Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

DJA 01 00:48:14.4±0.5, 1°S±3°×12°7E±°, h28km±6km, M3.6/6, mb3.9/1, mB4.7/1, MLv3.5/6, Mw(mB)3.9/1, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.53**	**31**	P	Pn	00 48 25.8	-0.4
LBMI				S	Sn	00 48 34.7	+0.5
SANI	**Sanana**	**1.56**	**233**	P	Pn	00 48 40.2	-0.1
SANI				S	Sn	00 48 58.6	-1.0
TNTI	**Ternate**	**1.86**	**4**	P	Pn	00 48 44.5	0.0
NLAI	**Namlea**	**2.13**	**184**	P	Pn	00 48 49.0	+0.9
NLAI				S	Sn	00 49 13.9	+0.3
APSI	**Ampana**	**5.58**	**272**	P	Pn	00 49 36.6	+0.9

*NEIC **01** 01:13:19.2±1.9, 3°74N±0°09×123°1E±0°1, h536km±7km, mb4.4/46, Error ellipse: s-maj=16.1km s-min=12.7km az=62.0*
*IDC **01** 01:13:19.1±1.0, 3°71N×123°04E, h549km±12km, mb3.3/17, mbtmp4.3/19, Error ellipse: s-maj=20.1km s-min=8.8km az=83.0*
*DJA **01** 01:13:22.4±0.7, 3°N±7°×12°3E±°, h497km±8km, M4.4/16, mb4.6/15, mB4.8/9, MLv4.8/16, Mw(mB)4.1/9*
ISC 01 01:13:19.4±0.6, 3°70N±0°05×123°11E±0°07, h552km±6km, n117, σ1s24/135, mb4.2/40, 5C-1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.41**	**90**	P	**P**	**01 14 28.5**	**-2.8**
MRSI	**Marisa**	**3.41**	**200**	P	**P**	**01 14 34.1**	**-3.2**
TOLI2	**Tolitoli**	**3.47**	**222**	P	**P**	**01 14 35.5**	**-2.2**
DDMP	**Don Marcelino,**	**3.52**	**47**	⇑eP	**P**	**01 14 36.5**	**-1.6**
DDMP				eS	**S**	**01 15 39.9**	**-2.1**
KCP	**Kidapawan**	**3.83**	**31**	⇓iP	**P**	**01 14 39.9**	**-0.4**
KCP				i S	**S**	**01 15 48.5**	**+2.4**
PAGZ	**Pagadian**	**4.13**	**4**	⇑eP	**P**	**01 14 42.2**	**-0.3**
PAGZ				eS	**S**	**01 15 51.0**	**+0.9**
DAV	**Davao City (W)**	**4.15**	**36**	P	**P**	**01 14 43.6**	**+1.0**
	245nm,0.4s,baz=67,slow=7.7,SNR=1.6						
DAV				S	**S**	**01 15 50.6**	**+0.2**
	275nm,0.5s,baz=109,slow=22,SNR=8.3						
BUKP	**Musuan**	**4.58**	**25**	⇑eP	**P**	**01 14 46.1**	**+0.1**
MPSI	**Mapaga**	**4.64**	**224**	P	**P**	**01 14 43.4**	**-3.0**
LUWI	**Luwuk**	**4.72**	**184**	P	**P**	**01 14 44.5**	**-2.6**
LUWI	**Luwuk**	**4.72**	**184**	P	**P**	**01 14 43.9**	**-3.3**
APSI	**Ampana**	**4.81**	**198**	P	**P**	**01 14 45.5**	**-2.4**
MYLDM	**Lahad Datu**	**4.83**	**288**	P	**P**	**01 14 47.5**	**-0.4**
TNTI	**Ternate**	**5.15**	**124**	P	**P**	**01 14 49.4**	**-1.4**
TNTI	**Ternate**	**5.15**	**124**	P	**P**	**01 14 49.7**	**-1.0**
	1.1nm4µm253nm,0.9s						
TBP	**Tagbilaran**	**6.00**	**7**	⇑eP	**P**	**01 14 58.0**	**-0.1**
TBP				i S	**S**	**01 16 18.3**	**-0.5**
LBMI	**Labuha**	**6.15**	**134**	P	**P**	**01 14 58.8**	**-0.8**
	1.0nm1µm59nm,0.6s						
SMKI	**Samarinda**	**7.20**	**235**	P	**P**	**01 15 11.3**	**+1.9**
	1.6nm10µm360nm,0.8s						
TTSI	**Tana Toraja**	**7.47**	**206**	P	**P**	**01 15 12.6**	**+0.6**
	0.9nm2µm229nm,0.9s						
BKB	**Balikpapan**	**7.93**	**232**	P	**P**	**01 15 16.1**	**-0.5**
BKB	**Balikpapan**	**7.93**	**232**	P	**P**	**01 15 17.1**	**+0.5**
	1.6nm480nm,1.0s						
NLAI	**Namlea**	**7.96**	**150**	P	**P**	**01 15 18.1**	**+1.2**
	0.4nm86nm,0.6s						
SPSI	**Sidrap Palu**	**8.32**	**204**	P	**P**	**01 15 19.2**	**-1.2**
	4µm498nm,0.7s						
BNSI	**Bone**	**8.59**	**200**	P	**P**	**01 15 23.0**	**-0.2**
	2µm206nm,0.7s						
BBSI	**Bau Bau**	**9.14**	**183**	P	**P**	**01 15 28.2**	**-0.6**
	279nm10nm,0.8s						
KAPI	**Kappang**	**9.29**	**201**	P	**P**	**01 15 29.2**	**-0.9**
	36nm,0.7s,baz=17,slow=5.0,SNR=17						
KAPI	**Kappang**	**9.29**	**201**	P	**P**	**01 15 29.6**	**-0.6**
BKSI	**Bulukumba**	**9.45**	**198**	P	**P**	**01 15 30.1**	**-1.7**
	32nm,0.6s						
BBKI	**Banjar Baru**	**10.91**	**229**	P	**P**	**01 15 49.1**	**+2.3**
	6µm56nm,0.7s						
SBUM	**Sibu**	**10.95**	**264**	P	**P**	**01 15 46.7**	**-0.5**
FAKI	**Fak Fak**	**11.25**	**126**	P	**P**	**01 15 50.8**	**+0.4**
BALP	**Baler**	**12.06**	**353**	⇑eP	**P**	**01 15 56.8**	**-1.8**
SOEI	**Soe**	**13.42**	**175**	P	**P**	**01 16 11.8**	**-1.0**
BATI	**Baumata**	**13.83**	**178**	P	**P**	**01 16 16.4**	**-0.5**
	1µm89nm,0.6s						
TWSI	**Taliwang, Sumb**	**13.83**	**207**	P	**P**	**01 16 17.2**	**+0.3**
JAGI	**Jajag, Banyuwa**	**15.04**	**216**	P	**P**	**01 16 27.9**	**-1.4**
MTN	**Manton Dam**	**18.27**	**154**	P	**P**	**01 17 01.0**	**+1.2**
MTN				IAmb	IAmb	01 17 04.3	
	comp=Z,11nm,0.9s						
TPUB	**Ta-pu**	**19.63**	**353**	P	**P**	**01 17 13.7**	**+1.7**
YULB	**Yu-li**	**19.65**	**355**	P	**P**	**01 17 12.1**	**-0.2**
KNRA	**Kununurra**	**20.05**	**164**	P	**P**	**01 17 17.7**	**+1.8**
KNRA				IAmb	IAmb	01 17 26.3	
	comp=Z,12nm,1.1s						
SSLB	**Suanglung**	**20.08**	**354**	P	**P**	**01 17 17.0**	**+0.9**
YHNB	**Yeheng**	**20.91**	**356**	P	**P**	**01 17 23.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**21.81**	**174**	P	**P**	**01 17 31.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=351,slow=13,SNR=2.5						
	comp=Z,1.3nm,0.4s						
JOW	**Kunigami**	**23.52**	**12**	P	**P**	**01 17 47.7**	**+0.7**
	comp=Z,6.4nm,0.5s,baz=158,slow=5.4,SNR=10						
	comp=Z,6.4nm,0.5s						
JOW	**Kunigami**	**23.52**	**12**	P	**P**	**01 17 47.9**	**+0.9**
MBWA	**Marble Bar**	**24.93**	**188**	P	**P**	**01 17 57.9**	**-1.6**
MBWA				IAmb	IAmb	01 18 09.3	
	comp=Z,30nm,1.4s						
WB0	**Warramunga Arr**	**25.82**	**155**	P	**P**	**01 18 06.8**	**-0.7**
WB0				IAmb	IAmb	01 18 36.3	
	comp=Z,8.6nm,1.4s						
WRAB	**Tennant Creek**	**25.95**	**155**	P	**P**	**01 18 07.8**	**-0.7**
WRAB				IAmb	IAmb	01 18 36.6	
	comp=Z,20nm,1.5s						
WRAB				PcP	**PcP**	**01 21 19.1**	**+0.6**
WRA	**Warramunga Arr**	**25.96**	**155**	P	**P**	**01 18 07.8**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=336,slow=9.9,SNR=16						
WRA				PcP	**PcP**	**01 21 19.0**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=322,slow=2.6,SNR=8.4						
WRA				S	**S**	**01 21 57.3**	**-3.4**
	comp=Z,1.8nm,1.0s,baz=336,slow=16,SNR=5.2						
	comp=Z,1.3nm,0.3s						
WRA	**Warramunga Arr**	**25.96**	**155**	P	**P**	**01 18 06.8**	**-1.9**
WB2	**Warramunga Arr**	**25.96**	**155**	P	**P**	**01 18 08.3**	**-0.4**
WB2				IAmb	IAmb	01 18 09.3	
	comp=Z,6.5nm,1.1s						
WB2				PcP	**PcP**	**01 21 19.1**	**+0.6**
WR0	**Warramunga Arr**	**26.06**	**155**	P	**P**	**01 18 09.0**	**-0.5**
ASAR	**Alice Springs**	**29.17**	**159**	P	**P**	**01 18 36.9**	**+0.2**
	comp=Z,11nm,0.3s,baz=337,slow=7.0,SNR=7.7						
ASAR				PcP	**PcP**	**01 21 26.6**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=338,slow=3.3,SNR=4.6						
ASAR				S	**S**	**01 22 49.2**	**-1.4**
	comp=Z,3.2nm,0.9s,baz=347,slow=20,SNR=10						
	comp=Z,11nm,0.3s						
JCJ	**Chichijima**	**29.56**	**36**	P	**P**	**01 18 39.2**	**-0.7**
	comp=Z,24nm,0.3s,baz=284,slow=24,SNR=16						
JCJ				S	**S**	**01 22 54.0**	**-2.5**
	comp=Z,48nm,0.8s,baz=287,slow=19,SNR=2.6						
JCJ	**Chichijima**	**29.56**	**36**	P	**P**	**01 18 39.0**	**-1.0**
MORW	**Morawa**	**33.28**	**191**	P	**P**	**01 19 10.9**	**-0.9**
MORW				IAmb	IAmb	01 19 51.5	
	comp=Z,30nm,1.4s						
KSRS	**Korea Array**	**33.88**	**7**	P	**P**	**01 19 16.8**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=187,slow=9.3,SNR=6.1						
	comp=Z,1.0nm,0.5s						
JGF	**Kuroka**	**34.37**	**21**	P	**P**	**01 19 20.6**	**-0.2**
JGF				IAmb	IAmb	01 19 58.5	
	comp=Z,12nm,1.5s						
MJAR	**Matsushiro Arr**	**35.52**	**21**	P	**P**	**01 19 29.9**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=189,slow=8.7,SNR=7.3						
	comp=Z,2.9nm,0.8s						
BBOO	**Buckleboo**	**38.33**	**162**	P	**P**	**01 19 54.4**	**+0.9**
STKA	**Stephens Creek**	**39.51**	**155**	P	**P**	**01 20 04.0**	**+1.0**
	comp=Z,3.1nm,0.4s,baz=320,slow=11,SNR=11						
	comp=Z,3.1nm,0.4s						
STKA	**Stephens Creek**	**39.51**	**155**	P	**P**	**01 20 04.2**	**+1.2**
EIDS	**Eidsvold**	**39.64**	**138**	P	**P**	**01 20 05.1**	**+0.9**
EIDS				IAmb	IAmb	01 20 22.4	
	comp=Z,9.7nm,1.2s						
RAMN	**Ramite**	**41.85**	**307**	eP	**P**	**01 20 22.9**	**+0.9**
JIRN	**Jiri**	**42.50**	**308**	eP	**P**	**01 20 27.9**	**+0.7**
	comp=Z,10nm,0.2s						
GUN	**Gumba**	**42.86**	**308**	eP	**P**	**01 20 30.7**	**+0.7**
PKI	**Pulchoki**	**43.08**	**307**	eP	**P**	**01 20 31.8**	**+0.1**
PKIN	**Phulchoki**	**43.09**	**307**	eP	**P**	**01 20 31.9**	**+0.2**
	comp=Z,8.6nm,0.3s						
ARMA	**Armidale**	**43.52**	**143**	P	**P**	**01 20 37.5**	**+2.7**
ARMA				IAmb	IAmb	01 20 38.5	
	comp=Z,8.5nm,1.0s						
DANN	**Dangsing**	**44.73**	**307**	eP	**P**	**01 20 44.8**	**+0.4**
	comp=Z,49nm,0.6s						
CAN	**Canberra**	**45.79**	**150**	P	**P**	**01 20 54.0**	**+1.9**
CAN				IAmb	IAmb	01 20 55.1	
	comp=Z,10nm,0.5s						
SONM	**Songino Array**	**46.26**	**344**	P	**P**	**01 20 56.1**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=144,slow=8.7,SNR=7.2						
SONM				PcP	**PcP**	**01 22 19.5**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=157,slow=4.2,SNR=4.5						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**46.26**	**344**	P	**P**	**01 20 56.5**	**+0.9**
MK31	**Makanchi Array**	**55.56**	**327**	P	**P**	**01 22 03.7**	**+0.7**
MK31				IAmb	IAmb	01 22 04.1	
	comp=Z,7.2nm,0.4s						
MK31				PcP	**PcP**	**01 22 54.8**	**+0.3**
MKAR	**Makanchi Array**	**55.56**	**327**	P	**P**	**01 22 03.9**	**+0.9**
MKAR				PcP	**PcP**	**01 22 54.6**	**0.0**
MAKZ	**Makanchi**	**55.74**	**327**	P	**P**	**01 22 04.9**	**+0.7**
MAKZ				IAmb	IAmb	01 22 05.2	
	comp=Z,9.6nm,0.4s						
MAKZ				PcP	**PcP**	**01 22 55.1**	**-0.1**
PEA0B	**Petropavlovsk-**	**56.87**	**24**	P	**P**	**01 22 10.7**	**-1.2**
PEA0B				IAmb	IAmb	01 22 22.0	
	comp=Z,13nm,1.4s						
KBL	**Kabul**	**58.69**	**309**	P	**P**	**01 22 25.0**	**+0.2**
KBL				IAmb	IAmb	01 22 25.7	
	comp=Z,6.7nm,0.7s						
ZAA0	**Zalesovo Array**	**59.02**	**335**	P	**P**	**01 22 26.1**	**-0.3**
ZALV	**Zalesovo Beam**	**59.02**	**335**	P	**P**	**01 22 25.9**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=126,slow=5.1,SNR=12						
	comp=Z,2.2nm,0.5s						
ZALV	**Zalesovo Beam**	**59.02**	**335**	P	**P**	**01 22 26.2**	**-0.2**
ZALV				PcP	**PcP**	**01 23 06.7**	**-1.4**
KURK	**Kurchatov**	**59.86**	**329**	P	**P**	**01 22 32.7**	**+0.7**
KURK				IAmb	IAmb	01 22 33.1	
	comp=Z,14nm,0.7s						
KKAR	**Karatay Array**	**60.82**	**318**	P	**P**	**01 22 39.0**	**+0.5**
LBZ	**Lake Benmore**	**63.73**	**144**	P	**P**	**01 22 59.0**	**+1.7**
LTZ	**Lake Taylor**	**64.08**	**142**	P	**P**	**01 23 01.2**	**+1.6**
LTZ				IAmb	IAmb	01 23 35.1	
	comp=Z,32nm,1.2s						
KHZ	**Kahutara**	**64.68**	**141**	P	**P**	**01 23 03.5**	**+0.2**
BKZ	**Black Stump Fm**	**65.01**	**136**	P	**P**	**01 23 06.8**	**+1.2**
BKZ				IAmb	IAmb	01 23 08.4	
	comp=Z,14nm,0.9s						
BRVK	**Borovoye**	**65.48**	**328**	P	**P**	**01 23 08.6**	**+0.4**
BRVK				IAmb	IAmb	01 23 09.3	
	comp=Z,8.2nm,1.2s						
GEYT	**Alibeck**	**68.11**	**309**	P	**P**	**01 23 24.9**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=201,slow=8.9,SNR=5.2						
	comp=Z,2.7nm,0.6s						
NRIK	**Noril'sk**	**69.63**	**347**	P	**P**	**01 23 33.2**	**0.0**
	comp=Z,3.4nm,0.5s,baz=120,slow=6.5,SNR=7.6						
	comp=Z,3.4nm,0.5s						
ABKAR	**Akbulak array**	**69.91**	**321**	P	**P**	**01 23 35.0**	**-0.2**
ABKAR				PcP	**PcP**	**01 23 52.6**	**-0.8**
ARU	**Arti**	**73.05**	**328**	P	**P**	**01 23 53.5**	**+0.1**
RAYN	**Ar Rayn**	**77.17**	**293**	P	**P**	**01 24 16.8**	**-0.4**
VOI	**Vohitsoka**	**78.73**	**247**	P	**P**	**01 24 24.9**	**-0.8**
VOI				IAmb	IAmb	01 24 25.9	
	comp=Z,7.3nm,0.9s						
KBZ	**Khabaz**	**80.38**	**314**	P	**P**	**01 24 33.5**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=182,slow=5.3,SNR=3.7						
	comp=Z,1.4nm,0.9s						
GURO	**Guroymak-BITLI**	**80.73**	**308**	P	**P**	**01 24 36.9**	**+1.0**
O18K	**Koktuh Hills**	**82.63**	**30**	P	**P**	**01 24 45.6**	**+0.7**
O18K				IAmb	IAmb	01 24 59.7	
	comp=Z,18nm,1.5s						
SII	**Sitkinak Islan**	**82.90**	**34**	P	**P**	**01 24 48.6**	**+2.3**
OHAK	**Old Harbor**	**83.44**	**33**	P	**P**	**01 24 50.5**	**+1.5**
OHAK				IAmb	IAmb	01 24 51.9	
	comp=Z,18nm,1.3s						
J20K	**Nowinta River**	**83.52**	**26**	P	**P**	**01 24 51.0**	**+1.8**
IMAR	**Indian Mountai**	**83.84**	**24**	P	**P**	**01 24 52.2**	**+1.4**
BPAW	**Bear Paw Mtn.**	**84.90**	**26**	P	**P**	**01 24 57.0**	**+0.9**
MLY	**Manley**	**85.04**	**25**	P	**P**	**01 24 57.7**	**+0.9**
TOKA	**Tokat**	**85.06**	**310**	P	**P**	**01 24 58.3**	**+0.9**
TOKA				IAmb	IAmb	01 24 58.6	
	comp=Z,3.1nm,0.6s						
KMBO	**Kilima Mbogo**	**85.94**	**269**	P	**P**	**01 25 01.6**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=54,slow=14,SNR=3.8						
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**86.68**	**25**	P	**P**	**01 25 03.7**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=247,slow=5.4,SNR=5.9						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**87.25**	**309**	P	**P**	**01 25 06.5**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=103,slow=5.5,SNR=5.0						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**89.22**	**340**	P	**P**	**01 25 14.6**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=90,slow=7.3,SNR=11						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**90.14**	**332**	P	**P**	**01 25 19.9**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=42,slow=6.2,SNR=14						
	comp=Z,2.3nm,0.6s						
BUR08	**Bucovina Ar. S**	**92.61**	**318**	P	**P**	**01 25 32.1**	**-0.5**
BUR08				IAmb	IAmb	01 25 34.0	
	comp=Z,2.9nm,1.1s						
PDAR	**Pinedale Array**	**113.72**	**40**	PKKPab	PKKPab	01 41 48.3	-2.4
	comp=Z,0.4nm,0.4s,baz=109,slow=8.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**119.49**	**287**	PKP	**PKPdf**	**01 31 07.3**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=69,slow=1.8,SNR=30						
SCHQ	**Schefferville**	**121.09**	**7**	PKP	**PKiKP**	**01 31 10.0**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=268,slow=2.9,SNR=6.2						
TXAR	**Lajitas Array**	**124.44**	**50**	PKP	**PKiKP**	**01 31 18.0**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=255,slow=0.8,SNR=5.7						
TXAR				PKKPbc	**PKKPbc**	**01 41 02.1**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=132,slow=6.7,SNR=3.8						
WMOK	**Wichita Mounta**	**125.13**	**42**		**PKPdf**	**01 31 17.6**	**-0.3**
S39A	**Bolivar**	**126.72**	**36**	PKPdf	**PKPdf**	**01 31 20.6**	**-0.4**
BO02	**Sierra Bellavi**	**146.48**	**159**		**PKPbc**	**01 32 00.6**	**+1.0**

IDC 01 01:14:32.3±1.4, 19°20S×63°86W, h0km, mb3.5/2, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=39.9km s-min=25.1km az=55.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.00**	**305**	Pn	Pn	01 15 50.1	+1.0
	0.7nm,0.3s,baz=144,slow=4.4,SNR=24						
LPAZ				Sn	Sn	01 16 45.5	-2.5
	3.0nm,0.3s,baz=2.3,slow=21,SNR=3.8						
LPAZ				Lg	Lg	01 17 05.9	
	3.0nm,0.3s,baz=331,slow=18,SNR=3.8						
	4.9nm,0.4s						
CPUP	**Villa Florida**	**9.30**	**141**	Pn	Pn	01 16 47.4	-0.3
	0.3nm,0.3s,baz=320,slow=11,SNR=4.9						
CPUP				Sn	Sn	01 18 26.4	-6.8
	0.2nm,0.3s,baz=301,slow=14,SNR=2.9						
CPUP				Lg	Lg	01 19 28.0	
	0.5nm,0.3s,baz=41,slow=16,SNR=3.5						
	0.6nm,0.3s						
PLCA	**Paso Flores**	**22.21**	**194**	P	P	01 19 30.8	+0.3
	1.1nm,0.9s,baz=31,slow=18,SNR=1.3						
	1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**72.12**	**69**	P	P	01 26 00.1	+1.0
	0.7nm,0.8s,baz=257,slow=6.0,SNR=3.5						
	0.7nm,0.8s						
SONM	**Songino Array**	**150.36**	**13**	PKPbc	PKPbc	01 34 23.8	-2.0
	0.3nm,0.5s,baz=333,slow=0.6,SNR=3.0						

MEX 01 01:19:32.4±0.8, 16°94N×94°30W, h146km±15km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UXUV	**UXUV**	**0.41**	**21**	eP	Pn	01 19 51.8	-1.1
UXUV				eS	Sn	01 20 06.2	-2.3
UXUV	**UXUV**	**0.41**	**21**	i P	Pn	01 19 51.8	-1.1
UXUV				i S	Sn	01 20 05.3	-3.3
TGIG		**1.14**	**98**	eP	Pn	01 19 56.5	-1.6
TGIG				e	S	01 20 15.2	-2.5
TGIG				eS	S	01 20 15.2	-2.5
TGIG		**1.14**	**98**	i P	Pn	01 19 56.9	-1.2
TGIG				i S	Sn	01 20 14.4	-3.3
PCIG		**1.61**	**140**	eP	Pn	01 20 02.0	-0.8
PCIG				eS	Sn	01 20 24.8	-1.3
PCIG		**1.61**	**140**	eP	Pn	01 20 02.7	-0.1
PCIG				eS	Sn	01 20 25.5	-0.7
HUIG	**Huatulco**	**2.09**	**236**	eP	Pn	01 20 06.9	-1.5
HUIG				e		01 20 37.0	
HUIG	**Huatulco**	**2.09**	**236**	i P	Pn	01 20 06.8	-1.5
HUIG				i S	Sn	01 20 36.9	+1.0
CCIG	**Comitan**	**2.17**	**107**	eP	Pn	01 20 03.3	-6.3
CCIG				eS	Sn	01 20 31.7	-6.4
VHO	**Vista Hermosa**	**2.33**	**274**	eP	Pn	01 20 10.5	-1.0
VHO				eS	Sn	01 20 40.6	-0.9
VHO	**Vista Hermosa**	**2.33**	**274**	eP	Pn	01 20 11.7	+0.3
VHO				eS	Sn	01 20 43.0	+1.5
PAVE	**Pavencul**	**2.68**	**130**	eP	Pn	01 20 14.9	-0.9
PAVE				eS	Sn	01 20 47.4	-1.8
PATR	**El Naranjo**	**2.69**	**132**	eP	Pn	01 20 15.5	-0.5
PATR				eS	Sn	01 20 46.7	-2.7
CHUJ	**Union Juarez**	**2.79**	**131**	eP	Pn	01 20 16.8	-0.5
CHUJ				eS	Sn	01 20 49.4	-2.4
TXIG	**Tlaxiaco**	**3.33**	**276**	e	Pn	01 20 24.9	+0.8
TXIG				e		01 21 00.3	

*ISU **01** 02:26:34, 39°53N×73°64E, h5km*
*SOME **01** 02:26:36.0, 39°68N×72°98E, h15km*
*KRNET **01** 02:26:37.8±0.1, 39°52N×73°40E, mb3.0*
*NNC **01** 02:26:39.8±2.6, 39°60N×73°60E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=20.2km s-min=12.2km az=164.0*
ISC 01 02:26:36.2±1.8, 39°30N±0°09×73°41E±0°04, h3km±13km, n30, σ1s80/49, 4C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**339**	P	**Pn**	**02 26 57.9**	**-3.6**
OHH				S	**Sn**	**02 27 15.8**	**-3.7**
FRG	**Fergana**	**1.65**	**311**	P	**Pn**	**02 27 05.9**	**-0.1**
FRG				S	**Sb**	**02 27 29.0**	**+0.7**
BTK	**Batken**	**2.13**	**292**	P	**Pb**	**02 27 16.0**	**+0.4**
BTK				S	**Sg**	**02 27 47.6**	**+2.8**
MINT	**Mingtut**	**2.20**	**303**	P	**Pb**	**02 27 17.4**	**+0.7**
MINT				S	**Sg**	**02 27 48.9**	**+2.0**
GAR	**Garm**	**2.42**	**264**	⇓iP	**Pg**	**02 27 21.3**	**-1.3**
	baz=59						
GAR				⇓iS	**Sg**	**02 27 52.8**	**-1.2**
	baz=59						
CHDK	**Chadak**	**2.63**	**310**	S	**Sb**	**02 28 00.2**	**+3.5**
ARLS	**Aral**	**2.65**	**15**	⇓iP	**Pn**	**02 27 21.1**	**+1.1**
	baz=17						
ARLS				⇓iS	**Sn**	**02 27 52.5**	**-0.2**
	baz=17						
TRKS	**Terek-Say**	**2.82**	**323**	⇑iP	**Pn**	**02 27 23.0**	**+0.7**
	baz=20						
TRKS				⇑iS	**Sn**	**02 27 55.8**	**-1.1**
	baz=20						
UCH	**Uchtor**	**3.04**	**16**	⇓iP	**Pn**	**02 27 26.2**	**+0.6**
	baz=17						
UCH				⇓iS	**Sn**	**02 28 01.2**	**-1.6**
	baz=17						
MRKS	**Merke**	**3.44**	**358**	eP	**Pn**	**02 27 32.1**	**+1.3**
	1.4nm,0.1s						
MRKS				eS	**Sn**	**02 28 12.3**	**+0.1**
	3.6nm,0.3s						
MRKS	**Merke**	**3.44**	**358**	Pg	**Pb**	**02 27 39.0**	**+1.1**
	2.2nm,0.2s						
MRKS				Lg	Lg	02 28 24.5	
	17nm,0.4s						
IUG	**Iuzhnay**	**3.83**	**319**	eP	**Pn**	**02 27 35.8**	**-0.3**
	71nm,0.4s						
IUG				eS	**Sn**	**02 28 18.9**	**-2.8**
	18nm,0.5s						
IUG	**Iuzhnay**	**3.83**	**319**	Pg	**Pb**	**02 27 46.3**	**+1.9**
	112nm,0.4s						
IUG				Lg	Lg	02 28 37.3	
	38nm,0.6s						
TKM2	**Tokmak 2**	**3.98**	**24**	⇑Pn	**Pn**	**02 27 40.2**	**+2.0**
	1.3nm,0.5s						
TKM2				⇑Lg	Lg	02 28 36.5	
	1.1nm,0.6s						
KST	**Kastek**	**4.21**	**26**	eP	**Pb**	**02 27 50.8**	**-0.1**
	4.8nm,0.9s						
KST				eS	**Sb**	**02 28 44.7**	**+2.6**
	12nm,0.4s						
KST	**Kastek**	**4.21**	**26**	Pg	**Pb**	**02 27 50.8**	**-0.1**
	4.8nm,0.9s						
KST				Lg	Lg	02 28 44.7	
	12nm,0.4s						
SGDS	**Sogindy**	**4.25**	**12**	eP	**Pb**	**02 27 49.0**	**-2.5**
	3.3nm,0.5s						
SGDS				eS	**Sb**	**02 28 41.7**	**-1.5**
	6.1nm,0.5s						
SGDS	**Sogindy**	**4.25**	**12**	Pg	**Pb**	**02 27 49.0**	**-2.5**
	3.3nm,0.5s						
SGDS				Lg	Lg	02 28 42.1	
	6.1nm,0.5s						
KK31	**Karatay Array**	**4.38**	**331**	⇓Pn	**Pn**	**02 27 44.8**	**+1.2**
	0.4nm,0.3s,baz=146,slow=18,SNR=9.7						
KK31				Pg	**Pg**	**02 27 58.2**	**-1.9**
	1.9nm,0.5s,baz=147,slow=15,SNR=6.2						
KK31				Lg	Lg	02 28 49.8	
	12nm,0.8s,baz=145,slow=32,SNR=5.2						
MTBS	**Maitube**	**4.45**	**30**	eP	**Pb**	**02 27 55.0**	**0.0**
	3.6nm,0.2s						
MTBS				eS	**Sb**	**02 28 52.2**	**+3.1**
	5.4nm,0.1s						
MTBS	**Maitube**	**4.45**	**30**	Pg	**Pb**	**02 27 55.0**	**0.0**
	3.6nm,0.2s						
MTBS				Lg	Lg	02 28 52.2	
	5.4nm,0.1s						
KRBS	**Karabastau**	**4.71**	**20**	eP	**Pb**	**02 27 57.7**	**-1.7**
	3.7nm,0.6s						
KRBS				eS	**Sb**	**02 28 56.8**	**+0.2**
	6.2nm,0.5s						
KRBS	**Karabastau**	**4.71**	**20**	Pg	**Pb**	**02 27 57.7**	**-1.7**
	3.7nm,0.6s						
KRBS				Lg	Lg	02 28 57.5	
	6.2nm,0.5s						
KTBS	**Karatobe**	**5.05**	**28**	eP	**Pb**	**02 28 04.4**	**-0.8**
	1.2nm,0.6s						
KTBS				eS	**Sb**	**02 29 08.0**	**+1.8**
	9.1nm,0.6s						
KTBS	**Karatobe**	**5.05**	**28**	Pg	**Pb**	**02 28 04.4**	**-0.8**
	1.2nm,0.6s						
KTBS				Lg	Lg	02 29 08.0	
	9.1nm,0.6s						
KUU	**Kurty**	**5.09**	**25**	eP	**Pb**	**02 28 04.6**	**-1.2**
	0.6nm,0.1s						
KUU				eS	**Sb**	**02 29 08.5**	**+1.1**
	5.2nm,0.4s						
KUU	**Kurty**	**5.09**	**25**	Pg	**Pb**	**02 28 04.6**	**-1.2**
	0.6nm,0.1s						
KUU				Lg	Lg	02 29 08.5	
	5.2nm,0.4s						
CHKK	**Chushkaly**	**5.28**	**29**	eP	**Pb**	**02 28 09.4**	**+0.2**
	1.1nm,0.3s						
CHKK				eS	**Sb**	**02 29 16.4**	**+3.4**
	6.0nm,0.5s						
CHKK	**Chushkaly**	**5.28**	**29**	Pg	**Pb**	**02 28 09.4**	**+0.2**
	1.1nm,0.3s						
CHKK				Lg	Lg	02 29 16.4	
	6.0nm,0.5s						
BTLS	**Baital**	**5.75**	**5**	eP	**Pb**	**02 28 16.6**	**-0.6**
	2.6nm,0.8s						
BTLS				eS	**Sb**	**02 29 28.7**	**+2.2**
	3.9nm,0.8s						

*IDC **01** 02:36:14.3±0.6, 17°18N×147°33E, h0km, mb4.2/21, mbtmp4.3/23, ML4.2/2, MS3.4/21, Error ellipse: s-maj=21.2km s-min=12.3km az=93.0*
*NEIC **01** 02:36:22.4±1.2, 17°21N±0°09×147°3E±0°1, h53km±8km, mb4.6/39, Error ellipse: s-maj=17.6km s-min=12.6km az=108.0*
ISC 01 02:36:20.6±0.5, 17°22N±0°06×147°26E±0°10, h41km, n95, σ0s89/81, mb4.5/38, MS3.6/19, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.28**	**213**	Pn	**Pn**	**02 37 21.7**	**-1.5**
	10nm,0.3s,baz=184,slow=19,SNR=1.8						
GUMO				Sn	**Sn**	**02 38 13.5**	**+1.5**
	6.3nm,0.3s,baz=210,slow=20,SNR=1.6						
GUMO				LR	LR	02 38 19.4	
	comp=Z,54nm,18.4s,baz=66,slow=29						
	24nm,0.2s						
GUMO	**Guam**	**4.28**	**213**	Pn	**Pn**	**02 37 24.7**	**+1.4**
JCJ	**Chichijima**	**10.90**	**335**	Pn	**Pn**	**02 38 51.9**	**-2.1**
	2.2nm,0.3s,baz=270,slow=20,SNR=2.0						
	27nm,0.7s						
JHJ	**Hachijo jima 2**	**17.21**	**338**	LR	LR	02 47 17.0	
	comp=Z,102nm,18.6s,baz=105,slow=38						
H11S3	**WAKE ISLAND Hy**	**18.53**	**83**	T	T	02 59 09.7	
	baz=268,slow=75						
H11S1	**WAKE ISLAND Hy**	**18.55**	**83**	T	T	02 59 12.0	
	baz=268,slow=75						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H11S2	WAKE ISLAND Hy	18.55	83	T	T	02 59 09.3	
	baz=268,slow=75						
H11N1	WAKE ISLAND Hy	18.78	79	T	T	02 59 29.8	
	baz=264,slow=74						
H11N2	WAKE ISLAND Hy	18.79	79	T	T	02 59 29.2	
	baz=264,slow=74						
H11N3	WAKE ISLAND Hy	18.80	79	T	T	02 59 34.8	
	baz=264,slow=74						
INU	Inuyama	20.24	335	P	Pn	02 40 53.7	-0.8
INU				IAmb	IAmb	02 41 03.8	
	comp=Z,46nm,1.3s						
JGF	Kuroka	20.32	336	P	P	02 40 53.2	-0.1
JGF				IAmb	IAmb	02 40 55.6	
	comp=Z,33nm,0.9s						
JMN	Monobe	20.37	326	P	P	02 40 54.2	+0.4
JMN				IAmb	IAmb	02 40 55.6	
	comp=Z,21nm,1.1s						
MJAR	Matsushiro Arr	20.85	339	P	P	02 40 58.6	-0.4
	comp=Z,7.5nm,0.7s,baz=171,slow=11,SNR=16						
MJAR				LR	LR	02 49 11.1	
	comp=Z,119nm,20.1s,baz=140,slow=37						
	comp=Z,7.5nm,0.7s						
MAJO	Matsushiro	20.86	339	P	P	02 40 59.5	+0.5
JNU	Nakatsue	21.65	320	P	P	02 41 07.6	0.0
	comp=Z,6.4nm,0.9s,baz=180,slow=20,SNR=4.9						
JNU				LR	LR	02 47 22.7	
	comp=Z,62nm,19.7s,baz=90,slow=31						
	comp=Z,6.4nm,0.9s						
JHS	Saijyo	21.75	327	P	P	02 41 08.3	-0.4
RABL	Rabaul	21.81	167	P	P	02 41 09.2	-0.2
JSD	Sado	22.20	341	P	P	02 41 13.5	+0.1
JTU	Tsushima	23.50	321	P	P	02 41 28.6	+1.7
JTU				IAmb	IAmb	02 41 29.8	
	comp=Z,24nm,1.4s						
KSCHJ	Chungju	25.95	323	P	P	02 41 48.3	-1.0
KSRS	Korea Array	26.39	324	P	P	02 41 52.5	-0.6
	comp=Z,3.3nm,0.7s,baz=146,slow=9.3,SNR=18						
KSRS				LR	LR	02 52 07.2	
	comp=Z,180nm,19.6s,baz=130,slow=36						
	comp=Z,3.3nm,0.7s						
KSAR	Wonju Array Be	26.40	324	P	P	02 41 53.3	0.0
PMG	Port Moresby	26.45	180	P	P	02 41 52.3	-1.5
	comp=Z,7.6nm,0.5s,baz=348,slow=14,SNR=2.1						
	comp=Z,7.6nm,0.5s						
HNR	Honiara	29.30	154	LR	LR	02 52 38.7	
	comp=Z,77nm,21.5s,baz=30,slow=34						
USRK	Ussuriysk Ar.	29.83	338	P	P	02 42 24.4	+0.6
	comp=Z,5.3nm,1.0s,baz=184,slow=14,SNR=4.8						
	comp=Z,5.3nm,1.0s						
USRK	Ussuriysk Ar.	29.83	338	P	P	02 42 26.5	+2.7
KLR	Kul'dur	34.33	342	P	P	02 43 03.9	+0.8
	comp=Z,6.8nm,0.6s,baz=133,slow=4.0,SNR=20						
	comp=Z,6.8nm,0.6s						
PETK	Petropavlovsk-	36.74	11	P	P	02 43 25.0	+1.1
	comp=Z,0.5nm,0.5s,baz=191,slow=6.9,SNR=2.1						
PETK				LR	LR	02 55 35.8	
	comp=Z,49nm,21.4s,baz=218,slow=32						
	comp=Z,0.5nm,0.5s						
PETK	Petropavlovsk-	36.74	11	P	P	02 43 26.0	+2.2
WB0	Warramunga Arr	38.87	200	P	P	02 43 41.4	-0.7
WB0				IAmb	IAmb	02 44 00.3	
	comp=Z,22nm,1.5s						
WR0	Warramunga Arr	39.00	199	P	P	02 43 43.1	-0.1
WR0				IAmb	IAmb	02 43 44.1	
	comp=Z,15nm,1.3s						
WRAB	Tennant Creek	39.04	200	P	P	02 43 44.2	+0.6
WRAB				IAmb	IAmb	02 43 45.0	
	comp=Z,11nm,1.2s						
WB2	Warramunga Arr	39.04	199	P	P	02 43 43.4	-0.2
WB2				IAmb	IAmb	02 43 51.9	
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	39.05	200	P	P	02 43 43.1	-0.6
	comp=Z,2.3nm,0.6s,baz=26,slow=9.1,SNR=34						
WRA				PcP	PcP	02 45 53.5	+0.3
	comp=Z,1.3nm,0.9s,baz=22,slow=3.6,SNR=4.9						
	comp=Z,2.3nm,0.6s						
WRA	Warramunga Arr	39.05	200	P	P	02 43 43.4	-0.3
FUNA	Funafuti	40.63	127	P	P	02 43 57.4	+0.5
FITZ	Fitzroy Crossi	41.04	212	P	P	02 43 59.8	-0.4
MA2	Magadan	42.38	3	LR	LR	02 58 04.4	
	comp=Z,39nm,21.9s,baz=216,slow=31						
AMKA	Amchitka	42.52	29	P	P	02 44 11.3	-0.7
AS31	Alice Springs	42.68	198	P	P	02 44 13.3	-0.3
ASAR	Alice Springs	42.68	198	P	P	02 44 12.8	-0.8
	comp=Z,1.2nm,0.7s,baz=23,slow=9.5,SNR=12						
ASAR				PcP	PcP	02 46 04.8	-0.1
	comp=Z,1.7nm,1.0s,baz=24,slow=4.0,SNR=5.8						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	42.68	198	P	P	02 44 12.6	-1.0
KIWB	Kanaga Island	44.53	31	P	P	02 44 28.3	+0.1
ULN	Ulaanbaatar	44.85	322	P	P	02 44 31.1	+0.1
SONM	Songino Array	45.23	322	P	P	02 44 33.5	-0.4
	comp=Z,4.3nm,0.9s,baz=131,slow=8.3,SNR=17						
SONM				PcP	PcP	02 46 14.5	+1.0
	comp=Z,1.4nm,0.8s,baz=142,slow=2.0,SNR=4.4						
SONM				LR	LR	03 04 00.1	
	comp=Z,105nm,19.1s,baz=139,slow=37						
	comp=Z,4.3nm,0.9s						
SONM	Songino Array	45.23	322	P	P	02 44 34.2	+0.2
SEY	Seymchan	45.81	3	P	P	02 44 39.4	+1.3
	comp=Z,0.6nm,0.4s,baz=253,slow=11,SNR=1.9						
SEY				LR	LR	03 06 03.0	
	comp=Z,31nm,18.3s,baz=194,slow=39						
	comp=Z,0.6nm,0.4s						
CMAR	Chiang Mai Arr	45.91	279	P	P	02 44 40.0	+0.4
	comp=Z,1.8nm,0.3s,baz=72,slow=6.8,SNR=12						
	comp=Z,1.8nm,0.3s						
CMAR	Chiang Mai Arr	45.91	279	P	P	02 44 41.1	+1.6
MSVF	Nonsavu	46.09	137	LR	LR	03 02 54.2	
	comp=Z,72nm,18.6s,baz=216,slow=35						
KDAK	Kodiak Island	59.79	33	P	P	02 46 21.4	0.0
	comp=Z,3.7nm,0.8s,baz=292,slow=15,SNR=1.8						
	comp=Z,3.7nm,0.8s						
ZAA0	Zalesovo Array	60.09	323	P	P	02 46 22.7	-0.9
ZAA0				IAmb	IAmb	02 46 26.5	
	comp=Z,2.9nm,0.7s						
ZALV	Zalesovo Beam	60.09	323	P	P	02 46 22.8	-0.8
	comp=Z,3.4nm,0.7s,baz=104,slow=6.3,SNR=11						
ZALV				PcP	PcP	02 47 09.0	-0.1
	comp=Z,3.6nm,0.8s,baz=93,slow=3.0,SNR=6.2						
ZALV				LR	LR	03 13 06.5	
	comp=Z,48nm,18.5s,baz=70,slow=37						
	comp=Z,3.4nm,0.7s						
MK31	Makanchi Array	60.56	314	P	P	02 46 26.8	-0.2
MK31				IAmb	IAmb	02 46 30.4	
	comp=Z,4.8nm,1.2s						
MKAR	Makanchi Array	60.56	314	P	P	02 46 26.6	-0.3
MAKZ	Makanchi	60.77	314	P	P	02 46 28.6	+0.2
MAKZ				IAmb	IAmb	02 46 30.2	
	comp=Z,4.9nm,0.7s						
J20K	Nowinta River	61.14	25	P	P	02 46 31.5	+1.0
H21K	Melozitna Rive	62.21	24	P	P	02 46 39.2	+1.5
H21K				IAmb	IAmb	02 46 47.4	
	comp=Z,8.9nm,1.5s						
KTH	Kantishna Hill	62.28	26	P	P	02 46 38.9	+0.6
MLY	Manley	62.82	25	P	P	02 46 42.3	+0.5
MLY				IAmb	IAmb	02 46 46.6	
	comp=Z,6.4nm,1.1s						
KURK	Kurchatov	63.36	319	P	P	02 46 44.6	-1.0
KURK				IAmb	IAmb	02 46 47.8	
	comp=Z,4.1nm,0.9s						
SCM	Sheep Creek Mo	63.41	29	P	P	02 46 45.3	-0.6
SCM				IAmb	IAmb	02 46 48.5	
	comp=Z,9.7nm,1.1s						
I23K	Minto, Yukon-K	63.41	25	P	P	02 46 46.6	+1.0
I23K				IAmb	IAmb	02 46 52.2	
	comp=Z,6.9nm,1.2s						
NRIK	Noril'sk	63.51	340	P	P	02 46 46.0	-0.2
	comp=Z,9.2nm,0.8s,baz=108,slow=8.4,SNR=10						
	comp=Z,9.2nm,0.8s						
NRIK	Noril'sk	63.51	340	P	P	02 46 46.7	+0.5
ILAR	Eielson Array	64.32	26	P	P	02 46 50.4	-1.3
	comp=Z,1.4nm,0.9s,baz=253,slow=4.7,SNR=10						
	comp=Z,1.4nm,0.9s						
ILAR	Eielson Array	64.32	26	P	P	02 46 51.7	0.0
SCRK	Sand Creek	65.37	27	P	P	02 46 58.1	-0.6
SCRK				IAmb	IAmb	02 47 00.2	
	comp=Z,8.9nm,1.5s						
AAK	Ala-Archa	65.96	309	LR	LR	03 18 15.5	
	comp=Z,32nm,18.5s,baz=276,slow=38						
NIL	Nilore	67.55	300	P	P	02 47 13.0	-0.1
BVAR	Borovoye Array	68.56	321	LR	LR	03 17 23.0	
	comp=Z,32nm,20.8s,baz=331,slow=36						
BRVK	Borovoye	68.62	321	P	P	02 47 18.6	-0.8
BRVK				IAmb	IAmb	02 47 21.6	
	comp=Z,7.4nm,0.8s						
KK31	Karatay Array	68.86	310	P	P	02 47 20.1	-1.0
KKAR	Karatay Array	68.86	310	P	P	02 47 20.7	-0.4
KKAR	Karatay Array	68.86	310	P	P	02 47 20.5	-0.6
KKAR				IAmb	IAmb	02 47 24.1	
	comp=Z,2.2nm,0.7s						
CHGR	Chuyangaron	70.29	306	P	P	02 47 29.9	-0.2
KBL	Kabul	70.91	301	P	P	02 47 33.8	-0.4
KBL				IAmb	IAmb	02 47 36.2	
	comp=Z,6.8nm,0.9s						
ARU	Arti	75.13	325	P	P	02 47 59.2	+0.8
ARU				IAmb	IAmb	02 48 00.7	
	comp=Z,5.8nm,0.7s						
ABKAR	Akbulak array	75.43	317	P	P	02 47 58.8	-1.5
AKTO	Aktyubinsk	76.46	319	LR	LR	03 23 16.0	
	comp=Z,30nm,19.1s,baz=84,slow=37						
YKA	Yellowknife Ar	78.59	28	P	P	02 48 17.0	-0.7
	comp=Z,0.8nm,0.8s,baz=283,slow=5.6,SNR=4.5						
	comp=Z,0.8nm,0.8s						
KIRV	Kirov	79.50	328	LR	LR	03 25 24.2	
	comp=Z,30nm,18.8s,baz=95,slow=37						
YERR	Yerington	82.02	52	P	P	02 48 35.8	-1.1
YERR				IAmb	IAmb	02 48 47.0	
	comp=Z,7.1nm,0.8s						
BELG	Belogornoye	82.28	322	LR	LR	03 27 13.4	
	comp=Z,28nm,18.1s,baz=160,slow=37						
NVAR	Mina Array Bea	82.87	52	P	P	02 48 41.5	+0.1
	comp=Z,0.4nm,0.5s,baz=272,slow=6.5,SNR=4.4						
	comp=Z,0.4nm,0.5s						
KLMR	Klimovskoe	83.46	332	*e*P	P	02 48 43.0	-0.7
KLMR				AMP		02 48 45.0	
	comp=Z,23nm,1.2s						
ARCES	ARCESS Array B	84.35	343	P	P	02 48 48.7	+0.6
	comp=Z,3.3nm,0.8s,baz=48,slow=3.6,SNR=13						
	comp=Z,3.3nm,0.8s						
FINES	FINESS Array B	88.84	336	P	P	02 49 09.1	-1.1
	comp=Z,1.6nm,0.6s,baz=64,slow=4.3,SNR=15						
FINES				LR	LR	03 32 25.0	
	comp=Z,28nm,18.8s,baz=42,slow=38						
	comp=Z,1.6nm,0.6s						
AKASG	Malin Array Be	93.36	326	LR	LR	03 32 36.8	
	comp=Z,37nm,21.9s,baz=12,slow=36						
NOA	NORSAR Array B	94.47	340	LR	LR	03 35 44.5	
	comp=Z,9.4nm,21.0s,baz=230,slow=38						
FRB	Frobisher Bay	94.66	15	LR	LR	03 33 30.0	
	comp=Z,12nm,19.1s,baz=223,slow=36						
BRTR	Keskin Array B	96.21	315	P	P	02 49 44.2	-0.6
	comp=Z,0.6nm,0.7s,baz=153,slow=1.6,SNR=4.8						
	comp=Z,0.6nm,0.7s						
TORD	Torodi Ar. Bea	134.54	309	PKP	PKPdf	02 55 35.2	-0.2
	comp=Z,0.8nm,0.9s,baz=48,slow=2.1,SNR=3.5						
LPAZ	La Paz	146.12	94	PKPbc	PKPbc	02 55 57.4	-0.6
	comp=Z,1.7nm,0.9s,baz=333,slow=2.3,SNR=2.8						

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*KRNET **01** 03:08:38.2±0.1, 42°.59N×74°.65E, h15km, mb3.7*
*SOME **01** 03:08:38.6, 42°.62N×74°.67E, h10km*
*KNET **01** 03:08:38.1±0.4, 42°.61N×74°.66E, h10km±5km, ml2.5, Error ellipse: s-maj=3.4km s-min=1.9km az=166.0*
*NNC **01** 03:08:39.6±0.8, 42°.64N×74°.71E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=4.8km s-min=2.4km az=43.0*
ISC 01 03:08:38.9±1.0, **42°.60N**±0°.02×**74°.66E**±0°.01, **h5**km±8km, **n63**, σ0s.93/113, **25C-28D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	0.13	287	⇓P	Pg	03 08 41.3	-0.2
	878nm,0.2s,SNR=1044						
AAK				⇑S	Sg	03 08 43.3	0.0
	10μm,0.2s						
AAK	Ala-Archa	0.13	287	⇓*e*P	Pg	03 08 41.4	-0.2
	baz=91						
AAK				⇓*e*S	Sg	03 08 43.3	0.0
	baz=91						
FRU1	Bishkek	0.21	354	⇑*i*P	Pg	03 08 43.6	+0.6
	baz=57						
FRU1				⇑*i*S	Sg	03 08 45.7	-0.2
	baz=57						
KBK	Karagaybulak	0.22	75	⇑P	Pg	03 08 43.7	+0.5
	669nm,0.2s,SNR=534						
KBK				⇑S	Sg	03 08 47.3	+1.2
	2μm,0.3s						
KBK	Karagaybulak	0.22	75	⇓*e*P	Pg	03 08 43.2	0.0
	baz=74						
KBK				⇓*e*S	Sg	03 08 46.7	+0.6
	baz=74						
CHMS	Chumysh	0.41	9	⇓P	Pg	03 08 46.6	0.0
	SNR=122						
CHMS				⇓S	Sg	03 08 52.2	+0.2
CHMS	Chumysh	0.41	9	⇓P	Pg	03 08 46.5	-0.2
	35nm,0.2s						
CHMS				⇑S	Sg	03 08 52.1	+0.1
	402nm,0.4s						
CHMS	Chumysh	0.41	9	⇓*e*P	Pg	03 08 46.3	-0.4
	baz=11						
CHMS				⇓*e*S	Sg	03 08 51.9	-0.1
	baz=11						
EKS2	Erkin-Say	0.66	276	⇓P	Pg	03 08 51.7	+0.2
	33nm,0.2s,SNR=60						
EKS2				⇓S	Sb	03 09 01.1	-1.3
	131nm,0.2s						
EKS2	Erkin-Say	0.66	276	⇓*e*P	Pg	03 08 50.6	-0.8
	baz=76						
EKS2				⇓*e*S	Sg	03 08 59.6	-0.4
	baz=76						
USP	Ospenovka	0.68	350	⇓P	Pg	03 08 51.5	-0.4
	92nm,0.2s,SNR=244						
USP				⇑S	Sg	03 09 00.6	-0.1
	309nm,0.2s						
USP	Ospenovka	0.68	350	⇓*e*P	Pg	03 08 51.2	-0.7
	baz=51						
USP				⇓*e*S	Sg	03 09 00.4	-0.3
	baz=51						
TKM2	Tokmak 2	0.76	65	P	Pg	03 08 53.1	-0.4
	37nm,0.1s,SNR=180						
TKM2				⇑S	Sg	03 09 03.5	+0.1
	188nm,0.2s						
TKM2	Tokmak 2	0.76	65	⇑P	Pg	03 08 53.1	-0.4
	22nm,0.4s						
TKM2				⇑S	Sg	03 09 03.3	0.0
	62nm,0.5s						
TKM2	Tokmak 2	0.76	65	⇑*e*P	Pg	03 08 52.9	-0.6
	baz=65						
TKM2				⇑*e*S	Sg	03 09 03.5	+0.1
	baz=65						
ARLS	Aral	0.78	199	⇓*e*P	Pg	03 08 52.9	-0.9
	baz=98						
ARLS				⇓*e*S	Sg	03 09 03.5	-0.4
	baz=98						
SGDS	Sogindy	0.85	358	*e*P	Pg	03 08 54.5	-0.7
	27nm,0.1s						
SGDS				*e*S	Sg	03 09 05.7	-0.6
	78nm,0.2s						
SGDS	Sogindy	0.85	358	P	Pg	03 08 54.5	-0.7
	27nm,0.1s						
SGDS				S	Sg	03 09 05.7	-0.6
	78nm,0.2s						
AML	Almayashu	0.86	237	⇑P	Pg	03 08 55.0	-0.3
	47nm,0.3s,SNR=44						
AML				⇑S	Sg	03 09 06.6	+0.2
	42nm,0.2s						
BOOM	Boomskoye usch	0.95	96	⇓*e*P	Pg	03 08 56.3	-0.8
	baz=96						
BOOM				⇓*e*S	Sg	03 09 09.4	-0.1
	baz=96						
KST	Kastek	1.06	65	*e*P	Pg	03 08 58.6	-0.4
	33nm,0.1s						
KST				*e*S	Sb	03 09 12.6	-1.3
	106nm,0.2s						
KST	Kastek	1.06	65	P	Pg	03 08 58.6	-0.4
	33nm,0.1s						
KST	Kastek	1.06	65	*e*P	Pg	03 08 58.7	-0.4
	baz=65						
KST				*e*S	Sb	03 09 12.7	-1.3
	baz=65						
MRKS	Merke	1.07	278	*e*P	Pn	03 09 01.8	+1.2
	42nm,0.2s						
MRKS				*e*S	Sn	03 09 18.8	+2.9
	113nm,0.3s						
ULHL	Ulahol	1.22	106	⇑P	Pg	03 09 02.2	-0.1
	16nm,0.2s						
ULHL				⇓S	Sn	03 09 18.5	-1.4
	37nm,0.1s						
ULHL	Ulahol	1.22	106	⇑*e*P	Pb	03 09 01.0	-1.6
	baz=6.0						
ULHL				⇑*e*S	Sb	03 09 17.7	-1.1
	baz=6.0						
KRBS	Karabastau	1.32	34	*e*P	Pb	03 09 03.4	-0.8
	11nm,0.2s						
KRBS				*e*S	Sg	03 09 20.8	-0.6
	74nm,0.1s						
KRBS	Karabastau	1.32	34	P	Pb	03 09 03.4	-0.8
	11nm,0.2s						
KRBS				S	Sg	03 09 20.8	-0.6
	74nm,0.1s						
KRBS	Karabastau	1.32	34	*e*P	Pb	03 09 03.4	-0.8
	baz=34						
KRBS				*e*S	Sg	03 09 20.8	-0.6
	baz=34						
MTBS	Maitube	1.40	67	*e*P	Pb	03 09 04.9	-0.7
	23nm,0.2s						
MTBS				*e*S	Sg	03 09 24.2	+0.3
	60nm,0.2s						
MTBS	Maitube	1.40	67	P	Pb	03 09 04.9	-0.7
	23nm,0.2s						
MTBS				S	Sg	03 09 24.3	+0.3
	60nm,0.2s						
MTBS	Maitube	1.40	67	*e*P	Pb	03 09 04.9	-0.7
	baz=67						
MTBS				*e*S	Sg	03 09 24.2	+0.3
	baz=67						
AAA	Alma-Ata	1.77	69	*e*P	Pg	03 09 12.0	-0.7
	72nm,0.2s						
AAA				*e*S	Sg	03 09 35.7	+0.2
	140nm,0.2s						
AAA	Alma-Ata	1.77	69	P	Pg	03 09 12.0	-0.7
	72nm,0.2s						
AAA				S	Sg	03 09 35.7	+0.2
	140nm,0.2s						
KUU	Kurty	1.78	43	*e*P	Pb	03 09 11.2	-0.8
	23nm,0.3s						
KUU				*e*S	Sg	03 09 34.7	-1.4
	127nm,0.2s						
KUU	Kurty	1.78	43	P	Pb	03 09 11.2	-0.8
	23nm,0.3s						
KUU				S	Sg	03 09 34.7	-1.4
	127nm,0.2s						
KUU	Kurty	1.78	43	*e*P	Pb	03 09 11.2	-0.8
	baz=43						
KUU				*e*S	Sg	03 09 34.7	-1.4
	baz=43						
KNDC	Almaty	1.80	69	⇑Pn	Pb	03 09 12.0	-0.4
	41nm,0.5s						
KNDC				⇑Sn	Sg	03 09 37.0	+0.2
	52nm,0.2s						
MDOK	Medeo	1.84	71	*e*P	Pb	03 09 12.8	-0.4
	23nm,0.3s						
MDOK				*e*S	Sg	03 09 37.4	-0.7
	39nm,0.2s						
MDOK	Medeo	1.84	71	⇓Pn	Pb	03 09 12.7	-0.4
	12nm,0.4s						
MDOK				Pg	Pb	03 09 12.8	-0.4
	23nm,0.3s						
MDOK				Lg	Lg	03 09 37.4	
	39nm,0.2s						
MDOK				⇑Sn	Sg	03 09 37.9	-0.2
	66nm,0.6s						
MDOK	Medeo	1.84	71	*e*P	Pb	03 09 12.8	-0.4
	baz=71						
MDOK				*e*S	Sg	03 09 37.4	-0.7
	baz=71						
KTBS	Karatobe	1.85	52	*e*P	Pb	03 09 12.6	-0.7
	10nm,0.2s						
KTBS				*e*S	Sg	03 09 36.5	-1.8
	184nm,0.3s						
CHKK	Chushkaly	2.11	53	*e*P	Pb	03 09 16.9	-0.7
	20nm,0.4s						
CHKK				*e*S	Sg	03 09 44.8	-1.9
	137nm,0.3s						
CHKK	Chushkaly	2.11	53	Pg	Pb	03 09 16.9	-0.7
	20nm,0.4s						
CHKK				Lg	Lg	03 09 44.8	
	137nm,0.3s						
CHKK	Chushkaly	2.11	53	*e*P	Pb	03 09 17.0	-0.7
	baz=53						
CHKK				*e*S	Sg	03 09 44.8	-1.9
	baz=53						
DZA	Taraz	2.47	278	*e*P	Pb	03 09 23.8	0.0
	64nm,0.1s						
DZA				*e*S	Sb	03 09 55.6	+1.1
	155nm,0.3s						
BTLS	Baital	2.48	350	*e*P	Pb	03 09 22.1	-1.8
	22nm,0.2s						
BTLS				*e*S	Sb	03 09 52.9	-2.0
	10nm,0.3s						
BTLS	Baital	2.48	350	Pg	Pb	03 09 22.1	-1.8
	22nm,0.2s						
BTLS				Lg	Lg	03 09 52.8	
	10nm,0.3s						
KURS	Kuram	2.72	70	*e*P	Pb	03 09 27.5	-0.6
	9.3nm,0.4s						
KURS				*e*S	Sb	03 10 02.1	+0.3
	28nm,0.6s						
KURS	Kuram	2.72	70	Pg	Pb	03 09 27.5	-0.6
	9.3nm,0.4s						
KURS				Lg	Lg	03 10 02.1	
	28nm,0.6s						
SATY	Saty	2.79	79	*e*P	Pb	03 09 28.8	-0.5
	31nm,0.5s						
SATY				*e*S	Sb	03 10 05.2	+1.3
	46nm,0.3s						
SATY	Saty	2.79	79	Pg	Pb	03 09 28.8	-0.5
	31nm,0.5s						
SATY				Lg	Lg	03 10 06.3	
	46nm,0.3s						
KK31	Karatay Array	3.09	281	⇓Pn	Pb	03 09 34.2	-0.2
	2.1nm,0.3s,baz=101,slow=16,SNR=18						
KK31				Lg	Lg	03 10 14.1	
	6.5nm,0.3s,baz=94,slow=30,SNR=17						
KKAR	Karatay Array	3.09	281	⇓*e*P	Pn	03 09 28.8	+0.4
	baz=81						
KKAR				⇓*e*S	Sn	03 10 05.3	-0.5
	baz=81						
UZB	Uzynbulak	3.25	79	*e*P	Pb	03 09 37.2	0.0
	26nm,0.2s						
UZB				*e*S	Sb	03 10 19.0	+1.9
	18nm,0.3s						
UZB	Uzynbulak	3.25	79	Pg	Pb	03 09 37.2	0.0
	26nm,0.2s						
UZB				Lg	Lg	03 10 20.5	
	18nm,0.3s						
IUG	Iuzhnay	3.46	264	*e*P	Pg	03 09 43.1	-2.1
	109nm,0.3s						
IUG				*e*S	Sg	03 10 28.9	-1.1
	32nm,0.7s						
PDGK	Podgornoye	3.62	77	Pg	Pb	03 09 43.7	+0.3
	4.5nm,0.5s						
PDGK				Lg	Lg	03 10 30.5	
	18nm,0.4s						
PDGK	Podgornoye	3.62	77	⇑Pg	Pb	03 09 42.9	-0.5
	5.7nm,0.5s						
PDGK				⇓Lg	Lg	03 10 30.9	
	39nm,0.7s						
OTUK	Ortayu	5.88	345	⇓Pg	Pb	03 10 24.5	+2.7
	0.7nm,0.5s						
OTUK				⇑Lg	Lg	03 11 40.9	
	8.3nm,0.6s						
MK31	Makanchi Array	6.87	50	Pn	Pn	03 10 22.0	+1.8
	0.7nm,0.4s,baz=226,slow=14,SNR=14						
MK31				⇑Sn	Sn	03 11 39.3	+0.6
	0.8nm,0.6s,baz=230,slow=26,SNR=3.9						
MK31				⇑Lg	Lg	03 12 15.3	
	1.5nm,0.5s,baz=231,slow=24,SNR=4.7						
KURBB	Kurchatov Arra	8.46	17	Lg	Lg	03 13 02.1	
KURK	Kurchatov	8.56	17	⇑Lg	Lg	03 13 08.0	
	3.1nm,0.5s						

IDC 01 03:18:23.2±14.0, **23°.84S**×**178°.85E**, **h610**km±108km, **mb2.9**/2, **mbtmp4.0**/3, **Error ellipse: s-maj=227.3km s-min=71.6km az=141.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.56	276	P	P	03 20 57.8	-0.1
	6.5nm,0.8s,baz=94,slow=16,SNR=2.7						
ASAR	Alice Springs	41.00	261	P	P	03 25 15.2	0.0
	0.4nm,0.4s,baz=96,slow=6.6,SNR=10						
	0.4nm,0.4s						
WRA	Warramunga Arr	41.35	266	P	P	03 25 17.8	-0.2
	1.9nm,0.5s,baz=104,slow=7.9,SNR=45						
	1.9nm,0.5s						
AKASG	Malin Array Be	144.34	327	PKP	PKPdf	03 36 50.4	-0.3
	0.3nm,0.3s,baz=53,slow=3.3,SNR=2.5						
BRTR	Keskin Array B	146.70	307	PKPbc	PKPbc	03 36 57.3	-0.8
	0.3nm,0.5s,baz=132,slow=4.1,SNR=2.4						

*NEIC **01** 03:40:25.4±1.7, 18°.60N±0°.10×144°.5E±0°.2, h155km±10km, mb4.4/11, Error ellipse: s-maj=22.4km s-min=13.6km az=80.0*
*IDC **01** 03:40:34.8±4.4, 18°.86N×144°.30E, h284km±46km, mb3.2/4, mbtmp4.0/5, Error ellipse: s-maj=88.7km s-min=17.9km az=97.0*
ISC 01 03:40:27.6±0.8**, 18°.62N**±0°.09×**144°.6E**±0°.2**, h200**km**, n21, σ1s.41**/18**, mb4.1**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	8.73	346	P	Pn	03 42 34.0	+3.8
	33nm,0.8s,baz=270,slow=14,SNR=2.2						
JCJ				S	Sn	03 44 09.4	+1.2
	37nm,0.9s,baz=299,slow=21,SNR=2.3						
PATS	Pohnpei	17.76	129		Pn	03 44 23.9	+1.0
PATS				IAmb	IAmb	03 45 00.9	
	comp=Z,60nm,1.2s						
MTN	Manton Dam	33.96	204	P	P	03 46 52.4	+0.1
MTN				IAmb	IAmb	03 47 12.9	
	comp=Z,13nm,1.4s						
SOEI	Soe	34.60	217	P	P	03 46 57.5	-0.4
PETK	Petropavlovsk-	35.91	13	P	P	03 47 09.4	+0.9
KNRA	Kununurra	37.47	206	P	P	03 47 24.4	+2.3
KNRA				IAmb	IAmb	03 48 00.9	
	comp=Z,13nm,1.3s						
WB0	Warramunga Arr	39.44	195	P	P	03 47 38.9	+0.5
WB0				IAmb	IAmb	03 47 39.9	
	comp=Z,5.7nm,1.1s						
WR0	Warramunga Arr	39.59	195	P	P	03 47 40.1	+0.4
WR0				IAmb	IAmb	03 47 45.7	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	39.61	195	P	P	03 47 40.7	+0.9
WRAB				IAmb	IAmb	03 48 14.6	
	comp=Z,11nm,1.3s						
WB2	Warramunga Arr	39.62	195	P	P	03 47 40.8	+0.9
WB2				IAmb	IAmb	03 47 41.5	
	comp=Z,6.2nm,1.1s						
WRA	Warramunga Arr	39.62	195	P	P	03 47 40.6	+0.7
	comp=Z,1.2nm,0.3s,baz=16,slow=8.4,SNR=56						
	comp=Z,1.2nm,0.3s						
WRA	Warramunga Arr	39.62	195	P	P	03 47 39.7	-0.2
FITZ	Fitzroy Crossi	40.97	208	P	P	03 47 53.2	+2.3
SMY	Shemya	41.08	27	P	P	03 47 55.6	+4.1
AS31	Alice Springs	43.30	194	P	P	03 48 11.3	+1.5
ASAR	Alice Springs	43.30	194	P	P	03 48 10.3	+0.5
	comp=Z,0.3nm,0.4s,baz=11,slow=7.6,SNR=6.9						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	43.30	194	P	P	03 48 09.6	-0.3
BMAR	Burnt Mountain	65.61	24	P	P	03 50 51.0	+1.2
ABKAR	Akbulak array	72.69	317	P	P	03 51 35.4	+1.8
YKA	Yellowknife Ar	78.55	28	P	P	03 52 04.0	-2.5
	comp=Z,0.3nm,0.7s,baz=292,slow=5.4,SNR=2.4						
	comp=Z,0.3nm,0.7s						
FINES	FINESS Array B	86.52	335	P	P	03 52 44.4	-3.2
	comp=Z,1.2nm,0.8s,baz=46,slow=6.0,SNR=1.6						
	comp=Z,1.2nm,0.8s						

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*IDC **01** 03:41:37.0±1.0, 22°.47S×68°.83W, h90km±13km, mb3.3/2, mbtmp3.6/5, Error ellipse: s-maj=31.8km s-min=27.9km az=58.0*
*GUC **01** 03:41:37.4±0.8, 22°.37S×69°.05W, h93km±3km, ML3.6*
ISC 01 03:41:35.9±0.9**, 22°.34S**±0°.04×**69°.03W**±0°.05**, h101**km±7km**, n25, σ1s.71**/37**, 3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.29	158	P	Pn	03 41 51.3	+0.1
	106nm,0.2s,baz=0.8,slow=6.0,SNR=1015						
LVC				S	Sn	03 42 01.5	-0.9
	760nm,0.4s,baz=111,slow=22,SNR=68						
LVC	Limon Verde	0.29	158	⇓iP	Pn	03 41 51.4	+0.3
LVC				i S	Sn	03 42 01.9	-0.6
PB09	IPOC Station P	0.57	340	eP	Pn	03 41 53.4	+0.8
PB09				i S	Sn	03 42 05.6	+0.5
PB09				IAML		03 42 07.4	
	comp=E,2µm,0.4s						
PB06	IPOC Station P	0.62	234	eP	Pn	03 41 53.1	+0.1
PB06				i S	Sn	03 42 05.1	-0.6
PB06				IAML		03 42 05.8	
	comp=E,5µm,0.3s						
PB15	IPOC Station P	0.96	205	eP	Pn	03 41 56.7	+0.5
PB15				i S	Sn	03 42 11.9	+0.4
AF01	San Pedro de A	1.00	128	eP	Pn	03 41 57.8	+1.0
AF01				i S	Sn	03 42 14.8	+2.4
PB07	IPOC Station P	1.00	307	eP	Pn	03 41 57.2	+0.6
PB07				i S	Sn	03 42 12.2	0.0
PB07				IAML		03 42 13.2	
	comp=E,2µm,0.2s						
PB04	IPOC Station P	1.03	270	eP	Pn	03 41 57.2	+0.2
PB04				i S	Sn	03 42 12.3	-0.6
PB04				IAML		03 42 15.0	
	comp=N,1µm,0.2s						
PB02	IPOC Station P	1.29	321	eP	Pn	03 42 00.7	+0.8
PB02				i S	Sn	03 42 18.2	+0.2
PB02				IAML		03 42 19.8	
	comp=E,2µm,0.2s						
PB01	IPOC Station P	1.35	342	eP	Pn	03 42 01.7	+1.1
PB01				i S	Sn	03 42 20.2	+0.9
PATCX	Punta Patache	1.83	325	eP	Pn	03 42 06.8	+0.3
PATCX				i S	Sn	03 42 29.5	-0.3
PATCX				IAML		03 42 34.5	
	comp=N,660nm,0.5s						
TA01	Diego Aracena	2.06	328	eP	Pn	03 42 09.6	+0.2
TA01				i S	Sn	03 42 35.4	+0.5
TA01				IAML		03 42 40.0	
	comp=E,525nm,0.4s						
PB11	IPOC Station P	2.63	347	eP	Pn	03 42 17.4	+0.4
PB11				i S	Sn	03 42 49.0	+0.6
PB11				IAML		03 42 51.4	
	comp=E,329nm,0.4s						
GO01	Chusmiza	2.66	357	⇓iP	Pn	03 42 18.9	+1.2
GO01				i S	Sn	03 42 50.9	+1.2
GO02	Mina Guanaco	2.86	190	⇓iP	Pn	03 42 20.2	0.0
PB12	IPOC Station P	3.90	342	eP	Pn	03 42 32.9	-1.0
PB16	IPOC Station P	4.00	354	eP	Pn	03 42 37.4	+1.6
LPAZ	La Paz	6.08	8	P	Pn	03 43 07.2	+3.3
	comp=E,1.9nm,0.3s,baz=187,slow=6.4,SNR=28						
SIV	San Ignacio	9.81	51	P	Pn	03 43 53.5	-0.7
	comp=E,1.9nm,0.6s,baz=250,slow=9.2,SNR=12						
SIV				S	Sn	03 45 34.8	-7.8
	comp=E,0.2nm,0.4s,baz=302,slow=20,SNR=1.1						
CPUP	Villa Florida	11.38	113	P	Pn	03 44 14.1	-1.3
	comp=E,1.3nm,0.8s,baz=287,slow=11,SNR=2.6						
H03N1	Juan Fernandez	14.09	216	T	T	03 58 58.3	
	baz=37,slow=73,SNR=3.8						
H03N2	Juan Fernandez	14.10	216	T	T	03 58 59.7	
	baz=37,slow=73,SNR=3.7						
H03N3	Juan Fernandez	14.10	216	T	T	03 58 57.5	
	baz=37,slow=73,SNR=10.0						
BDFB	Brasilia	20.95	75	P	P	03 46 11.1	+0.1
	comp=E,1.0nm,0.5s,baz=248,slow=19,SNR=1.6						
	comp=E,1.0nm,0.5s						
TORD	Torodi Ar. Bea	77.74	70	P	P	03 53 23.6	+1.3
	comp=E,0.6nm,0.6s,baz=256,slow=4.9,SNR=9.7						
	comp=E,0.6nm,0.6s						

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*CNRM **01** 03:48:46.5, 35°.91N×8°.43W, h1km, ml4.1*
*IDC **01** 03:48:48.1±0.6, 35°.98N×7°.90W, h0km, mb4.0/16, mbtmp4.0/21, ML4.2/4, MS3.2/10, Error ellipse: s-maj=17.9km s-min=13.7km az=119.0*
*NEIC **01** 03:48:49.4±1.7, 36°.09N±0°.05×7°.83W±0°.07, h10km±1km, mb4.1/27, Error ellipse: s-maj=10.2km s-min=8.2km az=284.0*
*IGIL **01** 03:48:51.3, 36°.06N×7°.90W, h18km, ML4.2*
*INMG **01** 03:48:51.2±2.0, 36°.05N×7°.90W, h14km±6km, ML4.0, Error ellipse: s-maj=3.4km s-min=3.0km az=54.0*
*LDG **01** 03:48:52.8, 36°.15N×7°.68W, h39km*
*SFS **01** 03:48:52.0, 36°.06N×7°.94W, h39km, ML4.2, GOLFO DE CADIZ*
*MDD **01** 03:48:52.1±0.3, 36°.06N×7°.94W, h35km±7km, mb_Lg4.0/42, Error ellipse: s-maj=2.1km s-min=1.9km az=39.0*
ISC 01 03:48:49.7±1.8**, 36°.10N**±0°.03×**7°.80W**±0°.03**, h14**km±12km**, n259, σ2s.07**/355**, mb4.0**/25**, MS3.2**/8**, 13C-33D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFARO	Faro	0.93	354	eP	Pn	03 49 08.4	+0.1
PFARO				eS	Sn	03 49 21.7	+0.3
PFARO				A	A	03 49 29.9	
	6µm,0.3s						
PTAV	Tavira	1.03	6	eP	Pn	03 49 10.7	+1.0
PTAV				eS	Sn	03 49 24.9	+1.0
PTAV				A	A	03 49 31.9	
	1µm,1.0s						
PALBU	Albufeira	1.06	340	eP	Pb	03 49 09.9	+0.1
PALBU				eS	Sb	03 49 24.3	+0.8
PALBU				A	A	03 49 35.2	
	2µm,0.5s						
PBDV	Barranco-do-Ve	1.15	355	⇓iP	Pb	03 49 11.4	+0.1
PBDV				eS	Sn	03 49 28.2	+1.4
PBDV				A	A	03 49 35.2	
	2µm,0.4s						
PLAGO	Lagos	1.23	324	eP	Pn	03 49 11.7	-0.7
PVAQ	Vaqueiros	1.30	3		Pn	03 49 13.6	+0.1
PVAQ	Vaqueiros	1.30	3	P	Pn	03 49 13.4	-0.1
PVAQ				S	Sg	03 49 32.2	+0.4
PVAQ	Vaqueiros	1.30	3	⇓iP	Pn	03 49 13.8	+0.3
PVAQ				A	A	03 49 37.9	
	1µm,0.5s						
PFVI	Vila Bisbo	1.32	322	Pn	Pn	03 49 12.6	-1.1
PFVI	Vila Bisbo	1.32	322	P	Pn	03 49 12.6	-1.1
PFVI				S	Sb	03 49 30.7	-0.4
PFVI	Vila Bisbo	1.32	322	⇓iP	Pn	03 49 12.7	-1.1
PFVI				eS	Sb	03 49 30.7	-0.4
PFVI				A	A	03 49 39.1	
	2µm,0.4s						
PSVI	Cabo S. Vicent	1.33	314	eP	Pn	03 49 13.3	-0.6
PSVI				eS	Sb	03 49 29.6	-1.8
PSVI				A	A	03 49 40.0	
	2µm,0.4s						
SFS	San Fernando	1.34	74	Pn	Pn	03 49 12.0	-1.9
MORF	Marmelete	1.39	331	eP	Pn	03 49 14.0	-0.6
MORF				eS	Sb	03 49 30.8	-2.1
MORF				IAML		03 49 39.1	
	comp=N,4µm,0.4s						
MORF	Marmelete	1.39	331	⇓iP	Pn	03 49 14.0	-0.6
MORF				eS	Sb	03 49 32.8	-0.2
MORF				A	A	03 49 37.1	
	comp=N,2µm,0.2s						
EGRO	El Granado	1.45	10	⇓P	Pn	03 49 16.0	+0.5
EGRO				S	Sn	03 49 33.9	-0.5
EGRO				i Vmb_Lg		03 49 43.9	
PALJ	Aljezur	1.46	327	eP	Pn	03 49 15.0	-0.6
PALJ				eS	Sb	03 49 35.5	+0.5
PALJ				A	A	03 49 40.0	
	comp=N,4µm,0.4s						
PCVE	Castro Verde	1.54	353	⇓iP	Pn	03 49 17.0	+0.3
PCVE				eS	Sn	03 49 35.1	-1.5
PCVE				A	A	03 49 48.6	
	comp=N,1µm,0.4s						
PTEO	Sao Teotonio	1.62	333	⇓iP	Pn	03 49 17.6	-0.2
PTEO				eS	Sn	03 49 37.5	-1.1
PTEO				A	A	03 49 45.8	
	comp=N,2µm,0.7s						
ESPR	Espera	1.74	63	⇑P	Pb	03 49 21.0	-0.4
ESPR				S	Sn	03 49 41.8	+0.3
ESPR				i Vmb_Lg		03 49 43.9	
MESJ	Messejana	1.77	349	eP	Pn	03 49 19.9	0.0
MESJ				eS	Sn	03 49 40.6	-1.6
MESJ				IAML		03 49 54.4	
	comp=N,1µm,0.2s						
MESJ	Messejana	1.77	349	⇓iP	Pn	03 49 20.0	+0.1
MESJ				eS	Sn	03 49 43.3	+1.1
MESJ				A	A	03 49 52.1	
	comp=N,1µm,0.5s						
EMIN	Mina Concepcio	1.89	28	⇓P	Pn	03 49 22.2	+0.6
EMIN				S	Sn	03 49 44.2	-1.1
EMIN				i Vmb_Lg		03 49 49.6	
EJIF	Jimena Fronter	1.91	79	⇑P	Pb	03 49 24.3	0.0
EJIF				S	Sb	03 49 48.4	+0.3
PBEJ	Beja	1.93	358	⇓iP	Pn	03 49 22.1	+0.1
PBEJ				eS	Sn	03 49 46.0	0.0
PBEJ				A	A	03 49 53.8	
	comp=N,506nm,0.4s						
ECEU	Ceuta	1.97	95	⇑P	Pb	03 49 25.1	-0.3
ECEU				S	Sb	03 49 49.6	-0.2
SMIR	Smir Dam	2.01	101	P	Pn	03 49 24.5	+1.4
SMIR				S	Sn	03 49 47.0	-1.0
RSA	Sarsar	2.02	126	P	Pn	03 49 22.9	-0.5
RSA				S	Sn	03 49 46.9	-1.5
PSINE	Sines	2.04	336	eP	Pn	03 49 23.7	+0.1
PSINE				A	A	03 49 58.9	
	comp=N,961nm,0.4s						
PNCL	Nicolau / Gran	2.09	344	⇓iP	Pn	03 49 24.0	-0.3
PNCL				eS	Sn	03 49 48.9	-1.2
PNCL				A	A	03 49 57.2	
	comp=N,680nm,0.3s						
PBAR	Barrancos	2.16	16	⇓eP	Pn	03 49 25.7	+0.5
PBAR				eS	Sn	03 49 52.9	+1.1
PBAR				A	A	03 50 08.6	
	comp=N,342nm,0.4s						
CHEFC	Chefchaouen	2.23	116	P	Pb	03 49 30.0	+0.1
CHEFC	Chefchaouen	2.23	116	P	Pn	03 49 27.8	+1.5
CHEFC				S	Sn	03 49 53.2	-0.5
EVO	Evora	2.44	356	P	Pn	03 49 29.1	+0.1
EVO				S	Sn	03 49 56.2	-2.4
EVO	Evora	2.44	356	⇓iP	Pn	03 49 29.1	+0.1
EVO				eS	Sn	03 49 57.9	-0.7
EVO				A	A	03 50 17.4	
	comp=N,405nm,0.5s						
EMIJ	Mijas	2.49	78	⇑P	Pn	03 49 30.9	+1.1
EMIJ				S	Sn	03 49 59.0	-0.9
EMIJ				i Vmb_Lg		03 50 07.3	
PSETU	Setºbal	2.58	341	eP	Pn	03 49 31.2	+0.2
PSETU				A	A	03 50 19.8	
	comp=N,2µm,0.6s						
EBAD	Badajoz	2.72	13	⇓P	Pn	03 49 33.2	+0.3
EBAD				S	Sn	03 50 04.5	-1.2
EBAD				i Vmb_Lg		03 50 07.6	
ECAB	El Cabril	2.74	43	⇓P	Pn	03 49 34.0	+0.7
ECAB				S	Sn	03 50 03.8	-2.3
ECAB				i Vmb_Lg		03 50 09.3	
PESTR	Estremoz	2.77	3	Pn	Pn	03 49 33.6	0.0
PESTR	Estremoz	2.77	3	P	Pn	03 49 33.7	0.0
PESTR				S	Sn	03 50 07.6	+0.8
PESTR	Estremoz	2.77	3	⇓eP	Pn	03 49 33.7	+0.1
PESTR				eS	Sn	03 50 06.2	-0.6
PESTR				A	A	03 50 31.6	
	comp=N,302nm,0.7s						
AVE	Averroes	2.81	173	P	Pn	03 49 34.2	0.0
AVE				S	Sn	03 50 04.8	-3.1
AVE	Averroes	2.81	173		Pn	03 49 33.7	-0.5
AVE	Averroes	2.81	173	P	Pn	03 49 34.3	+0.1
AVE				S	Sn	03 50 05.0	-2.9
ZHG	ZHG	2.81	160	P	Pn	03 49 34.0	-0.2
ZHG	ZHG	2.81	160	P	Pn	03 49 34.3	0.0
ZHG				S	Sn	03 50 06.3	-1.7
LIS	Lisbon	2.83	338	eP	Pn	03 49 34.9	+0.5
LIS				eS	Sn	03 50 07.4	-0.8
INMG	Instituto de M	2.87	339	eP	Pn	03 49 35.8	+0.8
INMG				eS	Sn	03 50 09.3	0.0
PVERD	Verdizela	2.95	335	eP	Pn	03 49 33.2	-2.9
PVERD				eS	Sn	03 50 04.0	-7.3
PVERD				A	A	03 50 32.6	
	comp=N,2µm,0.5s						
PBEN	Benavente	2.96	344	eP	Pn	03 49 37.0	+0.8
PBEN				eS	Sn	03 50 12.0	+0.6
PBEN				A	A	03 50 23.1	
	comp=N,209nm,0.7s						
PMTG	Montargil	2.98	354	⇓eP	Pn	03 49 36.5	0.0
PMTG				eS	Sn	03 50 10.6	-1.5
PMTG				A	A	03 50 31.5	
	comp=N,333nm,0.4s						
PCASC	Cascais	2.99	334	eP	Pn	03 49 37.1	+0.5
PVFX	Vila Franca de	3.00	342	eP	Pn	03 49 37.5	+0.7
PVFX				eS	Sn	03 50 12.0	-0.5
PVFX				A	A	03 50 14.4	
	comp=N,1µm,0.4s						
PMAFR	Mafra	3.09	338	eP	Pn	03 49 38.0	0.0
PMAFR				eS	Sn	03 50 12.9	-1.8
PMAFR				A	A	03 50 13.3	
	comp=N,1µm,0.4s						
EGOR	Sierra Gorda,	3.13	70	⇑P	Pn	03 49 40.9	+2.1
EGOR				S	Sn	03 50 15.6	-0.5
EGOR				i Vmb_Lg		03 50 22.4	
PALE	Palemas	3.26	105	P	Pb	03 49 45.0	-2.4
PALE	Palemas	3.26	105	P	Pn	03 49 41.3	+0.8
PALE				S	Sn	03 50 18.7	-0.4
EADA	Adamuz	3.30	50	⇓P	Pn	03 49 42.3	+1.4
EADA				S	Sn	03 50 18.1	-1.8
EADA				i Vmb_Lg		03 50 21.7	
PMRV	Marv??o	3.34	5	⇓eP	Pn	03 49 41.8	+0.3
PMRV				eS	Sn	03 50 19.4	-1.5
PMRV				A	A	03 50 39.4	
	comp=N,345nm,0.8s						
LCRM	LCR	3.41	134	P	Pn	03 49 42.5	0.0
LCRM				S	Sn	03 50 22.6	-0.3
ELGU	Los Guajares,	3.45	76	P	Pn	03 49 43.8	+0.8
ELGU				S	Sn	03 50 23.9	+0.2
ELGU				i Vmb_Lg		03 50 32.5	
PCDRA	Caldas da Rain	3.47	343	eP	Pn	03 49 43.6	+0.4
PCDRA				eS	Sn	03 50 22.5	-1.6
PCDRA				A	A	03 50 39.2	
	comp=N,2µm,0.4s						
PSBE	So Bento	3.50	347	⇓eP	Pn	03 49 43.9	+0.2
PSBE				eS	Sn	03 50 23.0	-1.9
PSBE				A	A	03 50 53.2	
	comp=N,299nm,0.4s						
AKLM	AKL	3.59	115	P	Pn	03 49 47.0	+2.1
AKLM	AKL	3.59	115	P	Pn	03 49 46.8	+1.9
AKLM				S	Sn	03 50 23.7	-3.4
SRHM	Skhour des Reh	3.62	181	P	Pn	03 49 45.0	-0.4
SRHM	Skhour des Reh	3.62	181	P	Pn	03 49 45.1	-0.2
SRHM				S	Sn	03 50 25.5	-2.4
EQUE	Quentar	3.67	71	⇑P	Pn	03 49 48.4	+2.3
EQUE				S	Sn	03 50 29.0	-0.3
EQUE				i Vmb_Lg		03 50 36.5	
PCBR	Castelo Branco	3.74	4	eP	Pn	03 49 47.4	+0.4
PCBR				eS	Sn	03 50 28.6	-2.2
PCBR				A	A	03 50 59.6	
	comp=N,162nm,0.5s						
CZD	Col de Zad	3.81	143	P	Pn	03 49 48.4	+0.2
CZD				S	Sn	03 50 30.7	-2.3
EALB	Alboran	3.86	91	P	Pn	03 49 48.5	-0.2
EALB				S	Sn	03 50 32.3	-1.5
EALB				i Vmb_Lg		03 50 37.6	
PCAS	Casmilo, Conde	3.99	352	⇓iP	Pn	03 49 50.4	+0.1
PCAS				eS	Sn	03 50 35.1	-1.7
PCAS				A	A	03 51 08.0	
	comp=N,207nm,0.5s						
GOG	Mont Gurugu	4.01	101	P	Pn	03 49 50.9	+0.2
GOG				S	Sn	03 50 36.9	-0.5
EMEL	Melilla	4.02	100	P	Pn	03 49 51.4	+0.6
EMEL				S	Sn	03 50 35.5	-2.2
EMEL				i Vmb_Lg		03 50 38.9	
WMELI	Melilla	4.02	100	P	Pn	03 49 51.4	+0.7
WMELI				S	Sn	03 50 35.6	-2.1
EBER	Berja	4.03	77	⇓P	Pn	03 49 52.0	+0.9
EBER				S	Sn	03 50 37.1	-1.2
EBER				i Vmb_Lg		03 50 47.6	
MD31	MD31	4.09	141	P	Pn	03 49 51.8	+0.1
MD31				S	Sn	03 50 37.0	-2.4
EQES	Quesada	4.15	64	⇑P	Pn	03 49 53.9	+1.2
EQES				S	Sn	03 50 38.9	-2.1
EQES				i Vmb_Lg		03 50 44.6	
EPLA	Plasencia	4.18	18	P	Pn	03 49 53.3	+0.2
EPLA				S	Sn	03 50 38.9	-2.9
EPLA				i Vmb_Lg		03 50 41.1	
MDT	Midelt	4.21	140	Pn	Pn	03 49 54.0	+0.5
	comp=N,31nm,0.3s,baz=218,slow=5.4,SNR=1139						
MDT				Sn	Sn	03 50 38.9	-3.5
	comp=N,23nm,0.3s,baz=178,slow=17,SNR=8.8						
	comp=N,221nm,0.6s						
MDT	Midelt	4.21	140	P	Pn	03 49 53.8	+0.3
MDT				S	Sn	03 50 38.9	-3.5
MTE	Manteigas	4.30	3		Pn	03 49 54.6	0.0
MTE	Manteigas	4.30	3	⇓eP	Pn	03 49 54.8	+0.1
MTE				eS	Sn	03 50 42.9	-1.7
MTE				A	A	03 51 13.2	
	comp=N,332nm,0.5s						
PAB	San Pablo	4.39	37		Pn	03 49 56.6	+0.6
PAB	San Pablo	4.39	37	⇓P	Pn	03 49 57.1	+1.2
PAB				S	Sn	03 50 42.4	-4.6
PAB				i Vmb_Lg		03 50 47.6	
TAF	Taforalt	4.58	105	P	Pn	03 49 58.8	+0.2
TAF				S	Sn	03 50 50.4	-1.2
ENIJ	Nijar	4.58	77	P	Pn	03 49 59.8	+1.2
ENIJ				S	Sn	03 50 49.0	-2.6
ENIJ				i Vmb_Lg		03 50 55.9	
PVIS	Viseu	4.61	359	eP	Pn	03 49 58.8	-0.2
PVIS				eS	Sn	03 50 50.1	-2.2
PVIS				A	A	03 51 25.8	
	comp=N,126nm,0.6s						
JBK	JBK	4.63	111	P	Pn	03 49 59.7	+0.4
JBK				S	Sn	03 50 50.0	-3.0
ESDC	Sonseca Array	4.68	39	Pn	Pn	03 50 01.1	+1.1
	comp=N,12nm,0.3s,baz=225,slow=13,SNR=912						
ESDC				Sn	Sn	03 50 50.6	-3.5
	comp=N,15nm,0.3s,baz=228,slow=24,SNR=19						
ESDC				LR	LR	03 51 42.8	
	comp=N,62nm,20.2s,baz=208,slow=36						
	comp=N,58nm,0.4s						
ESDC	Sonseca Array	4.68	39	Pn	Pn	03 50 00.8	+0.8
ESDC	Sonseca Array	4.68	39	⇓P	Pn	03 50 01.1	+1.1
ESDC				S	Sn	03 50 49.4	-4.7
ESDC				i Vmb_Lg		03 50 54.2	
ESBB	Sonseca Array	4.69	39		Pn	03 50 00.9	+1.0
PTO	Porto	5.07	353	⇑eP	Pn	03 50 05.1	-0.1
PTO				eS	Sn	03 50 59.0	-4.6
PTO				A	A	03 51 01.4	
	comp=N,162nm,0.1s						
MVO	Moncorvo	5.09	7	⇓eP	Pn	03 50 05.6	0.0
MVO				eS	Sn	03 51 00.2	-4.0
MVO				A	A	03 51 44.8	
	comp=N,204nm,0.5s						
PVRL	Vila Real	5.17	1	⇓eP	Pn	03 50 06.3	-0.3
PVRL				eS	Sn	03 51 03.4	-2.7
PVRL				A	A	03 51 41.2	
	comp=N,98nm,0.6s						
EZAR	Zarzadilla de	5.20	68	P	Pn	03 50 07.5	+0.4
EZAR				S	Sn	03 51 03.8	-3.0
POLO	Lamas de Olo	5.27	0	⇓eP	Pn	03 50 08.0	0.0
POLO				eS	Sn	03 51 04.9	-3.7
POLO				A	A	03 51 42.5	
	comp=N,42nm,0.5s						
GUD	Guadarrama	5.36	31	⇓P	Pn	03 50 10.4	+1.0
GUD				S	Sn	03 51 07.1	-3.9
GUD				i Vmb_Lg		03 51 10.8	
UCM	Universidad Co	5.52	39	P	Pn	03 50 13.2	+1.7
UCM				S	Sn	03 51 11.9	-2.8
EMUR	La Murta	5.53	70	P	Pn	03 50 13.2	+1.6
EMUR				S	Sn	03 51 11.9	-3.1
EMUR				i Vmb_Lg		03 51 16.4	
ETOB	Tobarra	5.59	61	⇑P	Pn	03 50 13.0	+0.5
ETOB				S	Sn	03 51 13.3	-3.2
ETOB				i Vmb_Lg		03 51 16.4	
PCAB	Cabril	5.61	358	eP	Pn	03 50 12.5	-0.1
PCAB				eS	Sn	03 51 13.0	-3.8
PCAB				A	A	03 51 55.8	
	comp=N,73nm,0.6s						
CART	Cartagena	5.65	73	P	Pn	03 50 13.7	+0.5
CART				S	Sn	03 51 13.9	-3.9
CART	Cartagena	5.65	73		Pn	03 50 12.8	-0.4
CART	Cartagena	5.65	73	P	Pn	03 50 13.7	+0.5
CART				S	Sn	03 51 13.7	-4.1
PBRG	Braganca	5.76	8	eP	Pn	03 50 14.7	0.0
PBRG				eS	Sn	03 51 16.7	-3.8
PBRG				A	A	03 51 59.3	
	comp=N,59nm,0.5s						
ELOB	Lobios	5.76	358	⇓P	Pn	03 50 14.4	-0.4
ELOB				S	Sn	03 51 15.5	-5.3
ELOB				i Vmb_Lg		03 51 18.8	
PGAV	Gavieira, Arco	5.87	357	eP	Pn	03 50 16.1	-0.2
PGAV				eS	Sn	03 51 20.4	-3.0
PGAV				A	A	03 52 08.5	
	comp=N,92nm,0.7s						
ECAL	Calabor	5.89	8	⇓P	Pn	03 50 16.6	0.0
ECAL				S	Sn	03 51 19.5	-4.4
ECAL				i Vmb_Lg		03 51 21.1	
ETRV	Los Montesinos	5.94	69	P	Pn	03 50 17.8	+0.6
ETRV				S	Sn	03 51 20.7	-4.3
EZAM	Zamans	6.08	354	P	Pn	03 50 18.8	-0.3
EZAM				S	Sn	03 51 22.2	-6.3
EZAM				i Vmb_Lg		03 51 23.9	
AFON	Font Roja	6.32	64	⇑P	Pn	03 50 23.2	+0.7
AFON				S	Sn	03 51 31.7	-2.9
AFON				i Vmb_Lg		03 51 34.4	
ECHE	Chera	6.43	55	⇓P	Pn	03 50 24.7	+0.7
ECHE				S	Sn	03 51 32.9	-4.3
ECHE				i Vmb_Lg		03 51 35.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ETOR	**Torete**	**6.52**	**42**	⇓P	**Pn**	**03 50 26.4**	**+1.2**
ETOR				S	**Sn**	**03 51 35.3**	**-4.1**
ETOR				*i* Vmb_Lg		03 51 40.1	
EAGO	**Agolada(Pontev**	**6.70**	**358**	⇑P	**Pn**	**03 50 27.7**	**+0.1**
EAGO				S	**Sn**	**03 51 37.9**	**-5.8**
EAGO				*i* Vmb_Lg		03 51 42.2	
FIGM	**Figuig**	**6.71**	**124**	P	**Pn**	**03 50 31.0**	**+3.1**
FIGM	**Figuig**	**6.71**	**124**	P	**Pn**	**03 50 27.4**	**-0.4**
FIGM				S	**Sn**	**03 51 42.9**	**-1.2**
EMAZ	**Mazaricos**	**6.90**	**353**	⇑P	**Pn**	**03 50 29.8**	**-0.6**
EMAZ				S	**Sn**	**03 51 41.8**	**-6.9**
EMAZ				*i* Vmb_Lg		03 51 50.5	
EMOS	**Mosqueruela**	**7.17**	**51**	P	**Pn**	**03 50 36.1**	**+1.9**
EMOS				S	**Sn**	**03 51 50.4**	**-5.1**
EMOS				*i* Vmb_Lg		03 51 56.2	
EPON	**Pontenova**	**7.24**	**4**	P	**Pn**	**03 50 34.9**	**-0.1**
EARI	**Arriondas**	**7.46**	**15**	P	**Pn**	**03 50 38.4**	**+0.2**
EARI				S	**Sn**	**03 51 57.0**	**-5.6**
EARI				*i* Vmb_Lg		03 52 01.2	
PMPST	**Porto Santo, M**	**7.66**	**249**	*e*P	**Pn**	**03 50 38.2**	**-2.6**
PMPST				*e*S	Sn	03 51 54.3	-13
PMPST				A	A	03 51 59.8	
	comp=N,57nm,0.8s						
PMPS	**Porto Santo**	**7.67**	**249**	*e*P	**Pn**	**03 50 38.2**	**-2.7**
PMPS				*e*S	Sn	03 51 56.5	-11
PMPS				A	A	03 52 08.7	
	comp=N,31nm,0.3s						
ECOL	**Islas Columbre**	**7.70**	**58**	S	**Sn**	**03 52 04.7**	**-3.5**
EIBI	**Ibiza**	**7.83**	**65**	P	**Pn**	**03 50 43.2**	**+0.1**
EIBI				S	**Sn**	**03 52 05.6**	**-5.8**
EIBI				*i* Vmb_Lg		03 52 10.0	
ELAN	**Lanestosa**	**7.88**	**24**	P	**Pn**	**03 50 44.1**	**+0.3**
ELAN				S	**Sn**	**03 52 07.1**	**-5.6**
ELAN				*i* Vmb_Lg		03 52 11.6	
ERTA	**Horta de San J**	**8.01**	**50**	P	**Pn**	**03 50 47.0**	**+1.5**
ERTA				S	**Sn**	**03 52 12.6**	**-3.3**
ERTA				*i* Vmb_Lg		03 52 25.8	
ESAC	**San Caprasio**	**8.01**	**43**	P	**Pn**	**03 50 47.6**	**+2.0**
ESAC				S	**Sn**	**03 52 12.9**	**-3.0**
EARA	**Aranguren**	**8.22**	**34**	P	**Pn**	**03 50 50.1**	**+1.7**
EARA				S	**Sn**	**03 52 15.9**	**-5.2**
EARA				*i* Vmb_Lg		03 52 21.5	
PMAR	**Madeira**	**8.25**	**249**	P	**Pn**	**03 50 46.1**	**-3.0**
PMAR	**Madeira**	**8.25**	**249**	*e*P	**Pn**	**03 50 46.8**	**-2.3**
PMAR				*e*S	Sn	03 52 10.2	-12
PMAR				A	A	03 52 20.6	
	comp=N,66nm,0.2s						
FUL	**Funchal**	**8.27**	**248**	*e*P	**Pn**	**03 50 46.7**	**-2.4**
FUL				*e*S	Sn	03 52 10.9	-11
FUL				A	A	03 52 14.9	
	comp=N,60nm,0.2s						
PMOZ	**Porto Moniz, M**	**8.42**	**250**	Pn	**Pn**	**03 50 49.0**	**-2.4**
PMOZ	**Porto Moniz, M**	**8.42**	**250**	P	**Pn**	**03 50 48.8**	**-2.5**
EORO	**Oroz-Betelu**	**8.43**	**34**	⇑P	**Pn**	**03 50 53.4**	**+1.9**
EORO				S	**Sn**	**03 52 20.7**	**-5.8**
EORO				*i* Vmb_Lg		03 52 26.3	
EFAM	**Famara**	**8.46**	**216**	P	**Pn**	**03 50 49.1**	**-2.8**
EFAM				S	Sn	03 52 16.9	-10
EFAM				*i* Vmb_Lg		03 52 19.5	
SJPF	**Ste Jean**	**8.65**	**34**	*e*Pn	**Pn**	**03 50 55.7**	**+1.4**
SJPF				*e*Sn	Sn	03 52 23.5	-8.1
	comp=N,52nm,0.4s						
EPOB	**Poblet**	**8.69**	**50**	P	**Pn**	**03 50 56.4**	**+1.4**
EPOB				S	**Sn**	**03 52 27.4**	**-5.5**
EPOB				*i* Vmb_Lg		03 52 33.6	
ETSF	**Etsaut**	**8.79**	**37**	*e*Pn	**Pn**	**03 50 57.8**	**+1.4**
ETSF				*e*Sn	**Sn**	**03 52 29.9**	**-5.4**
	comp=N,44nm,0.5s						
ECHI	**Chisagues Biel**	**9.01**	**41**	P	**Pn**	**03 51 00.9**	**+1.4**
ECHI				S	**Sn**	**03 52 34.5**	**-6.2**
CFUE	**Fuerteventura**	**9.06**	**217**	P	**Pn**	**03 50 55.5**	**-4.5**
CFUE				S	Sn	03 52 30.5	-11
CFUE				*i* Vmb_Lg		03 52 33.3	
ETOS	**Mallorca**	**9.15**	**63**	P	**Pn**	**03 51 00.6**	**-0.6**
ETOS				S	**Sn**	**03 52 38.4**	**-5.6**
EMIR	**Miracle**	**9.29**	**49**	P	**Pn**	**03 51 05.1**	**+1.9**
EMIR				S	**Sn**	**03 52 43.8**	**-3.7**
CFTV	**Fuerteventura**	**9.33**	**217**	S	Sn	03 52 36.9	-12
EPF	**Esparros**	**9.34**	**40**	*e*Pn	**Pn**	**03 51 05.4**	**+1.5**
EPF				*e*Sn	**Sn**	**03 52 41.1**	**-7.7**
	comp=N,26nm,0.4s						
EJON	**La Jonquera**	**10.43**	**49**	P	**Pn**	**03 51 20.2**	**+1.5**
MTLF	**Montolieu**	**10.57**	**44**	*e*Pn	**Pn**	**03 51 21.7**	**+1.1**
MTLF				*e*Sn	**Sn**	**03 53 11.0**	**-7.8**
	comp=N,14nm,0.7s						
LFF	**La Frestale**	**10.96**	**34**	*e*Pn	**Pn**	**03 51 26.3**	**+0.4**
LFF				*e*Sn	Sn	03 53 19.7	-8.5
	comp=N,14nm,0.5s						
TBT	**Taburiente**	**11.30**	**232**	P	**Pn**	**03 51 28.7**	**-2.0**
CAF	**Calviac**	**11.57**	**37**	*e*Pn	**Pn**	**03 51 34.5**	**+0.1**
CAF				*e*Sn	Sn	03 53 32.4	-11
	comp=N,14nm,0.5s						
RJF	**Les Rejaudoux**	**11.59**	**35**	*e*Pn	**Pn**	**03 51 34.4**	**-0.2**
RJF				*e*Sn	Sn	03 53 32.9	-11
	comp=N,14nm,0.5s						
LASF	**Ste Croix**	**11.96**	**45**	*e*Sg	Sn	03 53 42.1	-11
	comp=N,0.2nm,0.2s						
MFF	**Saint Martin d**	**11.96**	**26**	*e*Pn	**Pn**	**03 51 39.5**	**-0.1**
MFF				*e*Sn	Sn	03 53 43.0	-10
	comp=N,22nm,0.9s						
QUIF	**Quistinic**	**12.30**	**15**	*e*Pn	**Pn**	**03 51 43.3**	**-0.9**
QUIF				*e*Sn	Sn	03 53 51.1	-10
	comp=N,27nm,0.9s						
TCF	**Toulx Ste Croi**	**12.65**	**33**	*e*Pn	**Pn**	**03 51 48.6**	**-0.6**
TCF				*e*Sn	Sn	03 53 58.4	-11
	comp=N,7.3nm,0.6s						
ROSF	**Rostrenen**	**12.68**	**14**	*e*Pn	**Pn**	**03 51 48.4**	**-1.0**
ROSF				*e*Sn	Sn	03 54 00.7	-10
	comp=N,3.3nm,0.4s						
SGMF	**Saint Gilles**	**12.75**	**16**	*e*Pn	**Pn**	**03 51 49.6**	**-0.8**
SGMF				*e*Sn	Sn	03 54 01.4	-11
	comp=N,50nm,1.2s						
VIVF	**Saint-Julien-l**	**12.90**	**43**	*e*Pn	**Pn**	**03 51 52.4**	**-0.1**
BGF	**Bois d'Agland**	**13.14**	**34**	*e*Pn	**Pn**	**03 51 55.4**	**-0.4**
BGF				*e*Sn	Sn	03 54 11.4	-10
	comp=N,14nm,0.5s						
LMR	**La Mourre**	**13.16**	**52**	*e*Sg	Sn	03 54 14.0	-8.2
	comp=N,2.7nm,0.6s						
GRR	**Gorron**	**13.30**	**20**	*e*Pn	**Pn**	**03 51 57.3**	**-0.7**
GRR				*e*Sn	Sn	03 54 15.4	-10
	comp=N,12nm,0.8s						
AVF	**Avril sur Loir**	**13.55**	**35**	*e*Pn	**Pn**	**03 52 00.6**	**-0.7**
AVF				*e*Sn	Sn	03 54 21.1	-11
	comp=N,16nm,1.1s						
HYF	**Humbligny**	**13.60**	**32**	*e*Pn	**Pn**	**03 52 01.7**	**-0.3**
ORIF	**Oris-en-Rattie**	**13.62**	**46**	*e*Pn	**Pn**	**03 52 04.1**	**+1.7**
ORIF				*e*Sg	Sn	03 54 21.5	-12
	comp=N,0.6nm,0.3s						
SMF	**Signal de Mont**	**13.67**	**36**	*e*Pn	**Pn**	**03 52 01.8**	**-1.2**
SMF				*e*Sn	Sn	03 54 24.1	-11
	comp=N,7.3nm,0.9s						
LDF	**La Druitiere**	**13.71**	**22**	*e*Pn	**Pn**	**03 52 03.0**	**-0.5**
LDF				*e*Sn	Sn	03 54 23.9	-12
JSA	**Saint Aubin**	**13.71**	**16**	P	**Pn**	**03 52 03.7**	**+0.2**
FLN	**La Foliniere**	**13.75**	**21**	*e*Pn	**Pn**	**03 52 02.6**	**-1.5**
	baz=209						
FLN				*e*Sn	Sn	03 54 25.4	-11
	comp=N,51nm,1.4s						
SSF	**Saint Saulge**	**13.82**	**34**	*e*Pn	**Pn**	**03 52 04.2**	**-0.9**
SSF				*e*Sn	Sn	03 54 26.3	-12
	comp=N,7.0nm,0.7s						
KEST	**Kesra**	**13.90**	**86**	Pn	**Pn**	**03 52 08.5**	**+2.2**
	comp=N,0.3nm,0.3s,baz=221,slow=5.2,SNR=6.1						
	comp=N,2.0nm,0.5s						
KEST	**Kesra**	**13.90**	**86**		**Pn**	**03 52 06.6**	**+0.3**
PSMN	**Pico do Norte,**	**13.91**	**279**	*e*T	T	04 05 01.4	
PSMA	**Santa Maria**	**13.97**	**279**	*e*T	T	04 05 01.1	
BART	**Pico Bartolome**	**14.00**	**282**	*e*T	T	04 05 00.0	
MBDF	**Montbardon**	**14.04**	**48**	*e*Pn	**Pn**	**03 52 08.8**	**+0.6**
CLF	**Chambon-Foret**	**14.05**	**29**	Pn	**Pn**	**03 52 07.3**	**-0.8**
CLF	**Chambon-Foret**	**14.05**	**29**	P	**Pn**	**03 52 08.2**	**0.0**
LOR	**Lormes**	**14.14**	**34**	*e*Pn	**Pn**	**03 52 09.5**	**+0.1**
	baz=234						
LOR				*e*Sn	Sn	03 54 35.5	-11
	comp=N,6.6nm,0.8s						
CCA1	**Carnmenellis**	**14.20**	**7**	P	**Pn**	**03 52 09.6**	**-0.6**
LPL	**La Plagne**	**14.46**	**45**	*e*Pn	**Pn**	**03 52 15.2**	**+1.2**
LPG	**La Plagne**	**14.46**	**45**	*e*Pn	**Pn**	**03 52 15.7**	**+1.6**
DYA	**Yadsworthy**	**14.60**	**10**	P	**Pn**	**03 52 15.5**	**-0.2**
CABF	**La Chapelle**	**14.78**	**40**	*e*Pn	**Pn**	**03 52 17.6**	**-0.6**
SENIN	**Lac Senin/Sane**	**15.28**	**43**	Pn	**Pn**	**03 52 25.1**	**+0.1**
VAL	**Valentia**	**15.93**	**354**	P	**Pn**	**03 52 34.2**	**+1.0**
PAGF	**Fort de Pagny**	**15.94**	**34**	*e*Pn	**P**	**03 52 38.1**	**+1.2**
IWEX	**Carrickbyrne,**	**16.29**	**2**	P	**Pn**	**03 52 38.3**	**+0.4**
BAIF	**Baives**	**16.45**	**28**	*e*Pn	**Pn**	**03 52 40.6**	**+0.7**
CDF	**Champ du Feu**	**16.57**	**37**	*e*Pn	**Pn**	**03 52 42.7**	**+1.1**
GIVF	**Givet**	**16.72**	**29**	*e*Pn	**Pn**	**03 52 44.3**	**+0.9**
WLF	**Walferdange**	**16.94**	**33**	Pn	**Pn**	**03 52 46.2**	**+0.1**
DAVOX	**Davos/Dischmat**	**16.98**	**46**	P	**P**	**03 52 50.1**	**+1.4**
	comp=N,0.6nm,0.4s,baz=358,slow=22,SNR=1.5						
DAVOX				LR	LR	04 00 16.8	
	comp=N,116nm,18.1s,baz=240,slow=40						
DSB	**Dublin**	**17.17**	**3**		**P**	**03 52 50.5**	**-0.1**
DSB				IAmb	IAmb	03 53 03.9	
	comp=Z,13nm,1.1s						
DAVA	**Damuels**	**17.25**	**44**	*e*Pn	**Pn**	**03 52 50.3**	**0.0**
	comp=Z,0.6nm,0.3s						
AQU	**L'Aquila**	**17.55**	**63**	Pn	**Pn**	**03 52 52.6**	**-1.3**
AQU				IAmb	IAmb	03 53 10.0	
	comp=Z,12nm,1.0s						
TAM	**Tamanrasset**	**17.59**	**135**	Pn	**Pn**	**03 52 53.9**	**-0.7**
FETA	**Feichten**	**17.60**	**46**	*e*P	P	03 53 03.8	+8.2
	comp=Z,0.6nm,0.4s						
CTI	**Castel Tesino**	**17.67**	**50**		**Pn**	**03 52 55.5**	**+0.1**
GRFO	**Grafenberg**	**19.38**	**40**	P	**Pn**	**03 53 17.1**	**+1.0**
GRFO				IAmb	IAmb	03 53 30.1	
	comp=Z,6.6nm,0.9s						
GRA1	**Grafenberg Arr**	**19.39**	**40**	P	**Pn**	**03 53 17.3**	**+1.1**
GRA1				IAmb	IAmb	03 53 30.2	
	comp=Z,6.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**19.50**	**8**	P	**Pn**	**03 53 18.4**	**+1.0**
	baz=184,slow=10						
	comp=Z,1.9nm,0.8s						
TIP	**Timpagrande**	**19.67**	**74**		**P**	**03 53 19.2**	**+0.9**
TIP				IAmb	IAmb	03 53 21.5	
	comp=Z,7.0nm,0.5s						
OBKA	**Obir**	**19.68**	**51**	P	**Pn**	**03 53 21.2**	**+1.4**
	comp=Z,6.4nm,1.2s						
SOKA	**Soboth**	**20.06**	**51**	*e*P	Pn	03 53 25.0	+0.8
	comp=Z,4.0nm,1.2s						
GEC2	**GERESS Array S**	**20.25**	**44**	P	**P**	**03 53 24.2**	**-0.3**
GERES	**GERESS Array B**	**20.25**	**44**	P	Pn	03 53 26.7	+0.1
	comp=Z,0.5nm,0.6s,baz=220,slow=10,SNR=6.3						
	comp=Z,0.5nm,0.6s						
GERES	**GERESS Array B**	**20.25**	**44**	P	**P**	**03 53 24.6**	**+0.1**
KHC	**Kasperske Hory**	**20.33**	**44**	P	**P**	**03 53 26.9**	**+1.5**
KHC				IAmb	IAmb	03 53 37.8	
	comp=Z,8.4nm,1.0s						
KHC	**Kasperske Hory**	**20.33**	**44**	*e*P	Pn	03 53 27.6	+0.2
KHC				*e*pP	sP	03 53 31.3	+0.5
CKRC	**Cesky Krumlov**	**20.59**	**45**	*e*P	Pn	03 53 30.2	-0.2
ARSA	**Arzberg**	**20.60**	**50**	P	**P**	**03 53 28.2**	**0.0**
	comp=Z,3.6nm,1.4s						
SCTE	**Santa Cesarea**	**21.02**	**71**	P	**P**	**03 53 33.0**	**+0.2**
SCTE				IAmb	IAmb	03 54 09.7	
	comp=Z,22nm,1.2s						
CONA	**Conrad Observa**	**21.09**	**49**	*e*P	**P**	**03 53 34.3**	**+0.6**
	comp=Z,1.3nm,0.6s						
RONA	**Rosalia, Austr**	**21.26**	**50**	*e*P	**P**	**03 53 33.6**	**-1.8**
	comp=Z,1.8nm,0.6s						
PDG	**Podgorica**	**21.83**	**65**	P	**P**	**03 53 42.4**	**+0.9**
PDG				IAmb	IAmb	03 53 44.2	
	comp=Z,3.7nm,0.7s						
MODS	**Modra-Piesok**	**22.14**	**49**	*e*P	**P**	**03 53 46.8**	**+2.0**
VRAC	**Vranov**	**22.14**	**46**	LR	LR	04 03 30.8	
	comp=Z,37nm,20.0s,baz=252,slow=40						
DPC	**Dobruska-Polom**	**22.49**	**43**	*e*P	**P**	**03 53 52.2**	**+3.6**
KRLC	**Kraliky**	**22.61**	**44**	*e*P	**P**	**03 53 53.2**	**+3.3**
DIVS	**Divibare**	**22.63**	**61**	P	**P**	**03 53 48.9**	**-1.3**
KBN	**Korca**	**22.82**	**70**	P	**P**	**03 53 51.9**	**-0.3**
KBN				IAmb	IAmb	03 53 54.2	
	comp=Z,7.3nm,1.1s						
MORC	**Moravsky Berou**	**22.91**	**45**	P	**P**	**03 53 53.6**	**+0.7**
MORC				IAmb	IAmb	03 54 05.5	
	comp=Z,12nm,1.5s						
VYHS	**Vyhne**	**23.14**	**49**	*e*P	**P**	**03 53 57.1**	**+1.8**
TOA0	**Torodi Ar. Sit**	**24.40**	**157**	P	**P**	**03 54 07.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**24.40**	**157**	P	**P**	**03 54 08.0**	**+0.4**
	comp=Z,22nm,0.7s,baz=341,slow=8.7,SNR=126						
	comp=Z,22nm,0.7s						
TORD	**Torodi Ar. Bea**	**24.40**	**157**	P	**P**	**03 54 07.7**	**0.0**
RDO	**Rodhopi**	**26.43**	**69**	P	**P**	**03 54 26.5**	**+0.7**
RDO				IAmb	IAmb	03 54 29.8	
	comp=Z,7.0nm,1.0s						
IDI	**Anoyia**	**26.50**	**82**	P	**P**	**03 54 28.1**	**+1.4**
	comp=Z,7.7nm,0.9s,baz=249,slow=8.6,SNR=2.2						
	comp=Z,7.7nm,0.9s						
NOA	**NORSAR Array B**	**27.74**	**20**	LR	LR	04 07 49.3	
	comp=Z,56nm,18.0s,baz=210,slow=41						
HFS	**Hagfors**	**27.75**	**23**	P	**P**	**03 54 39.0**	**+1.5**
	comp=Z,2.0nm,0.9s,baz=213,slow=10,SNR=1.8						
HFS				LR	LR	04 06 37.2	
	comp=Z,59nm,20.2s,baz=223,slow=38						
	comp=Z,2.0nm,0.9s						
DBIC	**Dimbokro**	**29.41**	**174**	P	**P**	**03 54 51.8**	**-1.0**
	comp=Z,4.6nm,0.9s,baz=1.3,slow=8.5,SNR=2.3						
	comp=Z,4.6nm,0.9s						
BORG	**Borgarnes**	**29.81**	**348**	LR	LR	04 04 45.9	
	comp=Z,24nm,20.8s,baz=191,slow=32						
BRTR	**Keskin Array B**	**32.68**	**71**	P	**P**	**03 55 23.1**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=265,slow=6.6,SNR=4.2						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**33.12**	**29**	P	**P**	**03 55 26.8**	**+1.9**
	comp=Z,1.9nm,0.9s,baz=237,slow=12,SNR=1.2						
FINES				LR	LR	04 10 07.5	
	comp=Z,44nm,19.7s,baz=214,slow=38						
	comp=Z,1.9nm,0.9s						
JMIC	**Jan Mayen**	**34.95**	**360**	LR	LR	04 08 37.4	
	comp=Z,48nm,21.9s,baz=230,slow=34						
ARCES	**ARCESS Array B**	**38.08**	**18**	P	**P**	**03 56 09.9**	**+2.5**
	comp=Z,1.9nm,0.9s,baz=213,slow=8.1,SNR=2.6						
ARCES				PcP	**PcP**	**03 58 22.8**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=184,slow=2.7,SNR=5.1						
	comp=Z,1.9nm,0.9s						
SFJD	**Kangerlussuaq**	**39.39**	**335**	LR	LR	04 09 41.8	
	comp=Z,51nm,18.6s,baz=105,slow=32						
SCHQ	**Schefferville**	**43.98**	**314**	P	**P**	**03 56 55.7**	**-0.6**
G65A	**Princeton**	**45.32**	**301**	P	**P**	**03 57 06.3**	**-0.7**
FRB	**Frobisher Bay**	**45.46**	**327**	LR	LR	04 12 42.3	
	comp=Z,60nm,19.2s,baz=336,slow=32						
MVL	**Millersville**	**52.91**	**296**	P	**P**	**03 58 06.0**	**+0.7**
KURK	**Kurchatov**	**60.99**	**47**	P	**P**	**03 59 03.1**	**+0.8**
KURK				IAmb	IAmb	03 59 14.7	
	comp=Z,3.3nm,1.1s						
MKAR	**Makanchi Array**	**64.83**	**49**	P	**P**	**03 59 27.1**	**-0.8**
YKA	**Yellowknife Ar**	**65.74**	**331**	P	**P**	**03 59 35.8**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=70,slow=6.3,SNR=4.8						
	comp=Z,0.5nm,0.7s						
ETMB	**Extrema**	**71.42**	**242**	P	**P**	**04 00 10.1**	**+0.4**
ETMB				IAmb	IAmb	04 00 10.3	
	comp=Z,2.1nm,0.7s						
BOSA	**Boshof**	**71.50**	**150**	P	**P**	**04 00 10.3**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=354,slow=10,SNR=1.2						
	comp=Z,1.2nm,0.7s						
SIV	**San Ignacio**	**72.23**	**234**	P	**P**	**04 00 15.0**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=63,slow=6.2,SNR=14						
	comp=Z,2.8nm,0.9s						
PDAR	**Pinedale Array**	**74.02**	**311**	P	**P**	**04 00 25.0**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=77,slow=9.3,SNR=2.0						
	comp=Z,0.5nm,0.4s						
SDCO	**Great Sand Dun**	**74.25**	**305**	P	**P**	**04 00 27.0**	**+0.4**
SDCO				IAmb	IAmb	04 00 41.9	
	comp=Z,1.3nm,1.1s						
LPAZ	**La Paz**	**77.20**	**239**	P	**P**	**04 00 43.7**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=118,slow=2.1,SNR=5.1						
	comp=Z,1.3nm,0.8s						
TXAR	**Lajitas Array**	**77.67**	**297**	P	**P**	**04 00 46.9**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=72,slow=6.6,SNR=6.2						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**77.67**	**297**	P	**P**	**04 00 47.4**	**+1.3**
CPUP	**Villa Florida**	**77.71**	**224**	P	**P**	**04 00 46.1**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=39,slow=5.3,SNR=11						
	comp=Z,2.3nm,0.5s						
CPUP	**Villa Florida**	**77.71**	**224**	P	**P**	**04 00 46.0**	**0.0**
SONM	**Songino Array**	**77.89**	**39**	P	**P**	**04 00 48.5**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=316,slow=6.0,SNR=2.4						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**143.17**	**74**	PKhKP	PKPpre	04 08 19.2	
	comp=Z,0.2nm,0.6s,baz=289,slow=2.2,SNR=1.4						
ASAR	**Alice Springs**	**144.78**	**80**	PKP	PKPbc	04 08 26.4	+1.0
	comp=Z,2.2nm,0.7s,baz=305,slow=3.3,SNR=23						

*IDC **01** 03:55:02.9±0.9, 11°.36S×13°.00W, h0km, mb4.2/15, mbtmp4.2/16, ML3.7/1, MS3.9/31, Error ellipse: s-maj=22.8km s-min=18.3km az=65.0*

*NEIC **01** 03:55:06.3±2.4, 11°.17S±0°.07×12°.98W±0°.07, h10km±1km, mb4.7/22, Error ellipse: s-maj=12.8km s-min=10.8km az=119.0*

*GCMT **01** 03:55:06.3±0.3, 11°.51S±0°.02×12°.98W±0°.02, h20km±1km, MW4.8/98, Moment Tensor Solution. s21,c23; s98,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.41±.11; $M_{\theta\theta}$-0.61±.09; $M_{\phi\phi}$1.03±.11; $M_{r\theta}$-0.65±.18; $M_{\theta\phi}$1.83±.08; $M_{\phi r}$-0.77±.20; Best double couple: $M_0$2.18000×10^{16} NP1:ϕ_s259.00000°, δ81.00000°, λ18.00000°. NP2: ϕ_s166.00000°, δ72.00000°, λ171.00000°. Principal axes: T 2.5480, Plg19.0000°, Azm123.0000°; N -0.7350, Plg70.0000°, Azm284.0000°; P -1.8120, Plg6.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 03:55:05.5±0.5, **11°.25S**±0°.07×**13°.00W**±0°.08, **h10km, n74, σ1s.25**/50, **mb4.3**/21, **MS3.9**/30, **2C-1D, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**2.79**	**324**	Pn	**Pn**	**03 55 49.8**	**-0.2**
H10S3	**ASCENSION HYDR**	**2.81**	**324**	Pn	**Pn**	**03 55 49.8**	**-0.4**
H10N1	**ASCENSION HYDR**	**3.68**	**337**	Pn	**Pn**	**03 56 03.0**	**+0.7**
	baz=308,slow=78						
H10N3	**ASCENSION HYDR**	**3.69**	**336**	Pn	**Pn**	**03 56 03.0**	**+0.6**
	baz=308,slow=78						
H10N2	**ASCENSION HYDR**	**3.70**	**337**	Pn	**Pn**	**03 56 03.0**	**+0.5**
	baz=308,slow=78						
SHEL	**Horse Pasture**	**8.46**	**124**	Pn	**Pn**	**03 57 10.2**	**+1.9**
LIC	**Lamto**	**19.08**	**25**	⇑*i*P	**Pn**	**03 59 30.4**	**+1.2**
	143nm,1.3s						
KIC	**Kosan Boka**	**19.33**	**26**	⇑*e*P	**Pn**	**03 59 34.4**	**+2.2**
	16nm,0.8s						
TIC	**Toumodi**	**19.47**	**24**	⇓*e*P	**Pn**	**03 59 34.4**	**+0.5**
	41nm,0.9s						
DBIC	**Dimbokro**	**19.56**	**25**	P	**P**	**03 59 34.1**	**+0.5**
	0.2nm,0.3s,baz=210,slow=14,SNR=5.7						
DBIC				LR	LR	04 05 25.9	
	comp=Z,283nm,19.1s,baz=197,slow=32						
	14nm,1.0s						
DBIC	**Dimbokro**	**19.56**	**25**	P	**P**	**03 59 34.4**	**+0.8**
DBIC				IAmb	IAmb	03 59 38.7	
	comp=Z,38nm,1.4s						
RCBR	**Riachuelo**	**23.27**	**281**	LR	LR	04 06 47.5	
	comp=Z,435nm,21.3s,baz=258,slow=30						
TOA0	**Torodi Ar. Sit**	**28.28**	**31**	P	**P**	**04 00 59.3**	**-0.1**
TOA0				IAmb	IAmb	04 01 00.1	
	comp=Z,14nm,0.9s						
TORD	**Torodi Ar. Bea**	**28.28**	**31**	P	**P**	**04 00 59.1**	**-0.2**
	comp=Z,9.0nm,0.8s,baz=221,slow=9.1,SNR=29						
TORD				LR	LR	04 10 41.4	
	comp=Z,244nm,20.4s,baz=191,slow=33						
	comp=Z,9.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**28.28**	**31**	P	**P**	**04 00 59.2**	**-0.2**
TORD				IAmb	IAmb	04 01 00.2	
	comp=Z,9.7nm,1.0s						
TSUM	**Tsumeb**	**30.51**	**109**	LR	LR	04 10 55.7	
	comp=Z,383nm,21.2s,baz=326,slow=31						
BDFB	**Brasilia**	**34.31**	**259**	P	**P**	**04 01 51.9**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=175,slow=3.1,SNR=2.1						
BDFB				LR	LR	04 13 09.4	
	comp=Z,102nm,21.7s,baz=183,slow=32						
	comp=Z,2.4nm,0.7s						
BDFB	**Brasilia**	**34.31**	**259**	P	**P**	**04 01 55.0**	**+2.3**
SUR	**Sutherland**	**37.53**	**129**	LR	LR	04 14 18.4	
	comp=Z,561nm,18.2s,baz=294,slow=31						
LBTB	**Lobatse**	**39.00**	**116**	LR	LR	04 15 54.6	
	comp=Z,219nm,21.1s,baz=278,slow=32						
BOSA	**Boshof**	**39.68**	**122**	P	**P**	**04 02 34.8**	**-3.4**
	comp=Z,5.1nm,1.0s,baz=256,slow=8.6,SNR=3.6						
BOSA				LR	LR	04 15 43.9	
	comp=Z,368nm,21.6s,baz=294,slow=31						
	comp=Z,5.1nm,1.0s						
LSZ	**Lusaka**	**40.25**	**100**	P	**P**	**04 02 42.6**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=259,slow=11,SNR=4.0						
LSZ				LR	LR	04 16 37.1	
	comp=Z,202nm,21.9s,baz=284,slow=32						
	comp=Z,1.3nm,0.3s						
LSZ	**Lusaka**	**40.25**	**100**	P	**P**	**04 02 42.8**	**-0.3**
MATP	**Matopo**	**40.86**	**108**	P	**P**	**04 02 47.8**	**-0.3**
	comp=Z,3.2nm,0.9s,baz=313,slow=7.2,SNR=4.0						
MATP				LR	LR	04 19 26.7	
	comp=Z,352nm,18.9s,baz=240,slow=36						
	comp=Z,3.2nm,0.9s						
MDP	**Montagnes des**	**42.66**	**290**	LR	LR	04 17 50.5	
	comp=Z,96nm,20.4s,baz=78,slow=32						
CPUP	**Villa Florida**	**44.33**	**244**	LR	LR	04 18 56.9	
	comp=Z,101nm,18.3s,baz=81,slow=32						
MDT	**Midelt**	**44.54**	**10**	LR	LR	04 21 05.6	
	comp=Z,102nm,19.3s,baz=200,slow=35						
SIV	**San Ignacio**	**46.88**	**259**	LR	LR	04 21 20.5	
	comp=Z,52nm,20.5s,baz=110,slow=34						
KMBO	**Kilima Mbogo**	**50.88**	**82**	LR	LR	04 23 24.8	
	comp=Z,98nm,20.4s,baz=246,slow=33						
KEST	**Kesra**	**51.27**	**23**	P	**P**	**04 04 11.2**	**+1.4**
	comp=Z,6.7nm,1.1s,baz=142,slow=7.3,SNR=4.0						
KEST				LR	LR	04 25 06.7	
	comp=Z,148nm,20.4s,baz=271,slow=35						
	comp=Z,6.7nm,1.1s						
KEST	**Kesra**	**51.27**	**23**	P	**P**	**04 04 10.1**	**+0.2**
KEST				IAmb	IAmb	04 04 20.3	
	comp=Z,7.9nm,1.1s						
ESDC	**Sonseca Array**	**51.35**	**9**	LR	LR	04 25 15.5	
	comp=Z,62nm,18.6s,baz=194,slow=35						
ETMB	**Extrema**	**52.28**	**266**	P	**P**	**04 04 17.3**	**-0.4**
ETMB				IAmb	IAmb	04 04 43.3	
	comp=Z,6.6nm,1.4s						
LPAZ	**La Paz**	**53.65**	**258**	P	**P**	**04 04 27.6**	**-0.9**
H05S1	**Guadeloupe/Mar**	**53.84**	**297**	T	T	05 02 37.2	
	SNR=11						
EFI	**East Falkland**	**54.33**	**213**	P	**P**	**04 04 35.4**	**+3.2**
VAE	**Valguarnera**	**54.87**	**27**	LR	LR	04 29 06.7	
	comp=Z,168nm,18.2s,baz=158,slow=37						
CO01	**Juntas del Tor**	**56.03**	**241**	P	**P**	**04 04 44.5**	**-0.7**
CO01				IAmb	IAmb	04 05 03.0	
	comp=Z,14nm,1.2s						
GO04	**Tololo Observa**	**56.66**	**241**	P	**P**	**04 04 49.7**	**+0.1**
VA03	**San Esteban**	**56.78**	**238**	P	**P**	**04 04 51.7**	**+1.4**
MT09	**Talagante**	**57.29**	**237**	P	**P**	**04 04 53.8**	**-0.2**
MT09				IAmb	IAmb	04 04 56.4	
	comp=Z,14nm,1.4s						
GO05	**Huala**	**58.25**	**236**	P	**P**	**04 05 02.6**	**+2.1**
PLCA	**Paso Flores**	**58.27**	**229**	LR	LR	04 26 19.8	
	comp=Z,42nm,21.5s,baz=87,slow=32						
IDI	**Anoyia**	**58.54**	**36**	LR	LR	04 31 19.0	
	comp=Z,31nm,19.4s,baz=260,slow=37						
SJG	**San Juan**	**60.02**	**299**	LR	LR	04 26 22.2	
	comp=Z,56nm,21.3s,baz=94,slow=31						
SNAA	**Sanae**	**60.70**	**176**	P	**P**	**04 05 15.6**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=26,slow=15,SNR=2.3						
	comp=Z,1.0nm,0.7s						
SDV	**Santo Domingo**	**60.71**	**287**	LR	LR	04 28 38.1	
	comp=Z,60nm,22.0s,baz=88,slow=33						
DAVOX	**Davos/Dischmat**	**61.29**	**18**	LR	LR	04 31 20.4	
	comp=Z,130nm,20.8s,baz=220,slow=36						
GO09	**Cerro Castillo**	**62.29**	**218**	P	**P**	**04 05 28.5**	**+0.7**
GO09				IAmb	IAmb	04 05 35.3	
	comp=Z,15nm,1.2s						
ROSC	**El Rosal**	**63.07**	**281**	LR	LR	04 32 31.0	
	comp=Z,175nm,18.5s,baz=60,slow=36						
PMSA	**Palmer Station**	**63.94**	**202**	LR	LR	04 29 58.4	
	comp=Z,56nm,18.2s,baz=75,slow=33						
PMSA	**Palmer Station**	**63.94**	**202**	P	**P**	**04 05 39.6**	**+1.2**
GERES	**GERESS Array B**	**64.31**	**19**	P	**P**	**04 05 41.0**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=123,slow=4.9,SNR=5.1						
	comp=Z,0.3nm,0.2s						
GERES	**GERESS Array B**	**64.31**	**19**	P	**P**	**04 05 40.1**	**-1.2**
MLR	**Muntele Rosu**	**66.48**	**29**	P	**P**	**04 05 54.8**	**-0.6**
	comp=Z,5.4nm,1.1s,baz=179,slow=6.9,SNR=6.8						
	comp=Z,5.4nm,1.1s						
MLR	**Muntele Rosu**	**66.48**	**29**	P	**P**	**04 05 54.1**	**-1.4**
MLR				IAmb	IAmb	04 06 11.1	
	comp=Z,8.8nm,1.2s						
BR131	**Keskin Array S**	**66.66**	**38**	P	**P**	**04 05 56.3**	**-0.4**
BR131				IAmb	IAmb	04 05 58.0	
	comp=Z,6.4nm,1.3s						
BRTR	**Keskin Array B**	**66.66**	**38**	P	**P**	**04 05 55.3**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=248,slow=3.3,SNR=5.9						
	comp=Z,0.8nm,0.9s						
BRTR	**Keskin Array B**	**66.66**	**38**	P	**P**	**04 05 55.6**	**-1.1**
BURAR	**Bucovina Array**	**67.74**	**27**	P	**P**	**04 06 03.4**	**0.0**
AKASG	**Malin Array Be**	**71.79**	**27**	P	**P**	**04 06 27.3**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=222,slow=5.8,SNR=16						
	comp=Z,2.5nm,0.8s						
AKASG	**Malin Array Be**	**71.79**	**27**	P	**P**	**04 06 27.0**	**-1.1**
AKASG				IAmb	IAmb	04 06 36.3	
	comp=Z,6.1nm,1.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKBB	Malin Array Si	71.79	27	P	P	04 06 27.0	-1.1
AKBB				IAmb	IAmb	04 06 37.2	
	comp=Z,17nm,1.4s						
MAW	Mawson	74.29	157	LR	LR	04 32 44.3	
	comp=Z,111nm,18.7s,baz=306,slow=30						
NOA	NORSAR Array B	74.56	12	P	P	04 06 44.9	+0.6
	comp=Z,0.5nm,0.8s,baz=232,slow=5.5,SNR=1.0						
	comp=Z,0.5nm,0.8s						
KBZ	Khabaz	74.62	39	P	P	04 06 44.4	-0.5
	comp=Z,1.3nm,0.8s,baz=287,slow=0.9,SNR=4.3						
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	78.70	18	P	P	04 07 07.1	-0.6
	comp=Z,2.0nm,0.8s,baz=243,slow=9.2,SNR=2.1						
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	78.70	18	P	P	04 07 08.1	+0.5
QSPA	South Pole Qui	78.89	180	P	P	04 07 07.3	-1.7
QSPA				IAmb	IAmb	04 07 46.5	
	comp=Z,10.0nm,1.5s						
SCHQ	Schefferville	79.81	332	LR	LR	04 35 03.7	
	comp=Z,90nm,21.2s,baz=121,slow=30						
TKL	Tuckaleechee C	81.34	309	LR	LR	04 39 35.6	
	comp=Z,23nm,18.2s,baz=122,slow=33						
SADO	Sadowa	81.57	319	LR	LR	04 36 25.0	
	comp=Z,119nm,19.3s,baz=56,slow=30						
TXAR	Lajitas Array	95.99	299	P	P	04 08 31.4	-2.2
	comp=Z,0.5nm,1.0s,baz=110,slow=4.9,SNR=2.7						
TXAR				LR	LR	04 46 09.0	
	comp=Z,19nm,21.2s,baz=62,slow=32						
	comp=Z,0.5nm,1.0s						
ANMO	Albuquerque	99.15	304	LR	LR	04 46 42.3	
	comp=Z,102nm,21.3s,baz=98,slow=31						

IDC 01 04:01:49.1±9.5, 30°.06S×179°.35W, h418km±100km, mb2.6/2, mbtmp3.6/3, Error ellipse: s-maj=92.7km s-min=50.2km az=23.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.68	199	P	P	04 03 52.6	+0.9
	2.2nm,0.3s,baz=121,slow=24,SNR=12						
URZ				S	S	04 05 31.3	-1.2
	4.2nm,0.5s,baz=121,slow=23,SNR=2.1						
ASAR	Alice Springs	41.96	267	P	P	04 09 01.5	-0.2
	0.3nm,0.6s,baz=94,slow=7.1,SNR=2.0						
	0.3nm,0.6s						
WRA	Warramunga Arr	42.91	273	P	P	04 09 09.2	-0.1
	0.4nm,0.5s,baz=111,slow=7.3,SNR=13						
	0.4nm,0.5s						
FINES	FINESS Array B	144.42	339	PKP	PKPbc	04 20 35.0	-0.3
	1.2nm,0.7s,baz=25,slow=3.7,SNR=5.6						

*NEIC **01** 04:14:33.2±0.9, 25°.1S±0°.1×179°.84E±0°.10, h513km±15km, mb4.0/16, Error ellipse: s-maj=21.1km s-min=12.8km az=174.0*

*IDC **01** 04:14:33.3±1.3, 25°.06S×179°.67E, h504km±13km, mb3.2/5, mbtmp4.1/7, Error ellipse: s-maj=19.5km s-min=16.0km az=163.0*

ISC 01 04:14:32.8±0.6, 25°.11S±0°.07×179°.7E±0°.1, h500km, n43, σ0s.92/47, mb3.9/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.62	154	P	P	04 15 57.7	+1.4
	265nm,0.4s,baz=64,slow=15,SNR=5.1						
RAO	Raoul Island	4.62	154	P	P	04 15 57.5	+1.2
MSVF	Nonsavu	7.51	348	P	P	04 16 24.1	-0.2
	15nm,0.4s,baz=220,slow=10,SNR=52						
MSVF				S	S	04 17 55.8	+0.2
	5.6nm,1.0s,baz=163,slow=21,SNR=1.7						
MSVF	Nonsavu	7.51	348	P	P	04 16 24.2	-0.1
MARNC	Mare, Loyalty	11.35	286	P	P	04 17 05.8	+1.3
OUZ	Omahuta	11.38	206	P	P	04 17 05.3	+0.7
MXZ	Matakaoa Point	12.47	185	P	P	04 17 16.5	+0.4
DZM	Mont Dzumac	12.56	281	P	P	04 17 19.2	+1.8
	9.7nm,1.0s,baz=82,slow=14,SNR=3.5						
URZ	Urewera	13.30	189	P	P	04 17 22.7	-2.2
	23nm,0.5s,baz=301,slow=23,SNR=26						
URZ				S	S	04 19 47.8	+1.1
	8.4nm,0.5s,baz=300,slow=24,SNR=2.8						
URZ	Urewera	13.30	189	P	P	04 17 22.1	-2.7
KHZ	Kahutara	18.00	195	P	P	04 18 11.6	-1.3
EIDS	Eidsvold	25.90	263	P	P	04 19 23.5	-0.8
EIDS				IAmb	IAmb	04 19 44.3	
	comp=Z,7.0nm,1.2s						
AS31	Alice Springs	41.62	262	P	P	04 21 36.8	+0.1
ASAR	Alice Springs	41.62	262	P	P	04 21 36.6	-0.1
	comp=Z,0.4nm,0.3s,baz=94,slow=7.0,SNR=17						
ASAR				PcP	PcP	04 23 22.2	0.0
	comp=Z,0.4nm,0.7s,baz=113,slow=4.5,SNR=1.9						
ASAR				ScP	ScP	04 26 24.4	-0.2
	comp=Z,0.4nm,0.9s,baz=110,slow=4.0,SNR=2.1						
ASAR				S	S	04 27 15.3	-1.4
	comp=Z,0.3nm,0.8s,baz=101,slow=14,SNR=2.0						
	comp=Z,0.4nm,0.3s						
WR0	Warramunga Arr	41.91	268	P	P	04 21 38.5	-0.7
WR0				IAmb	IAmb	04 22 06.1	
	comp=Z,9.9nm,1.5s						
WB2	Warramunga Arr	42.09	268	P	P	04 21 39.7	-0.8
WB2				IAmb	IAmb	04 21 53.7	
	comp=Z,8.6nm,1.4s						
WRAB	Tennant Creek	42.09	268	P	P	04 21 40.0	-0.6
WRAB				IAmb	IAmb	04 22 00.1	
	comp=Z,5.2nm,1.2s						
WB0	Warramunga Arr	42.10	268	P	P	04 21 39.9	-0.7
WB0				IAmb	IAmb	04 21 41.7	
	comp=Z,4.4nm,0.8s						
WRA	Warramunga Arr	42.10	268	P	P	04 21 40.3	-0.3
	comp=Z,0.9nm,0.4s,baz=100,slow=6.7,SNR=72						
WRA				ScP	ScP	04 26 27.5	+0.9
	comp=Z,0.7nm,0.8s,baz=98,slow=3.5,SNR=4.8						
	comp=Z,0.9nm,0.4s						
WRA	Warramunga Arr	42.10	268	P	P	04 21 39.8	-0.8
KNRA	Kununurra	48.45	271	P	P	04 22 29.7	+0.3
FITZ	Fitzroy Crossi	50.51	267	P	P	04 22 44.4	-0.1
FITZ				IAmb	IAmb	04 22 48.1	
	comp=Z,4.0nm,1.1s						
MBWA	Marble Bar	54.94	261	P	P	04 23 15.6	-0.7
CASY	Casey	58.92	206	P	P	04 23 42.8	-0.1
QSPA	South Pole Qui	64.98	180	P	P	04 24 23.3	+0.8
QSPA				IAmb	IAmb	04 24 24.2	
	comp=Z,3.9nm,0.8s						
BELA	Belgrano 2	75.27	173	P	P	04 25 23.1	-0.3
BELA				IAmb	IAmb	04 25 23.5	
	comp=Z,2.9nm,0.5s						
MAW	Mawson	76.54	201	P	P	04 25 31.2	+0.7
	comp=Z,2.1nm,0.6s,baz=129,slow=8.5,SNR=7.7						
	comp=Z,2.1nm,0.6s						
MAW	Mawson	76.54	201	P	P	04 25 31.3	+0.7
TROLL	Troll, Antarti	83.12	181	P	P	04 26 05.3	-0.1
SNAA	Sanae	83.46	179	P	P	04 26 06.1	-0.9
SNAA	Sanae	83.46	179	P	P	04 26 06.2	-0.7
VNA3	Neumayer Olymp	83.68	177	P	P	04 26 07.3	-0.7
VNA2	Neumayer--Watz	84.10	178	P	P	04 26 09.6	-0.4
	baz=183,slow=5.0						
NVAR	Mina Array Bea	85.79	44	P	P	04 26 18.8	-0.3
	comp=Z,0.7nm,0.7s,baz=223,slow=9.2,SNR=6.3						
	comp=Z,0.7nm,0.7s						
TXAR	Lajitas Array	91.27	58	P	P	04 26 45.3	+0.6
	comp=Z,1.0nm,0.8s,baz=217,slow=6.9,SNR=13						
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	133.02	348	PKP	PKPdf	04 32 49.0	-1.1
	comp=Z,0.5nm,0.5s,baz=66,slow=2.2,SNR=6.2						
FINES	FINESS Array B	139.51	341	PKP	PKPdf	04 33 02.7	+0.4
	comp=Z,0.9nm,0.7s,baz=76,slow=0.6,SNR=4.4						
NB2	NORSAR Subarra	143.24	351	PKP	PKPab	04 33 05.5	-1.4
	comp=Z,2.9nm,1.2s,baz=16,slow=3.2						
NOA	NORSAR Array B	143.24	351	PKhKP	PKPpre	04 33 05.3	
	comp=Z,1.4nm,0.8s,baz=16,slow=4.8,SNR=4.5						
AKASG	Malin Array Be	145.85	326	PKPbc	PKPdf	04 33 14.2	+0.4
	comp=Z,0.6nm,0.5s,baz=46,slow=4.0,SNR=2.6						
BRTR	Keskin Array B	148.10	306	PKPbc	PKPbc	04 33 21.4	-0.7
	comp=Z,0.3nm,0.4s,baz=146,slow=3.3,SNR=2.6						
CLL	Collm	151.94	342	*i* PKPbc	PKPbc	04 33 30.2	-0.3
	comp=Z,4.0nm,0.7s						
TORD	Torodi Ar. Bea	167.96	189	PKPab	PKPab	04 34 51.9	-0.8
	comp=Z,0.6nm,0.7s,baz=163,slow=3.6,SNR=4.4						

*IDC **01** 04:44:37.2±0.9, 18°.64N×145°.70E, h203km±8km, mb3.7/14, mbtmp4.2/17, Error ellipse: s-maj=15.8km s-min=9.9km az=101.0*

*NEIC **01** 04:44:37.3±1.4, 18°.60N±0°.08×145°.7E±0°.2, h195km±8km, mb4.2/62, Error ellipse: s-maj=21.8km s-min=11.9km az=83.0*

ISC 01 04:44:36.9±0.5, 18°.63N±0°.06×145°.61E±0°.10, h200km, n96, σ0s.82/96, mb4.2/42, Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	9.00	340	P	Pn	04 46 44.0	+0.8
	28nm,0.8s,baz=286,slow=21,SNR=1.3						
JCJ				S	Sn	04 48 22.1	-2.0
	25nm,0.4s,baz=277,slow=22,SNR=2.4						
JCJ	Chichijima	9.00	340	Pn	Pn	04 46 44.5	+1.4
PATS	Pohnpei	17.04	132		P	04 48 20.1	-2.2
JOW	Kunigami	17.94	300	P	Pn	04 48 34.6	+0.3
	12nm,0.7s,baz=149,slow=10,SNR=6.9						
JMN	Monobe	18.34	327	P	Pn	04 48 39.9	+1.0
JMN				IAmb	IAmb	04 49 15.0	
	comp=Z,22nm,1.5s						
JGF	Kuroka	18.42	338	P	Pn	04 48 38.9	-0.9
JGF				IAmb	IAmb	04 48 40.5	
	comp=Z,8.2nm,0.8s						
MJAR	Matsushiro Arr	19.00	341	P	P	04 48 42.4	-1.1
	comp=Z,1.3nm,0.3s,baz=144,slow=9.3,SNR=5.2						
MAJO	Matsushiro	19.00	341	P	P	04 48 42.4	-1.1
MAJO				IAmb	IAmb	04 48 52.6	
	comp=Z,8.3nm,1.1s						
JMM	Marumori	19.63	349	P	P	04 48 51.2	+1.0
JHS	Saijyo	19.73	328	P	Pn	04 48 54.9	-0.4
H11S3	WAKE ISLAND Hy	19.98	87	T	T	05 09 58.9	
	baz=275,slow=74,SNR=3.9						
H11S1	WAKE ISLAND Hy	19.99	87	T	T	05 10 01.2	
	baz=275,slow=74,SNR=5.3						
H11S2	WAKE ISLAND Hy	20.00	87	T	T	05 10 02.4	
	baz=275,slow=74,SNR=4.0						
H11N1	WAKE ISLAND Hy	20.13	83	T	T	05 10 13.2	
	baz=269,slow=74						
H11N2	WAKE ISLAND Hy	20.14	83	T	T	05 10 13.6	
	baz=269						
H11N3	WAKE ISLAND Hy	20.15	83	T	T	05 10 14.5	
	baz=269,slow=74						
JSD	Sado	20.38	343	P	P	04 48 58.1	-0.1
KSRS	Korea Array	24.33	324	P	P	04 49 36.5	+0.3
	comp=Z,1.4nm,0.6s,baz=145,slow=8.8,SNR=7.1						
KSRS				pP	pwP	04 50 17.6	-0.9
	comp=Z,1.3nm,0.8s,baz=148,slow=8.9,SNR=2.1						
	comp=Z,1.4nm,0.6s						
JEW	Eniwo	24.40	353	P	P	04 49 38.0	+1.3
KLR	Kul'dur	32.51	343	P	P	04 50 48.7	0.0
	comp=Z,2.2nm,0.3s,baz=154,slow=9.3,SNR=5.1						
	comp=Z,2.2nm,0.3s						
KAPI	Kappang	34.66	230	P	P	04 51 08.1	+0.5
	comp=Z,2.6nm,0.5s,baz=243,slow=16,SNR=1.9						
	comp=Z,2.6nm,0.5s						
PETK	Petropavlovsk-	35.68	13	P	P	04 51 15.8	-0.1
	comp=Z,1.1nm,0.5s,baz=295,slow=29,SNR=4.6						
	comp=Z,1.1nm,0.5s						
WR0	Warramunga Arr	39.85	196	P	P	04 51 51.6	+0.4
WRAB	Tennant Creek	39.88	197	P	P	04 51 51.4	0.0
WRAB				IAmb	IAmb	04 51 52.9	
	comp=Z,4.3nm,0.6s						
WB2	Warramunga Arr	39.89	197	P	P	04 51 51.5	0.0
WB2				IAmb	IAmb	04 51 52.6	
	comp=Z,8.9nm,1.1s						
WRA	Warramunga Arr	39.89	197	P	P	04 51 51.5	0.0
	comp=Z,1.9nm,0.4s,baz=20,slow=8.9,SNR=17						
WRA				PcP	PcP	04 53 52.5	-0.7
	comp=Z,0.9nm,0.4s,baz=16,slow=3.5,SNR=4.5						
	comp=Z,1.9nm,0.4s						
WRA	Warramunga Arr	39.89	197	P	P	04 51 51.0	-0.5
FITZ	Fitzroy Crossi	41.44	209	P	P	04 52 04.0	-0.1
	comp=Z,3.3nm,0.6s,baz=44,slow=8.6,SNR=8.9						
	comp=Z,3.3nm,0.6s						
FITZ	Fitzroy Crossi	41.44	209	P	P	04 52 04.6	+0.5
SONM	Songino Array	43.15	321	P	P	04 52 18.1	+0.3
	comp=Z,1.4nm,0.5s,baz=136,slow=8.9,SNR=11						
	comp=Z,1.4nm,0.5s						
SONM	Songino Array	43.15	321	P	P	04 52 17.8	-0.1
ASAR	Alice Springs	43.56	196	P	P	04 52 21.6	+0.4
	comp=Z,0.7nm,0.7s,baz=17,slow=14,SNR=8.4						
ASAR				PcP	PcP	04 54 05.1	-0.1
	comp=Z,1.0nm,0.8s,baz=25,slow=3.5,SNR=5.9						
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	43.56	196	P	P	04 52 21.9	+0.6
KIWB	Kanaga Island	44.17	33	P	P	04 52 25.7	0.0
DZM	Mont Dzumac	45.29	152	P	P	04 52 34.6	-0.4
PSA00	Pilbara Seismi	47.25	213	P	P	04 52 50.4	+0.2
SDPT	Sand Point	54.58	34	P	P	04 53 44.5	+0.2
MORW	Morawa	55.35	212	P	P	04 53 50.3	+0.1
CHGN	Chignik	55.99	34	P	P	04 53 53.8	-0.6
SII	Sitkinak Islan	58.31	34	P	P	04 54 11.5	+0.8
N18K	Kilae Creek	58.65	29	P	P	04 54 14.6	+1.6
N18K				IAmb	IAmb	04 54 51.8	
	comp=Z,5.5nm,1.1s						
O18K	Koktuh Hills	58.72	30	P	P	04 54 14.6	+1.2
SVW2	Sparrevohn	58.93	29	P	P	04 54 15.7	+0.9
SVW2				IAmb	IAmb	04 54 48.9	
	comp=Z,6.5nm,1.2s						
N19K	Bonanza Creek	59.35	30	P	P	04 54 19.4	+1.5
N19K				IAmb	IAmb	04 54 27.5	
	comp=Z,6.5nm,1.0s						
KDAK	Kodiak Island	59.46	33	P	P	04 54 18.9	+0.4
K20K	Telida	60.33	27	P	P	04 54 25.0	+0.6
K20K				IAmb	IAmb	04 54 26.8	
	comp=Z,6.1nm,1.2s						
J20K	Nowinta River	60.56	26	P	P	04 54 26.8	+0.9
J20K				IAmb	IAmb	04 55 04.5	
	comp=Z,6.0nm,1.4s						
PPLA	Purkeypile	61.00	28	P	P	04 54 29.8	+0.7
PPLA				IAmb	IAmb	04 54 39.8	
	comp=Z,9.9nm,1.2s						
CAST	Castle Rocks	61.20	27	P	P	04 54 31.4	+1.1
CAST				IAmb	IAmb	04 54 32.1	
	comp=Z,5.9nm,0.9s						
IMAR	Indian Mountai	61.32	24	P	P	04 54 32.6	+1.7
KURBB	Kurchatov Arra	61.32	318	P	P	04 54 29.9	-1.3
	comp=Z,2.8nm,0.6s,baz=89,slow=7.5,SNR=1.9						
	comp=Z,2.8nm,0.6s						
H21K	Melozitna Rive	61.58	24	P	P	04 54 33.6	+0.8
H21K				IAmb	IAmb	04 54 34.9	
	comp=Z,4.2nm,1.1s						
KTH	Kantishna Hill	61.74	27	P	P	04 54 35.0	+1.1
KTH				IAmb	IAmb	04 54 35.4	
	comp=Z,3.3nm,1.0s						
I21K	Tanana	61.76	25	P	P	04 54 34.6	+0.7
I21K				IAmb	IAmb	04 54 36.1	
	comp=Z,3.4nm,0.8s						
BPAW	Bear Paw Mtn.	61.86	26	P	P	04 54 35.1	+0.5
BPAW				IAmb	IAmb	04 54 36.4	
	comp=Z,3.8nm,0.8s						
TRF	Thorofare Moun	61.98	27	P	P	04 54 35.1	-0.5
TRF				IAmb	IAmb	04 54 36.7	
	comp=Z,4.6nm,1.0s						
GHO	Glory Hole Cre	62.19	29	P	P	04 54 36.8	-0.2
GHO				IAmb	IAmb	04 54 38.0	
	comp=Z,5.7nm,0.8s						
MLY	Manley	62.22	25	P	P	04 54 37.4	+0.3
MLY				IAmb	IAmb	04 54 38.8	
	comp=Z,3.2nm,0.7s						
PWL	Port Wells	62.28	30	P	P	04 54 38.0	+0.5
PWL				IAmb	IAmb	04 54 38.8	
	comp=Z,5.2nm,0.8s						
SML	Sawmill	62.48	29	P	P	04 54 39.1	+0.2
RND	Reindeer	62.60	27	P	P	04 54 39.0	-0.6
RND				IAmb	IAmb	04 54 59.9	
	comp=Z,5.9nm,1.3s						
I23K	Minto, Yukon-K	62.81	26	P	P	04 54 42.0	+1.1
I23K				IAmb	IAmb	04 54 42.9	
	comp=Z,2.8nm,0.7s						
GLI	Glacier Island	62.87	30	P	P	04 54 41.7	+0.3
GLI				IAmb	IAmb	04 55 08.1	
	comp=Z,7.4nm,1.2s						
H23K	Yukon River	62.92	25	P	P	04 54 42.9	+1.2
SCM	Sheep Creek Mo	62.95	29	P	P	04 54 41.5	-0.5
WRH	Wood River Hil	63.17	26	P	P	04 54 42.9	-0.4
WRH				IAmb	IAmb	04 55 18.9	
	comp=Z,4.1nm,1.2s						
MDM	Murphy Dome	63.23	26	P	P	04 54 45.0	+1.3
MDM				IAmb	IAmb	04 54 45.8	
	comp=Z,2.9nm,0.6s						
H24K	Noodor Dome	63.58	25	P	P	04 54 46.8	+0.8
TOLK	Toolik Lake Re	63.69	22	P	P	04 54 47.5	+0.8
ILAR	Eielson Array	63.75	26	P	P	04 54 46.3	-0.8
	comp=Z,1.5nm,0.8s,baz=260,slow=5.1,SNR=13						
	comp=Z,1.5nm,0.8s						
J25K	Salcha River,	64.35	27	P	P	04 54 50.2	-0.9
RIDG	Independent Ri	64.42	28	P	P	04 54 50.9	-0.7
RIDG				IAmb	IAmb	04 54 52.8	
	comp=Z,3.1nm,0.8s						
DOT	Dot Lake	64.75	28	P	P	04 54 53.0	-0.7
DOT				IAmb	IAmb	04 54 54.8	
	comp=Z,2.9nm,0.8s						
SCRK	Sand Creek	64.84	27	P	P	04 54 54.2	-0.1
BMAR	Burnt Mountain	65.22	24	P	P	04 54 57.8	+1.2
L27K	Beaver Creek,	65.67	28	P	P	04 54 60.0	+0.4
BCAR	Beaver Creek A	65.69	28	P	P	04 55 00.1	+0.4
HYT	Haines Junctio	67.53	31	P	P	04 55 13.0	+1.5
HYT				IAmb	IAmb	04 55 14.0	
	comp=Z,3.4nm,0.7s						
M30M	Minto, Yukon	67.93	29	P	P	04 55 14.1	+0.2
INK	Inuvik	69.47	23	P	P	04 55 23.5	+0.3
	comp=Z,2.6nm,0.7s,baz=159,slow=3.0,SNR=6.9						
	comp=Z,2.6nm,0.7s						
INK	Inuvik	69.47	23	P	P	04 55 23.0	-0.2
INK				IAmb	IAmb	04 55 24.6	
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	78.09	28	P	P	04 56 12.2	-1.1
	comp=Z,2.4nm,0.8s,baz=288,slow=5.5,SNR=16						
YKA				pP	pP	04 57 01.3	+0.8
	comp=Z,0.6nm,0.6s,baz=291,slow=5.3,SNR=4.3						
	comp=Z,2.4nm,0.8s						
YKA	Yellowknife Ar	78.09	28	P	P	04 56 13.4	+0.1
LTY	Liberty	79.02	44	P	P	04 56 18.8	0.0
LTY				IAmb	IAmb	04 56 25.3	
	comp=Z,5.7nm,1.4s						
B08A	Colville Reser	79.58	42	P	P	04 56 22.5	+0.7
K05A	Summer Lake	80.09	48	P	P	04 56 25.5	+0.6
K05A				IAmb	IAmb	04 56 47.1	
	comp=Z,8.4nm,1.3s						
NEW	Newport	81.02	42	P	P	04 56 29.7	+0.2
PNTR	Pine Nut	82.08	52	P	P	04 56 35.5	0.0
PNTR				IAmb	IAmb	04 56 37.3	
	comp=Z,5.0nm,0.8s						
NVAR	Mina Array Bea	83.25	52	P	P	04 56 41.7	+0.2
	comp=Z,2.6nm,0.7s,baz=271,slow=5.7,SNR=26						
NVAR				pP	pP	04 57 29.9	+0.8
	comp=Z,0.2nm,0.5s,baz=222,slow=38,SNR=1.7						
	comp=Z,2.6nm,0.7s						
NVAR	Mina Array Bea	83.25	52	P	P	04 56 42.2	+0.7
MFID	Camas Ranch	83.42	46	P	P	04 56 42.0	-0.1
HLID	Hailey	84.34	46	P	P	04 56 48.8	+1.9
LRM	Limekiln Ridge	84.85	43	P	P	04 56 49.7	+0.2
HRY	Holter Researc	84.92	42	P	P	04 56 50.2	+0.5
PDAR	Pinedale Array	87.94	45	P	P	04 57 04.2	-0.3
	comp=Z,0.2nm,0.3s,baz=184,slow=2.0,SNR=6.9						
	comp=Z,0.2nm,0.3s						
LPAZ	La Paz	147.75	91	PKPbc	PKPbc	05 03 60.0	+0.3
	comp=Z,4.3nm,0.9s,baz=289,slow=2.5,SNR=14						

*IDC **01** 04:46:31.7±0.4, 39°.94N×47°.92E, h0km, mb4.8/39, mbtmp4.8/51, ML4.3/11, MS4.4/65, Error ellipse: s-maj=8.6km s-min=5.5km az=10.0*

*BJI **01** 04:46:34.0±0.0, 39°.90N×47°.90E, h20km, mb4.9/65, mB5.0/41, Ms4.9/62, Ms7 4.7/60*

*NEIC **01** 04:46:34.5±1.9, 39°.95N±0°.06×47°.98E±0°.07, h16km±1km, mb5.3/344, Mwb5.0/17, Error ellipse: s-maj=10.0km s-min=9.3km az=199.0*

*THR **01** 04:46:34.1±1.0, 40°.00N×47°.98E, h15km±12km, ML4.8*

*NEIC **01** 04:46:34.3, 40°.07N×48°.07E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr3.33; Mθθ0.23; Mφφ-3.56; Mrθ-0.38; Mθφ1.91; Mφr0.35; Fault plane solution: M0 3.97000×10^16 NP1:φs162.88000°, δ41.77000°, λ97.97000°. NP2:φs332.24000°, δ48.72000°, λ82.94000°. Principal axes: T 3.3778, Plg84.0000°, Azm190.0000°; N 1.0020, Plg5.0000°, Azm337.0000°; P -4.3798, Plg3.0000°, Azm67.0000°;*

*GII **01** 04:46:35.5±0.0, 40°.07N×48°.07E, h10km*

*AZER **01** 04:46:35.8±0.0, 39°.91N×47°.86E, h28km, Error ellipse: s-maj=0.3km s-min=0.2km az=315.0*

*NSSP **01** 04:46:36.4, 39°.98N×47°.68E, h10km, Ms5.2*

*TIF **01** 04:46:36.1, 39°.93N×47°.82E, h39km±1km*

*MOS **01** 04:46:36.9±1.1, 39°.92N×47°.92E, h21km, mb5.4/88, MS4.1/24, Error ellipse: s-maj=4.0km s-min=2.3km az=131.5*

*TEH **01** 04:46:36.4, 39°.89N×47°.93E, h24km, ML5.1*

*GCMT **01** 04:46:37.5±0.2, 39°.98N±0°.02×47°.99E±0°.01, h28km, MW5.1/115, Moment Tensor Solution. s90,c113; s115,c178; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.78±.15; Mθθ-0.97±.11; Mφφ-3.81±.10; Mrθ0.50±.18; Mθφ1.75±.07; Mφr1.18±.13; Best double couple: M0 4.87700×10^16 NP1:φs345.00000°, δ51.00000°, λ103.00000°. NP2:φs144.00000°, δ41.00000°, λ74.00000°. Principal axes: T 5.0320, Plg78.0000°, Azm309.0000°; N -0.3100, Plg10.0000°, Azm157.0000°; P -4.7210, Plg5.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DRS **01** 04:46:37.6±0.0, 39°.53N×48°.06E, h28km*

*NNC **01** 04:46:41.5±4.9, 40°.63N×48°.93E, h0km, mb5.1, Error ellipse: s-maj=61.3km s-min=32.7km az=50.0*

ISC 01 04:46:35.4±0.3, 39°.95N±0°.01×47°.89E±0°.01, h25km±2km, h25km:pP-P, n1526, σ1s.91/1618, mb5.3/387, MS4.5/101, 106C-51D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLQ	Beylaqan	0.34	229	*e*Pg	Pn	04 46 44.4	-0.3
BLQ	Beylaqan	0.34	229	P	Pn	04 46 44.5	-0.3
	SNR=2276						
BLQ				S	Sn	04 46 50.7	-0.2
ZRD	Zardab	0.37	334	*e*Pg	Pn	04 46 45.7	+0.6
ZRD	Zardab	0.37	334	P	Pn	04 46 45.7	+0.6
	SNR=1462						
ZRD				S	Sn	04 46 54.0	+2.5
SAAT	Saatly	0.42	102	*e*Pg	Pb	04 46 44.1	-0.1
SAAT	Saatly	0.42	102	P	Pb	04 46 44.2	-0.1
	SNR=444						
SAAT				S	Sb	04 46 51.0	+0.8
KDMR	Kurdemir	0.48	27	*e*Pg	Pn	04 46 47.1	+0.4
KDMR	Kurdemir	0.48	27	P	Pn	04 46 47.2	+0.4
	SNR=980						
KDMR				S	Sn	04 46 56.5	+2.1
AGDM	Agdam	0.62	285	P	Pn	04 46 49.0	+0.3
AGDM				S	Sn	04 46 59.1	+1.2
BRDA	Brd	0.63	300	*e*Pg	Pn	04 46 50.1	+1.4
BRDA	Brd	0.63	300	P	Pn	04 46 50.1	+1.4
	SNR=1880						
BRDA				S	Sn	04 47 01.6	+3.6
QRD	Qoradiz	0.66	223	*e*Pg	Pn	04 46 48.9	-0.2
QRD	Qoradiz	0.66	223	P	Pn	04 46 49.0	-0.2
	SNR=1254						
QRD				S	Sn	04 46 58.5	-0.1
GLBA	Clilabad	0.80	151	*e*Pg	Pn	04 46 51.8	+0.7
GLBA	Clilabad	0.80	151	P	Pn	04 46 51.8	+0.7
	SNR=348						
GLBA				S	Sn	04 47 04.2	+2.0
ALIB	Äli-Bayra	0.85	89	*e*Pg	Pn	04 46 54.3	+2.5
ALIB	Äli-Bayra	0.85	89	P	Pn	04 46 54.4	+2.5
	SNR=4061						
ALIB				S	Sn	04 47 06.9	+3.4
IML	Ismayilli	0.87	15	*e*Pg	Pn	04 46 53.1	+1.0
IML	Ismayilli	0.87	15	P	Pn	04 46 53.1	+1.0
	SNR=1049						
IML				S	Sn	04 47 06.3	+2.2
GBS	Qobustan	0.99	53	*e*Pg	Pb	04 46 56.6	+2.6
GBS	Qobustan	0.99	53	P	Pb	04 46 56.7	+2.7
	SNR=519						
GBS				S	Sn	04 47 10.2	+3.1
PQL	Pirkuli	1.00	32	*e*Pg	Pb	04 46 55.4	+1.3
PQL	Pirkuli	1.00	32	P	Pb	04 46 55.5	+1.3
	SNR=280						
PQL				S	Sn	04 47 10.4	+3.1
QBL	Gabala	1.00	358	*e*Pg	Pb	04 46 55.1	+1.0
QBL	Gabala	1.00	358	P	Pb	04 46 55.1	+1.0
	SNR=4015						
QBL				S	Sn	04 47 09.6	+2.4
MNGR	Mingechevir, A	1.03	323	P	Pb	04 46 55.8	+1.2
MNGR	Mingechevir, A	1.03	323	*e*Pg	Pb	04 46 55.8	+1.2
MNGR	Mingechevir, A	1.03	323	P	Pb	04 46 56.0	+1.5
	SNR=178						
MNGR				S	Sn	04 47 11.8	+3.9
YRD	Yardimli	1.06	165	*e*Pg	Pb	04 46 55.4	+0.2
YRD	Yardimli	1.06	165	P	Pb	04 46 55.6	+0.3
	SNR=1876						
YRD				S	Sn	04 47 09.7	+0.7
GRMI	Germi	1.14	180	*e*Pg	Pb	04 46 56.5	+0.1

GRMI eSg **Sb** **04 47 11.6 +0.8**
GRMI Germi 1.14 180 ePg **Pb** **04 46 56.6 +0.2**
GRMI eSg **Sb** **04 47 12.2 +1.4**
GRMI IAML 04 47 12.7
comp=N,19µm,0.3s
GRMI IAML 04 47 14.8
comp=E,27µm,0.5s
ATGJ Altiaghaj 1.21 41 P **Pb** **04 46 59.8 +2.0**
SNR=628
ATGJ S **Sb** **04 47 18.3 +5.3**
XNQ Khinaliq 1.24 9 ePg **Pb** **04 46 58.2 -0.1**
XNQ Khinaliq 1.24 9 P **Pb** **04 46 58.1 -0.1**
SNR=4552
XNQ S **Sb** **04 47 15.3 +1.5**
GRS Goris 1.28 250⇑ *i*P **Pb** **04 46 58.6 -0.3**
GRS ⇑ *i*S **Sb** **04 47 15.6 +0.5**
LRK Lerik 1.35 165 ePg **Pb** **04 46 59.8 -0.2**
LRK Lerik 1.35 165 Pn **Pb** **04 46 59.8 -0.2**
SNR=3443
LRK Sn **Sb** **04 47 18.3 +1.4**
SIZA Siyzn 1.36 34 ePn **Pb** **04 47 01.8 +1.6**
SIZA Siyzn 1.36 34 Pn **Pb** **04 47 01.9 +1.6**
SNR=924
SIZA Sg **Sb** **04 47 22.6 +5.2**
SEKA Sheki 1.37 337 P **Pb** **04 46 59.8 -0.5**
SEKA Sheki 1.37 337 ePn **Pb** **04 46 59.8 -0.5**
SEKA Sheki 1.37 337 Pn **Pb** **04 46 59.9 -0.4**
SNR=4617
SEKA Sn **Sb** **04 47 19.7 +2.3**
GANJ Ganja 1.39 301 P **Pn** **04 46 59.7 +0.5**
GANJ Ganja 1.39 301 ePn **Pn** **04 46 59.7 +0.5**
GANJ Ganja 1.39 301 Pn **Pn** **04 46 59.9 +0.6**
SNR=4870
GANJ Sn **Sb** **04 47 18.0 0.0**
LKRN Lenkeran, Azer 1.41 151 P **Pb** **04 47 00.6 -0.4**
LKRN Lenkeran, Azer 1.41 151 ePn **Pb** **04 47 00.6 -0.4**
LKRN Lenkeran, Azer 1.41 151 Pn **Pb** **04 47 00.7 -0.3**
SNR=104
LKRN Sn **Sb** **04 47 19.7 +1.1**
QUB Quba 1.48 14 ePn **Pb** **04 47 03.0 +0.8**
QUBA Quba, Azerbaij 1.48 18 Pn **Pb** **04 47 03.2 +1.0**
SNR=603
QUBA Sn **Sb** **04 47 23.7 +3.1**
GOBA Gobu 1.48 72 ePn **Pb** **04 47 04.0 +1.8**
GOBA Gobu 1.48 72 Pg **Pb** **04 47 04.5 +2.2**
SNR=160
GOBA Sn **Sb** **04 47 24.3 +3.7**
AKT Akhty 1.54 355 eP **Pb** **04 47 03.2 0.0**
AKT eS **Sb** **04 47 23.3 +1.0**
AKT *i* S **Sn** **04 47 23.9 +3.3**
AKT pmax pmax
comp=Z,4µm,0.6s
AKT smax smax
comp=E,36µm,0.4s
AKT Akhty 1.54 355 ePg **Pb** **04 47 03.2 0.0**
comp=E,4µm,0.6s
AKT eSg **Sb** **04 47 23.4 +1.1**
comp=E,1µm,0.3s
ASTR Astara 1.55 153 ePn **Pb** **04 47 02.9 -0.5**
ASTR Astara 1.55 153 Pn **Pb** **04 47 02.6 -0.8**
SNR=295
ASTR Sn **Sb** **04 47 23.8 +1.2**
QSAR Qusar 1.59 10 ePn **Pb** **04 47 04.6 +0.4**
QSAR Qusar 1.59 10 Pn **Pb** **04 47 04.5 +0.4**
SNR=566
QSAR Sn **Sb** **04 47 26.3 +2.5**
KSMR Kasumkent 1.66 6 eP **Pb** **04 47 06.1 +0.7**
KSMR eS **Sb** **04 47 28.2 +2.3**
KSMR *i* S **Sn** **04 47 28.7 +5.1**
KSMR pmax pmax
comp=Z,16nm,0.1s
KSMR smax smax
comp=E,107µm,0.4s
KSMR Kasumkent 1.66 6 ePg **Pb** **04 47 06.1 +0.7**
comp=E,16nm,0.1s
KSMR eSg **Sb** **04 47 28.3 +2.3**
comp=E,6µm,0.4s
NDR Nardaran 1.72 68 ePn **Pb** **04 47 06.1 -0.2**
NDR Nardaran 1.72 68 Pn **Pb** **04 47 06.9 +0.6**
SNR=101
NDR Sg **Sb** **04 47 30.4 +2.8**
GAS1 Astara - Iran 1.72 154 eSg **Sb** **04 47 28.0 +0.5**
GAS1 ePg **Pb** **04 47 05.4 -0.9**
GAS1 *e* 04 47 40.0
comp=Z,38µm,0.6s
TVRZ Varzaqan 1.73 214 ePn **Pb** **04 47 06.3 -0.2**
IHRS Heris 1.76 202 *e* 04 47 34.7
comp=Z,63µm,0.3s
IHRS ePn **Pb** **04 47 06.5 -0.5**
ORD Ordubad 1.79 236 ePn **Pb** **04 47 06.4 -1.1**
ORD Ordubad 1.79 236 Pn **Pb** **04 47 06.6 -0.9**
SNR=558
ORD Sn **Sb** **04 47 29.5 0.0**
GALA Gala 1.79 74 ePn **Pb** **04 47 07.9 +0.4**
GALA Gala 1.79 74 Pn **Pb** **04 47 08.0 +0.5**
SNR=4.9
GALA Sn **Sb** **04 47 29.1 -0.5**
GDB GEDABAY 1.81 296 ePn **Pn** **04 47 06.1 +1.0**
GDB GEDABAY 1.81 296 Pn **Pn** **04 47 05.8 +0.7**
SNR=4772
GDB Sn **Sb** **04 47 29.6 -0.6**
SBZ Shahbuz 1.89 254 ePn **Pb** **04 47 08.6 -0.6**
SBZ Shahbuz 1.89 254 Pn **Pb** **04 47 08.6 -0.6**
SNR=7844
SBZ Sg **Sb** **04 47 34.1 +1.6**
ZKT Zaqatala 1.94 332 ePn **Pn** **04 47 08.3 +1.5**
ZKTA Zakatala 1.95 331 P **Pn** **04 47 08.3 +1.4**
ZKTA Zakatala 1.95 331 Pn **Pn** **04 47 08.4 +1.6**
SNR=2400
ZKTA Sn **Sb** **04 47 33.2 -0.8**
NAX Nakhchivan 2.01 248 P **Pb** **04 47 11.3 +0.1**
NAX Nakhchivan 2.01 248 ePn **Pb** **04 47 11.3 +0.1**
NAX Nakhchivan 2.01 248 Pn **Pb** **04 47 10.3 -0.9**
SNR=2163
NAX Sg **Sb** **04 47 37.1 +1.3**
DDFL Dedoflistskaro 2.02 319 P **Pb** **04 47 12.1 +0.7**
DDFL S **Sb** **04 47 44.3 +8.2**
DDFL Dedoflistskaro 2.02 319 P **Pb** **04 47 12.1 +0.7**
DDFL S **Sb** **04 47 44.2 +8.2**
IMRD Marand 2.10 235 ePn **Pb** **04 47 11.8 -1.0**
ITBZ Tabriz 2.19 219 ePn **Pn** **04 47 12.3 +2.0**
ITBZ *e* 04 47 21.2
comp=Z,71µm,0.5s
QZX Qazax, Azerbai 2.22 301 ePn **Pn** **04 47 11.5 +0.9**
QZX Qazax, Azerbai 2.22 301 Pn **Pn** **04 47 11.8 +1.1**
SNR=764
QZX Sn **Sb** **04 47 42.7 +0.8**
URKR Urkarakh 2.23 355 eP **Pb** **04 47 14.1 -0.9**
URKR eS **Sb** **04 47 42.5 +0.4**
URKR *i* S **Sn** **04 47 43.1 +5.5**
URKR pmax pmax
comp=Z,1µm,0.4s
URKR smax smax
comp=E,5µm,0.7s
URKR smax smax
comp=N,14µm,0.8s
URKR Urkarakh 2.23 355 ePn **Pb** **04 47 14.1 -0.9**
comp=N,1µm,0.4s
URKR eSn **Sb** **04 47 42.5 +0.4**
comp=N,3µm,0.5s
TAB1 Tabriz 2.25 213 ePn **Pb** **04 47 14.2 -1.3**
KMKR Kumukh 2.26 345 eP **Pb** **04 47 14.6 -1.0**
KMKR eS **Sb** **04 47 43.6 +0.3**
KMKR *i* S **Sn** **04 47 44.1 +5.5**
KMKR pmax pmax
comp=Z,2µm,0.5s
KMKR smax smax
comp=E,12µm,0.6s
KMKR Kumukh 2.26 345 ePn **Pb** **04 47 14.7 -1.0**
comp=E,2µm,0.5s
KMKR eSn **Sb** **04 47 43.7 +0.3**
comp=E,3µm,0.7s
LGD Lagodekhi 2.26 327 P **Pn** **04 47 12.9 +1.7**
LGD S **Sn** **04 47 39.9 +1.5**
LGD Lagodekhi 2.26 327 P **Pn** **04 47 12.9 +1.7**
LGD S **Sn** **04 47 39.8 +1.5**
HYR Heyderabad 2.35 265 ePn **Pb** **04 47 15.0 -2.1**
HYR Heyderabad 2.35 265 Pn **Pb** **04 47 15.0 -2.1**
SNR=512
HYR Sg **Sb** **04 47 48.8 +3.1**
IBST Bostanabad 2.38 200 ePn **Pb** **04 47 15.4 -2.2**
GNI Garni 2.43 276 Pn **Pb** **04 47 16.1 -2.3**
comp=E,920nm,0.3s,baz=58,slow=2.7,SNR=186
GNI Pg Pn 04 47 18.9 +5.3
comp=E,1µm,0.3s,baz=70,slow=3.1,SNR=340
GNI Sn **Sb** **04 47 48.7 +0.7**
comp=E,813nm,0.3s,baz=266,slow=15,SNR=3.3
comp=E,4µm,0.4s
GNI Garni 2.43 276 P **Pb** **04 47 18.2 -0.3**
GNI Garni 2.43 276⇑ *i*P **Pb** **04 47 16.2 -2.3**
GNI ⇑ *i*S **Sb** **04 47 50.1 +2.1**
GNI Garni 2.43 276 Pn **Pb** **04 47 16.3 -2.2**
GNI Garni 2.43 276 eP **Pb** **04 47 16.3 -2.2**
GNI Garni 2.43 276 P **Pb** **04 47 16.4 -2.0**
GNI S **Sb** **04 47 52.0 +4.0**
GNI Garni 2.43 276 Pn **Pn** **04 47 15.9 +2.3**
ISHB Shabestar 2.43 228 ePn **Pn** **04 47 15.2 +1.5**
ISHB *e* 04 47 50.2
comp=Z,57µm,0.4s
NRKZ NAREK 2.48 272⇓ *i*P **Pb** **04 47 18.8 -0.6**
NRKZ ⇑ *i*S **Sb** **04 47 51.4 +1.8**
SGKR Sergokala 2.52 356 eP **Pb** **04 47 18.3 -1.6**
SGKR eS **Sb** **04 47 49.9 -0.5**
SGKR *i* S **Sn** **04 47 50.5 +5.9**
SGKR pmax pmax
comp=Z,7.0nm,0.1s
SGKR smax smax
comp=E,3µm,0.7s
SGKR smax smax
comp=N,9µm,0.8s
SGKR smax smax
comp=N,10µm,0.9s
SGKR Sergokala 2.52 356 ePn **Pb** **04 47 18.3 -1.6**
comp=N,7.0nm,0.1s
SGKR eSn **Sb** **04 47 49.9 -0.5**
comp=N,2µm,0.8s
MAKU Maku 2.55 258 ePn **Pn** **04 47 17.3 +2.0**
MAKU *e* 04 47 57.1
comp=Z,99nm,0.6s
MAKU Maku 2.55 258 ePn **Pn** **04 47 17.9 +2.6**
MAKU IAML 04 47 57.7
comp=N,4µm,0.6s
CSN1 Caspian 2.56 158 ePn **Pn** **04 47 16.7 +1.5**
IHSH Hashtrud 2.68 191 ePn **Pn** **04 47 19.4 +2.1**
IAZR Azarshahr 2.71 214 ePn **Pn** **04 47 20.3 +2.7**
IAZR *e* 04 48 02.0
comp=Z,10µm,1.0s
ARKR Arakani 2.74 346 eP **Pb** **04 47 21.2 -2.4**
ARKR eS **Sb** **04 47 55.2 -1.6**
ARKR *i* S **Sn** **04 47 55.7 +5.6**
ARKR pmax pmax
comp=Z,1µm,0.5s
ARKR smax smax
comp=N,5µm,0.5s
ARKR smax smax
comp=E,2µm,0.8s
ARKR smax smax
comp=N,4µm,0.5s
ARKR Arakani 2.74 346 ePn **Pb** **04 47 21.3 -2.4**
comp=N,1µm,0.5s
ARKR eSn **Sb** **04 47 55.3 -1.6**
comp=N,2µm,0.6s
XNZR Khunzakh 2.74 341 eP **Pb** **04 47 21.3 -2.5**
XNZR eS **Sb** **04 47 55.3 -1.7**
XNZR *i* S **Sn** **04 47 56.0 +5.6**
XNZR pmax pmax
comp=Z,638nm,0.3s
XNZR smax smax
comp=E,3µm,0.6s
XNZR smax smax
comp=N,2µm,0.6s
XNZR smax smax
comp=E,3µm,0.7s
XNZR Khunzakh 2.74 341 ePn **Pb** **04 47 21.4 -2.5**
comp=E,638nm,0.3s
XNZR eSn **Sb** **04 47 55.4 -1.7**
comp=E,3µm,0.4s
TASB TASBURUN-IGDIR 2.81 272 P **Pb** **04 47 26.4 +1.5**
STE Stepanavan 2.89 293⇑ *i*P **Pn** **04 47 22.2 +2.3**
STE ⇓ *i*S **Sb** **04 48 02.5 +1.4**
UNCR Uncukul 2.89 344 eP **Pb** **04 47 23.1 -3.1**
UNCR eS **Sb** **04 47 58.8 -2.3**
UNCR *i* S **Sn** **04 47 59.3 +5.6**
UNCR pmax pmax
comp=Z,905nm,0.8s
UNCR smax smax
comp=N,5µm,0.5s
UNCR smax smax
comp=E,3µm,0.4s
UNCR smax smax
comp=N,5µm,0.5s
UNCR Uncukul 2.89 344 ePn **Pb** **04 47 23.1 -3.1**
comp=N,904nm,0.8s
UNCR eSn **Sb** **04 47 58.8 -2.3**
comp=N,8µm,0.5s
BTNK Botanikuri 2.92 307 P **Pn** **04 47 18.9 -1.4**
BTNK S **Sn** **04 47 57.0 +2.4**
BTNK Botanikuri 2.92 307 P **Pn** **04 47 18.9 -1.4**
BTNK S **Sn** **04 47 56.9 +2.4**
METS Metsamor 2.93 275⇓ *i*S **Sb** **04 48 05.7 +3.2**
BUJR Buynaksk 2.94 349 eP **Pb** **04 47 24.1 -2.9**
BUJR eS **Sb** **04 48 00.2 -2.2**
BUJR *i* S **Sn** **04 48 00.6 +5.7**
BUJR pmax pmax
comp=Z,1µm,0.3s
BUJR smax smax
comp=N,9µm,0.6s
BUJR smax smax
comp=E,8µm,0.5s
BUJR smax smax
comp=N,9µm,0.6s
BUJR Buynaksk 2.94 349 ePn **Pb** **04 47 24.1 -2.9**
comp=N,1µm,0.3s
BUJR eSn **Sb** **04 48 00.2 -2.2**
comp=N,4µm,0.6s
SEAG Tbilisi Sea 2.96 309 P **Pn** **04 47 23.7 +2.8**
SEAG S **Sb** **04 48 05.8 +2.4**
SEAG Tbilisi Sea 2.96 309 P **Pn** **04 47 23.6 +2.8**
SEAG S **Sb** **04 48 05.7 +2.4**
KZRT Kazreti 3.02 300 P **Pn** **04 47 23.4 +1.7**
KZRT Kazreti 3.02 300 P **Pn** **04 47 23.4 +1.7**
MAK Makhachkala 3.03 355 eP **Pb** **04 47 25.3 -3.2**
MAK eS **Sb** **04 48 02.2 -2.8**
MAK *i* S **Sn** **04 48 03.0 +5.9**
MAK pmax pmax
comp=Z,1µm,0.4s
MAK smax smax
comp=N,4µm,0.6s
MAK smax smax
comp=E,5µm,0.6s
MAK smax smax
comp=E,7µm,0.7s
MAK Makhachkala 3.03 355 ePn **Pb** **04 47 25.3 -3.2**
comp=E,1µm,0.5s
MAK eSn **Sb** **04 48 02.2 -2.8**
comp=E,4µm,0.5s
DMNI Dmanisi 3.14 297 P **Pn** **04 47 25.4 +2.1**
DMNI S **Sb** **04 48 08.6 +0.2**
DMNI Dmanisi 3.14 297 P **Pn** **04 47 25.4 +2.1**
DMNI S **Sb** **04 48 08.6 +0.2**
DBC Dubki 3.17 346 eP **Pn** **04 47 27.2 +3.4**
DBC eS **Sb** **04 48 05.6 -3.7**
DBC *i* S **Sn** **04 48 06.2 +5.3**
DBC pmax pmax
comp=Z,471nm,0.3s
DBC smax smax
comp=N,2µm,0.4s
DBC smax smax
comp=E,4µm,0.5s
DBC smax smax
comp=E,5µm,0.7s
DBC Dubki 3.17 346 ePn **Pn** **04 47 27.2 +3.4**
comp=E,470nm,0.2s
DBC eSn **Sb** **04 48 05.7 -3.7**
comp=E,7µm,0.6s
CLDR Caldiran 3.18 257 P **Pb** **04 47 31.1 -0.2**
LHJ2 Lahijan - Gila 3.25 148 ePn **Pn** **04 47 25.2 +0.4**
KANR Karaman 3.26 355 eP **Pn** **04 47 28.2 +3.4**
KANR eS **Sb** **04 48 08.4 -3.3**
KANR *i* S **Sn** **04 48 09.0 +6.2**
KANR pmax pmax
comp=Z,1µm,0.4s
KANR smax smax
comp=N,3µm,0.6s
KANR smax smax
comp=E,2µm,0.5s
KANR smax smax
comp=N,4µm,0.7s
KANR Karaman 3.26 355 ePn **Pn** **04 47 28.3 +3.4**
comp=N,1µm,0.4s
KANR eSn **Sb** **04 48 08.5 -3.3**
comp=N,6µm,0.8s
DLMR Dylym 3.26 344 eP **Pn** **04 47 28.4 +3.5**
DLMR eS **Sb** **04 48 08.4 -3.4**
DLMR *i* S **Sn** **04 48 09.1 +6.1**
DLMR pmax pmax
comp=Z,876nm,0.4s
DLMR smax smax
comp=N,6µm,0.8s
DLMR smax smax
comp=E,7µm,0.6s
DLMR smax smax
comp=E,6µm,0.9s
DLMR Dylym 3.26 344 ePn **Pn** **04 47 28.5 +3.5**
comp=E,875nm,0.4s
DLMR eSn **Sb** **04 48 08.5 -3.4**
comp=E,2µm,0.5s
DVE Vedeno 3.29 337*c* *i*P **Pn** **04 47 28.2 +2.9**
TRLG Trialeti 3.29 300 P **Pn** **04 47 28.1 +2.6**
TRLG S **Sb** **04 48 14.6 +1.8**
TRLG Trialeti 3.29 300 P **Pn** **04 47 28.1 +2.6**
TRLG S **Sb** **04 48 14.6 +1.8**
ZNJK Zanjan 3.33 169 ePn **Pn** **04 47 28.9 +2.8**
GIDE GILAN DEYLAMAN 3.41 152 ePn **Pn** **04 47 28.1 +1.0**
GIDE IAML 04 48 22.5
comp=N,1µm,0.4s
GIDE IAML 04 48 27.5
comp=E,1µm,0.5s
BRNG Burnasheti 3.51 300 P **Pn** **04 47 31.2 +2.7**
BGD Bogdanovka 3.52 293 P **Pn** **04 47 31.8 +3.0**
BGD S **Sb** **04 48 23.7 +4.1**
BGD Bogdanovka 3.52 293 P **Pn** **04 47 31.7 +3.0**
JIR1 Jirandeh 3.56 155 ePn **Pn** **04 47 30.3 +1.0**
GUDG Gudauri 3.60 315 P **Pn** **04 47 31.7 +1.8**
GUDG Gudauri 3.60 315 P **Pn** **04 47 31.6 +1.8**
MAHB Mahabad 3.61 209 ePn **Pn** **04 47 32.5 +2.6**
MAHB *e* 04 48 11.8
comp=Z,35µm,0.6s
GROC Groznyy 3.61 335 eP **Pn** **04 47 32.9 +3.2**
GROC *e* 04 48 16.4
GROC pmax pmax
comp=Z,412nm,0.5s
GROC smax smax
comp=E,4µm,0.6s
GROC smax smax
comp=N,5µm,1.0s
GROC MLR MLR
comp=Z,8µm,2.0s
GROC Groznyy 3.61 335 ePn **Pn** **04 47 33.1 +3.3**
comp=Z,360nm,0.6s
GROC eSn **Sn** **04 48 16.1 +4.5**
comp=Z,3µm,0.6s
PNSH Pansheti 3.65 318 P **Pn** **04 47 32.3 +1.8**
PNSH S **Sn** **04 48 15.3 +2.6**
PNSH Pansheti 3.65 318 P **Pn** **04 47 32.2 +1.8**
PNSH S **Sn** **04 48 15.3 +2.6**
MTEO Meteo 3.72 318 P **Pn** **04 47 33.6 +1.9**
KARS Kars 3.75 282 P **Pb** **04 47 39.3 -1.6**
KARS Kars 3.75 282 Pn **Pn** **04 47 34.4 +2.7**
KARS Kars 3.75 282 P **Pn** **04 47 34.4 +2.7**
VANB Van 3.75 250 P **Pb** **04 47 40.6 -0.3**
BKRG Bakuriani 3.78 300 P **Pn** **04 47 34.8 +2.6**
BKRG S **Sb** **04 48 29.9 +3.1**
BKRG Bakuriani 3.78 300 P **Pn** **04 47 34.8 +2.6**
AGRB Hanur-Agry 3.80 266 P **Pb** **04 47 40.8 -1.0**
IGZV Ghazvin 4.00 152 ePn **Pn** **04 47 36.8 +1.5**
GEVA Gevas 4.10 248 Pn **Pn** **04 47 37.4 +0.8**
QALM Alamut, Qazvin 4.12 147 ePn **Pn** **04 47 37.1 +0.1**
AKDM Akdamar-Van 4.15 249 P **Pb** **04 47 46.6 -1.2**
MLAZ Malazgirt-MUS 4.21 261 P **Pb** **04 47 47.0 -1.8**
ABS Abastumani 4.25 297 P **Pn** **04 47 40.5 +1.7**
ABS Abastumani 4.25 297 P **Pn** **04 47 40.4 +1.7**
ONI Oni 4.26 310 P **Pn** **04 47 41.0 +2.3**
ONI S **Sb** **04 48 43.9 +3.2**
ONI Oni 4.26 310 P **Pn** **04 47 42.9 +4.2**
ONI Oni 4.26 310 Pn **Pn** **04 47 40.6 +1.8**
ONI Oni 4.26 310 P **Pn** **04 47 41.0 +2.3**
SENK Senkaya-Erzuru 4.29 280 P **Pb** **04 47 46.9 -3.2**
CUKT Cukurca 4.30 233 P **Pb** **04 47 48.9 -1.5**
TKB Tkibuli 4.41 305 P **Pn** **04 47 43.6 +2.8**
TKB Tkibuli 4.41 305 P **Pn** **04 47 43.5 +2.8**
KOPR Koprukoy-ERZUR 4.64 272 P **Pb** **04 47 52.9 -3.3**
GURO Guroymak-BITLI 4.76 255 P **Pb** **04 47 55.2 -2.9**
GURO Guroymak-BITLI 4.76 255 Pn **Pn** **04 47 48.3 +2.7**
CHTH Charan 4.77 147 ePn **Pn** **04 47 48.1 +2.2**
IMHD Mahdasht 4.79 152 ePn **Pn** **04 47 48.5 +2.5**
NCK Nalchik 4.79 319 *i* P **Pn** **04 47 47.8 +1.9**
IRAZ Razeghan 4.81 160 ePn **Pn** **04 47 48.7 +1.6**
SNGE Sanandaj 4.87 185 ePn **Pn** **04 47 50.7 +1.8**
BATM Batumi 4.99 291 P **Pb** **04 48 01.5 -0.5**
BATM Batumi 4.99 291 P **Pn** 04 47 55.0 +6.3
BCA Borcka 5.00 289⇑ P **Pn** **04 47 50.6 +1.8**
BCA Borcka 5.00 289 P **Pb** 04 47 56.3 -5.8
TEH Tehran 5.03 146 ePn **Pn** **04 47 51.0 +1.6**
VRTB Varto-Mus 5.04 263 P **Pb** **04 47 58.3 -4.6**
ILIN Lien 5.07 189 ePn **Pn** **04 47 54.1 +4.0**
IPRN Peran 5.10 135 ePn **Pn** **04 47 50.9 +0.6**
HAGD Aghdareh 5.21 169 ePn **Pn** **04 47 55.3 +3.3**
IHSB Hasanabad 5.24 148 ePn **Pn** **04 47 55.4 +3.2**
KBZ Khabaz 5.31 317 Pn **Pn** **04 47 54.6 +1.5**
comp=Z,3.1nm,0.3s,baz=144,slow=9.8,SNR=34
KBZ Pg **Pb** **04 48 07.8 +0.4**
comp=Z,8.7nm,0.3s,baz=140,slow=9.6,SNR=16
KBZ Sn **Sn** **04 48 58.4 +5.0**
comp=Z,23nm,0.3s,baz=73,slow=11,SNR=3.8
KBZ Lg Lg 04 49 17.5
comp=Z,34nm,0.3s,baz=156,slow=8.9,SNR=2.2
KBZ LR LR 04 50 30.6
comp=Z,5µm,20.1s,baz=129,slow=45
comp=Z,25nm,0.6s
KBZ Khabaz 5.31 317 *i* P **Pn** **04 47 56.1 +3.1**
IDHR Dehrash 5.37 193 ePn **Pn** **04 48 50.8 +3.8**
DAMV Damavand 5.38 142 ePn **Pn** **04 47 56.7 +2.4**
DAMV IAML 04 49 12.9
comp=E,243nm,0.5s
DAMV IAML 04 49 21.4
comp=N,247nm,0.7s
IDMV Damavand 5.46 142 ePn **Pn** **04 47 58.9 +3.5**
IBZA Bozab 5.47 180 ePn **Pn** **04 47 59.6 +4.1**
SVAN Silvan-Diyarba 5.51 253 P **Pb** 04 48 05.6 -5.3
CHOM Cayeli-Rize 5.55 284 P **Pb** 04 48 04.1 -7.5
KVAR Kislovodsk Arr 5.57 318 Pn **Pn** **04 47 59.3 +2.5**
baz=82,slow=22
KVAR Sn **Sn** **04 49 05.1 +5.1**
baz=285,slow=18
KVAR Lg Lg 04 49 26.1
baz=347,slow=17
KVAR LR LR 04 50 55.2
comp=N,2µm,21.0s,baz=71,slow=47
comp=N,9.0nm,0.4s
KIV Kislovodsk 5.58 318⇓ P **Pn** **04 48 00.0 +3.2**
KIV Kislovodsk 5.58 318 P **Pn** **04 48 00.6 +3.8**
KIV Kislovodsk 5.58 318 Pn **Pn** **04 47 58.4 +1.5**
KIV Kislovodsk 5.58 318 eP **Pn** **04 47 59.2 +2.4**
KIV eS **Sn** **04 49 04.4 +4.3**
KIV pmax pmax
comp=Z,78nm,1.0s
KIV MLR MLR
comp=Z,1µm,9.0s
KIV Kislovodsk 5.58 318 *i* Pn **Pn** **04 47 59.3 +2.5**
SNR=14
KER Kermanshah 5.58 186 ePn Pn 04 48 02.4 +5.4
ASAO Ashtian 5.65 162 ePn **Pn** **04 48 00.7 +2.7**
BNGB Bingl 5.66 263 P Pb 04 48 07.7 -5.8
IQOM Qom 5.69 153 ePn **Pn** **04 48 00.8 +2.3**
YEDI Yedisu-Bingol 5.69 267 P Pb 04 48 07.1 -6.9
KCHF Cheshme Sefid, 5.70 187 ePn **Pn** **04 48 02.9 +4.2**
HSAM Samen 5.75 174 ePn **Pn** **04 48 03.2 +3.8**
DOMR Dombai 5.76 307 *i* P **Pn** **04 48 01.6 +2.1**
IFIR Firoozkooh 5.77 137 ePn **Pn** **04 48 01.8 +2.2**
IKOM Komasi 5.77 183 ePn **Pn** **04 48 04.0 +4.4**
IGLO Ghaloghah 5.80 124 ePn **Pn** **04 48 00.1 +0.1**
IVRN Varamin 5.81 147 ePn **Pn** **04 48 02.6 +2.6**
ISHM Shahmirzad 5.94 132 ePn **Pn** **04 48 03.7 +1.7**
BAYT Aydıntepe-Bayb 5.96 277 P Pb 04 48 10.5 -8.0
ILAS Lasjerd 6.07 137 ePn **Pn** **04 48 06.1 +2.3**
GHVR GHOM 6.09 153 ePn **Pn** **04 48 06.2 +2.3**
ARXR Arkhyz 6.13 308*d* *i*P Pn 04 48 10.1 +5.7
IDOB Doab 6.15 178 ePn **Pn** **04 48 08.9 +4.0**
MARD Mardin 6.16 247 Pn **Pn** **04 48 07.3 +2.5**
GOF Gofitskoye 6.24 327⇑ eP Pn 04 48 13.7 +7.9
GOF eS **Sn** **04 49 16.6 +0.3**

GOF pmax pmax
comp=Z,340nm,0.6s
GOF smax smax
comp=N,1µm,0.9s
GOF smax smax
comp=E,919nm,0.9s
KTUT Trabzon 6.28 282 ⇓P Pn 04 48 11.9 +5.5
KTUT Trabzon 6.28 282 P Pn 04 48 14.6 +8.2
ERZN Erzincan 6.31 269 P Pn 04 48 15.3 +8.4
MAZI Mazidag 6.33 249 P Pb 04 48 17.0 -7.9
IKFM Kafar-mosalman 6.41 180 *e*Pn Pn 04 48 13.2 +5.0
KHMZ Khomeyn 6.41 164 *e*Pn Pn 04 48 13.5 +5.1
IMND Minoodasht 6.47 112 *e*Pn **Pn 04 48 08.6 -0.4**
IANJ Anjilo 6.54 131 *e*Pn **Pn 04 48 12.2 +2.0**
ISFB Sefidab 6.58 147 *e*Pn **Pn 04 48 13.2 +2.7**
PTK Pertek 6.67 264 P Pn 04 48 20.9 +9.0
MRVT Maraveh tapeh 6.80 107 *e*Pn **Pn 04 48 13.8 +0.2**
MRVT Maraveh tapeh 6.80 107 *e*Pn **Pn 04 48 14.4 +0.8**
QAMS Qamsar 6.80 155 *e*Pn **Pn 04 48 16.6 +2.7**
VSLR Vesyoloye 6.85 303*c i*P **Pn 04 48 13.6 -0.6**
KRSH Karshahi 6.86 149 *e*Pn **Pn 04 48 17.1 +2.5**
ESPY Espiye-Giresun 7.06 281 P Pn 04 48 24.5 +7.4
SOC Sochi 7.11 303 *e*P **Pn 04 48 20.5 +2.7**
SOC *e* 04 49 45.4
SOC pmax pmax
comp=Z,14nm,0.9s
SOC MLR MLR
comp=Z,2µm,17.0s
IKLH Kolahrood 7.25 155 *e*Pn **Pn 04 48 23.2 +3.3**
ARPR Arapgir-MALATY 7.44 266 P Pn 04 48 30.4 +8.0
LZRR Lazarevskoye 7.49 305 *i*P **Pn 04 48 25.0 +2.0**
URFA Urfa 7.52 253 P Pn 04 48 32.5 +9.0
SHRO Shahrood 7.53 119 *e*Pn **Pn 04 48 25.1 +1.5**
IPIR Pirpir 7.64 161 *e*Pn Pn 04 48 33.3 +7.9
IZEF Zefreh 7.89 152 *e*Pn **Pn 04 48 31.3 +2.5**
NASN Na'in 8.16 149 *e*Pn **Pn 04 48 35.6 +3.1**
DARE Darende-Malaty 8.19 264 P Pn 04 48 41.4 +8.6
GEYT Alibeck 8.22 101 Pn **Pn 04 48 32.1 -0.9**
comp=Z,28nm,0.3s,baz=262,slow=16,SNR=100
GEYT Sn **Sn 04 49 58.9 -6.2**
baz=40,slow=14
comp=Z,52nm,0.2s
GEYT Alibeck 8.22 101 Pn **Pn 04 48 31.7 -1.4**
GYA0 ALIBECK ARRAY 8.22 101 P **Pn 04 48 31.4 -1.6**
GYA0 04 50 02.2
GYA0B ALIBECK ARRAY 8.22 101 Pn **Pn 04 48 31.8 -1.3**
GYA0B ALIBECK ARRAY 8.22 101 ⇑Pn **Pn 04 48 31.4 -1.6**
GYA0B ⇓Sn **Sn 04 50 02.3 -2.8**
AMIS Naft Sefid 8.34 172 *e*Pn **Pn 04 48 36.9 +2.2**
SVSK Karacayir 8.37 273 P Pn 04 48 43.1 +8.0
ISFR Sfrayin 8.43 107 *e*Pn **Pn 04 48 36.8 +0.6**
SBZV Sabzevar 8.44 112 *e*Pn **Pn 04 48 36.1 -0.1**
TOKT Tokat 8.70 276 P Pn 04 48 46.9 +7.2
IEMG Emamngholi 8.79 103 *e*Pn **Pn 04 48 41.2 +0.1**
IRAM Ramesheh 8.90 154 *e*Pn **Pn 04 48 46.9 +4.3**
KMRS Kahramanmaras 8.93 258 P Pn 04 48 51.3 +8.5
ANN Anapa 9.13 305 *e*P **Pn 04 48 45.9 +0.4**
ANN *e*S **Sn 04 50 31.1 +3.7**
ANN pmax pmax
comp=Z,18nm,0.9s
ANN MLR MLR
comp=Z,3µm,15.0s
ANN MLR MLR
comp=E,2µm,16.0s
ANN MLR MLR
comp=N,783nm,14.0s
IAKL Akhelmad 9.17 108 *e*Pn **Pn 04 48 46.9 +0.6**
TNSJ Nastanj 9.18 128 *e*Pn **Pn 04 48 49.0 +2.7**
YZKH Yazd 9.28 142 *e*Pn **Pn 04 48 50.4 +2.7**
ICHK Chekchek 9.32 144 *e*Pn **Pn 04 48 50.4 +2.1**
BNN Bunyan 9.39 267 Pn **Pn 04 48 53.6 +4.4**
IPAY Payeh 9.41 108 *e*Pn **Pn 04 48 50.4 +0.8**
KLNJ Kolanjah 9.41 160 *e*Pn Pn 04 48 59.1 +9.4
IKRD Kardeh 9.66 105 *e*Pn **Pn 04 48 52.7 -0.3**
TABS Tabas 9.70 127 *e*Pn **Pn 04 48 55.4 +1.9**
TKDS Koohdasht(Taba 9.73 128 *e*Pn **Pn 04 48 55.3 +1.4**
IMOG Moghan 9.81 109 *e*Pn **Pn 04 48 54.6 -0.5**
TPRV Parvadeh(Tabas 9.88 132 *e*Pn **Pn 04 48 57.7 +1.8**
TBHD Torbat heydari 10.06 113 *e*Pn **Pn 04 48 59.8 +1.3**
IMEH Mehriz 10.13 145 *e*Pn **Pn 04 49 02.5 +3.0**
IMYA Miami 10.27 107 *e*Pn **Pn 04 49 00.3 -0.9**
IBAF Bafgh 10.41 141 *e*Pn **Pn 04 49 05.8 +2.6**
JRKH Jarkhoshk 10.63 108 *e*Pn **Pn 04 49 05.7 -0.5**
BZK Bozkurt 10.70 285 Pn **Pn 04 49 09.6 +2.6**
ILGA Ilgaz 10.86 280 Pn **Pn 04 49 11.8 +2.5**
TBJM Torbat-e-JAM 10.91 111 *e*Pn **Pn 04 49 10.3 +0.2**
BR131 Keskin Array S 10.97 273 Pn **Pn 04 49 14.4 +3.6**
BR131 Keskin Array S 10.97 273*c i*P Pn 04 49 15.7 +4.9
BR131 Keskin Array S 10.97 273 P Pn 04 49 16.1 +5.4
SNR=69
BR131 S **Sn 04 51 20.0 +7.3**
BRTR Keskin Array B 10.97 273 Pn Pn 04 49 15.6 +4.8
comp=N,9,3nm,0.9s,baz=94,slow=12,SNR=44
BRTR Lg Lg 04 52 22.2
comp=N,0.1nm,0.3s,baz=312,slow=27,SNR=1.3
BRTR LR LR 04 54 00.4
comp=N,6µm,20.0s,baz=83,slow=41
BRTR Keskin Array B 10.97 273 Pn **Pn 04 49 14.4 +3.6**
AFRZ Afriz 11.04 123 *e*Pn **Pn 04 49 13.9 +2.0**
SIM Simferopol' 11.34 301 *e*P **Pn 04 49 17.6 +1.9**
SIM *e*S **Sn 04 51 18.6 -2.9**
SIM *e*S **Sn 04 51 19.2 -2.3**
SIM pmax pmax
comp=Z,16nm,1.0s
SIM smax smax
comp=N,124nm,2.7s
SIM smax smax
comp=N,41nm,1.1s
ANTO Ankara 11.60 274 Pn **Pn 04 49 20.5 +1.1**
ANTO Ankara 11.60 274 P **Pn 04 49 23.0 +3.6**
ANTO Ankara 11.60 274 P **Pn 04 49 21.7 +2.3**
BR231 Keskin MP Arra 11.62 274 Pn **Pn 04 49 23.9 +4.2**
IKOO Kooshah 11.70 126 *e*Pn **Pn 04 49 22.3 +1.4**
SHRT Shahrakht 11.76 118 *e*Pn **Pn 04 49 23.5 +1.9**
KHGB Koh Gabri 11.85 141 *e*Pn **Pn 04 49 24.7 +1.8**
GEM Giv'at Ha'Em 11.90 239 Pn **Pn 04 49 27.9 +4.4**
VRH Novokhopyorsk 12.05 341 *e*P **Pn 04 49 24.6 -0.8**
VRH pmax pmax
comp=Z,40nm,0.6s
VRH MLR MLR
comp=Z,2µm,16.0s
BSRN Basiran 12.09 128 *e*Pn **Pn 04 49 28.0 +1.9**
MMA0B Mount Meron ar 12.20 239 Pn **Pn 04 49 31.4 +3.9**
MMAI Mount Meron Ar 12.20 239 Pn **Pn 04 49 32.2 +4.7**
comp=Z,0.8nm,0.3s,baz=58,slow=13,SNR=7.0
MMAI Lg Lg 04 53 02.8
comp=Z,3.8nm,0.3s,baz=128,slow=32,SNR=5.7
MMAI LR LR 04 54 52.1
comp=Z,5µm,18.4s,baz=218,slow=41
KRBR Kerman 12.31 141 *e*Pn **Pn 04 49 32.3 +2.9**
BELG Belogornoye 12.45 359 Pn Pn **04 49 28.5 -2.4**
comp=Z,5.7nm,0.3s,baz=297,slow=3.7,SNR=24
BELG Sn Sn 04 51 36.9 -12
comp=Z,5.2nm,0.3s,baz=144,slow=21,SNR=8.0
BELG LR LR 04 56 15.1
comp=Z,2µm,18.6s,baz=148,slow=47
comp=Z,49nm,0.6s
MMLI Mount Malkishu 12.55 237 Pn **Pn 04 49 36.8 +4.5**
CSS Mathiatis 12.59 251 Pn **Pn 04 49 35.3 +2.4**
HMDT Nahal Hemdat 12.60 236 Pn **Pn 04 49 37.5 +4.5**
AB31 Akbulak array 12.65 39 *e*P **Pn 04 49 30.6 -3.0**
ABKAR Akbulak array 12.65 39 Pn **Pn 04 49 30.3 -3.3**
ABKAR Akbulak array 12.65 39 Pn **Pn 04 49 30.1 -3.4**
AKTO Aktyubinsk 12.67 31 Pn **Pn 04 49 31.4 -2.5**
comp=Z,8.0nm,0.3s,baz=193,slow=10,SNR=69
AKTO Sn Sn 04 51 43.1 -11
comp=Z,2.5nm,0.3s,baz=214,slow=18,SNR=1.3
AKTO LR LR 04 55 46.4
comp=Z,1µm,18.3s,baz=218,slow=44
comp=Z,22nm,0.3s
HRA Herat 12.71 111 Pn **Pn 04 49 33.2 -1.6**
MDUB Mudurnu 12.78 278 Pn **Pn 04 49 37.2 +1.7**
VSR Storozhevoye 12.81 335 *e*P **Pn 04 49 34.6 -1.1**
VSR pmax pmax
comp=Z,20nm,0.6s
VSR MLR MLR
comp=Z,2µm,16.0s
VORR Voronezh 13.19 336 *e*P **Pn 04 49 40.4 -0.5**
VORR pmax pmax
comp=Z,70nm,0.5s
BORA Eskisehir 13.39 275 **Pn 04 49 46.5 +2.6**
ISP Isparta 13.70 267 Pn **Pn 04 49 49.6 +1.5**
ISP Isparta 13.70 267 P **Pn 04 49 49.6 +1.5**

ZFRI Zfri 13.98 232 Pn **Pn 04 49 55.6 +3.8**
LPSR Galich'ya Gora 14.08 337 *e*P **Pn 04 49 51.6 -1.4**
LPSR pmax pmax
comp=Z,130nm,1.0s
LPSR MLR MLR
comp=Z,780nm,16.0s
KZIT Kziot 14.21 235 Pn **P 04 49 59.7 -2.5**
PRNI Paran 14.23 232 Pn **P 04 49 59.7 -2.7**
GENO Geno 14.28 149 *e*Pn **P 04 50 00.3 -2.8**
HRFI Mount Harif 14.43 231 Pn **P 04 50 02.0 -2.7**
ELLL Elmali 14.47 263 Pn **P 04 50 02.6 -2.6**
ELLL Elmali 14.47 263 P **P 04 50 02.6 -2.6**
KRMI Paran Flat 14.56 232 Pn **P 04 50 03.9 -2.2**
PURM Purcari 14.68 303 ⇑P **P 04 50 04.9 -2.3**
MBRI Mt Berech 14.68 230 Pn **P 04 50 07.1 -0.4**
EIL Elat 14.75 230 Pn **Pn 04 50 05.1 +2.7**
comp=Z,0.4nm,0.3s,baz=338,slow=3.2,SNR=6.5
EIL Sn **Sn 04 52 45.8 +0.8**
comp=Z,0.5nm,0.3s,baz=249,slow=23,SNR=0.9
EIL Lg Lg 04 54 22.7
comp=Z,0.5nm,0.3s,baz=86,slow=20,SNR=1.6
EIL LR LR 04 56 28.1
comp=Z,3µm,18.7s,baz=53,slow=40
EIL Elat 14.75 230 Pn **P 04 50 06.6 -1.6**
ZHSF Zahedan 14.76 130 *e*Pn **Pn 04 50 05.0 +2.4**
JURR Jurilovca 14.85 295 ⇓P **Pn 04 50 04.7 +1.1**
TLCR 14.99 297 ⇑P **P 04 50 11.4 +0.7**
TIRR Tirgusor 15.12 294 IAmb IAmb 04 50 14.6
comp=Z,405nm,1.9s
TIRR Tirgusor 15.12 294 ⇓P **Pn 04 50 07.6 +0.4**
TPGR Topolog 15.19 295 ⇓P **Pn 04 50 09.6 +1.4**
SHME Shamm 15.48 151 P **P 04 50 16.0 -0.3**
SHME P **P 04 50 16.0 -0.3**
SHME Shamm 15.48 151 Pn **P 04 50 15.8 -0.5**
ICOR Ion Corvin 15.49 292 ⇓P **P 04 50 15.2 -1.1**
MILM Milestii Mici 15.49 303 *i*P **Pn 04 50 14.0 +1.9**
comp=Z,530nm,1.3s
MILM Milestii Mici 15.49 303 *e*PP P 04 50 26.0 +10
MILM *e*S **Sn 04 53 06.0 +3.1**
MILM *e*L L 04 56 38.0
MILM LRM MLR 04 57 12.0
comp=Z,700nm,21.0s
MILM Milestii Mici 15.49 303 ⇑P **Pn 04 50 14.1 +2.1**
MILM Milestii Mici 15.49 303 *i*P **Pn 04 50 14.0 +1.9**
MILM *e*S **Sn 04 53 06.0 +3.1**
MILM pmax pmax
comp=E,340nm,1.3s
MILM pmax pmax
comp=Z,530nm,1.3s
HARR Harsova 15.50 294 ⇓P **Pn 04 50 14.0 +1.8**
KIS Kishinev 15.52 303 *e*P **Pn 04 50 14.0 +1.6**
comp=Z,310nm,1.8s
KIS Kishinev 15.52 303 *e*PP P 04 50 27.0 +10
KIS LRM MLR 04 55 17.0
comp=Z,250nm,18.0s
KIS *e*L L 04 56 27.0
KIS Kishinev 15.52 303 *e*P **Pn 04 50 14.0 +1.6**
KIS *e* 04 53 09.0
KIS pmax pmax
comp=Z,310nm,1.8s
KIS pmax pmax
comp=E,320nm,2.1s
BANOM Banah 15.65 151 P **P 04 50 16.6 -1.6**
SNR=17
BANOM P **P 04 50 16.6 -1.6**
SNR=17
BANOM Banah 15.65 151 *i*Pn **P 04 50 16.4 -1.9**
SNR=7.7
PRD Pryadia 15.67 289 *i*P **Pn 04 50 15.4 +1.0**
ARG Arkhangelos 16.00 263 P **P 04 50 21.9 -0.1**
ARG Arkhangelos 16.00 263 P **P 04 50 21.9 -0.1**
ARG pmax pmax
comp=Z,170nm,1.2s
VASR Vaslui 16.07 301 ⇓P **P 04 50 22.0 -0.8**
MASF Masafi 16.10 152 P **P 04 50 24.9 +1.7**
SNR=24
MASF P **P 04 50 24.9 +1.7**
SNR=24
MSFE Esma-Masafi 16.11 152 *i*P **P 04 50 24.4 +1.0**
SNR=11
GHRR 16.16 299 ⇓P **P 04 50 25.4 +1.7**
SORM Soroca 16.23 307 ⇑P **Pn 04 50 21.1 -0.4**
JMB Yambol 16.23 286 *i*P **Pn 04 50 20.9 -0.7**
NAZ Nazwa, Dubai 16.28 154 P **P 04 50 28.0 +2.8**
SNR=29
NAZ Nazwa, Dubai 16.28 154 *i*P **P 04 50 26.1 +1.0**
SNR=7.6
TAS Tashkent 16.30 78 Pn **Pn 04 50 20.5 -2.1**
TAS IAmb IAmb 04 50 24.0
comp=Z,147nm,0.5s
TAS Tashkent 16.30 78 P **Pn 04 50 20.5 -2.1**
TAS pmax pmax
comp=Z,147nm,0.5s
ODBI Odobesti 16.33 298 ⇑P **P 04 50 27.4 +1.8**
IAS Iasi 16.40 303 ⇑P **P 04 50 27.1 +0.7**
IAS Iasi 16.40 303 P **P 04 50 26.9 +0.6**
IAS pmax pmax
comp=Z,801nm,0.9s
AJN Ajban 16.46 157 P **P 04 50 29.4 +2.2**
SNR=36
AJN P **P 04 50 29.4 +2.2**
SNR=36
AJN Ajban 16.46 157 *i*P **P 04 50 28.4 +1.3**
SNR=23
RAYN Ar Rayn 16.50 188 Pn **Pn 04 50 23.4 -1.8**
RAYN Ar Rayn 16.50 188 P **Pn 04 50 23.4 -1.8**
RAYN pmax pmax
comp=Z,212nm,1.9s
RAYN Ar Rayn 16.50 188 Pn **Pn 04 50 23.5 -1.7**
ASUD Al Ashush, Dub 16.51 156 P **P 04 50 30.0 +2.3**
SNR=21
ASUD Al Ashush, Dub 16.51 156 *i*P **P 04 50 29.4 +1.7**
SNR=7.6
UOSS Minazif 16.51 152 **Pn 04 50 26.1 +0.9**
UOSS Minazif 16.51 152 P **P 04 50 28.8 +1.1**
UOSS P **P 04 50 28.8 +1.1**
UOSS Minazif 16.51 152 *i*Pn **P 04 50 27.7 0.0**
SNR=12
CHGR Chuyangaron 16.51 88 Pn **Pn 04 50 22.4 -2.9**
CHGR Chuyangaron 16.51 88 P **Pn 04 50 24.0 -1.3**
CHGR pmax pmax
comp=Z,121nm,1.0s
ISR Istrita 16.55 295 ⇑P **P 04 50 28.2 +0.1**
ISR Istrita 16.55 295 P **P 04 50 27.9 -0.2**
ISR pmax pmax
comp=Z,158nm,1.2s
VRI Vrincioaia 16.58 298 ⇓P **P 04 50 27.5 -0.8**
VRI Vrincioaia 16.58 298 P **Pn 04 50 27.1 +1.1**
VRI pmax pmax
comp=Z,52nm,0.8s
HATD Hatta, Dubai 16.59 153 P **P 04 50 30.0 +1.3**
SNR=36
HATD P **P 04 50 30.0 +1.3**
SNR=36
HATD Hatta, Dubai 16.59 153 *i*Pn **P 04 50 29.0 +0.4**
SNR=12
PLOR Plostina 16.63 298 ⇑P **P 04 50 28.3 -0.7**
ALN Alexandroupoli 16.66 280 **P 04 50 28.9 -0.4**
ALN Alexandroupoli 16.66 280 P **P 04 50 28.9 -0.4**
ALN pmax pmax
comp=Z,63nm,1.2s
ASHO Ashiyiah 16.70 153 P **P 04 50 33.0 +3.2**
SNR=23
ASHO P **P 04 50 33.0 +3.2**
SNR=23
ASHO Ashiyiah 16.70 153 *i*Pn **P 04 50 29.2 -0.7**
SNR=20
SZH Strazhica 16.75 289 *i*P **Pn 04 50 28.9 +0.7**
NEHR Nehoiu 16.78 296 ⇓P **P 04 50 32.6 +2.0**
TESR Tescani 16.79 300 ⇑P **P 04 50 29.8 -0.9**
IUG Iuzhnay 16.84 75 *e*P **Pn 04 50 26.1 -3.3**
IUG Iuzhnay 16.84 75 *e*P **Pn 04 50 26.1 -3.3**
baz=76
AKASG Malin Array Be 16.92 316 Pn **Pn 04 50 29.4 -0.9**
comp=Z,3.5nm,0.3s,baz=122,slow=12,SNR=76
AKASG Sn **Sn 04 53 31.4 -6.0**
comp=Z,0.9nm,0.3s,baz=70,slow=33,SNR=1.8
AKASG LR LR 04 57 43.7
comp=Z,859nm,19.4s,baz=132,slow=40
comp=Z,74nm,0.7s
AKASG Malin Array Be 16.92 316 Pn **Pn 04 50 29.2 -1.1**
AKASG IAmb IAmb 04 50 34.3
comp=Z,186nm,0.9s
AKASG Malin Array Be 16.92 316 *i*P **Pn 04 50 29.3 -0.9**
AKASG pmax pmax

comp=Z,90nm,0.7s
AKBB Malin Array Si 16.92 316 Pn **Pn 04 50 29.0 -1.3**
AKBB IAmb IAmb 04 50 34.3
comp=Z,210nm,0.9s
AKBB Malin Array Si 16.92 316*c e*P **Pn 04 50 29.3 -1.0**
OBN Obninsk 16.96 337 ⇑P **Pn 04 50 28.9 -1.8**
OBN Obninsk 16.96 337 Pn **Pn 04 50 27.8 -2.8**
comp=Z,0.7nm,0.3s,baz=332,slow=22,SNR=23
OBN Sn **Sn 04 53 30.7 -7.5**
comp=Z,0.9nm,0.3s,baz=94,slow=18,SNR=1.4
OBN LR LR 04 58 02.1
comp=Z,320nm,21.2s,baz=158,slow=41
comp=Z,16nm,0.7s
OBN Obninsk 16.96 337 Pn **Pn 04 50 27.3 -3.3**
OBN Obninsk 16.96 337*c i*P **Pn 04 50 27.6 -3.1**
OBN *e*S **Sn 04 53 42.0 +3.8**
OBN pmax pmax
comp=Z,137nm,1.2s
OBN MLR MLR
comp=Z,814nm,17.0s
KARP Karpathos 16.97 262 Pn **Pn 04 50 31.6 +0.5**
MLR Muntele Rosu 17.03 296 ⇑P **P 04 50 35.2 +1.6**
MLR Muntele Rosu 17.03 296 P **P 04 50 33.0 -0.5**
comp=Z,0.3nm,0.3s,baz=163,slow=5.8,SNR=37
MLR S **Sn 04 53 32.7 -7.7**
comp=Z,9.2nm,1.0s,baz=75,slow=10,SNR=1.3
MLR LR LR 05 00 16.8
comp=Z,1µm,18.2s,baz=78,slow=48
comp=Z,25nm,0.8s
MLR Muntele Rosu 17.03 296 **P 04 50 33.8 +0.2**
MLR Muntele Rosu 17.03 296 P **P 04 50 33.8 +0.2**
MLR pmax pmax
comp=Z,35nm,0.9s
KDZ Kurdzhali 17.10 283 *i*P **P 04 50 34.4 +0.2**
ALNE Al Ain 17.18 155 P **P 04 50 36.7 +1.6**
SNR=12
ALNE P **P 04 50 36.7 +1.6**
SNR=12
MOS Moscow 17.21 340 *e*P **Pn 04 50 28.3 -5.5**
MOS *e*S **Sn 04 53 33.9 -10**
MOS pmax pmax
comp=Z,250nm,1.3s
MOS pmax pmax
comp=N,166nm,1.2s
MOS pmax pmax
comp=Z,700nm,2.0s
MOS MLR MLR
comp=Z,1µm,17.0s
KK31 Karatay Array 17.22 72 Pn **Pn 04 50 31.3 -2.8**
KK31 Karatay Array 17.22 72 *i*P **Pn 04 50 31.8 -2.3**
KK31 Karatay Array 17.22 72 ⇑P **Pn 04 50 31.9 -2.3**
comp=Z,91nm,0.8s,baz=268,slow=15,SNR=425
KK31 S **Sn 04 53 37.1 -7.8**
comp=Z,2.2nm,0.2s,baz=275,slow=22,SNR=4.3
KKAR Karatay Array 17.22 72 Pn **Pn 04 50 31.8 -2.3**
KKAR Karatay Array 17.22 72 Pn **Pn 04 50 30.8 -3.4**
KKAR Karatay Array 17.22 72 P **Pn 04 50 31.8 -2.3**
KKAR pmax pmax
comp=Z,56nm,0.8s
BIZ Bicaz 17.27 301 ⇓P **P 04 50 35.6 -0.3**
OZUR 17.27 298 ⇓P **P 04 50 37.0 +1.0**
GAR Garm 17.34 86 IAmb IAmb 04 50 41.1
comp=Z,279nm,1.5s
SOHO SOHO 17.37 153 P **P 04 50 37.4 +0.2**
SOHO P **P 04 50 37.4 +0.2**
SOHO SOHO 17.37 153 *i*Pn **P 04 50 36.8 -0.4**
SNR=5.7
DOPR Dopca 17.51 297 ⇓P **P 04 50 40.8 +2.1**
MZR Muzera 17.54 163 P **P 04 50 41.3 +2.1**
SNR=63
MZR Muzera 17.54 163 *i*P **P 04 50 41.3 +2.1**
SNR=24
BTK Batken 17.56 82 Pn **Pn 04 50 36.7 -1.8**
BTK Batken 17.56 82 P **Pn 04 50 36.7 -1.8**
BTK pmax pmax
comp=Z,45nm,0.8s
MTUR Matau 17.60 295 ⇑P **P 04 50 43.5 +3.8**
RZN Rozhen 17.62 283 *i*P **P 04 50 40.4 +0.2**
VOIR 17.64 296 ⇑P **P 04 50 41.4 +1.2**
VOIR 17.64 296 P **P 04 50 41.1 +0.9**
VOIR pmax pmax
comp=Z,216nm,1.1s
KBL Kabul 17.67 101 **Pn 04 50 39.4 -0.6**
KBL Kabul 17.67 101 P **Pn 04 50 39.4 -0.6**
KBL pmax pmax
comp=Z,53nm,1.4s
KBL Kabul 17.67 101 P **P 04 50 43.0 +2.2**
SNR=21
KBL P **P 04 50 43.0 +2.2**
SNR=21
APE Apeiranthos 17.73 268 P **P 04 50 43.0 +1.8**
APE pmax pmax
comp=Z,229nm,1.8s
DZA Taraz 17.81 73 *e*P **Pn 04 50 38.7 -2.7**
DZA Taraz 17.81 73 *e*P **Pn 04 50 38.8 -2.7**
baz=73
ARR Arges 17.92 295 ⇓P **P 04 50 45.5 +2.2**
ARU Arti 17.92 20 P **Pn 04 50 39.1 -3.5**
comp=Z,37nm,0.5s,baz=203,slow=7.9,SNR=46
ARU S Sn 04 53 43.1 -19
comp=Z,16nm,0.6s,baz=9.1,slow=24,SNR=1.2
ARU LR LR 04 59 54.2
comp=Z,1µm,18.4s,baz=208,slow=45
ARU Arti 17.92 20 Pn **Pn 04 50 38.7 -4.0**
ARU Arti 17.92 20*d i*P **Pn 04 50 39.0 -3.7**
ARU S **Sn 04 53 55.4 -6.3**
ARU pmax pmax
comp=Z,32nm,0.5s
ARU MLR MLR
comp=Z,1µm,17.0s
SANT Santorini 17.99 266 **P 04 50 45.1 +1.1**
PGB Panagyurishte 18.02 286 *i*P **P 04 50 45.8 +1.4**
BUR01 Bucovina Ar. S 18.04 303 ⇑P **P 04 50 44.8 +0.2**
BURAR Bucovina Array 18.04 303 **Pn 04 50 43.6 -0.6**
BURAR Bucovina Array 18.04 303 P **Pn 04 50 44.0 -0.3**
BURAR pmax pmax
comp=Z,62nm,0.8s
BUR08 Bucovina Ar. S 18.06 303 IAmb IAmb 04 50 48.8
comp=Z,348nm,1.9s
ARQ Araqi 18.10 154 P **P 04 50 49.0 +3.6**
SNR=22
HOQ Hoqain 18.15 151 P **P 04 50 47.1 +1.1**
HOQ P **P 04 50 47.1 +1.1**
MMB Musomiste 18.37 283 *i*P **Pn 04 50 49.8 +1.5**
DRK Karamyk 18.39 84 **P 04 50 47.5 -1.2**
SRS Serrai 18.50 281 P **Pn 04 50 51.8 +1.9**
SRS pmax pmax
comp=Z,49nm,0.9s
BIDO Bidbid 18.52 149 P **Pn 04 50 53.9 +3.6**
BIDO P **Pn 04 50 53.9 +3.6**
LOT Lotru 18.53 295 ⇓P **Pn 04 50 52.0 +1.6**
PAIG Paliouri 18.56 278 P **Pn 04 50 51.4 +0.8**
PAIG pmax pmax
comp=Z,51nm,0.9s
KIRV Kirov 18.68 2 P **P 04 50 48.6 -2.8**
comp=Z,200nm,0.9s,baz=168,slow=7.0,SNR=36
KIRV S Sn 04 54 04.9 -15
comp=Z,22nm,0.6s,baz=291,slow=24,SNR=1.5
KIRV LR LR 04 59 58.7
comp=Z,2µm,18.1s,baz=185,slow=43
KIRV Kirov 18.68 2*c e*P **P 04 50 48.4 -3.0**
SOH Sokhos 18.70 281 P **Pn 04 50 53.8 +1.4**
SOH pmax pmax
comp=Z,56nm,0.9s
VTS Vitosha 18.71 286 *i*P **Pn 04 50 54.0 +1.5**
IDI Anoyia 18.79 263 ⇑P **Pn 04 50 56.1 +2.6**
IDI Anoyia 18.79 263 P **P 04 50 52.9 0.0**
comp=Z,1.8nm,0.3s,baz=67,slow=14,SNR=13
IDI LR LR 04 59 19.8
comp=Z,2µm,18.7s,baz=64,slow=41
comp=Z,36nm,1.0s
IDI Anoyia 18.79 263 **Pn 04 50 54.5 +1.0**
KKB Krupnik 18.84 284 *i*P **Pn 04 50 54.6 +0.6**
SVE Sverdlovsk 18.84 22*c e*P **P 04 50 51.3 -1.9**
SVE pmax pmax
comp=Z,170nm,0.9s
BSY Bisya 18.88 153 P **Pn 04 50 56.1 +1.5**
SNR=11
BSY P **Pn 04 50 56.1 +1.5**
SNR=11
CJR Cluj-Napoca 18.88 299 ⇓P **Pn 04 50 56.9 +2.4**
CJR Cluj-Napoca 18.88 299 P **Pn 04 50 57.1 +2.6**
SMDO Samad 18.91 150 P **Pn 04 50 57.4 +2.4**
SMDO P **Pn 04 50 57.4 +2.4**
WSAR Wadi Sarin 18.98 148 P **Pn 04 50 56.4 +0.6**

comp=Z,1.5nm,0.3s,baz=328,slow=7.9,SNR=13
WSAR S Sn 04 54 21.1 -6.4
comp=Z,5.8nm,0.9s,baz=20,slow=2.3,SNR=1.5
WSAR LR LR 04 58 19.0
comp=Z,210nm,21.6s,baz=348,slow=37
comp=Z,10nm,0.6s
WSAR Wadi Sarin 18.98 148 P Pn **04 50 57.1 +1.3**
PUNG Punghina 18.99 291 ⇓P Sn **04 50 58.4 +2.6**
THE Thessaloniki 19.02 280 P Pn **04 50 57.0 +0.9**
THE pmax pmax
comp=Z,77nm,1.1s
KNT Kendrikon 19.02 282 P Pn **04 50 57.0 +0.8**
KNT pmax pmax
comp=Z,38nm,0.8s
BMR Baia Mare 19.17 302 ⇓P Pn **04 50 58.8 +0.8**
BMR Baia Mare 19.17 302 P Pn **04 50 58.5 +0.6**
BMR pmax pmax
comp=Z,140nm,0.9s
GZR Gura Zlata 19.22 295 ⇑P Pn **04 50 59.7 +1.1**
VAY Valandovo 19.25 282 *i* P Pn **04 51 00.1 +1.2**
OTUK Ortayu 19.36 57 P P **04 50 57.8 -1.1**
OTUK Ortayu 19.36 57 ⇓P P **04 50 57.9 -1.1**
comp=Z,128nm,1.2s
GRG Griva 19.41 281 P Pn **04 51 01.5 +0.6**
GRG pmax pmax
comp=Z,30nm,0.9s
HERR Herculane 19.41 293 ⇓P Pn **04 51 00.5 -0.3**
DRGR 19.49 299 ⇑P Pn **04 51 02.3 +0.4**
DRGR 19.49 299 P Pn **04 51 02.2 +0.4**
DRGR pmax pmax
comp=Z,86nm,0.9s
LVV L'vov 19.50 308*d* *i*P P **04 51 01.0 +0.5**
LVV *e*S S **04 54 38.0 -1.3**
LVV pmax pmax
comp=Z,550nm,1.4s
LVV MLR MLR
comp=Z,800nm,15.0s
JMDO Jabal Madar 19.55 151 P Pn **04 51 05.0 +2.3**
SNR=20
JMDO P Pn **04 51 05.0 +2.3**
SNR=20
AML Almayashu 19.56 75 P Pn **04 51 04.4 +1.3**
SNR=7.4
EKS2 Erkin-Say 19.61 74 P Pn **04 51 03.8 +0.4**
SNR=20
WBK Wadi Bani Khal 19.68 148 P Pn **04 51 07.1 +3.0**
MNK Minsk 19.81 324 *i* P P **04 51 03.3 -0.5**
MNK *i* S Sn **04 54 47.0 -0.3**
MNK pmax pmax
comp=E,31nm,0.9s
MNK pmax pmax
comp=Z,233nm,0.9s
MNK MLR MLR
comp=E,345nm,19.0s
MNK MLR MLR
comp=Z,2μm,19.0s
MNK Minsk 19.81 324 *i* P P **04 51 03.4 -0.5**
comp=E,31nm,0.9s
MNK *i* P P **04 51 03.4 -0.5**
MNK *i* P P **04 51 03.4 -0.5**
comp=Z,233nm,0.9s,baz=128
MNK *i* PP PnPn **04 51 17.6 -1.9**
MNK *i* S Sn **04 54 47.0 -0.3**
MNK *i* SS SnSn 04 55 39.2 +38
MNK *i* LR LR 04 58 32.1
MNK *i* LRM MLR 04 59 55.7
comp=E,345nm,19.3s
MNK *i* LRM MLR 04 59 55.7
comp=Z,2μm,19.4s
BOVS Bovan 19.84 289 ⇓P Pn **04 51 05.8 -0.2**
MDVR Moldovita 19.90 293 ⇓P Pn **04 51 06.5 -0.2**
BTLS Baital 19.91 67*de*P P **04 51 03.9 -1.1**
BTLS Baital 19.91 67⇓*e*P P **04 51 03.9 -1.1**
baz=67
BZS Buzias 20.06 295 ⇓P Pn 04 51 08.0 -0.5
BZS Buzias 20.06 295 P Pn 04 51 07.7 -0.8
BZS pmax pmax
comp=Z,48nm,1.2s
SKO Skopje 20.06 284 *i* P Pn 04 51 08.9 +0.3
BRVK Borovoye 20.13 42 P P **04 51 07.1 -0.2**
BRVK IAmb IAmb 04 51 19.8
comp=Z,80nm,0.7s
BRVK Borovoye 20.13 42*ce*P P **04 51 08.0 +0.7**
BRVK pmax pmax
comp=Z,38nm,0.7s
BRVK Borovoye 20.13 42 P P **04 51 08.2 +0.9**
BRVK P P **04 51 08.2 +0.9**
USP Ospenovka 20.14 72 P P **04 51 08.1 +0.5**
SNR=11
AAK Ala-Archa 20.14 74 P Pn 04 51 08.9 -0.8
comp=Z,34nm,0.7s,baz=252,slow=7.7,SNR=28
AAK S S **04 54 47.8 -5.0**
comp=Z,6.4nm,0.6s,baz=291,slow=15,SNR=1.3
AAK LR LR 05 00 56.3
comp=Z,1μm,18.4s,baz=284,slow=43
comp=Z,34nm,0.7s
AAK Ala-Archa 20.14 74 P Pn 04 51 09.1 -0.6
SNR=20
AAK Ala-Archa 20.14 74 P P **04 51 08.1 +0.3**
AAK Ala-Archa 20.14 74 P Pn 04 51 09.7 0.0
AAK P Pn 04 51 09.7 0.0
LTVH Ltavrtes, Hu 20.16 300 P Pn 04 51 09.6 0.0
BVA0 Borovoye Array 20.16 42 P P **04 51 07.8 +0.1**
BVA0 Borovoye Array 20.16 42 ⇑P P **04 51 07.8 +0.1**
comp=Z,85nm,0.8s
BVA0 S S 04 54 40.1 -13
comp=Z,6.6nm,1.0s,baz=236,slow=24,SNR=6.6
BVAR Borovoye Array 20.16 42 LR LR 05 00 25.6
comp=Z,560nm,19.7s,baz=122,slow=41
UZH Uzhgorod 20.20 304⇑ *i*P Pn 04 51 10.0 -0.2
UZH *e*PPP PPP 04 51 35.0
UZH *i* S S **04 54 50.2 -3.4**
SGDS Sogindy 20.24 71 *e*P P **04 51 07.0 -1.6**
SGDS Sogindy 20.24 71 *e*P P **04 51 07.1 -1.6**
baz=72
KWP Kalwaria Pacla 20.24 307 *i* P P **04 51 09.6 +1.0**
KWP *e*S Sn 04 55 00.4 +2.7
KWP Kalwaria Pacla 20.24 307 P P **04 51 09.6 +1.0**
KWP pmax pmax
comp=Z,332nm,1.1s
JLN Jalan Bani Buh 20.27 148 P Pn 04 51 10.5 -0.6
JLN P Pn 04 51 10.5 -0.6
KOLS Kolonicke sedl 20.30 305 *e*P Pn 04 51 10.5 -0.8
KOLS pmax pmax
comp=Z,55nm,0.9s
KOLS Kolonicke sedl 20.30 305 *e*P Pn 04 51 10.5 -0.8
CHMS Chumysh 20.32 73 P P **04 51 10.5 +0.9**
SNR=9.5
ITM Ithomi 20.47 271 P P **04 51 10.0 -1.2**
ITM IAmb IAmb 04 51 29.2
comp=Z,72nm,0.7s
KBK Karagaybulak 20.48 74 P Pn 04 51 12.8 -0.8
SNR=20
NACGM Naroch 20.56 324 *i* P P **04 51 11.7 -0.3**
OHR Ohrid 20.60 282 *i* P Pn 04 51 15.4 +0.4
KBN Korca 20.66 281 P P **04 51 14.3 +1.0**
KBN IAmb IAmb 04 51 27.8
comp=Z,198nm,1.2s
KBN Korca 20.66 281 P P **04 51 14.3 +1.0**
KBN pmax pmax
comp=Z,198nm,1.2s
MHTO MHTO 20.77 153 P Pn 04 51 17.1 +0.2
SNR=25
MHTO P Pn 04 51 17.1 +0.2
SNR=25
BEO Beograd 20.79 293 P P **04 51 15.3 +0.8**
TKM2 Tokmak 2 20.95 73 P P **04 51 16.7 +0.2**
SNR=27
TKM2 Tokmak 2 20.95 73 *i* P P **04 51 16.0 -0.5**
TKM2 pmax pmax
comp=Z,69nm,0.9s
TKM2 Tokmak 2 20.95 73 ⇑P P **04 51 16.0 -0.5**
comp=Z,69nm,0.9s
IIGN Ignalina 21.09 324 *e*P P **04 51 16.7 -1.0**
DIVS Divibare 21.09 290 P P **04 51 18.8 +0.8**
DIVS IAmb IAmb 04 51 24.3
comp=Z,142nm,1.2s
DIVS Divibare 21.09 290⇑ *i*P P **04 51 19.0 +1.0**
SJES Sjenica 21.10 288⇑ *i*P P **04 51 18.9 +0.9**
PVY Plav 21.13 286⇑ *i*P P **04 51 19.8 +1.4**
IVA Berane 21.16 287⇑ *i*P P **04 51 19.7 +1.0**
IGT Igoumenitsa 21.17 278 P P **04 51 18.7 0.0**
IGT pmax pmax
comp=Z,100nm,0.8s
BOOM Boomskoye usch 21.21 74 P P **04 51 19.4 +0.1**
BOOM IAmb IAmb 04 51 37.0
comp=Z,86nm,0.8s
BOOM Boomskoye usch 21.21 74 P P **04 51 19.4 +0.1**
BOOM pmax pmax
comp=Z,86nm,0.8s
NIL Nilore 21.22 99 P P **04 51 19.2 -0.1**
NIL IAmb IAmb 04 51 33.9
comp=Z,93nm,0.9s
NIL Nilore 21.22 99 P P **04 51 19.2 -0.1**
NIL pmax pmax
comp=Z,93nm,1.0s
BSZH Besenyszg 21.23 299 P P **04 51 21.3 +2.1**
ISAL Salakas 21.27 325 *e*P P **04 51 18.7 -0.9**
FRGS Fruska Gora 21.28 293⇑P P **04 51 21.3 +1.4**
FRGS Fruska Gora 21.28 293⇑*i*P P **04 51 21.2 +1.4**
TIR Tirane 21.28 283 P P **04 51 20.8 +0.9**
TIR Tirane 21.28 283 P P **04 51 20.8 +0.9**
TIR pmax pmax
comp=Z,41nm,0.9s
NRN Naryn 21.33 77 P P **04 51 21.0 +0.2**
NRN Naryn 21.33 77 P P **04 51 21.0 +0.2**
NRN pmax pmax
comp=Z,46nm,0.8s
TEKS Tekeris 21.44 292 *e*P P **04 51 22.9 +1.3**
KOME Kolasin 21.44 287⇑*i*P P **04 51 22.5 +0.8**
KUU Kurty 21.48 70 *e*P P **04 51 22.0 0.0**
KUU *e*S S **04 55 18.5 -0.5**
KUU pmax pmax
comp=Z,72nm,1.1s
KUU Kurty 21.48 70 *e*P P **04 51 22.1 0.0**
comp=Z,72nm,1.1s,baz=70
KUU *e*S S **04 55 18.5 -0.5**
baz=70
BBLS Lazići 21.51 290⇑*i*P P **04 51 23.4 +1.0**
RUDO Rudo 21.54 289 *e*P P **04 51 22.8 +0.2**
KEK Kerkira 21.55 278 P P **04 51 23.4 +0.7**
KEK IAmb IAmb 04 51 37.7
comp=Z,90nm,0.9s
KLMR Klimovskoe 21.57 349 *e*P P **04 51 20.2 -2.5**
KLMR *e*S S **04 55 17.4 -2.9**
KLMR pmax pmax
comp=Z,896nm,1.2s
KLMR MLR MLR
comp=Z,2μm,15.0s
KLMR Klimovskoe 21.57 349 *e*P P **04 51 20.2 -2.5**
KLMR AMP 04 51 25.9
comp=Z,896nm,1.2s
KLMR *e*S S **04 55 17.4 -2.9**
KLMR *e*S S **04 55 17.4 -2.9**
KLMR LQ LQ 04 58 19.3
KLMR LQ LQ 04 58 19.3
KLMR LR LR 04 59 11.1
KLMR AMP 05 01 07.8
comp=Z,2μm,15.4s
KSH Kashi 21.57 82 P P **04 51 22.1 -1.0**
KSH pP pP 04 51 26.5 -3.5
KSH PP PnPn **04 51 47.2 +3.4**
KSH S S **04 55 12.9 -8.1**
KSH pmax pmax
comp=Z,47nm,0.6s
KSH LR LR
comp=Z,1μm,14.1s
KSH LR LR
comp=Z,800nm,14.1s
KSH LR LR
comp=Z,920nm,16.1s
PSZ Piszkesteto 21.59 301⇑P P **04 51 24.8 +1.5**
PSZ Piszkesteto 21.59 301 P P **04 51 23.9 +0.6**
PSZ IAmb IAmb 04 51 28.4
comp=Z,177nm,1.2s
PSZ Piszkesteto 21.59 301 P P **04 51 23.9 +0.6**
PSZ pmax pmax
comp=Z,177nm,1.2s
PSZ Piszkesteto 21.59 301 P P **04 51 24.7 +1.4**
PSZ PP pP **04 51 27.4 -2.7**
PSZ S S **04 55 24.8 +3.6**
PDG Podgorica 21.65 286 ⇓P P **04 51 24.8 +1.0**
PDG Podgorica 21.65 286 P P **04 51 24.0 +0.1**
PDG IAmb IAmb 04 51 36.3
comp=Z,78nm,0.9s
PDG Podgorica 21.65 286⇑*i*P P **04 51 24.3 +0.5**
TTG Podgorica 21.65 286⇑*i*P P **04 51 24.4 +0.6**
VLO Vlora 21.66 281 P P **04 51 24.8 +0.8**
VLO IAmb IAmb 04 51 42.4
comp=Z,127nm,0.8s
VLO Vlora 21.66 281 P P **04 51 24.8 +0.8**
VLO pmax pmax
comp=Z,127nm,0.8s
NIE Niedzica 21.68 305 *i* P P **04 51 25.0 +0.9**
NIE Niedzica 21.68 305 P P **04 51 25.1 +0.9**
NIE pmax pmax
comp=Z,50nm,1.1s
DRME Dracevica, Mon 21.72 285⇑*i*P P **04 51 24.3 -0.3**
DRME Dracevica, Mon 21.72 285⇑*i*P P **04 51 24.9 +0.3**
PRGR Permogore 21.76 357⇑*i*P P **04 51 23.6 -1.2**
PRGR *e*S S **04 55 17.1 -7.0**
PRGR pmax pmax
comp=Z,1μm,0.8s
NKY Niksic 21.83 287⇑*i*P P **04 51 26.5 +0.6**
NKME Niksic 21.86 287⇑*i*P P **04 51 26.8 +0.7**
UPM Unac-Piva 21.88 288 *e*P P **04 51 27.6 +1.1**
UPM Unac-Piva 21.88 288⇑*i*P P **04 51 26.8 +0.3**
CEME Cevo 21.90 286⇑*i*P P **04 51 26.8 +0.2**
DOK Doka 21.93 164 P P **04 51 29.6 +2.7**
BUM Brajici-Budva 21.93 286⇑*i*P P **04 51 27.5 +0.6**
CHKK Chushkaly 21.95 70 *e*P P **04 51 26.5 -0.6**
CHKK Chushkaly 21.95 70 *e*P P **04 51 26.6 -0.6**
baz=70
MDOK Medeo 22.00 72 *e*P P **04 51 27.8 0.0**
MDOK *e*S S **04 55 28.8 -0.6**
MDOK Medeo 22.00 72 *e*P P **04 51 27.9 0.0**
baz=72
MDOK *e*S S **04 55 28.8 -0.6**
baz=72
BUD Budapest 22.09 299 P P **04 51 31.1 +2.6**
BUD pmax pmax
comp=Z,104nm,1.2s
BUD Budapest 22.09 299 P P **04 51 30.3 +1.7**
BUD S S **04 55 36.0 +5.2**
LANS Liptovska Anna 22.14 304 *e*P P **04 51 30.9 +1.8**
LANS pmax pmax
comp=Z,30nm,1.5s
LANS Liptovska Anna 22.14 304 *e*P P **04 51 30.9 +1.8**
BEL Belsk 22.16 311 *e*P P **04 51 29.3 +0.1**
BEL Belsk 22.16 311 P P **04 51 29.8 +0.6**
BEL pmax pmax
comp=Z,564nm,0.9s
BRY Bratogost 22.16 287 *e*P P **04 51 31.1 +1.6**
BRY Bratogost 22.16 287⇑*i*P P **04 51 29.9 +0.4**
HCY Herceg Novi 22.21 286 *e*P P **04 51 29.7 -0.2**
HCY Herceg Novi 22.21 286⇑*i*P P **04 51 29.8 -0.2**
PABE Paberze 22.22 322 P P **04 51 28.6 -1.2**
PABE Paberze 22.22 322 *e*P P **04 51 29.4 -0.4**
TREB Trebinje 22.31 287 *e*P P **04 51 32.1 +1.2**
VYHS Vyhne 22.40 302 *e*P P **04 51 33.1 +1.2**
VYHS pmax pmax
comp=Z,127nm,1.3s
VYHS Vyhne 22.40 302 *e*P P **04 51 33.1 +1.2**
DBRK Dubrovnik 22.46 287 *i* P P **04 51 31.0 -1.6**
SCTE Santa Cesarea 22.50 280 P P **04 51 31.6 -1.3**
SCTE IAmb IAmb 04 51 48.1
comp=Z,153nm,1.1s
KOVH Kovagotottos 22.55 296 P P **04 51 34.2 +0.8**
KOVH S S **04 55 39.4 +0.2**
SRO2 Moca 22.56 300 *e*P P **04 51 34.6 +1.1**
SRO2 Moca 22.56 300 *e*P P **04 51 34.6 +1.1**
CSKK Cskako 22.59 299 P P **04 51 35.3 +1.4**
A252A Venje 22.68 294 *i* P P **04 51 35.5 +0.7**
PUL Pulkovo 22.71 337*ce*P P **04 51 35.2 +0.2**
PUL pmax pmax
comp=Z,336nm,1.0s
STON Ston 22.78 287⇑*i*P P **04 51 33.9 -1.9**
STON Ston 22.78 287 *i* P P **04 51 34.2 -1.7**
TIH Tihany 22.78 298 P P **04 51 37.8 +1.9**
TIH S S **04 55 48.0 +4.8**
SHAO Shalim 22.85 161 P P **04 51 41.5 +4.7**
VSU Vasula 22.94 331*c* *i*P P **04 51 36.4 -1.0**
VSU pmax pmax
comp=Z,592nm,0.9s
VSU Vasula 22.94 331 *e*P P **04 51 36.5 -0.9**
DMTO DMTO 22.98 163 P P **04 51 43.1 +4.9**
DMTO P P **04 51 43.1 +4.9**
MPLH Magyarpolny 23.05 298 P P **04 51 39.8 +1.1**
MPLH S S **04 55 51.4 +3.5**
BLY Banja Luka 23.12 292⇑*i*P P **04 51 38.1 -1.3**
SRKY Kupres RS 23.13 290 *e*P P **04 51 40.9 +1.3**
OKC Ostrava-Krasne 23.14 305 *e*P P **04 51 41.4 +1.8**
OKC Ostrava-Krasne 23.14 305 *e*P P **04 51 41.4 +1.8**
RICI Ricice 23.16 289 *i* P P **04 51 40.4 +0.5**
MGRS Mrkonjic Grad 23.19 291⇑*i*P P **04 51 42.6 +2.5**
EGYH Egyhazaskeszo 23.22 299 P P **04 51 41.9 +1.5**
JAVC Velka Javorina 23.23 303 *e*P P **04 51 42.8 +2.2**
LSTV Lastovo 23.38 287 *i* P P **04 51 41.0 -0.9**
MODS Modra-Piesok 23.40 301 *e*P P **04 51 42.8 +0.6**
MODS Modra-Piesok 23.40 301 *e*P P **04 51 42.8 +0.6**
UZB Uzunbulak 23.45 72 *e*P P **04 51 42.7 -0.1**
UZB *e*S S **04 55 55.9 +1.1**
UZB *e*S S **04 55 55.9 +1.1**
UZB Uzunbulak 23.45 72 *e*P P **04 51 42.8 -0.1**
baz=72
UZB *e*S S **04 55 55.9 +1.1**
baz=72
UZB *e*S S **04 55 55.9 +1.1**
baz=72
MOSL Moslavina 23.45 294 *i* P P **04 51 42.9 +0.2**
PBUR Paburge 23.47 322 *e*P P **04 51 43.1 +0.4**
ZST Bratislava 23.49 301 *e*P P **04 51 44.4 +1.4**
ZST pmax pmax
comp=Z,424nm,1.7s
ZST Bratislava 23.49 301 *e*P P **04 51 44.4 +1.4**
BEHE Becsehely 23.50 296⇑*i*P P **04 51 43.9 +0.8**
BEHE Becsehely 23.50 296 P P **04 51 45.1 +2.0**
MORC Moravsky Berou 23.51 305 ⇓P P **04 51 44.1 +0.8**
MORC Moravsky Berou 23.51 305 P P **04 51 43.0 -0.3**
MORC IAmb IAmb 04 51 46.3
comp=Z,61nm,1.0s
MORC Moravsky Berou 23.51 305 P P **04 51 43.0 -0.3**
MORC pmax pmax
comp=Z,61nm,1.0s
MORC Moravsky Berou 23.51 305 *e*P P **04 51 43.5 +0.2**
KLNR Kaliningrad 23.62 318*c* *i*P P **04 51 43.7 -0.5**
KLNR pmax pmax
comp=Z,248nm,1.5s
HVAR Hvar 23.68 288 *i* P P **04 51 44.4 -0.5**
KIJV Kijevo 23.68 290 *i* P P **04 51 45.3 +0.4**
KALN Kalnik 23.69 295 *i* P P **04 51 45.7 +0.6**
MATE Matera 23.74 282⇑P P **04 51 45.7 +0.2**
SHLS Shalkode 23.77 72 *e*P P **04 51 47.9 +1.9**
SHLS *e*S S **04 56 06.2 +6.2**
SHLS Shalkode 23.77 72 *e*P P **04 51 47.1 +1.1**
baz=72
SHLS *e*S S **04 56 06.2 +6.2**
baz=72
SOP Sopron 23.77 299 P P **04 51 46.7 +0.9**
SOP pmax pmax
comp=Z,80nm,1.1s
SOP Sopron 23.77 299 P P **04 51 46.8 +0.9**
A251A Rujevac 23.78 293 *i* P P **04 51 46.8 +0.9**
VALR Valaam 23.85 340*d* *i*P P **04 51 46.5 +0.2**
VALR pmax pmax
comp=Z,225nm,0.9s
KOGS Kog 23.86 296 *e*P P **04 51 47.5 +0.9**
KOGS *e*pP **sP** **04 51 59.4 +2.4**
KURBB Kurchatov Arra 23.89 53 P P **04 51 47.8 +1.0**
comp=Z,12nm,0.5s,baz=262,slow=10.0,SNR=131
KURBB PcP **PcP** **04 55 29.2 +0.2**
comp=Z,2.7nm,0.7s,baz=256,slow=3.7,SNR=1.8
KURBB S S **04 56 00.2 -1.3**
comp=Z,0.9nm,0.6s,baz=202,slow=16,SNR=1.5
KURBB LR LR 05 02 57.6
comp=Z,1μm,18.7s,baz=245,slow=41
comp=Z,12nm,0.5s
KURBB Kurchatov Arra 23.89 53 P P **04 51 47.4 +0.6**
KURBB Kurchatov Arra 23.89 53 ⇑P P **04 51 47.4 +0.6**
comp=Z,204nm,1.5s
RONA Rosalia, Austr 23.95 299 *e*P P **04 51 48.2 +0.7**
comp=Z,71nm,1.2s,SNR=30
TIP Timpagrande 23.96 278 P P **04 51 47.7 0.0**
TIP IAmb IAmb 04 51 59.7
comp=Z,129nm,1.1s
LOBO Lobor 23.96 296 *i* P P **04 51 48.6 +1.0**
KURK Kurchatov 23.97 53 P P **04 51 47.1 -0.5**
KURK IAmb IAmb 04 52 01.5
comp=Z,87nm,0.8s
KURK Kurchatov 23.97 53*ce*P P **04 51 48.8 +1.2**
KURK pmax pmax
comp=Z,79nm,1.3s
KURK MLR MLR
comp=Z,1μm,17.0s
ZAG Zagreb 24.00 295 P P **04 51 49.2 +1.2**
VRAC Vranov 24.01 303⇑P P **04 51 48.9 +0.9**
VRAC Vranov 24.01 303 P P **04 51 48.8 +0.7**
comp=Z,23nm,0.9s,baz=99,slow=9.6,SNR=29
VRAC S S **04 56 06.8 +3.3**
comp=Z,1.2nm,0.4s,baz=139,slow=6.3,SNR=1.0
VRAC LR LR 05 02 45.4
comp=Z,503nm,19.9s,baz=89,slow=40
comp=Z,23nm,0.9s
VRAC Vranov 24.01 303 P P **04 51 48.8 +0.7**
VRAC pmax pmax
comp=Z,42nm,1.6s
VRAC Vranov 24.01 303 *e*P P **04 51 48.4 +0.3**
PTJ Puntijarka 24.02 295 P P **04 51 48.9 +0.6**
PTJ Puntijarka 24.02 295 P P **04 51 49.2 +1.0**
KRLC Kraliky 24.05 305 *e*P P **04 51 48.5 0.0**
KRLC *e*S S **04 56 03.5 -0.7**
KRLC Kraliky 24.05 305 *e*P P **04 51 48.5 0.0**
KRLC *e*S S **04 56 03.5 -0.7**
KRLC AMS AMS 05 01 40.0
comp=Z,500nm,28.8s
KRUC Moravsky 24.09 303 P P **04 51 49.8 +1.0**
KRUC pmax pmax
comp=Z,87nm,1.2s
KRUC Moravsky 24.09 303 *e*P P **04 51 49.5 +0.7**
UDBI Udbina 24.13 292 *i* P P **04 51 49.7 +0.4**
MORI Morici 24.19 290 *i* P P **04 51 49.8 +0.1**
SLIT Slitere, Latvi 24.21 325 *e*P P **04 51 50.5 +0.8**
PLIT Plitvice 24.23 292 *i* P P **04 51 51.0 +0.9**
ZIRJ Zirje 24.24 289 *i* P P **04 51 49.9 -0.3**
MTSE Matsula 24.24 329 *e*P P **04 51 50.2 +0.2**
CONA Conrad Observa 24.27 300 *e*P P **04 51 51.1 +0.6**
comp=Z,58nm,1.3s,SNR=35
SGRT San Giovanni R 24.31 285 P P **04 51 50.8 -0.2**
OZLJ Ozalj 24.36 294 *i* P P **04 51 52.3 +1.1**
DPC Dobruska-Polom 24.40 306 *e*P P **04 51 52.4 +0.7**
DPC *e* 04 52 01.7
DPC *e*S S **04 56 06.9 -2.9**
DPC Dobruska-Polom 24.40 306 *e*P P **04 51 52.4 +0.7**
DPC *ex* x 04 52 01.7
DPC *e*S S **04 56 06.9 -2.9**
DPC AMS AMS 05 00 50.0
comp=Z,700nm,32.2s
ARSA Arzberg 24.42 298 *e*P P **04 51 52.9 +1.1**
comp=Z,76nm,1.1s,SNR=27
OSTC Ostas 24.52 306 *e*P P **04 51 52.9 +0.2**
OSTC *ex* x 04 52 04.7
OSTC *e*S S **04 56 19.6 +8.0**
OSTC AMS AMS 05 00 50.0
comp=Z,700nm,33.7s
CUC Castrocucco 24.52 281 P P **04 51 52.2 -0.6**
CUC IAmb IAmb 04 52 05.1
comp=Z,92nm,1.1s
KSP Ksiaz 24.54 307 *i* P P **04 51 53.5 +0.7**
KSP Ksiaz 24.54 307 P P **04 51 53.5 +0.7**
KSP pmax pmax
comp=Z,111nm,0.9s
UPC Upice 24.63 306 *e*P P **04 51 54.1 +0.4**
UPC *e*S S **04 56 08.0 -5.4**
UPC MLR MLR
comp=Z,600nm,23.6s
UPC Upice 24.63 306 *e*P P **04 51 54.1 +0.4**
UPC *e*S S **04 56 08.0 -5.4**
UPC AMS AMS 05 02 00.0
comp=Z,600nm,23.6s
VIRC Vir 24.64 291 *i* P P **04 51 54.2 +0.4**
DUGI Dugi Otok 24.65 290 *i* P P **04 51 53.6 -0.3**
GKP Gorka Klasztor 24.70 313 P P **04 51 54.7 +0.5**
GKP pmax pmax
comp=Z,160nm,0.8s
GKP Gorka Klasztor 24.70 313 *e*P P **04 51 55.3 +1.1**
SOKA Soboth 24.71 297 *e*P P **04 51 55.8 +1.2**
comp=Z,143nm,1.2s,SNR=55
TREC Trest 24.72 303 *e*P P **04 51 55.0 +0.4**
TREC MLR MLR
comp=Z,500nm,23.9s
TREC Trest 24.72 303 *e*P P **04 51 55.0 +0.4**
TREC AMS AMS 05 01 50.0

comp=Z,500nm,23.9s
NVLJ Novalja 24.77 292 *i* P **P** **04 51 54.7 -0.3**
CEL Celeste 24.82 276 P **P** **04 51 55.7 +0.1**
CEL IAmb IAmb 04 52 06.8
comp=Z,50nm,0.9s
SEM Semipalatinsk 24.91 54 *e*P **P** **04 51 56.1 -0.3**
SEM Semipalatinsk 24.91 54 *e*P **P** **04 51 56.2 -0.3**
baz=55
MEF Metsahovi 25.03 332 *e*P **P** **04 51 57.4 +0.3**
LJU Ljubljana 25.03 295 *i* P **P** **04 51 58.9 +1.6**
OBKA Obir 25.04 296 *e*P **P** **04 51 58.6 +1.1**
comp=Z,65nm,1.0s,SNR=18
CEY Cerknica 25.09 294⇑ *i*P **P** **04 51 59.1 +1.2**
PAOL Paolisi 25.29 283 P **P** **04 51 59.8 +0.1**
PAOL IAmb IAmb 04 52 15.6
comp=Z,110nm,1.5s
MOA Molln 25.33 299 *e*P **P** **04 52 00.6 +0.6**
comp=Z,51nm,1.2s
FIA0 FINESS Array S 25.34 335 P **P** **04 51 59.1 -0.8**
FIA0 FINESS Array S 25.34 335 P **P** **04 51 59.1 -0.8**
FIA1 FINESS Array S 25.34 335 P **P** **04 51 58.8 -1.1**
FINES FINESS Array B 25.34 335 P **P** **04 51 60.0 +0.1**
comp=Z,70nm,0.8s,baz=132,slow=11,SNR=142
FINES S **S** **04 56 27.5 +3.0**
comp=Z,3.8nm,0.8s,baz=12,slow=28,SNR=1.0
FINES LR LR 05 03 03.4
comp=Z,1µm,20.8s,baz=146,slow=39
comp=Z,70nm,0.8s
FINES FINESS Array B 25.34 335 P **P** **04 51 59.3 -0.6**
FINES FINESS Array B 25.34 335 *i* P **P** **04 52 00.0 +0.1**
FINES pmax pmax
comp=Z,70nm,0.8s
CKRC Cesky Krumlov 25.41 302 *e*P **P** **04 52 01.8 +1.0**
CKRC *ex* x 04 52 12.7
CKRC *e*S **S** **04 56 19.1 -6.9**
PRU Pruhonice 25.45 304 *e*P **P** **04 52 01.2 +0.1**
PRU MLR MLR
comp=Z,500nm,16.3s
PRU Pruhonice 25.45 304 *e*P **P** **04 52 01.2 +0.1**
PRU *e*S **S** **04 56 34.9 +8.4**
PRU AMS AMS 05 02 30.0
comp=Z,500nm,16.3s
PVCC Panska Ves 25.54 306 *e*P **P** **04 52 02.4 +0.5**
PVCC *e* 04 52 10.2
PVCC MLR MLR
comp=Z,400nm,24.7s
PVCC Panska Ves 25.54 306 *e*P **P** **04 52 02.4 +0.5**
PVCC *ex* x 04 52 10.2
PVCC AMS AMS 05 01 40.0
comp=Z,400nm,24.7s
MAKZ Makanchi 25.56 63 P **P** **04 52 02.1 0.0**
MAKZ IAmb IAmb 04 52 18.3
comp=Z,78nm,0.9s
MAKZ Makanchi 25.56 63 P **P** **04 52 02.1 0.0**
MAKZ pmax pmax
comp=Z,78nm,0.9s
CADS Cadrg 25.59 296 *i* P **P** **04 52 03.3 +0.9**
MYKA Terra Mystica 25.67 296 *e*P **P** **04 52 04.1 +1.0**
comp=Z,60nm,1.0s,SNR=22
SABO M.te Sabotino 25.67 295 P **P** **04 52 03.0 -0.3**
SABO IAmb IAmb 04 52 16.5
comp=Z,190nm,0.9s
PRED Cave del Predi 25.71 296 P **P** **04 52 03.9 +0.3**
PRED IAmb IAmb 04 52 25.1
comp=Z,92nm,1.1s
BIOA Bad Ischl, Aus 25.74 299 *i* P **P** **04 52 04.2 +0.4**
comp=Z,63nm,1.0s,SNR=24
MK31 Makanchi Array 25.77 63 P **P** **04 52 03.8 -0.3**
MK31 Makanchi Array 25.77 63 *i* P **P** **04 52 05.2 +1.1**
MK31 pmax pmax
comp=Z,141nm,0.9s
MKAR Makanchi Array 25.77 63 P **P** **04 52 04.2 +0.1**
MKAR Makanchi Array 25.77 63 P **P** **04 52 04.2 +0.1**
GERES GERESS Array B 25.82 302 P **P** **04 52 05.0 +0.4**
comp=Z,99nm,0.9s,baz=105,slow=9.8,SNR=159
GERES LR LR 05 03 43.7
comp=Z,377nm,20.9s,baz=80,slow=40
GERES GERESS Array B 25.82 302 P **P** **04 52 04.8 +0.2**
KBA Koelnbreinsper 25.89 297 P **P** **04 52 06.5 +1.1**
KBA pmax pmax
comp=Z,128nm,1.0s
KBA Koelnbreinsper 25.89 297 *e*P **P** **04 52 06.3 +1.0**
comp=Z,97nm,1.0s,SNR=56
KHC Kasperske Hory 25.93 302 P **P** **04 52 05.7 +0.1**
KHC Kasperske Hory 25.93 302 *e*P **P** **04 52 05.5 -0.1**
KHC *e* 04 52 17.4
KHC *e*S **S** **04 56 37.7 +3.4**
KHC MLR MLR
comp=Z,400nm,21.7s
KHC Kasperske Hory 25.93 302 *e*P **P** **04 52 05.5 -0.1**
KHC *ex* x 04 52 17.4
KHC *e*S **S** **04 56 37.7 +3.4**
KHC AMS AMS 05 03 10.0
comp=Z,400nm,21.7s
AQU L'Aquila 25.98 287 P **P** **04 52 07.0 +1.0**
AQU IAmb IAmb 04 52 19.1
comp=Z,100nm,1.0s
AQU L'Aquila 25.98 287 P **P** **04 52 07.0 +1.0**
AQU pmax pmax
comp=Z,100nm,1.0s
AJM Ajmer 25.98 113 *e*P **P** **04 52 08.0 +1.8**
BRG Berggiesshubel 26.00 306 *i* P **P** **04 52 06.9 +0.8**
BRG Amp 04 52 10.5
comp=Z,47nm,1.0s
BRG *ex* x 04 52 17.7
BRG Amp 04 52 19.5
comp=Z,29nm,0.9s
BRG PP **PnPn** **04 52 41.7 -2.4**
BRG Amp 04 52 43.8
comp=Z,35nm,1.0s
BRG Berggiesshubel 26.00 306 S **S** **04 56 40.0 +4.9**
BRG Amp 05 04 21.0
comp=E,0.2nm,19.4s
BRG Amp 05 04 23.0
comp=N,0.5nm,16.4s
BRG Amp 05 04 25.0
comp=Z,0.5nm,17.3s
BRG Berggiesshubel 26.00 306 *i* P **P** **04 52 06.8 +0.8**
BRG *e* 04 52 17.7
BRG S **S** **04 56 40.0 +4.9**
BRG pmax pmax
comp=Z,47nm,1.0s
BRG pmax pmax
comp=Z,29nm,0.9s
BRG pmax pmax
comp=Z,35nm,1.0s
BRG smax smax
comp=E,231nm,19.4s
BRG MLR MLR
comp=N,540nm,16.4s
BRG MLR MLR
comp=Z,480nm,17.3s
NRCA Norcia 26.14 288 P **P** **04 52 07.9 +0.4**
NRCA IAmb IAmb 04 52 10.5
comp=Z,52nm,1.0s
VAE Valguarnera 26.16 275 P **P** **04 52 09.4 +1.7**
comp=Z,6.9nm,0.4s,baz=326,slow=8.2,SNR=4.6
comp=Z,6.9nm,0.4s
CLUD Cludinico 26.18 296 P **P** **04 52 07.9 +0.1**
CLUD IAmb IAmb 04 52 46.1
comp=Z,75nm,0.9s
RAFF Raffo Rosso 26.27 275 P **P** **04 52 09.2 +0.6**
RAFF IAmb IAmb 04 52 45.2
comp=Z,79nm,1.0s
STAL STALIGIAL 26.30 296 P **P** **04 52 08.8 -0.1**
STAL IAmb IAmb 04 52 21.0
comp=Z,115nm,1.1s
WET Wettzell 26.39 302 P **P** **04 52 09.6 -0.1**
WET pmax pmax
comp=Z,31nm,0.8s
ABTA Abfaltersbach 26.45 297 *e*P **P** **04 52 10.9 +0.6**
comp=Z,26nm,1.0s,SNR=23
RUE Ruedersdorf 26.46 310 *e*P **P** **04 52 10.6 +0.5**
CIMO Cimolais 26.49 296 P **P** **04 52 10.5 -0.1**
CIMO IAmb IAmb 04 52 22.9
comp=Z,104nm,1.4s
MURB Monte Urbino 26.53 289 P **P** **04 52 12.4 +1.3**
RAF Rauma 26.53 331 *e*P **P** **04 52 10.6 -0.1**
BLEU Blekinge 26.61 319 *e*P **P** **04 52 14.3 +2.8**
BSD Bornholm Skovb 26.62 316 *e*P **P** **04 52 11.8 +0.1**
BSD Bornholm Skovb 26.62 316 *e*P **P** **04 52 11.5 -0.1**
BSD IAmb IAmb 04 52 11.7
comp=N,25nm,1.1s
CLL Collm 26.66 307 P **P** **04 52 12.2 +0.2**
CLL IAmb IAmb 04 52 41.6
comp=Z,44nm,0.9s
CLL Collm 26.66 307 *i* P **P** **04 52 12.5 +0.5**
CLL *e* 04 52 21.0
CLL *e*S **S** **04 56 50.0 +4.4**
CLL pmax pmax
comp=Z,47nm,1.1s
CLL MLR MLR
comp=Z,500nm,20.9s
CLL Collm 26.66 307 *i* P **P** **04 52 12.5 +0.5**
comp=Z,47nm,1.1s
CLL *e*Pmax 04 52 14.0
CLL *ex* x 04 52 21.0
CLL *i* x x 04 52 27.4
CLL *ex* x 04 52 37.0
CLL *i* x x 04 52 39.3
CLL *e*PPP PPP 04 53 05.0
CLL *e*PPPP 04 53 12.0
CLL *e*S **S** **04 56 50.0 +4.4**
CLL *ex* x 04 57 15.0
CLL *ex* x 04 57 43.0
CLL *e*SSS SSS 04 58 08.0
CLL Lm MLR 05 03 00.0
comp=N,500nm,21.4s
CLL Lm MLR 05 03 00.0
comp=E,400nm,21.5s
CLL Lm MLR 05 03 00.0
comp=Z,500nm,20.9s
NKC Novy Kostel 26.82 304 *e*P **P** **04 52 13.6 +0.1**
NKC *e* 04 52 23.0
NKC Novy Kostel 26.82 304 *e*P **P** **04 52 13.6 +0.1**
NKC *ex* x 04 52 23.0
NKC *e*S **S** **04 56 55.2 +7.0**
NKC AMS AMS 05 02 20.0
comp=Z,600nm,28.4s
TEOL Teolo 27.03 294 P **P** **04 52 15.8 +0.4**
CTI Castel Tesino 27.03 295 P **P** **04 52 15.6 0.0**
CTI IAmb IAmb 04 52 27.4
comp=Z,103nm,1.3s
CTI Castel Tesino 27.03 295 P **P** **04 52 15.6 0.0**
CTI pmax pmax
comp=Z,103nm,1.3s
CLTB Caltabellotta 27.04 276 P **P** **04 52 15.7 -0.1**
WTTA Wattenberg 27.07 298 P **P** **04 52 16.4 +0.4**
WTTA pmax pmax
comp=Z,154nm,0.9s
WTTA Wattenberg 27.07 298 *e*P **P** **04 52 16.2 +0.3**
comp=Z,153nm,1.2s,SNR=34
WATA Walderalm 27.11 298 *e*P **P** **04 52 16.3 0.0**
comp=Z,47nm,1.0s,SNR=23
WATA *e*P PcP 04 55 47.4 +11
comp=Z,6.0nm,0.7s
LATE Laterza 27.12 287 P **P** **04 52 16.4 0.0**
RGN Rugen 27.30 314 P **P** **04 52 17.8 +0.1**
SQTA Sankt Quirin 27.36 298 *e*P **P** **04 52 18.5 0.0**
comp=Z,53nm,1.1s,SNR=25
SQTA *e*P PcP 04 55 48.0 +11
comp=Z,13nm,0.9s
MOX Moxa 27.41 305 P **P** **04 52 19.3 +0.5**
MOX pmax pmax
comp=Z,8.0nm,0.6s
MOTA Moosalm 27.43 298 *e*P **P** **04 52 18.8 -0.4**
comp=Z,55nm,1.3s,SNR=20
MOTA *e*P PcP 04 55 48.3 +11
comp=Z,12nm,0.9s
OSSC Osservatorio P 27.44 290 P **P** **04 52 19.9 +0.8**
OSSC IAmb IAmb 04 52 36.6
comp=Z,76nm,0.9s
GRA1 Grafenberg Arr 27.53 303 P **P** **04 52 19.8 -0.1**
GRF Grafenberg Arr 27.53 303 P **P** **04 52 19.8 -0.1**
GRF pmax pmax
comp=Z,19nm,0.9s
GRFO Grafenberg 27.53 303 P **P** **04 52 20.8 +0.9**
GRFO Grafenberg 27.53 303 P **P** **04 52 20.8 +0.9**
GRFO pmax pmax
comp=Z,17nm,0.8s
ZSN Zaisan 27.56 62 *e*P **P** **04 52 19.4 -0.8**
ZSN Zaisan 27.56 62 *e*P **P** **04 52 19.4 -0.8**
baz=62
ZCCA Zocca 27.57 291 P **P** **04 52 22.7 +2.4**
LUNU Lund 27.59 316 *i* P **P** **04 52 20.0 -0.3**
RETA Reutte 27.67 298 *e*P **P** **04 52 20.9 -0.4**
comp=Z,9.0nm,0.6s,SNR=16
RETA *e*P PcP 04 55 48.4 +11
comp=Z,8.8nm,0.9s
DEL Delary 27.67 318 *i* P **P** **04 52 20.0 -1.0**
FETA Feichten 27.68 297 *e*P **P** **04 52 21.5 +0.1**
comp=Z,47nm,1.1s,SNR=32
CASP Castiglione de 27.79 288 P **P** **04 52 23.4 +1.1**
SALO Salr 27.83 294 P **P** **04 52 23.1 +0.5**
SALO IAmb IAmb 04 52 36.4
comp=Z,68nm,1.0s
BJUU Bjuv 27.97 317 *e*P **P** **04 52 27.8 +4.1**
VLC Villacollemand 28.00 291 P **P** **04 52 24.9 +0.7**
PRMA PARMA 28.01 292 P **P** **04 52 25.5 +1.3**
DAVOX Davos/Dischmat 28.26 297 P **P** **04 52 26.8 +0.2**
comp=Z,11nm,0.4s,baz=96,slow=7.1,SNR=34
DAVOX LR LR 05 06 35.7
comp=Z,615nm,18.8s,baz=86,slow=43
comp=Z,11nm,0.4s
DAVA Damuels 28.26 298 *e*P **P** **04 52 26.3 -0.3**
comp=Z,43nm,1.2s,SNR=18
ZAA0 Zalesovo Array 28.46 48 P **P** **04 52 28.0 -0.1**
ZAA0 Zalesovo Array 28.46 48⇑ P **P** **04 52 27.7 -0.4**
comp=Z,4.5nm,1.0s
ZALV Zalesovo Beam 28.46 48 P **P** **04 52 28.5 +0.4**
comp=Z,8.8nm,0.4s,baz=267,slow=11,SNR=30
ZALV LR LR 05 05 01.2
comp=Z,250nm,19.7s,baz=254,slow=39
comp=Z,8.8nm,0.4s
ZALV Zalesovo Beam 28.46 48 P **P** **04 52 27.9 -0.2**
MSSA Maissana 28.61 291 P **P** **04 52 30.1 +0.5**
ATD Arta Tunnel 28.65 190 LR LR 05 05 02.6
comp=Z,1µm,18.2s,baz=1.5,slow=39
STU Stuttgart 28.78 301 P **P** **04 52 30.7 -0.3**
STU IAmb IAmb 04 52 46.4
comp=Z,58nm,1.0s
STU Stuttgart 28.78 301 P **P** **04 52 30.7 -0.3**
STU pmax pmax
comp=Z,58nm,1.0s
APA Apatity 28.81 349⇓ *i*P P 04 52 49.7 +19
APA pmax pmax
comp=Z,36nm,0.8s
BSEG Bad Segeberg 28.83 312 P **P** **04 52 32.2 +0.8**
BSEG pmax pmax
comp=Z,26nm,0.8s
LVZ Lovozero 28.94 350 P **P** **04 52 31.7 -0.5**
LVZ IAmb IAmb 04 53 24.7
comp=Z,50nm,0.7s
LVZ Lovozero 28.94 350*c*P **P** **04 52 31.7 -0.5**
LVZ pmax pmax
comp=Z,61nm,1.7s
SLE Schleitheim 29.21 299 P **P** **04 52 34.5 -0.4**
SLE pmax pmax
comp=Z,35nm,0.9s
HFS Hagfors 29.32 325 P **P** **04 52 35.3 -0.4**
comp=Z,21nm,0.8s,baz=120,slow=8.9,SNR=53
HFS LR LR 05 05 39.7
comp=Z,2µm,19.0s,baz=117,slow=39
comp=Z,21nm,0.8s
BFO Black Forest 29.33 300 P **P** **04 52 34.8 -1.2**
BFO Black Forest 29.33 300 P **P** **04 52 34.8 -1.2**
BFO pmax pmax
comp=Z,10.0nm,0.9s
TNS Taunus Mts 29.37 304 P **P** **04 52 37.4 +1.1**
TNS pmax pmax
comp=Z,19nm,1.0s
KTD Kalmit 29.54 302 P **P** **04 52 38.8 +1.0**
WMQ Urumqi 29.68 69 *e*P **P** **04 52 41.0 +1.8**
WMQ sP sP 04 52 49.8 +0.1
WMQ pmax pmax
comp=Z,49nm,0.9s
WMQ pmax pmax
comp=Z,230nm,3.9s
WMQ LR LR
comp=Z,770nm,15.5s
WMQ LR LR
comp=Z,1µm,15.9s
WMQ LR LR
comp=Z,850nm,17.9s
CDF Champ du Feu 30.04 300 *e*P **P** **04 52 40.9 -1.4**
CDF pmax pmax
comp=Z,13nm,1.0s
SENIN Lac Senin/Sane 30.05 296 P **P** **04 52 42.6 +0.1**
SENIN IAmb IAmb 04 53 00.5
comp=Z,46nm,0.8s
ECH Echery 30.11 300 P **P** **04 52 41.9 -1.0**
ECH Echery 30.11 300 P **P** **04 52 41.9 -1.0**
ECH pmax pmax
comp=Z,24nm,1.0s
HINF Hinteralfeld 30.32 299 *e*P **P** **04 52 44.1 -0.6**
HINF pmax pmax
comp=Z,20nm,1.5s
LPG La Plagne 30.48 294 *e*P **P** **04 52 46.0 -0.5**
LPG pmax pmax
comp=Z,19nm,0.7s
LPL La Plagne 30.49 294 *e*P **P** **04 52 46.1 -0.4**
LPL pmax pmax
comp=Z,46nm,0.9s
NC602 NORSAR Array S 30.55 325 P **P** **04 52 46.1 -0.4**
NC602 IAmb IAmb 04 53 55.2
comp=Z,50nm,1.0s
NC602 NORSAR Array S 30.55 325 *e*P **P** **04 52 46.5 0.0**
NC602 IAmb IAmb 04 52 48.4
comp=Z,6.8nm,0.8s
NC602 IAMs_20 IAMs_20 05 06 01.8
comp=Z,2µm,17.5s
NORES NORESS Array B 30.55 325 P **P** **04 52 47.0 +0.5**
BNI Bardonecchia 30.57 293 P **P** **04 52 47.8 +0.7**
BNI pmax pmax
comp=Z,134nm,1.1s
KEST Kesra 30.57 275 P **P** **04 52 47.7 +0.6**
comp=Z,7.9nm,0.9s,baz=321,slow=1.7,SNR=9.7
comp=Z,7.9nm,0.9s
KEST Kesra 30.57 275 P **P** **04 52 47.6 +0.5**
KEST IAmb IAmb 04 53 00.7
comp=Z,29nm,0.9s
KEST Kesra 30.57 275 P **P** **04 52 49.4 +2.3**
SNR=9.9
KEST P **P** **04 52 49.4 +2.3**
SNR=9.9
OSL Oslo 30.57 323 *e*P **P** **04 52 46.8 +0.1**
OSL IAmb IAmb 04 52 47.6
comp=Z,41nm,0.9s
NB201 NORSAR Array S 30.79 325 P **P** **04 52 47.3 -1.4**
WLF Walferdange 30.81 302 P **P** **04 52 48.9 -0.1**
WLF Walferdange 30.81 302 P **P** **04 52 48.9 -0.1**
WLF pmax pmax
comp=Z,17nm,0.8s
WLF Walferdange 30.81 302 *d*P **P** **04 52 50.4 +1.4**
NB2 NORSAR Subarra 30.82 325 P **P** **04 52 48.1 -0.9**
comp=Z,11nm,0.6s,baz=119,slow=8.6
NB2 NORSAR Subarra 30.82 325 P **P** **04 52 48.1 -0.9**
baz=119,slow=8.6
NOA NORSAR Array B 30.82 325 P **P** **04 52 48.1 -0.9**
comp=Z,7.4nm,0.9s,baz=125,slow=9.0,SNR=46
NOA LR LR 05 06 35.6
comp=Z,2µm,18.7s,baz=120,slow=39
comp=Z,7.4nm,0.9s
NC303 NORSAR Array S 30.84 326 P **P** **04 52 48.5 -0.6**
NC303 IAmb IAmb 04 53 42.3
comp=Z,49nm,1.1s
BTNL Ternell 30.88 304 *d*P **P** **04 52 51.3 +1.7**
comp=Z,32nm,1.1s
BHOU Houvegnez 30.94 304 *d*P **P** **04 52 51.7 +1.5**
comp=Z,11nm,1.1s
MEM Membach 30.95 304 P **P** **04 52 51.9 +1.7**
MEM pmax pmax
comp=Z,73nm,1.1s
MEM Membach 30.95 304 *d*P **P** **04 52 51.5 +1.3**
comp=Z,38nm,1.0s
KONO Kongsberg 30.98 322 P **P** **04 52 49.0 -1.3**
KONO Kongsberg 30.98 322*c*eP **P** **04 52 50.0 -0.4**
KONO pmax pmax
comp=Z,27nm,1.3s
KONO Kongsberg 30.98 322 *e*P **P** **04 52 50.0 -0.4**
KONO IAMs_20 IAMs_20 05 06 34.8
comp=Z,2µm,16.9s
NBO00 NORSAR Array S 31.01 325 IAmb IAmb 04 53 02.7
comp=Z,36nm,0.7s
BSTI Sart Tilman 31.23 304 *d*P **P** **04 52 54.7 +2.0**
BCLA Clavier 31.39 304 *b*P **P** **04 52 55.5 +1.4**
comp=Z,11nm,0.8s
RCHB Rochefort 31.43 303 *d*P **P** **04 52 56.0 +1.6**
comp=Z,32nm,0.9s
DANN Dangsing 31.66 100 *e*P **P** **04 52 59.5 +2.5**
comp=Z,101nm,0.6s
BMRD Maredsous 31.73 304 *d*P **P** **04 52 59.0 +1.9**
comp=Z,35nm,1.0s
DOU Dourbes 31.83 303 *d*P **P** **04 52 59.2 +1.3**
comp=Z,41nm,1.0s
JBP Jabalpur 31.83 112 *e*P **P** **04 52 58.3 +0.1**
KEV Kevo 31.84 346 P **P** **04 52 57.9 +0.1**
KEV IAmb IAmb 04 52 59.6
comp=Z,83nm,1.6s
KEV Kevo 31.84 346 P **P** **04 52 57.9 +0.1**
KEV pmax pmax
comp=Z,83nm,1.6s
ARCES ARCESS Array B 31.93 345 P **P** **04 52 58.9 +0.2**
comp=Z,17nm,0.9s,baz=155,slow=8.9,SNR=42
ARCES LR LR 05 07 05.7
comp=Z,964nm,19.3s,baz=144,slow=39
comp=Z,17nm,0.9s
ARCES ARCESS Array B 31.93 345 P **P** **04 52 58.6 0.0**
ARCES IAmb IAmb 04 53 00.4
comp=Z,44nm,1.2s
SKAR Skarslia 31.97 324 *e*P **P** **04 52 59.7 +0.5**
SKAR IAmb IAmb 04 53 02.1
comp=Z,67nm,1.8s
SKAR IAMs_20 IAMs_20 05 07 05.5
comp=Z,2µm,15.8s
SNF Seneffe 32.05 304 *d*P **P** **04 53 01.3 +1.5**
comp=Z,20nm,1.0s
DOMB Dombas 32.19 326 *e*P **P** **04 52 59.9 -1.2**
DOMB IAmb IAmb 04 53 03.1
comp=Z,40nm,1.1s
NSS Namsos 32.24 332 *e*P **P** **04 53 01.8 +0.4**
NSS IAmb IAmb 04 53 03.2
comp=Z,118nm,1.6s
NSS IAMs_20 IAMs_20 05 07 27.4
comp=Z,1µm,14.7s
TBLU Trondheim 32.24 329 *e*P **P** **04 53 00.5 -0.9**
TBLU IAmb IAmb 04 53 01.5
comp=Z,26nm,0.9s
MOR8 Moi Rana 32.33 335 *e*P **P** **04 53 02.3 +0.1**
MOR8 IAmb IAmb 04 53 02.9
comp=Z,77nm,1.1s
MOR8 IAMs_20 IAMs_20 05 09 08.2
comp=Z,794nm,8.9s
BLS5 Blasjo 32.41 321 *e*P **P** **04 53 03.4 +0.5**
BLS5 IAmb IAmb 04 53 04.5
comp=Z,12nm,0.9s
BLS5 IAMs_20 IAMs_20 05 07 29.5
comp=Z,1µm,18.2s
ODD1 Odda 32.48 322 *e*P **P** **04 53 04.9 +1.3**
ODD1 IAmb IAmb 04 53 07.1
comp=Z,30nm,1.0s
GKN Gorkha 32.50 100 *e*P **P** **04 53 05.3 +1.1**
comp=Z,25nm,0.4s
AVF Avril sur Loir 32.74 297 *e*P **P** **04 53 04.5 -1.4**
AVF pmax pmax
comp=Z,87nm,1.3s
FAUS Fauske 32.83 337 *e*P **P** **04 53 06.9 +0.4**
FAUS IAmb IAmb 04 53 07.2
comp=Z,104nm,1.3s
FAUS IAMs_20 IAMs_20 05 07 11.1
comp=Z,720nm,14.9s
KONS Konsvik 32.96 335 *e*P **P** **04 53 08.1 +0.6**
KONS IAmb IAmb 04 53 08.8
comp=Z,203nm,1.4s
JETT Jettan, Norway 33.03 343 *e*P **P** **04 53 08.4 +0.1**
JETT IAmb IAmb 04 53 09.5
comp=Z,161nm,1.3s
JETT IAMs_20 IAMs_20 05 07 12.4
comp=Z,1µm,19.7s
MOL Molde 33.05 327 *e*P **P** **04 53 08.4 -0.1**
MOL IAmb IAmb 04 53 10.0
comp=Z,25nm,0.9s
MOL IAMs_20 IAMs_20 05 07 38.5
comp=Z,2µm,17.5s
DMN Daman 33.06 100 *e*P **P** **04 53 10.8 +1.6**
HYA Hoyanger 33.11 324 *e*P **P** **04 53 10.2 +1.2**
HYA IAmb IAmb 04 53 14.0
comp=Z,33nm,1.2s
AKN Aaknes 33.13 326 *e*P **P** **04 53 09.9 +0.7**
AKN IAmb IAmb 04 53 11.1
comp=Z,73nm,1.1s
AKN IAMs_20 IAMs_20 05 07 40.4
comp=Z,2µm,19.2s
HAMF Hammerfest 33.20 346 *e*P **P** **04 53 10.4 +0.7**
HAMF IAmb IAmb 04 53 11.1
comp=Z,72nm,1.1s

HAMF IAMs_20 IAMs_20 05 08 25.9
comp=Z,879nm,16.0s
STEI Steigen 33.20 338 *e*P **P** **04 53 10.1 +0.3**
STEI IAmb IAmb 04 53 10.3
comp=Z,71nm,1.1s
STEI IAMs_20 IAMs_20 05 07 38.0
comp=Z,831nm,4.5s
MAHO Mahon 33.21 284 P **P** **04 53 10.8 +0.7**
MAHO S S 04 58 05.7 -23
MAHO Mahon 33.21 284 P **P** **04 53 11.8 +1.7**
PKIN Phulchoki 33.29 100 *e*P **P** **04 53 12.3 +1.0**
comp=Z,32nm,0.6s
PKI Pulchoki 33.31 100 *e*P **P** **04 53 12.5 +1.0**
comp=Z,89nm,1.1s
CLF Chambon-Foret 33.40 299 P **P** **04 53 11.8 +0.2**
CLF IAmb IAmb 04 53 13.2
comp=Z,63nm,1.1s
TRO Tromso 33.43 342 *e*P **P** **04 53 11.6 -0.1**
TRO IAmb IAmb 04 53 12.2
comp=Z,29nm,0.9s
TRO IAMs_20 IAMs_20 05 08 25.8
comp=Z,1µm,13.8s
GUN Gumba 33.49 99 *e*P **P** **04 53 14.7 +1.6**
FOO Floro 33.78 324 IAMs_20 IAMs_20 05 08 09.2
comp=Z,2µm,21.4s
CAF Calviac 33.83 294 *e*P **P** **04 53 15.5 -0.1**
CAF pmax pmax
comp=Z,33nm,0.9s
JIRN Jiri 33.85 99 *e*P **P** **04 53 17.6 +1.3**
ELMS Elmsett, Ipswi 34.17 307 *e*P **P** **04 53 18.8 +0.5**
ELMS IAmb IAmb 04 53 19.6
comp=Z,94nm,0.9s
RAMN Ramite 34.53 100 *e*P **P** **04 53 22.6 +0.5**
comp=Z,83nm,0.7s
HYBB Hyderabad (bro 34.75 121 *e*P **P** **04 53 24.4 +0.6**
HYBB IVmB_BB 04 53 26.1
comp=Z,431nm,4.5s
HYBB *e*pP **pP** **04 53 28.3 -2.9**
HYBB *e*PcP **PcP** **04 55 57.4 +0.3**
HYBB *e*S **S** **04 58 52.1 -0.7**
ODAN Odare 35.18 100 *e*P **P** **04 53 28.9 +1.3**
WOL Wolverton 35.54 305 *e*P **P** **04 53 30.6 +0.4**
CWF Charnwood Fore 35.59 308 *e*P **P** **04 53 29.8 -0.9**
HPK Haverah Park 35.82 310 *e*P **P** **04 53 32.4 -0.1**
HPK IAmb IAmb 04 53 34.3
comp=Z,58nm,0.9s
LBWR Ladybower, Pea 35.86 309 *e*P **P** **04 53 32.6 -0.3**
LBWR IAmb IAmb 04 53 33.5
comp=Z,69nm,1.2s
SWN1 Swindon 35.90 306 *e*P **P** **04 53 33.9 +0.6**
SWN1 IAmb IAmb 04 53 34.7
comp=Z,133nm,1.1s
EDMD Edmundbyers 36.06 311 *e*P **P** **04 53 34.3 -0.3**
EDMD IAmb IAmb 04 53 36.0
comp=Z,40nm,1.1s
NRIK Noril'sk 36.10 23 P **P** **04 53 34.7 -0.1**
comp=Z,37nm,0.9s,baz=233,slow=7.0,SNR=43
NRIK LR LR 05 12 16.1
comp=Z,540nm,19.4s,baz=232,slow=43
comp=Z,37nm,0.9s
NRIK Noril'sk 36.10 23 P **P** **04 53 35.1 +0.3**
NRIK IAmb IAmb 04 53 37.3
comp=Z,69nm,1.1s
NRIK Noril'sk 36.10 23*c i*P **P** **04 53 36.1 +1.3**
NRIK pmax pmax
comp=Z,74nm,1.1s
STRD Stroud 36.12 306 *e*P **P** **04 53 35.0 -0.2**
STRD IAmb IAmb 04 53 36.0
comp=Z,46nm,0.8s
ESY Stoneypath 36.51 313 *e*P **P** **04 53 38.2 -0.2**
MONM Monmouth 36.52 306⇑ *e*P **P** **04 53 38.2 -0.3**
MONM IAmb IAmb 04 53 39.1
comp=Z,51nm,1.2s
DRUM Mains of Drumt 36.52 315 *e*P **P** **04 53 37.9 -0.6**
HLM1 Long Mynd 36.55 307 *e*P **P** **04 53 38.4 -0.5**
HLM1 IAmb IAmb 04 53 39.9
comp=Z,28nm,1.0s
MCH1 Michaelchurch 36.63 306 *e*P **P** **04 53 39.2 -0.3**
MCH1 IAmb IAmb 04 53 40.3
comp=Z,54nm,1.0s
LSA Lhasa 36.64 93 P **P** **04 53 40.9 +0.5**
LSA IAmb IAmb 04 53 52.2
comp=Z,26nm,0.7s
LSA Lhasa 36.64 93 P **P** **04 53 40.9 +0.5**
LSA pmax pmax
comp=Z,26nm,0.7s
EBL Broad Law 36.74 313⇑ *e*P **P** **04 53 40.3 -0.1**
FOEL Foel Wylfa 36.74 308 *e*P **P** **04 53 40.2 -0.3**
FOEL IAmb IAmb 04 53 40.7
comp=Z,59nm,1.1s
EKA Eskdalemuir Ar 36.78 312 P **P** **04 53 40.3 -0.4**
comp=Z,2.7nm,0.4s,baz=101,slow=8.9,SNR=33
EKA PcP **PcP** **04 56 02.8 +0.4**
comp=Z,3.8nm,0.8s,baz=128,slow=2.0,SNR=2.5
EKA LR LR 05 11 13.2
comp=Z,627nm,20.1s,baz=75,slow=40
comp=Z,2.7nm,0.4s
GOMU GeErMu 36.80 81 P **P** **04 53 44.8 +3.2**
GOMU pP pP 04 53 47.7 -1.4
GOMU S **S** **04 59 19.2 -5.3**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,93nm,5.1s
GOMU LR LR
comp=Z,210nm,16.3s
GOMU LR LR
comp=Z,200nm,17.8s
GOMU LR LR
comp=Z,150nm,17.1s
ESK Eskdalemuir 36.80 312⇑ *e*P **P** **04 53 40.4 -0.5**
ESK Eskdalemuir 36.80 312 P **P** **04 53 40.5 -0.5**
ESK Eskdalemuir 36.80 312 P **P** **04 53 40.5 -0.4**
ESK pmax pmax
comp=Z,17nm,0.9s
EDI Edinburgh 36.83 313⇑ *e*P **P** **04 53 41.8 +0.7**
EDI IAmb IAmb 04 53 42.0
comp=Z,55nm,1.2s
LLW Llanuwchllyn 37.03 308 *e*P **P** **04 53 43.0 +0.1**
QUIF Quistinic 37.04 300 *e*P **P** **04 53 43.4 +0.4**
QUIF pmax pmax
comp=Z,13nm,0.7s
ROSF Rostrenen 37.06 300 *e*P **P** **04 53 43.5 +0.3**
DYA Yadsworthy 37.30 304 *e*P **P** **04 53 44.6 -0.6**
INVG Invergeldie, C 37.34 314 *e*P **P** **04 53 45.0 -0.5**
NEWG New Galloway 37.38 312 *e*P **P** **04 53 45.6 -0.2**
WME Myndd Eilian 37.41 309⇑ *e*P **P** **04 53 45.7 -0.3**
WLF1 Llynfaes 37.46 309⇑ *e*P **P** **04 53 46.5 0.0**
WLF1 IAmb IAmb 04 53 48.5
comp=Z,58nm,0.9s
WPS Cemaes, Angles 37.52 309 *e*P **P** **04 53 47.4 +0.4**
WPS IAmb IAmb 04 53 49.3
comp=Z,29nm,1.0s
YRC Rhoscolyn 37.57 309⇑ *e*P **P** **04 53 47.7 +0.2**
GAL1 Galloway 37.65 311 *e*P **P** **04 53 47.4 -0.7**
RSBS Rosebush, Pemb 37.72 306 *e*P **P** **04 53 48.2 -0.5**
RSBS IAmb IAmb 04 53 49.7
comp=Z,23nm,1.0s
HOPEN Hopen 38.01 351 IAMs_20 IAMs_20 05 11 13.8
comp=Z,832nm,17.0s
MOY Mondy 38.02 54 *e*P **P** **04 53 53.3 +1.9**
MOY pmax pmax
comp=Z,25nm,1.5s
LODK Lodwar 38.09 201 P **P** **04 53 53.3 +1.0**
KAC Achnashellach 38.09 316 *e*P **P** **04 53 51.7 -0.2**
CCA1 Carnmenellis 38.14 304 *e*P **P** **04 53 52.2 -0.1**
CCA1 IAmb IAmb 04 53 53.2
comp=Z,38nm,1.0s
CLGH Cloghs, Cushen 38.46 312 *e*P **P** **04 53 55.5 +0.6**
CLGH IAmb IAmb 04 53 57.3
comp=Z,30nm,1.1s
ILTH Belurgan, Co L 38.60 310 *e*P **P** **04 53 56.2 +0.1**
DSB Dublin 38.65 309 P **P** **04 53 56.0 -0.5**
UCM Universidad Co 38.65 288 P **P** **04 53 59.5 +2.7**
UCM S **S** **04 59 44.6 -7.3**
PCHI Peechi 38.67 131 *e*P P 04 53 49.1 -8.0
PCHI *e*S S 04 59 37.7 -15
IWEX Carrickbyrne, 38.94 307 *e*P **P** **04 53 58.9 -0.1**
ESBB Sonseca Array 39.36 287 IAmb IAmb 04 54 14.4
comp=Z,82nm,1.0s
ESDC Sonseca Array 39.37 287 P **P** **04 54 02.6 -0.2**
comp=Z,31nm,0.9s,baz=63,slow=8.6,SNR=148
ESDC PcP **PcP** **04 56 11.0 +0.1**
comp=Z,0.9nm,0.8s,baz=36,slow=3.1,SNR=1.6
ESDC LR LR 05 12 19.1
comp=Z,118nm,22.0s,baz=64,slow=39
comp=Z,31nm,0.9s
ESDC Sonseca Array 39.37 287 P **P** **04 54 02.4 -0.4**
ESDC IAmb IAmb 04 54 14.4
comp=Z,81nm,1.0s
GTA Gaotai 39.49 74⇑ P **P** **04 54 05.7 +1.7**
GTA pP sP 04 54 14.4 -0.1
GTA sP pP 04 54 19.5 +8.0
GTA pmax pmax
comp=Z,14nm,1.4s
GTA LR LR
comp=Z,290nm,14.9s
GTA LR LR
comp=Z,500nm,16.0s
GTA LR LR
comp=Z,470nm,17.8s
ZAK Zakamensk 39.57 56 *e*P **P** **04 54 05.8 +1.4**
ZAK pmax pmax
comp=Z,17nm,1.2s
ZAK pmax pmax
comp=Z,11nm,1.5s
TAM Tamanrasset 39.60 257 P **P** **04 54 01.9 -3.2**
TAM Tamanrasset 39.60 257 P **P** **04 54 02.3 -2.8**
TAM pmax pmax
comp=Z,20nm,1.0s
PAB San Pablo 39.69 287 P **P** **04 54 04.8 -0.7**
PAB IAmb IAmb 04 54 17.2
comp=Z,109nm,1.2s
PAB San Pablo 39.69 287 P **P** **04 54 04.8 -0.7**
PAB pmax pmax
comp=Z,109nm,1.3s
PAB San Pablo 39.69 287 P **P** **04 54 06.4 +0.9**
IRK Irkutsk 40.00 53 *e*P **P** **04 54 08.4 +0.6**
IRK pmax pmax
comp=Z,74nm,1.5s
FIGM Figuig 40.09 275 P **P** **04 54 10.0 +1.1**
WMELI Melilla 40.09 280 P **P** **04 54 06.5 -2.3**
WMELI S **S** **05 00 20.2 +6.7**
JBK JBK 40.18 278 P **P** **04 54 12.0 +2.2**
SPB2 Spitsbergen Ar 40.45 350 P **P** **04 54 12.3 +1.0**
SPB2 IAmb IAmb 04 54 13.6
comp=Z,80nm,1.1s
SPITS Spitsbergen Ar 40.45 350 P **P** **04 54 12.2 +0.9**
comp=Z,35nm,0.8s,baz=129,slow=8.7,SNR=15
SPITS LR LR 05 12 19.8
comp=Z,518nm,20.6s,baz=117,slow=38
comp=Z,35nm,0.8s
PBRG Braganca 40.77 291 *e*P **P** **04 54 14.1 -0.3**
comp=Z,60nm,1.1s
AKLM AKL 41.09 279 P **P** **04 54 19.1 +1.9**
MVO Moncorvo 41.16 290 *e*P **P** **04 54 17.4 -0.2**
comp=Z,57nm,0.9s
MVO *e*S **S** **05 00 35.1 +5.7**
MVO *e*LR LR 05 09 46.4
comp=Z,246nm,18.0s
KBS Kingsbay 41.60 350 P **P** **04 54 19.9 -0.8**
KBS Kingsbay 41.60 350*ce*P **P** **04 54 22.6 +1.9**
KBS pmax pmax
comp=Z,21nm,1.3s
KBS Kingsbay 41.60 350 *e* **P** **04 54 21.9 +1.2**
PVRL Vila Real 41.62 291 *e*P **P** **04 54 21.5 +0.1**
comp=Z,111nm,1.4s
POLO Laas de Olo 41.65 291 *e*P **P** **04 54 21.7 0.0**
comp=Z,45nm,1.1s
PCAB Cabril 41.72 291 *e*P **P** **04 54 22.4 +0.2**
comp=Z,78nm,1.2s
MTE Manteigas 41.76 289 P **P** **04 54 22.4 -0.2**
MTE Manteigas 41.76 289 *e*P **P** **04 54 22.8 +0.2**
comp=Z,243nm,1.3s
MTE *e*S **S** **05 00 45.4 +7.0**
MTE Manteigas 41.76 289 *e*LR LR 05 13 05.2
comp=Z,208nm,18.0s
PGAV Gaviera, Arco 41.81 292 *e*P **P** **04 54 23.7 +0.6**
comp=Z,196nm,1.2s
PCBR Castelo Branco 41.89 288 *e*P **P** **04 54 23.8 +0.3**
comp=Z,112nm,1.7s
PVIS Viseu 41.92 290 *e*P **P** **04 54 24.0 +0.1**
comp=Z,146nm,1.4s
JMIC Jan Mayen 41.96 336 LR LR 05 12 30.6
comp=Z,294nm,19.6s,baz=106,slow=37
JMIC Jan Mayen 41.96 336 *e* **P** **04 54 21.4 -2.3**
PMRV Marv??o 41.96 288 *e*P **P** **04 54 24.2 0.0**
comp=Z,131nm,1.2s
PMRV Marv??o 41.96 288 *e*LR LR 05 13 58.7
comp=Z,191nm,18.0s
CHEFC Chefchaouen 41.98 281 P **P** **04 54 25.0 +0.5**
SONM Songino Array 41.99 59 P **P** **04 54 25.6 +1.1**
comp=Z,1.4nm,0.8s,baz=276,slow=10.0,SNR=9.7
SONM PcP **PcP** **04 56 19.4 0.0**
comp=Z,5.3nm,1.0s,baz=226,slow=3.9,SNR=6.1
SONM LR LR 05 13 52.4
comp=Z,762nm,19.4s,baz=288,slow=39
comp=Z,1.4nm,0.8s
SONM Songino Array 41.99 59 P **P** **04 54 24.5 0.0**
KMBO Kilima Mbogo 42.02 196 P **P** **04 54 26.6 +1.4**
comp=Z,4.4nm,1.0s,baz=360,slow=8.9,SNR=7.0
KMBO LR LR 05 13 00.0
comp=Z,1µm,18.1s,baz=20,slow=38
comp=Z,4.4nm,1.0s
KMBO Kilima Mbogo 42.02 196 P **P** **04 54 25.8 +0.8**
KMBO Kilima Mbogo 42.02 196 *i* P **P** **04 54 27.2 +2.1**
KMBO pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 42.02 196 *i* P **P** **04 54 26.5 +1.4**
SNR=6.0
SFS San Fernando 42.11 283 P **P** **04 54 26.9 +1.5**
SFS San Fernando 42.11 283 P **P** **04 54 26.9 +1.5**
SFS pmax pmax
comp=Z,189nm,0.9s
PBAR Barrancos 42.12 286 *e*P **P** **04 54 24.9 -0.6**
comp=Z,51nm,1.0s
PESTR Estremoz 42.29 287 P **P** **04 54 26.4 -0.4**
PESTR IAmb IAmb 04 54 38.7
comp=Z,101nm,1.1s
PESTR Estremoz 42.29 287 P **P** **04 54 26.9 0.0**
PESTR Estremoz 42.29 287 *e*P **P** **04 54 26.8 0.0**
comp=Z,214nm,1.1s
PTO Porto 42.30 291 *e*P **P** **04 54 27.2 +0.3**
comp=Z,135nm,1.1s
MDT Midelt 42.35 277 P **P** **04 54 26.7 -0.9**
comp=Z,5.2nm,1.0s,baz=82,slow=9.1,SNR=7.7
comp=Z,5.2nm,1.0s
MDT Midelt 42.35 277 P **P** **04 54 28.6 +1.0**
ULN Ulaanbaatar 42.42 59 P **P** **04 54 28.9 +0.8**
ULN IAmb IAmb 04 54 40.0
comp=Z,34nm,0.8s
ULN Ulaanbaatar 42.42 59*c i*P **P** **04 54 29.5 +1.5**
ULN pmax pmax
comp=Z,40nm,1.3s
ULN MLR MLR
comp=Z,2µm,17.0s
ULN Ulaanbaatar 42.42 59 P **P** **04 54 29.8 +1.8**
ULN P **P** **04 54 29.8 +1.8**
PCAS Casmilo, Conde 42.56 289 *e*P **P** **04 54 29.9 +0.8**
comp=Z,91nm,1.7s
PMTG Montargil 42.69 288 *e*P **P** **04 54 29.9 -0.2**
comp=Z,143nm,1.3s
EVO Evora 42.72 287 P **P** **04 54 30.3 0.0**
EVO S **S** **05 00 58.1 +5.7**
EVO Evora 42.72 287 *e*P **P** **04 54 30.5 +0.2**
comp=Z,52nm,1.6s
PBEJ Beja 42.78 286 *e*P **P** **04 54 31.3 +0.4**
comp=Z,59nm,1.3s
PVAQ Vaqueiros 42.90 285 P **P** **04 54 31.9 +0.1**
PVAQ IAmb IAmb 04 54 43.6
comp=Z,44nm,1.0s
PVAQ Vaqueiros 42.90 285 *e*P **P** **04 54 31.4 -0.4**
comp=Z,77nm,1.2s
PSBE So Bento 42.96 288 *e*P **P** **04 54 33.1 +0.8**
comp=Z,179nm,1.1s
KIBK Kibwezi 43.04 194 P **P** **04 54 34.7 +1.5**
PCVE Castro Verde 43.05 286 *e*P **P** **04 54 33.3 +0.3**
comp=Z,76nm,1.4s
MESJ Messejana 43.11 286 *e*P **P** **04 54 33.8 +0.3**
PBDV Barranco-do-Ve 43.11 285 *e*P **P** **04 54 34.2 +0.6**
PNCL Nicolau / Gran 43.24 286 *e*P **P** **04 54 34.8 +0.2**
comp=Z,66nm,1.2s
MBAR Mbarara 43.29 205 LR LR 05 13 22.7
comp=Z,618nm,18.8s,baz=5.0,slow=37
LIS Lisbon 43.49 287 *e*P **P** **04 54 37.6 +1.1**
comp=Z,378nm,1.2s
PMAFR Mafra 43.50 288 *e*P **P** **04 54 37.4 +0.7**
comp=Z,158nm,1.0s
PTEO Sao Teotonio 43.59 286 *e*P **P** **04 54 38.1 +0.7**
comp=Z,106nm,2.0s
ZHG ZHG 43.63 279 P **P** **04 54 39.0 +1.1**
LZH Lanzhou 43.64 77 *e*P **P** **04 54 39.8 +1.8**
LZH pP pP 04 54 43.4 -2.2
LZH sP sP 04 54 46.3 -2.3
LZH *e*S **S** **05 01 02.8 -3.5**
LZH pmax pmax
comp=Z,24nm,1.1s
LZH pmax pmax
comp=Z,130nm,4.3s
LZH LR LR
comp=Z,650nm,12.9s
LZH LR LR
comp=Z,520nm,12.9s
LZH LR LR
comp=Z,740nm,16.1s
SRHM Skhour des Reh 45.01 279 P **P** **04 54 49.0 +0.1**
BOD Bodaibo 45.02 44 *e*P **P** **04 54 48.7 +0.2**
BOD pmax pmax
comp=Z,44nm,1.7s
CD2 Chengdu 45.76 83 *e*P **P** **04 54 53.4 -1.4**
BORG Borgarnes 46.00 326 P **P** **04 54 56.0 -0.2**
comp=Z,56nm,1.1s,baz=93,slow=6.7,SNR=9.2
BORG LR LR 05 15 35.6
comp=Z,740nm,19.8s,baz=100,slow=38
comp=Z,56nm,1.1s
BORG Borgarnes 46.00 326 P **P** **04 54 57.2 +1.1**
BORG Borgarnes 46.00 326 P **P** **04 54 57.2 +1.1**
BORG pmax pmax
comp=Z,115nm,1.3s
DBG Daneborg 46.10 339 *e*P **P** **04 54 58.7 +1.8**
DBG IAmb IAmb 04 54 59.6
comp=Z,59nm,0.9s
DAG Danmarks Havn 46.15 343 P **P** **04 54 58.0 +0.8**
DAG pmax pmax
comp=Z,84nm,1.0s
DAG Danmarks Havn 46.15 343⇑ *i*P **P** **04 54 57.7 +0.5**
DAG IAmb IAmb 04 54 58.8
comp=Z,58nm,0.8s
SCO Scoresbysund 46.26 334 P **P** **04 54 59.2 +1.0**
SCO Scoresbysund 46.26 334 P **P** **04 54 59.2 +1.0**
SCO pmax pmax
comp=Z,260nm,1.9s
SCO Scoresbysund 46.26 334 *i* P **P** **04 54 59.8 +1.6**
SCO IAmb IAmb 04 55 01.3
comp=Z,273nm,1.9s
PZH PanZhiHua 46.35 90 P **P** **04 55 00.3 +0.7**
PZH S **S** **05 01 44.5 -1.2**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,170nm,4.8s
PZH LR LR
comp=Z,1µm,21.6s
PZH LR LR
comp=Z,510nm,21.8s
PZH LR LR
comp=Z,960nm,24.5s
BTO Baotou 46.51 68 *e*P **P** **04 55 01.2 +0.5**
BTO S **S** **05 01 48.1 +0.5**
BTO LR LR
comp=Z,2µm,19.1s
BTO LR LR
comp=Z,1µm,18.2s
NOR Nord 47.07 350 P **P** **04 55 05.2 +0.8**
NOR pmax pmax
comp=Z,30nm,1.6s
NOR Nord 47.07 350 *i* P **P** **04 55 05.0 +0.6**
NOR IAmb IAmb 04 55 06.0
comp=Z,219nm,2.4s
HHC Hu-ho-hao-te 47.52 67 *e*P **P** **04 55 10.0 +1.4**
HHC sP sP 04 55 18.5 -0.8
HHC S **S** **05 02 01.6 -0.4**
HHC ScS **ScS** **05 05 03.1 +2.3**
HHC pmax pmax
comp=Z,34nm,0.8s
HHC LR LR
comp=Z,880nm,15.2s
HHC LR LR
comp=Z,590nm,15.2s
HHC LR LR
comp=Z,810nm,15.1s
KMI Kunming 47.84 91⇑ P **P** **04 55 12.6 +1.2**
KMI pP pP 04 55 15.9 -3.1
KMI S **S** **05 02 08.0 +0.9**
KMI SS **SS** **05 05 25.6 -10**
KMI pmax pmax
comp=Z,32nm,1.1s
KMI pmax pmax
comp=Z,240nm,5.1s
KMI LR LR
comp=Z,340nm,12.9s
KMI LR LR
comp=Z,250nm,11.0s
KMI LR LR
comp=Z,440nm,18.6s
XAN Xi'an 48.27 77 P **P** **04 55 15.4 +0.9**
XAN pP sP 04 55 24.0 -1.1
XAN pmax pmax
comp=Z,19nm,1.1s
XAN LR LR
comp=Z,590nm,15.4s
XAN LR LR
comp=Z,540nm,13.6s
XAN LR LR
comp=Z,800nm,15.3s
TOA0 Torodi Ar. Sit 48.48 250 IAmb IAmb 04 55 16.5
comp=Z,46nm,1.4s
TORD Torodi Ar. Bea 48.48 250 P **P** **04 55 15.1 -1.0**
comp=Z,16nm,1.1s,baz=72,slow=7.1,SNR=42
TORD PcP **PcP** **04 56 41.9 -0.2**
comp=Z,8.2nm,1.0s,baz=67,slow=4.8,SNR=4.2
comp=Z,16nm,1.1s
TORD Torodi Ar. Bea 48.48 250 P **P** **04 55 14.8 -1.3**
TORD IAmb IAmb 04 55 16.5
comp=Z,47nm,1.5s
CHTO Chiang Mai 48.49 100 P **P** **04 55 14.7 -1.5**
CHTO Chiang Mai 48.49 100 P **P** **04 55 14.7 -1.5**
CHTO pmax pmax
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 48.70 101 P **P** **04 55 18.2 +0.4**
comp=Z,2.1nm,0.5s,baz=295,slow=7.8,SNR=11
CMAR PcP **PcP** **04 56 43.2 +0.3**
comp=Z,2.1nm,0.4s,baz=302,slow=5.2,SNR=1.6
CMAR LR LR 05 22 11.3
comp=Z,122nm,19.4s,baz=295,slow=44
comp=Z,2.1nm,0.5s
CMAR Chiang Mai Arr 48.70 101 P **P** **04 55 17.5 -0.4**
CMAR Chiang Mai Arr 48.70 101 *i* P **P** **04 55 18.6 +0.8**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
TIY Taiyuan 49.33 71 *e*P **P** **04 55 24.6 +2.0**
TIY S **S** **05 02 31.8 +4.2**
TIY pmax pmax
comp=Z,17nm,0.8s
TIY pmax pmax
comp=Z,88nm,5.1s
TIY LR LR
comp=Z,290nm,14.4s
TIY LR LR
comp=Z,220nm,13.1s
TIY LR LR
comp=Z,450nm,24.0s
XLT XiLinHaoTe 49.58 62⇓ *i*P **P** **04 55 26.5 +2.1**
XLT sP sP 04 55 35.6 +0.5
XLT S **S** **05 02 31.1 +0.2**
XLT ScS **ScS** **05 05 09.3 -5.1**
XLT pmax pmax
comp=Z,19nm,1.3s
XLT pmax pmax
comp=Z,62nm,3.7s
XLT LR LR
comp=Z,810nm,16.0s
XLT LR LR
comp=Z,1µm,16.4s
SOEG Soedalen 49.71 331 *e*P **P** **04 55 26.8 +1.9**
SOEG IAmb IAmb 04 55 27.4
comp=Z,83nm,1.1s
TIXI Tiksi 49.85 24 P **P** **04 55 26.5 +0.6**
comp=Z,8.9nm,0.3s,baz=274,slow=21,SNR=10
comp=Z,8.9nm,0.3s
TIXI Tiksi 49.85 24 P **P** **04 55 26.1 +0.3**
TIXI IAmb IAmb 04 55 28.0
comp=Z,59nm,1.2s
TIXI Tiksi 49.85 24*ce*P **P** **04 55 26.8 +0.9**
TIXI pmax pmax
comp=Z,58nm,1.2s
TIXI MLR MLR

comp=Z,288nm,17.0s
GYA Guiyang 50.16 87 ⇑P **P** **04 55 30.3 +1.3**
GYA sP pP 04 55 37.7 +1.0
GYA pmax pmax
comp=Z,24nm,1.2s
HIA Hailar 50.20 54 P **P** **04 55 30.0 +1.1**
HIA IAmb IAmb 04 55 41.0
comp=Z,30nm,1.2s
HIA Hailar 50.20 54 P **P** **04 55 30.0 +1.1**
HIA pmax pmax
comp=Z,30nm,1.2s
ENH Enshi 50.42 81 IAmb IAmb 04 55 42.7
comp=Z,52nm,1.1s
LYN LuoYang 50.69 74 *e*P **P** **04 55 33.7 +0.9**
LYN pP sP 04 55 43.7 +0.2
LYN S **S** **05 02 45.0 -1.5**
LYN pmax pmax
comp=Z,10.0nm,1.5s
LYN pmax pmax
comp=Z,170nm,5.4s
LYN LR LR
comp=Z,770nm,17.0s
LYN LR LR
comp=Z,910nm,16.7s
LYN LR LR
comp=Z,1μm,17.3s
HNS HongShan 51.11 70 ⇓P **P** **04 55 38.0 +2.1**
HNS S **S** **05 02 54.5 +2.3**
HNS pmax pmax
comp=Z,15nm,1.3s
HNS LR LR
comp=Z,500nm,17.1s
HNS LR LR
comp=Z,580nm,17.5s
HNS LR LR
comp=Z,830nm,17.1s
SUMG Summit 51.35 337 *i*P **P** **04 55 39.0 +1.3**
SUMG IAmb IAmb 04 55 40.0
comp=Z,132nm,1.0s
YAK Yakutsk 51.99 36 LR LR 05 21 28.7
comp=Z,526nm,18.6s,baz=270,slow=40
YAK Yakutsk 51.99 36 *e*P **P** **04 55 42.1 0.0**
YAK *e**PP **sP** **04 55 51.8 -1.0**
YAK *e* 04 56 55.0
YAK *e* 04 57 39.1
YAK *e*S **S** **05 03 01.8 -1.8**
YAK *e**SS **sS** **05 03 21.7 +5.4**
YAK *e* 05 05 28.9
YAK *e*SS **SS** **05 06 40.1 -0.1**
YAK *e*SSS SSS 05 08 20.6
YAK pmax pmax
comp=Z,37nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,12nm,1.3s
YAK pmax pmax
comp=Z,25nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.8s
YAK pmax pmax
comp=E,8.0nm,0.8s
YAK smax smax
comp=N,23nm,0.9s
YAK smax smax
comp=E,21nm,0.9s
ICESG Greenland Ices 52.50 333 ⇑*i*P **P** **04 55 47.4 +1.1**
ICESG IAmb IAmb 04 55 48.4
comp=Z,210nm,0.9s
ANGG Ammassalik, Gr 52.65 329 IAmb IAmb 04 55 49.1
comp=Z,57nm,1.1s
ANGG Ammassalik, Gr 52.65 329 *e*P **P** **04 55 48.0 +1.0**
ANGG IAmb IAmb 04 55 48.9
comp=Z,53nm,1.1s
ZEA Zeya 53.22 47 *e*P **P** **04 55 52.1 +0.8**
ZEA *e*S **S** **05 03 24.8 +4.2**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA pmax pmax
comp=Z,100nm,2.7s
ZEA smax smax
comp=E,100nm,6.4s
ZEA MLR MLR
comp=E,1μm,16.0s
ZEA MLR MLR
comp=Z,1μm,16.0s
TIA Tai'an 53.37 70 *e*P **P** **04 55 53.5 +0.7**
TIA pmax pmax
comp=Z,13nm,1.6s
TIA LR LR
comp=Z,440nm,14.7s
TIA LR LR
comp=Z,320nm,16.3s
TIA LR LR
comp=Z,750nm,16.2s
WHN Wuhan 53.96 78 ⇓P **P** **04 55 58.6 +1.5**
WHN sP **sP** **04 56 07.6 -0.3**
WHN S **S** **05 03 31.5 +0.2**
WHN LR LR
comp=Z,780nm,6.6s
WHN LR LR
comp=Z,1μm,15.1s
WHN LR LR
comp=Z,2μm,16.1s
DL2 Dalian 55.39 66 P **P** **04 56 08.4 +1.1**
DL2 S **S** **05 03 51.5 +1.2**
DL2 pmax pmax
comp=Z,100nm,1.1s
DL2 pmax pmax
comp=Z,190nm,8.5s
DL2 LR LR
comp=Z,280nm,15.3s
DL2 LR LR
comp=Z,470nm,13.9s
DL2 LR LR
comp=Z,510nm,15.2s
BART Pico Bartolome 55.42 293 *e*P **P** **04 56 08.9 +1.2**
comp=Z,140nm,1.1s
PSMN Pico do Norte, 55.69 292 *e*P **P** **04 56 08.6 -1.0**
comp=Z,127nm,1.6s
DY2G Dye2 55.71 331 ⇑*i*P **P** **04 56 10.5 +0.9**
DY2G IAmb IAmb 04 56 11.5
comp=Z,270nm,1.4s
PSMA Santa Maria 55.74 292 *e*P **P** **04 56 10.8 +0.9**
comp=Z,130nm,1.2s
CN2 Changchun 55.87 59 *e*P **P** **04 56 10.6 -0.2**
CN2 *es*P sP 04 56 21.5 0.0
CN2 *e*PP **PP** **04 58 16.5 +1.3**
CN2 *e*S **S** **05 03 54.5 -2.1**
CN2 *es*S pS 05 04 07.2 +1.3
CN2 *e*SS **SS** **05 07 39.9 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 LR LR
comp=Z,560nm,16.0s
CN2 LR LR
comp=Z,2μm,16.0s
CN2 LR LR
comp=Z,1μm,18.0s
UPNV Upernavik 56.29 340 ⇑*i*P **P** **04 56 14.0 +0.8**
UPNV IAmb IAmb 04 56 15.1
comp=Z,46nm,1.0s
BNX BinXian 56.32 56 ⇑P **P** **04 56 14.2 +0.2**
BNX pP **pP** **04 56 19.3 -2.4**
BNX sP **sP** **04 56 24.3 -0.4**
BNX S **S** **05 04 00.2 -2.4**
BNX pmax pmax
comp=Z,13nm,1.0s
BNX pmax pmax
comp=Z,130nm,4.5s
BNX LR LR
comp=Z,900nm,15.0s
BNX LR LR
comp=Z,1μm,16.6s
BNX LR LR
comp=Z,2μm,16.5s
ILULI Ilulissat 56.33 335 ⇑*i*P **P** **04 56 13.9 +0.3**
ILULI IAmb IAmb 04 56 14.9
comp=Z,66nm,0.9s
PAGU Agualva, Azore 56.39 295 *e*P **P** **04 56 15.9 +1.4**
comp=Z,86nm,0.9s
NJ2 Nanjing 56.58 74 *e*P **P** **04 56 12.7 -3.3**
PMAN Manadas 57.08 295 *e*P **P** **04 56 20.5 +1.1**
comp=Z,155nm,1.3s
SFJD Kangerlussuaq 57.09 332 P **P** **04 56 19.0 0.0**
comp=Z,43nm,0.8s,baz=62,slow=7.6,SNR=14
SFJD LR LR 05 21 18.2
comp=Z,643nm,20.3s,baz=60,slow=36
comp=Z,43nm,0.8s
SFJD Kangerlussuaq 57.09 332 P **P** **04 56 19.1 0.0**
SFJD Kangerlussuaq 57.09 332 P **P** **04 56 19.1 0.0**
SFJD pmax pmax
comp=Z,57nm,0.9s
SFJD Kangerlussuaq 57.09 332 ⇑*i*P **P** **04 56 19.2 +0.2**
SFJD IAmb IAmb 04 56 20.1
comp=Z,56nm,0.9s
ROSA Rosais 57.15 295 *e*P **P** **04 56 20.5 +0.6**
comp=Z,110nm,1.2s
ROSA Rosais 57.15 295 P **P** **04 56 20.3 +0.4**
PID Ribeirinha 57.19 295 *e*P **P** **04 56 22.4 +2.1**
comp=Z,58nm,1.1s
PPNO Prainha do Nor 57.27 295 *e*P **P** **04 56 22.9 +2.0**
comp=Z,107nm,1.1s
PICO Pico 57.37 295 *e*P **P** **04 56 22.4 +0.8**
comp=Z,81nm,1.4s
PCAN Candelaria 57.43 295 *e*P **P** **04 56 23.2 +1.2**
comp=Z,91nm,1.1s
NRS Narsarsuaq 57.47 325 P **P** **04 56 22.2 +0.4**
NRS pmax pmax
comp=Z,98nm,1.1s
NRS Narsarsuaq 57.47 325 *e*P **P** **04 56 22.2 +0.4**
NRS IAmb IAmb 04 56 23.3
comp=Z,86nm,1.0s
HOR Horta 57.50 295 *e*P **P** **04 56 23.7 +1.3**
comp=Z,107nm,0.9s
PCED Cedros 57.51 295 *e*P **P** **04 56 23.4 +0.9**
comp=Z,70nm,0.9s
KLR Kul'dur 57.53 51 P **P** **04 56 23.0 +0.6**
comp=Z,13nm,1.0s,baz=290,slow=7.4,SNR=16
KLR LR LR 05 21 16.5
comp=Z,167nm,21.2s,baz=346,slow=36
comp=Z,13nm,1.0s
CALA Caldeira 57.53 295 *e*P **P** **04 56 23.7 +1.0**
comp=Z,160nm,0.9s
DBIC Dimbokro 57.59 249 P **P** **04 56 22.5 -0.8**
comp=Z,8.5nm,0.4s,baz=51,slow=6.8,SNR=40
comp=Z,8.5nm,0.4s
DBIC Dimbokro 57.59 249 P **P** **04 56 22.4 -0.8**
DBIC IAmb IAmb 04 56 23.7
comp=Z,28nm,1.0s
DBIC Dimbokro 57.59 249 *e*P **P** **04 56 21.7 -1.6**
KIC Kosan Boka 57.72 249 ⇑*i*P **P** **04 56 23.5 -0.7**
comp=Z,17nm,0.4s
TIC Tumodi 57.72 250 ⇑*i*P **P** **04 56 23.4 -0.9**
comp=Z,71nm,1.1s
LSZ Lusaka 57.92 203 LR LR 05 23 08.8
comp=Z,294nm,18.5s,baz=30,slow=38
LSZ Lusaka 57.92 203 P **P** **04 56 26.0 +0.4**
LSZ Lusaka 57.92 203 P **P** **04 56 26.0 +0.4**
LSZ pmax pmax
comp=Z,13nm,1.2s
LIC Lamto 58.02 249 ⇑*i*P **P** **04 56 25.5 -0.8**
comp=Z,68nm,0.5s
OPO Ambohidratompo 58.22 181 LR LR 05 22 46.6
comp=Z,497nm,19.7s,baz=177,slow=37
IVI Ivigtut 58.65 326 *e*P **P** **04 56 31.1 +1.0**
IVI IAmb IAmb 04 56 31.5
comp=Z,75nm,1.2s
ABPO Ambohimpanom 58.66 181 P **P** **04 56 30.1 -0.7**
ABPO Ambohimpanom 58.66 181 P **P** **04 56 30.1 -0.7**
ABPO pmax pmax
comp=Z,16nm,1.1s
PSI Prapat 59.07 115 P **P** **04 56 33.3 -0.5**
PSI pmax pmax
comp=Z,174nm,0.8s
RPSI Rantau Prapat 59.15 115 IAmb IAmb 04 56 47.1
comp=Z,20nm,1.0s
IPM Ipoh 59.37 112 P **P** **04 56 34.3 -1.4**
IPM IAmb IAmb 04 56 36.4
comp=Z,37nm,1.3s
GRNR Gornyy 59.56 47 ⇑*i*P **P** **04 56 37.6 +1.0**
GRNR *e*S **S** **05 04 50.8 +5.9**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR smax smax
comp=N,2.0nm,0.6s
GRNR MLR MLR
comp=N,490nm,16.0s
USRK Ussuriysk Ar. 59.92 56 P **P** **04 56 39.0 -0.1**
comp=N,7.4nm,0.8s,baz=276,slow=7.1,SNR=17
USRK LR LR 05 26 01.8
comp=N,538nm,18.1s,baz=46,slow=40
comp=N,7.4nm,0.8s
USRK Ussuriysk Ar. 59.92 56 P **P** **04 56 38.7 -0.4**
SEHB SEOHWA 60.28 63 IAmb IAmb 04 56 53.4
comp=Z,35nm,1.1s
KS19 Wonju Array Si 60.39 64 P **P** **04 56 42.5 0.0**
KS19 IAmb IAmb 04 56 54.1
comp=Z,24nm,0.8s
KSAR Wonju Array Be 60.43 64 P **P** **04 56 43.0 +0.2**
KSAR pP **pP** **04 56 51.4 +0.8**
KSAR Wonju Array Be 60.43 64 P **P** **04 56 43.0 +0.2**
KSRS Korea Array 60.45 64 P **P** **04 56 43.1 +0.3**
comp=Z,16nm,1.0s,baz=289,slow=6.1,SNR=22
KSRS PcP **PcP** **04 57 28.2 +0.7**
comp=Z,5.9nm,0.9s,baz=294,slow=5.0,SNR=1.5
KSRS LR LR 05 26 31.5
comp=Z,469nm,18.1s,baz=290,slow=40
comp=Z,16nm,1.0s
KSCHJ Chungju 60.77 65 P **P** **04 56 44.7 -0.4**
NAWB Namwon 61.09 67 IAmb IAmb 04 56 57.8
comp=Z,36nm,1.0s
BKNI Bangkinang 62.31 115 P **P** **04 56 54.6 -1.1**
MA2 Magadan 62.40 34 LR LR 05 27 44.0
comp=Z,411nm,18.1s,baz=299,slow=40
MA2 Magadan 62.40 34 P **P** **04 56 56.4 +0.7**
MA2 Magadan 62.40 34*c* *i*P **P** **04 56 56.9 +1.2**
MA2 pmax pmax
comp=Z,83nm,1.1s
BLWY Bulawayo 62.43 200 *e*P **P** **04 56 55.0 -1.5**
BLWY IAmb IAmb 04 57 06.4
comp=Z,68nm,1.2s
BILL Bilibino 62.93 22 P **P** **04 56 59.9 +0.8**
BILL Bilibino 62.93 22*d* *i*P **P** **04 57 00.1 +1.0**
BILL *e* 04 57 37.7
BILL *e* 04 59 17.4
BILL *e*PPP PPP 05 00 45.2
BILL pmax pmax
comp=Z,40nm,1.2s
TYV Tymovskoe 62.98 45 *e*P **P** **04 57 01.2 +1.5**
TYV *e*S **S** **05 05 31.5 +3.3**
TYV pmax pmax
comp=Z,28nm,1.6s
TYV smax smax
comp=N,200nm,7.7s
TYV smax smax
comp=E,300nm,7.7s
MUSN Musina, Limpop 64.16 199 ⇑*i*P **P** **04 57 07.8 0.0**
MUSN IAmb IAmb 04 57 08.8
comp=Z,19nm,1.1s
JNU Nakatsue 64.75 67 P **P** **04 57 12.2 +0.5**
comp=Z,9.2nm,0.9s,baz=172,slow=10,SNR=8.2
comp=Z,9.2nm,0.9s
MOPA Mopani 64.98 197 ⇑*i*P **P** **04 57 12.6 -0.5**
MOPA IAmb IAmb 04 57 23.3
comp=Z,14nm,0.8s
YSS Yuzh-Sakhalins 65.08 49*ce*P **P** **04 57 14.5 +0.9**
YSS *e* 04 57 43.0
YSS *e*S **S** **05 05 55.1 +0.7**
YSS *e*PS **PnS** **05 06 07.9 -6.6**
YSS *e*PPS PPS 05 06 17.6
YSS *e*SSS SSS 05 12 57.6
YSS pmax pmax
comp=Z,200nm,2.5s
YSS pmax pmax
comp=N,100nm,2.6s
YSS pmax pmax
comp=E,100nm,2.5s
YSS pmax pmax
comp=Z,30nm,1.4s
YSS MLR MLR
comp=Z,800nm,15.0s
YSS MLR MLR
comp=N,200nm,13.0s
YSS MLR MLR
comp=E,700nm,16.0s
FRB Frobisher Bay 65.13 334 LR LR 05 26 19.8
comp=E,363nm,18.5s,baz=20,slow=37
FRB Frobisher Bay 65.13 334 P **P** **04 57 14.6 +1.0**
FRB pmax pmax
comp=Z,75nm,0.8s
TSUM Tsumeb 65.28 212 *e*P **P** **04 57 15.2 -0.1**
TSUM IAmb IAmb 04 57 29.0
comp=Z,27nm,1.9s
JHS Saijyo 65.31 64 IAmb IAmb 04 57 25.9
comp=Z,28nm,1.4s
JOW Kunigami 66.30 74 P **P** **04 57 21.8 0.0**
comp=Z,4.5nm,0.7s,baz=288,slow=16,SNR=2.1
JOW LR LR 05 30 22.7
comp=Z,214nm,18.9s,baz=341,slow=40
comp=Z,4.5nm,0.7s
CRLN Carolina, Mapu 67.68 197 *e*P **P** **04 57 31.4 +0.8**
SLR Silverton 67.85 199 *e*P **P** **04 57 32.2 +0.6**
LBTB Lobatse 67.89 202 LR LR 05 27 44.0
comp=Z,318nm,19.4s,baz=28,slow=36
LBTB Lobatse 67.89 202 P **P** **04 57 31.9 +0.1**
LBTB IAmb IAmb 04 57 32.7
comp=Z,31nm,1.4s
LBTB Lobatse 67.89 202 P **P** **04 57 31.9 +0.1**
LBTB pmax pmax
comp=Z,31nm,1.4s
LBTB Lobatse 67.89 202 *e*P **P** **04 57 31.6 -0.1**
LBTB IAmb IAmb 04 57 32.4
comp=Z,36nm,1.4s
MAJO Matsushiro 67.93 60 P **P** **04 57 31.0 -1.0**
MAJO IAmb IAmb 04 57 43.6
comp=Z,39nm,1.6s
MAJO Matsushiro 67.93 60 P **P** **04 57 31.0 -1.0**
MAJO pmax pmax
comp=Z,39nm,1.6s
MJAR Matsushiro Arr 67.93 60 P **P** **04 57 32.2 +0.2**
comp=Z,4.8nm,1.0s,baz=311,slow=4.7,SNR=12
MJAR LR LR 05 30 11.5
comp=Z,1μm,18.2s,baz=312,slow=39
comp=Z,4.8nm,1.0s
HRAO HartRAO 68.15 200 *e*P **P** **04 57 32.0 -1.5**
A36M Sachs Harbour 68.26 358 P **P** **04 57 33.9 +0.5**
baz=5.6
KASI Kota Agung 68.90 117 P **P** **04 57 38.2 0.0**
PEA0B Petropavlovsk- 69.32 37 IAmb IAmb 04 57 40.9
comp=Z,41nm,1.2s
PETK Petropavlovsk- 69.32 37 P **P** **04 57 39.2 -1.2**
comp=Z,13nm,1.1s,baz=28,slow=3.5,SNR=16
PETK PP **PP** **05 00 09.4 -3.7**
comp=Z,2.5nm,1.0s,baz=314,slow=5.4,SNR=2.3
PETK LR LR 05 31 57.9
comp=Z,197nm,18.2s,baz=308,slow=39
comp=Z,13nm,1.1s
PETK Petropavlovsk- 69.32 37 P **P** **04 57 38.9 -1.5**
PETK pP **pP** **04 57 48.8 +0.5**
DRLN Deer Lake 69.55 318 P **P** **04 57 41.7 -0.1**
DRLN IAmb IAmb 04 57 53.4
comp=Z,31nm,0.9s
C23K Itkillik River 69.69 7 P **P** **04 57 43.7 +1.3**
baz=345,SNR=5.9
C24K Franklin Bluff 69.97 6 P **P** **04 57 45.4 +1.3**
baz=346
SCHQ Schefferville 70.39 326 P **P** **04 57 47.2 +0.2**
comp=Z,33nm,1.2s,baz=59,slow=6.2,SNR=12
SCHQ LR LR 05 29 03.5
comp=Z,281nm,19.6s,baz=40,slow=36
comp=Z,33nm,1.2s
C27K Jago River 70.41 4 P **P** **04 57 48.0 +1.2**
baz=350
D24K Happy Valley 70.51 6 P **P** **04 57 48.6 +1.2**
baz=346
D23K Nanushuk River 70.53 7 P **P** **04 57 48.7 +1.2**
baz=345,SNR=8.1
D25K Kavik River 70.54 5 P **P** **04 57 48.8 +1.2**
baz=348
C36M Paulatuk 70.86 357 P **P** **04 57 49.4 -0.1**
baz=6.5
TOLK Toolik Lake Re 70.95 7 P **P** **04 57 51.1 +0.9**
baz=346,SNR=14
TNA Tin City 71.20 15 P **P** **04 57 52.3 +0.6**
baz=332
E22K Anaktuvuk Pass 71.22 8 P **P** **04 57 52.3 +0.5**
baz=344
BOSA Boshof 71.39 201 P **P** **04 57 52.8 -0.5**
comp=Z,6.2nm,1.0s,baz=12,slow=4.9,SNR=9.9
BOSA LR LR 05 30 59.5
comp=Z,522nm,19.4s,baz=29,slow=37
comp=Z,6.2nm,1.0s
BOSA Boshof 71.39 201 *e*P **P** **04 57 52.4 -0.9**
E24K Your Creek 71.59 6 P **P** **04 57 55.0 +0.9**
baz=347
E25K Arctic Village 71.78 5 P **P** **04 57 55.8 +0.7**
baz=349,SNR=8.4
F22K John River 71.79 8 P **P** **04 57 56.3 +1.1**
baz=344
F21K Alatna River 71.92 9 P **P** **04 57 56.9 +0.8**
baz=343,SNR=16
E27K Coleen River 71.95 4 P **P** **04 57 57.2 +1.0**
baz=352,SNR=15
GAMB Gambell 71.95 17 P **P** **04 57 56.5 +0.3**
baz=329
INK Inuvik 72.06 1 P **P** **04 57 56.7 -0.1**
comp=Z,5.6nm,1.0s,baz=313,slow=6.8,SNR=6.1
INK LR LR 05 35 11.1
comp=Z,247nm,19.4s,baz=353,slow=40
comp=Z,5.6nm,1.0s
INK Inuvik 72.06 1 P **P** **04 57 56.7 -0.1**
baz=359,SNR=5.4
F24K Squaw Lake 72.19 6 P **P** **04 57 58.9 +1.2**
baz=347,SNR=9.9
COLD Coldfoot 72.27 7 IAmb IAmb 04 58 10.3
comp=Z,23nm,1.0s
COLD Coldfoot 72.27 7 P **P** **04 57 58.9 +0.9**
baz=345,SNR=9.4
F25K Christian Rive 72.29 5 P **P** **04 57 59.4 +1.1**
baz=349,SNR=15
F26K Sheenjek River 72.30 5 P **P** **04 57 59.5 +1.2**
baz=350,SNR=14
G22K Bettles 72.43 8 P **P** **04 57 59.5 +0.5**
baz=344
BMAR Burnt Mountain 72.53 5 P **P** **04 58 00.5 +0.8**
ANM Nome 72.59 14 P **P** **04 58 00.8 +0.8**
baz=334
G21K Allakaket 72.60 9 P **P** **04 58 00.6 +0.5**
baz=343,SNR=17
KEIM Keimoes 72.75 205 *e*P **P** **04 58 02.3 +0.9**
KEIM IAmb IAmb 04 58 13.2
comp=Z,195nm,2.6s
G23K Bananza Creek 72.78 7 P **P** **04 58 02.2 +1.0**
baz=346,SNR=5.8
G24K Hadweenzic Riv 73.03 6 P **P** **04 58 04.0 +1.4**
baz=348,SNR=20
G26K Porcupine Rive 73.06 5 P **P** **04 58 04.2 +1.5**
baz=351,SNR=22
G25K Bearman Lake 73.08 6 P **P** **04 58 04.0 +1.2**
baz=349
IMAR Indian Mountai 73.08 9 P **P** **04 58 03.4 +0.5**
IMAR pP **sP** **04 58 12.4 -1.4**
G27K Doyon Strip 73.32 4 P **P** **04 58 05.8 +1.4**
baz=352,SNR=20
H22K Ishtalitna Cre 73.44 8 P **P** **04 58 06.5 +1.4**
baz=345,SNR=22
H21K Melozitna Rive 73.50 9 IAmb IAmb 04 58 17.9
comp=Z,32nm,1.0s
H21K Melozitna Rive 73.50 9 P **P** **04 58 06.8 +1.3**
baz=344,SNR=29
H25K Birch Creek 73.59 6 P **P** **04 58 07.4 +1.5**
baz=349
H23K Yukon River 73.69 7 IAmb IAmb 04 58 19.5
comp=Z,30nm,1.0s
H23K Yukon River 73.69 7 P **P** **04 58 08.2 +1.6**
baz=346,SNR=23
H24K Noodor Dome 73.84 7 P **P** **04 58 08.7 +1.2**
baz=347,SNR=12
GCSA Galena City Sc 73.84 11 P **P** **04 58 08.1 +0.7**
baz=340,SNR=6.1
H27K Steamboat Moun 73.90 4 P **P** **04 58 08.8 +1.0**
baz=352
I21K Tanana 74.06 9 IAmb IAmb 04 58 21.3
comp=Z,30nm,1.0s
I21K Tanana 74.06 9 P **P** **04 58 09.8 +1.1**
baz=344,SNR=16
GBN Guysborough 74.10 316 P **P** **04 58 10.0 +0.8**
MLY Manley 74.34 8 IAmb IAmb 04 58 22.8
comp=Z,32nm,1.1s
MLY Manley 74.34 8 P **P** **04 58 11.6 +1.2**
baz=345,SNR=28
PRP Porcupine Dome 74.35 6 P **P** **04 58 11.3 +0.8**
baz=349
I23K Minto, Yukon-K 74.37 7 IAmb IAmb 04 58 13.1
comp=Z,39nm,1.4s
I23K Minto, Yukon-K 74.37 7 P **P** **04 58 11.4 +0.9**
baz=346,SNR=7.6
I27K Kandik River 74.52 4 P **P** **04 58 12.1 +0.6**
baz=352

POKR	Poker Plat Res	74.59	7	IAmb	IAmb	04 58 24.4	
	comp=Z,37nm,1.1s						
POKR	Poker Plat Res	74.59	7	P	P	04 58 13.0	+1.2
	baz=348						
MDM	Murphy Dome	74.67	7	IAmb	IAmb	04 59 06.3	
	comp=Z,18nm,0.7s						
I26K	Coal Creek Min	74.73	5	IAmb	IAmb	04 58 24.6	
	comp=Z,23nm,1.1s						
I26K	Coal Creek Min	74.73	5	P	P	04 58 13.3	+0.7
	baz=351						
J20K	Nowinta River	74.76	10	IAmb	IAmb	04 58 25.1	
	comp=Z,28nm,1.0s						
J20K	Nowinta River	74.76	10	P	P	04 58 13.9	+1.1
	baz=343,SNR=13						
TCOL	CIGO, UAF Yank	74.79	7	P	P	04 58 13.0	+0.2
	baz=348						
COLA	College	74.79	7	P	P	04 58 13.5	+0.6
COLA	College	74.79	7	P	P	04 58 13.5	+0.6
COLA				pmax	pmax		
	comp=Z,168nm,0.2s						
COLA	College	74.79	7	P	P	04 58 13.3	+0.4
	baz=348						
I29M	Ogilvie Camp,	74.92	3	P	P	04 58 13.9	+0.2
	baz=355,SNR=6.9						
NEA2	Nenana	74.94	7	IAmb	IAmb	04 58 25.6	
	comp=Z,28nm,1.1s						
NEA2	Nenana	74.94	7	P	P	04 58 14.5	+0.7
	baz=346,SNR=12						
ILAR	Eielson Array	74.97	6	P	P	04 58 14.1	+0.1
	comp=Z,3.1nm,0.9s,baz=336,slow=4.4,SNR=22						
ILAR				PP	PP	05 01 00.5	-0.7
	comp=Z,2.5nm,0.9s,baz=346,slow=6.7,SNR=4.9						
ILAR				LR	LR	05 34 46.9	
	comp=Z,204nm,19.2s,baz=332,slow=39						
	comp=Z,3.1nm,0.9s						
ILAR	Eielson Array	74.97	6	P	P	04 58 13.8	-0.2
ILAR				pP	sP	04 58 23.6	-1.4
BATG	Bathurst New B	75.18	320	P	P	04 58 16.2	+0.8
BPAW	Bear Paw Mtn.	75.22	8	IAmb	IAmb	04 58 28.2	
	comp=Z,27nm,1.2s						
BPAW	Bear Paw Mtn.	75.22	8	P	P	04 58 15.9	+0.4
	baz=345,SNR=14						
J25K	Salcha River,	75.26	6	P	P	04 58 16.1	+0.4
	baz=349,SNR=9.0						
CHUM	Lake Minchumin	75.28	9	P	P	04 58 16.4	+0.7
	baz=344						
HDA	Harding Lake	75.33	7	IAmb	IAmb	04 58 27.2	
	comp=Z,19nm,0.9s						
HDA	Harding Lake	75.33	7	P	P	04 58 16.0	0.0
	baz=348,SNR=9.4						
J26L	Joseph Creek	75.50	5	P	P	04 58 17.5	+0.4
	baz=351,SNR=5.5						
LMN	Caledonia Moun	75.52	318	P	P	04 58 17.8	+0.3
K20K	Telida	75.56	10	IAmb	IAmb	04 58 29.7	
	comp=Z,29nm,1.1s						
K20K	Telida	75.56	10	P	P	04 58 18.4	+1.0
	baz=343,SNR=22						
TTA	Tatalina	75.69	11	IAmb	IAmb	04 58 20.5	
	comp=Z,51nm,1.6s						
TTA	Tatalina	75.69	11	P	P	04 58 19.1	+0.9
	baz=341						
CAST	Castle Rocks	75.75	9	P	P	04 58 19.3	+0.8
	baz=344,SNR=54						
KTH	Kantishna Hill	75.76	9	IAmb	IAmb	04 58 31.2	
	comp=Z,28nm,1.0s						
MCK	McKinley	75.80	8	IAmb	IAmb	04 58 30.9	
	comp=Z,22nm,1.0s						
MCK	McKinley	75.80	8	P	P	04 58 18.9	+0.1
	baz=347,SNR=7.4						
J29M	Klondike Camp	75.83	3	P	P	04 58 19.6	+0.7
	baz=355						
TRF	Thorofare Moun	75.93	8	P	P	04 58 19.4	-0.3
	baz=346,SNR=7.7						
SCRK	Sand Creek	75.99	5	IAmb	IAmb	04 58 32.2	
	comp=Z,23nm,1.1s						
SCRK	Sand Creek	75.99	5	P	P	04 58 20.5	+0.6
	baz=351,SNR=19						
K24K	Donnelly Dome	76.02	6	P	P	04 58 20.6	+0.6
	baz=349,SNR=8.8						
K27K	Chicken	76.06	5	IAmb	IAmb	04 58 32.4	
	comp=Z,23nm,1.1s						
K27K	Chicken	76.06	5	P	P	04 58 21.0	+0.7
	baz=352						
RND	Reindeer	76.13	8	IAmb	IAmb	04 58 31.6	
	comp=Z,29nm,0.9s						
RIDG	Independent Ri	76.16	6	IAmb	IAmb	04 58 32.8	
	comp=Z,33nm,1.2s						
RIDG	Independent Ri	76.16	6	P	P	04 58 21.4	+0.6
	baz=350,SNR=13						
DAWY	Dawson	76.17	3	IAmb	IAmb	04 58 32.6	
	comp=Z,26nm,1.1s						
DAWY	Dawson	76.17	3	P	P	04 58 21.4	+0.4
	baz=354,SNR=18						
JCJ	Chichijima	76.20	66	LR	LR	05 35 03.7	
	comp=Z,156nm,19.6s,baz=339,slow=38						
SUR	Sutherland	76.21	203	LR	LR	05 33 35.7	
	comp=Z,421nm,19.7s,baz=26,slow=37						
PPLA	Purkeypile	76.24	9	P	P	04 58 21.8	+0.4
	baz=344,SNR=9.7						
L20K	Farewell, AK	76.42	10	P	P	04 58 23.4	+1.0
	baz=343,SNR=19						
PQI	Presque Isle	76.56	320	P	P	04 58 24.3	+0.9
L19K	White Mountain	76.57	11	IAmb	IAmb	04 58 35.5	
	comp=Z,26nm,1.1s						
L19K	White Mountain	76.57	11	P	P	04 58 24.2	+1.0
	baz=342,SNR=9.2						
DHY	Denali Highway	76.60	7	P	P	04 58 23.2	-0.3
	baz=348,SNR=8.0						
FCC	Fort Churchill	76.69	341	P	P	04 58 24.0	+0.2
FCC				IAmb	IAmb	04 58 36.2	
	comp=Z,16nm,0.8s						
FCC	Fort Churchill	76.69	341	P	P	04 58 24.0	+0.2
FCC				pmax	pmax		
	comp=Z,16nm,0.9s						
WAT1	Susitna Watana	76.72	8	P	P	04 58 23.9	-0.2
	baz=347						
PAX	Paxson	76.87	6	P	P	04 58 25.7	+0.7
	baz=349,SNR=6.7						
M19K	Big River Lodg	76.91	11	IAmb	IAmb	04 58 27.7	
	comp=Z,36nm,1.4s						
M19K	Big River Lodg	76.91	11	P	P	04 58 26.6	+1.5
	baz=343,SNR=7.8						
E63A	Oxbow	76.93	320	P	P	04 58 26.3	+0.8
	baz=45,SNR=7.9						
E63A				P	P	04 58 26.3	+0.8
	baz=45,SNR=7.9						
YKA	Yellowknife Ar	76.94	352	P	P	04 58 25.1	-0.1
	comp=Z,5.7nm,0.8s,baz=8.8,slow=6.7,SNR=34						
YKA				LR	LR	05 35 45.2	
	comp=Z,181nm,18.7s,baz=2.0,slow=38						
	comp=Z,5.7nm,0.8s						
CUT	Chulitna	76.95	9	P	P	04 58 24.9	-0.4
CUT	Chulitna	76.95	9	P	P	04 58 25.6	+0.4
	baz=346						
L26K	Log Cabin Wild	76.98	5	IAmb	IAmb	04 58 37.9	
	comp=Z,85nm,2.0s						
L26K	Log Cabin Wild	76.98	5	P	P	04 58 26.6	+1.1
	baz=351,SNR=8.6						
MENT	Mentasta	77.04	5	IAmb	IAmb	04 58 40.0	
	comp=Z,31nm,1.3s						
BCAR	Beaver Creek A	77.04	5	P	P	04 58 26.8	+0.9
L27K	Beaver Creek,	77.04	5	IAmb	IAmb	04 58 38.2	
	comp=Z,19nm,1.1s						
L27K	Beaver Creek,	77.04	5	P	P	04 58 27.5	+1.7
	baz=352,SNR=20						
WAT6	Susitna Watana	77.05	7	P	P	04 58 26.6	+0.6
	baz=348,SNR=11						
GGN	Saint George	77.06	319	IAmb	IAmb	04 58 38.4	
	comp=Z,37nm,1.1s						
M20K	Styx River	77.10	10	P	P	04 58 27.5	+1.2
	baz=344						
F64A	Sherman	77.29	320	P	P	04 58 28.3	+0.8
	baz=45,SNR=10.0						
F64A				P	P	04 58 28.3	+0.8
	baz=45,SNR=10.0						
E62A	Clayton Lake	77.33	321	P	P	04 58 28.5	+0.8
	baz=44,SNR=15						
E62A				P	P	04 58 28.5	+0.8
	baz=44,SNR=15						
G65A	Princeton	77.37	319	P	P	04 58 28.8	+0.9
G65A				IAmb	IAmb	04 58 40.3	
	comp=Z,29nm,0.9s						
G65A	Princeton	77.37	319	P	P	04 58 28.8	+0.9
	baz=45,SNR=5.9						
G65A				P	P	04 58 28.8	+0.9
	baz=45,SNR=5.9						
HARP	HAARP	77.46	6	P	P	04 58 29.9	+1.7
	baz=350						
SVW2	Sparrevohn	77.50	11	IAmb	IAmb	04 58 40.8	
	comp=Z,25nm,1.2s						
N16K	Nishlik Lake	77.57	13	P	P	04 58 31.1	+2.3
	baz=339,SNR=6.0						
M22K	Willow	77.60	9	IAmb	IAmb	04 58 58.6	
	comp=Z,43nm,1.1s						
M22K	Willow	77.60	9	P	P	04 58 29.9	+1.0
	baz=346,SNR=7.4						
M26K	Nabesna, AK	77.62	5	P	P	04 58 30.2	+1.1
	baz=351,SNR=12						
M24K	Tolsona, Glenn	77.66	7	P	P	04 58 31.2	+1.9
	baz=349,SNR=8.0						
EMMW	East Machias	77.66	319	IAmb	IAmb	04 58 41.8	
	comp=Z,36nm,1.0s						
GHO	Glory Hole Cre	77.72	8	IAmb	IAmb	04 58 41.6	
	comp=Z,37nm,1.2s						
M27K	Edge Creek, AK	77.74	5	IAmb	IAmb	04 58 42.6	
	comp=Z,26nm,1.1s						
M27K	Edge Creek, AK	77.74	5	P	P	04 58 31.1	+1.2
	baz=352,SNR=18						
BVCY	Beaver Creek	77.74	4	P	P	04 58 30.2	+0.5
	baz=353						
SML	Sawmill	77.75	8	P	P	04 58 30.6	+0.7
	baz=347,SNR=9.9						
M30M	Minto, Yukon	77.75	2	P	P	04 58 30.4	+0.6
	baz=356,SNR=6.1						
F63A	Nahmakanta, Br	77.78	320	IAmb	IAmb	04 58 42.8	
	comp=Z,17nm,0.9s						
F63A	Nahmakanta, Br	77.78	320	P	P	04 58 30.9	+0.7
	baz=44						
F63A				P	P	04 58 30.9	+0.7
	baz=44						
M23K	Glacier View	77.82	8	P	P	04 58 30.8	+0.5
	baz=348						
SCM	Sheep Creek Mo	77.82	7	IAmb	IAmb	04 58 42.3	
	comp=Z,34nm,1.0s						
SCM	Sheep Creek Mo	77.82	7	P	P	04 58 32.0	+1.7
	baz=348,SNR=12						
M29M	Somme Creek	77.83	3	P	P	04 58 31.0	+0.7
	baz=355						
N18K	Kilae Creek	77.85	12	IAmb	IAmb	04 58 32.9	
	comp=Z,36nm,1.3s						
N18K	Kilae Creek	77.85	12	P	P	04 58 31.6	+1.2
	baz=342,SNR=7.0						
PMR	Palmer	77.87	8	IAmb	IAmb	04 58 32.1	
	comp=Z,35nm,1.2s						
PMR	Palmer	77.87	8	P	P	04 58 31.2	+0.8
	baz=347,SNR=12						
N19K	Bonanza Creek	77.94	11	P	P	04 58 32.1	+1.1
	baz=343,SNR=10						
SPIA	Saint Paul Isl	78.05	20	P	P	04 58 31.6	+0.2
	baz=331						
KNK	Knik Glacier	78.12	8	P	P	04 58 32.3	+0.5
KNK	Knik Glacier	78.12	8	P	P	04 58 32.4	+0.5
	baz=347,SNR=9.1						
M31M	Drury Creek, Y	78.18	1	P	P	04 58 32.7	+0.5
	baz=358,SNR=5.8						
PKME	Peaks-Kenny Pk	78.19	320	P	P	04 58 33.8	+1.3
	baz=44,SNR=7.2						
PKME	Peaks-Kenny Pk	78.19	320	P	P	04 58 33.8	+1.3
	baz=44						
KLU	Klutina	78.29	7	IAmb	IAmb	04 58 45.3	
	comp=Z,45nm,1.1s						
KLU	Klutina	78.29	7	P	P	04 58 33.7	+0.8
	baz=349,SNR=18						
N25K	Chitina, Valde	78.29	6	P	P	04 58 33.2	+0.3
	baz=350,SNR=5.1						
RC01	Rabbit Creek A	78.29	9	P	P	04 58 33.0	+0.2
	baz=346						
LATQ	La Tuque	78.31	323	IAmb	IAmb	04 58 45.6	
	comp=Z,31nm,1.0s						
YUK3	Moose Creek	78.40	4	P	P	04 58 34.6	+0.9
	baz=353,SNR=24						
CAPN	Captain Cook N	78.43	9	P	P	04 58 34.3	+0.8
	baz=345						
O16K	Kokwok River B	78.51	13	P	P	04 58 34.9	+0.9
	baz=340						
O17K	Koliganek Bris	78.52	13	P	P	04 58 35.0	+1.0
	baz=341						
O19K	Port Alsworth	78.55	11	IAmb	IAmb	04 59 11.6	
	comp=Z,14nm,0.8s						
O19K	Port Alsworth	78.55	11	P	P	04 58 34.3	+0.1
	baz=343						
ELIM	Elim	78.60	203	*e*P	P	04 58 49.5	+15
ELIM				IAmb	IAmb	04 58 53.4	
	comp=Z,104nm,1.6s						
MCARA	McCarthy VSAT	78.63	5	P	P	04 58 35.4	+0.7
	baz=351						
DIV	Divide	78.66	7	IAmb	IAmb	04 58 47.0	
	comp=Z,46nm,1.2s						
PWL	Port Wells	78.67	8	IAmb	IAmb	04 58 46.7	
	comp=Z,25nm,1.0s						
PWL	Port Wells	78.67	8	P	P	04 58 35.4	+0.5
	baz=347,SNR=11						
O18K	Koktuh Hills	78.74	12	IAmb	IAmb	04 58 37.7	
	comp=Z,66nm,1.6s						
O18K	Koktuh Hills	78.74	12	P	P	04 58 36.3	+1.0
	baz=342						
VRDI	Verde Repeater	78.75	6	P	P	04 58 35.0	-0.5
GLI	Glacier Island	78.78	7	P	P	04 58 35.9	+0.4
	baz=348						
G62A	West of Eustis	78.83	321	IAmb	IAmb	04 58 48.8	
	comp=Z,36nm,0.9s						
G62A	West of Eustis	78.83	321	P	P	04 58 37.0	+0.9
	baz=43,SNR=6.8						
G62A				P	P	04 58 37.0	+0.9
	baz=43,SNR=6.8						
N30M	Aishikik Lake	78.86	2	P	P	04 58 36.6	+0.6
	baz=356,SNR=6.1						
WVL	Waterville	78.87	320	IAmb	IAmb	04 58 48.5	
	comp=Z,24nm,0.9s						
WVL	Waterville	78.87	320	P	P	04 58 37.5	+1.3
	baz=44,SNR=5.4						
N31M	Braeburn, Yuko	78.87	2	P	P	04 58 36.1	0.0
	baz=357						
O22K	Cooper Landing	78.89	9	P	P	04 58 36.4	+0.4
	baz=346						
O20K	Slope Mountain	78.90	10	P	P	04 58 36.2	-0.1
	baz=344						
YUK4	Talbot Arm	78.92	3	P	P	04 58 36.8	+0.2
	baz=355,SNR=5.8						
BMRM	Bremner River	78.92	6	P	P	04 58 36.6	+0.3
	baz=350						
FID	Port Fidalgo	78.97	7	P	P	04 58 36.7	+0.1
FID				IAmb	IAmb	04 58 48.9	
	comp=Z,77nm,1.8s						
BARN	Barnard Glacie	79.04	5	IAmb	IAmb	04 58 49.3	
	comp=Z,39nm,1.6s						
P16K	Nushagak River	79.06	13	P	P	04 58 37.9	+0.9
	baz=340						
CTG	Chitna Glacier	79.16	5	P	P	04 58 38.3	+0.5
	baz=353,SNR=6.6						
P17K	Kvichak River	79.17	12	P	P	04 58 38.5	+0.9
	baz=341						
P18K	Big Mountain,	79.18	12	P	P	04 58 37.4	-0.4
	baz=342						
P19K	Oil Pt	79.23	11	P	P	04 58 37.9	-0.2
	baz=344						
EYAK	Cordova Ski Ar	79.23	7	IAmb	IAmb	04 58 40.5	
	comp=Z,46nm,1.5s						
EYAK	Cordova Ski Ar	79.23	7	P	P	04 58 39.1	+1.2
	baz=349,SNR=6.5						
CRQM	Cirque	79.24	5	IAmb	IAmb	04 58 50.8	
	comp=Z,46nm,1.2s						
CRQE	Cirque	79.25	5	P	P	04 58 38.6	+0.3
	baz=351,SNR=9.1						
N32M	Quiet Lake	79.25	0	P	P	04 58 37.9	-0.2
	baz=359						
TGL	Tana Glacier	79.27	5	IAmb	IAmb	04 59 08.1	
	comp=Z,23nm,1.0s						
SEW	Seward	79.28	9	IAmb	IAmb	04 58 50.2	
	comp=Z,38nm,1.0s						
SEW	Seward	79.28	9	P	P	04 58 38.3	+0.1
	baz=346						
LOGN	Logan Glacier	79.32	4	IAmb	IAmb	04 58 50.8	
	comp=Z,27nm,1.0s						
YUK6	Outpost Mounta	79.33	3	P	P	04 58 39.4	+0.6
	baz=355						
GRNC	Granite Creek	79.36	5	P	P	04 58 39.6	+0.7
GRNC				IAmb	IAmb	04 58 41.0	
	comp=Z,37nm,1.0s						
O28M	Mount Upton	79.42	4	P	P	04 58 39.6	+0.3
	baz=354						
BRLK	Bradley Lake	79.44	10	IAmb	IAmb	04 58 40.4	
	comp=Z,39nm,1.1s						
HOM	Homer	79.44	10	P	P	04 58 38.7	-0.4
	baz=345						
ISLE	Juniper Island	79.45	5	IAmb	IAmb	04 58 41.1	
	comp=Z,35nm,1.0s						
KAPI	Kappang	79.46	106	P	P	04 58 40.1	+0.2
KAPI				IAmb	IAmb	04 58 41.2	
	comp=Z,44nm,1.4s						
KAPI	Kappang	79.46	106	P	P	04 58 40.1	+0.2
KAPI				pmax	pmax		
	comp=Z,44nm,1.4s						
BRSE	Bradley Lake S	79.48	9	P	P	04 58 39.6	+0.2
	baz=346						
HYT	Haines Junctio	79.48	3	IAmb	IAmb	04 58 51.8	
	comp=Z,29nm,1.0s						
HYT	Haines Junctio	79.48	3	P	P	04 58 40.2	+0.7
	baz=356,SNR=20						
RAGM	Ragged Mountai	79.49	6	IAmb	IAmb	04 58 51.9	
	comp=Z,36nm,1.1s						
O30N	Mendenhall	79.58	2	P	P	04 58 39.7	-0.2
	baz=357,SNR=7.2						
H62A	Milan	79.60	321	IAmb	IAmb	04 58 52.8	
	comp=Z,31nm,0.9s						
H62A	Milan	79.60	321	P	P	04 58 41.4	+1.1
	baz=43,SNR=5.2						
H62A				P	P	04 58 41.4	+1.1
	baz=43,SNR=5.2						
P23K	Montague Islan	79.61	8	P	P	04 58 40.8	+0.7
	baz=348						
CNPM	China Poot	79.63	10	IAmb	IAmb	04 58 51.4	
	comp=Z,35nm,0.9s						
Q16K	King Salmon	79.63	13	P	P	04 58 40.4	+0.2
	baz=341						
I63A	Otisfield	79.70	320	P	P	04 58 41.4	+0.6
I63A				IAmb	IAmb	04 58 53.3	
	comp=Z,28nm,1.1s						
I63A	Otisfield	79.70	320	P	P	04 58 41.9	+1.1
	baz=43						
I63A				P	P	04 58 41.9	+1.1
	baz=43						
WHY	Whitehorse	79.72	1	P	P	04 58 40.1	-0.7
	baz=358						
VLDQ	Val d'Or	79.83	326	IAmb	IAmb	04 58 54.5	
	comp=Z,33nm,1.0s						
MESA	MESA	79.90	5	IAmb	IAmb	04 59 08.0	
	comp=Z,41nm,1.0s						
MESA	MESA	79.90	5	P	P	04 58 42.6	+0.7
	baz=352						
O29M	Mount Kennedy	79.96	3	P	P	04 58 42.8	+0.7
	baz=355						
KAIM	Kayak Island	79.97	6	P	P	04 58 43.1	+1.2
	baz=350						
TRQ	Mont Tremblant	79.98	323	IAmb	IAmb	04 58 55.8	
	comp=Z,56nm,1.6s						
PINM	Pinnacle	80.09	4	P	P	04 58 43.9	+1.2
	baz=354						
Q17K	Contact Creek	80.15	12	P	P	04 58 43.8	+0.6
	baz=342						
P33M	Teslin, Yukon	80.20	0	P	P	04 58 43.3	0.0
	baz=359,SNR=8.6						
I62A	Tamworth	80.20	320	IAmb	IAmb	04 58 56.5	
	comp=Z,34nm,1.1s						
I62A	Tamworth	80.20	320	P	P	04 58 44.4	+0.9
	baz=43						
I62A				P	P	04 58 44.4	+0.9
	baz=43						
P30M	Million Dollar	80.21	2	P	P	04 58 43.6	+0.2
	baz=356						
LBNH	Lisbon	80.22	321	IAmb	IAmb	04 58 56.6	
	comp=Z,44nm,0.9s						
LBNH	Lisbon	80.22	321	P	P	04 58 45.0	+1.4
	baz=42,SNR=6.5						
LBNH	Lisbon	80.22	321	P	P	04 58 45.0	+1.4
	baz=42						
BCPM	Bancas Point	80.26	4	P	P	04 58 44.1	+0.5
BCPM				IAmb	IAmb	05 00 06.0	
	comp=Z,26nm,0.6s						
Q23K	Middleton Isla	80.28	7	P	P	04 58 43.9	+0.3
	baz=349						
Q20K	Shuyak Island	80.36	11	P	P	04 58 44.1	0.0
	baz=344						
R16K	Pilot Point	80.52	14	P	P	04 58 44.7	-0.2
	baz=340						
UNH	University of	80.54	319	P	P	04 58 46.1	+0.8
	baz=43,SNR=6.1						
PNL	Peninsula	80.56	4	P	P	04 58 45.7	+0.5
	baz=354						
FRNY	Flat Rock	80.58	322	IAmb	IAmb	04 58 57.7	
	comp=Z,27nm,0.9s						
FRNY	Flat Rock	80.58	322	P	P	04 58 46.4	+0.8
	baz=42,SNR=6.3						
R17K	Ugashik Creek	80.66	13	P	P	04 58 46.1	+0.3
	baz=341						
HNH	Hanover	80.79	321	IAmb	IAmb	04 58 59.7	
	comp=Z,39nm,1.0s						
P32M	Atlin	80.81	1	P	P	04 58 46.4	-0.2
	baz=359						
PLBC	Pleasant Camp	80.89	2	P	P	04 58 47.4	+0.4
	baz=357,SNR=7.4						
SKAG	Skagway	80.92	2	P	P	04 58 47.4	+0.4
	baz=357						
BMNY	Brushton-Moira	81.00	323	P	P	04 58 48.6	+0.8
	baz=41						
R33M	Jennings River	81.01	359	P	P	04 58 48.6	+0.9
	baz=0.8,SNR=10						
KDAK	Kodiak Island	81.13	11	P	P	04 58 48.1	-0.1
KDAK	Kodiak Island	81.13	11	P	P	04 58 48.1	-0.1
KDAK				pmax	pmax		
	comp=Z,66nm,1.2s						
KDAK	Kodiak Island	81.13	11	P	P	04 58 48.6	+0.4
	baz=344						
LONY	Lake Ozonia	81.20	322	IAmb	IAmb	04 59 01.9	
	comp=Z,37nm,0.9s						
LONY	Lake Ozonia	81.20	322	P	P	04 58 49.6	+0.7
	baz=41						
HRV	Adam Dziewonsk	81.31	319	P	P	04 58 50.2	+0.7
	baz=42						
K62A	Royalston	81.53	320	IAmb	IAmb	04 59 03.6	
	comp=Z,34nm,1.1s						
OHAK	Old Harbor	81.56	11	IAmb	IAmb	04 59 02.6	
	comp=Z,44nm,1.4s						
OHAK	Old Harbor	81.56	11	P	P	04 58 50.9	+0.4
	baz=344						
ACCN	Adirondack Com	81.70	321	IAmb	IAmb	04 59 04.3	
	comp=Z,20nm,1.0s						
DLBC	Dease Lake	81.96	359	LR	LR	05 41 08.0	
	comp=Z,136nm,19.5s,baz=348,slow=40						
DLBC	Dease Lake	81.96	359	P	P	04 58 52.8	0.0
DLBC	Dease Lake	81.96	359	P	P	04 58 53.4	+0.7
	baz=1.6,SNR=7.7						
UNV	Unalaska Valle	81.99	20	P	P	04 58 53.7	+0.9
	baz=334						
J59A	Piesco	82.04	322	IAmb	IAmb	04 59 06.1	
	comp=Z,30nm,0.9s						
J59A	Piesco	82.04	322	P	P	04 58 53.8	+0.4
	baz=41,SNR=6.0						
J59A				P	P	04 58 53.8	+0.4
	baz=41,SNR=6.0						
J58A	Remsen	82.49	322	IAmb	IAmb	04 59 08.4	
	comp=Z,25nm,1.2s						
CHIR	Chirikof Islan	82.52	13	P	P	04 58 56.0	+0.4
	baz=342						
DELO	Deloro Mine	82.68	324	P	P	04 58 57.6	+1.0
J57A	Williamstown	82.79	322	IAmb	IAmb	04 59 09.7	
	comp=Z,35nm,1.0s						
J57A	Williamstown	82.79	322	P	P	04 58 58.4	+1.2
	baz=40,SNR=7.0						
J57A				P	P	04 58 58.4	+1.2
	baz=40,SNR=7.0						
SADO	Sadowa	83.16	325	LR	LR	05 36 26.4	
	comp=Z,207nm,19.4s,baz=26,slow=36						
SADO	Sadowa	83.16	325	IAmb	IAmb	04 59 14.0	
	comp=Z,23nm,0.9s						
L59A	Walton	83.26	321	P	P	04 59 01.0	+1.2
	baz=40,SNR=6.0						
L59A				P	P	04 59 01.0	+1.2
	baz=40,SNR=6.0						
J56A	Wolcott	83.29	323	P	P	04 59 01.4	+1.5
	baz=39						
J56A				P	P	04 59 01.4	+1.5
	baz=39						
BRNY	Black Rk. Fore	83.35	320	P	P	04 59 00.7	+0.5
	baz=41						
K57A	Scipio Center	83.55	322	P	P	04 59 02.5	+1.2
	baz=40,SNR=6.9						
PAL	Palisades	83.60	320	P	P	04 59 02.0	+0.5
	baz=41						
BINY	Binghamton	83.71	322	P	P	04 59 03.2	+1.2
	baz=40,SNR=7.7						
BINY	Binghamton	83.71	322	P	P	04 59 02.7	+0.6
	baz=40						
ODNJ	Ogdensburg	83.89	320	P	P	04 59 03.9	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=40,SNR=5.8						
WRAK	Wrangell Islan	84.00	0	IAmb	IAmb	04 59 15.7	
	comp=Z,14nm,1.1s						
WRAK	Wrangell Islan	84.00	0	P	P	04 59 04.0	+0.8
	baz=360						
E46A	Sault Ste Mari	84.04	329	P	P	04 59 04.9	+1.2
	baz=35						
KSPA	Keystone Colle	84.10	321	P	P	04 59 05.3	+1.2
	baz=40						
L56A	Greenwood	84.50	323	P	P	04 59 06.9	+0.8
	baz=39,SNR=10.0						
L56A				P	P	04 59 06.9	+0.8
	baz=39,SNR=10.0						
ULM	Lac du Bonnet	84.71	338	P	P	04 59 06.9	0.0
	comp=Z,4.0nm,0.8s,baz=108,slow=0.6,SNR=4.3						
	comp=Z,4.0nm,0.8s						
ULM	Lac du Bonnet	84.71	338	IAmb	IAmb	04 59 17.6	
	comp=Z,12nm,1.0s						
M57A	Sunshine Farm,	84.92	322	IAmb	IAmb	04 59 21.0	
	comp=Z,19nm,0.8s						
M57A	Sunshine Farm,	84.92	322	P	P	04 59 08.1	-0.1
	baz=39						
M57A				P	P	04 59 08.1	-0.1
	baz=39						
E43A	Lone Tree Farm	85.08	331	P	P	04 59 09.2	+0.4
	baz=33						
N58A	Sunbury	85.11	321	P	P	04 59 09.9	+0.8
N58A				IAmb	IAmb	04 59 21.2	
	comp=Z,23nm,1.0s						
N58A	Sunbury	85.11	321	P	P	04 59 10.3	+1.2
	baz=39						
N58A				P	P	04 59 10.3	+1.2
	baz=39						
EYMN	Ely	85.35	334	P	P	04 59 10.5	+0.2
	baz=30						
GLMI	Grayling	85.43	328	IAmb	IAmb	04 59 35.0	
	comp=Z,26nm,0.8s						
GLMI	Grayling	85.43	328	P	P	04 59 11.3	+0.6
	baz=34						
SWI	Sorong	85.46	95	P	P	04 59 12.3	+1.1
SWI				pmax	pmax		
	comp=Z,43nm,1.2s						
MVL	Millersville	85.58	320	IAmb	IAmb	04 59 24.7	
	comp=Z,16nm,1.0s						
B35A	Bob, Littlefor	85.72	335	P	P	04 59 11.8	-0.2
	baz=28						
SSPA	Standing Stone	85.82	322	P	P	04 59 12.5	-0.2
SSPA				IAmb	IAmb	04 59 26.9	
	comp=Z,16nm,0.9s						
SSPA	Standing Stone	85.82	322	P	P	04 59 13.0	+0.3
	baz=38						
COWI	Conover	86.11	332	IAmb	IAmb	04 59 28.1	
	comp=Z,18nm,1.1s						
COWI	Conover	86.11	332	P	P	04 59 13.2	-0.8
	baz=32						
AGMN	Agassiz Nation	86.44	337	P	P	04 59 15.6	0.0
	baz=27						
AGMN	Agassiz Nation	86.44	337	P	P	04 59 15.6	0.0
	baz=27						
GUMO	Guam	86.64	75	LR	LR	05 41 25.6	
	comp=Z,101nm,19.9s,baz=298,slow=38						
G40A	Rib Lake	87.20	332	IAmb	IAmb	04 59 33.5	
	comp=Z,13nm,0.9s						
G40A	Rib Lake	87.20	332	P	P	04 59 19.9	+0.5
	baz=31						
O53A	New Philadelph	87.68	324	P	P	04 59 22.3	+0.5
	baz=36						
MDND	Maddock	87.94	339	P	P	04 59 22.9	+0.1
	baz=24						
SPMN	Marine on St.	88.16	333	P	P	04 59 24.3	+0.3
	baz=29						
BBB	Bella Bella	88.18	358	LR	LR	05 44 57.5	
	comp=Z,105nm,18.8s,baz=1.0,slow=40						
ACSO	Alum Creek Sta	88.49	325	P	P	04 59 25.3	-0.3
	baz=35						
I40A	Norwalk	88.54	331	P	P	04 59 25.4	-0.4
I40A				IAmb	IAmb	04 59 40.0	
	comp=Z,16nm,1.2s						
DGMT	Dagmar	88.55	342	IAmb	IAmb	04 59 41.3	
	comp=Z,16nm,0.8s						
DGMT	Dagmar	88.55	342	P	P	04 59 25.7	-0.1
	baz=21						
P52A	Corning	88.59	324	P	P	04 59 25.8	-0.3
	baz=36						
F33A	5 Mile Ranch,	88.77	336	IAmb	IAmb	04 59 38.5	
	comp=Z,11nm,0.8s						
L44A	Lake County Fo	88.96	329	P	P	04 59 27.8	0.0
	baz=32						
U59A	Littleton	89.12	319	P	P	04 59 28.7	+0.1
	baz=38						
U59A				P	P	04 59 28.7	+0.1
	baz=38						
JFWS	Jewell Farm	89.24	331	P	P	04 59 29.2	+0.1
	baz=31						
LLLB	Lillooet	89.38	354	IAmb	IAmb	04 59 41.9	
	comp=Z,25nm,1.4s						
P49A	Miami Univ. Ec	89.83	325	P	P	04 59 31.3	-0.6
	baz=34						
EGMT	Eagleton	90.19	345	P	P	04 59 33.4	-0.2
	baz=17						
LAO	LASA Array	90.70	343	IAmb	IAmb	04 59 52.7	
	comp=Z,24nm,1.0s						
LAO	LASA Array	90.70	343	P	P	04 59 36.4	+0.5
	baz=20						
ECSD	EROS Data Cent	90.75	335	P	P	04 59 36.4	+0.2
	baz=26						
SUSD	Miller	90.85	337	P	P	04 59 36.3	-0.3
	baz=25						
HDIL	Hopedale	90.89	329	P	P	04 59 36.7	-0.1
	baz=31						
NEW	Newport	91.17	350	LR	LR	05 42 35.7	
	comp=Z,209nm,21.6s,baz=14,slow=37						
NEW	Newport	91.17	350	P	P	04 59 37.9	-0.2
NEW				IAmb	IAmb	04 59 50.4	
	comp=Z,14nm,0.9s						
NEW	Newport	91.17	350	P	P	04 59 37.9	-0.2
NEW				pmax	pmax		
	comp=Z,14nm,1.0s						
NEW	Newport	91.17	350	P	P	04 59 38.6	+0.6
	baz=11						
V55A	Taylorsville	91.20	321	IAmb	IAmb	04 59 41.6	
	comp=Z,19nm,1.3s						
KMSC	Kings Mountain	91.83	321	P	P	04 59 40.3	-1.0
	baz=36						
KMSC	Kings Mountain	91.83	321	P	P	04 59 41.7	+0.4
	baz=36						
MSO	Missoula	92.10	348	P	P	04 59 41.4	-1.1
	baz=14						
FITZ	Fitzroy Crossi	92.42	112	P	P	04 59 43.8	-0.3
	comp=Z,8.1nm,1.0s,baz=292,slow=4.9,SNR=7.8						
	comp=Z,8.1nm,1.0s						
FITZ	Fitzroy Crossi	92.42	112	IAmb	IAmb	04 59 55.4	
	comp=Z,16nm,0.8s						
RSSD	Black Hills	92.57	340	P	P	04 59 45.2	+0.4
RSSD				IAmb	IAmb	05 00 00.7	
	comp=Z,7.9nm,0.9s						
RSSD	Black Hills	92.57	340	P	P	04 59 45.2	+0.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RSSD	Black Hills	92.57	340	P	P	04 59 45.2	+0.4
	baz=21						
TKL	Tuckaleechee C	92.58	322	LR	LR	05 43 00.7	
	comp=Z,206nm,19.2s,baz=53,slow=37						
NHSC	New Hope	92.88	319	P	P	04 59 47.0	+0.8
	baz=37						
BOZ	Bozeman (W)	92.88	346	P	P	04 59 46.3	+0.1
	baz=16						
E09A	Wood Farm, Sta	93.02	350	IAmb	IAmb	04 59 58.1	
	comp=Z,8.2nm,0.8s						
R40A	Maddies Statio	94.00	330	P	P	04 59 51.3	0.0
	baz=29,SNR=5.3						
WVT	Waverly	94.02	325	P	P	04 59 51.2	-0.1
	baz=32						
GOGA	Godfrey	94.27	321	P	P	04 59 53.0	+0.5
	baz=35						
GOGA	Godfrey	94.27	321	P	P	04 59 53.1	+0.5
	baz=35						
K22A	Casper	94.58	341	P	P	04 59 53.6	-0.4
	baz=19						
OGNE	Ogallala	94.96	338	P	P	04 59 55.0	-0.7
	baz=23						
BW06	Boulder Array	95.17	344	P	P	04 59 55.8	-1.0
	baz=17						
PDAR	Pinedale Array	95.17	344	P	P	04 59 55.3	-1.6
	comp=Z,0.1nm,0.4s,baz=64,slow=4.1,SNR=1.8						
PDAR				PP	PP	05 03 45.7	+0.1
	comp=Z,3.4nm,1.0s,baz=53,slow=7.6,SNR=9.4						
PDAR				LR	LR	05 45 45.2	
	comp=Z,226nm,19.4s,baz=24,slow=37						
HLID	Hailey	95.35	347	P	P	04 59 57.4	-0.2
	baz=14						
SJG	San Juan	95.75	299	LR	LR	05 38 44.2	
	comp=Z,46nm,20.2s,baz=80,slow=33						
N23A	Red Feather La	96.08	340	P	P	05 00 00.8	-0.2
	baz=20						
I04A	Tendick Farm,	96.18	353	P	P	05 00 00.6	-0.5
	baz=7.4						
ELK	Elko	98.23	347	LR	LR	05 49 12.2	
	comp=Z,155nm,18.3s,baz=22,slow=38						
WRA	Warramunga Arr	99.90	108	P	Pdif	05 00 17.2	-0.9
	comp=Z,2.4nm,1.1s,baz=323,slow=3.6,SNR=10						
	comp=Z,2.4nm,1.1s						
NVAR	Mina Array Bea	100.98	349	P	Pdif	05 00 23.5	+0.5
	comp=Z,0.1nm,0.5s,baz=10,slow=5.5,SNR=1.4						
NVAR				PP	PP	05 04 31.0	+0.9
	comp=Z,0.7nm,0.9s,baz=46,slow=5.2,SNR=3.6						
ASAR	Alice Springs	101.90	111	P	Pdif	05 00 28.6	+1.6
	comp=Z,0.8nm,0.8s,baz=308,slow=5.1,SNR=5.4						
TXAR	Lajitas Array	106.17	334	PP	PP	05 05 09.2	+0.2
	comp=Z,2.5nm,1.1s,baz=25,slow=5.0,SNR=10.0						
CPUP	Villa Florida	117.60	258	PKP	PKPdf	05 05 18.2	-0.9
	comp=Z,1.6nm,0.9s,baz=101,slow=1.8,SNR=2.1						
LPAZ	La Paz	120.14	274	PKP	PKPdf	05 05 24.9	-0.2
	comp=Z,1.6nm,1.1s,baz=117,slow=2.3,SNR=2.2						
TRQA	Tornquist	126.79	248		PKPdf	05 05 36.1	-0.5
TRQA	Tornquist	126.79	248	PKIKP	PKPdf	05 05 36.1	-0.5
QSPA	South Pole Qui	129.77	180	PKPdf	PKPdf	05 05 40.1	-1.2
PLCA	Paso Flores	133.94	248	PKP	PKPdf	05 05 49.9	-0.2
	comp=Z,1.4nm,0.7s,baz=32,slow=3.4,SNR=7.5						

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*IDC **01** 05:11:55.8±1.0, 24°.75S×179°.82E, h497km±9km, mb4.0/17, mbtmp4.8/21, Error ellipse: s-maj=13.3km s-min=10.8km az=97.0*

*NEIC **01** 05:11:57.0±2.4, 24°.81S±0°.10×179°.9E±0°.1, h509km±6km, mb4.6/141, Error ellipse: s-maj=16.8km s-min=13.8km az=113.0*

*NOU **01** 05:11:56.2, 24°.76S×179°.86W, h535km, mb4.7/54, South of Fiji Islands*

ISC 01 05:11:55.8±0.3**, 24°.81S**±0°.04×**179°.87E**±0°.05**, h501**km**, n519, σ1.43**/502**, mb4.6**/88**, 24C-4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.84	156	P	P	05 13 22.9	+1.7
RIZ				S	S	05 14 32.1	+0.9
RAO	Raoul Island	4.85	156	P	P	05 13 23.0	+1.6
	422nm,0.3s,baz=266,slow=23,SNR=8.2						
RAO				S	S	05 14 33.3	+2.0
	422nm,0.5s,baz=104,slow=23,SNR=3.8						
RAO	Raoul Island	4.85	156	P	P	05 13 24.2	+2.9
RAO					S	05 14 34.3	+3.1
RAO	Raoul Island	4.85	156	P	P	05 13 24.8	+3.5
GLKZ	Green Lake	4.86	156	P	P	05 13 23.8	+2.4
GLKZ				S	S	05 14 30.7	-0.6
LKBA	Tubou, Lakemba	6.66	11	P	P	05 13 40.8	+2.1
MSVF	Nonsavu	7.24	346	P	P	05 13 45.1	+0.5
	20nm,0.4s,baz=71,slow=22,SNR=49						
MSVF	Nonsavu	7.24	346		P	05 13 45.2	+0.6
MSVF	Nonsavu	7.24	346	P	P	05 13 45.4	+0.7
TAVE	Taveuni	8.06	2	P	P	05 13 55.2	+2.2
MARNC	Mare, Loyalty	11.38	285	P	P	05 14 29.5	+1.7
MARNC	Mare, Loyalty	11.38	285	P	P	05 14 29.5	+1.7
PINNC	Pines Island,	11.59	278	P	P	05 14 32.3	+2.3
OUZ	Omahuta	11.71	206	P	P	05 14 33.4	+2.3
OUZ	Omahuta	11.71	206	P	P	05 14 34.7	+3.5
OUZ	Omahuta	11.71	206	P	P	05 14 34.6	+3.5
GRZ	Great Barrier	12.02	197	P	P	05 14 35.5	+1.2
WCZ	Waipu Caves	12.07	202	P	P	05 14 37.7	+2.8
OUENC	Ouen Island, N	12.18	279	P	P	05 14 38.2	+1.9
OUENC	Ouen Island, N	12.18	279	P	P	05 14 38.7	+2.4
YATNC	Mamie plateau,	12.22	280	P	P	05 14 38.9	+2.1
	115nm,1.0s						
LIFNC	LIFOU	12.32	286	P	P	05 14 37.6	-0.2
KUZ	Kuaotunu	12.42	196	P	P	05 14 41.2	+2.6
DZM	Mont Dzumac	12.62	280	P	P	05 14 41.6	+0.5
	79nm,0.9s,baz=88,slow=16,SNR=35						
DZM	Mont Dzumac	12.62	280	*e*P	P	05 14 41.5	+0.5
	270nm,1.1s						
DZM				*e*S	S	05 16 56.0	-1.3
	197nm,22.1s						
DZM	Mont Dzumac	12.62	280	P	P	05 14 43.3	+2.2
DZM	Mont Dzumac	12.62	280	P	P	05 14 43.6	+2.5
MBAZ	Motutapu North	12.66	198	P	P	05 14 43.8	+2.6
NOUC	Port Laguerre	12.74	279	P	P	05 14 45.0	+2.8
MXZ	Matakaoa Point	12.78	186	P	P	05 14 44.4	+2.0
MXZ	Matakaoa Point	12.78	186	P	P	05 14 44.7	+2.2
HAZ	Te Kaha	13.03	187	P	P	05 14 45.6	+0.5
HAZ				S	S	05 17 00.8	-3.9
PKGZ	Pakihiroa	13.13	186	P	P	05 14 46.4	+0.2
PKGZ				S	S	05 17 01.6	-5.1
RUGZ	Raukumara Rang	13.25	188	P	P	05 14 45.4	-2.1
PUZ	Puketiti	13.29	186	P	P	05 14 50.6	+2.7
PUZ				S	S	05 17 05.8	-4.0
AFI	Afiamalu	13.40	38	P	P	05 14 45.7	-3.6
	99nm,0.8s,baz=42,slow=16,SNR=6.1						
AFI				S	S	05 17 07.3	-5.2
	21nm,0.5s,baz=197,slow=16,SNR=4.3						
AFI	Afiamalu	13.40	38	P	P	05 14 46.2	-3.2
TOZ	Tahuroa Road	13.41	195	P	P	05 14 51.1	+2.0
KMRZ	Kaimai	13.42	193	P	P	05 14 52.9	+3.7
KARZ	Kaharoa	13.53	192	P	P	05 14 54.0	+3.7
OMRZ	Omania	13.59	192	P	P	05 14 54.3	+3.3
URZ	Urewera	13.61	189	P	P	05 14 50.6	-0.6
	66nm,0.5s,baz=121,slow=24,SNR=71						
URZ				S	S	05 17 15.6	-0.3
	27nm,0.5s,baz=117,slow=24,SNR=4.9						
URZ	Urewera	13.61	189	P	P	05 14 50.4	-0.8
URZ					S	05 17 16.3	+0.4
URZ	Urewera	13.61	189	P	P	05 14 49.7	-1.5
URZ				S	S	05 17 14.1	-1.8
URZ	Urewera	13.61	189	P	P	05 14 50.0	-1.2
NGRZ	Ngongotaha	13.62	192	P	P	05 14 53.3	+1.9
MWZ	Matawai	13.63	188	P	P	05 14 51.5	0.0
MWZ				S	S	05 17 10.1	-6.2
CNGZ	Carnagh Statio	13.71	186	P	P	05 14 54.5	+2.3
CNGZ				S	S	05 17 14.9	-2.8
HSRZ	Hossack Road	13.81	192	P	P	05 14 56.3	+2.9
HRRZ	Handcock Road	13.88	192	P	P	05 14 56.5	+2.4
MUGZ	Murupara	13.88	190	P	P	05 14 54.1	0.0
MUGZ				S	S	05 17 18.8	-2.2
PRRZ	Plateau Road	13.96	191	P	P	05 14 56.2	+1.3
TLZ	Tolley Road	13.97	194	P	P	05 14 58.5	+3.5
ALRZ	Allen Road	14.03	191	P	P	05 14 57.6	+1.9
SNGZ	Shannon Statio	14.10	188	P	P	05 14 56.5	+0.1
SNGZ				S	S	05 17 22.1	-3.2
MTHZ	Maungataniwha	14.23	190	P	P	05 14 57.8	0.0
MTHZ				S	S	05 17 21.2	-6.7
MRHZ	Matea Rd	14.29	191	P	P	05 14 58.6	+0.2
HIZ	Hauiti	14.31	196	P	P	05 15 01.8	+3.3
RATZ	Rangitukua	14.44	193	P	P	05 15 01.5	+1.5
NMHZ	Naumai	14.48	190	P	P	05 15 00.7	+0.3
NMHZ				S	S	05 17 34.2	+1.5
RITZ	Rihia Road	14.53	193	P	P	05 15 02.2	+1.3
KATZ	Kakaramea	14.56	193	P	P	05 15 03.2	+1.8
BKZ	Black Stump Fm	14.60	190	P	P	05 15 01.7	+0.1
BKZ	Black Stump Fm	14.60	190	P	P	05 15 01.5	-0.2
BKZ				S	S	05 17 28.8	-6.1
BKZ	Black Stump Fm	14.60	190	P	P	05 15 00.4	-1.2
ARHZ	Aropaoanui	14.62	189	P	P	05 15 02.2	+0.5
ARHZ				S	S	05 17 32.6	-2.5
NTVZ	North Tongarir	14.68	193	P	P	05 15 03.9	+1.3
KRVZ	Karewarewa	14.69	193	P	P	05 15 03.5	+0.9
TMVZ	Te Maari	14.69	193	P	P	05 15 03.7	+1.0
ETVZ	East Tongariro	14.71	193	P	P	05 15 03.6	+0.7
NNVZ	North Ngauruho	14.73	193	P	P	05 15 04.0	+0.9
OTVZ	Oturere	14.75	193	P	P	05 15 04.3	+0.9
SNVZ	South Ngauruho	14.77	193	P	P	05 15 04.6	+1.0
SNVZ				S	S	05 17 35.9	-2.6
MCHZ	McNeill Hill	14.84	190	P	P	05 15 04.3	+0.2
MCHZ				S	S	05 17 36.0	-3.4
FWVZ	Far West T-bar	14.86	193	P	P	05 15 04.9	+0.3
FWVZ				S	S	05 17 38.8	-1.4
KWHZ	Kaweka Forest	14.86	190	P	P	05 15 04.8	+0.4
KWHZ				S	S	05 17 33.9	-6.0
TRVZ	Turoa	14.90	193	P	P	05 15 05.6	+0.5
TRVZ				S	S	05 17 41.2	+0.2
WNVZ	Wahianoa	14.92	193	P	P	05 15 04.8	-0.4
WNVZ				S	S	05 17 41.7	+0.4
MOVZ	Moawhango	14.96	192	P	P	05 15 04.9	-0.6
BHHZ	Black Hill Sta	14.99	191	P	P	05 15 04.8	-0.9
BHHZ				S	S	05 17 38.2	-4.1
KOUNC	Koumac, New Ca	14.99	283	P	P	05 15 07.6	+1.6
KOUNC	Koumac, New Ca	14.99	283	P	P	05 15 08.6	+2.7
KAHZ	Kahuranaki	15.15	189	P	P	05 15 07.5	0.0
KAHZ				S	S	05 17 42.2	-3.3
MSWZ	Moikau Station	17.00	192	P	P	05 15 25.3	-1.3
SNZO	South Karori	17.01	193	P	P	05 15 26.0	-0.6
SNZO					S	05 18 19.5	+0.3
SNZO	South Karori	17.01	193	P	P	05 15 26.3	-0.3
QRZ	Quartz Range	17.11	199	P	P	05 15 27.9	+0.3
QRZ	Quartz Range	17.11	199	P	P	05 15 27.5	-0.1
PLWZ	Palliser	17.15	192	P	P	05 15 27.2	-0.9
NNZ	Nelson	17.23	197	P	P	05 15 28.2	-0.6
TUWZ	Tuamarina	17.29	195	P	P	05 15 28.5	-0.9
THZ	Tophouse	17.87	197	P	P	05 15 34.0	-0.8
KHZ	Kahutara	18.32	195	P	P	05 15 37.2	-1.6
KHZ	Kahutara	18.32	195	P	P	05 15 37.9	-0.9
LTZ	Lake Taylor	18.99	197	P	P	05 15 44.4	-0.6
OXZ	Oxford	19.56	197	P	P	05 15 49.5	-0.6
RPZ	Rata Peaks	20.19	199	P	P	05 15 56.1	+0.2
	28nm,0.5s,baz=10,slow=1.3,SNR=24						
	28nm,0.5s						
RPZ	Rata Peaks	20.19	199	P	P	05 15 56.4	+0.4
RPZ	Rata Peaks	20.19	199	P	P	05 15 56.4	+0.4
FOZ	Fox Glacier	20.41	201	P	P	05 15 58.5	+0.6
ARMA	Armidale	25.60	251	P	P	05 16 45.1	+0.4
ARMA				IAmb	IAmb	05 16 46.9	
	comp=Z,14nm,0.9s						
EIDS	Eidsvold	26.06	263	P	P	05 16 48.1	-0.6
MGCD	Mangrove Creek	26.44	245	P	P	05 16 53.6	+1.6
CNB	Canberra Magne	28.30	241	P	P	05 17 09.9	+1.6
CAN	Canberra	28.59	241	P	P	05 17 12.3	+1.4
PPT2	Papeete2	29.34	82	*e*LR	LR	05 25 32.5	
CMSA	Cobar Meteorol	30.78	250	P	P	05 17 30.3	+0.5
CTA	Charters Tower	31.37	272	P	P	05 17 35.6	+0.5
CTAO	Charters Tower	31.37	272	P	P	05 17 35.9	+0.9
CTAO	Charters Tower	31.37	272	P	P	05 17 35.6	+0.5
TOO	Toolangi	31.86	238	P	P	05 17 40.0	+0.9
TOO				IAmb	IAmb	05 17 51.4	
	comp=Z,30nm,1.4s						
TOO	Toolangi	31.86	238	P	P	05 17 40.0	+0.9
MTSU	Mount Surprise	33.67	274	P	P	05 17 55.5	+0.8
STKA	Stephens Creek	34.28	249	P	P	05 18 00.3	+0.6
	comp=Z,8.4nm,0.4s,baz=95,slow=11,SNR=32						
STKA				ScP	ScP	05 23 20.3	+1.1
	comp=Z,4.2nm,0.9s,baz=14,slow=4.9,SNR=4.6						
	comp=Z,8.4nm,0.4s						
STKA	Stephens Creek	34.28	249	P	P	05 18 00.1	+0.5
STKA	Stephens Creek	34.28	249	P	P	05 18 00.1	+0.5
ARPS	Mount Arapiles	34.56	241	P	P	05 18 02.5	+0.6
INKA	Innaminka	35.10	257	P	P	05 18 07.8	+1.2
COEN	Coen	36.15	280	P	P	05 18 15.2	-0.2
COEN				IAmb	IAmb	05 18 17.1	
	comp=Z,28nm,0.9s						
COEN	Coen	36.15	280	P	P	05 18 16.3	+0.9
HTT	Hallett	36.60	247	P	P	05 18 19.2	+0.2
LCRK	Leigh Creek	37.17	252	P	P	05 18 23.9	+0.2
QIS	Mount Isa	37.29	268	P	P	05 18 24.9	0.0
BBOO	Buckleboo	38.98	248	P	P	05 18 38.1	-0.4
OOD	Oodnadatta	39.56	256	P	P	05 18 44.1	+0.9
MULG	Mulgathing	40.77	252	P	P	05 18 52.5	-0.4
ASAR	Alice Springs	41.77	262	P	P	05 19 00.9	-0.1
	comp=Z,11nm,0.6s,baz=92,slow=6.8,SNR=127						
ASAR				ScP	ScP	05 23 49.3	+1.2
	comp=Z,3.2nm,0.9s,baz=111,slow=4.1,SNR=10						
ASAR				S	S	05 24 38.7	-3.2
	comp=Z,1.0nm,0.8s,baz=98,slow=16,SNR=8.2						
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	41.77	262	P	P	05 19 00.0	-1.0
WR0	Warramunga Arr	42.04	267	IAmb	IAmb	05 19 02.9	
	comp=Z,18nm,0.6s						
WB2	Warramunga Arr	42.22	267	P	P	05 19 04.2	-0.4
WRAB	Tennant Creek	42.22	267	P	P	05 19 04.2	-0.4
WRAB	Tennant Creek	42.22	267	P	P	05 19 03.9	-0.7
WRA	Warramunga Arr	42.23	267	P	P	05 19 03.9	-0.7
	comp=Z,26nm,0.6s,baz=99,slow=6.8,SNR=585						
WRA				ScP	ScP	05 23 52.1	+2.1
	comp=Z,11nm,0.9s,baz=101,slow=4.3,SNR=22						
WRA				S	S	05 24 44.1	-4.4
	comp=Z,4.9nm,1.1s,baz=98,slow=15,SNR=7.7						
	comp=Z,26nm,0.6s						
FORT	Forrest	45.89	250	P	P	05 19 31.9	-0.9
KDU	Kakadu	46.26	276	P	P	05 19 35.0	-0.8
WRKA	Warakurna	46.53	258	P	P	05 19 37.3	-0.5
KNRA	Kununurra	48.57	271	P	P	05 19 52.8	-0.5
KNRA	Kununurra	48.57	271	P	P	05 19 53.0	-0.2
HMH	Humu'ula Sheep	50.24	31	P	P	05 20 06.9	+1.1
HPAH	Hawaii Prepara	50.52	30	P	P	05 20 07.9	+0.4
FITZ	Fitzroy Crossi	50.64	266	IAmb	IAmb	05 20 09.7	
	comp=Z,22nm,0.8s						
FITZ	Fitzroy Crossi	50.64	266	P	P	05 20 08.1	-0.4
FAKI	Fak Fak	50.73	288	P	P	05 20 08.5	-0.8
SWI	Sorong	52.62	289	P	P	05 20 22.6	-0.3
KLBR	Kellerberrin	54.53	248	P	P	05 20 35.8	-0.5
MEEK	Meekatharra	54.74	254	P	P	05 20 37.0	-0.8
PSA00	Pilbara Seismi	54.88	260	P	P	05 20 38.2	-0.7
MBWA	Marble Bar	55.10	261	P	P	05 20 39.5	-0.9
BLDU	Ballidu	55.58	249	P	P	05 20 42.8	-0.8
MUN	Mundaring	55.76	247	P	P	05 20 44.7	-0.2
MORW	Morawa	56.45	251	P	P	05 20 49.0	-0.7
PLAI	Plampang	61.05	274	P	P	05 21 20.4	-0.5
TOLI2	Tolitoli	62.69	285	P	P	05 21 30.4	-1.2
TOLI2				IAmb	IAmb	05 21 32.9	
	comp=Z,14nm,0.7s						
TOLI2	Tolitoli	62.69	285	P	P	05 21 30.5	-1.1
QSPA	South Pole Qui	65.28	180	P	P	05 21 48.4	+1.0
	comp=Z,5.6nm,0.6s,baz=338,slow=0.7,SNR=48						
	comp=Z,5.6nm,0.6s						
INU	Inuyama	72.28	324	P	P	05 22 29.8	-0.2
MJAR	Matsushiro Arr	72.58	326	P	P	05 22 30.8	-0.9
	comp=Z,2.3nm,0.5s,baz=168,slow=6.0,SNR=6.4						
	comp=Z,2.3nm,0.5s						
SMAI	San Martin Ant	75.31	159	P	P	05 22 47.8	+1.1
SMAI				IAmb	IAmb	05 22 49.8	
	comp=Z,12nm,0.8s						
BELA	Belgrano 2	75.55	173	P	P	05 22 48.0	0.0
ADK	Adak	76.42	2	P	P	05 22 52.1	-0.8
ADK				IAmb	IAmb	05 22 53.5	
	comp=Z,29nm,0.8s						
MAW	Mawson	76.86	201	P	P	05 22 56.2	+0.9
	comp=Z,3.0nm,0.6s,baz=133,slow=9.0,SNR=9.6						
	comp=Z,3.0nm,0.6s						
NIKH	Nikolski High	78.07	7	P	P	05 23 01.6	-0.3
	baz=190						
PMSA	Palmer Station	78.13	157	P	P	05 23 03.0	+0.8
	comp=Z,10nm,1.0s,baz=293,slow=4.5,SNR=4.1						
	comp=Z,10nm,1.0s						
UNV	Unalaska Valle	79.21	8	P	P	05 23 08.0	0.0
	baz=193						
PEA0B	Petropavlovsk-	79.95	347	P	P	05 23 12.5	+0.6
PEA0B				IAmb	IAmb	05 23 13.2	
	comp=Z,42nm,1.4s						
PETK	Petropavlovsk-	79.95	347	P	P	05 23 11.2	-0.7
	comp=Z,12nm,0.8s,baz=139,slow=7.3,SNR=19						
	comp=Z,12nm,0.8s						
PETK	Petropavlovsk-	79.95	347	P	P	05 23 12.0	+0.1
NJ2	Nanjing	81.16	311	*e*P	P	05 23 20.7	+2.0
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	81.46	327	P	P	05 23 20.1	+0.1
	comp=Z,3.1nm,0.6s,baz=133,slow=4.2,SNR=9.3						
	comp=Z,3.1nm,0.6s						
SDPT	Sand Point	81.59	11	P	P	05 23 22.7	+2.4
	baz=198						
SPIA	Saint Paul Isl	82.09	5	P	P	05 23 25.9	+3.0
	baz=189						
SCI2	San Clemente I	82.10	48	P	P	05 23 25.1	+1.6
	baz=234						
SBC	Santa Barbara	82.19	47	P	P	05 23 25.8	+1.8
	baz=233						
PKM	Mcpherson Peak	82.40	46	P	P	05 23 26.8	+1.5
	baz=233						
CIS	Catalina Islan	82.44	48	P	P	05 23 26.1	+0.8
	baz=234						
SAO	San Andreas Ge	82.50	44	IAmb	IAmb	05 23 28.0	
	comp=Z,14nm,1.1s						
S14K	Fog Glacier	82.64	11	P	P	05 23 27.3	+1.4
	baz=199						
CHGN	Chignik	82.87	12	P	P	05 23 28.6	+1.8
	baz=200						
DECC	Green Verdugo	83.00	47	P	P	05 23 28.9	+0.8
	baz=234						
109C	Camp Elliot, M	83.03	49	IAmb	IAmb	05 23 30.6	

comp=Z,29nm,1.4s
109C **Camp Elliot, M** 83.03 49 P P 05 23 29.3 +1.0
baz=235
ARVC **Arvin** 83.18 46 P P 05 23 30.3 +1.3
baz=233
MURC **Murrieta** 83.38 48 P P 05 23 31.3 +1.2
baz=234,SNR=5.9
TROLL **Troll, Antarti** 83.43 181 P P 05 23 30.3 +0.5
BFSC **Mount Baldy Ra** 83.44 48 P P 05 23 31.4 +0.9
baz=234
VES **Vestal, Richgr** 83.44 46 P P 05 23 31.1 +0.9
baz=233
MONP2 **Monument Peak** 83.50 49 P P 05 23 32.4 +1.5
baz=235,SNR=15
IKP **In-Ko-Pah, Jac** 83.58 50 P P 05 23 32.9 +1.7
baz=235,SNR=9.7
EDW2 **Edwards Air Fo** 83.59 47 P P 05 23 32.5 +1.3
baz=234,SNR=8.0
ISA **Isabella, Lake** 83.74 46 P P 05 23 33.3 +1.5
baz=234
SNAA **Sanae** 83.76 179 P P 05 23 31.2 -0.2
PFO **Pinyon Flats O** 83.89 49 P P 05 23 34.1 +1.4
baz=235,SNR=7.0
TPFO **Pinon Flats** 83.89 49 P P 05 23 34.2 +1.5
baz=235,SNR=8.7
CMB **Columbia Colle** 83.94 43 IAmb IAmb 05 23 34.9
comp=Z,15nm,1.0s
SWSC **Sam W. Stewart** 83.97 50 P P 05 23 34.6 +1.7
baz=235,SNR=8.0
VNA3 **Neumayer Olymp** 83.98 177 P P 05 23 32.4 0.0
LRMC **Laurel Mtn Rad** 84.15 47 P P 05 23 35.2 +1.3
baz=234
VNA2 **Neumayer--Watz** 84.39 178 P P 05 23 34.7 +0.2
baz=192,slow=4.0
BELC **Belle Mtn. Jos** 84.43 49 P P 05 23 37.1 +1.7
baz=235,SNR=18
CWC **Cottonwood Cre** 84.45 46 P P 05 23 36.7 +1.2
baz=234
R17K **Ugashik Creek** 84.52 13 P P 05 23 35.4 +0.4
baz=202
BC3 **Big Chuckawall** 84.61 49 P P 05 23 38.1 +1.9
baz=236,SNR=7.5
MPMC **Manual Prospec** 84.61 46 P P 05 23 37.1 +0.7
baz=234,SNR=12
L02F **Cave Junction** 84.62 39 P P 05 23 37.6 +1.6
baz=230
GSC **Goldstone, Bar** 84.63 47 P P 05 23 37.5 +1.3
baz=234,SNR=13
VNA1 **Neumayer--Stat** 84.63 177 P P 05 23 35.3 -0.2
HEC **Hector,Ludlow** 84.67 48 P P 05 23 37.5 +1.0
baz=235,SNR=18
GLA **Glamis** 84.70 50 P P 05 23 38.4 +1.8
baz=236,SNR=7.8
TIN **Tinemaha, Big** 84.72 45 P P 05 23 37.9 +1.2
baz=234
MPK **Martis Peak** 84.94 42 IAmb IAmb 05 23 39.8
comp=Z,33nm,1.3s
K02D **Willamette Mer** 84.94 38 P P 05 23 39.2 +1.6
baz=229
PNTR **Pine Nut** 85.07 43 IAmb IAmb 05 23 40.8
comp=Z,14nm,0.9s
IRM **Iron Mountain** 85.10 49 P P 05 23 39.8 +1.3
baz=236,SNR=8.4
GMRC **Granite Mounta** 85.10 48 P P 05 23 39.8 +1.1
baz=235,SNR=11
Q17K **Contact Creek** 85.19 13 P P 05 23 39.1 +0.6
baz=202
GRAC **Grapevine Rang** 85.24 46 P P 05 23 40.6 +1.4
baz=234
FURC **Furnace Creek,** 85.26 46 P P 05 23 40.4 +1.2
baz=234
HUMO **Hull Mountain** 85.28 38 IAmb IAmb 05 23 42.3
comp=Z,18nm,1.2s
113A **Mohawk Valley,** 85.29 51 IAmb IAmb 05 23 42.2
comp=Z,17nm,1.2s
TUQ **Turquoise Moun** 85.30 48 P P 05 23 40.9 +1.4
baz=235,SNR=5.5
BLYC **Blythe** 85.30 50 P P 05 23 41.1 +1.7
SHOC **Shoshone, Teco** 85.33 47 P P 05 23 41.0 +1.4
baz=235
L04D **Klamath Falls** 85.41 39 P P 05 23 41.3 +1.3
baz=230
Q16K **King Salmon** 85.43 12 P P 05 23 39.5 +0.1
baz=201
NVAR **Mina Array Bea** 85.49 44 P P 05 23 41.5 +0.9
comp=Z,5.1nm,0.8s,baz=222,slow=8.6,SNR=41
comp=Z,5.1nm,0.8s
214A **Organ Pipe Nat** 85.52 52 P P 05 23 42.4 +1.8
baz=237
Q18K **Katmai Hardscr** 85.73 13 P P 05 23 41.0 0.0
baz=203
I03D **Drain, OR** 85.77 37 P P 05 23 42.8 +1.3
baz=230
PDMCI **Parker Dam,Lak** 85.87 49 P P 05 23 43.8 +1.6
baz=236,SNR=5.8
TPNV **Topopah Spring** 85.94 46 P P 05 23 43.9 +1.2
baz=235,SNR=18
P17K **Kvichak River** 85.96 12 P P 05 23 41.6 -0.4
baz=201
KVN **Kaiserville** 85.98 44 IAmb IAmb 05 23 44.2
comp=Z,7.8nm,0.7s
J04D **Umpqua Nationa** 86.17 38 P P 05 23 45.1 +1.5
baz=230
Q19K **Cape Douglas,** 86.27 13 P P 05 23 43.7 +0.2
baz=204
I04A **Tendick Farm,** 86.35 38 P P 05 23 44.4 +0.1
baz=230
MOD **Modoc Plateau** 86.37 40 IAmb IAmb 05 23 46.9
comp=Z,8.3nm,0.8s
P18K **Big Mountain,** 86.37 12 P P 05 23 43.5 -0.5
baz=202
O17K **Koliganek Bris** 86.38 11 P P 05 23 46.1 +2.2
baz=201
K05A **Summer Lake** 86.54 39 P P 05 23 47.3 +1.9
H04D **Lebanon** 86.64 37 P P 05 23 47.1 +1.6
baz=230
S11A **Rachel** 86.67 46 IAmb IAmb 05 23 48.1
comp=Z,8.9nm,0.9s
J05D **Fort Rock, OR** 86.69 39 P P 05 23 47.6 +1.5
baz=231
N16K **Nishlik Lake** 86.75 10 P P 05 23 46.5 +0.7
baz=199
O18K **Koktuh Hills** 86.80 12 P P 05 23 45.8 -0.2
baz=202
PRN **Pahroc Range** 86.99 46 IAmb IAmb 05 23 50.3
comp=Z,13nm,1.0s
P19K **Oil Pt** 87.02 13 P P 05 23 46.9 -0.2
baz=204
H04A **Detroit Lake** 87.04 37 P P 05 23 48.8 +1.3
TUC **Tucson** 87.17 52 P P 05 23 49.3 +0.8
TUC IAmb IAmb 05 23 51.8
comp=Z,17nm,1.0s
TUC **Tucson** 87.17 52 P P 05 23 50.7 +2.2
baz=238
R11A **Troy Canyon, C** 87.18 45 P P 05 23 48.9 +0.4
baz=235
I05D **Terrebonne, OR** 87.29 38 P P 05 23 49.9 +1.2
baz=231
O19K **Port Alsworth** 87.29 13 P P 05 23 48.1 -0.2
baz=203
BMN **Battle Mountai** 87.34 43 IAmb IAmb 05 23 50.8
comp=Z,7.9nm,0.8s
BRSE **Bradley Lake S** 87.64 14 P P 05 23 50.1 +0.2
baz=206
WVOR **Wild Horse Val** 87.68 41 IAmb IAmb 05 23 53.0
comp=Z,18nm,1.1s
PLCA **Paso Flores** 87.72 134 P P 05 23 52.0 +1.0
comp=Z,2.1nm,0.8s,baz=222,slow=6.6,SNR=6.7
comp=Z,2.1nm,0.8s
X16A **Lo Mia Camp, P** 87.81 50 IAmb IAmb 05 23 54.5
comp=Z,12nm,1.0s
N19K **Bonanza Creek** 87.83 12 P P 05 23 50.1 -0.8
baz=203
CCUT **Cedar City** 88.19 47 IAmb IAmb 05 23 56.1
comp=Z,9.5nm,1.1s
SEW **Seward** 88.26 15 P P 05 23 53.6 +0.8
baz=208
SPR3 **Spring Creek 3** 88.35 45 IAmb IAmb 05 23 56.8
comp=Z,11nm,1.5s
SZCU **Shurtz Canyon** 88.39 47 IAmb IAmb 05 23 57.0
comp=Z,11nm,1.0s
WUAZ **Wupatki** 88.44 50 P P 05 23 54.0 -0.5
baz=238
P23K **Montague Islan** 88.66 16 P P 05 23 54.7 +0.1
baz=209
ELK **Elko** 88.76 43 IAmb IAmb 05 23 58.0
comp=Z,14nm,1.4s
M19K **Big River Lodg** 88.85 12 P P 05 23 55.3 -0.2
baz=203
CBB **Campbell River** 88.90 32 IAmb IAmb 05 23 58.4
comp=Z,13nm,1.1s
L19K **White Mountain** 89.03 12 P P 05 23 56.6 +0.2
baz=203,SNR=11
RC01 **Rabbit Creek A** 89.07 14 P P 05 23 56.6 +0.1
baz=207
M20K **Styx River** 89.08 12 P P 05 23 56.2 -0.5
baz=204
BBB **Bella Bella** 89.11 29 P P 05 23 58.4 +1.5
comp=Z,7.7nm,0.8s,baz=262,slow=5.8,SNR=3.7
comp=Z,7.7nm,0.8s
PWL **Port Wells** 89.19 15 P P 05 23 56.7 -0.5
baz=209,SNR=7.8
MTPU **Mount Pierson** 89.24 47 IAmb IAmb 05 24 01.5
comp=Z,13nm,0.9s
121A **Cankes Peak, D** 89.46 54 P P 05 24 00.7 +1.3
baz=240
L20K **Farewell, AK** 89.48 12 P P 05 23 58.4 -0.1
baz=204
GLI **Glacier Island** 89.50 15 P P 05 23 58.4 -0.2
baz=210,SNR=8.5
FID **Port Fidalgo** 89.54 16 IAmb IAmb 05 23 59.6
comp=Z,15nm,1.1s
EYAK **Cordova Ski Ar** 89.55 16 P P 05 23 58.8 0.0
baz=211
M22K **Willow** 89.58 14 P P 05 23 59.2 +0.4
baz=207
KNK **Knik Glacier** 89.65 15 IAmb IAmb 05 24 00.3
comp=Z,13nm,1.1s
KNK **Knik Glacier** 89.65 15 P P 05 23 59.2 -0.1
baz=208
PMR **Palmer** 89.65 14 P P 05 23 58.8 -0.4
baz=208,SNR=6.2
CMAR **Chiang Mai Arr** 89.73 290 P P 05 24 02.5 +1.8
comp=Z,1.7nm,0.3s,baz=143,slow=3.3,SNR=9.4
comp=Z,1.7nm,0.3s
DUG **Dugway, Tooele** 89.99 45 P P 05 24 02.4 +0.9
baz=237,SNR=5.6
BMRM **Bremner River** 90.20 16 IAmb IAmb 05 24 03.1
comp=Z,9.1nm,1.0s
BMRM **Bremner River** 90.20 16 P P 05 24 01.9 0.0
baz=212
K20K **Telida** 90.25 11 IAmb IAmb 05 24 02.5
comp=Z,7.7nm,1.1s
K20K **Telida** 90.25 11 P P 05 24 01.9 -0.1
baz=204,SNR=5.4
SCM **Sheep Creek Mo** 90.28 15 P P 05 24 02.3 +0.1
baz=210,SNR=5.5
NLU **North Lily Min** 90.34 45 IAmb IAmb 05 24 05.5
comp=Z,6.1nm,0.9s
CRQM **Cirque** 90.41 17 IAmb IAmb 05 24 04.4
comp=Z,15nm,1.3s
CRQE **Cirque** 90.42 17 P P 05 24 03.0 +0.1
baz=213
WRAK **Wrangell Islan** 90.44 24 IAmb IAmb 05 24 05.2
comp=Z,7.1nm,0.9s
WRAK **Wrangell Islan** 90.44 24 P P 05 24 03.7 +0.8
baz=222
TNA **Tin City** 90.57 5 P P 05 24 04.5 +1.1
baz=191
PNL **Peninsula** 90.58 19 P P 05 24 04.3 +0.7
baz=216
MPU **Maple Canyon** 90.66 46 IAmb IAmb 05 24 06.9
comp=Z,8.4nm,0.9s
CAST **Castle Rocks** 90.68 12 P P 05 24 02.6 -1.4
baz=205,SNR=11
N25K **Chitina, Valde** 90.75 16 P P 05 24 04.6 +0.2
baz=212,SNR=5.8
GRNC **Granite Creek** 90.76 18 IAmb IAmb 05 24 06.1
comp=Z,13nm,1.1s
GLB **Gilahina Butte** 90.81 17 IAmb IAmb 05 24 05.8
comp=Z,6.5nm,0.9s
WAT6 **Susitna Watana** 90.84 14 P P 05 24 04.6 -0.3
baz=209,SNR=5.5
HLID **Hailey** 90.85 42 IAmb IAmb 05 24 07.9
comp=Z,9.0nm,1.2s
HLID **Hailey** 90.85 42 P P 05 24 06.6 +1.1
baz=236,SNR=12
WAT1 **Susitna Watana** 90.88 14 P P 05 24 04.8 -0.1
baz=208
HVU **Hansel Valley** 90.88 44 IAmb IAmb 05 24 07.7
comp=Z,10nm,0.8s
CTU **Camp Tracy** 90.94 45 IAmb IAmb 05 24 07.9
comp=Z,14nm,1.0s
MCARA **McCarthy VSAT** 90.96 17 P P 05 24 05.2 -0.1
baz=213
HHC **Hu-ho-hao-te** 90.97 315 *e*P P 05 24 07.1 +1.1
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,250nm,7.0s
J20K **Nowinta River** 90.99 11 IAmb IAmb 05 24 13.0
comp=Z,7.9nm,1.5s
J20K **Nowinta River** 90.99 11 P P 05 24 05.2 -0.2
baz=203
PZH **PanZhiHua** 91.01 299 P P 05 24 06.4 -0.1
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,3.9s
TX32 **Lajitas Array** 91.01 58 IAmb IAmb 05 24 09.1
comp=Z,8.5nm,0.9s
TXAR **Lajitas Array** 91.01 58 P P 05 24 07.9 +1.5
comp=Z,5.4nm,0.8s,baz=214,slow=6.4,SNR=80
TXAR PKKPbc PKKPbc 05 41 28.6 +0.9
comp=Z,0.2nm,0.6s,baz=97,slow=3.6,SNR=3.7
comp=Z,5.4nm,0.8s
KTH **Kantishna Hill** 91.03 13 IAmb IAmb 05 24 05.5
comp=Z,9.5nm,1.2s
LOGN **Logan Glacier** 91.05 18 IAmb IAmb 05 24 07.2
comp=Z,5.7nm,0.9s
TRF **Thorofare Moun** 91.06 13 IAmb IAmb 05 24 06.0
comp=Z,10nm,0.9s
TRF **Thorofare Moun** 91.06 13 P P 05 24 05.1 -0.9
baz=207,SNR=8.2
CTG **Chitna Glacier** 91.07 18 P P 05 24 05.9 -0.1
GCSA **Galena City Sc** 91.07 10 P P 05 24 05.5 -0.2
baz=201
JLU **Jordanelle** 91.09 45 IAmb IAmb 05 24 09.6
comp=Z,4.4nm,0.8s
O28M **Mount Upton** 91.24 18 P P 05 24 06.9 -0.1
baz=216
RND **Reindeer** 91.32 14 IAmb IAmb 05 24 07.6
comp=Z,9.6nm,0.8s
DHY **Denali Highway** 91.35 14 pwP 05 26 03.8 +2.3
DHY **Denali Highway** 91.35 14 P P 05 24 07.1 -0.2
baz=209
P18A **Preston Nutter** 91.36 47 IAmb IAmb 05 24 10.1
comp=Z,6.3nm,1.0s
HWUT **Hardware Ranch** 91.55 44 IAmb IAmb 05 24 09.8
comp=Z,4.5nm,0.7s
MCK **McKinley** 91.59 13 IAmb IAmb 05 24 09.9
comp=Z,4.3nm,0.7s
MCK **McKinley** 91.59 13 P P 05 24 08.5 +0.3
baz=206
ANMO **Albuquerque** 91.61 52 P P 05 24 10.1 +0.9
ANMO IAmb IAmb 05 24 11.2
comp=Z,4.0nm,0.9s
ANMO **Albuquerque** 91.61 52 P P 05 24 09.3 +0.1
baz=241
P30M **Million Dollar** 91.68 20 P P 05 24 09.3 +0.6
baz=218
PAX **Paxson** 91.70 15 pP 05 26 01.7 +1.9
PAX **Paxson** 91.70 15 P P 05 24 08.9 +0.1
baz=211
M26K **Nabesna, AK** 91.83 16 IAmb IAmb 05 24 10.6
comp=Z,4.1nm,0.9s
M26K **Nabesna, AK** 91.83 16 P P 05 24 09.2 -0.1
baz=213
YUK3 **Moose Creek** 91.98 18 P P 05 24 10.5 +0.2
baz=216,SNR=13
M27K **Edge Creek, AK** 92.08 17 IAmb IAmb 05 24 12.2
comp=Z,9.8nm,0.9s
M27K **Edge Creek, AK** 92.08 17 P P 05 24 10.8 +0.1
baz=214,SNR=9.8
L26K **Log Cabin Wild** 92.26 16 P P 05 24 11.0 -0.3
baz=213
RDMU **Red Mountain** 92.29 46 IAmb IAmb 05 24 13.9
comp=Z,5.0nm,0.9s
I21K **Tanana** 92.30 11 P P 05 24 11.0 -0.4
baz=205
K24K **Donnelly Dome** 92.34 15 P P 05 24 11.7 0.0
baz=211
MLY **Manley** 92.39 12 P P 05 24 11.7 -0.2
baz=206
BVCY **Beaver Creek** 92.39 17 P P 05 24 12.0 +0.1
baz=215
WRH **Wood River Hil** 92.42 13 IAmb IAmb 05 24 12.2
comp=Z,6.8nm,1.0s
AHID **Auburn Hatcher** 92.45 43 IAmb IAmb 05 24 15.1
comp=Z,14nm,1.5s
O30N **Mendenhall** 92.46 20 P P 05 24 12.4 +0.1
baz=219
RIDG **Independent Ri** 92.51 15 IAmb IAmb 05 24 13.3
comp=Z,6.7nm,1.1s
RIDG **Independent Ri** 92.51 15 P P 05 24 12.3 -0.1
baz=212
H21K **Melozitna Rive** 92.58 11 P P 05 24 12.6 -0.1
baz=205
HDA **Harding Lake** 92.61 14 IAmb IAmb 05 24 13.3
comp=Z,3.6nm,0.6s
HDA **Harding Lake** 92.61 14 P P 05 24 12.6 -0.3
baz=210
CCB **Clear Creek Bu** 92.64 13 IAmb IAmb 05 24 12.9
comp=Z,7.0nm,1.2s
L27K **Beaver Creek,** 92.67 16 P P 05 24 12.9 -0.4
baz=214,SNR=6.1
N30M **Aishikik Lake** 92.69 19 P P 05 24 13.4 0.0
baz=218
S22A **4UR Ranch, Cre** 92.72 49 P P 05 24 15.1 +0.7
baz=240
MDM **Murphy Dome** 92.82 13 IAmb IAmb 05 24 13.8
comp=Z,3.7nm,0.9s
TCOL **CIGO, UAF Yank** 92.82 13 P P 05 24 13.3 -0.4
baz=209
COLA **College** 92.83 13 P P 05 24 13.3 -0.4
baz=209
SCRK **Sand Creek** 92.91 15 P P 05 24 14.6 +0.2
baz=212
REDW **Red Top Meadow** 92.92 43 IAmb IAmb 05 24 18.0
comp=Z,5.0nm,1.1s
ILAR **Eielson Array** 92.94 14 P P 05 24 13.4 -0.9
comp=Z,1.1nm,0.6s,baz=225,slow=5.2,SNR=12
ILAR PP PP 05 28 08.0 +2.0
comp=Z,1.7nm,1.1s,baz=229,slow=6.8,SNR=6.0
comp=Z,1.1nm,0.6s
O20A **White River Ci** 92.94 47 P P 05 24 14.9 -0.3
baz=240
MSO **Missoula** 92.95 39 P P 05 24 14.5 -0.5
baz=236
SNOW **Snow King Moun** 93.04 43 IAmb IAmb 05 24 18.6
comp=Z,4.5nm,0.9s
H22K **Ishtalitna Cre** 93.05 11 P P 05 24 14.7 -0.1
baz=206
M29M **Somme Creek** 93.08 18 P P 05 24 15.4 +0.2
baz=217
J25K **Salcha River,** 93.13 14 P P 05 24 14.8 -0.5
baz=211
G21K **Allakaket** 93.25 10 P P 05 24 15.5 -0.2
baz=204
FLWY **Flagg Ranch** 93.39 43 IAmb IAmb 05 24 20.6
comp=Z,5.8nm,1.0s
K27K **Chicken** 93.42 16 P P 05 24 17.4 +0.8
baz=214
BW06 **Boulder Array** 93.42 44 P P 05 24 17.6 +0.2
baz=239
PDAR **Pinedale Array** 93.42 44 P P 05 24 17.5 +0.1
comp=Z,1.3nm,0.8s,baz=217,slow=3.0,SNR=13
PDAR PP PP 05 28 10.3 -0.2
comp=Z,0.1nm,0.4s,baz=255,slow=5.8,SNR=4.4
comp=Z,1.3nm,0.8s
J26L **Joseph Creek** 93.45 15 P P 05 24 17.4 +0.6
baz=213
YHL **Hebgen Lake** 93.50 42 IAmb IAmb 05 24 21.6
comp=Z,5.0nm,1.1s
BOZ **Bozeman (W)** 93.63 41 P P 05 24 19.4 +1.2
baz=238
H17A **Grant Village** 93.63 42 P P 05 24 19.9 +1.6
baz=238
SDCO **Great Sand Dun** 93.64 50 P P 05 24 19.2 +0.6
baz=241
M30M **Minto, Yukon** 93.66 19 IAmb IAmb 05 24 18.4
comp=Z,4.4nm,1.0s
M30M **Minto, Yukon** 93.66 19 P P 05 24 17.8 0.0
baz=219,SNR=7.8
DAWY **Dawson** 94.13 17 IAmb IAmb 05 24 21.0
comp=Z,4.8nm,0.9s
DAWY **Dawson** 94.13 17 P P 05 24 20.0 +0.2
baz=216,SNR=7.2
I26K **Coal Creek Min** 94.23 15 P P 05 24 20.4 +0.2
baz=213
COLD **Coldfoot** 94.46 11 P P 05 24 22.5 +1.3
baz=207
Q24A **Divide** 94.46 49 P P 05 24 22.9 +0.5
baz=242
G24K **Hadweenzic Riv** 94.50 12 P P 05 24 22.8 +1.4
baz=209
JCT **Junction City** 94.52 59 P P 05 24 22.8 +0.3
baz=244
ISCO **Idaho Springs** 94.54 48 P P 05 24 22.9 +0.2
baz=241
RLMT **Red Lodge** 94.81 42 P P 05 24 24.6 +0.9
baz=239
N23A **Red Feather La** 94.84 47 P P 05 24 24.6 +0.6
baz=241
K22A **Casper** 95.31 45 P P 05 24 26.7 +0.8
baz=241
G26K **Porcupine Rive** 95.47 14 P P 05 24 27.4 +1.7
baz=213
F25K **Christian River** 95.64 13 P P 05 24 28.2 +1.6
baz=211
D23K **Nanushuk River** 95.94 10 P P 05 24 29.2 +1.3
baz=207
C23K **Itkillik River** 96.73 10 P P 05 24 33.1 +1.7
baz=207
WMOK **Wichita Mounta** 97.13 55 pP 05 26 25.3 -0.4
OGNE **Ogallala** 97.50 48 P P 05 24 35.8 +0.1
baz=244
C27K **Jago River** 97.74 12 P P 05 24 38.0 +2.0
baz=213
C26K **Camden Bay** 97.77 12 P P 05 24 38.0 +1.9
baz=212
TZTN **Tazewell** 109.35 58 P PKiKP 05 29 28.7 -0.2
baz=253
ZALV **Zalesovo Beam** 112.57 320 PKiKP PKiKP 05 29 33.6 -0.8
comp=Z,0.6nm,0.3s,baz=70,slow=1.7,SNR=4.5
KURK **Kurchatov** 115.77 316 PKiKP 05 29 40.2 -0.4
BDFB **Brasilia** 118.39 126 PKP PKPdf 05 29 45.7 -1.2
comp=Z,0.5nm,0.3s,baz=335,slow=7.1,SNR=3.3
KKAR **Karatay Array** 120.31 307 PKPdf 05 29 49.2 -0.5
BOSA **Boshof** 121.54 206 PKP PKPdf 05 29 52.4 -0.4
comp=Z,2.0nm,0.7s,baz=170,slow=3.8,SNR=3.9
PKME **Peaks-Kenny Pk** 121.59 51 P PKPdf 05 29 51.4 -0.6
baz=266
GBN **Guysborough** 127.07 51 PKiKP 05 30 02.6 -0.5
ARU **Arti** 127.54 323 PKiKP 05 30 03.0 -0.7
ABKAR **Akbulak array** 127.75 314 PKPdf 05 30 03.3 -0.4
SUMG **Summit** 127.78 14 PKiKP 05 30 03.6 -0.6
NRS **Narsarsuaq** 132.45 28 PKPpre 05 30 00.6
ARCES **ARCESS Array B** 132.75 348 PKhKP PKPpre 05 30 05.6
comp=Z,0.3nm,0.4s,baz=34,slow=0.4,SNR=7.9
ARCES PKP PKPdf 05 30 11.5 -1.1
comp=Z,3.6nm,0.7s,baz=48,slow=0.8,SNR=23
ARCES SKPbc SKPbc 05 32 53.0 +0.1
comp=Z,6.3nm,0.8s,baz=20,slow=3.9,SNR=12
KLMR **Klimovskoe** 134.94 334 *e*PKPdf PKPdf 05 30 16.5 -0.4
KLMR AMP 05 30 25.4
comp=Z,8.0nm,1.1s
KLMR *e*PP PP 05 32 58.5 -0.1
KMBO **Kilima Mbogo** 135.54 240 SKPbc SKPbc 05 33 04.6 +0.6
comp=Z,3.0nm,0.8s,baz=9.4,slow=1.1,SNR=4.9
FINES **FINESS Array B** 139.26 341 PKhKP PKPpre 05 30 15.8
comp=Z,1.2nm,0.4s,baz=52,slow=4.4,SNR=16
FINES PKP PKiKP 05 30 25.6 -1.6
comp=Z,2.2nm,0.5s,baz=78,slow=4.1,SNR=6.3
FINES SKPbc SKPbc 05 33 12.6 -0.1
comp=Z,7.5nm,0.8s,baz=95,slow=6.3,SNR=12
NB2 **NORSAR Subarra1** 142.96 351 PKP PKPdf 05 30 27.8 -3.7
comp=Z,10.0nm,1.1s,baz=10,slow=3.2
NB2 **NORSAR Subarra1** 142.96 351 PKP PKPdf 05 30 27.8 -3.7
baz=10,slow=3.2
NOA **NORSAR Array B** 142.96 351 PKhKP PKPpre 05 30 28.4
comp=Z,7.6nm,0.8s,baz=17,slow=2.4,SNR=24
NOA SKPbc SKPbc 05 33 22.2 +0.1
comp=Z,2.4nm,0.9s,baz=15,slow=4.2,SNR=4.9
MARD **Mardin** 143.07 300 PKPbc 05 30 30.9 +0.3
NAO01 **NORSAR Array S** 143.19 351 *e*P PKPbc 05 30 29.4 -0.6
NAO01 IAmb IAmb 05 30 30.5
comp=Z,28nm,1.0s
SLIT **Slitere, Latvi** 143.48 340 *e*P PKPab 05 30 29.9 -0.8
SUE **Sulen** 143.61 356 *e*P PKPbc 05 30 31.0 -0.2
SUE IAmb IAmb 05 30 31.2
comp=Z,28nm,0.7s
SKAR **Skarslia** 143.68 353 *e*P PKPab 05 30 30.9 -0.6

SKAR				IAmb	IAmb	05 30 32.7	
	comp=Z,32nm,1.2s						
ISAL	Salakas	143.74	335	eP	PKPdf	05 30 32.8	-0.2
IIGN	Ignalina	143.86	335	eP	PKPdf	05 30 32.6	-0.6
NACGM	Naroch	143.96	334	ePKP	PKPdf	05 30 32.9	-0.5
OSL	Oslo	144.08	351	eP	PKPbc	05 30 32.3	-0.5
OSL				IAmb	IAmb	05 30 33.0	
	comp=Z,48nm,1.1s						
BER	Bergen	144.24	355	eP	PKPdf	05 30 34.0	+0.3
KONO	Kongsberg	144.52	351		PKPab	05 30 34.0	-0.6
KONO	Kongsberg	144.52	351	eP	PKPdf	05 30 33.9	-0.3
PABE	Paberze	144.60	336	eP	PKPab	05 30 34.9	-0.1
ODD1	Odda	144.60	354	eP	PKPab	05 30 34.5	-0.5
STRU	Stroemstad	144.88	350	i P	PKPbc	05 30 35.0	-0.3
STRU	Stroemstad	144.88	350	eP	PKPbc	05 30 34.9	-0.3
PBUR	Paburge	144.90	338	eP	PKPbc	05 30 35.3	-0.2
BLS5	Blasjo	145.10	354	eP	PKPdf	05 30 35.1	-0.2
KMY	Karmoy	145.41	355	eP	PKPdf	05 30 35.6	-0.1
AKASG	Malin Array Be	145.66	326	PKPbc	PKPbc	05 30 37.0	-0.8
	comp=Z,7.4nm,0.5s,baz=46,slow=4.2,SNR=38						
AKASG				SKPbc	SKiKP	05 33 28.9	-0.1
	comp=Z,1.1nm,0.6s,baz=42,slow=3.0,SNR=4.1						
HOMB	Homborsund	146.00	352	eP	PKPbc	05 30 38.6	0.0
SNART	Snartemo	146.09	353	eP	PKPbc	05 30 39.1	+0.2
SNART				IAmb	IAmb	05 30 39.8	
	comp=Z,48nm,1.1s						
LEWI	Lewis, Hebride	146.34	6	eP	PKPbc	05 30 38.2	-1.4
MLA1	Latheron	146.45	3	eP	PKPbc	05 30 39.3	-0.5
FABU	Falkenberg	146.52	347	i P	PKPbc	05 30 39.5	-0.6
DEL	Delary	146.77	346	i P	PKPbc	05 30 40.5	-0.3
KAC	Achnashellach	147.13	5	eP	PKPbc	05 30 41.5	-0.2
MCD	Coleburn Disti	147.18	3	eP	PKPbc	05 30 41.2	-0.6
MDO	Dochfour	147.25	4	eP	PKPbc	05 30 41.4	-0.7
KPL	Plockton	147.25	6	eP	PKPbc	05 30 41.7	-0.3
LUNU	Lund	147.63	346	i P	PKPbc	05 30 42.6	-0.5
SORM	Soroca	147.66	323	⇑P	PKPdf	05 30 38.9	-1.0
BSD	Bornholm Skovb	147.75	344	eP	PKPbc	05 30 43.4	0.0
BSD	Bornholm Skovb	147.75	344	i P	PKPbc	05 30 43.1	-0.3
DRUM	Mains of Drumt	147.88	2	eP	PKPbc	05 30 43.0	-0.7
BRTR	Keskin Array B	148.02	306	PKPbc	PKPbc	05 30 44.4	-0.4
	comp=Z,3.8nm,0.7s,baz=128,slow=3.1,SNR=17						
BRTR				PKPab	PKPab	05 30 49.2	-0.1
	comp=Z,2.7nm,0.7s,baz=118,slow=3.2,SNR=8.8						
INVG	Invergeldie, C	148.28	4	eP	PKPbc	05 30 44.4	-0.4
BEL	Belsk	148.64	335	ePKP	PKiKP	05 30 46.2	-0.6
PGBU	Glenifferbraes	148.87	5	eP	PKPbc	05 30 45.8	-0.4
ESY	Stoneypath	148.87	3	eP	PKPbc	05 30 45.5	-0.6
EBL	Broad Law	148.99	3	eP	PKPbc	05 30 46.1	-0.4
TLCR		149.03	318	⇓P	PKiKP	05 30 46.9	-0.9
TPGR	Topolog	149.44	318	⇑P	PKiKP	05 30 48.0	-0.8
CFR	Carcaliu	149.44	319	⇑P	PKPbc	05 30 47.8	-0.1
KWP	Kalwaria Pacla	149.50	330	ePKP	PKiKP	05 30 48.2	-0.6
TESR	Tescani	149.55	322	⇑P	PKPbc	05 30 46.3	-1.8
BIZ	Bicaz	149.59	323	⇑P	PKPbc	05 30 47.3	-0.9
BURAR	Bucovina Array	149.65	325	⇑P	PKPdf	05 30 45.1	+1.9
TIRR	Tirgusor	149.65	317	⇑P	PKiKP	05 30 48.3	-0.8
GAL1	Galloway	149.78	5	eP	PKPbc	05 30 48.0	-0.4
HARR	Harsova	149.82	318	⇓P	PKPbc	05 30 48.5	-0.3
VRI	Vrincioaia	149.88	321	⇑P	PKPbc	05 30 48.6	-0.3
PLOR	Plostina	149.93	321	⇑P	PKPbc	05 30 48.7	-0.5
EDMD	Edmundbyers	149.98	2	eP	PKPbc	05 30 48.4	-0.5
KOLS	Kolonicke sedl	150.19	330	ePKP	PKiKP	05 30 50.6	+0.4
IOMK	Kirk Michael	150.40	5	eP	PKPbc	05 30 49.3	-0.6
WIM	Isle of Man	150.50	5	eP	PKPbc	05 30 49.7	-0.5
MLR	Muntele Rosu	150.55	321	⇑P	PKiKP	05 30 51.1	-0.1
DOPR	Dopca	150.58	322	⇑P	PKiKP	05 30 50.7	-0.4
NIE	Niedzica	150.71	332	ePKP	PKiKP	05 30 51.7	+0.4
HPK	Haverah Park	150.87	2	eP	PKiKP	05 30 51.0	-0.3
KSP	Ksiaz	151.08	338	i PKPc		05 30 52.1	
VOIR		151.09	322	⇑P	PKiKP	05 30 52.2	-0.1
LANS	Liptovska Anna	151.26	333	ePKP	PKiKP	05 30 53.3	+0.9
WME	Myndd Eilian	151.28	5	eP	PKPbc	05 30 51.1	-0.8
OSTC	Ostas	151.35	338	⇑ePKP	PKiKP	05 30 52.4	-0.1
ARR	Arges	151.36	322	⇓P	PKiKP	05 30 53.5	+0.7
WLF1	Llynfaes	151.38	5	eP	PKPbc	05 30 51.3	-0.8
UPC	Upice	151.46	338	⇑ePKP	PKiKP	05 30 52.8	0.0
DRGR		151.47	326	⇑P	PKiKP	05 30 52.7	-0.3
DPC	Dobruska-Polom	151.49	338	⇑ePKP	PKPbc	05 30 52.0	-0.6
DPC				ePKPAB	PKPab	05 31 03.5	+0.2
MORC	Moravsky Berou	151.53	336	⇑P	PKiKP	05 30 52.6	-0.3
MORC	Moravsky Berou	151.53	336	ePKP	PKPbc	05 30 52.3	-0.4
CLL	Collm	151.68	342	ePKPdf	PKPdf	05 30 46.0	-0.1
CLL				⇑i PKPbc	PKiKP	05 30 52.9	-0.2
	comp=Z,24nm,0.8s						
CLL				⇓i PKPab	PKPab	05 31 03.9	-0.1
	comp=Z,10.0nm,0.9s						
CLL				epPKPbc	pPKPab	05 32 55.0	-1.4
FOEL	Foel Wylfa	151.86	4	eP	PKPbc	05 30 51.7	-1.6
PVCC	Panska Ves	151.92	340	⇑ePKP	PKiKP	05 30 53.9	+0.2
VYHS	Vyhne	152.04	333	ePKP	PKiKP	05 30 53.8	-0.2
JAVC	Velka Javorina	152.22	334	ePKP	PKiKP	05 30 55.4	+1.0
HLM1	Long Mynd	152.25	4	eP	PKPbc	05 30 53.6	-0.6
VRAC	Vranov	152.26	336	ePKP	PKiKP	05 30 54.0	-0.5
GZR	Gura Zlata	152.37	324	⇑P	PKiKP	05 30 54.5	-0.4
PRU	Pruhonice	152.39	339	⇑ePKP	PKiKP	05 30 54.3	-0.4
PRU				ePKPAB	PKPab	05 31 04.1	-3.0
KRUC	Moravsky	152.54	336	ePKP	PKiKP	05 30 54.9	-0.1
RSBS	Rosebush, Pemb	152.67	6	eP	PKPbc	05 30 53.8	-1.2
MCH1	Michaelchurch	152.76	4	eP	PKPbc	05 30 52.5	-2.8
BZS	Buzias	152.83	325	⇑P	PKiKP	05 30 55.4	-0.3
KHC	Kasperske Hory	153.45	340	⇑ePKP	PKiKP	05 30 56.6	-0.3
KHC				ePKPAB	PKPab	05 31 12.4	+0.8
CKRC	Cesky Krumlov	153.48	338	⇑ePKP	PKPbc	05 30 56.2	-0.8
CKRC				ePKPAB	PKPab	05 31 12.1	+0.3
GERES	GERESS Array B	153.66	339	PKP	PKPdf	05 30 46.5	-2.7
	comp=Z,0.3nm,0.2s,baz=46,slow=3.9,SNR=5.1						
GERES				PKPbc	PKPbc	05 30 56.2	-1.2
	comp=Z,2.0nm,0.8s,baz=52,slow=2.2,SNR=9.8						
GERES				PKPab	PKPab	05 31 12.9	+0.3
	comp=Z,1.1nm,0.7s,baz=20,slow=4.3,SNR=5.7						
CONA	Conrad Observa	153.68	335	eP	PKPdf	05 30 49.6	+0.4
	comp=Z,2.3nm,0.8s						
CONA				eP	PKiKP	05 30 57.5	0.0
	comp=Z,3.5nm,1.0s						
CONA				eP	PKPab	05 31 13.2	+0.5
	comp=Z,5.9nm,0.9s						
RONA	Rosalia, Austr	153.70	334	eP	PKPdf	05 30 50.3	+1.1
	comp=Z,5.2nm,1.1s						
RONA				eP	PKiKP	05 30 57.4	-0.1
	comp=Z,6.2nm,0.7s						
RONA				eP	PKPab	05 31 14.6	+1.8
	comp=Z,3.2nm,0.7s						
WATA	Walderalm	155.66	340	eP	PKPab	05 31 21.7	+0.4
	comp=Z,5.1nm,0.5s						
WTTA	Wattenberg	155.71	340	eP	PKPab	05 31 21.9	+0.4
	comp=Z,5.7nm,0.6s						
RETA	Reutte	155.76	342	eP	PKPab	05 31 22.0	+0.3
	comp=Z,4.9nm,0.9s						
MOTA	Moosalm	155.80	341	eP	PKPab	05 31 22.5	+0.6
	comp=Z,4.3nm,0.8s						
SQTA	Sankt Quirin	155.88	341	eP	PKPab	05 31 22.7	+0.5
	comp=Z,4.1nm,0.8s						
ABTA	Abfaltersbach	155.88	338	eP	PKPdf	05 30 51.6	-0.7
	comp=Z,1.5nm,0.5s						
ABTA				eP	PKPab	05 31 21.9	-0.4
	comp=Z,3.2nm,0.6s						
FETA	Feichten	156.20	341	eP	PKPdf	05 30 52.6	-0.1
	comp=Z,5.0nm,1.0s						
FETA				eP	PKPab	05 31 24.2	+0.5
	comp=Z,4.9nm,1.0s						
ESDC	Sonseca Array	164.83	11	PKPab	PKPab	05 32 01.6	+0.1
	comp=Z,5.3nm,1.1s,baz=343,slow=4.3,SNR=17						
TORD	Torodi Ar. Bea	168.27	189	PKP	PKPdf	05 31 04.7	-0.7
	comp=Z,1.5nm,0.8s,baz=103,slow=0.4,SNR=6.7						
TORD				PKPab	PKPab	05 32 17.1	0.0
	comp=Z,2.6nm,0.9s,baz=185,slow=3.4,SNR=8.7						

*IDC **01** 05:20:13.1±1.0, 32°.61N×131°.28E, h92^{km}±8^{km}, mb3.3/4, mbtmp3.8/8, Error ellipse: s-maj=25.7km s-min=20.9km az=44.0*

*NEIC **01** 05:20:14.9±1.6, 32°.73N±0°.07×131°.42E±0°.04, h92^{km}±8^{km}, mb4.1/3, Error ellipse: s-maj=10.4km s-min=5.4km az=174.0*

*JMA **01** 05:20:14.4±0.1, 32°.8N±0°.3×131°.4E±0°.5, h94^{km}, MV3.7/31, NORTHERN MIYAZAKI PREF*

JMA Felt I J1 at NORTHERN MIYAZAKI PREF .

ISC 01 05:20:14.2±0.8**, 32°.72N**±0°.06×**131°.41E**±0°.05**, h96**^{km}±6^{km}**, n30,** σ0^{s}.**95**/34**, mb3.7**/7**, 7D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKIT	Kitakata	0.10	160	⇓P	Pn	05 20 27.9	+0.2
JKIT				⇓S	Sn	05 20 37.9	+0.2
JIU3	Izumi3	0.53	252	⇓P	Pn	05 20 29.8	-0.1
JIU3				⇓eS	Sn	05 20 41.4	-0.1
JNU	Nakatsue	0.60	312	P	Pn	05 20 30.0	-0.5
	693nm,0.3s,baz=180,slow=23,SNR=1806						
JNU				S	Sn	05 20 42.5	-0.1
	1μm,0.5s,baz=205,slow=13,SNR=55						
JNU	Nakatsue	0.60	312		Pn	05 20 30.4	-0.1
JTZ	Takazaki	0.86	199	⇓P	Pn	05 20 33.2	+0.3
JTZ				⇓eS	Sn	05 20 47.6	+0.8
UWA2	Uwa jima 2	1.13	64	P	Pn	05 20 34.9	-1.0
UWA2				S	Sn	05 20 50.7	-1.5
JSU	Suzuyama	1.46	214	Pn	Pn	05 20 39.5	-0.3
JMN	Monobe	2.30	63	Pn	Pn	05 20 49.8	-0.8
JTU	Tsushima	2.47	318	Pn	Pn	05 20 51.9	-0.8
JHS	Saijyo	2.68	31	Pn	Pn	05 20 55.0	-0.6
TJN	Taejon	4.95	319	Pn	Pn	05 21 27.1	+0.9
INU	Inuyama	5.34	59	Pn	Pn	05 21 32.4	+0.9
KSRS	Korea Array	5.53	330	P	Pn	05 21 34.0	+0.1
	2.6nm,0.6s,baz=149,slow=14,SNR=15						
JGF	Kuroka	5.71	58	Pn	Pn	05 21 36.9	+0.4
SEHB	SEOHWA	6.11	336		Pn	05 21 43.1	+1.1
MAJO	Matsushiro	6.78	54	Pn	Pn	05 21 52.8	+1.7
MJAR	Matsushiro Arr	6.78	54	P	Pn	05 21 52.5	+1.4
	3.7nm,0.3s,baz=239,slow=13,SNR=6.5						
JHJ	Hachijo jima 2	7.05	84	P	Pn	05 21 55.1	+0.4
	110nm,0.4s,baz=95,slow=23,SNR=4.7						
JHJ2	Mitsune	7.08	85	Pn	Pn	05 21 55.7	+0.6
HNS	HongShan	14.46	293	⇓P	P	05 23 39.7	+1.6
HNS				pmax	pmax		
	comp=Z,14nm,0.8s						
KLR	Kul'dur	16.50	1	P	P	05 24 02.1	+1.4
	comp=Z,1.9nm,0.6s,baz=181,slow=6.4,SNR=3.5						
ULN	Ulaanbaatar	23.82	317	P	P	05 25 19.2	+0.7
ULN				IAmb	IAmb	05 25 19.3	
	comp=Z,3.1nm,0.6s						
SONM	Songino Array	24.19	316	P	P	05 25 20.7	-1.1
	comp=Z,2.7nm,0.8s,baz=123,slow=10,SNR=15						
	comp=Z,2.7nm,0.8s						
WRA	Warramunga Arr	52.44	177	P	P	05 29 15.3	-1.8
	comp=Z,0.7nm,1.1s,baz=352,slow=7.9,SNR=1.6						
	comp=Z,0.7nm,1.1s						
CTAO	Charters Tower	54.39	163		pP	05 29 43.5	-11
ABKAR	Akbulak array	54.42	310	P	P	05 29 30.0	-1.3
K20K	Telida	54.44	32	P	P	05 29 31.5	+0.3
K20K				IAmb	IAmb	05 29 38.9	
	comp=Z,3.1nm,1.1s						
ASAR	Alice Springs	56.12	177	P	P	05 29 42.9	-0.9
	comp=Z,0.1nm,0.3s,baz=9.0,slow=12,SNR=1.8						
	comp=Z,0.1nm,0.3s						
H23K	Yukon River	56.21	29	P	P	05 29 44.7	+0.8
H23K				IAmb	IAmb	05 30 09.5	
	comp=Z,2.1nm,1.2s						
NVAR	Mina Array Bea	84.06	48	P	P	05 32 34.4	-0.2
	comp=Z,0.2nm,0.4s,baz=303,slow=5.2,SNR=2.7						
	comp=Z,0.2nm,0.4s						

*NEIC **01** 05:51:24.9±1.9, 18°.1S±0°.1×172°.36W±0°.07, h10^{km}±1^{km}, mb5.0/148, Error ellipse: s-maj=20.8km s-min=11.1km az=188.0*

*BJI **01** 05:51:25.0±0.0, 17°.70S×172°.50W, h30^{km}, mb4.9/18, mB5.6/18, Ms4.9/8, Ms7 4.6/9*

*IDC **01** 05:51:25.3±0.5, 17°.77S×173°.07W, h0^{km}, mb4.6/18, mbtmp4.6/19, ML3.6/1, MS4.4/44, Error ellipse: s-maj=20.2km s-min=14.1km az=124.0*

*NOU **01** 05:51:28.8, 17°.60S×172°.37W, h49^{km}, mb5.3/16, Tonga Islands Region*

*GCMT **01** 05:51:30.9±0.3, 17°.98S±0°.03×172°.48W±0°.02, h22^{km}±1^{km}, MW5.0/70, Moment Tensor Solution. s37,c40; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.24±.21; $M_{\theta\theta}$0.56±.14; $M_{\phi\phi}$-2.81±.13; $M_{r\theta}$1.90±.30; $M_{\theta\phi}$-0.87±.09; $M_{\phi r}$1.35±.18; Best double couple: $M_0$3.57800×10^{16} NP1: ϕ_s40.00000°, δ68.00000°, λ117.00000°. NP2: ϕ_s167.00000°, δ34.00000°, λ42.00000°. Principal axes: T 3.5520, Plg59.0000°, Azm348.0000°; N 0.0460, Plg25.0000°, Azm209.0000°; P -3.6040, Plg18.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 05:51:26.1±0.3**, 17°.80S**±0°.05×**172°.52W**±0°.05**, h21**^{km}**, n543,** σ1^{s}.**95**/499**, mb5.0**/97**, MS4.5**/49**, 20C-8D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	2.77	118	P	Pn	05 52 08.1	-1.1
	baz=2.7,SNR=49						
NIUE				S	Sn	05 52 39.4	-2.7
	baz=2.7						
NIUE	Niue	2.77	118	Pn	Pn	05 52 05.8	-3.5
AFI	Afiamalu	3.94	11	Pn	Pn	05 52 22.7	-2.7
	22nm,0.3s,baz=208,slow=2.7,SNR=25						
AFI				Sn	Sn	05 53 06.2	-4.8
	93nm,0.3s,baz=190,slow=17,SNR=5.7						
AFI	Afiamalu	3.94	11	P	Pn	05 52 23.8	-1.6
AFI	Afiamalu	3.94	11	P	Pn	05 52 22.5	-2.9
LKBA	Tubou, Lakemba	6.00	265	P	Pn	05 52 56.6	+2.9
TAVE	Taveuni	7.14	278	P	Pn	05 53 13.1	+3.8
DGTI	Dogotuki	7.55	280	P	Pn	05 53 18.6	+3.6
MSVF	Nonsavu	8.98	269	Pn	Pn	05 53 34.6	-0.1
	1.2nm,0.3s,baz=114,slow=11,SNR=42						
MSVF				LR	LR	05 56 21.0	
	comp=Z,3μm,18.9s,baz=112,slow=35						
MSVF	Nonsavu	8.98	269	Pn	Pn	05 53 38.2	+3.5
MSVF	Nonsavu	8.98	269	P	Pn	05 53 38.2	+3.5
RAO	Raoul Island	12.42	202	LR	LR	05 58 21.5	
	comp=Z,638nm,21.4s,baz=25,slow=34						
RAR	Rarotonga	12.49	108	Pn	Pn	05 54 21.9	-0.7
	8.1nm,0.3s,baz=268,slow=8.5,SNR=8.8						
RAR	Rarotonga	12.49	108	Pn	Pn	05 54 20.9	-1.8
RAR	Rarotonga	12.49	108	P	Pn	05 54 22.5	-0.2
MARNC	Mare, Loyalty	18.68	256	P	P	05 55 42.7	-0.2
PINNC	Pines Island,	19.39	252	P	P	05 55 50.0	-0.8
PINNC				IAmb	IAmb	05 55 57.4	
	comp=Z,189nm,1.5s						
DZM	Mont Dzumac	20.22	254	Pn	P	05 55 58.8	-1.1
	comp=Z,0.2nm,0.3s,baz=279,slow=17,SNR=2.5						
	comp=Z,7.5nm,1.0s						
DZM	Mont Dzumac	20.22	254	eP	Pn	05 56 02.6	+0.7
	comp=Z,116nm,1.5s						
DZM				eLR	LR	06 00 54.6	
	comp=Z,508nm,23.4s						
DZM	Mont Dzumac	20.22	254	P	P	05 56 00.3	+0.3
DZM	Mont Dzumac	20.22	254	P	P	05 56 00.4	+0.5
PAE	Paea	21.85	93	eT	T	06 18 34.0	
	comp=Z,3.9nm,0.3s						
PPT2	Papeete2	21.86	93	eP	P	05 56 14.3	-3.4
	comp=Z,195nm,28.5s						
PPT2	Papeete2	21.86	93	eP	P	05 56 14.8	-2.9
	comp=Z,161nm,33.5s						
PPT2				eLR	LR	06 01 27.0	
	comp=Z,628nm,21.8s						
PPT2				eLR	LR	06 01 27.4	
	comp=Z,570nm,26.5s						
PPT2	Papeete2	21.86	93	eT	T	06 18 39.3	
	comp=Z,3.2nm,0.3s						
PPT	Papeete	21.86	93	LR	LR	06 03 20.2	
	comp=Z,978nm,18.1s,baz=259,slow=32						
URZ	Urewera	22.31	202	P	P	05 56 23.1	+0.9
	comp=Z,72nm,0.5s,baz=120,slow=23,SNR=94						
	comp=Z,72nm,0.5s						
URZ	Urewera	22.31	202	P	P	05 56 24.3	+2.1
	comp=Z,485nm,0.5s						
PRRZ	Plateau Road	22.78	203	P	P	05 56 29.1	+1.9
RAHZ	Arahi	22.90	201	P	P	05 56 30.4	+1.8
MTHZ	Maungataniwha	22.93	202	P	P	05 56 30.0	+1.2
TLZ	Tolley Road	22.96	205	P	P	05 56 31.9	+2.7
MRHZ	Matea Rd	23.07	202	P	P	05 56 31.8	+1.5
NMHZ	Naumai	23.16	201	P	P	05 56 33.5	+2.2
BKZ	Black Stump Fm	23.33	202	P	P	05 56 34.4	+1.4
BKZ	Black Stump Fm	23.33	202	P	P	05 56 34.5	+1.6
RATZ	Rangitukua	23.34	204	P	P	05 56 35.2	+2.2
HIZ	Hauiti	23.39	206	P	P	05 56 35.9	+2.4
MCHZ	McNeill Hill	23.51	201	P	P	05 56 36.6	+2.0
TMVZ	Te Maari	23.58	203	P	P	05 56 37.5	+2.0
KWHZ	Kaweka Forest	23.59	202	P	P	05 56 38.2	+2.7
ETVZ	East Tongariro	23.59	203	P	P	05 56 37.1	+1.5
FWVZ	Far West T-bar	23.76	203	P	P	05 56 37.8	+0.5
KAHZ	Kahuranaki	23.76	201	P	P	05 56 38.7	+1.6
WHVZ	Whangaehu Hut	23.77	203	P	P	05 56 38.3	+0.9
BHHZ	Black Hill Sta	23.77	202	P	P	05 56 36.9	-0.4
WNVZ	Wahianoa	23.80	203	P	P	05 56 37.3	-0.3
MOVZ	Moawhango	23.82	203	P	P	05 56 38.8	+1.1
PKVZ	Pokaka	23.87	204	P	P	05 56 39.1	+1.0
VRZ	Vera Road	23.95	205	P	P	05 56 41.1	+2.3
PXZ	Pawanui	23.98	200	P	P	05 56 33.7	-5.4
PNHZ	Pukenui	24.10	202	P	P	05 56 41.9	+1.6
PRHZ	Porangahau	24.27	200	P	P	05 56 45.6	+3.8
TSZ	Takapari Road	24.31	202	P	P	05 56 44.4	+2.1
NEZ	North Egmont	24.35	206	P	P	05 56 46.4	+3.7
DVHZ	Dannevirke	24.45	201	P	P	05 56 46.1	+2.5
ANWZ	Angora Road	24.50	201	P	P	05 56 48.4	+4.6
BFZ	Birch Farm	24.77	201	P	P	05 56 48.8	+2.5
MRZ	Mangatainoka R	24.98	202	P	P	05 56 50.1	+1.8
HOWZ	Holdsworth Sta	25.21	202	P	P	05 56 53.4	+3.1
OGWZ	Otaki Gorge	25.27	202	P	P	05 56 52.0	+1.2
KIW	Kapiti Island	25.40	203	P	P	05 56 54.6	+2.6
DUWZ	D'Urville Isla	25.72	204	P	P	05 56 57.5	+2.5
PLWZ	Palliser	25.90	201	P	P	05 57 00.5	+3.9
TCW	Tory Channel	25.94	203	P	P	05 56 58.6	+1.7
TUWZ	Tuamarina	26.25	203	P	P	05 57 02.6	+2.8
NNZ	Nelson	26.29	205	P	P	05 57 01.9	+1.8
TKNZ	Takaka Hill	26.30	205	P	P	05 56 58.6	-1.6
QRZ	Quartz Range	26.31	206	P	P	05 57 04.6	+4.4
QRZ	Quartz Range	26.31	206	P	P	05 57 03.4	+3.1
MRNZ	Matariki Terra	26.69	205	P	P	05 57 08.6	+4.9
THZ	Tophouse	26.94	205	P	P	05 57 10.8	+4.8
KHZ	Kahutara	27.26	203	P	P	05 57 11.8	+3.0
HNR	Honiara	27.99	284	LR	LR	06 06 37.5	
	comp=Z,450nm,19.1s,baz=118,slow=33						
RPZ	Rata Peaks	29.32	205	P	P	05 57 29.8	+2.6
	comp=Z,11nm,0.4s,baz=337,slow=2.8,SNR=17						
	comp=Z,11nm,0.4s						
TAOE	Nuku Hiva Isla	32.69	78	eLR	LR	06 06 26.8	
	comp=Z,290nm,21.2s						
EIDS	Eidsvold	34.59	251	P	P	05 58 12.1	-1.6
ARMA	Armidale	34.90	242	P	P	05 58 14.8	-1.6
	baz=35						
KRVT	Keravat (AS076	37.19	287	LR	LR	06 12 17.9	
	comp=Z,491nm,18.9s,baz=267,slow=34						
CTAO	Charters Tower	38.99	260	P	P	05 58 49.5	-1.8
PMG	Port Moresby	39.99	277	LR	LR	06 13 58.9	
	comp=Z,392nm,18.0s,baz=54,slow=34						
PTCN	Pitcairn Islan	40.02	108	P	P	05 58 57.9	-1.9
CMSA	Cobar Meteorol	40.12	242	P	P	05 58 57.6	-2.9
	baz=40,SNR=5.2						
MTSU	Mount Surprise	40.99	263	P	P	05 59 05.9	-1.9
	baz=41,SNR=4.1						
TOO	Toolangi	41.65	233	P	P	05 59 11.4	-1.8
	baz=42						
COEN	Coen	42.71	269	P	P	05 59 20.0	-2.0
	baz=43,SNR=7.6						
COEN	Coen	42.71	269	P	P	05 59 20.5	-1.5
STKA	Stephens Creek	43.62	242	P	P	05 59 26.4	-2.8
	comp=Z,5.0nm,0.9s,baz=91,slow=10,SNR=5.2						
STKA				LR	LR	06 17 13.2	
	comp=Z,450nm,18.3s,baz=83,slow=36						
	comp=Z,5.0nm,0.9s						
STKA	Stephens Creek	43.62	242	P	P	05 59 29.1	-0.1
MMPI	Merauke	46.68	275	P	P	05 59 50.6	-3.1
	comp=Z,16nm,0.6s						
BBOO	Buckleboo	48.38	242	P	P	06 00 04.4	-2.3
WR0	Warramunga Arr	49.97	259	P	P	06 00 16.9	-2.1
WR0				IAmb	IAmb	06 00 22.4	
	comp=Z,24nm,1.4s						
WB0	Warramunga Arr	50.13	259	P	P	06 00 18.0	-2.3
WB0				IAmb	IAmb	06 00 28.8	
	comp=Z,36nm,1.4s						
WB2	Warramunga Arr	50.14	259	P	P	06 00 17.3	-3.1
	baz=50						
WB2	Warramunga Arr	50.14	259	P	P	06 00 18.0	-2.4
WB2				IAmb	IAmb	06 00 31.7	
	comp=Z,15nm,0.9s						
WRAB	Tennant Creek	50.15	259	P	P	06 00 17.8	-2.6
WRAB				IAmb	IAmb	06 00 31.1	
	comp=Z,13nm,0.8s						
WRA	Warramunga Arr	50.16	259	P	P	06 00 17.2	-3.3
	comp=Z,7.9nm,0.7s,baz=97,slow=6.7,SNR=47						
WRA				PcP	PcP	06 01 41.8	+2.0
	comp=Z,5.3nm,1.0s,baz=87,slow=4.0,SNR=4.7						
WRA				LR	LR	06 21 58.0	
	comp=Z,463nm,18.2s,baz=122,slow=37						
	comp=Z,7.9nm,0.7s						
WRA	Warramunga Arr	50.16	259	P	P	06 00 18.0	-2.5
AS31	Alice Springs	50.21	254	P	P	06 00 18.7	-2.2
ASAR	Alice Springs	50.21	254	P	P	06 00 18.4	-2.5
	comp=Z,21nm,0.8s,baz=90,slow=7.7,SNR=128						
ASAR				PcP	PcP	06 01 41.8	+1.8
	comp=Z,7.0nm,0.8s,baz=105,slow=3.4,SNR=5.9						
ASAR				S	S	06 07 25.2	-6.9
	comp=Z,1.2nm,0.9s,baz=90,slow=15,SNR=5.4						
ASAR				LR	LR	06 18 42.2	
	comp=Z,330nm,20.9s,baz=130,slow=33						
	comp=Z,21nm,0.8s						
GUMO	Guam	52.35	304	LR	LR	06 21 21.9	
	comp=Z,183nm,18.4s,baz=125,slow=35						
KDU	Kakadu	53.16	267	P	P	06 00 41.1	-1.8
	baz=53,SNR=4.2						
MTN	Manton Dam	54.40	267	P	P	06 00 50.5	-1.6
MTN				IAmb	IAmb	06 01 02.0	
	comp=Z,12nm,0.8s						
WRKA	Warakurna	55.20	252	P	P	06 00 55.8	-2.0
	baz=55,SNR=4.5						
KNRA	Kununurra	56.07	263	P	P	06 01 01.6	-2.5
	baz=56,SNR=4.5						
KNRA	Kununurra	56.07	263	P	P	06 01 02.9	-1.2
KNRA				IAmb	IAmb	06 01 13.8	
	comp=Z,19nm,0.9s						
FAKI	Fak Fak	56.08	279	P	P	06 01 03.5	-0.7
FAKI	Fak Fak	56.08	279	P	P	06 01 00.8	-3.4
	comp=Z,11nm,1.1s						
SWI	Sorong	57.71	281	P	P	06 01 14.5	-1.2
FITZ	Fitzroy Crossi	58.56	259	LR	LR	06 26 26.9	
	comp=Z,362nm,18.2s,baz=102,slow=36						
FITZ	Fitzroy Crossi	58.56	259	P	P	06 01 20.7	-1.0
	baz=59						
FITZ	Fitzroy Crossi	58.56	259	P	P	06 01 21.3	-0.4
RPN	Rapa Nui	58.61	111	LR	LR	06 21 56.6	
	comp=Z,380nm,18.6s,baz=252,slow=31						
VNDA	Vanda	61.09	186	P	P	06 01 41.0	+2.9
	comp=Z,3.0nm,0.8s,baz=22,slow=8.6,SNR=6.5						
VNDA				LR	LR	06 24 19.5	
	comp=Z,152nm,20.0s,baz=11,slow=32						
	comp=Z,3.0nm,0.8s						
VNDA	Vanda	61.09	186	P	P	06 01 36.5	-1.6
VNDA				IAmb	IAmb	06 01 52.3	
	comp=Z,12nm,1.2s						
SOEI	Soe	61.68	268	P	P	06 01 43.2	0.0
SOEI	Soe	61.68	268	P	P	06 01 47.3	+4.1
PSA00	Pilbara Seismi	63.35	254	P	P	06 01 53.2	-1.0
MBWA	Marble Bar	63.52	255	P	P	06 01 54.5	-0.8
BLDU	Ballidu	64.88	244	P	P	06 02 03.2	-0.9
	baz=65,SNR=4.7						
DAV	Davao City (W)	65.91	286	LR	LR	06 30 09.1	
	comp=Z,150nm,18.0s,baz=168,slow=36						
KAPI	Kappang	67.28	272	LR	LR	06 30 29.9	
	comp=Z,109nm,18.1s,baz=109,slow=35						
TOLI2	Tolitoli	68.22	279	P	P	06 02 26.0	+0.3
JGF	Kuroka	71.23	319	P	P	06 02 45.7	+1.8
MJAR	Matsushiro Arr	71.31	320	P	P	06 02 43.9	-0.4
	comp=Z,4.5nm,0.8s,baz=163,slow=5.3,SNR=10						
MJAR				LR	LR	06 28 38.0	
	comp=Z,168nm,21.5s,baz=118,slow=32						
	comp=Z,4.5nm,0.8s						
MAJO	Matsushiro	71.31	320	P	P	06 02 45.9	+1.6
MAJO				IAmb	IAmb	06 02 49.0	
	comp=Z,9.7nm,0.8s						
UNV	Unalaska Valle	71.54	4	P	P	06 02 44.7	-0.4
	baz=186						
JAGI	Jajag, Banyuwa	71.64	267	P	P	06 02 45.6	-1.2
SCZ2	Santa Cruz Isl	72.03	44	P	P	06 02 46.0	-2.7
	baz=233						
SCI2	San Clemente I	72.16	46	P	P	06 02 46.5	-2.9
	baz=234						
JSD	Sado	72.25	321	P	P	06 02 51.3	+1.5
JSD				IAmb	IAmb	06 03 30.1	
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	72.25	180	LR	LR	06 32 04.1	
	comp=Z,289nm,18.9s,baz=41,slow=34						
QSPA	South Pole Qui	72.25	180	P	P	06 02 49.0	-0.7
QSPA				IAmb	IAmb	06 03 28.6	
	comp=Z,20nm,1.2s						
JMN	Monobe	72.35	315	P	P	06 02 50.6	+0.1
SAO	San Andreas Ge	72.57	41	P	P	06 02 53.1	+1.4
SAO				IAmb	IAmb	06 03 24.6	

comp=Z,15nm,1.2s
JOW Kunigami 72.58 306 LR LR 06 29 11.2
comp=Z,196nm,21.9s,baz=135,slow=31
BBGB Big Mountain B 72.71 41 P **P** **06 02 52.6 -0.2**
FMP Fort Macarthur 72.76 45 P **P** **06 02 52.8 -0.2**
baz=234
MURC Murrieta 73.44 46 P **P** **06 02 57.4 +0.3**
baz=235
BFSC Mount Baldy Ra 73.50 45 P **P** **06 02 58.4 +0.9**
baz=234
VES Vestal, Richgr 73.50 43 P **P** **06 02 59.4 +2.1**
baz=233
MONP2 Monument Peak 73.57 47 P **P** **06 02 59.3 +1.2**
baz=235
LPIG La Paz 73.59 57 LR LR 06 31 58.3
comp=Z,276nm,18.3s,baz=205,slow=33
JHS Saijyo 73.61 316 P **P** **06 02 59.2 +1.2**
JHS IAmb IAmb 06 03 03.7
comp=Z,12nm,0.8s
EDW2 Edwards Air Fo 73.65 44 P **P** **06 03 00.7 +2.3**
baz=234
IKP In-Ko-Pah, Jac 73.65 47 P **P** **06 02 60.0 +1.5**
baz=236
ISA Isabella, Lake 73.80 43 P **P** **06 02 58.6 -0.6**
baz=233
PFO Pinyon Flats O 73.95 46 LR LR 06 30 32.0
comp=Z,297nm,18.7s,baz=242,slow=32
PFO Pinyon Flats O 73.95 46 P **P** **06 03 00.8 +0.6**
PFO Pinyon Flats O 73.95 46 P **P** **06 03 01.1 +0.9**
baz=235
TPFO Pinon Flats 73.95 46 P **P** **06 03 00.4 +0.2**
baz=235
CMB Columbia Colle 74.02 40 P **P** **06 03 02.8 +2.4**
PMD Palm Desert 74.03 46 P **P** **06 03 01.2 +0.7**
PMD IAmb IAmb 06 03 06.6
comp=Z,4.5nm,1.1s
JNU Nakatsue 74.05 313 P **P** **06 03 01.4 +0.8**
comp=Z,11nm,0.8s,baz=89,slow=4.1,SNR=14
comp=Z,11nm,0.8s
JNU Nakatsue 74.05 313 P **P** **06 03 02.0 +1.3**
BELC Belle Mtn. Jos 74.49 46 P **P** **06 03 04.3 +1.0**
baz=235
CWC Cottonwood Cre 74.51 43 P **P** **06 03 03.9 +0.4**
baz=233
MDPB Devils Postpil 74.59 41 P **P** **06 03 05.4 +1.4**
MDPB IAmb IAmb 06 03 10.0
comp=Z,20nm,1.7s
BC3 Big Chuckawall 74.67 47 P **P** **06 03 05.0 +0.6**
baz=236
MPMC Manual Prospec 74.67 44 P **P** **06 03 05.7 +1.2**
baz=234,SNR=12
GSC Goldstone, Bar 74.69 44 P **P** **06 03 06.0 +1.6**
GSC Goldstone, Bar 74.69 44 P **P** **06 03 05.5 +1.1**
baz=235
HEC Hector,Ludlow 74.73 45 P **P** **06 03 05.5 +0.9**
baz=235
MLAC Mammoth, Mammo 74.74 42 P **P** **06 03 06.0 +1.2**
baz=233
L02F Cave Junction 74.79 36 P **P** **06 03 06.3 +1.6**
baz=228
PETK Petropavlovsk- 75.16 342 P **P** **06 03 08.7 +2.1**
comp=Z,4.2nm,0.8s,baz=169,slow=10.0,SNR=12
PETK LR LR 06 34 38.5
comp=Z,136nm,18.8s,baz=160,slow=35
comp=Z,4.2nm,0.8s
PETK Petropavlovsk- 75.16 342 P **P** **06 03 08.2 +1.6**
GMRC Granite Mounta 75.16 45 P **P** **06 03 08.1 +0.9**
baz=236
IRM Iron Mountain 75.16 46 P **P** **06 03 08.0 +0.9**
baz=236
BEKR Beckworth 75.18 39 P **P** **06 03 09.8 +2.6**
BEKR IAmb IAmb 06 03 34.6
comp=Z,17nm,1.5s
LCH Last Change Ra 75.26 42 P **P** **06 03 10.4 +2.6**
LCH IAmb IAmb 06 04 12.9
comp=Z,21nm,1.9s
GRAC Grapevine Rang 75.30 43 P **P** **06 03 08.9 +1.0**
baz=234,SNR=7.4
YERR Yerington 75.31 40 P **P** **06 03 08.5 +0.4**
YERR IAmb IAmb 06 03 27.1
comp=Z,16nm,1.4s
FURC Furnace Creek, 75.32 43 P **P** **06 03 08.9 +1.0**
baz=234
LHV Little Huntoon 75.33 41 P **P** **06 03 08.7 +0.8**
LHV IAmb IAmb 06 03 28.1
comp=Z,19nm,1.2s
SHOC Shoshone, Teco 75.38 44 P **P** **06 03 10.8 +2.5**
baz=235
RYN Ryan 75.54 41 P **P** **06 03 08.8 -0.5**
RYN IAmb IAmb 06 03 28.4
comp=Z,15nm,1.4s
NVAR Mina Array Bea 75.56 41 P **P** **06 03 13.8 +4.3**
comp=Z,4.6nm,0.8s,baz=227,slow=10,SNR=39
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 75.56 41 P **P** **06 03 08.8 -0.7**
214A Organ Pipe Nat 75.62 49 P **P** **06 03 11.7 +1.9**
baz=238
PAHR Pah Rah Range 75.67 40 P **P** **06 03 10.2 +0.1**
PDMCI Parker Dam,Lak 75.94 47 P **P** **06 03 13.9 +2.4**
baz=237
TPNV Topopah Spring 76.00 43 P **P** **06 03 14.5 +2.4**
baz=235
TPH Tonopah 76.03 42 P **P** **06 03 12.3 +0.1**
KVN Kaiserville 76.06 41 P **P** **06 03 13.3 +1.0**
J04D Umpqua Nationa 76.34 35 P **P** **06 03 16.0 +2.2**
baz=229
R17K Ugashik Creek 76.35 9 P **P** **06 03 16.3 +3.0**
baz=196
OHAK Old Harbor 76.45 11 P **P** **06 03 16.4 +2.6**
baz=199
MOD Modoc Plateau 76.50 37 P **P** **06 03 14.1 -0.6**
MOD IAmb IAmb 06 03 33.7
comp=Z,12nm,1.1s
K05A Summer Lake 76.68 36 P **P** **06 03 17.5 +1.7**
K05A IAmb IAmb 06 03 35.7
comp=Z,19nm,1.0s
J05D Fort Rock, OR 76.85 36 P **P** **06 03 17.0 +0.4**
baz=230
Q17K Contact Creek 77.03 9 P **P** **06 03 17.5 +0.3**
baz=196
R11A Troy Canyon, C 77.24 43 P **P** **06 03 15.1 -3.9**
baz=235,SNR=5.4
TUC Tucson 77.27 50 P **P** **06 03 16.4 -2.8**
baz=239
BMN Battle Mountai 77.43 40 P **P** **06 03 20.5 +0.5**
WVOR Wild Horse Val 77.80 38 P **P** **06 03 22.6 +0.6**
WVOR IAmb IAmb 06 03 28.1
comp=Z,30nm,1.8s
P17K Kvichak River 77.84 8 P **P** **06 03 21.0 -0.7**
baz=195
O16K Kokwok River B 78.02 7 P **P** **06 03 23.2 +0.7**
baz=194
P18K Big Mountain, 78.21 9 P **P** **06 03 23.6 -0.1**
baz=197
O17K Koliganek Bris 78.32 8 P **P** **06 03 24.9 +0.7**
baz=195
I07A Izee 78.33 36 P **P** **06 03 26.5 +1.6**
SPR3 Spring Creek 3 78.42 43 P **P** **06 03 26.7 +1.0**
SPR3 IAmb IAmb 06 03 44.2
comp=Z,8.2nm,1.1s
KSRS Korea Array 78.45 316 P **P** **06 03 28.6 +3.1**
comp=Z,5.1nm,0.9s,baz=126,slow=5.9,SNR=22
KSRS LR LR 06 33 02.1
comp=Z,58nm,21.4s,baz=110,slow=32
J08A Circle Bar Ran 78.46 37 P **P** **06 03 25.2 -0.4**
J08A IAmb IAmb 06 04 10.3
comp=Z,14nm,1.4s
PSUT Pine Spring 78.46 43 P **P** **06 03 26.2 +0.3**
KSAR Wonju Array Be 78.47 316 P **P** **06 03 27.7 +2.1**
WUAZ Wupatki 78.51 47 P **P** **06 03 24.3 -1.8**
baz=238
O18K Koktuh Hills 78.66 9 P **P** **06 03 28.6 +2.4**
O18K IAmb IAmb 06 04 04.5
comp=Z,26nm,1.3s
O18K Koktuh Hills 78.66 9 P **P** **06 03 24.8 -1.4**
baz=197
ELK Elko 78.83 41 P **P** **06 03 29.5 +1.6**
ILSW Iliamna Southw 79.10 10 P **P** **06 03 30.6 +1.9**
ILSW IAmb IAmb 06 03 32.5
comp=Z,22nm,1.0s
O19K Port Alsworth 79.11 9 P **P** **06 03 28.6 0.0**
baz=197
O20K Slope Mountain 79.28 10 P **P** **06 03 29.7 +0.1**
baz=199
BRSE Bradley Lake S 79.28 11 P **P** **06 03 30.7 +1.1**
baz=201
N18K Kilae Creek 79.35 8 P **P** **06 03 30.5 +0.6**
baz=196
G08A Pilot Rock 79.39 35 P **P** **06 03 31.4 +0.7**
121A Cookes Peak, D 79.58 51 P **P** **06 03 31.8 -0.3**
baz=241
BBB Bella Bella 79.66 26 LR LR 06 33 33.1
comp=Z,202nm,18.7s,baz=216,slow=32
N19K Bonanza Creek 79.68 9 P **P** **06 03 33.1 +1.2**
LTY Liberty 79.73 33 P **P** **06 03 33.1 +0.7**
LTY IAmb IAmb 06 04 03.7
comp=Z,28nm,1.9s
HAWA Hanford 79.77 34 P **P** **06 03 33.6 +1.0**
USRK Ussuriysk Ar. 79.80 323 LR LR 06 33 57.3
comp=Z,125nm,20.0s,baz=224,slow=32
SEW Seward 79.86 12 P **P** **06 03 32.9 +0.2**
baz=202
MFID Camas Ranch 80.03 38 P **P** **06 03 33.7 -0.5**
BMO Blue Mountains 80.04 36 P **P** **06 03 34.2 0.0**
DUG Dugway, Tooele 80.06 42 P **P** **06 03 35.5 +1.1**
DUG Dugway, Tooele 80.06 42 P **P** **06 03 34.8 +0.4**
baz=236
CRAG Craig 80.25 22 P **P** **06 03 35.7 +0.8**
baz=218
SPU Mount Spurr 80.41 10 P **P** **06 03 37.7 +1.9**
E09A Wood Farm, Sta 80.59 35 IAmb IAmb 06 03 42.5
comp=Z,20nm,1.5s
HIN Hinchinbrook I 80.72 13 P **P** **06 03 39.4 +2.1**
HIN IAmb IAmb 06 03 41.4
comp=Z,22nm,1.0s
M19K Big River Lodg 80.74 9 P **P** **06 03 38.0 +0.5**
baz=197
KAIM Kayak Island 80.75 14 P **P** **06 03 38.6 +1.1**
baz=207
PWL Port Wells 80.77 12 P **P** **06 03 39.3 +1.7**
PWL Port Wells 80.77 12 P **P** **06 03 39.7 +2.1**
baz=203,SNR=6.0
SIT Sitka 80.79 20 P **P** **06 03 38.6 +0.9**
baz=216
M20K Styx River 80.90 9 P **P** **06 03 38.1 -0.3**
baz=198
L19K White Mountain 80.94 8 P **P** **06 03 35.5 -3.1**
baz=197
HVU Hansel Valley 80.95 41 IAmb IAmb 06 04 07.7
comp=Z,19nm,1.6s
HLID Hailey 80.96 39 IAmb IAmb 06 04 06.7
comp=Z,26nm,1.9s
HLID Hailey 80.96 39 P **P** **06 03 38.8 -0.5**
baz=235,SNR=9.5
EYAK Cordova Ski Ar 81.02 13 P **P** **06 03 37.7 -1.2**
baz=206
GLI Glacier Island 81.04 12 P **P** **06 03 41.0 +2.0**
GLI IAmb IAmb 06 03 42.9
comp=Z,17nm,1.0s
GLI Glacier Island 81.04 12 P **P** **06 03 37.8 -1.2**
baz=204,SNR=6.7
B08A Colville Reser 81.12 33 P **P** **06 03 41.7 +1.9**
B08A IAmb IAmb 06 04 06.2
comp=Z,19nm,1.6s
SKT Skwentna 81.25 10 P **P** **06 03 39.0 -1.1**
baz=200
KNK Knik Glacier 81.26 11 P **P** **06 03 39.7 -0.5**
baz=203
TXAR Lajitas Array 81.26 55 P P 06 03 46.3 +5.2
comp=Z,1.1nm,0.8s,baz=224,slow=3.8,SNR=9.2
TXAR LR LR 06 34 48.7
comp=Z,162nm,18.2s,baz=242,slow=32
comp=Z,1.1nm,0.8s
WRAK Wrangell Islan 81.27 21 P **P** **06 03 40.8 +0.5**
baz=216
PMR Palmer 81.30 11 P **P** **06 03 42.7 +2.3**
PMR IAmb IAmb 06 03 48.6
comp=Z,17nm,1.4s
PMR Palmer 81.30 11 P **P** **06 03 39.9 -0.5**
baz=202,SNR=5.2
C09A Chrisman Ranch 81.33 34 P **P** **06 03 43.6 +2.7**
C09A IAmb IAmb 06 03 46.7
comp=Z,25nm,1.6s
LLLB Lillooet 81.33 30 IAmb IAmb 06 04 07.2
comp=Z,32nm,1.7s
L20K Farewell, AK 81.36 9 P **P** **06 03 41.6 +0.8**
baz=198
GHO Glory Hole Cre 81.50 11 P **P** **06 03 43.8 +2.2**
GHO IAmb IAmb 06 03 51.8
comp=Z,10nm,0.9s
TTA Tatalina 81.51 8 P **P** **06 03 41.4 -0.2**
baz=196
DIV Divide 81.54 13 IAmb IAmb 06 03 45.9
comp=Z,18nm,0.9s
MESA MESA 81.56 15 P **P** **06 03 43.5 +1.4**
baz=209
BMRM Bremner River 81.64 13 P **P** **06 03 43.4 +1.1**
BMRM Bremner River 81.64 13 P **P** **06 03 43.0 +0.7**
baz=207
SML Sawmill 81.65 11 P **P** **06 03 42.7 +0.4**
baz=203
PMSA Palmer Station 81.65 156 LR LR 06 32 51.2
comp=Z,273nm,19.1s,baz=256,slow=30
ANMO Albuquerque 81.71 49 LR LR 06 35 18.3
comp=Z,211nm,18.2s,baz=238,slow=32
ANMO Albuquerque 81.71 49 P **P** **06 03 41.2 -2.2**
baz=242
M23K Glacier View 81.75 12 P **P** **06 03 42.9 +0.1**
baz=204
PNL Peninsula 81.77 16 P **P** **06 03 43.2 +0.3**
baz=212,SNR=5.9
CRQE Cirque 81.79 14 P **P** **06 03 43.1 -0.1**
baz=208
CUT Chulitna 81.86 10 P **P** **06 03 43.2 -0.1**
baz=201
SCM Sheep Creek Mo 81.86 12 P **P** **06 03 44.8 +1.3**
SCM IAmb IAmb 06 03 47.6
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 81.86 12 P **P** **06 03 42.8 -0.6**
baz=204,SNR=7.1
PINM Pinnacle 81.92 16 P **P** **06 03 43.4 -0.4**
baz=211
BCPM Bancas Point 81.95 16 P **P** **06 03 44.7 +0.8**
GRNC Granite Creek 82.09 15 P **P** **06 03 45.4 +0.5**
GRNC IAmb IAmb 06 04 10.4
comp=Z,12nm,1.0s
VRDI Verde Repeater 82.13 14 P **P** **06 03 46.2 +1.1**
VRDI IAmb IAmb 06 03 49.4
comp=Z,9.8nm,1.0s
K20K Telida 82.17 8 P **P** **06 03 47.4 +2.4**
K20K IAmb IAmb 06 04 01.1
comp=Z,18nm,1.5s
K20K Telida 82.17 8 P **P** **06 03 44.5 -0.5**
baz=198
N25K Chitina, Valde 82.22 13 P **P** **06 03 46.4 +1.0**
N25K IAmb IAmb 06 03 53.8
comp=Z,11nm,1.0s
N25K Chitina, Valde 82.22 13 P **P** **06 03 45.3 0.0**
baz=207
NEW Newport 82.22 34 LR LR 06 36 58.8
comp=Z,583nm,18.0s,baz=228,slow=33
NEW Newport 82.22 34 P **P** **06 03 43.3 -2.4**
baz=232
GLB Galbraith Lake 82.24 13 IAmb IAmb 06 03 51.3
comp=Z,9.2nm,0.9s
NJ2 Nanjing 82.28 307 *e*P **P** **06 03 49.3 +3.1**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
M24K Tolsona, Glenn 82.34 12 P **P** **06 03 47.7 +1.7**
M24K Tolsona, Glenn 82.34 12 P **P** **06 03 47.0 +1.0**
baz=205
LOGN Logan Glacier 82.36 15 P **P** **06 03 48.5 +2.2**
LOGN IAmb IAmb 06 03 50.7
comp=Z,13nm,1.0s
MCARA McCarthy VSAT 82.37 14 P **P** **06 03 47.7 +1.7**
baz=208
CTG Chitna Glacier 82.40 15 P **P** **06 03 49.0 +2.6**
baz=210
CTGM Chitina Glacie 82.40 15 IAmb IAmb 06 03 50.9
comp=Z,12nm,0.9s
BARN Barnard Glacie 82.40 15 P **P** **06 03 48.0 +1.5**
BARN IAmb IAmb 06 03 51.1
comp=Z,15nm,1.0s
T35M Bob Quinn 82.44 22 P **P** **06 03 48.2 +1.7**
baz=220
PLBC Pleasant Camp 82.44 18 P **P** **06 03 48.3 +1.9**
baz=214,SNR=6.1
WAT6 Susitna Watana 82.47 11 P **P** **06 03 48.3 +1.5**
baz=204,SNR=7.0
O28M Mount Upton 82.51 15 P **P** **06 03 49.8 +2.6**
baz=211
CAST Castle Rocks 82.52 9 P **P** **06 03 47.6 +0.8**
baz=199
O29M Mount Kennedy 82.53 16 P **P** **06 03 50.1 +3.1**
baz=212
WAT1 Susitna Watana 82.55 11 P **P** **06 03 50.0 +3.0**
baz=203
MA2 Magadan 82.70 342 LR LR 06 39 33.2
comp=Z,165nm,18.6s,baz=135,slow=35
SKAG Skagway 82.75 18 P **P** **06 03 49.8 +1.8**
baz=215
S22A 4UR Ranch, Cre 82.78 47 P **P** **06 03 50.5 +1.3**
baz=241
P30M Million Dollar 82.82 17 P **P** **06 03 49.7 +1.2**
baz=214
KTH Kantishna Hill 82.83 10 P **P** **06 03 49.9 +1.4**
KTH IAmb IAmb 06 03 58.5
comp=Z,9.0nm,1.0s
TRF Thorofare Moun 82.83 10 IAmb IAmb 06 03 56.4
comp=Z,13nm,1.0s
TRF Thorofare Moun 82.83 10 P **P** **06 03 49.5 +0.9**
baz=201
J20K Nowinta River 82.95 8 P **P** **06 03 51.9 +2.9**
J20K Nowinta River 82.95 8 P **P** **06 03 50.5 +1.5**
baz=197,SNR=10
DHY Denali Highway 82.99 11 IAmb IAmb 06 04 09.5
comp=Z,16nm,1.5s
DHY Denali Highway 82.99 11 P **P** **06 03 51.0 +1.5**
baz=204
O20A White River Ci 83.00 44 P **P** **06 03 49.4 -0.7**
baz=240
RND Reindeer 83.03 10 P **P** **06 03 51.9 +2.3**
RND IAmb IAmb 06 03 58.0
comp=Z,14nm,1.0s
MSO Missoula 83.11 36 P **P** **06 03 52.5 +2.2**
MSO IAmb IAmb 06 03 55.5
comp=Z,12nm,1.4s
MSO Missoula 83.11 36 P **P** **06 03 51.7 +1.3**
baz=235,SNR=6.2
YUK6 Outpost Mounta 83.13 16 P **P** **06 03 53.3 +3.0**
baz=212
H03S2 Juan Fernandez 83.18 123 T T 07 35 50.6
baz=250,SNR=8.0
H03S1 Juan Fernandez 83.20 123 T T 07 35 54.4
baz=250,SNR=7.9
H03S3 Juan Fernandez 83.20 123 T T 07 35 56.3
baz=250,SNR=7.3
IMW Indian Meadow 83.24 40 IAmb IAmb 06 03 57.5
comp=Z,18nm,1.4s
HYT Haines Junctio 83.26 16 P **P** **06 03 52.4 +1.6**
HYT Haines Junctio 83.26 16 P **P** **06 03 52.9 +2.1**
baz=213
PAX Paxson 83.26 12 P **P** **06 03 52.4 +1.6**
PAX IAmb IAmb 06 04 20.8
comp=Z,13nm,1.5s
PAX Paxson 83.26 12 P **P** **06 03 52.4 +1.6**
baz=206
M26K Nabesna, AK 83.27 13 P **P** **06 03 53.1 +2.3**
M26K IAmb IAmb 06 04 21.6
comp=Z,14nm,1.1s
M26K Nabesna, AK 83.27 13 P **P** **06 03 53.1 +2.3**
baz=208,SNR=5.8
LOHW Long Hollow 83.29 40 P **P** **06 03 53.6 +2.0**
LOHW IAmb IAmb 06 04 18.8
comp=Z,20nm,1.6s
H03N2 Juan Fernandez 83.29 123 T T 07 35 52.7
baz=256,slow=73,SNR=12
H03N3 Juan Fernandez 83.30 123 T T 07 35 52.7
baz=256,slow=73,SNR=9.5
H03N1 Juan Fernandez 83.31 123 T T 07 35 52.7
baz=256,slow=73,SNR=7.1
YUK3 Moose Creek 83.31 15 P **P** **06 03 52.2 +1.0**
baz=210,SNR=8.3
MCK McKinley 83.32 10 P **P** **06 03 53.9 +2.9**
MCK McKinley 83.32 10 P **P** **06 03 52.7 +1.7**
baz=202,SNR=5.3
BPAW Bear Paw Mtn. 83.33 9 P **P** **06 03 52.4 +1.4**
baz=200
P32M Atlin 83.34 19 P **P** **06 03 52.6 +1.4**
baz=217
BNX BinXian 83.34 322 ⇑P **P** **06 03 53.5 +2.1**
BNX pP **sP** **06 04 00.5 +2.0**
BNX sP **pwP** **06 04 06.3 +0.2**
BNX pmax pmax
comp=Z,8.0nm,0.8s
BNX pmax pmax
comp=Z,240nm,5.8s
BNX LR LR
comp=Z,140nm,19.0s
BNX LR LR
comp=Z,170nm,16.3s
BNX LR LR
comp=Z,220nm,14.9s
LRM Limekiln Ridge 83.39 38 P **P** **06 03 52.3 +0.3**
YUK4 Talbot Arm 83.40 16 P **P** **06 03 52.2 +0.6**
baz=212
CN2 Changchun 83.46 320 *e*P **P** **06 03 49.6 -2.5**
CN2 *e*PP **PP** **06 07 04.0 -0.7**
CN2 *e*S **S** **06 14 07.8 -4.7**
CN2 *e*sS ScS 06 14 25.4 -0.5
CN2 *e*SS **SS** **06 19 37.6 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,180nm,14.0s
CN2 LR LR
comp=Z,140nm,14.0s
CN2 LR LR
comp=Z,140nm,15.0s
M27K Edge Creek, AK 83.48 14 P **P** **06 03 53.2 +1.2**
M27K Edge Creek, AK 83.48 14 P **P** **06 03 53.1 +1.2**
baz=209,SNR=7.2
BW06 Boulder Array 83.50 41 P **P** **06 03 54.7 +2.1**
BW06 Boulder Array 83.50 41 P **P** **06 03 52.6 0.0**
baz=238
PD31 Pinedale Array 83.50 41 P **P** **06 03 53.1 +0.5**
PDAR Pinedale Array 83.50 41 P **P** **06 03 56.2 +3.6**
comp=Z,3.0nm,0.9s,baz=210,slow=3.0,SNR=18
comp=Z,3.0nm,0.9s
PDAR Pinedale Array 83.50 41 P **P** **06 03 52.3 -0.4**
MENT Mentasta 83.59 13 P **P** **06 03 54.6 +2.2**
O30N Mendenhall 83.60 17 P **P** **06 03 54.0 +1.5**
baz=214,SNR=7.2
DLBC Dease Lake 83.63 21 LR LR 06 37 30.8
comp=Z,242nm,18.1s,baz=232,slow=33
DLBC Dease Lake 83.63 21 P **P** **06 03 56.2 +3.4**
DLBC Dease Lake 83.63 21 P **P** **06 03 54.7 +2.0**
baz=220
SDCO Great Sand Dun 83.71 47 P **P** **06 03 53.9 0.0**
baz=242
H17A Grant Village 83.72 40 P **P** **06 03 56.1 +2.3**
baz=238
BOZ Bozeman (W) 83.74 38 P **P** **06 03 54.4 +0.7**
BOZ Bozeman (W) 83.74 38 P **P** **06 03 54.0 +0.2**
baz=237,SNR=16
L26K Log Cabin Wild 83.75 13 P **P** **06 03 54.3 +1.1**
L26K IAmb IAmb 06 04 28.9
comp=Z,9.3nm,1.2s
L26K Log Cabin Wild 83.75 13 P **P** **06 03 54.8 +1.6**
baz=208
BVCY Beaver Creek 83.77 14 P **P** **06 03 53.6 +0.3**
baz=210
WHY Whitehorse 83.86 18 P **P** **06 03 55.5 +1.6**
WHY IAmb IAmb 06 04 19.3
comp=Z,10nm,1.1s
WHY Whitehorse 83.86 18 P **P** **06 03 54.0 +0.1**
baz=216
N30M Aishikik Lake 83.90 16 P **P** **06 03 55.2 +1.2**
baz=214
K24K Donnelly Dome 83.96 12 P **P** **06 03 55.6 +1.3**
baz=205
MSTX Muleshoe 83.97 52 P **P** **06 03 54.2 -0.9**
baz=244
R33M Jennings River 84.05 20 P **P** **06 03 56.5 +1.6**
baz=219,SNR=6.9
RIDG Independent Ri 84.08 12 P **P** **06 03 57.4 +2.4**
RIDG IAmb IAmb 06 04 20.3
comp=Z,12nm,1.0s
RIDG Independent Ri 84.08 12 P **P** **06 03 57.9 +2.9**
baz=206
NEA2 Nenana 84.09 10 P **P** **06 03 56.8 +1.9**
NEA2 IAmb IAmb 06 04 24.1
comp=Z,25nm,1.7s
NEA2 Nenana 84.09 10 P **P** **06 03 57.0 +2.1**
baz=202
P33M Teslin, Yukon 84.11 19 P **P** **06 03 56.5 +1.4**
baz=218
L27K Beaver Creek, 84.11 14 P **P** **06 03 56.5 +1.5**
L27K Beaver Creek, 84.11 14 P **P** **06 03 58.1 +3.0**
baz=209
BCAR Beaver Creek A 84.13 14 P **P** **06 03 56.6 +1.5**

WRH Wood River Hil 84.15 10 P P 06 03 56.1 +0.9
DOT Dot Lake 84.16 12 P P 06 03 57.5 +2.2
DOT IAmb IAmb 06 04 25.1
comp=Z,16nm,1.2s
T25A Trinidad 84.20 48 P P 06 03 56.7 +0.4
baz=243
I21K Tanana 84.20 9 P P 06 03 57.8 +2.4
baz=199
HRY Holter Researc 84.24 37 P P 06 03 57.1 +0.9
MLY Manley 84.24 9 P P 06 03 57.6 +1.9
MLY IAmb IAmb 06 04 05.0
comp=Z,14nm,1.2s
MLY Manley 84.24 9 P P 06 03 57.9 +2.2
baz=201,SNR=9.1
833A Chaparral WMA, 84.24 58 P P 06 03 56.8 +0.3
baz=246
N31M Braeburn, Yuko 84.28 17 P P 06 03 59.8 +3.9
baz=215
HDA Harding Lake 84.29 11 P P 06 03 58.4 +2.5
HDA IAmb IAmb 06 04 22.6
comp=Z,11nm,1.0s
HDA Harding Lake 84.29 11 P P 06 03 58.9 +3.0
baz=204,SNR=6.3
CCB Clear Creek Bu 84.36 10 P P 06 03 58.1 +1.9
CCB IAmb IAmb 06 04 04.3
comp=Z,12nm,1.0s
M29M Somme Creek 84.38 15 P P 06 03 58.9 +2.4
baz=212
WALA Waterton Lakes 84.41 34 P P 06 03 57.3 +0.3
SCRK Sand Creek 84.47 12 P P 06 03 59.0 +2.1
SCRK IAmb IAmb 06 04 26.9
comp=Z,13nm,1.4s
SCRK Sand Creek 84.47 12 P P 06 03 59.1 +2.2
baz=207,SNR=8.8
Q24A Divide 84.53 46 P P 06 03 59.7 +1.6
baz=242
H21K Melozitna Rive 84.54 8 P P 06 03 59.8 +2.7
H21K Melozitna Rive 84.54 8 P P 06 03 59.9 +2.7
baz=199
TCOL CIGO, UAF Yank 84.56 10 P P 06 03 59.8 +2.6
TCOL CIGO, UAF Yank 84.56 10 P P 06 03 59.5 +2.3
baz=203
COLA College 84.56 10 P P 06 03 59.1 +1.9
COLA College 84.56 10 P P 06 03 58.0 +0.8
baz=203
I23K Minto, Yukon-K 84.56 10 P P 06 03 58.9 +1.6
I23K IAmb IAmb 06 04 25.4
comp=Z,21nm,1.5s
I23K Minto, Yukon-K 84.56 10 P P 06 03 57.7 +0.5
baz=202
MDM Murphy Dome 84.57 10 P P 06 03 59.6 +2.2
ISCO Idaho Springs 84.60 45 P P 06 03 58.2 -0.3
baz=242
IL31 84.63 11 P P 06 03 59.6 +2.1
IL31 IAmb IAmb 06 04 28.6
comp=Z,13nm,1.2s
ILAR Eielson Array 84.63 11 P P 06 03 59.9 +2.3
comp=Z,2.8nm,0.9s,baz=216,slow=6.1,SNR=19
ILAR LR LR 06 37 15.4
comp=Z,209nm,19.7s,baz=168,slow=32
comp=Z,2.8nm,0.9s
IMAR Indian Mountai 84.73 8 P P 06 04 01.2 +3.1
J25K Salcha River, 84.77 11 P P 06 04 00.3 +1.9
J25K Salcha River, 84.77 11 P P 06 04 01.7 +3.3
baz=206,SNR=7.4
N32M Quiet Lake 84.78 18 P P 06 03 59.3 +0.8
baz=217
POKR Poker Plat Res 84.85 10 P P 06 03 59.8 +1.1
baz=204
RLMT Red Lodge 84.90 39 P P 06 03 59.3 -0.4
RLMT IAmb IAmb 06 04 09.0
comp=Z,11nm,1.4s
RLMT Red Lodge 84.90 39 P P 06 04 02.1 +2.4
baz=238
K27K Chicken 84.91 13 P P 06 04 01.2 +2.2
K27K IAmb IAmb 06 04 46.8
comp=Z,16nm,1.4s
K27K Chicken 84.91 13 P P 06 04 00.7 +1.7
baz=209
M30M Minto, Yukon 84.91 16 P P 06 04 01.8 +2.6
M30M IAmb IAmb 06 04 07.7
comp=Z,12nm,1.4s
M30M Minto, Yukon 84.91 16 P P 06 04 00.3 +1.2
baz=214,SNR=7.9
H22K Ishtalitna Cre 84.96 9 P P 06 04 00.7 +1.4
baz=200
J26L Joseph Creek 85.02 12 P P 06 04 00.4 +0.7
J26L Joseph Creek 85.02 12 P P 06 04 01.6 +1.9
baz=207,SNR=11
H23K Yukon River 85.17 9 P P 06 04 02.7 +2.4
baz=202
AMTX Amarillo 85.18 51 P P 06 04 02.3 +1.1
baz=244
M31M Drury Creek, Y 85.25 17 P P 06 04 03.5 +2.7
baz=216
G21K Allakaket 85.27 8 P P 06 04 01.9 +1.1
baz=198
K22A Casper 85.37 43 P P 06 04 03.0 +1.0
baz=241
H24K Noodor Dome 85.44 10 P P 06 04 02.4 +0.7
baz=203
DAWY Dawson 85.53 14 P P 06 04 05.3 +3.1
DAWY IAmb IAmb 06 04 08.7
comp=Z,9.0nm,0.8s
DAWY Dawson 85.53 14 P P 06 04 01.5 -0.7
baz=211,SNR=15
PRP Porcupine Dome 85.56 11 P P 06 04 05.6 +3.2
PRP IAmb IAmb 06 04 11.1
comp=Z,10nm,0.9s
PRP Porcupine Dome 85.56 11 P P 06 04 03.0 +0.5
baz=206
FARO Faro, Yukon 85.56 17 P P 06 04 05.0 +2.6
ABTX Abilene, Hawle 85.78 54 P P 06 04 05.5 +1.4
baz=246
MAW Mawson 85.79 198 P P 06 04 05.3 +1.8
comp=Z,2.5nm,0.8s,baz=39,slow=10,SNR=2.7
MAW LR LR 06 41 54.1
comp=Z,379nm,18.3s,baz=118,slow=35
comp=Z,2.5nm,0.8s
MAW Mawson 85.79 198 P P 06 04 03.7 +0.2
I26K Coal Creek Min 85.81 12 P P 06 04 06.6 +3.1
I26K IAmb IAmb 06 04 34.6
comp=Z,22nm,1.4s
I26K Coal Creek Min 85.81 12 P P 06 04 05.5 +2.0
baz=208
G23K Bananza Creek 85.92 9 P P 06 04 05.1 +1.0
baz=201
F21K Alatna River 85.94 7 P P 06 04 04.9 +0.8
baz=198
EGMT Eagleton 86.14 37 P P 06 04 07.3 +1.6
baz=238
G24K Hadweenzic Riv 86.30 10 P P 06 04 08.6 +2.7
baz=204
COLD Coldfoot 86.38 9 P P 06 04 07.7 +1.4
baz=201
G25K Bearman Lake 86.59 10 P P 06 04 07.7 +0.4
baz=205
I29M Ogilvie Camp, 86.88 14 P P 06 04 12.1 +3.3
I29M Ogilvie Camp, 86.88 14 P P 06 04 09.4 +0.6
baz=212
H27K Steamboat Moun 86.95 12 P P 06 04 08.3 -0.9
baz=209
F24K Squaw Lake 86.99 9 P P 06 04 10.0 +0.7
baz=203
G26K Porcupine Rive 87.16 11 P P 06 04 11.1 +1.1
baz=207
WHTX Lake Whitney, 87.23 55 P P 06 04 10.3 -0.9
baz=247
PLCA Paso Flores 87.29 132 P P 06 04 14.9 +3.4
comp=Z,2.4nm,1.0s,baz=222,slow=6.3,SNR=5.0
PLCA LR LR 06 36 52.6
comp=Z,341nm,18.0s,baz=239,slow=31
comp=Z,2.4nm,1.0s
E24K Your Creek 87.41 9 P P 06 04 10.4 -1.0
baz=203
F25K Christian Rive 87.42 10 P P 06 04 11.0 -0.3
baz=205
G27K Doyon Strip 87.43 12 P P 06 04 10.1 -1.3
baz=209
BMAR Burnt Mountain 87.45 10 P P 06 04 14.6 +3.0
OGNE Ogallala 87.56 46 P P 06 04 11.1 -1.7
baz=244
HNS HongShan 87.65 310 ⇑P P 06 04 26.8 +14
RSSD Black Hills 87.66 42 P P 06 04 11.3 -2.0
baz=242
F26K Sheenjek River 87.76 10 P P 06 04 11.7 -1.3
baz=207

TOLK Toolik Lake Re 87.79 8 P P 06 04 12.2 -0.9
baz=202
NATX Nacogdoches 89.34 56 P P 06 04 21.0 -0.3
baz=249
DGMT Dagmar 89.58 38 P P 06 04 22.4 +0.3
baz=242
GYA Guiyang 89.90 298 ⇑P P 06 04 28.7 +4.5
GYA sP pwP 06 04 39.3 +0.3
GYA pmax pmax
comp=Z,12nm,1.0s
TROLL Troll, Antarti 90.35 178 P P 06 04 23.9 -1.6
INK Inuvik 90.39 14 LR LR 06 43 54.7
comp=Z,228nm,18.1s,baz=190,slow=35
VNA3 Neumayer Olymp 90.40 175 pP pP 06 04 35.2 +5.1
SNAA Sanae 90.47 177 P P 06 04 25.8 -0.2
SNAA Sanae 90.47 177 LR LR 06 44 11.8
comp=Z,207nm,18.2s,baz=262,slow=35
SNAA Sanae 90.47 177 P P 06 04 25.1 -0.8
VNA2 Neumayer--Watz 90.90 175 pP pP 06 04 36.6 +4.2
baz=204,slow=4.0
VNA1 Neumayer--Stat 91.10 175 P P 06 04 32.2 +3.5
MIAR Mount Ida 91.19 54 P P 06 04 29.0 -0.9
baz=249
HHC Hu-ho-hao-te 91.27 313 eP P 06 04 28.5 -1.7
HHC pmax pmax
comp=Z,30nm,0.6s
HHC pmax pmax
comp=Z,350nm,6.9s
HHC LR LR
comp=Z,390nm,15.9s
YAK Yakutsk 91.64 336 LR LR 06 43 18.1
comp=Z,52nm,18.9s,baz=90,slow=34
NNA Nana 91.69 103 LR LR 06 38 07.7
comp=Z,133nm,18.2s,baz=247,slow=30
ATAH Atahualpa 91.75 98 LR LR 06 38 21.7
comp=Z,234nm,18.0s,baz=247,slow=30
YKA Yellowknife Ar 91.96 23 P P 06 04 36.0 +3.2
comp=Z,1.9nm,0.9s,baz=235,slow=3.9,SNR=8.9
YKA LR LR 06 41 13.9
comp=Z,178nm,18.8s,baz=300,slow=32
comp=Z,1.9nm,0.9s
BTO Baotou 92.26 312 eP P 06 04 33.4 -1.4
BTO SKS SKSac 06 15 01.9 -5.2
BTO S S 06 15 33.2 -3.7
BTO LR LR
comp=Z,410nm,12.7s
BTO LR LR
comp=Z,760nm,16.1s
ECSD EROS Data Cent 92.36 45 P P 06 04 35.5 +0.4
MGMO Mountain Grove 93.09 52 P P 06 04 39.4 +0.8
R40A Maddies Statio 93.48 51 P P 06 04 41.2 +0.9
R40A IAmb IAmb 06 04 45.1
comp=Z,7.5nm,0.9s
CD2 Chengdu 93.77 301 P P 06 04 39.2 -2.7
PZH PanZhiHua 94.09 296 P P 06 04 45.7 +2.1
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,190nm,5.7s
CMAR Chiang Mai Arr 94.16 288 P P 06 04 45.5 +1.6
comp=Z,1.1nm,0.3s,baz=105,slow=2.6,SNR=8.1
CMAR LR LR 06 45 58.0
comp=Z,58nm,19.3s,baz=130,slow=35
comp=Z,1.1nm,0.3s
CCM Cathedral Cave 94.16 51 P P 06 04 43.0 -0.5
baz=251
LVC Limon Verde 95.22 116 LR LR 06 38 58.7
comp=Z,22nm,19.0s,baz=231,slow=30
SONM Sogino Array 97.18 318 P Pdif 06 04 58.6 +1.3
comp=Z,0.4nm,0.7s,baz=141,slow=3.1,SNR=3.7
comp=Z,0.4nm,0.7s
L44A Lake County Fo 97.86 48 P P 06 04 59.7 -0.5
baz=253
LPAZ La Paz 98.20 110 LR LR 06 40 47.7
comp=Z,168nm,19.6s,baz=248,slow=30
TKL Tuckaleechee C 99.17 56 LR LR 06 46 11.5
comp=Z,196nm,18.0s,baz=264,slow=33
ROSC El Rosal 99.26 88 LR LR 06 42 50.8
comp=Z,75nm,19.4s,baz=232,slow=31
ZALV Zalesovo Beam 111.62 322 PKiKP PKiKP 06 10 00.2 +1.4
comp=Z,0.8nm,0.5s,baz=101,slow=2.3,SNR=4.9
ARCES ARCESS Array B 127.09 352 PKP PKiKP 06 10 30.9 +2.2
comp=Z,2.2nm,0.6s,baz=355,slow=1.5,SNR=18
FINES FINESS Array B 134.46 348 PKP PKiKP 06 10 45.5 +1.9
comp=Z,0.8nm,0.6s,baz=66,slow=2.3,SNR=4.0
AKASG Malin Array Be 142.87 337 PKP PKPdf 06 10 58.4 +0.4
comp=Z,1.7nm,0.9s,baz=44,slow=2.3,SNR=4.6
KMBO Kilima Mbogo 145.17 240 PKP PKiKP 06 11 05.8 -1.5
comp=Z,6.6nm,0.8s,baz=106,slow=3.7,SNR=16
SORM Soroca 145.28 335 ⇓P PKiKP 06 11 04.3 -1.8
CLL Collm 146.28 354 ⇑iPKPbc PKiKP 06 11 07.7 -0.4
comp=Z,35nm,0.9s
CLL i x x 06 11 11.6
CLL i x x 06 11 16.1
CLL LmV 07 20 00.0
comp=Z,200nm,18.2s
KSP Ksiaz 146.29 350 ePKP PKiKP 06 11 08.4 +0.2
OSTC Ostas 146.58 350 ePKP PKiKP 06 11 09.8 +1.0
BRG Berggiesshubel 146.60 353 i PKP PKiKP 06 11 09.7 +0.9
BRG Amp 06 11 13.3
comp=Z,66nm,1.9s
BRG ex x 06 11 18.6
BRG Amp 06 11 19.6
comp=Z,24nm,1.4s
BRG ex x 06 11 26.4
BRG Amp 06 11 29.3
comp=Z,34nm,1.3s
DPC Dobruska-Polom 146.76 350 ePKP PKiKP 06 11 10.0 +0.8
BURAR Buryatia Array 146.90 338 ⇑P PKiKP 06 11 11.1 +1.4
KRLC Kraliky 146.95 349 ePKP PKiKP 06 11 10.5 +0.9
MORC Moravsky Berou 147.09 348 ⇑P PKiKP 06 11 10.6 +0.6
MORC Moravsky Berou 147.09 348 ePKP PKiKP 06 11 10.3 +0.4
BIZ Bicaz 147.13 336 ⇑P PKiKP 06 11 11.5 +1.4
MEM Membach 147.25 2 dpPKPdf pPKPdf 06 11 10.8 +0.5
LANS Liptovska Anna 147.26 345 ePKP PKiKP 06 11 11.9 +1.6
BTNL Ternell 147.28 2 dpPKP pPKPdf 06 11 13.3 +2.9
PRU Pruhonice 147.39 352 ePKP PKiKP 06 11 11.3 +0.8
NKC Novy Kostel 147.40 354 ePKP PKiKP 06 11 13.9 +3.4
BCLA Clavier 147.41 3 dpPKPdf pPKPdf 06 11 12.7 +2.1
BMRD Maredsous 147.51 3 dpPKP pPKPdf 06 11 11.3 +0.5
DOU Dourbes 147.70 3 dpPKPdf PKPab 06 11 11.7 +0.4
CFR Carcaliu 147.71 332 ⇑P PKPab 06 11 12.8 +1.4
VRAC Vranov 147.72 349 ePKP PKPab 06 11 12.1 +0.7
VRI Vrincioaia 147.76 334 ⇑P PKPab 06 11 12.1 +0.4
PLOR Plostina 147.81 334 ⇑P PKPab 06 11 13.7 +1.8
TPGR Topolog 147.83 331 ⇑P PKPab 06 11 13.3 +1.3
JAVC Velka Javorina 147.94 347 ePKP PKPab 06 11 13.6 +1.2
KRUC Moravsky 147.99 349 ePKP PKPab 06 11 12.6 +0.1
VYHS Vyhne 148.02 346 ePKP PKPab 06 11 13.8 +1.1
WLF Walferdange 148.20 2 dpPKP PKPab 06 11 17.5 +4.2
KHC Kasperske Hory 148.36 352 ePKP PKPab 06 11 14.1 +0.1
MLR Muntele Rosu 148.39 335 ⇑P PKPab 06 11 15.4 +0.9
BRTR Keskin Array B 148.53 319 PKPbc PKiKP 06 11 14.1 +0.7
comp=Z,6.1nm,0.9s,baz=132,slow=1.8,SNR=14
CKRC Cesky Krumlov 148.57 351 ePKP PKPab 06 11 14.0 -0.9
GERES GERESS Array B 148.63 352 PKPbc PKPab 06 11 14.7 -0.5
comp=Z,2.4nm,0.6s,baz=48,slow=2.0,SNR=25
VOIR 148.79 336 ⇓P PKPab 06 11 14.8 -1.1
ARR Arges 149.01 336 ⇑P PKiKP 06 11 15.2 +1.2
CONA Conrad Observa 149.18 349 eP PKPdf 06 11 06.5 -2.4
comp=Z,3.2nm,0.9s
CONA eP PKPab 06 11 16.3 -1.1
comp=Z,5.6nm,0.7s
SIRR Siria 149.28 341 ⇑P PKPab 06 11 16.5 -1.4
RONA Rosalia, Austr 149.32 348 eP PKPdf 06 11 06.9 -2.1
comp=Z,2.0nm,0.5s
RONA eP PKPab 06 11 17.3 -0.7
comp=Z,8.9nm,0.7s
MOA Molln 149.52 351 eP PKPab 06 11 17.6 -1.1
comp=Z,3.4nm,0.7s
GZR Gura Zlata 149.67 338 ⇑P PKiKP 06 11 16.9 +1.5
BZS Buzias 149.87 340 ⇑P PKiKP 06 11 15.9 +0.2
ARSA Arzberg 149.90 349 eP PKiKP 06 11 17.8 +2.0
comp=Z,1.3nm,0.6s
HERR Herculane 150.24 338 ⇑P PKiKP 06 11 17.4 +0.9
RETA Reutte 150.27 356 eP PKiKP 06 11 18.7 +2.2
comp=Z,7.4nm,1.1s
WATA Walderalm 150.36 354 eP PKiKP 06 11 19.0 +2.1
comp=Z,4.6nm,0.6s
MOTA Moosalm 150.39 355 eP PKiKP 06 11 19.1 +2.2
comp=Z,8.8nm,1.1s
KBA Koelnbreinsper 150.41 352 eP PKiKP 06 11 19.4 +2.4
comp=Z,3.3nm,0.6s
WTTA Wattenberg 150.42 354 eP PKiKP 06 11 19.5 +2.4

comp=Z,8.4nm,0.6s
SQTA Sankt Quirin 150.50 355 eP PKiKP 06 11 19.4 +2.3
comp=Z,12nm,1.0s
DAVA Damuels 150.53 357 eP PKiKP 06 11 19.9 +2.7
comp=Z,13nm,0.8s
SOKA Soboth 150.54 349 eP PKiKP 06 11 19.5 +2.3
comp=Z,8.5nm,0.9s
MDVR Moldovita 150.57 339 ⇑P PKiKP 06 11 18.4 +1.1
FETA Feichten 150.74 355 eP PKiKP 06 11 20.3 +2.6
comp=Z,7.9nm,0.8s
ABTA Abfaltersbach 150.84 353 eP PKiKP 06 11 19.5 +1.7
comp=Z,17nm,0.7s
FRGS Fruska Gora 150.84 342 ⇑P PKiKP 06 11 19.4 +1.6
BOVS Bovan 151.58 338 ⇑P PKiKP 06 11 20.3 +1.0
ESDC Sonseca Array 156.05 22 PKPab PKPab 06 11 50.0 +3.6
comp=Z,0.9nm,0.7s,baz=321,slow=4.4,SNR=5.2
TORD Torodi Ar. Bea 172.75 129 PKP PKPdf 06 11 36.8 +2.3
comp=Z,0.8nm,0.8s,baz=320,slow=2.4,SNR=3.9
TORD PKPab pPKPab 06 13 03.0 -1.5
comp=Z,2.5nm,0.8s,baz=259,slow=3.1,SNR=6.8

*NEIC **01** 05:51:47.6±1.7, 18°.79N±0°.10×145°.8E±0°.2, h283km±10km, mb3.9/26, Error ellipse: s-maj=28.3km s-min=8.7km az=113.0*
*IDC **01** 05:51:47.8±7.4, 18°.77N×145°.49E, h278km±73km, mb3.2/9, mbtmp3.9/10, Error ellipse: s-maj=36.4km s-min=14.8km az=85.0*

ISC 01 05:51:40.7±0.8, 18°.8N±0°.1×145°.7E±0°.2, h214km, n42, σ1°03/42, mb3.9/22, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	Kunigami	17.95	300	P	Pn	05 55 37.5	+0.1
	3.6nm,0.4s,baz=115,slow=16,SNR=4.5						
JOW	Kunigami	17.95	300	P	Pn	05 55 37.4	0.0
JGF	Kuroka	18.30	338	P	Pn	05 55 40.9	-0.7
JGF				IAmb	IAmb	05 55 42.0	
	comp=Z,4.8nm,0.7s						
WB0	Warramunga Arr	39.90	197	P	P	05 58 54.2	+0.1
WR0	Warramunga Arr	40.04	196	P	P	05 58 55.1	-0.1
WR0				IAmb	IAmb	05 58 56.7	
	comp=Z,5.0nm,1.1s						
WRAB	Tennant Creek	40.07	197	P	P	05 58 56.0	+0.5
WRAB				IAmb	IAmb	05 59 07.4	
	comp=Z,8.1nm,1.4s						
WB2	Warramunga Arr	40.08	197	P	P	05 58 56.1	+0.6
WB2				IAmb	IAmb	05 59 25.3	
	comp=Z,8.0nm,1.5s						
WRA	Warramunga Arr	40.08	197	P	P	05 58 56.0	+0.5
	comp=Z,0.9nm,0.3s,baz=20,slow=8.5,SNR=27						
	comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	40.08	197	P	P	05 58 54.7	-0.9
FITZ	Fitzroy Crossi	41.63	209	P	P	05 59 08.4	+0.2
FITZ				IAmb	IAmb	05 59 51.0	
	comp=Z,8.3nm,1.4s						
SONM	Songino Array	43.08	321	P	P	05 59 20.0	+0.2
	comp=Z,0.6nm,0.5s,baz=140,slow=12,SNR=4.1						
	comp=Z,0.6nm,0.5s						
ASAR	Alice Springs	43.75	196	P	P	05 59 24.9	-0.2
	comp=Z,0.3nm,0.3s,baz=16,slow=6.9,SNR=6.9						
	comp=Z,0.3nm,0.3s						
ZALV	Zalesovo Beam	57.95	322	P	P	06 01 10.1	-0.5
	comp=Z,0.7nm,0.3s,baz=113,slow=7.5,SNR=4.2						
	comp=Z,0.7nm,0.3s						
MK31	Makanchi Array	58.41	314	P	P	06 01 14.3	+0.3
MKAR	Makanchi Array	58.41	314	P	P	06 01 13.4	-0.5
K20K	Telida	60.13	27	P	P	06 01 25.8	+0.3
K20K				IAmb	IAmb	06 01 44.3	
	comp=Z,4.2nm,1.4s						
J20K	Nowinta River	60.37	26	P	P	06 01 28.9	+1.9
CNPM	China Poot	60.37	32	P	P	06 01 27.7	+0.6
KURK	Kurchatov	61.21	318	P	P	06 01 32.9	0.0
KURK				IAmb	IAmb	06 01 34.3	
	comp=Z,5.9nm,1.4s						
RC01	Rabbit Creek A	61.46	30	P	P	06 01 34.0	-0.4
BPAW	Bear Paw Mtn.	61.66	26	P	P	06 01 38.1	+2.4
BPAW				IAmb	IAmb	06 02 19.4	
	comp=Z,3.1nm,1.0s						
PMR	Palmer	61.86	29	P	P	06 01 34.5	-2.5
PMR				IAmb	IAmb	06 01 35.0	
	comp=Z,3.0nm,0.8s						
GHO	Glory Hole Cre	62.00	29	P	P	06 01 35.4	-2.7
MLY	Manley	62.03	25	P	P	06 01 37.5	-0.7
H24K	Noodor Dome	63.39	25	P	P	06 01 47.4	+0.3
H24K				IAmb	IAmb	06 02 00.9	
	comp=Z,3.3nm,1.4s						
ILAR	Eielson Array	63.55	26	P	P	06 01 48.4	+0.2
	comp=Z,0.7nm,0.8s,baz=253,slow=5.2,SNR=4.8						
	comp=Z,0.7nm,0.8s						
PAX	Paxson	63.82	28	P	P	06 01 49.8	-0.2
SUCK	Suckling Hills	64.18	32	P	P	06 01 51.5	-0.8
VRDI	Verde Repeater	64.49	30	P	P	06 01 53.0	-1.5
VRDI				IAmb	IAmb	06 01 59.2	
	comp=Z,2.2nm,1.0s						
DOT	Dot Lake	64.56	28	P	P	06 01 53.1	-1.7
DOT				IAmb	IAmb	06 02 00.9	
	comp=Z,2.9nm,1.3s						
FYU	Fort Yukon	64.60	24	P	P	06 01 54.5	-0.4
BMAR	Burnt Mountain	65.02	24	P	P	06 01 57.9	+0.1
L27K	Beaver Creek,	65.47	29	P	P	06 01 59.6	-1.1
L27K				IAmb	IAmb	06 02 43.1	
	comp=Z,2.5nm,1.4s						
BCAR	Beaver Creek A	65.49	29	P	P	06 01 59.9	-0.9
KK31	Karatay Array	66.72	310	P	P	06 02 09.7	+0.7
KK31				IAmb	IAmb	06 02 10.3	
	comp=Z,1.6nm,0.7s						
KKAR	Karatay Array	66.72	310	P	P	06 02 09.9	+1.0
INK	Inuvik	69.28	23	P	P	06 02 25.5	+1.2
	comp=Z,1.2nm,0.8s,baz=265,slow=4.4,SNR=1.4						
	comp=Z,1.2nm,0.8s						
ABKAR	Akbulak array	73.28	317	P	P	06 02 48.0	-0.6
YKA	Yellowknife Ar	77.90	28	P	P	06 03 15.8	+1.3
	comp=Z,0.6nm,0.6s,baz=289,slow=5.8,SNR=6.2						
	comp=Z,0.6nm,0.6s						
ARCES	ARCESS Array B	82.41	342	P	P	06 03 38.8	+0.2
	comp=Z,2.0nm,0.3s,baz=84,slow=8.7,SNR=9.7						
	comp=Z,2.0nm,0.3s						
FINES	FINESS Array B	86.81	335	P	P	06 03 59.3	-1.3
	comp=Z,0.9nm,0.4s,baz=66,slow=4.1,SNR=15						
	comp=Z,0.9nm,0.4s						
LPAZ	La Paz	147.66	91	PKPbc	PKiKP	06 11 02.9	-0.5
	comp=Z,0.8nm,0.7s,baz=137,slow=5.1,SNR=4.5						

NOU 01 05:52:11.9, 13°.77S×171°.61W, h52km, MLv2.7/6, Samoa Islands, Samoa Islands

IDC 01 06:17:38.4±3.2, 10°.40S×161°.13E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=142.1km s-min=34.8km az=139.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.51	247	P	P	06 23 27.2	+0.3
	0.6nm,0.7s,baz=76,slow=8.7,SNR=8.7						
	0.6nm,0.7s						
ASAR	Alice Springs	29.11	240	P	P	06 23 41.0	-0.3
	0.3nm,0.8s,baz=60,slow=10,SNR=2.1						
	0.3nm,0.8s						
FITZ	Fitzroy Crossi	35.19	253	P	P	06 24 34.1	-0.4
	1.2nm,0.4s,baz=89,slow=5.6,SNR=2.2						
	1.2nm,0.4s						
ILAR	Eielson Array	84.39	20	P	P	06 30 12.5	+0.1
	0.4nm,0.9s,baz=215,slow=7.7,SNR=2.5						
	0.4nm,0.9s						

NNC 01 06:53:50.4±2.1, 53°.63N×88°.17E, h0km, mb3.5, mpv3.1, 4C-7D, Error ellipse: s-maj=15.6km s-min=11.7km az=64.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	2.02	280	⇓Pn	Pn	06 54 25.1	-0.4
	1.9nm,0.5s						
ZAA0				⇑Sn	Sb	06 54 52.9	-0.6
	0.6nm,0.3s						
KURK	Kurchatov	6.56	247	⇑Pn	Pn	06 55 28.0	0.0
	0.7nm,0.4s						
KURK				⇓Sn	Sn	06 56 44.5	+1.0
	1.0nm,0.6s						

KURK				⇓Lg	Lg	06 57 17.5	
	1.6nm,0.6s						
KURBB	Kurchatov Arra	6.66	247	⇓Pn	Pn	06 55 29.1	-0.3
	3.6nm,0.3s						
KURBB				⇓Sn	Sn	06 56 45.7	-0.1
	2.5nm,0.3s						
KURBB				⇑Lg	Lg	06 57 25.2	
	4.2nm,0.5s						
MK31	Makanchi Array	7.81	211	⇓Pn	Pn	06 55 47.5	+2.2
	0.5nm,0.6s,baz=31,slow=13,SNR=8.5						
MK31				⇑Sn	Sn	06 57 16.8	+2.4
	0.3nm,0.5s,baz=34,slow=28,SNR=2.5						
MK31				⇓Lg	Lg	06 57 58.6	
	1.9nm,0.8s						

*ATH **01** 06:54:22.1,34.°90N×25.°09E,h12km±1km,ML2.6/10,Error ellipse: s-maj=2.3km s-min=0.8km az=349.0*
*THE **01** 06:54:22.0,34.°93N×25.°11E,h7km±1km,ML2.4/8,Error ellipse: s-maj=1.6km s-min=0.6km az=2.0*
ISC 01 06:54:22.2±1.1,**34.°92N**±0.°05×**25.°10E**±0.°02,**h14**km±9km,**n24**,σ**0.s70**/43,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.26	293	P	Pg	06 54 27.5	-0.3
SIVA				S	Sg	06 54 31.3	-0.3
SIVA				AML	AML	06 54 33.2	
	comp=E,11318μm,0.3s						
SIVA				AML	AML	06 54 33.7	
	comp=N,6601μm,0.5s						
TMBK	Timbaki Herakl	0.32	299	P	Pg	06 54 28.9	+0.1
TMBK				S	Sg	06 54 33.8	+0.6
	comp=N,862nm,0.3s						
TMBK	Timbaki Herakl	0.32	299	P	Pg	06 54 28.8	0.0
TMBK				S	Sg	06 54 33.5	+0.3
TMBK				AML	AML	06 54 37.1	
	comp=E,6798μm,0.4s						
TMBK				AML	AML	06 54 41.2	
	comp=N,3947μm,0.4s						
KSTL	Kastelli Herak	0.39	356	P	Pg	06 54 29.2	-0.9
KSTL				S	Sg	06 54 35.1	-0.2
KSTL				AML	AML	06 54 36.4	
	comp=N,3356μm,0.3s						
KSTL				AML	AML	06 54 37.4	
	comp=E,1918μm,0.4s						
IACM	Heraklion	0.39	356	P	Pg	06 54 29.7	-0.4
IACM				S	Sg	06 54 35.9	+0.5
HRKL	Herakleio	0.39	0	P	Pg	06 54 30.0	-0.2
HRKL				S	Sg	06 54 35.1	-0.5
	comp=E,905nm,0.3s						
HRKL	Herakleio	0.39	0	P	Pg	06 54 30.0	-0.2
HRKL				S	Sg	06 54 36.3	+0.7
HRKL				AML	AML	06 54 47.1	
	comp=E,10110μm,0.3s						
HRKL				AML	AML	06 54 49.6	
	comp=N,8921μm,0.6s						
IDI	Anoyia	0.41	335	P	Pg	06 54 29.9	-0.6
IDI				S	Sg	06 54 36.4	+0.3
	comp=N,568nm,0.2s						
IDI	Anoyia	0.41	335	P	Pg	06 54 29.9	-0.6
IDI				S	Sg	06 54 36.4	+0.3
IDI				AML	AML	06 54 37.6	
	comp=E,1300μm,0.2s						
IDI				AML	AML	06 54 38.8	
	comp=N,931μm,0.3s						
FRMA	Ierapetra Chan	0.53	79	P	Pb	06 54 34.3	+1.1
FRMA				AML	AML	06 54 50.4	
	comp=E,910μm,0.5s						
FRMA				AML	AML	06 54 53.2	
	comp=N,569μm,0.3s						
PRNS	Prines Rethymn	0.66	312	P	Pg	06 54 35.0	-0.2
PRNS				S	Sb	06 54 45.9	+1.3
	comp=N,155nm,0.4s						
GVDS	Gavdos	0.83	265	P	Pb	06 54 38.5	0.0
GVDS				S	Sb	06 54 50.9	+1.4
	comp=N,435nm,0.2s						
GVD	Gavdhos	0.84	265	P	Pg	06 54 38.1	-0.4
GVD				S	Sb	06 54 50.8	+1.2
	comp=N,542nm,0.3s						
GVD	Gavdhos	0.84	265	P	Pg	06 54 37.9	-0.6
GVD				S	Sg	06 54 49.0	-0.4
GVD				AML	AML	06 54 53.1	
	comp=N,1007μm,0.2s						
GVD				AML	AML	06 54 53.9	
	comp=E,1175μm,0.3s						
STIA	Sitia Lasithi	0.86	71	P	Pg	06 54 38.2	-0.7
STIA				S	Sb	06 54 50.4	+0.1
ZKR	Zakros	0.94	78	P	Pg	06 54 39.3	-1.1
ZKR				S	Sb	06 54 53.0	+0.5
ZKR	Zakros	0.94	78	P	Pg	06 54 39.7	-0.7
ZKR				S	Sb	06 54 53.2	+0.7
ZKR				AML	AML	06 54 57.1	
	comp=N,170μm,0.3s						
ZKR				AML	AML	06 54 57.1	
	comp=E,415μm,0.4s						
CHAN	Chania	1.05	305	P	Pg	06 54 42.0	-0.6
CHAN				AML	AML	06 55 04.7	
	comp=N,398μm,0.5s						
CHAN				AML	AML	06 55 15.4	
	comp=E,431μm,0.6s						
IMMV	Iera Moni Meta	1.06	301	P	Pg	06 54 41.7	-1.1
IMMV				S	Sb	06 54 57.0	+0.8
	comp=E,250nm,0.4s						
IMMV	Iera Moni Meta	1.06	301	P	Pg	06 54 41.4	-1.4
IMMV				S	Sg	06 54 56.6	-0.2
IMMV				AML	AML	06 55 02.4	
	comp=N,542μm,0.3s						
IMMV				AML	AML	06 55 06.0	
	comp=E,400μm,0.3s						
RODP	Rodopos	1.27	301	P	Pn	06 54 45.3	-0.3
RODP				S	Sb	06 55 02.8	+0.6
	comp=E,38nm,0.3s						
ANKY	Antikythira Is	1.75	303	P	Pb	06 54 53.9	-0.2
KARP	Karpathos	1.80	69	P	Pb	06 54 55.1	+0.1
KTHA	Kythira Island	2.13	309	P	Pb	06 54 59.6	-1.0

*IDC **01** 06:59:41.1±6.4,18.°27S×177.°29W,h126km±48km,mb3.3/6,mbtmp3.6/7,MS3.7/6,Error ellipse: s-maj=101.3km s-min=23.5km az=146.0*
ISC 01 06:59:38.4±1.2,**18.°5S**±0.°4×**177.°1W**±0.°2,**h100**km,**n15**,σ**1.s97**/8,**mb3.5**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.67	278	P	Pn	07 00 47.4	+0.6
	6.1nm,0.9s,baz=163,slow=5.9,SNR=9.2						
MSVF				LR	LR	07 02 15.1	
	comp=Z,152nm,21.0s,baz=98,slow=34						
AFI	Afiamalu	6.82	49	LR	LR	07 03 20.7	
	comp=Z,297nm,20.6s,baz=224,slow=32						
DZM	Mont Dzumac	15.86	254	eLR	LR	07 07 15.5	
	comp=Z,2μm,24.9s						
URZ	Urewera	20.37	193	LR	LR	07 11 41.0	
	comp=Z,531nm,18.2s,baz=31,slow=35						
PPT2	Papeete2	26.17	92	eLR	LR	07 10 27.4	
	comp=Z,1μm,26.8s						
PPT2				eLR	LR	07 10 27.8	
	comp=Z,684nm,26.5s						
PMG	Port Moresby	35.78	280	LR	LR	07 20 04.6	
	comp=Z,270nm,18.1s,baz=147,slow=34						
TAOE	Nuku Hiva Isla	37.08	80	eLR	LR	07 15 32.3	
	comp=Z,341nm,23.8s						
STKA	Stephens Creek	39.47	242	P	P	07 07 00.1	+1.0
	3.4nm,1.0s,baz=84,slow=8.5,SNR=3.0						
	3.4nm,1.0s						
WRA	Warramunga Arr	45.77	260	P	P	07 07 48.1	-2.1
	0.4nm,0.8s,baz=95,slow=7.6,SNR=1.8						
	0.4nm,0.8s						
ASAR	Alice Springs	45.85	255	P	P	07 07 49.2	-1.6
	1.1nm,0.8s,baz=89,slow=8.5,SNR=11						
ASAR				LR	LR	07 25 59.3	
	comp=Z,116nm,21.3s,baz=150,slow=34						
	1.1nm,0.8s						
FITZ	Fitzroy Crossi	54.17	261	LR	LR	07 30 44.3	
	comp=Z,198nm,21.0s,baz=114,slow=34						
NVAR	Mina Array Bea	78.96	43	P	P	07 11 29.8	-1.6
	0.4nm,0.7s,baz=237,slow=8.0,SNR=3.8						
	0.4nm,0.7s						
TXAR	Lajitas Array	85.24	57	P	P	07 12 05.0	+0.6
	0.1nm,0.8s,baz=226,slow=4.9,SNR=2.4						
	0.1nm,0.8s						
ILAR	Eielson Array	86.14	12	P	P	07 12 08.0	+0.2
	0.9nm,1.1s,baz=235,slow=5.9,SNR=4.6						
	0.9nm,1.1s						
GERES	GERESS Array B	148.45	346	PKPbc	PKPdf	07 19 12.6	+2.8
	0.2nm,0.3s,baz=64,slow=4.7,SNR=1.6						

*NEIC **01** 07:02:15.8±0.7,22.°18N±0.°10×143.°8E±0.°2,h104km±9km,mb4.3/16,Error ellipse: s-maj=29.5km s-min=13.7km az=81.0*
*IDC **01** 07:02:17.1±0.9,22.°19N×143.°83E,h125km±8km,mb3.5/7,mbtmp4.0/8,MS4.3/1,Error ellipse: s-maj=30.5km s-min=15.9km az=81.0*
ISC 01 07:02:15.0±0.6,**22.°18N**±0.°07×**143.°8E**±0.°2,**h105**km,**n34**,σ**0.s83**/34,**mb4.2**/14,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.09	344	P	Pn	07 03 29.9	+0.8
	56nm,0.3s,baz=51,slow=23,SNR=42						
JCJ				S	Sn	07 04 24.2	-2.5
	108nm,0.5s,baz=283,slow=24,SNR=12						
JCJ	Chichijima	5.09	344	Pn	Pn	07 03 29.6	+0.5
KSRS	Korea Array	20.45	322	P	Pn	07 06 46.8	-0.5
	0.6nm,0.5s,baz=134,slow=14,SNR=2.6						
	0.6nm,0.5s						
H11S3	WAKE ISLAND Hy	21.81	96	T	T	07 29 46.1	
	baz=283,slow=74,SNR=5.0						
H11S1	WAKE ISLAND Hy	21.82	95	T	T	07 29 53.4	
	baz=283,slow=74,SNR=2.4						
H11S2	WAKE ISLAND Hy	21.82	96	T	T	07 29 55.8	
	baz=283,slow=74,SNR=3.2						
MTN	Manton Dam	36.95	201	P	P	07 09 14.0	-0.1
CTAO	Charters Tower	42.09	176	P	P	07 09 56.7	-0.1
CTAO				IAmb	IAmb	07 09 57.6	
	comp=Z,6.2nm,0.8s						
WB0	Warramunga Arr	42.69	193	P	P	07 10 01.9	+0.3
WB0				IAmb	IAmb	07 10 22.7	
	comp=Z,6.7nm,1.4s						
WR0	Warramunga Arr	42.84	193	P	P	07 10 02.9	0.0
WR0				IAmb	IAmb	07 10 29.7	
	comp=Z,6.4nm,1.4s						
WRAB	Tennant Creek	42.86	193	P	P	07 10 03.1	+0.1
WRAB				IAmb	IAmb	07 10 20.8	
	comp=Z,6.1nm,1.3s						
WB2	Warramunga Arr	42.87	193	P	P	07 10 03.1	+0.1
WB2				IAmb	IAmb	07 10 18.4	
	comp=Z,8.9nm,1.4s						
WRA	Warramunga Arr	42.87	193	P	P	07 10 03.3	+0.2
	comp=Z,1.2nm,0.3s,baz=14,slow=8.5,SNR=117						
WRA				LR	LR	07 26 22.9	
	comp=Z,392nm,19.2s,baz=152,slow=34						
	comp=Z,1.2nm,0.3s						
WRA	Warramunga Arr	42.87	193	P	P	07 10 03.0	-0.1
FITZ	Fitzroy Crossi	43.78	205	P	P	07 10 10.4	0.0
FITZ				IAmb	IAmb	07 10 45.9	
	comp=Z,8.7nm,1.4s						
AS31	Alice Springs	46.57	192	P	P	07 10 32.1	-0.4
ASAR	Alice Springs	46.57	192	P	P	07 10 32.3	-0.2
	comp=Z,0.3nm,0.4s,baz=11,slow=6.7,SNR=12						
	comp=Z,0.3nm,0.4s						
ASAR	Alice Springs	46.57	192	P	P	07 10 31.9	-0.6
PSA00	Pilbara Seismi	49.35	210	P	P	07 10 53.7	-0.2
STKA	Stephens Creek	53.79	182	P	P	07 11 26.4	-0.5
	comp=Z,2.1nm,0.4s,baz=9.0,slow=8.5,SNR=12						
	comp=Z,2.1nm,0.4s						
STKA	Stephens Creek	53.79	182	P	P	07 11 26.7	-0.1
MK31	Makanchi Array	54.76	312	P	P	07 11 34.3	+0.5
KURBB	Kurchatov Arra	57.53	317	P	P	07 11 53.6	+0.2
	comp=Z,0.7nm,0.3s,baz=93,slow=7.7,SNR=4.8						
KURBB				pP	pwP	07 12 24.4	+2.4
	comp=Z,0.4nm,0.6s,baz=52,slow=12,SNR=2.9						
	comp=Z,0.7nm,0.3s						
J20K	Nowinta River	58.17	27	P	P	07 11 58.6	+1.0
J20K				IAmb	IAmb	07 12 40.1	
	comp=Z,4.1nm,1.3s						
IMAR	Indian Mountai	58.82	25	P	P	07 12 02.5	+0.4
H21K	Melozitna Rive	59.11	26	P	P	07 12 05.0	+0.8
H21K				IAmb	IAmb	07 12 14.8	
	comp=Z,4.3nm,1.3s						
TOLK	Toolik Lake Re	61.07	23	P	P	07 12 18.4	+0.9
M24K	Tolsona, Glenn	61.32	30	P	P	07 12 19.1	-0.2
BMAR	Burnt Mountain	62.69	24	P	P	07 12 28.1	-0.3
ABKAR	Akbulak array	69.57	316	P	P	07 13 12.7	0.0
NVAR	Mina Array Bea	82.42	52	P	P	07 14 24.9	-1.2
	comp=Z,0.1nm,0.6s,baz=287,slow=6.3,SNR=2.1						
NVAR				pP	pwP	07 14 57.9	+1.7
	comp=Z,0.2nm,0.6s,baz=311,slow=6.9,SNR=2.6						
	comp=Z,0.1nm,0.6s						
FINES	FINESS Array B	82.97	335	P	P	07 14 27.7	-0.5
	comp=Z,1.8nm,0.9s,baz=70,slow=4.6,SNR=1.5						
FINES				pP	pwP	07 14 59.1	-0.1
	comp=Z,0.6nm,0.5s,baz=66,slow=4.6,SNR=1.1						
	comp=Z,1.8nm,0.9s						
PLCA	Paso Flores	145.67	131	PKPbc	PKPdf	07 21 41.4	0.0
	comp=Z,2.6nm,1.1s,baz=256,slow=2.5,SNR=8.0						
LPAZ	La Paz	149.37	85	PKPbc	PKPbc	07 21 52.8	-0.5
	comp=Z,0.4nm,0.5s,baz=58,slow=1.7,SNR=4.8						

*NEIC **01** 07:08:06.9±1.4,18.°78N±0.°08×145.°3E±0.°1,h304km±5km,mb4.4/110,Error ellipse: s-maj=16.9km s-min=11.1km az=83.0*
*IDC **01** 07:08:08.3±1.2,18.°76N×145.°23E,h326km±10km,mb3.9/27,mbtmp4.7/31,Error ellipse: s-maj=12.9km s-min=7.8km az=95.0*
ISC 01 07:08:05.9±0.4,**18.°77N**±0.°05×**145.°36E**±0.°08,**h300**km,**n340**,σ**1.s01**/346,**mb4.4**/83,**1C**,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.18	185	P	Pn	07 09 26.8	+1.2
	114nm,0.3s,baz=127,slow=6.0,SNR=20						
GUMO				S	S	07 10 34.5	+4.9
	146nm,0.3s,baz=24,slow=16,SNR=6.7						
GUMO	Guam	5.18	185	Pn	Pn	07 09 26.6	+1.0
GUMO	Guam	5.18	185	P	Pn	07 09 26.8	+1.2
JCJ	Chichijima	8.78	341	P	Pn	07 10 10.2	+1.1
	88nm,0.6s,baz=172,slow=4.7,SNR=14						
JCJ				S	S	07 11 51.2	+2.0
	42nm,0.6s,baz=111,slow=22,SNR=2.9						
JCJ	Chichijima	8.78	341		Pn	07 10 09.8	+0.8
JCJ	Chichijima	8.78	341	P	P	07 10 13.0	-1.0
JOW	Kunigami	17.66	300	P	P	07 11 51.5	-0.5
	30nm,0.4s,baz=130,slow=9.0,SNR=22						
JOW	Kunigami	17.66	300	P	P	07 11 52.6	+0.6
JOW	Kunigami	17.66	300	P	Pn	07 11 55.4	-0.1
JYT	Yasato	17.98	346	P	P	07 11 55.2	0.0
JMN	Monobe	18.08	328	P	P	07 11 56.6	+0.1
JMN				IAmb	IAmb	07 12 00.6	
	comp=Z,19nm,0.9s						
INU	Inuyama	18.09	338	P	P	07 11 55.6	-0.9
INU				IAmb	IAmb	07 12 00.6	
	comp=Z,33nm,1.2s						
JGF	Kuroka	18.20	339	P	P	07 11 57.9	+0.2
JGF				IAmb	IAmb	07 12 02.9	
	comp=Z,16nm,0.6s						
JSU	Suzuyama	18.49	316	P	P	07 12 00.7	-0.1
JSU				IAmb	IAmb	07 12 05.4	
	comp=Z,41nm,1.0s						
MJAR	Matsushiro Arr	18.79	342	P	P	07 12 02.6	-1.3
	comp=Z,5.0nm,0.4s,baz=168,slow=9.3,SNR=24						
MAJO	Matsushiro	18.79	342		P	07 12 03.5	-0.4
JNU	Nakatsue	19.30	321	P	P	07 12 09.6	+0.1
JNU				IAmb	IAmb	07 12 14.0	
	comp=Z,22nm,0.9s						
JMM	Marumori	19.44	349	P	P	07 12 11.4	+0.7
JHS	Saijyo	19.48	329		P	07 12 09.8	-1.5
JHS				IAmb	IAmb	07 12 14.9	
	comp=Z,12nm,0.9s						
JSD	Sado	20.17	344	P	P	07 12 18.4	0.0
MANU	Manus Island	20.78	174	P	P	07 12 24.2	-0.6
JTU	Tsushima	21.16	321	P	P	07 12 28.4	+0.3
JTU				IAmb	IAmb	07 12 30.6	
	comp=Z,20nm,0.8s						
KSBUS	Busan	21.83	322	P	P	07 12 34.6	+0.3
KSBUS				IAmb	IAmb	07 12 36.7	
	comp=Z,95nm,0.9s						
JTM	Tenmabayashi	22.25	351	P	P	07 12 38.8	+0.8
YULB	Yu-li	22.91	286	P	P	07 12 44.4	+0.1
YULB				IAmb	IAmb	07 12 59.7	
	comp=Z,53nm,1.3s						
NAWB	Namwon	22.97	320	P	P	07 12 44.5	-0.2
YHNB	Yeheng	23.02	289	P	P	07 12 45.4	0.0
ERM	Erimo	23.24	356	P	P	07 12 47.0	0.0
ERM				IAmb	IAmb	07 13 06.4	
	comp=Z,42nm,1.1s						
ERM	Erimo	23.24	356	P	P	07 12 50.3	+3.3
SSLB	Suanglung	23.27	287	P	P	07 12 46.6	-1.0
KSCHJ	Chungju	23.63	323	P	P	07 12 50.4	-0.2
KSCHJ				IAmb	IAmb	07 12 52.7	
	comp=Z,22nm,0.8s						
TJN	Taejon	23.64	322	P	P	07 12 50.4	-0.3
KSRS	Korea Array	24.07	324	P	P	07 12 54.5	-0.1
	comp=Z,14nm,0.6s,baz=145,slow=8.9,SNR=39						
	comp=Z,14nm,0.6s						
KSAR	Wonju Array Be	24.08	324	P	P	07 12 54.6	-0.1
KS19	Wonju Array Si	24.13	324	P	P	07 12 55.1	-0.2
KS19				IAmb	IAmb	07 12 55.8	
	comp=Z,9.4nm,0.7s						
JEW	Eniwo	24.22	353	P	P	07 12 56.0	+0.1
SEHB	SEOHWA	24.48	326	P	P	07 12 56.4	-1.9
SEHB				IAmb	IAmb	07 13 01.9	
	comp=Z,14nm,0.9s						
INCN	Inchon	24.82	323	P	P	07 13 00.6	-0.8
INCN				IAmb	IAmb	07 13 04.2	
	comp=Z,33nm,0.9s						
INCN	Inchon	24.82	323	P	P	07 13 04.5	+3.1
NJ2	Nanjing	27.26	304	eP	P	07 13 20.2	-3.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	27.72	339	P	P	07 13 27.2	+0.1
	comp=Z,6.9nm,0.8s,baz=164,slow=10,SNR=14						
	comp=Z,6.9nm,0.8s						
USRK	Ussuriysk Ar.	27.72	339	P	P	07 13 27.0	-0.1
YSS	Yuzh-Sakhalins	28.19	356	P	P	07 13 31.9	+0.7
YSS				IAmb	IAmb	07 13 33.0	
	comp=Z,21nm,0.8s						
YSS	Yuzh-Sakhalins	28.19	356	P	P	07 13 34.1	+2.9
HNS	HongShan	32.59	311	⇑P	P	07 14 11.1	+1.3
HNS				pmax	pmax		
	comp=Z,21nm,0.9s						
COEN	Coen	32.59	184	P	P	07 14 09.9	-0.2
COEN				IAmb	IAmb	07 14 47.1	
	comp=Z,26nm,1.5s						
BJT	Baijiatuau	32.85	316	P	P	07 14 11.7	-0.4
BJT				IAmb	IAmb	07 14 13.5	
	comp=Z,9.1nm,0.7s						
PEA0B	Petropavlovsk-	35.59	13	P	P	07 14 36.6	+1.3
PEA0B				IAmb	IAmb	07 14 41.4	
	comp=Z,18nm,1.3s						
PETK	Petropavlovsk-	35.59	13	P	P	07 14 36.4	+1.1
	comp=Z,2.8nm,0.8s,baz=184,slow=8.8,SNR=8.7						
	comp=Z,2.8nm,0.8s						
PETK	Petropavlovsk-	35.59	13	P	P	07 14 34.1	-1.2
HHC	Hu-ho-hao-te	36.32	315	eP	P	07 14 42.9	+1.1
MTSU	Mount Surprise	36.69	182	P	P	07 14 45.7	+0.7
QIS	Mount Isa	39.49	188	P	P	07 15 09.6	+1.4
WB0	Warramunga Arr	39.78	196	P	P	07 15 10.3	-0.3
WR0	Warramunga Arr	39.93	196	P	P	07 15 12.1	+0.3
WRAB	Tennant Creek	39.95	196	P	P	07 15 12.0	0.0
WRAB				IAmb	IAmb	07 15 12.9	
	comp=Z,10nm,0.7s						
WRAB	Tennant Creek	39.95	196	P	P	07 15 12.6	+0.6
WB2	Warramunga Arr	39.96	196	P	P	07 15 12.5	+0.4
WB2				IAmb	IAmb	07 15 13.1	
	comp=Z,13nm,0.8s						
WRA	Warramunga Arr	39.97	196	P	P	07 15 12.4	+0.3
	comp=Z,7.2nm,0.6s,baz=16,slow=8.6,SNR=100						
WRA				ScP	ScP	07 20 27.2	-3.7
	comp=Z,0.5nm,0.6s,baz=16,slow=4.5,SNR=7.1						
	comp=Z,7.2nm,0.6s						
WRA	Warramunga Arr	39.97	196	P	P	07 15 12.2	+0.1
LZH	Lanzhou	40.34	304	eP	P	07 15 17.3	+2.1
LZH				pmax	pmax		
	comp=Z,36nm,1.1s						
PZH	PanZhiHua	40.83	289	P	P	07 15 21.0	+1.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.8s						
MA2	Magadan	40.94	4	P	P	07 15 21.2	+1.7
	comp=Z,6.7nm,0.6s,baz=181,slow=8.8,SNR=5.6						
	comp=Z,6.7nm,0.6s						
MA2	Magadan	40.94	4	P	P	07 15 20.3	+0.8
MA2	Magadan	40.94	4	P	P	07 15 21.7	+2.2
ULN	Ulaanbaatar	42.51	322	P	P	07 15 33.0	+0.4
SONM	Songino Array	42.88	321	P	P	07 15 36.1	+0.6
	comp=Z,6.8nm,0.8s,baz=134,slow=9.0,SNR=43						
SONM				ScP	ScP	07 20 39.1	-3.3
	comp=Z,0.4nm,0.5s,baz=134,slow=4.3,SNR=4.6						
	comp=Z,6.8nm,0.8s						
SONM	Songino Array	42.88	321	P	P	07 15 35.9	+0.4
AS31	Alice Springs	43.64	195	P	P	07 15 41.3	-0.3
ASAR	Alice Springs	43.64	195	P	P	07 15 41.5	-0.2
	comp=Z,3.3nm,0.4s,baz=15,slow=6.4,SNR=88						
ASAR				S	S	07 21 45.0	-3.3
	comp=Z,1.0nm,1.0s,baz=18,slow=12,SNR=5.5						
	comp=Z,3.3nm,0.4s						
CHTO	Chiang Mai	43.84	278	P	P	07 15 43.5	+0.1
CMAR	Chiang Mai Arr	43.89	277	P	P	07 15 43.6	-0.1
	comp=Z,1.7nm,0.3s,baz=70,slow=6.4,SNR=12						
	comp=Z,1.7nm,0.3s						
CMAR	Chiang Mai Arr	43.89	277	P	P	07 15 44.7	+0.9
GTA	Gaotai	44.25	308	eP	P	07 15 47.8	+1.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SEY	Seymchan	44.39	5	P	P	07 15 47.1	+0.2
	comp=Z,4.1nm,0.8s,baz=180,slow=6.5,SNR=11						
	comp=Z,4.1nm,0.8s						
YAK	Yakutsk	44.59	350	P	P	07 15 48.0	-0.6
	comp=Z,58nm,0.6s,baz=264,slow=0.5,SNR=16						
	comp=Z,58nm,0.6s						
YAK	Yakutsk	44.59	350	P	P	07 15 48.9	+0.3
LIFNC	LIFOU	44.77	150	P	P	07 15 49.7	-0.8
GOMU	GeErMu	47.54	302	P	P	07 16 14.7	+2.4
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,58nm,5.1s						
STKA	Stephens Creek	50.49	184	P	P	07 16 34.1	+0.1
	comp=Z,1.8nm,0.5s,baz=354,slow=7.2,SNR=6.4						
	comp=Z,1.8nm,0.5s						
STKA	Stephens Creek	50.49	184	P	P	07 16 34.3	+0.3
UNV	Unalaska Valle	50.78	35	P	P	07 16 36.7	+0.9
UNV				IAmb	IAmb	07 16 40.0	
	comp=Z,20nm,1.0s						
UNV	Unalaska Valle	50.78	35	P	P	07 16 36.7	+0.9
	baz=246						
AKUT	Akutan	51.29	35	P	P	07 16 40.8	+1.1
FORT	Forrest	52.00	199	P	P	07 16 45.3	+0.1
BBOO	Buckleboo	52.06	190	P	P	07 16 46.0	+0.4
TAPN	Taplejung	53.34	290	eP	P	07 16 56.2	+0.7
	comp=Z,34nm,0.9s						
ODAN	Odare	53.65	290	eP	P	07 16 58.6	+0.9
TIXI	Tiksi	53.76	354	P	P	07 16 57.2	-0.2
TIXI				IAmb	IAmb	07 17 27.1	
	comp=Z,10nm,0.8s						
S12K	Black Hills	53.87	34	P	P	07 16 59.5	+1.0
	baz=249						
WMQ	Urumqi	54.02	311	eP	P	07 17 02.0	+2.1
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
RAMN	Ramite	54.35	290	eP	P	07 17 04.4	+1.6
	comp=Z,17nm,0.8s						
JIRN	Jiri	54.66	291	eP	P	07 17 05.3	+0.2
	comp=Z,53nm,0.9s						
GUN	Gumba	54.92	291	eP	P	07 17 07.7	+0.8
PKIN	Phulchoki	55.37	291	eP	P	07 17 11.0	+1.0
	comp=Z,14nm,0.6s						
DMN	Daman	55.62	291	eP	P	07 17 13.3	+1.5
GKN	Gorkha	56.01	292	eP	P	07 17 14.8	+0.4
DANN	Dangsing	56.75	292	eP	P	07 17 20.0	+0.2
	comp=Z,52nm,0.6s						
N16K	Nishlik Lake	57.23	29	P	P	07 17 22.9	+0.7
	baz=249						
O16K	Kokwok River B	57.24	30	P	P	07 17 22.7	+0.5
	baz=250						
Q16K	King Salmon	57.64	32	P	P	07 17 25.7	+0.7
	baz=252						
ZAA0	Zalesovo Array	57.76	323	P	P	07 17 25.8	-0.2
ZAA0				IAmb	IAmb	07 17 27.6	
	comp=Z,6.9nm,0.6s						
ZALV	Zalesovo Beam	57.76	323	P	P	07 17 25.3	-0.7
	comp=Z,4.0nm,0.4s,baz=103,slow=6.7,SNR=19						
	comp=Z,4.0nm,0.4s						
ZALV	Zalesovo Beam	57.76	323	P	P	07 17 25.5	-0.4
O17K	Koliganek Bris	57.78	30	P	P	07 17 27.2	+1.2
	baz=251						
P17K	Kvichak River	57.91	31	P	P	07 17 27.2	+0.3
	baz=252						
MK31	Makanchi Array	58.18	314	P	P	07 17 30.2	+1.1
MKAR	Makanchi Array	58.18	314	P	P	07 17 29.1	0.0

MAKZ Makanchi 58.40 314 P P 07 17 31.6 +1.1
MAKZ IAmb IAmb 07 17 32.6
comp=Z,12nm,0.8s
Q18K Katmai Hardscr 58.46 32 P P 07 17 31.1 +0.2
baz=254
N18K Kilae Creek 58.64 30 P P 07 17 33.1 +1.2
N18K Kilae Creek 58.64 30 P P 07 17 31.8 -0.2
baz=252
O18K Koktuh Hills 58.71 31 P P 07 17 32.2 -0.2
baz=253
SVW2 Sparrevohn 58.92 29 P P 07 17 34.8 +1.0
OHAK Old Harbor 58.97 34 P P 07 17 34.0 -0.2
baz=256
O19K Port Alsworth 59.24 30 P P 07 17 36.3 +0.3
baz=253
N19K Bonanza Creek 59.34 30 P P 07 17 37.4 +0.6
N19K Bonanza Creek 59.34 30 P P 07 17 36.8 -0.1
baz=253
L19K White Mountain 59.59 28 P P 07 17 38.9 +0.5
baz=252
Q20K Shuyak Island 59.77 32 P P 07 17 39.4 -0.2
baz=256
O20K Slope Mountain 60.02 31 P P 07 17 41.1 -0.3
baz=255
L20K Farewell, AK 60.12 28 P P 07 17 42.2 +0.3
baz=252
M20K Styx River 60.27 29 P P 07 17 43.6 +0.5
baz=254
K20K Telida 60.30 27 P P 07 17 43.5 +0.3
K20K Telida 60.30 27 P P 07 17 43.1 0.0
baz=252
J20K Nowinta River 60.53 26 P P 07 17 45.5 +0.8
J20K Nowinta River 60.53 26 P P 07 17 45.2 +0.6
baz=251,SNR=5.0
CNPM China Poot 60.57 32 P P 07 17 45.0 -0.1
CNPM IAmb IAmb 07 17 46.1
comp=Z,8.3nm,0.8s
BRSE Bradley Lake S 60.86 31 P P 07 17 46.6 -0.3
baz=257
KURK Kurchatov 61.00 318 P P 07 17 47.7 -0.4
SKT Skwentna 61.03 29 P P 07 17 47.9 -0.2
baz=255
KURBB Kurchatov Arra 61.05 318 P P 07 17 48.2 -0.1
comp=Z,23nm,0.6s,baz=97,slow=7.1,SNR=147
comp=Z,23nm,0.6s
CAST Castle Rocks 61.17 27 P P 07 17 50.1 +1.0
CAST IAmb IAmb 07 17 51.0
comp=Z,9.5nm,0.7s
CAST Castle Rocks 61.17 27 P P 07 17 49.6 +0.6
baz=254,SNR=16
IMAR Indian Mountai 61.28 24 P P 07 17 50.7 +1.1
NRIK Noril'sk 61.43 340 P P 07 17 50.4 -0.2
comp=Z,17nm,0.7s,baz=115,slow=7.6,SNR=25
comp=Z,17nm,0.7s
NRIK Noril'sk 61.43 340 P P 07 17 50.2 -0.4
NRIK IAmb IAmb 07 17 51.2
comp=Z,18nm,0.8s
H21K Melozitna Rive 61.54 25 P P 07 17 52.7 +1.2
H21K Melozitna Rive 61.54 25 P P 07 17 52.2 +0.8
baz=252,SNR=6.1
G21K Allakaket 61.55 24 P P 07 17 51.8 +0.4
baz=251
SEW Seward 61.57 31 P P 07 17 51.9 +0.3
baz=258
RC01 Rabbit Creek A 61.65 30 P P 07 17 52.5 +0.4
baz=257
KTH Kantishna Hill 61.71 27 P P 07 17 53.5 +0.8
KTH IAmb IAmb 07 17 54.3
comp=Z,8.9nm,1.1s
I21K Tanana 61.73 25 P P 07 17 54.0 +1.4
I21K IAmb IAmb 07 17 54.9
comp=Z,7.2nm,1.0s
I21K Tanana 61.73 25 P P 07 17 53.1 +0.5
baz=253,SNR=6.1
F21K Alatna River 61.80 23 P P 07 17 53.7 +0.6
baz=250
BPAW Bear Paw Mtn. 61.83 27 P P 07 17 54.4 +1.0
BPAW IAmb IAmb 07 17 55.2
comp=Z,9.7nm,0.7s
BPAW Bear Paw Mtn. 61.83 27 P P 07 17 53.9 +0.5
baz=254,SNR=12
TRF Thorofare Moun 61.96 27 P P 07 17 54.7 +0.3
TRF IAmb IAmb 07 17 55.5
comp=Z,6.7nm,0.9s
TRF Thorofare Moun 61.96 27 P P 07 17 54.4 0.0
baz=255
PMR Palmer 62.05 30 P P 07 17 54.7 0.0
baz=257
H22K Ishtalitna Cre 62.18 25 P P 07 17 55.9 +0.3
baz=253
MLY Manley 62.19 26 P P 07 17 56.7 +0.9
baz=254,SNR=14
PWL Port Wells 62.27 30 P P 07 17 56.6 +0.3
baz=258
KNK Knik Glacier 62.32 30 P P 07 17 57.2 +0.5
baz=258
F22K John River 62.37 23 P P 07 17 57.4 +0.6
baz=252
SML Sawmill 62.46 29 P P 07 17 58.5 +0.8
SML IAmb IAmb 07 17 59.1
comp=Z,11nm,0.8s
SML Sawmill 62.46 29 P P 07 17 57.8 +0.2
baz=258,SNR=5.8
NRN Naryn 62.48 307 P P 07 17 58.6 +0.1
NRN IAmb IAmb 07 18 00.2
comp=Z,5.3nm,0.7s
BWN Browne 62.49 27 P P 07 17 58.5 +0.8
BWN IAmb IAmb 07 18 26.0
comp=Z,19nm,0.9s
P23K Montague Islan 62.56 31 P P 07 17 58.4 +0.1
baz=260
KSH Kashi 62.56 305 P P 07 18 03.1 +4.3
KSH pmax pmax
comp=Z,17nm,0.9s
RND Reindeer 62.58 28 P P 07 17 59.1 +0.7
WAT1 Susitna Watana 62.58 28 P P 07 17 58.2 -0.1
baz=257
MCK McKinley 62.62 27 P P 07 17 58.2 -0.4
MCK McKinley 62.62 27 P P 07 17 58.5 -0.1
baz=256
E22K Anaktuvuk Pass 62.70 22 P P 07 17 59.6 +0.5
baz=252
M23K Glacier View 62.74 29 P P 07 17 59.6 +0.2
baz=259
NEA2 Nenana 62.77 26 P P 07 17 58.9 -0.6
NEA2 Nenana 62.77 26 P P 07 18 00.2 +0.7
baz=256
I23K Minto, Yukon-K 62.78 26 P P 07 18 00.0 +0.5
baz=255,SNR=8.6
H23K Yukon River 62.88 25 P P 07 18 00.9 +0.6
baz=255,SNR=5.5
WAT6 Susitna Watana 62.89 29 P P 07 18 00.6 0.0
baz=258
G23K Bananza Creek 62.93 24 P P 07 18 01.1 +0.5
baz=254
SCM Sheep Creek Mo 62.94 29 P P 07 18 00.3 -0.4
baz=259
Q23K Middleton Isla 62.99 32 P P 07 18 01.6 +0.6
baz=261
COLD Coldfoot 63.01 23 P P 07 18 02.1 +1.0
baz=254
DHY Denali Highway 63.16 28 P P 07 18 02.1 -0.2
baz=258
TCOL CIGO, UAF Yank 63.34 26 P P 07 18 03.4 +0.2
baz=257
COLA College 63.34 26 P P 07 18 03.4 +0.2
baz=257
D23K Nanushuk River 63.35 21 P P 07 18 03.6 +0.4
baz=252
EYAK Cordova Ski Ar 63.47 31 P P 07 18 03.4 -0.7
baz=261
KLU Klutina 63.53 30 P P 07 18 04.8 +0.1
baz=260
H24K Noodor Dome 63.55 25 P P 07 18 05.7 +1.0
H24K Noodor Dome 63.55 25 P P 07 18 04.6 -0.1
baz=256,SNR=6.0
POKR Poker Plat Res 63.57 26 P P 07 18 05.2 +0.4
baz=257
HDA Harding Lake 63.62 27 P P 07 18 05.0 -0.1
HDA IAmb IAmb 07 18 06.1
comp=Z,4.0nm,0.7s
HDA Harding Lake 63.62 27 P P 07 18 04.9 -0.2
baz=258
TOLK Toolik Lake Re 63.64 22 P P 07 18 07.0 +1.8
TOLK IAmb IAmb 07 18 07.1
comp=Z,5.2nm,0.6s
TOLK Toolik Lake Re 63.64 22 P P 07 18 05.9 +0.6
baz=254
C23K Itkillik River 63.65 20 P P 07 18 05.5 +0.4
baz=252
IL31 63.72 26 P P 07 18 04.8 -0.9
IL31 IAmb IAmb 07 18 05.9
comp=Z,4.8nm,0.8s
ILAR Eielson Array 63.72 26 P P 07 18 05.0 -0.7
comp=Z,3.5nm,0.7s,baz=257,slow=4.8,SNR=40
comp=Z,3.5nm,0.7s
ILAR Eielson Array 63.72 26 P P 07 18 04.6 -1.1
E24K Your Creek 63.88 22 P P 07 18 07.6 +0.9
baz=255
G24K Hadweenzic Riv 63.91 24 P P 07 18 07.7 +0.7
baz=256
F24K Squaw Lake 63.95 23 P P 07 18 07.6 +0.4
baz=256
PAX Paxson 63.99 28 P P 07 18 06.8 -0.9
PAX IAmb IAmb 07 18 08.7
comp=Z,4.9nm,0.7s
PAX Paxson 63.99 28 P P 07 18 07.0 -0.7
baz=260
K24K Donnelly Dome 64.00 27 P P 07 18 08.1 +0.4
baz=259
D24K Happy Valley 64.05 21 P P 07 18 08.5 +0.7
baz=254,SNR=5.6
BMRM Bremner River 64.08 31 P P 07 18 08.0 -0.2
BMRM IAmb IAmb 07 18 37.4
comp=Z,10.0nm,0.8s
BMRM Bremner River 64.08 31 P P 07 18 08.4 +0.2
baz=262
N25K Chitina, Valde 64.18 30 P P 07 18 09.7 +0.9
N25K Chitina, Valde 64.18 30 P P 07 18 09.3 +0.4
baz=262
C24K Franklin Bluff 64.25 21 P P 07 18 09.3 +0.3
baz=254
J25K Salcha River, 64.33 27 P P 07 18 09.1 -0.7
J25K Salcha River, 64.33 27 P P 07 18 09.5 -0.3
baz=259
RIDG Independent Ri 64.40 28 P P 07 18 09.6 -0.6
baz=260
H25K Birch Creek 64.46 25 P P 07 18 11.5 +1.0
baz=258
GLB Gilahina Butte 64.53 30 P P 07 18 11.8 +0.8
GLB IAmb IAmb 07 18 13.2
comp=Z,10nm,1.2s
DOT Dot Lake 64.73 28 P P 07 18 12.2 -0.2
DOT IAmb IAmb 07 18 13.5
comp=Z,6.5nm,0.7s
FYU Fort Yukon 64.76 24 P P 07 18 13.4 +1.1
FYU IAmb IAmb 07 18 14.2
comp=Z,6.5nm,0.8s
CRQE Cirque 64.79 31 P P 07 18 12.6 -0.3
baz=263
F25K Christian River 64.81 23 P P 07 18 13.5 +0.7
baz=258,SNR=6.8
SCRK Sand Creek 64.81 27 P P 07 18 12.1 -0.9
SCRK IAmb IAmb 07 18 14.3
comp=Z,5.3nm,1.1s
SCRK Sand Creek 64.81 27 P P 07 18 12.7 -0.3
baz=261
MCARA McCarthy VSAT 64.90 30 P P 07 18 13.6 +0.2
baz=263
D25K Kavik River 64.93 21 P P 07 18 14.0 +0.5
baz=256,SNR=5.2
E25K Arctic Village 64.95 23 P P 07 18 14.1 +0.5
baz=258
L26K Log Cabin Wild 64.96 28 P P 07 18 14.2 +0.4
baz=262
M26K Nabesna, AK 65.04 29 P P 07 18 14.8 +0.5
baz=263
J26L Joseph Creek 65.08 27 P P 07 18 14.3 -0.3
J26L IAmb IAmb 07 18 15.9
comp=Z,9.5nm,1.1s
J26L Joseph Creek 65.08 27 P P 07 18 14.6 0.0
baz=261,SNR=8.1
BMAR Burnt Mountain 65.18 24 P P 07 18 16.1 +1.0
NIL Nilore 65.21 299 P P 07 18 16.3 +0.3
I26K Coal Creek Min 65.38 26 P P 07 18 16.8 +0.5
baz=261
F26K Sheenjek River 65.39 23 P P 07 18 17.4 +0.9
baz=259,SNR=6.4
G26K Porcupine Rive 65.39 24 P P 07 18 17.3 +0.9
baz=260,SNR=6.7
M27K Edge Creek, AK 65.55 29 P P 07 18 18.6 +0.8
baz=264
C26K Camden Bay 65.57 21 P P 07 18 18.5 +1.0
baz=257
L27K Beaver Creek, 65.65 29 P P 07 18 19.1 +0.9
baz=264,SNR=7.2
K27K Chicken 65.66 27 P P 07 18 19.2 +1.0
baz=263
C27K Jago River 65.92 21 P P 07 18 20.6 +0.9
baz=259
BVCY Beaver Creek 66.03 29 P P 07 18 20.6 0.0
baz=265
I27K Kandik River 66.05 26 P P 07 18 21.0 +0.3
baz=262
H27K Steamboat Moun 66.17 25 P P 07 18 22.3 +0.9
baz=262
G27K Doyon Strip 66.20 24 P P 07 18 22.2 +0.6
baz=262
O28M Mount Upton 66.21 31 P P 07 18 21.9 -0.2
baz=266
BRVK Borovoye 66.28 320 P P 07 18 22.0 -0.3
E27K Coleen River 66.42 23 P P 07 18 23.6 +0.6
baz=261
KK31 Karatay Array 66.47 310 P P 07 18 24.0 +0.2
KK31 IAmb IAmb 07 18 25.5
comp=Z,15nm,0.8s
KKAR Karatay Array 66.47 310 P P 07 18 22.8 -0.9
PNL Peninsula 66.54 32 P P 07 18 24.1 +0.3
baz=267
DAWY Dawson 66.83 28 P P 07 18 26.4 +0.7
baz=265
GAR Garm 66.98 305 P P 07 18 27.5 +0.3
O29M Mount Kennedy 66.98 32 P P 07 18 26.8 0.0
baz=268
YUK4 Talbot Arm 67.00 31 P P 07 18 27.3 +0.4
baz=267
YUK6 Outpost Mounta 67.11 31 P P 07 18 27.4 -0.3
baz=268
M29M Somme Creek 67.14 29 P P 07 18 28.6 +0.9
baz=267
P29M Windy Craggy 67.38 32 P P 07 18 29.9 +0.7
baz=269
I29M Ogilvie Camp, 67.40 26 P P 07 18 30.1 +0.9
I29M Ogilvie Camp, 67.40 26 P P 07 18 29.1 -0.1
baz=266
HYT Haines Junctio 67.53 31 P P 07 18 30.1 0.0
HYT IAmb IAmb 07 18 32.8
comp=Z,8.9nm,0.8s
HYT Haines Junctio 67.53 31 P P 07 18 29.9 -0.3
baz=268
N30M Aishikik Lake 67.75 30 P P 07 18 31.8 +0.4
baz=268
P30M Million Dollar 67.78 32 P P 07 18 31.8 +0.1
baz=269
CHGR Chuyangaron 67.92 305 P P 07 18 31.9 -1.1
M30M Minto, Yukon 67.92 29 P P 07 18 33.9 +1.4
M30M Minto, Yukon 67.92 29 P P 07 18 32.9 +0.5
baz=268
PLBC Pleasant Camp 68.08 33 P P 07 18 34.6 +1.2
baz=270
N31M Braeburn, Yuko 68.38 30 P P 07 18 36.8 +1.5
N31M IAmb IAmb 07 18 37.7
comp=Z,5.5nm,0.7s
N31M Braeburn, Yuko 68.38 30 P P 07 18 36.2 +1.0
baz=270
KBL Kabul 68.56 300 P P 07 18 37.9 +0.7
KBL IAmb IAmb 07 18 38.2
comp=Z,15nm,0.9s
SIT Sitka 68.66 35 P P 07 18 37.2 +0.2
baz=272
WHY Whitehorse 68.82 31 P P 07 18 37.7 -0.4
baz=271
M31M Drury Creek, Y 69.04 30 P P 07 18 37.9 -1.4
M31M IAmb IAmb 07 18 40.7
comp=Z,4.1nm,0.7s
M31M Drury Creek, Y 69.04 30 P P 07 18 39.5 +0.2
baz=270
P32M Atlin 69.42 32 P P 07 18 41.7 -0.1
baz=272
INK Inuvik 69.43 23 P P 07 18 41.8 +0.3
comp=Z,5.8nm,0.7s,baz=287,slow=5.9,SNR=15
comp=Z,5.8nm,0.7s
INK Inuvik 69.43 23 P P 07 18 42.0 +0.4
INK IAmb IAmb 07 18 42.8
comp=Z,6.2nm,0.8s
INK Inuvik 69.43 23 P P 07 18 41.2 -0.3
baz=269
FARO Faro, Yukon 69.52 30 P P 07 18 41.4 -0.9
FARO IAmb IAmb 07 18 52.2
comp=Z,6.1nm,0.6s
N32M Quiet Lake 69.68 31 P P 07 18 43.3 0.0
baz=272
P33M Teslin, Yukon 69.85 32 P P 07 18 44.2 -0.2
baz=273
R33M Jennings River 70.84 33 P P 07 18 50.4 +0.1
baz=274
DLBC Dease Lake 71.41 34 P P 07 18 55.2 +1.5
comp=Z,3.2nm,0.7s,baz=282,slow=6.3,SNR=9.9
comp=Z,3.2nm,0.7s
DLBC Dease Lake 71.41 34 P P 07 18 53.8 +0.1
baz=276
T35M Bob Quinn 71.43 35 P P 07 18 53.9 0.0
baz=276
ARU Arti 72.82 325 P P 07 19 01.7 -0.3
comp=Z,16nm,0.6s,baz=96,slow=2.8,SNR=21
comp=Z,16nm,0.6s
ARU Arti 72.82 325 P P 07 19 01.7 -0.3
ABKAR Akbulak array 73.07 317 P P 07 19 02.8 -0.8
GEYT Alibeck 76.59 306 P P 07 19 24.3 +0.3
comp=Z,3.9nm,0.8s,baz=139,slow=7.9,SNR=4.4
comp=Z,3.9nm,0.8s
YKA Yellowknife Ar 78.07 28 P P 07 19 31.9 +0.3
comp=Z,4.3nm,0.7s,baz=292,slow=5.6,SNR=22
comp=Z,4.3nm,0.7s
H04D Lebanon 78.40 47 P P 07 19 33.5 -0.2
baz=285
L04D Klamath Falls 79.31 49 P P 07 19 38.6 -0.3
baz=286
J05D Fort Rock, OR 79.78 48 P P 07 19 40.8 -0.6
baz=286
NEW Newport 81.07 42 P P 07 19 48.9 +0.9
NEW IAmb IAmb 07 19 49.5
comp=Z,4.0nm,0.9s
NEW Newport 81.07 42 P P 07 19 47.4 -0.6
baz=288
KLMR Klimovskoe 81.24 332 eP P 07 19 46.7 -1.8
KLMR AMP 07 19 48.7
comp=Z,7.0nm,0.6s
BEKR Beckworth 81.38 51 P P 07 19 50.5 +0.5
BEKR IAmb IAmb 07 19 51.5
comp=Z,3.0nm,0.7s
UOSS Minazif 81.56 293 P P 07 19 50.9 0.0
UOSS IAmb IAmb 07 19 53.0
comp=Z,6.3nm,0.8s
KEV Kevo 81.76 342 eP P 07 19 50.0 -1.1
BMO Blue Mountains 82.02 45 P P 07 19 53.0 -0.1
ARA0 ARCESS Array S 82.32 342 eP P 07 19 52.7 -1.3
ARA0 IAmb IAmb 07 19 53.3
comp=Z,11nm,0.9s
ARCES ARCESS Array B 82.32 342 P P 07 19 52.7 -1.3
comp=Z,5.5nm,0.7s,baz=68,slow=6.8,SNR=42
comp=Z,5.5nm,0.7s
ARCES ARCESS Array B 82.32 342 P P 07 19 53.0 -1.0
ARCES IAmb IAmb 07 19 53.5
comp=Z,8.6nm,0.9s
NVAR Mina Array Bea 83.34 52 P P 07 20 01.1 +1.0
comp=Z,2.9nm,0.6s,baz=270,slow=5.7,SNR=40
comp=Z,2.9nm,0.6s
NVAR Mina Array Bea 83.34 52 P P 07 20 00.4 +0.2
MFID Camas Ranch 83.49 46 P P 07 20 00.9 +0.3
MFID IAmb IAmb 07 20 02.4
comp=Z,4.8nm,1.1s
HEF Hetta 83.52 342 eP P 07 19 58.8 -1.4
MSO Missoula 83.58 43 P P 07 20 00.7 -0.3
baz=290
JETT Jettan, Norway 83.75 343 eP P 07 20 00.6 -0.7
JETT IAmb IAmb 07 20 02.5
comp=Z,12nm,0.7s
TRO Tromso 84.11 344 eP P 07 20 02.0 -1.0
CWC Cottonwood Cre 84.15 54 P P 07 20 03.3 -0.9
baz=289
HLID Hailey 84.41 46 P P 07 20 05.1 -0.2
baz=290
DECC Green Verdugo 84.66 56 P P 07 20 06.8 +0.2
baz=289
MPMC Manual Prospec 84.73 54 P P 07 20 07.2 +0.1
baz=289
ELK Elko 84.81 49 P P 07 20 07.3 -0.2
CIS Catalina Islan 84.87 57 P P 07 20 07.7 +0.1
baz=289
FURC Furnace Creek, 85.07 53 P P 07 20 08.4 -0.1
baz=290
TPNV Topopah Spring 85.37 53 P P 07 20 10.4 +0.1
baz=290
R11A Troy Canyon, C 85.39 51 P P 07 20 10.6 +0.3
baz=290
BOZ Bozeman (W) 85.52 43 P P 07 20 11.2 +0.4
baz=292
KBZ Khabaz 85.86 315 P P 07 20 11.4 -0.8
comp=Z,3.1nm,1.0s,baz=287,slow=1.4,SNR=5.3
comp=Z,3.1nm,1.0s
STEI Steigen 86.25 343 eP P 07 20 11.7 -1.9
PFO Pinyon Flats O 86.34 56 P P 07 20 15.3 +0.3
baz=290
TPFO Pinon Flats 86.35 56 P P 07 20 14.6 -0.4
baz=290
GMRC Granite Mounta 86.56 55 P P 07 20 15.6 -0.4
baz=290
BELC Belle Mtn. Jos 86.57 55 P P 07 20 15.9 -0.2
baz=290
MONP2 Monument Peak 86.62 57 P P 07 20 16.2 -0.2
baz=290
FINES FINESS Array B 86.68 335 P P 07 20 13.4 -2.4
comp=Z,3.7nm,0.5s,baz=66,slow=5.0,SNR=38
comp=Z,3.7nm,0.5s
DUG Dugway, Tooele 86.74 49 P P 07 20 16.7 -0.1
baz=292
IKP In-Ko-Pah, Jac 86.95 57 P P 07 20 17.5 -0.3
baz=290
SWSC Sam W. Stewart 87.09 56 P P 07 20 18.3 -0.1
baz=290
BC3 Big Chuckawall 87.12 56 P P 07 20 18.0 -0.7
baz=291
IRM Iron Mountain 87.18 55 P P 07 20 17.8 -1.0
baz=291
RLMT Red Lodge 87.24 43 P P 07 20 19.1 -0.1
baz=294
PDMCI Parker Dam,Lak 87.91 55 P P 07 20 21.4 -0.8
baz=291
BW06 Boulder Array 88.00 45 P P 07 20 22.1 -0.7
baz=294
PDAR Pinedale Array 88.00 45 P P 07 20 21.8 -1.0
comp=Z,0.2nm,0.4s,baz=57,slow=0.7,SNR=5.5
comp=Z,0.2nm,0.4s
214A Organ Pipe Nat 89.81 56 P P 07 20 30.6 -0.7
baz=292
O20A White River Ci 89.98 47 P P 07 20 31.2 -0.9
baz=295
N23A Red Feather La 91.24 46 P P 07 20 36.8 -1.2
baz=296
NOA NORSAR Array B 92.39 340 P P 07 20 40.2 -2.3
comp=Z,0.4nm,0.6s,baz=46,slow=4.5,SNR=3.3
comp=Z,0.4nm,0.6s
BRTR Keskin Array B 93.83 314 P P 07 20 47.9 -1.9
comp=Z,1.8nm,1.0s,baz=132,slow=2.1,SNR=4.9
comp=Z,1.8nm,1.0s
JFWS Jewell Farm 100.14 38 P Pdif 07 21 16.8 -1.1
baz=308
TUL1 Leonard 100.62 46 P Pdif 07 21 19.8 -0.4
baz=302
L61B Northampton 109.70 29 P PKiKP 07 26 01.5 0.0
baz=322
TORD Torodi Ar. Bea 132.16 309 PKP PKPdf 07 26 43.9 -1.2
comp=Z,0.4nm,0.7s,baz=35,slow=1.7,SNR=1.6
TORD SKPbc SKPbc 07 29 36.6 -6.3
comp=Z,0.7nm,0.7s,baz=14,slow=2.0,SNR=3.5

JMA 01 07:11:12.9±0.0, 32.8N±0.1×130.6E±0.2, h12km, MV1.9/20,
NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JTA	**Tamana**	**0.17**	**338**	*i*	P		07 11 16.9	0.0
JTA					S		07 11 19.7	0.0
JIU3	**Izumi3**	**0.30**	**146**	*eP*			07 11 19.0	-0.1
JNU	**Nakatsue**	**0.39**	**35**	*i*	P		07 11 20.8	+0.1
JNU					S		07 11 26.2	+0.2

*IDC **01** 07:21:06.0±5.5, 18.15S×177.28W, h148km±42km, mb3.4/6,*

mbtmp3.9/7, MS4.0/10, Error ellipse: s-maj=93.2km s-min=21.4km az=147.0

ISC 01 07:21:05.9±1.2**, 18°.1S**±0°.4×**177°.3W**±0°.2**, h150**km**, n16,** σ**0s.85**/8**, mb3.5**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.46**	**274**	P	**Pn**	**07 22 12.7**	**+0.4**
	24nm,0.8s,baz=132,slow=11,SNR=16						
AFI	**Afiamalu**	**6.76**	**52**	LR	LR	07 24 18.7	
	comp=Z,167nm,20.5s,baz=197,slow=28						
RAO	**Raoul Island**	**11.08**	**183**	LR	LR	07 26 32.5	
	comp=Z,2μm,19.3s,baz=28,slow=30						
DZM	**Mont Dzumac**	**15.78**	**253**	LR	LR	07 29 54.1	
	comp=Z,821nm,19.7s,baz=61,slow=34						
URZ	**Urewera**	**20.64**	**193**	LR	LR	07 33 12.1	
	comp=Z,419nm,19.9s,baz=31,slow=35						
HNR	**Honiara**	**23.72**	**288**	LR	LR	07 35 45.5	
	comp=Z,192nm,18.1s,baz=140,slow=37						
RPZ	**Rata Peaks**	**27.33**	**199**	LR	LR	07 37 42.4	
	comp=Z,372nm,20.9s,baz=24,slow=36						
KRVT	**Keravat (AS076**	**33.01**	**291**	LR	LR	07 40 40.5	
	comp=Z,190nm,19.2s,baz=258,slow=36						
PMG	**Port Moresby**	**35.55**	**279**	LR	LR	07 40 58.7	
	comp=Z,250nm,18.1s,baz=126,slow=34						
STKA	**Stephens Creek**	**39.46**	**242**	P	**P**	**07 28 21.3**	**-0.4**
	3.9nm,1.0s,baz=110,slow=16,SNR=2.9						
STKA				LR	LR	07 43 30.2	
	comp=Z,183nm,18.5s,baz=156,slow=34						
	3.9nm,1.0s						
WRA	**Warramunga Arr**	**45.64**	**260**	P	**P**	**07 29 11.6**	**-0.2**
	1.1nm,1.0s,baz=95,slow=6.9,SNR=6.0						
WRA				LR	LR	07 47 15.6	
	comp=Z,351nm,19.9s,baz=138,slow=34						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**45.76**	**254**	P	**P**	**07 29 12.8**	**0.0**
	2.1nm,0.7s,baz=87,slow=8.1,SNR=20						
	2.1nm,0.7s						
NVAR	**Mina Array Bea**	**78.85**	**43**	P	**P**	**07 32 51.8**	**-1.0**
	0.5nm,0.8s,baz=230,slow=9.1,SNR=4.3						
	0.5nm,0.8s						
TXAR	**Lajitas Array**	**85.22**	**57**	P	**P**	**07 33 27.4**	**+1.4**
	0.7nm,1.0s,baz=212,slow=6.4,SNR=4.7						
	0.7nm,1.0s						
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**07 33 27.9**	**-0.5**
	1.0nm,1.1s,baz=224,slow=5.1,SNR=6.2						
	1.0nm,1.1s						
GERES	**GERESS Array B**	**148.10**	**346**	PKPbc	**PKiKP**	**07 40 35.9**	**+0.2**
	1.2nm,0.9s,baz=48,slow=4.7,SNR=2.1						

ARE ***01*** *07:24:38±1.1, 16°.31S±0°.10×72°.6W±0°.1, h109km±10km, ML4.5, Error ellipse: s-maj=17.2km s-min=11.9km az=57.0*

NEIC 01 07:24:38.6±1.1**, 16°.28S**±0°.10×**72°.6W**±0°.1**, h88**km±56km**, Error ellipse: s-maj=19.2km s-min=13.2km az=65.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**3.17**	**137**		Pn	07 25 26.5	0.0
PB16	**IPOC Station P**	**3.59**	**125**		Pn	07 25 33.4	+0.9
LPAZ	**La Paz**	**4.29**	**91**		Pn	07 25 43.8	+1.7
PB11	**IPOC Station P**	**4.45**	**142**		Pn	07 25 43.5	-0.4
TA02	**Huaiquique**	**4.61**	**150**	Pn	Pn	07 25 46.1	+0.2
GO01	**Chusmiza**	**4.67**	**137**		Pn	07 25 47.6	+0.4
TA01	**Diego Aracena**	**4.84**	**152**	Pn	Pn	07 25 47.8	-1.2
PATCX	**Punta Patache**	**5.08**	**153**	Pn	Pn	07 25 51.5	-0.8
PB01	**IPOC Station P**	**5.58**	**149**		Pn	07 25 58.9	-0.3
PB02	**IPOC Station P**	**5.63**	**153**		Pn	07 25 59.8	-0.1
NNA	**Nana**	**5.93**	**315**	Pn	Pn	07 26 04.0	0.0
PB07	**IPOC Station P**	**6.00**	**155**	Pn	Pn	07 26 04.7	-0.2
PB09	**IPOC Station P**	**6.34**	**151**	Pn	Pn	07 26 10.4	+0.8
PB04	**IPOC Station P**	**6.45**	**159**	Pn	Pn	07 26 10.6	-0.5
PB06	**IPOC Station P**	**7.00**	**156**	Pn	Pn	07 26 18.1	-0.5
LVC	**Limon Verde**	**7.19**	**152**	Pn	Pn	07 26 21.4	-0.1
PB15	**IPOC Station P**	**7.50**	**157**	Pn	Pn	07 26 23.4	-2.1
PB14	**IPOC Station P**	**8.56**	**166**	Pn	Pn	07 26 36.3	-3.7
ETMB	**Extrema**	**8.94**	**45**		Pn	07 26 40.5	-4.4

ARE ***01*** *07:32:47±3.2, 8°.98S±0°.09×76°.5W±0°.1, h137km±8km, Error ellipse: s-maj=0.0km s-min=0.0km az=203.0*

NEIC 01 07:32:45.2±2.7**, 8°.91S**±0°.06×**76°.5W**±0°.1**, h129**km±16km**, mb4.7**/2**, ML4.6**(ARE)**, Error ellipse: s-maj=15.7km s-min=6.9km az=110.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.07**	**186**		Pn	07 33 33.9	+1.1
CZSB	**Cruzeiro do Su**	**3.97**	**73**		Pn	07 33 45.4	+0.8
BOSC	**San Juan Bosco**	**6.04**	**341**		Pn	07 34 12.3	-0.1
ARNL	**Arenillas**	**6.38**	**326**	Pn	Pn	07 34 17.1	+0.3
CHSH	**Refugio Sur-Vo**	**7.72**	**342**	Pn	Pn	07 34 35.1	-0.4
PORT	**Chimborazo Vol**	**7.72**	**343**	Pn	Pn	07 34 34.4	-1.1
SLOR	**San Lorenzo -**	**8.36**	**346**	Pn	Pn	07 34 42.7	-1.2
ETMB	**Extrema**	**10.23**	**96**		Pn	07 35 07.0	-1.7
SAML	**Samuel**	**13.20**	**91**		Pn	07 35 45.7	-2.0
PATCX	**Punta Patache**	**13.35**	**153**	Pn	Pn	07 35 48.0	-1.7
VA01	**Torpederas**	**24.42**	**170**	P	P	07 37 51.2	-0.5
VA01				IAmb	IAmb	07 37 52.0	
	comp=Z,22nm,1.0s						
RCBR	**Riachuelo**	**40.41**	**89**	P	P	07 40 10.5	-0.6
RCBR				IAmb	IAmb	07 40 30.2	
	comp=Z,20nm,1.1s						

BJI ***01*** *07:42:46.4±0.0, 24°.35S×82°.19E, h20km, mb5.5/90, mB5.9/58, Ms5.6/92, Ms7 5.5/87*

IDC ***01*** *07:42:48.8±0.4, 23°.93S×82°.59E, h0km, mb5.5/45, mbtmp5.5/45, MS4.9/55, Error ellipse: s-maj=12.3km s-min=10.8km az=0.0*

MOS ***01*** *07:42:48.6±0.8, 23°.88S×82°.63E, h10km, mb6.1/101, MS5.1/33, Error ellipse: s-maj=7.9km s-min=4.3km az=105.1*

NEIC ***01*** *07:42:51.1, 23°.95S×82°.55E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.38; $M_{\theta\theta}$-2.39; $M_{\phi\phi}$1.01; $M_{r\theta}$-1.10; $M_{\theta\phi}$0.42; $M_{\phi r}$0.37; Fault plane solution: $M_0$2.42000×10^{17} NP1:ϕ_s74.51000°, δ33.26000°, λ57.33000°. NP2:ϕ_s291.99000°, δ62.51000°, λ109.50000°. Principal axes: T 1.7648, Plg67.0000°, Azm238.0000°; N 0.9902, Plg17.0000°, Azm103.0000°; P -2.7550, Plg15.0000°, Azm8.0000°;*

NEIC ***01*** *07:42:51.2±1.9, 23°.97S±0°.07×82°.56E±0°.09, h10km±1km, mb6.1/214, Ms_20 5.4/250, Mwb5.5/39, Mww5.6 Error ellipse: s-maj=13.9km s-min=11.5km az=238.0*

GCMT ***01*** *07:42:53.2±0.1, 23°.84S×82°.63E, h12km, MW5.6/155, Moment Tensor Solution. s117,c192; s155,c306; Duration: 1s.5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.85±.03; $M_{\theta\theta}$-3.06±.03; $M_{\phi\phi}$0.21±.03; $M_{r\theta}$-0.38±.08; $M_{\theta\phi}$0.28±.03; $M_{\phi r}$-0.12±.10; Best double couple: $M_0$2.99400×10^{17} NP1:ϕ_s271.00000°, δ49.00000°, λ86.00000°. NP2:ϕ_s98.00000°, δ42.00000°, λ95.00000°. Principal axes: T 2.8820, Plg85.0000°, Azm142.0000°; N 0.2300, Plg3.0000°, Azm274.0000°; P -3.1060, Plg4.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***01*** *07:42:54, 24°.06S×82°.48E, h12km, Moment Tensor Solution. Duration: 7s.8 Moment tensor: Scale 10^{17}Nm; M_{rr}1.73; $M_{\theta\theta}$-2.74; $M_{\phi\phi}$1.01; $M_{r\theta}$-1.58; $M_{\theta\phi}$0.56; $M_{\phi r}$0.36; Fault plane solution: $M_0$2.95000×10^{17} NP1:ϕ_s90.00000°, δ28.00000°, λ78.00000°. NP2:ϕ_s284.00000°, δ63.00000°, λ96.00000°. Principal axes: T 2.2566, Plg71.0000°, Azm208.0000°; N 1.0809, Plg6.0000°, Azm101.0000°; P -3.3375, Plg18.0000°, Azm9.0000°;*

ISC 01 07:42:51.5±0.3**, 24°.04S**±0°.04×**82°.51E**±0°.04**, h18**km±1km**, h18**km**:pP-P, n1946,** σ**1s.21**/2084**, mb5.9**/325**, MS5.3**/237**, 154C-20D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCAM	**Rodrigues Isla**	**18.27**	**280**	P	**P**	**07 47 04.1**	**0.0**
H08S2	**Diego Garcia H**	**18.92**	**328**	P	**Pn**	**07 47 13.6**	**+1.8**
	baz=123,slow=9.8,SNR=10						
H08S2				T	T	08 06 22.3	
	baz=152,slow=74,SNR=1697						
H08S1	**Diego Carcia H**	**18.93**	**328**	P	**Pn**	**07 47 13.8**	**+1.9**
	baz=123,slow=9.8,SNR=6.7						
H08S1				T	T	08 06 27.1	
	baz=152,slow=74,SNR=1760						
H08S3	**Diego Garcia H**	**18.94**	**328**	P	**Pn**	**07 47 13.1**	**+1.0**
	baz=123,slow=9.8,SNR=7.0						
H08S3				T	T	08 06 16.6	
	baz=152,slow=74,SNR=1994						
DGAR	**Diego Garcia**	**19.14**	**328**	P	**P**	**07 47 12.2**	**-1.7**
DGAR	**Diego Garcia**	**19.14**	**328**	*d i*P	**P**	**07 47 14.0**	**+0.2**
DGAR				pmax	pmax		
	comp=Z,1μm,1.5s						
DGAR				MLR	MLR		
	comp=Z,5μm,17.0s						
RER	**Riviere de l'E**	**24.86**	**271**	P	**P**	**07 48 13.4**	**+0.1**
RER	**Riviere de l'E**	**24.86**	**271**	P	**P**	**07 48 15.0**	**+1.8**
	SNR=5.4						
XMIS	**Christmas Isla**	**25.83**	**63**	P	**P**	**07 48 21.2**	**-0.8**
KAAM	**Kaadhehdhoo**	**26.08**	**338**	P	**P**	**07 48 22.6**	**-1.5**
KAAM				IAmb	IAmb	07 48 27.8	
	comp=Z,605nm,1.6s						
KAAM				IAMs_20	IAMs_20	07 55 18.9	
	comp=Z,10μm,22.0s						
KAAM	**Kaadhehdhoo**	**26.08**	**338**	P	**P**	**07 48 25.3**	**+1.1**
	SNR=6.7						
PAF	**Port-aux-Franc**	**27.05**	**198**	IAMs_20	IAMs_20	07 56 19.5	
	comp=Z,11μm,19.0s						
PPSI	**Pulau Pagai**	**27.08**	**41**	P	**P**	**07 48 33.1**	**-0.1**
	comp=Z,7μmcomp=Z,248nm,1.2s						
SISI	**Saibi**	**27.71**	**38**	P	**P**	**07 48 39.2**	**+0.4**
	comp=Z,3μmcomp=Z,105nm,2.0s						
KASI	**Kota Agung**	**28.04**	**52**	P	**P**	**07 48 40.7**	**-1.1**
LWLI	**Liwa**	**28.07**	**51**	P	**P**	**07 48 42.3**	**0.0**
	comp=Z,7μmcomp=Z,95nm,2.1s						
KRJI	**Kerinci**	**28.50**	**43**	P	**P**	**07 48 47.0**	**+1.0**
	comp=Z,355nm,1.1s						
DBJI	**Dramaga**	**29.05**	**57**	P	**P**	**07 48 52.1**	**+1.3**
	comp=Z,15μmcomp=Z,141nm,2.1s						
GIRL	**Giralia**	**29.13**	**94**	P	**P**	**07 48 52.6**	**+1.1**
	baz=29						
GSI	**Gunungsitoli**	**29.14**	**32**	P	**P**	**07 48 50.3**	**-1.3**
GSI				IAmb	IAmb	07 49 06.6	
	comp=Z,509nm,1.8s						
GSI				IAMs_20	IAMs_20	07 57 35.0	
	comp=Z,9μm,20.0s						
GSI	**Gunungsitoli**	**29.14**	**32**	P	**P**	**07 48 55.0**	**+3.4**
GSI	**Gunungsitoli**	**29.14**	**32**	P	**P**	**07 48 53.5**	**+1.9**
PPI	**Padang Panjang**	**29.16**	**39**	P	**P**	**07 48 53.4**	**+1.6**
	comp=Z,3μmcomp=Z,114nm,2.0s						
H01W3	**Cape Leeuwin H**	**29.46**	**119**	T	T	08 19 43.7	
	baz=284,slow=74,SNR=76						
H01W2	**Cape Leeuwin H**	**29.47**	**119**	T	T	08 19 47.0	
	baz=284,slow=74,SNR=80						
H01W1	**Cape Leeuwin H**	**29.48**	**119**	T	T	08 19 51.9	
	baz=284,slow=74,SNR=73						
LEM	**Lembang**	**29.55**	**59**	P	**P**	**07 48 58.0**	**+2.5**
LEM				pmax	pmax		
	comp=Z,63nm,1.3s						
LEM	**Lembang**	**29.55**	**59**	P	**P**	**07 48 55.3**	**-0.2**
	comp=Z,2μmcomp=Z,74nm,1.8s						
MNSI	**Mandailing Nat**	**29.73**	**36**	P	**P**	**07 48 57.6**	**+0.7**
SBSI	**Sibolga**	**30.01**	**34**	P	**P**	**07 49 00.1**	**+0.8**
	comp=Z,2μmcomp=Z,41nm,0.8s						
BKNI	**Bangkinang**	**30.17**	**39**	IAMs_20	IAMs_20	07 58 38.4	
	comp=Z,7μm,21.0s						
BKNI	**Bangkinang**	**30.17**	**39**	P	**P**	**07 49 02.5**	**+1.8**
	comp=Z,5μmcomp=Z,178nm,0.9s						
BKNI	**Bangkinang**	**30.17**	**39**	P	**P**	**07 49 03.7**	**+3.0**
MORW	**Morawa**	**30.34**	**107**	P	**P**	**07 49 03.7**	**+1.5**
	baz=30,SNR=9.5						
MORW	**Morawa**	**30.34**	**107**	P	**P**	**07 49 00.9**	**-1.3**
MORW				IAmb	IAmb	07 49 04.9	
	comp=Z,444nm,1.8s						
MORW	**Morawa**	**30.34**	**107**	P	**P**	**07 49 03.8**	**+1.5**
MUN	**Mundaring**	**30.69**	**113**	P	**P**	**07 49 06.6**	**+1.3**
	baz=31,SNR=6.5						
MUN	**Mundaring**	**30.69**	**113**	P	**P**	**07 49 06.9**	**+1.6**
BLDU	**Ballidu**	**31.00**	**110**	P	**P**	**07 49 08.8**	**+0.8**
	baz=31,SNR=7.0						
BLDU	**Ballidu**	**31.00**	**110**	P	**P**	**07 49 09.4**	**+1.4**
RPSI	**Rantau Prapat**	**31.00**	**33**	P	**P**	**07 49 08.1**	**0.0**
RPSI				IAMs_20	IAMs_20	07 58 28.5	
	comp=Z,10μm,22.0s						
PSI	**Prapat**	**31.09**	**33**	P	**P**	**07 49 08.1**	**-1.0**
PSI				pmax	pmax		
	comp=Z,162nm,1.6s						
PSI	**Prapat**	**31.09**	**33**	P	**P**	**07 49 11.1**	**+2.0**
YOGI	**Yogyakarta**	**31.11**	**63**	P	**P**	**07 49 09.0**	**-0.1**
	comp=Z,221nm,1.5s						
KCSI	**Kotacane, Aceh**	**31.17**	**31**	P	**P**	**07 49 08.5**	**-1.1**
PALK	**Pallekele**	**31.17**	**357**	LR	LR	07 59 02.8	
	comp=Z,8μm,19.6s,baz=291,slow=31						
PALK	**Pallekele**	**31.17**	**357**	IAMs_20	IAMs_20	07 58 30.7	
	comp=Z,8μm,21.0s						
PPBI	**Pangkal Pinang**	**31.55**	**50**	P	**P**	**07 49 12.2**	**-0.7**
NWAO	**Narrogin (SRO)**	**31.66**	**114**	P	**P**	**07 49 14.6**	**+0.8**
NWAO				IAmb	IAmb	07 49 16.2	
	comp=Z,602nm,1.9s						
NWAO	**Narrogin (SRO)**	**31.66**	**114**	P	**P**	**07 49 14.6**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,602nm,2.0s						
NWAO	**Narrogin (SRO)**	**31.66**	**114**	P	**P**	**07 49 14.7**	**+0.8**
NWAO	**Narrogin (SRO)**	**31.66**	**114**	P	**P**	**07 49 15.4**	**+1.6**
SMRI	**Semarang**	**31.66**	**62**	P	**P**	**07 49 14.9**	**+0.9**
SMRI	**Semarang**	**31.66**	**62**	P	**P**	**07 49 14.3**	**+0.3**
	comp=Z,6μmcomp=Z,226nm,1.7s						
SMRI	**Semarang**	**31.66**	**62**	P	**P**	**07 49 16.2**	**+2.2**
DSRI	**Dabo**	**31.72**	**46**	P	**P**	**07 49 15.9**	**+1.5**
	comp=Z,2μmcomp=Z,16nm,0.7s						
HMDM	**Hanimaadhoo**	**31.95**	**342**	IAMs_20	IAMs_20	07 59 44.5	
	comp=Z,6μm,20.0s						
KLBR	**Kellerberrin**	**31.96**	**112**	P	**P**	**07 49 17.3**	**+0.8**
	baz=32,SNR=9.0						
KLBR	**Kellerberrin**	**31.96**	**112**	P	**P**	**07 49 17.7**	**+1.2**
PWJI	**Pagerwojo**	**32.24**	**65**	P	**P**	**07 49 18.0**	**-1.0**
	comp=Z,99nm,2.2s						
FOMA	**Nahampoana Res**	**32.29**	**261**	P	**P**	**07 49 20.2**	**+0.8**
FOMA				IAmb	IAmb	07 49 21.8	
	comp=Z,280nm,1.5s						
FOMA	**Nahampoana Res**	**32.29**	**261**	P	**P**	**07 49 20.9**	**+1.5**
	SNR=7.3						
NGJI	**Ngawi**	**32.32**	**64**	P	**P**	**07 49 19.6**	**-0.1**
	comp=Z,121nm,1.4s						
LHMI	**Lhok Sumawe**	**32.32**	**28**	IAMs_20	IAMs_20	07 59 34.2	
	comp=Z,5μm,20.0s						
MSEY	**Mahe Island**	**32.38**	**302**	P	**P**	**07 49 21.5**	**+1.2**
MSEY				IAmb	IAmb	07 49 23.6	
	comp=Z,288nm,1.4s						
MSEY	**Mahe Island**	**32.38**	**302**	P	**P**	**07 49 21.5**	**+1.2**
MSEY				pmax	pmax		
	comp=Z,288nm,1.5s						
SBV	**Sambava**	**32.53**	**283**	P	**P**	**07 49 22.7**	**+1.1**
MEEK	**Meekatharra**	**32.66**	**102**	P	**P**	**07 49 23.5**	**+0.7**
	baz=33,SNR=12						
MEEK	**Meekatharra**	**32.66**	**102**	P	**P**	**07 49 24.1**	**+1.3**
VOI	**Vohitsoka**	**32.90**	**266**	P	**P**	**07 49 26.1**	**+1.2**
VOI	**Vohitsoka**	**32.90**	**266**	P	**P**	**07 49 26.1**	**+1.2**
	SNR=11						
VOI	**Vohitsoka**	**32.90**	**266**	P	**P**	**07 49 26.5**	**+1.5**
VOI	**Vohitsoka**	**32.90**	**266**	P	**P**	**07 49 26.5**	**+1.5**
TBJI	**Tambak Boyo**	**32.94**	**63**	P	**P**	**07 49 25.4**	**+0.2**
	comp=Z,3μmcomp=Z,157nm,1.2s						
MYKOM	**Kota Tinggi**	**33.01**	**42**	IAMs_20	IAMs_20	08 00 06.8	
	comp=Z,5μm,21.0s						
ABPO	**Ambohimpanom**	**33.14**	**272**	P	**P**	**07 49 27.2**	**+0.1**
ABPO	**Ambohimpanom**	**33.14**	**272**	P	**P**	**07 49 27.2**	**+0.1**
ABPO				pmax	pmax		
	comp=Z,99nm,1.5s						
GMJI	**Gumukmas**	**33.48**	**67**	P	**P**	**07 49 30.1**	**+0.2**
	comp=Z,3μmcomp=Z,84nm,1.9s						
IPM	**Ipoh**	**33.60**	**35**	IAMs_20	IAMs_20	08 00 35.4	
	comp=Z,6μm,20.0s						
IPM	**Ipoh**	**33.60**	**35**	P	**P**	**07 49 33.3**	**+2.4**
BLJI	**Banyuglugur**	**33.88**	**67**	P	**P**	**07 49 33.8**	**+0.4**
	comp=Z,2μmcomp=Z,50nm,2.1s						
JAGI	**Jajag, Banyuwa**	**33.98**	**68**	P	**P**	**07 49 33.7**	**-0.5**
JAGI				IAmb	IAmb	07 49 35.5	
	comp=Z,365nm,1.8s						
KULM	**Kulim**	**34.10**	**34**	P	**P**	**07 49 34.7**	**-0.6**
KULM				IAmb	IAmb	07 49 38.2	
	comp=Z,307nm,1.5s						
KULM				IAMs_20	IAMs_20	08 00 36.5	
	comp=Z,6μm,21.0s						
MBWA	**Marble Bar**	**34.42**	**93**	P	**P**	**07 49 38.6**	**+0.6**
MBWA				IAmb	IAmb	07 49 40.2	
	comp=Z,554nm,1.9s						
MBWA	**Marble Bar**	**34.42**	**93**	P	**P**	**07 49 38.8**	**+0.8**
MBWA	**Marble Bar**	**34.42**	**93**	P	**P**	**07 49 39.2**	**+1.2**
PSA00	**Pilbara Seismi**	**34.44**	**93**	P	**P**	**07 49 39.2**	**+1.0**
PSA00				IAmb	IAmb	07 49 41.3	
	comp=Z,770nm,2.0s						
PSA00	**Pilbara Seismi**	**34.44**	**93**	P	**P**	**07 49 39.6**	**+1.4**
PCHI	**Peechi**	**34.88**	**349**	⇓*e*P	**P**	**07 49 43.0**	**+1.0**
	baz=163,slow=7.4						
PCHI				*e*x	x	07 50 49.9	
PCHI				*e*S	**S**	**07 55 17.3**	**+4.8**
SRBI	**Singaraja**	**35.07**	**69**	P	**P**	**07 49 43.6**	**-0.1**
	comp=Z,4μmcomp=Z,159nm,2.2s						
SALM	**Salem**	**35.72**	**353**	*e*P	**P**	**07 49 48.9**	**-0.2**
SALM				*i* x	x	07 51 00.2	
TWSI	**Taliwang, Sumb**	**36.18**	**71**	P	P	07 49 59.8	+6.5
SRIT	**Nakonsritamara**	**36.48**	**29**	P	**P**	**07 49 56.7**	**+1.0**
SRIT				IAmb	IAmb	07 49 57.9	
	comp=Z,460nm,1.6s						
PBA	**Port Blair**	**36.86**	**17**	P	**P**	**07 49 59.5**	**+0.6**
PBA				IAmb	IAmb	07 50 10.9	
	comp=Z,554nm,1.3s						
PBA	**Port Blair**	**36.86**	**17**	*e*P	**P**	**07 49 59.3**	**+0.4**
PLAI	**Plampang**	**36.91**	**72**	P	**P**	**07 50 00.5**	**+1.0**
	comp=Z,72nm,1.1s						
PLAI	**Plampang**	**36.91**	**72**	P	**P**	**07 49 59.7**	**+0.2**
STKI	**Sintang**	**36.92**	**54**	P	**P**	**07 50 01.5**	**+1.9**
	comp=Z,77nm,2.2s						
KSM	**Kuching**	**37.05**	**51**	P	**P**	**07 49 59.6**	**-1.0**
KSM	**Kuching**	**37.05**	**51**	P	**P**	**07 50 02.3**	**+1.7**
BBKI	**Banjar Baru**	**37.30**	**62**	P	**P**	**07 50 03.8**	**+1.0**
	comp=Z,49nm,1.1s						
WBSI	**Waikabubak, Su**	**37.95**	**74**	P	**P**	**07 50 10.2**	**+1.8**
	comp=Z,2μmcomp=Z,66nm,0.7s						
MTKI	**Muara Teweh, K**	**38.87**	**59**	P	**P**	**07 50 17.3**	**+1.3**
	comp=Z,4μmcomp=Z,141nm,2.2s						
SBUM	**Sibu**	**39.09**	**52**	P	**P**	**07 50 18.8**	**+0.9**
VJD	**Vijayawada**	**40.35**	**357**	*e*P	**P**	**07 50 28.9**	**+0.8**
EDFI	**Ende, Flores**	**40.38**	**75**	P	**P**	**07 50 29.6**	**+0.9**
	comp=Z,2μmcomp=Z,59nm,1.6s						
KAPI	**Kappang**	**40.51**	**68**	LR	LR	08 06 33.7	
	comp=Z,459nm,19.0s,baz=218,slow=35						
KAPI	**Kappang**	**40.51**	**68**	P	**P**	**07 50 28.8**	**-0.9**
KAPI	**Kappang**	**40.51**	**68**	*c i*P	**P**	**07 50 28.3**	**-1.4**
KAPI				pmax	pmax		
	comp=Z,167nm,1.8s						
KAPI	**Kappang**	**40.51**	**68**	P	**P**	**07 50 29.1**	**-0.6**
KAPI	**Kappang**	**40.51**	**68**	P	**P**	**07 50 29.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**40.56**	**90**	LR	LR	08 07 53.1	
	comp=Z,511nm,18.5s,baz=272,slow=37						
FITZ	**Fitzroy Crossi**	**40.56**	**90**	P	**P**	**07 50 30.6**	**+0.5**
	baz=40,SNR=36						
FITZ	**Fitzroy Crossi**	**40.56**	**90**	P	**P**	**07 50 30.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**40.56**	**90**	P	**P**	**07 50 31.0**	**+0.9**
BSSI	**Bau Bau, Buton**	**40.57**	**70**	P	**P**	**07 50 30.3**	**+0.1**
	comp=Z,1μmcomp=Z,70nm,1.6s						
BKSI	**Bulukumba**	**40.67**	**69**	P	**P**	**07 50 31.2**	**+0.2**
	comp=Z,2μmcomp=Z,70nm,2.2s						
FORT	**Forrest**	**40.77**	**110**	P	**P**	**07 50 33.4**	**+1.7**
	baz=41,SNR=12						
FORT	**Forrest**	**40.77**	**110**	P	**P**	**07 50 31.7**	**0.0**
FORT				IAmb	IAmb	07 50 34.5	
	comp=Z,739nm,1.6s						
FORT	**Forrest**	**40.77**	**110**	P	**P**	**07 50 33.7**	**+2.0**
MMRI	**Maumere**	**40.91**	**75**	P	**P**	**07 50 32.2**	**-0.9**
MMRI	**Maumere**	**40.91**	**75**	P	**P**	**07 50 34.1**	**+1.1**
	comp=Z,8μmcomp=Z,541nm,1.5s						
MMRI	**Maumere**	**40.91**	**75**	P	**P**	**07 50 34.4**	**+1.4**
SPSI	**Sidrap Palu**	**41.08**	**67**	P	**P**	**07 50 34.1**	**-0.3**
	comp=Z,2μmcomp=Z,60nm,2.5s						
BNSI	**Bone**	**41.13**	**68**	P	**P**	**07 50 35.4**	**+0.6**
	comp=Z,58μmcomp=Z,4μmcomp=Z,161nm,2.1s						
HYBB	**Hyderabad (bro**	**41.39**	**354**	*e*P	**P**	**07 50 37.1**	**+0.2**
HYBB				IVmB_BB		07 50 38.2	
	comp=Z,1μm,2.8s						
HYBB				*e*PP	**PP**	**07 52 12.8**	**+0.1**
HYBB				*e*PcP	**PcP**	**07 52 34.4**	**-0.5**
HYBB				*e*ScP	**ScP**	**07 56 24.9**	**+0.9**
HYBB				*e*S	**S**	**07 56 53.0**	**+2.1**
HYBB				*e*ScS	**ScS**	**08 00 40.9**	**+0.6**
HYBB				IVMs_BB	IVMs_BB	08 04 42.1	
	comp=Z,1μm,11.9s						
BATI	**Baumata**	**41.50**	**78**	P	**P**	**07 50 41.1**	**+3.2**
WRKA	**Warakurna**	**41.51**	**101**	P	**P**	**07 50 38.7**	**+0.8**
	baz=42,SNR=27						
WRKA	**Warakurna**	**41.51**	**101**	P	**P**	**07 50 39.1**	**+1.2**
VIS	**Vishakhapatnam**	**41.52**	**1**	*e*P	**P**	**07 50 33.2**	**-4.6**
TTSI	**Tana Toraja**	**41.62**	**66**	P	**P**	**07 50 39.7**	**+0.9**
	comp=Z,2μmcomp=Z,2μmcomp=Z,86nm,1.8s						
SOEI	**Soe**	**42.23**	**78**	P	**P**	**07 50 43.2**	**-0.7**
SOEI				IAmb	IAmb	07 51 15.8	
	comp=Z,487nm,1.5s						
SOEI	**Soe**	**42.23**	**78**	P	**P**	**07 50 45.4**	**+1.5**
	comp=Z,5μmcomp=Z,152nm,2.1s						
SOEI	**Soe**	**42.23**	**78**	P	**P**	**07 50 45.8**	**+1.9**
LATR	**Latur**	**42.60**	**352**	*e*P	**P**	**07 50 45.9**	**-0.7**
RAGD	**RAYAGADA**	**43.03**	**1**	*e*P	**P**	**07 50 50.3**	**+0.1**
POO	**Poona**	**43.15**	**348**	*e*P	**P**	**07 50 51.6**	**+0.4**
MPSI	**Mapaga**	**43.61**	**62**	P	**P**	**07 50 55.8**	**+0.8**
	comp=Z,3μmcomp=Z,107nm,2.1s						
KNRA	**Kununurra**	**44.13**	**88**	P	**P**	**07 50 59.4**	**+0.2**
	baz=44,SNR=18						
KNRA	**Kununurra**	**44.13**	**88**	P	**P**	**07 50 59.4**	**+0.2**
KNRA				IAmb	IAmb	07 51 01.1	
	comp=Z,767nm,1.9s						
KNRA	**Kununurra**	**44.13**	**88**	P	**P**	**07 50 59.8**	**+0.6**
BWNR	**Bhubaneshwar**	**44.19**	**4**	*e*P	**P**	**07 50 59.6**	**+0.2**
TOLI2	**Tolitoli**	**44.78**	**62**	P	**P**	**07 51 03.1**	**-1.2**
TOLI2				IAmb	IAmb	07 51 05.3	
	comp=Z,363nm,1.7s						
TOLI2	**Tolitoli**	**44.78**	**62**	P	**P**	**07 51 04.5**	**+0.1**
AKL	**Akola**	**44.80**	**353**	*e*P	**P**	**07 51 04.7**	**+0.4**
CM31	**Chiang Mai Arr**	**45.18**	**22**	P	**P**	**07 51 08.3**	**+0.9**
	SNR=13						
CMAR	**Chiang Mai Arr**	**45.18**	**22**	P	**P**	**07 51 08.0**	**+0.6**
	comp=Z,12nm,0.8s,baz=207,slow=8.0,SNR=53						
CMAR				PcP	**PcP**	**07 52 47.2**	**-0.4**
	comp=Z,4.6nm,0.7s,baz=226,slow=2.2,SNR=4.9						
	comp=Z,12nm,0.8s						
CMAR	**Chiang Mai Arr**	**45.18**	**22**	P	**P**	**07 51 07.2**	**-0.2**
LUWI	**Luwuk**	**45.18**	**66**	P	**P**	**07 51 07.9**	**+0.3**
LUWI				IAmb	IAmb	07 51 09.5	
	comp=Z,357nm,1.5s						
MAW	**Mawson**	**45.24**	**190**	P	**P**	**07 51 08.3**	**+1.0**
	comp=Z,84nm,1.3s,baz=25,slow=9.4,SNR=30						
MAW				LR	LR	08 05 51.5	
	comp=Z,5μm,21.3s,baz=14,slow=30						
	comp=Z,84nm,1.3s						
MAW	**Mawson**	**45.24**	**190**	P	**P**	**07 51 08.7**	**+1.4**
	baz=45,SNR=24						
MAW	**Mawson**	**45.24**	**190**	P	**P**	**07 51 07.1**	**-0.2**
CHTO	**Chiang Mai**	**45.51**	**22**	P	**P**	**07 51 09.0**	**-1.0**
CHTO	**Chiang Mai**	**45.51**	**22**	P	**P**	**07 51 09.0**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,159nm,1.4s						
CHTO	**Chiang Mai**	**45.51**	**22**	P	**P**	**07 51 10.7**	**+0.7**
CHTO	**Chiang Mai**	**45.51**	**22**	P	**P**	**07 51 10.9**	**+0.9**
SOCY	**Socotra**	**45.54**	**319**	IAMs_20	IAMs_20	08 07 18.4	
	comp=Z,4μm,18.0s						
POGA	**Pongola**	**45.65**	**255**	P	**P**	**07 51 11.9**	**+0.7**
POGA				IAmb	IAmb	07 51 14.1	
	comp=Z,258nm,1.5s						
POGA	**Pongola**	**45.65**	**255**	⇑*i*P	**P**	**07 51 12.0**	**+0.7**
POGA				IAmb	IAmb	07 51 13.1	
	comp=Z,179nm,1.3s						
BLSP	**Bilaspur**	**45.90**	**360**	*e*P	**P**	**07 51 12.8**	**-0.3**
MULG	**Mulgathing**	**45.97**	**110**	P	**P**	**07 51 14.2**	**+0.5**
MAGG	**Maguga Dam**	**46.23**	**256**	*e*P	**P**	**07 51 15.5**	**-0.3**
MAGG				IAmb	IAmb	07 51 18.2	
	comp=Z,362nm,1.4s						
MOPA	**Mopani**	**46.56**	**260**	⇑*i*P	**P**	**07 51 18.8**	**+0.3**
MOPA				IAmb	IAmb	07 51 20.2	
	comp=Z,165nm,1.4s						
ASAR	**Alice Springs**	**46.78**	**101**	P	**P**	**07 51 20.2**	**0.0**
	comp=Z,73nm,0.7s,baz=266,slow=7.2,SNR=728						
ASAR				PcP	**PcP**	**07 52 53.4**	**0.0**
	comp=Z,10nm,0.8s,baz=254,slow=2.8,SNR=4.9						
ASAR				LR	LR	08 09 08.3	
	comp=Z,1μm,19.6s,baz=278,slow=34						
	comp=Z,73nm,0.7s						
AS31	**Alice Springs**	**46.78**	**101**	P	**P**	**07 51 20.3**	**+0.1**
JBP	**Jabalpur**	**46.99**	**357**	⇓*e*P	**P**	**07 51 19.3**	**-2.3**
JBP				IAmb	IAmb	07 51 22.6	
	comp=Z,739nm,1.7s						
NWCL	**Newcastle**	**47.19**	**254**	⇑*i*P	**P**	**07 51 23.9**	**+0.4**
NWCL				IAmb	IAmb	07 51 25.8	
	comp=Z,372nm,1.4s						
MTN	**Manton Dam**	**47.24**	**85**	P	**P**	**07 51 24.2**	**+0.4**
	baz=47,SNR=21						
MTN	**Manton Dam**	**47.24**	**85**	P	**P**	**07 51 23.1**	**-0.7**

MTN	**Manton Dam**	**47.24**	**85**	P	**P**	**07 51 24.5**	**+0.7**
BHPL	**Bhopal**	**47.26**	**354**	*e*P	**P**	**07 51 23.2**	**-0.5**
BHPL				IAmb	IAmb	07 51 24.6	
	comp=Z,293nm,1.5s						
BHPL				*i*x	x	07 53 14.1	
KSTD	**Kokstad**	**47.36**	**250**	*e*P	**P**	**07 51 25.5**	**+0.7**
KSTD				IAmb	IAmb	07 51 27.7	
	comp=Z,284nm,1.5s						
BBOO	**Buckleboo**	**47.47**	**113**	P	**P**	**07 51 26.0**	**+0.6**
	baz=48,SNR=15						
BBOO	**Buckleboo**	**47.47**	**113**	P	**P**	**07 51 25.6**	**+0.2**
BBOO	**Buckleboo**	**47.47**	**113**	P	**P**	**07 51 26.7**	**+1.2**
BOK	**Bokaro**	**47.66**	**4**	*e*P	**P**	**07 51 27.7**	**+0.9**
BOK				IAmb	IAmb	07 51 30.6	
	comp=Z,1µm,2.9s						
BOK				*i*x	x	07 53 19.8	
BOK				*e*x	x	07 58 20.3	
OOD	**Oodnadatta**	**47.67**	**106**	P	**P**	**07 51 27.3**	**+0.3**
WRA	**Warramunga Arr**	**48.02**	**96**	P	**P**	**07 51 30.0**	**+0.1**
	comp=Z,96nm,0.9s,baz=262,slow=8.0,SNR=641						
WRA				LR	LR	08 10 47.0	
	comp=Z,900nm,18.5s,baz=244,slow=35						
	comp=Z,96nm,0.9s						
WRA	**Warramunga Arr**	**48.02**	**96**	P	**P**	**07 51 30.1**	**+0.3**
WRA	**Warramunga Arr**	**48.02**	**96**	P	**P**	**07 51 30.1**	**+0.3**
WRA				pmax	pmax		
	comp=Z,46nm,1.8s						
WB2	**Warramunga Arr**	**48.03**	**96**	P	**P**	**07 51 29.8**	**-0.2**
	baz=48						
WB2	**Warramunga Arr**	**48.03**	**96**	P	**P**	**07 51 30.1**	**+0.2**
WRAB	**Tennant Creek**	**48.03**	**96**	P	**P**	**07 51 29.9**	**0.0**
WRAB	**Tennant Creek**	**48.03**	**96**	*ce*P	**P**	**07 51 30.1**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,499nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,965nm,16.0s						
WRAB	**Tennant Creek**	**48.03**	**96**	P	**P**	**07 51 30.9**	**+1.0**
KIBK	**Kibwezi**	**48.06**	**290**	P	**P**	**07 51 31.2**	**+0.9**
KIBK				IAmb	IAmb	07 51 32.7	
	comp=Z,169nm,1.4s						
KIBK	**Kibwezi**	**48.06**	**290**	P	**P**	**07 51 31.7**	**+1.4**
	SNR=23						
WB0	**Warramunga Arr**	**48.11**	**96**	P	**P**	**07 51 30.7**	**+0.2**
WR0	**Warramunga Arr**	**48.19**	**96**	P	**P**	**07 51 31.5**	**+0.3**
MUSN	**Musina, Limpop**	**48.20**	**261**	⇑*i*P	**P**	**07 51 31.4**	**+0.1**
MUSN				IAmb	IAmb	07 51 33.7	
	comp=Z,189nm,1.3s						
AGT	**Agartala**	**48.39**	**11**	*e*P	**P**	**07 51 33.2**	**+0.8**
AZL	**Aizawl**	**48.51**	**12**	⇑*i*P	**P**	**07 51 33.7**	**+0.1**
KDU	**Kakadu**	**48.52**	**86**	P	**P**	**07 51 34.1**	**+0.4**
	baz=48,SNR=15						
KDU	**Kakadu**	**48.52**	**86**	P	**P**	**07 51 34.6**	**+0.9**
WHYH	**Whyalla**	**48.73**	**114**	P	**P**	**07 51 36.8**	**+1.7**
SLR	**Silverton**	**48.93**	**256**	⇑*i*P	**P**	**07 51 37.2**	**+0.2**
SLR				IAmb	IAmb	07 51 39.0	
	comp=Z,344nm,1.2s						
SNKL	**Senekal, Frees**	**48.97**	**253**	⇑*i*P	**P**	**07 51 38.0**	**+0.6**
SNKL				IAmb	IAmb	07 51 39.6	
	comp=Z,635nm,1.4s						
KMBO	**Kilima Mbogo**	**49.36**	**291**	P	**P**	**07 51 41.7**	**+1.2**
	comp=Z,84nm,1.2s,baz=100,slow=6.8,SNR=64						
KMBO				LR	LR	08 09 00.1	
	comp=Z,606nm,18.3s,baz=101,slow=32						
	comp=Z,84nm,1.2s						
KMBO	**Kilima Mbogo**	**49.36**	**291**	P	**P**	**07 51 41.3**	**+0.8**
KMBO				IAmb	IAmb	07 51 43.1	
	comp=Z,185nm,1.4s						
KMBO	**Kilima Mbogo**	**49.36**	**291**	P	**P**	**07 51 42.0**	**+1.6**
KMBO	**Kilima Mbogo**	**49.36**	**291**	*e*P	**P**	**07 51 41.1**	**+0.7**
KMBO				IAML		07 58 18.9	
	comp=Z,7.4nm,0.1s						
KMBO				*e*S	**S**	**07 58 52.2**	**+5.5**
KMBO	**Kilima Mbogo**	**49.36**	**291**	*e*P	**P**	**07 51 40.0**	**-0.5**
KMBO	**Kilima Mbogo**	**49.36**	**291**	*e*P	**P**	**07 51 41.1**	**+0.7**
KMBO				IAML		07 58 18.9	
	comp=Z,7.4nm,0.1s						
KMBO				*e*S	**S**	**07 58 52.2**	**+5.5**
KMBO	**Kilima Mbogo**	**49.36**	**291**	*e*P	**P**	**07 51 41.3**	**+0.8**
KMBO	**Kilima Mbogo**	**49.36**	**291**	*i* P	**P**	**07 51 41.3**	**+0.8**
	SNR=55						
JHNI	**Jhansi**	**49.37**	**355**	*e*P	**P**	**07 51 38.4**	**-1.5**
LBMI	**Labuha**	**49.38**	**69**	P	**P**	**07 51 42.1**	**+1.8**
	comp=Z,7µmcomp=Z,346nm,2.0s						
HRAO	**HartRAO**	**49.43**	**256**	⇑*i*P	**P**	**07 51 39.0**	**-1.8**
TWOA	**Tennyson Woods**	**49.43**	**116**	P	**P**	**07 51 42.4**	**+1.9**
DMTO	**DMTO**	**49.46**	**325**	P	**P**	**07 51 41.2**	**+0.4**
LCRK	**Leigh Creek**	**49.52**	**110**	P	**P**	**07 51 41.9**	**+0.6**
PRYS	**Parys**	**49.54**	**254**	⇑*i*P	**P**	**07 51 41.2**	**-0.5**
PRYS				IAmb	IAmb	07 51 43.4	
	comp=Z,170nm,1.1s						
WDLM	**Western Deep L**	**49.57**	**255**	*e*P	**P**	**07 51 42.5**	**+0.5**
WDLM				IAmb	IAmb	07 51 43.3	
	comp=Z,153nm,1.4s						
RBK	**Rabkut**	**49.68**	**324**	P	**P**	**07 51 44.3**	**+1.7**
LEPH	**Lephalale, Lim**	**49.72**	**258**	⇑*i*P	**P**	**07 51 43.4**	**+0.4**
LEPH				IAmb	IAmb	07 51 45.2	
	comp=Z,510nm,1.3s						
HTT	**Hallett**	**49.83**	**114**	P	**P**	**07 51 44.2**	**+0.6**
	baz=50,SNR=13						
HTT	**Hallett**	**49.83**	**114**	P	**P**	**07 51 45.0**	**+1.4**
IMP	**Imphal**	**49.83**	**14**	IAmb	IAmb	07 51 44.2	
	comp=Z,34nm,0.9s						
BLWY	**Bulawayo**	**49.85**	**263**	⇑*i*P	**P**	**07 51 44.5**	**+0.4**
BLWY				IAmb	IAmb	07 51 45.8	
	comp=Z,883nm,1.4s						
MATP	**Matopo**	**49.88**	**263**	P	**P**	**07 51 44.9**	**+0.7**
	comp=Z,112nm,1.2s,baz=110,slow=8.0,SNR=54						
	comp=Z,112nm,1.2s						
TNTI	**Ternate**	**50.01**	**67**	P	**P**	**07 51 44.2**	**-0.9**
TNTI	**Ternate**	**50.01**	**67**	P	**P**	**07 51 47.2**	**+2.1**
TNTI	**Ternate**	**50.01**	**67**	P	**P**	**07 51 46.5**	**+1.4**
DQM	**DQM**	**50.02**	**329**	P	**P**	**07 51 45.5**	**+0.5**
ABTO	**Aybut**	**50.06**	**323**	P	**P**	**07 51 47.0**	**+1.6**
KSR	**Koster**	**50.14**	**256**	*e*P	**P**	**07 51 46.3**	**+0.1**
KSR				IAmb	IAmb	07 51 48.0	
	comp=Z,416nm,1.8s						
SHL	**Shillong**	**50.14**	**11**	P	**P**	**07 51 46.0**	**0.0**
SHL	**Shillong**	**50.14**	**11**	P	**P**	**07 51 46.1**	**0.0**
SHL				pmax	pmax		
	comp=Z,564nm,1.5s						
SHL	**Shillong**	**50.14**	**11**	P	**P**	**07 51 46.3**	**+0.2**
	SNR=74						
SHL	**Shillong**	**50.14**	**11**	*e*P	**P**	**07 51 44.6**	**-1.4**
WHFO	**Wadi Hawf**	**50.26**	**323**	P	**P**	**07 51 47.2**	**+0.3**
DHUB	**DHUBRI**	**50.29**	**9**	*e*P	**P**	**07 51 47.0**	**+0.1**
SOE	**Somerset East**	**50.34**	**247**	P	**P**	**07 51 47.6**	**+0.1**
SOE				IAmb	IAmb	07 51 50.6	
	comp=Z,259nm,1.3s						
SOE	**Somerset East**	**50.34**	**247**	*e*P	**P**	**07 51 48.6**	**+1.0**
SOE				IAmb	IAmb	07 51 50.4	
	comp=Z,199nm,1.2s						
QIZ	**Qiongzhong**	**50.43**	**34**	P	**P**	**07 51 49.0**	**+0.9**
QIZ	**Qiongzhong**	**50.43**	**34**	IAMs_20	IAMs_20	08 13 45.8	
	comp=Z,2µm,18.0s						
QIZ	**Qiongzhong**	**50.43**	**34**	P	**P**	**07 51 49.3**	**+1.2**
QIZ				PcP	**PcP**	**07 53 07.2**	**+0.8**
QIZ				PP	**PP**	**07 53 43.3**	**-0.7**
QIZ				S	**S**	**07 59 03.7**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,65nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,950nm,3.9s						
QIZ				LR	LR		
	comp=Z,3µm,15.1s						
QIZ				LR	LR		
	comp=Z,2µm,16.3s						
QIZ				LR	LR		
	comp=Z,2µm,31.0s						
QIZ	**Qiongzhong**	**50.43**	**34**	P	**P**	**07 51 49.8**	**+1.7**
HVD	**Gariep Dam**	**50.63**	**249**	⇑*i*P	**P**	**07 51 50.0**	**+0.2**
HVD				IAmb	IAmb	07 51 52.6	
	comp=Z,383nm,1.4s						
DOK	**Doka**	**50.64**	**324**	P	**P**	**07 51 49.7**	**0.0**
GUWA	**GUWAHATI**	**50.72**	**11**	⇑*i*P	**P**	**07 51 49.9**	**-0.3**
MHTO	**MHTO**	**50.73**	**330**	P	**P**	**07 51 50.2**	**-0.1**
	SNR=14						
AJM	**Ajmer**	**50.80**	**351**	*i* P	**P**	**07 51 50.1**	**-0.7**
ODAN	**Odare**	**50.82**	**6**	*e*P	**P**	**07 51 51.2**	**-0.1**
ODAN	**Odare**	**50.82**	**6**	*e*P	**P**	**07 51 51.6**	**+0.3**
RAMN	**Ramite**	**50.85**	**5**	*e*P	**P**	**07 51 51.8**	**+0.4**
PAGZ	**Pagadian**	**50.95**	**57**	⇑*e*P	**P**	**07 51 52.8**	**+0.6**
KROM	**Kromhout**	**50.99**	**245**	*e*P	**P**	**07 51 51.2**	**-1.2**
KROM				IAmb	IAmb	07 51 54.9	
	comp=Z,230nm,1.2s						

VLK	**Valmikinagar**	**51.08**	**2**	*e*P	**P**	**07 51 53.4**	**+0.6**
BOSA	**Boshof**	**51.11**	**252**	P	**P**	**07 51 53.8**	**+0.3**
	comp=Z,62nm,0.8s,baz=107,slow=6.6,SNR=72						
BOSA				LR	LR	08 08 39.5	
	comp=Z,1µm,21.0s,baz=104,slow=30						
	comp=Z,62nm,0.8s						
BOSA	**Boshof**	**51.11**	**252**	P	**P**	**07 51 53.6**	**+0.1**
BOSA				IAmb	IAmb	07 51 55.7	
	comp=Z,422nm,1.5s						
BOSA	**Boshof**	**51.11**	**252**	⇑*i*P	**P**	**07 51 53.4**	**-0.1**
JLN	**Jalan Bani Buh**	**51.11**	**332**	P	**P**	**07 51 52.1**	**-1.1**
	SNR=6.9						
SWZ	**Schweizer**	**51.28**	**254**	*e*P	**P**	**07 51 54.5**	**-0.3**
SWZ				IAmb	IAmb	07 51 56.5	
	comp=Z,432nm,1.4s						
GRAF	**Camdeboo Natio**	**51.28**	**247**	*e*P	**P**	**07 51 55.8**	**+1.1**
GRAF				IAmb	IAmb	07 51 56.7	
	comp=Z,197nm,1.4s						
BRCI	**Bahraich**	**51.31**	**359**	*e*P	**P**	**07 51 54.1**	**-0.5**
TAPN	**Taplejung**	**51.34**	**6**	*e*P	**P**	**07 51 55.3**	**+0.1**
	comp=Z,1µm,1.7s						
PKI	**Pulchoki**	**51.39**	**3**	*e*P	**P**	**07 51 55.0**	**-0.6**
PKIN	**Phulchoki**	**51.39**	**3**	*e*P	**P**	**07 51 55.3**	**-0.3**
	comp=Z,375nm,1.5s						
MOKO	**MOKOCHONG**	**51.39**	**14**	*i* P	**P**	**07 51 55.5**	**0.0**
MOKO				IAmb	IAmb	07 52 03.2	
	comp=Z,458nm,1.5s						
GTK	**Tadong**	**51.40**	**7**	*i* P	**P**	**07 51 55.8**	**+0.3**
GTK				IAmb	IAmb	07 51 59.8	
	comp=Z,544nm,1.9s						
GTK				*i*x	x	07 52 07.8	
DMN	**Daman**	**51.41**	**3**	*e*P	**P**	**07 51 55.5**	**-0.2**
	comp=Z,478nm,1.5s						
LBTB	**Lobatse**	**51.45**	**256**	P	**P**	**07 51 56.4**	**+0.3**
	comp=Z,122nm,1.2s,baz=110,slow=7.3,SNR=37						
LBTB				LR	LR	08 09 20.0	
	comp=Z,1µm,20.9s,baz=107,slow=31						
	comp=Z,122nm,1.2s						
LBTB	**Lobatse**	**51.45**	**256**	P	**P**	**07 51 56.8**	**+0.7**
LBTB				IAmb	IAmb	07 51 58.5	
	comp=Z,317nm,1.4s						
LBTB	**Lobatse**	**51.45**	**256**	P	**P**	**07 51 56.8**	**+0.7**
LBTB				pmax	pmax		
	comp=Z,317nm,1.4s						
LBTB	**Lobatse**	**51.45**	**256**	⇑*i*P	**P**	**07 51 55.8**	**-0.2**
LBTB				IAmb	IAmb	07 51 58.2	
	comp=Z,325nm,1.4s						
JIRN	**Jiri**	**51.52**	**4**	*e*P	**P**	**07 51 56.6**	**-0.1**
	comp=Z,1µm,1.8s						
KKN	**Kakani**	**51.60**	**3**	*e*P	**P**	**07 51 56.8**	**-0.2**
LSZ	**Lusaka**	**51.63**	**269**	P	**P**	**07 51 58.3**	**+0.7**
	comp=Z,27nm,0.8s,baz=117,slow=7.8,SNR=36						
LSZ				LR	LR	08 11 45.5	
	comp=Z,297nm,19.0s,baz=138,slow=34						
	comp=Z,27nm,0.8s						
LSZ	**Lusaka**	**51.63**	**269**	P	**P**	**07 51 58.0**	**+0.4**
WBK	**Wadi Bani Khal**	**51.71**	**332**	P	**P**	**07 51 57.9**	**+0.2**
	SNR=14						
JORH	**JORHAT**	**51.74**	**13**	*e*P	**P**	**07 51 57.6**	**-0.2**
KCP	**Kidapawan**	**51.75**	**59**	⇓*i*P	**P**	**07 51 58.6**	**+0.3**
GUN	**Gumba**	**51.75**	**4**	*e*P	**P**	**07 51 58.7**	**+0.4**
GKN	**Gorkha**	**51.78**	**2**	*e*P	**P**	**07 51 58.1**	**-0.2**
	comp=Z,755nm,1.5s						
JMDO	**Jabal Madar**	**51.88**	**331**	P	**P**	**07 51 59.4**	**+0.4**
	SNR=5.2						
JASL	**Jaisalmer**	**51.89**	**347**	*e*P	**P**	**07 51 58.6**	**-0.4**
ARPS	**Mount Arapiles**	**51.98**	**119**	P	**P**	**07 52 00.7**	**+1.1**
	baz=52,SNR=20						
ARPS	**Mount Arapiles**	**51.98**	**119**	P	**P**	**07 52 00.8**	**+1.1**
BFON	**Badsfontein, M**	**52.02**	**248**	*e*P	**P**	**07 52 01.8**	**+1.6**
ITAN	**ITANAGAR**	**52.02**	**13**	*e*P	**P**	**07 52 00.3**	**+0.3**
ROOI	**Rooidraai Farm**	**52.05**	**247**	*e*P	**P**	**07 52 00.5**	**+0.1**
ROOI				IAmb	IAmb	07 52 02.4	
	comp=Z,110nm,1.2s						
DANN	**Dangsing**	**52.10**	**1**	*e*P	**P**	**07 52 00.6**	**-0.3**
	comp=Z,876nm,1.4s						
INKA	**Innaminka**	**52.11**	**107**	P	**P**	**07 52 02.7**	**+1.9**
KUDL	**Kundal**	**52.21**	**353**	*e*P	**P**	**07 52 01.0**	**-0.3**
KHET	**Khetri**	**52.21**	**352**	*i* P	**P**	**07 52 00.9**	**-0.5**
STKA	**Stephens Creek**	**52.23**	**113**	P	**P**	**07 52 02.2**	**+0.6**
	comp=Z,29nm,0.7s,baz=283,slow=7.3,SNR=43						
STKA				LR	LR	08 10 45.0	
	comp=Z,978nm,21.8s,baz=246,slow=32						
	comp=Z,29nm,0.7s						
STKA	**Stephens Creek**	**52.23**	**113**	P	**P**	**07 52 02.1**	**+0.6**
	baz=52,SNR=34						
STKA	**Stephens Creek**	**52.23**	**113**	P	**P**	**07 52 01.9**	**+0.3**
STKA	**Stephens Creek**	**52.23**	**113**	P	**P**	**07 52 02.5**	**+0.9**
SONA	**Sohna**	**52.25**	**354**	*e*P	**P**	**07 52 01.8**	**+0.2**
BUKP	**Musuan**	**52.26**	**58**	⇓*e*P	**P**	**07 52 02.5**	**+0.5**
FAKI	**Fak Fak**	**52.37**	**74**	P	**P**	**07 52 03.4**	**+0.6**
FAKI	**Fak Fak**	**52.37**	**74**	P	**P**	**07 52 04.0**	**+1.2**
WSAR	**Wadi Sarin**	**52.41**	**332**	P	**P**	**07 52 02.7**	**-0.2**
	comp=Z,54nm,1.1s,baz=177,slow=7.7,SNR=24						
WSAR				LR	LR	08 10 59.8	
	comp=Z,2µm,18.0s,baz=154,slow=32						
	comp=Z,54nm,1.1s						
WSAR	**Wadi Sarin**	**52.41**	**332**	P	**P**	**07 52 02.9**	**0.0**
	SNR=13						
ZIRO	**ZIRO**	**52.42**	**13**	*e*P	**P**	**07 52 02.5**	**-0.6**
ATD	**Arta Tunnel**	**52.46**	**308**	P	**P**	**07 52 05.1**	**+1.6**
	comp=Z,232nm,1.1s,baz=117,slow=3.8,SNR=50						
	comp=Z,232nm,1.1s						
ATD	**Arta Tunnel**	**52.46**	**308**	P	**P**	**07 52 05.0**	**+1.4**
ATD				IAmb	IAmb	07 52 07.2	
	comp=Z,286nm,1.0s						
ATD	**Arta Tunnel**	**52.46**	**308**	P	**P**	**07 52 05.5**	**+2.0**
	SNR=25						
ATD	**Arta Tunnel**	**52.46**	**308**	*e*P	**P**	**07 52 04.9**	**+1.3**
ATD				*e*S	**S**	**07 59 35.4**	**+6.2**
ATD	**Arta Tunnel**	**52.46**	**308**	*e*P	**P**	**07 52 04.1**	**+0.6**
ATD	**Arta Tunnel**	**52.46**	**308**	*e*P	**P**	**07 52 04.9**	**+1.3**
ATD				*e*S	**S**	**07 59 35.4**	**+6.2**
ATD	**Arta Tunnel**	**52.46**	**308**	*e*P	**P**	**07 52 04.9**	**+1.3**
TBP	**Tagbilaran**	**52.49**	**55**	⇑*e*P	**P**	**07 52 02.4**	**-1.2**
SMDO	**Samad**	**52.50**	**331**	P	**P**	**07 52 03.8**	**+0.1**
	SNR=7.7						
BSY	**Bisya**	**52.61**	**330**	P	**P**	**07 52 04.7**	**+0.3**
	SNR=16						
QIS	**Mount Isa**	**52.64**	**98**	P	**P**	**07 52 05.0**	**+0.2**
	baz=53,SNR=67						
QIS	**Mount Isa**	**52.64**	**98**	P	**P**	**07 52 05.3**	**+0.5**
KMI	**Kunming**	**52.66**	**23**	⇑P	**P**	**07 52 06.0**	**+1.0**
KMI				pP	pP	07 52 08.5	-1.0
KMI				PP	**PP**	**07 54 09.6**	**+5.2**
KMI				S	**S**	**07 59 34.9**	**+3.0**
KMI				pmax	pmax		
	comp=Z,78nm,1.5s						
KMI				pmax	pmax		
	comp=Z,1µm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,16.8s						
KMI				LR	LR		
	comp=Z,2µm,14.2s						
KMI				LR	LR		
	comp=Z,2µm,17.5s						
NDI	**New Delhi**	**52.67**	**354**	*e*P	**P**	**07 52 04.0**	**-0.7**
BIDO	**Bidbid**	**52.87**	**332**	P	**P**	**07 52 07.3**	**+0.9**
	SNR=23						
RCP	**Roxas**	**52.89**	**53**	⇓*e*P	**P**	**07 52 05.6**	**-1.0**
PKA	**Prieska**	**53.11**	**250**	*e*P	**P**	**07 52 09.0**	**+0.7**
PKA				IAmb	IAmb	07 52 09.6	
	comp=Z,111nm,1.4s						
LGTI	**Lohaghat**	**53.23**	**358**	*i* P	**P**	**07 52 08.3**	**-0.5**
GRAN	**Grantham**	**53.23**	**247**	*e*P	**P**	**07 52 09.4**	**+0.2**
GRAN				IAmb	IAmb	07 52 11.7	
	comp=Z,60nm,1.1s						
HOQ	**Hoqain**	**53.29**	**331**	P	**P**	**07 52 09.8**	**+0.4**
	SNR=27						
PTH	**Pithoragarh**	**53.33**	**358**	*e*P	**P**	**07 52 09.5**	**-0.3**
LODK	**Lodwar**	**53.37**	**294**	P	**P**	**07 52 11.8**	**+1.4**
LODK				IAmb	IAmb	07 52 14.0	
	comp=Z,292nm,1.5s						
LODK	**Lodwar**	**53.37**	**294**	P	**P**	**07 52 12.1**	**+1.8**
	SNR=43						
LODK	**Lodwar**	**53.37**	**294**	*e*P	**P**	**07 52 11.5**	**+1.2**
LODK				*e*S	**S**	**07 59 47.2**	**+5.4**
LODK				IAML		07 59 57.1	
	comp=E,1.5nm,0.4s						
LODK	**Lodwar**	**53.37**	**294**	*e*P	**P**	**07 52 10.8**	**+0.5**
LODK	**Lodwar**	**53.37**	**294**	*e*P	**P**	**07 52 11.5**	**+1.2**
LODK				*e*S	**S**	**07 59 47.2**	**+5.4**
LODK				IAML		07 59 57.1	
	comp=E,1.5nm,0.4s						
LODK	**Lodwar**	**53.37**	**294**	*e*P	**P**	**07 52 10.2**	**-0.1**

ARQ	**Araqi**	**53.43**	**330**	P	**P**	**07 52 10.5**	**0.0**
	SNR=17						
ANKE	**Ethiopia-Afar**	**53.51**	**304**	*e*P	**P**	**07 52 12.8**	**+1.1**
ANKE	**Ethiopia-Afar**	**53.51**	**304**	*e*P	**P**	**07 52 13.3**	**+1.6**
UMZA	**Um Al Zommool**	**53.54**	**328**	P	**P**	**07 52 11.3**	**0.0**
PZH	**PanZhiHua**	**53.58**	**22**	P	**P**	**07 52 11.5**	**-0.1**
PZH				sP	**pwP**	**07 52 23.7**	**+1.9**
PZH				PP	**PP**	**07 54 16.0**	**+3.4**
PZH				S	**S**	**07 59 43.5**	**-0.7**
PZH				sS	**sS**	**07 59 53.0**	**+1.4**
PZH				ScS	**ScS**	**08 01 58.9**	**-1.6**
PZH				pmax	pmax		
	comp=E,60nm,1.0s						
PZH				pmax	pmax		
	comp=E,620nm,3.5s						
PZH				LR	LR		
	comp=E,7µm,24.5s						
PZH				LR	LR		
	comp=E,4µm,24.0s						
PZH				LR	LR		
	comp=E,18µm,28.9s						
BRAT	**Ballarat**	**53.59**	**120**	P	**P**	**07 52 13.4**	**+1.8**
GEXS	**Deakin Univers**	**53.84**	**121**	P	**P**	**07 52 15.7**	**+2.3**
FURI	**Furi**	**53.88**	**302**	*e*P	**P**	**07 52 16.4**	**+2.0**
FURI				*e*S	**S**	**07 59 55.4**	**+6.1**
FURI	**Furi**	**53.88**	**302**	*e*P	**P**	**07 52 16.2**	**+1.8**
FURI	**Furi**	**53.88**	**302**	*e*P	**P**	**07 52 16.4**	**+2.0**
FURI				*e*S	**S**	**07 59 55.4**	**+6.1**
FURI	**Furi**	**53.88**	**302**	*e*P	**P**	**07 52 15.6**	**+1.3**
AAE	**Adis Abeba**	**53.90**	**302**	*e*P	**P**	**07 52 16.8**	**+2.3**
AAE				IAML		07 59 37.8	
	comp=E,16nm,0.5s						
AAE				*e*S	**S**	**07 59 55.4**	**+6.0**
AAE	**Adis Abeba**	**53.90**	**302**	*e*P	**P**	**07 52 16.2**	**+1.7**
AAE	**Adis Abeba**	**53.90**	**302**	*e*P	**P**	**07 52 16.8**	**+2.3**
AAE				IAML		07 59 37.8	
	comp=E,16nm,0.5s						
AAE				*e*S	**S**	**07 59 55.4**	**+6.0**
AAE	**Adis Abeba**	**53.90**	**302**	*e*P	**P**	**07 52 15.4**	**+0.9**
LSA	**Lhasa**	**54.07**	**9**	P	**P**	**07 52 15.9**	**+0.3**
LSA				IAMs_20	IAMs_20	08 17 49.1	
	comp=Z,3µm,18.0s						
LSA	**Lhasa**	**54.07**	**9**	P	**P**	**07 52 16.5**	**+0.9**
LSA				pP	**pwP**	**07 52 26.3**	**+0.4**
LSA				S	**S**	**07 59 45.8**	**-5.7**
LSA				pmax	pmax		
	comp=Z,200nm,2.1s						
LSA				pmax	pmax		
	comp=Z,690nm,3.3s						
LSA				LR	LR		
	comp=Z,1µm,17.1s						
LSA				LR	LR		
	comp=Z,1µm,15.7s						
LSA				LR	LR		
	comp=Z,1µm,21.4s						
LSA	**Lhasa**	**54.07**	**9**	P	**P**	**07 52 15.9**	**+0.3**
LSA				pmax	pmax		
	comp=Z,780nm,1.9s						
LSA				MLR	MLR		
	comp=Z,3µm,18.0s						
LSA	**Lhasa**	**54.07**	**9**	P	**P**	**07 52 17.0**	**+1.4**
LSA	**Lhasa**	**54.07**	**9**	*i* P	**P**	**07 52 16.2**	**+0.6**
	SNR=61						
SOHO	**SOHO**	**54.11**	**330**	P	**P**	**07 52 15.2**	**-0.3**
SOHO	**SOHO**	**54.11**	**330**	*i* P	**P**	**07 52 14.7**	**-0.7**
	SNR=17						
DDI	**Dehra Dun**	**54.22**	**355**	*e*P	**P**	**07 52 15.8**	**-0.3**
DDI				IAmb	IAmb	07 52 18.5	
	comp=Z,2µm,2.2s						
DDI				*i*x	x	07 52 31.3	
SUR	**Sutherland**	**54.36**	**246**	LR	LR	08 10 04.2	
	comp=Z,3µm,21.6s,baz=108,slow=30						
SUR	**Sutherland**	**54.36**	**246**	P	**P**	**07 52 17.8**	**+0.2**
SUR				IAmb	IAmb	07 52 20.0	
	comp=Z,266nm,1.4s						
SUR	**Sutherland**	**54.36**	**246**	P	**P**	**07 52 19.0**	**+1.4**
ALNE	**Al Ain**	**54.41**	**330**	P	**P**	**07 52 17.9**	**+0.3**
	SNR=49						
ALNE	**Al Ain**	**54.41**	**330**	*i* P	**P**	**07 52 17.3**	**-0.2**
	SNR=13						
MATJ	**Matjiesfontein**	**54.44**	**245**	⇑*i*P	**P**	**07 52 19.1**	**+1.1**
MATJ				IAmb	IAmb	07 52 20.7	
	comp=Z,334nm,1.2s						
MZR	**Muzera**	**54.61**	**327**	P	**P**	**07 52 19.4**	**+0.3**
	SNR=36						
MZR	**Muzera**	**54.61**	**327**	*i* P	**P**	**07 52 19.0**	**0.0**
	SNR=20						
UPI	**Upington**	**54.63**	**251**	⇑*i*P	**P**	**07 52 20.0**	**+0.6**
UPI				IAmb	IAmb	07 52 21.7	
	comp=Z,104nm,1.2s						
ASHO	**Ashiyiah**	**54.80**	**330**	P	**P**	**07 52 19.9**	**-0.6**
	SNR=16						
ASHO	**Ashiyiah**	**54.80**	**330**	*i* P	**P**	**07 52 19.7**	**-0.8**
	SNR=12						
KEIM	**Keimoes**	**54.81**	**251**	⇑*i*P	**P**	**07 52 21.3**	**+0.6**
KEIM				IAmb	IAmb	07 52 23.2	
	comp=Z,300nm,1.2s						
TOO	**Toolangi**	**54.83**	**120**	P	**P**	**07 52 22.3**	**+1.6**
	baz=55,SNR=8.5						
TOO	**Toolangi**	**54.83**	**120**	P	**P**	**07 52 21.3**	**+0.6**
TOO				IAmb	IAmb	07 52 23.8	
	comp=Z,245nm,1.6s						
TOO	**Toolangi**	**54.83**	**120**	P	**P**	**07 52 21.3**	**+0.6**
TOO				pmax	pmax		
	comp=Z,245nm,1.6s						
TOO	**Toolangi**	**54.83**	**120**	P	**P**	**07 52 22.3**	**+1.6**
HATD	**Hatta, Dubai**	**54.89**	**330**	P	**P**	**07 52 20.8**	**-0.3**
	SNR=29						
HATD	**Hatta, Dubai**	**54.89**	**330**	*i* P	**P**	**07 52 20.4**	**-0.8**
	SNR=15						
ELIM	**Elim**	**54.96**	**244**	*e*P	**P**	**07 52 21.6**	**-0.1**
ELIM				IAmb	IAmb	07 52 24.4	
	comp=Z,251nm,1.6s						
UOSS	**Minazif**	**54.96**	**331**	P	**P**	**07 52 20.0**	**-1.6**
UOSS				IAmb	IAmb	07 52 22.5	
	comp=Z,354nm,1.6s						
UOSS	**Minazif**	**54.96**	**331**	IAMs_20	IAMs_20	08 10 52.8	
	comp=Z,2µm,21.0s						
UOSS	**Minazif**	**54.96**	**331**	P	**P**	**07 52 20.9**	**-0.7**
UOSS	**Minazif**	**54.96**	**331**	*i* P	**P**	**07 52 20.3**	**-1.3**
	SNR=30						
MZWR	**Madinat Zayed**	**55.05**	**328**	P	**P**	**07 52 22.4**	**+0.2**
ASUD	**Al Ashush, Dub**	**55.09**	**330**	P	**P**	**07 52 22.6**	**+0.1**
	SNR=18						
ASUD	**Al Ashush, Dub**	**55.09**	**330**	*i* P	**P**	**07 52 22.2**	**-0.3**
	SNR=20						
AJN	**Ajban**	**55.19**	**329**	P	**P**	**07 52 23.2**	**-0.1**
	SNR=21						
AJN	**Ajban**	**55.19**	**329**	*i* P	**P**	**07 52 22.8**	**-0.4**
	SNR=18						
NAZ	**Nazwa, Dubai**	**55.25**	**330**	P	**P**	**07 52 23.1**	**-0.5**
	SNR=17						
NAZ	**Nazwa, Dubai**	**55.25**	**330**	*i* P	**P**	**07 52 22.7**	**-1.0**
	SNR=7.0						
MBAR	**Mbarara**	**55.26**	**287**	P	**P**	**07 52 25.2**	**+1.0**
	comp=Z,24nm,1.0s,baz=100,slow=6.7,SNR=41						
MBAR				LR	LR	08 13 43.7	
	comp=Z,300nm,18.2s,baz=82,slow=34						
	comp=Z,24nm,1.0s						
MBAR	**Mbarara**	**55.26**	**287**	*ce*P	**P**	**07 52 25.3**	**+1.1**
MBAR				pmax	pmax		
	comp=Z,166nm,2.5s						
MBAR	**Mbarara**	**55.26**	**287**	P	**P**	**07 52 25.5**	**+1.3**
MBAR	**Mbarara**	**55.26**	**287**	*e*P	**P**	**07 52 24.9**	**+0.7**
MBAR	**Mbarara**	**55.26**	**287**	*e*P	**P**	**07 52 24.9**	**+0.7**
MSFE	**Esma-Masafi**	**55.34**	**331**	*i* P	**P**	**07 52 23.6**	**-0.8**
	SNR=29						
MASF	**Masafi**	**55.35**	**331**	P	**P**	**07 52 24.0**	**-0.5**
	SNR=29						
GYA	**Guiyang**	**55.37**	**26**	⇑*i*P	**P**	**07 52 24.6**	**0.0**
GYA				S	**S**	**08 00 10.2**	**+1.8**
GYA				pmax	pmax		
	comp=Z,50nm,1.7s						
GYA				pmax	pmax		
	comp=Z,1µm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,16.2s						
GYA				LR	LR		
	comp=Z,2µm,15.4s						
GYA				LR	LR		
	comp=Z,4µm,17.5s						
AUGR	**Augrabies**	**55.38**	**251**	*e*P	**P**	**07 52 25.0**	**+0.2**
AUGR				IAmb	IAmb	07 52 27.3	
	comp=Z,234nm,1.2s						
CVNA	**Calvinia**	**55.38**	**247**	*e*P	**P**	**07 52 25.1**	**+0.3**

QLP Quilpie 55.38 107 P **P** **07 52 25.6 +0.9**
baz=55,SNR=7.8
QLP Quilpie 55.38 107 P **P** **07 52 25.2 +0.4**
BHK Bhakra 55.45 354⇑*i*P **P** **07 52 24.6 -0.4**
CER Ceres 55.49 245 *e*P **P** **07 52 23.9 -1.6**
UMQ Umm Al-Quwin 55.71 330 P **P** **07 52 27.0 0.0**
SNR=9.3
UMQ Umm Al-Quwin 55.71 330 *i* P **P** **07 52 26.4 -0.6**
SNR=8.8
GHWR Ruwais 55.71 327 P **P** **07 52 27.2 +0.2**
CMSA Cobar Meteorol 55.73 113 P **P** **07 52 28.2 +0.9**
baz=56,SNR=38
CMSA Cobar Meteorol 55.73 113 P **P** **07 52 28.5 +1.3**
BANOM Banah 55.77 331 P **P** **07 52 27.0 -0.5**
SNR=21
BANOM Banah 55.77 331 *i* P **P** **07 52 26.6 -0.8**
SNR=38
SHME Shamm 55.95 331 P **P** **07 52 28.0 -0.7**
SNR=18
SHME Shamm 55.95 331 *i* P **P** **07 52 27.6 -1.0**
SNR=22
GULI GuiLin 55.97 31⇑P **P** **07 52 31.9 +3.1**
GULI S **S** **08 00 18.5 +2.3**
GULI pmax pmax
comp=Z,50nm,1.7s
GULI LR LR
comp=Z,890nm,18.2s
GULI LR LR
comp=Z,2μm,19.0s
GULI LR LR
comp=Z,3μm,17.9s
SLWR Sila 56.40 326 P **P** **07 52 32.4 +0.5**
THN Thein Dam 56.53 353 *e*P **P** **07 52 31.4 -1.3**
JRN Qarnain Island 56.54 327 P **P** **07 52 32.5 -0.4**
SNR=9.1
JMU Jammu 56.91 352 *e*P **P** **07 52 35.1 -0.2**
SMRA Abu-Samra 57.40 325 P **P** **07 52 38.8 -0.2**
MTSU Mount Surprise 57.58 97 P **P** **07 52 41.4 +0.8**
baz=58,SNR=11
MTSU Mount Surprise 57.58 97 P **P** **07 52 42.0 +1.4**
COEN Coen 57.86 92 P **P** **07 52 42.8 +0.2**
baz=58,SNR=6.8
COEN Coen 57.86 92 P **P** **07 52 42.5 -0.1**
COEN Coen 57.86 92 P **P** **07 52 42.9 +0.3**
CAN Canberra 57.90 118 P **P** **07 52 43.5 +0.9**
CAN Canberra 57.90 118 P **P** **07 52 43.5 +0.9**
CAN pmax pmax
comp=Z,170nm,1.5s
CAN Canberra 57.90 118 P **P** **07 52 44.2 +1.6**
NIL Nilore 58.04 351 P **P** **07 52 42.5 -0.9**
NIL IAmb IAmb 07 52 44.1
comp=Z,298nm,1.4s
NIL Nilore 58.04 351 P **P** **07 52 42.5 -0.9**
NIL pmax pmax
comp=Z,298nm,1.4s
CNB Canberra Magne 58.19 118 P **P** **07 52 46.2 +1.4**
baz=58,SNR=6.1
CNB Canberra Magne 58.19 118 P **P** **07 52 46.0 +1.3**
SHMA Al-Shehemyia 58.24 326 P **P** **07 52 44.8 -0.1**
CD2 Chengdu 58.31 21 P **P** **07 52 44.5 -0.9**
CD2 S **S** **08 00 46.8 -0.2**
CD2 pmax pmax
comp=Z,80nm,1.0s
CD2 pmax pmax
comp=Z,500nm,4.5s
CD2 LR LR
comp=Z,1μm,15.7s
CD2 LR LR
comp=Z,3μm,18.6s
CD2 LR LR
comp=Z,21μm,26.5s
CTA Charters Tower 58.77 100 P **P** **07 52 49.6 +0.7**
CTAO Charters Tower 58.77 100 P **P** **07 52 48.9 0.0**
CTAO IAmb IAmb 07 52 51.0
comp=Z,229nm,1.8s
CTAO Charters Tower 58.77 100 P **P** **07 52 48.9 0.0**
CTAO pmax pmax
comp=Z,229nm,1.8s
CTAO MLR MLR
comp=Z,1μm,19.0s
CTAO Charters Tower 58.77 100 P **P** **07 52 49.8 +0.9**
RMQ Roma 59.35 108 P **P** **07 52 53.7 +0.9**
baz=59,SNR=5.1
RMQ Roma 59.35 108 P **P** **07 52 53.8 +0.9**
RAYN Ar Rayn 59.38 320 P **P** **07 52 53.0 +0.1**
RAYN Ar Rayn 59.38 320 IAMs_20 IAMs_20 08 13 41.0
comp=Z,3μm,21.0s
RAYN Ar Rayn 59.38 320 P **P** **07 52 53.0 +0.1**
RAYN pmax pmax
comp=Z,361nm,1.4s
RAYN Ar Rayn 59.38 320 P **P** **07 52 53.5 +0.5**
RAYN Ar Rayn 59.38 320 P **P** **07 52 53.0 +0.1**
KNMB Chin-men Tao 59.45 38 P **P** **07 52 54.1 +0.8**
KNMB IAmb IAmb 07 52 55.6
comp=Z,307nm,1.4s
KNMB IAMs_20 IAMs_20 08 15 03.0
comp=Z,3μm,22.0s
GENI Genyem 59.55 78 P **P** **07 52 55.0 +0.7**
SYDH Sydney Hard Ro 59.56 116 P **P** **07 52 56.3 +2.1**
CNSH ChangSha 59.62 31⇑P **P** **07 52 54.8 +0.3**
CNSH S **S** **08 01 06.4 +2.4**
CNSH pmax pmax
comp=Z,110nm,1.8s
CNSH LR LR
comp=Z,1μm,14.8s
CNSH LR LR
comp=Z,990nm,17.2s
CNSH LR LR
comp=Z,2μm,16.3s
KBL Kabul 59.65 347 P **P** **07 52 54.6 -0.2**
KBL IAmb IAmb 07 52 56.7
comp=Z,201nm,1.2s
KBL Kabul 59.65 347 P **P** **07 52 54.6 -0.2**
KBL pmax pmax
comp=Z,201nm,1.2s
KBL Kabul 59.65 347 P **P** **07 52 54.7 -0.1**
SNR=85
ENH Enshi 59.89 27 P **P** **07 52 55.4 -0.9**
ENH IAmb IAmb 07 52 58.5
comp=Z,197nm,1.7s
ENH IAMs_20 IAMs_20 08 16 01.4
comp=Z,2μm,21.0s
QZH Quanzhou 59.94 38⇑*i*P **P** **07 52 57.0 +0.3**
QZH S **S** **08 01 14.7 +6.5**
QZH pmax pmax
comp=Z,91nm,1.6s
QZH LR LR
comp=Z,3μm,21.8s
MGCD Mangrove Creek 59.96 116 P **P** **07 52 58.9 +2.0**
baz=60,SNR=5.0
MGCD Mangrove Creek 59.96 116 P **P** **07 52 59.1 +2.1**
TSUM Tsumeb 60.09 261 P **P** **07 52 59.0 +0.8**
comp=Z,61nm,1.1s,baz=116,slow=7.1,SNR=32
TSUM LR LR 08 15 24.6
comp=Z,798nm,19.3s,baz=143,slow=32
comp=Z,61nm,1.1s
TSUM Tsumeb 60.09 261 P **P** **07 52 59.0 +0.8**
TSUM IAmb IAmb 07 53 01.1
comp=Z,123nm,1.3s
TSUM Tsumeb 60.09 261⇑*i*P **P** **07 52 58.6 +0.4**
TSUM IAmb IAmb 07 53 00.0
comp=Z,125nm,1.3s
SSLB Suanglung 60.43 41 P **P** **07 52 59.8 -0.3**
SSLB Suanglung 60.43 41 P **P** **07 53 02.0 +1.9**
ARMA Armidale 60.95 113 P **P** **07 53 05.2 +1.3**
baz=61,SNR=16
ARMA Armidale 60.95 113 P **P** **07 53 05.1 +1.2**
ARMA Armidale 60.95 113 P **P** **07 53 05.5 +1.6**
GOMU GeErMu 61.03 11 P **P** **07 53 04.1 -0.3**
GOMU pP pwP 07 53 16.4 +1.7
GOMU sP sP 07 53 19.6 +9.0
GOMU PcP **PcP** **07 53 47.7 +0.2**
GOMU S **S** **08 01 20.5 -2.0**
GOMU pmax pmax
comp=Z,17nm,0.8s
GOMU LR LR
comp=Z,1μm,18.6s
GOMU LR LR
comp=Z,770nm,18.6s
GOMU LR LR
comp=Z,1μm,18.6s
NACB Ninganchiao 61.10 41 P **P** **07 53 02.1 -2.6**
NACB IAmb IAmb 07 53 06.5
comp=Z,180nm,1.6s
NACB IAMs_20 IAMs_20 08 16 26.9
comp=Z,2μm,19.0s
NVL N'lazarevskaya 61.15 201 *e*P **P** **07 53 02.5 -1.9**
NVL *e*S **S** **08 01 23.6 +1.0**
NVL pmax pmax
comp=Z,217nm,1.5s
NVL MLR MLR
comp=Z,465nm,15.0s
HRA Herat 61.21 341 P **P** **07 53 03.8 -1.7**
YHNB Yeheng 61.35 41 IAMs_20 IAMs_20 08 13 08.3
comp=Z,2μm,20.0s
RK1H Rockhampton Ha 61.65 105 P **P** **07 53 10.2 +1.6**
EIDS Eidsvold 61.65 107 P **P** **07 53 09.0 +0.4**
baz=62,SNR=13
EIDS Eidsvold 61.65 107 P **P** **07 53 08.7 +0.1**
EIDS IAmb IAmb 07 53 10.6
comp=Z,216nm,1.8s
EIDS Eidsvold 61.65 107 P **P** **07 53 09.6 +1.0**
WHN Wuhan 62.27 31⇓P **P** **07 53 13.3 +0.9**
WHN S **S** **08 01 41.5 +3.8**
WHN pmax pmax
comp=Z,500nm,1.6s
WHN LR LR
comp=Z,3μm,12.4s
WHN LR LR
comp=Z,6μm,18.9s
WHN LR LR
comp=Z,7μm,18.8s
XAN Xi'an 62.98 24 P **P** **07 53 16.6 -0.6**
XAN pP sP 07 53 22.8 -0.6
XAN PP **PP** **07 55 39.4 +3.3**
XAN S **S** **08 01 46.0 -0.6**
XAN SS **SS** **08 05 52.8 0.0**
XAN pmax pmax
comp=Z,70nm,1.4s
XAN pmax pmax
comp=Z,1μm,3.5s
XAN LR LR
comp=Z,1μm,20.2s
XAN LR LR
comp=Z,2μm,16.9s
XAN LR LR
comp=Z,3μm,18.4s
LZH Lanzhou 63.11 19⇑P **P** **07 53 18.1 0.0**
LZH sP sP 07 53 25.1 +0.7
LZH *e*S **S** **08 01 45.8 -2.6**
LZH SS **SS** **08 05 57.9 +2.9**
LZH pmax pmax
comp=Z,130nm,1.1s
LZH pmax pmax
comp=Z,1μm,4.1s
LZH LR LR
comp=Z,3μm,18.2s
LZH LR LR
comp=Z,1μm,15.5s
LZH LR LR
comp=Z,5μm,19.9s
PMG Port Moresby 63.12 89 LR LR 08 20 25.2
comp=Z,703nm,20.1s,baz=249,slow=36
KSH Kashi 63.52 354 P **P** **07 53 18.3 -2.4**
KSH pP pP 07 53 24.9 -0.4
KSH PP **PP** **07 55 38.7 -2.1**
KSH pmax pmax
comp=Z,140nm,1.8s
KSH LR LR
comp=Z,5μm,19.2s
KSH LR LR
comp=Z,1μm,16.5s
KSH LR LR
comp=Z,5μm,17.9s
CHGR Chuyangaron 63.61 348 P **P** **07 53 19.8 -1.5**
CHGR Chuyangaron 63.61 348 P **P** **07 53 19.8 -1.5**
CHGR pmax pmax
comp=Z,717nm,1.8s
GAR Garm 63.74 349 P **P** **07 53 20.6 -1.6**
DRK Karamyk 63.98 351 P **P** **07 53 22.7 -1.2**
TROLL Troll, Antarti 64.25 200 P **P** **07 53 26.3 +1.1**
VNDA Vanda 64.39 166 P **P** **07 53 26.9 +1.0**
comp=Z,17nm,0.9s,baz=276,slow=7.1,SNR=38
VNDA LR LR 08 18 03.2
comp=Z,2μm,19.4s,baz=269,slow=33
comp=Z,17nm,0.9s
VNDA Vanda 64.39 166 P **P** **07 53 26.8 +0.9**
VNDA IAmb IAmb 07 53 28.5
comp=Z,199nm,1.8s
BTK Batken 64.69 350 P **P** **07 53 27.7 -0.7**
BTK IAmb IAmb 07 53 30.1
comp=Z,286nm,1.8s
BTK Batken 64.69 350 P **P** **07 53 27.7 -0.7**
BTK pmax pmax
comp=Z,287nm,1.8s
LYN LuoYang 64.84 27⇑*i*P **P** **07 53 29.3 0.0**
LYN PP **PP** **07 55 54.6 +2.2**
LYN S **S** **08 02 13.2 +3.6**
LYN pmax pmax
comp=Z,120nm,2.3s
LYN pmax pmax
comp=Z,600nm,5.0s
LYN LR LR
comp=Z,2μm,16.9s
LYN LR LR
comp=Z,1μm,18.0s
LYN LR LR
comp=Z,2μm,18.1s
GTA Gaotai 65.16 15⇑P **P** **07 53 31.5 0.0**
GTA pP pP 07 53 36.6 +0.5
GTA sP pwP 07 53 40.5 -1.3
GTA S **S** **08 02 14.0 +0.4**
GTA sS sS 08 02 30.7 +10
GTA SS **SS** **08 06 23.4 -3.4**
GTA pmax pmax
comp=Z,100nm,1.7s
GTA pmax pmax
comp=Z,860nm,5.1s
GTA LR LR
comp=Z,2μm,21.1s
GTA LR LR
comp=Z,710nm,21.1s
GTA LR LR
comp=Z,2μm,24.3s
NRN Naryn 65.42 355 P **P** **07 53 32.2 -1.1**
NRN Naryn 65.42 355 P **P** **07 53 32.2 -1.1**
SBA Scott Base 65.46 167 P **P** **07 53 34.3 +1.5**
SBA IAmb IAmb 07 53 37.6
comp=Z,185nm,1.9s
SBA Scott Base 65.46 167 IAMs_20 IAMs_20 08 17 08.0
comp=Z,2μm,19.0s
SBA Scott Base 65.46 167 P **P** **07 53 34.3 +1.5**
SBA pmax pmax
comp=Z,185nm,1.9s
NJ2 Nanjing 65.71 34⇑P **P** **07 53 35.0 0.0**
NJ2 PcP **PcP** **07 54 05.2 -1.0**
NJ2 pmax pmax
comp=Z,120nm,1.5s
NJ2 pmax pmax
comp=Z,1μm,3.5s
NJ2 LR LR
comp=Z,870nm,16.2s
NJ2 LR LR
comp=Z,1μm,14.9s
NJ2 LR LR
comp=Z,1μm,18.1s
GEYT Alibeck 65.77 339 P **P** **07 53 35.0 -0.4**
comp=Z,185nm,1.3s,baz=187,slow=7.3,SNR=44
GEYT LR LR 08 21 05.6
comp=Z,944nm,18.6s,baz=158,slow=35
comp=Z,185nm,1.3s
GEYT Alibeck 65.77 339 P **P** **07 53 34.7 -0.6**
GYA0B ALIBECK ARRAY 65.77 339 P **P** **07 53 35.2 -0.1**
SNAA Sanae 65.94 200 P **P** **07 53 36.9 +0.8**
SNAA Sanae 65.94 200 LR LR 08 18 56.2
comp=Z,1μm,18.4s,baz=82,slow=33
SNAA Sanae 65.94 200 P **P** **07 53 37.1 +1.0**
SNAA IAmb IAmb 07 53 38.8
comp=Z,147nm,1.3s
SNAA Sanae 65.94 200*c**e*P **P** **07 53 36.8 +0.7**
SNAA pmax pmax
comp=Z,177nm,1.7s
SNAA Sanae 65.94 200⇑*i*P **P** **07 53 36.8 +0.7**
QSPA South Pole Qui 66.07 180 LR LR 08 19 56.9
comp=Z,6μm,18.2s,baz=306,slow=34
QSPA South Pole Qui 66.07 180 P **P** **07 53 37.5 +0.4**
QSPA IAmb IAmb 07 53 39.1
comp=Z,114nm,1.1s
SSE Sheshan 66.17 36 P **P** **07 53 38.6 +0.6**
SSE S **S** **08 02 27.4 +1.5**
SSE pmax pmax
comp=Z,43nm,0.9s
SSE pmax pmax
comp=Z,390nm,3.5s
SSE LR LR
comp=Z,1μm,20.8s
SSE LR LR
comp=Z,850nm,22.2s
TAS Tashkent 66.18 349 P **P** **07 53 37.8 -0.1**
TAS IAmb IAmb 07 53 39.1
comp=Z,200nm,1.3s
TAS Tashkent 66.18 349 P **P** **07 53 37.8 -0.1**
TAS pmax pmax
comp=Z,200nm,1.3s
ULHL Ulahol 66.21 355 P **P** **07 53 38.7 +0.4**
SNR=14
PRZ Przheval'sk 66.30 357 P **P** **07 53 39.4 +0.6**
PRZ Przheval'sk 66.30 357 P **P** **07 53 39.4 +0.6**
AML Almayashu 66.34 353 P **P** **07 53 38.9 -0.5**
SNR=80
KBK Karagaybulak 66.73 354 P **P** **07 53 41.7 +0.1**
SNR=17
AAK Ala-Archa 66.76 354 P **P** **07 53 41.8 +0.1**
comp=Z,29nm,0.8s,baz=177,slow=5.3,SNR=89
AAK LR LR 08 21 38.8
comp=Z,5μm,18.1s,baz=170,slow=35
comp=Z,29nm,0.8s
AAK Ala-Archa 66.76 354 P **P** **07 53 41.9 +0.1**
SNR=25
AAK Ala-Archa 66.76 354 P **P** **07 53 41.4 -0.3**
EKS2 Erkin-Say 66.86 353 P **P** **07 53 42.1 -0.2**
SNR=32
IUG Iuzhnay 66.86 350*c* *i*P **P** **07 53 41.8 -0.5**
IUG Iuzhnay 66.86 350⇑*i*P **P** **07 53 41.9 -0.5**
baz=350
SATY Saty 66.87 357*c* *i*P **P** **07 53 41.9 -0.5**
SATY pmax pmax
comp=Z,250nm,2.3s
SATY Saty 66.87 357⇑*i*P **P** **07 53 42.0 -0.5**
comp=Z,250nm,2.3s,baz=357
SHLS Shalkode 66.92 358 *i* P **P** **07 53 42.6 -0.1**
SHLS pmax pmax
comp=Z,218nm,2.1s
SHLS Shalkode 66.92 358 *i* P **P** **07 53 42.6 -0.1**
comp=Z,218nm,2.1s,baz=358
UZB Uzynbulak 66.93 357 *e*P **P** **07 53 42.0 -0.8**
UZB Uzynbulak 66.93 357 *e*P **P** **07 53 42.1 -0.8**
baz=357
TKM2 Tokmak 2 66.93 354 P **P** **07 53 42.3 -0.6**
SNR=80
TKM2 Tokmak 2 66.93 354 *i* P **P** **07 53 42.0 -0.9**
TKM2 pmax pmax
comp=Z,289nm,1.4s
MDOK Medeo 67.06 356 *i* P **P** **07 53 43.1 -0.5**
MDOK Medeo 67.06 356 *i* P **P** **07 53 43.2 -0.5**
baz=356
CHMS Chumysh 67.09 354 P **P** **07 53 43.5 -0.2**
SNR=20
CHMS Chumysh 67.09 354 *i* P **P** **07 53 42.0 -1.7**
CHMS pmax pmax
comp=Z,194nm,1.5s
PDGK Podgornoye 67.09 358 P **P** **07 53 43.1 -0.7**
CHM Chimkent 67.10 350 P **P** **07 53 42.0 -1.7**
AAA Alma-Ata 67.11 356 *e*P **P** **07 53 42.3 -1.6**
AAA pmax pmax
comp=Z,412nm,1.7s
AAA Alma-Ata 67.11 356 *e*P **P** **07 53 42.3 -1.6**
comp=Z,412nm,1.7s,baz=355
JOW Kunigami 67.17 44 P **P** **07 53 44.6 +0.1**
JOW Kunigami 67.17 44 P **P** **07 53 45.9 +1.4**
USP Osepenovka 67.38 354 P **P** **07 53 45.0 -0.5**
SNR=122
DZA Taraz 67.39 351 *i* P **P** **07 53 44.3 -1.3**
DZA Taraz 67.39 351 *i* P **P** **07 53 44.4 -1.3**
baz=351
VNA2 Neumayer--Watz 67.47 201 P **P** **07 53 46.9 +1.0**
baz=90,slow=5.0
SGDS Sogindy 67.55 354*c* *i*P **P** **07 53 46.0 -0.6**
SGDS pmax pmax
comp=Z,262nm,2.0s
SGDS Sogindy 67.55 354⇑*i*P **P** **07 53 46.1 -0.6**
comp=Z,262nm,2.0s,baz=354
TIY Taiyuan 67.56 25⇓P **P** **07 53 47.4 +0.6**
TIY S **S** **08 02 39.9 -2.8**
TIY pmax pmax
comp=Z,65nm,1.5s
TIY pmax pmax
comp=Z,690nm,3.5s
TIY LR LR
comp=Z,2μm,17.2s
TIY LR LR
comp=Z,1μm,16.5s
TIY LR LR
comp=Z,2μm,19.2s
WMQ Urumqi 67.69 4 P **P** **07 53 48.2 +0.7**
WMQ pP sP 07 53 54.9 +1.2
WMQ sP pwP 07 54 00.3 +2.4
WMQ S **S** **08 02 45.5 +1.4**
WMQ pmax pmax
comp=Z,210nm,1.5s
WMQ pmax pmax
comp=Z,2μm,4.7s
WMQ LR LR
comp=Z,3μm,22.9s
WMQ LR LR
comp=Z,2μm,16.9s
WMQ LR LR
comp=Z,3μm,21.1s
KK31 Karatay Array 67.72 351 P **P** **07 53 47.5 -0.1**
KK31 Karatay Array 67.72 351 *i* P **P** **07 53 46.9 -0.7**
KKAR Karatay Array 67.72 351 P **P** **07 53 47.5 -0.1**
KKAR Karatay Array 67.72 351 P **P** **07 53 46.9 -0.7**
KKAR Karatay Array 67.72 351 P **P** **07 53 47.5 -0.1**
KKAR pmax pmax
comp=Z,368nm,1.5s
CHKK Chushkaly 67.75 356 *e*P **P** **07 53 46.7 -1.1**
CHKK Chushkaly 67.75 356 *e*P **P** **07 53 46.8 -1.1**
baz=356
VNA1 Neumayer--Stat 67.80 201 P **P** **07 53 49.0 +1.1**
KUU Kurty 67.84 355 *e*P **P** **07 53 47.2 -1.1**
KUU pmax pmax
comp=Z,502nm,1.9s
KUU Kurty 67.84 355 *e*P **P** **07 53 47.3 -1.1**
comp=Z,502nm,1.9s,baz=355
VNA3 Neumayer Olymp 68.16 200 P **P** **07 53 51.1 +1.0**
HNS HongShan 68.21 27⇑P **P** **07 53 51.2 +0.4**
HNS S **S** **08 02 51.5 +1.2**
HNS SS **SS** **08 07 16.1 +2.1**
HNS pmax pmax
comp=Z,110nm,1.8s
HNS LR LR
comp=Z,2μm,17.1s
HNS LR LR
comp=Z,720nm,16.9s
HNS LR LR
comp=Z,2μm,16.7s
TIA Tai'an 68.27 30⇑P **P** **07 53 50.8 -0.4**
TIA S **S** **08 02 51.3 +0.2**
TIA SS **SS** **08 07 14.0 -0.9**
TIA pmax pmax
comp=Z,61nm,1.9s
TIA LR LR
comp=Z,1μm,19.6s
TIA LR LR
comp=Z,790nm,17.2s
TIA LR LR
comp=Z,3μm,16.7s
BTLS Baital 69.18 354*c* *i*P **P** **07 53 55.9 -0.8**
BTLS pmax pmax
comp=Z,189nm,2.2s
BTLS Baital 69.18 354⇑*i*P **P** **07 53 55.9 -0.8**
comp=Z,189nm,2.2s,baz=354
BTO Baotou 69.22 22 *e*P **P** **07 53 57.9 +0.7**
BTO S **S** **08 03 04.2 +1.7**
BTO LR LR
comp=Z,6μm,17.4s
BTO LR LR
comp=Z,4μm,15.7s
KRVT Keravat (AS076 69.56 86 LR LR 08 25 01.0
comp=Z,254nm,20.3s,baz=20,slow=36
DCZ Deep Cove 69.64 132 P **P** **07 54 00.2 +0.4**
DCZ IAmb IAmb 07 54 03.2
comp=Z,247nm,1.5s
HHC Hu-ho-hao-te 69.98 23 *e*P **P** **07 54 02.4 +0.5**
HHC S **S** **08 03 13.0 +1.6**
HHC SS **SS** **08 07 38.9 -2.5**
HHC pmax pmax

comp=Z,160nm,1.3s
HHC pmax pmax
comp=Z,2µm,5.2s
HHC LR LR
comp=Z,3µm,19.0s
HHC LR LR
comp=Z,830nm,18.4s
HHC LR LR
comp=Z,3µm,19.0s
WHZ Wether Hill Ro 70.08 132 P **P** **07 54 03.3 +0.8**
EIL Elat 70.28 317 P **P** **07 54 04.8 +1.0**
comp=Z,104nm,1.1s,baz=143,slow=3.6,SNR=50
comp=Z,104nm,1.1s
MK31 Makanchi Array 70.50 360 P **P** **07 54 03.5 -1.3**
MK31 IAmb IAmb 07 54 05.2
comp=Z,187nm,1.4s
MK31 Makanchi Array 70.50 360 *i* P **P** **07 54 03.5 -1.3**
MK31 pmax pmax
comp=Z,166nm,1.2s
MKAR Makanchi Array 70.50 360 P **P** **07 54 03.5 -1.3**
MKAR Makanchi Array 70.50 360 P **P** **07 54 03.6 -1.3**
MAKZ Makanchi 70.52 360 P **P** **07 54 03.8 -1.1**
MAKZ IAmb IAmb 07 54 05.4
comp=Z,299nm,1.5s
MAKZ IAMs_20 IAMs_20 08 28 12.4
comp=Z,2µm,18.0s
MAKZ Makanchi 70.52 360 P **P** **07 54 03.8 -1.1**
MAKZ pmax pmax
comp=Z,299nm,1.5s
MAKZ MLR MLR
comp=Z,2µm,18.0s
BJT Baijiatuau 71.04 27 P **P** **07 54 07.8 -0.4**
BJT Baijiatuau 71.04 27 P **P** **07 54 07.8 -0.4**
BJT pmax pmax
comp=Z,114nm,1.8s
GHAJ Ghor Haditha 71.05 319 IAMs_20 IAMs_20 08 21 19.0
comp=Z,2µm,20.0s
BJI Beijing 71.06 27 P **P** **07 54 08.5 +0.2**
BJI PP **PP** **07 56 48.4 +2.1**
BJI S **S** **08 03 24.7 +1.0**
BJI pmax pmax
comp=Z,72nm,2.0s
BJI pmax pmax
comp=Z,1µm,3.5s
BJI LR LR
comp=Z,220nm,17.2s
BJI LR LR
comp=Z,1µm,15.5s
BJI LR LR
comp=Z,1µm,16.7s
ZSN Zaisan 71.19 2*c i* P **P** **07 54 08.8 -0.2**
ZSN *e*S **S** **08 03 24.1 -0.9**
ZSN pmax pmax
comp=Z,214nm,2.7s
ZSN Zaisan 71.19 2⇑*i* P **P** **07 54 08.8 -0.2**
comp=Z,214nm,2.7s,baz=1.6
ZSN *e*S **S** **08 03 24.1 -0.9**
baz=1.6
GUMO Guam 71.47 65 LR LR 08 20 35.4
comp=Z,127nm,21.3s,baz=236,slow=32
GUMO Guam 71.47 65 P **P** **07 54 09.8 -1.5**
GUMO IAmb IAmb 07 54 11.4
comp=Z,209nm,1.6s
GUMO Guam 71.47 65 P **P** **07 54 09.8 -1.5**
GUMO pmax pmax
comp=Z,209nm,1.6s
JSU Suzuyama 71.79 42 P **P** **07 54 12.3 -0.7**
JSU IAmb IAmb 07 54 14.0
comp=Z,347nm,1.6s
MMLI Mount Malkishu 71.93 319 P **P** **07 54 15.0 +1.1**
LBZ Lake Benmore 72.00 131 P **P** **07 54 14.8 +0.6**
BELA Belgrano 2 72.07 191 P **P** **07 54 14.5 +0.5**
BELA IAmb IAmb 07 54 16.1
comp=Z,159nm,1.5s
ODZ Otahua Downs 72.13 132 P **P** **07 54 14.2 -0.8**
ODZ IAmb IAmb 07 54 18.7
comp=Z,224nm,1.8s
GEVA Gevas 72.23 328 P **P** **07 54 16.6 +0.9**
AKDM Akdamar-Van 72.28 328 P **P** **07 54 17.3 +1.3**
VANB Van 72.29 329 P **P** **07 54 16.9 +0.9**
MMAI Mount Meron Ar 72.35 320 P **P** **07 54 17.4 +1.0**
comp=Z,57nm,1.0s,baz=121,slow=7.9,SNR=60
comp=Z,57nm,1.0s
OTUK Ortayu 72.53 353 P **P** **07 54 16.1 -0.9**
DL2 Dalian 72.54 31 P **P** **07 54 17.5 +0.3**
DL2 S **S** **08 03 43.4 +2.6**
DL2 pmax pmax
comp=Z,120nm,2.0s
DL2 pmax pmax
comp=Z,1µm,4.0s
DL2 LR LR
comp=Z,1µm,14.9s
DL2 LR LR
comp=Z,810nm,19.2s
DL2 LR LR
comp=Z,960nm,26.5s
MARD Mardin 72.58 326 P **P** **07 54 18.2 +0.5**
MARD IAmb IAmb 07 54 20.1
comp=Z,362nm,1.4s
RPZ Rata Peaks 72.79 131 LR LR 08 18 01.5
comp=Z,502nm,21.5s,baz=256,slow=29
RPZ Rata Peaks 72.79 131 P **P** **07 54 19.1 +0.2**
RPZ IAmb IAmb 07 54 21.1
comp=Z,190nm,1.6s
NAWB Namwon 72.82 37 P **P** **07 54 17.4 -1.7**
BHL Bhannes 72.84 321 *e*P **P** **07 54 19.8 +0.5**
MAZI Mazidag 72.86 326 P **P** **07 54 20.3 +0.9**
GURO Guroymak-BITLI 72.91 328 P **P** **07 54 19.8 +0.1**
GURO Guroymak-BITLI 72.91 328 P **P** **07 54 20.4 +0.7**
GNI Garni 72.92 331 LR LR 08 24 58.0
comp=Z,806nm,18.4s,baz=140,slow=35
GNI Garni 72.92 331 *i* P **P** **07 54 18.6 -1.1**
GNI pmax pmax
comp=Z,116nm,1.5s
HWQ Hawqa 72.94 321 *e*P **P** **07 54 20.3 +0.4**
SVAN Silvan-Diyarba 73.01 327 P **P** **07 54 20.4 +0.2**
MLAZ Malazgirt-MUS 73.13 329 P **P** **07 54 20.9 -0.1**
JNU Nakatsue 73.18 41 LR LR 08 27 36.5
comp=Z,826nm,18.0s,baz=248,slow=37
JNU Nakatsue 73.18 41 P **P** **07 54 21.0 -0.3**
JNU IAmb IAmb 07 54 22.4
comp=Z,342nm,1.5s
JNU Nakatsue 73.18 41 P **P** **07 54 21.7 +0.4**
JNU Nakatsue 73.18 41 P **P** **07 54 21.0 -0.3**
AGRB Hanur-Agry 73.26 329 P **P** **07 54 22.8 +1.0**
JTU Tsushima 73.30 39 P **P** **07 54 21.7 -0.2**
JTU IAmb IAmb 07 54 24.0
comp=Z,278nm,1.6s
TJN Taejon 73.51 36 P **P** **07 54 22.2 -0.8**
TJN Taejon 73.51 36*ce*P **P** **07 54 23.4 +0.3**
TJN Taejon 73.51 36 P **P** **07 54 24.3 +1.2**
OXZ Oxford 73.59 130 P **P** **07 54 23.8 +0.1**
OXZ IAmb IAmb 07 54 26.1
comp=Z,153nm,1.3s
VRTB Varto-Mus 73.67 328 P **P** **07 54 25.8 +1.6**
URFA Urfa 73.68 325 P **P** **07 54 20.6 -3.6**
HJU Haeju 73.89 34 P **P** **07 54 25.4 +0.2**
HJU pP **pwP** **07 54 37.4 +1.8**
HJU S **S** **08 03 56.2 +0.1**
HJU AmB
comp=Z,2µm,1.8s
HJU AMS AMS
comp=N,8µm,20.4s
HJU AMS AMS
comp=E,1µm,2.6s
HJU AMS AMS
comp=Z,7µm,19.1s
BNGB Bingl 73.92 327 P **P** **07 54 26.2 +0.6**
LTZ Lake Taylor 73.92 130 P **P** **07 54 25.6 -0.1**
INCN Inchon 73.94 35 P **P** **07 54 25.4 -0.2**
INCN IAmb IAmb 07 54 27.0
comp=Z,286nm,1.6s
INCN Inchon 73.94 35 IAMs_20 IAMs_20 08 24 19.3
comp=Z,3µm,22.0s
INCN Inchon 73.94 35 P **P** **07 54 25.4 -0.2**
INCN pmax pmax
comp=Z,286nm,1.6s
INCN Inchon 73.94 35 P **P** **07 54 26.6 +1.0**
KARS Kars 74.06 330 P **P** **07 54 26.0 -0.4**
KARS Kars 74.06 330 P **P** **07 54 26.0 -0.4**
KARS pmax pmax
comp=Z,978nm,1.6s
MAK Makhachkala 74.06 334 *e*P **P** **07 54 22.2 -3.9**
MAK *e*PPP PPP 07 58 59.4
MAK *e*S **SKiKP** **08 03 53.0 -0.6**
MAK *e*SSS SSS 08 12 00.6
MAK pmax pmax
comp=Z,305nm,1.4s
MAK MLR MLR
comp=Z,642nm,16.0s
YAYL Yayladag 74.11 322 P **P** **07 54 26.6 -0.2**
KOPR Koprukoy-ERZUR 74.13 329 P **P** **07 54 26.7 -0.2**
SEM Semipalatinsk 74.14 358*c i*P **P** **07 54 25.4 -1.3**
SEM pmax pmax
comp=Z,240nm,2.3s
SEM Semipalatinsk 74.14 358⇑*i*P **P** **07 54 25.5 -1.3**
comp=Z,240nm,2.3s,baz=358
BRZS Berezniki 74.21 353*ce*P **P** **07 54 25.7 -1.1**
BRZS pmax pmax
comp=Z,121nm,2.1s
BRZS Berezniki 74.21 353⇑*e*P **P** **07 54 25.8 -1.1**
comp=Z,121nm,2.1s,baz=353
KSCHJ Chungju 74.21 36 P **P** **07 54 27.3 +0.1**
KSCHJ IAmb IAmb 07 54 29.3
comp=Z,268nm,1.5s
XLT XiLinHaoTe 74.29 25⇑*i*P **P** **07 54 27.5 -0.1**
XLT sP sP 07 54 33.7 -0.2
XLT PcP **PcP** **07 54 43.0 +0.6**
XLT S **S** **08 04 02.0 +1.3**
XLT SKS **SKSac** **08 04 26.8 -7.6**
XLT SS **SS** **08 08 54.8 +7.5**
XLT pmax pmax
comp=Z,56nm,2.3s
XLT pmax pmax
comp=Z,1µm,3.8s
XLT LR LR
comp=Z,200nm,17.5s
XLT LR LR
comp=Z,890nm,16.3s
XLT LR LR
comp=Z,3µm,18.0s
TAHT Tahtakopru-Hat 74.32 323 P **P** **07 54 28.9 +1.1**
KURBB Kurchatov Arra 74.42 357 P **P** **07 54 27.1 -1.0**
comp=Z,64nm,1.1s,baz=184,slow=5.8,SNR=190
KURBB PKPPKP P'P'df 08 22 02.2 +10
comp=Z,0.5nm,0.8s,baz=325,slow=2.2,SNR=4.1
KURBB LR LR 08 25 48.9
comp=Z,2µm,21.4s,baz=156,slow=35
comp=Z,64nm,1.1s
KURBB Kurchatov Arra 74.42 357 P **P** **07 54 26.6 -1.4**
PTK Pertek 74.49 326 P **P** **07 54 30.2 +1.2**
KURK Kurchatov 74.50 357 P **P** **07 54 27.6 -0.9**
KURK IAmb IAmb 07 54 29.1
comp=Z,227nm,1.4s
KURK Kurchatov 74.50 357 IAMs_20 IAMs_20 08 25 28.0
comp=Z,3µm,22.0s
KURK Kurchatov 74.50 357*c i*P **P** **07 54 26.9 -1.6**
KURK pmax pmax
comp=Z,210nm,1.4s
KURK MLR MLR
comp=Z,1µm,17.0s
KURK Kurchatov 74.50 357 P **P** **07 54 28.1 -0.4**
KSAR Wonju Array Be 74.58 36 P **P** **07 54 29.7 +0.4**
KSAR Wonju Array Be 74.58 36 P **P** **07 54 29.7 +0.4**
KSRS Korea Array 74.61 36 P **P** **07 54 29.9 +0.5**
comp=Z,51nm,1.1s,baz=228,slow=5.6,SNR=138
KSRS PKPPKP 08 21 55.5
comp=Z,0.3nm,0.4s,baz=54,slow=1.8,SNR=4.1
KSRS LR LR 08 28 31.3
comp=Z,970nm,18.2s,baz=230,slow=37
comp=Z,51nm,1.1s
KSRS Korea Array 74.61 36 P **P** **07 54 30.0 +0.5**
KS19 Wonju Array Si 74.61 36 P **P** **07 54 30.3 +0.8**
KS19 IAmb IAmb 07 54 31.6
comp=Z,298nm,1.6s
PYAG Pyongyang 74.67 34 P **P** **07 54 30.4 +0.6**
PYAG pP **pwP** **07 54 41.5 +1.4**
PYAG S **S** **08 04 08.6 +3.7**
PYAG AmB
comp=Z,325nm,1.2s
PYAG AMS AMS
comp=N,86nm,1.5s
PYAG AMS AMS
comp=E,133nm,2.3s
PYAG AMS AMS
comp=Z,147nm,2.6s
KOUNC Koumac, New Ca 74.69 106 P **P** **07 54 29.4 -1.0**
SONM Songino Array 74.70 16 P **P** **07 54 30.0 +0.1**
comp=Z,28nm,1.1s,baz=204,slow=4.5,SNR=123
SONM LR LR 08 26 38.2
comp=Z,4µm,21.7s,baz=196,slow=35
comp=Z,28nm,1.1s
SONM Songino Array 74.70 16 P **P** **07 54 29.6 -0.4**
QRZ Quartz Range 74.72 128 P **P** **07 54 31.1 +0.9**
SUJ Sinuiju 74.85 32 P **P** **07 54 30.2 -0.6**
SUJ sP **PcP** **07 54 45.0 +0.3**
SUJ S **S** **08 04 08.1 +1.3**
SUJ AmB
comp=Z,2µm,3.2s
SUJ AMS AMS
comp=N,440nm,18.7s
SUJ AMS AMS
comp=E,42nm,1.8s
SUJ AMS AMS
comp=Z,40nm,1.7s
EREN Erenkoy 74.85 321 P **P** **07 54 30.7 -0.2**
ULN Ulaanbaatar 74.90 17 P **P** **07 54 30.8 -0.4**
ULN Ulaanbaatar 74.90 17*ce*P **P** **07 54 30.1 -1.0**
ULN pmax pmax
comp=Z,151nm,1.7s
ULN Ulaanbaatar 74.90 17 P **P** **07 54 31.4 +0.3**
KRTS Karatas 74.91 322 P **P** **07 54 32.6 +1.4**
KHZ Kahutara 74.92 130 P **P** **07 54 31.1 -0.3**
CSS Mathiatis 74.94 320 P **P** **07 54 32.3 +0.8**
CSS Mathiatis 74.94 320 P **P** **07 54 31.6 +0.1**
GROC Groznyy 74.96 333 *e*P **P** **07 54 32.1 +0.8**
GROC *e* 07 54 45.0
GROC *e*S **S** **08 04 09.7 +1.8**
GROC pmax pmax
comp=Z,255nm,1.4s
CEYT Ceyhan 75.02 323 P **P** **07 54 32.3 +0.5**
LFK Lefkose 75.05 320 P **P** **07 54 33.5 +1.3**
ARPR Arapgir-MALATY 75.18 326 P **P** **07 54 34.5 +1.6**
DARE Darende-Malaty 75.23 325 P **P** **07 54 34.7 +1.5**
LEF Lefka 75.31 320 P **P** **07 54 34.1 +0.5**
KOZT Kozan 75.32 323 P **P** **07 54 34.1 +0.5**
SEHB SEOHWA 75.38 36 P **P** **07 54 33.8 -0.1**
SEHB IAmb IAmb 07 54 36.3
comp=Z,255nm,1.5s
JMN Monobe 75.42 42 P **P** **07 54 34.6 +0.3**
JMN IAmb IAmb 07 54 36.4
comp=Z,429nm,1.7s
ZEI Tsey 75.42 332 *e*P **P** **07 54 34.0 -0.3**
ZEI pmax pmax
comp=Z,66nm,1.3s
TUWZ Tuamarina 75.53 129 P **P** **07 54 34.4 -0.5**
KIZK Mersin 75.54 322 P **P** **07 54 35.8 +0.9**
KARA Karaisali 75.58 323 P **P** **07 54 34.9 -0.2**
SILI Silifke-Mersin 75.58 321 P **P** **07 54 34.6 -0.6**
MERS Mersin 75.60 322 P **P** **07 54 34.6 -0.7**
IKL Isikli 75.63 321 P **P** **07 54 35.8 +0.4**
SARI SarD1z-Kayseri 75.67 324 P **P** **07 54 36.1 +0.3**
AB31 Akbulak array 75.69 345 *i* P **P** **07 54 34.5 -0.9**
ABKAR Akbulak array 75.69 345 P **P** **07 54 34.7 -0.8**
SNY Shenyang 75.76 30⇑P **P** **07 54 35.1 -0.9**
SNY PP **PP** **07 57 27.6 +1.3**
SNY S **S** **08 04 18.5 +1.6**
SNY pmax pmax
comp=Z,52nm,1.5s
SNY LR LR
comp=Z,1µm,18.0s
SNY LR LR
comp=Z,800nm,18.2s
SNY LR LR
comp=Z,1µm,20.1s
KEBE Keben-Mersin 75.76 321 P **P** **07 54 37.4 +1.2**
JHS Saijyo 75.81 41 P **P** **07 54 36.6 +0.1**
JHS IAmb IAmb 07 54 38.3
comp=Z,422nm,1.6s
JHS Saijyo 75.81 41 P **P** **07 54 36.6 +0.1**
TCW Tory Channel 75.84 129 P **P** **07 54 36.0 -0.7**
TEKE Tekeli-Mersin 75.89 321 P **P** **07 54 35.9 -1.0**
KTUT Trabzon 75.90 328⇑P **P** **07 54 37.5 +0.7**
KTUT Trabzon 75.90 328 P **P** **07 54 36.7 -0.1**
CMRD Camardi-Nigde 75.91 323 P **P** **07 54 37.1 0.0**
TEVE Tevekalti-Mers 75.91 321 P **P** **07 54 37.0 -0.1**
BERE Bereket-Mersin 75.97 321 P **P** **07 54 38.3 +0.7**
DZM Mont Dzumac 76.06 108 LR LR 08 24 23.2
comp=Z,416nm,21.6s,baz=218,slow=33
DZM Mont Dzumac 76.06 108 *e*LR LR 08 18 06.0
comp=Z,784nm,24.1s
DZM Mont Dzumac 76.06 108 P **P** **07 54 37.6 -0.8**
HHU Hamhung 76.23 34 P **P** **07 54 39.2 +0.4**
HHU pP **pwP** **07 54 49.8 +0.8**
HHU S **S** **08 04 24.8 +2.6**
HHU AmB
comp=Z,1µm,2.1s
HHU AMS AMS
comp=N,97nm,3.9s
HHU AMS AMS
comp=E,414nm,16.9s
HHU AMS AMS
comp=Z,31nm,1.3s
BNN Bunyan 76.30 324 P **P** **07 54 39.2 -0.2**
BNN Bunyan 76.30 324 P **P** **07 54 38.9 -0.5**
ZAK Zakamensk 76.34 14 *e*P **P** **07 54 39.1 -0.2**
ZAK pmax pmax
comp=Z,59nm,1.9s
ESPY Espiye-Giresun 76.36 327 P **P** **07 54 40.0 +0.5**
JAD Aida 76.41 42 P **P** **07 54 39.9 +0.1**
GAZI Gazipasa 76.42 320 P **P** **07 54 39.9 0.0**
YATNC Mamie plateau, 76.45 108 P **P** **07 54 41.9 +1.4**
SVSK Karacayir 76.48 326 P **P** **07 54 41.3 +1.2**
OGWZ Otaki Gorge 76.61 129 P **P** **07 54 40.8 -0.3**
KBZ Khabaz 76.61 332 P **P** **07 54 41.2 +0.5**
comp=Z,108nm,1.1s,baz=163,slow=3.2,SNR=48
KBZ LR LR 08 26 53.0
comp=Z,667nm,20.5s,baz=138,slow=34
comp=Z,108nm,1.1s
KBZ Khabaz 76.61 332*ce*P **P** **07 54 40.9 +0.1**
KBZ pmax pmax
comp=Z,267nm,1.4s
RSDY Resadiye-TOKAT 76.67 326 P **P** **07 54 42.5 +1.2**
MTW Mount Morrison 76.73 129 P **P** **07 54 42.0 +0.2**
JCJ Chichijima 76.82 52 LR LR 08 25 20.7
comp=Z,302nm,21.8s,baz=253,slow=33
HOWZ Holdsworth Sta 76.83 129 P **P** **07 54 43.3 +1.0**
KVAR Kislovodsk Arr 76.88 332 P **P** **07 54 42.3 -0.1**
comp=Z,18nm,0.9s,baz=264,slow=22,SNR=2.5
KVAR LR LR 08 27 18.9
comp=Z,703nm,19.9s,baz=69,slow=35
comp=Z,18nm,0.9s
KIV Kislovodsk 76.89 332⇓P **P** **07 54 42.9 +0.4**
KIV Kislovodsk 76.89 332 P **P** **07 54 43.2 +0.7**
KIV IAmb IAmb 07 54 45.0
comp=Z,295nm,1.4s
KIV Kislovodsk 76.89 332 *e*P **P** **07 54 42.2 -0.3**
KIV *e* 07 57 35.0
KIV *e*S **S** **08 04 30.2 +0.8**
KIV *e*SS **SS** **08 09 27.0 +0.3**
KIV pmax pmax
comp=Z,114nm,1.0s
KIV pmax pmax
comp=Z,91nm,3.8s
KIV MLR MLR
comp=Z,574nm,18.0s
KIV Kislovodsk 76.89 332 P **P** **07 54 43.4 +0.9**
KIV Kislovodsk 76.89 332 *i* P **P** **07 54 42.9 +0.4**
SNR=7.7
MRZ Mangatainoka R 76.95 129 P **P** **07 54 43.3 +0.2**
TOKT Tokat 77.01 326 P **P** **07 54 43.9 +0.7**
TMWZ Te Maipa 77.02 129 P **P** **07 54 44.1 +0.7**
TOKA Tokat 77.05 326 P **P** **07 54 44.3 +0.9**
TOKA IAmb IAmb 07 54 45.5
comp=Z,156nm,1.1s
SULT Sultanhani-AKS 77.11 322 P **P** **07 54 44.8 +0.9**
MOY Mondy 77.11 12 *e*P **P** **07 54 44.1 +0.5**
MOY pmax pmax
comp=Z,91nm,2.1s
TIWZ Tintock 77.13 129 P **P** **07 54 44.9 +0.8**
YOZ Yozgat 77.15 324 P **P** **07 54 44.4 +0.2**
AKTO Aktyubinsk 77.26 344 P **P** **07 54 43.4 -0.9**
comp=Z,19nm,0.7s,baz=152,slow=6.1,SNR=59
AKTO LR LR 08 27 52.9
comp=Z,2µm,20.6s,baz=146,slow=35
comp=Z,19nm,0.7s
PRWZ Pori Road 77.27 129 P **P** **07 54 45.9 +1.1**
JWT Wachi 77.39 42 P **P** **07 54 45.8 +0.4**
BFZ Birch Farm 77.42 129 P **P** **07 54 46.0 +0.3**
BFZ IAmb IAmb 07 54 48.8
comp=Z,178nm,1.4s
BFZ Birch Farm 77.42 129 P **P** **07 54 46.1 +0.4**
BVA0 Borovoye Array 77.46 353 *i* P **P** **07 54 43.4 -2.0**
BVAR Borovoye Array 77.46 353 LR LR 08 26 54.2
comp=Z,1µm,21.4s,baz=50,slow=34
DVHZ Dannevirke 77.50 129 P **P** **07 54 46.7 +0.5**
SEYD Seydisehir-KON 77.50 321 P **P** **07 54 46.4 +0.2**
BRVK Borovoye 77.51 352 P **P** **07 54 44.5 -1.1**
BRVK IAmb IAmb 07 54 46.1
comp=Z,209nm,1.6s
BRVK Borovoye 77.51 352*ce*P **P** **07 54 44.5 -1.1**
BRVK pmax pmax
comp=Z,106nm,1.3s
BRVK MLR MLR
comp=Z,2µm,17.0s
BRVK Borovoye 77.51 352 P **P** **07 54 45.0 -0.6**
KONT Konya--Tatoy 77.58 322 P **P** **07 54 47.3 +0.8**
SERE Sereflikochisa 77.61 323 P **P** **07 54 47.2 +0.5**
GOF Gofitskoye 77.62 333⇑*e*P **P** **07 54 46.5 +0.1**
GOF pmax pmax
comp=Z,389nm,1.3s
PNHZ Pukenui 77.66 128 P **P** **07 54 47.2 +0.1**
ANWZ Angora Road 77.66 129 P **P** **07 54 47.6 +0.6**
ZAA0 Zalesovo Array 77.69 1 P **P** **07 54 45.1 -1.4**
ZAA0 IAmb IAmb 07 54 46.6
comp=Z,288nm,1.6s
ZALV Zalesovo Beam 77.69 1 P **P** **07 54 45.1 -1.4**
comp=Z,49nm,0.7s,baz=190,slow=3.9,SNR=134
ZALV LR LR 08 27 52.2
comp=Z,2µm,22.0s,baz=188,slow=35
comp=Z,49nm,0.7s
ZALV Zalesovo Beam 77.69 1 P **P** **07 54 44.9 -1.7**
ZALV Zalesovo Beam 77.69 1 *i* P **P** **07 54 45.2 -1.4**
ZALV pmax pmax
comp=Z,50nm,0.7s
CHBY Cihanbeyli 77.72 322 P **P** **07 54 47.9 +0.6**
LADK Ladik-KONYA 77.75 322 P **P** **07 54 47.1 -0.4**
KAMT Kaman 77.83 323 P **P** **07 54 47.5 -0.4**
KVT Kavak 77.83 326 P **P** **07 54 48.2 +0.4**
ANTB Antalya 77.85 320 P **P** **07 54 47.8 -0.1**
MKAZ Moumakai 77.90 125 P **P** **07 54 50.4 +1.9**
CORM Corum 77.91 324 P **P** **07 54 48.1 -0.3**
SOC Sochi 77.92 330*c i*P **P** **07 54 47.0 -1.2**
SOC *e* 07 57 39.7
SOC *e*S **S** **08 04 41.1 +1.1**
SOC *e*SS **SS** **08 09 39.1 -3.1**
SOC *e*SSS SSS 08 12 54.0
SOC pmax pmax
comp=Z,194nm,1.4s
SOC MLR MLR
comp=Z,870nm,21.0s
AKAS Kas 78.03 319 P **P** **07 54 48.1 -1.0**
AKAS Kas 78.03 319 P **P** **07 54 47.7 -1.5**
AKAS IAmb IAmb 07 54 49.2
comp=Z,142nm,1.4s
SUTC Sutluce-Ispart 78.04 320 P **P** **07 54 48.6 -0.6**
KORT Korkueli 78.10 320 P **P** **07 54 50.1 +0.6**
BR131 Keskin Array S 78.12 324 P **P** **07 54 49.4 -0.2**
BR131 IAmb IAmb 07 54 51.6
comp=Z,189nm,1.1s
BR131 Keskin Array S 78.12 324*c i*P **P** **07 54 49.1 -0.5**
BR131 Keskin Array S 78.12 324 P **P** **07 54 49.6 0.0**
SNR=75
BRTR Keskin Array B 78.12 324 P **P** **07 54 49.4 -0.2**
comp=Z,61nm,0.9s,baz=153,slow=6.2,SNR=138
BRTR LR LR 08 27 56.8
comp=Z,1µm,19.1s,baz=136,slow=35
comp=Z,61nm,0.9s
BRTR Keskin Array B 78.12 324 P **P** **07 54 49.5 0.0**
BRTR Keskin Array B 78.12 324 P **P** **07 54 49.1 -0.5**
BRTR Keskin Array B 78.12 324 *i* P **P** **07 54 49.4 -0.2**
BRTR pmax pmax
comp=Z,62nm,0.9s
BKZ Black Stump Fm 78.14 128 P **P** **07 54 49.6 -0.2**
BKZ Black Stump Fm 78.14 128 P **P** **07 54 49.6 -0.2**
BKZ Black Stump Fm 78.14 128 P **P** **07 54 50.3 +0.5**
CN2 Changchun 78.16 30 *e*P **P** **07 54 48.0 -1.5**
CN2 *e*PP **PP** **07 57 47.5 +1.0**
CN2 *e*S **S** **08 04 42.2 -0.8**
CN2 *e*SS **SS** **08 09 47.9 +2.2**
CN2 pmax pmax
comp=Z,30nm,1.9s
CN2 pmax pmax

comp=Z,350nm,3.0s
CN2 LR LR
comp=Z,950nm,18.0s
CN2 LR LR
comp=Z,1µm,18.0s
CN2 LR LR
comp=Z,560nm,18.0s
ELL Elmali 78.19 319 P **P** **07 54 49.7 -0.3**
KAHZ Kahuranaki 78.19 128 P **P** **07 54 50.9 +0.9**
AFSR Afar-Bala (An 78.23 323 P **P** **07 54 49.4 -0.7**
BCK Bucak 78.27 320 P **P** **07 54 49.1 -1.2**
IRK Irkutsk 78.31 13 *eP* **P** **07 54 49.7 -0.4**
IRK *eS* **S** **08 04 46.2 +1.9**
IRK pmax pmax
comp=Z,300nm,2.1s
INU Inuyama 78.43 43 P **P** **07 54 50.8 -0.4**
INU IAmb IAmb 07 54 52.8
comp=Z,296nm,1.6s
INU Inuyama 78.43 43 P **P** **07 54 51.9 +0.7**
KIZT Kizilcal 78.50 322 P **P** **07 54 50.9 -0.7**
ISP Isparta 78.55 320 P **P** **07 54 50.4 -1.6**
FETY Fethiye 78.61 319 P **P** **07 54 51.2 -1.0**
DIKM Dikmen 78.65 326 ⇑P **P** **07 54 53.1 +0.8**
DIKM Dikmen 78.65 326 P **P** **07 54 51.2 -1.0**
BR231 Keskin MP Arra 78.67 323 P **P** **07 54 52.8 +0.2**
BR231 IAmb IAmb 07 54 55.2
comp=Z,303nm,1.3s
ANTO Ankara 78.68 323 ⇑P **P** **07 54 53.0 +0.4**
ANTO Ankara 78.68 323 P **P** **07 54 53.3 +0.7**
ANTO Ankara 78.68 323 P **P** **07 54 52.8 +0.2**
ANTO IAmb IAmb 07 54 55.2
comp=Z,344nm,1.2s
ANTO Ankara 78.68 323 IAMs_20 IAMs_20 08 27 56.9
comp=Z,1µm,19.0s
ANTO Ankara 78.68 323 P **P** **07 54 52.8 +0.2**
ANTO pmax pmax
comp=Z,345nm,1.3s
ANTO Ankara 78.68 323 P **P** **07 54 52.7 +0.2**
CAME Cameli-Denizli 78.68 319 P **P** **07 54 53.3 +0.6**
LOD Lodumlu 78.71 323 P **P** **07 54 52.4 -0.3**
CANT Cankiri 78.75 324 P **P** **07 54 50.8 -2.1**
JHJ Hachijo jima 2 78.78 46 LR LR 08 29 24.6
comp=Z,211nm,19.4s,baz=260,slow=36
JGF Kuroka 78.80 43 P **P** **07 54 53.1 -0.1**
JGF IAmb IAmb 07 54 54.7
comp=Z,333nm,1.8s
ARG Arkhangelos 78.92 318 P **P** **07 54 54.3 +0.5**
ARG Arkhangelos 78.92 318 P **P** **07 54 54.3 +0.5**
ARG pmax pmax
comp=Z,502nm,1.4s
URZ Urewera 78.92 127 LR LR 08 22 22.4
comp=Z,544nm,22.0s,baz=211,slow=30
URZ Urewera 78.92 127 P **P** **07 54 53.2 -0.8**
DALY Dalyan (Mula) 78.99 319 P **P** **07 54 55.0 +0.8**
ILGA Ilgaz 79.02 325 P **P** **07 54 54.3 -0.3**
SHUT Suhut-Afyon 79.03 321 P **P** **07 54 54.9 +0.3**
APMY Acipayam-Deniz 79.03 320 P **P** **07 54 53.6 -1.0**
AUSIV SIVRIHISAR 79.08 322 P **P** **07 54 53.8 -1.0**
KARP Karpathos 79.08 317 P **P** **07 54 55.2 +0.4**
SVRH Sivrihisar-ESK 79.09 322 P **P** **07 54 53.9 -1.0**
CIFT Ciftеler, Eski 79.29 322 P **P** **07 54 56.2 +0.3**
BZK Bozkurt 79.52 325 ⇑P **P** **07 54 57.1 +0.1**
BZK Bozkurt 79.52 325 P **P** **07 54 53.9 -3.1**
BZK Bozkurt 79.52 325 P **P** **07 54 56.5 -0.5**
YUVA Yuva-Kibriscik 79.65 323 P **P** **07 54 58.2 +0.3**
ANN Anapa 79.91 329 *eP* **P** **07 54 55.4 -3.6**
ANN *i* *PP **pP** **07 54 59.6 -4.0**
ANN *e* 07 58 01.0
ANN *eS* **S** **08 04 57.9 -3.7**
ANN *eSS* **SS** **08 10 13.3 +1.3**
ANN pmax pmax
comp=Z,678nm,1.2s
ANN MLR MLR
comp=N,472nm,19.0s
ANN MLR MLR
comp=Z,493nm,15.0s
ANN MLR MLR
comp=E,551nm,23.0s
MAJO Matsushiro 79.93 43 P **P** **07 54 59.4 +0.1**
MAJO IAmb IAmb 07 55 01.9
comp=Z,625nm,1.9s
MAJO Matsushiro 79.93 43*c i*P **P** **07 54 58.9 -0.5**
MAJO pmax pmax
comp=Z,296nm,1.8s
MAJO Matsushiro 79.93 43 P **P** **07 54 59.5 +0.1**
MJAR Matsushiro Arr 79.93 43 P **P** **07 54 58.9 -0.6**
comp=Z,53nm,1.2s,baz=211,slow=5.2,SNR=79
MJAR LR LR 08 31 56.2
comp=Z,470nm,18.1s,baz=236,slow=37
comp=Z,53nm,1.2s
MDUB Mudurnu 79.98 323 P **P** **07 54 58.3 -1.4**
MDUB Mudurnu 79.98 323 P **P** **07 54 58.5 -1.2**
BORA Eskisehir 79.99 322 P **P** **07 54 57.4 -2.3**
BORA Eskisehir 79.99 322 P **P** **07 54 59.7 0.0**
BORA IAmb IAmb 07 55 02.2
comp=Z,256nm,1.5s
SRCK Saricakaya, Es 80.00 322 P **P** **07 55 00.2 +0.5**
JRY Ryogami san 80.03 43 P **P** **07 54 59.9 -0.1**
KURC Kurucasile-Bar 80.10 325 P **P** **07 54 55.5 -4.6**
HIA Hailar 80.17 24 P **P** **07 54 59.6 -0.8**
HIA IAmb IAmb 07 55 01.6
comp=Z,211nm,1.5s
HIA Hailar 80.17 24 IAMs_20 IAMs_20 08 30 27.0
comp=Z,2µm,21.0s
HIA Hailar 80.17 24 P **P** **07 54 59.6 -0.8**
HIA pmax pmax
comp=Z,211nm,1.5s
HIA MLR MLR
comp=Z,2µm,21.0s
AUBOZ BOZOYUK 80.25 322 P **P** **07 55 00.1 -1.0**
TVSB Tavsanli 80.26 321 P **P** **07 55 00.2 -1.0**
GULT Gulveren 80.33 322 P **P** **07 55 01.6 +0.1**
IDI Anoyia 80.36 316 ⇑P **P** **07 55 01.5 -0.3**
IDI Anoyia 80.36 316 P **P** **07 55 02.1 +0.3**
comp=Z,59nm,0.8s,baz=126,slow=6.5,SNR=22
comp=Z,59nm,0.8s
IDI Anoyia 80.36 316 P **P** **07 55 01.5 -0.3**
IDI IAmb IAmb 07 55 04.2
comp=Z,400nm,1.5s
KDZE Karadeniz Ereo 80.42 324 ⇑P **P** **07 55 01.7 -0.3**
KDZE Karadeniz Ereo 80.42 324 P **P** **07 55 01.0 -0.9**
CIT Chita 80.47 19 *eP* **P** **07 55 00.8 -1.2**
CIT pmax pmax
comp=Z,521nm,1.9s
SANT Santorini 80.67 317 ⇑P **P** **07 55 03.8 +0.4**
SANT Santorini 80.67 317 P **P** **07 55 03.5 0.0**
MDJ Mudanjiang 80.73 32 P **P** **07 55 02.9 -0.6**
MDJ IAmb IAmb 07 55 04.6
comp=Z,306nm,1.7s
MDJ IAMs_20 IAMs_20 08 31 03.2
comp=Z,2µm,20.0s
MDJ Mudanjiang 80.73 32 P **P** **07 55 03.3 -0.2**
MDJ pP pP 07 55 08.4 +0.3
MDJ sP PcP 07 55 10.2 +0.1
MDJ PP **PP** **07 58 07.5 -0.4**
MDJ S **S** **08 05 06.2 -4.1**
MDJ SS **SS** **08 10 31.8 +7.5**
MDJ pmax pmax
comp=Z,110nm,1.6s
MDJ pmax pmax
comp=Z,600nm,5.2s
MDJ LR LR
comp=Z,2µm,18.9s
MDJ LR LR
comp=Z,630nm,17.5s
MDJ LR LR
comp=Z,2µm,17.5s
MDJ Mudanjiang 80.73 32 P **P** **07 55 03.7 +0.2**
VLA Vladivostok 80.79 34*c i*P **P** **07 55 03.9 +0.1**
VLA pmax pmax
comp=Z,258nm,1.2s
JSD Sado 80.92 41 P **P** **07 55 04.5 -0.1**
JSD IAmb IAmb 07 55 06.4
comp=Z,499nm,1.6s
JSD Sado 80.92 41 P **P** **07 55 05.0 +0.3**
JYT Yasato 80.98 44 P **P** **07 55 03.6 -1.3**
APE Apeiranthos 81.06 317 ⇑P **P** **07 55 05.0 -0.6**
APE Apeiranthos 81.06 317 P **P** **07 55 04.9 -0.6**
SIM Simferopol' 81.61 328 *eP* **P** **07 55 06.7 -1.5**
SIM pmax pmax
comp=Z,16nm,1.3s
USA0B Ussuriysk Arra 81.61 34 P **P** **07 55 07.8 -0.3**
USA0B Ussuriysk Arra 81.61 34 P **P** **07 55 07.9 -0.3**
USA0B pmax pmax
comp=Z,50nm,1.5s
USRK Ussuriysk Ar. 81.61 34 P **P** **07 55 07.7 -0.5**
comp=Z,92nm,1.1s,baz=241,slow=3.9,SNR=126
USRK PKKPbc **PKKPbc** **08 13 41.8 -1.0**
comp=Z,1.7nm,0.8s,baz=336,slow=4.2,SNR=5.6
USRK LR LR 08 30 52.9
comp=Z,838nm,20.3s,baz=234,slow=35
comp=Z,92nm,1.1s
USRK Ussuriysk Ar. 81.61 34 P **P** **07 55 07.3 -0.9**
BELG Belogornoye 81.98 339 P **P** **07 55 09.4 -0.5**
comp=Z,167nm,1.0s,baz=2.5,slow=1.4,SNR=68
BELG LR LR 08 31 43.9
comp=Z,976nm,21.4s,baz=134,slow=36
comp=Z,167nm,1.0s
JMM Marumori 82.37 43 P **P** **07 55 12.3 0.0**
JMM IAmb IAmb 07 55 13.8
comp=Z,228nm,1.4s
SVE Sverdlovsk 82.64 348*d i*P **P** **07 55 12.4 -0.9**
SVE *eS* **S** **08 05 29.1 -0.4**
SVE pmax pmax
comp=Z,242nm,1.6s
ARU Arti 82.68 347 P **P** **07 55 13.4 -0.1**
comp=Z,32nm,0.8s,baz=161,slow=4.3,SNR=66
ARU LR LR 08 30 47.2
comp=Z,4µm,21.3s,baz=142,slow=35
comp=Z,32nm,0.8s
ARU Arti 82.68 347 P **P** **07 55 13.2 -0.3**
ARU IAmb IAmb 07 55 14.7
comp=Z,182nm,1.3s
ARU Arti 82.68 347*c i*P **P** **07 55 13.2 -0.3**
ARU 07 58 18.6
ARU S **S** **08 05 31.1 +1.2**
ARU pmax pmax
comp=Z,185nm,1.3s
VRH Novokhopyorsk 83.07 336 *eP* **P** **07 55 14.9 -0.7**
VRH *e* 07 55 15.6
VRH *e**SP **sP** **07 55 21.5 -0.4**
VRH *eS* **S** **08 05 33.3 -0.8**
VRH pmax pmax
comp=Z,290nm,1.6s
VRH pmax pmax
comp=Z,290nm,1.2s
VRH smax smax
comp=N,1µm,9.5s
VRH MLR MLR
comp=Z,790nm,19.0s
ALN Alexandroupoli 83.19 320 P **P** **07 55 16.1 -0.4**
ALN Alexandroupoli 83.19 320 P **P** **07 55 16.1 -0.4**
ALN pmax pmax
comp=Z,288nm,1.3s
ITM Ithomi 83.40 316 P **P** **07 55 17.7 0.0**
RDO Rodhopi 83.64 320 P **P** **07 55 19.1 +0.3**
RDO IAmb IAmb 07 55 20.5
comp=Z,166nm,1.4s
MANR Mangalia 83.67 324 ⇑P **P** **07 55 19.6 +0.7**
JMB Yambol 83.89 322 *i* P **P** **07 55 17.8 -2.3**
KDZ Kurdzhali 84.03 321 *i* P **P** **07 55 21.1 +0.3**
VSR Storozhevoye 84.08 334 *eP* **P** **07 55 20.3 -0.5**
VSR *e* 07 55 20.7
VSR *e**SP **sP** **07 55 26.6 -0.5**
VSR *eS* **S** **08 05 39.0 -5.2**
VSR pmax pmax
comp=Z,260nm,1.8s
VSR pmax pmax
comp=Z,580nm,2.1s
VSR smax smax
comp=E,580nm,11.4s
VSR MLR MLR
comp=Z,1µm,23.0s
JURR Jurilovca 84.16 325 ⇑P **P** **07 55 22.0 +0.7**
TIRR Tirgusor 84.19 324 ⇑P **P** **07 55 22.6 +1.1**
TIRR Tirgusor 84.19 324 ⇑P **P** **07 55 22.6 +1.1**
TIRR Tirgusor 84.19 324 P **P** **07 55 20.4 -1.1**
TIRR IAMs_20 IAMs_20 08 32 02.7
comp=Z,1µm,20.0s
TIRR Tirgusor 84.19 324 P **P** **07 55 20.5 -1.1**
TIRR pmax pmax
comp=Z,539nm,1.4s
TIRR MLR MLR
comp=Z,1µm,20.0s
AGG Agios Georgios 84.25 317 P **P** **07 55 21.3 -0.7**
AGG IAmb IAmb 07 55 23.5
comp=Z,148nm,1.1s
AGG Agios Georgios 84.25 317 P **P** **07 55 21.3 -0.7**
AGG pmax pmax
comp=Z,148nm,1.1s
ICOR Ion Corvin 84.30 324 ⇑P **P** **07 55 23.2 +1.1**
VORR Voronezh 84.41 335 *eP* **P** **07 55 22.5 0.0**
VORR pmax pmax
comp=Z,75nm,0.4s
TLBR Topalu 84.45 324 ⇓P **P** **07 55 23.7 +0.9**
TPGR Topolog 84.46 325 ⇑P **P** **07 55 23.0 +0.1**
RZN Rozhen 84.46 320 *i* P **P** **07 55 23.7 +0.5**
TEY Ternei 84.58 35⇑ *eP* **P** **07 55 22.8 -0.7**
TEY *e* 08 05 51.0
TEY pmax pmax
comp=N,100nm,2.3s
TEY pmax pmax
comp=E,100nm,2.3s
TEY pmax pmax
comp=Z,300nm,2.3s
TEY pmax pmax
comp=E,10.0nm,2.0s
TEY pmax pmax
comp=N,10.0nm,1.6s
TEY pmax pmax
comp=Z,40nm,1.6s
TEY pmax pmax
comp=E,100nm,6.8s
TEY pmax pmax
comp=N,100nm,7.9s
TEY pmax pmax
comp=Z,100nm,7.1s
HARR Harsova 84.61 324 ⇑P **P** **07 55 24.6 +1.0**
HARR Harsova 84.61 324 P **P** **07 55 24.6 +1.0**
RAZG Razgrad 84.64 323 ⇑P **P** **07 55 24.4 +0.5**
SZH Strazhica 84.77 322 *i* P **P** **07 55 24.5 0.0**
CFR Carcaliu 84.82 325 ⇑P **P** **07 55 25.2 +0.5**
CFR Carcaliu 84.82 325 P **P** **07 55 25.1 +0.5**
JSH Shimam 84.91 39 P **P** **07 55 25.6 +0.4**
MMB Musomiste 84.98 320 *i* P **P** **07 55 25.4 -0.3**
KLR Kul'dur 85.10 30 LR LR 08 32 54.2
comp=Z,1µm,20.8s,baz=203,slow=35
SCTR Scanteiesti 85.22 325 ⇑P **P** **07 55 28.0 +1.2**
LPSR Galich'ya Gora 85.24 335 *eP* **P** **07 55 25.8 -0.8**
LPSR *e* 07 55 26.5
LPSR *e**SP **sP** **07 55 33.1 +0.2**
LPSR *eS* **S** **08 05 53.3 -2.5**
LPSR pmax pmax
comp=Z,240nm,1.4s
LPSR pmax pmax
comp=Z,570nm,2.0s
LPSR smax smax
comp=N,110nm,6.3s
LPSR MLR MLR
comp=Z,740nm,18.0s
PGB Panagyurishte 85.32 321 *i* P **P** **07 55 27.1 -0.3**
ORCD Orcadas 85.36 203 P **P** **07 55 27.1 -0.2**
ORCD IAmb IAmb 07 55 28.6
comp=Z,251nm,1.6s
VAY Valandovo 85.50 319 *i* P **P** **07 55 27.8 -0.5**
SULR 85.50 323 ⇑P **P** **07 55 29.0 +0.9**
KKB Krupnik 85.53 320 *i* P **P** **07 55 28.2 -0.2**
GRER 85.57 324 ⇑P **P** **07 55 28.9 +0.5**
ISR Istrita 85.63 324 ⇑P **P** **07 55 30.2 +1.3**
ISR Istrita 85.63 324 P **P** **07 55 30.1 +1.3**
MILM Milestii Mici 85.64 326⇑ *iP* **P** **07 55 28.0 -0.7**
comp=Z,460nm,1.4s
MILM *eS* **S** **08 05 58.0 -1.9**
MILM *eL* L 08 24 04.0
MILM LRM MLR 08 40 12.0
comp=Z,600nm,19.5s
MILM Milestii Mici 85.64 326 ⇑P **P** **07 55 29.5 +0.8**
MILM Milestii Mici 85.64 326*c i*P **P** **07 55 28.0 -0.7**
MILM *e* 07 55 35.0
MILM *eS* **S** **08 05 58.0 -1.9**
MILM pmax pmax
comp=Z,460nm,1.4s
MILM pmax pmax
comp=E,260nm,2.2s
KIS Kishinev 85.69 326⇑ *iP* **P** **07 55 29.0 0.0**
comp=E,330nm,2.4s
KIS *eS* **S** **08 06 00.0 -0.4**
KIS *eL* L 08 29 24.0
KIS LRM MLR 08 41 32.0
comp=E,300nm,20.0s
KIS Kishinev 85.69 326*c i*P **P** **07 55 29.0 0.0**
KIS *i* 07 55 36.0
KIS *eS* **S** **08 06 00.0 -0.4**
KIS pmax pmax
comp=Z,330nm,2.4s
BOD Bodaibo 85.70 16 *eP* **P** **07 55 28.1 -0.7**
BOD pmax pmax
comp=Z,165nm,1.9s
ODBI Odobesti 85.78 325 ⇑P **P** **07 55 30.8 +1.4**
PANC Panciu 85.80 325 ⇑P **P** **07 55 30.3 +0.7**
SECR 85.83 324 ⇓P **P** **07 55 29.7 -0.2**
VTS Vitosha 85.90 320 *i* P **P** **07 55 30.6 +0.2**
NEHR Nehoiu 85.96 324 ⇑P **P** **07 55 31.4 +0.9**
VRI Vrincioaia 86.02 325 P **P** **07 55 31.3 +0.6**
PLOR Plostina 86.05 325 ⇑P **P** **07 55 31.1 +0.1**
PLOR Plostina 86.05 325 P **P** **07 55 31.0 +0.1**
KBN Korca 86.16 318 P **P** **07 55 31.9 +0.2**
KBN IAmb IAmb 07 55 34.2
comp=Z,197nm,1.0s
KBN Korca 86.16 318 P **P** **07 55 31.9 +0.2**
KBN pmax pmax
comp=Z,197nm,1.0s
MLR Muntele Rosu 86.19 324 ⇑P **P** **07 55 32.2 +0.4**
MLR Muntele Rosu 86.19 324 P **P** **07 55 32.3 +0.5**
comp=Z,168nm,1.1s,baz=98,slow=1.3,SNR=147
MLR Muntele Rosu 86.19 324 P **P** **07 55 32.0 +0.2**
KEK Kerkira 86.25 317 P **P** **07 55 32.7 +0.7**
KEK IAmb IAmb 07 55 34.6
comp=Z,195nm,1.1s
COVR Voineasa-Covas 86.28 324 ⇑P **P** **07 55 32.1 +0.1**
ERM Erimo 86.34 41 P **P** **07 55 33.0 +0.7**
ERM IAmb IAmb 07 55 36.5
comp=Z,270nm,1.6s
ERM Erimo 86.34 41 *i* P **P** **07 55 28.8 -3.5**
ERM pmax pmax
comp=Z,181nm,1.6s
ERM MLR MLR
comp=Z,581nm,21.0s
ERM Erimo 86.34 41 P **P** **07 55 33.4 +1.1**
OHR Ohrid 86.44 318 *i* P **P** **07 55 30.8 -2.2**
TESR Tescani 86.48 325 ⇑P **P** **07 55 33.3 +0.3**
MTUR Matau 86.50 323 ⇑P **P** **07 55 33.0 -0.2**
ZEA Zeya 86.56 25 *eP* **P** **07 55 32.1 -1.1**
ZEA *e* 07 58 57.0
ZEA *e*PPP PPP 08 00 57.4
ZEA *e* 08 05 57.4
ZEA *eS* **S** **08 06 09.9 +1.2**
ZEA *eSS* **SS** **08 11 57.4 +7.1**
ZEA pmax pmax
comp=Z,20nm,0.6s
ZEA smax smax
comp=E,200nm,15.5s
ZEA MLR MLR
comp=E,300nm,15.0s
SORM Soroca 86.69 327 ⇑P **P** **07 55 33.6 -0.3**
SORM Soroca 86.69 327 P **P** **07 55 33.6 -0.3**
KIRV Kirov 86.78 343 P **P** **07 55 33.9 -0.2**
comp=E,44nm,0.7s,baz=143,slow=4.1,SNR=36
KIRV LR LR 08 33 11.9
comp=E,1µm,21.6s,baz=140,slow=35
comp=E,44nm,0.7s
KIRV Kirov 86.78 343*c i*P **P** **07 55 33.6 -0.5**
DOPR Dopca 86.80 324 ⇑P **P** **07 55 34.5 0.0**
ARR Arges 86.83 323 ⇓P **P** **07 55 35.0 +0.2**
BLKB Belogradchik 86.84 321 ⇑P **P** **07 55 34.8 -0.1**
PUNG Punghina 87.09 322 ⇑P **P** **07 55 37.1 +1.1**
TOA0 Torodi Ar. Sit 87.10 286 P **P** **07 55 36.5 -0.1**
TOA0 IAmb IAmb 07 55 38.3
comp=Z,148nm,1.4s
TOA0 Torodi Ar. Sit 87.10 286 P **P** **07 55 36.6 -0.1**
SNR=18
TORD Torodi Ar. Bea 87.10 286 P **P** **07 55 36.7 0.0**
comp=Z,64nm,1.2s,baz=112,slow=3.5,SNR=94
comp=Z,64nm,1.2s
TORD Torodi Ar. Bea 87.10 286 P **P** **07 55 36.3 -0.4**
TORD IAmb IAmb 07 55 38.3
comp=Z,143nm,1.4s
TIR Tirane 87.15 318 ⇑P **P** **07 55 37.2 +0.8**
TIR Tirane 87.15 318 P **P** **07 55 36.4 0.0**
TIR Tirane 87.15 318 P **P** **07 55 36.4 0.0**
TIR pmax pmax
comp=Z,221nm,0.9s
SCTE Santa Cesarea 87.29 316 P **P** **07 55 36.9 -0.1**
BOVS Bovan 87.41 321 ⇑P **P** **07 55 38.0 +0.4**
DJES Djerdap 87.57 322 ⇑P **P** **07 55 38.9 +0.7**
HERR Herculane 87.76 322 ⇑P **P** **07 55 39.5 +0.3**
PMSA Palmer Station 87.76 194 LR LR 08 33 32.6
comp=Z,1µm,19.8s,baz=158,slow=35
PMSA Palmer Station 87.76 194 IAMs_20 IAMs_20 08 33 11.5
comp=Z,1µm,19.0s
MSVF Nonsavu 87.79 108 LR LR 08 31 28.3
comp=Z,523nm,21.4s,baz=246,slow=33
MSVF Nonsavu 87.79 108 *i* P **P** **07 55 39.8 -0.4**
MSVF Nonsavu 87.79 108 *i* P **P** **07 55 37.5 -2.7**
MSVF pmax pmax
comp=Z,127nm,3.3s
PVY Plav 87.82 319⇑ *i*P **P** **07 55 39.9 +0.2**
GZR Gura Zlata 87.87 322 ⇑P **P** **07 55 40.1 +0.3**
TIP Timpagrande 87.88 315 ⇑P **P** **07 55 40.8 +0.8**
TIP Timpagrande 87.88 315 P **P** **07 55 40.7 +0.6**
TIP IAmb IAmb 07 55 42.3
comp=Z,188nm,1.5s
BURAR Bucovina Array 87.94 325 ⇑P **P** **07 55 40.8 +0.7**
BURAR Bucovina Array 87.94 325 P **P** **07 55 40.3 +0.2**
BURAR Bucovina Array 87.94 325 P **P** **07 55 40.3 +0.2**
BURAR pmax pmax
comp=Z,31nm,1.2s
BUR08 Bucovina Ar. S 87.97 325 P **P** **07 55 39.6 -0.6**
BUR08 IAmb IAmb 07 55 42.8
comp=Z,159nm,1.7s
AKASG Malin Array Be 88.00 329 P **P** **07 55 40.0 -0.2**
comp=Z,112nm,1.1s,baz=120,slow=4.2,SNR=186
comp=Z,112nm,1.1s
AKASG Malin Array Be 88.00 329 P **P** **07 55 39.9 -0.2**
AKASG Malin Array Be 88.00 329*ceP* **P** **07 55 40.0 -0.2**
AKASG pmax pmax
comp=Z,299nm,1.3s
AKBB Malin Array Si 88.00 329 P **P** **07 55 40.1 0.0**
AKBB Malin Array Si 88.00 329*c i*P **P** **07 55 40.0 -0.2**
IVA Berane 88.02 319⇑ *i*P **P** **07 55 40.9 +0.3**
DRME Dracevica, Mon 88.05 318⇑ *i*P **P** **07 55 41.2 +0.5**
DRME Dracevica, Mon 88.05 318⇑ *i*P **P** **07 55 41.2 +0.5**
TAM Tamanrasset 88.06 296 P **P** **07 55 37.9 -3.4**
TAM Tamanrasset 88.06 296 P **P** **07 55 37.9 -3.4**
TAM pmax pmax
comp=Z,62nm,1.3s
TAM MLR MLR
comp=Z,400nm,19.0s
ARCR ARCALIA 88.06 324 ⇑P **P** **07 55 41.5 +0.9**
OBN Obninsk 88.07 336 P **P** **07 55 40.7 +0.4**
comp=Z,8.3nm,0.5s,baz=116,slow=4.0,SNR=32
OBN LR LR 08 34 52.6
comp=Z,174nm,21.6s,baz=129,slow=36
comp=Z,8.3nm,0.5s
OBN Obninsk 88.07 336 P **P** **07 55 40.7 +0.4**
OBN IAMs_20 IAMs_20 08 35 54.5
comp=Z,2µm,21.0s
OBN Obninsk 88.07 336*c i*P **P** **07 55 39.9 -0.5**
OBN *e* 07 59 05.2
OBN *e*PPP PPP 08 01 05.9
OBN *eS* **SKSac** **08 06 08.0 +0.4**
OBN *eSS* **SS** **08 12 12.7 +0.5**
OBN pmax pmax
comp=Z,261nm,1.6s
OBN MLR MLR
comp=Z,2µm,24.0s
MDVR Moldovita 88.09 322 ⇑P **P** **07 55 41.5 +0.6**
DEV Deva 88.10 323 ⇑P **P** **07 55 41.8 +1.0**
DEV Deva 88.10 323 P **P** **07 55 41.8 +1.0**
PDG Podgorica 88.15 319 ⇑P **P** **07 55 41.3 +0.2**
PDG Podgorica 88.15 319 P **P** **07 55 41.2 +0.1**
PDG Podgorica 88.15 319⇑ *i*P **P** **07 55 41.4 +0.3**
TTG Podgorica 88.15 319⇑ *i*P **P** **07 55 41.4 +0.3**
MOS Moscow 88.15 336 *eP* **P** **07 55 39.8 -1.0**
MOS *e* 07 59 08.7
MOS *e* 08 06 23.8
MOS pmax pmax
comp=Z,500nm,1.8s
MOS pmax pmax
comp=Z,256nm,1.7s
SJES Sjenica 88.20 320⇑ *i*P **P** **07 55 42.2 +0.7**
CJR Cluj-Napoca 88.23 324 ⇑P **P** **07 55 41.5 0.0**
CJR Cluj-Napoca 88.23 324 P **P** **07 55 41.4 0.0**

KOME Kolasin 88.24 319 ⇑ *i*P **P** **07 55 42.0 +0.4**
BUM Brajici-Budva 88.30 318 ⇑ *i*P **P** **07 55 41.8 -0.1**
RAFF Raffo Rosso 88.42 312 P **P** **07 55 43.2 +0.7**
CEME Cevo 88.42 319 ⇑ *i*P **P** **07 55 42.9 +0.4**
VAE Valguarnera 88.52 312 P **P** **07 55 44.0 +0.9**
comp=Z,7.7nm,0.5s,baz=96,slow=3.4,SNR=9.5
comp=Z,7.7nm,0.5s
NKME Niksic 88.53 319 ⇑ *i*P **P** **07 55 43.3 +0.3**
NKY Niksic 88.53 319 ⇑ *i*P **P** **07 55 43.4 +0.4**
PLE Pljevlja 88.59 319 ⇑ *i*P **P** **07 55 43.5 +0.2**
HCY Herceg Novi 88.62 318 *e*P **P** **07 55 43.7 +0.3**
HCY Herceg Novi 88.62 318 ⇑ *i*P **P** **07 55 44.0 +0.6**
BZS Buzias 88.65 322 ⇑ P **P** **07 55 44.0 +0.6**
BZS Buzias 88.65 322 P **P** **07 55 44.0 +0.6**
DIVS Divibare 88.68 320 P **P** **07 55 43.6 -0.1**
DIVS IAmb IAmb 07 55 45.8
comp=Z,212nm,1.4s
MATE Matera 88.73 316 ⇓ P **P** **07 55 43.9 0.0**
DRGR 88.76 324 ⇑ P **P** **07 55 44.4 +0.3**
DRGR 88.76 324 P **P** **07 55 44.3 +0.3**
RUDO Rudo 88.77 320 ⇑ *i*P **P** **07 55 44.2 +0.2**
UPM Unac-Piva 88.81 319 *e*P **P** **07 55 43.9 -0.5**
UPM Unac-Piva 88.81 319 ⇑ *i*P **P** **07 55 44.2 -0.2**
BRY Bratogost 88.85 319 *e*P **P** **07 55 43.4 -1.2**
BRY Bratogost 88.85 319 ⇑ *i*P **P** **07 55 44.9 +0.3**
TREB Trebinje 88.86 318 *e*P **P** **07 55 45.2 +0.7**
BBLS Lazići 88.89 320 ⇑ *i*P **P** **07 55 45.3 +0.6**
CUC Castrocucco 88.94 315 P **P** **07 55 44.6 -0.4**
SIRR Siria 89.02 323 ⇑ P **P** **07 55 45.7 +0.6**
YSS Yuzh-Sakhalins 89.10 36 P **P** **07 55 44.7 -0.7**
YSS IAmb IAmb 07 55 46.0
comp=Z,176nm,1.4s
YSS Yuzh-Sakhalins 89.10 36 *αe*P **P** **07 55 44.4 -1.0**
YSS *e**SP **pP** **07 55 49.0 -1.1**
YSS *e* 08 06 12.9
YSS *e*S **S** **08 06 26.6 -6.6**
YSS *e*PS **PnS** **08 07 35.5 -3.9**
YSS *e*PPS PPS 08 08 09.7
YSS pmax pmax
comp=Z,500nm,2.2s
YSS pmax pmax
comp=N,100nm,2.1s
YSS pmax pmax
comp=E,100nm,2.0s
YSS pmax pmax
comp=Z,80nm,1.6s
YSS pmax pmax
comp=Z,200nm,12.0s
YSS pmax pmax
comp=E,100nm,12.0s
YSS smax smax
comp=N,100nm,3.8s
YSS smax smax
comp=E,300nm,8.7s
YSS MLR MLR
comp=Z,400nm,16.0s
YSS Yuzh-Sakhalins 89.10 36 P **P** **07 55 44.9 -0.5**
TEKS Tekeris 89.21 320 *e*P **P** **07 55 44.3 -1.8**
STON Ston 89.34 318 ⇑ *i*P **P** **07 55 45.5 -1.2**
CLTB Caltabellotta 89.38 312 P **P** **07 55 47.9 +0.7**
CLTB IAmb IAmb 07 55 49.5
comp=Z,124nm,1.2s
FRGS Fruska Gora 89.41 321 ⇑ P **P** **07 55 48.2 +1.3**
SGRT San Giovanni R 89.94 317 P **P** **07 55 49.6 0.0**
SGRT IAmb IAmb 07 55 51.4
comp=Z,140nm,1.3s
LVV L'vov 89.94 326 *e*P **P** **07 55 49.7 +0.3**
LVV *e* 07 59 30.4
LVV *e*S **S** **08 06 41.5 +0.5**
UGL Uglegorsk 90.03 35 *e*P **P** **07 55 49.5 -0.3**
UGL *e*S **S** **08 06 36.4 -5.4**
UGL pmax pmax
comp=Z,700nm,2.0s
UGL pmax pmax
comp=Z,110nm,1.3s
UGL smax smax
comp=E,800nm,6.9s
KIC Kosan Boka 90.06 277 ⇑ *e*P **P** **07 55 50.4 -0.4**
comp=E,42nm,0.9s
UZH Uzhgorod 90.11 325 ⇑ *i*P **P** **07 55 49.0 -1.1**
UZH *i* 07 55 51.4
UZH *i* 07 55 55.8
UZH *i* 07 59 19.2
UZH *i*S **S** **08 06 39.4 -3.1**
LIC Lamto 90.26 277 ⇑ *i*P **P** **07 55 52.5 +0.8**
comp=E,180nm,1.1s
DBIC Dimbokro 90.29 277 P **P** **07 55 53.1 +1.3**
comp=E,61nm,1.3s,baz=128,slow=5.6,SNR=10
DBIC LR LR 08 34 59.3
comp=E,322nm,18.1s,baz=118,slow=35
comp=E,61nm,1.3s
DBIC Dimbokro 90.29 277 P **P** **07 55 50.9 -1.0**
DBIC IAmb IAmb 07 55 54.0
comp=Z,131nm,1.4s
DBIC Dimbokro 90.29 277 *e*P **P** **07 55 52.6 +0.7**
PAOL Paolisi 90.30 315 P **P** **07 55 51.5 +0.1**
PAOL IAmb IAmb 07 55 52.6
comp=Z,140nm,1.8s
KOLS Kolonicke sedl 90.30 325 *e*P **P** **07 55 51.8 +0.7**
KOLS pmax pmax
comp=Z,39nm,1.1s
KOLS Kolonicke sedl 90.30 325 *e*P **P** **07 55 51.8 +0.7**
PRGR Permogore 90.39 343 *e*P **P** **07 55 48.7 -2.4**
TIC Toumodi 90.43 277 ⇑ *i*P **P** **07 55 53.2 +0.7**
comp=Z,16nm,0.4s
KWP Kalwaria Pacla 90.50 326 *e*P **P** **07 55 52.7 +0.7**
KWP *e*L L 08 42 21.2
comp=Z,775nm,20.2s
KWP Kalwaria Pacla 90.50 326 P **P** **07 55 52.8 +0.8**
KWP Kalwaria Pacla 90.50 326 P **P** **07 55 52.8 +0.8**
KWP pmax pmax
comp=Z,2μm,1.1s
MGRS Mrkonjic Grad 90.58 319 ⇑ *i*P **P** **07 55 53.5 +1.0**
BLY Banja Luka 90.70 320 ⇑ *i*P **P** **07 55 53.4 +0.4**
CRVS Cervenica-Dubn 90.71 325 *e*P **P** **07 55 53.5 +0.5**
CRVS pmax pmax
comp=Z,139nm,1.4s
CRVS Cervenica-Dubn 90.71 325 *e*P **P** **07 55 53.5 +0.5**
KOVH Kovagotottos 90.92 321 P **P** **07 55 54.0 0.0**
PSZ Piszkesteto 90.97 323 IAMs_20 IAMs_20 08 36 24.0
comp=Z,867nm,19.0s
PSZ Piszkesteto 90.97 323 P **P** **07 55 54.9 +0.6**
PSZ Piszkesteto 90.97 323 P **P** **07 55 52.8 -1.5**
KEST Kesra 91.15 309 P **P** **07 55 56.2 +0.8**
comp=Z,135nm,1.2s,baz=99,slow=1.6,SNR=79
comp=Z,135nm,1.2s
KEST Kesra 91.15 309 P **P** **07 55 56.0 +0.6**
KEST Kesra 91.15 309 P **P** **07 55 56.9 +1.4**
SNR=65
MNK Minsk 91.17 332 *i* P **P** **07 55 54.7 -0.2**
MNK *i* 07 59 30.1
MNK *i* PPP PPP 08 01 28.9
MNK *i* S **SKSac** **08 06 27.0 +1.1**
MNK *i* PS **PS** **08 08 02.6 -0.3**
MNK *i* SSS SSS 08 16 30.4
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,39nm,0.9s
MNK MLR MLR
comp=Z,1μm,22.0s
MNK MLR MLR
comp=E,137nm,22.0s
MNK Minsk 91.17 332 *i* P **P** **07 55 54.8 -0.2**
comp=E,2.0nm,0.9s
MNK *i* P **P** **07 55 54.8 -0.2**
MNK *i* P **P** **07 55 54.8 -0.2**
comp=Z,39nm,0.9s,baz=132
MNK *i* PP **PP** **07 59 30.1 -2.2**
MNK *i* PPP PPP 08 01 28.9
MNK *i* S **SKSac** **08 06 27.0 +1.1**
MNK *i* PS **PS** **08 08 02.6 -0.3**
MNK *i* SS SS 08 12 15.3 -42
MNK *i* SSS SSS 08 16 30.5
MNK *i* LQ LQ 08 31 27.7
MNK *i* LR LR 08 34 28.1
MNK *i* LRM MLR 08 37 47.9
comp=Z,1μm,22.2s
MNK *i* LRM MLR 08 37 53.7
comp=E,137nm,22.2s
BUD Budapest 91.20 323 P **P** **07 55 55.8 +0.6**
TYV Tymovskoe 91.43 33 *e*P **P** **07 55 56.3 +0.1**
TYV *e*S **S** **08 06 56.1 +1.6**
TYV pmax pmax
comp=Z,600nm,2.7s
TYV pmax pmax
comp=Z,38nm,1.3s
TYV smax smax
comp=N,200nm,6.0s
TYV smax smax
comp=E,900nm,6.0s
KLMR Klimovskoe 91.48 340 *e*P **P** **07 55 53.4 -2.8**
KLMR *e* 07 59 31.8
KLMR *e*S **SKSac** **08 06 25.2 -2.1**
KLMR *e*PS **PS** **08 07 59.9 -6.2**
KLMR *e*SS **SS** **08 12 56.6 -4.9**
KLMR pmax pmax
comp=Z,203nm,1.3s
KLMR Klimovskoe 91.48 340 *e*P **P** **07 55 53.5 -2.8**
KLMR AMP 07 55 57.7
comp=Z,203nm,1.3s
KLMR *e*PP **PP** **07 59 31.8 -2.8**
KLMR *e*S **SKSac** **08 06 25.3 -2.1**
KLMR *e*S **SKSac** **08 06 25.3 -2.1**
KLMR *e*PS **PS** **08 07 59.9 -6.2**
KLMR *e*PS **PS** **08 07 59.9 -6.2**
KLMR *e*SS **SS** **08 12 56.7 -4.8**
KLMR *e*SS **SS** **08 12 56.7 -4.8**
KLMR LQ LQ 08 28 26.5
KLMR LQ LQ 08 28 26.5
KLMR LR LR 08 32 45.5
CSKK Cskako 91.55 322 P **P** **07 55 57.3 +0.4**
NIE Niedzica 91.63 325 *e*P **P** **07 55 58.0 +0.7**
NIE *e*L L 08 44 14.9
comp=Z,694nm,19.1s
SRO2 Moca 91.70 323 *e*P **P** **07 55 57.8 +0.2**
SRO2 pmax pmax
comp=Z,79nm,1.1s
SRO2 Moca 91.70 323 *e*P **P** **07 55 57.8 +0.2**
AQU L'Aquila 91.73 316 IAmb IAmb 07 56 11.8
comp=Z,114nm,1.4s
AQU L'Aquila 91.73 316 P **P** **07 56 02.3 +4.3**
SRO Srobarova 91.78 323 *e*P **P** **07 55 59.5 +1.6**
SRO pmax pmax
comp=Z,113nm,1.3s
SRO Srobarova 91.78 323 *e*P **P** **07 55 59.5 +1.6**
MPLH Magyarpolny 91.85 322 P **P** **07 55 58.9 +0.6**
MPLH Magyarpolny 91.85 322 S **S** **08 06 59.9 +1.4**
VYHS Vyhne 91.88 323 *e*P **P** **07 55 59.1 +0.6**
VYHS pmax pmax
comp=Z,166nm,1.4s
VYHS Vyhne 91.88 323 *e*P **P** **07 55 59.0 +0.6**
BEHE Becsehely 91.90 321 P **P** **07 55 59.3 +0.7**
BEHE Becsehely 91.90 321 S **S** **08 06 57.8 -1.2**
NACGM Naroch 91.91 331 ⇓ *i*P **P** **07 55 59.0 +0.6**
baz=131
LANS Liptovska Anna 91.92 324 *e*P **P** **07 55 59.9 +1.3**
LANS pmax pmax
comp=Z,13nm,1.1s
LANS Liptovska Anna 91.92 324 *e*P **P** **07 55 59.9 +1.3**
EGYH Egyhazaskeszo 92.11 322 P **P** **07 56 00.3 +0.9**
NRCA Norcia 92.17 316 P **P** **07 55 59.7 -0.2**
NRCA IAmb IAmb 07 56 02.0
comp=Z,109nm,1.4s
KOGS Kog 92.19 321 *i* P **P** **07 56 00.0 +0.1**
GCIS Gornji Cirnik 92.24 320 *i* P **P** **07 56 00.6 +0.4**
GROS Grobnik 92.63 320 *i* P **P** **07 56 02.0 0.0**
ZST Bratislava 92.67 322 *e*P **P** **07 56 02.6 +0.6**
ZST pmax pmax
comp=Z,212nm,1.6s
ZST Bratislava 92.67 322 *e*P **P** **07 56 02.6 +0.6**
MODS Modra-Piesok 92.67 323 *e*P **P** **07 56 01.5 -0.6**
MODS Modra-Piesok 92.67 323 *e*P **P** **07 56 01.5 -0.6**
JAVC Velka Javorina 92.72 323 *e*P **P** **07 56 03.2 +0.8**
RONA Rosalia, Austr 92.85 322 *e*P **P** **07 56 03.0 +0.1**
comp=Z,87nm,1.2s,SNR=24
SOKA Soboth 93.02 320 *e*P **P** **07 56 03.8 -0.1**
comp=Z,46nm,1.3s,SNR=16
ARSA Arzberg 93.04 321 *e*P **P** **07 56 04.3 +0.5**
comp=Z,90nm,1.2s,SNR=29
NRIK Noril'sk 93.18 2 P **P** **07 56 02.6 -1.3**
comp=Z,53nm,1.1s,baz=172,slow=3.9,SNR=54
NRIK PP **PP** **07 59 49.4 +1.6**
comp=Z,15nm,1.1s,baz=192,slow=7.5,SNR=5.4
NRIK LR LR 08 40 28.4
comp=Z,2μm,18.4s,baz=189,slow=37
comp=Z,53nm,1.1s
NRIK Noril'sk 93.18 2 P **P** **07 56 02.7 -1.2**
NRIK IAmb IAmb 07 56 04.7
comp=Z,122nm,1.2s
NRIK Noril'sk 93.18 2*c* *i*P **P** **07 56 02.6 -1.3**
NRIK pmax pmax
comp=Z,80nm,1.1s
NRIK MLR MLR
comp=Z,2μm,18.0s
OBKA Obir 93.21 320 *e*P **P** **07 56 04.8 +0.1**
comp=Z,35nm,1.4s
CONA Conrad Observa 93.22 322 *e*P **P** **07 56 04.5 -0.3**
comp=Z,39nm,1.3s,SNR=17
MORC Moravsky Berou 93.31 324 P **P** **07 56 04.9 -0.1**
MORC Moravsky Berou 93.31 324 P **P** **07 56 04.9 -0.1**
MORC pmax pmax
comp=Z,41nm,1.4s
MORC Moravsky Berou 93.31 324 *e*P **P** **07 56 04.9 -0.1**
KRUC Moravsky 93.53 323 *e*P **P** **07 56 05.9 -0.1**
PABE Paberze 93.54 331 P **P** **07 56 05.8 0.0**
PABE IAmb IAmb 07 56 06.9
comp=Z,112nm,1.6s
VRAC Vranov 93.56 323 P **P** **07 56 05.4 -0.7**
comp=Z,1.7nm,0.3s,baz=117,slow=4.3,SNR=16
VRAC LR LR 08 38 08.2
comp=Z,559nm,19.0s,baz=112,slow=36
comp=Z,1.7nm,0.3s
VRAC Vranov 93.56 323 *e*P **P** **07 56 06.1 -0.1**
CASP Castiglione de 93.57 316 P **P** **07 56 06.3 0.0**
CASP IAmb IAmb 07 56 07.6
comp=Z,111nm,1.4s
YAK Yakutsk 93.68 20 P **P** **07 56 05.7 -0.6**
comp=Z,14nm,0.4s,baz=214,slow=1.1,SNR=5.7
YAK LR LR 08 39 39.4
comp=Z,1μm,20.6s,baz=266,slow=36
comp=Z,14nm,0.4s
YAK Yakutsk 93.68 20 IAMs_20 IAMs_20 08 39 07.2
comp=Z,1μm,22.0s
YAK Yakutsk 93.68 20 *e*P **P** **07 56 05.5 -0.9**
YAK *e* 07 59 51.2
YAK *e*PPP PPP 08 01 52.9
YAK *e*S **SKSac** **08 06 34.2 -5.4**
YAK *e* 08 07 14.5
YAK *e*SS **SS** **08 13 27.6 -5.4**
YAK *e*SSS SSS 08 17 10.6
YAK pmax pmax
comp=Z,49nm,1.1s
YAK pmax pmax
comp=N,13nm,1.2s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,100nm,2.2s
YAK pmax pmax
comp=N,49nm,2.2s
YAK pmax pmax
comp=E,56nm,2.2s
YAK smax smax
comp=N,68nm,2.0s
YAK smax smax
comp=E,41nm,1.5s
MYKA Terra Mystica 93.81 320 *e*P **P** **07 56 07.4 0.0**
comp=E,43nm,1.4s,SNR=9.8
KRLC Kraliky 93.88 324 *e*P **P** **07 56 08.1 +0.4**
KRLC *e* 07 56 15.9
KRLC MLR MLR
comp=Z,600nm,22.5s
KRLC Kraliky 93.88 324 *e*P **P** **07 56 08.1 +0.4**
KRLC *ex* x 07 56 15.9
KRLC AMS AMS 08 35 40.0
comp=Z,600nm,22.5s
MOA Molln 94.08 321 *e*P **P** **07 56 08.2 -0.5**
comp=Z,30nm,1.2s,SNR=12
TREC Trest 94.16 323 AMS AMS 08 38 00.0
comp=Z,700nm,17.7s
KBA Koelnbreinsper 94.22 320 *e*P **P** **07 56 09.0 -0.5**
comp=Z,14nm,1.0s
ZCCA Zocca 94.27 317 P **P** **07 56 11.0 +1.4**
ZCCA IAmb IAmb 07 56 13.5
comp=Z,52nm,1.0s
DPC Dobruska-Polom 94.28 324 *e*P P 07 56 03.6 -5.9
DPC *e* 07 56 10.7
DPC *e* 08 06 42.9
DPC MLR MLR
comp=Z,600nm,19.6s
DPC Dobruska-Polom 94.28 324 *e*P **P** **07 56 10.7 +1.2**
DPC *e*SKS **SKSac** **08 06 42.9 -0.6**
DPC AMS AMS 08 36 10.0
comp=Z,600nm,19.6s
TEOL Teolo 94.34 318 P **P** **07 56 10.4 +0.5**
TEOL IAmb IAmb 07 56 11.4
comp=Z,67nm,1.3s
CIMO Cimolais 94.36 319 P **P** **07 56 10.5 +0.5**
CIMO IAmb IAmb 07 56 11.2
comp=Z,43nm,1.5s
BIOA Bad Ischl, Aus 94.36 321 *e*P **P** **07 56 09.3 -0.6**
comp=Z,27nm,1.2s,SNR=8.2
OSTC Ostas 94.45 324 *e*P **P** **07 56 11.5 +1.3**
OSTC AMS AMS 08 36 40.0
comp=Z,800nm,23.1s
UPC Upice 94.53 324 AMS AMS 08 36 30.0
comp=Z,800nm,23.5s
ABTA Abfaltersbach 94.54 320 *e*P **P** **07 56 10.7 -0.1**
comp=Z,42nm,1.2s,SNR=14
KSP Ksiaz 94.56 324 *i* P **P** **07 56 11.6 +0.9**
KSP *e*L L 08 39 11.8
comp=Z,909nm,21.1s
CKRC Cesky Krumlov 94.57 322 *e*P **P** **07 56 10.9 +0.1**
CKRC *e*SKS **SKSac** **08 06 39.7 -5.4**
PGF Pioggiola 94.66 315 *e*P **P** **07 56 12.0 +0.5**
PGF pmax pmax
comp=Z,65nm,1.4s
GERES GERESS Array B 94.92 322 P **P** **07 56 12.2 -0.3**
comp=Z,3.3nm,0.9s,baz=106,slow=7.2,SNR=22
GERES LR LR 08 38 17.9
comp=Z,388nm,19.7s,baz=102,slow=35
comp=Z,3.3nm,0.9s
PRU Pruhonice 95.05 323 *e*P **P** **07 56 13.8 +0.8**
PRU *e* 08 06 42.9
PRU MLR MLR
comp=Z,600nm,19.3s
PRU Pruhonice 95.05 323 *e*P **P** **07 56 13.8 +0.8**
PRU *e*SKS **SKSac** **08 06 42.9 -4.7**
PRU AMS AMS 08 38 50.0
comp=Z,600nm,19.3s
KHC Kasperske Hory 95.14 322 P **P** **07 56 13.1 -0.4**
KHC Kasperske Hory 95.14 322 *e*P **P** **07 56 12.5 -1.0**
KHC *e* 08 06 41.3
KHC MLR MLR
comp=Z,600nm,24.6s
KHC Kasperske Hory 95.14 322 *e*P **P** **07 56 12.5 -1.0**
KHC *ex* x 07 56 33.2
KHC *e*SKS **SKSac** **08 06 41.3 -6.9**
KHC AMS AMS 08 39 50.0
comp=Z,600nm,24.6s
MSSA Maissana 95.17 316 P **P** **07 56 12.8 -0.9**
WTTA Wattenberg 95.31 320 *e*P **P** **07 56 13.8 -0.7**
comp=Z,45nm,1.2s,SNR=14
PVCC Panska Ves 95.32 324 AMS AMS 08 38 40.0
comp=Z,600nm,17.3s
WATA Walderalm 95.39 320 *e*P **P** **07 56 14.2 -0.6**
comp=Z,49nm,1.3s,SNR=10
SQTA Sankt Quirin 95.55 320 *e*P **P** **07 56 15.1 -0.3**
comp=Z,57nm,1.6s,SNR=12
MOTA Moosalm 95.67 320 *e*P **P** **07 56 15.3 -0.8**
comp=Z,26nm,1.1s,SNR=8.5
FETA Feichten 95.73 319 *e*P **P** **07 56 16.4 0.0**
comp=Z,35nm,1.3s,SNR=16
BRG Berggiesshubel 95.84 324 *e*P **P** **07 56 17.6 +1.0**
BRG Amp 07 56 19.3
comp=Z,48nm,1.8s
BRG *ex* x 07 56 24.2
BRG Amp 07 56 26.0
comp=Z,22nm,1.6s
BRG Berggiesshubel 95.84 324 Amp 08 00 16.6
comp=Z,18nm,1.7s
BRG *e*PKP **PP** **08 00 11.1 +2.1**
BRG Amp 08 39 19.0
comp=E,0.4nm,18.8s
BRG Amp 08 39 23.0
comp=N,0.4nm,20.2s
BRG Amp 08 39 26.0
comp=Z,0.7nm,19.7s
BRG Berggiesshubel 95.84 324 *e*P **P** **07 56 17.5 +1.0**
BRG *e* 07 56 24.1
BRG pmax pmax
comp=Z,48nm,1.8s
BRG pmax pmax
comp=Z,22nm,1.6s
RETA Reutte 95.94 320 *e*P **P** **07 56 16.9 -0.3**
comp=Z,52nm,1.5s,SNR=14
DAVOX Davos/Dischmat 96.13 319 P **P** **07 56 17.9 -0.3**
comp=Z,14nm,1.0s,baz=172,slow=5.7,SNR=18
DAVOX LR LR 08 38 05.4
comp=Z,314nm,21.8s,baz=87,slow=34
comp=Z,14nm,1.0s
NKC Novy Kostel 96.33 323 AMS AMS 08 39 30.0
comp=Z,600nm,18.8s
DAVA Damuels 96.37 319 *e*P **P** **07 56 19.1 -0.2**
comp=Z,45nm,1.3s,SNR=17
FINES FINESS Array B 96.45 336 P **P** **07 56 18.5 -0.6**
comp=Z,13nm,1.1s,baz=152,slow=8.6,SNR=10
FINES LR LR 08 40 13.4
comp=Z,928nm,21.9s,baz=113,slow=36
comp=Z,13nm,1.1s
FINES FINESS Array B 96.45 336 *i* P **P** **07 56 18.5 -0.6**
FINES pmax pmax
comp=Z,14nm,1.1s
CLL Collm 96.57 324 IAMs_20 IAMs_20 08 40 00.3
comp=Z,868nm,22.0s
CLL Collm 96.57 324 *i* P **P** **07 56 20.4 +0.5**
CLL *e* 07 56 26.0
CLL *e*S **ScS** **08 07 41.0 +0.8**
CLL pmax pmax
comp=Z,36nm,1.4s
CLL Collm 96.57 324 *i* P **P** **07 56 20.4 +0.5**
comp=Z,36nm,1.4s
CLL *es*P **sP** **07 56 26.0 -0.2**
CLL *e*PP **PP** **08 00 14.0 -0.6**
CLL *e*(sPP) 08 00 23.0
CLL *ex* x 08 00 30.0
CLL *e*SKSac **SKSac** **08 06 54.0 -1.5**
CLL *e*S **ScS** **08 07 41.0 +0.8**
CLL *e*PS **PS** **08 09 01.0 -1.7**
CLL *e*PPS PPS 08 09 47.0
CLL *ex* x 08 13 48.0
CLL *e*SSS SSS 08 18 00.0
CLL *ex* x 08 22 18.0
MBDF Montbardon 97.10 316 *e*P Pdif 07 56 23.7 +1.0
MBDF pmax pmax
comp=Z,11nm,1.0s
BNI Bardonecchia 97.31 316 P **P** **07 56 23.0 -0.6**
BNI Bardonecchia 97.31 316 P **P** **07 56 23.0 -0.6**
BNI pmax pmax
comp=Z,13nm,1.1s
SENIN Lac Senin/Sane 97.51 318 P **P** **07 56 23.5 -1.1**
SENIN IAmb IAmb 07 56 26.0
comp=Z,58nm,1.6s
BFO Black Forest 97.78 320 P **P** **07 56 25.4 -0.1**
BFO Black Forest 97.78 320 P **P** **07 56 25.4 -0.1**
BFO pmax pmax
comp=Z,28nm,1.3s
RGN Rugen 98.05 327 IAMs_20 IAMs_20 08 42 28.1
comp=Z,849nm,21.0s
LVZ Lovozero 98.21 344 IAMs_20 IAMs_20 08 40 35.2
comp=Z,1μm,20.0s
APA Apatity 98.30 343 ⇑ *i*P P 07 56 21.2 -6.1
APA *i* 08 00 25.0
APA pmax pmax
comp=Z,5.0nm,1.1s
ECH Echery 98.43 319 P **P** **07 56 26.9 -1.5**
ECH Echery 98.43 319 P **P** **07 56 26.9 -1.5**
ECH pmax pmax
comp=Z,19nm,1.3s
ECH MLR MLR
comp=Z,400nm,20.0s
HINF Hinteralfeld 98.43 319 *e*P **P** **07 56 28.1 -0.3**
HINF pmax pmax
comp=Z,19nm,1.4s
SKR Severo-Kuril's 98.53 38 *i* P **P** **07 56 27.5 -1.2**
BHOU Houvegnez 100.05 321 *d*PP **PP** **08 00 39.4 -1.9**
MA2 Magadan 100.16 29 IAMs_20 IAMs_20 08 43 53.8
comp=Z,2μm,20.0s
MA2 Magadan 100.16 29*c* *i*P **Pdif** **07 56 34.5 -1.3**
MA2 pmax pmax
comp=Z,25nm,1.1s
MA2 MLR MLR

comp=Z,2µm,19.0s
MA2 **Magadan** 100.16 29 P Pdif 07 56 35.5 -0.3
RCHB **Rochefort** 100.41 320 *d*PP PP 08 00 41.5 -2.5
BCLA **Clavier** 100.48 321 *d*PP PP 08 00 42.2 -2.3
PETK **Petropavlovsk-** 100.50 36 P Pdif 07 56 35.0 -2.4
comp=Z,5.4nm,1.1s,baz=259,slow=1.5,SNR=6.5
PETK PKKPbc **PKKPbc** 08 12 54.5 +0.1
comp=Z,4.2nm,1.1s,baz=77,slow=6.5,SNR=4.6
TIXI **Tiksi** 100.62 13 P Pdif 07 56 36.7 -0.9
comp=Z,4.9nm,0.7s,baz=91,slow=23,SNR=4.3
TIXI **Tiksi** 100.62 13 IAms_20 IAms_20 08 43 58.2
comp=Z,1µm,20.0s
BMRD **Maredsous** 100.74 320 *d*PP PP 08 00 44.0 -2.6
DOU **Dourbes** 100.76 320 *d*PP PP 08 00 43.9 -2.8
PET **Petropavlovsk** 100.99 37 P Pdif 07 56 39.3 -0.3
ARCES **ARCESS Array B** 101.78 342 P Pdif 07 56 42.5 -0.3
comp=Z,2.8nm,0.8s,baz=101,slow=6.3,SNR=5.8
NOA **NORSAR Array B** 102.19 332 PP PKiKP 08 01 03.9 -3.0
comp=Z,1.1nm,0.8s,baz=122,slow=7.8,SNR=3.4
KONO **Kongsberg** 102.27 330 IAms_20 IAms_20 08 45 22.5
comp=Z,1µm,20.0s
ESDC **Sonseca Array** 102.37 308 P Pdif 07 56 46.6 +0.4
comp=Z,5.5nm,1.2s,baz=92,slow=3.5,SNR=16
ESDC PP **PP** 08 01 03.6 +4.4
comp=Z,5.2nm,1.2s,baz=105,slow=6.3,SNR=7.9
PBAR **Barrancos** 104.11 306 e 08 01 11.5
PVAQ **Vaqueiros** 104.36 305 *e*LR LR 08 32 23.5
comp=Z,247nm,22.0s
PBEJ **Beja** 104.67 305 e 08 01 14.8
PMRV **Marv??o** 104.78 307 *e*LR LR 08 33 11.1
comp=Z,230nm,20.0s
EVO **Evora** 104.94 306 e 08 01 16.0
MVO **Moncorvo** 105.08 309 e 08 01 13.6
MVO **Moncorvo** 105.08 309 *e*LR LR 08 33 36.8
comp=Z,270nm,18.0s
PTEO **Sao Teotonio** 105.16 305 e 08 01 19.6
PNCL **Nicolau / Gran** 105.19 305 e 08 01 17.5
MTE **Manteigas** 105.20 308 *e*LR LR 08 33 35.5
comp=Z,261nm,18.0s
PGAV **Gavieira, Arco** 106.21 309 *e*LR LR 08 33 54.8
comp=Z,235nm,22.0s
BILL **Bilibino** 109.75 23 IAms_20 IAms_20 08 52 19.7
comp=Z,1µm,18.0s
TRQA **Tornquist** 109.81 209 IAms_20 IAms_20 08 38 57.5
comp=Z,863nm,20.0s
PPT2 **Papeete2** 114.47 124 *e*LR LR 08 35 53.0
comp=Z,421nm,23.2s
PPT2 *e*LR LR 08 35 54.0
comp=Z,355nm,26.2s
BDFB **Brasilia** 117.63 236 PKP **PKiKP** 08 01 38.4 +1.0
comp=Z,3.8nm,0.8s,baz=33,slow=3.8,SNR=5.3
GAMB **Gambell** 118.26 29 P **PKPdf** 08 01 36.8 -0.1
baz=273
SPIA **Saint Paul Isl** 119.17 37 P **PKPdf** 08 01 38.5 -0.3
baz=270
CO02 **Combarbal** 119.49 206 **PKPdf** 08 01 39.8 -0.9
TNA **Tin City** 119.72 27 P **PKPdf** 08 01 39.5 -0.1
baz=277
NIKH **Nikolski High** 119.95 41 P **PKPdf** 08 01 39.6 -0.9
baz=269
ANM **Nome** 120.93 28 PKPdf **PKiKP** 08 01 42.3 +0.1
ANM **Nome** 120.93 28 PKIKP **PKiKP** 08 01 42.3 +0.1
ANM **Nome** 120.93 28 P **PKPdf** 08 01 41.6 -0.5
baz=279
RDOG **Red Dog Mine** 121.22 24 IAms_20 IAms_20 09 02 42.9
comp=Z,953nm,22.0s
RDOG **Red Dog Mine** 121.22 24 P **PKPdf** 08 01 42.3 -0.3
baz=284
UNV **Unalaska Valle** 121.36 40 P **PKPdf** 08 01 43.0 -0.2
baz=272
AKUT **Akutan** 121.78 40 PKPdf **PKPdf** 08 01 43.1 -0.8
SUMG **Summit** 121.87 342 PKPdf **PKPdf** 08 01 43.4 -0.8
SUMG IAms_20 IAms_20 08 54 17.5
comp=Z,945nm,22.0s
SUMG **Summit** 121.87 342 PKIKP **PKPdf** 08 01 43.4 -0.8
SUMG MLR MLR
comp=Z,900nm,22.0s
SUMG **Summit** 121.87 342 *i* P **PKPdf** 08 01 43.0 -1.2
A21K **Barrow** 122.32 19 P **PKPdf** 08 01 44.2 -0.3
baz=292
FALS **False Pass** 123.10 39 P **PKPdf** 08 01 45.5 -1.0
baz=275
FALS **False Pass** 123.10 39 P **PKPdf** 08 01 46.6 +0.1
S12K **Black Hills** 123.79 38 P **PKPdf** 08 01 46.6 -1.3
baz=277
GCSA **Galena City Sc** 124.45 27 P **PKPdf** 08 01 48.6 -0.2
baz=288
N16K **Nishlik Lake** 124.72 32 P **PKiKP** 08 01 50.0 +0.2
baz=283,SNR=13
SDPT **Sand Point** 124.73 38 P **PKPdf** 08 01 48.7 -0.9
baz=278
C23K **Itkillik River** 124.77 20 P **PKPdf** 08 01 48.9 -0.4
baz=297,SNR=11
F21K **Alatna River** 124.91 23 P **PKPdf** 08 01 49.4 -0.3
baz=293,SNR=46
S14K **Fog Glacier** 125.11 37 P **PKPdf** 08 01 49.9 -0.5
baz=279
D23K **Nanushuk River** 125.14 21 P **PKiKP** 08 01 50.6 +0.2
baz=297,SNR=20
G21K **Aliakaket** 125.17 24 P **PKPdf** 08 01 49.3 -0.8
baz=292,SNR=20
O16K **Kokwok River B** 125.24 33 P **PKPdf** 08 01 50.5 0.0
baz=283
F22K **John River** 125.26 23 P **PKiKP** 08 01 50.6 -0.1
baz=294
IMAR **Indian Mountai** 125.27 25 PKPdf **PKPdf** 08 01 50.0 -0.4
CHNA **Chernabura Isl** 125.31 39 P **PKPdf** 08 01 49.8 -0.9
baz=278
CNBA **Chernabura Isl** 125.31 39 IAms_20 IAms_20 08 56 31.5
comp=Z,524nm,20.0s
TTA **Tatalina** 125.35 29 P **PKPdf** 08 01 50.5 -0.2
baz=287
C24K **Franklin Bluff** 125.41 19 P **PKPdf** 08 01 50.4 -0.1
baz=299
P16K **Nushagak River** 125.42 34 P **PKPdf** 08 01 50.6 -0.2
baz=283
TULEG **Thule** 125.58 352 IAms_20 IAms_20 08 56 44.6
comp=Z,862nm,22.0s
D24K **Happy Valley** 125.64 20 P **PKiKP** 08 01 51.3 -0.1
baz=299
TOLK **Toolik Lake Re** 125.64 21 PKPdf **PKiKP** 08 01 51.8 +0.3
TOLK **Toolik Lake Re** 125.64 21 P **PKiKP** 08 01 51.4 -0.1
baz=298,SNR=42
O17K **Koliganek Bris** 125.69 33 P **PKPdf** 08 01 51.3 0.0
baz=284,SNR=14
CHGN **Chignik** 125.73 37 P **PKPdf** 08 01 50.6 -0.9
baz=280
G22K **Bettles** 125.74 23 P **PKPdf** 08 01 51.3 0.0
baz=294
PTLB **Pontes e Lacer** 125.74 227 **PKPdf** 08 01 51.9 -0.9
J20K **Nowinta River** 125.75 27 IAms_20 IAms_20 09 03 54.2
comp=Z,985nm,20.0s
J20K **Nowinta River** 125.75 27 P **PKPdf** 08 01 51.4 0.0
baz=290,SNR=57
H21K **Melozitna Rive** 125.75 25 PKPdf **PKPdf** 08 01 50.5 -0.8
H21K IAms_20 IAms_20 09 00 30.7
comp=Z,1µm,20.0s
H21K **Melozitna Rive** 125.75 25 P **PKPdf** 08 01 51.2 -0.2
baz=292,SNR=39
R16K **Pilot Point** 125.94 35 P **PKPdf** 08 01 52.0 +0.2
baz=282
LVC **Limon Verde** 125.95 213 PKPdf **PKPdf** 08 01 53.4 -0.2
LVC **Limon Verde** 125.95 213 PKIKP **PKPdf** 08 01 53.4 -0.2
N18K **Kilae Creek** 126.05 31 IAms_20 IAms_20 09 03 00.2
comp=Z,728nm,20.0s
N18K **Kilae Creek** 126.05 31 P **PKPdf** 08 01 52.1 0.0
baz=286,SNR=16
K20K **Telida** 126.06 28 IAms_20 IAms_20 09 03 33.0
comp=Z,1µm,20.0s
K20K **Telida** 126.06 28 P **PKPdf** 08 01 51.9 -0.1
baz=289,SNR=42
COLD **Coldfoot** 126.07 23 PKPdf **PKPdf** 08 01 51.9 0.0
COLD **Coldfoot** 126.07 23 P **PKPdf** 08 01 52.0 +0.1
baz=296,SNR=30
SVW2 **Sparrevohn** 126.08 31 **PKPdf** 08 01 52.2 +0.1
L19K **White Mountain** 126.09 29 PKPdf **PKPdf** 08 01 51.1 -1.0
L19K IAms_20 IAms_20 09 01 29.2
comp=Z,991nm,20.0s
L19K **White Mountain** 126.09 29 P **PKPdf** 08 01 52.0 -0.1
baz=288,SNR=22
P17K **Kvichak River** 126.16 33 P **PKPdf** 08 01 51.5 -0.7
baz=284
Q16K **King Salmon** 126.17 34 P **PKPdf** 08 01 51.2 -1.0
baz=284
H22K **Ishtalitna Cre** 126.20 24 P **PKPdf** 08 01 52.2 -0.1
baz=294,SNR=43
HPAH **Hawaii Prepara** 126.22 82 **PKPdf** 08 01 53.8 +0.1
I21K **Tanana** 126.25 25 **PKPdf** 08 01 51.9 -0.4
I21K IAms_20 IAms_20 09 00 38.4
comp=Z,1µm,20.0s
I21K **Tanana** 126.25 25 P **PKPdf** 08 01 52.1 -0.2
baz=293,SNR=61
E24K **Your Creek** 126.27 21 P **PKPdf** 08 01 52.0 -0.3
baz=298,SNR=5.9
D25K **Kavik River** 126.31 19 P **PKPdf** 08 01 52.0 -0.4
baz=301,SNR=21
G23K **Bananza Creek** 126.36 23 P **PKPdf** 08 01 52.6 +0.1
baz=296,SNR=33
M19K **Big River Lodg** 126.38 30 IAms_20 IAms_20 09 01 41.0
comp=Z,951nm,19.0s
M19K **Big River Lodg** 126.38 30 P **PKPdf** 08 01 52.6 -0.1
baz=288
L20K **Farewell, AK** 126.43 29 P **PKPdf** 08 01 52.3 -0.5
baz=289,SNR=26
C26K **Camden Bay** 126.43 18 P **PKPdf** 08 01 52.5 0.0
baz=303
R17K **Ugashik Creek** 126.55 35 P **PKPdf** 08 01 52.3 -0.7
baz=283
O18K **Koktuh Hills** 126.60 32 **PKPdf** 08 01 53.1 -0.1
O18K IAms_20 IAms_20 09 01 50.5
comp=Z,868nm,20.0s
O18K **Koktuh Hills** 126.60 32 P **PKPdf** 08 01 52.2 -0.9
baz=286
CHUM **Lake Minchumin** 126.61 27 P **PKPdf** 08 01 51.9 -1.0
baz=292
Q17K **Contact Creek** 126.66 34 P **PKPdf** 08 01 52.1 -1.3
baz=284
N19K **Bonanza Creek** 126.67 31 PKPdf **PKPdf** 08 01 51.9 -1.5
N19K IAms_20 IAms_20 09 00 43.7
comp=Z,567nm,22.0s
N19K **Bonanza Creek** 126.67 31 P **PKPdf** 08 01 52.3 -1.1
baz=287,SNR=10
P18K **Big Mountain,** 126.71 33 **PKPdf** 08 01 52.3 -1.0
P18K IAms_20 IAms_20 09 01 48.6
comp=Z,744nm,20.0s
P18K **Big Mountain,** 126.71 33 P **PKPdf** 08 01 51.5 -1.9
baz=285
F24K **Squaw Lake** 126.73 22 P **PKiKP** 08 01 53.6 -0.1
baz=299,SNR=30
MLY **Manley** 126.80 25 **PKPdf** 08 01 52.5 -0.9
MLY **Manley** 126.80 25 P **PKPdf** 08 01 52.9 -0.5
baz=294,SNR=112
CAST **Castle Rocks** 126.88 27 IAms_20 IAms_20 09 03 17.9
comp=Z,915nm,20.0s
CAST **Castle Rocks** 126.88 27 P **PKPdf** 08 01 52.8 -0.8
baz=291,SNR=25
H23K **Yukon River** 126.92 24 **PKPdf** 08 01 52.6 -1.0
H23K **Yukon River** 126.92 24 P **PKPdf** 08 01 53.4 -0.2
baz=296,SNR=35
O19K **Port Alsworth** 126.93 32 **PKPdf** 08 01 53.0 -0.6
O19K IAms_20 IAms_20 09 02 53.6
comp=Z,709nm,19.0s
O19K **Port Alsworth** 126.93 32 P **PKPdf** 08 01 52.4 -1.2
baz=287
C27K **Jago River** 126.94 18 P **PKPdf** 08 01 53.5 0.0
baz=304,SNR=18
M20K **Styx River** 126.96 29 IAms_20 IAms_20 09 02 16.1
comp=Z,1µm,20.0s
M20K **Styx River** 126.96 29 P **PKPdf** 08 01 52.9 -0.9
baz=289,SNR=14
Q18K **Katmai Hardscr** 127.02 34 P **PKPdf** 08 01 52.5 -1.6
baz=285
PPLA **Purkeypile** 127.02 28 PKPdf **PKPdf** 08 01 52.9 -1.1
PPLA **Purkeypile** 127.02 28 P **PKPdf** 08 01 52.9 -1.1
baz=291,SNR=26
TAOE **Nuku Hiva Isla** 127.05 123 *e*LR LR 08 41 43.6
comp=Z,429nm,26.5s
BPAW **Bear Paw Mtn.** 127.07 26 P **PKPdf** 08 01 52.5 -1.4
baz=293,SNR=27
ILULI **Ilulissat** 127.13 341 IAms_20 IAms_20 09 02 44.4
comp=Z,855nm,20.0s
PB07 **IPOC Station P** 127.17 213 **PKPdf** 08 01 54.3 -1.4
E25K **Arctic Village** 127.19 20 P **PKPdf** 08 01 54.0 0.0
baz=301,SNR=32
G24K **Hadweenzic Riv** 127.27 23 P **PKPdf** 08 01 54.5 +0.2
baz=298,SNR=44
I23K **Minto, Yukon-K** 127.28 25 **PKPdf** 08 01 53.8 -0.4
I23K IAms_20 IAms_20 09 01 54.0
comp=Z,1µm,21.0s
I23K **Minto, Yukon-K** 127.28 25 P **PKPdf** 08 01 53.5 -0.8
baz=295,SNR=42
KTH **Kantishna Hill** 127.31 27 IAms_20 IAms_20 09 03 23.4
comp=Z,1µm,20.0s
CHIR **Chirikof Islan** 127.36 37 IAms_20 IAms_20 09 04 21.7
comp=Z,968nm,19.0s
CHIR **Chirikof Islan** 127.36 37 P **PKPdf** 08 01 53.5 -1.2
baz=282
F25K **Christian Rive** 127.44 21 P **PKiKP** 08 01 54.9 -0.2
baz=301,SNR=23
PB02 **IPOC Station P** 127.52 213 **PKPdf** 08 01 54.9 -1.3
H24K **Noodor Dome** 127.53 24 PKPdf **PKPdf** 08 01 54.7 0.0
H24K **Noodor Dome** 127.53 24 P **PKPdf** 08 01 54.8 0.0
baz=298,SNR=78
SPCR **Spurr Chakacha** 127.60 30 P **PKPdf** 08 01 53.8 -1.3
baz=290
TRF **Thorofare Moun** 127.61 27 IAms_20 IAms_20 09 00 57.3
comp=Z,828nm,20.0s
TRF **Thorofare Moun** 127.61 27 P **PKPdf** 08 01 54.1 -1.1
baz=293,SNR=15
P19K **Oil Pt** 127.61 32 IAms_20 IAms_20 09 02 12.7
comp=Z,695nm,20.0s
P19K **Oil Pt** 127.61 32 P **PKPdf** 08 01 53.8 -1.3
baz=288
Q19K **Cape Douglas,** 127.62 33 IAms_20 IAms_20 08 59 22.7
comp=Z,804nm,21.0s
Q19K **Cape Douglas,** 127.62 33 P **PKPdf** 08 01 54.0 -1.1
baz=287
NEA2 **Nenana** 127.63 25 **PKPdf** 08 01 53.7 -1.3
NEA2 IAms_20 IAms_20 09 01 47.3
comp=Z,1µm,22.0s
NEA2 **Nenana** 127.63 25 P **PKPdf** 08 01 53.3 -1.6
baz=295,SNR=16
SKT **Skwentna** 127.63 29 P **PKPdf** 08 01 53.4 -1.7
baz=291
BWN **Browne** 127.65 26 **PKPdf** 08 01 53.9 -1.1
G25K **Bearman Lake** 127.71 22 P **PKiKP** 08 01 55.5 -0.1
baz=300,SNR=17
O20K **Slope Mountain** 127.77 31 P **PKPdf** 08 01 54.5 -0.9
baz=288
MDM **Murphy Dome** 127.79 25 **PKPdf** 08 01 54.3 -1.0
MDM IAms_20 IAms_20 09 03 27.6
comp=Z,896nm,20.0s
F26K **Sheenjek River** 127.88 21 P **PKPdf** 08 01 54.9 -0.5
baz=305,SNR=8.4
BMAR **Burnt Mountain** 127.88 21 PKPdf **PKPdf** 08 01 55.1 -0.3
SII **Sitkinak Islan** 127.97 36 P **PKPdf** 08 01 55.4 -0.4
baz=284
SII **Sitkinak Islan** 127.97 36 P **PKiKP** 08 01 57.2 +0.8
TCOL **CIGO, UAF Yank** 127.97 25 IAms_20 IAms_20 09 03 42.3
comp=Z,885nm,20.0s
TCOL **CIGO, UAF Yank** 127.97 25 P **PKPdf** 08 01 53.9 -1.7
baz=297,SNR=9.1
COLA **College** 127.98 25 **PKPdf** 08 01 54.1 -1.5
COLA **College** 127.98 25 IAms_20 IAms_20 09 03 42.4
comp=Z,835nm,20.0s
COLA **College** 127.98 25 PKIKP **PKPdf** 08 01 54.1 -1.5
COLA **College** 127.98 25 P **PKPdf** 08 01 54.0 -1.5
baz=297
POKR **Poker Plat Res** 128.02 24 P **PKPdf** 08 01 53.9 -1.8
baz=297
CUT **Chulitna** 128.03 28 **PKPdf** 08 01 54.9 -0.9
CUT **Chulitna** 128.03 28 P **PKPdf** 08 01 55.0 -0.7
baz=293,SNR=11
MCK **McKinley** 128.05 26 P **PKPdf** 08 01 54.5 -1.3
baz=295,SNR=12
H25K **Birch Creek** 128.06 23 P **PKPdf** 08 01 55.5 -0.1
baz=300
WRH **Wood River Hil** 128.06 25 IAms_20 IAms_20 09 02 09.8
comp=Z,791nm,20.0s
CCB **Clear Creek Bu** 128.10 25 IAms_20 IAms_20 09 04 44.7
comp=Z,691nm,21.0s
FYU **Fort Yukon** 128.11 22 **PKiKP** 08 01 56.4 0.0
SFJD **Kangerlussuaq** 128.18 339 PKPdf **PKPdf** 08 01 55.5 -0.4
SFJD **Kangerlussuaq** 128.18 339 IAms_20 IAms_20 09 03 17.4
comp=Z,780nm,19.0s
SFJD **Kangerlussuaq** 128.18 339 PKIKP **PKPdf** 08 01 55.5 -0.4
CAPN **Captain Cook N** 128.23 30 P **PKPdf** 08 01 55.3 -0.9
baz=290
OHAK **Old Harbor** 128.28 35 P **PKPdf** 08 01 56.0 -0.3
baz=286,SNR=8.1
M22K **Willow** 128.34 29 IAms_20 IAms_20 09 04 05.8
comp=Z,900nm,20.0s
M22K **Willow** 128.34 29 P **PKPdf** 08 01 55.6 -0.7
baz=292,SNR=15
Q20K **Shuyak Island** 128.34 33 P **PKPdf** 08 01 55.6 -0.8
baz=288
HOM **Homer** 128.38 32 IAms_20 IAms_20 09 03 56.9
comp=Z,646nm,20.0s
HOM **Homer** 128.38 32 P **PKPdf** 08 01 55.9 -0.6
baz=289
ILAR **Eielson Array** 128.39 25 PKP **PKPdf** 08 01 54.8 -1.6
comp=Z,9.8nm,0.9s,baz=290,slow=2.6,SNR=57
E27K **Coleen River** 128.40 19 P **PKPdf** 08 01 56.1 -0.3
baz=306,SNR=26
G26K **Porcupine Rive** 128.40 21 P **PKPdf** 08 01 56.4 +0.1
baz=303,SNR=38
KDAK **Kodiak Island** 128.49 34 IAms_20 IAms_20 09 01 58.2
comp=Z,964nm,21.0s
FIS **Fire Island** 128.52 30 IAms_20 IAms_20 09 05 22.7
comp=Z,834nm,21.0s
HDA **Harding Lake** 128.53 25 P **PKPdf** 08 01 55.2 -1.5
baz=297,SNR=9.7
PRP **Porcupine Dome** 128.54 23 P **PKPdf** 08 01 56.2 -0.7
baz=300
WAT1 **Susitna Watana** 128.59 27 P **PKPdf** 08 01 55.9 -1.0
baz=295
CNPM **China Poot** 128.62 32 IAms_20 IAms_20 09 04 14.3
comp=Z,664nm,20.0s
BRLK **Bradley Lake** 128.70 31 **PKPdf** 08 01 57.2 0.0
BRLK IAms_20 IAms_20 08 58 57.5
comp=Z,587nm,22.0s
RC01 **Rabbit Creek A** 128.76 30 IAms_20 IAms_20 09 03 44.9
comp=Z,1µm,20.0s
RC01 **Rabbit Creek A** 128.76 30 P **PKPdf** 08 01 56.7 -0.5
baz=292,SNR=25
BRSE **Bradley Lake S** 128.78 31 P **PKPdf** 08 01 56.6 -0.7
baz=290,SNR=7.5
PMR **Palmer** 128.84 29 P **PKPdf** 08 01 56.5 -0.7
baz=293,SNR=29
GHO **Glory Hole Cre** 128.86 29 **PKPdf** 08 01 56.8 -0.6
GHO IAms_20 IAms_20 09 04 47.0
comp=Z,1µm,20.0s
DHY **Denali Highway** 128.97 27 P **PKPdf** 08 01 57.2 -0.5
baz=296,SNR=11
O22K **Cooper Landing** 128.99 30 IAms_20 IAms_20 09 05 45.2
comp=Z,939nm,19.0s
O22K **Cooper Landing** 128.99 30 P **PKPdf** 08 01 57.2 -0.4
baz=292
WAT6 **Susitna Watana** 129.03 27 P **PKPdf** 08 01 57.1 -0.8
baz=295,SNR=13
J25K **Salcha River,** 129.04 24 IAms_20 IAms_20 09 04 24.7
comp=Z,900nm,19.0s
J25K **Salcha River,** 129.04 24 P **PKPdf** 08 01 57.1 -0.6
baz=299,SNR=39
SML **Sawmill** 129.10 28 IAms_20 IAms_20 09 05 45.4
comp=Z,827nm,19.0s
SML **Sawmill** 129.10 28 P **PKPdf** 08 01 57.2 -0.7
baz=294,SNR=12
G27K **Doyon Strip** 129.18 21 P **PKPdf** 08 01 57.6 -0.3
baz=305,SNR=31
KNK **Knik Glacier** 129.20 29 **PKPdf** 08 01 57.6 -0.4
KNK **Knik Glacier** 129.20 29 P **PKPdf** 08 01 57.8 -0.3
baz=294,SNR=11
SEW **Seward** 129.26 31 P **PKPdf** 08 01 57.7 -0.4
baz=292,SNR=18
K24K **Donnelly Dome** 129.27 25 P **PKPdf** 08 01 57.7 -0.5
baz=298,SNR=12
M23K **Glacier View** 129.37 28 P **PKPdf** 08 01 57.9 -0.5
baz=295,SNR=17
PWL **Port Wells** 129.48 29 P **PKPdf** 08 01 58.3 -0.3
baz=293,SNR=34
I26K **Coal Creek Min** 129.50 23 P **PKPdf** 08 01 58.0 -0.5
baz=302
SCM **Sheep Creek Mo** 129.52 28 IAms_20 IAms_20 09 02 12.5
comp=Z,949nm,22.0s
SCM **Sheep Creek Mo** 129.52 28 P **PKPdf** 08 01 58.3 -0.4
baz=295,SNR=19
A36M **Sachs Harbour** 129.55 11 IAms_20 IAms_20 08 58 48.3
comp=Z,664nm,21.0s
A36M **Sachs Harbour** 129.55 11 P **PKPdf** 08 01 57.6 -0.7
baz=327
H27K **Steamboat Moun** 129.55 21 P **PKPdf** 08 01 58.6 -0.1
baz=305
RIDG **Independent Ri** 129.67 25 IAms_20 IAms_20 09 03 41.2
comp=Z,928nm,21.0s
RIDG **Independent Ri** 129.67 25 P **PKPdf** 08 01 58.3 -0.6
baz=299,SNR=8.1
J26L **Joseph Creek** 129.77 24 PKPdf **PKPdf** 08 01 58.6 -0.6
J26L IAms_20 IAms_20 09 05 13.8
comp=Z,898nm,18.0s
J26L **Joseph Creek** 129.77 24 P **PKPdf** 08 01 58.9 -0.2
baz=301,SNR=36
PAX **Paxson** 129.79 26 P **PKPdf** 08 01 58.9 -0.3
baz=298,SNR=19
I27K **Kandik River** 129.87 22 P **PKPdf** 08 01 59.4 +0.1
baz=304
SCRK **Sand Creek** 129.88 25 PKPdf **PKPdf** 08 01 59.0 -0.3
SCRK IAms_20 IAms_20 09 02 25.7
comp=Z,894nm,19.0s
SCRK **Sand Creek** 129.88 25 P **PKPdf** 08 01 59.1 -0.3
baz=300,SNR=39
M24K **Tolsona, Glenn** 129.89 27 IAms_20 IAms_20 09 04 20.3
comp=Z,703nm,22.0s
M24K **Tolsona, Glenn** 129.89 27 P **PKPdf** 08 01 59.3 -0.1
baz=297,SNR=6.6
PB12 **IPOC Station P** 130.01 214 PKPdf **PKPdf** 08 02 01.1 +0.1
GLI **Glacier Island** 130.03 29 IAms_20 IAms_20 09 05 18.4
comp=Z,999nm,19.0s
GLI **Glacier Island** 130.03 29 P **PKPdf** 08 01 59.4 -0.2
baz=295,SNR=17
HARP **HAARP** 130.18 27 P **PKPdf** 08 01 59.6 -0.2
baz=298
P23K **Montague Islan** 130.25 30 P **PKPdf** 08 01 59.8 -0.2
baz=294
KLU **Klutina** 130.28 28 IAms_20 IAms_20 09 10 14.5
comp=Z,727nm,18.0s
KLU **Klutina** 130.28 28 P **PKPdf** 08 01 60.0 -0.2
baz=296,SNR=18
FID **Port Fidalgo** 130.35 29 **PKiKP** 08 02 01.1 0.0
K27K **Chicken** 130.57 24 P **PKPdf** 08 02 00.8 +0.3
baz=302
L26K **Log Cabin Wild** 130.61 26 IAms_20 IAms_20 09 04 10.1
comp=Z,1µm,21.0s
L26K **Log Cabin Wild** 130.61 26 P **PKPdf** 08 02 00.8 +0.1
baz=300,SNR=20
INK **Inuvik** 130.61 17 PKP **PKPdf** 08 01 60.0 -0.5
comp=Z,24nm,0.9s,baz=314,slow=4.3,SNR=31
INK **Inuvik** 130.61 17 PKIKP **PKPdf** 08 02 00.0 -0.5
INK **Inuvik** 130.61 17 P **PKPdf** 08 01 59.8 -0.7
baz=315
LPAZ **La Paz** 130.72 218 PKP **PKiKP** 08 02 03.5 -0.4
comp=Z,61nm,1.3s,baz=71,slow=2.4,SNR=62
LPAZ **La Paz** 130.72 218 PKPdf **PKPdf** 08 02 03.3 +0.2
EYAK **Cordova Ski Ar** 130.77 29 P **PKPdf** 08 02 01.1 +0.1
baz=296,SNR=12
N25K **Chitina, Valde** 130.79 28 PKPdf **PKPdf** 08 02 01.2 0.0
N25K IAms_20 IAms_20 09 03 17.0
comp=Z,851nm,21.0s
N25K **Chitina, Valde** 130.79 28 P **PKiKP** 08 02 01.6 -0.4
baz=298,SNR=18
Q23K **Middleton Isla** 130.97 31 IAms_20 IAms_20 09 05 38.4
comp=Z,814nm,20.0s
Q23K **Middleton Isla** 130.97 31 P **PKPdf** 08 02 01.3 0.0
baz=294
M26K **Nabesna, AK** 131.06 26 P **PKPdf** 08 02 01.1 -0.5
baz=300,SNR=5.4
BMRM **Bremner River** 131.08 28 IAms_20 IAms_20 09 06 58.2
comp=Z,680nm,20.0s
BMRM **Bremner River** 131.08 28 P **PKPdf** 08 02 01.7 0.0
baz=297,SNR=7.1
I29M **Ogilvie Camp,** 131.14 21 PKPdf **PKPdf** 08 02 01.0 -0.6
I29M IAms_20 IAms_20 09 03 00.7
comp=Z,839nm,20.0s
I29M **Ogilvie Camp,** 131.14 21 P **PKPdf** 08 02 01.2 -0.4
baz=308,SNR=20
L27K **Beaver Creek,** 131.18 25 IAms_20 IAms_20 09 05 51.2
comp=Z,891nm,19.0s
L27K **Beaver Creek,** 131.18 25 P **PKPdf** 08 02 01.9 +0.1
baz=302,SNR=22
GLB **Gilahina Butte** 131.20 28 IAms_20 IAms_20 09 03 38.8
comp=Z,775nm,20.0s
RAGM **Ragged Mountai** 131.32 29 **PKPdf** 08 02 02.2 +0.1
VRDI **Verde Repeater** 131.45 28 IAms_20 IAms_20 09 07 43.0
comp=Z,671nm,20.0s
HMT **Hamilton** 131.52 29 IAms_20 IAms_20 09 04 39.5
comp=Z,1µm,20.0s
DAWY **Dawson** 131.53 23 P **PKPdf** 08 02 02.2 -0.2
baz=306,SNR=18
M27K **Edge Creek, AK** 131.53 26 IAms_20 IAms_20 09 06 22.6
comp=Z,769nm,20.0s
M27K **Edge Creek, AK** 131.53 26 P **PKPdf** 08 02 02.4 -0.2
baz=301,SNR=8.0

MCARA **McCarthy VSAT** 131.56 27 PKPdf **PKPdf** 08 02 02.4 -0.1
MCARA IAMs_20 IAMs_20 09 05 11.3
comp=Z,854nm,19.0s
MCARA **McCarthy VSAT** 131.56 27 P PKPdf **PKPdf** 08 02 02.5 0.0
baz=299
KAIM **Kayak Island** 131.64 29 IAMs_20 IAMs_20 09 02 31.6
comp=Z,925nm,20.0s
KAIM **Kayak Island** 131.64 29 P **PKPdf** 08 02 02.6 0.0
baz=297
J29M **Klondike Camp** 131.72 22 IAMs_20 IAMs_20 09 01 29.2
comp=Z,1µm,22.0s
J29M **Klondike Camp** 131.72 22 P **PKPdf** 08 02 02.9 +0.1
baz=307
BERG **Berg Lake** 131.74 29 IAMs_20 IAMs_20 09 03 52.3
comp=Z,1µm,22.0s
CRQM **Cirque** 131.81 28 IAMs_20 IAMs_20 09 07 39.2
comp=Z,922nm,20.0s
CRQE **Cirque** 131.84 28 P **PKPdf** 08 02 03.1 -0.1
baz=299,SNR=7.1
SUCK **Suckling Hills** 131.86 29 **PKiKP** 08 02 03.9 -0.3
BVCY **Beaver Creek** 131.91 25 P **PKPdf** 08 02 03.3 +0.1
baz=303,SNR=13
TGL **Tana Glacier** 131.95 28 IAMs_20 IAMs_20 09 07 49.1
comp=Z,767nm,19.0s
C36M **Paulatuk** 131.98 12 IAMs_20 IAMs_20 09 04 02.6
comp=Z,839nm,19.0s
C36M **Paulatuk** 131.98 12 P **PKPdf** 08 02 03.1 +0.1
baz=327
BGLC **Bering Glacier** 132.06 29 P **PKPdf** 08 02 03.5 +0.1
baz=298
SNH **Sunshine Point** 132.22 29 **PKPdf** 08 02 04.0 +0.2
ISLE **Juniper Island** 132.23 28 IAMs_20 IAMs_20 09 05 01.6
comp=Z,889nm,21.0s
YUK3 **Moose Creek** 132.41 26 P **PKPdf** 08 02 04.0 -0.4
baz=303,SNR=7.0
GRNC **Granite Creek** 132.42 28 IAMs_20 IAMs_20 09 04 18.5
comp=Z,941nm,20.0s
CTG **Chitina Glacier** 132.47 27 P **PKPdf** 08 02 04.4 0.0
baz=301,SNR=5.7
CTGM **Chitina Glacie** 132.48 27 IAMs_20 IAMs_20 09 04 51.6
comp=Z,860nm,20.0s
YAH **Yahtse** 132.61 28 IAMs_20 IAMs_20 09 05 25.1
comp=Z,1µm,21.0s
MESA **MESA** 132.61 28 IAMs_20 IAMs_20 09 06 02.7
comp=Z,762nm,20.0s
MESA **MESA** 132.61 28 P **PKPdf** 08 02 04.5 -0.3
baz=300
LOGN **Logan Glacier** 132.69 27 **PKPdf** 08 02 04.5 -0.4
LOGN IAMs_20 IAMs_20 09 05 07.2
comp=Z,896nm,21.0s
M29M **Somme Creek** 132.82 25 P **PKPdf** 08 02 05.0 0.0
baz=305
TABL **Table Mountain** 132.83 28 IAMs_20 IAMs_20 09 02 48.3
comp=Z,849nm,22.0s
O28M **Mount Upton** 133.06 27 P **PKPdf** 08 02 05.5 -0.2
baz=302,SNR=9.9
M30M **Minto, Yukon** 133.36 24 IAMs_20 IAMs_20 09 03 04.1
comp=Z,1µm,21.0s
M30M **Minto, Yukon** 133.36 24 P **PKPdf** 08 02 05.6 -0.3
baz=307,SNR=14
YUK4 **Talbot Arm** 133.37 26 P **PKPdf** 08 02 05.9 -0.3
baz=304
PINM **Pinnacle** 133.39 28 P **PKPdf** 08 02 05.9 -0.2
baz=302,SNR=6.3
YUK6 **Outpost Mounta** 133.71 26 P **PKPdf** 08 02 06.7 -0.2
baz=304
BCPM **Bancas Point** 133.72 28 IAMs_20 IAMs_20 09 06 37.0
comp=Z,788nm,20.0s
N30M **Aishikik Lake** 133.92 25 P **PKPdf** 08 02 06.7 -0.3
baz=306,SNR=8.2
PNL **Peninsula** 133.98 28 P **PKPdf** 08 02 07.0 -0.1
baz=302,SNR=6.1
O29M **Mount Kennedy** 133.98 27 P **PKPdf** 08 02 07.0 -0.3
baz=304,SNR=5.1
HYT **Haines Junctio** 134.13 26 P **PKPdf** 08 02 07.2 -0.3
baz=305,SNR=8.7
N31M **Braeburn, Yuko** 134.41 25 IAMs_20 IAMs_20 08 58 42.4
comp=Z,759nm,19.0s
N31M **Braeburn, Yuko** 134.41 25 P **PKPdf** 08 02 07.6 -0.3
baz=308,SNR=9.1
M31M **Drury Creek, Y** 134.47 23 IAMs_20 IAMs_20 09 05 37.4
comp=Z,929nm,21.0s
M31M **Drury Creek, Y** 134.47 23 P **PKPdf** 08 02 07.0 -1.0
baz=310,SNR=6.8
ETMB **Extrema** 134.55 226 PKPdf **PKPdf** 08 02 08.2 -1.4
P29M **Windy Craggy** 134.71 28 **PKPdf** 08 02 08.4 -0.1
P29M **Windy Craggy** 134.71 28 P **PKPdf** 08 02 08.3 -0.2
baz=304
O30N **Mendenhall** 134.72 26 P **PKPdf** 08 02 08.4 -0.1
baz=307,SNR=12
P30M **Million Dollar** 134.75 27 P **PKPdf** 08 02 08.5 -0.1
baz=305
WHY **Whitehorse** 135.26 25 P **PKPdf** 08 02 08.9 -0.7
baz=308,SNR=5.8
PLBC **Pleasant Camp** 135.38 27 P **PKPdf** 08 02 09.2 -0.5
baz=305
N32M **Quiet Lake** 135.63 24 P **PKPdf** 08 02 09.6 -0.7
baz=311
SKAG **Skagway** 135.81 27 **PKPdf** 08 02 10.5 0.0
SKAG **Skagway** 135.81 27 P **PKPdf** 08 02 10.3 -0.2
baz=307,SNR=7.3
P33M **Teslin, Yukon** 136.34 25 IAMs_20 IAMs_20 09 06 28.9
comp=Z,895nm,20.0s
P33M **Teslin, Yukon** 136.34 25 P **PKPdf** 08 02 11.0 -0.6
baz=310,SNR=12
P32M **Atlin** 136.38 26 P **PKPdf** 08 02 11.5 -0.1
baz=309,SNR=11
BESE **Bessie Mountai** 136.53 28 **PKPdf** 08 02 11.6 -0.4
JIS **Juneau Island** 136.91 28 IAMs_20 IAMs_20 09 06 54.2
comp=Z,931nm,21.0s
SIT **Sitka** 137.21 30 P **PKPdf** 08 02 12.9 -0.2
baz=304
R33M **Jennings River** 137.58 25 P **PKPdf** 08 02 13.7 -0.3
baz=312,SNR=19
DLBC **Dease Lake** 138.59 25 P **PKPdf** 08 02 15.5 -0.3
baz=312,SNR=12
NNA **Nana** 138.90 212 PKPdf **PKPdf** 08 02 17.5 -0.2
NNA **Nana** 138.90 212 PKIKP **PKPdf** 08 02 17.5 -0.2
WRAK **Wrangell Islan** 138.91 29 **PKPdf** 08 02 15.8 -0.5
WRAK **Wrangell Islan** 138.91 29 IAMs_20 IAMs_20 09 12 20.3
comp=Z,514nm,19.0s
WRAK **Wrangell Islan** 138.91 29 P **PKPdf** 08 02 16.0 -0.3
baz=308
CRAG **Craig** 139.13 30 **PKPdf** 08 02 17.3 +0.6
CRAG **Craig** 139.13 30 P **PKPdf** 08 02 16.4 -0.3
baz=306
T35M **Bob Quinn** 139.46 27 P **PKPdf** 08 02 17.3 -0.1
baz=311,SNR=6.7
YKA **Yellowknife Ar** 139.86 12 PKhKP PKPpre 08 02 09.1
comp=Z,2.1nm,0.7s,baz=334,slow=3.4,SNR=12
YKA PKP **PKPdf** 08 02 16.8 -1.1
comp=Z,40nm,1.3s,baz=331,slow=2.6,SNR=16
YKA PP **PP** 08 05 14.7 +0.9
comp=Z,7.6nm,1.2s,baz=336,slow=6.5,SNR=7.2
RUBB **Prince Rupert** 141.14 30 PKPdf **PKPdf** 08 02 19.7 -0.7
SCHQ **Schefferville** 141.76 332 PKhKP PKPpre 08 02 15.8
comp=Z,4.0nm,0.6s,baz=259,slow=3.9,SNR=7.3
GRGR **Grenville** 144.04 257 PKPdf **PKPdf** 08 02 25.8 -1.0
BIM **Bigot** 144.43 261 PKPdf PKPbc 08 02 26.2 +0.3
FDF **Fort de France** 144.58 262 PKPbc 08 02 26.7 +0.3
FDF **Fort de France** 144.58 262 PKIKP PKPbc 08 02 26.7 +0.2
SVN **Savane Anatole** 144.64 262 **PKPab** 08 02 25.9 -0.6
GDSD **La Dsirade Is** 145.04 264 **PKPbc** 08 02 27.7 -0.2
TLCB **Telegraph Cove** 145.12 33 **PKPbc** 08 02 26.8 -0.3
FCC **Fort Churchill** 145.22 357 **PKPbc** 08 02 26.2 -0.9
FCC **Fort Churchill** 145.22 357 PKIKP **PKPbc** 08 02 26.2 -0.9
CBE **Ft. Capester** 145.45 264 **PKPab** 08 02 29.4 -0.1
HAL **Halifax** 145.63 315 PKPbc **PKPab** 08 02 29.1 -0.1
HAL **Halifax** 145.63 315 PKIKP **PKPab** 08 02 29.1 -0.1
CBB **Campbell River** 146.18 33 PKPbc **PKPbc** 08 02 30.6 +0.1
OZB **Mount Ozzard** 146.79 34 **PKPdf** 08 02 31.2 +0.6
BOSC **San Juan Bosco** 147.25 217 **PKPdf** 08 02 33.5 +0.9
SMRT **St. Maarten** 147.39 266 IAMs_20 IAMs_20 09 05 49.0
comp=Z,576nm,21.0s
PTLC **Puerto Leguiza** 147.64 226 *eP* **PKPbc** 08 02 34.7 -1.0
E63A **Oxbow** 147.71 321 P **PKPdf** 08 02 31.7 -0.4
baz=56,SNR=26
E63A P **PKPdf** 08 02 31.7 -0.4
baz=56,SNR=26
ARNL **Arenillas** 147.75 214 **PKPdf** 08 02 34.0 +0.8
GUVC **San Jose del G** 147.84 232 *eP* **PKPbc** 08 02 35.2 -1.1
G65A **Princeton** 147.86 318 P **PKPdf** 08 02 31.3 -1.1
baz=59,SNR=30
G65A P **PKPdf** 08 02 31.3 -1.1
baz=59,SNR=30
C03A **Quillayute Air** 147.91 35 PKPbc **PKiKP** 08 02 36.8 -0.5
F64A **Sherman** 147.97 320 PKPdf **PKPdf** 08 02 31.7 -0.9
baz=57,SNR=29
F64A P **PKPdf** 08 02 32.3 -0.2
baz=57,SNR=29
PGC **Sidney** 148.03 33 **PKPbc** 08 02 35.6 -0.1
BAUV **El Baul** 148.12 247 PKPdf **PKPdf** 08 02 32.1 -1.7
E62A **Clayton Lake** 148.22 322 P **PKPdf** 08 02 32.5 -0.5
baz=54,SNR=20
E62A P **PKPdf** 08 02 32.5 -0.5
baz=54,SNR=20
B04A **Port Angeles** 148.39 34 **PKPbc** 08 02 37.4 +0.7
MACC **Macarena, Meta** 148.43 230 *eP* **PKPdf** 08 02 34.7 +0.3
F63A **Nahmakanta, Br** 148.50 320 P **PKPdf** 08 02 33.0 -0.5
baz=56,SNR=19
F63A P **PKPdf** 08 02 33.0 -0.5
baz=56,SNR=19
PTGC **Puerto Gaitan,** 148.59 235 *eP* **PKPbc** 08 02 37.2 -1.0
CHSH **Refugio Sur-Vo** 148.83 218 PKPbc **PKPdf** 08 02 37.5 +1.8
WISH **Wishkah** 148.84 36 PKPbc **PKiKP** 08 02 39.5 +0.3
PKME **Peaks-Kenny Pk** 148.86 320 P **PKPdf** 08 02 34.1 0.0
baz=56,SNR=14
PKME **Peaks-Kenny Pk** 148.86 320 P **PKPdf** 08 02 33.5 -0.5
baz=56,SNR=14
STVI **Saint Thomas** 149.19 266 **PKPbc** 08 02 39.2 -0.3
FLOC **Florencia** 149.26 227 *eP* **PKPbc** 08 02 40.0 0.0
RADR **Rader Ridge** 149.26 37 **PKiKP** 08 02 39.8 -0.4
WVL **Waterville** 149.46 319 P **PKPdf** 08 02 35.4 +0.4
baz=57,SNR=32
G62A **West of Eustis** 149.61 321 PKPbc **PKPbc** 08 02 39.6 -0.2
G62A **West of Eustis** 149.61 321 P **PKPdf** 08 02 35.2 0.0
baz=55,SNR=11
G62A P **PKPdf** 08 02 35.2 0.0
baz=55,SNR=11
TAMC **Tame, Arauca** 149.75 239 *eP* **PKiKP** 08 02 42.7 +0.5
IMBA **Imbabura, San** 149.87 221 **PKPbc** 08 02 40.2 -1.8
F04D **Rainier, OR** 149.90 37 P **PKPdf** 08 02 36.0 +0.3
baz=308,SNR=5.7
OTAV **Otavalo** 149.99 221 *eP* **PKiKP** 08 02 43.7 +0.5
CUSE **Cuicocha Este** 150.01 221 *eP* **PKiKP** 08 02 43.7 +0.4
GCUF **Volcan Galeras** 150.09 224 *eP* **PKPdf** 08 02 39.1 +1.5
SOCV **Socops** 150.09 243 *eP* **PKPbc** 08 02 41.6 -0.4
B08A **Colville Reser** 150.21 30 PKPbc **PKPbc** 08 02 40.6 -0.7
SJG **San Juan** 150.21 265 **PKPbc** 08 02 41.8 -0.3
SJG **San Juan** 150.21 265 PKIKP **PKPbc** 08 02 41.8 -0.3
SDV **Santo Domingo** 150.25 244 PKPdf **PKPdf** 08 02 36.5 -1.0
SDV PKPbc **PKPbc** 08 02 42.6 0.0
SDV PKPab **sPKPbc** 08 02 49.4 +0.4
PRAC **Prado** 150.27 231 *eP* **PKPbc** 08 02 42.0 -0.5
G03D **McMinnville, O** 150.29 38 P **PKPdf** 08 02 35.9 -0.4
baz=307,SNR=11
I63A **Otisfield** 150.29 319 P **PKPdf** 08 02 36.1 -0.2
baz=56,SNR=26
I63A P **PKPdf** 08 02 36.1 -0.2
baz=56,SNR=26
F04A **Amboy** 150.31 36 PKPbc **PKPbc** 08 02 41.9 +0.3
H62A **Milan** 150.34 320 P **PKPdf** 08 02 37.0 +0.5
baz=55,SNR=21
H62A P **PKPdf** 08 02 37.0 +0.5
baz=55,SNR=21
RUSC **La Rusia** 150.41 236 *eP* **PKPbc** 08 02 42.4 -0.9
I02E **Swisshome, OR** 150.59 41 P **PKPdf** 08 02 36.6 -0.2
baz=304,SNR=8.3
BBAC **Balboa, Cauca** 150.63 225 *eP* **PKPbc** 08 02 43.6 0.0
ROSC **El Rosal** 150.64 233 PKP **PKPdf** 08 02 39.2 +0.9
comp=Z,14nm,0.7s,baz=50,slow=2.6,SNR=24
ROSC PKPbc **PKiKP** 08 02 44.2 -0.3
comp=Z,66nm,0.7s,baz=107,slow=8.1,SNR=42
ROSC **El Rosal** 150.64 233 *eP* **PKiKP** 08 02 44.8 +0.3
POPC **Popayan, Colom** 150.65 226 *eP* **PKPbc** 08 02 43.8 +0.2
AOPR **Arecibo Observ** 150.83 265 **PKPbc** 08 02 43.3 -0.3
AOPR PKPab **sPKPbc** 08 02 50.1 +0.1
I62A **Tamworth** 150.84 319 P **PKPdf** 08 02 37.7 +0.4
baz=56,SNR=13
I62A P **PKPdf** 08 02 37.7 +0.4
baz=56,SNR=13
BARC **Barichara** 150.93 237 *eP* **PKPbc** 08 02 42.4 -1.8
LBNH **Lisbon** 150.98 320 P **PKPdf** 08 02 37.3 -0.2
baz=54,SNR=8.7
LBNH **Lisbon** 150.98 320 P **PKPdf** 08 02 37.1 -0.4
baz=54,SNR=8.7
UNH **University of** 150.99 317 P **PKPdf** 08 02 36.0 -1.4
baz=58,SNR=12
SPBC **San Pablo de B** 151.00 235 *eP* **PKPbc** 08 02 43.6 -0.6
H04D **Lebanon** 151.00 39 P **PKPdf** 08 02 37.4 -0.1
baz=307,SNR=25
PAMC **Pamplona, Colo** 151.01 239 *eP* **PKPbc** 08 02 45.0 +0.2
J01E **Myrtle Point** 151.06 42 P **PKPdf** 08 02 37.6 +0.1
baz=303,SNR=10
C09A **Chrisman Ranch** 151.10 30 PKPdf **PKPdf** 08 02 36.8 -0.7
C09A PKPbc **sPKPdf** 08 02 43.9 0.0
C09A PKPab **sPKPbc** 08 02 50.3 +0.5
I03D **Drain, OR** 151.12 41 P **PKPdf** 08 02 37.4 -0.2
baz=305,SNR=35
ANIL **Santa Ana** 151.18 231 *eP* **PKPbc** 08 02 44.1 -0.9
H04A **Detroit Lake** 151.22 38 PKPdf **PKPdf** 08 02 37.0 -0.8
H04A PKPbc **PKPbc** 08 02 43.9 +0.2
H04A PKPab **PKPab** 08 02 51.5 -0.1
NEW **Newport** 151.26 28 P **PKPdf** 08 02 37.4 -0.4
baz=320,SNR=23
DABV **Dabajuro** 151.33 248 *eP* **PKPbc** 08 02 44.8 -0.1
D08A **Wollman Farm,** 151.34 31 PKPdf **PKPdf** 08 02 37.5 -0.4
D08A PKPbc **PKiKP** 08 02 44.8 +0.4
D08A PKPab **PKPab** 08 02 51.5 -0.6
G05D **Wamic, OR** 151.35 37 P **PKPdf** 08 02 37.9 -0.1
baz=310,SNR=14
VT1 **Waterbury** 151.41 321 P **PKPdf** 08 02 38.2 +0.1
baz=53,SNR=8.2
K02D **Willamette Mer** 151.47 43 P **PKPdf** 08 02 38.2 -0.2
baz=303,SNR=30
YOTC **Yotoco, Valle** 151.48 229 *eP* **PKPdf** 08 02 39.1 -0.2
HAWA **Hanford** 151.51 33 PKPdf **PKPdf** 08 02 37.2 -1.0
HAWA PKPbc **PKiKP** 08 02 45.5 +0.7
HAWA PKPab **PKPab** 08 02 52.7 -0.1
FRNY **Flat Rock** 151.57 323 P **PKPdf** 08 02 38.1 -0.2
baz=51,SNR=11
L64A **Middleborough** 151.57 315 P **PKPdf** 08 02 37.8 -0.6
baz=59,SNR=6.0
L64A P **PKPdf** 08 02 37.8 -0.6
baz=59,SNR=6.0
I04A **Tendick Farm,** 151.62 40 P **PKPdf** 08 02 37.9 -0.5
baz=306,SNR=28
BRRC **Barranca, Sant** 151.66 237 *eP* **PKPdf** 08 02 39.1 -0.3
GUY2C **Guyana, Caldas** 151.66 232 *eP* **PKPbc** 08 02 45.7 -0.6
HRV **Adam Dziewonsk** 151.73 317 **PKPbc** 08 02 45.0 +0.1
HRV **Adam Dziewonsk** 151.73 317 PKIKP **PKPbc** 08 02 45.0 +0.1
HRV **Adam Dziewonsk** 151.73 317 P **PKPdf** 08 02 38.2 -0.4
baz=57
MCVT **Middlebury Col** 151.77 321 P **PKPbc** 08 02 44.9 -0.1
baz=53,SNR=10
L02F **Cave Junction** 151.84 44 P **PKPdf** 08 02 39.2 +0.4
baz=302,SNR=22
PTBC **PUERTO BERRIO** 151.86 236 *eP* **PKPbc** 08 02 45.8 -0.4
J61A **Chester** 151.87 319 P **PKiKP** 08 02 45.7 +0.1
baz=55,SNR=15
J61A P **PKiKP** 08 02 45.7 +0.1
baz=55,SNR=15
I05D **Terrebonne, OR** 151.91 38 P **PKPdf** 08 02 38.8 -0.1
baz=308
K62A **Royalston** 152.06 318 **PKPbc** 08 02 45.9 +0.2
K62A **Royalston** 152.06 318 P **PKPbc** 08 02 45.9 +0.2
baz=56,SNR=5.7
K62A P **PKPbc** 08 02 45.9 +0.2
baz=56,SNR=5.7
BMNY **Brushton-Moira** 152.07 324 P **PKPdf** 08 02 38.9 -0.1
baz=50,SNR=24
J04D **Umpqua Nationa** 152.12 41 PKPbc **PKiKP** 08 02 46.9 +0.5
J04D **Umpqua Nationa** 152.12 41 P **PKPdf** 08 02 38.8 -0.6
baz=306,SNR=15
LONY **Lake Ozonia** 152.25 323 P **PKPdf** 08 02 38.8 -0.6
baz=50,SNR=11
KMPM **Mount Pierce** 152.33 47 **PKiKP** 08 02 47.8 +1.0
KHMM **Horse Mountain** 152.37 46 **PKiKP** 08 02 47.6 +0.6
HELC **Santa Helena** 152.43 233 *eP* **PKPbc** 08 02 47.5 -0.3
L61B **Northampton** 152.46 318 PKPdf **PKPdf** 08 02 39.7 -0.1
L61B **PKiKP** 08 02 47.1 +0.3
L61B **PKPab** 08 02 58.1 +1.3
L61B **Northampton** 152.46 318 P **PKPbc** 08 02 46.6 0.0
baz=56,SNR=6.9
L61B **Northampton** 152.46 318 P **PKPdf** 08 02 39.2 -0.5
baz=56,SNR=6.9
NCB **Newcomb** 152.47 322 P **PKPdf** 08 02 38.8 -0.9
baz=51,SNR=13
ACCN **Adirondack Com** 152.50 320 PKPdf **PKPdf** 08 02 40.5 +0.8
ACCN **PKiKP** 08 02 47.0 +0.1
ACCN PKPab **PKPab** 08 02 58.2 +1.2
ACCN **Adirondack Com** 152.50 320 P **PKPbc** 08 02 45.9 -0.8
baz=53,SNR=9.6
UCCT **U. Connecticut** 152.53 316 PKPdf **PKPdf** 08 02 38.4 -1.4
UCCT **PKiKP** 08 02 47.1 +0.1
UCCT PKPab **PKPab** 08 02 57.5 +0.4
CBOC **Ciudad Bolivar** 152.56 232 *eP* **PKPbc** 08 02 47.1 -0.9
L04D **Klamath Falls** 152.58 43 P **PKPdf** 08 02 39.8 -0.3
baz=304
J05D **Fort Rock, OR** 152.61 40 P **PKPdf** 08 02 40.3 +0.1
baz=307
K04D **Chiloquin, OR** 152.69 41 P **PKPdf** 08 02 40.2 0.0
baz=305,SNR=10
ZARC **Zaragoza, Cauc** 152.78 237 *eP* **PKPdf** 08 02 40.9 -0.1
LL6C **La Loma 6 Bece** 152.88 242 *eP* **PKPdf** 08 02 41.5 +0.4
TRY **Troy** 152.89 319 P **PKiKP** 08 02 48.0 +0.3
baz=54,SNR=10
J59A **Piesco** 152.94 321 P **PKPbc** 08 02 47.5 -0.2
baz=52,SNR=8.2
J59A P **PKPbc** 08 02 47.5 -0.2
baz=52,SNR=8.2
WCNY **West Carthage** 153.25 323 P **PKPbc** 08 02 47.6 -0.8
baz=49,SNR=6.2
CRJC **Cerrejon, Guaj** 153.26 245 *eP* **PKPdf** 08 02 41.9 0.0
J58A **Remsen** 153.45 322 **PKPdf** 08 02 40.4 -0.7
J58A PKPbc **PKiKP** 08 02 49.2 +0.3
J58A **PKPab** 08 03 01.9 +0.9
J58A **Remsen** 153.45 322 P **PKPdf** 08 02 40.9 -0.3
baz=50,SNR=5.8
J58A P **PKPdf** 08 02 40.9 -0.3
baz=50,SNR=5.8
UREC **San Jos de Ur** 153.46 236 *eP* **PKPdf** 08 02 42.2 +0.2
MSO **Missoula** 153.71 26 P **PKPdf** 08 02 40.5 -1.1
baz=324
ARGC **Ariguani, Magd** 153.73 241 *eP* **PKPdf** 08 02 42.8 +0.4
ULM **Lac du Bonnet** 153.81 358 PKP **PKPdf** 08 02 40.8 -0.6
comp=Z,7.7nm,0.9s,baz=354,slow=2.9,SNR=9.5
ULM PKPbc **sPKPdf** 08 02 48.4 +0.5
comp=Z,42nm,1.1s,baz=356,slow=3.8,SNR=17
J57A **Williamstown** 153.81 323 **PKPdf** 08 02 40.9 -0.7
J57A **PKPbc** 08 02 49.2 -0.3
J57A PKPab **PKPab** 08 03 02.2 -0.3
J57A **Williamstown** 153.81 323 P **PKPdf** 08 02 41.3 -0.3
baz=49,SNR=5.4
J57A P **PKPdf** 08 02 41.3 -0.3
baz=49,SNR=5.4
DELO **Deloro Mine** 153.92 326 PKPdf **PKPdf** 08 02 41.1 -0.7
DELO PKPbc **PKiKP** 08 02 50.3 +0.5
DELO PKPab **PKPab** 08 03 03.2 +0.3
PECO **Prince Edward** 154.00 325 **PKPdf** 08 02 40.4 -1.5
PECO **PKiKP** 08 02 50.7 +0.7
PECO PKPab **PKPab** 08 03 03.2 -0.1
PAL **Palisades** 154.02 316 P **PKPdf** 08 02 41.0 -1.0
baz=56
TRNY **Table Rock, Ra** 154.14 317 **PKPdf** 08 02 40.9 -1.3
TRNY PKPbc **PKiKP** 08 02 51.2 +0.8
TRNY PKPab **PKPab** 08 03 03.5 -0.5
EGMT **Eagleton** 154.16 19 IAMs_20 IAMs_20 09 14 44.7
comp=Z,863nm,22.0s
EGMT **Eagleton** 154.16 19 P **PKPdf** 08 02 41.9 -0.3
baz=334,SNR=41
J56A **Wolcott** 154.37 323 **PKPdf** 08 02 41.7 -0.7
J56A PKPab **PKPab** 08 03 04.4 -0.5
ODNJ **Ogdensburg** 154.41 317 P **PKiKP** 08 02 51.0 0.0
baz=55
SJCC **San Jacinto, C** 154.50 240 *eP* **PKPdf** 08 02 44.8 +1.2
K57A **Scipio Center** 154.54 322 **PKPdf** 08 02 42.1 -0.6
K57A **PKiKP** 08 02 51.4 +0.2
K57A **PKPab** 08 03 06.4 +0.7
K57A **Scipio Center** 154.54 322 P **PKiKP** 08 02 51.2 0.0
baz=49,SNR=6.1
BINY **Binghamton** 154.58 321 P **PKPdf** 08 02 42.7 -0.1
baz=51,SNR=7.5
BINY **Binghamton** 154.58 321 P **PKPdf** 08 02 42.3 -0.6
baz=51,SNR=7.5
J55A **Hilton** 154.90 325 **PKPdf** 08 02 42.3 -0.8
J55A PKPab **PKPab** 08 03 07.4 +0.3
DGMT **Dagmar** 155.05 11 **PKPdf** 08 02 42.5 -0.8
DGMT PKPab **PKPab** 08 03 07.6 0.0
DGMT **Dagmar** 155.05 11 P **PKPdf** 08 02 44.0 +0.7
baz=346,SNR=6.6
DGMT **Dagmar** 155.05 11 P **PKPdf** 08 02 42.9 -0.4
baz=346
TUPA **Temple Univers** 155.29 316 P PKPdf 08 02 53.3 +10
baz=56,SNR=6.2
MMNY **Mt. Morris Dam** 155.31 324 **PKPdf** 08 02 43.0 -0.7
MMNY PKPab **PKPab** 08 03 08.5 -0.4
E46A **Sault Ste Mari** 155.32 338 P **PKPdf** 08 02 43.1 -0.5
baz=30
L56A **Greenwood** 155.52 322 P **PKPdf** 08 02 43.6 -0.6
baz=49,SNR=12
L56A P **PKPdf** 08 02 43.6 -0.6
baz=49,SNR=12
B35A **Bob, Littlefor** 155.55 354 P **PKPdf** 08 02 43.1 -0.8
baz=8.4
BOZ **Bozeman (W)** 155.63 25 **PKPdf** 08 02 42.6 -1.7
BOZ **Bozeman (W)** 155.63 25 PKIKP **PKPdf** 08 02 42.6 -1.7
BOZ **Bozeman (W)** 155.63 25 P **PKPdf** 08 02 44.1 -0.2
baz=327
EYMN **Ely** 155.67 350 P **PKPdf** 08 02 43.5 -0.6
baz=13,SNR=7.1
EYMN **Ely** 155.67 350 P **PKPdf** 08 02 43.2 -0.9
baz=13,SNR=7.1
WUPA **West Chester U** 155.69 316 PKPdf **PKPdf** 08 02 44.8 +0.4
WUPA PKPab **PKPab** 08 03 11.0 +0.4
AGMN **Agassiz Nation** 155.76 357 P **PKPdf** 08 02 43.3 -0.9
baz=3.7
AGMN **Agassiz Nation** 155.76 357 P **PKPdf** 08 02 43.0 -1.2
baz=3.7
M57A **Sunshine Farm,** 155.78 320 **PKPdf** 08 02 42.9 -1.6
M57A PKPab **PKPab** 08 03 11.2 +0.2
M57A **Sunshine Farm,** 155.78 320 P **PKPdf** 08 02 43.8 -0.6
baz=51
M57A P **PKPdf** 08 02 43.8 -0.6
baz=51
SAO **San Andreas Ge** 155.83 53 **PKPdf** 08 02 43.0 -1.7
SAO PKPab **PKPab** 08 03 10.4 -1.0
SAO **San Andreas Ge** 155.83 53 PKIKP **PKPdf** 08 02 43.0 -1.7
SAO 08 03 10.4
WVNY **West Valley, N** 155.91 324 P **PKPdf** 08 02 44.3 -0.3
baz=46
D41A **Chassel** 155.94 345 P **PKPdf** 08 02 44.6 +0.2
baz=20,SNR=6.5
CMB **Columbia Colle** 156.01 49 **PKPdf** 08 02 43.3 -1.6
CMB PKPab **PKPab** 08 03 12.0 -0.2
CMB **Columbia Colle** 156.01 49 PKP2 **PKPab** 08 03 12.0 -0.2
CMB 09 02 43.3
HLID **Hailey** 156.07 31 P **PKPdf** 08 02 45.1 +0.2
baz=319,SNR=36
MVL **Millersville** 156.12 317 PKPdf **PKPdf** 08 02 44.1 -0.8
MVL **PKPab** 08 03 13.2 +0.7
E43A **Lone Tree Farm** 156.17 342 P **PKPdf** 08 02 44.1 -0.7
baz=24,SNR=11
MDND **Maddock** 156.18 4 P **PKPdf** 08 02 43.1 -1.6
baz=355
YERR **Yerington** 156.30 46 **PKPdf** 08 02 45.5 0.0
YERR PKPab **PKPab** 08 03 13.4 -0.1
LAO **LASA Array** 156.34 15 P **PKPdf** 08 02 45.1 0.0
baz=340,SNR=8.1
M55A **Ridgway** 156.63 323 **PKPdf** 08 02 44.4 -1.2
M55A PKPab **PKPab** 08 03 14.4 -0.3
M55A **Ridgway** 156.63 323 P **PKPdf** 08 02 45.3 -0.3
baz=48,SNR=6.7
M55A P **PKPdf** 08 02 45.3 -0.3
baz=48,SNR=6.7
SSPA **Standing Stone** 156.67 320 PKPdf **PKPdf** 08 02 43.6 -2.0
SSPA PKPab **PKPab** 08 03 14.8 0.0
SSPA **Standing Stone** 156.67 320 P **PKPdf** 08 02 45.0 -0.6
baz=51,SNR=5.0
SSPA **Standing Stone** 156.67 320 P **PKPdf** 08 02 45.0 -0.6
baz=51
BMN **Battle Mountai** 156.72 41 PKPdf **PKPdf** 08 02 44.5 -1.4
BMN PKPab **PKPab** 08 03 14.7 -0.6
BMN **Battle Mountai** 156.72 41 PKP2 **PKPab** 08 03 14.7 -0.6
BMN 09 02 44.6
GLMI **Grayling** 156.76 336 P **PKPdf** 08 02 44.8 -0.8
baz=31
SDMD **Soldier's Deli** 156.77 316 P **PKPdf** 08 02 46.1 +0.3
baz=55,SNR=8.6
ERPA **Erie** 156.84 325 IAMs_20 IAMs_20 09 20 25.3
comp=Z,866nm,22.0s
ERPA **Erie** 156.84 325 P **PKPdf** 08 02 45.0 -0.8
baz=44
RLMT **Red Lodge** 156.89 22 P **PKPdf** 08 02 46.1 +0.1
baz=332
COWI **Conover** 156.98 345 P **PKPdf** 08 02 45.2 -0.7

baz=20
E38A The Farm, Brul 156.98 349 P PKPdf 08 02 45.3 -0.6
baz=14,SNR=8.5
F42A Maple Grove Fa 157.05 343 PKPdf PKPdf 08 02 45.4 -0.5
F42A PKPab 08 03 14.9 -1.4
H17A Grant Village 157.05 25 P PKPdf 08 02 47.3 +1.0
baz=328
NVAR Mina Array Bea 157.21 46 PKP PKPdf 08 02 47.2 +0.5
comp=Z,3.8nm,0.8s,baz=255,slow=1.3,SNR=46
NVAR PKPab PKPab 08 03 17.7 +0.2
comp=Z,18nm,0.7s,baz=287,slow=4.5,SNR=23
MLAC Mammoth, Mammo 157.28 48 P PKPdf 08 02 47.8 +0.9
baz=301
E28A Huff 157.37 6 P PKPdf 08 02 45.8 -0.5
baz=352,SNR=8.3
P57A Homestead Farm 157.46 318 PKPab 08 03 18.6 +0.3
P57A Homestead Farm 157.46 318 P PKPdf 08 02 46.6 0.0
baz=52,SNR=6.5
P57A P PKPdf 08 02 46.6 0.0
baz=52,SNR=6.5
SMMC Simmler 157.50 55 P PKPdf 08 02 48.1 +1.2
baz=294,SNR=6.4
VOG Valley Oaks Go 157.52 52 P PKPdf 08 02 46.6 -0.2
baz=297
ELK Elko 157.66 38 PKPdf PKPdf 08 02 46.8 -0.4
ELK PKPab PKPab 08 03 18.7 -0.7
ELK Elko 157.66 38 PKP2 PKPab 08 03 18.7 -0.7
ELK 09 02 46.8
M53A WI Miller and 157.69 325 P PKPdf 08 02 46.0 -0.9
baz=44
CBN Corbin Frederi 157.80 314 P PKPdf 08 02 46.5 -0.6
baz=56
PKM Mcpherson Peak 157.81 56 P PKPdf 08 02 48.6 +1.1
baz=294,SNR=22
VES Vestal, Richgr 157.95 53 P PKPdf 08 02 47.2 -0.2
baz=297,SNR=8.9
TIN Tinemaha, Big 157.98 49 P PKPdf 08 02 48.2 +0.6
baz=301
F36A Milaca 157.99 353 P PKPdf 08 02 46.3 -0.9
baz=9.7,SNR=8.1
G40A Rib Lake 158.01 346 P PKPdf 08 02 46.2 -1.0
baz=18,SNR=12
SBC Santa Barbara 158.06 57 P PKPdf 08 02 48.4 +0.9
baz=293
H43A Windswept, Lux 158.13 341 PKPdf PKPdf 08 02 45.9 -1.4
H43A PKPab PKPab 08 03 19.9 -1.0
J47A Sunmer 158.19 334 P PKPdf 08 02 47.3 -0.2
baz=32
J47A P PKPdf 08 02 47.3 -0.2
baz=32
HVU Hansel Valley 158.21 32 PKPdf PKPdf 08 02 47.4 -0.4
HVU PKPab PKPab 08 03 21.6 0.0
HVU Hansel Valley 158.21 32 PKP2 PKPab 08 03 21.6 0.0
HVU 09 02 47.4
N53A Lisbon 158.22 324 P PKPdf 08 02 47.5 -0.1
baz=45,SNR=8.5
N53A P PKPdf 08 02 47.5 -0.1
baz=45,SNR=8.5
R58B Mineral 158.26 314 PKPdf 08 02 46.3 -1.4
R58B PKPab PKPab 08 03 21.9 +0.1
R58B Mineral 158.26 314 P PKPdf 08 02 47.4 -0.3
baz=56,SNR=9.3
R58B P PKPdf 08 02 47.4 -0.3
baz=56,SNR=9.3
SCZ2 Santa Cruz Isl 158.28 58 P PKPdf 08 02 48.5 +0.6
baz=292
CWC Cottonwood Cre 158.39 50 P PKPdf 08 02 48.1 0.0
baz=300
O54A Avella 158.40 322 P PKPdf 08 02 47.8 0.0
baz=47,SNR=12
O54A P PKPdf 08 02 47.8 0.0
baz=47,SNR=12
ARVC Arvin 158.45 54 P PKPdf 08 02 48.7 +0.7
baz=295
MCWV Mont Chateau 158.45 320 P PKPdf 08 02 48.3 +0.4
baz=49,SNR=6.8
MCWV Mont Chateau 158.45 320 P PKPdf 08 02 47.3 -0.6
baz=49
AAM Ann Arbor 158.47 331 P PKPdf 08 02 46.7 -1.1
baz=36
ISA Isabella, Lake 158.47 53 PKPdf PKPdf 08 02 47.6 -0.6
ISA PKPab PKPab 08 03 22.0 -0.9
ISA Isabella, Lake 158.47 53 PKP2 PKPab 08 03 22.0 -0.9
ISA 09 02 47.6
ISA Isabella, Lake 158.47 53 P PKPdf 08 02 48.6 +0.4
baz=297,SNR=9.3
SPMN Marine on St. 158.53 351 P PKPdf 08 02 47.2 -0.6
baz=12,SNR=6.7
SPMN Marine on St. 158.53 351 P PKPdf 08 02 46.6 -1.1
baz=12,SNR=6.7
T59A Double "B" Far 158.58 312 PKPdf PKPdf 08 02 47.2 -0.9
T59A PKPab PKPab 08 03 23.1 -0.2
T59A Double "B" Far 158.58 312 P PKPab 08 03 23.0 -0.2
baz=58,SNR=7.2
T59A P PKPab 08 03 23.0 -0.2
baz=58,SNR=7.2
GRAC Grapevine Rang 158.61 48 P PKPdf 08 02 49.1 +0.9
baz=302,SNR=12
SNCC San Nicolas Is 158.63 60 P PKPdf 08 02 49.4 +1.1
baz=290
O53A New Philadelph 158.82 324 PKPab 08 03 24.4 +0.3
O53A New Philadelph 158.82 324 P PKPdf 08 02 47.9 -0.4
baz=45,SNR=5.8
BW06 Boulder Array 158.82 25 P PKPdf 08 02 47.4 -1.1
baz=328
PDAR Pinedale Array 158.82 25 PKP PKPdf 08 02 46.9 -1.7
comp=Z,16nm,1.2s,baz=63,slow=0.3,SNR=54
PDAR PKPab PKPab 08 03 23.1 -1.2
comp=Z,11nm,0.9s,baz=4.1,slow=1.7,SNR=14
I42A Draeger Farm, 158.99 343 PKPdf 08 02 47.0 -1.4
I42A PKPab 08 03 23.5 -1.2
I42A Draeger Farm, 158.99 343 P PKPdf 08 02 47.2 -1.1
baz=22,SNR=11
MPMC Manual Prospec 159.00 51 P PKPdf 08 02 49.8 +0.9
baz=300,SNR=23
R11A Troy Canyon, C 159.00 43 P PKPdf 08 02 49.3 +0.4
baz=308,SNR=94
U59A Littleton 159.06 310 P PKPab 08 03 25.9 +0.6
baz=59,SNR=7.6
U59A P PKPab 08 03 25.9 +0.6
baz=59,SNR=7.6
S57A Dark Hollow, R 159.08 315 P PKPdf 08 02 48.3 -0.3
baz=54,SNR=8.7
S57A P PKPdf 08 02 48.3 -0.3
baz=54,SNR=8.7
L48A N Adams 159.10 332 P PKPdf 08 02 48.2 -0.4
baz=35
L48A P PKPdf 08 02 48.2 -0.4
baz=35
LRMC Laurel Mtn Rad 159.13 52 P PKPdf 08 02 49.5 +0.5
baz=298,SNR=6.4
EDW2 Edwards Air Fo 159.17 54 P PKPdf 08 02 49.6 +0.6
baz=296,SNR=15
DECC Green Verdugo 159.18 56 P PKPdf 08 02 49.5 +0.5
baz=294
FURC Furnace Creek, 159.23 49 P PKPdf 08 02 49.5 +0.7
baz=302,SNR=19
O52A Adamsville 159.25 324 P PKPdf 08 02 48.5 -0.3
baz=44,SNR=6.4
O52A P PKPdf 08 02 48.5 -0.3
baz=44,SNR=6.4
RSSD Black Hills 159.26 13 PKPdf PKPdf 08 02 47.9 -1.1
RSSD PKPab PKPab 08 03 25.8 -0.3
RSSD Black Hills 159.26 13 PKP2 PKPab 08 03 25.8 -0.3
RSSD 09 02 47.9
RSSD Black Hills 159.26 13 P PKPdf 08 02 48.2 -0.8
baz=343
RSSD Black Hills 159.26 13 P PKPdf 08 02 48.1 -0.9
baz=343
DUG Dugway, Tooele 159.37 35 P PKPdf 08 02 49.5 +0.3
baz=317
TPNV Topopah Spring 159.39 47 P PKPdf 08 02 49.9 +0.6
baz=304,SNR=19
I40A Norwalk 159.41 346 P PKPdf 08 02 48.3 -0.6
baz=18,SNR=15
FMP Fort Macarthur 159.42 57 P PKPdf 08 02 50.0 +0.8
baz=293
CIS Catalina Islan 159.44 58 P PKPdf 08 02 49.8 +0.5
baz=292,SNR=8.9
P53A Whipple 159.45 322 PKPdf PKPdf 08 02 48.6 -0.4
P53A PKPab PKPab 08 03 26.5 -0.4
P53A Whipple 159.45 322 P PKPdf 08 02 49.0 0.0
baz=46,SNR=8.8
P53A P PKPdf 08 02 49.0 0.0
baz=46,SNR=8.8
Q54A Coxs Mills 159.47 320 P PKPdf 08 02 48.6 -0.5
baz=48,SNR=8.3
Q54A P PKPdf 08 02 48.6 -0.5
baz=48,SNR=8.3
SCI2 San Clemente I 159.49 60 P PKPdf 08 02 49.6 +0.3
baz=291
R55A Marlinton 159.50 318 PKPdf 08 02 46.7 -2.6
R55A PKPab PKPab 08 03 27.4 +0.2
R55A Marlinton 159.50 318 P PKPab 08 03 27.7 +0.5
baz=51,SNR=7.9
R55A P PKPab 08 03 27.7 +0.5
baz=51,SNR=7.9
SUSD Miller 159.61 3 P PKPdf 08 02 48.4 -0.7
baz=356
CNNC Cliffs of the 159.68 308 P PKPdf 08 02 48.9 -0.6
baz=62
BFSC Mount Baldy Ra 159.69 55 P PKPdf 08 02 49.9 +0.2
baz=295,SNR=7.0
T57A Hurt 159.71 314 P PKPab 08 03 28.4 +0.3
baz=55,SNR=10
T57A P PKPab 08 03 28.4 +0.3
baz=55,SNR=10
P52A Corning 159.75 324 PKPab 08 03 28.0 -0.2
P52A Corning 159.75 324 P PKPdf 08 02 48.6 -0.8
baz=44,SNR=9.7
ACSO Alum Creek Sta 159.76 326 PKPdf 08 02 47.8 -1.6
ACSO PKPab PKPab 08 03 27.4 -0.8
ACSO Alum Creek Sta 159.76 326 P PKPdf 08 02 48.8 -0.6
baz=41,SNR=8.4
I37A Lemond, Waseca 159.79 351 PKPab 08 03 27.9 -0.2
I37B Waseca 159.79 351 P PKPdf 08 02 48.8 -0.5
baz=311,SNR=10.0
L46A Eue Claire 159.80 335 PKPdf PKPdf 08 02 48.1 -1.3
L46A PKPab 08 03 27.3 -1.0
N49A Columbus Grove 159.81 330 P PKPdf 08 02 48.9 -0.5
baz=37,SNR=9.3
N49A P PKPdf 08 02 48.9 -0.5
baz=37,SNR=9.3
GSC Goldstone, Bar 159.85 52 P PKPdf 08 02 50.6 +0.8
baz=299,SNR=25
K43A Burlington 159.90 340 PKPdf PKPdf 08 02 48.3 -1.2
K43A PKPab PKPab 08 03 27.7 -1.0
RRX Edison Barstow 159.91 53 P PKPdf 08 02 50.6 +0.8
baz=298
SHOC Shoshone, Teco 159.93 50 P PKPdf 08 02 50.8 +1.0
baz=301,SNR=6.6
K22A Casper 159.99 20 P PKPdf 08 02 49.0 -0.8
baz=335
K22A Casper 159.99 20 P PKPdf 08 02 48.5 -1.3
baz=335
MPU Maple Canyon 160.10 33 PKPdf 08 02 48.2 -1.8
MPU PKPab 08 03 28.4 -1.6
ELS Elsinore Mount 160.11 57 PKPdf PKPdf 08 02 49.9 -0.2
ELS PKPab 08 03 29.4 -0.7
BBRC Big Bear Solar 160.24 55 P PKPdf 08 02 51.0 +0.5
baz=296
L44A Lake County Fo 160.24 339 P PKPdf 08 02 49.3 -0.5
baz=27
JFWS Jewell Farm 160.25 344 P PKPdf 08 02 49.4 -0.5
baz=20,SNR=7.1
JFWS Jewell Farm 160.25 344 P PKPdf 08 02 48.3 -1.6
baz=20,SNR=6.3
V58A Windy Hill, Pi 160.27 311 P PKPdf 08 02 49.5 -0.6
baz=58
V58A P PKPdf 08 02 49.5 -0.6
baz=58
Q52A Bidwell 160.30 323 PKPdf 08 02 48.6 -1.4
Q52A PKPab 08 03 30.5 -0.1
Q52A Bidwell 160.30 323 P PKPdf 08 02 49.6 -0.4
baz=45
Q52A P PKPdf 08 02 49.6 -0.4
baz=45
MURC Murrieta 160.31 57 P PKPdf 08 02 50.6 +0.4
baz=294,SNR=7.8
BLA Blacksburg 160.34 316 PKPab 08 03 31.7 +0.8
BLA Blacksburg 160.34 316 P PKPdf 08 02 49.5 -0.7
baz=53
ECSD EROS Data Cent 160.34 358 P PKPdf 08 02 49.0 -1.0
baz=2.5
ECSD EROS Data Cent 160.34 358 P PKPdf 08 02 48.9 -1.0
baz=2.5,SNR=67
TUQ Turquoise Moun 160.41 50 P PKPdf 08 02 51.4 +0.9
baz=301
HEC Hector,Ludlow 160.41 52 P PKPdf 08 02 51.3 +0.9
baz=299,SNR=6.1
O49A Covington 160.46 329 PKPdf 08 02 49.0 -1.2
O49A PKPab 08 03 30.2 -1.0
O49A Covington 160.46 329 P PKPdf 08 02 49.4 -0.8
baz=38,SNR=8.3
O49A P PKPdf 08 02 49.4 -0.8
baz=38,SNR=8.3
HQIL Hanson Quary C 160.56 338 PKPdf PKPdf 08 02 49.3 -0.9
HQIL PKPab 08 03 30.4 -1.1
R53A Hurricane 160.56 321 P PKPdf 08 02 50.2 -0.2
baz=47,SNR=11
R53A P PKPdf 08 02 50.2 -0.2
baz=47,SNR=11
109C Camp Elliot, M 160.66 59 PKPab 08 03 32.9 +0.5
109C Camp Elliot, M 160.66 59 P PKPdf 08 02 51.2 +0.6
baz=292,SNR=5.7
O48B Farmland 160.79 330 P PKPab 08 03 31.7 -1.0
baz=36,SNR=5.7
O48B Farmland 160.79 330 P PKPdf 08 02 49.4 -1.1
baz=36
U56A King 160.83 314 P PKPab 08 03 33.6 +0.6
baz=55,SNR=8.2
U56A P PKPab 08 03 33.6 +0.6
baz=55,SNR=8.2
Q51A Peebles 160.84 325 P PKPab 08 03 32.9 -0.1
baz=43,SNR=8.5
Q51A P PKPab 08 03 32.9 -0.1
baz=43,SNR=8.5
PFO Pinyon Flats O 160.86 56 PKPdf PKPdf 08 02 51.8 +0.7
PFO PKPab 08 03 32.9 -0.6
PFO Pinyon Flats O 160.86 56 PKP2 PKPab 08 03 32.9 -0.6
PFO 09 02 51.8
PFO Pinyon Flats O 160.86 56 P PKPdf 08 02 51.7 +0.7
baz=295,SNR=25
TPFO Pinon Flats 160.87 56 P PKPdf 08 02 51.7 +0.7
baz=295,SNR=25
GMRC Granite Mounta 160.92 52 P PKPdf 08 02 52.2 +1.2
baz=300,SNR=28
L42A Oliver, Polo 160.94 342 P PKPab 08 03 32.2 -1.0
baz=22,SNR=8.0
M44A Midewin, Midew 160.99 338 P PKPab 08 03 32.7 -0.7
baz=27,SNR=5.7
K38A Parkersburg 161.04 349 P PKPdf 08 02 49.6 -1.1
baz=13
BELC Belle Mtn. Jos 161.04 54 P PKPdf 08 02 52.3 +1.1
baz=297,SNR=36
P49A Miami Univ. Ec 161.15 328 P PKPdf 08 02 50.1 -0.9
baz=39,SNR=6.6
P49A Miami Univ. Ec 161.15 328 P PKPdf 08 02 49.8 -1.1
baz=39,SNR=6.6
MONP2 Monument Peak 161.18 58 P PKPdf 08 02 52.6 +1.1
baz=294,SNR=30
L40A Anamosa 161.29 345 PKPdf 08 02 50.1 -0.9
L40A PKPab 08 03 33.3 -1.4
SFIN Lafayette 161.51 334 P PKPab 08 03 34.6 -1.2
baz=31,SNR=6.0
SFIN Lafayette 161.51 334 P PKPdf 08 02 50.9 -0.4
baz=31,SNR=6.0
IKP In-Ko-Pah, Jac 161.52 58 P PKPdf 08 02 52.6 +1.0
baz=293,SNR=20
P48A Milroy 161.55 329 P PKPdf 08 02 50.3 -1.1
baz=37,SNR=7.9
P48A P PKPdf 08 02 50.3 -1.1
baz=37,SNR=7.9
O20A White River Ci 161.57 27 P PKPdf 08 02 51.4 -0.2
baz=328,SNR=34
IRM Iron Mountain 161.59 53 P PKPdf 08 02 52.9 +1.2
baz=295,SNR=12
BC3 Big Chuckawall 161.60 55 P PKPdf 08 02 52.7 +0.9
baz=297,SNR=18
SWSC Sam W. Stewart 161.64 57 P PKPdf 08 02 52.5 +0.8
baz=295,SNR=8.6
U54A Nelsons Funny 161.65 316 P PKPdf 08 02 51.3 -0.4
baz=51,SNR=6.8
U54A P PKPdf 08 02 51.3 -0.4
baz=51,SNR=6.8
V55A Taylorsville 161.66 314 P PKPdf 08 02 51.5 -0.1
baz=54,SNR=5.1
V55A P PKPdf 08 02 51.5 -0.1
baz=54,SNR=5.1
NEE2 Needles Airpor 161.67 50 P PKPdf 08 02 52.1 +0.5
baz=302
N23A Red Feather La 161.76 21 P PKPdf 08 02 51.5 -0.4
baz=335,SNR=22
BIRD Birdtown, Kers 161.81 309 PKPdf PKPdf 08 02 51.0 -0.8
BIRD PKPab PKPab 08 03 37.4 0.0
BIRD Birdtown, Kers 161.81 309 P PKPab 08 03 37.9 +0.5
baz=59,SNR=5.8
SCIA State Center 161.83 350 P PKPdf 08 02 50.6 -1.0
baz=13
KMSC Kings Mountain 162.14 312 P PKPdf 08 02 51.7 -0.4
baz=56,SNR=6.0
KMSC Kings Mountain 162.14 312 P PKPdf 08 02 51.4 -0.7
baz=56,SNR=6.4
HDIL Hopedale 162.15 339 P PKPab 08 03 37.6 -1.0
baz=25
HDIL Hopedale 162.15 339 P PKPdf 08 02 51.3 -0.6
baz=25
O44A Mansfield 162.23 337 P PKPdf 08 02 52.2 +0.2
baz=28,SNR=5.9
BLYC Blythe 162.24 53 PKPdf PKPdf 08 02 51.5 -0.8
BLYC PKPab PKPab 08 03 38.7 -0.6
PDMCI Parker Dam,Lak 162.25 51 P PKPdf 08 02 52.9 +0.7
baz=301,SNR=17
NHSC New Hope 162.33 305 P PKPdf 08 02 52.1 -0.2
baz=63
GLA Glamis 162.34 56 P PKPdf 08 02 53.5 +1.0
baz=296,SNR=10
R49A Shelbyville 162.34 326 P PKPdf 08 02 51.5 -0.8
baz=40,SNR=6.5
R49A P PKPdf 08 02 51.5 -0.8
baz=40,SNR=6.5
N41A Harden Midland 162.47 343 PKPdf 08 02 50.6 -1.6
N41A PKPab 08 03 38.5 -1.4
N41A Harden Midland 162.47 343 P PKPab 08 03 38.7 -1.2
baz=20,SNR=8.5
JSC Jenkinsville 162.56 309 P PKPdf 08 02 52.7 +0.2
baz=58,SNR=5.7
BGNE Belgrade 162.67 2 P PKPdf 08 02 51.3 -1.2
baz=358
TZTN Tazewell 162.70 319 P PKPdf 08 02 52.5 -0.2
baz=48,SNR=16
TZTN Tazewell 162.70 319 P PKPdf 08 02 52.5 -0.2
baz=48
OGNE Ogallala 162.72 12 P PKPab 08 03 40.4 -0.8
baz=346
OGNE Ogallala 162.72 12 P PKPdf 08 02 51.5 -1.1
baz=346
V53A Saluda 162.81 316 P PKPdf 08 02 52.9 0.0
baz=51,SNR=12
V53A P PKPdf 08 02 52.9 0.0
baz=51,SNR=12
ISCO Idaho Springs 162.85 22 P PKPdf 08 02 53.3 +0.2
baz=334,SNR=28
ISCO Idaho Springs 162.85 22 P PKPdf 08 02 52.7 -0.4
baz=334,SNR=28
N38A Joes South For 162.92 349 PKPdf 08 02 51.7 -1.0
N38A PKPab 08 03 40.3 -1.5
P43A Skaggs, Pawnee 163.05 338 P PKPdf 08 02 53.3 +0.5
baz=26,SNR=7.7
T50A Nancy 163.11 323 PKPab 08 03 43.0 0.0
T50A Nancy 163.11 323 P PKPdf 08 02 52.4 -0.7
baz=43
T50A P PKPdf 08 02 52.4 -0.7
baz=43
V52A Sevierville 163.19 318 PKPdf 08 02 52.2 -1.0
V52A PKPab 08 03 43.8 +0.4
V52A Sevierville 163.19 318 P PKPdf 08 02 53.4 +0.3
baz=49,SNR=11
ACON Acoyapa 163.24 226 eP PKPdf 08 02 49.3 -4.5
HAW Hawthorne Fire 163.28 307 P PKPdf 08 02 53.7 +0.4
baz=60,SNR=8.4
HODGE Hodges 163.28 311 PKPab 08 03 44.8 +0.9
OLIL Olney 163.32 334 P PKPdf 08 02 53.4 +0.3
baz=31,SNR=5.4
WUAZ Wupatki 163.41 43 P PKPdf 08 02 54.3 +0.8
baz=310,SNR=11
TKL Tuckaleechee C 163.42 317 PKPab 08 03 44.8 +0.4
TKL Tuckaleechee C 163.42 317 P PKPdf 08 02 53.1 -0.3
baz=49,SNR=6.9
Q44A Meyer Farm, Va 163.53 336 P PKPdf 08 02 53.4 +0.1
baz=28,SNR=7.6
V51A Loudon 163.68 319 P PKPdf 08 02 53.4 -0.2
baz=48
Q24A Divide 163.76 22 P PKPdf 08 02 53.6 -0.4
baz=334,SNR=11
MVCO Mesa Verde 163.83 33 P PKPdf 08 02 54.5 +0.5
baz=322,SNR=52
W52A Murphy 163.88 316 PKPdf 08 02 52.6 -1.3
W52A PKPab PKPab 08 03 46.2 -0.3
W52A Murphy 163.88 316 P PKPdf 08 02 54.1 +0.2
baz=50,SNR=5.9
P40A Paris 163.89 345 P PKPdf 08 02 53.5 -0.1
baz=18,SNR=17
U49A Red Boiling Sp 163.99 324 P PKPdf 08 02 53.6 -0.3
baz=42,SNR=5.5
CPCT Cooper Cave 164.02 318 PKPab 08 03 47.9 +0.9
S22A 4UR Ranch, Cre 164.17 28 P PKPdf 08 02 54.9 +0.5
baz=327,SNR=55
214A Organ Pipe Nat 164.35 56 P PKPdf 08 02 55.2 +0.8
baz=297,SNR=24
KSCO Kaye Shedlock' 164.45 15 PKPab 08 03 48.6 -0.2
KSCO Kaye Shedlock' 164.45 15 P PKPdf 08 02 54.6 +0.3
baz=342,SNR=12
KSCO Kaye Shedlock' 164.45 15 P PKPdf 08 02 54.3 -0.1
baz=342,SNR=12
GOGA Godfrey 164.57 310 PKPab 08 03 50.4 +0.9
GOGA Godfrey 164.57 310 P PKPdf 08 02 54.3 -0.1
baz=56
GOGA Godfrey 164.57 310 P PKPdf 08 02 54.6 +0.2
baz=56,SNR=15
CLTN Cedars of Leba 164.60 324 PKPab 08 03 49.4 -0.1
SIUC Southern Illin 164.64 334 PKPab 08 03 49.5 -0.1
W50A Signal Mountai 164.66 319 P PKPdf 08 02 54.4 -0.2
baz=47,SNR=16
W18A Petrified Fore 164.67 41 P PKPdf 08 02 55.4 +0.6
baz=313
S44A Carbondale 164.68 335 PKPab 08 03 49.6 -0.1
S44A Carbondale 164.68 335 P PKPdf 08 02 54.5 +0.1
baz=30,SNR=9.5
SDCO Great Sand Dun 164.72 25 P PKPdf 08 02 54.5 -0.3
baz=331
SDCO Great Sand Dun 164.72 25 P PKPdf 08 02 54.9 0.0
baz=331,SNR=37
X51A Calhoun 164.80 316 P PKPdf 08 02 54.9 +0.3
baz=50,SNR=6.5
X51A P PKPdf 08 02 54.9 +0.3
baz=50,SNR=6.5
FVM French Village 164.85 338 P PKPdf 08 02 54.4 -0.1
baz=25,SNR=9.9
KSU1 Kansas State U 164.97 357 P PKPdf 08 02 54.8 +0.2
baz=3.2,SNR=16
KSU1 Kansas State U 164.97 357 P PKPdf 08 02 54.2 -0.5
baz=3.2,SNR=16
SWET Sewanee 165.01 321 PKPab 08 03 51.2 -0.2
DWPF Disney Wildern 165.02 289 P PKPdf 08 02 54.7 -0.3
baz=78
CCM Cathedral Cave 165.05 341 PKPdf 08 02 53.3 -1.4
CCM PKPab 08 03 50.7 -0.6
CCM Cathedral Cave 165.05 341 PKP2 PKPab 08 03 50.7 -0.6
CCM 09 02 53.3
CCM Cathedral Cave 165.05 341 P PKPdf 08 02 54.6 -0.1
baz=23,SNR=16
CCM Cathedral Cave 165.05 341 P PKPdf 08 02 54.2 -0.6
baz=23
R40A Maddies Statio 165.11 344 P PKPdf 08 02 54.5 -0.3
baz=19,SNR=18
V48A Smith Brothers 165.13 324 P PKPdf 08 02 54.7 -0.2
baz=41
CBKS Cedar Bluff 165.15 7 P PKPdf 08 02 54.6 -0.3
baz=352,SNR=7.4
FPAL Fort Paine 165.29 318 PKPab 08 03 52.9 +0.3
WVT Waverly 165.35 328 P PKPdf 08 02 54.3 -0.8
baz=37
R32A Long Quarter, 165.62 4 PKPdf 08 02 53.6 -1.6
R32A PKPab 08 03 52.1 -1.7
R32A Long Quarter, 165.62 4 P PKPdf 08 02 55.4 +0.1
baz=356,SNR=16
T25A Trinidad 165.66 23 P PKPdf 08 02 55.6 0.0
baz=334
TIGA Tifton 165.66 304 P PKPdf 08 02 55.3 -0.1
baz=62
TUC Tucson 165.68 52 P PKPdf 08 02 56.4 +0.9
baz=302
152A Waverly Hall 165.86 310 P PKPdf 08 02 56.1 +0.5
baz=56
PBMO Poplar Bluff 165.93 336 P PKPdf 08 02 55.4 -0.1
baz=27,SNR=9.4
S39A Bolivar 165.93 346 P PKPdf 08 02 55.1 -0.4
baz=16,SNR=20
X48A Hartselle 166.20 321 P PKPdf 08 02 55.5 -0.3
baz=44,SNR=23

Y49A Blount Mountai 166.24 318 P PKPdf 08 02 56.1 +0.3
baz=47,SNR=17
ANMO Albuquerque 166.63 34 PKPdf 08 02 55.8 -0.6
ANMO PKPab PKPab 08 03 55.6 -3.1
ANMO Albuquerque 166.63 34 PKP2 PKPab 08 03 55.6 -3.1
ANMO 09 02 55.8
ANMO Albuquerque 166.63 34 P PKPdf 08 02 57.0 +0.6
baz=322
ANMO Albuquerque 166.63 34 P PKPdf 08 02 56.5 +0.2
baz=322
W45A Hickory Valley 166.78 329 P PKPdf 08 02 56.3 +0.1
baz=35
Y22D IRIS PASSCAL I 167.05 37 P PKPdf 08 02 56.9 +0.2
baz=318
Y22A Socorro 167.12 38 P PKPdf 08 02 57.3 +0.6
baz=318
T35B Sooner Cattle 167.14 356 P PKPdf 08 02 56.7 +0.2
baz=4.1
LRAL Lakeview Retre 167.15 317 P PKPdf 08 02 56.8 +0.3
baz=48
LRAL Lakeview Retre 167.15 317 P PKPdf 08 02 56.9 +0.3
baz=48,SNR=24
250A Grady 167.33 311 P PKPdf 08 02 56.9 +0.2
baz=54,SNR=5.0
U38A Gravette 167.36 348 P PKPdf 08 02 55.6 -1.0
baz=13,SNR=8.9
121A Cookes Peak, D 167.60 45 P PKPdf 08 02 57.9 +0.8
baz=311
121A Cookes Peak, D 167.60 45 P PKPdf 08 02 57.9 +0.8
baz=311,SNR=26
Z47A Carrollton 167.69 320 P PKPdf 08 02 57.3 +0.4
baz=44,SNR=23
RLO Rose Lookout 167.73 351 PKPdf 08 02 55.2 -1.7
RLO PKPab 08 04 02.4 -0.8
TUL1 Leonard 168.08 353 PKPdf 08 02 56.0 -1.1
TUL1 PKPab PKPab 08 04 03.9 -0.8
TUL1 Leonard 168.08 353 P PKPdf 08 02 56.8 -0.4
baz=7.6
TUL1 Leonard 168.08 353 P PKPdf 08 02 56.8 -0.4
baz=7.6,SNR=16
BRAL Brewton 168.34 310 P PKPdf 08 02 58.1 +0.7
baz=55
UALR University of 168.40 338 PKPdf 08 02 57.4 0.0
UALR PKPab PKPab 08 04 05.6 -0.6
AMTX Amarillo 168.60 18 P PKPdf 08 02 57.5 -0.1
baz=341
AMTX Amarillo 168.60 18 P PKPdf 08 02 57.6 0.0
baz=341
MIAR Mount Ida 168.99 343 PKPdf 08 02 58.0 +0.2
MIAR PKPab PKPab 08 04 08.2 -0.6
MIAR Mount Ida 168.99 343 PKIKP PKPdf 08 02 58.0 +0.2
MIAR 08 04 08.2
MIAR Mount Ida 168.99 343 P PKPdf 08 02 58.1 +0.3
baz=19
MIAR Mount Ida 168.99 343 P PKPdf 08 02 57.9 +0.1
baz=19
MSTX Muleshoe 169.08 24 P PKPdf 08 02 58.5 +0.5
baz=334,SNR=16
MSTX Muleshoe 169.08 24 P PKPdf 08 02 58.0 0.0
baz=334,SNR=16
WMOK Wichita Mounta 169.28 6 P PKPdf 08 02 57.6 -0.3
baz=354
WMOK Wichita Mounta 169.28 6 P PKPdf 08 02 57.7 -0.3
baz=354,SNR=24
X37A Clayton 169.33 351 P PKPdf 08 02 58.0 0.0
baz=11
X34A Smith Ranch, M 169.47 2 PKPdf 08 02 57.9 -0.2
X34A PKPab PKPab 08 04 08.1 -2.9
VBMS Vicksburg 169.79 325 P PKPdf 08 02 58.6 +0.3
baz=38
GDL2 Guadalupe Moun 169.86 35 PKPdf 08 02 58.6 0.0
GDL2 PKPab PKPab 08 04 12.5 -0.5
Z41A Richland Creek 169.94 337 P PKPdf 08 02 58.9 +0.6
baz=25
HTMS Hat Mesa 170.01 31 PKPab 08 04 12.9 -0.7
344A Westbrook Farm 170.50 322 P PKPdf 08 03 00.1 +1.3
baz=40
Z38A Mt. Pleasant 170.56 347 P PKPdf 08 02 59.5 +0.7
baz=14,SNR=17
ABTX Abilene, Hawle 171.24 12 P PKPdf 08 02 59.8 +0.6
baz=347,SNR=17
ABTX Abilene, Hawle 171.24 12 P PKPdf 08 02 59.3 +0.2
baz=347,SNR=17
NATX Nacogdoches 171.91 343 PKPdf PKPdf 08 02 59.9 +0.4
NATX PKPab 08 04 20.0 -1.8
NATX Nacogdoches 171.91 343 P PKPdf 08 02 59.9 +0.4
baz=19,SNR=12
WHTX Lake Whitney, 172.08 360 P PKPdf 08 02 59.8 +0.3
baz=0.4
WHTX Lake Whitney, 172.08 360 P PKPdf 08 02 59.6 +0.1
baz=0.4,SNR=19
TX31 Lajitas Ar. Si 172.36 45 P PKPdf 08 03 00.4 +0.5
baz=313,SNR=6.2
TXAR Lajitas Array 172.36 45 PKP PKPdf 08 03 00.1 +0.2
comp=Z,34nm,1.2s,baz=170,slow=0.8,SNR=114
TXAR PKPab PKPab 08 04 23.6 -0.6
comp=Z,20nm,1.2s,baz=284,slow=2.1,SNR=7.6
TXAR PP PP 08 08 18.4 +3.3
comp=Z,16nm,1.3s,baz=343,slow=2.6,SNR=8.8
JCT Junction City 173.26 17 P PKPdf 08 03 00.3 +0.2
baz=342
JCT Junction City 173.26 17 P PKPdf 08 03 00.5 +0.3
baz=342
435B Jarrell 173.28 1 P PKPdf 08 03 00.5 +0.4
baz=360
HKT Hockley 173.93 346 PKPdf PKPdf 08 02 59.5 -0.7
HKT PKPab 08 04 28.9 -1.7
HKT Hockley 173.93 346 PKIKP PKPdf 08 02 59.5 -0.7
HKT 08 04 29.0
HKT Hockley 173.93 346 P PKPdf 08 03 00.7 +0.5
baz=14
833A Chaparral WMA, 175.40 21 P PKPdf 08 03 01.1 +0.3
baz=338
833A Chaparral WMA, 175.40 21 P PKPdf 08 03 01.4 +0.6
baz=338

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*IDC **01** 07:50:58.0±1.3, 39°.93N×48°.03E, h0km, mb3.9/8, mbtmp4.0/15, ML3.7/5, MS3.5/4, Error ellipse: s-maj=21.6km s-min=12.1km az=167.0*
*TEH **01** 07:51:01.9, 39°.98N×47°.87E, h25km, ML3.7*
*NSSP **01** 07:51:01.7, 39°.98N×47°.67E, h10km, Ms4.0*
*AZER **01** 07:51:01.6±0.0, 39°.92N×47°.87E, h25km±1km, Error ellipse: s-maj=0.6km s-min=0.4km az=297.0*
*DRS **01** 07:51:05.5±0.0, 39°.75N×47°.90E, h26km*
ISC 01 07:51:01.9±1.0, **39°.93N**±0°.02×**47°.86E**±0°.02, **h25**km±9km, **n131**, σ**1s.54**/182, **mb3.9**/8, **2C, Iran-Armenia-Azerbaijan border region**

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

BLQ Beylaqan 0.31 228 ePg Pn 07 51 10.4 -0.4
BLQ Beylaqan 0.31 228 P Pn 07 51 10.5 -0.4
SNR=33
BLQ S Sn 07 51 16.6 +0.1
ZRD Zardab 0.38 339 ePg Pn 07 51 11.6 -0.1
ZRD Zardab 0.38 339 P Pn 07 51 11.6 -0.1
SNR=31
ZRD S Sn 07 51 19.8 +1.6
SAAT Saatly 0.44 99 ePn Pb 07 51 09.9 -1.1
SAAT Saatly 0.44 99 P Pb 07 51 09.9 -1.1
SNR=50
SAAT S Sb 07 51 16.7 -0.6
KDMR Kurdemir 0.51 29 ePn Pn 07 51 12.9 -0.6
KDMR Kurdemir 0.51 29 P Pn 07 51 13.0 -0.6
SNR=61
KDMR S Sn 07 51 22.2 +0.6
AGDM Agdam 0.60 288 P Pn 07 51 14.9 0.0
SNR=650
AGDM S Sn 07 51 24.9 +1.1
BRDA Brd 0.62 303 ePn Pn 07 51 15.9 +0.9
BRDA Brd 0.62 303 P Pn 07 51 16.0 +0.9
SNR=93
BRDA S Sn 07 51 27.0 +2.8
QRD Qoradiz 0.62 222 ePn Pn 07 51 14.9 -0.2
QRD Qoradiz 0.62 222 P Pn 07 51 14.9 -0.2
SNR=63
QRD S Sn 07 51 24.2 -0.1
GLBA Clilabad 0.80 149 ePn Pn 07 51 17.7 +0.2
GLBA Clilabad 0.80 149 P Pn 07 51 17.7 +0.2
SNR=165
GLBA S Sn 07 51 29.3 +0.7
ALIB Äli-Bayra 0.88 88 P Pn 07 51 20.1 +1.5
SNR=55
ALIB S Sn 07 51 32.8 +2.2
IML Ismayilli 0.90 16 ePn Pn 07 51 18.9 0.0
IML Ismayilli 0.90 16 P Pn 07 51 19.0 0.0
SNR=86
IML S Sn 07 51 32.4 +1.2
QBL Gabala 1.02 359 ePn Pb 07 51 21.0 +0.2
QBL Gabala 1.02 359 P Pb 07 51 21.1 +0.2
SNR=16
QBL S Sn 07 51 35.3 +1.2
GBS Qobustan 1.03 53 ePn Pb 07 51 22.5 +1.5
GBS Qobustan 1.03 53 P Pb 07 51 22.6 +1.5
SNR=96
GBS S Sn 07 51 35.6 +1.2
PQL Pirkuli 1.03 33 ePn Pb 07 51 21.2 +0.2
PQL Pirkuli 1.03 33 P Pb 07 51 21.3 +0.2
SNR=45
PQL S Sn 07 51 36.1 +1.6
MNGR Mingechevir, A 1.03 325 ePn Pb 07 51 21.9 +0.9
MNGR Mingechevir, A 1.03 325 P Pb 07 51 22.0 +0.9
SNR=6.5
MNGR S Sn 07 51 37.1 +2.7
YRD Yardimli 1.05 164 ePn Pb 07 51 21.4 -0.1
YRD Yardimli 1.05 164 P Pb 07 51 21.5 -0.1
SNR=262
YRD S Sn 07 51 36.1 +0.9
GRMI Germi 1.12 179 ePg Pb 07 51 22.5 -0.1
ATGJ Altiaghaj 1.24 41 ePn Pb 07 51 25.5 +0.8
ATGJ Altiaghaj 1.24 41 P Pb 07 51 25.5 +0.8
SNR=100
ATGJ S Sb 07 51 44.0 +3.5
GRS Goris 1.25 251 eP Pb 07 51 24.4 -0.4
GRS eS Sb 07 51 41.8 +1.1
XNQ Khinaliq 1.26 10 ePn Pn 07 51 23.9 -0.2
XNQ Khinaliq 1.26 10 P Pn 07 51 23.9 -0.2
SNR=168
XNQ S Sb 07 51 41.3 +0.3
LRK Lerik 1.34 164 ePn Pb 07 51 26.0 -0.3
LRK Lerik 1.34 164 Pn Pb 07 51 26.0 -0.3
SNR=137
LRK Sn Sb 07 51 44.1 +1.1
SEKA Sheki 1.38 339 ePn Pn 07 51 25.7 +0.2
SEKA Sheki 1.38 339 Pn Pn 07 51 25.8 +0.2
SNR=137
SEKA Sn Sb 07 51 44.7 +0.5
GANJ Ganja 1.38 302 ePn Pn 07 51 25.7 +0.2
GANJ Ganja 1.38 302 Pn Pn 07 51 25.8 +0.2
SNR=69
GANJ Sn Sb 07 51 44.7 +0.5
SIZA Siyzn 1.40 34 ePn Pb 07 51 28.1 +0.8
SIZA Siyzn 1.40 34 Pg Pb 07 51 28.2 +0.8
SNR=194
SIZA Sg Sb 07 51 48.4 +3.7
LKRN Lenkeran, Azer 1.41 149 ePn Pb 07 51 26.8 -0.7
LKRN Lenkeran, Azer 1.41 149 Pn Pb 07 51 26.8 -0.7
SNR=6.5
LKRN Sn Sb 07 51 44.9 -0.1
QUB Quba 1.50 15 ePn Pb 07 51 29.6 +0.5
QUBA Quba, Azerbaij 1.50 18 Pg Pb 07 51 29.6 +0.5
SNR=21
QUBA Sn Sb 07 51 49.5 +1.6
GOBA Gobu 1.51 71 ePg Pb 07 51 30.4 +1.2
GOBA Gobu 1.51 71 Pn Pb 07 51 30.4 +1.2
SNR=8.1
GOBA Sn Sb 07 51 49.3 +1.4
ASTR Astara 1.54 152 ePn Pb 07 51 28.8 -1.0
ASTR Astara 1.54 152 Pn Pb 07 51 28.8 -1.0
SNR=58
ASTR Sn Sb 07 51 49.3 +0.4
AKT Akhty 1.55 356 ePg Pb 07 51 29.6 -0.5
159nm,0.2s
AKT eSg Sb 07 51 49.1 -0.2
123nm,0.4s
QSAR Qusar 1.61 11 ePn Pb 07 51 30.3 -0.7
QSAR Qusar 1.61 11 Pn Pb 07 51 30.4 -0.7
SNR=49
QSAR Sn Sb 07 51 52.2 +1.2
KSMR Kasumkent 1.69 7 ePg Pb 07 51 31.8 -0.5
2.0nm,0.1s
KSMR eSg Sb 07 51 52.6 -0.4
23nm,0.2s
TVRZ Varzaqan 1.70 213 ePn Pb 07 51 32.1 -0.4
GAS1 Astara - Iran 1.72 153 ePn Pn 07 51 31.1 +1.0
IHRS Heris 1.73 202 ePn Pb 07 51 32.4 -0.7
IHRS eSg Sb 07 51 54.9 +0.5
IHRS e 07 51 56.4
comp=Z,14μm,0.2s
ORD Ordubad 1.76 236 ePn Pb 07 51 32.5 -0.9
ORD Ordubad 1.76 236 Pn Pb 07 51 32.6 -0.9
SNR=84
ORD Sn Sb 07 51 55.1 0.0
GDB GEDABAY 1.79 297 ePn Pn 07 51 31.8 +0.5
GDB GEDABAY 1.79 297 Pn Pn 07 51 31.9 +0.5
SNR=171
GDB Sn Sb 07 51 56.1 -0.2
SBZ Shahbuz 1.86 254 ePn Pb 07 51 34.9 -0.3
SBZ Shahbuz 1.86 254 Pg Pb 07 51 34.8 -0.3
SNR=44
SBZ Sn Sb 07 51 59.2 +1.1
ZKT Zaqatala 1.95 333 ePn Pn 07 51 34.3 +0.9
ZKTA Zakatala 1.95 332 Pn Pn 07 51 34.2 +0.9
SNR=44
ZKTA Sn Sb 07 52 00.1 -0.5
NAX Nakhchivan 1.98 248 ePn Pb 07 51 37.4 +0.2
NAX Nakhchivan 1.98 248 Pg Pb 07 51 37.5 +0.2
SNR=18
NAX Sg Sb 07 52 04.0 +2.6
DDFL Dedoflistskaro 2.01 319 P Pb 07 51 38.0 +0.1
DDFL S Sb 07 52 07.6 +5.1
IMRD Marand 2.07 235 ePn Pb 07 51 37.6 -1.2
ISRB Sarab 2.10 184 ePn Pb 07 51 37.8 -1.7
ITBZ Tabriz 2.15 219 ePn Pn 07 51 38.3 +2.0
ITBZ e 07 51 47.2
comp=Z,5μm,0.4s
QZX Qazax, Azerbai 2.21 302 ePn Pb 07 51 39.4 -1.7
QZX Qazax, Azerbai 2.21 302 Pn Pn 07 51 38.4 +1.4
SNR=39
QZX Sn Sb 07 52 07.1 -0.9
URKR Urkarakh 2.24 356 ePn Pb 07 51 39.6 -2.1
comp=Z,85nm,0.5s
URKR eSn Sb 07 52 07.2 -2.0
comp=Z,465nm,0.3s
LGD Lagodekhi 2.27 328 P Pn 07 51 38.6 +0.9
LGD S Sb 07 52 08.3 -1.4
KMKR Kumukh 2.28 346 ePn Pb 07 51 40.5 -1.9
comp=Z,119nm,0.2s
KMKR eSn Sb 07 52 08.7 -1.5
comp=Z,367nm,0.8s
HYR Heyderabad 2.33 266 ePg Pb 07 51 43.4 +0.3
HYR Heyderabad 2.33 266 Pg Pb 07 51 43.5 +0.3
SNR=23
HYR Sg Sb 07 52 14.9 +3.5
IBST Bostanabad 2.35 199 ePn Pb 07 51 41.5 -2.1
ISHB Shabestar 2.40 227 ePn Pn 07 51 40.9 +1.2
ISHB e 07 52 19.4
comp=Z,5μm,0.4s
GNI Garni 2.40 276 Pn Pb 07 51 44.9 +0.4
comp=Z,334nm,0.8s,baz=77,slow=3.0,SNR=63
GNI Lg Lg 07 52 16.9
comp=Z,55nm,0.3s,baz=137,slow=18,SNR=5.9
GNI Garni 2.40 276 eP Pb 07 51 44.8 +0.3
GNI eS Sb 07 52 16.9 +3.2
MAKU Maku 2.52 258 ePn Pn 07 51 41.8 +0.5
SGKR Sergokala 2.54 357 ePn Pb 07 51 43.9 -2.8
comp=Z,3.0nm,0.6s
SGKR eSn Sb 07 52 14.9 -2.5
comp=Z,82nm,0.5s
IHSH Hashtrud 2.66 190 ePn Pn 07 51 45.5 +2.1
IHSH e 07 52 33.4
comp=Z,2μm,0.5s
IAZR Azarshahr 2.68 214 ePn Pn 07 51 45.8 +2.1
IAZR e 07 52 33.5
comp=Z,4μm,0.9s
ARKR Arakani 2.75 347 ePn Pb 07 51 47.4 -3.0
comp=Z,43nm,0.7s
ARKR eSn Sb 07 52 20.8 -2.9
comp=Z,156nm,0.5s
XNZR Khunzakh 2.75 342 ePn Pn 07 51 47.0 +2.4
comp=Z,64nm,0.4s
XNZR eSn Sb 07 52 20.7 -3.2
comp=Z,119nm,0.4s
STE Stepanavan 2.87 293 eP Pb 07 51 51.2 -1.3
STE eS Sb 07 52 29.3 +2.1
UNCR Uncukul 2.90 344 ePn Pn 07 51 48.8 +2.4
comp=Z,52nm,0.8s
UNCR eSn Sn 07 52 23.8 +3.4
comp=Z,273nm,0.4s
BTNK Botanikuri 2.91 308 P Pn 07 51 45.1 -1.5
BTNK S Sn 07 52 22.7 +2.0
BUJR Buynaksk 2.95 349 ePn Pn 07 51 49.6 +2.4
comp=Z,123nm,0.4s
BUJR eSn Sn 07 52 25.2 +3.5
comp=Z,71nm,0.4s
DMNI Dmanisi 3.12 298 P Pn 07 51 52.6 +3.0
DMNI S Sb 07 52 34.2 -0.2
DBC Dubki 3.19 346 ePn Pn 07 51 52.9 +2.5
comp=Z,23nm,0.2s
DBC eSn Sn 07 52 30.8 +3.2
comp=Z,71nm,0.4s
TRLG Trialeti 3.28 301 P Pb 07 51 58.2 -1.2
TRLG S Sb 07 52 40.4 +1.4
ZNJK Zanjan 3.32 168 ePn Pn 07 51 54.6 +2.2
GIDE GILAN DEYLAMAN 3.41 151 ePn Pn 07 51 54.7 +1.1
PNSH Pansheti 3.65 319 P Pn 07 51 58.3 +1.5
PNSH S Sn 07 52 39.9 +0.8
MTEO Meteo 3.72 319 P Pn 07 51 59.7 +1.6
QALM Alamut, Qazvin 4.12 147 ePn Pn 07 52 03.4 -0.1
ABS Abastumani 4.24 297 P Pb 07 52 16.9 +1.1
ONI Oni 4.25 310 P Pn 07 52 07.5 +2.4
ONI S Sb 07 53 11.2 +4.3
CHTH Charan 4.77 146 ePn Pn 07 52 14.6 +2.2
SNGE Sanandaj 4.84 185 ePn Pn 07 52 16.1 +2.8
IPRN Peran 5.10 135 ePn Pn 07 52 17.1 +0.3
KBZ Khabaz 5.31 317 Pn Pn 07 52 23.6 +4.1
comp=Z,0.2nm,0.3s,baz=157,slow=8.7,SNR=2.4
KBZ Lg Lg 07 53 47.8
comp=Z,0.9nm,0.3s,baz=57,slow=1.6,SNR=4.0
KBZ LR LR 07 54 59.4
comp=Z,119nm,21.0s,baz=180,slow=45
comp=Z,0.8nm,0.4s
DAMV Damavand 5.38 142 ePn Pn 07 52 22.5 +1.7
ASAO Ashtian 5.64 161 ePn Pn 07 52 26.6 +2.3
ISHM Shahmirzad 5.95 132 ePn Pn 07 52 29.0 +0.4
MRVT Maraveh tapeh 6.81 107 ePn Pn 07 52 39.4 -0.9
GEYT Alibeck 8.24 101 Pn Pn 07 52 56.4 -3.4
comp=Z,1.4nm,0.3s,baz=266,slow=14,SNR=11
comp=Z,3.5nm,0.4s
ISFR Sfrayin 8.45 107 ePn Pn 07 53 02.8 -0.2
BRTR Keskin Array B 10.94 273 LR LR 07 58 18.3
comp=Z,95nm,21.8s,baz=132,slow=40
AKTO Aktyubinsk 12.70 31 Pn Pn 07 53 58.5 -2.3
comp=Z,0.2nm,0.3s,baz=202,slow=7.7,SNR=7.8
comp=Z,0.9nm,0.4s
EIL Elat 14.72 230 Pn Pn 07 54 28.1 -0.4
comp=Z,0.8nm,0.3s,baz=21,slow=4.3,SNR=5.0
comp=Z,35nm,1.0s
AKASG Malin Array Be 16.92 316 Pn Pn 07 54 56.1 -0.5
comp=Z,1.1nm,0.3s,baz=122,slow=11,SNR=9.6
comp=Z,1.5nm,0.5s
KIRV Kirov 18.70 3 P P 07 55 16.9 -1.2
comp=Z,14nm,0.5s,baz=161,slow=19,SNR=3.6
SKO Skopje 20.04 284 iP P 07 55 33.3 +0.4
AAK Ala-Archa 20.17 74 LR LR 08 03 34.4
comp=Z,482nm,21.5s,baz=212,slow=38
DIVS Divibare 21.08 291 ⇑iP P 07 55 44.3 +0.1
FRGS Fruska Gora 21.26 293 ⇑iP P 07 55 46.6 +0.5
KURBB Kurchatov Arra 23.92 53 P P 07 56 14.0 +0.4
comp=Z,1.4nm,0.7s,baz=260,slow=8.7,SNR=1.2
comp=Z,1.4nm,0.7s
FINES FINESS Array B 25.34 335 P P 07 56 25.9 -0.5
comp=Z,3.2nm,0.6s,baz=141,slow=10,SNR=16
comp=Z,3.2nm,0.6s
GERES GERESS Array B 25.80 302 P P 07 56 30.5 -0.4
comp=Z,2.2nm,0.6s,baz=99,slow=9.2,SNR=8.5
comp=Z,2.2nm,0.6s
VAE Valguarnera 26.13 275 LR LR 08 08 14.5
comp=Z,275nm,18.2s,baz=336,slow=39
HFS Hagfors 29.32 325 P P 07 57 01.7 -0.4
comp=Z,1.0nm,0.5s,baz=119,slow=12,SNR=5.0
comp=Z,1.0nm,0.5s
NB2 NORSAR Subarra 30.82 325 P P 07 57 15.1 -0.4
comp=Z,0.6nm,0.4s,baz=116,slow=8.6
NOA NORSAR Array B 30.82 325 P P 07 57 14.7 -0.8
comp=Z,0.4nm,0.6s,baz=127,slow=9.0,SNR=4.8
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 31.94 345 P P 07 57 24.4 -0.8
comp=Z,2.5nm,1.1s,baz=144,slow=10,SNR=5.2
comp=Z,2.5nm,1.1s
ESDC Sonseca Array 39.34 287 P P 07 58 28.4 -0.7
comp=Z,1.6nm,0.9s,baz=63,slow=7.7,SNR=6.9
comp=Z,1.6nm,0.9s
TORD Torodi Ar. Bea 48.45 250 P P 07 59 42.8 +0.4
comp=Z,1.3nm,1.0s,baz=31,slow=7.2,SNR=1.0
comp=Z,1.3nm,1.0s

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*IDC **01** 07:52:01.8±0.9, 23°.97S×82°.49E, h0km, mb4.2/6, mbtmp4.2/6, Error ellipse: s-maj=40.0km s-min=23.0km az=5.0*
*NEIC **01** 07:52:04.4±2.2, 24°.0S±0°.3×82°.54E±0°.05, h10km±2km, mb4.6/9, Error ellipse: s-maj=51.5km s-min=7.8km az=3.0*
ISC 01 07:52:03.3±0.9, **24°.0S**±0°.2×**82°.5E**±0°.1, **h10**km, **n24**, σ**0s.81**/18, **mb4.5**/11, **South Indian Ocean**

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

H08S2 Diego Garcia H 18.85 328 T T 08 15 35.2
baz=152,slow=74,SNR=34
H08S1 Diego Carcia H 18.86 328 T T 08 15 35.4
baz=152,slow=74,SNR=32
H08S3 Diego Garcia H 18.87 328 T T 08 15 38.5
baz=152,slow=74,SNR=48
H01W3 Cape Leeuwin H 29.51 119 T T 08 28 59.1
baz=284,slow=74,SNR=3.9
H01W2 Cape Leeuwin H 29.51 119 T T 08 29 01.6
baz=284,slow=74,SNR=4.1
H01W1 Cape Leeuwin H 29.52 119 T T 08 29 02.6
baz=284,slow=74,SNR=4.8
FITZ Fitzroy Crossi 40.56 90 P P 07 59 41.7 -1.4
ASAR Alice Springs 46.80 101 P P 08 00 33.4 0.0
3.1nm,0.7s,baz=265,slow=7.2,SNR=34
3.1nm,0.7s
ASAR Alice Springs 46.80 101 P P 08 00 32.5 -0.9
AS31 Alice Springs 46.80 101 P P 08 00 32.2 -1.2
AS31 IAmb IAmb 08 00 34.0
comp=Z,1.1nm,0.8s
WRA Warramunga Arr 48.02 96 P P 08 00 43.5 +0.5
comp=Z,3.2nm,0.7s,baz=262,slow=7.6,SNR=29
comp=Z,3.2nm,0.7s
WRA Warramunga Arr 48.02 96 P P 08 00 43.5 +0.5
WB2 Warramunga Arr 48.03 96 P P 08 00 43.6 +0.5
WB2 IAmb IAmb 08 01 17.2
comp=Z,8.6nm,1.3s
WRAB Tennant Creek 48.03 96 P P 08 00 43.2 +0.2
WRAB IAmb IAmb 08 00 51.1
comp=Z,7.2nm,1.1s
WB0 Warramunga Arr 48.12 96 P P 08 00 44.2 +0.5
WR0 Warramunga Arr 48.20 96 P P 08 00 45.1 +0.7
WR0 IAmb IAmb 08 00 45.4
comp=Z,5.0nm,0.7s
BOSA Boshof 51.14 252 P P 08 01 06.8 -0.1
comp=Z,3.0nm,0.7s,baz=116,slow=5.2,SNR=7.6
comp=Z,3.0nm,0.7s
BOSA Boshof 51.14 252 P P 08 01 06.3 -0.5
STKA Stephens Creek 52.26 113 P P 08 01 15.1 +0.2
comp=Z,2.9nm,0.8s,baz=232,slow=5.8,SNR=3.7
comp=Z,2.9nm,0.8s
SNAA Sanae 66.02 200 P P 08 02 50.3 +0.5
SNAA IAmb IAmb 08 02 55.3
comp=Z,6.1nm,1.4s
QSPA South Pole Qui 66.16 180 P P 08 02 50.3 -0.6
comp=Z,1.3nm,0.7s,baz=282,slow=2.6,SNR=2.7
comp=Z,1.3nm,0.7s
BRTR Keskin Array B 78.05 324 P P 08 04 02.5 +0.1
comp=Z,1.1nm,0.7s,baz=148,slow=7.3,SNR=3.8
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 157.15 46 PKPab PKPab 08 12 29.4 -1.1
comp=Z,0.9nm,0.7s,baz=275,slow=4.3,SNR=6.3
TXAR Lajitas Array 172.30 45 PKP PKPdf 08 12 14.4 +1.3
comp=Z,1.7nm,1.0s,baz=134,slow=5.4,SNR=5.5

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*IDC **01** 07:59:41.0±0.7, 23°.95S×82°.50E, h0km, mb4.2/10, mbtmp4.2/10, Error ellipse: s-maj=24.8km s-min=20.4km az=29.0*
*NEIC **01** 07:59:43.9±1.0, 24°.0S±0°.1×82°.4E±0°.1, h10km±1km, mb4.6/12, Error ellipse: s-maj=24.2km s-min=12.8km az=220.0*
ISC 01 07:59:42.6±0.6, **24°.0S**±0°.2×**82°.5E**±0°.1, **h10**km, **n38**, σ**0s.57**/39, **mb4.5**/14, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.83**	**328**	T	T	08 23 17.4	
	baz=152,slow=74,SNR=41						
H08S1	**Diego Carcia H**	**18.84**	**328**	T	T	08 23 18.4	
	baz=152,slow=74,SNR=32						
H08S3	**Diego Garcia H**	**18.85**	**328**	T	T	08 23 18.2	
	baz=152,slow=74,SNR=43						
ASAR	**Alice Springs**	**46.85**	**101**	P	**P**	**08 08 12.8**	**-0.4**
	4.6nm,0.7s,baz=266,slow=7.2,SNR=49						
	4.6nm,0.7s						
ASAR	**Alice Springs**	**46.85**	**101**	P	**P**	**08 08 13.1**	**-0.1**
AS31	**Alice Springs**	**46.86**	**101**	P	**P**	**08 08 13.2**	**-0.1**
WRA	**Warramunga Arr**	**48.08**	**96**	P	**P**	**08 08 22.1**	**-0.7**
	4.4nm,0.7s,baz=262,slow=7.9,SNR=56						
	4.4nm,0.7s						
WRA	**Warramunga Arr**	**48.08**	**96**	P	**P**	**08 08 23.4**	**+0.6**
WB2	**Warramunga Arr**	**48.09**	**96**	P	**P**	**08 08 23.1**	**+0.2**
WB2				IAmb	IAmb	08 08 24.8	
	comp=Z,3.6nm,0.8s						
WRAB	**Tennant Creek**	**48.09**	**96**	P	**P**	**08 08 23.4**	**+0.5**
WRAB				IAmb	IAmb	08 08 23.8	
	comp=Z,4.6nm,0.8s						
WB0	**Warramunga Arr**	**48.18**	**96**	P	**P**	**08 08 23.6**	**+0.1**
WB0				IAmb	IAmb	08 08 24.2	
	comp=Z,4.3nm,0.8s						
WR0	**Warramunga Arr**	**48.26**	**96**	P	**P**	**08 08 24.5**	**+0.3**
BOSA	**Boshof**	**51.08**	**252**	P	**P**	**08 08 46.4**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=99,slow=5.5,SNR=8.5						
	comp=Z,3.5nm,0.7s						
BOSA	**Boshof**	**51.08**	**252**	P	**P**	**08 08 46.1**	**+0.4**
BOSA				IAmb	IAmb	08 08 46.6	
	comp=Z,5.2nm,0.8s						
STKA	**Stephens Creek**	**52.31**	**113**	P	**P**	**08 08 54.8**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=352,slow=3.2,SNR=4.0						
	comp=Z,2.2nm,0.7s						
STKA	**Stephens Creek**	**52.31**	**113**	P	**P**	**08 08 55.4**	**+0.7**
FAKI	**Fak Fak**	**52.40**	**74**	P	**P**	**08 08 55.9**	**+0.3**
SUR	**Sutherland**	**54.34**	**246**	P	**P**	**08 09 09.8**	**0.0**
QSPA	**South Pole Qui**	**66.14**	**180**	P	**P**	**08 10 29.8**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=313,slow=0.2,SNR=10						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**66.14**	**180**	P	**P**	**08 10 30.2**	**+0.1**
QSPA				IAmb	IAmb	08 10 38.4	
	comp=Z,3.1nm,1.1s						
KKAR	**Karatay Array**	**67.64**	**351**	P	**P**	**08 10 40.2**	**+0.6**
JNU	**Nakatsue**	**73.16**	**41**	P	**P**	**08 11 14.1**	**+0.5**
JNU				IAmb	IAmb	08 11 35.7	
	comp=Z,6.7nm,1.0s						
KURBB	**Kurchatov Arra**	**74.34**	**357**	P	**P**	**08 11 19.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=184,slow=5.4,SNR=3.6						
	comp=Z,1.0nm,0.7s						
KSRS	**Korea Array**	**74.58**	**36**	P	**P**	**08 11 21.8**	**0.0**
	comp=Z,1.0nm,0.7s,baz=236,slow=4.9,SNR=5.0						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**77.62**	**1**	P	**P**	**08 11 38.0**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=195,slow=5.1,SNR=7.3						
	comp=Z,2.7nm,0.7s						
ZALV	**Zalesovo Beam**	**77.62**	**1**	P	**P**	**08 11 38.3**	**-0.4**
BRTR	**Keskin Array B**	**78.03**	**324**	P	**P**	**08 11 41.9**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=134,slow=5.3,SNR=6.5						
	comp=Z,1.7nm,0.7s						
AKASG	**Malin Array Be**	**87.91**	**329**	P	**P**	**08 12 32.4**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=123,slow=4.0,SNR=5.3						
	comp=Z,0.3nm,0.3s						
ILAR	**Eielson Array**	**128.35**	**24**	PKP	**PKPdf**	**08 18 47.6**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=277,slow=3.0,SNR=4.2						
SCM	**Sheep Creek Mo**	**129.49**	**28**	PKPdf	**PKPdf**	**08 18 51.5**	**+0.3**
B08A	**Colville Reser**	**150.18**	**30**	PKPbc	**PKPbc**	**08 19 33.2**	**-0.5**
D08A	**Wollman Farm,**	**151.31**	**31**		**PKiKP**	**08 19 37.0**	**0.0**
HAWA	**Hanford**	**151.49**	**33**		**PKiKP**	**08 19 37.3**	**0.0**
F10A	**Beach Ranch, E**	**152.90**	**31**		**PKPbc**	**08 19 40.2**	**0.0**
F10A				PKPab	**PKPab**	**08 19 51.5**	**+0.3**
MSO	**Missoula**	**153.67**	**26**	PKPdf	**PKPdf**	**08 19 32.0**	**-2.1**
MSO					**PKPbc**	**08 19 41.4**	**-0.4**
MSO				PKPab	**PKPab**	**08 19 54.2**	**-0.2**
NVAR	**Mina Array Bea**	**157.21**	**46**	PKPab	**PKPab**	**08 20 10.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=273,slow=4.8,SNR=11						
IMW	**Indian Meadow**	**157.29**	**26**	PKPdf	**PKPdf**	**08 19 38.4**	**-0.9**
IMW					**PKPab**	**08 20 09.9**	**-0.3**
TXAR	**Lajitas Array**	**172.36**	**44**	PKP	**PKPdf**	**08 19 52.6**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=147,slow=2.5,SNR=3.9						

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*IDC **01** 08:00:07.5±0.8, 41.56N×73.06E, h0km, mb3.9/15, mbtmp4.0/20, ML3.5/4, Error ellipse: s-maj=15.0km s-min=8.7km az=145.0*

*SOME **01** 08:00:08.3, 41.62N×73.03E, h15km, MS3.7*

*NNC **01** 08:00:10.3±1.7, 41.64N×72.96E, h0km, mb5.1, mpv4.8, Error ellipse: s-maj=18.9km s-min=5.3km az=176.0*

*KRNET **01** 08:00:10.0±0.1, 41.73N×72.95E, h30km, mb4.8*

*KNET **01** 08:00:11.1±0.8, 41.79N×73.00E, h5km±3km, ml4.3, Error ellipse: s-maj=6.9km s-min=4.1km az=124.0*

*MOS **01** 08:00:11.5±1.1, 41.75N×72.89E, h26km, mb4.4/9, Error ellipse: s-maj=5.7km s-min=4.0km az=66.7*

MOS Felt (IV-V) at Ketmen-Tobo, Kok-Bel'; (IV) at Kara-Kul'; (III-IV) at Toktogul.

*ISU **01** 08:00:11, 41.79N×72.96E, h28km*

*BJI **01** 08:00:13.9±0.0, 41.66N×72.79E, h57km, mb4.4/13, mB4.5/3*

*NEIC **01** 08:00:15.0±1.3, 41.71N±0.05×72.94E±0.07, h42km±5km, mb4.5/33, Error ellipse: s-maj=7.7km s-min=7.1km az=170.0*

ISC 01 08:00:12.9±0.6**, 41.69N**±0.02×**72.95E**±0.02**, h30**km±4km**,** **n245,** σ1s**93**/321**, mb4.5**/40**, 36C-38D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.71**	**51**	P	**Pb**	**08 00 23.6**	**-3.4**
	1µm,0.2s,SNR=3843						
AML				⇑S	**Sb**	**08 00 33.4**	**-3.4**
	4µm,0.3s						
AML	**Almayashu**	**0.71**	**51**	⇓*e*PG	**Pb**	**08 00 23.7**	**-3.4**
AML				*e*S	**Sb**	**08 00 33.2**	**-3.5**
ARK	**Arkit**	**0.75**	**279**	P	**Pb**	**08 00 24.1**	**-3.4**
ARK				S	**Sb**	**08 00 34.7**	**-2.8**
ARLS	**Aral**	**1.04**	**80**	⇓*e*PG	**Pn**	**08 00 29.3**	**-2.4**
ARLS				*e*S	**Sb**	**08 00 43.2**	**-2.7**
ARLS	**Aral**	**1.04**	**80**	⇓*e*P	**Pn**	**08 00 29.3**	**-2.4**
	baz=82						
ARLS				⇓*e*S	**Sb**	**08 00 43.2**	**-2.7**
	baz=82						
MRKS	**Merke**	**1.08**	**11**	*e*P	**Pb**	**08 00 34.1**	**+1.0**
	1.9nm,0.2s						
MRKS				*e*S	**Sn**	**08 00 52.4**	**+6.2**
	2µm,0.4s						
EKS2	**Erkin-Say**	**1.15**	**32**	⇓P	**Pn**	**08 00 31.5**	**-1.7**
	325nm,0.1s,SNR=533						
EKS2				⇑S	**Sb**	**08 00 46.8**	**-2.2**
	720nm,0.2s						
EKS2	**Erkin-Say**	**1.15**	**32**	*e*PG	**Pn**	**08 00 30.8**	**-2.4**
EKS2				*e*S	**Sn**	**08 00 45.8**	**-2.2**
EKS2	**Erkin-Say**	**1.15**	**32**	⇑*e*P	**Pn**	**08 00 30.8**	**-2.4**
	baz=33						
EKS2				⇑*e*S	**Sn**	**08 00 45.8**	**-2.2**
	baz=33						
TSTA	**Tashata**	**1.16**	**198**	P	**Pn**	**08 00 31.8**	**-1.5**
TSTA				S	**Sb**	**08 00 50.2**	**+1.0**
OHH	**Osh**	**1.17**	**186**	*e*PG	**Pn**	**08 00 32.2**	**-1.2**
OHH				*e*S	**Sb**	**08 00 48.1**	**-1.3**
OHH	**Osh**	**1.17**	**186**	⇑*e*P	**Pn**	**08 00 32.2**	**-1.2**
	baz=86						
OHH				⇑*e*S	**Sb**	**08 00 48.1**	**-1.3**
	baz=86						
NAM	**Namangan**	**1.20**	**235**	S	**Sb**	**08 00 53.5**	**+3.4**
TRKS	**Terek-Say**	**1.37**	**264**	⇓*e*PG	**Pn**	**08 00 34.8**	**-1.4**
TRKS				*e*S	**Sb**	**08 00 52.9**	**-2.2**
TRKS	**Terek-Say**	**1.37**	**264**	⇓*e*P	**Pn**	**08 00 34.8**	**-1.4**
	baz=59						
TRKS				⇓*e*S	**Sb**	**08 00 52.9**	**-2.2**
	baz=59						
AAK	**Ala-Archa**	**1.49**	**50**	Pn	**Pb**	**08 00 37.6**	**-2.5**
	145nm,0.3s,baz=241,slow=3.2,SNR=156						
AAK				Lg	Lg	08 00 57.7	
	97nm,0.3s,baz=181,slow=6.3,SNR=16						
AAK	**Ala-Archa**	**1.49**	**50**	⇓P	**Pb**	**08 00 37.6**	**-2.5**
	838nm,0.5s,SNR=82						
AAK				⇓S	**Sb**	**08 00 57.6**	**-1.0**
	2µm,0.4s						
AAK	**Ala-Archa**	**1.49**	**50**	⇑*e*P	**Pn**	**08 00 36.7**	**-1.2**
	baz=51						
AAK				⇑*e*S	**Sb**	**08 00 55.8**	**-2.9**
	baz=51						
FRG	**Fergana**	**1.58**	**214**	P	**Pb**	**08 00 40.3**	**-1.2**
FRG				S	**Sb**	**08 01 03.5**	**+2.4**
FRU1	**Bishkek**	**1.68**	**47**	⇓*e*PN	**Pn**	**08 00 39.3**	**-1.1**
FRU1				*e*S	**Sb**	**08 01 00.7**	**-3.3**
FRU1	**Bishkek**	**1.68**	**47**	⇓*e*P	**Pn**	**08 00 39.3**	**-1.1**
	baz=48						
FRU1				⇓*e*S	**Sb**	**08 01 00.7**	**-3.3**
	baz=48						
DZA	**Taraz**	**1.70**	**316**	*i* PN	**Pb**	**08 00 41.0**	**-2.6**
DZA				*e*		08 01 03.1	
DZA	**Taraz**	**1.70**	**316**	*e*P	**Pb**	**08 00 42.1**	**-1.5**
	260nm,0.2s						
DZA				*e*S	**Sb**	**08 01 06.7**	**+2.1**
	6µm,0.2s						
DZA	**Taraz**	**1.70**	**316**	*i* Pb	**Pb**	**08 00 41.0**	**-2.6**
	baz=317						
DZA				*e*Sb	**Sb**	**08 01 03.1**	**-1.5**
	baz=317						
DZA	**Taraz**	**1.70**	**316**	P	**Pb**	**08 00 42.9**	**-0.6**
	544nm,0.2s						
DZA				S	**Sb**	**08 01 06.9**	**+2.3**
	3µm,0.2s						
KBK	**Karagaybulak**	**1.77**	**56**	⇓P	**Pb**	**08 00 42.9**	**-2.0**
	496nm,0.1s,SNR=270						
KBK				⇑S	**Sb**	**08 01 07.1**	**+0.3**
	3µm,0.4s						
KBK	**Karagaybulak**	**1.77**	**56**	*e*PN	**Pn**	**08 00 40.7**	**-1.1**
KBK				*e*S	**Sn**	**08 01 02.9**	**-0.5**
KBK	**Karagaybulak**	**1.77**	**56**	⇑*e*P	**Pn**	**08 00 40.7**	**-1.1**
	baz=57						
KBK				⇑*e*S	**Sn**	**08 01 02.9**	**-0.5**
	baz=57						
CHDK	**Chadak**	**1.80**	**247**	P	**Pb**	**08 00 43.8**	**-1.5**
CHDK				S	**Sb**	**08 01 09.4**	**+1.8**
CHMS	**Chumysh**	**1.87**	**45**	⇓P	**Pb**	**08 00 44.6**	**-2.0**
	340nm,0.2s,SNR=286						
CHMS				⇑S	**Sb**	**08 01 10.6**	**+1.1**
	2µm,0.3s						
CHMS	**Chumysh**	**1.87**	**45**	*i* PN	**Pb**	**08 00 44.4**	**-2.1**
CHMS				pmax	pmax		
	comp=Z,342nm,0.4s						
CHMS	**Chumysh**	**1.87**	**45**	⇓Pn	**Pb**	**08 00 44.5**	**-2.0**
	comp=Z,342nm,0.5s						
CHMS				⇓Sn	**Sb**	**08 01 10.6**	**+1.1**
	comp=Z,3µm,0.8s						
CHMS	**Chumysh**	**1.87**	**45**	⇓*e*P	**Pn**	**08 00 42.0**	**-1.0**
	baz=46						
CHMS				⇓*e*S	**Sn**	**08 01 05.1**	**-0.5**
	baz=46						
MINT	**Mingtut**	**1.93**	**231**	S	**Sb**	**08 01 12.9**	**+1.8**
USP	**Ospenovka**	**1.95**	**35**	P	**Pb**	**08 00 45.9**	**-2.0**
	comp=Z,764nm,0.2s,SNR=912						
USP				⇓S	**Sb**	**08 01 11.8**	**0.0**
	comp=Z,2µm,0.2s						
USP	**Ospenovka**	**1.95**	**35**	*e*PN	**Pn**	**08 00 43.1**	**-1.0**
USP				*e*S	**Sn**	**08 01 07.0**	**-0.6**
USP	**Ospenovka**	**1.95**	**35**	⇑*e*P	**Pn**	**08 00 43.1**	**-1.0**
	baz=36						
USP				⇑*e*S	**Sn**	**08 01 07.0**	**-0.6**
	baz=36						
SGDS	**Sogindy**	**2.16**	**35**	*d i*PN	**Pb**	**08 00 49.3**	**-2.0**
SGDS				*e*		08 01 19.0	
SGDS	**Sogindy**	**2.16**	**35**	*e*P	**Pb**	**08 00 48.6**	**-2.7**
	comp=Z,605nm,0.2s						
SGDS				*e*S	**Sb**	**08 01 17.4**	**-0.2**
	comp=Z,4µm,0.5s						
SGDS	**Sogindy**	**2.16**	**35**	⇓*i*Pb	**Pb**	**08 00 49.3**	**-2.0**
	baz=37						
SGDS				*e*Sb	**Sb**	**08 01 19.0**	**+1.3**
	baz=37						
SGDS	**Sogindy**	**2.16**	**35**	Pg	**Pb**	**08 00 49.3**	**-2.0**
	comp=Z,605nm,0.2s						
SGDS				Lg	Lg	08 01 18.0	
	comp=Z,2µm,0.5s						
IUG	**Iuzhnay**	**2.23**	**283**	*d i*PN	**Pb**	**08 00 50.2**	**-2.3**
IUG	**Iuzhnay**	**2.23**	**283**	*e*P	**Pb**	**08 00 50.1**	**-2.5**
	comp=Z,3µm,0.3s						
IUG				*e*S	**Sb**	**08 01 20.9**	**+1.2**
	comp=Z,2µm,0.4s						
IUG	**Iuzhnay**	**2.23**	**283**	⇓*i*Pb	**Pb**	**08 00 50.3**	**-2.3**
	baz=283						
IUG				*i* Pg	Pn	08 00 51.3	+3.4
	baz=283						
IUG				*e*Lg	Lg	08 01 20.9	
	baz=283						
IUG	**Iuzhnay**	**2.23**	**283**	Pg	**Pb**	**08 00 50.4**	**-2.2**
	comp=Z,5µm,0.3s						
IUG				Lg	Lg	08 01 20.3	
	comp=Z,3µm,0.4s						
CHRV	**Charvak**	**2.25**	**270**	S	**Sb**	**08 01 23.5**	**+3.2**
BTK	**Batken**	**2.29**	**226**		**Pb**	**08 00 49.8**	**-3.9**
BTK	**Batken**	**2.29**	**226**	PN	**Pb**	**08 00 49.8**	**-3.9**
BTK	**Batken**	**2.29**	**226**	⇑*e*P	**Pn**	**08 00 48.6**	**-0.3**
	baz=25						
BTK				⇑*e*S	**Sn**	**08 01 16.7**	**+0.5**
	baz=25						
KK31	**Karatay Array**	**2.29**	**309**		**Pb**	**08 00 50.6**	**-3.1**
KK31	**Karatay Array**	**2.29**	**309**	*e*PN	**Pb**	**08 00 50.8**	**-2.9**
KK31	**Karatay Array**	**2.29**	**309**	Pn	**Pb**	**08 00 50.8**	**-2.9**
	comp=Z,287nm,0.5s,baz=126,slow=12,SNR=1498						
KK31				⇑Sn	**Sb**	**08 01 23.2**	**+1.6**
	comp=Z,647nm,0.4s,baz=230,slow=163,SNR=17						
KKAR	**Karatay Array**	**2.29**	**309**		**Pb**	**08 00 50.3**	**-3.4**
KKAR	**Karatay Array**	**2.29**	**309**	PN	**Pb**	**08 00 50.3**	**-3.4**
KKAR	**Karatay Array**	**2.29**	**309**	⇓*e*P	**Pn**	**08 00 48.0**	**-0.8**
	baz=8.0						
KKAR				⇓*e*S	**Sn**	**08 01 15.5**	**-0.6**
	baz=8.0						
NRN	**Naryn**	**2.30**	**95**	Pn	**Pb**	**08 00 50.4**	**-3.6**
NRN	**Naryn**	**2.30**	**95**	PN	**Pb**	**08 00 50.4**	**-3.6**
TKM2	**Tokmak 2**	**2.32**	**57**	⇑P	**Pb**	**08 00 51.9**	**-2.4**
	comp=Z,223nm,0.1s,SNR=533						
TKM2	**Tokmak 2**	**2.32**	**57**	*i* PN	**Pb**	**08 00 51.8**	**-2.4**
TKM2				pmax	pmax		
	comp=Z,1µm,1.0s						
TKM2	**Tokmak 2**	**2.32**	**57**	⇑Pn	**Pb**	**08 00 51.8**	**-2.4**
	comp=Z,1µm,1.0s						
TKM2				⇑Sn	**Sb**	**08 01 24.2**	**+1.7**
	comp=Z,4µm,0.6s						
TKM2	**Tokmak 2**	**2.32**	**57**	⇓*e*P	**Pn**	**08 00 48.4**	**-0.9**
	baz=58						
TKM2				⇓*e*S	**Sn**	**08 01 16.2**	**-0.7**
	baz=58						
DRK	**Karamyk**	**2.37**	**202**		**Pb**	**08 00 51.9**	**-3.3**
DRK	**Karamyk**	**2.37**	**202**	⇑*e*P	**Pn**	**08 00 49.9**	**-0.2**
	baz=2.0						
DRK				⇑*e*S	**Sn**	**08 01 19.2**	**+0.8**
	baz=2.0						
ULHL	**Ulahol**	**2.52**	**76**	⇓*i*PN	**Pn**	**08 00 51.3**	**-0.7**
ULHL	**Ulahol**	**2.52**	**76**	⇓*i*P	**Pn**	**08 00 51.3**	**-0.7**
	baz=77						
ULHL				⇓*e*S	**Sn**	**08 01 21.4**	**-0.4**
	baz=77						
YBZ	**Yangibazar**	**2.56**	**262**	S	**Sb**	**08 01 32.7**	**+3.5**
CHM	**Chimkent**	**2.57**	**285**	*e*P	**Pb**	**08 00 58.2**	**-0.2**
	comp=Z,6.1nm,0.4s						
CHM				*e*S	**Sb**	**08 01 33.7**	**+4.1**
	comp=Z,3µm,0.5s						
KST	**Kastek**	**2.61**	**58**	*e*P	**Pb**	**08 00 57.8**	**-1.3**
	comp=Z,283nm,0.6s						
KST				*e*S	**Sb**	**08 01 33.5**	**+2.6**
	comp=Z,5µm,0.6s						
KST	**Kastek**	**2.61**	**58**	Pg	**Pb**	**08 00 57.9**	**-1.2**
	comp=Z,507nm,0.5s						
KST				Lg	Lg	08 01 32.6	
	comp=Z,4µm,0.6s						
TAS	**Tashkent**	**2.77**	**264**	Pn	**Pn**	**08 00 55.6**	**+0.3**
TAS	**Tashkent**	**2.77**	**264**	PN	**Pn**	**08 00 55.6**	**+0.3**
TAS	**Tashkent**	**2.77**	**264**	⇑*i*P	**Pn**	**08 00 54.9**	**-0.4**
	baz=63						
TAS				⇑*e*S	**Sn**	**08 01 27.5**	**-0.3**
	baz=63						
TAS	**Tashkent**	**2.77**	**264**	S	**Sb**	**08 01 39.3**	**+4.1**
KUMR	**Kumaryk**	**2.79**	**261**	S	**Sb**	**08 01 40.0**	**+4.3**
KRBS	**Karabastau**	**2.84**	**44**	*e*P	**Pb**	**08 00 59.0**	**-4.0**
	comp=Z,346nm,0.3s						
KRBS				*e*S	**Sb**	**08 01 36.0**	**-1.4**
	comp=Z,1µm,0.7s						
KRBS	**Karabastau**	**2.84**	**44**	Pg	**Pb**	**08 00 59.4**	**-3.5**
	comp=Z,341nm,0.3s						
KRBS				Lg	Lg	08 01 35.2	
	comp=Z,777nm,0.7s						
NZBK	**Nazarbek**	**2.92**	**262**	S	**Sb**	**08 01 44.1**	**+4.6**
MTBS	**Maitube**	**2.95**	**60**	*e*P	**Pb**	**08 01 03.4**	**-1.5**
	comp=Z,202nm,0.3s						
MTBS				*e*S	**Sb**	**08 01 42.8**	**+2.2**
	comp=Z,1µm,0.5s						
MTBS	**Maitube**	**2.95**	**60**	Pg	**Pb**	**08 01 03.9**	**-1.0**
	comp=Z,202nm,0.3s						
MTBS				Lg	Lg	08 01 42.5	
	comp=Z,1µm,0.3s						
KSH	**Kashi**	**3.16**	**132**	P	**Pb**	**08 01 04.9**	**-3.6**
KSH				pP	Pn	08 01 12.5	+12
KSH				sP		08 01 17.9	
KSH				S	**Sb**	**08 01 44.1**	**-2.5**
KSH				pmax	pmax		
	comp=Z,29nm,0.6s						
AAA	**Alma-Ata**	**3.31**	**61**	*e*PN	**Pb**	**08 01 11.0**	**+0.1**
AAA				*e*		08 01 54.5	
AAA	**Alma-Ata**	**3.31**	**61**	*e*P	**Pb**	**08 01 09.5**	**-1.4**
	comp=Z,348nm,0.4s						
AAA				*e*S	**Sb**	**08 01 53.7**	**+3.0**
	comp=Z,2µm,0.7s						
AAA	**Alma-Ata**	**3.31**	**61**	*e*Pb	**Pb**	**08 01 11.1**	**+0.1**
	baz=62						
AAA				*e*Sb	**Sb**	**08 01 54.6**	**+3.9**
	baz=62						
AAA	**Alma-Ata**	**3.31**	**61**	Pg	**Pb**	**08 01 10.3**	**-0.6**
	comp=Z,348nm,0.4s						
AAA				Lg	Lg	08 01 54.0	
	comp=Z,2µm,0.7s						
KUU	**Kurty**	**3.33**	**47**	*e*PN	**Pn**	**08 01 03.1**	**+0.1**
KUU				*e*		08 01 14.5	
KUU				*i*		08 01 54.5	
KUU	**Kurty**	**3.33**	**47**	*e*P	**Pb**	**08 01 09.6**	**-1.7**
	comp=Z,76nm,0.3s						
KUU				*e*S	**Sb**	**08 01 53.5**	**+2.2**
	comp=Z,632nm,0.6s						
KUU	**Kurty**	**3.33**	**47**	*e*Pn	**Pn**	**08 01 03.1**	**+0.1**
	baz=49						
KUU				*e*Pg	Pb	08 01 14.5	+3.2
	baz=49						
KUU				*i* Sb	**Sb**	**08 01 54.5**	**+3.2**
	baz=49						
KUU	**Kurty**	**3.33**	**47**	Pg	**Pb**	**08 01 09.9**	**-1.3**
	comp=Z,72nm,0.2s						
KUU				Lg	Lg	08 01 53.2	
	comp=Z,413nm,0.6s						
KNDC	**Almaty**	**3.34**	**61**	PN	**Pb**	**08 01 11.1**	**-0.4**
KNDC	**Almaty**	**3.34**	**61**	⇑Pg	**Pb**	**08 01 12.7**	**+1.2**
	comp=Z,661nm,0.7s						
KNDC				⇑Lg	Lg	08 01 54.8	
	comp=Z,2µm,0.6s						
GAR	**Garm**	**3.35**	**218**		**Pn**	**08 01 05.5**	**+2.0**
GAR	**Garm**	**3.35**	**218**	⇓*e*PN	**Pn**	**08 01 03.6**	**+0.1**
GAR				*e*S	**Sn**	**08 01 42.3**	**-0.1**
GAR	**Garm**	**3.35**	**218**	⇓*e*P	**Pn**	**08 01 03.6**	**+0.1**
	baz=17						
GAR				⇓*e*S	**Sn**	**08 01 42.3**	**-0.1**
	baz=17						
MDOK	**Medeo**	**3.37**	**63**	*e*PN	**Pn**	**08 01 04.8**	**+1.1**
MDOK				*e*		08 01 14.2	
MDOK				*e*		08 01 57.1	
MDOK	**Medeo**	**3.37**	**63**	*e*P	**Pb**	**08 01 11.1**	**-1.0**
	comp=Z,185nm,0.7s						
MDOK				*e*S	**Sb**	**08 01 56.0**	**+3.2**
	comp=Z,464nm,1.0s						
MDOK	**Medeo**	**3.37**	**63**	*e*Pn	**Pn**	**08 01 04.8**	**+1.1**
	baz=64						
MDOK				*e*Pb	**Pb**	**08 01 12.5**	**+0.4**
	baz=64						
MDOK				*e*Pg		08 01 14.2	
	baz=64						
MDOK				*e*Sb	**Sb**	**08 01 57.1**	**+4.4**
	baz=64						
MDOK	**Medeo**	**3.37**	**63**	⇓Pn	Pb	08 01 06.1	-6.0
	comp=Z,22nm,0.6s						
MDOK				⇑Pg	Pn	08 01 11.1	+7.3
	comp=Z,246nm,0.7s						
MDOK				Pg		08 01 11.4	
	comp=Z,251nm,0.6s						
MDOK				Lg	Lg	08 01 55.8	
	comp=Z,440nm,0.5s						
MDOK				⇑Lg	Lg	08 01 56.4	
	comp=Z,999nm,1.3s						
KTBS	**Karatobe**	**3.41**	**52**	*e*P	**Pb**	**08 01 10.6**	**-2.1**
	comp=Z,62nm,0.2s						
KTBS				*e*S	**Sb**	**08 01 55.7**	**+1.9**
	comp=Z,2µm,0.6s						
KTBS	**Karatobe**	**3.41**	**52**	Pg	**Pb**	**08 01 11.2**	**-1.6**
	comp=Z,108nm,0.4s						
KTBS				Lg	Lg	08 01 55.4	
	comp=Z,1µm,0.4s						
BTLS	**Baital**	**3.45**	**13**	*e*PN	**Pn**	**08 01 04.4**	**-0.2**
BTLS				*e*		08 01 14.4	
BTLS				*e*		08 01 57.2	
BTLS	**Baital**	**3.45**	**13**	*e*P	**Pb**	**08 01 11.4**	**-1.8**
	comp=Z,76nm,0.3s						
BTLS				*e*S	**Sb**	**08 01 56.4**	**+1.7**
	comp=Z,407nm,0.5s						
BTLS	**Baital**	**3.45**	**13**	*e*Pn	**Pn**	**08 01 04.5**	**-0.2**
	baz=14						
BTLS				*e*Pb	**Pb**	**08 01 12.0**	**-1.2**
	baz=14						
BTLS				*e*Pg		08 01 14.4	
	baz=14						
BTLS				*e*Sb	**Sb**	**08 01 57.2**	**+2.5**
	baz=14						
BTLS	**Baital**	**3.45**	**13**	Pg	**Pb**	**08 01 12.1**	**-1.2**
	comp=Z,170nm,0.6s						
BTLS				Lg	Lg	08 01 57.0	
	comp=Z,437nm,0.6s						
CHKK	**Chushkaly**	**3.68**	**53**	*e*PN	**Pn**	**08 01 08.7**	**+0.9**
CHKK				*e*		08 01 17.6	
CHKK				*e*		08 02 05.3	
CHKK	**Chushkaly**	**3.68**	**53**	*e*P	**Pb**	**08 01 15.2**	**-2.0**
	comp=Z,31nm,0.5s						
CHKK				*e*S	**Sb**	**08 02 03.4**	**+2.0**
	comp=Z,430nm,0.5s						
CHKK	**Chushkaly**	**3.68**	**53**	*e*Pn	**Pn**	**08 01 08.8**	**+0.9**
	baz=54						
CHKK				*e*Pb	**Pb**	**08 01 17.7**	**+0.5**
	baz=54						
CHKK				*e*Sb	**Sb**	**08 02 05.4**	**+4.0**
	baz=54						
CHKK	**Chushkaly**	**3.68**	**53**	Pg	**Pb**	**08 01 16.3**	**-0.9**
	comp=Z,66nm,0.4s						
CHKK				Lg	Lg	08 02 04.1	
	comp=Z,429nm,0.4s						
CHGR	**Chuyangaron**	**4.20**	**225**	Pn	**Pn**	**08 01 16.7**	**+1.7**
CHGR	**Chuyangaron**	**4.20**	**225**	PN	**Pn**	**08 01 16.7**	**+1.7**
CHGR	**Chuyangaron**	**4.20**	**225**	⇑*e*P	**Pn**	**08 01 15.2**	**+0.2**
	baz=25						
CHGR				⇑*e*S	**Sn**	**08 02 02.4**	**-0.7**
	baz=25						
KURS	**Kuram**	**4.25**	**63**	*e*P	**Pb**	**08 01 27.1**	**+0.1**
	comp=Z,41nm,0.4s						
KURS				*e*S	**Sb**	**08 02 23.6**	**+5.7**
	comp=Z,260nm,0.9s						
KURS	**Kuram**	**4.25**	**63**	Pg	**Pb**	**08 01 27.7**	**+0.7**
	comp=Z,70nm,0.6s						
KURS				Lg	Lg	08 02 23.6	
	comp=Z,202nm,0.6s						
SATY	**Saty**	**4.27**	**69**	*e*PN	**Pn**	**08 01 16.7**	**+0.7**
SATY				*e*		08 01 31.8	
SATY				*e*		08 02 23.4	
SATY	**Saty**	**4.27**	**69**	*e*P	**Pb**	**08 01 27.0**	**-0.3**
	comp=Z,29nm,0.5s						
SATY				*e*S	**Sb**	**08 02 23.3**	**+4.9**
	comp=Z,335nm,0.5s						
SATY	**Saty**	**4.27**	**69**	*e*Pn	**Pn**	**08 01 16.7**	**+0.7**
	baz=70						
SATY				*e*Pb	**Pb**	**08 01 27.7**	**+0.4**
	baz=70						
SATY				*e*Pg		08 01 31.9	
	baz=70						
SATY				*e*Sb	**Sb**	**08 02 23.4**	**+5.0**
	baz=70						
SATY	**Saty**	**4.27**	**69**	Pg	**Pb**	**08 01 28.3**	**+1.0**
	comp=Z,41nm,0.3s						
SATY				Lg	Lg	08 02 24.5	
	comp=Z,245nm,0.5s						
UZB	**Uzynbulak**	**4.72**	**70**	*e*PN	**Pn**	**08 01 23.0**	**+0.7**
UZB				*i*		08 01 36.0	
UZB	**Uzynbulak**	**4.72**	**70**	*e*P	**Pb**	**08 01 35.0**	**-0.1**
	comp=Z,32nm,0.4s						
UZB				*e*S	**Sb**	**08 02 37.0**	**+5.4**
	comp=Z,236nm,0.5s						
UZB	**Uzynbulak**	**4.72**	**70**	*e*Pn	**Pn**	**08 01 23.1**	**+0.7**
	baz=70						
UZB				*i* Pg	**Pb**	**08 01 36.0**	**+0.9**
	baz=70						
UZB				*e*Lg	Lg	08 02 41.0	

	baz=70						
UZB	Uzynbulak	4.72	70	Pg	Pb	08 01 35.7	+0.6
	comp=Z,59nm,0.4s						
UZB				Lg	Lg	08 02 37.1	
	comp=Z,131nm,0.3s						
SHLS	Shalkode	5.04	71	*e*P	Pb	08 01 46.2	+5.8
	comp=Z,67nm,0.9s						
SHLS				*e*S	Sb	08 02 56.2	+16
	comp=Z,258nm,0.7s						
SHLS	Shalkode	5.04	71	*i* Pg	Pb	08 01 51.1	+11
	baz=72						
SHLS				*e*Lg	Lg	08 03 01.2	
	baz=72						
PDGK	Podgornoye	5.11	69	Pg	Pb	08 01 43.3	+1.7
	comp=Z,24nm,0.5s						
PDGK				Lg	Lg	08 02 50.2	
	comp=Z,76nm,0.7s						
PDGK	Podgornoye	5.11	69	⇑Pg	Pb	08 01 41.4	-0.1
	comp=Z,55nm,0.7s						
PDGK				⇓Lg	Lg	08 02 50.0	
	comp=Z,384nm,0.9s						
DJR	Jarkent	5.67	60	*e*P	Pb	08 01 53.0	+1.8
	comp=Z,18nm,0.5s						
DJR				*e*S	Sb	08 03 08.0	+9.4
	comp=Z,140nm,0.7s						
DJR	Jarkent	5.67	60	Pg	Pb	08 01 53.1	+1.9
	comp=Z,35nm,0.4s						
DJR				Lg	Lg	08 03 07.1	
	comp=Z,125nm,0.6s						
OTUK	Ortayu	6.57	356	PN	Pn	08 01 49.0	+1.5
OTUK	Ortayu	6.57	356	⇓Pn	Pn	08 01 49.0	+1.5
	comp=Z,13nm,0.5s						
KBL	Kabul	7.77	205	Pn	Pn	08 02 05.3	+1.1
KBL	Kabul	7.77	205	P	Pn	08 02 05.3	+1.1
CEP	Cherat	7.89	186	P	Pn	08 02 08.2	+2.4
CEP				S	Sn	08 03 37.0	+2.8
CHCP	Chirah Chowk	8.02	178	P	Pn	08 02 09.9	+2.4
NIL	Nilore	8.03	178		Pn	08 02 10.0	+2.4
NIL	Nilore	8.03	178	P	Pn	08 02 10.0	+2.4
MAKZ	Makanchi	8.26	49		Pn	08 02 12.7	+2.0
MAKZ	Makanchi	8.26	49	P	Pn	08 02 12.7	+2.0
BRZS	Berezniki	8.30	359	*e*P	Pn	08 02 12.2	+1.0
BRZS	Berezniki	8.30	359	*e*Pn	Pn	08 02 12.3	+1.0
	baz=359						
MK31	Makanchi Array	8.42	50	Pn	Pn	08 02 15.2	+2.2
MK31	Makanchi Array	8.42	50	*i* P	Pn	08 02 14.9	+2.0
MK31				pmax	pmax		
	comp=Z,8.0nm,0.4s						
MK31	Makanchi Array	8.42	50	⇑Pn	Pn	08 02 15.0	+2.0
	comp=Z,7.6nm,0.5s						
MK31				⇑Lg	Lg	08 04 36.7	
	comp=Z,54nm,0.8s						
MKAR	Makanchi Array	8.42	50	Pn	Pn	08 02 15.1	+2.1
MKAR	Makanchi Array	8.42	50	P	Pn	08 02 15.1	+2.1
THW	Thamme Wali	8.93	187	P	Pn	08 02 20.3	+0.4
KURBB	Kurchatov Arra	9.74	21	Pn	Pn	08 02 29.8	-1.1
	comp=Z,0.4nm,0.3s,baz=216,slow=12,SNR=13						
KURBB				Sn	Sn	08 04 19.4	+0.3
	comp=Z,0.4nm,0.3s,baz=52,slow=17,SNR=6.1						
KURBB				Lg	Lg	08 05 21.9	
	comp=Z,1.1nm,0.3s,baz=211,slow=27,SNR=7.6						
	comp=Z,1.5nm,0.5s						
KURBB	Kurchatov Arra	9.74	21	P	Pn	08 02 30.4	-0.4
KURBB	Kurchatov Arra	9.74	21	Pn	Pn	08 02 30.5	-0.4
	comp=Z,12nm,0.6s						
KURK	Kurchatov	9.84	22		Pn	08 02 32.9	+0.6
KURK	Kurchatov	9.84	22	*i* P	Pn	08 02 32.2	-0.2
WMQ	Urumqi	11.05	74	*e*P	Pn	08 02 54.4	+5.4
HRA	Herat	11.15	233	Pn	Pn	08 02 49.8	-0.7
BVA0	Borovoye Array	11.47	352	P	Pn	08 02 53.5	-1.1
BVA0	Borovoye Array	11.47	352	⇑P	Pn	08 02 53.5	-1.1
	comp=Z,9.1nm,0.8s						
BRVK	Borovoye	11.52	352	Pn	Pn	08 02 54.8	-0.5
BRVK	Borovoye	11.52	352	*i* P	Pn	08 02 54.5	-0.8
AB31	Akbulak array	11.85	314	*e*P	Pn	08 02 58.9	-0.9
AB31	Akbulak array	11.85	314	⇑P	Pn	08 02 58.9	-0.9
	comp=Z,10nm,0.5s,baz=121,slow=14,SNR=262						
ABKAR	Akbulak array	11.85	314	Pn	Pn	08 02 59.3	-0.5
GEYT	Alibeck	12.01	257	Pn	Pn	08 02 59.7	-2.4
	comp=Z,2.3nm,0.5s,baz=96,slow=15,SNR=1.9						
AKTO	Aktyubinsk	13.54	315	Pn	Pn	08 03 22.2	-0.8
	comp=Z,1.6nm,0.3s,baz=114,slow=12,SNR=16						
AKTO				Sn	Sn	08 05 55.6	+3.3
	comp=Z,0.4nm,0.3s,baz=234,slow=17,SNR=5.6						
	comp=Z,3.8nm,0.5s						
AKTO	Aktyubinsk	13.54	315	⇓P	Pn	08 03 22.1	-0.9
	comp=Z,14nm,1.0s						
ZALV	Zalesovo Beam	14.60	29	Pn	Pn	08 03 36.8	-0.6
	comp=Z,0.8nm,0.3s,baz=224,slow=13,SNR=7.4						
ZALV				Lg	Lg	08 07 57.0	
	baz=209,slow=31						
	comp=Z,4.9nm,0.6s						
ZALV	Zalesovo Beam	14.60	29	*i* P	P	08 03 38.7	-4.7
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	17.45	333	P	P	08 04 12.7	-2.2
	baz=43,slow=18,SNR=3.1						
	comp=Z,4.9nm,0.2s						
ARU	Arti	17.45	333	P	Pn	08 04 12.4	-1.5
ARU				S	Sn	08 07 25.0	-2.1
MAK	Makhachkala	18.84	282	*e*P	P	08 04 28.2	-2.1
MAK				*e*S	Sn	08 07 57.6	-3.3
MAK				pmax	pmax		
	comp=Z,46nm,0.4s						
MAK				MLR	MLR		
	comp=Z,130nm,9.0s						
KNGR	Kungurtug, Tuv	19.14	54	*i* P	Pn	08 04 35.9	+1.1
DVE	Vedeno	19.85	283	*i* P	P	08 04 38.7	-2.8
ONI	Oni	21.85	282		P	08 05 04.3	+1.3
ONI	Oni	21.85	282	*e*P	P	08 05 04.0	+1.0
GOF	Gofitskoye	21.94	289	⇑*e*P	P	08 05 05.5	+1.6
WSAR	Wadi Sarin	21.95	217	P	P	08 05 03.1	-1.1
	comp=Z,2.3nm,0.5s,baz=98,slow=7.1,SNR=1.6						
	comp=Z,2.3nm,0.5s						
KIV	Kislovodsk	22.26	286	*e*P	P	08 05 06.2	-1.3
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIRV	Kirov	22.47	327	*i* P	P	08 05 08.8	-0.6
ARXR	Arkhyz	23.31	285	*i* P	P	08 05 16.1	-2.4
SONM	Songino Array	24.40	64	P	P	08 05 28.4	-0.4
	comp=Z,0.8nm,0.7s,baz=228,slow=40,SNR=2.7						
	comp=Z,0.8nm,0.7s						
LZH	Lanzhou	24.61	93	*e*P	P	08 05 34.9	+4.1
LZH				pP	sP	08 05 43.2	-0.3
LZH				sP	pP	08 05 46.4	+6.7
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HYBB	Hyderabad (bro	24.66	167	*e*P	P	08 05 31.9	+0.8
HYBB				*e*sP	sP	08 05 48.8	+4.1
HYBB				*e*S	S	08 09 51.5	+0.6
ULN	Ulaanbaatar	24.84	64	*i* P	P	08 05 33.6	+0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PZH	PanZhiHua	28.08	114	P	P	08 06 03.8	+1.7
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC	Hu-ho-hao-te	28.88	79	*e*P	P	08 06 11.2	+2.2
BR131	Keskin Array S	29.69	279	*i* P	P	08 06 16.2	-0.1
BRTR	Keskin Array B	29.69	279	P	P	08 06 17.1	+0.8
	comp=Z,1.5nm,0.8s,baz=90,slow=6.4,SNR=5.7						
	comp=Z,1.5nm,0.8s						
BRTR	Keskin Array B	29.69	279	*i* P	P	08 06 17.2	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	31.18	302	P	P	08 06 28.6	-0.6
	comp=Z,0.2nm,0.2s,baz=77,slow=8.3,SNR=4.0						
	comp=Z,0.2nm,0.2s						
AKASG	Malin Array Be	31.18	302	*i* P	P	08 06 29.3	+0.2
AKBB	Malin Array Si	31.18	302	*i* P	P	08 06 27.7	-1.4
AKBB				pmax	pmax		
	comp=Z,16nm,2.0s						
MLR	Muntele Rosu	33.88	293		P	08 06 53.2	+0.2
MLR				IAmb	IAmb	08 07 06.7	
	comp=Z,6.5nm,1.0s						
MLR	Muntele Rosu	33.88	293	P	P	08 06 53.2	+0.2
MLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FIA1	FINESS Array S	34.20	321	P	P	08 06 55.9	+0.5
FINES	FINESS Array B	34.20	321	P	P	08 06 55.7	+0.3
	comp=Z,1.6nm,0.4s,baz=110,slow=9.1,SNR=24						
	comp=Z,1.6nm,0.4s						
FINES	FINESS Array B	34.20	321	P	P	08 06 55.9	+0.5
ARCES	ARCESS Array B	37.02	335	P	P	08 07 19.4	-0.2
	comp=Z,1.2nm,0.6s,baz=76,slow=5.1,SNR=10						
	comp=Z,1.2nm,0.6s						
ARCES	ARCESS Array B	37.02	335	P	P	08 07 20.1	+0.5
ARCES				IAmb	IAmb	08 07 59.6	
	comp=Z,12nm,1.4s						
NJ2	Nanjing	37.58	90	*e*P	P	08 07 24.3	-0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
IDI	Anoyia	37.76	276	P	P	08 07 26.2	-0.2
DIVS	Divibare	38.32	292	P	P	08 07 30.6	-0.3
DIVS				IAmb	IAmb	08 07 38.2	
	comp=Z,6.4nm,1.2s						
PDG	Podgorica	39.31	290	P	P	08 07 39.4	+0.2
PDG				IAmb	IAmb	08 07 40.7	
	comp=Z,8.1nm,0.7s						
HFS	Hagfors	40.07	318	P	P	08 07 45.4	+0.1
	comp=Z,3.5nm,0.4s,baz=98,slow=11,SNR=21						
	comp=Z,3.5nm,0.4s						
TIXI	Tiksi	40.41	24	P	P	08 07 48.8	+0.9
TIXI				IAmb	IAmb	08 07 51.2	
	comp=Z,9.1nm,0.8s						
TIXI	Tiksi	40.41	24	P	P	08 07 48.8	+0.9
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KAAM	Kaadhehdhoo	41.01	180	P	P	08 07 53.5	+0.1
NC405	NORSAR Array S	41.04	320	P	P	08 07 53.3	0.0
NC405				IAmb	IAmb	08 08 35.4	
	comp=Z,14nm,1.2s						
NORES	NORESS Array B	41.13	319	P	P	08 07 54.2	+0.2
NC303	NORSAR Array S	41.21	320	P	P	08 07 54.8	+0.1
NC303				IAmb	IAmb	08 08 12.2	
	comp=Z,14nm,1.2s						
NB201	NORSAR Array S	41.25	319	P	P	08 07 54.7	-0.3
NB201				IAmb	IAmb	08 07 55.1	
	comp=Z,9.8nm,0.8s						
NB2	NORSAR Subarra	41.29	319	P	P	08 07 55.1	-0.2
	comp=Z,1.4nm,0.6s,baz=90,slow=8.6						
NOA	NORSAR Array B	41.29	319	P	P	08 07 54.9	-0.5
	comp=Z,2.2nm,0.6s,baz=90,slow=8.2,SNR=11						
	comp=Z,2.2nm,0.6s						
GERES	GERESS Array B	41.37	301	P	P	08 07 56.7	+0.4
	comp=Z,1.4nm,0.7s,baz=80,slow=8.3,SNR=8.0						
	comp=Z,1.4nm,0.7s						
GERES	GERESS Array B	41.37	301	P	P	08 07 56.6	+0.3
GERES	GERESS Array B	41.37	301	P	P	08 07 56.6	+0.3
NAO01	NORSAR Array S	41.45	319	P	P	08 07 56.8	+0.2
NBO00	NORSAR Array S	41.50	319	P	P	08 07 57.0	-0.1
NBO00				IAmb	IAmb	08 08 36.0	
	comp=Z,14nm,1.1s						
NC204	NORSAR Array S	41.50	320	P	P	08 07 57.2	+0.1
NC204				IAmb	IAmb	08 08 29.6	
	comp=Z,20nm,1.3s						
EKA	Eskdalemuir Ar	49.72	313	P	P	08 09 01.2	-0.9
KKM	Kota Kinabalu	52.28	120	P	P	08 09 20.7	-1.2
JHJ	Hachijo jima 2	52.58	76	P	P	08 09 22.8	-1.1
	comp=Z,90nm,0.6s,baz=328,slow=13,SNR=2.1						
BILL	Bilibino	53.30	28	*e*P	P	08 09 31.0	+2.3
BILL				*e*		08 10 37.5	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ESDC	Sonseca Array	56.48	296	P	P	08 09 51.4	-0.8
	comp=Z,2.1nm,0.8s,baz=56,slow=7.2,SNR=15						
	comp=Z,2.1nm,0.8s						
ESDC	Sonseca Array	56.48	296	P	P	08 09 52.5	+0.3
TOLK	Toolik Lake Re	65.53	16	P	P	08 10 54.1	+1.0
COLD	Coldfoot	66.57	17	P	P	08 11 00.7	+0.9
COLD				IAmb	IAmb	08 11 13.9	
	comp=Z,6.1nm,1.3s						
IMAR	Indian Mountai	66.78	19	P	P	08 11 01.3	+0.3
TOA0	Torodi Ar. Sit	67.41	268	P	P	08 11 06.0	+0.1
TOA0				IAmb	IAmb	08 11 27.1	
	comp=Z,6.9nm,1.3s						
TORD	Torodi Ar. Bea	67.41	268	P	P	08 11 05.1	-0.7
	comp=Z,1.0nm,0.6s,baz=54,slow=5.3,SNR=7.3						
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	67.41	268	P	P	08 11 05.2	-0.6
BMAR	Burnt Mountain	67.55	15	P	P	08 11 06.9	+0.9
I21K	Tanana	67.86	19	P	P	08 11 08.3	+0.4
I21K				IAmb	IAmb	08 11 26.1	
	comp=Z,5.7nm,1.4s						
J20K	Nowinta River	68.14	20	P	P	08 11 10.8	+1.1
J20K				IAmb	IAmb	08 11 13.9	
	comp=Z,4.6nm,1.1s						
ILAR	Eielson Array	69.38	17	P	P	08 11 17.0	-0.4
	comp=Z,0.6nm,0.7s,baz=326,slow=5.3,SNR=5.6						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	69.38	17	P	P	08 11 17.2	-0.2
I29M	Ogilvie Camp,	70.54	13	P	P	08 11 24.7	+0.1
I29M				pP	sP	08 11 38.0	+0.2
I29M				IAmb	IAmb	08 11 43.4	
	comp=Z,2.6nm,0.7s						
I29M				sP	PcP	08 11 43.4	-2.2
SKT	Skwentna	70.63	21	P	P	08 11 25.1	-0.1
SCRK	Sand Creek	70.70	16	P	P	08 11 25.7	0.0
RIDG	Independent Ri	70.72	17	P	P	08 11 25.7	-0.1
RIDG				IAmb	IAmb	08 12 04.9	
	comp=Z,5.7nm,1.2s						
SCM	Sheep Creek Mo	71.81	19	P	P	08 11 32.7	+0.3
SCM	Sheep Creek Mo	71.81	19	P	P	08 11 32.7	+0.3
SCM				pmax	pmax		
	comp=Z,14nm,1.4s						
ILSW	Iliamna Southw	71.84	22	P	P	08 11 32.5	-0.1
ILSW				IAmb	IAmb	08 12 15.2	
	comp=Z,8.4nm,0.9s						
L27K	Beaver Creek,	71.96	16	P	P	08 11 33.9	+0.7
BCAR	Beaver Creek A	71.97	16	P	P	08 11 34.3	+1.0
M27K	Edge Creek, AK	72.58	16	P	P	08 11 37.5	+0.4
ROSA	Rosais	72.60	306	P	P	08 11 36.8	-0.6
YKA	Yellowknife Ar	75.99	4	P	P	08 11 56.5	-0.2
	comp=Z,0.8nm,0.7s,baz=348,slow=6.6,SNR=3.6						
	comp=Z,0.8nm,0.7s						
WRA	Warramunga Arr	83.53	124	P	P	08 12 37.9	-0.2
	comp=Z,0.5nm,0.8s,baz=322,slow=4.4,SNR=2.1						
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	86.05	127	P	P	08 12 50.5	-0.3
	comp=Z,0.7nm,0.9s,baz=325,slow=7.0,SNR=5.7						
	comp=Z,0.7nm,0.9s						

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*IDC **01** 08:01:22.3±0.5, 27°.86S×176°.33W, h0km, mb4.4/13, mbtmp4.4/13, MS4.3/6, Error ellipse: s-maj=21.3km s-min=16.6km az=131.0*

*NEIC **01** 08:01:28.2±1.5, 28°.06S±0°.07×176°.41W±0°.10, h35km±1km, mb4.9/47, Error ellipse: s-maj=15.4km s-min=11.0km az=66.0*

ISC 01 08:01:28.0±0.4**, 28°.02S**±0°.07×**176°.36W**±0°.08**, h37km, n101, σ1s.16**/96**, mb4.9**/41**, MS4.1**/6**, 1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.83	228	Pn	Pn	08 01 59.1	+2.2
	157nm,0.3s,baz=245,slow=23,SNR=8.7						
RAO				Sn	Sn	08 02 24.0	+5.1
	544nm,0.3s,baz=76,slow=23,SNR=15						
RAO	Raoul Island	1.83	228		Pn	08 01 56.2	-0.7
OUZ	Omahuta	11.16	228	Pn	Pn	08 04 05.0	0.0
MSVF	Nonsavu	11.46	332		Pn	08 04 10.1	+0.9
URZ	Urewera	11.58	206	Sn	Sn	08 06 13.2	-5.3
	2.2nm,0.3s,baz=116,slow=23,SNR=5.7						
URZ	Urewera	11.58	206	Pn	Pn	08 04 08.9	-1.7
MSWZ	Moikau Station	15.02	205	Pn	Pn	08 04 57.8	+0.2
RAR	Rarotonga	16.53	69	LR	LR	08 10 31.2	
	comp=Z,704nm,18.9s,baz=242,slow=33						
DZM	Mont Dzumac	16.66	287	Pn	P	08 05 22.2	+1.3
	0.3nm,0.3s,baz=132,slow=12,SNR=4.6						
DZM				LR	LR	08 10 49.4	
	comp=Z,346nm,18.7s,baz=102,slow=34						
DZM	Mont Dzumac	16.66	287	*e*P	P	08 05 20.0	-0.9
	141nm,1.5s						
DZM				*e*LR	LR	08 09 10.3	
	comp=Z,496nm,22.1s						
PAE	Paea	26.70	73	*e*T	T	08 34 19.5	
	4.1nm,0.4s						
PPT2	Papeete2	26.73	73	*e*LR	LR	08 13 52.2	
	comp=Z,288nm,21.5s						
PPT2				*e*LR	LR	08 13 52.3	
	comp=Z,316nm,21.0s						
PPT	Papeete	26.74	73	LR	LR	08 16 45.4	
	comp=Z,430nm,18.1s,baz=220,slow=35						
EIDS	Eidsvold	29.16	268	P	P	08 07 24.1	-1.7
CAN	Canberra	30.25	247	P	P	08 07 35.8	+0.3
CAN				IAmb	IAmb	08 08 40.8	
	comp=Z,42nm,1.8s						
TOO	Toolangi	33.26	243	P	P	08 08 01.7	-0.2
CTAO	Charters Tower	34.93	275	P	P	08 08 16.5	0.0
STKA	Stephens Creek	36.47	253	P	P	08 08 30.2	+0.6
	comp=Z,2.9nm,0.9s,baz=20,slow=18,SNR=2.9						
	comp=Z,2.9nm,0.9s						
STKA	Stephens Creek	36.47	253	P	P	08 08 29.7	+0.2
TAOE	Nuku Hiva Isla	39.07	68	*e*LR	LR	08 19 34.7	
	comp=Z,356nm,22.7s						
COEN	Coen	40.09	282	P	P	08 08 58.9	-1.3
COEN				IAmb	IAmb	08 09 58.2	
	comp=Z,37nm,1.6s						
AS31	Alice Springs	44.73	264	P	P	08 09 37.2	-0.7
ASAR	Alice Springs	44.73	264	P	P	08 09 37.4	-0.6
	comp=Z,2.9nm,0.8s,baz=97,slow=7.5,SNR=21						
ASAR				LR	LR	08 27 24.1	
	comp=Z,349nm,18.6s,baz=52,slow=35						
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	44.73	264		P	08 09 36.7	-1.2
WR0	Warramunga Arr	45.32	269	P	P	08 09 41.9	-0.8
WR0				IAmb	IAmb	08 09 43.6	
	comp=Z,22nm,1.4s						
WB2	Warramunga Arr	45.49	269	P	P	08 09 42.5	-1.5
WB2				IAmb	IAmb	08 09 45.1	
	comp=Z,17nm,1.2s						
WRAB	Tennant Creek	45.50	269	P	P	08 09 44.1	+0.1
WRA	Warramunga Arr	45.51	269	P	P	08 09 42.7	-1.4
	comp=Z,3.2nm,0.7s,baz=108,slow=6.2,SNR=19						
WRA				LR	LR	08 27 41.1	
	comp=Z,209nm,18.4s,baz=345,slow=35						
	comp=Z,3.2nm,0.7s						
WRA	Warramunga Arr	45.51	269	P	P	08 09 42.9	-1.2
WB0	Warramunga Arr	45.52	269	P	P	08 09 43.0	-1.2
SBA	Scott Base	50.51	185		P	08 10 23.1	+1.2
SBA				IAmb	IAmb	08 10 47.6	
	comp=Z,19nm,1.3s						
FITZ	Fitzroy Crossi	53.85	267	P	P	08 10 47.9	+0.3
QSPA	South Pole Qui	62.08	180	P	P	08 11 45.8	+1.0
	comp=Z,17nm,0.9s,baz=44,slow=2.4,SNR=27						
	comp=Z,17nm,0.9s						
QSPA	South Pole Qui	62.08	180	P	P	08 11 45.5	+0.8
MAW	Mawson	75.03	200	P	P	08 13 06.3	+1.1
	comp=Z,2.9nm,0.9s,baz=189,slow=3.9,SNR=4.0						
	comp=Z,2.9nm,0.9s						
MG05	Puerto Natales	76.48	142	P	P	08 13 14.4	+0.5
MG05				IAmb	IAmb	08 13 15.8	
	comp=Z,18nm,1.1s						
JNU	Nakatsue	78.77	317	P	P	08 13 26.1	-0.7
	comp=Z,6.3nm,0.8s,baz=24,slow=2.3,SNR=6.3						
	comp=Z,6.3nm,0.8s						
JNU	Nakatsue	78.77	317	P	P	08 13 26.3	-0.6
JHS	Saijyo	78.78	320	P	P	08 13 26.9	0.0
TROLL	Troll, Antarti	80.24	180	P	P	08 13 34.9	+0.4
SNAA	Sanae	80.48	178	P	P	08 13 35.9	+0.2
SNAA	Sanae	80.48	178	P	P	08 13 36.0	+0.2
SNAA				IAmb	IAmb	08 13 38.3	
	comp=Z,14nm,1.0s						
VNA3	Neumayer Olymp	80.56	176	P	P	08 13 35.8	-0.4
VNA2	Neumayer--Watz	81.02	176	P	P	08 13 38.7	+0.2
	baz=186,slow=3.0						
VNA1	Neumayer--Stat	81.24	176	P	P	08 13 41.2	+1.6
PLCA	Paso Flores	83.07	133	P	P	08 13 49.8	-0.2
	comp=Z,9.9nm,1.1s,baz=217,slow=5.5,SNR=7.1						
	comp=Z,9.9nm,1.1s						
PLCA	Paso Flores	83.07	133	P	P	08 13 50.1	+0.1
PLCA				IAmb	IAmb	08 13 52.4	
	comp=Z,24nm,1.3s						
KSRS	Korea Array	83.49	319	P	P	08 13 53.0	+1.2
	comp=Z,2.5nm,1.0s,baz=132,slow=5.8,SNR=9.2						
	comp=Z,2.5nm,1.0s						
KSAR	Wonju Array Be	83.51	319	P	P	08 13 51.9	-0.1
PETK	Petropavlovsk-	83.89	345	P	P	08 13 53.7	+0.2
	comp=Z,2.4nm,0.9s,baz=110,slow=8.1,SNR=4.1						
	comp=Z,2.4nm,0.9s						
CMB	Columbia Colle	84.04	41	P	P	08 13 55.2	+0.5
QSM	Queen of Sheba	84.79	45	P	P	08 13 58.9	+0.4
QSM				IAmb	IAmb	08 14 04.1	
	comp=Z,17nm,1.5s						
MPK	Martis Peak	85.10	40	P	P	08 14 00.8	+0.5
MPK				IAmb	IAmb	08 14 02.2	
	comp=Z,7.1nm,1.0s						
PNTR	Pine Nut	85.20	41	P	P	08 14 01.7	+0.9
PNTR				IAmb	IAmb	08 14 03.6	
	comp=Z,8.7nm,1.0s						
NVAR	Mina Array Bea	85.53	42	P	P	08 14 02.0	-0.4
	comp=Z,3.3nm,0.9s,baz=221,slow=8.2,SNR=14						
	comp=Z,3.3nm,0.9s						
NVAR	Mina Array Bea	85.53	42	P	P	08 14 02.4	0.0
NV11	Mina Array Sit	85.61	42	P	P	08 14 03.4	+0.7
TPNV	Topopah Spring	85.81	44	P	P	08 14 03.5	-0.2
NJ2	Nanjing	85.81	310	*e*P	P	08 14 01.7	-2.0
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
TPH	Tonopah	85.94	43	P	P	08 14 04.1	-0.4
USRK	Ussuriysk Ar.	86.00	326	P	P	08 14 03.8	-0.4
TUC	Tucson	86.51	51	P	P	08 14 07.4	+0.2
TUC				IAmb	IAmb	08 14 10.5	
	comp=Z,8.9nm,1.1s						
PRN	Pahroc Range	86.83	44	P	P	08 14 08.5	-0.3
PRN				IAmb	IAmb	08 14 12.2	
	comp=Z,6.5nm,1.0s						
CCUT	Cedar City	87.97	45	P	P	08 14 14.2	-0.2
CCUT				IAmb	IAmb	08 14 17.8	
	comp=Z,6.6nm,1.1s						
MTPU	Mount Pierson	89.01	45	P	P	08 14 19.5	+0.1
MTPU				IAmb	IAmb	08 14 22.6	
	comp=Z,7.1nm,1.1s						
D05A	Enumclaw	89.46	34	P	P	08 14 22.7	+1.9
G08A	Pilot Rock	89.71	36	P	P	08 14 21.8	-0.4
G08A				IAmb	IAmb	08 14 25.6	
	comp=Z,7.1nm,1.1s						
ILSW	Iliamna Southw	89.74	11	P	P	08 14 21.8	-0.2
ILSW				IAmb	IAmb	08 15 52.6	
	comp=Z,28nm,0.4s						
TXAR	Lajitas Array	89.90	56	P	P	08 14 23.3	-0.2
	comp=Z,1.8nm,1.1s,baz=202,slow=6.5,SNR=6.1						
	comp=Z,1.8nm,1.1s						
HAWA	Hanford	90.15	35	P	P	08 14 24.2	+0.1
HAWA				IAmb	IAmb	08 14 27.7	
	comp=Z,9.2nm,1.3s						
SRU	San Rafael Swe	90.69	45	P	P	08 14 26.7	-0.4
SRU				IAmb	IAmb	08 14 29.7	
	comp=Z,10nm,1.4s						
D08A	Wollman Farm,	90.91	35	P	P	08 14 27.6	0.0
E09A	Wood Farm, Sta	90.94	36	P	P	08 14 27.9	+0.1
E09A				IAmb	IAmb	08 14 29.7	
	comp=Z,5.7nm,1.0s						
F10A	Beach Ranch, E	91.07	37	P	P	08 14 29.4	+0.9
F10A				IAmb	IAmb	08 14 30.4	
	comp=Z,7.7nm,1.0s						
PLID	Pearl Lake	91.16	38	P	P	08 14 29.0	-0.1
PLID				IAmb	IAmb	08 14 31.5	
	comp=Z,11nm,1.2s						
ENH	Enshi	91.46	304	P	P	08 14 30.6	-0.1
BJI	Beijing	92.25	315	P	P	08 14 35.2	+1.2
BJI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PCA	Pinnacle	92.67	17	P	P	08 14 35.5	-0.1
REDW	Red Top Meadow	93.01	42	P	P	08 14 37.6	-0.2
REDW				IAmb	IAmb	08 14 59.0	
	comp=Z,15nm,1.6s						
SNOW	Snow King Moun	93.13	42	P	P	08 14 39.1	+0.8
SNOW				IAmb	IAmb	08 14 40.5	
	comp=Z,5.9nm,1.0s						
PDAR	Pinedale Array	93.43	43	P	P	08 14 39.2	-0.4
	comp=Z,1.0nm,0.9s,baz=223,slow=3.3,SNR=4.8						
	comp=Z,1.0nm,0.9s						
RND	Reindeer	93.70	12	P	P	08 14 40.8	+0.6
YHL	Hebgen Lake	93.70	40	P	P	08 14 41.1	+0.2
YHL				IAmb	IAmb	08 14 44.3	
	comp=Z,12nm,1.3s						
YMR	Madison River	93.72	41	P	P	08 14 42.2	+1.2
ILAR	Eielson Array	95.30	12	P	P	08 14 46.4	-1.1
	comp=Z,1.1nm,1.0s,baz=225,slow=4.2,SNR=6.1						
	comp=Z,1.1nm,1.0s						
PZH	PanZhiHua	95.49	297	P	P	08 14 50.2	+0.8
HHC	Hu-ho-hao-te	95.63	314	*e*P	P	08 14 52.1	+2.4
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,6.5s						
RSSD	Black Hills	97.53	44	P	Pdif	08 14 58.7	+0.3
RSSD				IAmb	IAmb	08 14 59.8	
	comp=Z,5.6nm,1.0s						
LPAZ	La Paz	97.78	113	LR	LR	08 51 54.7	
	comp=Z,577nm,19.0s,baz=141,slow=31						
LZH	Lanzhou	98.46	306	*e*P	Pdif	08 15 03.1	+0.4
LZH				pP	sP	08 15 14.2	-2.9
LZH				sP	pwP	08 15 17.5	-0.9
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOSA	**Boshof**	**120.00**	**202**	PKP	**PKiKP**	**08 20 14.7**	**-0.7**
	comp=Z,4.6nm,1.0s,baz=207,slow=2.3,SNR=3.8						
KURBB	**Kurchatov Arra**	**120.47**	**314**	PKP	**PKPdf**	**08 20 14.0**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=106,slow=1.9,SNR=5.8						
KKAR	**Karatay Array**	**124.92**	**305**		**PKiKP**	**08 20 23.7**	**-0.7**
ARCES	**ARCESS Array B**	**136.56**	**349**	PKP	**PKiKP**	**08 20 46.6**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=324,slow=7.5,SNR=4.1						
KBZ	**Khabaz**	**144.90**	**307**	PKP	**PKPdf**	**08 21 00.2**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=102,slow=3.3,SNR=6.2						
NB2	**NORSAR Subarra**	**146.59**	**353**	PKP	**PKPbc**	**08 21 04.3**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=6.8,slow=2.8						
NOA	**NORSAR Array B**	**146.59**	**353**	PKPbc	**PKPbc**	**08 21 04.0**	**-1.0**
	comp=Z,6.4nm,1.0s,baz=13,slow=4.4,SNR=10						
NACGM	**Naroch**	**148.32**	**334**	⇓*e*PKP	**PKPab**	**08 21 11.5**	**-1.5**
	baz=41						
AKASG	**Malin Array Be**	**150.20**	**326**	PKPbc	**PKiKP**	**08 21 14.4**	**-1.0**
	comp=Z,6.7nm,0.9s,baz=43,slow=3.1,SNR=30						
BRTR	**Keskin Array B**	**152.62**	**303**	PKPbc	**PKPbc**	**08 21 20.1**	**-0.8**
	comp=Z,2.1nm,1.0s,baz=134,slow=5.3,SNR=5.0						
BRTR				PKPab	**PKPab**	**08 21 31.2**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=116,slow=5.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	**165.09**	**173**	PKP	**PKPdf**	**08 21 29.9**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=232,slow=7.3,SNR=5.0						
TORD				PKPab	**PKPab**	**08 22 26.6**	**+1.0**
	comp=Z,9.0nm,1.0s,baz=189,slow=4.3,SNR=20						

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*IDC **01** 08:16:04.3±1.1, 26.°81N×90.°13E, h0km, mb3.7/9, mbtmp3.7/10, ML4.0/1, Error ellipse: s-maj=39.2km s-min=18.9km az=52.0*

ISC 01 08:16:09.9±0.7**, 26.°9N**±0.°1×**90.°17E**±0.°09**, h35km, n12,** σ1.s**39**/13**, mb3.6**/9**, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBP	**Jabalpur**	**9.96**	**250**	*e*P	**Pn**	**08 18 31.3**	**+0.7**
JBP				*e*S	**Sn**	**08 20 20.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**11.68**	**134**	Pn	**Pn**	**08 18 53.7**	**-0.4**
	0.3nm,0.3s,baz=324,slow=12,SNR=5.6						
	1.5nm,0.3s						
WMQ	**Urumqi**	**16.99**	**354**	*e*P	**Pn**	**08 20 02.0**	**-2.7**
SONM	**Songino Array**	**24.45**	**27**	P	**P**	**08 21 25.5**	**+0.1**
	1.0nm,0.7s,baz=203,slow=8.4,SNR=6.1						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**25.29**	**342**	P	**P**	**08 21 31.8**	**-1.1**
	0.8nm,0.5s,baz=158,slow=8.6,SNR=5.8						
	0.8nm,0.5s						
MJAR	**Matsushiro Arr**	**41.61**	**64**	P	**P**	**08 23 55.6**	**+1.0**
	0.7nm,0.5s,baz=254,slow=9.0,SNR=4.1						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**54.38**	**328**	P	**P**	**08 25 32.3**	**-0.6**
	1.1nm,0.5s,baz=110,slow=10,SNR=8.4						
	1.1nm,0.5s						
ARCES	**ARCESS Array B**	**56.23**	**338**	P	**P**	**08 25 48.0**	**+1.8**
	0.8nm,0.7s,baz=95,slow=6.1,SNR=3.8						
	0.8nm,0.7s						
GERES	**GERESS Array B**	**61.57**	**313**	P	**P**	**08 26 24.8**	**+1.1**
	0.4nm,0.5s,baz=69,slow=7.3,SNR=3.7						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**63.27**	**133**	P	**P**	**08 26 33.9**	**-1.4**
	0.4nm,0.7s,baz=325,slow=6.8,SNR=6.0						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**65.68**	**136**	P	**P**	**08 26 50.5**	**-0.5**
	0.2nm,0.5s,baz=317,slow=6.1,SNR=1.5						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**78.54**	**22**	P	**P**	**08 28 08.4**	**+1.1**
	0.6nm,1.0s,baz=305,slow=4.3,SNR=4.4						
	0.6nm,1.0s						

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*IDC **01** 08:21:32.6±0.8, 15.°11N×94.°31W, h0km, mb4.3/22, mbtmp4.3/23, ML4.1/1, MS4.1/22, Error ellipse: s-maj=30.0km s-min=12.0km az=53.0*

*MEX **01** 08:21:35.0±1.0, 14.°90N×94.°62W, h17km±51km, MD4.6*

*NEIC **01** 08:21:36.5±2.4, 15.°02N±0.°06×94.°57W±0.°02, h29km±6km, mb4.7/319, Md4.6/65(MEX), Error ellipse: s-maj=9.1km s-min=1.5km az=164.0*

*GCG **01** 08:21:36.8±2.2, 15.°52N×94.°29W, h46km, MD4.8*

*GCMT **01** 08:21:38.5±0.5, 14.°93N±0.°03×94.°44W±0.°04, h12km, MW5.0/74, Moment Tensor Solution. s21,c22; s74,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.86±.09; $M_{\theta\theta}$-1.34±.08; $M_{\phi\phi}$-0.51±.07; $M_{r\theta}$3.83±.30; $M_{\phi\phi}$0.43±.07; $M_{\phi r}$-0.04±.34; Best double couple: $M_0$4.17700×10^{16} NP1:ϕ_s93.00000°, δ78.00000°, λ84.00000°. NP2: ϕ_s299.00000°, δ13.00000°, λ116.00000°. Principal axes: T 4.4190, Plg56.0000°, Azm356.0000°; N -0.4830, Plg6.0000°, Azm94.0000°; P -3.9340, Plg33.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 08:21:34.9±1.2**, 14.°91N**±0.°05×**94.°61W**±0.°03**, h24km**±8km**, n645,** σ1.s**47**/622**, mb4.7**/150**, MS4.2**/20**, 7D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CARR	**Arriaga**	**1.49**	**27**	*e*P	**Pn**	**08 21 58.0**	**-2.1**
CARR				*e*S	**Sn**	**08 22 15.4**	**-3.5**
PCIG		**1.56**	**59**		**Pn**	**08 21 58.4**	**-2.7**
PCIG					**Sn**	**08 22 18.2**	**-2.3**
PCIG		**1.56**	**59**	*i* P	**Pn**	**08 21 58.4**	**-2.7**
PCIG				*i* S	**Sn**	**08 22 18.2**	**-2.3**
NILT	**Santiago Nilte**	**1.65**	**360**	*e*P	**Pn**	**08 22 00.3**	**-2.0**
NILT				*e*S	**Sn**	**08 22 19.3**	**-3.4**
HUIG	**Huatulco**	**1.68**	**301**		**Pn**	**08 22 00.6**	**-2.1**
HUIG	**Huatulco**	**1.68**	**301**	*e*P	**Pn**	**08 22 00.6**	**-2.1**
HUIG				*i* S	**Sn**	**08 22 19.5**	**-4.1**
PANG	**Puerto Angel**	**1.95**	**293**		**Pn**	**08 22 04.7**	**-1.8**
PANG					**Sn**	**08 22 26.1**	**-4.1**
PANG	**Puerto Angel**	**1.95**	**293**	*e*P	**Pn**	**08 22 04.7**	**-1.8**
PANG				*i* S	**Sn**	**08 22 26.1**	**-4.1**
THIG		**2.27**	**90**		**Pn**	**08 22 08.3**	**-2.6**
THIG					**Sn**	**08 22 34.6**	**-3.4**
THIG		**2.27**	**90**	*e*P	**Pn**	**08 22 08.3**	**-2.6**
THIG				*e*S	**Sn**	**08 22 34.6**	**-3.4**
PATR	**El Naranjo**	**2.31**	**85**	*e*P	**Pn**	**08 22 09.5**	**-2.1**
PATR				*e*S	**Sn**	**08 22 36.6**	**-2.8**
TGIG		**2.35**	**37**		**Pn**	**08 22 11.3**	**-0.6**
TGIG					**Sn**	**08 22 37.5**	**-2.6**
TGIG		**2.35**	**37**	*e*P	**Pn**	**08 22 11.3**	**-0.6**
TGIG				*i* S	**Sn**	**08 22 37.5**	**-2.6**
PAVE	**Pavencul**	**2.37**	**83**	*e*P	**Pn**	**08 22 09.4**	**-3.0**
PAVE				*e*S	**Sn**	**08 22 37.9**	**-2.9**
CHUJ	**Union Juarez**	**2.42**	**85**	*e*P	**Pn**	**08 22 10.9**	**-2.3**
CHUJ				*e*S	**Sn**	**08 22 39.1**	**-3.2**
PEIG	**Puerto Escondi**	**2.68**	**294**	*e*P	**Pn**	**08 22 15.2**	**-1.3**
PEIG				*i* S	**Sn**	**08 22 43.4**	**-4.8**
CCIG	**Comitan**	**2.75**	**60**		**Pn**	**08 22 17.4**	**-0.2**
CCIG	**Comitan**	**2.75**	**60**	*e*P	**Pn**	**08 22 17.4**	**-0.2**
CCIG				*e*S	**Sn**	**08 22 50.7**	**+0.6**
RTAL	**Retalhuleu**	**2.85**	**97**		**Pn**	**08 22 17.2**	**-1.6**
STG3	**Santiaguito 3,**	**2.95**	**93**	*e*P	**Pn**	**08 22 19.3**	**-1.0**
STG3				*e*S	**Sn**	**08 22 51.3**	**-3.8**
VHO	**Vista Hermosa**	**2.97**	**317**	*e*P	**Pn**	**08 22 21.1**	**+0.5**
VHO				*e*S	**Sn**	**08 22 54.2**	**-1.4**
HUEH	**Huehuetenango**	**3.03**	**82**		**Pn**	**08 22 21.3**	**-0.3**
TUIG	**Tuzandepetl**	**3.11**	**3**	*e*P	**Pn**	**08 22 22.5**	**0.0**
PNIG	**Pinotepa**	**3.70**	**294**		**Pn**	**08 22 29.9**	**-0.6**
PNIG					**Sn**	**08 23 08.2**	**-5.1**
PNIG	**Pinotepa**	**3.70**	**294**	*e*P	**Pn**	**08 22 29.9**	**-0.6**
PNIG				*i* S	**Sn**	**08 23 08.2**	**-5.1**
TXIG	**Tlaxiaco**	**3.83**	**308**	*e*P	**Pn**	**08 22 33.2**	**+0.6**
TXIG				*e*S	**Sn**	**08 23 16.2**	**-0.8**
TOIG	**Toxpalan**	**3.95**	**324**	*e*P	**Pn**	**08 22 34.7**	**+0.6**
TOIG				*e*S	**Sn**	**08 23 17.5**	**-2.2**
NBG	**Las Nubes**	**4.14**	**94**	*e*P	**Pn**	**08 22 36.5**	**-0.3**
HLIG	**Huajuapan de L**	**4.22**	**314**	*e*P	**Pn**	**08 22 40.0**	**+2.0**
HLIG				*e*S	**Sn**	**08 23 24.8**	**-1.8**
MGIG	**Malinaltepec**	**4.51**	**301**	*e*P	**Pn**	**08 22 43.4**	**+1.5**
MGIG				*e*S	**Sn**	**08 23 31.3**	**-2.3**
TLIG	**Tlapa**	**4.63**	**305**		**Pn**	**08 22 43.9**	**+0.4**
TLIG	**Tlapa**	**4.63**	**305**	*e*P	**Pn**	**08 22 45.1**	**+1.7**
TLIG				*e*S	**Sn**	**08 23 33.4**	**-3.1**
CRIG	**Cruz Grande**	**4.72**	**293**		**Pn**	**08 22 44.5**	**0.0**
CRIG					**Sn**	**08 23 33.6**	**-4.9**
CRIG	**Cruz Grande**	**4.72**	**293**	*e*P	**Pn**	**08 22 44.5**	**0.0**
CRIG				*i* S	**Sn**	**08 23 33.6**	**-4.9**
MRL	**Marmol**	**4.76**	**87**	*e*P	**Pn**	**08 22 45.5**	**+0.1**
JAUV	**Jalcomulco**	**4.90**	**335**	*e*P	**Pn**	**08 22 46.6**	**-0.6**
JAUV				*i* S	**Sn**	**08 23 40.2**	**-3.0**
PETF	**Flores**	**4.98**	**66**		**Pn**	**08 22 46.6**	**-1.5**
ESQI	**Esquipulas**	**5.11**	**93**		**Pn**	**08 22 50.2**	**+0.2**
SCIG	**Sabancuy**	**5.20**	**39**	*e*P	**Pn**	**08 22 49.7**	**-1.5**
SCIG				*e*S	**Sn**	**08 23 49.7**	**-0.7**
DAIG	**Los Arroyos**	**5.28**	**294**		**Pn**	**08 22 52.4**	**0.0**
DAIG					**Sn**	**08 23 48.4**	**-4.1**
DAIG	**Los Arroyos**	**5.28**	**294**	*e*P	**Pn**	**08 22 52.4**	**0.0**
DAIG				*i* S	**Sn**	**08 23 48.4**	**-4.1**
SNET	**Serv Nac Est T**	**5.35**	**102**		**Pn**	**08 22 53.4**	**0.0**
MEIG	**Mezcala**	**5.67**	**303**		**Pn**	**08 22 59.2**	**+1.5**
MEIG					**Sn**	**08 23 59.5**	**-2.6**
MEIG	**Mezcala**	**5.67**	**303**	*e*P	**Pn**	**08 22 59.2**	**+1.5**
MEIG				*e*S	**Sn**	**08 23 59.5**	**-2.6**
YAIG	**Yautepec**	**5.80**	**313**		**Pn**	**08 23 01.9**	**+2.3**
YAIG					**Sn**	**08 24 03.8**	**-1.7**
YAIG	**Yautepec**	**5.80**	**313**	*e*P	**Pn**	**08 23 01.9**	**+2.3**
YAIG				*i* S	**Sn**	**08 24 03.8**	**-1.7**
PLIG	**Platanillo**	**5.83**	**307**		**Pn**	**08 23 02.5**	**+2.6**
PLIG					**Sn**	**08 24 01.7**	**-4.4**
PLIG	**Platanillo**	**5.83**	**307**	*e*P	**Pn**	**08 23 02.5**	**+2.6**
PLIG				*e*S	**Sn**	**08 24 01.7**	**-4.4**
CAIG	**El Cayaco**	**5.84**	**292**		**Pn**	**08 23 01.0**	**+1.0**
CAIG					**Sn**	**08 24 03.5**	**-2.8**
CAIG	**El Cayaco**	**5.84**	**292**	*e*P	**Pn**	**08 23 01.0**	**+1.0**
CAIG				*i* S	**Sn**	**08 24 03.5**	**-2.8**
UNM	**Universidad Na**	**6.20**	**316**	Pn	**Pn**	**08 23 03.8**	**-1.3**
ARIG	**Puente Sto Nin**	**6.44**	**302**		**Pn**	**08 23 11.1**	**+2.8**
ARIG					**Sn**	**08 24 21.4**	**+0.3**
ARIG	**Puente Sto Nin**	**6.44**	**302**	*e*P	**Pn**	**08 23 11.1**	**+2.8**
ARIG				*e*S	**Sn**	**08 24 21.4**	**+0.3**
ZIIG	**Zihuatanejo**	**7.11**	**293**		**Pn**	**08 23 17.8**	**+0.3**
ZIIG					**Sn**	**08 24 34.9**	**-2.7**
ZIIG	**Zihuatanejo**	**7.11**	**293**	*e*P	**Pn**	**08 23 17.8**	**+0.3**
ZIIG				*e*S	**Sn**	**08 24 34.9**	**-2.7**
TGUH	**Tegucigalpa,Un**	**7.16**	**96**	Pn	**Pn**	**08 23 16.7**	**-1.5**
CRIN	**San Cristobal**	**7.66**	**106**		**Pn**	**08 23 25.2**	**+0.1**
MOIG	**Morelia**	**7.87**	**308**	Pn	**Pn**	**08 23 28.1**	**-0.1**
MOIG	**Morelia**	**7.87**	**308**	*e*P	**Pn**	**08 23 29.7**	**+1.5**
MOIG				*i* S	**Sn**	**08 24 54.0**	**-2.7**
TEIG	**Tepich**	**8.03**	**48**	Pn	**Pn**	**08 23 27.9**	**-2.1**
MATN	**Matagalpa**	**8.66**	**102**	Pn	**Pn**	**08 23 37.5**	**-1.3**
MMIG	**Aquila**	**9.02**	**293**		**Pn**	**08 23 44.0**	**+0.3**
MMIG					**Sn**	**08 25 23.4**	**-1.2**
MMIG	**Aquila**	**9.02**	**293**	*e*P	**Pn**	**08 23 44.0**	**+0.3**
MMIG				*i* S	**Sn**	**08 25 23.4**	**-1.2**
ACON	**Acoyapa**	**9.63**	**107**	Pn	**Pn**	**08 23 51.0**	**-1.1**
HZTE	**Horizontes, Gu**	**9.73**	**114**	Pn	**Pn**	**08 23 55.0**	**+1.5**
ORTG	**Ortega, Santa**	**10.01**	**116**		**Pn**	**08 23 58.6**	**+1.3**
DUNO	**Dulce Nombre,**	**10.11**	**117**		**Pn**	**08 23 59.0**	**+0.3**
ESPN	**Las Esperanzas**	**10.38**	**104**	Pn	**Pn**	**08 24 01.3**	**-1.0**
JTS	**Las Juntas de**	**10.48**	**115**		**Pn**	**08 24 03.1**	**-0.7**
COVE	**Coope Vega, Sa**	**10.79**	**112**		**Pn**	**08 24 08.9**	**+0.9**
ZAIG	**Zacatecas**	**10.85**	**317**	Pn	**Pn**	**08 24 08.9**	**-0.2**
RIMA	**Rio Macho**	**11.68**	**115**		**Pn**	**08 24 21.3**	**+1.0**
PEZE	**Perez Zeledon,**	**12.01**	**116**		**Pn**	**08 24 25.7**	**+0.9**
SRBA	**San Rafael, Bu**	**12.36**	**116**		**Pn**	**08 24 29.0**	**-0.5**
DRK0	**Durika**	**12.45**	**116**		**Pn**	**08 24 29.4**	**-1.4**
BRU2	**Volcan**	**13.15**	**116**		**Pn**	**08 24 39.8**	**-0.6**
SOR	**Soroa**	**13.49**	**53**	Pn	**Pn**	**08 24 43.1**	**-1.7**
833A	**Chaparral WMA,**	**14.07**	**342**	Pn	**Pn**	**08 24 53.1**	**+0.4**
833A	**Chaparral WMA,**	**14.07**	**342**	P	**Pn**	**08 24 53.4**	**+0.6**
	baz=160,SNR=16						
735A	**Kenedy**	**14.19**	**348**	Pn	**Pn**	**08 24 55.4**	**+1.0**
HKT	**Hockley**	**15.01**	**356**	Pn	**Pn**	**08 25 05.5**	**0.0**
441A	**DeRidder**	**15.82**	**4**	Pn	**Pn**	**08 25 15.9**	**-0.2**
441A				IAmb	IAmb	08 25 31.6	
	comp=Z,94nm,1.4s						
435B	**Jarrell**	**16.03**	**351**		**Pn**	**08 25 20.0**	**+1.1**
435B				IAmb	IAmb	08 25 32.2	
	comp=Z,29nm,0.6s						
435B	**Jarrell**	**16.03**	**351**	P	**Pn**	**08 25 18.2**	**-0.7**
	baz=169						
JCT	**Junction City**	**16.22**	**344**		**Pn**	**08 25 21.1**	**-0.1**
JCT	**Junction City**	**16.22**	**344**	P	**Pn**	**08 25 20.0**	**-1.3**
	baz=161						
342A	**Flagon Creek P**	**16.52**	**7**	Pn	**Pn**	**08 25 24.0**	**-1.0**
TX32	**Lajitas Array**	**16.61**	**331**	Pn	**Pn**	**08 25 25.8**	**-0.6**
TXAR	**Lajitas Array**	**16.61**	**331**	Pn	**Pn**	**08 25 27.6**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=150,slow=13,SNR=35						
TXAR				LR	LR	08 32 00.5	
	comp=Z,434nm,19.8s,baz=197,slow=38						
	comp=Z,7.9nm,1.0s						
TXAR	**Lajitas Array**	**16.61**	**331**	Pn	**Pn**	**08 25 26.7**	**+0.4**
TX31	**Lajitas Ar. Si**	**16.62**	**331**		**Pn**	**08 25 27.1**	**+0.8**
TX31				IAmb	IAmb	08 25 46.0	
	comp=Z,78nm,1.1s						
NATX	**Nacogdoches**	**16.77**	**360**	Pn	**Pn**	**08 25 26.3**	**-2.0**
NATX	**Nacogdoches**	**16.77**	**360**	P	**Pn**	**08 25 26.0**	**-2.2**
	baz=179						
344A	**Westbrook Farm**	**16.85**	**12**	Pn	**Pn**	**08 25 27.4**	**-1.7**
344A				IAmb	IAmb	08 25 41.8	
	comp=Z,65nm,1.2s						
SLBS	**Sierra La Lagu**	**16.89**	**303**	Pn	**Pn**	**08 25 28.8**	**-1.1**
237A	**Washetta, Mont**	**17.05**	**357**		**Pn**	**08 25 31.4**	**-0.4**
346A	**Big Creek Wild**	**17.07**	**15**	Pn	**Pn**	**08 25 30.4**	**-1.5**
346A				IAmb	IAmb	08 25 55.7	
	comp=Z,33nm,0.8s						
WHTX	**Lake Whitney,**	**17.20**	**352**	Pn	**Pn**	**08 25 32.1**	**-1.5**
WHTX				IAmb	IAmb	08 25 59.9	
	comp=Z,49nm,1.1s						
WHTX	**Lake Whitney,**	**17.20**	**352**	P	**Pn**	**08 25 33.1**	**-0.6**
	baz=170						
LPIG	**La Paz**	**17.38**	**304**	LR	LR	08 31 15.4	
	comp=Z,190nm,19.6s,baz=103,slow=33						
BRAL	**Brewton**	**17.61**	**22**	P	**Pn**	**08 25 37.2**	**-1.4**
	baz=204						
VBMS	**Vicksburg**	**17.63**	**12**		**Pn**	**08 25 37.8**	**-1.2**
VBMS				IAmb	IAmb	08 25 53.8	
	comp=Z,66nm,1.5s						
VBMS	**Vicksburg**	**17.63**	**12**	P	**Pn**	**08 25 37.8**	**-1.2**
	baz=192						
DWPF	**Disney Wildern**	**17.95**	**41**	P	**Pn**	**08 25 39.0**	**-3.8**
	baz=225						
143A	**Socs Landing,**	**17.95**	**9**		**Pn**	**08 25 42.8**	**-0.1**
ABTX	**Abilene, Hawle**	**18.22**	**346**	P	**Pn**	**08 25 46.0**	**-0.2**
ABTX				IAmb	IAmb	08 26 00.9	
	comp=Z,60nm,1.4s						
ABTX	**Abilene, Hawle**	**18.22**	**346**	P	**Pn**	**08 25 46.1**	**-0.2**
	baz=163						
Z38A	**Mt. Pleasant**	**18.27**	**359**	P	**P**	**08 25 46.2**	**-0.6**
Z41A	**Richland Creek**	**18.34**	**5**	P	**P**	**08 25 47.8**	**+0.2**
Z41A	**Richland Creek**	**18.34**	**5**	P	**P**	**08 25 46.8**	**-0.8**
	baz=185						
146A	**Union**	**18.36**	**15**	P	**P**	**08 25 47.0**	**-0.8**
146A				IAmb	IAmb	08 25 59.1	
	comp=Z,48nm,1.2s						
Z35A	**Perchaven, San**	**18.50**	**353**	P	**P**	**08 25 49.2**	**-0.2**
Z35A				IAmb	IAmb	08 26 13.9	
	comp=Z,56nm,1.2s						
250A	**Grady**	**18.62**	**23**	P	**P**	**08 25 49.7**	**-1.0**
352A	**Blakely**	**18.72**	**27**	P	**P**	**08 25 50.0**	**-1.8**
WLAR	**White Oak Lake**	**18.75**	**4**		**P**	**08 25 49.9**	**-2.1**
WLAR				IAmb	IAmb	08 26 04.4	
	comp=Z,44nm,1.2s						
CCAR	**Cane Creek**	**19.10**	**7**	P	**P**	**08 25 54.4**	**-1.6**
CCAR				IAmb	IAmb	08 26 25.0	
	comp=Z,78nm,1.4s						
LOOK	**Love County**	**19.14**	**353**	P	**P**	**08 25 55.9**	**-0.5**
LOOK				IAmb	IAmb	08 26 18.6	
	comp=Z,38nm,0.6s						
Z47A	**Carrollton**	**19.15**	**17**	P	**P**	**08 25 55.8**	**-0.7**
CLNB	**Carlsbad**	**19.23**	**336**	P	**P**	**08 25 57.9**	**+0.4**
TIGA	**Tifton**	**19.30**	**30**	P	**P**	**08 25 57.1**	**-1.0**
TIGA	**Tifton**	**19.30**	**30**	P	**P**	**08 25 57.1**	**-1.0**
	baz=214						
HTMS	**Hat Mesa**	**19.32**	**336**	P	**P**	**08 25 57.9**	**-0.6**
LRAL	**Lakeview Retre**	**19.32**	**20**		**P**	**08 25 58.5**	**+0.1**
LRAL	**Lakeview Retre**	**19.32**	**20**	P	**P**	**08 25 56.8**	**-1.6**
	baz=202						
CLN7	**Carlsbad 7**	**19.34**	**336**	P	**P**	**08 25 59.2**	**+0.5**
GDL2	**Guadalupe Moun**	**19.38**	**334**	P	**P**	**08 25 59.9**	**+0.7**
Y45A	**Yeager Farm, C**	**19.42**	**13**	P	**P**	**08 25 59.4**	**-0.1**
Y45A				IAmb	IAmb	08 26 16.6	
	comp=Z,42nm,1.0s						
MIAR	**Mount Ida**	**19.57**	**3**	P	**P**	**08 26 00.4**	**-0.7**
MIAR	**Mount Ida**	**19.57**	**3**	P	**P**	**08 25 59.8**	**-1.3**
	baz=182,SNR=15						
X37A	**Clayton**	**19.61**	**358**		**P**	**08 26 00.7**	**-0.8**
X37A				IAmb	IAmb	08 26 08.3	
	comp=Z,43nm,1.2s						
X34A	**Smith Ranch, M**	**19.82**	**352**	P	**P**	**08 26 03.4**	**-0.4**
X34A				IAmb	IAmb	08 26 23.9	
	comp=Z,41nm,0.8s						
152A	**Waverly Hall**	**19.84**	**25**	P	**P**	**08 26 04.4**	**+0.4**
152A				IAmb	IAmb	08 26 19.0	
	comp=Z,48nm,1.4s						
UALR	**University of**	**19.89**	**5**	P	**P**	**08 26 03.1**	**-1.4**
UALR				IAmb	IAmb	08 26 24.6	
	comp=Z,39nm,1.2s						
WMOK	**Wichita Mounta**	**20.10**	**350**	P	**P**	**08 26 06.8**	**-0.1**
	baz=168						
MSTX	**Muleshoe**	**20.36**	**340**	P	**P**	**08 26 10.4**	**+0.5**
MSTX				IAmb	IAmb	08 26 16.8	
	comp=Z,57nm,1.2s						
MSTX	**Muleshoe**	**20.36**	**340**	P	**P**	**08 26 09.8**	**-0.1**
	baz=156,SNR=16						
CBOC	**Ciudad Bolivar**	**20.36**	**114**	*e*P	**P**	**08 26 11.2**	**+1.1**
WHAR	**Wooly Hollow**	**20.40**	**5**	P	**P**	**08 26 07.7**	**-2.4**
WHAR				IAmb	IAmb	08 26 31.0	
	comp=Z,28nm,1.2s						
FNO	**Franklin**	**20.42**	**353**		**P**	**08 26 10.0**	**-0.3**
PLMC	**San Jos del P**	**20.59**	**117**	*e*P	**P**	**08 26 11.2**	**-1.3**
HSIG		**20.62**	**316**	P	**P**	**08 26 13.6**	**+0.9**
HSIG				IAmb	IAmb	08 26 17.2	
	comp=Z,33nm,1.3s						
HELC	**Santa Helena**	**20.64**	**113**	*e*P	**P**	**08 26 13.5**	**+0.2**
ZARC	**Zaragoza, Cauc**	**20.72**	**109**	*e*P	**P**	**08 26 08.4**	**-5.4**
OK025	**Westminster Rd**	**20.73**	**354**		**P**	**08 26 12.5**	**-1.2**
W45A	**Hickory Valley**	**20.74**	**13**	IAmb	IAmb	08 26 23.3	
	comp=Z,24nm,1.0s						
BCOK	**Bluff Creek, N**	**20.84**	**353**		**P**	**08 26 14.8**	**0.0**
BCOK				IAmb	IAmb	08 26 20.4	
	comp=Z,137nm,1.3s						
PLAL	**Pickwick Lake**	**20.84**	**15**	P	**P**	**08 26 12.7**	**-2.2**
AMTX	**Amarillo**	**20.88**	**344**	P	**P**	**08 26 16.4**	**+0.9**
AMTX	**Amarillo**	**20.88**	**344**	P	**P**	**08 26 16.1**	**+0.6**
	baz=160						
DEOK	**Depew**	**20.91**	**356**		**P**	**08 26 15.0**	**-0.7**
DEOK				IAmb	IAmb	08 26 24.2	
	comp=Z,22nm,0.7s						
TUL1	**Leonard**	**20.94**	**357**	P	**P**	**08 26 14.9**	**-1.0**
TUL1				IAmb	IAmb	08 26 28.9	
	comp=Z,34nm,1.1s						
TUL1	**Leonard**	**20.94**	**357**	P	**P**	**08 26 15.2**	**-0.8**
	baz=176,SNR=6.7						
OK029	**Liberty Lake**	**20.96**	**354**		**P**	**08 26 15.3**	**-0.9**
CSTR	**Hydro, Custer**	**20.97**	**351**	P	**P**	**08 26 16.5**	**+0.2**
CSTR				IAmb	IAmb	08 26 25.8	
	comp=Z,5.3nm,1.3s						
GOGA	**Godfrey**	**21.01**	**27**	P	**P**	**08 26 16.4**	**-0.3**
GOGA				IAmb	IAmb	08 26 32.6	
	comp=Z,24nm,1.1s						
GOGA	**Godfrey**	**21.01**	**27**	P	**P**	**08 26 16.4**	**-0.3**
	baz=211						
YOTC	**Yotoco, Valle**	**21.01**	**119**	*e*P	**P**	**08 26 14.9**	**-2.2**
FCAR	**Ozark Folk Cen**	**21.01**	**6**	P	**P**	**08 26 15.1**	**-1.6**
FCAR				IAmb	IAmb	08 26 21.7	
	comp=Z,15nm,0.7s						
OK030	**Cody Creek RV**	**21.02**	**355**		**P**	**08 26 16.1**	**-0.8**
OK030				IAmb	IAmb	08 26 26.2	
	comp=Z,31nm,0.9s						
OK031	**S. Brethren Rd**	**21.05**	**355**	P	**P**	**08 26 16.5**	**-0.7**
OK031				IAmb	IAmb	08 26 26.1	
	comp=Z,32nm,0.7s						
Y52A	**Lilburn**	**21.15**	**25**	P	**P**	**08 26 17.1**	**-1.2**
Y52A				IAmb	IAmb	08 26 32.6	
	comp=Z,59nm,1.4s						
FPAL	**Fort Paine**	**21.16**	**21**	IAmb	IAmb	08 26 32.7	
	comp=Z,54nm,1.4s						
RLO	**Rose Lookout**	**21.17**	**359**	IAmb	IAmb	08 26 22.3	
	comp=Z,13nm,0.6s						
319A	**Douglas**	**21.19**	**323**	IAmb	IAmb	08 26 40.3	
	comp=Z,53nm,1.3s						
GUY2C	**Guyana, Caldas**	**21.23**	**115**	*e*P	**P**	**08 26 20.4**	**+0.6**
121A	**Cookes Peak, D**	**21.25**	**328**	P	**P**	**08 26 20.9**	**+1.4**
	baz=142,SNR=35						
HHAR	**Hobbs**	**21.29**	**1**	P	**P**	**08 26 19.5**	**-0.3**
HHAR				IAmb	IAmb	08 26 23.7	
	comp=Z,18nm,0.5s						
LCAR	**Lake Charles**	**21.30**	**8**	P	**P**	**08 26 18.1**	**-1.7**
U38A	**Gravette**	**21.44**	**0**		**P**	**08 26 21.4**	**0.0**
PTBC	**PUERTO BERRIO,**	**21.46**	**111**	*e*P	**P**	**08 26 18.6**	**-3.2**
ELIS	**Ellis County**	**21.50**	**349**	P	**P**	**08 26 22.9**	**+0.8**
ELIS				IAmb	IAmb	08 26 49.1	
	comp=Z,45nm,1.0s						
NORC	**Norcasia**	**21.51**	**114**	*e*P	**P**	**08 26 21.4**	**-1.0**
POPC	**Popayan, Colom**	**21.54**	**123**	*e*P	**P**	**08 26 22.3**	**-0.5**
OTAV	**Otavalo**	**21.62**	**131**	P	**P**	**08 26 26.1**	**+2.1**
SWET	**Sewanee**	**21.67**	**20**	P	**P**	**08 26 22.2**	**-1.7**
CROK	**Carrier**	**21.72**	**353**	IAmb	IAmb	08 26 36.0	
	comp=Z,44nm,0.8s						
W50A	**Signal Mountai**	**21.87**	**21**	IAmb	IAmb	08 26 41.6	
	comp=Z,50nm,1.4s						
BLOK	**Blackwell**	**21.89**	**354**		**P**	**08 26 26.1**	**-0.1**
BLOK				IAmb	IAmb	08 26 29.5	
	comp=Z,135nm,1.2s						
NOKA	**Waynoka**	**21.98**	**351**	IAmb	IAmb	08 26 38.7	
	comp=Z,46nm,0.7s						
T35A	**Sooner Cattle**	**21.98**	**356**	IAmb	IAmb	08 26 30.3	
	comp=Z,48nm,1.3s						
WVT	**Waverly**	**21.99**	**15**	P	**P**	**08 26 24.7**	**-2.5**
WVT	**Waverly**	**21.99**	**15**	P	**P**	**08 26 27.4**	**+0.2**
	baz=197						
Y22D	**IRIS PASSCAL I**	**22.09**	**332**	IAmb	IAmb	08 26 54.7	
	comp=Z,47nm,1.0s						
Y22D	**IRIS PASSCAL I**	**22.09**	**332**	P	**P**	**08 26 29.7**	**+1.2**
	baz=146						
KAN13	**South Haven SW**	**22.16**	**354**		**P**	**08 26 29.3**	**+0.2**
SPBC	**San Pablo de B**	**22.18**	**112**	*e*P	**P**	**08 26 29.1**	**-0.5**
LENM	**Lemitar**	**22.19**	**332**	P	**P**	**08 26 31.7**	**+2.1**
MGMO	**Mountain Grove**	**22.25**	**5**	P	**P**	**08 26 29.8**	**-0.3**
W52A	**Murphy**	**22.28**	**24**	P	**P**	**08 26 29.5**	**-0.9**
ROSC	**El Rosal**	**22.33**	**115**	P	**P**	**08 26 31.6**	**+0.1**
	comp=Z,24nm,0.9s,baz=326,slow=15,SNR=14						
	comp=Z,24nm,0.9s						
ROSC	**El Rosal**	**22.33**	**115**	P	**P**	**08 26 32.0**	**+0.5**
ROSC	**El Rosal**	**22.33**	**115**	*e*P	**P**	**08 26 31.6**	**+0.1**
NHSC	**New Hope**	**22.36**	**33**	P	**P**	**08 26 29.9**	**-1.3**
	baz=219						
CPCT	**Cooper Cave**	**22.37**	**22**	IAmb	IAmb	08 26 49.2	
	comp=Z,29nm,1.4s						
KS20	**Mayfield South**	**22.39**	**354**	P	**P**	**08 26 29.9**	**-1.6**
KS20				IAmb	IAmb	08 26 33.6	
	comp=Z,89nm,1.2s						
PRAC	**Prado**	**22.39**	**118**	*e*P	**P**	**08 26 31.6**	**-0.2**
KAN06	**Argonia West S**	**22.44**	**353**	P	**P**	**08 26 30.3**	**-1.7**
PORT	**Chimborazo Vol**	**22.59**	**135**	P	**P**	**08 26 35.2**	**+0.7**
PORT				IAmb	IAmb	08 26 57.2	
	comp=Z,47nm,1.2s						
ANMO	**Albuquerque**	**22.62**	**334**	P	**P**	**08 26 35.1**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=139,slow=12,SNR=8.2						
ANMO				LR	LR	08 35 56.2	
	comp=Z,459nm,19.9s,baz=344,slow=38						
	comp=Z,1.3nm,0.5s						
ANMO	**Albuquerque**	**22.62**	**334**	P	**P**	**08 26 33.4**	**-0.8**
ANMO	**Albuquerque**	**22.62**	**334**	P	**P**	**08 26 35.5**	**+1.3**
	baz=148						
T45A	**Paducah**	**22.65**	**12**	P	**P**	**08 26 32.4**	**-2.0**
S39A	**Bolivar**	**22.72**	**3**	IAmb	IAmb	08 26 37.5	
	comp=Z,15nm,0.8s						
CGM3	**Cape Girardeau**	**22.73**	**10**	P	**P**	**08 26 32.7**	**-2.4**
CGM3				IAmb	IAmb	08 26 57.4	
	comp=Z,16nm,1.2s						
TUC	**Tucson**	**22.75**	**322**	P	**P**	**08 26 36.8**	**+1.3**
TUC	**Tucson**	**22.75**	**322**	P	**P**	**08 26 36.6**	**+1.2**
	baz=135						
V51A	**Loudon**	**22.75**	**22**	P	**P**	**08 26 33.4**	**-1.9**
V51A				IAmb	IAmb	08 26 57.8	
	comp=Z,20nm,1.1s						
TKL	**Tuckaleechee C**	**22.83**	**23**	P	**P**	**08 26 34.2**	**-2.0**
	comp=Z,16nm,1.1s,baz=214,slow=8.5,SNR=6.3						
TKL				LR	LR	08 36 24.2	
	comp=Z,242nm,20.4s,baz=173,slow=40						
	comp=Z,16nm,1.1s						
TKL	**Tuckaleechee C**	**22.83**	**23**	P	**P**	**08 26 34.6**	**-1.7**
TKL				IAmb	IAmb	08 26 51.1	
	comp=Z,48nm,1.4s						
U49A	**Red Boiling Sp**	**22.91**	**19**	P	**P**	**08 26 33.8**	**-3.3**
U49A				IAmb	IAmb	08 26 54.0	
	comp=Z,35nm,1.3s						
FLOC	**Florencia**	**22.93**	**124**	*e*P	**P**	**08 26 43.7**	**+6.3**
RUSC	**La Rusia**	**22.97**	**111**	*e*P	**P**	**08 26 37.7**	**-0.7**
T47A	**Sharon Grove**	**22.98**	**16**	P	**P**	**08 26 35.4**	**-2.4**
T47A				IAmb	IAmb	08 26 45.2	
	comp=Z,12nm,0.6s						
V52A	**Sevierville**	**23.06**	**23**	P	**P**	**08 26 37.0**	**-1.6**
V52A				IAmb	IAmb	08 26 56.8	
	comp=Z,36nm,1.4s						
S44A	**Carbondale**	**23.19**	**11**	P	**P**	**08 26 37.4**	**-2.4**

S44A IAmb IAmb 08 26 56.9
comp=Z,53nm,1.4s
SIUC Southern Illin 23.21 11 P **P** **08 26 38.0 -2.1**
SIUC IAmb IAmb 08 26 57.1
comp=Z,25nm,0.9s
CCM Cathedral Cave 23.25 7 P **P** **08 26 38.8 -1.7**
CCM IAmb IAmb 08 26 40.5
comp=Z,29nm,1.2s
CCM Cathedral Cave 23.25 7 P **P** **08 26 37.9 -2.5**
baz=188
FVM French Village 23.28 8 P **P** **08 26 38.9 -1.9**
R40A Maddies Statio 23.38 5 P **P** **08 26 41.0 -0.8**
R40A IAmb IAmb 08 26 42.0
comp=Z,33nm,1.1s
KMSC Kings Mountain 23.42 28 P **P** **08 26 41.3 -0.9**
T50A Nancy 23.68 20 P **P** **08 26 42.9 -1.8**
R32A Long Quarter, 23.70 352 P **P** **08 26 44.4 -0.5**
TZTN Tazewell 23.70 23 P **P** **08 26 43.1 -1.8**
TZTN IAmb IAmb 08 26 44.0
comp=Z,38nm,1.2s
TZTN Tazewell 23.70 23 P **P** **08 26 42.5 -2.4**
baz=207,SNR=7.2
214A Organ Pipe Nat 23.75 319 P **P** **08 26 47.1 +1.6**
214A IAmb IAmb 08 27 01.8
comp=Z,26nm,1.4s
214A Organ Pipe Nat 23.75 319 P **P** **08 26 48.0 +2.6**
baz=131
T25A Trinidad 23.80 340 P **P** **08 26 45.7 -0.4**
T25A Trinidad 23.80 340 P **P** **08 26 48.0 +1.9**
baz=155,SNR=43
X18A Snowflake 23.94 327 P **P** **08 26 46.1 -1.3**
SLM Saint Louis 23.95 8 P **P** **08 26 46.4 -0.8**
SLM IAmb IAmb 08 26 46.9
comp=Z,28nm,1.1s
BOSC San Juan Bosco 24.02 137 P **P** **08 26 47.7 -0.5**
MACC Macarena, Meta 24.10 120 eP **P** **08 26 52.1 +3.2**
KSU1 Kansas State U 24.16 356 P **P** **08 26 48.3 -0.9**
KSU1 IAmb IAmb 08 26 50.6
comp=Z,23nm,1.0s
KSU1 Kansas State U 24.16 356 P **P** **08 26 48.0 -1.2**
baz=175
SDV Santo Domingo 24.20 102 P **P** **08 26 48.8 -1.2**
comp=Z,5.7nm,0.5s,baz=194,slow=4.2,SNR=4.8
SDV LR LR 08 37 49.9
comp=Z,414nm,18.4s,baz=298,slow=41
comp=Z,5.7nm,0.5s
CBKS Cedar Bluff 24.24 350 P **P** **08 26 50.0 0.0**
CBKS Cedar Bluff 24.24 350 P **P** **08 26 50.4 +0.4**
baz=167,SNR=6.4
W18A Petrified Fore 24.29 329 P **P** **08 26 51.5 +0.8**
baz=142
Q44A Meyer Farm, Va 24.40 11 P **P** **08 26 49.9 -1.6**
Q44A IAmb IAmb 08 26 51.5
comp=Z,22nm,0.9s
OLIL Olney 24.42 12 P **P** **08 26 50.1 -1.4**
OLIL IAmb IAmb 08 26 52.0
comp=Z,23nm,0.7s
P40A Paris 24.63 5 P **P** **08 26 52.2 -1.3**
P38A Dawn 24.64 2 P **P** **08 26 51.8 -1.8**
P38A IAmb IAmb 08 26 53.6
comp=Z,32nm,1.2s
X16A Lo Mia Camp, P 24.65 325 P **P** **08 26 55.6 +1.6**
X16A IAmb IAmb 08 26 59.4
comp=Z,37nm,1.3s
SDCO Great Sand Dun 24.71 339 P **P** **08 26 55.7 +1.1**
SDCO IAmb IAmb 08 27 02.1
comp=Z,18nm,1.3s
SDCO Great Sand Dun 24.71 339 P **P** **08 26 55.4 +0.8**
baz=154,SNR=20
R49A Shelbyville 24.74 18 P **P** **08 26 52.1 -2.4**
R49A IAmb IAmb 08 27 15.8
comp=Z,28nm,1.5s
U56A King 24.85 28 P **P** **08 26 53.9 -1.7**
113A Mohawk Valley, 24.89 319 P **P** **08 26 55.4 -0.5**
113A IAmb IAmb 08 27 01.3
comp=Z,21nm,1.3s
KSCO Kaye Shedlock' 25.03 345 P **P** **08 26 57.2 0.0**
KSCO Kaye Shedlock' 25.03 345 P **P** **08 26 58.4 +1.1**
baz=161
P43A Skaggs, Pawnee 25.04 9 P **P** **08 26 55.9 -1.3**
P43A IAmb IAmb 08 26 56.9
comp=Z,31nm,1.4s
BLO Bloomington 25.20 15 P **P** **08 26 56.6 -2.0**
BLO IAmb IAmb 08 26 58.7
comp=Z,16nm,0.9s
S22A 4UR Ranch, Cre 25.20 337 P **P** **08 26 58.1 -0.9**
S22A 4UR Ranch, Cre 25.20 337 P **P** **08 27 00.3 +1.3**
baz=151,SNR=9.5
MVCO Mesa Verde 25.41 333 P **P** **08 27 01.1 +0.2**
MVCO IAmb IAmb 08 27 04.6
comp=Z,34nm,1.4s
MVCO Mesa Verde 25.41 333 P **P** **08 27 00.9 0.0**
baz=147,SNR=12
WUAZ Wupatki 25.44 327 P **P** **08 27 00.9 -0.2**
WUAZ Wupatki 25.44 327 P **P** **08 27 00.8 -0.2**
baz=139,SNR=9.4
P46A Rosedale 25.46 13 P **P** **08 26 59.4 -1.5**
BLA Blacksburg 25.55 27 P **P** **08 26 59.9 -2.0**
baz=213
Q24A Divide 25.70 341 P **P** **08 27 02.4 -1.1**
baz=155
O44A Mansfield 25.72 11 P **P** **08 27 01.3 -2.0**
O44A IAmb IAmb 08 27 03.4
comp=Z,15nm,1.1s
GLA Glamis 25.75 318 P **P** **08 27 03.3 -0.5**
baz=129
P48A Milroy 25.75 17 P **P** **08 27 00.9 -2.7**
P48A IAmb IAmb 08 27 02.7
comp=Z,19nm,1.0s
N38A Joes South For 25.82 2 P **P** **08 27 03.0 -1.3**
N35A Tabor 25.87 358 P **P** **08 27 04.3 -0.4**
R53A Hurricane 25.87 23 P **P** **08 27 03.3 -1.5**
R53A IAmb IAmb 08 27 04.1
comp=Z,24nm,1.2s
HDIL Hopedale 25.97 9 P **P** **08 27 03.7 -1.9**
baz=191,SNR=7.3
Q51A Peebles 25.99 20 IAmb IAmb 08 27 30.9
comp=Z,33nm,1.4s
P49A Miami Univ. Ec 26.02 18 P **P** **08 27 04.1 -2.0**
baz=202
PDMCI Parker Dam,Lak 26.14 321 P **P** **08 27 08.3 +1.0**
baz=132,SNR=6.6
SFIN Lafayette 26.21 13 P **P** **08 27 05.1 -2.6**
baz=196
YUH Yuha Desert 26.22 316 P **P** **08 27 07.9 -0.1**
Q52A Bidwell 26.31 22 P **P** **08 27 06.8 -1.9**
Q52A IAmb IAmb 08 27 08.2
comp=Z,14nm,0.9s
SWSC Sam W. Stewart 26.32 317 P **P** **08 27 08.2 -0.7**
baz=127
IKP In-Ko-Pah, Jac 26.35 316 P **P** **08 27 09.9 +0.7**
baz=126
PV13 Radium Mtn., P 26.35 334 IAmb IAmb 08 27 13.1
comp=Z,25nm,1.3s
PV15 Paradox Valley 26.36 335 P **P** **08 27 10.5 +1.0**
PV15 IAmb IAmb 08 27 13.7
comp=Z,31nm,1.2s
PV11 David Mesa, Pa 26.49 334 IAmb IAmb 08 27 31.5
comp=Z,17nm,1.0s
P51A Williamsport 26.50 20 IAmb IAmb 08 27 09.5
comp=Z,14nm,1.1s
PV07 Paradox Valley 26.51 335 IAmb IAmb 08 27 14.8
comp=Z,36nm,1.3s
BC3 Big Chuckawall 26.54 318 P **P** **08 27 12.8 +1.8**
baz=129,SNR=9.0
O48B Farmland 26.57 16 P **P** **08 27 08.2 -2.9**
baz=200,SNR=7.4
ISCO Idaho Springs 26.61 341 P **P** **08 27 12.1 +0.4**
ISCO Idaho Springs 26.61 341 P **P** **08 27 12.9 +1.2**
baz=155,SNR=16
U15A North Rim 26.62 327 P **P** **08 27 11.4 -0.5**
BAUV El Baul 26.65 100 P **P** **08 27 11.4 -0.6**
BAUV IAmb IAmb 08 27 12.8
comp=Z,20nm,1.1s
IRM Iron Mountain 26.67 320 P **P** **08 27 13.3 +1.2**
baz=130
PV23 Carpenter Ridg 26.68 334 IAmb IAmb 08 27 15.9
comp=Z,28nm,1.2s
MONP2 Monument Peak 26.70 316 P **P** **08 27 12.0 -0.6**
baz=126
OGNE Ogallala 26.73 347 P **P** **08 27 12.7 +0.1**
baz=163
O49A Covington 26.74 18 IAmb IAmb 08 27 11.2
comp=Z,26nm,1.1s
NEE2 Needles Airpor 26.75 321 P **P** **08 27 12.5 -0.3**
baz=132

SCIA State Center 26.93 2 P **P** **08 27 13.5 -0.8**
baz=182
P52A Corning 26.95 22 P **P** **08 27 11.3 -3.2**
baz=207
N47A Urbana 27.02 15 IAmb IAmb 08 27 13.9
comp=Z,20nm,1.2s
BELC Belle Mtn. Jos 27.11 318 P **P** **08 27 16.6 +0.4**
baz=129
PMD Palm Desert 27.13 317 IAmb IAmb 08 27 19.5
comp=Z,12nm,1.4s
TPFO Pinon Flats 27.16 317 P **P** **08 27 17.1 +0.5**
baz=127
109C Camp Elliot, M 27.16 315 P **P** **08 27 17.8 +1.3**
baz=125
PFO Pinyon Flats O 27.16 317 P **P** **08 27 18.1 +1.4**
comp=Z,1.7nm,0.8s,baz=144,slow=5.8,SNR=4.7
PFO LR LR 08 38 27.3
comp=Z,520nm,20.3s,baz=135,slow=37
comp=Z,1.7nm,0.8s
PFO Pinyon Flats O 27.16 317 P **P** **08 27 16.3 -0.3**
PFO Pinyon Flats O 27.16 317 P **P** **08 27 17.1 +0.5**
baz=127
ACSO Alum Creek Sta 27.20 20 P **P** **08 27 14.2 -2.6**
baz=205
L42A Oliver, Polo 27.34 8 P **P** **08 27 15.9 -2.0**
GMRC Granite Mounta 27.40 320 P **P** **08 27 18.8 0.0**
baz=130,SNR=5.6
SJG San Juan 27.46 79 LR LR 08 39 12.7
comp=Z,393nm,18.8s,baz=248,slow=39
O52A Adamsville 27.48 22 IAmb IAmb 08 27 19.1
comp=Z,19nm,0.9s
MURC Murrieta 27.65 316 P **P** **08 27 20.9 0.0**
baz=126
N23A Red Feather La 27.71 341 P **P** **08 27 21.0 -0.6**
baz=155
L44A Lake County Fo 27.78 11 P **P** **08 27 19.4 -2.5**
baz=194
MTPU Mount Pierson 27.80 329 P **P** **08 27 23.9 +1.3**
MTPU IAmb IAmb 08 27 26.8
comp=Z,18nm,1.4s
O20A White River Ci 27.82 337 IAmb IAmb 08 27 26.1
comp=Z,21nm,1.5s
O20A White River Ci 27.82 337 P **P** **08 27 23.2 +0.7**
baz=150,SNR=5.5
O53A New Philadelph 27.83 22 IAmb IAmb 08 27 21.8
comp=Z,18nm,1.2s
O53A New Philadelph 27.83 22 P **P** **08 27 20.3 -2.1**
baz=208
HEC Hector,Ludlow 27.85 319 P **P** **08 27 23.8 +1.0**
baz=129
SRU San Rafael Swe 27.88 333 P **P** **08 27 24.0 +1.0**
PHWY Pilot Hill 27.93 342 IAmb IAmb 08 27 26.7
comp=Z,16nm,1.4s
TUQ Turquoise Moun 27.99 321 P **P** **08 27 25.0 +0.9**
baz=131
Q16A Castle Valley 28.01 332 IAmb IAmb 08 27 28.2
comp=Z,14nm,1.3s
JFWS Jewell Farm 28.16 7 P **P** **08 27 23.7 -1.6**
baz=188,SNR=15
MVU Marysvale 28.17 330 IAmb IAmb 08 27 56.0
comp=Z,16nm,1.1s
P18A Preston Nutter 28.19 334 P **P** **08 27 27.4 +1.5**
P18A IAmb IAmb 08 27 29.6
comp=Z,16nm,1.4s
BFSC Mount Baldy Ra 28.34 317 P **P** **08 27 28.4 +1.3**
baz=127
L48A N Adams 28.34 16 P **P** **08 27 24.6 -2.3**
L48A IAmb IAmb 08 27 25.8
comp=Z,15nm,1.0s
CIS Catalina Islan 28.36 315 P **P** **08 27 28.5 +1.3**
baz=124
GSC Goldstone, Bar 28.45 320 P **P** **08 27 30.0 +1.9**
baz=129
RDMU Red Mountain 28.70 336 P **P** **08 27 31.4 +0.9**
RDMU IAmb IAmb 08 27 35.2
comp=Z,16nm,1.4s
ECSD EROS Data Cent 28.78 357 IAmb IAmb 08 27 31.5
comp=Z,12nm,1.1s
ECSD EROS Data Cent 28.78 357 P **P** **08 27 32.1 +1.2**
baz=176,SNR=12
RWWY Rawlins 28.83 340 P **P** **08 27 31.1 -0.5**
PSUT Pine Spring 29.02 328 P **P** **08 27 34.1 +0.8**
I37A Lemond, Waseca 29.03 2 P **P** **08 27 31.4 -1.6**
I37A IAmb IAmb 08 27 33.7
comp=Z,17nm,1.1s
I40A Norwalk 29.09 6 IAmb IAmb 08 27 34.2
comp=Z,14nm,1.2s
MPU Maple Canyon 29.11 332 P **P** **08 27 35.7 +1.7**
TPNV Topopah Spring 29.20 323 P **P** **08 27 36.0 +1.2**
baz=132
FURC Furnace Creek, 29.24 321 P **P** **08 27 36.2 +1.2**
baz=131
I42A Draeger Farm, 29.29 8 P **P** **08 27 33.7 -1.6**
I42A IAmb IAmb 08 27 34.7
comp=Z,18nm,1.1s
MPMC Manual Prospec 29.36 320 P **P** **08 27 37.6 +1.3**
baz=129,SNR=9.1
S11A Rachel 29.39 324 P **P** **08 27 36.5 -0.1**
S11A IAmb IAmb 08 27 43.4
comp=Z,18nm,1.2s
K22A Casper 29.49 342 IAmb IAmb 08 27 40.3
comp=Z,29nm,1.4s
K22A Casper 29.49 342 P **P** **08 27 37.9 +0.6**
baz=156,SNR=6.9
SSPA Standing Stone 29.49 26 P **P** **08 27 35.8 -1.3**
baz=214
SPR3 Spring Creek 3 29.61 328 IAmb IAmb 08 27 42.2
comp=Z,9.1nm,1.3s
ARVC Arvin 29.64 317 P **P** **08 27 40.0 +1.4**
baz=126
CTU Camp Tracy 29.71 333 IAmb IAmb 08 27 43.0
comp=Z,11nm,1.2s
ISA Isabella, Lake 29.73 318 P **P** **08 27 40.3 +0.8**
baz=127
DUG Dugway, Tooele 29.79 331 IAmb IAmb 08 27 44.3
comp=Z,13nm,1.4s
DUG Dugway, Tooele 29.79 331 P **P** **08 27 41.3 +1.3**
baz=142,SNR=5.2
R11A Troy Canyon, C 29.80 326 P **P** **08 27 41.4 +1.2**
baz=135,SNR=5.7
ERPA Erie 29.91 22 P **P** **08 27 39.8 -1.0**
baz=209
CWC Cottonwood Cre 29.97 320 P **P** **08 27 42.7 +1.0**
baz=129
PKM Mcpherson Peak 30.16 316 P **P** **08 27 44.9 +1.6**
baz=124
RSSD Black Hills 30.20 346 P **P** **08 27 43.9 +0.2**
LCH Last Change Ra 30.22 322 P **P** **08 27 43.2 -0.6**
VES Vestal, Richgr 30.23 318 P **P** **08 27 46.2 +2.4**
baz=127,SNR=6.6
SPMN Marine on St. 30.26 3 P **P** **08 27 43.0 -0.8**
SPMN Marine on St. 30.26 3 P **P** **08 27 43.1 -0.7**
baz=183,SNR=24
G40A Rib Lake 30.49 6 IAmb IAmb 08 27 46.9
comp=Z,12nm,1.1s
TPH Tonopah 30.53 323 P **P** **08 27 48.2 +1.5**
BW06 Boulder Array 30.59 338 P **P** **08 27 48.5 +1.4**
baz=150
PD31 Pinedale Array 30.59 338 P **P** **08 27 47.3 +0.2**
PDAR Pinedale Array 30.59 338 P **P** **08 27 47.5 +0.3**
comp=Z,1.6nm,0.8s,baz=134,slow=8.5,SNR=14
comp=Z,1.6nm,0.8s
PDAR Pinedale Array 30.59 338 P **P** **08 27 47.0 -0.1**
F36A Milaca 30.87 1 IAmb IAmb 08 27 49.2
comp=Z,14nm,1.1s
HVU Hansel Valley 31.05 333 IAmb IAmb 08 27 54.9
comp=Z,14nm,1.1s
MLAC Mammoth, Mammo 31.20 321 P **P** **08 27 54.0 +1.5**
baz=130
MDPB Devils Postpil 31.34 321 IAmb IAmb 08 27 58.4
comp=Z,14nm,1.3s
ELK Elko 31.39 329 LR LR 08 42 36.1
comp=Z,507nm,18.7s,baz=186,slow=40
ELK Elko 31.39 329 IAmb IAmb 08 27 58.4
comp=Z,14nm,1.4s
LHV Little Huntoon 31.40 322 P **P** **08 27 53.7 -0.3**
LHV IAmb IAmb 08 27 59.3
comp=Z,18nm,1.5s
NVAR Mina Array Bea 31.40 323 P **P** **08 27 57.6 +3.3**
comp=Z,10nm,1.1s,baz=140,slow=7.5,SNR=45
NVAR LR LR 08 39 57.6
comp=Z,450nm,19.9s,baz=152,slow=35
comp=Z,10nm,1.1s
NVAR Mina Array Bea 31.40 323 P **P** **08 27 54.0 -0.3**
COWI Conover 31.43 7 IAmb IAmb 08 27 53.5
comp=Z,9.6nm,1.1s
SNOW Snow King Moun 31.63 337 P **P** **08 27 58.5 +2.1**

RYN Ryan 31.66 323 IAmb IAmb 08 28 01.1
comp=Z,14nm,1.5s
LOHW Long Hollow 31.71 338 P **P** **08 27 58.4 +1.4**
MOOW Moose Ponds 31.88 338 P **P** **08 27 57.2 -1.3**
MOOW IAmb IAmb 08 28 01.6
comp=Z,13nm,1.4s
E28A Huff 31.98 352 P **P** **08 27 59.9 +0.8**
E43A Lone Tree Farm 32.01 10 IAmb IAmb 08 28 06.4
comp=Z,5.2nm,0.6s
IMW Indian Meadow 32.08 337 IAmb IAmb 08 28 03.5
comp=Z,7.7nm,1.2s
YERR Yerington 32.32 323 IAmb IAmb 08 28 06.9
comp=Z,22nm,1.4s
CMB Columbia Colle 32.40 320 P **P** **08 28 05.1 +2.1**
CMB IAmb IAmb 08 28 06.8
comp=Z,14nm,1.4s
SADO Sadowa 32.53 21 IAmb IAmb 08 28 02.5
comp=Z,10nm,1.1s
RLMT Red Lodge 32.57 341 P **P** **08 28 05.9 +1.4**
RLMT Red Lodge 32.57 341 P **P** **08 28 05.5 +0.9**
baz=152,SNR=13
YMR Madison River 32.75 338 IAmb IAmb 08 28 09.9
comp=Z,11nm,1.1s
VCNR Virginia City 32.76 323 IAmb IAmb 08 28 10.9
comp=Z,10nm,1.4s
YHL Hebgen Lake 32.99 338 IAmb IAmb 08 28 12.4
comp=Z,22nm,1.5s
EYMN Ely 33.04 4 P **P** **08 28 06.8 -1.5**
EYMN IAmb IAmb 08 28 07.8
comp=Z,13nm,1.3s
EYMN Ely 33.04 4 P **P** **08 28 06.9 -1.5**
baz=185
MDND Maddock 33.10 354 P **P** **08 28 08.7 -0.2**
baz=171
HLID Hailey 33.20 333 P **P** **08 28 11.4 +1.4**
HLID IAmb IAmb 08 28 13.5
comp=Z,12nm,1.2s
HLID Hailey 33.20 333 P **P** **08 28 10.6 +0.6**
baz=143,SNR=15
GCMT Greycliff 33.29 341 P **P** **08 28 10.7 0.0**
AGMN Agassiz Nation 33.31 358 P **P** **08 28 09.8 -0.9**
AGMN Agassiz Nation 33.31 358 P **P** **08 28 09.8 -0.9**
baz=177,SNR=12
B35A Bob, Littlefor 33.36 1 P **P** **08 28 09.8 -1.3**
BEKR Beckworth 33.55 323 P **P** **08 28 13.3 +0.2**
BEKR IAmb IAmb 08 28 17.5
comp=Z,15nm,1.4s
BOZ Bozeman (W) 33.79 338 P **P** **08 28 15.5 +0.4**
baz=149,SNR=6.2
LONY Lake Ozonia 34.14 26 P **P** **08 28 17.0 -1.0**
baz=216
GCRM Castle Rock Sp 34.30 319 P **P** **08 28 20.1 +0.6**
GBGM Boggs Mountain 34.31 319 P **P** **08 28 20.6 +1.0**
WVOR Wild Horse Val 34.35 328 P **P** **08 28 20.8 +0.8**
GSGM Seigler Mounta 34.36 319 P **P** **08 28 20.5 +0.6**
DGMT Dagmar 34.39 349 P **P** **08 28 20.4 +0.3**
baz=163
GSSM Skaggs Springs 34.45 319 P **P** **08 28 23.1 +2.4**
GCVM Cloverdale 34.49 319 P **P** **08 28 22.4 +1.3**
GPMM Pine Mountain 34.49 319 P **P** **08 28 21.1 -0.1**
HOPS Hopland Field 34.66 319 P **P** **08 28 24.3 +1.7**
HRY Holter Researc 34.82 339 P **P** **08 28 24.3 +0.3**
MOD Modoc Plateau 34.87 326 P **P** **08 28 23.8 -0.7**
MOD IAmb IAmb 08 28 28.0
comp=Z,11nm,1.1s
J08A Circle Bar Ran 34.94 329 P **P** **08 28 24.5 -0.5**
LBNH Lisbon 35.03 29 P **P** **08 28 24.6 -1.1**
baz=220
PLID Pearl Lake 35.10 333 P **P** **08 28 24.9 -1.6**
ULM Lac du Bonnet 35.26 359 P **P** **08 28 26.6 -0.9**
comp=Z,13nm,1.0s,baz=181,slow=5.9,SNR=5.0
ULM LR LR 08 45 27.1
comp=Z,147nm,19.1s,baz=114,slow=41
comp=Z,13nm,1.0s
ULM Lac du Bonnet 35.26 359 P **P** **08 28 27.2 -0.4**
ULM IAmb IAmb 08 28 28.0
comp=Z,13nm,1.1s
EGMT Eagleton 35.32 342 P **P** **08 28 27.8 -0.4**
EGMT Eagleton 35.32 342 P **P** **08 28 27.7 -0.5**
baz=154,SNR=10
BMO Blue Mountains 35.50 332 P **P** **08 28 30.3 +0.5**
BMO IAmb IAmb 08 28 32.4
comp=Z,11nm,1.4s
MSO Missoula 35.68 337 P **P** **08 28 31.0 -0.4**
MSO IAmb IAmb 08 28 34.3
comp=Z,12nm,1.2s
MSO Missoula 35.68 337 P **P** **08 28 31.6 +0.2**
baz=146
L04D Klamath Falls 36.19 324 P **P** **08 28 36.3 +0.5**
baz=130
J05D Fort Rock, OR 36.31 326 P **P** **08 28 37.5 +0.6**
baz=133
F10A Beach Ranch, E 36.33 333 IAmb IAmb 08 28 39.7
comp=Z,20nm,1.2s
J04D Umpqua Nationa 36.76 326 P **P** **08 28 40.6 -0.1**
baz=131
I05D Terrebonne, OR 37.09 328 P **P** **08 28 43.6 +0.2**
baz=133
K02D Willamette Mer 37.27 324 P **P** **08 28 45.9 +1.0**
baz=129
I04A Tendick Farm, 37.29 326 P **P** **08 28 45.6 +0.5**
baz=132
ETMB Extrema 37.36 129 P **P** **08 28 45.5 -0.4**
ETMB IAmb IAmb 08 28 59.5
comp=Z,8.0nm,1.0s
WALA Waterton Lakes 37.56 339 P **P** **08 28 48.7 +1.4**
G05D Wamic, OR 37.71 329 P **P** **08 28 48.9 +0.4**
baz=134
J01E Myrtle Point 37.72 324 P **P** **08 28 49.1 +0.5**
baz=129
I03D Drain, OR 37.74 325 P **P** **08 28 49.2 +0.5**
baz=130
D08A Wollman Farm, 37.91 333 IAmb IAmb 08 28 54.2
comp=Z,9.9nm,1.3s
H04D Lebanon 37.95 327 P **P** **08 28 50.9 +0.3**
baz=132
NEW Newport 38.10 336 IAmb IAmb 08 28 54.0
comp=Z,13nm,1.5s
NEW Newport 38.10 336 P **P** **08 28 52.4 +0.6**
baz=143
C09A Chrisman Ranch 38.20 334 IAmb IAmb 08 28 55.7
comp=Z,16nm,1.2s
LTY Liberty 38.85 332 IAmb IAmb 08 29 01.5
comp=Z,18nm,1.4s
B08A Colville Reser 39.09 334 P **P** **08 29 01.1 +1.0**
F04D Rainier, OR 39.15 328 P **P** **08 29 01.7 +1.1**
baz=133
LPAZ La Paz 40.55 139 P **P** **08 29 13.4 +0.1**
comp=Z,1.3nm,0.7s,baz=300,slow=2.3,SNR=6.8
comp=Z,1.3nm,0.7s
LPAZ La Paz 40.55 139 P **P** **08 29 13.6 +0.3**
LLLB Lillooet 41.88 334 P **P** **08 29 24.8 +1.6**
LLLB IAmb IAmb 08 29 26.2
comp=Z,13nm,1.2s
VILB Vilhena 43.89 127 P **P** **08 29 42.1 +2.1**
VILB IAmb IAmb 08 29 52.0
comp=Z,13nm,1.1s
SCHQ Schefferville 45.30 22 P **P** **08 29 49.9 -0.7**
comp=Z,2.7nm,0.9s,baz=205,slow=2.9,SNR=5.2
comp=Z,2.7nm,0.9s
PTLB Pontes e Lacer 46.25 129 IAmb IAmb 08 30 04.2
comp=Z,7.0nm,1.2s
YKA Yellowknife Ar 49.59 348 P **P** **08 30 24.1 +0.3**
comp=Z,4.0nm,0.8s,baz=150,slow=7.6,SNR=26
comp=Z,4.0nm,0.8s
T35M Bob Quinn 49.90 335 P **P** **08 30 26.4 0.0**
baz=132
DLBC Dease Lake 50.81 337 P **P** **08 30 32.7 -0.6**
DLBC IAmb IAmb 08 30 37.6
comp=Z,16nm,1.3s
DLBC Dease Lake 50.81 337 P **P** **08 30 34.0 +0.7**
baz=133,SNR=7.6
R33M Jennings River 51.83 337 P **P** **08 30 41.5 +0.5**
baz=133,SNR=8.7
P32M Atlin 53.00 336 P **P** **08 30 50.2 +0.6**
baz=130
P33M Teslin, Yukon 53.07 337 IAmb IAmb 08 30 53.5
comp=Z,9.9nm,1.4s
P33M Teslin, Yukon 53.07 337 P **P** **08 30 50.6 +0.5**
baz=131
N32M Quiet Lake 53.80 338 P **P** **08 30 55.9 +0.6**
baz=132
PLBC Pleasant Camp 53.97 335 P **P** **08 30 57.1 +0.5**
baz=127
WHY Whitehorse 54.14 337 P **P** **08 30 58.6 +0.6**
baz=129
FARO Faro, Yukon 54.61 339 IAmb IAmb 08 31 04.3

comp=Z,8.0nm,1.3s
P30M **Million Dollar** **54.62 336** P **P** **08 31 01.6 +0.3**
baz=127
P29M **Windy Craggy** **54.64 335** P **P** **08 31 02.1 +0.5**
baz=126
O30N **Mendenhall** **54.67 337** P **P** **08 31 02.1 +0.4**
baz=128
CPUP **Villa Florida** **54.72 138** P **P** **08 31 04.1 +1.6**
comp=Z,0.9nm,0.5s,baz=325,slow=9.1,SNR=3.7
comp=Z,0.9nm,0.5s
M31M **Drury Creek, Y** **54.96 339** P **P** **08 31 03.9 +0.1**
baz=131
N31M **Braeburn, Yuko** **55.00 337** P **P** **08 31 05.8 +1.7**
N31M IAmb IAmb 08 31 07.4
comp=Z,11nm,1.2s
N31M **Braeburn, Yuko** **55.00 337** P **P** **08 31 04.0 -0.1**
baz=129
BDFB **Brasilia** **55.14 121** P **P** **08 31 06.0 +0.1**
comp=Z,7.1nm,0.9s,baz=339,slow=7.5,SNR=5.9
comp=Z,7.1nm,0.9s
BDFB **Brasilia** **55.14 121** P **P** **08 31 05.1 -0.8**
BDFB IAmb IAmb 08 31 11.6
comp=Z,7.7nm,0.8s
HYT **Haines Junctio** **55.26 336** P **P** **08 31 07.0 +0.9**
HYT IAmb IAmb 08 31 14.4
comp=Z,6.7nm,1.3s
HYT **Haines Junctio** **55.26 336** P **P** **08 31 06.2 +0.2**
baz=126
PNL **Peninsula** **55.35 334** P **P** **08 31 07.2 +0.6**
baz=124
O29M **Mount Kennedy** **55.38 335** P **P** **08 31 07.7 +0.7**
baz=125
N30M **Aishikik Lake** **55.48 337** P **P** **08 31 08.3 +0.7**
baz=127
YUK6 **Outpost Mounta** **55.66 336** P **P** **08 31 09.7 +0.6**
baz=126
PINM **Pinnacle** **55.95 334** P **P** **08 31 11.0 0.0**
baz=123
M30M **Minto, Yukon** **56.06 338** P **P** **08 31 13.4 +1.6**
M30M IAmb IAmb 08 31 14.7
comp=Z,12nm,1.4s
M30M **Minto, Yukon** **56.06 338** P **P** **08 31 12.2 +0.4**
baz=128,SNR=6.4
M29M **Somme Creek** **56.59 337** P **P** **08 31 16.9 +1.3**
baz=126
GRNC **Granite Creek** **56.92 335** IAmb IAmb 08 31 21.8
comp=Z,9.9nm,1.1s
YUK3 **Moose Creek** **56.97 336** P **P** **08 31 18.8 +0.4**
baz=124
M27K **Edge Creek, AK** **57.85 336** P **P** **08 31 24.9 +0.3**
baz=123
DAWY **Dawson** **57.90 339** P **P** **08 31 24.9 +0.2**
baz=126
GLB **Gilahina Butte** **58.15 335** IAmb IAmb 08 31 29.9
comp=Z,7.2nm,1.2s
BCAR **Beaver Creek A** **58.20 337** P **P** **08 31 28.3 +1.4**
L27K **Beaver Creek,** **58.22 337** P **P** **08 31 29.0 +2.0**
L27K IAmb IAmb 08 31 30.1
comp=Z,10nm,1.4s
L27K **Beaver Creek,** **58.22 337** P **P** **08 31 27.5 +0.6**
baz=123,SNR=6.8
BMRM **Bremner River** **58.24 334** P **P** **08 31 28.9 +1.7**
BMRM IAmb IAmb 08 31 30.7
comp=Z,7.4nm,1.1s
BMRM **Bremner River** **58.24 334** P **P** **08 31 28.2 +1.0**
baz=119
Q23K **Middleton Isla** **58.28 332** P **P** **08 31 28.3 +0.9**
baz=116
M26K **Nabesna, AK** **58.31 336** IAmb IAmb 08 31 30.9
comp=Z,9.7nm,1.4s
M26K **Nabesna, AK** **58.31 336** P **P** **08 31 28.7 +1.0**
baz=122
I29M **Ogilvie Camp,** **58.32 340** P **P** **08 31 27.2 -0.4**
baz=128
EYAK **Cordova Ski Ar** **58.53 333** P **P** **08 31 30.2 +1.1**
baz=118
N25K **Chitina, Valde** **58.55 335** IAmb IAmb 08 31 33.1
comp=Z,12nm,1.4s
N25K **Chitina, Valde** **58.55 335** P **P** **08 31 30.6 +1.2**
baz=120
L26K **Log Cabin Wild** **58.78 336** P **P** **08 31 31.2 +0.3**
baz=122
K27K **Chicken** **58.85 338** P **P** **08 31 31.8 +0.5**
baz=123
INK **Inuvik** **58.87 344** P **P** **08 31 31.2 -0.1**
comp=Z,4.4nm,0.8s,baz=130,slow=5.7,SNR=17
INK LR LR 08 59 50.8
comp=Z,998nm,21.6s,baz=305,slow=39
comp=Z,4.4nm,0.8s
INK **Inuvik** **58.87 344** P **P** **08 31 32.1 +0.8**
INK **Inuvik** **58.87 344** P **P** **08 31 31.3 -0.1**
baz=134
P23K **Montague Islan** **59.01 332** P **P** **08 31 33.0 +0.5**
baz=116
KLU **Klutina** **59.05 334** P **P** **08 31 32.7 -0.1**
baz=118
HARP **HAARP** **59.18 335** P **P** **08 31 34.0 +0.4**
baz=119
GLI **Glacier Island** **59.27 333** P **P** **08 31 34.4 +0.1**
baz=116
SCRK **Sand Creek** **59.53 337** IAmb IAmb 08 31 39.1
comp=Z,12nm,1.4s
SCRK **Sand Creek** **59.53 337** P **P** **08 31 36.5 +0.3**
baz=121,SNR=8.7
I27K **Kandik River** **59.58 339** P **P** **08 31 36.2 -0.2**
baz=125
PAX **Paxson** **59.59 336** P **P** **08 31 37.0 +0.4**
PAX IAmb IAmb 08 31 38.4
comp=Z,9.0nm,1.3s
PAX **Paxson** **59.59 336** P **P** **08 31 36.6 0.0**
baz=119
J26L **Joseph Creek** **59.65 338** P **P** **08 31 36.5 -0.4**
J26L **Joseph Creek** **59.65 338** P **P** **08 31 37.2 +0.2**
baz=122,SNR=10
PLCA **Paso Flores** **59.69 159** P **P** **08 31 39.9 +2.4**
comp=Z,1.7nm,0.9s,baz=355,slow=14,SNR=3.4
comp=Z,1.7nm,0.9s
RIDG **Independent Ri** **59.73 337** P **P** **08 31 38.0 +0.6**
RIDG **Independent Ri** **59.73 337** P **P** **08 31 37.7 +0.2**
baz=120,SNR=7.0
SCM **Sheep Creek Mo** **59.81 334** P **P** **08 31 38.2 +0.2**
baz=117
PWL **Port Wells** **59.81 333** P **P** **08 31 38.2 +0.2**
baz=115
A36M **Sachs Harbour** **59.88 349** P **P** **08 31 38.2 -0.1**
baz=145
I26K **Coal Creek Min** **59.94 339** P **P** **08 31 39.0 +0.2**
baz=123
M23K **Glacier View** **59.96 334** P **P** **08 31 38.6 -0.4**
baz=116
SEW **Seward** **59.99 332** P **P** **08 31 39.2 0.0**
baz=114
KNK **Knik Glacier** **60.10 333** P **P** **08 31 41.0 +1.0**
KNK IAmb IAmb 08 31 42.9
comp=Z,8.7nm,1.2s
KNK **Knik Glacier** **60.10 333** P **P** **08 31 40.5 +0.5**
baz=116
K24K **Donnelly Dome** **60.12 336** P **P** **08 31 39.9 -0.3**
baz=119
SML **Sawmill** **60.22 334** P **P** **08 31 41.8 +0.9**
SML **Sawmill** **60.22 334** P **P** **08 31 40.0 -0.9**
baz=116
G27K **Doyon Strip** **60.29 341** P **P** **08 31 40.7 -0.6**
baz=125
WAT6 **Susitna Watana** **60.32 335** P **P** **08 31 42.3 +0.6**
baz=117,SNR=8.6
J25K **Salcha River,** **60.38 337** P **P** **08 31 42.2 +0.3**
J25K IAmb IAmb 08 31 44.7
comp=Z,9.8nm,1.4s
J25K **Salcha River,** **60.38 337** P **P** **08 31 42.9 +1.1**
baz=120,SNR=5.5
DHY **Denali Highway** **60.40 335** P **P** **08 31 42.4 +0.2**
baz=117
BRSE **Bradley Lake S** **60.44 331** P **P** **08 31 43.2 +0.9**
baz=112
GHO **Glory Hole Cre** **60.46 334** P **P** **08 31 42.2 -0.3**
GHO IAmb IAmb 08 31 52.5
comp=Z,5.6nm,0.8s
PMR **Palmer** **60.47 333** P **P** **08 31 43.5 +1.0**
baz=115
RC01 **Rabbit Creek A** **60.52 333** P **P** **08 31 43.9 +1.0**
baz=114
OHAK **Old Harbor** **60.80 328** P **P** **08 31 45.6 +0.9**
baz=109
HDA **Harding Lake** **60.87 337** P **P** **08 31 46.3 +1.1**
HDA **Harding Lake** **60.87 337** P **P** **08 31 45.6 +0.5**
baz=118,SNR=5.3
IL31 **61.02 337** P **P** **08 31 47.5 +1.4**

ILAR **Eielson Array** **61.02 337** P **P** **08 31 46.8 +0.6**
comp=Z,7.3nm,1.2s,baz=136,slow=4.3,SNR=38
comp=Z,7.3nm,1.2s
ILAR **Eielson Array** **61.02 337** P **P** **08 31 47.1 +0.9**
G26K **Porcupine Rive** **61.06 340** P **P** **08 31 47.5 +1.1**
baz=123
E27K **Coleen River** **61.08 342** P **P** **08 31 47.2 +0.7**
baz=126
RND **Reindeer** **61.15 335** P **P** **08 31 48.9 +1.7**
CCB **Clear Creek Bu** **61.31 337** P **P** **08 31 48.9 +0.8**
MCK **McKinley** **61.33 336** P **P** **08 31 48.6 +0.3**
MCK **McKinley** **61.33 336** P **P** **08 31 49.4 +1.1**
baz=116
WRH **Wood River Hil** **61.33 337** P **P** **08 31 48.7 +0.3**
WRH IAmb IAmb 08 31 49.9
comp=Z,6.9nm,1.4s
H25K **Birch Creek** **61.38 339** P **P** **08 31 49.6 +1.0**
baz=120
POKR **Poker Plat Res** **61.39 337** P **P** **08 31 49.6 +0.9**
baz=118
COLA **College** **61.43 337** P **P** **08 31 49.3 +0.4**
baz=118
TCOL **CIGO, UAF Yank** **61.44 337** P **P** **08 31 49.6 +0.6**
baz=118
BMAR **Burnt Mountain** **61.58 340** P **P** **08 31 51.0 +1.0**
F26K **Sheenjek River** **61.59 341** P **P** **08 31 51.2 +1.1**
baz=123
RCBR **Riachuelo** **61.72 105** LR LR 09 02 27.5
comp=Z,248nm,18.6s,baz=342,slow=40
G25K **Beman Lake** **61.74 339** P **P** **08 31 51.9 +0.9**
baz=120
TRF **Thorofare Moun** **61.75 335** P **P** **08 31 52.0 +0.6**
baz=115,SNR=7.4
NEA2 **Nenana** **61.77 337** P **P** **08 31 51.6 +0.3**
NEA2 IAmb IAmb 08 31 53.3
comp=Z,10nm,1.3s
NEA2 **Nenana** **61.77 337** P **P** **08 31 51.7 +0.4**
baz=116
H24K **Noodor Dome** **61.90 338** P **P** **08 31 53.0 +0.9**
H24K **Noodor Dome** **61.90 338** P **P** **08 31 53.1 +0.9**
baz=118,SNR=9.1
F25K **Christian Rive** **62.02 340** P **P** **08 31 54.0 +1.0**
baz=121
KTH **Kantishna Hill** **62.05 335** P **P** **08 31 53.6 +0.4**
Q18K **Katmai Hardscr** **62.12 329** P **P** **08 31 54.6 +0.8**
baz=108
I23K **Minto, Yukon-K** **62.13 337** P **P** **08 31 54.6 +1.0**
I23K **Minto, Yukon-K** **62.13 337** P **P** **08 31 54.3 +0.7**
baz=116,SNR=13
G24K **Hadweenzic Riv** **62.18 339** P **P** **08 31 55.1 +1.1**
baz=119,SNR=6.0
E25K **Arctic Village** **62.27 341** P **P** **08 31 55.3 +0.7**
baz=122
BPAW **Bear Paw Mtn.** **62.30 336** P **P** **08 31 55.3 +0.4**
BPAW **Bear Paw Mtn.** **62.30 336** P **P** **08 31 55.4 +0.5**
baz=114,SNR=5.5
PPLA **Purkeypile** **62.31 334** P **P** **08 31 55.8 +0.7**
baz=112
M20K **Styx River** **62.33 333** P **P** **08 31 56.2 +1.0**
baz=111
Q17K **Contact Creek** **62.44 328** P **P** **08 31 56.6 +0.6**
baz=107
CAST **Castle Rocks** **62.47 335** P **P** **08 31 56.3 +0.3**
baz=113,SNR=11
H23K **Yukon River** **62.50 338** P **P** **08 31 56.9 +0.7**
baz=117
R17K **Ugashik Creek** **62.52 328** P **P** **08 31 57.2 +0.8**
baz=106
C27K **Jago River** **62.54 343** P **P** **08 31 57.6 +1.2**
baz=124
N19K **Bonanza Creek** **62.57 331** P **P** **08 31 55.7 -1.1**
N19K **Bonanza Creek** **62.57 331** P **P** **08 31 57.1 +0.3**
baz=109
MLY **Manley** **62.60 337** P **P** **08 31 57.7 +0.9**
MLY **Manley** **62.60 337** P **P** **08 31 57.8 +0.9**
baz=115,SNR=10
F24K **Squaw Lake** **62.72 340** P **P** **08 31 58.3 +0.7**
baz=119
CHUM **Lake Minchumin** **62.75 335** P **P** **08 31 58.4 +0.6**
baz=113
L20K **Farewell, AK** **62.88 333** P **P** **08 31 59.3 +0.6**
baz=111
M19K **Big River Lodg** **62.90 333** P **P** **08 31 59.6 +0.7**
baz=110
G23K **Bananza Creek** **63.08 338** P **P** **08 32 00.0 0.0**
baz=116
I21K **Tanana** **63.14 337** P **P** **08 32 01.0 +0.6**
I21K IAmb IAmb 08 32 04.5
comp=Z,13nm,1.4s
I21K **Tanana** **63.14 337** P **P** **08 32 00.9 +0.5**
baz=114
D25K **Kavik River** **63.16 342** P **P** **08 32 01.4 +0.9**
baz=121
E24K **Your Creek** **63.19 340** P **P** **08 32 01.1 +0.3**
baz=119
H22K **Ishtalitna Cre** **63.21 337** P **P** **08 32 01.2 +0.3**
baz=115,SNR=6.4
K20K **Telida** **63.28 334** P **P** **08 32 01.8 +0.4**
K20K IAmb IAmb 08 32 14.8
comp=Z,9.9nm,1.3s
K20K **Telida** **63.28 334** P **P** **08 32 01.8 +0.4**
baz=111
COLD **Coldfoot** **63.37 339** P **P** **08 32 03.5 +1.6**
COLD IAmb IAmb 08 32 05.0
comp=Z,8.8nm,1.3s
COLD **Coldfoot** **63.37 339** P **P** **08 32 02.6 +0.6**
baz=116
O17K **Koliganek Bris** **63.48 330** P **P** **08 32 03.5 +0.8**
baz=106
J20K **Nowinta River** **63.61 335** P **P** **08 32 03.6 0.0**
J20K **Nowinta River** **63.61 335** P **P** **08 32 03.5 0.0**
baz=111,SNR=6.0
H21K **Melozitna Rive** **63.65 337** P **P** **08 32 03.7 -0.1**
H21K IAmb IAmb 08 32 05.5
comp=Z,10nm,1.4s
H21K **Melozitna Rive** **63.65 337** P **P** **08 32 04.1 +0.3**
baz=113
P16K **Nushagak River** **63.72 329** P **P** **08 32 05.0 +0.7**
baz=105
TOLK **Toolik Lake Re** **63.82 340** P **P** **08 32 05.3 +0.4**
baz=118
D24K **Happy Valley** **63.83 341** P **P** **08 32 05.1 +0.3**
baz=119
O16K **Kokwok River B** **63.92 330** P **P** **08 32 06.1 +0.5**
baz=105
C24K **Franklin Bluff** **64.07 342** P **P** **08 32 07.3 +0.8**
baz=119
F22K **John River** **64.19 339** P **P** **08 32 08.6 +1.3**
baz=115
G21K **Allakaket** **64.25 338** P **P** **08 32 08.4 +0.6**
baz=113
D23K **Nanushuk River** **64.33 341** P **P** **08 32 09.4 +1.3**
baz=117
E22K **Anaktuvuk Pass** **64.33 340** P **P** **08 32 09.0 +0.8**
baz=115
N16K **Nishlik Lake** **64.48 330** P **P** **08 32 10.2 +0.8**
baz=105
F21K **Alatna River** **64.53 338** P **P** **08 32 10.9 +1.4**
baz=113,SNR=14
C23K **Itkillik River** **64.71 341** P **P** **08 32 11.7 +1.1**
baz=117
SUMG **Summit** **66.05 16** P **P** **08 32 19.2 -0.6**
SUMG IAmb IAmb 08 32 45.3
comp=Z,14nm,1.5s
SUMG **Summit** **66.05 16** *i* P **P** **08 32 19.0 -0.8**
UNV **Unalaska Valle** **67.42 322** P **P** **08 32 29.5 +1.2**
baz=95
ESK **Eskdalemuir** **78.68 36** P **P** **08 33 34.0 -0.9**
PAB **San Pablo** **80.87 52** P **P** **08 33 46.9 -0.4**
PAB IAmb IAmb 08 33 48.5
comp=Z,13nm,1.1s
ESDC **Sonseca Array** **81.13 51** P **P** **08 33 47.6 -1.0**
comp=Z,7.9nm,1.0s,baz=292,slow=5.6,SNR=31
ESDC LR LR 09 07 06.0
comp=Z,136nm,19.7s,baz=8.5,slow=34
comp=Z,7.9nm,1.0s
ESDC **Sonseca Array** **81.13 51** P **P** **08 33 49.0 +0.3**
ESDC IAmb IAmb 08 33 49.8
comp=Z,12nm,1.1s
DOU **Dourbes** **84.49 40** *d*P **P** **08 34 06.0 +0.2**
BMRD **Maredsous** **84.54 39** *d*P **P** **08 34 06.8 +0.7**
BMRD *d*pP **pwP** **08 34 17.6 +1.5**
NB2 **NORSAR Subarra** **84.55 28** P **P** **08 34 06.8 +0.9**
comp=Z,15nm,1.4s,baz=290,slow=5.3
NOA **NORSAR Array B** **84.55 28** P **P** **08 34 07.0 +1.1**
comp=Z,5.1nm,1.0s,baz=291,slow=5.1,SNR=7.9
NOA LR LR 09 09 18.3
comp=Z,139nm,21.8s,baz=35,slow=34
comp=Z,5.1nm,1.0s
BCLA **Clavier** **84.83 39** *d*P **P** **08 34 07.8 +0.3**
RCHB **Rochefort** **84.86 40** *d*P **P** **08 34 07.2 -0.5**
comp=Z,6.9nm,1.0s
MEM **Membach** **85.20 39** *d*P **P** **08 34 10.6 +1.2**
WLF **Walferdange** **85.58 40** *d*P **P** **08 34 12.1 +0.9**
HFS **Hagfors** **86.02 28** LR LR 09 13 17.4
comp=Z,196nm,18.3s,baz=4.5,slow=36
ARCES **ARCESS Array B** **86.06 18** P **P** **08 34 14.4 +1.1**
comp=Z,1.1nm,0.4s,baz=292,slow=4.7,SNR=19
comp=Z,1.1nm,0.4s
SENIN **Lac Senin/Sane** **87.35 43** P **P** **08 34 20.6 +0.3**
GERES **GERESS Array B** **90.50 39** P **P** **08 34 35.2 +0.2**
comp=Z,0.9nm,0.7s,baz=325,slow=2.1,SNR=6.6
GERES LR LR 09 17 10.7
comp=Z,144nm,18.1s,baz=331,slow=37
comp=Z,0.9nm,0.7s
FINES **FINESS Array B** **90.74 24** P **P** **08 34 37.3 +1.7**
comp=Z,3.2nm,1.0s,baz=316,slow=5.3,SNR=4.1
FINES LR LR 09 16 55.2
comp=Z,133nm,19.2s,baz=26,slow=37
comp=Z,3.2nm,1.0s
MSVF **Nonsavu** **91.99 252** LR LR 09 08 22.5
comp=Z,98nm,19.0s,baz=274,slow=30
VRAC **Vranov** **92.04 38** LR LR 09 16 43.9
comp=Z,114nm,18.5s,baz=0.0,slow=36
TORD **Torodi Ar. Bea** **92.61 76** P **P** **08 34 44.1 -1.2**
comp=Z,0.6nm,0.6s,baz=296,slow=4.2,SNR=5.4
comp=Z,0.6nm,0.6s
AKASG **Malin Array Be** **98.34 32** LR LR 09 21 49.0
comp=Z,57nm,18.4s,baz=350,slow=37
OBN **Obninsk** **99.00 26** LR LR 09 22 29.1
comp=Z,29nm,18.0s,baz=350,slow=37
MLR **Mumtele Rosu** **99.44 38** LR LR 09 20 56.9
comp=Z,160nm,20.0s,baz=330,slow=36
HHC **Hu-ho-hao-te** **119.45 337** *e*P **PKiKP** **08 40 23.1 +0.1**
WMQ **Urumqi** **121.52 358** *e*P **PKiKP** **08 40 27.6 +0.7**
NJ2 **Nanjing** **123.36 326** *e*P **PKiKP** **08 40 31.6 +0.9**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
PZH **PanZhiHua** **135.87 339** PKP **PKPdf** **08 40 55.0 +0.4**
CMAR **Chiang Mai Arr** **144.26 338** PKP PKPbc 08 41 08.6 +0.6
comp=Z,4.4nm,1.1s,baz=355,slow=4.3,SNR=8.5

IDC ***01*** *08:30:56.0±1.6, 30.37S×178.66W, h0km, mb4.4/2, mbtmp4.4/2, Error ellipse: s-maj=52.5km s-min=43.0km az=72.0*
WEL ***01*** *08:31:42.5±0.9, 32.2°S±10.1°×17.9W±2.5, h289km±13km, M4.4/12, mB4.5/6, ML5.0/11, MLv4.9/12, Mw(mB)3.7/6, Error ellipse: s-maj=0.0km s-min=0.0km az=109.9*

ISC 01 08:31:38.4±0.9, 31.47S±0.09×179.4W±0.2, h350km, n22, σ2.9 04/36, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.54**	**31**	P	**Pn**	**08 32 32.3**	**-1.6**
GLKZ				S	**S**	**08 33 14.8**	**-3.6**
RIZ	**Raoul Island**	**2.55**	**30**	P	**Pn**	**08 32 32.3**	**-1.7**
RIZ				S	**S**	**08 33 19.4**	**+0.8**
MXZ	**Matakaoa Point**	**6.37**	**197**	P	**Pn**	**08 33 16.8**	**+3.4**
MXZ				S	**S**	**08 34 29.4**	**-1.0**
WMGZ	**Waiomatatini S**	**6.59**	**195**	P	**Pn**	**08 33 17.4**	**+1.5**
HAZ	**Te Kaha**	**6.69**	**200**	P	**Pn**	**08 33 17.6**	**+0.5**
HAZ				S	**S**	**08 34 36.0**	**-1.2**
PKGZ	**Pakihiroa**	**6.74**	**197**	P	**Pn**	**08 33 18.8**	**+1.2**
PKGZ				S	**S**	**08 34 36.4**	**-1.9**
WCZ	**Waipu Caves**	**6.86**	**228**	P	**Pn**	**08 33 21.9**	**+2.8**
PUZ	**Puketiti**	**6.87**	**196**	P	**Pn**	**08 33 19.9**	**+0.8**
PUZ				S	**S**	**08 34 38.9**	**-2.1**
TWGZ	**Tauwhareparae**	**7.03**	**197**	P	**Pn**	**08 33 22.2**	**+1.1**
TWGZ				S	**S**	**08 34 44.2**	**-0.4**
CNGZ	**Carnagh Statio**	**7.27**	**195**	P	**Pn**	**08 33 25.8**	**+2.0**
MWZ	**Matawai**	**7.30**	**199**	P	**Pn**	**08 33 24.7**	**+0.5**
MWZ				S	**S**	**08 34 46.6**	**-3.8**
TKGZ	**Te Karaka**	**7.32**	**197**	P	**Pn**	**08 33 24.4**	**0.0**
TKGZ				S	**S**	**08 34 48.3**	**-2.2**
URZ	**Urewera**	**7.36**	**202**	P	**Pn**	**08 33 24.7**	**-0.1**
URZ				S	**S**	**08 34 48.7**	**-2.9**
RIGZ	**Rimuhau**	**7.59**	**197**	P	**Pn**	**08 33 29.2**	**+1.5**
RIGZ				S	**S**	**08 34 55.1**	**-1.4**
MUGZ	**Murupara**	**7.67**	**203**	P	**Pn**	**08 33 30.8**	**+2.3**
SNGZ	**Shannon Statio**	**7.77**	**199**	P	**Pn**	**08 33 31.9**	**+2.1**
SNGZ				S	**S**	**08 34 59.7**	**-0.8**
RAHZ	**Arahi**	**7.97**	**200**	P	**Pn**	**08 33 34.1**	**+1.9**
RAHZ				S	**S**	**08 35 02.3**	**-2.5**
MTHZ	**Maungataniwha**	**7.99**	**202**	P	**Pn**	**08 33 34.1**	**+1.7**
MTHZ				S	**S**	**08 35 03.9**	**-1.3**
STKA	**Stephens Creek**	**33.08**	**259**	P	**P**	**08 37 40.9**	**-1.8**
	3.5nm,0.8s,baz=111,slow=9.7,SNR=5.6						
	3.5nm,0.8s						
QSPA	**South Pole Qui**	**58.65**	**180**	P	**P**	**08 41 02.4**	**+2.6**
	3.7nm,0.5s,baz=13,slow=2.2,SNR=31						
	3.7nm,0.5s						
FINES	**FINESS Array B**	**145.71**	**338**	PKP	**PKPdf**	**08 50 33.1**	**-1.7**
	1.8nm,0.5s,baz=43,slow=3.7,SNR=16						
NOA	**NORSAR Array B**	**149.60**	**350**	PKPbc	**PKPdf**	**08 50 44.1**	**+2.9**
	0.6nm,0.6s,baz=18,slow=4.2,SNR=4.1						

NEIC ***01*** *08:32:16.9±2.1, 9.63S±0.06×122.37E±0.07, h64km±6km, mb4.9/36, Error ellipse: s-maj=10.9km s-min=7.5km az=52.0*
IDC ***01*** *08:32:19.0±0.7, 9.41S×122.49E, h74km±5km, mb4.1/15, mbtmp4.5/15, MS3.9/7, Error ellipse: s-maj=24.4km s-min=12.4km az=83.0*
DJA ***01*** *08:32:18.1±0.2, 10°S±2°×12°2E±°, h45km±3km, M4.9/37, mb5.0/37, mB5.4/18, MLv5.0/13, Mw(mB)4.8/18*

ISC 01 08:32:17.8±0.4, 9.63S±0.04×122.42E±0.04, h69km±3km, h69km:pP-P, n186, σ2.8 28/186, mb4.7/33, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.00**	**350**		**Pn**	**08 32 34.8**	**-1.5**
MMRI	**Maumere**	**1.00**	**350**	P	**Pn**	**08 32 36.5**	**+0.2**
MMRI				S	**Sn**	**08 32 51.0**	**+0.9**
MMRI	**Maumere**	**1.00**	**350**	P	**Pn**	**08 32 36.9**	**+0.6**
EDFI	**Ende, Flores**	**1.13**	**321**	P	**Pn**	**08 32 38.1**	**+0.1**
EDFI				S	**Sn**	**08 32 53.8**	**+0.7**
BATI	**Baumata**	**1.35**	**115**	P	**Pn**	**08 32 41.2**	**+0.3**
BATI				S	**Sn**	**08 33 02.0**	**+3.8**
SOEI	**Soe**	**1.83**	**94**		**Pn**	**08 32 47.7**	**+0.5**
SOEI	**Soe**	**1.83**	**94**	P	**Pn**	**08 32 48.5**	**+1.3**
BSSI	**Bau Bau, Buton**	**3.96**	**331**	P	**Pn**	**08 33 18.6**	**+2.5**
BBSI	**Bau Bau**	**4.12**	**2**	P	**Pn**	**08 33 21.0**	**+2.7**
PLAI	**Plampang**	**4.65**	**279**	P	**Pn**	**08 33 27.8**	**+2.2**
PLAI				S	**Sn**	**08 34 19.2**	**+0.9**
PLAI	**Plampang**	**4.65**	**279**	P	**Pn**	**08 33 28.2**	**+2.6**
BKSI	**Bulukumba**	**4.85**	**332**	P	**Pn**	**08 33 30.6**	**+2.3**
	1.3nm3µm440nm,0.9s						
KAPI	**Kappang**	**5.29**	**330**	P	**Pn**	**08 33 37.9**	**+3.6**
	414nm,0.6s,baz=165,slow=11,SNR=106						
KAPI	**Kappang**	**5.29**	**330**	Pn	**Pn**	**08 33 30.9**	**-3.5**
KAPI	**Kappang**	**5.29**	**330**	P	**Pn**	**08 33 38.6**	**+4.2**
TWSI	**Taliwang, Sumb**	**5.54**	**279**	P	**Pn**	**08 33 40.0**	**+2.3**
	2.6nm3µm110nm,0.6s						
BNSI	**Bone**	**5.68**	**336**	P	**Pn**	**08 33 43.8**	**+4.1**
	0.7nm2µm252nm,0.8s						
SPSI	**Sidrap Palu**	**6.21**	**335**	P	**Pn**	**08 33 51.1**	**+4.1**
	0.4nm1µm124nm,0.8s						
TTSI	**Tana Toraja**	**7.03**	**338**	P	**Pn**	**08 34 02.5**	**+4.3**
	0.3nm798nm97nm,0.7s						
NLAI	**Namlea**	**7.87**	**37**	P	**Pn**	**08 34 11.6**	**+2.0**
	1.1nm3µm388nm,0.8s						
JAGI	**Jajag, Banyuwa**	**8.24**	**277**	Pn	**Pn**	**08 34 13.2**	**-1.6**
SANI	**Sanana**	**8.32**	**25**	P	**Pn**	**08 34 18.2**	**+2.3**
	2µm153nm,1.0s						
SANI	**Sanana**	**8.32**	**25**	P	**Pn**	**08 34 19.3**	**+3.4**
LUWI	**Luwuk**	**8.54**	**2**	Pn	**Pn**	**08 34 17.3**	**-1.5**
LUWI	**Luwuk**	**8.54**	**2**	P	**Pn**	**08 34 22.6**	**+3.8**
	155nm,0.8s						
KNRA	**Kununurra**	**8.63**	**135**	Pn	**Pn**	**08 34 16.0**	**-4.0**
KNRA	**Kununurra**	**8.63**	**135**	P	**Pn**	**08 34 16.4**	**-3.6**
APSI	**Ampana**	**8.70**	**355**	P	**Pn**	**08 34 24.5**	**+3.6**
	1µm117nm,1.1s						
SAUI	**Saumlaki**	**8.93**	**80**	Pn	**Pn**	**08 34 22.2**	**-2.0**
FITZ	**Fitzroy Crossi**	**8.98**	**160**	P	**Pn**	**08 34 22.2**	**-2.5**
	27nm,0.5s,baz=355,slow=9.1,SNR=64						
FITZ				S	Sn	08 35 55.1	-9.3
	128nm,0.3s,baz=2.1,slow=14,SNR=14						

FITZ				LR	LR	08 38 51.8	
	comp=Z,314nm,21.3s,baz=339,slow=43						
FITZ	**Fitzroy Crossi**	**8.98**	**160**	Pn	**Pn**	**08 34 22.4**	**-2.4**
FITZ	**Fitzroy Crossi**	**8.98**	**160**	P	**Pn**	**08 34 22.3**	**-2.5**
MSAI	**Masohi**	**8.99**	**46**	P	**Pn**	**08 34 28.3**	**+3.4**
	1µm25nm,0.7s						
MTN	**Manton Dam**	**9.13**	**111**	Pn	**Pn**	**08 34 22.7**	**-4.1**
MTN	**Manton Dam**	**9.13**	**111**	P	**Pn**	**08 34 22.7**	**-4.1**
BBKI	**Banjar Baru**	**9.70**	**309**	P	**Pn**	**08 34 38.4**	**+3.7**
	3µm94nm,1.1s						
MRSI	**Marisa**	**10.05**	**357**	P	**Pn**	**08 34 43.7**	**+4.2**
	50nm,0.6s						
LBMI	**Labuha**	**10.27**	**30**	P	**Pn**	**08 34 44.8**	**+2.4**
	1µm120nm,0.8s						
KDU	**Kakadu**	**10.32**	**108**	P	**Pn**	**08 34 40.2**	**-3.0**
TOLI2	**Tolitoli**	**10.79**	**351**	Pn	**Pn**	**08 34 48.4**	**-1.2**
TOLI2	**Tolitoli**	**10.79**	**351**	P	Pn	08 34 55.1	+5.5
MTKI	**Muara Teweh, K**	**11.42**	**319**	P	Pn	08 35 12.2	+14
MBWA	**Marble Bar**	**11.75**	**192**	Pn	**Pn**	**08 34 58.8**	**-3.8**
MBWA	**Marble Bar**	**11.75**	**192**	P	**Pn**	**08 34 59.7**	**-2.9**
FAKI	**Fak Fak**	**11.83**	**56**	Pn	**Pn**	**08 35 02.2**	**-1.5**
FAKI	**Fak Fak**	**11.83**	**56**	P	**Pn**	**08 35 03.7**	**0.0**
	846nm58nm,0.8s						
FAKI	**Fak Fak**	**11.83**	**56**	P	**Pn**	**08 35 04.2**	**+0.5**
UGM	**Wanagama**	**11.88**	**277**	P	**Pn**	**08 35 06.0**	**+1.5**
PSA00	**Pilbara Seismi**	**12.13**	**191**	Pn	**Pn**	**08 35 04.8**	**-3.0**
PSA00	**Pilbara Seismi**	**12.13**	**191**	P	**Pn**	**08 35 05.7**	**-2.1**
SWI	**Sorong**	**12.38**	**46**	P	**Pn**	**08 35 10.9**	**-0.3**
	1µm82nm,1.1s						
STKI	**Sintang**	**14.54**	**311**	P	P	08 35 50.4	+5.6
GIRL	**Giralia**	**15.13**	**210**	P	**Pn**	**08 35 46.6**	**-1.1**
WB0	**Warramunga Arr**	**15.34**	**132**	Pn	**Pn**	**08 35 43.9**	**-6.5**
WRA	**Warramunga Arr**	**15.41**	**133**	P	**Pn**	**08 35 45.2**	**-6.1**
	53nm,0.8s,baz=309,slow=14,SNR=269						
WRA				S	Sn	08 38 26.0	-15
	56nm,0.9s,baz=306,slow=22,SNR=11						
WRA	**Warramunga Arr**	**15.41**	**133**	Pn	**Pn**	**08 35 44.8**	**-6.6**
WRAB	**Tennant Creek**	**15.42**	**133**	Pn	**Pn**	**08 35 44.9**	**-6.5**
WB2	**Warramunga Arr**	**15.42**	**133**	Pn	**Pn**	**08 35 44.8**	**-6.7**
WR0	**Warramunga Arr**	**15.57**	**133**	Pn	**Pn**	**08 35 47.2**	**-6.1**
SBUM	**Sibu**	**15.72**	**319**	Pn	**Pn**	**08 35 54.2**	**-1.1**
CBJI	**Citeko**	**15.74**	**281**	P	**P**	**08 35 58.2**	**+0.1**
	186nm,0.6s						
DBJI	**Dramaga**	**15.81**	**280**	P	**P**	**08 36 01.3**	**+2.4**
WRKA	**Warakurna**	**16.31**	**161**	P	**Pn**	**08 36 00.5**	**-2.2**
KSM	**Kuching**	**16.34**	**312**	Pn	**Pn**	**08 36 00.0**	**-3.0**
KKM	**Kota Kinabalu**	**16.75**	**338**	Pn	**Pn**	**08 36 05.6**	**-2.6**
DAV	**Davao City (W)**	**16.89**	**11**		**Pn**	**08 36 08.8**	**-1.0**
MEEK	**Meekatharra**	**17.30**	**192**	P	**P**	**08 36 15.5**	**+0.2**
AS31	**Alice Springs**	**17.76**	**143**	P	**P**	**08 36 17.5**	**-2.9**
ASAR	**Alice Springs**	**17.76**	**143**	P	**P**	**08 36 17.4**	**-3.0**
	52nm,1.1s,baz=323,slow=13,SNR=108						
ASAR				S	Sn	08 39 24.4	-13
	28nm,0.7s,baz=317,slow=23,SNR=11						
ASAR				LR	LR	08 44 21.0	
	comp=Z,161nm,18.8s,baz=2.5,slow=40						
ASAR	**Alice Springs**	**17.76**	**143**	P	**P**	**08 36 17.6**	**-2.8**
PPBI	**Pangkal Pinang**	**17.80**	**294**	P	**Pn**	**08 36 26.2**	**+5.1**
SMPI	**Sarmi**	**17.89**	**66**	P	**P**	**08 36 21.7**	**-0.2**
	20nm,1.1s						
KASI	**Kota Agung**	**18.22**	**282**	P	**Pn**	**08 36 29.2**	**+3.0**
	107nm,1.2s						
GENI	**Genyem**	**18.97**	**70**	P	**Pn**	**08 36 35.9**	**+0.7**
	18µm80nm,0.7s						
QIS	**Mount Isa**	**19.81**	**125**	P	**P**	**08 36 43.3**	**+0.3**
MORW	**Morawa**	**20.24**	**196**	P	**P**	**08 36 46.4**	**-1.1**
MORW				IAmb	IAmb	08 36 49.9	
	comp=Z,49nm,1.0s						
MORW	**Morawa**	**20.24**	**196**	P	**P**	**08 36 48.3**	**+0.8**
COEN	**Coen**	**20.77**	**104**	P	**P**	**08 36 53.6**	**+0.3**
COEN				IAmb	IAmb	08 36 57.1	
	comp=Z,36nm,0.8s						
COEN	**Coen**	**20.77**	**104**	P	**P**	**08 36 53.4**	**+0.1**
BLDU	**Ballidu**	**21.55**	**194**	P	**P**	**08 37 02.1**	**+0.6**
FORT	**Forrest**	**21.69**	**167**	P	**P**	**08 37 02.7**	**-0.4**
FORT				IAmb	IAmb	08 37 08.5	
	comp=Z,85nm,0.8s						
FORT	**Forrest**	**21.69**	**167**	P	**P**	**08 37 03.0**	**0.0**
OOD	**Oodnadatta**	**21.97**	**147**	P	**P**	**08 37 06.1**	**0.0**
KLBR	**Kellerberrin**	**22.28**	**191**	P	**P**	**08 37 09.6**	**+0.2**
MTSU	**Mount Surprise**	**22.86**	**114**	P	**P**	**08 37 16.5**	**+0.8**
MUN	**Mundaring**	**22.97**	**194**	P	**P**	**08 37 16.4**	**-0.3**
MULG	**Mulgathing**	**23.24**	**154**	P	**P**	**08 37 18.9**	**-0.4**
NWAO	**Narrogin (SRO)**	**23.67**	**191**	P	**P**	**08 37 21.8**	**-1.5**
NWAO				IAmb	IAmb	08 37 42.5	
	comp=Z,29nm,0.9s						
NWAO	**Narrogin (SRO)**	**23.67**	**191**	P	**P**	**08 37 23.2**	**0.0**
CTAO	**Charters Tower**	**25.24**	**117**	P	**P**	**08 37 38.1**	**+0.5**
CTAO				IAmb	IAmb	08 37 39.8	
	comp=Z,40nm,1.0s						
CTAO	**Charters Tower**	**25.24**	**117**	P	**P**	**08 37 38.8**	**+1.2**
LCRK	**Leigh Creek**	**25.42**	**147**	P	**P**	**08 37 39.7**	**+0.6**
IPM	**Ipoh**	**25.51**	**302**	P	**P**	**08 37 37.4**	**-2.7**
MANU	**Manus Island**	**25.92**	**75**	P	**P**	**08 37 41.6**	**-2.2**
MANU				IAmb	IAmb	08 37 51.3	
	comp=Z,54nm,0.9s						
BBOO	**Buckleboo**	**26.28**	**153**	P	**P**	**08 37 46.1**	**-0.8**
BBOO				IAmb	IAmb	08 37 49.4	
	comp=Z,54nm,1.3s						
BBOO	**Buckleboo**	**26.28**	**153**	P	**P**	**08 37 46.9**	**0.0**
RPSI	**Rantau Prapat**	**26.41**	**296**	P	**P**	**08 37 46.3**	**-2.0**
HTT	**Hallett**	**28.14**	**150**	P	**P**	**08 38 04.7**	**+1.1**
STKA	**Stephens Creek**	**28.39**	**144**	P	**P**	**08 38 06.5**	**+0.7**
	comp=Z,18nm,0.7s,baz=314,slow=9.6,SNR=32						
	comp=Z,18nm,0.7s						
STKA	**Stephens Creek**	**28.39**	**144**	P	**P**	**08 38 04.5**	**-1.3**
STKA	**Stephens Creek**	**28.39**	**144**	P	**P**	**08 38 06.5**	**+0.7**
CMSA	**Cobar Meteorol**	**30.69**	**139**	P	**P**	**08 38 27.7**	**+1.6**
EIDS	**Eidsvold**	**31.40**	**124**	P	**P**	**08 38 31.6**	**-0.8**
EIDS				IAmb	IAmb	08 39 38.9	
	comp=Z,28nm,1.9s						
ARPS	**Mount Arapiles**	**32.24**	**150**	P	**P**	**08 38 41.2**	**+1.5**
ARMA	**Armidale**	**34.19**	**131**	P	**P**	**08 38 55.0**	**-1.9**
ARMA				IAmb	IAmb	08 38 59.7	
	comp=Z,7.9nm,0.7s						
ARMA	**Armidale**	**34.19**	**131**	P	**P**	**08 38 59.4**	**+2.5**
TOO	**Toolangi**	**34.74**	**147**	P	**P**	**08 39 01.7**	**+0.2**
TOO				IAmb	IAmb	08 39 04.6	
	comp=Z,19nm,1.0s						
TOO	**Toolangi**	**34.74**	**147**	P	**P**	**08 39 03.8**	**+2.3**
CMAR	**Chiang Mai Arr**	**36.27**	**320**	P	**P**	**08 39 13.8**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=146,slow=6.4,SNR=5.7						
	comp=Z,0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.27**	**320**	P	**P**	**08 39 13.3**	**-1.4**
NJ2	**Nanjing**	**41.59**	**355**	*e*P	P	08 40 05.0	+6.0
YATNC	**Mamie plateau,**	**44.37**	**112**	P	**P**	**08 40 24.9**	**+3.1**
OUENC	**Ouen Island, N**	**44.38**	**112**	P	**P**	**08 40 21.9**	**+0.1**
OUENC				IAmb	IAmb	08 40 26.5	
	comp=Z,56nm,1.2s						
JHS	**Saijyo**	**45.53**	**12**	P	**P**	**08 40 29.2**	**-1.5**
JHS				IAmb	IAmb	08 40 39.2	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**47.12**	**6**	P	**P**	**08 40 41.8**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=183,slow=10,SNR=4.4						
	comp=Z,0.6nm,0.5s						
JGF	**Kuroka**	**47.15**	**17**	P	**P**	**08 40 42.1**	**-1.3**
JGF				IAmb	IAmb	08 41 12.3	
	comp=Z,15nm,1.3s						
MJAR	**Matsushiro Arr**	**48.27**	**17**	P	**P**	**08 40 50.4**	**-1.6**
	comp=Z,2.3nm,0.8s,baz=191,slow=9.4,SNR=7.7						
	comp=Z,2.3nm,0.8s						
LZH	**Lanzhou**	**48.73**	**340**	*e*P	P	08 41 03.7	+8.0
LZH				pP	pwP	08 41 17.1	+0.6
LZH				sP	sP	08 41 22.6	+3.0
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
H08S2	**Diego Garcia H**	**49.37**	**268**	T	T	09 35 13.2	
	baz=99,slow=75,SNR=3.4						
H08S3	**Diego Garcia H**	**49.38**	**268**	T	T	09 35 16.4	
	baz=99,slow=75,SNR=2.1						
H08S1	**Diego Carcia H**	**49.38**	**268**	T	T	09 35 13.2	
	baz=99,slow=75,SNR=3.4						
BJI	**Beijing**	**49.76**	**354**	P	P	08 41 09.7	+6.4
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
HYBB	**Hyderabad (bro**	**51.00**	**302**	*e*P	**P**	**08 41 12.0**	**-1.2**
HYBB				*e*pP	**pP**	**08 41 27.9**	**-1.8**
HYBB				*e*S	**S**	**08 48 26.3**	**+0.7**
HHC	**Hu-ho-hao-te**	**51.22**	**349**	*e*P	P	08 41 20.3	+5.8
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,390nm,8.3s						
FOZ	**Fox Glacier**	**53.16**	**138**	P	**P**	**08 41 28.6**	**-0.2**
LBZ	**Lake Benmore**	**53.77**	**139**	P	**P**	**08 41 34.0**	**+0.8**
QRZ	**Quartz Range**	**53.98**	**134**	P	**P**	**08 41 37.4**	**+2.6**
RPZ	**Rata Peaks**	**54.06**	**138**	P	**P**	**08 41 35.1**	**-0.3**
RPZ	**Rata Peaks**	**54.06**	**138**	P	**P**	**08 41 36.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**54.27**	**8**	P	**P**	**08 41 35.4**	**-1.4**
	comp=Z,5.5nm,0.5s,baz=192,slow=6.1,SNR=12						
USRK				pP	**pP**	**08 41 55.8**	**+2.3**
	comp=Z,7.2nm,0.6s,baz=198,slow=6.4,SNR=5.3						
	comp=Z,5.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.27**	**8**	P	**P**	**08 41 35.9**	**-0.9**
ODZ	**Otahua Downs**	**54.34**	**139**	P	**P**	**08 41 38.6**	**+1.2**
THZ	**Tophouse**	**54.57**	**135**	P	**P**	**08 41 39.2**	**-0.1**
KHZ	**Kahutara**	**55.25**	**135**	P	**P**	**08 41 45.3**	**+1.3**
SNZO	**South Karori**	**55.69**	**134**	P	**P**	**08 41 48.4**	**+1.2**
BKZ	**Black Stump Fm**	**56.34**	**131**	P	**P**	**08 41 53.4**	**+1.5**
URZ	**Urewera**	**56.55**	**130**	P	**P**	**08 41 53.7**	**+0.3**
BFZ	**Birch Farm**	**56.60**	**133**	P	**P**	**08 41 54.7**	**+1.0**
CASY	**Casey**	**57.16**	**186**	P	**P**	**08 41 56.4**	**-0.7**
SONM	**Songino Array**	**58.95**	**347**	P	**P**	**08 42 09.5**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=167,slow=8.6,SNR=9.9						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**58.95**	**347**	P	**P**	**08 42 09.8**	**-0.3**
WMQ	**Urumqi**	**61.84**	**332**	*e*P	**P**	**08 42 33.9**	**+4.1**
KSH	**Kashi**	**65.15**	**322**	P	**P**	**08 42 52.2**	**+0.4**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CCD	**Concordia, Ant**	**65.45**	**180**	P	**P**	**08 42 55.1**	**+1.5**
CCD				pP	**PcP**	**08 43 28.0**	**+3.0**
MK31	**Makanchi Array**	**66.59**	**331**	P	**P**	**08 43 00.5**	**-0.3**
MK31				IAmb	IAmb	08 43 01.6	
	comp=Z,8.7nm,0.9s						
MKAR	**Makanchi Array**	**66.59**	**331**	P	**P**	**08 43 00.6**	**-0.2**
MAKZ	**Makanchi**	**66.75**	**331**	P	**P**	**08 43 01.1**	**-0.8**
MAKZ	**Makanchi**	**66.75**	**331**	P	**P**	**08 43 00.8**	**-1.1**
MAKZ				pP	**sP**	**08 43 26.6**	**+0.4**
PETK	**Petropavlovsk-**	**69.35**	**22**	P	**P**	**08 43 17.1**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=204,slow=3.2,SNR=1.7						
PETK				pP	**pP**	**08 43 36.1**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=203,slow=6.4,SNR=6.0						
	comp=Z,0.4nm,0.5s						
PETK	**Petropavlovsk-**	**69.35**	**22**	P	**P**	**08 43 18.2**	**+0.3**
MAW	**Mawson**	**69.82**	**201**	LR	LR	09 12 20.0	
	comp=Z,80nm,19.0s,baz=120,slow=34						
WSAR	**Wadi Sarin**	**70.40**	**299**	P	**P**	**08 43 25.2**	**+0.1**
	comp=Z,4.4nm,0.9s,baz=153,slow=4.1,SNR=4.4						
	comp=Z,4.4nm,0.9s						
KK31	**Karatay Array**	**70.58**	**322**	P	**P**	**08 43 24.6**	**-1.2**
KKAR	**Karatay Array**	**70.58**	**322**	P	**P**	**08 43 24.4**	**-1.4**
VNDA	**Vanda**	**70.86**	**172**	P	**P**	**08 43 28.1**	**+1.2**
	comp=Z,3.9nm,0.9s,baz=323,slow=5.1,SNR=6.5						
	comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**70.86**	**172**	P	**P**	**08 43 25.9**	**-1.0**
VNDA				IAmb	IAmb	08 43 29.5	
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	**70.86**	**172**	P	**P**	**08 43 27.6**	**+0.7**
VNDA				pP	**sP**	**08 43 51.2**	**-0.4**
ZAA0	**Zalesovo Array**	**70.87**	**338**	P	**P**	**08 43 25.8**	**-1.4**
ZAA0				IAmb	IAmb	08 43 26.2	
	comp=Z,7.2nm,0.7s						
ZALV	**Zalesovo Beam**	**70.87**	**338**	P	**P**	**08 43 25.6**	**-1.6**
	comp=Z,6.4nm,0.6s,baz=131,slow=4.7,SNR=27						
	comp=Z,6.4nm,0.6s						
KURK	**Kurchatov**	**71.08**	**332**	P	**P**	**08 43 27.9**	**-0.7**
SOCY	**Socotra**	**71.36**	**286**	P	**P**	**08 43 30.8**	**-0.3**
YAK	**Yakutsk**	**71.66**	**4**	P	**P**	**08 43 31.8**	**0.0**
SBA	**Scott Base**	**71.83**	**171**	P	**P**	**08 43 32.0**	**-0.7**
SBA	**Scott Base**	**71.83**	**171**	P	**P**	**08 43 34.4**	**+1.6**
VOI	**Vohitsoka**	**73.20**	**250**	P	**P**	**08 43 40.8**	**-1.3**
VOI				IAmb	IAmb	08 43 45.6	
	comp=Z,26nm,1.3s						
SEY	**Seymchan**	**75.94**	**14**	P	**P**	**08 43 56.5**	**-0.4**
	comp=Z,4.3nm,0.6s,baz=224,slow=5.7,SNR=20						
	comp=Z,4.3nm,0.6s						
QSPA	**South Pole Qui**	**80.37**	**180**	P	**P**	**08 44 23.2**	**+1.6**
	comp=Z,21nm,1.0s,baz=298,slow=1.4,SNR=61						
QSPA				pP	**pwP**	**08 44 43.1**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=300,slow=4.8,SNR=2.3						
	comp=Z,21nm,1.0s						
QSPA	**South Pole Qui**	**80.37**	**180**	P	**P**	**08 44 21.0**	**-0.6**
QSPA				IAmb	IAmb	08 44 24.1	
	comp=Z,18nm,0.8s						
AKTO	**Aktyubinsk**	**81.68**	**324**	LR	LR	09 26 08.1	
	comp=Z,135nm,21.3s,baz=348,slow=40						
ARU	**Arti**	**84.08**	**330**	LR	LR	09 28 30.0	
	comp=Z,133nm,18.0s,baz=342,slow=40						
KMBO	**Kilima Mbogo**	**85.05**	**270**	P	**P**	**08 44 49.1**	**+2.0**
	comp=Z,1.7nm,0.5s,baz=86,slow=6.9,SNR=5.8						
	comp=Z,1.7nm,0.5s						
GNI	**Garni**	**86.87**	**311**	LR	LR	09 29 31.2	
	comp=Z,91nm,20.4s,baz=348,slow=40						
KBZ	**Khabaz**	**89.11**	**315**	P	**P**	**08 45 05.3**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=72,slow=1.0,SNR=4.6						
	comp=Z,2.2nm,0.9s						
TROLL	**Troll, Antarti**	**89.70**	**196**	P	**P**	**08 45 10.4**	**+2.2**
SNAA	**Sanae**	**91.28**	**195**	P	**P**	**08 45 17.5**	**+2.0**
SNAA	**Sanae**	**91.28**	**195**	LR	LR	09 26 47.2	
	comp=Z,83nm,18.0s,baz=99,slow=36						
BOSA	**Boshof**	**91.66**	**241**	P	**P**	**08 45 19.1**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=122,slow=5.1,SNR=4.1						
	comp=Z,2.4nm,0.7s						
VNA2	**Neumayer--Watz**	**92.90**	**195**	P	**P**	**08 45 21.9**	**-1.0**
	baz=140,slow=1.0						
VNA3	**Neumayer Olymp**	**93.24**	**194**	P	**P**	**08 45 26.0**	**+1.5**
VNA1	**Neumayer--Stat**	**93.30**	**195**	P	**P**	**08 45 26.1**	**+1.5**
NB2	**NORSAR Subarra**	**108.59**	**331**	PKP	**PKiKP**	**08 50 43.8**	**+5.3**
	comp=Z,0.5nm,0.6s,baz=19,slow=2.6						
TORD	**Torodi Ar. Bea**	**121.89**	**280**	PKP	**PKiKP**	**08 51 05.7**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=75,slow=1.6,SNR=14						
TORD				pPKP	**pPKPdf**	**08 51 26.6**	**+2.6**
	comp=Z,1.2nm,0.6s,baz=50,slow=1.9,SNR=4.3						
DBIC	**Dimbokro**	**127.76**	**271**	PKP	**PKiKP**	**08 51 17.5**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=38,slow=3.6,SNR=4.3						
TXAR	**Lajitas Array**	**132.70**	**59**	PKP	**PKiKP**	**08 51 27.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=200,slow=2.7,SNR=5.1						
TXAR				pPKP	**pPKPdf**	**08 51 47.1**	**+2.7**
	comp=Z,0.3nm,0.7s,baz=240,slow=1.0,SNR=3.0						
CPUP	**Villa Florida**	**144.25**	**180**	PKP	**PKPdf**	**08 51 46.6**	**-0.2**
	comp=Z,9.9nm,0.7s,baz=160,slow=2.8,SNR=20						
LPAZ	**La Paz**	**152.21**	**158**	PKPbc	**PKiKP**	**08 52 09.2**	**+1.5**
	comp=Z,4.1nm,0.8s,baz=142,slow=2.2,SNR=22						
LPAZ				PKPab	**pPKPdf**	**08 52 19.1**	**-0.5**
	comp=Z,12nm,0.6s,baz=189,slow=2.2,SNR=27						

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*SOME **01** 09:00:05.6, 41°.62N×73°.63E, h10km*
*KRNET **01** 09:00:05.6±0.1, 41°.61N×73°.63E, h19km, mb2.1*
*NNC **01** 09:00:06.6±2.0, 41°.60N×73°.68E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=20.0km s-min=8.4km az=161.0*
ISC 01 09:00:05.1±1.8**, 41°.60N**±0°.07×**73°.74E**±0°.03**, h2**km±12km**,**
n21, σ**0s.98**/37**, 9C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.51**	**59**	⇑*i*P	**Pb**	**09 00 16.8**	**-0.1**
	baz=65						
ARLS				⇑*i*S	**Sb**	**09 00 24.8**	**+0.1**
	baz=65						
EKS2	**Erkin-Say**	**1.06**	**1**	⇑*i*P	**Pg**	**09 00 25.2**	**-0.3**
	baz=6.0						
EKS2				⇑*i*S	**Sb**	**09 00 39.9**	**-0.8**
	baz=6.0						
AAK	**Ala-Archa**	**1.18**	**28**	⇓*i*P	**Pn**	**09 00 28.3**	**-0.5**
	baz=32						
AAK				⇓*i*S	**Sn**	**09 00 44.8**	**-0.7**
	baz=32						
MRKS	**Merke**	**1.21**	**342**	*e*P	**Pg**	**09 00 30.5**	**+2.2**
	2.6nm,0.1s						
MRKS				*e*S	**Sn**	**09 00 48.3**	**+2.2**
	27nm,0.3s						
CHMS	**Chumysh**	**1.58**	**28**	⇑*i*P	**Pg**	**09 00 35.4**	**-0.1**
	baz=31						
CHMS				⇑*i*S	**Sg**	**09 00 56.8**	**+0.8**
	baz=31						
USP	**Ospenovka**	**1.76**	**18**	⇓*i*P	**Pb**	**09 00 38.2**	**+0.1**
	baz=21						
USP				⇓*i*S	**Sg**	**09 01 01.5**	**-0.1**
	baz=21						
TKM2	**Tokmak 2**	**1.91**	**46**	⇓Pn	**Pg**	**09 00 42.1**	**+0.5**
	6.4nm,0.3s						
TKM2				⇑Sn	**Sg**	**09 01 07.6**	**+1.3**
	1.4nm,0.2s						
TKM2	**Tokmak 2**	**1.91**	**46**	⇑*i*P	**Pb**	**09 00 40.8**	**0.0**
	baz=48						
TKM2				⇑*i*S	**Sg**	**09 01 07.2**	**+0.9**
	baz=48						
SGDS	**Sogindy**	**1.96**	**19**	*e*P	**Pg**	**09 00 42.4**	**-0.3**
	3.5nm,0.3s						
SGDS				*e*S	**Sg**	**09 01 08.9**	**+0.7**
	7.4nm,0.2s						
SGDS	**Sogindy**	**1.96**	**19**	Pg	**Pg**	**09 00 42.4**	**-0.3**
	3.5nm,0.3s						
SGDS				Lg	Lg	09 01 08.9	
	7.4nm,0.2s						
KST	**Kastek**	**2.19**	**48**	*e*P	**Pg**	**09 00 47.1**	**+0.1**
	5.6nm,0.2s						
KST				*e*S	**Sg**	**09 01 17.1**	**+1.7**
	9.5nm,0.5s						
KST	**Kastek**	**2.19**	**48**	Pg	**Pg**	**09 00 47.1**	**+0.1**
	5.6nm,0.2s						
KST				Lg	Lg	09 01 17.1	
	9.5nm,0.5s						
KRBS	**Karabastau**	**2.53**	**34**	*e*P	**Pg**	**09 00 52.9**	**-0.7**
	1.2nm,0.4s						
KRBS				*e*S	**Sg**	**09 01 26.5**	**0.0**
	7.0nm,0.4s						
IUG	**Iuzhnay**	**2.83**	**282**	*e*P	**Pb**	**09 00 56.2**	**-0.2**
	39nm,0.3s						
IUG				*e*S	**Sb**	**09 01 32.3**	**+0.8**
	12nm,0.5s						
IUG	**Iuzhnay**	**2.83**	**282**	Pg	**Pb**	**09 00 56.2**	**-0.2**
	39nm,0.3s						
IUG				Lg	Lg	09 01 32.3	
	12nm,0.5s						
KK31	**Karatay Array**	**2.83**	**303**	Pn	**Pb**	**09 00 54.9**	**-1.4**
	0.3nm,0.2s,baz=122,slow=17,SNR=5.8						
KK31				Sn	**Sb**	**09 01 31.2**	**-0.3**
	1.4nm,0.3s,baz=124,slow=28,SNR=12						
KUU	**Kurty**	**2.98**	**39**	*e*P	**Pg**	**09 01 01.3**	**-1.0**
	0.4nm,0.2s						
KUU				*e*S	**Sg**	**09 01 41.0**	**+0.1**
	4.0nm,0.3s						
KUU	**Kurty**	**2.98**	**39**	Pg	**Pg**	**09 01 01.3**	**-1.0**
	0.4nm,0.2s						
KUU				Lg	Lg	09 01 41.0	
	4.0nm,0.3s						
KTBS	**Karatobe**	**3.02**	**45**	*e*P	**Pg**	**09 01 02.2**	**-0.9**
	1.0nm,0.3s						
KTBS				*e*S	**Sg**	**09 01 42.4**	**+0.1**
	19nm,0.5s						
BTLS	**Baital**	**3.44**	**4**	*e*P	**Pg**	**09 01 09.2**	**-2.0**
	2.2nm,1.5s						
BTLS				*e*S	**Sg**	**09 01 54.4**	**-1.4**
	2.9nm,0.3s						
BTLS	**Baital**	**3.44**	**4**	Pg	**Pb**	**09 01 08.0**	**+1.2**
BTLS				Lg	Lg	09 01 52.7	

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*IDC **01** 09:02:12.2±4.7, 36°.23N×70°.63E, h200km±44km, mb3.2/7, mbtmp3.8/8, Error ellipse: s-maj=26.4km s-min=21.6km az=15.0*
*NNC **01** 09:02:21.5±13.0, 37°.19N×71°.00E, h235km±132km, mb3.0, mpv4.3, Error ellipse: s-maj=171.5km s-min=76.1km az=22.0*
ISC 01 09:02:12.9±1.1**, 36°.5N**±0°.1×**70°.7E**±0°.1**, h200**km**, n19,**
σ**1s.47**/19**, mb3.5**/6**, 4C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.06**	**22**	P	**Pn**	**09 03 41.9**	**+0.7**
	SNR=110						
KK31	**Karatay Array**	**6.57**	**359**	⇑P	**Pn**	**09 03 47.6**	**+0.2**
	4.3nm,0.2s,baz=174,slow=12,SNR=162						
KK31				⇑S	**Sn**	**09 04 58.3**	**-4.1**
	20nm,0.7s,baz=197,slow=43,SNR=4.5						
EKS2	**Erkin-Say**	**6.57**	**20**	P	**Pn**	**09 03 48.6**	**+1.0**
	SNR=13						
AAK	**Ala-Archa**	**6.77**	**25**	P	**Pn**	**09 03 51.2**	**+1.1**
	SNR=7.4						
KBK	**Karagaybulak**	**6.95**	**27**	P	**Pn**	**09 03 53.8**	**+1.4**
	SNR=6.0						
CHMS	**Chumysh**	**7.18**	**25**	P	**Pn**	**09 03 56.5**	**+1.1**
	SNR=8.1						
USP	**Ospenovka**	**7.34**	**22**	P	**Pn**	**09 03 57.6**	**+0.2**
	SNR=9.1						
TKM2	**Tokmak 2**	**7.42**	**29**	P	**Pn**	**09 03 59.5**	**+0.9**
	SNR=40						
TKM2	**Tokmak 2**	**7.42**	**29**	⇑P	**Pn**	**09 03 59.2**	**+0.6**
	21nm,0.4s						
GEYT	**Alibeck**	**10.12**	**282**	P	**Pn**	**09 04 33.2**	**-0.5**
	2.0nm,0.4s,baz=130,slow=13,SNR=2.7						
AB31	**Akbulak array**	**14.94**	**332**	P	**P**	**09 05 36.5**	**+1.6**
	0.3nm,0.3s,baz=141,slow=11,SNR=12						
AKTO	**Aktyubinsk**	**16.63**	**331**	⇑P	**Pn**	**09 05 54.7**	**+0.1**
	5.8nm,0.8s						
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	Pn	09 06 32.2	-2.1
	1.0nm,0.3s,baz=214,slow=12,SNR=2.1						
	1.0nm,0.3s						
FINES	**FINESS Array B**	**37.32**	**326**	P	**P**	**09 09 06.4**	**+0.9**
	1.3nm,0.6s,baz=119,slow=12,SNR=4.2						
	1.3nm,0.6s						
ARCES	**ARCESS Array B**	**41.02**	**338**	P	**P**	**09 09 37.5**	**+1.5**
	1.2nm,0.6s,baz=103,slow=3.9,SNR=5.6						
	1.2nm,0.6s						
NOA	**NORSAR Array B**	**44.21**	**323**	P	**P**	**09 10 02.6**	**+0.8**
	0.6nm,0.5s,baz=98,slow=7.8,SNR=3.8						
	0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.47**	**268**	P	**P**	**09 12 33.8**	**-1.0**
	0.8nm,0.4s,baz=47,slow=6.2,SNR=14						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**82.22**	**122**	P	**P**	**09 14 10.7**	**-1.1**
	0.4nm,0.8s,baz=328,slow=4.7,SNR=6.4						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**84.48**	**125**	P	**P**	**09 14 21.8**	**-1.5**
	0.4nm,0.8s,baz=307,slow=5.9,SNR=4.5						
	0.4nm,0.8s						

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*NEIC **01** 09:09:42.9±1.2, 18°.54N±0°.09×145°.8E±0°.1, h193km±9km, mb4.2/18, Error ellipse: s-maj=15.7km s-min=12.2km az=104.0*
*IDC **01** 09:09:42.4±1.9, 18°.61N×145°.62E, h194km±19km, mb3.3/5, mbtmp4.0/7, Error ellipse: s-maj=34.3km s-min=13.5km az=96.0*
ISC 01 09:09:43.0±0.7**, 18°.57N**±0°.06×**145°.7E**±0°.1**, h200**km**, n30,**
σ**1s.05**/31**, mb4.1**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.02**	**190**	P	**Pn**	**09 10 57.1**	**-0.6**
	46nm,0.3s,baz=13,slow=1.7,SNR=12						
GUMO				S	**Sn**	**09 11 57.0**	**+0.5**
	34nm,0.4s,baz=11,slow=20,SNR=2.0						
GUMO	**Guam**	**5.02**	**190**		**Pn**	**09 10 57.3**	**-0.4**
GUMO	**Guam**	**5.02**	**190**	P	**Pn**	**09 10 58.2**	**+0.5**
JCJ	**Chichijima**	**9.10**	**340**	P	**Pn**	**09 11 49.9**	**-0.6**
	13nm,0.3s,baz=285,slow=21,SNR=6.6						
JCJ	**Chichijima**	**9.10**	**340**		**Pn**	**09 11 49.4**	**-1.0**
JMZ	**Minamidaito 2**	**15.24**	**301**	Pn	**P**	**09 13 11.8**	**+3.2**
JHJ2	**Mitsune**	**15.43**	**341**		**P**	**09 13 11.6**	**+1.1**
JOW	**Kunigami**	**18.07**	**300**		**Pn**	**09 13 40.9**	**-0.9**
JGF	**Kuroka**	**18.52**	**338**	P	**Pn**	**09 13 45.8**	**-1.3**
JGF				IAmb	IAmb	09 13 46.7	
	comp=Z,6.3nm,0.7s						
MAJO	**Matsushiro**	**19.10**	**341**	P	**P**	**09 13 51.3**	**+0.7**
MAJO				IAmb	IAmb	09 14 09.7	
	comp=Z,9.1nm,1.2s						
JMM	**Marumori**	**19.71**	**348**	P	**P**	**09 13 58.2**	**+1.1**
COEN	**Coen**	**32.41**	**185**	P	**P**	**09 15 54.7**	**+0.4**
MTN	**Manton Dam**	**34.37**	**206**	P	**P**	**09 16 09.7**	**-1.5**
MTN				IAmb	IAmb	09 16 40.2	
	comp=Z,7.9nm,1.2s						
KNRA	**Kununurra**	**37.91**	**207**	P	**P**	**09 16 39.4**	**-1.7**
KNRA				IAmb	IAmb	09 17 03.8	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**39.68**	**197**	P	**P**	**09 16 55.9**	**0.0**
WB0				IAmb	IAmb	09 16 58.2	
	comp=Z,12nm,1.5s						
WR0	**Warramunga Arr**	**39.83**	**197**	P	**P**	**09 16 56.6**	**-0.5**
WR0				IAmb	IAmb	09 17 12.6	
	comp=Z,9.0nm,1.4s						
WRAB	**Tennant Creek**	**39.85**	**197**	P	**P**	**09 16 57.0**	**-0.2**
WRAB				IAmb	IAmb	09 17 01.3	
	comp=Z,13nm,1.2s						
WB2	**Warramunga Arr**	**39.86**	**197**	P	**P**	**09 16 56.7**	**-0.6**
WB2				IAmb	IAmb	09 17 01.3	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**39.87**	**197**	P	**P**	**09 16 57.0**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=20,slow=8.8,SNR=37						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**39.87**	**197**	P	**P**	**09 16 56.1**	**-1.3**
SONM	**Songino Array**	**43.26**	**321**	P	**P**	**09 17 24.1**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=133,slow=10,SNR=1.9						

	comp=Z,0.3nm,0.5s						
AS31	**Alice Springs**	**43.53**	**196**	P	**P**	**09 17 26.7**	**-0.4**
ASAR	**Alice Springs**	**43.53**	**196**	P	**P**	**09 17 27.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=21,slow=11,SNR=12						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**43.53**	**196**	P	**P**	**09 17 26.7**	**-0.4**
SDPT	**Sand Point**	**54.56**	**34**	P	**P**	**09 18 51.0**	**+0.7**
MLY	**Manley**	**62.23**	**25**	P	**P**	**09 19 42.9**	**-0.3**
MLY				IAmb	IAmb	09 20 22.9	
	comp=Z,4.4nm,1.4s						
MDM	**Murphy Dome**	**63.24**	**26**	P	**P**	**09 19 50.5**	**+0.6**
ILAR	**Eielson Array**	**63.75**	**26**	P	**P**	**09 19 51.6**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=252,slow=4.9,SNR=6.5						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**83.20**	**52**	P	**P**	**09 21 48.1**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=263,slow=5.9,SNR=17						
	comp=Z,1.2nm,0.7s						
LPAZ	**La Paz**	**147.64**	**91**	PKPbc	**PKiKP**	**09 29 06.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=41,slow=12,SNR=4.9						

KRSC 01 09:16:43.4±0.9**,50°.04N×154°.57E,h560**km±7km**,ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.84**	**50**	*e*P	P	09 17 58.9	+0.8
KDTR				*e*S	S	09 18 58.1	-1.2
RUS	**Russkaya**	**3.45**	**44**	*e*P	P	09 18 02.8	+0.9
KOK	**Koryaka**	**4.12**	**36**	*e*P	P	09 18 08.6	+1.8
UGLR	**Uglovaya**	**4.13**	**38**	*e*P	P	09 18 08.5	+1.6
SMAR	**Somma**	**4.17**	**38**	*e*P	P	09 18 08.8	+1.5
KRER	**Koryakskii**	**4.18**	**37**	*e*P	P	09 18 08.4	+1.1
SDLR	**Sedlovina**	**4.21**	**38**	*e*P	P	09 18 08.3	+0.8
GNL	**Ganaly**	**4.21**	**28**	*e*P	P	09 18 08.3	+0.8
SPN	**Mys Shipunski**	**4.58**	**46**	*e*P	P	09 18 11.5	+1.3
SPN				*e*S	S	09 19 20.6	-0.7
TUMR	**Tumrok**	**6.25**	**31**	*e*P	P	09 18 26.2	+1.6
MKZ	**Mys Kozlova**	**6.30**	**41**	*e*P	P	09 18 26.3	+1.3
MKZ				*e*S	S	09 19 46.9	-1.5
KBTR	**Krutoberegovo**	**7.92**	**36**	*e*P	P	09 18 41.7	+1.4

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*IDC **01** 09:21:10.4±0.8, 9°.40N×126°.21E, h0km, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=63.5km s-min=17.7km az=80.0*
*MAN **01** 09:21:14, 9°.52N×126°.59E, h23km, Ms3.3*
ISC 01 09:21:12.1±1.7**,9°.50N**±0°.04×**126°.59E**±0°.06**,h9**km±10km**, n29,**σ**1s.59**/34**,mb3.8**/8**,11C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.54**	**301⇑**	*e*P	**Pn**	**09 21 26.4**	**+0.4**
GLSP				*e*S	**Sn**	**09 21 33.3**	**-1.8**
BUTP	**Butuan**	**1.09**	**241⇑**	*e*P	**Pn**	**09 21 33.8**	**+0.1**
BUTP				*e*S	**Sb**	**09 21 45.1**	**-2.5**
SCPH	**Surigao**	**1.12**	**284⇑**	*e*P	**Pg**	**09 21 33.9**	**+0.3**
SCPH				*e*S	**Sb**	**09 21 47.4**	**-0.9**
BIPH	**Bislig**	**1.33**	**190⇑**	*e*P	**Pg**	**09 21 37.9**	**+0.3**
BIPH				*i* S	**Sg**	**09 21 56.1**	**+1.2**
MSLP	**Maasin**	**1.82**	**290⇑**	*e*P	**Pb**	**09 21 45.6**	**+0.1**
BUKP	**Musuan**	**2.21**	**223⇑**	*e*P	**Pb**	**09 21 51.3**	**-1.0**
BUKP				*e*S	**Sb**	**09 22 19.4**	**-0.4**
OCLP	**Ormoc**	**2.48**	**308⇑**	*e*P	**Pb**	**09 21 56.9**	**+0.1**
TBP	**Tagbilaran**	**2.70**	**274**	*e*P	**Pn**	**09 21 57.3**	**+1.7**
TBP				*i* S	**Sn**	**09 22 30.7**	**+2.2**
LLP	**Lapu-Lapu**	**2.71**	**288⇓**	*i*P	**Pb**	**09 22 00.5**	**-0.3**
LLP				*i* S	**Sb**	**09 22 32.0**	**-2.1**
KCP	**Kidapawan**	**2.89**	**211⇓**	*e*P	**Pb**	**09 22 00.9**	**-3.0**
KCP				*i* S	**Sn**	**09 22 35.4**	**+2.1**
SNPH	**Sibulan**	**3.31**	**268⇑**	*e*P	**Pn**	**09 22 06.1**	**+1.9**
SNPH				*e*S	**Sn**	**09 22 46.0**	**+2.2**
DCPH	**Dipolog City**	**3.33**	**254⇑**	*e*P	**Pn**	**09 22 03.1**	**-1.2**
DCPH				*e*S	**Sn**	**09 22 45.0**	**+1.0**
DDMP	**Don Marcelino,**	**3.49**	**195⇑**	*e*P	**Pb**	**09 22 13.0**	**-1.1**
DDMP				*e*S	**Sn**	**09 22 51.3**	**+3.3**
PAGZ	**Pagadian**	**3.57**	**243⇑**	*e*P	**Pn**	**09 22 10.5**	**+2.8**
FITZ	**Fitzroy Crossi**	**27.44**	**182**	P	**P**	**09 26 57.8**	**-0.7**
	0.8nm,0.3s,baz=14,slow=4.3,SNR=2.2						
	0.8nm,0.3s						
KSRS	**Korea Array**	**27.85**	**2**	P	**P**	**09 27 02.5**	**+0.5**
	0.5nm,0.4s,baz=188,slow=9.6,SNR=4.7						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**30.24**	**165**	P	**P**	**09 27 22.2**	**-1.2**
	0.1nm,0.4s,baz=342,slow=8.4,SNR=7.1						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**33.73**	**168**	P	**P**	**09 27 53.4**	**-0.7**
	0.2nm,0.3s,baz=350,slow=7.3,SNR=13						
	0.2nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**39.84**	**73**	T	T	10 11 42.0	
	baz=262,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**39.85**	**73**	T	T	10 11 45.1	
	baz=262,slow=75,SNR=43						
H11S2	**WAKE ISLAND Hy**	**39.86**	**73**	T	T	10 11 46.4	
	baz=262,slow=75,SNR=47						
H11N1	**WAKE ISLAND Hy**	**40.20**	**71**	T	T	10 12 13.2	
	baz=263,slow=75,SNR=25						
H11N2	**WAKE ISLAND Hy**	**40.21**	**71**	T	T	10 12 07.5	
	baz=263,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**40.22**	**71**	T	T	10 12 21.0	
	baz=263,slow=75,SNR=23						
KURBB	**Kurchatov Arra**	**56.88**	**326**	P	**P**	**09 30 56.4**	**-0.9**
	0.6nm,0.2s,baz=128,slow=6.5,SNR=1.9						
	0.6nm,0.2s						
ILAR	**Eielson Array**	**79.99**	**26**	P	**P**	**09 33 23.1**	**+1.5**
	0.2nm,0.6s,baz=235,slow=5.1,SNR=7.8						
	0.2nm,0.6s						
ARCES	**ARCESS Array B**	**85.02**	**340**	P	**P**	**09 33 47.2**	**-0.5**
	0.9nm,0.5s,baz=71,slow=6.8,SNR=12						
	0.9nm,0.5s						
FINES	**FINESS Array B**	**86.71**	**332**	P	**P**	**09 33 55.1**	**-1.2**
	0.4nm,0.4s,baz=92,slow=5.7,SNR=6.0						
	0.4nm,0.4s						
PLCA	**Paso Flores**	**145.38**	**157**	PKPbc	**PKPdf**	**09 40 51.4**	**+0.4**
	1.2nm,0.8s,baz=342,slow=3.2,SNR=1.9						

IDC 01 09:25:03.1±3.1**,27°.82N×100°.16E,h0**km**,mb3.3**/4**, mbtmp3.3**/4**,Error ellipse: s-maj=87.9km s-min=28.5km az=96.0,Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.39**	**187**	Pg	Pn	09 27 55.8	+36
	0.4nm,0.3s,baz=360,slow=18,SNR=2.0						
SONM	**Songino Array**	**20.56**	**12**	P	P	09 29 43.2	-0.2
	0.3nm,0.4s,baz=183,slow=8.1,SNR=2.1						
	0.3nm,0.4s						
KSRS	**Korea Array**	**25.20**	**61**	P	P	09 30 30.4	+0.1
	0.3nm,0.3s,baz=256,slow=9.0,SNR=2.3						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**57.87**	**141**	P	P	09 34 55.5	-1.5
	0.3nm,0.6s,baz=329,slow=7.7,SNR=6.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**60.66**	**144**	P	P	09 35 17.7	+1.4
	0.2nm,0.7s,baz=327,slow=7.9,SNR=2.1						
	0.2nm,0.7s						

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*ATH **01** 09:29:18.6, 35°.89N×26°.33E, h10km±31km, ML2.5/6, Error ellipse: s-maj=31.6km s-min=1.2km az=0.0*
*ISK **01** 09:29:20.4, 35°.85N×26°.49E, h19km, ML2.6/13*
*DDA **01** 09:29:21.8±0.0, 36°.01N×26°.56E, h24km±1km, ML2.3*
*THE **01** 09:29:21.9, 35°.74N×26°.43E, h26km±7km, ML2.4/3, Error ellipse: s-maj=8.1km s-min=0.9km az=150.0*
ISC 01 09:29:18.2±1.1**,35°.87N**±0°.03×**26°.36E**±0°.02**,h20**km±4km**, n35,**σ**1s.57**/55**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIA	**Sitia Lasithi**	**0.70**	**198**	P	**Pn**	**09 29 33.4**	**+0.4**
STIA				S	**Sg**	**09 29 42.1**	**+0.8**
STIA	**Sitia Lasithi**	**0.70**	**198**	P	**Pn**	**09 29 32.4**	**-0.5**
STIA				S	**Sg**	**09 29 41.9**	**+0.6**
STIA				AML	AML	09 29 45.7	
	comp=E,877μm,0.4s						
STIA				AML	AML	09 29 46.0	
	comp=N,723μm,0.3s						
KARP	**Karpathos**	**0.73**	**116**	P	**Pn**	**09 29 33.4**	**-0.1**
KARP				S	**Sb**	**09 29 42.2**	**+0.4**
	comp=N,745nm,0.1s						
KARP	**Karpathos**	**0.73**	**116**	PG	**Pg**	**09 29 33.3**	**+0.7**
KARP				SG	**Sb**	**09 29 42.3**	**+0.4**
KARP	**Karpathos**	**0.73**	**116**	P	**Pg**	**09 29 33.2**	**+0.7**
KARP				S	**Sb**	**09 29 42.5**	**+0.7**
KARP				AML	AML	09 29 42.9	
	comp=N,1525μm,0.2s						
KARP				AML	AML	09 29 43.1	
	comp=E,1376μm,0.1s						
ZKR	**Zakros**	**0.76**	**189**	P	**Pn**	**09 29 34.3**	**+0.5**
ZKR				S	**Sg**	**09 29 44.0**	**+0.7**
	comp=E,290nm,0.2s						
ZKR	**Zakros**	**0.76**	**189**	PG	**Pn**	**09 29 35.7**	**+1.9**
ZKR	**Zakros**	**0.76**	**189**	P	**Pn**	**09 29 33.5**	**-0.3**
ZKR				S	**Sg**	**09 29 43.7**	**+0.4**
ZKR				AML	AML	09 29 44.3	
	comp=E,900μm,0.3s						
ZKR				AML	AML	09 29 44.5	
	comp=N,257μm,0.2s						
SANT	**Santorini**	**0.88**	**305**	PG	Pn	09 29 39.5	+4.0
SANT				SG	**Sn**	**09 29 53.7**	**+5.9**
FRMA	**Ierapetra Chan**	**0.99**	**211**	P	**Pg**	**09 29 36.8**	**-0.7**
FRMA				S	**Sb**	**09 29 49.2**	**-0.1**
FRMA				AML	AML	09 29 53.1	
	comp=E,579μm,0.3s						
FRMA				AML	AML	09 29 53.9	
	comp=N,738μm,0.5s						
AMGA	**Amorgos Island**	**1.03**	**339**	P	**Pg**	**09 29 38.2**	**0.0**
KSTL	**Kastelli Herak**	**1.19**	**242**	P	**Pb**	**09 29 38.9**	**-1.1**
DAT	**Datca**	**1.31**	**49**	P	**Pg**	**09 29 44.0**	**+0.5**
DAT				S	**Sg**	**09 30 01.7**	**+1.0**
DAT	**Datca**	**1.31**	**49**	PN	**Pg**	**09 29 43.3**	**-0.2**
DAT				SN	**Sg**	**09 30 00.2**	**-0.5**
IDI	**Anoyia**	**1.33**	**245**	P	**Pg**	**09 29 43.3**	**-0.6**
IDI				S	**Sg**	**09 30 00.2**	**-1.0**
	comp=N,78nm,0.3s						
IDI	**Anoyia**	**1.33**	**245**	P	**Pg**	**09 29 43.0**	**-0.9**
IDI				S	**Sg**	**09 30 00.0**	**-1.2**
IDI				AML	AML	09 30 02.1	
	comp=E,166μm,0.4s						
IDI				AML	AML	09 30 05.4	
	comp=N,137μm,0.3s						
BODT	**Bodrum**	**1.42**	**33**	PN	**Pg**	**09 29 45.3**	**-0.3**
BODT	**Bodrum**	**1.42**	**33**	P	**Pg**	**09 29 45.0**	**-0.6**
BODT				S	**Sb**	**09 30 01.6**	**-0.1**
ARG	**Arkhangelos**	**1.48**	**76**	PN	**Pb**	**09 29 45.1**	**+0.1**
ARG				SN	**Sb**	**09 30 03.4**	**+0.1**
ARG	**Arkhangelos**	**1.48**	**76**	P	**Pb**	**09 29 44.9**	**0.0**
ARG				AML	AML	09 30 05.9	
	comp=E,279μm,0.2s						
ARG				AML	AML	09 30 06.7	
	comp=N,176μm,0.2s						
TURN	**Turunc**	**1.77**	**59**	PN	**Pb**	**09 29 49.8**	**-0.3**
TURN	**Turunc**	**1.77**	**59**	P	**Pb**	**09 29 49.7**	**-0.3**
TURN				S	**Sb**	**09 30 11.6**	**-0.3**
TURN				*i* AML	AML	09 30 21.0	
	comp=N,32nm,0.2s						
TURN				*i* AML	AML	09 30 21.0	
	comp=N,47nm,0.3s						
IMMV	**Iera Moni Meta**	**1.98**	**259**	P	**Pb**	**09 29 53.0**	**-0.5**
YER	**Yerkesik**	**2.00**	**50**	PN	**Pb**	**09 29 53.4**	**-0.6**
YER	**Yerkesik**	**2.00**	**50**	P	**Pb**	**09 29 54.2**	**+0.2**
YER				S	**Sb**	**09 30 18.9**	**+0.3**
DALY	**Dalyan (Mula)**	**2.08**	**62**	PN	**Pb**	**09 29 54.1**	**-1.2**
AYDN	**Tasoluk**	**2.17**	**34**	P	**Pb**	**09 29 55.9**	**-0.9**
AYDN				S	**Sb**	**09 30 21.5**	**-1.8**
ANKY	**Antikythira Is**	**2.48**	**271**	P	**Pb**	**09 30 00.7**	**-1.4**
TAVA	**DENIZLI_Tavas**	**2.60**	**51**	P	**Pb**	**09 30 02.9**	**-1.3**
TAVA				S	**Sb**	**09 30 34.6**	**-1.3**
CAME	**Cameli-Denizli**	**2.61**	**65**	PN	**Pb**	**09 30 01.7**	**-2.7**
AKAS	**Kas**	**2.66**	**81**	PN	**Pn**	**09 30 01.5**	**+1.4**
AKAS	**Kas**	**2.66**	**81**	P	**Pn**	**09 29 59.0**	**-1.1**
AKAS				S	**Sn**	**09 30 27.2**	**-4.6**
AKAS				*i* AML	AML	09 30 50.0	
	comp=N,28nm,1.1s						
AKAS				*i* AML	AML	09 30 52.0	
	comp=N,14nm,0.8s						
APMY	**Acipayam-Deniz**	**2.86**	**55**	PN	**Pb**	**09 30 05.2**	**-3.4**
GOLH	**Golhisar**	**2.92**	**61**	P	**Pb**	**09 30 06.8**	**-2.8**
GOLH				S	**Sn**	**09 30 40.8**	**+2.6**
GOLH				*i* AML	AML	09 30 50.0	
	comp=N,17nm,0.5s						
GOLH				*i* AML	AML	09 30 52.0	
	comp=N,14nm,0.8s						
KORT	**Korkueli**	**3.41**	**70**	PN	**Pn**	**09 30 12.9**	**+2.4**

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*IDC **01** 09:43:36.5±1.1, 23°.81S×82°.48E, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=50.0km s-min=27.4km az=6.0*
ISC 01 09:43:37.9±1.0**,23°.8S**±0°.3×**82°.5E**±0°.2**,h10**km**,n13, **σ**0s.79**/7**,mb4.2**/4**,South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.74**	**328**	T	T	10 07 09.4	
	baz=151,slow=74,SNR=41						
H08S1	**Diego Carcia H**	**18.75**	**328**	T	T	10 07 12.9	
	baz=151,slow=74,SNR=48						
H08S3	**Diego Garcia H**	**18.76**	**328**	T	T	10 07 14.7	
	baz=151,slow=74,SNR=75						
H01W3	**Cape Leeuwin H**	**29.58**	**119**	T	T	10 20 32.9	
	baz=284,slow=75,SNR=3.9						
H01W2	**Cape Leeuwin H**	**29.58**	**119**	T	T	10 20 30.1	
	baz=284,slow=75,SNR=4.7						
H01W1	**Cape Leeuwin H**	**29.59**	**119**	T	T	10 20 33.6	
	baz=284,slow=75,SNR=4.4						
ASAR	**Alice Springs**	**46.84**	**101**	P	**P**	**09 52 08.4**	**0.0**
	2.1nm,0.7s,baz=265,slow=7.3,SNR=36						
	2.1nm,0.7s						
WRA	**Warramunga Arr**	**48.05**	**96**	P	**P**	**09 52 18.3**	**+0.4**
	2.7nm,0.7s,baz=262,slow=7.9,SNR=36						
	2.7nm,0.7s						
BOSA	**Boshof**	**51.16**	**252**	P	**P**	**09 52 41.5**	**0.0**
	1.8nm,0.6s,baz=102,slow=6.3,SNR=4.2						
	1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**77.49**	**1**	P	**P**	**09 55 33.8**	**+0.5**
	1.4nm,0.8s,baz=199,slow=5.0,SNR=4.9						
	1.4nm,0.8s						
ILAR	**Eielson Array**	**128.22**	**24**	PKP	**PKPdf**	**10 02 43.7**	**-0.3**
	0.2nm,0.8s,baz=298,slow=4.5,SNR=4.0						
NVAR	**Mina Array Bea**	**157.09**	**46**	PKPab	**PKPab**	**10 04 03.5**	**-1.3**
	0.5nm,0.7s,baz=280,slow=5.3,SNR=5.0						
TXAR	**Lajitas Array**	**172.24**	**44**	PKP	**PKPdf**	**10 03 48.2**	**+0.4**
	0.3nm,1.0s,baz=214,slow=3.1,SNR=3.4						

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*BJI **01** 10:01:06.3±0.0, 21°.17N×94°.77E, h147km, mb5.1/66, mB4.8/40*
*MOS **01** 10:01:06.7±0.9, 21°.28N×94°.95E, h143km, mb5.0/96, Error ellipse: s-maj=6.5km s-min=3.3km az=122.5*
*IDC **01** 10:01:07.7±0.7, 21°.32N×94°.97E, h131km±6km, mb4.6/33, mbtmp5.0/35, MS3.6/18, Error ellipse: s-maj=10.0km s-min=8.1km az=46.0*
*NEIC **01** 10:01:08.2±1.9, 21°.31N±0°.05×94°.93E±0°.06, h131km±4km, mb5.1/263, Error ellipse: s-maj=8.6km s-min=6.6km az=77.0*
*GCMT **01** 10:01:09.2±0.3, 21°.25N±0°.02×94°.87E±0°.02, h128km±3km, MW5.0/111, Moment Tensor Solution. s29,c30; s111,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.07±.11; $M_{\theta\theta}$-2.44±.14; $M_{\phi\phi}$-0.63±.14; $M_{r\theta}$1.23±.12; $M_{\theta\phi}$-2.49±.13; $M_{\phi r}$-0.78±.10; Best double couple: $M_0$4.00700×10^{16} NP1:ϕ_s79.00000°,δ55.00000°, λ123.00000°. NP2:ϕ_s210.00000°,δ47.00000°,λ52.00000°. Principal axes: T 3.7830, Plg63.0000°, Azm47.0000°; N 0.4460, Plg26.0000°, Azm238.0000°; P -4.2300, Plg5.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NDI **01** 10:01:10.5±3.0, 21°.35N×94°.61E, h124km±16km, mb5.3, ML5.0, mb5.1(NEIC)*
ISC 01 10:01:07.8±0.3**,21°.33N**±0°.03×**94°.83E**±0°.03**,h134**km±2km**, h134**km**:pP-P,n1224,**σ**1s.20**/1284**,mb5.1**/325**,100C-16D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MND	**Mandalay**	**1.38**	**60**	Pn	**Pn**	**10 01 34.8**	**0.0**
IMP	**Imphal**	**3.58**	**347⇓**	*i*P	**Pn**	**10 02 05.0**	**+2.8**
IMP				*e*S	**Sn**	**10 02 43.7**	**-0.6**
AGT	**Agartala**	**4.17**	**308**	*e*P	**Pn**	**10 02 10.7**	**+0.8**
AGT				*i* x	x	10 02 12.1	
CHTO	**Chiang Mai**	**4.61**	**122**	Pn	**Pn**	**10 02 13.7**	**-2.1**
CHTO	**Chiang Mai**	**4.61**	**122**	P	**Pn**	**10 02 14.1**	**-1.7**
CHTO	**Chiang Mai**	**4.61**	**122**	P	**Pn**	**10 02 14.0**	**-1.7**
CMAR	**Chiang Mai Arr**	**4.81**	**126**	P	**Pn**	**10 02 16.2**	**-2.3**
	538nm,0.7s,baz=150,slow=21,SNR=4.5						
CMAR	**Chiang Mai Arr**	**4.81**	**126**	Pn	**Pn**	**10 02 17.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**4.81**	**126**	*i* P	Pn	10 02 13.0	-5.5
CMAR				pmax	pmax		
	comp=Z,17nm,0.7s						
MOKO	**MOKOCHONG**	**4.98**	**357**	*e*P	**Pn**	**10 02 23.5**	**+2.7**
MOKO				*e*S	**Sn**	**10 03 16.9**	**-0.8**
MOKO				IAML		10 03 24.5	
	comp=N,3μm,0.6s						
SHL	**Shillong**	**5.01**	**328**	*e*P	**Pn**	**10 02 21.1**	**-0.2**
SHL				*e*S	**Sn**	**10 03 14.4**	**-4.1**
SHL				IAML		10 03 18.8	
	comp=N,7μm,0.2s						
JORH	**JORHAT**	**5.42**	**354⇑**	*e*P	**Pn**	**10 02 28.2**	**+1.7**
TEZP	**TEZPUR**	**5.58**	**341**	*e*P	**Pn**	**10 02 28.4**	**-0.4**
TEZP				*i* x	x	10 02 36.8	
TEZP				*e*S	**Sn**	**10 03 26.6**	**-5.3**
GUWA	**GUWAHATI**	**5.63**	**330**	*e*P	**Pn**	**10 02 28.5**	**-0.9**
GUWA				*e*S	**Sn**	**10 03 27.3**	**-5.8**
GUWA				IAML		10 03 31.2	
	comp=N,3μm,0.2s						
GUWA				IAML		10 03 31.3	
	comp=E,3μm,0.2s						
TURI	**Tura**	**5.89**	**316**	*e*S	**Sn**	**10 03 34.3**	**-5.1**
DIBR	**DIBRUGARH**	**6.11**	**1**	*e*P	**Pn**	**10 02 37.3**	**+1.5**
ZIRO	**ZIRO**	**6.23**	**352**	*e*P	**Pn**	**10 02 38.3**	**+0.6**
DHUB	**DHUBRI**	**6.44**	**317**	*e*P	**Pn**	**10 02 38.4**	**-1.8**
DHUB				*i* x	x	10 02 41.5	
DHUB				*e*S	**Sn**	**10 03 47.3**	**-5.2**
PBKT	**Sadao Pong**	**7.49**	**128**	Pn	**Pn**	**10 02 53.2**	**-1.3**
PZH	**PanZhiHua**	**8.15**	**49**	P	**Pn**	**10 03 07.3**	**+3.8**
PZH				S	**Sn**	**10 04 34.9**	**+0.8**
PZH				pmax	pmax		
	comp=E,60nm,1.0s						
PZH				pmax	pmax		
	comp=E,310nm,3.5s						
PZH				LR	LR		
	comp=E,650nm,5.7s						
PZH				LR	LR		
	comp=E,680nm,6.0s						
PZH				LR	LR		
	comp=E,500nm,10.0s						
KMI	**Kunming**	**8.19**	**61**	⇑P	**Pn**	**10 03 08.3**	**+4.2**
KMI				S	**Sn**	**10 04 42.6**	**+7.3**
KMI				smax	smax		
	comp=E,100nm,1.4s						
KMI				smax	smax		
	comp=E,63nm,1.4s						
KMI				LR	LR		
	comp=E,260nm,8.5s						
KMI				LR	LR		
	comp=E,480nm,6.4s						
KMI				LR	LR		
	comp=E,580nm,15.3s						
GTK	**Tadong**	**8.23**	**318**	*e*P	**Pn**	**10 03 04.0**	**-0.5**
GTK				*i* x	x	10 03 15.7	
BWNR	**Bhubaneshwar**	**8.51**	**265**	*e*P	**Pn**	**10 03 07.5**	**-0.5**
BOK	**Bokaro**	**8.62**	**288**	*e*P	**Pn**	**10 03 07.8**	**-1.9**
BOK				*e*x	x	10 04 26.9	
ODAN	**Odare**	**8.75**	**310**	*e*Pn	**Pn**	**10 03 10.4**	**-1.1**
ODAN				*e*Sn	**Sn**	**10 04 45.0**	**-3.6**
	comp=E,408nm,0.5s						
TAPN	**Taplejung**	**8.84**	**314**	*e*Pn	**Pn**	**10 03 12.1**	**-0.7**
TAPN				*e*Sn	**Sn**	**10 04 48.7**	**-2.2**
	comp=E,580nm,0.4s						
LSA	**Lhasa**	**8.97**	**339**	Pn	**Pn**	**10 03 15.0**	**+0.2**
LSA	**Lhasa**	**8.97**	**339**	P	**Pn**	**10 03 15.0**	**+0.2**
RAMN	**Ramite**	**9.37**	**308**	*e*Pn	**Pn**	**10 03 18.7**	**-1.2**
RAMN				*e*Sn	**Sn**	**10 05 00.0**	**-3.7**
JIRN	**Jiri**	**10.08**	**310**	*e*Pn	**Pn**	**10 03 28.7**	**-0.8**
JIRN				*e*Sn	**Sn**	**10 05 16.4**	**-4.7**
	comp=E,354nm,0.3s						
JHSG	**JHARSUGUGA**	**10.30**	**274**	*e*P	**Pn**	**10 03 31.9**	**-0.3**
GUN	**Gumba**	**10.45**	**311**	*e*Pn	**Pn**	**10 03 33.5**	**-0.9**
GUN				*e*Sn	**Sn**	**10 05 26.0**	**-4.0**
	comp=E,819nm,0.6s						
PKI	**Pulchoki**	**10.59**	**308**	*e*Pn	**Pn**	**10 03 35.0**	**-1.4**
PKI				*e*Sn	**Sn**	**10 05 27.9**	**-5.5**
PKIN	**Phulchoki**	**10.61**	**308**	*e*Pn	**Pn**	**10 03 35.0**	**-1.5**
PKIN				*e*Sn	**Sn**	**10 05 28.2**	**-5.5**
	comp=E,310nm,0.4s						
KKN	**Kakani**	**10.81**	**308**	*e*Pn	**Pn**	**10 03 37.7**	**-1.4**
KKN				*e*Sn	**Sn**	**10 05 33.1**	**-5.4**
KKN				*e*Sn	Sn	10 05 33.6	-4.9
DMN	**Daman**	**10.84**	**307**	*e*Pn	**Pn**	**10 03 38.0**	**-1.6**
DMN				*e*Sn	**Sn**	**10 05 33.8**	**-5.5**
	comp=E,345nm,0.4s						
RAGD	**RAYAGADA**	**10.87**	**261**	*e*P	**Pn**	**10 03 40.6**	**+0.8**
GKN	**Gorkha**	**11.40**	**308**	*e*Pn	**Pn**	**10 03 45.6**	**-1.3**
GKN				*e*Sn	**Sn**	**10 05 47.7**	**-5.0**
VIS	**Vishakhapatnam**	**11.42**	**254**	*e*x	x	10 05 35.8	
VLK	**Valmikinagar**	**11.64**	**303**	*e*P	**Pn**	**10 03 49.4**	**-0.4**
VLK				*i* x	x	10 03 54.5	
BLSP	**Bilaspur**	**11.83**	**276**	*e*P	**Pn**	**10 03 51.1**	**-1.4**
GYA	**Guiyang**	**11.97**	**62**	⇑P	**Pn**	**10 03 56.4**	**+2.1**
GYA				pmax	pmax		
	comp=E,25nm,0.6s						
DANN	**Dangsing**	**12.24**	**307**	*e*Pn	**Pn**	**10 03 56.0**	**-2.0**
DANN				*e*Sn	**Sn**	**10 06 07.0**	**-6.1**
	comp=E,246nm,0.4s						
CD2	**Chengdu**	**12.46**	**38**	P	**Pn**	**10 04 01.5**	**+0.9**
CD2				S	**Sn**	**10 06 18.4**	**+0.4**
CD2				pmax	pmax		
	comp=E,40nm,0.6s						
CD2				LR	LR		
	comp=E,800nm,7.0s						
CD2				LR	LR		
	comp=E,950nm,7.2s						
CD2				LR	LR		
	comp=E,890nm,7.2s						
JBP	**Jabalpur**	**13.87**	**280**	*e*P	**Pn**	**10 04 16.8**	**-2.0**
JBP			⇓	*e*S	**Sn**	**10 06 45.9**	**-6.2**
QIZ	**Qiongzhong**	**14.28**	**97**		**P**	**10 04 27.2**	**0.0**
QIZ	**Qiongzhong**	**14.28**	**97**	P	**P**	**10 04 27.9**	**+0.7**
QIZ				S	**Sn**	**10 07 02.8**	**+0.7**
QIZ				pmax	pmax		
	comp=E,61nm,0.8s						
NGP	**Nagpur**	**14.72**	**272**	*e*P	**Pn**	**10 04 30.7**	**+1.2**
GULI	**GuiLin**	**14.80**	**72**	⇑P	**P**	**10 04 33.9**	**+0.9**
GOMU	**GeErMu**	**14.82**	**360**	P	**Pn**	**10 04 28.1**	**-2.9**
GOMU				pP	P	10 04 29.8	-3.7
GOMU				pmax	pmax		
	comp=E,3.0nm,0.4s						
LGTI	**Lohaghat**	**15.45**	**304**	*e*P	**Pn**	**10 04 39.2**	**+0.6**
JHNI	**Jhansi**	**15.51**	**289**	*e*P	**Pn**	**10 04 37.6**	**-1.8**
PTH	**Pithoragarh**	**15.52**	**305**	*e*P	**Pn**	**10 04 39.4**	**-0.3**
HYBB	**Hyderabad (bro**	**15.84**	**259**	*e*P	**P**	**10 04 46.3**	**+1.7**
HYBB				*e*S	**Sn**	**10 07 41.1**	**+1.3**
ENH	**Enshi**	**15.91**	**53**		**Pn**	**10 04 43.9**	**-0.4**
BHPL	**Bhopal**	**16.22**	**280**	*e*P	**P**	**10 04 48.8**	**-0.1**
BHPL				*i* x	x	10 04 51.1	
LZH	**Lanzhou**	**16.68**	**26**	⇑P	**P**	**10 04 54.9**	**+1.0**
LZH				S	**Sn**	**10 07 58.7**	**-1.1**
LZH				pmax	pmax		
	comp=E,50nm,1.1s						
LZH				pmax	pmax		
	comp=E,370nm,4.6s						
KULM	**Kulim**	**16.91**	**160**		**P**	**10 04 55.0**	**-1.4**
SONA	**Sohna**	**17.52**	**297**	*e*P	**Pn**	**10 05 05.3**	**+1.5**
DDI	**Dehra Dun**	**17.54**	**304**	*e*x	x	10 05 11.0	
XAN	**Xi'an**	**17.75**	**42**	P	**P**	**10 05 05.7**	**+0.1**
XAN				sP	sP	10 05 44.2	-2.0
XAN				S	**S**	**10 08 23.2**	**+0.1**
XAN				pmax	pmax		
	comp=E,39nm,0.6s						
XAN				LR	LR		
	comp=E,430nm,7.1s						
XAN				LR	LR		
	comp=E,610nm,7.0s						
XAN				LR	LR		
	comp=E,320nm,9.3s						
CNSH	**ChangSha**	**17.79**	**64**	⇑P	**P**	**10 05 06.1**	**+0.2**
CNSH				pmax	pmax		
	comp=E,130nm,0.8s						
IPM	**Ipoh**	**17.80**	**159**	P	**P**	**10 05 04.7**	**-1.4**
KCSI	**Kotacane, Aceh**	**17.93**	**170**	P	**P**	**10 05 06.6**	**-1.0**
	comp=E,1μmcomp=E,66nm,1.1s						
KUDL	**Kundal**	**17.98**	**296**	*e*P	**Pn**	**10 05 09.5**	**+0.1**
TSI	**Tuntungan**	**18.09**	**168**	P	**Pn**	**10 05 10.8**	**+0.1**
	comp=E,287nm,0.9s						
GTA	**Gaotai**	**18.52**	**12**	*e*P	**Pn**	**10 05 15.0**	**-0.8**
SMLA	**Simla**	**18.59**	**305**	*e*P	**Pn**	**10 05 16.6**	**+0.1**
SMLA				IAmb	IAmb	10 05 18.8	
	comp=Z,144nm,0.8s						

PSI Prapat 18.84 167 P **P** **10 05 18.1 +0.4**
RPSI Rantau Prapat 18.95 167 P **P** **10 05 18.1 -0.6**
AJM Ajmer 19.15 289 *i* P **Pn** **10 05 23.1 -0.1**
BHK Bhakra 19.29 305 *e*P **Pn** **10 05 24.7 -0.1**
PALK Pallekele 19.54 226 P **P** **10 05 25.8 +0.6**
comp=Z,22nm,0.9s,baz=157,slow=9.2,SNR=4.9
PALK S **S** **10 08 53.5 -5.2**
comp=Z,5.4nm,0.3s,baz=62,slow=22,SNR=4.6
PALK LR LR 10 12 46.4
comp=Z,240nm,22.0s,baz=159,slow=36
WHN Wuhan 19.78 58 ⇑P **P** **10 05 28.7 +1.1**
GSI Gunungsitoli 20.08 172 P **P** **10 05 28.6 -2.4**
GSI Gunungsitoli 20.08 172 P **P** **10 05 28.6 -2.4**
comp=Z,14μmcomp=Z,40nm,0.7s
THN Thein Dam 20.29 307 *e*P **P** **10 05 34.7 +1.7**
LYN LuoYang 20.36 46 ⇑P **P** **10 05 33.8 0.0**
LYN PP **PnPn** **10 06 02.6 +3.3**
LYN sP sP 10 06 16.4 +1.5
LYN S **S** **10 09 07.2 -7.5**
LYN pmax pmax
comp=Z,70nm,1.0s
LYN pmax pmax
comp=Z,320nm,6.2s
LYN LR LR
comp=Z,450nm,5.8s
LYN LR LR
comp=Z,410nm,5.8s
LYN LR LR
comp=Z,380nm,13.0s
PCHI Peechi 20.74 242 *e*P Pn 10 05 41.8 -0.1
PCHI *e*S **S** **10 09 22.5 +0.1**
JMU Jammu 21.03 307 *ex* x 10 05 46.4
TIY Taiyuan 22.32 39 *e*P **P** **10 05 54.4 -0.2**
TIY S **S** **10 09 40.1 -10**
TIY pmax pmax
comp=Z,26nm,0.5s
TIY pmax pmax
comp=Z,220nm,3.8s
CHCP Chirah Chowk 22.68 307 P **P** **10 05 58.9 +0.8**
NIL Nilore 22.69 307 P **P** **10 05 59.3 +1.2**
NIL Nilore 22.69 307 P **P** **10 05 59.3 +1.2**
NIL pmax pmax
comp=Z,177nm,0.8s
BTO Baotou 23.15 30 *e*P **P** **10 06 02.6 +0.1**
BTO S **S** **10 10 07.0 +3.2**
BTO LR LR
comp=Z,810nm,10.2s
BTO LR LR
comp=Z,630nm,11.8s
WMQ Urumqi 23.20 347 ⇓P **P** **10 06 05.5 +2.6**
WMQ pP pP 10 06 30.2 +1.3
WMQ PP **PnPn** **10 06 36.9 -0.5**
WMQ S **S** **10 10 07.0 +2.5**
WMQ pmax pmax
comp=Z,66nm,0.9s
WMQ pmax pmax
comp=Z,320nm,4.3s
THW Thamme Wali 23.46 304 P **P** **10 06 06.3 +0.9**
HNS HongShan 23.51 43 ⇑P **P** **10 06 06.1 +0.4**
HNS pmax pmax
comp=Z,41nm,0.9s
CEP Cherat 23.77 306 P **P** **10 06 08.9 +0.7**
NJ2 Nanjing 23.92 58 ⇓P **P** **10 06 09.9 +0.5**
NJ2 pP **pP** **10 06 34.1 -2.5**
NJ2 pmax pmax
comp=Z,57nm,0.8s
TPUB Ta-pu 23.94 80 P **P** **10 06 09.8 0.0**
HHC Hu-ho-hao-te 24.09 32 *e*P **P** **10 06 12.3 +1.3**
HHC S **S** **10 10 19.8 +0.9**
HHC pmax pmax
comp=Z,27nm,0.7s
HHC pmax pmax
comp=Z,330nm,6.2s
KSH Kashi 24.27 323 P **P** **10 06 14.3 +1.6**
KSH PcP **PcP** **10 09 52.1 +2.8**
KSH S **S** **10 10 22.4 +0.6**
KSH sS sS 10 11 07.3 -4.3
KSH pmax pmax
comp=Z,73nm,0.6s
TIA Tai'an 24.45 48 ⇑P **P** **10 06 14.1 -0.1**
TIA pmax pmax
comp=Z,60nm,0.7s
YULB Yu-li 24.55 80 P **P** **10 06 15.8 +0.5**
NACB Ninganchiao 24.83 78 P **P** **10 06 18.6 +0.8**
NACB IAmb IAmb 10 06 20.9
comp=Z,77nm,0.9s
SHLS Shalkode 25.27 333*c* *i*P **P** **10 06 22.1 +0.4**
SHLS *i* *PP **pP** **10 06 47.3 -3.1**
SHLS pmax pmax
comp=Z,17nm,0.7s
SHLS Shalkode 25.27 333⇑ *i*P **P** **10 06 22.1 +0.4**
comp=Z,17nm,0.7s,baz=333
SHLS *i* pP **pP** **10 06 47.3 -3.1**
baz=333
PDGK Podgornoye 25.40 333 P **P** **10 06 23.5 +0.6**
UZB Uzynbulak 25.45 332*c* *i*P **P** **10 06 24.9 +1.5**
UZB *e*S **S** **10 10 43.9 +3.3**
UZB Uzynbulak 25.45 332⇑ *i*P **P** **10 06 24.1 +0.7**
baz=332
UZB *e*S **S** **10 10 43.9 +3.3**
baz=332
NRN Naryn 25.59 326 IAmb IAmb 10 07 06.9
comp=Z,42nm,0.9s
SATY Saty 25.65 331*c* *i*P **P** **10 06 27.0 +1.8**
SATY pmax pmax
comp=Z,25nm,0.9s
SATY Saty 25.65 331⇑ *i*P **P** **10 06 27.1 +1.8**
comp=Z,25nm,0.9s,baz=331
BJT Baijiatuau 26.04 40 P **P** **10 06 28.7 +0.2**
BJT Baijiatuau 26.04 40 P **P** **10 06 28.7 +0.2**
BJT pmax pmax
comp=Z,23nm,0.9s
BJI Beijing 26.05 40 P **P** **10 06 29.4 +0.7**
BJI S **S** **10 10 51.0 +1.2**
BJI pmax pmax
comp=Z,35nm,0.9s
BJI pmax pmax
comp=Z,230nm,6.4s
KBL Kabul 26.22 306 P **P** **10 06 31.7 +1.2**
KBL IAmb IAmb 10 07 05.6
comp=Z,52nm,0.8s
KBL Kabul 26.22 306 P **P** **10 06 31.7 +1.2**
KBL pmax pmax
comp=Z,52nm,0.9s
KBL Kabul 26.22 306 P **P** **10 06 32.4 +1.8**
SNR=9.4
MDOK Medeo 26.35 330 *i* P **P** **10 06 33.8 +2.3**
MDOK *e*S **S** **10 10 56.5 +1.7**
MDOK Medeo 26.35 330 *i* P **P** **10 06 33.8 +2.3**
baz=330
MDOK *e*S **S** **10 10 56.5 +1.7**
baz=330
AAA Alma-Ata 26.45 330 *e*P **P** **10 06 34.2 +1.9**
AAA *e*S **S** **10 10 59.7 +3.5**
AAA pmax pmax
comp=Z,21nm,0.4s
AAA Alma-Ata 26.45 330 *e*P **P** **10 06 34.2 +1.9**
comp=Z,21nm,0.4s,baz=330
AAA *e*S **S** **10 10 59.8 +3.5**
baz=330
DRK Karamyk 26.74 318 IAmb IAmb 10 06 37.5
comp=Z,46nm,0.8s
TKM2 Tokmak 2 26.88 328 P **P** **10 06 38.2 +1.9**
SNR=10
TKM2 Tokmak 2 26.88 328 *i* P **P** **10 06 37.6 +1.3**
TKM2 pmax pmax
comp=Z,52nm,1.1s
CHKK Chushkaly 26.91 331 *e*P **P** **10 06 36.9 +0.5**
CHKK Chushkaly 26.91 331 *e*P **P** **10 06 36.1 -0.3**
baz=331
KBK Karagaybulak 27.01 326 P **P** **10 06 39.9 +2.4**
SNR=9.7
AAK Ala-Archa 27.23 326 P **P** **10 06 40.3 +0.8**
comp=Z,13nm,0.6s,baz=141,slow=6.8,SNR=16
AAK PcP **PcP** **10 09 57.8 +1.8**
comp=Z,11nm,0.7s,baz=242,slow=2.6,SNR=3.9
comp=Z,13nm,0.6s
AAK Ala-Archa 27.23 326 P **P** **10 06 41.9 +2.5**
SNR=6.8
AAK Ala-Archa 27.23 326 P **P** **10 06 41.1 +1.6**
AAK **pP** **10 07 03.9 -4.2**
AAK IAmb IAmb 10 07 34.4
comp=Z,40nm,1.1s
AAK Ala-Archa 27.23 326*c* *i*P **P** **10 06 41.3 +1.9**
AAK pmax pmax
comp=Z,16nm,0.7s
KUU Kurty 27.24 330 *e*P **P** **10 06 39.9 +0.6**
KUU pmax pmax
comp=Z,54nm,2.3s
KUU Kurty 27.24 330 *e*P **P** **10 06 40.0 +0.6**
comp=Z,54nm,2.3s,baz=330
ZSN Zaisan 27.28 345 *e*P **P** **10 06 41.1 +1.5**
ZSN *e*S **S** **10 11 10.3 +1.3**
ZSN Zaisan 27.28 345 *e*P **P** **10 06 41.1 +1.5**
baz=345
ZSN *e*S **S** **10 11 10.4 +1.3**
baz=345
AML Almayashu 27.31 324 P **P** **10 06 42.4 +2.0**
SNR=12
MK31 Makanchi Array 27.37 341 *i* P **P** **10 06 41.3 +0.8**
MK31 pmax pmax
comp=Z,18nm,0.7s
MAKZ Makanchi 27.48 341 P **P** **10 06 42.1 +0.7**
MAKZ IAmb IAmb 10 07 24.8
comp=Z,39nm,1.1s
MAKZ PcP **PcP** **10 09 57.1 +0.7**
MAKZ Makanchi 27.48 341 P **P** **10 06 42.2 +0.8**
EKS2 Erkin-Say 27.63 325 P **P** **10 06 45.6 +2.7**
SNR=18
USP Ospenovka 27.68 327 P **P** **10 06 44.7 +1.5**
SNR=10
SGDS Sogindy 27.75 327*c* *i*P **P** **10 06 45.2 +1.3**
SGDS *e*S **S** **10 11 17.6 +1.0**
SGDS Sogindy 27.75 327⇑ *i*P **P** **10 06 45.2 +1.3**
baz=327
SGDS *e*S **S** **10 11 17.6 +1.0**
baz=327
CHGR Chuyangaron 28.01 314 P **P** **10 06 47.2 +0.9**
CHGR pP **pP** **10 07 15.5 +0.4**
CHGR Chuyangaron 28.01 314 P **P** **10 06 47.2 +0.9**
CHGR *PP **pP** **10 07 15.5 +0.4**
CHGR pmax pmax
comp=Z,90nm,0.8s
SONM Songino Array 28.04 17 P **P** **10 06 47.0 +0.5**
comp=Z,2.8nm,0.4s,baz=198,slow=9.2,SNR=16
SONM PcP **PcP** **10 09 58.4 +0.5**
comp=Z,2.2nm,0.7s,baz=213,slow=4.6,SNR=4.4
SONM ScP **ScP** **10 13 26.3 -0.2**
comp=Z,3.0nm,0.9s,baz=192,slow=2.8,SNR=8.3
comp=Z,2.8nm,0.4s
SONM Songino Array 28.04 17 P **P** **10 06 46.2 -0.3**
ULN Ulaanbaatar 28.25 18 P **P** **10 06 48.0 -0.4**
ULN Ulaanbaatar 28.25 18*ce*P **P** **10 06 48.4 0.0**
ULN pmax pmax
comp=Z,9.0nm,1.7s
XLT XiLinHaoTe 28.60 33⇑ *i*P **P** **10 06 51.8 +0.3**
XLT pP pP 10 07 18.7 -1.5
XLT pmax pmax
comp=Z,17nm,0.8s
XLT pmax pmax
comp=Z,120nm,5.4s
DL2 Dalian 28.90 47 P **P** **10 06 54.4 +0.4**
DL2 pmax pmax
comp=Z,32nm,0.7s
BTLS Baital 29.19 329*c* *i*P **P** **10 06 57.7 +1.1**
BTLS *i* *PP **pP** **10 07 25.5 0.0**
BTLS Baital 29.19 329⇑ *i*P **P** **10 06 57.7 +1.1**
baz=329
BTLS *i* pP **pP** **10 07 25.5 0.0**
baz=329
KNGR Kungurtug, Tuv 29.29 3 *i* P **P** **10 06 59.3 +1.7**
KNGR pmax pmax
comp=Z,17nm,0.8s
IUG luzhnay 29.41 321*c* *i*P **P** **10 07 00.4 +1.7**
IUG *e*S **S** **10 11 43.8 +1.0**
IUG luzhnay 29.41 321⇑ *i*P **P** **10 07 00.4 +1.7**
baz=320
IUG *e*S **S** **10 11 43.9 +1.0**
baz=320
KK31 Karatay Array 29.72 323 *i* P **P** **10 07 02.0 +0.7**
KKAR Karatay Array 29.72 323 P **P** **10 07 02.2 +0.9**
KKAR Karatay Array 29.72 323 P **P** **10 07 02.2 +0.9**
ZAK Zakamensk 29.75 11 *e*P **P** **10 07 02.0 +0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
ZAK pmax pmax
comp=Z,7.0nm,0.9s
JOW Kunigami 30.96 73 P **P** **10 07 12.9 +0.4**
SEM Semipalatinsk 31.21 342 *e*P **P** **10 07 14.6 0.0**
SEM *e*S **S** **10 12 08.2 -2.8**
SEM Semipalatinsk 31.21 342 *e*P **P** **10 07 14.7 0.0**
baz=342
SEM *e*S **S** **10 12 08.3 -2.8**
baz=342
NAWB Namwon 31.74 57 IAmb IAmb 10 07 19.6
comp=Z,28nm,1.0s
INCN Inchon 31.85 53 P **P** **10 07 18.9 -1.2**
INCN IAmb IAmb 10 07 20.0
comp=Z,39nm,0.7s
INCN Inchon 31.85 53 P **P** **10 07 18.9 -1.2**
INCN pmax pmax
comp=Z,39nm,0.7s
INCN Inchon 31.85 53 P **P** **10 07 19.0 -1.2**
KURBB Kurchatov Arra 31.92 340 P **P** **10 07 21.6 +1.0**
comp=Z,29nm,0.6s,baz=153,slow=8.2,SNR=95
KURBB PcP **PcP** **10 10 08.6 +0.9**
comp=Z,34nm,0.6s,baz=164,slow=2.4,SNR=46
comp=Z,29nm,0.6s
KURK Kurchatov 31.98 340 P **P** **10 07 22.0 +1.0**
KURK IAmb IAmb 10 07 22.9
comp=Z,40nm,0.9s
KURK Kurchatov 31.98 340 P **P** **10 07 22.0 +1.0**
KURK pmax pmax
comp=Z,40nm,0.9s
KURK Kurchatov 31.98 340 P **P** **10 07 22.0 +1.0**
TJN Taejon 32.02 55*ce*P **P** **10 07 20.5 -1.1**
TJN Taejon 32.02 55 P **P** **10 07 21.6 0.0**
KSAR Wonju Array Be 32.77 53 P **P** **10 07 27.1 -1.0**
KSAR Wonju Array Be 32.77 53 P **P** **10 07 27.1 -1.0**
KSRS Korea Array 32.80 53 P **P** **10 07 27.1 -1.3**
comp=Z,7.3nm,0.5s,baz=240,slow=8.5,SNR=43
KSRS PcP **PcP** **10 10 09.9 -0.4**
comp=Z,1.0nm,0.6s,baz=256,slow=2.1,SNR=4.2
KSRS ScP **ScP** **10 13 41.0 -1.0**
comp=Z,1.0nm,0.8s,baz=243,slow=4.1,SNR=6.0
comp=Z,7.3nm,0.5s
JLN Jalan Bani Buh 32.87 278 P **P** **10 07 32.0 +2.8**
SNR=8.8
JTU Tsushima 33.08 59 IAmb IAmb 10 07 32.1
comp=Z,22nm,0.9s
WBK Wadi Bani Khal 33.23 279 P **P** **10 07 34.7 +2.3**
SEHB SEOHWA 33.33 52 IAmb IAmb 10 07 34.5
comp=Z,33nm,0.8s
JSU Suzuyama 33.35 65 IAmb IAmb 10 07 34.9
comp=Z,46nm,0.8s
ZALV Zalesovo Beam 33.45 349 P **P** **10 07 35.0 +1.2**
comp=Z,61nm,0.5s,baz=169,slow=9.0,SNR=271
ZALV PcP **PcP** **10 10 11.3 -0.5**
comp=Z,5.5nm,0.7s,baz=173,slow=3.1,SNR=3.6
ZALV S **S** **10 12 43.2 -2.0**
comp=Z,4.9nm,0.7s,baz=162,slow=12,SNR=8.5
comp=Z,61nm,0.5s
ZALV Zalesovo Beam 33.45 349 P **P** **10 07 34.9 +1.1**
ZALV Zalesovo Beam 33.45 349 *i* P **P** **10 07 35.0 +1.2**
ZALV pmax pmax
comp=Z,62nm,0.5s
WSAR Wadi Sarin 33.50 280 LR LR 10 21 50.6
comp=Z,90nm,21.7s,baz=131,slow=37
WSAR Wadi Sarin 33.50 280 P **P** **10 07 37.5 +2.8**
BRZS Berezniki 33.53 334*c* *i*P **P** **10 07 35.8 +1.2**
BRZS *e*S **S** **10 12 45.0 -1.6**
BRZS pmax pmax
comp=Z,14nm,0.8s
BRZS Berezniki 33.53 334⇑ *i*P **P** **10 07 35.9 +1.2**
comp=Z,14nm,0.8s,baz=334
BRZS *e*S **S** **10 12 45.0 -1.6**
baz=334
BIDO Bidbid 33.94 281 P **P** **10 07 41.1 +2.6**
SMDO Samad 34.05 280 P **P** **10 07 42.1 +2.6**
SNR=11
JMDO Jabal Madar 34.05 279 P **P** **10 07 42.2 +2.7**
HIA Hailar 34.19 29*c* *i*P **P** **10 07 40.6 +0.2**
HIA pmax pmax
comp=Z,13nm,0.8s
MHTO MHTO 34.33 276 P **P** **10 07 44.0 +2.2**
HOQ Hoqain 34.69 281 P **P** **10 07 47.3 +2.4**
SNR=6.1
BSY Bisya 34.85 279 P **P** **10 07 49.3 +2.9**
SOHO SOHO 35.36 282 P **P** **10 07 53.1 +2.4**
ARQ Araqi 35.43 281 P **P** **10 07 53.7 +2.4**
BANOM Banah 35.51 285 P **P** **10 07 52.9 +0.9**
UOSS Minazif 35.62 283 P **P** **10 07 53.8 +0.9**
SHME Shamm 35.65 285 P **P** **10 07 55.2 +2.0**
GEYT Alibeck 35.67 306 P **P** **10 07 56.0 +2.8**
comp=Z,5.2nm,0.4s,baz=152,slow=9.6,SNR=11
GEYT PcP **PcP** **10 10 20.2 +1.5**
comp=Z,15nm,0.5s,baz=114,slow=3.6,SNR=9.9
GEYT ScP **ScP** **10 13 53.4 +1.0**
comp=Z,11nm,0.8s,baz=220,slow=5.8,SNR=7.7
comp=Z,5.2nm,0.4s
GEYT Alibeck 35.67 306 P **P** **10 07 55.8 +2.6**
GEYT IAmb IAmb 10 07 56.8
comp=Z,31nm,1.2s
GEYT PcP **PcP** **10 10 19.2 +0.5**
GYA0B ALIBECK ARRAY 35.67 306 P **P** **10 07 54.8 +1.5**
HATD Hatta, Dubai 35.69 283 P **P** **10 07 56.2 +2.7**
KAPI Kappang 35.81 134 PcP **PcP** **10 10 19.5 +0.1**
comp=Z,4.6nm,0.4s,baz=130,slow=13,SNR=4.3
KAPI LR LR 10 26 15.9
comp=Z,43nm,18.4s,baz=299,slow=42
BNX BinXian 36.06 40 ⇑P **P** **10 07 56.0 -0.4**
BNX pmax pmax
comp=Z,20nm,0.7s
BNX pmax pmax
comp=Z,62nm,4.5s
JHS Saijyo 36.17 60 IAmb IAmb 10 07 59.1
comp=Z,31nm,0.9s
JMN Monobe 36.55 62 IAmb IAmb 10 08 03.4
comp=Z,52nm,1.0s
BVA0 Borovoye Array 36.79 335 *i* P **P** **10 08 02.8 +0.4**
BRVK Borovoye 36.85 335 P **P** **10 08 01.8 -1.2**
BRVK IAmb IAmb 10 08 04.6
comp=Z,40nm,1.6s
BRVK PcP **PcP** **10 10 22.0 +0.1**
BRVK Borovoye 36.85 335*ce*P **P** **10 08 03.4 +0.4**
BRVK pmax pmax
comp=Z,5.0nm,0.5s
MDJ Mudanjiang 36.86 43 P **P** **10 08 02.7 -0.4**
MDJ pmax pmax
comp=Z,17nm,1.2s
MDJ pmax pmax
comp=Z,110nm,4.9s
VLA Vladivostok 37.71 46*c* *i*P **P** **10 08 10.2 -0.2**
VLA pmax pmax
comp=Z,39nm,0.9s
USRK Ussuriysk Ar. 38.22 45 P **P** **10 08 14.3 -0.3**
comp=Z,6.2nm,0.5s,baz=261,slow=6.1,SNR=15
USRK ScP **S** **10 13 59.9 +1.6**
comp=Z,0.6nm,0.5s,baz=224,slow=5.6,SNR=4.1
comp=Z,6.2nm,0.5s
USRK Ussuriysk Ar. 38.22 45 P **P** **10 08 13.6 -1.0**
AB31 Akbulak array 39.26 324 *i* P **P** **10 08 24.5 +1.3**
ABKAR Akbulak array 39.26 324 P **P** **10 08 24.6 +1.4**
ABKAR Akbulak array 39.26 324 IAmb IAmb 10 08 25.5
comp=Z,52nm,0.7s
INU Inuyama 39.38 60 P **P** **10 08 23.7 -0.7**
INU Inuyama 39.38 60 P **P** **10 08 24.7 +0.3**
INU Inuyama 39.38 60 P **P** **10 08 23.9 -0.5**
INU pP **pP** **10 08 52.1 -2.0**
INU sP **sP** **10 09 04.0 -5.3**
JGF Kuroka 39.69 60 IAmb IAmb 10 08 27.8
comp=Z,18nm,0.7s
KLR Kul'dur 40.38 37*c* *i*P **P** **10 08 32.2 -0.3**
KLR pmax pmax
comp=Z,7.0nm,0.9s
SMRA Abu-Samra 40.51 283 P **P** **10 08 35.5 +1.6**
MAJO Matsushiro 40.52 58 P **P** **10 08 33.2 -0.7**
MAJO IAmb IAmb 10 08 34.7
comp=Z,32nm,1.1s
MAJO Matsushiro 40.52 58 *i* P **P** **10 08 33.0 -0.9**
MAJO pmax pmax
comp=Z,29nm,1.1s
MAJO Matsushiro 40.52 58 P **P** **10 08 34.8 +0.9**
MAJO Matsushiro 40.52 58 P **P** **10 08 32.8 -1.1**
MJAR Matsushiro Arr 40.53 58 P **P** **10 08 33.3 -0.6**
comp=Z,11nm,0.8s,baz=262,slow=8.5,SNR=34
MJAR ScP **ScP** **10 14 10.2 -0.7**
comp=Z,3.6nm,0.9s,baz=241,slow=2.8,SNR=9.1
comp=Z,11nm,0.8s
AKTO Aktyubinsk 40.95 324 P **P** **10 08 37.8 +0.7**
SVE Sverdlovsk 43.45 333*de*P **P** **10 08 57.8 +0.5**
SVE *e*S **S** **10 15 15.5 +0.1**
SVE pmax pmax
comp=Z,79nm,0.6s
ARU Arti 44.09 332 P **P** **10 09 02.3 -0.1**
ARU Arti 44.09 332*ce*P **P** **10 09 02.8 +0.4**
ARU pmax pmax
comp=Z,32nm,0.6s
ERM Erimo 45.33 52 P **P** **10 09 12.2 -0.2**
ERM IAmb IAmb 10 09 13.6
comp=Z,29nm,0.8s
ERM Erimo 45.33 52*ce*P **P** **10 09 12.6 +0.2**
ERM pmax pmax
comp=Z,41nm,1.0s
ERM Erimo 45.33 52 P **P** **10 09 12.7 +0.3**
RAYN Ar Rayn 45.47 282 P **P** **10 09 14.7 +0.8**
RAYN IAmb IAmb 10 09 47.8
comp=Z,51nm,1.1s
RAYN Ar Rayn 45.47 282 P **P** **10 09 14.7 +0.8**
RAYN pmax pmax
comp=Z,51nm,1.1s
RAYN Ar Rayn 45.47 282 P **P** **10 09 15.1 +1.1**
GROC Groznyy 46.08 310 *e*P **P** **10 09 18.4 0.0**
GROC *e*PP **pP** **10 09 50.0 +1.0**
GROC *e*SP **sP** **10 10 05.1 +1.0**
GROC *e*S **S** **10 15 53.6 -0.2**
GROC *e*SS **sS** **10 16 47.9 +1.2**
GROC pmax pmax
comp=Z,26nm,0.4s
YSS Yuzh-Sakhalins 46.26 45 P **P** **10 09 19.9 +0.3**
YSS IAmb IAmb 10 09 20.9
comp=Z,30nm,1.0s
YSS Yuzh-Sakhalins 46.26 45 *e*P **P** **10 09 19.5 -0.1**
YSS *e* 10 09 47.7
YSS pmax pmax
comp=Z,100nm,4.0s
YSS pmax pmax
comp=Z,30nm,1.0s
GNI Garni 46.31 306*c* *i*P **P** **10 09 22.7 +2.3**
GNI pmax pmax
comp=Z,21nm,0.9s
YAK Yakutsk 47.19 22 LR LR 10 32 55.6
comp=Z,66nm,18.5s,baz=246,slow=40
YAK Yakutsk 47.19 22 *e*P **P** **10 09 26.0 -0.6**
YAK *e**PP **pP** **10 09 55.2 -2.1**
YAK *e* 10 10 56.3
YAK *e* 10 11 15.9
YAK *e*PPP PPP 10 12 06.0
YAK *e*S **S** **10 16 09.3 +0.4**
YAK *e* 10 19 07.2
YAK pmax pmax
comp=Z,12nm,0.6s
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.7s
YAK pmax pmax
comp=Z,56nm,2.7s
YAK pmax pmax
comp=N,22nm,3.2s
YAK pmax pmax
comp=E,31nm,2.8s
YAK smax smax
comp=E,48nm,1.3s
YAK smax smax
comp=N,20nm,1.4s
ZEI Tsey 47.37 309 *e*P **P** **10 09 27.4 -1.2**
ZEI pmax pmax
comp=Z,87nm,1.3s
BELG Belogornoye 47.63 323*c* *i*P **P** **10 09 29.9 -0.3**
BELG pmax pmax
comp=Z,11nm,0.7s
ONI Oni 47.66 309 IAmb IAmb 10 09 39.5
comp=Z,22nm,0.7s
NCK Nalchik 47.71 310 *i* P **P** **10 09 32.0 +0.9**
NCK pmax pmax
comp=Z,17nm,0.8s
PYA1 Pyatigorsk 48.18 311 *i* P **P** **10 09 34.7 +0.1**
KBZ Khabaz 48.26 310 P **P** **10 09 36.4 +1.2**
comp=Z,7.8nm,0.8s,baz=135,slow=8.2,SNR=19
comp=Z,7.8nm,0.8s
KBZ Khabaz 48.26 310*ce*P **P** **10 09 36.5 +1.3**
KBZ pmax pmax
comp=Z,13nm,1.1s
KIV Kislovodsk 48.45 310 ⇑P **P** **10 09 37.3 +0.5**
KIV Kislovodsk 48.45 310 P **P** **10 09 37.8 +1.0**

KIV IAmb IAmb 10 09 39.3
comp=Z,49nm,0.8s
KIV Kislovodsk 48.45 310 *e*P **P 10 09 38.1 +1.3**
KIV *e*S **S 10 16 30.6 +3.1**
KIV pmax pmax
comp=Z,65nm,1.0s
KIV Kislovodsk 48.45 310 P **P 10 09 38.9 +2.1**
KIV Kislovodsk 48.45 310 P **P 10 09 37.5 +0.7**
KIV pP **pP 10 10 09.8 +2.1**
MBWA Marble Bar 48.73 148 P **P 10 09 37.7 -1.3**
MBWA IAmb IAmb 10 09 39.6
comp=Z,29nm,0.8s
MBWA Marble Bar 48.73 148 P **P 10 09 39.6 +0.6**
BCA Borcka 48.84 307 ⇑P **P 10 09 40.6 +0.9**
PSA00 Pilbara Seismi 49.14 149 P **P 10 09 41.4 -0.8**
KIRV Kirov 49.40 331*ce*P **P 10 09 44.2 +0.6**
FITZ Fitzroy Crossi 49.46 140 P **P 10 09 44.4 -0.2**
FITZ PcP **PcP 10 11 04.0 -0.8**
comp=Z,5.4nm,0.7s,baz=290,slow=3.5,SNR=3.1
FITZ Fitzroy Crossi 49.46 140 P **P 10 09 43.2 -1.5**
FITZ Fitzroy Crossi 49.46 140 P **P 10 09 44.2 -0.4**
KNRA Kununurra 49.61 135 IAmb IAmb 10 09 45.9
comp=Z,27nm,0.7s
SOC Sochi 50.51 309*c i*P **P 10 09 51.3 -1.0**
SOC *e**PP **pP 10 10 21.8 -1.7**
SOC *e**SP **sP 10 10 40.1 +1.7**
SOC *e* 10 11 48.7
SOC *e*PPP PPP 10 12 49.5
SOC *e*S **S 10 16 56.7 +0.6**
SOC *e**SS **sS 10 17 50.1 +0.3**
SOC *e*SS **SS 10 20 32.0 +0.4**
SOC pmax pmax
comp=Z,27nm,0.5s
ATD Arta Tunnel 50.61 268 LR LR 10 31 05.2
comp=Z,34nm,18.9s,baz=352,slow=35
VRH Novokhopyorsk 50.72 319 *e*P **P 10 09 53.2 -0.5**
VRH *e* 10 11 09.0
VRH pmax pmax
comp=Z,70nm,0.8s
VSR Storozhevoye 52.27 319 *e*P **P 10 10 04.3 -1.0**
VSR *e* 10 11 14.9
VSR pmax pmax
comp=Z,60nm,1.8s
VORR Voronezh 52.36 320 *e*P **P 10 10 06.1 +0.2**
VORR pmax pmax
comp=Z,70nm,0.4s
PRGR Permogore 52.51 333 *e*P **P 10 10 06.1 -0.8**
PRGR *e*S **S 10 17 20.6 -2.3**
PRGR pmax pmax
comp=Z,98nm,0.9s
LPSR Galich'ya Gora 52.75 321 *e*P **P 10 10 07.9 -0.9**
LPSR *e* 10 11 16.7
LPSR pmax pmax
comp=Z,60nm,0.6s
MMAI Mount Meron Ar 53.52 296 LR LR 10 39 00.5
comp=Z,71nm,18.7s,baz=247,slow=42
DIKM Dikmen 53.61 307 ⇑P **P 10 10 15.2 -0.1**
TIXI Tiksi 54.01 13 LR LR 10 35 38.2
comp=Z,63nm,18.8s,baz=183,slow=38
TIXI Tiksi 54.01 13 P **P 10 10 17.3 -0.4**
TIXI IAmb IAmb 10 10 18.0
comp=Z,40nm,1.3s
TIXI Tiksi 54.01 13*ce*P **P 10 10 17.0 -0.6**
TIXI pmax pmax
comp=Z,41nm,1.7s
MORW Morawa 54.12 157 P **P 10 10 19.4 +0.4**
MOS Moscow 54.28 324 *e*P **P 10 10 17.8 -2.1**
MOS *e**PP **pP 10 10 51.3 -0.2**
MOS *e* 10 11 18.6
MOS *e*S **S 10 17 47.4 +0.4**
MOS *e**SS **sS 10 18 45.9 +4.1**
MOS pmax pmax
comp=Z,51nm,0.7s
BZK Bozkurt 54.56 307 ⇑P **P 10 10 22.2 +0.1**
OBN Obninsk 54.71 323 *e*P **P 10 10 22.9 -0.1**
OBN *e* 10 11 24.7
OBN pmax pmax
comp=Z,42nm,1.3s
MA2 Magadan 54.76 31 P **P 10 10 22.8 -0.5**
MA2 IAmb IAmb 10 10 23.8
comp=Z,27nm,0.8s
MA2 Magadan 54.76 31*ce*P **P 10 10 22.4 -0.9**
MA2 pmax pmax
comp=Z,26nm,0.7s
BR131 Keskin Array S 54.78 304 IAmb IAmb 10 10 25.5
comp=Z,18nm,0.9s
BR131 Keskin Array S 54.78 304*c i*P **P 10 10 24.2 +0.1**
BR131 Keskin Array S 54.78 304 P **P 10 10 24.6 +0.6**
BRTR Keskin Array B 54.78 304 P **P 10 10 24.4 +0.4**
comp=Z,8.4nm,0.8s,baz=110,slow=5.4,SNR=30
BRTR PcP **PcP 10 11 25.1 +0.2**
comp=Z,4.1nm,0.6s,baz=134,slow=3.6,SNR=4.9
comp=Z,8.4nm,0.8s
BRTR Keskin Array B 54.78 304 P **P 10 10 24.1 +0.1**
KLMR Klimovskoe 54.90 331 *e*P **P 10 10 23.1 -1.1**
KLMR *e* 10 11 24.1
KLMR *e* 10 12 26.3
KLMR pmax pmax
comp=Z,19nm,0.6s
KLMR Klimovskoe 54.90 331 *e*P **P 10 10 23.1 -1.1**
KLMR AMP 10 10 24.7
comp=Z,19nm,0.6s
KLMR *e*PcP **PcP 10 11 24.2 -0.4**
KLMR *e*PP **PP 10 12 26.4 -2.0**
CSS Mathiatis 55.13 298 IAmb IAmb 10 10 32.1
comp=Z,21nm,0.7s
ANTO Ankara 55.44 304 ⇑P **P 10 10 29.4 +0.7**
ANTO Ankara 55.44 304 P **P 10 10 29.3 +0.7**
ANTO Ankara 55.44 304 P **P 10 10 29.3 +0.7**
ANTO pmax pmax
comp=Z,44nm,1.0s
ANTO Ankara 55.44 304 P **P 10 10 29.3 +0.7**
BLDU Ballidu 55.76 157 P **P 10 10 30.7 -0.1**
WB0 Warramunga Arr 56.26 134 IAmb IAmb 10 10 34.8
comp=Z,29nm,1.1s
WRA Warramunga Arr 56.35 134 P **P 10 10 34.4 -0.8**
comp=Z,14nm,0.8s,baz=320,slow=7.6,SNR=167
WRA PcP **PcP 10 11 30.2 -0.7**
comp=Z,4.8nm,0.6s,baz=326,slow=3.7,SNR=14
comp=Z,14nm,0.8s
WRA Warramunga Arr 56.35 134 P **P 10 10 33.9 -1.3**
WRA Warramunga Arr 56.35 134 *i* P **P 10 10 34.4 -0.8**
WRA pmax pmax
comp=Z,15nm,0.8s
WRAB Tennant Creek 56.35 134 P **P 10 10 34.5 -0.7**
WRAB IAmb IAmb 10 10 35.6
comp=Z,26nm,1.0s
WRAB Tennant Creek 56.35 134*ce*P **P 10 10 34.9 -0.3**
WRAB pmax pmax
comp=Z,23nm,0.8s
WRAB Tennant Creek 56.35 134 P **P 10 10 34.8 -0.4**
WRAB Tennant Creek 56.35 134 P **P 10 10 34.7 -0.5**
WB2 Warramunga Arr 56.36 134 IAmb IAmb 10 10 35.6
comp=Z,26nm,0.9s
WRKA Warakurna 56.40 143 P **P 10 10 35.6 +0.1**
KDZE Karadeniz Ereo 56.47 306 ⇑P **P 10 10 35.0 -0.8**
WR0 Warramunga Arr 56.50 134 IAmb IAmb 10 10 36.1
comp=Z,16nm,0.8s
SEY Seymchan 56.61 28*ce*P **P 10 10 35.8 -0.6**
SEY pmax pmax
comp=Z,8.0nm,0.8s
MUN Mundaring 56.82 158 P **P 10 10 38.3 0.0**
PEA0B Petropavlovsk- 56.99 40*ce*P **P 10 10 37.3 -2.0**
PETK Petropavlovsk- 56.99 40 P **P 10 10 38.2 -1.1**
comp=Z,3.4nm,0.9s,baz=243,slow=1.7,SNR=10
comp=Z,3.4nm,0.9s
PETK Petropavlovsk- 56.99 40 P **P 10 10 38.4 -0.9**
PETK Petropavlovsk- 56.99 40 P **P 10 10 38.4 -0.9**
KLBR Kellerberrin 57.02 157 P **P 10 10 39.6 -0.2**
PET Petropavlovsk 57.55 40 P **P 10 10 41.6 -1.5**
PET IAmb IAmb 10 10 43.5
comp=Z,15nm,1.0s
PET Petropavlovsk 57.55 40 *e*P **P 10 10 42.6 -0.6**
PET pmax pmax
comp=Z,22nm,0.9s
PURM Purcari 57.72 312 ⇑P **P 10 10 45.5 +1.0**
NWAO Narrogin (SRO) 58.04 158 P **P 10 10 46.4 -0.5**
NWAO Narrogin (SRO) 58.04 158 P **P 10 10 46.4 -0.5**
NWAO pmax pmax
comp=Z,38nm,0.7s
NWAO Narrogin (SRO) 58.04 158 P **P 10 10 46.6 -0.2**
AKAS Kas 58.08 300 IAmb IAmb 10 10 46.7
comp=Z,38nm,1.1s
AKASG Malin Array Be 58.40 317 P **P 10 10 48.6 -0.7**
comp=Z,7.7nm,0.4s,baz=80,slow=6.8,SNR=95
AKASG S **S 10 18 39.0 -2.6**
comp=Z,4.1nm,0.9s,baz=108,slow=20,SNR=7.5
AKASG LR LR 10 39 21.2
comp=Z,75nm,21.4s,baz=61,slow=39
comp=Z,7.7nm,0.4s
AKASG Malin Array Be 58.40 317 P **P 10 10 48.6 -0.7**
AKASG Malin Array Be 58.40 317 *i* P **P 10 10 48.5 -0.7**
AKASG pmax pmax
comp=Z,13nm,0.4s
AKBB Malin Array Si 58.40 317*ce*P **P 10 10 46.4 -2.8**
TLCR 58.42 311 ⇑P **P 10 10 50.1 +0.7**
TLCR 58.42 311 P **P 10 10 50.1 +0.7**
MILM Milestii Mici 58.46 313 *i* P **P 10 10 49.0 -0.7**
comp=Z,70nm,0.7s
MILM Milestii Mici 58.46 313 ⇑P **P 10 10 50.0 +0.3**
MILM Milestii Mici 58.46 313*c i*P **P 10 10 49.0 -0.7**
MILM pmax pmax
comp=Z,70nm,0.7s
TPGR Topolog 58.70 310 ⇑P **P 10 10 51.7 +0.3**
TIRR Tirgusor 58.70 310 ⇑P **P 10 10 52.3 +0.9**
TIRR Tirgusor 58.70 310 P **P 10 10 52.2 +0.9**
ASAR Alice Springs 58.71 137 P **P 10 10 51.5 -0.3**
comp=Z,11nm,0.7s,baz=317,slow=6.9,SNR=148
ASAR PcP **PcP 10 11 40.0 -0.3**
comp=Z,7.4nm,0.7s,baz=321,slow=3.9,SNR=16
ASAR PKPPKP P'P'df 10 40 37.6 +12
comp=Z,4.9nm,0.9s,baz=134,slow=3.0,SNR=9.2
comp=Z,11nm,0.7s
ASAR Alice Springs 58.71 137 P **P 10 10 51.3 -0.4**
ASAR pP **pP 10 11 27.6 +4.0**
SORM Soroca 58.82 314 ⇑P **P 10 10 51.3 -0.9**
SORM Soroca 58.82 314 P **P 10 10 51.2 -0.9**
CFR Carcaliu 58.90 311 ⇑P **P 10 10 52.9 +0.2**
CFR Carcaliu 58.90 311 P **P 10 10 52.9 +0.2**
COEN Coen 59.01 122 P **P 10 10 54.0 +0.1**
HARR Harsova 59.05 310 ⇑P **P 10 10 54.1 +0.3**
HARR Harsova 59.05 310 P **P 10 10 54.0 +0.3**
ICOR Ion Corvin 59.14 309 ⇑P **P 10 10 55.3 +0.9**
LVZ Lovozero 59.33 338 P **P 10 10 55.3 -0.1**
LVZ Lovozero 59.33 338*ce*P **P 10 10 54.7 -0.7**
LVZ pmax pmax
comp=Z,41nm,1.3s
LVZ Lovozero 59.33 338 P **P 10 10 55.2 -0.1**
LVZ sP **PcP 10 11 41.6 -0.4**
GHRR 59.42 312 ⇑P **P 10 10 56.9 +0.6**
MNK Minsk 59.56 322 *i* P **P 10 10 57.8 +0.7**
MNK *i**PP **pP 10 11 28.8 -0.4**
MNK *i* 10 11 43.2
MNK *i**SP **PcP 10 11 43.3 +0.2**
MNK *i* 10 13 11.0
MNK *i* PPP PPP 10 14 33.8
MNK *i*S **S 10 18 58.9 +2.6**
MNK *i*SS **SS 10 22 48.9 -4.7**
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=Z,40nm,0.9s
MNK MLR MLR
comp=E,11nm,20.0s
MNK MLR MLR
comp=Z,84nm,20.0s
MNK Minsk 59.56 322 *i* P **P 10 10 57.8 +0.7**
comp=E,5.0nm,0.9s
MNK *i* P **P 10 10 57.8 +0.7**
MNK *i* P **P 10 10 57.8 +0.7**
comp=Z,40nm,0.9s,baz=95
MNK *i* pP **pP 10 11 28.8 -0.4**
MNK *i* sP **PcP 10 11 43.4 +0.2**
MNK *i* PP **PP 10 13 11.0 +1.2**
MNK *i* PPP PPP 10 14 33.9
MNK *i*S **S 10 18 59.0 +2.6**
MNK *i*SS **SS 10 22 49.0 -4.7**
MNK *i* SSS SSS 10 25 23.1
MNK *i* LR LR 10 34 37.4
MNK *i* LRM MLR 10 39 27.1
comp=E,11nm,20.3s
MNK *i* LRM MLR 10 39 27.1
comp=Z,84nm,20.3s
APA Apatity 59.66 337 ⇑ *i*P **P 10 10 56.6 -1.0**
APA *i* 10 11 30.5
APA pmax pmax
comp=Z,26nm,0.7s
VRI Vrincioaia 59.89 311 ⇓P **P 10 11 00.7 +1.1**
VRI Vrincioaia 59.89 311 P **P 10 11 00.7 +1.1**
TESR Tescani 59.95 312 ⇑P **P 10 10 59.8 -0.1**
PLOR Plostina 59.95 311 ⇑P **P 10 11 01.4 +1.3**
PLOR Plostina 59.95 311 P **P 10 11 01.3 +1.3**
ISR Istrita 60.03 311 ⇑P **P 10 11 01.7 +1.1**
ISR Istrita 60.03 311 P **P 10 11 01.7 +1.1**
KARP Karpathos 60.12 300 P **P 10 11 02.0 +0.7**
NACGM Naroch 60.23 322 *i* P **P 10 11 01.9 +0.2**
baz=96
COVR Voineasa-Covas 60.26 311 ⇑P **P 10 11 02.8 +0.7**
KIBK Kibwezi 60.29 254 P **P 10 11 02.3 -0.5**
KIBK IAmb IAmb 10 11 05.3
comp=Z,43nm,1.9s
BIZ Bicaz 60.32 313 ⇑P **P 10 11 03.2 +0.7**
LODK Lodwar 60.38 262 P **P 10 11 04.2 +0.7**
LODK IAmb IAmb 10 11 05.5
comp=Z,14nm,0.9s
QIS Mount Isa 60.40 131 P **P 10 11 03.4 +0.1**
MLR Muntele Rosu 60.45 311 ⇑P **P 10 11 04.7 +1.2**
MLR Muntele Rosu 60.45 311 P **P 10 11 04.7 +1.2**
KMBO Kilima Mbogo 60.48 256 P **P 10 11 05.0 +0.6**
comp=Z,5.1nm,0.6s,baz=49,slow=12,SNR=14
comp=Z,5.1nm,0.6s
KMBO Kilima Mbogo 60.48 256 P **P 10 11 04.2 -0.2**
OZUR 60.55 312 ⇑P **P 10 11 04.0 -0.1**
ALN Alexandroupoli 60.55 306 IAmb IAmb 10 11 05.6
comp=Z,26nm,0.8s
IIGN Ignalina 60.59 322 *e*P **P 10 11 04.5 +0.4**
VSU Vasula 60.63 326 *i* P **P 10 11 04.3 0.0**
ISAL Salakas 60.66 323 *e*P **P 10 11 05.3 +0.7**
DOPR Dopca 60.83 312 ⇑P **P 10 11 06.3 +0.3**
FORT Forrest 60.85 147 P **P 10 11 06.4 +0.2**
BURAR Bucovina Array 60.92 313 ⇑P **P 10 11 07.2 +0.4**
BURAR Bucovina Array 60.92 313 P **P 10 11 07.1 +0.4**
BURAR IAmb IAmb 10 11 07.8
comp=Z,24nm,0.6s
BURAR Bucovina Array 60.92 313 P **P 10 11 07.1 +0.4**
RDO Rodhopi 60.92 306 IAmb IAmb 10 11 08.2
comp=Z,33nm,1.1s
BUR08 Bucovina Ar. S 60.93 314 P **P 10 11 06.8 0.0**
BUR08 IAmb IAmb 10 11 08.0
comp=Z,15nm,0.7s
VOIR 61.08 311 ⇑P **P 10 11 07.7 0.0**
VOIR 61.08 311 P **P 10 11 07.7 0.0**
FIA1 FINESS Array S 61.35 329 IAmb IAmb 10 11 10.0
comp=Z,26nm,0.9s
FINES FINESS Array B 61.35 329 P **P 10 11 09.1 0.0**
comp=Z,18nm,0.6s,baz=100,slow=5.9,SNR=90
FINES PcP **PcP 10 11 50.7 +0.5**
comp=Z,6.4nm,0.8s,baz=57,slow=5.1,SNR=4.8
FINES LR LR 10 39 30.5
comp=Z,62nm,19.0s,baz=61,slow=38
comp=Z,18nm,0.6s
ARR Arges 61.37 311 ⇓P **P 10 11 10.0 +0.3**
SANT Santorini 61.41 301 P **P 10 11 09.1 -0.9**
ABPO Ambohimpanom 61.47 233 P **P 10 11 11.4 +0.6**
ABPO IAmb IAmb 10 11 12.3
comp=Z,17nm,1.1s
ABPO Ambohimpanom 61.47 233 P **P 10 11 11.4 +0.6**
ABPO pmax pmax
comp=Z,17nm,1.1s
LVV L'vov 61.70 316 *e*P **P 10 11 11.8 +0.1**
LVV MLR MLR
comp=Z,200nm,18.0s
PABE Paberze 61.88 322 P **P 10 11 13.2 +0.4**
PABE Paberze 61.88 322 *e*P **P 10 11 13.2 +0.4**
IDI Anoyia 61.99 299 ⇑P **P 10 11 14.0 -0.1**
IDI Anoyia 61.99 299 LR LR 10 42 49.8
comp=Z,30nm,21.7s,baz=68,slow=40
IDI Anoyia 61.99 299 IAmb IAmb 10 11 15.4
comp=Z,26nm,0.8s
MEF Metsahovi 62.02 328 *e*P **P 10 11 14.0 +0.4**
CJR Cluj-Napoca 62.05 312 ⇑P **P 10 11 15.2 +1.0**
CJR Cluj-Napoca 62.05 312 P **P 10 11 15.2 +1.0**
MTSE Matsula 62.18 326 *e*P **P 10 11 14.9 +0.2**
KEV Kevo 62.52 339 P **P 10 11 17.3 +0.5**
KEV IAmb IAmb 10 11 18.3
comp=Z,44nm,1.1s
KEV Kevo 62.52 339 P **P 10 11 17.3 +0.5**
KEV pmax pmax
comp=Z,44nm,1.1s
KWP Kalwaria Pacla 62.56 316 *e*P **P 10 11 18.0 +0.5**
KWP Kalwaria Pacla 62.56 316 P **P 10 11 17.7 +0.2**
DRGR 62.65 313 P **P 10 11 19.2 +1.0**
OOD Oodnadatta 62.81 139 P **P 10 11 19.3 0.0**
UZH Uzhgorod 62.86 315 ⇑ *i*P **P 10 11 20.0 +0.5**
KOLS Kolonicke sedl 62.86 315 *e*P **P 10 11 19.8 +0.3**
KOLS pmax pmax
comp=Z,11nm,0.6s
KOLS Kolonicke sedl 62.86 315 *e*P **P 10 11 19.8 +0.3**
DJES Djerdap 62.90 310 ⇑P **P 10 11 21.0 +1.2**
ARA0 ARCESS Array S 62.98 338 *e*P **P 10 11 20.3 +0.4**
ARCES ARCESS Array B 62.98 338 P **P 10 11 20.4 +0.5**
comp=Z,15nm,0.5s,baz=85,slow=7.6,SNR=189
ARCES PcP **PcP 10 11 56.9 +0.2**
comp=Z,15nm,0.6s,baz=86,slow=4.0,SNR=12
ARCES LR LR 10 39 58.4
comp=Z,69nm,19.0s,baz=339,slow=37
comp=Z,15nm,0.5s
ARCES ARCESS Array B 62.98 338 P **P 10 11 20.5 +0.6**
ARCES **PcP 10 11 56.6 -0.1**
VAY Valandovo 63.14 306 *i* P **P 10 11 21.2 -0.2**
RAF Rauma 63.38 329 *e*P **P 10 11 22.7 0.0**
CRVS Cervenica-Dubn 63.40 315 *e*P **P 10 11 24.1 +1.0**
CRVS pmax pmax
comp=Z,37nm,0.8s
CRVS Cervenica-Dubn 63.40 315 *e*P **P 10 11 24.1 +1.0**
SIRR Siria 63.40 312 ⇑P **P 10 11 24.2 +1.1**
BILL Bilibino 63.47 23 *e*P **P 10 11 22.5 -0.6**
BILL *e**PP **pP 10 11 54.9 -0.5**
BILL *e* 10 11 58.9
BILL *e**SP **sP 10 12 09.4 -0.7**
BILL *e*PPP PPP 10 15 16.3
BILL pmax pmax
comp=Z,6.0nm,0.6s
BILL MLR MLR
comp=Z,53nm,18.0s
BZS Buzias 63.48 311 ⇑P **P 10 11 23.9 +0.3**
BZS Buzias 63.48 311 P **P 10 11 23.9 +0.3**
BOVS Bovan 63.57 309 ⇑P **P 10 11 23.9 -0.4**
AGG Agios Georgios 63.57 304 IAmb IAmb 10 11 24.2
comp=Z,29nm,0.9s
VOI Vohitsoka 63.59 230 P **P 10 11 25.0 +0.3**
VOI IAmb IAmb 10 11 25.8
comp=Z,29nm,0.9s
VOI **pP 10 11 57.2 0.0**
VOI Vohitsoka 63.59 230 P **P 10 11 25.1 +0.4**
VOI Vohitsoka 63.59 230 P **P 10 11 25.1 +0.4**
MULG Mulgathing 63.69 142 P **P 10 11 25.1 0.0**
BEL Belsk 63.73 318 *i* P **P 10 11 25.6 +0.5**
BEL Belsk 63.73 318 P **P 10 11 26.0 +0.9**
HAMF Hammerfest 63.81 339 *e*P **P 10 11 25.8 +0.5**
HAMF IAmb IAmb 10 11 26.5
comp=Z,69nm,1.0s
SKO Skopje 63.92 307 *i* P **P 10 11 26.3 -0.3**
NIE Niedzica 64.14 316 *e*P **P 10 11 29.1 +1.2**
NIE Niedzica 64.14 316 P **P 10 11 28.8 +0.9**
PSZ Piszkesteto 64.50 314 ⇑P **P 10 11 30.7 +0.4**
PSZ Piszkesteto 64.50 314 P **P 10 11 30.7 +0.4**
PSZ Piszkesteto 64.50 314 P **P 10 11 30.3 0.0**
LANS Liptovska Anna 64.70 315 *e*P **P 10 11 32.5 +0.9**
LANS pmax pmax
comp=Z,6.0nm,0.7s
LANS Liptovska Anna 64.70 315 *e*P **P 10 11 32.5 +0.9**
HOPEN Hopen 64.72 346 *e*P **P 10 11 31.9 +0.7**
HOPEN IAmb IAmb 10 11 32.7
comp=Z,54nm,0.9s
JETT Jettan, Norway 64.75 338 *e*P **P 10 11 32.1 +0.5**
JETT IAmb IAmb 10 11 33.3
comp=Z,26nm,0.6s
CTAO Charters Tower 64.98 126 P **P 10 11 33.6 0.0**
CTAO IAmb IAmb 10 11 34.8
comp=Z,18nm,0.9s
CTAO Charters Tower 64.98 126 P **P 10 11 33.7 0.0**
CTAO pmax pmax
comp=Z,18nm,0.9s
VYHS Vyhne 65.16 315 *e*P **P 10 11 34.7 +0.2**
VYHS pmax pmax
comp=Z,10.0nm,0.7s
VYHS Vyhne 65.16 315 *e*P **P 10 11 34.7 +0.2**
SALU Saltoluokta 65.25 336 *e*P **P 10 11 35.0 +0.2**
TRO Tromso 65.28 338 *e*P **P 10 11 34.8 -0.1**
TRO IAmb IAmb 10 11 35.0
comp=Z,36nm,0.5s
PDG Podgorica 65.48 308 IAmb IAmb 10 11 37.3
comp=Z,21nm,0.9s
SRO2 Moca 65.52 314 *e*P **P 10 11 36.6 -0.2**
SRO2 pmax pmax
comp=Z,43nm,0.6s
SRO2 Moca 65.52 314 *e*P **P 10 11 36.6 -0.2**
SRO Srobarova 65.57 314 *e*P **P 10 11 38.2 +1.1**
SRO pmax pmax
comp=Z,30nm,1.0s
SRO Srobarova 65.57 314 *e*P **P 10 11 38.2 +1.1**
BJO1 Bjornoya 65.82 343 *e*P **P 10 11 38.4 +0.2**
KOVH Kovagotottos 65.88 312 P **P 10 11 39.1 -0.2**
JAVC Velka Javorina 65.90 315 *e*P **P 10 11 40.3 +1.0**
MORC Moravsky Berou 65.90 316 ⇑P **P 10 11 39.7 +0.4**
MORC Moravsky Berou 65.90 316 P **P 10 11 39.7 +0.4**
MORC Moravsky Berou 65.90 316 *e*P **P 10 11 39.6 +0.3**
INKA Innaminka 65.95 136 P **P 10 11 40.5 +0.7**
A252A Venje 66.13 311 *i* P **P 10 11 41.1 +0.2**
MPLH Magyarpolny 66.15 313 P **P 10 11 41.0 +0.1**
MBAR Mbarara 66.20 259 P **P 10 11 42.7 +0.8**
MBAR **pP 10 12 15.4 +0.8**
MBAR Mbarara 66.20 259 *i* P **P 10 11 41.7 -0.3**
MBAR pmax pmax
comp=Z,11nm,0.9s
MODS Modra-Piesok 66.20 315 *e*P **P 10 11 40.6 -0.7**
MODS Modra-Piesok 66.20 315 *e*P **P 10 11 40.6 -0.7**
LCRK Leigh Creek 66.25 140 P **P 10 11 41.8 +0.2**
ZST Bratislava 66.34 314 *e*P **P 10 11 42.4 +0.3**
ZST pmax pmax
comp=Z,32nm,0.8s
ZST Bratislava 66.34 314 *e*P **P 10 11 42.4 +0.3**
KRLC Kraliky 66.36 317 *e*P **P 10 11 42.5 +0.2**
KRLC Kraliky 66.36 317 *e*P **P 10 11 42.5 +0.2**
BLEU Blekinge 66.47 323 *i* P **P 10 11 42.6 -0.1**
FAUS Fauske 66.49 335 *e*P **P 10 11 42.5 -0.2**
FAUS IAmb IAmb 10 11 43.1
comp=Z,59nm,1.1s
STEI Steigen 66.52 336 *e*P **P 10 11 42.8 0.0**
STEI IAmb IAmb 10 11 44.1
comp=Z,14nm,0.9s
VRAC Vranov 66.56 316 *e*P **P 10 11 44.1 +0.6**
KSP Ksiaz 66.60 317 *e*P **P 10 11 44.4 +0.7**
KSP Ksiaz 66.60 317 P **P 10 11 44.2 +0.5**
DPC Dobruska-Polom 66.63 317 *e*P **P 10 11 44.2 +0.2**
DPC Dobruska-Polom 66.63 317 *e*P **P 10 11 44.2 +0.2**
OSTC Ostas 66.68 317 *e*P **P 10 11 44.8 +0.6**
KRUC Moravsky 66.72 315 *e*P **P 10 11 44.7 +0.2**
BEHE Becsehely 66.75 313 P **P 10 11 46.0 +1.3**
SOP Sopron 66.76 314 P **P 10 11 47.0 +2.3**
SOP Sopron 66.76 314 P **P 10 11 45.0 +0.2**
UPC Upice 66.81 317 *e*P **P 10 11 45.8 +0.7**
UPC Upice 66.81 317 *e*P **P 10 11 45.8 +0.7**
MOR8 Moi Rana 66.82 334 *e*P **P 10 11 44.0 -0.8**
MOR8 IAmb IAmb 10 11 44.3
comp=Z,45nm,0.6s
MOSL Moslavina 66.87 312 *i* P **P 10 11 45.3 -0.2**
SPB2 Spitsbergen Ar 66.90 347 IAmb IAmb 10 11 46.5
comp=Z,33nm,0.8s
SPA0 Spitsbergen Ar 66.90 347 *e*P **P 10 11 45.6 +0.4**
SPITS Spitsbergen Ar 66.90 347 P **P 10 11 45.0 -0.2**
comp=Z,24nm,0.6s,baz=38,slow=13,SNR=6.2
comp=Z,24nm,0.6s
SPITS Spitsbergen Ar 66.90 347 P **P 10 11 45.9 +0.7**
SPITS pmax pmax
comp=Z,80nm,1.2s
RONA Rosalia, Austr 66.93 314 *e*P **P 10 11 46.0 0.0**
comp=Z,6.3nm,0.6s
HSPB Hornsund (broa 66.96 346 *e*P **P 10 11 46.1 +0.7**
HSPB Hornsund (broa 66.96 346 *e*P **P 10 11 46.2 +0.7**
HSPB IAmb IAmb 10 11 46.8
comp=Z,41nm,0.7s
KALN Kalnik 67.02 312 *i* P **P 10 11 46.6 +0.1**
BSD Bornholm Skovb 67.06 322 *e*P **P 10 11 45.6 -0.9**
LOF Lofoten 67.16 336 *e*P **P 10 11 46.4 -0.5**
LOF IAmb IAmb 10 11 47.5
comp=Z,134nm,1.3s
LSTV Lastovo 67.16 309 *i* P **P 10 11 46.4 -0.9**
CONA Conrad Observa 67.20 314 *e*P **P 10 11 47.8 +0.2**
comp=Z,13nm,0.8s,SNR=11

LOBO **Lobor** 67.28 312 *i* P P 10 11 48.0 -0.1
TREC **Trest** 67.28 316 *e*P P 10 11 48.6 +0.5
TREC **Trest** 67.28 316 *e*P P 10 11 48.6 +0.5
KIJV **Kijevo** 67.34 310 *i* P P 10 11 47.7 -0.8
KONS **Konsvik** 67.35 335 *e*P P 10 11 48.0 -0.1
HFS **Hagfors** 67.36 328 LR LR 10 43 24.5
comp=Z,82nm,18.0s,baz=94,slow=38
PTJ **Puntijarka** 67.38 312 P P 10 11 49.0 +0.1
ARSA **Arzberg** 67.51 314 *e*P P 10 11 49.7 +0.1
comp=Z,9.5nm,0.7s,SNR=6.5
DEL **Delary** 67.54 324 *i* P P 10 11 49.0 -0.5
GCIS **Gornji Cirnik** 67.62 312 *i* P P 10 11 50.8 +0.5
GROS **Grobnik** 67.63 313 *i* P P 10 11 50.5 +0.2
PRU **Pruhonice** 67.81 317 *e*P P 10 11 52.0 +0.7
PRU **Pruhonice** 67.81 317 *e*P P 10 11 52.0 +0.7
KBS **Kingsbay** 67.85 348 P P 10 11 51.5 +0.4
KBS IAmb IAmb 10 11 52.0
comp=Z,25nm,0.7s
KBS **Kingsbay** 67.85 348 *ce*P P 10 11 51.0 -0.1
KBS pmax pmax
comp=Z,17nm,0.8s
KBS **Kingsbay** 67.85 348 *e*P P 10 11 51.4 +0.3
KBS IAmb IAmb 10 11 51.9
comp=Z,25nm,0.7s
MORI **Morici** 67.86 310 *i* P P 10 11 51.1 -0.6
NSS **Namsos** 67.91 332 *e*P P 10 11 51.2 -0.4
NSS IAmb IAmb 10 11 52.5
comp=Z,16nm,0.7s
SOKA **Soboth** 67.92 313 *e*P P 10 11 52.5 +0.3
comp=Z,10nm,0.5s,SNR=8.7
ZIRJ **Zirje** 67.93 310 *i* P P 10 11 51.6 -0.6
PDKS **Podkum** 68.03 312 *i* P P 10 11 53.5 +0.7
BORU **Boraas** 68.03 325 *e*P P 10 11 42.1 -10
BRG **Berggiesshubel** 68.08 318⇑ *i*P P 10 11 53.7 +0.7
BRG Amp 10 11 54.5
comp=Z,27nm,0.7s
BRG *ex* x 10 12 19.3
BRG Amp 10 12 20.2
comp=Z,6.2nm,0.7s
BRG **Berggiesshubel** 68.08 318⇑ *i*P P 10 11 53.7 +0.7
BRG *e* 10 12 19.2
BRG pmax pmax
comp=Z,27nm,0.7s
BRG pmax pmax
comp=Z,6.0nm,0.7s
CKRC **Cesky Krumlov** 68.11 315 *e*P P 10 11 53.7 +0.4
FABU **Falkenberg** 68.12 324 *e*P P 10 11 53.4 +0.3
MOA **Molln** 68.27 314 *e*P P 10 11 54.4 +0.1
comp=Z,27nm,0.5s,SNR=14
OBKA **Obir** 68.27 313 *i* P P 10 11 54.8 +0.4
comp=Z,16nm,0.8s
DUGI **Dugi Otok** 68.30 310 *i* P P 10 11 54.4 -0.1
NC602 **NORSAR Array S** 68.38 328 *e*P P 10 11 54.4 -0.3
NC602 IAmb IAmb 10 11 55.0
comp=Z,30nm,0.7s
NORES **NORESS Array B** 68.38 328 P P 10 11 54.2 -0.5
NORES pmax pmax
comp=Z,5.0nm,0.6s
NC303 **NORSAR Array S** 68.42 329 IAmb IAmb 10 11 55.7
comp=Z,36nm,0.7s
GEC2 **GERESS Array S** 68.50 315 IAmb IAmb 10 11 57.2
comp=Z,34nm,0.7s
GERES **GERESS Array B** 68.50 315 P P 10 11 55.8 0.0
comp=Z,24nm,0.6s,baz=79,slow=6.2,SNR=170
comp=Z,24nm,0.6s
GERES **GERESS Array B** 68.50 315 P P 10 11 55.5 -0.4
NB2 **NORSAR Subarra** 68.51 329 P P 10 11 54.8 -0.8
comp=Z,21nm,0.6s,baz=85,slow=6.5
NB2 **NORSAR Subarra** 68.51 329 P P 10 11 51.5 -4.1
NB2 pmax pmax
comp=Z,3.0nm,0.6s
NB2 **NORSAR Subarra** 68.51 329 P P 10 11 54.8 -0.8
baz=85,slow=6.5
NOA **NORSAR Array B** 68.51 329 P P 10 11 55.1 -0.4
comp=Z,19nm,0.6s,baz=85,slow=6.2,SNR=106
NOA LR LR 10 44 20.9
comp=Z,43nm,20.4s,baz=85,slow=38
comp=Z,19nm,0.6s
KHC **Kasperske Hory** 68.54 316 *e*P P 10 11 56.2 +0.2
KHC **Kasperske Hory** 68.54 316 *e*P P 10 11 56.2 +0.2
KHC *ex* x 10 12 08.9
CLL **Collm** 68.61 318 IAmb IAmb 10 11 57.5
comp=Z,39nm,1.5s
CLL **Collm** 68.61 318 *i* P P 10 11 56.4 +0.1
CLL *e**PP pP 10 12 30.0 +0.8
CLL pmax pmax
comp=Z,19nm,1.1s
CLL **Collm** 68.61 318 *i* P P 10 11 56.4 +0.1
comp=Z,19nm,1.1s
CLL *e*pP pP 10 12 30.0 +0.8
CLL *e*(sP) sP 10 12 47.0 +3.2
CEL **Celeste** 68.67 304 IAmb IAmb 10 11 58.5
comp=Z,45nm,0.9s
BIOA **Bad Ischl, Aus** 68.71 314 *e*P P 10 11 57.2 +0.1
comp=Z,17nm,0.8s
TBLU **Trondheim** 68.75 331 *e*P P 10 11 55.8 -1.1
OSL **Oslo** 68.86 328 *e*P P 10 11 57.9 +0.2
OSL IAmb IAmb 10 11 58.6
comp=Z,70nm,0.8s
MYKA **Terra Mystica** 68.87 313 *i* P P 10 11 57.9 -0.2
comp=Z,3.5nm,0.5s
PRED **Cave del Predi** 68.95 313 IAmb IAmb 10 11 59.4
comp=Z,22nm,0.7s
KBA **Koelnbreinsper** 69.00 314 *i* P P 10 11 58.7 -0.3
comp=Z,9.9nm,0.5s,SNR=9.0
NKC **Novy Kostel** 69.11 317 *e*P P 10 11 59.6 +0.1
NKC **Novy Kostel** 69.11 317 *e*P P 10 11 59.6 +0.1
STKA **Stephens Creek** 69.31 139 P P 10 11 59.9 -0.9
comp=Z,7.2nm,0.6s,baz=324,slow=7.3,SNR=17
comp=Z,7.2nm,0.6s
STKA **Stephens Creek** 69.31 139 P P 10 12 00.6 -0.2
STKA **Stephens Creek** 69.31 139 P P 10 12 00.6 -0.2
STKA pmax pmax
comp=Z,3.0nm,0.9s
DOMB **Dombas** 69.43 330 *e*P P 10 12 01.1 -0.1
DOMB IAmb IAmb 10 12 01.7
comp=Z,38nm,0.8s
KONO **Kongsberg** 69.46 327 *ce*P P 10 11 59.7 -1.7
KONO pmax pmax
comp=Z,20nm,1.7s
KONO **Kongsberg** 69.46 327 *e*P P 10 12 01.4 +0.1
KONO IAmb IAmb 10 12 01.6
comp=Z,11nm,0.7s
ABTA **Abfaltersbach** 69.62 313 *e*P P 10 12 01.9 -0.9
comp=Z,11nm,0.7s,SNR=6.4
CIMO **Cimolais** 69.75 313 IAmb IAmb 10 12 04.0
comp=Z,28nm,0.7s
SKAR **Skarslia** 69.97 328 *e*P P 10 12 05.3 +0.8
SKAR IAmb IAmb 10 12 05.9
comp=Z,18nm,0.8s
RAFF **Raffo Rosso** 70.06 303 IAmb IAmb 10 12 07.7
comp=Z,42nm,1.0s
MOL **Molde** 70.06 331 *e*P P 10 12 04.7 -0.3
MOL IAmb IAmb 10 12 05.2
comp=Z,43nm,0.8s
WTTA **Wattenberg** 70.12 314 *i* P P 10 12 05.4 -0.5
comp=Z,19nm,0.4s,SNR=15
MUD **Monsted U'grnd** 70.13 324 *e*P P 10 12 06.7 +1.2
WATA **Walderalm** 70.15 314 *i* P P 10 12 05.3 -0.7
comp=Z,9.7nm,0.5s,SNR=11
AMKA **Amchitka** 70.24 42 P P 10 12 05.3 -1.0
CTI **Castel Tesino** 70.33 313 IAmb IAmb 10 12 07.8
comp=Z,21nm,0.6s
AKN **Aaknes** 70.37 330 *e*P P 10 12 06.5 -0.4
SQTA **Sankt Quirin** 70.42 314 *e*P P 10 12 07.1 -0.5
comp=Z,39nm,0.5s,SNR=17
TEOL **Teolo** 70.44 312 IAmb IAmb 10 12 08.7
comp=Z,27nm,0.7s
MOTA **Moosalm** 70.46 314 *i* P P 10 12 07.3 -0.7
comp=Z,29nm,0.6s,SNR=18
RETA **Reute** 70.67 314 *e*P P 10 12 08.9 -0.2
comp=Z,26nm,0.5s,SNR=28
FETA **Feichten** 70.78 314 *i* P P 10 12 09.6 -0.2
SNR=21
SNART **Snartemo** 70.88 326 *e*P P 10 12 10.4 +0.4
ODD1 **Odda** 70.91 328 *e*P P 10 12 10.7 +0.5
BLS5 **Blasjo** 71.08 327 *e*P P 10 12 11.7 +0.4
OSSC **Osservatorio P** 71.10 310 IAmb IAmb 10 12 12.8
comp=Z,17nm,0.8s
ZCCA **Zocca** 71.12 311 IAmb IAmb 10 12 18.2
comp=Z,33nm,0.8s
FUORN **Ofenpass-Fuorn** 71.17 314 IAmb IAmb 10 12 14.6
comp=Z,19nm,0.6s
DAVA **Damuels** 71.29 314 *i* P P 10 12 12.7 -0.3
comp=Z,43nm,0.9s,SNR=18

EIDS **Eidsvold** 71.67 128 P P 10 12 15.2 0.0
NOR **Nord** 72.10 352⇑ *i*P P 10 12 16.5 -0.5
NOR IAmb IAmb 10 12 17.7
comp=Z,40nm,1.2s
BFO **Black Forest** 72.11 316 P P 10 12 17.3 -0.3
BFO **Black Forest** 72.11 316 P P 10 12 17.3 -0.3
BFO pmax pmax
comp=Z,10.0nm,0.9s
MSSA **Maissana** 72.16 311 P P 10 12 17.8 -0.3
MSSA IAmb IAmb 10 12 18.3
comp=Z,19nm,0.6s
KIWB **Kanaga Island** 72.32 41 P P 10 12 16.9 -1.9
GAMB **Gambell** 72.61 28 P P 10 12 19.9 -0.4
baz=283
CDF **Champ du Feu** 72.77 316 *e*P P 10 12 20.9 -0.8
CDF pmax pmax
comp=Z,16nm,0.7s
PGF **Pioggiola** 72.92 310 *e*P P 10 12 22.2 -0.5
PGF pmax pmax
comp=Z,18nm,0.6s
BTNL **Ternell** 73.02 318 *d*P P 10 12 23.5 +0.5
MEM **Memach** 73.09 318 *d*P P 10 12 23.7 +0.4
BHOU **Houvegnez** 73.15 318 *d*P P 10 12 24.5 +0.7
HINF **Hinteralfeld** 73.18 315 *e*P P 10 12 23.2 -0.9
HINF pmax pmax
comp=Z,17nm,1.2s
WLF **Walferdange** 73.21 317 IAmb IAmb 10 12 26.4
comp=Z,56nm,1.0s
WLF **Walferdange** 73.21 317 *d*P P 10 12 25.1 +1.0
comp=Z,34nm,1.0s
SENIN **Lac Senin/Sane** 73.22 314 IAmb IAmb 10 12 26.3
comp=Z,30nm,0.7s
HAU **Haudompre** 73.47 316 *e*P P 10 12 25.0 -0.7
HAU pmax pmax
comp=Z,17nm,0.8s
BCLA **Clavier** 73.57 318 *d*P P 10 12 26.8 +0.6
RCHB **Rochefort** 73.68 318 *d*P P 10 12 27.2 +0.3
comp=Z,9.6nm,0.8s
SBF **Sospel** 73.72 311 *e*P P 10 12 26.6 -0.7
SBF pmax pmax
comp=Z,28nm,0.8s
TNA **Tin City** 73.75 25 P P 10 12 26.7 -0.2
baz=285
LPG **La Plagne** 73.80 313 *e*P P 10 12 27.7 -0.3
LPG pmax pmax
comp=Z,30nm,0.7s
LPL **La Plagne** 73.81 313 *e*P P 10 12 27.7 -0.3
LPL pmax pmax
comp=Z,37nm,0.5s
BMRD **Maredsous** 73.93 318 *d*P P 10 12 28.7 +0.4
comp=Z,9.6nm,0.6s
GIVF **Givet** 73.94 318 *e*P P 10 12 28.1 -0.3
GIVF pmax pmax
comp=Z,18nm,0.9s
MBDF **Montbardon** 73.97 312 *e*P P 10 12 27.5 -1.4
MBDF pmax pmax
comp=Z,10.0nm,0.6s
CABF **La Chapelle** 73.98 314 *e*P P 10 12 29.2 +0.4
CABF pmax pmax
comp=Z,25nm,0.8s
DOU **Dourbes** 74.09 318 *d*P P 10 12 29.8 +0.6
SNF **Seneffe** 74.18 318 *d*P P 10 12 30.3 +0.6
BAIF **Baives** 74.34 318 *e*P P 10 12 30.5 -0.2
BAIF pmax pmax
comp=Z,33nm,1.1s
KEST **Kesra** 74.34 303 P P 10 12 31.9 +0.9
comp=Z,19nm,1.0s,baz=355,slow=1.5,SNR=15
comp=Z,19nm,1.0s
KEST **Kesra** 74.34 303 IAmb IAmb 10 12 32.9
comp=Z,33nm,1.1s
ORIF **Oris-en-Rattie** 74.54 313 *e*P P 10 12 31.0 -1.1
ORIF pmax pmax
comp=Z,7.0nm,0.7s
DAG **Danmarks Havn** 74.55 347 *i* P P 10 12 31.1 -0.4
DAG IAmb IAmb 10 12 31.9
comp=Z,46nm,0.8s
LSZ **Lusaka** 74.81 247 P P 10 12 34.2 +0.2
LSZ pP 10 13 07.4 -0.1
RDOG **Red Dog Mine** 74.89 22 P P 10 12 33.8 +0.2
baz=289
SPIA **Saint Paul Isl** 74.95 34 P P 10 12 33.7 -0.3
baz=286
ARMA **Armidale** 75.00 132 P P 10 12 34.2 -0.7
ANM **Nome** 75.07 26 P P 10 12 34.9 +0.2
baz=288
LOR **Lormes** 75.28 315 *e*P P 10 12 35.4 -0.8
LOR pmax pmax
comp=Z,14nm,0.8s
VIVF **Saint-Julien-l** 75.38 313 *e*P P 10 12 36.3 -0.6
VIVF pmax pmax
comp=Z,25nm,1.0s
A21K **Barrow** 75.71 18 P P 10 12 38.4 +0.3
baz=294
AVF **Avril sur Loir** 75.75 315 *e*P P 10 12 38.2 -0.6
AVF pmax pmax
comp=Z,20nm,0.7s
CLF **Chambon-Foret** 76.12 316 IAmb IAmb 10 12 42.4
comp=Z,64nm,1.2s
MOPA **Mopani** 76.16 238⇑ *i*P P 10 12 42.0 +0.5
MOPA IAmb IAmb 10 12 43.5
comp=Z,6.3nm,0.8s
MCD **Coleburn Disti** 76.47 327 *e*P P 10 12 43.3 +0.6
EDMD **Edmundbyers** 76.64 324 *e*P P 10 12 44.0 +0.3
EDMD IAmb IAmb 10 12 44.5
comp=Z,28nm,0.6s
TCF **Toulx Ste Croi** 76.65 315 *e*P P 10 12 43.9 -0.1
TCF pmax pmax
comp=Z,31nm,0.9s
ESY **Stoneypath** 76.65 325 *e*P P 10 12 43.7 0.0
BLWY **Bulawayo** 76.74 242 *e*P P 10 12 45.2 +0.3
BLWY IAmb IAmb 10 12 45.9
comp=Z,85nm,0.9s
MUSN **Musina, Limpop** 76.76 240⇑ *i*P P 10 12 45.6 +0.7
MUSN IAmb IAmb 10 12 46.5
comp=Z,22nm,0.9s
EBL **Broad Law** 76.93 325 *e*P P 10 12 45.8 +0.5
NIKH **Nikolski High** 76.94 38 P P 10 12 45.4 0.0
baz=288
EKA **Eskdalemuir Ar** 77.13 325 P P 10 12 46.6 +0.1
CAF **Calviac** 77.14 313 *e*P P 10 12 46.6 -0.2
CAF pmax pmax
comp=Z,12nm,0.8s
ESK **Eskdalemuir** 77.16 325 *e*P P 10 12 47.2 +0.6
ESK IAmb IAmb 10 12 47.8
comp=Z,26nm,0.9s
ESK **Eskdalemuir** 77.16 325 P P 10 12 47.2 +0.6
ESK IAmb IAmb 10 12 48.1
comp=Z,26nm,0.8s
ESK **Eskdalemuir** 77.16 325 P P 10 12 47.2 +0.6
ESK pmax pmax
comp=Z,26nm,0.9s
KESW **Keswick, Cumbr** 77.34 324 *e*P P 10 12 47.3 -0.3
KESW IAmb IAmb 10 12 48.7
comp=Z,22nm,0.7s
RJF **Les Rejaudoux** 77.40 314 *e*P P 10 12 48.3 +0.1
RJF pmax pmax
comp=Z,48nm,1.2s
KAC **Achnashellach** 77.53 327 *e*P P 10 12 49.0 +0.4
MAGG **Maguga Dam** 77.57 236 *e*P P 10 12 49.4 -0.1
MAGG IAmb IAmb 10 12 50.4
comp=Z,32nm,1.2s
KPL **Plockton** 77.77 327 *e*P P 10 12 49.9 0.0
NEWG **New Galloway** 77.78 325 *e*P P 10 12 50.5 +0.4
NEWG IAmb IAmb 10 12 51.6
comp=Z,13nm,0.9s
HLM1 **Long Mynd** 77.89 322 *e*P P 10 12 51.2 +0.4
HLM1 IAmb IAmb 10 12 52.1
comp=Z,17nm,0.8s
POGA **Pongola** 77.90 234 *e*P P 10 12 51.6 +0.5
POGA IAmb IAmb 10 12 52.4
comp=Z,41nm,0.7s
FOEL **Foel Wylfa** 77.95 322 *e*P P 10 12 50.7 -0.4
FOEL IAmb IAmb 10 12 51.6
comp=Z,22nm,0.8s
UNV **Unalaska Valle** 77.99 37 P P 10 12 51.6 +0.3
baz=290
GRR **Gorron** 78.00 317 *e*P P 10 12 50.8 -0.6
GRR pmax pmax
comp=Z,11nm,0.8s
MCH1 **Michaelchurch** 78.13 321 *e*P P 10 12 52.3 +0.2
MCH1 IAmb IAmb 10 12 53.1
comp=Z,24nm,0.9s
C23K **Itkillik River** 78.18 19 P P 10 12 52.8 +0.8
baz=300,SNR=16
LLW **Llanuwchllyn** 78.23 322 *e*P P 10 12 52.4 -0.2

IOMK **Kirk Michael** 78.26 324 *e*P P 10 12 53.3 +0.6
IOMK IAmb IAmb 10 12 54.5
comp=Z,39nm,0.7s
WIM **Isle of Man** 78.36 324 *e*P P 10 12 54.0 +0.7
GCSA **Galena City Sc** 78.40 25 P P 10 12 53.5 +0.3
baz=295
WME **Myndd Eilian** 78.41 323 *e*P P 10 12 54.2 +0.7
YLL **Llanberis** 78.42 323 *e*P P 10 12 54.1 +0.5
CRLN **Carolina, Mapu** 78.49 236 *e*P P 10 12 55.1 +0.4
CRLN IAmb IAmb 10 12 56.4
comp=Z,10nm,1.0s
WLF1 **Llynfaes** 78.50 323 *e*P P 10 12 55.0 +1.0
WLF1 IAmb IAmb 10 12 55.6
comp=Z,66nm,1.0s
SCO **Scoresbysund** 78.50 342 *e*P P 10 12 55.3 +1.6
SCO IAmb IAmb 10 12 56.1
comp=Z,48nm,1.2s
WPS **Cemaes, Angles** 78.52 323 *e*P P 10 12 54.2 +0.1
WPS IAmb IAmb 10 12 56.2
comp=Z,19nm,0.8s
F21K **Alatna River** 78.53 22 P P 10 12 54.2 +0.2
baz=298,SNR=42
D23K **Nanushuk River** 78.60 20 P P 10 12 55.1 +0.8
baz=300,SNR=22
YRC **Rhoscolyn** 78.61 323 *e*P P 10 12 55.4 +0.7
E22K **Anaktuvuk Pass** 78.65 21 P P 10 12 54.9 +0.2
baz=299
C24K **Franklin Bluff** 78.81 19 P P 10 12 55.8 +0.4
baz=302
F22K **John River** 78.83 21 P P 10 12 56.0 +0.3
baz=299
G21K **Allakaket** 78.85 22 P P 10 12 55.7 0.0
baz=298
IMAR **Indian Mountai** 79.01 23 P P 10 12 56.4 -0.2
D24K **Happy Valley** 79.07 19 P P 10 12 57.4 +0.4
baz=302
TOLK **Toolik Lake Re** 79.11 20 IAmb IAmb 10 12 58.9
comp=Z,59nm,1.3s
TOLK **Toolik Lake Re** 79.11 20 P P 10 12 57.7 +0.5
baz=301,SNR=10
SGMF **Saint Gilles** 79.11 318 *e*P P 10 12 57.2 -0.3
SGMF pmax pmax
comp=Z,22nm,0.7s
RSBS **Rosebush, Pemb** 79.16 322 *e*P P 10 12 58.4 +0.7
RSBS IAmb IAmb 10 12 59.1
comp=Z,47nm,1.0s
LEPH **Lephalale, Lim** 79.19 239⇑ *i*P P 10 12 58.7 +0.3
LEPH IAmb IAmb 10 12 59.5
comp=Z,58nm,1.2s
N16K **Nishlik Lake** 79.41 29 P P 10 12 59.3 +0.3
baz=294
NWCL **Newcastle** 79.48 235 *e*P P 10 13 00.6 +0.7
NWCL IAmb IAmb 10 13 01.0
comp=Z,33nm,0.9s
H21K **Melozitna Rive** 79.51 23 P P 10 13 00.0 +0.6
H21K IAmb IAmb 10 13 01.6
comp=Z,37nm,0.8s
H21K **Melozitna Rive** 79.51 23 P P 10 12 59.8 +0.5
baz=299,SNR=65
TTA **Tatalina** 79.54 26 P P 10 12 59.8 +0.1
baz=296
QUIF **Quistinic** 79.61 317 *e*P P 10 12 59.6 -0.6
QUIF pmax pmax
comp=Z,26nm,1.2s
COLD **Coldfoot** 79.64 21 P P 10 13 00.2 +0.2
baz=301,SNR=9.3
J20K **Nowinta River** 79.71 25 P P 10 13 01.0 +0.5
baz=298,SNR=9.8
D25K **Kavik River** 79.72 18 P P 10 13 00.9 +0.5
baz=304,SNR=27
SLR **Silverton** 79.72 237 *e*P P 10 13 02.2 +0.9
SLR IAmb IAmb 10 13 02.7
comp=Z,44nm,0.9s
S12K **Black Hills** 79.72 34 P P 10 13 01.1 +0.4
baz=293
E24K **Your Creek** 79.75 20 P P 10 13 01.3 +0.6
baz=302,SNR=34
H22K **Ishtalitna Cre** 79.91 22 P P 10 13 02.2 +0.7
baz=300,SNR=46
G23K **Bananza Creek** 79.96 21 P P 10 13 02.2 +0.4
baz=301,SNR=21
SJPF **Ste Jean** 79.97 312 *e*P P 10 13 02.8 +0.5
SJPF pmax pmax
comp=Z,15nm,1.0s
I21K **Tanana** 80.05 23 IAmb IAmb 10 13 04.0
comp=Z,35nm,1.3s
I21K **Tanana** 80.05 23 P P 10 13 02.7 +0.5
baz=299,SNR=18
O16K **Kokwok River B** 80.09 30 P P 10 13 02.5 -0.1
baz=295
K20K **Telida** 80.13 25 P P 10 13 03.3 +0.5
baz=298,SNR=11
F24K **Squaw Lake** 80.24 20 P P 10 13 03.8 +0.5
baz=303,SNR=16
HRAO **HartRAO** 80.26 237 *e*P P 10 13 05.1 +0.9
C27K **Jago River** 80.31 18 P P 10 13 04.3 +0.7
baz=306,SNR=14
L19K **White Mountain** 80.36 27 P P 10 13 04.3 +0.3
baz=297,SNR=10
P16K **Nushagak River** 80.38 30 P P 10 13 03.8 -0.3
baz=295
O17K **Koliganek Bris** 80.47 29 P P 10 13 04.5 -0.1
baz=296
SVW2 **Sparrevohn** 80.55 28 IAmb IAmb 10 13 06.4
comp=Z,60nm,1.5s
CHUM **Lake Minchumin** 80.56 24 P P 10 13 05.7 +0.7
baz=299
MLY **Manley** 80.58 23 IAmb IAmb 10 13 06.5
comp=Z,54nm,1.3s
MLY **Manley** 80.58 23 P P 10 13 05.4 +0.3
baz=300,SNR=44
H23K **Yukon River** 80.59 22 IAmb IAmb 10 13 07.0
comp=Z,56nm,1.4s
H23K **Yukon River** 80.59 22 P P 10 13 05.8 +0.6
baz=302,SNR=26
N18K **Kilae Creek** 80.60 28 P P 10 13 05.5 +0.2
baz=297
L20K **Farewell, AK** 80.62 26 P P 10 13 05.8 +0.4
baz=298,SNR=7.3
E25K **Arctic Village** 80.64 19 P P 10 13 05.9 +0.5
baz=305,SNR=11
M19K **Big River Lodg** 80.68 27 P P 10 13 06.2 +0.5
baz=298
SDPT **Sand Point** 80.69 34 P P 10 13 06.3 +0.5
baz=294
G24K **Hadweenzic Riv** 80.83 21 P P 10 13 06.8 +0.4
baz=303,SNR=16
CAST **Castle Rocks** 80.88 25 P P 10 13 07.0 +0.2
baz=300,SNR=53
F25K **Christian Rive** 80.92 20 P P 10 13 08.0 +1.1
baz=305,SNR=31
BPAW **Bear Paw Mtn.** 80.96 24 IAmb IAmb 10 13 09.4
comp=Z,66nm,1.5s
BPAW **Bear Paw Mtn.** 80.96 24 P P 10 13 07.1 0.0
baz=300,SNR=29
I23K **Minto, Yukon-K** 81.01 23 IAmb IAmb 10 13 08.9
comp=Z,36nm,1.4s
I23K **Minto, Yukon-K** 81.01 23 P P 10 13 07.6 +0.3
baz=302,SNR=14
PRYS **Parys** 81.02 237 *e*P P 10 13 08.6 +0.3
PRYS IAmb IAmb 10 13 08.8
comp=Z,4.4nm,0.5s
P17K **Kvichak River** 81.03 30 P P 10 13 07.7 +0.2
baz=297
PPLA **Purkeypile** 81.10 25 IAmb IAmb 10 13 09.4
comp=Z,17nm,0.7s
PPLA **Purkeypile** 81.10 25 P P 10 13 08.1 0.0
baz=300,SNR=11
N19K **Bonanza Creek** 81.15 28 P P 10 13 08.5 +0.2
N19K IAmb IAmb 10 13 09.6
comp=Z,20nm,0.7s
N19K **Bonanza Creek** 81.15 28 P P 10 13 08.7 +0.3
baz=298
Q16K **King Salmon** 81.16 30 P P 10 13 07.8 -0.4
baz=296
H24K **Noodor Dome** 81.17 22 P P 10 13 08.6 +0.3
baz=303,SNR=16
M20K **Styx River** 81.22 26 IAmb IAmb 10 13 10.2
comp=Z,52nm,1.4s
M20K **Styx River** 81.22 26 P P 10 13 09.1 +0.4
baz=299,SNR=17
G25K **Bearman Lake** 81.24 21 P P 10 13 09.5 +0.9
baz=304,SNR=15
SUMG **Summit** 81.24 347 *i* P P 10 13 09.1 +0.1
SUMG IAmb IAmb 10 13 09.5
comp=Z,50nm,0.7s
O18K **Koktuh Hills** 81.28 29 P P 10 13 09.2 +0.2

baz=298
F26K Sheenjek River 81.33 19 P P 10 13 09.8 +0.7
baz=306,SNR=29
BMAR Burnt Mountain 81.35 20 P P 10 13 10.2 +0.9
CHGN Chignik 81.35 33 P P 10 13 09.6 +0.3
baz=295
BORG Borgarnes 81.35 337 LR LR 10 51 55.4
comp=Z,38nm,18.3s,baz=93,slow=37
SNKL Senekal, Frees 81.37 235⇑iP P 10 13 10.6 +0.5
SNKL IAmb IAmb 10 13 11.1
comp=Z,49nm,0.9s
CHNA Chernabura Isl 81.37 34 P P 10 13 09.0 -0.4
baz=295
NEA2 Nenana 81.41 23 IAmb IAmb 10 13 10.6
comp=Z,57nm,1.4s
NEA2 Nenana 81.41 23 P P 10 13 09.3 -0.2
baz=302,SNR=20
P18K Big Mountain, 81.49 29 P P 10 13 09.6 -0.5
baz=298
BWN Browne 81.49 24 IAmb IAmb 10 13 12.2
comp=Z,40nm,1.0s
LBTB Lobatse 81.50 239 IAmb IAmb 10 13 12.3
comp=Z,34nm,0.9s
LBTB Lobatse 81.50 239⇑iP P 10 13 11.5 +0.7
LBTB IAmb IAmb 10 13 11.8
comp=Z,29nm,0.7s
O19K Port Alsworth 81.52 28 P P 10 13 09.9 -0.3
baz=298
TRF Thorofare Moun 81.56 24 P P 10 13 09.8 -0.7
baz=301,SNR=11
H25K Birch Creek 81.62 21 P P 10 13 11.2 +0.7
baz=305
FYU Fort Yukon 81.64 21 IAmb IAmb 10 13 12.8
comp=Z,39nm,1.2s
TCOL CIGO, UAF Yank 81.70 23 P P 10 13 10.7 -0.3
baz=303,SNR=6.2
COLA College 81.70 23 P P 10 13 10.7 -0.3
COLA College 81.70 23c iP P 10 13 10.3 -0.7
COLA pmax pmax
comp=Z,14nm,0.8s
COLA College 81.70 23 P P 10 13 10.7 -0.3
baz=303
Q17K Contact Creek 81.71 30 P P 10 13 11.3 0.0
baz=297
POKR Poker Plat Res 81.72 22 P P 10 13 11.2 0.0
baz=303,SNR=11
E27K Coleen River 81.80 18 P P 10 13 11.9 +0.4
baz=308
SKT Skwentna 81.82 26 IAmb IAmb 10 13 12.1
comp=Z,57nm,1.3s
SKT Skwentna 81.82 26 P P 10 13 11.1 -0.7
baz=300
TULEG Thule 81.84 356⇑iP P 10 13 11.2 -0.3
TULEG IAmb IAmb 10 13 11.9
comp=Z,59nm,0.7s
G26K Porcupine Rive 81.88 20 P P 10 13 12.8 +0.9
baz=306,SNR=39
MCK McKinley 81.92 24 IAmb IAmb 10 13 13.0
comp=Z,50nm,1.3s
MCK McKinley 81.92 24 P P 10 13 11.5 -0.8
baz=302,SNR=15
SPCR Spurr Chakacha 81.94 27 P P 10 13 11.6 -0.8
baz=300
Q18K Katmai Hardscr 81.94 30 P P 10 13 10.8 -1.7
baz=298
ILAR Eielson Array 82.10 22 P P 10 13 11.8 -1.3
comp=Z,5.8nm,0.5s,baz=286,slow=5.2,SNR=88
ILAR PKKPbc PKKPbc 10 31 40.5 -2.3
comp=Z,0.8nm,0.8s,baz=168,slow=2.9,SNR=5.3
comp=Z,5.8nm,0.5s
RND Reindeer 82.13 24 IAmb IAmb 10 13 13.7
comp=Z,45nm,1.3s
PRP Porcupine Dome 82.15 21 IAmb IAmb 10 13 15.1
comp=Z,76nm,1.2s
PRP Porcupine Dome 82.15 21 P P 10 13 14.3 +0.7
baz=305
P19K Oil Pt 82.26 28 P P 10 13 12.1 -2.0
baz=299
HDA Harding Lake 82.28 23 P P 10 13 12.7 -1.4
baz=304,SNR=8.5
O20K Slope Mountain 82.32 28 P P 10 13 13.3 -1.2
baz=300
Q19K Cape Douglas, 82.43 29 P P 10 13 13.9 -1.1
baz=299
M22K Willow 82.51 26 IAmb IAmb 10 13 15.6
comp=Z,41nm,0.8s
M22K Willow 82.51 26 P P 10 13 14.2 -1.0
baz=302,SNR=16
WAT1 Susitna Watana 82.56 24 P P 10 13 14.2 -1.5
baz=303
CAPN Captain Cook N 82.60 27 P P 10 13 14.2 -1.5
baz=301
G27K Doyon Strip 82.64 19 P P 10 13 16.0 +0.1
baz=308,SNR=13
J25K Salcha River, 82.73 22 IAmb IAmb 10 13 16.5
comp=Z,37nm,1.4s
J25K Salcha River, 82.73 22 P P 10 13 15.1 -1.4
baz=305,SNR=24
SWZ Schweizer 82.73 237 eP P 10 13 17.3 +0.1
SWZ IAmb IAmb 10 13 18.3
comp=Z,26nm,0.9s
DHY Denali Highway 82.87 24 P P 10 13 16.5 -0.8
baz=304,SNR=7.2
HOM Homer 82.96 28 P P 10 13 17.0 -0.6
baz=300
CHIR Chirikof Islan 82.96 32 P P 10 13 17.0 -0.8
baz=298
GHO Glory Hole Cre 82.99 25 IAmb IAmb 10 13 19.8
comp=Z,39nm,1.6s
PMR Palmer 83.00 26 IAmb IAmb 10 13 17.8
comp=Z,14nm,0.7s
PMR Palmer 83.00 26 P P 10 13 17.2 -0.6
baz=302,SNR=16
A36M Sachs Harbour 83.01 12 P P 10 13 17.8 +0.2
baz=323
WAT6 Susitna Watana 83.01 24 P P 10 13 17.5 -0.6
baz=303,SNR=21
RC01 Rabbit Creek A 83.02 26 IAmb IAmb 10 13 18.3
comp=Z,72nm,1.6s
RC01 Rabbit Creek A 83.02 26 P P 10 13 17.3 -0.7
baz=302,SNR=5.2
H27K Steamboat Moun 83.04 20 P P 10 13 18.5 +0.5
baz=308
K24K Donnelly Dome 83.05 23 P P 10 13 17.6 -0.5
baz=305,SNR=28
I26K Coal Creek Min 83.08 21 IAmb IAmb 10 13 19.6
comp=Z,16nm,0.8s
I26K Coal Creek Min 83.08 21 P P 10 13 18.2 0.0
baz=307
ESDC Sonseca Array 83.11 310 P P 10 13 19.4 +0.5
comp=Z,6.9nm,0.8s,baz=59,slow=4.8,SNR=44
ESDC pP pP 10 13 52.8 -0.1
comp=Z,4.4nm,1.1s,baz=55,slow=4.9,SNR=3.7
comp=Z,6.9nm,0.8s
ESDC Sonseca Array 83.11 310 P P 10 13 19.2 +0.3
Q20K Shuyak Island 83.15 29 P P 10 13 18.1 -0.6
baz=300
SML Sawmill 83.20 25 IAmb IAmb 10 13 19.8
comp=Z,29nm,0.6s
SML Sawmill 83.20 25 P P 10 13 18.8 -0.2
baz=303,SNR=24
BRLK Bradley Lake 83.23 28 IAmb IAmb 10 13 18.8
comp=Z,30nm,0.6s
BRSE Bradley Lake S 83.31 28 P P 10 13 18.3 -1.2
baz=301
O22K Cooper Landing 83.35 27 P P 10 13 19.2 -0.4
baz=302
KNK Knik Glacier 83.37 26 IAmb IAmb 10 13 20.6
comp=Z,21nm,0.6s
KNK Knik Glacier 83.37 26 P P 10 13 19.5 -0.2
baz=303,SNR=10
I27K Kandik River 83.40 20 P P 10 13 20.6 +0.6
baz=308
J26L Joseph Creek 83.43 22 IAmb IAmb 10 13 21.0
comp=Z,50nm,1.1s
J26L Joseph Creek 83.43 22 P P 10 13 19.8 -0.3
baz=307,SNR=60
RIDG Independent Ri 83.43 23 IAmb IAmb 10 13 21.0
comp=Z,35nm,1.0s
RIDG Independent Ri 83.43 23 P P 10 13 19.3 -0.8
baz=306,SNR=28
OHAK Old Harbor 83.43 31 P P 10 13 20.5 +0.4
baz=299
PAB San Pablo 83.44 310 P P 10 13 20.7 0.0
PAB San Pablo 83.44 310 P P 10 13 20.7 0.0
PAB pmax pmax
comp=Z,10.0nm,1.0s
M23K Glacier View 83.45 25 P P 10 13 19.9 -0.3

baz=304,SNR=9.9
BOSA Boshof 83.47 236 P P 10 13 21.4 +0.4
comp=Z,24nm,0.6s,baz=65,slow=3.5,SNR=86
BOSA LR LR 10 45 50.0
comp=Z,84nm,21.2s,baz=80,slow=32
comp=Z,24nm,0.6s
BOSA Boshof 83.47 236 P P 10 13 21.0 +0.1
BOSA IAmb IAmb 10 13 21.8
comp=Z,28nm,0.7s
BOSA Boshof 83.47 236⇑iP P 10 13 21.3 +0.4
SCM Sheep Creek Mo 83.59 25 IAmb IAmb 10 13 22.1
comp=Z,69nm,1.6s
SCM Sheep Creek Mo 83.59 25 P P 10 13 20.8 -0.1
baz=304,SNR=11
SCRK Sand Creek 83.59 22 IAmb IAmb 10 13 22.8
comp=Z,84nm,1.6s
SCRK Sand Creek 83.59 22 P P 10 13 20.8 -0.2
baz=306,SNR=44
PAX Paxson 83.65 24 P P 10 13 21.0 -0.2
baz=305,SNR=20
SEW Seward 83.67 27 P P 10 13 20.4 -0.8
baz=302
PWL Port Wells 83.72 26 IAmb IAmb 10 13 22.3
comp=Z,32nm,0.7s
PWL Port Wells 83.72 26 P P 10 13 21.3 -0.3
baz=303,SNR=27
M24K Tolsona, Glenn 83.88 24 P P 10 13 22.9 +0.5
baz=305,SNR=14
INK Inuvik 83.95 16 P P 10 13 22.4 -0.2
comp=Z,21nm,0.5s,baz=315,slow=2.9,SNR=100
INK LR LR 10 58 24.3
comp=Z,37nm,18.6s,baz=296,slow=41
comp=Z,21nm,0.5s
INK Inuvik 83.95 16 IAmb IAmb 10 13 23.4
comp=Z,60nm,1.2s
INK Inuvik 83.95 16 P P 10 13 22.3 -0.2
baz=315
ICESG Greenland Ices 84.09 345⇑iP P 10 13 23.6 -0.1
ICESG IAmb IAmb 10 13 24.6
comp=Z,72nm,0.8s
HARP HAARP 84.10 24 P P 10 13 23.7 +0.2
baz=306,SNR=8.0
GLI Glacier Island 84.22 26 P P 10 13 23.6 -0.5
baz=304
K27K Chicken 84.23 22 IAmb IAmb 10 13 26.0
comp=Z,40nm,1.2s
K27K Chicken 84.23 22 P P 10 13 24.6 +0.5
baz=308
HVD Gariep Dam 84.23 234 eP P 10 13 25.0 +0.2
HVD IAmb IAmb 10 13 26.2
comp=Z,43nm,0.9s
MENT Mentasta 84.31 23 IAmb IAmb 10 13 26.9
comp=Z,30nm,1.3s
KLU Klutina 84.33 25 IAmb IAmb 10 13 26.1
comp=Z,67nm,1.4s
KLU Klutina 84.33 25 P P 10 13 25.0 +0.2
baz=305,SNR=27
L26K Log Cabin Wild 84.40 23 IAmb IAmb 10 13 26.8
comp=Z,27nm,1.3s
L26K Log Cabin Wild 84.40 23 P P 10 13 25.5 +0.5
baz=307,SNR=13
FID Port Fidalgo 84.54 26 IAmb IAmb 10 13 26.8
comp=Z,46nm,1.4s
P23K Montague Islan 84.59 27 P P 10 13 25.6 -0.4
baz=304
DIV Divide 84.60 25 IAmb IAmb 10 13 27.4
comp=Z,32nm,1.2s
I29M Ogilvie Camp, 84.62 20 P P 10 13 25.3 -0.7
baz=311,SNR=5.4
MVO Moncorvo 84.70 312 eP P 10 13 27.6 +0.6
comp=Z,40nm,1.1s
N25K Chitina, Valde 84.78 24 P P 10 13 27.6 +0.6
baz=306,SNR=44
M26K Nabesna, AK 84.91 23 IAmb IAmb 10 13 30.1
comp=Z,40nm,1.1s
M26K Nabesna, AK 84.91 23 P P 10 13 28.1 +0.5
baz=308,SNR=33
L27K Beaver Creek, 84.92 22 P P 10 13 28.3 +0.7
baz=308,SNR=16
BCAR Beaver Creek A 84.93 22 P P 10 13 28.3 +0.6
EYAK Cordova Ski Ar 84.95 26 IAmb IAmb 10 13 29.2
comp=Z,36nm,1.3s
EYAK Cordova Ski Ar 84.95 26 P P 10 13 28.0 +0.3
baz=305,SNR=8.5
DAWY Dawson 85.12 21 P P 10 13 28.4 -0.2
baz=310
POLO Lamas de Olo 85.14 313 eP P 10 13 29.9 +0.7
comp=Z,14nm,1.3s
BMRM Bremner River 85.16 25 P P 10 13 29.1 +0.2
baz=306,SNR=40
PCAB Cabril 85.16 313 eP P 10 13 30.2 +0.9
comp=Z,21nm,1.0s
GLB Gilahina Butte 85.18 24 IAmb IAmb 10 13 30.3
comp=Z,39nm,1.3s
PGAV Gavieira, Arco 85.22 313 eP P 10 13 30.0 +0.4
M27K Edge Creek, AK 85.34 23 IAmb IAmb 10 13 31.8
comp=Z,27nm,1.1s
M27K Edge Creek, AK 85.34 23 P P 10 13 30.4 +0.5
baz=308,SNR=18
MTE Manteigas 85.36 312 IAmb IAmb 10 13 32.5
comp=Z,28nm,0.9s
MTE Manteigas 85.36 312 eP P 10 13 31.5 +1.2
comp=Z,33nm,1.1s
C36M Paulatuk 85.37 13 P P 10 13 28.9 -0.8
baz=324
RAGM Ragged Mountai 85.47 25 IAmb IAmb 10 13 32.1
comp=Z,43nm,1.3s
PVIS Viseu 85.48 312 eP P 10 13 31.9 +1.0
MCARA McCarthy VSAT 85.52 24 P P 10 13 31.2 +0.6
baz=308,SNR=14
PCBR Castelo Branco 85.54 311 eP P 10 13 32.3 +1.2
comp=Z,36nm,1.4s
PCBR epP pP 10 14 04.9 -0.3
TSUM Tsumeb 85.63 248 P P 10 13 32.5 +0.5
TSUM IAmb IAmb 10 13 34.8
comp=Z,43nm,1.9s
PMRV Marv??o 85.65 311 eP P 10 13 32.3 +0.6
comp=Z,28nm,1.0s
HMT Hamilton 85.67 25 IAmb IAmb 10 13 32.3
comp=Z,19nm,0.7s
BVCY Beaver Creek 85.67 23 P P 10 13 31.7 +0.3
baz=309
GRAF Camdeboo Natio 85.78 233 eP P 10 13 32.9 +0.5
GRAF IAmb IAmb 10 13 33.9
comp=Z,40nm,0.9s
KAIM Kayak Island 85.85 26 P P 10 13 32.7 +0.4
baz=306
CRQM Cirque 85.86 25 IAmb IAmb 10 13 33.9
comp=Z,39nm,1.2s
CRQE Cirque 85.88 25 P P 10 13 32.8 +0.2
baz=308,SNR=5.4
PBAR Barrancos 85.90 309 eP P 10 13 33.8 +0.9
comp=Z,32nm,0.9s
PBAR epP pP 10 14 07.6 +0.5
PESTR Estremoz 86.02 310 eP P 10 13 34.3 +0.8
comp=Z,21nm,1.5s
ANGG Ammassalik, Gr 86.12 342 IAmb IAmb 10 13 34.2
comp=Z,26nm,0.8s
BFON Badsfontein, M 86.16 234 eP P 10 13 35.1 +0.8
BFON IAmb IAmb 10 13 35.2
comp=Z,129nm,1.5s
PCAS Casmilo, Conde 86.17 312 eP P 10 13 35.3 +1.1
YUK3 Moose Creek 86.23 23 P P 10 13 34.7 +0.3
baz=310
BARN Barnard Glacie 86.24 24 IAmb IAmb 10 13 35.7
comp=Z,15nm,0.8s
ISLE Juniper Island 86.26 25 IAmb IAmb 10 13 36.0
comp=Z,25nm,1.1s
SNH Sunshine Point 86.33 25 IAmb IAmb 10 13 36.8
comp=Z,45nm,1.0s
PMTG Montargil 86.39 311 eP P 10 13 35.7 +0.4
comp=Z,24nm,0.9s
PMTG epP pP 10 14 09.4 0.0
GRNC Granite Creek 86.41 24 IAmb IAmb 10 13 37.0
comp=Z,36nm,1.2s
CTG Chitna Glacier 86.42 24 P P 10 13 35.7 +0.5
baz=309
CTGM Chitina Glacie 86.42 24 IAmb IAmb 10 13 37.1
comp=Z,33nm,1.2s
EVO Evora 86.46 310 eP P 10 13 36.8 +1.1
comp=Z,36nm,1.3s
M29M Somme Creek 86.50 22 P P 10 13 36.1 +0.6
baz=311
PBEJ Beja 86.56 309 eP P 10 13 37.1 +0.9
comp=Z,27nm,1.3s
YAH Yahtse 86.64 25 IAmb IAmb 10 13 38.5
comp=Z,41nm,1.2s
MESA MESA 86.68 25 P P 10 13 37.1 +0.6

baz=309
PVAQ Vaqueiros 86.71 309 IAmb IAmb 10 13 39.0
comp=Z,18nm,0.8s
PVAQ Vaqueiros 86.71 309 eP P 10 13 37.9 +1.0
comp=Z,36nm,1.0s
PVAQ epP pP 10 14 10.6 -0.5
KEIM Keimoes 86.86 238 eP P 10 13 38.2 +0.5
KEIM IAmb IAmb 10 13 38.6
comp=Z,34nm,1.2s
MESJ Messejana 86.89 309 eP P 10 13 38.6 +0.8
comp=Z,25nm,0.9s
PBDV Barranco-do-Ve 86.93 309 eP P 10 13 38.1 +0.1
comp=Z,61nm,1.5s
O28M Mount Upton 86.98 24 P P 10 13 38.5 +0.5
baz=310
M30M Minto, Yukon 86.99 21 P P 10 13 38.0 +0.2
baz=313,SNR=14
PNCL Nicolau / Gran 87.00 310 eP P 10 13 39.5 +1.2
comp=Z,21nm,1.5s
YUK4 Talbot Arm 87.17 23 P P 10 13 39.0 +0.1
baz=311
PINM Pinnacle 87.39 24 P P 10 13 40.2 +0.4
baz=310
MORF Marmelete 87.43 309 eP P 10 13 38.9 -1.5
comp=Z,40nm,1.5s
GRAN Grantham 87.54 234 eP P 10 13 41.7 +0.8
GRAN IAmb IAmb 10 13 42.2
comp=Z,42nm,2.0s
YUK6 Outpost Mounta 87.54 23 P P 10 13 41.2 +0.5
baz=312,SNR=5.7
PFVI Vila Bisbo 87.63 309 eP P 10 13 42.8 +1.5
comp=Z,117nm,1.3s
N30M Aishikik Lake 87.65 22 P P 10 13 41.4 +0.4
baz=313,SNR=15
O29M Mount Kennedy 87.89 24 P P 10 13 42.4 +0.1
baz=311
HYT Haines Junctio 87.93 23 P P 10 13 42.9 +0.5
baz=312,SNR=6.7
PNL Peninsula 88.00 24 P P 10 13 42.4 -0.3
baz=311
M31M Drury Creek, Y 88.06 21 P P 10 13 42.8 -0.1
baz=315,SNR=8.2
N31M Braeburn, Yuko 88.09 22 IAmb IAmb 10 13 44.6
comp=Z,39nm,1.1s
N31M Braeburn, Yuko 88.09 22 P P 10 13 43.4 +0.3
baz=314,SNR=15
TOA0 Torodi Ar. Sit 88.16 283 P P 10 13 44.2 0.0
TOA0 IAmb IAmb 10 13 45.9
comp=Z,17nm,1.1s
TOA0 pP pP 10 14 18.1 -0.5
TORD Torodi Ar. Bea 88.16 283 P P 10 13 44.7 +0.5
comp=Z,10nm,0.8s,baz=66,slow=4.5,SNR=46
TORD pP pP 10 14 17.7 -0.9
comp=Z,8.2nm,1.0s,baz=63,slow=3.5,SNR=6.5
TORD PKKPbc PKKPbc 10 31 28.1 +1.0
comp=Z,0.5nm,0.5s,baz=291,slow=3.1,SNR=4.2
comp=Z,10nm,0.8s
SFJD Kangerlussuaq 88.24 347 P P 10 13 43.7 +0.2
comp=Z,25nm,0.5s,baz=47,slow=3.8,SNR=10
comp=Z,25nm,0.5s
SFJD Kangerlussuaq 88.24 347 P P 10 13 43.8 +0.2
SFJD Kangerlussuaq 88.24 347 P P 10 13 43.8 +0.2
SFJD pmax pmax
comp=Z,34nm,0.7s
SFJD Kangerlussuaq 88.24 347 iP P 10 13 43.4 -0.2
SFJD IAmb IAmb 10 13 44.3
comp=Z,35nm,0.7s
O30N Mendenhall 88.48 22 P P 10 13 45.5 +0.6
baz=314,SNR=12
P30M Million Dollar 88.61 23 P P 10 13 46.3 +0.7
baz=313
P29M Windy Craggy 88.65 24 P P 10 13 46.0 +0.2
baz=312
WHY Whitehorse 88.98 22 P P 10 13 47.3 -0.1
baz=315
CVNA Calvinia 89.01 236 eP P 10 13 48.0 0.0
CVNA IAmb IAmb 10 13 51.3
comp=Z,149nm,2.0s
N32M Quiet Lake 89.25 21 P P 10 13 48.5 0.0
baz=316
PLBC Pleasant Camp 89.28 23 P P 10 13 48.9 +0.3
baz=313
SKAG Skagway 89.66 23 IAmb IAmb 10 13 52.4
comp=Z,28nm,1.2s
SKAG Skagway 89.66 23 P P 10 13 51.2 +0.8
baz=314
P33M Teslin, Yukon 90.02 22 P P 10 13 52.4 +0.2
baz=316
P32M Atlin 90.15 22 P P 10 13 53.0 +0.2
baz=316
JIS Juneau Island 90.85 24 IAmb IAmb 10 13 58.5
comp=Z,16nm,1.2s
NUUK Nuuk 90.89 346 iP P 10 13 56.2 +0.2
NUUK IAmb IAmb 10 13 56.8
comp=Z,51nm,1.1s
R33M Jennings River 91.25 22 P P 10 13 58.4 +0.4
baz=318
SIT Sitka 91.35 25 P P 10 13 58.9 +0.6
baz=314
MAW Mawson 91.77 192 P P 10 14 01.0 +1.3
comp=Z,1.9nm,0.7s,baz=326,slow=9.3,SNR=3.8
comp=Z,1.9nm,0.7s
DLBC Dease Lake 92.30 22 P P 10 14 03.8 +1.0
comp=Z,4.7nm,1.0s,baz=313,slow=3.4,SNR=7.9
comp=Z,4.7nm,1.0s
DLBC Dease Lake 92.30 22 IAmb IAmb 10 14 04.8
comp=Z,18nm,1.4s
DLBC Dease Lake 92.30 22 P P 10 14 03.7 +0.9
baz=319
WRAK Wrangell Islan 92.95 24 P P 10 14 06.2 +0.5
baz=317
YKA Yellowknife Ar 93.25 13 P P 10 14 06.1 -0.8
comp=Z,8.2nm,0.8s,baz=328,slow=4.6,SNR=27
comp=Z,8.2nm,0.8s
YKA Yellowknife Ar 93.25 13 P P 10 14 06.2 -0.7
YKA Yellowknife Ar 93.25 13 iP P 10 14 06.0 -1.0
YKA pmax pmax
comp=Z,8.0nm,0.9s
T35M Bob Quinn 93.31 23 P P 10 14 07.8 +0.3
baz=319
CRAG Craig 93.34 25 P P 10 14 08.5 +1.0
baz=316
FRB Frobisher Bay 94.21 353 P P 10 14 11.0 -0.3
comp=Z,4.7nm,0.5s,baz=13,slow=6.8,SNR=8.3
FRB LR LR 11 03 01.3
comp=Z,22nm,18.1s,baz=358,slow=39
comp=Z,4.7nm,0.5s
DBIC Dimbokro 96.55 280 P P 10 14 23.8 +0.8
comp=Z,2.9nm,0.6s,baz=83,slow=4.3,SNR=4.3
DBIC LR LR 11 03 43.1
comp=Z,29nm,18.8s,baz=122,slow=39
comp=Z,2.9nm,0.6s
J04D Umpqua Nationa 107.32 27 P PKiKP 10 19 18.4 -0.4
baz=324
MSO Missoula 107.35 20 P PKiKP 10 19 18.6 -0.1
baz=332
EGMT Eagleton 107.52 17 P PKiKP 10 19 18.6 -0.3
baz=336
J05D Fort Rock, OR 107.66 27 P PKiKP 10 19 19.2 -0.3
baz=325
K04D Chiloquin, OR 107.97 28 P PKiKP 10 19 19.6 -0.4
baz=324
L04D Klamath Falls 108.06 28 P PKiKP 10 19 19.9 -0.3
baz=324
BOZ Bozeman (W) 109.18 19 P PKiKP 10 19 22.0 -0.2
baz=334
HLID Hailey 110.06 22 P PKiKP 10 19 24.2 +0.3
baz=331
RLMT Red Lodge 110.31 18 P PKiKP 10 19 24.4 -0.1
baz=336
EYMN Ely 110.81 5 P PKiKP 10 19 25.1 0.0
baz=354
TROLL Troll, Antarti 110.81 199 PKiKP PKiKP 10 19 24.9 +0.6
F64A Sherman 111.40 347 P PKiKP 10 19 25.9 -0.3
baz=17
F64A P PKiKP 10 19 25.9 -0.3
baz=17
PKME Peaks-Kenny Pk 112.17 348 P PKiKP 10 19 27.9 +0.3
baz=16
BW06 Boulder Array 112.37 19 P PKiKP 10 19 28.5 0.0
baz=335
PDAR Pinedale Array 112.37 19 PKiKP PKiKP 10 19 28.0 -0.5
comp=Z,1.0nm,0.7s,baz=8.9,slow=0.5,SNR=11
SNAA Sanae 112.48 200 PKiKP PKiKP 10 19 27.1 -0.4
RSSD Black Hills 112.61 15 P PKiKP 10 19 28.7 -0.1
baz=341
E46A Sault Ste Mari 112.62 359 P PKiKP 10 19 28.3 -0.2
baz=0.8

F36A	Milaca	112.70	6	P	PKiKP	10 19 28.3	-0.4
	baz=352						
WVL	Waterville	112.91	348	P	PKiKP	10 19 28.9	-0.2
	baz=16						
NVAR	Mina Array Bea	112.91	28	PKiKP	PKiKP	10 19 30.6	+1.1
	comp=Z,1.6nm,0.6s,baz=297,slow=1.9,SNR=21						
NVAR				PKKPbc	PKKPbc	10 30 15.4	-2.3
	comp=Z,0.6nm,0.7s,baz=151,slow=4.7,SNR=6.3						
K22A	Casper	113.36	17	P	PKiKP	10 19 29.7	-0.6
	baz=338						
SPMN	Marine on St.	113.40	6	P	PKiKP	10 19 29.9	-0.1
	baz=352						
BMNY	Brushton-Moira	113.44	352	P	PKiKP	10 19 29.8	-0.3
	baz=11						
G40A	Rib Lake	113.57	4	P	PKiKP	10 19 30.1	-0.2
	baz=355						
DUG	Dugway, Tooele	113.59	23	P	PKiKP	10 19 31.0	+0.3
	baz=332						
LBNH	Lisbon	113.63	350	P	PKiKP	10 19 30.8	+0.3
	baz=13						
LONY	Lake Ozonia	113.66	352	P	PKiKP	10 19 30.8	+0.2
	baz=11						
VNA2	Neumayer--Watz	113.98	201	PKiKP	PKiKP	10 19 30.2	0.0
	baz=66,slow=3.0						
R11A	Troy Canyon, C	114.12	26	P	PKiKP	10 19 31.8	0.0
	baz=329						
GLMI	Grayling	114.17	360	P	PKiKP	10 19 30.7	-0.8
	baz=0.5						
VOG	Valley Oaks Go	114.17	30	P	PKiKP	10 19 31.6	-0.1
	baz=325						
VNA1	Neumayer--Stat	114.29	201	PKiKP	PKiKP	10 19 30.8	+0.1
ECSD	EROS Data Cent	114.41	9	P	PKiKP	10 19 31.9	-0.1
	baz=348						
ECSD	EROS Data Cent	114.41	9	P	PKiKP	10 19 31.7	-0.3
	baz=348						
WCNY	West Carthage	114.43	352	P	PKiKP	10 19 31.7	-0.3
	baz=9.6						
GRAC	Grapevine Rang	114.52	28	P	PKPdf	10 19 32.5	0.0
	baz=327						
J61A	Chester	114.61	350	P	PKPdf	10 19 33.4	+1.0
	baz=13						
J61A				P	PKPdf	10 19 33.4	+1.0
	baz=13						
CWC	Cottonwood Cre	114.66	29	P	PKPdf	10 19 33.5	+0.5
	baz=326						
VNA3	Neumayer Olymp	114.69	200	PKiKP	PKPdf	10 19 31.1	-0.5
VES	Vestal, Richgr	114.70	30	P	PKiKP	10 19 32.6	-0.1
	baz=325						
J58A	Remsen	114.99	352	P	PKiKP	10 19 33.1	-0.1
	baz=10.0						
J58A				P	PKiKP	10 19 33.1	-0.1
	baz=10.0						
I42A	Draeger Farm,	115.01	3	P	PKiKP	10 19 32.4	-0.7
	baz=356						
TPNV	Topopah Spring	115.04	27	P	PKPdf	10 19 33.9	+0.3
	baz=328						
PKM	Mcpherson Peak	115.13	31	P	PKPdf	10 19 34.0	+0.1
	baz=324						
N23A	Red Feather La	115.15	17	P	PKiKP	10 19 33.5	-0.4
	baz=338						
O20A	White River Ci	115.18	19	P	PKiKP	10 19 33.5	-0.3
	baz=336						
FURC	Furnace Creek,	115.18	28	P	PKPdf	10 19 34.6	+0.9
	baz=327						
MPMC	Manual Prospec	115.25	29	P	PKPdf	10 19 34.8	+0.7
	baz=327						
LRMC	Laurel Mtn Rad	115.64	29	P	PKPdf	10 19 35.0	+0.2
	baz=326						
JFWS	Jewell Farm	115.91	4	P	PKiKP	10 19 33.8	-1.1
	baz=355						
JFWS	Jewell Farm	115.91	4	P	PKiKP	10 19 34.2	-0.7
	baz=355						
K38A	Parkersburg	115.96	6	P	PKiKP	10 19 34.3	-0.7
	baz=352						
EDW2	Edwards Air Fo	115.99	30	P	PKiKP	10 19 35.8	+0.4
	baz=326						
OGNE	Ogallala	116.09	14	P	PKPdf	10 19 35.3	-0.2
	baz=342						
GSC	Goldstone, Bar	116.18	29	P	PKPdf	10 19 35.5	-0.3
	baz=327						
K43A	Burlington	116.22	3	P	PKPdf	10 19 34.5	-1.0
	baz=357						
BINY	Binghamton	116.22	352	P	PKPdf	10 19 35.6	0.0
	baz=9.4						
ISCO	Idaho Springs	116.26	17	P	PKPdf	10 19 35.5	-0.6
	baz=339						
L56A	Greenwood	116.46	354	P	PKPdf	10 19 35.7	-0.3
	baz=7.8						
L56A				P	PKPdf	10 19 35.7	-0.3
	baz=7.8						
SCIA	State Center	116.64	7	P	PKPdf	10 19 36.1	-0.3
	baz=352						
AAM	Ann Arbor	116.68	359	P	PKiKP	10 19 36.7	+0.4
	baz=1.5						
L40A	Anamosa	116.68	5	P	PKPdf	10 19 35.5	-0.9
	baz=354						
ERPA	Erie	116.69	356	P	PKPdf	10 19 36.0	-0.4
	baz=5.3						
FMP	Fort Macarthur	116.81	31	P	PKiKP	10 19 37.2	+0.4
	baz=325						
BBRC	Big Bear Solar	117.00	29	P	PKPdf	10 19 37.2	-0.3
	baz=327						
CIS	Catalina Islan	117.01	31	P	PKPdf	10 19 37.3	-0.1
	baz=325						
L48A	N Adams	117.05	359	P	PKPdf	10 19 36.3	-0.8
	baz=0.7						
L48A				P	PKPdf	10 19 36.3	-0.8
	baz=0.7						
GMRC	Granite Mounta	117.12	28	P	PKPdf	10 19 37.5	-0.2
	baz=328						
ODNJ	Ogdensburg	117.14	351	P	PKiKP	10 19 37.4	+0.1
	baz=11						
M57A	Sunshine Farm,	117.21	353	P	PKiKP	10 19 37.6	+0.1
	baz=8.3						
M57A				P	PKiKP	10 19 37.6	+0.1
	baz=8.3						
M55A	Ridgway	117.24	355	P	PKPdf	10 19 37.4	-0.2
	baz=6.6						
M55A				P	PKPdf	10 19 37.4	-0.2
	baz=6.6						
SCI2	San Clemente I	117.29	31	P	PKPdf	10 19 37.0	-0.8
	baz=325						
M53A	WI Miller and	117.41	356	P	PKPdf	10 19 37.3	-0.6
	baz=4.6						
MURC	Murrieta	117.42	30	P	PKPdf	10 19 37.7	-0.4
	baz=326						
PSDB	Penn State Uni	117.58	355	P	PKPdf	10 19 38.1	-0.1
	baz=6.6						
BELC	Belle Mtn. Jos	117.63	29	P	PKPdf	10 19 38.2	-0.4
	baz=327						
N58A	Sunbury	117.65	353	P	PKPdf	10 19 38.0	-0.3
	baz=8.8						
N58A				P	PKPdf	10 19 38.0	-0.3
	baz=8.8						
N38A	Joes South For	117.74	7	P	PKPdf	10 19 37.8	-0.7
	baz=351						
PFO	Pinyon Flats O	117.75	29	P	PKiKP	10 19 38.9	0.0
	baz=327						
MVCO	Mesa Verde	117.76	21	P	PKPdf	10 19 38.5	-0.5
	baz=335						
TPFO	Pinon Flats	117.76	29	P	PKPdf	10 19 38.5	-0.4
	baz=327						
KSCO	Kaye Shedlock'	117.79	15	P	PKPdf	10 19 38.5	-0.3
	baz=342						
S22A	4UR Ranch, Cre	117.80	19	P	PKPdf	10 19 38.5	-0.6
	baz=337						
IRM	Iron Mountain	117.88	28	P	PKPdf	10 19 38.5	-0.5
	baz=328						
SSPA	Standing Stone	117.98	354	P	PKPdf	10 19 38.6	-0.3
	baz=7.5						
SSPA	Standing Stone	117.98	354	P	PKPdf	10 19 38.7	-0.3
	baz=7.5						
N53A	Lisbon	118.05	356	P	PKPdf	10 19 38.9	-0.2
	baz=4.5						
N53A				P	PKPdf	10 19 38.9	-0.2
	baz=4.5						
N49A	Columbus Grove	118.06	359	P	PKPdf	10 19 38.7	-0.4
	baz=0.9						
N49A				P	PKPdf	10 19 38.7	-0.4
	baz=0.9						
TUPA	Temple Univers	118.12	351	P	PKiKP	10 19 39.2	0.0
	baz=10						
BC3	Big Chuckawall	118.17	28	P	PKPdf	10 19 39.4	-0.3
	baz=328						
PDMCI	Parker Dam,Lak	118.19	27	P	PKPdf	10 19 39.1	-0.5
	baz=329						
SDCO	Great Sand Dun	118.20	18	P	PKPdf	10 19 39.2	-0.7
	baz=338						
WUAZ	Wupatki	118.25	24	P	PKiKP	10 19 40.0	+0.1
	baz=332						
HDIL	Hopedale	118.31	4	P	PKPdf	10 19 39.2	-0.4
	baz=356						
UPAO	U. Pittsburgh	118.32	356	P	PKPdf	10 19 39.5	-0.1
	baz=5.3						
MONP2	Monument Peak	118.37	30	P	PKPdf	10 19 39.6	-0.6
	baz=327						
MVL	Millersville	118.44	352		PKiKP	10 19 40.2	+0.3
SFIN	Lafayette	118.58	2	P	PKPdf	10 19 39.7	-0.4
	baz=358						
BELA	Belgrano 2	118.60	191	PKPdf	PKPdf	10 19 38.5	-0.5
SWSC	Sam W. Stewart	118.61	29	P	PKPdf	10 19 39.9	-0.5
	baz=327						
O53A	New Philadelph	118.63	357	P	PKiKP	10 19 40.3	0.0
	baz=4.1						
O54A	Avella	118.64	356	P	PKPdf	10 19 40.1	-0.1
	baz=5.0						
O54A				P	PKPdf	10 19 40.1	-0.1
	baz=5.0						
IKP	In-Ko-Pah, Jac	118.71	30	P	PKPdf	10 19 40.5	-0.2
	baz=327						
ACSO	Alum Creek Sta	118.72	358	P	PKPdf	10 19 40.0	-0.4
	baz=2.2						
ACSO	Alum Creek Sta	118.72	358	P	PKPdf	10 19 40.2	-0.2
	baz=2.2						
O48B	Farmland	118.73	360	P	PKPdf	10 19 39.8	-0.7
	baz=360						
O48B	Farmland	118.73	360	P	PKPdf	10 19 40.1	-0.3
	baz=360						
O52A	Adamsville	118.80	357	P	PKPdf	10 19 39.6	-0.9
	baz=3.4						
O52A				P	PKPdf	10 19 39.6	-0.9
	baz=3.4						
O49A	Covington	118.80	359	P	PKPdf	10 19 39.9	-0.6
	baz=0.8						
O49A				P	PKPdf	10 19 39.9	-0.6
	baz=0.8						
P38A	Dawn	118.86	7	P	PKPdf	10 19 40.2	-0.5
	baz=351						
KSU1	Kansas State U	118.94	10	P	PKPdf	10 19 40.7	-0.1
	baz=348						
KSU1	Kansas State U	118.94	10	P	PKPdf	10 19 40.6	-0.3
	baz=348						
GLA	Glamis	118.96	28	P	PKiKP	10 19 41.8	+0.6
	baz=328						
T25A	Trinidad	119.08	18	P	PKPdf	10 19 41.2	-0.3
	baz=339						
P40A	Paris	119.12	6	P	PKPdf	10 19 40.5	-0.7
	baz=353						
P57A	Homestead Farm	119.14	354	P	PKiKP	10 19 41.2	0.0
	baz=7.5						
P57A				P	PKiKP	10 19 41.2	0.0
	baz=7.5						
W18A	Petrified Fore	119.21	23	P	PKiKP	10 19 42.3	+0.5
	baz=334						
P43A	Skaggs, Pawnee	119.21	4	P	PKPdf	10 19 41.4	0.0
	baz=355						
R32A	Long Quarter,	119.22	12	P	PKPdf	10 19 41.4	-0.1
	baz=345						
P52A	Corning	119.29	357	P	PKPdf	10 19 40.8	-0.7
	baz=3.1						
P46A	Rosedale	119.34	2	P	PKiKP	10 19 41.6	0.0
	baz=358						
P53A	Whipple	119.40	357	P	PKPdf	10 19 41.4	-0.3
	baz=3.9						
P53A				P	PKPdf	10 19 41.4	-0.3
	baz=3.9						
P49A	Miami Univ. Ec	119.45	360	P	PKPdf	10 19 40.8	-1.0
	baz=0.4						
P51A	Williamsport	119.48	358	P	PKPdf	10 19 41.1	-0.7
	baz=2.1						
P51A				P	PKPdf	10 19 41.1	-0.7
	baz=2.1						
P48A	Milroy	119.53	0	P	PKPdf	10 19 41.2	-0.7
	baz=360						
P48A				P	PKPdf	10 19 41.2	-0.7
	baz=360						
Q56A	Snyder Ridge,	119.69	355		PKiKP	10 19 42.4	+0.1
Q56A	Snyder Ridge,	119.69	355	P	PKiKP	10 19 42.5	+0.1
	baz=6.3						
Q56A				P	PKiKP	10 19 42.5	+0.1
	baz=6.3						
Q54A	Coxs Mills	119.87	356	P	PKPdf	10 19 42.5	-0.1
	baz=4.5						
Q54A				P	PKPdf	10 19 42.5	-0.1
	baz=4.5						
Q51A	Peebles	119.94	358	P	PKPdf	10 19 42.1	-0.7
	baz=1.8						
Q51A				P	PKPdf	10 19 42.1	-0.7
	baz=1.8						
Q52A	Bidwell	119.97	357	P	PKPdf	10 19 42.4	-0.4
	baz=3.0						
Q52A				P	PKPdf	10 19 42.4	-0.4
	baz=3.0						
Q44A	Meyer Farm, Va	119.98	3	P	PKPdf	10 19 42.5	-0.3
	baz=356						
R40A	Maddies Statio	120.32	6	P	PKPdf	10 19 43.0	-0.5
	baz=352						
CBN	Corbin Frederi	120.33	353	P	PKiKP	10 19 43.8	+0.2
	baz=8.3						
ANMO	Albuquerque	120.49	20	PKPdf	PKPdf	10 19 44.0	-0.2
ANMO	Albuquerque	120.49	20	*i* PKIKP	PKPdf	10 19 44.0	-0.2
ANMO	Albuquerque	120.49	20	P	PKPdf	10 19 44.1	-0.1
	baz=337						
ANMO	Albuquerque	120.49	20	P	PKiKP	10 19 44.4	0.0
	baz=337						
CCM	Cathedral Cave	120.66	6		PKPdf	10 19 42.8	-1.4
CCM	Cathedral Cave	120.66	6	PKIKP	PKPdf	10 19 42.8	-1.4
CCM	Cathedral Cave	120.66	6	P	PKPdf	10 19 42.8	-1.4
	baz=353						
CCM	Cathedral Cave	120.66	6	P	PKPdf	10 19 43.5	-0.6
	baz=353						
214A	Organ Pipe Nat	120.77	27	P	PKPdf	10 19 44.5	-0.2
	baz=330						
S39A	Bolivar	120.80	8	P	PKPdf	10 19 44.0	-0.5
	baz=351,SNR=16						
S57A	Dark Hollow, R	120.94	354	P	PKiKP	10 19 45.1	+0.2
	baz=6.6						
S57A				P	PKiKP	10 19 45.1	+0.2
	baz=6.6						
T35B	Sooner Cattle	121.09	11	P	PKPdf	10 19 44.8	-0.3
	baz=348,SNR=5.7						
Y22D	IRIS PASSCAL I	121.14	21	P	PKiKP	10 19 46.3	+0.7
	baz=336						
Y22A	Socorro	121.25	21	P	PKiKP	10 19 46.6	+0.8
	baz=336						
TUC	Tucson	121.30	25	PKPdf	PKiKP	10 19 46.0	+0.1
TUC	Tucson	121.30	25	PKIKP	PKiKP	10 19 46.0	+0.1
TUC	Tucson	121.30	25	P	PKiKP	10 19 46.2	+0.3
	baz=332						
S51A	Beattyville	121.33	359	P	PKPdf	10 19 45.1	-0.4
	baz=1.6						
S51A				P	PKPdf	10 19 45.1	-0.4
	baz=1.6						
BLA	Blacksburg	121.60	356	P	PKPdf	10 19 45.9	-0.2
	baz=5.1						
BLA	Blacksburg	121.60	356	P	PKPdf	10 19 45.8	-0.2
	baz=5.1						
T57A	Hurt	121.72	354	P	PKPdf	10 19 46.3	+0.1
	baz=6.3						
T57A				P	PKPdf	10 19 46.3	+0.1
	baz=6.3						
U38A	Gravette	121.89	9	P	PKPdf	10 19 45.9	-0.7
	baz=350,SNR=9.0						
AMTX	Amarillo	121.94	16	P	PKPdf	10 19 46.7	-0.2
	baz=342						
T50A	Nancy	121.96	360	P	PKPdf	10 19 46.1	-0.6
	baz=0.2						
T50A				P	PKPdf	10 19 46.1	-0.6
	baz=0.2						
T47A	Sharon Grove	121.97	2	P	PKPdf	10 19 46.5	-0.2
	baz=358,SNR=12						
PBMO	Poplar Bluff	121.99	5	P	PKPdf	10 19 46.1	-0.7
	baz=354,SNR=5.6						
OK029	Liberty Lake	122.01	12		PKPdf	10 19 45.5	-1.4
RLO	Rose Lookout	122.06	9		PKPdf	10 19 46.0	-0.9
HHAR	Hobbs	122.11	8	P	PKPdf	10 19 46.0	-1.1
	baz=350						
TUL1	Leonard	122.19	10	P	PKPdf	10 19 47.0	-0.1
	baz=348						
121A	Cookes Peak, D	122.24	23	P	PKiKP	10 19 47.8	0.0
	baz=335						
TZTN	Tazewell	122.42	358	P	PKPdf	10 19 47.4	-0.2
	baz=1.7						
TZTN	Tazewell	122.42	358	P	PKiKP	10 19 47.7	-0.1
	baz=1.7						
U49A	Red Boiling Sp	122.47	1	P	PKPdf	10 19 47.3	-0.4
	baz=359,SNR=5.9						
MSTX	Muleshoe	122.51	17	P	PKiKP	10 19 48.2	0.0
	baz=340						
MSTX	Muleshoe	122.51	17	P	PKiKP	10 19 48.2	0.0
	baz=340,SNR=6.4						
WMOK	Wichita Mounta	122.76	13	P	PKPdf	10 19 47.7	-0.7
	baz=345						
WVT	Waverly	122.80	3	PKPdf	PKPdf	10 19 47.8	-0.5
WVT	Waverly	122.80	3	PKIKP	PKPdf	10 19 47.8	-0.5
WVT	Waverly	122.80	3	P	PKPdf	10 19 47.9	-0.5
	baz=357,SNR=14						
WVT	Waverly	122.80	3	P	PKPdf	10 19 48.1	-0.2
	baz=357						
V55A	Taylorsville	123.01	356	P	PKPdf	10 19 48.3	-0.5
	baz=4.3,SNR=5.4						
V55A				P	PKPdf	10 19 48.3	-0.5
	baz=4.3,SNR=5.4						
V52A	Sevierville	123.12	358	P	PKPdf	10 19 49.0	+0.1
	baz=1.6,SNR=7.0						
V51A	Loudon	123.17	359	P	PKPdf	10 19 49.1	0.0
	baz=0.8,SNR=6.1						
V48A	Smith Brothers	123.22	2	P	PKPdf	10 19 48.4	-0.8
	baz=358						
V53A	Saluda	123.27	358	P	PKPdf	10 19 49.4	0.0
	baz=2.5,SNR=8.4						
V53A				P	PKPdf	10 19 49.4	0.0
	baz=2.5,SNR=8.4						
TKL	Tuckaleechee C	123.31	359	PKP	PKPdf	10 19 49.1	-0.3
	comp=Z,14nm,0.7s,baz=135,slow=4.6,SNR=30						
TKL	Tuckaleechee C	123.31	359	P	PKPdf	10 19 49.4	+0.1
	baz=1.4,SNR=6.4						
X37A	Clayton	123.55	10	P	PKPdf	10 19 49.9	+0.1
	baz=348						
W45A	Hickory Valley	123.70	4	P	PKPdf	10 19 49.9	-0.2
	baz=355						
KMSC	Kings Mountain	123.72	356	P	PKPdf	10 19 50.2	+0.1
	baz=4.2,SNR=5.2						
KMSC	Kings Mountain	123.72	356	P	PKPdf	10 19 50.2	+0.1
	baz=4.2						
W50A	Signal Mountai	123.78	0	P	PKPdf	10 19 50.1	-0.2
	baz=360						
MIAR	Mount Ida	123.86	8	P	PKPdf	10 19 50.6	+0.1
	baz=350						
MIAR	Mount Ida	123.86	8	P	PKiKP	10 19 50.7	0.0
	baz=350						
W52A	Murphy	123.88	359	P	PKPdf	10 19 50.4	-0.1
	baz=1.3,SNR=8.5						
CASEE	Lake Jocassee	123.95	358	P	PKPdf	10 19 50.6	0.0
	baz=2.4						
BIRD	Birdtown, Kers	124.16	355	P	PKPdf	10 19 51.0	0.0
	baz=5.2						
X51A	Calhoun	124.41	360	P	PKPdf	10 19 51.4	-0.1
	baz=0.2						
X51A				P	PKPdf	10 19 51.4	-0.1
	baz=0.2						
X48A	Hartselle	124.50	2	P	PKPdf	10 19 51.0	-0.6
	baz=358,SNR=10						
ABTX	Abilene, Hawle	124.59	15	P	PKPdf	10 19 51.3	-0.6
	baz=344						
HODGE	Hodges	124.68	357	P	PKPdf	10 19 52.1	+0.1
	baz=3.2						
Y57A	Sumter	124.77	355	P	PKiKP	10 19 52.4	-0.1
	baz=5.3						
Y57A				P	PKiKP	10 19 52.4	-0.1
	baz=5.3						
Y45A	Yeager Farm, C	124.95	4	P	PKiKP	10 19 53.0	+0.1
	baz=355						
Y52A	Lilburn	125.10	359	P	PKiKP	10 19 53.1	-0.1
	baz=1.1						
Y52A				P	PKiKP	10 19 53.1	-0.1
	baz=1.1						
Y49A	Blount Mountai	125.11	1	P	PKPdf	10 19 52.5	-0.4
	baz=358						
Z41A	Richland Creek	125.23	8	P	PKPdf	10 19 52.6	-0.4
	baz=351						
HAW	Hawthorne Fire	125.51	356	P	PKPdf	10 19 53.7	+0.1
	baz=3.9						
GOGA	Godfrey	125.54	358	P	PKiKP	10 19 53.9	-0.1
	baz=1.8						
GOGA	Godfrey	125.54	358	P	PKPdf	10 19 53.4	-0.3
	baz=1.8						
NHSC	New Hope	125.66	355	P	PKPdf	10 19 53.9	+0.1
	baz=5.6						
WHTX	Lake Whitney,	125.69	13	P	PKPdf	10 19 54.0	0.0
	baz=346						
Z47A	Carrollton	125.71	3	P	PKPdf	10 19 53.5	-0.5
	baz=357						
LRAL	Lakeview Retre	125.91	2	P	PKPdf	10 19 54.4	0.0
	baz=358						
143A	Socs Landing,	125.94	6	P	PKiKP	10 19 54.9	+0.1
	baz=353						
152A	Waverly Hall	126.31	360	P	PKiKP	10 19 55.4	-0.2
	baz=0.4						
154A	Montrose	126.33	358	P	PKiKP	10 19 56.0	+0.3
	baz=2.2						
NATX	Nacogdoches	126.44	10	P	PKiKP	10 19 55.8	-0.1
	baz=349						
VBMS	Vicksburg	126.51	6	P	PKiKP	10 19 56.1	+0.1
	baz=354						
TX31	Lajitas Ar. Si	126.57	20	P	PKPdf	10 19 56.0	+0.1
	baz=338						
TXAR	Lajitas Array	126.57	20	PKP	PKPdf	10 19 55.1	-0.8
	comp=Z,3.2nm,0.7s,baz=184,slow=0.5,SNR=44						
TXAR				pPKP	pPKPdf	10 20 32.4	+0.6
	comp=Z,2.1nm,0.8s,baz=132,slow=1.9,SNR=4.1						
TXAR	Lajitas Array	126.57	20	PKPdf	PKPdf	10 19 55.5	-0.4
TXAR				pPKPdf	pPKPdf	10 20 32.5	+0.7
JCT	Junction City	126.60	16	P	PKiKP	10 19 56.1	-0.2
	baz=343						
JCT	Junction City	126.60	16	P	PKiKP	10 19 56.4	0.0
	baz=343						
435B	Jarrell	126.83	13	P	PKiKP	10 19 56.6	-0.1
	baz=345						
TIGA	Tifton	127.51	358	P	PKPdf	10 19 57.6	+0.1
	baz=1.7						
BRAL	Brewton	127.77	2	P	PKiKP	10 19 58.7	+0.2
	baz=358						
833A	Chaparral WMA,	128.76	16	P	PKiKP	10 20 00.6	0.0
	baz=343						
CELP	Cerrillos	136.81	334		PKPdf	10 20 15.2	-0.2
MDP	Montagnes des	138.68	306	PKP	PKPdf	10 20 19.5	+0.6
	comp=Z,8.9nm,0.7s,baz=337,slow=0.3,SNR=7.1						
ESQI	Esquipulas	144.10	7		PKPbc	10 20 27.7	+0.8
BDFB	Brasilia	144.37	273	PKP	PKPdf	10 20 28.8	-0.3
	comp=Z,29nm,0.6s,baz=90,slow=2.8,SNR=40						
BDFB	Brasilia	144.37	273	PKPdf	PKPdf	10 20 28.6	-0.5
URIC	Uribia, Colomb	144.72	337	*e*P	PKPdf	10 20 29.2	-0.4
TGUH	Tegucigalpa,Un	144.77	4	*e*P	PKPdf	10 20 30.0	+0.1
DABV	Dabajuro	144.91	335	*e*P	PKPdf	10 20 29.9	-0.1
PRVC	Isla de Provid	145.31	353	*e*P	PKPab	10 20 30.7	-0.1
BAUV	El Baul	145.53	329	PKPdf	PKPbc	10 20 31.4	0.0
MG03	Isla Dawson	145.65	195		PKPab	10 20 31.1	+0.1
CRJC	Cerrejon, Guaj	145.66	338	*e*P	PKPbc	10 20 31.8	-0.1
SMRC	Santa Marta, M	145.97	341	*e*P	PKPbc	10 20 32.7	0.0
CRIN	San Cristobal	146.13	3	*e*P	PKPab	10 20 34.8	+0.8
BOAV	Boa Vista	146.27	311	PKPab	PKPbc	10 20 33.2	-0.4
CNGN	Cerro Negro	146.35	3	*e*P	PKPab	10 20 35.3	+0.5
GO10	Punta Arenas	146.43	195		PKPab	10 20 33.6	-0.5
SDV	Santo Domingo	146.75	333		PKPdf	10 20 34.3	+0.9
MG04	Isla Riesco	146.83	195		PKPbc	10 20 33.4	-0.6
ACON	Acoyapa	146.91	0		PKPdf	10 20 33.2	-0.1
ACON	Acoyapa	146.91	0	*e*P	PKPdf	10 20 34.0	+0.7
LL6C	La Loma 6 Bece	146.99	338	*e*P	PKPbc	10 20 35.2	-0.5
LL1C	La Loma 1 Cana	147.27	338	*e*P	PKPbc	10 20 36.4	-0.1
SJCC	San Jacinto, C	147.45	341	*e*P	PKPbc	10 20 36.2	-0.8
ORTG	Ortega, Santa	148.50	1		PKPdf	10 20 36.9	+0.8
PAMC	Pamplona, Colo	148.99	335	*e*P	PKPdf	10 20 37.7	+0.3
BCIP	Isla Barro Col	149.25	350	*e*P	PKPdf	10 20 36.9	-0.4
BRRC	Barranca, Sant	149.59	337	*e*P	PKiKP	10 20 43.3	-0.2
UREC	San Jos de Ur	149.59	341	*e*P	PKPdf	10 20 38.6	+0.7
ZARC	Zaragoza, Cauc	149.62	339	*e*P	PKPbc	10 20 42.6	0.0
BARC	Barichara	149.86	336	*e*P	PKPdf	10 20 39.1	+0.6
BRU2	Volcan	149.97	355		PKPbc	10 20 43.2	-0.4
BRU2	Volcan	149.97	355	*e*P	PKPbc	10 20 43.0	-0.6
PTBC	PUERTO BERRIO;	150.38	338	*e*P	PKPdf	10 20 39.2	+0.2
RUSC	La Rusia	150.46	335	*e*P	PKPdf	10 20 40.4	+0.6
DBBC	Dabeiba	150.49	342	*e*P	PKiKP	10 20 46.7	+1.2
HELC	Santa Helena	151.06	340	*e*P	PKiKP	10 20 47.1	+0.1
SPBC	San Pablo de B	151.06	337	*e*P	PKPdf	10 20 41.3	+1.1
CACAO	El Cacao, Vera	151.19	351	*e*P	PKPbc	10 20 45.6	-0.6
NORC	Norcasia	151.43	338	*e*P	PKiKP	10 20 47.3	-0.1
CBOC	Ciudad Bolivar	151.52	341	*e*P	PKPbc	10 20 47.2	-0.1
PTGC	Puerto Gaitan,	151.59	332	*e*P	PKPbc	10 20 46.1	-1.2
ROSC	El Rosal	151.90	337	PKP	PKPdf	10 20 43.5	+1.6
	comp=Z,68nm,0.9s,baz=147,slow=1.7,SNR=20						
ROSC				PKPbc	PKiKP	10 20 50.1	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,316nm,0.7s,baz=150,slow=7.3,SNR=57						
ROSC	**El Rosal**	**151.90**	**337**	*e*P	**PKPdf**	**10 20 43.9**	**+2.0**
GUY2C	**Guyana, Caldas**	**151.91**	**339**	*e*P	**PKPdf**	**10 20 42.5**	**+0.5**
PLMC	**San Jos del P**	**152.51**	**341**	*e*P	**PKPdf**	**10 20 43.0**	**+0.6**
ANIL	**Santa Ana**	**152.61**	**338**	*e*P	**PKiKP**	**10 20 50.1**	**0.0**
ITQB	**Itaqui**	**152.98**	**246**		**PKPbc**	**10 20 49.9**	**0.0**
GUVC	**San Jose del G**	**153.28**	**331**	*e*P	**PKiKP**	**10 20 51.2**	**0.0**
YOTC	**Yotoco, Valle**	**153.40**	**340**	*e*P	**PKPdf**	**10 20 44.0**	**+0.3**
TRQA	**Tornquist**	**153.96**	**225**	PKPdf	**PKPdf**	**10 20 44.0**	**+0.3**
TRQA					**PKiKP**	**10 20 52.0**	**+0.2**
TRQA				PKPab	**PKPab**	**10 21 03.0**	**-2.6**
CPUP	**Villa Florida**	**154.08**	**253**	PKP	**PKPdf**	**10 20 44.5**	**+0.4**
	comp=Z,14nm,1.1s,baz=78,slow=1.1,SNR=12						
CPUP				PKPbc	**PKPbc**	**10 20 52.0**	**-0.3**
	comp=Z,18nm,0.6s,baz=106,slow=2.0,SNR=37						
CPUP				PKPab	**PKPab**	**10 21 06.5**	**+0.1**
	comp=Z,10nm,0.7s,baz=81,slow=2.8,SNR=8.6						
MACC	**Macarena, Meta**	**154.17**	**333**	*e*P	**PKPdf**	**10 20 43.7**	**-1.0**
GARC	**Garzon, Huila**	**154.78**	**337**	*e*P	**PKPdf**	**10 20 47.0**	**+1.2**
POPC	**Popayan, Colom**	**154.86**	**340**	*e*P	**PKPbc**	**10 20 54.6**	**-0.1**
FLOC	**Florencia**	**155.40**	**337**	*e*P	**PKPdf**	**10 20 47.7**	**+1.3**
SIV	**San Ignacio**	**156.57**	**279**	PKP	**PKPdf**	**10 20 48.3**	**+0.5**
	comp=Z,5.3nm,0.9s,baz=82,slow=1.3,SNR=10						
SIV				PKPab	**PKPab**	**10 21 17.9**	**+0.5**
	comp=Z,6.2nm,1.0s,baz=69,slow=6.5,SNR=7.1						
PLCA	**Paso Flores**	**157.02**	**209**	PKP	**PKPdf**	**10 20 48.9**	**+1.1**
	comp=Z,4.6nm,1.0s,baz=54,slow=2.2,SNR=6.5						
PLCA				PKPab	**PKPab**	**10 21 18.0**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=93,slow=2.2,SNR=13						
OTAV	**Otavalo**	**157.58**	**342**	*e*P	**PKPdf**	**10 20 50.8**	**+1.1**
ETMB	**Extrema**	**158.48**	**299**	PKPdf	**PKPdf**	**10 20 50.2**	**0.0**
ETMB				PKPab	**PKPab**	**10 21 25.3**	**-0.3**
LPAZ	**La Paz**	**163.11**	**284**	PKP	**PKPdf**	**10 20 56.3**	**+0.4**
	comp=Z,6.2nm,0.7s,baz=50,slow=3.2,SNR=26						
LPAZ				PKPab	**PKPab**	**10 21 46.4**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=90,slow=15,SNR=3.9						
LPAZ	**La Paz**	**163.11**	**284**	*e*P	**PKPdf**	**10 20 56.0**	**+0.1**
ATAH	**Atahualpa**	**164.44**	**334**	PKP	**PKPdf**	**10 20 58.3**	**+1.3**
	comp=Z,14nm,0.9s,baz=328,slow=2.5,SNR=9.4						
ATAH				PKPab	**PKPab**	**10 21 53.7**	**+1.7**
	comp=Z,25nm,0.8s,baz=355,slow=2.3,SNR=14						
LVC	**Limon Verde**	**164.86**	**262**	PKPab	**PKPab**	**10 21 54.0**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=68,slow=4.5,SNR=6.0						
NNA	**Nana**	**167.76**	**318**	PKP	**PKPdf**	**10 20 58.5**	**-0.6**
	comp=Z,5.0nm,0.4s,baz=0.5,slow=6.2,SNR=4.0						

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*IDC **01** 10:06:13.4±1.1, 6°.61N×72°.76W, h167^{km}±16^{km}, mbtmp4.3/2, Error ellipse: s-maj=456.3km s-min=8.6km az=132.0*

*RSNC **01** 10:06:14.4±1.0, 6°.79N×73°.13W, h154^{km}±3^{km}, ML3.3, Mw3.6*

ISC 01 10:06:12.4±1.0, **6°.83N**±0°.03×**73°.12W**±0°.04, **h162**^{km}±7^{km}, **n40**, σ**1^{s}66**/75, **1C-3D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**194**⇓	*i*P	**Pn**	**10 06 35.0**	**+0.4**
BARC				*e*S	**Sn**	**10 06 50.5**	**-1.1**
BARC				*i*		10 06 53.9	
	comp=Z,328nm,0.5s						
BRRC	**Barranca, Sant**	**0.65**	**295**	*e*P	**Pn**	**10 06 37.0**	**+1.0**
BRRC				*e*S	**Sn**	**10 06 54.4**	**+0.5**
BRRC				*i*		10 06 59.5	
	comp=Z,388nm,0.2s						
PAMC	**Pamplona, Colo**	**0.66**	**40**⇓	*i*P	**Pn**	**10 06 37.9**	**+1.3**
PAMC				*e*S	**Sn**	**10 06 55.3**	**+0.2**
PAMC				*i*		10 06 57.7	
	comp=Z,523nm,0.6s						
RUSC	**La Rusia**	**0.94**	**178**	*e*P	**Pn**	**10 06 38.9**	**+0.4**
RUSC				*e*S	**Sn**	**10 06 57.2**	**-1.2**
RUSC				*i*		10 06 58.8	
	comp=Z,212nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*e*P	**Pn**	**10 06 41.5**	**0.0**
PTBC				*e*S	**Sn**	**10 07 03.4**	**-0.5**
PTBC				*i*		10 07 08.4	
	comp=Z,279nm,0.4s						
TAMC	**Tame, Arauca**	**1.38**	**107**⇓	*i*P	**Pn**	**10 06 43.2**	**+1.4**
TAMC				*e*S	**Sn**	**10 07 04.7**	**+0.3**
TAMC				*i*		10 07 06.1	
	comp=Z,151nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**219**	*e*P	**Pn**	**10 06 43.8**	**+0.7**
SPBC				*e*S	**Sn**	**10 07 06.5**	**-0.2**
SPBC				*i*		10 07 10.7	
	comp=Z,310nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	**Pn**	**10 06 47.8**	**+1.2**
ZARC				*e*S	**Sn**	**10 07 13.4**	**+0.5**
ZARC				*i*		10 07 18.8	
	comp=Z,364nm,0.3s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**10 06 50.8**	**+0.7**
NORC				*e*S	**Sn**	**10 07 19.5**	**+0.3**
NORC				*i*		10 07 23.0	
	comp=Z,162nm,0.5s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**10 06 55.2**	**+2.9**
	comp=Z,67nm,0.3s,baz=308,slow=24,SNR=33						
ROSC				S	**Sn**	**10 07 25.2**	**+2.1**
	comp=Z,99nm,0.4s,baz=34,slow=14,SNR=5.7						
ROSC	**El Rosal**	**2.31**	**211**	*e*P	**Pn**	**10 06 54.7**	**+2.4**
ROSC				*e*S	**Sn**	**10 07 25.2**	**+2.1**
ROSC				*i*		10 07 31.1	
	comp=Z,257nm,0.5s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**10 06 55.4**	**+1.2**
HELC				*e*S	**Sn**	**10 07 25.1**	**-1.4**
HELC				*i*		10 07 35.6	
	comp=Z,100nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	**Pn**	**10 06 55.0**	**0.0**
UREC				*e*S	**Sn**	**10 07 26.6**	**-1.2**
UREC				*i*		10 07 34.9	
	comp=Z,180nm,0.2s						
SOCV	**Socops**	**2.67**	**57**	*e*P	**Pn**	**10 06 57.6**	**+1.3**
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*i* P	**Pn**	**10 07 00.3**	**+3.4**
LL1C				*e*S	**Sn**	**10 07 34.6**	**+3.1**
LL1C				*i*		10 07 40.8	
	comp=Z,489nm,0.5s						
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**10 06 58.9**	**+1.3**
GUY2C				*e*S	**Sn**	**10 07 34.8**	**+2.2**
GUY2C				*i*		10 07 41.6	
	comp=Z,132nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**⇑	*i*P	**Pn**	**10 06 57.8**	**0.0**
PTGC				*e*S	**Sn**	**10 07 30.9**	**-2.0**
PTGC				*i*		10 07 33.8	
	comp=Z,80nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.89**	**357**	*e*P	**Pn**	**10 06 59.9**	**+1.0**
LL6C				*e*S	**Sn**	**10 07 35.1**	**+0.1**
LL6C				*i*		10 07 46.7	
	comp=Z,48nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*e*P	**Pn**	**10 07 02.5**	**+1.7**
CBOC				*e*S	**Sn**	**10 07 34.4**	**-4.0**
CBOC				*i*		10 07 49.5	
	comp=Z,41nm,0.3s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**10 07 04.3**	**+1.3**
	comp=Z,93nm,0.3s,baz=205,slow=3.9,SNR=45						
SDV				S	**Sn**	**10 07 40.9**	**-1.3**
	comp=Z,32nm,0.5s,baz=59,slow=11,SNR=7.5						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	**Pn**	**10 07 05.1**	**+2.2**
ARGC				*e*S	**Sn**	**10 07 40.7**	**-1.4**
ARGC				*i*		10 07 55.9	
	comp=Z,46nm,0.5s						
ANIL	**Santa Ana**	**3.25**	**224**	*e*P	**Pn**	**10 07 05.1**	**+1.4**
ANIL				*e*S	**Sn**	**10 07 45.8**	**+2.2**
ANIL				*i*		10 07 50.1	
	comp=Z,240nm,0.3s						
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**10 07 08.3**	**+0.8**
PRAC				*e*S	**Sn**	**10 07 50.9**	**+0.6**
PRAC				*i*		10 07 56.6	
	comp=Z,126nm,0.4s						
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**10 07 08.8**	**0.0**
SJCC				*e*S	**Sn**	**10 07 49.8**	**-2.9**
SJCC				*i*		10 07 55.1	
	comp=Z,55nm,0.4s						
PLMC	**San Jos del P**	**3.68**	**239**	*e*P	**Pn**	**10 07 10.5**	**+1.5**
PLMC				*e*S	**Sn**	**10 07 52.8**	**-0.2**
PLMC				*i*		10 07 59.2	
	comp=Z,30nm,0.2s						
LCBC	**Los crdobas,**	**3.79**	**302**	*e*P	**Pn**	**10 07 10.9**	**+0.5**
LCBC				*e*S	**Sn**	**10 07 53.9**	**-1.6**
LCBC				*i*		10 08 00.4	
	comp=Z,51nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**10 07 15.3**	**0.0**
CRJC				*e*S	**Sn**	**10 08 01.3**	**-3.0**
CRJC				*i*		10 08 07.7	
	comp=Z,60nm,0.4s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**10 07 17.5**	**+0.7**
GUVC	**San Jose del G**	**4.29**	**173**	*e*P	**Pn**	**10 07 16.4**	**-0.4**
GUVC				*e*S	**Sn**	**10 08 04.8**	**-2.3**
GUVC				*i*		10 08 11.9	
	comp=Z,40nm,0.2s						
SMRC	**Santa Marta, M**	**4.44**	**346**	*e*P	**Pn**	**10 07 20.4**	**+1.7**
SMRC				*e*S	**Sn**	**10 08 08.7**	**-1.9**
SMRC				*i*		10 08 13.5	
	comp=Z,43nm,0.2s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**10 07 21.4**	**-0.9**
MACC				*e*S	**Sn**	**10 08 14.3**	**-2.8**
MACC				*i*		10 08 21.8	
	comp=Z,18nm,0.4s						
DABV	**Dabajuro**	**4.75**	**31**	*e*P	**Pn**	**10 07 23.7**	**+0.9**
DABV				*e*S	**Sn**	**10 08 16.5**	**-1.3**
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P	**Pn**	**10 07 25.5**	**-0.1**
URIC				*e*S	**Sn**	**10 08 18.9**	**-4.0**
URIC				*i*		10 08 26.7	
	comp=Z,14nm,0.5s						
MALC	**Bahia Malaga**	**5.04**	**236**	*i* P	**Pn**	**10 07 29.5**	**+2.8**
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	**Pn**	**10 07 28.9**	**+0.1**
GARC				*e*S	**Sn**	**10 08 26.0**	**-2.5**
GARC				*i*		10 08 31.8	
	comp=Z,33nm,0.2s						
POPC	**Popayan, Colom**	**5.54**	**220**	*e*P	**Pn**	**10 07 34.4**	**+0.9**
POPC				*e*S	**Sn**	**10 08 35.8**	**-1.2**
POPC				*i*		10 08 43.6	
	comp=Z,3.7nm,0.3s						
FLOC	**Florencia**	**5.79**	**206**	*e*P	**Pn**	**10 07 37.4**	**+0.7**
FLOC				*e*S	**Sn**	**10 08 42.4**	**-0.2**
FLOC				*i*		10 08 46.4	
	comp=Z,6.1nm,0.4s						
BBAC	**Balboa, Cauca**	**6.30**	**221**	*e*P	**Pn**	**10 07 44.3**	**+0.7**
BBAC				*e*S	**Sn**	**10 08 52.7**	**-2.3**
BBAC				*i*		10 09 03.9	
	comp=Z,3.8nm,0.4s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKiKP**	**10 25 43.2**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=126,slow=3.6,SNR=2.5						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKiKP**	**10 25 45.8**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=107,slow=3.0,SNR=8.6						

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*IDC **01** 10:10:39.5±7.2, 6°.08S×105°.66E, h78^{km}±62^{km}, mb4.2/17, mbtmp4.5/17, Error ellipse: s-maj=26.7km s-min=12.5km az=74.0*

*NEIC **01** 10:10:45.4±1.8, 6°.52S±0°.08×105°.70E±0°.07, h109^{km}±7^{km}, mb4.5/19, Error ellipse: s-maj=12.0km s-min=9.0km az=201.0*

*DJA **01** 10:10:46.0±0.4, 6°S±5°×10°6E±°, h123^{km}±4^{km}, M5.0/13, mB6.1/3, mb5.2/4, MLv4.7/13, Mw(mB)5.8/3*

ISC 01 10:10:45.6±0.7, **6°.32S**±0°.06×**105°.65E**±0°.05, **h138**^{km}±5^{km}, **n80**, σ**1^{s}43**/80, **mb4.4**/26, **1D**, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.52**	**67**	P	**Pn**	**10 11 04.8**	**-0.9**
SBJI				S	**Sn**	**10 11 19.3**	**-1.6**
TNG	**Tangerang**	**1.00**	**82**	P	**Pn**	**10 11 12.5**	**+3.3**
TNG				S	**Sn**	**10 11 30.1**	**+2.9**
BLSI	**Bandar Lampung**	**1.03**	**337**	P	**Pn**	**10 11 09.3**	**-0.3**
BLSI				S	**Sn**	**10 11 26.8**	**-1.0**
DBJI	**Dramaga**	**1.11**	**102**	P	**Pn**	**10 11 09.5**	**-0.8**
DBJI				S	**Sn**	**10 11 28.1**	**-1.1**
SKJI	**Sukabumi**	**1.13**	**127**	P	**Pn**	**10 11 09.7**	**-0.7**
CBJI	**Citeko**	**1.20**	**95**	P	**Pn**	**10 11 11.8**	**+0.7**
KASI	**Kota Agung**	**1.40**	**304**	P	**Pn**	**10 11 13.4**	**+0.3**
KASI				S	**Sn**	**10 11 33.4**	**-0.8**
KLI	**Kotabumi**	**1.65**	**331**	P	**Pn**	**10 11 16.7**	**+0.7**
CNJI	**Cibinong**	**1.77**	**124**	P	**Pn**	**10 11 15.5**	**-1.8**
LWLI	**Liwa**	**2.05**	**309**	P	**Pn**	**10 11 21.4**	**+0.7**
JCJI	**Jatiwangi**	**2.61**	**94**	P	**Pn**	**10 11 27.7**	**+0.2**
MNAI	**Manna**	**3.32**	**306**	Pn	**Pn**	**10 11 38.0**	**+1.4**
MNAI	**Manna**	**3.32**	**306**	P	**Pn**	**10 11 37.7**	**+1.1**
TPI	**Tanjungpandan**	**4.06**	**29**	P	**Pn**	**10 11 46.2**	**-0.2**
XMIS	**Christmas Isla**	**4.13**	**180**	Pn	**Pn**	**10 11 43.7**	**-3.6**
XMIS					Sn	10 12 24.2	-11
PPBI	**Pangkal Pinang**	**4.16**	**7**	P	**Pn**	**10 11 48.3**	**+0.6**
SMRI	**Semarang**	**4.81**	**99**	Pn	**Pn**	**10 11 56.5**	**+0.2**
SMRI	**Semarang**	**4.81**	**99**	P	Pn	10 12 03.1	+6.8
JMBI	**JAMBI**	**5.07**	**337**	P	**Pn**	**10 12 00.9**	**+1.1**
	0.8nm179nm,0.8s						
UGM	**Wanagama**	**5.09**	**108**		**Pn**	**10 11 58.7**	**-1.4**
NGJI	**Ngawi**	**5.86**	**101**	P	Pn	10 12 19.3	+8.9
KRJI	**Kerinci**	**5.92**	**315**	P	**Pn**	**10 12 12.1**	**+0.8**
	8.2nm73µm500nm,0.5s						
PWJI	**Pagerwojo**	**6.33**	**106**	P	**Pn**	**10 12 17.0**	**+0.3**
	0.5nm106nm,0.8s						
PPSI	**Pulau Pagai**	**6.64**	**302**	P	**Pn**	**10 12 22.9**	**+2.1**
BKNI	**Bangkinang**	**8.05**	**325**	Pn	**Pn**	**10 12 39.2**	**-0.6**
JAGI	**Jajag, Banyuwa**	**8.70**	**105**	Pn	**Pn**	**10 12 47.6**	**-0.8**
TOLI2	**Tolitoli**	**16.81**	**64**	P	**Pn**	**10 14 33.9**	**+0.9**
TOLI2				IAmb	IAmb	10 14 40.3	
	comp=Z,24nm,1.0s						
SOEI	**Soe**	**18.74**	**102**		**P**	**10 14 54.0**	**-0.1**
SOEI					**S**	**10 18 15.0**	**-5.5**
PSA00	**Pilbara Seismi**	**20.46**	**139**	P	**P**	**10 15 12.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.74**	**123**	P	**P**	**10 15 36.9**	**+0.7**
	comp=Z,5.3nm,0.7s,baz=308,slow=7.7,SNR=9.3						
	comp=Z,5.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.74**	**123**	P	**P**	**10 15 36.8**	**+0.6**
KNRA	**Kununurra**	**24.49**	**114**	P	**P**	**10 15 51.8**	**-0.4**
KNRA				IAmb	IAmb	10 15 54.3	
	comp=Z,14nm,0.7s						
MTN	**Manton Dam**	**25.93**	**106**	P	**P**	**10 16 05.5**	**+0.3**
MTN				IAmb	IAmb	10 16 09.9	
	comp=Z,14nm,0.5s						
H01W3	**Cape Leeuwin H**	**29.48**	**166**	T	T	10 47 27.1	
	baz=344,slow=76,SNR=20						
H01W1	**Cape Leeuwin H**	**29.50**	**166**	T	T	10 47 28.4	
	baz=344,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**29.50**	**166**	T	T	10 47 27.0	
	baz=344,slow=76,SNR=18						
WB0	**Warramunga Arr**	**30.95**	**118**	P	**P**	**10 16 49.5**	**-0.4**
WRA	**Warramunga Arr**	**30.97**	**119**	P	**P**	**10 16 50.1**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=296,slow=9.4,SNR=28						
WRA				PcP	**PcP**	**10 19 43.4**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=307,slow=1.9,SNR=13						
	comp=Z,3.3nm,0.7s						
WRA	**Warramunga Arr**	**30.97**	**119**	P	**P**	**10 16 50.1**	**+0.1**
WRAB	**Tennant Creek**	**30.98**	**119**	P	**P**	**10 16 50.1**	**+0.1**
WRAB				IAmb	IAmb	10 16 52.2	
	comp=Z,5.6nm,0.7s						
WB2	**Warramunga Arr**	**30.98**	**119**	P	**P**	**10 16 49.8**	**-0.3**
WB2				IAmb	IAmb	10 16 52.1	
	comp=Z,5.5nm,0.7s						
WR0	**Warramunga Arr**	**31.15**	**119**	P	**P**	**10 16 51.9**	**+0.3**
WR0				IAmb	IAmb	10 16 52.7	
	comp=Z,7.5nm,0.6s						
AS31	**Alice Springs**	**32.17**	**125**	P	**P**	**10 17 00.8**	**+0.3**
ASAR	**Alice Springs**	**32.17**	**125**	P	**P**	**10 17 01.4**	**+0.9**
	comp=Z,11nm,0.7s,baz=293,slow=7.6,SNR=109						
ASAR				PcP	**PcP**	**10 19 47.1**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=293,slow=2.2,SNR=7.2						
ASAR				S	**S**	**10 22 01.4**	**-2.0**
	comp=Z,2.1nm,0.9s,baz=291,slow=15,SNR=11						
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**32.17**	**125**	P	**P**	**10 17 01.2**	**+0.7**
H08S2	**Diego Garcia H**	**32.94**	**266**	T	T	10 51 34.3	
	baz=90,slow=75,SNR=5.9						
H08S3	**Diego Garcia H**	**32.94**	**266**	T	T	10 51 35.1	
	baz=90,slow=75,SNR=5.1						
H08S1	**Diego Carcia H**	**32.95**	**266**	T	T	10 51 35.9	
	baz=90,slow=75,SNR=13						
COEN	**Coen**	**37.67**	**105**	P	**P**	**10 17 47.1**	**-0.7**
BBOO	**Buckleboo**	**38.66**	**137**	P	**P**	**10 17 56.3**	**+0.4**
NJ2	**Nanjing**	**40.18**	**17**	*e*P	**P**	**10 18 10.9**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
CTAO	**Charters Tower**	**41.70**	**113**	P	**P**	**10 18 21.9**	**+0.8**
CTAO				IAmb	IAmb	10 18 24.6	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**42.09**	**132**	P	**P**	**10 18 25.6**	**+1.5**
	comp=Z,24nm,0.7s,baz=306,slow=7.9,SNR=39						
	comp=Z,24nm,0.7s						
STKA	**Stephens Creek**	**42.09**	**132**	P	**P**	**10 18 25.2**	**+1.1**
STKA				IAmb	IAmb	10 18 26.3	
	comp=Z,4.8nm,0.7s						
EIDS	**Eidsvold**	**47.34**	**119**	P	**P**	**10 19 06.7**	**+0.9**
EIDS				IAmb	IAmb	10 19 07.9	
	comp=Z,14nm,1.4s						
KSRS	**Korea Array**	**48.26**	**24**	P	**P**	**10 19 12.3**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=221,slow=7.6,SNR=20						
KSRS				PcP	**PcP**	**10 20 37.6**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=221,slow=3.8,SNR=6.5						
	comp=Z,1.9nm,0.6s						
MJAR	**Matsushiro Arr**	**52.42**	**33**	P	**P**	**10 19 41.0**	**-3.0**
	comp=Z,1.4nm,0.7s,baz=200,slow=7.8,SNR=7.5						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	**53.92**	**1**	P	**P**	**10 19 54.4**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=172,slow=9.2,SNR=13						
SONM				PcP	**PcP**	**10 20 57.5**	**-1.1**
	comp=Z,2.4nm,0.6s,baz=175,slow=4.1,SNR=9.7						
	comp=Z,2.7nm,0.7s						
BNX	**BinXian**	**55.35**	**18**⇓	P	**P**	**10 20 05.0**	**-0.1**
BNX				pmax	pmax		
	comp=Z,26nm,0.7s						
BNX				pmax	pmax		
	comp=Z,62nm,9.8s						
USRK	**Ussuriysk Ar.**	**55.62**	**23**	P	**P**	**10 20 06.0**	**-0.9**
	comp=Z,5.3nm,0.5s,baz=222,slow=6.1,SNR=19						
	comp=Z,5.3nm,0.5s						
ZALV	**Zalesovo Beam**	**62.55**	**346**	P	**P**	**10 20 52.5**	**-2.0**
	comp=Z,1.2nm,0.3s,baz=155,slow=5.9,SNR=6.3						
	comp=Z,1.2nm,0.3s						
PETK	**Petropavlovsk-**	**73.66**	**30**	P	**P**	**10 22 02.7**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=184,slow=4.5,SNR=12						
	comp=Z,2.3nm,0.6s						
KBZ	**Khabaz**	**75.25**	**318**	P	**P**	**10 22 12.9**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=149,slow=6.7,SNR=5.9						
	comp=Z,2.6nm,0.8s						
CSS	**Mathiatis**	**79.31**	**307**	P	P	10 22 43.3	+7.1
BRTR	**Keskin Array B**	**80.38**	**312**	P	**P**	**10 22 42.1**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=130,slow=6.4,SNR=9.5						
	comp=Z,2.8nm,0.8s						
QSPA	**South Pole Qui**	**83.67**	**180**	P	**P**	**10 23 00.2**	**+1.6**
	comp=Z,5.1nm,1.0s,baz=22,slow=1.6,SNR=8.0						
	comp=Z,5.1nm,1.0s						
QSPA	**South Pole Qui**	**83.67**	**180**	P	**P**	**10 23 00.5**	**+1.8**
QSPA				IAmb	IAmb	10 23 01.4	
	comp=Z,6.4nm,1.1s						
KLMR	**Klimovskoe**	**84.17**	**333**	*e*P	**P**	**10 23 00.0**	**-1.0**
KLMR				AMP		10 23 01.9	
	comp=Z,20nm,1.3s						
AKASG	**Malin Array Be**	**86.33**	**322**	P	**P**	**10 23 11.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=81,slow=5.5,SNR=5.1						
	comp=Z,0.6nm,0.5s						
SNAA	**Sanae**	**89.77**	**197**	P	**P**	**10 23 30.5**	**+2.4**
	comp=Z,3.3nm,0.8s,baz=98,slow=4.0,SNR=10.0						
	comp=Z,3.3nm,0.8s						
SNAA	**Sanae**	**89.77**	**197**	P	**P**	**10 23 31.1**	**+3.0**
SNAA				IAmb	IAmb	10 23 32.2	
	comp=Z,4.8nm,1.0s						
FINES	**FINESS Array B**	**90.54**	**332**	P	**P**	**10 23 31.9**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=101,slow=5.3,SNR=11						
	comp=Z,1.4nm,0.5s						
ARCES	**ARCESS Array B**	**92.44**	**340**	P	**P**	**10 23 39.1**	**-1.2**
	comp=Z,4.4nm,0.9s,baz=96,slow=5.4,SNR=12						
	comp=Z,4.4nm,0.9s						
NVAR	**Mina Array Bea**	**129.03**	**45**	PKP	**PKiKP**	**10 29 40.0**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=276,slow=2.8,SNR=4.8						
PDAR	**Pinedale Array**	**132.22**	**35**	PKP	**PKiKP**	**10 29 44.6**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=264,slow=1.5,SNR=3.6						
CPUP	**Villa Florida**	**143.59**	**206**	PKP	PKPbc	10 30 03.7	+1.2
	comp=Z,1.0nm,0.4s,baz=79,slow=1.7,SNR=3.3						
TXAR	**Lajitas Array**	**144.10**	**47**	PKP	PKPbc	10 30 04.8	+0.7
	comp=Z,5.8nm,0.6s,baz=270,slow=1.1,SNR=83						
BDFB	**Brasilia**	**145.99**	**230**	PKPbc	**PKiKP**	**10 30 12.8**	**-0.8**
	comp=Z,2.1nm,0.4s,baz=120,slow=6.5,SNR=4.0						
LVC	**Limon Verde**	**150.76**	**190**	PKPbc	**PKiKP**	**10 30 24.8**	**+1.3**
	comp=Z,2.1nm,0.7s,baz=336,slow=1.6,SNR=5.3						
SIV	**San Ignacio**	**154.23**	**211**	PKPab	**PKPab**	**10 30 46.3**	**+1.7**
	comp=Z,2.3nm,0.7s,baz=137,slow=6.7,SNR=11						

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*GUC **01** 10:14:26.8±0.6, 21°.58S×68°.39W, h120^{km}±5^{km}, ML3.9*

*IDC **01** 10:14:27.6±3.0, 21°.59S×67°.87W, h120^{km}±29^{km}, mb3.9/2, mbtmp3.9/5, Error ellipse: s-maj=49.8km s-min=25.7km az=126.0*

ISC 01 10:14:25.3±0.9, **21°.53S**±0°.05×**68°.34W**±0°.08, **h122**^{km}±11^{km}, **n18**, σ**1^{s}33**/32, **10C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.88**	**252**⇑	*i*P	**Pn**	**10 14 47.5**	**+0.8**
PB09				*i* S	**Sn**	**10 15 03.0**	**+0.2**
PB01	**IPOC Station P**	**1.18**	**294**⇑	*i*P	**Pn**	**10 14 50.0**	**+0.5**
PB01				*i* S	**Sn**	**10 15 07.4**	**-0.3**
PB01				IAML		10 15 09.8	
	comp=N,1µm,0.3s						
LVC	**Limon Verde**	**1.20**	**206**⇑	*i*P	**Pn**	**10 14 50.5**	**+0.5**
LVC				*i* S	**Sn**	**10 15 08.6**	**-0.1**
PB07	**IPOC Station P**	**1.45**	**262**⇑	*i*P	**Pn**	**10 14 52.7**	**+0.1**
PB07				*i* S	**Sn**	**10 15 12.5**	**-0.7**
PB07				IAML		10 15 13.5	
	comp=N,2µm,0.4s						
PB02	**IPOC Station P**	**1.47**	**278**⇑	*i*P	**Pn**	**10 14 52.8**	**+0.2**
PB02				*i* S	**Sn**	**10 15 12.8**	**-0.6**
PB02				IAML		10 15 14.3	
	comp=E,3µm,0.1s						
PB06	**IPOC Station P**	**1.64**	**224**⇑	*i*P	**Pn**	**10 14 54.8**	**+0.1**
PB06				*i* S	**Sn**	**10 15 16.1**	**-1.0**
PATCX	**Punta Patache**	**1.83**	**292**⇑	*i*P	**Pn**	**10 14 57.4**	**+0.4**
PATCX				*i* S	**Sn**	**10 15 21.0**	**-0.1**
PATCX				IAML		10 15 22.7	
	comp=E,2µm,0.3s						
PB04	**IPOC Station P**	**1.86**	**244**⇑	*i*P	**Pn**	**10 14 57.0**	**-0.4**
PB04				*i* S	**Sn**	**10 15 20.7**	**-1.1**
PB04				IAML		10 15 25.1	
	comp=N,607nm,0.3s						
TA01	**Diego Aracena**	**1.97**	**299**	*i* P	**Pn**	**10 14 58.5**	**0.0**
TA01				*i* S	**Sn**	**10 15 23.6**	**-0.3**
TA01				IAML		10 15 25.0	
	comp=E,1µm,0.4s						
PB15	**IPOC Station P**	**1.97**	**212**	*e*P	**Pn**	**10 14 59.0**	**+0.2**
PB15				*e*S	**Sn**	**10 15 24.4**	**0.0**
GO01	**Chusmiza**	**2.02**	**336**⇑	*i*P	**Pn**	**10 15 01.1**	**+1.5**
GO01				*i* S	**Sn**	**10 15 27.2**	**+1.5**
GO01				IAML		10 15 31.3	
	comp=N,406nm,0.2s						
TA02	**Huaiquique**	**2.09**	**306**	*e*P	**Pn**	**10 15 00.2**	**+0.1**
TA02				*i* S	**Sn**	**10 15 26.1**	**-0.5**
TA02				IAML		10 15 27.0	
	comp=N,1µm,0.3s						
PB11	**IPOC Station P**	**2.15**	**325**⇑	*i*P	**Pn**	**10 15 01.5**	**+0.5**
PB11				*i* S	**Sn**	**10 15 28.4**	**+0.2**
PB11				IAML		10 15 30.8	
	comp=E,869nm,0.5s						
LPAZ	**La Paz**	**5.22**	**2**	P	**Pn**	**10 15 44.9**	**+3.1**
	comp=E,1.3nm,0.3s,baz=193,slow=8.4,SNR=19						
SIV	**San Ignacio**	**8.81**	**53**	P	**Pn**	**10 16 28.6**	**-1.2**
	comp=E,2.4nm,0.5s,baz=246,slow=11,SNR=19						
SIV				S	**Sn**	**10 18 02.2**	**-5.3**
	comp=E,2.5nm,0.9s,baz=302,slow=22,SNR=7.5						
PLCA	**Paso Flores**	**19.24**	**185**	P	**Pn**	**10 18 42.1**	**-0.2**
	comp=E,2.0nm,1.1s,baz=0.0,slow=8.1,SNR=1.7						
DBIC	**Dimbokro**	**68.23**	**73**	P	**P**	**10 25 13.5**	**+0.3**
	comp=E,2.6nm,0.6s,baz=233,slow=6.8,SNR=3.3						
	comp=E,2.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.86**	**70**	P	**P**	**10 26 04.7**	**+0.3**
	comp=E,1.1nm,0.6s,baz=256,slow=6.3,SNR=9.3						
	comp=E,1.1nm,0.6s						

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*BJI **01** 10:29:17.8±0.0, 24°.17S×82°.31E, h10^{km}, mb5.0/63, mB5.2/38, Ms4.8/19, Ms7 4.5/23*

*IDC **01** 10:29:20.1±0.4, 23°.95S×82°.53E, h0^{km}, mb4.9/23, mbtmp4.9/23, MS4.0/47, Error ellipse: s-maj=14.7km s-min=13.9km az=80.0*

*MOS **01** 10:29:20.3±1.1, 23°.83S×82°.57E, h10^{km}, mb5.4/64, Error ellipse: s-maj=10.4km s-min=5.3km az=102.7*

*NEIC **01** 10:29:22.6±1.6, 23°.91S±0°.10×82°.4E±0°.1, h10^{km}±1^{km}, mb5.4/113, Error ellipse: s-maj=16.9km s-min=15.6km az=141.0*

*GCMT **01** 10:29:24.6±0.3, 23°.76S±0°.02×82°.51E±0°.04, h15^{km}±1^{km}, MW5.0/99, Moment Tensor Solution. s24,c27; s99,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.12±.22; $M_{\theta\theta}$-3.39±.16; $M_{\phi\phi}$0.27±.13; $M_{r\theta}$-0.46±.26; $M_{\theta\phi}$-0.14±.09; $M_{\phi r}$-0.40±.36; Best double couple: $M_0$3.31700×10^{16} NP1:ϕ_s261.00000°, δ50.00000°, λ80.00000°. NP2: ϕ_s95.00000°, δ41.00000°, λ101.00000°. Principal axes: T 3.2040, Plg81.0000°, Azm116.0000°; N 0.2320, Plg7.0000°, Azm267.0000°; P -3.4290, Plg4.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 10:29:21.8±0.3, **23°.92S**±0°.05×**82°.41E**±0°.06, **h10**^{km}, **n747**, σ**0^{s}94**/712, **mb5.3**/140, **MS4.2**/56, **45C-6D**, **South Indian**

Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	18.77	328	T	T	10 52 52.1	
	baz=151,slow=74,SNR=137						
H08S1	Diego Carcia H	18.78	328	T	T	10 52 53.0	
	baz=151,slow=74,SNR=146						
H08S3	Diego Garcia H	18.79	328	T	T	10 52 53.6	
	baz=151,slow=74,SNR=172						
H01W3	Cape Leeuwin H	29.61	119	T	T	11 06 18.2	
	baz=284,slow=74,SNR=45						
H01W2	Cape Leeuwin H	29.61	119	T	T	11 06 17.6	
	baz=284,slow=74,SNR=52						
H01W1	Cape Leeuwin H	29.62	119	T	T	11 06 19.5	
	baz=284,slow=74,SNR=47						
MORW	Morawa	30.47	107	P	P	10 35 36.0	+1.1
PSI	Prapat	31.05	33	P	P	10 35 42.4	+2.2
PSI				pmax	pmax		
	comp=Z,86nm,1.2s						
PALK	Pallekele	31.05	357	LR	LR	10 45 33.3	
	comp=Z,631nm,19.3s,baz=283,slow=31						
BLDU	Ballidu	31.13	110	P	P	10 35 41.0	+0.3
MEEK	Meekatharra	32.78	102	P	P	10 35 55.3	0.0
VOI	Vohitsoka	32.81	266	P	P	10 35 56.4	+0.7
VOI	Vohitsoka	32.81	266	P	P	10 35 58.0	+2.3
IPM	Ipoh	33.56	35	P	P	10 36 04.6	+2.5
KULM	Kulim	34.05	34	P	P	10 36 06.7	+0.3
KULM				IAmb	IAmb	10 36 09.4	
	comp=Z,98nm,1.5s						
MBWA	Marble Bar	34.52	93	P	P	10 36 10.8	+0.3
PSA00	Pilbara Seismi	34.54	94	P	P	10 36 10.3	-0.4
PSA00				IAmb	IAmb	10 36 11.9	
	comp=Z,98nm,1.6s						
PSA00	Pilbara Seismi	34.54	94	P	P	10 36 11.4	+0.7
KSM	Kuching	37.05	51	P	P	10 36 33.6	+1.5
SBUM	Sibu	39.09	52	P	P	10 36 49.0	-0.4
KAPI	Kappang	40.56	68	LR	LR	10 52 21.2	
	comp=Z,73nm,21.7s,baz=292,slow=34						
FITZ	Fitzroy Crossi	40.66	90	P	P	10 37 02.6	+0.2
FITZ	Fitzroy Crossi	40.66	90	P	P	10 37 02.6	+0.2
FORT	Forrest	40.90	110	P	P	10 37 04.7	+0.4
FORT				IAmb	IAmb	10 37 06.0	
	comp=Z,81nm,1.1s						
MMRI	Maumere	40.97	75	P	P	10 37 04.8	-0.3
MMRI	Maumere	40.97	75	P	P	10 37 06.2	+1.1
HYBB	Hyderabad (bro	41.26	354	eP	P	10 37 07.8	+0.5
HYBB				ePP	PnPn	10 38 50.6	+3.3
HYBB				ePcP	PcP	10 39 06.6	+0.5
HYBB				eS	S	10 43 22.6	+1.2
SOEI	Soe	42.29	78	P	P	10 37 15.8	-0.2
SOEI	Soe	42.29	78	P	P	10 37 17.9	+1.8
KNRA	Kununurra	44.22	88	P	P	10 37 30.3	-1.2
KNRA				IAmb	IAmb	10 37 32.4	
	comp=Z,98nm,1.6s						
KNRA	Kununurra	44.22	88	P	P	10 37 31.4	-0.1
CMAR	Chiang Mai Arr	45.11	22	P	P	10 37 38.6	+0.2
	comp=Z,4.1nm,0.8s,baz=206,slow=8.3,SNR=23						
CMAR				LR	LR	10 54 09.5	
	comp=Z,128nm,20.5s,baz=205,slow=33						
	comp=Z,4.1nm,0.8s						
CMAR	Chiang Mai Arr	45.11	22	P	P	10 37 38.0	-0.4
MAW	Mawson	45.34	190	P	P	10 37 39.8	+0.1
	comp=Z,8.9nm,1.1s,baz=26,slow=12,SNR=8.6						
MAW				LR	LR	10 52 01.5	
	comp=Z,341nm,20.2s,baz=12,slow=30						
	comp=Z,8.9nm,1.1s						
MAW	Mawson	45.34	190	P	P	10 37 40.4	+0.7
MAW	Mawson	45.34	190	P	P	10 37 40.4	+0.7
MAW				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CHTO	Chiang Mai	45.44	22	P	P	10 37 41.0	0.0
CHTO				IAmb	IAmb	10 37 43.1	
	comp=Z,51nm,1.4s						
CHTO	Chiang Mai	45.44	22	P	P	10 37 41.0	0.0
CHTO				pmax	pmax		
	comp=Z,51nm,1.5s						
CHTO	Chiang Mai	45.44	22	P	P	10 37 42.2	+1.2
ASAR	Alice Springs	46.90	101	P	P	10 37 52.1	-0.6
	comp=Z,34nm,1.1s,baz=263,slow=6.7,SNR=102						
ASAR				PcP	PcP	10 39 25.1	-0.4
	comp=Z,7.0nm,1.0s,baz=240,slow=2.0,SNR=6.1						
ASAR				LR	LR	10 56 09.9	
	comp=Z,176nm,19.1s,baz=326,slow=34						
	comp=Z,34nm,1.1s						
AS31	Alice Springs	46.90	101	P	P	10 37 51.9	-0.9
MTN	Manton Dam	47.33	86	P	P	10 37 55.7	-0.4
MTN				IAmb	IAmb	10 37 57.1	
	comp=Z,68nm,1.4s						
MTN	Manton Dam	47.33	86	P	P	10 37 56.2	+0.1
OOD	Oodnadatta	47.80	107	P	P	10 37 59.3	-0.3
WRA	Warramunga Arr	48.12	96	P	P	10 38 01.8	-0.5
	comp=Z,35nm,1.1s,baz=260,slow=8.0,SNR=128						
WRA				LR	LR	10 57 54.2	
	comp=Z,109nm,18.3s,baz=184,slow=36						
	comp=Z,35nm,1.1s						
WRA	Warramunga Arr	48.12	96	P	P	10 38 01.6	-0.7
WB2	Warramunga Arr	48.13	96	P	P	10 38 01.6	-0.7
WRAB	Tennant Creek	48.13	96	P	P	10 38 01.7	-0.7
WRAB	Tennant Creek	48.13	96	ceP	P	10 38 01.1	-1.2
WRAB				pmax	pmax		
	comp=Z,102nm,1.7s						
WRAB	Tennant Creek	48.13	96	P	P	10 38 02.2	-0.1
WB0	Warramunga Arr	48.22	96	P	P	10 38 02.1	-0.8
WR0	Warramunga Arr	48.30	96	P	P	10 38 03.2	-0.4
KDU	Kakadu	48.60	86	P	P	10 38 06.1	+0.1
KMBO	Kilima Mbogo	49.23	291	P	P	10 38 12.6	+1.6
	comp=Z,4.8nm,0.8s,baz=81,slow=8.3,SNR=8.4						
KMBO				LR	LR	10 55 55.1	
	comp=Z,83nm,18.1s,baz=91,slow=32						
	comp=Z,4.8nm,0.8s						
KMBO	Kilima Mbogo	49.23	291	P	P	10 38 09.5	-1.5
KMBO	Kilima Mbogo	49.23	291	i P	P	10 38 13.3	+2.2
	SNR=7.9						
LBMI	Labuha	49.43	69	P	P	10 38 13.2	+0.9
	comp=Z,1μmcomp=Z,86nm,1.5s						
LCRK	Leigh Creek	49.65	110	P	P	10 38 14.1	+0.2
WHFO	Wadi Hawf	50.10	324	P	P	10 38 18.4	+1.1
DOK	Doka	50.48	324	P	P	10 38 21.3	+1.2
MHTO	MHTO	50.58	330	P	P	10 38 21.6	+0.7
BOSA	Boshof	51.06	252	P	P	10 38 25.3	+0.6
	comp=Z,22nm,0.8s,baz=104,slow=7.3,SNR=30						
BOSA				LR	LR	10 57 35.5	
	comp=Z,45nm,18.1s,baz=146,slow=33						
	comp=Z,22nm,0.8s						
BOSA	Boshof	51.06	252	P	P	10 38 24.8	+0.1
BOSA				IAmb	IAmb	10 38 26.6	
	comp=Z,35nm,0.9s						
LBTB	Lobatse	51.39	256	LR	LR	10 57 22.6	
	comp=Z,71nm,18.4s,baz=135,slow=33						
LBTB	Lobatse	51.39	256	P	P	10 38 27.3	+0.1
LBTB	Lobatse	51.39	256	P	P	10 38 27.3	+0.1
LBTB				pmax	pmax		
	comp=Z,30nm,1.2s						
LSZ	Lusaka	51.54	269	P	P	10 38 27.5	-0.9
LSZ	Lusaka	51.54	269	P	P	10 38 27.5	-0.9
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WBK	Wadi Bani Khal	51.56	332	P	P	10 38 29.3	+1.1
INKA	Innaminka	52.23	107	P	P	10 38 34.0	+0.7
WSAR	Wadi Sarin	52.26	332	LR	LR	10 56 36.0	
	comp=Z,274nm,19.4s,baz=144,slow=31						
ATD	Arta Tunnel	52.31	308	LR	LR	10 57 47.8	
	comp=Z,268nm,18.3s,baz=146,slow=33						
ATD	Arta Tunnel	52.31	308	P	P	10 38 37.0	+3.0
SMDO	Samad	52.35	331	P	P	10 38 35.6	+1.3
STKA	Stephens Creek	52.36	113	P	P	10 38 32.9	-1.3
	comp=Z,16nm,1.1s,baz=283,slow=11,SNR=6.6						
STKA				LR	LR	10 57 59.8	
	comp=Z,306nm,19.3s,baz=217,slow=33						
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	52.36	113	i P	P	10 38 33.1	-1.1
STKA	Stephens Creek	52.36	113	P	P	10 38 35.0	+0.8
FAKI	Fak Fak	52.43	74	P	P	10 38 33.4	-1.5
FAKI				IAmb	IAmb	10 38 36.5	
	comp=Z,109nm,1.7s						
FAKI	Fak Fak	52.43	74	P	P	10 38 33.4	-1.5
	comp=Z,40nm,1.4s						
FAKI	Fak Fak	52.43	74	P	P	10 38 36.1	+1.2
BSY	Bisya	52.46	330	P	P	10 38 36.0	+1.0
SWI	Sorong	52.55	72	P	P	10 38 33.7	-2.1
	comp=Z,44nm,1.3s						
KMI	Kunming	52.59	23	⇑P	P	10 38 37.3	+1.3
KMI				pP	sP	10 38 40.0	+1.4
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
QIS	Mount Isa	52.75	98	P	P	10 38 37.0	-0.3
HOQ	Hoqain	53.14	331	P	P	10 38 41.1	+1.2
LODK	Lodwar	53.23	294	P	P	10 38 42.0	+1.1
LODK	Lodwar	53.23	294	P	P	10 38 43.6	+2.7
	SNR=6.3						
PZH	PanZhiHua	53.50	22	P	P	10 38 41.6	-1.1
PZH				pmax	pmax		
	comp=Z,30nm,1.3s						
PZH				pmax	pmax		
	comp=Z,270nm,6.1s						
SOHO	SOHO	53.96	330	P	P	10 38 46.4	+0.5
ALNE	Al Ain	54.25	330	P	P	10 38 49.3	+1.2
	SNR=6.4						
ALNE	Al Ain	54.25	330	P	P	10 38 49.3	+1.2
SUR	Sutherland	54.32	246	P	P	10 38 49.8	+0.9
SUR				IAmb	IAmb	10 38 51.5	
	comp=Z,55nm,1.0s						
SUR	Sutherland	54.32	246	P	P	10 38 50.8	+1.9
MZR	Muzera	54.46	327	P	P	10 38 50.9	+1.4
	SNR=6.3						
MZR	Muzera	54.46	327	i P	P	10 38 50.7	+1.1
	SNR=8.2						
ASHO	Ashiyiah	54.65	330	P	P	10 38 51.3	+0.3
ASHO	Ashiyiah	54.65	330	P	P	10 38 51.1	+0.1
HATD	Hatta, Dubai	54.74	330	P	P	10 38 52.1	+0.5
UOSS	Minazif	54.81	331	P	P	10 38 50.8	-1.3
UOSS				IAmb	IAmb	10 38 52.7	
	comp=Z,46nm,1.4s						
UOSS	Minazif	54.81	331	P	P	10 38 51.7	-0.4
UOSS	Minazif	54.81	331	i P	P	10 38 52.1	-0.1
	SNR=7.0						
ASUD	Al Ashush, Dub	54.94	330	P	P	10 38 53.5	+0.5
ASUD	Al Ashush, Dub	54.94	330	P	P	10 38 53.7	+0.7
MBAR	Mbarara	55.13	287	i P	P	10 38 55.7	+0.8
MBAR				pmax	pmax		
	comp=Z,13nm,1.1s						
MSFE	Esma-Masafi	55.19	331	i P	P	10 38 55.2	+0.3
	SNR=8.6						
MASF	Masafi	55.20	331	P	P	10 38 55.2	+0.2
	SNR=5.7						
GYA	Guiyang	55.30	27	⇑P	P	10 38 56.3	+0.5
GYA				pmax	pmax		
	comp=Z,17nm,0.9s						
QLP	Quilpie	55.50	107	P	P	10 38 57.7	+0.4
BANOM	Banah	55.62	331	P	P	10 38 58.3	+0.3
BANOM	Banah	55.62	331	i P	P	10 38 59.0	+1.0
	SNR=7.6						
SHME	Shamm	55.80	331	P	P	10 38 59.2	0.0
CMSA	Cobar Meteorol	55.87	113	P	P	10 39 00.4	+0.6
NIL	Nilore	57.91	351	P	P	10 39 13.8	-0.3
NIL				IAmb	IAmb	10 39 15.2	
	comp=Z,60nm,1.4s						
NIL	Nilore	57.91	351	P	P	10 39 13.8	-0.3
NIL				pmax	pmax		
	comp=Z,60nm,1.4s						
CD2	Chengdu	58.23	22	eP	P	10 39 18.0	+1.6
CTA	Charters Tower	58.88	100	P	P	10 39 22.3	+1.0
CTAO	Charters Tower	58.88	100	P	P	10 39 22.4	+1.1
RAYN	Ar Rayn	59.23	320	P	P	10 39 23.5	0.0
RAYN				IAmb	IAmb	10 39 25.5	
	comp=Z,43nm,1.1s						
RAYN	Ar Rayn	59.23	320	P	P	10 39 23.5	0.0
RAYN				pmax	pmax		
	comp=Z,43nm,1.1s						
RAYN	Ar Rayn	59.23	320	P	P	10 39 24.8	+1.3
RAYN	Ar Rayn	59.23	320	i P	P	10 39 24.3	+0.8
	SNR=26						
KBL	Kabul	59.51	347	P	P	10 39 25.9	+0.5
KBL				IAmb	IAmb	10 39 27.7	
	comp=Z,45nm,1.1s						
KBL	Kabul	59.51	347	P	P	10 39 25.9	+0.5
KBL				pmax	pmax		
	comp=Z,45nm,1.2s						
KBL	Kabul	59.51	347	P	P	10 39 26.1	+0.7
	SNR=20						
TSUM	Tsumeb	60.02	261	P	P	10 39 29.7	+0.4
GOMU	GeErMu	60.93	11	P	P	10 39 35.8	+0.4
GOMU				pP	sP	10 39 39.4	+1.3
GOMU				sP	pwP	10 39 43.2	+0.7
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,69nm,4.9s						
HRA	Herat	61.07	341	P	P	10 39 35.5	-0.7
HRA				IAmb	IAmb	10 39 36.8	
	comp=Z,33nm,1.6s						
ARMA	Armidale	61.08	113	P	P	10 39 36.2	-0.2
ARMA				IAmb	IAmb	10 39 38.1	
	comp=Z,50nm,1.2s						
ARMA	Armidale	61.08	113	P	P	10 39 37.3	+0.9
NVL	N'lazarevskaya	61.23	201	eP	P	10 39 36.0	-0.5
NVL				pmax	pmax		
	comp=Z,46nm,1.3s						
RK1H	Rockhampton Ha	61.77	105	P	P	10 39 41.2	+0.2
EIDS	Eidsvold	61.78	107	P	P	10 39 40.3	-0.7
EIDS	Eidsvold	61.78	107	P	P	10 39 41.6	+0.6
XAN	Xi'an	62.91	25	P	P	10 39 48.4	+0.1
XAN				pmax	pmax		
	comp=Z,33nm,1.2s						
LZH	Lanzhou	63.03	19	eP	P	10 39 49.2	0.0
LZH				pP	sP	10 39 53.8	+2.0
LZH				sP	pwP	10 39 56.4	-0.2
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,180nm,4.8s						
KSH	Kashi	63.39	354	P	P	10 39 50.2	-1.3
KSH				pmax	pmax		
	comp=Z,23nm,1.5s						
KSH				LR	LR		
	comp=Z,420nm,19.2s						
TROLL	Troll, Antarti	64.33	200	P	P	10 39 58.5	+1.1
VNDA	Vanda	64.53	166	P	P	10 39 57.8	-0.6
	comp=Z,4.7nm,1.0s,baz=266,slow=6.8,SNR=8.3						
VNDA				LR	LR	11 04 43.8	
	comp=Z,239nm,18.4s,baz=282,slow=33						
	comp=Z,4.7nm,1.0s						
VNDA	Vanda	64.53	166	P	P	10 39 58.5	+0.1
VNDA	Vanda	64.53	166	P	P	10 39 58.5	+0.1
VNDA				pmax	pmax		
	comp=Z,12nm,1.3s						
BTK	Batken	64.56	350	IAmb	IAmb	10 40 00.3	
	comp=Z,33nm,1.4s						
LYN	LuoYang	64.78	27	⇑P	P	10 40 00.6	0.0
LYN				S	S	10 48 38.5	-2.8
LYN				pmax	pmax		
	comp=Z,20nm,1.8s						
LYN				pmax	pmax		
	comp=Z,230nm,4.9s						
GTA	Gaotai	65.07	15	⇑P	P	10 40 02.8	+0.3
GTA				pP	pwP	10 40 07.7	-2.0
GTA				sP	sP	10 40 11.5	+6.3
GTA				pmax	pmax		
	comp=Z,25nm,1.4s						
GTA				pmax	pmax		
	comp=Z,130nm,5.5s						
GTA				LR	LR		
	comp=Z,140nm,19.3s						
GTA				LR	LR		
	comp=Z,270nm,17.5s						
GTA				LR	LR		
	comp=Z,190nm,18.9s						
NRN	Naryn	65.29	355	IAmb	IAmb	10 40 05.4	
	comp=Z,33nm,1.0s						
SBA	Scott Base	65.60	167	P	P	10 40 06.4	+1.1
SBA	Scott Base	65.60	167	P	P	10 40 06.4	+1.1
SBA				pmax	pmax		
	comp=Z,15nm,1.4s						
GEYT	Alibeck	65.62	339	P	P	10 40 06.3	+0.3
	comp=Z,16nm,1.1s,baz=193,slow=12,SNR=14						
GEYT				LR	LR	11 07 35.6	
	comp=Z,129nm,18.3s,baz=168,slow=35						
	comp=Z,16nm,1.1s						
GEYT	Alibeck	65.62	339	P	P	10 40 06.5	+0.4
NJ2	Nanjing	65.66	34	eP	P	10 40 08.5	+2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SNAA	Sanae	66.02	200	P	P	10 40 09.3	+1.1
SNAA	Sanae	66.02	200	LR	LR	11 02 42.5	
	comp=Z,108nm,21.3s,baz=86,slow=30						
SNAA	Sanae	66.02	200	P	P	10 40 08.5	+0.2
SNAA				IAmb	IAmb	10 40 10.6	
	comp=Z,36nm,1.4s						
SNAA	Sanae	66.02	200	ceP	P	10 40 08.3	+0.1
SNAA				pmax	pmax		
	comp=Z,26nm,1.3s						
PRZ	Przheval'sk	66.17	357	P	P	10 40 10.2	+0.5
PRZ	Przheval'sk	66.17	357	P	P	10 40 10.2	+0.5
QSPA	South Pole Qui	66.19	180	P	P	10 40 08.7	-0.8
	comp=Z,12nm,1.0s,baz=244,slow=1.1,SNR=28						
QSPA				LR	LR	11 06 28.7	
	comp=Z,517nm,18.1s,baz=314,slow=34						
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	66.19	180	P	P	10 40 09.2	-0.4
QSPA				IAmb	IAmb	10 40 10.3	
	comp=Z,23nm,1.1s						
AML	Almayashu	66.21	353	P	P	10 40 10.3	+0.2
	SNR=17						
KBK	Karagaybulak	66.60	354	P	P	10 40 13.3	+0.9
	SNR=7.1						
AAK	Ala-Archa	66.63	354	LR	LR	11 08 18.2	
	comp=Z,494nm,18.0s,baz=171,slow=35						
AAK	Ala-Archa	66.63	354	P	P	10 40 12.5	0.0
	SNR=6.0						
AAK	Ala-Archa	66.63	354	P	P	10 40 13.0	+0.5
AAK				IAmb	IAmb	10 40 14.1	
	comp=Z,65nm,1.6s						
AAK	Ala-Archa	66.63	354	c iP	P	10 40 12.9	+0.4
AAK				pmax	pmax		
	comp=Z,41nm,1.6s						
IUG	Iuzhnay	66.72	350	eP	P	10 40 11.8	-1.3
IUG	Iuzhnay	66.72	350	eP	P	10 40 11.8	-1.3
	baz=350						
EKS2	Erkin-Say	66.73	353	P	P	10 40 13.6	+0.5
	SNR=11						
SATY	Saty	66.75	357	eP	P	10 40 12.3	-0.9
SATY				pmax	pmax		
	comp=Z,24nm,1.1s						
SATY	Saty	66.75	357	eP	P	10 40 12.3	-0.9
	comp=Z,24nm,1.1s,baz=357						
SHLS	Shalkode	66.80	358	eP	P	10 40 12.5	-1.1
SHLS				pmax	pmax		
	comp=Z,32nm,1.7s						
SHLS	Shalkode	66.80	358	eP	P	10 40 12.5	-1.1
	comp=Z,32nm,1.7s,baz=358						
TKM2	Tokmak 2	66.80	355	P	P	10 40 14.2	+0.5
	SNR=26						
TKM2	Tokmak 2	66.80	355	i P	P	10 40 13.3	-0.4
TKM2				pmax	pmax		
	comp=Z,60nm,1.4s						
UZB	Uzynbulak	66.81	357	eP	P	10 40 12.9	-0.8
UZB	Uzynbulak	66.81	357	eP	P	10 40 12.9	-0.8
	baz=357						
MDOK	Medeo	66.93	356	eP	P	10 40 12.9	-1.5
MDOK	Medeo	66.93	356	eP	P	10 40 13.0	-1.5
	baz=356						
AAA	Alma-Ata	66.99	356	eP	P	10 40 14.2	-0.5
AAA	Alma-Ata	66.99	356	eP	P	10 40 14.3	-0.5
	baz=356						
JOW	Kunigami	67.15	44	P	P	10 40 16.1	+0.1
	comp=Z,25nm,1.2s,baz=210,slow=6.2,SNR=4.5						
JOW				LR	LR	11 07 19.0	
	comp=Z,24nm,20.9s,baz=96,slow=34						
	comp=Z,25nm,1.2s						
JOW	Kunigami	67.15	44	P	P	10 40 17.9	+1.9
USP	Ospenovka	67.25	354	P	P	10 40 16.4	+0.1
	SNR=31						
DZA	Taraz	67.26	351	eP	P	10 40 14.8	-1.5
DZA	Taraz	67.26	351	eP	P	10 40 14.9	-1.5
	baz=351						
SGDS	Sogindy	67.42	354	eP	P	10 40 16.8	-0.6
SGDS				pmax	pmax		
	comp=Z,48nm,1.8s						
SGDS	Sogindy	67.42	354	eP	P	10 40 16.8	-0.6
	comp=Z,48nm,1.8s,baz=354						
TIY	Taiyuan	67.50	25	eP	P	10 40 18.7	+0.6
VNA2	Neumayer--Watz	67.55	201	P	P	10 40 19.1	+1.2
	baz=87,slow=5.0						
WMQ	Urumqi	67.58	4	⇓P	P	10 40 19.7	+1.2
WMQ				pP	pwP	10 40 25.7	0.0
WMQ				pmax	pmax		
	comp=Z,39nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.9s						
WMQ				LR	LR		
	comp=Z,330nm,21.3s						
WMQ				LR	LR		
	comp=Z,230nm,16.1s						
WMQ				LR	LR		
	comp=Z,300nm,21.1s						
KK31	Karatay Array	67.59	351	P	P	10 40 18.7	+0.3
KK31	Karatay Array	67.59	351	i P	P	10 40 18.2	-0.2
KKAR	Karatay Array	67.59	351	P	P	10 40 18.7	+0.3
KKAR	Karatay Array	67.59	351	P	P	10 40 18.4	0.0
KKAR	Karatay Array	67.59	351	P	P	10 40 18.7	+0.3
KKAR				pmax	pmax		
	comp=Z,54nm,1.3s						
CHKK	Chushkaly	67.62	356	eP	P	10 40 17.5	-1.1
CHKK	Chushkaly	67.62	356	eP	P	10 40 17.6	-1.1
	baz=356						
KUU	Kurty	67.71	355	eP	P	10 40 17.6	-1.6
KUU				pmax	pmax		
	comp=Z,35nm,1.3s						
KUU	Kurty	67.71	355	eP	P	10 40 17.6	-1.6
	comp=Z,35nm,1.3s,baz=355						
VNA1	Neumayer--Stat	67.88	201	P	P	10 40 21.4	+1.4
HNS	HongShan	68.15	27	⇑P	P	10 40 22.7	+0.6
HNS				pmax	pmax		
	comp=Z,24nm,1.5s						
VNA3	Neumayer Olymp	68.23	200	P	P	10 40 23.3	+1.0
BTLS	Baital	69.05	354	eP	P	10 40 26.3	-1.2
BTLS				pmax	pmax		
	comp=Z,18nm,1.5s						
BTLS	Baital	69.05	354	eP	P	10 40 26.4	-1.2
	comp=Z,18nm,1.5s,baz=354						
BTO	Baotou	69.15	22	eP	P	10 40 29.4	+1.0
BTO				S	S	10 49 36.0	+1.9
BTO				LR	LR		
	comp=Z,570nm,9.1s						
BTO				LR	LR		
	comp=Z,650nm,10.4s						
LKRN	Lenkeran, Azer	69.82	333	P	P	10 40 33.9	+1.5
HHC	Hu-ho-hao-te	69.91	23	eP	P	10 40 34.4	+1.3
HHC				pmax	pmax		
	comp=Z,54nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
EIL	Elat	70.13	317	LR	LR	11 06 47.9	
	comp=Z,230nm,21.2s,baz=87,slow=32						
MK31	Makanchi Array	70.38	360	P	P	10 40 35.1	-0.6
MK31				IAmb	IAmb	10 40 37.0	
	comp=Z,32nm,1.3s						
MK31	Makanchi Array	70.38	360	i P	P	10 40 34.6	-1.1
MK31				pmax	pmax		
	comp=Z,42nm,1.3s						
MAKZ	Makanchi	70.40	360	P	P	10 40 34.5	-1.3
MAKZ				IAmb	IAmb	10 40 36.5	
	comp=Z,28nm,1.1s						
MAKZ	Makanchi	70.40	360	P	P	10 40 34.5	-1.3
MAKZ				pmax	pmax		
	comp=Z,28nm,1.1s						
BJI	Beijing	71.00	27	P	P	10 40 39.9	+0.3
BJI				pmax	pmax		
	comp=Z,11nm,1.4s						
ZSN	Zaisan	71.07	2	eP	P	10 40 38.9	-1.0
ZSN				pmax	pmax		
	comp=Z,36nm,2.4s						
ZSN	Zaisan	71.07	2	eP	P	10 40 39.0	-1.0
	comp=Z,36nm,2.4s,baz=1.6						
NAX	Nakhchivan	71.64	331	P	P	10 40 44.5	+0.9
JSU	Suzuyama	71.77	42	IAmb	IAmb	10 40 46.0	
	comp=Z,69nm,1.4s						
BELA	Belgrano 2	72.17	191	P	P	10 40 46.0	-0.3
MMAI	Mount Meron Ar	72.20	320	LR	LR	11 07 57.1	
	comp=Z,168nm,21.9s,baz=284,slow=32						
MNGR	Mingechevir, A	72.26	333	P	P	10 40 49.9	+2.7
MARD	Mardin	72.42	326	IAmb	IAmb	10 40 51.1	
	comp=Z,32nm,1.0s						
GANJ	Ganja	72.48	332	P	P	10 40 49.2	+0.6
SEKA	Sheki	72.57	333	P	P	10 40 50.0	+0.8
GNI	Garni	72.77	331	LR	LR	11 11 28.6	
	comp=Z,111nm,18.2s,baz=149,slow=35						
GNI	Garni	72.77	331	i P	P	10 40 50.3	-0.2
GNI				pmax	pmax		
	comp=Z,40nm,1.8s						
RPZ	Rata Peaks	72.94	131	LR	LR	11 04 46.9	
	comp=Z,130nm,20.1s,baz=272,slow=29						
JNU	Nakatsue	73.15	41	P	P	10 40 52.0	-0.8
	comp=Z,23nm,1.1s,baz=162,slow=1.9,SNR=12						
	comp=Z,23nm,1.1s						
JNU	Nakatsue	73.15	41	IAmb	IAmb	10 40 53.8	

comp=Z,54nm,1.2s
JNU Nakatsue 73.15 41 P **P 10 40 52.8 +0.1**
ZKTA Zakatala 73.17 333 P **P 10 40 53.9 +1.3**
TJN Taejon 73.47 36_ce_P **P 10 40 54.2 -0.3**
TJN Taejon 73.47 36 P **P 10 40 55.1 +0.6**
INCN Inchon 73.90 35 P **P 10 40 58.9 +1.9**
comp=Z,26nm,1.2s
SEM Semipalatinsk 74.02 359 _e_P **P 10 40 56.4 -1.3**
SEM pmax pmax
comp=Z,31nm,1.3s
SEM Semipalatinsk 74.02 359 _e_P **P 10 40 56.4 -1.3**
comp=Z,32nm,1.3s,baz=358
BRZS Berezniki 74.08 353 _e_P **P 10 40 56.6 -1.1**
BRZS pmax pmax
comp=Z,18nm,1.7s
BRZS Berezniki 74.08 353 _e_P **P 10 40 56.7 -1.1**
comp=Z,18nm,1.7s,baz=353
KSCHJ Chungju 74.17 37 IAmb IAmb 10 41 00.6
comp=Z,58nm,1.5s
XLT XiLinHaoTe 74.22 25⇑_i_P **P 10 41 00.3 +1.5**
XLT pmax pmax
comp=Z,14nm,1.2s
XLT pmax pmax
comp=Z,230nm,5.2s
KURBB Kurchatov Arra 74.29 357 LR LR 11 12 08.7
comp=Z,228nm,22.0s,baz=171,slow=35
KURK Kurchatov 74.38 358 P **P 10 40 59.2 -0.3**
KURK IAmb IAmb 10 41 00.2
comp=Z,42nm,1.2s
KURK Kurchatov 74.38 358_ce_P **P 10 40 57.9 -1.6**
KURK pmax pmax
comp=Z,41nm,1.3s
KURK Kurchatov 74.38 358 P **P 10 40 59.2 -0.3**
KSRS Korea Array 74.57 36 P **P 10 41 01.4 +0.6**
comp=Z,21nm,1.2s,baz=229,slow=5.8,SNR=51
KSRS LR LR 11 12 40.2
comp=Z,54nm,20.6s,baz=220,slow=35
comp=Z,21nm,1.2s
KS19 Wonju Array Si 74.57 36 IAmb IAmb 10 41 02.9
comp=Z,62nm,1.5s
SONM Songino Array 74.61 17 P **P 10 41 01.9 +0.8**
comp=Z,16nm,1.2s,baz=207,slow=5.2,SNR=31
SONM LR LR 11 13 19.8
comp=Z,232nm,21.8s,baz=214,slow=35
comp=Z,16nm,1.2s
CSS Mathiatis 74.79 320 IAmb IAmb 10 41 05.3
comp=Z,54nm,1.3s
GROC Groznyy 74.81 333 _e_P **P 10 41 00.5 -1.6**
GROC _e_ 10 41 16.0
GROC pmax pmax
comp=Z,20nm,0.4s
ULN Ulaanbaatar 74.81 17 P **P 10 41 01.7 -0.6**
ULN Ulaanbaatar 74.81 17_ce_P **P 10 41 01.8 -0.5**
ULN pmax pmax
comp=Z,33nm,1.7s
ULN Ulaanbaatar 74.81 17 P **P 10 41 02.4 +0.1**
BCA Borcka 75.22 329 ⇑P **P 10 41 05.0 +0.4**
ZEI Tsey 75.27 332 _e_P **P 10 41 06.1 +1.0**
ZEI pmax pmax
comp=Z,19nm,1.4s
SEHB SEOHWA 75.34 36 P **P 10 41 06.2 +0.9**
SEHB IAmb IAmb 10 41 07.5
comp=Z,38nm,1.3s
JMN Monobe 75.39 42 IAmb IAmb 10 41 07.6
comp=Z,62nm,1.4s
KNGR Kungurtug, Tuv 75.39 10 _i_ P **P 10 41 05.3 -0.2**
KNGR pmax pmax
comp=Z,20nm,1.4s
AB31 Akbulak array 75.55 345 _i_ P **P 10 41 05.8 -0.5**
ABKAR Akbulak array 75.55 345 IAmb IAmb 10 41 07.3
comp=Z,40nm,1.2s
JHS Saijyo 75.79 41 IAmb IAmb 10 41 10.3
comp=Z,65nm,1.4s
NCK Nalchik 75.97 332 _i_ P **P 10 41 10.0 +1.1**
NCK pmax pmax
comp=Z,30nm,0.5s
DZM Mont Dzumac 76.18 108 _e_LR LR 11 04 40.0
comp=Z,132nm,22.5s
ZAK Zakamensk 76.25 14 _e_P **P 10 41 10.3 -0.1**
ZAK pmax pmax
comp=Z,10.0nm,1.8s
KBZ Khabaz 76.46 332 P **P 10 41 12.6 +1.1**
comp=Z,20nm,1.1s,baz=182,slow=2.6,SNR=32
KBZ LR LR 11 13 22.9
comp=Z,90nm,20.1s,baz=154,slow=34
comp=Z,20nm,1.1s
KBZ Khabaz 76.46 332_ce_P **P 10 41 12.1 +0.5**
KBZ pmax pmax
comp=Z,44nm,1.4s
PYA1 Pyatigorsk 76.64 332 _i_ P **P 10 41 13.0 +0.3**
KVAR Kislovodsk Arr 76.73 332 LR LR 11 13 40.0
comp=Z,83nm,19.5s,baz=82,slow=35
KIV Kislovodsk 76.74 332 P **P 10 41 13.5 +0.2**
KIV IAmb IAmb 10 41 15.3
comp=Z,50nm,1.3s
KIV Kislovodsk 76.74 332 _e_P **P 10 41 13.8 +0.5**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV Kislovodsk 76.74 332 P **P 10 41 14.1 +0.8**
KIV Kislovodsk 76.74 332 _i_ P **P 10 41 14.5 +1.2**
SNR=8.1
AKTO Aktyubinsk 77.11 344 LR LR 11 14 23.1
comp=Z,170nm,20.7s,baz=149,slow=35
BVA0 Borovoye Array 77.33 353 _i_ P **P 10 41 15.3 -1.0**
BVAR Borovoye Array 77.33 353 LR LR 11 13 24.8
comp=Z,145nm,21.4s,baz=58,slow=34
BRVK Borovoye 77.38 353 P **P 10 41 16.1 -0.4**
BRVK Borovoye 77.38 353_ce_P **P 10 41 15.9 -0.6**
BRVK pmax pmax
comp=Z,23nm,1.3s
BRVK Borovoye 77.38 353 P **P 10 41 16.0 -0.5**
GOF Gofitskoye 77.47 333⇑_e_P **P 10 41 17.1 -0.1**
GOF pmax pmax
comp=Z,53nm,1.1s
ZAA0 Zalesovo Array 77.57 1 IAmb IAmb 10 41 17.7
comp=Z,24nm,0.9s
ZALV Zalesovo Beam 77.57 1 P **P 10 41 16.6 -1.0**
comp=Z,13nm,0.7s,baz=194,slow=4.1,SNR=55
ZALV LR LR 11 16 30.7
comp=Z,124nm,18.1s,baz=200,slow=36
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 77.57 1 P **P 10 41 16.5 -1.1**
SOC Sochi 77.77 330 _e_P **P 10 41 16.5 -2.5**
SOC _e_ 10 44 11.7
SOC _e_PPP PPP 10 45 58.0
SOC _e_S **S 10 51 09.7 -1.7**
SOC _e_SS **SS 10 56 09.2 -3.1**
SOC pmax pmax
comp=Z,21nm,0.9s
BR131 Keskin Array S 77.97 324 IAmb IAmb 10 41 21.9
comp=Z,42nm,1.1s
BR131 Keskin Array S 77.97 324_c i_P **P 10 41 20.3 -0.1**
BR131 Keskin Array S 77.97 324 P **P 10 41 20.9 +0.6**
SNR=14
BRTR Keskin Array B 77.97 324 P **P 10 41 20.1 -0.3**
comp=Z,18nm,1.1s,baz=149,slow=5.8,SNR=43
BRTR LR LR 11 14 17.3
comp=Z,142nm,18.8s,baz=140,slow=35
comp=Z,18nm,1.1s
BRTR Keskin Array B 77.97 324 _i_ P **P 10 41 21.1 +0.7**
BRTR pmax pmax
comp=Z,19nm,1.1s
ELL Elmali 78.04 319 P **P 10 41 21.7 +0.9**
CN2 Changchun 78.10 30 _e_P **P 10 41 19.5 -1.3**
CN2 _e_PP **PP 10 44 18.7 +1.1**
CN2 _e_S **S 10 51 13.6 -1.4**
CN2 _e_sS sS 10 51 21.5 +3.3
CN2 _e_SS **SS 10 56 19.1 +1.8**
CN2 LR LR
comp=Z,160nm,14.0s
CN2 LR LR
comp=Z,130nm,14.0s
IRK Irkutsk 78.22 14 _e_P **P 10 41 21.4 +0.1**
IRK pmax pmax
comp=Z,51nm,2.0s
INU Inuyama 78.41 43 IAmb IAmb 10 41 24.8
comp=Z,51nm,1.4s
INU Inuyama 78.41 43 P **P 10 41 23.6 +0.9**
ANTO Ankara 78.53 323 P **P 10 41 25.2 +1.9**
ANTO Ankara 78.53 323 P **P 10 41 24.7 +1.3**
ANTO IAmb IAmb 10 41 25.5
comp=Z,52nm,1.1s
ANTO Ankara 78.53 323 P **P 10 41 24.7 +1.3**
ANTO pmax pmax
comp=Z,52nm,1.2s
ANTO Ankara 78.53 323 P **P 10 41 24.8 +1.4**

ARG Arkhangelos 78.76 318 IAmb IAmb 10 41 27.0
comp=Z,56nm,1.1s
JGF Kuroka 78.78 43 IAmb IAmb 10 41 25.9
comp=Z,39nm,1.3s
KARP Karpathos 78.93 317 P **P 10 41 27.0 +1.4**
URZ Urewera 79.07 127 LR LR 11 08 40.7
comp=Z,106nm,20.6s,baz=211,slow=30
ANN Anapa 79.76 329 _e_P **P 10 41 27.1 -2.8**
ANN _e_*PP **pP 10 41 30.8 -1.1**
ANN _e_ 10 44 30.1
ANN _e_S **S 10 51 30.4 -2.2**
ANN _e_SS **SS 10 56 39.2 -2.9**
ANN pmax pmax
comp=Z,121nm,1.2s
MAJO Matsushiro 79.91 43 P **P 10 41 30.9 -0.1**
MAJO IAmb IAmb 10 41 33.0
comp=Z,62nm,1.4s
MAJO Matsushiro 79.91 43_c i_P **P 10 41 30.4 -0.5**
MAJO pmax pmax
comp=Z,52nm,1.4s
MAJO Matsushiro 79.91 43 P **P 10 41 31.0 +0.1**
MJAR Matsushiro Arr 79.91 43 P **P 10 41 30.5 -0.5**
comp=Z,14nm,1.1s,baz=208,slow=6.0,SNR=31
MJAR LR LR 11 13 41.1
comp=Z,22nm,21.6s,baz=234,slow=33
comp=Z,14nm,1.1s
HIA Hailar 80.10 24_c i_P **P 10 41 31.1 -0.6**
HIA pmax pmax
comp=Z,34nm,1.5s
IDI Anoyia 80.20 316 LR LR 11 14 48.4
comp=Z,19nm,21.2s,baz=86,slow=34
BNX BinXian 80.48 30 ⇓P **P 10 41 33.1 -0.7**
BNX pmax pmax
comp=Z,9.0nm,1.3s
BNX pmax pmax
comp=Z,110nm,6.7s
MDJ Mudanjiang 80.68 32 P **P 10 41 34.8 -0.1**
MDJ pmax pmax
comp=Z,22nm,1.3s
MDJ pmax pmax
comp=Z,100nm,3.7s
MDJ Mudanjiang 80.68 32 P **P 10 41 35.7 +0.8**
comp=Z,20nm,1.4s
VLA Vladivostok 80.75 34_c i_P **P 10 41 35.8 +0.6**
VLA pmax pmax
comp=Z,68nm,1.4s
JSD Sado 80.90 41 P **P 10 41 35.6 -0.6**
JSD IAmb IAmb 10 41 37.7
comp=Z,61nm,1.2s
SIM Simferopol' 81.46 328 _e_P **P 10 41 39.5 +0.5**
SIM _e_ 10 41 45.4
SIM pmax pmax
comp=Z,22nm,0.8s
USRK Ussuriysk Ar. 81.57 34 P **P 10 41 38.9 -0.7**
comp=Z,22nm,1.1s,baz=240,slow=3.8,SNR=40
comp=Z,22nm,1.1s
BELG Belogornoye 81.84 339 LR LR 11 18 14.5
comp=Z,85nm,21.5s,baz=151,slow=36
BELG Belogornoye 81.84 339_c i_P **P 10 41 40.1 -0.7**
BELG pmax pmax
comp=Z,14nm,1.3s
SVE Sverdlovsk 82.51 348 _e_P **P 10 41 44.0 -0.2**
SVE pmax pmax
comp=Z,37nm,1.3s
ARU Arti 82.55 347 LR LR 11 17 17.6
comp=Z,380nm,21.3s,baz=145,slow=35
ARU Arti 82.55 347 P **P 10 41 43.7 -0.7**
ARU IAmb IAmb 10 41 46.6
comp=Z,39nm,1.3s
ARU Arti 82.55 347_c i_P **P 10 41 44.8 +0.4**
ARU 10 44 48.4
ARU S **S 10 52 03.1 +2.0**
ARU SS **SS 10 57 19.4 -3.9**
ARU pmax pmax
comp=Z,42nm,1.4s
ARU MLR MLR
comp=Z,417nm,23.0s
VRH Novokhopyorsk 82.93 336 _e_P **P 10 41 46.2 -0.3**
VRH pmax pmax
comp=Z,50nm,1.3s
ALN Alexandroupoli 83.03 321 IAmb IAmb 10 41 49.3
comp=Z,36nm,1.2s
RDO Rodhopi 83.49 320 IAmb IAmb 10 41 51.5
comp=Z,26nm,1.3s
VSR Storozhevoye 83.93 334 _e_P **P 10 41 51.0 -0.7**
VSR pmax pmax
comp=Z,40nm,1.6s
TIRR Tirgusor 84.04 324 ⇑P **P 10 41 53.8 +1.3**
TIRR Tirgusor 84.04 324 P **P 10 41 53.7 +1.3**
AGG Agios Georgios 84.10 317 IAmb IAmb 10 41 54.5
comp=Z,34nm,1.2s
VORR Voronezh 84.27 335 _e_P **P 10 41 53.3 -0.1**
VORR pmax pmax
comp=Z,40nm,0.4s
HARR Harsova 84.45 324 ⇑P **P 10 41 56.1 +1.6**
HARR Harsova 84.45 324 P **P 10 41 56.1 +1.6**
CFR Carcaliu 84.67 325 ⇑P **P 10 41 56.3 +0.7**
CFR Carcaliu 84.67 325 P **P 10 41 56.2 +0.7**
KLR Kul'dur 85.05 30 _i_ P **P 10 41 56.1 -1.3**
KLR pmax pmax
comp=Z,15nm,1.4s
LPSR Galich'ya Gora 85.10 335 _e_P **P 10 41 57.6 0.0**
LPSR pmax pmax
comp=Z,60nm,1.7s
VAY Valandovo 85.35 319 _i_ P **P 10 41 59.5 +0.4**
ISR Istrita 85.48 324 ⇓P **P 10 42 01.1 +1.3**
ISR Istrita 85.48 324 P **P 10 42 01.0 +1.3**
MILM Milestii Mici 85.48 326 _e_P **P 10 41 59.0 -0.6**
comp=Z,70nm,1.3s
MILM Milestii Mici 85.48 326 _e_P **P 10 41 59.0 -0.6**
MILM pmax pmax
comp=Z,70nm,1.3s
SMAI San Martin Ant 85.50 191 IAmb IAmb 10 42 02.0
comp=Z,38nm,1.1s
BOD Bodaibo 85.61 16 _e_P **P 10 41 59.9 -0.1**
BOD pmax pmax
comp=Z,30nm,1.6s
VRI Vrincioaia 85.87 325 ⇑P **P 10 42 03.7 +2.1**
VRI Vrincioaia 85.87 325 P **P 10 42 03.7 +2.1**
PLOR Plostina 85.90 325 ⇑P **P 10 42 03.9 +2.0**
PLOR Plostina 85.90 325 P **P 10 42 03.8 +2.0**
MLR Muntele Rosu 86.04 324 ⇓P **P 10 42 04.1 +1.4**
KEK Kerkira 86.09 317 P **P 10 42 02.9 0.0**
KEK IAmb IAmb 10 42 05.0
comp=Z,37nm,1.0s
COVR Voineasa-Covas 86.13 324 ⇑P **P 10 42 04.3 +1.3**
ERM Erimo 86.31 41 P **P 10 42 04.6 +0.8**
ERM Erimo 86.31 41 _i_ P **P 10 42 02.9 -1.0**
ERM pmax pmax
comp=Z,35nm,1.2s
TESR Tescani 86.33 325 ⇑P **P 10 42 04.7 +0.8**
SKO Skopje 86.42 319 _i_ P **P 10 42 04.8 +0.3**
VOIR 86.49 324 ⇑P **P 10 42 05.8 +0.9**
VOIR 86.49 324 P **P 10 42 05.7 +0.9**
KIRV Kirov 86.64 343 LR LR 11 19 42.3
comp=Z,100nm,21.6s,baz=141,slow=35
KIRV Kirov 86.64 343_ce_P **P 10 42 04.9 -0.2**
DOPR Dopca 86.65 324 ⇑P **P 10 42 05.7 +0.2**
ARR Arges 86.67 323 ⇑P **P 10 42 06.6 +0.9**
BLKB Belogradchik 86.69 321 ⇑P **P 10 42 06.2 +0.5**
TOA0 Torodi Ar. Sit 86.98 286 P **P 10 42 08.7 +0.9**
TORD Torodi Ar. Bea 86.98 286 P **P 10 42 08.4 +0.6**
comp=Z,12nm,1.1s,baz=119,slow=3.8,SNR=33
comp=Z,12nm,1.1s
TORD Torodi Ar. Bea 86.98 286 IAmb IAmb 10 43 03.7
comp=Z,13nm,0.8s
TIR Tirane 87.00 318 P **P 10 42 09.4 +2.1**
BOVS Bovan 87.26 321 ⇑P **P 10 42 09.1 +0.7**
HERR Herculane 87.60 322 ⇑P **P 10 42 11.1 +0.9**
GZR Gura Zlata 87.71 323 ⇑P **P 10 42 11.9 +1.1**
GZR Gura Zlata 87.71 323 P **P 10 42 11.8 +1.1**
TIP Timpagrande 87.73 315 ⇑P **P 10 42 13.0 +2.1**
TIP Timpagrande 87.73 315 P **P 10 42 12.0 +1.0**
TIP IAmb IAmb 10 42 13.4
comp=Z,27nm,1.4s
BUR01 Bucovina Ar. S 87.79 325 ⇑P **P 10 42 13.2 +2.2**
AKASG Malin Array Be 87.85 329 P **P 10 42 11.8 +0.7**
comp=Z,24nm,1.1s,baz=118,slow=4.2,SNR=59
comp=Z,24nm,1.1s
AKASG Malin Array Be 87.85 329 IAmb IAmb 10 42 12.7
comp=Z,28nm,1.4s
AKASG Malin Array Be 87.85 329 _i_ P **P 10 42 11.8 +0.7**
AKASG pmax pmax
comp=Z,26nm,1.1s
AKBB Malin Array Si 87.85 329_ce_P **P 10 42 11.0 -0.1**

PMSA Palmer Station 87.85 194 LR LR 11 19 22.9
comp=Z,120nm,20.1s,baz=145,slow=34
MSVF Nonsavu 87.92 108 LR LR 11 20 56.3
comp=Z,105nm,18.1s,baz=239,slow=35
OBN Obninsk 87.92 336 _e_P **P 10 42 11.3 0.0**
OBN _e_ 10 45 40.5
OBN _e_PPP PPP 10 47 37.8
OBN pmax pmax
comp=Z,72nm,2.5s
OBN MLR MLR
comp=Z,205nm,23.0s
MDVR Moldovita 87.94 322 ⇑P **P 10 42 12.5 +0.7**
PDG Podgorica 88.00 319 ⇓P **P 10 42 12.9 +0.9**
PDG Podgorica 88.00 319 IAmb IAmb 10 42 14.3
comp=Z,32nm,1.1s
MOS Moscow 88.00 337 _e_P **P 10 42 11.2 -0.5**
MOS _e_ 10 45 35.6
MOS pmax pmax
comp=Z,42nm,0.8s
VAE Valguarnera 88.37 312 LR LR 11 17 24.9
comp=Z,32nm,21.8s,baz=142,slow=33
BZS Buzias 88.50 322 ⇑P **P 10 42 16.0 +1.7**
BZS Buzias 88.50 322 P **P 10 42 16.0 +1.7**
DIVS Divibare 88.53 320 IAmb IAmb 10 42 16.9
comp=Z,27nm,1.2s
DRGR 88.61 324 ⇓P **P 10 42 15.9 +1.0**
DRGR 88.61 324 P **P 10 42 15.9 +1.0**
SIRR Siria 88.87 323 ⇑P **P 10 42 17.8 +1.7**
YSS Yuzh-Sakhalins 89.06 37_ce_P **P 10 42 16.0 -0.9**
YSS pmax pmax
comp=Z,28nm,1.3s
YSS Yuzh-Sakhalins 89.06 37 P **P 10 42 16.7 -0.2**
UZH Uzhgorod 89.95 325 _e_P **P 10 42 21.5 +0.4**
KOLS Kolonicke sedl 90.15 325 _e_P **P 10 42 24.1 +2.1**
KOLS pmax pmax
comp=Z,14nm,1.4s
KOLS Kolonicke sedl 90.15 325 _e_P **P 10 42 24.1 +2.1**
DBIC Dimbokro 90.18 277 LR LR 11 18 39.8
comp=Z,38nm,20.7s,baz=146,slow=33
PRGR Permogore 90.24 343 _e_P **P 10 42 17.4 -4.7**
CRVS Cervenica-Dubn 90.56 325 _e_P **P 10 42 25.5 +1.6**
CRVS pmax pmax
comp=Z,28nm,1.4s
CRVS Cervenica-Dubn 90.56 325 _e_P **P 10 42 25.5 +1.6**
KEST Kesra 91.00 309 P **P 10 42 27.8 +1.4**
comp=Z,20nm,1.0s,baz=150,slow=1.2,SNR=15
KEST LR LR 11 22 53.4
comp=Z,76nm,18.2s,baz=338,slow=35
comp=Z,20nm,1.0s
KEST Kesra 91.00 309 P **P 10 42 28.3 +1.9**
SNR=7.2
MNK Minsk 91.02 332 _i_ P **P 10 42 24.5 -1.3**
MNK _i_ 10 46 00.7
MNK _i_ PPP PPP 10 47 59.0
MNK _i_ S **SKSac 10 52 57.4 -0.2**
MNK _i_ PS **PnS 10 54 33.1 0.0**
MNK _i_ SS SS 10 59 41.6 +14
MNK pmax pmax
comp=E,1.0nm,1.1s
MNK pmax pmax
comp=Z,7.0nm,1.0s
MNK MLR MLR
comp=Z,238nm,19.0s
MNK Minsk 91.02 332 _i_ P **P 10 42 24.6 -1.3**
comp=E,1.0nm,1.1s
MNK _i_ P **P 10 42 24.6 -1.3**
MNK _i_ P **PcP 10 42 25.0 -1.9**
comp=Z,7.0nm,1.1s,baz=131
MNK _i_ PP **PP 10 46 00.7 -1.9**
MNK _i_ PPP PPP 10 47 59.1
MNK _i_ SKS SKiKP 10 50 27.7 -26
MNK _i_ S **SKSac 10 52 57.4 -0.2**
MNK _i_ PS **PnS 10 54 33.1 0.0**
MNK _i_ SS SS 10 59 41.6 +14
MNK _i_ SSS SSS 11 03 46.5
MNK _i_ LQ LQ 11 13 57.9
MNK _i_ LR LR 11 21 18.4
MNK _i_ LRM MLR 11 25 58.1
comp=Z,238nm,19.3s
MNK _i_ LRM MLR 11 26 34.9
KLMR Klimovskoe 91.34 341 _e_P **P 10 42 25.9 -1.3**
KLMR pmax pmax
comp=Z,47nm,1.3s
KLMR Klimovskoe 91.34 341 _e_P **P 10 42 26.0 -1.3**
KLMR AMP 10 42 28.1
comp=Z,47nm,1.3s
MPLH Magyarpolny 91.70 322 P **P 10 42 29.9 +0.6**
VYHS Vyhne 91.73 323 _e_P **P 10 42 30.1 +0.7**
VYHS pmax pmax
comp=Z,26nm,1.3s
VYHS Vyhne 91.73 323 _e_P **P 10 42 30.0 +0.7**
LANS Liptovska Anna 91.76 324 _e_P **P 10 42 31.5 +1.9**
LANS Liptovska Anna 91.76 324 _e_P **P 10 42 31.5 +1.9**
JAVC Velka Javorina 92.57 323 _e_P **P 10 42 35.2 +1.9**
MORC Moravsky Berou 93.15 324 _e_P **P 10 42 36.1 +0.1**
KRUC Moravsky 93.38 323 _e_P **P 10 42 37.7 +0.7**
VRAC Vranov 93.41 323 LR LR 11 24 38.9
comp=Z,61nm,19.1s,baz=122,slow=36
VRAC Vranov 93.41 323 _e_P **P 10 42 37.0 -0.1**
YAK Yakutsk 93.61 20 LR LR 11 26 19.8
comp=Z,99nm,19.6s,baz=267,slow=36
YAK Yakutsk 93.61 20_ce_P **P 10 42 37.3 -0.4**
YAK pmax pmax
comp=Z,7.0nm,0.7s
GERES GERESS Array B 94.77 322 P **P 10 42 42.9 -0.6**
comp=Z,0.2nm,0.4s,baz=96,slow=12,SNR=5.0
comp=Z,0.2nm,0.4s
DAVOX Davos/Dischmat 95.97 319 LR LR 11 26 16.4
comp=Z,30nm,20.2s,baz=82,slow=36
FINES FINESS Array B 96.31 336 LR LR 11 28 35.5
comp=Z,74nm,18.0s,baz=76,slow=37
CLL Collm 96.42 324 _e_P **P 10 42 52.0 +1.2**
CLL Collm 96.42 324 _e_P **P 10 42 52.0 +1.2**
SENIN Lac Senin/Sane 97.36 318 IAmb IAmb 10 43 00.4
comp=Z,9.0nm,1.1s
AFI Afiamalu 98.39 109 LR LR 11 25 41.0
comp=Z,27nm,19.4s,baz=226,slow=34
PPT2 Papeete2 114.61 124 _e_LR LR 11 22 27.3
comp=Z,80nm,23.5s
PPT2 _e_LR LR 11 22 28.0
comp=Z,118nm,25.2s
DAG Danmarks Havn 115.65 345 _i_ P PKiKP 10 47 55.0 -8.3
NIKH Nikolski High 119.93 41 P **PKPdf 10 48 11.3 -0.9**
baz=269
ANM Nome 120.87 28 P **PKiKP 10 48 14.3 +0.5**
baz=279
GCSA Galena City Sc 124.38 27 P **PKiKP 10 48 20.7 0.0**
baz=288,SNR=7.3
N16K Nishlik Lake 124.67 32 P **PKiKP 10 48 21.8 +0.4**
baz=283
C23K Itkillik River 124.69 20 P **PKiKP 10 48 21.4 +0.3**
baz=297
SDPT Sand Point 124.69 38 P **PKPdf 10 48 21.0 -0.2**
baz=278
F21K Alatna River 124.83 23 P **PKiKP 10 48 21.3 -0.3**
baz=293,SNR=10
E22K Anaktuvuk Pass 125.05 22 P **PKiKP 10 48 21.7 -0.4**
baz=295
D23K Nanushuk River 125.06 21 P **PKiKP 10 48 22.7 +0.7**
baz=297
S14K Fog Glacier 125.07 37 P **PKiKP 10 48 22.5 +0.1**
baz=279
G21K Allakaket 125.10 24 P **PKiKP 10 48 21.6 -0.5**
baz=292
F22K John River 125.18 23 P **PKiKP 10 48 22.8 +0.6**
baz=294
O16K Kokwok River B 125.19 33 P **PKiKP 10 48 22.7 +0.2**
baz=283
C24K Franklin Bluff 125.33 19 P **PKiKP 10 48 22.7 +0.3**
baz=299
P16K Nushagak River 125.37 33 P **PKPdf 10 48 22.3 -0.2**
baz=283
D24K Happy Valley 125.56 20 P **PKiKP 10 48 23.0 0.0**
baz=299
TOLK Toolik Lake Re 125.57 21 P **PKiKP 10 48 23.2 +0.2**
baz=298
O17K Koliganek Bris 125.65 32 P **PKiKP 10 48 23.6 +0.3**
baz=284
H21K Melozitna Rive 125.69 25 PKPdf **PKPdf 10 48 21.9 -1.0**
H21K Melozitna Rive 125.69 25 P **PKiKP 10 48 23.1 -0.2**
baz=292,SNR=9.7
J20K Nowinta River 125.69 27 P **PKiKP 10 48 23.2 -0.1**
baz=290,SNR=9.1
CHGN Chignik 125.69 37 P **PKiKP 10 48 23.2 -0.3**
baz=280

N18K	Kilae Creek	125.99	31	P	PKiKP	10 48 24.0	0.0
	baz=286						
COLD	Coldfoot	126.00	22	P	PKiKP	10 48 24.0	+0.1
	baz=296,SNR=7.0						
K20K	Telida	126.00	28	P	PKiKP	10 48 23.8	-0.2
	baz=290,SNR=12						
L19K	White Mountain	126.03	29	PKPdf	PKPdf	10 48 23.3	-0.4
L19K	White Mountain	126.03	29	P	PKiKP	10 48 24.0	-0.1
	baz=288,SNR=5.6						
P17K	Kvichak River	126.11	33	P	PKiKP	10 48 24.4	+0.1
	baz=284						
H22K	Ishtalitna Cre	126.14	24	P	PKiKP	10 48 24.4	+0.2
	baz=294,SNR=12						
I21K	Tanana	126.19	25	P	PKiKP	10 48 23.9	-0.3
	baz=293,SNR=16						
E24K	Your Creek	126.19	21	P	PKiKP	10 48 24.4	+0.1
	baz=298						
D25K	Kavik River	126.23	19	P	PKiKP	10 48 24.1	-0.2
	baz=301						
G23K	Bananza Creek	126.29	23	P	PKiKP	10 48 24.6	+0.1
	baz=296,SNR=7.5						
M19K	Big River Lodg	126.33	29	P	PKiKP	10 48 24.8	+0.1
	baz=288,SNR=5.6						
L20K	Farewell, AK	126.37	29	P	PKiKP	10 48 24.5	-0.3
	baz=289,SNR=6.0						
CHUM	Lake Minchumin	126.55	27	P	PKPdf	10 48 24.4	-0.1
	baz=292						
Q17K	Contact Creek	126.62	34	P	PKPdf	10 48 24.2	-0.8
	baz=284						
F24K	Squaw Lake	126.66	22	P	PKiKP	10 48 24.7	-0.5
	baz=299,SNR=6.3						
P18K	Big Mountain,	126.66	33	P	PKPdf	10 48 24.1	-0.9
	baz=286						
MLY	Manley	126.73	25	P	PKPdf	10 48 24.7	-0.3
	baz=294,SNR=39						
CAST	Castle Rocks	126.81	27	P	PKPdf	10 48 25.0	-0.1
	baz=292,SNR=7.7						
H23K	Yukon River	126.85	24	P	PKiKP	10 48 25.5	-0.1
	baz=296,SNR=14						
C27K	Jago River	126.86	18	P	PKiKP	10 48 25.8	+0.2
	baz=304						
PPLA	Purkeypile	126.96	28	P	PKPdf	10 48 25.0	-0.6
	baz=291,SNR=5.2						
BPAW	Bear Paw Mtn.	127.01	26	P	PKPdf	10 48 25.4	-0.1
	baz=293						
E25K	Arctic Village	127.12	20	P	PKiKP	10 48 25.9	-0.2
	baz=302,SNR=5.2						
G24K	Hadweenzic Riv	127.19	22	P	PKiKP	10 48 26.2	0.0
	baz=299,SNR=11						
I23K	Minto, Yukon-K	127.21	25	P	PKiKP	10 48 25.9	-0.4
	baz=296,SNR=8.4						
CHIR	Chirikof Islan	127.32	37	P	PKPdf	10 48 25.5	-0.8
	baz=283						
F25K	Christian Rive	127.37	21	P	PKPdf	10 48 25.7	-0.5
	baz=301,SNR=6.4						
H24K	Noodor Dome	127.46	24	P	PKPdf	10 48 25.9	-0.4
	baz=298,SNR=21						
TRF	Thorofare Moun	127.55	27	P	PKPdf	10 48 25.9	-0.8
	baz=293						
NEA2	Nenana	127.56	25	P	PKPdf	10 48 25.7	-0.8
	baz=295						
SKT	Skwentna	127.58	29	P	PKPdf	10 48 25.5	-1.2
	baz=291						
G25K	Bearman Lake	127.64	22	P	PKPdf	10 48 25.7	-0.9
	baz=300						
F26K	Sheenjek River	127.80	21	P	PKPdf	10 48 26.3	-0.7
	baz=303						
TCOL	CIGO, UAF Yank	127.91	25	P	PKPdf	10 48 26.2	-0.9
	baz=297						
COLA	College	127.91	25	P	PKPdf	10 48 26.7	-0.4
	baz=297						
CUT	Chulitna	127.97	28	P	PKPdf	10 48 26.6	-0.7
	baz=293						
H25K	Birch Creek	127.98	23	P	PKiKP	10 48 27.3	-0.5
	baz=300						
MCK	McKinley	127.98	26	P	PKPdf	10 48 26.4	-1.0
	baz=295						
CAPN	Captain Cook N	128.18	30	P	PKPdf	10 48 26.9	-0.9
	baz=291						
Q20K	Shuyak Island	128.29	33	P	PKPdf	10 48 27.8	-0.2
	baz=288						
E27K	Coleen River	128.32	19	P	PKiKP	10 48 27.9	-0.6
	baz=306,SNR=8.1						
G26K	Porcupine Rive	128.32	21	P	PKPdf	10 48 27.6	-0.2
	baz=303,SNR=7.7						
ILAR	Eielson Array	128.32	24	PKP	PKPdf	10 48 26.1	-1.8
	comp=Z,2.7nm,1.0s,baz=289,slow=3.0,SNR=21						
KDAK	Kodiak Island	128.44	34	P	PKiKP	10 48 28.4	-0.6
	baz=287						
HDA	Harding Lake	128.47	25	P	PKPdf	10 48 28.2	-0.1
	baz=298						
WAT1	Susitna Watana	128.52	27	P	PKPdf	10 48 27.8	-0.7
	baz=295						
RC01	Rabbit Creek A	128.70	29	P	PKPdf	10 48 28.5	-0.3
	baz=292						
BRSE	Bradley Lake S	128.73	31	P	PKiKP	10 48 29.2	-0.3
	baz=290						
PMR	Palmer	128.78	29	P	PKPdf	10 48 28.6	-0.2
	baz=293,SNR=5.4						
DHY	Denali Highway	128.90	27	P	PKPdf	10 48 29.1	-0.3
	baz=296						
WAT6	Susitna Watana	128.97	27	P	PKPdf	10 48 28.9	-0.6
	baz=295						
J25K	Salcha River,	128.97	24	P	PKPdf	10 48 28.0	-1.3
	baz=299,SNR=14						
SML	Sawmill	129.04	28	P	PKPdf	10 48 28.7	-0.7
	baz=294						
G27K	Doyon Strip	129.10	21	P	PKPdf	10 48 29.0	-0.5
	baz=305,SNR=6.6						
KNK	Knik Glacier	129.15	29	P	PKPdf	10 48 29.1	-0.6
	baz=294						
SEW	Seward	129.20	31	P	PKPdf	10 48 29.7	0.0
	baz=292						
K24K	Donnelly Dome	129.21	25	P	PKPdf	10 48 29.6	-0.1
	baz=298						
M23K	Glacier View	129.31	28	P	PKiKP	10 48 30.8	+0.2
	baz=295						
PWL	Port Wells	129.42	29	P	PKiKP	10 48 30.4	-0.5
	baz=294						
I26K	Coal Creek Min	129.43	23	P	PKPdf	10 48 30.0	-0.1
	baz=302						
SCM	Sheep Creek Mo	129.46	28	P	PKiKP	10 48 30.6	-0.5
	baz=295,SNR=5.6						
H27K	Steamboat Moun	129.47	21	P	PKiKP	10 48 30.5	-0.5
	baz=305						
RIDG	Independent Ri	129.60	25	P	PKPdf	10 48 30.2	-0.3
	baz=299						
J26L	Joseph Creek	129.70	24	P	PKPdf	10 48 30.2	-0.5
	baz=301,SNR=12						
PAX	Paxson	129.72	26	P	PKPdf	10 48 29.9	-0.9
	baz=298						
I27K	Kandik River	129.80	22	P	PKPdf	10 48 30.2	-0.7
	baz=304						
SCRK	Sand Creek	129.81	25	P	PKiKP	10 48 31.1	-0.7
	baz=300,SNR=9.0						
M24K	Tolsona, Glenn	129.83	27	P	PKiKP	10 48 31.2	-0.6
	baz=297						
P23K	Montague Islan	130.19	30	P	PKiKP	10 48 32.5	+0.1
	baz=294						
KLU	Klutina	130.22	28	P	PKPdf	10 48 31.8	0.0
	baz=296						
K27K	Chicken	130.50	24	P	PKPdf	10 48 32.1	0.0
	baz=302						
INK	Inuvik	130.53	17	P	PKPdf	10 48 31.6	-0.4
	baz=315						
L26K	Log Cabin Wild	130.54	25	P	PKiKP	10 48 32.6	-0.5
	baz=300,SNR=6.4						
EYAK	Cordova Ski Ar	130.71	29	P	PKPdf	10 48 32.5	0.0
	baz=296						
N25K	Chitina, Valde	130.73	27	P	PKiKP	10 48 32.9	-0.7
	baz=298						
LPAZ	La Paz	130.75	219	PKP	PKiKP	10 48 35.5	-0.3
	comp=Z,9.5nm,1.1s,baz=48,slow=2.9,SNR=17						
LPAZ	La Paz	130.75	219	PKPdf	PKPdf	10 48 34.6	-0.3
LPAZ	La Paz	130.75	219	*e*P	PKiKP	10 48 35.2	-0.5
M26K	Nabesna, AK	131.00	26	P	PKPdf	10 48 33.1	-0.1
	baz=300						
BMRM	Bremner River	131.02	28	P	PKPdf	10 48 33.3	0.0
	baz=298						
I29M	Ogilvie Camp,	131.06	21	P	PKPdf	10 48 33.2	0.0
	baz=308,SNR=6.2						
L27K	Beaver Creek,	131.12	25	P	PKiKP	10 48 33.8	-0.5
	baz=302,SNR=7.3						
DAWY	Dawson	131.46	23	P	PKiKP	10 48 34.3	-0.7
	baz=306,SNR=6.3						
M27K	Edge Creek, AK	131.47	26	P	PKPdf	10 48 34.0	-0.2
	baz=302						
MCARA	McCarthy VSAT	131.50	27	P	PKPdf	10 48 34.2	+0.1
	baz=300						
CRQE	Cirque	131.78	28	P	PKiKP	10 48 35.0	-0.8
	baz=299						
BVCY	Beaver Creek	131.84	25	P	PKiKP	10 48 35.2	-0.6
	baz=303						
YUK3	Moose Creek	132.34	26	P	PKPdf	10 48 35.4	-0.6
	baz=303						
M29M	Somme Creek	132.75	24	P	PKiKP	10 48 37.0	-0.7
	baz=305						
O28M	Mount Upton	132.99	27	P	PKPdf	10 48 37.4	+0.1
	baz=302						
M30M	Minto, Yukon	133.29	24	P	PKiKP	10 48 38.0	-0.7
	baz=307,SNR=8.9						
YUK4	Talbot Arm	133.31	26	P	PKiKP	10 48 38.3	-0.7
	baz=304						
PINM	Pinnacle	133.33	28	P	PKiKP	10 48 38.8	-0.1
	baz=302						
N30M	Aishikik Lake	133.85	25	P	PKiKP	10 48 39.4	-0.5
	baz=306,SNR=6.3						
O29M	Mount Kennedy	133.92	27	P	PKPdf	10 48 39.1	+0.2
	baz=304						
HYT	Haines Junctio	134.06	26	P	PKPdf	10 48 39.1	0.0
	baz=305						
N31M	Braeburn, Yuko	134.34	25	P	PKPdf	10 48 39.7	+0.2
	baz=308,SNR=7.0						
M31M	Drury Creek, Y	134.40	23	P	PKPdf	10 48 39.2	-0.4
	baz=310						
ETMB	Extrema	134.56	226	PKPdf	PKPdf	10 48 40.7	-0.6
O30N	Mendenhall	134.65	25	P	PKPdf	10 48 40.5	+0.3
	baz=307,SNR=7.6						
P30M	Million Dollar	134.69	27	P	PKiKP	10 48 40.9	-0.8
	baz=305						
WHY	Whitehorse	135.19	25	P	PKPdf	10 48 41.5	+0.3
	baz=308						
PLBC	Pleasant Camp	135.32	27	P	PKPdf	10 48 41.4	+0.1
	baz=305						
N32M	Quiet Lake	135.56	24	P	PKPdf	10 48 41.3	-0.5
	baz=311						
SKAG	Skagway	135.75	27	P	PKPdf	10 48 41.6	-0.5
	baz=307						
P33M	Teslin, Yukon	136.27	25	P	PKPdf	10 48 42.5	-0.7
	baz=310						
P32M	Atlin	136.32	26	P	PKPdf	10 48 42.8	-0.4
	baz=309						
R33M	Jennings River	137.51	25	P	PKPdf	10 48 45.5	-0.1
	baz=312,SNR=9.2						
BOAV	Boa Vista	138.27	245	PKPdf	PKPdf	10 48 45.3	-2.9
DLBC	Dease Lake	138.52	25	P	PKPdf	10 48 47.6	+0.2
	baz=312						
WRAK	Wrangell Islan	138.85	29	P	PKPdf	10 48 48.5	+0.6
	baz=308						
T35M	Bob Quinn	139.40	27	P	PKiKP	10 48 50.8	-0.4
	baz=311						
YKA	Yellowknife Ar	139.77	12	PKP	PKPdf	10 48 48.0	-1.4
	comp=Z,4.4nm,1.2s,baz=357,slow=2.8,SNR=6.4						
BIM	Bigot	144.36	262		PKPbc	10 48 57.1	-0.3
FDF	Fort de France	144.50	262		PKPdf	10 48 59.1	-0.2
FDF	Fort de France	144.50	262	PKIKP	PKPdf	10 48 59.1	-0.2
FCC	Fort Churchill	145.10	357		PKPbc	10 48 57.8	-0.6
FCC	Fort Churchill	145.10	357	PKIKP	PKPbc	10 48 57.8	-0.6
HAL	Halifax	145.48	315		PKPdf	10 48 59.6	-0.5
HAL	Halifax	145.48	315	PKIKP	PKPdf	10 48 59.6	-0.5
LMN	Caledonia Moun	145.70	318	PKPdf	PKPab	10 49 01.1	-0.1
BOSC	San Juan Bosco	147.29	217		PKPbc	10 49 05.8	-0.9
PTLC	Puerto Leguiza	147.65	226	*e*P	PKPbc	10 49 07.1	-0.4
F64A	Sherman	147.82	320		PKPbc	10 49 07.3	+0.4
BAUV	El Baul	148.08	247	PKPdf	PKPdf	10 49 02.9	-2.5
MACC	Macarena, Meta	148.44	230	*e*P	PKPdf	10 49 05.5	-0.6
PTGC	Puerto Gaitan,	148.58	235	*e*P	PKPdf	10 49 06.2	-0.1
PKME	Peaks-Kenny Pk	148.70	320	P	PKPbc	10 49 09.4	+0.2
	baz=56						
PORT	Chimborazo Vol	148.83	219		PKPab	10 49 13.8	-1.3
FLOC	Florencia	149.27	227	*e*P	PKPbc	10 49 11.8	+0.1
SLOR	San Lorenzo -	149.27	220		PKiKP	10 49 14.5	+1.0
GARC	Garzon, Huila	149.60	228	*e*P	PKiKP	10 49 13.8	-0.1
F04D	Rainier, OR	149.86	37	P	PKPbc	10 49 12.1	-0.1
	baz=309						
BETC	Betania	149.93	229	*e*P	PKiKP	10 49 14.3	0.0
OTAV	Otavalo	150.01	221	*e*P	PKPdf	10 49 09.8	+0.6
SOCV	Socops	150.06	243	*e*P	PKPbc	10 49 12.9	-0.8
GCUF	Volcan Galeras	150.10	224	*e*P	PKiKP	10 49 15.9	+0.7
G03D	McMinnville, O	150.25	38	P	PKPbc	10 49 12.8	-0.3
	baz=307						
PRAC	Prado	150.27	231	*e*P	PKPdf	10 49 10.7	+1.7
FLF1	Flavio Alfaro-	150.34	218	*e*P	PKPbc	10 49 12.9	-1.5
RUSC	La Rusia	150.39	237	*e*P	PKPbc	10 49 14.3	-0.7
I02E	Swisshome, OR	150.56	40	P	PKPbc	10 49 13.6	-0.2
	baz=305						
ROSC	El Rosal	150.63	233	PKP	PKPdf	10 49 11.0	+1.0
	comp=Z,12nm,0.5s,baz=102,slow=10,SNR=3.9						
BBAC	Balboa, Cauca	150.65	225	*e*P	PKiKP	10 49 15.4	-0.6
POPC	Popayan, Colom	150.66	227	*e*P	PKPbc	10 49 14.2	-1.1
LBNH	Lisbon	150.83	320	P	PKPbc	10 49 13.9	-0.7
	baz=54						
BARC	Barichara	150.91	238	*e*P	PKPab	10 49 20.9	-2.2
H04D	Lebanon	150.97	39	P	PKiKP	10 49 15.0	-0.4
	baz=307,SNR=12						
SPBC	San Pablo de B	150.99	235	*e*P	PKPbc	10 49 14.3	-1.6
J01E	Myrtle Point	151.04	42	P	PKiKP	10 49 15.4	-0.1
	baz=303						
I03D	Drain, OR	151.09	41	P	PKiKP	10 49 15.1	-0.6
	baz=305,SNR=12						
H04A	Detroit Lake	151.18	38		PKPbc	10 49 13.7	-1.7
NEW	Newport	151.20	28	P	PKiKP	10 49 15.5	-0.3
	baz=321,SNR=20						
G05D	Wamic, OR	151.31	36	P	PKiKP	10 49 16.2	0.0
	baz=310,SNR=6.2						
K02D	Willamette Mer	151.45	43	P	PKiKP	10 49 16.1	-0.5
	baz=303						
YOTC	Yotoco, Valle	151.48	229	*e*P	PKPdf	10 49 10.9	-0.1
NORC	Norcasia	151.52	234	*e*P	PKPdf	10 49 10.7	-0.3
I04A	Tendick Farm,	151.59	40	P	PKiKP	10 49 16.3	-0.5
	baz=306,SNR=14						
BRRC	Barranca, Sant	151.64	238	*e*P	PKPdf	10 49 12.0	+0.9
GUY2C	Guyana, Caldas	151.65	233	*e*P	PKPbc	10 49 16.5	-1.4
L02F	Cave Junction	151.82	44	P	PKiKP	10 49 17.2	-0.1
	baz=302,SNR=9.5						
PTBC	PUERTO BERRIO,	151.85	236	*e*P	PKPbc	10 49 17.2	-0.6
I05D	Terrebonne, OR	151.87	38	P	PKiKP	10 49 17.4	0.0
	baz=309,SNR=12						
HUMO	Hull Mountain	151.94	42	PKPdf	PKPdf	10 49 11.9	+1.2
J04D	Umpqua Nationa	152.09	40	P	PKiKP	10 49 18.0	-0.1
	baz=306,SNR=19						
PLMC	San Jos del P	152.09	231	*e*P	PKPbc	10 49 16.7	-1.8
LONY	Lake Ozonia	152.10	323	P	PKiKP	10 49 18.0	+0.2
	baz=50						
L61B	Northampton	152.30	318	P	PKiKP	10 49 17.9	-0.4
	baz=56						
HELC	Santa Helena	152.42	234	*e*P	PKPbc	10 49 18.0	-1.6
L04D	Klamath Falls	152.56	42	P	PKPbc	10 49 18.4	-0.3
	baz=304,SNR=6.3						
CBOC	Ciudad Bolivar	152.56	233	*e*P	PKPbc	10 49 19.0	-0.6
J05D	Fort Rock, OR	152.58	39	P	PKiKP	10 49 19.2	+0.2
	baz=307,SNR=17						
K04D	Chiloquin, OR	152.66	41	P	PKiKP	10 49 19.1	0.0
	baz=305						
ZARC	Zaragoza, Cauc	152.76	237	*e*P	PKPbc	10 49 19.3	-0.5
MSO	Missoula	153.65	26	P	PKPbc	10 49 20.3	-0.6
	baz=325						
EGMT	Eagleton	154.08	19	P	PKPbc	10 49 21.0	-0.8
	baz=334						
DGMT	Dagmar	154.95	10	P	PKiKP	10 49 23.3	-0.2
	baz=346						
EYMN	Ely	155.54	350	P	PKPab	10 49 40.5	-0.9
	baz=14						
BOZ	Bozeman (W)	155.56	24	P	PKPab	10 49 41.2	-0.6
	baz=328						
AGMN	Agassiz Nation	155.63	357	P	PKPab	10 49 41.9	+0.2
	baz=3.8						
HLID	Hailey	156.01	31	P	PKPab	10 49 42.8	-1.0
	baz=319						
MDND	Maddock	156.07	3	P	PKPab	10 49 43.1	-0.6
	baz=355						
LAO	LASA Array	156.25	15	P	PKPab	10 49 44.3	-0.2
	baz=340						
SSPA	Standing Stone	156.52	320	P	PKPab	10 49 45.6	-0.3
	baz=51						
ERPA	Erie	156.69	325	P	PKPab	10 49 47.1	+0.6
	baz=44						
RLMT	Red Lodge	156.81	21	P	PKPab	10 49 47.4	+0.1
	baz=332						
H17A	Grant Village	156.98	24	P	PKPab	10 49 48.8	+0.8
	baz=328						
NVAR	Mina Array Bea	157.20	46	PKP	PKPdf	10 49 19.1	+0.7
	comp=Z,1.9nm,1.0s,baz=268,slow=1.8,SNR=13						
NVAR				PKPab	PKPab	10 49 49.3	+0.1
	comp=Z,8.3nm,1.0s,baz=280,slow=4.4,SNR=22						
MLAC	Mammoth, Mammo	157.27	48	P	PKPab	10 49 49.6	+0.1
	baz=301						
MOOW	Moose Ponds	157.46	25		PKPab	10 49 50.6	+0.5
M53A	WI Miller and	157.53	325	P	PKPab	10 49 50.5	+0.3
	baz=44						
ELK	Elko	157.63	37	PKPab	PKPab	10 49 50.2	-0.8
ELK	Elko	157.63	37	PKP2	PKPab	10 49 50.2	-0.8
PKM	Mcpherson Peak	157.82	55	P	PKPab	10 49 51.7	-0.2
	baz=294						
VES	Vestal, Richgr	157.96	52	P	PKPab	10 49 51.7	-0.6
	baz=297						
SBC	Santa Barbara	158.07	56	P	PKPab	10 49 53.2	+0.4
	baz=293						
HVU	Hansel Valley	158.16	32		PKPab	10 49 53.6	+0.5
CWC	Cottonwood Cre	158.39	50	P	PKPab	10 49 53.8	-0.5
	baz=300						
SPMN	Marine on St.	158.39	351	P	PKPab	10 49 53.6	-0.1
	baz=12						
ARVC	Arvin	158.46	54	P	PKPab	10 49 54.6	+0.2
	baz=296						
ISA	Isabella, Lake	158.48	52	P	PKPab	10 49 54.5	-0.2
	baz=297						
GRAC	Grapevine Rang	158.60	48	P	PKPab	10 49 54.8	-0.3
	baz=302						
SNCC	San Nicolas Is	158.65	59	P	PKPab	10 49 55.0	-0.4
	baz=290						
O53A	New Philadelph	158.67	324	P	PKPab	10 49 54.9	-0.2
	baz=45						
BW06	Boulder Array	158.75	25	P	PKPab	10 49 54.8	-0.9
	baz=328						
PDAR	Pinedale Array	158.75	25	PKP	PKPdf	10 49 20.1	-0.1
	comp=Z,2.2nm,1.1s,baz=94,slow=2.2,SNR=12						
PDAR				PKPab	PKPab	10 49 54.0	-1.7
	comp=Z,3.0nm,0.9s,baz=48,slow=2.2,SNR=9.3						
HWUT	Hardware Ranch	158.86	30		PKPab	10 49 56.5	+0.4
R11A	Troy Canyon, C	158.98	43	P	PKPab	10 49 55.8	-1.0
	baz=308						
MPMC	Manual Prospec	158.99	50	P	PKPab	10 49 56.5	-0.5
	baz=300						
LRMC	Laurel Mtn Rad	159.13	52	P	PKPab	10 49 57.2	-0.3
	baz=298						
RSSD	Black Hills	159.17	13	PKPdf	PKPdf	10 49 20.5	-0.1
RSSD					PKPab	10 49 57.0	-0.4
RSSD	Black Hills	159.17	13	PKIKP	PKPdf	10 49 20.5	-0.1
RSSD						10 49 57.0	
RSSD	Black Hills	159.17	13	P	PKPab	10 49 56.5	-0.9
	baz=343						
EDW2	Edwards Air Fo	159.18	54	P	PKPab	10 49 57.3	-0.3
	baz=296						
FURC	Furnace Creek,	159.22	49	P	PKPab	10 49 57.4	-0.3
	baz=302						
SPR3	Spring Creek 3	159.32	39		pPKPab	10 49 59.3	-1.2
DUG	Dugway, Tooele	159.32	35	P	PKPab	10 49 57.8	-0.4
	baz=317						
TPNV	Topopah Spring	159.38	47	P	PKPab	10 49 57.8	-0.7
	baz=304						
CIS	Catalina Islan	159.46	58	P	PKPab	10 49 58.5	-0.4
	baz=292						
SCI2	San Clemente I	159.51	59	P	PKPab	10 49 58.4	-0.7
	baz=291						
P52A	Corning	159.60	324	P	PKPab	10 49 58.7	-0.5
	baz=44						
BFSC	Mount Baldy Ra	159.71	55	P	PKPab	10 49 59.4	-0.7
	baz=295						
GSC	Goldstone, Bar	159.85	51		PKPab	10 50 00.6	0.0
GSC	Goldstone, Bar	159.85	51	P	PKPab	10 49 59.6	-1.0
	baz=299						
NLU	North Lily Min	159.88	34		PKPab	10 50 01.3	+0.6
K22A	Casper	159.91	19	P	PKPab	10 49 59.8	-0.8
	baz=336						
RRX	Edison Barstow	159.91	53	P	PKPab	10 50 00.3	-0.5
	baz=298						
SHOC	Shoshone, Teco	159.92	49	P	PKPab	10 50 00.6	-0.2
	baz=302						
JFWS	Jewell Farm	160.11	344	P	PKPab	10 50 00.3	-0.9
	baz=20						
BLA	Blacksburg	160.19	316	P	PKPab	10 50 01.9	-0.1
	baz=53						
ECSD	EROS Data Cent	160.22	358	P	PKPab	10 50 00.9	-0.8
	baz=2.6						
BBRC	Big Bear Solar	160.25	54	P	PKPab	10 50 02.0	-0.5
	baz=296						
MURC	Murrieta	160.32	56	P	PKPab	10 50 02.0	-0.7
	baz=294						
TUQ	Turquoise Moun	160.41	50	P	PKPab	10 50 02.6	-0.4
	baz=301						
HEC	Hector,Ludlow	160.41	52	P	PKPab	10 50 03.2	+0.1
	baz=299						
O48B	Farmland	160.63	330	P	PKPab	10 50 03.4	-0.2
	baz=36						
109C	Camp Elliot, M	160.67	58	P	PKPab	10 50 03.9	-0.3
	baz=293						
CCUT	Cedar City	160.85	41		PKPab	10 50 05.2	+0.2
PFO	Pinyon Flats O	160.88	55		PKPab	10 50 05.4	+0.2
PFO	Pinyon Flats O	160.88	55	P	PKPab	10 50 04.6	-0.6
	baz=296						
TPFO	Pinon Flats	160.88	55	P	PKPab	10 50 04.8	-0.4
	baz=296						
GMRC	Granite Mounta	160.92	51	P	PKPab	10 50 05.4	+0.1
	baz=300						
BELC	Belle Mtn. Jos	161.05	54	P	PKPab	10 50 05.5	-0.4
	baz=297						
MONP2	Monument Peak	161.20	57	P	PKPab	10 50 06.5	-0.2
	baz=294						
SFIN	Lafayette	161.36	334	P	PKPab	10 50 06.5	-0.2
	baz=31						
O20A	White River Ci	161.51	27		PKPab	10 50 07.7	-0.1
O20A	White River Ci	161.51	27	P	PKPab	10 50 07.4	-0.4
	baz=328						
IKP	In-Ko-Pah, Jac	161.54	58	P	PKPab	10 50 07.7	-0.4
	baz=294						
IRM	Iron Mountain	161.60	52	P	PKPab	10 50 08.5	+0.3
	baz=299						
BC3	Big Chuckawall	161.61	54	P	PKPab	10 50 08.1	-0.3
	baz=297						
SWSC	Sam W. Stewart	161.66	57	P	PKPab	10 50 08.7	+0.3
	baz=295						
NEE2	Needles Airpor	161.67	50	P	PKPab	10 50 08.6	+0.2
	baz=302						
N23A	Red Feather La	161.68	21		PKPab	10 50 08.8	+0.3
N23A	Red Feather La	161.68	21	P	PKPab	10 50 08.3	-0.2
	baz=335						
KMSC	Kings Mountain	161.99	312	P	PKPab	10 50 09.8	0.0
	baz=56						
W13A	Hualapai Mount	162.00	48	PKPab	PKPab	10 50 09.7	-0.4
HDIL	Hopedale	162.01	339	P	PKPab	10 50 09.0	-0.5
	baz=25						
U15A	North Rim	162.23	42	PKPab	PKPab	10 50 11.4	+0.2
PDMCI	Parker Dam,Lak	162.24	51	P	PKPab	10 50 10.8	-0.2
	baz=301						
BLYC	Blythe	162.25	53	PKPdf	PKPdf	10 49 25.6	+1.6
BLYC					PKPab	10 50 11.4	+0.4
GLA	Glamis	162.35	55	P	PKPab	10 50 11.5	0.0
	baz=297						
TZTN	Tazewell	162.55	319	P	PKPab	10 50 12.6	+0.4
	baz=48						
PV23	Carpenter Ridg	162.55	31		PKPab	10 50 12.9	+0.5
OGNE	Ogallala	162.62	11	P	PKPab	10 50 12.0	-0.4
	baz=346						
ISCO	Idaho Springs	162.78	21		PKPab	10 50 13.6	+0.2
ISCO	Idaho Springs	162.78	21	P	PKPab	10 50 13.3	-0.1
	baz=334						
WUAZ	Wupatki	163.38	43		PKPab	10 50 16.7	+0.6
WUAZ	Wupatki	163.38	43	P	PKPab	10 50 16.0	-0.1
	baz=310						
MVCO	Mesa Verde	163.78	33	P	PKPab	10 50 17.4	-0.4
	baz=322						
S22A	4UR Ranch, Cre	164.11	28	P	PKPab	10 50 19.2	-0.2
	baz=328						
214A	Organ Pipe Nat	164.36	56	P	PKPab	10 50 20.6	+0.2
	baz=297						
KSCO	Kaye Shedlock'	164.36	15	P	PKPab	10 50 19.3	-0.8
	baz=343						
GOGA	Godfrey	164.42	311	P	PKPab	10 50 20.9	+0.3
	baz=56						
W18A	Petrified Fore	164.65	41	P	PKPab	10 50 21.7	0.0
	baz=314						
SDCO	Great Sand Dun	164.65	24		PKPab	10 50 21.1	-0.5
SDCO	Great Sand Dun	164.65	24	P	PKPab	10 50 21.4	-0.3
	baz=332						
KSU1	Kansas State U	164.84	357	P	PKPab	10 50 21.6	-0.4
	baz=3.4						
DWPF	Disney Wildern	164.89	289	P	PKPab	10 50 21.5	-1.2
	baz=78						
CCM	Cathedral Cave	164.90	340		PKPab	10 50 22.0	-0.4
CCM	Cathedral Cave	164.90	340	PKP2	PKPab	10 50 22.0	-0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCM	Cathedral Cave	164.90	340	P	PKPab	10 50 22.2	-0.2
	baz=23						
CBKS	Cedar Bluff	165.04	7	P	PKPab	10 50 22.3	-0.7
	baz=352						
WVT	Waverly	165.20	328	P	PKPab	10 50 23.1	-0.6
	baz=37						
T25A	Trinidad	165.58	22	P	PKPab	10 50 25.5	-0.2
	baz=334						
TUC	Tucson	165.68	51	PKPab	PKPab	10 50 26.9	+0.6
TUC	Tucson	165.68	51	PKP2	PKPab	10 50 26.9	+0.6
TUC	Tucson	165.68	51	P	PKPab	10 50 26.5	+0.2
	baz=302						
ANMO	Albuquerque	166.58	33		PKPdf	10 49 28.6	+0.5
ANMO					PKPab	10 50 30.2	0.0
ANMO	Albuquerque	166.58	33	PKP2	PKPab	10 50 30.2	0.0
ANMO						11 49 28.6	
ANMO	Albuquerque	166.58	33	P	PKPab	10 50 30.6	+0.5
	baz=323						
LRAL	Lakeview Retre	167.00	317	P	PKPab	10 50 32.0	+0.1
	baz=48						
T35A	Sooner Cattle	167.01	356		PKPdf	10 49 28.7	+0.6
T35A					PKPab	10 50 31.3	-0.4
BNM	Barren Site	167.11	36		PKPab	10 50 33.1	+0.5
U38A	Gravette	167.22	348	PKPab	PKPab	10 50 31.8	-0.9
121A	Cookes Peak, D	167.58	44	P	PKPab	10 50 34.3	-0.4
	baz=311						
WHAR	Wooly Hollow	167.77	339		PKPab	10 50 35.2	+0.2
TUL1	Leonard	167.95	353	P	PKPab	10 50 36.7	+0.9
	baz=7.8						
MIAR	Mount Ida	168.85	343	P	PKPab	10 50 38.9	-1.0
	baz=19						
MSTX	Muleshoe	169.01	23	P	PKPab	10 50 39.5	-1.2
	baz=334						
WMOK	Wichita Mounta	169.17	5		PKPab	10 50 40.7	-0.6
WMOK	Wichita Mounta	169.17	5	P	PKPab	10 50 40.1	-1.2
	baz=354						
TXAR	Lajitas Array	172.35	44	PKP	PKPdf	10 49 31.3	-0.3
	comp=Z,5.9nm,1.1s,baz=150,slow=1.0,SNR=38						
TXAR				PKPab	PKPab	10 50 54.3	-1.5
	comp=Z,4.6nm,1.1s,baz=302,slow=2.8,SNR=10						
TXAR	Lajitas Array	172.35	44	PKPab	PKPab	10 50 53.9	-1.9

*NEIC **01** 10:44:16.2±1.3, 18°.88N±0°.03×145°.5E±0°.2, h187km±8km, mb4.1/46, Error ellipse: s-maj=23.9km s-min=1.9km az=79.0*

*IDC **01** 10:44:16.4±3.0, 18°.99N×145°.23E, h198km±28km, mb3.4/7, mbtmp3.9/8, Error ellipse: s-maj=57.3km s-min=15.7km az=112.0*

ISC 01 10:44:18.2±0.6**, 18°.85N**±0°.07×**145°.4E**±0°.2**, h214**km**, n62,** σ**0s.73**/64**, mb4.0**/31**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.25	185	P	Pn	10 45 37.1	+0.9
	28nm,0.9s,baz=84,slow=17,SNR=1.7						
GUMO				S	S	10 46 37.5	-0.2
	18nm,0.3s,baz=178,slow=21,SNR=6.1						
GUMO	Guam	5.25	185	Pn	Pn	10 45 34.5	-1.7
JMM	Marumori	19.37	349	P	P	10 48 27.4	-0.4
JSD	Sado	20.10	343	P	P	10 48 34.8	-0.9
MTN	Manton Dam	34.48	205	P	P	10 50 45.3	-0.8
MTN				IAmb	IAmb	10 51 24.4	
	comp=Z,11nm,1.4s						
KNRA	Kununurra	38.00	207	P	P	10 51 14.7	-1.2
WR0	Warramunga Arr	40.00	196	P	P	10 51 32.9	+0.5
WR0				IAmb	IAmb	10 51 48.2	
	comp=Z,8.0nm,1.4s						
WRAB	Tennant Creek	40.03	196	P	P	10 51 32.9	+0.3
WRAB				IAmb	IAmb	10 51 51.1	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	40.03	196	P	P	10 51 33.1	+0.5
WB2				IAmb	IAmb	10 51 34.0	
	comp=Z,8.5nm,1.2s						
WRA	Warramunga Arr	40.04	196	P	P	10 51 33.5	+0.7
	comp=Z,1.1nm,0.3s,baz=15,slow=8.1,SNR=45						
WRA				PcP	PcP	10 53 32.8	-0.5
	comp=Z,0.3nm,0.4s,baz=17,slow=3.6,SNR=4.6						
	comp=Z,1.1nm,0.3s						
WRA	Warramunga Arr	40.04	196	P	P	10 51 33.2	+0.4
FITZ	Fitzroy Crossi	41.52	209	P	P	10 51 45.8	+1.0
ASAR	Alice Springs	43.71	195	P	P	10 52 02.6	+0.2
	comp=Z,0.2nm,0.3s,baz=12,slow=6.5,SNR=9.2						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	43.71	195	P	P	10 52 02.4	0.0
MORW	Morawa	55.42	211	P	P	10 53 31.4	+0.8
MKAR	Makanchi Array	58.13	314	P	P	10 53 49.4	-0.1
N18K	Kilae Creek	58.58	30	P	P	10 53 53.1	+0.8
O18K	Koktuh Hills	58.65	31	P	P	10 53 52.7	-0.1
SVW2	Sparrevohn	58.85	29	P	P	10 53 55.2	+1.0
SVW2				IAmb	IAmb	10 54 17.6	
	comp=Z,6.5nm,1.2s						
K20K	Telida	60.23	27	P	P	10 54 03.7	+0.1
J20K	Nowinta River	60.46	26	P	P	10 54 06.2	+1.1
J20K				IAmb	IAmb	10 54 46.9	
	comp=Z,3.3nm,1.2s						
CNPM	China Poot	60.50	32	P	P	10 54 04.9	-0.6
SKT	Skwentna	60.96	29	P	P	10 54 08.3	-0.2
SKT				IAmb	IAmb	10 54 39.4	
	comp=Z,4.8nm,1.4s						
IMAR	Indian Mountai	61.21	24	P	P	10 54 10.9	+0.8
H21K	Melozitna Rive	61.48	25	P	P	10 54 11.9	0.0
RC01	Rabbit Creek A	61.58	30	P	P	10 54 12.4	-0.3
KTH	Kantishna Hill	61.65	27	P	P	10 54 13.4	+0.2
KTH				IAmb	IAmb	10 54 14.5	
	comp=Z,2.4nm,0.9s						
I21K	Tanana	61.66	25	P	P	10 54 13.9	+0.8
I21K				IAmb	IAmb	10 54 47.7	
	comp=Z,4.4nm,1.3s						
BPAW	Bear Paw Mtn.	61.76	27	P	P	10 54 14.3	+0.4
BPAW				IAmb	IAmb	10 54 15.3	
	comp=Z,4.2nm,1.2s						
PMR	Palmer	61.98	30	P	P	10 54 14.6	-0.7
PMR				IAmb	IAmb	10 54 16.2	
	comp=Z,4.6nm,1.3s						
MLY	Manley	62.12	26	P	P	10 54 16.7	+0.4
MLY				IAmb	IAmb	10 54 17.4	
	comp=Z,1.4nm,0.6s						
PWL	Port Wells	62.20	30	P	P	10 54 16.2	-0.7
I23K	Minto, Yukon-K	62.71	26	P	P	10 54 20.4	+0.2
I23K				IAmb	IAmb	10 54 21.1	
	comp=Z,6.4nm,1.4s						
H23K	Yukon River	62.81	25	P	P	10 54 21.0	+0.2
H23K				IAmb	IAmb	10 54 48.1	
	comp=Z,7.0nm,1.5s						
SCM	Sheep Creek Mo	62.87	29	P	P	10 54 22.3	+0.9
SCM				IAmb	IAmb	10 54 30.3	
	comp=Z,3.6nm,1.0s						
FID	Port Fidalgo	63.08	31	P	P	10 54 22.5	-0.1
WRH	Wood River Hil	63.08	26	P	P	10 54 21.7	-0.9
WRH				IAmb	IAmb	10 54 32.4	
	comp=Z,4.0nm,1.3s						
MDM	Murphy Dome	63.13	26	P	P	10 54 24.0	+1.1
CCB	Clear Creek Bu	63.24	26	P	P	10 54 22.3	-1.3
CCB				IAmb	IAmb	10 54 30.4	
	comp=Z,4.6nm,1.5s						
H24K	Noodor Dome	63.48	25	P	P	10 54 25.6	+0.3
H24K				IAmb	IAmb	10 55 03.0	
	comp=Z,4.1nm,1.4s						
HDA	Harding Lake	63.55	27	P	P	10 54 24.6	-1.0
HDA				IAmb	IAmb	10 54 49.6	
	comp=Z,4.2nm,1.5s						
TOLK	Toolik Lake Re	63.57	22	P	P	10 54 26.8	+1.0
ILAR	Eielson Array	63.65	26	P	P	10 54 25.3	-1.0
	comp=Z,0.6nm,0.6s,baz=253,slow=6.0,SNR=7.7						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	63.65	26	P	P	10 54 25.4	-0.9
PAX	Paxson	63.93	28	P	P	10 54 27.4	-0.9
PAX				IAmb	IAmb	10 54 41.5	
	comp=Z,3.3nm,1.4s						
RIDG	Independent Ri	64.33	28	P	P	10 54 30.9	+0.1
RIDG				IAmb	IAmb	10 54 41.4	
	comp=Z,3.3nm,1.2s						
DOT	Dot Lake	64.66	28	P	P	10 54 32.6	-0.3
DOT				IAmb	IAmb	10 55 09.1	
	comp=Z,3.8nm,1.4s						
BMAR	Burnt Mountain	65.11	24	P	P	10 54 37.3	+1.6
L27K	Beaver Creek,	65.58	29	P	P	10 54 38.6	-0.2
L27K				IAmb	IAmb	10 54 46.3	
	comp=Z,4.0nm,1.5s						
BCAR	Beaver Creek A	65.60	29	P	P	10 54 39.1	+0.1
HYT	Haines Junctio	67.46	31	P	P	10 54 51.7	+0.8
M30M	Minto, Yukon	67.85	29	P	P	10 54 54.3	+1.1
INK	Inuvik	69.36	23	P	P	10 55 02.0	-0.3
	comp=Z,0.8nm,0.5s,baz=288,slow=9.0,SNR=4.7						
	comp=Z,0.8nm,0.5s						
FARO	Faro, Yukon	69.46	30	P	P	10 55 03.3	+0.2
DLBC	Dease Lake	71.34	34	P	P	10 55 15.4	+0.8
ABKAR	Akbulak array	73.02	317	P	P	10 55 25.3	+0.7
YKA	Yellowknife Ar	78.00	28	P	P	10 55 52.7	0.0
	comp=Z,0.7nm,0.5s,baz=290,slow=5.3,SNR=5.3						
	comp=Z,0.7nm,0.5s						
K05A	Summer Lake	80.12	48	P	P	10 56 05.0	+0.1
K05A				IAmb	IAmb	10 56 17.5	
	comp=Z,6.6nm,1.4s						
BEKR	Beckworth	81.33	51	P	P	10 56 10.9	-0.4
NVAR	Mina Array Bea	83.30	52	P	P	10 56 21.6	0.0
	comp=Z,0.9nm,0.7s,baz=269,slow=5.7,SNR=11						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	83.30	52	P	P	10 56 21.3	-0.3
FINES	FINESS Array B	86.62	335	P	P	10 56 36.0	-1.2
	comp=Z,1.5nm,0.8s,baz=90,slow=3.8,SNR=6.8						
	comp=Z,1.5nm,0.8s						

*NEIC **01** 11:05:03.6±1.2, 3°.6S±0°.3×150°.1E±0°.2, h49km±26km, mb4.2/10, Error ellipse: s-maj=46.6km s-min=20.4km az=194.0*

*IDC **01** 11:05:05.4±5.1, 3°.83S×149°.98E, h54km±57km, mb3.6/6, mbtmp3.9/7, ML2.8/1, MS3.3/5, Error ellipse: s-maj=56.9km s-min=21.0km az=135.0*

ISC 01 11:05:04.5±0.8**, 3°.8S**±0°.1×**150°.03E**±0°.09**, h50**km**, n25,** σ**0s.99**/21**, mb4.0**/10**, MS3.4**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.07	106	P	Pn	11 05 39.0	+2.2
	2.8nm,0.3s,baz=262,slow=9.9,SNR=4.0						
KRVT				S	Sn	11 06 00.8	-0.5
	80nm,0.7s,baz=267,slow=19,SNR=3.8						
	30nm,0.5s						
RABL	Rabaul	2.17	102	Pn	Pn	11 05 36.7	-1.5
GUMO	Guam	17.97	344	LR	LR	11 14 14.9	
	comp=Z,85nm,21.8s,baz=174,slow=30						
MTN	Manton Dam	20.75	243	P	P	11 09 41.0	-0.2
MTN				IAmb	IAmb	11 09 57.5	
	comp=Z,9.8nm,1.1s						
EIDS	Eidsvold	21.52	177	P	P	11 09 50.0	+0.6
EIDS				IAmb	IAmb	11 09 55.6	
	comp=Z,15nm,1.4s						
WB0	Warramunga Arr	22.05	223	P	P	11 09 55.0	-0.1
WB0				IAmb	IAmb	11 10 31.5	
	comp=Z,12nm,1.2s						
WR0	Warramunga Arr	22.08	222	P	P	11 09 54.5	-1.0
WR0				IAmb	IAmb	11 10 28.8	
	comp=Z,9.6nm,1.1s						
WRAB	Tennant Creek	22.19	222	P	P	11 09 56.0	-0.7
WB2	Warramunga Arr	22.20	222	P	P	11 09 55.8	-1.0
WB2				IAmb	IAmb	11 10 02.3	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	22.21	222	P	P	11 09 55.0	-1.9
	comp=Z,2.4nm,0.9s,baz=45,slow=10,SNR=14						
	comp=Z,2.4nm,0.9s						
WRA	Warramunga Arr	22.21	222	P	P	11 09 57.0	+0.1
KNRA	Kununurra	24.05	239	P	P	11 10 13.7	-1.4
AS31	Alice Springs	25.19	217	P	P	11 10 25.2	-0.4
ASAR	Alice Springs	25.19	217	P	P	11 10 25.2	-0.4
	comp=Z,1.9nm,0.8s,baz=50,slow=8.0,SNR=14						
	comp=Z,1.9nm,0.8s						
ASAR	Alice Springs	25.19	217	P	P	11 10 25.6	+0.1
FITZ	Fitzroy Crossi	27.81	237	P	P	11 10 49.8	+0.6
	comp=Z,5.1nm,0.7s,baz=61,slow=7.8,SNR=12						
	comp=Z,5.1nm,0.7s						
FITZ	Fitzroy Crossi	27.81	237	P	P	11 10 49.4	+0.2
FITZ				IAmb	IAmb	11 10 55.3	
	comp=Z,5.8nm,0.7s						
KAPI	Kappang	30.21	266	LR	LR	11 23 27.5	
	comp=Z,78nm,18.9s,baz=316,slow=36						
JCJ	Chichijima	31.59	347	LR	LR	11 22 17.4	
	comp=Z,79nm,20.3s,baz=144,slow=33						
KSRS	Korea Array	45.86	335	LR	LR	11 32 11.3	
	comp=Z,8.7nm,18.7s,baz=125,slow=35						
CMAR	Chiang Mai Arr	54.93	296	P	P	11 14 31.5	+0.7
	comp=Z,1.0nm,0.7s,baz=118,slow=6.8,SNR=4.8						
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	78.76	327	P	P	11 17 02.1	+0.4
	comp=Z,0.6nm,0.6s,baz=108,slow=7.7,SNR=1.8						
	comp=Z,0.6nm,0.6s						
ILAR	Eielson Array	82.25	23	P	P	11 17 19.9	-0.3
	comp=Z,0.5nm,0.8s,baz=252,slow=5.7,SNR=4.9						
	comp=Z,0.5nm,0.8s						
ARU	Arti	93.91	326	LR	LR	12 02 58.1	
	comp=Z,22nm,18.3s,baz=148,slow=37						
TORD	Torodi Ar. Bea	147.36	289	PKPbc	PKiKP	11 24 45.3	-0.7
	comp=Z,0.8nm,1.1s,baz=80,slow=5.5,SNR=2.1						

IDC 01 11:11:41.3±6.4**, 17°.90N**×**145°.30E, h58**km±55km**, mb3.1**/4**, mbtmp3.5**/5**, ML4.1**/1**, Error ellipse: s-maj=115.9km s-min=25.9km az=112.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.30	186	P	Pn	11 12 46.0	+1.8
	11nm,0.3s,baz=63,slow=6.8,SNR=11						
GUMO				S	Sn	11 13 32.9	-0.3
	49nm,0.3s,baz=342,slow=20,SNR=7.6						
	46nm,0.4s						
H11S3	WAKE ISLAND Hy	20.33	85	T	T	11 36 48.0	
	baz=273,slow=74,SNR=3.4						
H11S1	WAKE ISLAND Hy	20.34	85	T	T	11 36 50.5	
	baz=273,slow=74,SNR=3.8						
H11S2	WAKE ISLAND Hy	20.34	85	T	T	11 36 48.7	
	baz=273,slow=74,SNR=4.8						
H11N1	WAKE ISLAND Hy	20.52	82	T	T	11 37 04.3	
	baz=267,slow=74,SNR=5.2						
H11N2	WAKE ISLAND Hy	20.52	81	T	T	11 37 05.5	
	baz=267,slow=74,SNR=6.4						
H11N3	WAKE ISLAND Hy	20.54	82	T	T	11 37 07.4	
	baz=267,slow=74,SNR=5.2						
WRA	Warramunga Arr	39.11	196	P	P	11 19 04.0	+0.8
	0.5nm,0.7s,baz=18,slow=8.9,SNR=6.1						
	0.5nm,0.7s						
ASAR	Alice Springs	42.78	195	P	P	11 19 32.6	-0.8
	0.3nm,1.0s,baz=25,slow=7.6,SNR=1.1						
	0.3nm,1.0s						
ILAR	Eielson Array	64.53	26	P	P	11 22 11.4	-0.5
	0.2nm,0.5s,baz=252,slow=6.9,SNR=5.8						
	0.2nm,0.5s						
NVAR	Mina Array Bea	83.93	52	P	P	11 24 05.8	+0.2
	0.3nm,0.6s,baz=266,slow=5.9,SNR=4.9						
	0.3nm,0.6s						

*HVO **01** 11:16:12.4±1.0, 19°.429N±0°.007×155°.616W±0°.009, h3km±5km, ML2.8/21, ML2.5/48(NEIC), Error ellipse: s-maj=1.3km s-min=1.0km az=50.0*

NEIC 01 11:16:13.0±0.9**, 19°.428N**±0°.005×**155°.598W**±0°.009**, h4**km±6km**, Error ellipse: s-maj=1.4km s-min=0.8km az=73.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWH	Moku'aweowe	0.06	1		Pg	11 16 16.0	+1.2
MLOA	Mauna Loa Obse	0.11	11		Pg	11 16 15.5	0.0
MLOA					Sg	11 16 17.6	+0.5
MLOA	Mauna Loa Obse	0.11	11	IAML		11 16 17.9	
	comp=N,1µm,0.5s						
MLOA				IAML		11 16 18.1	
	comp=E,3µm,0.8s						
ALEP	Alea Permanent	0.12	339		Pg	11 16 15.6	-0.1
ALEP					Sg	11 16 17.9	+0.5
AIN	Ainahou	0.14	113		Pg	11 16 16.5	+0.5
AIN					Sg	11 16 18.5	+0.6
AIN	Ainahou	0.14	113	IAML		11 16 19.9	
	comp=E,3µm,0.3s						
AIN				IAML		11 16 20.9	
	comp=N,3µm,0.3s						
KHU	Kahuku	0.18	185		Pg	11 16 16.5	-0.2
KHU					Sg	11 16 19.7	+0.6
KHU	Kahuku	0.18	185	IAML		11 16 20.3	
	comp=E,1µm,0.2s						
KHU				IAML		11 16 22.4	
	comp=N,1µm,0.4s						
HMH	Humu'ula Sheep	0.20	32		Pg	11 16 17.3	+0.2
HMH					Sg	11 16 20.8	+0.9
HMH	Humu'ula Sheep	0.20	32	IAML		11 16 21.1	
	comp=E,341nm,0.7s						
HMH				IAML		11 16 21.3	
	comp=N,437nm,0.5s						
MLH	Mauna Loa	0.21	72		Pg	11 16 17.6	+0.4
MLH	Mauna Loa	0.21	72	IAML		11 16 21.8	
	comp=E,777nm,0.7s						
MLH				IAML		11 16 21.9	
	comp=N,1µm,0.6s						
HTC	Hot Caves	0.27	135		Pg	11 16 18.2	0.0
WRMHI	West Rim	0.28	94		Pg	11 16 18.6	+0.1
WRMHI	West Rim	0.28	94	IAML		11 16 27.5	
	comp=N,975nm,0.6s						
WRMHI				IAML		11 16 27.9	
	comp=E,3µm,0.5s						
UWE	Uwekahuna	0.29	91		Pg	11 16 18.4	-0.3
UWE				IAML		11 16 25.5	
	comp=N,1µm,0.5s						
UWE				IAML		11 16 26.8	
	comp=E,1µm,0.4s						
SDHHI	Sand Hill	0.29	98		Pg	11 16 18.4	-0.3
SDHHI				IAML		11 16 25.8	
	comp=E,909nm,0.6s						
OBL	Observatory Le	0.30	92		Pg	11 16 18.5	-0.3
NPH	North Pit	0.30	93		Pg	11 16 19.0	+0.1
UWB	Uwekahuna B	0.30	91		Pg	11 16 18.9	-0.1
UWB	Uwekahuna B	0.30	91	IAML		11 16 29.4	
	comp=E,467nm,0.9s						
HLP	Hilina Pali	0.30	116		Pg	11 16 19.0	+0.1
HLP					Sg	11 16 23.9	+0.9
HLP	Hilina Pali	0.30	116	IAML		11 16 26.3	
	comp=N,1µm,0.6s						
HLP				IAML		11 16 27.0	
	comp=E,2µm,0.6s						
RSD	Rainshed	0.30	83		Pg	11 16 19.4	+0.4
RIM	Rim	0.31	96		Pg	11 16 18.5	-0.5
RIM				IAML		11 16 29.2	
	comp=N,725nm,0.8s						
RIM				IAML		11 16 30.2	
	comp=E,573nm,0.6s						
CPH	Captain Cook	0.31	281		Pg	11 16 19.0	0.0
SBLHI	Steaming Bluff	0.31	90		Pg	11 16 19.0	-0.1
SBLHI					Sg	11 16 23.6	+0.4
SBLHI	Steaming Bluff	0.31	90	IAML		11 16 26.5	
	comp=N,541nm,0.5s						
SBLHI				IAML		11 16 29.9	
	comp=E,468nm,1.0s						
KKO	Keanakako`i	0.32	95		Pg	11 16 18.4	-0.8
KKO				IAML		11 16 28.9	
	comp=E,495nm,0.8s						
KKO				IAML		11 16 29.8	
	comp=N,816nm,0.8s						
HATHI	Halema'uma'u T	0.32	91		Pg	11 16 19.5	+0.3
HATHI				IAML		11 16 28.4	
	comp=N,658nm,0.6s						
BYL	Byron's Ledge	0.32	93		Pg	11 16 18.7	-0.6
BYL				IAML		11 16 28.4	
	comp=E,495nm,0.5s						
BYL				IAML		11 16 30.2	
	comp=N,542nm,0.6s						
KHLU	Kahalu`u	0.32	300		Pg	11 16 19.4	+0.1
KHLU	Kahalu`u	0.32	300	IAML		11 16 26.1	
	comp=E,1µm,0.3s						
KHLU				IAML		11 16 26.1	
	comp=N,2µm,0.2s						
POHA	Pohakuloa	0.33	11		Pg	11 16 19.7	+0.1
POHA				IAML		11 16 29.3	
	comp=N,611nm,0.5s						
POHA				IAML		11 16 29.9	
	comp=N,480nm,0.4s						
HUH	Hualalai	0.34	319		Pg	11 16 20.4	+0.7
HUH	Hualalai	0.34	319	IAML		11 16 29.5	
	comp=E,1µm,0.5s						
HUH				IAML		11 16 30.0	
	comp=N,993nm,0.5s						
PUH	Pauahi	0.36	98		Pg	11 16 19.7	-0.4
PUH	Pauahi	0.36	98	IAML		11 16 26.8	
	comp=E,324nm,0.5s						
PUH				IAML		11 16 31.5	
	comp=N,508nm,0.7s						
STCH	Steam Cracks	0.45	95		Pg	11 16 21.6	-0.1
STCH	Steam Cracks	0.45	95	IAML		11 16 29.5	
	comp=N,4.8nm,0.3s						
STCH				IAML		11 16 32.4	
	comp=E,3.1nm,0.2s						
HPAH	Hawaii Prepara	0.61	351		Pg	11 16 23.9	-0.8
HLK	Haleakala	1.46	335	Pn	Pn	11 16 38.5	-1.9

*HEL **01** 11:26:02.0±0.1, 64°.02N×28°.12E, h0km, ML1.8, Explosion*

*IDC **01** 11:26:03.3±1.4, 63°.94N×28°.00E, h0km, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=21.5km s-min=10.9km az=110.0*

*UPP **01** 11:26:08.0±2.0, 64°.11N×27°.14E, h0km, ML1.6, Suspected explosion*

ISC 01 11:26:02.1±0.8**, 64°.05N**±0°.03×**28°.12E**±0°.04**, h0**km**, n33,** σ**1s.41**/43**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RMF	Romuvaara	0.81	78	PB	Pg	11 26 17.4	-0.3
RMF				SB	Sg	11 26 28.4	+0.2
OBF4	Vikkela, Lumij	1.51	302	PN	Pn	11 26 30.1	-0.3
	baz=121						
OUF	Merijarvi	1.51	284	PG	Pn	11 26 29.2	-1.1
OUF				MSG		11 26 47.6	
	comp=Z,11nm,0.2s						
OUF				SN	Sg	11 26 49.7	-0.9
OBF0	Syolatti, Pyha	1.75	286	PG	Pn	11 26 33.7	+0.1
OBF0				SN	Sn	11 26 57.2	+0.6
MSF	Maaselka	1.91	11	PG	Pb	11 26 36.9	-0.8
	baz=195						
OBF8	Ulkokalla	2.06	280	PG	Pn	11 26 39.1	+1.3
KAF	Kangasniemi	2.12	204	PB	Pn	11 26 38.3	-0.3
KAF				MSG		11 27 03.9	
	comp=Z,4.2nm,0.2s						
KAF				SN	Sn	11 27 04.9	-0.7
KU6	Riekki	2.12	20	PG	Pb	11 26 41.0	-0.3
KU6				MSG		11 27 05.8	
	comp=Z,3.2nm,0.2s						
KEF	Keuruu	2.40	219	PB	Pn	11 26 43.2	+0.6
KEF				MSG		11 27 12.2	
	comp=Z,4.9nm,0.2s						
KEF				SB	Sn	11 27 13.4	+0.8
TOF	Tornio	2.59	323	SB	Sn	11 27 18.3	+1.0
TOF				MSG		11 27 19.2	
	comp=Z,2.0nm,0.2s						
VAF	Ylistaro	2.64	250	PB	Pn	11 26 47.5	+1.7
VAF				MSG		11 27 19.5	
	comp=Z,4.6nm,0.2s						
VAF				SB	Sn	11 27 21.1	+2.6
RUFX	Ruokolahti	2.66	171	PB	Pn	11 26 47.1	+1.0
RNF	Rovaniemi	2.71	342	PG	Pb	11 26 51.2	-0.2
RNF				SG	Sb	11 27 26.2	+1.1
KALU	Kalix	2.72	314	P	Pn	11 26 48.3	+1.4
KALU				S	Sn	11 27 19.2	-1.2
FIA0	FINESS Array S	2.78	201	PN	Pn	11 26 48.8	+1.0
	baz=17						
FIA0				SN	Sn	11 27 20.9	-1.1
FINES	FINESS Array B	2.78	201	Pn	Pn	11 26 48.5	+0.7
	comp=Z,0.6nm,0.3s,baz=17,slow=15,SNR=22						
FINES				Lg	Lg	11 27 23.5	
	comp=Z,0.7nm,0.3s,baz=21,slow=27,SNR=25						
	comp=Z,1.1nm,0.3s						
BURU	Burvik	2.98	283	P	Pn	11 26 50.8	+0.2
BURU	Burvik	2.98	283	SN	Sn	11 27 27.6	+0.6
SJUU	Sjulsmark	3.15	301	P	Pn	11 26 53.3	+0.5
SJUU				S	Sn	11 27 28.7	-2.3
ODEU	Stanfors	3.25	280	P	Pn	11 26 53.5	-0.7
PAJU	Pajala	3.64	327	P	Pn	11 27 01.5	+2.0
PAJU	Pajala	3.64	327	PB	Pn	11 27 01.8	+2.3
SVAU	Svanoeiden	3.75	281	P	Pn	11 27 00.6	-0.5
VRF	Varrio	3.76	9	SB	Sb	11 27 53.7	-1.6
LILU	Lilltraesk	3.76	293	P	Pn	11 27 01.5	+0.3
HUSU	Husum	4.02	264	P	Pn	11 27 05.5	+0.7
BREU	Bredtraesk	4.21	272	P	Pn	11 27 07.3	-0.1
RAF	Rauma	4.23	227	SG	Sg	11 28 14.4	-3.4
DUNU	Dundret	4.39	318	P	Pn	11 27 11.4	+1.5
HEMU	Hemsoen	4.74	258	SG	Sb	11 28 27.4	+3.9
ARCES	ARCESS Array B	5.60	351	Pn	Pn	11 27 28.4	+1.9
	comp=Z,0.1nm,0.3s,baz=166,slow=12,SNR=1.0						
ARCES				Sn	Sn	11 28 30.1	-1.4
	comp=Z,0.1nm,0.3s,baz=169,slow=24,SNR=2.3						
ARCES				Lg	Lg	11 28 54.8	
	baz=172,slow=30,SNR=1.6						
	comp=Z,0.6nm,0.7s						
I37NO	I37NO	6.30	327	*i*		12 04 10.0	
	baz=140,slow=318,SNR=0.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HFS	**Hagfors**	**7.82**	**246**	Pn	**Pn**	**11 27 56.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=59,slow=14,SNR=2.7						
HFS				Lg	Lg	11 29 56.6	
	comp=Z,0.1nm,0.3s,baz=38,slow=33,SNR=3.2						
	comp=Z,2.0nm,0.8s						

*NEIC **01** 11:31:17.8±1.6,53°2N±0°1×161°00W±0°07,h30km±22km, ML3.4/12,ML3.2/36(AEIC),Error ellipse: s-maj=20.0km s-min=3.4km az=163.0*
*IDC **01** 11:31:17.8±4.9,53°30N×160°59W,h0km,mb3.3/2, mbtmp3.4/5,ML3.4/3,Error ellipse: s-maj=85.4km s-min=27.4km az=91.0*
*AEIC **01** 11:31:19±2.0,53°10N±0°09×160°9W±0°1,h12km±8km, Error ellipse: s-maj=14.5km s-min=7.7km az=158.0*
ISC 01 11:31:19.1±1.1,**53°26N**±0°09×**160°97W**±0°05,**h35**km,**n66, σ1s19**/65,**South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.76**	**27**		**Pn**	**11 31 46.2**	**-0.8**
DT1	**Dutton Round H**	**2.00**	**338**		**Pn**	**11 31 49.9**	**-0.4**
SDPT	**Sand Point**	**2.11**	**8**	IAML		11 32 17.8	
	comp=N,151nm,0.4s						
SDPT				IAML		11 32 20.4	
	comp=E,150nm,0.6s						
SDPT	**Sand Point**	**2.11**	**8**		**Pn**	**11 31 51.6**	**-0.2**
SDPT					**Sn**	**11 32 16.9**	**0.0**
HAG	**Hague Volcano**	**2.13**	**346**		**Pn**	**11 31 52.6**	**+0.4**
FALS	**False Pass**	**2.15**	**319**		**Pn**	**11 31 51.6**	**-0.8**
FALS					**Sn**	**11 32 17.7**	**-0.1**
PS4A	**Pavlof South-4**	**2.15**	**346**		**Pn**	**11 31 52.6**	**+0.2**
ISLZ	**Isanotski Laza**	**2.18**	**313**		**Pn**	**11 31 52.1**	**-0.8**
ISLZ					**Sn**	**11 32 17.8**	**-1.0**
PN7A	**Pavlof North-7**	**2.26**	**345**		**Pn**	**11 31 54.6**	**+0.7**
ISNN	**Isanotski Nort**	**2.28**	**315**		**Pn**	**11 31 54.2**	**-0.1**
ISNN					**Sn**	**11 32 21.3**	**+0.1**
SSLS	**Shishaldin Sou**	**2.30**	**310**		**Pn**	**11 31 54.2**	**-0.4**
SSLN	**Shishaldin Nor**	**2.37**	**312**		**Pn**	**11 31 55.5**	**+0.1**
SSBA	**Shishaldin**	**2.40**	**310**		**Pn**	**11 31 55.5**	**-0.4**
SSBA					**Sn**	**11 32 23.7**	**-0.3**
WESN	**West Dahl Nort**	**2.51**	**303**		**Pn**	**11 31 57.0**	**-0.3**
S12K	**Black Hills**	**2.53**	**346**		**Pn**	**11 31 58.4**	**+0.8**
WECS	**Westdahl Cape**	**2.59**	**301**		**Pn**	**11 31 57.9**	**-0.5**
WECS					**Sn**	**11 32 27.8**	**-0.8**
AKSA	**Akutan Strait**	**2.94**	**289**		**Pn**	**11 32 02.3**	**-1.0**
AKUT	**Akutan**	**2.98**	**289**	Pn	**Pn**	**11 32 02.5**	**-1.3**
AKUT				IAML		11 32 40.2	
	comp=N,65nm,0.4s						
AKBBA	**Akutan Broad B**	**3.07**	**288**		**Pn**	**11 32 04.3**	**-0.7**
AKMO	**Akutan Morgan**	**3.11**	**288**		**Pn**	**11 32 04.9**	**-0.7**
UNV	**Unalaska Valle**	**3.35**	**282**		**Pn**	**11 32 07.5**	**-1.3**
CHGN	**Chignik**	**3.39**	**25**		**Pn**	**11 32 09.4**	**0.0**
CHGN				IAML		11 32 52.2	
	comp=N,170nm,0.1s						
MNAT	**Makushin Natee**	**3.46**	**283**		**Pn**	**11 32 09.3**	**-1.1**
MTBL	**Makushin Table**	**3.47**	**284**		**Pn**	**11 32 10.2**	**-0.4**
MSW	**Makushin Switc**	**3.52**	**283**		**Pn**	**11 32 10.2**	**-1.1**
CHIR	**Chirikof Islan**	**4.04**	**48**		**Pn**	**11 32 17.7**	**-0.6**
CHIR	**Chirikof Islan**	**4.04**	**48**	IAML		11 34 01.8	
	comp=E,85nm,1.5s						
OKNC	**Okmok New Cone**	**4.29**	**275**		**Pn**	**11 32 21.2**	**-0.6**
NIKH	**Nikolski High**	**4.76**	**270**		**Pn**	**11 32 27.1**	**-1.2**
SII	**Sitkinak Islan**	**5.12**	**47**	Pn	**Pn**	**11 32 33.7**	**+0.5**
OHAK	**Old Harbor**	**5.92**	**45**		**Pn**	**11 32 43.4**	**-0.8**
KDAK	**Kodiak Island**	**6.57**	**43**	Pn	**Pn**	**11 32 52.0**	**-1.0**
	comp=E,0.9nm,0.3s,baz=229,slow=11,SNR=51						
KDAK				Sn	**Sn**	**11 34 01.3**	**-5.3**
	comp=E,0.9nm,0.3s,baz=246,slow=20,SNR=10						
	comp=E,2.3nm,0.3s						
KDAK	**Kodiak Island**	**6.57**	**43**	Pn	**Pn**	**11 32 51.7**	**-1.3**
Q19K	**Cape Douglas,**	**7.00**	**33**	Pn	**Pn**	**11 33 00.2**	**+1.2**
O18K	**Koktuh Hills**	**7.33**	**23**	Pn	**Pn**	**11 33 05.7**	**+2.2**
N18K	**Kilae Creek**	**7.94**	**18**	Pn	**Pn**	**11 33 11.5**	**-0.3**
CNPM	**China Poot**	**8.28**	**37**	Pn	**Pn**	**11 33 17.1**	**+0.7**
SVW2	**Sparrevohn**	**8.38**	**18**	Pn	**Pn**	**11 33 18.9**	**+1.0**
M19K	**Big River Lodg**	**9.35**	**20**	Pn	**Pn**	**11 33 32.6**	**+1.4**
L19K	**White Mountain**	**9.52**	**18**	Pn	**Pn**	**11 33 34.9**	**+1.4**
RC01	**Rabbit Creek A**	**9.93**	**33**	Pn	**Pn**	**11 33 40.2**	**+1.2**
PWL	**Port Wells**	**10.25**	**37**		**Pn**	**11 33 43.7**	**+0.2**
HIN	**Hinchinbrook I**	**10.66**	**42**	Pn	**Pn**	**11 33 49.6**	**+0.6**
GHO	**Glory Hole Cre**	**10.69**	**32**	Pn	**Pn**	**11 33 49.5**	**-0.1**
FID	**Port Fidalgo**	**10.88**	**41**	Pn	**Pn**	**11 33 50.2**	**-1.9**
EYAK	**Cordova Ski Ar**	**11.05**	**43**	Pn	**Pn**	**11 33 54.2**	**-0.2**
CAST	**Castle Rocks**	**11.19**	**21**	Pn	**Pn**	**11 33 57.3**	**+1.0**
SCM	**Sheep Creek Mo**	**11.27**	**35**	Pn	**Pn**	**11 33 58.1**	**+0.7**
RAGM	**Ragged Mountai**	**11.41**	**45**	Pn	**Pn**	**11 33 59.2**	**-0.1**
J20K	**Nowinta River**	**11.50**	**15**	Pn	**Pn**	**11 34 01.1**	**+0.6**
KLU	**Klutina**	**11.55**	**38**	Pn	**Pn**	**11 34 01.3**	**0.0**
HMT	**Hamilton**	**11.56**	**46**	Pn	**Pn**	**11 34 02.5**	**+1.2**
TRF	**Thorofare Moun**	**11.63**	**24**	Pn	**Pn**	**11 34 02.0**	**-0.5**
RND	**Reindeer**	**11.97**	**27**	Pn	**Pn**	**11 34 06.4**	**-0.7**
N25K	**Chitina, Valde**	**12.12**	**40**	Pn	**Pn**	**11 34 09.9**	**+0.8**
PAX	**Paxson**	**12.68**	**34**	Pn	**Pn**	**11 34 14.1**	**-2.7**
ILAR	**Eielson Array**	**13.59**	**26**	Pn	**Pn**	**11 34 27.0**	**-2.0**
	comp=E,0.1nm,0.3s,baz=218,slow=13,SNR=3.1						
ILAR				Sn	Sn	11 36 48.5	-10
	baz=220,slow=29,SNR=2.0						
	comp=E,0.2nm,0.4s						
INK	**Inuvik**	**19.89**	**30**	P	**P**	**11 35 48.0**	**+1.0**
	comp=E,0.2nm,0.3s,baz=248,slow=12,SNR=4.6						
	comp=E,1.8nm,0.7s						
NVAR	**Mina Array Bea**	**32.67**	**100**	P	**P**	**11 37 49.5**	**+1.6**
	comp=E,0.2nm,0.7s,baz=290,slow=10,SNR=2.7						
	comp=E,0.2nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**41.62**	**229**	T	T	12 24 44.7	
	baz=26						
H11N3	**WAKE ISLAND Hy**	**41.63**	**229**	T	T	12 24 44.7	
	baz=26						
H11N1	**WAKE ISLAND Hy**	**41.64**	**229**	T	T	12 24 43.6	
	baz=26						
H11S1	**WAKE ISLAND Hy**	**42.78**	**228**	T	T	12 26 16.3	
	baz=26,slow=74						
H11S2	**WAKE ISLAND Hy**	**42.80**	**228**	T	T	12 26 15.8	
	baz=26,slow=74						
H11S3	**WAKE ISLAND Hy**	**42.80**	**228**	T	T	12 26 14.1	
	baz=26						
TXAR	**Lajitas Array**	**47.70**	**97**	P	**P**	**11 39 54.2**	**+2.0**
	comp=E,0.6nm,0.7s,baz=300,slow=5.6,SNR=8.8						
	comp=E,0.6nm,0.7s						

IDC 01 11:32:01.8±17.0,**23°37S**×**82°18E**,**h0**km,**mb3.6**/3, **mbtmp3.6**/3,**MS4.4**/1,**Error ellipse: s-maj=423.0km s-min=53.9km az=139.0**,**South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.19**	**328**	T	T	11 55 39.9	
	baz=152,slow=74,SNR=20						
H08S1	**Diego Carcia H**	**18.20**	**328**	T	T	11 55 39.5	
	baz=152,slow=74,SNR=7.4						
H08S3	**Diego Garcia H**	**18.21**	**328**	T	T	11 55 40.3	
	baz=152,slow=74,SNR=42						
ASAR	**Alice Springs**	**47.21**	**101**	P	P	11 40 36.3	-0.4
	0.6nm,0.9s,baz=267,slow=7.2,SNR=8.5						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**48.39**	**96**	P	P	11 40 46.1	+0.3
	0.6nm,0.7s,baz=261,slow=7.9,SNR=9.2						
	0.6nm,0.7s						
MATP	**Matopo**	**49.66**	**262**	LR	LR	11 58 46.4	
	comp=Z,422nm,21.2s,baz=240,slow=32						
VNDA	**Vanda**	**65.11**	**166**	P	P	11 42 43.8	-0.1
	0.6nm,0.4s,baz=292,slow=5.4,SNR=2.1						
	0.6nm,0.4s						

IDC 01 11:38:20.6±13.0,**29°32N**×**81°75E**,**h0**km,**mb3.8**/3, **mbtmp3.8**/4,**ML3.6**/1,**Error ellipse: s-maj=255.7km s-min=85.5km az=138.0**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.45**	**1**	P	Pn	11 42 24.8	-0.6
	0.2nm,0.3s,baz=173,slow=11,SNR=5.6						
	1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**24.71**	**4**	P	P	11 43 44.1	+0.8
	0.7nm,0.5s,baz=187,slow=10,SNR=2.8						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**48.40**	**328**	P	P	11 47 04.9	+0.8
	1.1nm,0.7s,baz=101,slow=12,SNR=2.2						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**51.19**	**338**	P	P	11 47 23.8	-1.5
	1.8nm,1.0s,baz=93,slow=8.1,SNR=1.4						
	1.8nm,1.0s						

*IDC **01** 11:43:59.4±11.0,8°03S×118°33E,h164km±127km, mb2.9/2,mbtmp3.4/4,ML3.4/2,Error ellipse: s-maj=197.8km s-min=42.0km az=46.0*
*DJA **01** 11:44:02.9±0.7,9°S±9°×11°8E±°,h172km±6km,M3.4/6, MLv3.4/6*
ISC 01 11:43:58.8±1.4,**7°8S**±0°1×**118°55E**±0°08,**h150**km,**n10, σ1s14**/12,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.28**	**217**	P	**Pn**	**11 44 28.1**	**+1.9**
PLAI				S	**Sn**	**11 44 47.5**	**+0.4**
TWSI	**Taliwang, Sumb**	**1.90**	**240**	P	**Pn**	**11 44 33.6**	**+0.9**
TWSI				S	**Sn**	**11 44 57.9**	**-0.9**
WBSI	**Waikabubak, Su**	**2.02**	**156**	P	**Pn**	**11 44 35.5**	**+1.3**
WBSI				S	**Sn**	**11 45 00.0**	**-1.4**
BASI	**Baing, Sumba**	**3.14**	**140**	P	**Pn**	**11 44 49.0**	**+1.1**
EDFI	**Ende, Flores**	**3.25**	**107**	P	Pn	11 44 55.2	+5.8
IGBI	**Denpasar**	**3.52**	**253**	P	**Pn**	**11 44 53.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**12.35**	**147**	P	**Pn**	**11 46 49.2**	**-0.5**
	0.1nm,0.3s,baz=324,slow=15,SNR=1.5						
FITZ				S	Sn	11 48 55.1	-11
	1.1nm,0.8s,baz=308,slow=17,SNR=1.4						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**19.49**	**130**	P	**P**	**11 48 14.2**	**-0.2**
	0.2nm,0.3s,baz=303,slow=12,SNR=15						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**21.59**	**139**	P	**P**	**11 48 35.9**	**-0.9**
	0.8nm,0.4s,baz=315,slow=8.9,SNR=46						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**63.19**	**333**	P	**P**	**11 54 10.9**	**0.0**
	0.2nm,0.5s,baz=138,slow=6.0,SNR=1.6						
	0.2nm,0.5s						

*KRSC **01** 11:53:03.3±0.9,53°86N×159°14E,h173km±9km,ML4.2*
*IDC **01** 11:53:04.7±0.7,54°11N×158°55E,h159km±8km,mb3.3/14, mbtmp3.7/14,Error ellipse: s-maj=18.3km s-min=13.0km az=148.0*
ISC 01 11:53:04.9±0.7,**53°89N**±0°05×**159°06E**±0°05,**h166**km±5km, **n53**,σ**1s08**/68,**mb3.5**/15,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.27**	**58**	*e*P	**Pn**	**11 53 27.4**	**0.0**
KRX	**Arik**	**0.59**	**205**	*e*P	**Pn**	**11 53 28.8**	**+0.1**
KRER	**Koryakskii**	**0.62**	**197**	*e*P	**Pn**	**11 53 29.2**	**+0.3**
SDLR	**Sedlovina**	**0.62**	**189**	*e*P	**Pn**	**11 53 29.2**	**+0.3**
SMAR	**Somma**	**0.65**	**194**	*e*P	**Pn**	**11 53 29.6**	**+0.5**
KOK	**Koryaka**	**0.65**	**203**	*e*P	**Pn**	**11 53 29.4**	**+0.4**
AVH	**Avacha**	**0.66**	**197**	*i* P	**Pn**	**11 53 29.4**	**+0.4**
GNL	**Ganaly**	**0.69**	**254**	*e*P	**Pn**	**11 53 28.8**	**-0.4**
GNL				*e*S	**Sn**	**11 53 47.2**	**-0.6**
UGLR	**Uglovaya**	**0.70**	**191**	*e*P	**Pn**	**11 53 29.7**	**+0.4**
NLC	**Nalytchevo**	**0.74**	**166**	*e*P	**Pn**	**11 53 29.4**	**0.0**
NLC				*e*S	**Sn**	**11 53 48.4**	**+0.3**
DALK	**Dalny**	**0.88**	**192**	*i* P	**Pn**	**11 53 30.4**	**+0.1**
PET	**Petropavlovsk**	**0.90**	**196**	*e*P	**Pn**	**11 53 30.7**	**+0.2**
PET				*e*S	**Sn**	**11 53 50.6**	**+0.6**
SPN	**Mys Shipunski**	**0.98**	**144**	*i* P	**Pn**	**11 53 30.6**	**-0.5**
SPN				*e*S	**Sn**	**11 53 50.5**	**-0.6**
PETK	**Petropavlovsk-**	**1.13**	**226**	P	**Pn**	**11 53 31.2**	**-1.1**
	57nm,0.5s,baz=72,slow=14,SNR=364						
PETK				S	**Sn**	**11 53 52.0**	**-1.3**
	13nm,0.6s,baz=57,slow=30,SNR=5.5						
PETK				LR	LR	11 54 09.5	
	comp=Z,49nm,18.0s,baz=267,slow=58						
KRMR	**Karymshinskiy**	**1.20**	**208**	*i* P	**Pn**	**11 53 32.9**	**0.0**
KRMR				*e*S	**Sn**	**11 53 54.3**	**0.0**
GRL	**Gorelyy**	**1.47**	**204**	*i* P	**Pn**	**11 53 36.3**	**+0.8**
APC	**Apacha**	**1.49**	**230**	*e*P	**Pn**	**11 53 35.8**	**+0.2**
APC				*e*S	**Sn**	**11 53 59.4**	**+0.2**
RUS	**Russkaya**	**1.50**	**193**	*e*P	**Pn**	**11 53 35.4**	**-0.2**
RUS				*e*S	**Sn**	**11 53 58.8**	**-0.5**
MTVR	**Mutnovka**	**1.51**	**201**	*e*P	**Pn**	**11 53 36.5**	**+0.6**
MTVR				*e*S	**Sn**	**11 54 01.6**	**+1.8**
TUMR	**Tumrok**	**1.53**	**24**	*e*P	**Pn**	**11 53 36.7**	**+0.6**
TUMR				*e*S	**Sn**	**11 54 01.3**	**+1.0**
ASAK	**Asacha**	**1.66**	**205**	*i* P	**Pn**	**11 53 37.9**	**+0.4**
ASAK				*e*S	**Sn**	**11 54 04.0**	**+1.5**
MKZ	**Mys Kozlova**	**1.71**	**66**	*e*P	**Pn**	**11 53 37.7**	**0.0**
MKZ				*e*S	**Sn**	**11 54 01.5**	**-1.6**
KMNR	**Kamenistaya**	**1.99**	**20**	*e*P	**Pn**	**11 53 41.6**	**+0.7**
ESO	**Esso**	**2.05**	**354**	*i* P	**Pn**	**11 53 43.0**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.17**	**196**	*e*P	**Pn**	**11 53 42.2**	**-0.7**
KDTR				*e*S	**Sn**	**11 54 10.7**	**-1.6**
KPT	**Kopyto**	**2.19**	**17**	*e*P	**Pn**	**11 53 43.3**	**+0.2**
KOZ	**Kozyrevsk**	**2.22**	**12**	*e*P	**Pn**	**11 53 43.6**	**+0.1**
SRDR	**Sredinnyy**	**2.46**	**9**	*e*P	**Pn**	**11 53 46.2**	**-0.1**
KRSR	**Krestovskiy**	**2.49**	**20**	*e*P	**Pn**	**11 53 47.5**	**+0.8**
KLY	**Klyuchi**	**2.59**	**20**	*e*P	**Pn**	**11 53 49.0**	**+1.2**
PAU	**Pauzhetka**	**2.79**	**210**	*e*P	**Pn**	**11 53 51.1**	**+0.9**
BDR	**Baidarnaya**	**2.95**	**24**	*e*P	**Pn**	**11 53 53.5**	**+1.2**
SRKR	**Sorokina**	**3.02**	**23**	*e*P	**Pn**	**11 53 53.8**	**+0.7**
SMKR	**Semkarok**	**3.03**	**26**	*e*P	**Pn**	**11 53 54.3**	**+1.1**
KBTR	**Krutoberegovo**	**3.17**	**41**	*e*P	**Pn**	**11 53 54.7**	**-0.3**
SKR	**Severo-Kuril's**	**3.69**	**210**	*e*P	**Pn**	**11 54 01.8**	**+0.3**
SKR				*e*S	**Sn**	**11 54 45.0**	**-0.5**
BKI	**Bering**	**4.24**	**69**	*e*P	**Pn**	**11 54 08.2**	**-0.3**
BKI				*e*S	**Sn**	**11 54 54.8**	**-3.4**
MJAR	**Matsushiro Arr**	**22.59**	**228**	P	**P**	**11 57 51.0**	**-0.3**
	1.1nm,0.5s,baz=27,slow=10,SNR=3.4						
	1.1nm,0.5s						
JHJ	**Hachijo jima 2**	**24.88**	**221**	P	**P**	**11 58 12.2**	**+0.1**
	52nm,0.5s,baz=74,slow=21,SNR=2.4						
ILAR	**Eielson Array**	**28.70**	**46**	P	**P**	**11 58 46.6**	**+0.7**
	0.4nm,0.8s,baz=266,slow=7.1,SNR=8.9						
	0.4nm,0.8s						
SONM	**Songino Array**	**33.12**	**281**	P	**P**	**11 59 23.7**	**-1.4**
	0.4nm,0.3s,baz=49,slow=9.8,SNR=2.1						
	0.4nm,0.3s						
YKA	**Yellowknife Ar**	**42.99**	**43**	P	**P**	**12 00 47.8**	**+0.7**
	0.9nm,0.8s,baz=300,slow=7.3,SNR=4.0						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**47.25**	**294**	P	**P**	**12 01 18.7**	**-2.2**
	1.4nm,0.5s,baz=57,slow=7.1,SNR=19						
	1.4nm,0.5s						
ARCES	**ARCESS Array B**	**52.33**	**341**	P	**P**	**12 01 56.6**	**-2.3**
	0.5nm,0.6s,baz=39,slow=7.3,SNR=0.8						
	0.5nm,0.6s						
NVAR	**Mina Array Bea**	**56.05**	**70**	P	**P**	**12 02 28.9**	**+2.4**
	0.2nm,0.5s,baz=296,slow=7.4,SNR=4.3						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**57.67**	**61**	P	**P**	**12 02 40.0**	**+2.1**
	0.7nm,0.5s,baz=318,slow=3.8,SNR=6.6						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**59.14**	**336**	P	**P**	**12 02 45.4**	**-1.9**
	0.9nm,0.3s,baz=42,slow=8.8,SNR=12						
	0.9nm,0.3s						
NOA	**NORSAR Array B**	**62.60**	**343**	P	**P**	**12 03 09.3**	**-1.5**
	0.5nm,0.7s,baz=23,slow=6.8,SNR=3.4						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**70.89**	**66**	P	**P**	**12 04 05.7**	**+1.9**
	0.4nm,0.4s,baz=293,slow=5.5,SNR=14						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**76.55**	**204**	P	**P**	**12 04 37.4**	**+0.9**
	0.3nm,0.7s,baz=23,slow=6.2,SNR=4.8						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**80.24**	**203**	P	**P**	**12 04 57.8**	**+1.1**
	0.3nm,0.7s,baz=12,slow=5.2,SNR=4.8						
	0.3nm,0.7s						
ESDC	**Sonseca Array**	**85.66**	**347**	P	**P**	**12 05 24.3**	**-0.3**
	0.9nm,0.9s,baz=5.6,slow=4.7,SNR=4.7						
	0.9nm,0.9s						
PLCA	**Paso Flores**	**144.63**	**89**	PKP	**PKPdf**	**12 12 20.6**	**-0.3**
	1.5nm,1.0s,baz=288,slow=6.4,SNR=2.1						

*MDD **01** 13:09:18.9±1.1,36°77N×11°07W,h0km,mb_Lg2.8/8, Error ellipse: s-maj=8.5km s-min=6.7km az=66.0*
*INMG **01** 13:09:20.2±1.4,36°61N×11°27W,h32km±29km,ML2.1, Error ellipse: s-maj=26.8km s-min=5.6km az=62.0*
*IGIL **01** 13:09:20.9,36°60N×11°25W,h31km,ML1.9*
*CNRM **01** 13:09:31.0,38°16N×5°16W,h0km,ml4.2*
ISC 01 13:09:17.4±3.2,**36°7N**±0°1×**11°2W**±0°2,**h27**km±22km,**n32, σ1s34**/47,**Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.98**	**76**	*e*P	**Pn**	**13 09 50.6**	**+1.5**
PFVI				*e*S	**Sn**	**13 10 13.0**	**0.0**
PFVI				A	A	13 10 14.6	
	18nm,0.4s						
MORF	**Marmelete**	**2.16**	**73**	*e*P	**Pn**	**13 09 53.2**	**+1.6**
MORF				*e*S	**Sn**	**13 10 16.9**	**-0.6**
MORF				IAML		13 10 19.2	
	comp=N,14nm,0.2s						
MORF	**Marmelete**	**2.16**	**73**	*e*P	**Pn**	**13 09 53.2**	**+1.6**
MORF				*e*S	**Sn**	**13 10 17.3**	**-0.2**
MORF				A	A	13 10 18.9	
	comp=N,8.5nm,0.3s						
PNCL	**Nicolau / Gran**	**2.58**	**56**	*e*P	**Pn**	**13 09 59.1**	**+1.7**
PNCL				*e*S	**Sn**	**13 10 28.4**	**+0.6**
PNCL				A	A	13 10 30.3	
	comp=N,4.8nm,0.5s						
MESJ	**Messejana**	**2.66**	**64**	*e*S	**Sn**	**13 10 29.4**	**-0.6**
MESJ				IAML		13 10 31.5	
	comp=N,2.7nm,0.1s						
MESJ	**Messejana**	**2.66**	**64**	*e*S	**Sn**	**13 10 30.1**	**+0.2**
MESJ				A	A	13 10 32.5	
	comp=N,2.1nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.70**	**77**	*e*S	**Sn**	**13 10 31.5**	**+0.6**
PBDV				A	A	13 10 37.1	
	comp=N,4.7nm,0.7s						
PCVE	**Castro Verde**	**2.72**	**69**	*e*P	**Pn**	**13 10 01.0**	**+1.7**
PCVE				*e*S	**Sn**	**13 10 30.9**	**-0.4**
PCVE				A	A	13 10 33.7	
	comp=N,4.4nm,0.9s						
PVAQ	**Vaqueiros**	**2.90**	**75**	P	**Pb**	**13 10 07.7**	**-0.7**
PVAQ				S	**Sn**	**13 10 35.4**	**-0.4**
PVAQ	**Vaqueiros**	**2.90**	**75**	*e*P	**Pn**	**13 10 03.0**	**+1.2**
PVAQ				*e*S	**Sn**	**13 10 36.1**	**+0.3**
PVAQ				A	A	13 10 46.3	
	comp=N,4.4nm,0.3s						
PBEJ	**Beja**	**3.00**	**63**	*e*S	**Sn**	**13 10 38.1**	**-0.1**
PBEJ				A	A	13 10 40.8	
	comp=N,2.2nm,0.2s						
EGRO	**El Granado**	**3.11**	**73**	P	**Pn**	**13 10 06.7**	**+2.0**
EGRO				S	**Sn**	**13 10 41.4**	**+0.4**
EGRO				*i* Vmb_Lg		13 10 48.7	
EVO	**Evora**	**3.15**	**53**	P	Pn	13 10 00.4	-4.9
EVO				S	**Sn**	**13 10 43.0**	**+1.0**
EVO	**Evora**	**3.15**	**53**	S	**Sn**	**13 10 41.9**	**0.0**
EVO				A	A	13 10 47.2	
	comp=N,6.1nm,0.4s						
PMTG	**Montargil**	**3.36**	**44**	S	**Sn**	**13 10 47.1**	**-0.1**
PESTR	**Estremoz**	**3.61**	**52**	P	Pn	13 10 02.2	-9.4
PESTR				S	Sn	13 10 37.7	-16
PESTR	**Estremoz**	**3.61**	**52**	S	**Sn**	**13 10 53.0**	**-0.4**
PESTR				A	A	13 11 10.9	
	comp=N,2.4nm,0.5s						
PBAR	**Barrancos**	**3.65**	**65**	*e*P	**Pn**	**13 10 14.2**	**+2.1**
PBAR				S	**Sn**	**13 10 53.7**	**-0.6**
PBAR				A	A	13 11 03.1	
	comp=N,1.6nm,0.4s						
EMIN	**Mina Concepcio**	**3.80**	**72**	P	**Pn**	**13 10 15.4**	**+1.3**
EMIN				S	**Sn**	**13 10 57.7**	**-0.1**
EMIN				*i* Vmb_Lg		13 11 00.6	
EBAD	**Badajoz**	**3.93**	**57**	P	**Pn**	**13 10 17.4**	**+1.4**
EBAD				S	**Sn**	**13 11 01.0**	**-0.2**
PCAS	**Casmilo, Conde**	**3.99**	**32**	S	**Sn**	**13 11 03.1**	**+0.5**
PMRV	**Marv??o**	**4.08**	**47**	*e*P	**Pn**	**13 10 19.8**	**+1.7**
PMRV				S	**Sn**	**13 11 04.5**	**-0.5**
PMRV				A	A	13 11 05.4	
	comp=N,2.3nm,0.7s						
ESPR	**Espera**	**4.32**	**86**	P	**Pn**	**13 10 22.6**	**+1.3**
ESPR				S	**Sn**	**13 11 08.2**	**-2.5**
ESPR				*i* Vmb_Lg		13 11 11.5	
ECAB	**El Cabril**	**4.83**	**72**	P	**Pn**	**13 10 29.0**	**+0.6**
ECAB				S	**Sn**	**13 11 21.7**	**-1.7**
ECAB				*i* Vmb_Lg		13 11 24.9	
EADA	**Adamuz**	**5.50**	**72**	P	**Pn**	**13 10 38.0**	**+0.5**
EADA				S	**Sn**	**13 11 38.3**	**-1.6**
EADA				*i* Vmb_Lg		13 11 43.9	
MVO	**Moncorvo**	**5.54**	**35**	S	**Sn**	**13 11 39.7**	**-1.3**
ELOB	**Lobios**	**5.73**	**24**	S	**Sn**	**13 11 42.8**	**-2.8**
ELOB				*i* Vmb_Lg		13 11 45.6	
PGAV	**Gavieira, Arco**	**5.75**	**23**	S	**Sn**	**13 11 44.1**	**-2.0**
PGAV				A	A	13 12 03.6	
	comp=N,3.8nm,0.7s						
PAB	**San Pablo**	**6.13**	**60**	S	**Sn**	**13 11 52.2**	**-3.4**
PAB				*i* Vmb_Lg		13 11 55.5	
ECAL	**Calabor**	**6.30**	**32**	P	**Pn**	**13 10 49.5**	**+1.0**
ECAL				S	**Sn**	**13 11 57.8**	**-1.8**
ECAL				*i* Vmb_Lg		13 12 00.7	
MD31	**MD31**	**6.55**	**124**	P	**Pn**	**13 10 51.6**	**-0.4**
MD31				S	Sn	13 11 54.6	-11
MDT	**Midelt**	**6.68**	**123**	P	**Pn**	**13 10 54.3**	**+0.4**
MDT				S	Sn	13 11 56.4	-13

*IDC **01** 13:26:29.0±0.8,39°93N×78°01E,h0km,mb3.8/11, mbtmp3.7/13,ML3.0/2,MS3.0/5,Error ellipse: s-maj=18.0km s-min=13.9km az=51.0*
*KRNET **01** 13:26:28.1±0.1,39°87N×78°90E,mb4.2*
*SOME **01** 13:26:31.8,40°13N×78°00E,h5km*
*NNC **01** 13:26:33.6±1.7,40°14N×77°97E,h0km,mb4.4,mpv4.0, Error ellipse: s-maj=12.1km s-min=10.2km az=161.0*
*NEIC **01** 13:26:35.4±2.7,39°95N±0°06×78°0E±0°1,h52km±6km, mb4.4/6,Error ellipse: s-maj=12.9km s-min=8.1km az=97.0*
ISC 01 13:26:32.2±0.5,**39°91N**±0°03×**77°94E**±0°04,**h23**km,**n92, σ2s12**/110,**mb3.8**/11,**16C-12D**,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.12**	**316**		**Pn**	**13 27 06.4**	**-0.1**
PRZ	**Przheval'sk**	**2.59**	**8**	Pn	**Pn**	**13 27 14.1**	**+1.2**
ULHL	**Ulahol**	**2.66**	**332**	P	**Pb**	**13 27 18.3**	**-1.0**
	SNR=45						
ULHL	**Ulahol**	**2.66**	**332**	⇓*i*P	**Pb**	**13 27 17.2**	**-2.1**
	baz=21						
ULHL				⇓*i*S	**Sb**	**13 27 52.8**	**+1.2**
	baz=21						
SATY	**Saty**	**3.16**	**6**	*e*P	**Pb**	**13 27 28.1**	**+0.3**
	66nm,0.7s						
SATY				*e*S	**Sb**	**13 28 09.1**	**+3.1**
	227nm,0.6s						
SATY	**Saty**	**3.16**	**6**	Pg	**Pb**	**13 27 28.1**	**+0.3**
	66nm,0.7s						
SATY				Lg	Lg	13 28 09.1	
	227nm,0.6s						
IZV	**Izvestkoviy**	**3.27**	**343**	*e*P	**Pb**	**13 27 30.6**	**+0.8**
	46nm,0.1s						
IZV				*e*S	**Sb**	**13 28 12.6**	**+3.4**
	353nm,0.7s						
MDOK	**Medeo**	**3.31**	**349**	*e*P	**Pb**	**13 27 30.2**	**-0.2**
	49nm,0.6s						
MDOK				*e*S	**Sb**	**13 28 12.6**	**+2.2**
	401nm,0.8s						
MDOK	**Medeo**	**3.31**	**349**	⇓Pn	**Pn**	**13 27 25.5**	**+2.7**
	14nm,0.6s						
MDOK				⇑Pg	**Pb**	**13 27 29.6**	**-0.8**
	166nm,0.9s						
MDOK				Pg		13 27 30.2	
	49nm,0.6s						
MDOK				Lg	Lg	13 28 12.6	
	401nm,0.8s						
MDOK				⇑Lg	Lg	13 28 12.8	
	454nm,0.7s						
UZB	**Uzynbulak**	**3.33**	**14**	*e*P	**Pb**	**13 27 29.9**	**-0.8**
	16nm,0.3s						
UZB				*e*S	**Sb**	**13 28 12.2**	**+1.3**
	276nm,1.1s						
UZB	**Uzynbulak**	**3.33**	**14**	Pg	**Pb**	**13 27 30.0**	**-0.8**
	16nm,0.3s						
UZB				Lg	Lg	13 28 12.2	
	276nm,1.1s						
ARLS	**Aral**	**3.36**	**307**	⇓*i*P	**Pb**	**13 27 29.1**	**-2.1**
	baz=1.0						
ARLS				⇓*i*S	**Sb**	**13 28 14.1**	**+2.4**
	baz=1.0						
KNDC	**Almaty**	**3.38**	**348**	⇑Pg	**Pb**	**13 27 30.4**	**-1.1**
	212nm,1.1s						
KNDC				⇓Lg	Lg	13 28 15.0	
	1μm,1.0s						
AAA	**Alma-Ata**	**3.38**	**347**	*e*P	**Pb**	**13 27 32.2**	**+0.7**
	170nm,0.7s						
AAA				*e*S	**Sb**	**13 28 16.5**	**+4.3**
	953nm,1.0s						
MTBS	**Maitube**	**3.41**	**341**	*e*P	**Pb**	**13 27 32.5**	**+0.5**
	76nm,0.4s						
MTBS				*e*S	**Sb**	**13 28 16.2**	**+3.2**
	192nm,0.5s						
MTBS	**Maitube**	**3.41**	**341**	Pg	**Pb**	**13 27 32.5**	**+0.5**

	76nm,0.4s						
MTBS				Lg	Lg	13 28 16.2	
	192nm,0.5s						
SHLS	Shalkode	3.44	19	eP	Pb	13 27 32.8	+0.3
	44nm,0.7s						
SHLS				eS	Sb	13 28 16.4	+2.5
	156nm,0.5s						
KST	Kastek	3.46	335	eP	Pb	13 27 33.6	+0.7
	60nm,0.7s						
KST				eS	Sb	13 28 18.1	+3.5
	156nm,0.5s						
KST	Kastek	3.46	335	Pg	Pb	13 27 33.6	+0.7
	60nm,0.7s						
KST				Lg	Lg	13 28 18.1	
	156nm,0.5s						
TKM2	Tokmak 2	3.48	330	P	Pn	13 27 28.3	+3.1
	SNR=11						
TKM2	Tokmak 2	3.48	330	⇑Pn	Pn	13 27 28.1	+2.9
	6.3nm,0.5s						
TKM2				⇑Pg	Pb	13 27 33.8	+0.5
	66nm,1.0s						
TKM2				⇓Lg	Lg	13 28 17.9	
	137nm,0.7s						
TKM2	Tokmak 2	3.48	330	⇑iP	Pn	13 27 28.1	+2.9
	baz=22						
TKM2				⇑iS	Sb	13 28 12.3	-3.0
	baz=22						
KBK	Karagaybulak	3.55	322	P	Pb	13 27 34.8	+0.4
	SNR=30						
KBK	Karagaybulak	3.55	322	⇑iP	Pb	13 27 30.7	-3.7
	baz=14						
KBK				⇑iS	Sb	13 28 16.0	-1.1
	baz=14						
KURS	Kuram	3.58	3	eP	Pb	13 27 35.0	+0.1
	104nm,1.4s						
KURS				eS	Sb	13 28 20.5	+2.7
	139nm,0.6s						
KURS	Kuram	3.58	3	Pg	Pb	13 27 35.0	+0.1
	104nm,1.4s						
KURS				Lg	Lg	13 28 20.5	
	139nm,0.6s						
PDGK	Podgornoye	3.61	18	Pg	Pb	13 27 32.9	-2.5
	8.1nm,0.5s						
PDGK				Lg	Lg	13 28 17.2	
	49nm,0.6s						
PDGK	Podgornoye	3.61	18	⇓Pn	Pn	13 27 28.1	+1.3
	14nm,0.5s						
PDGK				⇑Pg	Pb	13 27 34.7	-0.7
	26nm,0.6s						
PDGK				⇑Lg	Lg	13 28 17.7	
	226nm,0.8s						
AAK	Ala-Archa	3.76	317	Pn	Pb	13 27 35.2	-2.8
	3.6nm,0.3s,baz=151,slow=14,SNR=25						
AAK				Pg	Pn	13 27 38.9	+10
	3.6nm,0.3s,baz=141,slow=10.0,SNR=12						
AAK				Lg	Lg	13 28 27.7	
	3.5nm,0.3s,baz=299,slow=16,SNR=11						
AAK				LR	LR	13 29 06.4	
	comp=Z,157nm,19.2s,baz=106,slow=42						
AAK	Ala-Archa	3.76	317	P	Pb	13 27 35.4	-2.6
	SNR=12						
AAK	Ala-Archa	3.76	317		Pn	13 27 31.4	+2.4
AAK	Ala-Archa	3.76	317	⇑iP	Pb	13 27 33.9	-4.1
	baz=11						
AAK				⇑iS	Sb	13 28 21.6	-1.6
	baz=11						
AML	Almayashu	3.90	306	P	Pb	13 27 35.5	-5.1
	SNR=26						
CHMS	Chumysh	3.90	323	P	Pb	13 27 41.1	+0.7
	SNR=9.1						
CHMS	Chumysh	3.90	323	⇑Pg	Pb	13 27 41.1	+0.7
	35nm,0.7s						
CHMS				⇓Lg	Lg	13 28 31.4	
	83nm,0.7s						
CHMS	Chumysh	3.90	323	⇓iP	Pn	13 27 35.0	+4.2
	baz=16						
CHMS				⇓iS	Sb	13 28 23.5	-3.7
	baz=16						
KTBS	Karatobe	3.91	347	eP	Pb	13 27 41.8	+1.3
	68nm,0.9s						
KTBS				eS	Sb	13 28 31.8	+4.5
	211nm,0.6s						
CHKK	Chushkaly	4.00	350	eP	Pb	13 27 42.2	+0.2
	25nm,0.5s						
CHKK				eS	Sb	13 28 33.3	+3.4
	121nm,0.2s						
CHKK	Chushkaly	4.00	350	Pg	Pb	13 27 42.2	+0.2
	25nm,0.5s						
CHKK				Lg	Lg	13 28 33.3	
	121nm,0.2s						
KRBS	Karabastau	4.14	337	eP	Pb	13 27 45.4	+0.9
	31nm,0.5s						
KRBS				eS	Sb	13 28 37.9	+3.9
	79nm,0.7s						
KUU	Kurty	4.15	344	eP	Pb	13 27 45.1	+0.5
	16nm,0.7s						
KUU				eS	Sb	13 28 37.5	+3.2
	146nm,0.6s						
KUU	Kurty	4.15	344	Pg	Pb	13 27 45.1	+0.5
	16nm,0.7s						
KUU				Lg	Lg	13 28 37.5	
	146nm,0.6s						
USP	Ospenovka	4.23	324	P	Pb	13 27 46.4	+0.5
	SNR=18						
SGDS	Sogindy	4.32	326	eP	Pb	13 27 48.7	+1.3
	44nm,0.7s						
SGDS				eS	Sb	13 28 44.0	+4.9
	47nm,0.8s						
SGDS	Sogindy	4.32	326	Pg	Pb	13 27 48.7	+1.3
SGDS				Lg	Lg	13 28 44.0	
MRKS	Merke	4.54	310	eP	Pb	13 27 54.7	+3.5
	4.5nm,0.7s						
MRKS				eS	Sb	13 28 53.9	+8.4
	42nm,0.8s						
DJR	Jarkent	4.63	17	eP	Pb	13 27 53.3	+0.6
	9.7nm,0.7s						
DJR				eS	Sb	13 28 51.7	+3.7
	77nm,0.6s						
DJR	Jarkent	4.63	17	Pg	Pb	13 27 53.3	+0.6
DJR				Lg	Lg	13 28 51.7	
BTLS	Baital	5.88	332	eP	Pb	13 28 17.0	+3.1
	19nm,1.2s						
BTLS				eS	Sb	13 29 32.3	+8.4
	28nm,0.7s						
BTLS	Baital	5.88	332	Pg	Pb	13 28 17.0	+3.1
BTLS				Lg	Lg	13 29 32.3	
GAR	Garm	5.97	264	Pn	Pn	13 28 00.4	+1.1
IUG	Iuzhnay	6.38	293	eP	Pb	13 28 28.1	+5.5
	109nm,0.3s						
IUG				eS	Sb	13 29 51.2	+13
	28nm,1.0s						
KK31	Karatay Array	6.42	302	⇓Pg	Pb	13 28 26.7	+3.5
	8.0nm,0.8s,baz=113,slow=15,SNR=6.8						
KK31				⇑Lg	Lg	13 29 51.1	
	22nm,0.9s,baz=122,slow=30,SNR=4.3						
CHGR	Chuyangaron	6.92	262	Pn	Pn	13 28 12.7	+0.3
NIL	Nilore	7.29	212		Pn	13 28 20.1	+2.7
MAKZ	Makanchi	7.49	22	Pn	Pn	13 28 20.4	+0.3
MK31	Makanchi Array	7.57	23	Pn	Pn	13 28 20.9	-0.3
MK31	Makanchi Array	7.57	23	⇑Lg	Lg	13 30 29.6	
	6.9nm,0.7s,baz=199,slow=30,SNR=4.1						
MKAR	Makanchi Array	7.57	23	Pn	Pn	13 28 21.4	+0.2
	0.6nm,0.3s,baz=206,slow=13,SNR=27						
MKAR				Sn	Sn	13 29 45.5	-0.8
	0.4nm,0.3s,baz=203,slow=18,SNR=3.6						
MKAR				Lg	Lg	13 30 27.3	
	0.8nm,0.3s,baz=198,slow=23,SNR=1.8						
	1.3nm,0.4s						
MKAR	Makanchi Array	7.57	23		Pn	13 28 20.6	-0.5
WMQ	Urumqi	8.26	59	eP	Pn	13 28 31.2	+0.5
WMQ				smax	smax		
	comp=N,34nm,1.1s						
WMQ				smax	smax		
	comp=E,30nm,0.9s						
KURBB	Kurchatov Arra	10.72	2	Lg	Lg	13 32 06.1	
	comp=E,0.1nm,0.3s,baz=188,slow=27,SNR=8.7						
DMN	Daman	13.64	152	eP	Pn	13 29 43.0	-1.4
GUN	Gumba	13.66	149	eP	Pn	13 29 44.7	-0.1
PKIN	Phulchoki	13.77	151	eP	Pn	13 29 44.4	-1.9
PKI	Pulchoki	13.78	151	eP	Pn	13 29 44.3	-2.2
JIRN	Jiri	14.01	148	eP	Pn	13 29 47.9	-1.7
BVAR	Borovoye Array	14.10	341	LR	LR	13 35 16.0	
	comp=E,42nm,19.1s,baz=68,slow=37						
BRVK	Borovoye	14.15	341	P	P	13 30 00.6	+2.1
ZALV	Zalesovo Beam	14.79	16	Pn	Pn	13 29 59.2	-0.7
	comp=E,0.2nm,0.3s,baz=196,slow=10,SNR=1.5						
	comp=E,0.4nm,0.4s						
GEYT	Alibeck	15.55	269	P	P	13 30 16.0	+1.8
GEYT				IAmb	IAmb	13 30 16.7	
	comp=Z,3.3nm,0.8s						
AKTO	Aktyubinsk	17.49	314	P	P	13 30 37.4	+1.9
	comp=Z,1.6nm,0.5s,baz=148,slow=13,SNR=2.2						
AKTO				LR	LR	13 37 39.0	
	comp=Z,49nm,20.3s,baz=123,slow=38						
ARU	Arti	20.86	329	P	Pn	13 31 14.2	-0.6
	comp=Z,3.0nm,0.3s,baz=141,slow=3.0,SNR=4.2						
ARU				LR	LR	13 39 28.1	
	comp=Z,62nm,18.4s,baz=164,slow=37						
	comp=Z,3.0nm,0.3s						
SONM	Songino Array	21.90	59	P	P	13 31 24.2	+0.5
	comp=Z,2.0nm,0.7s,baz=250,slow=12,SNR=6.9						
	comp=Z,2.0nm,0.7s						
HYBB	Hyderabad (bro	22.42	178	eP	P	13 31 30.8	+1.4
HYBB				esP	sP	13 31 47.8	+8.5
HYBB				eS	S	13 35 34.7	+0.2
FINES	FINESS Array B	37.94	322	P	P	13 33 48.5	+1.0
	comp=Z,0.7nm,0.6s,baz=112,slow=11,SNR=4.5						
	comp=Z,0.7nm,0.6s						
FINES	FINESS Array B	37.94	322	P	P	13 33 46.5	-1.1
RDO	Rodhopi	39.35	289	P	P	13 33 59.2	-0.5
ARCES	ARCESS Array B	40.25	334	P	P	13 34 07.4	+0.5
	comp=Z,1.7nm,0.7s,baz=99,slow=7.5,SNR=4.5						
	comp=Z,1.7nm,0.7s						
ARCES	ARCESS Array B	40.25	334	P	P	13 34 07.6	+0.7
ARCES				IAmb	IAmb	13 34 15.6	
	comp=Z,13nm,1.3s						
NOA	NORSAR Array B	45.07	321	P	P	13 34 46.5	+0.4
	comp=Z,0.3nm,0.5s,baz=87,slow=7.9,SNR=1.9						
	comp=Z,0.3nm,0.5s						
GERES	GERESS Array B	45.52	304	P	P	13 34 51.3	+1.4
	comp=Z,0.4nm,0.5s,baz=82,slow=7.0,SNR=4.6						
	comp=Z,0.4nm,0.5s						
KEST	Kesra	53.13	289	LR	LR	14 01 41.5	
	comp=Z,19nm,21.7s,baz=254,slow=40						
ILAR	Eielson Array	69.90	19	P	P	13 37 39.8	-1.1
	comp=Z,0.3nm,0.8s,baz=330,slow=5.2,SNR=3.4						
	comp=Z,0.3nm,0.8s						
TOA0	Torodi Ar. Sit	71.18	272	P	P	13 37 49.3	-0.1
TOA0				IAmb	IAmb	13 38 14.8	
	comp=Z,6.7nm,1.4s						
TORD	Torodi Ar. Bea	71.18	272	P	P	13 37 49.5	0.0
	comp=Z,0.5nm,0.6s,baz=52,slow=5.4,SNR=9.1						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	71.18	272	P	P	13 37 49.5	0.0
TORD				IAmb	IAmb	13 38 31.7	
	comp=Z,8.1nm,0.8s						
YKA	Yellowknife Ar	77.44	6	P	P	13 38 24.9	-0.2
	comp=Z,1.0nm,0.8s,baz=351,slow=5.4,SNR=4.0						
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	79.41	127	P	P	13 38 37.1	+0.5
	comp=Z,0.7nm,0.8s,baz=312,slow=8.0,SNR=16						
	comp=Z,0.7nm,0.8s						
WRA	Warramunga Arr	79.41	127	P	P	13 38 34.3	-2.3
DBIC	Dimbokro	80.24	271	P	P	13 38 41.2	-0.1
ASAR	Alice Springs	81.97	130	P	P	13 38 50.6	+0.3
	comp=Z,0.8nm,0.5s,baz=320,slow=5.4,SNR=21						
	comp=Z,0.8nm,0.5s						

*IDC **01** 13:38:27.9±0.8, 31°.33N×77°.46E, h0km, mb3.8/11, mbtmp3.8/13, ML3.6/2, MS2.8/1, Error ellipse: s-maj=28.0km s-min=16.1km az=48.0*
*NEIC **01** 13:38:32.9±2.8, 31°.3N±0°.1×76°.99E±0°.07, h35km±6km, mb4.5/11, Error ellipse: s-maj=17.4km s-min=7.6km az=192.0*
*NDI **01** 13:38:33.6±1.8, 31°.33N×77°.55E, h10km, ML3.9, mb4.5(NEIC)*
ISC 01 13:38:30.5±0.5, **31°.43N**±0°.04×**77°.68E**±0°.04, **h20**km±5km, **n49**, σ**2.s34**/62, **mb3.9**/16, **Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	Simla	0.53	236	eP	Pb	13 38 40.2	-1.0
SMLA				eS	Sb	13 38 46.3	-2.1
SMLA				IAML		13 38 47.9	
	comp=E,4μm,0.2s						
BHK	Bhakra	1.08	270	eP	Pb	13 38 52.4	+1.8
BHK				eS	Sn	13 39 08.1	+3.1
DDI	Dehra Dun	1.14	164	eP	Pb	13 38 54.0	+2.3
DDI				i x	Sn	13 39 09.4	+2.9
DDI				eS	Sb	13 39 09.8	+3.8
DDI				IAML		13 39 15.7	
	comp=E,3μm,0.3s						
DDI				IAML		13 39 15.8	
	comp=N,5μm,0.3s						
DDI				IAML		13 39 15.9	
	comp=E,3μm,0.2s						
DDI				IAML		13 39 15.9	
	comp=N,5μm,0.2s						
THN	Thein Dam	1.95	302	eP	Pb	13 39 05.4	+0.1
THN				eS	Sb	13 39 30.8	+1.6
JMU	Jammu	2.69	299	eP	Pb	13 39 18.2	+0.2
JMU				ex	Sg	13 39 55.5	
NDI	New Delhi	2.76	189	eP	Pb	13 39 17.2	-2.0
NDI				eP	Pn	13 39 18.0	+4.4
NDI				i x	x	13 39 20.6	
NDI				eS	Sn	13 39 49.5	+3.1
NDI				eS	Sb	13 39 51.0	-1.6
PTH	Pithoragarh	2.88	130	eP	Pb	13 39 20.5	-0.7
PTH				eS	Sb	13 39 54.0	-2.1
LGTI	Lohaghat	2.96	131	eP	Pn	13 39 19.7	+3.4
LGTI				eS	Sb	13 39 55.8	-2.5
CHCP	Chirah Chowk	4.35	302	P	Pn	13 39 38.6	+3.1
NIL	Nilore	4.35	302		Pn	13 39 29.3	-6.2
CEP	Cherat	5.43	298	P	Pn	13 39 52.7	+2.3
AJM	Ajmer	5.60	209	ex	Pb	13 40 04.7	-2.9
AJM				eS	Sn	13 40 55.8	-0.7
JHNI	Jhansi	5.98	173	eP	Pn	13 39 59.9	+1.9
JHNI				eS	Sn	13 41 05.0	-0.9
JBP	Jabalpur	8.48	165	eP	Pn	13 40 34.4	+2.2
JBP				eS	Sn	13 42 03.6	-3.6
NRN	Naryn	10.08	353		Pn	13 40 57.0	+2.6
KK31	Karatay Array	12.97	336		Pn	13 41 32.7	-1.0
KKAR	Karatay Array	12.97	336		Pn	13 41 31.9	-1.8
KKAR	Karatay Array	12.97	336		Pn	13 41 32.5	-1.2
HYBB	Hyderabad (bro	13.97	177	ePn	Pn	13 41 46.9	-0.5
HYBB				eSn	Sn	13 44 23.1	+1.2
MAKZ	Makanchi	15.71	11	Pn	Pn	13 42 11.6	+0.9
MAKZ				IAmb	IAmb	13 42 12.8	
	comp=Z,3.1nm,0.6s						
MK31	Makanchi Array	15.75	12	Pn	Pn	13 42 11.4	+0.3
MKAR	Makanchi Array	15.75	12	Pn	Pn	13 42 10.1	-1.1
	comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=9.3						
MKAR				Sn	Sn	13 44 58.1	-7.1
	comp=Z,0.1nm,0.3s,baz=190,slow=26,SNR=2.6						
	comp=Z,0.9nm,0.5s						
GEYT	Alibeck	17.34	297	LR	LR	13 50 14.8	
	comp=Z,37nm,20.9s,baz=284,slow=41						
KURBB	Kurchatov Arra	19.19	2	P	P	13 42 53.0	+0.2
	comp=Z,0.1nm,0.3s,baz=163,slow=3.5,SNR=3.6						
	comp=Z,1.4nm,0.2s						
ABKAR	Akbulak array	22.27	328	P	P	13 43 21.8	-4.4
ZALV	Zalesovo Beam	23.09	11	P	P	13 43 36.7	+1.9
	comp=Z,1.3nm,0.3s,baz=186,slow=8.3,SNR=7.3						
	comp=Z,1.3nm,0.3s						
ZALV	Zalesovo Beam	23.09	11	P	P	13 43 37.0	+2.3
CMAR	Chiang Mai Arr	23.15	119	P	P	13 43 37.1	+1.5
	comp=Z,2.2nm,0.8s,baz=302,slow=10,SNR=11						
	comp=Z,2.2nm,0.8s						
AKTO	Aktyubinsk	23.98	328	P	P	13 43 43.8	+0.2
	comp=Z,1.7nm,0.8s,baz=130,slow=9.2,SNR=5.4						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	27.31	45	P	P	13 44 16.0	+2.1
	comp=Z,1.6nm,1.0s,baz=242,slow=9.4,SNR=5.3						
	comp=Z,1.6nm,1.0s						
FIA1	FINESS Array S	44.76	328	P	P	13 46 41.4	-0.9
FIA1				IAmb	IAmb	13 47 22.3	
	comp=Z,11nm,1.4s						
FINES	FINESS Array B	44.76	328	P	P	13 46 43.1	+0.8
	comp=Z,1.8nm,0.5s,baz=107,slow=9.5,SNR=11						
	comp=Z,1.8nm,0.5s						
FINES	FINESS Array B	44.76	328	P	P	13 46 41.3	-0.9
KEV	Kevo	47.55	339	P	P	13 47 05.2	+1.1
ARCES	ARCESS Array B	47.93	338	P	P	13 47 08.2	+1.1
	comp=Z,2.9nm,0.6s,baz=108,slow=8.1,SNR=18						
	comp=Z,2.9nm,0.6s						
ARCES	ARCESS Array B	47.93	338	P	P	13 47 08.2	+1.1
ARCES				IAmb	IAmb	13 47 31.7	
	comp=Z,22nm,1.5s						
LODK	Lodwar	48.57	244	P	P	13 47 08.7	-4.1
LODK				IAmb	IAmb	13 47 34.8	
	comp=Z,1.5nm,1.0s						
NOA	NORSAR Array B	51.73	325	P	P	13 47 36.0	-0.1
	comp=Z,1.1nm,0.7s,baz=95,slow=7.4,SNR=3.6						
	comp=Z,1.1nm,0.7s						
GRA1	Grafenberg Arr	51.96	311	P	P	13 47 34.8	-3.3
GRA1				IAmb	IAmb	13 47 36.1	
	comp=Z,10nm,0.6s						
GRFO	Grafenberg	51.96	311	P	P	13 47 34.9	-3.1
SENIN	Lac Senin/Sane	55.04	307	P	P	13 47 58.4	-2.5
ESDC	Sonseca Array	64.80	302	P	P	13 49 07.6	-0.4
	comp=Z,0.4nm,0.6s,baz=45,slow=8.2,SNR=2.3						
	comp=Z,0.4nm,0.6s						
TORD	Torodi Ar. Bea	71.41	274	P	P	13 49 48.7	-0.9
	comp=Z,0.2nm,0.4s,baz=66,slow=6.3,SNR=4.1						
	comp=Z,0.2nm,0.4s						
WRA	Warramunga Arr	74.56	125	P	P	13 50 09.7	+1.5
	comp=Z,0.7nm,0.6s,baz=323,slow=6.1,SNR=12						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	74.56	125	P	P	13 50 09.2	+1.0
WRAB	Tennant Creek	74.57	125	P	P	13 50 09.5	+1.3
WRAB				IAmb	IAmb	13 50 45.9	
	comp=Z,10.0nm,1.5s						
WB2	Warramunga Arr	74.57	125	P	P	13 50 09.2	+1.0
WB2				IAmb	IAmb	13 50 18.5	
	comp=Z,16nm,1.5s						
BMAR	Burnt Mountain	76.44	15	P	P	13 50 21.0	+2.6
ASAR	Alice Springs	76.78	128	P	P	13 50 22.1	+1.3
	comp=Z,0.4nm,0.6s,baz=312,slow=5.8,SNR=6.3						
	comp=Z,0.4nm,0.6s						

*IDC **01** 13:39:17.6±3.6, 5°.56S×151°.81E, h50km±28km, mb3.2/3, mbtmp3.5/4, ML1.6/1, Error ellipse: s-maj=73.0km s-min=11.5km az=119.0*
ISC 01 13:39:16.1±2.3, **5°.6S**±0°.2×**152°.0E**±0°.3, **h45**km, **n6**, σ**1.s14**/8, **mb3.3**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.32	360	P	Pn	13 39 37.8	-0.3
	169nm,0.3s,baz=180,slow=3.0,SNR=68						
KRVT				S	Sn	13 39 55.0	+0.5
	375nm,0.4s,baz=183,slow=19,SNR=12						
PMG	Port Moresby	6.11	232	P	Pn	13 40 44.5	+0.6
	1.1nm,0.3s,baz=78,slow=14,SNR=2.0						
PMG				S	Sn	13 41 51.4	-1.2
	9.6nm,0.8s,baz=139,slow=9.3,SNR=1.6						
	8.8nm,0.7s						
WRA	Warramunga Arr	22.32	229	P	P	13 44 08.8	-1.2
	0.3nm,0.5s,baz=52,slow=10,SNR=6.1						
	0.3nm,0.5s						
ASAR	Alice Springs	25.02	222	P	P	13 44 37.1	+1.0
	0.8nm,0.8s,baz=58,slow=8.3,SNR=12						
	0.8nm,0.8s						
FITZ	Fitzroy Crossi	28.59	242	P	P	13 45 09.0	+0.8
	1.0nm,0.7s,baz=55,slow=9.7,SNR=1.6						
	1.0nm,0.7s						
TORD	Torodi Ar. Bea	149.82	286	PKPbc	PKPbc	13 59 01.2	-1.1
	0.3nm,0.7s,baz=53,slow=4.2,SNR=1.9						

*IDC **01** 13:46:21.9±0.7, 4°.63S×169°.33W, h0km, mb4.2/16, mbtmp4.2/16, MS3.1/5, Error ellipse: s-maj=28.5km s-min=14.7km az=139.0*
*NEIC **01** 13:46:24.7±1.2, 4°.47S±0°.09×169°.45W±0°.07, h10km±1km, mb4.6/88, Error ellipse: s-maj=18.2km s-min=4.4km az=142.0*
ISC 01 13:46:23.3±0.4, **4°.58S**±0°.08×**169°.37W**±0°.09, **h10**km, **n134**, σ**0.s96**/122, **mb4.5**/59, **MS3.1**/4, **Phoenix Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNTN	Kanton	2.96	307		Pn	13 47 07.9	-2.5
AFI	Afiamalu	9.57	194	Pn	Pn	13 48 35.2	-6.1
	5.5nm,0.3s,baz=225,slow=17,SNR=8.7						
AFI				Sn	Sn	13 50 12.1	-17
	8.0nm,0.3s,baz=5.3,slow=23,SNR=3.2						
AFI	Afiamalu	9.57	194	Pn	Pn	13 48 38.3	-3.0
FUNA	Funafuti	12.02	250	Pn	Pn	13 49 11.8	-3.0
XMAS	Kiritimati	13.61	61		Pn	13 49 32.7	-3.8
MSVF	Nonsavu	17.96	222		P	13 50 35.8	+1.8
RAR	Rarotonga	18.98	151	LR	LR	13 57 04.4	
	comp=Z,54nm,18.0s,baz=346,slow=34						
PPT	Papeete	23.28	125	LR	LR	13 58 34.7	
	comp=Z,46nm,19.2s,baz=288,slow=32						
H11S2	WAKE ISLAND Hy	32.89	315	T	T	14 27 37.3	
	baz=132,slow=75,SNR=113						
H11S1	WAKE ISLAND Hy	32.91	315	T	T	14 27 45.3	
	baz=132,slow=75,SNR=69						
H11S3	WAKE ISLAND Hy	32.91	315	T	T	14 27 50.0	
	baz=132,slow=75,SNR=116						
H11N3	WAKE ISLAND Hy	33.58	317	T	T	14 28 22.3	
	baz=128,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	33.59	317	T	T	14 28 20.4	
	baz=128,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	33.60	317	T	T	14 28 26.4	
	baz=128,slow=76,SNR=29						
KRVT	Keravat (AS076	38.49	269	P	P	13 53 46.0	-0.1
	22nm,0.8s,baz=131,slow=9.3,SNR=2.5						
	22nm,0.8s						
KHZ	Kahutara	40.63	200	P	P	13 54 03.8	+0.3
FOZ	Fox Glacier	42.94	202	P	P	13 54 22.0	-0.4
DCZ	Deep Cove	45.59	203	P	P	13 54 45.2	+1.6
WHZ	Wether Hill Ro	45.64	202	P	P	13 54 44.1	0.0
CTAO	Charters Tower	45.83	246	P	P	13 54 47.7	+1.7
CTAO				IAmb	IAmb	13 54 48.7	
	comp=Z,5.7nm,0.8s						
STKA	Stephens Creek	53.30	233	P	P	13 55 42.0	-0.8
	comp=Z,5.6nm,0.9s,baz=65,slow=8.4,SNR=6.9						
	comp=Z,5.6nm,0.9s						
STKA	Stephens Creek	53.30	233	P	P	13 55 44.1	+1.3
ADK	Adak	56.59	355	P	P	13 56 06.8	+0.6
WR0	Warramunga Arr	56.63	249	P	P	13 56 07.4	+0.3
WR0				IAmb	IAmb	13 56 09.1	
	comp=Z,6.3nm,1.1s						
WB0	Warramunga Arr	56.74	249	P	P	13 56 08.1	+0.2
WB0				IAmb	IAmb	13 56 09.3	
	comp=Z,6.6nm,0.9s						
WB2	Warramunga Arr	56.81	249	P	P	13 56 07.9	-0.5
WB2				IAmb	IAmb	13 56 10.4	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	56.82	249	P	P	13 56 08.8	+0.4
	comp=Z,3.6nm,0.8s,baz=82,slow=6.8,SNR=28						
WRA				PcP	PcP	13 57 04.7	+0.4
	comp=Z,0.9nm,1.0s,baz=78,slow=6.3,SNR=1.9						
	comp=Z,3.6nm,0.8s						
WRA	Warramunga Arr	56.82	249	P	P	13 56 07.7	-0.8
AS31	Alice Springs	57.79	245	P	P	13 56 15.1	-0.2
ASAR	Alice Springs	57.79	245	P	P	13 56 16.2	+0.9
	comp=Z,3.1nm,0.8s,baz=77,slow=9.3,SNR=40						
ASAR				PcP	PcP	13 57 08.6	+0.6
	comp=Z,0.9nm,0.9s,baz=91,slow=4.2,SNR=2.1						
	comp=Z,3.1nm,0.8s						
ASAR	Alice Springs	57.79	245	P	P	13 56 15.2	-0.1
BBOO	Buckleboo	58.04	234	P	P	13 56 17.2	+0.3
UNV	Unalaska Valle	58.26	2	P	P	13 56 18.1	+0.2
MTN	Manton Dam	59.27	258	P	P	13 56 25.9	+0.2
CHIR	Chirikof Islan	61.25	9	P	P	13 56 36.2	-2.3
RPN	Rapa Nui	61.33	118	LR	LR	14 16 09.4	
	comp=Z,29nm,21.7s,baz=229,slow=29						
KNRA	Kununurra	61.71	255	P	P	13 56 42.2	-0.1
GRAC	Grapevine Rang	63.65	45	P	P	13 56 56.6	+1.5
GRAC				IAmb	IAmb	13 57 33.0	
	comp=Z,8.2nm,1.4s						
NVAR	Mina Array Bea	63.71	43	P	P	13 56 56.6	+1.1
	comp=Z,1.3nm,0.7s,baz=238,slow=8.4,SNR=13						
	comp=Z,1.3nm,0.7s						
NVAR	Mina Array Bea	63.71	43	P	P	13 56 56.8	+1.2
MJAR	Matsushiro Arr	63.74	315	P	P	13 56 55.5	0.0
	comp=Z,1.2nm,0.8s,baz=143,slow=9.6,SNR=4.4						
MJAR				LR	LR	14 17 47.7	
	comp=Z,14nm,20.7s,baz=172,slow=30						
	comp=Z,1.2nm,0.8s						
NV11	Mina Array Sit	63.81	43	P	P	13 56 56.8	+0.6
PEA0B	Petropavlovsk-	63.83	339	P	P	13 56 57.1	+1.3
PETK	Petropavlovsk-	63.83	339	P	P	13 56 57.1	+1.3
	comp=Z,4.0nm,0.8s,baz=126,slow=9.7,SNR=8.9						
	comp=Z,4.0nm,0.8s						
PETK	Petropavlovsk-	63.83	339	P	P	13 56 56.5	+0.7
FORT	Forrest	64.18	238	P	P	13 56 59.1	+0.5
FITZ	Fitzroy Crossi	64.83	252	P	P	13 57 04.1	+1.1
	comp=Z,5.3nm,0.9s,baz=108,slow=4.3,SNR=7.1						
	comp=Z,5.3nm,0.9s						
FITZ	Fitzroy Crossi	64.83	252	P	P	13 57 03.9	+0.9
FITZ				IAmb	IAmb	13 57 04.9	
	comp=Z,6.2nm,0.9s						
SHPR	Sheep Range	64.99	46	P	P	13 57 05.3	+1.3

SHPR				IAmb	IAmb	13 57 05.6	
	comp=Z,1.9nm,0.6s						
O18K	Koktuh Hills	65.21	8	P	P	13 57 05.2	+0.5
W13A	Hualapai Mount	65.31	48	P	P	13 57 06.8	+0.7
CNPM	China Poot	65.51	10	P	P	13 57 07.3	+0.7
R11A	Troy Canyon, C	65.54	44	P	P	13 57 08.1	+0.6
I07A	Izee	65.92	37	P	P	13 57 11.1	+1.4
RSO	Redoubt South	66.15	9	P	P	13 57 11.2	+0.2
N19K	Bonanza Creek	66.23	8	P	P	13 57 11.7	+0.3
N19K				IAmb	IAmb	13 57 15.7	
	comp=Z,6.4nm,1.1s						
SVW2	Sparrevohn	66.36	7	P	P	13 57 11.6	-0.5
ELK	Elko	66.91	42	P	P	13 57 17.2	+0.9
LTY	Liberty	67.04	34	P	P	13 57 17.5	+0.7
LTY				IAmb	IAmb	13 57 18.6	
	comp=Z,2.7nm,0.9s						
HIN	Hinchinbrook I	67.22	12	P	P	13 57 17.9	+0.3
M19K	Big River Lodg	67.29	8	P	P	13 57 18.5	+0.5
M19K				IAmb	IAmb	13 57 26.1	
	comp=Z,8.0nm,1.5s						
SIT	Sitka	67.36	19	P	P	13 57 19.3	+0.8
SKT	Skwentna	67.78	9	P	P	13 57 19.7	-1.4
PMR	Palmer	67.81	10	P	P	13 57 20.1	-1.2
PMR				IAmb	IAmb	13 57 23.9	
	comp=Z,3.6nm,0.6s						
GHO	Glory Hole Cre	68.02	10	P	P	13 57 23.3	+0.6
GHO				IAmb	IAmb	13 57 24.6	
	comp=Z,6.1nm,1.0s						
BMRM	Bremner River	68.14	13	P	P	13 57 23.9	+0.5
KLU	Klutina	68.34	12	P	P	13 57 25.0	+0.3
KLU				IAmb	IAmb	13 57 25.9	
	comp=Z,4.1nm,1.1s						
ISLE	Juniper Island	68.34	14	P	P	13 57 23.8	-1.0
ISLE				IAmb	IAmb	13 57 48.3	
	comp=Z,5.3nm,1.0s						
VRDI	Verde Repeater	68.63	13	P	P	13 57 27.3	+0.6
VRDI				IAmb	IAmb	13 57 36.4	
	comp=Z,2.8nm,0.8s						
N25K	Chitina, Valde	68.72	12	P	P	13 57 27.8	+0.7
N25K				IAmb	IAmb	13 57 28.7	
	comp=Z,7.6nm,1.5s						
K20K	Telida	68.74	7	P	P	13 57 27.8	+0.7
K20K				IAmb	IAmb	13 57 29.4	
	comp=Z,5.1nm,1.1s						
GLB	Gilahina Butte	68.74	13	P	P	13 57 27.6	+0.4
GLB				IAmb	IAmb	13 57 28.1	
	comp=Z,3.4nm,0.6s						
HLID	Hailey	68.80	40	P	P	13 57 29.0	+0.9
HLID				IAmb	IAmb	13 57 30.4	
	comp=Z,3.1nm,0.9s						
LOGN	Logan Glacier	68.86	14	P	P	13 57 28.7	+0.6
LOGN				IAmb	IAmb	13 57 29.6	
	comp=Z,3.1nm,0.8s						
121A	Cookes Peak, D	69.00	53	P	P	13 57 29.6	0.0
121A				IAmb	IAmb	13 57 32.0	
	comp=Z,4.0nm,1.1s						
HVU	Hansel Valley	69.03	42	P	P	13 57 30.3	+0.7
HVU				IAmb	IAmb	13 57 31.5	
	comp=Z,2.9nm,1.0s						
CAST	Castle Rocks	69.06	8	P	P	13 57 27.8	-1.3
CAST				IAmb	IAmb	13 57 29.3	
	comp=Z,3.5nm,1.2s						
TRF	Thorofare Moun	69.36	9	P	P	13 57 30.8	-0.4
TRF				IAmb	IAmb	13 57 32.1	
	comp=Z,3.3nm,0.7s						
J20K	Nowinta River	69.52	7	P	P	13 57 32.5	+0.7
J20K				IAmb	IAmb	13 57 33.8	
	comp=Z,4.6nm,0.8s						
TCUT	Toone Canyon	69.66	43	P	P	13 57 34.5	+1.0
TCUT				IAmb	IAmb	13 57 35.7	
	comp=Z,7.1nm,1.0s						
HWUT	Hardware Ranch	69.77	43	P	P	13 57 34.5	+0.4
HWUT				IAmb	IAmb	13 57 35.8	
	comp=Z,2.8nm,0.8s						
M26K	Nabesna, AK	69.77	13	P	P	13 57 33.8	+0.2
M26K				IAmb	IAmb	13 57 35.0	
	comp=Z,2.5nm,0.6s						
HYT	Haines Junctio	69.78	16	P	P	13 57 34.6	+0.9
HYT				IAmb	IAmb	13 57 36.0	
	comp=Z,4.8nm,0.8s						
M27K	Edge Creek, AK	69.99	13	P	P	13 57 35.4	+0.4
PSA00	Pilbara Seismi	70.47	249	P	P	13 57 40.0	+1.3
PSA00				IAmb	IAmb	13 58 15.9	
	comp=Z,12nm,1.5s						
RIDG	Independent Ri	70.59	11	P	P	13 57 38.6	+0.1
RIDG				IAmb	IAmb	13 57 39.8	
	comp=Z,3.8nm,0.9s						
L27K	Beaver Creek,	70.61	13	P	P	13 57 39.2	+0.5
BCAR	Beaver Creek A	70.63	13	P	P	13 57 39.6	+0.8
DOT	Dot Lake	70.66	12	P	P	13 57 39.4	+0.4
P33M	Teslin, Yukon	70.66	18	P	P	13 57 40.3	+1.2
P33M				IAmb	IAmb	13 57 41.1	
	comp=Z,4.0nm,0.9s						
WRH	Wood River Hil	70.67	10	P	P	13 57 39.4	+0.5
MSO	Missoula	70.69	37	P	P	13 57 39.6	+0.1
MSO				IAmb	IAmb	13 57 40.4	
	comp=Z,3.1nm,0.8s						
I21K	Tanana	70.75	8	P	P	13 57 39.9	+0.5
I21K				IAmb	IAmb	13 57 42.1	
	comp=Z,3.9nm,1.1s						
MLY	Manley	70.78	8	P	P	13 57 39.0	-0.7
MLY				IAmb	IAmb	13 57 40.5	
	comp=Z,4.2nm,1.2s						
CCB	Clear Creek Bu	70.88	10	P	P	13 57 40.1	-0.1
SCRK	Sand Creek	70.97	12	P	P	13 57 41.2	+0.3
SCRK				IAmb	IAmb	13 57 41.9	
	comp=Z,2.4nm,0.7s						
FXWY	Fox Creek	71.02	41	P	P	13 57 42.9	+1.0
TCOL	CIGO, UAF Yank	71.08	10	P	P	13 57 40.9	-0.5
COLA	College	71.08	10	P	P	13 57 40.9	-0.5
I23K	Minto, Yukon-K	71.10	9	P	P	13 57 41.8	+0.3
I23K				IAmb	IAmb	13 57 42.7	
	comp=Z,4.3nm,0.8s						
H21K	Melozitna Rive	71.11	7	P	P	13 57 42.5	+0.9
ILAR	Eielson Array	71.15	10	P	P	13 57 42.1	+0.3
	comp=Z,0.5nm,0.7s,baz=203,slow=3.9,SNR=6.7						
	comp=Z,0.5nm,0.7s						
MA2	Magadan	71.27	340	P	P	13 57 43.5	+0.8
MA2				IAmb	IAmb	13 57 44.8	
	comp=Z,4.9nm,0.8s						
J25K	Salcha River,	71.28	11	P	P	13 57 42.9	+0.1
J25K				IAmb	IAmb	13 57 43.6	
	comp=Z,2.9nm,0.8s						
IMAR	Indian Mountai	71.31	7	P	P	13 57 43.5	+0.7
TXAR	Lajitas Array	71.36	57	P	P	13 57 44.0	0.0
	comp=Z,0.4nm,0.8s,baz=246,slow=4.5,SNR=5.1						
TXAR				LR	LR	14 24 14.5	
	comp=Z,12nm,20.7s,baz=283,slow=32						
	comp=Z,0.4nm,0.8s						
TXAR	Lajitas Array	71.36	57	P	P	13 57 45.1	+1.1
POKR	Poker Plat Res	71.38	10	P	P	13 57 44.2	+1.0
POKR				IAmb	IAmb	13 57 45.2	
	comp=Z,7.0nm,0.8s						
K27K	Chicken	71.41	12	P	P	13 57 44.1	+0.7
J26L	Joseph Creek	71.52	11	P	P	13 57 45.0	+0.8
KSRS	Korea Array	71.60	312	P	P	13 57 45.9	+0.8
	comp=Z,0.5nm,0.7s,baz=132,slow=8.4,SNR=5.2						
	comp=Z,0.5nm,0.7s						
BW06	Boulder Array	71.61	42	P	P	13 57 45.5	+0.1
PD31	Pinedale Array	71.61	42	P	P	13 57 45.5	+0.1
PDAR	Pinedale Array	71.61	42	P	P	13 57 45.3	-0.2
	comp=Z,1.2nm,0.7s,baz=223,slow=4.9,SNR=9.0						
	comp=Z,1.2nm,0.7s						
PDAR	Pinedale Array	71.61	42	P	P	13 57 45.5	+0.1
H23K	Yukon River	71.71	8	P	P	13 57 45.4	+0.1
H23K				IAmb	IAmb	13 57 46.4	
	comp=Z,3.0nm,0.8s						
H24K	Noodor Dome	71.97	9	P	P	13 57 47.2	+0.4
DAWY	Dawson	72.03	13	P	P	13 57 48.1	+0.9
DAWY				IAmb	IAmb	13 57 49.8	
	comp=Z,4.8nm,1.2s						
BMAR	Burnt Mountain	73.97	10	P	P	13 58 00.2	+1.5
SBA	Scott Base	74.30	185	P	P	13 58 01.8	+1.4
VNDA	Vanda	74.48	186	P	P	13 58 01.4	-0.1
	comp=Z,2.0nm,0.8s,baz=27,slow=3.3,SNR=6.0						
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	78.65	23	P	P	13 58 25.6	+0.3
	comp=Z,3.2nm,1.0s,baz=239,slow=5.6,SNR=7.1						
	comp=Z,3.2nm,1.0s						
ECSD	EROS Data Cent	80.82	45	P	P	13 58 37.0	-0.5
ECSD				IAmb	IAmb	13 58 38.3	
	comp=Z,10.0nm,1.4s						
QSPA	South Pole Qui	85.40	180	P	P	13 59 01.5	+0.6
QSPA				IAmb	IAmb	13 59 03.1	
	comp=Z,8.2nm,1.3s						
H03N2	Juan Fernandez	87.87	123	T	T	15 36 20.5	
	baz=270,slow=74,SNR=4.4						
H03N3	Juan Fernandez	87.87	123	T	T	15 36 24.5	
	baz=270,slow=74,SNR=4.2						
H03N1	Juan Fernandez	87.88	123	T	T	15 36 22.2	
	baz=270,slow=74,SNR=4.4						
SONM	Songino Array	89.50	318	P	P	13 59 20.8	-0.3
	comp=Z,0.7nm,0.6s,baz=116,slow=3.4,SNR=2.3						
	comp=Z,0.7nm,0.6s						
SONM	Songino Array	89.50	318	P	P	13 59 20.6	-0.4
CMAR	Chiang Mai Arr	93.03	288	P	P	13 59 37.4	-0.5
	comp=Z,0.4nm,0.3s,baz=98,slow=2.4,SNR=4.1						
	comp=Z,0.4nm,0.3s						
ESDC	Sonseca Array	142.65	19	PKhKP	PKPpre	14 05 54.2	
	comp=Z,0.3nm,0.7s,baz=327,slow=2.1,SNR=3.0						
IDI	Anoyia	146.72	338	PKPbc	PKPdf	14 06 04.4	-0.1
	comp=Z,4.5nm,0.4s,baz=74,slow=7.4,SNR=9.3						
VAE	Valguarnera	147.08	354	PKPbc	PKPbc	14 06 08.0	+0.9
	comp=Z,20nm,0.6s,baz=108,slow=10.0,SNR=5.1						
MDT	Midelt	148.51	25	PKPbc	PKPbc	14 06 11.0	-0.1
	comp=Z,3.2nm,1.0s,baz=303,slow=2.3,SNR=3.7						

*ROM **01** 14:03:32.6±0.7, 41°.64N±0°.04×16°.76E±0°.05, h9km, ML2.6/6, Error ellipse: s-maj=5.8km s-min=1.5km az=42.0*

ISC 01 14:03:33.3±1.2**, 41°.56N**±0°.02×**16°.76E**±0°.03**, h7**km±10km**, n35, σ1s.25**/40**, 1C-2D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVN	Minervino Murg	0.66	220	P	Pg	14 03 45.9	-0.1
MRVN				AML	AML		
	comp=E,181μm,0.8s						
MRVN				AML	AML		
	comp=N,189μm,0.2s						
MRVN				AML	AML		
	comp=E,182μm,0.8s						
SGRT	San Giovanni R	0.78	285	P	Pg	14 03 47.1	-1.3
SGRT				S	Sg	14 03 57.5	-1.1
SGRT				AML	AML		
	comp=N,397μm,0.2s						
SGRT				AML	AML		
	comp=E,420μm,1.2s						
NOCI	Noci	0.81	163	P	Pg	14 03 49.5	+0.7
NOCI				AML	AML		
	comp=E,729μm,0.7s						
NOCI				AML	AML		
	comp=N,755μm,0.4s						
MATE	Matera	0.91	182	P	Pg	14 03 51.4	+0.6
MATE				AML	AML		
	comp=N,304μm,0.9s						
MATE				AML	AML		
	comp=E,196μm,0.4s						
APRC	Apricena	0.93	283	P	Pg	14 03 50.1	-1.1
APRC				S	Sg	14 04 03.2	-0.1
APRC				AML	AML		
	comp=E,465μm,0.6s						
APRC				AML	AML		
	comp=N,623μm,0.4s						
LTRZ	Laterza	0.96	177	P	Pg	14 03 51.6	-0.1
ACER	Acerenza	0.99	219	P	Pg	14 03 52.6	+0.3
ACER				AML	AML		
	comp=N,280μm,0.8s						
ACER				AML	AML		
	comp=E,467μm,0.4s						
VULT	Monte Vulture	1.05	235	P	Pb	14 03 54.1	+0.2
SGTA	Sant Agata di	1.13	248	P	Pb	14 03 55.7	+0.5
LSTV	Lastovo	1.21	5	*e*Pg	Pg	14 03 56.4	-0.1
LSTV				Sg	Sg	14 04 12.0	-0.3
MELA	Melanico ??? S	1.23	277	P	Pg	14 03 55.8	-1.1
MELA				AML	AML		
	comp=E,290μm,1.4s						
MELA				AML	AML		
	comp=N,266μm,0.9s						
MCEL	Monticello	1.43	211	P	Pn	14 03 59.2	-0.5
STON	Ston	1.48	28	*e*Pn	Pn	14 03 59.9	-0.5
STON				Sn	Sn	14 04 19.3	-0.7
MTSN	Montesano sull	1.50	211	P	Pn	14 04 00.9	+0.1
DBRK	Dubrovnik	1.52	43	*e*Pn	Pg	14 04 02.2	-0.1
SIRI	Monte Sirino -	1.53	206	P	Pg	14 04 03.2	+0.5
HVAR	Hvar	1.63	352	*e*Pn	Pn	14 04 02.6	+0.2
CUC	Castrocucco	1.72	205	P	Pn	14 04 04.7	+1.0
BULG	Bulgheria - Ca	1.81	216	P	Pn	14 04 04.7	-0.3
VAGA	Valle Agricola	1.90	266	P	Pg	14 04 09.4	-0.3
VAGA				AML	AML		
	comp=N,74μm,1.6s						
VAGA				AML	AML		
	comp=E,48μm,1.4s						
RICI	Ricice	1.95	8	*e*Pn	Pb	14 04 09.2	0.0
ZIRJ	Zirje	2.25	339	Sn	Sn	14 04 36.8	-2.0
LIK	San Giovanni I	2.40	270	⇓P	Pb	14 04 17.3	+0.5
LIK				S	Sg	14 04 53.0	+2.5
AQU	L'Aquila	2.62	289	S	Sn	14 04 48.0	-0.2
DUGI	Dugi Otok	2.73	333	Sn	Sn	14 04 48.8	-2.0
GUMA	Gualdo di Mace	2.95	302	⇑P	Pb	14 04 26.8	+0.7
SRN	Sarande	2.98	123	S	Sn	14 04 58.0	+1.0
VIRC	Vir	3.00	336	Sn	Sn	14 04 56.7	-0.7
ARRO	Arrone	3.14	290	P	Pb	14 04 27.1	-2.3
ARRO				AML	AML		
	comp=E,36μm,1.6s						
ARRO				AML	AML		
	comp=N,58μm,0.6s						
CING	Cingoli	3.20	306	P	Pb	14 04 32.1	+1.7
SSFR	Montelago di S	3.48	304	P	Pg	14 04 41.8	+1.7
APEC	Apecchio	3.77	303	S	Sn	14 05 18.0	+1.5
SACS	San Casciano d	3.82	291	P	Pg	14 04 47.3	+0.8
RESU	Resuttano	4.43	209	P	Pb	14 04 48.0	-3.5
BRES	Bressanone	6.28	327	⇓P	Pn	14 05 08.7	+2.1

*IDC **01** 14:04:37.1±2.3, 7°.35S×155°.73E, h77km±22km, mb3.5/11, mbtmp3.9/14, MS3.1/2, Error ellipse: s-maj=25.2km s-min=21.7km az=137.0*

ISC 01 14:04:39.2±0.7**, 7°.3S**±0°.1×**155°.80E**±0°.07**, h100**km**, n16, σ1s.81**/16**, mb3.9**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.62	118	P	Pn	14 05 45.5	-1.3
	31nm,0.4s,baz=191,slow=7.8,SNR=6.1						
HNR				S	Sn	14 06 40.5	+1.1
	90nm,0.8s,baz=274,slow=6.4,SNR=3.7						
KRVT	Keravat (AS076	4.78	308	P	Pn	14 05 45.7	-3.3
	9.1nm,0.3s,baz=150,slow=11,SNR=9.7						
KRVT				S	Sn	14 06 51.8	+8.5
	38nm,0.7s,baz=139,slow=1.8,SNR=4.1						
PMG	Port Moresby	8.81	256	P	Pn	14 06 41.3	-2.4
	11nm,0.5s,baz=61,slow=7.2,SNR=7.8						
PMG				S	Sn	14 08 24.5	+3.2
	17nm,0.9s,baz=194,slow=14,SNR=2.1						
WRA	Warramunga Arr	24.32	237	P	P	14 09 46.6	-1.1
	1.3nm,0.9s,baz=62,slow=9.7,SNR=5.2						
	1.3nm,0.9s						
ASAR	Alice Springs	26.59	230	P	P	14 10 06.8	-1.5
	0.2nm,0.6s,baz=61,slow=9.7,SNR=2.2						
	0.2nm,0.6s						
AFI	Afiamalu	32.52	104	LR	LR	14 22 21.2	
	comp=Z,35nm,19.9s,baz=283,slow=33						
JHJ	Hachijo jima 2	42.97	340	LR	LR	14 30 44.2	
	comp=Z,22nm,18.9s,baz=85,slow=36						
MJAR	Matsushiro Arr	46.62	340	P	P	14 12 55.9	-1.6
	0.6nm,0.5s,baz=154,slow=5.5,SNR=2.6						
	0.6nm,0.5s						
KSRS	Korea Array	51.57	332	P	P	14 13 35.9	+0.7
	0.4nm,0.5s,baz=143,slow=7.5,SNR=5.1						
	0.4nm,0.5s						
USRK	Ussuriysk Ar.	55.58	339	P	P	14 14 05.8	+1.4
	1.9nm,0.9s,baz=166,slow=30,SNR=1.7						
	1.9nm,0.9s						
PETK	Petropavlovsk-	60.19	1	P	P	14 14 37.7	+1.3
	1.1nm,0.8s,baz=176,slow=6.8,SNR=4.2						
	1.1nm,0.8s						
CMAR	Chiang Mai Arr	61.63	295	P	P	14 14 48.1	+1.3
	1.5nm,0.9s,baz=108,slow=4.7,SNR=6.7						
	1.5nm,0.9s						
SONM	Songino Array	70.01	327	P	P	14 15 40.8	+0.5
	2.1nm,1.0s,baz=119,slow=5.1,SNR=5.2						
	2.1nm,1.0s						
ILAR	Eielson Array	83.35	21	P	P	14 16 55.2	+0.4
	0.4nm,0.7s,baz=227,slow=5.2,SNR=3.5						
	0.4nm,0.7s						
MKAR	Makanchi Array	84.15	319	P	P	14 16 59.6	+0.3
	2.6nm,0.8s,baz=101,slow=6.3,SNR=20						
	2.6nm,0.8s						
ZALV	Zalesovo Beam	84.87	326	P	P	14 17 03.0	+0.3
	1.1nm,0.5s,baz=104,slow=5.4,SNR=6.5						
	1.1nm,0.5s						

*IDC **01** 14:15:29.8±1.2, 9°.44S×148°.96E, h0km, mb3.8/8, mbtmp3.9/10, ML3.7/2, MS3.2/1, Error ellipse: s-maj=30.4km s-min=17.3km az=132.0*

*NEIC **01** 14:15:35.1±1.4, 9°.42S±0°.08×148°.8E±0°.1, h28km±4km, mb4.4/19, Error ellipse: s-maj=19.2km s-min=10.5km az=108.0*

ISC 01 14:15:33.8±0.6**, 9°.49S**±0°.08×**148°.85E**±0°.08**, h22**km**, n40, σ1s.26**/37**, mb4.4**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	1.67	273	Pn	Pn	14 16 01.9	+0.2
	100nm,0.3s,baz=78,slow=6.4,SNR=224						
PMG				Sn	Sb	14 16 25.5	+1.1
	329nm,0.3s,baz=170,slow=21,SNR=26						
KRVT	Keravat (AS076	6.04	32	Pn	Pn	14 17 00.4	-1.5
	4.5nm,0.3s,baz=175,slow=12,SNR=8.9						
KRVT				Sn	Sn	14 18 13.4	+3.0
	3.5nm,0.3s,baz=143,slow=20,SNR=3.6						
	12nm,0.3s						
RABL	Rabaul	6.21	32	Pn	Pn	14 17 02.3	-2.0
COEN	Coen	7.11	231	Pn	Pn	14 17 15.7	-0.9
CTAO	Charters Tower	10.83	193	Pn	Pn	14 18 08.8	+1.2
EIDS	Eidsvold	15.94	173	Pn	Pn	14 19 18.2	+1.4
WR0	Warramunga Arr	17.30	231		Pn	14 19 34.9	+0.7
WB0	Warramunga Arr	17.30	232		P	14 19 36.0	+0.5
WB0				IAmb	IAmb	14 19 46.6	
	comp=Z,10nm,1.1s						
WB2	Warramunga Arr	17.43	232		Pn	14 19 36.5	+0.7
WRA	Warramunga Arr	17.45	232	P	Pn	14 19 36.8	+0.8
	comp=Z,0.2nm,0.3s,baz=50,slow=12,SNR=8.6						
WRA				S	Sn	14 22 39.0	-11
	comp=Z,0.4nm,0.7s,baz=47,slow=26,SNR=3.0						
WRA				LR	LR	14 26 02.4	
	comp=Z,77nm,18.3s,baz=63,slow=36						
	comp=Z,1.7nm,0.8s						
MTN	Manton Dam	17.69	258	P	P	14 19 41.5	+1.6
MTN				IAmb	IAmb	14 20 08.1	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	20.06	224	P	Pn	14 20 07.4	-0.3
ASAR	Alice Springs	20.07	224	P	Pn	14 20 07.2	-0.5
	comp=Z,4.8nm,0.9s,baz=61,slow=10,SNR=58						
ASAR				S	S	14 23 46.5	-4.1
	comp=Z,0.7nm,0.9s,baz=42,slow=25,SNR=3.4						
	comp=Z,4.8nm,0.9s						
ASAR	Alice Springs	20.07	224	P	Pn	14 20 07.3	-0.4
KNRA	Kununurra	20.53	251	P	P	14 20 10.4	-0.5
KNRA				IAmb	IAmb	14 20 20.5	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	23.27	196	P	P	14 20 40.2	+0.2
	comp=Z,1.6nm,0.8s,baz=55,slow=16,SNR=0.8						
	comp=Z,1.6nm,0.8s						
FITZ	Fitzroy Crossi	24.08	247	P	P	14 20 46.9	-1.0
	comp=Z,4.5nm,0.6s,baz=76,slow=6.2,SNR=21						
	comp=Z,4.5nm,0.6s						
FITZ	Fitzroy Crossi	24.08	247	P	P	14 20 47.1	-0.8
FITZ				IAmb	IAmb	14 20 48.0	
	comp=Z,5.1nm,0.6s						
JOW	Kunigami	41.26	332	P	P	14 23 17.8	+0.2
KSCHJ	Chungju	50.11	338	P	P	14 24 27.1	-0.3
KSRS	Korea Array	50.65	338	P	P	14 24 31.2	-0.2
	comp=Z,1.2nm,0.6s,baz=159,slow=8.2,SNR=9.7						
	comp=Z,1.2nm,0.6s						
CMAR	Chiang Mai Arr	56.53	299	P	P	14 25 15.7	+0.7
	comp=Z,0.7nm,0.5s,baz=120,slow=5.0,SNR=5.4						
	comp=Z,0.7nm,0.5s						
PETK	Petropavlovsk-	62.81	6	P	P	14 25 56.1	-1.5
	comp=Z,0.4nm,0.5s,baz=153,slow=8.2,SNR=2.1						
	comp=Z,0.4nm,0.5s						
QSPA	South Pole Qui	80.50	180	P	P	14 27 45.0	+0.9
QSPA				IAmb	IAmb	14 27 47.2	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	81.34	320	P	P	14 27 48.3	-0.5
	comp=Z,0.3nm,0.5s,baz=103,slow=6.5,SNR=2.3						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	81.34	320	P	P	14 27 48.0	-0.7
ANM	Nome	81.41	18	P	P	14 27 48.8	+0.1
SVW2	Sparrevohn	82.66	24	P	P	14 27 55.8	+0.4
SVW2				IAmb	IAmb	14 27 57.5	
	comp=Z,3.7nm,0.8s						
L19K	White Mountain	83.56	23	P	P	14 28 00.2	+0.2
L19K				IAmb	IAmb	14 28 02.3	
	comp=Z,3.1nm,0.8s						
K20K	Telida	84.52	22	P	P	14 28 05.8	+1.0
K20K				IAmb	IAmb	14 28 06.9	
	comp=Z,3.0nm,0.8s						
CAST	Castle Rocks	85.31	23	P	P	14 28 08.3	-0.5
CAST				IAmb	IAmb	14 28 10.1	
	comp=Z,2.6nm,0.9s						
IMAR	Indian Mountai	86.10	20	P	P	14 28 12.6	-0.1
RND	Reindeer	86.55	24	P	P	14 28 14.9	-0.2
WRH	Wood River Hil	87.36	23	P	P	14 28 18.5	-0.4
WRH				IAmb	IAmb	14 28 34.6	
	comp=Z,3.0nm,1.2s						
ILAR	Eielson Array	87.96	23	P	P	14 28 19.9	-1.8
	comp=Z,1.1nm,0.7s,baz=252,slow=5.2,SNR=11						
	comp=Z,1.1nm,0.7s						
J25K	Salcha River,	88.47	23	P	P	14 28 24.5	+0.3
J25K				IAmb	IAmb	14 28 24.9	
	comp=Z,2.4nm,0.8s						
H03S2	Juan Fernandez	117.45	136	T	T	16 44 21.2	
	SNR=8.1						
H03S1	Juan Fernandez	117.47	136	T	T	16 44 22.3	
	SNR=8.4						
H03S3	Juan Fernandez	117.47	136	T	T	16 44 18.1	
	SNR=7.4						
TORD	Torodi Ar. Bea	147.60	280	PKPbc	PKPbc	14 35 17.3	-0.3
	comp=Z,1.9nm,0.6s,baz=65,slow=2.8,SNR=12						

*WEL **01** 14:36:00, 40°.18S×176°.69E, h15km, ML4.2, Mw3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}0.35; $M_{\theta\theta}$1.15; $M_{\phi\phi}$-1.49; $M_{r\theta}$-1.39; $M_{\theta\phi}$-6.64; $M_{\phi r}$4.43; Fault plane solution: $M_0$8.19000×10^{14} NP1: ϕ_s262.00000°, δ57.00000°, λ175.00000°. NP2: ϕ_s355.00000°, δ85.00000°, λ34.00000°. Principal axes: T 85.4000, Plg26.0000°, Azm224.0000°; N -6.9100, Plg56.0000°, Azm2.0000°; P -78.4900, Plg19.0000°, Azm124.0000°;*

*NOU **01** 14:36:48.8, 40°.45S×177°.16E, h64km, MLv4.6/9, Off E. Coast of N. Island, N.Z.*

*NEIC **01** 14:36:50.7±0.9, 40°.31S±0°.09×177°.0E±0°.2, h30km±15km, mb4.2/4, Error ellipse: s-maj=22.8km s-min=6.4km az=120.0*

*WEL **01** 14:36:51.7±0.5, 40°S±3°×17°7E±°, h14km±3km, M4.2/19, ML4.5/19, MLv4.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=116.8*

*IDC **01** 14:36:57.8±1.3, 38°.64S×175°.56E, h0km, mb3.7/3, mbtmp3.9/4, ML4.3/1, Error ellipse: s-maj=39.4km s-min=19.8km az=164.0*

ISC 01 14:36:47.3±1.3**, 40°.33S**±0°.02×**176°.95E**±0°.03**, h7**km±9km**, n161, σ1s.09**/174**, mb3.9**/5**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRHZ	Porangahau	0.25	284	P	Pb	14 36 55.1	+1.0
PRHZ				S	Sb	14 36 58.3	-0.4
PXZ	Pawanui	0.30	347	P	Pb	14 36 56.3	+1.3
PXZ				S	Sb	14 37 01.4	+1.1
ANWZ	Angora Road	0.39	250	P	Pn	14 36 59.5	+0.2
ANWZ				S	Sb	14 37 06.8	+4.1
WPHZ	Waipukurau	0.47	304	P	Pg	14 36 57.2	+0.8
KAHZ	Kahuranaki	0.54	354	P	Pn	14 37 00.8	-0.6
DVHZ	Dannevirke	0.60	272	P	Pb	14 37 00.9	+0.7
BFZ	Birch Farm	0.65	236	Pn	Pn	14 37 04.4	+1.5
BFZ					Sn	14 37 13.5	+0.1
BFZ	Birch Farm	0.65	236	P	Pn	14 37 04.5	+1.7
BFZ	Birch Farm	0.65	236	P	Pn	14 37 04.7	+1.8
CKHZ	Cape Kidnapper	0.67	8	P	Pn	14 37 04.7	+1.5
CKHZ				S	Sn	14 37 15.7	+1.7
PNHZ	Pukenui	0.71	305	P	Pg	14 37 01.4	+0.4
PNHZ				S	Sg	14 37 09.4	-0.8
PRWZ	Pori Road	0.78	253	P	Pn	14 37 06.0	+1.2
TSZ	Takapari Road	0.81	289	P	Pb	14 37 03.4	-0.3
TSZ				S	Sg	14 37 12.5	-0.8
CPWZ	Castlepoint	0.82	224	P	Pn	14 37 08.1	+2.9
MCHZ	McNeill Hill	0.90	347	P	Pn	14 37 07.0	+0.6
MCHZ				S	Sn	14 37 20.8	+1.1

POWZ	Post Office Ro	0.91	265	P	Pn	14 37 06.9	+0.4
POWZ				S	Sn	14 37 20.6	+0.8
TIWZ	Tintock	0.93	241	P	Pn	14 37 08.4	+1.6
KWHZ	Kaweka Forest	0.99	335	P	Pb	14 37 07.3	+0.5
ARHZ	Aropaoanui	1.06	2	P	Pn	14 37 10.0	+1.4
BHHZ	Black Hill Sta	1.08	320	P	Pg	14 37 08.0	0.0
BHHZ				S	Sg	14 37 20.2	-1.9
MRZ	Mangatainoka R	1.10	252	P	Pn	14 37 10.0	+0.9
MRZ				S	Sn	14 37 25.2	+0.6
TMWZ	Te Maipa	1.12	226	P	Pn	14 37 11.4	+2.0
BKZ	Black Stump Fm	1.21	343	Pn	Pn	14 37 11.2	+0.5
BKZ	Black Stump Fm	1.21	343	P	Pn	14 37 11.1	+0.4
BKZ	Black Stump Fm	1.21	343	P	Pn	14 37 11.5	+0.8
NMHZ	Naumai	1.23	355	P	Pn	14 37 12.2	+1.1
HOWZ	Holdsworth Sta	1.23	242	P	Pn	14 37 12.1	+1.1
HOWZ				S	Sn	14 37 28.1	+0.2
OHWZ	Ohakea	1.26	275	P	Pg	14 37 12.9	+1.4
OHWZ				S	Sn	14 37 29.7	+1.3
WHHZ	Waihua	1.27	10	P	Pg	14 37 15.5	+3.9
MOVZ	Moawhango	1.30	314	P	Pn	14 37 12.1	+0.1
MTW	Mount Morrison	1.38	233	P	Pg	14 37 13.8	0.0
MHGZ	Mahia Peninsul	1.38	32	P	Pg	14 37 14.8	+0.9
RAHZ	Arahi	1.41	4	P	Pg	14 37 14.5	+0.1
KNZ	Kokohu	1.42	23	P	Pg	14 37 14.7	+0.2
TRWZ	Traveller	1.44	221	P	Pg	14 37 15.1	+0.2
OGWZ	Otaki Gorge	1.44	250	P	Pg	14 37 14.8	-0.2
WNVZ	Wahianoa	1.44	313	P	Pb	14 37 14.7	+0.1
TUVZ	Tukino	1.46	316	P	Pb	14 37 15.0	+0.2
MTHZ	Maungataniwha	1.48	357	P	Pb	14 37 15.4	+0.4
MTVZ	Mangateitei	1.48	309	P	Pg	14 37 15.6	-0.1
WHVZ	Whangaehu Hut	1.48	314	P	Pb	14 37 15.4	+0.1
TRVZ	Turoa	1.49	313	P	Pb	14 37 15.8	+0.3
DRZ	Dome Shelter	1.50	314	P	Pb	14 37 16.0	+0.4
FWVZ	Far West T-bar	1.52	314	P	Pb	14 37 15.8	-0.1
SNVZ	South Ngauruho	1.52	318	P	Pb	14 37 16.0	0.0
ETVZ	East Tongariro	1.53	321	P	Pb	14 37 16.2	+0.2
OTVZ	Oturere	1.53	319	P	Pb	14 37 16.0	0.0
TMVZ	Te Maari	1.55	321	P	Pb	14 37 16.4	+0.1
MRHZ	Matea Rd	1.55	344	P	Pb	14 37 16.3	0.0
NGZ	Ngauruhoe	1.55	317	P	Pb	14 37 16.4	0.0
PAWZ	Paruwai Farm	1.57	227	P	Pb	14 37 16.4	-0.2
SNGZ	Shannon Statio	1.57	11	P	Pb	14 37 17.2	+0.5
NTVZ	North Tongarir	1.57	321	P	Pb	14 37 16.8	0.0
PRGZ	Paritu Road	1.57	27	P	Pb	14 37 16.9	+0.1
NNVZ	North Ngauruho	1.58	319	P	Pb	14 37 16.8	-0.1
HATZ	Hinemaiaia	1.58	335	P	Pg	14 37 17.7	+0.1
RITZ	Rihia Road	1.59	328	P	Pb	14 37 17.6	+0.6
KRVZ	Karewarewa	1.59	320	P	Pb	14 37 17.5	+0.3
WTVZ	West Tongariro	1.60	319	P	Pb	14 37 17.3	0.0
PKVZ	Pokaka	1.61	309	P	Pb	14 37 17.7	+0.3
WAZ	Wanganui	1.61	290	P	Pb	14 37 17.6	+0.2
CAW	Cannon Point	1.63	241	P	Pb	14 37 17.1	-0.6
KIW	Kapiti Island	1.65	250	P	Pb	14 37 17.6	-0.4
KATZ	Kakaramea	1.66	324	P	Pb	14 37 18.8	+0.5
MSWZ	Moikau Station	1.69	229	Pn	Pn	14 37 17.6	+0.4
MSWZ	Moikau Station	1.69	229	P	Pb	14 37 17.8	-0.9
TWVZ	Taurewa	1.71	317	P	Pb	14 37 19.3	+0.2
RATZ	Rangitukua	1.72	328	P	Pb	14 37 19.5	+0.3
RIGZ	Rimuhau	1.73	21	P	Pb	14 37 19.2	-0.3
PLWZ	Palliser	1.79	225	Pn	Pn	14 37 19.2	+0.6
PLWZ	Palliser	1.79	225	P	Pn	14 37 19.3	+0.6
ALRZ	Allen Road	1.82	345	P	Pb	14 37 20.5	-0.5
WHTZ	Whakaora	1.83	335	P	Pg	14 37 22.3	0.0
MUGZ	Murupara	1.85	356	P	Pn	14 37 20.3	+0.9
RAGZ	Rawiri	1.86	11	P	Pn	14 37 20.5	+0.8
WATZ	Wairara	1.87	329	P	Pg	14 37 23.4	+0.2
PRRZ	Plateau Road	1.88	346	P	Pn	14 37 20.8	+1.0
WPRZ	Whakapapatarin	1.91	341	P	Pb	14 37 22.2	-0.2
WEL	Wellington	1.92	239	P	Pn	14 37 20.8	+0.5
SNZO	South Karori	1.97	239	P	Pn	14 37 21.8	+0.8
HRRZ	Handcock Road	2.00	345	P	Pn	14 37 22.8	+1.3
TKGZ	Te Karaka	2.01	21	P	Pn	14 37 22.5	+1.0
RRRZ	Republican Roa	2.01	350	P	Pn	14 37 23.1	+1.4
KUTZ	Kaahu Road	2.03	334	P	Pn	14 37 23.3	+1.4
MWZ	Matawai	2.04	13	P	Pn	14 37 22.4	+0.3
URZ	Urewera	2.07	3	Pn	Pn	14 37 23.1	+0.7
	10nm,0.3s,baz=301,slow=19,SNR=58						
URZ	Urewera	2.07	3	Pn	Pn	14 37 22.9	+0.5
URZ	Urewera	2.07	3	P	Pn	14 37 23.1	+0.7
URZ	Urewera	2.07	3	P	Pn	14 37 23.1	+0.7
VRZ	Vera Road	2.08	305	P	Pb	14 37 24.8	-0.5
GRRZ	Galatos Road	2.08	341	P	Pb	14 37 26.4	+1.0
HSRZ	Hossack Road	2.09	345	P	Pn	14 37 23.6	+0.9
TARZ	Mount Tarawera	2.12	350	P	Pn	14 37 24.3	+1.1
HLRZ	Highlands Stat	2.12	347	P	Pg	14 37 29.5	+1.5
LREZ	Lake Rotokare	2.14	293	P	Pb	14 37 27.1	+0.7
TCW	Tory Channel	2.22	246	P	Pn	14 37 24.7	+0.3
EDRZ	Edgecumbe	2.22	356	P	Pg	14 37 30.9	+1.0
UTU	Utuhina	2.23	344	P	Pg	14 37 30.0	0.0
OMRZ	Omania	2.26	348	P	Pg	14 37 31.0	+0.3
TLZ	Tolley Road	2.28	331	P	Pn	14 37 27.1	+1.8
TWGZ	Tauwhareparae	2.29	21	P	Pb	14 37 28.0	-1.0
MARZ	Manawahe	2.35	355	P	Pg	14 37 32.8	+0.5
DUWZ	D'Urville Isla	2.36	257	P	Pn	14 37 27.6	+1.1
KARZ	Kaharoa	2.37	346	P	Pg	14 37 32.8	+0.1
DREZ	Durham Road	2.41	297	P	Pb	14 37 31.0	+0.1
HIZ	Hauiti	2.43	317	P	Pn	14 37 29.3	+1.9
HIZ	Hauiti	2.43	317	P	Pn	14 37 29.4	+2.0
NEZ	North Egmont	2.44	295	P	Pb	14 37 31.5	-0.1
WHRZ	Whale Island	2.47	0	P	Pb	14 37 31.9	-0.1
PUZ	Puketiti	2.47	25	P	Pn	14 37 28.0	0.0
CMWZ	Cape Campbell	2.51	235	P	Pn	14 37 29.1	+0.5
TUWZ	Tuamarina	2.53	243	P	Pn	14 37 28.5	-0.3
PKE	Pukeiti	2.55	295	P	Pb	14 37 32.9	-0.5
PKGZ	Pakihiroa	2.59	20	P	Pn	14 37 30.1	+0.5
NBEZ	Newall Road No	2.60	293	P	Pb	14 37 34.4	+0.2
HAZ	Te Kaha	2.65	14	P	Pn	14 37 32.0	+1.7
BSWZ	Blackbirch Sta	2.71	238	P	Pn	14 37 31.1	-0.1
WMGZ	Waiomatatini S	2.75	25	P	Pn	14 37 32.1	+0.3
TOZ	Tahuroa Road	2.83	336	P	Pn	14 37 34.0	+1.1
MXZ	Matakaoa Point	2.96	21	P	Pn	14 37 37.1	+2.5
TKNZ	Takaka Hill	3.12	256	P	Pn	14 37 37.5	+0.7
KHZ	Kahutara	3.31	230	P	Pn	14 37 38.8	-0.7
KHZ	Kahutara	3.31	230	P	Pn	14 37 38.7	-0.7
MRNZ	Matariki Terra	3.36	250	P	Pn	14 37 40.7	+0.5
THZ	Tophouse	3.38	244		Pn	14 37 40.1	-0.5
THZ	Tophouse	3.38	244	P	Pn	14 37 40.0	-0.6
QRZ	Quartz Range	3.41	260	Pn	Pn	14 37 40.8	-0.1
QRZ	Quartz Range	3.41	260	P	Pn	14 37 40.7	-0.1
QRZ	Quartz Range	3.41	260	P	Pn	14 37 40.8	-0.1
MKAZ	Moumakai	3.51	336	P	Pn	14 37 43.4	+1.2
AWAZ	Awhitu Peninsu	3.73	330	P	Pb	14 37 52.6	-0.8
WTAZ	Waiatarua	3.87	330	P	Pb	14 37 54.2	-1.6
MBAZ	Motutapu North	3.90	335	P	Pn	14 37 49.6	+2.0
GVZ	Greta Valley S	3.95	227	P	Pn	14 37 47.4	-0.8
DSZ	Denniston Nort	4.14	248	P	Pn	14 37 50.6	-0.4
AMCZ	Amberley	4.30	227	P	Pn	14 37 53.0	-0.1
OKCZ	Okains Bay	4.46	219	P	Pn	14 37 54.8	-0.6
AKCZ	Akaroa Harbour	4.65	219	P	Pn	14 37 58.4	+0.5
WVZ	Waitaha Valley	5.40	237	P	Pn	14 38 07.2	-1.0
RPZ	Rata Peaks	5.55	230	Pn	Pb	14 38 28.6	+4.1
	7.5nm,0.3s,baz=66,slow=20,SNR=17						
RPZ				Sn	Sg	14 39 42.7	-2.7
	0.7nm,0.3s,baz=81,slow=23,SNR=3.1						
	57nm,0.7s						
RPZ	Rata Peaks	5.55	230		Pn	14 38 09.0	-1.3
RPZ	Rata Peaks	5.55	230	P	Pn	14 38 09.1	-1.1
ARCZ	Arundel	5.61	228	P	Pn	14 38 10.4	-0.7
GCSZ	Gaunt Creek Bo	5.78	237	P	Pn	14 38 13.4	-0.1
CTZ	Chatham Island	5.88	128	P	Pn	14 38 19.7	+5.0
FOZ	Fox Glacier	6.21	237		Pn	14 38 17.7	-1.6
LBZ	Lake Benmore	6.45	229	P	Pn	14 38 21.8	-0.8
ODZ	Otahua Downs	6.62	223	Pn	Pn	14 38 23.8	-1.1
ODZ	Otahua Downs	6.62	223	P	Pn	14 38 23.7	-1.2
WKZ	Wanaka	7.38	230		Pn	14 38 34.2	-1.3
MLZ	Mavora Lakes	8.21	229	P	Pn	14 38 46.0	-0.9
SYZ	Scrubby Hill	8.41	220	P	Pn	14 38 50.6	+1.0
AS31	Alice Springs	39.69	281	P	P	14 44 20.6	+0.4
ASAR	Alice Springs	39.69	281	P	P	14 44 20.2	+0.1
	0.6nm,0.5s,baz=124,slow=7.4,SNR=26						
	0.6nm,0.5s						
ASAR	Alice Springs	39.69	281	P	P	14 44 19.9	-0.3
WR0	Warramunga Arr	41.44	287	P	P	14 44 34.2	-0.5
WR0				IAmb	IAmb	14 45 14.8	
	comp=Z,8.3nm,1.4s						
WB2	Warramunga Arr	41.59	286	P	P	14 44 35.5	-0.4
WRA	Warramunga Arr	41.59	286	P	P	14 44 35.9	-0.1
	comp=Z,0.8nm,0.7s,baz=127,slow=8.0,SNR=16						
	comp=Z,0.8nm,0.7s						
WB0	Warramunga Arr	41.66	287	P	P	14 44 36.0	-0.5
WB0				IAmb	IAmb	14 45 18.4	
	comp=Z,5.4nm,1.2s						
FITZ	Fitzroy Crossi	49.19	281	P	P	14 45 36.4	+0.2
	comp=Z,1.2nm,0.8s,baz=117,slow=6.8,SNR=1.6						
	comp=Z,1.2nm,0.8s						
FINES	FINESS Array B	152.40	330	PKPbc	PKPab	14 56 49.2	-4.1
	comp=Z,2.0nm,0.9s,baz=45,slow=2.7,SNR=2.4						

IDC 01 14:48:45.1±8.9,18°.89N×146°.53E,h140km±54km,mb3.0/4, mbtmp3.5/5,Error ellipse: s-maj=152.3km s-min=25.6km az=81.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.51	197	P	Pn	14 50 05.0	-0.2
	5.5nm,0.4s,baz=345,slow=20,SNR=1.4						
GUMO				S	Sn	14 51 08.4	+0.7
	5.9nm,0.3s,baz=8.3,slow=21,SNR=1.5						
WRA	Warramunga Arr	40.40	198	P	P	14 56 09.4	-0.3
	0.2nm,0.3s,baz=19,slow=8.7,SNR=6.2						
	0.2nm,0.3s						
ASAR	Alice Springs	44.06	197	P	P	14 56 39.2	0.0
	0.3nm,0.9s,baz=8.6,slow=6.6,SNR=1.9						
	0.3nm,0.9s						
ZALV	Zalesovo Beam	58.35	322	P	P	14 58 24.9	-0.5
	0.5nm,0.5s,baz=100,slow=7.7,SNR=2.4						
	0.5nm,0.5s						
MKAR	Makanchi Array	58.90	314	P	P	14 58 30.0	+0.5
	0.2nm,0.5s,baz=87,slow=7.4,SNR=2.4						
	0.2nm,0.5s						

IDC 01 15:05:06.6±1.3,35°.97N×141°.18E,h0km,mb3.2/4, mbtmp3.5/8,ML3.6/4,Error ellipse: s-maj=31.2km s-min=21.9km az=71.0
JMA 01 15:05:18.2±0.2,35°.6N±0°.7×140°.2E±0°.9,h67km±2km, MV3.0/40,CENTRAL CHIBA PREF
ISC 01 15:05:18.8±1.0,35°.57N±0°.05×140°.20E±0°.05,h71km±7km, n28,σ1s.02/29,mb3.4/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.15	180	*i* P	Pn	15 05 29.3	0.0
JCN				*e*S	Sn	15 05 38.3	+1.3
JSMT	Sammumatsuo	0.21	70	P	Pn	15 05 28.8	-0.7
JSMT				*e*S	Sn	15 05 37.9	+0.4
TOK	Tokyo	0.38	288	P	Pn	15 05 30.4	-0.2
JIHU	Itakohorinouch	0.48	33	P	Pn	15 05 30.9	-0.6
BSO3	Boso 3	0.81	162	P	Pn	15 05 34.4	-0.3
JOD2	Odawara 2	0.96	252	P	Pn	15 05 36.4	-0.4
JOD2				S	Sn	15 05 49.4	-0.9
JAG	Ashikaga	1.05	325	P	Pn	15 05 36.8	-1.1
JIM2	Oshima 3	1.06	217	P	Pn	15 05 37.3	-0.8
BSO1	Boso 1	1.11	145	P	Pn	15 05 37.8	-0.4
JRY	Ryogami san	1.15	293	P	Pn	15 05 39.1	-0.1
JFNN	Fujinakano	1.29	254	P	Pn	15 05 41.0	0.0
JFNN				S	Sn	15 05 57.8	0.0
JYN	Shimob	1.35	267	P	Pn	15 05 41.7	-0.2
JIZS	Izushimoda	1.38	232	P	Pn	15 05 41.9	-0.3
JIZS				S	Sn	15 05 59.2	-0.5
JKT	Katashina	1.42	327	P	Pn	15 05 41.7	-1.1
JKT				*e*S	Sn	15 05 59.8	-1.1
MJAR	Matsushiro Arr	1.89	302	Pn	Pn	15 05 47.5	-1.4
	4.2nm,0.3s,baz=133,slow=14,SNR=150						
MJAR				Sn	Sn	15 06 12.1	+0.2
	1.8nm,0.3s,baz=270,slow=7.1,SNR=2.9						
	15nm,0.3s						
JHJ	Hachijo jima 2	2.47	188	Pn	Pn	15 05 57.0	+0.2
	24nm,0.3s,baz=80,slow=19,SNR=15						
JHJ				Sn	Sn	15 06 25.8	-0.1
	38nm,0.3s,baz=318,slow=20,SNR=7.0						
	41nm,0.3s						
JCJ	Chichijima	8.62	168	Pn	Pn	15 07 17.2	-3.5
	5.2nm,0.3s,baz=342,slow=20,SNR=1.4						
	22nm,0.5s						
KSRS	Korea Array	10.06	284	Pn	Pn	15 07 41.9	+1.5
	0.1nm,0.3s,baz=93,slow=14,SNR=5.9						
	0.4nm,0.3s						
H11N2	WAKE ISLAND Hy	28.30	117	T	T	15 40 55.7	
	baz=303						
H11N1	WAKE ISLAND Hy	28.31	117	T	T	15 40 32.3	
	baz=303						
H11N3	WAKE ISLAND Hy	28.32	117	T	T	15 40 44.6	
	baz=303						
H11S1	WAKE ISLAND Hy	28.95	119	T	T	15 41 10.9	
	baz=310						
H11S3	WAKE ISLAND Hy	28.95	119	T	T	15 41 21.6	
	baz=310						
H11S2	WAKE ISLAND Hy	28.96	119	T	T	15 41 17.6	
	baz=310						
MKAR	Makanchi Array	44.08	303	P	P	15 13 20.3	+0.6
	0.3nm,0.5s,baz=81,slow=9.2,SNR=4.2						
	0.3nm,0.5s						
ILAR	Eielson Array	51.25	32	P	P	15 14 06.0	-8.9
	0.1nm,0.5s,baz=287,slow=6.3,SNR=3.0						
	0.1nm,0.5s						
WRA	Warramunga Arr	55.48	187	P	P	15 14 46.2	-0.1
	0.4nm,0.6s,baz=0.2,slow=7.5,SNR=10						
	0.4nm,0.6s						
ASAR	Alice Springs	59.21	187	P	P	15 15 13.1	+0.5
	0.3nm,1.0s,baz=24,slow=10,SNR=4.7						
	0.3nm,1.0s						

IDC 01 15:07:17.4±1.4,35°.97N×141°.16E,h0km,mb3.4/5, mbtmp3.5/9,ML3.1/3,Error ellipse: s-maj=30.0km s-min=22.6km az=68.0
JMA 01 15:07:29.5±0.2,35°.7N±0°.5×140°.2E±0°.7,h63km±1km, MV2.9/39,CENTRAL CHIBA PREF
ISC 01 15:07:29.6±1.0,35°.58N±0°.05×140°.21E±0°.06,h64km±8km, n28,σ1s.06/29,mb3.5/5,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.17	183	P	Pn	15 07 40.1	+0.7
JSMT	Sammumatsuo	0.20	73	P	Pn	15 07 39.7	+0.1
TOK	Tokyo	0.39	286	P	Pn	15 07 41.2	+0.4
JIHU	Itakohorinouch	0.46	34	P	Pn	15 07 41.7	+0.2
BSO3	Boso 3	0.82	163	P	Pn	15 07 45.5	+0.2
BSO3				*e*X		15 07 58.5	
JOD2	Odawara 2	0.97	251	P	Pn	15 07 47.2	-0.3
JOD2				S	Sn	15 08 00.2	-0.6
JAG	Ashikaga	1.04	324	P	Pn	15 07 47.7	-0.7
JIM2	Oshima 3	1.08	217	P	Pn	15 07 48.2	-0.6
JIM2				S	Sn	15 08 02.7	-0.4
JRY	Ryogami san	1.15	292	P	Pn	15 07 49.9	+0.1
JFNN	Fujinakano	1.31	253	P	Pn	15 07 51.8	0.0
JFNN				S	Sn	15 08 08.7	+0.2
JYN	Shimob	1.36	267	P	Pn	15 07 52.6	-0.1
JYN				S	Sn	15 08 09.5	-0.4
JIZS	Izushimoda	1.39	232	P	Pn	15 07 52.7	-0.3
JIZS				S	Sn	15 08 09.8	-0.7
JKT	Katashina	1.42	327	P	Pn	15 07 52.7	-0.7
JKT				*e*S	Sn	15 08 09.3	-1.9
MJAR	Matsushiro Arr	1.88	301	Pn	Pn	15 07 58.1	-1.4
	2.4nm,0.3s,baz=119,slow=12,SNR=17						
MJAR				Sn	Sn	15 08 22.7	+0.4
	1.3nm,0.3s,baz=129,slow=19,SNR=2.8						
	9.9nm,0.3s						
JHJ	Hachijo jima 2	2.48	188	Pn	Pn	15 08 08.6	+0.9
	20nm,0.3s,baz=323,slow=20,SNR=2.3						
JHJ				Sn	Sn	15 08 37.2	+0.3
	26nm,0.3s,baz=66,slow=20,SNR=2.9						
	46nm,0.3s						
JCJ	Chichijima	8.63	168	Pn	Pn	15 09 28.9	-2.9
	20nm,0.6s,baz=287,slow=21,SNR=1.2						
KSRS	Korea Array	10.07	284	Pn	Pn	15 09 53.5	+2.1
	0.1nm,0.3s,baz=82,slow=14,SNR=2.2						
	0.3nm,0.3s						
H11N2	WAKE ISLAND Hy	28.30	117	T	T	15 43 08.9	
	baz=313						
H11N1	WAKE ISLAND Hy	28.31	117	T	T	15 42 51.8	
	baz=313						
H11N3	WAKE ISLAND Hy	28.32	117	T	T	15 42 48.9	
	baz=313						
H11S3	WAKE ISLAND Hy	28.95	119	T	T	15 43 30.9	
	baz=305						
H11S1	WAKE ISLAND Hy	28.95	119	T	T	15 43 20.7	
	baz=305						
H11S2	WAKE ISLAND Hy	28.96	119	T	T	15 43 29.1	
	baz=305						
CMAR	Chiang Mai Arr	40.20	256	P	P	15 15 01.6	+1.7
	0.2nm,0.3s,baz=85,slow=9.3,SNR=1.3						
	0.2nm,0.3s						
MKAR	Makanchi Array	44.08	303	P	P	15 15 31.3	+0.1
	0.6nm,0.8s,baz=83,slow=9.6,SNR=3.9						
	0.6nm,0.8s						
ILAR	Eielson Array	51.23	32	P	P	15 16 17.0	-9.3
	0.3nm,1.1s,baz=265,slow=7.2,SNR=2.4						
	0.3nm,1.1s						
WRA	Warramunga Arr	55.50	187	P	P	15 16 57.0	-1.0
	0.3nm,0.5s,baz=1.4,slow=7.5,SNR=5.9						
	0.3nm,0.5s						
ASAR	Alice Springs	59.23	187	P	P	15 17 23.2	-1.1
	0.3nm,0.8s,baz=19,slow=12,SNR=2.8						
	0.3nm,0.8s						

IDC 01 15:20:55.6±8.8,31°.99S×179°.93W,h285km±96km, mb3.2/2,mbtmp3.9/3,Error ellipse: s-maj=97.5km s-min=46.6km az=1.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.71	200	P	Pn	15 22 34.3	+1.3
	9.2nm,0.9s,baz=301,slow=24,SNR=7.7						
URZ				S	S	15 23 50.2	-1.3
	4.9nm,0.3s,baz=301,slow=24,SNR=7.6						
ASAR	Alice Springs	41.41	270	P	P	15 28 14.9	+0.1
	0.7nm,0.6s,baz=105,slow=7.3,SNR=19						
	0.7nm,0.6s						
WRA	Warramunga Arr	42.54	275	P	P	15 28 23.8	-0.2
	1.2nm,0.5s,baz=112,slow=7.7,SNR=22						
	1.2nm,0.5s						
FINES	FINESS Array B	146.03	338	PKPbc	PKPdf	15 40 00.2	+0.3
	1.2nm,0.7s,baz=52,slow=2.5,SNR=3.8						

IDC 01 15:26:17.3±6.4,31°.56N×50°.98E,h0km,mb3.5/4, mbtmp3.5/5,ML3.4/1,MS3.0/5,Error ellipse: s-maj=128.2km s-min=47.8km az=112.0
TEH 01 15:26:18.1,31°.55N×50°.87E,h8km,ML3.3
DSN 01 15:26:23.9±2.0,31°.01N×50°.82E,h10km,ML3.3/5,Error ellipse: s-maj=27.1km s-min=11.1km az=18.0
ISC 01 15:26:20.1±0.7,31°.52N±0°.03×50°.84E±0°.04,h19km,n58, σ2s.23/57,mb3.5/4,MS3.1/5,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	Brojen	0.52	42	*e*Pg	Pg	15 26 27.7	-3.1
SHK1	Shahrekord	0.81	2	*e*Pg	Pb	15 26 32.9	-2.7
SHK1				*e*Sg	Sb	15 26 45.2	-1.0
KLNJ	Kolanjah	0.82	128	*e*Pg	Pb	15 26 33.8	-2.1
KLNJ				*e*		15 26 53.9	
	comp=Z,30μm,0.4s						
ABEH	Behbahan	1.05	209	*e*Pg	Pb	15 26 39.4	-0.2
IPIR	Pirpir	1.16	2	*e*Pg	Pn	15 26 39.8	-1.8
IPIR				*e*		15 27 10.0	
	comp=Z,4μm,0.6s						
AMIS	Naft Sefid	1.34	277	*e*Pg	Pn	15 26 43.8	0.0
AMIS				*e*Sg	Sg	15 27 04.3	+0.9
IRAM	Ramesheh	1.34	77	*e*Pg	Pn	15 26 43.9	-0.1
IRAM				*e*		15 27 10.9	
	comp=Z,5μm,0.4s						
IGAR	Gharneh	1.35	49	*e*Pg	Pn	15 26 42.9	-1.2
IGAR				*e*		15 27 09.9	
	comp=Z,5μm,0.4s						
IZEF	Zefreh	1.86	42	*e*Pn	Pb	15 26 52.7	-1.0
IZEF				*e*		15 27 35.7	
	comp=Z,2μm,0.6s						
AHWZ	Ahwaz	1.89	265	*e*Sg	Sg	15 27 22.6	+1.6
IKLH	Kolahrood	1.90	19	*e*Pn	Pb	15 26 53.4	-0.9
IKLH				*e*		15 27 22.8	
	comp=Z,2μm,0.5s						
NASN	Na'in	2.10	52	*e*Pn	Pb	15 26 57.3	-0.4
QAMS	Qamsar	2.26	12	*e*	Sg	15 27 37.2	+4.3
	comp=Z,3μm,0.4s						
KHMZ	Khomeyn	2.33	342	*e*Pn	Pb	15 27 00.6	-1.1
ISAD	Sadrabad	2.45	80	*e*Pn	Pb	15 27 02.1	-1.7
ISAD				*e*		15 27 52.4	
	comp=Z,2μm,0.9s						
KRSH	Karshahi	2.67	24	*e*Pn	Pn	15 27 04.5	+2.2
KRSH				*e*		15 27 53.7	
	comp=Z,1μm,0.5s						
AHBU	AHRAM	2.68	171	*e*Pn	Pn	15 27 04.1	+1.9
AHBU				*e*		15 27 54.7	
	comp=Z,99nm,0.8s						
GHVR	GHOM	2.98	7	*e*Pn	Pb	15 27 09.5	-3.0
ISFB	Sefidab	3.06	22	*e*Pn	Pn	15 27 09.5	+2.0
ASAO	Ashtian	3.10	347	*e*Pn	Pn	15 27 11.3	+3.1
IDOB	Doab	3.19	316	*e*Pn	Pn	15 27 10.6	+1.2
IMEH	Mehriz	3.22	91	*e*Pn	Pn	15 27 13.0	+3.1
IMEH				*e*		15 28 22.5	
	comp=Z,483nm,0.8s						
IKFM	Kafar-mosalman	3.23	309	*e*Pn	Pn	15 27 11.3	+1.6
HSAM	Samen	3.28	325	*e*Pn	Pn	15 27 12.8	+2.1
YZKH	Yazd	3.30	74	*e*Pn	Pn	15 27 14.1	+3.3
HAGD	Aghdareh	3.59	337	*e*Pn	Pn	15 27 16.1	+1.2
HAGD				*e*		15 28 28.7	
	comp=Z,1μm,0.8s						
IKOM	Komasi	3.86	314	*e*Pn	Pn	15 27 20.1	+1.6
IBZA	Bozab	3.86	320	*e*Pn	Pn	15 27 20.0	+1.3
IRAZ	Razeghan	3.95	349	*e*Pn	Pn	15 27 21.5	+1.7
IBAF	Bafgh	4.03	88	*e*Pn	Pn	15 27 24.2	+3.2
IDMV	Damavand	4.17	13	*e*Pn	Pn	15 27 24.5	+1.6
DAMV	Damavand	4.21	13	*e*Pn	Pn	15 27 27.2	+3.8
CHTH	Charan	4.38	3	*e*Pn	Pn	15 27 29.3	+3.5
SNGE	Sanandaj	4.61	322	*e*Pn	Pn	15 27 32.1	+3.1
IDHR	Dehrash	4.90	311	*e*Pn	Pn	15 27 34.2	+1.2
KRBR	Kerman	5.32	105	*e*Pn	Pn	15 27 41.2	+2.4
TABS	Tabas	5.71	67	*e*Pn	Pn	15 27 47.1	+3.2
SHRO	Shahrood	6.19	43	*e*Pn	Pn	15 27 54.3	+3.7
BSRN	Basiran	7.07	84	*e*Pn	Pn	15 28 06.0	+3.3
BANOM	Banah	7.35	138	P	Pn	15 28 07.7	+1.2
BANOM				S	Sn	15 29 27.5	-1.9
MRVT	Maraveh tapeh	7.50	34	*e*Pn	Pn	15 28 11.7	+3.3
MSFE	Esma-Masafi	7.72	141	P	Pn	15 28 10.8	-0.7
MDH	Madha	7.84	141	P	Pn	15 28 11.0	-2.1
UOSS	Minazif	8.08	143	P	Pn	15 28 17.4	+1.0
HATD	Hatta, Dubai	8.14	144	P	Pn	15 28 18.1	+0.9
BJRD	Bojnurd	8.20	39	*e*Pn	Pn	15 28 21.6	+3.4
ASHO	Ashiyiah	8.22	145	P	Pn	15 28 16.8	-1.6
ASHO				S	Sn	15 29 47.9	-2.9
RAYN	Ar Rayn	9.27	212	P	Pn	15 28 31.9	-0.9
BRTR	Keskin Array B	16.19	305	Pn	P	15 30 10.7	+0.9
	comp=Z,0.2nm,0.3s,baz=115,slow=9.6,SNR=3.0						
	comp=Z,1.0nm,0.7s						
AKTO	Aktyubinsk	19.64	14	LR	LR	15 39 53.1	
	comp=Z,31nm,20.1s,baz=139,slow=42						
IDI	Anoyia	21.97	287	LR	LR	15 42 24.6	
	comp=Z,32nm,19.0s,baz=324,slow=44						
AKASG	Malin Array Be	24.99	326	P	P	15 31 42.1	-0.4
	comp=Z,0.2nm,0.4s,baz=137,slow=8.9,SNR=2.0						
	comp=Z,0.2nm,0.4s						
FINES	FINESS Array B	34.02	339	P	P	15 33 04.2	+1.8
	comp=Z,1.5nm,0.9s,baz=145,slow=10.0,SNR=1.9						
	comp=Z,1.5nm,0.9s						
HFS	Hagfors	37.71	330	LR	LR	15 50 19.1	
	comp=Z,40nm,18.5s,baz=114,slow=38						
NOA	NORSAR Array B	39.23	331	P	P	15 33 45.9	-1.1
	comp=Z,0.4nm,0.7s,baz=121,slow=8.2,SNR=3.2						
NOA				LR	LR	15 50 50.6	
	comp=Z,13nm,19.0s,baz=315,slow=38						
	comp=Z,0.4nm,0.7s						
TORD	Torodi Ar. Bea	48.57	259	P	P	15 35 03.6	+1.1
	comp=Z,0.5nm,0.7s,baz=52,slow=9.2,SNR=2.9						
	comp=Z,0.5nm,0.7s						
BORG	Borgarnes	54.40	330	LR	LR	16 02 30.6	
	comp=Z,17nm,18.8s,baz=183,slow=40						
JOW	Kunigami	66.44	72	LR	LR	16 06 57.5	
	comp=Z,178nm,20.3s,baz=1.5,slow=37						

IDC 01 15:34:35.7±2.2,4°.87S×35°.74E,h0km,mb3.6/2, mbtmp3.5/3,ML2.9/1,Error ellipse: s-maj=60.3km s-min=19.9km az=115.0,Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	4.01	22	Pn	Pn	15 35 38.0	-0.7
	0.9nm,0.3s,baz=198,slow=18,SNR=6.1						
KMBO				Sn	Sn	15 36 26.9	+0.4
	0.6nm,0.3s,baz=210,slow=8.9,SNR=1.6						
KMBO				Lg	Lg	15 36 44.2	
	2.3nm,0.3s,baz=92,slow=23,SNR=8.5						
	2.0nm,0.3s						
BOSA	Boshof	25.63	202	P	P	15 40 07.3	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.1nm,0.6s,baz=344,slow=18,SNR=1.6						
	1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**38.26**	**298**	P	P	15 41 57.9	-0.1
	0.2nm,0.4s,baz=123,slow=7.2,SNR=2.4						
	0.2nm,0.4s						

IDC 01 15:36:44.0±3.0**,14°.20S**×**167°.48E,h0**km**,mb3.7**/5**,**
mbtmp3.6/5**,MS3.0**/1**,Error ellipse: s-maj=120.2km**
s-min=32.1km az=134.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.77**	**302**	LR	LR	15 41 47.2	
	comp=Z,82nm,18.8s,baz=344,slow=35						
STKA	**Stephens Creek**	**29.50**	**229**	P	P	15 42 50.8	+0.7
	0.7nm,0.5s,baz=54,slow=12,SNR=3.0						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**32.16**	**255**	P	P	15 43 13.3	-0.5
	0.3nm,0.8s,baz=86,slow=9.2,SNR=2.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**33.06**	**248**	P	P	15 43 21.1	-0.6
	0.2nm,0.3s,baz=79,slow=9.4,SNR=10						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**85.96**	**18**	P	P	15 49 25.2	-0.6
	0.3nm,0.6s,baz=236,slow=6.0,SNR=4.2						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**96.97**	**316**	P	P	15 50 18.7	+1.1
	0.3nm,0.7s,baz=87,slow=5.9,SNR=2.8						
	0.3nm,0.7s						

*ARE **01** 15:43:35±4.1, 9°.49S±0°.08×78°.9W±0°.1, h45km±7km, Error ellipse: s-maj=0.0km s-min=0.0km az=154.0*
*NEIC **01** 15:43:37.2±1.4, 9°.92S±0°.08×78°.58W±0°.08, h58km±9km, mb4.3/22, ML4.4(ARE), Error ellipse: s-maj=15.6km s-min=2.7km az=223.0*
*IDC **01** 15:43:37.2±0.8, 9°.94S×78°.66W, h63km±7km, mb3.5/6, mbtmp3.9/9, MS2.8/6, Error ellipse: s-maj=19.7km s-min=7.2km az=68.0*
ISC 01 15:43:36.8±0.6**,9°.89S**±0°.07×**78°.54W**±0°.10**,h55**km**,n58,**
σ1.s17/51**,mb4.2**/13**,MS2.9**/3**,Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.67**	**141**	P	**Pn**	**15 44 19.2**	**+1.8**
	64nm,0.3s,baz=315,slow=9.6,SNR=58						
NNA				S	**Sn**	**15 44 50.8**	**+2.2**
	216nm,0.3s,baz=306,slow=15,SNR=14						
NNA				LR	LR	15 45 38.9	
	comp=Z,93nm,19.1s,baz=332,slow=45						
NNA	**Nana**	**2.67**	**141**		**Pn**	**15 44 18.4**	**+1.0**
ATAH	**Atahualpa**	**2.74**	**3**	P	**Pn**	**15 44 21.1**	**+2.4**
	112nm,0.3s,baz=171,slow=4.2,SNR=209						
ATAH				S	**Sn**	**15 44 53.6**	**+2.7**
	183nm,0.4s,baz=126,slow=19,SNR=19						
ATAH				LR	LR	15 45 36.1	
	comp=Z,41nm,21.2s,baz=209,slow=42						
CZSB	**Cruzeiro do Su**	**6.16**	**70**	Pn	**Pn**	**15 45 06.5**	**+1.3**
BOSC	**San Juan Bosco**	**6.70**	**0**	Pn	**Pn**	**15 45 11.2**	**-1.6**
PORT	**Chimborazo Vol**	**8.38**	**358**	Pn	**Pn**	**15 45 35.4**	**-0.8**
SLOR	**San Lorenzo -**	**9.10**	**0**	Pn	**Pn**	**15 45 47.2**	**+1.2**
LPAZ	**La Paz**	**11.97**	**123**	P	**Pn**	**15 46 27.5**	**+2.2**
	0.7nm,0.4s,baz=293,slow=7.7,SNR=2.2						
ETMB	**Extrema**	**12.15**	**91**		**Pn**	**15 46 25.3**	**-1.9**
PB11	**IPOC Station P**	**13.04**	**140**	Pn	**Pn**	**15 46 37.7**	**-1.7**
PATCX	**Punta Patache**	**13.54**	**144**	Pn	**Pn**	**15 46 45.7**	**-0.5**
PB09	**IPOC Station P**	**14.83**	**144**	Pn	**Pn**	**15 47 03.5**	**0.0**
PAYG	**Puerto Ayora**	**14.84**	**307**	P	**P**	**15 47 09.0**	**+0.9**
SAML	**Samuel**	**15.18**	**88**	Pn	**Pn**	**15 47 08.4**	**+0.5**
LVC	**Limon Verde**	**15.65**	**145**	LR	LR	15 52 26.3	
	comp=Z,29nm,21.7s,baz=307,slow=34						
PB14	**IPOC Station P**	**16.58**	**153**	P	**P**	**15 47 26.8**	**-0.8**
PB14				IAmb	IAmb	15 48 01.9	
	comp=Z,22nm,0.7s						
MACA	**Manacapuru-AM**	**18.95**	**71**	P	**P**	**15 47 52.6**	**-1.0**
MACA				IAmb	IAmb	15 48 36.3	
	comp=Z,15nm,0.6s						
PTLB	**Pontes e Lacer**	**19.71**	**108**	P	**P**	**15 48 01.7**	**-0.2**
PTLB				IAmb	IAmb	15 48 04.0	
	comp=Z,14nm,0.9s						
SDV	**Santo Domingo**	**20.25**	**23**	LR	LR	15 57 51.4	
	comp=Z,37nm,19.9s,baz=270,slow=42						
BAUV	**El Baul**	**21.43**	**30**	P	**P**	**15 48 18.8**	**-1.7**
H03N2	**Juan Fernandez**	**23.44**	**181**	T	T	16 12 45.0	
	baz=0.6,slow=75,SNR=150						
H03N1	**Juan Fernandez**	**23.44**	**181**	T	T	16 12 46.8	
	baz=0.6,slow=75,SNR=192						
H03N3	**Juan Fernandez**	**23.45**	**181**	T	T	16 12 44.6	
	baz=0.6,slow=75,SNR=190						
BIRV	**Birongo**	**23.63**	**31**	P	**P**	**15 48 43.1**	**-0.1**
BIRV				IAmb	IAmb	15 48 56.3	
	comp=Z,8.3nm,0.9s						
CPUP	**Villa Florida**	**25.89**	**132**	LR	LR	16 00 30.7	
	comp=Z,44nm,18.9s,baz=218,slow=39						
MDP	**Montagnes des**	**29.79**	**61**	LR	LR	16 01 27.9	
	comp=Z,29nm,18.3s,baz=356,slow=36						
TX31	**Lajitas Ar. Si**	**45.91**	**329**	P	**P**	**15 51 54.0**	**-0.3**
TX31				IAmb	IAmb	15 52 02.8	
	comp=Z,3.4nm,1.2s						
TX32	**Lajitas Array**	**45.91**	**329**	P	**P**	**15 51 53.9**	**-0.4**
TXAR	**Lajitas Array**	**45.91**	**329**	P	**P**	**15 51 53.6**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=145,slow=9.0,SNR=7.6						
	comp=Z,0.6nm,0.8s						
U49A	**Red Boiling Sp**	**46.66**	**352**	P	**P**	**15 52 00.6**	**+0.8**
P49A	**Miami Univ. Ec**	**49.51**	**354**	P	**P**	**15 52 21.0**	**-0.9**
LENM	**Lemitar**	**51.46**	**330**	P	**P**	**15 52 36.4**	**-0.6**
ANMO	**Albuquerque**	**51.84**	**331**	P	**P**	**15 52 39.6**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=158,slow=9.1,SNR=4.7						
	comp=Z,1.6nm,0.6s						
ANMO	**Albuquerque**	**51.84**	**331**	P	**P**	**15 52 39.4**	**-0.3**
ANMO				IAmb	IAmb	15 52 40.1	
	comp=Z,1.8nm,0.6s						
SDCO	**Great Sand Dun**	**53.69**	**334**	P	**P**	**15 52 52.4**	**-1.0**
PV15	**Paradox Valley**	**55.53**	**332**	P	**P**	**15 53 06.5**	**-0.3**
PV13	**Radium Mtn., P**	**55.54**	**331**	P	**P**	**15 53 05.9**	**-1.0**
PV13				IAmb	IAmb	15 53 07.2	
	comp=Z,3.6nm,0.9s						
PV07	**Paradox Valley**	**55.69**	**332**	P	**P**	**15 53 06.8**	**-1.0**
PV07				IAmb	IAmb	15 53 08.2	
	comp=Z,2.8nm,0.9s						
PFO	**Pinyon Flats O**	**56.31**	**322**	P	**P**	**15 53 11.5**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=132,slow=12,SNR=1.8						
	comp=Z,1.0nm,0.6s						
DUG	**Dugway, Tooele**	**59.07**	**330**	P	**P**	**15 53 31.0**	**-0.6**
DUG				IAmb	IAmb	15 53 32.2	
	comp=Z,2.0nm,0.8s						
R11A	**Troy Canyon, C**	**59.14**	**327**	P	**P**	**15 53 31.5**	**-0.7**
HWUT	**Hardware Ranch**	**59.56**	**332**	P	**P**	**15 53 34.2**	**-0.7**
PDAR	**Pinedale Array**	**59.58**	**334**	P	**P**	**15 53 33.9**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=140,slow=3.4,SNR=2.0						
	comp=Z,0.2nm,0.4s						
LHV	**Little Huntoon**	**60.70**	**325**	P	**P**	**15 53 41.9**	**-0.7**
LHV				IAmb	IAmb	15 53 43.2	
	comp=Z,1.7nm,0.7s						
ELK	**Elko**	**60.71**	**329**	P	**P**	**15 53 41.9**	**-1.1**
NVAR	**Mina Array Bea**	**60.71**	**325**	P	**P**	**15 53 42.6**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=141,slow=5.8,SNR=8.3						
NVAR				pP	**pP**	**15 53 58.9**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=132,slow=6.4,SNR=2.3						
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**60.71**	**325**	P	**P**	**15 53 41.6**	**-1.3**
YHL	**Hebgen Lake**	**61.95**	**334**	P	**P**	**15 53 51.0**	**-0.3**
YHL				IAmb	IAmb	15 53 51.7	
	comp=Z,1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**82.87**	**75**	P	**P**	**15 55 55.3**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=258,slow=5.0,SNR=4.6						
TORD				pP	**pP**	**15 56 12.5**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=274,slow=4.2,SNR=2.3						
	comp=Z,1.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.87**	**75**	P	**P**	**15 55 55.5**	**-0.7**
TORD				IAmb	IAmb	15 55 56.5	
	comp=Z,3.2nm,1.2s						
H11N3	**WAKE ISLAND Hy**	**16.29**	**287**	T	T	18 08 46.3	
	baz=93,slow=74,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**16.30**	**287**	T	T	18 08 47.4	
	baz=93,slow=74,SNR=9.9						
H11N1	**WAKE ISLAND Hy**	**16.31**	**287**	T	T	18 08 48.2	
	baz=93,slow=74,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**16.44**	**286**	T	T	18 08 56.3	
	baz=92,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**16.45**	**286**	T	T	18 09 00.6	
	baz=92,slow=75,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**16.46**	**286**	T	T	18 09 03.3	
	baz=92,slow=75,SNR=7.5						
ASAR	**Alice Springs**	**133.97**	**223**	PKP	**PKPdf**	**16 02 47.6**	**-1.2**
	comp=Z,0.5nm,1.1s,baz=120,slow=1.5,SNR=1.7						
ASAR				pPKP	**pPKPdf**	**16 03 06.3**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=129,slow=1.7,SNR=1.4						
WRA	**Warramunga Arr**	**136.10**	**227**	PKP	**PKPdf**	**16 02 52.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=125,slow=1.8,SNR=2.8						
WRA				pPKP	**pPKPdf**	**16 03 10.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=120,slow=2.0,SNR=2.7						

*IDC **01** 15:49:05.9±5.0, 11°.86S×166°.50E, h170km±46km, mb3.4/9, mbtmp3.9/10, Error ellipse: s-maj=34.4km s-min=27.0km az=135.0*
*NEIC **01** 15:49:06.5±1.5, 11°.9S±0°.1×166°.6E±0°.2, h179km±9km, mb4.5/18, Error ellipse: s-maj=25.9km s-min=16.4km az=87.0*
ISC 01 15:49:06.5±0.8**,11°.90S**±0°.07×**166°.6E**±0°.2**,h179**km**,n35,**
σ0.s93/35**,mb4.2**/18**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**8.88**	**194**	Pn	**Pn**	**15 51 11.4**	**+0.1**
DZM	**Mont Dzumac**	**10.12**	**181**	P	**Pn**	**15 51 28.5**	**+0.8**
	5.7nm,0.7s,baz=356,slow=19,SNR=9.0						
DZM				S	**Sn**	**15 53 18.3**	**-2.0**
	8.4nm,1.0s,baz=307,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**10.12**	**181**	Pn	**Pn**	**15 51 26.8**	**-0.9**
EIDS	**Eidsvold**	**19.84**	**225**	P	**P**	**15 53 25.3**	**+1.5**
EIDS				IAmb	IAmb	15 53 30.1	
	comp=Z,14nm,1.4s						
LHI	**Lord Howe Isla**	**20.72**	**198**	P	**P**	**15 53 32.9**	**-0.1**
BFZ	**Birch Farm**	**29.91**	**165**	P	**P**	**15 54 57.2**	**-0.3**
H11S2	**WAKE ISLAND Hy**	**30.20**	**0**	T	T	16 25 44.7	
	baz=178						
H11S3	**WAKE ISLAND Hy**	**30.20**	**0**	T	T	16 25 45.5	
	baz=178						
H11S1	**WAKE ISLAND Hy**	**30.22**	**0**	T	T	16 25 53.4	
	baz=178						
STKA	**Stephens Creek**	**30.40**	**225**	P	**P**	**15 55 02.5**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=45,slow=14,SNR=1.5						
	comp=Z,1.5nm,0.7s						
LTZ	**Lake Taylor**	**31.16**	**172**	P	**P**	**15 55 09.4**	**+0.8**
LTZ				IAmb	IAmb	15 55 19.7	
	comp=Z,39nm,1.3s						
WR0	**Warramunga Arr**	**31.78**	**251**	P	**P**	**15 55 12.7**	**-1.6**
WR0				IAmb	IAmb	15 55 35.9	
	comp=Z,7.7nm,1.5s						
TOO	**Toolangi**	**31.78**	**213**	P	**P**	**15 55 15.2**	**+1.2**
TOO				IAmb	IAmb	15 55 42.5	
	comp=Z,31nm,1.5s						
WB0	**Warramunga Arr**	**31.88**	**252**	P	**P**	**15 55 14.1**	**-1.1**
WB0				IAmb	IAmb	15 55 49.2	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**31.96**	**251**	P	**P**	**15 55 14.6**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=84,slow=9.2,SNR=2.1						
WRA				PcP	**PcP**	**15 58 02.5**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=72,slow=3.0,SNR=3.3						
	comp=Z,0.3nm,0.5s						
AS31	**Alice Springs**	**33.15**	**245**	P	**P**	**15 55 25.0**	**-1.2**
ASAR	**Alice Springs**	**33.15**	**245**	P	**P**	**15 55 25.1**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=68,slow=10,SNR=9.9						
ASAR				PcP	**PcP**	**15 58 05.2**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=66,slow=2.5,SNR=9.8						
	comp=Z,0.5nm,0.7s						
BBOO	**Buckleboo**	**34.85**	**228**	P	**P**	**15 55 40.5**	**-0.2**
KNRA	**Kununurra**	**36.88**	**260**	P	**P**	**15 55 56.4**	**-1.7**
KNRA				IAmb	IAmb	15 56 10.6	
	comp=Z,8.9nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.95**	**256**	P	**P**	**15 56 23.5**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=68,slow=5.4,SNR=1.6						
	comp=Z,1.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.95**	**256**	P	**P**	**15 56 23.4**	**-0.3**
FORT	**Forrest**	**40.23**	**236**	P	**P**	**15 56 25.6**	**-0.3**
JMN	**Monobe**	**55.02**	**327**	P	**P**	**15 58 19.4**	**-0.2**
JMN				IAmb	IAmb	15 58 45.5	
	comp=Z,11nm,1.1s						
JSU	**Suzuyama**	**55.33**	**322**	P	**P**	**15 58 21.4**	**-0.5**
JSU				IAmb	IAmb	15 58 53.4	
	comp=Z,11nm,1.2s						
JHS	**Saijyo**	**56.40**	**327**	P	**P**	**15 58 27.7**	**-1.7**
JHS				IAmb	IAmb	15 58 59.6	
	comp=Z,12nm,1.5s						
KSRS	**Korea Array**	**61.03**	**325**	P	**P**	**15 59 01.3**	**0.0**
	comp=Z,0.6nm,0.8s,baz=135,slow=7.7,SNR=4.1						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**65.66**	**181**	P	**P**	**15 59 31.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**73.19**	**294**	P	**P**	**16 00 19.4**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=125,slow=4.4,SNR=6.8						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**78.11**	**180**	P	**P**	**16 00 46.0**	**+0.4**
QSPA				IAmb	IAmb	16 00 47.1	
	comp=Z,5.8nm,0.9s						
SONM	**Songino Array**	**79.83**	**324**	P	**P**	**16 00 55.5**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=123,slow=5.3,SNR=4.2						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**84.06**	**18**	P	**P**	**16 01 16.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=224,slow=5.9,SNR=3.0						
	comp=Z,0.3nm,0.5s						
J25K	**Salcha River,**	**84.43**	**19**	P	**P**	**16 01 18.1**	**-0.5**
MKAR	**Makanchi Array**	**94.69**	**317**	P	**P**	**16 02 07.2**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=88,slow=6.1,SNR=24						
	comp=Z,1.6nm,0.5s						
ARCES	**ARCESS Array B**	**117.36**	**346**	PKP	**PKPdf**	**16 07 30.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=62,slow=4.2,SNR=11						
FINES	**FINESS Array B**	**122.86**	**339**	PKP	**PKPdf**	**16 07 40.9**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=64,slow=3.2,SNR=5.7						

*FUNV **01** 15:49:35.5, 8°.46N×71°.50W, h5km, MW3.3*
ISC 01 15:49:37.1±1.2**,8°.42N**±0°.04×**71°.40W**±0°.03**,h24**km±14km**,**
n17,σ1.s49/31**,1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.55**	**104**	*e*P	**Pb**	**15 49 47.5**	**-0.7**
SOCV				*e*S	**Sb**	**15 49 55.9**	**+0.2**
SOCV	**Socops**	**0.55**	**104**⇓	*i*P	**Pb**	**15 49 47.4**	**-0.8**
SOCV				*e*S	**Sb**	**15 49 55.8**	**+0.2**
CAPV	**Capacho**	**1.06**	**239**	*e*P	**Pn**	**15 49 54.4**	**-2.3**
CAPV				*e*S	**Sn**	**15 50 08.2**	**-2.6**
PAMC	**Pamplona, Colo**	**1.68**	**230**	*e*P	**Pb**	**15 50 07.3**	**-0.2**
PAMC				*e*S	**Sb**	**15 50 29.4**	**+0.9**
PAMC				*i*		15 50 32.6	
	comp=Z,92nm,0.4s						
TAMC	**Tame, Arauca**	**2.00**	**191**	*e*P	**Pb**	**15 50 11.5**	**-1.4**
TAMC				*e*S	**Sb**	**15 50 41.5**	**+4.0**
TAMC				*i*		15 50 42.8	
	comp=Z,52nm,0.2s						
BARC	**Barichara**	**2.53**	**224**	*e*P	**Pb**	**15 50 22.3**	**+0.2**
BARC				*e*S	**Sb**	**15 50 55.3**	**+2.4**
BARC				*i*		15 50 57.9	
	comp=Z,83nm,0.5s						
DABV	**Dabajuro**	**2.60**	**17**	*e*P	**Pb**	**15 50 22.4**	**-0.7**
DABV				*e*S	**Sn**	**15 50 49.4**	**+0.8**
DABV	**Dabajuro**	**2.60**	**17**	*e*P	**Pn**	**15 50 17.3**	**-0.5**
DABV				*e*S	**Sn**	**15 50 48.2**	**-0.4**
BRRC	**Barranca, Sant**	**2.64**	**241**	*e*P	Pb	15 50 25.5	+1.8
BRRC				*e*S	**Sb**	**15 50 57.3**	**+1.6**
BRRC				*i*		15 51 01.8	
	comp=Z,24nm,0.7s						
SIQV	**Siquisique**	**2.72**	**35**	*e*P	**Pn**	**15 50 20.4**	**+1.0**
SIQV				*e*S	**Sn**	**15 50 51.8**	**+0.3**
MAPV	**Macapo**	**3.23**	**64**	*e*P	**Pn**	**15 50 26.9**	**+0.6**
MAPV				*e*S	**Sn**	**15 51 05.2**	**+1.1**
BAUV	**El Baul**	**3.36**	**81**	*e*P	**Pn**	**15 50 29.3**	**+1.2**
BAUV				*e*S	**Sn**	**15 51 08.2**	**+0.9**
ZARC	**Zaragoza, Cauc**	**3.55**	**255**	*e*P	Pb	15 50 33.0	-6.3
ZARC				*e*S	**Sb**	**15 51 22.8**	**+0.8**
ZARC				*i*		15 51 28.1	
	comp=Z,16nm,0.3s						
BENV	**Beln**	**4.05**	**67**	*e*P	**Pn**	**15 50 37.9**	**+0.1**
BENV				*e*S	**Sn**	**15 51 24.9**	**+0.4**
PAYV	**Puerto Ayacuch**	**4.76**	**128**	*e*P	**Pn**	**15 50 48.3**	**+0.9**
PAYV				*e*S	**Sn**	**15 51 41.7**	**-0.2**
CACV	**CAICARA DEL OR**	**4.88**	**100**	*e*P	Pb	15 50 56.9	-5.1
CACV				*e*S	**Sb**	**15 51 57.0**	**-3.4**
MERV	**Las Mercedes**	**5.11**	**80**	*e*P	**Pn**	**15 50 52.5**	**+0.3**
MERV				*e*S	**Sn**	**15 51 49.7**	**-0.8**

*IDC **01** 15:57:52.1±2.8, 18°.73N×145°.64E, h173km±26km, mb3.1/7, mbtmp3.6/8, MS3.4/1, Error ellipse: s-maj=33.9km s-min=17.7km az=95.0*
*NEIC **01** 15:57:53.6±1.9, 18°.5N±0°.1×145°.7E±0°.3, h194km±9km, mb4.1/3, Error ellipse: s-maj=45.3km s-min=20.1km az=98.0*
ISC 01 15:57:54.5±0.8**,18°.58N**±0°.09×**145°.6E**±0°.2**,h200**km**,n16,**
σ1.s19/17**,mb3.4**/10**,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.01**	**188**	P	**Pn**	**15 59 06.9**	**-2.2**
	6.3nm,0.3s,baz=215,slow=23,SNR=1.8						
GUMO				S	**Sn**	**16 00 08.9**	**+1.0**
	8.2nm,0.3s,baz=32,slow=22,SNR=1.8						
WB0	**Warramunga Arr**	**39.66**	**197**	P	**P**	**16 05 06.7**	**-0.5**
WB0				IAmb	IAmb	16 05 43.5	
	comp=Z,7.9nm,1.3s						
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**16 05 10.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=12,slow=8.1,SNR=7.3						
WRA				PcP	**PcP**	**16 07 10.5**	**0.0**
	comp=Z,0.2nm,0.5s,baz=17,slow=3.3,SNR=1.8						
	comp=Z,0.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.38**	**209**	P	**P**	**16 05 22.9**	**+1.7**
	baz=29,slow=9.5						
FITZ	**Fitzroy Crossi**	**41.38**	**209**	P	**P**	**16 05 22.6**	**+1.3**
FITZ				IAmb	IAmb	16 05 24.3	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**43.17**	**322**	LR	LR	16 23 17.6	
	comp=Z,41nm,18.6s,baz=224,slow=35						
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**16 05 39.9**	**+1.5**
	comp=Z,0.2nm,0.8s,baz=12,slow=6.5,SNR=6.0						
	comp=Z,0.2nm,0.8s						
MKAR	**Makanchi Array**	**58.46**	**314**	P	**P**	**16 07 30.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=97,slow=6.4,SNR=4.5						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.46**	**314**	P	**P**	**16 07 30.5**	**+0.9**
CAST	**Castle Rocks**	**61.25**	**27**	P	**P**	**16 07 48.5**	**+0.4**
CAST				IAmb	IAmb	16 07 49.5	
	comp=Z,1.4nm,1.0s						
KURBB	**Kurchatov Arra**	**61.33**	**318**	P	**P**	**16 07 49.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=93,slow=7.9,SNR=6.2						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**63.80**	**26**	P	**P**	**16 08 04.4**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=249,slow=5.9,SNR=2.3						
	comp=Z,0.2nm,0.6s						
ABKAR	**Akbulak array**	**73.35**	**317**	P	**P**	**16 09 03.9**	**-0.5**
NVAR	**Mina Array Bea**	**83.30**	**52**	P	**P**	**16 10 00.3**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=265,slow=4.5,SNR=3.8						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**86.94**	**335**	P	**P**	**16 10 15.2**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=73,slow=6.4,SNR=5.5						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**86.94**	**335**	P	**P**	**16 10 16.1**	**-0.6**

*IDC **01** 16:03:29.2±2.2, 9°.88N×122°.15E, h0km, mb3.2/4, mbtmp3.2/4, MS2.8/1, Error ellipse: s-maj=112.5km s-min=24.4km az=55.0*
ISC 01 16:03:30.2±1.4**,9°.98N**±0°.03×**122°.21E**±0°.05**,h10**km±10km**,**
n19,σ1.s11/28**,mb3.2**/4**,9C-4D,Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.45**	**110**⇑	*e*P	**Pn**	**16 03 41.4**	**-1.3**
GUIM	**Jordan**	**0.74**	**30**⇑	*e*P	**Pg**	**16 03 44.5**	**0.0**
GUIM				*e*S	**Sg**	**16 03 54.0**	**-0.2**
JAP	**San Jose, Anti**	**0.81**	**341**⇓	*i*P	**Pn**	**16 03 47.1**	**-0.5**
SNPH	**Sibulan**	**1.19**	**122**⇓	*i*P	**Pg**	**16 03 54.0**	**+0.9**
SNPH				*i* S	**Sn**	**16 04 10.3**	**+1.0**
TBP	**Tagbilaran**	**1.65**	**100**⇓	*i*P	**Pg**	**16 04 02.0**	**+0.1**
TBP				*i* S	**Sg**	**16 04 23.1**	**-0.3**
RCP	**Roxas**	**1.66**	**18**⇑	*e*P	**Pb**	**16 04 00.8**	**0.0**
RCP				*e*S	**Sg**	**16 04 23.8**	**+0.4**
KALP	**Kalibo**	**1.69**	**4**	*e*P	**Pg**	**16 04 02.7**	**+0.1**
LLP	**Lapu-Lapu**	**1.76**	**79**⇓	*i*P	**Pg**	**16 04 04.1**	**+0.2**
LLP				*i* S	**Sg**	**16 04 26.6**	**-0.2**
DCPH	**Dipolog City**	**1.79**	**141**⇑	*e*P	**Pg**	**16 04 03.8**	**-0.7**
DCPH				*e*S	**Sg**	**16 04 27.7**	**0.0**
PAGZ	**Pagadian**	**2.41**	**151**⇑	*e*P	**Pb**	**16 04 14.2**	**+0.4**
MSLP	**Maasin**	**2.61**	**86**⇑	*e*P	**Pb**	**16 04 14.8**	**-2.3**
MSLP				*e*S	**Sb**	**16 04 50.4**	**+1.1**
BUSP	**Coron**	**2.82**	**316**⇑	*e*P	**Pn**	**16 04 15.1**	**-0.2**
BUSP				*e*S	**Sn**	**16 04 46.2**	**-3.2**
BOAC	**Boac**	**3.48**	**354**⇑	*e*P	**Pn**	**16 04 26.2**	**+1.8**
BOAC				*e*S	**Sn**	**16 05 05.6**	**-0.1**
PGP	**Puerto Galera**	**3.71**	**341**⇑	*e*P	**Pn**	**16 04 28.5**	**+0.9**
PGP				*i* S	**Sn**	**16 05 10.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**24.06**	**293**	P	**P**	**16 08 46.3**	**+0.4**
	0.5nm,0.7s,baz=94,slow=8.2,SNR=1.6						
	0.5nm,0.7s						
JHJ	**Hachijo jima 2**	**28.15**	**32**	LR	LR	16 21 09.1	
	comp=Z,17nm,18.0s,baz=46,slow=38						
WRA	**Warramunga Arr**	**32.04**	**158**	P	**P**	**16 09 57.7**	**+0.4**
	0.2nm,0.6s,baz=336,slow=9.9,SNR=1.8						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**35.34**	**161**	P	**P**	**16 10 25.5**	**-0.5**
	0.3nm,0.7s,baz=339,slow=7.2,SNR=10						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**49.90**	**325**	P	**P**	**16 12 24.9**	**+0.9**
	0.3nm,0.8s,baz=116,slow=6.6,SNR=2.2						
	0.3nm,0.8s						

*IDC **01** 16:04:47.3±1.7, 28°.41N×130°.13E, h40km±17km, mb3.3/8, mbtmp3.7/11, ML3.0/2, MS2.5/2, Error ellipse: s-maj=20.6km s-min=9.3km az=117.0*
*JMA **01** 16:04:47.1±0.2, 28°N±1°×130°.3E±1°.0, h37km±1km, MV3.3/11, NEAR AMAMI-OSHIMA ISLAND*
ISC 01 16:04:47.0±0.8**,28°.36N**±0°.06×**130°.22E**±0°.07**,h35**km**,n21,**
σ1.s07/26**,mb3.5**/8**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.22**	**259**	*e*P	**Pn**	**16 04 54.5**	**+0.5**
JZK				*e*S	**Sn**	**16 04 59.5**	**+0.6**
JAM	**Amami Oshima**	**0.55**	**276**	*e*P	**Pn**	**16 04 58.7**	**+0.5**
JAM				*e*S	**Sn**	**16 05 07.4**	**+1.2**
JAMN	**Amaminishikomi**	**0.93**	**263**	*e*P	**Pn**	**16 05 04.2**	**+0.6**
JTAJ	**Takarajima**	**1.19**	**312**	*e*P	**Pn**	**16 05 07.3**	**+0.1**
JTK	**Tokunoshima**	**1.26**	**243**	*e*P	**Pn**	**16 05 09.2**	**+1.1**
JTK				*e*S	**Sn**	**16 05 24.9**	**+1.1**
JNN	**Nakanoshima**	**1.51**	**349**	*e*P	**Pn**	**16 05 12.2**	**+0.7**
JOKE	**Okinoerabujima**	**1.77**	**236**	*e*P	**Pn**	**16 05 16.4**	**+1.2**
JYAK	**Yakushimahirau**	**1.89**	**8**	*e*P	**Pn**	**16 05 17.6**	**+0.8**
JYAK				*e*S	**Sn**	**16 05 40.1**	**+0.7**
JOW	**Kunigami**	**2.30**	**229**	P	**Pn**	**16 05 23.1**	**+0.7**
	4.1nm,0.3s,baz=102,slow=22,SNR=44						
JOW				S	**Sn**	**16 05 49.6**	**0.0**
	45nm,0.4s,baz=318,slow=29,SNR=6.0						
	12nm,0.2s						
JNU	**Nakatsue**	**4.78**	**7**	P	**Pn**	**16 05 58.0**	**+1.4**
	1.3nm,0.3s,baz=1.7,slow=23,SNR=13						
JNU				S	**Sn**	**16 06 50.0**	**-0.8**
	12nm,0.5s,baz=278,slow=19,SNR=7.4						
	2.7nm,0.3s						
KSRS	**Korea Array**	**9.27**	**349**	P	**Pn**	**16 07 00.8**	**+2.6**
	0.6nm,0.8s,baz=164,slow=14,SNR=2.4						
KSRS				LR	LR	16 10 50.6	
	comp=Z,28nm,18.2s,baz=170,slow=40						
JHJ	**Hachijo jima 2**	**9.50**	**58**	LR	LR	16 10 13.8	
	comp=Z,32nm,19.7s,baz=16,slow=34						
JCJ	**Chichijima**	**10.68**	**94**	P	**Pn**	**16 07 17.6**	**+0.1**
	34nm,0.6s,baz=301,slow=22,SNR=6.7						
PETK	**Petropavlovsk-**	**31.96**	**32**	P	**P**	**16 11 09.0**	**-0.4**
	0.8nm,0.3s,baz=243,slow=7.3,SNR=1.8						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**41.49**	**310**	P	**P**	**16 12 28.5**	**-2.1**
	0.5nm,0.9s,baz=106,slow=8.5,SNR=3.9						
	0.5nm,0.9s						
ZALV	**Zalesovo Beam**	**41.68**	**321**	P	**P**	**16 12 30.5**	**-1.5**
	0.6nm,0.6s,baz=113,slow=9.6,SNR=2.1						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**44.58**	**315**	P	**P**	**16 12 54.3**	**-1.2**
	0.1nm,0.3s,baz=119,slow=9.7,SNR=2.8						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**48.18**	**175**	P	**P**	**16 13 23.9**	**-0.1**
	0.3nm,0.7s,baz=356,slow=8.2,SNR=2.0						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**51.84**	**176**	P	**P**	**16 13 52.0**	**+0.2**
	0.6nm,0.9s,baz=9.8,slow=12,SNR=6.2						
	0.6nm,0.9s						
ILAR	**Eielson Array**	**61.73**	**29**	P	**P**	**16 15 01.5**	**0.0**
	0.4nm,0.9s,baz=294,slow=6.5,SNR=2.8						
	0.4nm,0.9s						
FINES	**FINESS Array B**	**71.89**	**331**	P	**P**	**16 16 06.2**	**+0.1**
	0.8nm,0.7s,baz=62,slow=5.2,SNR=4.6						
	0.8nm,0.7s						

WEL 01 16:13:41.1±1.2, 34°S±10°×18°0E±2°3, h33km, M4.1/8, mB4.5/2, ML4.5/12, MLv4.1/8, Mw(mB)3.6/2, Error ellipse: s-maj=0.0km s-min=0.0km az=108.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.93	199	P	Pn	16 14 38.6	-0.4
WMGZ	Waiomatatini S	4.14	197	P	Pn	16 14 41.1	-0.9
WMGZ				S	Sn	16 15 32.9	+3.7
HAZ	Te Kaha	4.26	204	P	Pn	16 14 43.6	-0.1
HAZ				S	Sn	16 15 32.7	+0.4
PKGZ	Pakihiroa	4.29	200	P	Pn	16 14 43.7	-0.5
PKGZ				S	Sn	16 15 32.3	-0.8
PUZ	Puketiti	4.42	198	P	Pn	16 14 45.2	-0.6
PUZ				S	Sn	16 15 37.9	+1.8
TWGZ	Tauwhareparae	4.59	200	P	Pn	16 14 47.1	-1.1
TWGZ				S	Sn	16 15 42.8	+2.4
MWZ	Matawai	4.87	203	P	Pn	16 14 51.4	-0.6
TKGZ	Te Karaka	4.87	200	P	Pn	16 14 52.1	+0.1
TKGZ				S	Sn	16 15 49.3	+2.1
URZ	Urewera	4.95	207	P	Pn	16 14 52.7	-0.4
URZ				S	Sn	16 15 46.5	-2.7
MUGZ	Murupara	5.27	208	P	Pn	16 14 57.7	+0.2
MUGZ				S	Sn	16 15 56.6	-0.5
TOZ	Tahuroa Road	5.28	222	P	Pn	16 15 01.4	+3.7
MTHZ	Maungataniwha	5.57	206	P	Pn	16 15 01.1	-0.6
MTHZ				S	Sn	16 16 04.9	+0.3
BKZ	Black Stump Fm	5.98	207	P	Pn	16 15 06.2	-1.1
OTVZ	Oturere	6.31	212	P	Pn	16 15 14.0	+2.0

IDC 01 16:32:16.0±1.1, 2°.97S×122°.54E, h0km, mb3.3/6, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=30.6km s-min=19.4km az=87.0
DJA 01 16:32:20.0±1.2, 3°S±2°×12°2E±°, h16km±11km, M4.2/20, mb4.3/7, mB4.9/4, ML4.2/20, MLv4.0/20, Mw(mB)4.2/4
ISC 01 16:32:21.3±0.8, 2°.94S±0°.05×122°.44E±0°.05, h35km, n24, σ1s.19/27, mb3.7/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	1.92	10	P	Pn	16 32 51.6	+0.1
LUWI				S	Sn	16 33 16.4	+2.0
APSI	Ampana	2.17	339	P	Pn	16 32 54.7	-0.2
BBSI	Bau Bau	2.53	177	P	Pn	16 33 00.9	+1.0
TTSI	Tana Toraja	2.62	268	P	Pn	16 33 01.7	+0.6
BNSI	Bone	2.74	238	P	Pn	16 33 03.4	+0.6
SPSI	Sidrap Palu	2.85	249	P	Pn	16 33 04.4	+0.1
SPSI				S	Sn	16 33 38.7	+1.3
BKSI	Bulukumba	3.31	224	P	Pn	16 33 11.2	+0.6
KAPI	Kappang	3.38	232	Pn	Pn	16 33 12.5	+0.9
	5.8nm,0.3s,baz=31,slow=5.4,SNR=13						
KAPI				Sn	Sn	16 33 52.4	+1.9
	14nm,0.3s,baz=45,slow=19,SNR=6.1						
	17nm,0.3s						
MRSI	Marisa	3.43	352	P	Pn	16 33 12.5	+0.2
BSSI	Bau Bau, Buton	3.73	211	P	Pn	16 33 17.6	+1.2
KMSI	Cibinong	3.82	24	P	Pn	16 33 17.8	+0.2
MPSI	Mapaga	4.13	322	P	Pn	16 33 22.1	+0.2
NLAI	Namlea	4.67	94	P	Pn	16 33 30.7	+1.4
LBMI	Labuha	5.55	66	P	Pn	16 33 41.6	+0.1
	0.2nm0.1nm571nm23nm,0.6s						
EDFI	Ende, Flores	5.82	187	P	Pn	16 33 45.4	+0.2
	0.0nm0.1nm10nm,1.3s						
TNTI	Ternate	6.16	53	P	Pn	16 33 50.6	+0.8
	0.9nm0.4nm2µm36nm,0.6s						
MSAI	Masohi	6.49	94	P	Pn	16 33 56.1	+1.7
	0.2nm0.1nm275nm6.8nm,0.6s						
FITZ	Fitzroy Crossi	15.39	168	Pn	Pn	16 35 53.5	-2.3
	0.1nm,0.3s,baz=340,slow=12,SNR=1.4						
	1.0nm,0.7s						
WRA	Warramunga Arr	20.51	146	P	P	16 36 54.4	-2.1
	0.4nm,0.7s,baz=323,slow=11,SNR=2.8						
	0.4nm,0.7s						
ASAR	Alice Springs	23.40	153	P	P	16 37 25.9	-1.3
	0.1nm,0.4s,baz=333,slow=11,SNR=10						
	0.1nm,0.4s						
USRK	Ussuriysk Ar.	47.70	9	P	P	16 40 53.9	-0.7
	0.5nm,0.6s,baz=188,slow=6.1,SNR=4.6						
	0.5nm,0.6s						
SONM	Songino Array	52.48	346	P	P	16 41 30.6	-0.3
	0.2nm,0.4s,baz=160,slow=4.6,SNR=2.1						
	0.2nm,0.4s						
MKAR	Makanchi Array	60.83	330	P	P	16 42 29.9	-0.1
	0.4nm,0.6s,baz=127,slow=6.1,SNR=2.6						
	0.4nm,0.6s						
PETK	Petropavlovsk-	63.19	23	P	P	16 42 47.1	+1.3
	1.1nm,0.8s,baz=232,slow=1.7,SNR=4.7						
	1.1nm,0.8s						

NEIC 01 16:44:04.7±1.8, 18°.7N±0°.1×145°.5E±0°.2, h183km±1km, mb4.1/11, Error ellipse: s-maj=31.1km s-min=14.3km az=98.0
IDC 01 16:44:04.8±1.8, 18°.68N×145°.64E, h195km±18km, mb3.1/7, mbtmp3.8/10, Error ellipse: s-maj=28.1km s-min=13.0km az=93.0
ISC 01 16:44:05.5±0.6, 18°.67N±0°.06×145°.4E±0°.2, h200km, n30, σ1s.29/30, mb3.8/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.08	186	P	Pn	16 45 21.4	+0.4
	19nm,0.3s,baz=111,slow=4.5,SNR=12						
GUMO				S	Sn	16 46 18.6	-1.9
	12nm,0.3s,baz=114,slow=14,SNR=1.6						
GUMO	Guam	5.08	186	Pn	Pn	16 45 21.6	+0.7
JCJ	Chichijima	8.90	341	P	Pn	16 46 12.1	+1.6
	23nm,0.7s,baz=263,slow=21,SNR=1.4						
JCJ				S	Sn	16 47 47.6	-2.6
	42nm,0.8s,baz=234,slow=18,SNR=1.4						
JOW	Kunigami	17.75	300	P	P	16 47 59.0	+0.3
	1.6nm,0.6s,baz=111,slow=17,SNR=1.0						
JMM	Marumori	19.55	349	P	P	16 48 16.0	-2.0
H11S3	WAKE ISLAND Hy	20.18	87	T	T	17 09 25.5	
	baz=275						
H11S1	WAKE ISLAND Hy	20.19	87	T	T	17 09 26.7	
	baz=275						
H11S2	WAKE ISLAND Hy	20.20	87	T	T	17 09 27.2	
	baz=275						
COEN	Coen	32.49	184	P	P	16 50 16.9	-0.5
PEA0B	Petropavlovsk-	35.68	13	P	P	16 50 46.9	+2.4
PEA0B				IAmb	IAmb	16 51 00.1	
	comp=Z,15nm,1.3s						
PETK	Petropavlovsk-	35.68	13	P	P	16 50 44.3	-0.2
	comp=Z,0.7nm,0.8s,baz=190,slow=7.3,SNR=2.4						
	comp=Z,0.7nm,0.8s						
PETK	Petropavlovsk-	35.68	13	P	P	16 50 46.6	+2.1
WB0	Warramunga Arr	39.69	196	P	P	16 51 18.9	+0.4
WB0				IAmb	IAmb	16 51 56.8	
	comp=Z,6.4nm,1.4s						
WR0	Warramunga Arr	39.84	196	P	P	16 51 20.5	+0.9
WR0				IAmb	IAmb	16 51 37.0	
	comp=Z,7.6nm,1.5s						
WB2	Warramunga Arr	39.87	196	P	P	16 51 20.5	+0.5
WB2				IAmb	IAmb	16 51 27.2	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	39.87	196	P	P	16 51 20.8	+0.8
	comp=Z,0.3nm,0.3s,baz=14,slow=8.4,SNR=8.1						
WRA				PcP	PcP	16 53 20.9	-0.8
	comp=Z,0.3nm,0.7s,baz=25,slow=3.8,SNR=1.8						
	comp=Z,0.3nm,0.3s						
FITZ	Fitzroy Crossi	41.38	209	P	P	16 51 33.3	+1.1
FITZ				IAmb	IAmb	16 52 04.6	
	comp=Z,9.7nm,1.5s						
ASAR	Alice Springs	43.55	195	P	P	16 51 50.6	+0.9
	comp=Z,0.1nm,0.4s,baz=16,slow=6.8,SNR=8.2						
	comp=Z,0.1nm,0.4s						
MKAR	Makanchi Array	58.28	314	P	P	16 53 40.7	+1.4
	comp=Z,0.3nm,0.5s,baz=82,slow=8.7,SNR=5.4						
	comp=Z,0.3nm,0.5s						
KURK	Kurchatov	61.10	318	P	P	16 53 59.4	+1.0
SKT	Skwentna	61.10	29	P	P	16 53 58.0	-0.2
CAST	Castle Rocks	61.25	27	P	P	16 54 00.0	+0.8
CAST				IAmb	IAmb	16 54 00.8	
	comp=Z,2.0nm,0.8s						
IMAR	Indian Mountai	61.36	24	P	P	16 53 59.3	-0.6
MLY	Manley	62.27	26	P	P	16 54 06.0	0.0
MLY				IAmb	IAmb	16 54 33.0	
	comp=Z,3.1nm,1.4s						
ILAR	Eielson Array	63.80	26	P	P	16 54 15.1	-1.0
	comp=Z,0.8nm,0.8s,baz=261,slow=5.1,SNR=6.1						
	comp=Z,0.8nm,0.8s						
BMAR	Burnt Mountain	65.26	24	P	P	16 54 26.9	+1.4
ABKAR	Akbulak array	73.17	317	P	P	16 55 14.1	-0.2
NVAR	Mina Array Bea	83.38	52	P	P	16 56 09.3	-1.5
	comp=Z,0.8nm,0.7s,baz=275,slow=5.0,SNR=7.4						
	comp=Z,0.8nm,0.7s						
NVAR	Mina Array Bea	83.38	52		P	16 56 11.1	+0.3
FINES	FINESS Array B	86.80	335	P	P	16 56 25.3	-1.7
	comp=Z,0.3nm,0.3s,baz=72,slow=4.7,SNR=8.0						
	comp=Z,0.3nm,0.3s						

IDC 01 17:08:38.4±3.9, 19°.31N×119°.99E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=350.3km s-min=30.1km az=60.0
ISC 01 17:08:41.8±2.0, 19°.4N±0°.2×120°.2E±0°.7, h24km, n7, σ0s.50/5, mb3.0/3, 4C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACP	Maragondon, Ca	5.14	174	⇑eP	Pb	17 10 10.6	-0.4
LUBP	Lubang	5.64	179	⇑eP	Pb	17 10 09.8	-10
PGP	Puerto Galera	5.92	172	⇑eP	Pn	17 10 08.5	+0.5
BUSP	Coron	7.36	180	⇑eP	Pn	17 10 19.3	-8.5
MKAR	Makanchi Array	41.24	320	P	P	17 16 24.9	0.0
	0.2nm,0.6s,baz=131,slow=6.5,SNR=2.5						
	0.2nm,0.6s						
WRA	Warramunga Arr	41.50	160	P	P	17 16 26.9	-0.3
	0.1nm,0.4s,baz=341,slow=8.8,SNR=1.5						
	0.1nm,0.4s						
ASAR	Alice Springs	44.86	162	P	P	17 16 54.5	+0.1
	0.5nm,1.1s,baz=332,slow=7.1,SNR=4.9						
	0.5nm,1.1s						

MDD 01 17:26:56.0±1.0, 37°.27N×9°.98W, h0km, mb_Lg2.7/7, Error ellipse: s-maj=8.0km s-min=5.4km az=41.0
CNRM 01 17:26:55.6, 36°.97N×9°.83W, h0km, ml4.6
INMG 01 17:26:56.5±1.5, 37°.10N×10°.23W, h31km±18km, ML1.9, Error ellipse: s-maj=17.3km s-min=4.4km az=70.0
IGIL 01 17:26:56.4, 37°.08N×10°.19W, h30km, ML1.6
ISC 01 17:26:55.0±2.4, 37°.19N±0°.05×10°.01W±0°.09, h15km±11km, n28, σ1s.02/49, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.94	93	⇑eP	Pb	17 27 14.0	+0.9
PFVI				eS	Sn	17 27 28.0	+1.0
PFVI				A	A	17 27 29.1	
	8.3nm,0.3s						
PTEO	Sao Teotonio	1.08	71	eP	Pg	17 27 16.9	+1.0
PTEO				A	A	17 27 37.9	
	13nm,0.6s						
MORF	Marmelete	1.09	84	eP	Pb	17 27 16.4	+0.8
MORF	Marmelete	1.09	84	eP	Pb	17 27 16.4	+0.8
MORF				A	A	17 27 36.8	
	17nm,0.1s						
PNCL	Nicolau / Gran	1.49	52	eP	Pb	17 27 22.6	+0.2
PNCL				eS	Sg	17 27 41.2	-1.8
PNCL				A	A	17 27 42.4	
	5.3nm,0.1s						
MESJ	Messejana	1.56	65	eP	Pn	17 27 23.3	+1.1
MESJ				eS	Sb	17 27 42.9	-0.2
MESJ				IAML		17 27 44.1	
	comp=E,4.7nm,0.1s						
MESJ	Messejana	1.56	65	eP	Pn	17 27 23.3	+1.1
MESJ				S	Sg	17 27 43.5	-1.8
MESJ				A	A	17 27 53.5	
	comp=E,5.0nm,0.5s						
PCVE	Castro Verde	1.63	74	eP	Pn	17 27 24.0	+0.8
PCVE				S	Sb	17 27 44.7	-0.4
PCVE				A	A	17 27 48.9	
	comp=E,3.7nm,0.3s						
PBDV	Barranco-do-Ve	1.66	88	eP	Pn	17 27 24.7	+1.1
PBDV				S	Sb	17 27 45.8	-0.2
PBDV				A	A	17 27 49.3	
	comp=E,5.9nm,0.4s						
PVAQ	Vaqueiros	1.84	83	P	Pn	17 27 27.0	+1.0
PVAQ				S	Sb	17 27 50.8	-0.3
PVAQ	Vaqueiros	1.84	83	eP	Pn	17 27 27.0	+1.0
PVAQ				S	Sb	17 27 50.6	-0.5
PVAQ				A	A	17 27 52.7	
	comp=E,6.5nm,0.1s						
PMAFR	Mafra	1.85	18	eP	Pn	17 27 27.0	+0.8
PMAFR				S	Sn	17 27 49.0	-0.4
PBEJ	Beja	1.89	63	S	Sb	17 27 51.7	-1.0
EGRO	El Granado	2.04	80	P	Pn	17 27 29.4	+0.6
EGRO				S	Sn	17 27 54.6	+0.5
EGRO				i Vmb_Lg		17 27 57.0	
EVO	Evora	2.07	49	S	Sb	17 27 55.6	-2.2
EVO				A	A	17 27 57.1	
	comp=E,4.9nm,0.2s						
PMTG	Montargil	2.34	36	eP	Pn	17 27 33.8	+0.8
PMTG				A	A	17 28 00.5	
	comp=E,2.8nm,1.1s						
PMTG				S	Sn	17 28 00.9	-0.6
PESTR	Estremoz	2.54	48	eP	Pn	17 27 37.3	+1.6
PESTR				S	Sn	17 28 07.3	+0.9
PESTR				A	A	17 28 10.4	
	comp=E,3.6nm,0.6s						
PBAR	Barrancos	2.55	66	eP	Pn	17 27 36.6	+0.8
PBAR				S	Sn	17 28 07.2	+0.6
PBAR				A	A	17 28 09.7	
	comp=E,2.8nm,0.5s						
EMIN	Mina Concepcio	2.71	77	P	Pn	17 27 39.1	+1.0
EMIN				S	Sn	17 28 11.0	+0.3
EMIN				i Vmb_Lg		17 28 12.6	
EBAD	Badajoz	2.83	56	P	Pn	17 27 40.4	+0.7
EBAD				S	Sn	17 28 13.3	-0.4
EBAD				i Vmb_Lg		17 28 16.1	
PMRV	Marv??o	3.04	42	eP	Pn	17 27 43.5	+1.0
PMRV				S	Sn	17 28 17.6	-1.0
PMRV				A	A	17 28 18.6	
	comp=E,3.2nm,0.8s						
ESPR	Espera	3.34	94	P	Pn	17 27 47.5	+0.9
ESPR				S	Sn	17 28 27.4	+1.4
ESPR				i Vmb_Lg		17 28 28.5	
ECAB	El Cabril	3.75	75	P	Pn	17 27 53.0	+0.7
ECAB				S	Sn	17 28 35.7	-0.5
ECAB				i Vmb_Lg		17 28 37.6	
EADA	Adamuz	4.42	76	P	Pn	17 28 01.9	+0.4
EADA				S	Sn	17 28 52.2	-0.5
EADA				i Vmb_Lg		17 28 55.0	
MVO	Moncorvo	4.59	29	eP	Pn	17 28 04.9	+0.9
MVO				S	Sn	17 28 55.8	-1.3
MVO				A	A	17 29 01.0	
	comp=E,1.8nm,0.6s						
EGOR	Sierra Gorda,	4.71	89	P	Pn	17 28 04.3	-1.4
EGOR				S	Sn	17 28 58.8	-1.4
EGOR				i Vmb_Lg		17 28 59.0	
MD31	MD31	6.09	134	P	Pn	17 28 23.4	-1.2
MDT	Midelt	6.22	133	P	Pn	17 28 25.4	-1.0

OMAN 01 17:29:01.3±0.8, 24°.94N×62°.59E, h34km±30km, mb4.2/1, Error ellipse: s-maj=38.8km s-min=5.9km az=256.0, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGCH	Negor - Chabah	1.38	288	P	Pn	17 29 25.2	+1.0
WSAR	Wadi Sarin	3.99	246	P	Pn	17 30 00.3	+0.2
WSAR				S	Sn	17 30 45.4	-0.4
WBK	Wadi Bani Khal	4.04	236	P	Pn	17 30 00.5	-0.4
	SNR=8.9						
WBK				S	Sn	17 30 47.6	+0.5
SMDO	Samad	4.55	247	P	Pn	17 30 09.0	+1.0
SMDO				S	Sn	17 31 00.4	+0.7
JMDO	Jabal Madar	4.84	239	P	Pn	17 30 12.7	+0.8
	SNR=10						
JMDO				S	Sn	17 31 07.7	+0.9
HOQ	Hoqain	5.00	255	P	Pn	17 30 14.3	+0.3
MDH	Madha	5.71	275	P	Pn	17 30 23.4	-0.4
BANOM	Banah	5.77	281	P	Pn	17 30 24.5	-0.1
UOSS	Minazif	5.79	271	P	Pn	17 30 24.1	-0.8
SHME	Shamm	5.93	282	P	Pn	17 30 29.2	+2.4
ASHO	Ashiyiah	5.94	269	P	Pn	17 30 28.5	+1.6

NOU 01 17:29:23.5, 37°.48S×176°.89E, h210km, MLv3.7/4, North Island, New Zealand
WEL 01 17:29:35.8, 38°S±8°×17°7E±°, h113km±17km, M2.6/31, MLv2.6/31, Error ellipse: s-maj=0.0km s-min=0.0km az=125.8
ISC 01 17:29:25.4±1.8, 37°.58S±0°.10×176°.56E±0°.08, h200km, n68, σ0s.71/59, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.28	238	P	Pn	17 29 51.5	-0.4
KARZ	Kaharoa	0.50	209	P	Pn	17 29 52.2	-0.4
OMRZ	Omania	0.55	196	P	Pn	17 29 52.4	-0.4
KMRZ	Kaimai	0.56	241	P	Pn	17 29 52.7	-0.1
URZ	Urewera	0.81	147	P	Pn	17 29 53.3	-0.7
URZ	Urewera	0.81	147	P	Pn	17 29 53.5	-0.4
TOZ	Tahuroa Road	0.85	259	P	Pn	17 29 54.8	+0.6
MUGZ	Murupara	0.91	169	P	Pn	17 29 54.2	-0.4
HAZ	Te Kaha	0.99	101	P	Pn	17 29 55.2	+0.1
MWZ	Matawai	1.07	135	P	Pn	17 29 55.4	-0.3
TLZ	Tolley Road	1.10	227	P	Pn	17 29 56.4	+0.5
PKGZ	Pakihiroa	1.24	105	P	Pn	17 29 58.2	+1.1
TWGZ	Tauwhareparae	1.27	118	P	Pn	17 29 58.3	+1.1
MTHZ	Maungataniwha	1.29	170	P	Pn	17 29 57.6	+0.3
TKGZ	Te Karaka	1.33	130	P	Pn	17 29 57.3	-0.3
SNGZ	Shannon Statio	1.35	153	P	Pn	17 29 58.3	+0.4
RAHZ	Arahi	1.40	163	P	Pn	17 29 58.8	+0.6
RATZ	Rangitukua	1.43	205	P	Pn	17 29 59.2	+0.7
PUZ	Puketiti	1.43	111	P	Pn	17 30 01.6	+3.1
RIGZ	Rimuhau	1.47	140	P	Pn	17 29 59.5	+0.6
WMGZ	Waiomatatini S	1.49	100	P	Pn	17 30 00.4	+1.4
NMHZ	Naumai	1.53	173	P	Pn	17 30 01.7	+2.3
MBAZ	Motutapu North	1.55	301	P	Pn	17 30 02.1	+2.5
BKZ	Black Stump Fm	1.58	182	P	Pn	17 29 59.8	-0.2
BKZ	Black Stump Fm	1.58	182	P	Pn	17 30 00.0	+0.1
CNGZ	Carnagh Statio	1.58	125	P	Pn	17 30 01.3	+1.4
HIZ	Hauiti	1.63	235	P	Pn	17 30 01.7	+1.4
HIZ	Hauiti	1.63	235	P	Pn	17 30 01.8	+1.5
TMVZ	Te Maari	1.67	203	P	Pn	17 29 59.0	-1.8
ARHZ	Aropaoanui	1.71	169	P	Pn	17 30 02.2	+1.1
OTVZ	Oturere	1.73	204	P	Pn	17 30 02.4	+1.0
TWVZ	Taurewa	1.73	210	P	Pn	17 30 00.5	-0.9
SNVZ	South Ngauruho	1.76	204	P	Pn	17 30 02.8	+1.1
NGZ	Ngauruhoe	1.76	205	P	Pn	17 30 03.3	+1.6
TUVZ	Tukino	1.83	203	P	Pn	17 30 03.2	+0.9
KWHZ	Kaweka Forest	1.84	183	P	Pn	17 30 02.9	+0.5
WHVZ	Whangaehu Hut	1.86	204	P	Pn	17 30 03.6	+0.8
MCHZ	McNeill Hill	1.86	177	P	Pn	17 30 04.0	+1.5
TRVZ	Turoa	1.89	204	P	Pn	17 30 03.9	+0.8
MHGZ	Mahia Peninsul	1.90	146	P	Pn	17 30 03.9	+1.1
WNVZ	Wahianoa	1.90	203	P	Pn	17 30 03.8	+0.7
MOVZ	Moawhango	1.93	199	P	Pn	17 30 03.5	+0.2
BHHZ	Black Hill Sta	1.94	191	P	Pn	17 30 03.5	+0.1
VRZ	Vera Road	2.09	222	P	Pn	17 30 07.2	+2.4
CKHZ	Cape Kidnapper	2.12	169	P	Pn	17 30 05.7	+0.6
KAHZ	Kahuranaki	2.23	174	P	Pn	17 30 06.9	+0.6
PNHZ	Pukenui	2.35	187	P	Pn	17 30 07.5	-0.1
PXZ	Pawanui	2.46	175	P	Pn	17 30 09.1	+0.3
WPHZ	Waipukurau	2.48	182	P	Pn	17 30 09.2	+0.1
TSZ	Takapari Road	2.52	190	P	Pn	17 30 09.5	0.0
PRHZ	Porangahau	2.68	179	P	Pn	17 30 11.5	+0.2
DVHZ	Dannevirke	2.73	186	P	Pn	17 30 11.7	-0.3
POWZ	Post Office Ro	2.87	192	P	Pn	17 30 13.6	0.0
ANWZ	Angora Road	2.88	181	P	Pn	17 30 13.8	+0.3
PRWZ	Pori Road	3.00	189	P	Pn	17 30 15.3	+0.2
BFZ	Birch Farm	3.11	184	P	Pn	17 30 16.1	-0.1
BFZ	Birch Farm	3.11	184	P	Pn	17 30 16.3	0.0
MRZ	Mangatainoka R	3.17	194	P	Pn	17 30 16.6	-0.4
TIWZ	Tintock	3.23	189	P	Pn	17 30 17.7	-0.1
CPWZ	Castlepoint	3.34	185	P	Pn	17 30 19.6	+0.6
OGWZ	Otaki Gorge	3.41	198	P	Pn	17 30 19.6	-0.2
HOWZ	Holdsworth Sta	3.41	193	P	Pn	17 30 19.3	-0.7
KIW	Kapiti Island	3.52	201	P	Pn	17 30 20.5	-0.7
TMWZ	Te Maipa	3.56	188	P	Pn	17 30 20.6	-1.1
MTW	Mount Morrison	3.67	193	P	Pn	17 30 22.1	-0.9
CAW	Cannon Point	3.71	198	P	Pn	17 30 22.8	-0.7
PLWZ	Palliser	4.11	194	P	Pn	17 30 27.3	-1.2
TUWZ	Tuamarina	4.34	207	P	Pn	17 30 31.2	-0.2

PRU 01 17:37:16.5±0.0, 49°.83N×18°.52E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.24	272	ePG	Pg	17 37 21.2	+0.1
OKC				eSG	Sg	17 37 24.3	+0.1
MORC	Moravsky Berou	0.64	266	ePG	Pg	17 37 28.7	0.0
MORC				eSG	Sg	17 37 35.9	-1.0
KRLC	Kraliky	1.15	283	ePG	Pg	17 37 36.2	-2.3
KRLC				eSG	Sg	17 37 52.5	-0.9
	comp=Z,4.3nm,0.9s						
VRAC	Vranov	1.36	248	ePG	Pg	17 37 40.4	-2.1
VRAC				eSG	Sg	17 37 59.0	-1.1
DPC	Dobruska-Polom	1.51	291	ePG	Pn	17 37 44.1	-0.7
DPC				eSG	Sg	17 38 04.3	-0.6
	comp=Z,1.5nm,0.3s						
KRUC	Moravsky	1.59	242	ePG	Pn	17 37 44.7	-1.1
OSTC	Ostas	1.65	297	eSG	Sb	17 38 09.0	-0.1
	comp=Z,2.8nm,0.6s						

BUC 01 17:38:29.8±0.2, 45°.11N×22°.59E, h6km±2km, ml1.6/9, 32C-8D, Error ellipse: s-maj=1.9km s-min=1.5km az=109.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HERR	Herculane	0.26	209	⇑P	Pg	17 38 35.6	+0.8
HERR				⇑S	Sg	17 38 39.3	+1.1
HERR	Herculane	0.26	209	⇑P	Pg	17 38 35.6	+0.8
HERR				⇑S	Sg	17 38 39.3	+1.1
GZR	Gura Zlata	0.32	25	⇑P	Pg	17 38 36.6	+0.5
GZR				⇑S	Sg	17 38 40.9	+0.6
GZR	Gura Zlata	0.32	25	⇑P	Pg	17 38 36.6	+0.5
GZR				⇑S	Sg	17 38 40.9	+0.6
RMGR	Halanga-Turnu	0.45	170	⇑P	Pg	17 38 37.8	-0.7
RMGR				⇑S	Sg	17 38 44.0	-0.3
RMGR	Halanga-Turnu	0.45	170	⇑P	Pg	17 38 37.8	-0.7
RMGR				⇑S	Sg	17 38 44.0	-0.3
SRE	Strehaia	0.62	135	⇑P	Pg	17 38 41.4	-0.4
SRE	Strehaia	0.62	135	⇑P	Pg	17 38 41.4	-0.4
MDVR	Moldovita	0.70	243	⇑S	Sg	17 38 52.5	+0.1
MDVR	Moldovita	0.70	243	⇑S	Sg	17 38 52.5	+0.1
BZS	Buzias	0.85	307	⇑P	Pg	17 38 46.1	-0.1
BZS				⇑S	Sg	17 38 57.3	-0.1
BZS	Buzias	0.85	307	⇑P	Pg	17 38 46.1	-0.1
BZS				⇑S	Sg	17 38 57.3	-0.1
	SNR=23						
PUNG	Punghina	0.86	163	⇓S	Sb	17 38 59.1	+0.1
PUNG	Punghina	0.86	163	⇓S	Sb	17 38 59.1	+0.1
LOT	Lotru	0.90	67	⇑S	Sg	17 38 59.5	+0.7
LOT	Lotru	0.90	67	⇑S	Sg	17 38 59.5	+0.7
SIRR	Siria	1.33	331	⇓P	Pb	17 38 55.1	-0.1
SIRR	Siria	1.33	331	⇓P	Pb	17 38 55.1	-0.1
ARR	Arges	1.47	79	⇓S	Sn	17 39 16.5	0.0
ARR	Arges	1.47	79	⇓S	Sn	17 39 16.5	0.0
BLKB	Belogradchik	1.48	178	⇑P	Pb	17 38 57.6	-0.2
BLKB	Belogradchik	1.48	178	⇑P	Pb	17 38 57.6	-0.2
BOVS	Bovan	1.60	204	⇑P	Pn	17 38 58.9	+0.3
BOVS				⇓S	Sb	17 39 20.2	0.0
BOVS	Bovan	1.60	204	⇑P	Pn	17 38 58.9	+0.3
BOVS				⇓S	Sb	17 39 20.2	0.0
DRGR		1.69	3	⇑S	Sb	17 39 22.7	-0.2
DRGR		1.69	3	⇑S	Sb	17 39 22.7	-0.2
VOIR		1.77	78	⇑P	Pn	17 39 01.2	+0.2
VOIR				⇑S	Sb	17 39 25.5	+0.3
VOIR		1.77	78	⇑P	Pn	17 39 01.2	+0.2
VOIR				⇑S	Sb	17 39 25.5	+0.3

IDC 01 17:41:48.6±3.7, 17°.29S×178°.84W, h562km±19km, mb3.4/4, mbtmp4.2/5, Error ellipse: s-maj=99.5km s-min=60.4km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.00	261	P	P	17 43 04.7	0.0
	18nm,0.7s,baz=105,slow=5.4,SNR=16						
STKA	Stephens Creek	38.58	240	P	P	17 48 24.3	+0.3
	2.6nm,0.7s,baz=78,slow=10.0,SNR=8.4						
	2.6nm,0.7s						
WRA	Warramunga Arr	44.34	259	P	P	17 49 09.1	-0.6
	0.9nm,0.5s,baz=96,slow=6.9,SNR=26						
WRA				PcP	PcP	17 50 40.9	-0.6
	0.2nm,0.6s,baz=94,slow=2.8,SNR=1.7						
	0.9nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ASAR	**Alice Springs**	**44.57**	**254**	P	P	17 49 11.2	-0.2
	10nm,0.6s,baz=89,slow=7.9,SNR=356						
ASAR				PcP	PcP	17 50 42.1	-0.2
	0.2nm,0.5s,baz=99,slow=3.4,SNR=2.1						
	10nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.73**	**260**	P	P	17 50 12.2	+0.3
	6.3nm,1.3s,baz=102,slow=9.3,SNR=1.7						
	6.3nm,1.3s						

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*NEIC **01** 17:43:53.6±1.3, 18°.75N±0°.08×145°.5E±0°.1, h209km±5km, mb4.3/94, Error ellipse: s-maj=19.7km s-min=12.3km az=89.0*

*IDC **01** 17:43:55.0±2.1, 18°.82N×145°.51E, h230km±21km, mb3.5/21, mbtmp4.2/24, Error ellipse: s-maj=16.0km s-min=9.5km az=92.0*

ISC 01 17:43:53.3±0.5**, 18°.76N**±0°.05×**145°.4E**±0°.1**, h214**km**, n128, σ1^{s}01**/128**, mb4.2**/60**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.17**	**186**	P	**Pn**	**17 45 12.5**	**+2.2**
	23nm,0.3s,baz=307,slow=4.9,SNR=4.2						
GUMO				S	**S**	**17 46 08.8**	**-2.3**
	25nm,0.3s,baz=360,slow=20,SNR=2.0						
GUMO	**Guam**	**5.17**	**186**	Pn	**Pn**	**17 45 07.7**	**-2.6**
JCJ	**Chichijima**	**8.82**	**341**	P	**Pn**	**17 45 57.4**	**+0.4**
	36nm,0.7s,baz=237,slow=14,SNR=1.8						
JCJ				S	**S**	**17 47 31.9**	**-4.5**
	47nm,0.8s,baz=279,slow=18,SNR=1.5						
JHJ2	**Mitsune**	**15.15**	**342**	P	**Pn**	**17 47 15.7**	**-1.0**
PATS	**Pohnpei**	**17.25**	**132**	P	Pn	17 47 49.9	+8.0
JOW	**Kunigami**	**17.73**	**300**	P	**Pn**	**17 47 48.1**	**+0.7**
	12nm,0.8s,baz=150,slow=8.8,SNR=8.8						
JOW	**Kunigami**	**17.73**	**300**	P	**P**	**17 47 46.1**	**+0.8**
JOW				IAmb	IAmb	17 47 55.0	
	comp=Z,17nm,1.0s						
JYT	**Yasato**	**18.00**	**346**	P	**Pn**	**17 47 50.1**	**-0.4**
JGF	**Kuroka**	**18.23**	**339**	P	**P**	**17 47 52.3**	**+1.6**
JGF				IAmb	IAmb	17 47 54.5	
	comp=Z,6.1nm,0.7s						
MAJO	**Matsushiro**	**18.82**	**342**	P	**P**	**17 47 55.3**	**-1.7**
JMM	**Marumori**	**19.46**	**349**	P	**P**	**17 48 06.0**	**+2.2**
JMM				IAmb	IAmb	17 48 15.7	
	comp=Z,12nm,0.9s						
JSD	**Sado**	**20.20**	**343**	P	**P**	**17 48 12.5**	**+0.8**
JSD				IAmb	IAmb	17 48 14.6	
	comp=Z,5.3nm,0.5s						
MANU	**Manus Island**	**20.76**	**175**	P	**P**	**17 48 16.8**	**-1.2**
MANU				IAmb	IAmb	17 48 18.1	
	comp=Z,10.0nm,0.7s						
YOJ	**Yonaguni jima**	**21.59**	**289**	P	**P**	**17 48 28.8**	**+2.4**
JTM	**Tenmabayashi**	**22.27**	**351**	P	**P**	**17 48 32.9**	**+0.2**
KSRS	**Korea Array**	**24.12**	**324**	P	**P**	**17 48 49.7**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=145,slow=8.6,SNR=8.4						
	comp=Z,0.8nm,0.7s						
JEW	**Eniwo**	**24.24**	**353**	P	**P**	**17 48 50.3**	**-0.2**
KLR	**Kul'dur**	**32.33**	**343**	P	**P**	**17 50 01.9**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=160,slow=9.8,SNR=4.9						
	comp=Z,1.1nm,0.3s						
MTN	**Manton Dam**	**34.43**	**205**	P	**P**	**17 50 21.1**	**+0.4**
MTN				IAmb	IAmb	17 50 36.2	
	comp=Z,9.5nm,1.3s						
PEA0B	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**17 50 31.4**	**+1.3**
PEA0B				IAmb	IAmb	17 50 52.2	
	comp=Z,20nm,1.5s						
PETK	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**17 50 30.9**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=193,slow=10,SNR=4.7						
	comp=Z,1.6nm,0.7s						
KNRA	**Kununurra**	**37.96**	**207**	P	**P**	**17 50 52.1**	**+1.6**
KNRA				IAmb	IAmb	17 51 04.5	
	comp=Z,17nm,1.5s						
WB0	**Warramunga Arr**	**39.80**	**196**	P	**P**	**17 51 06.7**	**+0.9**
WR0	**Warramunga Arr**	**39.94**	**196**	P	**P**	**17 51 07.8**	**+0.8**
WB2	**Warramunga Arr**	**39.97**	**196**	P	**P**	**17 51 08.2**	**+0.9**
WB2				IAmb	IAmb	17 51 09.8	
	comp=Z,7.7nm,1.0s						
WRA	**Warramunga Arr**	**39.98**	**196**	P	**P**	**17 51 08.2**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=25,slow=8.8,SNR=30						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**39.98**	**196**	P	**P**	**17 51 08.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**41.48**	**209**	P	**P**	**17 51 20.8**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=26,slow=7.2,SNR=13						
	comp=Z,1.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**41.48**	**209**	P	**P**	**17 51 20.8**	**+1.3**
FITZ				IAmb	IAmb	17 51 37.3	
	comp=Z,9.7nm,1.4s						
SONM	**Songino Array**	**42.94**	**321**	P	**P**	**17 51 32.4**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=141,slow=5.5,SNR=3.6						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**42.94**	**321**	P	**P**	**17 51 32.6**	**+1.4**
AS31	**Alice Springs**	**43.65**	**195**	P	**P**	**17 51 37.6**	**+0.7**
ASAR	**Alice Springs**	**43.65**	**195**	P	**P**	**17 51 37.0**	**0.0**
	comp=Z,0.4nm,0.4s,baz=12,slow=6.6,SNR=13						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**43.65**	**195**	P	**P**	**17 51 37.1**	**+0.2**
SEY	**Seymchan**	**44.39**	**5**	P	**P**	**17 51 41.5**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=154,slow=8.2,SNR=7.1						
	comp=Z,1.4nm,0.6s						
YAK	**Yakutsk**	**44.61**	**349**	P	**P**	**17 51 43.4**	**-0.6**
	comp=Z,2.9nm,0.4s,baz=51,slow=1.7,SNR=5.0						
	comp=Z,2.9nm,0.4s						
CLES	**Cleveland East**	**48.47**	**35**	P	**P**	**17 52 15.1**	**+1.0**
CLES				IAmb	IAmb	17 52 42.2	
	comp=Z,148nm,1.3s						
AKUT	**Akutan**	**51.26**	**35**	P	**P**	**17 52 35.9**	**+0.8**
SDPT	**Sand Point**	**54.56**	**35**	P	**P**	**17 52 59.6**	**+0.5**
CNBA	**Chernabura Isl**	**54.87**	**35**	P	**P**	**17 53 02.0**	**+0.6**
CHGN	**Chignik**	**55.97**	**34**	P	**P**	**17 53 09.5**	**+0.3**
ZALV	**Zalesovo Beam**	**57.81**	**323**	P	**P**	**17 53 22.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=100,slow=7.7,SNR=3.7						
	comp=Z,0.7nm,0.5s						
MK31	**Makanchi Array**	**58.24**	**314**	P	**P**	**17 53 25.2**	**-0.2**
MKAR	**Makanchi Array**	**58.24**	**314**	P	**P**	**17 53 25.9**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=94,slow=7.2,SNR=15						
	comp=Z,0.8nm,0.5s						
SII	**Sitkinak Islan**	**58.30**	**34**	P	**P**	**17 53 26.7**	**+1.2**
MAKZ	**Makanchi**	**58.45**	**314**	P	**P**	**17 53 27.5**	**+0.7**
K20K	**Telida**	**60.28**	**27**	P	**P**	**17 53 40.8**	**+1.8**
J20K	**Nowinta River**	**60.51**	**26**	P	**P**	**17 53 41.8**	**+1.3**
J20K				IAmb	IAmb	17 53 43.0	
	comp=Z,9.3nm,1.4s						
CNPM	**China Poot**	**60.54**	**32**	P	**P**	**17 53 41.0**	**+0.2**
KURK	**Kurchatov**	**61.06**	**318**	P	**P**	**17 53 44.2**	**-0.2**
KURBB	**Kurchatov Arra**	**61.10**	**318**	P	**P**	**17 53 44.8**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=92,slow=7.5,SNR=25						
	comp=Z,1.3nm,0.5s						
CAST	**Castle Rocks**	**61.15**	**27**	P	**P**	**17 53 45.9**	**+1.0**
CAST				IAmb	IAmb	17 53 46.6	
	comp=Z,6.8nm,0.8s						
IMAR	**Indian Mountai**	**61.26**	**24**	P	**P**	**17 53 45.8**	**+0.3**
H21K	**Melozitna Rive**	**61.52**	**25**	P	**P**	**17 53 48.4**	**+1.1**
KTH	**Kantishna Hill**	**61.69**	**27**	P	**P**	**17 53 49.0**	**+0.4**
KTH				IAmb	IAmb	17 53 50.0	
	comp=Z,4.7nm,1.0s						
I21K	**Tanana**	**61.70**	**25**	P	**P**	**17 53 49.6**	**+1.1**
I21K				IAmb	IAmb	17 53 50.3	
	comp=Z,2.7nm,0.6s						
BPAW	**Bear Paw Mtn.**	**61.81**	**27**	P	**P**	**17 53 50.0**	**+0.8**
BPAW				IAmb	IAmb	17 53 50.9	
	comp=Z,6.2nm,0.7s						
TRF	**Thorofare Moun**	**61.94**	**27**	P	**P**	**17 53 50.4**	**+0.1**
TRF				IAmb	IAmb	17 53 55.5	
	comp=Z,11nm,1.3s						
GHO	**Glory Hole Cre**	**62.15**	**29**	P	**P**	**17 53 52.0**	**+0.3**
GHO				IAmb	IAmb	17 53 52.6	
	comp=Z,4.1nm,0.8s						
MLY	**Manley**	**62.16**	**26**	P	**P**	**17 53 52.3**	**+0.7**
MLY				IAmb	IAmb	17 53 53.4	
	comp=Z,4.0nm,0.7s						
PWL	**Port Wells**	**62.24**	**30**	P	**P**	**17 53 52.6**	**+0.5**
SML	**Sawmill**	**62.44**	**29**	P	**P**	**17 53 53.8**	**+0.3**
I23K	**Minto, Yukon-K**	**62.76**	**26**	P	**P**	**17 53 56.3**	**+0.8**
I23K				IAmb	IAmb	17 53 57.5	
	comp=Z,3.3nm,0.7s						
GLI	**Glacier Island**	**62.84**	**31**	P	**P**	**17 53 56.6**	**+0.4**
GLI				IAmb	IAmb	17 53 57.3	
	comp=Z,6.0nm,0.7s						
H23K	**Yukon River**	**62.86**	**25**	P	**P**	**17 53 56.9**	**+0.7**
H23K				IAmb	IAmb	17 53 58.2	
	comp=Z,3.9nm,0.8s						
SCM	**Sheep Creek Mo**	**62.91**	**29**	P	**P**	**17 53 57.2**	**+0.6**
HIN	**Hinchinbrook I**	**63.04**	**31**	P	**P**	**17 53 57.3**	**-0.2**
FID	**Port Fidalgo**	**63.11**	**31**	P	**P**	**17 53 58.6**	**+0.7**
WRH	**Wood River Hil**	**63.12**	**26**	P	**P**	**17 53 58.0**	**+0.1**
WRH				IAmb	IAmb	17 53 58.5	
	comp=Z,2.9nm,0.7s						
DHY	**Denali Highway**	**63.13**	**28**	P	**P**	**17 53 58.6**	**+0.4**
MDM	**Murphy Dome**	**63.18**	**26**	P	**P**	**17 53 59.3**	**+1.0**
MDM				IAmb	IAmb	17 54 00.4	
	comp=Z,4.3nm,0.6s						
KLU	**Klutina**	**63.51**	**30**	P	**P**	**17 54 00.9**	**+0.4**
KLU				IAmb	IAmb	17 54 02.2	
	comp=Z,2.8nm,0.6s						
H24K	**Noodor Dome**	**63.53**	**25**	P	**P**	**17 54 01.7**	**+1.1**
IL31		**63.70**	**26**	P	**P**	**17 54 00.9**	**-0.7**
IL31				IAmb	IAmb	17 54 01.7	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**63.70**	**26**	P	**P**	**17 54 00.8**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=259,slow=4.9,SNR=19						
	comp=Z,2.1nm,0.7s						
ILAR	**Eielson Array**	**63.70**	**26**	P	**P**	**17 54 01.1**	**-0.6**
RIDG	**Independent Ri**	**64.38**	**28**	P	**P**	**17 54 06.5**	**+0.3**
RIDG				IAmb	IAmb	17 54 07.3	
	comp=Z,5.6nm,0.8s						
BKZ	**Black Stump Fm**	**64.54**	**154**	P	**P**	**17 54 07.4**	**-0.1**
VRDI	**Verde Repeater**	**64.64**	**30**	P	**P**	**17 54 08.7**	**+0.6**
VRDI				IAmb	IAmb	17 54 09.5	
	comp=Z,5.5nm,0.9s						
SCRK	**Sand Creek**	**64.79**	**27**	P	**P**	**17 54 08.7**	**-0.3**
SCRK				IAmb	IAmb	17 54 10.1	
	comp=Z,5.0nm,1.1s						
J26L	**Joseph Creek**	**65.05**	**27**	P	**P**	**17 54 11.0**	**+0.4**
J26L				IAmb	IAmb	17 54 11.7	
	comp=Z,4.8nm,1.1s						
BMAR	**Burnt Mountain**	**65.16**	**24**	P	**P**	**17 54 12.9**	**+1.8**
L27K	**Beaver Creek,**	**65.62**	**29**	P	**P**	**17 54 14.8**	**+0.6**
BCAR	**Beaver Creek A**	**65.64**	**29**	P	**P**	**17 54 14.9**	**+0.5**
TABL	**Table Mountain**	**65.69**	**31**	P	**P**	**17 54 15.6**	**+0.7**
BRVK	**Borovoye**	**66.33**	**320**	P	**P**	**17 54 19.0**	**+0.2**
HYT	**Haines Junctio**	**67.50**	**31**	P	**P**	**17 54 28.3**	**+2.1**
HYT				IAmb	IAmb	17 54 28.6	
	comp=Z,6.3nm,0.8s						
M30M	**Minto, Yukon**	**67.89**	**29**	P	**P**	**17 54 29.2**	**+0.7**
M31M	**Drury Creek, Y**	**69.01**	**30**	P	**P**	**17 54 35.5**	**+0.1**
M31M				IAmb	IAmb	17 54 36.6	
	comp=Z,6.7nm,1.4s						
INK	**Inuvik**	**69.41**	**23**	P	**P**	**17 54 38.1**	**+0.5**
INK				IAmb	IAmb	17 54 54.6	
	comp=Z,5.5nm,1.0s						
DLBC	**Dease Lake**	**71.37**	**34**	P	**P**	**17 54 49.8**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=293,slow=6.1,SNR=6.3						
	comp=Z,2.5nm,0.6s						
DLBC	**Dease Lake**	**71.37**	**34**	P	**P**	**17 54 50.1**	**+0.2**
DLBC				IAmb	IAmb	17 54 52.1	
	comp=Z,2.8nm,0.7s						
ABKAR	**Akbulak array**	**73.12**	**317**	P	**P**	**17 54 59.9**	**-0.4**
ABKAR	**Akbulak array**	**73.12**	**317**	P	**P**	**17 54 59.8**	**-0.5**
HOLB	**Holberg**	**73.50**	**42**	P	**P**	**17 55 02.6**	**+0.1**
YKA	**Yellowknife Ar**	**78.05**	**28**	P	**P**	**17 55 27.9**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=288,slow=5.4,SNR=8.3						
	comp=Z,3.3nm,0.7s						
YKA	**Yellowknife Ar**	**78.05**	**28**	P	**P**	**17 55 27.2**	**-0.7**
SPITS	**Spitsbergen Ar**	**79.06**	**351**	P	**P**	**17 55 33.0**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=50,slow=12,SNR=1.0						
	comp=Z,0.3nm,0.3s						
SPITS	**Spitsbergen Ar**	**79.06**	**351**	P	**P**	**17 55 33.0**	**-0.3**
BEKR	**Beckworth**	**81.33**	**51**	P	**P**	**17 55 46.4**	**+0.1**
BEKR				IAmb	IAmb	17 56 30.5	
	comp=Z,12nm,1.3s						
WVOR	**Wild Horse Val**	**81.81**	**48**	P	**P**	**17 55 49.8**	**+1.1**
CMB	**Columbia Colle**	**81.85**	**53**	P	**P**	**17 55 48.9**	**0.0**
CMB				IAmb	IAmb	17 56 25.3	
	comp=Z,4.3nm,0.9s						
BMO	**Blue Mountains**	**81.97**	**45**	P	**P**	**17 55 49.8**	**+0.3**
ARCES	**ARCESS Array B**	**82.36**	**342**	P	**P**	**17 55 49.8**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=78,slow=8.8,SNR=6.3						
	comp=Z,1.9nm,0.8s						
YERR	**Yerington**	**82.42**	**52**	P	**P**	**17 55 51.0**	**-1.1**
YERR				IAmb	IAmb	17 56 31.8	
	comp=Z,6.9nm,0.6s						
RYN	**Ryan**	**83.07**	**52**	P	**P**	**17 55 55.1**	**-0.2**
RYN				IAmb	IAmb	17 56 33.4	
	comp=Z,6.4nm,1.1s						
LHV	**Little Huntoon**	**83.20**	**52**	P	**P**	**17 55 57.0**	**+1.2**
LHV				IAmb	IAmb	17 56 32.7	
	comp=Z,9.8nm,1.0s						
KVN	**Kaiserville**	**83.25**	**51**	P	**P**	**17 55 56.7**	**+0.4**
KVN				IAmb	IAmb	17 56 35.9	
	comp=Z,12nm,1.4s						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**17 55 57.2**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=266,slow=6.1,SNR=34						
	comp=Z,3.5nm,0.7s						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**17 55 56.9**	**+0.3**
NV11	**Mina Array Sit**	**83.40**	**52**	P	**P**	**17 55 57.4**	**+0.3**
NV11				IAmb	IAmb	17 56 34.2	
	comp=Z,6.9nm,1.1s						
MFID	**Camas Ranch**	**83.45**	**46**	P	**P**	**17 55 55.9**	**-1.2**
MFID				IAmb	IAmb	17 55 58.6	
	comp=Z,3.8nm,0.9s						
TPH	**Tonopah**	**84.21**	**52**	P	**P**	**17 56 01.2**	**0.0**
ELK	**Elko**	**84.76**	**49**	P	**P**	**17 56 04.4**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=269,slow=6.6,SNR=10						
	comp=Z,2.4nm,0.8s						
ELK	**Elko**	**84.76**	**49**	P	**P**	**17 56 03.1**	**-0.9**
TPNV	**Topopah Spring**	**85.32**	**53**	P	**P**	**17 56 06.9**	**+0.2**
BOZ	**Bozeman (W)**	**85.48**	**43**	P	**P**	**17 56 06.7**	**-0.6**
EGMT	**Eagleton**	**85.73**	**41**	P	**P**	**17 56 07.1**	**-1.3**
YHL	**Hebgen Lake**	**86.06**	**44**	P	**P**	**17 56 10.8**	**+0.5**
YHL				IAmb	IAmb	17 56 12.3	
	comp=Z,3.4nm,0.7s						
PSUT	**Pine Spring**	**86.54**	**51**	P	**P**	**17 56 12.6**	**-0.2**
PSUT				IAmb	IAmb	17 56 49.2	
	comp=Z,4.0nm,0.8s						
IMW	**Indian Meadow**	**86.58**	**45**	P	**P**	**17 56 12.7**	**-0.2**
IMW				IAmb	IAmb	17 56 15.6	
	comp=Z,2.3nm,0.7s						
FINES	**FINESS Array B**	**86.72**	**335**	P	**P**	**17 56 10.8**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=62,slow=4.6,SNR=16						
	comp=Z,0.8nm,0.3s						
PDAR	**Pinedale Array**	**87.95**	**45**	P	**P**	**17 56 17.3**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=294,slow=11,SNR=3.5						
	comp=Z,0.2nm,0.4s						
Y14A	**Wickenburg**	**88.86**	**55**	P	**P**	**17 56 23.8**	**+0.2**
Y14A				IAmb	IAmb	17 56 25.1	
	comp=Z,2.1nm,0.6s						
PV11	**David Mesa, Pa**	**90.24**	**49**	P	**P**	**17 56 30.4**	**+0.3**
PV13	**Radium Mtn., P**	**90.34**	**49**	P	**P**	**17 56 30.7**	**+0.1**
PV13				IAmb	IAmb	17 56 31.2	
	comp=Z,2.6nm,0.7s						
PLCA	**Paso Flores**	**142.23**	**133**	PKhKP	PKPpre	18 02 56.1	
	comp=Z,1.2nm,0.9s,baz=282,slow=4.6,SNR=4.3						
LPAZ	**La Paz**	**147.92**	**91**	PKPbc	**PKPbc**	**18 03 14.3**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=277,slow=3.5,SNR=7.2						

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*NOU **01** 17:45:21.9, 17°.54S×178°.41W, h565km, mb4.9/42, Fiji Islands Region*

*NEIC **01** 17:45:23.6±1.7, 17°.7S±0°.1×178°.51W±0°.09, h559km±6km, mb4.2/103, Error ellipse: s-maj=19.9km s-min=10.0km az=150.0*

*IDC **01** 17:45:23.2±1.0, 17°.85S×178°.59W, h559km±9km, mb3.8/22, mbtmp4.7/24, Error ellipse: s-maj=15.0km s-min=11.1km az=139.0*

ISC 01 17:45:24.3±0.4**, 17°.83S**±0°.08×**178°.59W**±0°.07**, h579**km**, n295, σ1^{s}07**/296**, mb4.2**/80**, 16C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.45**	**208**	P	**P**	**17 46 29.0**	**-3.6**
TAVE	**Taveuni**	**1.68**	**312**	P	**P**	**17 46 31.9**	**-3.7**
DGTI	**Dogotuki**	**2.21**	**313**	P	**P**	**17 46 33.6**	**-4.1**
MSVF	**Nonsavu**	**3.20**	**271**	P	**P**	**17 46 40.8**	**-2.3**
	811nm,0.7s,baz=95,slow=3.4,SNR=754						
MSVF				S	**S**	**17 47 44.2**	**-3.0**
	34nm,1.0s,baz=117,slow=23,SNR=0.6						
MSVF	**Nonsavu**	**3.20**	**271**	P	**P**	**17 46 41.0**	**-2.1**
AFI	**Afiamalu**	**7.63**	**60**	P	P	17 47 13.0	-6.6
	79nm,0.7s,baz=225,slow=23,SNR=10						
AFI				S	S	17 48 42.1	-12
	11nm,0.5s,baz=156,slow=20,SNR=0.9						
AFI	**Afiamalu**	**7.63**	**60**	P	P	17 47 12.9	-6.7
AFI	**Afiamalu**	**7.63**	**60**	P	P	17 47 14.4	-5.2
NIUE	**Niue**	**8.32**	**100**	P	**P**	**17 47 22.8**	**-3.2**
	baz=8.1,SNR=4.3						
NIUE	**Niue**	**8.32**	**100**	P	**P**	**17 47 22.9**	**-3.2**
PINNC	**Pines Island,**	**13.94**	**248**	P	**P**	**17 48 22.3**	**-0.6**
DZM	**Mont Dzumac**	**14.69**	**251**	P	**P**	**17 48 28.8**	**-1.4**
	15nm,0.6s,baz=86,slow=17,SNR=22						
DZM	**Mont Dzumac**	**14.69**	**251**	P	**P**	**17 48 31.7**	**+1.4**
KOUNC	**Koumac, New Ca**	**16.40**	**258**	P	**P**	**17 48 45.6**	**-0.7**
KOUNC	**Koumac, New Ca**	**16.40**	**258**	P	**P**	**17 48 46.2**	**-0.2**
URZ	**Urewera**	**20.70**	**190**	P	**P**	**17 49 22.8**	**-2.3**
	4.6nm,0.5s,baz=301,slow=24,SNR=6.3						
	4.6nm,0.5s						
EIDS	**Eidsvold**	**29.13**	**250**	P	**P**	**17 50 39.4**	**-0.4**
	baz=29,SNR=12						
EIDS	**Eidsvold**	**29.13**	**250**	P	**P**	**17 50 39.2**	**-0.6**
EIDS	**Eidsvold**	**29.13**	**250**	P	**P**	**17 50 39.6**	**-0.2**
RK1H	**Rockhampton Ha**	**29.42**	**254**	P	**P**	**17 50 42.1**	**-0.2**
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**17 50 46.8**	**+0.9**
	baz=30,SNR=37						
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**17 50 46.6**	**+0.7**
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**17 50 46.7**	**+0.9**
RMQ	**Roma**	**31.37**	**248**	P	**P**	**17 50 59.6**	**+0.7**
	baz=32,SNR=36						
RMQ	**Roma**	**31.37**	**248**	P	**P**	**17 50 59.7**	**+0.7**
RABL	**Rabaul**	**31.67**	**292**	P	**P**	**17 50 59.8**	**-1.9**
RABL	**Rabaul**	**31.67**	**292**	P	**P**	**17 51 00.5**	**-1.3**
KRVT	**Keravat (AS076**	**31.74**	**292**	P	**P**	**17 51 01.3**	**-1.0**
	41nm,0.7s,baz=137,slow=1.2,SNR=10.0						
	41nm,0.7s						
CTA	**Charters Tower**	**33.28**	**260**	P	**P**	**17 51 15.2**	**-0.1**
CTAO	**Charters Tower**	**33.28**	**260**	P	**P**	**17 51 14.9**	**-0.4**
CTAO	**Charters Tower**	**33.28**	**260**	P	**P**	**17 51 15.2**	**-0.1**
CNB	**Canberra Magne**	**33.33**	**232**	P	**P**	**17 51 16.7**	**+1.1**
	baz=34,SNR=29						
CNB	**Canberra Magne**	**33.33**	**232**	P	**P**	**17 51 16.7**	**+1.1**
MILA	**Mila**	**34.20**	**229**	P	**P**	**17 51 23.6**	**+0.8**
	baz=34,SNR=4.0						
PMG	**Port Moresby**	**34.27**	**280**	P	**P**	**17 51 24.2**	**+0.6**
	42nm,0.8s,baz=79,slow=5.1,SNR=8.7						
	42nm,0.8s						
CMSA	**Cobar Meteorol**	**35.03**	**240**	P	**P**	**17 51 30.2**	**+0.5**
	baz=35,SNR=65						
CMSA	**Cobar Meteorol**	**35.03**	**240**	P	**P**	**17 51 30.2**	**+0.5**
MTSU	**Mount Surprise**	**35.24**	**264**	P	**P**	**17 51 31.3**	**-0.3**
	baz=36,SNR=23						
MTSU	**Mount Surprise**	**35.24**	**264**	P	**P**	**17 51 31.4**	**-0.3**
QLP	**Quilpie**	**35.40**	**249**	P	**P**	**17 51 32.8**	**0.0**
	baz=36,SNR=16						
QLP	**Quilpie**	**35.40**	**249**	P	**P**	**17 51 33.1**	**+0.3**
MANU	**Manus Island**	**36.91**	**291**	P	**P**	**17 51 45.8**	**+0.4**
COEN	**Coen**	**36.93**	**270**	P	**P**	**17 51 45.9**	**+0.3**
	baz=37,SNR=25						
COEN	**Coen**	**36.93**	**270**	P	**P**	**17 51 45.6**	**+0.1**
COEN	**Coen**	**36.93**	**270**	P	**P**	**17 51 45.8**	**+0.3**
TOO	**Toolangi**	**37.08**	**231**	P	**P**	**17 51 47.6**	**+1.0**
	baz=37,SNR=19						
TOO	**Toolangi**	**37.08**	**231**	P	**P**	**17 51 47.7**	**+1.1**
BRAT	**Ballarat**	**38.23**	**231**	P	**P**	**17 51 57.2**	**+1.4**
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**17 51 59.2**	**+1.0**
	18nm,0.5s,baz=89,slow=9.9,SNR=82						
	18nm,0.5s						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**17 51 59.1**	**+1.0**
	baz=39,SNR=28						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**17 51 58.7**	**+0.4**
STKA				IAmb	IAmb	17 52 00.1	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**17 51 59.0**	**+0.8**
INKA	**Innaminka**	**38.61**	**248**	P	**P**	**17 52 00.2**	**+1.1**
QIS	**Mount Isa**	**39.50**	**259**	P	**P**	**17 52 05.1**	**-1.2**
	baz=40,SNR=5.4						
ARPS	**Mount Arapiles**	**39.55**	**233**	P	**P**	**17 52 07.1**	**+0.6**
	baz=40,SNR=7.3						
HTT	**Hallett**	**41.03**	**239**	P	**P**	**17 52 19.2**	**+0.8**
	baz=41,SNR=29						
HTT	**Hallett**	**41.03**	**239**	P	**P**	**17 52 19.6**	**+1.2**
LCRK	**Leigh Creek**	**41.13**	**244**	P	**P**	**17 52 19.7**	**+0.6**
WHYH	**Whyalla**	**42.07**	**240**	P	**P**	**17 52 27.4**	**+0.9**
OOD	**Oodnadatta**	**43.08**	**248**	P	**P**	**17 52 35.5**	**+1.0**
	comp=Z,53nm,0.8s						
GENI	**Genyem**	**43.18**	**286**	P	**P**	**17 52 36.6**	**+1.2**
	comp=Z,114nm,0.7s						
GENI	**Genyem**	**43.18**	**286**	P	**P**	**17 52 35.4**	**0.0**
BBOO	**Buckleboo**	**43.29**	**241**	P	**P**	**17 52 36.8**	**+0.8**
WR0	**Warramunga Arr**	**44.28**	**259**	P	**P**	**17 52 43.0**	**-0.9**
WR0				IAmb	IAmb	17 52 44.0	
	comp=Z,21nm,1.4s						
WB0	**Warramunga Arr**	**44.44**	**260**	P	**P**	**17 52 43.9**	**-1.2**
WB2	**Warramunga Arr**	**44.46**	**259**	P	**P**	**17 52 44.7**	**-0.6**
	baz=45						
WB2	**Warramunga Arr**	**44.46**	**259**	P	**P**	**17 52 44.1**	**-1.2**
WRAB	**Tennant Creek**	**44.46**	**259**	P	**P**	**17 52 44.6**	**-0.7**
WRA	**Warramunga Arr**	**44.47**	**259**	P	**P**	**17 52 44.5**	**-0.8**
	comp=Z,11nm,0.5s,baz=94,slow=6.8,SNR=126						
WRA				PcP	**PcP**	**17 54 16.9**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=104,slow=2.6,SNR=6.1						
WRA				ScP	**ScP**	**17 57 15.5**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=87,slow=4.2,SNR=2.5						
WRA				S	**S**	**17 58 36.4**	**-3.0**
	comp=Z,0.6nm,0.9s,baz=94,slow=13,SNR=2.4						
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**44.47**	**259**	P	**P**	**17 52 43.6**	**-1.8**
AS31	**Alice Springs**	**44.64**	**254**	P	**P**	**17 52 46.3**	**-0.3**
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**17 52 46.7**	**0.0**
	comp=Z,132nm,0.6s,baz=88,slow=8.2,SNR=1465						
ASAR				PcP	**PcP**	**17 54 17.6**	**+0.9**
	comp=Z,3.9nm,0.6s,baz=91,slow=4.1,SNR=5.3						
ASAR				ScP	**ScP**	**17 57 17.0**	**+2.7**
	comp=Z,0.6nm,0.7s,baz=96,slow=4.7,SNR=3.0						
ASAR				S	**S**	**17 58 39.8**	**-1.9**
	comp=Z,1.7nm,1.1s,baz=90,slow=16,SNR=5.9						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**17 52 46.2**	**-0.5**
MULG	**Mulgathing**	**44.68**	**245**	P	**P**	**17 52 47.3**	**+0.5**
SMPI	**Sarmi**	**44.75**	**286**	P	**P**	**17 52 47.9**	**+0.4**
	comp=Z,26nm,0.8s						
SRPI	**Serui, Papua**	**47.07**	**285**	P	**P**	**17 53 06.5**	**+1.4**
	comp=Z,21nm,0.6s						
KDU	**Kakadu**	**47.38**	**269**	P	**P**	**17 53 07.1**	**-0.3**
	baz=48,SNR=28						
KDU	**Kakadu**	**47.38**	**269**	P	**P**	**17 53 07.1**	**-0.3**
GUMO	**Guam**	**47.69**	**308**	P	**P**	**17 53 09.7**	**0.0**
	comp=Z,102nm,0.8s,baz=72,slow=18,SNR=9.0						
	comp=Z,102nm,0.8s						
MTN	**Manton Dam**	**48.62**	**268**	P	**P**	**17 53 16.1**	**-0.6**
	baz=49,SNR=14						
MTN	**Manton Dam**	**48.62**	**268**	P	**P**	**17 53 15.8**	**-0.8**
MTN	**Manton Dam**	**48.62**	**268**	P	**P**	**17 53 16.3**	**-0.4**
WRKA	**Warakurna**	**49.70**	**252**	P	**P**	**17 53 24.8**	**+0.3**
	baz=50,SNR=52						
WRKA	**Warakurna**	**49.70**	**252**	P	**P**	**17 53 24.8**	**+0.3**
FORT	**Forrest**	**49.88**	**245**	P	**P**	**17 53 25.6**	**-0.2**
	baz=50,SNR=28						
FORT	**Forrest**	**49.88**	**245**	P	**P**	**17 53 25.2**	**-0.5**
FORT	**Forrest**	**49.88**	**245**	P	**P**	**17 53 25.5**	**-0.2**
KNRA	**Kununurra**	**50.32**	**264**	P	**P**	**17 53 28.9**	**-0.2**
	baz=50,SNR=33						
KNRA	**Kununurra**	**50.32**	**264**	P	**P**	**17 53 28.3**	**-0.8**
KNRA	**Kununurra**	**50.32**	**264**	P	**P**	**17 53 29.0**	**-0.1**
SWI	**Sorong**	**52.05**	**283**	P	**P**	**17 53 41.8**	**+0.1**
	comp=Z,1μmcomp=Z,119nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.87**	**261**	P	**P**	**17 53 47.7**	**+0.3**
	comp=Z,3.6nm,0.4s,baz=72,slow=4.0,SNR=12						
	comp=Z,3.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**52.87**	**261**	P	**P**	**17 53 48.0**	**+0.6**
	baz=53,SNR=3.5						
AAI	**Ambon**	**53.93**	**279**	P	**P**	**17 53 55.3**	**+0.3**
	comp=Z,53nm,0.8s						
LBMI	**Labuha**	**55.63**	**282**	P	**P**	**17 54 06.2**	**-0.7**
	comp=Z,448nmcomp=Z,38nm,1.0s						
TNTI	**Ternate**	**56.27**	**283**	P	**P**	**17 54 11.9**	**+0.6**
	comp=Z,493nmcomp=Z,41nm,0.9s						
TNTI	**Ternate**	**56.27**	**283**	P	**P**	**17 54 10.9**	**-0.4**
PSA00	**Pilbara Seismi**	**57.76**	**255**	P	**P**	**17 54 19.9**	**-1.5**
PSA00				IAmb	IAmb	17 54 22.1	
	comp=Z,13nm,0.9s						
MBWA	**Marble Bar**	**57.92**	**256**	P	**P**	**17 54 22.2**	**-0.2**
MBWA				IAmb	IAmb	17 54 49.0	
	comp=Z,35nm,1.3s						
MEEK	**Meekatharra**	**58.30**	**249**	P	**P**	**17 54 24.7**	**-0.2**
	baz=58,SNR=3.9						
EDFI	**Ende, Flores**	**58.61**	**271**	P	**P**	**17 54 27.9**	**+0.6**
	comp=Z,18nm,0.9s						
KLBR	**Kellerberrin**	**58.70**	**243**	P	**P**	**17 54 27.4**	**-0.1**
	baz=59,SNR=7.7						
KLBR	**Kellerberrin**	**58.70**	**243**	P	**P**	**17 54 27.2**	**-0.4**
BLDU	**Ballidu**	**59.65**	**245**	P	**P**	**17 54 33.8**	**-0.1**
	baz=60						
MORW	**Morawa**	**60.35**	**246**	P	**P**	**17 54 38.6**	**+0.1**
	baz=61,SNR=3.7						
KAPI	**Kappang**	**61.51**	**274**	P	**P**	**17 54 45.9**	**-0.5**
	comp=Z,5.8nm,0.6s,baz=115,slow=4.5,SNR=4.2						
	comp=Z,5.8nm,0.6s						
GIRL	**Giralia**	**62.75**	**253**	P	**P**	**17 54 55.3**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=63,SNR=3.6						
JYT	**Yasato**	**66.40**	**324**	P	**P**	**17 55 17.2**	**+0.4**
MTKI	**Muara Teweh, K**	**67.38**	**277**	P	**P**	**17 55 20.3**	**-3.1**
JGF	**Kuroka**	**67.57**	**322**	P	**P**	**17 55 24.1**	**0.0**
JGF				IAmb	IAmb	17 55 24.8	
	comp=Z,6.8nm,0.8s						
MJAR	**Matsushiro Arr**	**67.74**	**323**	P	**P**	**17 55 24.7**	**-0.4**
	comp=Z,4.3nm,0.6s,baz=156,slow=6.9,SNR=16						
	comp=Z,4.3nm,0.6s						
MAJO	**Matsushiro**	**67.74**	**323**	P	**P**	**17 55 24.7**	**-0.4**
MAJO				IAmb	IAmb	17 55 25.7	
	comp=Z,7.7nm,0.7s						
JSD	**Sado**	**68.78**	**325**	P	**P**	**17 55 31.4**	**+0.1**
JSD				IAmb	IAmb	17 55 32.4	
	comp=Z,11nm,0.7s						
JSU	**Suzuyama**	**69.25**	**315**	P	**P**	**17 55 34.7**	**+0.4**
JSU				IAmb	IAmb	17 55 35.3	
	comp=Z,5.6nm,0.7s						
JHS	**Saijyo**	**69.72**	**319**	P	**P**	**17 55 37.2**	**+0.1**
SBUM	**Sibu**	**71.02**	**279**	P	**P**	**17 55 46.1**	**+0.9**
SBUM				IAmb	IAmb	17 55 46.8	
	comp=Z,6.5nm,0.8s						
NACB	**Ninganchiao**	**71.73**	**304**	P	**P**	**17 55 49.2**	**+0.1**
TPUB	**Ta-pu**	**72.07**	**303**	P	**P**	**17 55 50.8**	**-0.3**
QSPA	**South Pole Qui**	**72.22**	**180**	P	**P**	**17 55 52.3**	**+0.9**
QSPA				IAmb	IAmb	17 55 53.3	
	comp=Z,5.5nm,0.8s						
KSM	**Kuching**	**72.50**	**277**	P	**P**	**17 55 55.0**	**+1.2**
PEA0B	**Petropavlovsk-**	**73.56**	**345**	P	**P**	**17 55 58.9**	**0.0**
PEA0B				IAmb	IAmb	17 56 04.7	
	comp=Z,16nm,1.3s						
PETK	**Petropavlovsk-**	**73.56**	**345**	P	**P**	**17 55 59.1**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=110,slow=8.1,SNR=5.8						
	comp=Z,3.0nm,0.7s						
PETK	**Petropavlovsk-**	**73.56**	**345**	P	**P**	**17 55 58.5**	**-0.4**
KSRS	**Korea Array**	**74.53**	**318**	P	**P**	**17 56 05.8**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=128,slow=6.5,SNR=15						
	comp=Z,2.0nm,0.7s						
KSAR	**Wonju Array Be**	**74.55**	**318**	P	**P**	**17 56 05.4**	**+0.6**
SEHB	**SEOHWA**	**74.82**	**319**	P	**P**	**17 56 06.9**	**+0.5**
USRK	**Ussuriysk Ar.**	**76.45**	**326**	P	**P**	**17 56 16.6**	**+1.3**
	comp=Z,2.0nm,0.6s,baz=88,slow=7.6,SNR=4.7						
	comp=Z,2.0nm,0.6s						
SAO	**San Andreas Ge**	**76.49**	**44**	P	**P**	**17 56 16.4**	**+0.7**
SAO				IAmb	IAmb	17 56 17.5	
	comp=Z,8.2nm,0.9s						
NJ2	**Nanjing**	**77.75**	**310**	*e*P	**P**	**17 56 21.4**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ISA	**Isabella, Lake**	**77.89**	**46**	P	**P**	**17 56 23.6**	**+0.2**
ISA				IAmb	IAmb	17 56 25.2	
	comp=Z,7.0nm,0.9s						
CMB	**Columbia Colle**	**77.91**	**43**	P	**P**	**17 56 23.4**	**0.0**
MDJ	**Mudanjiang**	**78.02**	**325**	P	**P**	**17 56 24.2**	**+0.4**
MDJ				IAmb	IAmb	17 56 26.0	
	comp=Z,8.9nm,0.7s						
MDJ	**Mudanjiang**	**78.02**	**325**	P	**P**	**17 56 25.2**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,39nm,6.8s						
YUH	**Yuha Desert**	**78.14**	**50**	P	**P**	**17 56 25.6**	**+0.9**
MDPB	**Devils Postpil**	**78.55**	**44**	P	**P**	**17 56 26.4**	**-0.7**
PNTR	**Pine Nut**	**79.00**	**43**	P	**P**	**17 56 29.9**	**+0.5**
PNTR				IAmb	IAmb	17 56 31.2	
	comp=Z,11nm,0.8s						
GLA	**Glamis**	**79.14**	**50**	P	**P**	**17 56 30.1**	**+0.1**
GLA				IAmb	IAmb	17 56 32.4	
	comp=Z,6.8nm,1.0s						
QSM	**Queen of Sheba**	**79.16**	**47**	P	**P**	**17 56 30.2**	**+0.2**
YERR	**Yerington**	**79.18**	**43**	P	**P**	**17 56 30.3**	**0.0**
LHV	**Little Huntoon**	**79.26**	**44**	P	**P**	**17 56 31.2**	**+0.7**
LCH	**Last Change Ra**	**79.29**	**45**	P	**P**	**17 56 30.4**	**-0.4**
GWY	**Greenwater Val**	**79.41**	**47**	P	**P**	**17 56 31.3**	**-0.3**
RYN	**Ryan**	**79.45**	**44**	P	**P**	**17 56 31.0**	**-0.7**
PAHR	**Pah Rah Range**	**79.49**	**42**	P	**P**	**17 56 31.0**	**-0.8**
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**17 56 32.8**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=226,slow=8.4,SNR=20						
NVAR				pP	**pP**	**17 58 29.3**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=222,slow=7.6,SNR=3.3						
	comp=Z,4.2nm,0.8s						
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**17 56 32.2**	**+0.2**
NV11	**Mina Array Sit**	**79.59**	**44**	P	**P**	**17 56 32.0**	**-0.4**
O18K	**Koktuh Hills**	**79.72**	**12**	P	**P**	**17 56 31.5**	**-0.9**
O18K				IAmb	IAmb	17 56 32.9	
	comp=Z,17nm,1.1s						
J04D	**Umpqua Nationa**	**79.83**	**38**	P	**P**	**17 56 34.1**	**+0.5**
J04D				IAmb	IAmb	17 56 35.3	
	comp=Z,15nm,0.7s						
KVN	**Kaiserville**	**79.96**	**43**	P	**P**	**17 56 34.7**	**+0.3**
TPH	**Tonopah**	**80.02**	**45**	P	**P**	**17 56 35.3**	**+0.5**
TPH				IAmb	IAmb	17 56 36.0	
	comp=Z,18nm,1.0s						
MOD	**Modoc Plateau**	**80.14**	**40**	P	**P**	**17 56 35.6**	**+0.4**
MOD				IAmb	IAmb	17 56 36.7	
	comp=Z,5.0nm,0.8s						
K05A	**Summer Lake**	**80.25**	**39**	P	**P**	**17 56 36.8**	**+0.9**
K05A				IAmb	IAmb	17 56 37.7	
	comp=Z,9.1nm,1.0s						
SHPR	**Sheep Range**	**80.62**	**47**	P	**P**	**17 56 38.8**	**+1.0**
H04A	**Detroit Lake**	**80.64**	**37**	P	**P**	**17 56 37.5**	**-0.1**
H04A				IAmb	IAmb	17 56 38.2	
	comp=Z,4.8nm,0.7s						
W13A	**Hualapai Mount**	**80.82**	**49**	P	**P**	**17 56 39.7**	**+0.7**
E03A	**Lebam**	**80.99**	**35**	P	**P**	**17 56 39.9**	**+0.6**
E03A				IAmb	IAmb	17 57 07.4	
	comp=Z,18nm,1.1s						
PRN	**Pahroc Range**	**81.15**	**46**	P	**P**	**17 56 41.7**	**+1.2**
PRN				IAmb	IAmb	17 56 42.7	
	comp=Z,6.1nm,0.9s						
R11A	**Troy Canyon, C**	**81.27**	**45**	P	**P**	**17 56 41.3**	**+0.1**
BMN	**Battle Mountai**	**81.27**	**43**	P	**P**	**17 56 41.8**	**+0.7**
BMN				IAmb	IAmb	17 56 42.4	
	comp=Z,4.0nm,0.7s						
WVOR	**Wild Horse Val**	**81.46**	**40**	P	**P**	**17 56 42.2**	**+0.2**
WVOR				IAmb	IAmb	17 56 43.8	
	comp=Z,8.0nm,1.1s						
TUC	**Tucson**	**81.79**	**52**	P	**P**	**17 56 45.0**	**+1.1**
TUC				IAmb	IAmb	17 56 46.5	
	comp=Z,4.5nm,0.9s						
I07A	**Izee**	**81.86**	**39**	P	**P**	**17 56 44.8**	**+0.8**
I07A				IAmb	IAmb	17 56 45.8	
	comp=Z,6.5nm,0.9s						
J08A	**Circle Bar Ran**	**82.07**	**40**	P	**P**	**17 56 45.6**	**+0.5**
J08A				IAmb	IAmb	17 56 46.3	
	comp=Z,4.7nm,0.8s						
LCMT	**Little Creek M**	**82.21**	**47**	P	**P**	**17 56 46.4**	**+0.5**
IPM	**Ipoh**	**82.24**	**277**	P	**P**	**17 56 46.9**	**+0.5**
BELA	**Belgrano 2**	**82.26**	**173**	P	**P**	**17 56 46.0**	**+0.6**
BELA				IAmb	IAmb	17 56 46.7	
	comp=Z,5.2nm,0.8s						
X16A	**Lo Mia Camp, P**	**82.27**	**50**	P	**P**	**17 56 47.8**	**+1.5**
X16A				IAmb	IAmb	17 56 48.8	
	comp=Z,7.4nm,1.0s						
CCUT	**Cedar City**	**82.39**	**47**	P	**P**	**17 56 47.8**	**+0.9**
PSUT	**Pine Spring**	**82.53**	**46**	P	**P**	**17 56 47.7**	**+0.1**
U15A	**North Rim**	**82.60**	**48**	P	**P**	**17 56 49.2**	**+1.1**
U15A				IAmb	IAmb	17 56 50.4	
	comp=Z,8.6nm,0.8s						
SZCU	**Shurtz Canyon**	**82.60**	**47**	P	**P**	**17 56 48.4**	**+0.4**
SZCU				IAmb	IAmb	17 56 50.1	
	comp=Z,5.5nm,1.1s						
ELK	**Elko**	**82.72**	**43**	P	**P**	**17 56 49.2**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=246,slow=8.3,SNR=9.0						
	comp=Z,2.8nm,0.8s						
ELK	**Elko**	**82.72**	**43**	P	**P**	**17 56 48.7**	**+0.1**
WUAZ	**Wupatki**	**82.83**	**49**	P	**P**	**17 56 49.9**	**+0.8**
WUAZ				IAmb	IAmb	17 56 51.4	
	comp=Z,5.6nm,0.9s						
G08A	**Pilot Rock**	**82.86**	**38**	P	**P**	**17 56 49.1**	**+0.1**
G08A				IAmb	IAmb	17 56 50.5	
	comp=Z,10nm,1.4s						
HAWA	**Hanford**	**83.15**	**37**	P	**P**	**17 56 50.5**	**+0.3**
HAWA				IAmb	IAmb	17 56 51.8	
	comp=Z,11nm,1.2s						
MTPU	**Mount Pierson**	**83.44**	**47**	P	**P**	**17 56 54.0**	**+1.6**
MTPU				IAmb	IAmb	17 56 55.0	
	comp=Z,4.7nm,1.1s						
MVU	**Marysvale**	**83.64**	**46**	P	**P**	**17 56 54.4**	**+1.2**
SEY	**Seymchan**	**83.66**	**347**	P	**P**	**17 56 52.1**	**-0.2**
	comp=Z,5.6nm,0.6s,baz=162,slow=4.7,SNR=28						
	comp=Z,5.6nm,0.6s						
RPSI	**Rantau Prapat**	**83.67**	**275**	P	**P**	**17 56 53.0**	**-0.6**
MFID	**Camas Ranch**	**83.73**	**41**	P	**P**	**17 56 53.6**	**+0.2**
MFID				IAmb	IAmb	17 56 55.0	
	comp=Z,3.5nm,0.8s						
MAW	**Mawson**	**83.87**	**200**	P	**P**	**17 56 54.8**	**+1.3**
	comp=Z,2.9nm,0.6s,baz=136,slow=2.5,SNR=7.7						
	comp=Z,2.9nm,0.6s						
MAW	**Mawson**	**83.87**	**200**		**P**	**17 56 54.9**	**+1.4**
ENH	**Enshi**	**84.08**	**304**	P	**P**	**17 56 56.8**	**+1.5**
B08A	**Colville Reser**	**84.38**	**35**	P	**P**	**17 56 55.9**	**-0.4**
B08A				IAmb	IAmb	17 56 57.0	
	comp=Z,3.0nm,0.8s						
C09A	**Chrisman Ranch**	**84.65**	**36**	P	**P**	**17 56 57.7**	**+0.1**
C09A				IAmb	IAmb	17 56 58.8	
	comp=Z,8.8nm,1.2s						
HLID	**Hailey**	**84.69**	**41**	P	**P**	**17 56 59.1**	**+1.0**
HVU	**Hansel Valley**	**84.85**	**43**	P	**P**	**17 56 59.5**	**+0.6**
HVU				IAmb	IAmb	17 57 00.7	
	comp=Z,8.0nm,1.5s						
SRU	**San Rafael Swe**	**85.09**	**46**	P	**P**	**17 57 00.5**	**+0.3**
XLT	**XiLinHaoTe**	**85.58**	**319**	*e*P	**P**	**17 57 02.1**	**-0.2**
XLT				pmax	pmax		
	comp=Z,11nm,0.9s						
XLT				pmax	pmax		
	comp=Z,80nm,5.0s						
ILAR	**Eielson Array**	**85.85**	**13**	P	**P**	**17 57 02.2**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=221,slow=5.6,SNR=7.5						
	comp=Z,0.4nm,0.4s						
TX31	**Lajitas Ar. Si**	**86.10**	**58**	P	**P**	**17 57 06.9**	**+1.8**
TX32	**Lajitas Array**	**86.10**	**58**	P	**P**	**17 57 07.0**	**+1.9**
TX32				IAmb	IAmb	17 57 08.1	
	comp=Z,5.5nm,1.0s						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**17 57 07.0**	**+1.9**
	comp=Z,3.2nm,0.8s,baz=217,slow=6.1,SNR=40						
	comp=Z,3.2nm,0.8s						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**17 57 07.0**	**+1.9**
ANMO	**Albuquerque**	**86.19**	**52**	P	**P**	**17 57 06.2**	**+0.6**
MCMT	**McKenzie Canyo**	**86.30**	**41**	P	**P**	**17 57 06.8**	**+1.0**
REDW	**Red Top Meadow**	**86.85**	**43**	P	**P**	**17 57 08.6**	**+0.1**
REDW				IAmb	IAmb	17 57 10.5	
	comp=Z,6.8nm,1.2s						
FXWY	**Fox Creek**	**86.87**	**42**	P	**P**	**17 57 09.5**	**+0.9**
FXWY				IAmb	IAmb	17 57 11.4	
	comp=Z,4.1nm,1.2s						
IMW	**Indian Meadow**	**87.05**	**42**	P	**P**	**17 57 10.3**	**+0.9**
IMW				IAmb	IAmb	17 57 11.5	
	comp=Z,3.7nm,0.8s						
S22A	**4UR Ranch, Cre**	**87.09**	**49**	P	**P**	**17 57 10.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**87.09**	**315**	*e*P	**P**	**17 57 12.5**	**+3.0**
YHL	**Hebgen Lake**	**87.34**	**41**	P	**P**	**17 57 12.5**	**+1.6**
YHL				IAmb	IAmb	17 57 14.1	
	comp=Z,15nm,1.5s						
PD31	**Pinedale Array**	**87.42**	**43**	P	**P**	**17 57 10.8**	**-0.3**
PDAR	**Pinedale Array**	**87.42**	**43**	P	**P**	**17 57 11.7**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=205,slow=3.1,SNR=14						
	comp=Z,1.3nm,0.5s						
PDAR	**Pinedale Array**	**87.42**	**43**	P	**P**	**17 57 11.3**	**+0.1**
BOZ	**Bozeman (W)**	**87.42**	**40**	P	**P**	**17 57 11.2**	**+0.1**
KMI	**Kunming**	**87.64**	**297**	⇑P	**P**	**17 57 14.8**	**+2.2**
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**88.69**	**290**	P	**P**	**17 57 19.4**	**+2.0**
	comp=Z,4.7nm,0.9s,baz=104,slow=2.8,SNR=15						
	comp=Z,4.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**88.69**	**290**	P	**P**	**17 57 18.0**	**+0.6**
PZH	**PanZhiHua**	**88.97**	**298**	P	**P**	**17 57 20.0**	**+1.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
YAK	**Yakutsk**	**89.44**	**338**	P	**P**	**17 57 22.0**	**+2.3**
	comp=Z,14nm,0.4s,baz=237,slow=1.1,SNR=8.7						
	comp=Z,14nm,0.4s						
YAK	**Yakutsk**	**89.44**	**338**	P	**P**	**17 57 22.2**	**+2.4**
YAK				IAmb	IAmb	17 57 23.6	
	comp=Z,64nm,1.2s						
YAK	**Yakutsk**	**89.44**	**338**	P	**P**	**17 57 22.2**	**+2.4**
VNA3	**Neumayer Olymp**	**90.83**	**176**	P	**P**	**17 57 26.9**	**+0.7**
VNA2	**Neumayer--Watz**	**91.26**	**177**	P	**P**	**17 57 28.1**	**-0.2**
	baz=176,slow=5.0						
VNA1	**Neumayer--Stat**	**91.49**	**177**	P	**P**	**17 57 30.3**	**+1.0**
SONM	**Songino Array**	**93.38**	**319**	P	**P**	**17 57 39.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=138,slow=4.8,SNR=3.7						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**126.21**	**350**	PKP	**PKPdf**	**18 03 21.2**	**+0.2**
	comp=Z,5.8nm,1.2s,baz=30,slow=4.2,SNR=1.9						
BELG	**Belogornoye**	**130.12**	**325**	PKP	**PKPdf**	**18 03 27.4**	**-1.5**
	comp=Z,7.5nm,0.7s,baz=336,slow=12,SNR=4.6						
FINES	**FINESS Array B**	**133.07**	**344**	PKhKP	PKPpre	18 03 28.0	
	comp=Z,3.3nm,1.1s,baz=5.7,slow=2.8,SNR=1.8						
FINES				PKP	**PKPdf**	**18 03 33.7**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=64,slow=4.4,SNR=4.2						
AKASG	**Malin Array Be**	**140.41**	**332**	PKhKP	PKPpre	18 03 41.4	
	comp=Z,0.5nm,0.4s,baz=42,slow=4.4,SNR=5.6						
AKASG				PKP	**PKPdf**	**18 03 49.1**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=45,slow=2.5,SNR=3.0						
SORM	**Soroca**	**142.64**	**330**	⇑P	**PKPdf**	**18 03 48.9**	**-3.2**
BNN	**Bunyan**	**143.47**	**312**		PKPab	18 03 52.6	-0.1
LODK	**Lodwar**	**143.78**	**251**		PKPab	18 03 55.7	+1.1
VASR	**Vaslui**	**143.95**	**329**	⇑P	PKPbc	18 03 54.4	+0.5
BUR08	**Bucovina Ar. S**	**144.45**	**332**	PKPdf	**PKPab**	**18 03 56.5**	**+0.3**
BURAR	**Bucovina Array**	**144.47**	**332**	⇑P	**PKPab**	**18 03 56.9**	**+0.7**
BURAR	**Bucovina Array**	**144.47**	**332**	PKPdf	PKPbc	18 03 56.2	+0.6
BIZ	**Bicaz**	**144.56**	**330**	⇑P	**PKPab**	**18 03 57.0**	**+0.5**
BR131	**Keskin Array S**	**144.60**	**315**	PKPdf	**PKPdf**	**18 03 56.4**	**+0.3**
BRTR	**Keskin Array B**	**144.60**	**315**	PKP	PKPbc	18 03 56.8	+0.4
	comp=Z,7.0nm,0.8s,baz=106,slow=2.7,SNR=20						
BRTR	**Keskin Array B**	**144.60**	**315**	PKPdf	**PKPdf**	**18 03 56.2**	**+0.2**
TESR	**Tescani**	**144.60**	**329**	⇑P	**PKPab**	**18 03 56.8**	**+0.2**
KOLS	**Kolonicke sedl**	**144.66**	**336**	*e*PKP	**PKPab**	**18 03 57.2**	**+0.4**
CFR	**Carcaliu**	**144.78**	**327**	⇑P	PKPbc	18 03 56.9	+0.4
TPGR	**Topolog**	**144.84**	**326**	⇓P	**PKPab**	**18 03 57.8**	**+0.1**
NIE	**Niedzica**	**144.99**	**338**	*e*PKP	**PKPab**	**18 03 58.4**	**+0.3**
CRVS	**Cervenica-Dubn**	**145.00**	**337**	*e*PKP	**PKPab**	**18 03 58.2**	**+0.1**
VRI	**Vrincioaia**	**145.02**	**329**	⇓P	**PKPbc**	**18 03 57.9**	**+0.6**
ANTO	**Ankara**	**145.10**	**316**	⇓P	**PKPbc**	**18 03 58.6**	**+0.8**
HARR	**Harsova**	**145.21**	**326**	⇓P	**PKPbc**	**18 03 58.1**	**+0.3**
OSTC	**Ostas**	**145.27**	**343**	*e*PKP	**PKPbc**	**18 03 58.6**	**+0.8**
CLL	**Collm**	**145.35**	**347**		**PKPbc**	**18 03 58.5**	**+0.4**
CLL	**Collm**	**145.35**	**347**	*i* PKPbc	**PKPbc**	**18 03 58.4**	**+0.4**
	comp=Z,12nm,0.7s						
UPC	**Upice**	**145.37**	**344**	*e*PKP	**PKPbc**	**18 03 58.7**	**+0.6**
DPC	**Dobruska-Polom**	**145.43**	**343**	*e*PKP	**PKPbc**	**18 03 59.3**	**+1.0**
KRLC	**Kraliky**	**145.54**	**342**	*e*PKP	**PKPbc**	**18 03 59.0**	**+0.3**
BRG	**Berggiesshubel**	**145.55**	**346**	*e*PKP	**PKPdf**	**18 03 54.9**	**-2.2**
BRG				Amp		18 03 56.3	
	comp=Z,3.4nm,0.8s						
BRG				*i* x	x	18 03 59.7	
BRG				Amp		18 04 00.9	
	comp=Z,12nm,1.3s						
MORC	**Moravsky Berou**	**145.58**	**341**	⇓P	**PKPbc**	**18 03 58.9**	**0.0**
MORC	**Moravsky Berou**	**145.58**	**341**	PKPab	**PKPbc**	**18 03 59.4**	**+0.6**
MORC	**Moravsky Berou**	**145.58**	**341**	*e*PKP	**PKPbc**	**18 03 59.4**	**+0.6**
DOPR	**Dopca**	**145.60**	**330**	⇑P	**PKPab**	**18 04 00.5**	**-0.1**
MLR	**Muntele Rosu**	**145.68**	**329**		**PKPbc**	**18 03 59.2**	**-0.2**
PVCC	**Panska Ves**	**145.72**	**345**	*e*PKP	**PKPab**	**18 04 00.4**	**-0.4**
VOIR		**146.15**	**330**	⇑P	**PKiKP**	**18 04 03.4**	**+0.5**
DRGR		**146.19**	**333**	⇑P	**PKPbc**	**18 04 01.3**	**+0.6**
PRU	**Pruhonice**	**146.23**	**345**	*e*PKP	**PKPbc**	**18 04 01.1**	**+0.6**
VRAC	**Vranov**	**146.28**	**342**	*e*PKP	**PKPbc**	**18 04 01.5**	**+0.8**
VYHS	**Vyhne**	**146.28**	**339**	*e*PKP	**PKPbc**	**18 04 01.9**	**+1.1**
JAVC	**Velka Javorina**	**146.35**	**340**	*e*PKP	**PKiKP**	**18 04 02.9**	**-0.3**
ARR	**Arges**	**146.40**	**330**	⇑P	**PKiKP**	**18 04 03.3**	**-0.1**
KRUC	**Moravsky**	**146.56**	**342**	*e*PKP	**PKPbc**	**18 04 02.2**	**+0.7**
CSS	**Mathiatis**	**146.89**	**307**		**PKPbc**	**18 04 02.3**	**-0.5**
SIRR	**Siria**	**147.05**	**334**	⇓P	**PKPbc**	**18 04 03.7**	**+0.7**
MEM	**Membach**	**147.09**	**355**	*d*PKPdf	**PKPdf**	**18 03 58.8**	**-0.9**
MEM				*d*PKiKP	**PKiKP**	**18 04 04.1**	**-0.5**
BSTI	**Sart Tilman**	**147.16**	**355**	*d*PKP	**PKiKP**	**18 04 05.4**	**+0.7**
GZR	**Gura Zlata**	**147.25**	**332**	⇑P	**PKPbc**	**18 04 04.2**	**+0.6**
KHC	**Kasperske Hory**	**147.26**	**345**	*e*PKP	**PKPbc**	**18 04 03.9**	**+0.5**
CKRC	**Cesky Krumlov**	**147.36**	**344**	*e*PKP	**PKPbc**	**18 04 04.6**	**+1.0**
GEC2	**GERESS Array S**	**147.49**	**345**		**PKPbc**	**18 04 04.3**	**+0.2**
GERES	**GERESS Array B**	**147.49**	**345**	PKPbc	**PKPbc**	**18 04 04.7**	**+0.6**
	comp=Z,3.6nm,0.6s,baz=26,slow=3.1,SNR=35						
BZS	**Buzias**	**147.59**	**333**	⇑P	**PKPbc**	**18 04 04.8**	**+0.6**
DOU	**Dourbes**	**147.71**	**356**	*d*PKiKP	**PKPbc**	**18 04 05.3**	**+0.8**
CONA	**Conrad Observa**	**147.74**	**342**	*e*P	**PKPbc**	**18 04 05.7**	**+1.0**
	comp=Z,5.4nm,0.6s						
HERR	**Herculane**	**147.81**	**331**	⇑P	**PKPbc**	**18 04 05.2**	**+0.3**
RONA	**Rosalia, Austr**	**147.81**	**341**	*i* P	**PKiKP**	**18 04 06.0**	**-0.2**
	comp=Z,5.6nm,0.7s,SNR=6.1						
WLF	**Walferdange**	**148.02**	**354**	*d*PKiKP	**PKiKP**	**18 04 06.4**	**-0.1**
BIOA	**Bad Ischl, Aus**	**148.58**	**344**	*e*P	**PKPab**	**18 04 13.6**	**+1.0**
	comp=Z,6.3nm,0.9s						
BLKB	**Belogradchik**	**148.64**	**330**	⇑P	**PKPbc**	**18 04 07.5**	**+0.5**
FRGS	**Fruska Gora**	**148.72**	**335**	⇓P	**PKPbc**	**18 04 08.0**	**+0.9**
BOVS	**Bovan**	**149.09**	**331**	⇑P	**PKPbc**	**18 04 08.2**	**+0.1**
SOKA	**Soboth**	**149.11**	**342**	*e*P	**PKPbc**	**18 04 08.1**	**-0.1**
	comp=Z,6.3nm,1.2s						
KBA	**Koelnbreinsper**	**149.22**	**344**	*e*P	**PKPbc**	**18 04 08.8**	**+0.3**
	comp=Z,3.8nm,0.5s						
WATA	**Walderalm**	**149.41**	**346**	*e*P	**PKPbc**	**18 04 09.3**	**+0.4**
	comp=Z,3.0nm,0.5s						
WTTA	**Wattenberg**	**149.47**	**346**	*i* P	**PKPbc**	**18 04 09.6**	**+0.5**
	comp=Z,8.0nm,0.6s,SNR=6.4						
DIVS	**Divibare**	**149.50**	**333**		**PKPbc**	**18 04 09.6**	**+0.4**
MOTA	**Moosalm**	**149.51**	**347**	*e*P	**PKPbc**	**18 04 09.5**	**+0.3**
	comp=Z,2.4nm,0.5s						
MYKA	**Terra Mystica**	**149.55**	**343**	*e*P	**PKPbc**	**18 04 09.0**	**-0.2**
	comp=Z,4.1nm,0.6s						
SQTA	**Sankt Quirin**	**149.60**	**347**	*e*P	**PKiKP**	**18 04 10.1**	**0.0**
	comp=Z,5.2nm,0.5s						
ABTA	**Abfaltersbach**	**149.74**	**345**	*i* P	**PKPbc**	**18 04 09.5**	**-0.1**
	comp=Z,2.7nm,0.6s,SNR=5.4						
DAVA	**Damuels**	**149.81**	**348**	*e*P	**PKPbc**	**18 04 09.8**	**-0.1**
	comp=Z,5.5nm,0.9s						
FETA	**Feichten**	**149.89**	**347**	*e*P	**PKPbc**	**18 04 09.5**	**-0.6**
	comp=Z,5.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**175.33**	**183**	PKP	**PKPdf**	**18 04 28.9**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=113,slow=0.9,SNR=4.3						
TORD				PKPab	**PKPab**	**18 06 10.2**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=158,slow=4.2,SNR=1.5						

BJI ***01*** *17:47:02.6±0.0, 1.̊94N×99.̊32E, h147km, mb4.3/20, mB4.8/10*

DJA ***01*** *17:47:04.7±0.1, 2˚N±2˚×9˚9E±˚, h134km±2km, M4.8/37, mb4.9/37, mB5.3/10, MLv4.8/19, Mw(mB)4.8/10, MwMwp7.7/1, Mwp7.3/1*

IDC ***01*** *17:47:04.2±0.5, 2.̊06N×99.̊10E, h139km±3km, mb4.0/28, mbtmp4.4/29, MS3.2/2, Error ellipse: s-maj=13.1km s-min=9.0km az=56.0*

NEIC ***01*** *17:47:04.9±1.4, 2.̊10N±0.̊05×99.̊11E±0.̊06, h140km±4km, mb4.7/43, Error ellipse: s-maj=8.9km s-min=7.1km az=96.0*

ISC 01 17:47:04.0±0.4**, 2.̊01N**±0.̊04×**99.̊06E**±0.̊04**, h143**km±3km**, h143**km**:pP-P, n154,** σ**1.̊48**/185**, mb4.5**/71**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	**Rantau Prapat**	**0.69**	**349**	Pn	**Pn**	**17 47 25.9**	**+0.2**
MNSI	**Mandailing Nat**	**1.31**	**157**	P	**Pn**	**17 47 32.5**	**+1.4**
MNSI				S	**Sn**	**17 47 53.5**	**+1.7**
TSI	**Tuntungan**	**1.56**	**341**	P	**Pn**	**17 47 34.2**	**+0.5**
TSI				S	**Sn**	**17 47 57.3**	**+0.8**
GSI	**Gunungsitoli**	**1.64**	**245**	Pn	**Pn**	**17 47 35.5**	**+0.9**
GSI	**Gunungsitoli**	**1.64**	**245**	P	**Pn**	**17 47 36.1**	**+1.4**
GSI				S	**Sn**	**17 47 58.7**	**+0.6**
KCSI	**Kotacane, Aceh**	**1.98**	**319**	P	**Pn**	**17 47 38.6**	**+0.1**
KCSI				S	**Sn**	**17 48 04.7**	**-0.3**
BKNI	**Bangkinang**	**2.59**	**130**		**Pn**	**17 47 47.4**	**+1.5**
BKNI	**Bangkinang**	**2.59**	**130**	P	**Pn**	**17 47 47.3**	**+1.3**
BKNI				S	**Sn**	**17 48 18.9**	**+0.6**
PPI	**Padang Panjang**	**2.79**	**151**	P	**Pn**	**17 47 49.5**	**+1.0**
PPI				S	**Sn**	**17 48 22.7**	**-0.1**
IPM	**Ipoh**	**3.14**	**39**	Pn	**Pn**	**17 47 53.6**	**+0.7**
SISI	**Saibi**	**3.32**	**180**	P	**Pn**	**17 47 54.2**	**-1.0**
KULM	**Kulim**	**3.62**	**26**	Pn	**Pn**	**17 47 58.9**	**-0.3**
LHMI	**Lhok Sumawe**	**3.83**	**327**	Pn	**Pn**	**17 48 02.5**	**+0.6**
LHMI	**Lhok Sumawe**	**3.83**	**327**	P	**Pn**	**17 48 02.1**	**+0.2**
KRJI	**Kerinci**	**4.73**	**149**	P	**Pn**	**17 48 14.6**	**+0.7**
MYKOM	**Kota Tinggi**	**4.79**	**93**	Pn	**Pn**	**17 48 14.2**	**-0.4**
PPSI	**Pulau Pagai**	**4.84**	**169**	P	**Pn**	**17 48 14.5**	**-0.7**
TPRI	**Tanjung Pinang**	**5.57**	**101**	P	**Pn**	**17 48 25.6**	**+0.7**
	0.3nm3µm72nm,1.0s						
JMBI	**JAMBI**	**5.84**	**128**	P	**Pn**	**17 48 31.6**	**+3.1**
DSRI	**Dabo**	**6.04**	**114**	P	**Pn**	**17 48 32.7**	**+1.4**
	0.1nm14nm,0.8s						
SRIT	**Nakonsritamara**	**6.56**	**5**	Pn	**Pn**	**17 48 37.8**	**-0.4**
KSI	**Kapahiang**	**6.64**	**148**	P	**Pn**	**17 48 39.4**	**0.0**
	1.5nm9µm277nm,0.8s						
MNAI	**Manna**	**7.43**	**148**	Pn	**Pn**	**17 48 49.0**	**-0.9**
MNAI	**Manna**	**7.43**	**148**	P	**Pn**	**17 48 48.8**	**-1.1**
	3.1nm467nm,0.6s						
PMBI	**Palembang**	**7.53**	**131**		**Pn**	**17 48 50.1**	**-1.0**
PMBI	**Palembang**	**7.53**	**131**	P	**Pn**	**17 48 50.9**	**-0.3**
	1.2nm220nm,0.5s						
PPBI	**Pangkal Pinang**	**8.20**	**120**	P	**Pn**	**17 48 59.4**	**-0.8**
LWLI	**Liwa**	**8.58**	**144**	P	**Pn**	**17 49 04.5**	**-0.9**
	3µm156nm,0.6s						
KLI	**Kotabumi**	**8.95**	**140**	P	**Pn**	**17 49 10.1**	**-0.2**
	123nm,0.6s						
KASI	**Kota Agung**	**9.25**	**144**	P	**Pn**	**17 49 11.1**	**-3.1**
KSM	**Kuching**	**11.25**	**93**	Pn	**Pn**	**17 49 43.3**	**+2.5**
CNJI	**Cibinong**	**12.27**	**139**	P	**Pn**	**17 49 54.3**	**+0.2**
	140nm,1.3s						
STKI	**Sintang**	**12.56**	**99**	P	**Pn**	**17 49 58.4**	**+0.5**
	22nm,0.9s						
SBUM	**Sibu**	**13.15**	**88**	Pn	**Pn**	**17 50 07.5**	**+1.9**
PBKI	**Pangkalan Bun**	**13.45**	**110**	P	**P**	**17 50 17.0**	**+3.4**
CM31	**Chiang Mai Arr**	**16.34**	**360**	P	**P**	**17 50 46.7**	**+1.0**
CM31				IAmb	IAmb	17 50 49.1	
	comp=Z,42nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.34**	**360**	P	**P**	**17 50 46.4**	**+0.7**
	comp=Z,24nm,1.0s,baz=191,slow=11,SNR=71						
CMAR				ScP	**ScP**	**17 58 51.2**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=201,slow=4.4,SNR=5.1						
CMAR	**Chiang Mai Arr**	**16.34**	**360**		**P**	**17 50 46.7**	**+1.0**
BBKI	**Banjar Baru**	**16.68**	**109**	P	**Pn**	**17 50 50.2**	**+0.6**
	comp=Z,38nm,1.0s						
CHTO	**Chiang Mai**	**16.70**	**360**		**P**	**17 50 49.2**	**-0.4**
SMKI	**Samarinda**	**18.31**	**97**	P	**P**	**17 51 08.1**	**+0.8**
	comp=Z,248nm,0.6s						
SRBI	**Singaraja**	**18.97**	**122**	P	**P**	**17 51 15.2**	**+0.6**
	comp=Z,116nm,1.0s						
PALK	**Pallekele**	**19.03**	**287**	S	**S**	**17 54 37.9**	**-5.9**
	comp=Z,13nm,1.0s,baz=84,slow=13,SNR=2.4						
MYLDM	**Lahad Datu**	**19.65**	**80**	P	**P**	**17 51 20.1**	**-1.8**
MYLDM				IAmb	IAmb	17 51 29.3	
	comp=Z,42nm,0.9s						
MPSI	**Mapaga**	**20.90**	**94**	P	**P**	**17 51 36.8**	**+1.5**
	comp=Z,28nm,1.0s						
TTSI	**Tana Toraja**	**21.35**	**104**	P	**P**	**17 51 42.5**	**+2.4**
	comp=Z,50nm,1.1s						
SPSI	**Sidrap Palu**	**21.53**	**106**	P	**P**	**17 51 44.1**	**+2.0**
	comp=Z,29nm,1.3s						
TOLI2	**Tolitoli**	**21.73**	**92**	P	**P**	**17 51 43.7**	**-0.5**
TOLI2				IAmb	IAmb	17 51 46.0	
	comp=Z,30nm,0.9s						
KAPI	**Kappang**	**21.82**	**109**	P	**P**	**17 51 46.2**	**+1.1**
	comp=Z,33nm,1.0s,baz=302,slow=5.9,SNR=7.0						
	comp=Z,33nm,1.0s						
KAPI	**Kappang**	**21.82**	**109**	P	**P**	**17 51 46.2**	**+1.1**
KAPI				IAmb	IAmb	17 51 48.3	
	comp=Z,29nm,0.9s						
BNSI	**Bone**	**21.97**	**107**	P	**P**	**17 51 48.4**	**+1.7**
	comp=Z,78nm,1.0s						
BKSI	**Bulukumba**	**22.26**	**109**	P	**P**	**17 51 50.7**	**+1.1**
	comp=Z,45nm,1.0s						
AZL	**Aizawl**	**22.46**	**345**	*e*P	**P**	**17 51 53.4**	**+1.8**
APSI	**Ampana**	**22.77**	**97**	P	**P**	**17 51 56.5**	**+2.0**
	comp=Z,1µmcomp=Z,102nm,1.2s						
BSSI	**Bau Bau, Buton**	**22.88**	**111**	P	**P**	**17 51 56.4**	**+0.9**
	comp=Z,39nm,0.8s						
MRSI	**Marisa**	**22.92**	**94**	P	**P**	**17 51 56.5**	**+0.6**
	comp=Z,570nmcomp=Z,69nm,1.0s						
WBSI	**Waikabubak, Su**	**23.32**	**120**	P	**P**	**17 51 58.5**	**-1.1**
LUWI	**Luwuk**	**23.90**	**97**	P	**P**	**17 52 04.5**	**-0.4**
SHL	**Shillong**	**24.42**	**344**	*e*P	**P**	**17 52 10.1**	**+0.5**
SHL				IAmb	IAmb	17 52 12.8	
	comp=Z,22nm,1.2s						
MOKO	**MOKOCHONG**	**24.56**	**350**	*e*P	**P**	**17 52 12.4**	**+1.5**
MOKO				IAmb	IAmb	17 52 13.9	
	comp=Z,65nm,0.9s						
MOKO				*i* pP	**pP**	**17 52 41.5**	**+1.0**
BBSI	**Bau Bau**	**24.63**	**108**	P	**P**	**17 52 12.6**	**+1.1**
	comp=Z,75nmcomp=Z,10nm,0.9s						
KMSI	**Cibinong**	**24.95**	**93**	P	**P**	**17 52 15.7**	**+1.3**
	comp=Z,60nm,0.9s						
BOK	**Bokaro**	**25.13**	**331**	*e*P	**P**	**17 52 18.8**	**+2.9**
BOK				IAmb	IAmb	17 52 22.0	
	comp=Z,12nm,0.9s						
TEZP	**TEZPUR**	**25.19**	**347**	*e*P	**P**	**17 52 16.2**	**-0.2**
TEZP				IAmb	IAmb	17 52 20.3	
	comp=Z,10nm,0.9s						
TEZP				*i* x	x	17 52 50.5	
ZIRO	**ZIRO**	**25.86**	**349**	*e*P	**P**	**17 52 23.7**	**+1.1**
ZIRO				IAmb	IAmb	17 52 27.0	
	comp=Z,24nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GTK	Tadong	27.09	339	*e*P	P	17 52 34.7	+1.0
NLAI	Namlea	28.51	100	P	P	17 52 48.4	+2.1
	comp=Z,30nm,0.6s						
LSA	Lhasa	28.55	345	P	P	17 52 47.9	+1.0
LSA				IAmb	IAmb	17 52 50.8	
	comp=Z,6.4nm,0.6s						
LBMI	Labuha	28.56	95	P	P	17 52 49.2	+2.5
	comp=Z,18nm,1.2s						
ENH	Enshi	29.80	18	P	P	17 52 55.3	-2.2
ENH				IAmb	IAmb	17 52 56.0	
	comp=Z,22nm,1.4s						
JHNI	Jhansi	30.57	321	*e*P	P	17 53 06.3	+1.9
SWI	Sorong	32.32	95	P	P	17 53 20.2	+0.3
	comp=Z,1µmcomp=Z,119nm,0.8s						
LGTI	Lohaghat	32.63	329	*e*P	P	17 53 24.6	+2.3
FITZ	Fitzroy Crossi	32.93	128	P	P	17 53 26.1	+1.0
	comp=Z,14nm,0.6s,baz=319,slow=6.0,SNR=34						
	comp=Z,14nm,0.6s						
FITZ	Fitzroy Crossi	32.93	128	P	P	17 53 25.6	+0.6
FITZ				IAmb	IAmb	17 53 27.0	
	comp=Z,13nm,0.7s						
XAN	Xi'an	33.17	15	P	P	17 53 24.4	-2.7
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2	Nanjing	35.22	30	*e*P	P	17 53 48.0	+3.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GTA	Gaotai	37.23	1	*e*P	P	17 54 01.9	0.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JOW	Kunigami	37.34	46	P	P	17 54 02.5	-0.3
	comp=Z,4.9nm,0.7s,baz=260,slow=29,SNR=4.9						
	comp=Z,4.9nm,0.7s						
NIL	Nilore	39.67	325	P	P	17 54 23.0	+0.7
NIL				IAmb	IAmb	17 54 25.2	
	comp=Z,16nm,1.0s						
SMPI	Sarmi	39.84	95	P	P	17 54 24.5	+0.6
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	40.87	124		P	17 54 32.9	+0.6
WB0				IAmb	IAmb	17 54 34.7	
	comp=Z,24nm,0.7s						
WRA	Warramunga Arr	40.91	124	P	P	17 54 33.1	+0.5
	comp=Z,30nm,0.7s,baz=301,slow=9.1,SNR=64						
WRA				PcP	PcP	17 56 29.7	-0.8
	comp=Z,0.4nm,0.3s,baz=309,slow=2.6,SNR=2.2						
WRA				ScP	ScP	18 00 05.1	-1.9
	comp=Z,1.4nm,0.9s,baz=306,slow=3.6,SNR=5.3						
WRA				S	S	18 00 27.1	-6.7
	comp=Z,2.5nm,1.1s,baz=293,slow=16,SNR=5.8						
WRA	Warramunga Arr	40.91	124	P	P	17 54 33.4	+0.7
WRAB	Tennant Creek	40.92	124	P	P	17 54 33.2	+0.5
WB2	Warramunga Arr	40.92	124		P	17 54 33.1	+0.4
WR0	Warramunga Arr	41.09	124	P	P	17 54 34.4	+0.3
ASAR	Alice Springs	42.43	129	P	P	17 54 45.6	+0.7
	comp=Z,6.2nm,0.6s,baz=306,slow=7.9,SNR=14						
ASAR				PcP	PcP	17 56 35.2	-0.3
	comp=Z,0.6nm,0.6s,baz=305,slow=3.3,SNR=2.2						
ASAR				ScP	ScP	18 00 11.2	-1.9
	comp=Z,0.6nm,0.7s,baz=304,slow=4.2,SNR=6.7						
ASAR				S	S	18 00 48.6	-7.5
	comp=Z,0.5nm,0.8s,baz=300,slow=15,SNR=3.4						
	comp=Z,6.2nm,0.6s						
AS31	Alice Springs	42.43	129	P	P	17 54 45.3	+0.4
KSH	Kashi	42.84	334	P	P	17 54 48.6	+0.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSAR	Wonju Array Be	44.11	33	P	P	17 54 59.0	+0.8
KSRS	Korea Array	44.14	33	P	P	17 54 57.8	-0.6
	comp=Z,2.3nm,0.6s,baz=222,slow=8.9,SNR=21						
KSRS				pP	pP	17 55 30.6	+0.2
	comp=Z,3.2nm,0.8s,baz=222,slow=9.0,SNR=7.2						
KSRS				ScP	ScP	18 00 19.0	-0.6
	comp=Z,0.2nm,0.3s,baz=240,slow=5.6,SNR=2.3						
KSRS				LR	LR	18 17 17.3	
	comp=Z,30nm,18.4s,baz=225,slow=41						
	comp=Z,2.3nm,0.6s						
GAR	Garm	45.20	328	P	P	17 55 08.7	+1.7
GAR				IAmb	IAmb	17 55 10.5	
	comp=Z,12nm,1.1s						
JHS	Saijyo	45.60	40	P	P	17 55 07.5	-2.5
JHS				IAmb	IAmb	17 55 38.7	
	comp=Z,20nm,0.8s						
BTK	Batken	45.73	330	P	P	17 55 12.8	+1.8
AAK	Ala-Archa	46.03	335	P	P	17 55 14.5	+1.0
	comp=Z,3.1nm,0.5s,baz=148,slow=9.8,SNR=1.6						
	comp=Z,3.1nm,0.5s						
SONM	Songino Array	46.09	7	P	P	17 55 14.4	+0.6
	comp=Z,2.6nm,0.7s,baz=187,slow=10,SNR=15						
SONM				pP	pP	17 55 47.0	+0.8
	comp=Z,1.2nm,0.6s,baz=187,slow=10,SNR=3.0						
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	46.09	7	P	P	17 55 14.2	+0.4
ULN	Ulaanbaatar	46.20	7	P	P	17 55 14.3	-0.3
MK31	Makanchi Array	46.94	344		P	17 55 20.5	+0.1
MKAR	Makanchi Array	46.94	344	P	P	17 55 21.1	+0.8
	comp=Z,2.9nm,0.5s,baz=160,slow=8.6,SNR=35						
MKAR				pP	pP	17 55 52.3	-0.8
	comp=Z,2.2nm,0.7s,baz=157,slow=7.4,SNR=1.9						
MKAR				ScP	ScP	18 00 29.6	-1.5
	comp=Z,0.4nm,0.9s,baz=152,slow=6.5,SNR=2.2						
MKAR				S	S	18 01 59.5	-1.1
	comp=Z,0.1nm,0.6s,baz=156,slow=14,SNR=1.9						
	comp=Z,2.9nm,0.5s						
MAKZ	Makanchi	47.04	344	P	P	17 55 21.8	+0.7
KKAR	Karatay Array	48.19	332	P	P	17 55 31.4	+1.3
KKAR	Karatay Array	48.19	332	P	P	17 55 31.1	+1.1
KKAR				IAmb	IAmb	17 55 33.7	
	comp=Z,3.5nm,1.1s						
MANU	Manus Island	48.46	94	P	P	17 55 32.1	-0.5
PMG	Port Moresby	49.24	104	P	P	17 55 38.2	-0.2
	comp=Z,8.6nm,0.7s,baz=284,slow=10,SNR=1.9						
	comp=Z,8.6nm,0.7s						
USRK	Ussuriysk Ar.	51.13	30	P	P	17 55 52.1	-0.1
	comp=Z,4.1nm,0.8s,baz=239,slow=4.1,SNR=7.4						
	comp=Z,4.1nm,0.8s						
KURBB	Kurchatov Arra	51.46	343	P	P	17 55 55.5	+1.0
	comp=Z,4.2nm,0.8s,baz=164,slow=7.1,SNR=24						
KURBB				pP	pP	17 56 27.0	-0.9
	comp=Z,1.5nm,0.6s,baz=164,slow=7.2,SNR=3.3						
KURBB				PcP	PcP	17 57 08.6	+1.6
	comp=Z,0.7nm,0.6s,baz=154,slow=3.4,SNR=4.4						
	comp=Z,4.2nm,0.8s						
KURK	Kurchatov	51.52	344	P	P	17 55 55.4	+0.4
KURK				IAmb	IAmb	17 55 58.3	
	comp=Z,6.0nm,0.8s						
GEYT	Alibeck	51.81	319	P	P	17 55 59.5	+2.0
	comp=Z,3.0nm,0.6s,baz=134,slow=9.5,SNR=4.6						
	comp=Z,3.0nm,0.6s						
GEYT	Alibeck	51.81	319	P	P	17 55 58.0	+0.6
STKA	Stephens Creek	52.54	134	P	P	17 56 04.1	+1.2
	comp=Z,4.7nm,0.7s,baz=326,slow=4.8,SNR=5.5						
	comp=Z,4.7nm,0.7s						
ZAA0	Zalesovo Array	53.08	350		P	17 56 05.9	-0.5
ZAA0				IAmb	IAmb	17 56 09.5	
	comp=Z,5.8nm,0.8s						
ZALV	Zalesovo Beam	53.08	350	P	P	17 56 07.1	+0.6
	comp=Z,4.0nm,0.5s,baz=172,slow=6.6,SNR=24						
ZALV				pP	pP	17 56 39.5	-0.3
	comp=Z,2.7nm,0.6s,baz=181,slow=6.9,SNR=2.5						
ZALV				LR	LR	18 20 28.9	
	comp=Z,20nm,18.9s,baz=134,slow=38						
	comp=Z,4.0nm,0.5s						
ZALV	Zalesovo Beam	53.08	350		P	17 56 06.8	+0.3
KLR	Kul'dur	54.71	26	P	P	17 56 18.1	-0.3
	comp=Z,6.1nm,0.9s,baz=306,slow=17,SNR=15						
	comp=Z,6.1nm,0.9s						
OPO	Ambohidratompo	54.95	246	P	P	17 56 21.9	+1.0
	comp=Z,1.0nm,0.3s,baz=101,slow=10,SNR=2.5						
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	56.19	340	P	P	17 56 28.8	0.0
ABKAR	Akbulak array	57.70	331	P	P	17 56 39.6	0.0
ABKAR				pP	pP	17 57 12.6	-1.0
ABKAR	Akbulak array	57.70	331	P	P	17 56 39.6	0.0
ABKAR				pP	pP	17 57 12.2	-1.4
ABKAR				IAmb	IAmb	17 57 13.7	
	comp=Z,6.8nm,0.8s						
YSS	Yuzh-Sakhalins	58.64	34	P	P	17 56 46.0	-0.2
AKTO	Aktyubinsk	59.42	331	P	P	17 56 51.4	-0.1
	comp=Z,1.2nm,0.5s,baz=210,slow=3.9,SNR=5.1						
AKTO				pP	pP	17 57 24.0	-1.7
	comp=Z,3.8nm,0.9s,baz=125,slow=4.8,SNR=5.8						
	comp=Z,1.2nm,0.5s						
ARU	Arti	63.18	336	pP	pP	17 57 49.9	-1.5
	comp=Z,2.7nm,0.6s,baz=184,slow=19,SNR=2.0						
KBZ	Khabaz	64.70	318	P	P	17 57 27.7	+0.9
	comp=Z,1.0nm,0.6s,baz=71,slow=6.1,SNR=2.3						
KBZ				pP	pP	17 58 00.7	-1.0
	comp=Z,5.3nm,0.8s,baz=184,slow=4.9,SNR=8.5						
	comp=Z,1.0nm,0.6s						
BELG	Belogornoye	65.84	328	pP	pP	17 58 07.0	-1.9
	comp=Z,12nm,0.8s,baz=117,slow=1.4,SNR=4.1						
KIRV	Kirov	68.37	335	pP	pP	17 58 23.5	-1.4
	comp=Z,6.8nm,0.6s,baz=262,slow=2.1,SNR=3.6						
MA2	Magadan	69.81	25	P	P	17 57 58.9	+0.1
	comp=Z,8.5nm,0.7s,baz=212,slow=5.6,SNR=13						
	comp=Z,8.5nm,0.7s						
MA2	Magadan	69.81	25	P	P	17 57 59.4	+0.7
MA2				IAmb	IAmb	17 58 00.5	
	comp=Z,13nm,0.8s						
BRTR	Keskin Array B	69.95	312	P	P	17 58 00.9	+0.6
	comp=Z,1.2nm,0.8s,baz=158,slow=3.6,SNR=3.6						
BRTR				pP	pP	17 58 33.1	-2.5
	comp=Z,4.1nm,0.8s,baz=134,slow=7.1,SNR=9.5						
	comp=Z,1.2nm,0.8s						
PETK	Petropavlovsk-	70.04	33	P	P	17 58 00.2	-0.1
	comp=Z,4.0nm,0.6s,baz=210,slow=10,SNR=7.7						
	comp=Z,4.0nm,0.6s						
ILGA	Ilgaz	70.24	313	P	P	17 58 02.1	+0.1
PET	Petropavlovsk	70.53	34		P	17 58 03.2	0.0
MDUB	Mudurnu	71.95	312	P	P	17 58 11.9	-0.4
SEY	Seymchan	72.30	23	P	P	17 58 14.3	+0.7
	comp=Z,6.1nm,1.0s,baz=228,slow=5.5,SNR=11						
	comp=Z,6.1nm,1.0s						
MAW	Mawson	73.93	194	P	P	17 58 25.9	+2.8
	comp=Z,1.4nm,0.6s,baz=34,slow=7.3,SNR=0.9						
	comp=Z,1.4nm,0.6s						
AKASG	Malin Array Be	75.76	322	pP	pP	17 59 07.8	-2.1
	comp=Z,1.8nm,0.5s,baz=86,slow=4.9,SNR=3.4						
BOSA	Boshof	76.80	240	P	P	17 58 41.6	+1.1
	comp=Z,1.3nm,0.6s,baz=50,slow=10,SNR=4.1						
BOSA				pP	pP	17 59 16.1	+0.1
	comp=Z,4.2nm,1.1s,baz=92,slow=10.0,SNR=2.6						
	comp=Z,1.3nm,0.6s						
BURAR	Bucovina Array	77.66	318	P	P	17 58 45.9	+1.0
BURAR					pP	17 59 20.0	-0.8
BURAR				IAmb	IAmb	17 59 21.8	
	comp=Z,9.6nm,0.9s						
BUR08	Bucovina Ar. S	77.67	318	P	P	17 58 46.4	+1.4
BUR08					pP	17 59 20.7	-0.3
BUR08				IAmb	IAmb	17 59 21.6	
	comp=Z,8.6nm,0.8s						
FINES	FINESS Array B	80.15	332	P	P	17 58 58.4	+0.4
	comp=Z,1.1nm,0.4s,baz=103,slow=5.8,SNR=9.2						
FINES				pP	pP	17 59 31.8	-2.4
	comp=Z,1.1nm,0.4s,baz=97,slow=6.3,SNR=2.6						
	comp=Z,1.1nm,0.4s						
ARCES	ARCESS Array B	82.41	340	P	P	17 59 09.6	-0.2
	comp=Z,3.0nm,0.9s,baz=90,slow=3.6,SNR=5.4						
ARCES				pP	pP	17 59 44.9	-1.2
	comp=Z,1.0nm,0.6s,baz=93,slow=6.1,SNR=1.5						
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	85.44	319	P	P	17 59 26.5	+0.7
	comp=Z,0.6nm,0.7s,baz=79,slow=6.9,SNR=7.7						
GERES				pP	pP	18 00 01.4	-1.0
	comp=Z,2.4nm,1.0s,baz=90,slow=8.1,SNR=7.9						
	comp=Z,0.6nm,0.7s						
GERES	GERESS Array B	85.44	319	P	P	17 59 26.1	+0.3
GERES					pP	18 00 01.3	-1.1
CLL	Collm	85.97	321	*e*P	P	17 59 28.0	-0.2
CLL				*i* pP	pP	18 00 04.5	-0.2
	comp=Z,5.0nm,1.4s						
NB2	NORSAR Subarra	87.21	331	P	pP	18 00 09.6	-1.1
	comp=Z,4.2nm,0.8s,baz=92,slow=5.1						
NOA	NORSAR Array B	87.21	331	P	P	17 59 34.5	+0.4
	comp=Z,1.0nm,0.9s,baz=106,slow=5.8,SNR=2.0						
NOA				pP	pP	18 00 09.7	-1.1
	comp=Z,2.9nm,0.7s,baz=92,slow=4.9,SNR=9.4						
	comp=Z,1.0nm,0.9s						
KEST	Kesra	88.61	306	pP	pP	18 00 15.5	-2.7
	comp=Z,6.4nm,0.9s,baz=354,slow=2.1,SNR=5.1						
CAST	Castle Rocks	96.56	25	P	P	18 00 17.9	+0.7
CAST				IAmb	IAmb	18 00 19.7	
	comp=Z,2.3nm,0.6s						
BPAW	Bear Paw Mtn.	96.80	25		P	18 00 18.8	+0.4
BPAW				IAmb	IAmb	18 00 19.9	
	comp=Z,2.1nm,0.8s						
NVAR	Mina Array Bea	127.03	37	PKP	PKiKP	18 05 53.7	+1.2
	comp=Z,0.8nm,0.8s,baz=270,slow=3.0,SNR=6.1						
NVAR				pPKP	pPKPdf	18 06 29.3	-1.1
	comp=Z,0.3nm,0.5s,baz=354,slow=1.5,SNR=2.9						
PDAR	Pinedale Array	128.49	27	PKP	PKPdf	18 05 53.1	-1.5
	comp=Z,0.3nm,0.8s,baz=307,slow=1.9,SNR=1.9						
ANMO	Albuquerque	136.14	31	SKPbc	SKPbc	18 09 26.6	-1.5
	comp=Z,2.4nm,0.7s,baz=277,slow=4.2,SNR=7.3						
TXAR	Lajitas Array	141.99	33	PKhKP	PKPpre	18 06 16.1	
	comp=Z,0.7nm,0.8s,baz=287,slow=0.9,SNR=7.7						
TXAR				SKPbc	SKPbc	18 09 43.4	-0.9
	comp=Z,1.2nm,0.8s,baz=226,slow=1.2,SNR=9.7						
CPUP	Villa Florida	146.84	221	pPKPbc	pPKPbc	18 07 06.0	-2.1
	comp=Z,2.4nm,0.6s,baz=202,slow=2.9,SNR=3.4						

IDC ***01*** *18:07:01.0±1.3, 43.°81N×105.°63W, h0km, mb4.0/3, mbtmp3.8/8, ML3.6/5, Error ellipse: s-maj=31.4km s-min=8.6km az=149.0*

NEIC ***01*** *18:07:01.7±2.2, 43.°76N±0.°04×105.°30W±0.°06, h0km±2km, ML3.3/63, Error ellipse: s-maj=8.0km s-min=6.4km az=308.0*

ISC 01 18:07:01.0±0.8**, 43.°79N**±0.°06×**105.°32W**±0.°05**, h0km, n75, σ1.s32**/74**, mb4.0**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	70		Pb	18 07 20.4	-0.6
K22A	Casper	1.44	218		Pn	18 07 27.1	-1.5
K22A				IAML		18 07 50.1	
	comp=E,388nm,0.3s						
K22A				IAML		18 07 51.2	
	comp=N,536nm,0.3s						
PHWY	Pilot Hill	2.49	182		Pn	18 07 43.6	+0.5
PHWY				IAML		18 08 19.9	
	comp=N,114nm,0.4s						
RWWY	Rawlins	2.52	214		Pn	18 07 43.0	-0.4
RWWY				IAML		18 08 21.6	
	comp=N,167nm,0.8s						
N23A	Red Feather La	2.93	189		Pn	18 07 50.3	+1.2
N23A				IAML		18 08 33.2	
	comp=N,115nm,0.6s						
N23A				IAML		18 08 40.5	
	comp=E,88nm,0.7s						
LAO	LASA Array	2.97	348		Pn	18 07 50.3	+0.8
LAO				IAML		18 08 34.6	
	comp=E,228nm,0.6s						
LAO				IAML		18 08 40.3	
	comp=E,173nm,0.5s						
RLMT	Red Lodge	3.13	297		Pn	18 07 52.5	+0.7
RLMT				IAML		18 08 43.6	
	comp=E,53nm,0.4s						
RLMT				IAML		18 08 54.6	
	comp=E,61nm,0.4s						
PD31	Pinedale Array	3.26	253		Pn	18 07 54.6	+0.9
PDAR	Pinedale Array	3.26	253	Pn	Pn	18 07 53.9	+0.2
	comp=E,6.9nm,0.3s,baz=70,slow=16,SNR=49						
PDAR				Lg	Lg	18 08 35.6	
	comp=E,4.9nm,0.3s,baz=75,slow=35,SNR=3.0						
	comp=E,5.6nm,0.4s						
PDAR	Pinedale Array	3.26	253		Pn	18 07 54.3	+0.6
BW06	Boulder Array	3.26	253		Pn	18 07 54.8	+1.1
BW06				IAML		18 08 42.8	
	comp=E,49nm,0.7s						
BW06				IAML		18 08 47.6	
	comp=E,47nm,0.6s						
GCMT	Greycliff	3.69	304		Pn	18 08 00.8	+1.3
OGNE	Ogallala	3.74	138		Pn	18 08 01.3	+1.2
OGNE				IAML		18 09 05.5	
	comp=E,83nm,0.7s						
LOHW	Long Hollow	3.84	269		Pn	18 08 03.3	+1.7
FLWY	Flagg Ranch	3.90	276		Pn	18 08 03.8	+1.4
FLWY				IAML		18 09 11.8	
	comp=E,42nm,2.0s						
FLWY				IAML		18 09 14.0	
	comp=E,27nm,2.2s						
MOOW	Moose Ponds	3.93	271		Pn	18 08 04.3	+1.4
YPP	Pitchstone Pla	3.99	279		Pn	18 08 05.0	+1.3
ISCO	Idaho Springs	3.99	183		Pn	18 08 04.7	+0.9
REDW	Red Top Meadow	4.04	266		Pb	18 08 10.4	-2.9
REDW				IAML		18 09 16.1	
	comp=E,49nm,0.7s						
REDW				IAML		18 09 49.5	
	comp=E,28nm,1.0s						
IMW	Indian Meadow	4.07	273		Pn	18 08 07.1	+2.3
IMW				IAML		18 08 36.6	
	comp=E,47nm,0.5s						
IMW				IAML		18 09 25.6	
	comp=E,21nm,0.7s						
TPAW	Teton Pass	4.10	268		Pn	18 08 05.4	+0.2
TPAW				IAML		18 09 30.4	
	comp=E,31nm,0.6s						
FXWY	Fox Creek	4.14	270		Pn	18 08 07.1	+1.3
O20A	White River Ci	4.25	212		Pn	18 08 05.5	-1.7
O20A				IAML		18 09 09.7	
	comp=E,43nm,0.5s						
O20A				IAML		18 09 58.3	
	comp=N,36nm,2.1s						
E28A	Huff	4.29	48		Pn	18 08 09.6	+1.9
YHL	Hebgen Lake	4.34	286		Pn	18 08 10.9	+2.4
YHL				IAML		18 09 24.5	
	comp=E,25nm,0.7s						
YHL				IAML		18 09 36.9	
	comp=N,17nm,0.8s						
AHID	Auburn Hatcher	4.34	258		Pn	18 08 08.2	-0.4
ECR	Eagle Creek	4.47	263		Pb	18 08 22.7	+2.2
RDMU	Red Mountain	4.51	226		Pn	18 08 10.6	-0.1
RDMU				IAML		18 09 27.6	
	comp=E,21nm,0.8s						
RDMU				IAML		18 09 28.6	
	comp=N,21nm,0.8s						
QLMT	Earthquake Lak	4.51	285		Pn	18 08 11.4	+0.6
SUSD	Miller	4.63	80		Pn	18 08 11.8	-0.4
DGMT	Dagmar	4.75	9		Pn	18 08 13.8	-0.1
SMCO	Snowmass	4.77	196		Pb	18 08 27.7	+1.9
SMCO				IAML		18 11 08.6	
	comp=N,46nm,0.2s						
Q24A	Divide	4.82	178		Pn	18 08 14.4	-0.7
Q24A				IAML		18 09 38.3	
	comp=E,27nm,0.4s						
Q24A				IAML		18 09 40.1	
	comp=N,20nm,0.3s						
BOZ	Bozeman (W)	4.85	294		Pn	18 08 16.6	+1.2
BOZ				IAML		18 09 40.0	
	comp=N,15nm,0.6s						
HWUT	Hardware Ranch	5.09	247		Pn	18 08 19.3	+0.5
HWUT				IAML		18 09 53.8	
	comp=N,19nm,0.7s						
HWUT				IAML		18 10 04.7	
	comp=N,20nm,0.8s						
KSCO	Kaye Shedlock'	5.18	156	Pn	Pn	18 08 19.5	-0.5
TCUT	Toone Canyon	5.24	241		Pn	18 08 21.2	+0.4
EGMT	Eagleton	5.25	325		Pn	18 08 21.1	+0.3
EGMT				IAML		18 09 58.4	
	comp=N,37nm,0.6s						
HRY	Holter Researc	5.45	305		Pn	18 08 24.7	+1.1
LRM	Limekiln Ridge	5.47	294		Pn	18 08 25.6	+1.6
MCMT	McKenzie Canyo	5.50	283		Pn	18 08 24.3	-0.2
JLU	Jordanelle	5.56	237		Pn	18 08 22.6	-2.7
P18A	Preston Nutter	5.56	223		Pn	18 08 25.5	+0.2
CTU	Camp Tracy	5.69	239	Pn	Pn	18 08 24.6	-2.3
HVU	Hansel Valley	5.84	252		Pn	18 08 30.8	+1.7
PV07	Paradox Valley	5.91	206		Pn	18 08 31.4	+1.4
P17A	Butcher Ranch,	5.92	225		Pn	18 08 30.3	+0.1
PV15	Paradox Valley	5.94	205		Pn	18 08 28.7	-1.9
PV23	Carpenter Ridg	6.02	209		Pn	18 08 29.9	-1.6
SDCO	Great Sand Dun	6.04	181		Pn	18 08 31.8	0.0
SRU	San Rafael Swe	6.09	222		Pn	18 08 32.6	+0.1
PV11	David Mesa, Pa	6.11	207		Pn	18 08 33.0	+0.3
S22A	4UR Ranch, Cre	6.14	191	Pn	Pn	18 08 33.3	0.0
PV13	Radium Mtn., P	6.22	206		Pn	18 08 35.2	+1.0
TMUT	Trail Mountain	6.30	227		Pn	18 08 36.9	+1.4
ECSD	EROS Data Cent	6.30	87	Pn	Pn	18 08 35.7	+0.5
NLU	North Lily Min	6.33	235	Pn	Pn	18 08 33.7	-2.2
BGU	Big Grassy Mou	6.39	246		Pn	18 08 38.7	+2.2
CBKS	Cedar Bluff	6.50	138	Pn	Pn	18 08 36.9	-1.2
Q16A	Castle Valley	6.56	224	Pn	Pn	18 08 37.5	-1.5
HLID	Hailey	6.60	271	Pn	Pn	18 08 38.8	-0.7
DUG	Dugway, Tooele	6.64	240		Pn	18 08 40.5	+0.5
MSU	Marysvale	7.39	227	Pn	Pn	18 08 50.2	-0.1
ELK	Elko	7.96	251	Pn	Pn	18 08 58.1	-0.1
	comp=N,0.2nm,0.3s,baz=74,slow=4.9,SNR=2.3						
	comp=N,0.7nm,0.3s						
AGMN	Agassiz Nation	7.97	52	Pn	Pn	18 08 58.4	+0.3
PSUT	Pine Spring	8.31	234	Pn	Pn	18 09 01.9	-1.0
LCMT	Little Creek M	9.07	224	Pn	Pn	18 09 11.2	-2.2
U15A	North Rim	9.08	218	Pn	Pn	18 09 14.6	+0.9
ULM	Lac du Bonnet	9.13	42	Pn	Pn	18 09 13.6	-0.3
	comp=N,3.9nm,0.3s,baz=226,slow=12,SNR=18						
	comp=N,6.3nm,0.3s						
NEW	Newport	9.35	303	Pn	Pn	18 09 13.7	-3.3
	comp=N,0.5nm,0.3s,baz=145,slow=11,SNR=7.3						
	comp=N,1.9nm,0.2s						
I56US	NEWPORT INFRAS	9.35	303	*i*		19 04 20.0	
	baz=115,slow=313,SNR=2.1						
NVAR	Mina Array Bea	11.16	246	Pn	Pn	18 09 42.4	+0.4
	comp=N,0.1nm,0.3s,baz=59,slow=14,SNR=6.7						
	comp=N,0.6nm,0.6s						
ARCES	ARCESS Array B	61.38	18	P	P	18 17 17.6	-0.6
	comp=N,2.9nm,1.0s,baz=337,slow=8.3,SNR=3.5						
	comp=N,2.9nm,1.0s						
ZALV	Zalesovo Beam	82.25	354	P	P	18 19 23.3	-0.6
	comp=N,0.8nm,0.6s,baz=355,slow=3.5,SNR=2.5						
	comp=N,0.8nm,0.6s						
MKAR	Makanchi Array	89.55	355	P	P	18 20 00.1	-0.1
	comp=N,0.4nm,0.6s,baz=9.5,slow=4.8,SNR=5.2						
	comp=N,0.4nm,0.6s						

NEIC ***01*** *18:31:41.9±1.3, 18.°90N±0.°07×145.°4E±0.°1, h200km±8km, mb4.3/105, Error ellipse: s-maj=15.4km s-min=10.6km az=84.0*

IDC ***01*** *18:31:43.5±1.5, 18.°87N×145.°52E, h226km±13km, mb3.7/24, mbtmp4.4/29, Error ellipse: s-maj=14.6km s-min=8.6km az=83.0*

ISC 01 18:31:42.5±0.4**, 18.°86N**±0.°05×**145.°43E**±0.°08**, h214km, n175, σ1.s30**/173**, mb4.2**/81**, 1C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.27	186	P	Pn	18 33 00.8	+0.1
	156nm,0.2s,baz=121,slow=6.5,SNR=49						
GUMO				S	S	18 34 01.0	-1.3
	197nm,0.3s,baz=152,slow=24,SNR=2.1						
GUMO	Guam	5.27	186	Pn	Pn	18 33 00.3	-0.4
GUMO	Guam	5.27	186	P	Pn	18 33 01.0	+0.3
JCJ	Chichijima	8.72	341	P	Pn	18 33 44.5	-0.6
	86nm,0.8s,baz=163,slow=17,SNR=15						
JCJ				S	S	18 35 18.6	-4.8
	56nm,0.5s,baz=298,slow=21,SNR=5.9						
JCJ	Chichijima	8.72	341	Pn	Pn	18 33 42.6	-2.4
JCJ	Chichijima	8.72	341	P	Pn	18 33 44.9	-0.2
JMZ	Minamidaito 2	14.85	300		Pn	18 35 00.5	-1.8
JHJ2	Mitsune	15.06	342		Pn	18 35 00.7	-4.1
JHJ2	Mitsune	15.06	342	P	P	18 35 07.0	+1.9
JHJ	Hachijo jima 2	15.08	342	P	P	18 35 06.3	+1.1
	40nm,0.3s,baz=86,slow=22,SNR=8.4						
PATS	Pohnpei	17.32	132		Pn	18 35 31.6	-0.4
JOW	Kunigami	17.68	300	P	Pn	18 35 38.1	+2.1
	44nm,0.4s,baz=131,slow=12,SNR=147						
JOW	Kunigami	17.68	300	Pn	Pn	18 35 38.0	+1.9
JOW	Kunigami	17.68	300	P	Pn	18 35 38.1	+2.1
JYT	Yasato	17.91	346		Pn	18 35 37.7	-0.9
INU	Inuyama	18.04	337	P	Pn	18 35 39.1	-1.0
JGF	Kuroka	18.14	338	Pn	Pn	18 35 40.8	-0.6
JSU	Suzuyama	18.47	316	P	P	18 35 42.4	-0.1
JSU				IAmb	IAmb	18 35 49.7	
	comp=Z,8.9nm,0.7s						
MJAR	Matsushiro Arr	18.73	342	P	P	18 35 44.4	-0.9
	comp=Z,8.5nm,0.5s,baz=166,slow=9.9,SNR=36						
MAJO	Matsushiro	18.73	342		P	18 35 45.5	+0.3
MAJO	Matsushiro	18.73	342	P	P	18 35 46.0	+0.8
JNU	Nakatsue	19.27	320	P	Pn	18 35 53.1	-1.7
	comp=Z,4.0nm,0.8s,baz=174,slow=20,SNR=5.6						
JNU	Nakatsue	19.27	320	P	P	18 35 50.1	-1.1
JNU				IAmb	IAmb	18 36 14.5	
	comp=Z,12nm,1.2s						
JMM	Marumori	19.37	349		P	18 35 53.9	+1.8
JHS	Saijyo	19.43	328	P	P	18 35 42.9	-10
JSD	Sado	20.11	343	P	P	18 36 01.1	+1.1
H11S3	WAKE ISLAND Hy	20.15	88	T	T	18 57 09.1	
	baz=274						
H11S1	WAKE ISLAND Hy	20.16	88	T	T	18 57 11.4	
	baz=274						
H11S2	WAKE ISLAND Hy	20.17	88	T	T	18 57 10.2	
	baz=274						
H11N1	WAKE ISLAND Hy	20.28	84	T	T	18 57 28.3	
	baz=269,slow=74,SNR=8.4						
H11N2	WAKE ISLAND Hy	20.29	84	T	T	18 57 27.7	
	baz=269,slow=74,SNR=7.6						
H11N3	WAKE ISLAND Hy	20.30	84	T	T	18 57 24.3	

baz=269
MANU Manus Island 20.86 175 P P 18 36 07.0 -1.1
JTM Tenmabayashi 22.17 351 P P 18 36 21.9 +0.9
NACB Ninganchiao 22.78 288 P P 18 36 22.6 -4.2
NAWB Namwon 22.95 320 P P 18 36 27.1 -1.0
NAWB IAmb IAmb 18 36 32.0
comp=Z,8.4nm,0.9s
YHNB Yeheng 23.06 289 P P 18 36 30.1 +0.8
YHNB Yeheng 23.06 289 P P 18 36 31.8 +2.5
ERM Erimo 23.16 356 P P 18 36 34.5 +4.5
KSCHJ Chungju 23.60 323 P P 18 36 34.0 0.0
KSCHJ IAmb IAmb 18 36 38.1
comp=Z,8.5nm,0.8s
TJN Taejon 23.61 321 P P 18 36 33.1 -1.0
RABL Rabaul 23.85 163 P P 18 36 39.4 +2.9
RABL Rabaul 23.85 163 P P 18 36 39.5 +3.0
KSRS Korea Array 24.04 324 P P 18 36 38.5 +0.6
comp=Z,5.2nm,0.5s,baz=144,slow=8.8,SNR=31
comp=Z,5.2nm,0.5s
KSAR Wonju Array Be 24.05 324 P P 18 36 37.0 -1.1
KS19 Wonju Array Si 24.10 324 P P 18 36 38.6 0.0
KS19 IAmb IAmb 18 36 42.2
comp=Z,8.0nm,0.7s
JEW Eniwo 24.14 353 P P 18 36 38.8 -0.1
NJ2 Nanjing 27.27 304 *eP* **P 18 37 03.0 -4.1**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
USRK Ussuriysk Ar. 27.66 339 P P 18 37 11.6 +1.2
comp=Z,1.4nm,0.5s,baz=146,slow=7.7,SNR=5.5
comp=Z,1.4nm,0.5s
YSS Yuzh-Sakhalins 28.11 356 P P 18 37 14.3 0.0
YSS IAmb IAmb 18 37 16.2
comp=Z,8.3nm,0.9s
HNS HongShan 32.58 311 ⇑P **P 18 37 55.1 +1.4**
BJI Beijing 32.84 316 P P 18 37 56.8 +0.8
BJI pmax pmax
comp=Z,8.0nm,0.5s
PETK Petropavlovsk- 35.49 13 P P 18 38 18.1 -0.5
comp=Z,1.5nm,0.7s,baz=178,slow=7.4,SNR=3.7
comp=Z,1.5nm,0.7s
PETK Petropavlovsk- 35.49 13 P P 18 38 19.9 +1.3
HHC Hu-ho-hao-te 36.30 314 *eP* **P 18 38 29.0 +3.2**
HHC pmax pmax
comp=Z,45nm,0.8s
WB0 Warramunga Arr 39.88 196 P P 18 38 56.4 +0.7
WB0 IAmb IAmb 18 39 01.7
comp=Z,7.0nm,1.2s
WR0 Warramunga Arr 40.03 196 P P 18 38 57.5 +0.6
WB2 Warramunga Arr 40.06 196 P P 18 38 57.4 +0.2
WB2 IAmb IAmb 18 39 01.4
comp=Z,5.4nm,0.8s
WRA Warramunga Arr 40.06 196 P P 18 38 57.9 +0.7
comp=Z,1.1nm,0.3s,baz=41,slow=10.0,SNR=15
WRA PcP **PcP 18 40 57.0 -0.7**
comp=Z,0.6nm,0.5s,baz=18,slow=3.8,SNR=2.1
WRA ScP **ScP 18 44 23.1 -3.2**
comp=Z,1.2nm,0.9s,baz=13,slow=3.8,SNR=6.9
comp=Z,1.1nm,0.3s
WRA Warramunga Arr 40.06 196 P P 18 38 56.7 -0.5
MA2 Magadan 40.85 4 P P 18 39 01.9 -1.3
comp=Z,1.8nm,0.6s,baz=352,slow=19,SNR=1.8
comp=Z,1.8nm,0.6s
PZH PanZhiHua 40.86 289 P P 18 39 05.0 +1.1
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,70nm,3.5s
FITZ Fitzroy Crossi 41.55 209 P P 18 39 10.2 +0.9
FITZ IAmb IAmb 18 39 28.1
comp=Z,8.2nm,1.2s
ULN Ulaanbaatar 42.48 322 P P 18 39 17.2 +0.4
ULN IAmb IAmb 18 39 18.1
comp=Z,3.5nm,0.6s
SONM Songino Array 42.86 321 P P 18 39 20.2 +0.4
comp=Z,2.4nm,0.3s,baz=132,slow=8.0,SNR=34
SONM ScP **ScP 18 44 33.5 -3.8**
comp=Z,0.2nm,0.4s,baz=113,slow=3.3,SNR=4.1
comp=Z,2.4nm,0.3s
SONM Songino Array 42.86 321 P P 18 39 19.7 -0.1
SONM IAmb IAmb 18 39 20.9
comp=Z,3.3nm,0.5s
AS31 Alice Springs 43.73 195 P P 18 39 27.6 +0.8
ASAR Alice Springs 43.73 195 P P 18 39 27.1 +0.3
comp=Z,0.5nm,0.4s,baz=13,slow=6.2,SNR=25
ASAR PcP **PcP 18 41 08.7 -1.1**
comp=Z,0.5nm,0.6s,baz=27,slow=6.3,SNR=2.0
comp=Z,0.5nm,0.4s
CMAR Chiang Mai Arr 43.94 277 P P 18 39 29.9 +1.3
comp=Z,1.7nm,0.6s,baz=74,slow=6.6,SNR=7.7
comp=Z,1.7nm,0.6s
CMAR Chiang Mai Arr 43.94 277 P P 18 39 26.8 -1.9
YAK Yakutsk 44.52 349 P P 18 39 32.4 -0.2
DZM Mont Dzumac 45.58 152 P P 18 39 40.3 -1.2
comp=Z,9.6nm,0.9s,baz=310,slow=18,SNR=3.1
comp=Z,9.6nm,0.9s
GOMU GeErMu 47.55 302 P P 18 40 00.4 +3.3
GOMU pmax pmax
comp=Z,8.0nm,0.5s
GOMU pmax pmax
comp=Z,38nm,4.7s
LSA Lhasa 50.25 293 P P 18 40 20.8 +3.0
LSA IAmb IAmb 18 40 21.9
comp=Z,7.9nm,0.5s
STKA Stephens Creek 50.58 184 P P 18 40 18.5 -1.0
comp=Z,0.8nm,0.4s,baz=0.0,slow=6.1,SNR=1.4
comp=Z,0.8nm,0.4s
BILL Bilibino 50.91 10 P P 18 40 22.7 +1.2
BILL IAmb IAmb 18 40 23.8
comp=Z,8.7nm,0.9s
WMQ Urumqi 54.01 311 *eP* **P 18 40 46.5 +1.7**
WMQ pmax pmax
comp=Z,17nm,0.8s
TNA Tin City 55.76 21 P P 18 40 57.1 +0.3
ZAA0 Zalesovo Array 57.73 322 P P 18 41 10.3 -0.6
ZAA0 IAmb IAmb 18 41 11.4
comp=Z,4.1nm,0.6s
ZALV Zalesovo Beam 57.73 322 P P 18 41 10.3 -0.5
comp=Z,3.5nm,0.4s,baz=111,slow=7.8,SNR=19
comp=Z,3.5nm,0.4s
MK31 Makanchi Array 58.17 314 P P 18 41 14.6 +0.5
MK31 IAmb IAmb 18 41 15.7
comp=Z,3.5nm,0.7s
MKAR Makanchi Array 58.17 314 P P 18 41 14.4 +0.4
comp=Z,5.4nm,0.6s,baz=89,slow=8.7,SNR=78
comp=Z,5.4nm,0.6s
MKAR Makanchi Array 58.17 314 P P 18 41 14.9 +0.8
MAKZ Makanchi 58.38 314 P P 18 41 16.1 +0.5
MAKZ IAmb IAmb 18 41 17.6
comp=Z,8.0nm,0.6s
KURK Kurchatov 60.98 318 P P 18 41 32.8 -0.3
KURK IAmb IAmb 18 41 34.7
comp=Z,5.9nm,0.9s
CAST Castle Rocks 61.07 27 P P 18 41 34.5 +0.9
CAST IAmb IAmb 18 41 35.4
comp=Z,7.8nm,1.4s
NRIK Noril'sk 61.37 340 P P 18 41 35.4 0.0
comp=Z,6.6nm,0.6s,baz=109,slow=8.0,SNR=12
comp=Z,6.6nm,0.6s
NRIK Noril'sk 61.37 340 P P 18 41 35.4 0.0
NRIK IAmb IAmb 18 41 36.1
comp=Z,7.7nm,0.7s
BPAW Bear Paw Mtn. 61.73 27 P P 18 41 39.0 +1.0
BPAW IAmb IAmb 18 41 39.2
comp=Z,2.6nm,0.6s
MLY Manley 62.09 26 P P 18 41 41.3 +0.9
MLY IAmb IAmb 18 41 41.7
comp=Z,2.0nm,0.6s
PWL Port Wells 62.17 30 P P 18 41 41.0 +0.1
PWL IAmb IAmb 18 42 04.7
comp=Z,5.9nm,1.0s
KSH Kashi 62.57 305 P P 18 41 49.0 +4.9
KSH pmax pmax
comp=Z,4.0nm,0.5s
I23K Minto, Yukon-K 62.68 26 P P 18 41 44.7 +0.6
SCM Sheep Creek Mo 62.83 29 P P 18 41 45.8 +0.4
SCM IAmb IAmb 18 41 47.0
comp=Z,14nm,1.2s
IL31 63.62 26 P P 18 41 50.1 -0.2
IL31 IAmb IAmb 18 41 50.5
comp=Z,4.6nm,1.3s
ILAR Eielson Array 63.62 26 P P 18 41 49.2 -1.1
comp=Z,0.9nm,0.6s,baz=264,slow=5.6,SNR=8.5
comp=Z,0.9nm,0.6s
ILAR Eielson Array 63.62 26 P P 18 41 49.4 -1.0
PAX Paxson 63.89 28 P P 18 41 52.3 0.0
PAX IAmb IAmb 18 41 56.0
comp=Z,2.8nm,0.9s
RIDG Independent Ri 64.30 28 P P 18 41 54.7 -0.2
RIDG IAmb IAmb 18 41 55.6
comp=Z,4.9nm,1.3s
GLB Gilahina Butte 64.43 30 P P 18 41 56.4 +0.6
GLB IAmb IAmb 18 41 57.6
comp=Z,5.5nm,1.2s
SCRK Sand Creek 64.71 27 P P 18 41 58.2 +0.5
J26L Joseph Creek 64.98 27 P P 18 41 59.6 +0.3
BMAR Burnt Mountain 65.08 24 P P 18 42 01.2 +1.4
NIL Nilore 65.23 299 P P 18 42 01.5 +0.1
L27K Beaver Creek, 65.55 29 P P 18 42 03.4 +0.5
BCAR Beaver Creek A 65.57 29 P P 18 42 03.3 +0.2
BRVK Borovoye 66.25 320 P P 18 42 07.5 -0.1
BRVK IAmb IAmb 18 42 08.8
comp=Z,8.6nm,0.8s
KK31 Karatay Array 66.47 310 P P 18 42 09.4 +0.3
KK31 IAmb IAmb 18 42 10.9
comp=Z,6.3nm,0.7s
KKAR Karatay Array 66.47 310 P P 18 42 09.3 +0.2
KKAR Karatay Array 66.47 310 P P 18 42 09.2 0.0
KKAR IAmb IAmb 18 42 10.9
comp=Z,6.3nm,0.7s
BTK Batken 66.49 306 P P 18 42 07.9 -1.5
BTK IAmb IAmb 18 42 10.5
comp=Z,2.8nm,0.5s
GAR Garm 66.98 305 P P 18 42 12.6 0.0
I29M Ogilvie Camp, 67.30 26 P P 18 42 13.3 -0.7
CHGR Chuyangaron 67.92 305 P P 18 42 18.5 0.0
KBL Kabul 68.57 300 P P 18 42 21.8 -0.8
KBL IAmb IAmb 18 42 24.3
comp=Z,6.0nm,0.7s
DLBC Dease Lake 71.30 34 P P 18 42 39.0 +0.4
comp=Z,2.0nm,0.6s,baz=238,slow=3.7,SNR=5.8
comp=Z,2.0nm,0.6s
DLBC Dease Lake 71.30 34 P P 18 42 40.0 +1.3
ARU Arti 72.79 324 P P 18 42 47.1 -0.3
ARU IAmb IAmb 18 42 48.7
comp=Z,6.8nm,0.8s
ABKAR Akbulak array 73.05 317 P P 18 42 48.3 -0.7
ABKAR Akbulak array 73.05 317 P P 18 42 48.2 -0.9
ABKAR IAmb IAmb 18 42 50.0
comp=Z,8.0nm,0.6s
YKA Yellowknife Ar 77.97 28 P P 18 43 16.2 -0.5
comp=Z,1.4nm,0.5s,baz=267,slow=5.6,SNR=5.1
comp=Z,1.4nm,0.5s
SPA0 Spitsbergen Ar 78.97 351 *eP* **P 18 43 23.8 +1.8**
J04D Umpqua Nationa 79.07 48 P P 18 43 24.1 +0.7
KBS Kingsbay 79.09 352 *eP* **P 18 43 23.4 +0.7**
B08A Colville Reser 79.53 42 P P 18 43 26.1 +0.5
B08A IAmb IAmb 18 43 26.9
comp=Z,3.0nm,0.7s
K05A Summer Lake 80.07 48 P P 18 43 29.1 +0.2
K05A IAmb IAmb 18 43 30.3
comp=Z,6.3nm,0.8s
MOD Modoc Plateau 80.73 49 P P 18 43 32.6 +0.3
MOD IAmb IAmb 18 43 33.7
comp=Z,3.6nm,1.0s
E09A Wood Farm, Sta 80.84 44 P P 18 43 33.1 +0.5
E09A IAmb IAmb 18 43 34.1
comp=Z,2.9nm,0.7s
NEW Newport 80.97 42 P P 18 43 32.8 -0.5
BEKR Beckworth 81.28 51 P P 18 43 35.5 +0.2
BEKR IAmb IAmb 18 43 36.3
comp=Z,5.2nm,0.8s
J08A Circle Bar Ran 81.58 47 P P 18 43 36.9 +0.2
J08A IAmb IAmb 18 43 37.8
comp=Z,8.0nm,1.2s
WVOR Wild Horse Val 81.75 48 P P 18 43 37.8 +0.2
CMB Columbia Colle 81.81 53 P P 18 43 38.1 +0.2
CMB IAmb IAmb 18 43 39.1
comp=Z,3.4nm,0.7s
PAHR Pah Rah Range 82.05 51 P P 18 43 38.8 -0.4
PNTR Pine Nut 82.08 52 P P 18 43 39.7 +0.2
PNTR IAmb IAmb 18 43 41.5
comp=Z,7.3nm,0.7s
ARA0 ARCESS Array S 82.26 342 *eP* **P 18 43 39.9 +0.3**
ARCES ARCESS Array B 82.26 342 P P 18 43 39.7 +0.1
comp=Z,1.3nm,0.5s,baz=84,slow=8.5,SNR=20
comp=Z,1.3nm,0.5s
YERR Yerington 82.38 52 P P 18 43 41.2 +0.2
YERR IAmb IAmb 18 43 42.4
comp=Z,3.6nm,0.7s
RYN Ryan 83.02 52 P P 18 43 44.6 +0.2
RYN IAmb IAmb 18 43 45.6
comp=Z,3.9nm,0.9s
LHV Little Huntoon 83.15 52 P P 18 43 45.4 +0.6
LHV IAmb IAmb 18 43 48.0
comp=Z,3.5nm,0.8s
KVN Kaiserville 83.20 51 P P 18 43 45.5 +0.2
KVN IAmb IAmb 18 43 46.5
comp=Z,3.6nm,0.8s
NVAR Mina Array Bea 83.25 52 P P 18 43 46.1 +0.6
comp=Z,4.5nm,0.7s,baz=266,slow=6.0,SNR=43
comp=Z,4.5nm,0.7s
NV11 Mina Array Sit 83.36 52 P P 18 43 46.4 +0.4
NV11 IAmb IAmb 18 43 47.4
comp=Z,3.4nm,0.8s
MFID Camas Ranch 83.39 46 P P 18 43 46.3 +0.2
TRO Tromso 84.05 344 *eP* **P 18 43 48.1 -0.5**
TRO IAmb IAmb 18 43 48.5
comp=Z,30nm,1.2s
TPH Tonopah 84.17 52 P P 18 43 50.4 +0.2
ELK Elko 84.71 49 P P 18 43 53.3 +0.3
comp=Z,2.1nm,0.8s,baz=299,slow=8.6,SNR=9.7
comp=Z,2.1nm,0.8s
ELK Elko 84.71 49 P P 18 43 53.2 +0.3
LRM Limekiln Ridge 84.80 43 P P 18 43 53.1 -0.2
DLMT Dillon 84.88 44 P P 18 43 54.0 +0.5
DLMT IAmb IAmb 18 43 55.3
comp=Z,5.7nm,1.4s
GWY Greenwater Val 85.21 54 P P 18 43 55.2 -0.2
TPNV Topopah Spring 85.27 53 P P 18 43 56.0 +0.4
TPNV IAmb IAmb 18 43 56.8
comp=Z,4.1nm,0.7s
R11A Troy Canyon, C 85.29 51 P P 18 43 56.1 +0.4
BOZ Bozeman (W) 85.42 43 P P 18 43 56.6 +0.3
QLMT Earthquake Lak 85.84 44 P P 18 43 58.0 -0.5
KBZ Khabaz 85.85 315 P P 18 43 59.5 +1.4
comp=Z,1.2nm,0.6s,baz=108,slow=8.3,SNR=4.5
comp=Z,1.2nm,0.6s
YHL Hebgen Lake 86.00 44 P P 18 44 00.1 +0.8
YHL IAmb IAmb 18 44 01.1
comp=Z,3.6nm,0.7s
PRN Pahroc Range 86.01 52 P P 18 43 58.1 -1.1
PRN IAmb IAmb 18 44 00.8
comp=Z,3.3nm,1.1s
HVU Hansel Valley 86.08 47 P P 18 43 59.8 +0.3
STEI Steigen 86.19 343 *eP* **P 18 43 58.8 -0.5**
STEI IAmb IAmb 18 44 01.9
comp=Z,20nm,1.2s
SHPR Sheep Range 86.25 53 P P 18 44 00.9 +0.4
PSUT Pine Spring 86.49 51 P P 18 44 01.9 +0.2
FAUS Fauske 86.55 343 *eP* **P 18 44 00.1 -0.9**
FAUS IAmb IAmb 18 44 01.0
comp=Z,110nm,1.9s
FINES FINESS Array B 86.63 335 P P 18 43 59.8 -1.8
comp=Z,4.1nm,0.3s,baz=68,slow=4.6,SNR=77
comp=Z,4.1nm,0.3s
FINES FINESS Array B 86.63 335 P P 18 44 00.6 -1.0
CCUT Cedar City 87.21 51 P P 18 44 05.7 +0.4
W13A Hualapai Mount 87.72 54 P P 18 44 08.1 +0.4
PDAR Pinedale Array 87.90 45 P P 18 44 07.8 -0.5
comp=Z,2.0nm,0.3s,baz=191,slow=1.1,SNR=4.6
comp=Z,2.0nm,0.3s
U15A North Rim 88.43 52 P P 18 44 11.8 +0.8
WUAZ Wupatki 89.46 53 P P 18 44 16.2 +0.5
WUAZ IAmb IAmb 18 44 17.5
comp=Z,4.5nm,1.1s
NB2 NORSAR Subarra 92.33 340 P P 18 44 27.7 -0.7
comp=Z,0.2nm,0.4s,baz=42,slow=4.6
NB2 NORSAR Subarra 92.33 340 P P 18 44 27.7 -0.7
baz=42,slow=4.6
NOA NORSAR Array B 92.33 340 P P 18 44 27.5 -0.9
comp=Z,0.5nm,0.7s,baz=36,slow=4.6,SNR=3.8
comp=Z,0.5nm,0.7s
BRTR Keskin Array B 93.81 314 P P 18 44 34.9 -0.9
comp=Z,0.8nm,0.6s,baz=64,slow=6.6,SNR=2.3
comp=Z,0.8nm,0.6s
LPAZ La Paz 147.94 91 PKPbc PKPbc 18 51 03.0 -1.1
comp=Z,1.9nm,0.7s,baz=220,slow=2.4,SNR=6.7

IDC 01 18:34:18.8±6.9, 22.72S×176.00W, h0km, mb3.6/2, mbtmp3.9/3, ML4.3/1, Error ellipse: s-maj=242.3km

s-min=35.6km az=138.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.63**	**25**	Pn	Pn	18 36 38.7	-0.2
	2.9nm,0.3s,baz=149,slow=5.9,SNR=1.9						
AFI				Sn	Sn	18 38 16.0	-12
	baz=252,slow=22						
	14nm,0.5s						
ASAR	**Alice Springs**	**45.87**	**259**	P	P	18 42 43.2	0.0
	0.3nm,0.5s,baz=96,slow=6.7,SNR=6.1						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**46.18**	**264**	P	P	18 42 45.3	-0.4
	0.6nm,0.5s,baz=103,slow=8.2,SNR=4.8						
	0.6nm,0.5s						
AKASG	**Malin Array Be**	**145.85**	**331**	PKPbc	PKPdf	18 53 59.2	-0.2
	0.6nm,0.4s,baz=39,slow=3.7,SNR=5.5						

*NEIC **01** 18:54:28.8±1.4, 6.7S±0.1×146.2E±0.1, h116km±11km, mb4.0/9, Error ellipse: s-maj=20.1km s-min=8.3km az=223.0*
*IDC **01** 18:54:30.2±2.5, 6.61S×146.19E, h137km±30km, mb3.3/6, mbtmp3.8/9, Error ellipse: s-maj=36.8km s-min=17.6km az=116.0*

ISC 01 18:54:28.8±0.7, 6.55S±0.07×146.16E±0.09, h122km, n23, σ1°41/24, mb3.8/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.00**	**161**	P	**Pn**	**18 55 17.7**	**+2.5**
	75nm,0.3s,baz=21,slow=8.3,SNR=235						
PMG				S	**Sn**	**18 55 52.0**	**+1.0**
	122nm,0.4s,baz=54,slow=21,SNR=11						
MANU	**Manus Island**	**4.64**	**15**	Pn	**Pn**	**18 55 38.5**	**+1.5**
KRVT	**Keravat (AS076**	**6.25**	**69**	P	**Pn**	**18 55 59.5**	**+0.8**
	9.9nm,0.7s,baz=159,slow=20,SNR=2.4						
RABL	**Rabaul**	**6.42**	**69**	Pn	**Pn**	**18 56 01.1**	**+0.1**
COEN	**Coen**	**7.92**	**202**		**Pn**	**18 56 23.4**	**+2.2**
MTN	**Manton Dam**	**16.07**	**246**		**Pn**	**18 58 06.8**	**-1.1**
MTN				IAmb	IAmb	18 58 41.8	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**17.46**	**219**	P	**P**	**18 58 21.9**	**-2.3**
WR0				IAmb	IAmb	18 59 02.4	
	comp=Z,9.3nm,1.3s						
WB2	**Warramunga Arr**	**17.57**	**220**	P	**P**	**18 58 23.4**	**-2.0**
WB2				IAmb	IAmb	18 58 33.7	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**17.57**	**220**	P	**P**	**18 58 25.3**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=45,slow=12,SNR=8.5						
KNRA	**Kununurra**	**19.31**	**241**	P	**P**	**18 58 43.9**	**-0.6**
KNRA				IAmb	IAmb	18 59 09.0	
	comp=Z,8.4nm,1.1s						
ASAR	**Alice Springs**	**20.70**	**213**	P	**P**	**18 58 59.3**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=52,slow=8.6,SNR=15						
	comp=Z,1.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.07**	**238**	P	**P**	**18 59 22.6**	**-1.2**
FITZ				IAmb	IAmb	19 00 04.2	
	comp=Z,15nm,1.4s						
OUENC	**Ouen Island, N**	**25.43**	**130**	P	**P**	**18 59 42.4**	**-2.9**
STKA	**Stephens Creek**	**25.55**	**189**	P	**P**	**18 59 46.1**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=12,slow=8.1,SNR=4.5						
	comp=Z,2.1nm,0.8s						
STKA	**Stephens Creek**	**25.55**	**189**	P	**P**	**18 59 45.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**52.78**	**299**	P	**P**	**19 03 31.4**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=124,slow=6.2,SNR=5.9						
	comp=Z,0.8nm,0.6s						
PETK	**Petropavlovsk-**	**60.23**	**8**	P	**P**	**19 04 24.5**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=185,slow=12,SNR=3.9						
	comp=Z,1.1nm,0.9s						
MKAR	**Makanchi Array**	**77.39**	**321**	P	**P**	**19 06 11.1**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=105,slow=7.6,SNR=4.8						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**77.39**	**321**	P	**P**	**19 06 10.8**	**+0.4**
MAKZ	**Makanchi**	**77.59**	**321**	P	**P**	**19 06 12.8**	**+1.2**
QSPA	**South Pole Qui**	**83.42**	**180**		**P**	**19 06 42.8**	**+0.3**
ILAR	**Eielson Array**	**86.32**	**23**	P	**P**	**19 06 56.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=253,slow=5.6,SNR=4.6						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**144.41**	**283**	PKP	**PKPab**	**19 13 50.1**	**0.0**
	comp=Z,0.5nm,0.8s,baz=90,slow=4.3,SNR=2.5						

*IDC **01** 19:23:09.9±1.1, 33.76S×177.35W, h0km, mb4.1/5, mbtmp4.2/7, ML3.5/2, MS3.4/3, Error ellipse: s-maj=28.6km s-min=24.9km az=48.0*
*NEIC **01** 19:23:12.8±3.4, 33.93S±0.08×177.3W±0.1, h10km±1km, mb4.4/7, Error ellipse: s-maj=16.8km s-min=12.5km az=129.0*
*WEL **01** 19:23:14.8±1.0, 33°S±9°×177°W±2°, h33km, M4.5/9, mB4.8/5, ML5.0/12, MLv4.7/9, Mw(mB)4.0/5, Error ellipse: s-maj=0.0km s-min=0.0km az=111.2*

ISC 01 19:23:14.7±1.0, 33.83S±0.10×177.3W±0.1, h35km, n56, σ1°69/64, mb4.2/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.59**	**353**	P	Pn	19 24 14.1	-7.5
GLKZ				S	Sn	19 24 56.0	-18
RAO	**Raoul Island**	**4.60**	**353**	Sn	Sn	19 25 00.8	-13
	82nm,0.3s,baz=83,slow=19,SNR=2.3						
RAO	**Raoul Island**	**4.60**	**353**	Pn	Pn	19 24 24.9	+3.1
MXZ	**Matakaoa Point**	**5.19**	**223**	Pn	**Pn**	**19 24 31.0**	**+1.0**
MXZ				Sn	**Sn**	**19 25 24.6**	**-4.0**
MXZ	**Matakaoa Point**	**5.19**	**223**	P	**Pn**	**19 24 30.8**	**+0.9**
MXZ				S	**Sn**	**19 25 29.1**	**+0.5**
WMGZ	**Waiomatatini S**	**5.32**	**220**	P	**Pn**	**19 24 33.4**	**+1.7**
WMGZ				S	**Sn**	**19 25 32.5**	**+0.8**
PKGZ	**Pakihiroa**	**5.55**	**222**	P	**Pn**	**19 24 35.9**	**+0.9**
PKGZ				S	**Sn**	**19 25 40.0**	**+2.4**
PUZ	**Puketiti**	**5.59**	**219**	P	**Pn**	**19 24 36.7**	**+1.3**
PUZ				S	**Sn**	**19 25 40.4**	**+2.0**
HAZ	**Te Kaha**	**5.63**	**224**	P	**Pn**	**19 24 38.0**	**+2.1**
HAZ				S	**Sn**	**19 25 42.1**	**+2.8**
CNGZ	**Carnagh Statio**	**5.93**	**217**	P	**Pn**	**19 24 41.7**	**+1.7**
CNGZ				S	**Sn**	**19 25 46.3**	**-0.4**
MWZ	**Matawai**	**6.17**	**222**	P	**Pn**	**19 24 43.8**	**+0.4**
MWZ				S	**Sn**	**19 25 53.8**	**+1.0**
URZ	**Urewera**	**6.36**	**224**	Pn	**Pn**	**19 24 46.4**	**+0.5**
	0.9nm,0.3s,baz=120,slow=24,SNR=9.4						
URZ				Sn	**Sn**	**19 25 57.4**	**+0.1**
	18nm,0.3s,baz=189,slow=22,SNR=6.8						
	4.6nm,0.5s						
URZ	**Urewera**	**6.36**	**224**	Pn	**Pn**	**19 24 46.2**	**+0.2**
URZ				Sn	**Sn**	**19 25 56.8**	**-0.5**
URZ	**Urewera**	**6.36**	**224**	P	**Pn**	**19 24 45.5**	**-0.4**
URZ				S	**Sn**	**19 25 56.8**	**-0.5**
SNGZ	**Shannon Statio**	**6.60**	**220**	S	**Sn**	**19 26 06.0**	**+2.8**
WHHZ	**Waihua**	**6.87**	**219**	S	**Sn**	**19 26 12.1**	**+2.2**
MTHZ	**Maungataniwha**	**6.92**	**222**	P	**Pn**	**19 24 55.1**	**+1.4**
MTHZ				S	**Sn**	**19 26 11.9**	**+0.7**
NMHZ	**Naumai**	**7.11**	**221**	S	**Sn**	**19 26 19.1**	**+3.1**
ARHZ	**Aropaoanui**	**7.13**	**219**	S	**Sn**	**19 26 17.2**	**+0.8**
BKZ	**Black Stump Fm**	**7.33**	**222**	Pn	**Pn**	**19 24 58.3**	**-1.1**
BKZ				Sn	**Sn**	**19 26 13.5**	**-7.9**
BKZ	**Black Stump Fm**	**7.33**	**222**	P	**Pn**	**19 24 59.6**	**+0.2**
BKZ				S	**Sn**	**19 26 21.0**	**-0.4**
MCHZ	**McNeill Hill**	**7.42**	**219**	P	**Pn**	**19 24 59.3**	**-1.3**
MCHZ				S	**Sn**	**19 26 24.4**	**+0.9**
KWHZ	**Kaweka Forest**	**7.55**	**221**	P	**Pn**	**19 25 01.7**	**-0.7**
KWHZ				S	**Sn**	**19 26 26.8**	**0.0**
KAHZ	**Kahuranaki**	**7.59**	**217**	S	**Sn**	**19 26 28.4**	**+0.6**
OUZ	**Omahuta**	**7.68**	**257**	Pn	**Pn**	**19 25 04.5**	**+0.4**
PXZ	**Pawanui**	**7.78**	**216**	S	**Sn**	**19 26 30.4**	**-1.9**
BHHZ	**Black Hill Sta**	**7.80**	**222**	P	**Pn**	**19 25 05.9**	**+0.1**
BHHZ				S	**Sn**	**19 26 33.0**	**+0.2**
BFZ	**Birch Farm**	**8.58**	**215**	Pn	**Pn**	**19 25 14.9**	**-1.6**
SNZO	**South Karori**	**9.82**	**218**	Pn	**Pn**	**19 25 32.6**	**-0.9**
THZ	**Tophouse**	**11.10**	**222**	Pn	**Pn**	**19 25 51.3**	**+0.2**
KHZ	**Kahutara**	**11.23**	**218**	Pn	**Pn**	**19 25 52.6**	**0.0**
LTZ	**Lake Taylor**	**12.14**	**220**	Pn	**Pn**	**19 26 05.3**	**+0.1**
MQZ	**McQueen's Vall**	**12.62**	**216**	Pn	**Pn**	**19 26 10.8**	**-0.8**
RPZ	**Rata Peaks**	**13.43**	**219**	Pn	**Pn**	**19 26 22.2**	**-0.6**
	0.3nm,0.3s,baz=218,slow=17,SNR=2.4						
RPZ				Sn	Sn	19 28 37.3	-13
	0.7nm,0.3s,baz=103,slow=21,SNR=1.9						
	18nm,1.0s						
DZM	**Mont Dzumac**	**18.54**	**305**	LR	LR	19 33 34.6	
	comp=Z,248nm,18.2s,baz=200,slow=34						
PPT	**Papeete**	**29.60**	**64**	LR	LR	19 39 50.9	
	comp=Z,34nm,19.1s,baz=62,slow=34						
ASAR	**Alice Springs**	**43.66**	**270**	P	**P**	**19 31 15.7**	**-0.6**
	0.8nm,0.4s,baz=108,slow=7.5,SNR=17						
	0.8nm,0.4s						

VNDA	Vanda	44.77	186	P	P	19 31 22.7	-1.7
VNDA				IAmb	IAmb	19 31 41.8	
	comp=Z,3.0nm,0.8s						
WR0	Warramunga Arr	44.78	275	P	P	19 31 24.9	-0.3
WR0				IAmb	IAmb	19 31 26.5	
	comp=Z,3.1nm,0.9s						
WB2	Warramunga Arr	44.94	275	P	P	19 31 25.5	-1.0
WB2				IAmb	IAmb	19 31 40.6	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.95	275	P	P	19 31 25.6	-1.1
	comp=Z,1.5nm,0.7s,baz=115,slow=7.7,SNR=10						
	comp=Z,1.5nm,0.7s						
WRA	Warramunga Arr	44.95	275	P	P	19 31 25.4	-1.1
WB0	Warramunga Arr	44.99	275	P	P	19 31 25.9	-1.0
WB0				IAmb	IAmb	19 31 37.9	
	comp=Z,7.2nm,1.0s						
MTN	Manton Dam	51.21	281	P	P	19 32 13.5	-1.5
KNRA	Kununurra	51.67	277	P	P	19 32 17.7	-0.6
KNRA				IAmb	IAmb	19 32 27.1	
	comp=Z,5.7nm,0.9s						
FITZ	Fitzroy Crossi	53.06	272	P	P	19 32 27.6	-1.1
	comp=Z,2.6nm,0.9s,baz=102,slow=5.0,SNR=1.8						
	comp=Z,2.6nm,0.9s						
QSPA	South Pole Qui	56.29	180	P	P	19 32 53.1	+1.5
	comp=Z,0.5nm,0.6s,baz=45,slow=7.1,SNR=12						
	comp=Z,0.5nm,0.6s						
RPN	Rapa Nui	57.98	103	LR	LR	19 54 16.6	
	comp=Z,20nm,18.9s,baz=180,slow=32						
PMSA	Palmer Station	68.89	155	P	P	19 34 15.4	-0.1
	comp=Z,6.5nm,0.6s,baz=79,slow=5.9,SNR=4.5						
	comp=Z,6.5nm,0.6s						
VNA3	Neumayer Olymp	74.85	176	P	P	19 34 57.4	+6.2
VNA2	Neumayer--Watz	75.29	177	P	P	19 35 00.1	+6.4
	baz=181,slow=5.0						
VNA1	Neumayer--Stat	75.52	176	P	P	19 35 01.5	+6.5
FINES	FINESS Array B	148.57	339	PKPbc	PKiKP	19 42 58.1	-0.5
	comp=Z,2.8nm,0.8s,baz=38,slow=3.4,SNR=11						
NB2	NORSAR Subarra	152.22	351	PKP	PKiKP	19 43 08.8	+2.6
	comp=Z,0.5nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	152.22	351	PKPab	PKPab	19 43 16.2	+0.4
	comp=Z,0.4nm,0.6s,baz=24,slow=3.1,SNR=1.9						
TORD	Torodi Ar. Bea	159.39	177	PKPab	PKPab	19 43 47.7	+0.1
	comp=Z,0.5nm,1.0s,baz=169,slow=3.1,SNR=2.3						

*NEIC **01** 19:26:41.7±1.6, 18°.75N±0°.09×145°.7E±0°.2, h208km±9km, mb4.0/17, Error ellipse: s-maj=24.2km s-min=13.3km az=90.0*
*IDC **01** 19:26:42.1±2.5, 18°.84N×145°.72E, h218km±22km, mb3.1/7, mbtmp3.8/10, Error ellipse: s-maj=34.8km s-min=13.7km az=80.0*
ISC 01 19:26:40.6±0.6, **18°.84N**±0°.07×**145°.7E**±0°.1, **h200**km, **n31**, σ**1s.21**/32, **mb3.9**/14, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.28	189	P	Pn	19 28 00.8	+2.1
	12nm,0.3s,baz=44,slow=22,SNR=1.6						
GUMO				S	Sn	19 29 02.4	+2.1
	31nm,0.3s,baz=201,slow=20,SNR=1.8						
GUMO	Guam	5.28	189	Pn	Pn	19 27 58.8	+0.1
JOW	Kunigami	17.90	300	P	P	19 30 36.2	+0.7
	6.4nm,0.4s,baz=128,slow=12,SNR=13						
JOW	Kunigami	17.90	300	P	P	19 30 36.4	+1.0
JGF	Kuroka	18.25	338	P	P	19 30 41.4	+2.2
JGF				IAmb	IAmb	19 30 42.1	
	comp=Z,4.2nm,0.7s						
MJAR	Matsushiro Arr	18.82	341	P	P	19 30 46.2	+0.8
	comp=Z,0.6nm,0.5s,baz=286,slow=8.7,SNR=3.1						
JSD	Sado	20.20	343	P	P	19 31 01.3	+1.3
PETK	Petropavlovsk-	35.45	12	P	P	19 33 18.9	+1.2
WB0	Warramunga Arr	39.94	197	P	P	19 33 53.2	-2.4
WB0				IAmb	IAmb	19 34 33.6	
	comp=Z,7.2nm,1.4s						
WB2	Warramunga Arr	40.11	197	P	P	19 33 56.5	-0.6
WB2				IAmb	IAmb	19 34 32.2	
	comp=Z,7.6nm,1.4s						
WRA	Warramunga Arr	40.12	197	P	P	19 33 56.8	-0.3
	comp=Z,0.3nm,0.4s,baz=360,slow=9.1,SNR=6.5						
	comp=Z,0.3nm,0.4s						
WRA	Warramunga Arr	40.12	197	P	P	19 33 57.0	-0.1
FITZ	Fitzroy Crossi	41.66	209	P	P	19 34 09.8	+0.2
	comp=Z,1.5nm,0.9s,baz=28,slow=9.7,SNR=7.9						
	comp=Z,1.5nm,0.9s						
FITZ	Fitzroy Crossi	41.66	209	P	P	19 34 08.5	-1.2
FITZ				IAmb	IAmb	19 34 39.6	
	comp=Z,12nm,1.4s						
SONM	Songino Array	43.03	321	P	P	19 34 20.2	-0.4
	comp=Z,0.3nm,0.5s,baz=122,slow=6.0,SNR=2.9						
	comp=Z,0.3nm,0.5s						
ASAR	Alice Springs	43.78	196	P	P	19 34 26.4	-0.4
	comp=Z,0.2nm,0.5s,baz=8.4,slow=6.8,SNR=4.3						
	comp=Z,0.2nm,0.5s						
PINNC	Pines Island,	46.36	152	P	P	19 34 45.8	-1.2
PSA00	Pilbara Seismi	47.47	213	P	P	19 34 54.2	-1.3
PSA00				IAmb	IAmb	19 34 54.9	
	comp=Z,14nm,1.4s						
MK31	Makanchi Array	58.36	314	P	P	19 36 14.6	-0.3
MKAR	Makanchi Array	58.36	314	P	P	19 36 14.9	-0.1
	comp=Z,0.6nm,0.6s,baz=89,slow=9.7,SNR=9.0						
	comp=Z,0.6nm,0.6s						
MKAR	Makanchi Array	58.36	314	P	P	19 36 14.8	-0.2
MAKZ	Makanchi	58.58	314	P	P	19 36 16.3	-0.2
KURK	Kurchatov	61.16	318	P	P	19 36 33.6	-0.3
KURK				IAmb	IAmb	19 36 40.5	
	comp=Z,2.1nm,1.2s						
BPAW	Bear Paw Mtn.	61.63	26	P	P	19 36 37.8	+0.9
BPAW				IAmb	IAmb	19 36 54.4	
	comp=Z,4.4nm,1.5s						
MDM	Murphy Dome	63.01	26	P	P	19 36 45.6	-0.4
MDM				IAmb	IAmb	19 36 59.0	
	comp=Z,1.5nm,0.9s						
L27K	Beaver Creek,	65.44	29	P	P	19 37 01.2	-0.7
L27K				IAmb	IAmb	19 37 13.5	
	comp=Z,4.0nm,1.4s						
LOGN	Logan Glacier	65.60	31	P	P	19 37 05.4	+2.3
KKAR	Karatay Array	66.67	310	P	P	19 37 10.1	0.0
ABKAR	Akbulak array	73.23	317	P	P	19 37 48.7	-1.1
NVAR	Mina Array Bea	83.06	52	P	P	19 38 44.3	+0.1
	comp=Z,0.3nm,0.6s,baz=238,slow=5.0,SNR=3.8						
	comp=Z,0.3nm,0.6s						
FINES	FINESS Array B	86.75	335	P	P	19 38 59.9	-2.0
	comp=Z,1.0nm,0.3s,baz=65,slow=4.3,SNR=21						
	comp=Z,1.0nm,0.3s						

*BJI **01** 19:40:03.6±0.0, 1°.44N×95°.78E, h12km, mb4.5/28, mB4.8/15, Ms4.9/2, Ms7 4.4/3*
*IDC **01** 19:40:05.1±0.5, 1°.70N×95°.69E, h0km, mb4.4/24, mbtmp4.4/26, ML4.3/2, MS3.6/30, Error ellipse: s-maj=17.0km s-min=12.0km az=49.0*
*DJA **01** 19:40:09.1±0.8, 2°N±2°×9°6E±°, h17km±6km, M4.9/36, mB5.5/12, mb4.8/36, MLv4.9/13, Mw(mB)5.0/12*
*NEIC **01** 19:40:10.5±1.5, 1°.76N±0°.07×95°.84E±0°.08, h29km±5km, mb4.9/84, Error ellipse: s-maj=12.5km s-min=8.5km az=59.0*
ISC 01 19:40:09.7±0.4, **1°.71N**±0°.05×**95°.75E**±0°.05, **h29**km±2km, **h29km:pP-P, n264**, σ**0s.98**/249, **mb4.8**/83, **MS3.6**/28, **1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.87	102	Pn	Pn	19 40 39.4	-0.4
GSI	Gunungsitoli	1.87	102	P	Pn	19 40 39.6	-0.2
GSI				S	Sn	19 41 01.6	-0.9
GSI	Gunungsitoli	1.87	102	P	Pn	19 40 39.8	0.0
KCSI	Kotacane, Aceh	2.71	48	P	Pn	19 40 51.5	+0.1
KCSI				S	Sn	19 41 24.3	+1.1
RPSI	Rantau Prapat	3.33	73		Pn	19 40 59.5	-0.2
TSI	Tuntungan	3.33	58	P	Pn	19 41 00.7	+0.8
TSI				S	Sn	19 41 39.4	+0.9
PSI	Prapat	3.36	71	P	Pn	19 41 00.3	0.0
LHMI	Lhok Sumawe	3.70	19		Pn	19 41 05.1	+0.1
LHMI	Lhok Sumawe	3.70	19	P	Pn	19 41 04.4	-0.5
LHMI	Lhok Sumawe	3.70	19	P	Pn	19 41 05.5	+0.6
MNSI	Mandailing Nat	3.94	103	P	Pn	19 41 08.4	+0.2
SISI	Saibi	4.50	132	P	Pn	19 41 14.3	-1.7
PPI	Padang Panjang	5.12	115	P	Pn	19 41 24.7	+0.2
	3μm242nm,0.8s						
BKNI	Bangkinang	5.47	104		Pn	19 41 29.9	+0.6
BKNI	Bangkinang	5.47	104	P	Pn	19 41 30.1	+0.8
	1.3nm3μm204nm,0.5s						
BKNI	Bangkinang	5.47	104	P	Pn	19 41 30.5	+1.2
IPM	Ipoh	5.95	62		Pn	19 41 35.1	-0.8
IPM	Ipoh	5.95	62	P	Pn	19 41 36.4	+0.5
KULM	Kulim	6.05	54		Pn	19 41 36.8	-0.5
KRJI	Kerinci	6.85	123	P	Pn	19 41 48.6	+0.3
	2.5nm8μm776nm,0.9s						
SRIT	Nakonsritamara	7.85	29	Pn	Pn	19 42 01.1	-0.9
MYKOM	Kota Tinggi	8.10	89	Pn	Pn	19 42 05.0	-0.5
KSI	Kapahiang	8.67	128	P	Pn	19 42 13.1	-0.2
	5μm329nm,0.9s						
TPRI	Tanjung Pinang	8.81	95	P	Pn	19 42 15.1	-0.1
	3μm40nm,1.0s						
DSRI	Dabo	9.10	104	P	Pn	19 42 19.3	+0.2
	10nm,0.9s						
MNAI	Manna	9.39	130	Pn	Pn	19 42 22.5	-0.8
MNAI	Manna	9.39	130	P	Pn	19 42 22.7	-0.5
	559nm,1.0s						
MNAI	Manna	9.39	130	P	Pn	19 42 22.4	-0.8
LWLI	Liwa	10.66	129	P	Pn	19 42 40.1	-0.5
	3μm310nm,0.9s						
KASI	Kota Agung	11.31	129	P	Pn	19 42 48.1	-1.4
	194nm,0.8s						
STKI	Sintang	15.81	96	P	P	19 43 55.9	+1.9
PALK	Pallekele	15.98	291	Pn	Pn	19 43 51.2	-1.4
	0.7nm,0.3s,baz=210,slow=12,SNR=6.0						
PALK				Sn	Sn	19 46 32.2	-17
	2.0nm,0.3s,baz=305,slow=23,SNR=11						
PALK				LR	LR	19 48 38.9	
	comp=Z,238nm,18.6s,baz=215,slow=32						
	5.0nm,0.5s						
SBUM	Sibu	16.48	87		Pn	19 43 58.6	-0.4
CM31	Chiang Mai Arr	16.94	10		Pn	19 44 02.2	-2.5
CMAR	Chiang Mai Arr	16.94	10	Pn	Pn	19 44 03.6	-1.1
	0.5nm,0.3s,baz=202,slow=11,SNR=33						
CMAR				LR	LR	19 51 48.4	
	comp=Z,200nm,18.4s,baz=190,slow=42						
	5.8nm,0.7s						
CMAR	Chiang Mai Arr	16.94	10	Pn	Pn	19 44 03.3	-1.4
CHTO	Chiang Mai	17.29	10		Pn	19 44 07.2	-1.9
CHTO	Chiang Mai	17.29	10	P	P	19 44 09.9	-0.4
AZL	Aizawl	22.10	353	eP	P	19 45 02.3	-0.6
AZL				IAmb	IAmb	19 45 08.8	
	comp=Z,19nm,0.4s						
HYBB	Hyderabad (bro	23.01	314	eP	P	19 45 13.2	+0.7
HYBB				eS	S	19 49 21.9	+0.4
HYBB				ePcS	PcS	19 52 40.9	-0.3
HYBB				eScS	ScS	19 56 23.9	-0.1
BOK	Bokaro	23.95	337	eP	P	19 45 22.7	+1.1
BOK				IAmb	IAmb	19 45 24.8	
	comp=Z,26nm,0.8s						
SHL	Shillong	24.01	351	eP	P	19 45 21.7	-0.7
SHL				IAmb	IAmb	19 45 25.6	
	comp=Z,16nm,0.7s						
MPSI	Mapaga	24.19	93	P	P	19 45 25.7	+1.8
	comp=Z,19nm,0.8s						
MOKO	MOKOCHONG	24.50	357	eP	P	19 45 28.0	+1.2
KAPI	Kappang	24.89	106	P	P	19 45 30.3	0.0
	comp=Z,26nm,0.8s,baz=288,slow=8.5,SNR=12						
KAPI				LR	LR	19 57 20.9	
	comp=Z,206nm,18.3s,baz=329,slow=42						
	comp=Z,26nm,0.8s						
KAPI	Kappang	24.89	106	P	P	19 45 30.1	-0.2
KAPI				IAmb	IAmb	19 45 32.5	
	comp=Z,34nm,1.0s						
TEZP	TEZPUR	24.93	354	eP	P	19 45 28.4	-2.1
H08S2	Diego Garcia H	24.99	248	T	T	20 12 19.6	
	baz=67,slow=75,SNR=438						
H08S3	Diego Garcia H	24.99	248	T	T	20 12 33.7	
	baz=67,slow=75,SNR=430						
H08S1	Diego Carcia H	25.00	248	T	T	20 12 28.1	
	baz=67,slow=75,SNR=454						
BNSI	Bone	25.09	104	P	P	19 45 32.5	+0.4
	comp=Z,31nm,1.3s						
BKSI	Bulukumba	25.33	106	P	P	19 45 34.6	+0.3
	comp=Z,25nm,1.0s						
LKP	Lekhapani	25.48	0	eP	P	19 45 36.5	+1.0
MRSI	Marisa	26.22	92	P	P	19 45 54.6	+12
ODAN	Odare	26.27	343	eP	P	19 45 44.5	+1.6
	comp=Z,39nm,1.0s						
GTK	Tadong	26.37	346	eP	P	19 45 45.8	+2.1
TAPN	Taplejung	26.64	344	eP	P	19 45 47.8	+1.5
	comp=Z,58nm,0.8s						
JIRN	Jiri	27.38	341	eP	P	19 45 54.7	+1.6
	comp=Z,58nm,0.7s						
PKI	Pulchoki	27.56	340	eP	P	19 45 59.2	+4.6
PKIN	Phulchoki	27.57	340	eP	P	19 45 59.5	+4.8
DMN	Daman	27.70	339	eP	P	19 46 00.5	+4.7
BBSI	Bau Bau	27.73	105	P	P	19 45 56.8	+0.8
	comp=Z,70nmcomp=Z,6.6nm,0.8s						
LSA	Lhasa	28.18	352	P	P	19 46 01.4	+1.1
LSA				IAmb	IAmb	19 46 17.8	
	comp=Z,24nm,0.9s						
LSA	Lhasa	28.18	352	P	P	19 46 00.2	-0.1
GKN	Gorkha	28.23	339	eP	P	19 46 01.4	+1.0
DAV	Davao City (W)	30.21	79	LR	LR	19 59 12.9	
	comp=Z,87nm,20.9s,baz=246,slow=38						
ENH	Enshi	31.26	23	P	P	19 46 26.2	-0.9
ENH				IAmb	IAmb	19 46 41.3	
	comp=Z,18nm,1.2s						
LBMI	Labuha	31.84	94	P	P	19 46 32.8	+0.4
	comp=Z,16nm,1.7s						
PSA00	Pilbara Seismi	33.02	136	P	P	19 46 42.7	0.0
PSA00	Pilbara Seismi	33.02	136	P	P	19 46 42.4	-0.2
PSA00				IAmb	IAmb	19 46 43.3	
	comp=Z,45nm,2.0s						
SMLA	Simla	34.13	331	eP	P	19 46 52.1	-0.1
SMLA				IAmb	IAmb	19 46 56.4	
	comp=Z,7.3nm,0.9s						
GOMU	GeErMu	34.33	359	P	P	19 47 04.6	+10
GOMU				pP	pwP	19 47 06.4	-1.5
GOMU				sP	sP	19 47 07.4	+3.1
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,50nm,5.7s						
XAN	Xi'an	34.45	20	P	P	19 46 55.5	+0.6
XAN				pP	sP	19 47 05.4	+0.3
XAN				pmax	pmax		
	comp=Z,16nm,1.2s						
XAN	Xi'an	34.45	20	P	P	19 46 55.2	+0.3
XAN				pP	sP	19 47 05.1	0.0
FITZ	Fitzroy Crossi	35.40	125	P	P	19 47 02.9	-0.5
	baz=36,SNR=9.5						
FITZ	Fitzroy Crossi	35.40	125	P	P	19 47 02.5	-0.8
FITZ				IAmb	IAmb	19 47 03.6	
	comp=Z,20nm,1.1s						
FITZ	Fitzroy Crossi	35.40	125	P	P	19 47 02.7	-0.7
SWI	Sorong	35.60	94	P	P	19 47 17.1	+12
KNRA	Kununurra	36.93	119	P	P	19 47 15.0	-1.4
	baz=37,SNR=5.1						
KNRA	Kununurra	36.93	119	P	P	19 47 14.5	-1.9
KNRA				IAmb	IAmb	19 47 20.6	
	comp=Z,20nm,1.2s						
KNRA	Kununurra	36.93	119	P	P	19 47 14.9	-1.5
NJ2	Nanjing	37.22	33	eP	P	19 47 18.7	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GTA	Gaotai	37.71	5	eP	P	19 47 23.0	+0.1
GTA				pP	pP	19 47 27.5	-2.6
GTA				sP	sP	19 47 30.8	-2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MTN	Manton Dam	37.98	113	P	P	19 47 24.0	-1.4
	baz=38,SNR=6.0						
MTN	Manton Dam	37.98	113	P	P	19 47 23.7	-1.6
MTN				IAmb	IAmb	19 47 25.3	
	comp=Z,8.5nm,0.7s						
NIL	Nilore	38.12	329	P	P	19 47 25.9	-0.5
NIL				IAmb	IAmb	19 47 37.2	
	comp=Z,20nm,1.1s						
MUN	Mundaring	38.71	152	P	P	19 47 32.0	+0.7
	baz=39,SNR=3.2						
MUN	Mundaring	38.71	152	P	P	19 47 30.7	-0.6
KDU	Kakadu	39.16	112	P	P	19 47 34.0	-1.4
	baz=39,SNR=4.9						
KDU	Kakadu	39.16	112	P	P	19 47 33.9	-1.4
HNS	HongShan	39.58	24	⇑P	P	19 47 41.1	+2.6
HNS				pmax	pmax		
	comp=Z,23nm,1.3s						
H01W3	Cape Leeuwin H	40.28	156	T	T	20 31 03.4	
	baz=333,slow=76,SNR=35						
H01W2	Cape Leeuwin H	40.29	156	T	T	20 31 06.7	
	baz=333,slow=76,SNR=37						
H01W1	Cape Leeuwin H	40.29	156	T	T	20 30 56.9	
	baz=333,slow=76,SNR=32						
WRKA	Warakurna	41.25	132	P	P	19 47 52.9	+0.3
	baz=41,SNR=8.5						
WRKA	Warakurna	41.25	132	P	P	19 47 52.8	+0.3
BJT	Baijiatuau	42.41	23	P	P	19 48 03.3	+1.5
BJT				IAmb	IAmb	19 48 15.1	
	comp=Z,24nm,1.2s						
WB0	Warramunga Arr	43.51	121	P	P	19 48 10.4	-0.6
WB0				IAmb	IAmb	19 48 11.4	
	comp=Z,18nm,0.7s						
WRA	Warramunga Arr	43.54	122	P	P	19 48 10.8	-0.4
	comp=Z,13nm,0.9s,baz=299,slow=9.2,SNR=83						
WRA				PcP	PcP	19 49 58.1	-0.7
	comp=Z,1.5nm,0.7s,baz=310,slow=2.6,SNR=5.3						
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	43.54	122	P	P	19 48 10.4	-0.8
WRAB	Tennant Creek	43.54	122	P	P	19 48 11.2	0.0
WRAB				IAmb	IAmb	19 48 11.9	
	comp=Z,28nm,1.0s						
WRAB	Tennant Creek	43.54	122	P	P	19 48 11.3	0.0
WRAB	Tennant Creek	43.54	122	P	P	19 48 09.8	-1.4
WRAB				pP	sP	19 48 20.5	-0.9
WB2	Warramunga Arr	43.55	122	P	P	19 48 11.2	-0.1
	baz=44						
WB2	Warramunga Arr	43.55	122	P	P	19 48 11.2	-0.1
WB2				IAmb	IAmb	19 48 11.9	
	comp=Z,26nm,1.1s						
WR0	Warramunga Arr	43.72	121	P	P	19 48 11.8	-0.8
SHLS	Shalkode	43.76	343	eP	P	19 48 12.2	-0.6
	baz=343						
GAR	Garm	43.78	331	P	P	19 48 12.8	-0.2
GAR				IAmb	IAmb	19 48 24.5	
	comp=Z,32nm,1.3s						
UZB	Uzynbulak	43.88	342	eP	P	19 48 13.7	-0.1
	baz=342						
SATY	Saty	43.99	342	eP	P	19 48 12.8	-1.8
	baz=342						
CHGR	Chuyangaron	44.09	330		P	19 48 14.5	-1.0
CHGR				IAmb	IAmb	19 48 25.4	
	comp=Z,14nm,0.7s						
BTK	Batken	44.38	332	P	P	19 48 18.6	+0.8
BTK				IAmb	IAmb	19 48 31.1	
	comp=Z,9.9nm,0.7s						
MDOK	Medeo	44.52	340	eP	P	19 48 17.7	-1.2
	baz=341						
FORT	Forrest	44.60	139	P	P	19 48 20.9	+1.4
	baz=45,SNR=9.6						
FORT	Forrest	44.60	139	P	P	19 48 19.2	-0.4
FORT	Forrest	44.60	139	P	P	19 48 20.8	+1.2
AS31	Alice Springs	44.86	127	P	P	19 48 21.6	-0.2
ASAR	Alice Springs	44.86	127	P	P	19 48 21.6	-0.2
	comp=Z,6.3nm,0.6s,baz=298,slow=7.9,SNR=113						
ASAR				PcP	PcP	19 50 03.4	0.0
	comp=Z,2.2nm,0.8s,baz=302,slow=3.0,SNR=8.8						
ASAR				LR	LR	20 10 27.6	
	comp=Z,120nm,18.3s,baz=326,slow=41						
	comp=Z,6.3nm,0.6s						
ASAR	Alice Springs	44.86	127	P	P	19 48 21.2	-0.6
AAK	Ala-Archa	44.98	338	LR	LR	20 09 48.4	
	comp=Z,67nm,18.0s,baz=142,slow=40						
TJN	Taejon	45.22	37	P	P	19 48 24.1	-0.3
KUU	Kurty	45.41	340	eP	P	19 48 25.1	-0.7
	comp=Z,8.0nm,1.3s,baz=340						
SGDS	Sogindy	45.63	338	eP	P	19 48 26.8	-0.8
	baz=339						
KSAR	Wonju Array Be	46.24	36	P	P	19 48 32.6	+0.2
KS19	Wonju Array Si	46.27	36	P	P	19 48 31.9	-0.9
KS19				IAmb	IAmb	19 49 51.5	
	comp=Z,21nm,1.8s						
KSRS	Korea Array	46.27	36	P	P	19 48 32.4	-0.3
	comp=Z,1.5nm,0.7s,baz=232,slow=8.1,SNR=12						
	comp=Z,1.5nm,0.7s						
IUG	Iuzhnay	46.41	334	eP	P	19 48 33.1	-0.7
	baz=334						
MK31	Makanchi Array	46.42	347	P	P	19 48 34.4	+0.6
MK31				IAmb	IAmb	19 48 45.4	
	comp=Z,19nm,1.3s						
MKAR	Makanchi Array	46.42	347	P	P	19 48 34.3	+0.6
	comp=Z,4.6nm,0.6s,baz=164,slow=8.9,SNR=84						
MKAR				LR	LR	20 11 10.8	
	comp=Z,53nm,19.5s,baz=158,slow=40						
	comp=Z,4.6nm,0.6s						
DZA	Taraz	46.45	335	eP	P	19 48 33.4	-0.6
	baz=335						
MAKZ	Makanchi	46.50	347	P	P	19 48 34.5	+0.1
MAKZ				IAmb	IAmb	19 48 45.9	
	comp=Z,15nm,1.4s						
ZSN	Zaisan	46.53	350	eP	P	19 48 34.1	-0.5
	comp=Z,9.4nm,1.4s,baz=350						
SONM	Songino Array	46.87	10	P	P	19 48 38.0	+0.6
	comp=Z,7.6nm,0.6s,baz=190,slow=9.4,SNR=74						
SONM				PcP	PcP	19 50 10.6	+0.6
	comp=Z,2.6nm,0.6s,baz=201,slow=3.3,SNR=7.2						
SONM				LR	LR	20 10 38.0	
	comp=Z,116nm,20.3s,baz=188,slow=39						
	comp=Z,7.6nm,0.6s						
SONM	Songino Array	46.87	10	P	P	19 48 37.6	+0.2
SONM				IAmb	IAmb	19 48 49.0	
	comp=Z,11nm,0.9s						
KK31	Karatay Array	46.97	335	P	P	19 48 38.6	+0.5
KK31				IAmb	IAmb	19 48 49.7	
	comp=Z,9.2nm,0.8s						
KKAR	Karatay Array	46.97	335	P	P	19 48 38.6	+0.5
KKAR	Karatay Array	46.97	335	P	P	19 48 38.7	+0.6
KKAR				IAmb	IAmb	19 48 49.7	
	comp=Z,9.2nm,0.8s						
ULN	Ulaanbaatar	47.01	10	P	P	19 48 38.6	0.0
ULN				IAmb	IAmb	19 48 50.0	
	comp=Z,14nm,1.3s						
ULN	Ulaanbaatar	47.01	10	P	P	19 48 38.5	0.0
ULN				pP	sP	19 48 48.6	-0.1
BTLS	Baital	47.21	339	eP	P	19 48 38.6	-1.3
	baz=339						
JMN	Monobe	47.81	44	P	P	19 48 45.0	+0.1
JHS	Saijyo	48.01	42	P	P	19 48 46.5	+0.2
JHS				IAmb	IAmb	19 48 59.8	
	comp=Z,17nm,1.1s						
QIS	Mount Isa	48.31	120	P	P	19 48 49.0	+0.1
	baz=48,SNR=7.6						
GEYT	Alibeck	49.90	321	P	P	19 49 01.0	+0.1
	comp=Z,4.5nm,0.7s,baz=173,slow=11,SNR=7.8						
	comp=Z,4.5nm,0.7s						
GEYT	Alibeck	49.90	321	P	P	19 49 00.9	+0.1
GEYT				IAmb	IAmb	19 49 12.0	
	comp=Z,7.8nm,0.8s						
GYA0B	ALIBECK ARRAY	49.90	321	P	P	19 49 00.8	-0.1
GYA0B				IAmb	IAmb	19 49 12.0	
	comp=Z,8.1nm,0.8s						
GUMO	Guam	49.99	74	LR	LR	20 14 37.1	
	comp=Z,19nm,18.4s,baz=280,slow=41						
SEM	Semipalatinsk	50.28	347	eP	P	19 49 02.7	-1.0
	baz=347						
INU	Inuyama	50.86	44		P	19 49 07.1	-1.0
INU				IAmb	IAmb	19 49 21.4	
	comp=Z,20nm,1.1s						
KURBB	Kurchatov Arra	50.88	346	LR	LR	20 13 47.9	
	comp=Z,45nm,18.8s,baz=154,slow=40						
KURK	Kurchatov	50.94	346	P	P	19 49 08.6	+0.2
KURK				IAmb	IAmb	19 49 22.3	
	comp=Z,16nm,1.4s						
JCJ	Chichijima	51.14	56	LR	LR	20 09 16.7	
	comp=Z,42nm,20.7s,baz=173,slow=34						
JGF	Kuroka	51.23	44	P	P	19 49 10.6	-0.3
MTSU	Mount Surprise	51.70	115	P	P	19 49 15.1	+0.4
	baz=52,SNR=5.6						
JHJ	Hachijo jima 2	51.75	48	LR	LR	20 10 40.6	
	comp=Z,35nm,21.1s,baz=260,slow=35						
BNX	BinXian	51.91	28	⇓P	P	19 49 15.6	-0.1
BNX				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,120nm,6.0s						
ABPO	Ambohimpanom	51.92	244	P	P	19 49 17.1	+0.6
ABPO				IAmb	IAmb	19 49 18.0	
	comp=Z,14nm,1.1s						
BRZS	Berezniki	51.95	341	eP	P	19 49 15.5	-0.5
	baz=341						
MJAR	Matsushiro Arr	52.31	43	P	P	19 49 19.5	+0.6
	comp=Z,0.7nm,0.6s,baz=242,slow=5.8,SNR=2.4						
MJAR				LR	LR	20 13 34.6	
	comp=Z,45nm,18.2s,baz=224,slow=38						
	comp=Z,0.7nm,0.6s						
PMG	Port Moresby	52.39	103	LR	LR	20 13 26.9	
	comp=Z,38nm,18.1s,baz=138,slow=38						
ZAA0	Zalesovo Array	52.84	352	P	P	19 49 22.6	0.0
ZAA0				IAmb	IAmb	19 49 34.0	
	comp=Z,16nm,0.9s						
ZALV	Zalesovo Beam	52.84	352	P	P	19 49 22.9	+0.4
	comp=Z,9.8nm,0.6s,baz=182,slow=6.8,SNR=56						
	comp=Z,9.8nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	Zalesovo Beam	52.84	352	P	P	19 49 22.6	0.0
USRK	Ussuriysk Ar.	53.10	32	P	P	19 49 24.6	0.0
	comp=Z,2.3nm,0.6s,baz=232,slow=7.1,SNR=2.1						
	comp=Z,2.3nm,0.6s						
USRK	Ussuriysk Ar.	53.10	32	P	P	19 49 23.9	-0.7
RAYN	Ar Rayn	53.24	298	P	P	19 49 26.5	+0.5
RAYN	Ar Rayn	53.24	298	P	P	19 49 26.0	-0.1
RAYN				pP	sP	19 49 36.3	0.0
RAYN				sP	pwP	19 49 40.5	+0.5
HTT	Hallett	53.61	135	P	P	19 49 29.3	+0.7
	baz=54,SNR=4.0						
CTAO	Charters Tower	54.03	116	P	P	19 49 32.5	+0.6
CTAO	Charters Tower	54.03	116	P	P	19 49 31.7	-0.2
CTAO				pP	sP	19 49 42.1	0.0
STKA	Stephens Creek	54.77	132	P	P	19 49 37.5	+0.4
	comp=Z,9.3nm,0.6s,baz=304,slow=7.0,SNR=23						
	comp=Z,9.3nm,0.6s						
STKA	Stephens Creek	54.77	132	P	P	19 49 37.5	+0.4
	baz=55,SNR=12						
STKA	Stephens Creek	54.77	132	P	P	19 49 37.4	+0.3
BVAR	Borovoye Array	55.31	342	LR	LR	20 16 19.7	
	comp=Z,33nm,18.7s,baz=22,slow=39						
BRVK	Borovoye	55.37	342	P	P	19 49 40.4	-0.6
BRVK				IAmb	IAmb	19 49 51.7	
	comp=Z,21nm,1.5s						
BRVK	Borovoye	55.37	342	P	P	19 49 40.6	-0.4
BRVK				pP	sP	19 49 50.7	-0.5
ABKAR	Akbulak array	56.39	333	P	P	19 49 47.5	-0.8
ABKAR	Akbulak array	56.39	333	P	P	19 49 47.7	-0.7
ABKAR				IAmb	IAmb	19 49 59.2	
	comp=Z,10nm,0.8s						
CMSA	Cobar Meteorol	57.74	129	P	P	19 49 58.9	+0.7
	baz=58,SNR=14						
KIBK	Kibwezi	57.83	266	P	P	19 49 59.6	+0.3
RMQ	Roma	58.27	123	P	P	19 50 02.2	+0.1
	baz=58,SNR=4.8						
KMBO	Kilima Mbogo	58.55	268	P	P	19 50 04.5	-0.1
	comp=Z,3.0nm,0.8s,baz=60,slow=8.3,SNR=10.0						
KMBO				LR	LR	20 11 17.3	
	comp=Z,53nm,18.3s,baz=91,slow=32						
	comp=Z,3.0nm,0.8s						
KMBO	Kilima Mbogo	58.55	268	P	P	19 50 05.4	+0.8
GNI	Garni	59.93	316	LR	LR	20 18 34.7	
	comp=Z,24nm,19.6s,baz=128,slow=39						
GNI	Garni	59.93	316	P	P	19 50 12.2	-1.3
GNI				IAmb	IAmb	19 50 42.4	
	comp=Z,6.1nm,0.8s						
LODK	Lodwar	60.34	273	P	P	19 50 17.1	+0.4
YSS	Yuzh-Sakhalins	60.76	35	P	P	19 50 18.8	0.0
GURO	Guroymak-BITLI	61.17	314	P	P	19 50 22.2	+0.2
MARD	Mardin	61.62	312	P	P	19 50 24.6	-0.5
ONI	Oni	61.87	319	P	P	19 50 26.5	-0.1
ARMA	Armidale	62.01	126	P	P	19 50 28.3	+0.5
	baz=62						
ARMA	Armidale	62.01	126	P	P	19 50 28.1	+0.3
ARU	Arti	62.16	338	LR	LR	20 19 48.7	
	comp=Z,73nm,18.1s,baz=138,slow=38						
ARU	Arti	62.16	338	P	P	19 50 27.2	-0.9
ARU				IAmb	IAmb	19 50 38.6	
	comp=Z,10nm,1.1s						
KBZ	Khabaz	62.74	319	P	P	19 50 32.1	-0.1
	comp=Z,2.2nm,0.8s,baz=124,slow=5.4,SNR=7.8						
	comp=Z,2.2nm,0.8s						
KIV	Kislovodsk	62.98	320	P	P	19 50 33.0	-0.9
KIV				IAmb	IAmb	19 50 44.9	
	comp=Z,6.1nm,0.9s						
EIL	Elat	63.96	302	LR	LR	20 18 14.2	
	comp=Z,94nm,18.4s,baz=27,slow=36						
YAK	Yakutsk	65.35	17	P	P	19 50 48.4	-0.6
BNN	Bunyan	65.80	312	P	P	19 50 51.6	-1.0
CSS	Mathiatis	66.61	308	P	P	19 50 57.1	-0.6
BRTR	Keskin Array B	67.70	313	P	P	19 51 04.1	-0.6
	comp=Z,1.4nm,0.8s,baz=130,slow=5.0,SNR=4.4						
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	67.70	313	P	P	19 51 00.7	-4.0
NRIK	Noril'sk	67.74	357	P	P	19 51 04.3	+0.1
ILGA	Ilgaz	68.04	314	P	P	19 51 05.3	-1.7
LSZ	Lusaka	68.87	253	LR	LR	20 16 52.9	
	comp=Z,100nm,19.2s,baz=98,slow=32						
LSZ	Lusaka	68.87	253	P	P	19 51 12.8	+0.4
ELL	Elmali	69.74	309	P	P	19 51 18.1	+0.6
OBN	Obninsk	71.43	329	LR	LR	20 26 58.6	
	comp=Z,11nm,18.2s,baz=163,slow=39						
MA2	Magadan	71.51	26	LR	LR	20 25 17.3	
	comp=Z,107nm,18.7s,baz=238,slow=38						
KARP	Karpathos	71.65	307	P	P	19 51 29.2	+0.1
PETK	Petropavlovsk-	72.12	34	LR	LR	20 28 27.3	
	comp=Z,19nm,18.0s,baz=253,slow=40						
PET	Petropavlovsk	72.63	34	P	P	19 51 34.1	-0.3
KLMR	Klimovskoe	72.67	335	eP	P	19 51 32.6	-1.9
KLMR				AMP		19 51 48.6	
	comp=Z,12nm,1.2s						
LBTB	Lobatse	72.81	243	LR	LR	20 16 59.7	
	comp=Z,118nm,21.3s,baz=78,slow=30						
MAW	Mawson	72.88	193	P	P	19 51 36.7	+1.1
	comp=Z,5.0nm,0.9s,baz=131,slow=4.7,SNR=8.3						
	comp=Z,5.0nm,0.9s						
MAW	Mawson	72.88	193	P	P	19 51 37.5	+1.9
TIXI	Tiksi	72.95	10	LR	LR	20 26 56.1	
	comp=Z,88nm,18.5s,baz=182,slow=38						
BOSA	Boshof	73.77	240	P	P	19 51 41.2	-0.7
	comp=Z,3.0nm,0.8s,baz=156,slow=4.5,SNR=5.6						
BOSA				LR	LR	20 20 13.5	
	comp=Z,41nm,20.9s,baz=23,slow=33						
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	73.97	323	P	P	19 51 41.1	-1.3
	comp=Z,0.3nm,0.4s,baz=300,slow=28,SNR=5.1						
	comp=Z,0.3nm,0.4s						
MLR	Muntele Rosu	74.70	317	P	P	19 51 47.4	+0.4
BURAR	Bucovina Array	75.69	319	P	P	19 51 52.2	-0.4
BUR08	Bucovina Ar. S	75.70	319	P	P	19 51 52.4	-0.2
SUR	Sutherland	78.22	237	LR	LR	20 19 48.7	
	comp=Z,112nm,19.3s,baz=91,slow=30						
FINES	FINESS Array B	78.88	333	P	P	19 52 09.4	-0.6
	comp=Z,2.5nm,0.7s,baz=91,slow=5.9,SNR=12						
	comp=Z,2.5nm,0.7s						
JAVC	Velka Javorina	80.87	319	eP	P	19 52 21.8	+0.6
MORC	Moravsky Berou	81.08	320	P	P	19 52 22.8	+0.5
MORC	Moravsky Berou	81.08	320	eP	P	19 52 22.3	0.0
ARCES	ARCESS Array B	81.57	340	P	P	19 52 24.3	-0.1
	comp=Z,15nm,1.2s,baz=91,slow=5.2,SNR=14						
	comp=Z,15nm,1.2s						
KRLC	Kraliky	81.61	320	eP	P	19 52 25.7	+0.6
KRLC				ex	x	19 52 35.9	
DPC	Dobruska-Polom	81.94	321	eP	P	19 52 27.8	+1.0
DPC				ex	x	19 52 34.4	
CONA	Conrad Observa	81.95	318	eP	P	19 52 27.0	0.0
	comp=Z,1.6nm,0.9s						
OSTC	Ostas	82.03	321	eP	P	19 52 27.5	+0.3
ARSA	Arzberg	82.11	317	eP	P	19 52 27.5	-0.2
	comp=Z,2.3nm,0.6s						
SOKA	Soboth	82.38	317	eP	P	19 52 29.9	+0.7
	comp=Z,4.8nm,1.3s						
CKRC	Cesky Krumlov	83.07	319	eP	P	19 52 33.2	+0.5
CKRC				ex	x	19 52 41.8	
AQU	L'Aquila	83.19	312	P	P	19 52 33.6	+0.1
BIOA	Bad Ischl, Aus	83.42	318	eP	P	19 52 34.3	-0.2
	comp=Z,2.7nm,0.7s						
GEC2	GERESS Array S	83.48	319	P	P	19 52 35.3	+0.4
GEC2				IAmb	IAmb	19 52 36.2	
	comp=Z,9.1nm,1.1s						
GERES	GERESS Array B	83.48	319	P	P	19 52 34.5	-0.4
	comp=Z,2.7nm,0.9s,baz=96,slow=6.8,SNR=24						
	comp=Z,2.7nm,0.9s						
GERES	GERESS Array B	83.48	319	P	P	19 52 34.6	-0.3
KHC	Kasperske Hory	83.58	319	eP	P	19 52 35.4	+0.1
CLUD	Cludinico	83.84	316	P	P	19 52 36.8	+0.1
ABTA	Abfaltersbach	84.12	317	eP	P	19 52 36.6	-1.6
	comp=Z,3.8nm,1.1s						
CLL	Collm	84.13	321	eP	P	19 52 37.0	-1.0
CLL				epP	pP	19 52 48.0	+2.2
CIMO	Cimolais	84.14	316	P	P	19 52 37.9	-0.4
CIMO				IAmb	IAmb	19 52 39.3	
	comp=Z,8.6nm,1.0s						
CTI	Castel Tesino	84.67	316	P	P	19 52 40.9	-0.2
CTI				IAmb	IAmb	19 52 55.4	
	comp=Z,10nm,1.1s						
WTTA	Wattenberg	84.75	317	eP	P	19 52 41.1	-0.4
	comp=Z,5.2nm,1.0s						
RETA	Reutte	85.35	317	eP	P	19 52 44.1	-0.3
	comp=Z,4.8nm,0.8s						
FETA	Feichten	85.35	317	eP	P	19 52 44.6	0.0
	comp=Z,3.1nm,1.0s						
NB2	NORSAR Subarra	85.86	331	P	P	19 52 45.9	-0.7
	comp=Z,7.6nm,1.2s,baz=93,slow=5.3						
NOA	NORSAR Array B	85.86	331	P	P	19 52 46.1	-0.4
	comp=Z,2.0nm,1.0s,baz=94,slow=5.8,SNR=4.0						
NOA				LR	LR	20 34 52.5	
	comp=Z,22nm,19.8s,baz=55,slow=38						
	comp=Z,2.0nm,1.0s						
KEST	Kesra	86.08	306	P	P	19 52 48.1	-0.1
	comp=Z,6.7nm,0.9s,baz=308,slow=4.1,SNR=6.9						
	comp=Z,6.7nm,0.9s						
KEST	Kesra	86.08	306	P	P	19 52 49.5	+1.3
KEST				IAmb	IAmb	19 52 51.1	
	comp=Z,9.3nm,0.9s						
SPITS	Spitsbergen Ar	86.16	348	LR	LR	20 37 23.1	
	comp=Z,28nm,19.1s,baz=72,slow=40						
VNDA	Vanda	86.61	169	P	P	19 52 50.0	+0.2
	comp=Z,1.1nm,0.7s,baz=326,slow=6.4,SNR=2.6						
	comp=Z,1.1nm,0.7s						
SBA	Scott Base	87.71	168	P	P	19 52 56.7	+1.5
SBA				IAmb	IAmb	19 52 57.1	
	comp=Z,7.4nm,1.1s						
TAM	Tamanrasset	89.55	293	P	P	19 53 02.7	-2.6
TAM				IAmb	IAmb	19 53 03.6	
	comp=Z,9.2nm,1.3s						
TORD	Torodi Ar. Bea	93.56	283	P	P	19 53 24.2	+0.4
	comp=Z,2.9nm,0.9s,baz=84,slow=5.7,SNR=12						
	comp=Z,2.9nm,0.9s						
TORD	Torodi Ar. Bea	93.56	283	P	P	19 53 24.0	+0.2
SNAA	Sanae	94.32	198	LR	LR	20 32 25.5	
	comp=Z,26nm,19.4s,baz=86,slow=33						
NVAR	Mina Array Bea	129.21	35	PKP	PKPdf	19 59 16.0	+0.1
	comp=Z,0.8nm,0.8s,baz=325,slow=2.2,SNR=6.1						
PLCA	Paso Flores	139.22	196	PKhKP	PKPpre	19 59 28.6	
	comp=Z,1.9nm,1.1s,baz=304,slow=1.3,SNR=3.6						
TXAR	Lajitas Array	143.97	30	PKP	PKPbc	19 59 41.4	+0.3
	comp=Z,0.7nm,0.6s,baz=356,slow=1.8,SNR=9.4						
CPUP	Villa Florida	144.38	224	PKP	PKPab	19 59 42.8	+0.8
	comp=Z,16nm,0.8s,baz=110,slow=3.3,SNR=25						

*SSNC **01** 19:41:21.4±3.1, 19.°44N×70.°37W, h25km±119km, MD3.6, ML2.6*

*OSPL **01** 19:41:23.6±4.6, 19.°69N×70.°53W, h5km±14km, ML3.1*

ISC 01 19:41:20.4±1.3**, 19.°76N**±0.°04×**70.°47W**±0.°04**, h13**km±10km**, n12,** σ1.°19/18**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.41	217	*i* P	Pg	19 41 28.4	-0.1
SC01				*e*S	Sg	19 41 34.7	+0.6
SC01				IAML		19 41 43.1	
	comp=Z,1μm,0.3s						
LONA1	Toro Cenizo, N	0.68	123	*i* P	Pn	19 41 35.7	0.0
LONA1				*e*S	Sn	19 41 46.9	+0.7
LONA1				IAML		19 41 49.6	
	comp=Z,1μm,0.6s						
LOPP1	Punta Rusia, P	0.69	278	*i* P	Pn	19 41 37.6	+1.7
LOPP1				*e*S	Sb	19 41 44.9	+1.0
LOPP1				IAML		19 41 48.7	
	comp=Z,2μm,1.5s						
SDDR	Presa de Saban	1.09	225	*i* P	Pb	19 41 39.0	-2.1
SDDR				IAML		19 41 56.1	
	comp=Z,168nm,0.3s						
LODA1	ITESIL, Dajabo	1.18	260	*i* P	Pg	19 41 44.2	+1.0
LODA1				*e*S	Sb	19 41 57.3	-0.6
BANI	BANI	1.36	176	*i* P	Pn	19 41 45.0	-0.2
BANI				*e*S	Sb	19 42 04.0	+0.9
BANI				IAML		19 42 05.2	
	comp=Z,431nm,0.6s						
LOBA2	Hotel Casa Bon	1.77	200	IAML		19 43 03.0	
	comp=Z,99nm,0.8s						
GRTK	Grand Turk	1.85	341	*i* P	Pb	19 41 53.6	-0.6
GRTK				*e*S	Sg	19 42 18.4	-1.7
GRTK				IAML		19 42 20.2	
	comp=Z,245nm,0.6s						
LOPE2	Hotel El Peder	2.10	215	*i* P	Pb	19 41 57.7	-0.6
LOPE2				IAML		19 42 31.1	
	comp=Z,128nm,0.7s						
PCDR	Punta Cana, DR	2.33	122	*i* P	Pb	19 42 02.0	-0.2
PCDR				IAML		19 42 42.2	
	comp=Z,243nm,1.2s						
MASC	Masc	3.56	277	*e*P	Pn	19 42 15.9	+0.6
MASC				*e*S	Sn	19 42 55.8	-1.6
MASC				IAML		19 42 57.4	
	comp=N,5.1nm,0.1s						
MASC				IAML		19 43 01.5	
	comp=E,8.5nm,0.2s						
GTBY	Guantanamo Bay	4.37	273	*e*P	Pn	19 42 27.9	+1.4

RSNC 01 19:52:57.7±1.0**, 6.°82N**×**73.°13W, h150**km±4km**, ML3.3, Mw3.7, 2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	193⇓	*e*P	Pn	19 53 18.0	-0.4
BARC				*e*S	Sn	19 53 33.3	-0.8
BARC				*i*		19 53 34.6	
	comp=Z,582nm,0.2s						
BRRC	Barranca, Sant	0.65	296	*e*P	Pn	19 53 19.8	-0.1
BRRC				*e*S	Sn	19 53 36.5	-0.2
BRRC				*i*		19 53 40.9	
	comp=Z,359nm,0.3s						
PAMC	Pamplona, Colo	0.67	39	*e*P	Pn	19 53 20.8	+0.2
PAMC				*e*S	Sn	19 53 37.9	-0.2
PAMC				*i*		19 53 40.2	
	comp=Z,258nm,0.5s						
RUSC	La Rusia	0.92	177	*e*P	Pn	19 53 22.0	-0.5
RUSC				*i*		19 53 41.7	
	comp=Z,158nm,0.2s						
PTBC	PUERTO BERRIO,	1.35	258	*e*P	Pn	19 53 24.5	-1.2
PTBC				*e*S	Sn	19 53 46.6	-0.5
PTBC				*i*		19 53 52.5	
	comp=Z,209nm,0.3s						
TAMC	Tame, Arauca	1.38	106⇓	*e*P	Pn	19 53 26.5	+0.3
TAMC				*e*S	Sn	19 53 47.0	-0.9
TAMC				*i*		19 53 47.3	
	comp=Z,129nm,0.4s						
SPBC	San Pablo de B	1.49	219	*e*P	Pn	19 53 26.9	-0.4
SPBC				*e*S	Sn	19 53 48.8	-1.2
SPBC				*i*		19 53 53.9	
	comp=Z,397nm,0.2s						
ZARC	Zaragoza, Cauc	1.84	291	*e*P	Pn	19 53 30.5	-0.6
ZARC				*e*S	Sn	19 53 56.0	-0.6
ZARC				*i*		19 54 01.2	
	comp=Z,248nm,0.3s						
NORC	Norcasia	2.13	234	*e*P	Pn	19 53 34.1	-0.4
NORC				*e*S	Sn	19 54 01.9	-0.8
NORC				*i*		19 54 11.6	
	comp=Z,157nm,0.4s						
ROSC	El Rosal	2.29	211	*e*P	Pn	19 53 38.0	+1.2
ROSC				*e*S	Sn	19 54 04.5	-2.2
ROSC				*i*		19 54 12.8	
	comp=Z,366nm,0.5s						
HELC	Santa Helena	2.46	255	*e*P	Pn	19 53 38.6	-0.1
HELC				*e*S	Sn	19 54 10.4	+0.1
HELC				*i*		19 54 16.1	
	comp=Z,114nm,0.3s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	19 53 38.5	-1.0
UREC				*e*S	Sn	19 54 07.6	-4.3
UREC				*i*		19 54 21.7	
	comp=Z,112nm,0.3s						
SOCV	Socops	2.68	57	*e*P	Pn	19 53 40.8	-0.3
SOCV				*e*S	Sn	19 54 11.5	-3.2
GUY2C	Guyana, Caldas	2.73	235	*e*P	Pn	19 53 42.0	-0.2
GUY2C				*e*S	Sn	19 54 20.5	+4.1
GUY2C				*i*		19 54 24.3	
	comp=Z,141nm,0.3s						
LL1C	La Loma 1 Cana	2.74	351	*e*P	Pn	19 53 43.0	+1.2
LL1C				*e*S	Sn	19 54 18.5	+2.6
VILC	Villavicencio,	2.75	192	*e*P	Pn	19 53 41.3	-0.8
VILC				*e*S	Sn	19 54 15.3	-1.0
VILC				*i*		19 54 25.7	
	comp=Z,225nm,0.4s						
PTGC	Puerto Gaitan,	2.78	159	*e*P	Pn	19 53 41.1	-1.3
PTGC				*e*S	Sn	19 54 14.6	-2.3
PTGC				*i*		19 54 17.3	
	comp=Z,86nm,0.4s						
LL6C	La Loma 6 Bece	2.90	357	*e*P	Pn	19 53 42.5	-1.4
LL6C				*e*S	Sn	19 54 17.6	-2.1
LL6C				*i* Sg		19 54 17.6	
LL6C				*i*		19 54 24.0	
	comp=Z,52nm,0.4s						
CBOC	Ciudad Bolivar	3.02	252	*e*P	Pn	19 53 45.7	+0.2
CBOC				*i*		19 54 27.8	
	comp=Z,29nm,0.5s						
ARGC	Ariguani, Magd	3.22	340	*e*P	Pn	19 53 48.1	+0.2
ARGC				*e*S	Sn	19 54 25.8	-0.9
ARGC				*i*		19 54 33.8	
	comp=Z,29nm,0.2s						
ANIL	Santa Ana	3.23	224	*e*P	Pn	19 53 48.4	0.0
PRAC	Prado	3.54	210	*e*P	Pn	19 53 51.2	-1.0
PRAC				*e*S	Sn	19 54 33.3	-1.1
PRAC				*i*		19 54 40.2	
	comp=Z,136nm,0.4s						
PLMC	San Jos del P	3.67	239	*e*P	Pn	19 53 53.6	-0.1
PLMC				*e*S	Sn	19 54 36.6	-0.6
PLMC				*i*		19 54 41.7	
	comp=Z,21nm,0.2s						
SJCC	San Jacinto, C	3.67	327	*e*P	Pn	19 53 51.6	-2.1
SJCC				*e*S	Sn	19 54 33.3	-4.0
SJCC				*i*		19 54 47.8	
	comp=Z,34nm,0.6s						
CRJC	Cerrejon, Guaj	4.18	3	*e*P	Pn	19 53 58.2	-2.2
CRJC				*e*S	Sn	19 54 45.5	-3.8
CRJC				*i*		19 54 48.0	
	comp=Z,42nm,0.2s						
YOTC	Yotoco, Valle	4.26	229	*e*P	Pn	19 54 00.5	-1.1
SMRC	Santa Marta, M	4.45	346	*e*P	Pn	19 54 03.4	-0.5
MACC	Macarena, Meta	4.70	189	*e*P	Pn	19 54 04.9	-2.3
MACC				*e*S	Sn	19 54 56.1	-5.2
MACC				*i*		19 55 20.8	
	comp=Z,23nm,0.5s						
DABV	Dabajuro	4.76	31	*e*P	Pn	19 54 06.9	-1.2
URIC	Uribia, Colomb	4.98	13	*e*P	Pn	19 54 08.3	-2.6
URIC				*i*		19 55 11.0	
	comp=Z,9.6nm,0.4s						
GARC	Garzon, Huila	5.17	207	*e*P	Pn	19 54 12.1	-1.6
FLOC	Florencia	5.78	206	*e*P	Pn	19 54 20.5	-1.0
FLOC				*e*S	Sn	19 55 27.1	+0.1
BBAC	Balboa, Cauca	6.29	221	*e*P	Pn	19 54 28.9	+0.3

*IDC **01** 19:58:36.1±1.1, 41.°24N×112.°99W, h0km, mbtmp2.4/1, ML3.2/1, Error ellipse: s-maj=39.9km s-min=5.5km az=155.0*

*NEIC **01** 19:58:36.6±0.6, 41.°11N±0.°02×112.°87W±0.°02, h0km±1km, ML1.9/36, Error ellipse: s-maj=3.5km s-min=2.9km az=239.0*

ISC 01 19:58:35.7±0.9**, 41.°17N**±0.°03×**112.°83W**±0.°03**, h0**km**, n28, σ1.°06/29, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGU	Big Grassy Mou	0.28	212		Pg	19 58 41.3	+0.2
HVU	Hansel Valley	0.61	4	Pg	Pb	19 58 49.5	+0.1
HVU				IAML		19 59 00.7	
	comp=N,80nm,0.4s						
HVU				IAML		19 59 02.7	
	comp=E,68nm,0.4s						
CTU	Camp Tracy	0.95	120		Pb	19 58 54.9	-0.1
CTU				IAML		19 59 14.0	
	comp=N,40nm,0.3s						
CTU				IAML		19 59 17.6	
	comp=E,36nm,0.5s						
DUG	Dugway, Tooele	0.97	179	Pg	Pg	19 58 53.8	-0.4
DUG				IAML		19 59 14.9	
	comp=E,42nm,0.5s						
DUG				IAML		19 59 15.8	
	comp=E,38nm,0.4s						
HWUT	Hardware Ranch	1.05	65		Pn	19 58 57.8	-0.1
HWUT				IAML		19 59 19.7	
	comp=E,18nm,0.5s						
HWUT				IAML		19 59 21.5	
	comp=E,25nm,0.5s						
TCUT	Toone Canyon	1.07	92		Pn	19 58 58.8	+0.6
TCUT					Sn	19 59 15.1	+1.1
JLU	Jordanelle	1.19	118		Pb	19 58 59.0	-0.2
NLU	North Lily Min	1.34	154		Pb	19 59 01.6	-0.2
MPU	Maple Canyon	1.47	141	Pn	Pn	19 59 03.4	-0.2
ELK	Elko	1.87	258	Pg	Pn	19 59 09.9	+0.7
	comp=E,2.1nm,0.3s,baz=74,slow=11,SNR=28						
ELK				Lg	Lg	19 59 32.0	
	comp=E,1.0nm,0.3s,baz=200,slow=22,SNR=4.0						
ELK	Elko	1.87	258		Pn	19 59 09.5	+0.3
ELK				IAML		19 59 37.8	
	comp=E,8.2nm,0.3s						
AHID	Auburn Hatcher	2.05	38	Pn	Pb	19 59 13.6	-0.4
AHID				IAML		20 00 07.6	
	comp=E,8.9nm,0.7s						
ECR	Eagle Creek	2.18	29	Pn	Pb	19 59 16.0	0.0
SPR3	Spring Creek 3	2.45	208	Pn	Pn	19 59 18.2	+1.0
SPR3				IAML		20 00 07.5	
	comp=N,5.1nm,0.6s						
SPR3				IAML		20 00 07.5	
	comp=E,5.0nm,0.5s						
P18A	Preston Nutter	2.50	127	Pn	Pn	19 59 17.5	-0.4
HLID	Hailey	2.67	334	Pn	Pn	19 59 21.3	+1.3
HLID				IAML		20 00 11.3	
	comp=E,3.7nm,2.5s						
HLID				IAML		20 00 16.8	
	comp=E,4.4nm,4.7s						
MSU	Marysvale	2.70	169	Pn	Pn	19 59 20.7	+0.2
MVU	Marysvale	2.70	170		Pn	19 59 20.8	+0.3
PSUT	Pine Spring	2.75	197		Pn	19 59 21.2	+0.1
PSUT				IAML		19 59 38.0	
	comp=E,5.0nm,4.9s						
PSUT				IAML		19 59 47.1	
	comp=N,5.3nm,5.0s						
PD31	Pinedale Array	2.92	56		Pn	19 59 25.1	+1.6
PDAR	Pinedale Array	2.92	56	Pn	Pb	19 59 27.3	-1.4
	comp=N,0.4nm,0.3s,baz=227,slow=12,SNR=5.4						
PDAR				Pg	Pg	19 59 31.1	-0.5
	comp=N,1.3nm,0.3s,baz=229,slow=14,SNR=11						
PDAR				Lg	Lg	20 00 08.8	
	comp=N,0.8nm,0.3s,baz=231,slow=30,SNR=3.7						
	comp=N,0.9nm,0.3s						
PDAR	Pinedale Array	2.92	56	Pn	Pn	19 59 24.7	+1.2
IMW	Indian Meadow	3.07	26	Pn	Pn	19 59 27.4	+1.8
MFID	Camas Ranch	3.16	316	Pn	Pn	19 59 27.8	+1.0
MFID				IAML		20 00 23.5	
	comp=N,4.7nm,0.5s						
R11A	Troy Canyon, C	3.52	218		Pb	19 59 38.9	-0.1
R11A				IAML		20 00 30.9	
	comp=E,3.4nm,0.8s						
MCMT	McKenzie Canyo	3.66	360		Pb	19 59 37.8	-3.5
NVAR	Mina Array Bea	5.02	239	Pg	Pb	20 00 03.5	-1.1
	comp=E,0.1nm,0.3s,baz=56,slow=18,SNR=2.3						
NVAR				Lg	Lg	20 01 11.4	
	comp=E,0.2nm,0.3s,baz=52,slow=30,SNR=2.0						
I56US	NEWPORT INFRAS	7.73	338	*i*		20 42 40.0	
	comp=E,0.1nm,1.0s,baz=159,slow=312,SNR=2.5						

*IDC **01** 20:03:31.3±2.5, 8.°54S×111.°97E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=127.0km s-min=21.9km az=51.0*

*DJA **01** 20:03:41.5±0.7, 9°S±5°×11°2E±°, h33km±11km, M3.9/13, MLv3.9/13*

ISC 01 20:03:40.2±2.8**, 8.°90S**±0.°09×**112.°09E**±0.°05**, h30**km±22km**, n21, σ1.°06/20, mb3.5/5, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWJI	Pagerwojo	0.92	342	P	Pn	20 03 57.5	+0.5
PWJI				S	Sb	20 04 09.0	-0.4
GMJI	Gumukmas	1.48	65	P	Pn	20 04 05.2	+0.5
GMJI				S	Sn	20 04 24.0	+1.0
NGJI	Ngawi	1.64	338	P	Pn	20 04 08.1	+1.1
NGJI				S	Sn	20 04 27.9	+0.8
UGM	Wanagama	1.83	302	P	Pn	20 04 10.6	+1.0
UGM				S	Sn	20 04 32.7	+0.8
BLJI	Banyuglugur	1.88	53	P	Pn	20 04 10.8	+0.6
BLJI				S	Sn	20 04 33.8	+0.9
YOGI	Yogyakarta	2.08	301	P	Pn	20 04 12.9	-0.1
TBJI	Tambak Boyo	2.08	353	P	Pn	20 04 13.0	0.0
JAGI	Jajag, Banyuwa	2.08	78	P	Pn	20 04 13.7	+0.6
ABJI	Asem Bagus	2.39	63	P	Pn	20 04 17.1	-0.1
KMMI	Kalianget	2.61	45	P	Pn	20 04 19.5	-0.8
IGBI	Denpasar	3.02	89	P	Pn	20 04 26.9	+1.0
DNP	Denpasar	3.09	86	P	Pn	20 04 28.9	+2.0
SRBI	Singaraja	3.19	76	P	Pn	20 04 28.5	+0.2
WRA	Warramunga Arr	24.15	119	P	P	20 08 52.1	-1.8
	0.3nm,0.4s,baz=293,slow=12,SNR=7.6						
	0.3nm,0.4s						
ASAR	Alice Springs	25.52	128	P	P	20 09 04.7	-1.6
	0.4nm,0.4s,baz=305,slow=9.2,SNR=7.4						
	0.4nm,0.4s						
H08S2	Diego Garcia H	39.19	269	T	T	20 52 30.8	
	baz=96						
H08S3	Diego Garcia H	39.20	269	T	T	20 52 25.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=96						
H08S1	Diego Carcia H	39.21	269	T	T	20 52 29.8	
	baz=96						
SONM	Songino Array	56.71	355	P	P	20 13 14.5	-6.5
	0.2nm,0.4s,baz=177,slow=7.2,SNR=2.1						
	0.2nm,0.4s						
MKAR	Makanchi Array	61.48	337	P	P	20 13 47.3	-6.7
	0.3nm,0.5s,baz=154,slow=7.5,SNR=9.1						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	66.72	343	P	P	20 14 20.9	-7.3
	0.5nm,0.5s,baz=167,slow=6.8,SNR=2.4						
	0.5nm,0.5s						

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*NEIC **01** 20:11:57.6±2.0, 43°.76N±0°.04×105°.27W±0°.06, h0km±2km, ML3.6/73, Error ellipse: s-maj=8.2km s-min=5.9km az=131.0*

*IDC **01** 20:11:57.8±0.9, 44°.13N×105°.80W, h0km, mb4.0/3, mbtmp3.7/8, ML3.4/5, MS3.2/2, Error ellipse: s-maj=26.3km s-min=8.0km az=144.0*

ISC 01 20:11:56.7±0.8**, 43°.78N**±0°.06×**105°.24W**±0°.07**, h0km, n111, σ0^{s}97**/108**, mb4.1**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	68	Pg	Pb	20 12 16.0	+0.1
K22A	Casper	1.47	220		Pn	20 12 23.1	-1.5
K22A				IAML		20 12 48.1	
	comp=E,672nm,0.6s						
K22A				IAML		20 12 49.0	
	comp=N,774nm,0.3s						
PHWY	Pilot Hill	2.48	184		Pn	20 12 38.9	+0.3
PHWY				IAML		20 13 19.6	
	comp=N,211nm,0.7s						
RWWY	Rawlins	2.54	215		Pn	20 12 40.6	+1.1
N23A	Red Feather La	2.93	191	Pn	Pn	20 12 45.8	+1.1
N23A				IAML		20 13 29.4	
	comp=N,202nm,0.6s						
N23A				IAML		20 13 33.3	
	comp=E,147nm,0.7s						
LAO	LASA Array	2.99	347		Pn	20 12 46.2	+0.7
LAO				IAML		20 13 34.4	
	comp=E,265nm,0.6s						
RLMT	Red Lodge	3.18	296		Pn	20 12 48.4	+0.2
RLMT				IAML		20 13 39.7	
	comp=E,116nm,0.6s						
RLMT				IAML		20 13 53.4	
	comp=E,102nm,0.7s						
BW06	Boulder Array	3.31	254		Pn	20 12 49.9	-0.1
BW06				IAML		20 13 46.3	
	comp=E,107nm,0.7s						
PD31	Pinedale Array	3.31	254		Pn	20 12 50.1	+0.1
PDAR	Pinedale Array	3.31	254	Pn	Pn	20 12 50.5	+0.5
	comp=E,4.4nm,0.3s,baz=60,slow=19,SNR=55						
PDAR				Lg	Lg	20 13 31.8	
	comp=E,3.4nm,0.3s,baz=84,slow=27,SNR=4.3						
	comp=E,5.5nm,0.3s						
PDAR	Pinedale Array	3.31	254	Pn	Pn	20 12 50.1	+0.1
OGNE	Ogallala	3.70	139		Pn	20 12 55.4	+0.3
GCMT	Greycliff	3.74	304		Pn	20 12 56.5	+0.7
LKWY	Lake	3.80	284		Pn	20 12 56.7	0.0
LKWY				IAML		20 14 27.2	
	comp=E,64nm,1.2s						
LOHW	Long Hollow	3.90	269		Pn	20 12 58.4	+0.4
FLWY	Flagg Ranch	3.96	276		Pn	20 12 59.5	+0.7
FLWY				IAML		20 14 07.9	
	comp=E,111nm,1.5s						
FLWY				IAML		20 14 12.3	
	comp=E,66nm,1.2s						
ISCO	Idaho Springs	3.99	184		Pn	20 12 59.9	+0.6
MOOW	Moose Ponds	3.99	271		Pn	20 13 00.0	+0.7
SNOW	Snow King Moun	4.02	267		Pn	20 13 00.3	+0.6
SNOW				IAML		20 14 07.7	
	comp=E,82nm,0.7s						
SNOW				IAML		20 14 08.1	
	comp=E,90nm,0.9s						
YNR	Norris Junctio	4.02	285		Pn	20 12 59.3	-0.4
YPP	Pitchstone Pla	4.04	279		Pn	20 13 00.6	+0.5
YFT	Old Faithful	4.09	281		Pn	20 13 00.2	-0.4
REDW	Red Top Meadow	4.10	266		Pn	20 13 01.5	+0.7
REDW				IAML		20 14 14.4	
	comp=E,106nm,0.8s						
REDW				IAML		20 14 17.2	
	comp=E,107nm,0.7s						
IMW	Indian Meadow	4.13	274		Pn	20 13 02.8	+1.6
IMW				IAML		20 14 12.2	
	comp=E,88nm,0.6s						
IMW				IAML		20 14 25.0	
	comp=E,58nm,0.7s						
TPAW	Teton Pass	4.16	268		Pn	20 13 01.2	-0.4
TPAW				IAML		20 14 17.5	
	comp=E,56nm,0.9s						
TPAW				IAML		20 14 27.9	
	comp=E,78nm,1.1s						
FXWY	Fox Creek	4.20	270		Pn	20 13 02.8	+0.6
YMR	Madison River	4.21	284		Pn	20 13 03.2	+0.9
YMR				IAML		20 14 31.7	
	comp=N,93nm,1.0s						
YMR				IAML		20 14 33.6	
	comp=E,84nm,0.9s						
E28A	Huff	4.26	47		Pn	20 13 04.3	+1.5
O20A	White River Ci	4.28	213	Pn	Pn	20 13 02.8	-0.4
O20A				IAML		20 14 17.8	
	comp=E,78nm,0.8s						
O20A				IAML		20 14 27.7	
	comp=N,73nm,0.9s						
AHID	Auburn Hatcher	4.40	259		Pn	20 13 06.3	+1.5
AHID				IAML		20 14 24.6	
	comp=N,74nm,0.8s						
AHID				IAML		20 14 30.1	
	comp=N,65nm,0.8s						
YHL	Hebgen Lake	4.40	286		Pn	20 13 05.6	+0.6
YHL				IAML		20 14 25.0	
	comp=E,95nm,0.8s						
YHL				IAML		20 14 25.3	
	comp=N,68nm,0.7s						
ECR	Eagle Creek	4.53	263		Pn	20 13 08.4	+1.8
RDMU	Red Mountain	4.54	227		Pn	20 13 07.3	+0.5
RDMU				IAML		20 14 25.3	
	comp=N,56nm,0.8s						
RDMU				IAML		20 14 25.9	
	comp=E,68nm,1.2s						
QLMT	Earthquake Lak	4.57	285		Pn	20 13 06.8	-0.5
DGMT	Dagmar	4.75	8		Pn	20 13 10.6	+1.1
SMCO	Snowmass	4.78	196		Pn	20 13 10.3	0.0
SMCO				IAML		20 14 35.3	
	comp=E,64nm,1.0s						
SMCO				IAML		20 14 44.5	
	comp=E,45nm,0.4s						
Q24A	Divide	4.81	179		Pn	20 13 11.7	+1.0
Q24A				IAML		20 14 30.3	
	comp=E,70nm,0.7s						
Q24A				IAML		20 14 30.5	
	comp=N,27nm,0.8s						
K31A	O'Neill	4.88	101		Pn	20 13 12.4	+1.1
BOZ	Bozeman (W)	4.91	294		Pn	20 13 12.6	+0.8
BOZ				IAML		20 14 30.9	
	comp=N,34nm,1.3s						
BOZ				IAML		20 14 34.9	
	comp=N,28nm,0.7s						
HWUT	Hardware Ranch	5.14	247		Pn	20 13 16.0	+0.9
HWUT				IAML		20 14 46.7	
	comp=N,55nm,0.8s						
KSCO	Kaye Shedlock'	5.15	157		Pn	20 13 15.5	+0.3
TCUT	Toone Canyon	5.28	242		Pn	20 13 16.6	-0.4
EGMT	Eagleton	5.29	325		Pn	20 13 17.2	+0.3
DLMT	Dillon	5.49	289	Pn	Pn	20 13 18.7	-1.1
HRY	Holter Researc	5.50	304		Pn	20 13 20.2	+0.3
LRM	Limekiln Ridge	5.52	294		Pn	20 13 21.1	+0.8
MCMT	McKenzie Canyo	5.56	283		Pn	20 13 21.6	+0.8
P18A	Preston Nutter	5.59	224		Pn	20 13 21.6	+0.2
JLU	Jordanelle	5.60	238		Pn	20 13 20.7	-0.7
CTU	Camp Tracy	5.73	240	Pn	Pn	20 13 22.4	-0.8
HVU	Hansel Valley	5.89	253	Pn	Pn	20 13 25.9	+0.5
PV07	Paradox Valley	5.92	207		Pn	20 13 27.0	+1.1
P17A	Butcher Ranch,	5.96	226		Pn	20 13 27.5	+1.2
PV15	Paradox Valley	5.96	205		Pn	20 13 27.3	+0.9
SDCO	Great Sand Dun	6.03	182		Pn	20 13 29.1	+1.7
PV23	Carpenter Ridg	6.04	209	Pn	Pn	20 13 29.2	+1.7
MPU	Maple Canyon	6.08	234	Pn	Pn	20 13 27.2	-0.7
PV10	Paradox Valley	6.11	209		Pn	20 13 29.5	+1.0
PV11	David Mesa, Pa	6.12	208		Pn	20 13 29.8	+1.2
SRU	San Rafael Swe	6.12	222		Pn	20 13 28.9	+0.3
S22A	4UR Ranch, Cre	6.15	192		Pn	20 13 28.9	-0.1
PV13	Radium Mtn., P	6.23	207		Pn	20 13 31.1	+0.9
ECSD	EROS Data Cent	6.25	87	Pn	Pn	20 13 31.8	+1.7
TMUT	Trail Mountain	6.33	227		Pn	20 13 32.5	+0.9
NLU	North Lily Min	6.37	236	Pn	Pn	20 13 31.6	-0.5
BGU	Big Grassy Mou	6.44	246		Pn	20 13 34.3	+1.4
Q16A	Castle Valley	6.60	225		Pn	20 13 35.4	+0.3
HLID	Hailey	6.66	271	Pn	Pn	20 13 36.0	+0.1
T25A	Trinidad	6.66	174	Pn	Pn	20 13 35.3	-0.7
DUG	Dugway, Tooele	6.68	240	Pn	Pn	20 13 36.1	-0.1
F33A	5 Mile Ranch,	6.69	69	Pn	Pn	20 13 36.6	+0.5
L34A	Svendsen Farm,	6.76	103	Pn	Pn	20 13 36.8	-0.3
MSO	Missoula	6.85	299	Pn	Pn	20 13 38.0	-0.4
MVCO	Mesa Verde	7.02	202		Pn	20 13 40.6	-0.2
MSU	Marysvale	7.42	227	Pn	Pn	20 13 47.1	+0.7
JTMT	Jette	7.46	305	Pn	Pn	20 13 47.2	+0.3
TCRU	Three Creeks R	7.50	229	Pn	Pn	20 13 45.3	-2.2
MFID	Camas Ranch	7.70	271	Pn	Pn	20 13 46.6	-3.5
MTPU	Mount Pierson	7.78	225		Pn	20 13 51.6	+0.2
PLID	Pearl Lake	7.81	283	Pn	Pn	20 13 52.6	+0.8
AGMN	Agassiz Nation	7.93	52	Pn	Pn	20 13 53.5	+0.3
WALA	Waterton Lakes	7.98	314	Pn	Pn	20 13 53.0	-1.0
ELK	Elko	8.01	251	Pn	Pn	20 13 55.3	+0.8
	comp=N,0.7nm,0.3s,baz=65,slow=8.9,SNR=9.4						
	comp=N,1.2nm,0.3s						
ELK	Elko	8.01	251	Pn	Pn	20 13 54.2	-0.3
PKCU	Pink Cliffs	8.30	223	Pn	Pn	20 14 00.6	+2.0
SPR3	Spring Creek 3	8.34	238	Pn	Pn	20 13 58.5	-0.5
PSUT	Pine Spring	8.35	234	Pn	Pn	20 14 00.2	+1.1
SZCU	Shurtz Canyon	8.58	227	Pn	Pn	20 14 03.5	+1.2
F36A	Milaca	8.58	72	Pn	Pn	20 14 01.2	-0.9
BMO	Blue Mountains	8.72	281	Pn	Pn	20 14 06.0	+1.9
CCUT	Cedar City	8.76	228	Pn	Pn	20 14 05.7	+0.9
OK032	Salt Plains WL	8.79	140	Pn	Pn	20 14 04.4	-0.6
KAN17	Caldwell West	8.81	137	Pn	Pn	20 14 04.2	-1.2
KNB	Kanab	8.89	223	Pn	Pn	20 14 07.0	+0.5
KAN13	South Haven SW	8.98	136	Pn	Pn	20 14 05.6	-2.0
ULM	Lac du Bonnet	9.09	41	Pn	Pn	20 14 07.7	-1.4
	comp=N,1.0nm,0.3s,baz=234,slow=11,SNR=8.6						
ULM				Lg	Lg	20 16 38.4	
	comp=N,0.5nm,0.3s,baz=136,slow=23,SNR=1.4						
	comp=N,2.2nm,0.3s						
ULM	Lac du Bonnet	9.09	41	Pn	Pn	20 14 10.3	+1.2
U15A	North Rim	9.11	219	Pn	Pn	20 14 10.7	+1.0
B35A	Bob, Littlefor	9.22	56	Pn	Pn	20 14 10.6	-0.2
NEW	Newport	9.40	303	Lg	Lg	20 16 40.0	
	comp=N,0.4nm,0.3s,baz=11,slow=20,SNR=1.7						
NEW				LR	LR	20 17 11.2	
	comp=N,27nm,21.2s,baz=164,slow=35						
I56US	NEWPORT INFRAS	9.40	303	*i*		21 09 10.0	
	baz=115,slow=319,SNR=1.7						
WUAZ	Wupatki	9.51	212	Pn	Pn	20 14 14.3	-0.7
R11A	Troy Canyon, C	9.51	239	Pn	Pn	20 14 14.9	-0.1
T35A	Sooner Cattle	9.55	133	Pn	Pn	20 14 14.7	-0.8
PRN	Pahroc Range	9.80	233	Pn	Pn	20 14 18.3	-0.7
NVAR	Mina Array Bea	11.21	246	Pn	Pn	20 14 39.5	+1.2
	comp=N,0.2nm,0.3s,baz=49,slow=12,SNR=11						
	comp=N,1.2nm,0.6s						
TXAR	Lajitas Array	14.47	175	Pn	P	20 15 30.3	+0.5
	baz=5.2,slow=7.9,SNR=4.8						
	comp=N,0.3nm,0.7s						
FINES	FINESS Array B	67.98	23	P	P	20 22 57.5	+0.4
	comp=N,1.0nm,0.8s,baz=299,slow=5.6,SNR=1.5						
	comp=N,1.0nm,0.8s						
ZALV	Zalesovo Beam	82.27	354	P	P	20 24 19.1	-0.5
	comp=N,0.8nm,0.5s,baz=355,slow=5.1,SNR=4.5						
	comp=N,0.8nm,0.5s						
MKAR	Makanchi Array	89.56	355	P	P	20 24 55.0	-0.9
	comp=N,0.7nm,0.6s,baz=14,slow=4.3,SNR=8.6						
	comp=N,0.7nm,0.6s						
EIL	Elat	98.32	34	LR	LR	21 14 57.3	
	comp=N,50nm,18.5s,baz=270,slow=38						

IDC 01 20:12:09.3±2.4**, 6°.38S**×**129°.69E, h0km, mb3.2**/1**, mbtmp3.4**/4**, ML3.3**/3**, Error ellipse: s-maj=89.6km s-min=30.3km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.30	198	Pn	Pn	20 15 05.6	-0.2
	0.1nm,0.3s,baz=25,slow=12,SNR=13						
FITZ				Sn	Sn	20 17 06.8	-17
	0.3nm,0.3s,baz=70,slow=10,SNR=2.3						
	2.6nm,0.9s						
WRA	Warramunga Arr	14.22	162	Pn	Pn	20 15 32.8	+0.6
	0.2nm,0.3s,baz=341,slow=12,SNR=2.4						
WRA				Sn	Sn	20 17 56.0	-15
	0.4nm,0.3s,baz=333,slow=22,SNR=5.9						
	0.2nm,0.3s						
ASAR	Alice Springs	17.66	167	P	Pn	20 16 16.6	-0.3
	0.1nm,0.3s,baz=346,slow=11,SNR=7.1						
ASAR				S	Sn	20 19 20.0	-14
	0.4nm,0.8s,baz=347,slow=26,SNR=2.3						
	0.5nm,0.5s						
MKAR	Makanchi Array	67.54	327	P	P	20 23 07.6	+0.1
	0.2nm,0.6s,baz=131,slow=6.6,SNR=2.0						
	0.2nm,0.6s						

RSNC 01 20:54:08.5±1.2**, 6°.81N**×**73°.13W, h150km**±4km**, ML3.5, Mw3.7, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.22	192	⇓*i*P	Pn	20 54 28.7	-0.5
BARC				*e*S	Sn	20 54 44.0	-0.9
BRRC	Barranca, Sant	0.65	297	⇑*i*P	Pn	20 54 30.5	-0.2
BRRC				*e*S	Sn	20 54 47.5	0.0
BRRC				*i*		20 54 51.5	
	comp=Z,574nm,0.3s						
PAMC	Pamplona, Colo	0.68	39	*e*P	Pn	20 54 31.4	-0.1
PAMC				*e*S	Sn	20 54 48.5	-0.4
PAMC				*i*		20 54 50.9	
	comp=Z,410nm,0.5s						
RUSC	La Rusia	0.91	177	⇓*i*P	Pn	20 54 32.5	-0.6
RUSC				*e*S	Sn	20 54 51.3	-0.7
RUSC				*i*		20 54 52.7	
	comp=Z,266nm,0.3s						
TAMC	Tame, Arauca	1.39	106	*e*P	Pn	20 54 37.1	+0.2
TAMC				*e*S	Sn	20 54 58.5	-0.1
TAMC				*i*		20 55 00.1	
	comp=Z,146nm,0.5s						
SPBC	San Pablo de B	1.48	219	*e*P	Pn	20 54 37.6	-0.4
SPBC				*e*S	Sn	20 54 59.8	-0.8
SPBC				*i*		20 55 04.5	
	comp=Z,533nm,0.2s						
ZARC	Zaragoza, Cauc	1.84	292	*e*P	Pn	20 54 41.8	0.0
ZARC				*e*S	Sn	20 55 06.4	-1.0
ZARC				*i*		20 55 12.0	
	comp=Z,334nm,0.4s						
NORC	Norcasia	2.12	234	*e*P	Pn	20 54 44.8	-0.4
NORC				*e*S	Sn	20 55 12.4	-0.9
NORC				*i*		20 55 20.3	
	comp=Z,195nm,0.1s						
ROSC	El Rosal	2.29	211	*e*P	Pn	20 54 48.5	+1.1
ROSC				*e*S	Sn	20 55 19.1	+1.8
ROSC				*i*		20 55 23.4	
	comp=Z,440nm,0.4s						
HELC	Santa Helena	2.46	256	*e*P	Pn	20 54 50.2	+0.7
HELC				*e*S	Sn	20 55 21.0	0.0
HELC				*i*		20 55 27.4	
	comp=Z,89nm,0.5s						
UREC	San Jos de Ur	2.56	292	*e*P	Pn	20 54 48.4	-2.0
UREC				*e*S	Sn	20 55 18.9	-3.8
UREC				*i*		20 55 32.5	
	comp=Z,156nm,0.2s						
SOCV	Socops	2.69	57	*e*P	Pn	20 54 51.4	-0.6
SOCV				*e*S	Sn	20 55 23.0	-2.6
GUY2C	Guyana, Caldas	2.72	235	*e*P	Pn	20 54 52.9	+0.1
GUY2C				*e*S	Sn	20 55 30.3	+3.3
GUY2C				*i*		20 55 34.9	
	comp=Z,159nm,0.3s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	20 54 52.5	-0.2
VILC				*e*S	Sn	20 55 26.5	-0.4
VILC				*i*		20 55 36.2	
	comp=Z,299nm,0.4s						
LL1C	La Loma 1 Cana	2.75	351	*e*P	Pn	20 54 53.1	+0.5
LL1C				*e*S	Sn	20 55 29.2	+2.4
LL1C				*i*		20 55 37.9	
	comp=Z,427nm,0.4s						
PTGC	Puerto Gaitan,	2.78	159	*e*P	Pn	20 54 51.8	-1.4
PTGC				*e*S	Sn	20 55 25.5	-2.2
PTGC				*i*		20 55 27.8	
	comp=Z,75nm,0.4s						
LL6C	La Loma 6 Bece	2.91	357	*e*P	Pn	20 54 53.2	-1.6
LL6C				*e*S	Sn	20 55 28.6	-2.0
LL6C				*i*		20 55 34.6	
	comp=Z,79nm,0.4s						
CBOC	Ciudad Bolivar	3.01	252	*e*P	Pn	20 54 56.9	+0.7
CBOC				*e*S	Sn	20 55 32.1	-0.9
CBOC				*i*		20 55 38.4	
	comp=Z,43nm,0.7s						
DBBC	Dabeiba	3.06	274	*e*P	Pn	20 54 56.8	+0.1
DBBC				*e*S	Sn	20 55 32.1	-1.9
ARGC	Ariguani, Magd	3.22	340	*e*P	Pn	20 54 58.5	-0.2
ARGC				*e*S	Sn	20 55 37.7	0.0
ARGC				*i*		20 55 44.4	
	comp=Z,43nm,0.4s						
ANIL	Santa Ana	3.23	225	*e*P	Pn	20 54 59.8	+0.7
ANIL				*e*S	Sn	20 55 39.6	+1.4
ANIL				*i*		20 55 42.8	
	comp=Z,316nm,0.3s						
PRAC	Prado	3.54	210	*e*P	Pn	20 55 02.1	-0.7
PRAC				*e*S	Sn	20 55 44.2	-0.8
PRAC				*i*		20 55 50.9	
	comp=Z,196nm,0.3s						
PLMC	San Jos del P	3.66	239	*e*P	Pn	20 55 04.2	-0.2
PLMC				*e*S	Sn	20 55 45.6	-2.2
PLMC				*i*		20 55 57.6	
	comp=Z,29nm,0.5s						
SJCC	San Jacinto, C	3.67	327	*e*P	Pn	20 55 02.3	-2.3
SJCC				*e*S	Sn	20 55 43.7	-4.4
SJCC				*i*		20 55 58.4	
	comp=Z,54nm,0.7s						
CRJC	Cerrejon, Guaj	4.19	3	*e*P	Pn	20 55 09.0	-2.4
CRJC				*e*S	Sn	20 55 56.0	-4.3
CRJC				*i*		20 55 58.6	
	comp=Z,80nm,0.2s						
YOTC	Yotoco, Valle	4.25	229	*e*P	Pn	20 55 11.2	-1.1
YOTC				*e*S	Sn	20 56 00.9	-0.9
SMRC	Santa Marta, M	4.46	346	*e*P	Pn	20 55 14.0	-0.8
SMRC				*e*S	Sn	20 56 01.5	-4.9
SMRC				*i*		20 56 06.1	
	comp=Z,30nm,0.2s						
MACC	Macarena, Meta	4.69	189	*e*P	Pn	20 55 15.7	-2.2
MACC				*e*S	Sn	20 56 07.8	-4.2
MACC				*i*		20 56 12.9	
	comp=Z,63nm,0.8s						
DABV	Dabajuro	4.77	31	*e*P	Pn	20 55 17.4	-1.5
DABV				*e*S	Sn	20 56 13.1	-0.7
GARC	Garzon, Huila	5.16	207	*e*P	Pn	20 55 22.6	-1.7
GARC				*e*S	Sn	20 56 20.1	-3.4
GARC				*i*		20 56 25.1	
	comp=Z,46nm,0.2s						
FLOC	Florencia	5.77	206	*e*P	Pn	20 55 31.6	-0.6
FLOC				*e*S	Sn	20 56 35.6	-2.0
FLOC				*i*		20 56 42.6	
	comp=Z,9.8nm,0.5s						

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*TEH **01** 21:04:38.9, 31°.59N×50°.91E, h8km, ML3.5*

*IDC **01** 21:04:39.0±1.4, 31°.49N×50°.98E, h0km, mb3.8/10, mbtmp3.8/13, ML3.6/3, MS2.8/2, Error ellipse: s-maj=30.0km s-min=18.5km az=175.0*

*NEIC **01** 21:04:42.2±2.8, 31°.54N±0°.04×50°.87E±0°.04, h10km±1km, mb4.1/15, mb_Lg3.5(TEH), Error ellipse: s-maj=7.5km s-min=4.4km az=207.0*

ISC 01 21:04:41.3±0.5**, 31°.55N**±0°.03×**50°.92E**±0°.03**, h10km, n127, σ1^{s}76**/128**, mb4.0**/15**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	Brojen	0.46	39	Pg	Pg	21 04 49.0	-1.3
IBRJ	Brojen	0.46	39	*e*Pg	Pg	21 04 49.1	-1.3
SHK1	Shahrekord	0.78	358	*e*Pg	Pg	21 04 54.1	-2.2
SHK1				*e*Sg	Sg	21 05 05.5	-1.0
KLNJ	Kolanjah	0.79	133	Pg	Pg	21 04 55.0	-1.6
KLNJ				Sg	Sb	21 05 09.8	+1.6
KLNJ	Kolanjah	0.79	133	*e*Pg	Pg	21 04 55.0	-1.6
KLNJ				*e*Sg	Sb	21 05 09.8	+1.6
KLNJ				*e*		21 05 21.8	
	comp=Z,32µm,0.5s						
ABEH	Behbahan	1.11	211	*e*Pg	Pg	21 05 01.0	-1.5
IPIR	Pirpir	1.13	359	Pg	Pg	21 05 00.6	-2.5
IPIR	Pirpir	1.13	359	*e*Pg	Pg	21 05 00.7	-2.4
IRAM	Ramesheh	1.27	78		Pn	21 05 04.3	-1.0
IRAM	Ramesheh	1.27	78	*e*		21 05 35.3	
	comp=Z,7µm,0.6s						
IRAM				*e*Pg	Pn	21 05 04.3	-1.0
IGAR	Gharneh	1.28	48		Pn	21 05 03.8	-1.6
IGAR	Gharneh	1.28	48	*e*Pg	Pn	21 05 03.9	-1.5
IGAR				*e*		21 05 35.2	
	comp=Z,5µm,0.4s						
AMIS	Naft Sefid	1.40	275	*e*		21 05 37.3	
	comp=Z,16µm,0.5s						
AMIS				*e*Pn	Pn	21 05 05.2	-1.6
IZEF	Zefreh	1.80	41	Pn	Pn	21 05 13.0	+0.4
IZEF	Zefreh	1.80	41	*e*Pn	Pn	21 05 13.0	+0.4
IKLH	Kolahrood	1.85	17	Pn	Pn	21 05 13.7	+0.4
IKLH	Kolahrood	1.85	17	*e*Pn	Pn	21 05 13.7	+0.4
IKLH				*e*		21 05 55.8	
	comp=Z,3µm,0.5s						
AHWZ	Ahwaz	1.96	264	Sg	Sg	21 05 45.1	+0.9
AHWZ	Ahwaz	1.96	264	*e*Sg	Sg	21 05 45.1	+0.9
KAZ1	Kazerun	2.02	162	Pn	Pn	21 05 16.2	+0.8
KAZ1	Kazerun	2.02	162	*e*Pn	Pn	21 05 16.3	+0.8
NASN	Na'in	2.03	52	Pn	Pn	21 05 17.6	+1.8
NASN	Na'in	2.03	52	*e*Pn	Pn	21 05 17.6	+1.8
QAMS	Qamsar	2.22	10	Pn	Pn	21 05 19.0	+0.7
QAMS	Qamsar	2.22	10	*e*Pn	Pn	21 05 19.1	+0.7
KHMZ	Khomeyn	2.33	340	Pn	Pn	21 05 21.6	+1.8
KHMZ	Khomeyn	2.33	340	*e*Pn	Pn	21 05 21.7	+1.9
SHI	Shiraz	2.35	144	*e*Pn	Pn	21 05 21.7	+1.7
ISAD	Sadrabad	2.38	81	Pn	Pn	21 05 22.6	+1.9
ISAD	Sadrabad	2.38	81	*e*Pn	Pn	21 05 22.6	+1.9
ISAD				*e*		21 06 13.5	
	comp=Z,3µm,0.8s						
KRSH	Karshahi	2.62	23	Pn	Pn	21 05 24.4	+0.6
KRSH	Karshahi	2.62	23	*e*Pn	Pn	21 05 24.4	+0.6
KRSH				*e*		21 05 40.2	
	comp=Z,2µm,0.9s						
AHBU	AHRAM	2.70	173	*e*Pn	Pn	21 05 26.1	+1.4
AHBU				*e*		21 06 14.8	
	comp=Z,99nm,0.9s						
GHVR	GHOM	2.94	6	Pn	Pn	21 05 30.8	+2.7
GHVR	GHOM	2.94	6	*e*Pn	Pn	21 05 30.9	+2.8
ISFB	Sefidab	3.01	21	Pn	Pn	21 05 29.6	+0.5
ISFB	Sefidab	3.01	21	*e*Pn	Pn	21 05 29.6	+0.5
ASAO	Ashtian	3.08	346	Pn	Pn	21 05 32.4	+2.2
ASAO	Ashtian	3.08	346	*e*Pn	Pn	21 05 32.5	+2.2
IMEH	Mehriz	3.16	92	*e*		21 06 39.6	
	comp=Z,994nm,0.8s						
IDOB	Doab	3.21	315	Pn	Pn	21 05 31.4	-0.6
IDOB	Doab	3.21	315	*e*Pn	Pn	21 05 31.4	-0.6
YZKH	Yazd	3.23	74	Pn	Pn	21 05 35.6	+3.4
YZKH	Yazd	3.23	74	*e*Pn	Pn	21 05 35.7	+3.5
IKFM	Kafar-mosalman	3.26	308	Pn	Pn	21 05 33.1	+0.7
IKFM	Kafar-mosalman	3.26	308	*e*Pn	Pn	21 05 33.2	+0.8
IQOM	Qom	3.29	2	Pn	Pn	21 05 33.1	+0.1
IQOM	Qom	3.29	2	*e*Pn	Pn	21 05 33.2	+0.1
HSAM	Samen	3.29	324	Pn	Pn	21 05 33.9	+0.8
HSAM	Samen	3.29	324	*e*Pn	Pn	21 05 34.0	+0.8
IVRN	Varamin	3.50	11	Pn	Pn	21 05 36.1	+0.2
IVRN	Varamin	3.50	11	*e*Pn	Pn	21 05 36.2	+0.3
IVRN				*e*		21 06 53.9	
	comp=Z,1µm,0.9s						
HAGD	Aghdareh	3.59	336	Pn	Pn	21 05 37.7	+0.5
HAGD	Aghdareh	3.59	336	*e*Pn	Pn	21 05 37.7	+0.5
IBZA	Bozab	3.88	319	Pn	Pn	21 05 40.8	-0.5
IBZA	Bozab	3.88	319	*e*Pn	Pn	21 05 40.8	-0.5
IBZA				*e*		21 06 51.1	
	comp=Z,682nm,0.6s						
IKOM	Komasi	3.88	313	Pn	Pn	21 05 41.4	+0.2
IKOM	Komasi	3.88	313	*e*Pn	Pn	21 05 41.4	+0.2
IKOM				*e*		21 06 58.2	
	comp=Z,1µm,0.6s						
IRAZ	Razeghan	3.93	348	Pn	Pn	21 05 42.9	+1.0
IRAZ	Razeghan	3.93	348	*e*Pn	Pn	21 05 42.9	+1.0
IBAF	Bafgh	3.97	88	Pn	Pn	21 05 42.8	+0.5
IBAF	Bafgh	3.97	88	*e*Pn	Pn	21 05 42.9	+0.6
DAMV	Damavand	4.16	12	Pn	Pn	21 05 47.0	+1.9
DAMV	Damavand	4.16	12	*e*Pn	Pn	21 05 47.1	+1.9
CHTH	Charan	4.35	2	Pn	Pn	21 05 50.4	+2.7
CHTH	Charan	4.35	2	*e*Pn	Pn	21 05 50.4	+2.7
IFIR	Firoozkooh	4.36	20	Pn	Pn	21 05 48.6	+0.8
IFIR	Firoozkooh	4.36	20	*e*Pn	Pn	21 05 48.6	+0.8
SNGE	Sanandaj	4.63	321	Pn	Pn	21 05 52.7	+1.2

SNGE Sanandaj 4.63 321 *e*Pn **Pn** **21 05 52.7 +1.2**
ISHM Shahmirzad 4.68 24 Pn **Pn** **21 05 52.9 +0.6**
ISHM Shahmirzad 4.68 24 *e*Pn **Pn** **21 05 52.9 +0.6**
KRBR Kerman 5.26 106 Pn **Pn** **21 06 03.5 +3.3**
KRBR Kerman 5.26 106 *e*Pn **Pn** **21 06 03.6 +3.3**
TABS Tabas 5.63 67 Pn **Pn** **21 06 07.6 +2.4**
TABS Tabas 5.63 67 *e*Pn **Pn** **21 06 07.6 +2.4**
SHRO Shahrood 6.13 42 Pn **Pn** **21 06 14.8 +2.8**
SHRO Shahrood 6.13 42 *e*Pn **Pn** **21 06 14.8 +2.8**
BSRN Basiran 7.00 84 Pn **Pn** **21 06 27.3 +3.3**
BSRN Basiran 7.00 84 *e*Pn **Pn** **21 06 27.4 +3.4**
MRVT Maraveh tapeh 7.44 34 Pn **Pn** **21 06 33.6 +3.7**
MRVT Maraveh tapeh 7.44 34 *e*Pn **Pn** **21 06 33.6 +3.7**
GRMI Germi 7.65 342 Pn **Pn** **21 06 35.2 +2.3**
GRMI Germi 7.65 342 *e*Pn **Pn** **21 06 35.3 +2.3**
UOSS Minazif 8.06 143 Pn **Pn** **21 06 37.4 -1.1**
BJRD Bojnurd 8.14 39 Pn **Pn** **21 06 42.3 +2.7**
BJRD Bojnurd 8.14 39 *e*Pn **Pn** **21 06 42.4 +2.8**
SHRT Shahrakht 8.18 73 Pn **Pn** **21 06 43.4 +3.3**
SHRT Shahrakht 8.18 73 *e*Pn **Pn** **21 06 43.4 +3.3**
RAYN Ar Rayn 9.33 212 Pn **Pn** **21 06 52.9 -3.0**
GNI Garni 9.94 331 LR LR 21 11 21.9
comp=Z,65nm,21.5s,baz=144,slow=40
WSAR Wadi Sarin 10.74 139 Pn **Pn** **21 07 13.6 -1.6**
comp=Z,0.4nm,0.3s,baz=325,slow=14,SNR=7.2
WSAR Sn **Sn** **21 09 10.8 -4.8**
comp=Z,0.2nm,0.3s,baz=309,slow=22,SNR=2.7
comp=Z,7.3nm,1.0s
MMAI Mount Meron Ar 13.21 280 Pn **Pn** **21 07 49.1 +0.1**
comp=Z,0.5nm,0.3s,baz=90,slow=16,SNR=2.3
comp=Z,0.2nm,0.4s
BNN Bunyan 14.30 305 P **P** **21 08 11.7 +0.4**
BR131 Keskin Array S 16.23 305 P **P** **21 08 32.4 -0.1**
BRTR Keskin Array B 16.23 305 Pn **Pn** **21 08 31.5 +2.1**
comp=Z,0.2nm,0.3s,baz=128,slow=13,SNR=4.7
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 16.23 305 P **P** **21 08 33.5 +1.0**
TAS Tashkent 17.68 51 P **P** **21 08 49.6 +1.1**
NIL Nilore 18.93 78 P **P** **21 09 01.4 -0.9**
NIL IAmb IAmb 21 09 09.4
comp=Z,9.0nm,0.7s
ABKAR Akbulak array 18.95 18 P **Pn** **21 09 04.0 +1.0**
KK31 Karatay Array 19.33 48 P **P** **21 09 06.5 -0.2**
KKAR Karatay Array 19.33 48 P **P** **21 09 06.4 -0.3**
BELG Belogornoye 20.97 354 LR LR 21 18 45.7
comp=Z,23nm,18.5s,baz=146,slow=40
AAK Ala-Archa 21.75 53 P **P** **21 09 31.7 -1.4**
comp=Z,3.1nm,0.3s,baz=214,slow=10,SNR=2.2
comp=Z,3.1nm,0.3s
AAK Ala-Archa 21.75 53 P **P** **21 09 34.7 +1.7**
AAK IAmb IAmb 21 09 35.0
comp=Z,3.4nm,0.8s
IDI Anoyia 22.02 287 P **P** **21 09 36.8 +0.9**
comp=Z,6.6nm,0.8s,baz=81,slow=14,SNR=2.7
comp=Z,6.6nm,0.8s
IDI Anoyia 22.02 287 P **P** **21 09 36.4 +0.5**
IDI IAmb IAmb 21 09 46.3
comp=Z,15nm,1.1s
ALN Alexandroupoli 22.07 302 P **P** **21 09 36.9 +0.6**
ALN IAmb IAmb 21 09 59.9
comp=Z,7.9nm,1.1s
MLR Muntele Rosu 23.87 313 P **P** **21 09 55.8 +0.9**
comp=Z,0.7nm,0.6s,baz=121,slow=12,SNR=3.3
comp=Z,0.7nm,0.6s
ITM Ithomi 24.53 291 P **P** **21 10 03.2 +2.1**
ITM IAmb IAmb 21 10 38.0
comp=Z,12nm,1.1s
AKASG Malin Array Be 25.00 326 P **P** **21 10 03.8 -1.3**
comp=Z,0.6nm,0.4s,baz=134,slow=8.6,SNR=5.8
comp=Z,0.6nm,0.4s
AKBB Malin Array Si 25.00 326 P **P** **21 10 03.2 -1.9**
AKBB IAmb IAmb 21 10 39.0
comp=Z,2.8nm,0.7s
BURAR Bucovina Array 25.32 317 P **P** **21 10 09.3 +1.1**
BUR08 Bucovina Ar. S 25.35 317 P **P** **21 10 09.3 +0.8**
KURBB Kurchatov Arra 27.96 39 P **P** **21 10 30.5 -1.3**
comp=Z,1.3nm,0.2s,baz=235,slow=9.0,SNR=2.0
comp=Z,1.3nm,0.2s
KURK Kurchatov 28.06 39 P **P** **21 10 34.4 +1.7**
KURK IAmb IAmb 21 10 43.4
comp=Z,2.3nm,0.9s
MKAR Makanchi Array 28.46 49 P **P** **21 10 35.7 -0.7**
comp=Z,0.4nm,0.9s,baz=245,slow=7.6,SNR=2.1
comp=Z,0.4nm,0.9s
ZALV Zalesovo Beam 32.98 37 P **P** **21 11 16.5 +0.4**
comp=Z,0.3nm,0.4s,baz=254,slow=8.9,SNR=1.4
comp=Z,0.3nm,0.4s
FIA1 FINESS Array S 34.01 339 P **P** **21 11 25.5 +0.5**
FINES FINESS Array B 34.01 339 P **P** **21 11 25.5 +0.5**
comp=Z,2.6nm,0.9s,baz=141,slow=9.0,SNR=7.3
comp=Z,2.6nm,0.9s
FINES FINESS Array B 34.01 339 P **P** **21 11 24.6 -0.3**
NC405 NORSAR Array S 39.06 331 P **P** **21 12 05.8 -2.3**
NB2 NORSAR Subarra 39.24 331 P **P** **21 12 06.8 -2.8**
comp=Z,2.9nm,0.9s,baz=121,slow=8.6
NOA NORSAR Array B 39.24 331 P **P** **21 12 08.9 -0.7**
comp=Z,0.7nm,0.7s,baz=121,slow=8.1,SNR=4.6
comp=Z,0.7nm,0.7s
TOA0 Torodi Ar. Sit 48.64 259 P **P** **21 13 24.7 -0.9**
TOA0 IAmb IAmb 21 13 28.2
comp=Z,3.5nm,1.1s
TORD Torodi Ar. Bea 48.64 259 P **P** **21 13 24.6 -1.0**
comp=Z,1.1nm,0.7s,baz=55,slow=7.0,SNR=8.9
comp=Z,1.1nm,0.7s
TORD Torodi Ar. Bea 48.64 259 P **P** **21 13 24.4 -1.2**
TORD IAmb IAmb 21 13 40.3
comp=Z,1.7nm,1.1s

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*IDC **01** 21:24:16.1±0.4, 9°.42S×159°.46E, h0km, mb4.4/23, mbtmp4.4/26, ML4.2/2, MS3.7/37, Error ellipse: s-maj=12.7km s-min=11.4km az=11.0*
*NEIC **01** 21:24:19.6±1.2, 9°.39S±0°.07×159°.43E±0°.07, h20km±2km, mb5.0/154, Error ellipse: s-maj=11.1km s-min=9.8km az=217.0*
*NOU **01** 21:24:56.5, 13°.04S×159°.92E, h51km, mb5.4/15, South of Solomon Islands*
ISC 01 21:24:20.0±0.3**, 9°.41S**±0°.05×**159°.44E**±0°.05**, h26**km**, n418, σ0s.98**/399**, mb4.9**/104**, MS3.8**/34**, 2C-1D, Bougainville-Solomon Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HNR Honiara 0.50 92 Pn **Pb** **21 24 29.3 -1.0**
17µm,0.3s,baz=227,slow=3.9,SNR=2854
HNR Sn **Sb** **21 24 36.4 -0.9**
29µm,0.3s,baz=278,slow=19,SNR=19
HNR Honiara 0.50 92 Pg **Pb** **21 24 28.9 -1.4**
RABL Rabaul 8.89 305 Pn **Pn** **21 26 26.5 -0.5**
KRVT Keravat (AS076 8.94 304 Pn **Pn** **21 26 24.9 -2.6**
4.3nm,0.3s,baz=100,slow=4.7,SNR=2.8
KRVT LR LR 21 30 12.0
comp=Z,1µm,19.1s,baz=266,slow=40
18nm,0.5s
KOUNC Koumac, New Ca 12.02 158 Pn **Pn** **21 27 10.6 +0.8**
PMG Port Moresby 12.12 269 LR LR 21 31 34.8
comp=Z,1µm,19.8s,baz=111,slow=36
DZM Mont Dzumac 14.27 153 Pn **Pn** **21 27 40.1 -0.5**
0.7nm,0.3s,baz=279,slow=20,SNR=1.6
DZM LR LR 21 32 47.8
comp=Z,773nm,18.2s,baz=12,slow=36
2.6nm,0.4s
DZM Mont Dzumac 14.27 153 *e*LR LR 21 30 56.4
comp=Z,851nm,25.6s
DZM Mont Dzumac 14.27 153 Pn **Pn** **21 27 38.1 -2.5**
ONTNC Ouen Toro 14.48 153 Pn **Pn** **21 27 43.3 0.0**
MARNC Mare, Loyalty 14.57 146 Pn **Pn** **21 27 44.7 +0.1**
OUENC Ouen Island, N 14.75 152 Pn **Pn** **21 27 47.8 +0.7**
PINNC Pines Island, 15.21 151 Pn **Pn** **21 27 52.1 -1.0**
PINNC IAmb IAmb 21 27 59.1
comp=Z,82nm,1.3s
PATS Pohnpei 16.18 356 Pn **Pn** **21 28 05.5 -0.3**
PATS IAmb IAmb 21 28 08.4
comp=Z,97nm,1.1s
COEN Coen 16.55 253 **Pn** **21 28 11.0 +0.5**
CTAO Charters Tower 16.58 229 Pn **Pn** **21 28 10.7 -0.2**
EIDS Eidsvold 17.75 206 **Pn** **21 28 25.3 -0.1**
FUNA Funafuti 19.54 89 P **P** **21 28 45.1 -0.7**
FUNA IAmb IAmb 21 28 58.8
comp=Z,102nm,1.4s
RMQ Roma 19.77 209 P **Pn** **21 28 50.9 +1.0**
MSVF Nonsavu 19.88 117 P **Pn** **21 28 50.7 -0.6**
comp=Z,1.7nm,0.3s,baz=240,slow=0.9,SNR=36
MSVF LR LR 21 35 07.2
comp=Z,207nm,20.7s,baz=292,slow=33
MSVF Nonsavu 19.88 117 **P** **21 28 49.9 +0.3**
GENI Genyem 20.32 288 P Pn 21 28 57.0 +0.5
comp=Z,51nm,0.5s
SMPI Sarmi 21.89 288 P **P** **21 29 14.1 +2.8**
comp=Z,29nm,0.8s
QIS Mount Isa 22.10 238 P P 21 29 32.9 +19
ARMA Armidale 22.13 198 P **P** **21 29 14.7 +0.9**
ARMA Armidale 22.13 198 P **P** **21 29 14.8 +0.9**
BAKI Biak 24.61 288 P **P** **21 29 39.6 +1.1**
comp=Z,75nm,0.8s
WR0 Warramunga Arr 26.23 244 P **P** **21 29 52.7 -0.4**
WR0 IAmb IAmb 21 30 03.1
comp=Z,20nm,0.8s
WB0 Warramunga Arr 26.30 244 P **P** **21 29 51.3 -2.5**
WRAB Tennant Creek 26.39 244 P **P** **21 29 53.3 -1.3**
WB2 Warramunga Arr 26.39 244 P **P** **21 29 54.9 +0.3**
WRA Warramunga Arr 26.40 244 P **P** **21 29 54.8 +0.1**
comp=Z,6.7nm,0.8s,baz=70,slow=9.9,SNR=15
WRA PcP **PcP** **21 33 19.7 -0.4**
comp=Z,1.6nm,0.9s,baz=75,slow=2.4,SNR=5.0
WRA ScP **ScP** **21 37 00.3 +1.9**
comp=Z,0.2nm,0.6s,baz=76,slow=3.9,SNR=2.8
comp=Z,6.7nm,0.8s
WRA Warramunga Arr 26.40 244 P **P** **21 29 55.6 +0.9**
GUMO Guam 27.05 327 LR LR 21 40 35.3
comp=Z,40nm,20.9s,baz=138,slow=36
STKA Stephens Creek 27.81 214 P **P** **21 30 07.0 -0.2**
comp=Z,4.7nm,0.7s,baz=57,slow=14,SNR=9.8
STKA LR LR 21 41 01.9
comp=Z,339nm,18.3s,baz=30,slow=36
comp=Z,4.7nm,0.7s
STKA Stephens Creek 27.81 214 P **P** **21 30 06.8 -0.5**
AS31 Alice Springs 28.21 237 P **P** **21 30 10.8 -0.2**
ASAR Alice Springs 28.21 237 P **P** **21 30 10.2 -0.8**
comp=Z,1.3nm,0.7s,baz=65,slow=9.6,SNR=21
ASAR PcP **PcP** **21 33 24.6 +0.2**
comp=Z,1.3nm,0.7s,baz=51,slow=1.7,SNR=5.0
ASAR LR LR 21 40 54.0
comp=Z,238nm,21.1s,baz=125,slow=35
comp=Z,1.3nm,0.7s
ASAR Alice Springs 28.21 237 P **P** **21 30 10.8 -0.2**
AFI Afiamalu 28.53 102 LR LR 21 39 32.4
comp=Z,419nm,20.1s,baz=295,slow=32
RAO Raoul Island 28.98 136 P **P** **21 30 16.9 -0.8**
KNTN Kanton 29.41 79 P **P** **21 30 21.8 +0.1**
KNRA Kununurra 30.56 255 P **P** **21 30 30.1 -1.7**
KNRA IAmb IAmb 21 30 59.9
comp=Z,40nm,1.6s
TOO Toolangi 30.73 202 P **P** **21 30 32.7 -0.4**
TOO IAmb IAmb 21 30 45.6
comp=Z,26nm,1.2s
NIUE Niue 31.16 111 P P 21 30 57.8 +21
BBOO Buckleboo 31.75 219 P **P** **21 30 41.8 -0.3**
TWOA Tennyson Woods 31.84 214 P P 21 30 53.7 +11
URZ Urewera 32.83 154 P **P** **21 30 51.3 -0.1**
comp=Z,6.2nm,0.4s,baz=121,slow=24,SNR=2.1
URZ LR LR 21 43 07.0
comp=Z,138nm,18.3s,baz=31,slow=34
comp=Z,6.2nm,0.4s
URZ Urewera 32.83 154 P **P** **21 30 50.4 -1.0**
URZ Urewera 32.83 154 P **P** **21 30 54.8 +3.4**
LBMI Labuha 32.96 283 P P 21 31 06.7 +14
BKZ Black Stump Fm 33.33 155 P **P** **21 30 56.3 +0.4**
BKZ Black Stump Fm 33.33 155 P **P** **21 30 59.4 +3.5**
QRZ Quartz Range 33.37 162 P **P** **21 30 58.8 +2.6**
FITZ Fitzroy Crossi 33.90 252 P **P** **21 31 00.7 -0.4**
comp=Z,3.6nm,0.7s,baz=96,slow=6.6,SNR=6.6
FITZ LR LR 21 45 14.7
comp=Z,131nm,18.8s,baz=84,slow=37
comp=Z,3.6nm,0.7s
FITZ Fitzroy Crossi 33.90 252 P **P** **21 31 00.7 -0.4**
FITZ IAmb IAmb 21 31 57.4
comp=Z,43nm,1.9s
BFZ Birch Farm 34.53 157 P **P** **21 31 09.1 +2.9**
LTZ Lake Taylor 35.09 163 P **P** **21 31 10.0 -1.1**
KHZ Kahutara 35.13 162 P **P** **21 31 13.9 +2.5**
RPZ Rata Peaks 35.64 165 P **P** **21 31 16.2 +0.4**
comp=Z,12nm,0.8s,baz=199,slow=22,SNR=2.8
RPZ LR LR 21 45 44.4
comp=Z,168nm,18.1s,baz=316,slow=36
comp=Z,12nm,0.8s
RPZ Rata Peaks 35.64 165 P **P** **21 31 16.9 +1.1**
FORT Forrest 36.12 229 P **P** **21 31 18.4 -1.7**
FORT IAmb IAmb 21 32 22.1
comp=Z,27nm,1.1s
DAV Davao City (W) 37.50 295 LR LR 21 46 22.1
comp=Z,47nm,19.0s,baz=84,slow=35
BNSI Bone 39.34 275 P P 21 31 58.4 +11
PSA00 Pilbara Seismi 39.90 248 P **P** **21 31 50.5 -1.6**
PSA00 IAmb IAmb 21 32 28.5
comp=Z,50nm,1.8s
MBWA Marble Bar 39.93 248 P **P** **21 31 50.3 -2.0**
MBWA IAmb IAmb 21 32 19.1
comp=Z,81nm,1.6s
JCJ Chichijima 39.97 336 LR LR 21 47 28.0
comp=Z,132nm,18.9s,baz=120,slow=35
RAR Rarotonga 40.93 112 LR LR 21 45 18.9
comp=Z,204nm,20.8s,baz=287,slow=31
MORW Morawa 45.08 238 P **P** **21 32 34.0 -0.2**
JOW Kunigami 47.04 321 LR LR 21 51 01.4
comp=Z,52nm,20.9s,baz=134,slow=34
JGF Kuroka 49.39 336 P **P** **21 33 07.0 -0.6**
JGF IAmb IAmb 21 34 39.8
comp=Z,17nm,1.4s
YULB Yu-li 49.55 312 P **P** **21 33 08.0 -1.0**
MJAR Matsushiro Arr 49.88 338 P **P** **21 33 11.2 -0.1**
comp=Z,0.8nm,0.7s,baz=170,slow=7.4,SNR=2.3
MJAR LR LR 21 53 47.9
comp=Z,54nm,20.5s,baz=170,slow=36
comp=Z,0.8nm,0.7s
PPT Papeete 50.11 105 LR LR 21 49 30.3
comp=Z,151nm,22.0s,baz=272,slow=30
PPT2 Papeete2 50.11 105 *e*P **P** **21 33 14.9 +1.4**
comp=Z,24nm,21.2s
PPT2 *e*S **S** **21 40 24.2 +0.3**
comp=Z,99nm,28.5s
PPT2 *e*LR LR 21 47 31.3
comp=Z,272nm,24.5s
PPT2 *e*LR LR 21 47 32.6
comp=Z,292nm,22.5s
JSD Sado 51.19 339 P **P** **21 33 19.7 -1.4**
KHU Kahuku 52.66 57 P **P** **21 33 33.7 +1.0**
AIN Ainahou 52.85 57 P **P** **21 33 32.6 -1.4**
KSRS Korea Array 55.18 330 P **P** **21 33 51.5 +1.0**
comp=Z,0.5nm,0.3s,baz=143,slow=8.3,SNR=11
KSRS LR LR 21 58 37.7
comp=Z,46nm,18.0s,baz=145,slow=37
comp=Z,0.5nm,0.3s
KSAR Wonju Array Be 55.19 330 P **P** **21 33 50.4 -0.2**
KSI Kapahiang 56.72 272 P P 21 34 14.7 +13
USRK Ussuriysk Ar. 58.88 337 P **P** **21 34 16.8 +0.2**
comp=Z,3.7nm,0.9s,baz=143,slow=5.0,SNR=5.9
comp=Z,3.7nm,0.9s
USRK Ussuriysk Ar. 58.88 337 P **P** **21 34 16.6 0.0**
CN2 Changchun 61.30 333 *e*P **P** **21 34 33.0 -0.2**
CN2 *e*S **S** **21 42 51.9 -0.1**
CN2 *e*sS sS 21 43 04.6 -0.1
CN2 *e*SS **SS** **21 46 54.8 +1.9**
BNX BinXian 61.98 335 ⇑P **P** **21 34 38.8 +1.0**
BNX pmax pmax
comp=Z,4.0nm,0.8s
BNX pmax pmax
comp=Z,76nm,4.4s
PETK Petropavlovsk- 62.29 359 P **P** **21 34 39.8 +0.1**
comp=Z,3.1nm,0.8s,baz=186,slow=12,SNR=10
comp=Z,3.1nm,0.8s
PETK Petropavlovsk- 62.29 359 P **P** **21 34 39.5 -0.2**
GSI Gunungsitoli 62.52 276 P **P** **21 34 41.0 -1.0**
HNS HongShan 62.62 321 ⇑P P 21 34 50.2 +8.0
AMKA Amchitka 62.94 14 P **P** **21 34 42.0 -2.0**
CMAR Chiang Mai Arr 65.79 295 P **P** **21 35 04.1 +0.7**
comp=Z,1.2nm,0.9s,baz=130,slow=5.6,SNR=7.6
CMAR LR LR 22 02 22.8
comp=Z,42nm,20.6s,baz=115,slow=35
comp=Z,1.2nm,0.9s
CMAR Chiang Mai Arr 65.79 295 P **P** **21 35 02.7 -0.8**
CHTO Chiang Mai 65.91 295 P **P** **21 35 04.0 -0.2**
CHTO IAmb IAmb 21 35 14.0
comp=Z,17nm,1.6s
XLT XiLinHaoTe 66.03 327 ⇓*i*P **P** **21 35 05.9 +1.3**
XLT S **S** **21 43 53.7 +2.6**
XLT pmax pmax
comp=Z,14nm,0.9s
XLT pmax pmax
comp=Z,51nm,3.5s
PZH PanZhiHua 66.40 304 P **P** **21 35 09.2 +1.8**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,120nm,3.5s
HHC Hu-ho-hao-te 66.66 322 *e*P **P** **21 35 10.4 +1.7**
HHC pmax pmax
comp=Z,43nm,0.7s
HHC pmax pmax
comp=Z,210nm,5.6s
CD2 Chengdu 66.73 309 *e*P **P** **21 35 10.0 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
NIKH Nikolski High 67.77 20 P **P** **21 35 15.6 +0.2**
baz=214
VNDA Vanda 68.09 179 P **P** **21 35 17.8 +0.7**
comp=Z,6.8nm,0.8s,baz=340,slow=6.4,SNR=16
comp=Z,6.8nm,0.8s
VNDA Vanda 68.09 179 P **P** **21 35 17.4 +0.3**
VNDA IAmb IAmb 21 35 18.8
comp=Z,9.2nm,0.9s
SBA Scott Base 68.52 178 P **P** **21 35 22.2 +2.4**
MA2 Magadan 69.11 355 LR LR 22 02 07.5
comp=Z,23nm,21.8s,baz=173,slow=33
LZH Lanzhou 69.13 314 *e*P P 21 35 33.2 +8.8
LZH pP sP 21 35 40.5 +5.5
LZH sP PcP 21 35 43.7 -4.6
LZH pmax pmax
comp=Z,10.0nm,1.1s
UNV Unalaska Valle 69.30 21 P **P** **21 35 25.4 +0.5**
baz=216
S12K Black Hills 72.35 22 P **P** **21 35 44.1 +0.7**
baz=220
CHNA Chernabura Isl 72.63 23 P **P** **21 35 45.8 +0.7**
baz=223
SDPT Sand Point 72.67 23 P **P** **21 35 45.0 -0.3**
ULN Ulaanbaatar 73.42 326 P **P** **21 35 50.1 0.0**
GTA Gaotai 73.52 316 *e*P **P** **21 35 52.2 +1.3**
GTA pP pP 21 35 58.0 -0.6
GTA sP pwP 21 36 00.8 0.0
GTA pmax pmax
comp=Z,4.0nm,0.8s
S14K Fog Glacier 73.72 22 P **P** **21 35 52.2 +0.5**
baz=222
SONM Songino Array 73.77 326 P **P** **21 35 53.4 +1.3**
comp=Z,2.9nm,0.8s,baz=140,slow=5.5,SNR=15
SONM LR LR 22 08 27.4
comp=Z,30nm,19.6s,baz=92,slow=36
comp=Z,2.9nm,0.8s
SONM Songino Array 73.77 326 P **P** **21 35 52.7 +0.6**
CHGN Chignik 74.17 23 P **P** **21 35 53.9 -0.1**
YAK Yakutsk 74.90 346 LR LR 22 11 52.5
comp=Z,38nm,18.1s,baz=94,slow=38
R17K Ugashik Creek 75.90 23 P **P** **21 36 04.6 +0.5**
baz=225
LSA Lhasa 76.26 304 P **P** **21 36 04.8 -2.6**
Q17K Contact Creek 76.53 22 P **P** **21 36 08.2 +0.4**
baz=226
OHAK Old Harbor 76.83 24 P **P** **21 36 09.4 0.0**
OHAK IAmb IAmb 21 36 18.9
comp=Z,26nm,1.2s
OHAK Old Harbor 76.83 24 P **P** **21 36 10.2 +0.8**
baz=228
N16K Nishlik Lake 77.10 20 P **P** **21 36 12.1 +1.2**
baz=222
Q18K Katmai Hardscr 77.13 23 P **P** **21 36 11.3 +0.1**
baz=226
O17K Koliganek Bris 77.16 21 P **P** **21 36 11.3 +0.1**
baz=224
BILL Bilibino 77.41 3 P **P** **21 36 12.9 +0.5**
BILL IAmb IAmb 21 37 59.4
comp=Z,14nm,0.6s
Q19K Cape Douglas, 77.84 23 P **P** **21 36 15.4 +0.4**
Q19K Cape Douglas, 77.84 23 P **P** **21 36 15.0 0.0**
baz=228
Q20K Shuyak Island 78.11 23 P **P** **21 36 17.6 +1.1**
baz=229
N18K Kilae Creek 78.23 21 P **P** **21 36 18.7 +1.5**
baz=225
ANM Nome 78.36 15 P **P** **21 36 20.4 +2.6**
baz=216
P19K Oil Pt 78.49 22 P **P** **21 36 18.4 -0.2**
P19K Oil Pt 78.49 22 P **P** **21 36 19.3 +0.7**
baz=228
TNA Tin City 78.58 13 P **P** **21 36 19.9 +1.0**
baz=213
SVW2 Sparrevohn 78.64 21 P **P** **21 36 21.0 +1.6**
SVW2 IAmb IAmb 21 36 22.4
comp=Z,14nm,0.8s
N19K Bonanza Creek 78.82 21 P **P** **21 36 20.9 +0.4**
baz=226
O20K Slope Mountain 79.00 22 P **P** **21 36 22.0 +0.5**
baz=228
CNPM China Poot 79.17 23 P **P** **21 36 23.4 +1.0**
BRSE Bradley Lake S 79.50 23 P **P** **21 36 24.7 +0.6**
baz=230
M19K Big River Lodg 79.61 20 P **P** **21 36 26.2 +1.5**
M19K IAmb IAmb 21 36 27.2
comp=Z,19nm,0.9s
M19K Big River Lodg 79.61 20 P **P** **21 36 26.1 +1.4**
baz=226,SNR=13
L19K White Mountain 79.64 20 P **P** **21 36 26.4 +1.5**
L19K IAmb IAmb 21 36 27.1
comp=Z,18nm,1.0s
L19K White Mountain 79.64 20 P **P** **21 36 25.9 +1.0**
baz=226,SNR=11
TTA Tatalina 79.79 19 P **P** **21 36 26.6 +0.9**
baz=225,SNR=5.7
CAPN Captain Cook N 80.00 22 P **P** **21 36 28.6 +1.9**
baz=230
M20K Styx River 80.03 21 P **P** **21 36 27.5 +0.4**
M20K Styx River 80.03 21 P **P** **21 36 27.8 +0.8**
baz=228
PALK Pallekele 80.17 279 LR LR 22 14 38.9
comp=Z,40nm,19.8s,baz=220,slow=38
L20K Farewell, AK 80.18 20 P **P** **21 36 28.8 +1.0**
baz=227,SNR=7.0
SEW Seward 80.23 23 P **P** **21 36 27.1 -0.9**
SEW IAmb IAmb 21 36 29.9
comp=Z,16nm,0.9s
SEW Seward 80.23 23 P **P** **21 36 28.7 +0.7**
baz=231
O22K Cooper Landing 80.36 23 P **P** **21 36 27.9 -0.8**
O22K Cooper Landing 80.36 23 P **P** **21 36 29.7 +1.0**
baz=231
QSPA South Pole Qui 80.58 180 P **P** **21 36 30.6 +0.5**
comp=Z,3.0nm,0.7s,baz=339,slow=1.1,SNR=21
comp=Z,3.0nm,0.7s
QSPA South Pole Qui 80.58 180 P **P** **21 36 29.6 -0.5**
K20K Telida 80.72 19 P **P** **21 36 30.9 +0.3**
K20K Telida 80.72 19 P **P** **21 36 31.7 +1.0**
baz=226,SNR=7.8
RC01 Rabbit Creek A 80.74 22 P **P** **21 36 30.6 -0.2**
RC01 IAmb IAmb 21 36 32.3
comp=Z,25nm,1.2s
RC01 Rabbit Creek A 80.74 22 P **P** **21 36 31.2 +0.4**
baz=231
M22K Willow 81.02 22 P **P** **21 36 30.9 -1.3**
M22K Willow 81.02 22 P **P** **21 36 32.6 +0.4**
baz=230
PPLA Purkeypile 81.04 20 P **P** **21 36 32.7 +0.1**
baz=228
Q23K Middleton Isla 81.07 25 P **P** **21 36 33.7 +1.2**
baz=234
MID Middleton Isla 81.07 25 P **P** **21 36 33.1 +0.6**
PWL Port Wells 81.13 23 P **P** **21 36 33.6 +0.6**
PWL Port Wells 81.13 23 P **P** **21 36 33.3 +0.4**
baz=232,SNR=12
J20K Nowinta River 81.27 19 P **P** **21 36 34.1 +0.6**
J20K Nowinta River 81.27 19 P **P** **21 36 34.4 +0.9**
baz=226,SNR=7.2
PMR Palmer 81.29 22 P **P** **21 36 34.0 +0.3**
PMR IAmb IAmb 21 36 35.0
comp=Z,15nm,0.8s
PMR Palmer 81.29 22 P **P** **21 36 33.8 +0.1**
baz=231
CAST Castle Rocks 81.42 20 P **P** **21 36 33.2 -1.2**
CAST IAmb IAmb 21 36 35.2
comp=Z,12nm,0.7s
CAST Castle Rocks 81.42 20 P **P** **21 36 34.1 -0.3**
baz=228,SNR=7.1
KNK Knik Glacier 81.43 23 P **P** **21 36 34.7 +0.2**
KNK IAmb IAmb 21 37 21.7
comp=Z,11nm,0.8s
KNK Knik Glacier 81.43 23 P **P** **21 36 35.1 +0.6**
baz=232
GHO Glory Hole Cre 81.48 22 P **P** **21 36 34.8 0.0**

GHO IAmb IAmb 21 36 36.3
comp=Z,20nm,0.8s
GLI Glacier Island 81.63 23 P P 21 36 35.4 -0.1
GLI IAmb IAmb 21 37 05.2
comp=Z,21nm,1.0s
GLI Glacier Island 81.63 23 P P 21 36 35.9 +0.4
baz=233
CHUM Lake Minchumin 81.66 19 P P 21 36 36.0 +0.5
baz=228
SML Sawmill 81.72 22 P P 21 36 35.6 -0.5
SML Sawmill 81.72 22 P P 21 36 36.5 +0.5
baz=232,SNR=11
FID Port Fidalgo 81.79 24 P P 21 36 35.8 -0.6
FID IAmb IAmb 21 37 03.1
comp=Z,11nm,0.8s
KTH Kantishna Hill 81.90 20 P P 21 36 36.5 -0.5
KTH IAmb IAmb 21 36 37.5
comp=Z,17nm,1.0s
M23K Glacier View 81.94 22 P P 21 36 38.3 +1.1
baz=233
TRF Thorofare Moun 82.05 20 P P 21 36 35.9 -2.1
TRF IAmb IAmb 21 36 39.8
comp=Z,8.3nm,0.8s
TRF Thorofare Moun 82.05 20 P P 21 36 38.5 +0.5
baz=230
SCM Sheep Creek Mo 82.11 23 P P 21 36 38.5 +0.4
SCM Sheep Creek Mo 82.11 23 P P 21 36 38.8 +0.7
baz=233,SNR=5.3
KAIM Kayak Island 82.16 25 P P 21 36 38.3 0.0
baz=236
BPAW Bear Paw Mtn. 82.24 20 P P 21 36 38.3 -0.4
baz=229
WAT1 Susitna Watana 82.27 21 P P 21 36 39.2 +0.3
baz=232
DIV Divide 82.30 24 P P 21 36 39.1 0.0
DIV IAmb IAmb 21 37 17.6
comp=Z,9.6nm,0.7s
WAT6 Susitna Watana 82.42 22 P P 21 36 40.2 +0.4
baz=232,SNR=6.9
KLU Klutina 82.45 23 P P 21 36 40.7 +0.8
baz=234
RND Reindeer 82.53 21 P P 21 36 39.8 -0.4
RND IAmb IAmb 21 36 41.2
comp=Z,12nm,0.8s
I21K Tanana 82.63 19 P P 21 36 41.3 +0.6
I21K IAmb IAmb 21 36 42.7
comp=Z,8.8nm,0.8s
I21K Tanana 82.63 19 P P 21 36 41.6 +0.9
baz=228,SNR=10.0
IMAR Indian Mountai 82.64 18 P P 21 36 40.8 +0.1
BMRM Bremner River 82.67 24 P P 21 36 41.3 +0.3
H21K Melozitna Rive 82.70 18 P P 21 36 41.6 +0.6
H21K Melozitna Rive 82.70 18 P P 21 36 42.3 +1.3
baz=227
MCK McKinley 82.70 21 P P 21 36 40.9 -0.2
MCK McKinley 82.70 21 P P 21 36 40.9 -0.2
baz=231,SNR=15
BERG Berg Lake 82.71 25 P P 21 36 41.9 +0.6
M24K Tolsona, Glenn 82.72 23 P P 21 36 42.0 +0.8
M24K Tolsona, Glenn 82.72 23 P P 21 36 42.5 +1.2
baz=234,SNR=5.7
BGLC Bering Glacier 82.74 25 P P 21 36 42.7 +1.5
baz=237
BWN Browne 82.80 20 P P 21 36 41.0 -0.6
DHY Denali Highway 82.85 22 P P 21 36 42.2 +0.2
DHY IAmb IAmb 21 36 49.3
comp=Z,8.5nm,0.9s
DHY Denali Highway 82.85 22 P P 21 36 42.4 +0.4
baz=233
MLY Manley 82.93 19 P P 21 36 42.4 +0.1
MLY IAmb IAmb 21 36 43.7
comp=Z,9.6nm,0.8s
MLY Manley 82.93 19 P P 21 36 42.6 +0.3
baz=229,SNR=15
N25K Chitina, Valde 83.03 24 P P 21 36 43.0 0.0
N25K Chitina, Valde 83.03 24 P P 21 36 43.7 +0.7
baz=235,SNR=6.2
G21K Allakaket 83.08 17 P P 21 36 43.6 +0.6
baz=227,SNR=6.7
WAX Waxell Ridge 83.10 25 P P 21 36 43.1 -0.2
WAX IAmb IAmb 21 36 45.3
comp=Z,11nm,0.8s
CRQM Cirque 83.15 25 P P 21 36 43.9 +0.2
CRQM IAmb IAmb 21 36 46.4
comp=Z,11nm,0.9s
CRQE Cirque 83.16 25 P P 21 36 44.5 +0.8
baz=237
NEA2 Nenana 83.20 20 P P 21 36 42.4 -1.3
NEA2 IAmb IAmb 21 36 44.3
comp=Z,16nm,1.0s
NEA2 Nenana 83.20 20 P P 21 36 43.4 -0.3
baz=231,SNR=11
GLB Gilahina Butte 83.25 24 P P 21 36 44.1 +0.1
GLB IAmb IAmb 21 36 45.6
comp=Z,9.2nm,0.8s
HARP HAARP 83.27 23 P P 21 36 44.6 +0.5
baz=235
TGL Tana Glacier 83.27 25 P P 21 36 44.9 +0.6
TGL IAmb IAmb 21 36 45.9
comp=Z,8.4nm,0.9s
VRDI Verde Repeater 83.28 24 P P 21 36 44.8 +0.4
VRDI IAmb IAmb 21 36 45.8
comp=Z,5.9nm,0.8s
H22K Ishtalitna Cre 83.30 18 P P 21 36 45.1 +0.9
baz=229,SNR=7.8
MESA MESA 83.33 25 P P 21 36 45.1 +0.4
baz=238
ISLE Juniper Island 83.39 25 P P 21 36 45.4 +0.5
ISLE IAmb IAmb 21 36 46.5
comp=Z,9.4nm,0.9s
TIXI Tiksi 83.40 351 LR LR 22 18 03.6
comp=Z,36nm,18.0s,baz=181,slow=39
I23K Minto, Yukon-K 83.45 19 P P 21 36 44.7 -0.2
I23K Minto, Yukon-K 83.45 19 P P 21 36 45.0 +0.1
baz=231
WRH Wood River Hil 83.45 20 P P 21 36 44.5 -0.4
WRH IAmb IAmb 21 36 45.6
comp=Z,13nm,1.0s
PAX Paxson 83.49 22 P P 21 36 45.8 +0.5
baz=234
YAH Yahtse 83.52 25 P P 21 36 45.9 +0.3
MCARA McCarthy VSAT 83.54 24 P P 21 36 46.5 +1.0
MCARA IAmb IAmb 21 36 59.3
comp=Z,8.9nm,0.9s
MCARA McCarthy VSAT 83.54 24 P P 21 36 45.8 +0.3
baz=237
F21K Alatna River 83.57 17 P P 21 36 45.8 +0.2
baz=227
WMQ Urumqi 83.59 316 *e*P P 21 36 47.3 +1.1
WMQ pP pP 21 36 52.6 -1.5
WMQ pmax pmax
comp=Z,11nm,1.3s
CCB Clear Creek Bu 83.66 20 P P 21 36 45.0 -1.0
CCB IAmb IAmb 21 36 46.5
comp=Z,7.1nm,0.8s
GRNC Granite Creek 83.71 25 P P 21 36 46.9 +0.2
GRNC IAmb IAmb 21 36 48.3
comp=Z,7.7nm,0.8s
MDM Murphy Dome 83.71 20 P P 21 36 45.6 -0.7
MDM IAmb IAmb 21 36 46.9
comp=Z,9.2nm,0.9s
TCOL CIGO, UAF Yank 83.78 20 P P 21 36 46.0 -0.6
TCOL CIGO, UAF Yank 83.78 20 P P 21 36 46.7 +0.1
baz=232
COLA College 83.78 20 P P 21 36 46.7 +0.1
COLA College 83.78 20 P P 21 36 46.7 +0.1
baz=232
HDA Harding Lake 83.81 21 P P 21 36 46.5 -0.3
HDA IAmb IAmb 21 36 47.8
comp=Z,12nm,0.9s
HDA Harding Lake 83.81 21 P P 21 36 46.7 0.0
baz=233,SNR=8.8
TABL Table Mountain 83.81 25 P P 21 36 47.4 +0.2
H23K Yukon River 83.83 19 P P 21 36 47.2 +0.3
H23K IAmb IAmb 21 36 48.6
comp=Z,12nm,0.8s
H23K Yukon River 83.83 19 P P 21 36 47.5 +0.6
baz=230,SNR=14
K24K Donnelly Dome 83.86 21 P P 21 36 47.6 +0.5
baz=234
MAW Mawson 83.87 203 P P 21 36 47.5 +0.4
comp=Z,2.9nm,0.8s,baz=115,slow=4.6,SNR=8.1
comp=Z,2.9nm,0.8s
MAW Mawson 83.87 203 P P 21 36 47.8 +0.7
BARN Barnard Glacie 83.92 25 P P 21 36 47.9 +0.3
BARN IAmb IAmb 21 36 49.5
comp=Z,8.2nm,0.8s
CTG Chitna Glacier 84.00 25 P P 21 36 48.8 +0.8
baz=238,SNR=6.8
CTGM Chitina Glacie 84.01 25 P P 21 36 48.7 +0.6
PCA Pinnacle 84.01 26 P P 21 36 48.5 +0.4
PINM Pinnacle 84.02 26 P P 21 36 48.9 +0.8
baz=240
IL31 84.05 20 P P 21 36 46.3 -1.6
IL31 IAmb IAmb 21 36 48.7
comp=Z,5.4nm,0.8s
ILAR Eielson Array 84.05 20 P P 21 36 47.5 -0.5
comp=Z,3.5nm,0.5s,baz=249,slow=4.9,SNR=39
ILAR LR LR 22 09 02.6
comp=Z,31nm,20.6s,baz=194,slow=32
comp=Z,3.5nm,0.5s
ILAR Eielson Array 84.05 20 P P 21 36 46.7 -1.3
LOGN Logan Glacier 84.07 25 P P 21 36 49.0 +0.6
LOGN IAmb IAmb 21 36 50.6
comp=Z,9.9nm,0.9s
POKR Poker Plat Res 84.07 20 P P 21 36 48.9 +0.8
baz=232
M26K Nabesna, AK 84.11 23 P P 21 36 48.6 +0.2
M26K IAmb IAmb 21 36 50.2
comp=Z,7.5nm,0.8s
M26K Nabesna, AK 84.11 23 P P 21 36 49.0 +0.6
baz=237,SNR=8.9
RIDG Independent Ri 84.16 22 P P 21 36 48.9 +0.3
RIDG IAmb IAmb 21 36 50.3
comp=Z,17nm,1.2s
RIDG Independent Ri 84.16 22 P P 21 36 49.1 +0.4
baz=235,SNR=11
PNL Peninsula 84.17 27 P P 21 36 49.7 +0.9
baz=240
HYBB Hyderabad (bro 84.21 289 *e*P P 21 36 49.7 -0.2
HYBB *e*PcP PcP 21 36 53.1 -0.6
HYBB *es*P pP 21 36 58.6 +0.8
HYBB *e*PP PP 21 40 03.6 -1.1
G23K Bananza Creek 84.25 18 P P 21 36 49.9 +0.9
baz=230
L26K Log Cabin Wild 84.32 23 P P 21 36 50.3 +0.8
L26K IAmb IAmb 21 36 51.4
comp=Z,8.4nm,0.9s
L26K Log Cabin Wild 84.32 23 P P 21 36 50.1 +0.7
baz=236
H24K Noodor Dome 84.37 19 P P 21 36 49.8 +0.1
H24K Noodor Dome 84.37 19 P P 21 36 50.3 +0.6
baz=232
O28M Mount Upton 84.39 25 P P 21 36 51.1 +0.9
baz=240,SNR=12
DOT Dot Lake 84.40 22 P P 21 36 50.2 +0.4
DOT IAmb IAmb 21 36 51.4
comp=Z,11nm,0.8s
J25K Salcha River, 84.48 21 P P 21 36 50.1 -0.2
J25K IAmb IAmb 21 36 51.9
comp=Z,22nm,1.4s
J25K Salcha River, 84.48 21 P P 21 36 50.6 +0.3
baz=234,SNR=15
M27K Edge Creek, AK 84.52 24 P P 21 36 51.3 +0.7
M27K IAmb IAmb 21 36 52.9
comp=Z,11nm,0.8s
M27K Edge Creek, AK 84.52 24 P P 21 36 51.8 +1.1
baz=238,SNR=13
COLD Coldfoot 84.53 18 P P 21 36 51.5 +1.1
COLD IAmb IAmb 21 36 59.0
comp=Z,32nm,2.0s
COLD Coldfoot 84.53 18 P P 21 36 51.1 +0.7
baz=230
SCRK Sand Creek 84.61 22 P P 21 36 51.1 +0.1
SCRK IAmb IAmb 21 36 52.8
comp=Z,9.2nm,0.9s
SCRK Sand Creek 84.61 22 P P 21 36 51.7 +0.6
baz=236,SNR=16
E22K Anaktuvuk Pass 84.66 16 P P 21 36 52.1 +1.0
baz=228
YUK3 Moose Creek 84.79 24 P P 21 36 52.8 +0.7
baz=239,SNR=8.8
O29M Mount Kennedy 84.84 26 P P 21 36 53.4 +1.1
baz=241
L27K Beaver Creek, 84.92 23 P P 21 36 53.0 +0.5
L27K IAmb IAmb 21 36 54.8
comp=Z,7.1nm,1.0s
L27K Beaver Creek, 84.92 23 P P 21 36 53.4 +0.9
baz=238,SNR=12
BCAR Beaver Creek A 84.94 23 P P 21 36 52.8 +0.2
PRP Porcupine Dome 84.96 20 P P 21 36 53.7 +0.9
baz=234
G24K Hadweenzic Riv 85.03 19 P P 21 36 54.0 +1.0
baz=232
J26L Joseph Creek 85.06 21 P P 21 36 53.7 +0.5
J26L Joseph Creek 85.06 21 P P 21 36 54.0 +0.8
baz=236,SNR=7.1
YUK6 Outpost Mounta 85.25 26 P P 21 36 55.7 +1.2
baz=241,SNR=7.2
YUK4 Talbot Arm 85.32 25 P P 21 36 56.7 +1.9
baz=241,SNR=8.0
K27K Chicken 85.34 22 P P 21 36 55.1 +0.6
K27K IAmb IAmb 21 36 57.4
comp=Z,11nm,1.4s
K27K Chicken 85.34 22 P P 21 36 56.2 +1.6
baz=238
F24K Squaw Lake 85.41 18 P P 21 36 56.0 +1.2
baz=232
PLBC Pleasant Camp 85.43 27 P P 21 36 56.1 +1.0
baz=243
P30M Million Dollar 85.47 27 P P 21 36 56.7 +1.4
baz=242
D23K Nanushuk River 85.53 16 P P 21 36 56.4 +1.0
baz=229
HYT Haines Junctio 85.56 26 P P 21 36 56.4 +0.5
HYT Haines Junctio 85.56 26 P P 21 36 57.1 +1.2
baz=242,SNR=20
E24K Your Creek 85.57 17 P P 21 36 56.1 +0.4
baz=231
TOLK Toolik Lake Re 85.62 17 P P 21 36 57.4 +1.5
TOLK IAmb IAmb 21 36 57.8
comp=Z,6.8nm,0.7s
TOLK Toolik Lake Re 85.62 17 P P 21 36 56.7 +0.7
baz=230
I26K Coal Creek Min 85.65 21 P P 21 36 55.5 -0.6
I26K Coal Creek Min 85.65 21 P P 21 36 57.0 +1.0
baz=236
M29M Somme Creek 85.94 24 P P 21 36 58.5 +0.8
baz=241
N30M Aishikik Lake 86.04 26 P P 21 36 59.2 +1.1
baz=242,SNR=8.8
WRAK Wrangell Islan 86.08 31 P P 21 36 59.5 +1.2
baz=247
C23K Itkillik River 86.11 15 P P 21 36 59.3 +1.1
baz=229
F25K Christian Rive 86.14 18 P P 21 36 59.7 +1.2
baz=234
D24K Happy Valley 86.16 16 P P 21 36 59.2 +0.8
baz=231
I27K Kandik River 86.35 21 P P 21 37 00.9 +1.3
baz=238
G26K Porcupine Rive 86.36 19 P P 21 37 00.7 +1.2
baz=236
DAWY Dawson 86.37 23 P P 21 37 00.8 +1.1
DAWY IAmb IAmb 21 37 02.2
comp=Z,10.0nm,1.1s
DAWY Dawson 86.37 23 P P 21 37 00.6 +0.9
baz=240
BMAR Burnt Mountain 86.38 19 P P 21 37 00.8 +1.2
C24K Franklin Bluff 86.55 16 P P 21 37 01.7 +1.3
baz=231
N31M Braeburn, Yuko 86.61 26 P P 21 37 02.2 +1.3
baz=243
F26K Sheenjek River 86.67 19 P P 21 37 02.4 +1.3
baz=235
M30M Minto, Yukon 86.68 25 P P 21 37 01.8 +0.5
M30M IAmb IAmb 21 37 03.5
comp=Z,12nm,1.2s
M30M Minto, Yukon 86.68 25 P P 21 37 02.2 +0.9
baz=242,SNR=11
P32M Atlin 86.70 28 P P 21 37 01.8 +0.3
baz=245
H27K Steamboat Moun 86.72 20 P P 21 37 02.7 +1.3
baz=238
J01E Myrtle Point 86.78 45 P P 21 37 03.2 +1.1
baz=254
BBB Bella Bella 86.84 36 LR LR 22 08 45.4
comp=Z,35nm,19.6s,baz=246,slow=31
K02D Willamette Mer 86.84 46 P P 21 37 03.8 +1.3
baz=254
D25K Kavik River 86.95 17 P P 21 37 02.9 +0.4
baz=233
G27K Doyon Strip 86.98 20 P P 21 37 03.6 +1.0
baz=238
BBGB Big Mountain B 87.25 52 P P 21 37 05.3 +0.6
P33M Teslin, Yukon 87.37 28 P P 21 37 05.5 +0.8
baz=246
I29M Ogilvie Camp, 87.42 22 P P 21 37 05.0 +0.2
I29M IAmb IAmb 21 37 06.7
comp=Z,9.8nm,1.1s
I29M Ogilvie Camp, 87.42 22 P P 21 37 05.8 +1.0
baz=241,SNR=7.3
M31M Drury Creek, Y 87.52 25 P P 21 37 05.8 +0.6
M31M Drury Creek, Y 87.52 25 P P 21 37 06.1 +0.8
baz=245
L04D Klamath Falls 87.68 47 P P 21 37 06.6 -0.1
baz=255
SNCC San Nicolas Is 87.70 56 P P 21 37 05.3 -1.5
baz=257
C26K Camden Bay 87.72 17 P P 21 37 06.8 +0.8
baz=235
E27K Coleen River 87.74 19 P P 21 37 07.7 +1.4
baz=238
SCZ2 Santa Cruz Isl 87.77 55 P P 21 37 06.8 -0.4
baz=257
PKM Mcpherson Peak 87.83 54 P P 21 37 08.5 +0.9
baz=257
C27K Jago River 87.89 17 P P 21 37 08.3 +1.3
baz=236
R33M Jennings River 87.91 29 P P 21 37 08.3 +0.9
baz=248
FARO Faro, Yukon 87.97 26 P P 21 37 08.0 +0.5
DLBC Dease Lake 88.01 30 P P 21 37 08.0 +0.2
baz=249
I04A Tendick Farm, 88.01 45 P P 21 37 09.7 +1.6
baz=255
MK31 Makanchi Array 88.13 318 P P 21 37 08.1 -0.5
MKAR Makanchi Array 88.13 318 P P 21 37 08.6 0.0
comp=Z,2.2nm,0.7s,baz=100,slow=6.2,SNR=22
comp=Z,2.2nm,0.7s
MKAR Makanchi Array 88.13 318 P P 21 37 08.2 -0.3
BCW Bitter Crk WRg 88.16 54 P P 21 37 07.8 -1.3
MAKZ Makanchi 88.34 318 P P 21 37 09.4 -0.2
BEKR Beckworth 88.54 49 P P 21 37 10.6 -0.3
BEKR IAmb IAmb 21 37 12.9
comp=Z,4.4nm,0.8s
ZALV Zalesovo Beam 88.65 325 P P 21 37 10.1 -0.7
comp=Z,0.5nm,0.4s,baz=121,slow=5.6,SNR=4.0
ZALV LR LR 22 18 06.8
comp=Z,30nm,18.6s,baz=112,slow=36
comp=Z,0.5nm,0.4s
J05D Fort Rock, OR 88.71 46 P P 21 37 13.1 +1.5
baz=256
ISA Isabella, Lake 89.06 54 P P 21 37 14.4 +1.1
baz=258
PAHR Pah Rah Range 89.23 50 P P 21 37 15.3 +1.2
PAHR IAmb IAmb 21 37 16.5
comp=Z,9.4nm,1.0s
EDW2 Edwards Air Fo 89.29 55 P P 21 37 15.6 +1.2
baz=258
BFSC Mount Baldy Ra 89.43 55 P P 21 37 16.0 +0.9
baz=258
CWC Cottonwood Cre 89.54 53 P P 21 37 16.5 +0.9
baz=258
RYN Ryan 89.65 51 P P 21 37 16.3 +0.1
LRMC Laurel Mtn Rad 89.66 54 P P 21 37 17.2 +1.0
baz=258
NVAR Mina Array Bea 89.78 51 P P 21 37 17.9 +1.1
comp=Z,3.4nm,0.9s,baz=243,slow=6.0,SNR=20
comp=Z,3.4nm,0.9s
NVAR Mina Array Bea 89.78 51 P P 21 37 16.6 -0.2
NV11 Mina Array Sit 89.89 51 P P 21 37 17.1 -0.1
NV11 IAmb IAmb 21 37 19.7
comp=Z,10nm,1.1s
MPMC Manual Prospec 89.93 54 P P 21 37 18.4 +0.8
baz=258,SNR=10
LCH Last Change Ra 90.04 52 P P 21 37 17.2 -0.7
KVN Kaiserville 90.07 51 P P 21 37 18.1 0.0
KVN IAmb IAmb 21 37 20.4
comp=Z,7.5nm,1.0s
MONP2 Monument Peak 90.17 57 P P 21 37 20.1 +1.4
baz=259,SNR=7.3
PFO Pinyon Flats O 90.28 56 P P 21 37 20.5 +1.3
comp=Z,3.2nm,0.8s,baz=300,slow=5.8,SNR=4.8
PFO LR LR 22 11 49.0
comp=Z,165nm,19.1s,baz=272,slow=32
comp=Z,3.2nm,0.8s
PFO Pinyon Flats O 90.28 56 P P 21 37 20.6 +1.5
baz=259
TPFO Pinon Flats 90.28 56 P P 21 37 20.3 +1.2
baz=259
GSC Goldstone, Bar 90.33 54 P P 21 37 20.7 +1.5
baz=259
WVOR Wild Horse Val 90.38 47 P P 21 37 18.5 -0.8
WVOR IAmb IAmb 21 37 22.7
comp=Z,13nm,1.4s
IKP In-Ko-Pah, Jac 90.39 57 P P 21 37 21.1 +1.5
baz=259
QSM Queen of Sheba 90.41 54 P P 21 37 20.0 +0.5
QSM IAmb IAmb 21 37 21.6
comp=Z,8.1nm,0.9s
INK Inuvik 90.44 20 LR LR 22 15 57.9
comp=Z,32nm,18.8s,baz=162,slow=34
FURC Furnace Creek, 90.51 53 P P 21 37 21.4 +1.5
baz=259,SNR=8.5
TPH Tonopah 90.54 52 P P 21 37 20.3 -0.1
YUH Yuha Desert 90.54 57 P P 21 37 20.6 +0.4
YUH IAmb IAmb 21 37 22.6
comp=Z,6.5nm,1.1s
GWY Greenwater Val 90.61 54 P P 21 37 20.5 -0.2
GWY IAmb IAmb 21 37 22.6
comp=Z,10nm,1.4s
HEC Hector,Ludlow 90.61 55 P P 21 37 21.6 +1.0
baz=259,SNR=6.9
SWSC Sam W. Stewart 90.70 57 P P 21 37 22.3 +1.4
baz=259
BELC Belle Mtn. Jos 90.73 56 P P 21 37 22.3 +1.1
baz=259,SNR=6.4
G08A Pilot Rock 90.77 44 P P 21 37 21.2 +0.1
SHOC Shoshone, Teco 90.86 54 P P 21 37 22.5 +0.9
baz=259
TUQ Turquoise Moun 91.06 54 P P 21 37 23.8 +1.1
baz=259
TPNV Topopah Spring 91.08 53 P P 21 37 22.8 0.0
TPNV IAmb IAmb 21 37 25.1
comp=Z,5.7nm,0.9s
TPNV Topopah Spring 91.08 53 P P 21 37 24.1 +1.3
baz=259,SNR=5.8
BC3 Big Chuckawall 91.11 56 P P 21 37 24.2 +1.2
baz=260
GMRC Granite Mounta 91.15 55 P P 21 37 24.4 +1.2
baz=259,SNR=7.5
IRM Iron Mountain 91.46 56 P P 21 37 25.9 +1.4
baz=260
KURBB Kurchatov Arra 91.49 321 LR LR 22 17 51.3
comp=Z,33nm,21.9s,baz=67,slow=35
GLA Glamis 91.52 57 P P 21 37 26.2 +1.4
baz=260
BMO Blue Mountains 91.82 45 P P 21 37 26.1 +0.1
BMO IAmb IAmb 21 37 27.8
comp=Z,10nm,1.4s
R11A Troy Canyon, C 91.86 52 P P 21 37 26.2 -0.2
R11A Troy Canyon, C 91.86 52 P P 21 37 27.6 +1.1
baz=260,SNR=5.4
SHPR Sheep Range 91.86 53 P P 21 37 26.6 +0.1
SHPR IAmb IAmb 21 37 29.1
comp=Z,5.3nm,1.0s
F10A Beach Ranch, E 92.09 44 P P 21 37 26.9 -0.3
PRN Pahroc Range 92.11 53 P P 21 37 27.0 -0.6
PRN IAmb IAmb 21 37 30.2
comp=Z,6.6nm,0.9s
BELA Belgrano 2 92.49 177 P P 21 37 27.6 -0.8
BELA IAmb IAmb 21 37 29.6
comp=Z,8.4nm,0.8s
ELK Elko 92.55 49 P P 21 37 30.7 +1.0
comp=Z,3.6nm,0.9s,baz=244,slow=4.3,SNR=11
ELK LR LR 22 13 50.1
comp=Z,27nm,19.2s,baz=246,slow=32
comp=Z,3.6nm,0.9s
ELK Elko 92.55 49 P P 21 37 30.0 +0.4
ELK IAmb IAmb 21 37 32.0
comp=Z,7.4nm,1.1s
NEW Newport 92.61 42 LR LR 22 11 14.9
comp=Z,50nm,21.3s,baz=298,slow=30
NEW Newport 92.61 42 P P 21 37 30.3 +0.8
baz=259
SPR3 Spring Creek 3 92.94 51 P P 21 37 32.5 +0.9
SPR3 IAmb IAmb 21 37 35.0
comp=Z,4.0nm,1.0s
HLID Hailey 93.63 47 P P 21 37 35.5 +1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=261						
LPIG	La Paz	94.01	66	LR	LR	22 13 42.2	
	comp=Z,95nm,19.0s,baz=237,slow=32						
BOZ	Bozeman (W)	95.90	45	P	P	21 37 45.7	+0.9
	baz=263						
YKA	Yellowknife Ar	96.41	28	P	P	21 37 46.6	+0.2
	comp=Z,1.2nm,0.7s,baz=265,slow=4.4,SNR=3.8						
YKA				LR	LR	22 15 48.7	
	comp=Z,42nm,20.4s,baz=300,slow=32						
	comp=Z,1.2nm,0.7s						
BVAR	Borovoye Array	96.87	323	LR	LR	22 21 39.0	
	comp=Z,20nm,21.2s,baz=334,slow=36						
PDAR	Pinedale Array	97.05	48	P	Pdif	21 37 51.2	+0.9
	comp=Z,1.1nm,0.6s,baz=194,slow=1.2,SNR=4.2						
PDAR				LR	LR	22 15 46.0	
	comp=Z,26nm,20.8s,baz=280,slow=32						
	comp=Z,1.1nm,0.6s						
ANMO	Albuquerque	98.67	56	LR	LR	22 18 00.9	
	comp=Z,41nm,18.6s,baz=262,slow=33						
CO02	Combarbal	117.05	132		PKPdf	21 43 01.7	-1.8
V53A	Saluda	117.93	55		PKPdf	21 43 02.9	-2.0
NRS	Narsarsuaq	125.19	14	PKPdf	PKiKP	21 43 18.3	0.0
LPAZ	La Paz	126.44	118	PKP	PKPdf	21 43 22.3	-0.2
	comp=Z,2.3nm,0.8s,baz=239,slow=2.0,SNR=10						
GERES	GERESS Array B	131.35	330	PKP	PKiKP	21 43 30.8	-0.4
	comp=Z,0.2nm,0.4s,baz=22,slow=1.4,SNR=3.8						
SAML	Samuel	133.81	112		PKPdf	21 43 34.6	-1.1
ESDC	Sonseca Array	146.42	337	PKPbc	PKPbc	21 43 59.0	-0.2
	comp=Z,0.7nm,0.9s,baz=2.2,slow=3.3,SNR=3.8						
TORD	Torodi Ar. Bea	157.87	282	PKP	PKPdf	21 44 14.9	-0.5
	comp=Z,0.9nm,0.7s,baz=81,slow=1.2,SNR=5.9						

*AEIC **01** 22:02:09±2.6, 51°.5N±0°.1×173°.34W±0°.09, h26km±8km, Error ellipse: s-maj=15.5km s-min=7.7km az=174.0*

*NEIC **01** 22:02:11.4±1.9, 51°.6N±0°.1×173°.28W±0°.09, h35km±25km, mb3.5/22, ML3.6/6, ML3.1/8(AEIC), Error ellipse: s-maj=15.2km s-min=7.8km az=176.0*

*IDC **01** 22:02:14.2±2.0, 52°.92N×174°.39W, h0km, mb3.6/7, mbtmp3.6/8, ML3.9/1, Error ellipse: s-maj=57.6km s-min=24.9km az=15.0*

ISC 01 22:02:10.9±1.2**, 51°.6N**±0°.1×**173°.28W**±0°.05**, h37km, n56, σ0s.98**/50**, mb3.5**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.84	323		Pn	22 02 26.5	+0.2
KOSE	Korovin Southe	0.88	327		Pn	22 02 27.2	+0.4
KOKL	Mount Kliuchef	0.92	322		Pn	22 02 27.4	0.0
GSMY	Great Sitkin M	1.78	285		Pn	22 02 39.7	+0.6
GSTR	Great Sitkin T	1.79	287	Pn	Pn	22 02 39.1	-0.2
GSTD	Great Sitkin T	1.84	285		Pn	22 02 40.3	+0.4
GSSP	Great Sitkin S	1.86	286		Pn	22 02 41.3	+1.1
ADK	Adak	2.14	279	Pn	Pn	22 02 43.6	-0.4
ADK	Adak	2.14	279	IAML		22 03 21.7	
	314nm,0.4s						
CLES	Cleveland East	2.41	58	Pn	Pn	22 02 48.7	+1.0
CLES				IAML		22 03 41.5	
	comp=N,274nm,0.8s						
CLES				IAML		22 03 50.5	
	comp=E,228nm,1.0s						
KIWB	Kanaga Island	2.42	277	Pn	Pn	22 02 48.0	+0.1
KIMD	Kanaga Island	2.47	275		Pn	22 02 48.8	+0.3
CLCO	Concord Point,	2.49	60		Pn	22 02 50.1	+1.4
TAFP	Tanaga Falls P	2.94	278		Pn	22 02 56.0	+0.9
TASE	Tanaga Southea	2.97	276		Pn	22 02 56.3	+0.8
NIKH	Nikolski High	3.04	62	Pn	Pn	22 02 56.3	-0.1
AMKA	Amchitka	4.64	270	Pn	Pn	22 03 18.1	-0.3
AKUT	Akutan	5.20	58	Pn	Pn	22 03 23.6	-2.4
AKUT				IAML		22 06 59.3	
	comp=E,64nm,3.0s						
M19K	Big River Lodg	14.55	38	Pn	Pn	22 05 32.7	-1.3
CNPM	China Poot	14.72	49	Pn	Pn	22 05 36.8	+0.6
PPLA	Purkeypile	15.97	37	Pn	Pn	22 05 51.5	-1.1
RC01	Rabbit Creek A	16.05	45	Pn	Pn	22 05 54.7	+1.3
J20K	Nowinta River	16.09	31	Pn	Pn	22 05 54.8	+0.7
BPAW	Bear Paw Mtn.	17.11	34		P	22 06 09.9	+1.5
FID	Port Fidalgo	17.38	48		Pn	22 06 10.6	+0.3
SCM	Sheep Creek Mo	17.41	44	Pn	Pn	22 06 10.0	-0.7
IMAR	Indian Mountai	17.48	27		Pn	22 06 13.2	+1.7
H21K	Melozitna Rive	17.53	29		Pn	22 06 12.8	+0.8
H21K				IAmb	IAmb	22 06 19.2	
	comp=Z,7.0nm,1.5s						
BWN	Browne	17.70	36		P	22 06 16.6	+1.8
MLY	Manley	17.77	32		P	22 06 17.2	+1.7
I23K	Minto, Yukon-K	18.30	33	P	P	22 06 22.2	+0.8
I23K				IAmb	IAmb	22 06 35.6	
	comp=Z,3.0nm,1.0s						
WRH	Wood River Hil	18.37	36	P	P	22 06 21.2	-0.9
WRH				IAmb	IAmb	22 06 38.5	
	comp=Z,3.4nm,1.3s						
CCB	Clear Creek Bu	18.57	36	P	P	22 06 26.0	+1.7
MDM	Murphy Dome	18.59	34	P	P	22 06 23.9	-0.6
MDM				IAmb	IAmb	22 06 36.5	
	comp=Z,4.8nm,1.4s						
HDA	Harding Lake	18.76	37	P	P	22 06 27.6	+1.3
HDA				IAmb	IAmb	22 06 36.0	
	comp=Z,2.0nm,0.7s						
IL31		18.97	36	P	P	22 06 29.4	+0.8
IL31				IAmb	IAmb	22 06 30.7	
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	18.97	36	P	P	22 06 29.4	+0.8
	comp=Z,0.4nm,0.3s,baz=224,slow=9.1,SNR=20						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	18.97	36	P	P	22 06 29.6	+0.9
H24K	Noodor Dome	19.21	32	P	P	22 06 31.4	+0.1
H24K				IAmb	IAmb	22 06 34.0	
	comp=Z,3.2nm,0.9s						
RIDG	Independent Ri	19.25	40	P	P	22 06 32.2	+0.4
RIDG				IAmb	IAmb	22 07 13.8	
	comp=Z,6.4nm,1.4s						
J25K	Salcha River,	19.45	37	P	P	22 06 33.6	-0.4
J25K				IAmb	IAmb	22 06 46.3	
	comp=Z,2.9nm,0.6s						
SCRK	Sand Creek	19.70	40	P	P	22 06 36.1	-0.7
J26L	Joseph Creek	20.09	39	P	P	22 06 40.6	-0.5
J26L				IAmb	IAmb	22 06 41.9	
	comp=Z,3.1nm,0.8s						
K27K	Chicken	20.49	41	P	P	22 06 45.8	+0.6
K27K				IAmb	IAmb	22 07 14.7	
	comp=Z,3.4nm,1.4s						
I26K	Coal Creek Min	20.61	37	P	P	22 06 45.8	-0.7
I26K				IAmb	IAmb	22 06 47.3	
	comp=Z,2.9nm,0.9s						
BMAR	Burnt Mountain	21.20	31	P	P	22 06 54.7	+1.8
H11S1	WAKE ISLAND Hy	36.62	213	T	T	22 48 25.7	
	baz=18,slow=74						
H11S2	WAKE ISLAND Hy	36.63	213	T	T	22 48 25.6	
	baz=18,slow=74						
H11S3	WAKE ISLAND Hy	36.63	213	T	T	22 48 26.3	
	baz=18						
NVAR	Mina Array Bea	40.09	87	P	P	22 09 57.2	+14
	comp=Z,0.3nm,0.7s,baz=289,slow=11,SNR=2.3						
	comp=Z,0.3nm,0.7s						
SONM	Songino Array	49.59	299	P	P	22 10 58.2	-0.1
	comp=Z,0.2nm,0.4s,baz=38,slow=7.3,SNR=2.0						
	comp=Z,0.2nm,0.4s						
TXAR	Lajitas Array	55.20	85	P	P	22 11 52.2	+12
	comp=Z,0.2nm,0.6s,baz=290,slow=3.6,SNR=3.5						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	58.39	352	P	P	22 12 01.8	-0.1
	comp=Z,1.9nm,0.8s,baz=16,slow=7.7,SNR=6.4						
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	62.54	311	P	P	22 12 29.7	-0.8
	comp=Z,0.2nm,0.6s,baz=47,slow=6.3,SNR=5.0						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	66.24	350	P	P	22 12 53.9	-0.6
	comp=Z,2.4nm,1.0s,baz=10,slow=6.4,SNR=1.9						
	comp=Z,2.4nm,1.0s						
AKASG	Malin Array Be	76.30	345	P	P	22 13 54.9	-0.5
	comp=Z,0.7nm,0.4s,baz=16,slow=5.6,SNR=5.0						
	comp=Z,0.7nm,0.4s						

*IDC **01** 22:21:42.0±3.8, 36°.07N×71°.24E, h78km±32km, mb3.6/10, mbtmp3.9/14, Error ellipse: s-maj=29.6km s-min=19.8km az=173.0*

*BJI **01** 22:21:45.0±0.0, 36°.50N×71°.10E, h104km, mb4.5/15, mB4.8/8*

*MOS **01** 22:21:45.5±1.1, 36°.44N×71°.27E, h107km, mb4.0/6, Error ellipse: s-maj=10.1km s-min=4.5km az=86.0*

*NNC **01** 22:21:47.5±18.0, 36°.98N×70°.51E, h0km, mb4.6, mpv4.5, Error ellipse: s-maj=171.0km s-min=103.4km az=166.0*

*NEIC **01** 22:21:47.1±1.4, 36°.42N±0°.05×71°.06E±0°.08, h110km±7km, mb4.3/28, Error ellipse: s-maj=9.2km s-min=7.7km az=98.0*

ISC 01 22:21:45.4±0.4**, 36°.36N**±0°.04×**71°.15E**±0°.05**, h100km, n140, σ1s.89**/157**, mb4.1**/26**, 7C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.50	224		Pn	22 22 27.2	+2.5
KBL	Kabul	2.50	224	PN	Pn	22 22 27.2	+2.5
GAR	Garm	2.71	346	Pn	Pn	22 22 28.5	+1.1
CHGR	Chuyangaron	2.78	326		Pn	22 22 28.9	+0.6
CHGR	Chuyangaron	2.78	326	PN	Pn	22 22 28.9	+0.6
NIL	Nilore	3.21	147	Pn	Pn	22 22 36.5	+2.5
NIL	Nilore	3.21	147	PN	Pn	22 22 36.5	+2.5
BTK	Batken	3.70	356		Pn	22 22 42.5	+2.0
BTK	Batken	3.70	356	PN	Pn	22 22 42.6	+2.0
JMU	Jammu	4.78	139	eP	Pn	22 22 56.4	+1.4
JMU				eS	Sn	22 23 48.3	-0.8
KSH	Kashi	4.94	49	P	Pn	22 22 55.2	-2.2
KSH				S	Sn	22 23 45.2	-8.2
KSH				smax	smax		
	comp=N,870nm,0.6s						
KSH				smax	smax		
	comp=E,350nm,0.7s						
TAS	Tashkent	5.16	344	Pn	Pn	22 23 00.9	+0.7
TAS	Tashkent	5.16	344	PN	Pn	22 23 00.9	+0.7
THN	Thein Dam	5.44	135	eP	Pn	22 23 06.2	+2.1
THN				eP	Pn	22 23 07.5	+3.4
THN				eS	Sn	22 24 04.7	-0.7
THN				eS	Sn	22 24 05.5	+0.1
IUG	Iuzhnay	5.84	352	ePN	Pn	22 23 08.3	-1.2
IUG	Iuzhnay	5.84	352	eP	Pn	22 23 08.3	-1.2
	baz=352						
IUG				eS	Sn	22 24 11.6	-3.5
	baz=352						
AML	Almayashu	6.09	18	P	Pn	22 23 14.1	+0.9
	SNR=325						
DZA	Taraz	6.52	1	ePN	Pn	22 23 17.9	-0.8
DZA	Taraz	6.52	1	eP	Pn	22 23 18.0	-0.8
	baz=1.6						
DZA				eS	Sn	22 24 28.8	-2.9
	baz=1.6						
BHK	Bhakra	6.60	137	ex	x	22 23 34.8	
BHK				eS	Sn	22 24 31.7	-1.8
EKS2	Erkin-Say	6.61	17	P	Pn	22 23 21.0	+1.0
	SNR=33						
KK31	Karatay Array	6.75	356	Pn	Pn	22 23 22.1	+0.3
KK31	Karatay Array	6.75	356	PN	Pn	22 23 22.1	+0.3
KK31	Karatay Array	6.75	356	⇑P	Pn	22 23 22.2	+0.4
	14nm,0.2s,baz=176,slow=12,SNR=446						
KK31				⇓S	Sn	22 24 33.0	-4.2
	4.3nm,0.3s,baz=186,slow=24,SNR=5.1						
KKAR	Karatay Array	6.75	356	Pn	Pn	22 23 22.0	+0.2
KKAR	Karatay Array	6.75	356	PN	Pn	22 23 22.0	+0.2
AAK	Ala-Archa	6.78	21	P	Pn	22 23 23.8	+1.5
	55nm,0.3s,baz=187,slow=6.0,SNR=58						
AAK				S	Sn	22 24 35.9	-2.1
	6.4nm,0.4s,baz=204,slow=20,SNR=1.4						
AAK	Ala-Archa	6.78	21	P	Pn	22 23 23.6	+1.2
	SNR=38						
AAK	Ala-Archa	6.78	21	Pn	Pn	22 23 23.5	+1.2
AAK	Ala-Archa	6.78	21	cePN	Pn	22 23 23.5	+1.2
AAK				pmax	pmax		
	comp=Z,31nm,0.5s						
KBK	Karagaybulak	6.94	24	P	Pn	22 23 25.8	+1.3
	SNR=13						
ULHL	Ulahol	7.08	32	P	Pn	22 23 27.4	+1.0
	SNR=11						
CHMS	Chumysh	7.18	22	P	Pn	22 23 28.7	+0.9
	SNR=36						
SMLA	Simla	7.24	134	eP	Pn	22 23 28.8	+0.3
SMLA				eS	Sn	22 24 44.7	-4.3
SMLA				IAML		22 24 47.5	
	comp=E,69nm,0.4s						
SMLA				IAML		22 24 47.7	
	comp=N,83nm,0.3s						
USP	Ospenovka	7.36	19	P	Pn	22 23 30.5	+0.4
	SNR=56						
TKM2	Tokmak 2	7.39	26	P	Pn	22 23 31.5	+0.8
	SNR=27						
TKM2	Tokmak 2	7.39	26	PN	Pn	22 23 31.9	+1.2
TKM2				S	Sn	22 24 54.0	+0.9
TKM2	Tokmak 2	7.39	26	⇑P	Pn	22 23 31.1	+0.4
	comp=N,16nm,0.5s						
TKM2				⇑S	Sn	22 24 54.0	+0.9
	comp=N,11nm,0.8s						
SGDS	Sogindy	7.57	20	ePN	Pn	22 23 31.8	-1.2
SGDS	Sogindy	7.57	20	eP	Pn	22 23 31.8	-1.2
	baz=21						
SGDS				eS	Sn	22 24 54.6	-2.5
	baz=21						
MDOK	Medeo	8.17	32	ePN	Pn	22 23 41.2	0.0
MDOK	Medeo	8.17	32	eP	Pn	22 23 41.2	0.0
	baz=33						
PRZ	Przheval'sk	8.29	40	Pn	Pn	22 23 44.4	+1.4
PRZ	Przheval'sk	8.29	40	PN	Pn	22 23 44.4	+1.4
DDI	Dehra Dun	8.35	134	eS	Sn	22 25 09.8	-6.4
KUU	Kurty	8.51	26	ePN	Pn	22 23 45.3	-0.4
KUU	Kurty	8.51	26	eP	Pn	22 23 45.3	-0.4
	baz=27						
CHKK	Chushkaly	8.71	29	ePN	Pn	22 23 47.9	-0.6
CHKK	Chushkaly	8.71	29	eP	Pn	22 23 47.9	-0.6
	baz=30						
SATY	Saty	8.71	38	ePN	Pn	22 23 48.4	-0.2
SATY	Saty	8.71	38	eP	Pn	22 23 48.5	-0.2
	baz=39						
BTLS	Baital	8.94	13	ePN	Pn	22 23 50.7	-0.9
BTLS	Baital	8.94	13	eP	Pn	22 23 50.8	-0.9
	baz=14						
AJM	Ajmer	10.29	162	eP	Pn	22 24 09.9	-0.2
AJM				eS	Sn	22 25 58.6	-5.0
GEYT	Alibeck	10.52	282	P	Pn	22 24 10.9	-2.2
	comp=N,1.0nm,0.3s,baz=140,slow=19,SNR=2.8						
GEYT	Alibeck	10.52	282	Pn	Pn	22 24 13.2	0.0
GYA0	ALIBECK ARRAY	10.52	282	P	Pn	22 24 11.0	-2.1
GYA0B	ALIBECK ARRAY	10.52	282	Pn	Pn	22 24 12.0	-1.2
JHNI	Jhansi	12.57	148	ex	x	22 24 39.0	
MAKZ	Makanchi	13.20	34	Pn	Pn	22 24 47.7	-1.0
MAKZ	Makanchi	13.20	34	P	Pn	22 24 47.7	-1.0
MK31	Makanchi Array	13.33	35		P	22 24 57.4	+0.9
MK31	Makanchi Array	13.33	35	i P	Pn	22 24 49.4	-1.1
MKAR	Makanchi Array	13.33	35	P	Pn	22 24 50.1	-0.3
	comp=N,0.9nm,0.7s,baz=219,slow=14,SNR=7.3						
MKAR	Makanchi Array	13.33	35	Pn	Pn	22 24 48.9	-1.6
BRZS	Berezniki	13.66	4	eP	Pn	22 24 52.3	-2.4
BRZS	Berezniki	13.66	4	eP	Pn	22 24 52.3	-2.4
	baz=4.4						
GKN	Gorkha	14.13	122	eP	Pn	22 24 59.2	-1.9
	comp=N,6.6nm,0.3s						
GKN				eS	Sn	22 27 25.7	-11
WMQ	Urumqi	14.68	54	P	Pn	22 25 08.3	+0.4
PKIN	Phulchoki	14.92	122	eP	Pn	22 25 10.0	-1.3
	comp=N,9.5nm,0.4s						
PKI	Pulchoki	14.93	122	eP	Pn	22 25 10.4	-1.1
KURBB	Kurchatov Arra	15.21	18	P	P	22 25 16.8	-0.5
	comp=N,1.4nm,0.6s,baz=208,slow=11,SNR=10						
ABKAR	Akbulak array	15.26	331	P	Pn	22 25 14.3	-0.9
ABKAR				IAmb	IAmb	22 25 15.7	
	comp=Z,4.9nm,0.5s						
ABKAR	Akbulak array	15.26	331	Pn	Pn	22 25 13.0	-2.2
KURK	Kurchatov	15.32	18	Pn	Pn	22 25 16.2	+0.2
KURK	Kurchatov	15.32	18	ceP	P	22 25 17.8	-0.7
KURK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
JIRN	Jiri	15.41	120	eP	Pn	22 25 16.1	-1.6
	comp=Z,8.3nm,0.3s						
BVA0	Borovoye Array	16.67	358	P	Pn	22 25 33.1	+0.4
BVA0	Borovoye Array	16.67	358	P	Pn	22 25 33.1	+0.4
	comp=Z,1.7nm,0.7s,baz=162,slow=11,SNR=20						
BRVK	Borovoye	16.70	358		Pn	22 25 32.5	-0.6
BRVK				IAmb	IAmb	22 25 38.7	
	comp=Z,5.6nm,0.5s						
BRVK	Borovoye	16.70	358	ceP	P	22 25 35.0	+1.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AKTO	Aktyubinsk	16.96	330	P	Pn	22 25 37.1	+0.9
	comp=Z,5.5nm,0.5s,baz=140,slow=15,SNR=16						
AKTO				S	Sn	22 28 32.8	-12
	comp=Z,1.2nm,0.5s,baz=98,slow=18,SNR=3.3						
UOSS	Minazif	17.15	233	P	P	22 25 38.6	-0.2
UOSS				IAmb	IAmb	22 25 58.8	
	comp=Z,14nm,1.3s						
MAK	Makhachkala	19.33	297	eP	P	22 26 00.2	-2.4
MAK				eS	S	22 29 33.2	-2.6
MAK				pmax	pmax		
	comp=Z,103nm,1.4s						
MAK				MLR	MLR		
	comp=Z,61nm,19.0s						
HYBB	Hyderabad (bro	19.98	159	ePn	Pn	22 26 14.4	+2.0
HYBB				eSn	Sn	22 30 00.6	+3.2
ZAA0	Zalesovo Array	19.99	24	P	P	22 26 09.9	+0.3
ZAA0				IAmb	IAmb	22 26 15.8	
	comp=Z,4.1nm,0.4s						
ZALV	Zalesovo Beam	19.99	24	P	P	22 26 09.7	0.0
	comp=Z,2.4nm,0.3s,baz=212,slow=10,SNR=17						
	comp=Z,2.4nm,0.3s						
ZALV	Zalesovo Beam	19.99	24	P	P	22 26 09.9	+0.2
GNI	Garni	21.05	288	P	P	22 26 20.6	-0.8
GNI	Garni	21.05	288	i P	P	22 26 22.6	+1.2
GNI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARU	Arti	21.80	341	P	P	22 26 29.8	+0.7
	comp=Z,3.5nm,0.6s,baz=110,slow=19,SNR=8.1						
	comp=Z,3.5nm,0.6s						
ARU	Arti	21.80	341	P	P	22 26 29.7	+0.7
ARU	Arti	21.80	341	d iP	P	22 26 31.4	+2.4
ARU						22 26 52.8	
ARU				S	S	22 30 27.9	+3.9
ARU				SS	SnSn	22 31 07.9	+10
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GEVA	Gevas	22.39	283	P	P	22 26 33.7	-2.0
GEVA				IAmb	IAmb	22 26 33.7	
	comp=Z,6.6nm,0.7s						
KBZ	Khabaz	22.77	298	i P	P	22 26 40.7	+1.5
KBZ				pmax	pmax		
	comp=Z,3.0nm,2.2s						
BELG	Belogornoye	23.07	321	P	P	22 26 43.5	+1.5
	comp=Z,15nm,1.0s,baz=286,slow=5.9,SNR=1.8						
	comp=Z,15nm,1.0s						
ANN	Anapa	26.81	299	eP	P	22 27 15.2	-0.8
ANN				e*PP	pP	22 27 35.3	-3.7
ANN				eS	S	22 31 44.5	-0.2
ANN				pmax	pmax		
	comp=Z,34nm,1.2s						
PZH	PanZhiHua	27.79	102	P	P	22 27 27.5	+2.3
PZH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PZH				pmax	pmax		
	comp=Z,190nm,4.8s						
BNN	Bunyan	27.97	286	P	P	22 27 26.7	0.0
BNN				IAmb	IAmb	22 27 60.0	
	comp=Z,4.1nm,0.7s						
SONM	Songino Array	28.31	55	P	P	22 27 28.5	-1.1
	comp=Z,0.2nm,0.4s,baz=249,slow=7.6,SNR=2.0						
	comp=Z,0.2nm,0.4s						
OBN	Obninsk	30.12	319	eP	P	22 27 46.8	+1.5
OBN				e		22 28 19.0	
OBN				e		22 28 52.0	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	31.70	69	eP	P	22 28 00.4	+0.9
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
AKASG	Malin Array Be	33.12	309	P	P	22 28 12.9	+1.2
	comp=Z,0.5nm,0.4s,baz=82,slow=7.3,SNR=4.4						
	comp=Z,0.5nm,0.4s						
AKASG	Malin Array Be	33.12	309	ceP	P	22 28 12.8	+1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
XLT	XiLinHaoTe	34.82	63	eP	P	22 28 26.4	-0.2
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,48nm,6.2s						
BURAR	Bucovina Array	35.46	303	P	P	22 28 31.8	-0.3
BURAR	Bucovina Array	35.46	303	P	P	22 28 34.4	+2.3
BURAR				pmax	pmax		
	comp=Z,2.0nm,1.4s						
RDO	Rodhopi	35.58	292	P	P	22 28 33.2	+0.2
RDO				IAmb	IAmb	22 28 34.4	
	comp=Z,4.0nm,1.1s						
LVZ	Lovozero	37.63	338	P	P	22 28 50.3	+0.1
LVZ	Lovozero	37.63	338	P	P	22 28 50.3	+0.1
LVZ				pmax	pmax		
	comp=Z,54nm,1.5s						
FIA1	FINESS Array S	37.66	326	P	P	22 28 51.8	+1.4
FINES	FINESS Array B	37.66	326	P	P	22 28 51.8	+1.4
	comp=Z,2.5nm,0.9s,baz=111,slow=10,SNR=4.6						
	comp=Z,2.5nm,0.9s						
FINES	FINESS Array B	37.66	326	P	P	22 28 50.2	-0.2
FINES	FINESS Array B	37.66	326	i P	P	22 28 53.0	+2.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FNA	Florina	38.74	292	P	P	22 29 00.4	+0.5
FNA	Florina	38.74	292	P	P	22 29 00.4	+0.5
FNA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KULM	Kulim	41.09	132	P	P	22 29 19.7	+0.3
ARCES	ARCESS Array B	41.32	338	P	P	22 29 22.6	+1.9
	comp=Z,1.5nm,0.6s,baz=104,slow=9.1,SNR=7.2						
	comp=Z,1.5nm,0.6s						
ARCES	ARCESS Array B	41.32	338	P	P	22 29 22.2	+1.6
ARCES				IAmb	IAmb	22 29 33.4	
	comp=Z,11nm,1.3s						
GSI	Gunungsitoli	42.61	139	P	P	22 29 33.7	+1.9
NC405	NORSAR Array S	44.33	323	P	P	22 29 45.5	+0.4
NC602	NORSAR Array S	44.37	323	P	P	22 29 44.9	-0.5
NB2	NORSAR Subarra	44.56	323	P	P	22 29 47.9	+0.9
	comp=Z,1.1nm,0.6s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.56	323	P	P	22 29 47.7	+0.7
	comp=Z,0.6nm,0.5s,baz=106,slow=7.1,SNR=4.7						
	comp=Z,0.6nm,0.5s						
NC204	NORSAR Array S	44.80	323	P	P	22 29 48.8	-0.2
NC204				IAmb	IAmb	22 30 22.6	
	comp=Z,12nm,1.1s						
RAFF	Raffo Rosso	44.89	289	P	P	22 29 48.1	-1.8
CART	Cartagena	56.28	295	P	P	22 31 16.4	+0.9
PAB	San Pablo	57.95	298	P	P	22 31 27.5	+0.1
PAB				IAmb	IAmb	22 31 55.1	
	comp=Z,8.8nm,1.4s						
PAB	San Pablo	57.95	298	P	P	22 31 27.5	+0.1
PAB				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TOA0	Torodi Ar. Sit	65.83	269	P	P	22 32 20.0	-0.4
TOA0				IAmb	IAmb	22 32 45.6	
	comp=Z,2.9nm,1.1s						
TORD	Torodi Ar. Bea	65.83	269	P	P	22 32 19.7	-0.8
	comp=Z,1.0nm,0.5s,baz=52,slow=5.1,SNR=17						
	comp=Z,1.0nm,0.5s						
TORD	Torodi Ar. Bea	65.83	269	P	P	22 32 20.3	-0.1
PMOZ	Porto Moniz, M	70.24	297	P	P	22 32 46.5	-1.4
TOLK	Toolik Lake Re	71.02	15	P	P	22 32 51.0	-1.0
TOLK				IAmb	IAmb	22 33 04.9	
	comp=Z,9.9nm,1.4s						
IMAR	Indian Mountai	72.27	18	P	P	22 32 59.7	+0.3
BMAR	Burnt Mountain	73.05	14	P	P	22 33 05.2	+1.1
K20K	Telida	74.30	19	P	P	22 33 11.9	+0.5
K20K				IAmb	IAmb	22 33 13.9	
	comp=Z,6.2nm,1.4s						
BCAR	Beaver Creek A	77.46	15	P	P	22 33 30.0	+0.6
M30M	Minto, Yukon	78.87	13	P	P	22 33 38.0	+0.8
ASAR	Alice Springs	84.08	125	P	P	22 34 03.8	-1.4
	comp=Z,0.3nm,0.6s,baz=324,slow=4.6,SNR=1.5						
	comp=Z,0.3nm,0.6s						

IDC 01 22:26:18.8±7.3**, 7°.05S**×**127°.86E, h386km**±96km**, mb2.8**/2**, mbtmp3.8**/5**, Error ellipse: s-maj=70.4km s-min=36.5km az=56.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.19	191	P	Pn	22 28 50.5	-0.3
	3.3nm,1.0s,baz=8.8,slow=5.3,SNR=7.9						
FITZ				S	S	22 30 53.1	-1.6
	1.7nm,0.8s,baz=78,slow=13,SNR=2.0						
WRA	Warramunga Arr	14.27	154	P	P	22 29 22.6	-1.4
	1.8nm,0.6s,baz=332,slow=12,SNR=11						
WRA				S	S	22 31 59.8	+2.5
	0.3nm,0.6s,baz=332,slow=21,SNR=2.9						
ASAR	Alice Springs	17.51	161	P	P	22 29 59.1	+0.3
	4.4nm,0.5s,baz=344,slow=12,SNR=47						
SONM	Songino Array	57.85	343	P	P	22 35 31.3	-0.4
	0.2nm,0.3s,baz=150,slow=6.0,SNR=1.6						
	0.2nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	67.12	328	P	P	22 36 32.5	+0.2
	0.3nm,0.5s,baz=133,slow=6.5,SNR=5.4						
	0.3nm,0.5s						

WEL 01 23:08:04.6±0.7, 38°S±4°×17°8E±°, h26km±4km, M3.3/20, ML3.5/23, MLv3.3/20, Error ellipse: s-maj=0.0km s-min=0.0km az=106.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.18	330	P	Pn	23 08 11.6	-0.2
PUZ				S	Sb	23 08 16.8	+2.7
CNGZ	Carnagh Statio	0.28	207	P	Pn	23 08 13.4	+0.3
TWGZ	Tauwhareparae	0.31	280	P	Pn	23 08 13.4	-0.2
TWGZ				S	Sn	23 08 20.5	+1.1
WMGZ	Waiomatatini S	0.41	5	P	Pn	23 08 15.1	+0.2
WMGZ				S	Sn	23 08 22.6	+0.9
PKGZ	Pakihiroa	0.41	326	P	Pn	23 08 14.8	-0.2
PKGZ				S	Sn	23 08 21.9	+0.1
TKGZ	Te Karaka	0.46	243	P	Pn	23 08 15.4	-0.2
TKGZ				S	Sn	23 08 23.7	+0.8
RUGZ	Raukumara Rang	0.61	296	P	Pb	23 08 17.1	+0.3
RUGZ				S	Sn	23 08 26.2	-0.5
HAZ	Te Kaha	0.67	315	P	Pb	23 08 17.8	+0.2
MXZ	Matakaoa Point	0.67	356	P	Pn	23 08 18.6	+0.2
MWZ	Matawai	0.67	261	P	Pb	23 08 18.1	+0.3
RIGZ	Rimuhau	0.67	225	P	Pn	23 08 18.3	-0.2
RAGZ	Rawiri	0.80	250	P	Pn	23 08 20.4	+0.1
KNZ	Kokohu	0.96	215	P	Pn	23 08 21.4	-1.0
SNGZ	Shannon Statio	0.98	236	P	Pn	23 08 22.4	-0.3
MHGZ	Mahia Peninsul	0.99	201	P	Pn	23 08 22.2	-0.6
URZ	Urewera	0.99	268	P	Pn	23 08 22.9	0.0
WHRZ	Whale Island	1.17	288	P	Pn	23 08 25.6	+0.3
WIZ	White Island	1.17	307	P	Pn	23 08 25.2	-0.1
RAHZ	Arahi	1.22	235	P	Pb	23 08 26.8	-0.2
MUGZ	Murupara	1.28	258	P	Pn	23 08 27.2	+0.3
MTHZ	Maungataniwha	1.35	242	P	Pn	23 08 27.6	-0.3
TARZ	Mount Tarawera	1.47	269	P	Pn	23 08 30.4	+0.8
ARHZ	Aropaoanui	1.49	226	P	Pn	23 08 30.0	+0.3
NMHZ	Naumai	1.50	234	P	Pn	23 08 29.3	-0.6
MRHZ	Matea Rd	1.65	248	P	Pn	23 08 32.2	+0.2
KARZ	Kaharoa	1.69	277	P	Pn	23 08 32.9	+0.4
BKZ	Black Stump Fm	1.74	237	P	Pn	23 08 33.1	-0.1
MCHZ	McNeill Hill	1.78	227	P	Pn	23 08 33.1	-0.6
KWHZ	Kaweka Forest	1.93	231	P	Pn	23 08 35.2	-0.7
PXZ	Pawanui	2.15	213	P	Pn	23 08 37.3	-1.4
BHHZ	Black Hill Sta	2.20	234	P	Pn	23 08 38.7	-0.8
TMVZ	Te Maari	2.27	246	P	Pn	23 08 40.5	0.0
ETVZ	East Tongariro	2.27	246	P	Pn	23 08 41.0	+0.4
NTVZ	North Tongarir	2.28	247	P	Pn	23 08 40.8	+0.1
KRVZ	Karewarewa	2.31	247	P	Pn	23 08 41.5	+0.4
OTVZ	Oturere	2.31	245	P	Pn	23 08 41.1	-0.1
NNVZ	North Ngauruho	2.34	247	P	Pn	23 08 42.1	+0.5
SNVZ	South Ngauruho	2.34	245	P	Pn	23 08 41.7	+0.1
MOVZ	Moawhango	2.36	239	P	Pn	23 08 41.7	-0.1
NGZ	Ngauruhoe	2.36	246	P	Pn	23 08 42.1	+0.3
PNHZ	Pukenui	2.38	225	P	Pn	23 08 40.4	-1.6
WNVZ	Wahianoa	2.43	242	P	Pn	23 08 42.5	-0.2
PRHZ	Porangahau	2.44	213	P	Pn	23 08 40.2	-2.6
TWVZ	Taurewa	2.45	249	P	Pn	23 08 43.2	+0.3
MTVZ	Mangateitei	2.54	242	P	Pn	23 08 44.6	+0.3
KUZ	Kuaotunu	2.58	304	P	Pn	23 08 43.9	-0.8
TSZ	Takapari Road	2.62	225	P	Pn	23 08 43.1	-2.2
DVHZ	Dannevirke	2.68	219	P	Pn	23 08 46.1	0.0
MKAZ	Moumakai	2.79	293	P	Pn	23 08 47.2	-0.3
BFZ	Birch Farm	2.95	213	P	Pn	23 08 46.6	-3.2
VRZ	Vera Road	2.97	251	P	Pn	23 08 50.5	+0.6
PRWZ	Pori Road	2.97	218	P	Pn	23 08 48.7	-1.4
WAZ	Wanganui	3.05	239	P	Pn	23 08 51.6	+0.5
GRZ	Great Barrier	3.05	309	P	Pn	23 08 50.9	-0.3
MBAZ	Motutapu North	3.12	297	P	Pn	23 08 52.3	+0.1
TIWZ	Tintock	3.19	216	P	Pn	23 08 50.3	-2.7
MRZ	Mangatainoka R	3.25	221	P	Pn	23 08 50.9	-3.0
NEZ	North Egmont	3.50	251	P	Pn	23 08 59.0	+1.5
PKE	Pukeiti	3.56	253	P	Pn	23 08 59.7	+1.5
KHEZ	Kahui Hut	3.57	251	P	Pn	23 08 60.0	+1.6
OKCZ	Okains Bay	6.80	215	P	Pn	23 09 40.5	-2.1

*SOME **01** 23:08:31.3, 39°55N×73°33E, h10km*
*NNC **01** 23:08:32.8±5.3, 39°63N×73°42E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=41.5km s-min=18.7km az=169.0*
*KRNET **01** 23:08:34.4±0.1, 39°53N×73°63E, mb2.7*
ISC 01 23:08:35.9±2.0, 39°77N±0°09×73°44E±0°04, h10km, n19, σ2°93/30, 6C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHH	Osh	0.91	327	⇓iP	Pn	23 08 57.2	+2.4
	baz=27						
OHH				⇓iS	Sn	23 09 13.7	+5.7
	baz=27						
BTK	Batken	2.04	279	⇓iP	Pg	23 09 14.5	-0.5
	baz=85						
BTK				⇓iS	Sg	23 09 44.5	+3.1
	baz=85						
ARLS	Aral	2.19	17	⇑iP	Pg	23 09 17.0	-1.0
	baz=13						
ARLS				⇑iS	Sg	23 09 47.8	+1.3
	baz=13						
TRKS	Terek-Say	2.48	316	⇑iP	Pg	23 09 21.2	-2.3
	baz=17						
TRKS				⇑iS	Sg	23 09 56.1	+0.4
	baz=17						
MRKS	Merke	2.98	357	eP	Pg	23 09 30.9	-2.1
	2.2nm,0.1s						
MRKS				eS	Sg	23 10 14.0	+2.4
	3.8nm,0.4s						
IUG	Iuzhnay	3.51	314	eP	Pb	23 09 36.5	-1.7
	56nm,0.4s						
IUG				eS	Sg	23 10 23.3	-5.3
	8.2nm,0.3s						
IUG	Iuzhnay	3.51	314	Pg	Pb	23 09 36.5	-1.7
	73nm,0.4s						
IUG				Lg	Lg	23 10 24.5	
	8.2nm,0.3s						
TKM2	Tokmak 2	3.54	27	⇓Pg	Pb	23 09 35.2	-3.6
	1.0nm,0.5s						
TKM2				⇓Lg	Lg	23 10 30.9	
	3.6nm,0.6s						
KST	Kastek	3.78	29	eP	Pb	23 09 44.8	+2.0
	1.6nm,0.3s						
KST				eS	Sg	23 10 38.1	+0.7
	9.7nm,0.8s						
KST	Kastek	3.78	29	Pg	Pb	23 09 44.8	+2.0
KST				Lg	Lg	23 10 38.1	
KK31	Karatay Array	3.99	327	⇑Pn	Pb	23 09 42.2	-4.2
	0.2nm,0.3s,baz=137,slow=14,SNR=7.2						
KK31				⇑Pg	Pg	23 09 54.0	+1.5
	0.4nm,0.3s,baz=150,slow=16,SNR=3.8						
KK31				⇓Lg	Lg	23 10 48.4	
	1.1nm,0.3s,baz=152,slow=26,SNR=4.2						
KRBS	Karabastau	4.27	22	eP	Pg	23 09 54.7	-2.9
	1.0nm,0.4s						
KRBS				eS	Sg	23 10 54.5	+1.6
	4.6nm,0.7s						
MDOK	Medeo	4.34	37	eP	Pg	23 09 55.2	-3.9
	2.1nm,0.3s						
MDOK				eS	Sg	23 10 55.6	+0.2
	4.1nm,0.6s						
MDOK	Medeo	4.34	37	Pg	Pg	23 09 55.2	-3.9
MDOK				Lg	Lg	23 10 55.6	
KUU	Kurty	4.66	27	eP	Pg	23 10 01.1	-3.9
	0.9nm,0.2s						
KUU				eS	Sg	23 11 05.8	+0.5
	3.0nm,0.5s						
KUU	Kurty	4.66	27	Pg	Pg	23 10 01.1	-3.9
	0.9nm,0.2s						
KUU				Lg	Lg	23 11 05.8	
	3.0nm,0.5s						
CHKK	Chushkaly	4.87	32	eP	Pb	23 10 04.5	+3.2
	0.3nm,0.1s						
CHKK				eS	Sg	23 11 11.9	-0.2
	4.0nm,0.6s						
CHKK	Chushkaly	4.87	32	Pg	Pb	23 10 04.5	+3.2
CHKK				Lg	Lg	23 11 11.9	
BTLS	Baital	5.29	5	Pg	Pb	23 10 10.4	+2.0
BTLS				Lg	Lg	23 11 21.9	

*IDC **01** 23:11:32.4±2.9, 7°23S×129°19E, h75km±27km, mb3.9/13, mbtmp4.3/15, MS3.0/1, Error ellipse: s-maj=25.6km s-min=12.7km az=80.0*
*DJA **01** 23:11:37.0±0.2, 7°S±2°×12°9E±°, h133km±9km, M4.6/19, mB5.1/10, mb4.7/19, MLv4.7/14, Mw(mB)4.5/10*
*NEIC **01** 23:11:38.3±1.9, 7°41S±0°07×129°19E±0°06, h130km±7km, mb4.6/33, Error ellipse: s-maj=9.9km s-min=8.8km az=184.0*
ISC 01 23:11:38.1±0.3, 7°33S±0°04×129°19E±0°04, h131km, n136, σ1°66/141, mb4.5/33, 2C, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.19	107		Pn	23 12 15.5	+1.1
SAUI				Sn	Sn	23 12 40.9	-1.3
SAUI	Saumlaki	2.19	107	P	Pn	23 12 14.1	-0.3
SAUI	Saumlaki	2.19	107	P	Pn	23 12 15.9	+1.5
BNDI	Bandanaira	2.88	14	P	Pn	23 12 22.5	-0.7
BNDI	Bandanaira	2.88	14	P	Pn	23 12 24.1	+0.9
MSAI	Masohi	3.97	356	P	Pn	23 12 38.5	+1.0
NLAI	Namlea	4.57	333	P	Pn	23 12 45.7	+0.2
FAKI	Fak Fak	5.33	35	Pn	Pn	23 12 54.8	-0.9
FAKI	Fak Fak	5.33	35	P	Pn	23 12 54.6	-1.1
	0.4nm2μm84nm,0.7s						
FAKI				S	Sn	23 13 52.6	-3.7
	0.4nm2μm84nm,0.7s						
SOEI	Soe	5.43	243	Pn	Pn	23 12 56.4	-0.8
SOEI				Sn	Sn	23 13 58.5	-0.4
SOEI	Soe	5.43	243	P	Pn	23 12 56.1	-1.1
	4.3nm4μm263nm,0.5s						
SOEI				S	Sn	23 13 56.0	-2.8
	4.3nm4μm263nm,0.5s						
SOEI	Soe	5.43	243	P	Pn	23 12 57.3	+0.1
MTN	Manton Dam	5.80	161	Pn	Pn	23 13 01.6	-0.4
MTN				Sn	Sn	23 14 05.7	-1.7
MTN	Manton Dam	5.80	161	P	Pn	23 13 01.9	-0.1
BATI	Baumata	6.17	242	P	Pn	23 13 06.0	-0.9
	1.8nm3μm247nm,1.2s						
KDU	Kakadu	6.22	149	P	Pn	23 13 07.3	-0.4
SWI	Sorong	6.75	18	P	Pn	23 13 14.1	-0.6
	0.3nm1μm48nm,1.1s						
BBSI	Bau Bau	6.83	285	P	Pn	23 13 14.7	-1.2
	0.0nm10nm,1.1s						
LBMI	Labuha	6.86	346	P	Pn	23 13 16.9	+0.6
	0.2nm2μm50nm,0.8s						
MMRI	Maumere	7.01	259	Pn	Pn	23 13 18.0	-0.3
MMRI	Maumere	7.01	259	P	Pn	23 13 15.6	-2.7
	0.4nm55nm,0.7s						
EDFI	Ende, Flores	7.56	259	P	Pn	23 13 23.5	-2.3
	0.1nm15nm,1.0s						
TNTI	Ternate	8.25	347	P	Pn	23 13 34.8	-0.2
	24nm,1.1s						
KNRA	Kununurra	8.30	183	Pn	Pn	23 13 34.0	-1.7
KNRA				Sn	Sn	23 15 00.6	-7.4
KNRA	Kununurra	8.30	183	P	Pn	23 13 34.0	-1.7
LUWI	Luwuk	8.95	314	P	Pn	23 13 56.6	+12
BASI	Baing, Sumba	8.99	251	P	Pn	23 13 43.5	-1.4
	133nm,0.5s						
BAKI	Biak	9.20	49	P	Pn	23 13 48.4	+0.6
	4μm475nm,0.9s						
WBSI	Waikabubak, Su	9.96	256	P	Pn	23 13 56.7	-1.3
	86nm,0.5s						
MRSI	Marisa	10.61	317	P	Pn	23 14 07.1	+0.5
	872nm73nm,0.9s						
FITZ	Fitzroy Crossi	11.25	198	P	Pn	23 14 11.1	-4.1
	64nm,0.6s,baz=28,slow=10,SNR=150						
FITZ				S	Sn	23 16 07.7	-11
	53nm,0.5s,baz=84,slow=20,SNR=8.9						
FITZ	Fitzroy Crossi	11.25	198	Pn	Pn	23 14 11.7	-3.4
PLAI	Plampang	11.40	262	P	Pn	23 14 15.5	-1.7
WB0	Warramunga Arr	13.35	158	Pn	Pn	23 14 39.7	-2.9
WRAB	Tennant Creek	13.49	159	Pn	Pn	23 14 41.5	-2.8
WRA	Warramunga Arr	13.49	159	P	Pn	23 14 40.7	-3.7
	22nm,0.6s,baz=341,slow=12,SNR=100						
WRA				S	Sn	23 16 59.1	-14
	12nm,0.7s,baz=333,slow=23,SNR=8.6						
WRA	Warramunga Arr	13.49	159	P	Pn	23 14 41.0	-3.4
WB2	Warramunga Arr	13.50	159	Pn	Pn	23 14 41.5	-3.0
WR0	Warramunga Arr	13.58	158	Pn	Pn	23 14 43.0	-2.6
BBKI	Banjar Baru	14.79	284	P	P	23 15 16.4	+13
JAGI	Jajag, Banyuwa	14.94	265	Pn	Pn	23 15 02.3	-0.5
JAGI	Jajag, Banyuwa	14.94	265	P	Pn	23 15 03.0	+0.2
COEN	Coen	15.23	117		P	23 15 07.1	-1.2
COEN	Coen	15.23	117	P	P	23 15 08.1	-0.2
MTKI	Muara Teweh, K	15.60	293	P	P	23 15 20.7	+8.3
MYLDM	Lahad Datu	16.38	319	P	Pn	23 15 21.6	+1.0
MBWA	Marble Bar	16.51	213		Pn	23 15 20.8	-1.4
MBWA				IAmb	IAmb	23 16 00.5	
	comp=Z,37nm,1.1s						
MBWA	Marble Bar	16.51	213	P	Pn	23 15 21.1	-1.0
QIS	Mount Isa	16.57	144	P	P	23 15 23.9	+0.8
PSA00	Pilbara Seismi	16.79	212	P	Pn	23 15 24.6	-0.9
PSA00	Pilbara Seismi	16.79	212	P	Pn	23 15 24.2	-1.3
PSA00				IAmb	IAmb	23 15 28.3	
	comp=Z,30nm,1.2s						
PSA00	Pilbara Seismi	16.79	212	P	Pn	23 15 24.7	-0.9
AS31	Alice Springs	16.86	165		Pn	23 15 25.8	-0.6
ASAR	Alice Springs	16.86	165	P	P	23 15 25.3	-1.0
	comp=Z,21nm,0.6s,baz=339,slow=9.7,SNR=96						
ASAR				S	Sn	23 18 18.6	-16
	comp=Z,4.2nm,0.6s,baz=348,slow=26,SNR=4.8						
WRKA	Warakurna	17.63	183	P	Pn	23 15 34.9	-0.8
PMG	Port Moresby	17.89	98	P	P	23 15 35.9	-1.8
	comp=Z,7.8nm,0.4s,baz=251,slow=18,SNR=1.7						
PMG				S	S	23 18 51.0	-5.8
	comp=Z,4.4nm,0.3s,baz=254,slow=20,SNR=1.4						
KKM	Kota Kinabalu	18.55	315	P	P	23 15 46.1	+1.1
SBUM	Sibu	19.53	299	P	P	23 15 56.7	+1.2
SBUM				IAmb	IAmb	23 16 01.6	
	comp=Z,31nm,0.7s						
KSM	Kuching	20.77	294	P	P	23 16 10.2	+1.2
KSM				IAmb	IAmb	23 16 14.7	
	comp=Z,27nm,0.9s						
OOD	Oodnadatta	21.26	164	P	P	23 16 15.9	+1.9
MEEK	Meekatharra	21.68	206	P	P	23 16 19.1	+0.6
MULG	Mulgathing	23.28	169	P	P	23 16 36.2	+2.0
FORT	Forrest	23.35	182	P	P	23 16 36.4	+1.6
QLP	Quilpie	23.90	145	P	P	23 16 43.1	+3.2
LCRK	Leigh Creek	24.50	161	P	P	23 16 47.1	+1.8
MORW	Morawa	24.93	208	P	P	23 16 51.3	+2.1
MORW				IAmb	IAmb	23 16 57.1	
	comp=Z,32nm,1.2s						
MORW	Morawa	24.93	208	P	P	23 16 51.5	+2.3
BLDU	Ballidu	25.95	205	P	P	23 17 00.0	+1.6
BBOO	Buckleboo	26.14	167	P	P	23 17 01.1	+1.0
BBOO	Buckleboo	26.14	167	P	P	23 17 03.0	+2.9
KLBR	Kellerberrin	26.39	202	P	P	23 17 04.3	+1.9
STKA	Stephens Creek	27.02	156	P	P	23 17 09.1	+1.0
	comp=Z,2.8nm,0.6s,baz=329,slow=9.5,SNR=8.7						
	comp=Z,2.8nm,0.6s						
STKA	Stephens Creek	27.02	156	P	P	23 17 09.4	+1.4
STKA	Stephens Creek	27.02	156	P	P	23 17 10.0	+2.0
CMSA	Cobar Meteorol	28.59	150	P	P	23 17 24.3	+2.3
ARPS	Mount Arapiles	31.49	160	P	P	23 17 50.0	+2.5
CAN	Canberra	33.27	150	P	P	23 18 06.1	+3.0
CAN				IAmb	IAmb	23 18 18.3	
	comp=Z,16nm,1.1s						
TOO	Toolangi	33.54	156	P	P	23 18 05.7	+0.2
TOO				IAmb	IAmb	23 18 45.6	
	comp=Z,13nm,1.1s						
JOW	Kunigami	33.97	359	P	P	23 18 08.7	-0.5
	comp=Z,3.6nm,0.6s,baz=213,slow=13,SNR=4.2						
JOW				LR	LR	23 30 34.6	
	comp=Z,25nm,19.4s,baz=282,slow=34						
	comp=Z,3.6nm,0.6s						
DZM	Mont Dzumac	38.76	116	P	P	23 18 51.9	+1.8
DZM				IAmb	IAmb	23 19 30.0	
	comp=Z,15nm,1.3s						
CMAR	Chiang Mai Arr	39.34	311	P	P	23 18 54.6	-0.3
	comp=Z,1.6nm,0.6s,baz=144,slow=6.6,SNR=8.7						
CMAR				PcP	PcP	23 21 01.7	+0.8
	comp=Z,0.8nm,0.6s,baz=176,slow=3.6,SNR=2.1						
	comp=Z,1.6nm,0.6s						
CHTO	Chiang Mai	39.55	311	P	P	23 18 56.4	-0.2
CHTO				IAmb	IAmb	23 18 57.5	
	comp=Z,14nm,1.4s						
KMI	Kunming	41.28	322	⇑P	P	23 19 12.1	+1.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PZH	PanZhiHua	42.90	323	P	P	23 19 25.8	+1.8
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,220nm,4.3s						
MJAR	Matsushiro Arr	44.45	10	P	P	23 19 34.2	-1.9
	comp=Z,1.3nm,0.5s,baz=184,slow=10,SNR=6.5						
	comp=Z,1.3nm,0.5s						
KSRS	Korea Array	44.57	359	P	P	23 19 36.2	-0.8
	comp=Z,1.4nm,0.6s,baz=181,slow=11,SNR=10						
	comp=Z,1.4nm,0.6s						
LZH	Lanzhou	49.33	333	eP	P	23 20 14.2	0.0
LZH				pP	pP	23 20 22.7	-21
LZH				sP	pwP	23 20 27.3	-21
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC	Hu-ho-hao-te	50.61	343	eP	P	23 20 25.1	+1.3
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
USRK	Ussuriysk Ar.	51.35	3	P	P	23 20 28.9	-0.2
	comp=Z,2.0nm,0.6s,baz=191,slow=6.3,SNR=4.5						
	comp=Z,2.0nm,0.6s						
USRK	Ussuriysk Ar.	51.35	3	P	P	23 20 29.1	0.0
RPZ	Rata Peaks	51.47	142	P	P	23 20 33.1	+3.0
LSA	Lhasa	51.89	317	P	P	23 20 34.9	+1.0
ODAN	Odare	52.87	312	eP	P	23 20 39.8	-1.2
TAPN	Taplejung	52.91	312	eP	P	23 20 40.7	-0.7
	comp=Z,20nm,0.4s						
RAMN	Ramite	53.51	311	eP	P	23 20 45.0	-0.7
	comp=Z,53nm,0.6s						
GTA	Gaotai	53.88	332	eP	P	23 20 47.8	-0.2
GTA				pP	pP	23 20 52.0	-26
GTA				sP	pwP	23 20 57.1	-24
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JIRN	Jiri	54.20	312	eP	P	23 20 50.2	-0.7
	comp=Z,18nm,0.5s						
GUN	Gumba	54.57	312	eP	P	23 20 52.9	-0.6
	comp=Z,42nm,0.6s						
PKI	Pulchoki	54.74	311	eP	P	23 20 53.5	-1.2
	comp=Z,13nm,0.5s						
PKIN	Phulchoki	54.75	311	eP	P	23 20 53.5	-1.2
	comp=Z,11nm,0.5s						
KKN	Kakani	54.95	311	eP	P	23 20 55.3	-0.8
GKN	Gorkha	55.55	311	eP	P	23 20 59.7	-0.6
	comp=Z,36nm,0.4s						
KLR	Kul'dur	56.37	2	P	P	23 21 05.4	-0.1
	comp=Z,1.2nm,0.6s,baz=185,slow=2.9,SNR=3.1						
	comp=Z,1.2nm,0.6s						
ULN	Ulaanbaatar	58.34	343	P	P	23 21 20.2	+0.6
SONM	Songino Array	58.51	342	P	P	23 21 20.7	0.0
	comp=Z,1.0nm,0.5s,baz=160,slow=7.0,SNR=8.6						
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	58.51	342	P	P	23 21 21.9	+1.2
WMQ	Urumqi	63.24	328	⇑P	P	23 21 53.8	+1.1
WMQ				sP	sP	23 22 39.4	+2.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
PETK	Petropavlovsk-	64.89	19	P	P	23 22 03.2	0.0
	comp=Z,1.9nm,0.7s,baz=190,slow=7.4,SNR=5.9						
	comp=Z,1.9nm,0.7s						
PETK	Petropavlovsk-	64.89	19	P	P	23 22 03.7	+0.5
NIL	Nilore	66.83	311	P	P	23 22 15.7	-0.4
KSH	Kashi	67.72	318	P	P	23 22 22.9	+1.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MK31	Makanchi Array	68.07	327	P	P	23 22 23.9	+0.3
MK31				IAmb	IAmb	23 22 25.5	
	comp=Z,7.3nm,1.1s						
MKAR	Makanchi Array	68.07	327	P	P	23 22 23.4	-0.2
	comp=Z,5.0nm,0.5s,baz=119,slow=7.4,SNR=79						
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	68.07	327	P	P	23 22 23.7	+0.1
MAKZ	Makanchi	68.24	327	P	P	23 22 24.7	0.0
MAKZ				IAmb	IAmb	23 22 26.5	
	comp=Z,8.0nm,1.2s						
AAK	Ala-Archa	70.28	320	P	P	23 22 38.1	+0.6
AAK				IAmb	IAmb	23 22 45.1	
	comp=Z,6.6nm,1.2s						
KBL	Kabul	70.37	311	P	P	23 22 37.8	-0.5
GAR	Garm	71.33	315	P	P	23 22 43.7	-0.2
GAR				IAmb	IAmb	23 22 44.8	
	comp=Z,23nm,1.5s						
ZAA0	Zalesovo Array	71.53	334	P	P	23 22 44.8	+0.2
ZAA0				IAmb	IAmb	23 22 45.8	
	comp=Z,6.7nm,0.8s						
ZALV	Zalesovo Beam	71.53	334	P	P	23 22 43.7	-0.9
	comp=Z,5.7nm,0.6s,baz=141,slow=5.5,SNR=23						
	comp=Z,5.7nm,0.6s						
ZALV	Zalesovo Beam	71.53	334	P	P	23 22 44.0	-0.5
KURK	Kurchatov	72.39	329	P	P	23 22 49.7	-0.1
KURK				IAmb	IAmb	23 22 51.7	
	comp=Z,10nm,0.8s						
KKAR	Karatay Array	73.06	319	P	P	23 22 54.7	+0.7
MAW	Mawson	74.35	201	P	P	23 23 02.2	+1.2
	comp=Z,1.2nm,0.5s,baz=81,slow=3.5,SNR=7.8						
	comp=Z,1.2nm,0.5s						
BRVK	Borovoye	77.99	328	P	P	23 23 20.9	-0.9
VOI	Vohitsoka	80.28	249	P	P	23 23 35.0	-0.2
VOI				IAmb	IAmb	23 23 38.5	
	comp=Z,20nm,1.4s						
ABKAR	Akbulak array	82.27	322	P	P	23 23 44.2	-0.6
QSPA	South Pole Qui	82.65	180	P	P	23 23 47.5	+0.8
RAYN	Ar Rayn	87.15	294	P	P	23 24 10.0	0.0
RAYN				IAmb	IAmb	23 24 10.6	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	93.99	25	P	P	23 24 39.4	-1.5
	comp=Z,0.5nm,0.8s,baz=261,slow=5.4,SNR=4.2						
	comp=Z,0.5nm,0.8s						
GERES	GERESS Array B	112.16	320	PKiKP	PKiKP	23 29 58.5	+0.1
	comp=Z,0.4nm,0.6s,baz=66,slow=3.2,SNR=6.0						
TXAR	Lajitas Array	125.78	59	PKP	PKiKP	23 30 26.3	+0.8
	comp=Z,0.3nm,0.5s,baz=196,slow=1.7,SNR=5.7						
TORD	Torodi Ar. Bea	128.09	281	PKP	PKPdf	23 30 29.2	-0.5
	comp=Z,1.0nm,0.7s,baz=95,slow=1.7,SNR=6.6						
PLCA	Paso Flores	128.83	161	PKP	PKiKP	23 30 32.0	+0.7
	comp=Z,0.6nm,0.4s,baz=153,slow=6.5,SNR=3.9						
CPUP	Villa Florida	145.94	170	PKPbc	PKPab	23 31 04.0	+0.3
	comp=Z,5.0nm,0.8s,baz=174,slow=3.0,SNR=8.6						
LPAZ	La Paz	150.94	144	PKPbc	PKiKP	23 31 18.6	+0.8
	comp=Z,2.5nm,0.7s,baz=130,slow=18,SNR=8.2						

*NCEDC **01** 23:32:47.6±0.9, 38°44N±0°03×122°51W±0°04, h11km±4km, ML3.2/63, ML2.8/69(NEIC), Error ellipse: s-maj=5.1km s-min=4.4km az=212.0*
NEIC 01 23:32:47.9±2.0, 38°36N±0°04×122°56W±0°05, h14km±3km, Error ellipse: s-maj=7.0km s-min=3.8km az=50.0, Northern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NTYM	Taylor	0.09	291		Pg	23 32 51.0	+0.1
NBRB	Beebe Ranch Br	0.10	178		Pg	23 32 51.9	+1.0
SNT	Sears Point	0.19	155		Pb	23 32 52.9	-0.4
SNT					Sb	23 32 56.9	0.0
MAC	Mark West Spri	0.23	326		Pg	23 32 52.3	-0.7
NAPC	Atlas Peak	0.25	71		Pg	23 32 52.0	-1.3
NGVM		0.28	106		Pg	23 32 53.5	-0.2
NHSM	Mount Saint He	0.30	351		Pg	23 32 52.6	-1.6
MCCM	Marconi Confer	0.33	230		Pb	23 32 56.2	+0.5
MCCM				Sg	Sb	23 33 02.1	+1.3
MCCM				IAML		23 33 07.0	
	comp=E,2μm,0.8s						
MCCM				IAML		23 33 07.0	
	comp=N,1μm,0.8s						
GAXM	Alexander Vall	0.39	336		Pg	23 32 54.4	-1.3
HERB	Hercules	0.41	146		Pb	23 32 57.2	+0.2
C032	McCall Drive,	0.42	131		Pb	23 32 57.0	-0.1
NBPM	Berryessa Peak	0.42	42		Pg	23 32 55.1	-1.2
CPMM	Point Molate	0.42	164		Pb	23 32 57.6	+0.4
GCRM	Castle Rock Sp	0.43	343		Pg	23 32 55.0	-1.6
CSPM	San Pablo Ridg	0.44	154		Pb	23 32 58.4	+0.8
C024	33rd St Richmo	0.45	157		Pb	23 32 58.1	+0.5
NMTM	Middletown	0.46	11		Pg	23 32 55.1	-1.9
GBGM	Boggs Mountain	0.47	348		Pg	23 32 55.9	-1.3
C012	Glenmawr Avenu	0.47	156		Pb	23 32 58.6	+0.6
RFSB	Richmond Field	0.47	159		Pb	23 32 58.6	+0.6
GDXM	Geysers	0.49	337		Pg	23 32 56.1	-1.5
GDXM				Sg	Sg	23 33 01.9	-2.2
GSSM	Skaggs Springs	0.50	314		Pg	23 32 57.4	-0.4
FTR	Fort Ross	0.50	289		Pg	23 32 58.2	+0.3
NPRM	Point Reyes	0.51	225		Pb	23 32 59.5	+0.7
GSGM	Seigler Mounta	0.52	347		Pg	23 32 57.2	-1.1
MNRC	McLaughlin Min	0.53	10		Pg	23 32 56.7	-1.6
BL88	Building 88, L	0.54	154		Pb	23 32 59.7	+0.5
BRK	Berkeley--Havi	0.54	154		Pb	23 32 59.4	+0.3
BL67	Building 67, L	0.54	154		Pb	23 32 59.7	+0.5
VAK	Adit at Lawren	0.54	153		Pb	23 32 59.5	+0.3
CTAM	Taylor	0.54	128		Pb	23 33 00.2	+1.0

C031	**McGee Avenue B**	**0.54**	**156**		Pb	23 32 59.8	+0.6
CVPM	**Vollmer Peak**	**0.54**	**151**		Pb	23 32 59.6	+0.4
BKS	**Berkeley--Byer**	**0.54**	**152**		Pb	23 32 59.4	+0.2
GCVM	**Cloverdale**	**0.55**	**319**		Pg	23 32 58.3	-0.4
C028	**Eucalyptus Rd**	**0.56**	**154**		Pb	23 33 00.2	+0.6
GHCM	**House Creek**	**0.56**	**296**		Pg	23 32 58.9	0.0
JPRM	**Presidio of Sa**	**0.56**	**173**		Pb	23 33 00.3	+0.7
CYBM	**Yerba Buena Is**	**0.57**	**164**		Pb	23 33 00.1	+0.5
GPMM	**Pine Mountain**	**0.58**	**328**		Pg	23 32 58.6	-0.7
GRTM	**Round Top Moun**	**0.59**	**351**		Pg	23 32 58.2	-1.2
C013	**Ascot Lane Oak**	**0.61**	**151**		Pb	23 33 00.8	+0.5
SMCB	**Saint Mary's C**	**0.62**	**146**		Pb	23 33 01.0	+0.3
J061	**Lakeshore Driv**	**0.63**	**176**		Pn	23 33 01.8	-0.7
NDHM	**Dunnigan Hills**	**0.65**	**51**		Pg	23 33 00.6	0.0
C058	**Eastshore Driv**	**0.65**	**156**		Pb	23 33 01.8	+0.7
C051	**Centre Court A**	**0.66**	**158**		Pb	23 33 01.9	+0.6
BGC	**Bolinger Road**	**0.67**	**144**		Pb	23 33 02.2	+0.8
CRHM	**Round Hill Res**	**0.67**	**138**		Pb	23 33 02.2	+0.8
BDM	**Black Diamond**	**0.68**	**126**		Pg	23 33 01.3	+0.2
JSBM	**San Bruno Moun**	**0.69**	**170**		Pb	23 33 02.5	+0.7
CSLM	**San Leandro Hi**	**0.72**	**151**		Pb	23 33 02.6	+0.3
JMGM	**Milagra Ridge**	**0.72**	**175**		Pn	23 33 03.1	-0.7
CLCB	**Lake Chabot**	**0.73**	**148**		Pb	23 33 02.9	+0.5
FARB	**Farallon Islan**	**0.75**	**208**		Pn	23 33 03.7	-0.4
HOPS	**Hopland Field**	**0.75**	**328**		Pg	23 33 01.8	-0.8
HOPS	**Hopland Field**	**0.75**	**328**	Sg	Sg	23 33 11.2	-1.3
HOPS				IAML		23 33 15.4	
	comp=E,339nm,0.8s						
HOPS	**Hopland Field**	**0.75**	**328**	Pg	Pg	23 33 01.6	-0.9
GHLM	**Highland Sprin**	**0.77**	**332**		Pg	23 33 02.0	-0.9
GBMM	**Baldy Mountain**	**0.79**	**3**		Pg	23 33 02.1	-1.1
JCPM	**Coyote Point**	**0.79**	**166**		Pb	23 33 04.0	+0.5
CMOB	**Morgan Territo**	**0.81**	**132**		Pb	23 33 04.1	+0.3
JCHM	**Cahill Ridge**	**0.85**	**170**		Pb	23 33 04.9	+0.4
CNIC	**Niles Canyon**	**0.88**	**148**		Pb	23 33 05.3	+0.3
GGUM	**Gualala**	**0.89**	**304**		Pg	23 33 03.9	-1.3
CBSNC	**Byron Hot Spri**	**0.90**	**126**		Pg	23 33 05.1	-0.2
CVLM	**Vallecito**	**0.93**	**142**		Pn	23 33 06.5	-0.1
JHPM	**Huddart Park**	**0.93**	**168**		Pg	23 33 06.2	+0.3
GTSM	**Trough Springs**	**0.95**	**358**		Pb	23 33 04.5	-1.8
WENL	**Wente Vineyard**	**0.97**	**139**		Pg	23 33 06.9	+0.3
JRSC	**Jasper Ridge**	**0.98**	**165**		Pb	23 33 06.7	-0.1
GFC	**Funks Creek**	**0.99**	**12**		Pb	23 33 05.0	-1.8
JSFB	**Stanford Teles**	**1.00**	**162**		Pn	23 33 07.4	-0.2
BGH	**Bear Gulch**	**1.03**	**170**		Pg	23 33 07.7	-0.1
GHOM	**Hamilton Openi**	**1.03**	**312**		Pb	23 33 05.8	-1.9
JFP	**Foothills Park**	**1.04**	**164**		Pb	23 33 07.5	-0.2
JJRM	**Joaquin Road**	**1.05**	**164**		Pg	23 33 08.1	-0.1
SUTB	**Sutter Butte**	**1.06**	**34**		Pb	23 33 04.3	-3.8
OSUM	**Sutter Buttes**	**1.06**	**31**		Pb	23 33 04.9	-3.3
CALM	**Calaveras Res.**	**1.08**	**146**		Pb	23 33 08.3	-0.2
JBMM	**Black Mountain**	**1.08**	**163**		Pg	23 33 08.9	+0.1
JSJM	**St Joseph**	**1.09**	**160**		Pg	23 33 08.8	0.0
CMLM	**Mount Lewis**	**1.13**	**141**		Pb	23 33 09.1	-0.3
JSGM	**Saratoga Golf**	**1.15**	**159**		Pb	23 33 09.5	-0.1
GCK	**Clark Valley**	**1.19**	**4**		Pn	23 33 08.1	-2.1
CMMM	**Mount Mocho**	**1.23**	**137**		Pn	23 33 10.2	-0.7
JJOM	**Saint Joseph's**	**1.24**	**158**		Pn	23 33 10.2	-0.7
MHC	**Mount Hamilton**	**1.25**	**144**		Pn	23 33 10.9	-0.1
COSM	**Mount Oso**	**1.26**	**132**		Pn	23 33 10.6	-0.7
JBNB	**Ben Lomond Mou**	**1.27**	**166**		Pn	23 33 10.8	-0.6
CCOB	**Coe Ranch Numb**	**1.30**	**147**		Pb	23 33 12.0	-0.2
GASB	**Alder Springs**	**1.30**	**355**		Pn	23 33 10.0	-1.9
AMC	**Almaden**	**1.32**	**155**		Pn	23 33 11.4	-0.6
JLAB	**Laurel Hill**	**1.37**	**151**		Pn	23 33 12.2	-0.5
JHLM	**Holstrom Ranch**	**1.37**	**155**		Pn	23 33 12.1	-0.7
CMPM	**Mikes Peak**	**1.40**	**135**		Pn	23 33 13.1	-0.1
KFPM	**Farley Peak**	**1.45**	**332**		Pn	23 33 11.7	-2.2
ORV	**Oroville**	**1.45**	**34**		Pn	23 33 10.2	-3.7
ORV	**Oroville**	**1.45**	**34**		Pn	23 33 09.9	-3.9
OGOM	**Van Goodin Ran**	**1.49**	**29**		Pn	23 33 10.8	-3.5
GHS	**Gilroy Hot Spr**	**1.54**	**145**		Pn	23 33 14.7	-0.3
JELB	**Ellicott, Sant**	**1.54**	**158**		Pn	23 33 14.8	-0.3
KCPM	**Cahto Peak**	**1.55**	**329**		Pn	23 33 13.9	-1.4
MCUB	**Copperopolis B**	**1.57**	**103**		Pn	23 33 14.3	-1.2
CSR	**Chase Ranch**	**1.60**	**151**		Pn	23 33 15.5	-0.3
HPCM	**Pacheco Lake**	**1.65**	**142**		Pn	23 33 16.2	-0.3
HFEM	**San Felipe**	**1.65**	**146**		Pn	23 33 16.3	-0.2
SLD	**San Luis Dam**	**1.66**	**140**		Pn	23 33 16.6	-0.1
HTUM	**Tustin Road**	**1.69**	**154**		Pn	23 33 16.2	-0.8
CMB	**Columbia Colle**	**1.74**	**100**		Pn	23 33 17.1	-0.7
CMB				IAML		23 33 40.1	
	comp=N,61nm,0.5s						
HSFM	**Saint Francis**	**1.76**	**151**		Pn	23 33 17.8	-0.2
SAO	**San Andreas Ge**	**1.82**	**151**		Pn	23 33 18.2	-0.6
SAO	**San Andreas Ge**	**1.82**	**151**		Pn	23 33 18.4	-0.5
BSRM	**Salinas Radio**	**1.88**	**154**		Pn	23 33 18.8	-0.9
BPCNC	**Pine Canyon**	**1.93**	**157**		Pn	23 33 20.1	-0.2
SCZ	**Santa Cruz**	**1.98**	**152**		Pn	23 33 20.0	-1.1
DONR	**Donner Summit**	**2.01**	**60**		Pn	23 33 21.0	-0.7
EMB	**Emerald Bay**	**2.02**	**71**		Pn	23 33 21.0	-0.8
EMB				IAML		23 33 47.7	
	comp=E,147nm,0.7s						
TNK	**Tinkers Knob**	**2.03**	**63**		Pn	23 33 21.7	-0.2
BJCM	**Johnson Can.**	**2.03**	**153**		Pn	23 33 20.9	-0.9
KMRM	**Mail Ridge**	**2.07**	**335**		Pg	23 33 27.2	-0.4
KMRM				IAML		23 34 33.3	
	comp=N,47nm,3.7s						
BAVM	**Antelope Valle**	**2.10**	**144**		Pn	23 33 22.6	-0.2
HAST	**Hastings Reser**	**2.12**	**158**		Pn	23 33 22.3	-0.8
BBGB	**Big Mountain B**	**2.15**	**145**		Pg	23 33 29.0	-0.1
BBGB				IAML		23 34 16.7	
	comp=N,115nm,0.9s						
BSMM	**Soledad Missio**	**2.17**	**155**		Pn	23 33 23.3	-0.4
BPIM	**Pinnacles**	**2.17**	**149**		Pn	23 33 22.9	-0.8
MPK	**Martis Peak**	**2.18**	**64**		Pn	23 33 23.6	-0.5
BBNM	**San Benito**	**2.19**	**147**		Pn	23 33 24.3	+0.3
LOY	**Loyalton**	**2.23**	**54**		Pn	23 33 24.1	-0.5
BEKR	**Beckworth**	**2.28**	**48**	Pn	Pn	23 33 24.5	-0.8
BEKR				IAML		23 33 54.0	
	comp=N,45nm,0.6s						
BEKR				IAML		23 34 00.2	
	comp=E,63nm,0.7s						
PEAR	**Peavine Mounta**	**2.38**	**58**		Pn	23 33 26.8	0.0
PNTR	**Pine Nut**	**2.42**	**72**		Pn	23 33 27.8	+0.3
VCNR	**Virginia City**	**2.45**	**67**		Pn	23 33 28.1	+0.2
VCNR				IAML		23 34 04.4	
	comp=E,55nm,0.7s						
VCNR				IAML		23 34 05.5	
	comp=N,65nm,0.7s						
BMRR	**Black Mountain**	**2.48**	**44**		Pn	23 33 27.6	-0.6
PMPB	**Monarch Peak**	**2.56**	**146**		Pn	23 33 29.2	+0.2
PMPB	**Monarch Peak**	**2.56**	**146**	IAML		23 34 32.0	
	comp=E,60nm,2.6s						
PMPB				IAML		23 34 32.4	
	comp=N,51nm,1.9s						
YERR	**Yerington**	**2.67**	**75**		Pn	23 33 30.6	-0.1
PAHR	**Pah Rah Range**	**2.81**	**60**		Pn	23 33 32.2	-0.5
PAHR				IAML		23 34 24.3	
	comp=E,28nm,0.9s						
MDPB	**Devils Postpil**	**2.84**	**104**		Pn	23 33 33.2	0.0
MDPB				IAML		23 34 13.0	
	comp=E,31nm,0.4s						
RYN	**Ryan**	**3.17**	**84**		Pn	23 33 37.8	+0.1
RYN				IAML		23 34 27.7	
	comp=N,22nm,0.7s						
RYN				IAML		23 34 29.6	
	comp=E,25nm,0.6s						
LHV	**Little Huntoon**	**3.19**	**91**		Pn	23 33 38.2	+0.5
LHV				IAML		23 34 34.1	
	comp=E,34nm,0.8s						
LHV				IAML		23 34 38.8	
	comp=N,36nm,1.0s						
PTRM	**Twissleman Ran**	**3.29**	**144**		Pb	23 33 47.8	+1.7
NVAR	**Mina Array Bea**	**3.34**	**87**	Pn	Pn	23 33 39.9	-0.1
YBH	**Yreka Blue Hor**	**3.37**	**358**	Pn	Pn	23 33 40.3	0.0
NV11	**Mina Array Sit**	**3.46**	**87**		Pb	23 33 50.1	+1.1
NV11				IAML		23 34 50.1	
	comp=N,14nm,2.8s						
KVN	**Kaiserville**	**3.55**	**77**	Pn	Pn	23 33 42.4	-0.5
KVN				IAML		23 34 24.9	
	comp=E,14nm,0.6s						
KSXB	**Camp Six Broad**	**3.61**	**344**	Pn	Pn	23 33 43.3	-0.3
KSXB				IAML		23 34 51.9	
	comp=E,24nm,2.9s						
KSXB				IAML		23 35 35.8	
	comp=N,28nm,3.0s						
L04D	**Klamath Falls**	**3.86**	**3**	Pn	Pn	23 33 46.4	-0.7
L04D				IAML		23 34 19.7	
	comp=N,14nm,3.8s						
L04D				IAML		23 35 38.9	
	comp=E,28nm,3.8s						
MOD	**Modoc Plateau**	**3.94**	**25**		Pn	23 33 48.0	-0.2
MOD				IAML		23 36 11.2	
	comp=E,9.3nm,3.5s						
LCH	**Last Change Ra**	**4.05**	**105**		Pg	23 34 04.3	-1.2
KBO	**Bosley Butte**	**4.06**	**342**	Pg	Pb	23 33 58.9	-0.3
TPH	**Tonopah**	**4.21**	**92**		Pg	23 34 07.2	-1.3
ISA	**Isabella, Lake**	**4.23**	**128**	Pn	Pn	23 33 51.5	-0.6
ISA				IAML		23 35 13.5	
	comp=E,8.8nm,0.8s						
HUMO	**Hull Mountain**	**4.26**	**356**	Pn	Pn	23 33 52.4	0.0
HUMO				IAML		23 34 39.5	
	comp=N,8.9nm,3.4s						
HUMO				IAML		23 34 44.8	
	comp=E,11nm,3.4s						
GRAC	**Grapevine Rang**	**4.33**	**107**	Pn	Pn	23 33 53.6	+0.1
GRAC				IAML		23 35 21.8	
	comp=E,15nm,0.7s						
GRAC				IAML		23 35 26.9	
	comp=N,17nm,0.7s						

IDC ***01*** *23:44:39.6±1.1, 67.°79N×20.°37E, h0km, mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=16.8km s-min=7.5km az=121.0*
HEL ***01*** *23:44:39.8±0.0, 67.°83N×20.°19E, h0km, ML2.4, ML2.7(UPP), Suspected explosion*
KOLA ***01*** *23:44:39.3, 67.°85N×20.°06E, h0km, ML2.6*
UPP ***01*** *23:44:39.1±0.0, 67.°83N×20.°20E, h0km, ML2.7, Explosion*
ISC 01 23:44:38.0±0.7**, 67.°77N**±0.°02×**20.°23E**±0.°02**, h0km, n35, σ1.s00**/52**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.19**	**13**	P	**Pg**	**23 44 41.9**	**+0.4**
KUA				S	**Sg**	**23 44 44.0**	**-0.1**
KUA	**Kurravaara**	**0.19**	**13**	*i* P	**Pg**	**23 44 41.9**	**+0.4**
KUA				*i* S	**Sg**	**23 44 44.0**	**-0.1**
RATU	**Laukkuluspa**	**0.25**	**283**	P	**Pg**	**23 44 43.7**	**+1.0**
RATU				S	**Sg**	**23 44 46.9**	**+1.0**
RATU	**Laukkuluspa**	**0.25**	**283**	*i* P	**Pg**	**23 44 43.7**	**+1.0**
RATU				*i* S	**Sg**	**23 44 46.9**	**+1.0**
KOVU	**Salmi**	**0.45**	**357**	P	**Pg**	**23 44 46.8**	**+0.1**
KOVU				S	**Sg**	**23 44 52.0**	**-0.5**
KOVU	**Salmi**	**0.45**	**357**	*i* P	**Pg**	**23 44 46.8**	**+0.1**
KOVU				*i* S	**Sg**	**23 44 52.0**	**-0.5**
DUNU	**Dundret**	**0.67**	**168**	P	**Pb**	**23 44 52.7**	**+0.2**
DUNU	**Dundret**	**0.67**	**168**	*i* P	**Pb**	**23 44 52.7**	**+0.2**
LANU	**Lannavaara**	**0.72**	**66**	P	**Pg**	**23 44 52.6**	**+0.8**
LANU	**Lannavaara**	**0.72**	**66**	*e*P	**Pg**	**23 44 52.5**	**+0.8**
LANU				*e*S	**Sg**	**23 45 01.9**	**+0.8**
MASU	**Masugnsbyn**	**0.75**	**114**	P	**Pb**	**23 44 53.9**	**0.0**
MASU	**Masugnsbyn**	**0.75**	**114**	*i* P	**Pb**	**23 44 53.9**	**0.0**
SALU	**Saltoluokta**	**0.77**	**240**	P	**Pb**	**23 44 54.0**	**-0.2**
SALU	**Saltoluokta**	**0.77**	**240**	*i* P	**Pb**	**23 44 54.0**	**-0.2**
KIF	**Kilpisjarvi**	**1.26**	**9**	*e*P	**Pg**	**23 45 02.4**	**+0.3**
KIF	**Kilpisjarvi**	**1.26**	**9**	*e*P	**Pg**	**23 45 02.3**	**+0.3**
KIF				*e*S	**Sg**	**23 45 18.6**	**+0.3**
PAJU	**Pajala**	**1.34**	**123**	P	**Pb**	**23 45 04.5**	**+0.4**
PAJU	**Pajala**	**1.34**	**123**	*e*P	**Pb**	**23 45 04.4**	**+0.4**
PAJU				*e*S	**Sn**	**23 45 22.7**	**+0.1**
HEF	**Hetta**	**1.44**	**62**	*e*P	**Pn**	**23 45 05.2**	**-0.1**
HEF	**Hetta**	**1.44**	**62**	*e*P	**Pn**	**23 45 05.2**	**-0.1**
HEF				*e*S	**Sg**	**23 45 23.7**	**-0.4**
HARU	**Harads**	**1.64**	**169**	P	**Pg**	**23 45 10.1**	**+0.7**
HARU	**Harads**	**1.64**	**169**	*e*P	**Pg**	**23 45 10.1**	**+0.7**
TRO	**Tromso**	**1.93**	**346**	*e*P	**Pn**	**23 45 12.7**	**+0.7**
TRO				*e*S	**Sb**	**23 45 38.1**	**-0.5**
KALU	**Kalix**	**2.29**	**146**	*e*P	**Pb**	**23 45 19.6**	**-0.4**
KALU				*e*SB	**Sb**	**23 45 49.8**	**+1.1**
TOF	**Tornio**	**2.34**	**135**	MSG		23 45 54.1	
	comp=Z,17nm,0.3s						
ARCES	**ARCESS Array B**	**2.62**	**45**	Pn	**Pn**	**23 45 22.7**	**+1.2**
	comp=Z,1.7nm,0.3s,baz=226,slow=14,SNR=60						
ARCES				Sn	**Sn**	**23 45 55.8**	**+1.8**
	comp=Z,6.0nm,0.3s,baz=226,slow=24,SNR=21						
	comp=Z,2.7nm,0.3s						
ARCES	**ARCESS Array B**	**2.62**	**45**	P	**Pn**	**23 45 22.7**	**+1.2**
ARCES				S	**Sn**	**23 45 53.6**	**-0.4**
BURU	**Burvik**	**3.24**	**171**	*e*P	**Pb**	**23 45 33.8**	**-2.5**
BURU				*e*S	**Sb**	**23 46 13.0**	**-3.1**
OBF4	**Vikkela, Lumij**	**3.56**	**144**	MSG		23 46 38.8	
	comp=Z,7.0nm,0.3s						
MSF	**Maaselka**	**3.95**	**114**	MSG		23 46 46.5	
	comp=Z,10nm,0.3s						
APA0	**Apatity Array**	**4.87**	**86**	P	**Pn**	**23 45 52.8**	**+0.5**
APA0				S	**Sn**	**23 46 48.8**	**-0.5**
TERR	**Teriberka**	**5.66**	**68**	P	**Pn**	**23 46 03.3**	**+0.2**
TERR				S	**Sn**	**23 47 07.2**	**-1.5**
FINES	**FINESS Array B**	**6.83**	**156**	Pn	**Pn**	**23 46 21.3**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=337,slow=17,SNR=5.8						
FINES				Sn	**Sn**	**23 47 38.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=343,slow=21,SNR=6.2						
FINES				Lg	Lg	23 48 13.1	
	comp=Z,1.1nm,0.3s,baz=348,slow=27,SNR=9.6						
	comp=Z,1.4nm,0.7s						
NOA	**NORSAR Array B**	**7.79**	**214**	Pn	**Pn**	**23 46 32.6**	**+0.1**
	baz=24,slow=11,SNR=4.2						
NOA				Sn	**Sn**	**23 47 59.2**	**-2.2**
	baz=21,slow=19,SNR=1.1						
NOA				Lg	Lg	23 48 43.9	
	comp=Z,0.1nm,0.3s,baz=24,slow=15,SNR=5.4						
	comp=Z,0.3nm,0.7s						
HFS	**Hagfors**	**8.18**	**204**	Pn	**Pn**	**23 46 38.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=13,slow=14,SNR=1.7						
HFS				Sn	**Sn**	**23 48 09.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=15,slow=23,SNR=6.6						
HFS				Lg	Lg	23 48 56.7	
	comp=Z,0.2nm,0.3s,baz=25,slow=25,SNR=2.0						
	comp=Z,1.3nm,0.7s						

IDC 01 23:58:01.6±1.3**, 23.°70S**×**82.°51E, h0km, mb3.9**/5**, mbtmp3.9**/5**, Error ellipse: s-maj=45.0km s-min=27.8km az=13.0, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.63**	**327**	T	T	00 21 39.5	
	baz=151,slow=74,SNR=50						
H08S1	**Diego Carcia H**	**18.64**	**327**	T	T	00 21 42.5	
	baz=151,slow=74,SNR=14						
H08S3	**Diego Garcia H**	**18.65**	**327**	T	T	00 21 40.9	
	baz=151,slow=74,SNR=79						
H01W3	**Cape Leeuwin H**	**29.64**	**119**	T	T	00 34 54.2	
	baz=284,slow=75,SNR=3.5						
H01W2	**Cape Leeuwin H**	**29.64**	**119**	T	T	00 34 54.3	
	baz=284,slow=75,SNR=4.6						
H01W1	**Cape Leeuwin H**	**29.65**	**119**	T	T	00 34 55.9	
	baz=284,slow=75,SNR=3.9						
ASAR	**Alice Springs**	**46.85**	**101**	P	P	00 06 33.7	0.0
	1.5nm,0.6s,baz=264,slow=7.4,SNR=18						
	1.5nm,0.6s						
WRA	**Warramunga Arr**	**48.06**	**96**	P	P	00 06 42.9	-0.2
	2.3nm,0.9s,baz=260,slow=7.8,SNR=9.3						
	2.3nm,0.9s						
BOSA	**Boshof**	**51.22**	**252**	P	P	00 07 07.1	-0.1
	4.5nm,1.1s,baz=90,slow=6.1,SNR=3.7						
	4.5nm,1.1s						
MKAR	**Makanchi Array**	**70.16**	**360**	P	P	00 09 16.7	+0.9
	0.1nm,0.4s,baz=191,slow=5.4,SNR=2.0						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**77.34**	**1**	P	P	00 09 57.1	-0.7
	0.4nm,0.5s,baz=176,slow=4.3,SNR=1.9						
	0.4nm,0.5s						

IDC 01 23:59:06.1±443.0**, 50.°80N**×**44.°94E, h0km, Error ellipse: s-maj=155.8km s-min=64.6km az=155.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**7.49**	**325**	*i*		00 45 50.0	
	baz=136,slow=322,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**8.35**	**88**	*i*		00 48 10.0	
	baz=280,slow=307,SNR=0.9						
I37NO	**I37NO**	**22.24**	**335**	*i*		02 16 50.0	
	baz=132,slow=320,SNR=3.7						

IDC 02 00:10:58.7±2.5**, 6.°52S**×**129.°05E, h0km, mb3.4**/1**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=169.9km s-min=34.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.30**	**159**	Pn	Pn	00 14 23.1	+0.5
	0.1nm,0.3s,baz=342,slow=13,SNR=2.4						
WRA				Sn	Sn	00 16 54.5	-7.6
	0.2nm,0.3s,baz=338,slow=23,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.68**	**165**	P	Pn	00 15 06.2	-0.3
	0.1nm,0.3s,baz=344,slow=10,SNR=1.4						
ASAR				S	Sn	00 18 19.2	-5.0
	0.2nm,0.3s,baz=349,slow=24,SNR=1.3						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**67.31**	**327**	P	P	00 21 55.5	0.0
	0.3nm,0.8s,baz=126,slow=7.3,SNR=2.6						
	0.3nm,0.8s						

IDC ***02*** *00:24:45.6±0.7, 2.°84N×95.°49E, h0km, mb4.4/21, mbtmp4.4/22, ML4.8/1, MS4.1/51, Error ellipse: s-maj=21.0km s-min=14.7km az=40.0*
BJI ***02*** *00:24:47.8±0.0, 2.°77N×95.°51E, h32km, mb4.9/65, mB5.1/40, Ms4.8/60, Ms7 4.6/59*
NEIC ***02*** *00:24:50.4±1.2, 2.°81N±0.°06×95.°53E±0.°08, h30km±5km, mb4.9/106, Error ellipse: s-maj=12.0km s-min=8.3km az=62.0*
DJA ***02*** *00:24:50.6±1.1, 3°N±3°×9°5E±°, h35km±32km, M4.9/12, mb5.0/8, mB5.5/3, MLv4.9/12, Mw(mB)4.9/3*
ISC 02 00:24:49.4±0.5**, 2.°77N**±0.°04×**95.°50E**±0.°05**, h28km**±2km**, h28km:pP-P, n297, σ1.s34**/284**, mb4.9**/111**, MS4.3**/71**, 19C-4D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**2.38**	**72**	P	**Pn**	**00 25 28.0**	**+1.3**
KCSI				S	**Sn**	**00 25 57.6**	**+2.6**
GSI	**Gunungsitoli**	**2.53**	**125**	Pn	**Pn**	**00 25 29.2**	**+0.6**
GSI				Sn	**Sn**	**00 25 57.6**	**-1.1**
GSI	**Gunungsitoli**	**2.53**	**125**	P	**Pn**	**00 25 29.3**	**+0.6**
GSI				S	**Sn**	**00 25 59.5**	**+0.8**
LHMI	**Lhok Sumawe**	**2.83**	**31**	Pn	**Pn**	**00 25 33.4**	**+0.6**
LHMI	**Lhok Sumawe**	**2.83**	**31**	P	**Pn**	**00 25 33.9**	**+1.1**
LHMI				S	**Sn**	**00 26 09.1**	**+3.0**
TSI	**Tuntungan**	**3.14**	**77**	P	**Pn**	**00 25 38.8**	**+1.7**
TSI				S	**Sn**	**00 26 16.0**	**+2.3**
RPSI	**Rantau Prapat**	**3.42**	**91**	Pn	**Pn**	**00 25 42.0**	**+1.1**
MNSI	**Mandailing Nat**	**4.52**	**116**	P	**Pn**	**00 25 58.0**	**+1.9**
SISI	**Saibi**	**5.42**	**139**	P	**Pn**	**00 26 09.2**	**+0.7**
	0.5nm50nm,0.7s						
KULM	**Kulim**	**5.71**	**64**	Pn	**Pn**	**00 26 13.0**	**+0.6**
IPM	**Ipoh**	**5.77**	**73**	Pn	**Pn**	**00 26 14.1**	**+0.9**
PPI	**Padang Panjang**	**5.85**	**123**	P	**Pn**	**00 26 15.7**	**+1.4**
BKNI	**Bangkinang**	**6.04**	**114**	Pn	**Pn**	**00 26 18.2**	**+1.2**
BKNI	**Bangkinang**	**6.04**	**114**	P	**Pn**	**00 26 18.7**	**+1.7**
	0.9nm139nm,0.8s						
SRIT	**Nakonsritamara**	**7.08**	**35**	Pn	**Pn**	**00 26 31.2**	**0.0**
KRJI	**Kerinci**	**7.67**	**129**	P	**Pn**	**00 26 39.5**	**+0.1**
	1.6nm178nm,0.7s						
MYKOM	**Kota Tinggi**	**8.40**	**96**	Pn	**Pn**	**00 26 49.1**	**-0.2**
TPRI	**Tanjung Pinang**	**9.20**	**101**	P	**Pn**	**00 27 02.0**	**+1.6**
	6μm55nm,0.5s						
JMBI	**JAMBI**	**9.24**	**118**	P	**Pn**	**00 27 02.0**	**+1.1**
KSI	**Kapahiang**	**9.54**	**132**	P	**Pn**	**00 27 05.8**	**+0.8**
KSM	**Kuching**	**14.85**	**95**		**Pn**	**00 28 17.4**	**-0.3**
PALK	**Pallekele**	**15.40**	**287**	LR	LR	00 33 58.1	
	comp=Z,1μm,18.5s,baz=213,slow=36						
CM31	**Chiang Mai Arr**	**15.95**	**12**	P	**P**	**00 28 34.7**	**-0.6**
CM31				IAmb	IAmb	00 28 35.5	
	comp=Z,83nm,1.1s						
CMAR	**Chiang Mai Arr**	**15.95**	**12**	Pn	**Pn**	**00 28 31.4**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=202,slow=11,SNR=75						
CMAR				LR	LR	00 35 38.9	
	comp=Z,1μm,18.3s,baz=205,slow=41						
	comp=Z,31nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.95**	**12**	Pn	**Pn**	**00 28 31.2**	**-0.8**
CHTO	**Chiang Mai**	**16.30**	**12**		**Pn**	**00 28 34.9**	**-1.6**
CHTO				P	**P**	**00 28 38.6**	**-0.6**
SBUM	**Sibu**	**16.70**	**91**	Pn	**Pn**	**00 28 41.2**	**-0.4**
KKM	**Kota Kinabalu**	**20.90**	**80**	P	**P**	**00 29 29.9**	**0.0**
AZL	**Aizawl**	**21.02**	**353**	*e*P	**P**	**00 29 29.1**	**-2.0**
QIZ	**Qiongzhong**	**21.40**	**40**	P	**P**	**00 29 36.6**	**+1.5**
QIZ				S	**S**	**00 33 34.8**	**+3.4**
QIZ				LR	LR		
	comp=Z,2μm,14.3s						
QIZ				LR	LR		
	comp=Z,680nm,14.9s						
QIZ				LR	LR		
	comp=Z,1μm,13.7s						
HYBB	**Hyderabad (bro**	**22.11**	**312**	*e*P	**P**	**00 29 43.0**	**+0.2**
HYBB				*e*S	**S**	**00 33 46.6**	**+1.3**
BOK	**Bokaro**	**22.88**	**337**	*e*P	**P**	**00 29 50.0**	**-0.9**
BOK				IAmb	IAmb	00 29 54.6	
	comp=Z,44nm,1.1s						
SHL	**Shillong**	**22.93**	**352**	*e*P	**P**	**00 29 47.2**	**-4.4**
SHL				IAmb	IAmb	00 29 52.1	
	comp=Z,37nm,1.2s						
MYLDM	**Lahad Datu**	**23.06**	**83**	P	**P**	**00 29 53.0**	**+0.1**
BLSP	**Bilaspur**	**23.21**	**327**	*e*P	**P**	**00 29 54.0**	**-0.3**
KMI	**Kunming**	**23.29**	**17**	⇑P	**P**	**00 29 55.2**	**-0.1**
KMI				pP	pP	00 30 03.5	+0.5
KMI				sP	sP	00 30 08.4	+1.9
KMI				S	**S**	**00 34 06.7**	**+0.4**
KMI				pmax	pmax		
	comp=Z,26nm,0.8s						
KMI				LR	LR		
	comp=Z,2μm,13.1s						
KMI				LR	LR		
	comp=Z,740nm,14.4s						
KMI				LR	LR		
	comp=Z,2μm,11.6s						
PZH	**PanZhiHua**	**24.34**	**14**	P	**P**	**00 30 04.6**	**-0.6**
PZH				pmax	pmax		
	comp=Z,50nm,1.4s						
PZH				pmax	pmax		
	comp=Z,340nm,3.7s						
PZH				LR	LR		
	comp=Z,1μm,14.5s						
PZH				LR	LR		
	comp=Z,960nm,15.3s						
PZH				LR	LR		
	comp=Z,2μm,14.3s						
ZIRO	**ZIRO**	**24.67**	**356**	*e*P	**P**	**00 30 03.7**	**-4.5**
ZIRO				IAmb	IAmb	00 30 06.5	
	comp=Z,24nm,0.5s						
H08S2	**Diego Garcia H**	**25.18**	**246**	T	T	00 56 20.1	
	baz=66,slow=76,SNR=8216						
ODAN	**Odare**	**25.18**	**343**	*e*P	**P**	**00 30 12.1**	**-0.8**
H08S3	**Diego Garcia H**	**25.18**	**246**	T	T	00 56 20.2	
	baz=66,slow=76,SNR=9392						
H08S1	**Diego Carcia H**	**25.20**	**246**	T	T	00 56 23.5	
	baz=66,slow=76,SNR=1985						
TOLI2	**Tolitoli**	**25.32**	**93**	P	**P**	**00 30 13.7**	**-0.3**
TOLI2				IAmb	IAmb	00 30 15.2	
	comp=Z,20nm,0.9s						
KAPI	**Kappang**	**25.43**	**108**	P	**P**	**00 30 16.2**	**+1.2**
	comp=Z,35nm,1.1s,baz=278,slow=9.8,SNR=5.1						
	comp=Z,35nm,1.1s						
KAPI	**Kappang**	**25.43**	**108**	P	**P**	**00 30 14.9**	**-0.2**
KAPI				IAmb	IAmb	00 30 17.9	
	comp=Z,41nm,1.1s						
RAMN	**Ramite**	**25.51**	**341**	*e*P	**P**	**00 30 17.0**	**+1.1**
	comp=Z,47nm,0.6s						
TAPN	**Taplejung**	**25.55**	**344**	*e*P	**P**	**00 30 16.8**	**+0.4**
GYA	**Guiyang**	**25.87**	**23**	⇓P	**P**	**00 30 18.9**	**-0.2**
GYA				pmax	pmax		
	comp=Z,35nm,1.2s						
GYA				LR	LR		
	comp=Z,2μm,15.5s						
JIRN	**Jiri**	**26.30**	**341**	*e*P	**P**	**00 30 23.8**	**+0.6**
	comp=Z,54nm,0.6s						
PKI	**Pulchoki**	**26.48**	**340**	*e*P	**P**	**00 30 25.9**	**+1.1**
PKIN	**Phulchoki**	**26.49**	**340**	*e*P	**P**	**00 30 25.7**	**+0.9**
DMN	**Daman**	**26.62**	**339**	*e*P	**P**	**00 30 27.6**	**+1.6**
	comp=Z,56nm,0.8s						
GUN	**Gumba**	**26.63**	**341**	*e*P	**P**	**00 30 27.5**	**+1.3**
	comp=Z,61nm,0.7s						
KKN	**Kakani**	**26.73**	**340**	*e*P	**P**	**00 30 27.9**	**+1.0**
LSA	**Lhasa**	**27.10**	**352**	P	**P**	**00 30 30.6**	**+0.1**
LSA				IAmb	IAmb	00 30 34.1	
	comp=Z,22nm,0.8s						
GKN	**Gorkha**	**27.15**	**339**	*e*P	**P**	**00 30 32.1**	**+1.4**
LUWI	**Luwuk**	**27.52**	**98**	P	**P**	**00 30 34.3**	**+0.3**
DANN	**Dangsing**	**27.79**	**337**	*e*P	**P**	**00 30 37.9**	**+1.3**
CD2	**Chengdu**	**29.05**	**15**	P	**P**	**00 30 46.7**	**-0.8**
CD2				S	**S**	**00 35 37.9**	**+0.5**

CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,1μm,11.0s
CD2 LR LR
comp=Z,790nm,12.0s
CD2 LR LR
comp=Z,2μm,13.4s
LGTI Lohaghat 30.23 333 *e*P **P 00 30 58.1 +0.2**
DAV Davao City (W) 30.26 81 LR LR 00 45 24.8
comp=Z,337nm,18.5s,baz=180,slow=41
ENH Enshi 30.39 24 P **P 00 30 58.3 -1.0**
ENH IAmb IAmb 00 30 59.3
comp=Z,16nm,0.8s
WHN Wuhan 32.88 31 ⇓P **P 00 31 21.7 +0.6**
WHN S **S 00 36 28.3 -8.9**
WHN LR LR
comp=Z,3μm,14.0s
WHN LR LR
comp=Z,3μm,14.1s
WHN LR LR
comp=Z,4μm,13.3s
SMLA Simla 33.09 330 *e*P **P 00 31 23.4 +0.4**
GOMU GeErMu 33.27 359 P **P 00 31 24.5 -0.4**
GOMU pmax pmax
comp=Z,8.0nm,0.7s
GOMU pmax pmax
comp=Z,21nm,4.6s
XAN Xi'an 33.53 20 P **P 00 31 25.9 -1.0**
XAN pmax pmax
comp=Z,46nm,1.0s
XAN LR LR
comp=Z,840nm,13.7s
XAN LR LR
comp=Z,920nm,13.9s
XAN LR LR
comp=Z,1μm,17.1s
XAN Xi'an 33.53 20 P **P 00 31 25.2 -1.7**
XAN pP **pP 00 31 33.8 -1.2**
LZH Lanzhou 34.04 12 *e*P **P 00 31 30.8 -0.6**
LZH pP pP 00 31 37.8 -1.7
LZH sP sP 00 31 41.3 -1.6
LZH pmax pmax
comp=Z,26nm,1.1s
LZH LR LR
comp=Z,290nm,12.0s
LZH LR LR
comp=Z,700nm,17.5s
LZH LR LR
comp=Z,490nm,19.9s
THN Thein Dam 34.87 330 *ex* x 00 31 42.0
LYN LuoYang 35.34 25 ⇑/P **P 00 31 42.2 -0.3**
LYN pP pP 00 31 49.1 -1.5
LYN S **S 00 37 17.8 +2.6**
LYN pmax pmax
comp=Z,50nm,1.1s
LYN pmax pmax
comp=Z,300nm,4.7s
LYN LR LR
comp=Z,2μm,15.1s
LYN LR LR
comp=Z,450nm,10.2s
LYN LR LR
comp=Z,1μm,14.9s
FITZ Fitzroy Crossi 36.22 126 LR LR 00 49 25.1
comp=Z,377nm,18.2s,baz=316,slow=41
NJ2 Nanjing 36.48 34 ⇑P **P 00 31 52.5 +0.3**
NJ2 pmax pmax
comp=Z,36nm,1.0s
NJ2 LR LR
comp=Z,590nm,17.9s
NJ2 LR LR
comp=Z,590nm,15.7s
NJ2 LR LR
comp=Z,570nm,13.2s
GTA Gaotai 36.68 6 ⇑P **P 00 31 53.4 -0.6**
GTA pP pP 00 32 00.5 -1.7
GTA sP sP 00 32 03.9 -1.7
GTA pmax pmax
comp=Z,13nm,1.0s
GTA LR LR
comp=Z,440nm,14.7s
GTA LR LR
comp=Z,440nm,15.1s
GTA LR LR
comp=Z,520nm,13.9s
NIL Nilore 37.09 328 P **P 00 31 56.8 -0.8**
NIL IAmb IAmb 00 31 57.8
comp=Z,16nm,0.7s
FAKI Fak Fak 37.16 98 P **P 00 31 57.9 -0.5**
FAKI IAmb IAmb 00 31 59.2
comp=Z,24nm,1.1s
HNS HongShan 38.72 25 ⇑P **P 00 32 11.9 +0.8**
HNS pP **pP 00 32 19.1 -0.2**
HNS *e*S **S 00 38 05.7 -0.8**
HNS pmax pmax
comp=Z,110nm,1.0s
HNS LR LR
comp=Z,690nm,14.9s
HNS LR LR
comp=Z,690nm,15.2s
HNS LR LR
comp=Z,1μm,16.1s
TIA Tai'an 38.81 28 ⇑P **P 00 32 11.5 -0.5**
TIA pmax pmax
comp=Z,20nm,1.2s
TIA LR LR
comp=Z,670nm,15.7s
TIA LR LR
comp=Z,720nm,15.2s
TIA LR LR
comp=Z,1μm,12.0s
JOW Kunigami 39.46 50 P **P 00 32 17.9 +0.3**
JOW IAmb IAmb 00 32 18.5
comp=Z,24nm,0.9s
BTO Baotou 39.88 17 *e*P **P 00 32 21.7 +0.7**
BTO LR LR
comp=Z,7μm,14.0s
BTO LR LR
comp=Z,2μm,11.8s
HHC Hu-ho-hao-te 40.58 19 *e*P **P 00 32 27.9 +1.1**
HHC pP pP 00 32 35.2 +0.2
HHC S **S 00 38 37.3 +2.6**
HHC sS sS 00 38 51.1 +2.9
HHC pmax pmax
comp=Z,74nm,1.2s
HHC pmax pmax
comp=Z,350nm,4.1s
HHC LR LR
comp=Z,3μm,14.6s
HHC LR LR
comp=Z,830nm,12.8s
HHC LR LR
comp=Z,3μm,15.4s
KSH Kashi 40.66 337 P **P 00 32 27.0 -0.4**
KSH sP sP 00 32 38.0 -1.0
KSH pmax pmax
comp=Z,8.0nm,0.6s
KSH LR LR
comp=Z,270nm,13.7s
KSH LR LR
comp=Z,230nm,14.8s
KSH LR LR
comp=Z,230nm,15.5s
WSAR Wadi Sarin 41.08 303 LR LR 00 48 59.1
comp=Z,93nm,19.4s,baz=120,slow=35
H01W3 Cape Leeuwin H 41.34 157 T T 01 16 21.1
baz=332,slow=76,SNR=411
H01W2 Cape Leeuwin H 41.35 157 T T 01 16 22.2
baz=332,slow=76,SNR=388
H01W1 Cape Leeuwin H 41.36 157 T T 01 16 22.4
baz=332,slow=76,SNR=329
WMQ Urumqi 41.46 351 *e*P **P 00 32 34.4 +0.5**
WMQ pP pP 00 32 41.6 -0.4
WMQ sP sP 00 32 48.8 +3.4
WMQ pmax pmax
comp=Z,35nm,1.3s
WMQ pmax pmax
comp=Z,140nm,4.9s
WMQ LR LR
comp=Z,300nm,19.9s
WMQ LR LR
comp=Z,390nm,20.9s
WMQ LR LR
comp=Z,240nm,20.9s
BJT Baijiatuau 41.54 24 P **P 00 32 35.7 +1.1**
BJT Baijiatuau 41.54 24 P **P 00 32 35.1 +0.6**
BJT pP **pP 00 32 42.1 -0.6**
BJI Beijing 41.56 24 P **P 00 32 35.8 +1.1**
BJI pP **pP 00 32 42.9 0.0**
BJI sP **sP 00 32 45.3 -1.0**
BJI PP **PnPn 00 34 16.2 +0.3**
BJI PcP **PcP 00 34 33.0 +1.3**
BJI ScP **ScP 00 38 21.1 +0.9**
BJI pmax pmax
comp=Z,80nm,0.9s
BJI pmax pmax
comp=Z,320nm,4.0s
BJI LR LR
comp=Z,85nm,14.1s
BJI LR LR
comp=Z,230nm,13.1s
BJI LR LR
comp=Z,440nm,14.5s
SHLS Shalkode 42.67 343 *e*P **P 00 32 42.1 -1.8**
comp=Z,11nm,0.9s,baz=343
SHLS *e*S **S 00 39 03.6 -2.1**
baz=343
GAR Garm 42.74 331 P **P 00 32 43.9 -0.6**
GAR IAmb IAmb 00 33 29.1
comp=Z,22nm,1.0s
UZB Uzynbulak 42.80 342 *e*P **P 00 32 43.8 -1.1**
baz=342
UZB *e*S **S 00 39 07.0 -0.5**
baz=342
SATY Saty 42.91 342 *e*P **P 00 32 45.0 -0.8**
baz=342
CHGR Chuyangaron 43.05 329 P **P 00 32 46.3 -0.7**
CHGR IAmb IAmb 00 32 54.3
comp=Z,20nm,0.8s
DL2 Dalian 43.13 30 P **P 00 32 48.4 +0.9**
DL2 pmax pmax
comp=Z,67nm,0.8s
DL2 LR LR
comp=Z,480nm,14.5s
DL2 LR LR
comp=Z,460nm,14.5s
DL2 LR LR
comp=Z,640nm,16.0s
BTK Batken 43.33 332 P **P 00 32 48.9 -0.3**
BTK IAmb IAmb 00 33 07.9
comp=Z,22nm,1.0s
MDOK Medeo 43.45 340 *e*P **P 00 32 49.9 -0.3**
baz=340
MDOK *e*S **S 00 39 16.9 -0.2**
baz=340
AAA Alma-Ata 43.53 340 *e*P **P 00 32 49.9 -0.8**
baz=340
AAK Ala-Archa 43.91 338 P **P 00 32 54.2 +0.4**
comp=Z,3.2nm,0.5s,baz=160,slow=9.5,SNR=6.3
AAK LR LR 00 54 53.7
comp=Z,252nm,18.0s,baz=150,slow=41
comp=Z,3.2nm,0.5s
AAK Ala-Archa 43.91 338 P **P 00 32 54.3 +0.4**
NAWB Namwon 43.91 38 P **P 00 32 52.8 -1.1**
NAWB IAmb IAmb 00 32 54.7
comp=Z,33nm,1.4s
WB0 Warramunga Arr 44.27 122 P **P 00 32 56.9 -0.1**
WB0 IAmb IAmb 00 33 05.8
comp=Z,28nm,1.6s
WRA Warramunga Arr 44.30 122 P **P 00 32 57.6 +0.4**
comp=Z,7.7nm,1.1s,baz=300,slow=9.1,SNR=23
WRA LR LR 00 51 58.5
comp=Z,388nm,20.8s,baz=302,slow=37
comp=Z,7.7nm,1.1s
WRA Warramunga Arr 44.30 122 P **P 00 32 57.0 -0.3**
WRAB Tennant Creek 44.31 122 P **P 00 32 56.5 -0.8**
WRAB pP **pP 00 33 06.5 +0.9**
WB2 Warramunga Arr 44.31 122 P **P 00 32 57.2 -0.1**
WB2 IAmb IAmb 00 32 58.9
comp=Z,15nm,1.1s
KUU Kurty 44.33 340 *e*P **P 00 32 56.2 -1.0**
comp=Z,29nm,1.4s,baz=340
KUU *e*S **S 00 39 29.0 -0.7**
baz=340
WR0 Warramunga Arr 44.48 122 P **P 00 32 59.0 +0.3**
WR0 IAmb IAmb 00 33 00.4
comp=Z,22nm,1.1s
TJN Taejon 44.52 37 P **P 00 32 58.3 -0.4**
SGDS Sogindy 44.55 338 *e*P **P 00 32 58.5 -0.5**
baz=338
JNU Nakatsue 44.80 44 P **P 00 33 00.4 -0.7**
INCN Inchon 44.82 36 P **P 00 33 00.7 -0.5**
XLT XiLinHaoTe 44.83 21 *e*P **P 00 33 02.1 +0.9**
XLT pP pP 00 33 09.1 -0.4
XLT sP sP 00 33 14.4 +1.6
XLT PcP **PcP 00 34 43.7 +0.9**
XLT S **S 00 39 40.6 +3.5**
XLT sS sS 00 39 55.2 +4.5
XLT pmax pmax
comp=Z,17nm,1.4s
XLT pmax pmax
comp=Z,100nm,4.4s
XLT LR LR
comp=Z,84nm,15.0s
XLT LR LR
comp=Z,480nm,16.1s
XLT LR LR
comp=Z,1μm,17.1s
KSCHJ Chungju 45.22 37 P **P 00 33 03.6 -0.7**
KSCHJ IAmb IAmb 00 33 05.1
comp=Z,20nm,1.2s
MK31 Makanchi Array 45.33 347 P **P 00 33 05.3 +0.2**
MK31 IAmb IAmb 00 33 05.9
comp=Z,19nm,0.7s
MKAR Makanchi Array 45.33 347 P **P 00 33 05.8 +0.7**
comp=Z,25nm,0.6s,baz=166,slow=7.7,SNR=338
MKAR LR LR 00 55 01.1
comp=Z,264nm,21.7s,baz=166,slow=40
comp=Z,25nm,0.6s
MKAR Makanchi Array 45.33 347 P **P 00 33 05.0 -0.1**
IUG Iuzhnay 45.35 333 *e*P **P 00 33 04.6 -0.8**
baz=333
DZA Taraz 45.39 335 *e*P **P 00 33 05.2 -0.4**
comp=Z,7.2nm,0.6s,baz=335
MAKZ Makanchi 45.41 347 P **P 00 33 05.9 +0.2**
MAKZ Makanchi 45.41 347 P **P 00 33 04.7 -1.0**
MAKZ pP **pP 00 33 12.8 -1.1**
ZSN Zaisan 45.45 350 *e*P **P 00 33 05.4 -0.6**
comp=Z,19nm,0.9s,baz=350
FORT Forest 45.56 140 P **P 00 33 08.3 +1.2**
KS19 Wonju Array Si 45.56 37 P **P 00 33 06.4 -0.6**
KS19 IAmb IAmb 00 33 14.6
comp=Z,24nm,1.4s
KSRS Korea Array 45.56 37 P **P 00 33 06.6 -0.4**
comp=Z,3.0nm,0.8s,baz=227,slow=8.3,SNR=23
KSRS LR LR 00 54 49.0
comp=Z,369nm,18.6s,baz=230,slow=40
comp=Z,3.0nm,0.8s
ASAR Alice Springs 45.69 127 P **P 00 33 09.0 +0.7**
comp=Z,2.1nm,0.7s,baz=310,slow=7.4,SNR=16
comp=Z,2.1nm,0.7s
ASAR Alice Springs 45.69 127 P **P 00 33 06.7 -1.6**
SONM Songino Array 45.87 10 P **P 00 33 09.3 -0.1**
comp=Z,17nm,0.9s,baz=193,slow=8.9,SNR=58
SONM PcP **PcP 00 34 47.1 +0.8**
comp=Z,4.7nm,0.8s,baz=194,slow=2.0,SNR=5.6
SONM LR LR 00 54 06.8
comp=Z,504nm,20.9s,baz=189,slow=38
comp=Z,17nm,0.9s
SONM Songino Array 45.87 10 P **P 00 33 09.0 -0.4**
SONM IAmb IAmb 00 33 10.3
comp=Z,19nm,1.0s
KK31 Karatay Array 45.91 334 P **P 00 33 09.5 -0.2**
KKAR Karatay Array 45.91 334 P **P 00 33 09.8 +0.1**
KKAR Karatay Array 45.91 334 P **P 00 33 09.7 +0.1**
ULN Ulaanbaatar 46.01 11 P **P 00 33 09.9 -0.7**
ULN IAmb IAmb 00 33 10.9
comp=Z,8.7nm,0.8s
BTLS Baital 46.13 339 *e*P **P 00 33 11.2 -0.2**
baz=339
SEHB SEOHWA 46.30 36 P **P 00 33 11.8 -1.0**
SEHB IAmb IAmb 00 33 20.4
comp=Z,25nm,1.6s
JMN Monobe 47.22 45 P **P 00 33 19.6 -0.5**
JHS Saijyo 47.39 43 P **P 00 33 21.1 -0.3**
CN2 Changchun 48.71 29 *e*P **P 00 33 30.8 -0.7**
CN2 *e*S **S 00 40 29.0 -3.4**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,500nm,16.0s
CN2 LR LR
comp=Z,600nm,16.0s
CN2 LR LR
comp=Z,300nm,17.2s
GEYT Alibeck 48.93 320 P **P 00 33 33.3 0.0**
comp=Z,3.6nm,0.6s,baz=64,slow=12,SNR=5.2
comp=Z,3.6nm,0.6s
GEYT Alibeck 48.93 320 P **P 00 33 33.6 +0.3**
GYA0B ALIBECK ARRAY 48.93 320 P **P 00 33 33.3 0.0**
GYA0B IAmb IAmb 00 33 51.9
comp=Z,6.0nm,0.7s
JWT Wachi 49.11 44 P **P 00 33 35.0 +0.3**
SEM Semipalatinsk 49.19 347 *e*P **P 00 33 34.7 -0.6**
comp=Z,16nm,1.1s,baz=347
KURBB Kurchatov Arra 49.79 346 LR LR 00 57 36.0
comp=Z,270nm,21.3s,baz=138,slow=40
KURK Kurchatov 49.86 346 P **P 00 33 40.3 +0.3**
KURK IAmb IAmb 00 33 41.1
comp=Z,14nm,0.8s
KURK Kurchatov 49.86 346 P **P 00 33 39.3 -0.8**
KURK pP **pP 00 33 49.0 +0.7**
GUMO Guam 49.93 75 LR LR 00 54 03.4
comp=Z,161nm,20.6s,baz=274,slow=35
INU Inuyama 50.28 45 P **P 00 33 42.7 -0.9**
INU IAmb IAmb 00 33 44.7
comp=Z,11nm,0.9s
JGF Kuroka 50.64 45 P **P 00 33 45.1 -1.3**
JGF IAmb IAmb 00 33 46.9
comp=Z,14nm,0.9s
HIA Hailar 50.73 20 P **P 00 33 46.5 -0.3**
HIA IAmb IAmb 00 33 48.5
comp=Z,27nm,1.3s
JCJ Chichijima 50.75 57 LR LR 00 53 17.8
comp=Z,86nm,21.6s,baz=256,slow=34
JCJ Chichijima 50.75 57 P **P 00 33 45.6 -1.7**
BRZS Berezniki 50.88 341 *e*P **P 00 33 47.4 -0.5**
comp=Z,17nm,1.9s,baz=341
BNX BinXian 51.09 28 ⇑P **P 00 33 49.0 -0.5**
BNX pmax pmax
comp=Z,19nm,0.7s
BNX pmax pmax
comp=Z,110nm,4.8s
MDJ Mudanjiang 51.36 31 P **P 00 33 51.6 +0.1**
MDJ IAmb IAmb 00 33 53.7
comp=Z,44nm,1.5s
MDJ Mudanjiang 51.36 31 P **P 00 33 53.2 +1.7**
MDJ pmax pmax
comp=Z,20nm,1.3s
MDJ pmax pmax
comp=Z,120nm,7.3s
MAJO Matsushiro 51.71 44 P **P 00 33 53.3 -1.0**
MAJO IAmb IAmb 00 33 55.8
comp=Z,18nm,1.4s
MJAR Matsushiro Arr 51.71 44 P **P 00 33 54.8 +0.4**
comp=Z,1.2nm,0.4s,baz=208,slow=7.0,SNR=5.8
comp=Z,1.2nm,0.4s
ZAA0 Zalesovo Array 51.76 352 P **P 00 33 54.1 -0.3**
ZALV Zalesovo Beam 51.76 352 P **P 00 33 54.6 +0.3**
comp=Z,37nm,0.6s,baz=181,slow=7.4,SNR=243
ZALV Zalesovo Beam 51.76 352 P **P 00 33 54.2 -0.1**
OPO Ambohidratompo 52.06 244 P **P 00 33 59.2 +1.8**
comp=Z,2.1nm,0.5s,baz=60,slow=2.9,SNR=5.5
comp=Z,2.1nm,0.5s
USRK Ussuriysk Ar. 52.34 33 P **P 00 34 00.3 +1.5**
comp=Z,6.6nm,0.8s,baz=355,slow=2.3,SNR=16
comp=Z,6.6nm,0.8s
USRK Ussuriysk Ar. 52.34 33 P **P 00 33 58.9 +0.1**
RAYN Ar Rayn 52.53 298 P **P 00 34 01.6 +1.0**
RAYN Ar Rayn 52.53 298 P **P 00 34 01.5 +0.8**
RAYN pP **pP 00 34 08.2 -0.7**
PMG Port Moresby 52.87 104 LR LR 00 59 30.8
comp=Z,228nm,18.2s,baz=294,slow=39
ATD Arta Tunnel 52.89 282 LR LR 00 52 54.6
comp=Z,109nm,21.8s,baz=22,slow=32
BRVK Borovoye 54.29 342 P **P 00 34 12.6 -0.4**
BRVK IAmb IAmb 00 34 13.5
comp=Z,11nm,0.8s
CTAO Charters Tower 54.72 117 P **P 00 34 16.7 -0.1**
CTAO IAmb IAmb 00 34 18.9
comp=Z,21nm,1.2s
ABKAR Akbulak array 55.34 332 P **P 00 34 20.5 -0.2**
ABKAR IAmb IAmb 00 34 39.7
comp=Z,14nm,0.9s
ABKAR Akbulak array 55.34 332 P **P 00 34 20.6 -0.1**
STKA Stephens Creek 55.66 132 LR LR 01 00 19.4
comp=Z,106nm,19.7s,baz=276,slow=38
ERM Erimo 57.76 41 P **P 00 34 38.4 +0.4**
KMBO Kilima Mbogo 58.36 267 LR LR 00 57 23.7
comp=Z,416nm,18.5s,baz=74,slow=34
KMBO Kilima Mbogo 58.36 267 P **P 00 34 43.2 +0.1**
KMBO IAmb IAmb 00 35 33.3
comp=Z,13nm,1.8s
GNI Garni 58.99 316 LR LR 01 03 57.6
comp=Z,73nm,18.0s,baz=116,slow=40
YSS Yuzh-Sakhalins 60.04 35 P **P 00 34 54.0 +0.2**
LODK Lodwar 60.05 272 P **P 00 34 55.5 +1.0**
GURO Guroymak-BITLI 60.26 313 P **P 00 34 55.5 -0.3**
KARS Kars 60.35 316 P **P 00 34 55.8 -0.5**
MARD Mardin 60.73 312 P **P 00 34 59.2 +0.3**
MARD IAmb IAmb 00 37 08.7
comp=Z,6.3nm,0.9s
ONI Oni 60.92 318 P **P 00 34 59.5 -0.5**
ARU Arti 61.09 338 P **P 00 34 59.4 -1.4**
ARU IAmb IAmb 00 35 01.0
comp=Z,12nm,1.0s
ARU Arti 61.09 338 P **P 00 34 59.2 -1.6**
ARU pP **sP 00 35 12.7 +0.4**
KBZ Khabaz 61.78 319 P **P 00 35 06.2 +0.6**
comp=Z,1.3nm,0.8s,baz=215,slow=6.8,SNR=4.8
comp=Z,1.3nm,0.8s
KVAR Kislovodsk Arr 62.01 319 LR LR 01 03 54.4
comp=Z,56nm,21.3s,baz=98,slow=38
KIV Kislovodsk 62.02 319 P **P 00 35 07.3 -0.1**
EIL Elat 63.19 302 LR LR 01 02 26.3
comp=Z,267nm,19.2s,baz=108,slow=36
YAK Yakutsk 64.41 17 P **P 00 35 22.1 -0.6**
comp=Z,13nm,0.4s,baz=312,slow=1.8,SNR=4.4
YAK LR LR 01 06 27.7
comp=Z,706nm,18.0s,baz=262,slow=39
comp=Z,13nm,0.4s
YAK Yakutsk 64.41 17 P **P 00 35 21.6 -1.2**
MBAR Mbarara 64.83 268 LR LR 01 01 13.6
comp=Z,192nm,18.8s,baz=75,slow=34
BNN Bunyan 64.91 312 P **P 00 35 25.6 -1.1**
BNN IAmb IAmb 00 37 01.0
comp=Z,10nm,0.8s
HNR Honiara 65.33 102 LR LR 01 07 43.5
comp=Z,47nm,18.9s,baz=348,slow=39
CSS Mathiatis 65.77 307 P **P 00 35 31.1 -1.2**
CSS IAmb IAmb 00 36 12.2
comp=Z,25nm,1.7s
KIRV Kirov 66.19 336 LR LR 01 08 44.3
comp=Z,151nm,18.9s,baz=133,slow=40
NRIK Noril'sk 66.67 357 P **P 00 35 36.9 -0.4**
comp=Z,2.1nm,0.4s,baz=161,slow=3.8,SNR=6.3
NRIK LR LR 01 07 59.9
comp=Z,217nm,20.4s,baz=172,slow=39
comp=Z,2.1nm,0.4s
NRIK Noril'sk 66.67 357 P **P 00 35 35.8 -1.5**
NRIK IAmb IAmb 00 35 38.6
comp=Z,19nm,1.2s
BRTR Keskin Array B 66.81 312 P **P 00 35 38.8 -0.1**
comp=Z,1.1nm,0.7s,baz=111,slow=7.9,SNR=2.6
BRTR LR LR 01 07 20.7
comp=Z,75nm,18.7s,baz=120,slow=38
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 66.81 312 P **P 00 35 38.0 -1.0**
ILGA Ilgaz 67.14 314 P **P 00 35 41.3 +0.2**
ANTO Ankara 67.47 312 P **P 00 35 42.5 -0.6**
ANTO IAmb IAmb 00 35 44.2
comp=Z,5.7nm,0.7s
POGA Pongola 68.26 239 P **P 00 35 48.5 +0.3**
ELL Elmali 68.89 308 P **P 00 35 52.2 +0.1**
LSZ Lusaka 68.95 253 LR LR 01 00 52.5
comp=Z,188nm,19.9s,baz=88,slow=31
BORA Eskisehir 69.21 312 P **P 00 35 53.9 -0.1**
BORA IAmb IAmb 00 37 58.4
comp=Z,16nm,1.5s
OBN Obninsk 70.40 329 P **P 00 36 01.0 +0.2**
MA2 Magadan 70.67 26 P **P 00 36 02.3 -0.1**
MA2 IAmb IAmb 00 36 03.7
comp=Z,22nm,1.3s
PETK Petropavlovsk- 71.38 34 P **P 00 36 06.6 -0.3**
comp=Z,1.6nm,1.0s,baz=242,slow=3.1,SNR=3.5

PETK LR LR 01 11 40.9
comp=Z,161nm,18.2s,baz=242,slow=40
comp=Z,1.6nm,1.0s
PETK Petropavlovsk- 71.38 34 P P 00 36 05.8 -1.1
KLMR Klimovskoe 71.61 335 eP P 00 36 04.4 -3.7
KLMR AMP 00 36 08.3
comp=Z,9.0nm,0.8s
TIRR Tirgusor 71.82 316 ⇑P P 00 36 06.9 -2.8
TIRR Tirgusor 71.82 316 P P 00 36 09.7 0.0
TIRR IAmb IAmb 00 37 52.9
comp=Z,26nm,1.4s
PET Petropavlovsk 71.89 35 P P 00 36 09.1 -0.8
TIXI Tiksi 71.95 11 LR LR 01 10 45.2
comp=Z,236nm,19.0s,baz=183,slow=38
TIXI Tiksi 71.95 11 P P 00 36 09.3 -0.7
MILM Milestii Mici 72.19 319 ⇓P P 00 36 10.9 -0.9
CFR Carcaliu 72.19 317 ⇑P P 00 36 11.7 -0.1
HARR Harsova 72.21 316 ⇑P P 00 36 12.0 0.0
IDI Anoyia 72.61 306 LR LR 01 11 35.4
comp=Z,69nm,19.9s,baz=94,slow=39
IDI Anoyia 72.61 306 P P 00 36 14.8 +0.1
IDI IAmb IAmb 00 36 33.0
comp=Z,21nm,1.4s
ALN Alexandroupoli 72.72 312 P P 00 36 14.9 -0.2
ALN IAmb IAmb 00 36 48.5
comp=Z,13nm,1.3s
SORM Soroca 72.81 320 ⇑P P 00 36 14.5 -1.0
AKASG Malin Array Be 72.99 322 P P 00 36 15.5 -1.0
comp=Z,0.6nm,0.5s,baz=89,slow=5.1,SNR=6.8
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 72.99 322 P P 00 36 15.8 -0.7
AKBB Malin Array Si 72.99 322 P P 00 36 15.5 -1.0
LBTB Lobatse 73.07 243 LR LR 01 04 43.6
comp=Z,270nm,19.3s,baz=76,slow=33
LBTB Lobatse 73.07 243 P P 00 36 16.3 -1.4
LBTB IAmb IAmb 00 36 28.0
comp=Z,32nm,1.6s
RDO Rodhopi 73.15 312 P P 00 36 17.7 +0.1
RDO IAmb IAmb 00 36 25.8
comp=Z,16nm,1.6s
VRI Vrincioaia 73.32 317 ⇑P P 00 36 19.3 +0.7
PLOR Plostina 73.37 317 ⇑P P 00 36 19.4 +0.5
DZM Mont Dzumac 73.47 114 LR LR 01 10 08.3
comp=Z,149nm,20.9s,baz=214,slow=37
TESR Tescani 73.53 318 ⇑P P 00 36 19.7 -0.1
MLR Muntele Rosu 73.77 317 ⇑P P 00 36 21.3 -0.1
MLR Muntele Rosu 73.77 317 LR LR 01 13 14.9
comp=Z,58nm,19.6s,baz=73,slow=40
MLR Muntele Rosu 73.77 317 P P 00 36 21.1 -0.3
MLR IAmb IAmb 00 36 59.4
comp=Z,13nm,1.3s
MAW Mawson 73.86 192 LR LR 01 05 11.7
comp=Z,101nm,18.4s,baz=30,slow=33
MAW Mawson 73.86 192 P P 00 36 22.7 +1.5
BIZ Bicaz 73.99 318 ⇑P P 00 36 23.5 +1.0
BOSA Boshof 74.10 239 LR LR 01 06 34.8
comp=Z,258nm,18.5s,baz=36,slow=34
VOIR 74.37 316 ⇑P P 00 36 23.9 -1.0
BURAR Bucovina Array 74.73 319 P P 00 36 27.7 +0.7
BUR08 Bucovina Ar. S 74.75 319 P P 00 36 27.6 +0.5
MNK Minsk 74.88 326 *i* P P 00 36 26.3 -1.2
comp=E,1.0nm,0.7s
MNK *i* P P **00 36 26.3 -1.2**
comp=N,7.0nm,0.9s
MNK *i* P P **00 36 26.3 -1.2**
comp=Z,13nm,0.8s,baz=106
MNK *i* PcP **sP 00 36 40.0 +0.8**
MNK *i* PP **PP 00 39 13.5 -1.6**
MNK *i* PPP PPP 00 40 59.5
MNK *i* S **S 00 46 01.2 -1.6**
MNK *i* SS **SS 00 50 50.3 -1.0**
MNK *i* SSS SSS 00 54 12.9
MNK *i* LR LR 01 10 07.5
MNK *i* LRM MLR 01 11 59.9
comp=Z,62nm,19.8s
MNK *i* LRM MLR 01 12 05.7
comp=E,12nm,23.6s
MNK *i* LRM MLR 01 12 08.2
comp=N,17nm,16.0s
NACGM Naroch 75.61 326 ⇓*i* P P 00 36 32.0 +0.4
baz=106
BOVS Bovan 76.39 314 ⇑P P 00 36 31.5 -4.9
SIRR Siria 76.86 317 ⇑P P 00 36 38.9 -0.1
PABE Paberze 77.32 326 P P 00 36 40.7 -0.6
FINES FINESS Array B 77.83 333 P P 00 36 44.2 +0.1
comp=N,2.9nm,0.6s,baz=94,slow=5.9,SNR=15
FINES LR LR 01 16 10.6
comp=N,115nm,18.4s,baz=114,slow=40
comp=N,2.9nm,0.6s
FINES FINESS Array B 77.83 333 P P 00 36 43.7 -0.4
PSZ Piszkesteto 78.31 318 P P 00 36 47.3 +0.1
SUR Sutherland 78.61 236 LR LR 01 05 09.4
comp=N,170nm,21.2s,baz=78,slow=31
TSUM Tsumeb 79.52 250 LR LR 01 10 14.4
comp=N,128nm,18.2s,baz=106,slow=34
JAVC Velka Javorina 79.92 319 eP P 00 36 54.1 -1.8
MORC Moravsky Berou 80.12 320 P P 00 36 57.0 0.0
MORC Moravsky Berou 80.12 320 eP P 00 36 56.5 -0.5
ARCES ARCESS Array B 80.49 340 P P 00 36 58.9 +0.3
comp=N,2.1nm,0.7s,baz=98,slow=7.2,SNR=11
ARCES LR LR 01 17 31.3
comp=N,132nm,19.0s,baz=114,slow=39
comp=N,2.1nm,0.7s
ARCES ARCESS Array B 80.49 340 P P 00 36 59.0 +0.4
RONA Rosalia, Austr 80.69 318 eP P 00 37 01.1 +1.0
comp=N,6.3nm,1.3s
KRUC Moravsky 80.77 319 eP P 00 37 00.1 -0.4
CONA Conrad Observa 81.00 318 eP P 00 37 12.5 +11
comp=N,6.8nm,1.9s
ARSA Arzberg 81.17 317 eP P 00 37 14.1 +11
comp=N,6.7nm,1.3s
SOKA Soboth 81.45 317 eP P 00 37 06.1 +1.9
comp=N,8.8nm,1.1s
RPZ Rata Peaks 81.51 135 LR LR 01 12 09.4
comp=N,188nm,21.3s,baz=280,slow=35
MOA Molln 82.07 318 eP P 00 37 15.3 +7.9
comp=N,5.1nm,1.4s
PRED Cave del Predi 82.44 316 P P 00 37 09.8 +0.4
PRED IAmb IAmb 00 38 26.6
comp=Z,14nm,1.4s
BIOA Bad Ischl, Aus 82.48 318 eP P 00 37 09.6 0.0
comp=Z,0.1nm,0.2s
GEC2 GERESS Array S 82.52 319 P P 00 37 10.7 +0.9
GERES GERESS Array B 82.52 319 P P 00 37 10.6 +0.7
comp=Z,1.3nm,0.7s,baz=102,slow=5.6,SNR=11
comp=Z,1.3nm,0.7s
BRG Berggiesshubel 82.53 321 eP P 00 37 17.7 +8.0
BRG Amp 00 37 19.7
comp=Z,2.2nm,0.7s
KHC Kasperske Hory 82.62 319 P P 00 37 10.4 +0.1
KBA Koelnbreinsper 82.63 317 eP P 00 37 11.8 +1.3
comp=Z,7.8nm,1.4s
CLUD Cludinico 82.91 316 P P 00 37 12.7 +0.8
CLUD IAmb IAmb 00 37 37.9
comp=Z,15nm,1.0s
STAL STALIGIAL 83.02 316 P P 00 37 12.4 0.0
CLL Collm 83.15 321 esP sP 00 37 26.0 +1.4
CLL *eS* **S 00 47 32.0 +0.9**
CLL *ePPS* PPS 00 48 48.0
CLL *eSS* **SS 00 53 06.0 +10**
ABTA Abfaltersbach 83.18 317 eP P 00 37 26.9 +14
comp=Z,4.8nm,1.6s
CIMO Cimolais 83.21 316 P P 00 37 14.4 +1.0
CIMO IAmb IAmb 00 37 41.7
comp=Z,8.6nm,1.0s
WTTA Wattenberg 83.81 317 eP P 00 37 23.3 +6.6
comp=Z,5.4nm,1.2s
WATA Walderalm 83.85 317 eP P 00 37 17.9 +1.1
comp=Z,2.8nm,0.9s
SQTA Sankt Quirin 84.10 317 eP P 00 37 25.4 +7.4
comp=Z,4.1nm,0.8s
MOTA Moosalm 84.17 317 eP P 00 37 25.6 +7.1
comp=Z,4.7nm,1.0s
RETA Reutte 84.41 317 eP P 00 37 19.1 -0.4
comp=Z,5.3nm,1.4s
FETA Feichten 84.42 317 eP P 00 37 29.3 +10
comp=Z,4.8nm,1.2s
NB2 NORSAR Subarra 84.82 331 P P 00 37 20.6 -0.7
comp=Z,2.7nm,0.9s,baz=92,slow=5.6
NOA NORSAR Array B 84.82 331 P P 00 37 20.0 -1.2
comp=Z,0.8nm,0.7s,baz=96,slow=5.1,SNR=4.3
NOA LR LR 01 18 48.3
comp=Z,83nm,21.7s,baz=90,slow=38
comp=Z,0.8nm,0.7s
SPITS Spitsbergen Ar 85.08 348 LR LR 01 21 05.0
comp=Z,138nm,20.8s,baz=90,slow=40

URZ Urewera 85.12 129 LR LR 01 16 31.5
comp=Z,103nm,20.0s,baz=211,slow=36
VNDA Vanda 87.69 168 LR LR 01 11 37.9
comp=Z,96nm,19.9s,baz=336,slow=32
JMIC Jan Mayen 91.94 341 LR LR 01 23 42.7
comp=Z,74nm,18.8s,baz=73,slow=38
QSPA South Pole Qui 92.71 180 LR LR 01 16 17.4
comp=Z,215nm,18.9s,baz=312,slow=33
SNAA Sanae 95.25 198 LR LR 01 17 39.1
comp=Z,51nm,18.1s,baz=74,slow=33
ESDC Sonseca Array 95.52 310 LR LR 01 24 30.2
comp=Z,52nm,20.2s,baz=120,slow=38
MDT Midelt 96.99 303 LR LR 01 26 49.1
comp=Z,37nm,18.5s,baz=119,slow=38
BORG Borgarnes 98.63 337 LR LR 01 27 07.6
comp=Z,73nm,20.4s,baz=69,slow=38
DBIC Dimbokro 99.95 277 LR LR 01 21 10.7
comp=Z,84nm,20.0s,baz=110,slow=34
NVAR Mina Array Bea 128.47 34 PKP PKPdf 00 43 54.3 -0.1
comp=Z,0.1nm,0.3s,baz=90,slow=3.0,SNR=3.9
TXAR Lajitas Array 143.17 29 PKhKP PKPpre 00 44 19.0
comp=Z,0.4nm,0.7s,baz=276,slow=3.0,SNR=5.9

*IDC **02** 00:24:59.7±1.4, 62.08N×149.72W, h41km±14km, mb3.8/11, mbtmp4.0/16, ML4.1/5, MS3.4/16, Error ellipse: s-maj=15.4km s-min=9.2km az=105.0*
*AEIC **02** 00:25:01±1.1, 62.05N±0.02×149.39W±0.05, h38km±6km, ML4.1, mb4.2/16(NEIC), ML4.3/190(NEIC), Mwr4.1/96(NEIC), Error ellipse: s-maj=3.5km s-min=2.9km az=96.0*
*NEIC **02** 00:25:01.2±1.1, 62.05N±0.03×149.39W±0.05, h45km±3km, Error ellipse: s-maj=3.9km s-min=3.3km az=220.0*
*ANF **02** 00:25:01.2±0.1, 62.05N×149.39W, h34km±1km, ML4.5/92, Error ellipse: s-maj=0.9km s-min=0.9km az=88.0*
*NEIC **02** 00:25:01, 62.04N×149.39W, h49km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.42; $M_{\theta\theta}$=0.20; $M_{\phi\phi}$ 1.62; $M_{r\theta}$=0.87; $M_{\theta\phi}$=0.20; $M_{r\phi}$=0.19; Fault plane solution: $M_0$1.78000×10^{15} NP1:ϕ_s197.70000°, δ45.49000°, λ-50.92000°. NP2:ϕ_s328.50000°, δ56.39000°, λ-122.68000°. Principal axes: T 1.6699, Plg6.0000°, Azm81.0000°; N 0.2041, Plg27.0000°, Azm348.0000°; P -1.8740, Plg63.0000°, Azm183.0000°;*
ISC 02 00:25:00.9±0.7, 62.05N±0.02×149.38W±0.03, h44km±6km, n439,$_o$0$_s$81/444, mb4.1/17, MS3.4/11, 1C, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GHO	**Glory Hole Cre**	**0.35**	**142**			**Pn**		**00 25 10.1**	**-0.1**
GHO				Sn		**Sn**		**00 25 17.1**	**+0.5**
GHO				IAML				00 25 18.3	
	comp=N,21μm,0.3s								
M22K	**Willow**	**0.46**	**231**			**Pn**		**00 25 10.6**	**-0.6**
M22K						**Sn**		**00 25 18.6**	**0.0**
M22K	**Willow**	**0.46**	**231**	IAML				00 25 19.4	
	comp=N,45μm,0.3s								
M22K				IAML				00 25 19.6	
	comp=E,43μm,0.7s								
M22K	**Willow**	**0.46**	**231**	P		**Pn**		**00 25 10.7**	**-0.6**
	baz=50,SNR=298								
M22K				S		**Sn**		**00 25 18.7**	**+0.1**
	baz=50								
PMR	**Palmer**	**0.47**	**165**			**Pn**		**00 25 10.9**	**-0.5**
PMR	**Palmer**	**0.47**	**165**			**Sn**		**00 25 19.0**	**+0.1**
PMR	**Palmer**	**0.47**	**165**	P		**Pn**		**00 25 10.9**	**-0.5**
	baz=345,SNR=275								
PMR				S		**Sn**		**00 25 18.9**	**+0.1**
	baz=345								
SML	**Sawmill**	**0.55**	**115**			**Pn**		**00 25 12.2**	**-0.3**
SML						**Sn**		**00 25 21.0**	**+0.2**
SML				IAML				00 25 23.0	
	comp=E,12μm,1.1s								
SML	**Sawmill**	**0.55**	**115**	P		**Pn**		**00 25 12.2**	**-0.3**
	baz=296,SNR=792								
SML				S		**Sn**		**00 25 21.0**	**+0.2**
	baz=296								
CUT	**Chulitna**	**0.55**	**311**			**Pn**		**00 25 12.2**	**-0.3**
CUT						**Sn**		**00 25 21.3**	**+0.6**
CUT	**Chulitna**	**0.55**	**311**	P		**Pn**		**00 25 12.3**	**-0.3**
	baz=132,SNR=600								
CUT				S		**Sn**		**00 25 21.0**	**+0.3**
	baz=132								
KNK	**Knik Glacier**	**0.77**	**145**			**Pn**		**00 25 15.3**	**-0.1**
KNK						**Sn**		**00 25 26.5**	**+0.7**
KNK				IAML				00 25 30.0	
	comp=E,10μm,0.5s								
KNK	**Knik Glacier**	**0.77**	**145**	P		**Pn**		**00 25 15.3**	**-0.1**
	baz=325,SNR=367								
KNK				S		**Sn**		**00 25 26.6**	**+0.7**
	baz=325								
M23K	**Glacier View**	**0.82**	**107**			**Pn**		**00 25 15.8**	**-0.3**
M23K						**Sn**		**00 25 27.6**	**+0.4**
M23K	**Glacier View**	**0.82**	**107**	P		**Pn**		**00 25 15.8**	**-0.3**
	baz=288,SNR=1000								
M23K				S		**Sn**		**00 25 27.9**	**+0.7**
	baz=288								
WAT7	**Susitna Watana**	**0.83**	**17**			**Pn**		**00 25 16.0**	**-0.3**
WAT7						**Sn**		**00 25 27.6**	**+0.1**
WAT1	**Susitna Watana**	**0.88**	**26**			**Pn**		**00 25 16.5**	**-0.4**
WAT1	**Susitna Watana**	**0.88**	**26**	P		**Pn**		**00 25 16.5**	**-0.4**
	baz=207								
WAT1				S		**Sn**		**00 25 28.5**	**0.0**
	baz=207								
WAT6	**Susitna Watana**	**0.94**	**54**			**Pn**		**00 25 17.3**	**-0.5**
WAT6						**Sn**		**00 25 29.6**	**-0.5**
WAT6	**Susitna Watana**	**0.94**	**54**	P		**Pn**		**00 25 17.3**	**-0.5**
	baz=236,SNR=338								
WAT6				S		**Sn**		**00 25 29.9**	**-0.2**
	baz=236								
RC01	**Rabbit Creek A**	**0.97**	**190**			**Pn**		**00 25 18.0**	**-0.2**
RC01						**Sn**		**00 25 31.8**	**+1.0**
RC01	**Rabbit Creek A**	**0.97**	**190**	P		**Pn**		**00 25 17.7**	**-0.5**
	baz=9.7,SNR=680								
RC01				S		**Sn**		**00 25 32.0**	**+1.2**
	baz=9.7								
FIS	**Fire Island**	**0.99**	**204**			**Pn**		**00 25 19.2**	**+0.8**
FIS				IAML				00 25 36.1	
	comp=E,15μm,0.4s								
SCM	**Sheep Creek Mo**	**0.99**	**101**			**Pn**		**00 25 18.4**	**-0.1**
SCM	**Sheep Creek Mo**	**0.99**	**101**	IAML				00 25 36.8	
	comp=N,7μm,0.6s								
SCM				IAML				00 25 37.1	
	comp=E,10μm,0.6s								
SCM	**Sheep Creek Mo**	**0.99**	**101**	P		**Pn**		**00 25 18.4**	**-0.1**
	baz=283,SNR=1000								
SCM				S		**Sn**		**00 25 32.5**	**+1.2**
	baz=283								
STLK	**Strandline Lak**	**1.29**	**246**			**Pn**		**00 25 22.4**	**-0.1**
PWL	**Port Wells**	**1.29**	**157**			**Pn**		**00 25 22.7**	**+0.2**
PWL	**Port Wells**	**1.29**	**157**	P		**Pn**		**00 25 22.8**	**+0.2**
	baz=337,SNR=394								
PWL				S		**Sn**		**00 25 39.7**	**+1.2**
	baz=337								
RND	**Reindeer**	**1.39**	**10**			**Pn**		**00 25 24.1**	**+0.2**
DHY	**Denali Highway**	**1.39**	**41**			**Pn**		**00 25 23.9**	**-0.1**
DHY				IAML				00 25 46.7	
	comp=N,3μm,0.9s								
DHY				IAML				00 25 47.4	
	comp=E,4μm,0.7s								
DHY	**Denali Highway**	**1.39**	**41**	P		**Pn**		**00 25 23.9**	**-0.1**
	baz=223,SNR=295								
DHY				S		**Sn**		**00 25 42.1**	**+1.0**
	baz=223								
SPCG	**Spurr Capps Gl**	**1.47**	**240**			**Pn**		**00 25 25.3**	**+0.2**
TRF	**Thorofare Moun**	**1.47**	**344**			**Pn**		**00 25 25.4**	**+0.3**
TRF	**Thorofare Moun**	**1.47**	**344**	P		**Pn**		**00 25 25.4**	**+0.3**
	baz=163,SNR=225								
TRF				S		**Sn**		**00 25 43.6**	**+0.4**
	baz=163								
M24K	**Tolsona, Glenn**	**1.51**	**86**			**Pn**		**00 25 26.5**	**+1.0**
M24K				IAML				00 25 50.2	
	comp=E,6μm,0.4s								
M24K				IAML				00 25 50.3	
	comp=N,4μm,0.7s								
M24K	**Tolsona, Glenn**	**1.51**	**86**	P		**Pn**		**00 25 26.6**	**+1.1**
	baz=269,SNR=658								
CAPN	**Captain Cook N**	**1.54**	**214**			**Pn**		**00 25 27.8**	**+2.0**
CAPN	**Captain Cook N**	**1.54**	**214**	P		**Pn**		**00 25 27.6**	**+1.7**
	baz=33,SNR=41								
SPU	**Mount Spurr**	**1.54**	**237**			**Pn**		**00 25 26.2**	**+0.2**
PPLA	**Purkeypile**	**1.56**	**304**			**Pn**		**00 25 26.4**	**+0.1**
PPLA	**Purkeypile**	**1.56**	**304**	P		**Pn**		**00 25 26.4**	**+0.1**
	baz=122,SNR=489								

O22K Cooper Landing 1.58 186 Pn 00 25 26.3 -0.1
O22K Cooper Landing 1.58 186 P Pn 00 25 26.3 -0.1
baz=5.7,SNR=62
O22K S **Sn 00 25 46.8 +1.3**
baz=5.7
SLKM Skilak Lake 1.60 195 Pn 00 25 26.5 -0.1
SPCR Spurr Chakacha 1.60 239 Pn 00 25 27.0 +0.3
SPCR Spurr Chakacha 1.60 239 P Pn 00 25 26.6 -0.1
baz=57,SNR=331
GLI Glacier Island 1.60 136 Pn 00 25 26.7 -0.1
GLI Glacier Island 1.60 136 P Pn 00 25 27.2 +0.4
baz=318,SNR=422
CKL Chakachamna La 1.65 240 Pn 00 25 27.9 +0.4
JPK Jack Peak 1.66 126 Pn 00 25 28.0 +0.4
KTH Kantishna Hill 1.67 336 Pn 00 25 28.1 +0.3
KTH IAML 00 25 49.8
comp=E,2μm,0.7s
SPWE Spurr West 1.70 244 Pn 00 25 28.5 +0.3
MCK McKinley 1.71 7 Pn 00 25 28.8 +0.6
MCK McKinley 1.71 7 P Pn 00 25 28.7 +0.5
baz=187,SNR=188
MCK S **Sn 00 25 49.9 +1.2**
baz=187
KLU Klutina 1.73 107 Pn 00 25 29.1 +0.5
KLU IAML 00 25 53.6
comp=N,5μm,0.4s
KLU IAML 00 25 53.8
comp=E,5μm,0.5s
KLU Klutina 1.73 107 P Pn 00 25 29.1 +0.5
baz=290,SNR=1000
KLU S **Sn 00 25 50.9 +1.4**
baz=290
VMT TAPS Tl Valdez 1.73 122 Pn 00 25 28.8 +0.2
M20K Styx River 1.78 266 Pn 00 25 29.7 +0.5
M20K IAML 00 25 53.6
comp=N,4μm,0.5s
M20K IAML 00 25 54.0
comp=E,5μm,0.5s
M20K Styx River 1.78 266 P Pn 00 25 29.8 +0.5
baz=83
PS11 TAPS Pump St11 1.84 87 Pn 00 25 31.5 +1.5
CAST Castle Rocks 1.86 319 Pn 00 25 30.3 0.0
CAST Castle Rocks 1.86 319 P Pn 00 25 30.3 0.0
baz=137,SNR=466
CAST S **Sn 00 25 53.2 +0.7**
baz=137
FID Port Fidalgo 1.91 132 Pn 00 25 31.1 +0.2
SEW Seward 1.95 181 Pn 00 25 31.9 +0.4
SEW Seward 1.95 181 P Pn 00 25 32.0 +0.6
baz=0.9,SNR=28
DIV Divide 1.95 116 Pn 00 25 31.7 +0.1
HARP HAARP 2.01 78 Pn 00 25 33.9 +1.5
HARP HAARP 2.01 78 P Pn 00 25 33.9 +1.5
baz=262,SNR=328
PAX Paxson 2.04 61 Pn 00 25 33.9 +1.1
PAX Paxson 2.04 61 P Pn 00 25 33.9 +1.1
baz=245,SNR=652
PS12 TAPS Pump St12 2.09 104 Pn 00 25 34.0 +0.5
BWN Browne 2.13 359 Pn 00 25 34.5 +0.5
BWN IAML 00 26 14.9
comp=N,3μm,0.9s
BWN IAML 00 26 25.9
comp=E,3μm,0.8s
L20K Farewell, AK 2.15 284 Pn 00 25 34.2 -0.1
L20K Farewell, AK 2.15 284 P Pn 00 25 34.2 -0.1
baz=100,SNR=1000
DFR Drift River 2.16 229 Pn 00 25 34.8 +0.3
HIN Hinchinbrook I 2.16 139 Pn 00 25 34.8 +0.4
PS10 TAPS Pump St10 2.16 49 Pn 00 25 36.3 +1.9
BPAW Bear Paw Mtn. 2.19 341 Pn 00 25 34.8 -0.1
BPAW Bear Paw Mtn. 2.19 341 P Pn 00 25 34.7 -0.1
baz=160,SNR=149
RDJH Redoubt Jeurge 2.20 230 Pn 00 25 35.6 +0.5
P23K Montague Islan 2.27 154 Pn 00 25 35.5 -0.4
P23K Montague Islan 2.27 154 P Pn 00 25 35.2 -0.7
baz=336,SNR=44
NCT North Crescent 2.27 231 Pn 00 25 36.6 +0.6
RDSO Redoubt South 2.28 227 Pn 00 25 36.4 +0.2
CHUM Lake Minchumin 2.28 325 Pn 00 25 36.3 +0.3
CHUM Lake Minchumin 2.28 325 P Pn 00 25 36.3 +0.3
baz=143,SNR=38
RDWB Redoubt West 2.29 228 Pn 00 25 36.7 +0.4
EYAK Cordova Ski Ar 2.31 129 Pn 00 25 36.9 +0.5
EYAK Cordova Ski Ar 2.31 129 P Pn 00 25 36.8 +0.5
baz=312,SNR=175
N25K Chitina, Valde 2.31 99 Pn 00 25 37.2 +0.7
N25K IAML 00 26 11.1
comp=N,1μm,0.3s
N25K IAML 00 26 13.6
comp=E,1μm,0.5s
N25K Chitina, Valde 2.31 99 P Pn 00 25 37.3 +0.7
baz=283,SNR=216
N25K S **Sn 00 26 05.0 +1.2**
baz=283
RED Redoubt Volcan 2.31 227 Pn 00 25 37.1 +0.5
M19K Big River Lodg 2.37 269 Pn 00 25 37.4 +0.1
M19K IAML 00 26 24.3
comp=E,1μm,0.7s
M19K IAML 00 26 25.9
comp=N,2μm,0.6s
M19K Big River Lodg 2.37 269 P Pn 00 25 37.4 +0.1
baz=84,SNR=297
M19K S **Sn 00 26 05.9 +0.8**
baz=84
WACK Wrangell Chich 2.38 89 Pn 00 25 38.4 +0.7
BRLK Bradley Lake 2.40 199 Pn 00 25 38.4 +0.6
BRLK IAML 00 26 13.6
comp=E,1μm,0.7s
BRSE Bradley Lake S 2.41 197 Pn 00 25 37.5 -0.3
BRSE Bradley Lake S 2.41 197 P Pn 00 25 38.3 +0.6
baz=15,SNR=38
K24K Donnelly Dome 2.41 41 Pn 00 25 40.6 +2.7
K24K Donnelly Dome 2.41 41 P Pn 00 25 40.5 +2.6
baz=225,SNR=392
WASW Wrangell South 2.46 90 Pn 00 25 39.9 +1.2
WRH Wood River Hil 2.50 13 Pn 00 25 39.2 +0.1
PS09 TAPS Pump Stn9 2.51 39 Pn 00 25 41.6 +2.4
O20K Slope Mountain 2.52 220 Pn 00 25 40.5 +1.1
O20K Slope Mountain 2.52 220 P Pn 00 25 40.2 +0.8
baz=37,SNR=30
BMRM Bremner River 2.53 113 Pn 00 25 39.4 -0.1
BMRM IAML 00 26 17.7
comp=N,2μm,0.5s
BMRM Bremner River 2.53 113 P Pn 00 25 39.5 0.0
baz=297,SNR=412
K20K Telida 2.53 303 Pn 00 25 39.4 -0.1
K20K IAML 00 26 27.4
comp=E,1μm,0.7s
K20K IAML 00 26 27.7
comp=N,889nm,0.6s
K20K Telida 2.53 303 P Pn 00 25 39.5 0.0
baz=119,SNR=184
NEA2 Nenana 2.56 3 Pn 00 25 39.8 -0.1
NEA2 Nenana 2.56 3 P Pn 00 25 39.8 -0.1
baz=183,SNR=133
L19K White Mountain 2.58 275 Pn 00 25 40.3 +0.2
L19K White Mountain 2.58 275 IAML 00 26 13.2
comp=N,1μm,0.5s
L19K IAML 00 26 13.3
comp=E,2μm,0.5s
L19K White Mountain 2.58 275 P Pn 00 25 40.3 +0.2
baz=91,SNR=471
HDA Harding Lake 2.62 24 Pn 00 25 41.2 +0.6
HDA Harding Lake 2.62 24 IAML 00 26 18.1
comp=E,2μm,0.4s
HDA IAML 00 26 28.9
comp=N,1μm,0.6s
HDA Harding Lake 2.62 24 P Pn 00 25 41.0 +0.3
baz=206,SNR=219
ILIM Iliamna 2.63 223 Pn 00 25 41.7 +0.8
HOM Homer 2.64 206 Pn 00 25 41.4 +0.5
HOM Homer 2.64 206 P Pn 00 25 41.7 +0.8
baz=24
GOAT Goat Mountain 2.68 121 Pn 00 25 42.2 +0.6
RIDG Independent Ri 2.68 49 Pn 00 25 43.1 +1.5
RIDG Independent Ri 2.68 49 P Pn 00 25 43.2 +1.6
baz=233,SNR=1000
CNPM China Poot 2.69 201 Pn 00 25 42.8 +1.2
CNPM IAML 00 26 22.6
comp=E,1μm,0.5s
CNPM IAML 00 26 23.1
comp=N,2μm,0.5s
IVE Iliamna Volcan 2.70 223 Pn 00 25 42.5 +0.7
CCB Clear Creek Bu 2.71 14 Pn 00 25 41.9 +0.1
GLB Gilahina Butte 2.72 100 Pn 00 25 42.5 +0.4

GLB IAML 00 26 25.1
comp=E,765nm,0.6s
GLB IAML 00 26 27.7
comp=N,1µm,0.7s
N19K Bonanza Creek 2.75 246 Pn 00 25 42.8 +0.3
N19K Bonanza Creek 2.75 246 IAML 00 26 21.0
comp=N,889nm,0.7s
N19K Bonanza Creek 2.75 246 P **Pn 00 25 42.8 +0.3**
baz=61,SNR=167
PS08 TAPS Pump Stn8 2.76 24 Pn 00 25 42.9 +0.3
ILSW Iliamna Southw 2.76 223 Pn 00 25 43.1 +0.4
ILSW IAML 00 26 22.9
comp=E,662nm,0.7s
ILSW IAML 00 26 24.6
comp=N,729nm,0.7s
MENT Mentasta 2.77 69 Pn 00 25 43.4 +0.6
MENT IAML 00 26 26.4
comp=N,2µm,0.8s
MENT IAML 00 26 31.7
comp=E,1µm,0.7s
RAGM Ragged Mountai 2.82 124 Pn 00 25 44.5 +1.0
TCOL CIGO, UAF Yank 2.92 13 Pn 00 25 45.2 +0.4
TCOL CIGO, UAF Yank 2.92 13 P **Pn 00 25 45.3 +0.5**
baz=194,SNR=12
DOT Dot Lake 2.92 54 Pn 00 25 45.5 +0.7
COLA College 2.92 13 Pn **Pn 00 25 45.4 +0.7**
COLA College 2.92 13 P **Pn 00 25 45.2 +0.5**
baz=194
VRDI Verde Repeater 2.94 104 Pn 00 25 45.6 +0.3
VRDI Verde Repeater 2.94 104 IAML 00 26 38.5
comp=N,661nm,0.8s
IL31 2.96 21 Pn 00 25 45.4 +0.1
ILAR Eielson Array 2.96 21 P **Pn 00 25 45.4 +0.1**
comp=N,24nm,0.3s,baz=202,slow=14,SNR=265
ILAR S **Sn 00 26 19.4 -0.1**
comp=N,187nm,0.8s,baz=202,slow=23,SNR=11
ILAR LR LR 00 26 29.5
comp=N,145nm,18.8s,baz=218,slow=30
comp=N,57nm,0.4s
L26K Log Cabin Wild 2.96 68 Pn 00 25 46.5 +1.1
L26K IAML 00 26 41.7
comp=N,2µm,0.4s
L26K IAML 00 26 44.1
comp=E,2µm,0.4s
L26K Log Cabin Wild 2.96 68 P **Pn 00 25 46.3 +0.9**
baz=253,SNR=190
MDM Murphy Dome 2.97 9 Pn 00 25 45.7 +0.2
MDM IAML 00 26 22.2
comp=N,564nm,0.9s
M26K Nabesna, AK 3.01 80 Pn 00 25 46.4 +0.3
M26K IAML 00 26 38.2
comp=E,931nm,0.4s
M26K IAML 00 26 42.3
comp=N,914nm,0.6s
M26K Nabesna, AK 3.01 80 P **Pn 00 25 46.6 +0.5**
baz=266,SNR=141
HMT Hamilton 3.01 122 Pn 00 25 46.2 +0.1
Q23K Middleton Isla 3.02 149 Pn **Pn 00 25 46.6 +0.5**
Q23K IAML 00 26 43.0
comp=E,1µm,0.5s
Q23K IAML 00 26 45.0
comp=N,1µm,0.7s
Q23K Middleton Isla 3.02 149 P **Pn 00 25 46.1 +0.1**
baz=332
MID Middleton Isla 3.02 149 Pn **Pn 00 25 46.7 +0.6**
MID IAML 00 26 43.0
comp=E,1µm,0.5s
MID IAML 00 26 45.0
comp=N,849nm,0.6s
J20K Nowinta River 3.04 317 Pn 00 25 46.6 +0.1
J20K Nowinta River 3.04 317 IAML 00 26 23.2
comp=E,622nm,0.6s
J20K IAML 00 26 42.4
comp=N,914nm,0.6s
J20K Nowinta River 3.04 317 P **Pn 00 25 46.6 +0.1**
baz=133,SNR=239
P19K Oil Pt 3.05 220 Pn **Pn 00 25 47.6 +0.9**
P19K IAML 00 26 33.0
comp=E,2µm,0.6s
P19K IAML 00 26 46.1
comp=N,1µm,0.8s
P19K Oil Pt 3.05 220 P **Pn 00 25 47.0 +0.4**
baz=36,SNR=19
MLY Manley 3.06 349 Pn 00 25 46.9 +0.1
MLY Manley 3.06 349 P **Pn 00 25 46.9 +0.1**
baz=168,SNR=110
MCARA McCarthy VSAT 3.10 100 Pn 00 25 47.9 +0.6
MCARA IAML 00 26 37.2
comp=E,2µm,0.6s
MCARA McCarthy VSAT 3.10 100 P **Pn 00 25 47.9 +0.6**
baz=285,SNR=114
I23K Minto, Yukon-K 3.12 0 Pn 00 25 47.8 +0.4
I23K IAML 00 26 26.4
comp=N,626nm,0.8s
I23K Minto, Yukon-K 3.12 0 P **Pn 00 25 48.0 +0.5**
baz=180,SNR=134
SVW2 Sparrevohn 3.12 255 Pn **Pn 00 25 47.3 -0.2**
SVW2 IAML 00 26 25.3
comp=E,535nm,0.4s
SVW2 IAML 00 26 44.7
comp=N,621nm,0.6s
SCRK Sand Creek 3.13 49 Pn 00 25 48.3 +0.6
SCRK IAML 00 26 39.8
comp=E,915nm,1.0s
SCRK IAML 00 26 39.8
comp=N,690nm,0.7s
SCRK Sand Creek 3.13 49 P **Pn 00 25 48.4 +0.6**
baz=234,SNR=370
J25K Salcha River, 3.15 33 Pn 00 25 49.1 +1.1
J25K IAML 00 26 31.4
comp=N,1µm,0.5s
J25K IAML 00 26 32.0
comp=E,1µm,0.6s
J25K Salcha River, 3.15 33 P **Pn 00 25 48.7 +0.7**
baz=217,SNR=527
NICHA Nichawak Mount 3.19 122 Pn 00 25 48.7 +0.2
TT01 Tatalina 3.20 289 Pn 00 25 48.6 -0.1
POKR Poker Plat Res 3.20 15 Pn 00 25 49.3 +0.6
POKR IAML 00 26 46.6
comp=E,568nm,0.7s
POKR Poker Plat Res 3.20 15 P **Pn 00 25 49.1 +0.4**
baz=197,SNR=42
TTA Tatalina 3.21 289 Pn **Pn 00 25 48.5 -0.3**
TTA IAML 00 26 47.9
comp=E,534nm,0.7s
TTA Tatalina 3.21 289 P **Pn 00 25 48.4 -0.3**
baz=103,SNR=106
BERG Berg Lake 3.21 119 Pn 00 25 48.6 -0.1
KAIM Kayak Island 3.22 129 Pn 00 25 48.2 -0.6
KAIM IAML 00 26 42.8
comp=N,838nm,0.6s
KAIM IAML 00 26 45.2
comp=E,964nm,0.5s
KAIM Kayak Island 3.22 129 P **Pn 00 25 48.6 -0.3**
baz=313,SNR=16
CRQM Cirque 3.27 111 Pn 00 25 49.7 -0.1
CRQE Cirque 3.29 110 P **Pn 00 25 50.1 +0.1**
baz=296,SNR=390
PS07 TAPS Pump Stn7 3.31 8 Pn 00 25 51.0 +0.8
AU22 Augustine Moun 3.32 218 Pn 00 25 51.0 +0.7
I21K Tanana 3.35 341 Pn 00 25 51.1 +0.3
I21K Tanana 3.35 341 P **Pn 00 25 51.2 +0.5**
baz=159,SNR=35
SUCK Suckling Hills 3.37 124 Pn 00 25 50.5 -0.5
SUCK IAML 00 26 43.3
comp=E,1µm,0.5s
KHIT Khitrov Hills 3.37 116 Pn 00 25 51.5 +0.4
TGL Tana Glacier 3.40 109 Pn 00 25 51.5 -0.1
PTPK Patty Peak 3.41 102 Pn 00 25 52.2 +0.5
N18K Kilae Creek 3.42 249 Pn **Pn 00 25 51.5 -0.1**
N18K IAML 00 26 53.1
comp=N,472nm,0.7s
N18K Kilae Creek 3.42 249 P **Pn 00 25 51.7 0.0**
baz=64,SNR=86
GRIN Grindle Hills 3.43 118 Pn 00 25 52.5 +0.7
BALM Baldy 3.52 104 Pn 00 25 53.1 +0.1
M27K Edge Creek, AK 3.53 82 Pn 00 25 54.4 +1.2
M27K Edge Creek, AK 3.53 82 P **Pn 00 25 54.4 +1.2**
baz=268,SNR=73
BGLC Bering Glacier 3.53 120 Pn 00 25 53.9 +0.8
BGLC Bering Glacier 3.53 120 P **Pn 00 25 53.9 +0.8**
baz=306,SNR=14
WAX Waxell Ridge 3.54 114 Pn 00 25 53.6 +0.3
KIAG Kiagna River 3.55 105 Pn 00 25 53.5 -0.1
J26L Joseph Creek 3.60 44 Pn 00 25 54.9 +0.7
J26L Joseph Creek 3.60 44 P **Pn 00 25 55.1 +0.9**
baz=229,SNR=613
L27K Beaver Creek, 3.64 70 Pn 00 25 54.9 +0.2
L27K Beaver Creek, 3.64 70 P **Pn 00 25 55.1 +0.4**
baz=257,SNR=52
BC03 3.66 70 Pn 00 25 55.5 +0.6
BCAR Beaver Creek A 3.66 70 Pn **Pn 00 25 55.0 0.0**
SNH Sunshine Point 3.68 118 Pn 00 25 56.3 +1.0
SNH IAML 00 26 53.7
comp=N,750nm,0.4s
SNH IAML 00 26 53.0
comp=E,788nm,0.5s
ISLE Juniper Island 3.69 110 Pn 00 25 55.5 0.0
ISLE Juniper Island 3.69 110 IAML 00 26 50.8
comp=E,797nm,0.5s
BARK Barkley Ridge 3.71 113 Pn 00 25 56.1 +0.3
SYI Shuyak Island 3.76 205 Pn 00 25 57.0 +0.7
Q20K Shuyak Island 3.76 205 P **Pn 00 25 56.7 +0.4**
baz=22,SNR=22
Q19K Cape Douglas, 3.77 216 Pn **Pn 00 25 57.2 +0.7**
Q19K Cape Douglas, 3.77 216 P **Pn 00 25 57.3 +0.7**
baz=32,SNR=37
H23K Yukon River 3.80 359 Pn 00 25 57.5 +0.7
H23K Yukon River 3.80 359 P **Pn 00 25 57.2 +0.4**
baz=179,SNR=121
BARN Barnard Glacie 3.82 102 Pn 00 25 57.8 +0.4
BARN Barnard Glacie 3.82 102 IAML 00 27 00.9
comp=E,506nm,0.5s
BARN IAML 00 27 03.2
comp=N,494nm,0.8s
BAGL Bagley Icefiel 3.85 111 Pn 00 25 57.9 +0.4
H24K Noodor Dome 3.87 9 Pn 00 25 58.4 +0.6
H24K Noodor Dome 3.87 9 IAML 00 27 10.7
comp=E,334nm,0.8s
H24K Noodor Dome 3.87 9 P **Pn 00 25 58.5 +0.7**
baz=191,SNR=119
K27K Chicken 3.88 56 Pn 00 25 58.4 +0.5
K27K Chicken 3.88 56 IAML 00 27 07.5
comp=E,316nm,0.6s
K27K Chicken 3.88 56 P **Pn 00 25 58.2 +0.4**
baz=242
PRP Porcupine Dome 3.88 24 Pn 00 25 58.8 +0.6
PRP Porcupine Dome 3.88 24 IAML 00 26 47.1
comp=E,459nm,0.8s
PRP IAML 00 26 48.4
comp=N,482nm,0.7s
PRP Porcupine Dome 3.88 24 P **Pn 00 25 58.8 +0.6**
baz=208
GRNC Granite Creek 3.90 106 Pn 00 25 58.5 +0.1
GRNC Granite Creek 3.90 106 IAML 00 27 05.0
comp=E,265nm,0.7s
GRNC IAML 00 27 08.9
comp=N,563nm,0.8s
H21K Melozitna Rive 3.93 339 Pn 00 25 58.8 +0.2
H21K Melozitna Rive 3.93 339 P **Pn 00 25 59.0 +0.3**
baz=156,SNR=153
H22K Ishtalitna Cre 3.96 348 Pn 00 25 59.6 +0.5
H22K Ishtalitna Cre 3.96 348 P **Pn 00 25 59.6 +0.5**
baz=166,SNR=36
CTG Chitna Glacier 4.00 102 P **Pn 00 26 00.2 +0.4**
baz=289,SNR=106
BVCY Beaver Creek 4.00 81 Pn 00 26 00.8 +1.1
BVCY Beaver Creek 4.00 81 P **Pn 00 26 00.5 +0.8**
baz=268,SNR=20
CTGM Chitina Glacie 4.00 102 Pn 00 26 00.5 +0.7
CTGM Chitina Glacie 4.00 102 IAML 00 27 01.4
comp=N,334nm,0.8s
YUK2 White River 4.04 90 Pn 00 26 01.1 +0.8
YAH Yahtse 4.06 111 Pn 00 26 01.1 +0.4
YAH IAML 00 27 02.3
comp=E,423nm,0.6s
YAH IAML 00 27 03.2
comp=N,616nm,0.7s
MESA MESA 4.06 114 Pn 00 26 01.4 +0.8
MESA MESA 4.06 114 P **Pn 00 26 01.0 +0.4**
baz=301
LOGN Logan Glacier 4.20 103 Pn 00 26 02.9 +0.3
LOGN Logan Glacier 4.20 103 IAML 00 27 12.8
comp=E,288nm,0.9s
LOGN IAML 00 27 13.8
comp=N,309nm,1.0s
YUK3 Moose Creek 4.23 90 Pn 00 26 03.4 +0.5
YUK3 Moose Creek 4.23 90 P **Pn 00 26 03.5 +0.5**
baz=278,SNR=118
KAPH Katmai Pasha 4.25 218 Pn 00 26 03.8 +0.6
I26K Coal Creek Min 4.29 38 Pn **Pn 00 26 04.2 +0.7**
I26K IAML 00 27 21.7
comp=E,500nm,0.9s
I26K IAML 00 27 25.8
comp=N,510nm,0.7s
I26K Coal Creek Min 4.29 38 P **Pn 00 26 04.2 +0.7**
baz=223,SNR=293
TABL Table Mountain 4.29 108 Pn 00 26 04.3 +0.5
TABL IAML 00 27 16.0
comp=E,301nm,1.2s
TABL IAML 00 27 18.2
comp=N,336nm,0.7s
GCSA Galena City Sc 4.33 312 Pn 00 26 04.7 +0.6
GCSA Galena City Sc 4.33 312 P **Pn 00 26 04.3 +0.3**
baz=126,SNR=26
IM03 4.40 336 Pn 00 26 05.3 +0.3
O17K Koliganek Bris 4.40 242 Pn 00 26 05.3 +0.2
O17K Koliganek Bris 4.40 242 P **Pn 00 26 05.5 +0.4**
baz=56
KAHC Katmai Hardscr 4.41 222 Pn 00 26 06.0 +0.7
CHX Chaix Hills 4.48 113 Pn 00 26 07.2 +1.0
P17K Kvichak River 4.50 234 Pn 00 26 06.9 +0.4
P17K Kvichak River 4.50 234 P **Pn 00 26 06.8 +0.4**
baz=48
KDAK Kodiak Island 4.57 202 P **Pn 00 26 07.0 -0.4**
comp=N,9.4nm,0.3s,baz=63,slow=7.2,SNR=158
KDAK S **Sn 00 26 56.2 -2.9**
comp=N,50nm,0.5s,baz=22,slow=14,SNR=4.2
comp=N,32nm,0.4s
KDAK Kodiak Island 4.57 202 Pn **Pn 00 26 06.7 -0.7**
KDAK IAML 00 27 08.7
comp=N,177nm,0.8s
KDAK IAML 00 27 24.9
comp=N,170nm,1.0s
KDAK Kodiak Island 4.57 202 P **Pn 00 26 06.5 -0.9**
baz=19
SAMH Samovar Hills 4.59 111 Pn 00 26 08.9 +1.1
O28M Mount Upton 4.60 102 Pn 00 26 08.8 +0.8
O28M Mount Upton 4.60 102 P **Pn 00 26 08.6 +0.6**
baz=290,SNR=33
G23K Bananza Creek 4.69 357 Pn 00 26 09.6 +0.5
G23K Bananza Creek 4.69 357 P **Pn 00 26 09.4 +0.3**
baz=176,SNR=29
KCG Knife Ck. Glac 4.72 220 Pn 00 26 10.2 +0.8
G24K Hadweenzic Riv 4.75 9 Pn 00 26 10.8 +1.0
G24K Hadweenzic Riv 4.75 9 P **Pn 00 26 11.1 +1.3**
baz=191,SNR=18
N16K Nishlik Lake 4.80 255 Pn 00 26 10.9 +0.3
N16K Nishlik Lake 4.80 255 P **Pn 00 26 10.4 -0.2**
baz=67,SNR=16
KELA Mount Kelaz 4.81 224 Pn 00 26 11.5 +0.7
G21K Allakaket 4.83 340 Pn 00 26 11.8 +0.7
G21K Allakaket 4.83 340 P **Pn 00 26 11.7 +0.6**
baz=156,SNR=47
PCA Pinnacle 4.84 110 Pn **Pn 00 26 11.4 +0.2**
PINM Pinnacle 4.84 110 P **Pn 00 26 11.8 +0.5**
baz=298,SNR=9.9
FYU Fort Yukon 4.88 20 Pn 00 26 12.7 +1.0
FYU IAML 00 27 47.2
comp=N,308nm,1.1s
FYU IAML 00 27 48.2
comp=E,380nm,1.3s
O16K Kokwok River B 4.92 244 Pn 00 26 12.6 +0.3
O16K Kokwok River B 4.92 244 P **Pn 00 26 12.3 +0.1**
baz=56,SNR=28
G25K Bearman Lake 4.95 15 Pn 00 26 13.6 +1.0
G25K Bearman Lake 4.95 15 P **Pn 00 26 13.4 +0.8**
baz=198,SNR=15
DAWY Dawson 4.97 62 Pn 00 26 13.6 +0.6
DAWY IAML 00 27 46.2
comp=N,273nm,0.8s
DAWY IAML 00 27 54.5
comp=E,140nm,1.1s
DAWY Dawson 4.97 62 P **Pn 00 26 13.6 +0.6**
baz=250,SNR=51
Q17K Contact Creek 5.00 223 P **Pn 00 26 13.8 +0.5**
baz=38
YUK4 Talbot Arm 5.16 93 P **Pn 00 26 16.2 +0.5**
baz=282,SNR=31
BCPM Bancas Point 5.18 110 Pn 00 26 15.8 0.0
BCPM IAML 00 27 32.9
comp=E,208nm,0.7s
BCPM IAML 00 27 41.0
comp=N,236nm,0.5s
COLD Coldfoot 5.22 356 Pn **Pn 00 26 16.2 -0.1**
COLD Coldfoot 5.22 356 P **Pn 00 26 16.7 +0.4**
baz=176,SNR=12
P16K Nushagak River 5.22 238 Pn 00 26 16.9 +0.7
P16K Nushagak River 5.22 238 P **Pn 00 26 16.9 +0.7**
baz=51
OHAK Old Harbor 5.23 204 Pn 00 26 14.9 -1.5
OHAK IAML 00 27 39.3
comp=E,120nm,1.5s
OHAK Old Harbor 5.23 204 P **Pn 00 26 15.1 -1.4**
baz=21
YUK6 Outpost Mounta 5.39 97 Pn 00 26 19.5 +0.6
YUK6 Outpost Mounta 5.39 97 P **Pn 00 26 19.1 +0.2**
baz=287,SNR=18
PNL Peninsula 5.43 112 Pn 00 26 19.2 0.0
PNL Peninsula 5.43 112 P **Pn 00 26 18.9 -0.3**
baz=300,SNR=11
G26K Porcupine Rive 5.48 24 Pn 00 26 20.5 +0.6
G26K Porcupine Rive 5.48 24 P **Pn 00 26 20.2 +0.3**
baz=209,SNR=36
F21K Alatna River 5.49 343 Pn 00 26 21.0 +0.9
F21K Alatna River 5.49 343 P **Pn 00 26 20.1 +0.1**
baz=159,SNR=26
O29M Mount Kennedy 5.51 104 Pn 00 26 20.2 -0.2
O29M Mount Kennedy 5.51 104 P **Pn 00 26 21.1 +0.7**
baz=293,SNR=11
F24K Squaw Lake 5.53 6 Pn 00 26 21.4 +0.8
F24K Squaw Lake 5.53 6 P **Pn 00 26 22.0 +1.4**
baz=187,SNR=17
YUK5 Granite Creek 5.58 94 Pn 00 26 21.6 +0.2
F22K John River 5.61 349 Pn 00 26 22.7 +1.0
F22K John River 5.61 349 P **Pn 00 26 22.7 +1.0**
baz=166
R17K Ugashik Creek 5.66 222 Pn 00 26 22.9 +0.6
R17K Ugashik Creek 5.66 222 P **Pn 00 26 22.6 +0.3**
baz=36,SNR=9.1
BM03 Burnt Mountain 5.77 19 Pn 00 26 24.7 +0.8
F25K Christian Rive 5.79 14 Pn 00 26 24.8 +0.6
F25K Christian Rive 5.79 14 P **Pn 00 26 25.2 +0.9**
baz=198,SNR=27
BM01 Burnt Mountain 5.81 19 Pn 00 26 25.2 +0.8
HYT Haines Junctio 5.83 97 Pn 00 26 25.2 +0.4
HYT Haines Junctio 5.83 97 P **Pn 00 26 24.9 +0.1**
baz=287,SNR=36
G27K Doyon Strip 5.83 32 Pn 00 26 24.5 -0.3
G27K Doyon Strip 5.83 32 P **Pn 00 26 25.0 +0.3**
baz=219,SNR=30
N30M Aishikik Lake 5.87 90 Pn 00 26 25.1 -0.2
N30M Aishikik Lake 5.87 90 P **Pn 00 26 24.9 -0.4**
baz=281,SNR=63
M30M Minto, Yukon 5.89 79 Pn 00 26 25.8 +0.2
M30M Minto, Yukon 5.89 79 P **Pn 00 26 26.0 +0.4**
baz=270,SNR=18
I29M Ogilvie Camp, 5.94 51 Pn **Pn 00 26 26.9 +0.8**
I29M Ogilvie Camp, 5.94 51 P **Pn 00 26 26.4 +0.2**
baz=241,SNR=157
SII Sitkinak Islan 6.03 206 Pn 00 26 26.6 -0.8
SII Sitkinak Islan 6.03 206 P **Pn 00 26 26.5 -1.0**
baz=22
E24K Your Creek 6.07 3 Pn 00 26 28.6 +0.6
E24K Your Creek 6.07 3 P **Pn 00 26 28.5 +0.6**
baz=184
F26K Sheenjek River 6.09 19 Pn 00 26 29.2 +0.9
F26K Sheenjek River 6.09 19 P **Pn 00 26 28.8 +0.5**
baz=204,SNR=53
E22K Anaktuvuk Pass 6.20 352 Pn 00 26 30.3 +0.5
E22K Anaktuvuk Pass 6.20 352 P **Pn 00 26 31.4 +1.6**
baz=169
P30M Million Dollar 6.33 102 Pn 00 26 31.7 +0.2
P30M Million Dollar 6.33 102 P **Pn 00 26 32.0 +0.5**
baz=293
N31M Braeburn, Yuko 6.48 89 Pn 00 26 33.8 +0.2
N31M Braeburn, Yuko 6.48 89 P **Pn 00 26 33.7 0.0**
baz=281,SNR=18
O30N Mendenhall 6.51 95 Pn 00 26 34.1 +0.1
O30N Mendenhall 6.51 95 P **Pn 00 26 33.9 -0.1**
baz=287,SNR=16
TOLK Toolik Lake Re 6.62 359 Pn **Pn 00 26 37.0 +1.4**
TOLK Toolik Lake Re 6.62 359 P **Pn 00 26 36.7 +1.1**
baz=179,SNR=7.7
PLBC Pleasant Camp 6.88 106 Pn 00 26 39.3 +0.2
PLBC Pleasant Camp 6.88 106 P **Pn 00 26 39.7 +0.6**
baz=298,SNR=13
E27K Coleen River 6.98 25 Pn 00 26 40.2 -0.2
E27K Coleen River 6.98 25 P **Pn 00 26 41.0 +0.6**
baz=212,SNR=16
CHIR Chirikof Islan 7.03 210 Pn 00 26 41.1 0.0
CHIR Chirikof Islan 7.03 210 P **Pn 00 26 40.8 -0.3**
baz=25
M31M Drury Creek, Y 7.03 82 P **Pn 00 26 41.5 +0.3**
baz=275,SNR=10
SKAG Skagway 7.35 104 Pn 00 26 45.9 +0.3
SKAG Skagway 7.35 104 P **Pn 00 26 46.2 +0.7**
baz=297,SNR=7.5
CHGN Chignik 7.39 223 Pn 00 26 45.2 -0.9
D25K Kavik River 7.41 8 P **Pn 00 26 48.4 +2.0**
baz=191,SNR=8.5
ANM Nome 7.63 296 Pn 00 26 50.1 +0.7
ANM Nome 7.63 296 P **Pn 00 26 49.5 +0.2**
baz=102
C24K Franklin Bluff 7.71 2 Pn 00 26 50.0 -0.4
C24K Franklin Bluff 7.71 2 P **Pn 00 26 50.6 +0.2**
baz=182
C23K Itkillik River 7.84 357 P **Pn 00 26 53.1 +0.9**
baz=176
C27K Jago River 7.96 14 Pn 00 26 54.5 +0.7
C27K Jago River 7.96 14 P **Pn 00 26 55.7 +2.0**
baz=200,SNR=9.6
BESE Bessie Mountai 8.00 109 Pn **Pn 00 26 54.4 -0.1**
P32M Atlin 8.04 101 Pn 00 26 54.8 -0.2
P32M Atlin 8.04 101 P **Pn 00 26 55.0 0.0**
baz=294,SNR=9.5
C26K Camden Bay 8.11 11 Pn 00 26 57.0 +1.1
P33M Teslin, Yukon 8.22 96 Pn 00 26 57.2 -0.3
P33M Teslin, Yukon 8.22 96 P **Pn 00 26 57.4 -0.2**
baz=290,SNR=8.0
JIS Juneau Island 8.37 110 Pn 00 26 59.5 0.0
SIT Sitka 8.71 119 Pn **Pn 00 27 03.5 -0.6**
SIT Sitka 8.71 119 P **Pn 00 27 03.5 -0.6**
baz=311
SDPT Sand Point 8.85 226 Pn **Pn 00 27 07.7 +1.7**
TNA Tin City 8.91 301 Pn **Pn 00 27 07.5 +0.6**
TNA Tin City 8.91 301 P **Pn 00 27 07.2 +0.3**
baz=105
CNBA Chernabura Isl 9.00 221 Pn **Pn 00 27 07.3 -0.7**
INK Inuvik 9.13 40 P **Pn 00 27 10.6 +0.7**
comp=E,3.2nm,0.3s,baz=224,slow=13,SNR=24
INK LR LR 00 31 00.0
comp=E,126nm,18.8s,baz=222,slow=39
comp=E,12nm,0.5s
INK Inuvik 9.13 40 Pn 00 27 09.8 -0.1
INK Inuvik 9.13 40 P **Pn 00 27 11.4 +1.5**
baz=234,SNR=14
R33M Jennings River 9.40 98 Pn 00 27 13.2 -0.4
R33M Jennings River 9.40 98 P **Pn 00 27 13.6 -0.1**
baz=294,SNR=19
DLBC Dease Lake 10.26 102 P **Pn 00 27 25.5 +0.1**
comp=E,1.2nm,0.3s,baz=327,slow=11,SNR=6.8
DLBC LR LR 00 31 54.0
comp=E,124nm,19.3s,baz=281,slow=40
comp=E,4.9nm,0.5s
DLBC Dease Lake 10.26 102 Pn 00 27 25.7 +0.2
DLBC Dease Lake 10.26 102 P **Pn 00 27 25.4 -0.1**
baz=299
GAMB Gambell 10.31 289 Pn 00 27 25.7 -0.3
WRAK Wrangell Islan 10.37 115 Pn 00 27 27.2 +0.4
CRAG Craig 10.69 121 Pn **Pn 00 27 32.1 +0.9**
T35M Bob Quinn 10.94 109 P **Pn 00 27 35.4 +0.8**
baz=306,SNR=5.7
DIB Dawson Inlet, 12.63 127 Pn 00 27 57.7 0.0
C36M Paulatuk 12.64 44 Pn 00 27 58.2 +0.6
C36M Paulatuk 12.64 44 P **Pn 00 27 57.6 -0.1**
baz=247,SNR=5.1
RUBB Prince Rupert 12.67 119 Pn 00 27 59.2 +1.0
NIKH Nikolski High 13.81 238 Pn 00 28 13.4 -0.4
HG4B Hotspring 13.83 127 Pn 00 28 15.7 +1.7
BBB Bella Bella 15.12 121 LR LR 00 34 52.0
comp=E,33nm,18.8s,baz=306,slow=39
BBB IAmb IAmb 00 28 56.5
BBB Bella Bella 15.12 121 P **P 00 28 36.3 +0.6**
comp=Z,13nm,0.9s
YKA Yellowknife Ar 16.08 73 P **Pn 00 28 43.3 -0.2**
comp=Z,0.2nm,0.3s,baz=287,slow=11,SNR=3.6

YKA				LR	LR	00 34 59.5	
	comp=Z,74nm,20.7s,baz=286,slow=37						
	comp=Z,2.1nm,0.8s						
YKA	**Yellowknife Ar**	**16.08**	**73**	Pn	**Pn**	**00 28 41.6**	**-1.9**
HOLB	**Holberg**	**16.31**	**125**	Pn	**Pn**	**00 28 47.3**	**+0.8**
ADK	**Adak**	**17.88**	**248**		**P**	**00 29 06.6**	**+0.4**
ADK				IAmb	IAmb	00 29 20.1	
	comp=Z,26nm,0.9s						
KIWB	**Kanaga Island**	**18.11**	**248**	P	**P**	**00 29 10.2**	**+1.4**
NEW	**Newport**	**22.71**	**113**	LR	LR	00 39 42.8	
	comp=Z,61nm,19.2s,baz=324,slow=39						
SEY	**Seymchan**	**26.13**	**298**	P	**P**	**00 30 28.1**	**-2.2**
	comp=Z,0.8nm,0.5s,baz=60,slow=14,SNR=3.0						
	comp=Z,0.8nm,0.5s						
RLMT	**Red Lodge**	**28.59**	**108**	P	**P**	**00 30 54.0**	**+1.3**
RLMT				IAmb	IAmb	00 31 15.1	
	comp=Z,7.9nm,1.1s						
RLMT	**Red Lodge**	**28.59**	**108**	P	**P**	**00 30 53.3**	**+0.5**
	baz=321,SNR=8.1						
MAC	**Mark West Spri**	**28.64**	**133**		**S**	**00 35 37.3**	**-1.1**
NBPM	**Berryessa Peak**	**28.72**	**132**		**S**	**00 35 38.0**	**-1.6**
NDHM	**Dunnigan Hills**	**28.73**	**131**		**S**	**00 35 41.2**	**+1.4**
ELK	**Elko**	**29.57**	**120**	P	**P**	**00 31 02.1**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=321,slow=6.5,SNR=4.5						
ELK				LR	LR	00 42 38.2	
	comp=Z,39nm,18.2s,baz=350,slow=36						
	comp=Z,0.5nm,0.4s						
PDAR	**Pinedale Array**	**30.32**	**111**	LR	LR	00 44 57.5	
	comp=Z,42nm,19.1s,baz=5.5,slow=39						
NVAR	**Mina Array Bea**	**30.35**	**127**	P	**P**	**00 31 09.3**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=310,slow=9.2,SNR=17						
	comp=Z,2.2nm,0.8s						
NV11	**Mina Array Sit**	**30.40**	**126**	P	**P**	**00 31 10.1**	**+1.3**
NV11				IAmb	IAmb	00 31 10.2	
	comp=Z,2.4nm,0.6s						
LHV	**Little Huntoon**	**30.43**	**127**	P	**P**	**00 31 10.9**	**+2.1**
LHV				IAmb	IAmb	00 31 11.3	
	comp=Z,2.8nm,0.9s						
DUG	**Dugway, Tooele**	**31.03**	**118**	P	**P**	**00 31 14.5**	**+0.2**
	baz=327						
R11A	**Troy Canyon, C**	**31.47**	**123**	P	**P**	**00 31 18.5**	**+0.2**
	baz=330						
RSSD	**Black Hills**	**31.74**	**103**	P	**P**	**00 31 21.4**	**+0.8**
RSSD	**Black Hills**	**31.74**	**103**	P	**P**	**00 31 21.1**	**+0.5**
	baz=320						
TPNV	**Topopah Spring**	**32.43**	**125**	P	**P**	**00 31 26.5**	**-0.2**
TPNV	**Topopah Spring**	**32.43**	**125**	P	**P**	**00 31 27.1**	**+0.5**
	baz=331						
MSU	**Marysvale**	**32.71**	**119**	P	**P**	**00 31 29.8**	**+0.7**
FRB	**Frobisher Bay**	**34.58**	**51**	LR	LR	00 44 51.4	
	comp=Z,43nm,18.3s,baz=220,slow=34						
ANMO	**Albuquerque**	**38.15**	**115**	LR	LR	00 47 22.7	
	comp=Z,56nm,19.1s,baz=9.5,slow=35						
LENM	**Lemitar**	**38.60**	**116**	P	**P**	**00 32 19.6**	**0.0**
R32A	**Long Quarter,**	**38.70**	**104**	P	**P**	**00 32 21.3**	**+1.1**
SCHQ	**Schefferville**	**40.99**	**61**	LR	LR	00 51 38.2	
	comp=Z,28nm,18.1s,baz=124,slow=39						
WMOK	**Wichita Mounta**	**41.70**	**107**	P	**P**	**00 32 45.1**	**0.0**
U38A	**Gravette**	**42.30**	**101**	P	**P**	**00 32 48.8**	**-1.2**
U38A				IAmb	IAmb	00 33 03.3	
	comp=Z,3.8nm,0.8s						
TXAR	**Lajitas Array**	**44.17**	**116**	P	**P**	**00 33 05.8**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=322,slow=6.5,SNR=11						
TXAR				LR	LR	00 52 16.4	
	comp=Z,48nm,19.4s,baz=356,slow=37						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**44.17**	**116**	P	**P**	**00 33 05.4**	**+0.1**
TKL	**Tuckaleechee C**	**47.90**	**92**	LR	LR	00 54 06.4	
	comp=Z,56nm,19.1s,baz=332,slow=36						
KSRS	**Korea Array**	**54.43**	**284**	P	**P**	**00 34 22.4**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=21,slow=7.4,SNR=4.0						
	comp=Z,0.7nm,0.3s						
SONM	**Songino Array**	**54.99**	**307**	P	**P**	**00 34 27.2**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=38,slow=7.3,SNR=1.9						
	comp=Z,1.7nm,0.9s						
ZALV	**Zalesovo Beam**	**56.74**	**325**	LR	LR	01 00 14.8	
	comp=Z,185nm,18.6s,baz=168,slow=37						
FINES	**FINESS Array B**	**56.78**	**3**	P	**P**	**00 34 37.4**	**-2.5**
	comp=Z,0.9nm,0.7s,baz=42,slow=2.3,SNR=4.4						
	comp=Z,0.9nm,0.7s						
HHC	**Hu-ho-hao-te**	**58.77**	**299**	*e*P	**P**	**00 34 58.5**	**+4.2**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,7.2s						
MKAR	**Makanchi Array**	**63.89**	**323**	P	**P**	**00 35 25.8**	**-2.8**
	comp=Z,1.1nm,0.6s,baz=48,slow=7.7,SNR=6.1						
	comp=Z,1.1nm,0.6s						
WMQ	**Urumqi**	**64.97**	**318**	*e*P	**P**	**00 35 39.5**	**+3.7**
BELG	**Belogornoye**	**65.11**	**349**	LR	LR	01 06 46.2	
	comp=Z,205nm,21.5s,baz=137,slow=38						
AKASG	**Malin Array Be**	**67.60**	**1**	P	**P**	**00 35 50.1**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=3.3,slow=5.9,SNR=3.9						
	comp=Z,0.6nm,0.3s						
BURAR	**Bucovina Array**	**70.61**	**4**	⇑P	**P**	**00 36 09.2**	**-2.0**
ESDC	**Sonseca Array**	**74.84**	**27**	P	**P**	**00 36 35.8**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=344,slow=5.9,SNR=11						
	comp=Z,0.8nm,0.6s						
PZH	**PanZhiHua**	**75.24**	**299**	P	**P**	**00 36 41.0**	**+2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
KEST	**Kesra**	**81.05**	**17**	LR	LR	01 16 34.5	
	comp=Z,122nm,20.0s,baz=54,slow=38						
CMAR	**Chiang Mai Arr**	**83.55**	**297**	P	**P**	**00 37 22.7**	**-1.4**
	comp=Z,2.2nm,0.3s,baz=1.0,slow=5.8,SNR=6.2						
	comp=Z,2.2nm,0.3s						
BOSA	**Boshof**	**146.38**	**9**	PKPbc	**PKPdf**	**00 44 34.9**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=350,slow=6.2,SNR=7.1						

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*NCEDC **02** 00:35:26.8±1.0, 38°.15N±0°.04×122°.29W±0°.04, h10km±3km, Md2.9/110, ML2.6/60(NEIC), Error ellipse: s-maj=6.8km s-min=1.1km az=218.0*

NEIC 02 00:35:26.9±1.4**, 38°.14N**±0°.03×**122°.35W**±0°.03**, h17**km±2km**, Error ellipse: s-maj=4.1km s-min=2.6km az=147.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNT	**Sears Point**	**0.10**	**298**		Pg	00 35 30.5	+0.1
C032	**McCall Drive,**	**0.16**	**111**		Pg	00 35 29.6	-1.6
C067	**Fleetwood El S**	**0.17**	**165**		Pg	00 35 31.2	0.0
NGVM		**0.18**	**36**		Pg	00 35 30.2	-1.2
CSPM	**San Pablo Ridg**	**0.18**	**171**		Pg	00 35 31.7	+0.2
C024	**33rd St Richmo**	**0.20**	**178**		Pg	00 35 31.6	0.0
CPMM	**Point Molate**	**0.20**	**195**		Pb	00 35 31.9	-0.2
NBRB	**Beebe Ranch Br**	**0.20**	**307**		Pb	00 35 32.0	-0.2
C012	**Glenmawr Avenu**	**0.21**	**173**		Pg	00 35 31.9	-0.1
RFSB	**Richmond Field**	**0.22**	**178**		Pg	00 35 32.1	0.0
CVS	**Carmenet Viney**	**0.23**	**337**		Pg	00 35 31.8	-0.3
CVS					Sg	00 35 35.9	+0.2
C011	**Colusa Avenue,**	**0.23**	**170**		Pg	00 35 32.2	-0.1
C018	**Christie Drive**	**0.24**	**131**		Pg	00 35 31.8	-0.6
C008	**Spokane Avenue**	**0.25**	**170**		Pg	00 35 32.4	-0.1
BL88	**Building 88, L**	**0.27**	**164**		Pg	00 35 32.8	-0.1
VAK	**Adit at Lawren**	**0.27**	**164**		Pg	00 35 32.8	-0.1
CVPM	**Vollmer Peak**	**0.27**	**159**		Pg	00 35 32.8	-0.1
BL67	**Building 67, L**	**0.27**	**165**		Pg	00 35 32.8	-0.1
BL67					Sb	00 35 37.5	-0.4
BRK	**Berkeley--Havi**	**0.27**	**166**		Pg	00 35 32.8	-0.1
BRK					Sg	00 35 37.1	+0.2
BKS	**Berkeley--Byer**	**0.28**	**162**		Pg	00 35 32.8	-0.1
C031	**McGee Avenue B**	**0.28**	**169**		Pg	00 35 32.8	-0.2
CTAM	**Taylor**	**0.28**	**113**		Pg	00 35 32.6	-0.4
C033	**Glashaus Lp Em**	**0.29**	**171**		Pg	00 35 33.2	-0.1
C028	**Eucalyptus Rd**	**0.30**	**165**		Pg	00 35 33.1	-0.2
NAPC	**Atlas Peak**	**0.31**	**14**		Pg	00 35 32.9	-0.6
CYBM	**Yerba Buena Is**	**0.33**	**182**		Pg	00 35 34.0	+0.2
C005	**Mandana Bl Oak**	**0.34**	**165**		Pg	00 35 33.8	-0.2
C013	**Ascot Lane Oak**	**0.34**	**158**		Pg	00 35 33.9	-0.1
NTYM	**Taylor**	**0.35**	**315**		Pg	00 35 34.5	+0.2
C064	**Brunell Drive**	**0.36**	**159**		Pg	00 35 34.1	-0.3
JPRM	**Presidio of Sa**	**0.36**	**197**		Pb	00 35 34.9	+0.1
NOLM	**Olema**	**0.37**	**255**		Pb	00 35 35.3	+0.3
BGC	**Bolinger Road**	**0.39**	**145**		Pg	00 35 34.5	-0.5
CRHM	**Round Hill Res**	**0.40**	**135**		Pg	00 35 34.8	-0.2
C047	**Rutherford Dri**	**0.40**	**140**		Pg	00 35 35.1	0.0
MCCM	**Marconi Confer**	**0.42**	**271**	Pg	Pb	00 35 36.1	+0.2
MCCM				Sg	Sb	00 35 42.8	+0.8
MCCM				IAML		00 35 43.2	
	comp=N,561nm,0.6s						
MCCM				IAML		00 35 47.9	
	comp=E,741nm,0.5s						
BDM	**Black Diamond**	**0.42**	**116**		Pg	00 35 34.9	-0.6
HMR	**Hamilton Ranch**	**0.43**	**88**		Pg	00 35 35.8	+0.1
NADM	**Allendale**	**0.44**	**43**		Pb	00 35 36.2	0.0
CSLM	**San Leandro Hi**	**0.45**	**157**		Pg	00 35 35.6	-0.4
CLCB	**Lake Chabot**	**0.46**	**151**		Pg	00 35 35.8	-0.4
JSBM	**San Bruno Moun**	**0.46**	**185**		Pb	00 35 36.5	-0.1
JMGM	**Milagra Ridge**	**0.51**	**191**		Pb	00 35 37.6	+0.1
CMOB	**Morgan Territo**	**0.54**	**127**		Pg	00 35 36.9	-0.8
NPRM	**Point Reyes**	**0.55**	**255**		Pb	00 35 38.4	+0.3
JCPM	**Coyote Point**	**0.55**	**178**		Pg	00 35 38.0	+0.1
NHSM	**Mount Saint He**	**0.56**	**338**		Pg	00 35 37.8	-0.3
CDOM	**Doolan Road**	**0.57**	**135**		Pg	00 35 38.0	-0.3
CNIC	**Niles Canyon**	**0.61**	**150**		Pg	00 35 38.5	-0.5
JCHM	**Cahill Ridge**	**0.62**	**182**		Pb	00 35 39.3	-0.1
CBSNC	**Byron Hot Spri**	**0.64**	**120**		Pg	00 35 38.7	-0.9
CVLM	**Vallecito**	**0.65**	**142**		Pb	00 35 40.0	+0.2
GAXM	**Alexander Vall**	**0.66**	**331**		Pg	00 35 39.5	-0.4
NMTM	**Middletown**	**0.67**	**353**		Pg	00 35 39.9	-0.3
FARB	**Farallon Islan**	**0.68**	**230**		Pb	00 35 40.9	+0.5
JHPM	**Huddart Park**	**0.69**	**177**		Pb	00 35 40.7	+0.1
WENL	**Wente Vineyard**	**0.69**	**138**		Pb	00 35 40.6	0.0
GCRM	**Castle Rock Sp**	**0.70**	**336**		Pg	00 35 40.5	-0.1
JRSC	**Jasper Ridge**	**0.74**	**173**		Pb	00 35 41.1	-0.3
MNRC	**McLaughlin Min**	**0.74**	**354**		Pb	00 35 41.6	+0.1
JSFB	**Stanford Teles**	**0.75**	**170**		Pb	00 35 41.4	-0.1
FTR	**Fort Ross**	**0.75**	**301**		Pg	00 35 41.7	+0.1
GDXM	**Geysers**	**0.76**	**332**		Pb	00 35 41.5	-0.3
GDXM	**Geysers**	**0.76**	**332**	Sg	Sb	00 35 51.8	0.0
GDXM				IAML		00 35 53.4	
	comp=N,212nm,0.2s						
GDXM				IAML		00 35 54.5	
	comp=E,258nm,0.6s						
GSSM	**Skaggs Springs**	**0.77**	**317**		Pb	00 35 41.5	-0.4
JFP	**Foothills Park**	**0.79**	**171**		Pb	00 35 41.7	-0.5
BGH	**Bear Gulch**	**0.80**	**180**		Pb	00 35 42.1	-0.2
JJRM	**Joaquin Road**	**0.80**	**172**		Pb	00 35 42.2	-0.2
CALM	**Calaveras Res.**	**0.81**	**148**		Pb	00 35 42.0	-0.6
GHCM	**House Creek**	**0.82**	**305**		Pb	00 35 42.7	0.0
GCVM	**Cloverdale**	**0.82**	**320**		Pb	00 35 42.6	-0.1
JSJM	**St Joseph**	**0.83**	**166**		Pb	00 35 42.9	0.0
JBMM	**Black Mountain**	**0.83**	**169**		Pb	00 35 42.8	-0.2
GPMM	**Pine Mountain**	**0.85**	**327**		Pg	00 35 43.7	+0.2
CMLM	**Mount Lewis**	**0.86**	**140**		Pb	00 35 42.9	-0.6
JSGM	**Saratoga Golf**	**0.89**	**165**		Pb	00 35 43.5	-0.3
CMMM	**Mount Mocho**	**0.96**	**135**		Pb	00 35 44.2	-1.0
MHC	**Mount Hamilton**	**0.97**	**145**		Pb	00 35 44.4	-1.1
JJOM	**Saint Joseph's**	**0.97**	**162**		Pb	00 35 44.5	-0.9
COSM	**Mount Oso**	**0.99**	**129**		Pb	00 35 44.2	-1.6
ARN	**Arnold Ranch**	**1.02**	**140**		Pb	00 35 45.3	-0.9
HOPS	**Hopland Field**	**1.03**	**327**		Pg	00 35 46.8	-0.1
HOPS				Sn	Sn	00 36 02.1	+1.4
CCOB	**Coe Ranch Numb**	**1.03**	**149**		Pb	00 35 46.0	-0.3
AMC	**Almaden**	**1.05**	**158**		Pb	00 35 45.5	-1.3
JLAB	**Laurel Hill**	**1.10**	**154**		Pb	00 35 46.3	-1.1
JHLM	**Holstrom Ranch**	**1.10**	**158**		Pb	00 35 46.2	-1.4
CMPM	**Mikes Peak**	**1.13**	**133**		Pb	00 35 47.1	-1.0
CADM	**Anderson Res.**	**1.13**	**149**		Pn	00 35 47.4	-0.5
JRGM	**Rodeo Gulch Ro**	**1.14**	**165**		Pn	00 35 46.9	-1.3
GGUM	**Gualala**	**1.15**	**309**		Pn	00 35 47.4	-1.1
SUTB	**Sutter Butte**	**1.17**	**22**		Pn	00 35 46.3	-2.3
OSUM	**Sutter Buttes**	**1.20**	**19**		Pn	00 35 47.2	-1.7
GHS	**Gilroy Hot Spr**	**1.26**	**145**		Pn	00 35 48.6	-1.3
GHOM	**Hamilton Openi**	**1.30**	**314**		Pn	00 35 49.6	-0.9
CSR	**Chase Ranch**	**1.32**	**153**		Pn	00 35 49.3	-1.4
HCOM	**Corn Cob Canyo**	**1.35**	**158**		Pn	00 35 49.6	-1.4
HPCM	**Pacheco Lake**	**1.37**	**141**		Pn	00 35 50.4	-1.0
MCUB	**Copperopolis B**	**1.37**	**96**		Pn	00 35 49.2	-2.1
OHCM	**Honcut**	**1.37**	**29**		Pn	00 35 48.8	-2.5
SLD	**San Luis Dam**	**1.39**	**140**		Pn	00 35 50.8	-0.8
GCK	**Clark Valley**	**1.41**	**357**		Pn	00 35 51.6	-0.2
MOBB	**Monterey Bay O**	**1.45**	**174**		Pn	00 35 51.3	-1.0
HSFM	**Saint Francis**	**1.49**	**153**		Pn	00 35 52.3	-0.6
SAO	**San Andreas Ge**	**1.55**	**152**		Pn	00 35 53.6	-0.2
CMB	**Columbia Colle**	**1.55**	**93**		Pn	00 35 52.3	-1.6
ORV	**Oroville**	**1.56**	**25**	Pn	Pn	00 35 51.7	-2.3
OGOM	**Van Goodin Ran**	**1.62**	**20**		Pn	00 35 53.2	-1.5
BPCNC	**Pine Canyon**	**1.66**	**160**		Pn	00 35 54.5	-0.8
MYLM	**Yosemite Lake**	**1.70**	**116**		Pn	00 35 54.4	-1.5
SCZ	**Santa Cruz**	**1.71**	**154**		Pn	00 35 54.3	-1.8
KFPM	**Farley Peak**	**1.72**	**331**		Pb	00 35 57.5	-0.6
KCPM	**Cahto Peak**	**1.82**	**328**	Pn	Pn	00 35 58.4	+0.7
KCPM				IAML		00 36 14.2	
	comp=E,54nm,3.8s						
KCPM				IAML		00 36 43.4	
	comp=N,42nm,3.8s						
BBGB	**Big Mountain B**	**1.87**	**146**		Pn	00 35 57.9	-0.4
BBGB				IAML		00 36 48.2	
	comp=E,76nm,1.0s						
EMB	**Emerald Bay**	**1.95**	**64**	Pn	Pn	00 35 59.6	+0.1
TNK	**Tinkers Knob**	**2.00**	**55**		Pn	00 36 00.7	+0.5
MPK	**Martis Peak**	**2.15**	**57**		Pn	00 36 02.1	-0.2
PMPB	**Monarch Peak**	**2.28**	**147**		Pn	00 36 03.7	-0.2
PMPB				IAML		00 36 50.8	
	comp=N,34nm,2.6s						
PMPB				IAML		00 37 16.6	
	comp=E,35nm,4.0s						
BEKR	**Beckworth**	**2.32**	**41**	Pn	Pn	00 36 04.1	-0.5
BEKR				IAML		00 36 35.5	
	comp=E,35nm,0.6s						
BEKR				IAML		00 36 36.3	
	comp=N,35nm,0.5s						
KMRM	**Mail Ridge**	**2.33**	**333**	Pn	Pn	00 36 05.3	+0.6
KMRM				IAML		00 36 22.1	
	comp=E,50nm,4.2s						
KMRM				IAML		00 36 50.4	
	comp=N,35nm,4.5s						
PNTR	**Pine Nut**	**2.35**	**65**		Pn	00 36 06.3	+1.2
PNTR				IAML		00 37 02.2	
	comp=E,49nm,0.8s						
PNTR				IAML		00 37 03.9	
	comp=N,48nm,1.2s						
VCNR	**Virginia City**	**2.40**	**60**		Pn	00 36 05.3	-0.4
VCNR				IAML		00 36 40.0	
	comp=E,40nm,0.4s						
VCNR				IAML		00 36 51.0	
	comp=N,36nm,1.0s						
LMEM	**Manzanita Entr**	**2.47**	**14**		Pb	00 36 11.7	+0.7
YERR	**Yerington**	**2.58**	**70**		Pn	00 36 08.1	0.0
YERR				IAML		00 36 45.8	
	comp=N,45nm,0.5s						
MDPB	**Devils Postpil**	**2.63**	**100**		Pn	00 36 09.8	+0.8
MDPB				IAML		00 36 47.6	
	comp=E,20nm,0.4s						
MDPB				IAML		00 36 54.9	
	comp=N,25nm,0.8s						
KMPM	**Mount Pierce**	**2.66**	**329**	Pn	Pn	00 36 07.8	-1.4
PAHR	**Pah Rah Range**	**2.79**	**55**		Pn	00 36 10.9	-0.1
PTRM	**Twissleman Ran**	**3.01**	**145**		Pn	00 36 16.8	+2.8
LHV	**Little Huntoon**	**3.03**	**87**		Pn	00 36 15.2	+1.1
LHV				IAML		00 37 09.2	
	comp=E,20nm,0.8s						
LHV				IAML		00 37 21.1	
	comp=N,18nm,1.4s						
RYN	**Ryan**	**3.04**	**80**		Pn	00 36 14.7	+0.2
NVAR	**Mina Array Bea**	**3.19**	**84**		Pg	00 36 26.9	-1.3
KVN	**Kaiserville**	**3.45**	**73**	IAML		00 37 27.7	
	comp=N,11nm,0.9s						
YBH	**Yreka Blue Hor**	**3.60**	**356**	Pn	Pn	00 36 23.9	+1.8
YBH				IAML		00 37 08.5	
	comp=E,8.1nm,4.0s						
LCH	**Last Change Ra**	**3.84**	**102**		Pb	00 36 36.2	+1.9
LCH				IAML		00 38 19.2	
	comp=N,6.6nm,4.7s						
KSXB	**Camp Six Broad**	**3.87**	**343**	Pn	Pn	00 36 26.8	+1.0
ISA	**Isabella, Lake**	**3.97**	**127**	Pn	Pn	00 36 27.2	+0.1
ISA				IAML		00 37 52.6	
	comp=E,9.1nm,4.3s						
ISA				IAML		00 37 57.6	
	comp=N,8.5nm,4.6s						

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*IDC **02** 01:00:59.5±1.6, 23°.55S×180°.00W, h522km±16km, mb3.5/9, mbtmp4.3/12, Error ellipse: s-maj=21.4km s-min=14.8km az=143.0*

*NEIC **02** 01:00:59.2±1.6, 23°.6S±0°.2×179°.9W±0°.1, h516km±11km, mb4.3/32, Error ellipse: s-maj=22.9km s-min=19.3km az=178.0*

ISC 02 01:00:60.0±0.6**, 23°.6S**±0°.1×**180°.0W**±0°.1**, h532**km**, n53, σ0s.99**/53**, mb4.2**/21**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.10**	**342**	P	**P**	**01 02 39.2**	**+0.3**
	6.2nm,0.6s,baz=190,slow=19,SNR=5.6						
MARNC	**Mare, Loyalty**	**11.26**	**278**	P	**P**	**01 03 31.3**	**+0.5**
PINNC	**Pines Island,**	**11.60**	**272**	P	**P**	**01 03 33.7**	**-0.6**
DZM	**Mont Dzumac**	**12.59**	**274**	P	**P**	**01 03 46.0**	**+1.1**
	7.8nm,0.7s,baz=78,slow=16,SNR=4.4						
DZM	**Mont Dzumac**	**12.59**	**274**	P	**P**	**01 03 41.9**	**-3.0**
URZ	**Urewera**	**14.84**	**189**	P	**P**	**01 04 07.1**	**-0.7**
	5.0nm,0.3s,baz=121,slow=24,SNR=6.7						
BKZ	**Black Stump Fm**	**15.82**	**190**	P	**P**	**01 04 17.5**	**-0.6**
BKZ				IAmb	IAmb	01 04 31.7	
	comp=Z,14nm,1.2s						
TUWZ	**Tuamarina**	**18.50**	**194**	P	**P**	**01 04 42.6**	**-0.5**
LTZ	**Lake Taylor**	**20.19**	**197**	P	**P**	**01 04 57.2**	**-1.3**
LTZ				IAmb	IAmb	01 05 05.3	
	comp=Z,6.9nm,0.6s						
CTAO	**Charters Tower**	**31.48**	**270**	P	**P**	**01 06 39.1**	**+0.8**
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**01 07 06.8**	**+0.2**
	comp=Z,3.5nm,0.5s,baz=94,slow=11,SNR=12						
	comp=Z,3.5nm,0.5s						
AS31	**Alice Springs**	**42.09**	**260**	P	**P**	**01 08 05.6**	**0.0**
ASAR	**Alice Springs**	**42.09**	**260**	P	**P**	**01 08 05.5**	**0.0**
	comp=Z,9.6nm,0.6s,baz=94,slow=8.1,SNR=86						
ASAR				ScP	**ScP**	**01 12 50.4**	**+2.5**
	comp=Z,2.3nm,0.8s,baz=109,slow=4.1,SNR=13						
	comp=Z,9.6nm,0.6s						
WR0	**Warramunga Arr**	**42.24**	**266**	P	**P**	**01 08 06.2**	**-0.6**
WR0				IAmb	IAmb	01 08 06.9	
	comp=Z,7.3nm,0.9s						
WB2	**Warramunga Arr**	**42.42**	**266**	P	**P**	**01 08 07.7**	**-0.5**
WB0	**Warramunga Arr**	**42.42**	**266**	P	**P**	**01 08 07.6**	**-0.6**
WRA	**Warramunga Arr**	**42.43**	**266**	P	**P**	**01 08 07.8**	**-0.4**
	comp=Z,10.0nm,0.4s,baz=90,slow=5.8,SNR=187						
WRA				ScP	**ScP**	**01 12 52.0**	**+2.7**
	comp=Z,2.4nm,0.9s,baz=100,slow=4.2,SNR=8.5						
	comp=Z,10.0nm,0.4s						
WRA	**Warramunga Arr**	**42.43**	**266**	P	**P**	**01 08 06.6**	**-1.7**
PTCN	**Pitcairn Islan**	**45.29**	**103**	P	P	01 08 24.8	-5.6
QSPA	**South Pole Qui**	**66.50**	**180**	P	**P**	**01 10 57.4**	**+0.8**
	comp=Z,4.0nm,0.7s,baz=34,slow=2.3,SNR=13						
	comp=Z,4.0nm,0.7s						
QSPA	**South Pole Qui**	**66.50**	**180**	P	**P**	**01 10 57.5**	**+0.9**
QSPA				IAmb	IAmb	01 10 58.6	
	comp=Z,6.1nm,0.9s						
PETK	**Petropavlovsk-**	**78.79**	**347**	P	**P**	**01 12 07.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=108,slow=6.8,SNR=3.0						
	comp=Z,0.8nm,0.6s						
PMSA	**Palmer Station**	**79.20**	**157**	P	**P**	**01 12 09.8**	**+0.4**
PMSA				IAmb	IAmb	01 12 12.2	
	comp=Z,20nm,1.1s						
SLBS	**Sierra La Lagu**	**82.65**	**60**	P	**P**	**01 12 26.3**	**-1.8**
SLBS				IAmb	IAmb	01 12 38.0	
	comp=Z,7.2nm,1.1s						
ISA	**Isabella, Lake**	**82.80**	**46**	P	**P**	**01 12 29.0**	**+0.4**
CMB	**Columbia Colle**	**82.97**	**43**	P	**P**	**01 12 29.5**	**+0.2**
NVAR	**Mina Array Bea**	**84.53**	**44**	P	**P**	**01 12 37.5**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=220,slow=7.8,SNR=9.4						
	comp=Z,0.6nm,0.6s						
TPH	**Tonopah**	**85.02**	**45**	P	**P**	**01 12 39.1**	**-0.5**
TPH				IAmb	IAmb	01 12 40.8	
	comp=Z,15nm,1.1s						
TUC	**Tucson**	**86.33**	**52**	P	**P**	**01 12 45.2**	**-0.7**
TUC				IAmb	IAmb	01 12 48.3	
	comp=Z,5.0nm,0.9s						
I07A	**Izee**	**87.14**	**39**	P	**P**	**01 12 50.4**	**+0.9**
I07A				IAmb	IAmb	01 12 51.2	
	comp=Z,5.3nm,1.0s						
J08A	**Circle Bar Ran**	**87.31**	**40**	P	**P**	**01 12 51.1**	**+0.8**
J08A				IAmb	IAmb	01 12 52.4	
	comp=Z,5.6nm,1.1s						
U15A	**North Rim**	**87.39**	**48**	P	**P**	**01 12 51.8**	**+0.7**
U15A				IAmb	IAmb	01 12 52.9	
	comp=Z,5.2nm,0.9s						
G08A	**Pilot Rock**	**88.18**	**38**	P	**P**	**01 12 55.1**	**+0.8**
MTPU	**Mount Pierson**	**88.32**	**47**	P	**P**	**01 12 55.5**	**0.0**
MTPU				IAmb	IAmb	01 12 57.6	
	comp=Z,3.4nm,0.9s						
TMUT	**Trail Mountain**	**89.62**	**46**	P	**P**	**01 13 01.7**	**+0.3**
HLID	**Hailey**	**89.86**	**41**	P	**P**	**01 13 03.3**	**+1.0**
HVU	**Hansel Valley**	**89.91**	**44**	P	**P**	**01 13 03.1**	**+0.6**
HVU				IAmb	IAmb	01 13 03.8	
	comp=Z,2.7nm,0.7s						
SRU	**San Rafael Swe**	**89.98**	**47**	P	**P**	**01 13 03.2**	**+0.3**
TX31	**Lajitas Ar. Si**	**90.26**	**58**	P	**P**	**01 13 05.0**	**+0.6**
TX32	**Lajitas Array**	**90.26**	**58**	P	**P**	**01 13 05.1**	**+0.7**
TX32				IAmb	IAmb	01 13 06.2	
	comp=Z,2.5nm,0.8s						
TXAR	**Lajitas Array**	**90.26**	**58**	P	**P**	**01 13 05.4**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=214,slow=6.6,SNR=31						
	comp=Z,1.7nm,0.7s						
P18A	**Preston Nutter**	**90.43**	**46**	P	**P**	**01 13 05.6**	**+0.4**
HWUT	**Hardware Ranch**	**90.59**	**44**	P	**P**	**01 13 05.6**	**-0.1**
HWUT				IAmb	IAmb	01 13 06.4	
	comp=Z,2.3nm,0.7s						
ANMO	**Albuquerque**	**90.76**	**52**	P	**P**	**01 13 07.1**	**+0.5**
ILAR	**Eielson Array**	**91.72**	**14**	P	**P**	**01 13 09.1**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=210,slow=7.1,SNR=3.0						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**92.46**	**44**	P	**P**	**01 13 14.1**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=212,slow=3.2,SNR=5.1						
	comp=Z,0.7nm,0.5s						
T25A	**Trinidad**	**93.25**	**51**	P	**P**	**01 13 18.8**	**+0.7**
MKAR	**Makanchi Array**	**111.94**	**313**	PKiKP	**PKiKP**	**01 18 33.4**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=0.0,slow=0.6,SNR=4.1						
ARCES	**ARCESS Array B**	**131.58**	**348**	PKP	**PKPdf**	**01 19 10.5**	**-1.0**
	comp=Z,3.9nm,1.0s,baz=38,slow=4.8,SNR=4.2						
FINES	**FINESS Array B**	**138.15**	**342**	PKP	**PKPdf**	**01 19 24.0**	**+0.1**
	comp=Z,4.1nm,1.1s,baz=80,slow=1.6,SNR=1.7						
NOA	**NORSAR Array B**	**141.77**	**351**	PKhKP	PKPpre	01 19 25.1	
	comp=Z,0.6nm,0.7s,baz=7.1,slow=2.3,SNR=3.8						
AKASG	**Malin Array Be**	**144.71**	**327**	PKP	**PKPdf**	**01 19 35.2**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=43,slow=3.4,SNR=6.0						
CLL	**Collm**	**150.55**	**343**	*i* PKPbc	**PKPbc**	**01 19 51.2**	**-0.2**
	comp=Z,8.0nm,1.2s						

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*NDI **02** 01:23:54.4±2.8, 34°.20N×72°.04E, h33km, ML4.3, mb4.2(NEIC)*

*IDC **02** 01:23:54.4±0.6, 34°.04N×72°.58E, h0km, mb4.3/21, mbtmp4.3/26, ML4.0/5, MS3.2/16, Error ellipse: s-maj=15.6km s-min=13.2km az=53.0*

*MOS **02** 01:23:58.1±1.1, 34°.06N×72°.72E, h38km, mb4.4/17, Error ellipse: s-maj=8.4km s-min=3.9km az=89.9*

*NEIC **02** 01:24:00.0±2.0, 33°.94N±0°.09×72°.71E±0°.08, h56km±11km, mb4.2/13, Error ellipse: s-maj=14.0km s-min=8.4km az=202.0*

*BJI **02** 01:24:09.2±0.0, 34°.86N×72°.55E, h130km, mb4.4/14, mB4.2/7*

ISC 02 01:23:58.7±0.4**, 34°.00N**±0°.04×**72°.64E**±0°.04**, h34**km**, n165, σ2s.31**/181**, mb4.3**/36**, MS3.2**/16**, 9C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIL	**Nilore**	**0.62**	**124**		**Pn**	**01 24 09.8**	**-1.3**
NIL				Sn	**Sb**	**01 24 21.6**	**+1.7**
NIL	**Nilore**	**0.62**	**124**	P	**Pn**	**01 24 09.8**	**-1.3**
NIL						01 24 21.6	
CHCP	**Chirah Chowk**	**0.62**	**123**	P	**Pn**	**01 24 10.0**	**-1.1**
CEP	**Cherat**	**0.63**	**254**	P	**Pn**	**01 24 08.5**	**-2.8**
THW	**Thamme Wali**	**1.42**	**212**	P	**Pb**	**01 24 24.2**	**-0.4**
JMU	**Jammu**	**2.29**	**123**	*e*P	**Pb**	**01 24 37.0**	**-2.2**
JMU				*e*S	**Sb**	**01 25 08.1**	**+1.0**
THN	**Thein Dam**	**3.02**	**120**	*e*P	**Pb**	**01 24 48.0**	**-3.7**
THN				*e*PN	**Pb**	**01 24 48.0**	**-3.7**
THN				*e*SN	**Sb**	**01 25 25.0**	**-3.1**
THN				*e*S	**Sn**	**01 25 25.7**	**+6.7**
KBL	**Kabul**	**3.02**	**281**		**Pn**	**01 24 47.4**	**+3.0**
KBL				Sn	**Sn**	**01 25 23.1**	**+3.6**
KBL	**Kabul**	**3.02**	**281**	P	**Pn**	**01 24 47.4**	**+3.0**
KBL						01 25 23.1	
BHK	**Bhakra**	**4.10**	**128**	*e*PN	**Pn**	**01 25 03.0**	**+4.0**
BHK				*i* PG	**Pb**	**01 25 14.2**	**+4.1**
BHK				*e*S	**Sn**	**01 25 50.6**	**+4.9**
SMLA	**Simla**	**4.78**	**126**	*e*P	**Pn**	**01 25 10.7**	**+2.4**
SMLA				*e*S	**Sn**	**01 26 06.6**	**+4.2**
SMLA				IAML		01 26 33.1	
	comp=E,552nm,0.8s						
SMLA				IAML		01 26 34.4	
	comp=N,598nm,0.8s						
GAR	**Garm**	**5.33**	**340**		**Pn**	**01 25 19.6**	**+3.6**
CHGR	**Chuyangaron**	**5.43**	**330**		**Pn**	**01 25 19.4**	**+2.1**
CHGR	**Chuyangaron**	**5.43**	**330**	P	**Pn**	**01 25 19.4**	**+2.1**
DRK	**Karamyk**	**5.51**	**353**	Pn	**Pn**	**01 25 22.5**	**+3.9**

KSH Kashi 6.12 25 P Pn 01 25 27.4 +0.5
KSH smax smax
comp=N,230nm,0.3s
KSH smax smax
comp=N,120nm,0.3s
BTK Batken 6.22 347 Pn 01 25 31.9 +3.8
BTK Batken 6.22 347 P Pn 01 25 31.9 +3.8
KHET Khetri 6.50 154 eP Pn 01 25 32.6 +0.6
KHET eS Sn 01 26 43.4 -1.6
NDI New Delhi 6.59 142 eP Pn 01 25 35.0 +1.8
KUDL Kundal 6.71 149 eP Pn 01 25 35.5 +0.8
KUDL eS Sn 01 26 50.8 +0.8
AML Almayashu 8.16 6 P Pn 01 25 57.9 +2.9
SNR=83
IUG Iuzhnay 8.39 347 eP Pn 01 25 59.4 +1.5
IUG eS Sn 01 27 26.9 -4.5
IUG Iuzhnay 8.39 347 eP Pn 01 25 59.4 +1.5
baz=346
IUG eS Sn 01 27 27.0 -4.5
baz=346
EKS2 Erkin-Say 8.70 6 P Pn 01 26 05.5 +3.4
SNR=55
ULHL Ulahol 8.71 18 P Pn 01 26 07.5 +5.1
SNR=14
AAK Ala-Archa 8.75 9 Pn Pn 01 26 05.7 +2.9
comp=N,6.4nm,0.3s,baz=172,slow=8.4,SNR=20
AAK Sn Sn 01 27 41.1 +0.8
comp=N,1.3nm,0.3s,baz=150,slow=20,SNR=1.6
AAK LR LR 01 29 07.7
comp=N,25nm,20.2s,baz=183,slow=36
comp=N,14nm,0.3s
AAK Ala-Archa 8.75 9 P Pn 01 26 06.3 +3.4
SNR=12
AAK Ala-Archa 8.75 9 Pn Pn 01 26 04.8 +1.9
KBK Karagaybulak 8.83 11 P Pn 01 26 08.2 +4.2
SNR=9.7
DZA Taraz 8.94 354 eP Pn 01 26 05.4 +0.1
DZA Taraz 8.94 354 eP Pn 01 26 05.5 +0.1
baz=354
CHMS Chumysh 9.14 10 P Pn 01 26 11.2 +3.1
SNR=12
CHMS Chumysh 9.14 10 i P Pn 01 26 10.5 +2.4
CHMS pmax pmax
comp=Z,31nm,0.7s
TKM2 Tokmak 2 9.20 14 P Pn 01 26 12.0 +2.8
SNR=24
TKM2 Tokmak 2 9.20 14 i P Pn 01 26 11.4 +2.2
TKM2 pmax pmax
comp=Z,13nm,0.5s
TKM2 Tokmak 2 9.20 14 ⇓P Pn 01 26 11.5 +2.2
comp=Z,13nm,0.5s
TKM2 ⇓S Sn 01 27 55.1 +3.4
comp=Z,12nm,0.6s
KK31 Karatay Array 9.24 350 Pn 01 26 10.7 +1.2
KK31 Karatay Array 9.24 350 P Pn 01 26 10.7 +1.2
KK31 S Sn 01 27 53.7 +1.4
KK31 Karatay Array 9.24 350 ⇑P Pn 01 26 11.2 +1.7
comp=Z,21nm,0.3s,baz=166,slow=11,SNR=198
KK31 ⇑S Sn 01 27 52.3 0.0
comp=Z,5.3nm,0.3s,baz=172,slow=22,SNR=7.3
KKAR Karatay Array 9.24 350 Pn 01 26 10.9 +1.4
KKAR Karatay Array 9.24 350 Pn 01 26 11.1 +1.5
KKAR Karatay Array 9.24 350 P Pn 01 26 10.9 +1.4
USP Ospenovka 9.37 8 P Pn 01 26 13.8 +2.6
SNR=9.0
SGDS Sogindy 9.57 9 eP Pn 01 26 14.5 +0.5
SGDS pmax pmax
comp=Z,3.0nm,0.4s
SGDS Sogindy 9.57 9 eP Pn 01 26 14.6 +0.5
comp=Z,2.7nm,0.4s,baz=9.4
MDOK Medeo 9.78 19 eP Pn 01 26 18.2 +1.2
MDOK Medeo 9.78 19 eP Pn 01 26 18.2 +1.2
baz=20
AAA Alma-Ata 9.78 19 eP Pn 01 26 18.2 +1.2
AAA Alma-Ata 9.78 19 eP Pn 01 26 18.2 +1.2
baz=20
SATY Saty 10.11 25 eP Pn 01 26 22.8 +1.3
SATY Saty 10.11 25 eP Pn 01 26 22.9 +1.3
baz=26
KUU Kurty 10.29 15 eP Pn 01 26 24.5 +0.7
KUU Kurty 10.29 15 eP Pn 01 26 24.6 +0.7
baz=16
CHKK Chushkaly 10.40 18 eP Pn 01 26 26.9 +1.4
CHKK Chushkaly 10.40 18 eP Pn 01 26 26.9 +1.4
baz=19
UZB Uzynbulak 10.41 27 eP Pn 01 26 27.1 +1.5
UZB Uzynbulak 10.41 27 eP Pn 01 26 27.2 +1.5
baz=28
SHLS Shalkode 10.59 28 eP Pn 01 26 31.7 +3.7
SHLS pmax pmax
comp=Z,6.0nm,0.7s
SHLS Shalkode 10.59 28 eP Pn 01 26 31.8 +3.7
comp=Z,5.5nm,0.7s,baz=31
PDGK Podgornoye 10.74 28 P Pn 01 26 31.5 +1.3
DANN Dangsing 11.06 118 eP Pn 01 26 34.4 -0.4
comp=Z,33nm,0.3s
BTLS Baital 11.08 5 eP Pn 01 26 35.5 +0.8
BTLS pmax pmax
comp=Z,1.0nm,0.4s
BTLS Baital 11.08 5 eP Pn 01 26 35.5 +0.8
comp=Z,1.0nm,0.4s,baz=5.5
BHPL Bhopal 11.51 157 eP Pn 01 26 37.4 -3.4
BHPL ex x 01 26 37.6
BHPL eS Sn 01 28 43.7 -4.4
GKN Gorkha 11.90 117 eP Pn 01 26 45.2 -0.9
comp=Z,34nm,0.3s
GKN eS Sn 01 28 51.7 -6.1
GEYT Alibeck 12.40 293 Pn Pn 01 26 52.4 -0.4
comp=Z,0.5nm,0.3s,baz=101,slow=16,SNR=6.1
comp=Z,4.1nm,0.7s
GEYT Alibeck 12.40 293 Pn 01 26 51.9 -0.8
GYA0B ALIBECK ARRAY 12.40 293 Pn 01 26 50.4 -2.4
DMN Daman 12.46 117 eP Pn 01 26 52.2 -1.7
JBP Jabalpur 12.57 147 eP Pn 01 26 50.8 -4.4
JBP eS Sn 01 29 07.0 -6.9
PKIN Phulchoki 12.70 117 eP Pn 01 26 54.9 -2.2
PKIN eS Sn 01 29 11.5 -5.9
PKI Pulchoki 12.71 117 eP Pn 01 26 56.2 -1.1
GUN Gumba 12.88 115 eP Pn 01 27 00.6 +0.9
JIRN Jiri 13.24 115 eP Pn 01 27 02.5 -2.2
comp=Z,42nm,0.3s
RAMN Ramite 13.93 117 eP Pn 01 27 10.4 -3.6
comp=Z,44nm,0.4s
TAPN Taplejung 14.56 113 eP Pn 01 27 21.3 -1.3
comp=Z,25nm,0.4s
MAKZ Makanchi 14.62 26 Pn 01 27 21.8 -1.2
MAKZ Makanchi 14.62 26 P Pn 01 27 22.7 -0.4
MK31 Makanchi Array 14.73 27 Pn Pn 01 27 24.4 0.0
MK31 Makanchi Array 14.73 27 i P Pn 01 27 24.4 0.0
MK31 pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 14.73 27 Pn Pn 01 27 24.8 +0.3
comp=Z,0.4nm,0.3s,baz=194,slow=12,SNR=20
comp=Z,1.9nm,0.6s
MKAR Makanchi Array 14.73 27 Pn Pn 01 27 23.4 -1.1
MKAR Makanchi Array 14.73 27 i P Pn 01 27 26.2 +1.7
MKAR pmax pmax
comp=Z,3.0nm,0.6s
BRZS Berezniki 15.97 0 eP Pn 01 27 39.8 -0.9
BRZS Berezniki 15.97 0 eP Pn 01 27 39.9 -0.9
baz=0.1
ZSN Zaisan 16.30 31 eP Pn 01 27 44.9 +0.1
ZSN Zaisan 16.30 31 eP Pn 01 27 44.1 -0.7
baz=32
KURBB Kurchatov Arra 17.16 13 P Pn 01 27 54.0 -1.7
comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=16
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 17.16 13 P Pn 01 27 52.5 -3.2
KURK Kurchatov 17.27 13 Pn Pn 01 27 54.9 -2.2
KURK Kurchatov 17.27 13 ceP Pn 01 27 54.3 -2.7
KURK pmax pmax
comp=Z,6.0nm,1.0s
SEM Semipalatinsk 17.32 17 eP Pn 01 27 56.8 -1.1
SEM Semipalatinsk 17.32 17 eP Pn 01 27 56.9 -1.1
baz=17
HYBB Hyderabad (bro 17.34 161 ePn Pn 01 27 57.0 -1.3
HYBB eSn Sn 01 31 11.0 +0.8
AB31 Akbulak array 17.91 332 P Pn 01 28 03.0 -2.0
ABKAR Akbulak array 17.91 332 P Pn 01 28 03.4 -1.6
ABKAR Akbulak array 17.91 332 P Pn 01 28 03.3 -1.8
ABKAR IAmb IAmb 01 28 11.8
comp=Z,6.1nm,0.6s
BVAR Borovoye Array 19.09 356 LR LR 01 36 03.6
comp=Z,116nm,21.1s,baz=56,slow=38
BRVK Borovoye 19.13 356 P P 01 28 17.4 -1.3
BRVK IAmb IAmb 01 28 27.4
comp=Z,8.7nm,0.7s
BRVK Borovoye 19.13 356 ceP P 01 28 18.7 +0.1
BRVK pmax pmax
comp=Z,12nm,1.0s
AKTO Aktyubinsk 19.61 331 P P 01 28 24.5 +0.5
comp=Z,1.7nm,0.3s,baz=144,slow=11,SNR=38
AKTO LR LR 01 36 32.2
comp=Z,60nm,20.0s,baz=150,slow=39
comp=Z,12nm,0.6s
AKTO Aktyubinsk 19.61 331 P P 01 28 23.7 -0.3
ZAA0 Zalesovo Array 21.73 20 P P 01 28 46.9 +0.1
ZALV Zalesovo Beam 21.73 20 P P 01 28 46.5 -0.2
comp=Z,8.2nm,0.4s,baz=213,slow=10.0,SNR=29
ZALV LR LR 01 37 33.3
comp=Z,26nm,19.9s,baz=148,slow=38
comp=Z,8.2nm,0.4s
ZALV Zalesovo Beam 21.73 20 P P 01 28 46.4 -0.4
ZALV Zalesovo Beam 21.73 20 i P P 01 28 47.0 +0.2
ZALV pmax pmax
comp=Z,9.0nm,0.4s
GROC Groznyy 22.82 302 eP P 01 29 01.2 +2.6
GROC pmax pmax
comp=Z,11nm,0.5s
GNI Garni 23.03 294 P P 01 29 03.8 +2.8
comp=Z,5.6nm,0.7s,baz=66,slow=1.6,SNR=9.4
GNI Garni 23.03 294 P P 01 29 00.8 -0.2
GNI IAmb IAmb 01 29 20.3
comp=Z,13nm,0.8s
GNI Garni 23.03 294 ceP P 01 29 02.6 +1.6
GNI pmax pmax
comp=Z,14nm,0.8s
ZEI Tsey 24.08 300 eP P 01 29 12.4 +1.3
ZEI pmax pmax
comp=Z,4.0nm,0.5s
SVE Sverdlovsk 24.26 344 eP P 01 29 12.3 -0.1
ARU Arti 24.43 341 P P 01 29 14.1 +0.2
comp=Z,4.9nm,0.6s,baz=157,slow=11,SNR=13
ARU LR LR 01 38 29.4
comp=Z,20nm,19.3s,baz=124,slow=36
comp=Z,4.9nm,0.6s
ARU Arti 24.43 341 P P 01 29 13.6 -0.3
ARU IAmb IAmb 01 29 15.1
comp=Z,4.6nm,0.6s
ARU Arti 24.43 341 c iP P 01 29 14.1 +0.2
ARU S S 01 33 26.4 -5.0
ARU pmax pmax
comp=Z,5.0nm,0.7s
ARU MLR MLR
comp=Z,133nm,15.0s
NCK Nalchik 24.45 301 i P P 01 29 16.9 +2.6
NCK pmax pmax
comp=Z,4.0nm,0.5s
KNGR Kungurtug, Tuv 24.60 40 i P P 01 29 17.5 +1.8
KNGR pmax pmax
comp=Z,8.0nm,0.7s
KBZ Khabaz 25.00 302 P P 01 29 20.7 +1.5
comp=Z,3.4nm,0.8s,baz=135,slow=4.4,SNR=9.6
KBZ LR LR 01 42 01.3
comp=Z,47nm,18.7s,baz=53,slow=44
comp=Z,3.4nm,0.8s
KBZ Khabaz 25.00 302 ceP P 01 29 20.3 +1.1
KBZ pmax pmax
comp=Z,5.0nm,0.9s
GURO Guroymak-BITLI 25.02 289 P P 01 29 19.7 0.0
KVAR Kislovodsk Arr 25.19 302 LR LR 01 42 27.2
comp=Z,42nm,18.4s,baz=350,slow=44
KIV Kislovodsk 25.20 302 P P 01 29 20.7 -0.4
KIV IAmb IAmb 01 30 04.0
comp=Z,4.6nm,0.8s
KIV Kislovodsk 25.20 302 eP P 01 29 21.9 +0.8
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,46nm,15.0s
BELG Belogornoye 25.68 323 P P 01 29 25.2 0.0
comp=Z,24nm,0.9s,baz=169,slow=4.0,SNR=5.8
BELG LR LR 01 41 07.5
comp=Z,59nm,18.1s,baz=134,slow=40
comp=Z,24nm,0.9s
BELG Belogornoye 25.68 323 i P P 01 29 25.3 0.0
BELG pmax pmax
comp=Z,3.0nm,0.8s
PALK Pallekele 27.62 163 LR LR 01 40 32.7
comp=Z,100nm,18.3s,baz=89,slow=36
CMAR Chiang Mai Arr 28.11 117 P P 01 29 49.5 +2.0
comp=Z,1.6nm,0.3s,baz=305,slow=9.5,SNR=7.3
CMAR LR LR 01 44 40.2
comp=Z,40nm,19.6s,baz=195,slow=44
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 28.11 117 ceP P 01 29 52.2 +4.7
CMAR pmax pmax
comp=Z,2.0nm,0.3s
SONM Songino Array 28.76 51 P P 01 29 54.7 +1.5
comp=Z,0.5nm,0.5s,baz=248,slow=7.4,SNR=2.3
SONM LR LR 01 42 54.3
comp=Z,78nm,19.2s,baz=204,slow=40
comp=Z,0.5nm,0.5s
ANN Anapa 29.05 302 eP P 01 29 56.8 +1.2
ANN pmax pmax
comp=Z,29nm,0.9s
KIRV Kirov 29.07 335 P P 01 29 56.3 +0.8
comp=Z,8.9nm,0.6s,baz=338,slow=5.3,SNR=3.9
comp=Z,8.9nm,0.6s
KIRV Kirov 29.07 335 ceP P 01 29 55.1 -0.5
ELL Elmali 34.74 287 P P 01 30 45.1 -0.7
ELL Elmali 34.74 287 P P 01 30 45.1 -0.7
ELL pmax pmax
comp=Z,19nm,0.9s
AKASG Malin Array Be 35.58 311 P P 01 30 52.5 -0.1
comp=Z,1.5nm,0.7s,baz=81,slow=7.0,SNR=6.6
AKASG LR LR 01 47 32.1
comp=Z,46nm,18.1s,baz=74,slow=40
comp=Z,1.5nm,0.7s
NRIK Noril'sk 36.36 9 P P 01 31 00.2 +1.1
comp=Z,3.0nm,0.5s,baz=216,slow=14,SNR=2.0
comp=Z,3.0nm,0.5s
MLR Muntele Rosu 37.21 302 P P 01 31 07.0 +0.2
MLR IAmb IAmb 01 31 14.9
comp=Z,5.0nm,1.0s
MLR Muntele Rosu 37.21 302 P P 01 31 07.0 +0.2
MLR pmax pmax
comp=Z,5.0nm,1.0s
MNK Minsk 37.23 317 i P P 01 31 01.1 -5.6
MNK i *PP sP 01 31 21.0 +0.1
MNK i SS SS 01 39 21.4 -14
MNK pmax pmax
comp=Z,4.0nm,0.7s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=N,5.0nm,0.9s
MNK MLR MLR
comp=N,14nm,14.0s
MNK MLR MLR
comp=E,15nm,20.0s
MNK MLR MLR
comp=Z,206nm,20.0s
MNK Minsk 37.23 317 i P P 01 31 01.1 -5.6
comp=E,1.0nm,0.8s
MNK i P P 01 31 01.1 -5.6
comp=N,5.0nm,0.9s
MNK i P P 01 31 01.1 -5.6
comp=Z,4.0nm,0.7s,baz=285
MNK i pP sP 01 31 21.0 +0.1
MNK i PP PP 01 32 26.6 -5.2
MNK i S S 01 36 39.9 -11
MNK i sS ScP 01 37 14.9 +4.6
MNK i SS SnSn 01 39 21.4 -6.6
MNK i SSS SSS 01 39 39.1
MNK i LQ LQ 01 43 38.2
MNK i LR LR 01 45 40.6
MNK i LRM MLR 01 48 14.0
comp=N,14nm,13.5s
MNK i LRM MLR 01 48 36.6
comp=E,15nm,20.0s
MNK i LRM MLR 01 48 52.7
comp=Z,206nm,20.0s
NJ2 Nanjing 38.55 80 eP P 01 31 18.8 +0.7
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
FINES FINESS Array B 40.30 327 P P 01 31 32.1 -0.2
comp=Z,3.3nm,1.0s,baz=122,slow=10,SNR=15
comp=Z,3.3nm,1.0s
FINES FINESS Array B 40.30 327 i P P 01 31 32.2 -0.2
FINES pmax pmax
comp=Z,2.0nm,0.7s
MORC Moravsky Berou 42.95 309 P P 01 31 52.8 -1.4
MORC IAmb IAmb 01 31 56.2
comp=Z,2.1nm,0.7s
MORC Moravsky Berou 42.95 309 P P 01 31 52.8 -1.4
MORC pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 43.96 338 P P 01 32 02.4 +0.3
comp=Z,1.8nm,0.5s,baz=115,slow=7.7,SNR=20
ARCES LR LR 01 51 35.5
comp=Z,92nm,18.9s,baz=114,slow=38
comp=Z,1.8nm,0.5s
GERES GERESS Array B 45.49 307 P P 01 32 15.4 +0.7
comp=Z,0.2nm,0.4s,baz=91,slow=8.9,SNR=4.4
comp=Z,0.2nm,0.4s
CLL Collm 45.82 311 e(pP) pP 01 32 27.0 -0.4
HFS Hagfors 45.86 323 LR LR 01 54 34.5
comp=Z,50nm,19.5s,baz=88,slow=40
NB2 NORSAR Subarra 47.18 324 P P 01 32 26.4 -1.3
comp=Z,1.5nm,0.5s,baz=98,slow=7.9
NOA NORSAR Array B 47.18 324 P P 01 32 26.0 -1.7
comp=Z,3.5nm,0.8s,baz=104,slow=7.3,SNR=15
NOA LR LR 01 55 15.9
comp=Z,20nm,19.3s,baz=35,slow=40
comp=Z,3.5nm,0.8s
KMBO Kilima Mbogo 48.22 231 P P 01 32 38.4 +1.9
comp=Z,1.5nm,0.6s,baz=221,slow=19,SNR=2.4
comp=Z,1.5nm,0.6s
SENIN Lac Senin/Sane 50.09 305 P P 01 32 49.9 -0.6
SENIN IAmb IAmb 01 32 52.8
comp=Z,3.1nm,0.8s
KEST Kesra 51.14 291 P P 01 32 59.5 +1.1
comp=Z,4.4nm,0.5s,baz=29,slow=2.2,SNR=20
comp=Z,4.4nm,0.5s
MJAR Matsushiro Arr 52.65 67 LR LR 01 56 48.8
comp=Z,21nm,19.8s,baz=216,slow=38
SEY Seymchan 55.76 33 i P P 01 33 31.1 -0.7
SEY pmax pmax
comp=Z,3.0nm,1.2s
ESDC Sonseca Array 59.83 300 P P 01 34 01.4 +0.5
comp=Z,2.6nm,0.8s,baz=64,slow=7.4,SNR=21
comp=Z,2.6nm,0.8s
BILL Bilibino 60.27 26 ⇓eP P 01 34 04.9 +1.6
BILL e 01 34 56.4
BILL pmax pmax
comp=Z,3.0nm,0.8s
BILL MLR MLR
comp=Z,40nm,18.0s
SUMG Summit 63.85 342 i P P 01 34 28.0 +0.2
TORD Torodi Ar. Bea 67.04 271 P P 01 34 48.3 -0.5
comp=Z,1.8nm,0.5s,baz=52,slow=6.1,SNR=31
comp=Z,1.8nm,0.5s
BOSA Boshof 76.74 222 P P 01 35 47.7 +1.0
comp=Z,1.5nm,0.6s,baz=32,slow=3.6,SNR=5.7
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 79.53 123 P P 01 36 03.5 +1.2
comp=Z,2.4nm,0.8s,baz=322,slow=5.0,SNR=14
comp=Z,2.4nm,0.8s
ASAR Alice Springs 81.72 126 P P 01 36 15.0 +1.0
comp=Z,1.9nm,0.6s,baz=312,slow=5.3,SNR=11
comp=Z,1.9nm,0.6s
YKA Yellowknife Ar 83.67 3 P P 01 36 23.4 -0.1
comp=Z,1.4nm,0.7s,baz=348,slow=5.1,SNR=2.9
comp=Z,1.4nm,0.7s

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*IDC **02** 01:40:24.1±1.4, 0°.58S×123°.36E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=218.6km s-min=21.9km az=62.0*
*DJA **02** 01:40:31.0±1.1, 0°S±5°×12°4E±°, h20km±12km, M3.7/9, MLv3.7/9*
ISC 02 01:40:31.3±1.0**, 0°.15S**±0°.07×**124°.06E**±0°.06**, h50**km**, n11, σ1s.53**/12**, mb3.6**/4**, Southern Molucca Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KMSI Cibinong 0.72 354 P Pn 01 40 45.9 +0.6
KMSI S Sn 01 40 55.8 +0.4
LUWI Luwuk 1.56 235 P Pn 01 40 58.3 +1.7
MRSI Marisa 2.21 286 P Pn 01 41 06.7 +1.3
APSI Ampana 2.53 252 P Pn 01 41 10.1 +0.3
SANI Sanana 2.70 134 P Pn 01 41 13.5 +1.2
LBMI Labuha 3.48 98 P Pn 01 41 24.2 +1.3
NLAI Namlea 4.32 135 P Pn 01 41 35.5 +1.0
WRA Warramunga Arr 22.10 153 P P 01 45 21.4 -1.1
0.8nm,0.7s,baz=331,slow=12,SNR=9.5
0.8nm,0.7s
ASAR Alice Springs 25.26 158 P P 01 45 50.5 -2.5
1.5nm,0.9s,baz=325,slow=6.9,SNR=13
1.5nm,0.9s
MKAR Makanchi Array 59.30 328 P P 01 50 29.3 +1.3
0.3nm,0.5s,baz=119,slow=9.4,SNR=4.4
0.3nm,0.5s
KURBB Kurchatov Arra 63.62 330 P P 01 50 55.5 -1.5
0.2nm,0.2s,baz=128,slow=6.0,SNR=4.2
0.2nm,0.2s

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*IDC **02** 01:52:34.7±0.6, 32°.46N×137°.33E, h407km±6km, mb3.5/20, mbtmp4.3/25, Error ellipse: s-maj=11.3km s-min=8.5km az=86.0*
*NIED **02** 01:52:34.3, 32°.42N×137°.32E, h418km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-1.80; Mθθ3.05; Mφφ-1.25; Mrθ1.58; Mθφ-0.91; Mφr-2.06; Fault plane solution: M0 3.81000×10^15 NP1:φs67.00000°, δ37.00000°, λ-150.00000°. NP2:φs313.00000°, δ72.00000°, λ-56.00000°.*
*JMA **02** 01:52:34.3±0.2, 32°.4N±0°.8×137°.3E±0°.8, h418km±1km, MV3.7/34, FAR S OFF TOKAI DISTRICT*
*NEIC **02** 01:52:35.3±1.0, 32°.47N±0°.10×137°.30E±0°.09, h408km±5km, mb4.0/36, Error ellipse: s-maj=14.7km s-min=10.3km az=161.0*
ISC 02 01:52:35.3±0.7**, 32°.49N**±0°.07×**137°.31E**±0°.07**, h413**km±6km**, n106, σ0s.83**/116**, mb4.0**/42**, 1C, Southeast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TTO1 TONANKAI O.B.S 1.21 339 P P 01 53 28.9 +0.9
TTO2 TONANKAI O.B.S 1.26 349 eP P 01 53 29.2 +1.0
TK02 Tokai 2 1.50 14 eP P 01 53 29.9 +0.6
JTNC Tanabenakahech 1.94 313 eP P 01 53 32.1 +0.1
JTNC eS S 01 54 17.6 -0.4
JKN2 Miekihoku 1.94 334 P P 01 53 32.2 +0.3
JKN2 eS S 01 54 17.6 -0.3
JIE Ise 1.96 345 P P 01 53 32.4 +0.4
JIE eS S 01 54 17.7 -0.4
JAOM Aogashimamukai 2.08 90 P P 01 53 32.6 -0.3
JHJ Hachijo jima 2 2.18 73 P P 01 53 33.3 -0.1
159nm,0.3s,baz=59,slow=3.2,SNR=22
JHJ S S 01 54 20.2 -0.4
107nm,0.3s,baz=73,slow=21,SNR=4.2
JHJ2 Mitsune 2.20 73 P 01 53 33.2 -0.4
JHJ2 Sn S 01 54 21.9 +1.1
JHJ2 Mitsune 2.20 73 P P 01 53 33.5 -0.1
JWY Kouya 2.24 321 P P 01 53 34.5 +0.6
HMMJ Hamamatsu 2 2.38 8 P P 01 53 35.2 +0.5
HMMJ eS S 01 54 23.3 +0.3
INU Inuyama 2.86 355 Pn P 01 53 37.9 -0.3
JGF Kuroka 3.10 1 Pn P 01 53 39.7 -0.5
JMN Monobe 3.13 294 Pn P 01 53 41.0 +0.5
MJAR Matsushiro Arr 4.11 10 P P 01 53 47.5 -1.5
155nm,0.6s,baz=173,slow=10,SNR=140
MJAR S S 01 54 46.7 -2.4
38nm,0.7s,baz=190,slow=16,SNR=10
MAJO Matsushiro 4.11 10 Pn P 01 53 48.7 -0.2
JHS Saijyo 4.29 307 Pn P 01 53 50.7 -0.1
JYT Yasato 4.42 32 Pn P 01 53 49.6 -2.3
JNU Nakatsue 5.45 278 P P 01 54 02.9 +0.6
3.3nm,0.5s,baz=346,slow=23,SNR=5.1
JSD Sado 5.59 8 Pn P 01 54 02.6 -1.0
JMM Marumori 6.07 27 Pn P 01 54 07.0 -1.7
JCJ Chichijima 6.85 141 P P 01 54 12.4 -5.6
25nm,0.4s,baz=51,slow=21,SNR=8.0
JCJ S S 01 55 30.1 -11
211nm,0.4s,baz=290,slow=22,SNR=25
NAWB Namwon 8.73 292 P 01 54 39.0 +0.5
JTM Tenmabayashi 8.81 19 P 01 54 38.8 -0.5
TJN Taejon 9.08 298 P 01 54 43.6 +1.3
KSRS Korea Array 9.15 305 P P 01 54 45.0 +1.9
2.9nm,0.5s,baz=126,slow=10.0,SNR=18
INCN Inchon 10.07 303 P P 01 54 54.3 +0.9
ERM Erimo 10.58 24 P P 01 54 58.8 -0.1
JEW Eniwo 10.84 16 P P 01 55 02.0 +0.4
USRK Ussuriysk Ar. 12.41 342 P P 01 55 19.0 0.0
5.0nm,0.6s,baz=147,slow=12,SNR=9.1

YSS	Yuzh-Sakhalins	15.03	15	P	P	01 55 48.2	+0.7
KLR	Kul'dur	17.23	348	P	P	01 56 10.4	-0.5
	9.9nm,0.8s,baz=145,slow=12						
WHN	Wuhan	19.66	270	⇑P	P	01 56 35.4	-0.4
WHN				pmax	pmax		
	comp=Z,110nm,0.5s						
XAN	Xi'an	23.76	281	P	P	01 57 12.5	-0.5
XAN				pmax	pmax		
	comp=Z,37nm,0.7s						
ENH	Enshi	23.83	272	P	P	01 57 13.1	-0.6
PETK	Petropavlovsk-	25.30	29	P	P	01 57 25.6	-0.8
	comp=Z,4.1nm,0.9s,baz=201,slow=7.8,SNR=11						
	comp=Z,4.1nm,0.9s						
PETK	Petropavlovsk-	25.30	29	P	P	01 57 27.0	+0.5
SONM	Songino Array	27.92	312	P	P	01 57 50.8	+0.9
	comp=Z,1.3nm,0.5s,baz=110,slow=7.6,SNR=8.1						
	comp=Z,1.3nm,0.5s						
MA2	Magadan	28.54	14	P	P	01 57 55.9	+1.0
	comp=Z,24nm,0.5s,baz=206,slow=8.1,SNR=32						
	comp=Z,24nm,0.5s						
MA2	Magadan	28.54	14	P	P	01 57 55.0	0.0
GOMU	GeErMu	35.08	288	P	P	01 58 52.4	+0.3
GOMU				pmax	pmax		
	comp=Z,11nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,70nm,4.8s						
CMAR	Chiang Mai Arr	37.14	257	P	P	01 59 09.1	0.0
	comp=Z,2.8nm,0.7s,baz=48,slow=7.3,SNR=12						
	comp=Z,2.8nm,0.7s						
ZALV	Zalesovo Beam	42.66	316	P	P	01 59 53.0	-0.3
	comp=Z,1.6nm,0.4s,baz=89,slow=7.4,SNR=7.6						
ZALV				PcP	PcP	02 01 36.1	-0.3
	comp=Z,1.8nm,0.6s,baz=84,slow=4.3,SNR=6.4						
	comp=Z,1.6nm,0.4s						
MK31	Makanchi Array	43.83	306	P	P	02 00 02.1	-0.6
MKAR	Makanchi Array	43.83	306	P	P	02 00 03.0	+0.3
	comp=Z,4.3nm,0.6s,baz=89,slow=10.0,SNR=43						
MKAR				PcP	PcP	02 01 40.4	-0.2
	comp=Z,0.8nm,0.8s,baz=78,slow=6.3,SNR=4.6						
	comp=Z,4.3nm,0.6s						
MAKZ	Makanchi	44.05	306	P	P	02 00 04.7	+0.2
MAKZ				IAmb	IAmb	02 00 05.0	
	comp=Z,5.0nm,0.5s						
JIRN	Jiri	44.16	278	*e*P	P	02 00 06.1	+0.1
	comp=Z,69nm,0.6s						
GUN	Gumba	44.34	278	*e*P	P	02 00 07.3	0.0
	comp=Z,28nm,0.5s						
PKI	Pulchoki	44.84	278	*e*P	P	02 00 10.7	-0.5
	comp=Z,14nm,0.6s						
PKIN	Phulchoki	44.85	278	*e*P	P	02 00 10.6	-0.6
KKN	Kakani	44.88	278	*e*P	P	02 00 11.1	-0.3
GKN	Gorkha	45.34	279	*e*P	P	02 00 14.8	-0.1
	comp=Z,28nm,0.7s						
DANN	Dangsing	45.96	280	*e*P	P	02 00 20.0	+0.1
	comp=Z,18nm,0.4s						
KURK	Kurchatov	46.22	311	P	P	02 00 20.9	-0.2
KURK				IAmb	IAmb	02 00 22.0	
	comp=Z,5.7nm,0.8s						
GSI	Gunungsitoli	48.56	238	P	P	02 00 38.5	-0.9
KNRA	Kununurra	48.59	191	P	P	02 00 38.6	-0.8
KSH	Kashi	49.28	296	P	P	02 00 48.9	+4.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FITZ	Fitzroy Crossi	51.53	194	P	P	02 01 00.7	-0.5
N19K	Bonanza Creek	51.70	35	P	P	02 01 03.0	+0.9
K20K	Telida	51.97	32	P	P	02 01 04.8	+0.9
K20K				IAmb	IAmb	02 01 06.2	
	comp=Z,6.1nm,0.8s						
J20K	Nowinta River	51.98	31	P	P	02 01 04.8	+0.9
J20K				IAmb	IAmb	02 01 06.1	
	comp=Z,6.5nm,0.8s						
WB0	Warramunga Arr	52.04	183	P	P	02 01 03.9	-1.0
WB0				IAmb	IAmb	02 01 04.2	
	comp=Z,4.8nm,0.6s						
WB2	Warramunga Arr	52.22	184	P	P	02 01 05.1	-1.1
WB2				IAmb	IAmb	02 01 05.8	
	comp=Z,5.1nm,0.8s						
WRA	Warramunga Arr	52.22	184	P	P	02 01 05.1	-1.1
	comp=Z,3.0nm,0.4s,baz=0.5,slow=7.6,SNR=14						
WRA				PcP	PcP	02 02 11.6	+0.4
	comp=Z,1.3nm,0.7s,baz=359,slow=4.8,SNR=3.8						
WRA				S	S	02 07 59.5	+0.7
	comp=Z,0.9nm,0.8s,baz=1.2,slow=15,SNR=6.3						
	comp=Z,3.0nm,0.4s						
WR0	Warramunga Arr	52.22	183	P	P	02 01 05.2	-1.0
WR0				IAmb	IAmb	02 01 05.9	
	comp=Z,7.8nm,0.8s						
IMAR	Indian Mountai	52.26	29	P	P	02 01 06.4	+0.5
KK31	Karatay Array	52.56	302	P	P	02 01 08.5	0.0
KK31				IAmb	IAmb	02 01 09.3	
	comp=Z,5.2nm,0.7s						
KKAR	Karatay Array	52.56	302	P	P	02 01 08.4	-0.1
KKAR	Karatay Array	52.56	302	P	P	02 01 08.5	-0.1
KKAR				IAmb	IAmb	02 01 09.3	
	comp=Z,5.2nm,0.7s						
PPLA	Purkeypile	52.81	33	P	P	02 01 11.1	+1.0
PPLA				IAmb	IAmb	02 01 13.2	
	comp=Z,8.5nm,1.0s						
CAST	Castle Rocks	52.87	32	P	P	02 01 11.6	+1.2
NIL	Nilore	52.90	290	P	P	02 01 11.3	+0.3
MLY	Manley	53.47	30	P	P	02 01 15.9	+1.1
NEA2	Nenana	54.19	31	P	P	02 01 20.7	+0.9
NEA2				IAmb	IAmb	02 01 21.6	
	comp=Z,8.1nm,0.9s						
RND	Reindeer	54.32	32	P	P	02 01 21.4	+0.6
RND				IAmb	IAmb	02 01 21.7	
	comp=Z,8.5nm,0.6s						
MDM	Murphy Dome	54.54	30	P	P	02 01 23.4	+1.1
MDM				IAmb	IAmb	02 01 24.2	
	comp=Z,7.0nm,0.8s						
CHGR	Chuyangaron	54.63	297	P	P	02 01 23.4	0.0
H24K	Noodor Dome	54.66	29	P	P	02 01 24.1	+0.9
HDA	Harding Lake	55.11	31	P	P	02 01 26.3	0.0
IL31		55.12	30	P	P	02 01 26.3	-0.1
ILAR	Eielson Array	55.12	30	P	P	02 01 26.2	-0.2
	comp=Z,1.1nm,0.6s,baz=261,slow=5.6,SNR=14						
	comp=Z,1.1nm,0.6s						
AS31	Alice Springs	55.94	184	P	P	02 01 32.0	-0.6
AS31				IAmb	IAmb	02 01 33.8	
	comp=Z,2.8nm,0.4s						
ASAR	Alice Springs	55.94	184	P	P	02 01 32.0	-0.6
	comp=Z,1.8nm,0.6s,baz=14,slow=12,SNR=29						
	comp=Z,1.8nm,0.6s						
SCRK	Sand Creek	56.44	31	P	P	02 01 35.8	+0.1
SCRK				IAmb	IAmb	02 01 36.7	
	comp=Z,3.7nm,0.5s						
J26L	Joseph Creek	56.57	31	P	P	02 01 36.8	+0.2
ABKAR	Akbulak array	58.33	311	P	P	02 01 48.9	0.0
ABKAR	Akbulak array	58.33	311	P	P	02 01 49.0	+0.1
ABKAR				IAmb	IAmb	02 01 49.4	
	comp=Z,5.8nm,0.6s						
INK	Inuvik	59.94	25	P	P	02 01 60.0	+0.6
	comp=Z,3.5nm,0.6s,baz=303,slow=6.4,SNR=8.0						
	comp=Z,3.5nm,0.6s						
STKA	Stephens Creek	64.15	176	P	P	02 02 26.2	-1.2
	comp=Z,2.4nm,0.8s,baz=331,slow=10,SNR=3.7						
	comp=Z,2.4nm,0.8s						
ARCES	ARCESS Array B	67.04	339	P	P	02 02 45.1	-0.2
	comp=Z,3.1nm,1.1s,baz=56,slow=8.9,SNR=5.8						
	comp=Z,3.1nm,1.1s						
FINES	FINESS Array B	71.23	332	P	P	02 03 10.7	0.0
	comp=Z,1.9nm,0.5s,baz=72,slow=6.5,SNR=25						
	comp=Z,1.9nm,0.5s						
KBZ	Khabaz	71.27	310	P	P	02 03 12.1	+0.8
	comp=Z,4.6nm,0.8s,baz=94,slow=4.4,SNR=17						
	comp=Z,4.6nm,0.8s						
AKASG	Malin Array Be	75.77	321	P	P	02 03 36.8	-0.3
	comp=Z,1.5nm,0.5s,baz=50,slow=6.4,SNR=9.2						
	comp=Z,1.5nm,0.5s						
PINE	Pine Mountain	75.88	47	P	P	02 03 38.7	+0.6
NOA	NORSAR Array B	77.01	336	P	P	02 03 43.7	-0.1
	comp=Z,0.6nm,0.6s,baz=47,slow=5.8,SNR=2.0						
	comp=Z,0.6nm,0.6s						
BEKR	Beckworth	78.32	50	P	P	02 03 51.8	+0.2
BEKR				IAmb	IAmb	02 03 52.9	
	comp=Z,1.9nm,0.7s						
RAYN	Ar Rayn	79.18	291	P	P	02 03 56.3	0.0
BUR08	Bucovina Ar. S	79.70	320	P	P	02 03 59.1	+0.5
BUR08				IAmb	IAmb	02 03 59.8	
	comp=Z,4.5nm,1.1s						
KVN	Kaiserville	80.23	50	P	P	02 04 01.9	+0.1
NVAR	Mina Array Bea	80.45	50	P	P	02 04 03.6	+0.6
	comp=Z,0.6nm,0.7s,baz=287,slow=5.4,SNR=7.1						
	comp=Z,0.6nm,0.7s						
CLL	Collm	83.27	329	*i* P	P	02 04 16.6	-0.3
	comp=Z,5.0nm,1.2s						
PDAR	Pinedale Array	83.27	43	P	P	02 04 17.8	+0.3
	comp=Z,0.4nm,0.3s,baz=286,slow=2.6,SNR=4.2						
	comp=Z,0.4nm,0.3s						
GERES	GERESS Array B	84.70	326	P	P	02 04 23.9	-0.4
	comp=Z,0.5nm,0.6s,baz=42,slow=4.2,SNR=3.7						
	comp=Z,0.5nm,0.6s						
TXAR	Lajitas Array	95.59	50	P	P	02 05 16.6	+1.2
	comp=Z,0.4nm,0.8s,baz=295,slow=2.9,SNR=5.6						
	comp=Z,0.4nm,0.8s						
TORD	Torodi Ar. Bea	117.87	310	PKP	PKPdf	02 10 33.1	-1.2
	comp=Z,0.6nm,1.0s,baz=70,slow=1.7,SNR=5.2						

*NEIC **02** 02:09:04.5±0.9, 54°.19N±0°.08×162°.31W±0°.07, h17km±11km, Error ellipse: s-maj=12.6km s-min=1.3km az=151.0*

AEIC 02 02:09:05±0.9**, 54°.22N**±0°.06×**162°.37W**±0°.07**, h20**km±8km**, ML2.9**/31**, Error ellipse: s-maj=10.0km s-min=1.4km az=146.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	0.88	317		Pb	02 09 21.7	+0.2
FALS					Sn	02 09 34.3	0.0
DT1	Dutton Round H	0.89	3		Pb	02 09 21.6	-0.1
BRPK	Brown Peak	0.90	298		Pb	02 09 21.8	-0.1
ISLZ	Isanotski Laza	0.93	303		Pb	02 09 22.6	+0.2
ISLZ					Sn	02 09 36.9	+1.2
ISNN	Isanotski Nort	1.02	307		Pn	02 09 24.6	+0.4
ISNN					Sn	02 09 39.5	+1.6
SSLS	Shishaldin Sou	1.07	298		Pn	02 09 25.2	+0.4
SSLN	Shishaldin Nor	1.11	303		Pb	02 09 26.4	+0.8
HAG	Hague Volcano	1.13	14		Pb	02 09 25.8	-0.1
SSBA	Shishaldin	1.16	299		Pb	02 09 26.5	+0.1
SSBA					Sn	02 09 42.9	+1.5
PS4A	Pavlof South-4	1.16	15		Pb	02 09 26.6	+0.2
PN7A	Pavlof North-7	1.23	10		Pb	02 09 28.1	+0.5
WESE	West Dahl East	1.32	282		Pn	02 09 28.6	+0.3
WESN	West Dahl Nort	1.34	286		Pb	02 09 29.1	-0.3
WESP	Westdahl Peak	1.40	282		Pn	02 09 29.8	+0.4
WESP					Sb	02 09 47.7	-0.2
WECS	Westdahl Cape	1.44	283		Pb	02 09 30.6	-0.6
S12K	Black Hills	1.49	7		Pb	02 09 32.0	0.0
SDPT	Sand Point	1.57	43		Pn	02 09 31.9	+0.2
SDPT					Sb	02 09 52.6	-0.2
CNBA	Chernabura Isl	1.73	69		Pn	02 09 32.3	-1.5
AKSA	Akutan Strait	1.96	269		Pn	02 09 37.2	+0.3
AKSA	Akutan Strait	1.96	269		Pn	02 09 37.6	+0.6
MNAT	Makushin Natee	2.56	264		Pn	02 09 45.6	+0.3
MGOD	Makushin Gods	2.69	263		Pn	02 09 47.5	+0.3
MAPS	Pakushin South	2.73	263		Pn	02 09 48.2	+0.6

*IDC **02** 02:24:25.9±3.6, 24°.86N×95°.75E, h0km, mb3.7/4, mbtmp3.7/4, MS3.1/2, Error ellipse: s-maj=382.0km s-min=23.7km az=58.0*
*NDI **02** 02:24:36.6±1.7, 24°.54N×94°.43E, h102km±11km, ML3.7*

ISC 02 02:24:36.1±1.1**, 24°.52N**±0°.07×**94°.47E**±0°.09**, h100**km**, n14,** σ**1s67**/16**, mb3.8**/4**, 1C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	0.57	303	*e*P	Pn	02 24 52.5	0.0
IMP				*e*S	Sn	02 25 04.5	-0.3
IMP				IAML		02 25 06.0	
	comp=N,620nm,0.3s						
IMP				IAML		02 25 08.9	
	comp=E,493nm,0.4s						
AZL	Aizawl	1.80	245	*e*P	Pn	02 25 05.8	-0.5
AZL				*e*S	Sn	02 25 29.5	+0.3
AZL				IAML		02 25 30.7	
	comp=N,254nm,0.2s						
AZL				IAML		02 25 31.0	
	comp=E,781nm,0.3s						
SHL	Shillong	2.57	295	*e*P	Pn	02 25 16.4	+0.2
SHL				*e*S	Sn	02 25 46.1	-0.9
SHL				IAML		02 25 49.0	
	comp=E,421nm,0.1s						
ITAN	ITANAGAR	2.70	346	*e*S	Sn	02 25 48.0	-1.9
ITAN				IAML		02 25 51.1	
	comp=E,499nm,0.2s						
ITAN				IAML		02 25 51.4	
	comp=N,588nm,0.0s						
GUWA	GUWAHATI	3.02	304	*e*P	Pn	02 25 22.6	+0.6
GUWA				*e*S	Sn	02 25 55.7	-1.8
GUWA				IAML		02 25 58.4	
	comp=N,332nm,0.1s						
ZIRO	ZIRO	3.05	350	*e*P	Pn	02 25 23.0	+0.3
ZIRO				*e*S	Sn	02 25 56.2	-2.3
ZIRO				IAML		02 25 59.7	
	comp=E,777nm,0.5s						
ZIRO				IAML		02 26 00.5	
	comp=N,824nm,0.3s						
TURI	Tura	3.89	286	*e*S	Sn	02 26 16.1	-2.4
TURI				IAML		02 26 20.2	
	comp=E,864nm,0.1s						
TURI				IAML		02 26 20.3	
	comp=N,508nm,0.3s						
MKAR	Makanchi Array	24.27	339	P	P	02 29 46.4	+2.5
	comp=N,1.0nm,0.6s,baz=147,slow=10,SNR=12						
	comp=N,1.0nm,0.6s						
MAKZ	Makanchi	24.39	339	⇑Lg	Lg	02 29 54.7	
	comp=N,0.6nm,0.7s						
JOW	Kunigami	30.50	78	LR	LR	02 42 52.6	
	comp=N,14nm,20.6s,baz=295,slow=38						
WRA	Warramunga Arr	58.82	135	P	P	02 34 22.4	-2.0
	comp=N,0.9nm,0.7s,baz=324,slow=7.4,SNR=9.0						
	comp=N,0.9nm,0.7s						
ARCES	ARCESS Array B	59.91	338	P	P	02 34 33.4	+2.2
	comp=N,1.5nm,0.9s,baz=98,slow=6.5,SNR=1.3						
	comp=N,1.5nm,0.9s						
ASAR	Alice Springs	61.29	138	P	P	02 34 40.0	-1.3
	comp=N,0.2nm,0.3s,baz=322,slow=7.1,SNR=2.2						
	comp=N,0.2nm,0.3s						
VRAC	Vranov	64.07	315	LR	LR	03 08 39.0	
	comp=N,34nm,18.6s,baz=300,slow=41						

*LDG **02** 02:28:07.9±0.1, 43°.54N×7°.24E, h24km, Md2.5/2, Ml2.0/9, Error ellipse: s-maj=1.2km s-min=0.8km az=146.0*
*STR **02** 02:28:07.5±0.6, 44°N±3°×°±°, h20km±4km, MLv2.0/15, Error ellipse: s-maj=0.0km s-min=0.0km az=136.6, preliminary*
*GEN **02** 02:28:08.7, 43°.59N×7°.25E, h17km±1km, Ml1.6*
*ROM **02** 02:28:09.3±0.1, 43°.584N±0°.004×7°.290E±0°.005, h11km, ML1.8/7, Error ellipse: s-maj=0.5km s-min=0.3km az=323.0*

ISC 02 02:28:07.0±1.0**, 43°.49N**±0°.02×**7°.28E**±0°.02**, h19**km±2km**, n69,** σ**0s93**/123**, 4C-6D, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EILF	Villa Eilenroc	0.12	298	P	Pg	02 28 12.5	+1.4
EILF				S	Sg	02 28 14.6	+0.8
EILF	Villa Eilenroc	0.12	298	⇑Pg	Pg	02 28 12.0	+0.9
EILF				Sg	Sg	02 28 13.8	0.0
MENA	Menton	0.33	27	P	Pb	02 28 15.8	+1.4
MENA				S	Sb	02 28 19.7	+0.4
ESCA	l'Escarene	0.35	11	P	Pb	02 28 15.7	+1.0
ESCA				S	Sb	02 28 20.3	+0.4
ESCA	l'Escarene	0.35	11	⇑Pg	Pb	02 28 15.1	+0.4
ESCA				Sg	Sg	02 28 19.8	+0.2
BURY	Giardini Botan	0.35	34	P	Pb	02 28 15.6	+0.8
BURY				S	Sb	02 28 20.8	+0.8
BURY	Giardini Botan	0.35	34	P	Pb	02 28 15.7	+0.9
BURY				S	Sb	02 28 20.0	0.0
BURY				AML	AML		
	comp=E,242µm,0.5s						
BURY				AML	AML		
	comp=N,253µm,0.4s						
CALF	Calern	0.37	315	⇑Pg	Pg	02 28 15.3	+0.3
CALF				Sg	Sg	02 28 19.7	-0.6
SBF	Sospel	0.39	17	*e*Pg	Pb	02 28 16.1	+0.6
SBF				*e*Sg	Sb	02 28 21.2	0.0
	comp=N,252nm,0.2s						
MVIF	Mont Vial	0.42	347	P	Pb	02 28 16.5	+0.5
MVIF				S	Sb	02 28 22.0	-0.1
MVIF	Mont Vial	0.42	347	Pg	Pb	02 28 16.2	+0.2
MVIF				Sg	Sg	02 28 21.3	-0.4
TURF	col de Turini	0.49	9	P	Pb	02 28 17.6	+0.4
TURF				S	Sg	02 28 23.9	0.0
TURF	col de Turini	0.49	9	Pg	Pb	02 28 17.6	+0.4
TURF				Sg	Sg	02 28 23.9	0.0
SAOF	Saorge	0.54	22	P	Pb	02 28 18.3	+0.5
SAOF				S	Sg	02 28 24.9	-0.2
SAOF	Saorge	0.54	22	Pg	Pb	02 28 18.3	+0.5
SAOF				Sg	Sg	02 28 24.7	-0.4
SAOF	Saorge	0.54	22	P	Pb	02 28 18.3	+0.5
SAOF				S	Sg	02 28 24.9	-0.2
SAOF				AML	AML		
	comp=N,261µm,0.0s						
SAOF				AML	AML		
	comp=E,181µm,0.7s						
SPIF	crte de Spivo	0.57	357	Pg	Pg	02 28 18.7	+0.2
SPIF				Sg	Sg	02 28 25.8	-0.3
LMR	La Mourre	0.58	255	*e*Pg	Pg	02 28 19.4	+0.7
LMR	La Mourre	0.58	255	*e*P	Pn	02 28 20.1	-0.2
LMR				*e*Sn	Sg	02 28 27.0	+0.4
	comp=E,48nm,0.2s						
IMI	Imperia	0.61	46	P	Pg	02 28 20.1	+0.8
IMI				S	Sg	02 28 28.0	+0.5
IMI	Imperia	0.61	46	P	Pg	02 28 20.0	+0.8
IMI				S	Sg	02 28 28.2	+0.7
IMI				AML	AML		
	comp=E,122µm,0.8s						
IMI				AML	AML		
	comp=N,134µm,1.0s						
MGRO	Montegrosso	0.67	34	P	Pg	02 28 21.1	+0.7
MGRO				S	Sg	02 28 29.8	+0.4
MGRO	Montegrosso	0.67	34	P	Pg	02 28 21.1	+0.7
MGRO				S	Sg	02 28 29.4	-0.1
MGRO				AML	AML		
	comp=E,63µm,1.1s						
MGRO				AML	AML		
	comp=N,62µm,0.5s						
MGRO				AML	AML		
	comp=N,62µm,0.5s						
MGRO				AML	AML		
	comp=E,63µm,1.1s						
TRIGF	Trigance	0.69	292	Pg	Pg	02 28 21.1	+0.5
TRIGF				Sg	Sg	02 28 30.0	+0.2
ISO	Isola	0.71	346	P	Pg	02 28 21.1	+0.1
ISO				S	Sb	02 28 29.6	-0.7
ISO	Isola	0.71	346	Pg	Pg	02 28 21.2	+0.1
ISO				Sg	Sb	02 28 29.6	-0.7
ENR	Entracque	0.74	8	P	Pg	02 28 22.1	+0.4
ENR				S	Sb	02 28 31.2	-0.1
ENR	Entracque	0.74	8	⇓P	Pg	02 28 22.1	+0.4
ENR				S	Sb	02 28 31.1	-0.1
ENR				AML	AML		
	comp=N,166µm,0.1s						
ENR				AML	AML		
	comp=E,106µm,0.6s						
FLAF	Flassans-sur-I	0.76	262	Pg	Pn	02 28 22.7	0.0
FLAF				Sg	Sg	02 28 32.7	+0.7
STV	Sant Anna di V	0.76	2	P	Pg	02 28 22.1	+0.2
STV				S	Sb	02 28 31.2	-0.4
STV	Sant Anna di V	0.76	2	⇓P	Pg	02 28 22.1	+0.2
STV				S	Sb	02 28 31.1	-0.5
STV				AML	AML		
	comp=E,79µm,0.3s						
STV				AML	AML		
	comp=E,79µm,0.3s						
STV				AML	AML		
	comp=N,58µm,0.7s						
RORO	Rocca Rossa	0.84	42	P	Pg	02 28 23.7	+0.2
RORO				S	Sb	02 28 34.1	+0.1
RORO	Rocca Rossa	0.84	42	P	Pg	02 28 23.7	+0.2
RORO				S	Sb	02 28 34.1	+0.1
RORO				AML	AML		
	comp=N,76µm,1.1s						
RORO				AML	AML		
	comp=N,76µm,1.1s						
RORO				AML	AML		
	comp=E,66µm,0.2s						
OGDI	Digne	0.94	311	P	Pg	02 28 26.7	+1.2
OGDI				S	Sn	02 28 40.5	+2.2
OGDI	Digne	0.94	311	Pg	Pg	02 28 26.7	+1.2
CANO	Canova, Maglio	1.00	44	P	Pn	02 28 26.1	+0.1
CANO				S	Sb	02 28 38.4	-0.1
CANO	Canova, Maglio	1.00	44	P	Pn	02 28 26.1	+0.1
CANO				S	Sb	02 28 38.4	-0.1
CANO				AML	AML		
	comp=E,59µm,1.1s						
CANO				AML	AML		
	comp=N,46µm,0.3s						
BLAF	les Blancs	1.01	298	Pg	Pg	02 28 26.8	+0.2
BLAF				Sg	Sg	02 28 39.8	-0.1
PZZ	Stroppo	1.02	353	P	Pn	02 28 26.8	+0.3
PZZ				S	Sb	02 28 39.4	0.0
PZZ	Stroppo	1.02	353	⇓P	Pn	02 28 26.8	+0.3
PZZ				S	Sb	02 28 39.0	-0.3
PZZ				AML	AML		
	comp=E,86µm,1.1s						
PZZ				AML	AML		
	comp=N,95µm,0.7s						
PZZ				AML	AML		
	comp=E,86µm,1.1s						
SURF	Saint Ours	1.05	341	P	Pn	02 28 27.3	+0.4
SURF				S	Sb	02 28 39.8	-0.3
SURF	Saint Ours	1.05	341	⇓Pg	Pn	02 28 27.3	+0.4
SURF				Sg	Sb	02 28 39.8	-0.3
ASEAF	Site Antares,	1.07	230	Pg	Pg	02 28 27.7	0.0
ASEAF				Sg	Sg	02 28 42.3	+0.4
ARTF	Artigues	1.08	276	⇓Pg	Pn	02 28 27.7	+0.5
QLNO	Quiliano	1.14	42	P	Pn	02 28 27.2	-0.7
QLNO				S	Sb	02 28 42.5	0.0
QLNO	Quiliano	1.14	42	P	Pb	02 28 28.5	+0.5
QLNO				S	Sb	02 28 42.4	0.0
MLYF	Mely	1.21	295	Pg	Pb	02 28 29.6	+0.4
BSTF	la Bastide-des	1.25	289	Pg	Pn	02 28 29.7	+0.2
MBDF	Montbardon	1.29	344	*e*Pg	Pb	02 28 31.4	+0.6
MBDF				*e*Sg	Sn	02 28 47.7	+0.7
	comp=E,3.6nm,0.2s						
SMRF	Simiane la Rot	1.33	292	*e*P	Pn	02 28 31.1	+0.5
SMRF	Simiane la Rot	1.33	292	*e*Pg	Pg	02 28 32.4	-0.3
SMRF				*e*Sn	Sn	02 28 43.8	-4.0
SMRF				*e*Sg	Sb	02 28 48.5	+0.5
	comp=E,6.4nm,0.2s						
BHB	Bricherasio	1.35	359	P	Pn	02 28 30.8	-0.1
RUSF	Rustrel	1.38	290	Pn	Pb	02 28 32.2	0.0
RRL	Rocca Remolon	1.47	346	P	Pg	02 28 35.0	-0.5
RRL	Rocca Remolon	1.47	346	P	Pg	02 28 35.0	-0.5
RRL				S	Sb	02 28 52.3	-0.1
PGF	Pioggiola	1.57	126	*e*Pn	Pn	02 28 33.7	-0.3
PGF				*e*Sn	Sn	02 28 52.3	-1.6
	comp=E,2.9nm,0.2s						
PGF	Pioggiola	1.57	126	Pn	Pn	02 28 34.3	+0.3
BNI	Bardonecchia	1.62	345	P	Pg	02 28 37.8	-0.5
BNI				S	Sb	02 28 57.5	+0.9
ORIF	Oris-en-Rattie	1.75	325	*e*Pg	Pb	02 28 39.4	+0.9
ORIF				*e*Sg	Sb	02 29 01.0	+0.9
	comp=E,1.5nm,0.2s						
LPG	La Plagne	2.04	349	*e*Pg	Pb	02 28 44.5	+0.8
LPG				*e*Sg	Sb	02 29 10.9	+2.1
	comp=E,0.6nm,0.2s						
LPL	La Plagne	2.06	349	*e*Pn	Pn	02 28 38.7	-2.2
LPL	La Plagne	2.06	349	*e*P	Pn	02 28 41.1	+0.2
LPL	La Plagne	2.06	349	*e*Pg	Pb	02 28 45.3	+1.3
LPL				*e*Sg	Sb	02 29 11.3	+1.9
	comp=E,0.8nm,0.3s						
VIVF	Saint-Julien-l	2.32	307	*e*Pn	Pn	02 28 41.8	-2.4
VIVF	Saint-Julien-l	2.32	307	*e*P	Pn	02 28 44.5	+0.3
VIVF				*e*Sn	Sn	02 29 07.8	-4.5
	comp=E,1.6nm,0.3s						
VIVF				*e*Sg	Sb	02 29 18.5	+1.9
	comp=E,2.6nm,0.5s						
LASF	Ste Croix	2.55	284	*e*P	Pn	02 28 48.1	+0.8
SF04	Casetta	3.27	100	⇑P	Pn	02 28 58.7	+1.4
SF04				AML	AML		
	comp=N,89µm,1.6s						
SF04				AML	AML		
	comp=E,72µm,1.6s						
CAF	Calviac	4.02	293	*e*Pn	Pn	02 29 06.0	-1.5
LAV9	Lanuvio	4.39	113	⇓P	Pg	02 29 29.5	-1.6

*IDC **02** 02:45:19.6±0.7, 44°.62N×149°.00E, h0km, mb4.0/16, mbtmp4.0/19, ML3.4/3, MS3.1/7, Error ellipse: s-maj=20.0km s-min=14.6km az=128.0*
*MOS **02** 02:45:23.6±1.4, 44°.44N×149°.38E, h44km, mb4.5/9, Error ellipse: s-maj=9.0km s-min=8.2km az=65.6*
*SKHL **02** 02:45:26.0±0.6, 44°.50N×149°.30E, h65km±4km, mb5.0/8*
*NIED **02** 02:45:26.5, 44°.58N×149°.11E, h30km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm;*

Mrr0.19; Mθθ1.61; Mϕϕ-1.80; Mrθ0.78; Mθϕ-2.13; Mϕr0.54;
Fault plane solution: M0 2.88000×10[15] *NP1: ϕs160.00000°,δ72.00000°,λ-3.00000°. NP2:ϕs251.00000°, δ88.00000°,λ-162.00000°.*
JMA ***02*** *02:45:26.5±0.7,45°N±3°×14°9E±°,h30km,MV4.8/17,SE OFF ETOROFU*
NEIC ***02*** *02:45:26±1.5,44.5°N±0.1°×149.3°E±0.1°,h49km±11km, mb4.2/14,Error ellipse: s-maj=16.8km s-min=11.4km az=146.0*
ISC 02 02:45:25.9±1.1**,44.49°N**±0.06°×**149.22°E**±0.07°**,h49**km±9km**, n129,σ1.64**/135**,mb4.2**/37**,MS3.3**/4**,11C-4D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.22**	**308**	d iPN	**Pn**	**02 45 46.1**	**-0.4**
KUR				eS	**Sn**	**02 46 01.8**	**0.0**
KUR				pmax	pmax		
	comp=N,1µm,0.5s						
KUR				pmax	pmax		
	comp=Z,5µm,0.5s						
KUR				pmax	pmax		
	comp=E,838nm,0.6s						
KUR				smax	smax		
	comp=N,5µm,0.5s						
KUR				smax	smax		
	comp=E,5µm,0.6s						
KUR	**Kuril'sk**	**1.22**	**308**	iP	**Pn**	**02 45 46.2**	**-0.3**
KUR				AMB	AMB	02 45 46.7	
	comp=E,6µm,0.5s						
KUR				eS	**Sn**	**02 46 01.8**	**0.0**
KUR				A	A	02 46 04.7	
	comp=E,8µm,0.6s						
KUR				A	A	02 46 04.7	
	comp=E,6µm,0.6s						
SHO	**Shikotan**	**1.83**	**251**	c iPN	**Pn**	**02 45 54.1**	**-0.7**
SHO				iS	**Sn**	**02 46 14.5**	**-2.3**
SHO				pmax	pmax		
	comp=N,106nm,0.4s						
SHO				pmax	pmax		
	comp=Z,235nm,0.4s						
SHO				smax	smax		
	comp=N,1µm,0.6s						
SHO				smax	smax		
	comp=E,2µm,1.0s						
SHO				smax	smax		
	comp=E,159nm,0.4s						
SHO				smax	smax		
	comp=N,2µm,0.3s						
SHO	**Shikotan**	**1.83**	**251**	iP	**Pn**	**02 45 54.4**	**-0.4**
SHO				AMB	AMB	02 45 56.6	
	comp=N,350nm,0.4s						
SHO				iS	**Sn**	**02 46 15.2**	**-1.6**
SHO				A	A	02 46 19.8	
	comp=N,2µm,0.5s						
SHO				A	A	02 46 19.8	
	comp=N,1µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.46**	**260**	d iPN	**Pn**	**02 46 03.9**	**+0.5**
YUK				iS	**Sn**	**02 46 31.2**	**-1.0**
YUK				pmax	pmax		
	comp=Z,354nm,0.1s						
YUK				pmax	pmax		
	comp=N,82nm,0.2s						
YUK				smax	smax		
	comp=E,5µm,0.4s						
YUK				smax	smax		
	comp=N,3µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.46**	**260**	iP	**Pn**	**02 46 03.9**	**+0.5**
YUK				AMB	AMB	02 46 05.8	
	comp=N,200nm,0.4s						
YUK				iS	**Sn**	**02 46 31.2**	**-1.0**
YUK				A	A	02 46 37.3	
	comp=N,2µm,0.5s						
YUK				A	A	02 46 37.3	
	comp=N,4µm,0.5s						
NEM2	**Nemuro 2**	**2.75**	**247**	eP	**Pn**	**02 46 06.9**	**-0.6**
NEM2				eS	**Sn**	**02 46 36.8**	**-2.7**
NMR	**Nemuro--Hokkai**	**2.76**	**247**	⇑iPN	**Pn**	**02 46 06.9**	**-0.7**
NMR				eS	**Sn**	**02 46 37.1**	**-2.6**
NMR	**Nemuro--Hokkai**	**2.76**	**247**	iP	**Pn**	**02 46 06.9**	**-0.7**
NMR				eS	**Sn**	**02 46 38.5**	**-1.2**
RUSJ	**Misakicho**	**2.88**	**264**	⇓iPN	**Pn**	**02 46 11.1**	**+1.9**
RUSJ				iS	**Sn**	**02 46 44.8**	**+2.2**
JRA	**Rausu**	**3.00**	**261**	eP	**Pn**	**02 46 12.3**	**+1.5**
JRA				eS	**Sn**	**02 46 46.4**	**+0.9**
JNK	**Nakash**	**3.37**	**256**	eP	**Pn**	**02 46 16.6**	**+0.7**
JNK				eS	**Sn**	**02 46 54.2**	**-0.5**
AKK	**Akkeshi**	**3.50**	**247**	iP	**Pn**	**02 46 17.7**	**0.0**
JAK	**Akkeshi**	**3.60**	**247**	eP	**Pn**	**02 46 19.1**	**0.0**
JAK				eS	**Sn**	**02 46 59.0**	**-1.3**
JTKR	**Abashiri--Toko**	**3.85**	**264**	eP	**Pn**	**02 46 24.9**	**+2.3**
JAR	**Ashorobuto**	**4.12**	**255**	eP	**Pn**	**02 46 27.4**	**+1.1**
JAR				eS	**Sn**	**02 47 12.2**	**-0.8**
JOB	**Onbets**	**4.21**	**250**	eP	**Pn**	**02 46 28.1**	**+0.5**
JOB				eS	**Sn**	**02 47 14.3**	**-1.2**
JCH	**Churui**	**4.65**	**248**	eP	**Pn**	**02 46 33.8**	**+0.3**
JKK2	**Kamakawa 2**	**4.70**	**265**	eP	**Pn**	**02 46 36.4**	**+2.2**
ERM	**Erimo**	**5.07**	**243**	Pn	**Pn**	**02 46 40.9**	**+1.5**
ERM	**Erimo**	**5.07**	**243**	cePN	**Pn**	**02 46 40.8**	**+1.5**
ERM				pmax	pmax		
	comp=Z,294nm,1.7s						
YSS	**Yuzh-Sakhalins**	**5.15**	**301**	Pn	**Pn**	**02 46 41.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**5.15**	**301**	dePN	**Pn**	**02 46 41.7**	**+1.3**
YSS				pmax	pmax		
	comp=Z,90nm,1.2s						
YSS				pmax	pmax		
	comp=Z,100nm,4.8s						
YSS	**Yuzh-Sakhalins**	**5.15**	**301**	eP	**Pn**	**02 46 41.7**	**+1.3**
YSS				AMB	AMB	02 46 42.7	
	comp=Z,90nm,1.2s						
YSS				eS	**Sn**	**02 47 37.6**	**-0.9**
YSS				A	A	02 47 41.8	
	comp=Z,60nm,0.5s						
YSS				A	A	02 47 41.8	
	comp=Z,60nm,0.5s						
JNBK	**Urakawa-nobuka**	**5.21**	**247**	eP	**Pn**	**02 46 41.0**	**-0.1**
JWK2	**Keihoku**	**5.27**	**282**	eP	**Pn**	**02 46 45.5**	**+3.5**
JRBN	**Rebuntou**	**5.86**	**282**	eP	**Pn**	**02 46 52.6**	**+2.5**
UGL	**Uglegorsk**	**6.72**	**316**	eP	**Pn**	**02 47 04.7**	**+2.8**
UGL				AMB	AMB	02 47 07.2	
	comp=Z,70nm,0.4s						
JANG	**Nango**	**7.03**	**237**	eP	**Pn**	**02 47 04.1**	**-2.1**
JTM	**Tenmabayashi**	**7.06**	**241**	Pn	**Pn**	**02 47 05.6**	**-1.0**
SKR	**Severo-Kuril's**	**7.75**	**35**	ePN	**Pn**	**02 47 14.6**	**-1.4**
SKR				pmax	pmax		
	comp=Z,56nm,0.6s						
SKR	**Severo-Kuril's**	**7.75**	**35**	eP	**Pn**	**02 47 15.7**	**-0.3**
SKR				AMB	AMB	02 47 17.4	
	comp=Z,40nm,0.3s						
SKR				eS	**Sn**	**02 48 40.3**	**-2.0**
SKR				A	A	02 48 52.0	
	comp=Z,20nm,0.6s						
SKR				A	A	02 48 52.0	
	comp=Z,30nm,0.6s						
TYV	**Tymovskoe**	**7.76**	**328**	eP	**Pn**	**02 47 17.8**	**+1.7**
TYV				AMB	AMB	02 47 24.2	
	comp=Z,20nm,0.7s						
TYV				eS	**Sn**	**02 48 43.2**	**+0.7**
PAU	**Pauzhetka**	**8.64**	**33**	eP	**Pn**	**02 47 27.7**	**-0.4**
PAU				AMB	AMB	02 47 31.0	
	comp=Z,50nm,0.5s						
PAU				eS	**Sn**	**02 49 01.9**	**-2.1**
PAU				A	A	02 49 04.7	
	comp=Z,30nm,0.3s						
PAU				A	A	02 49 04.7	
	comp=Z,40nm,0.3s						
PEA0B	**Petropavlovsk-**	**10.27**	**30**	Pn	**Pn**	**02 47 48.7**	**-1.8**
PEA0B	**Petropavlovsk-**	**10.27**	**30**	cePN	**Pn**	**02 47 49.2**	**-1.3**
PETK	**Petropavlovsk-**	**10.27**	**30**	Pn	**Pn**	**02 47 49.0**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=206,slow=13,SNR=25						
PETK				LR	LR	02 51 34.8	
	comp=Z,57nm,18.4s,baz=246,slow=37						
	comp=Z,7.8nm,0.5s						
PETK	**Petropavlovsk-**	**10.27**	**30**	Pn	**Pn**	**02 47 49.2**	**-1.3**
PETK	**Petropavlovsk-**	**10.27**	**30**	PN	**Pn**	**02 47 49.2**	**-1.3**
JSD	**Sado**	**10.46**	**236**	Pn	**Pn**	**02 47 52.0**	**-1.2**
GRNR	**Gornyy**	**10.67**	**311**	⇑iPN	**Pn**	**02 47 59.0**	**+3.0**
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,1µm,16.0s						
GRNR				MLR	MLR		
	comp=Z,50nm,15.0s						
GRNR	**Gornyy**	**10.67**	**311**	eP	**Pn**	**02 47 59.0**	**+3.0**
MJAR	**Matsushiro Arr**	**11.54**	**230**	Pn	**Pn**	**02 48 04.8**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=36,slow=13,SNR=12						
MJAR				LR	LR	02 52 46.8	
	comp=Z,42nm,21.2s,baz=42,slow=39						
	comp=Z,1.8nm,0.3s						
MAJO	**Matsushiro**	**11.54**	**230**	Pn	**Pn**	**02 48 06.4**	**-1.5**
MAJO	**Matsushiro**	**11.54**	**230**	PN	**Pn**	**02 48 06.4**	**-1.5**
USRK	**Ussuriysk Ar.**	**12.34**	**275**	Pn	**Pn**	**02 48 18.7**	**-0.1**
USRK	**Ussuriysk Ar.**	**12.34**	**275**	PN	**Pn**	**02 48 18.7**	**-0.1**
JGF	**Kuroka**	**12.69**	**230**	Pn	**Pn**	**02 48 23.2**	**-0.5**
MA2	**Magadan**	**15.14**	**3**	LR	LR	02 54 59.5	
	comp=Z,41nm,18.7s,baz=135,slow=39						
ZEA	**Zeya**	**17.04**	**311**	iP	**P**	**02 49 21.5**	**-0.1**
ZEA	**Zeya**	**17.04**	**311**	eP	**Pn**	**02 49 18.5**	**-1.9**
KSRS	**Korea Array**	**17.52**	**254**	P	**P**	**02 49 28.1**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=71,slow=11,SNR=4.8						
SEY	**Seymchan**	**18.57**	**5**	P	**P**	**02 49 36.3**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=180,slow=11,SNR=9.2						
	comp=Z,2.3nm,0.6s						
SEY	**Seymchan**	**18.57**	**5**	ceP	**P**	**02 49 35.6**	**-2.8**
SEY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JOW	**Kunigami**	**24.38**	**231**	P	**P**	**02 50 40.6**	**+1.3**
	comp=Z,8.9nm,0.8s,baz=37,slow=11,SNR=6.1						
	comp=Z,8.9nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.75**	**144**	T	T	03 22 11.9	
	baz=333,slow=75,SNR=278						
H11N1	**WAKE ISLAND Hy**	**28.76**	**144**	T	T	03 22 14.6	
	baz=333,slow=75,SNR=276						
H11N3	**WAKE ISLAND Hy**	**28.76**	**143**	T	T	03 22 11.2	
	baz=333,slow=75,SNR=277						
SONM	**Songino Array**	**29.57**	**292**	P	**P**	**02 51 25.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=79,slow=7.2,SNR=4.7						
	comp=Z,0.8nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**29.76**	**145**	T	T	03 23 26.6	
	baz=334,slow=76,SNR=306						
H11S3	**WAKE ISLAND Hy**	**29.76**	**145**	T	T	03 23 27.0	
	baz=334,slow=76,SNR=248						
H11S2	**WAKE ISLAND Hy**	**29.77**	**145**	T	T	03 23 30.6	
	baz=334,slow=76,SNR=199						
J20K	**Nowinta River**	**36.85**	**38**	P	**P**	**02 52 29.0**	**+0.1**
J20K				IAmb	IAmb	02 52 29.7	
	comp=Z,2.6nm,0.8s						
KTH	**Kantishna Hill**	**38.24**	**39**	P	**P**	**02 52 40.8**	**-0.1**
MLY	**Manley**	**38.37**	**36**	P	**P**	**02 52 41.4**	**-0.4**
MLY				IAmb	IAmb	02 52 43.1	
	comp=Z,2.3nm,0.8s						
NEA2	**Nenana**	**39.07**	**37**	P	**P**	**02 52 47.6**	**-0.1**
NEA2				IAmb	IAmb	02 52 48.6	
	comp=Z,3.6nm,0.8s						
COLA	**College**	**39.59**	**37**	iP	**P**	**02 52 51.2**	**-0.7**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CCB	**Clear Creek Bu**	**39.61**	**37**	P	**P**	**02 52 52.0**	**-0.1**
CCB				IAmb	IAmb	02 53 17.7	
	comp=Z,4.8nm,1.5s						
IL31		**40.01**	**37**	P	**P**	**02 52 55.2**	**-0.2**
IL31				IAmb	IAmb	02 53 10.2	
	comp=Z,5.9nm,1.2s						
ILAR	**Eielson Array**	**40.01**	**37**	P	**P**	**02 52 55.3**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=268,slow=8.3,SNR=17						
	comp=Z,1.2nm,0.6s						
SCRK	**Sand Creek**	**41.31**	**38**	P	**P**	**02 53 05.8**	**-0.5**
ZALV	**Zalesovo Beam**	**41.74**	**307**	LR	LR	03 11 06.5	
	comp=Z,16nm,19.4s,baz=255,slow=37						
K27K	**Chicken**	**42.14**	**38**	P	**P**	**02 53 13.1**	**+0.2**
K27K				IAmb	IAmb	02 53 26.3	
	comp=Z,5.1nm,1.1s						
L27K	**Beaver Creek,**	**42.37**	**39**	P	**P**	**02 53 14.8**	**-0.1**
L27K				IAmb	IAmb	02 53 31.1	
	comp=Z,3.3nm,0.7s						
BCAR	**Beaver Creek A**	**42.39**	**39**	P	**P**	**02 53 15.0**	**0.0**
INK	**Inuvik**	**45.01**	**31**	P	**P**	**02 53 36.2**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=348,slow=6.7,SNR=3.0						
	comp=Z,1.6nm,0.6s						
MK31	**Makanchi Array**	**45.56**	**298**		**P**	**02 53 40.6**	**-0.1**
MK31	**Makanchi Array**	**45.56**	**298**	iP	**P**	**02 53 40.0**	**-0.7**
MKAR	**Makanchi Array**	**45.56**	**298**	P	**P**	**02 53 40.2**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=72,slow=8.5,SNR=20						
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**45.56**	**298**		**P**	**02 53 40.5**	**-0.2**
MKAR	**Makanchi Array**	**45.56**	**298**	ceP	P	02 53 46.7	+6.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAKZ	**Makanchi**	**45.75**	**298**	P	**P**	**02 53 41.7**	**-0.5**
MAKZ				IAmb	IAmb	02 53 42.4	
	comp=Z,2.1nm,0.8s						
MAKZ	**Makanchi**	**45.75**	**298**	P	**P**	**02 53 41.7**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**50.18**	**310**	LR	LR	03 16 59.6	
	comp=Z,29nm,19.1s,baz=243,slow=38						
AAK	**Ala-Archa**	**52.38**	**296**	LR	LR	03 16 04.5	
	comp=Z,40nm,18.6s,baz=136,slow=35						
ARU	**Arti**	**54.82**	**317**	LR	LR	03 20 02.3	
	comp=Z,29nm,19.3s,baz=72,slow=38						
KLMR	**Klimovskoe**	**60.60**	**328**	eP	**P**	**02 55 34.8**	**+3.8**
KLMR				pmax	pmax		
	comp=Z,14nm,1.4s						
KLMR	**Klimovskoe**	**60.60**	**328**	eP	**P**	**02 55 34.8**	**+3.8**
KLMR				AMP		02 55 40.6	
	comp=Z,14nm,1.4s						
FINES	**FINESS Array B**	**64.88**	**334**	P	**P**	**02 55 57.1**	**-2.3**
	comp=Z,2.1nm,0.8s,baz=26,slow=9.8,SNR=4.3						
	comp=Z,2.1nm,0.8s						
FINES	**FINESS Array B**	**64.88**	**334**	ceP	P	02 56 04.5	+5.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB0	**Warramunga Arr**	**65.37**	**195**	P	**P**	**02 56 03.5**	**+0.4**
WB2	**Warramunga Arr**	**65.55**	**195**	P	**P**	**02 56 04.0**	**-0.2**
WRA	**Warramunga Arr**	**65.55**	**195**	P	**P**	**02 56 04.2**	**0.0**
	comp=Z,1.5nm,0.7s,baz=15,slow=6.9,SNR=10						
	comp=Z,1.5nm,0.7s						
WRA	**Warramunga Arr**	**65.55**	**195**	P	**P**	**02 56 04.1**	**-0.2**
NVAR	**Mina Array Bea**	**65.92**	**59**	P	**P**	**02 56 08.0**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=286,slow=7.3,SNR=4.5						
	comp=Z,0.4nm,0.7s						
VORR	**Voronezh**	**66.80**	**320**	eP	**P**	**02 56 15.1**	**+3.1**
VORR				pmax	pmax		
	comp=Z,30nm,0.4s						
PDAR	**Pinedale Array**	**68.29**	**51**	P	**P**	**02 56 24.9**	**+3.0**
	comp=Z,0.4nm,0.5s,baz=262,slow=2.7,SNR=3.3						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**69.26**	**195**	P	**P**	**02 56 29.0**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=5.7,slow=5.8,SNR=13						
	comp=Z,0.9nm,0.7s						
NB2	**NORSAR Subarra**	**69.44**	**340**	P	**P**	**02 56 27.0**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**69.44**	**340**	P	**P**	**02 56 26.7**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=31,slow=6.7,SNR=7.5						
	comp=Z,0.5nm,0.5s						
KIV	**Kislovodsk**	**70.37**	**313**	eP	**P**	**02 56 34.8**	**+0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**70.37**	**313**	eP	**P**	**02 56 34.8**	**+0.3**
KBZ	**Khabaz**	**70.41**	**312**	P	**P**	**02 56 34.9**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=193,slow=7.0,SNR=9.4						
	comp=Z,2.3nm,0.6s						
KBZ	**Khabaz**	**70.41**	**312**	ceP	**P**	**02 56 34.7**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**70.41**	**312**	eP	**P**	**02 56 34.7**	**+0.1**
AKASG	**Malin Array Be**	**71.85**	**325**	P	**P**	**02 56 42.7**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=37,slow=5.9,SNR=5.5						
	comp=Z,0.7nm,0.4s						
AKASG	**Malin Array Be**	**71.85**	**325**	ceP	**P**	**02 56 45.4**	**+2.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GNI	**Garni**	**71.86**	**309**	iP	**P**	**02 56 47.2**	**+3.5**
GNI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DPC	**Dobruska-Polom**	**77.05**	**331**	eP	**P**	**02 57 14.9**	**+1.4**
DPC	**Dobruska-Polom**	**77.05**	**331**	eP	**P**	**02 57 14.9**	**+1.4**
KRLC	**Kraliky**	**77.12**	**331**	eP	**P**	**02 57 15.0**	**+1.1**
KRLC	**Kraliky**	**77.12**	**331**	eP	**P**	**02 57 15.0**	**+1.1**
CLL	**Collm**	**77.33**	**334**	eP	**P**	**02 57 15.0**	**+0.1**
	comp=Z,5.0nm,1.0s						
BRTR	**Keskin Array B**	**78.10**	**315**	P	**P**	**02 57 18.5**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=91,slow=6.2,SNR=4.1						
	comp=Z,1.2nm,0.7s						
BRTR	**Keskin Array B**	**78.10**	**315**	ceP	**P**	**02 57 21.5**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KHC	**Kasperske Hory**	**79.02**	**332**	eP	**P**	**02 57 25.4**	**+1.0**
KHC	**Kasperske Hory**	**79.02**	**332**	eP	**P**	**02 57 25.4**	**+1.0**
GERES	**GERESS Array B**	**79.22**	**332**	P	**P**	**02 57 25.2**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=40,slow=7.0,SNR=7.4						
	comp=Z,0.5nm,0.6s						
CONA	**Conrad Observa**	**79.26**	**330**	eP	**P**	**02 57 24.5**	**-1.3**
	comp=Z,2.6nm,1.0s						
MOA	**Molln**	**79.89**	**331**	eP	**P**	**02 57 26.2**	**-2.9**
	comp=Z,7.4nm,2.2s						
SOKA	**Soboth**	**80.62**	**330**	eP	**P**	**02 57 31.6**	**-1.5**
	comp=Z,4.6nm,1.0s						
KBA	**Koelnbreinsper**	**80.87**	**331**	eP	**P**	**02 57 35.1**	**+0.5**
	comp=Z,6.2nm,1.4s						
TXAR	**Lajitas Array**	**81.00**	**58**	P	**P**	**02 57 36.4**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=282,slow=3.6,SNR=8.4						
	comp=Z,0.4nm,0.6s						
WATA	**Walderalm**	**81.24**	**332**	eP	**P**	**02 57 36.7**	**+0.1**
	comp=Z,5.9nm,1.0s						
WATA	**Walderalm**	**81.24**	**332**	eSg	**S**	**03 07 37.6**	**-5.5**
	comp=Z,1.6nm,0.2s						
WTTA	**Wattenberg**	**81.29**	**332**	eP	**P**	**02 57 36.3**	**-0.5**
	comp=Z,2.3nm,0.5s						
WTTA	**Wattenberg**	**81.29**	**332**	eSg	**S**	**03 07 37.2**	**-6.4**
	comp=Z,0.3nm,0.1s						
MOTA	**Moosalm**	**81.39**	**333**	eP	**P**	**02 57 37.1**	**-0.3**
	comp=Z,8.3nm,1.2s						
SQTA	**Sankt Quirin**	**81.47**	**333**	eP	**P**	**02 57 38.1**	**+0.4**
	comp=Z,2.5nm,0.6s						

RSNC 02 02:57:43.7±1.1**,6.86N×73.13W,h154**km±4km**,ML3.5, Mw3.7,1C-2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**191**	⇓iP	Pn	02 58 04.3	-0.7
BARC				eS	Sn	02 58 20.1	-1.1
BARC				i		02 58 21.0	
	comp=Z,997nm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**293**	⇑iP	Pn	02 58 06.1	-0.1
BRRC				eS	Sn	02 58 23.1	-0.2
BRRC				i		02 58 27.3	
	comp=Z,567nm,0.3s						
PAMC	**Pamplona, Colo**	**0.64**	**42**	eP	Pn	02 58 07.1	+0.3
PAMC				eS	Sn	02 58 24.3	-0.2
PAMC				i		02 58 25.2	
	comp=Z,336nm,0.5s						
RUSC	**La Rusia**	**0.96**	**177**	eP	Pn	02 58 08.2	-0.9
RUSC				eS	Sn	02 58 27.3	-1.2
RUSC				i		02 58 28.0	
	comp=Z,264nm,0.2s						
TAMC	**Tame, Arauca**	**1.40**	**108**	⇓eP	Pn	02 58 12.7	+0.2
TAMC				i		02 58 33.6	
	comp=Z,221nm,0.4s						
TAMC				eS	Sn	02 58 34.5	-0.2
SPBC	**San Pablo de B**	**1.52**	**218**	eP	Pn	02 58 13.1	-0.8
SPBC				eS	Sn	02 58 36.3	-0.8
SPBC				i		02 58 40.2	
	comp=Z,525nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.83**	**290**	eP	Pn	02 58 17.5	+0.4
ZARC				eS	Sn	02 58 41.9	-0.8
ZARC				i		02 58 47.5	
	comp=Z,419nm,0.3s						
NORC	**Norcasia**	**2.16**	**233**	eP	Pn	02 58 20.3	-0.6
NORC				eS	Sn	02 58 48.8	-0.8
NORC				i		02 58 55.2	
	comp=Z,159nm,0.2s						
ROSC	**El Rosal**	**2.33**	**211**	eP	Pn	02 58 23.3	-0.1
ROSC				eS	Sn	02 58 53.8	-0.1
ROSC				i		02 58 58.9	
	comp=Z,657nm,0.5s						
HELC	**Santa Helena**	**2.48**	**255**	eP	Pn	02 58 24.9	-0.2
HELC				eS	Sn	02 58 56.8	-0.1
HELC				i		02 59 02.4	
	comp=Z,193nm,0.3s						
UREC	**San Jos de Ur**	**2.54**	**291**	eP	Pn	02 58 24.4	-1.2
UREC				eS	Sn	02 58 56.2	-1.7
UREC				i		02 59 08.0	
	comp=Z,179nm,0.4s						
SOCV	**Socops**	**2.66**	**58**	iP	Pn	02 58 27.1	+0.1
SOCV				eS	Sn	02 58 59.6	-0.9
LL1C	**La Loma 1 Cana**	**2.70**	**351**	eP	Pn	02 58 29.3	+1.9
LL1C				eS	Sn	02 59 05.0	+3.7
LL1C				i		02 59 15.2	
	comp=Z,498nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.75**	**234**	eP	Pn	02 58 28.3	-0.4
GUY2C				eS	Sn	02 59 04.8	+1.5
GUY2C				i		02 59 10.6	
	comp=Z,252nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.82**	**159**	eP	Pn	02 58 27.4	-1.6
PTGC				eS	Sn	02 59 00.9	-3.3
PTGC				i		02 59 03.8	
	comp=Z,107nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.86**	**357**	eP	Pn	02 58 28.8	-0.7
LL6C				eS	Sn	02 59 04.4	-0.6
LL6C				i		02 59 10.4	
	comp=Z,87nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.03**	**251**	eP	Pn	02 58 31.8	0.0
CBOC				eS	Sn	02 59 09.4	+0.4
CBOC				i		02 59 19.3	
	comp=Z,44nm,0.3s						
DBBC	**Dabeiba**	**3.06**	**273**	eP	Pn	02 58 31.7	-0.4
DBBC				eS	Sn	02 59 08.6	-0.9
DBBC				i		02 59 09.9	
	comp=Z,83nm,0.3s						
ARGC	**Ariguani, Magd**	**3.18**	**340**	eP	Pn	02 58 33.1	-0.4
ARGC				eS	Sn	02 59 11.5	-0.6
ARGC				i		02 59 20.1	
	comp=Z,44nm,0.3s						
ANIL	**Santa Ana**	**3.27**	**224**	eP	Pn	02 58 35.5	+0.7
ANIL				eS	Sn	02 59 14.6	0.0
PRAC	**Prado**	**3.58**	**209**	eP	Pn	02 58 37.8	-0.9
PRAC				eS	Sn	02 59 20.1	-1.4
PRAC				i		02 59 26.6	
	comp=Z,221nm,0.4s						
SJCC	**San Jacinto, C**	**3.63**	**326**	eP	Pn	02 58 38.0	-1.4
SJCC				eS	Sn	02 59 19.0	-3.7
SJCC				i		02 59 34.1	
	comp=Z,59nm,0.6s						
PLMC	**San Jos del P**	**3.69**	**238**	eP	Pn	02 58 39.8	-0.4
PLMC				eS	Sn	02 59 23.6	-0.4
PLMC				i		02 59 27.8	
	comp=Z,33nm,0.3s						
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	eP	Pn	02 58 44.5	-1.5
CRJC				eS	Sn	02 59 32.8	-1.7
CRJC				i		02 59 39.7	
	comp=Z,88nm,0.3s						
YOTC	**Yotoco, Valle**	**4.29**	**228**	eP	Pn	02 58 47.0	-1.1
YOTC				eS	Sn	02 59 37.6	-0.5
GUVC	**San Jose del G**	**4.32**	**173**	eP	Pn	02 58 46.7	-1.6
GUVC				eS	Sn	02 59 37.0	-1.6
GUVC				i		02 59 39.3	
	comp=Z,43nm,0.2s						
SMRC	**Santa Marta, M**	**4.41**	**346**	eP	Pn	02 58 49.0	-0.4
SMRC				eS	Sn	02 59 38.8	-1.9
SMRC				i		02 59 39.8	
	comp=Z,38nm,0.4s						
MACC	**Macarena, Meta**	**4.74**	**189**	eP	Pn	02 58 51.3	-2.5
MACC				eS	Sn	02 59 44.1	-4.4
GARC	**Garzon, Huila**	**5.21**	**207**	eP	Pn	02 58 58.4	-1.8
GARC				eS	Sn	02 59 58.1	-1.8
GARC				i		03 00 02.6	
	comp=Z,42nm,0.2s						
FLOC	**Florencia**	**5.81**	**206**	eP	Pn	02 59 06.7	-1.4
FLOC				eS	Sn	03 00 14.2	+0.1
FLOC				i		03 00 17.3	
	comp=Z,13nm,0.5s						

IDC 02 03:39:27.9±1.5**,24.01S×82.42E,h0**km**,mb3.9**/4**, mbtmp3.9**/4**,MS3.4**/3**,Error ellipse: s-maj=61.1km s-min=27.5km az=168.0,South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W3	**Cape Leeuwin H**	**29.55**	**119**	T	T	04 16 23.0	
	baz=284,slow=74,SNR=7.6						
H01W2	**Cape Leeuwin H**	**29.55**	**119**	T	T	04 16 18.9	
	baz=284,slow=74,SNR=10						
H01W1	**Cape Leeuwin H**	**29.57**	**119**	T	T	04 16 20.1	
	baz=284,slow=74,SNR=13						
PALK	**Pallekele**	**31.14**	**357**	LR	LR	03 56 23.4	
	comp=Z,38nm,21.8s,baz=251,slow=33						
ASAR	**Alice Springs**	**46.87**	**101**	P	P	03 48 00.0	-0.2
	0.9nm,0.8s,baz=264,slow=7.2,SNR=9.3						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**48.10**	**96**	P	P	03 48 09.7	-0.1
	1.6nm,0.9s,baz=259,slow=7.9,SNR=9.5						
	1.6nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOSA	Boshof	51.05	252	P	P	03 48 32.1	-0.1
	2.5nm,0.9s,baz=116,slow=7.4,SNR=5.1						
	2.5nm,0.9s						
ATD	Arta Tunnel	52.37	308	LR	LR	04 08 10.5	
	comp=Z,55nm,18.8s,baz=356,slow=33						
QSPA	South Pole Qui	66.10	180	P	P	03 50 16.7	0.0
	0.7nm,0.7s,baz=286,slow=7.4,SNR=2.1						
	0.7nm,0.7s						
AKTO	Aktyubinsk	77.20	344	LR	LR	04 23 39.5	
	comp=Z,20nm,20.4s,baz=128,slow=34						
NVAR	Mina Array Bea	157.25	46	PKPab	PKPab	03 59 57.0	-0.2
	0.2nm,0.3s,baz=268,slow=4.5,SNR=3.2						

IDC 02 03:47:43.6±4.8, 17°.91S×175°.34W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=207.5km s-min=36.7km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.20	242	P	P	03 55 30.2	-0.1
	2.4nm,0.9s,baz=90,slow=9.1,SNR=3.0						
	2.4nm,0.9s						
WRA	Warramunga Arr	47.51	259	P	P	03 56 20.7	-0.2
	0.3nm,0.3s,baz=95,slow=7.0,SNR=9.6						
	0.3nm,0.3s						
ASAR	Alice Springs	47.60	254	P	P	03 56 21.6	-0.1
	4.7nm,0.6s,baz=91,slow=8.6,SNR=70						
	4.7nm,0.6s						
ILAR	Eielson Array	85.26	12	P	P	04 00 21.8	0.0
	0.3nm,0.6s,baz=231,slow=5.7,SNR=4.2						
	0.3nm,0.6s						

IDC 02 04:18:02.3±1.3, 1°.93N×85°.78W, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=127.6km s-min=23.0km az=58.0

ISC 02 04:18:06.0±1.0, 2°.66N±0°.09×84°.57W±0°.08, h26km, n49, σ1s.73/50, mb3.5/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	Otavalo	6.57	111	eP	Pn	04 19 40.4	-1.0
CUSE	Cuicocha Este	6.59	111	eP	Pn	04 19 41.4	-0.3
PEZE	Perez Zeledon,	6.74	8	eP	Pn	04 19 41.7	-1.8
CDM	Cerro de Muert	6.90	7	eP	Pn	04 19 44.9	-1.1
JACO	JACO, Garabito	6.96	359	eP	Pn	04 19 45.7	-0.7
LCR2	La Lucha 2	7.06	5	eP	Pn	04 19 47.9	-0.1
RIMA	Rio Macho	7.10	6	eP	Pn	04 19 46.9	-1.6
LAFE	Finca La Fe, P	7.11	357	eP	Pn	04 19 47.9	-0.6
INDI	Punta indio, G	7.22	353	eP	Pn	04 19 48.9	-1.1
BBAC	Balboa, Cauca	7.34	95	eP	Pn	04 19 52.3	+0.5
BBAC				eS	Sn	04 21 21.0	+6.5
MALC	Bahia Malaga	7.34	79	eP	Pn	04 19 50.5	-1.1
GCUF	Volcan Galeras	7.36	101	eP	Pn	04 19 53.1	+0.8
SAJU	San Juanillo,	7.45	351	eP	Pn	04 19 52.3	-0.9
JTS	Las Juntas de	7.59	357	eP	Pn	04 19 55.0	-0.1
JTS	Las Juntas de	7.59	357	eP	Pn	04 19 54.8	-0.3
GUAI	GUAI	7.62	353	eP	Pn	04 19 54.7	-0.8
ARE1	Arenal 1	7.76	359	eP	Pn	04 19 58.2	+0.9
FORC	Fortuna	7.76	359	eP	Pn	04 19 58.1	+0.7
CEDE	Laguna Cedeo	7.78	359	eP	Pn	04 19 59.4	+1.7
POPC	Popayan, Colom	7.88	91	eP	Pn	04 19 58.2	-1.1
POPC				eS	Sn	04 21 26.5	-1.4
ACAL	Aguas Claras	7.94	357	eP	Pn	04 20 01.3	+1.4
CUI	Cuipilapa	7.97	356	eP	Pn	04 20 00.4	+0.1
COLC	Colonia	7.98	355	eP	Pn	04 20 00.4	-0.1
COVE	Coope Vega, Sa	8.01	1	eP	Pn	04 20 01.2	+0.3
PTEN	Parque Tenorio	8.02	357	eP	Pn	04 20 01.2	+0.2
HORNC	Hornillas	8.03	356	eP	Pn	04 20 01.4	+0.3
HZTE	Horizontes, Gu	8.07	353	eP	Pn	04 20 02.5	+0.8
GPS2	Hotel Rincn d	8.08	355	eP	Pn	04 20 02.2	+0.4
LAPC	Finca la Perla	8.10	354	eP	Pn	04 20 02.2	+0.1
GBS3	Finca Las Img	8.12	354	eP	Pn	04 20 03.0	+0.7
BUEV	Buena Vista	8.13	354	eP	Pn	04 20 02.2	-0.3
VERA	Finca Concepci	8.15	358	eP	Pn	04 20 04.9	+2.2
GB1A	Borinquen Arri	8.15	354	eP	Pn	04 20 03.6	+0.8
BUAI	Buenos Aires	8.20	355	eP	Pn	04 20 04.6	+1.1
YOTC	Yotoco, Valle	8.31	81	eP	Pn	04 20 04.0	-1.1
YOTC				eS	Sn	04 21 36.7	-1.6
PLMC	San Jos del P	8.56	75	eP	Pn	04 20 07.7	-0.8
PLMC				eS	Sn	04 21 39.5	-4.8
CBOC	Ciudad Bolivar	9.11	69	eP	Pn	04 20 15.3	-0.7
CBOC				eS	Sn	04 21 46.4	-11
ANIL	Santa Ana	9.33	78	eP	Pn	04 20 18.6	-0.5
ANIL				eS	Sn	04 21 50.2	-13
GUY2C	Guyana, Caldas	9.53	74	eP	Pn	04 20 23.9	+1.9
GUY2C				eS	Sn	04 21 53.4	-15
PRAC	Prado	9.72	84	eP	Pn	04 20 27.7	+3.3
PRAC				eS	Sn	04 21 54.7	-18
TGUH	Tegucigalpa,Un	11.64	347	eP	Pn	04 20 53.4	+2.7
LPAZ	La Paz	24.86	140	P	P	04 23 30.0	+2.6
	0.7nm,0.7s,baz=311,slow=9.3,SNR=3.4						
	0.7nm,0.7s						
H03N2	Juan Fernandez	36.29	172	T	T	05 03 36.8	
	baz=351,slow=76,SNR=13						
H03N1	Juan Fernandez	36.30	172	T	T	05 03 40.0	
	baz=351,slow=76,SNR=18						
H03N3	Juan Fernandez	36.31	172	T	T	05 03 42.3	
	baz=351,slow=76,SNR=16						
PLCA	Paso Flores	45.04	165	P	P	04 26 17.1	-2.7
	0.7nm,0.9s,baz=309,slow=6.5,SNR=0.9						
	0.7nm,0.9s						
PDAR	Pinedale Array	45.74	334	P	P	04 26 27.0	+1.5
	0.5nm,0.9s,baz=128,slow=9.6,SNR=4.4						
	0.5nm,0.9s						
NVAR	Mina Array Bea	47.08	323	P	P	04 26 35.0	-1.1
	0.5nm,0.7s,baz=134,slow=6.4,SNR=5.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	138.32	243	PKP	PKiKP	04 37 31.7	-0.5
	0.5nm,0.9s,baz=104,slow=2.6,SNR=3.3						

IDC 02 04:19:30.7±1.2, 2°.57N×84°.78W, h0km, mb3.7/5, mbtmp3.9/7, ML3.0/2, MS3.8/27, Error ellipse: s-maj=43.0km s-min=25.3km az=40.0

NEIC 02 04:19:34.3±1.1, 2°.80N±0°.04×84°.28W±0°.08, h10km±1km, mb4.5/36, Error ellipse: s-maj=14.4km s-min=5.3km az=287.0

GCMT 02 04:19:37.3±0.3, 2°.75N±0°.02×84°.45W±0°.03, h24km, MW4.9/103, Moment Tensor Solution. s24,c26; s103,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.44±.16; $M_{\theta\theta}$2.61±.10; $M_{\phi\phi}$0.83±.10; $M_{r\theta}$0.80±.13; $M_{\theta\phi}$-0.31±.06; $M_{\phi r}$0.08±.15; Best double couple: $M_0$3.15300×10^{16} NP1:ϕ_s276.00000°, δ52.00000°, λ-93.00000°. NP2:ϕ_s102.00000°, δ38.00000°, λ-86.00000°. Principal axes: T 2.7590, Plg7.0000°, Azm9.0000°; N 0.7890, Plg3.0000°, Azm278.0000°; P -3.5470, Plg82.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 02 04:19:35.9±0.8, 2°.80N±0°.10×84°.29W±0°.09, h28km, n103, σ0s.80/76, mb4.3/23, MS3.9/25, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	Canoas	5.90	14	Pn	Pn	04 21 02.0	+0.4
BRU2	Volcan	6.16	15	Pn	Pn	04 21 05.3	+0.1
OTAV	Otavalo	6.36	114	Pn	Pn	04 21 08.6	+0.2
SRBA	San Rafael, Bu	6.45	8		Pn	04 21 08.6	-0.6
DRK0	Durika	6.50	9		Pn	04 21 10.3	+0.4
PEZE	Perez Zeledon,	6.56	5		Pn	04 21 10.7	-0.1
IMBA	Imbabura, San	6.58	112	Pn	Pn	04 21 11.5	+0.2
SLOR	San Lorenzo -	6.77	121	Pn	Pn	04 21 13.3	-0.6
TULM	Tulcn-Chalpat	6.82	108	Pn	Pn	04 21 15.7	+1.1
JACO	JACO, Garabito	6.82	357	Pn	Pn	04 21 13.8	-0.4
CHSH	Refugio Sur-Vo	6.89	128	Pn	Pn	04 21 15.7	0.0
RIMA	Rio Macho	6.93	3		Pn	04 21 15.5	-0.4
PORT	Chimborazo Vol	6.95	128	Pn	Pn	04 21 16.4	-0.2
HDC	Heredia	7.15	1		Pn	04 21 19.3	+0.4
CVTR	Volcan Turrial	7.19	4	Pn	Pn	04 21 19.2	-0.4
DUNO	Dulce Nombre,	7.33	351		Pn	04 21 20.5	-0.7
JTS	Las Juntas de	7.47	355	Pn	Pn	04 21 23.1	0.0
ORTG	Ortega, Santa	7.60	351		Pn	04 21 24.9	-0.1
COVE	Coope Vega, Sa	7.87	359	Pn	Pn	04 21 28.8	+0.3
HZTE	Horizontes, Gu	7.97	351	Pn	Pn	04 21 29.5	-0.5
BOSC	San Juan Bosco	8.28	136	Pn	Pn	04 21 35.2	+0.8
ACON	Acoyapa	9.15	355		Pn	04 21 46.5	+0.3
ESPN	Las Esperanzas	9.33	360	Pn	Pn	04 21 49.4	+0.8
ROSC	El Rosal	10.15	78	Pn	Pn	04 22 06.5	+6.3
	1.5nm,0.3s,baz=49,slow=19,SNR=4.0						
ROSC				LR	LR	04 25 59.4	
	comp=Z,502nm,20.6s,baz=234,slow=36						
	7.5nm,0.4s						
ROSC	El Rosal	10.15	78	Pn	Pn	04 21 60.0	-0.3
MATN	Matagalpa	10.19	351	Pn	Pn	04 22 00.4	-0.2
CRIN	San Cristobal	10.21	345	Pn	Pn	04 22 01.6	+0.8
ATAH	Atahualpa	11.49	149	LR	LR	04 26 15.4	
	comp=Z,518nm,19.4s,baz=320,slow=35						
TGUH	Tegucigalpa,Un	11.56	345	Pn	Pn	04 22 19.1	-0.3
MTO3	Montecristo	12.56	337	Pn	Pn	04 22 33.5	+0.3
SDV	Santo Domingo	14.86	65	Pn	P	04 23 09.6	-0.4
	0.9nm,0.3s,baz=270,slow=2.0,SNR=1.6						
	4.7nm,0.4s						
SDV	Santo Domingo	14.86	65	Pn	Pn	04 23 02.5	-2.0
CZSB	Cruzeiro do Su	15.59	132	Pn	Pn	04 23 13.5	-0.4
CZSB				IAmb	IAmb	04 23 15.5	
	comp=Z,47nm,1.3s						
NNA	Nana	16.45	153	LR	LR	04 29 42.6	
	comp=Z,139nm,21.4s,baz=314,slow=37						
BAUV	El Baul	17.26	69		Pn	04 23 34.6	-0.6
CMIG	Matias Romero	17.61	324	LR	LR	04 29 08.3	
	comp=Z,319nm,20.8s,baz=150,slow=33						
ETMB	Extrema	21.94	125	P	P	04 24 27.6	+0.1
ETMB				IAmb	IAmb	04 24 37.2	
	comp=Z,39nm,1.2s						
BOAV	Boa Vista	23.74	90	P	P	04 24 45.5	-0.7
BOAV				IAmb	IAmb	04 24 56.5	
	comp=Z,34nm,1.5s						
SAML	Samuel	24.06	119	P	P	04 24 48.3	-0.8
SAML				IAmb	IAmb	04 24 58.9	
	comp=Z,11nm,1.4s						
LPAZ	La Paz	24.79	140	P	P	04 24 57.0	+0.6
	comp=Z,2.5nm,0.9s,baz=313,slow=10,SNR=6.6						
LPAZ				LR	LR	04 35 42.8	
	comp=Z,453nm,21.1s,baz=300,slow=39						
	comp=Z,2.5nm,0.9s						
LPAZ	La Paz	24.79	140	P	P	04 24 57.4	+0.9
LVC	Limon Verde	29.38	150	LR	LR	04 36 06.9	
	comp=Z,196nm,21.2s,baz=295,slow=34						
TXAR	Lajitas Array	32.18	327	LR	LR	04 38 08.2	
	comp=Z,105nm,19.6s,baz=132,slow=35						
S51A	Beattyville	34.67	1	P	P	04 26 24.2	+1.0
S51A				IAmb	IAmb	04 26 33.5	
	comp=Z,9.6nm,1.1s						
MGMO	Mountain Grove	34.97	349	P	P	04 26 26.6	+0.8
CCM	Cathedral Cave	35.66	351	P	P	04 26 31.7	0.0
CCM				IAmb	IAmb	04 26 40.7	
	comp=Z,10nm,1.1s						
H03N2	Juan Fernandez	36.40	172	T	T	05 05 03.2	
	baz=351,slow=76,SNR=16						
H03N1	Juan Fernandez	36.41	172	T	T	05 05 04.1	
	baz=351,slow=76,SNR=16						
H03N3	Juan Fernandez	36.42	172	T	T	05 05 05.0	
	baz=351,slow=76,SNR=13						
P53A	Whipple	36.61	4	P	P	04 26 40.7	+0.9
P40A	Paris	37.23	350	P	P	04 26 45.6	+0.5
P40A				IAmb	IAmb	04 26 54.1	
	comp=Z,8.5nm,1.1s						
BNM	Barren Site	37.51	329	P	P	04 26 48.1	+0.3
P38A	Dawn	37.60	348	P	P	04 26 46.9	-1.3
P38A				IAmb	IAmb	04 26 49.5	
	comp=Z,15nm,1.5s						
ANMO	Albuquerque	38.04	330	P	P	04 26 52.2	0.0
RPN	Rapa Nui	38.33	217	LR	LR	04 37 45.2	
	comp=Z,165nm,19.1s,baz=49,slow=29						
T25A	Trinidad	38.86	334	P	P	04 26 58.5	-0.7
T25A				IAmb	IAmb	04 27 09.4	
	comp=Z,12nm,1.4s						
CPUP	Villa Florida	38.96	140	LR	LR	04 45 06.1	
	comp=Z,176nm,18.2s,baz=319,slow=39						
SDCO	Great Sand Dun	39.85	333	P	P	04 27 07.7	+0.2
W18A	Petrified Fore	39.90	327	P	P	04 27 08.2	+0.4
BDFB	Brasilia	40.29	118	LR	LR	04 44 26.6	
	comp=Z,142nm,19.1s,baz=346,slow=37						
S22A	4UR Ranch, Cre	40.46	332	P	P	04 27 13.6	+1.0
SMCO	Snowmass	41.68	333	P	P	04 27 23.4	+0.7
PV15	Paradox Valley	41.72	331	P	P	04 27 24.3	+1.5
PV15				IAmb	IAmb	04 27 26.1	
	comp=Z,8.1nm,1.2s						
PV13	Radium Mtn., P	41.74	331	P	P	04 27 23.2	+0.2
PV13				IAmb	IAmb	04 27 32.5	
	comp=Z,8.2nm,1.2s						
ECSD	EROS Data Cent	42.20	347	P	P	04 27 26.7	+0.3
ECSD				IAmb	IAmb	04 27 35.1	
	comp=Z,10.0nm,1.2s						
SPMN	Marine on St.	42.91	351	P	P	04 27 32.4	+0.3
SPMN				IAmb	IAmb	04 27 40.5	
	comp=Z,15nm,1.1s						
PKCU	Pink Cliffs	43.02	327	P	P	04 27 34.2	+0.7
PKCU				IAmb	IAmb	04 27 44.4	
	comp=Z,15nm,1.4s						
SRU	San Rafael Swe	43.32	330	P	P	04 27 36.5	+0.7
SRU				IAmb	IAmb	04 27 45.6	
	comp=Z,11nm,1.5s						
CCUT	Cedar City	43.67	326	P	P	04 27 39.0	+0.3
RWWY	Rawlins	43.85	335	P	P	04 27 40.4	+0.3
RDMU	Red Mountain	43.99	332	P	P	04 27 41.1	-0.2
RDMU				IAmb	IAmb	04 27 50.6	
	comp=Z,4.3nm,0.9s						
SPR3	Spring Creek 3	45.24	327	P	P	04 27 51.6	+0.3
SPR3				IAmb	IAmb	04 28 05.5	
	comp=Z,4.3nm,1.3s						
PDAR	Pinedale Array	45.73	334	P	P	04 27 55.5	+0.5
	comp=Z,0.9nm,1.0s,baz=146,slow=8.2,SNR=5.8						
PDAR				PcP	PcP	04 29 31.5	-1.2
	comp=Z,0.4nm,0.8s,baz=99,slow=5.8,SNR=2.5						
PDAR				LR	LR	04 47 50.4	
	comp=Z,170nm,21.3s,baz=140,slow=37						
	comp=Z,0.9nm,1.0s						
HWUT	Hardware Ranch	45.74	331	P	P	04 27 54.8	-0.4
HWUT				IAmb	IAmb	04 28 03.8	
	comp=Z,4.0nm,0.9s						
AGMN	Agassiz Nation	46.41	349	P	P	04 28 00.2	+0.2
HVU	Hansel Valley	46.46	331	P	P	04 27 59.9	-0.9
HVU				IAmb	IAmb	04 28 09.4	
	comp=Z,4.6nm,1.2s						
MDND	Maddock	46.78	346	P	P	04 28 03.4	+0.4
REDW	Red Top Meadow	46.78	333	P	P	04 28 02.5	-0.8
TPAW	Teton Pass	46.93	333	P	P	04 28 04.6	+0.1
TPAW				IAmb	IAmb	04 28 15.2	
	comp=Z,4.8nm,1.1s						
NVAR	Mina Array Bea	47.13	323	P	P	04 28 07.2	+1.1
	comp=Z,0.6nm,0.7s,baz=137,slow=7.3,SNR=5.6						
YHL	Hebgen Lake	48.11	334	P	P	04 28 12.7	-1.0
YHL				IAmb	IAmb	04 28 24.0	
	comp=Z,6.4nm,1.2s						
TAOE	Nuku Hiva Isla	56.87	258	eLR	LR	04 45 32.9	
	comp=Z,143nm,26.7s						
FRB	Frobisher Bay	61.90	8	LR	LR	04 56 26.9	
	comp=Z,393nm,19.9s,baz=200,slow=36						
PPT	Papeete	67.44	250	LR	LR	04 52 18.0	
	comp=Z,179nm,18.4s,baz=106,slow=29						
PPT2	Papeete2	67.44	250	eLR	LR	04 50 24.8	
	comp=Z,202nm,27.0s						
PPT2				eLR	LR	04 50 24.8	
	comp=Z,234nm,24.2s						
ILAR	Eielson Array	76.06	337	P	P	04 31 18.9	-1.7
	comp=Z,0.7nm,1.0s,baz=142,slow=3.4,SNR=4.9						
	comp=Z,0.7nm,1.0s						
ILAR	Eielson Array	76.06	337	P	P	04 31 19.8	-0.9
KDAK	Kodiak Island	76.18	329	LR	LR	05 03 39.6	
	comp=Z,53nm,18.1s,baz=127,slow=35						
DBIC	Dimbokro	79.19	84	LR	LR	05 06 24.4	
	comp=Z,26nm,18.1s,baz=44,slow=35						
ESDC	Sonseca Array	80.76	50	P	P	04 31 49.0	+1.8
	comp=Z,0.5nm,0.8s,baz=261,slow=7.7,SNR=1.9						
ESDC				LR	LR	05 00 22.6	
	comp=Z,34nm,21.7s,baz=256,slow=30						
	comp=Z,0.5nm,0.8s						
JMIC	Jan Mayen	82.74	19	LR	LR	05 09 11.9	
	comp=Z,36nm,18.4s,baz=238,slow=36						
TORD	Torodi Ar. Bea	85.46	77	P	P	04 32 13.5	+1.6
	comp=Z,0.6nm,0.7s,baz=210,slow=2.4,SNR=4.9						
TORD				LR	LR	05 12 16.7	
	comp=Z,45nm,18.1s,baz=212,slow=37						
	comp=Z,0.6nm,0.7s						
AFI	Afiamalu	88.23	256	LR	LR	05 01 44.1	
	comp=Z,41nm,20.8s,baz=124,slow=29						
SPITS	Spitsbergen Ar	89.46	12	LR	LR	05 13 52.3	
	comp=Z,182nm,18.9s,baz=256,slow=36						
SNAA	Sanae	89.95	162	LR	LR	05 05 43.9	
	comp=Z,58nm,21.8s,baz=238,slow=31						
DAVOX	Davos/Dischmat	90.83	43	LR	LR	05 10 52.7	
	comp=Z,31nm,18.6s,baz=266,slow=34						
HFS	Hagfors	91.57	30	LR	LR	05 08 20.6	
	comp=Z,37nm,21.1s,baz=272,slow=32						
ARCES	ARCESS Array B	94.21	19	LR	LR	05 15 52.1	
	comp=Z,25nm,18.1s,baz=222,slow=36						
VRAC	Vranov	94.97	40	LR	LR	05 09 40.2	
	comp=Z,70nm,21.9s,baz=282,slow=32						
FINES	FINESS Array B	97.14	27	LR	LR	05 11 19.6	
	comp=Z,42nm,21.9s,baz=258,slow=32						
VNDA	Vanda	97.78	192	LR	LR	05 09 13.7	
	comp=Z,70nm,18.8s,baz=162,slow=31						
ASAR	Alice Springs	137.66	237	PKP	PKPdf	04 38 55.6	-2.8
	comp=Z,0.4nm,0.6s,baz=99,slow=4.1,SNR=4.3						
WRA	Warramunga Arr	138.64	243	PKP	PKPdf	04 38 59.8	-0.5
	comp=Z,0.8nm,0.9s,baz=104,slow=3.1,SNR=3.2						

BEO 02 05:11:04.3±0.3, 41°.86N×23°.48E, h2km±3km, ML1.6/9

SKO 02 05:11:05.0, 41°.81N×23°.55E, h4km

ATH 02 05:11:03.4, 41°.84N×23°.53E, h10km±2km, ML1.6/5, Error ellipse: s-maj=2.9km s-min=1.4km az=320.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.55	153	P	Pg	05 11 13.5	-0.5
NVR				S	Sg	05 11 21.6	+0.3
NVR				AML	AML	05 11 29.0	
	comp=E,109μm,0.2s						
NVR				AML	AML	05 11 29.0	
	comp=N,104μm,0.1s						
SRS	Serrai	0.72	176	ePg	Pg	05 11 17.0	-0.3
SRS				eSg	Sb	05 11 27.7	-0.3
SRS	Serrai	0.72	176	i Pg	Pg	05 11 17.1	-0.3
SRS				i Sg	Sb	05 11 27.7	-0.3
SRS	Serrai	0.72	176	P	Pg	05 11 17.1	-0.2
SRS				S	Sb	05 11 27.7	-0.3
SRS				AML	AML	05 11 30.1	
	comp=N,79μm,0.1s						
SRS				AML	AML	05 11 30.7	
	comp=E,74μm,0.3s						
KNT	Kendrikon	0.83	215	i Pg	Pg	05 11 19.0	-0.3
KNT				i Sg	Sg	05 11 30.3	+0.2
KNT	Kendrikon	0.83	215	P	Pg	05 11 19.0	-0.3
KNT				S	Sg	05 11 30.0	-0.1
VAY	Valandovo	0.89	235	ePg	Pg	05 11 20.6	+0.2
VAY				eSg	Sb	05 11 32.8	+0.1
VAY	Valandovo	0.89	235	i Sg	Sn	05 11 33.7	-1.0
VAY				i Pg	Pb	05 11 20.9	+0.1
VAY				eLg	Lg	05 11 34.1	
	comp=N,9.4nm,0.3s						
PLD	Plovdiv	0.92	73	ePg	Pn	05 11 22.1	-0.2
PLD				eSg	Sb	05 11 34.2	+0.7
PLD	Plovdiv	0.92	73	i Pg	Pn	05 11 22.5	+0.2
BOSS	Bosilegrad	1.02	310	ePg	Pg	05 11 21.7	-1.3
BOSS				eSg	Sg	05 11 35.6	-0.6
SOH	Sokhos	1.03	187	i Pg	Pb	05 11 23.5	+0.3
SOH				i Sg	Sb	05 11 37.0	+0.2
SOH	Sokhos	1.03	187	P	Pg	05 11 21.9	-1.2
SOH				S	Sg	05 11 36.5	+0.1
SOH				AML	AML	05 11 39.6	
	comp=E,87μm,0.2s						
SOH				AML	AML	05 11 39.9	
	comp=N,138μm,0.4s						
KOKK	Kokkinochori,	1.08	161	P	Pb	05 11 23.4	-0.7
KOKK				S	Sn	05 11 39.0	-0.6
KVLA	Kavala	1.11	144	P	Pb	05 11 23.5	-1.1
KVLA				S	Sb	05 11 38.0	-1.0
KAVA	Kavala	1.12	138	P	Pb	05 11 24.0	-0.8
KAVA				S	Sb	05 11 39.1	-0.3
GRG	Griva	1.22	224	i Pg	Pn	05 11 26.4	-0.2
GRG				i Sg	Sn	05 11 43.7	+0.6
PRVS	Prvonek	1.27	302	ePg	Pn	05 11 26.3	-0.9
PRVS				eSg	Sb	05 11 43.4	-0.4
HORT	Hortiatis	1.28	195	P	Pn	05 11 27.5	+0.1
HORT				S	Sb	05 11 44.2	+0.1
HORT				AML	AML	05 11 47.2	
	comp=N,34μm,0.2s						
HORT				AML	AML	05 11 47.8	
	comp=E,33μm,0.2s						
THAS	Thassos island	1.52	144	P	Pn	05 11 31.1	+0.5
THAS				S	Sn	05 11 50.3	-0.2
ZAPS	Zavoj	1.58	336	ePg	Pn	05 11 31.9	+0.5
ZAPS				eSg	Sb	05 11 53.1	+0.4
BARS	Barje	1.60	308	ePg	Pn	05 11 31.9	+0.2
BARS				eSg	Sn	05 11 52.7	+0.2
BARS	Barje	1.60	308	i Pn	Pb	05 11 32.8	-0.3
BARS				i Sn	Sb	05 11 53.6	+0.3
RDO	Rodhopi	1.66	114	P	Pb	05 11 33.7	-0.3
RDO				S	Sb	05 11 55.6	+0.7
RDO				AML	AML	05 11 58.4	
	comp=E,104μm,0.2s						
RDO				AML	AML	05 12 00.4	
	comp=N,139μm,0.3s						
BLKB	Belogradchik	1.89	341	ePn	Pb	05 11 36.9	-1.1
BLKB				eSn	Sb	05 12 00.7	-0.9
ALN	Alexandroupoli	2.12	116	P	Pb	05 11 41.3	-0.5
ZAGS	Zajecar	2.19	335	ePn	Pb	05 11 42.5	-0.5
ZAGS				eSn	Sn	05 12 07.9	+1.0
BOVS	Bovan	2.24	324	ePn	Pn	05 11 42.2	+1.7
BOVS				eSn	Sn	05 12 08.6	+0.4
SELS	Selova	2.25	309	ePn	Pn	05 11 42.0	+1.3
SELS				eSn	Sn	05 12 09.2	+0.7

JMA 02 05:13:32.6±0.2, 24°.8N±0°.5×121°.8E±0°.5, h96km±1km, MV3.2/10, TAIWAN REGION

TAP 02 05:13:33.3, 24°.77N×121°.82E, h91km, ML3.9, B

ISC 02 05:13:32.5±1.3, 24°.84N±0°.03×121°.82E±0°.02, h100km±5km, n96, σ0s.71/178, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	Toucheng	0.02	50	i P	Pn	05 13 46.5	+0.2
	baz=27						
NTC				S	Sn	05 13 56.2	-0.4
	baz=27						
ILA	Ilan	0.10	218	P	Pn	05 13 47.1	+0.7
	baz=255						
ILA				eS	Sn	05 13 57.8	+1.1
	baz=255						
EGS		0.11	89	P	Pn	05 13 46.9	+0.5
	baz=71						
EGS				i S	Sn	05 13 56.7	-0.1
	baz=71						
TIPB	Shuangxi	0.13	4	i P	Pn	05 13 46.7	+0.2
	baz=6.0						
TIPB				S	Sn	05 13 56.2	-0.8
	baz=6.0						
TWE	Neicheng	0.18	228	P	Pn	05 13 47.0	+0.4
	baz=263						
TWE				S	Sn	05 13 57.2	+0.2
	baz=263						
FUSB	Fushanzhiwuyua	0.22	248	i P	Pn	05 13 46.8	0.0
	baz=267						
FUSB				i S	Sn	05 13 57.0	-0.6
	baz=267						
NDS	Dongshan	0.23	203	eP	Pn	05 13 46.2	-0.6
	baz=220						
NDS				i S	Sn	05 13 57.0	-0.4
	baz=220						
TWB1	Santiao Chiao	0.23	44	P	Pn	05 13 46.9	+0.2
	baz=44						
TWB1				S	Sn	05 13 56.8	-0.6
	baz=44						
NWF	Wu-fen Shan	0.23	352	i P	Pn	05 13 47.2	+0.3
	baz=5.0						
NWF				S	Sn	05 13 57.2	-0.3
	baz=5.0						
WFSB	Wu-fen Shan	0.23	352	P	Pn	05 13 47.1	+0.4
	baz=4.0						
WFSB				i S	Sn	05 13 57.4	0.0
	baz=4.0						
TWC	Suao	0.23	172	P	Pn	05 13 47.1	+0.3
	baz=158						
TWC				eS	Sn	05 13 58.0	+0.6
	baz=158						
TWA	Mucha	0.25	303	P	Pn	05 13 47.2	+0.3
	baz=321						
TWA				S	Sn	05 13 57.7	+0.1
	baz=321						
SXI1	Grass Mountain	0.26	12	eP	Pn	05 13 46.9	-0.1
	baz=13						
SXI1				S	Sn	05 13 57.9	+0.2
	baz=13						
NHDH	Xindian Distri	0.29	295	P	Pn	05 13 47.2	+0.2
	baz=296						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NHDH				iS	Sn	05 13 57.6	-0.2
	baz=296						
NWLT	Wulai	0.29	257	P	Pn	05 13 46.9	-0.2
	baz=270						
NWLT				S	Sn	05 13 56.8	-1.1
	baz=270						
ENTT	Nioudou	0.30	228	eP	Pn	05 13 46.3	-0.8
	baz=251						
ENTT				S	Sn	05 13 56.7	-1.3
	baz=251						
TNOU	National Taiwa	0.31	353	P	Pn	05 13 47.2	+0.1
	baz=2.0						
TNOU				S	Sn	05 13 57.6	-0.4
	baz=2.0						
TATO	Taipei	0.33	294	P	Pn	05 13 47.2	+0.1
	baz=296						
TATO				S	Sn	05 13 57.7	-0.4
	baz=296						
NDT	Datong Townshi	0.36	229	iP	Pn	05 13 47.5	+0.1
	baz=250						
BACT	New Taipei Cit	0.37	295	P	Pn	05 13 47.8	+0.4
	baz=300						
BACT				eS	Sn	05 13 59.2	+0.6
	baz=300						
YM01	YM01	0.38	324	P	Pn	05 13 47.9	+0.4
	baz=323						
YM01				S	Sn	05 13 58.9	+0.1
	baz=323						
NWRT	Kuosheng	0.39	339	P	Pn	05 13 48.2	+0.7
	baz=346						
NWRT				S	Sn	05 13 59.1	+0.4
	baz=346						
EWUT	Wuta	0.40	185	P	Pn	05 13 47.1	-0.5
	baz=193						
EWUT				S	Sn	05 13 58.1	-0.7
	baz=193						
YM08	YM08	0.40	329	P	Pn	05 13 47.8	+0.1
	baz=326						
LATG	Datong	0.40	221	P	Pn	05 13 48.0	+0.2
	baz=237						
LATG				iS	Sn	05 13 58.4	-0.7
	baz=237						
ENA	Nanau	0.42	189	P	Pn	05 13 48.2	+0.5
	baz=197						
ENA				eS	Sn	05 14 00.6	+1.5
	baz=197						
ANP	Anpu	0.43	322	P	Pn	05 13 48.2	+0.2
	baz=323						
ANP				S	Sn	05 13 59.3	-0.2
	baz=323						
YHNB	Yeheng	0.43	247	eP	Pn	05 13 47.7	-0.2
	baz=255						
YHNB				eS	Sn	05 13 58.1	-1.4
	baz=255						
NSK	Sanguang	0.45	248	eP	Pn	05 13 46.7	-1.3
	baz=256						
NSK				eS	Sn	05 13 57.2	-2.4
	baz=256						
NTST	Danshui	0.46	314	P	Pn	05 13 48.6	+0.6
	baz=324						
NTST				S	Sn	05 13 59.9	+0.4
	baz=324						
TWY	Chenhua	0.47	336	P	Pn	05 13 48.6	+0.6
	baz=336						
TWY				S	Sn	05 14 00.5	+0.8
	baz=336						
NSM	Shimen	0.49	335	P	Pn	05 13 48.9	+0.7
	baz=340						
NSM				eS	Sn	05 14 01.0	+1.1
	baz=340						
NTY	Taoyuan	0.49	289	P	Pn	05 13 48.7	+0.5
	baz=305						
NTY				S	Sn	05 14 00.4	+0.5
	baz=305						
NNS	Nan Shan	0.57	225	eP	Pn	05 13 48.1	-0.9
	baz=230						
NNSH	Datong	0.57	224	P	Pn	05 13 49.1	+0.1
	baz=232						
NNSH				S	Sn	05 14 00.4	-0.8
	baz=232						
NCU	National Centr	0.58	283	P	Pn	05 13 49.3	+0.4
	baz=289						
NCU				S	Sn	05 14 01.4	+0.2
	baz=289						
NCUH	Zhongli	0.58	282	P	Pn	05 13 49.1	+0.1
	baz=288						
NCUH				S	Sn	05 14 01.0	-0.2
	baz=288						
NFF	Wufeng Townshi	0.67	252	eP	Pn	05 13 48.6	-1.1
	baz=256						
NFF				eS	Sn	05 14 00.5	-2.0
	baz=256						
NACB	Ninganchiao	0.70	197	P	Pn	05 13 49.5	-0.4
	baz=204						
NACB				eS	Sn	05 14 02.4	-0.5
	baz=204						
ETLH	Xiulin Townshi	0.70	206	eP	Pn	05 13 49.2	-0.9
	baz=213						
ETLH				eS	Sn	05 14 01.6	-1.5
	baz=213						
NHW	Xinwu Township	0.71	283	P	Pn	05 13 50.3	+0.3
	baz=288						
NHW				S	Sn	05 14 03.7	+0.5
	baz=288						
HSN1	Hsinchu	0.73	265	P	Pn	05 13 50.6	+0.5
	baz=269						
HSN1				S	Sn	05 14 03.5	+0.2
	baz=269						
LIOB	Emei	0.75	255	eP	Pn	05 13 50.7	+0.3
	baz=254						
SBCB	Hsinchu	0.76	266	P	Pn	05 13 50.8	+0.4
	baz=270						
SBCB				S	Sn	05 14 04.0	+0.2
	baz=270						
HSN	Hsinchu	0.77	267	P	Pn	05 13 50.5	0.0
	baz=266						
HSN				S	Sn	05 14 03.3	-0.8
	baz=266						
NSTT	Nanjuang	0.77	254	eP	Pn	05 13 50.7	+0.1
	baz=251						
NSTT				eS	Sn	05 14 03.0	-1.1
	baz=251						
FUSS	Fushou	0.79	221	P	Pn	05 13 51.5	+0.5
	baz=223						
FUSS				S	Sn	05 14 04.7	-0.2
	baz=223						
PCYT	Pengchaiyu	0.82	16	P	Pn	05 13 51.5	+0.5
	baz=13						
PCYT				eS	Sn	05 14 05.7	+0.8
	baz=13						
TWT	Tachien	0.83	225	P	Pn	05 13 52.2	+0.8
	baz=221						
TWT				S	Sn	05 14 05.7	+0.3
	baz=221						
TDCB	Techi	0.84	226	P	Pn	05 13 52.2	+0.8
	baz=228						
WHF	Hehuan Shan	0.86	216	P	Pn	05 13 52.3	+0.4
	baz=210						
WHF				S	Sn	05 14 06.3	-0.1
	baz=210						
NJN	Zhunan	0.87	260	eP	Pn	05 13 50.5	-1.0
	baz=259						
NJN				S	Sn	05 14 06.5	+0.6
	baz=259						
WHP	Taichung City	0.97	235	P	Pn	05 13 53.4	+0.7
	baz=236						
WHP				S	Sn	05 14 07.7	-0.1
	baz=236						
CHGB	Renai	0.97	217	P	Pn	05 13 53.6	+0.7
	baz=217						
CHGB				S	Sn	05 14 08.1	0.0
	baz=217						
NMLH	Miaoli	0.98	252	P	Pn	05 13 53.5	+0.8
	baz=255						
NMLH				S	Sn	05 14 07.7	-0.2
	baz=255						
NSY	Sanyi	1.05	246	P	Pn	05 13 54.2	+0.7
	baz=248						
NSY				eS	Sn	05 14 09.3	+0.1
	baz=248						
OWD	Renai	1.06	213	P	Pn	05 13 54.2	+0.5
	baz=210						
OWD				S	Sn	05 14 09.7	0.0
	baz=210						
WUSB	Renai	1.06	217	P	Pn	05 13 54.6	+0.9
	baz=216						
WUSB				S	Sn	05 14 10.0	+0.3
	baz=216						
TWQ1	Liyutan	1.07	243	eP	Pn	05 13 54.2	+0.5
	baz=244						
TWQ1				eS	Sn	05 14 09.4	-0.3
	baz=244						
JYNG	Yonagunijimaku	1.10	111	P	Pn	05 13 53.9	-0.1
JYNG				eS	Sn	05 14 09.2	-1.0
WCS	Beigang Elemen	1.14	227	P	Pn	05 13 54.0	-0.4
	baz=233						
WCS				S	Sn	05 14 09.9	-1.0
	baz=233						
WPL	Puli Township	1.14	224	P	Pn	05 13 55.3	+0.8
	baz=231						
WPL				S	Sn	05 14 11.1	+0.1
	baz=231						
DPDB	Guoxing	1.14	225	P	Pn	05 13 55.3	+0.7
	baz=234						
DPDB				eS	Sn	05 14 12.2	+1.0
	baz=234						
YOJ	Yonaguni jima	1.15	109	P	Pn	05 13 54.6	0.0
	baz=106						
YOJ				S	Sn	05 14 10.8	-0.5
	baz=106						
YOJ	Yonaguni jima	1.15	109	P	Pn	05 13 54.5	-0.1
WDJ	Dajia District	1.18	245	P	Pn	05 13 55.7	+0.8
	baz=241						
WDJ				S	Sn	05 14 11.7	-0.1
	baz=241						
VWDT	VWDT	1.25	210	P	Pn	05 13 56.7	+1.0
	baz=216						
VWDT				eS	Sn	05 14 14.6	+1.4
	baz=216						
TCU	Taichung	1.25	237	P	Pn	05 13 56.4	+0.7
	baz=237						
TCU				eS	Sn	05 14 13.5	+0.3
	baz=237						
SMLT	Sun Moon Lake	1.27	221	P	Pn	05 13 56.9	+0.8
	baz=227						
SMLT				S	Sn	05 14 14.7	+0.8
	baz=227						
TYC	Yuchr	1.28	223	eP	Pn	05 13 56.7	+0.6
	baz=222						
TYC				eS	Sn	05 14 14.2	+0.4
	baz=222						
WWF	Wufeng	1.29	232	P	Pn	05 13 56.0	-0.3
	baz=232						
WWF				S	Sn	05 14 13.9	-0.3
	baz=232						
SSLB	Suanglung	1.31	217	eP	Pn	05 13 57.1	+0.5
	baz=225						
HGSD	Ruisui	1.39	195	eP	Pn	05 13 58.0	+0.6
	baz=199						
HGSD				eS	Sn	05 14 16.9	+0.6
	baz=199						
WNT1	Nantou City	1.39	228	P	Pn	05 13 58.1	+0.7
	baz=236						
WNT1				S	Sn	05 14 16.7	+0.4
	baz=236						
WNT	Mingjian	1.41	227	P	Pn	05 13 58.4	+0.7
	baz=235						
WNT				S	Sn	05 14 17.0	+0.3
	baz=235						
WJS	Zhushan	1.42	225	P	Pn	05 13 58.4	+0.6
	baz=233						
WJS				S	Sn	05 14 17.2	+0.3
	baz=233						
WHYT	Xinyi Township	1.44	218	eS	Sn	05 14 18.1	+0.7
	baz=224						
YULB	Yu-li	1.52	198	eP	Pn	05 13 59.7	+0.6
	baz=192						
YULB				eS	Sn	05 14 19.2	+0.1
	baz=192						
YUS	Yu-Shan	1.56	210	eP	Pn	05 14 01.1	+1.1
	baz=219						
YUS				eS	Sn	05 14 23.5	+2.7
	baz=219						
IRIF	Iriomote-Funau	1.81	106	P	Pn	05 14 02.5	-0.2
IRIF				S	Sn	05 14 24.9	-0.7
CHY	Chiayi	1.85	224	P	Pn	05 14 03.6	+0.5
	baz=231						
CHY				S	Sn	05 14 26.7	+0.3
	baz=231						
EDH	Donghe	1.92	194	eP	Pn	05 14 03.8	-0.3
	baz=183						
EDH				eS	Sn	05 14 27.6	-0.4
	baz=183						
HATJ	Hateruma jima	1.98	113	eS	Sn	05 14 29.5	+0.2
JKRS	Kuro-shima	2.09	106	P	Pn	05 14 06.6	+0.4
JKRS				S	Sn	05 14 31.7	-0.3
MATB	Ma-tsu	2.13	308	eP	Pn	05 14 06.8	0.0
	baz=307						
MATB				eS	Sn	05 14 32.5	-0.5
	baz=307						
VWUC	VWUC	2.15	274	eP	Pn	05 14 07.2	+0.2
	baz=275						
VWUC				eS	Sn	05 14 31.6	-1.8
	baz=275						
MSUT	Lienchiang	2.16	308	eP	Pn	05 14 07.1	0.0
	baz=307						
JIJ	Ishigaki jima	2.17	102	P	Pn	05 14 07.3	0.0
JIJ				S	Sn	05 14 32.6	-1.3
PNG	Penghu	2.42	239	eP	Pn	05 14 09.9	-0.7
	baz=239						
PNG				eS	Sn	05 14 38.5	-1.2
	baz=239						
PHUB	P'eng-hu	2.44	238	eP	Pn	05 14 09.9	-0.9
	baz=238						
PHUB				eS	Sn	05 14 38.2	-2.0
	baz=238						
JTJ	Tarama	2.63	94	P	Pn	05 14 14.0	+0.6
JTJ				S	Sn	05 14 45.0	+0.2
KNM	Kinmen	3.11	263	eP	Pn	05 14 21.0	+1.4
	baz=262						
KNMB	Chin-men Tao	3.14	264	eP	Pn	05 14 19.8	-0.3
	baz=263						
KNMB				eS	Sn	05 14 55.9	-1.0
	baz=263						
JMJ	Miyako jima 2	3.16	90	eS	Sn	05 14 57.2	-0.2
	baz=96						
AXDP	Jialang	3.49	272	eP	Pn	05 14 24.7	-0.2
	baz=271						
DSXP	Dongshan	4.16	255	eP	Pn	05 14 34.4	+0.5
	baz=253						

IDC 02 05:13:47.9±4.0, 10°.91S×163°.98E, h0km, mb3.7/3, mbtmp3.9/4, ML4.7/1, MS4.0/1, Error ellipse: s-maj=77.2km s-min=55.2km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.24	290	Pn	Pn	05 14 53.7	0.0
	41nm,0.3s,baz=151,slow=5.7,SNR=3.0						
	230nm,0.4s						
RAO	Raoul Island	24.87	140	LR	LR	05 27 08.4	
	comp=Z,363nm,19.4s,baz=248,slow=32						
WRA	Warramunga Arr	29.91	249	P	P	05 19 58.4	+0.7
	0.5nm,0.4s,baz=79,slow=9.0,SNR=6.4						
	0.5nm,0.4s						
ASAR	Alice Springs	31.32	242	P	P	05 20 09.3	-0.8
	0.3nm,0.6s,baz=65,slow=10.0,SNR=4.4						
	0.3nm,0.6s						
MKAR	Makanchi Array	92.25	317	P	P	05 26 59.9	0.0
	0.5nm,0.8s,baz=101,slow=2.9,SNR=3.0						
	0.5nm,0.8s						

NEIC 02 05:18:34.2±1.8, 28°.0S±0°.1×175°.84W±0°.10, h10km±1km, mb4.5/10, Error ellipse: s-maj=26.0km s-min=6.7km az=148.0

IDC 02 05:18:35.5±1.5, 27°.83S×176°.44W, h0km, mb3.8/2, mbtmp3.8/2, MS2.7/1, Error ellipse: s-maj=46.9km s-min=27.6km az=133.0

ISC 02 05:18:34.7±0.9, 28°.0S±0°.1×176°.0W±0°.1, h10km, n21, σ1s.36/21, mb4.4/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.12	234	Pn	Pn	05 19 10.5	+0.3
	174nm,0.3s,baz=89,slow=10,SNR=5.3						
RAO				Sn	Sn	05 19 36.1	-0.6
	334nm,0.3s,baz=75,slow=23,SNR=8.8						
RAO	Raoul Island	2.12	234	Pn	Pn	05 19 10.7	+0.4
NIUE	Niue	10.47	33	Pn	Pn	05 21 03.6	-1.2
URZ	Urewera	11.76	208	Pn	Pn	05 21 21.6	-0.9
AFI	Afiamalu	14.55	16	LR	LR	05 26 52.4	
	comp=Z,29nm,20.4s,baz=242,slow=34						
NNZ	Nelson	15.82	211	Pn	Pn	05 22 15.8	-1.6
NNZ				IAmb	IAmb	05 22 50.0	
	comp=Z,53nm,1.4s						
THZ	Tophouse	16.47	211	Pn	Pn	05 22 24.6	-1.3
THZ				IAmb	IAmb	05 22 56.2	
	comp=Z,36nm,1.4s						
MQZ	McQueen's Vall	18.16	207		Pn	05 22 46.4	-0.5
MQZ				IAmb	IAmb	05 23 10.7	
	comp=Z,59nm,1.3s						
COEN	Coen	40.43	282	P	P	05 26 15.4	+1.9
COEN				IAmb	IAmb	05 26 56.4	
	comp=Z,15nm,1.2s						
ASAR	Alice Springs	45.08	264	P	P	05 26 49.7	-1.5
	comp=Z,1.0nm,0.6s,baz=94,slow=7.6,SNR=9.7						
	comp=Z,1.0nm,0.6s						
WB2	Warramunga Arr	45.85	269	P	P	05 26 57.0	-0.3
WRA	Warramunga Arr	45.86	269	P	P	05 26 56.2	-1.3
	comp=Z,0.9nm,0.7s,baz=108,slow=7.6,SNR=8.6						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	45.86	269	P	P	05 26 56.4	-1.0
WB0	Warramunga Arr	45.87	269	P	P	05 26 54.8	-2.8
WB0				IAmb	IAmb	05 26 59.5	
	comp=Z,4.9nm,1.1s						
FORT	Forrest	48.42	252	P	P	05 27 17.9	+0.6
MTN	Manton Dam	51.44	276	P	P	05 27 39.4	-1.0
QSPA	South Pole Qui	62.10	180	P	P	05 28 55.8	+0.2
QSPA				IAmb	IAmb	05 29 01.0	
	comp=Z,3.8nm,0.8s						
NB2	NORSAR Subarra	146.61	354	PKP	PKiKP	05 38 19.9	+1.1
	comp=Z,0.8nm,0.7s,baz=9.8,slow=2.9						
NOA	NORSAR Array B	146.61	354	PKPbc	PKiKP	05 38 17.7	-1.1
	comp=Z,1.9nm,0.9s,baz=13,slow=4.6,SNR=4.6						
AKASG	Malin Array Be	150.38	327	PKPbc	PKiKP	05 38 28.1	+1.3
	comp=Z,3.2nm,0.9s,baz=48,slow=2.9,SNR=7.8						
TORD	Torodi Ar. Bea	165.06	171	PKPab	PKPab	05 39 38.4	+2.1
	comp=Z,1.6nm,0.8s,baz=201,slow=4.5,SNR=6.3						

IDC 02 05:24:54.0±2.4, 6°.55S×129°.54E, h0km, mb3.7/1, mbtmp3.6/4, ML3.3/3, Error ellipse: s-maj=107.4km s-min=28.5km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.10	198	Pn	Pn	05 27 48.9	+1.1
	0.1nm,0.3s,baz=10,slow=12,SNR=7.8						
FITZ				Sn	Sn	05 29 48.4	-15
	0.2nm,0.3s,baz=288,slow=10,SNR=2.4						
	1.2nm,0.6s						
WRA	Warramunga Arr	14.11	161	Pn	Pn	05 28 14.5	-0.8
	0.1nm,0.3s,baz=333,slow=13,SNR=3.2						
WRA				Sn	Sn	05 30 36.0	-17
	0.3nm,0.3s,baz=333,slow=23,SNR=4.6						
	0.2nm,0.5s						
ASAR	Alice Springs	17.53	167	P	Pn	05 28 59.8	-0.3
	0.3nm,0.3s,baz=338,slow=9.2,SNR=12						
	0.8nm,0.4s						
MKAR	Makanchi Array	67.60	327	P	P	05 35 52.6	0.0
	0.4nm,0.5s,baz=121,slow=8.0,SNR=5.2						
	0.4nm,0.5s						

IDC 02 05:26:45.7±6.1, 18°.91S×176°.92W, h0km, mb3.7/3, mbtmp3.7/3, MS3.7/1, Error ellipse: s-maj=281.9km s-min=35.1km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	19.97	194	LR	LR	05 38 55.7	
	comp=Z,177nm,18.1s,baz=31,slow=37						
WRA	Warramunga Arr	45.85	260	P	P	05 35 10.6	+0.6
	0.4nm,0.3s,baz=94,slow=7.7,SNR=10						
	0.4nm,0.3s						
ASAR	Alice Springs	45.89	255	P	P	05 35 09.6	-0.8
	0.3nm,0.3s,baz=93,slow=8.3,SNR=4.9						
	0.3nm,0.3s						
ILAR	Eielson Array	86.55	12	P	P	05 39 30.9	+0.7
	0.2nm,0.4s,baz=214,slow=5.3,SNR=7.3						
	0.2nm,0.4s						
AKASG	Malin Array Be	142.10	333	PKhKP	PKPpre	05 46 13.9	
	0.2nm,0.4s,baz=51,slow=3.1,SNR=4.6						
GERES	GERESS Array B	148.93	346	PKPbc	PKPbc	05 46 33.7	-1.9
	0.4nm,0.5s,baz=45,slow=1.5,SNR=2.7						

IDC 02 05:31:29.6±1.4, 27°.93S×176°.46W, h0km, mb3.8/3, mbtmp3.7/3, Error ellipse: s-maj=49.6km s-min=25.2km az=134.0

ISC 02 05:31:34.8±1.4, 27°.9S±0°.2×176°.4W±0°.3, h37km, n7, σ1s.49/8, mb3.8/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.90	224	Pn	Pn	05 32 03.7	-0.9
	108nm,0.3s,baz=252,slow=20,SNR=2.3						
RAO				Sn	Sn	05 32 29.2	+2.0
	165nm,0.3s,baz=249,slow=23,SNR=6.9						
ASAR	Alice Springs	44.70	264	P	P	05 39 44.0	-0.5
	0.4nm,0.5s,baz=96,slow=7.7,SNR=6.1						
	0.4nm,0.5s						
WRA	Warramunga Arr	45.47	269	P	P	05 39 49.5	-1.1
	0.8nm,0.5s,baz=109,slow=7.3,SNR=9.5						
	0.8nm,0.5s						
ILAR	Eielson Array	95.18	12	P	P	05 44 55.5	+1.9
	0.2nm,0.5s,baz=224,slow=5.0,SNR=4.3						
	0.2nm,0.5s						
NOA	NORSAR Array B	146.46	353	PKPbc	PKPab	05 51 12.2	-0.1
	0.6nm,0.6s,baz=12,slow=4.5,SNR=3.0						
AKASG	Malin Array Be	150.07	327	PKPbc	PKiKP	05 51 21.3	-0.7
	0.6nm,0.6s,baz=39,slow=2.8,SNR=4.0						
TORD	Torodi Ar. Bea	165.22	173	PKPab	PKPab	05 52 32.0	-1.0
	0.9nm,0.8s,baz=186,slow=3.5,SNR=4.7						

IDC 02 05:33:40.6±0.9, 34°.96N×141°.30E, h0km, mb3.8/6, mbtmp3.7/7, ML2.8/2, MS2.8/4, Error ellipse: s-maj=27.0km s-min=18.8km az=103.0

JMA 02 05:33:46.7±0.2, 36°.0N±0°.6×139°.8E±0°.7, h74km±1km, MV2.8/36, SW IBARAKI PREF

ISC 02 05:33:46.2±1.0, 35°.91N±0°.04×139°.79E±0°.06, h79km±8km, n28, σ0s.98/23, mb3.7/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	Tokyo	0.23	186	P	Pn	05 33 59.5	+1.6
JYT	Yasato	0.45	46	P	Pn	05 33 59.3	-0.1
JYT				S	Sn	05 34 08.4	-0.8
JAG	Ashikaga	0.58	332	P	Pn	05 34 00.4	-0.1
JAG				S	Sn	05 34 10.3	-0.8
JRY	Ryogami san	0.73	278	P	Pn	05 34 02.4	+0.4
JRY				eS	Sn	05 34 13.9	+0.1
JOD2	Odawara 2	0.86	222	P	Pn	05 34 03.4	-0.2
JOD2				S	Sn	05 34 15.6	-0.9
JKT	Katashina	0.96	333	P	Pn	05 34 04.7	0.0
JKT				S	Sn	05 34 17.8	-0.8
JYN	Shimob	1.09	248	P	Pn	05 34 06.5	+0.1
JYN				S	Sn	05 34 21.2	-0.2
JFNN	Fujinakano	1.15	232	P	Pn	05 34 07.2	+0.3
JFNN				S	Sn	05 34 22.4	-0.2
JIM2	Oshima 3	1.23	194	P	Pn	05 34 07.8	-0.2
JIM2				eS	Sn	05 34 23.6	-0.8
MJAR	Matsushiro Arr	1.42	297	Pn	Pn	05 34 28.5	+18
	0.9nm,0.3s,baz=88,slow=14,SNR=6.0						
MJAR				LR	LR	05 35 23.4	
	comp=Z,50nm,18.1s,baz=140,slow=35						
	6.3nm,0.3s						
MAT	Matsushiro	1.42	297	P	Pn	05 34 10.7	+0.2
MAT				eS	Sn	05 34 28.8	-0.1
JFT	Otama	1.66	15	eP	Pn	05 34 13.1	-0.5
JHJ	Hachijo jima 2	2.79	180	Pn	Pn	05 34 19.8	-8.9
	10nm,0.3s,baz=60,slow=20,SNR=2.0						
JHJ				Sn	Sn	05 34 48.6	-13
	26nm,0.3s,baz=65,slow=22,SNR=5.9						
KSRS	Korea Array	9.65	283	LR	LR	05 40 49.0	
	comp=Z,71nm,19.4s,baz=85,slow=38						
MA2	Magadan	24.73	13	LR	LR	05 49 16.7	
	comp=Z,34nm,20.6s,baz=198,slow=37						
SONM	Songino Array	27.36	306	LR	LR	05 50 16.5	
	comp=Z,34nm,18.3s,baz=136,slow=34						
H11N2	WAKE ISLAND Hy	28.76	117	T	T	06 08 03.4	
	baz=310,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	28.76	117	T	T	06 08 00.6	
	baz=310,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	28.77	117	T	T	06 08 03.9	
	baz=310,slow=75,SNR=16						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H11S3	WAKE ISLAND Hy	29.41	119	T	T	06 09 14.8	
	baz=312,slow=75,SNR=49						
H11S1	WAKE ISLAND Hy	29.41	119	T	T	06 09 05.7	
	baz=312,slow=75,SNR=67						
H11S2	WAKE ISLAND Hy	29.42	119	T	T	06 09 14.4	
	baz=312,slow=75,SNR=42						
ZALV	Zalesovo Beam	41.71	313	P	P	05 41 43.5	+16
	0.9nm,0.4s,baz=90,slow=7.2,SNR=1.7						
	0.9nm,0.4s						
MKAR	Makanchi Array	43.61	303	P	P	05 41 58.6	+16
	0.5nm,0.6s,baz=91,slow=8.5,SNR=5.5						
	0.5nm,0.6s						
ILAR	Eielson Array	51.14	32	P	P	05 42 46.5	+5.9
	0.5nm,0.7s,baz=267,slow=5.5,SNR=7.2						
	0.5nm,0.7s						
WRA	Warramunga Arr	55.79	186	P	P	05 43 13.3	-1.8
	1.9nm,0.5s,baz=5.3,slow=7.6,SNR=36						
	1.9nm,0.5s						
ASAR	Alice Springs	59.52	186	P	P	05 43 40.0	-1.2
	0.3nm,0.4s,baz=0.9,slow=7.4,SNR=5.2						
	0.3nm,0.4s						
NVAR	Mina Array Bea	76.71	52	P	P	05 45 31.7	+2.6
	0.3nm,0.5s,baz=290,slow=5.4,SNR=4.1						
	0.3nm,0.5s						

*IDC **02** 05:37:13.2±4.3, 11°.64S×166°.50E, h31km±29km, mb4.2/13, mbtmp4.4/14, ML5.1/1, MS3.6/29, Error ellipse: s-maj=22.6km s-min=17.3km az=103.0*

*NEIC **02** 05:37:20.3±1.6, 11°.66S±0°.08×166°.4E±0°.1, h93km±7km, mb4.7/38, Error ellipse: s-maj=15.4km s-min=11.8km az=93.0*

ISC 02 05:37:16.8±0.5**, 11°.64S**±0°.07×**166°.38E**±0°.08**, h59km, n87, σ1s.06**/68**, mb4.7**/34**, MS3.6**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.69	289	Pn	Pn	05 38 51.5	-0.9
	38nm,0.3s,baz=166,slow=0.7,SNR=7.5						
HNR				LR	LR	05 41 47.9	
	comp=Z,692nm,20.5s,baz=134,slow=40						
	381nm,0.6s						
HNR	Honiara	6.69	289	Pn	Pn	05 38 52.8	+0.3
KOUNC	Koumac, New Ca	9.09	192	Pn	Pn	05 39 26.7	+1.5
DZM	Mont Dzumac	10.38	180	Pn	Pn	05 39 43.1	+0.1
	0.6nm,0.3s,baz=3.5,slow=19,SNR=1.8						
DZM	Mont Dzumac	10.38	180	Pn	Pn	05 39 45.0	+2.1
PINNC	Pines Island,	10.96	175	Pn	Pn	05 39 52.8	+1.9
MSVF	Nonsavu	12.81	120	LR	LR	05 44 25.3	
	comp=Z,492nm,20.6s,baz=341,slow=34						
TARA	Tarawa	14.46	27	Pn	Pn	05 40 40.0	+1.6
PMG	Port Moresby	19.02	275	LR	LR	05 48 14.5	
	comp=Z,385nm,20.9s,baz=94,slow=34						
EIDS	Eidsvold	19.89	225	P	Pn	05 41 45.0	-0.6
PATS	Pohnpei	20.03	336	P	P	05 41 45.8	+0.8
CTAO	Charters Tower	21.08	244	P	P	05 41 56.7	+0.3
AFI	Afiamalu	21.43	98	LR	LR	05 49 23.5	
	comp=Z,111nm,18.1s,baz=253,slow=34						
COEN	Coen	22.74	262	P	P	05 42 14.6	+0.4
ARMA	Armidale	23.16	214	P	P	05 42 19.3	+0.9
ARMA				IAmb	IAmb	05 42 21.8	
	comp=Z,63nm,1.1s						
URZ	Urewera	28.19	162	LR	LR	05 53 18.8	
	comp=Z,142nm,18.5s,baz=31,slow=34						
BKZ	Black Stump Fm	28.85	164	P	P	05 43 09.7	-0.1
BKZ				IAmb	IAmb	05 43 48.2	
	comp=Z,31nm,1.5s						
BFZ	Birch Farm	30.21	165	P	P	05 43 19.9	-1.8
STKA	Stephens Creek	30.45	225	P	P	05 43 25.1	+1.1
	comp=Z,11nm,0.7s,baz=40,slow=9.4,SNR=21						
STKA				PcP	PcP	05 46 22.3	0.0
	comp=Z,1.5nm,0.7s,baz=162,slow=3.2,SNR=2.8						
STKA				LR	LR	05 54 55.7	
	comp=Z,233nm,19.8s,baz=32,slow=35						
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	30.45	225	P	P	05 43 25.0	+1.1
THZ	Tophouse	30.55	170	P	P	05 43 24.1	-0.6
WR0	Warramunga Arr	31.68	251	P	P	05 43 34.8	-0.2
WR0				IAmb	IAmb	05 43 35.5	
	comp=Z,9.9nm,1.1s						
WB0	Warramunga Arr	31.79	251	P	P	05 43 35.9	0.0
WB0				IAmb	IAmb	05 43 36.6	
	comp=Z,23nm,1.1s						
WB2	Warramunga Arr	31.86	251	P	P	05 43 36.0	-0.4
WB2				IAmb	IAmb	05 43 36.6	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	31.87	251	P	P	05 43 36.2	-0.4
	comp=Z,8.1nm,1.0s,baz=81,slow=9.3,SNR=26						
WRA				PcP	PcP	05 46 26.4	0.0
	comp=Z,2.0nm,0.8s,baz=73,slow=3.0,SNR=7.2						
WRA				LR	LR	05 55 31.2	
	comp=Z,90nm,18.0s,baz=68,slow=34						
	comp=Z,8.1nm,1.0s						
WRA	Warramunga Arr	31.87	251	P	P	05 43 35.3	-1.3
TOO	Toolangi	31.90	212	P	P	05 43 37.7	+1.0
TOO				IAmb	IAmb	05 43 40.1	
	comp=Z,22nm,1.4s						
FOZ	Fox Glacier	31.92	175	P	P	05 43 36.5	-0.1
RPZ	Rata Peaks	32.22	174	P	P	05 43 37.9	-1.4
	comp=Z,5.6nm,0.5s,baz=3.1,slow=1.9,SNR=5.9						
RPZ				LR	LR	05 54 34.4	
	comp=Z,228nm,22.0s,baz=345,slow=32						
	comp=Z,5.6nm,0.5s						
RPZ	Rata Peaks	32.22	174	P	P	05 43 38.5	-0.8
MQZ	McQueen's Vall	32.41	171	P	P	05 43 40.1	-0.9
GUMO	Guam	32.91	319	LR	LR	05 56 28.3	
	comp=Z,56nm,21.3s,baz=121,slow=35						
AS31	Alice Springs	33.09	244	P	P	05 43 46.7	-0.5
ASAR	Alice Springs	33.09	244	P	P	05 43 46.5	-0.8
	comp=Z,5.6nm,0.7s,baz=74,slow=9.5,SNR=50						
ASAR				PcP	PcP	05 46 28.9	-0.7
	comp=Z,4.6nm,1.1s,baz=77,slow=3.2,SNR=9.6						
ASAR				ScP	ScP	05 50 12.2	+3.2
	comp=Z,1.0nm,1.0s,baz=72,slow=4.0,SNR=3.2						
	comp=Z,5.6nm,0.7s						
RAR	Rarotonga	33.77	111	LR	LR	05 54 52.2	
	comp=Z,87nm,21.3s,baz=294,slow=32						
BBOO	Buckleboo	34.88	228	P	P	05 44 02.5	-0.2
BBOO				IAmb	IAmb	05 44 04.4	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	36.74	259	P	P	05 44 19.0	+0.3
FITZ	Fitzroy Crossi	39.83	256	P	P	05 44 45.0	+0.3
FITZ				IAmb	IAmb	05 44 46.1	
	comp=Z,13nm,0.8s						
PPT	Papeete	42.96	103	LR	LR	05 58 39.2	
	comp=Z,78nm,21.0s,baz=288,slow=30						
JCJ	Chichijima	45.10	329	LR	LR	06 01 08.1	
	comp=Z,52nm,20.8s,baz=104,slow=32						
PSA00	Pilbara Seismi	45.52	251	P	P	05 45 30.0	-0.8
PSA00				IAmb	IAmb	05 45 40.6	
	comp=Z,13nm,1.2s						
KAPI	Kappang	46.55	274	LR	LR	06 06 14.2	
	comp=Z,114nm,18.1s,baz=104,slow=37						
MPSI	Mapaga	47.66	281	P	P	05 45 48.2	+0.5
	comp=Z,14nm,0.8s						
RSD	Rainshed	48.81	51	P	P	05 45 57.9	+1.3
JOW	Kunigami	53.21	316	LR	LR	06 08 32.4	
	comp=Z,36nm,19.0s,baz=131,slow=35						
JOW	Kunigami	53.21	316	P	P	05 46 30.0	+0.6
JOW				IAmb	IAmb	05 46 31.0	
	comp=Z,12nm,0.9s						
MJAR	Matsushiro Arr	54.78	332	LR	LR	06 07 50.9	
	comp=Z,28nm,21.3s,baz=148,slow=34						
KSRS	Korea Array	60.71	325	P	P	05 47 22.1	-0.1
	comp=Z,0.9nm,0.6s,baz=140,slow=7.1,SNR=6.6						
KSRS				LR	LR	06 11 38.2	
	comp=Z,16nm,20.5s,baz=160,slow=34						
	comp=Z,0.9nm,0.6s						
USRK	Ussuriysk Ar.	63.75	333	P	P	05 47 43.4	+1.0
	comp=Z,1.9nm,0.7s,baz=131,slow=5.3,SNR=7.8						
	comp=Z,1.9nm,0.7s						
USRK	Ussuriysk Ar.	63.75	333	P	P	05 47 42.5	0.0
PETK	Petropavlovsk-	64.91	354	LR	LR	06 10 34.2	
	comp=Z,33nm,21.3s,baz=141,slow=31						
VNDA	Vanda	65.92	181	P	P	05 47 56.4	+0.3
	comp=Z,2.3nm,0.8s,baz=351,slow=10,SNR=4.5						
	comp=Z,2.3nm,0.8s						
VNDA	Vanda	65.92	181	P	P	05 47 55.2	-0.9
BKNI	Bangkinang	65.94	276	P	P	05 48 04.9	+7.6
MA2	Magadan	72.08	352	LR	LR	06 15 09.5	
	comp=Z,34nm,21.8s,baz=142,slow=32						
CM31	Chiang Mai Arr	72.91	294	P	P	05 48 40.3	+0.1
CMAR	Chiang Mai Arr	72.91	294	P	P	05 48 41.7	+1.4
	comp=Z,11nm,0.8s,baz=121,slow=4.5,SNR=42						
CMAR				LR	LR	06 22 43.8	
	comp=Z,28nm,18.6s,baz=120,slow=37						
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	72.91	294	P	P	05 48 40.9	+0.6
CMMT	Chiang Mai	73.02	294	P	P	05 48 42.5	+1.6
	comp=Z,435nmcomp=Z,12nm,1.0s						
CHTO	Chiang Mai	73.03	294	P	P	05 48 40.5	-0.5
CHTO				IAmb	IAmb	05 48 42.4	
	comp=Z,9.1nm,0.8s						
CHTO	Chiang Mai	73.03	294	P	P	05 48 42.0	+1.0
	comp=Z,7.2nm,1.0s						
QSPA	South Pole Qui	78.37	180	P	P	05 49 10.0	-0.8
QSPA				IAmb	IAmb	05 49 11.9	
	comp=Z,17nm,1.0s						
ULN	Ulaanbaatar	79.14	324		P	05 49 13.8	-1.5
ULN				IAmb	IAmb	05 49 16.7	
	comp=Z,8.5nm,1.0s						
ULN	Ulaanbaatar	79.14	324	P	P	05 49 16.0	+0.7
SONM	Songino Array	79.51	324	P	P	05 49 16.9	-0.4
	comp=Z,1.7nm,0.6s,baz=125,slow=5.1,SNR=10						
	comp=Z,1.7nm,0.6s						
RPN	Rapa Nui	79.76	116	LR	LR	06 16 56.5	
	comp=Z,36nm,21.5s,baz=192,slow=30						
HDA	Harding Lake	83.61	19	P	P	05 49 37.1	-1.2
HDA				IAmb	IAmb	05 50 16.4	
	comp=Z,5.5nm,0.8s						
IL31		83.88	18	P	P	05 49 39.4	-0.3
ILAR	Eielson Array	83.88	18	P	P	05 49 38.6	-1.1
	comp=Z,0.8nm,0.5s,baz=237,slow=5.4,SNR=17						
	comp=Z,0.8nm,0.5s						
DOT	Dot Lake	84.02	20	IAmb	IAmb	05 50 07.1	
	comp=Z,7.1nm,1.3s						
SCRK	Sand Creek	84.26	20	P	P	05 49 40.8	-1.0
SCRK				IAmb	IAmb	05 50 08.0	
	comp=Z,6.1nm,1.2s						
MDPB	Devils Postpil	85.10	50	P	P	05 49 44.0	-2.9
MDPB				IAmb	IAmb	05 50 03.2	
	comp=Z,6.3nm,1.3s						
PFO	Pinyon Flats O	85.92	55	LR	LR	06 20 28.8	
	comp=Z,57nm,19.4s,baz=258,slow=30						
NVAR	Mina Array Bea	85.93	50	P	P	05 49 51.1	+0.1
	comp=Z,0.5nm,0.7s,baz=233,slow=8.0,SNR=6.4						
NVAR				LR	LR	06 19 51.1	
	comp=Z,93nm,21.8s,baz=271,slow=30						
	comp=Z,0.5nm,0.7s						
LPIG	La Paz	88.69	65	LR	LR	06 21 58.8	
	comp=Z,20nm,20.5s,baz=232,slow=30						
ELK	Elko	88.88	48	LR	LR	06 23 52.1	
	comp=Z,40nm,18.9s,baz=248,slow=32						
NEW	Newport	89.79	41	LR	LR	06 26 06.0	
	comp=Z,40nm,18.0s,baz=214,slow=33						
PDAR	Pinedale Array	93.50	47	LR	LR	06 24 39.8	
	comp=Z,20nm,20.9s,baz=260,slow=30						
ANMO	Albuquerque	94.27	55	LR	LR	06 26 11.1	
	comp=Z,39nm,19.9s,baz=272,slow=31						
MK31	Makanchi Array	94.37	317	P	P	05 50 29.2	-1.0
MK31				IAmb	IAmb	05 50 30.9	
	comp=Z,4.2nm,0.9s						
MKAR	Makanchi Array	94.37	317	P	P	05 50 30.0	-0.2
	comp=Z,4.6nm,0.7s,baz=94,slow=6.3,SNR=36						
	comp=Z,4.6nm,0.7s						
MKAR	Makanchi Array	94.37	317	P	P	05 50 29.5	-0.7
MAKZ	Makanchi	94.59	317	P	P	05 50 29.4	-1.8
MAKZ				IAmb	IAmb	05 50 31.8	
	comp=Z,4.3nm,0.9s						
YKA	Yellowknife Ar	95.21	27	LR	LR	06 25 42.7	
	comp=Z,38nm,21.8s,baz=333,slow=31						
TXAR	Lajitas Array	95.57	61	P	P	05 50 35.9	-0.3
	comp=Z,0.2nm,0.6s,baz=216,slow=4.0,SNR=3.7						
TXAR				LR	LR	06 27 18.7	
	comp=Z,24nm,18.7s,baz=242,slow=32						
	comp=Z,0.2nm,0.6s						
ARCES	ARCESS Array B	117.06	346	PKP	PKPdf	05 55 53.4	-1.2
	comp=Z,1.9nm,0.9s,baz=82,slow=2.0,SNR=10.0						
TORD	Torodi Ar. Bea	164.96	277	PKPab	PKPab	05 58 11.6	-0.4
	comp=Z,2.1nm,1.0s,baz=82,slow=5.9,SNR=6.7						

KRSC 02 05:44:02.3±1.1**, 56°.17N**×**163°.19E, h7km**±10km**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.21	281	eP	Pg	05 44 08.2	+1.7
KBG	Krutoberegovo	0.28	288	eP	Pb	05 44 08.8	-0.9
KBG				eS	Sg	05 44 12.7	+1.1
SMKR	Semkarok	1.04	294	eP	Pg	05 44 21.8	-0.5
SMKR				eS	Sg	05 44 35.6	-0.2
BDR	Baidarnaya	1.17	291	eP	Pg	05 44 24.4	-0.4
BDR				eS	Sg	05 44 40.0	0.0
SRKR	Sorokina	1.22	294	eP	Pg	05 44 24.9	-0.9
ZLN	Zelenaya	1.34	264	eP	Pg	05 44 28.2	+0.1
BZGR	Bezymyannyi-Gr	1.42	262	eP	Pb	05 44 29.0	-0.1
KLY	Klyuchi	1.42	277	eP	Pn	05 44 26.5	-2.1
KLY				eS	Sb	05 44 44.0	-3.5
KRSR	Krestovskiy	1.47	273	eP	Pn	05 44 28.9	-0.4
BZWR	Bezymyannyi-We	1.52	263	eP	Pb	05 44 30.9	-0.1
BZMR	Bezymyannaya	1.53	262	eP	Pb	05 44 30.9	-0.2
KIRR	Kirishev	1.61	263	eP	Pb	05 44 31.9	-0.6
KPT	Kopyto	1.68	264	eP	Pn	05 44 32.2	+0.1
KMNR	Kamenistaya	1.71	257	eP	Pb	05 44 34.0	-0.1
MKZ	Mys Kozlova	1.82	208	eP	Pb	05 44 36.1	+0.2
MKZ				eS	Sg	05 45 00.4	-0.3
BKI	Bering	1.85	120	eP	Pb	05 44 35.9	-0.5
BKI				eS	Sb	05 44 59.9	+0.2
TUMR	Tumrok	1.94	244	eP	Pb	05 44 37.8	-0.2
SRDR	Sredinnyy	1.94	276	eP	Pn	05 44 36.8	+1.0
ESO	Esso	2.53	266	eP	Pb	05 44 48.2	+0.2
KII	Karymskiy	3.03	227	eP	Pb	05 44 54.0	-2.6
SPN	Mys Shipunski	3.59	212	eP	Pn	05 44 59.7	+1.4
SPN				eS	Sn	05 45 41.3	+0.4
NLC	Nalytchevo	3.74	218	eS	Sn	05 45 48.5	+3.8
SDLR	Sedlovina	3.82	223	eP	Pn	05 45 04.9	+3.2
KRX	Arik	3.85	225	eP	Pb	05 45 07.0	-3.6
KRER	Koryakskii	3.86	224	eP	Pn	05 45 05.9	+3.7
SMAR	Somma	3.87	223	eP	Pn	05 45 05.3	+2.9
AVH	Avacha	3.89	223	eP	Pn	05 45 06.6	+4.1
UGLR	Uglovaya	3.90	222	eP	Pn	05 45 06.4	+3.7
KOK	Koryaka	3.91	224	eP	Pn	05 45 06.5	+3.7
GNL	Ganaly	3.91	233	eP	Pn	05 45 06.0	+3.1
DALK	Dalny	4.07	221	eP	Pn	05 45 07.9	+3.0
GRL	Gorelyy	4.70	222	eP	Pb	05 45 19.5	-5.6
ASAK	Asacha	4.90	221	eP	Pn	05 45 21.4	+5.0
KDTR	Khodutka, Kamc	5.31	217	eP	Pn	05 45 25.3	+3.4

*UPA **02** 05:43:59.2±1.2, 4°.60N×82°.66W, h10km±136km, MW4.4*

*IDC **02** 05:44:01.5±1.2, 4°.61N×82°.74W, h0km, mb3.5/5, mbtmp3.6/6, ML2.8/1, MS3.5/10, Error ellipse: s-maj=59.5km s-min=21.9km az=47.0*

*UCR **02** 05:44:02.7±2.0, 4°.89N×82°.89W, h0km±353km, mb4.1(NEIC)*

*NEIC **02** 05:44:03.4±2.4, 4°.81N±0°.08×82°.7W±0°.1, h12km±7km, mb4.1/22, Error ellipse: s-maj=18.4km s-min=2.1km az=50.0*

ISC 02 05:44:03.3±0.7**, 4°.81N**±0°.06×**82°.60W**±0°.07**, h12km, n122, σ1s.59**/118**, mb4.1**/17**, MS3.5**/6**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAPC	Malpelo	1.27	129	eP	Pn	05 44 21.1	-5.8
MAPC				eS	Sb	05 44 35.1	-8.4
MAPC				i		05 44 37.6	
	comp=Z,454nm,0.2s						
CACAO	El Cacao, Vera	3.05	34	eP	Pn	05 44 49.6	-1.8
CACAO				eS	Sn	05 45 25.3	-2.5
CACAO				i		05 45 28.9	
	comp=Z,50nm,0.1s						
DVD	David	3.60	2	eP	Pn	05 44 57.8	-1.2
DVD				eS	Sn	05 45 41.5	+0.1
CDITO	Canoas	3.75	356		Pn	05 44 58.9	-2.1
CDITO	Canoas	3.75	356	eP	Pn	05 44 59.2	-1.7
CDITO				eS	Sn	05 45 44.8	-0.2
AZU	Azuero	3.75	38	eP	Pn	05 45 01.3	+0.2
AZU				eS	Sn	05 45 44.1	-1.1
AZU				i		05 45 45.1	
	comp=Z,84nm,0.6s						
AZU	Azuero	3.75	38	eP	Pn	05 44 59.5	-1.6
AZU				eS	Sn	05 45 44.6	-0.6
BCO2	Palmira	3.88	1	eP	Pn	05 45 02.3	-0.6
BCO2				eS	Sn	05 45 49.4	+0.8
BRU2	Volcan	3.96	359		Pn	05 45 02.3	-1.7
BRU2	Volcan	3.96	359	eP	Pn	05 45 02.1	-1.9
BRU2				eS	Sn	05 45 50.3	-0.1
BRU2				i		05 46 02.9	
	comp=Z,21nm,0.5s						
BRU2	Volcan	3.96	359	eP	Pn	05 45 02.5	-1.4
BRU2				eS	Sn	05 45 51.1	+0.6
CHGR2	Aguacate	4.12	6	eP	Pn	05 45 05.8	-0.3
CHGR2				eS	Sn	05 45 55.1	+0.7
EDPN	Palmar Norte	4.21	348	eP	Pn	05 45 05.7	-1.7
POTG	Potrero Grande	4.25	353	eP	Pn	05 45 06.9	-1.0
SRBA	San Rafael, Bu	4.46	350		Pn	05 45 09.1	-1.7
SRBA	San Rafael, Bu	4.46	350	eP	Pn	05 45 09.1	-1.7
SRBA				eS	Sn	05 46 00.0	-2.7
DRK0	Durika	4.47	352		Pn	05 45 10.3	-0.7
DRK0	Durika	4.47	352	eP	Pn	05 45 10.4	-0.6
PEZE	Perez Zeledon,	4.67	347		Pn	05 45 12.0	-1.7
PEZE	Perez Zeledon,	4.67	347	eP	Pn	05 45 12.1	-1.6
PEZE				eS	Sn	05 46 07.1	-0.7
CDM	Cerro de Muert	4.85	346	eP	Pn	05 45 15.0	-1.6
CDM				eS	Sn	05 46 12.2	-0.7
MRVA	Moravia de Chi	5.05	350	eP	Pn	05 45 18.1	-0.9
RIMA	Rio Macho	5.08	346		Pn	05 45 17.7	-1.8
RIMA	Rio Macho	5.08	346	eP	Pn	05 45 17.8	-1.6
LCR2	La Lucha 2	5.09	344	eP	Pn	05 45 19.1	-0.6
BCIP	Isla Barro Col	5.12	32	Pn	Pn	05 45 20.8	+1.0
BCIP	Isla Barro Col	5.12	32	eP	Pn	05 45 20.6	+0.7
BCIP				eS	Sn	05 46 18.4	-0.5
OCM	Ochomogo	5.23	345	eP	Pn	05 45 19.7	-1.8
JACO	JACO, Garabito	5.24	337	Pn	Pn	05 45 18.8	-2.6
JACO	JACO, Garabito	5.24	337	eP	Pn	05 45 18.9	-2.6
RAFA	San Farael, Vo	5.25	347	eP	Pn	05 45 21.1	-0.8
CVTR	Volcan Turrial	5.30	348		Pn	05 45 22.1	-0.6
CVTR	Volcan Turrial	5.30	348	eP	Pn	05 45 22.0	-0.7
MALC	Bahia Malaga	5.31	98	eP	Pn	05 45 22.6	+0.2
BATAN	Batan	5.31	352		Pn	05 45 22.9	+0.4
BATAN	Batan	5.31	352	eP	Pn	05 45 22.7	+0.3
BATAN	Batan	5.31	352	eP	Pn	05 45 23.5	+1.1
HDC	Heredia	5.37	344		Pn	05 45 22.1	-1.3
HDC					Sn	05 46 24.7	-0.6
HDC3	Heredia 3	5.37	344	eP	Pn	05 45 22.3	-1.1
LAFE	Finca La Fe, P	5.47	335	eP	Pn	05 45 22.1	-2.6
SRA1	San Ramn	5.56	340	eP	Pn	05 45 24.4	-1.6
RIFO	Rio Frio, Sara	5.62	347	eP	Pn	05 45 26.5	-0.3
INDI	Punta indio, G	5.79	330	eP	Pn	05 45 26.5	-2.5
GRZA	Playa Garza	5.90	329	eP	Pn	05 45 28.9	-1.6
JTS	Las Juntas de	5.92	337	Pn	Pn	05 45 29.1	-1.8
JTS	Las Juntas de	5.92	337	eP	Pn	05 45 29.3	-1.6
JTS	Las Juntas de	5.92	337	eP	Pn	05 45 29.0	-1.9
DUNO	Dulce Nombre,	5.97	331		Pn	05 45 29.6	-1.9
DUNO	Dulce Nombre,	5.97	331	eP	Pn	05 45 29.4	-2.1
ARE1	Arenal 1	5.99	340	eP	Pn	05 45 31.6	-0.3
NICO	Nicoya	6.00	332	eP	Pn	05 45 29.8	-2.1
CEDE	Laguna Cedeo	6.01	340	eP	Pn	05 45 32.1	-0.1
BBAC	Balboa, Cauca	6.02	117	eP	Pn	05 45 30.4	-1.9
BBAC				eS	Sn	05 46 34.3	-7.0
BBAC				i		05 46 44.4	
	comp=Z,4.8nm,0.5s						
SAJU	San Juanillo,	6.07	330	eP	Pn	05 45 30.7	-2.1
PLVR	Palo Verde	6.14	334	eP	Pn	05 45 31.0	-3.0
OTAV	Otavalo	6.15	138		Pn	05 45 34.1	-0.3
ORTG	Ortega, Santa	6.20	333		Pn	05 45 33.0	-1.8
ORTG	Ortega, Santa	6.20	333	eP	Pn	05 45 33.4	-1.4
YOTC	Yotoco, Valle	6.29	97	eP	Pn	05 45 36.6	+0.6
PLMC	San Jos del P	6.29	89	eP	Pn	05 45 35.1	-0.9
PLMC				eS	Sn	05 46 48.9	+0.9
TULM	Tulcn-Chalpat	6.29	130		Pn	05 45 37.3	+0.9
POPC	Popayan, Colom	6.33	111	eP	Pn	05 45 34.0	-2.6
GCUF	Volcan Galeras	6.34	124	eP	Pn	05 45 36.9	-0.1
CUI	Cuipilapa	6.34	337	eP	Pn	05 45 36.1	-0.6
HORNC	Hornillas	6.40	337	eP	Pn	05 45 36.9	-0.5
VMAR	Armenia, Volca	6.46	337	eP	Pn	05 45 38.2	-0.2
BUEV	Buena Vista	6.57	335	eP	Pn	05 45 39.3	-0.5
HZTE	Horizontes, Gu	6.57	333	Pn	Pn	05 45 39.0	-0.8
HZTE	Horizontes, Gu	6.57	333	eP	Pn	05 45 39.3	-0.5
CBOC	Ciudad Bolivar	6.64	81	eP	Pn	05 45 41.8	+0.9
SLOR	San Lorenzo -	6.86	143		Pn	05 45 45.8	+1.6
ANIL	Santa Ana	7.18	92	eP	Pn	05 45 49.4	+1.0
GUY2C	Guyana, Caldas	7.22	86	eP	Pn	05 45 50.3	+1.2
ACON	Acoyapa	7.55	340		Pn	05 45 52.2	-1.0
GARC	Garzon, Huila	7.55	110	eP	Pn	05 45 54.1	+0.6
PRAC	Prado	7.77	98	eP	Pn	05 45 57.1	+0.8
ROSC	El Rosal	8.25	89	Pn	Pn	05 46 05.8	+2.6
	comp=Z,2.3nm,0.3s,baz=98,slow=14,SNR=10						
ROSC				LR	LR	05 49 13.1	
	comp=Z,366nm,20.2s,baz=236,slow=37						
	comp=Z,13nm,0.6s						
ROSC	El Rosal	8.25	89	Pn	Pn	05 46 05.6	+2.4
ROSC	El Rosal	8.25	89	eP	Pn	05 46 09.2	+6.0
SPBC	San Pablo de B	8.53	84	eP	Pn	05 46 08.3	+1.5
MATN	Matagalpa	8.71	338		Pn	05 46 09.5	+0.2
SJCC	San Jacinto, C	8.92	55	eP	Pn	05 46 15.8	+3.6
MACC	Macarena, Meta	9.13	107	eP	Pn	05 46 14.7	-0.2
MTO3	Montecristo	11.62	326		Pn	05 46 51.9	+2.5
SDV	Santo Domingo	12.55	71	LR	LR	05 51 51.0	
	comp=Z,267nm,20.0s,baz=263,slow=37						
ATAH	Atahualpa	12.59	161	LR	LR	05 51 30.9	
	comp=Z,509nm,19.3s,baz=331,slow=36						
NNA	Nana	17.64	161	LR	LR	05 54 24.6	
	comp=Z,67nm,21.0s,baz=332,slow=36						
SJG	San Juan	20.82	49	LR	LR	05 57 36.1	
	comp=Z,76nm,18.8s,baz=249,slow=39						
ETMB	Extrema	21.86	132	P	P	05 48 56.4	+0.4
ETMB				IAmb	IAmb	05 49 07.3	
	comp=Z,13nm,1.3s						
SAML	Samuel	23.70	125	P	P	05 49 17.2	+2.0
LPAZ	La Paz	25.38	146	P	P	05 49 30.9	-0.4
	comp=Z,0.8nm,0.6s,baz=346,slow=2.9,SNR=4.5						
LPAZ				LR	LR	06 00 49.7	
	comp=Z,147nm,21.2s,baz=294,slow=40						
	comp=Z,0.8nm,0.6s						
LPAZ	La Paz	25.38	146	P	P	05 49 31.0	-0.4
PB16	IPOC Station P	26.37	151	P	P	05 49 40.4	+0.1
PB16				IAmb	IAmb	05 49 47.4	
	comp=Z,4.3nm,0.8s						
SIV	San Ignacio	29.68	135	LR	LR	06 02 58.0	
	comp=Z,103nm,19.7s,baz=312,slow=38						
MDP	Montagnes des	29.84	88	LR	LR	06 02 23.7	
	comp=Z,151nm,18.4s,baz=254,slow=37						
LVC	Limon Verde	30.36	154	LR	LR	06 03 13.6	
	comp=Z,43nm,18.3s,baz=335,slow=38						
H06E1	SOCORRO T-PHAS	30.94	299	T	T	06 22 48.5	
	SNR=22						
TXAR	Lajitas Array	31.51	323	P	P	05 50 27.5	+2.1
	comp=Z,0.1nm,0.6s,baz=140,slow=11,SNR=2.0						
	comp=Z,0.1nm,0.6s						
ANMO	Albuquerque	37.23	327	P	P	05 51 13.7	-1.3
ANMO				IAmb	IAmb	05 51 18.0	
	comp=Z,3.3nm,1.0s						
H03N2	Juan Fernandez	38.20	175	T	T	06 31 48.9	
	baz=354,slow=76,SNR=9.1						
H03N1	Juan Fernandez	38.20	175	T	T	06 31 45.6	
	baz=354,slow=76,SNR=13						
H03N3	Juan Fernandez	38.22	175	T	T	06 31 48.5	
	baz=354,slow=76,SNR=13						
SDCO	Great Sand Dun	38.88	331	P	P	05 51 31.3	+2.3
SDCO				IAmb	IAmb	05 51 31.9	
	comp=Z,5.0nm,1.1s						
X16A	Lo Mia Camp, P	39.78	321	P	P	05 51 36.8	+0.3
SMCO	Snowmass	40.72	331	P	P	05 51 44.3	-0.1
SMCO				IAmb	IAmb	05 51 47.2	
	comp=Z,3.2nm,0.8s						
PV13	Radium Mtn., P	40.89	328	IAmb	IAmb	05 51 48.2	
	comp=Z,3.8nm,0.9s						
SRU	San Rafael Swe	42.49	327	IAmb	IAmb	05 52 01.5	
	comp=Z,4.0nm,1.1s						
CCUT	Cedar City	43.02	323	P	P	05 52 01.8	-1.3
CCUT				IAmb	IAmb	05 52 12.6	
	comp=Z,5.0nm,1.4s						
SPR3	Spring Creek 3	44.55	324	P	P	05 52 14.6	-0.9
SPR3				IAmb	IAmb	05 52 17.4	
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	44.73	332	P	P	05 52 16.8	0.0
	comp=Z,0.1nm,0.3s,baz=127,slow=9.8,SNR=4.0						
	comp=Z,0.1nm,0.3s						
HWUT	Hardware Ranch	44.85	329	P	P	05 52 17.3	-0.4
HWUT				IAmb	IAmb	05 52 19.4	
	comp=Z,3.1nm,0.8s						
R11A	Troy Canyon, C	44.87	323	IAmb	IAmb	05 52 20.4	
	comp=Z,2.9nm,1.2s						
ELK	Elko	46.23	325	P	P	05 52 29.6	+0.9
ELK				IAmb	IAmb	05 52 30.6	
	comp=Z,1.9nm,0.8s						
NVAR	Mina Array Bea	46.60	321	P	P	05 52 33.3	+1.7
	comp=Z,1.2nm,0.7s,baz=141,slow=7.3,SNR=14						
	comp=Z,1.2nm,0.7s						
BMN	Battle Mountai	47.17	324	P	P	05 52 34.5	-1.5
RCBR	Riachuelo	47.81	102	LR	LR	06 13 46.4	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,77nm,18.1s,baz=124,slow=37						
ILAR	Eielson Array	74.90	336	P	P	05 55 43.1	-0.6
	comp=Z,0.5nm,0.8s,baz=108,slow=3.4,SNR=4.6						
	comp=Z,0.5nm,0.8s						
H11N3	WAKE ISLAND Hy	107.50	292	T	T	07 58 31.5	
	baz=79,slow=75,SNR=19						
H11N2	WAKE ISLAND Hy	107.51	292	T	T	07 58 31.2	
	baz=79,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	107.52	292	T	T	07 58 32.6	
	baz=79,slow=75,SNR=20						
ASAR	Alice Springs	140.15	238	PKP	PKPdf	06 03 30.9	-2.0
	comp=Z,0.5nm,0.8s,baz=108,slow=3.0,SNR=4.1						
WRA	Warramunga Arr	141.04	244	PKP	PKPdf	06 03 32.6	-1.9
	comp=Z,0.4nm,0.6s,baz=92,slow=1.8,SNR=6.6						

IDC 02 06:12:58.7±2.0, 2°.05N×126°.63E, h0km, mb3.5/4, mbtmp3.6/4, Error ellipse: s-maj=119.8km s-min=25.4km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.04	183	P	P	06 17 33.2	-0.3
	1.8nm,0.9s,baz=15,slow=12,SNR=1.5						
	1.8nm,0.9s						
WRA	Warramunga Arr	23.12	161	P	P	06 18 05.1	-1.5
	0.7nm,0.4s,baz=340,slow=11,SNR=18						
	0.7nm,0.4s						
ASAR	Alice Springs	26.52	165	P	P	06 18 40.0	+1.7
	0.4nm,0.3s,baz=346,slow=12,SNR=8.3						
	0.4nm,0.3s						
MKAR	Makanchi Array	58.88	326	P	P	06 22 59.2	-0.3
	0.2nm,0.4s,baz=119,slow=7.7,SNR=4.2						
	0.2nm,0.4s						

NOU 02 06:24:57.2, 43°.70S×172°.50E, h7km, MLv4.2/7, South Island, New Zealand
WEL 02 06:24:57.2, 44°S±1°×17°2E±°, h6km±2km, M3.4/17, ML3.6/17, MLv3.4/17, Error ellipse: s-maj=0.0km s-min=0.0km az=136.3
ISC 02 06:24:58.3±0.9, 43°.65S±0°.03×172°.42E±0°.02, h16km±7km, n58, σ0s.83/68, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.18	110	P	Pg	06 25 02.9	+0.1
MQZ				S	Sg	06 25 05.8	0.0
RACZ	Rakaia	0.22	248	P	Pg	06 25 03.2	-0.1
RACZ				S	Sg	06 25 06.6	-0.2
OXZ	Oxford	0.42	319	P	Pg	06 25 06.5	-0.4
OXZ				S	Sg	06 25 11.9	-0.7
AKCZ	Akaroa Harbour	0.42	123	P	Pb	06 25 07.6	+0.2
OKCZ	Okains Bay	0.47	100	P	Pb	06 25 08.6	+0.4
OKCZ				S	Sb	06 25 15.7	+0.7
AMCZ	Amberley	0.50	20	P	Pb	06 25 09.1	+0.4
WACZ	Wakanui South	0.51	234	P	Pb	06 25 09.1	+0.2
MHCZ	Mount Hutt	0.63	280	P	Pb	06 25 11.0	+0.1
MHCZ				S	Sb	06 25 19.3	-0.1
GVZ	Greta Valley S	0.81	34	P	Pb	06 25 14.2	+0.1
GVZ				S	Sn	06 25 27.1	+0.3
LTZ	Lake Taylor	0.87	353	P	Pb	06 25 15.1	+0.1
LTZ				S	Sb	06 25 27.1	+0.7
ARCZ	Arundel	0.95	251	P	Pb	06 25 16.4	+0.1
ARCZ				S	Sb	06 25 29.2	+0.6
RPZ	Rata Peaks	0.99	266	P	Pb	06 25 17.1	0.0
RPZ	Rata Peaks	0.99	266	P	Pb	06 25 17.2	+0.1
INZ	Inchbonnie	1.16	322	P	Pg	06 25 19.2	-1.5
INZ				S	Sb	06 25 35.5	+0.7
TMZ	Timaru	1.26	234	P	Pn	06 25 20.8	-0.3
WVZ	Waitaha Valley	1.35	294	P	Pn	06 25 22.5	0.0
KHZ	Kahutara	1.48	34	P	Pn	06 25 23.7	-0.5
KHZ				S	Sn	06 25 42.6	-0.5
KHZ	Kahutara	1.48	34	P	Pn	06 25 23.8	-0.4
GCSZ	Gaunt Creek Bo	1.56	281	P	Pn	06 25 25.8	+0.5
LBZ	Lake Benmore	1.77	245	P	Pn	06 25 28.3	0.0
ODZ	Otahua Downs	1.89	222	P	Pn	06 25 29.6	-0.2
FOZ	Fox Glacier	1.89	273	P	Pn	06 25 30.8	+1.0
THZ	Tophouse	1.92	11	P	Pn	06 25 29.9	-0.4
DSZ	Denniston Nort	1.95	346	P	Pn	06 25 30.8	+0.1
BSWZ	Blackbirch Sta	2.21	30	P	Pn	06 25 34.3	+0.1
MRNZ	Matariki Terra	2.26	7	P	Pn	06 25 35.4	+0.5
NNZ	Nelson	2.53	17	P	Pn	06 25 38.8	+0.1
HHSZ	Highcliff Hill	2.59	209	P	Pn	06 25 39.9	+0.5
TKNZ	Takaka Hill	2.64	9	P	Pn	06 25 41.1	+0.9
JCZ	Jackson Bay	2.66	259	P	Pn	06 25 40.4	-0.1
WKZ	Wanaka	2.71	243	P	Pn	06 25 40.9	-0.3
EAZ	Earnscleugh	2.73	233	P	Pn	06 25 41.2	-0.3
TCW	Tory Channel	2.80	30	P	Pn	06 25 42.2	-0.1
QRZ	Quartz Range	2.82	2	P	Pn	06 25 42.7	+0.1
QRZ	Quartz Range	2.82	2	P	Pn	06 25 42.9	+0.3
SNZO	South Karori	2.88	37	P	Pn	06 25 42.7	-0.8
PLWZ	Palliser	2.95	46	P	Pn	06 25 43.3	-1.1
TUZ	Tuapeka	3.04	220	P	Pn	06 25 46.4	+0.7
DUWZ	D'Urville Isla	3.05	22	P	Pn	06 25 46.7	+0.8
MSWZ	Moikau Station	3.06	44	P	Pn	06 25 44.6	-1.3
CAW	Cannon Point	3.21	39	P	Pn	06 25 46.6	-1.3
KIW	Kapiti Island	3.34	34	P	Pn	06 25 49.6	-0.3
MTW	Mount Morrison	3.38	44	P	Pn	06 25 48.9	-1.4
MSZ	Milford Sound	3.39	251	P	Pn	06 25 50.0	-0.5
OGWZ	Otaki Gorge	3.49	37	P	Pn	06 25 51.2	-0.6
MLZ	Mavora Lakes	3.52	239	P	Pn	06 25 51.7	-0.6
SYZ	Scrubby Hill	3.71	218	P	Pn	06 25 55.3	+0.5
MRZ	Mangatainoka R	3.80	39	P	Pn	06 25 54.7	-1.4
TIWZ	Tintock	3.85	43	P	Pn	06 25 56.6	-0.3
WHZ	Wether Hill Ro	3.90	233	P	Pn	06 25 56.1	-1.4
BFZ	Birch Farm	4.11	45	P	Pn	06 25 58.6	-1.8
BFZ	Birch Farm	4.11	45	P	Pn	06 26 00.0	-0.4
APZ	The Paps	4.46	223	P	Pn	06 26 05.2	-0.1
KHEZ	Kahui Hut	4.51	16	P	Pn	06 26 07.9	+2.0
NEZ	North Egmont	4.55	17	P	Pn	06 26 09.3	+2.8
PKE	Pukeiti	4.60	15	P	Pn	06 26 09.2	+2.0
BKZ	Black Stump Fm	5.42	36	P	Pn	06 26 19.4	+0.9
HIZ	Hauiti	5.45	21	P	Pn	06 26 19.9	+1.1

IDC 02 06:39:32.2±1.8, 0°.06S×125°.34E, h0km, mb3.5/3, mbtmp3.5/3, MS3.1/1, Error ellipse: s-maj=189.3km s-min=24.8km az=64.0
DJA 02 06:39:36.9±1.9, 0°S±4°×12°5E±°, h12km±14km, M4.2/7, mb4.4/1, mB4.8/1, MLv4.1/7, Mw(mB)4.0/1
ISC 02 06:39:39.4±1.1, 0°.18S±0°.10×125°.3E±0°.1, h57km, n11, σ2s.27/10, mb3.3/3, 1C, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.52	299	P	Pn	06 40 04.3	0.0
SANI	Sanana	1.98	160	P	Pn	06 40 07.2	-3.4
LBMI	Labuha	2.24	102	S	Sn	06 40 41.1	+0.4
MRSI	Marisa	3.43	281	P	Pn	06 40 28.3	-2.1
APSI	Ampana	3.73	259	P	Pn	06 40 35.1	+0.6
MPSI	Mapaga	5.43	275	P	Pn	06 41 01.7	+3.8
KCP	Kidapawan	7.14	358⇑	eP	Pn	06 41 19.7	-1.7
WRA	Warramunga Arr	21.54	156	P	P	06 44 23.6	-0.6
	0.9nm,0.7s,baz=335,slow=11,SNR=5.6						
	0.9nm,0.7s						
ASAR	Alice Springs	24.80	161	P	P	06 44 57.6	+1.4
	0.4nm,0.6s,baz=342,slow=9.1,SNR=5.5						
	0.4nm,0.6s						
CMAR	Chiang Mai Arr	31.84	307	LR	LR	06 59 09.1	
	comp=Z,34nm,18.6s,baz=195,slow=37						
MKAR	Makanchi Array	59.99	327	P	P	06 49 40.0	-0.1
	0.9nm,0.5s,baz=122,slow=8.3,SNR=13						
	0.9nm,0.5s						

IDC 02 06:45:21.1±1.9, 13°.73N×121°.34E, h0km, mb3.5/4, mbtmp3.6/4, Error ellipse: s-maj=84.1km s-min=22.8km az=52.0
MAN 02 06:45:42, 13°.66N×120°.67E, h159km, Ms2.5
ISC 02 06:45:40.8±1.1, 13°.66N±0°.06×120°.9E±0°.1, h178km±7km, n15, σ1s.55/19, mb3.3/4, 3C-8D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.18	150⇓	eP	Pn	06 46 05.3	+0.8
PGP				iS	Sn	06 46 22.6	-0.1
TGY	Tagaytay City	0.45	9⇓	eP	Pn	06 46 05.5	+0.3
TGY				eS	Sn	06 46 20.8	-3.4
LUBP	Lubang	0.60	277⇑	iP	Pn	06 46 06.5	+0.7
LUBP				iS	Sn	06 46 23.5	-1.5
MACP	Maragondon, Ca	0.62	347⇓	eP	Pn	06 46 07.2	+1.3
MACP				eS	Sn	06 46 25.8	+0.4
LQP	Lukban	0.80	55⇑	eP	Pn	06 46 12.4	+5.2
BOAC	Boac	0.98	102⇓	eP	Pn	06 46 09.8	+1.7
SJMP	San Jose	1.22	168⇓	eP	Pn	06 46 11.0	+0.9
SJMP				eS	Sn	06 46 33.6	+0.9
BUSP	Coron	1.77	202⇓	eP	Pn	06 46 16.3	+1.1
PCPH	Palayan	1.91	7⇑	eP	Pn	06 46 18.1	+1.4
SCZP	Santa Cruz	2.30	337⇓	eP	Pn	06 46 21.8	+0.8
SMPP	San Manuel, Pa	2.48	356⇓	eP	Pn	06 46 24.3	+1.1
SMPP				eS	Sn	06 46 55.7	-0.7
CMAR	Chiang Mai Arr	21.59	286	P	P	06 50 18.7	+1.9
	1.1nm,0.3s,baz=92,slow=11,SNR=5.3						
	1.1nm,0.3s						
WRA	Warramunga Arr	35.93	158	P	P	06 52 22.2	-2.1
	0.3nm,0.3s,baz=330,slow=10,SNR=10						
	0.3nm,0.3s						
ASAR	Alice Springs	39.23	161	P	P	06 52 50.9	-1.2
	0.4nm,0.6s,baz=338,slow=6.9,SNR=7.8						
	0.4nm,0.6s						
MKAR	Makanchi Array	46.16	324	P	P	06 53 48.3	+0.7
	0.3nm,0.5s,baz=119,slow=8.7,SNR=4.9						
	0.3nm,0.5s						

KRSC 02 06:47:36.2±2.1, 49°.38N×157°.16E, h41km±33km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.47	333	P	Pn	06 47 59.6	-0.5
SKR				S	Sn	06 48 16.9	-1.2
PAU	Pauzhetka	2.10	354	P	Pn	06 48 11.1	+2.3
PAU				S	Sn	06 48 36.0	+2.3
KDTR	Khodutka, Kamc	2.50	13	P	Pn	06 48 17.7	+3.4
KDTR				S	Sn	06 48 47.8	+4.3
ASAK	Asacha	3.04	9	P	Pn	06 48 25.9	+4.1
ASAK				S	Sn	06 49 02.1	+5.1
MTVR	Mutnovka	3.17	11	P	Pn	06 48 27.8	+4.1
MTVR				S	Sn	06 49 04.8	+4.5
RUS	Russkaya	3.17	15	P	Pn	06 48 27.0	+3.5
RUS				S	Sn	06 49 04.1	+4.0
GRL	Gorelyy	3.23	10	P	Pn	06 48 28.8	+4.4
GRL				S	Sn	06 49 06.9	+5.3
DALK	Dalny	3.79	15	P	Pn	06 48 36.1	+4.1
DALK				S	Sn	06 49 20.0	+4.8
UGLR	Uglovaya	3.97	15	P	Pn	06 48 39.4	+4.8
AVH	Avacha	4.01	14	S	Sn	06 49 26.8	+5.9
KOK	Koryaka	4.02	13	P	Pn	06 48 40.8	+5.5
KRER	Koryakskii	4.05	14	P	Pn	06 48 41.4	+5.6
KRER				S	Sn	06 49 27.3	+5.3
SPN	Mys Shipunski	4.13	25	P	Pn	06 48 41.5	+4.8
SPN				S	Sn	06 49 28.1	+4.4
GNL	Ganaly	4.35	6	P	Pn	06 48 44.0	+4.2
MKZ	Mys Kozlova	5.90	27	P	Pn	06 49 04.9	+4.0
MKZ				S	Sn	06 50 10.8	+3.6
KBTR	Krutoberegovo	7.65	24	P	Pn	06 49 28.9	+4.0

IDC 02 07:06:04.7±4.4, 53°.66N×87°.97E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=49.4km s-min=24.0km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.89	280	i		07 17 50.0	
	0.1nm,0.8s,baz=98,slow=321,SNR=3.2						
ZALV	Zalesovo Beam	1.89	280	Pn	Pn	07 06 38.9	+0.7
	3.1nm,0.3s,baz=96,slow=16,SNR=5.1						
ZALV				Sn	Sg	07 07 05.3	-0.2
	1.9nm,0.3s,baz=96,slow=24,SNR=4.0						
KURBB	Kurchatov Arra	6.56	246	Pn	Pn	07 07 41.8	-0.5
	0.1nm,0.3s,baz=63,slow=15,SNR=4.0						
	0.5nm,0.3s						
MKAR	Makanchi Array	7.78	210	Pn	Pn	07 08 00.6	+1.6
	0.1nm,0.3s,baz=30,slow=13,SNR=6.1						
	0.2nm,0.3s						

IDC 02 07:22:47.5±3.0, 54°.22N×86°.52E, h0km, mbtmp3.0/2, ML2.9/1, Error ellipse: s-maj=24.5km s-min=14.7km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.04	255	i		07 29 20.0	
	baz=76,slow=312,SNR=5.5						
ZALV	Zalesovo Beam	1.04	255	Pg	Pg	07 23 07.1	-0.3
	1.8nm,0.3s,baz=74,slow=17,SNR=12						
ZALV				Lg	Lg	07 23 22.3	
	3.0nm,0.3s,baz=73,slow=30,SNR=12						
KURBB	Kurchatov Arra	6.07	237	Pn	Pn	07 24 17.8	-0.7
	1.0nm,0.5s,baz=56,slow=13,SNR=3.6						
MKAR	Makanchi Array	7.91	202	Pn	Pn	07 24 45.5	+1.8
	0.2nm,0.3s,baz=24,slow=13,SNR=6.4						
	0.2nm,0.3s						

NEIC 02 07:32:29.3±1.8, 58°.75S±0°.08×25°.6W±0°.2, h34km±1km, mb5.8/118, Ms_20 5.1/100, Mww5.6, Error ellipse: s-maj=14.6km s-min=12.7km az=223.0
IDC 02 07:32:30.6±1.3, 58°.77S×25°.73W, h45km±10km, mb5.2/26, mbtmp5.4/27, ML5.6/1, MS4.9/44, Error ellipse: s-maj=13.6km s-min=9.9km az=35.0
MOS 02 07:32:31.2±1.1, 58°.79S×25°.64W, h60km, mb5.7/15, MS4.9/9, Error ellipse: s-maj=16.6km s-min=8.7km az=107.5
GCMT 02 07:32:33.3±0.1, 58°.98S±0°.01×24°.94W±0°.01, h51km, MW5.6/141, Moment Tensor Solution. s141,c240; s141,c245; Duration: 1s.5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.24±.04; $M_{\theta\theta}$0.78±.04; $M_{\phi\phi}$-3.02±.03; $M_{r\theta}$-0.33±.03; $M_{\theta\phi}$0.04±.03; $M_{\phi r}$0.58±.03; Best double couple: $M_0$2.72600×10^{17} NP1:ϕ_s349.00000°, δ52.00000°, λ76.00000°. NP2:ϕ_s191.00000°, δ40.00000°, λ108.00000°. Principal axes: T 2.3670, Plg77.0000°, Azm208.0000°; N 0.7170, Plg11.0000°, Azm358.0000°; P -3.0840, Plg6.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 02 07:32:34, 58°.84S×25°.54W, h50km, Moment Tensor Solution. Duration: 10s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.67; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-2.34; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.21; $M_{\phi r}$1.72; Fault plane solution: $M_0$3.07000×10^{17} NP1: ϕ_s173.00000°, δ28.00000°, λ89.00000°. NP2: ϕ_s355.00000°, δ62.00000°, λ91.00000°. Principal axes: T 3.2086, Plg73.0000°, Azm267.0000°; N -0.3082, Plg1.0000°, Azm175.0000°; P -2.9004, Plg17.0000°, Azm84.0000°;
ISC 02 07:32:29.8±0.4, 58°.73S±0°.04×25°.51W±0°.04, h41km±3km, h41km:pP-P, n1086, σ1s.13/1093, mb5.7/108, MS5.0/119, 38C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.53	302	Pn	Pn	07 34 22.8	+5.9
HOPE	Hope Point	7.53	302	eP	Pn	07 34 22.8	+5.9
ORCD	Orcadas	9.91	250		Pn	07 34 52.0	+2.6
VNA1	Neumayer--Stat	13.96	156	P	Pn	07 35 43.7	-1.0
VNA1	Neumayer--Stat	13.96	156	PcP	PcP	07 41 03.6	+0.4
VNA1	Neumayer--Stat	13.96	156	ScP	ScP	07 44 33.4	+0.3
VNA3	Neumayer Olymp	14.15	159	P	Pn	07 35 45.5	-1.7
VNA3	Neumayer Olymp	14.15	159	PcP	PcP	07 41 04.2	+0.7
VNA3				S	Sn	07 38 09.5	-13
VNA3	Neumayer Olymp	14.15	159	ScP	ScP	07 44 33.4	-0.1
VNA2	Neumayer--Watz	14.36	156	P	Pn	07 35 48.1	-2.0
	baz=315,slow=14						
VNA2	Neumayer--Watz	14.36	156	PcP	PcP	07 41 04.6	+0.8
VNA2				S	Sn	07 38 16.1	-12
VNA2	Neumayer--Watz	14.36	156	ScP	ScP	07 44 33.4	-0.4
SNAA	Sanae	15.92	154	P	Pn	07 36 10.1	-0.5
SNAA	Sanae	15.92	154	PcP	PcP	07 41 06.8	+0.8
SNAA				S	Sn	07 38 48.0	-18
SNAA	Sanae	15.92	154	ScP	ScP	07 44 34.0	-2.8
SNAA	Sanae	15.92	154	P	Pn	07 36 10.3	-0.2
	24nm,0.3s,baz=320,slow=15,SNR=241						
SNAA				S	Sn	07 38 53.4	-12
	14nm,0.4s,baz=163,slow=19,SNR=1.9						
SNAA				LR	LR	07 40 54.8	
	comp=Z,5μm,22.0s,baz=314,slow=32						
SNAA				PcP	PcP	07 41 07.0	+0.9
	14nm,0.7s,baz=270,slow=5.1,SNR=3.9						
SNAA				ScP	ScP	07 44 36.1	-0.7
	15nm,1.1s,baz=299,slow=2.5,SNR=8.3						
	93nm,0.4s						
SNAA	Sanae	15.92	154		Pn	07 36 10.0	-0.6
SNAA	Sanae	15.92	154	ceP	Pn	07 36 10.2	-0.4
SNAA				pmax	pmax		
	comp=Z,75nm,0.6s						
SNAA	Sanae	15.92	154⇑	iP	Pn	07 36 10.5	0.0
TROLL	Troll, Antarti	17.44	151	P	P	07 36 30.0	-0.6
PMSA	Palmer Station	18.96	235	P	Pn	07 36 49.5	+1.4
	comp=Z,378nm,0.7s,baz=90,slow=8.1,SNR=72						
PMSA				PcP	PcP	07 41 11.7	+0.8
	comp=Z,60nm,0.7s,baz=68,slow=1.9,SNR=9.6						
PMSA				LR	LR	07 42 58.3	
	comp=Z,5μm,20.4s,baz=69,slow=33						
PMSA	Palmer Station	18.96	235		Pn	07 36 49.5	+1.4
PMSA				IAmb	IAmb	07 36 57.8	
	comp=Z,542nm,0.8s						
BELA	Belgrano 2	19.47	186		P	07 36 52.3	-0.4
NVL	N'lazarevskaya	19.54	143	eP	Pn	07 36 53.8	-1.1
NVL				eS	S	07 40 24.3	-7.2
NVL				pmax	pmax		
	comp=Z,49nm,0.8s						
NVL				MLR	MLR		
	comp=Z,1μm,17.0s						
EFI	East Falkland	19.72	277		P	07 36 57.9	+2.4
EFI				IAmb	IAmb	07 37 02.3	
	comp=Z,384nm,0.8s						
EFI	East Falkland	19.72	277	ceP	P	07 36 57.9	+2.4
EFI				pmax	pmax		
	comp=Z,331nm,0.8s						
SMAI	San Martin Ant	20.41	225	P	P	07 37 04.6	+1.7
SMAI				IAmb	IAmb	07 37 07.7	
	comp=Z,433nm,0.8s						
MG01	Puerto William	23.07	261	P	P	07 37 32.1	+0.8
USHA	Ushuaia	23.53	261	P	P	07 37 35.6	-0.2
	comp=Z,594nm,0.9s,baz=119,slow=10,SNR=118						
USHA				LR	LR	07 44 47.4	
	comp=Z,6μm,20.4s,baz=102,slow=32						
	comp=Z,594nm,0.9s						
MG02	Cerro Sombrero	24.94	265	P	P	07 37 48.4	-0.4
MG03	Isla Dawson	25.04	262	P	P	07 37 49.0	-0.7
MG03				IAmb	IAmb	07 38 08.4	
	comp=Z,213nm,0.8s						
GO10	Punta Arenas	25.69	263	P	P	07 37 55.2	-0.5
MG04	Isla Riesco	26.12	263	P	P	07 37 59.6	+0.1
MG04				IAmb	IAmb	07 38 02.1	
	comp=Z,287nm,0.8s						
MG05	Puerto Natales	27.23	264	P	P	07 38 08.2	-1.3
GO09	Cerro Castillo	27.38	265	P	P	07 38 09.5	-1.3
GO09				IAmb	IAmb	07 38 12.7	
	comp=Z,216nm,0.8s						
COYC	Coyhaique	30.78	275	P	P	07 38 41.3	+0.2
COYC				IAmb	IAmb	07 38 45.1	
	comp=Z,106nm,0.9s						
COYC	Coyhaique	30.78	275	IAMs_20	IAMs_20	07 49 29.1	
	comp=Z,4μm,22.0s						
COYC	Coyhaique	30.78	275	P	P	07 38 40.9	-0.2
TRQA	Tornquist	31.26	295	P	P	07 38 45.2	-0.2
TRQA				IAmb	IAmb	07 38 49.2	
	comp=Z,182nm,0.7s						
TRQA				IAMs_20	IAMs_20	07 49 59.8	
	comp=Z,4μm,20.0s						
TRQA	Tornquist	31.26	295	P	P	07 38 45.2	-0.2
TRQA				pmax	pmax		
	comp=Z,182nm,0.7s						
TRQA				MLR	MLR		
	comp=Z,4μm,20.0s						
QSPA	South Pole Qui	31.51	180	PKiKP	PKiKP	07 49 06.5	-1.2
	comp=Z,3.7nm,0.8s,baz=315,slow=0.7,SNR=4.3						
QSPA				LR	LR	07 50 37.8	
	comp=Z,2μm,21.8s,baz=184,slow=34						
QSPA	South Pole Qui	31.51	180	P	P	07 38 48.1	+0.6
QSPA	South Pole Qui	31.51	180	P	P	07 38 46.3	-1.2
AY01	Puyuhuapi	31.86	276	P	P	07 38 50.0	-0.5
AY01				IAmb	IAmb	07 38 52.8	
	comp=Z,209nm,0.8s						
LL02	Futaleuf	32.30	278	P	P	07 38 53.9	-0.6
PLTB	Pedras Altas	32.98	313	P	P	07 39 00.0	-0.5
PLTB				IAmb	IAmb	07 39 03.1	
	comp=Z,98nm,0.6s						
GO07	Milladeo Hill,	33.30	276	P	P	07 39 01.3	-1.9
PLCA	Paso Flores	33.42	282	P	P	07 39 04.3	-0.1
	comp=Z,113nm,0.8s,baz=142,slow=7.5,SNR=318						
PLCA				PcP	PcP	07 41 45.0	+0.1
	comp=Z,8.0nm,0.7s,baz=236,slow=3.6,SNR=2.2						
PLCA				ScP	ScP	07 45 24.3	-1.4
	comp=Z,3.5nm,0.6s,baz=116,slow=4.9,SNR=8.7						
PLCA				LR	LR	07 52 39.4	
	comp=Z,2μm,18.6s,baz=141,slow=36						
	comp=Z,113nm,0.8s						
PLCA	Paso Flores	33.42	282	P	P	07 39 04.2	-0.2
PLCA				IAmb	IAmb	07 39 05.4	
	comp=Z,125nm,0.8s						
PLCA	Paso Flores	33.42	282	P	P	07 39 02.6	-1.8
PLCA				pP	pP	07 39 14.3	-0.8
LL03	Petrohue	34.07	280	P	P	07 39 09.4	-0.5
LR03	Panguipulli	35.16	282	P	P	07 39 18.0	-1.3
LR04	Corral	35.52	281	P	P	07 39 22.4	-0.1
ITQB	Itaqui	36.02	310	P	P	07 39 25.8	-1.0
ITAB	Concordia	36.53	318	P	P	07 39 30.5	-0.7
MAW	Mawson	37.46	141	P	P	07 39 38.7	+0.1
	comp=Z,13nm,0.8s,baz=228,slow=8.0,SNR=32						
MAW				PcP	PcP	07 41 57.5	+1.3
	comp=Z,15nm,0.8s,baz=261,slow=5.9,SNR=5.2						
MAW				ScP	ScP	07 45 39.5	-0.2
	comp=Z,13nm,1.0s,baz=274,slow=6.5,SNR=7.8						
MAW				LR	LR	07 53 12.7	
	comp=Z,2μm,20.0s,baz=249,slow=33						
	comp=Z,13nm,0.8s						
ML02	Panimavida	37.67	287	P	P	07 39 40.1	-0.7
BI05	Punta Hualpn	37.79	284	P	P	07 39 42.2	+0.5
ELIM	Elim	38.27	71	eP	P	07 39 47.2	+1.4
ELIM				IAmb	IAmb	07 39 54.5	
	comp=Z,45nm,0.9s						
LMEL	Las Melosas	38.59	290	P	P	07 39 48.9	+0.1
LMEL				IAmb	IAmb	07 39 55.1	
	comp=Z,126nm,0.7s						
MT03	Universidad Ad	39.03	290	P	P	07 39 52.5	+0.2
CER	Ceres	39.04	69	eP	P	07 39 53.8	+1.5
CER				IAmb	IAmb	07 40 08.1	
	comp=Z,35nm,1.1s						
CPUP	Villa Florida	39.27	312	P	P	07 39 53.2	-1.1
	comp=Z,41nm,0.8s,baz=155,slow=7.1,SNR=45						
CPUP				ScP	ScP	07 45 45.6	-1.7
	comp=Z,2.3nm,0.7s,baz=167,slow=1.8,SNR=3.1						
CPUP				LR	LR	07 56 29.5	
	comp=Z,836nm,19.6s,baz=159,slow=37						
	comp=Z,41nm,0.8s						
CPUP	Villa Florida	39.27	312	P	P	07 39 53.0	-1.4
CPUP	Villa Florida	39.27	312	P	P	07 39 52.4	-1.9
CPUP				pP	pP	07 40 04.1	-1.0
PEL	Peldehue	39.40	290	P	P	07 39 55.4	0.0
PEL	Peldehue	39.40	290	P	P	07 39 55.4	0.0
PEL				pmax	pmax		
	comp=Z,797nm,0.7s						
PEL	Peldehue	39.40	290	P	P	07 39 55.2	-0.2
VA03	San Esteban	39.64	291	P	P	07 39 58.0	+0.6
ROC1	El Roble	39.70	290	P	P	07 39 57.7	-0.4
ZON	Zonda	39.74	294	P	P	07 39 57.6	-0.6
ZON				IAmb	IAmb	07 40 01.1	
	comp=Z,168nm,0.5s						
ZON	Zonda	39.74	294	P	P	07 39 57.6	-0.6
ZON				pmax	pmax		
	comp=Z,168nm,0.5s						
MATJ	Matjiesfontein	39.75	71⇑	iP	P	07 39 59.5	+1.1
MATJ				IAmb	IAmb	07 40 21.6	
	comp=Z,337nm,2.5s						
SUR	Sutherland	40.58	70	P	P	07 40 06.5	+1.2
	comp=Z,12nm,0.7s,baz=177,slow=8.8,SNR=13						
SUR				PcP	PcP	07 42 08.7	+1.9
	comp=Z,8.5nm,0.9s,baz=202,slow=5.4,SNR=3.7						
SUR				LR	LR	07 52 52.7	
	comp=Z,3μm,21.2s,baz=210,slow=30						
	comp=Z,12nm,0.7s						
TRCB	Terra Rica	40.80	320	P	P	07 40 06.1	-0.9
CVNA	Calvinia	40.80	68	eP	P	07 40 08.6	+1.5
CVNA				IAmb	IAmb	07 40 21.8	
	comp=Z,50nm,1.0s						
KROM	Kromhout	41.06	76	eP	P	07 40 10.9	+1.9
KROM				IAmb	IAmb	07 40 30.0	
	comp=Z,54nm,1.1s						
CO02	Combarbal	41.14	292	P	P	07 40 10.3	+0.4
GRAN	Grantham	41.31	72⇑	iP	P	07 40 12.5	+1.2
GRAN				IAmb	IAmb	07 40 19.6	
	comp=Z,19nm,0.5s						

BFON Badsfontein, M 42.47 73 *e*P **P** 07 40 21.8 +1.0
BFON IAmb IAmb 07 40 35.0
comp=Z,13nm,0.7s
GRAF Camdeboo Natio 42.48 74⇑*i*P **P** **07 40 22.6 +1.8**
GRAF IAmb IAmb 07 40 34.1
comp=Z,58nm,1.2s
LCO Las Campanas 42.81 294 P **P** **07 40 23.2 -0.5**
LCO IAmb IAmb 07 40 26.6
comp=Z,123nm,0.7s
LCO Las Campanas 42.81 294 IAMs_20 IAMs_20 07 57 24.6
comp=Z,2µm,20.0s
LCO Las Campanas 42.81 294 *e*P **P** **07 40 23.2 -0.5**
LCO Las Campanas 42.81 294 P **P** **07 40 22.7 -1.0**
VA04 Juan Fernndez 43.08 282 P **P** **07 40 26.2 +0.7**
SBA Scott Base 43.46 184 P **P** **07 40 29.7 +1.7**
SBA IAmb IAmb 07 40 31.6
comp=Z,434nm,1.9s
SBA Scott Base 43.46 184 P **P** **07 40 29.7 +1.7**
SBA pmax pmax
comp=Z,435nm,1.9s
SBA Scott Base 43.46 184 P **P** **07 40 26.8 -1.2**
AC04 Llanos de Chal 43.66 294 P **P** **07 40 30.6 +0.3**
KEIM Keimoes 43.68 67 *e*P **P** **07 40 31.4 +0.9**
KEIM IAmb IAmb 07 40 39.8
comp=Z,29nm,0.9s
AC02 Maricunga 43.91 297 P **P** **07 40 33.0 +0.2**
AC02 IAmb IAmb 07 40 36.8
comp=Z,97nm,0.8s
VNDA Vanda 43.92 182 P **P** **07 40 33.0 +1.2**
comp=Z,70nm,0.8s,baz=187,slow=7.1,SNR=147
VNDA PcP **PcP** **07 42 18.4 +1.5**
comp=Z,28nm,0.9s,baz=213,slow=3.9,SNR=4.4
VNDA LR LR 07 59 00.5
comp=Z,428nm,20.2s,baz=176,slow=36
comp=Z,70nm,0.8s
VNDA Vanda 43.92 182 P **P** **07 40 33.3 +1.5**
VNDA IAmb IAmb 07 40 34.7
comp=Z,96nm,0.9s
VNDA Vanda 43.92 182 P **P** **07 40 33.3 +1.5**
VNDA pmax pmax
comp=Z,96nm,0.9s
VNDA Vanda 43.92 182 P **P** **07 40 31.8 0.0**
UPI Upington 44.10 67 *e*P **P** **07 40 35.9 +2.0**
UPI IAmb IAmb 07 40 43.6
comp=Z,15nm,0.9s
HVD Gariep Dam 44.34 73 *e*P **P** **07 40 36.0 +0.1**
HVD IAmb IAmb 07 40 49.8
comp=Z,22nm,0.9s
CCD Concordia, Ant 44.86 169 P **P** **07 40 38.7 -1.1**
BOSA Boshof 45.85 72 P **P** **07 40 48.8 +0.9**
comp=Z,16nm,0.7s,baz=213,slow=7.7,SNR=36
BOSA ScP **ScP** **07 46 12.2 -1.7**
comp=Z,8.2nm,0.9s,baz=222,slow=4.2,SNR=5.5
BOSA LR LR 07 55 56.6
comp=Z,1µm,20.2s,baz=228,slow=31
comp=Z,16nm,0.7s
BOSA Boshof 45.85 72 P **P** **07 40 48.0 +0.1**
BOSA Boshof 45.85 72⇑*i*P **P** **07 40 47.9 +0.1**
BOSA Boshof 45.85 72 P **P** **07 40 47.5 -0.3**
BOSA pP **pP** **07 40 55.3 -3.6**
BDFB Brasilia 46.15 329 P **P** **07 40 50.9 +0.7**
comp=Z,75nm,0.5s,baz=150,slow=6.8,SNR=64
BDFB LR LR 07 57 22.5
comp=Z,935nm,21.1s,baz=153,slow=32
comp=Z,75nm,0.5s
BDFB Brasilia 46.15 329 P **P** **07 40 50.6 +0.4**
BDFB IAmb IAmb 07 40 54.3
comp=Z,86nm,0.6s
KSTD Kokstad 46.26 77 *e*P **P** **07 40 52.2 +1.1**
KSTD IAmb IAmb 07 40 59.1
comp=Z,32nm,1.4s
AF01 San Pedro de A 46.82 301 P **P** **07 40 56.0 +0.3**
AF01 IAmb IAmb 07 40 59.1
comp=Z,110nm,0.8s
SWZ Schweizer 47.07 71 *e*P **P** **07 40 57.7 +0.3**
SWZ IAmb IAmb 07 41 05.6
comp=Z,36nm,1.0s
PB15 IPOC Station P 47.18 299 P **P** **07 40 57.8 -0.6**
PB15 IAmb IAmb 07 41 05.9
comp=Z,61nm,0.7s
SNKL Senekal, Frees 47.38 74 *e*P **P** **07 41 00.6 +0.7**
SNKL IAmb IAmb 07 41 02.1
comp=Z,84nm,1.4s
LVC Limon Verde 47.44 300 P **P** **07 41 00.2 -0.4**
comp=Z,43nm,0.7s,baz=130,slow=6.3,SNR=28
LVC LR LR 08 01 33.1
comp=Z,868nm,21.3s,baz=169,slow=37
comp=Z,43nm,0.7s
LVC Limon Verde 47.44 300 P **P** **07 41 00.3 -0.4**
LVC Limon Verde 47.44 300 P **P** **07 41 00.3 -0.4**
LVC pmax pmax
comp=Z,40nm,0.7s
LVC Limon Verde 47.44 300 P **P** **07 40 59.5 -1.1**
NWCL Newcastle 48.89 76 *e*P **P** **07 41 12.8 +1.3**
NWCL IAmb IAmb 07 41 15.7
comp=Z,23nm,0.9s
KSR Koster 48.95 71 *e*P **P** **07 41 13.4 +1.4**
KSR IAmb IAmb 07 41 16.1
comp=Z,40nm,0.8s
PB02 IPOC Station P 49.01 300 P **P** **07 41 11.8 -0.7**
PB02 IAmb IAmb 07 41 15.9
comp=Z,77nm,0.7s
LBTB Lobatse 49.01 69 LR LR 07 57 40.7
comp=Z,3µm,21.8s,baz=203,slow=31
LBTB Lobatse 49.01 69 P **P** **07 41 13.2 +0.8**
LBTB Lobatse 49.01 69 P **P** **07 41 13.2 +0.8**
LBTB pmax pmax
comp=Z,89nm,1.6s
LBTB Lobatse 49.01 69⇑*i*P **P** **07 41 12.9 +0.5**
LBTB IAmb IAmb 07 41 14.3
comp=Z,93nm,1.6s
LBTB Lobatse 49.01 69 P **P** **07 41 13.4 +1.0**
HRAO HartRAO 49.31 72⇑*i*P **P** **07 41 15.3 +0.6**
SLR Silverton 49.73 73 *e*P **P** **07 41 18.1 +0.1**
SLR IAmb IAmb 07 41 19.5
comp=Z,38nm,1.2s
PTLB Pontes e Lacer 49.86 316 P **P** **07 41 17.6 -1.2**
PTLB IAmb IAmb 07 41 20.9
comp=Z,93nm,0.8s
SIV San Ignacio 50.08 313 P **P** **07 41 19.4 -1.1**
comp=Z,37nm,0.6s,baz=156,slow=7.4,SNR=176
SIV PcP **PcP** **07 42 40.7 +1.0**
comp=Z,8.3nm,0.7s,baz=141,slow=3.0,SNR=3.5
SIV LR LR 08 02 59.7
comp=Z,836nm,19.5s,baz=174,slow=37
comp=Z,37nm,0.6s
POGA Pongola 50.13 77 *e*P **P** **07 41 21.0 +0.2**
POGA IAmb IAmb 07 41 25.2
comp=Z,12nm,0.8s
GO01 Chusmiza 50.14 302 P **P** **07 41 20.6 -0.9**
GO01 IAmb IAmb 07 41 24.7
comp=Z,58nm,0.8s
TSUM Tsumeb 50.29 57 LR LR 07 58 17.7
comp=Z,1µm,21.4s,baz=157,slow=31
TSUM Tsumeb 50.29 57 P **P** **07 41 23.7 +1.5**
TSUM IAmb IAmb 07 41 25.4
comp=Z,98nm,1.6s
TSUM Tsumeb 50.29 57 IAMs_20 IAMs_20 07 57 43.5
comp=Z,2µm,22.0s
TSUM Tsumeb 50.29 57⇑*i*P **P** **07 41 24.2 +1.9**
TSUM IAmb IAmb 07 41 24.9
comp=Z,97nm,1.6s
TSUM Tsumeb 50.29 57 P **P** **07 41 23.4 +1.2**
TSUM pP **pwP** **07 41 37.5 +3.9**
H10S2 ASCENSION HYDR 50.35 14 T T 08 35 52.9
baz=188,slow=74,SNR=173
H10S3 ASCENSION HYDR 50.36 14 T T 08 35 53.2
baz=32,slow=74,SNR=304
CRLN Carolina, Mapu 50.39 74 *e*P **P** **07 41 23.4 +0.4**
CRLN IAmb IAmb 07 41 24.4
comp=Z,31nm,1.5s
MAGG Maguga Dam 50.95 76 *e*P **P** **07 41 28.4 +1.4**
MAGG IAmb IAmb 07 42 26.7
comp=Z,36nm,1.2s
LEPH Lephalale, Lim 51.06 71 *e*P **P** **07 41 28.1 +0.2**
LEPH IAmb IAmb 07 41 29.6
comp=Z,66nm,1.5s
CNG Changalane 51.24 77 *e*P **P** **07 41 30.3 +1.2**
CNG IAmb IAmb 07 41 30.9
comp=Z,118nm,1.6s
H10N1 ASCENSION HYDR 51.47 14 T T 08 37 17.2
baz=181,slow=72,SNR=66
H10N3 ASCENSION HYDR 51.47 14 T T 08 37 17.1
baz=181,slow=72,SNR=297
H10N2 ASCENSION HYDR 51.49 14 T T 08 37 18.4
baz=181,slow=72,SNR=210

PB18 Visviri 52.10 303 P **P** **07 41 36.4 +0.1**
PB18 IAmb IAmb 07 41 43.6
comp=Z,46nm,0.6s
VILB Vilhena 52.55 316 P **P** **07 41 37.8 -1.2**
VILB IAmb IAmb 07 41 41.0
comp=Z,158nm,0.7s
LPAZ La Paz 52.67 305 P **P** **07 41 40.0 -0.6**
comp=Z,44nm,0.7s,baz=144,slow=5.5,SNR=145
LPAZ PKiKP **PKiKP** **07 49 27.1 -1.7**
comp=Z,1.6nm,0.8s,baz=80,slow=6.4,SNR=3.9
LPAZ LR LR 08 06 16.4
comp=Z,637nm,19.9s,baz=149,slow=38
comp=Z,44nm,0.7s
LPAZ La Paz 52.67 305 P **P** **07 41 39.8 -0.8**
LPAZ IAmb IAmb 07 41 42.9
comp=Z,55nm,0.8s
LPAZ La Paz 52.67 305 P **P** **07 41 38.9 -1.7**
LPAZ pP **pP** **07 41 50.0 -1.7**
MOPA Mopani 53.13 74 *e*P **P** **07 41 44.5 +1.3**
MOPA IAmb IAmb 07 41 45.3
comp=Z,48nm,1.6s
RCBR Riachuelo 53.38 347 P **P** **07 41 45.7 +0.6**
comp=Z,16nm,0.5s,baz=315,slow=11,SNR=12
RCBR PcP **PcP** **07 42 54.1 +2.0**
comp=Z,61nm,0.8s,baz=331,slow=6.2,SNR=10.0
RCBR LR LR 08 00 00.5
comp=Z,684nm,21.6s,baz=326,slow=31
comp=Z,16nm,0.5s
RCBR Riachuelo 53.38 347 P **P** **07 41 45.2 0.0**
MUSN Musina, Limpop 53.40 72 *e*P **P** **07 41 45.0 -0.3**
MUSN IAmb IAmb 07 41 47.0
comp=Z,80nm,1.6s
MATP Matopo 54.30 69 LR LR 08 00 51.9
comp=Z,2µm,21.5s,baz=236,slow=31
MATP Matopo 54.30 69⇑*i*P **P** **07 41 52.5 +0.5**
MATP IAmb IAmb 07 41 53.4
comp=Z,253nm,1.6s
DRV Dumont d'Urvil 54.45 173 P **P** **07 41 51.0 -1.3**
DRV pP **pP** **07 42 01.4 -2.0**
BLWY Bulawayo 54.60 69⇑*i*P **P** **07 41 54.5 +0.3**
BLWY IAmb IAmb 07 41 55.1
comp=Z,389nm,1.6s
SAML Samuel 57.34 314 P **P** **07 42 12.1 -1.5**
SAML Samuel 57.34 314 P **P** **07 42 12.1 -1.5**
SAML pmax pmax
comp=Z,39nm,0.8s
SAML Samuel 57.34 314 P **P** **07 42 12.0 -1.5**
ETMB Extrema 57.71 311 P **P** **07 42 14.5 -1.7**
ETMB IAmb IAmb 07 42 17.6
comp=Z,33nm,0.8s
LSZ Lusaka 58.57 66 LR LR 08 04 11.7
comp=Z,3µm,19.9s,baz=215,slow=32
LSZ Lusaka 58.57 66 P **P** **07 42 22.8 +0.4**
LSZ Lusaka 58.57 66 P **P** **07 42 22.8 +0.4**
LSZ pmax pmax
comp=Z,28nm,0.8s
LSZ Lusaka 58.57 66 P **P** **07 42 21.9 -0.4**
NNA Nana 60.34 298 P **P** **07 42 33.8 -0.7**
comp=Z,29nm,0.7s,baz=168,slow=5.7,SNR=15
NNA LR LR 08 06 40.4
comp=Z,1µm,21.6s,baz=154,slow=34
comp=Z,29nm,0.7s
NNA Nana 60.34 298 P **P** **07 42 33.6 -0.9**
NNA Nana 60.34 298 IAMs_20 IAMs_20 08 06 47.1
comp=Z,1µm,21.0s
NNA Nana 60.34 298 *ce*P **P** **07 42 34.1 -0.4**
NNA pmax pmax
comp=Z,54nm,0.7s
MACA Manacapuru-AM 61.81 319 P **P** **07 42 42.2 -2.1**
MACA IAmb IAmb 07 42 43.0
comp=Z,44nm,0.7s
RPN Rapa Nui 64.09 260 P **P** **07 42 59.8 +0.4**
comp=Z,47nm,0.8s,baz=56,slow=3.6,SNR=2.2
RPN LR LR 08 02 11.4
comp=Z,82nm,22.0s,baz=124,slow=28
comp=Z,47nm,0.8s
ATAH Atahualpa 65.32 299 P **P** **07 43 08.9 +0.9**
comp=Z,34nm,0.9s,baz=172,slow=4.3,SNR=15
ATAH LR LR 08 10 48.9
comp=Z,624nm,21.2s,baz=173,slow=35
comp=Z,34nm,0.9s
OPO Ambohidratompo 65.34 85 P **P** **07 43 09.7 +1.8**
comp=Z,8.0nm,0.8s,baz=200,slow=8.8,SNR=7.2
OPO LR LR 08 07 18.0
comp=Z,542nm,19.4s,baz=360,slow=32
comp=Z,8.0nm,0.8s
LIC Lamto 66.81 22⇑*i*P **P** **07 43 17.9 +0.9**
comp=Z,172nm,0.6s
BOAV Boa Vista 66.96 321 P **P** **07 43 16.5 -1.5**
BOAV IAmb IAmb 07 43 19.3
comp=Z,74nm,0.7s
KIC Kosan Boka 67.00 23⇑*i*P **P** **07 43 18.8 +0.6**
comp=Z,87nm,0.7s
TIC Toumodi 67.22 22⇑*i*P **P** **07 43 20.3 +0.7**
comp=Z,153nm,0.8s
MDP Montagnes des 67.23 330 LR LR 08 09 54.5
comp=Z,714nm,21.9s,baz=164,slow=33
MPGF Montagnes des 67.24 330 P **P** **07 43 18.8 -1.0**
MPGF sP **pP** **07 43 33.0 +1.8**
DBIC Dimbokro 67.27 22 P **P** **07 43 20.7 +0.8**
comp=Z,71nm,1.0s,baz=196,slow=6.9,SNR=39
DBIC LR LR 08 06 34.3
comp=Z,393nm,20.3s,baz=178,slow=30
comp=Z,71nm,1.0s
DBIC Dimbokro 67.27 22 P **P** **07 43 20.7 +0.8**
DBIC IAmb IAmb 07 43 22.1
comp=Z,76nm,1.1s
DBIC Dimbokro 67.27 22⇑*i*P **P** **07 43 20.7 +0.8**
DBIC Dimbokro 67.27 22 P **P** **07 43 19.8 -0.2**
BOSC San Juan Bosco 68.89 301 P **P** **07 43 29.0 -1.4**
BOSC IAmb IAmb 07 43 32.6
comp=Z,37nm,0.6s
ARNL Arenillas 69.25 300 P **P** **07 43 32.5 +0.1**
PTLC Puerto Leguiza 70.27 306 *e*P P 07 43 35.5 -3.1
PORT Chimborazo Vol 70.52 302 P **P** **07 43 41.1 +0.2**
PORT IAmb IAmb 07 43 49.0
comp=Z,49nm,0.7s
CHSH Refugio Sur-Vo 70.53 302 P **P** **07 43 41.5 +0.4**
CHSH IAmb IAmb 07 43 44.2
comp=Z,96nm,0.6s
SLOR San Lorenzo - 71.05 302 P **P** **07 43 44.9 +0.9**
GUVC San Jose del G 71.52 309 *e*P **P** **07 43 45.3 -1.0**
IMBA Imbabura, San 71.82 303 P **P** **07 43 49.6 +1.0**
IMBA IAmb IAmb 07 43 52.0
comp=Z,83nm,0.8s
OTAV Otavalo 71.89 303 P **P** **07 43 49.2 +0.1**
OTAV Otavalo 71.89 303 IAMs_20 IAMs_20 08 14 20.7
comp=Z,823nm,22.0s
OTAV Otavalo 71.89 303 P **P** **07 43 49.2 +0.1**
OTAV pmax pmax
comp=Z,35nm,0.8s
OTAV Otavalo 71.89 303 *e*P **P** **07 43 47.5 -1.6**
OTAV Otavalo 71.89 303 P **P** **07 43 48.3 -0.8**
OTAV pP **pP** **07 43 58.7 -1.9**
FLOC Florencia 71.90 306 *e*P **P** **07 43 47.2 -1.4**
CMBC Cumbal 72.25 304 *e*P **P** **07 43 53.3 +2.1**
GARC Garzon, Huila 72.38 307 *e*P **P** **07 43 50.4 -1.3**
MBAR Mbarara 72.62 61 LR LR 08 12 51.2
comp=Z,830nm,19.1s,baz=192,slow=33
MBAR Mbarara 72.62 61 P **P** **07 43 56.6 +3.5**
MBAR Mbarara 72.62 61 IAMs_20 IAMs_20 08 14 31.6
comp=Z,1µm,19.0s
MBAR Mbarara 72.62 61 *i*P **P** **07 43 56.0 +2.9**
MBAR pmax pmax
comp=Z,54nm,1.7s
BETC Betania 72.80 307 *e*P **P** **07 43 53.5 -0.5**
PTGC Puerto Gaitan, 72.83 311 *e*P **P** **07 43 53.6 -0.4**
BBAC Balboa, Cauca 72.97 305 *e*P **P** **07 43 54.1 -1.1**
POPC Popayan, Colom 73.19 306 *e*P **P** **07 43 56.1 -0.4**
PRAC Prado 73.50 308 *e*P **P** **07 43 57.2 -0.9**
GR1C Gorgona, Isla 74.24 304 *e*P **P** **07 44 02.2 -0.2**
ROSC El Rosal 74.29 309 P **P** **07 44 02.0 -1.1**
comp=Z,56nm,0.7s,baz=36,slow=23,SNR=31
ROSC LR LR 08 17 08.6
comp=Z,1µm,21.8s,baz=179,slow=36
comp=Z,56nm,0.7s
ROSC El Rosal 74.29 309 P **P** **07 44 02.8 -0.3**
ROSC IAmb IAmb 07 44 06.1
comp=Z,54nm,0.8s
ROSC El Rosal 74.29 309 P **P** **07 44 02.8 -0.3**
ROSC pmax pmax
comp=Z,54nm,0.8s
ROSC El Rosal 74.29 309 *e*P **P** **07 44 03.4 +0.2**
YOTC Yotoco, Valle 74.35 307 *e*P **P** **07 44 01.0 -2.1**
ANIL Santa Ana 74.42 308 *e*P **P** **07 44 03.0 -0.7**
KIBK Kibwezi 74.53 68 P **P** **07 44 07.8 +3.5**
KIBK IAmb IAmb 07 44 09.9
comp=Z,122nm,1.9s
SPBC San Pablo de B 74.93 309 *e*P **P** **07 44 06.5 0.0**
TOA0 Torodi Ar. Sit 74.99 27 P **P** **07 44 07.7 +1.1**
TOA0 IAmb IAmb 07 44 09.0
comp=Z,136nm,1.2s
TORD Torodi Ar. Bea 74.99 27 P **P** **07 44 07.7 +1.1**
comp=Z,63nm,0.7s,baz=199,slow=6.3,SNR=297
TORD PKKPbc **PKKPbc** **08 03 30.1 +1.6**
comp=Z,0.5nm,0.5s,baz=1.5,slow=2.3,SNR=6.9
TORD LR LR 08 11 33.0
comp=Z,604nm,19.9s,baz=196,slow=31
comp=Z,63nm,0.7s
TORD Torodi Ar. Bea 74.99 27 P **P** **07 44 07.4 +0.8**
TORD IAmb IAmb 07 44 09.0
comp=Z,128nm,1.2s
GUY2C Guyana, Caldas 75.07 308 *e*P **P** **07 44 05.7 -2.1**
KMBO Kilima Mbogo 75.21 67 P **P** **07 44 12.4 +4.1**
comp=Z,5.4nm,0.9s,baz=187,slow=6.6,SNR=10
KMBO LR LR 08 14 27.5
comp=Z,2µm,18.9s,baz=216,slow=33
KMBO Kilima Mbogo 75.21 67 P **P** **07 44 12.2 +3.9**
KMBO Kilima Mbogo 75.21 67 *i*P **P** **07 44 11.3 +3.0**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
DCZ Deep Cove 75.64 189 P **P** **07 44 10.5 +0.4**
DCZ IAmb IAmb 07 44 16.9
comp=Z,94nm,0.9s
MLZ Mavora Lakes 75.65 190 P **P** **07 44 10.8 +0.6**
MLZ IAmb IAmb 07 44 11.9
comp=Z,182nm,1.2s
ODZ Otahua Downs 75.72 192 P **P** **07 44 10.4 -0.2**
CBOC Ciudad Bolivar 75.91 308 *e*P **P** **07 44 10.3 -1.9**
PAMC Pamplona, Colo 75.92 311 *e*P **P** **07 44 11.8 -0.8**
SOCV Socops 76.08 314 *e*P **P** **07 44 12.3 -0.6**
WKZ Wanaka 76.10 191 P **P** **07 44 13.2 +0.4**
WKZ IAmb IAmb 07 44 18.9
comp=Z,102nm,0.8s
LBZ Lake Benmore 76.42 192 P **P** **07 44 15.5 +0.9**
LBZ IAmb IAmb 07 44 16.6
comp=Z,85nm,0.8s
BIRV Birongo 76.44 319 P **P** **07 44 14.3 -0.7**
BIRV IAmb IAmb 07 44 17.9
comp=Z,98nm,0.8s
SDV Santo Domingo 76.54 314 LR LR 08 17 24.7
comp=Z,1µm,21.7s,baz=150,slow=35
SDV Santo Domingo 76.54 314 P **P** **07 44 14.9 -0.9**
SDV IAmb IAmb 07 44 18.0
comp=Z,57nm,0.8s
MQZ McQueen's Vall 76.82 193 P **P** **07 44 17.2 +0.4**
MQZ IAmb IAmb 07 44 18.4
comp=Z,287nm,1.6s
ZARC Zaragoza, Cauc 76.92 309 *e*P **P** **07 44 14.6 -3.0**
RPZ Rata Peaks 76.99 192 LR LR 08 15 47.0
comp=Z,420nm,19.4s,baz=166,slow=34
RPZ Rata Peaks 76.99 192 P **P** **07 44 18.2 +0.4**
RPZ IAmb IAmb 07 44 19.6
comp=Z,128nm,1.0s
DBBC Dabeiba 77.04 308 *e*P **P** **07 44 17.2 -1.2**
UREC San Jos de Ur 77.42 309 *e*P **P** **07 44 18.4 -2.1**
GVZ Greta Valley S 77.50 194 P **P** **07 44 21.7 +1.0**
KHZ Kahutara 77.98 194 P **P** **07 44 23.0 -0.3**
KHZ IAmb IAmb 07 44 24.6
comp=Z,134nm,1.4s
KHZ Kahutara 77.98 194 P **P** **07 44 23.5 +0.2**
LODK Lodwar 78.30 63 P **P** **07 44 27.3 +1.9**
CMWZ Cape Campbell 78.54 195 P **P** **07 44 28.3 +1.8**
PLWZ Palliser 78.58 196 P **P** **07 44 27.2 +0.5**
BSWZ Blackbirch Sta 78.62 195 P **P** **07 44 27.6 +0.7**
BSWZ Blackbirch Sta 78.62 195 P **P** **07 44 28.1 +1.2**
THZ Tophouse 78.70 194 P **P** **07 44 28.0 +0.6**
MSWZ Moikau Station 78.73 196 P **P** **07 44 25.7 -1.8**
PAWZ Paruwai Farm 78.74 196 P **P** **07 44 28.3 +0.7**
ARGC Ariguani, Magd 78.82 311 *e*P **P** **07 44 27.2 -1.0**
DSZ Denniston Nort 78.85 193 P **P** **07 44 27.6 -0.6**
TUWZ Tuamarina 78.89 195 P **P** **07 44 28.8 +0.4**
TUWZ Tuamarina 78.89 195 P **P** **07 44 29.3 +0.9**
SNZO South Karori 78.91 195 P **P** **07 44 28.4 -0.1**
TMWZ Te Maipa 78.94 196 P **P** **07 44 29.9 +1.2**
MTW Mount Morrison 78.94 196 P **P** **07 44 27.1 -1.6**
CAW Cannon Point 79.06 196 P **P** **07 44 26.1 -2.7**
TCW Tory Channel 79.06 195 P **P** **07 44 30.1 +0.8**
NNZ Nelson 79.18 194 P **P** **07 44 30.4 +0.5**
HOWZ Holdsworth Sta 79.20 196 P **P** **07 44 30.6 +0.5**
SJCC San Jacinto, C 79.23 310 *e*P **P** **07 44 30.2 -0.3**
TIWZ Tintock 79.26 196 P **P** **07 44 31.4 +0.9**
BFZ Birch Farm 79.30 197 P **P** **07 44 31.6 +0.9**
KIW Kapiti Island 79.32 196 P **P** **07 44 31.8 +1.0**
OGWZ Otaki Gorge 79.33 196 P **P** **07 44 31.7 +0.9**
CRJC Cerrejon, Guaj 79.35 313 *e*P **P** **07 44 28.8 -2.4**
TKNZ Takaka Hill 79.41 194 P **P** **07 44 31.0 -0.3**
MRZ Mangatainoka R 79.42 196 P **P** **07 44 32.0 +0.7**
PRWZ Pori Road 79.47 196 P **P** **07 44 32.8 +1.2**
ANWZ Angora Road 79.49 197 P **P** **07 44 32.8 +1.2**
DUWZ D'Urville Isla 79.51 195 P **P** **07 44 32.3 +0.5**
PRHZ Porangahau 79.65 197 P **P** **07 44 33.8 +1.3**
POWZ Post Office Ro 79.66 196 P **P** **07 44 33.8 +1.2**
QRZ Quartz Range 79.67 194 P **P** **07 44 31.2 -1.4**
DVHZ Dannevirke 79.69 197 P **P** **07 44 33.6 +0.8**
PXZ Pawanui 79.85 197 P **P** **07 44 34.6 +1.0**
WPHZ Waipukurau 79.88 197 P **P** **07 44 34.4 +0.6**
TSZ Takapari Road 79.96 197 P **P** **07 44 34.9 +0.7**
PNHZ Pukenui 80.06 197 P **P** **07 44 35.9 +1.0**
KAHZ Kahuranaki 80.08 197 P **P** **07 44 36.4 +1.5**
WAZ Wanganui 80.40 196 P **P** **07 44 38.0 +1.4**
MCHZ McNeill Hill 80.45 197 P **P** **07 44 38.8 +1.9**
BCIP Isla Barro Col 80.49 306 *e*P **P** **07 44 37.6 +0.4**
BHHZ Black Hill Sta 80.50 197 P **P** **07 44 38.4 +1.2**
KWHZ Kaweka Forest 80.51 197 P **P** **07 44 38.6 +1.4**
MOVZ Moawhango 80.62 197 P **P** **07 44 38.6 +0.6**
BKZ Black Stump Fm 80.75 197 P **P** **07 44 39.7 +1.1**
TRVZ Turoa 80.76 196 P **P** **07 44 39.7 +0.9**
NMHZ Naumai 80.77 197 P **P** **07 44 40.3 +1.6**
WHVZ Whangaehu Hut 80.77 196 P **P** **07 44 39.8 +0.9**
TUVZ Tukino 80.78 196 P **P** **07 44 39.8 +0.9**
FWVZ Far West T-bar 80.80 196 P **P** **07 44 40.0 +0.9**
SNVZ South Ngauruho 80.86 196 P **P** **07 44 40.1 +0.8**
NGZ Ngauruhoe 80.87 196 P **P** **07 44 40.4 +1.1**
OTVZ Oturere 80.88 197 P **P** **07 44 40.3 +0.9**
NNVZ North Ngauruho 80.92 196 P **P** **07 44 39.3 -0.3**
KHEZ Kahui Hut 80.98 195 P **P** **07 44 39.8 -0.1**
NEZ North Egmont 81.00 195 P **P** **07 44 40.2 +0.3**
NBEZ Newall Road No 81.03 195 P **P** **07 44 40.0 0.0**
DREZ Durham Road 81.06 195 P **P** **07 44 40.5 +0.3**
MRHZ Matea Rd 81.09 197 P **P** **07 44 41.1 +0.7**
MSEY Mahe Island 81.34 85 IAMs_20 IAMs_20 08 12 47.1
comp=Z,1µm,21.0s
URZ Urewera 81.54 198 LR LR 08 19 58.2
comp=Z,387nm,18.1s,baz=211,slow=35
DRK0 Durika 82.05 303 P **P** **07 44 46.6 +0.9**
SRBA San Rafael, Bu 82.07 302 P **P** **07 44 45.7 -0.1**
PEZE Perez Zeledon, 82.34 302 P **P** **07 44 47.8 +0.5**
PEZE IAmb IAmb 07 44 50.3
comp=Z,43nm,0.7s
SMRT St. Maarten 82.50 324 IAMs_20 IAMs_20 08 19 24.4
comp=Z,729nm,22.0s
HDC Heredia 83.08 302 P **P** **07 44 50.9 -0.2**
HDC IAmb IAmb 07 44 54.1
comp=Z,51nm,0.7s
STVI Saint Thomas 83.37 323 P **P** **07 44 51.1 -1.1**
STVI IAmb IAmb 07 44 54.1
comp=Z,67nm,0.7s
CUPR Culebra, Puert 83.43 322 P **P** **07 44 51.2 -1.3**
SJG San Juan 83.53 321 LR LR 08 21 28.6
comp=Z,383nm,21.4s,baz=160,slow=35
JTS Las Juntas de 83.71 302 P **P** **07 44 53.8 -0.4**
JTS Las Juntas de 83.71 302 *i*P **P** **07 44 53.0 -1.2**
JTS pmax pmax
comp=Z,37nm,0.8s
JTS Las Juntas de 83.71 302 *e*P **P** **07 44 53.3 -0.9**
TOO Toolangi 83.76 173 P **P** **07 44 54.1 -0.2**
TOO IAmb IAmb 07 44 55.3
comp=Z,45nm,0.9s
TOO Toolangi 83.76 173 P **P** **07 44 54.1 -0.2**
TOO pmax pmax
comp=Z,45nm,1.0s
DUNO Dulce Nombre, 83.77 301 P **P** **07 44 54.2 -0.2**
DUNO IAmb IAmb 07 44 57.2
comp=Z,48nm,0.7s
ORTG Ortega, Santa 84.00 301 P **P** **07 44 56.3 +0.6**
ORTG IAmb IAmb 07 44 58.1
comp=Z,39nm,0.7s
OUZ Omahuta 85.05 196 P **P** **07 45 00.9 +0.1**

ESPN Las Esperanzas 85.11 303 P **P** 07 45 00.2 -1.0
ESPN IAmb IAmb 07 45 02.9
comp=Z,38nm,0.6s
TAM Tamanrasset 85.19 29 P **P** 07 45 00.1 -1.5
TAM Tamanrasset 85.19 29 P **P** 07 45 00.1 -1.5
TAM pmax pmax
comp=Z,27nm,1.3s
ACON Acoyapa 85.30 302 P **P** 07 45 00.5 -1.7
ACON IAmb IAmb 07 45 04.0
comp=Z,66nm,0.7s
CAN Canberra 86.19 176 P **P** 07 45 06.2 -0.3
CAN IAmb IAmb 07 45 07.4
comp=Z,46nm,0.9s
CAN Canberra 86.19 176 P **P** 07 45 06.2 -0.3
CAN pmax pmax
comp=Z,46nm,0.9s
MATN Matagalpa 86.48 302 P **P** 07 45 07.2 -1.0
BBOO Buckleboo 87.51 165 P **P** 07 45 11.7 -1.3
BBOO IAmb IAmb 07 45 13.2
comp=Z,39nm,0.8s
TGUH Tegucigalpa,Un 88.08 301 P **P** 07 45 15.0 -0.9
FORT Forrest 88.14 157 P **P** 07 45 16.2 +0.2
ATD Arta Tunnel 88.91 66 LR LR 08 23 27.4
comp=Z,1µm,18.9s,baz=191,slow=34
ATD Arta Tunnel 88.91 66 P **P** 07 45 19.7 0.0
STKA Stephens Creek 89.09 169 P **P** 07 45 20.6 +0.2
comp=Z,32nm,0.7s,baz=165,slow=5.0,SNR=56
STKA LR LR 08 23 39.1
comp=Z,984nm,19.1s,baz=194,slow=34
comp=Z,32nm,0.7s
STKA Stephens Creek 89.09 169 P **P** 07 45 20.2 -0.3
STKA Stephens Creek 89.09 169 *c iP* **P** 07 45 20.8 +0.3
MTO3 Montecristo 89.32 300 P **P** 07 45 19.4 -2.4
RAO Raoul Island 89.38 204 LR LR 08 20 16.8
comp=Z,310nm,19.4s,baz=154,slow=32
ESQI Esquipulas 89.45 300 P **P** 07 45 20.7 -1.6
ESQI IAmb IAmb 07 45 24.8
comp=Z,40nm,0.7s
ARMA Armidale 91.15 178 P **P** 07 45 30.1 -0.2
ARMA IAmb IAmb 07 45 31.4
comp=Z,37nm,1.1s
PPT2 Papeete2 91.28 232 *eP* **P** 07 45 32.0 +1.1
comp=Z,130nm,25.2s
PPT2 Papeete2 91.28 232 *e*PP **PP** 07 49 07.8 -0.1
comp=Z,132nm,26.5s
PPT2 Papeete2 91.28 232 *e*LR LR 08 14 45.2
comp=Z,1µm,22.8s
PPT2 *e*LR LR 08 14 47.0
comp=Z,890nm,24.0s
PPT Papeete 91.30 232 LR LR 08 18 39.4
comp=Z,474nm,19.4s,baz=158,slow=30
PETF Flores 91.76 300 P **P** 07 45 31.4 -1.4
RAR Rarotonga 91.88 222 P **P** 07 45 33.2 -0.3
comp=Z,42nm,0.8s,baz=27,slow=4.5,SNR=4.8
RAR LR LR 08 19 23.6
comp=Z,197nm,20.0s,baz=176,slow=31
comp=Z,42nm,0.8s
MDT Midelt 92.86 18 LR LR 08 23 41.4
comp=Z,362nm,19.3s,baz=184,slow=33
TEIG Tepich 93.96 303 P **P** 07 45 42.5 -0.4
CMIG Matias Romero 94.22 296 LR LR 08 23 04.1
comp=Z,405nm,20.6s,baz=153,slow=32
TAOE Nuku Hiva Isla 94.84 244 *e*LR LR 08 16 25.6
comp=Z,3µm,27.1s
ASAR Alice Springs 96.15 161 P **P** 07 45 52.5 -0.8
comp=Z,22nm,0.7s,baz=184,slow=3.9,SNR=245
ASAR PP **PP** 07 49 47.2 +1.8
comp=Z,1.9nm,0.9s,baz=175,slow=7.8,SNR=4.7
ASAR PKKPbc **PKKPbc** 08 02 38.4 +1.5
comp=Z,12nm,0.6s,baz=12,slow=2.2,SNR=96
ASAR PKPPKP P'P'df 08 10 41.0 -16
comp=Z,1.2nm,0.9s,baz=55,slow=2.4,SNR=8.4
ASAR LR LR 08 27 11.2
comp=Z,1µm,19.5s,baz=188,slow=34
comp=Z,22nm,0.7s
ASAR Alice Springs 96.15 161 P **P** 07 45 52.3 -0.9
AS31 Alice Springs 96.15 161 P **P** 07 45 52.7 -0.5
CART Cartagena 98.12 19 IAMs_20 IAMs_20 08 24 16.3
comp=Z,590nm,22.0s
KEST Kesra 98.50 28 P Pdif 07 46 04.9 +1.5
comp=Z,6.0nm,0.9s,baz=34,slow=7.3,SNR=3.9
KEST LR LR 08 26 21.0
comp=Z,317nm,18.9s,baz=164,slow=33
comp=Z,6.0nm,0.9s
DZM Mont Dzumac 98.89 191 *eP* Pdif 07 46 06.7 +1.0
comp=Z,68nm,37.8s
DZM Mont Dzumac 98.89 191 *e*PP **PP** 07 50 06.9 +0.3
comp=Z,93nm,29.9s
DZM Mont Dzumac 98.89 191 *e*LR LR 08 18 19.9
comp=Z,1µm,22.4s
COI Coimbra 99.61 13 IAMs_20 IAMs_20 08 24 33.5
comp=Z,683nm,22.0s
ESDC Sonseca Array 99.68 17 P **Pdif** 07 46 10.4 +2.0
comp=Z,1.2nm,0.7s,baz=184,slow=4.6,SNR=7.0
ESDC PKKP **PKKPbc** 08 02 30.0 +1.4
comp=Z,1.0nm,0.6s,baz=360,slow=2.9,SNR=8.6
ESDC LR LR 08 26 25.0
comp=Z,189nm,21.8s,baz=178,slow=32
comp=Z,1.2nm,0.7s
FITZ Fitzroy Crossi 99.85 152 P **Pdif** 07 46 09.7 -0.1
comp=Z,2.7nm,0.7s,baz=225,slow=2.9,SNR=2.4
FITZ LR LR 08 30 18.0
comp=Z,391nm,18.1s,baz=195,slow=35
comp=Z,2.7nm,0.7s
WRA Warramunga Arr 99.87 161 P **Pdif** 07 46 08.7 -1.2
comp=Z,2.7nm,0.6s,baz=197,slow=4.2,SNR=24
WRA PKKP **PKKPdf** 08 02 29.2 -0.5
comp=Z,12nm,0.8s,baz=355,slow=2.9,SNR=60
WRA PKPPKP P'P'df 08 10 28.4 -22
comp=Z,1.0nm,0.8s,baz=37,slow=2.6,SNR=4.6
WRA LR LR 08 29 35.5
comp=Z,997nm,19.7s,baz=197,slow=34
comp=Z,2.7nm,0.6s
WRAB Tennant Creek 99.88 161 *i* P **Pdif** 07 46 08.9 -1.1
WRAB pmax pmax
comp=Z,28nm,2.0s
GHAJ Ghor Haditha 103.02 50 IAMs_20 IAMs_20 08 33 34.6
comp=Z,555nm,20.0s
GOGA Godfrey 103.66 313 IAMs_20 IAMs_20 08 33 01.7
comp=Z,622nm,21.0s
V55A Taylorsville 105.00 316 P **PKiKP** 07 50 46.3 -0.4
baz=154
V55A P **PKiKP** 07 50 46.3 -0.4
baz=154
Y49A Blount Mountai 105.19 311 P **PKiKP** 07 50 46.7 -0.4
baz=152
CSS Mathiatis 105.37 47 IAMs_20 IAMs_20 08 32 08.9
comp=Z,428nm,22.0s
AQU L'Aquila 105.78 29 IAMs_20 IAMs_20 08 28 45.3
comp=Z,615nm,22.0s
BLA Blacksburg 105.93 317 IAMs_20 IAMs_20 08 30 04.8
comp=Z,440nm,22.0s
W50A Signal Mountai 105.95 313 P **PKiKP** 07 50 47.9 -0.6
baz=152
V51A Loudon 106.11 314 P **PKiKP** 07 50 48.8 +0.1
baz=152
BNI Bardonecchia 106.80 23 IAMs_20 IAMs_20 08 28 27.1
comp=Z,766nm,22.0s
PLAL Pickwick Lake 106.84 310 IAMs_20 IAMs_20 08 35 19.7
comp=Z,646nm,21.0s
OXF Oxford 106.96 309 P **PKiKP** 07 50 49.2 -1.0
baz=151
PAL Paliasades 107.19 324 IAMs_20 IAMs_20 08 29 59.4
comp=Z,476nm,22.0s
R53A Hurricane 107.47 317 P **PKiKP** 07 50 50.9 -0.2
baz=153
R53A P **PKiKP** 07 50 50.9 -0.2
baz=153
WVT Waverly 107.74 311 P **PKiKP** 07 50 50.7 -1.0
baz=151
WVT Waverly 107.74 311 P **PKiKP** 07 50 50.6 -1.0
baz=151
SSPA Standing Stone 108.13 321 IAMs_20 IAMs_20 08 34 05.2
comp=Z,493nm,21.0s
SSPA Standing Stone 108.13 321 P **PKiKP** 07 50 51.8 -0.5
baz=154
L61B Northampton 108.14 325 P **PKiKP** 07 50 51.5 -0.7
baz=156
Q52A Bidwell 108.14 317 P **PKiKP** 07 50 52.2 -0.1
baz=153
Q52A P **PKiKP** 07 50 52.2 -0.1
baz=153
T47A Sharon Grove 108.21 312 P **PKiKP** 07 50 51.7 -0.8
baz=151
P53A Whipple 108.30 318 P **PKiKP** 07 50 52.4 -0.2
baz=153
P53A P **PKiKP** 07 50 52.4 -0.2
baz=153

M57A Sunshine Farm, 108.52 321 P **PKiKP** 07 50 53.1 +0.1
baz=155
M57A P **PKiKP** 07 50 53.1 +0.1
baz=155
Q51A Peebles 108.59 316 P **PKiKP** 07 50 52.7 -0.5
baz=152
Q51A P **PKiKP** 07 50 52.7 -0.5
baz=152
P52A Corning 108.69 317 P **PKiKP** 07 50 52.9 -0.5
baz=153
MIAR Mount Ida 108.71 306 P **PKiKP** 07 50 53.3 -0.2
baz=149
MIAR Mount Ida 108.71 306 P **PKiKP** 07 50 53.2 -0.4
baz=149
TXAR Lajitas Array 108.81 295 Pdiff **Pdif** 07 46 52.3 +2.9
comp=Z,0.2nm,0.7s,baz=153,slow=8.1,SNR=2.5
TXAR PKiKP **PKiKP** 07 50 54.3 +0.2
comp=Z,3.2nm,0.8s,baz=165,slow=4.7,SNR=21
TXAR PKKPbc **PKKPbc** 08 02 03.5 +2.9
comp=Z,0.2nm,0.6s,baz=282,slow=0.1,SNR=3.5
TX31 Lajitas Ar. Si 108.81 295 P **PKiKP** 07 50 54.2 +0.1
baz=148,SNR=6.9
O53A New Philadelph 108.92 318 P **PKiKP** 07 50 53.0 -0.7
baz=153
BINY Binghamton 108.93 323 P **PKiKP** 07 50 53.0 -0.8
baz=155
O52A Adamsville 109.02 318 P **PKiKP** 07 50 53.4 -0.6
baz=153
O52A P **PKiKP** 07 50 53.4 -0.6
baz=153
G65A Princeton 109.24 330 P **PKiKP** 07 50 54.0 -0.2
baz=158
G65A P **PKiKP** 07 50 54.0 -0.2
baz=158
N53A Lisbon 109.28 319 P **PKiKP** 07 50 54.1 -0.3
baz=153
N53A P **PKiKP** 07 50 54.1 -0.3
baz=153
PBMO Poplar Bluff 109.34 310 P **PKiKP** 07 50 53.5 -1.1
baz=150
L56A Greenwood 109.37 322 P **PKiKP** 07 50 54.6 0.0
baz=154
L56A P **PKiKP** 07 50 54.6 0.0
baz=154
X37A Clayton 109.51 305 P **PKiKP** 07 50 54.7 -0.4
baz=149
ACSO Alum Creek Sta 109.53 317 P **PKiKP** 07 50 53.8 -1.1
baz=152
P49A Miami Univ. Ec 109.54 315 P **PKiKP** 07 50 53.5 -1.5
baz=152
P49A Miami Univ. Ec 109.54 315 P **PKiKP** 07 50 53.4 -1.6
baz=152
LBNH Lisbon 109.56 326 P **PKiKP** 07 50 54.4 -0.5
baz=156
K57A Scipio Center 109.58 323 P **PKiKP** 07 50 54.8 -0.1
baz=155
S44A Carbondale 109.66 311 P **PKiKP** 07 50 54.9 -0.3
baz=150
BRTR Keskin Array B 109.68 45 PKiKP **PKiKP** 07 50 55.4 0.0
comp=Z,1.4nm,0.8s,baz=214,slow=3.5,SNR=3.6
BRTR PKKPbc **PKKPbc** 08 01 59.0 +0.9
comp=Z,4.9nm,0.7s,baz=93,slow=3.0,SNR=12
BRTR PKKPab **PKKPab** 08 02 10.2 +2.1
comp=Z,4.9nm,0.9s,baz=14,slow=1.5,SNR=8.5
ABTX Abilene, Hawle 109.72 300 P **PKiKP** 07 50 55.7 +0.1
baz=148
ABTX Abilene, Hawle 109.72 300 P **PKiKP** 07 50 54.8 -0.8
baz=148
P48A Milroy 109.74 315 P **PKiKP** 07 50 54.0 -1.3
baz=152
P48A P **PKiKP** 07 50 54.0 -1.3
baz=152
J58A Remsen 109.76 324 P **PKiKP** 07 50 55.2 -0.1
baz=155
J58A P **PKiKP** 07 50 55.2 -0.1
baz=155
PKME Peaks-Kenny Pk 109.76 329 P **PKiKP** 07 50 54.6 -0.5
baz=158
PKME Peaks-Kenny Pk 109.76 329 P **PKiKP** 07 50 54.6 -0.5
baz=158
M53A WI Miller and 109.79 319 IAMs_20 IAMs_20 08 31 43.0
comp=Z,498nm,20.0s
M53A WI Miller and 109.79 319 P **PKiKP** 07 50 54.1 -1.2
baz=153
WVNY West Valley, N 109.96 321 P **PKiKP** 07 50 55.6 0.0
baz=154
O49A Covington 109.97 316 P **PKiKP** 07 50 54.7 -1.1
baz=152
O49A P **PKiKP** 07 50 54.7 -1.1
baz=152
NCB Newcomb 109.99 325 P **PKiKP** 07 50 55.3 -0.3
baz=156,SNR=5.8
OLIL Olney 110.11 312 P **PKiKP** 07 50 55.7 -0.3
baz=151
ERPA Erie 110.16 320 P **PKiKP** 07 50 54.9 -1.1
baz=153
BFO Black Forest 110.26 23 IAMs_20 IAMs_20 08 30 58.9
comp=Z,625nm,22.0s
O48B Farmland 110.33 315 P **PKiKP** 07 50 55.3 -1.1
baz=151
O48B Farmland 110.33 315 P **PKiKP** 07 50 54.9 -1.6
baz=151
HHAR Hobbs 110.35 307 P **PKiKP** 07 50 55.4 -1.2
baz=149
WCNY West Carthage 110.44 324 P **PKiKP** 07 50 56.1 -0.4
baz=155
P46A Rosedale 110.54 313 P **PKiKP** 07 50 55.9 -0.9
baz=151
N49A Columbus Grove 110.56 316 P **PKiKP** 07 50 55.8 -1.0
baz=152
N49A P **PKiKP** 07 50 55.8 -1.0
baz=152
FRNY Flat Rock 110.59 326 P **PKiKP** 07 50 56.0 -0.8
baz=156,SNR=5.1
E63A Oxbow 110.60 330 P **PKiKP** 07 50 56.3 -0.4
baz=158
E63A P **PKiKP** 07 50 56.3 -0.4
baz=158
U38A Gravette 110.67 306 P **PKiKP** 07 50 56.1 -1.1
baz=149
LONY Lake Ozonia 110.69 325 P **PKiKP** 07 50 55.7 -1.3
baz=155
CCM Cathedral Cave 110.77 310 P **PKiKP** 07 50 56.5 -0.8
baz=150
CCM Cathedral Cave 110.77 310 P **PKiKP** 07 50 56.3 -1.1
baz=150
TUL1 Leonard 110.82 305 P **PKiKP** 07 50 56.7 -0.9
baz=148
TUL1 Leonard 110.82 305 P **PKiKP** 07 50 56.6 -0.9
baz=148
BMNY Brushton-Moira 110.86 325 P **PKiKP** 07 50 56.3 -0.3
baz=155,SNR=10.0
STU Stuttgart 110.86 24 IAMs_20 IAMs_20 08 31 39.7
comp=Z,492nm,22.0s
E62A Clayton Lake 111.08 329 P **PKiKP** 07 50 57.4 -0.2
baz=157
E62A P **PKiKP** 07 50 57.4 -0.2
baz=157
WMOK Wichita Mounta 111.12 302 P **PKiKP** 07 50 57.8 -0.4
baz=148
WMOK Wichita Mounta 111.12 302 P **PKiKP** 07 50 57.3 -0.9
baz=148
SFIN Lafayette 111.16 314 P **PKiKP** 07 50 57.4 -0.5
baz=151
SFIN Lafayette 111.16 314 P **PKiKP** 07 50 57.2 -0.8
baz=151
S39A Bolivar 111.30 308 P **PKiKP** 07 50 57.4 -0.9
baz=149
OK031 S. Brethren Rd 111.30 304 IAMs_20 IAMs_20 08 38 23.8
comp=Z,426nm,20.0s
R40A Maddies Statio 111.38 309 P **PKiKP** 07 50 57.6 -0.9
baz=149
P43A Skaggs, Pawnee 111.45 312 P **PKiKP** 07 50 58.4 -0.1
baz=150
O44A Mansfield 111.49 313 P **PKiKP** 07 50 58.6 0.0
baz=150
L48A N Adams 111.55 317 P **PKiKP** 07 50 57.8 -0.9
baz=151
L48A P **PKiKP** 07 50 57.8 -0.9
baz=151
AAM Ann Arbor 111.59 317 P **PKiKP** 07 50 58.0 -0.7
baz=152
AAM Ann Arbor 111.59 317 P **PKiKP** 07 50 57.9 -0.8
baz=152
K50A Casco 111.64 318 P **PKiKP** 07 50 57.8 -1.0
baz=152
K50A P **PKiKP** 07 50 57.8 -1.0
baz=152

GERES GERESS Array B 111.94 27 PKiKP **PKiKP** 07 50 59.3 0.0
comp=Z,1.3nm,0.7s,baz=224,slow=2.7,SNR=10.0
GERES PKKPbc **PKKPbc** 08 01 50.3 -0.7
comp=Z,0.3nm,0.3s,baz=55,slow=5.1,SNR=5.2
T35B Sooner Cattle 111.98 305 P **PKiKP** 07 50 59.5 -0.2
baz=148
HYBB Hyderabad (bro 112.01 93 *e*Pdif **Pdif** 07 47 02.7 -1.1
HYBB *e*PKiKP **PKiKP** 07 51 00.9 +0.5
HYBB *e*PP **PP** 07 51 44.9 +0.3
HYBB *e*PKSdf **PKSdf** 07 54 37.4 +0.1
HYBB *e*SKSdf **SKSdf** 07 58 10.6 +1.5
HYBB *e*SKKSac **SKKSac** 07 58 42.4 -1.0
HYBB *e*SKKPbc **SKKPbc** 08 05 32.7 +3.1
HYBB *e*PKKSbc PKKSbc 08 05 36.6 +2.7
CKRC Cesky Krumlov 112.06 27 *e*PS PS 08 01 11.5 -5.7
TIRR Tirgusor 112.06 39 IAMs_20 IAMs_20 08 45 16.8
comp=Z,476nm,19.0s
HDIL Hopedale 112.15 312 P **PKiKP** 07 50 59.8 0.0
baz=150
HDIL Hopedale 112.15 312 P **PKiKP** 07 50 59.3 -0.6
baz=150
KHC Kasperske Hory 112.17 27 *e*PS PS 08 01 24.0 +5.7
KHC AMS AMS 08 30 30.0
comp=Z,500nm,25.6s
EPT El Paso 112.18 295 IAMs_20 IAMs_20 08 35 50.0
comp=Z,668nm,22.0s
MSTX Muleshoe 112.27 299 P **PKiKP** 07 50 60.0 -0.5
baz=147,SNR=9.1
MSTX Muleshoe 112.27 299 P **PKiKP** 07 50 59.8 -0.7
baz=147
P40A Paris 112.35 310 P **PKiKP** 07 50 59.7 -0.5
baz=149
AMTX Amarillo 112.54 300 P **PKiKP** 07 51 00.9 0.0
baz=147,SNR=8.7
AMTX Amarillo 112.54 300 P **PKiKP** 07 51 00.4 -0.5
baz=147
TREC Trest 112.78 28 *e*PS PS 08 01 31.8 +7.9
TREC AMS AMS 08 32 10.0
comp=Z,500nm,19.6s
JAVC Velka Javorina 112.92 29 *e*PKiKP **PKiKP** 07 51 02.2 +1.1
NKC Novy Kostel 112.95 25 *e*PS PS 08 01 31.0 +5.6
NKC AMS AMS 08 30 10.0
comp=Z,500nm,30.2s
L44A Lake County Fo 113.03 314 P **PKiKP** 07 51 01.8 +0.3
baz=150
P38A Dawn 113.03 309 P **PKiKP** 07 51 01.1 -0.5
baz=148
VRAC Vranov 113.07 28 *e*PKiKP **PKiKP** 07 51 01.5 +0.2
PRU Pruhonice 113.20 27 *e*PS PS 08 01 32.7 +5.1
PRU AMS AMS 08 32 10.0
comp=Z,400nm,23.4s
121A Cookes Peak, D 113.42 294 P **PKiKP** 07 51 03.4 +0.6
baz=146
121A Cookes Peak, D 113.42 294 P **PKiKP** 07 51 02.8 0.0
baz=146,SNR=21
PVCC Panska Ves 113.71 27 *e*PS PS 08 01 38.2 +5.9
PVCC AMS AMS 08 32 30.0
comp=Z,500nm,24.8s
MORC Moravsky Berou 113.74 29 *e*PKiKP **PKiKP** 07 51 01.6 -1.0
KRLC Kraliky 113.82 28 *e*PS PS 08 01 40.8 +7.4
KRLC AMS AMS 08 33 20.0
comp=Z,300nm,25.4s
KSU1 Kansas State U 113.86 306 P 07 51 02.8
baz=148,SNR=7.0
KSU1 Kansas State U 113.86 306 P 07 51 02.6
baz=148
OKC Ostrava-Krasne 113.95 29 *e*PS PS 08 00 50.0 -44
DPC Dobruska-Polom 113.96 28 *e*SP SP 08 01 22.4 -7.5
DPC AMS AMS 08 33 20.0
comp=Z,300nm,17.7s
UPC Upice 114.03 28 *e*PS PS 08 01 29.2 -6.1
UPC AMS AMS 08 33 40.0
comp=Z,200nm,23.3s
CLL Collm 114.08 25 IAMs_20 IAMs_20 08 34 26.9
comp=Z,339nm,20.0s
CLL Collm 114.08 25 *e*PKiKP **PKiKP** 07 51 05.0 +1.8
CLL *e* 07 52 01.0
CLL Collm 114.08 25 *e*Pdif **Pdif** 07 47 17.0 +4.9
CLL *e*PKiKP **PKiKP** 07 51 05.0 +1.8
CLL *e*PP **PP** 07 52 01.0 +1.9
CLL *e*PS **PS** 08 01 38.0 +2.4
CLL *e*SS SS 08 07 47.0 +0.7
CLL *e*SSS SSS 08 11 54.0
CLL *e*SSSS 08 15 12.0
CLL *ex* x 08 19 06.0
OSTC Ostas 114.13 28 *e*PS PS 08 01 38.6 +2.4
OSTC AMS AMS 08 33 30.0
comp=Z,300nm,25.7s
GLMI Grayling 114.13 318 P PKPdf 07 51 03.4 -0.1
baz=151,SNR=5.9
GLMI Grayling 114.13 318 P PKPdf 07 51 02.9 -0.6
baz=151
R32A Long Quarter, 114.18 304 P PKPdf 07 51 03.9 +0.1
baz=147,SNR=12
Y22A Socorro 114.19 296 P PKPdf 07 51 04.3 0.0
baz=146
L40A Anamoosa 114.19 312 P PKPdf 07 51 03.3 -0.3
baz=149,SNR=5.6
MILM Milestii Mici 114.37 38 *i*PKP PKPdf 07 51 03.0 -0.8
comp=Z,35nm,0.8s
MILM *e*L L 08 27 38.0
MILM LRM MLR 08 40 38.0
comp=Z,160nm,21.5s
MILM Milestii Mici 114.37 38 *c i*PKIKP PKPdf 07 51 03.0 -0.8
MILM *i* 08 01 35.0
MILM pmax pmax
comp=Z,35nm,0.8s
GNI Garni 114.39 52 IAMs_20 IAMs_20 08 38 25.7
comp=Z,552nm,22.0s
JFWS Jewell Farm 114.54 313 P PKPdf 07 51 04.1 -0.2
baz=149,SNR=10
JFWS Jewell Farm 114.54 313 P PKPdf 07 51 03.8 -0.6
baz=149
TUC Tucson 114.68 292 P PKPdf 07 51 05.2 +0.1
baz=145
ANMO Albuquerque 114.78 297 PKKPab PKKPab 08 01 44.1 -2.5
comp=Z,0.8nm,0.7s,baz=301,slow=6.1,SNR=4.0
ANMO Albuquerque 114.78 297 *c i*PKIKP PKPdf 07 51 05.2 -0.1
ANMO pmax pmax
comp=Z,6.0nm,1.0s
ANMO Albuquerque 114.78 297 P PKPdf 07 51 05.1 -0.2
baz=146
ANMO Albuquerque 114.78 297 P PKPdf 07 51 04.9 -0.4
baz=146
SCIA State Center 114.84 310 IAMs_20 IAMs_20 08 39 29.5
comp=Z,487nm,22.0s
SCIA State Center 114.84 310 P **PKPdf** 07 51 04.9 0.0
baz=148,SNR=5.7
SCIA State Center 114.84 310 P **PKPdf** 07 51 04.5 -0.4
baz=148
I42A Draeger Farm, 114.88 315 P **PKPdf** 07 51 04.5 -0.4
baz=149,SNR=9.2
CBKS Cedar Bluff 114.95 304 P **PKPdf** 07 51 05.0 -0.4
baz=146
H43A Windswept, Lux 114.95 316 P **PKPdf** 07 51 05.0 0.0
baz150,SNR=13
K38A Parkersburg 115.29 311 **PKPdf** 07 51 04.7 -1.1
K38A Parkersburg 115.29 311 P **PKPdf** 07 51 05.5 -0.3
baz=148,SNR=10
SOC Sochi 115.30 47 *i* PKIKP **PKiKP** 07 51 07.8 +2.0
SOC *e* 07 52 07.5
SOC *e*PPP PPP 07 54 36.3
SOC *e*PS **PS** 08 01 47.3 +0.4
SOC *e*SS SS 08 08 05.5 +2.9
SOC *e*SSS SSS 08 12 20.0
E46A Sault Ste Mari 115.37 319 **PKPdf** 07 51 04.7 -1.1
E46A Sault Ste Mari 115.37 319 P **PKPdf** 07 51 05.2 -0.6
baz=150
214A Organ Pipe Nat 115.37 290 P **PKPdf** 07 51 06.1 -0.3
baz=145
ANN Anapa 115.48 45 *i* PKIKP **PKiKP** 07 51 07.8 +1.8
ANN *e* 07 57 50.0
ANN pmax pmax
comp=Z,27nm,0.9s
I40A Norwalk 115.52 313 **PKPdf** 07 51 04.9 -1.3
I40A Norwalk 115.52 313 P **PKPdf** 07 51 05.9 -0.3
baz=148,SNR=9.6
T25A Trinidad 115.64 300 **PKPdf** 07 51 06.4 -0.5
T25A Trinidad 115.64 300 P **PKPdf** 07 51 06.6 -0.3
baz=146
X18A Snowflake 116.08 294 **PKiKP** 07 51 08.8 +0.9
ZEI Tsey 116.26 50 *i* PKIKP **PKPdf** 07 51 06.4 -1.5
ZEI pmax pmax
comp=Z,8.0nm,1.8s
E43A Lone Tree Farm 116.31 317 P **PKPdf** 07 51 07.3 -0.4
baz=149

KSCO	Kaye Shedlock'	116.38	302	PKPdf	PKPdf	07 51 08.1	-0.1
KSCO	Kaye Shedlock'	116.38	302	P	PKPdf	07 51 07.7	-0.5
	baz=146						
BGNE	Belgrade	116.43	307	P	PKPdf	07 51 07.3	-0.8
	baz=146						
113A	Mohawk Valley,	116.50	290		PKPdf	07 51 08.1	-0.3
G40A	Rib Lake	116.53	314	P	PKPdf	07 51 07.7	-0.4
	baz=148						
SDCO	Great Sand Dun	116.63	299		PKPdf	07 51 08.6	-0.4
SDCO	Great Sand Dun	116.63	299	P	PKPdf	07 51 08.9	0.0
	baz=145						
SDCO	Great Sand Dun	116.63	299	P	PKPdf	07 51 08.8	-0.2
	baz=145						
KBZ	Khabaz	116.65	49	PKP	PKPdf	07 51 08.5	+0.2
	comp=Z,3.2nm,0.7s,baz=164,slow=2.7,SNR=9.2						
KBZ				PKKPab	PKKPab	08 01 39.7	+2.4
	comp=Z,3.4nm,0.8s,baz=156,slow=2.6,SNR=5.9						
KBZ	Khabaz	116.65	49c	i PKIKP	PKPdf	07 51 08.2	-0.1
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
I37A	Lemond, Waseca	116.69	312		PKPdf	07 51 08.7	+0.2
I37B	Waseca	116.69	312	P	PKPdf	07 51 08.5	0.0
	baz=147						
KIV	Kislovodsk	116.76	49	i PKIKP	PKPdf	07 51 08.4	-0.3
KIV				e		07 52 17.7	
KIV				ePS	PKKPdf	08 02 01.7	+0.5
KIV				eSS	SS	08 08 20.9	-1.0
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,215nm,22.0s						
TOLI2	Tolitoli	116.76	142		PKPdf	07 51 09.0	-0.6
COWI	Conover	116.85	316	P	PKPdf	07 51 08.5	-0.2
	baz=148						
Y14A	Wickenburg	117.08	291		PKPdf	07 51 09.4	-0.2
KRVT	Keravat (AS076	117.13	177	PKKPbc	PKKPbc	08 01 33.0	+0.8
	comp=Z,57nm,0.4s,baz=172,slow=0.6,SNR=7.1						
S22A	4UR Ranch, Cre	117.24	298	P	PKPdf	07 51 10.2	0.0
	baz=145,SNR=26						
GLA	Glamis	117.25	289	P	PKPdf	07 51 10.0	0.0
	baz=144						
D41A	Chassel	117.46	317	P	PKPdf	07 51 09.2	-0.6
	baz=148						
Q24A	Divide	117.47	300	P	PKPdf	07 51 10.2	-0.3
	baz=145						
SPMN	Marine on St.	117.48	313		PKPdf	07 51 09.3	-0.5
SPMN	Marine on St.	117.48	313	P	PKPdf	07 51 09.4	-0.5
	baz=147						
SPMN	Marine on St.	117.48	313	P	PKPdf	07 51 09.1	-0.8
	baz=147,SNR=16						
IKP	In-Ko-Pah, Jac	117.56	288	P	PKPdf	07 51 10.3	-0.3
	baz=144						
WUAZ	Wupatki	117.57	293	PKPdf	PKPdf	07 51 11.0	+0.4
WUAZ	Wupatki	117.57	293	P	PKPdf	07 51 10.3	-0.4
	baz=144,SNR=16						
CBX	Cerro Bola	117.57	287	PKPdf	PKPdf	07 51 11.2	+0.5
MVCO	Mesa Verde	117.58	297	PKPdf	PKPdf	07 51 10.1	-0.6
MVCO	Mesa Verde	117.58	297	P	PKPdf	07 51 10.2	-0.6
	baz=144,SNR=13						
SWSC	Sam W. Stewart	117.65	288	P	PKPdf	07 51 10.3	-0.3
	baz=144						
BLYC	Blythe	117.67	290	PKPdf	PKPdf	07 51 10.8	+0.1
OGNE	Ogallala	117.71	304	P	PKPdf	07 51 10.8	+0.1
	baz=145						
OGNE	Ogallala	117.71	304	P	PKPdf	07 51 10.3	-0.3
	baz=145						
ECSD	EROS Data Cent	117.73	309	PKPdf	PKPdf	07 51 09.8	-0.7
ECSD	EROS Data Cent	117.73	309	P	PKPdf	07 51 10.0	-0.4
	baz=146						
ECSD	EROS Data Cent	117.73	309	P	PKPdf	07 51 09.8	-0.7
	baz=146,SNR=41						
AKASG	Malin Array Be	117.84	36	PKP	PKPdf	07 51 09.7	-0.7
	comp=Z,9.2nm,0.7s,baz=238,slow=1.2,SNR=23						
AKASG				PKKPbc	PKKPbc	08 01 29.6	-0.8
	comp=Z,1.6nm,0.5s,baz=31,slow=4.4,SNR=6.5						
AKASG	Malin Array Be	117.84	36	PKPdf	PKPdf	07 51 10.0	-0.4
AKASG	Malin Array Be	117.84	36	PKIKP	PKPdf	07 51 10.0	-0.4
AKBB	Malin Array Si	117.84	36	PKPdf	PKPdf	07 51 10.2	-0.2
AKBB	Malin Array Si	117.84	36c	i PKIKP	PKPdf	07 51 09.8	-0.6
MAK	Makhachkala	117.87	53	eP	Pdif	07 47 26.7	-2.4
MAK				i		07 51 11.4	
MAK				e		07 51 26.9	
MAK				e		07 52 25.4	
MAK				e		07 58 05.7	
MAK				ePS	PS	08 02 16.6	+6.3
MAK				eSS	SS	08 08 42.1	+6.0
MAK				eSSS	SSS	08 13 01.6	
MAK				pmax	pmax		
	comp=Z,75nm,1.0s						
MAK				MLR	MLR		
	comp=Z,364nm,19.0s						
MONP2	Monument Peak	117.91	288	P	PKPdf	07 51 11.7	+0.2
	baz=144						
PDMCI	Parker Dam,Lak	117.93	291	P	PKPdf	07 51 11.0	-0.2
	baz=144,SNR=25						
SCHQ	Schefferville	117.99	334	PKP	PKPdf	07 51 10.3	-0.3
	comp=Z,38nm,0.6s,baz=122,slow=0.6,SNR=80						
SCHQ				PP	PP	07 52 26.8	+0.3
	comp=Z,9.6nm,0.8s,baz=139,slow=5.3,SNR=4.2						
SCHQ	Schefferville	117.99	334	PKPdf	PKPdf	07 51 10.6	0.0
BC3	Big Chuckawall	118.05	289	P	PKPdf	07 51 11.1	-0.5
	baz=144,SNR=8.8						
E38A	The Farm, Brul	118.17	314	P	PKPdf	07 51 10.5	-0.7
	baz=147						
109C	Camp Elliot, M	118.25	287	P	PKPdf	07 51 11.8	-0.1
	baz=144						
F36A	Milaca	118.29	313	P	PKPdf	07 51 11.0	-0.5
	baz=147						
IRM	Iron Mountain	118.30	290	P	PKPdf	07 51 11.8	-0.1
	baz=144,SNR=15						
ISCO	Idaho Springs	118.36	300	PKPdf	PKPdf	07 51 12.1	-0.1
ISCO	Idaho Springs	118.36	300	PKIKP	PKPdf	07 51 12.1	-0.1
ISCO	Idaho Springs	118.36	300	P	PKPdf	07 51 12.3	+0.1
	baz=144						
ISCO	Idaho Springs	118.36	300	P	PKPdf	07 51 11.8	-0.4
	baz=144,SNR=19						
GEYT	Alibeck	118.46	63	PKP	PKPdf	07 51 11.8	-0.4
	comp=Z,1.7nm,0.4s,baz=62,slow=7.2,SNR=2.2						
SMCO	Snowmass	118.47	299		PKPdf	07 51 12.5	-0.1
PV13	Radium Mtn., P	118.50	297		PKPdf	07 51 11.7	-0.7
TPFO	Pinon Flats	118.50	288	P	PKPdf	07 51 12.4	-0.1
	baz=144						
PFO	Pinyon Flats O	118.51	288	P	PKPdf	07 51 12.2	-0.3
	baz=144						
NEE2	Needles Airpor	118.53	290	P	PKPdf	07 51 12.5	+0.2
	baz=144						
BELC	Belle Mtn. Jos	118.59	289	P	PKPdf	07 51 12.7	+0.1
	baz=144,SNR=20						
U15A	North Rim	118.74	293	PKPdf	PKPdf	07 51 13.0	0.0
MURC	Murrieta	118.87	288	P	PKPdf	07 51 13.1	+0.1
	baz=144						
GMRC	Granite Mounta	119.06	290	P	PKPdf	07 51 13.7	+0.2
	baz=144,SNR=23						
BBRC	Big Bear Solar	119.26	288	P	PKPdf	07 51 14.4	+0.3
	baz=143,SNR=14						
EYMN	Ely	119.27	315	P	PKPdf	07 51 12.7	-0.6
	baz=147						
EYMN	Ely	119.27	315	P	PKPdf	07 51 12.4	-0.9
	baz=147						
SUSD	Miller	119.27	308	P	PKPdf	07 51 13.3	-0.2
	baz=145						
SUSD	Miller	119.27	308	P	PKPdf	07 51 12.8	-0.7
	baz=145						
CIS	Catalina Islan	119.32	287	P	PKPdf	07 51 14.1	+0.2
	baz=143						
F33A	5 Mile Ranch,	119.35	311	P	PKPdf	07 51 13.2	-0.3
	baz=146						
N23A	Red Feather La	119.39	301	P	PKPdf	07 51 13.8	-0.3
	baz=144,SNR=24						
HEC	Hector,Ludlow	119.42	289	P	PKPdf	07 51 14.1	-0.1
	baz=143,SNR=11						
PHWY	Pilot Hill	119.50	302		PKPdf	07 51 13.2	-1.1
BFSC	Mount Baldy Ra	119.61	288	P	PKPdf	07 51 14.4	-0.2
	baz=143,SNR=9.6						
LCMT	Little Creek M	119.66	293		PKPdf	07 51 14.4	-0.2
TUQ	Turquoise Moun	119.71	290	P	PKPdf	07 51 14.5	-0.2
	baz=143						
HOMB	Homborsund	119.73	20	ePKPdf	PKPdf	07 51 14.3	+0.5
SNCC	San Nicolas Is	119.75	286	P	PKPdf	07 51 14.9	+0.2
	baz=143						
KKM	Kota Kinabalu	119.77	135	IAMs_20	IAMs_20	08 34 55.8	
	comp=Z,415nm,20.0s						
O20A	White River Ci	119.82	299	P	PKPdf	07 51 14.4	-0.4
	baz=144,SNR=29						
DECC	Green Verdugo	119.95	287	P	PKPdf	07 51 15.2	0.0
	baz=143						

GSC	Goldstone, Bar	120.03	289	P	PKPdf	07 51 15.1	-0.2
	baz=143						
SHPR	Sheep Range	120.19	291		PKPdf	07 51 15.6	-0.1
Q16A	Castle Valley	120.20	296		PKPdf	07 51 14.8	-0.8
SHOC	Shoshone, Teco	120.25	290	P	PKPdf	07 51 15.6	0.0
	baz=143,SNR=13						
EDW2	Edwards Air Fo	120.29	288	P	PKPdf	07 51 16.1	+0.3
	baz=143,SNR=32						
MVU	Marysvale	120.36	295		PKPdf	07 51 15.9	-0.1
SCZ2	Santa Cruz Isl	120.40	286	P	PKPdf	07 51 16.1	+0.1
	baz=143						
B35A	Bob, Littlefor	120.44	314	P	PKPdf	07 51 14.7	-0.8
	baz=146						
P17A	Butcher Ranch,	120.44	297		PKPdf	07 51 15.7	-0.3
PBUR	Paburge	120.53	29	eP	PKPdf	07 51 15.8	+0.4
PABE	Paberze	120.59	30	eP	PKPdf	07 51 14.6	-0.9
RWWY	Rawlins	120.59	301		PKPdf	07 51 16.0	-0.4
LRMC	Laurel Mtn Rad	120.61	289	P	PKPdf	07 51 16.6	+0.2
	baz=143,SNR=5.7						
D32B	Dogwood Acres,	120.70	311	P	PKPdf	07 51 15.3	-0.7
	baz=145						
MNK	Minsk	120.77	33	i PKIKP	PKPdf	07 51 15.8	-0.1
MNK				i		07 51 30.9	
MNK				i		07 52 46.5	
MNK				i PPP	PPP	07 55 19.2	
MNK				i		07 58 23.3	
MNK				i PS	PS	08 02 32.9	-3.2
MNK				i SS	SS	08 09 14.5	+1.2
MNK				i SSS	SSS	08 13 42.9	
MNK				pmax	pmax		
	comp=Z,43nm,0.8s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,270nm,24.0s						
MNK				MLR	MLR		
	comp=N,20nm,19.0s						
MNK				MLR	MLR		
	comp=E,52nm,22.0s						
MNK	Minsk	120.77	33	i PKP	PKPdf	07 51 15.8	-0.1
	comp=E,4.0nm,0.8s						
MNK				i PKP	PKPdf	07 51 15.8	-0.1
	comp=N,7.0nm,0.8s						
MNK				i PKP	PKPdf	07 51 15.8	-0.1
	comp=Z,43nm,0.8s,baz=29						
MNK				i pPKP	pPKPdf	07 51 30.9	+2.8
MNK				i PP	PP	07 52 46.5	+0.9
MNK				i PPP	PPP	07 55 19.3	
MNK				i SKS	SKSdf	07 58 23.4	-0.5
MNK				i PS	PS	08 02 32.9	-3.2
MNK				i SS	SS	08 09 14.5	+1.2
MNK				i SSS	SSS	08 13 42.9	
MNK				i LR	LR	08 36 31.9	
MNK				i LRM	MLR	08 41 04.0	
	comp=Z,270nm,24.3s						
MNK				i LRM	MLR	08 41 06.6	
	comp=N,20nm,19.2s						
MNK				i LRM	MLR	08 42 09.2	
	comp=E,52nm,21.7s						
SBC	Santa Barbara	120.79	286	P	PKPdf	07 51 17.3	+0.7
	baz=143						
NACGM	Naroch	120.82	32⇑	ePKP	PKPdf	07 51 15.5	-0.5
	comp=Z,36nm,0.8s,baz=210						
MPMC	Manual Prospec	120.97	289	P	PKPdf	07 51 17.4	+0.2
	baz=143						
FURC	Furnace Creek,	120.99	290	P	PKPdf	07 51 17.5	+0.6
	baz=143,SNR=14						
VSVD	Vaisvydziai	121.00	30	eP	PKPdf	07 51 16.4	+0.1
IIGN	Ignalina	121.06	32	eP	PKPdf	07 51 16.8	+0.3
K22A	Casper	121.06	302	P	PKPdf	07 51 16.6	-0.5
	baz=143						
K22A	Casper	121.06	302	P	PKPdf	07 51 16.6	-0.5
	baz=143						
TPNV	Topopah Spring	121.07	291	PKPdf	PKPdf	07 51 17.7	+0.4
TPNV	Topopah Spring	121.07	291	PKIKP	PKPdf	07 51 17.7	+0.4
TPNV	Topopah Spring	121.07	291	P	PKPdf	07 51 17.9	+0.6
	baz=143,SNR=56						
ISA	Isabella, Lake	121.14	288	PKPdf	PKPdf	07 51 17.7	+0.3
ISA	Isabella, Lake	121.14	288	PKIKP	PKPdf	07 51 17.7	+0.3
ISA	Isabella, Lake	121.14	288	P	PKiKP	07 51 18.1	+0.6
	baz=143,SNR=21						
RSSD	Black Hills	121.15	304	P	PKPdf	07 51 16.8	-0.6
	baz=143						
RSSD	Black Hills	121.15	304	P	PKPdf	07 51 16.7	-0.6
	baz=143						
PKM	Mcpherson Peak	121.20	287	P	PKiKP	07 51 18.5	+0.7
	baz=143,SNR=9.8						
AGMN	Agassiz Nation	121.20	313	P	PKPdf	07 51 16.3	-0.6
	baz=145						
AGMN	Agassiz Nation	121.20	313	P	PKPdf	07 51 16.1	-0.9
	baz=145						
ISAL	Salakas	121.22	31	eP	PKPdf	07 51 17.2	+0.4
CWC	Cottonwood Cre	121.56	289	P	PKPdf	07 51 18.4	+0.1
	baz=142						
VES	Vestal, Richgr	121.59	288	P	PKPdf	07 51 17.7	-0.4
	baz=142,SNR=9.2						
SMMC	Simmler	121.63	287	P	PKiKP	07 51 19.3	+0.9
	baz=142,SNR=8.8						
GRAC	Grapevine Rang	121.65	290	P	PKPdf	07 51 18.5	+0.2
	baz=142,SNR=23						
E28A	Huff	121.72	308	P	PKPdf	07 51 17.9	-0.2
	baz=144						
SUE	Sulen	121.76	17	eP	PKPdf	07 51 17.8	+0.2
R11A	Troy Canyon, C	121.85	292		PKPdf	07 51 18.8	0.0
R11A	Troy Canyon, C	121.85	292	P	PKPdf	07 51 18.7	-0.1
	baz=142						
VORR	Voronezh	121.93	42	ePKIKP	PKPdf	07 51 17.5	-0.7
VORR				pmax	pmax		
	comp=Z,50nm,0.3s						
SKAR	Skarslia	121.97	19	eP	PKPdf	07 51 18.1	0.0
DUG	Dugway, Tooele	121.99	296	P	PKPdf	07 51 19.0	0.0
	baz=142,SNR=47						
HYA	Hoyanger	122.08	17	eP	PKPdf	07 51 18.7	+0.5
PAGB	Antelope Grade	122.08	287		PKiKP	07 51 20.1	+0.8
TIN	Tinemaha, Big	122.12	289	P	PKPdf	07 51 19.3	0.0
	baz=142						
MDND	Maddock	122.30	310	P	PKPdf	07 51 18.6	-0.6
	baz=144						
MDND	Maddock	122.30	310	P	PKPdf	07 51 18.4	-0.8
	baz=144						
FOO	Floro	122.32	17	eP	PKiKP	07 51 19.9	+1.0
VRH	Novokhopyorsk	122.43	43	ePKIKP	PKPdf	07 51 18.5	-0.7
VRH				pmax	pmax		
	comp=Z,50nm,0.6s						
TPH	Tonopah	122.43	291		PKPdf	07 51 20.4	+0.4
TPH	Tonopah	122.43	291	PKIKP	PKPdf	07 51 20.4	+0.4
NIL	Nilore	122.47	78		PKiKP	07 51 20.7	+0.5
NIL	Nilore	122.47	78	IAMs_20	IAMs_20	08 38 30.1	
	comp=Z,397nm,22.0s						
NIL	Nilore	122.47	78	PKIKP	PKiKP	07 51 20.7	+0.5
BW06	Boulder Array	122.51	300		PKPdf	07 51 19.0	-1.0
BW06	Boulder Array	122.51	300	P	PKPdf	07 51 19.0	-1.0
	baz=142						
PD31	Pinedale Array	122.51	300	PKPdf	PKPdf	07 51 19.0	-1.0
PDAR	Pinedale Array	122.51	300	PKP	PKPdf	07 51 18.9	-1.0
	comp=Z,8.0nm,0.6s,baz=133,slow=4.8,SNR=62						
PDAR				PKKPab	PKKPbc	08 01 14.3	+1.1
	comp=Z,0.6nm,0.9s,baz=1.6,slow=3.2,SNR=3.6						
PDAR	Pinedale Array	122.51	300	PKPdf	PKPdf	07 51 19.0	-1.0
NC602	NORSAR Array S	122.59	21	eP	PKPdf	07 51 19.1	-0.1
LPSR	Galich'ya Gora	122.61	41	ePKIKP	PKPdf	07 51 18.5	-1.0
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
ULM	Lac du Bonnet	122.80	314	PKP	PKPdf	07 51 18.9	-1.0
	comp=Z,88nm,0.8s,baz=142,slow=1.6,SNR=84						
ULM	Lac du Bonnet	122.80	314c	i PKIKP	PKPdf	07 51 18.8	-1.2
NB2	NORSAR Subarra	122.81	20	PKPdf	PKPdf	07 51 19.9	+0.2
	comp=Z,3.5nm,0.7s,baz=202,slow=1.9						
NB2	NORSAR Subarra	122.81	20	PKPdf	PKPdf	07 51 19.9	+0.2
	baz=202,slow=1.9						
NOA	NORSAR Array B	122.81	20	PKP	PKPdf	07 51 19.9	+0.2
	comp=Z,13nm,0.9s,baz=202,slow=1.7,SNR=23						
NOA				PKKPbc	PKKPbc	08 01 12.0	-0.1
	comp=Z,3.3nm,0.8s,baz=22,slow=2.9,SNR=11						
MLAC	Mammoth, Mammo	122.87	289	P	PKPdf	07 51 20.2	-0.7
	baz=142						
MDPB	Devils Postpil	123.00	289		PKPdf	07 51 21.9	+0.7
AKN	Aaknes	123.17	18	eP	PKiKP	07 51 21.2	+0.6
NVAR	Mina Array Bea	123.24	290	PKP	PKPdf	07 51 22.2	+0.7
	comp=Z,15nm,0.7s,baz=142,slow=3.2,SNR=131						
NVAR				PKKPab	PKKPab	08 01 10.2	0.0
	comp=Z,0.7nm,0.7s,baz=287,slow=3.8,SNR=5.3						
NVAR	Mina Array Bea	123.24	290	PKPdf	PKiKP	07 51 22.8	+1.0

CMAR	Chiang Mai Arr	123.27	111	PKP	PKiKP	07 51 22.2	+0.1
	comp=Z,23nm,0.8s,baz=233,slow=3.8,SNR=74						
CMAR				PKKPab	PKKPbc	08 01 11.7	+2.2
	comp=Z,1.0nm,0.3s,baz=16,slow=3.0,SNR=4.9						
CMAR	Chiang Mai Arr	123.27	111	PKPdf	PKPdf	07 51 22.0	+0.1
DOMB	Dombas	123.38	19	ePKPdf	PKPdf	07 51 21.3	+0.5
MTSE	Matsula	123.40	28	eP	PKPdf	07 51 20.5	-0.2
REDW	Red Top Meadow	123.56	299		PKPdf	07 51 21.7	-0.3
CHTO	Chiang Mai	123.57	110	IAMs_20	IAMs_20	08 33 24.2	
	comp=Z,505nm,20.0s						
MOL	Molde	123.63	18	eP	PKPdf	07 51 21.4	+0.3
TPAW	Teton Pass	123.71	299	IAMs_20	IAMs_20	08 43 52.3	
	comp=Z,360nm,21.0s						
FXWY	Fox Creek	123.86	299	IAMs_20	IAMs_20	08 44 06.2	
	comp=Z,320nm,22.0s						
VSU	Vasula	123.92	30	i PKIKP	PKPdf	07 51 22.1	+0.3
VSU				pmax	pmax		
	comp=Z,97nm,0.9s						
VSU	Vasula	123.92	30	eP	PKPdf	07 51 20.9	-0.9
OBN	Obninsk	123.92	38c	i PKIKP	PKPdf	07 51 21.8	-0.1
OBN				e		07 53 12.9	
OBN				pmax	pmax		
	comp=Z,35nm,0.6s						
OBN				MLR	MLR		
	comp=Z,177nm,19.0s						
IMW	Indian Meadow	124.02	300	IAMs_20	IAMs_20	08 43 03.4	
	comp=Z,394nm,22.0s						
LAO	LASA Array	124.12	305	P	PKPdf	07 51 22.9	+0.2
	baz=142						
LAO	LASA Array	124.12	305	P	PKPdf	07 51 22.7	-0.1
	baz=142,SNR=105						
NUUK	Nuuk	124.20	346	eP	PKPdf	07 51 21.7	-0.5
RLMT	Red Lodge	124.22	302	P	PKPdf	07 51 22.9	-0.3
	baz=141						
H17A	Grant Village	124.24	300	P	PKPdf	07 51 23.2	-0.2
	baz=141						
ANGG	Ammassalik, Gr	124.37	354	i P	PKiKP	07 51 23.4	+0.6
YNR	Norris Junctio	124.54	300		PKPdf	07 51 24.7	+0.9
DGMT	Dagmar	124.66	307	P	PKPdf	07 51 23.8	+0.1
	baz=142						
DGMT	Dagmar	124.66	307	P	PKPdf	07 51 23.5	-0.2
	baz=142						
MOS	Moscow	124.78	38	i PKIKP	PKPdf	07 51 22.5	-1.0
MOS				e		07 53 12.1	
MEF	Metsahovi	124.86	28	eP	PKPdf	07 51 23.6	+0.1
GCMT	Greycliff	124.92	302		PKPdf	07 51 24.3	-0.1
RAF	Rauma	124.95	26	eP	PKPdf	07 51 23.9	+0.2
HEL	Helsinki	124.96	28	PKIKP	PKPdf	07 51 17.4	-6.3
GAR	Garm	125.17	71	PKPdf	PKPdf	07 51 25.2	+0.1
HLID	Hailey	125.36	297	P	PKPdf	07 51 25.5	+0.2
	baz=140						
BOZ	Bozeman (W)	125.65	300	P	PKPdf	07 51 26.0	+0.2
	baz=140						
DY2G	Dye2	125.85	350	i P	PKPdf	07 51 25.6	0.0
NSS	Namsos	126.18	19	eP	PKiKP	07 51 27.2	+0.8
NSS				IAmb	IAmb	07 51 28.4	
	comp=Z,19nm,0.9s						
FINES	FINESS Array B	126.34	28	PKP	PKPdf	07 51 26.4	0.0
	comp=Z,16nm,0.6s,baz=168,slow=2.1,SNR=75						
FINES				PP	PP	07 53 23.9	+1.0
	comp=Z,3.7nm,0.8s,baz=267,slow=2.6,SNR=2.6						
FINES	FINESS Array B	126.34	28	PKPdf	PKPdf	07 51 24.8	-1.6
FIA1	FINESS Array S	126.34	28	PKPdf	PKPdf	07 51 25.9	-0.5
WVOR	Wild Horse Val	126.49	293		PKPdf	07 51 28.3	+0.8
WVOR	Wild Horse Val	126.49	293	PKIKP	PKPdf	07 51 28.3	+0.8
EGMT	Eagleton	126.68	304	IAMs_20	IAMs_20	08 46 54.7	
	comp=Z,532nm,22.0s						
EGMT	Eagleton	126.68	304	P	PKPdf	07 51 27.9	+0.3
	baz=140,SNR=53						
SOEG	Soedalen	126.71	357	i P	PKPdf	07 51 26.9	0.0
SFJD	Kangerlussuaq	126.79	348	i P	PKPdf	07 51 26.4	-0.6
IUG	Iuzhnay	127.44	69	ePKIKP	PKPdf	07 51 28.6	-0.7
IUG	Iuzhnay	127.44	69	ePKP	PKPdf	07 51 28.6	-0.7
	baz=69						
MSO	Missoula	127.63	300	IAMs_20	IAMs_20	08 45 31.9	
	comp=Z,407nm,20.0s						
MSO	Missoula	127.63	300	P	PKPdf	07 51 29.6	+0.1
	baz=139						
ICESG	Greenland Ices	127.94	354	i P	PKPdf	07 51 29.2	-0.4
L04D	Klamath Falls	128.10	290	P	PKPdf	07 51 30.4	-0.2
	baz=139						
MOR8	Moi Rana	128.11	19	ePKPdf	PKPdf	07 51 30.2	+0.5
ABKAR	Akbulak array	128.13	56	PKPdf	PKPdf	07 51 30.1	-0.1
ABKAR	Akbulak array	128.13	56	PKPdf	PKPdf	07 51 30.4	+0.2
K04D	Chiloquin, OR	128.14	291	P	PKPdf	07 51 30.7	0.0
	baz=139,SNR=5.1						
KONS	Konsvik	128.19	19	eP	PKPdf	07 51 30.3	+0.6
KONS				IAmb	IAmb	07 51 32.4	
	comp=Z,57nm,1.1s						
J05D	Fort Rock, OR	128.38	292	P	PKPdf	07 51 31.2	+0.1
	baz=139,SNR=25						
KK31	Karatay Array	128.39	68	PKPdf	PKPdf	07 51 31.0	+0.1
KK31	Karatay Array	128.39	68	PKIKP	PKPdf	07 51 31.0	+0.1
KKAR	Karatay Array	128.39	68	PKPdf	PKPdf	07 51 30.4	-0.6
KKAR	Karatay Array	128.39	68	PKIKP	PKPdf	07 51 30.4	-0.6
KSH	Kashi	128.39	75	PKP	PKPdf	07 51 31.4	+0.2
KHLH	Kahului Airpor	128.46	244		PKiKP	07 51 33.2	+0.9
JTMT	Jette	128.47	300	PKPdf	PKPdf	07 51 30.8	-0.3
LSA	Lhasa	128.62	96	IAMs_20	IAMs_20	08 38 56.3	
	comp=Z,433nm,20.0s						
DZA	Taraz	128.63	69	ePKIKP	PKPdf	07 51 31.0	-0.4
DZA	Taraz	128.63	69	ePKP	PKPdf	07 51 31.1	-0.4
	baz=69						
L02F	Cave Junction	128.65	289	P	PKPdf	07 51 31.7	+0.2
	baz=139,SNR=6.6						
J04D	Umpqua Nationa	128.77	291	P	PKPdf	07 51 32.2	+0.2
	baz=138,SNR=16						
QIZ	Qiongzhong	128.87	121	PKP	PKPdf	07 51 32.6	0.0
QIZ				PP	PP	07 53 41.6	+1.9
QIZ				SS	SS	08 10 58.4	+3.4
QIZ				LR	LR		
	comp=Z,490nm,16.1s						
QIZ				LR	LR		
	comp=Z,310nm,14.9s						
QIZ				LR	LR		
	comp=Z,470nm,18.2s						
FCC	Fort Churchill	128.97	321	PKPdf	PKPdf	07 51 31.0	-0.4
FCC	Fort Churchill	128.97	321	PKIKP	PKPdf	07 51 31.0	-0.4
ILULI	Ilulissat	128.98	349		PKPdf	07 51 31.0	-0.2
ILULI				IAMs_20	IAMs_20	08 39 10.8	
	comp=Z,394nm,20.0s						
ILULI	Ilulissat	128.98	349	PKIKP	PKPdf	07 51 31.0	-0.2
ILULI	Ilulissat	128.98	349	i P	PKPdf	07 51 30.9	-0.3
K02D	Willamette Mer	129.12	290	P	PKPdf	07 51 32.8	+0.3
	baz=138,SNR=11						
I05D	Terrebonne, OR	129.22	293	P	PKPdf	07 51 33.1	+0.5
	baz=138,SNR=26						
AML	Almayashu	129.22	71	P	PKiKP	07 51 33.7	0.0
	SNR=14						
WALA	Waterton Lakes	129.28	302	PKPdf	PKPdf	07 51 32.5	-0.1
I04A	Tendick Farm,	129.33	292	P	PKPdf	07 51 32.6	-0.2
	baz=138,SNR=12						
FAUS	Fauske	129.35	19	eP	PKPdf	07 51 32.2	+0.2
FAUS				IAmb	IAmb	07 51 32.8	
	comp=Z,74nm,1.0s						
KLMR	Klimovskoe	129.51	35	ePKIKP	PKPdf	07 51 31.1	-1.3
KLMR				e		07 53 44.8	
KLMR				pmax	pmax		
	comp=Z,151nm,1.3s						
KLMR	Klimovskoe	129.51	35	ePKPdf	PKPdf	07 51 31.2	-1.2
KLMR				AMP		07 51 33.5	
	comp=Z,151nm,1.3s						
KLMR				ePP	PP	07 53 44.8	+1.0
KLMR				e		07 54 46.8	
J01E	Myrtle Point	129.60	290	P	PKPdf	07 51 33.4	+0.2
	baz=138						
EKS2	Erkin-Say	129.66	71	P	PKPdf	07 51 34.0	+0.5
	SNR=14						
KIP	Kipapa	129.66	243c	i PKIKP	PKiKP	07 51 35.7	+0.9
KIP				pmax	pmax		
	comp=Z,129nm,1.7s						
I03D	Drain, OR	129.72	291	P	PKiKP	07 51 34.5	+0.4
	baz=138						
STEI	Steigen	129.84	19	eP	PKPdf	07 51 33.0	+0.1
STEI				IAmb	IAmb	07 51 33.7	
	comp=Z,43nm,1.0s						
G05D	Wamic, OR	129.88	294	P	PKPdf	07 51 34.0	+0.2
	baz=138,SNR=6.0						
AAK	Ala-Archa	129.99	72	P	PKPdf	07 51 34.7	+0.5
	SNR=7.5						
AAK	Ala-Archa	129.99	72		PKPdf	07 51 34.4	+0.2
AAK	Ala-Archa	129.99	72	PKIKP	PKPdf	07 51 34.4	+0.2
AAK				MLR	MLR		
	comp=Z,800nm,21.0s						
H04D	Lebanon	130.03	292	P	PKPdf	07 51 34.1	+0.1

baz=138,SNR=18
NEW Newport 130.14 299 P **PKPdf 07 51 33.6 -0.5**
baz=137,SNR=13
KBK Karagaybulak 130.23 72 P **PKPdf 07 51 34.6 0.0**
SNR=5.2
I02E Swisshome, OR 130.26 291 P **PKPdf 07 51 34.6 +0.2**
baz=138
USP Ospenovka 130.46 71 P **PKPdf 07 51 35.0 +0.1**
SNR=11
ULHL Ulahol 130.57 73 P **PKPdf 07 51 35.9 +0.5**
SNR=5.2
SGDS Sogindy 130.66 71 *e*PKIKP **PKPdf 07 51 34.6 -0.7**
SGDS Sogindy 130.66 71 *e*PKP **PKPdf 07 51 34.6 -0.7**
baz=71
TKM2 Tokmak 2 130.75 72 P **PKPdf 07 51 35.5 -0.2**
SNR=7.8
G03D McMinnville, O 130.79 292 P **PKPdf 07 51 36.0 +0.6**
baz=137
KIRV Kirov 130.98 42 *c i*PKIKP **PKPdf 07 51 34.7 -0.6**
F04D Rainier, OR 131.30 293 P **PKPdf 07 51 36.9 +0.6**
baz=137
SUMG Summit 131.33 355 PKPdf **PKPdf 07 51 36.5 +0.4**
SUMG Summit 131.33 355 PKIKP **PKIKP 07 51 36.5 +0.4**
SUMG Summit 131.33 355 *i* P **PKPdf 07 51 36.8 +0.7**
PZH PanZhiHua 131.42 108 PKP **PKiKP 07 51 38.8 +0.4**
PZH PP PP 07 54 03.8 +7.2
PZH AMB AMB
comp=Z,170nm,4.1s
PZH LR LR
comp=Z,600nm,18.6s
PZH LR LR
comp=Z,530nm,19.2s
PZH LR LR
comp=Z,730nm,21.1s
BTLS Baital 131.54 69 *ce*PKIKP **PKPdf 07 51 36.2 -0.6**
BTLS *e* 07 53 56.3
BTLS Baital 131.54 69⇑ *e*PKP **PKPdf 07 51 36.2 -0.6**
baz=69
BTLS *e*PP **PP 07 53 56.4 -0.9**
baz=69
AAA Alma-Ata 131.61 73 *e*PKIKP **PKPdf 07 51 36.4 -0.7**
AAA Alma-Ata 131.61 73 *e*PKP **PKPdf 07 51 36.5 -0.7**
baz=73
D05A Enumclaw 131.61 295 PKPdf 07 51 37.7 +0.8
MDOK Medeo 131.65 73 *e*PKIKP **PKPdf 07 51 35.9 -1.4**
MDOK Medeo 131.65 73 *e*PKP **PKPdf 07 51 36.0 -1.4**
baz=73
KUU Kurty 131.83 72 *ce*PKIKP **PKPdf 07 51 36.2 -1.3**
KUU Kurty 131.83 72⇑ *e*PKP **PKPdf 07 51 36.2 -1.3**
baz=72
PRGR Permogore 132.00 37 *e*PKIKP **PKPdf 07 51 34.4 -2.7**
CHKK Chushkaly 132.12 72 *e*PKIKP **PKPdf 07 51 36.6 -1.4**
CHKK Chushkaly 132.12 72 *e*PKP **PKPdf 07 51 36.6 -1.4**
baz=72
JETT Jettan, Norway 132.17 20 *e*P **PKPdf 07 51 37.0 -0.3**
JETT IAmb IAmb 07 51 43.4
comp=Z,19nm,0.7s
SATY Saty 132.25 74 *e*PKIKP **PKPdf 07 51 37.2 -1.2**
SATY Saty 132.25 74 *e*PKP **PKPdf 07 51 37.2 -1.2**
baz=74
UZB Uzynbulak 132.62 74 *e*PKIKP **PKPdf 07 51 38.8 -0.4**
UZB Uzynbulak 132.62 74 *e*PKP **PKPdf 07 51 38.8 -0.4**
baz=75
ARU Arti 132.81 49 PKPdf **PKPdf 07 51 39.4 +0.6**
ARU Arti 132.81 49 *i* PKIKP **PKPdf 07 51 39.6 +0.8**
ARU MLR MLR
comp=Z,418nm,20.0s
SHLS Shalkode 132.85 75 *e*PKIKP **PKPdf 07 51 39.5 0.0**
SHLS Shalkode 132.85 75 *e*PKP **PKPdf 07 51 39.5 0.0**
baz=75
UPNV Upernavik 132.91 348 *i* P **PKPdf 07 51 39.4 +0.8**
ARA0 ARCESS Array S 133.10 22 *e*PKPdf **PKPdf 07 51 37.4 -1.7**
ARCES ARCESS Array B 133.10 22 PKhKP PKPpre 07 51 25.4
comp=Z,5.1nm,0.8s,baz=201,slow=2.3,SNR=9.6
ARCES PKP **PKPdf 07 51 38.0 -1.0**
comp=Z,16nm,0.6s,baz=190,slow=1.5,SNR=25
ARCES PP **PP 07 54 05.4 -1.5**
comp=Z,8.0nm,0.9s,baz=205,slow=6.0,SNR=5.4
APA Apatity 133.20 27⇑ *i*PKIKP **PKPdf 07 51 33.2 -6.0**
APA *e* 07 54 07.0
APA pmax pmax
comp=Z,20nm,0.9s
HAMF Hammerfest 133.69 20 *e*P **PKPdf 07 51 39.5 -0.6**
HAMF IAmb IAmb 07 51 46.2
comp=Z,24nm,0.8s
LVZ Lovozero 133.75 27 *c i*PKIKP **PKPdf 07 51 39.7 -0.7**
LVZ pmax pmax
comp=Z,115nm,2.5s
SVE Sverdlovsk 133.90 50 *e*PKIKP **PKPdf 07 51 40.4 -0.5**
SVE pmax pmax
comp=Z,33nm,1.4s
BRZS Berezniki 134.39 63 *e*PKIKP **PKPdf 07 51 41.3 -0.8**
BRZS Berezniki 134.39 63 *e*PKP **PKPdf 07 51 41.3 -0.8**
baz=64
DAG Danmarks Havn 135.32 2 *i* P **PKPdf 07 51 42.9 -0.1**
BRVK Borovoye 135.40 59 PKPdf **PKPdf 07 51 44.3 +0.4**
BRVK Borovoye 135.40 59 *i* PKIKP **PKPdf 07 51 43.7 -0.1**
BRVK pmax pmax
comp=Z,26nm,0.9s
GOMU GeErMu 135.62 93 PKP **PKPdf 07 51 45.2 -0.1**
GOMU PP **PP 07 54 21.7 -2.0**
GOMU AMB AMB
comp=Z,76nm,5.0s
GOMU LR LR
comp=Z,160nm,16.7s
GOMU LR LR
comp=Z,120nm,16.4s
GOMU LR LR
comp=Z,170nm,16.3s
CD2 Chengdu 136.04 107 PKP **PKPdf 07 51 45.8 0.0**
BJO1 Bjornoya 136.20 16 *e*P **PKPdf 07 51 46.0 +1.3**
MAKZ Makanchi 136.70 73 PKPdf 07 51 46.5 0.0
MAKZ IAmb_20 IAmb_20 08 52 40.4
comp=Z,474nm,22.0s
MAKZ Makanchi 136.70 73 PKIKP **PKPdf 07 51 46.5 0.0**
MAKZ MLR MLR
comp=Z,500nm,22.0s
MK31 Makanchi Array 136.84 73 PKPdf 07 51 47.2 +0.4
MK31 Makanchi Array 136.84 73 PKIKP **PKPdf 07 51 47.2 +0.4**
MKAR Makanchi Array 136.84 73 PKhKP PKPpre 07 51 34.5
comp=Z,4.2nm,0.8s,baz=220,slow=2.5,SNR=27
MKAR PKP **PKPdf 07 51 46.4 -0.4**
comp=Z,10.0nm,0.9s,baz=265,slow=3.0,SNR=17
MKAR PKKP **PKKPdf 08 01 20.8 -1.7**
comp=Z,1.4nm,0.8s,baz=41,slow=2.4,SNR=5.8
MKAR Makanchi Array 136.84 73 PKPdf 07 51 47.2 +0.4
MKAR Makanchi Array 136.84 73 PKIKP **PKPdf 07 51 47.2 +0.4**
WMQ Urumqi 137.51 80 *e*PKP **PKPdf 07 51 49.2 +1.0**
WMQ LR LR
comp=Z,400nm,22.9s
WMQ LR LR
comp=Z,270nm,21.5s
WMQ LR LR
comp=Z,370nm,20.7s
KURK Kurchatov 137.69 66 PKiKP 07 51 49.8 -0.3
KURK Kurchatov 137.69 66 *d i*PKIKP **PKiKP 07 51 50.3 +0.2**
KURK pmax pmax
comp=Z,16nm,0.8s
HSPB Hornsund (broa 137.90 13 *e*P **PKPdf 07 51 48.9 +1.1**
SEM Semipalatinsk 138.27 68 *e*PKIKP **PKPdf 07 51 46.6 -2.9**
SEM Semipalatinsk 138.27 68 *e*PKP **PKPdf 07 51 46.6 -2.9**
baz=68
ZSN Zaisan 138.58 74 *e*PKIKP **PKPdf 07 51 48.7 -1.2**
ZSN Zaisan 138.58 74 *e*PKP **PKPdf 07 51 48.8 -1.2**
baz=74
YKA Yellowknife Ar 138.75 315 PKhKP PKPpre 07 51 40.5
comp=Z,1.6nm,0.5s,baz=112,slow=3.9,SNR=20
YKA PKP **PKPdf 07 51 49.8 0.0**
comp=Z,198nm,0.7s,baz=124,slow=2.3,SNR=323
YKA PP PP 07 54 35.3 -7.2
comp=Z,2.6nm,0.7s,baz=123,slow=5.9,SNR=3.9
YKA SKP 07 55 19.5
comp=Z,10nm,0.8s,baz=126,slow=2.6,SNR=11
SPA0 Spitsbergen Ar 139.01 12 *e*P **PKPdf 07 51 46.6 -3.3**
KBS Kingsbay 139.21 10 *i* P **PKPdf 07 51 46.6 -3.5**
KBS Kingsbay 139.21 10 *e*P **PKPdf 07 51 47.4 -2.8**
WAKE Wake Island 139.61 198 IAMs_20 IAMs_20 08 59 35.4
comp=Z,380nm,19.0s
GRNB Grenville Isla 139.85 297 PKPdf **PKPdf 07 51 52.3 +0.3**
NOR Nord 140.19 2 *i* P **PKPdf 07 51 50.5 -1.4**
LZH Lanzhou 140.19 102 *e*PKP **PKPdf 07 51 54.0 +0.5**
LZH LR LR
comp=Z,360nm,17.1s
LZH LR LR
comp=Z,240nm,19.1s
LZH LR LR
comp=Z,290nm,19.3s
RUBB Prince Rupert 140.29 298 PKPdf **PKPdf 07 51 52.6 -0.1**
GTA Gaotai 140.64 95 *e*PKP **PKPdf 07 51 53.7 -0.4**
GTA PKS **PKSdf 07 55 30.4 +0.3**
GTA LR LR
comp=Z,290nm,21.1s
GTA LR LR
comp=Z,310nm,19.1s
GTA LR LR
comp=Z,390nm,20.3s
WHN Wuhan 140.84 118 ⇓PKP **PKiKP 07 51 56.8 -0.4**
WHN LR LR
comp=Z,1μm,23.1s
XAN Xi'an 141.13 109 PKP **PKPdf 07 51 54.5 -0.6**
T35M Bob Quinn 141.87 301 P **PKPdf 07 51 55.8 +0.2**
baz=125
CRAG Craig 142.30 297 P **PKPdf 07 51 56.2 -0.1**
baz=126
WRAK Wrangell Islan 142.50 299 P **PKPdf 07 51 56.7 +0.1**
baz=125
DLBC Dease Lake 142.60 303 P **PKPdf 07 51 56.2 -0.7**
baz=124
ZALV Zalesovo Beam 142.68 66 PKhKP PKPpre 07 51 52.6
comp=Z,5.0nm,0.4s,baz=254,slow=3.2,SNR=11
ZALV PKP **PKPdf 07 51 58.5 +1.4**
comp=Z,14nm,0.6s,baz=231,slow=4.1,SNR=9.5
ZALV SKP 07 55 29.1
comp=Z,3.6nm,0.8s,baz=346,slow=1.8,SNR=2.8
LYN LuoYang 143.27 112 ⇓PKP PKPbc 07 51 55.2 -0.8
LYN LR LR
comp=Z,350nm,20.2s
LYN LR LR
comp=Z,400nm,17.1s
R33M Jennings River 143.53 304 P PKPbc 07 51 58.1 +2.0
baz=122
NJ2 Nanjing 144.15 122 *e*PKP PKPbc 07 51 58.6 0.0
SIT Sitka 144.21 298 PKPdf **PKPdf 07 51 59.9 +0.2**
SIT Sitka 144.21 298 PKIKP **PKPdf 07 51 59.9 +0.2**
SIT Sitka 144.21 298 P **PKPab 07 51 58.7 +1.1**
baz=123
JIS Juneau Island 144.44 301 PKPab 07 51 59.0 +0.6
P33M Teslin, Yukon 144.76 304 PKPbc 07 51 59.3 -0.5
P33M Teslin, Yukon 144.76 304 P PKPbc 07 51 59.5 -0.3
baz=120,SNR=119
P32M Atlin 144.83 303 P **PKPbc 07 51 59.9 -0.1**
baz=121,SNR=44
N32M Quiet Lake 145.34 306 P **PKPdf 07 52 01.4 -0.2**
baz=119
SKAG Skagway 145.47 302 PKPdf 07 52 01.6 -0.1
SKAG Skagway 145.47 302 P **PKPdf 07 52 01.8 +0.1**
baz=120,SNR=18
C36M Paulatuk 145.62 322 P **PKPdf 07 52 01.4 -0.3**
baz=114,SNR=8.1
TIY Taiyuan 145.78 109 *e*PKPbc **PKPab 07 52 04.1 0.0**
TIY LR LR
comp=Z,260nm,15.1s
TIY LR LR
comp=Z,180nm,13.1s
TIY LR LR
comp=Z,340nm,17.2s
WHY Whitehorse 145.87 304 P **PKPdf 07 52 02.1 -0.5**
baz=119
PLBC Pleasant Camp 145.93 302 P **PKPdf 07 52 03.3 +0.7**
baz=120,SNR=39
FARO Faro, Yukon 145.96 307 PKPdf 07 52 02.5 -0.1
M31M Drury Creek, Y 146.38 307 P **PKPdf 07 52 04.1 +0.8**
baz=117,SNR=90
O30N Mendenhall 146.45 304 P **PKPdf 07 52 04.8 +1.3**
baz=118,SNR=67
P30M Million Dollar 146.52 302 P **PKPdf 07 52 05.1 +1.5**
baz=118
P29M Windy Craggy 146.63 301 PKPdf 07 52 03.4 -0.4
P29M Windy Craggy 146.63 301 P **PKPdf 07 52 05.0 +1.2**
baz=119
HNS HongShan 146.64 112 ⇑PKPbc **PKPdf 07 52 04.2 -0.3**
HNS PKPab **PKPab 07 52 06.5 -0.8**
HNS *e*PP **PP 07 55 33.7 +3.4**
HNS LR LR
comp=Z,240nm,19.2s
HNS LR LR
comp=Z,300nm,18.1s
HNS LR LR
comp=Z,310nm,20.2s
N31M Braeburn, Yuko 146.65 305 P **PKPdf 07 52 04.9 +1.1**
baz=117,SNR=64
BTO Baotou 146.78 103 *e*PKPbc **PKPdf 07 52 04.3 -0.5**
BTO LR LR
comp=Z,890nm,15.3s
BTO LR LR
comp=Z,750nm,19.2s
TIA Tai'an 146.83 116 *e*PKPbc **PKPdf 07 52 04.9 0.0**
A36M Sachs Harbour 146.96 326 PKPdf 07 52 05.7 +1.8
A36M Sachs Harbour 146.96 326 P **PKPbc 07 52 06.2 +0.2**
baz=110,SNR=32
HYT Haines Junctio 147.09 303 P **PKPbc 07 52 06.8 -0.1**
baz=117,SNR=48
N30M Aishikik Lake 147.19 304 P **PKPbc 07 52 06.9 -0.2**
baz=116,SNR=48
JCJ Chichijima 147.23 159 PKPbc 07 52 07.1 -1.0
O29M Mount Kennedy 147.32 302 P **PKPdf 07 52 06.9 +1.8**
baz=117,SNR=10.0
PNL Peninsula 147.39 301 P **PKPbc 07 52 07.6 0.0**
baz=118,SNR=26
YUK6 Outpost Mounta 147.51 303 P **PKPbc 07 52 07.7 -0.5**
baz=117,SNR=15
M30M Minto, Yukon 147.56 306 P **PKPbc 07 52 07.7 -0.3**
baz=115,SNR=73
HHC Hu-ho-hao-te 147.74 105 *e*PKPbc **PKPbc 07 52 09.6 +0.3**
HHC AMB AMB
comp=Z,210nm,8.5s
HHC LR LR
comp=Z,330nm,15.1s
HHC LR LR
comp=Z,440nm,17.3s
HHC LR LR
comp=Z,460nm,20.4s
YUK4 Talbot Arm 147.82 304 P **PKPbc 07 52 08.6 -0.3**
baz=116,SNR=43
PINM Pinnacle 147.97 301 P **PKPbc 07 52 09.1 -0.2**
baz=117,SNR=35
M29M Somme Creek 148.20 306 P **PKPbc 07 52 09.4 -0.4**
baz=114
O28M Mount Upton 148.24 302 P **PKPbc 07 52 10.1 -0.1**
baz=116,SNR=32
JSU Suzuyama 148.27 139 PKPbc 07 52 10.4 -0.5
INK Inuvik 148.43 318 PKPdf **PKPdf 07 52 04.1 -2.3**
INK PKPbc **PKPbc 07 52 10.2 +0.2**
INK Inuvik 148.43 318 PKHKP PKPpre 07 52 04.1
INK 07 52 10.3
INK Inuvik 148.43 318 P **PKPbc 07 52 09.5 -0.5**
baz=109,SNR=37
TABL Table Mountain 148.52 301 PKPdf 07 52 05.9 -1.3
TABL PKPbc **PKPbc 07 52 11.0 +0.2**
MESA MESA 148.77 300 P **PKPbc 07 52 11.1 -0.3**
baz=116,SNR=6.7
YUK3 Moose Creek 148.78 304 P **PKPbc 07 52 10.9 -0.6**
baz=114,SNR=5.9
CTG Chitna Glacier 148.83 302 P **PKPbc 07 52 11.1 -0.4**
baz=115,SNR=11
J29M Klondike Camp 148.88 309 P **PKPbc 07 52 11.4 -0.1**
baz=112
GRNC Granite Creek 148.92 301 IAMs_20 IAMs_20 08 58 21.0
comp=Z,247nm,22.0s
BARN Barnard Glacie 149.01 302 PKPdf 07 52 06.1 -1.8
BARN PKPbc **PKPbc 07 52 12.9 +0.8**
BVCY Beaver Creek 149.21 305 P **PKPbc 07 52 11.8 -0.5**
baz=113,SNR=65
DAWY Dawson 149.22 308 P **PKPbc 07 52 11.6 -0.7**
baz=111,SNR=29
I29M Ogilvie Camp, 149.24 311 P **PKPbc 07 52 11.2 -1.1**
baz=110,SNR=19
BGLC Bering Glacier 149.34 300 P **PKPbc 07 52 13.1 +0.5**
baz=115
BJT Baijiatuau 149.40 111 IAMs_20 IAMs_20 09 03 08.1
comp=Z,259nm,22.0s
MOY Mondy 149.40 80 *e*PKHKP PKPpre 07 52 08.6
MOY pmax pmax
comp=Z,189nm,1.3s
BJI Beijing 149.42 111 PKPbc **PKPdf 07 52 08.9 -0.1**
CRQE Cirque 149.52 301 P **PKPbc 07 52 12.9 -0.3**
baz=114,SNR=16
M27K Edge Creek, AK 149.63 304 PKPdf **PKPdf 07 52 07.0 -1.8**
M27K PKPbc **PKiKP 07 52 14.9 +0.5**
M27K Edge Creek, AK 149.63 304 P **PKPbc 07 52 13.0 -0.4**
baz=112,SNR=159
MCARA McCarthy VSAT 149.75 302 P **PKPbc 07 52 13.8 +0.2**
baz=113,SNR=24
KAIM Kayak Island 149.78 299 PKPdf **PKPdf 07 52 07.3 -1.6**
KAIM PKPbc **PKiKP 07 52 15.4 +0.7**
KAIM Kayak Island 149.78 299 P **PKPbc 07 52 13.9 +0.2**
baz=115,SNR=7.9
ZAK Zakamensk 149.84 83 *e*PKIKP **PKPdf 07 52 08.7 -0.8**
ZAK pmax pmax
comp=Z,136nm,1.3s
BCAR Beaver Creek A 149.85 306 PKPdf **PKPdf 07 52 06.5 -2.5**
BCAR PKPbc **PKiKP 07 52 15.7 +0.9**
L27K Beaver Creek, 149.87 306 PKPdf 07 52 06.7 -2.4
L27K PKPbc **PKPbc 07 52 14.7 +0.8**
L27K Beaver Creek, 149.87 306 P **PKPbc 07 52 13.6 -0.3**
baz=111,SNR=96
HMT Hamilton 149.88 300 PKPdf 07 52 07.2 -1.9
HMT PKPbc **PKiKP 07 52 15.3 +0.4**
SONM Songino Array 149.90 90 PKP **PKPdf 07 52 09.6 -0.1**
comp=Z,4.8nm,0.8s,baz=199,slow=3.0,SNR=18
SONM PKPbc **PKPbc 07 52 14.9 +0.3**
comp=Z,60nm,1.0s,baz=220,slow=1.9,SNR=99
SONM Songino Array 149.90 90 PKPdf **PKPdf 07 52 08.8 -0.9**
SONM PKPbc **PKiKP 07 52 15.2 -0.3**
RAGM Ragged Mountai 150.09 300 PKPdf 07 52 07.6 -1.9
RAGM PKPbc **PKPbc 07 52 15.4 +0.9**
GLB Gilahina Butte 150.12 302 IAMs_20 IAMs_20 08 56 17.8
comp=Z,228nm,20.0s
M26K Nabesna, AK 150.13 304 P **PKPbc 07 52 14.3 -0.3**
baz=112,SNR=32
ULN Ulaanbaatar 150.27 90 PKPdf **PKPdf 07 52 10.2 -0.1**
ULN PKPbc **PKPbc 07 52 15.8 +0.3**
ULN Ulaanbaatar 150.27 90 IAMs_20 IAMs_20 09 07 17.5
comp=Z,368nm,21.0s
ULN Ulaanbaatar 150.27 90 PKIKP **PKPdf 07 52 10.2 -0.1**
BMRM Bremner River 150.29 301 P **PKPbc 07 52 15.1 +0.1**
baz=113,SNR=14
K27K Chicken 150.32 307 PKPdf 07 52 07.9 -1.8
K27K PKPbc **PKiKP 07 52 16.2 +0.6**
K27K Chicken 150.32 307 P **PKPbc 07 52 15.4 +0.5**
baz=110
Q23K Middleton Isla 150.46 297 P **PKPbc 07 52 15.1 -0.2**
baz=115
L26K Log Cabin Wild 150.51 305 PKPdf 07 52 07.4 -2.6
L26K PKPbc **PKPbc 07 52 15.7 +0.2**
L26K Log Cabin Wild 150.51 305 P **PKPbc 07 52 15.6 +0.2**
baz=111,SNR=22
N25K Chitina, Valde 150.53 302 P **PKPbc 07 52 15.7 +0.1**
baz=112,SNR=42
I27K Kandik River 150.63 310 P **PKPbc 07 52 15.9 +0.2**
baz=107
EYAK Cordova Ski Ar 150.64 299 P **PKPbc 07 52 16.1 +0.4**
baz=113,SNR=12
H27K Steamboat Moun 150.78 312 P **PKPbc 07 52 16.1 +0.1**
baz=106
HIN Hinchinbrook I 150.92 299 PKPdf 07 52 08.5 -2.2
HIN PKPbc **PKPbc 07 52 17.0 +0.5**
HIN PKPab **pPKPdf 07 52 25.8 +2.8**
G27K Doyon Strip 150.98 313 P **PKPbc 07 52 16.3 -0.1**
baz=105,SNR=23
HARP HAARP 151.07 303 P **PKPbc 07 52 16.9 +0.2**
baz=110,SNR=16
KLU Klutina 151.08 301 P **PKPbc 07 52 17.2 +0.4**
baz=112,SNR=22
J26L Joseph Creek 151.08 308 P **PKPbc 07 52 17.0 +0.2**
baz=108,SNR=26
SCRK Sand Creek 151.09 307 P **PKPbc 07 52 17.2 +0.3**
baz=108,SNR=17
DL2 Dalian 151.10 119 PKPbc **PKPbc 07 52 17.2 -0.3**
I26K Coal Creek Min 151.16 310 P **PKPbc 07 52 16.9 +0.1**
baz=107
P23K Montague Islan 151.18 298 P **PKPbc 07 52 17.2 +0.2**
baz=113,SNR=11
E27K Coleen River 151.29 316 P **PKPbc 07 52 17.4 +0.3**
baz=103,SNR=14
GLI Glacier Island 151.38 300 PKPdf **PKPdf 07 52 10.8 -0.6**
GLI **PKPbc 07 52 17.8 +0.3**
GLI PKPab **PKPab 07 52 28.2 +2.2**
GLI Glacier Island 151.38 300 P **PKPbc 07 52 17.6 +0.1**
baz=112,SNR=5.2
RIDG Independent Ri 151.38 306 P **PKPbc 07 52 18.1 +0.6**
baz=108,SNR=14
PAX Paxson 151.40 304 P **PKPbc 07 52 17.3 -0.3**
baz=109,SNR=6.9
IRK Irkutsk 151.41 81 *e*PKIKP **PKPdf 07 52 09.9 -1.8**
IRK pmax pmax
comp=Z,198nm,2.2s
M24K Tolsona, Glenn 151.41 302 P **PKPbc 07 52 18.5 +0.9**
baz=110,SNR=9.6
K24K Donnelly Dome 151.79 306 P **PKPbc 07 52 18.6 +0.2**
baz=108,SNR=17
SCM Sheep Creek Mo 151.83 301 P **PKPbc 07 52 18.9 +0.3**
baz=110,SNR=9.9
G26K Porcupine Rive 151.83 313 P **PKPbc 07 52 18.5 +0.2**
baz=105,SNR=34
J25K Salcha River, 151.86 308 P **PKPbc 07 52 18.8 +0.2**
baz=106,SNR=16
PWL Port Wells 151.94 299 P **PKPbc 07 52 18.8 +0.1**
baz=111,SNR=5.2
M23K Glacier View 151.99 301 P **PKPbc 07 52 18.9 0.0**
baz=110,SNR=8.6
INCN Inchon 152.11 127 IAMs_20 IAMs_20 09 00 03.8
comp=Z,331nm,19.0s
F26K Sheenjek River 152.13 314 P **PKPbc 07 52 19.6 +0.5**
baz=102,SNR=27
PRP Porcupine Dome 152.17 309 P **PKPbc 07 52 19.4 +0.1**
baz=105
SEW Seward 152.17 297 P **PKPbc 07 52 19.0 -0.2**
baz=112
KNK Knik Glacier 152.19 300 P **PKPbc 07 52 19.2 -0.2**
baz=110,SNR=6.6
BMAR Burnt Mountain 152.24 314 PKPdf **PKPdf 07 52 10.0 -2.6**
BMAR PKPbc **PKiKP 07 52 20.3 +0.7**
XLT XiLinHaoTe 152.25 105 PP PP 07 56 08.6 +5.6
XLT XiLinHaoTe 152.25 105⇑ *i*PKPbc **PKiKP 07 52 20.4 0.0**
XLT XiLinHaoTe 152.25 105 pPKP PKPab 07 52 30.5 +0.3
XLT XiLinHaoTe 152.25 105 sPKP 07 52 36.3
DHY Denali Highway 152.25 304 P **PKPbc 07 52 20.0 +0.3**
baz=108,SNR=5.9
WAT6 Susitna Watana 152.26 303 P **PKPbc 07 52 19.5 -0.1**
baz=109,SNR=40
SML Sawmill 152.27 301 P **PKPbc 07 52 19.1 -0.4**
baz=110,SNR=9.1
C27K Jago River 152.31 318 P **PKPbc 07 52 19.9 +0.5**
baz=98,SNR=7.0
JHS Saijyo 152.36 140 PKPdf **PKPdf 07 52 13.1 -0.7**
JHS PKPbc **PKiKP 07 52 21.0 +0.2**
O22K Cooper Landing 152.44 298 P **PKPbc 07 52 19.7 -0.1**
baz=111
HDA Harding Lake 152.46 307 P **PKPbc 07 52 19.4 -0.5**
baz=106,SNR=11
H25K Birch Creek 152.47 311 P **PKPbc 07 52 20.0 +0.3**
baz=103
ILAR Eielson Array 152.53 308 PKP **PKPdf 07 52 09.2 -3.8**
comp=Z,5.2nm,0.7s,baz=304,slow=0.9,SNR=51
ILAR PKPbc **PKPbc 07 52 20.1 +0.2**
comp=Z,131nm,0.9s,baz=154,slow=1.7,SNR=122
PMR Palmer 152.55 300 P **PKPbc 07 52 20.2 +0.1**
baz=110,SNR=12
KSAR Wonju Array Be 152.58 129 PKPdf **PKPdf 07 52 13.0 -0.9**
KSAR PKPbc **PKPbc 07 52 20.5 -0.4**
KSAR PKPab **PKPab 07 52 31.9 +0.3**
KSAR Wonju Array Be 152.58 129 PKIKP **PKPbc 07 52 20.5 -0.4**
KSAR 07 52 31.9
KSRS Korea Array 152.61 129 PKP **PKPdf 07 52 13.7 -0.3**
comp=Z,10nm,1.2s,baz=208,slow=1.6,SNR=21
KSRS PKPbc **PKiKP 07 52 21.6 +0.3**
comp=Z,11nm,0.7s,baz=198,slow=2.3,SNR=36
KS19 Wonju Array Si 152.63 129 PKPdf **PKPdf 07 52 13.1 -0.9**
KS19 **PKPbc 07 52 20.6 -0.4**
KS19 PKPab **PKPab 07 52 32.2 +0.4**
BRSE Bradley Lake S 152.63 296 P **PKPbc 07 52 20.0 -0.3**
baz=112
RC01 Rabbit Creek A 152.66 299 P **PKPbc 07 52 20.6 +0.3**
baz=110
F25K Christian Rive 152.67 314 P **PKPbc 07 52 20.7 +0.4**
baz=101,SNR=10
G25K Bearman Lake 152.69 312 P **PKPbc 07 52 21.0 +0.8**
baz=102,SNR=12
WAT1 Susitna Watana 152.69 303 P **PKPbc 07 52 20.2 -0.2**
baz=108
BRLK Bradley Lake 152.71 296 PKPdf 07 52 12.2 -1.2
BRLK PKPbc **PKPbc 07 52 20.4 -0.1**
BRLK PKPab **PKPab 07 52 31.4 -0.2**
KDAK Kodiak Island 152.74 291 P **PKPbc 07 52 20.5 -0.1**
baz=115
E25K Arctic Village 152.74 315 P **PKPbc 07 52 20.9 +0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=100,SNR=53						
C26K	**Camden Bay**	**152.77**	**319**	P	**PKPbc**	**07 52 20.9**	**+0.6**
	baz=97,SNR=15						
OHAK	**Old Harbor**	**152.84**	**290**	P	**PKPbc**	**07 52 20.9**	**0.0**
	baz=116						
POKR	**Poker Plat Res**	**152.84**	**308**		**PKPdf**	**07 52 12.3**	**-1.2**
POKR				PKPbc	**PKPbc**	**07 52 20.6**	**-0.1**
POKR				PKPab	**PKPab**	**07 52 32.4**	**+0.3**
POKR	**Poker Plat Res**	**152.84**	**308**	P	**PKPbc**	**07 52 20.1**	**-0.6**
	baz=104						
COLA	**College**	**152.96**	**307**	P	**PKPbc**	**07 52 20.4**	**-0.5**
	baz=104						
TCOL	**CIGO, UAF Yank**	**152.96**	**307**	P	**PKPbc**	**07 52 20.5**	**-0.4**
	baz=104,SNR=15						
Q20K	**Shuyak Island**	**152.98**	**293**	P	**PKPbc**	**07 52 21.2**	**+0.1**
	baz=113						
SII	**Sitkinak Islan**	**153.00**	**288**	P	**PKPbc**	**07 52 21.2**	**-0.1**
	baz=116						
HOM	**Homer**	**153.03**	**295**	P	**PKPbc**	**07 52 21.5**	**+0.3**
	baz=112						
M22K	**Willow**	**153.05**	**300**	P	**PKPbc**	**07 52 21.3**	**+0.1**
	baz=109,SNR=5.6						
MCK	**McKinley**	**153.12**	**305**	P	**PKPbc**	**07 52 21.4**	**+0.1**
	baz=106,SNR=8.6						
H24K	**Noodor Dome**	**153.19**	**310**	P	**PKPbc**	**07 52 21.5**	**+0.1**
	baz=102,SNR=9.0						
D25K	**Kavik River**	**153.20**	**317**	P	**PKPbc**	**07 52 21.3**	**-0.1**
	baz=97,SNR=18						
G24K	**Hadweenzic Riv**	**153.21**	**312**	P	**PKPbc**	**07 52 21.9**	**+0.5**
	baz=101,SNR=8.1						
CUT	**Chulitna**	**153.32**	**302**	P	**PKPbc**	**07 52 21.8**	**+0.1**
	baz=108,SNR=6.9						
NEA2	**Nenana**	**153.40**	**307**	P	**PKPbc**	**07 52 21.5**	**-0.4**
	baz=104,SNR=14						
SEHB	**SEOHWA**	**153.44**	**129**		**PKPdf**	**07 52 14.8**	**-0.4**
SEHB				PKPbc	**PKPbc**	**07 52 22.2**	**-0.6**
SEHB				PKPab	**pPKPbc**	**07 52 36.2**	**+1.1**
F24K	**Squaw Lake**	**153.51**	**313**	P	**PKPbc**	**07 52 22.7**	**+0.6**
	baz=99,SNR=12						
TRF	**Thorofare Moun**	**153.62**	**304**	P	**PKPbc**	**07 52 22.4**	**-0.2**
	baz=105,SNR=13						
I23K	**Minto, Yukon-K**	**153.65**	**308**	P	**PKPbc**	**07 52 21.8**	**-0.5**
	baz=103,SNR=12						
Q19K	**Cape Douglas,**	**153.71**	**293**	IAMs_20	IAMs_20	08 50 42.7	
	comp=Z,304nm,22.0s						
Q19K	**Cape Douglas,**	**153.71**	**293**	P	**PKPbc**	**07 52 22.2**	**-0.6**
	baz=112						
P19K	**Oil Pt**	**153.78**	**295**	P	**PKPbc**	**07 52 22.2**	**-0.7**
	baz=111						
E24K	**Your Creek**	**153.81**	**314**	P	**PKPbc**	**07 52 22.9**	**+0.1**
	baz=98						
H23K	**Yukon River**	**153.86**	**309**	P	**PKPbc**	**07 52 22.4**	**-0.5**
	baz=101,SNR=15						
D24K	**Happy Valley**	**154.06**	**317**	P	**PKPbc**	**07 52 23.0**	**-0.2**
	baz=95						
C24K	**Franklin Bluff**	**154.06**	**318**	P	**PKPbc**	**07 52 23.1**	**-0.1**
	baz=94						
BPAW	**Bear Paw Mtn.**	**154.09**	**305**	P	**PKPbc**	**07 52 22.9**	**-0.5**
	baz=104,SNR=17						
MLY	**Manley**	**154.19**	**307**	P	**PKPbc**	**07 52 22.8**	**-0.8**
	baz=102,SNR=6.9						
G23K	**Bananza Creek**	**154.21**	**311**	P	**PKPbc**	**07 52 23.9**	**+0.2**
	baz=99,SNR=17						
JGF	**Kuroka**	**154.24**	**146**	PKPdf	**PKPdf**	**07 52 15.7**	**-0.8**
JGF				PKPbc	**PKiKP**	**07 52 24.9**	**+0.1**
JGF				PKPab	**pPKPbc**	**07 52 39.6**	**+2.8**
Q18K	**Katmai Hardscr**	**154.26**	**292**	P	**PKPbc**	**07 52 23.1**	**-1.0**
	baz=112						
TOLK	**Toolik Lake Re**	**154.28**	**316**	P	**PKPbc**	**07 52 23.8**	**+0.1**
	baz=96,SNR=14						
PPLA	**Purkeypile**	**154.31**	**302**	P	**PKPbc**	**07 52 23.7**	**-0.3**
	baz=105,SNR=13						
COLD	**Coldfoot**	**154.35**	**312**	P	**PKPbc**	**07 52 24.4**	**+0.6**
	baz=98,SNR=26						
CAST	**Castle Rocks**	**154.40**	**303**	P	**PKPbc**	**07 52 23.4**	**-0.7**
	baz=104,SNR=8.0						
M20K	**Styx River**	**154.45**	**300**	P	**PKPbc**	**07 52 23.9**	**-0.5**
	baz=107						
O19K	**Port Alsworth**	**154.48**	**295**	P	**PKPbc**	**07 52 23.2**	**-1.1**
	baz=110						
Q17K	**Contact Creek**	**154.54**	**291**	P	**PKPbc**	**07 52 23.6**	**-1.1**
	baz=112						
R17K	**Ugashik Creek**	**154.54**	**289**	P	**PKPbc**	**07 52 24.0**	**-0.5**
	baz=114						
CHUM	**Lake Minchumin**	**154.61**	**304**	P	**PKPbc**	**07 52 24.0**	**-0.5**
	baz=103,SNR=9.5						
H22K	**Ishtalitna Cre**	**154.61**	**309**	P	**PKPbc**	**07 52 24.4**	**0.0**
	baz=100,SNR=18						
P18K	**Big Mountain,**	**154.64**	**293**	P	**PKPbc**	**07 52 23.4**	**-1.3**
	baz=111						
D23K	**Nanushuk River**	**154.71**	**316**	P	**PKPbc**	**07 52 24.3**	**-0.3**
	baz=94,SNR=6.0						
C23K	**Itkillik River**	**154.73**	**318**	P	**PKPbc**	**07 52 24.8**	**+0.2**
	baz=92						
I21K	**Tanana**	**154.74**	**307**	P	**PKPbc**	**07 52 24.0**	**-0.7**
	baz=101						
N19K	**Bonanza Creek**	**154.75**	**297**	P	**PKPbc**	**07 52 23.9**	**-1.2**
	baz=108						
O18K	**Koktuh Hills**	**154.78**	**294**	P	**PKPbc**	**07 52 24.2**	**-0.8**
	baz=110						
G22K	**Bettles**	**154.82**	**311**	P	PKPdf	07 52 25.6	+9.5
	baz=98						
CHNA	**Chernabura Isl**	**154.94**	**281**	P	PKPdf	07 52 24.5	+7.9
	baz=118						
L20K	**Farewell, AK**	**154.95**	**301**	P	PKPdf	07 52 24.4	+7.9
	baz=105						
M19K	**Big River Lodg**	**155.03**	**299**	P	PKPdf	07 52 25.0	+8.4
	baz=106						
E22K	**Anaktuvuk Pass**	**155.06**	**314**	P	PKPdf	07 52 25.4	+8.8
	baz=95						
Q16K	**King Salmon**	**155.07**	**291**	P	PKPdf	07 52 24.4	+7.7
	baz=111						
F22K	**John River**	**155.15**	**313**	P	PKPdf	07 52 25.9	+9.3
	baz=96						
P17K	**Kvichak River**	**155.15**	**292**	P	PKPdf	07 52 25.0	+8.2
	baz=110						
H21K	**Melozitna Rive**	**155.16**	**308**	P	PKPdf	07 52 25.5	+8.8
	baz=99						
K20K	**Telida**	**155.25**	**303**	P	PKPdf	07 52 25.0	+8.1
	baz=103,SNR=5.9						
L19K	**White Mountain**	**155.32**	**300**	IAMs_20	IAMs_20	09 05 52.1	
	comp=Z,276nm,20.0s						
L19K	**White Mountain**	**155.32**	**300**	P	PKPdf	07 52 25.1	+8.0
	baz=105						
MJAR	**Matsushiro Arr**	**155.37**	**147**	PKP	**PKPdf**	**07 52 17.2**	**-0.7**
	comp=Z,5.4nm,0.9s,baz=135,slow=3.2,SNR=13						
MJAR				PKPbc	**pPKPdf**	**07 52 27.0**	**-3.2**
	comp=Z,5.3nm,0.7s,baz=130,slow=4.3,SNR=7.0						
MJAR				PKPab	**PKPab**	**07 52 43.8**	**+0.4**
	comp=Z,7.0nm,0.7s,baz=172,slow=4.6,SNR=6.8						
MAJO	**Matsushiro**	**155.37**	**147**		**PKPdf**	**07 52 17.6**	**-0.3**
MAJO				PKPbc	**pPKPdf**	**07 52 26.6**	**-3.6**
MAJO					**PKPab**	**07 52 43.3**	**-0.1**
MAJO	**Matsushiro**	**155.37**	**147**	PKIKP	**PKPdf**	**07 52 17.6**	**-0.3**
MAJO						07 52 43.3	
N18K	**Kilae Creek**	**155.37**	**296**	P	**PKPdf**	**07 52 24.7**	**+7.6**
	baz=108						
J20K	**Nowinta River**	**155.46**	**305**	P	PKPdf	07 52 25.3	+8.2
	baz=101						
G21K	**Allakaket**	**155.56**	**310**	P	PKPdf	07 52 26.2	+9.0
	baz=97,SNR=5.3						
S14K	**Fog Glacier**	**155.57**	**284**	P	PKPdf	07 52 26.0	+8.3
	baz=115						
F21K	**Alatna River**	**155.62**	**312**	P	PKPdf	07 52 26.8	+10
	baz=95						
SDPT	**Sand Point**	**155.63**	**282**	P	PKPdf	07 52 26.9	+9.3
	baz=117						
O17K	**Koliganek Bris**	**155.66**	**293**	P	PKPdf	07 52 26.1	+8.6
	baz=109						
TTA	**Tatalina**	**156.02**	**301**	P	PKPdf	07 52 27.9	+10
	baz=103						
CN2	**Changchun**	**156.73**	**117**	*e*PKP	**PKPdf**	**07 52 18.3**	**-1.2**
CN2				PP	**PP**	**07 56 27.5**	**-0.4**
CN2				SS	SS	08 16 16.7	-0.2
CN2				AMB	AMB		
	comp=Z,100nm,5.4s						
CN2				LR	LR		
	comp=Z,100nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,100nm,18.0s						
HIA	**Hailar**	**157.73**	**100**	PKPdf	**PKPdf**	**07 52 19.9**	**-0.7**
HIA					**PKPab**	**07 52 54.6**	**+1.2**
HIA	**Hailar**	**157.73**	**100**	PKIKP	**PKPdf**	**07 52 19.9**	**-0.7**
BOD	**Bodaibo**	**158.91**	**75**	*e*PKIKP	**PKPdf**	**07 52 19.9**	**-1.8**
BOD				pmax	pmax		
	comp=Z,29nm,1.1s						
BNX	**BinXian**	**159.11**	**117**	PKP	**PKPdf**	**07 52 20.7**	**-1.6**
MDJ	**Mudanjiang**	**159.24**	**122**		**PKPdf**	**07 52 22.1**	**-0.4**
MDJ				PKPab	**PKPab**	**07 52 59.4**	**-0.6**
MDJ	**Mudanjiang**	**159.24**	**122**	PKP	**PKPdf**	**07 52 21.0**	**-1.5**
MDJ				AMB	AMB		
	comp=Z,330nm,4.4s						
USRK	**Ussuriysk Ar.**	**159.94**	**127**	PKP	**PKPdf**	**07 52 22.0**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=195,slow=3.7,SNR=6.0						
USRK				PKPab	**PKPab**	**07 53 02.9**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=225,slow=5.1,SNR=7.1						
USRK	**Ussuriysk Ar.**	**159.94**	**127**	PKPdf	**PKPdf**	**07 52 21.6**	**-1.7**
USRK					**PKPab**	**07 53 02.5**	**-0.5**
TEY	**Ternei**	**162.48**	**134**⇑	*e*PKIKP	**PKPdf**	**07 52 25.1**	**-0.8**
TEY				*e*		07 56 56.1	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TIXI	**Tiksi**	**163.38**	**29**	PKPdf	**PKPdf**	**07 52 23.0**	**-3.0**
TIXI				PKPab	**PKPab**	**07 53 18.8**	**+1.4**
TIXI	**Tiksi**	**163.38**	**29**	PKP2	**PKPab**	**07 53 18.8**	**+1.4**
TIXI						08 52 23.0	
ZEA	**Zeya**	**164.12**	**97**	*i* PKIKP	**PKPdf**	**07 52 26.4**	**-0.8**
ZEA				*e*		07 57 06.0	
ZEA				pmax	pmax		
	comp=Z,100nm,8.5s						
ZEA				pmax	pmax		
	comp=Z,100nm,11.6s						
YSS	**Yuzh-Sakhalins**	**166.26**	**144***c*	*i*PKIKP	**PKPdf**	**07 52 28.0**	**-1.3**
YSS				*e*		07 52 47.7	
YSS				*e*		07 53 30.6	
YSS				*e*		07 57 17.8	
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				pmax	pmax		
	comp=Z,200nm,7.5s						
GRNR	**Gornyy**	**166.90**	**120**	*e*PKIKP	**PKPdf**	**07 52 22.6**	**-7.1**
NKL	**Nikolayevsk**	**170.45**	**120**	*e*PKP2	**PKPab**	**07 53 48.1**	**-1.0**
NKL				*e*		07 57 38.4	
SKR	**Severo-Kuril's**	**171.88**	**187**	*i* PKIKP	**PKPdf**	**07 52 27.7**	**-4.9**
SKR				*e*		07 57 44.0	
SKR				pmax	pmax		
	comp=Z,100nm,12.5s						
PEA0B	**Petropavlovsk-**	**174.08**	**199**	PKPdf	**PKPdf**	**07 52 32.8**	**-0.7**
PEA0B				PKPab	**PKPab**	**07 54 04.7**	**-0.5**
PEA0B	**Petropavlovsk-**	**174.08**	**199**	PKP2	**PKPab**	**07 54 04.7**	**-0.5**
PEA0B						08 52 32.8	
PETK	**Petropavlovsk-**	**174.08**	**199**	PKP	**PKPdf**	**07 52 32.5**	**-1.0**
	comp=Z,12nm,0.9s,baz=160,slow=4.7,SNR=28						
PETK				PKPab	**PKPab**	**07 54 04.0**	**-1.1**
	comp=Z,24nm,0.8s,baz=111,slow=6.5,SNR=16						
PETK				PP	**PP**	**07 57 59.5**	**+2.0**
	comp=Z,8.2nm,1.1s,baz=124,slow=3.7,SNR=6.8						
PETK	**Petropavlovsk-**	**174.08**	**199**		**PKPdf**	**07 52 32.0**	**-1.5**
PETK				PKPab	**PKPab**	**07 54 05.0**	**-0.1**

IDC 02 07:40:42.0±1.5**,24.°18S**×**82.°45E,h0**km**,mb4.1**/4**, mbtmp4.1**/4**,Error ellipse: s-maj=133.8km s-min=24.7km az=180.0,South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**19.01**	**328**	T	T	08 04 15.1	
	baz=152,slow=74,SNR=172						
H08S1	**Diego Carcia H**	**19.02**	**328**	T	T	08 04 17.0	
	baz=152,slow=74,SNR=130						
H08S3	**Diego Garcia H**	**19.03**	**328**	T	T	08 04 16.0	
	baz=152,slow=74,SNR=418						
H01W3	**Cape Leeuwin H**	**29.44**	**119**	T	T	08 17 35.6	
	baz=284,slow=75,SNR=11						
H01W2	**Cape Leeuwin H**	**29.45**	**119**	T	T	08 17 34.9	
	baz=284,slow=75,SNR=25						
H01W1	**Cape Leeuwin H**	**29.46**	**119**	T	T	08 17 37.4	
	baz=284,slow=75,SNR=25						
ASAR	**Alice Springs**	**46.81**	**100**	P	P	07 49 13.6	-0.2
	1.7nm,0.6s,baz=265,slow=7.4,SNR=8.9						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**48.05**	**96**	P	P	07 49 23.6	0.0
	2.3nm,0.7s,baz=260,slow=8.2,SNR=9.7						
	2.3nm,0.7s						
BOSA	**Boshof**	**51.02**	**252**	P	P	07 49 46.0	-0.2
	2.8nm,0.7s,baz=84,slow=7.3,SNR=7.8						
	2.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**87.09**	**286**	P	P	07 53 30.4	+0.1
	0.8nm,1.0s,baz=132,slow=4.5,SNR=2.2						
	0.8nm,1.0s						

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*IDC **02** 07:50:54.4±1.6, 28.°42S×176.°83W, h0km, mb3.9/3, mbtmp4.0/4, ML3.5/1, MS4.1/4, Error ellipse: s-maj=41.1km s-min=31.5km az=62.0*

ISC 02 07:51:00.9±1.3**,28.°5S**±0.°1×**176.°9W**±0.°2**,h48**km**,n13, σ1§35**/10**,mb3.7**/3**,MS4.4**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.94**	**206**	Pn	**Pn**	**07 53 32.8**	**-1.9**
	0.3nm,0.3s,baz=121,slow=24,SNR=19						
URZ				Sn	**Sn**	**07 55 36.9**	**+1.3**
	0.3nm,0.3s,baz=307,slow=20,SNR=2.3						
	8.2nm,0.9s						
DZM	**Mont Dzumac**	**16.40**	**289**	LR	LR	07 59 35.7	
	comp=Z,179nm,21.9s,baz=194,slow=32						
ASAR	**Alice Springs**	**44.24**	**264**	P	**P**	**07 59 06.5**	**+0.7**
	0.6nm,0.6s,baz=96,slow=7.0,SNR=10						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**45.06**	**270**	P	**P**	**07 59 12.2**	**-0.1**
	1.1nm,0.8s,baz=111,slow=7.4,SNR=8.4						
	1.1nm,0.8s						
QSPA	**South Pole Qui**	**61.58**	**180**	P	**P**	**08 01 15.0**	**+1.9**
	3.9nm,1.0s,baz=35,slow=3.8,SNR=8.0						
	3.9nm,1.0s						
KAPI	**Kappang**	**64.28**	**279**	LR	LR	08 29 49.4	
	comp=Z,313nm,20.3s,baz=202,slow=36						
VNA3	**Neumayer Olymp**	**80.10**	**176**	P	**P**	**08 03 04.5**	**-0.8**
VNA2	**Neumayer--Watz**	**80.55**	**177**	P	**P**	**08 03 07.8**	**+0.2**
	baz=207,slow=1.0						
VNA1	**Neumayer--Stat**	**80.77**	**176**	P	**P**	**08 03 07.2**	**-1.6**
PFO	**Pinyon Flats O**	**84.20**	**47**	LR	LR	08 34 09.6	
	comp=Z,128nm,21.2s,baz=140,slow=31						
ANMO	**Albuquerque**	**91.62**	**51**	LR	LR	08 39 32.5	
	comp=Z,139nm,18.9s,baz=154,slow=32						
AKASG	**Malin Array Be**	**150.37**	**326**	PKPbc	**PKPbc**	**08 10 46.6**	**0.0**
	0.4nm,0.4s,baz=36,slow=2.8,SNR=6.8						
TORD	**Torodi Ar. Bea**	**164.64**	**175**	PKPab	**PKPab**	**08 11 55.0**	**-0.2**
	2.1nm,1.1s,baz=211,slow=3.5,SNR=4.7						

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*IDC **02** 07:58:25.9±2.1, 15.°20N×60.°30W, h0km, mb4.0/4, mbtmp4.1/5, ML2.9/1, Error ellipse: s-maj=59.8km s-min=31.2km az=141.0*

*TRN **02** 07:58:31.6, 15.°14N×60.°45W, h37km, MD4.1*

TRN Felt in Martinique MMI III.

*NEIC **02** 07:58:33.4±2.0, 15.°10N±0.°04×60.°41W±0.°07, h40km±5km, Error ellipse: s-maj=10.0km s-min=6.0km az=74.0*

ISC 02 07:58:32.7±1.2**,15.°14N**±0.°03×**60.°41W**±0.°06**,h43**km±12km**, n122,σ0§99**/144**,mb4.6**/11**,13D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.58**	**232**		**Pn**	**07 58 44.1**	**-0.5**
ILAM	**Ilet Lapin Mar**	**0.58**	**232**⇓	*i*P	**Pn**	**07 58 44.4**	**-0.2**
ILAM				*e*S	**Sn**	**07 58 53.1**	**+0.1**
LPMF	**Morne Lapointe**	**0.78**	**224**⇓	*e*P	**Pn**	**07 58 46.7**	**-0.5**
BAMF	**Morne Balai**	**0.78**	**246**⇓	*e*P	**Pn**	**07 58 47.4**	**-0.1**
SVN	**Savane Anatole**	**0.79**	**248**		**Pn**	**07 58 47.3**	**-0.2**
SVN	**Savane Anatole**	**0.79**	**248**⇓	*e*P	**Pn**	**07 58 47.4**	**-0.1**
CXM	**Morne La Croix**	**0.80**	**246**⇓	*e*P	**Pn**	**07 58 46.8**	**-1.0**
GBMF	**Grand Be**	**0.81**	**245**⇓	*e*P	**Pn**	**07 58 47.6**	**-0.2**
MPOM	**Morne Pois Mar**	**0.81**	**213**		**Pn**	**07 58 47.4**	**-0.4**
MPOM	**Morne Pois Mar**	**0.81**	**213**⇓	*i*P	**Pn**	**07 58 47.4**	**-0.4**
MPOM				*e*S	**Sn**	**07 58 58.7**	**0.0**
ZAM	**Aeronautique**	**0.82**	**227**⇓	*e*P	**Pn**	**07 58 47.5**	**-0.4**
FDF	**Fort de France**	**0.82**	**241**		**Pn**	**07 58 47.5**	**-0.4**
FDF	**Fort de France**	**0.82**	**241**	*e*P	**Pn**	**07 58 47.7**	**-0.2**
FDF				*e*S	**Sn**	**07 58 59.4**	**+0.4**
PML	**Morne Lenard**	**0.83**	**245**⇓	*e*P	**Pn**	**07 58 48.0**	**-0.1**
DLPL	**La Plaine**	**0.83**	**284**		**Pn**	**07 58 48.2**	**+0.1**
DLPL	**La Plaine**	**0.83**	**284**	*e*P	**Pn**	**07 58 48.2**	**+0.1**
DLPL				*e*S	**Sn**	**07 59 00.1**	**+0.9**
PCM	**Pelee Case Pet**	**0.84**	**248**	*e*P	**Pn**	**07 58 48.0**	**-0.1**
PCM	**Pelee Case Pet**	**0.84**	**248**⇓	*e*P	**Pn**	**07 58 48.1**	**-0.1**
TRMF	**Trois Ilets**	**0.86**	**226**⇓	*e*P	**Pn**	**07 58 48.1**	**-0.3**
BIM	**Bigot**	**0.89**	**226**		**Pn**	**07 58 48.8**	**0.0**
BIM	**Bigot**	**0.89**	**226**⇓	*i*P	**Pn**	**07 58 48.9**	**0.0**
BIM				*e*S	**Sn**	**07 59 01.0**	**+0.4**
MDN	**Morne-Daniel**	**0.97**	**281**	*e*P	**Pn**	**07 58 50.2**	**+0.4**
MDN				*e*S	**Sn**	**07 59 03.6**	**+1.1**
DSLB	**Salisbury**	**1.02**	**287**	*e*P	**Pn**	**07 58 50.7**	**0.0**
DSLB				*e*S	**Sn**	**07 59 04.2**	**+0.4**
MDVC	**Dominica, Viel**	**1.07**	**296**	*e*P	**Pn**	**07 58 50.7**	**-0.6**
MDVC				*e*S	**Sn**	**07 59 04.7**	**-0.4**
MDCT	**Cottage Hill,**	**1.13**	**295**	*e*P	**Pn**	**07 58 51.6**	**-0.4**
MDCT				*e*S	**Sn**	**07 59 06.2**	**-0.1**
MAGL	**Barre de l'ile**	**1.17**	**314**		**Pn**	**07 58 52.2**	**-0.4**
MAGL	**Barre de l'ile**	**1.17**	**314**	*e*P	**Pn**	**07 58 52.1**	**-0.5**
MAGL				*e*S	**Sn**	**07 59 07.3**	**-0.1**
SLW	**Petit Monier**	**1.22**	**205**	*e*P	**Pn**	**07 58 54.3**	**+0.9**
SLBI	**Saint Lucia, B**	**1.23**	**206**⇓	*i*P	**Pn**	**07 58 53.3**	**-0.2**
SLBI				*e*S	**Sn**	**07 59 09.6**	**+0.6**
SLCP	**Castries, St.**	**1.25**	**207**	*e*P	**Pn**	**07 58 53.6**	**-0.2**
SLCP				*e*S	**Sn**	**07 59 09.8**	**+0.3**
GDSD	**La Dsirade Is**	**1.33**	**332**		**Pn**	**07 58 53.7**	**-1.2**
TDBA	**Terre de Bas,**	**1.38**	**301**		**Pn**	**07 58 55.4**	**-0.2**
TDBA	**Terre de Bas,**	**1.38**	**301**	*e*P	**Pn**	**07 58 55.4**	**-0.2**
TDBA				*e*S	**Sn**	**07 59 12.5**	**-0.1**
TBG	**Guadaloupe-3**	**1.39**	**301**	*e*P	**Pn**	**07 58 55.4**	**-0.3**
SLB	**Belfond**	**1.44**	**205**	*e*P	**Pn**	**07 58 57.5**	**+1.2**
CBE	**Ff, Capester**	**1.48**	**309**		**Pn**	**07 58 57.1**	**+0.1**
CBE	**Ff, Capester**	**1.48**	**309**	*e*P	**Pn**	**07 58 57.0**	**0.0**
CBE				*e*S	**Sn**	**07 59 15.3**	**+0.1**
MCLT	**Moule a Chique**	**1.51**	**200**		**Pn**	**07 58 56.2**	**-1.1**
MCLT	**Moule a Chique**	**1.51**	**200**	*e*P	**Pn**	**07 58 56.7**	**-0.6**
MCLT				*e*S	**Sn**	**07 59 17.2**	**+1.4**
ABD	**La Joyeuse, An**	**1.69**	**322**		**Pn**	**07 58 59.7**	**-0.1**
ABD	**La Joyeuse, An**	**1.69**	**322**	*e*P	**Pn**	**07 58 59.5**	**-0.2**
ABD				*e*S	**Sn**	**07 59 20.3**	**+0.1**
GDHS	**Morne Mazeau,**	**1.73**	**311**		**Pn**	**07 59 00.5**	**+0.2**
SVB	**Belmont**	**2.02**	**204**		**Pn**	**07 59 05.1**	**+0.7**
SVB	**Belmont**	**2.02**	**204**	*e*P	**Pn**	**07 59 04.8**	**+0.4**
SVB				*e*S	**Sn**	**07 59 29.6**	**+1.1**
BBGH	**Gun Hill**	**2.14**	**157**	Pn	**Pn**	**07 59 06.9**	**+0.9**
BBGH	**Gun Hill**	**2.14**	**157**	*e*P	**Pn**	**07 59 07.5**	**+1.4**
BBGH				*e*S	**Sn**	**07 59 33.2**	**+1.7**
BBSP	**Saint Philip**	**2.22**	**155**	*e*P	**Pn**	**07 59 08.7**	**+1.7**
ANBD	**Bethesda, Anti**	**2.31**	**326**	*e*P	**Pn**	**07 59 08.6**	**+0.4**
ANBD				*e*S	**Sn**	**07 59 36.2**	**+0.8**
MLYT	**Lee's Yard**	**2.33**	**313**	*e*P	**Pn**	**07 59 10.2**	**+1.6**
MLYT				*e*S	**Sn**	**07 59 36.3**	**+0.2**
MBFL	**Flemmings, Mon**	**2.36**	**313**	*e*P	**Pn**	**07 59 10.2**	**+1.1**
MBFL				*e*S	**Sn**	**07 59 38.8**	**+1.9**
GCMP	**Grenada, Carri**	**2.81**	**201**	*e*P	**Pn**	**07 59 15.9**	**+0.7**
GCMP				*e*S	**Sn**	**07 59 48.4**	**+0.5**
ANWB	**Willy Bob**	**2.85**	**332**	Pn	**Pn**	**07 59 15.5**	**-0.2**
ANWB	**Willy Bob**	**2.85**	**332**	*e*P	**Pn**	**07 59 15.7**	**0.0**
ANWB				*e*S	**Sn**	**07 59 48.0**	**-0.7**
GRGR	**Grenville**	**3.22**	**202**	Pn	**Pn**	**07 59 22.0**	**+1.1**
GRGR	**Grenville**	**3.22**	**202**	*e*P	**Pn**	**07 59 21.8**	**+0.9**
GRGR				*e*S	**Sn**	**07 59 57.9**	**-0.1**
GRFF	**Grenada Fort F**	**3.33**	**203**	*e*P	**Pn**	**07 59 23.0**	**+0.7**
GRFF				*e*S	**Sn**	**08 00 01.3**	**+0.7**
SEUS	**St. Eustatius**	**3.41**	**314**		**Pn**	**07 59 25.6**	**+2.3**
SEUS	**St. Eustatius**	**3.41**	**314**	*e*P	**Pn**	**07 59 24.5**	**+1.1**
SEUS				*e*S	**Sn**	**08 00 02.1**	**-0.4**
TOSP	**Speyside**	**3.81**	**182**		**Pn**	**07 59 31.3**	**+2.3**
TOSP	**Speyside**	**3.81**	**182**	*e*P	**Pn**	**07 59 30.2**	**+1.2**
TOSP				*e*S	**Sn**	**08 00 11.7**	**-0.9**
SMRT	**St. Maarten**	**3.87**	**319**		**Pn**	**07 59 31.2**	**+1.5**
TRN	**Trinidad (W)**	**4.56**	**192**	*e*P	**Pn**	**07 59 39.9**	**+0.6**
CDVI	**St. Croix**	**4.93**	**302**	Pn	**Pn**	**07 59 44.1**	**-0.1**
STVI	**Saint Thomas**	**5.40**	**307**	Pn	**Pn**	**07 59 52.2**	**+1.4**
CUPR	**Culebra, Puert**	**5.64**	**305**	Pn	**Pn**	**07 59 55.6**	**+1.6**
CBYP	**Canovanas**	**6.08**	**302**		**Pn**	**08 00 02.6**	**+2.5**
PDPR	**Patillas Dam,**	**6.10**	**299**	Pn	**Pn**	**08 00 01.8**	**+1.4**
SJG	**San Juan**	**6.25**	**299**		**Pn**	**08 00 04.0**	**+1.6**
GCPR	**Guaynabo City**	**6.29**	**301**		**Pn**	**08 00 04.3**	**+1.3**
ICMP	**Isla Caja de M**	**6.48**	**296**	Pn	**Pn**	**08 00 05.5**	**0.0**
CELP	**Cerrillos**	**6.60**	**297**		**Pn**	**08 00 08.3**	**+1.1**
OBIP	**Obispado Ponce**	**6.61**	**297**		**Pn**	**08 00 08.3**	**+0.9**
AOPR	**Arecibo Observ**	**6.87**	**299**		**Pn**	**08 00 12.7**	**+1.7**
MLPR	**Magueyes Islan**	**6.96**	**295**		**Pn**	**08 00 12.1**	**-0.1**
PRSN	**Puerto Rico Se**	**7.15**	**296**		**Pn**	**08 00 15.4**	**+0.7**
AGPR	**Aguadilla, PR**	**7.22**	**298**	Pn	**Pn**	**08 00 16.2**	**+0.4**
BIRV	**Birongo**	**7.36**	**232**		**Pn**	**08 00 17.9**	**+0.2**
DR12	**Loma Pena Alta**	**9.32**	**294**		**Pn**	**08 00 47.5**	**+2.8**
BAUV	**El Baul**	**9.67**	**231**	Pn	**Pn**	**08 00 49.4**	**0.0**
BAUV	**El Baul**	**9.67**	**231**	*e*P	**Pn**	**08 00 49.0**	**-0.4**
SDDR	**Presa de Saban**	**11.09**	**292**		**Pn**	**08 01 12.2**	**+3.4**
BOAV	**Boa Vista**	**12.66**	**181**	Pn	**Pn**	**08 01 27.2**	**-3.0**
SJCC	**San Jacinto, C**	**15.33**	**252**	*e*P	**P**	**08 02 09.7**	**-0.7**
RUSC	**La Rusia**	**15.47**	**235**	*e*P	**P**	**08 02 13.9**	**+1.5**
ZARC	**Zaragoza, Cauc**	**16.07**	**243**	*e*P	**P**	**08 02 18.6**	**0.0**
SPBC	**San Pablo de B**	**16.40**	**236**	*e*P	**P**	**08 02 21.9**	**-0.5**
ROSC	**El Rosal**	**17.09**	**235**	P	**P**	**08 02 30.2**	**0.0**
	0.8nm,0.3s,baz=115,slow=22,SNR=2.4						
	8.4nm,0.5s						
CBOC	**Ciudad Bolivar**	**17.88**	**241**	*e*P	**P**	**08 02 40.2**	**+1.3**
ANIL	**Santa Ana**	**18.15**	**236**	*e*P	**Pn**	**08 02 44.9**	**+2.9**
PRAC	**Prado**	**18.23**	**233**	*e*P	**Pn**	**08 02 44.0**	**+1.4**
MACC	**Macarena, Meta**	**18.50**	**227**	*e*P	**P**	**08 02 45.3**	**-0.2**
PLMC	**San Jos del P**	**18.63**	**239**	*e*P	**Pn**	**08 02 48.4**	**+0.8**
GARC	**Garzon, Huila**	**19.67**	**231**	*e*P	**P**	**08 02 57.9**	**-0.6**
FLOC	**Florencia**	**20.19**	**230**	*e*P	**P**	**08 03 03.8**	**-0.2**
POPC	**Popayan, Colom**	**20.35**	**234**	*e*P	**P**	**08 03 05.8**	**-0.1**
BBAC	**Balboa, Cauca**	**21.11**	**233**	*e*P	**P**	**08 03 14.1**	**-0.1**
OTAV	**Otavalo**	**23.17**	**232**	P	**P**	**08 03 35.9**	**-0.4**
SAML	**Samuel**	**24.09**	**187**	P	**P**	**08 03 44.7**	**+0.3**
ETMB	**Extrema**	**25.45**	**193**	P	**P**	**08 03 57.0**	**+0.2**
ETMB				IAmb	IAmb	08 03 58.4	
	comp=Z,3.6nm,0.7s						
LPAZ	**La Paz**	**32.14**	**194**	P	**P**	**08 04 57.4**	**+0.4**
	comp=Z,3.5nm,0.9s,baz=7.0,slow=7.1,SNR=10						
	comp=Z,3.5nm,0.9s						
LPAZ	**La Paz**	**32.14**	**194**	P	**P**	**08 04 57.5**	**+0.4**
PBMO	**Poplar Bluff**	**34.31**	**315**	P	**P**	**08 05 17.1**	**+1.9**
J47A	**Sunmer**	**34.94**	**328**	P	**P**	**08 05 21.1**	**+0.6**
LVC	**Limon Verde**	**38.42**	**193**	P	**P**	**08 05 49.5**	**-1.2**
LVC				IAmb	IAmb	08 05 50.5	
	comp=Z,5.4nm,0.6s						
GO02	**Mina Guanaco**	**41.04**	**193**	P	**P**	**08 06 11.3**	**-1.2**
GO02				IAmb	IAmb	08 06 12.0	
	comp=Z,8.2nm,0.6s						
CPUP	**Villa Florida**	**41.33**	**176**	P	**P**	**08 06 12.9**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=356,slow=6.6,SNR=4.4						
	comp=Z,1.2nm,0.6s						
AC02	**Maricunga**	**42.57**	**192**	P	**P**	**08 06 25.4**	**+0.3**
AC02				IAmb	IAmb	08 06 26.4	
	comp=Z,18nm,1.1s						
LCO	**Las Campanas**	**45.00**	**193**	P	**P**	**08 06 43.1**	**-1.3**
LCO				IAmb	IAmb	08 07 01.8	
	comp=Z,13nm,1.1s						
CO01	**Juntas del Tor**	**45.81**	**192**	P	**P**	**08 06 51.0**	**+0.2**
CO01				IAmb	IAmb	08 07 02.1	
	comp=Z,18nm,1.4s						
CO03	**El Pedregal**	**46.77**	**192**	P	**P**	**08 06 56.8**	**-1.3**
H10N3	**ASCENSION HYDR**	**50.90**	**114**	T	T	09 02 44.1	
	baz=296,slow=75,SNR=96						
H10N2	**ASCENSION HYDR**	**50.91**	**114**	T	T	09 02 44.6	
	baz=296,slow=75,SNR=84						
H10N1	**ASCENSION HYDR**	**50.92**	**114**	T	T	09 02 41.2	
	baz=296,slow=75,SNR=81						
H10S3	**ASCENSION HYDR**	**51.26**	**115**	T	T	09 03 13.2	
	baz=292,slow=74,SNR=84						
H10S2	**ASCENSION HYDR**	**51.28**	**115**	T	T	09 03 14.6	
	baz=288,slow=74,SNR=59						
ML02	**Panimavida**	**51.68**	**191**	P	**P**	**08 07 35.2**	**-0.2**
PLCA	**Paso Flores**	**56.37**	**189**	P	**P**	**08 08 09.6**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=9.2,slow=9.2,SNR=12						
	comp=Z,1.3nm,0.6s						
PLCA	**Paso Flores**	**56.37**	**189**	P	**P**	**08 08 10.1**	**+0.4**
PLCA				IAmb	IAmb	08 08 12.0	
	comp=Z,12nm,1.5s						
TORD	**Torodi Ar. Bea**	**60.08**	**83**	P	**P**	**08 08 35.1**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=289,slow=6.3,SNR=4.4						
	comp=Z,0.8nm,0.7s						
DAWY	**Dawson**	**71.69**	**333**	P	**P**	**08 09 49.1**	**-0.8**
DAWY				IAmb	IAmb	08 10 02.3	
	comp=Z,4.0nm,1.1s						
L27K	**Beaver Creek,**	**72.75**	**332**	P	**P**	**08 09 56.8**	**+0.5**
L27K				IAmb	IAmb	08 10 07.1	
	comp=Z,8.9nm,1.1s						
WRA	**Warramunga Arr**	**165.15**	**249**	PKPab	**PKPab**	**08 19 29.3**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=105,slow=4.1,SNR=2.7						

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*IDC **02** 08:00:25.8±0.8, 16.°72N×99.°82W, h0km, mb4.4/19,*

mbtmp4.4/23, ML3.9/4, MS3.8/7, Error ellipse: s-maj=21.6km s-min=12.5km az=41.0
MEX 02 08:00:26.6±0.7, 16.49N×100.06W, h6km±3km, MD4.7
NEIC 02 08:00:30.6±3.0, 16.63N±0.05×99.97W±0.04, h33km±5km, mb4.7/143, Md4.7/108(MEX), Error ellipse: s-maj=7.5km s-min=4.8km az=198.0
ISC 02 08:00:27.0±2.5, 16.57N±0.04×100.00W±0.03, h14km±16km, n504, σ1.29/566, mb4.7/61, MS3.9/4, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.32	19		Pb	08 00 34.1	-0.4
ACP2					Sb	08 00 40.7	+1.2
ACP2	Acapulco	0.32	19	eP	Pb	08 00 34.1	-0.4
ACP2				iS	Sb	08 00 40.7	+1.2
DAIG	Los Arroyos	0.56	37		Pb	08 00 37.9	-0.7
DAIG					Sb	08 00 47.4	+1.0
DAIG	Los Arroyos	0.56	37	eP	Pb	08 00 37.9	-0.7
DAIG				iS	Sb	08 00 47.4	+1.0
CRIG	Cruz Grande	0.84	79		Pb	08 00 42.0	-1.5
CRIG					Sb	08 00 54.6	-0.2
CRIG	Cruz Grande	0.84	79	eP	Pb	08 00 42.0	-1.5
CRIG				eS	Sb	08 00 54.6	-0.2
MGIG	Malinaltepec	1.46	63	eP	Pn	08 00 53.1	-0.1
MGIG				eS	Sn	08 01 11.1	-1.1
TLIG	Tlapa	1.69	54		Pn	08 00 55.1	-1.1
TLIG	Tlapa	1.69	54	eP	Pn	08 00 55.1	-1.1
TLIG				eS	Sn	08 01 16.9	-0.8
ARIG	Puente Sto Nin	1.73	349		Pn	08 00 55.0	-1.7
ARIG					Sn	08 01 16.7	-2.0
ARIG	Puente Sto Nin	1.73	349	eP	Pn	08 00 55.0	-1.7
ARIG				eS	Sn	08 01 16.7	-2.0
ZIIG	Zihuatanejo	1.74	306		Pn	08 00 54.1	-2.7
ZIIG					Sn	08 01 15.9	-2.9
ZIIG	Zihuatanejo	1.74	306	eP	Pn	08 00 54.1	-2.7
ZIIG				eS	Sn	08 01 15.9	-2.9
PNIG	Pinotepa	1.80	95		Pn	08 00 55.4	-2.3
PNIG					Sn	08 01 16.2	-4.3
PNIG	Pinotepa	1.80	95	iP	Pn	08 00 55.4	-2.3
PNIG				iS	Sn	08 01 16.2	-4.3
HMTT	Tlapaneco	1.84	48		Pn	08 00 57.1	-1.2
HMTT					Sn	08 01 19.6	-1.8
HMTT	Tlapaneco	1.84	48	eP	Pn	08 00 57.1	-1.2
HMTT				eS	Sn	08 01 19.6	-1.8
PLIG	Platanillo	1.87	15		Pn	08 00 57.7	-1.0
PLIG					Sn	08 01 21.4	-0.8
PLIG	Platanillo	1.87	15	eP	Pn	08 00 57.7	-1.0
PLIG				eS	Sn	08 01 21.4	-0.8
UON	La Union	2.22	309	eP	Pn	08 01 03.1	-0.4
UON				eS	Sn	08 01 27.3	-3.5
TXIG	Tlaxiaco	2.24	72	iP	Pn	08 01 03.1	-0.9
TXIG				eS	Sn	08 01 30.7	-0.9
TEJU	Tejupilco	2.32	356	eP	Pn	08 01 04.9	-0.1
TEJU				eS	Sn	08 01 32.4	-1.1
MAVM	Malinalco, Edo	2.42	11		Pb	08 01 11.1	+0.7
MAVM					Sn	08 01 34.6	-1.3
MAVM	Malinalco, Edo	2.42	11	eP	Pb	08 01 11.1	+0.7
MAVM				eS	Sn	08 01 34.6	-1.3
HLIG	Huajuapan de L	2.44	59	iP	Pn	08 01 05.8	-0.9
HLIG				eS	Sn	08 01 35.7	-0.8
YAIG	Yautepec	2.44	21		Pn	08 01 04.9	-1.7
YAIG					Sn	08 01 36.5	+0.1
YAIG	Yautepec	2.44	21	eP	Pn	08 01 04.9	-1.7
YAIG				eS	Sn	08 01 36.5	+0.1
TLVM	San Miguel Top	2.74	17	eP	Pn	08 01 09.7	-1.2
TLVM				eS	Sn	08 01 44.0	-0.1
AOVM	Tlapan	2.75	13	eP	Pn	08 01 10.7	-0.6
AOVM				eS	Sn	08 01 42.8	-1.8
XCVM	Xochimilco	2.79	17	eP	Pn	08 01 10.2	-1.4
XCVM				eS	Sn	08 01 43.9	-1.4
PPM	Popocatepetl	2.80	28	eP	Pn	08 01 10.2	-1.7
PPM				eS	Sn	08 01 45.2	-0.6
UNM	Universidad Na	2.85	16		Pn	08 01 12.3	0.0
UNM	Universidad Na	2.85	16	eP	Pn	08 01 12.3	0.0
UNM				eS	Sn	08 01 46.7	+0.1
CJVM	Cuajimalpa	2.85	14	eP	Pn	08 01 11.8	-0.6
CJVM				eS	Sn	08 01 46.8	0.0
COVM	Coyoacan	2.88	16	eP	Pn	08 01 13.3	+0.6
COVM				eP	Pb	08 01 15.4	-2.8
COVM				eS	Sn	08 01 47.7	+0.4
COVM				eS	Sb	08 01 48.1	-5.4
THVM	De Xico	2.89	20	eP	Pn	08 01 12.0	-0.9
THVM				eS	Sn	08 01 46.8	-0.9
BJVM	Benito Juarez	2.90	16	eP	Pn	08 01 13.3	+0.3
BJVM				eS	Sn	08 01 48.4	+0.6
SCT2	Benito Juarez	2.92	16	e	Pb	08 01 16.6	-2.4
SCT2				eS	Sn	08 01 46.9	-1.5
VRVM	Mexico City	2.95	16	eP	Pn	08 01 12.0	-1.7
VRVM				eS	Sn	08 01 48.1	-1.0
CTVM	Cuauhtemoc	2.96	15	eP	Pb	08 01 18.6	-1.1
CTVM				eS	Sn	08 01 48.8	-0.6
APVM	Azcapotzalco	2.99	14	eP	Pb	08 01 18.3	-2.0
APVM				eS	Sn	08 01 49.6	-0.6
PHPU	Puebla	3.01	35		Pn	08 01 15.2	+0.6
PHPU					Sn	08 01 49.1	-1.5
PHPU	Puebla	3.01	35	eP	Pn	08 01 15.2	+0.6
PHPU				eS	Sn	08 01 49.1	-1.5
GMVM	Gustavo A Made	3.02	16	eP	Pn	08 01 13.4	-1.4
GMVM				eS	Sn	08 01 51.5	+0.5
TXVM	Universitario	3.02	20	eP	Pn	08 01 14.5	-0.3
TXVM				iS	Sn	08 01 51.0	+0.1
TPIG	Tehuac#an	3.11	53		Pn	08 01 14.9	-1.0
TPIG					Sn	08 01 52.0	-1.0
TPIG	Tehuac#an	3.11	53	eP	Pn	08 01 14.9	-1.0
TPIG				eS	Sn	08 01 52.0	-1.0
THEZ	Tehuacan	3.13	52	eP	Pn	08 01 14.2	-1.9
THEZ				eS	Sn	08 01 52.6	-0.9
VHO	Vista Hermosa	3.17	81	eP	Pn	08 01 16.3	-0.4
VHO				eS	Sn	08 01 53.6	-0.8
OXBJ	Oaxaca	3.17	81		Pn	08 01 15.0	-1.7
OXBJ					Sn	08 01 53.4	-1.2
OXBJ	Oaxaca	3.17	81	eP	Pn	08 01 15.0	-1.7
OXBJ				eS	Sn	08 01 53.4	-1.2
TOIG	Toxpalan	3.18	61	eP	Pn	08 01 15.6	-1.2
TOIG				eS	Sn	08 01 54.6	0.0
OXLC	Oaxaca	3.19	81	eP	Pn	08 01 15.4	-1.6
OXLC				eS	Sn	08 01 52.4	-2.6
MOIG	Morelia	3.29	340	Pn	Pn	08 01 18.8	+0.4
MOIG	Morelia	3.29	340	eP	Pn	08 01 18.8	+0.4
MOIG				eS	Sn	08 01 57.4	-0.1
ACIG	Acambay	3.39	2	eP	Pn	08 01 19.9	+0.2
ACIG				eS	Sn	08 02 01.5	+1.6
URUA	Uruapan	3.45	325		Pn	08 01 22.8	+2.2
URUA					Sn	08 01 58.6	-2.8
URUA	Uruapan	3.45	325	eP	Pn	08 01 22.8	+2.2
URUA				eS	Sn	08 01 58.6	-2.8
OZST	Orizaba	3.58	50	eP	Pn	08 01 20.6	-1.7
OZST				eS	Sb	08 02 09.5	-4.1
MMIG	Aquila	3.62	299		Pn	08 01 18.8	-3.9
MMIG					Sn	08 02 07.3	+1.9
MMIG	Aquila	3.62	299	eP	Pn	08 01 18.8	-3.9
MMIG				eS	Sn	08 02 07.3	+1.9
DEIG	Demacu	3.82	14	eP	Pn	08 01 27.1	+1.5
DEIG				eS	Sn	08 02 11.2	+0.6
JAUV	Jalcomulco	4.12	47	eP	Pn	08 01 27.8	-1.8
JAUV				eS	Sn	08 02 17.4	-0.2
JRQG	Juriquilla Cam	4.13	354	eP	Pn	08 01 35.1	+5.2
JRQG				eS	Sn	08 02 16.7	-1.5
NEUV	Arroyo Zacate	4.17	74	iP	Pn	08 01 29.5	-0.7
NEUV				eS	Sn	08 02 18.7	-0.1
CXUV	Coxquihui	4.25	32	eP	Pn	08 01 30.0	-1.3
CXUV				iS	Sn	08 02 20.7	-0.1
LVIG	Laguna Verde	4.62	47	eP	Pn	08 01 33.4	-3.1
LVIG				eS	Sn	08 02 28.0	-2.1
CMIG	Matias Romero	4.92	83	Pn	Pn	08 01 39.7	-1.0
	6.3nm,0.3s,baz=261,slow=12,SNR=81						
CMIG				Sn	Sn	08 02 33.8	-3.7
	17nm,0.3s,baz=280,slow=17,SNR=3.7						
CMIG				Lg	Lg	08 02 57.2	
	18nm,0.3s,baz=195,slow=3.5,SNR=4.6						
CMIG				LR	LR	08 03 21.6	
	comp=Z,499nm,19.1s,baz=270,slow=37						
	21nm,0.4s						
CMIG	Matias Romero	4.92	83		Pn	08 01 39.6	-1.0
CMIG					Sn	08 02 37.4	-0.1
CMIG	Matias Romero	4.92	83	eP	Pn	08 01 39.6	-1.0
CMIG				eS	Sn	08 02 37.4	-0.1
ZAIG	Zacatecas	6.62	339	Pn	Pn	08 02 07.2	+3.0
CCIG	Comitan	7.55	91	Pn	Pn	08 02 18.9	+2.0
RTAL	Retalhuleu	8.26	103	Pn	Pn	08 02 28.6	+2.2
PETF	Flores	9.71	87		Pn	08 02 47.0	+0.6
ESQI	Esquipulas	10.46	100		Pn	08 02 58.1	+1.3
MTO3	Montecristo	10.48	100		Pn	08 02 58.2	+1.1
H06E1	SOCORRO T-PHAS	10.64	284	T	T	08 13 43.0	
	SNR=96						
833A	Chaparral WMA,	11.71	3	Pn	Pn	08 03 14.6	+0.8
833A	Chaparral WMA,	11.71	3	P	Pn	08 03 12.9	-0.8
	baz=182						
SLBS	Sierra La Lagu	11.71	309	Pn	Pn	08 03 18.6	+4.7
LPIG	La Paz	12.23	309	Pn	Pn	08 03 22.8	+2.0
	1.7nm,0.3s,baz=120,slow=20,SNR=2.5						
LPIG				LR	LR	08 07 11.4	
	comp=Z,415nm,18.6s,baz=60,slow=33						
	10nm,0.6s						
TGUH	Tegucigalpa,Un	12.53	100		Pn	08 03 26.6	+1.5
CRIN	San Cristobal	13.11	105		Pn	08 03 36.5	+3.5
TX31	Lajitas Ar. Si	13.14	346		Pn	08 03 35.0	+1.5
TX32	Lajitas Array	13.14	346		Pn	08 03 34.9	+1.5
TXAR	Lajitas Array	13.14	346	Pn	Pn	08 03 35.0	+1.6
	baz=163,slow=15,SNR=16						
TXAR				Lg	Lg	08 07 14.9	
	0.1nm,0.3s,baz=159,slow=18,SNR=3.2						
	1.6nm,0.8s						
CNGN	Cerro Negro	13.49	106	Pn	Pn	08 03 41.8	+3.5
JCT	Junction City	13.84	1		Pn	08 03 42.9	0.0
JCT	Junction City	13.84	1	P	Pn	08 03 42.6	-0.4
	baz=180						
MATN	Matagalpa	14.08	103	Pn	Pn	08 03 47.4	+1.1
435B	Jarrell	14.31	8	P	Pn	08 03 48.6	-0.8
	baz=189						
ACON	Acoyapa	15.08	106		Pn	08 04 00.6	+0.8
ACON				IAmb	IAmb	08 04 13.0	
	comp=Z,25nm,0.9s						
441A	DeRidder	15.42	23	P	P	08 04 09.3	+0.6
ORTG	Ortega, Santa	15.42	112	P	P	08 04 09.5	+0.6
ORTG				IAmb	IAmb	08 04 27.2	
	comp=Z,53nm,1.0s						
DUNO	Dulce Nombre,	15.51	113	P	P	08 04 11.8	+1.9
DUNO				IAmb	IAmb	08 04 17.3	
	comp=Z,35nm,0.8s						
WHTX	Lake Whitney,	15.52	8	P	Pn	08 04 03.1	-2.5
	baz=188,SNR=6.5						
ESPN	Las Esperanzas	15.81	104	P	Pn	08 04 09.7	+0.3
237A	Washetta, Mont	15.82	13	P	P	08 04 13.0	-0.3
NATX	Nacogdoches	15.88	17	P	P	08 04 12.9	-1.0
NATX				IAmb	IAmb	08 04 14.7	
	comp=Z,74nm,0.9s						
NATX	Nacogdoches	15.88	17	P	Pn	08 04 07.8	-2.4
	baz=198,SNR=9.6						
JTS	Las Juntas de	15.90	111	P	P	08 04 12.7	-1.6
JTS				IAmb	IAmb	08 04 23.8	
	comp=Z,36nm,0.9s						
JTS	Las Juntas de	15.90	111	eP	P	08 04 16.4	+2.1
HSIG		15.97	323		Pn	08 04 13.1	+1.8
HSIG				IAmb	IAmb	08 04 23.3	
	comp=Z,39nm,0.9s						
ABTX	Abilene, Hawle	15.98	1		P	08 04 13.5	-1.6
ABTX	Abilene, Hawle	15.98	1	P	Pn	08 04 10.1	-1.5
	baz=180						
CLNB	Carlsbad	16.01	348	P	Pn	08 04 12.4	+0.4
CLN7	Carlsbad 7	16.14	348	P	Pn	08 04 14.1	+0.4
HTMS	Hat Mesa	16.17	349	P	Pn	08 04 14.6	+0.5
342A	Flagon Creek P	16.31	24	P	P	08 04 17.5	-1.1
342A				IAmb	IAmb	08 04 25.1	
	comp=Z,68nm,0.9s						
Z35A	Perchaven, San	16.87	8	P	Pn	08 04 21.2	-1.6
319A	Douglas	16.99	332		P	08 04 26.0	-0.3
319A				IAmb	IAmb	08 04 35.0	
	comp=Z,39nm,0.9s						
344A	Westbrook Farm	17.05	28	P	Pn	08 04 26.0	+1.0
344A				IAmb	IAmb	08 04 46.6	
	comp=Z,74nm,1.4s						
RIMA	Rio Macho	17.10	111	P	P	08 04 29.6	+1.9
Z38A	Mt. Pleasant	17.22	14	P	Pn	08 04 28.1	+0.9
Z38A				IAmb	IAmb	08 04 29.2	
	comp=Z,59nm,0.9s						
121A	Cookes Peak, D	17.38	337	P	Pn	08 04 29.5	0.0
	baz=153,SNR=15						
MSTX	Muleshoe	17.50	352	P	Pn	08 04 29.4	-1.5
	baz=170,SNR=21						
LOOK	Love County	17.53	8		Pn	08 04 30.6	-0.4
LOOK				IAmb	IAmb	08 05 00.8	
	comp=Z,32nm,0.9s						
VBMS	Vicksburg	17.79	27	P	Pn	08 04 31.9	-2.4
	baz=211						
Z41A	Richland Creek	17.84	20	P	Pn	08 04 33.5	-1.3
	baz=203,SNR=8.5						
143A	Socs Landing,	17.84	24	P	Pn	08 04 34.1	-0.8
X34A	Smith Ranch, M	18.06	6		P	08 04 38.1	+0.2
WMOK	Wichita Mounta	18.12	3	P	Pn	08 04 35.8	-2.6
WMOK	Wichita Mounta	18.12	3	P	Pn	08 04 36.5	-1.9
	baz=183						
WLAR	White Oak Lake	18.13	19	P	Pn	08 04 37.2	-1.3
WLAR				IAmb	IAmb	08 05 00.2	
	comp=Z,71nm,1.2s						
AMTX	Amarillo	18.30	356	P	Pn	08 04 39.2	-1.4
AMTX	Amarillo	18.30	356	P	Pn	08 04 38.9	-1.7
	baz=174						
CRNM	Carthage	18.34	342	P	P	08 04 41.8	+0.6
X37A	Clayton	18.41	12		P	08 04 41.8	0.0
TUC	Tucson	18.47	330	P	Pn	08 04 44.0	+1.3
TUC	Tucson	18.47	330	P	Pn	08 04 43.0	+0.2
	baz=144						
Y22D	IRIS PASSCAL I	18.50	342	P	P	08 04 42.4	-0.7
	baz=158						
LENM	Lemitar	18.61	342	P	Pn	08 04 44.7	+0.2
BRAL	Brewton	18.71	37	P	P	08 04 41.8	-3.4
	baz=222						
CCAR	Cane Creek	18.79	22	P	P	08 04 45.5	-0.5
CCAR				IAmb	IAmb	08 05 01.5	
	comp=Z,68nm,1.4s						
MIAR	Mount Ida	18.80	17	P	P	08 04 44.7	-1.5
MIAR	Mount Ida	18.80	17	P	P	08 04 43.5	-2.6
	baz=199,SNR=17						
CSTR	Hydro, Custer	19.03	3		P	08 04 47.9	-0.8
CSTR				IAmb	IAmb	08 04 57.3	
	comp=Z,3.3nm,0.7s						
ANMO	Albuquerque	19.19	344	P	P	08 04 51.1	+0.5
	comp=Z,0.4nm,0.3s,baz=150,slow=11,SNR=35						
ANMO				LR	LR	08 12 07.7	
	comp=Z,347nm,20.1s,baz=160,slow=37						
	comp=Z,8.2nm,0.9s						
ANMO	Albuquerque	19.19	344	P	P	08 04 51.1	+0.5
ANMO	Albuquerque	19.19	344	P	P	08 04 49.9	-0.7
	baz=160						
214A	Organ Pipe Nat	19.23	325	P	P	08 04 51.5	+0.5
	baz=139,SNR=7.7						
UALR	University of	19.38	19	P	P	08 04 51.8	-0.7
UALR				IAmb	IAmb	08 05 15.0	
	comp=Z,45nm,1.2s						
OK030	Cody Creek RV	19.49	8		P	08 04 52.5	-1.2
OK030				IAmb	IAmb	08 04 59.8	
	comp=Z,24nm,0.8s						
OK034	N. Norfolk Rd.	19.58	8		P	08 04 53.5	-1.1
OK034				IAmb	IAmb	08 05 02.0	
	comp=Z,56nm,1.3s						
TUL1	Leonard	19.62	10	P	P	08 04 54.1	-1.0
TUL1				IAmb	IAmb	08 05 02.8	
	comp=Z,38nm,1.0s						
TUL1	Leonard	19.62	10	P	P	08 04 53.1	-2.0
	baz=192,SNR=12						
Z47A	Carrollton	19.75	31	P	P	08 04 55.0	-1.5
WHAR	Wooly Hollow	19.87	19	P	P	08 04 56.9	-0.9
WHAR				IAmb	IAmb	08 05 05.5	
	comp=Z,26nm,0.9s						
X18A	Snowflake	19.98	335	P	Pn	08 05 02.5	+1.4
LRAL	Lakeview Retre	20.16	33	P	P	08 04 59.8	-1.3
LRAL	Lakeview Retre	20.16	33	P	P	08 04 59.3	-1.8
	baz=218						
OXF	Oxford	20.23	26	P	P	08 05 00.0	-1.8
	baz=210						
BLOK	Blackwell	20.26	6		P	08 05 00.1	-1.9
BLOK				IAmb	IAmb	08 05 38.7	
	comp=Z,22nm,1.1s						
HHAR	Hobbs	20.35	14	P	P	08 05 01.6	-1.5
113A	Mohawk Valley,	20.37	325	P	P	08 05 04.4	+1.1
U38A	Gravette	20.40	13	P	P	08 05 01.8	-1.8
U38A				IAmb	IAmb	08 05 09.1	
	comp=Z,26nm,0.8s						
W18A	Petrified Fore	20.42	337	P	Pn	08 05 05.7	-0.5
W18A				IAmb	IAmb	08 05 10.7	
	comp=Z,29nm,0.8s						
W18A	Petrified Fore	20.42	337	P	P	08 05 04.9	+0.9
	baz=151,SNR=15						
FCAR	Ozark Folk Cen	20.48	19	P	P	08 05 03.2	-1.2
FCAR				IAmb	IAmb	08 05 04.2	
	comp=Z,42nm,0.8s						
T35A	Sooner Cattle	20.50	8	P	P	08 05 03.1	-1.6
T35A				IAmb	IAmb	08 05 13.6	
	comp=Z,25nm,0.8s						
X16A	Lo Mia Camp, P	20.52	332	P	P	08 05 06.1	+1.0
X16A				IAmb	IAmb	08 05 17.9	
	comp=Z,21nm,0.9s						
DWPF	Disney Wildern	20.62	53	P	P	08 05 04.8	-1.3
	baz=240						
T25A	Trinidad	20.85	350	P	P	08 05 09.1	+0.4
T25A				IAmb	IAmb	08 05 15.0	
	comp=Z,25nm,0.8s						
T25A	Trinidad	20.85	350	P	P	08 05 08.7	-0.1
	baz=167,SNR=24						
Y14A	Wickenburg	20.88	328	P	P	08 05 10.3	+1.4
LCAR	Lake Charles	20.95	20	P	P	08 05 08.2	-1.4
TIGA	Tifton	21.02	42	P	P	08 05 08.4	-2.0
	baz=229						
GLA	Glamis	21.18	323	P	P	08 05 13.9	+1.8
GLA	Glamis	21.18	323	P	P	08 05 13.5	+1.4
	baz=136						
PLAL	Pickwick Lake	21.21	28	P	P	08 05 10.2	-2.2
PLAL				IAmb	IAmb	08 05 20.8	
	comp=Z,25nm,0.8s						
Z51A	Franklin	21.37	36	P	P	08 05 12.7	-1.4
Z51A				IAmb	IAmb	08 05 17.6	
	comp=Z,34nm,0.9s						
WUAZ	Wupatki	21.42	334	P	P	08 05 16.6	+1.8
WUAZ				IAmb	IAmb	08 05 26.3	
	comp=Z,53nm,1.1s						
WUAZ	Wupatki	21.42	334	P	P	08 05 16.1	+1.2
	baz=148,SNR=26						
SDCO	Great Sand Dun	21.64	348	P	P	08 05 17.2	-0.1
SDCO				IAmb	IAmb	08 05 23.9	
	comp=Z,19nm,0.9s						
SDCO	Great Sand Dun	21.64	348	P	P	08 05 17.3	0.0
	baz=165,SNR=35						
IKP	In-Ko-Pah, Jac	21.65	321	P	P	08 05 18.6	+1.4
	baz=133						
SWSC	Sam W. Stewart	21.67	322	P	P	08 05 19.1	+1.7
	baz=134,SNR=8.6						
PDMCI	Parker Dam,Lak	21.75	327	P	P	08 05 19.3	+1.1
	baz=140,SNR=16						
MVCO	Mesa Verde	21.89	342	P	P	08 05 20.0	+0.1
MVCO	Mesa Verde	21.89	342	P	P	08 05 20.1	+0.1
	baz=157,SNR=18						
S22A	4UR Ranch, Cre	21.93	345	P	P	08 05 19.6	-0.9
	baz=161,SNR=16						
BC3	Big Chuckawall	21.98	324	P	P	08 05 21.3	+0.5
	baz=136,SNR=13						
MONP2	Monument Peak	22.01	321	P	P	08 05 21.9	+0.7
	baz=133						
CBKS	Cedar Bluff	22.16	1	P	P	08 05 21.2	-1.4
	baz=180						
IRM	Iron Mountain	22.18	325	P	P	08 05 23.3	+0.5
	baz=138,SNR=19						
W13A	Hualapai Mount	22.24	329	P	P	08 05 24.9	+1.2
W13A				IAmb	IAmb	08 05 33.7	
	comp=Z,27nm,1.0s						
WVT	Waverly	22.28	27	P	P	08 05 22.0	-1.9
	baz=212						
NEE2	Needles Airpor	22.36	327	P	P	08 05 25.1	+0.4
	baz=140						
Y52A	Lilburn	22.40	37	P	P	08 05 25.1	-0.1
Y52A				IAmb	IAmb	08 05 27.3	
	comp=Z,27nm,0.8s						
109C	Camp Elliot, M	22.43	320	P	P	08 05 26.6	+1.1
	baz=131						
GOGA	Godfrey	22.43	39	P	P	08 05 24.6	-0.9
GOGA				IAmb	IAmb	08 05 27.7	
	comp=Z,38nm,0.9s						
GOGA	Godfrey	22.43	39	P	P	08 05 22.9	-2.6
	baz=226,SNR=19						
KSCO	Kaye Shedlock'	22.47	355	P	P	08 05 24.7	-1.3
	baz=173,SNR=5.5						
TPFO	Pinon Flats	22.52	322	P	P	08 05 28.1	+1.5
	baz=134,SNR=10.0						
PFO	Pinyon Flats O	22.53	322	P	P	08 05 27.3	+0.6
	comp=Z,8.4nm,0.9s,baz=123,slow=9.4,SNR=13						
	comp=Z,8.4nm,0.9s						
PFO	Pinyon Flats O	22.53	322	P	P	08 05 28.0	+1.3
PFO				IAmb	IAmb	08 05 37.3	
	comp=Z,63nm,1.5s						
PFO	Pinyon Flats O	22.53	322	P	P	08 05 27.9	+1.2
	baz=134,SNR=7.9						
BELC	Belle Mtn. Jos	22.54	323	P	P	08 05 26.9	+0.1
	baz=136,SNR=17						
U15A	North Rim	22.59	333	P	P	08 05 28.7	+1.2
U15A				IAmb	IAmb	08 05 43.5	
	comp=Z,26nm,1.1s						
KSU1	Kansas State U	22.64	7	P	P	08 05 26.1	-1.6
	baz=188						
CCM	Cathedral Cave	22.74	18	P	P	08 05 27.7	-1.1
CCM	Cathedral Cave	22.74	18	P	P	08 05 27.2	-1.6
	baz=202						
Q24A	Divide	22.76	350	P	P	08 05 28.2	-1.1
	baz=166						
GMRC	Granite Mounta	22.93	325	P	P	08 05 31.4	+0.5
	baz=138,SNR=16						
MURC	Murrieta	22.96	321	P	P	08 05 32.1	+0.9
	baz=132						
S44A	Carbondale	23.07	22	P	P	08 05 31.8	-0.4
S44A				IAmb	IAmb	08 05 33.4	
	comp=Z,29nm,0.9s						
BBRC	Big Bear Solar	23.26	322	P	P	08 05 35.7	+1.3
	baz=134						
T47A	Sharon Grove	23.32	27	P	P	08 05 33.1	-1.6
T47A				IAmb	IAmb	08 05 45.6	
	comp=Z,20nm,0.8s						
HEC	Hector,Ludlow	23.33	324	P	P	08 05 36.4	+1.4
	baz=136,SNR=20						
SMCO	Snowmass	23.33	346	P	P	08 05 35.4	+0.1
PKCU	Pink Cliffs	23.46	335	P	P	08 05 38.2	+1.7
TUQ	Turquoise Moun	23.56	326	P	P	08 05 38.3	+1.0
	baz=138,SNR=11						
CIS	Catalina Islan	23.59	319	P	P	08 05 38.1	+0.6
	baz=130						
P38A	Dawn	23.65	13	P	P	08 05 35.8	-2.2
P38A				IAmb	IAmb	08 05 38.9	
	comp=Z,18nm,0.9s						
ISCO	Idaho Springs	23.65	349	P	P	08 05 37.8	-0.6
ISCO				IAmb	IAmb	08 05 40.4	
	comp=Z,16nm,0.9s						
ISCO	Idaho Springs	23.65	349	P	P	08 05 37.8	-0.6
	baz=166,SNR=25						
BFSC	Mount Baldy Ra	23.68	321	P	P	08 05 39.8	+1.3
	baz=133						
FMP	Fort Macarthur	23.71	319	P	P	08 05 39.1	+0.4
	baz=131						
RRX	Edison Barstow	23.74	323	P	P	08 05 39.3	+0.3
	baz=135						
TKL	Tuckaleechee C	23.88	34	P	P	08 05 38.3	-1.9
	comp=Z,15nm,0.8s,baz=203,slow=13,SNR=15						
	comp=Z,15nm,0.8s						
TKL	Tuckaleechee C	23.88	34	P	P	08 05 38.6	-1.7
TKL				IAmb	IAmb	08 05 52.4	
	comp=Z,22nm,0.9s						
P40A	Paris	23.90	15	P	P	08 05 38.2	-2.1
GSC	Goldstone, Bar	23.94	324	P	P	08 05 41.2	+0.3
	baz=136,SNR=10						
SHPR	Sheep Range	23.98	329	P	P	08 05 42.5	+1.1
SHPR				IAmb	IAmb	08 05 50.6	
	comp=Z,20nm,1.1s						
SHOC	Shoshone, Teco	24.09	326	P	P	08 05 42.3	+0.1
	baz=138						
DECC	Green Verdugo	24.10	320	P	P	08 05 43.4	+1.0
	baz=132						
SNCC	San Nicolas Is	24.20	317	P	P	08 05 44.0	+0.6
	baz=128						
NHSC	New Hope	24.31	44	P	P	08 05 42.2	-2.1
	baz=232						
Q16A	Castle Valley	24.32	338	P	P	08 05 45.5	+0.9
Q16A				IAmb	IAmb	08 05 45.9	
	comp=Z,16nm,0.9s						
EDW2	Edwards Air Fo	24.32	322	P	P	08 05 44.5	0.0
	baz=133						
MVU	Marysvale	24.34	336	P	P	08 05 46.1	+1.3
OGNE	Ogallala	24.35	356	P	P	08 05 43.5	-1.2
	baz=175						
PAULI	Pauline	24.39	38	P	P	08 05 44.9	-0.1
O20A	White River Ci	24.55	345	P	P	08 05 46.6	0.0
	baz=160,SNR=13						
LRMC	Laurel Mtn Rad	24.56	323	P	P	08 05 46.6	-0.1
	baz=135						
P17A	Butcher Ranch,	24.67	340	P	P	08 05 48.0	+0.4

TMUT **Trail Mountain** 24.67 339 P P 08 05 49.0 +1.2
TMUT IAmb IAmb 08 05 50.5
comp=Z,24nm,1.0s
TZTN **Tazewell** 24.67 33 P P 08 05 45.5 -2.1
baz=220,SNR=8.6
SCZ2 **Santa Cruz Isl** 24.75 318 P P 08 05 48.5 +0.3
baz=129
N23A **Red Feather La** 24.78 349 P P 08 05 47.0 -1.7
baz=166,SNR=14
FURC **Furnace Creek,** 24.83 326 P P 08 05 50.1 +1.1
baz=138,SNR=6.1
MPMC **Manual Prospec** 24.87 325 P P 08 05 49.8 +0.3
baz=136,SNR=14
TPNV **Topopah Spring** 24.88 328 P P 08 05 51.2 +1.6
TPNV **Topopah Spring** 24.88 328 P P 08 05 50.2 +0.7
baz=140,SNR=19
KMSC **Kings Mountain** 24.90 39 P P 08 05 47.5 -2.1
baz=227,SNR=16
ARVC **Arvin** 24.99 321 P P 08 05 51.4 +1.0
baz=132
SBC **Santa Barbara** 25.08 319 P P 08 05 52.0 +0.8
baz=130
PHWY **Pilot Hill** 25.09 350 P P 08 05 51.9 +0.3
PHWY IAmb IAmb 08 05 52.9
comp=Z,15nm,0.8s
ISA **Isabella, Lake** 25.15 323 P P 08 05 52.8 +0.9
baz=134,SNR=8.5
PKM **Mcpherson Peak** 25.43 320 P P 08 05 55.4 +0.7
baz=130
V55A **Taylorsville** 25.46 37 P P 08 05 54.6 -0.1
CWC **Cottonwood Cre** 25.48 324 P P 08 05 55.7 +0.7
baz=136
GRAC **Grapevine Rang** 25.50 326 P P 08 05 55.8 +0.7
baz=138,SNR=8.9
VES **Vestal, Richgr** 25.63 322 P P 08 05 56.7 +0.5
baz=133,SNR=13
HDIL **Hopedale** 25.64 19 P P 08 05 55.0 -1.2
baz=204,SNR=10
R11A **Troy Canyon, C** 25.65 331 P P 08 05 56.8 +0.2
baz=143,SNR=27
W57A **Gilead** 25.72 40 P P 08 05 57.2 +0.2
RWWY **Rawlins** 25.79 348 P P 08 05 59.4 +1.6
RWWY IAmb IAmb 08 06 01.3
comp=Z,23nm,0.9s
SMMC **Simmler** 25.83 320 P P 08 05 58.6 +0.5
baz=130
SCIA **State Center** 25.91 12 P P 08 05 57.4 -1.3
baz=195
TIN **Tinemaha, Big** 26.00 325 P P 08 06 01.1 +1.3
baz=136
DUG **Dugway, Tooele** 26.04 337 P P 08 06 00.2 +0.1
baz=150,SNR=28
SFIN **Lafayette** 26.23 23 P P 08 05 59.9 -1.6
baz=209,SNR=6.1
TPH **Tonopah** 26.23 328 P P 08 06 03.4 +1.5
P49A **Miami Univ. Ec** 26.48 27 P P 08 06 02.5 -1.4
baz=214,SNR=7.7
K22A **Casper** 26.58 349 P P 08 06 04.6 -0.4
baz=165,SNR=6.7
OTAV **Otavalo** 26.73 125 P P 08 06 09.2 +2.3
MLAC **Mammoth, Mammo** 26.75 325 P P 08 06 07.5 +0.9
baz=136
HWUT **Hardware Ranch** 26.86 341 P P 08 06 08.1 +0.5
HWUT IAmb IAmb 08 06 09.8
comp=Z,19nm,0.8s
BLA **Blacksburg** 26.87 36 P P 08 06 07.4 -0.1
BLA **Blacksburg** 26.87 36 P P 08 06 06.1 -1.3
baz=225,SNR=16
O48B **Farmland** 26.89 26 P P 08 06 05.8 -1.8
baz=213,SNR=6.1
NV11 **Mina Array Sit** 26.98 327 P P 08 06 10.3 +1.7
NV11 IAmb IAmb 08 06 31.8
comp=Z,29nm,1.2s
NVAR **Mina Array Bea** 27.06 327 P P 08 06 10.8 +1.4
comp=Z,10nm,0.8s,baz=154,slow=9.7,SNR=40
NVAR PcP PcP 08 09 30.9 +0.5
comp=Z,0.6nm,0.8s,baz=70,slow=3.9,SNR=2.2
comp=Z,10nm,0.8s
CNNC **Cliffs of the** 27.11 43 P P 08 06 07.6 -2.0
baz=232
ECSD **EROS Data Cent** 27.22 5 P P 08 06 10.0 -0.5
ECSD IAmb IAmb 08 06 10.8
comp=Z,18nm,1.1s
ECSD **EROS Data Cent** 27.22 5 P P 08 06 10.0 -0.5
baz=187,SNR=16
BW06 **Boulder Array** 27.36 345 P P 08 06 11.9 -0.1
BW06 IAmb IAmb 08 06 13.3
comp=Z,13nm,0.9s
BW06 **Boulder Array** 27.36 345 P P 08 06 11.9 -0.1
baz=159,SNR=32
PD31 **Pinedale Array** 27.36 345 P P 08 06 12.3 +0.3
PD31 IAmb IAmb 08 06 13.3
comp=Z,12nm,0.9s
PDAR **Pinedale Array** 27.36 345 P P 08 06 12.3 +0.3
comp=Z,11nm,0.8s,baz=146,slow=9.7,SNR=74
PDAR PcP PcP 08 09 30.9 -0.2
comp=Z,0.8nm,0.9s,baz=157,slow=4.9,SNR=2.6
PDAR LR LR 08 18 10.6
comp=Z,313nm,19.5s,baz=188,slow=39
comp=Z,11nm,0.8s
PDAR **Pinedale Array** 27.36 345 P P 08 06 12.5 +0.5
ELK **Elko** 27.46 334 P P 08 06 13.9 +0.9
comp=Z,2.6nm,0.9s,baz=170,slow=9.3,SNR=10
ELK LR LR 08 17 55.5
comp=Z,244nm,20.7s,baz=166,slow=38
comp=Z,2.6nm,0.9s
JFWS **Jewell Farm** 27.54 16 P P 08 06 11.8 -1.6
baz=200,SNR=6.9
L44A **Lake County Fo** 27.54 20 P P 08 06 11.9 -1.5
baz=205
RSSD **Black Hills** 27.67 354 P P 08 06 14.5 -0.3
baz=171
P52A **Corning** 27.75 31 P P 08 06 13.8 -1.6
baz=219
AHID **Auburn Hatcher** 27.78 342 P P 08 06 16.6 +0.9
AHID IAmb IAmb 08 06 17.1
comp=Z,13nm,1.1s
SUSD **Miller** 27.80 2 P P 08 06 14.1 -1.5
baz=182
ACSO **Alum Creek Sta** 27.82 29 P P 08 06 14.6 -1.3
baz=217
S57A **Dark Hollow, R** 28.09 37 P P 08 06 18.1 -0.3
VCNR **Virginia City** 28.41 327 P P 08 06 23.6 +2.2
VCNR IAmb IAmb 08 06 32.0
comp=Z,13nm,1.1s
EMB **Emerald Bay** 28.41 326 P P 08 06 23.6 +2.1
EMB IAmb IAmb 08 06 30.5
comp=Z,19nm,1.1s
MOOW **Moose Ponds** 28.58 344 P P 08 06 23.2 +0.3
MPK **Martis Peak** 28.61 326 P P 08 06 25.1 +1.9
MPK IAmb IAmb 08 06 33.6
comp=Z,19nm,0.9s
O53A **New Philadelph** 28.68 31 P P 08 06 21.7 -1.9
baz=220
IMW **Indian Meadow** 28.77 343 P P 08 06 25.0 +0.3
BOSC **San Juan Bosco** 28.91 131 P P 08 06 28.6 +2.6
BOSC IAmb IAmb 08 06 46.4
comp=Z,24nm,1.2s
MCWV **Mont Chateau** 28.93 33 P P 08 06 25.0 -0.8
baz=223
BEKR **Beckworth** 29.20 327 P P 08 06 29.8 +1.4
SPMN **Marine on St.** 29.20 10 P P 08 06 27.3 -0.8
baz=194
AAM **Ann Arbor** 29.21 25 P P 08 06 26.4 -1.9
baz=213
RLMT **Red Lodge** 29.51 347 P P 08 06 31.2 0.0
baz=161,SNR=5.9
HLID **Hailey** 29.56 338 P P 08 06 32.4 +0.8
HLID IAmb IAmb 08 06 39.2
comp=Z,10nm,1.0s
HLID **Hailey** 29.56 338 P P 08 06 31.8 +0.2
baz=150,SNR=15
M53A **WI Miller and** 29.85 30 P P 08 06 31.8 -2.2
baz=219
E28A **Huff** 29.92 359 P P 08 06 34.6 0.0
MFID **Camas Ranch** 29.95 337 P P 08 06 36.1 +1.1
MFID IAmb IAmb 08 06 43.4
comp=Z,13nm,0.9s
WVOR **Wild Horse Val** 30.31 332 P P 08 06 39.2 +1.1
WVOR IAmb IAmb 08 06 51.6
comp=Z,15nm,1.2s
LAO **LASA Array** 30.47 352 P P 08 06 39.5 +0.1
LAO IAmb IAmb 08 06 41.6
comp=Z,13nm,0.8s
LAO **LASA Array** 30.47 352 P P 08 06 38.8 -0.7
baz=168,SNR=9.6
BOZ **Bozeman (W)** 30.53 344 P P 08 06 41.0 +0.9
baz=157,SNR=15
BOZ **Bozeman (W)** 30.53 344 P P 08 06 40.2 0.0
DLMT **Dillon** 30.59 342 P P 08 06 41.8 +1.2
SSPA **Standing Stone** 30.68 34 P P 08 06 41.3 0.0
SSPA IAmb IAmb 08 06 47.1
comp=Z,12nm,0.9s
SSPA **Standing Stone** 30.68 34 P P 08 06 39.5 -1.8
baz=225
GLMI **Grayling** 31.00 21 P P 08 06 42.2 -1.9
baz=209
MDND **Maddock** 31.19 1 P P 08 06 44.8 -0.9
baz=180,SNR=11
PLID **Pearl Lake** 31.45 338 P P 08 06 48.8 +0.5
PLID IAmb IAmb 08 06 55.7
comp=Z,17nm,0.9s
AGMN **Agassiz Nation** 31.82 5 P P 08 06 49.9 -1.3
baz=187,SNR=8.1
L04D **Klamath Falls** 31.91 328 P P 08 06 52.0 -0.3
baz=136
K04D **Chiloquin, OR** 31.93 329 P P 08 06 52.3 -0.2
baz=137
DGMT **Dagmar** 32.00 355 P P 08 06 53.4 +0.5
DGMT **Dagmar** 32.00 355 P P 08 06 52.2 -0.6
baz=172,SNR=12
I07A **Izee** 32.01 333 P P 08 06 53.3 +0.2
EYMN **Ely** 32.06 11 P P 08 06 51.5 -1.9
baz=195
B35A **Bob, Littlefor** 32.12 8 P P 08 06 53.3 -0.6
J05D **Fort Rock, OR** 32.18 330 P P 08 06 54.5 -0.1
baz=139
MSO **Missoula** 32.31 342 P P 08 06 56.1 +0.4
MSO IAmb IAmb 08 07 02.9
comp=Z,10nm,0.8s
MSO **Missoula** 32.31 342 P P 08 06 55.5 -0.2
baz=154,SNR=8.3
EGMT **Eagleton** 32.37 348 P P 08 06 56.9 +0.7
EGMT **Eagleton** 32.37 348 P P 08 06 56.3 +0.1
baz=162,SNR=7.7
L02F **Cave Junction** 32.51 326 P P 08 06 57.9 +0.5
baz=134
J04D **Umpqua Nationa** 32.57 329 P P 08 06 58.3 +0.2
baz=137
BINY **Binghamton** 32.79 34 P P 08 06 58.7 -1.2
baz=226
K02D **Willamette Mer** 32.96 327 P P 08 07 01.8 +0.4
baz=134
I05D **Terrebonne, OR** 33.03 331 P P 08 07 02.7 +0.8
baz=140
I04A **Tendick Farm,** 33.12 330 P P 08 07 03.3 +0.5
baz=137
PAL **Palisades** 33.16 37 P P 08 07 01.0 -2.1
baz=230
J01E **Myrtle Point** 33.43 327 P P 08 07 05.2 -0.2
baz=134
I03D **Drain, OR** 33.51 329 P P 08 07 06.7 +0.6
baz=136
J57A **Williamstown** 33.64 32 P P 08 07 06.1 -1.1
G05D **Wamic, OR** 33.72 332 P P 08 07 08.2 +0.2
baz=140
ULM **Lac du Bonnet** 33.76 5 P P 08 07 07.2 -1.0
comp=Z,20nm,0.9s,baz=194,slow=8.4,SNR=15
comp=Z,20nm,0.9s
H04D **Lebanon** 33.82 330 P P 08 07 09.0 +0.2
baz=138
I02E **Swisshome, OR** 34.06 329 P P 08 07 12.5 +1.6
baz=136
WALA **Waterton Lakes** 34.33 344 P P 08 07 13.8 +0.5
J59A **Piesco** 34.45 34 P P 08 07 14.0 -0.4
J59A IAmb IAmb 08 07 14.6
comp=Z,6.0nm,0.8s
NEW **Newport** 34.59 340 P P 08 07 15.2 -0.2
baz=150
G03D **McMinnville, O** 34.59 331 P P 08 07 15.9 +0.5
baz=138
L61B **Northampton** 34.79 37 P P 08 07 15.3 -1.9
baz=230
LONY **Lake Ozonia** 35.21 32 P P 08 07 18.2 -2.6
baz=225
HRV **Adam Dziewonsk** 35.47 37 P P 08 07 21.2 -1.9
baz=232
LBNH **Lisbon** 36.36 35 P P 08 07 28.3 -2.4
baz=229
I62A **Tamworth** 36.45 36 P P 08 07 31.2 -0.3
LLLB **Lillooet** 38.23 337 P P 08 07 47.5 +0.9
LLLB IAmb IAmb 08 07 54.0
comp=Z,17nm,1.0s
PKME **Peaks-Kenny Pk** 38.46 35 P P 08 07 46.4 -2.1
baz=232
LMQ **La Malbaie** 39.38 32 P P 08 07 55.7 -0.4
LMQ IAmb IAmb 08 07 56.7
comp=Z,17nm,0.9s
BBB **Bella Bella** 41.91 334 P P 08 08 18.6 +1.6
comp=Z,4.9nm,0.9s,baz=186,slow=10,SNR=2.1
comp=Z,4.9nm,0.9s
ETMB **Extrema** 42.48 126 P P 08 08 23.1 +1.0
ETMB IAmb IAmb 08 08 30.3
comp=Z,5.2nm,0.9s
RPN **Rapa Nui** 44.38 192 LR LR 08 22 40.8
comp=Z,154nm,20.3s,baz=48,slow=30
SAML **Samuel** 44.38 122 P P 08 08 37.2 -0.2
LPAZ **La Paz** 45.32 135 P P 08 08 48.2 +2.6
comp=Z,1.1nm,0.8s,baz=27,slow=8.4,SNR=3.3
comp=Z,1.1nm,0.8s
SCHQ **Schefferville** 45.92 26 P P 08 08 49.0 -0.2
comp=Z,20nm,0.9s,baz=221,slow=5.5,SNR=19
comp=Z,20nm,0.9s
SCHQ **Schefferville** 45.92 26 P P 08 08 48.4 -0.8
T35M **Bob Quinn** 46.31 338 P P 08 08 53.1 +0.8
baz=138
YKA **Yellowknife Ar** 47.00 351 P P 08 08 56.7 -0.8
comp=Z,5.3nm,0.8s,baz=157,slow=6.9,SNR=16
comp=Z,5.3nm,0.8s
YKA **Yellowknife Ar** 47.00 351 P P 08 08 57.5 0.0
DLBC **Dease Lake** 47.33 339 P P 08 09 01.6 +1.3
comp=Z,4.7nm,0.8s,baz=160,slow=6.5,SNR=14
comp=Z,4.7nm,0.8s
DLBC **Dease Lake** 47.33 339 P P 08 09 01.7 +1.5
DLBC IAmb IAmb 08 09 12.6
comp=Z,11nm,1.0s
DLBC **Dease Lake** 47.33 339 P P 08 09 02.0 +1.7
baz=139,SNR=6.5
R33M **Jennings River** 48.37 339 P P 08 09 10.2 +1.8
baz=138,SNR=6.7
P32M **Atlin** 49.47 338 P P 08 09 18.0 +1.2
baz=135
P33M **Teslin, Yukon** 49.61 339 P P 08 09 18.8 +1.0
baz=137
N32M **Quiet Lake** 50.39 340 P P 08 09 24.4 +0.7
baz=137
P29M **Windy Craggy** 50.99 336 P P 08 09 28.6 +0.4
baz=130
P30M **Million Dollar** 51.02 337 P P 08 09 28.4 -0.1
baz=132
O30N **Meadenhall** 51.15 338 P P 08 09 30.1 +0.7
baz=133
PTLB **Pontes e Lacer** 51.37 126 P P 08 09 32.8 +1.3
PTLB IAmb IAmb 08 09 35.8
comp=Z,3.9nm,1.2s
N31M **Braeburn, Yuko** 51.53 339 P P 08 09 34.0 +1.6
N31M **Braeburn, Yuko** 51.53 339 P P 08 09 32.8 +0.5
baz=134,SNR=11
M31M **Drury Creek, Y** 51.58 340 P P 08 09 33.7 +1.1
M31M IAmb IAmb 08 09 34.9
comp=Z,7.0nm,0.9s
M31M **Drury Creek, Y** 51.58 340 P P 08 09 33.3 +0.7
baz=136,SNR=7.0
PNL **Peninsula** 51.66 336 P P 08 09 34.2 +1.0
baz=129
HYT **Haines Junctio** 51.69 338 P P 08 09 35.9 +2.2
HYT **Haines Junctio** 51.69 338 P P 08 09 33.6 0.0
baz=132
O29M **Mount Kennedy** 51.75 337 P P 08 09 34.7 +0.7
baz=130
N30M **Aishikik Lake** 51.97 338 P P 08 09 36.8 +1.2
baz=132,SNR=8.6
YUK6 **Outpost Mounta** 52.09 337 P P 08 09 37.5 +0.8
baz=131
PINM **Pinnacle** 52.26 336 P P 08 09 38.5 +0.7
baz=128
YUK4 **Talbot Arm** 52.45 338 P P 08 09 40.4 +1.0
baz=131
M30M **Minto, Yukon** 52.64 340 P P 08 09 41.3 +0.8
baz=133,SNR=7.4
O28M **Mount Upton** 52.66 337 P P 08 09 41.6 +0.6
baz=128
M29M **Somme Creek** 53.12 339 P P 08 09 45.3 +1.2
baz=131
YUK3 **Moose Creek** 53.40 337 P P 08 09 47.3 +1.0
baz=129
H03N2 **Juan Fernandez** 53.65 158 T T 09 07 42.1
baz=338,slow=78,SNR=85
H03N1 **Juan Fernandez** 53.65 158 T T 09 07 41.7
baz=338,slow=78,SNR=57
H03N3 **Juan Fernandez** 53.66 158 T T 09 07 40.3
baz=338,slow=78,SNR=89
CRQE **Cirque** 53.78 335 P P 08 09 49.2 +0.2
baz=125
BVCY **Beaver Creek** 53.95 338 P P 08 09 51.0 +0.9
baz=129
MCARA **McCarthy VSAT** 54.13 336 P P 08 09 52.4 +1.0
baz=126
M27K **Edge Creek, AK** 54.28 337 P P 08 09 53.6 +0.9
baz=128,SNR=6.7
GLB **Gilahina Butte** 54.47 336 P P 08 09 55.1 +1.1
GLB IAmb IAmb 08 10 03.1
comp=Z,10nm,1.0s
BMRM **Bremner River** 54.51 335 P P 08 09 54.1 -0.2
baz=124
DAWY **Dawson** 54.52 340 P P 08 09 54.7 +0.5
baz=131
BCAR **Beaver Creek A** 54.69 338 P P 08 09 56.3 +0.7
L27K **Beaver Creek,** 54.70 338 P P 08 09 55.6 0.0
baz=128,SNR=7.8
M26K **Nabesna, AK** 54.72 337 P P 08 09 56.3 +0.5
baz=126
EYAK **Cordova Ski Ar** 54.75 334 P P 08 09 56.3 +0.4
baz=122
C36M **Paulatuk** 54.85 350 P P 08 09 56.6 +0.1
baz=151
N25K **Chitina, Valde** 54.87 336 P P 08 09 57.8 +0.8
baz=124
I29M **Ogilvie Camp,** 55.05 342 P P 08 09 58.0 -0.1
baz=133
P23K **Montague Islan** 55.16 333 P P 08 09 59.0 +0.1
baz=120
L26K **Log Cabin Wild** 55.23 338 P P 08 09 60.0 +0.5
baz=126
KLU **Klutina** 55.34 335 P P 08 10 01.7 +1.5
KLU **Klutina** 55.34 335 P P 08 10 00.3 0.0
baz=123
K27K **Chicken** 55.39 339 P P 08 10 01.8 +1.2
K27K **Chicken** 55.39 339 P P 08 10 01.6 +1.0
baz=128
HARP **HAARP** 55.54 336 P P 08 10 02.1 +0.4
baz=124
M24K **Tolsona, Glenn** 55.77 336 P P 08 10 03.8 +0.4
baz=123
DOT **Dot Lake** 55.86 338 P P 08 10 05.1 +1.1
DOT IAmb IAmb 08 10 13.4
comp=Z,12nm,1.1s
INK **Inuvik** 55.92 346 P P 08 10 04.0 -0.2
comp=Z,6.3nm,0.8s,baz=131,slow=8.7,SNR=14
comp=Z,6.3nm,0.8s
INK **Inuvik** 55.92 346 P P 08 10 04.4 +0.2
INK IAmb IAmb 08 10 12.5
comp=Z,8.5nm,0.9s
INK **Inuvik** 55.92 346 P P 08 10 03.6 -0.6
baz=140,SNR=7.4
PAX **Paxson** 55.98 337 P P 08 10 05.7 +0.8
PAX IAmb IAmb 08 10 06.4
comp=Z,6.3nm,0.9s
PAX **Paxson** 55.98 337 P P 08 10 04.6 -0.4
baz=124,SNR=7.4
PWL **Port Wells** 56.00 334 P P 08 10 04.6 -0.4
baz=120
SCRK **Sand Creek** 56.03 338 P P 08 10 05.3 +0.1
baz=126,SNR=7.7
RIDG **Independent Ri** 56.20 338 P P 08 10 07.6 +1.2
RIDG **Independent Ri** 56.20 338 P P 08 10 06.5 +0.1
baz=125,SNR=14
J26L **Joseph Creek** 56.20 339 P P 08 10 07.7 +1.2
J26L **Joseph Creek** 56.20 339 P P 08 10 07.2 +0.7
baz=127,SNR=22
M23K **Glacier View** 56.23 335 P P 08 10 07.4 +0.8
baz=121
I27K **Kandik River** 56.24 341 P P 08 10 07.3 +0.6
baz=130
SML **Sawmill** 56.48 335 P P 08 10 08.3 -0.1
baz=120
I26K **Coal Creek Min** 56.55 340 P P 08 10 08.8 0.0
I26K IAmb IAmb 08 10 25.5
comp=Z,6.6nm,1.1s
I26K **Coal Creek Min** 56.55 340 P P 08 10 09.0 +0.2
baz=128
WAT6 **Susitna Watana** 56.65 336 P P 08 10 10.3 +0.6
baz=121
PMR **Palmer** 56.70 334 P P 08 10 09.6 -0.3
baz=119
DHY **Denali Highway** 56.77 336 P P 08 10 11.5 +0.9
baz=122
Q20K **Shuyak Island** 56.78 330 P P 08 10 11.1 +0.6
baz=114
J25K **Salcha River,** 56.89 339 P P 08 10 12.1 +0.8
baz=125
G27K **Doyon Strip** 57.04 342 P P 08 10 12.4 +0.1
baz=130,SNR=6.1
HDA **Harding Lake** 57.34 338 P P 08 10 14.1 -0.3
baz=123
PRP **Porcupine Dome** 57.47 339 P P 08 10 15.0 -0.5
baz=125
RND **Reindeer** 57.51 336 P P 08 10 16.6 +0.8
IL31 57.52 338 P P 08 10 16.2 +0.6
ILAR **Eielson Array** 57.52 338 P P 08 10 15.4 -0.2
comp=Z,3.4nm,1.0s,baz=147,slow=5.7,SNR=25
comp=Z,3.4nm,1.0s
ILAR **Eielson Array** 57.52 338 P P 08 10 15.8 +0.1
MCK **McKinley** 57.71 337 P P 08 10 17.1 0.0
baz=121
COLA **College** 57.92 338 P P 08 10 18.7 +0.3
baz=123
TCOL **CIGO, UAF Yank** 57.92 338 P P 08 10 18.2 -0.3
baz=123
E27K **Coleen River** 57.93 343 P P 08 10 18.5 0.0
baz=131
H25K **Birch Creek** 58.01 340 P P 08 10 19.0 -0.1
baz=126
Q18K **Katmai Hardscr** 58.05 330 P P 08 10 19.4 -0.2
baz=112
TRF **Thorofare Moun** 58.09 336 P P 08 10 20.4 +0.5
TRF **Thorofare Moun** 58.09 336 P P 08 10 20.2 +0.3
baz=119,SNR=9.6
NEA2 **Nenana** 58.21 337 P P 08 10 20.9 +0.4
baz=121
F26K **Sheenjek River** 58.35 342 P P 08 10 21.9 +0.4
baz=128
G25K **Bearman Lake** 58.40 340 P P 08 10 22.1 +0.3
baz=125
H24K **Noodor Dome** 58.46 339 P P 08 10 22.3 -0.1
baz=123
M20K **Styx River** 58.52 334 P P 08 10 22.7 -0.2
baz=116
PPLA **Purkeypile** 58.58 335 P P 08 10 23.1 -0.3
baz=117
O18K **Koktuh Hills** 58.61 331 P P 08 10 23.9 +0.5
baz=112
I23K **Minto, Yukon-K** 58.61 338 P P 08 10 23.7 +0.4
I23K **Minto, Yukon-K** 58.61 338 P P 08 10 23.5 +0.2
baz=121
N19K **Bonanza Creek** 58.66 332 P P 08 10 23.2 -0.6
baz=114
CAST **Castle Rocks** 58.78 335 P P 08 10 24.6 +0.1
baz=117
G24K **Hadweenzic Riv** 58.81 340 P P 08 10 25.0 +0.3
baz=124
MLY **Manley** 59.05 337 P P 08 10 26.3 -0.2
baz=120,SNR=7.0
M19K **Big River Lodg** 59.07 333 P P 08 10 26.8 +0.2
M19K **Big River Lodg** 59.07 333 P P 08 10 26.7 +0.2
baz=114
L20K **Farewell, AK** 59.09 334 P P 08 10 26.4 -0.4
baz=115
N18K **Kilae Creek** 59.24 332 P P 08 10 27.8 0.0
baz=112
L19K **White Mountain** 59.38 334 P P 08 10 28.4 -0.4
baz=114
C27K **Jago River** 59.45 344 P P 08 10 27.8 -1.3
baz=129
O17K **Koliganek Bris** 59.46 330 P P 08 10 29.2 -0.1
baz=110
K20K **Telida** 59.55 335 P P 08 10 29.0 -0.9
baz=115
I21K **Tanana** 59.58 337 P P 08 10 29.3 -0.8
baz=118
P16K **Nushagak River** 59.64 329 P P 08 10 31.0 +0.5
baz=109

G23K	Bananza Creek	59.66	339	P	P	08 10 30.7	0.0
	baz=121						
H22K	Ishtalitna Cre	59.71	338	P	P	08 10 30.8	-0.2
	baz=120						
E24K	Your Creek	59.91	341	P	P	08 10 32.8	+0.5
	baz=124						
J20K	Nowinta River	59.94	336	P	P	08 10 32.4	-0.1
	baz=116						
COLD	Coldfoot	59.99	340	P	P	08 10 32.5	-0.4
	baz=121						
D25K	Kavik River	60.00	343	P	P	08 10 32.6	-0.3
	baz=126						
H21K	Melozitna Rive	60.11	338	P	P	08 10 32.6	-1.2
	baz=118						
BDFB	Brasilia	60.46	119	P	P	08 10 37.0	+0.1
	comp=Z,4.1nm,0.8s,baz=248,slow=2.5,SNR=5.0						
	comp=Z,4.1nm,0.8s						
N16K	Nishlik Lake	60.49	331	P	P	08 10 36.4	0.0
	baz=109						
F22K	John River	60.80	340	P	P	08 10 38.8	+0.4
	baz=119						
F21K	Alatna River	61.10	339	P	P	08 10 41.0	+0.6
	baz=118						
PLCA	Paso Flores	63.23	155	P	P	08 10 56.1	+1.0
	comp=Z,4.8nm,1.0s,baz=352,slow=7.1,SNR=7.5						
	comp=Z,4.8nm,1.0s						
SUMG	Summit	65.92	17	P	P	08 11 12.9	+0.2
SUMG	Summit	65.92	17	*i* P	P	08 11 12.0	-0.7
SEY	Seymchan	83.15	334	P	P	08 12 52.8	+0.4
	comp=Z,2.8nm,0.6s,baz=86,slow=6.1,SNR=12						
	comp=Z,2.8nm,0.6s						
PAB	San Pablo	83.87	51	P	P	08 12 57.1	+0.3
PETK	Petropavlovsk-	84.09	324	P	P	08 12 57.8	+0.4
	comp=Z,1.4nm,0.7s,baz=126,slow=7.7,SNR=4.6						
	comp=Z,1.4nm,0.7s						
PETK	Petropavlovsk-	84.09	324	P	P	08 12 57.1	-0.3
ESDC	Sonseca Array	84.12	50	P	P	08 12 57.7	-0.3
	comp=Z,2.6nm,0.8s,baz=302,slow=5.5,SNR=18						
	comp=Z,2.6nm,0.8s						
ESDC	Sonseca Array	84.12	50	P	P	08 12 58.7	+0.7
ESDC				IAmb	IAmb	08 12 58.7	
	comp=Z,4.8nm,1.1s						
MDT	Midelt	85.58	57	LR	LR	08 49 55.5	
	comp=Z,58nm,18.1s,baz=152,slow=35						
BMRD	Maredsous	86.51	38	*d*PcP	P	08 13 11.2	+1.6
GERES	GERESS Array B	92.39	37	P	P	08 13 37.3	-0.2
	comp=Z,0.4nm,0.6s,baz=286,slow=4.0,SNR=2.4						
	comp=Z,0.4nm,0.6s						
TOA0	Torodi Ar. Sit	97.19	74	P	P	08 13 58.6	-1.4
TOA0				IAmb	IAmb	08 14 32.3	
	comp=Z,3.9nm,1.2s						

NNC 02 08:26:20.9±3.1, 53°.73N×90°.69E, h0km, mb3.7, mpv3.4, 6C-6D, Error ellipse: s-maj=25.1km s-min=23.0km az=160.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	8.00	253	⇑Pn	Pn	08 28 18.6	+0.3
	2.6nm,1.2s						
KURK				⇑Sn	Sn	08 29 49.6	+0.2
	3.8nm,0.7s						
KURK				⇑Lg	Lg	08 30 35.6	
	27nm,1.4s						
KURBB	Kurchatov Arra	8.09	252	⇓Pn	Pn	08 28 21.6	+2.0
	2.4nm,0.5s						
KURBB				⇑Sn	Sn	08 29 52.1	+0.4
	15nm,0.8s						
KURBB				⇑Lg	Lg	08 30 39.5	
	12nm,0.6s						
MK31	Makanchi Array	8.78	221	⇓Pn	Pn	08 28 28.7	-0.3
	0.5nm,0.6s,baz=43,slow=13,SNR=7.8						
MK31				⇓Sn	Sn	08 30 10.3	+1.7
	0.5nm,0.5s						
MK31				⇑Lg	Lg	08 30 58.8	
	4.9nm,0.8s,baz=32,slow=29,SNR=5.1						
MAKZ	Makanchi	8.89	222	⇓Pn	Pn	08 28 28.3	-2.2
	1.1nm,0.7s						
MAKZ				⇓Sn	Sn	08 30 14.4	+3.1
	2.0nm,0.7s						
MAKZ				⇓Lg	Lg	08 31 02.8	
	5.1nm,0.9s						

INET 02 08:38:04.5±0.7, 12°.73N×88°.94W, h17km±8km, MW3.6
UCR 02 08:38:05.1±0.9, 12°.81N×88°.96W, h26km±4km, ML3.7
SNET 02 08:38:05.5±0.8, 12°.84N×88°.96W, h27km±4km, ML3.7
ISC 02 08:38:01.6±1.5, 12°.79N±0°.06×88°.97W±0°.04, h5km±11km, n59, σ1s11/69, 10C-24D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.77	334	⇓*i*P	Pg	08 38 12.5	-4.0
LALI				*e*S	Sg	08 38 22.9	-3.5
LALI	Alcalda de L	0.77	334	⇓*i*P	Pg	08 38 12.5	-4.0
LALI				*e*S	Sg	08 38 22.9	-3.5
SJTE	Alcalda de S	0.82	358	⇓*e*P	Pn	08 38 20.1	+0.3
SJTE				*e*S	Sn	08 38 31.5	-0.9
SJTE	Alcalda de S	0.82	358	⇓*e*P	Pn	08 38 20.1	+0.3
SJTE				*e*S	Sn	08 38 31.5	-0.9
COEB	Comit de Eme	0.82	31	⇑*i*P	Pn	08 38 20.3	+0.3
COEB				*e*S	Sn	08 38 31.9	-0.7
COEB				IAML		08 38 34.2	
	comp=Z,2μm,0.3s						
COEB	Comit de Eme	0.82	31	⇑*i*P	Pn	08 38 20.3	+0.3
COEB				*e*S	Sn	08 38 31.9	-0.7
COEB				IAML		08 38 34.2	
	comp=Z,2μm,0.3s						
COEG	Centro de Oper	0.83	6	⇓*i*P	Pn	08 38 20.3	+0.3
COEG				IAML		08 38 35.4	
	comp=Z,2μm,0.4s						
COEG	Centro de Oper	0.83	6	⇓*i*P	Pn	08 38 20.3	+0.3
COEG				IAML		08 38 35.4	
	comp=Z,2μm,0.4s						
LFRS	El Faro	0.83	354	⇑*i*P	Pn	08 38 20.7	+0.6
LFRS	El Faro	0.83	354	⇑*i*P	Pn	08 38 20.7	+0.6
LCY	Lacayo	0.91	46	*e*P	Pn	08 38 21.6	+0.5
LCY	Lacayo	0.91	46	*e*P	Pn	08 38 21.6	+0.5
PAVA	Las Pavas	0.92	2	⇓*i*P	Pn	08 38 22.0	+0.7
PAVA	Las Pavas	0.92	2	⇓*i*P	Pn	08 38 22.0	+0.7
PQSS	Presa 15 de Se	0.92	26	*e*P	Pn	08 38 22.1	+1.0
PQSS	Presa 15 de Se	0.92	26	*e*P	Pn	08 38 22.1	+1.0
PACA	Pacayal	0.92	43	*e*P	Pn	08 38 21.9	+0.5
PACA	Pacayal	0.92	43	*e*P	Pn	08 38 21.9	+0.5
PACA	Pacayal	0.92	43	*e*P	Pn	08 38 21.8	+0.5
SNET	Serv Nac Est T	0.93	344	⇓*i*P	Pn	08 38 22.0	+0.7
SNET				IAML		08 38 22.8	
	comp=Z,2μm,0.3s						
SNET				*e*S	Sn	08 38 34.7	-0.3
SNET	Serv Nac Est T	0.93	344	⇓*i*P	Pn	08 38 22.0	+0.7
SNET				IAML		08 38 22.8	
	comp=Z,2μm,0.3s						
SNET				*e*S	Sn	08 38 34.7	-0.3
SNET	Serv Nac Est T	0.93	344	*e*P	Pn	08 38 22.0	+0.7
SNET				*e*S	Sn	08 38 34.3	-0.8
SCLA	Alcaldia de Sa	0.94	15	⇓*i*P	Pn	08 38 22.4	+1.0
SCLA	Alcaldia de Sa	0.94	15	⇓*i*P	Pn	08 38 22.4	+1.0
JAYA	Jayaque - finc	0.98	332	⇓*i*P	Pn	08 38 22.8	+0.8
JAYA				*e*S	Sn	08 38 35.9	-0.5
JAYA	Jayaque - finc	0.98	332	⇓*i*P	Pn	08 38 22.8	+0.8
JAYA				*e*S	Sn	08 38 35.9	-0.5
BOQS	Boqueron	0.98	342	⇓*i*P	Pn	08 38 23.3	+1.1
BOQS	Boqueron	0.98	342	⇓*i*P	Pn	08 38 23.3	+1.1
CEDA	San Andres	1.09	338	⇓*i*P	Pn	08 38 24.6	+1.1
CEDA				IAML		08 38 44.6	
	comp=Z,3μm,0.6s						
CEDA	San Andres	1.09	338	⇓*i*P	Pn	08 38 24.6	+1.1
CEDA				IAML		08 38 44.6	
	comp=Z,3μm,0.6s						
LCND	La Caada	1.17	64	⇑*i*P	Pn	08 38 24.9	+0.2
LCND				IAML		08 38 46.3	
	comp=Z,2μm,0.3s						
LCND	La Caada	1.17	64	⇑*i*P	Pn	08 38 24.9	+0.2
LCND				IAML		08 38 46.3	
	comp=Z,2μm,0.3s						
P5NO	Presa 5 de nov	1.21	10	⇓*i*P	Pg	08 38 26.3	+1.6
CEVE	Cerro Verde	1.21	328	⇓*i*P	Pg	08 38 26.6	+1.7
CEVE	Cerro Verde	1.21	328	⇓*i*P	Pg	08 38 26.6	+1.7
SBLS	San Blas	1.22	329	*e*P	Pg	08 38 26.7	+1.7
SBLS	San Blas	1.22	329	*e*P	Pg	08 38 26.7	+1.7
CAHU	Cacacuatique	1.22	37	⇑*i*P	Pg	08 38 26.9	+1.8
CAHU	Cacacuatique	1.22	37	⇑*i*P	Pg	08 38 26.9	+1.8
SNJE	San Jose	1.24	330	*e*P	Pg	08 38 26.9	+1.6
SNJE	San Jose	1.24	330	*e*P	Pg	08 38 26.9	+1.6
NUBE	Las Nubes	1.36	325	*i* P	Pg	08 38 28.3	+0.7
NUBE	Las Nubes	1.36	325	*i* P	Pg	08 38 28.3	+0.7
CSGN	Cosiguina Volc	1.39	82	*e*P	Pn	08 38 27.1	-0.6
MTO3	Montecristo	1.64	347	⇓*i*P	Pb	08 38 32.7	+0.2
MTO3	Montecristo	1.64	347	⇓*i*P	Pb	08 38 32.7	+0.2
MTO3	Montecristo	1.64	347	*e*P	Pb	08 38 32.7	+0.2
ESQI	Esquipulas	1.79	349	⇓*i*P	Pb	08 38 35.1	+0.1
CRIN	San Cristobal	1.88	93	*e*P	Pn	08 38 34.8	+0.4
CRIN				*e*S	Sn	08 38 57.7	-0.8
TGUH	Tegucigalpa,Un	2.08	53	⇑*i*P	Pn	08 38 38.2	+1.0
TGUH	Tegucigalpa,Un	2.08	53	⇑*i*P	Pn	08 38 38.2	+1.0
TGUH	Tegucigalpa,Un	2.08	53	*e*P	Pn	08 38 38.2	+1.0
TEL3	Telica 3	2.09	96	*e*P	Pn	08 38 36.8	-0.4
CNGN	Cerro Negro	2.24	97	*e*P	Pn	08 38 38.9	-0.5
COPN	Copaltepe	2.40	104	*e*P	Pn	08 38 40.7	-0.9
MOMN	Momotombo	2.41	99	*e*P	Pn	08 38 41.3	-0.3
SAJU	San Juanillo,	4.19	130	*e*P	Pn	08 39 07.0	+0.8
CUI	Cuipilapa	4.29	119	*e*P	Pn	08 39 09.2	+1.6
PLVR	Palo Verde	4.30	124	*e*P	Pn	08 39 08.2	+0.3

ISK 02 08:41:08.8, 40°.46N×29°.28E, h0km, ML1.3/3, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	Gemlik	0.08	248	PG	Pg	08 41 11.0	+0.8
GEMT				SG	Sg	08 41 12.6	+1.4
YLV	Yalova	0.12	34	PG	Pg	08 41 11.9	+0.7
YLV				SG	Sg	08 41 14.3	+1.5
ARMT	Armutlu	0.34	288	PG	Pg	08 41 15.9	+0.7

DDA 02 08:41:31.0±0.0, 39°.69N×29°.49E, h7km±3km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDZ	Kutahya, Merke	0.36	120	P	Pg	08 41 38.0	-0.1
ANDZ				S	Sb	08 41 44.4	-1.4
ANDZ				*i* AML	AML	08 41 45.0	
	comp=E,32nm,0.4s						
ANDZ				*i* AML	AML	08 41 46.0	
	comp=N,33nm,0.2s						
STBT	Saitabat	0.49	337	P	Pg	08 41 40.6	0.0
STBT				S	Sb	08 41 48.3	-1.2
STBT				*i* AML	AML	08 41 50.0	
	comp=N,72nm,0.4s						
STBT				*i* AML	AML	08 41 53.0	
	comp=E,50nm,0.4s						
ULDT	Uludag	0.53	329	P	Pg	08 41 41.4	+0.2
ULDT				S	Sb	08 41 49.6	-1.1
ULDT				*i* AML	AML	08 41 51.0	
	comp=E,25nm,0.5s						
ULDT				*i* AML	AML	08 41 57.0	
	comp=N,21nm,0.4s						
IGD	Bursa	0.62	339	P	Pg	08 41 42.6	-0.2
IGD				S	Sg	08 41 50.8	-0.2
IGD				*i* AML	AML	08 42 03.0	
	comp=E,11nm,1.1s						
DURS	Dursunbey	0.79	264	P	Pg	08 41 45.8	-0.4
DURS				S	Sb	08 41 58.6	+0.6
DURS				*i* AML	AML	08 42 02.0	
	comp=N,16nm,0.6s						
DURS				*i* AML	AML	08 42 03.0	
	comp=E,15nm,0.2s						

IDC 02 08:52:42.2±2.2, 17°.87S×178°.59W, h608km±21km, mb2.6/5, mbtmp3.5/6, Error ellipse: s-maj=67.6km s-min=23.4km az=149.0
ISC 02 08:52:41.5±1.5, 17°.9S±0°.4×178°.5W±0°.3, h600km, n7, σ0s59/8, mb3.1/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.28	273	P	P	08 54 03.2	+0.9
	12nm,0.6s,baz=192,slow=23,SNR=11						
ASAR	Alice Springs	44.69	254	P	P	09 00 02.5	-0.3
	0.4nm,0.6s,baz=90,slow=8.0,SNR=9.2						
ASAR				PcP	PcP	09 01 31.3	-0.7
	0.4nm,0.9s,baz=90,slow=3.7,SNR=2.1						
	0.4nm,0.6s						
PETK	Petropavlovsk-	73.67	345	P	P	09 03 14.8	-0.1
	0.3nm,0.5s,baz=140,slow=7.4,SNR=2.0						
	0.3nm,0.5s						
NVAR	Mina Array Bea	79.50	44	P	P	09 03 47.6	+0.2
	0.1nm,0.5s,baz=223,slow=7.4,SNR=2.4						
	0.1nm,0.5s						
ILAR	Eielson Array	85.92	13	P	P	09 04 18.2	-0.4
	0.3nm,0.6s,baz=228,slow=6.0,SNR=2.2						
TXAR	Lajitas Array	86.09	58	P	P	09 04 20.7	+0.4
	0.4nm,0.8s,baz=205,slow=6.0,SNR=5.4						
	0.4nm,0.8s						
PDAR	Pinedale Array	87.43	43	P	P	09 04 26.2	-0.3
	0.2nm,0.5s,baz=197,slow=2.8,SNR=2.6						
	0.2nm,0.5s						

IDC 02 08:54:17.9±2.4, 44°.31N×149°.17E, h0km, mb3.7/6, mbtmp3.7/8, ML3.3/2, MS3.8/15, Error ellipse: s-maj=57.3km s-min=31.3km az=169.0
NEIC 02 08:54:24.8±1.4, 44°.4N±0°.1×149°.5E±0°.2, h37km±18km, mb4.1/9, Error ellipse: s-maj=25.5km s-min=14.7km az=135.0
MOS 02 08:54:24.4±1.0, 44°.57N×149°.23E, h56km, mb4.3/1, Error ellipse: s-maj=14.8km s-min=10.5km az=52.2
JMA 02 08:54:25.5±0.7, 45°N±3°×14°9E±°, h30km, MV4.3/13, SE OFF ETOROFU
SKHL 02 08:54:26.3±0.0, 44°.50N×149°.20E, h72km±5km, mb4.8/3
ISC 02 08:54:23.6±0.9, 44°.37N±0°.06×149°.4E±0°.1, h35km±6km, n75, σ1s79/71, mb3.9/10, MS3.9/15, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.37	310	*d i*PN	Pn	08 54 45.9	-0.3
KUR				*i* S	Sn	08 55 01.8	-1.3
KUR				pmax	pmax		
	comp=Z,1μm,0.5s						
KUR				pmax	pmax		
	comp=N,615nm,0.4s						
KUR				pmax	pmax		
	comp=E,368nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,0.2s						
KUR				smax	smax		
	comp=E,1μm,0.3s						
KUR	Kuril'sk	1.37	310	*i* P	Pn	08 54 46.0	-0.3
KUR				AMB	AMB	08 54 46.4	
	comp=E,1μm,0.5s						
KUR				*i* S	Sn	08 55 00.8	-2.3
KUR				A	A	08 55 03.3	
	comp=E,2μm,0.4s						
KUR				A	A	08 55 03.3	
	comp=E,730nm,0.4s						
SHO	Shikotan	1.89	256	*e*PN	Pn	08 54 53.9	+0.5
SHO				*e*S	Sn	08 55 14.4	-1.5
SHO				pmax	pmax		
	comp=Z,55nm,0.3s						
SHO				pmax	pmax		
	comp=E,32nm,0.2s						
SHO				pmax	pmax		
	comp=N,44nm,0.2s						
SHO				smax	smax		
	comp=N,484nm,0.3s						
SHO				smax	smax		
	comp=E,406nm,0.2s						
SHO	Shikotan	1.89	256	*e*P	Pn	08 54 53.9	+0.5
SHO				AMB	AMB	08 54 58.7	
	comp=E,60nm,0.2s						
SHO				*e*S	Sn	08 55 14.6	-1.3
SHO				A	A	08 55 19.5	
	comp=E,490nm,0.3s						
SHO				A	A	08 55 19.5	
	comp=E,540nm,0.3s						
YUK	Yuzh-Kuril'sk	2.54	264	*e*PN	Pn	08 55 03.5	+1.2
YUK				*e*S	Sn	08 55 31.2	-0.8
YUK				pmax	pmax		
	comp=N,142nm,0.2s						
YUK				pmax	pmax		
	comp=E,136nm,0.2s						
YUK				pmax	pmax		
	comp=Z,241nm,0.2s						
YUK				smax	smax		
	comp=N,458nm,0.3s						
YUK				smax	smax		
	comp=E,795nm,0.4s						
YUK	Yuzh-Kuril'sk	2.54	264	*e*P	Pn	08 55 03.5	+1.2
YUK				AMB	AMB	08 55 08.0	
	comp=E,240nm,0.4s						
YUK				*e*S	Sn	08 55 31.4	-0.6
YUK				A	A	08 55 37.0	
	comp=E,460nm,0.4s						
YUK				A	A	08 55 37.0	
	comp=E,800nm,0.4s						
NEM2	Nemuro 2	2.81	250	*e*P	Pn	08 55 06.8	+0.9
NEM2				*e*S	Sn	08 55 37.8	-0.7
NMR	Nemuro--Hokkai	2.81	250	*e*PN	Pn	08 55 07.7	+1.7
NMR				*e*S	Sn	08 55 39.9	+1.2
NMR	Nemuro--Hokkai	2.81	250	*e*P	Pn	08 55 07.7	+1.7
NMR				*e*S	Sn	08 55 39.0	+0.3
RUSJ	Misakicho	2.97	266	PN	Pn	08 55 09.4	+1.2
RUSJ				S	Sn	08 55 42.2	-0.4
JRA	Rausu	3.08	263	*e*P	Pn	08 55 12.1	+2.3
JRA				*e*S	Sn	08 55 46.4	+1.1
JNK	Nakash	3.44	258	*e*P	Pn	08 55 16.6	+1.9
JNK				*e*S	Sn	08 55 54.4	+0.1
AKK	Akkeshi	3.55	249	*e*P	Pn	08 55 17.5	+1.4
JAK	Akkeshi	3.65	250	*e*P	Pn	08 55 18.8	+1.3
JAK				*e*S	Sn	08 55 58.6	-0.8
JTKR	Abashiri--Toko	3.95	266	*e*P	Pn	08 55 24.4	+2.8
JAR	Ashorobuto	4.19	257	*e*P	Pn	08 55 27.5	+2.6
JAR				*e*S	Sn	08 56 13.2	+0.6
JOB	Onbets	4.27	252	*e*P	Pn	08 55 28.2	+2.2
JOB				*e*S	Sn	08 56 15.3	+0.6
JCH	Churui	4.71	250	*e*P	Pn	08 55 34.6	+2.6
JCH				*e*S	Sn	08 56 25.5	+0.2
ERM	Erimo	5.11	245	Pn	Pn	08 55 40.9	+3.3
ERM	Erimo	5.11	245	PN	Pn	08 55 40.9	+3.3
JNBK	Urakawa-nobuka	5.26	249	*e*P	Pn	08 55 41.2	+1.6
JNBK				*e*S	Sn	08 56 37.8	-1.1
YSS	Yuzh-Sakhalins	5.31	301		Pn	08 55 41.4	+1.2
YSS	Yuzh-Sakhalins	5.31	301	*e*PN	Pn	08 55 41.7	+1.5
YSS				*e*S	Sn	08 56 39.6	-0.5
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				smax	smax		
	comp=N,10.0nm,0.6s						
YSS				smax	smax		
	comp=E,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	5.31	301	*e*P	Pn	08 55 41.7	+1.5
YSS				AMB	AMB	08 55 42.2	
	comp=E,30nm,0.5s						
YSS				*e*S	Sn	08 56 39.0	-1.1
JANG	Nango	7.05	238	*e*P	Pn	08 56 04.6	+0.3
JANG				*e*S	Sn	08 57 16.4	-6.7
JTM	Tenmabayashi	7.09	243	Pn	Pn	08 56 06.1	+1.3
JTH	Tanohata	7.12	234	*e*S	Sn	08 57 17.1	-7.6
PEA0B	Petropavlovsk-	10.33	29	Pn	Pn	08 56 49.9	+0.8
PEA0B	Petropavlovsk-	10.33	29	PN	Pn	08 56 49.9	+0.8
PETK	Petropavlovsk-	10.33	29	Pn	Pn	08 56 49.5	+0.4
	comp=E,0.4nm,0.3s,baz=215,slow=15,SNR=11						
	comp=E,1.7nm,0.5s						
PETK	Petropavlovsk-	10.33	29	Pn	Pn	08 56 48.8	-0.3
SEY	Seymchan	18.68	4	P	Pn	08 58 38.4	-0.6
	comp=E,0.2nm,0.3s,baz=199,slow=14,SNR=5.5						
	comp=E,1.3nm,0.5s						
H11N2	WAKE ISLAND Hy	28.59	144	T	T	09 31 07.9	
	baz=334,slow=76,SNR=195						
H11N1	WAKE ISLAND Hy	28.60	144	T	T	09 31 08.9	
	baz=334,slow=76,SNR=216						
H11N3	WAKE ISLAND Hy	28.60	144	T	T	09 31 14.6	
	baz=334,slow=76,SNR=291						
H11S1	WAKE ISLAND Hy	29.60	145	T	T	09 32 28.7	
	baz=335,slow=76,SNR=284						
H11S3	WAKE ISLAND Hy	29.60	145	T	T	09 32 23.2	
	baz=335,slow=76,SNR=168						
H11S2	WAKE ISLAND Hy	29.61	145	T	T	09 32 29.3	
	baz=335,slow=76,SNR=176						
K20K	Telida	36.85	39	P	P	09 01 29.0	+0.9
J20K	Nowinta River	36.88	37	P	P	09 01 28.8	+0.5
IMAR	Indian Mountai	37.23	35	P	P	09 01 30.8	-0.5
H21K	Melozitna Rive	37.58	35	P	P	09 01 34.4	+0.1
H21K				IAmb	IAmb	09 01 35.8	
	comp=Z,2.1nm,0.9s						
H23K	Yukon River	38.94	35	P	P	09 01 46.2	+0.6
H23K				IAmb	IAmb	09 01 47.5	
	comp=Z,2.3nm,0.8s						
TOLK	Toolik Lake Re	39.15	31	P	P	09 01 46.9	-0.5
TOLK				IAmb	IAmb	09 02 02.2	
	comp=Z,5.0nm,1.1s						
IL31		40.04	37	P	P	09 01 54.9	+0.1
ILAR	Eielson Array	40.04	37	P	P	09 01 55.1	+0.3
	comp=Z,0.8nm,0.6s,baz=264,slow=9.0,SNR=7.6						
	comp=Z,0.8nm,0.6s						
BMAR	Burnt Mountain	40.95	33	P	P	09 02 03.0	+0.6
SCRK	Sand Creek	41.34	38	P	P	09 02 04.8	-0.9
K27K	Chicken	42.17	38	P	P	09 02 13.0	+0.7
K27K				IAmb	IAmb	09 02 14.0	
	comp=Z,2.8nm,1.1s						
BCAR	Beaver Creek A	42.42	39	P	P	09 02 15.6	+1.2
INK	Inuvik	45.06	31	P	P	09 02 35.9	+0.5
	comp=Z,0.7nm,0.3s,baz=287,slow=6.9,SNR=10						
	comp=Z,0.7nm,0.3s						
INK	Inuvik	45.06	31	P	P	09 02 35.7	+0.3
INK				IAmb	IAmb	09 03 10.8	
	comp=Z,6.6nm,1.5s						
INK	Inuvik	45.06	31	P	P	09 02 35.7	+0.3
INK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MKAR	Makanchi Array	45.71	298	P	P	09 02 40.0	-0.9
	comp=Z,0.4nm,0.7s,baz=67,slow=6.7,SNR=4.5						
	comp=Z,0.4nm,0.7s						
KURBB	Kurchatov Arra	46.59	304	LR	LR	09 21 32.2	
	comp=Z,91nm,20.8s,baz=26,slow=35						
BVAR	Borovoye Array	50.34	310	LR	LR	09 28 02.0	
	comp=Z,65nm,20.0s,baz=284,slow=40						
YKA	Yellowknife Ar	54.39	35	P	P	09 03 46.8	+0.3
	comp=Z,0.7nm,0.8s,baz=304,slow=8.0,SNR=2.2						
	comp=Z,0.7nm,0.8s						
ARU	Arti	54.98	317	LR	LR	09 30 18.9	
	comp=Z,122nm,20.7s,baz=44,slow=39						
AKTO	Aktyubinsk	58.34	311	LR	LR	09 33 15.4	
	comp=Z,129nm,21.9s,baz=32,slow=40						
NOA	NORSAR Array B	69.59	340	P	P	09 05 27.7	-0.9
	comp=Z,0.2nm,0.4s,baz=29,slow=6.5,SNR=1.7						
	comp=Z,0.2nm,0.4s						
HFS	Hagfors	69.72	338	LR	LR	09 40 33.7	
	comp=Z,67nm,20.9s,baz=34,slow=40						
ULM	Lac du Bonnet	70.03	38	LR	LR	09 39 51.5	
	comp=Z,64nm,18.1s,baz=341,slow=39						
KBZ	Khabaz	70.57	313	LR	LR	09 42 10.5	
	comp=Z,50nm,20.5s,baz=37,slow=41						
GNI	Garni	72.02	309	LR	LR	09 39 12.6	
	comp=Z,56nm,21.7s,baz=24,slow=38						
VRAC	Vranov	77.99	331	LR	LR	09 46 49.3	
	comp=Z,42nm,18.3s,baz=42,slow=40						
BRTR	Keskin Array B	78.26	315	LR	LR	09 44 46.4	
	comp=Z,84nm,20.8s,baz=34,slow=39						
TXAR	Lajitas Array	80.97	58	P	P	09 06 35.5	+0.9
	comp=Z,0.3nm,0.5s,baz=298,slow=4.5,SNR=11						
	comp=Z,0.3nm,0.5s						
MMAI	Mount Meron Ar	82.35	309	LR	LR	09 47 46.3	
	comp=Z,52nm,19.1s,baz=208,slow=39						
DAVOX	Davos/Dischmat	82.44	333	LR	LR	09 48 38.6	
	comp=Z,62nm,19.5s,baz=78,slow=40						
EIL	Elat	85.11	307	LR	LR	09 50 23.9	
	comp=Z,69nm,18.9s,baz=86,slow=40						
KEST	Kesra	92.41	328	LR	LR	09 55 12.5	
	comp=Z,84nm,18.4s,baz=276,slow=40						
MDT	Midelt	99.60	338	LR	LR	10 01 21.9	
	comp=Z,36nm,18.0s,baz=358,slow=40						
H03N2	Juan Fernandez	141.37	91	T	T	11 51 35.2	
	baz=305,slow=77,SNR=4.9						
H03N3	Juan Fernandez	141.38	91	T	T	11 51 39.0	
	baz=305,slow=77,SNR=3.6						
H03N1	Juan Fernandez	141.38	91	T	T	11 51 38.3	
	baz=305,slow=77,SNR=3.8						

NNC 02 09:54:56.0±1.0, 43°.69N×69°.61E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=6.2km s-min=4.0km az=91.0, Suspected Mining explosion.
SOME 02 09:54:56.6, 43°.70N×69°.72E
ISC 02 09:55:00.4±1.8, 43°.70N±0°.05×70°.2E±0°.1, h0km, n10, σ1s12/12, 2C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.65**	**157**	⇓P	**Pg**	**09 55 12.8**	**-0.1**
	1.9nm,0.3s,baz=315,slow=18,SNR=114						
KK31				⇑S	**Sb**	**09 55 25.3**	**+1.0**
	47nm,0.6s,baz=310,slow=29,SNR=123						
BTLS	**Baital**	**3.09**	**63**	Pg	**Pg**	**09 56 01.1**	**+1.5**
	15nm,0.6s						
BTLS				Lg	Lg	09 56 47.6	
	2.9nm,0.4s						
SGDS	**Sogindy**	**3.25**	**93**	Pg	**Pg**	**09 56 02.2**	**-0.5**
	4.2nm,0.4s						
SGDS				Lg	Lg	09 56 49.1	
	6.7nm,0.5s						
CHMS	**Chumysh**	**3.42**	**100**	⇑Pg	**Pn**	**09 55 55.6**	**+0.6**
	2.1nm,0.5s						
CHMS				⇓Lg	Lg	09 56 56.9	
	5.2nm,0.5s						
KRBS	**Karabastau**	**3.99**	**88**	Pg	**Pg**	**09 56 16.5**	**-0.5**
	3.6nm,0.6s						
KRBS				Lg	Lg	09 57 13.6	
	6.3nm,0.6s						
TKM2	**Tokmak 2**	**4.04**	**99**	⇓Pg	**Pg**	**09 56 16.3**	**-1.5**
	2.0nm,0.5s						
TKM2				⇓Lg	Lg	09 57 15.6	
	5.5nm,0.7s						
KST	**Kastek**	**4.28**	**97**	Pg	**Pg**	**09 56 21.8**	**-0.6**
	2.2nm,0.6s						
KST				Lg	Lg	09 57 23.5	
	8.6nm,0.5s						
KUU	**Kurty**	**4.47**	**85**	Pg	**Pg**	**09 56 24.5**	**-1.6**
	1.9nm,0.4s						
KUU				Lg	Lg	09 57 27.1	
	6.5nm,0.2s						
KTBS	**Karatobe**	**4.72**	**88**	Pg	**Pg**	**09 56 32.0**	**+1.1**
	4.1nm,0.6s						
KTBS				Lg	Lg	09 57 40.1	
	10.0nm,0.4s						
OTUK	**Ortayu**	**4.79**	**18**	⇓Pn	**Pn**	**09 56 13.3**	**-0.5**
	2.8nm,0.5s						
OTUK				⇓Sn	**Sn**	**09 57 09.4**	**-0.5**
	2.7nm,0.9s						
OTUK				⇓Lg	Lg	09 57 28.9	
	3.0nm,0.8s						

*NEIC **02** 09:56:29.7±1.1, 3°.46S±0°.09×150°.0E±0°.1, h10km±2km, mb4.4/7, Error ellipse: s-maj=21.4km s-min=10.2km az=52.0*

*IDC **02** 09:56:29.6±1.2, 3°.67S×150°.00E, h0km, mb3.8/4, mbtmp3.7/5, ML2.7/1, Error ellipse: s-maj=34.6km s-min=21.5km az=158.0*

ISC 02 09:56:31.1±0.9**, 3°.6S**±0°.1×**150°.00E**±0°.09**, h19**km**, n14, σ1§11**/15**, mb4.2**/8**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.15**	**110**	Pn	**Pn**	**09 57 06.5**	**+0.4**
	2.4nm,0.3s,baz=172,slow=22,SNR=2.3						
KRVT				Sn	**Sb**	**09 57 35.8**	**-0.1**
	3.9nm,0.3s,baz=220,slow=17,SNR=2.0						
	19nm,0.5s						
RABL	**Rabaul**	**2.25**	**106**	Pn	**Pn**	**09 57 06.4**	**-0.9**
EIDS	**Eidsvold**	**21.71**	**177**	P	**P**	**10 01 21.4**	**+0.2**
EIDS				IAmb	IAmb	10 01 29.0	
	comp=Z,15nm,1.5s						
WR0	**Warramunga Arr**	**22.20**	**222**	P	**P**	**10 01 25.9**	**-0.7**
WR0				IAmb	IAmb	10 01 29.4	
	comp=Z,17nm,1.4s						
WB2	**Warramunga Arr**	**22.32**	**222**	P	**P**	**10 01 27.0**	**-0.9**
WB2				IAmb	IAmb	10 01 39.6	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**22.33**	**222**	P	**P**	**10 01 27.2**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=47,slow=9.6,SNR=13						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**22.33**	**222**	P	**P**	**10 01 27.8**	**-0.2**
KNRA	**Kununurra**	**24.12**	**239**	P	**P**	**10 01 45.6**	**-0.4**
KNRA				IAmb	IAmb	10 02 25.4	
	comp=Z,23nm,1.2s						
ASAR	**Alice Springs**	**25.32**	**216**	P	**P**	**10 01 56.6**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=46,slow=8.0,SNR=9.7						
	comp=Z,0.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**27.89**	**237**	P	**P**	**10 02 22.5**	**+2.4**
	comp=Z,5.3nm,0.6s,baz=60,slow=9.3,SNR=11						
	comp=Z,5.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**27.89**	**237**	P	**P**	**10 02 18.9**	**-1.2**
FITZ				IAmb	IAmb	10 02 28.1	
	comp=Z,8.7nm,0.9s						
USA0B	**Ussuriysk Arra**	**50.22**	**343**	P	**P**	**10 05 24.5**	**-1.4**
ILAR	**Eielson Array**	**82.09**	**23**	P	**P**	**10 08 51.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=259,slow=4.9,SNR=5.7						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.27**	**289**	PKPbc	**PKPab**	**10 16 16.3**	**0.0**
	comp=Z,0.6nm,0.8s,baz=96,slow=1.5,SNR=3.2						

*SIGU **02** 09:57:08.9±0.2, 48°N±2°×25°.1E±0°.9, h17km, mb2.5/9, MD2.7/12, ML2.5/9*

*MCSM **02** 09:57:09.0±0.6, 48°N±5°×2°5E±°, h6km±2km, ML2.9*

ISC 02 09:57:08.9±1.3**, 48°.31N**±0°.03×**25°.08E**±0°.03**, h15**km±11km**, n32,** σ**1§65**/47**, 24C-6D, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BURAR	**Bucovina Array**	**0.70**	**172**	⇑P	**Pn**	**09 57 24.1**	**-0.3**
BURAR				⇑S	**Sn**	**09 57 33.7**	**-1.4**
KMPD	**K-Podol'skiy**	**0.95**	**74**	Pg	**Pn**	**09 57 28.1**	**+0.3**
KMPD				Sg	**Sb**	**09 57 40.7**	**+1.1**
DRBR	**Darabani**	**1.03**	**95**	⇑P	**Pn**	**09 57 29.9**	**+1.1**
MEZ	**Mezhgor'ye**	**1.06**	**282**	Pg	**Pn**	**09 57 31.1**	**+1.8**
MEZ				Sg	**Sn**	**09 57 45.8**	**+2.0**
BMR	**Baia Mare**	**1.24**	**240**	⇑P	**Pg**	**09 57 32.5**	**-0.3**
BMR				⇑S	**Sn**	**09 57 48.6**	**+0.4**
ARCR	**ARCALIA**	**1.32**	**202**	⇑P	**Pg**	**09 57 34.7**	**+0.3**
ARCR				⇑S	**Sg**	**09 57 52.7**	**+1.2**
BIZ	**Bicaz**	**1.54**	**153**	⇑P	**Pg**	**09 57 38.6**	**+0.1**
BIZ				⇓S	**Sg**	**09 58 00.2**	**+1.7**
MESR	**Meseseni**	**1.85**	**232**	⇑S	**Sb**	**09 58 04.3**	**-1.0**
CJR	**Cluj-Napoca**	**1.89**	**213**	⇓P	**Pb**	**09 57 42.3**	**-0.8**
CJR				⇑S	**Sb**	**09 58 05.9**	**-0.6**
TESR	**Tescani**	**2.09**	**149**	⇑P	**Pb**	**09 57 45.5**	**-1.1**
TESR				⇑S	**Sb**	**09 58 13.2**	**+0.9**
SORM	**Soroca**	**2.19**	**93**	⇓P	**Pb**	**09 57 47.2**	**-1.1**
SORM				⇑S	**Sb**	**09 58 16.0**	**+0.7**
DRGR		**2.21**	**227**	⇑P	**Pn**	**09 57 46.2**	**+1.0**
DRGR		**2.21**	**227**	Pn	**Pn**	**09 57 45.7**	**+0.6**
DOPR	**Dopca**	**2.35**	**175**	⇑P	**Pb**	**09 57 49.1**	**-2.0**
LUBAR	**Lubar, Ukraine**	**2.39**	**47**	Pn	**Pn**	**09 57 48.8**	**+1.3**
VASR	**Vaslui**	**2.48**	**131**	⇑S	**Sb**	**09 58 23.4**	**-0.2**
PLOR	**Plostina**	**2.69**	**156**	⇓P	**Pb**	**09 57 54.4**	**-2.3**
PLOR				⇑S	**Sb**	**09 58 28.5**	**-1.0**
VRI	**Vrincioaia**	**2.69**	**155**	⇑P	**Pb**	**09 57 54.5**	**-2.3**
VRI				⇓S	**Sb**	**09 58 28.6**	**-1.1**
MI29	**MI29, Kamyanyy**	**2.78**	**40**	Pn	**Pn**	**09 57 54.6**	**+1.7**
VOIR		**2.88**	**180**	⇑P	**Pn**	**09 57 56.1**	**+1.8**
MLR	**Muntele Rosu**	**2.88**	**168**	⇑P	**Pn**	**09 57 55.9**	**+1.5**
ARR	**Arges**	**2.96**	**186**	⇑P	**Pn**	**09 57 57.3**	**+1.8**
RNPP5	**Staryi Chortor**	**2.97**	**10**	Pn	**Pn**	**09 57 57.5**	**+2.0**
RNPP8	**Varash**	**3.07**	**9**	Pn	**Pn**	**09 57 59.2**	**+2.3**
RNPP8				pP	**Pb**	**09 58 00.3**	**-2.9**
RNPP1	**Kostyukhnivka**	**3.07**	**8**	Pn	**Pn**	**09 57 59.0**	**+2.1**
RNPP1				pP	**Pb**	**09 58 00.4**	**-2.9**
SIRR	**Siria**	**3.10**	**230**	⇓P	**Pn**	**09 57 58.2**	**+0.9**
MI28	**Mi28,Pidlybu**	**3.12**	**32**	Pn	**Pn**	**09 57 59.0**	**+1.5**
RNPP9	**Sopachiv**	**3.15**	**9**	Pn	**Pn**	**09 58 00.0**	**+2.1**
RNPP9				pP	**Pb**	**09 58 01.3**	**-3.2**
MI30	**MI30,Zelenitsa**	**3.17**	**39**	Pn	**Pn**	**09 57 59.7**	**+1.5**
MI30				pP	**Pb**	**09 58 01.7**	**-3.2**
GZR	**Gura Zlata**	**3.32**	**209**	⇑P	**Pn**	**09 58 01.7**	**+1.3**
PSZ	**Piszkesteto**	**3.50**	**265**	⇑P	**Pn**	**09 58 03.3**	**+0.5**
BZS	**Buzias**	**3.59**	**223**	⇑P	**Pn**	**09 58 04.8**	**+0.8**

HEL 02 09:59:24.9±0.1**, 65°.11N**×**25°.68E, h0**km**, ML1.5, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBF4	**Vikkela, Lumij**	**0.39**	**220**	PG	Pg	09 59 31.9	-0.4
	baz=44						
OBF4				SG	Sg	09 59 37.2	-0.1
OUF	**Merijarvi**	**0.85**	**209**	PG	Pg	09 59 40.4	-0.8
OUF				SB	Sg	09 59 51.6	-0.7
OBF0	**Syolatti, Pyha**	**0.87**	**226**	PG	Pg	09 59 41.0	-0.6
OBF0				SB	Sg	09 59 52.4	-0.5
TOF	**Tornio**	**1.12**	**330**	PG	Pg	09 59 45.0	-1.4
TOF				SG	Sg	09 59 58.8	-2.1
TOF				MSG		09 59 58.9	
	comp=Z,1.9nm,0.2s						
KALU	**Kalix**	**1.23**	**309**	PG	Pg	09 59 47.5	-0.9
	baz=126						
KALU				SG	Sg	10 00 02.9	-1.3
OBF8	**Ulkokalla**	**1.24**	**232**	SB	Sg	10 00 04.5	-0.2
RNF	**Rovaniemi**	**1.51**	**5**	PG	Pn	09 59 52.6	-0.6
	baz=186						
RNF				SG	Sg	10 00 11.9	-1.4
MSF	**Maaselka**	**1.61**	**59**	PN	Pn	09 59 54.4	-0.2
	baz=243						
BURU	**Burvik**	**1.91**	**256**	PG	Pn	09 59 58.8	+0.1
BURU				SG	Sn	10 00 24.0	+0.6
OLKF	**Oulanka, Finla**	**1.96**	**50**	PG	Pn	10 00 00.0	+0.7
KU6	**Riekki**	**1.98**	**60**	PG	Pn	10 00 00.2	+0.6
KU6				MSG		10 00 23.7	
	comp=Z,6.2nm,0.2s						
KU6				SG	Sn	10 00 24.8	-0.2
KU6	**Riekki**	**1.98**	**60**	SB	Sn	10 00 24.8	-0.2
PAJU	**Pajala**	**2.19**	**333**	PG	Pn	10 00 03.7	+1.2
PAJU				SB	Sn	10 00 31.1	+0.9
VAF	**Ylistaro**	**2.46**	**214**	MSG		10 00 37.5	
	comp=Z,1.0nm,0.2s						
VAF				SG	Sb	10 00 40.0	-0.8
UMAU	**Umeaa**	**2.49**	**243**	SG	Sb	10 00 40.6	-1.0
HEMU	**Hemsoen**	**4.17**	**238**	SN	Sn	10 01 17.9	-1.1
LVZ	**Lovozero**	**4.55**	**48**	SB	Sb	10 01 38.0	-2.8

*HEL **02** 09:59:42.1±0.5, 64°.74N×30°.91E, h0km, ML1.9, Explosion*

*IDC **02** 09:59:44.7±1.7, 64°.70N×30°.27E, h0km, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=27.1km s-min=9.7km az=106.0*

ISC 02 09:59:40.8±1.4**, 64°.73N**±0°.03×**30°.62E**±0°.07**, h0**km**, n19,** σ**1§39**/24**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.33**	**347**	PG	**Pg**	**10 00 06.9**	**+0.6**
KU6				MSG		10 00 23.1	
	comp=Z,6.2nm,0.2s						
MSF	**Maaselka**	**1.35**	**331**	PG	**Pg**	**10 00 07.0**	**+0.3**
	baz=149						
MSF				SB	**Sb**	**10 00 25.9**	**+1.0**
OLKF	**Oulanka, Finla**	**1.67**	**343**	PG	**Pn**	**10 00 12.6**	**+1.3**
OBF4	**Vikkela, Lumij**	**2.36**	**274**	PG	**Pg**	**10 00 27.6**	**+1.5**
OBF4				SB	**Sg**	**10 00 56.8**	**+0.2**
OUF	**Merijarvi**	**2.57**	**264**	PN	**Pb**	**10 00 26.7**	**-0.9**
OUF				SN	**Sb**	**10 01 00.8**	**+1.0**
OUF				MSG		10 01 01.4	
	comp=Z,8.9nm,0.2s						
RNF	**Rovaniemi**	**2.68**	**317**	SG	**Sg**	**10 01 05.7**	**-1.1**
OBF0	**Syolatti, Pyha**	**2.76**	**268**	SB	**Sg**	**10 01 07.4**	**-1.9**
TOF	**Tornio**	**2.96**	**300**	MSG		10 01 12.0	
	comp=Z,4.0nm,0.2s						
TOF				SB	**Sb**	**10 01 12.0**	**+1.1**
KAF	**Kangasniemi**	**3.27**	**218**	SB	**Sb**	**10 01 21.3**	**+1.5**
KEF	**Keuruu**	**3.65**	**228**	PN	**Pn**	**10 00 41.3**	**+2.9**
KEF				SB	**Sg**	**10 01 35.8**	**-2.0**
PAJU	**Pajala**	**3.84**	**310**	SG	**Sg**	**10 01 43.2**	**-0.9**
FIA0	**FINESS Array S**	**3.89**	**214**	PG	**Pg**	**10 00 53.7**	**-1.6**
FINES	**FINESS Array B**	**3.89**	**214**	Pn	**Pn**	**10 00 43.6**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=3.8						
FINES				Pg	**Pb**	**10 00 50.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=31,slow=16,SNR=6.9						
FINES				Lg	Lg	10 01 41.0	
	comp=Z,1.0nm,0.3s,baz=39,slow=29,SNR=12						
	comp=Z,1.1nm,0.7s						
VAF	**Ylistaro**	**3.90**	**248**	SG	**Sg**	**10 01 44.5**	**-1.4**
BURU	**Burvik**	**3.98**	**272**	SG	**Sg**	**10 01 47.9**	**-0.5**
UMAU	**Umeaa**	**4.41**	**263**	SG	**Sg**	**10 02 00.8**	**-1.5**
ARCES	**ARCESS Array B**	**5.22**	**340**	Pn	**Pn**	**10 01 01.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=9.8						
ARCES				Sn	**Sn**	**10 02 00.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=153,slow=23,SNR=2.3						
ARCES				Lg	Lg	10 02 22.9	
	comp=Z,0.3nm,0.3s,baz=153,slow=27,SNR=6.2						
	comp=Z,1.5nm,0.7s						
I37NO	**I37NO**	**6.42**	**318**	*i*		10 38 10.0	
	baz=129,slow=311,SNR=1.6						
HFS	**Hagfors**	**9.09**	**247**	Pn	**Pn**	**10 01 52.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=53,slow=13,SNR=1.7						
	comp=Z,1.1nm,0.7s						

*NEIC **02** 10:12:49.4±2.5, 27°.8S±0°.1×176°.3W±0°.2, h10km±1km, mb4.5/14, Error ellipse: s-maj=29.9km s-min=13.6km az=131.0*

*IDC **02** 10:12:49.3±0.5, 28°.01S×176°.31W, h0km, mb4.3/15, mbtmp4.3/15, MS4.1/27, Error ellipse: s-maj=20.1km s-min=16.2km az=124.0*

ISC 02 10:12:50.0±0.5**, 27°.84S**±0°.08×**176°.4W**±0°.1**, h10**km**, n75,** σ**1§45**/50**, mb4.4**/23**, MS4.1**/28**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.95**	**224**	Pn	**Pn**	**10 13 24.0**	**+0.8**
	203nm,0.3s,baz=66,slow=12,SNR=6.5						
RAO				Sn	**Sn**	**10 13 49.0**	**+1.3**
	438nm,0.3s,baz=80,slow=22,SNR=10						
RAO	**Raoul Island**	**1.95**	**224**		**Pn**	**10 13 22.5**	**-0.7**
NIUE	**Niue**	**10.54**	**36**	Pn	Pn	10 15 15.5	-5.8
URZ	**Urewera**	**11.73**	**206**	Pn	Pn	10 15 29.8	-7.7
	0.6nm,0.3s,baz=228,slow=9.6,SNR=1.3						
URZ				Sn	Sn	10 17 36.1	-12
	1.5nm,0.3s,baz=301,slow=24,SNR=23						
AFI	**Afiamalu**	**14.51**	**18**	Pn	**Pn**	**10 16 12.3**	**-3.3**
	0.7nm,0.3s,baz=115,slow=22,SNR=2.5						
AFI				Sn	Sn	10 18 42.5	-14
	1.1nm,0.3s,baz=234,slow=21,SNR=2.1						
RAR	**Rarotonga**	**16.48**	**70**	LR	LR	10 22 09.8	
	comp=Z,683nm,18.4s,baz=250,slow=34						
DZM	**Mont Dzumac**	**16.60**	**286**	*e*P	Pn	10 16 34.3	-8.7
	116nm,26.8s						
DZM				*e*LR	LR	10 20 34.1	
	comp=Z,733nm,27.1s						
RPZ	**Rata Peaks**	**18.80**	**209**	P	**P**	**10 17 06.1**	**-3.5**
	4.8nm,0.5s,baz=37,slow=5.8,SNR=5.6						
PPT2	**Papeete2**	**26.69**	**73**	*e*LR	LR	10 25 00.2	
	comp=Z,315nm,20.8s						
PPT	**Papeete**	**26.70**	**73**	LR	LR	10 26 52.9	
	comp=Z,398nm,19.1s,baz=222,slow=32						
HNR	**Honiara**	**28.86**	**305**	LR	LR	10 30 13.8	
	comp=Z,279nm,18.1s,baz=176,slow=36						
CTAO	**Charters Tower**	**34.90**	**274**	P	**P**	**10 19 41.0**	**-1.1**
CTAO				IAmb	IAmb	10 20 03.0	
	comp=Z,11nm,1.5s						
STKA	**Stephens Creek**	**36.51**	**253**	P	**P**	**10 19 55.1**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=104,slow=18,SNR=2.9						
	comp=Z,2.1nm,0.8s						
STKA	**Stephens Creek**	**36.51**	**253**	P	**P**	**10 19 52.9**	**-2.8**
TAOE	**Nuku Hiva Isla**	**39.02**	**68**	*e*LR	LR	10 30 45.9	
	comp=Z,304nm,21.3s						
BBOO	**Buckleboo**	**41.08**	**251**	P	**P**	**10 20 31.7**	**-2.4**
BBOO				IAmb	IAmb	10 20 52.5	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**44.73**	**264**	P	**P**	**10 21 03.7**	**-0.1**
ASAR	**Alice Springs**	**44.73**	**264**	P	**P**	**10 21 04.2**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=98,slow=7.0,SNR=41						
ASAR				LR	LR	10 40 08.9	
	comp=Z,302nm,18.2s,baz=140,slow=37						
	comp=Z,2.3nm,0.7s						
ASAR	**Alice Springs**	**44.73**	**264**	P	**P**	**10 21 03.4**	**-0.5**
WR0	**Warramunga Arr**	**45.31**	**269**	P	**P**	**10 21 07.3**	**-1.1**
WR0				IAmb	IAmb	10 21 10.7	
	comp=Z,4.5nm,0.9s						
WB2	**Warramunga Arr**	**45.49**	**269**	P	**P**	**10 21 10.2**	**+0.4**
WB2				IAmb	IAmb	10 21 12.6	
	comp=Z,7.1nm,1.0s						
WRA	**Warramunga Arr**	**45.50**	**269**	P	**P**	**10 21 10.1**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=110,slow=7.5,SNR=50						
	comp=Z,4.2nm,0.8s						
WRA	**Warramunga Arr**	**45.50**	**269**	P	**P**	**10 21 09.4**	**-0.5**
WB0	**Warramunga Arr**	**45.51**	**269**	P	**P**	**10 21 10.3**	**+0.3**
WB0				IAmb	IAmb	10 21 12.7	
	comp=Z,9.9nm,1.1s						
FORT	**Forrest**	**48.12**	**252**	P	**P**	**10 21 29.5**	**-0.8**
KNRA	**Kununurra**	**51.99**	**271**	P	**P**	**10 21 58.6**	**-1.2**
KNRA				IAmb	IAmb	10 22 24.6	
	comp=Z,6.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.84**	**267**	P	**P**	**10 22 14.5**	**+1.0**
FITZ				IAmb	IAmb	10 22 29.0	
	comp=Z,7.1nm,1.1s						
GUMO	**Guam**	**55.73**	**313**	LR	LR	10 44 05.4	
	comp=Z,71nm,20.5s,baz=136,slow=34						
RPN	**Rapa Nui**	**58.77**	**106**	LR	LR	10 44 06.4	
	comp=Z,143nm,18.2s,baz=256,slow=32						
BATI	**Baumata**	**58.79**	**275**	LR	LR	10 47 32.7	
	comp=Z,606nm,19.1s,baz=219,slow=35						
QSPA	**South Pole Qui**	**62.26**	**180**	P	**P**	**10 23 12.5**	**+0.6**
	comp=Z,11nm,0.9s,baz=36,slow=1.6,SNR=29						
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**62.26**	**180**	P	**P**	**10 23 12.6**	**+0.6**
KAPI	**Kappang**	**64.61**	**278**	LR	LR	10 51 25.4	
	comp=Z,100nm,19.5s,baz=122,slow=36						
BELA	**Belgrano 2**	**72.12**	**172**	P	**P**	**10 24 13.9**	**-0.3**
BELA				IAmb	IAmb	10 24 27.4	
	comp=Z,2.3nm,1.0s						
LEM	**Lembang**	**74.48**	**270**	LR	LR	10 58 21.5	
	comp=Z,152nm,18.1s,baz=130,slow=37						
MAW	**Mawson**	**75.19**	**200**	P	**P**	**10 24 33.2**	**+0.9**
	comp=Z,2.0nm,1.0s,baz=118,slow=10,SNR=2.7						
MAW				LR	LR	10 56 13.6	
	comp=Z,144nm,19.4s,baz=114,slow=35						
	comp=Z,2.0nm,1.0s						
MJAR	**Matsushiro Arr**	**76.99**	**324**	P	**P**	**10 24 44.8**	**+1.9**
	comp=Z,1.9nm,0.8s,baz=154,slow=7.2,SNR=4.8						
MJAR				LR	LR	10 53 19.0	
	comp=Z,50nm,20.9s,baz=161,slow=32						
	comp=Z,1.9nm,0.8s						
SNAA	**Sanae**	**80.66**	**178**	P	**P**	**10 25 02.2**	**-0.6**
SNAA	**Sanae**	**80.66**	**178**	P	**P**	**10 25 02.1**	**-0.6**
	comp=Z,6.3nm,1.1s,baz=176,slow=4.9,SNR=12						
	comp=Z,6.3nm,1.1s						
SNAA	**Sanae**	**80.66**	**178**	P	**P**	**10 25 02.3**	**-0.6**
H03S2	**Juan Fernandez**	**80.68**	**123**	T	T	11 53 33.5	
	baz=246						
H03S1	**Juan Fernandez**	**80.69**	**123**	T	T	11 53 29.3	
	baz=246						
H03S3	**Juan Fernandez**	**80.70**	**123**	T	T	11 53 34.6	
	baz=246						
VNA3	**Neumayer Olymp**	**80.75**	**176**	P	**P**	**10 25 02.3**	**-0.9**
VNA2	**Neumayer--Watz**	**81.20**	**176**	P	**P**	**10 25 05.3**	**-0.4**
	baz=180,slow=6.0						
VNA1	**Neumayer--Stat**	**81.42**	**176**	P	**P**	**10 25 06.2**	**-0.5**
LPIG	**La Paz**	**81.98**	**58**	LR	LR	10 55 00.9	
	comp=Z,139nm,18.1s,baz=229,slow=31						
PLCA	**Paso Flores**	**83.20**	**133**	P	**P**	**10 25 16.3**	**-0.5**
	comp=Z,2.2nm,1.0s,baz=268,slow=6.7,SNR=3.9						
PLCA				LR	LR	10 54 41.9	
	comp=Z,145nm,18.9s,baz=246,slow=30						
	comp=Z,2.2nm,1.0s						
KSRS	**Korea Array**	**83.35**	**319**	P	**P**	**10 25 20.7**	**+3.5**
	comp=Z,2.3nm,1.0s,baz=145,slow=6.0,SNR=10						
KSRS				LR	LR	10 56 09.7	
	comp=Z,36nm,21.9s,baz=235,slow=31						
	comp=Z,2.3nm,1.0s						
PFO	**Pinyon Flats O**	**83.43**	**47**	LR	LR	10 57 40.1	
	comp=Z,215nm,18.1s,baz=254,slow=32						
PETK	**Petropavlovsk-**	**83.72**	**345**	P	**P**	**10 25 20.8**	**+2.0**
	comp=Z,1.3nm,0.6s,baz=149,slow=6.2,SNR=6.4						
PETK				LR	LR	10 57 50.3	
	comp=Z,85nm,20.5s,baz=132,slow=32						
	comp=Z,1.3nm,0.6s						
NVAR	**Mina Array Bea**	**85.40**	**42**	P	**P**	**10 25 29.4**	**+1.4**
	comp=Z,2.1nm,1.1s,baz=222,slow=7.8,SNR=9.7						
NVAR				LR	LR	10 59 10.0	
	comp=Z,312nm,18.4s,baz=216,slow=32						
	comp=Z,2.1nm,1.1s						
USRK	**Ussuriysk Ar.**	**85.84**	**326**	P	**P**	**10 25 33.1**	**+3.4**
	comp=Z,2.7nm,0.9s,baz=136,slow=5.4,SNR=8.7						
	comp=Z,2.7nm,0.9s						
ELK	**Elko**	**88.70**	**42**	LR	LR	11 01 32.2	
	comp=Z,327nm,18.4s,baz=230,slow=33						
KLR	**Kul'dur**	**89.57**	**329**	LR	LR	11 01 15.6	
	comp=Z,62nm,20.3s,baz=222,slow=32						
TXAR	**Lajitas Array**	**89.81**	**56**	P	**P**	**10 25 50.6**	**+1.4**
	comp=Z,1.0nm,1.1s,baz=209,slow=7.2,SNR=5.6						
	comp=Z,1.0nm,1.1s						
CMIG	**Matias Romero**	**90.60**	**71**	LR	LR	10 57 49.6	
	comp=Z,65nm,19.5s,baz=232,slow=30						
ANMO	**Albuquerque**	**90.87**	**51**	LR	LR	10 59 17.5	
	comp=Z,153nm,20.4s,baz=254,slow=31						
MA2	**Magadan**	**91.22**	**344**	LR	LR	11 02 46.8	
	comp=Z,47nm,20.7s,baz=149,slow=33						
NNA	**Nana**	**92.73**	**105**	LR	LR	10 59 00.6	
	comp=Z,40nm,19.3s,baz=243,slow=30						
PDAR	**Pinedale Array**	**93.31**	**43**	P	**P**	**10 26 06.1**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=242,slow=1.9,SNR=4.6						
PDAR				LR	LR	11 04 42.0	
	comp=Z,163nm,18.3s,baz=261,slow=33						
	comp=Z,0.4nm,0.9s						
ATAH	**Atahualpa**	**93.71**	**100**	LR	LR	10 59 31.9	
	comp=Z,128nm,19.4s,baz=214,slow=30						
LVC	**Limon Verde**	**93.90**	**118**	LR	LR	11 01 43.5	
	comp=Z,62nm,18.3s,baz=214,slow=31						
CMAR	**Chiang Mai Arr**	**93.91**	**289**	P	**P**	**10 26 11.1**	**+2.7**
	comp=Z,0.7nm,0.4s,baz=131,slow=4.1,SNR=1.7						
	comp=Z,0.7nm,0.4s						
LPAZ	**La Paz**	**97.86**	**113**	LR	LR	11 01 53.3	
	comp=Z,35nm,19.5s,baz=251,slow=30						
MKAR	**Makanchi Array**	**117.20**	**311**	PKP	**PKiKP**	**10 31 35.3**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=98,slow=2.5,SNR=5.7						
KURBB	**Kurchatov Arra**	**120.33**	**315**	PKP	**PKiKP**	**10 31 42.0**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=99,slow=2.2,SNR=10						
ARCES	**ARCESS Array B**	**136.38**	**349**	PKP	**PKiKP**	**10 32 12.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=17,slow=1.3,SNR=3.6						
KBZ	**Khabaz**	**144.78**	**307**	PKP	**PKPdf**	**10 32 27.2**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=157,slow=5.2,SNR=5.1						
NB2	**NORSAR Subarra**	**146.41**	**353**	PKP	**PKiKP**	**10 32 32.3**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=11,slow=3.0						
NOA	**NORSAR Array B**	**146.41**	**353**	PKPbc	**PKPbc**	**10 32 30.3**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=12,slow=4.5,SNR=8.2						
AKASG	**Malin Array Be**	**150.04**	**327**	PKPbc	**PKiKP**	**10 32 41.2**	**-0.2**
	comp=Z,6.4nm,0.8s,baz=44,slow=3.1,SNR=19						
BRTR	**Keskin Array B**	**152.51**	**303**	PKPbc	**PKiKP**	**10 32 47.0**	**-0.1**
	comp=Z,3.0nm,1.0s,baz=224,slow=3.4,SNR=4.9						
TORD	**Torodi Ar. Bea**	**165.27**	**173**	PKP	**PKPdf**	**10 32 56.3**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=276,slow=1.3,SNR=2.4						
TORD				PKPab	**PKPab**	**10 33 52.6**	**0.0**
	comp=Z,4.5nm,1.0s,baz=182,slow=3.6,SNR=13						
ESDC	**Sonseca Array**	**166.63**	**26**	PKPab	**PKPab**	**10 33 59.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=28,slow=3.0,SNR=1.8						

*AZER **02** 10:15:50.7±0.1, 38°.48N×46°.72E, h10km, Error ellipse: s-maj=2.4km s-min=1.2km az=351.0*

*NEIC **02** 10:15:50.6±1.6, 38°.46N±0°.04×46°.73E±0°.03, h14km±5km, Error ellipse: s-maj=5.7km s-min=3.4km az=189.0*

*IDC **02** 10:15:50.0±1.5, 38°.40N×46°.75E, h0km, mb3.6/4, mbtmp3.7/10, ML3.2/5, MS2.8/7, Error ellipse: s-maj=23.8km s-min=13.8km az=17.0*

*TEH **02** 10:15:51.0, 38°.44N×46°.73E, h8km, ML4.0*

*NSSP **02** 10:15:54.3, 38°.52N×46°.75E, h12km, Ms4.0*

ISC 02 10:15:51.1±0.8**, 38°.47N**±0°.02×**46°.72E**±0°.01**, h15**km±5km**, n168,** σ**1§64**/220**, mb3.7**/5**, MS2.5**/3**, 6C-10D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVRZ	**Varzaqan**	**0.05**	**317**	*e*Pg	**Pg**	**10 15 54.0**	**-0.2**
IHRS	**Heris**	**0.30**	**120**	Pg	**Pg**	**10 15 56.4**	**-1.0**
IHRS				Sg	**Sg**	**10 16 00.7**	**-1.1**
IHRS	**Heris**	**0.30**	**120**	*e*Pg	**Pg**	**10 15 56.6**	**-0.8**
IHRS				*e*Sg	**Sg**	**10 16 00.9**	**-0.9**
ITBZ	**Tabriz**	**0.50**	**243**	Pg	**Pg**	**10 16 00.0**	**-1.1**
ITBZ	**Tabriz**	**0.50**	**243**	*e*Pg	**Pg**	**10 16 00.3**	**-0.8**
ITBZ				*e*Sg	**Sg**	**10 16 08.3**	**+0.4**
TAB1	**Tabriz**	**0.51**	**216**	Pg	**Pg**	**10 16 01.7**	**+0.4**
TAB1	**Tabriz**	**0.51**	**216**	*e*Pg	**Pg**	**10 16 01.8**	**+0.4**
ORD	**Ordubad**	**0.73**	**310**	*e*Pg	**Pb**	**10 16 05.2**	**-0.3**
ORD	**Ordubad**	**0.73**	**310**	P	**Pb**	**10 16 05.3**	**-0.3**
	SNR=285						
ORD				S	**Sb**	**10 16 15.8**	**+0.4**
IBST	**Bostanabad**	**0.78**	**170**	Pg	**Pg**	**10 16 04.9**	**-1.3**
IBST	**Bostanabad**	**0.78**	**170**	*e*Sg	**Sg**	**10 16 16.3**	**-0.2**
IBST				*e*Pg	**Pg**	**10 16 05.2**	**-1.0**
IMRD	**Marand**	**0.83**	**288**	Pg	**Pg**	**10 16 06.7**	**-0.5**
IMRD	**Marand**	**0.83**	**288**	*e*		10 16 23.0	
	comp=Z,52µm,0.2s						
IMRD				*e*Pg	**Pb**	**10 16 07.2**	**-0.1**
ISHB	**Shabestar**	**0.88**	**258**	Pg	**Pg**	**10 16 07.2**	**-1.0**
ISHB	**Shabestar**	**0.88**	**258**	*e*Pg	**Pg**	**10 16 07.3**	**-1.0**
IAZR	**Azarshahr**	**0.98**	**217**	*e*		10 16 25.2	
	comp=Z,23µm,0.2s						
IAZR				*e*Pg	**Pb**	**10 16 09.6**	**-0.2**

GRMI	**Germi**	**0.98**	**69**	Pg	**Pb**	**10 16 08.8**	**-1.1**
GRMI	**Germi**	**0.98**	**69**	*e*		10 16 23.9	
	comp=Z,99nm,0.2s						
GRMI				*e*Pg	**Pb**	**10 16 09.1**	**-0.8**
ISRB	**Sarab**	**0.98**	**130**	*e*Sg	**Sb**	**10 16 22.1**	**-0.7**
ISRB				*e*Pg	**Pb**	**10 16 08.6**	**-1.3**
ISRB				*e*		10 16 25.8	
	comp=Z,85µm,0.2s						
GRS	**Goris**	**1.08**	**344**	⇑*i*P	**Pb**	**10 16 11.2**	**-0.3**
GRS				⇓*i*S	**Sn**	**10 16 26.1**	**-0.4**
QRD	**Qoradiz**	**1.10**	**25**	*e*Pg	**Pg**	**10 16 12.3**	**0.0**
QRD	**Qoradiz**	**1.10**	**25**	P	**Pg**	**10 16 12.4**	**0.0**
	SNR=23						
QRD				S	**Sn**	**10 16 28.3**	**+1.4**
NAX	**Nakhchivan**	**1.19**	**307**	*e*Pg	**Pg**	**10 16 13.6**	**-0.4**
NAX	**Nakhchivan**	**1.19**	**307**	P	**Pg**	**10 16 13.6**	**-0.4**
	SNR=167						
NAX				S	**Sn**	**10 16 30.1**	**+1.0**
IHSH	**Hashtrud**	**1.24**	**159**	*e*Pg	**Pn**	**10 16 13.0**	**-1.1**
IHSH				*e*		10 16 15.4	
	comp=Z,74µm,0.3s						
YRD	**Yardimli**	**1.28**	**69**	*e*Pg	**Pn**	**10 16 14.5**	**0.0**
YRD	**Yardimli**	**1.28**	**69**	P	**Pn**	**10 16 14.5**	**0.0**
	SNR=92						
YRD				S	**Sg**	**10 16 32.4**	**0.0**
LRK	**Lerik**	**1.29**	**82**	*e*Pg	**Pn**	**10 16 14.5**	**-0.1**
LRK	**Lerik**	**1.29**	**82**	P	**Pn**	**10 16 14.5**	**-0.1**
	SNR=54						
LRK				S	**Sg**	**10 16 32.8**	**+0.1**
SBZ	**Shahbuz**	**1.30**	**316**	*e*Pg	**Pb**	**10 16 15.2**	**0.0**
SBZ	**Shahbuz**	**1.30**	**316**	P	**Pb**	**10 16 15.3**	**0.0**
	SNR=225						
SBZ				S	**Sg**	**10 16 34.1**	**+1.1**
STKZ		**1.35**	**1**	⇓*i*P	**Pg**	**10 16 16.5**	**-0.5**
STKZ				⇑*i*S	**Sg**	**10 16 35.0**	**+0.4**
BLQ	**Beylaqan**	**1.42**	**27**	*e*Pg	**Pg**	**10 16 18.0**	**-0.3**
BLQ	**Beylaqan**	**1.42**	**27**	P	**Pg**	**10 16 18.1**	**-0.3**
	SNR=83						
BLQ				S	**Sg**	**10 16 38.0**	**+1.3**
GLBA	**Clilabad**	**1.52**	**59**	*e*Pn	**Pg**	**10 16 20.0**	**-0.3**
GLBA	**Clilabad**	**1.52**	**59**	P	**Pg**	**10 16 20.0**	**-0.3**
	SNR=68						
GLBA				S	**Sg**	**10 16 41.9**	**+1.8**
ASTR	**Astara**	**1.63**	**86**	*e*Pn	**Pb**	**10 16 20.7**	**-0.1**
ASTR	**Astara**	**1.63**	**86**	P	**Pb**	**10 16 20.8**	**-0.1**
	SNR=67						
ASTR				S	**Sg**	**10 16 43.6**	**0.0**
LKRN	**Lenkeran, Azer**	**1.64**	**81**	*e*Pn	**Pb**	**10 16 20.8**	**-0.1**
LKRN	**Lenkeran, Azer**	**1.64**	**81**	P	**Pb**	**10 16 20.8**	**-0.1**
	SNR=23						
LKRN				S	**Sg**	**10 16 43.8**	**0.0**
AGDM	**Agdam**	**1.67**	**10**	P	**Pg**	**10 16 22.1**	**-1.0**
	SNR=173						
AGDM				S	**Sg**	**10 16 45.5**	**+0.7**
GAS1	**Astara - Iran**	**1.67**	**92**	Pn	**Pb**	**10 16 21.3**	**-0.2**
GAS1	**Astara - Iran**	**1.67**	**92**	*e*Pn	**Pb**	**10 16 21.6**	**+0.1**
GAS1				*e*		10 16 45.9	
	comp=Z,36µm,0.3s						
MAKU	**Maku**	**1.82**	**300**	Pn	**Pb**	**10 16 23.9**	**-0.2**
MAKU	**Maku**	**1.82**	**300**	*e*Pn	**Pb**	**10 16 23.8**	**-0.3**
MAKU				*e*		10 16 52.0	
	comp=Z,99nm,0.3s						
BRDA	**Brd**	**1.83**	**11**	*e*Pn	**Pg**	**10 16 25.6**	**-0.6**
BRDA	**Brd**	**1.83**	**11**	P	**Pg**	**10 16 25.6**	**-0.6**
	SNR=12						
BRDA				S	**Sg**	**10 16 52.7**	**+2.6**
MAHB	**Mahabad**	**1.88**	**206**	Pn	**Pb**	**10 16 24.7**	**-0.4**
MAHB	**Mahabad**	**1.88**	**206**	*e*Pn	**Pb**	**10 16 25.2**	**+0.1**
MAHB				*e*		10 16 55.6	
	comp=Z,34µm,0.6s						
HYR	**Heyderabad**	**1.92**	**311**	*e*Pn	**Pb**	**10 16 26.0**	**+0.3**
HYR	**Heyderabad**	**1.92**	**311**	Pn	**Pb**	**10 16 26.0**	**+0.3**
	SNR=75						
HYR				S	**Sg**	**10 16 53.2**	**+0.5**
SAAT	**Saatly**	**1.93**	**43**	*e*Pn	**Pb**	**10 16 25.3**	**-0.5**
SAAT	**Saatly**	**1.93**	**43**	P	**Pb**	**10 16 25.3**	**-0.5**
	SNR=11						
SAAT				S	**Sg**	**10 16 51.9**	**-1.1**
ZRD	**Zardab**	**1.96**	**22**	*e*Pn	**Pg**	**10 16 27.8**	**-0.9**
ZRD	**Zardab**	**1.96**	**22**	P	**Pg**	**10 16 27.8**	**-0.9**
	SNR=74						
ZRD				S	**Sg**	**10 16 56.6**	**+2.5**
CSN1	**Caspian**	**2.08**	**115**	*e*Pn	**Pb**	**10 16 27.9**	**-0.6**
GANJ	**Ganja**	**2.20**	**352**	*e*Pn	**Pb**	**10 16 30.5**	**0.0**
GANJ	**Ganja**	**2.20**	**352**	P	**Pb**	**10 16 30.5**	**0.0**
	SNR=268						
GANJ				S	**Sb**	**10 16 59.0**	**+1.4**
NRKZ	**NAREK**	**2.21**	**314**	⇑*i*P	**Pb**	**10 16 30.4**	**-0.4**
NRKZ				⇓*i*S	**Sg**	**10 17 00.3**	**-1.9**
KDMR	**Kurdemir**	**2.22**	**30**	*e*Pn	**Pb**	**10 16 32.0**	**+1.1**
KDMR	**Kurdemir**	**2.22**	**30**	P	**Pb**	**10 16 32.1**	**+1.1**
	SNR=8.0						
KDMR				S	**Sg**	**10 17 02.0**	**-0.5**
GNI	**Garni**	**2.27**	**318**	Pn	**Pg**	**10 16 33.0**	**-1.7**
	comp=Z,87nm,0.3s,baz=151,slow=1.6,SNR=83						
GNI				LR	LR	10 16 58.4	
	comp=Z,74nm,20.9s,baz=276,slow=29						
GNI				Sn	**Sg**	**10 17 03.0**	**-1.2**
	comp=Z,75nm,0.3s,baz=330,slow=20,SNR=11						
	comp=Z,496nm,0.5s						
GNI	**Garni**	**2.27**	**318**	⇓*i*P	**Pb**	**10 16 32.7**	**+0.8**
GNI				⇓*i*S	**Sg**	**10 17 04.1**	**-0.1**
GNI	**Garni**	**2.27**	**318**	Pn	**Pn**	**10 16 26.4**	**-1.8**
ALIB	**Äli-Bayra**	**2.32**	**49**	P	**Pg**	**10 16 34.6**	**-0.9**
	SNR=9.7						
ALIB				S	**Sg**	**10 17 03.8**	**-1.9**
MNGR	**Mingechevir, A**	**2.32**	**7**	P	**Pg**	**10 16 34.0**	**-1.6**
	SNR=5.6						
MNGR				S	**Sg**	**10 17 04.9**	**-0.9**
GDB	**GEDABAY**	**2.37**	**342**	P	**Pb**	**10 16 33.2**	**-0.4**
	SNR=300						
GDB				S	**Sb**	**10 17 04.1**	**+1.4**
ZNJK	**Zanjan**	**2.38**	**138**	*e*Pn	**Pn**	**10 16 31.5**	**+1.8**
KAPZ	**Kaputan**	**2.42**	**321**	⇑*i*P	**Pg**	**10 16 36.0**	**-1.6**
KAPZ				⇑*i*S	**Sg**	**10 17 09.1**	**+0.1**
IML	**Ismayilli**	**2.59**	**26**	P	**Pb**	**10 16 36.2**	**-0.9**
	SNR=13						
IML				S	**Sb**	**10 17 09.5**	**+0.7**
QBL	**Gabala**	**2.62**	**19**	P	**Pb**	**10 16 36.4**	**-1.4**
	SNR=2.9						
QBL				S	**Sb**	**10 17 10.1**	**+0.3**
METS	**Metsamor**	**2.65**	**310**	⇓*i*P	**Pb**	**10 16 37.2**	**-1.0**
METS				⇓*i*S	**Sb**	**10 17 10.2**	**-0.3**
GBS	**Qobustan**	**2.69**	**39**	P	**Pb**	**10 16 39.4**	**+0.4**
	SNR=11						
GBS				S	**Sb**	**10 17 11.0**	**-0.8**
PQL	**Pirkuli**	**2.74**	**31**	P	**Pg**	**10 16 41.6**	**-1.9**
	SNR=3.9						
PQL				S	**Sb**	**10 17 13.0**	**-0.2**
SEKA	**Sheki**	**2.77**	**8**	P	**Pb**	**10 16 38.2**	**-2.1**
	SNR=47						
SEKA				S	**Sb**	**10 17 15.1**	**+1.2**
VNNZ	**Vanand**	**2.78**	**307**	⇓*i*P	**Pg**	**10 16 42.3**	**-2.0**
VNNZ				⇓*i*S	**Sg**	**10 17 18.7**	**-1.6**
QZX	**Qazax, Azerbai**	**2.79**	**339**	P	**Pb**	**10 16 42.0**	**+1.4**
	SNR=41						
QZX				S	**Sb**	**10 17 13.5**	**-1.1**
GEVA	**Gevas**	**2.88**	**268**	Pn	**Pn**	**10 16 36.3**	**-0.2**
XNQ	**Khinaliq**	**2.92**	**22**	P	**Pn**	**10 16 39.7**	**+2.6**
	SNR=22						
XNQ				S	**Sb**	**10 17 21.2**	**+2.7**
ATGJ	**Altiaghaj**	**2.94**	**35**	P	**Pg**	**10 16 45.7**	**-1.8**
	SNR=5.8						
ATGJ				S	**Sb**	**10 17 20.1**	**+1.0**
LHJ2	**Lahijan - Gila**	**2.95**	**115**	*e*Pn	**Pn**	**10 16 39.1**	**+1.8**
GIDE	**GILAN DEYLAMAN**	**2.96**	**120**	*e*Pn	**Pn**	**10 16 40.0**	**+2.2**
DDFL	**Dedoflistskaro**	**3.01**	**351**	P	**Pg**	**10 16 47.0**	**-1.8**
DDFL				S	**Sg**	**10 17 31.6**	**+3.8**
GOBA	**Gobu**	**3.03**	**49**	S	**Sb**	**10 17 22.9**	**+1.4**
SIZA	**Siyzn**	**3.10**	**32**	P	**Pb**	**10 16 45.6**	**-0.4**
	SNR=16						
SIZA				S	**Sb**	**10 17 22.3**	**-1.4**
STE	**Stepanavan**	**3.11**	**325**	⇑*i*P	**Pg**	**10 16 48.6**	**-2.1**
STE				⇓*i*S	**Sg**	**10 17 30.5**	**-0.6**
ZKTA	**Zakatala**	**3.17**	**359**	P	**Pb**	**10 16 46.4**	**-0.6**
	SNR=16						
ZKTA				S	**Sb**	**10 17 24.9**	**-0.7**
QUBA	**Quba, Azerbaij**	**3.19**	**25**	P	**Pb**	**10 16 45.8**	**-1.8**
	SNR=9.8						
QUBA				S	**Sb**	**10 17 25.2**	**-1.0**
QSAR	**Qusar**	**3.27**	**21**	P	**Pb**	**10 16 46.8**	**-2.0**
	SNR=6.2						
QSAR				S	**Sb**	**10 17 27.9**	**-0.6**
LGD	**Lagodekhi**	**3.39**	**354**	P	**Pb**	**10 16 49.8**	**-1.0**
LGD				S	**Sg**	**10 17 37.3**	**-2.5**
SNGE	**Sanandaj**	**3.40**	**171**	*e*Pn	**Pn**	**10 16 47.0**	**+3.2**
KZRT	**Kazreti**	**3.42**	**329**	P	**Pg**	**10 16 53.7**	**-2.8**
KZRT				S	**Sg**	**10 17 39.3**	**-1.6**
DMNI	**Dmanisi**	**3.46**	**327**	P	**Pb**	**10 16 54.0**	**+1.9**
DMNI				S	**Sg**	**10 17 40.7**	**-1.4**
IGZV	**Ghazvin**	**3.48**	**126**	*e*Pn	**Pn**	**10 16 47.3**	**+2.5**
IGZV				*e*		10 17 43.5	
	comp=Z,3µm,0.5s						
ILIN	**Lien**	**3.54**	**177**	*e*Pn	**Pb**	**10 16 50.3**	**-3.3**
KARS	**Kars**	**3.54**	**309**	Pn	**Pn**	**10 16 46.1**	**+0.4**
SEAG	**Tbilisi Sea**	**3.61**	**337**	P	**Pg**	**10 16 58.1**	**-2.0**
SEAG				S	**Sg**	**10 17 46.5**	**-0.4**
TRLG	**Trialeti**	**3.67**	**328**	P	**Pg**	**10 16 58.3**	**-3.0**
TRLG				S	**Sg**	**10 17 47.4**	**-1.4**
GURO	**Guroymak-BITLI**	**3.67**	**273**		**Pn**	**10 16 47.0**	**-0.5**
QALM	**Alamut, Qazvin**	**3.73**	**122**	*e*Pn	**Pn**	**10 16 49.9**	**+1.6**
IDHR	**Dehrash**	**3.77**	**184**	*e*Pn	**Pn**	**10 16 51.2**	**+2.4**
IDHR				*e*		10 18 04.0	
	comp=Z,2µm,1.1s						
BRNG	**Burnasheti**	**3.85**	**326**	P	**Pg**	**10 17 01.7**	**-3.2**
BRNG				S	**Sg**	**10 17 54.2**	**-0.7**
IRAZ	**Razeghan**	**3.99**	**139**	*e*Pn	**Pn**	**10 16 54.2**	**+2.3**
KER	**Kermanshah**	**4.08**	**175**	*e*Pn	**Pn**	**10 16 56.8**	**+3.7**
IBZA	**Bozab**	**4.09**	**167**	*e*Pn	**Pn**	**10 16 57.4**	**+4.1**
BKRG	**Bakuriani**	**4.10**	**324**	P	**Pg**	**10 17 08.2**	**-1.4**
HAGD	**Aghdareh**	**4.12**	**151**	*e*Pn	**Pn**	**10 16 56.3**	**+2.6**
IMHD	**Mahdasht**	**4.21**	**130**	*e*Pn	**Pn**	**10 16 57.8**	**+3.1**
IKOM	**Komasi**	**4.33**	**171**	*e*Pn	**Pn**	**10 16 59.7**	**+3.2**
GUDG	**Gudauri**	**4.34**	**338**	P	**Pb**	**10 17 07.5**	**+0.2**
GUDG				S	**Sg**	**10 18 05.8**	**-4.8**
CHTH	**Charan**	**4.35**	**125**	*e*Pn	**Pn**	**10 16 59.1**	**+2.3**
ABS	**Abastumani**	**4.44**	**319**	P	**Pg**	**10 17 13.4**	**-2.8**
ABS				S	**Sg**	**10 18 15.0**	**+1.3**
PNSH	**Pansheti**	**4.46**	**340**	P	**Pb**	**10 17 07.7**	**-1.5**
HSAM	**Samen**	**4.51**	**160**	*e*Pn	**Pn**	**10 17 02.3**	**+3.2**
ASAO	**Ashtian**	**4.73**	**145**	*e*Pn	**Pn**	**10 17 04.8**	**+2.7**
TKB	**Tkibuli**	**4.81**	**325**	P	**Pb**	**10 17 18.6**	**+3.5**
ONI	**Oni**	**4.81**	**330**	P	**Pb**	**10 17 16.6**	**+1.5**
ONI				S	**Sg**	**10 18 21.9**	**-3.7**
ONI	**Oni**	**4.81**	**330**	Pn	**Pn**	**10 17 02.8**	**-0.2**
IDOB	**Doab**	**4.81**	**165**	*e*Pn	**Pn**	**10 17 06.5**	**+3.3**
MARD	**Mardin**	**4.83**	**258**	Pn	**Pn**	**10 17 01.8**	**-1.6**
IPRN	**Peran**	**5.00**	**115**	*e*Pn	**Pn**	**10 17 08.4**	**+2.7**
IKFM	**Kafar-mosalman**	**5.01**	**169**	*e*Pn	**Pn**	**10 17 09.7**	**+4.0**
DAMV	**Damavand**	**5.07**	**122**	*e*Pn	**Pn**	**10 17 09.1**	**+2.4**
KHMZ	**Khomeyn**	**5.40**	**150**	*e*Pn	**Pn**	**10 17 14.6**	**+3.4**
GHVR	**GHOM**	**5.42**	**136**	*e*Pn	**Pn**	**10 17 13.2**	**+1.7**
IGLO	**Ghaloghah**	**5.99**	**107**	*e*Pn	**Pn**	**10 17 21.6**	**+2.3**
KBZ	**Khabaz**	**6.00**	**332**	Pn	**Pn**	**10 17 23.6**	**+4.5**
	comp=Z,0.1nm,0.3s,baz=313,slow=5.5,SNR=2.1						
KBZ				Lg	Lg	10 18 56.9	
	baz=143,slow=11						
KBZ				LR	LR	10 19 40.5	
	comp=Z,67nm,19.3s,baz=232,slow=38						
	comp=Z,1.0nm,0.5s						
ISFB	**Sefidab**	**6.06**	**131**	*e*Pn	**Pn**	**10 17 21.7**	**+1.5**
KIV	**Kislovodsk**	**6.27**	**332**	Pn	**Pn**	**10 17 24.1**	**+1.0**
KRSH	**Karshahi**	**6.27**	**134**	*e*Pn	**Pn**	**10 17 27.4**	**+4.2**
NASN	**Na'in**	**7.52**	**137**	*e*Pn	**Pn**	**10 17 43.4**	**+2.9**
SHRO	**Shahrood**	**7.81**	**106**	*e*Pn	**Pn**	**10 17 46.5**	**+2.2**
BJRD	**Bojnurd**	**8.47**	**92**	*e*Pn	**Pn**	**10 17 54.8**	**+1.5**
BNN	**Bunyan**	**8.51**	**276**	Pn	**Pn**	**10 17 52.6**	**-1.3**
YZKH	**Yazd**	**8.83**	**131**	*e*Pn	**Pn**	**10 18 00.8**	**+2.6**
GEYT	**Alibeck**	**8.99**	**90**	Pn	**Pn**	**10 18 00.3**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=288,slow=10.0,SNR=10						
GEYT				Sn	**Sn**	**10 19 39.5**	**-1.9**
	baz=88,slow=38						
	comp=Z,3.8nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**8.99**	**90**	Pn	**Pn**	**10 17 59.8**	**-0.6**
TABS	**Tabas**	**9.70**	**117**	*e*Pn	**Pn**	**10 18 12.9**	**+2.8**
BR131	**Keskin Array S**	**10.24**	**281**	Pn	**Pn**	**10 18 17.5**	**-0.1**
BRTR	**Keskin Array B**	**10.24**	**281**	LR	LR	10 22 33.7	
	comp=Z,72nm,20.6s,baz=140,slow=39						
BRTR	**Keskin Array B**	**10.24**	**281**	Pn	**Pn**	**10 18 16.6**	**-1.0**
IMYA	**Miami**	**10.86**	**97**	*e*Pn	**Pn**	**10 18 28.1**	**+2.0**
BSRN	**Basiran**	**12.04**	**119**	*e*Pn	**Pn**	**10 18 44.7**	**+2.5**
BELG	**Belogornoye**	**13.94**	**2**	LR	LR	10 26 33.2	
	comp=Z,41nm,20.1s,baz=149,slow=46						
ABKAR	**Akbulak array**	**14.38**	**37**	Pn	**Pn**	**10 19 14.0**	**0.0**
ABKAR	**Akbulak array**	**14.38**	**37**	Pn	**Pn**	**10 19 12.9**	**-1.0**
AKTO	**Aktyubinsk**	**14.41**	**30**	Pn	**Pn**	**10 19 12.6**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=212,slow=8.6,SNR=12						
AKTO				Sn	Sn	10 21 44.7	-9.2
	comp=Z,0.1nm,0.3s,baz=320,slow=20,SNR=2.4						
	comp=Z,1.9nm,0.4s						
MLR	**Muntele Rosu**	**16.94**	**301**	Pn	**Pn**	**10 19 47.8**	**+0.3**
MLR				IAmb	IAmb	10 20 19.6	
	comp=Z,9.4nm,1.4s						
AK05	**Malin Array Si**	**17.37**	**320**	Pn	**Pn**	**10 19 52.3**	**-0.4**
AKASG	**Malin Array Be**	**17.41**	**320**	P	**P**	**10 19 53.8**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=125,slow=12,SNR=1.6						
GAR	**Garm**	**18.42**	**81**		**P**	**10 20 04.9**	**-0.9**
GAR				IAmb	IAmb	10 20 31.2	
	comp=Z,6.5nm,0.8s						
KK31	**Karatay Array**	**18.59**	**68**	P	**P**	**10 20 07.0**	**-0.5**
KK31				IAmb	IAmb	10 20 11.9	
	comp=Z,7.2nm,0.8s						
KKAR	**Karatay Array**	**18.59**	**68**	P	**P**	**10 20 06.7**	**-0.9**
BTK	**Batken**	**18.72**	**78**	P	**P**	**10 20 09.3**	**+0.2**
ARU	**Arti**	**19.63**	**20**	P	**P**	**10 20 18.5**	**-0.3**
	baz=209,slow=13,SNR=1.4						
	comp=Z,1.9nm,0.3s						
ARU	**Arti**	**19.63**	**20**	P	**P**	**10 20 18.8**	**+0.1**
ARU				IAmb	IAmb	10 20 24.6	
	comp=Z,4.0nm,0.7s						
BVAR	**Borovoye Array**	**21.88**	**41**	LR	LR	10 31 32.8	
	comp=Z,17nm,18.6s,baz=118,slow=43						
KURBB	**Kurchatov Arra**	**25.52**	**51**	P	**P**	**10 21 21.4**	**+2.7**
	comp=Z,1.8nm,0.8s,baz=260,slow=9.9,SNR=8.0						
	comp=Z,1.8nm,0.8s						
KURK	**Kurchatov**	**25.60**	**51**	P	**P**	**10 21 18.3**	**-1.2**
GERES	**GERESS Array B**	**25.85**	**304**	P	**P**	**10 21 25.0**	**+3.0**
	comp=Z,1.1nm,0.6s,baz=102,slow=9.3,SNR=10.0						
	comp=Z,1.1nm,0.6s						
GERES	**GERESS Array B**	**25.85**	**304**	P	**P**	**10 21 22.0**	**0.0**
KHC	**Kasperske Hory**	**25.99**	**305**	P	**P**	**10 21 22.8**	**-0.3**
MK31	**Makanchi Array**	**27.28**	**61**	P	**P**	**10 21 34.4**	**-0.4**
MK31				IAmb	IAmb	10 21 46.1	
	comp=Z,1.7nm,0.9s						
MKAR	**Makanchi Array**	**27.28**	**61**	P	**P**	**10 21 37.3**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=263,slow=12,SNR=1.7						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**27.28**	**61**	P	**P**	**10 21 34.1**	**-0.6**
HFS	**Hagfors**	**30.03**	**327**	LR	LR	10 33 42.1	
	comp=Z,38nm,18.9s,baz=196,slow=36						
NOA	**NORSAR Array B**	**31.55**	**327**	LR	LR	10 34 25.7	
	comp=Z,12nm,21.1s,baz=100,slow=35						
TORD	**Torodi Ar. Bea**	**47.11**	**250**	P	**P**	**10 24 22.5**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=66,slow=8.9,SNR=4.4						
	comp=Z,0.9nm,0.8s						

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*IDC **02** 10:16:00.3±1.0, 10°.72S×165°.66E, h0km, mb4.1/7, mbtmp4.1/8, ML3.9/1, MS3.7/3, Error ellipse: s-maj=47.4km s-min=21.2km az=136.0*

*NEIC **02** 10:16:06.3±1.2, 10°.8S±0°.1×165°.9E±0°.1, h35km±2km, mb4.3/8, Error ellipse: s-maj=25.1km s-min=17.2km az=59.0*

ISC 02 10:16:05.9±0.8**, 10°.88S**±0°.09×**165°.83E**±0°.10**, h35**km**, n28,** σ**1s.28**/26**, mb4.0**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.97**	**283**	Pn	**Pn**	**10 17 31.9**	**+0.1**
	41nm,0.3s,baz=168,slow=3.1,SNR=18						
HNR				Sn	**Sn**	**10 18 39.2**	**+0.1**
	baz=154,slow=18						
HNR	**Honiara**	**5.97**	**283**		**Pn**	**10 17 32.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**9.73**	**189**	Pn	**Pn**	**10 18 24.5**	**+1.0**
DZM	**Mont Dzumac**	**11.14**	**177**	Pn	**Pn**	**10 18 44.3**	**+1.4**
	0.8nm,0.3s,baz=91,slow=22,SNR=2.2						
DZM				Sn	**Sn**	**10 20 44.3**	**-2.1**
	0.1nm,0.3s,baz=100,slow=22,SNR=1.3						
	7.6nm,0.6s						
DZM	**Mont Dzumac**	**11.14**	**177**	Pn	**Pn**	**10 18 44.0**	**+1.0**
OUENC	**Ouen Island, N**	**11.52**	**175**	Pn	**Pn**	**10 18 48.5**	**+0.5**
KRVT	**Keravat (AS076**	**15.16**	**294**	LR	LR	10 25 47.6	
	comp=Z,252nm,19.1s,baz=261,slow=39						
PMG	**Port Moresby**	**18.44**	**273**	LR	LR	10 26 30.1	
	comp=Z,300nm,19.6s,baz=107,slow=34						
EIDS	**Eidsvold**	**20.08**	**222**	P	**P**	**10 20 37.0**	**+0.5**
EIDS				IAmb	IAmb	10 20 45.8	
	comp=Z,11nm,1.1s						
CTAO	**Charters Tower**	**20.95**	**242**	P	**P**	**10 20 46.2**	**+0.2**
CTAO				IAmb	IAmb	10 20 50.3	
	comp=Z,11nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	10 52 30.5	
	baz=181,slow=76,SNR=199						
H11S3	**WAKE ISLAND Hy**	**29.20**	**2**	T	T	10 52 32.5	
	baz=181,slow=76,SNR=78						
H11S1	**WAKE ISLAND Hy**	**29.21**	**2**	T	T	10 52 31.9	
	baz=181,slow=76,SNR=86						
BKZ	**Black Stump Fm**	**29.73**	**163**	P	**P**	**10 22 09.6**	**+0.6**
STKA	**Stephens Creek**	**30.62**	**223**	P	**P**	**10 22 15.8**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=101,slow=5.8,SNR=3.3						
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**30.62**	**223**	P	**P**	**10 22 17.6**	**+0.7**
WB0	**Warramunga Arr**	**31.54**	**250**	P	**P**	**10 22 24.4**	**-0.7**
WB0				IAmb	IAmb	10 22 24.7	
	comp=Z,5.0nm,0.7s						
WB2	**Warramunga Arr**	**31.61**	**250**	P	**P**	**10 22 25.1**	**-0.7**
WB2				IAmb	IAmb	10 23 05.9	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**31.62**	**250**	P	**P**	**10 22 23.9**	**-2.0**
	comp=Z,2.3nm,0.7s,baz=81,slow=9.0,SNR=13						
	comp=Z,2.3nm,0.7s						
AS31	**Alice Springs**	**32.94**	**243**	P	**P**	**10 22 36.2**	**-1.3**
ASAR	**Alice Springs**	**32.94**	**243**	P	**P**	**10 22 35.9**	**-1.7**
	comp=Z,4.3nm,0.8s,baz=75,slow=9.4,SNR=19						
ASAR				PcP	**PcP**	**10 25 22.6**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=92,slow=2.2,SNR=1.7						
ASAR				ScP	**ScP**	**10 29 06.7**	**+3.6**
	comp=Z,0.7nm,1.1s,baz=64,slow=2.9,SNR=4.1						
	comp=Z,4.3nm,0.8s						
ASAR	**Alice Springs**	**32.94**	**243**	P	**P**	**10 22 37.5**	**0.0**
RAR	**Rarotonga**	**34.54**	**112**	LR	LR	10 36 18.9	
	comp=Z,109nm,18.6s,baz=278,slow=35						
FITZ	**Fitzroy Crossi**	**39.51**	**255**	P	**P**	**10 23 32.7**	**-0.9**
ILAR	**Eielson Array**	**83.33**	**18**	P	**P**	**10 28 28.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=233,slow=4.9,SNR=9.7						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**85.85**	**50**	P	**P**	**10 28 41.8**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=236,slow=9.4,SNR=7.2						
	comp=Z,0.9nm,0.8s						
PDAR	**Pinedale Array**	**93.38**	**47**	P	**P**	**10 29 17.5**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=270,slow=1.8,SNR=2.8						
	comp=Z,0.3nm,0.8s						
MKAR	**Makanchi Array**	**93.46**	**317**	P	**P**	**10 29 17.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=94,slow=4.5,SNR=3.3						
	comp=Z,0.3nm,0.6s						

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*IDC **02** 10:23:34.9±1.5, 15°.90S×175°.01W, h270km±18km, mb3.3/6, mbtmp3.9/7, Error ellipse: s-maj=69.6km s-min=16.7km az=145.0*

ISC 02 10:23:35.3±1.6**, 16°.0S**±0°.5×**175°.0W**±0°.2**, h278**km**, n9,** σ**0s.98**/10**, mb3.4**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.69**	**57**	P	**Pn**	**10 24 37.9**	**+0.8**
	14nm,0.3s,baz=192,slow=4.4,SNR=8.9						
AFI				S	**S**	**10 25 24.9**	**-1.5**
	128nm,0.6s,baz=265,slow=23,SNR=15						
WRA	**Warramunga Arr**	**48.26**	**257**	P	**P**	**10 31 49.0**	**0.0**
	2.4nm,0.8s,baz=90,slow=6.7,SNR=33						
	2.4nm,0.8s						
ASAR	**Alice Springs**	**48.51**	**252**	P	**P**	**10 31 50.9**	**0.0**
	10nm,0.6s,baz=86,slow=7.9,SNR=202						
	10nm,0.6s						
PETK	**Petropavlovsk-**	**72.73**	**343**	P	**P**	**10 34 33.1**	**+0.1**
	1.5nm,0.8s,baz=123,slow=5.3,SNR=6.6						
	1.5nm,0.8s						
NVAR	**Mina Array Bea**	**75.76**	**43**	P	**P**	**10 34 52.3**	**+1.2**
	0.2nm,0.6s,baz=209,slow=5.0,SNR=2.0						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**83.30**	**12**	P	**P**	**10 35 30.7**	**+0.1**
	0.2nm,0.5s,baz=214,slow=5.8,SNR=3.3						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**83.69**	**42**	P	**P**	**10 35 33.7**	**+0.3**
	0.1nm,0.4s,baz=202,slow=3.7,SNR=2.3						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**110.16**	**314**	PKiKP	**PKiKP**	**10 41 32.7**	**-1.4**
	0.2nm,0.7s,baz=172,slow=2.9,SNR=1.7						
BRTR	**Keskin Array B**	**145.64**	**319**	PKPbc	**PKPdf**	**10 42 40.5**	**-0.5**
	0.8nm,0.5s,baz=47,slow=6.7,SNR=2.3						

IDC 02 10:53:55.5±2.7**, 3°.88S**×**152°.42E, h118**km±6km**, mb3.0**/2**, mbtmp3.3**/2**, Error ellipse: s-maj=133.8km s-min=40.7km az=123.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.57**	**222**	P	Pn	10 54 14.9	+1.1
	598nm,0.3s,baz=250,slow=2.0,SNR=259						
KRVT				S	Sn	10 54 28.9	+1.4
	452nm,0.3s,baz=143,slow=23,SNR=39						
WRA	**Warramunga Arr**	**23.78**	**226**	P	P	10 58 57.1	-0.5
	0.7nm,0.8s,baz=52,slow=9.4,SNR=6.9						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**26.58**	**221**	P	P	10 59 23.5	+0.6
	0.3nm,0.4s,baz=58,slow=9.4,SNR=20						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**149.65**	**289**	PKPbc	PKPbc	11 13 31.1	-1.3
	0.7nm,1.1s,baz=118,slow=1.5,SNR=2.1						

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*NEIC **02** 11:15:04.6±2.0, 8°.1S±0°.1×111°.70E±0°.05, h123km±10km, mb4.1/10, Error ellipse: s-maj=17.3km s-min=3.3km az=202.0*

*DJA **02** 11:15:06.5±0.7, 8°S±6°×11°2E±°, h101km±6km, M3.5/7, MLv3.5/7*

*IDC **02** 11:15:07.4±18.0, 8°.12S×111°.77E, h154km±182km, mb3.5/5, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=108.4km s-min=30.1km az=57.0*

ISC 02 11:15:04.3±0.7**, 8°.27S**±0°.07×**111°.66E**±0°.05**, h123**km**, n42,** σ**1s.47**/45**, mb4.0**/9**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.29**	**30**	P	**Pn**	**11 15 22.8**	**+1.2**
PWJI				S	**Sn**	**11 15 34.9**	**+0.3**
NGJI	**Ngawi**	**0.92**	**348**	P	**Pn**	**11 15 29.1**	**+3.3**
UGM	**Wanagama**	**1.18**	**287**	Pn	**Pn**	**11 15 29.8**	**+1.3**
UGM	**Wanagama**	**1.18**	**287**	P	**Pn**	**11 15 29.6**	**+1.2**
UGM				S	**Sn**	**11 15 48.1**	**+1.4**
UGM	**Wanagama**	**1.18**	**287**	P	**Pn**	**11 15 30.0**	**+1.6**
TBJI	**Tambak Boyo**	**1.46**	**7**	P	**Pn**	**11 15 33.8**	**+2.4**
TBJI				S	**Sn**	**11 15 55.9**	**+3.8**
SMRI	**Semarang**	**1.71**	**315**	Pn	**Pn**	**11 15 34.7**	**+0.3**
SMRI	**Semarang**	**1.71**	**315**	P	**Pn**	**11 15 36.1**	**+1.7**
SMRI	**Semarang**	**1.71**	**315**	P	**Pn**	**11 15 36.6**	**+2.2**
GMJI	**Gumukmas**	**1.77**	**90**	P	**Pn**	**11 15 36.2**	**+1.1**
GMJI				S	**Sn**	**11 15 59.6**	**+1.1**
BLJI	**Banyuglugur**	**1.99**	**75**	P	**Pn**	**11 15 39.3**	**+1.5**
JAGI	**Jajag, Banyuwa**	**2.48**	**95**	Pn	**Pn**	**11 15 44.5**	**+0.6**
JAGI	**Jajag, Banyuwa**	**2.48**	**95**	P	**Pn**	**11 15 45.3**	**+1.4**
XMI	**Christmas Isla**	**6.28**	**249**	P	Pn	11 16 27.5	-7.0
	114nm,0.5s						
GIRL	**Giralia**	**14.50**	**170**	Pn	**Pn**	**11 18 24.3**	**+0.5**
GIRL	**Giralia**	**14.50**	**170**	P	**Pn**	**11 18 23.6**	**-0.2**
MBWA	**Marble Bar**	**15.00**	**150**	Pn	**Pn**	**11 18 30.6**	**+0.6**
MBWA				IAmb	IAmb	11 18 49.8	
	comp=Z,16nm,1.1s						
MYLDM	**Lahad Datu**	**15.00**	**27**	Pn	**Pn**	**11 18 26.4**	**-3.7**
PSA00	**Pilbara Seismi**	**15.40**	**150**	Pn	**Pn**	**11 18 36.2**	**+1.1**
PSA00	**Pilbara Seismi**	**15.40**	**150**	P	**Pn**	**11 18 36.2**	**+1.1**
FITZ	**Fitzroy Crossi**	**16.74**	**127**	P	**P**	**11 18 52.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=311,slow=12,SNR=1.3						
FITZ				S	Sn	11 21 42.2	-16
	comp=Z,2.1nm,0.8s,baz=150,slow=20,SNR=2.2						
	comp=Z,1.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**16.74**	**127**	P	**P**	**11 18 53.8**	**+2.0**
KNRA	**Kununurra**	**18.27**	**115**	P	**P**	**11 19 08.2**	**-0.4**
KNRA				IAmb	IAmb	11 19 44.0	
	comp=Z,15nm,1.4s						
KNRA	**Kununurra**	**18.27**	**115**	P	**P**	**11 19 09.0**	**+0.4**
WRKA	**Warakurna**	**23.02**	**138**	P	**P**	**11 19 58.0**	**-0.9**
WB0	**Warramunga Arr**	**24.80**	**120**	P	**P**	**11 20 15.8**	**+0.6**
WB0				IAmb	IAmb	11 20 54.3	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**24.83**	**120**	P	**P**	**11 20 15.2**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=294,slow=11,SNR=15						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**24.83**	**120**	P	**P**	**11 20 13.7**	**-1.6**
WRAB	**Tennant Creek**	**24.84**	**120**	P	**P**	**11 20 15.5**	**+0.1**
WB2	**Warramunga Arr**	**24.84**	**120**	P	**P**	**11 20 14.6**	**-0.9**
WB2				IAmb	IAmb	11 20 22.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.8nm,1.2s						
WR0	**Warramunga Arr**	**25.01**	**120**	P	**P**	**11 20 17.2**	**+0.2**
WR0				IAmb	IAmb	11 20 36.6	
	comp=Z,14nm,1.5s						
AS31	**Alice Springs**	**26.24**	**128**	P	**P**	**11 20 28.3**	**+0.2**
ASAR	**Alice Springs**	**26.24**	**128**	P	**P**	**11 20 28.4**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=304,slow=8.4,SNR=23						
	comp=Z,0.5nm,0.3s						
ASAR	**Alice Springs**	**26.24**	**128**	P	**P**	**11 20 28.1**	**0.0**
STKA	**Stephens Creek**	**36.41**	**134**	P	**P**	**11 21 57.9**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=310,slow=17,SNR=2.9						
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**56.05**	**356**	P	**P**	**11 24 29.5**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=175,slow=6.9,SNR=4.9						
	comp=Z,1.2nm,0.6s						
MK31	**Makanchi Array**	**60.74**	**337**	P	**P**	**11 25 02.6**	**-0.3**
MK31				IAmb	IAmb	11 25 02.8	
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**60.74**	**337**	P	**P**	**11 25 02.0**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=154,slow=7.5,SNR=22						
	comp=Z,1.3nm,0.4s						
MKAR	**Makanchi Array**	**60.74**	**337**	P	**P**	**11 25 02.3**	**-0.7**
ZAA0	**Zalesovo Array**	**66.00**	**343**	P	**P**	**11 25 35.6**	**-1.7**
ZALV	**Zalesovo Beam**	**66.00**	**343**	P	**P**	**11 25 36.0**	**-1.4**
ABKAR	**Akbulak array**	**72.91**	**327**	P	**P**	**11 26 19.1**	**-0.9**

*INET **02** 11:20:54.4±0.6, 12°.57N×88°.32W, h26km±11km, MW2.7*
*SNET **02** 11:20:55.2±0.8, 12°.67N×88°.32W, h30km±5km, ML2.7*
ISC 02 11:20:52.7±2.5**, 12°.5N**±0°.2×**88°.3W**±0°.1**, h21**km±8km**, n9, σ0s.41**/14**, 1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.90**	**29**	*e*P	**Pb**	**11 21 09.2**	**-0.4**
LCND				*e*S	**Sb**	**11 21 20.9**	**-0.3**
LCND				IAML		11 21 24.4	
	comp=Z,293nm,0.4s						
PACA	**Pacayal**	**0.95**	**1**	*e*P	**Pb**	**11 21 10.8**	**+0.3**
PACA				*e*S	**Sb**	**11 21 23.1**	**+0.5**
COEB	**Comit de Eme**	**0.99**	**349**	*e*P	**Pn**	**11 21 11.3**	**-0.2**
COEB				*e*S	**Sb**	**11 21 23.9**	**0.0**
COEB				IAML		11 21 24.7	
	comp=Z,224nm,0.4s						
PQSS	**Presa 15 de Se**	**1.12**	**349**	⇑*i*P	**Pn**	**11 21 13.3**	**+0.2**
COEG	**Centro de Oper**	**1.22**	**334**	*e*P	**Pn**	**11 21 14.4**	**-0.1**
COEG				IAML		11 21 33.3	
	comp=Z,165nm,0.2s						
SCLA	**Alcaldia de Sa**	**1.24**	**342**	*e*P	**Pn**	**11 21 15.2**	**+0.4**
SCLA				*e*S	**Sn**	**11 21 30.3**	**-0.5**
CRIN	**San Cristobal**	**1.27**	**82**	*e*P	**Pn**	**11 21 15.7**	**+0.3**
CRIN				*e*S	**Sn**	**11 21 32.4**	**+0.5**
COPN	**Copaltepe**	**1.74**	**101**	*e*P	**Pn**	**11 21 21.5**	**-0.2**
MOMN	**Momotombo**	**1.76**	**93**	*e*P	**Pn**	**11 21 21.9**	**-0.2**

*IDC **02** 11:31:03.3±0.8, 40°.18N×120°.20W, h0km, mbtmp3.1/6, ML3.5/6, Error ellipse: s-maj=10.8km s-min=5.7km az=39.0*
*NEIC **02** 11:31:03.6, 40°.15N×120°.22W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr0.45; Mθθ-3.61; Mϕϕ3.16; Mrθ0.39; Mθϕ-2.55; Mϕr1.74; Fault plane solution: Mo4.61000×10^14 NP1:ϕs295.17000°, δ67.53000°, λ172.76000°. NP2:ϕs27.95000°, δ83.32000°, λ22.63000°. Principal axes: T 4.5837, Plg21.0000°, Azm254.0000°; N 0.0547, Plg66.0000°, Azm44.0000°; P -4.6384, Plg11.0000°, Azm160.0000°;*
*NEIC **02** 11:31:03.6, 40°.15N×120°.22W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr0.11; Mθθ-3.45; Mϕϕ3.34; Mrθ0.27; Mθϕ-3.19; Mϕr2.01; Fault plane solution: Mo5.08000×10^14 NP1:ϕs292.13000°, δ67.58000°, λ174.45000°. NP2:ϕs24.25000°, δ84.87000°, λ22.52000°. Principal axes: T 5.2276, Plg19.0000°, Azm250.0000°; N -0.3055, Plg67.0000°, Azm36.0000°; P -4.9221, Plg12.0000°, Azm156.0000°;*
*ANF **02** 11:31:04.2±0.3, 40°.20N×120°.23W, h0km, ML4.1/24 Error ellipse: s-maj=6.9km s-min=2.3km az=57.0*
*NCEDC **02** 11:31:04.4±2.0, 40°.14N±0°.02×120°.23W±0°.02, h9km±5km, Mwr3.7/5, ML3.7/92(NEIC), Mwr3.7/65(NEIC), Error ellipse: s-maj=2.4km s-min=2.2km az=217.0*
*NEIC **02** 11:31:04.4±2.0, 40°.16N±0°.02×120°.23W±0°.02, h8km±5km, Error ellipse: s-maj=2.3km s-min=2.2km az=165.0*
ISC 02 11:31:03.7±0.8**, 40°.17N**±0°.02×**120°.24W**±0°.02**, h15**km±7km**, n234, σ1s.83**/239**, Northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BMRR	**Black Mountain**	**0.07**	**215**		**Pg**	**11 31 06.9**	**-0.2**
BEKR	**Beckworth**	**0.31**	**197**		**Pg**	**11 31 10.3**	**-0.1**
BEKR					**Sg**	**11 31 14.7**	**-0.2**
BEKR	**Beckworth**	**0.31**	**197**	IAML		11 31 14.9	
	comp=N,32µm,0.3s						
BEKR				IAML		11 31 15.0	
	comp=E,47µm,0.5s						
WVA	**Winnemucca Val**	**0.39**	**125**		**Pg**	**11 31 11.5**	**-0.2**
WVA					**Sg**	**11 31 16.8**	**-0.2**
LOY	**Loyalton**	**0.51**	**180**		**Pg**	**11 31 13.6**	**-0.3**
BABR	**Babbit Peak**	**0.57**	**170**		**Pg**	**11 31 14.9**	**-0.2**
PEAR	**Peavine Mounta**	**0.60**	**159**		**Pg**	**11 31 15.3**	**-0.2**
PEAR	**Peavine Mounta**	**0.60**	**159**		**Sg**	**11 31 23.7**	**+0.2**
KBF	**Kyburz Flat**	**0.66**	**178**		**Pg**	**11 31 16.3**	**-0.3**
REN	**Reno**	**0.71**	**152**		**Pg**	**11 31 17.3**	**-0.2**
REN					**Sg**	**11 31 27.1**	**+0.3**
VPK	**Verdi Peak**	**0.71**	**167**		**Pg**	**11 31 17.4**	**-0.2**
IND	**Independence**	**0.73**	**183**		**Pg**	**11 31 17.5**	**-0.6**
PLTX	**Planet X, Gerl**	**0.80**	**47**		**Pg**	**11 31 18.8**	**-0.5**
PLTX					**Sb**	**11 31 30.2**	**+0.2**
PLTX	**Planet X, Gerl**	**0.80**	**47**	IAML		11 31 33.8	
	comp=E,18µm,0.8s						
PLTX				IAML		11 31 34.2	
	comp=N,12µm,0.7s						
PAHR	**Pah Rah Range**	**0.80**	**125**		**Pg**	**11 31 18.4**	**-0.9**
PAHR					**Sg**	**11 31 29.0**	**-0.9**
PAHR	**Pah Rah Range**	**0.80**	**125**	IAML		11 31 33.0	
	comp=N,4µm,0.7s						
DONR	**Donner Summit**	**0.82**	**184**		**Pg**	**11 31 19.0**	**-0.6**
DONR	**Donner Summit**	**0.82**	**184**		**Sg**	**11 31 29.9**	**-0.5**
MPK	**Martis Peak**	**0.88**	**169**		**Pg**	**11 31 20.2**	**-0.7**
MPK					**Sg**	**11 31 32.0**	**-0.5**
VCNR	**Virginia City**	**0.98**	**152**		**Pg**	**11 31 22.2**	**-0.5**
VCNR					**Sg**	**11 31 35.1**	**-0.5**
VCNR	**Virginia City**	**0.98**	**152**	IAML		11 31 37.2	
	comp=N,2µm,0.5s						
LRDM	**Redding Peak**	**0.98**	**288**		**Pg**	**11 31 22.7**	**0.0**
LCMM	**Colby Mountain**	**0.98**	**269**		**Pg**	**11 31 22.8**	**0.0**
LMEM	**Manzanita Entr**	**1.08**	**290**		**Pb**	**11 31 24.7**	**+0.5**
HATC	**Hat Creek Radi**	**1.14**	**305**		**Pb**	**11 31 25.5**	**+0.4**
ORV	**Oroville**	**1.15**	**238**		**Pb**	**11 31 25.4**	**+0.2**
ORV				IAML		11 31 40.9	
	comp=E,1µm,0.4s						
ORV	**Oroville**	**1.15**	**238**		**Sb**	**11 31 40.3**	**+0.4**
OGOM	**Van Goodin Ran**	**1.17**	**245**		**Pb**	**11 31 25.9**	**+0.3**
PNTR	**Pine Nut**	**1.18**	**155**		**Pb**	**11 31 26.0**	**0.0**
PNTR	**Pine Nut**	**1.18**	**155**	IAML		11 31 48.0	
	comp=N,1µm,0.8s						
PNTR				IAML		11 31 48.2	
	comp=E,1µm,0.7s						
EMB	**Emerald Bay**	**1.19**	**175**		**Pb**	**11 31 25.9**	**-0.3**
OWYM	**Wyandotte**	**1.20**	**234**		**Pn**	**11 31 25.8**	**-0.1**
PAM	**Palermo**	**1.22**	**234**		**Pn**	**11 31 26.5**	**+0.4**
OHCM	**Honcut**	**1.27**	**230**		**Pn**	**11 31 26.7**	**-0.1**
LTIM	**Timbered Crate**	**1.39**	**317**		**Pb**	**11 31 29.5**	**+0.2**
YERR	**Yerington**	**1.41**	**146**		**Pn**	**11 31 29.0**	**0.0**
YERR	**Yerington**	**1.41**	**146**	IAML		11 31 49.4	
	comp=N,2µm,0.3s						
LTCM	**Tuscan Springs**	**1.45**	**272**		**Pn**	**11 31 30.1**	**+0.8**
SUTB	**Sutter Butte**	**1.52**	**232**		**Pn**	**11 31 31.5**	**+1.3**
OSUM	**Sutter Buttes**	**1.53**	**235**		**Pb**	**11 31 32.0**	**+0.3**
LBFM	**Black Fox Moun**	**1.72**	**314**		**Pb**	**11 31 35.3**	**+0.2**
MOD	**Modoc Plateau**	**1.74**	**358**		**Pb**	**11 31 35.2**	**-0.2**
MOD	**Modoc Plateau**	**1.74**	**358**	Pn	**Pn**	**11 31 34.0**	**+0.5**
MOD	**Modoc Plateau**	**1.74**	**358**	IAML		11 32 02.3	
	comp=N,887nm,0.6s						
MOD				IAML		11 32 03.1	
	comp=E,1µm,0.7s						
LMHM	**Little Mount H**	**1.77**	**323**		**Pb**	**11 31 36.2**	**+0.1**
GCK	**Clark Valley**	**1.80**	**251**		**Pn**	**11 31 35.6**	**+1.5**
M03C	**McCloud**	**1.81**	**308**		**Pb**	**11 31 36.6**	**0.0**
LGMM	**Garner Mountai**	**1.88**	**320**		**Pn**	**11 31 36.8**	**+1.5**
GROM	**Round Mountain**	**1.88**	**263**		**Pn**	**11 31 36.4**	**+0.9**
NDHM	**Dunnigan Hills**	**1.91**	**223**		**Pn**	**11 31 37.6**	**+2.0**
GVV	**Valley View**	**1.91**	**259**		**Pn**	**11 31 36.5**	**+0.6**
LMPM	**Military Pass**	**1.97**	**313**		**Pb**	**11 31 38.9**	**-0.4**
GASB	**Alder Springs**	**1.97**	**256**		**Pn**	**11 31 37.4**	**+0.7**
KVN	**Kaiserville**	**1.99**	**123**		**Pn**	**11 31 37.0**	**0.0**
KVN	**Kaiserville**	**1.99**	**123**	IAML		11 32 08.1	
	comp=N,892nm,0.5s						
KVN				IAML		11 32 08.7	
	comp=E,1µm,0.8s						
GTSM	**Trough Springs**	**2.01**	**246**		**Pn**	**11 31 38.0**	**+0.8**
GBMM	**Baldy Mountain**	**2.02**	**240**		**Pn**	**11 31 38.9**	**+1.6**
LBPM	**Beegum Peak**	**2.03**	**275**		**Pn**	**11 31 38.1**	**+0.7**
RYN	**Ryan**	**2.03**	**139**		**Pn**	**11 31 37.8**	**+0.3**
LCSM	**College of the**	**2.06**	**308**		**Pb**	**11 31 40.8**	**0.0**
LKVW	**Lakeview**	**2.06**	**357**		**Pb**	**11 31 40.0**	**-0.9**
LBKM	**Bonanza King**	**2.06**	**297**		**Pb**	**11 31 40.5**	**-0.4**
LHEM	**Herd Peak**	**2.10**	**315**		**Pb**	**11 31 41.6**	**+0.1**
LGPM	**Granite Peak**	**2.11**	**292**		**Pb**	**11 31 41.7**	**0.0**
NBPM	**Berryessa Peak**	**2.13**	**226**		**Pn**	**11 31 40.2**	**+1.5**
CMB	**Columbia Colle**	**2.13**	**183**	Pn	**Pn**	**11 31 39.5**	**+0.8**
CMB				IAML		11 32 10.6	
	comp=E,730nm,0.5s						
CMB				IAML		11 32 12.7	
	comp=N,575nm,0.8s						
MNRC	**McLaughlin Min**	**2.13**	**234**		**Pn**	**11 31 40.3**	**+1.5**
NMTM	**Middletown**	**2.18**	**232**		**Pn**	**11 31 40.8**	**+1.3**
MCUB	**Copperopolis B**	**2.21**	**188**		**Pn**	**11 31 41.1**	**+1.3**
LUL	**Lundy Lake**	**2.27**	**158**		**Pn**	**11 31 42.5**	**+1.7**
NV09	**Mina Array Sit**	**2.27**	**139**		**Pn**	**11 31 41.4**	**+0.6**
KBNM	**Bluenose Ridge**	**2.29**	**264**		**Pn**	**11 31 42.7**	**+1.7**
NVAR	**Mina Array Bea**	**2.29**	**138**	Pn	**Pn**	**11 31 41.7**	**+0.5**
	comp=N,22nm,0.3s,baz=315,slow=13,SNR=288						
NVAR				Lg	Lg	11 32 15.3	
	comp=N,136nm,0.3s,baz=329,slow=27,SNR=8.9						
	comp=N,35nm,0.4s						
NV08	**Mina Array Sit**	**2.31**	**139**		**Pn**	**11 31 41.8**	**+0.5**
LAMM	**Antelope Mount**	**2.31**	**309**		**Pb**	**11 31 45.1**	**-0.2**
GBGM	**Boggs Mountain**	**2.32**	**235**		**Pn**	**11 31 43.5**	**+2.1**
BMN	**Battle Mountai**	**2.32**	**82**		**Pn**	**11 31 40.8**	**-0.7**
BMN				IAML		11 32 16.3	
	comp=N,294nm,0.7s						
BMN				IAML		11 32 23.0	
	comp=E,348nm,0.6s						
NAPC	**Atlas Peak**	**2.33**	**223**		**Pn**	**11 31 42.5**	**+1.1**
KHBM	**Hayfork Bally**	**2.33**	**283**		**Pb**	**11 31 44.7**	**-0.8**
LHV	**Little Huntoon**	**2.34**	**144**		**Pn**	**11 31 42.7**	**+1.2**
LHV	**Little Huntoon**	**2.34**	**144**	IAML		11 32 23.1	
	comp=E,668nm,0.8s						
B040	**Montague**	**2.34**	**316**		**Pn**	**11 31 43.9**	**+2.3**
HOG	**Hogback Mounta**	**2.35**	**332**		**Pb**	**11 31 45.7**	**-0.1**
GCRM	**Castle Rock Sp**	**2.37**	**235**		**Pn**	**11 31 43.8**	**+1.7**
NV11	**Mina Array Sit**	**2.37**	**136**		**Pn**	**11 31 42.7**	**+0.6**
NV11				IAML		11 32 19.5	
	comp=E,415nm,0.8s						
NV11				IAML		11 32 21.4	
	comp=N,297nm,0.9s						
NHSM	**Mount Saint He**	**2.38**	**231**		**Pn**	**11 31 43.6**	**+1.4**
KPPM	**Pickett Peak**	**2.40**	**275**		**Pn**	**11 31 44.8**	**+2.2**
GDXM	**Geysers**	**2.40**	**236**		**Pn**	**11 31 43.7**	**+1.2**
GHLM	**Highland Sprin**	**2.42**	**243**		**Pn**	**11 31 44.1**	**+1.3**
GAXM	**Alexander Vall**	**2.43**	**234**		**Pn**	**11 31 44.2**	**+1.3**
YBH	**Yreka Blue Hor**	**2.44**	**311**	Pn	**Pn**	**11 31 45.4**	**+2.3**
	comp=N,6.8nm,0.3s,baz=127,slow=12,SNR=164						
YBH				Lg	Lg	11 32 20.4	
	comp=N,9.9nm,0.3s,baz=286,slow=21,SNR=11						
	comp=N,34nm,0.5s						
YBH	**Yreka Blue Hor**	**2.44**	**311**	Pn	**Pn**	**11 31 44.9**	**+1.9**
HOPS	**Hopland Field**	**2.48**	**243**	Pn	**Pn**	**11 31 45.0**	**+1.5**
CVS	**Carmenet Viney**	**2.50**	**224**		**Pn**	**11 31 45.3**	**+1.5**
KFPM	**Farley Peak**	**2.51**	**259**		**Pn**	**11 31 45.3**	**+1.4**
MAC	**Mark West Spri**	**2.51**	**231**		**Pn**	**11 31 45.4**	**+1.5**
KIPM	**Iron Peak**	**2.52**	**263**		**Pn**	**11 31 45.7**	**+1.5**
BDM	**Black Diamond**	**2.55**	**210**		**Pn**	**11 31 45.2**	**+0.8**
GWRM	**Wonder Ranch**	**2.55**	**249**		**Pn**	**11 31 45.9**	**+1.4**
GCVM	**Cloverdale**	**2.56**	**238**		**Pn**	**11 31 46.4**	**+1.7**
WVOR	**Wild Horse Val**	**2.57**	**28**		**Pn**	**11 31 46.3**	**+1.4**
WVOR	**Wild Horse Val**	**2.57**	**28**	IAML		11 32 26.7	
	comp=N,330nm,0.6s						
WVOR				IAML		11 32 36.5	
	comp=N,217nm,1.6s						
L04D	**Klamath Falls**	**2.58**	**323**		**Pn**	**11 31 47.4**	**+2.4**
L04D	**Klamath Falls**	**2.58**	**323**	Pn	**Pn**	**11 31 47.3**	**+2.2**
L04D	**Klamath Falls**	**2.58**	**323**	IAML		11 32 30.6	
	comp=E,481nm,1.0s						
L04D	**Klamath Falls**	**2.58**	**323**	P	**Pn**	**11 31 47.2**	**+2.2**
	baz=142,SNR=82						
L04D				Sb	**Sg**	**11 32 25.4**	**-1.2**
	baz=142						
NTYM	**Taylor**	**2.58**	**227**		**Pn**	**11 31 46.5**	**+1.6**
K05A	**Summer Lake**	**2.60**	**349**	Pn	**Pn**	**11 31 47.9**	**+2.5**
K05A				IAML		11 32 42.6	
	comp=N,214nm,1.2s						
KCPM	**Cahto Peak**	**2.62**	**261**		**Pn**	**11 31 46.7**	**+1.2**
NBRB	**Beebe Ranch Br**	**2.62**	**224**		**Pn**	**11 31 48.1**	**+2.7**
MDCM	**Deadman Creek**	**2.62**	**159**		**Pn**	**11 31 48.1**	**+2.3**
SNT	**Sears Point**	**2.62**	**222**		**Pn**	**11 31 46.5**	**+1.0**
CMOB	**Morgan Territo**	**2.65**	**208**		**Pn**	**11 31 47.6**	**+1.7**
KMRM	**Mail Ridge**	**2.66**	**272**		**Pn**	**11 31 47.8**	**+1.7**
KMRM	**Mail Ridge**	**2.66**	**272**	IAML		11 32 38.0	
	comp=N,188nm,0.7s						
KMRM				IAML		11 32 39.4	
	comp=E,221nm,0.8s						
GTC	**Three Chop Rid**	**2.67**	**254**		**Pn**	**11 31 47.1**	**+1.0**
MDYM	**Dry Creek**	**2.68**	**159**		**Pn**	**11 31 48.6**	**+2.0**
MDPB	**Devils Postpil**	**2.69**	**160**		**Pn**	**11 31 48.2**	**+1.6**
MDPB	**Devils Postpil**	**2.69**	**160**	IAML		11 32 31.6	
	comp=N,212nm,0.5s						
MDPB				IAML		11 32 33.7	
	comp=E,192nm,0.7s						
MMLB	**Mammoth Lakes**	**2.69**	**158**		**Pn**	**11 31 49.4**	**+2.7**
MEMM	**East Mammoth H**	**2.69**	**158**		**Pn**	**11 31 49.7**	**+3.0**
MMSM	**Mammoth Summit**	**2.70**	**159**		**Pn**	**11 31 49.4**	**+2.5**
K04D	**Chiloquin, OR**	**2.71**	**336**		**Pb**	**11 31 51.6**	**-0.3**
K04D	**Chiloquin, OR**	**2.71**	**336**	P	**Pn**	**11 31 49.4**	**+2.7**
	baz=155,SNR=78						
K04D				Sb	**Sg**	**11 32 28.9**	**-1.9**
	baz=155						
Q09A	**Carvers**	**2.71**	**118**		**Pn**	**11 31 48.2**	**+1.3**
MCSM	**Casa Diablo Ho**	**2.71**	**157**		**Pb**	**11 31 51.6**	**-0.5**
MLAC	**Mammoth, Mammo**	**2.76**	**156**	P	**Pn**	**11 31 50.1**	**+2.6**
	baz=337						
BENR	**Benton**	**2.77**	**152**		**Pn**	**11 31 49.3**	**+1.5**
ORC	**Owens River**	**2.81**	**153**		**Pn**	**11 31 50.5**	**+2.2**
MCCM	**Marconi Confer**	**2.88**	**226**	Pn	**Pn**	**11 31 50.2**	**+1.2**
MCCM				IAML		11 32 34.2	
	comp=E,162nm,0.8s						
RCCR	**Rock Creek Can**	**2.92**	**156**		**Pn**	**11 31 52.3**	**+2.3**
MLNR	**Milner Canyon**	**2.96**	**149**		**Pn**	**11 31 52.5**	**+2.1**
MCDM	**Chidago Canyon**	**2.97**	**151**		**Pn**	**11 31 52.9**	**+2.6**
KMPM	**Mount Pierce**	**2.98**	**276**	Pn	**Pn**	**11 31 51.9**	**+1.5**
TPH	**Tonopah**	**3.14**	**131**		**Pn**	**11 31 54.3**	**+1.5**
HUMO	**Hull Mountain**	**3.18**	**321**	Pn	**Pn**	**11 31 55.8**	**+2.6**
L02F	**Cave Junction**	**3.19**	**309**	Pb	**Pb**	**11 32 00.7**	**+0.7**
	baz=127						
J05D	**Fort Rock, OR**	**3.20**	**347**	P	**Pn**	**11 31 56.5**	**+2.9**
	baz=166,SNR=297						
J05D				Sb	**Sg**	**11 32 44.7**	**-2.0**
	baz=166						
KSXB	**Camp Six Broad**	**3.22**	**302**	Pn	**Pn**	**11 31 55.9**	**+2.1**
DSP	**Deep Springs**	**3.31**	**147**		**Pn**	**11 31 56.5**	**+1.7**
J04D	**Umpqua Nationa**	**3.38**	**336**		**Pn**	**11 31 56.7**	**+0.7**
J04D				IAML		11 32 24.2	
	comp=N,284nm,0.7s						
J04D	**Umpqua Nationa**	**3.38**	**336**	Pb	**Pb**	**11 32 03.1**	**-0.2**
	baz=155,SNR=20						
J08A	**Circle Bar Ran**	**3.45**	**22**	Pn	**Pn**	**11 31 59.6**	**+2.6**
TIN	**Tinemaha, Big**	**3.48**	**153**	Pb	**Pg**	**11 32 08.2**	**-2.3**
	baz=334						
SAO	**San Andreas Ge**	**3.53**	**196**		**Pn**	**11 31 59.8**	**+1.9**
LCH	**Last Change Ra**	**3.56**	**144**		**Pn**	**11 32 00.0**	**+1.5**
BBGB	**Big Mountain B**	**3.64**	**190**	Pn	**Pn**	**11 32 00.8**	**+1.3**
PINE	**Pine Mountain**	**3.66**	**352**	Pn	**Pn**	**11 32 01.6**	**+1.6**
DBO	**Dodson Butte**	**3.71**	**324**	Pn	**Pn**	**11 32 04.1**	**+3.5**
ELK	**Elko**	**3.86**	**80**	Pn	**Pn**	**11 32 02.8**	**+0.1**
	comp=N,1.3nm,0.3s,baz=267,slow=14,SNR=25						
ELK				Pg	**Pb**	**11 32 12.7**	**+1.1**
	comp=N,14nm,0.3s,baz=272,slow=17,SNR=49						
ELK				Lg	Lg	11 33 03.0	
	comp=N,52nm,0.3s,baz=125,slow=15,SNR=20						
	comp=N,2.9nm,0.3s						
ELK	**Elko**	**3.86**	**80**	Pn	**Pn**	**11 32 02.8**	**+0.1**
ELK				IAML		11 33 06.3	
	comp=N,88nm,0.4s						
GRAC	**Grapevine Rang**	**3.88**	**144**		**Pn**	**11 32 04.4**	**+1.5**
GRAC				IAML		11 33 15.3	
	comp=E,73nm,0.6s						
GRAC				IAML		11 33 15.8	
	comp=N,74nm,0.9s						
GRAC	**Grapevine Rang**	**3.88**	**144**	P	**Pn**	**11 32 05.1**	**+2.2**
	baz=325						
GRAC				Sb	**Sg**	**11 33 06.8**	**-1.6**
	baz=325						
VOG	**Valley Oaks Go**	**3.90**	**170**	Sb	**Sg**	**11 33 06.2**	**-2.7**
	baz=350						
I07A	**Izee**	**3.95**	**8**	Pn	**Pn**	**11 32 07.5**	**+3.6**
PMPB	**Monarch Peak**	**3.97**	**187**		**Pn**	**11 32 05.8**	**+1.8**
R11A	**Troy Canyon, C**	**4.04**	**115**		**Pn**	**11 32 06.4**	**+1.2**
R11A				IAML		11 33 10.2	
	comp=N,85nm,0.5s						
R11A				IAML		11 33 11.5	
	comp=E,77nm,0.8s						
R11A	**Troy Canyon, C**	**4.04**	**115**	P	**Pn**	**11 32 06.7**	**+1.5**
	baz=298						
R11A				Sb	**Sg**	**11 33 09.6**	**-3.9**
	baz=298						
SGV	**South Grapevin**	**4.05**	**141**		**Pn**	**11 32 07.1**	**+1.8**
J01E	**Myrtle Point**	**4.08**	**318**	Pb	**Pb**	**11 32 16.7**	**+1.5**
	baz=136,SNR=5.8						
CWC	**Cottonwood Cre**	**4.09**	**155**	Pb	**Pb**	**11 32 18.6**	**+3.2**
	baz=336						
CWC				Sb	**Sg**	**11 33 14.3**	**-0.8**
	baz=336						
I03D	**Drain, OR**	**4.22**	**328**	P	**Pn**	**11 32 10.7**	**+3.3**
	baz=146,SNR=8.1						
I05D	**Terrebonne, OR**	**4.25**	**349**	Pb	**Pb**	**11 32 19.6**	**+1.5**
	baz=169,SNR=10.0						
S11A	**Rachel**	**4.31**	**124**		**Pn**	**11 32 10.5**	**+1.6**
Q12A	**Willow Creek R**	**4.33**	**103**		**Pn**	**11 32 11.3**	**+2.2**
VES	**Vestal, Richgr**	**4.41**	**168**	Sb	**Sg**	**11 33 21.0**	**-4.4**
	baz=348						
PAGB	**Antelope Grade**	**4.43**	**180**	Pn	**Pn**	**11 32 09.7**	**-0.7**
TPNV	**Topopah Spring**	**4.48**	**135**	Pn	**Pn**	**11 32 12.6**	**+1.4**
TPNV				IAML		11 33 33.0	
	comp=E,80nm,0.8s						
TPNV				IAML		11 33 34.2	
	comp=E,107nm,0.7s						
TPNV	**Topopah Spring**	**4.48**	**135**	P	**Pn**	**11 32 13.1**	**+1.9**
	baz=317						
TPNV				Sb	**Sg**	**11 33 24.9**	**-2.7**
	baz=317						
FURC	**Furnace Creek,**	**4.55**	**143**	Sb	**Sg**	**11 33 26.8**	**-2.9**
	baz=325						
MFID	**Camas Ranch**	**4.63**	**44**	Pn	**Pn**	**11 32 13.7**	**+0.6**
MFID				IAML		11 33 32.3	
	comp=E,65nm,0.9s						
MFID				IAML		11 33 38.6	
	comp=E,72nm,0.8s						
MPMC	**Manual Prospec**	**4.64**	**151**	P	**Pn**	**11 32 15.3**	**+1.9**
	baz=333						
ISA	**Isabella, Lake**	**4.71**	**162**	Pn	**Pn**	**11 32 16.9**	**+2.7**
ISA				IAML		11 33 36.3	
	comp=N,77nm,0.5s						
ISA	**Isabella, Lake**	**4.71**	**162**	P	**Pn**	**11 32 18.1**	**+3.9**
	baz=343						
ISA				Sb	**Sg**	**11 33 31.4**	**-3.4**
	baz=343						
SPR3	**Spring Creek 3**	**4.71**	**102**	Pn	**Pn**	**11 32 16.6**	**+2.1**
H04D	**Lebanon**	**4.73**	**338**		**Pn**	**11 32 16.3**	**+1.8**
H04D				IAML		11 33 50.8	
	comp=N,36nm,1.2s						
H04D	**Lebanon**	**4.73**	**338**	P	**Pn**	**11 32 15.8**	**+1.3**
	baz=156						
H04A	**Detroit Lake**	**4.74**	**343**	Pn	**Pn**	**11 32 16.7**	**+2.1**
I02E	**Swisshome, OR**	**4.77**	**327**	Pb	**Pb**	**11 32 28.2**	**+1.3**
	baz=145						
AMDNV	**Amargosa**	**4.84**	**139**		**Pn**	**11 32 18.6**	**+2.7**
GWY	**Greenwater Val**	**4.87**	**144**	Pn	**Pn**	**11 32 17.5**	**+1.0**
PRN	**Pahroc Range**	**4.90**	**123**		**Pn**	**11 32 19.0**	**+2.1**
QSM	**Queen of Sheba**	**4.97**	**147**		**Pn**	**11 32 19.5**	**+1.8**
LRMC	**Laurel Mtn Rad**	**5.10**	**156**	Pb	**Pb**	**11 32 36.3**	**+3.7**
	baz=337						
ARVC	**Arvin**	**5.15**	**167**	P	**Pn**	**11 32 22.2**	**+1.9**
	baz=348						
ARVC				Sb	**Sg**	**11 33 43.1**	**-6.0**
	baz=348						
BMO	**Blue Mountains**	**5.16**	**24**	Pn	**Pn**	**11 32 23.2**	**+2.8**
CCCA	**Chr Cany lake**	**5.16**	**153**		**Pn**	**11 32 24.7**	**+4.3**
G08A	**Pilot Rock**	**5.21**	**10**	Pn	**Pn**	**11 32 23.1**	**+2.0**
PSUT	**Pine Spring**	**5.21**	**106**		**Pn**	**11 32 21.6**	**+0.4**
HOOD	**Mount Hood Mea**	**5.26**	**349**	Pn	**Pn**	**11 32 21.7**	**-0.1**
BCW	**Bitter Crk WRg**	**5.26**	**173**	Pn	**Pn**	**11 32 24.1**	**+2.2**
SHOC	**Shoshone, Teco**	**5.28**	**142**	Sb	**Sg**	**11 33 48.9**	**-4.4**
	baz=325						
CCAC	**Calif City Air**	**5.31**	**160**	Pn	**Pn**	**11 32 20.8**	**-1.6**
SHPR	**Sheep Range**	**5.41**	**131**		**Pn**	**11 32 25.9**	**+1.9**
G03D	**McMinnville, O**	**5.51**	**337**	P	**Pn**	**11 32 29.2**	**+4.1**
	baz=155						
HLID	**Hailey**	**5.52**	**50**	Pn	**Pn**	**11 32 27.3**	**+1.9**
BGU	**Big Grassy Mou**	**5.54**	**80**		**Pn**	**11 32 24.5**	**-1.3**
GSC	**Goldstone, Bar**	**5.56**	**150**	Pn	**Pn**	**11 32 26.8**	**+0.8**
EDW2	**Edwards Air Fo**	**5.57**	**161**	Pb	**Pb**	**11 32 44.2**	**+3.6**
	baz=342						
DUG	**Dugway, Tooele**	**5.69**	**87**	Pn	**Pn**	**11 32 29.0**	**+1.3**
DUG	**Dugway, Tooele**	**5.69**	**87**	P	**Pn**	**11 32 29.3**	**+1.6**
	baz=272						
F07A	**Phinny Hill Vi**	**5.73**	**2**	Pn	**Pn**	**11 32 30.6**	**+2.4**
PLID	**Pearl Lake**	**5.83**	**31**	Pn	**Pn**	**11 32 28.2**	**-1.5**
HVU	**Hansel Valley**	**5.88**	**72**	Pn	**Pn**	**11 32 30.0**	**-0.3**
CCUT	**Cedar City**	**5.97**	**114**	Pn	**Pn**	**11 32 31.3**	**-0.3**
F04A	**Amboy**	**5.98**	**345**	Pn	**Pn**	**11 32 32.8**	**+1.2**
SZCU	**Shurtz Canyon**	**6.14**	**112**	Pn	**Pn**	**11 32 36.0**	**+2.0**
F10A	**Beach Ranch, E**	**6.21**	**20**	Pn	**Pn**	**11 32 35.7**	**+0.9**
HAWA	**Hanford**	**6.25**	**4**	Pn	**Pn**	**11 32 38.3**	**+3.1**
NLU	**North Lily Min**	**6.27**	**89**		**Pn**	**11 32 37.1**	**+1.3**
LCMT	**Little Creek M**	**6.32**	**118**	Pn	**Pn**	**11 32 37.9**	**+1.5**
MVU	**Marysvale**	**6.44**	**102**		**Pn**	**11 32 40.4**	**+2.2**
MSU	**Marysvale**	**6.46**	**102**	Pn	**Pn**	**11 32 41.2**	**+2.7**
MPU	**Maple Canyon**	**6.60**	**89**	Pn	**Pn**	**11 32 39.5**	**-0.9**
MTPU	**Mount Pierson**	**6.61**	**106**		**Pn**	**11 32 42.4**	**+1.8**
JLU	**Jordanelle**	**6.72**	**83**	Pn	**Pn**	**11 32 40.9**	**-1.2**
PKCU	**Pink Cliffs**	**6.76**	**111**		**Pn**	**11 32 42.9**	**+0.3**
TCUT	**Toone Canyon**	**6.78**	**79**	Pn	**Pn**	**11 32 42.6**	**-0.3**
D08A	**Wollman Farm,**	**6.96**	**7**	Pn	**Pn**	**11 32 44.8**	**-0.2**
TMUT	**Trail Mountain**	**7.01**	**94**	Pn	**Pn**	**11 32 47.6**	**+1.5**
BELC	**Belle Mtn. Jos**	**7.02**	**150**	P	**Pn**	**11 32 48.4**	**+2.3**
	baz=332						
Q16A	**Castle Valley**	**7.12**	**97**	Pn	**Pn**	**11 32 51.0**	**+3.6**
W13A	**Hualapai Mount**	**7.14**	**133**	Pn	**Pn**	**11 32 49.8**	**+2.1**
MCMT	**McKenzie Canyo**	**7.18**	**47**	Pn	**Pn**	**11 32 47.5**	**-0.7**
PFO	**Pinyon Flats O**	**7.21**	**154**	Pn	**Pn**	**11 32 51.0**	**+2.4**
	comp=N,0.3nm,0.3s,baz=339,slow=14,SNR=4.7						
PFO				Lg	Lg	11 34 56.1	
	comp=N,0.5nm,0.3s,baz=220,slow=22,SNR=9.2						
	comp=N,1.7nm,0.6s						
PFO	**Pinyon Flats O**	**7.21**	**154**	Pn	**Pn**	**11 32 48.5**	**-0.1**
TPFO	**Pinon Flats**	**7.21**	**154**	P	**Pn**	**11 32 51.6**	**+2.9**
	baz=336						
U15A	**North Rim**	**7.28**	**118**	Pn	**Pn**	**11 32 52.1**	**+2.4**
SRU	**San Rafael Swe**	**7.57**	**95**	Pn	**Pn**	**11 32 56.5**	**+2.9**
P18A	**Preston Nutter**	**7.70**	**91**	Pn	**Pn**	**11 33 00.1**	**+4.5**
MSO	**Missoula**	**8.08**	**32**	Pn	**Pn**	**11 33 03.8**	**+3.3**
H17A	**Grant Village**	**8.31**	**56**	Pn	**Pn**	**11 33 05.3**	**+1.4**
PDAR	**Pinedale Array**	**8.43**	**69**	Pn	**Pn**	**11 33 09.1**	**+3.6**
	comp=N,0.2nm,0.3s,baz=247,slow=8.7,SNR=3.8						
PDAR				Pg	**Pb**	**11 33 26.8**	**-2.7**
	comp=N,0.2nm,0.3s,baz=231,slow=11,SNR=2.7						
PDAR				Lg	Lg	11 35 30.0	
	comp=N,0.2nm,0.3s,baz=291,slow=17,SNR=1.7						
	comp=N,0.2nm,0.3s						
TXAR	**Lajitas Array**	**17.36**	**123**	P	**P**	**11 35 07.5**	**+0.8**
	baz=314,slow=13,SNR=2.5						
	comp=N,0.2nm,0.8s						

*IDC **02** 11:31:15.4±0.7, 58°.08S×25°.62W, h0km, mb4.2/7, mbtmp4.2/8, ML3.5/1, MS3.1/3, Error ellipse: s-maj=30.0km s-min=21.8km az=60.0*
*NEIC **02** 11:31:21.1±1.6, 58°.04S±0°.09×25°.1W±0°.2, h35km±2km, mb4.5/13, Error ellipse: s-maj=21.1km s-min=8.1km az=131.0*
ISC 02 11:31:22.3±0.5**, 58°.11S**±0°.08×**25°.3W**±0°.1**, h49**km**, n48, σ1s.35**/47**, mb4.3**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.49**	**157**	P	**P**	**11 34 47.8**	**-1.8**
VNA3	**Neumayer Olymp**	**14.70**	**160**	P	**P**	**11 34 50.8**	**-1.2**
VNA2	**Neumayer--Watz**	**14.89**	**157**	P	**P**	**11 34 52.9**	**-1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=316,slow=14						
SNAA	**Sanae**	**16.44**	**155**	P	**P**	**11 35 12.8**	**+1.5**
SNAA	**Sanae**	**16.44**	**155**	Pn	**Pn**	**11 35 10.2**	**+1.0**
	0.2nm,0.3s,baz=331,slow=19,SNR=4.8						
SNAA				Sn	**Sn**	**11 38 05.0**	**-5.3**
	baz=343,slow=19,SNR=1.1						
SNAA				LR	LR	11 40 11.0	
	comp=Z,68nm,20.7s,baz=58,slow=32						
	0.9nm,0.5s						
SNAA	**Sanae**	**16.44**	**155**		**Pn**	**11 35 10.8**	**+1.5**
PMSA	**Palmer Station**	**19.40**	**234**	P	**Pn**	**11 35 45.3**	**0.0**
PMSA				IAmb	IAmb	11 36 21.4	
	comp=Z,24nm,1.2s						
BELA	**Belgrano 2**	**20.10**	**186**	P	**P**	**11 35 52.4**	**+1.0**
QSPA	**South Pole Qui**	**32.13**	**180**	P	**P**	**11 37 43.1**	**-1.6**
	comp=Z,5.1nm,1.1s,baz=331,slow=6.2,SNR=2.5						
	comp=Z,5.1nm,1.1s						
QSPA	**South Pole Qui**	**32.13**	**180**	P	**P**	**11 37 44.7**	**0.0**
QSPA				IAmb	IAmb	11 37 49.0	
	comp=Z,10nm,1.2s						
PLCA	**Paso Flores**	**33.38**	**281**	P	**P**	**11 37 54.7**	**-1.1**
	comp=Z,3.9nm,1.2s,baz=140,slow=6.5,SNR=5.9						
PLCA				LR	LR	11 50 24.4	
	comp=Z,34nm,19.9s,baz=162,slow=35						
	comp=Z,3.9nm,1.2s						
PLCA	**Paso Flores**	**33.38**	**281**	P	**P**	**11 37 55.1**	**-0.7**
PLCA				IAmb	IAmb	11 38 27.7	
	comp=Z,5.6nm,1.4s						
MAW	**Mawson**	**37.89**	**141**	P	**P**	**11 38 34.9**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=225,slow=5.7,SNR=1.9						
	comp=Z,1.1nm,0.6s						
MAW	**Mawson**	**37.89**	**141**	P	**P**	**11 38 33.1**	**-0.8**
MT02	**Curacav**	**39.41**	**289**	P	**P**	**11 38 47.6**	**+0.5**
VNDA	**Vanda**	**44.55**	**182**	P	**P**	**11 39 32.2**	**+3.7**
	comp=Z,2.4nm,0.8s,baz=173,slow=2.5,SNR=5.9						
H10S2	**ASCENSION HYDR**	**49.73**	**14**	T	T	12 33 52.7	
	baz=188,slow=74,SNR=8.8						
H10S3	**ASCENSION HYDR**	**49.73**	**14**	T	T	12 33 51.5	
	baz=32,slow=74,SNR=21						
H10N1	**ASCENSION HYDR**	**50.84**	**14**	T	T	12 35 17.0	
	baz=189,slow=72						
H10N3	**ASCENSION HYDR**	**50.85**	**14**	T	T	12 35 18.2	
	baz=189,slow=72						
H10N2	**ASCENSION HYDR**	**50.86**	**14**	T	T	12 35 19.3	
	baz=191,slow=72						
LPAZ	**La Paz**	**52.39**	**305**	P	**P**	**11 40 28.7**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=176,slow=7.0,SNR=6.0						
	comp=Z,1.1nm,0.4s						
SAML	**Samuel**	**56.97**	**314**	P	**P**	**11 41 01.1**	**-1.6**
SAML				IAmb	IAmb	11 41 02.3	
	comp=Z,3.0nm,0.5s						
BOAV	**Boa Vista**	**66.53**	**321**	P	**P**	**11 42 05.5**	**-1.4**
BOAV				IAmb	IAmb	11 42 06.2	
	comp=Z,6.0nm,1.1s						
DBIC	**Dimbokro**	**66.66**	**22**	P	**P**	**11 42 07.8**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=179,slow=9.4,SNR=1.9						
	comp=Z,1.7nm,0.3s						
DBIC	**Dimbokro**	**66.66**	**22**	P	**P**	**11 42 06.6**	**-1.0**
MDP	**Montagnes des**	**66.74**	**330**	LR	LR	12 08 15.2	
	comp=Z,16nm,19.9s,baz=104,slow=33						
TOA0	**Torodi Ar. Sit**	**74.39**	**27**	P	**P**	**11 42 55.9**	**+1.2**
TOA0				IAmb	IAmb	11 43 12.9	
	comp=Z,5.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**74.39**	**27**	P	**P**	**11 42 55.5**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=191,slow=6.2,SNR=10.0						
	comp=Z,2.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**74.39**	**27**	P	**P**	**11 42 54.0**	**-0.7**
TORD				IAmb	IAmb	11 43 12.8	
	comp=Z,3.1nm,0.8s						
ASAR	**Alice Springs**	**96.70**	**161**	P	**P**	**11 44 48.4**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=179,slow=3.7,SNR=5.8						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**122.28**	**300**	PKP	**PKPdf**	**11 50 10.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=128,slow=8.1,SNR=4.6						
NVAR	**Mina Array Bea**	**123.11**	**291**	PKP	**PKiKP**	**11 50 13.0**	**0.0**
	comp=Z,0.1nm,0.5s,baz=116,slow=6.1,SNR=4.5						
FINES	**FINESS Array B**	**125.74**	**28**	PKP	**PKPdf**	**11 50 15.8**	**-1.0**
	comp=Z,2.6nm,0.9s,baz=286,slow=1.0,SNR=5.4						
ARCES	**ARCESS Array B**	**132.49**	**22**	PKP	**PKPdf**	**11 50 29.3**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=235,slow=3.2,SNR=1.6						
YKA	**Yellowknife Ar**	**138.38**	**316**	PKP	**PKPdf**	**11 50 40.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=110,slow=3.7,SNR=16						
VRDI	**Verde Repeater**	**149.63**	**302**	PKPbc	**PKPbc**	**11 51 05.4**	**+0.4**
HMT	**Hamilton**	**149.65**	**301**	PKPbc	**PKiKP**	**11 51 05.7**	**-0.2**
SONM	**Songino Array**	**149.80**	**89**	PKPbc	**PKPbc**	**11 51 06.5**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=202,slow=1.8,SNR=6.4						
K27K	**Chicken**	**150.01**	**308**		**PKiKP**	**11 51 06.5**	**0.0**
KLU	**Klutina**	**150.83**	**302**	PKPdf	**PKPdf**	**11 51 02.7**	**+0.5**
KLU					**PKiKP**	**11 51 08.8**	**+0.3**
KLU				PKPab	**pPKPdf**	**11 51 17.1**	**+1.0**
PAX	**Paxson**	**151.12**	**305**		**PKiKP**	**11 51 09.4**	**+0.5**
FYU	**Fort Yukon**	**151.96**	**312**		**PKiKP**	**11 51 11.5**	**+1.0**
IL31		**152.22**	**308**		**PKiKP**	**11 51 11.2**	**+0.2**
IL31				PKPab	**PKPab**	**11 51 21.0**	**+0.2**
ILAR	**Eielson Array**	**152.22**	**308**	PKPbc	**PKPbc**	**11 51 10.9**	**+0.1**
	comp=Z,6.8nm,0.8s,baz=140,slow=1.9,SNR=42						
CCB	**Clear Creek Bu**	**152.58**	**308**		**PKPbc**	**11 51 11.7**	**+0.1**
RND	**Reindeer**	**152.72**	**305**		**PKiKP**	**11 51 12.9**	**+0.7**
BPAW	**Bear Paw Mtn.**	**153.81**	**306**	PKPdf	**PKPdf**	**11 51 07.9**	**+1.5**
BPAW					**PKiKP**	**11 51 14.4**	**0.0**

DDA 02 11:57:19.4±0.0**, 39.°68N**×**30.°63E, h7**km±1km**, ML1.4, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGAZ	**Eskisehir, Sey**	**0.22**	**132**	P	Pg	11 57 24.4	+0.5
SGAZ				S	Sg	11 57 28.1	+1.2
SGAZ				*i* AML	AML	11 57 29.0	
	comp=E,90nm,0.3s						
SGAZ				*i* AML	AML	11 57 29.0	
	comp=N,64nm,0.2s						
BORA	**Eskisehir**	**0.24**	**326**	P	Pg	11 57 24.4	+0.3
BORA				S	Sg	11 57 28.0	+0.6
BORA				*i* AML	AML	11 57 29.0	
	comp=N,94nm,0.2s						
BORA				*i* AML	AML	11 57 29.0	
	comp=E,111nm,0.2s						
AUKIR	**Kırka- Seyitga**	**0.41**	**190**	P	Pg	11 57 27.6	+0.2

SNET ***02*** *11:58:47.7±1.3, 14.°12N×89.°68W, h6km±7km, ML2.9*
GCG ***02*** *11:58:50.1±0.5, 14.°19N×89.°76W, h24km±58km, MD3.0*
ISC 02 11:58:46.6±1.5**, 14.°11N**±0.°04×**89.°67W**±0.°04**, h11**km±12km**, n20,** σ**1.s30**/25**, 4C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTR	**El Retiro**	**0.21**	**174**	⇑*i*P	**Pb**	**11 58 53.0**	**+0.5**
NUBE	**Las Nubes**	**0.23**	**208**	⇑*i*P	**Pb**	**11 58 52.6**	**-0.3**
NUBE				*e*S	**Sg**	**11 58 56.2**	**+1.2**
SNJE	**San Jose**	**0.25**	**166**	⇓*i*P	**Pb**	**11 58 53.5**	**+0.3**
CEVE	**Cerro Verde**	**0.28**	**171**	*e*P	**Pb**	**11 58 54.2**	**+0.3**
CEDA	**San Andres**	**0.40**	**139**	⇓*i*P	**Pb**	**11 58 56.2**	**+0.5**
CEDA				IAML		11 58 56.6	
	comp=Z,2μm,0.2s						
MTO3	**Montecristo**	**0.41**	**46**	⇑*i*P	**Pb**	**11 58 56.6**	**+0.5**
MTO3				*e*S	**Sb**	**11 59 03.0**	**+0.5**
JAYA	**Jayaque - finc**	**0.50**	**155**	*i* P	**Pb**	**11 58 58.1**	**+0.6**
JAYA				IAML		11 59 06.8	
	comp=Z,728nm,0.2s						
BOQS	**Boqueron**	**0.53**	**135**	*e*P	**Pb**	**11 58 58.8**	**+0.8**
BOQS				*e*S	**Sb**	**11 59 07.2**	**+1.4**
ESQI	**Esquipulas**	**0.55**	**35**	⇑*i*P	**Pn**	**11 58 59.0**	**-1.4**
LALI	**Alcalda de L**	**0.70**	**151**	*i* P	Pg	11 58 54.4	-5.8
LALI				*e*S	**Sg**	**11 59 05.1**	**-4.4**
LFRS	**El Faro**	**0.76**	**129**	*e*P	**Pb**	**11 59 03.0**	**+1.0**
SJTE	**Alcalda de S**	**0.81**	**127**	*e*P	**Pb**	**11 59 03.6**	**+0.9**
NBG	**Las Nubes**	**0.81**	**306**	*e*P	**Pn**	**11 59 04.2**	**0.0**
NBG				*e*S	**Sn**	**11 59 15.0**	**-1.3**
PAVA	**Las Pavas**	**0.81**	**119**	*e*P	**Pb**	**11 59 03.7**	**+0.9**
P5NO	**Presa 5 de nov**	**0.89**	**98**	*e*P	**Pb**	**11 59 05.0**	**+0.9**
COEG	**Centro de Oper**	**0.91**	**122**	*e*P	**Pb**	**11 59 05.2**	**+0.9**
COEG				IAML		11 59 20.9	
	comp=Z,310nm,0.2s						
PCG	**Pacaya**	**0.95**	**287**	*e*S	**Sn**	**11 59 18.9**	**-0.9**
MRL	**Marmol**	**0.97**	**359**	*e*P	**Pn**	**11 59 07.0**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.00**	**114**	*e*P	**Pn**	**11 59 07.1**	**+0.6**
FUG	**Fuego 3**	**1.19**	**287**	*e*P	**Pn**	**11 59 10.0**	**+0.8**
FUG				*e*S	**Sn**	**11 59 25.4**	**-0.1**

BUC 02 11:58:54.6±0.7**, 46.°37N**×**23.°09E, h13**km±8km**, ml1.5**/5**, 10C-8D, Error ellipse: s-maj=6.0km s-min=4.0km**

az=164.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CJR	**Cluj-Napoca**	**0.50**	**45**	⇓S	Sb	11 59 11.8	-0.6
CJR	**Cluj-Napoca**	**0.50**	**45**	⇓S	Sb	11 59 11.8	-0.6
SIRR	**Siria**	**0.99**	**265**	⇓P	Pn	11 59 14.2	-0.1
SIRR				⇑S	Sg	11 59 26.3	-0.4
SIRR	**Siria**	**0.99**	**265**	⇓P	Pn	11 59 14.2	-0.1
SIRR				⇑S	Sg	11 59 26.3	-0.4
GZR	**Gura Zlata**	**1.00**	**193**	⇓P	Pb	11 59 13.2	-0.6
GZR				⇑S	Sn	11 59 27.7	-0.6
GZR	**Gura Zlata**	**1.00**	**193**	⇓P	Pb	11 59 13.2	-0.6
GZR				⇑S	Sn	11 59 27.7	-0.6
BZS	**Buzias**	**1.27**	**234**	⇑P	Pn	11 59 17.5	-0.5
BZS				⇑S	Sg	11 59 35.8	+0.3
BZS	**Buzias**	**1.27**	**234**	⇑P	Pn	11 59 17.5	-0.5
BZS				⇑S	Sg	11 59 35.8	+0.3
VOIR		**1.66**	**123**	⇑P	Pn	11 59 22.3	-1.1
VOIR		**1.66**	**123**	⇑P	Pn	11 59 22.3	-1.1
MDVR	**Moldovita**	**1.85**	**212**	⇓P	Pb	11 59 27.4	-1.0
MDVR	**Moldovita**	**1.85**	**212**	⇓P	Pb	11 59 27.4	-1.0

JMA ***02*** *12:01:23.3±0.3, 35°N±2°×13°7E±°, h332km±2km, MV3.2/32, MIKAWA BAY REGION*
IDC ***02*** *12:01:25.1±0.6, 34.°77N×137.°52E, h336km±13km, mb3.1/5, mbtmp3.8/8, Error ellipse: s-maj=39.1km s-min=10.8km az=62.0*
ISC 02 12:01:24.7±0.8**, 34.°67N**±0.°08×**137.°34E**±0.°07**, h323**km±8km**, n26,** σ**1.s27**/30**, mb3.2**/5**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.17**	**258**	P	**Pn**	**12 02 05.5**	**+0.1**
JAA				*e*S	**S**	**12 02 37.1**	**-0.6**
JIE	**Ise**	**0.59**	**243**	P	**Pn**	**12 02 06.0**	**-0.1**
JYTA	**Yamagatataniai**	**1.05**	**332**	*i* P	**Pn**	**12 02 07.5**	**-0.2**
JYN	**Shimob**	**1.29**	**50**	*e*P	**Pn**	**12 02 08.9**	**0.0**
JWY	**Kouya**	**1.51**	**253**	*i* P	**Pn**	**12 02 09.9**	**-0.4**
JOD2	**Odawara 2**	**1.55**	**67**	P	**Pn**	**12 02 10.8**	**+0.4**
JTNC	**Tanabenakahech**	**1.66**	**240**	P	**Pn**	**12 02 10.8**	**-0.4**
JWT	**Wachi**	**1.71**	**292**	*i* P	**Pn**	**12 02 10.9**	**-0.4**
JKG	**Kaga**	**1.81**	**333**	*e*P	**Pn**	**12 02 11.4**	**-0.6**
JRY	**Ryogami san**	**1.86**	**43**	*i* P	**Pn**	**12 02 12.8**	**+0.4**
MJAR	**Matsushiro Arr**	**2.00**	**20**	P	**Pn**	**12 02 13.4**	**0.0**
	18nm,0.4s,baz=196,slow=8.0,SNR=60						
MJAR				S	**S**	**12 02 53.0**	**+0.6**
	1.0nm,0.5s,baz=252,slow=29,SNR=0.7						
MAT	**Matsushiro**	**2.00**	**20**	*i* P	**Pn**	**12 02 13.3**	**-0.2**
JAG	**Ashikaga**	**2.46**	**44**	*i* P	**Pn**	**12 02 16.0**	**-1.1**
JAI	**Aioi**	**2.55**	**251**	P	**Pn**	**12 02 17.0**	**-1.0**
JHJ	**Hachijo jima 2**	**2.55**	**127**	P	**Pn**	**12 02 17.9**	**-0.1**
	61nm,0.7s,baz=307,slow=23,SNR=7.5						
JHJ				S	**S**	**12 03 04.3**	**+3.7**
	55nm,0.6s,baz=119,slow=22,SNR=6.9						
JSZ	**Suzu**	**2.78**	**0**	P	**Pn**	**12 02 19.4**	**-0.4**
BSO1	**Boso 1**	**3.00**	**89**	P	**Pn**	**12 02 20.8**	**-0.6**
BSO1				*e*S	**S**	**12 03 06.1**	**-0.8**
JHS	**Saijyo**	**3.49**	**277**	P	**Pn**	**12 02 26.6**	**-0.3**
KSRS	**Korea Array**	**8.12**	**293**	P	**Pn**	**12 03 19.9**	**+0.2**
	2.0nm,0.4s,baz=107,slow=13,SNR=13						
JCJ	**Chichijima**	**8.62**	**150**	P	**Pn**	**12 03 22.1**	**-3.9**
	11nm,0.2s,baz=312,slow=22,SNR=6.4						
JCJ				S	S	12 04 52.8	-12
	17nm,0.3s,baz=265,slow=21,SNR=2.9						
KLR	**Kul'dur**	**15.13**	**346**	P	**Pn**	**12 04 42.1**	**-1.5**
	0.7nm,0.4s,baz=213,slow=7.3,SNR=2.8						
SONM	**Songino Array**	**26.53**	**309**	P	**P**	**12 06 34.7**	**+1.1**
	1.2nm,0.7s,baz=114,slow=8.8,SNR=4.8						
	1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.69**	**255**	P	**P**	**12 08 11.9**	**+1.7**
	0.3nm,0.3s,baz=52,slow=10,SNR=2.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**42.62**	**304**	P	**P**	**12 08 50.1**	**+0.1**
	0.5nm,0.6s,baz=91,slow=9.9,SNR=5.4						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**54.38**	**183**	P	**P**	**12 10 18.2**	**-0.9**
	1.0nm,0.3s,baz=359,slow=7.6,SNR=53						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**58.10**	**184**	P	**P**	**12 10 44.7**	**-0.5**
	0.3nm,0.3s,baz=356,slow=5.2,SNR=26						
	0.3nm,0.3s						

IDC ***02*** *12:18:37.9±1.7, 5.°32S×141.°82E, h0km, mb3.8/4, mbtmp3.8/5, ML3.5/1, MS2.7/1, Error ellipse: s-maj=63.9km s-min=28.4km az=110.0*
ISC 02 12:18:39.3±1.5**, 5.°7S**±0.°1×**141.°5E**±0.°3**, h10**km**, n7,** σ**3.s65**/9**, mb4.0**/3**, New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.77**	**124**	LR	LR	12 22 48.4	
	comp=Z,70nm,22.0s,baz=12,slow=38						
WRA	**Warramunga Arr**	**15.77**	**205**	Pn	**Pn**	**12 22 23.6**	**+1.9**
	0.2nm,0.3s,baz=22,slow=13,SNR=7.2						
WRA				Sn	**Sn**	**12 25 14.6**	**-2.2**
	0.2nm,0.3s,baz=31,slow=24,SNR=2.6						
ASAR	**Alice Springs**	**19.30**	**201**	P	**Pn**	**12 23 09.6**	**+3.8**
	0.1nm,0.3s,baz=24,slow=9.2,SNR=16						
ASAR				S	**Sn**	**12 26 39.0**	**-3.3**
	0.6nm,0.5s,baz=24,slow=26,SNR=3.5						
	0.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.76**	**230**	P	**Pn**	**12 23 15.6**	**+4.4**
	2.9nm,1.0s,baz=63,slow=11,SNR=2.4						
FITZ				S	**S**	**12 26 48.0**	**-4.6**
	1.7nm,0.7s,baz=156,slow=12,SNR=1.8						
	2.9nm,1.0s						
MKAR	**Makanchi Array**	**73.79**	**322**	P	**P**	**12 30 14.3**	**+0.3**
	1.2nm,0.8s,baz=108,slow=7.8,SNR=6.8						
	1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**77.71**	**325**	P	**P**	**12 30 36.3**	**0.0**
	0.4nm,0.5s,baz=110,slow=4.2,SNR=5.7						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**87.40**	**24**	P	**P**	**12 31 24.1**	**-2.4**
	1.0nm,0.6s,baz=256,slow=4.6,SNR=11						
	1.0nm,0.6s						

IDC ***02*** *12:27:14.3±1.2, 16.°50S×177.°66E, h0km, mb3.6/5, mbtmp3.6/5, MS3.3/10, Error ellipse: s-maj=27.2km s-min=21.6km az=71.0*
NOU ***02*** *12:27:17.2, 16.°38S×177.°90E, h44km, MLv3.2/4, Fiji Islands*
ISC 02 12:27:17.0±0.9**, 16.°47S**±0.°08×**177.°94E**±0.°07**, h21**km**, n20,** σ**1.s71**/11**, mb3.5**/5**, MS3.5**/9**, Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YSA	**Yasawairara**	**0.42**	**236**	P	**Pn**	**12 27 28.9**	**+1.1**
MSVF	**Nonsavu**	**1.27**	**175**	Pn	**Pb**	**12 27 39.7**	**-0.5**
	68nm,0.3s,baz=236,slow=5.5,SNR=143						
MSVF				LR	LR	12 27 56.3	
	comp=Z,217nm,19.6s,baz=220,slow=32						
MSVF				Sn	**Sb**	**12 27 57.4**	**+1.3**
	163nm,0.3s,baz=253,slow=19,SNR=9.4						
MSVF	**Nonsavu**	**1.27**	**175**	P	**Pb**	**12 27 39.9**	**-0.3**
TAVE	**Taveuni**	**2.08**	**97**	P	**Pn**	**12 27 50.3**	**-0.4**
LKBA	**Tubou, Lakemba**	**3.56**	**120**	P	**Pn**	**12 28 11.1**	**0.0**
AFI	**Afiamalu**	**10.25**	**77**	LR	LR	12 32 55.6	
	comp=Z,40nm,18.9s,baz=248,slow=32						
RAR	**Rarotonga**	**21.61**	**106**	LR	LR	12 39 13.1	
	comp=Z,33nm,18.6s,baz=282,slow=33						
URZ	**Urewera**	**21.72**	**182**	LR	LR	12 38 43.0	
	comp=Z,86nm,20.1s,baz=31,slow=32						
PPT	**Papeete**	**31.06**	**97**	LR	LR	12 44 09.7	
	comp=Z,35nm,18.1s,baz=298,slow=32						
STKA	**Stephens Creek**	**36.34**	**238**	P	**P**	**12 34 19.4**	**-0.3**
	3.7nm,0.8s,baz=77,slow=7.9,SNR=5.4						
	3.7nm,0.8s						
WRA	**Warramunga Arr**	**41.48**	**258**	P	**P**	**12 34 59.9**	**-3.0**
	0.6nm,1.0s,baz=90,slow=9.0,SNR=2.7						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**41.85**	**253**	P	**P**	**12 35 03.7**	**-2.2**
	0.8nm,0.8s,baz=83,slow=7.9,SNR=15						
	0.8nm,0.8s						
GUMO	**Guam**	**44.27**	**311**	LR	LR	12 51 27.6	
	comp=Z,23nm,18.1s,baz=248,slow=33						
RPN	**Rapa Nui**	**67.56**	**113**	LR	LR	13 00 24.1	
	comp=Z,35nm,21.1s,baz=258,slow=29						
YBH	**Yreka Blue Hor**	**79.67**	**41**	LR	LR	13 09 58.6	
	comp=Z,19nm,19.1s,baz=258,slow=32						
NVAR	**Mina Array Bea**	**80.86**	**46**	P	**P**	**12 39 32.1**	**+2.3**
	0.2nm,0.6s,baz=211,slow=6.8,SNR=2.0						
	0.2nm,0.6s						
ELK	**Elko**	**84.04**	**45**	LR	LR	13 15 05.5	
	comp=Z,28nm,19.2s,baz=267,slow=34						
ILAR	**Eielson Array**	**85.32**	**14**	P	**P**	**12 39 53.0**	**+1.0**
	0.3nm,0.9s,baz=218,slow=4.2,SNR=2.4						
	0.3nm,0.9s						
NEW	**Newport**	**86.44**	**37**	LR	LR	13 11 14.7	
	comp=Z,25nm,20.0s,baz=105,slow=30						
PDAR	**Pinedale Array**	**88.75**	**45**	LR	LR	13 16 40.9	
	comp=Z,24nm,18.6s,baz=285,slow=33						

IDC ***02*** *12:40:21.9±0.4, 23.°93S×82.°56E, h0km, mb4.6/31, mbtmp4.6/31, MS3.8/19, Error ellipse: s-maj=13.4km s-min=11.3km az=166.0*
BJI ***02*** *12:40:22.0±0.0, 23.°90S×82.°60E, h10km, mb4.7/38, mB5.0/22, Ms4.6/10, Ms7 4.2/14*
NEIC ***02*** *12:40:24.9±1.9, 23.°9S±0.°1×82.°6E±0.°1, h10km±1km, mb5.0/61, Error ellipse: s-maj=17.4km s-min=16.4km az=149.0*
ISC 02 12:40:23.5±0.3**, 23.°95S**±0.°07×**82.°59E**±0.°07**, h10**km**, n392,** σ**0.s80**/426**, mb4.9**/61**, MS3.8**/20**, 11C, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.89**	**328**	T	T	13 03 58.1	
	baz=150,slow=74						
H08S1	**Diego Carcia H**	**18.90**	**327**	T	T	13 03 56.1	
	baz=150,slow=74						
H08S3	**Diego Garcia H**	**18.91**	**328**	T	T	13 04 02.7	
	baz=150,slow=74						
XMIS	**Christmas Isla**	**25.73**	**63**	P	**P**	**12 45 54.0**	**-0.4**
H01W3	**Cape Leeuwin H**	**29.44**	**119**	T	T	13 17 20.4	
	baz=284,slow=75						
H01W2	**Cape Leeuwin H**	**29.44**	**119**	T	T	13 17 19.3	
	baz=284,slow=75						
H01W1	**Cape Leeuwin H**	**29.46**	**119**	T	T	13 17 22.3	
	baz=284,slow=75						
MORW	**Morawa**	**30.30**	**107**	P	**P**	**12 46 34.8**	**-0.4**
MORW				IAmb	IAmb	12 46 38.6	
	comp=Z,66nm,1.7s						
PSI	**Prapat**	**30.98**	**33**	LR	LR	12 56 23.6	
	comp=Z,310nm,21.8s,baz=235,slow=31						
PALK	**Pallekele**	**31.09**	**356**	LR	LR	12 57 05.7	
	comp=Z,185nm,19.3s,baz=265,slow=32						
MBWA	**Marble Bar**	**34.35**	**93**	P	**P**	**12 47 09.4**	**-1.3**
MBWA				IAmb	IAmb	12 47 25.7	
	comp=Z,33nm,1.4s						
PSA00	**Pilbara Seismi**	**34.37**	**94**	P	**P**	**12 47 10.9**	**-0.1**
PSA00				IAmb	IAmb	12 47 15.3	
	comp=Z,59nm,1.7s						
FITZ	**Fitzroy Crossi**	**40.49**	**90**	P	**P**	**12 48 02.7**	**-0.1**
	comp=Z,10.0nm,1.0s,baz=235,slow=8.7,SNR=7.4						
	comp=Z,10.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**40.49**	**90**	P	**P**	**12 48 04.1**	**+1.3**
FITZ				IAmb	IAmb	12 48 05.1	
	comp=Z,57nm,1.7s						
FORT	**Forrest**	**40.73**	**110**	P	**P**	**12 48 05.6**	**+0.9**
FORT				IAmb	IAmb	12 48 07.5	
	comp=Z,74nm,1.4s						
HYBB	**Hyderabad (bro**	**41.31**	**354**	*e*P	**P**	**12 48 10.0**	**+0.5**
HYBB				*e*sP	**sP**	**12 48 14.1**	**+2.2**
HYBB				*e*S	**S**	**12 54 24.6**	**+0.7**
KNRA	**Kununurra**	**44.05**	**88**	P	**P**	**12 48 31.6**	**-0.3**
TOLI2	**Tolitoli**	**44.67**	**62**	P	**P**	**12 48 35.1**	**-1.8**
CMAR	**Chiang Mai Arr**	**45.07**	**22**	P	**P**	**12 48 40.7**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=211,slow=8.0,SNR=6.0						
CMAR				LR	LR	13 05 23.4	
	comp=Z,56nm,20.3s,baz=200,slow=33						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**45.07**	**22**	P	**P**	**12 48 39.2**	**-0.7**
MAW	**Mawson**	**45.34**	**190**	P	**P**	**12 48 42.3**	**+0.9**
	comp=Z,3.9nm,1.0s,baz=32,slow=8.4,SNR=5.4						
MAW				LR	LR	13 03 13.0	
	comp=Z,141nm,21.0s,baz=4.0,slow=30						
	comp=Z,3.9nm,1.0s						
MAW	**Mawson**	**45.34**	**190**	P	**P**	**12 48 43.0**	**+1.6**
CHTO	**Chiang Mai**	**45.40**	**22**	P	**P**	**12 48 43.0**	**+0.5**
CHTO				IAmb	IAmb	12 48 51.8	
	comp=Z,25nm,1.8s						
ASAR	**Alice Springs**	**46.73**	**101**	P	**P**	**12 48 53.9**	**+0.7**
	comp=Z,16nm,0.7s,baz=266,slow=7.1,SNR=210						
ASAR				PcP	**PcP**	**12 50 25.7**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=274,slow=2.4,SNR=5.0						
ASAR				LR	LR	13 07 03.9	
	comp=Z,124nm,18.3s,baz=301,slow=34						
	comp=Z,16nm,0.7s						
ASAR	**Alice Springs**	**46.73**	**101**	P	**P**	**12 48 53.7**	**+0.6**
AS31	**Alice Springs**	**46.73**	**101**	P	**P**	**12 48 53.3**	**+0.1**
WRA	**Warramunga Arr**	**47.95**	**96**	P	**P**	**12 49 03.5**	**+0.9**
	comp=Z,17nm,0.8s,baz=262,slow=7.9,SNR=106						
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**47.95**	**96**	P	**P**	**12 49 03.6**	**+0.9**
WB2	**Warramunga Arr**	**47.96**	**96**	P	**P**	**12 49 03.3**	**+0.5**
WRAB	**Tennant Creek**	**47.96**	**96**	P	**P**	**12 49 03.6**	**+0.8**
WB0	**Warramunga Arr**	**48.05**	**96**	P	**P**	**12 49 04.2**	**+0.8**
WB0				IAmb	IAmb	12 49 05.2	
	comp=Z,20nm,0.8s						
KIBK	**Kibwezi**	**48.10**	**290**	P	**P**	**12 49 03.6**	**-0.3**
WR0	**Warramunga Arr**	**48.13**	**96**	P	**P**	**12 49 05.0**	**+1.0**
KMBO	**Kilima Mbogo**	**49.40**	**290**	P	**P**	**12 49 14.7**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=128,slow=2.8,SNR=7.2						
	comp=Z,2.7nm,0.7s						
KMBO	**Kilima Mbogo**	**49.40**	**290**	P	**P**	**12 49 13.1**	**-1.0**
MATP	**Matopo**	**49.96**	**263**	P	**P**	**12 49 18.1**	**-0.2**
	comp=Z,10nm,1.1s,baz=91,slow=7.4,SNR=7.4						
	comp=Z,10nm,1.1s						
BOSA	**Boshof**	**51.21**	**252**	P	**P**	**12 49 26.7**	**-0.9**
	comp=Z,9.3nm,0.6s,baz=105,slow=6.3,SNR=28						
BOSA				LR	LR	13 08 31.6	
	comp=Z,28nm,18.0s,baz=22,slow=33						
	comp=Z,9.3nm,0.6s						
BOSA	**Boshof**	**51.21**	**252**	P	**P**	**12 49 27.1**	**-0.5**
BOSA				IAmb	IAmb	12 49 28.0	
	comp=Z,13nm,0.8s						
LBTB	**Lobatse**	**51.54**	**256**	P	**P**	**12 49 29.0**	**-1.1**
	comp=Z,8.1nm,1.1s,baz=138,slow=4.2,SNR=6.0						
	comp=Z,8.1nm,1.1s						
LBTB	**Lobatse**	**51.54**	**256**	P	**P**	**12 49 30.0**	**-0.1**
LBTB				IAmb	IAmb	12 49 31.6	
	comp=Z,17nm,1.2s						
LSZ	**Lusaka**	**51.71**	**269**	P	**P**	**12 49 31.0**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=106,slow=5.8,SNR=5.4						
	comp=Z,4.9nm,0.8s						
STKA	**Stephens Creek**	**52.19**	**113**	P	**P**	**12 49 34.5**	**-0.3**
	comp=Z,5.4nm,0.8s,baz=283,slow=6.9,SNR=11						
	comp=Z,5.4nm,0.8s						
STKA	**Stephens Creek**	**52.19**	**113**	P	**P**	**12 49 35.1**	**+0.4**
FAKI	**Fak Fak**	**52.27**	**74**	P	**P**	**12 49 34.0**	**-1.5**
FAKI				IAmb	IAmb	12 49 38.9	
	comp=Z,19nm,0.8s						
WSAR	**Wadi Sarin**	**52.37**	**332**	LR	LR	13 08 34.7	
	comp=Z,100nm,19.8s,baz=180,slow=32						
LODK	**Lodwar**	**53.40**	**294**	P	**P**	**12 49 43.2**	**-0.7**
PZH	**PanZhiHua**	**53.47**	**21**	P	**P**	**12 49 47.9**	**+3.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,3.9s						
SUR	**Sutherland**	**54.46**	**246**	P	**P**	**12 49 51.4**	**-0.3**
	comp=Z,9.1nm,0.8s,baz=91,slow=13,SNR=6.2						
SUR				LR	LR	13 08 53.3	
	comp=Z,55nm,18.3s,baz=140,slow=31						
	comp=Z,9.1nm,0.8s						
MBAR	**Mbarara**	**55.30**	**287**	P	**P**	**12 49 58.3**	**+0.4**
	comp=Z,1.7nm,0.2s,baz=85,slow=7.7,SNR=3.7						
	comp=Z,1.7nm,0.2s						
NIL	**Nilore**	**57.97**	**351**	P	**P**	**12 50 15.7**	**-0.6**
NIL				IAmb	IAmb	12 50 17.2	
	comp=Z,12nm,1.1s						
CD2	**Chengdu**	**58.20**	**21**	*e*P	**P**	**12 50 20.0**	**+2.0**
CTAO	**Charters Tower**	**58.71**	**100**	P	**P**	**12 50 21.8**	**0.0**
CTAO				IAmb	IAmb	12 50 23.7	
	comp=Z,14nm,1.4s						
RAYN	**Ar Rayn**	**59.36**	**320**	P	**P**	**12 50 26.4**	**+0.2**
KBL	**Kabul**	**59.58**	**347**	P	**P**	**12 50 27.8**	**+0.1**
KBL				IAmb	IAmb	12 50 29.0	
	comp=Z,30nm,1.6s						
TSUM	**Tsumeb**	**60.18**	**261**	P	**P**	**12 50 31.9**	**-0.3**
	comp=Z,5.7nm,1.0s,baz=109,slow=5.3,SNR=4.8						
	comp=Z,5.7nm,1.0s						
TSUM	**Tsumeb**	**60.18**	**261**	P	**P**	**12 50 32.9**	**+0.7**
TSUM				IAmb	IAmb	12 50 33.5	
	comp=Z,14nm,1.2s						
HRA	**Herat**	**61.16**	**341**	P	**P**	**12 50 38.9**	**+0.4**
EIDS	**Eidsvold**	**61.61**	**107**	P	**P**	**12 50 42.2**	**+0.6**

LZH Lanzhou 63.01 19 eP P 12 50 51.6 +0.8
LZH sP pwP 12 51 02.0 +3.5
LZH pmax pmax
comp=Z,24nm,1.0s
KSH Kashi 63.44 354 P P 12 50 52.1 -1.5
KSH pmax pmax
comp=Z,5.0nm,1.0s
CHGR Chuyangaron 63.54 348 P P 12 50 53.7 -0.6
GAR Garm 63.67 349 P P 12 50 54.6 -0.5
GAR IAmb IAmb 12 50 55.0
comp=Z,18nm,1.3s
TROLL Troll, Antarti 64.35 200 P P 12 51 00.1 +0.8
VNDA Vanda 64.46 166 P P 12 51 01.1 +1.3
VNDA IAmb IAmb 12 51 02.3
comp=Z,12nm,0.7s
BTK Batken 64.62 350 P P 12 51 01.2 -0.1
BTK IAmb IAmb 12 51 19.8
comp=Z,22nm,1.9s
GTA Gaotai 65.06 15 eP P 12 51 05.3 +1.1
GTA pP pwP 12 51 10.7 -1.2
GTA sP sP 12 51 14.8 +8.1
GTA pmax pmax
comp=Z,6.0nm,1.3s
NJ2 Nanjing 65.59 33 eP P 12 51 09.2 +1.5
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
GEYT Alibeck 65.71 339 P P 12 51 08.9 +0.5
comp=Z,5.8nm,1.0s,baz=197,slow=4.5,SNR=5.9
comp=Z,5.8nm,1.0s
GEYT Alibeck 65.71 339 P P 12 51 07.9 -0.5
GEYT IAmb IAmb 12 51 09.9
comp=Z,23nm,1.4s
GYA0B ALIBECK ARRAY 65.71 339 P P 12 51 08.7 +0.3
SNAA Sanae 66.04 200 P P 12 51 10.7 +0.5
SNAA Sanae 66.04 200 P P 12 51 10.4 +0.3
comp=Z,3.3nm,0.8s,baz=114,slow=4.8,SNR=11
comp=Z,3.3nm,0.8s
SNAA Sanae 66.04 200 P P 12 51 10.9 +0.7
QSPA South Pole Qui 66.16 180 P P 12 51 10.9 -0.2
comp=Z,7.2nm,0.9s,baz=281,slow=2.3,SNR=32
QSPA LR LR 13 17 29.4
comp=Z,171nm,18.3s,baz=309,slow=34
comp=Z,7.2nm,0.9s
QSPA South Pole Qui 66.16 180 P P 12 51 11.1 0.0
AAK Ala-Archa 66.68 354 LR LR 13 19 12.2
comp=Z,117nm,18.1s,baz=184,slow=35
AAK Ala-Archa 66.68 354 P P 12 51 15.2 +0.6
AAK IAmb IAmb 12 51 16.0
comp=Z,16nm,1.5s
JOW Kunigami 67.05 44 LR LR 13 17 35.3
comp=Z,17nm,21.2s,baz=179,slow=33
VNA2 Neumayer--Watz 67.58 201 P P 12 51 20.5 +0.5
baz=91,slow=5.0
WMQ Urumqi 67.60 4 eP P 12 51 23.4 +3.1
WMQ LR LR
comp=Z,120nm,21.9s
KK31 Karatay Array 67.65 350 P P 12 51 20.7 +0.2
KK31 IAmb IAmb 12 51 21.8
comp=Z,10nm,1.0s
KKAR Karatay Array 67.65 350 P P 12 51 20.7 +0.1
KKAR Karatay Array 67.65 350 P P 12 51 21.1 +0.6
KKAR IAmb IAmb 12 51 21.8
comp=Z,10nm,1.0s
VNA1 Neumayer--Stat 67.91 201 P P 12 51 22.6 +0.7
VNA3 Neumayer Olymp 68.26 200 P P 12 51 24.7 +0.4
BTO Baotou 69.11 22 eP P 12 51 33.4 +3.5
HHC Hu-ho-hao-te 69.87 23 eP P 12 51 36.9 +2.3
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,130nm,6.7s
MK31 Makanchi Array 70.41 360 P P 12 51 37.6 -0.1
MKAR Makanchi Array 70.41 360 P P 12 51 37.5 -0.2
comp=Z,2.7nm,0.8s,baz=176,slow=6.9,SNR=18
comp=Z,2.7nm,0.8s
MKAR Makanchi Array 70.41 360 P P 12 51 37.3 -0.4
MAKZ Makanchi 70.43 360 P P 12 51 37.8 0.0
ASF Jabal al Asfar 70.85 320 P P 12 51 41.1 +0.3
comp=Z,10nm,1.1s,baz=72,slow=3.2,SNR=6.8
comp=Z,10nm,1.1s
BELA Belgrano 2 72.17 191 P P 12 51 47.9 -0.2
MMAI Mount Meron Ar 72.34 320 P P 12 51 49.4 -0.3
comp=Z,3.4nm,0.8s,baz=72,slow=4.7,SNR=4.8
comp=Z,3.4nm,0.8s
JNU Nakatsue 73.06 41 P P 12 51 54.4 +0.4
JNU IAmb IAmb 12 51 57.5
comp=Z,9.5nm,0.8s
KURK Kurchatov 74.42 357 P P 12 52 00.6 -0.9
KSAR Wonju Array Be 74.46 36 P P 12 52 02.5 +0.4
KSRS Korea Array 74.49 36 P P 12 52 02.7 +0.5
comp=Z,3.2nm,0.9s,baz=228,slow=5.0,SNR=18
KSRS LR LR 13 24 00.8
comp=Z,32nm,19.2s,baz=215,slow=35
comp=Z,3.2nm,0.9s
KS19 Wonju Array Si 74.50 36 P P 12 52 02.6 +0.4
KS19 IAmb IAmb 12 52 04.7
comp=Z,24nm,1.6s
SONM Songino Array 74.60 16 P P 12 52 02.7 -0.1
comp=Z,0.8nm,0.4s,baz=202,slow=6.0,SNR=8.3
SONM LR LR 13 24 00.2
comp=Z,123nm,21.4s,baz=212,slow=35
comp=Z,0.8nm,0.4s
SONM Songino Array 74.60 16 P P 12 52 02.6 -0.1
ULN Ulaanbaatar 74.80 17 P P 12 52 04.2 +0.3
ULN IAmb IAmb 12 52 05.6
comp=Z,22nm,1.8s
ABKAR Akbulak array 75.63 345 P P 12 52 07.7 -0.8
JHS Saijyo 75.70 41 P P 12 52 08.3 -1.0
JHS IAmb IAmb 12 52 11.3
comp=Z,36nm,1.7s
KBZ Khabaz 76.57 332 P P 12 52 15.2 +1.3
comp=Z,5.0nm,0.9s,baz=163,slow=2.7,SNR=12
comp=Z,5.0nm,0.9s
AKTO Aktyubinsk 77.19 344 LR LR 13 25 46.9
comp=Z,45nm,20.0s,baz=151,slow=35
BRVK Borovoye 77.43 352 P P 12 52 17.8 -0.8
ZAA0 Zalesovo Array 77.60 1 P P 12 52 18.7 -0.8
ZAA0 IAmb IAmb 12 52 19.6
comp=Z,7.9nm,0.8s
ZALV Zalesovo Beam 77.60 1 P P 12 52 18.7 -0.8
comp=Z,5.3nm,0.7s,baz=188,slow=4.9,SNR=24
ZALV LR LR 13 25 25.8
comp=Z,50nm,21.4s,baz=216,slow=35
comp=Z,5.3nm,0.7s
ZALV Zalesovo Beam 77.60 1 P P 12 52 18.5 -1.1
BR131 Keskin Array S 78.09 324 P P 12 52 22.2 -0.6
BR131 IAmb IAmb 12 52 23.9
comp=Z,16nm,1.1s
BRTR Keskin Array B 78.09 324 P P 12 52 21.9 -1.0
comp=Z,9.6nm,1.1s,baz=152,slow=5.5,SNR=15
comp=Z,9.6nm,1.1s
BRTR Keskin Array B 78.09 324 P P 12 52 22.0 -0.8
MJAR Matsushiro Arr 79.82 42 P P 12 52 32.3 +0.1
comp=Z,3.1nm,0.8s,baz=206,slow=5.5,SNR=8.5
comp=Z,3.1nm,0.8s
IDI Anoyia 80.34 315 ⇑P P 12 52 34.9 -0.3
IDI Anoyia 80.34 315 P P 12 52 35.4 +0.2
IDI IAmb IAmb 12 52 36.5
comp=Z,33nm,1.5s
USRK Ussuriysk Ar. 81.50 34 P P 12 52 39.4 -1.6
comp=Z,9.7nm,1.1s,baz=235,slow=5.1,SNR=16
USRK LR LR 13 26 28.8
comp=Z,33nm,21.1s,baz=164,slow=34
comp=Z,9.7nm,1.1s
USRK Ussuriysk Ar. 81.50 34 P P 12 52 40.2 -0.8
BELG Belogornoye 81.93 339 P P 12 52 42.7 -0.3
comp=Z,15nm,0.9s,baz=67,slow=4.4,SNR=5.3
comp=Z,15nm,0.9s
CFR Carcaliu 84.79 325 ⇑P P 12 52 58.1 +0.1
SMAI San Martin Ant 85.50 191 P P 12 53 01.9 +0.6
VRI Vrincioaia 85.99 325 ⇑P P 12 53 04.5 +0.5
PLOR Plostina 86.02 325 ⇑P P 12 53 04.2 0.0
MLR Muntele Rosu 86.17 324 ⇑P P 12 53 04.7 -0.4
MLR Muntele Rosu 86.17 324 P P 12 53 04.0 -1.1
MLR IAmb IAmb 12 53 07.6
comp=Z,20nm,1.1s
COVR Voineasa-Covas 86.26 324 ⇑P P 12 53 05.6 +0.2
KIRV Kirov 86.72 343 LR LR 13 30 45.9
comp=Z,45nm,21.5s,baz=161,slow=35
ARR Arges 86.80 323 ⇑P P 12 53 08.4 +0.3
BLKB Belogradchik 86.82 321 ⇑P P 12 53 07.6 -0.5
TOA0 Torodi Ar. Sit 87.15 286 P P 12 53 10.3 -0.1
TORD Torodi Ar. Bea 87.15 286 P P 12 53 09.7 -0.7
comp=Z,4.3nm,1.0s,baz=112,slow=3.9,SNR=12
comp=Z,4.3nm,1.0s
TORD Torodi Ar. Bea 87.15 286 P P 12 53 10.3 0.0
TORD IAmb IAmb 12 53 11.5
comp=Z,9.8nm,1.3s
BOVS Bovan 87.39 321 ⇑P P 12 53 10.7 -0.1
HERR Herculane 87.73 322 ⇑P P 12 53 12.2 -0.3
PMSA Palmer Station 87.86 194 LR LR 13 29 30.1
comp=Z,67nm,19.6s,baz=124,slow=34
AKASG Malin Array Be 87.96 329 P P 12 53 12.9 -0.5
comp=Z,4.2nm,0.8s,baz=117,slow=4.1,SNR=22
comp=Z,4.2nm,0.8s
AKBB Malin Array Si 87.96 329 P P 12 53 13.4 0.0
BZS Buzias 88.63 322 ⇑P P 12 53 16.8 0.0
DIVS Divibare 88.66 320 P P 12 53 16.5 -0.5
DIVS IAmb IAmb 12 53 19.6
comp=Z,8.5nm,1.0s
KEST Kesra 91.16 309 P P 12 53 29.3 +0.4
comp=Z,8.8nm,1.0s,baz=85,slow=6.7,SNR=4.7
comp=Z,8.8nm,1.0s
KEST Kesra 91.16 309 P P 12 53 28.5 -0.4
KLMR Klimovskoe 91.43 340 eP P 12 53 27.8 -1.6
KLMR AMP 12 53 30.7
comp=Z,12nm,1.1s
YAK Yakutsk 93.58 20 LR LR 13 36 28.5
comp=Z,36nm,20.1s,baz=268,slow=36
SPIA Saint Paul Isl 119.05 37 P PKiKP 12 59 13.9 +1.7
baz=270
N16K Nishlik Lake 124.61 32 P PKiKP 12 59 23.0 -0.1
baz=283
SDPT Sand Point 124.62 38 P PKiKP 12 59 23.1 -0.1
baz=289
C23K Itkillik River 124.66 20 P PKiKP 12 59 23.1 +0.2
baz=297
F21K Alatna River 124.80 23 P PKiKP 12 59 23.3 0.0
baz=292
E22K Anaktuvuk Pass 125.02 22 P PKiKP 12 59 23.5 -0.2
baz=295
D23K Nanushuk River 125.03 21 P PKiKP 12 59 23.8 +0.1
baz=296
G21K Allakaket 125.06 24 P PKPdf 12 59 23.4 0.0
baz=292
O16K Kokwok River B 125.13 33 P PKiKP 12 59 24.2 +0.1
baz=283
F22K John River 125.15 23 P PKiKP 12 59 24.5 +0.5
baz=294
IMAR Indian Mountai 125.16 25 PKPdf PKiKP 12 59 23.8 -0.2
C24K Franklin Bluff 125.30 19 P PKiKP 12 59 24.4 +0.3
baz=299
D24K Happy Valley 125.54 20 P PKiKP 12 59 24.6 0.0
baz=289
TOLK Toolik Lake Re 125.54 21 P PKiKP 12 59 25.3 +0.6
baz=298
O17K Koliganek Bris 125.58 32 P PKiKP 12 59 24.9 -0.1
baz=284
CHGN Chignik 125.62 37 P PKiKP 12 59 25.0 -0.1
baz=280
G22K Bettles 125.63 23 P PKiKP 12 59 24.7 -0.2
baz=294
J20K Nowinta River 125.64 27 P PKiKP 12 59 25.2 +0.2
baz=290
H21K Melozitna Rive 125.65 25 PKiKP 12 59 24.8 -0.2
H21K Melozitna Rive 125.65 25 P PKiKP 12 59 25.1 +0.1
baz=292
K20K Telida 125.95 28 P PKPdf 12 59 25.2 0.0
baz=289
COLD Coldfoot 125.96 23 P PKiKP 12 59 25.7 +0.1
baz=296
L19K White Mountain 125.98 29 P PKiKP 12 59 25.8 0.0
baz=288
H22K Ishtalitna Cre 126.10 24 P PKiKP 12 59 25.8 -0.1
baz=294
I21K Tanana 126.15 25 PKiKP 12 59 25.9 -0.1
I21K Tanana 126.15 25 P PKiKP 12 59 25.9 -0.1
baz=293,SNR=6.7
E24K Your Creek 126.16 21 P PKiKP 12 59 26.0 0.0
baz=298
D25K Kavik River 126.21 19 P PKiKP 12 59 25.9 -0.2
baz=301
G23K Bananza Creek 126.25 23 P PKiKP 12 59 26.2 0.0
baz=296
L20K Farewell, AK 126.32 29 P PKiKP 12 59 26.3 -0.1
baz=289
R17K Ugashik Creek 126.44 35 P PKiKP 12 59 26.8 +0.1
baz=283
O18K Koktuh Hills 126.48 32 P PKiKP 12 59 26.7 -0.1
baz=286
F24K Squaw Lake 126.63 22 P PKiKP 12 59 27.1 +0.2
baz=298
MLY Manley 126.69 25 PKPdf 12 59 26.4 -0.3
MLY Manley 126.69 25 P PKPdf 12 59 26.8 +0.2
baz=294,SNR=12
CAST Castle Rocks 126.77 27 P PKiKP 12 59 27.0 -0.3
baz=291
H23K Yukon River 126.81 24 PKiKP 12 59 27.2 -0.1
H23K Yukon River 126.81 24 P PKiKP 12 59 27.3 0.0
baz=296
C27K Jago River 126.83 18 P PKiKP 12 59 27.7 +0.5
baz=304
BPAW Bear Paw Mtn. 126.96 26 P PKiKP 12 59 27.8 +0.1
baz=293
E25K Arctic Village 127.09 20 P PKiKP 12 59 28.3 +0.4
baz=301
G24K Hadweenzic Riv 127.16 23 P PKiKP 12 59 28.3 +0.3
baz=298
I23K Minto, Yukon-K 127.17 25 P PKiKP 12 59 28.2 +0.2
baz=295
F25K Christian Rive 127.34 21 P PKiKP 12 59 28.5 +0.1
baz=301
H24K Noodor Dome 127.42 24 PKiKP 12 59 28.6 +0.1
H24K Noodor Dome 127.42 24 P PKiKP 12 59 28.7 +0.1
baz=297
TRF Thorofare Moun 127.50 27 P PKiKP 12 59 29.1 +0.2
baz=293
G25K Bearman Lake 127.60 22 P PKiKP 12 59 29.3 +0.5
baz=300
F26K Sheenjek River 127.77 21 P PKiKP 12 59 29.6 +0.4
baz=303
BMAR Burnt Mountain 127.77 21 PKPdf PKiKP 12 59 29.1 -0.2
SII Sitkinak Islan 127.86 36 P PKiKP 12 59 29.9 +0.2
baz=284
TCOL CIGO, UAF Yank 127.86 25 P PKPdf 12 59 28.7 -0.1
baz=297
COLA College 127.87 25 P PKPdf 12 59 28.5 -0.3
baz=297
MCK McKinley 127.94 26 P PKPdf 12 59 29.1 0.0
baz=295
H25K Birch Creek 127.95 23 P PKiKP 12 59 29.4 -0.1
baz=300
WRH Wood River Hil 127.96 25 PKPdf 12 59 28.3 -0.7
CCB Clear Creek Bu 127.99 25 PKPdf 12 59 28.3 -0.7
FYU Fort Yukon 128.00 22 PKPdf 12 59 28.9 -0.1
OHAK Old Harbor 128.16 35 P PKiKP 12 59 30.9 +0.7
baz=286
ILAR Eielson Array 128.28 25 PKP PKPdf 12 59 28.7 -1.0
comp=Z,1.3nm,0.9s,baz=289,slow=2.3,SNR=11
G26K Porcupine Rive 128.29 21 P PKiKP 12 59 30.2 0.0
E27K Coleen River 128.29 19 P PKPdf 12 59 29.8 +0.1
baz=306
KDAK Kodiak Island 128.37 34 P PKPdf 12 59 30.2 +0.2
baz=287
PMR Palmer 128.73 29 P PKiKP 12 59 31.0 -0.2
baz=293
O22K Cooper Landing 128.88 30 P PKPdf 12 59 31.2 +0.3
baz=292
WAT6 Susitna Watana 128.92 27 P PKPdf 12 59 31.0 -0.1
baz=295
J25K Salcha River, 128.93 24 PKPdf 12 59 31.0 0.0
J25K Salcha River, 128.93 24 P PKiKP 12 59 31.3 -0.4
baz=299,SNR=6.0
G27K Doyon Strip 129.07 21 P PKiKP 12 59 32.0 +0.1
baz=305
M23K Glacier View 129.26 28 P PKiKP 12 59 32.8 +0.5
baz=295
PWL Port Wells 129.37 29 P PKiKP 12 59 32.7 +0.1
baz=293
I26K Coal Creek Min 129.39 23 P PKiKP 12 59 32.7 +0.2
baz=302
H27K Steamboat Moun 129.44 21 P PKiKP 12 59 33.0 +0.4
baz=305
A36M Sachs Harbour 129.45 11 P PKiKP 12 59 32.5 +0.1
baz=326
J26L Joseph Creek 129.66 24 PKPdf PKiKP 12 59 33.2 +0.1
J26L Joseph Creek 129.66 24 P PKiKP 12 59 32.9 -0.2
baz=301
PAX Paxson 129.68 26 P PKiKP 12 59 33.0 -0.3
baz=298
I27K Kandik River 129.77 22 P PKiKP 12 59 33.1 -0.2
baz=304
SCRK Sand Creek 129.77 25 PKPdf 12 59 33.0 +0.3
SCRK Sand Creek 129.77 25 P PKiKP 12 59 33.2 -0.2
baz=300
M24K Tolsona, Glenn 129.78 27 P PKPdf 12 59 32.9 +0.2
baz=297
DOT Dot Lake 129.91 25 PKiKP 12 59 33.6 0.0
KLU Klutina 130.16 28 P PKiKP 12 59 34.0 -0.2
baz=296
K27K Chicken 130.46 24 PKPdf 12 59 34.1 +0.3
K27K Chicken 130.46 24 P PKiKP 12 59 34.6 -0.1
baz=302
L26K Log Cabin Wild 130.50 26 P PKiKP 12 59 34.8 0.0
baz=300
INK Inuvik 130.51 17 PKP PKPdf 12 59 32.8 -1.0
comp=Z,5.3nm,1.1s,baz=11,slow=5.1,SNR=6.0
INK Inuvik 130.51 17 PKPdf PKPdf 12 59 34.1 +0.3
INK Inuvik 130.51 17 P PKiKP 12 59 34.9 +0.3
baz=315
EYAK Cordova Ski Ar 130.66 29 P PKiKP 12 59 35.4 +0.3
baz=296
N25K Chitina, Valde 130.68 28 PKPdf PKiKP 12 59 35.2 -0.1
N25K Chitina, Valde 130.68 28 P PKiKP 12 59 34.9 -0.4
baz=298
LPAZ La Paz 130.83 218 PKP PKPdf 12 59 37.0 +0.2
comp=Z,4.8nm,1.2s,baz=85,slow=2.0,SNR=5.9
LPAZ La Paz 130.83 218 PKPdf 12 59 35.9 -0.9
M26K Nabesna, AK 130.95 26 P PKiKP 12 59 35.8 0.0
baz=300
BMRM Bremner River 130.97 28 P PKiKP 12 59 35.9 +0.1
baz=297
L27K Beaver Creek, 131.07 25 PKiKP 12 59 35.9 -0.1
L27K Beaver Creek, 131.07 25 P PKiKP 12 59 35.6 -0.4
baz=302,SNR=6.5
BCAR Beaver Creek A 131.09 25 PKPdf 12 59 35.3 +0.2
M27K Edge Creek, AK 131.42 26 P PKiKP 12 59 36.6 -0.2
baz=301
DAWY Dawson 131.43 23 PKPdf 12 59 35.3 -0.4
DAWY Dawson 131.43 23 P PKiKP 12 59 36.6 -0.1
baz=305
CRQE Cirque 131.73 28 P PKiKP 12 59 37.7 +0.2
baz=299
M29M Somme Creek 132.71 25 P PKPdf 12 59 38.7 +0.4
baz=305
O28M Mount Upton 132.95 27 P PKiKP 12 59 39.8 -0.3
baz=302
M30M Minto, Yukon 133.25 24 PKPdf 12 59 39.1 -0.1
M30M Minto, Yukon 133.25 24 P PKiKP 12 59 40.3 -0.1
baz=307
YUK6 Outpost Mounta 133.60 26 P PKiKP 12 59 40.9 -0.5
baz=304
N30M Aishikik Lake 133.81 25 P PKiKP 12 59 41.6 0.0
baz=306
PNL Peninsula 133.87 28 P PKiKP 12 59 42.0 +0.3
baz=302
HYT Haines Junctio 134.02 26 PKPdf 12 59 41.2 +0.4
HYT Haines Junctio 134.02 26 P PKiKP 12 59 42.1 0.0
baz=305
N31M Braeburn, Yuko 134.30 25 PKPdf 12 59 40.9 -0.3
N31M Braeburn, Yuko 134.30 25 P PKiKP 12 59 42.4 -0.1
baz=308
M31M Drury Creek, Y 134.37 23 PKPdf 12 59 41.0 -0.2
M31M Drury Creek, Y 134.37 23 P PKiKP 12 59 42.3 -0.3
baz=310
O30N Mendenhall 134.61 26 P PKiKP 12 59 43.1 -0.1
baz=307
P30M Million Dollar 134.64 27 P PKiKP 12 59 43.5 +0.2
baz=305
N32M Quiet Lake 135.52 24 P PKiKP 12 59 44.5 -0.6
baz=311
SKAG Skagway 135.70 27 P PKiKP 12 59 45.1 -0.2
baz=306
P33M Teslin, Yukon 136.23 25 PKPdf 12 59 45.4 +0.5
P33M Teslin, Yukon 136.23 25 P PKiKP 12 59 46.1 -0.5
baz=310
P32M Atlin 136.27 26 P PKiKP 12 59 46.1 -0.5
baz=309
SIT Sitka 137.10 30 P PKPdf 12 59 46.9 +0.5
baz=304
R33M Jennings River 137.47 25 P PKPdf 12 59 47.8 +0.5
baz=312
DLBC Dease Lake 138.48 25 PKP PKPdf 12 59 48.8 -0.3
comp=Z,1.7nm,0.9s,baz=348,slow=1.9,SNR=3.3
DLBC Dease Lake 138.48 25 P PKiKP 12 59 50.7 -0.5
baz=312
BATG Bathurst New B 145.86 321 PKPdf PKPab 13 00 03.4 -0.1
CBB Campbell River 146.07 33 PKPbc 13 00 03.5 0.0
LLLB Lillooet 147.32 29 PKPbc 13 00 07.3 0.0
BOSC San Juan Bosco 147.37 217 PKPbc PKPbc 13 00 07.7 -0.9
NLWA Neilton Lookou 148.51 35 PKiKP 13 00 11.6 -0.5
B08A Colville Reser 150.10 30 PKPbc 13 00 14.4 -0.1
B08A PKPab pPKPab 13 00 21.6 -0.6
OTAV Otavalo 150.10 221 PKiKP 13 00 16.8 -0.1
F04A Amboy 150.20 36 PKiKP 13 00 15.3 -0.3
I02E Swisshome, OR 150.47 41 P PKPbc 13 00 15.6 +0.1
baz=304
H04D Lebanon 150.88 39 P PKPbc 13 00 16.5 +0.1
baz=307
J01E Myrtle Point 150.95 42 P PKiKP 13 00 17.1 -0.1
baz=303
LBNH Lisbon 150.96 320 P PKPbc 13 00 16.6 0.0
baz=54
C09A Chrisman Ranch 150.99 30 PKiKP 13 00 16.8 -0.3
C09A pPKPab 13 00 25.1 -0.8
I03D Drain, OR 151.00 41 P PKiKP 13 00 17.3 0.0
baz=305,SNR=10
H04A Detroit Lake 151.10 38 PKPbc 13 00 17.2 +0.2
H04A PKPab PKPab 13 00 24.5 -0.2
NEW Newport 151.15 28 PKPbc PKPbc 13 00 16.9 0.0
comp=Z,4.8nm,0.7s,baz=252,slow=3.7,SNR=12
NEW Newport 151.15 28 PKPbc 13 00 17.1 +0.2
NEW Newport 151.15 28 P PKiKP 13 00 17.4 -0.1
baz=320
TRQ Mont Tremblant 151.15 326 PKPbc 13 00 16.4 -0.7
VLDQ Val d'Or 151.16 332 PKPbc 13 00 16.9 0.0
D08A Wollman Farm, 151.23 31 PKiKP 13 00 17.4 -0.3
D08A PKPab PKPab 13 00 24.9 -0.1
G05D Wamic, OR 151.24 37 P PKiKP 13 00 17.9 +0.1
baz=310
K02D Willamette Mer 151.36 43 P PKiKP 13 00 18.3 +0.1
baz=303,SNR=5.9
DBO Dodson Butte 151.39 42 PKiKP 13 00 18.6 +0.4
HAWA Hanford 151.40 33 PKiKP 13 00 17.9 -0.1
HAWA PKPab PKPab 13 00 25.5 -0.3
I04A Tendick Farm, 151.50 40 P PKiKP 13 00 18.3 -0.1
baz=306
L02F Cave Junction 151.72 44 P PKiKP 13 00 19.1 +0.2
baz=302
WALA Waterton Lakes 151.78 23 PKiKP 13 00 18.9 0.0
WALA PKPab PKPab 13 00 26.6 -0.8
I05D Terrebonne, OR 151.79 38 P PKiKP 13 00 19.1 +0.2
baz=309,SNR=6.6
HUMO Hull Mountain 151.85 42 PKPbc PKiKP 13 00 19.5 +0.4
HUMO PKPab PKPab 13 00 28.2 +0.4
J04D Umpqua Nationa 152.00 41 PKiKP 13 00 19.6 -0.1
J04D PKPab PKPab 13 00 27.1 -1.6
J04D Umpqua Nationa 152.00 41 P PKiKP 13 00 19.9 +0.3
baz=306,SNR=18
LONY Lake Ozonia 152.23 324 P PKiKP 13 00 19.7 -0.1
baz=49
PINE Pine Mountain 152.36 39 PKiKP 13 00 20.9 +0.6
PINE PKPab PKPab 13 00 28.3 -1.8
G08A Pilot Rock 152.45 34 PKiKP 13 00 20.4 0.0
L04D Klamath Falls 152.47 43 PKiKP 13 00 20.6 +0.1
L04D PKPab PKPab 13 00 29.1 -1.4
L04D Klamath Falls 152.47 43 P PKiKP 13 00 20.6 +0.1
baz=304,SNR=9.2
YBH Yreka Blue Hor 152.48 44 PKPbc PKPbc 13 00 20.2 -0.1
comp=Z,2.1nm,0.9s,baz=333,slow=7.5,SNR=6.9
J05D Fort Rock, OR 152.50 40 P PKiKP 13 00 20.9 +0.3
baz=307,SNR=11
K04D Chiloquin, OR 152.57 41 P PKiKP 13 00 21.2 +0.5
baz=305
F10A Beach Ranch, E 152.82 31 PKiKP 13 00 21.0 -0.1
F10A PKPab PKPab 13 00 31.1 -0.7
I07A Izee 152.97 37 PKiKP 13 00 22.1 +0.5
K05A Summer Lake 153.03 40 PKiKP 13 00 22.6 +0.8
K05A PKPab PKPab 13 00 32.6 -0.4
BMO Blue Mountains 153.60 33 PKPdf PKPdf 13 00 12.4 -2.5
BMO PKPab PKPab 13 00 35.5 +0.4
MSO Missoula 153.60 26 PKPdf PKPdf 13 00 13.2 -1.6
MSO PKPbc PKPbc 13 00 22.3 -0.3
MSO PKPab PKPab 13 00 34.3 -0.8
MSO Missoula 153.60 26 P PKPbc 13 00 22.4 -0.2
baz=324
J08A Circle Bar Ran 154.01 37 PKPdf PKPdf 13 00 14.9 -0.6

J08A				PKPbc	PKiKP	13 00 24.4	+0.7
J08A				PKPab	PKPab	13 00 35.9	-1.1
EGMT	Eagleton	154.05	19	P	PKiKP	13 00 23.6	+0.1
	baz=334						
PLID	Pearl Lake	154.06	31	PKPdf	PKPdf	13 00 15.4	-0.3
PLID					PKPbc	13 00 23.4	-0.4
BINY	Binghamton	154.56	321	P	PKiKP	13 00 25.0	+0.3
	baz=51						
DGMT	Dagmar	154.95	11	P	PKPab	13 00 40.2	-0.4
	baz=345						
BEKR	Beckworth	154.98	45	PKPdf	PKPdf	13 00 15.9	-1.2
BEKR					PKiKP	13 00 26.3	+0.4
BEKR					PKPab	13 00 40.7	-0.7
DLMT	Dillon	155.34	26	PKPdf	PKPdf	13 00 15.7	-1.7
DLMT					pPKPbc	13 00 26.8	-1.6
DLMT				PKPab	PKPab	13 00 41.9	-0.7
MFID	Camas Ranch	155.37	34	PKPdf	PKPdf	13 00 16.4	-1.1
MFID				PKPab	PKPab	13 00 43.4	+0.6
BOZ	Bozeman (W)	155.52	25	P	PKPab	13 00 42.4	-1.0
	baz=327						
EYMN	Ely	155.60	350	P	PKPab	13 00 43.7	+0.3
	baz=13						
MCMT	McKenzie Canyo	155.67	27	PKPdf	PKPdf	13 00 16.4	-1.6
MCMT					PKPab	13 00 44.2	0.0
HLID	Hailey	155.95	31	PKPdf	PKPdf	13 00 18.4	+0.1
HLID					PKPab	13 00 45.9	+0.6
HLID	Hailey	155.95	31	P	PKPab	13 00 46.4	+1.1
	baz=319						
BMN	Battle Mountai	156.61	41	PKPdf	PKPdf	13 00 17.4	-1.9
BMN				PKPab	PKPab	13 00 48.3	+0.1
KVN	Kaiserville	156.89	45	PKPdf	PKPdf	13 00 18.6	-1.2
KVN					PKPab	13 00 50.1	+0.6
NVAR	Mina Array Bea	157.10	46	PKP	PKPdf	13 00 19.9	-0.2
	comp=Z,0.7nm,0.8s,baz=271,slow=1.3,SNR=5.7						
NVAR				PKPab	PKPab	13 00 50.5	-0.1
	comp=Z,2.8nm,0.8s,baz=282,slow=5.0,SNR=18						
NVAR	Mina Array Bea	157.10	46	PKPdf	PKPdf	13 00 19.0	-1.0
NVAR				PKPab	PKPab	13 00 50.7	+0.2
IMW	Indian Meadow	157.22	26	PKPdf	PKPdf	13 00 18.3	-1.8
IMW				PKPab	PKPab	13 00 51.1	+0.2
ELK	Elko	157.55	38	PKPdf	PKPdf	13 00 18.7	-1.9
ELK					PKPab	13 00 52.6	+0.2
REDW	Red Top Meadow	157.69	27	PKPdf	PKPdf	13 00 18.6	-2.0
REDW					PKPab	13 00 52.0	-0.9
CWC	Cottonwood Cre	158.28	50	P	PKPab	13 00 54.3	-1.4
	baz=300						
ISA	Isabella, Lake	158.36	53	P	PKPab	13 00 54.3	-1.6
	baz=297						
BW06	Boulder Array	158.71	25	P	PKPab	13 00 54.0	-3.3
	baz=328						
PDAR	Pinedale Array	158.71	25	PKP	PKPdf	13 00 21.6	-0.3
	comp=Z,0.2nm,0.6s,baz=180,slow=0.7,SNR=6.7						
PDAR				PKPab	PKPab	13 00 55.6	-1.6
	comp=Z,0.7nm,0.6s,baz=354,slow=2.1,SNR=5.8						
PDAR	Pinedale Array	158.71	25		PKPdf	13 00 20.4	-1.5
PDAR				PKPab	PKPab	13 00 56.3	-0.9
MPMC	Manual Prospec	158.88	51	P	PKPab	13 00 57.2	-1.1
	baz=300						
R11A	Troy Canyon, C	158.89	43	P	PKPab	13 00 55.5	-2.7
	baz=308						
LRMC	Laurel Mtn Rad	159.02	52	P	PKPab	13 00 56.3	-2.6
	baz=298						
FURC	Furnace Creek,	159.12	49	P	PKPab	13 00 57.3	-1.7
	baz=302						
RSSD	Black Hills	159.16	14	PKPdf	PKPdf	13 00 20.9	-1.5
RSSD					PKPab	13 00 58.8	-0.4
RSSD	Black Hills	159.16	14	P	PKPab	13 00 58.1	-1.0
	baz=343						
SPR3	Spring Creek 3	159.24	40	PKPdf	PKPdf	13 00 22.0	-0.8
SPR3				PKPab	PKPab	13 01 00.4	+0.6
DUG	Dugway, Tooele	159.25	35	PKPdf	PKPdf	13 00 21.8	-0.7
DUG					PKPab	13 00 58.9	-0.7
DUG	Dugway, Tooele	159.25	35	P	PKPab	13 00 58.3	-1.3
	baz=317						
TPNV	Topopah Spring	159.27	47	P	PKPab	13 00 59.0	-0.9
	baz=304						
FMP	Fort Macarthur	159.31	57	P	PKPab	13 00 59.4	-0.6
	baz=293						
CIS	Catalina Islan	159.34	58	P	PKPab	13 00 59.6	-0.5
	baz=292						
GSC	Goldstone, Bar	159.74	52	PKPdf	PKPdf	13 00 21.8	-1.4
GSC				PKPab	PKPab	13 01 01.7	-0.2
GSC	Goldstone, Bar	159.74	52	P	PKPab	13 01 00.9	-0.9
	baz=299						
SHPR	Sheep Range	160.25	47	PKPdf	PKPdf	13 00 21.9	-1.9
SHPR					PKPab	13 01 03.5	-0.7
ECSD	EROS Data Cent	160.26	358		PKPdf	13 00 21.8	-1.5
ECSD				PKPab	PKPab	13 01 02.9	-0.7
ECSD	EROS Data Cent	160.26	358	P	PKPab	13 01 03.7	+0.1
	baz=2.2						
TUQ	Turquoise Moun	160.30	50	P	PKPab	13 01 03.2	-1.2
	baz=301						
HEC	Hector,Ludlow	160.30	52	P	PKPab	13 01 03.5	-0.8
	baz=299						
PFO	Pinyon Flats O	160.75	56	P	PKPab	13 01 04.0	-2.5
	baz=296						
CCUT	Cedar City	160.76	42	PKPdf	PKPdf	13 00 23.0	-1.4
CCUT				PKPab	PKPab	13 01 05.0	-1.4
TPFO	Pinon Flats	160.76	56	P	PKPab	13 01 05.1	-1.3
	baz=296						
MSU	Marysvale	160.80	37	PKPdf	PKPdf	13 00 21.8	-2.6
MSU				PKPab	PKPab	13 01 07.2	+0.7
GMRC	Granite Mounta	160.81	52	P	PKPab	13 01 07.1	+0.5
	baz=300						
BELC	Belle Mtn. Jos	160.93	54	P	PKPab	13 01 07.5	+0.3
	baz=297						
MONP2	Monument Peak	161.08	58	P	PKPab	13 01 08.7	+0.7
	baz=294						
IKP	In-Ko-Pah, Jac	161.41	58	P	PKPab	13 01 09.7	+0.4
	baz=294						
O20A	White River Ci	161.46	27	P	PKPab	13 01 09.2	-0.1
	baz=328						
IRM	Iron Mountain	161.48	53	P	PKPab	13 01 10.1	+0.6
	baz=299						
BC3	Big Chuckawall	161.49	54	P	PKPab	13 01 10.1	+0.5
	baz=297						
N23A	Red Feather La	161.65	21	P	PKPab	13 01 10.9	+0.7
	baz=335						
W13A	Hualapai Mount	161.89	48	PKPdf	PKPdf	13 00 24.6	-1.0
W13A				PKPab	PKPab	13 01 11.6	+0.1
PDMCI	Parker Dam,Lak	162.13	51	P	PKPab	13 01 12.7	+0.5
	baz=301						
U15A	North Rim	162.14	42	PKPdf	PKPdf	13 00 24.6	-1.3
U15A				PKPab	PKPab	13 01 11.3	-1.2
TZTN	Tazewell	162.68	320	P	PKPab	13 01 14.8	+0.2
	baz=47						
ISCO	Idaho Springs	162.75	22	P	PKPab	13 01 15.2	+0.2
	baz=334						
WUAZ	Wupatki	163.29	43	PKPdf	PKPdf	13 00 25.5	-1.4
WUAZ				PKPab	PKPab	13 01 16.9	-0.5
WUAZ	Wupatki	163.29	43	P	PKPab	13 01 17.6	+0.1
	baz=310						
Q24A	Divide	163.66	22	P	PKPab	13 01 18.7	-0.4
	baz=334						
MVCO	Mesa Verde	163.72	33	P	PKPab	13 01 20.0	+0.7
	baz=322						
S22A	4UR Ranch, Cre	164.06	28	P	PKPab	13 01 20.9	0.0
	baz=327						
214A	Organ Pipe Nat	164.24	56	P	PKPab	13 01 21.6	0.0
	baz=297						
GOGA	Godfrey	164.57	311	P	PKPab	13 01 23.2	+0.3
	baz=56						
SDCO	Great Sand Dun	164.61	25	P	PKPab	13 01 23.5	+0.2
	baz=331						
T25A	Trinidad	165.55	23	P	PKPab	13 01 27.2	-0.1
	baz=334						
TUC	Tucson	165.57	52	P	PKPab	13 01 28.4	+0.9
	baz=302						
ANMO	Albuquerque	166.51	34	PKPdf	PKPdf	13 00 29.1	-0.7
ANMO				PKPab	PKPab	13 01 31.6	0.0
ANMO	Albuquerque	166.51	34	P	PKPab	13 01 32.4	+0.8
	baz=322						
LRAL	Lakeview Retre	167.14	317	P	PKPab	13 01 34.5	+0.3
	baz=48						
121A	Cookes Peak, D	167.49	45	P	PKPab	13 01 36.1	0.0
	baz=311						
TXAR	Lajitas Array	172.25	45	PKP	PKPdf	13 00 33.8	+0.5
	comp=Z,2.5nm,1.1s,baz=129,slow=1.8,SNR=16						
TXAR				PKPab	PKPab	13 01 56.7	-0.4
	comp=Z,0.9nm,0.9s,baz=290,slow=5.2,SNR=5.6						

*IDC **02** 12:42:13.1±2.2, 31°.99S×57°.50E, h0km, mb4.0/7, mbtmp4.0/7, MS3.5/14, Error ellipse: s-maj=82.4km s-min=30.9km az=42.0*

ISC 02 12:42:13.8±2.2**, 32°.2S**±0°.4×**57°.3E**±0°.4**, h11km, n29, σ0.68**/9**, mb4.1**/7**, MS3.5**/13**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	Ambohidratompo	16.30	324	LR	LR	12 51 08.4	
	comp=Z,80nm,18.7s,baz=1.0,slow=33						
BOSA	Boshof	27.81	269	LR	LR	12 56 31.5	
	comp=Z,49nm,21.5s,baz=170,slow=31						
H08S1	Diego Carcia H	28.18	33	T	T	13 16 50.6	
	baz=207,slow=76,SNR=67						
H08S2	Diego Garcia H	28.18	33	T	T	13 16 51.8	
	baz=207,slow=76,SNR=26						
H08S3	Diego Garcia H	28.20	33	T	T	13 16 52.4	
	baz=207,slow=76,SNR=95						
LBTB	Lobatse	28.66	276	LR	LR	12 56 57.8	
	comp=Z,40nm,21.6s,baz=106,slow=31						
SUR	Sutherland	30.76	260	LR	LR	12 58 32.1	
	comp=Z,82nm,19.5s,baz=136,slow=32						
LSZ	Lusaka	31.36	296	LR	LR	12 59 51.7	
	comp=Z,106nm,18.2s,baz=137,slow=34						
KMBO	Kilima Mbogo	36.19	325	LR	LR	13 03 52.1	
	comp=Z,51nm,18.0s,baz=90,slow=36						
TSUM	Tsumeb	37.83	280	LR	LR	13 03 35.9	
	comp=Z,80nm,19.7s,baz=152,slow=34						
MBAR	Mbarara	40.16	316	LR	LR	13 05 31.7	
	comp=Z,94nm,18.7s,baz=122,slow=35						
ATD	Arta Tunnel	45.58	340	LR	LR	13 06 01.9	
	comp=Z,48nm,19.0s,baz=42,slow=31						
H01W2	Cape Leeuwin H	46.92	110	T	T	13 40 29.2	
	baz=256,slow=75,SNR=38						
H01W3	Cape Leeuwin H	46.92	110	T	T	13 40 29.6	
	baz=256,slow=75,SNR=35						
H01W1	Cape Leeuwin H	46.94	110	T	T	13 40 29.4	
	baz=256,slow=75,SNR=45						
CMAR	Chiang Mai Arr	64.21	44	P	P	12 52 48.9	+0.1
	0.5nm,0.3s,baz=236,slow=7.4,SNR=5.7						
	0.5nm,0.3s						
EIL	Elat	65.04	339	LR	LR	13 16 33.3	
	comp=Z,66nm,20.7s,baz=84,slow=32						
ASAR	Alice Springs	66.95	104	P	P	12 53 07.5	+0.7
	0.8nm,0.7s,baz=234,slow=5.9,SNR=5.2						
	0.8nm,0.7s						
WRA	Warramunga Arr	68.99	101	P	P	12 53 19.3	-0.3
	1.3nm,0.9s,baz=240,slow=5.4,SNR=6.1						
	1.3nm,0.9s						
DBIC	Dimbokro	70.58	291	LR	LR	13 21 39.5	
	comp=Z,75nm,19.4s,baz=156,slow=34						
BRTR	Keskin Array B	74.80	341	P	P	12 53 54.7	+0.7
	1.4nm,0.7s,baz=186,slow=4.3,SNR=2.8						
	1.4nm,0.7s						
KBZ	Khabaz	76.65	349	P	P	12 54 04.5	+0.3
	2.5nm,0.9s,baz=141,slow=6.5,SNR=2.3						
	2.5nm,0.9s						
MKAR	Makanchi Array	81.75	17	P	P	12 54 31.7	-0.5
	0.7nm,0.7s,baz=188,slow=2.9,SNR=0.8						
	0.7nm,0.7s						
MDT	Midelt	87.09	312	LR	LR	13 36 14.7	
	comp=Z,37nm,18.2s,baz=152,slow=37						
ARU	Arti	88.23	1	LR	LR	13 28 43.2	
	comp=Z,72nm,21.7s,baz=156,slow=32						
ZALV	Zalesovo Beam	88.99	16	P	P	12 55 08.0	0.0
	0.3nm,0.4s,baz=205,slow=6.4,SNR=2.0						
	0.3nm,0.4s						
HFS	Hagfors	98.69	340	LR	LR	13 41 15.4	
	comp=Z,15nm,18.5s,baz=94,slow=36						
ILAR	Eielson Array	144.10	17	PKP	PKPdf	13 01 47.5	-1.2
	0.5nm,1.0s,baz=270,slow=2.7,SNR=2.9						
YKA	Yellowknife Ar	149.20	353	PKPbc	PKiKP	13 02 02.9	+0.1
	2.9nm,0.9s,baz=2.8,slow=2.9,SNR=5.5						

*IDC **02** 12:47:26.4±1.4, 31°.79S×57°.74E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=48.9km s-min=30.8km az=97.0*

ISC 02 12:47:27.3±1.5**, 31°.7S**±0°.2×**57°.6E**±0°.4**, h10km, n12, σ0.93**/6**, mb4.0**/5**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	27.72	33	T	T	13 22 03.6	
	baz=207,slow=76,SNR=46						
H08S2	Diego Garcia H	27.73	33	T	T	13 22 05.3	
	baz=207,slow=76,SNR=6.1						
H08S3	Diego Garcia H	27.74	33	T	T	13 22 05.1	
	baz=207,slow=76,SNR=92						
H01W2	Cape Leeuwin H	46.85	110	T	T	13 45 37.9	
	baz=256,slow=75,SNR=25						
H01W3	Cape Leeuwin H	46.86	110	T	T	13 45 37.6	
	baz=256,slow=75,SNR=26						
H01W1	Cape Leeuwin H	46.87	110	T	T	13 45 38.8	
	baz=256,slow=75,SNR=24						
QSPA	South Pole Qui	58.43	180	P	P	12 57 23.3	+0.3
	1.7nm,0.8s,baz=263,slow=1.7,SNR=9.0						
	1.7nm,0.8s						
CMAR	Chiang Mai Arr	63.77	44	P	P	12 58 00.8	+1.2
	1.1nm,0.8s,baz=239,slow=6.7,SNR=5.3						
	1.1nm,0.8s						
ASAR	Alice Springs	66.84	104	P	P	12 58 19.2	-0.5
	0.8nm,0.8s,baz=239,slow=5.6,SNR=7.6						
	0.8nm,0.8s						
WRA	Warramunga Arr	68.86	101	P	P	12 58 32.0	-0.5
	0.8nm,0.9s,baz=242,slow=5.5,SNR=4.8						
	0.8nm,0.9s						
MKAR	Makanchi Array	81.30	17	P	P	12 59 42.7	-0.8
	0.5nm,0.8s,baz=206,slow=6.3,SNR=4.0						
	0.5nm,0.8s						
YKA	Yellowknife Ar	148.82	353	PKPbc	PKiKP	13 07 15.7	0.0
	1.3nm,0.7s,baz=15,slow=2.4,SNR=4.8						

*IDC **02** 13:03:47.3±1.8, 3°.67N×128°.02E, h0km, mb3.6/5, mbtmp3.6/6, ML3.3/1, MS3.4/2, Error ellipse: s-maj=82.4km s-min=25.7km az=66.0*

ISC 02 13:03:53.9±1.6**, 3°.7N**±0°.3×**128°.3E**±0°.4**, h50km, n8, σ1.48**/7**, mb3.6**/5**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.38	147	Pn	Pn	13 05 13.1	+1.3
	0.8nm,0.3s,baz=322,slow=19,SNR=1.5						
SIJI				Sn	Sn	13 06 10.2	-2.3
	2.4nm,0.3s,baz=339,slow=23,SNR=16						
	2.2nm,0.3s						
FITZ	Fitzroy Crossi	21.78	187	P	P	13 08 41.3	-0.4
	1.8nm,1.0s,baz=350,slow=11,SNR=1.5						
	1.8nm,1.0s						
WRA	Warramunga Arr	24.19	166	P	P	13 09 05.8	-0.1
	1.4nm,0.6s,baz=346,slow=10,SNR=23						
	1.4nm,0.6s						
ASAR	Alice Springs	27.70	169	P	P	13 09 37.6	0.0
	0.3nm,0.5s,baz=354,slow=7.8,SNR=6.9						
	0.3nm,0.5s						
STKA	Stephens Creek	37.53	161	P	P	13 11 04.4	+1.1
	0.6nm,0.3s,baz=336,slow=12,SNR=1.3						
	0.6nm,0.3s						
MA2	Magadan	58.40	13	LR	LR	13 42 25.6	
	comp=Z,34nm,18.1s,baz=238,slow=40						
MKAR	Makanchi Array	58.52	325	P	P	13 13 44.4	-0.8
	0.3nm,0.6s,baz=120,slow=5.7,SNR=2.7						
	0.3nm,0.6s						
INK	Inuvik	89.64	22	LR	LR	13 58 39.2	
	comp=Z,16nm,20.8s,baz=313,slow=37						

*ATH **02** 13:08:56.3, 38°.24N×20°.38E, h10km±1km, ML2.6/5, Error ellipse: s-maj=2.2km s-min=1.1km az=251.0*
*THE **02** 13:08:56.3, 38°.25N×20°.38E, h10km, ML2.8/8, Error ellipse: s-maj=1.5km s-min=0.5km az=264.0*

ISC 02 13:08:55.3±0.8**, 38°.26N**±0°.03×**20°.36E**±0°.04**, h14km**±4km**, n32, σ0.74**/54**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMLN	Damoulianata-K	0.02	146	P	Pg	13 08 58.3	+0.4
DMLN				S	Sg	13 08 59.6	0.0
	25µm,0.1s						
KEF4	Livadi, Kephal	0.05	87	P	Pg	13 08 58.0	0.0
KEF4				S	Sg	13 08 59.3	-0.5
	59µm,0.1s						
KEF4	Livadi, Kephal	0.05	87	P	Pg	13 08 58.0	0.0
KEF4				S	Sg	13 08 59.2	-0.6
KEF3	Kipouria, Keph	0.05	189	P	Pg	13 08 58.3	+0.3
KEF3				S	Sg	13 08 59.6	-0.3
	52µm,0.1s						
KEF3	Kipouria, Keph	0.05	189	P	Pg	13 08 58.3	+0.3
KEF3				S	Sg	13 08 59.6	-0.3
ARGA	Argostoli. Kep	0.12	130	P	Pg	13 08 59.7	+0.9
ARGA				S	Sg	13 09 01.6	+0.5
VLS	Valsamata	0.20	113	P	Pg	13 08 59.7	-0.2
VLS	Valsamata	0.20	113	P	Pg	13 08 59.7	-0.2
VLS				S	Sg	13 09 02.2	-0.8
VLS				AML	AML	13 09 02.5	
	comp=E,8518µm,0.1s						
VLS				AML	AML	13 09 02.5	
	comp=N,11290µm,0.3s						
PSDA	Pessada-Kefalo	0.23	128	P	Pg	13 09 00.5	+0.2
PSDA				S	Sg	13 09 03.7	0.0
	comp=N,1µm,0.4s						
PSDA	Pessada-Kefalo	0.23	128	P	Pg	13 09 00.5	+0.2
PSDA				S	Sg	13 09 03.5	-0.1
FSK	Fiskardo	0.26	38	P	Pb	13 09 01.9	+0.2
FSK				S	Sb	13 09 06.0	-0.1
	comp=N,2µm,0.2s						
FSK	Fiskardo	0.26	38	P	Pb	13 09 02.0	+0.2
FSK				S	Sb	13 09 05.9	-0.1
FSK				AML	AML	13 09 06.2	
	comp=E,4721µm,0.1s						
FSK				AML	AML	13 09 08.9	
	comp=N,2340µm,0.3s						
EVGI	Lefkada island	0.43	32	P	Pg	13 09 04.5	+0.5
EVGI				S	Sb	13 09 11.2	+0.1
	comp=N,408nm,0.1s						
EVGI	Lefkada island	0.43	32	P	Pg	13 09 04.4	+0.5
EVGI				S	Sb	13 09 11.0	-0.1
DRAG	Dragano-Lefkad	0.46	22	P	Pg	13 09 05.0	+0.5
DRAG				S	Sb	13 09 12.3	+0.4
	comp=N,5µm,0.3s						
NYDR	Nydri-Lefkada	0.53	30	P	Pg	13 09 05.9	+0.1
NYDR				S	Sb	13 09 14.2	+0.3
	comp=N,248nm,0.3s						
LKD2	Lefkada island	0.58	24	P	Pg	13 09 06.9	+0.1
TSLK	Tsoukalades, L	0.61	22	P	Pg	13 09 07.7	+0.3
TSLK				S	Sg	13 09 16.3	+0.7
TSLK	Tsoukalades, L	0.61	22	P	Pg	13 09 07.7	+0.3
LTHK	Lithakia	0.66	145	P	Pb	13 09 08.7	+0.1
LTHK	Lithakia	0.66	145	P	Pb	13 09 08.8	+0.1
LTHK				S	Sb	13 09 18.3	+0.6
LTHK				AML	AML	13 09 19.8	
	comp=N,1557µm,0.2s						
LTHK				AML	AML	13 09 21.0	
	comp=E,1043µm,0.5s						
RLS	Riolos of Patr	0.90	102	P	Pg	13 09 12.1	-0.6
PVO	Paravola	0.98	68	P	Pg	13 09 14.6	+0.2
PVO	Paravola	0.98	68	P	Pg	13 09 14.6	+0.2
PVO				S	Sn	13 09 28.5	+0.1
DRO	Drossia	1.11	105	P	Pb	13 09 16.1	-0.1
DRO				S	Sn	13 09 31.9	+0.4
DRO				AML	AML	13 09 41.6	
	comp=E,407µm,0.3s						
DRO				AML	AML	13 09 44.8	
	comp=N,308µm,0.4s						
LAKA	Lakka	1.27	90	P	Pn	13 09 18.7	0.0
LAKA				S	Sg	13 09 36.9	+0.3
LAKA				AML	AML	13 09 38.8	
	comp=E,507µm,0.6s						
LAKA				AML	AML	13 09 39.7	
	comp=N,711µm,0.4s						
IGT	Igoumenitsa	1.28	359	P	Pg	13 09 20.4	+0.5
KLV	Kalavryta, Ach	1.43	98	P	Pb	13 09 21.5	-0.3
STON	Ston	5.04	337	ePn	Pn	13 10 10.2	-0.1
STON				Sn	Sn	13 11 04.3	-4.0
LSTV	Lastovo	5.22	331	ePn	Pn	13 10 13.7	+0.8
KIJV	Kijevo	6.47	334	ePn	Pn	13 10 31.4	+1.2
KIJV				Sn	Sn	13 11 42.7	-1.1
MORI	Morici	6.62	329	ePn	Pn	13 10 33.2	+1.1

*TRN **02** 13:13:31.1, 11°.01N×62°.33W, h8km, MD3.7*
*NEIC **02** 13:13:31.1±2.4, 10°.81N±0°.09×62°.23W±0°.08, h93km±10km, mb4.2/7, Error ellipse: s-maj=14.0km s-min=9.7km az=148.0*
*FUNV **02** 13:13:32.8, 10°.83N×62°.30W, h26km, MW4.1*
*IDC **02** 13:13:34.7±10.0, 11°.17N×62°.59W, h112km±58km, mb3.4/5, mbtmp3.8/5, MS3.3/1, Error ellipse: s-maj=134.7km s-min=29.5km az=174.0*

ISC 02 13:13:31.3±0.8**, 10°.88N**±0°.04×**62°.39W**±0°.04**, h92km**±8km**, n84, σ1.59**/111**, mb4.0**/9**, 1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.85	257	⇓iP	Pn	13 13 50.1	+0.6
CRUV				eS	Sn	13 14 02.1	-1.1
TRN	Trinidad (W)	1.00	103	eP	Pn	13 13 50.7	-0.4
TRN				eS	Sn	13 14 03.4	-2.6
TPP	Pointe-a-Pierr	1.08	121	eP	Pn	13 13 53.2	+1.2
GRFF	Grenada Fort F	1.33	29	eP	Pn	13 13 54.4	-0.7
GRFF				eS	Sn	13 14 11.6	-1.4
TBH	Brigand Hill	1.36	107	eP	Pn	13 13 56.6	+1.2
TBH				eS	Sn	13 14 15.6	+2.0
GRGR	Grenville	1.44	30		Pn	13 13 55.8	-0.7
GRGR	Grenville	1.44	30	eP	Pn	13 13 56.0	-0.4
GRGR				eS	Sn	13 14 14.1	-1.4
COAV	Cumanacoa	1.58	243	eP	Pn	13 14 00.4	+2.1
TPR	Prospect	1.61	79	eP	Pn	13 13 59.7	+1.1
TPR				eS	Sn	13 14 19.4	+0.1
BOT	Bacolet	1.67	80	eP	Pn	13 14 00.1	+0.8
BOT				eS	Sn	13 14 20.6	0.0
CUMV	Cumana_UDO	1.83	256	eP	Pn	13 14 03.1	+1.8
CUMV				eS	Sn	13 14 25.5	+1.4
GCMP	Grenada, Carri	1.86	30	eP	Pn	13 14 01.6	-0.1
GCMP				eS	Sn	13 14 23.7	-1.2
TOSP	Speyside	1.87	77	Pn	Pn	13 14 00.6	-1.3
TOSP	Speyside	1.87	77	eP	Pn	13 14 01.3	-0.6
TOSP				eS	Sn	13 14 24.7	-0.5
PCRV	Puerto La Cruz	2.31	253	eP	Pn	13 14 09.8	+2.0
PCRV				eS	Sn	13 14 37.1	+1.4
SVB	Belmont	2.63	25	Pn	Pn	13 14 11.3	-0.7
SVB	Belmont	2.63	25	eP	Pn	13 14 11.8	-0.1
SVB				eS	Sn	13 14 43.6	+0.5
PRGV	PARIAGUAN	3.06	227	eP	Pn	13 14 18.8	+1.1
PRGV				eS	Sn	13 14 53.4	0.0
MCLT	Moule a Chique	3.15	27	Pn	Pn	13 14 18.8	-0.2
MCLT	Moule a Chique	3.15	27	eP	Pn	13 14 19.1	+0.1
MCLT				eS	Sn	13 14 55.5	-0.2
SLBI	Saint Lucia, B	3.42	24	eP	Pn	13 14 23.5	+1.0
SLBI				eS	Sn	13 15 02.8	+0.6
BBGH	Gun Hill	3.57	51	eP	Pn	13 14 25.8	+1.2
BBSP	Saint Philip	3.63	52	eP	Pn	13 14 27.3	+1.9
BIRV	Birongo	3.83	264		Pn	13 14 30.9	+2.8
BIRV	Birongo	3.83	264	eP	Pn	13 14 31.0	+2.8
BIRV				eS	Sn	13 15 13.6	+1.4
H05S1	Guadeloupe/Mar	3.84	23	P	Pn	13 14 29.3	+1.0
H05S1				S	Sn	13 15 08.9	-3.5
BIM	Bigot	3.84	19	Pn	Pn	13 14 28.0	-0.3
BIM	Bigot	3.84	19	eP	Pn	13 14 28.6	+0.3
BIM				eS	Sn	13 15 11.3	-1.1
MPOM	Morne Pois Mar	3.85	23	Pn	Pn	13 14 28.9	+0.5
MPOM	Morne Pois Mar	3.85	23	eP	Pn	13 14 28.8	+0.5
MPOM				eS	Sn	13 15 11.9	-0.7
ZAM	Aeronautique	3.91	20	eP	Pn	13 14 30.2	+1.0
FDF	Fort de France	4.02	17	Pn	Pn	13 14 30.3	-0.4
FDF	Fort de France	4.02	17	eP	Pn	13 14 31.5	+0.7
GBMF	Grand Be	4.08	17	eP	Pn	13 14 31.3	-0.3
BAMF	Morne Balai	4.10	17	eP	Pn	13 14 32.2	+0.4
SVN	Savane Anatole	4.12	17		Pn	13 14 32.0	-0.1
ILAM	Ilet Lapin Mar	4.15	21	Pn	Pn	13 14 30.8	-1.7
ILAM	Ilet Lapin Mar	4.15	21	eP	Pn	13 14 32.6	+0.2
ILAM	Ilet Lapin Mar	4.15	21	eS	Sn	13 15 19.6	-0.2
MERV	Las Mercedes	4.17	248	eP	Pn	13 14 34.3	+1.5
MERV				eS	Sn	13 15 20.1	-0.3
FUNV	FUNVISIS	4.36	265	eP	Pn	13 14 37.5	+2.1
FUNV				eS	Sn	13 15 25.2	0.0
DSLB	Salisbury	4.63	12	eP	Pn	13 14 40.5	+1.4
TDBA	Terre de Bas,	5.00	8	Pn	Pn	13 14 46.1	+2.1
TDBA	Terre de Bas,	5.00	8	eP	Pn	13 14 45.3	+1.4
TBG	Guadaloupe-3	5.00	8	eP	Pn	13 14 45.5	+1.5
MAGL	Barre de l'ile	5.16	12	Pn	Pn	13 14 48.5	+2.4
MAGL	Barre de l'ile	5.16	12	eP	Pn	13 14 47.9	+1.8
BENV	Beln	5.20	260	eP	Pn	13 14 48.1	+1.2
BENV				eS	Sn	13 15 44.6	-1.0
CBE	Ff, Capester	5.22	8	Pn	Pn	13 14 47.8	+0.8
CBE	Ff, Capester	5.22	8	eP	Pn	13 14 48.6	+1.6
CACV	CAICARA DEL OR	5.25	232	eP	Pn	13 14 42.2	-5.2
CACV				eS	Sn	13 15 35.8	-11
TURV	Turiamo	5.37	266	eP	Pn	13 14 51.2	+2.2
TURV				eS	Sn	13 15 48.8	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDSD	La Dsirade Is	5.56	13	Pn	Pn	13 14 53.1	+1.5
ABD	La Joyeuse, An	5.63	9	eP	Pn	13 14 54.7	+2.0
BAUV	El Baul	5.89	251		Pn	13 14 57.0	+0.9
BAUV	El Baul	5.89	251	eP	Pn	13 14 56.7	+0.6
BAUV				eS	Sn	13 15 59.7	-2.6
MAPV	Macapo	6.06	261	eP	Pn	13 14 59.6	+1.2
MAPV				eS	Sn	13 16 04.8	-1.6
ANBD	Bethesda, Anti	6.17	6	eP	Pn	13 15 01.4	+1.6
CURV	Curarigua	7.49	264	eP	Pn	13 15 20.5	+2.5
CURV				eS	Sn	13 16 38.9	-2.7
PAYV	Puerto Ayacuch	7.52	224	eP	Pn	13 15 18.3	0.0
PAYV				eS	Sn	13 16 36.5	-5.5
STVI	Saint Thomas	7.83	342	Pn	Pn	13 15 23.8	+1.2
CUPR	Culebra, Puert	7.90	340	Pn	Pn	13 15 23.6	+0.2
CBYP	Canovanas	8.08	336	Pn	Pn	13 15 26.5	+0.5
CELP	Cerrillos	8.22	331	Pn	Pn	13 15 30.4	+2.5
AOPR	Arecibo Observ	8.54	331	Pn	Pn	13 15 34.5	+2.2
BOAV	Boa Vista	8.63	167		Pn	13 15 31.7	-1.8
SOCV	Socops	8.73	254	eP	Pn	13 15 35.0	+0.1
SOCV				eS	Sn	13 17 06.8	-5.0
BANI	BANI	10.73	315	Pn	Pn	13 16 06.0	+3.8
SDDR	Presa de Saban	11.78	314	Pn	Pn	13 16 20.0	+3.7
TXAR	Lajitas Array	42.61	302	P	P	13 21 18.3	-0.5
	0.4nm,0.6s,baz=118,slow=11,SNR=6.7						
TXAR				PcP	PcP	13 23 08.8	-0.8
	0.3nm,0.6s,baz=120,slow=5.3,SNR=4.8						
	0.4nm,0.6s						
SCHQ	Schefferville	43.99	356	P	P	13 21 28.8	-0.6
SCHQ				IAmb	IAmb	13 21 30.4	
	comp=Z,5.8nm,1.1s						
SDCO	Great Sand Dun	46.94	312	P	P	13 21 52.7	-0.7
PD31	Pinedale Array	51.78	317	P	P	13 22 28.8	-1.3
PD31				IAmb	IAmb	13 22 29.1	
	comp=Z,0.9nm,0.6s						
PDAR	Pinedale Array	51.78	317	P	P	13 22 28.5	-1.6
	comp=Z,0.8nm,0.6s,baz=116,slow=10,SNR=8.6						
	comp=Z,0.8nm,0.6s						
PDAR	Pinedale Array	51.78	317	P	P	13 22 28.8	-1.3
BW06	Boulder Array	51.79	317	P	P	13 22 28.6	-1.5
BW06				IAmb	IAmb	13 22 29.1	
	comp=Z,1.0nm,0.6s						
YHL	Hebgen Lake	53.70	318	P	P	13 22 44.3	+0.1
YHL				IAmb	IAmb	13 22 44.9	
	comp=Z,2.0nm,0.7s						
RPN	Rapa Nui	59.16	229	LR	LR	13 46 31.8	
	comp=Z,26nm,18.6s,baz=168,slow=33						
LLLB	Lillooet	62.47	322	P	P	13 23 45.1	+0.1
LLLB				IAmb	IAmb	13 23 50.7	
	comp=Z,2.1nm,0.7s						
NOA	NORSAR Array B	72.62	29	P	P	13 24 49.9	+1.1
	comp=Z,0.9nm,0.8s,baz=280,slow=4.1,SNR=2.3						
	comp=Z,0.9nm,0.8s						
ILAR	Eielson Array	77.89	334	P	P	13 25 17.2	-1.6
	comp=Z,0.2nm,0.6s,baz=85,slow=5.1,SNR=2.0						
	comp=Z,0.2nm,0.6s						
FINES	FINESS Array B	79.80	29	P	P	13 25 29.6	+0.2
	comp=Z,1.2nm,0.5s,baz=256,slow=2.9,SNR=12						
	comp=Z,1.2nm,0.5s						
FINES	FINESS Array B	79.80	29	P	P	13 25 29.4	+0.1
FIA1	FINESS Array S	79.81	29	P	P	13 25 29.6	+0.3

*IDC **02** 13:19:33.1±3.3, 33°03S×69°97W, h93km±31km, mb3.3/3, mbtmp3.6/6, Error ellipse: s-maj=40.2km s-min=28.7km az=103.0*

*GUC **02** 13:19:34.3±0.7, 32°99S×70°22W, h104km±3km, ML3.8*

ISC 02 13:19:33.9±0.8**, 32°99S**±0°04×**70°21W**±0°07**, h102**km±6km**, n27,** σ**0s83**/46**, mb3.5**/3**, 11C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FCH	Farellones	0.34	191	⇓iP	Pn	13 19 49.7	+0.3
FCH				iS	Sn	13 20 01.6	+0.7
FCH				IAML		13 20 02.4	
	comp=N,7µm,0.2s						
VA03	San Esteban	0.36	308	⇓iP	Pn	13 19 49.4	+0.2
VA03				iS	Sn	13 20 01.2	+0.6
PEL	Peldehue	0.42	249	eP	Pn	13 19 49.1	-0.4
PEL				eS	Sn	13 20 01.3	+0.1
PEL				IAML		13 20 02.6	
	comp=E,14µm,0.2s						
MT03	Universidad Ad	0.56	206	⇑iP	Pn	13 19 50.9	+0.4
MT03				eS	Sn	13 20 02.5	-0.4
MT05	Renca	0.59	228	⇑iP	Pn	13 19 50.9	+0.2
MT05				eS	Sn	13 20 03.1	-0.2
MT05				IAML		13 20 05.6	
	comp=E,9µm,0.2s						
ROCH	El Roble	0.67	271	⇑iP	Pn	13 19 51.7	+0.2
ROCH				iS	Sn	13 20 05.1	+0.4
ROCH				IAML		13 20 06.0	
	comp=E,6µm,0.3s						
MT02	Curacav	0.82	251	⇑iP	Pn	13 19 52.7	+0.1
MT02				iS	Sn	13 20 06.8	0.0
LMEL	Las Melosas	0.85	179	⇑iP	Pn	13 19 53.8	+0.6
LMEL				iS	Sn	13 20 09.3	+1.6
LMEL				IAML		13 20 14.9	
	comp=N,2µm,0.2s						
MT09	Talagante	1.02	219	⇑iP	Pn	13 19 55.0	+0.2
MT09				iS	Sn	13 20 11.0	+0.4
MT09				IAML		13 20 11.5	
	comp=E,3µm,0.3s						
VA01	Torpederas	1.21	268	eP	Pn	13 19 56.7	-0.1
VA01				iS	Sn	13 20 13.8	-0.2
VA01				IAML		13 20 19.3	
	comp=N,1µm,0.3s						
MT01	Popeta	1.23	225	⇑iP	Pn	13 19 56.8	-0.2
MT01				iS	Sn	13 20 14.5	-0.1
MT01				IAML		13 20 17.8	
	comp=E,1µm,0.2s						
VA05	Santo Domingo	1.35	240	⇑eP	Pn	13 19 58.5	+0.1
VA05				iS	Sn	13 20 17.5	+0.5
VA05				IAML		13 20 21.9	
	comp=N,2µm,0.2s						
BO01	Tunca	1.58	207	⇑iP	Pn	13 20 01.3	+0.1
BO01				eS	Sn	13 20 21.9	0.0
BO01				IAML		13 20 25.7	
	comp=E,540nm,0.2s						
BO02	Sierra Bellavi	1.86	195	⇑iP	Pn	13 20 05.7	+0.9
BO02				iS	Sn	13 20 30.2	+1.8
BO02				IAML		13 20 33.5	
	comp=N,2µm,0.3s						
CO02	Combarbal	1.90	339	eP	Pn	13 20 05.8	+0.3
CO02				eS	Sn	13 20 29.9	+0.5
CO02				IAML		13 20 32.3	
	comp=N,2µm,0.2s						
BO03	Pichilemu	2.09	224	⇑iP	Pn	13 20 06.9	-0.9
BO03				eS	Sn	13 20 32.1	-1.4
BO03				IAML		13 20 43.3	
	comp=E,357nm,0.3s						
CO03	El Pedregal	2.18	349	eP	Pn	13 20 10.3	+1.2
CO03				eS	Sn	13 20 35.8	-0.1
CO03				IAML		13 20 38.5	
	comp=E,445nm,0.2s						
GO05	Huala	2.47	215	eP	Pn	13 20 11.9	-0.7
GO05				eS	Sn	13 20 42.8	+0.4
GO05				IAML		13 20 50.4	
	comp=N,344nm,0.3s						
GO04	Tololo Observa	2.85	350	eP	Pn	13 20 18.0	0.0
GO04				iS	Sn	13 20 52.2	+0.3
GO04				IAML		13 21 01.6	
	comp=E,688nm,0.4s						
PLCA	Paso Flores	7.73	182	P	Pn	13 21 22.8	-0.9
	comp=E,0.5nm,0.5s,baz=351,slow=10.0,SNR=7.3						
CPUP	Villa Florida	13.02	63	P	Pn	13 22 31.8	-3.1
	comp=E,1.0nm,0.4s,baz=229,slow=11,SNR=2.0						
LPAZ	La Paz	16.74	7	P	Pn	13 23 22.9	+0.1
	comp=E,0.8nm,0.5s,baz=153,slow=6.8,SNR=2.5						
TXAR	Lajitas Array	69.63	329	P	P	13 30 33.1	+0.8
	comp=E,0.2nm,0.4s,baz=147,slow=10,SNR=4.3						
	comp=E,0.2nm,0.4s						
TORD	Torodi Ar. Bea	82.43	69	P	P	13 31 45.0	-0.2
	comp=E,0.4nm,0.5s,baz=267,slow=5.1,SNR=2.0						
	comp=E,0.4nm,0.5s						
NVAR	Mina Array Bea	83.95	324	P	P	13 31 54.5	+1.8
	comp=E,0.4nm,0.7s,baz=143,slow=6.2,SNR=3.1						
	comp=E,0.4nm,0.7s						
WRA	Warramunga Arr	122.37	208	PKP	PKPdf	13 38 17.6	-0.1
	comp=E,0.2nm,0.6s,baz=150,slow=1.7,SNR=8.0						
ZALV	Zalesovo Beam	152.56	33	PKPbc	PKPbc	13 39 17.9	+0.2
	comp=E,1.6nm,0.4s,baz=319,slow=3.8,SNR=7.0						

*DJA **02** 13:35:06.7±0.3, 3°N±2°×12°7E±°, h48km±5km, M4.2/16, mb4.3/13, mB4.8/6, MLv4.2/16, Mw(mB)4.1/6*

*IDC **02** 13:35:06.4±2.3, 2°81N×127°18E, h49km±23km, mb3.9/14, mbtmp4.1/15, ML4.3/1, MS3.3/10, Error ellipse: s-maj=29.3km s-min=10.0km az=69.0*

*NEIC **02** 13:35:08.5±1.7, 2°85N±0°07×127°32E±0°09, h65km±4km, mb4.5/31, Error ellipse: s-maj=13.4km s-min=8.7km az=67.0*

ISC 02 13:35:06.9±0.4**, 2°90N**±0°04×**127°30E**±0°06**, h49**km**, n84,** σ**1s67**/93**, mb4.4**/31**, MS3.4**/8**, 2C-6D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.93	294	P	Pn	13 35 36.9	-0.4
SGSI				S	Sn	13 36 00.9	+0.4
TNTI	Ternate	2.12	178	Pn	Pn	13 35 39.9	0.0
TNTI	Ternate	2.12	178	P	Pn	13 35 40.6	+0.7
TNTI				S	Sn	13 36 05.6	+0.6
LBMI	Labuha	3.52	177	P	Pn	13 35 59.6	+0.4
LBMI				S	Sn	13 36 43.0	+3.4
DDMP	Don Marcelino,	3.55	334	⇓eP	Pn	13 35 58.8	-0.8
DDMP				eS	Sn	13 36 41.8	+1.4
GSPH	General Santos	3.94	324	⇑iP	Pn	13 36 05.4	+0.5
GSPH				iS	Sn	13 36 48.7	-1.3
KMSI	Cibinong	4.05	235	P	Pn	13 36 06.9	+0.6
MATI	Mati	4.15	346	⇓eP	Pn	13 36 09.3	+1.6
MATI				eS	Sn	13 37 03.4	+8.4
DAV	Davao City (W)	4.48	338	LR	LR	13 38 28.4	
	comp=Z,227nm,19.1s,baz=350,slow=45						
SKMP	Bagumbayan, Su	4.52	323	⇓eP	Pn	13 36 12.7	-0.2
SKMP				eS	Sn	13 37 03.2	-1.1
KCP	Kidapawan	4.64	332	⇓eP	Pn	13 36 16.5	+2.0
KCP				iS	Sn	13 37 11.2	+4.1
SANI	Sanana	5.09	195	P	Pn	13 36 19.9	-0.8
	0.2nm2µm19nm,0.9s						
CTBH	Cotabato--PC H	5.26	325	⇑eP	Pn	13 36 22.8	-0.2
BUKP	Musuan	5.42	336	⇓eP	Pn	13 36 26.0	+0.7
SWI	Sorong	5.44	133	P	Pn	13 36 26.5	+1.0
	0.2nm797nm48nm,0.6s						
SWI				S	Sn	13 37 26.7	-0.2
	0.2nm797nm48nm,0.6s						
SIJI	Sorong	5.45	133	P	Pn	13 36 27.0	+1.3
	9.8nm,0.3s,baz=329,slow=22,SNR=34						
SIJI				S	Sn	13 37 28.0	+0.8
	7.6nm,0.5s,baz=197,slow=19,SNR=1.4						
SIJI				LR	LR	13 38 48.2	
	comp=Z,282nm,21.5s,baz=298,slow=40						
	31nm,0.4s						
MRSI	Marisa	5.88	246	P	Pn	13 36 33.7	+2.2
	0.2nm691nm63nm,0.6s						
LUWI	Luwuk	5.99	229	Pn	Pn	13 36 35.2	+2.2
LUWI	Luwuk	5.99	229	P	Pn	13 36 34.5	+1.5
	0.4nm2µm74nm,1.1s						
NLAI	Namlea	6.10	182	P	Pn	13 36 36.1	+1.5
	0.1nm23nm,0.8s						
NLAI				S	Sn	13 37 44.3	+1.1
	0.1nm23nm,0.8s						
TOLI2	Tolitoli	6.75	255		Pn	13 36 44.0	+0.4
APSI	Ampana	6.80	236	P	Pn	13 36 46.1	+1.9
	0.1nm393nm16nm,0.6s						
FAKI	Fak Fak	7.61	139	Pn	Pn	13 36 56.3	+1.0
FAKI	Fak Fak	7.61	139	P	Pn	13 36 55.9	+0.7
	0.1nm29nm,1.1s						
MPSI	Mapaga	7.83	251	P	Pn	13 36 59.8	+1.6
	0.1nm11nm,0.9s						
MYLDM	Lahad Datu	9.07	285		Pn	13 37 18.5	+3.3
SBUM	Sibu	15.07	269		P	13 38 39.8	-1.5
MTN	Manton Dam	16.10	166	P	Pn	13 38 51.8	+1.7
KNRA	Kununurra	18.52	176	P	P	13 39 18.5	-0.9
GUMO	Guam	20.35	58	LR	LR	13 45 57.8	
	comp=Z,50nm,21.2s,baz=242,slow=32						
FITZ	Fitzroy Crossi	20.93	184	P	P	13 39 43.6	-2.0
	3.5nm,0.8s,baz=13,slow=10,SNR=9.7						
	3.5nm,0.8s						
FITZ	Fitzroy Crossi	20.93	184	P	P	13 39 45.0	-0.6
YULB	Yu-li	21.18	345	P	P	13 39 45.4	-2.9
YULB				IAmb	IAmb	13 39 46.8	
	comp=Z,17nm,1.0s						
TPUB	Ta-pu	21.28	343	P	P	13 39 46.9	-2.5
WB0	Warramunga Arr	23.58	163	P	P	13 40 11.6	-1.7
WB0				IAmb	IAmb	13 40 16.1	
	comp=Z,13nm,1.1s						
WRAB	Tennant Creek	23.73	163	P	P	13 40 12.9	-1.8
WRAB				IAmb	IAmb	13 40 18.9	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	23.73	163	P	P	13 40 12.8	-1.9
	comp=Z,3.7nm,0.5s,baz=344,slow=9.9,SNR=42						
WRA				S	S	13 44 26.2	-0.5
	comp=Z,0.2nm,0.8s,baz=340,slow=17,SNR=1.6						
	comp=Z,3.7nm,0.5s						
WB2	Warramunga Arr	23.73	163	P	P	13 40 13.1	-1.7
WB2				IAmb	IAmb	13 40 27.4	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	23.81	163	P	P	13 40 13.8	-1.6
WR0				IAmb	IAmb	13 40 16.1	
	comp=Z,14nm,1.1s						
MBWA	Marble Bar	25.04	197	P	P	13 40 26.2	-0.4
MBWA				IAmb	IAmb	13 40 28.6	
	comp=Z,34nm,1.4s						
PSA00	Pilbara Seismi	25.40	196	P	P	13 40 30.0	+0.1
PSA00				IAmb	IAmb	13 41 02.7	
	comp=Z,30nm,1.4s						
KULM	Kulim	26.69	276	P	P	13 40 41.2	-0.5
KULM				IAmb	IAmb	13 40 46.8	
	comp=Z,28nm,1.5s						
AS31	Alice Springs	27.18	167	P	P	13 40 44.5	-1.5
ASAR	Alice Springs	27.18	167	P	P	13 40 44.5	-1.6
	comp=Z,0.9nm,0.5s,baz=346,slow=7.4,SNR=34						
ASAR				PcP	PcP	13 44 05.8	+0.1
	comp=Z,0.7nm,0.6s,baz=357,slow=2.4,SNR=8.0						
	comp=Z,0.9nm,0.5s						
JCJ	Chichijima	27.96	29	LR	LR	13 51 16.1	
	comp=Z,24nm,20.5s,baz=100,slow=34						
NJ2	Nanjing	30.07	346	eP	P	13 41 10.8	-0.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	31.78	301	P	P	13 41 26.2	-0.7
	comp=Z,1.1nm,0.6s,baz=106,slow=6.7,SNR=7.3						
	comp=Z,1.1nm,0.6s						
JHJ	Hachijo jima 2	32.25	20	LR	LR	13 53 10.7	
	comp=Z,25nm,20.6s,baz=162,slow=34						
FORT	Forrest	33.50	179	P	P	13 41 41.1	-0.6
MORW	Morawa	33.58	198	P	P	13 41 41.7	-0.8
KSRS	Korea Array	34.39	1	P	P	13 41 49.1	-0.3
	comp=Z,1.6nm,1.0s,baz=183,slow=9.4,SNR=8.0						
	comp=Z,1.6nm,1.0s						
MJAR	Matsushiro Arr	34.95	15	P	P	13 41 53.0	-1.3
	comp=Z,0.8nm,0.7s,baz=186,slow=9.8,SNR=2.7						
	comp=Z,0.8nm,0.7s						
HNS	HongShan	36.23	343	⇓P	P	13 42 05.4	+0.2
HNS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BBOO	Buckleboo	36.47	168	P	P	13 42 06.3	-1.1
NWAO	Narrogin (SRO)	36.89	194	P	P	13 42 10.6	-0.3
STKA	Stephens Creek	37.16	160	P	P	13 42 12.3	-0.9
	comp=Z,4.1nm,0.5s,baz=337,slow=8.4,SNR=9.8						
STKA				LR	LR	14 00 50.9	
	comp=Z,82nm,19.8s,baz=207,slow=42						
	comp=Z,4.1nm,0.5s						
STKA	Stephens Creek	37.16	160	P	P	13 42 11.8	-1.4
ARMA	Armidale	40.47	147	P	P	13 42 40.6	-0.5
CAN	Canberra	43.12	154	P	P	13 43 02.6	0.0
SONM	Songino Array	48.26	341	P	P	13 43 43.9	+0.8
	comp=Z,1.1nm,0.4s,baz=147,slow=8.2,SNR=10.0						
	comp=Z,1.1nm,0.4s						
SONM	Songino Array	48.26	341	P	P	13 43 44.8	+1.7
SONM				IAmb	IAmb	13 43 45.5	
	comp=Z,4.2nm,1.2s						
HYBB	Hyderabad (bro	49.94	290	eP	P	13 43 55.5	-0.8
HYBB				esP	sP	13 44 20.0	+5.5
HYBB				ePP	PP	13 45 52.5	+0.8
HYBB				eS	S	13 51 02.5	-1.2
PETK	Petropavlovsk-	55.98	22	P	P	13 44 41.8	+1.5
	comp=Z,0.6nm,0.5s,baz=212,slow=10,SNR=3.1						
	comp=Z,0.6nm,0.5s						
MK31	Makanchi Array	58.56	325	P	P	13 44 58.1	-0.5
MK31				IAmb	IAmb	13 44 59.6	
	comp=Z,2.7nm,1.2s						
MKAR	Makanchi Array	58.56	325	P	P	13 44 58.1	-0.4
	comp=Z,0.9nm,0.4s,baz=121,slow=7.8,SNR=22						
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	58.56	325	P	P	13 44 58.0	-0.6
MAKZ	Makanchi	58.74	325	P	P	13 44 59.5	-0.3
MAKZ				IAmb	IAmb	13 45 00.9	
	comp=Z,5.3nm,1.4s						
ZAA0	Zalesovo Array	61.58	333	P	P	13 45 18.2	-0.9
ZAA0				IAmb	IAmb	13 45 19.6	
	comp=Z,6.9nm,1.1s						
ZALV	Zalesovo Beam	61.58	333	P	P	13 45 18.1	-1.0
	comp=Z,1.0nm,0.4s,baz=114,slow=6.6,SNR=9.3						
	comp=Z,1.0nm,0.4s						
AFI	Afiamalu	62.66	107	LR	LR	14 11 58.3	
	comp=Z,16nm,18.4s,baz=261,slow=35						
KURK	Kurchatov	62.74	328	P	P	13 45 26.9	-0.1
KURK				IAmb	IAmb	13 45 28.1	
	comp=Z,7.7nm,0.9s						
KKAR	Karatay Array	64.22	317	P	P	13 45 35.9	-1.0
BRVK	Borovoye	68.39	327	P	P	13 46 03.1	-0.3
BRVK				IAmb	IAmb	13 46 04.6	
	comp=Z,9.5nm,0.9s						
TIXI	Tiksi	68.66	1	P	P	13 46 04.4	-0.3
TIXI				IAmb	IAmb	13 46 05.2	
	comp=Z,10nm,1.0s						
ABKAR	Akbulak array	73.15	321	P	P	13 46 32.0	-0.4
ABKAR				IAmb	IAmb	13 46 33.3	
	comp=Z,3.4nm,0.8s						
AKTO	Aktyubinsk	74.66	322	P	P	13 46 41.1	-0.1
	comp=Z,3.8nm,0.7s,baz=102,slow=6.6,SNR=15						
AKTO				LR	LR	14 21 32.5	
	comp=Z,26nm,18.5s,baz=109,slow=37						
	comp=Z,3.8nm,0.7s						
ARU	Arti	75.94	328	P	P	13 46 48.1	-0.3
	comp=Z,2.1nm,0.3s,baz=49,slow=4.2,SNR=5.4						
	comp=Z,2.1nm,0.3s						
J20K	Nowinta River	82.41	26	P	P	13 47 24.4	+0.8
J20K				IAmb	IAmb	13 47 31.1	
	comp=Z,5.4nm,1.3s						
VNDA	Vanda	82.54	173	P	P	13 47 24.6	+0.6
IMAR	Indian Mountai	82.86	24	P	P	13 47 26.7	+0.8
PPT	Papeete	84.32	108	LR	LR	14 22 36.4	
	comp=Z,33nm,19.9s,baz=10,slow=34						
BMAR	Burnt Mountain	86.61	23	P	P	13 47 44.6	-0.3
ARCES	ARCESS Array B	91.42	340	P	P	13 48 06.0	-1.5
	comp=Z,1.8nm,0.9s,baz=70,slow=6.0,SNR=3.7						
	comp=Z,1.8nm,0.9s						
MLR	Muntele Rosu	95.89	316	LR	LR	14 37 42.2	
	comp=Z,22nm,18.3s,baz=23,slow=39						

KRSC 02 13:44:29.3±1.2**, 51°20N**×**158°32E, h44**km±17km**, ML4.1, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.63	346	eP	Pn	13 44 43.2	+1.3
KDTR				eS	Sn	13 44 51.9	+0.9
PAU	Pauzhetka	0.99	287	eP	Pn	13 44 47.8	+1.1
PAU				eS	Sn	13 44 59.9	+0.4
ASAK	Asacha	1.22	348	eP	Pn	13 44 51.6	+1.7
ASAK				eS	Sn	13 45 06.6	+1.3
RUS	Russkaya	1.24	5	eP	Pn	13 44 51.5	+1.3
RUS				eS	Sn	13 45 06.3	+0.5
MTVR	Mutnovka	1.29	356	eP	Pn	13 44 52.8	+1.8
MTVR				eS	Sn	13 45 08.8	+1.6
GRL	Gorelyy	1.37	354	eP	Pn	13 44 54.3	+2.3
GRL				eS	Sn	13 45 11.0	+2.0
SKR	Severo-Kuril's	1.49	251	eP	Pn	13 44 54.7	+1.2
SKR				eS	Sn	13 45 11.9	+0.2
KRMR	Karymshinskiy	1.64	356	eP	Pn	13 44 57.9	+2.3
KRMR				eS	Sn	13 45 18.8	+3.3
PET	Petropavlovsk	1.84	6	eP	Pn	13 45 00.5	+2.1
PET				eS	Sn	13 45 22.2	+1.8
DALK	Dalny	1.86	8	eP	Pn	13 45 00.8	+2.2
DALK				eS	Sn	13 45 22.9	+2.1
APC	Apacha	1.87	338	eP	Pn	13 45 01.3	+2.5
UGLR	Uglovaya	2.04	9	eP	Pn	13 45 03.9	+2.7
NLC	Nalytchevo	2.08	17	eS	Sn	13 45 26.8	+0.6
AVH	Avacha	2.09	7	eP	Pn	13 45 04.8	+3.0
SMAR	Somma	2.09	8	eP	Pn	13 45 04.9	+2.9
KOK	Koryaka	2.11	5	eP	Pn	13 45 05.5	+3.4
SDLR	Sedlovina	2.11	9	eP	Pn	13 45 04.4	+2.2
KRER	Koryakskii	2.13	7	eP	Pn	13 45 05.4	+2.9
SPN	Mys Shipunski	2.17	28	eP	Pn	13 45 05.6	+2.7
KRX	Arik	2.17	5	eP	Pn	13 45 06.1	+3.0
GNL	Ganaly	2.51	355	eP	Pn	13 45 10.6	+2.9
KII	Karymskiy	2.93	13	eP	Pn	13 45 16.6	+3.3
MKZ	Mys Kozlova	3.95	30	eP	Pn	13 45 30.2	+3.0
TUMR	Tumrok	4.24	14	eP	Pn	13 45 36.3	+4.9
KBTR	Krutoberegovo	5.69	26	eP	Pn	13 45 54.9	+3.8

*NEIC **02** 13:51:35.6±1.1, 18°1S±0°3×178°1W±0°2, h624km±20km, mb4.3/18, Error ellipse: s-maj=40.2km s-min=25.3km az=206.0*

*IDC **02** 13:51:36.9±1.8, 18°27S×178°34W, h624km±19km, mb3.0/5, mbtmp4.0/7, Error ellipse: s-maj=26.6km s-min=23.4km az=132.0*

ISC 02 13:51:35.3±0.9**, 18°2S**±0°2×**178°2W**±0°1**, h600**km**, n33,** σ**1s24**/35**, mb4.2**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.62	277	P	P	13 53 01.2	+2.9
	24nm,0.7s,baz=137,slow=4.6,SNR=12						
MSVF	Nonsavu	3.62	277	P	P	13 53 01.0	+2.6
MARNC	Mare, Loyalty	13.37	254	P	P	13 54 28.0	+0.1
PINNC	Pines Island,	14.16	250	P	P	13 54 35.7	-0.1
DZM	Mont Dzumac	14.94	253	P	P	13 54 41.9	-1.1
	6.1nm,0.9s,baz=112,slow=19,SNR=2.1						
KOUNC	Koumac, New Ca	16.70	259	P	P	13 55 00.4	+1.2
KOUNC				IAmb	IAmb	13 55 05.2	
	comp=Z,23nm,1.0s						
URZ	Urewera	20.38	191	P	P	13 55 32.0	-0.3
	comp=Z,2.2nm,0.3s,baz=301,slow=24,SNR=24						
	comp=Z,2.2nm,0.3s						
BKZ	Black Stump Fm	21.37	191	P	P	13 55 41.0	-0.3
BFZ	Birch Farm	22.89	191	P	P	13 55 54.3	-0.4
QRZ	Quartz Range	23.90	198	P	P	13 56 05.3	+1.7
WKZ	Wanaka	28.61	199	P	P	13 56 44.6	-0.2
CTAO	Charters Tower	33.61	261	P	P	13 57 28.3	+0.5
TOO	Toolangi	37.14	231	P	P	13 57 57.8	+1.0
TOO				IAmb	IAmb	13 58 25.2	
	comp=Z,22nm,1.4s						
STKA	Stephens Creek	38.67	242	P	P	13 58 09.0	-0.2
	comp=Z,2.0nm,0.6s,baz=72,slow=9.6,SNR=4.4						
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	38.67	242	P	P	13 58 09.7	+0.5
BBOO	Buckleboo	43.44	241	P	P	13 58 46.5	-0.3
BBOO				IAmb	IAmb	13 59 22.9	
	comp=Z,36nm,1.5s						
WR0	Warramunga Arr	44.60	260	P	P	13 58 54.9	-1.0
WR0				IAmb	IAmb	13 58 59.1	
	comp=Z,6.6nm,1.1s						
WB0	Warramunga Arr	44.76	260	P	P	13 58 56.0	-1.2
WB0				IAmb	IAmb	13 59 08.2	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	44.78	260	P	P	13 58 55.7	-1.6
WB2				IAmb	IAmb	13 58 58.5	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	44.79	260	P	P	13 58 55.6	-1.8
	comp=Z,0.6nm,0.3s,baz=94,slow=7.2,SNR=37						
WRA				PcP	PcP	14 00 24.9	-1.3
	comp=Z,0.7nm,0.9s,baz=90,slow=3.5,SNR=6.0						
	comp=Z,0.6nm,0.3s						
AS31	Alice Springs	44.91	255	P	P	13 58 57.2	-1.1
ASAR	Alice Springs	44.91	255	P	P	13 58 57.2	-1.1
	comp=Z,3.4nm,0.6s,baz=86,slow=8.7,SNR=66						
ASAR				PcP	PcP	14 00 25.4	-1.3
	comp=Z,0.7nm,0.4s,baz=100,slow=4.1,SNR=11						
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	44.91	255	P	P	13 58 56.8	-1.5
MTN	Manton Dam	49.01	269	P	P	13 59 27.5	-1.6
MTN				IAmb	IAmb	14 00 04.9	
	comp=Z,26nm,1.5s						
FORT	Forrest	50.07	245	P	P	13 59 35.3	-1.2
FORT				IAmb	IAmb	13 59 39.7	
	comp=Z,9.4nm,0.8s						
KNRA	Kununurra	50.67	264	P	P	13 59 39.6	-1.5
KNRA				IAmb	IAmb	14 00 04.9	
	comp=Z,28nm,1.5s						
QSPA	South Pole Qui	71.83	180	P	P	14 01 59.6	+1.2
QSPA				IAmb	IAmb	14 02 03.1	
	comp=Z,10nm,1.4s						
NVAR	Mina Array Bea	79.50	44	P	P	14 02 41.3	+0.1
	comp=Z,0.2nm,0.6s,baz=231,slow=5.7,SNR=2.3						
	comp=Z,0.2nm,0.6s						
BELA	Belgrano 2	81.82	173	P	P	14 02 51.4	-0.9
VNA3	Neumayer Olymp	90.41	176	P	P	14 03 33.8	+0.4
VNA2	Neumayer--Watz	90.85	177	P	P	14 03 36.2	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=186,slow=4.0						
VNA1	Neumayer--Stat	91.08	177	P	P	14 03 36.7	+0.3
GERES	GERESS Array B	147.97	345	PKPbc	PKPbc	14 10 13.2	-1.0
	comp=Z,0.4nm,0.3s,baz=48,slow=1.5,SNR=4.5						

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*NEIC **02** 14:14:13.3±2.2, 21°.1S±0°.1×175°.99W±0°.10, h151km±3km, mb4.5/32, Error ellipse: s-maj=18.7km s-min=12.6km az=166.0*
*NOU **02** 14:14:14.3, 21°.26S×175°.81W, h166km, mb4.4/24, Tonga Islands*
*IDC **02** 14:14:18.1±2.6, 21°.16S×176°.24W, h192km±23km, mb3.6/10, mbtmp4.2/13, Error ellipse: s-maj=19.9km s-min=14.9km az=131.0*
ISC 02 14:14:18.4±0.5**, 21°.15S**±0°.09×**176°.20W**±0°.08**, h196**km**, n89,** σ1s.15/80**, mb4.2**/21**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	3.81	319	P	Pn	14 15 15.4	-2.3
NIUE	Niue	6.24	72	Pn	Pn	14 15 40.1	-8.6
NIUE	Niue	6.24	72	P	Pn	14 15 39.9	-8.9
MSVF	Nonsavu	6.40	301	P	Pn	14 15 51.5	+0.5
	17nm,0.6s,baz=40,slow=21,SNR=15						
MSVF	Nonsavu	6.40	301		Pn	14 15 48.7	-2.3
MSVF	Nonsavu	6.40	301	P	Pn	14 15 51.9	+0.9
AFI	Afiamalu	8.34	31	P	Pn	14 16 07.6	-8.7
	12nm,1.0s,baz=24,slow=17,SNR=1.7						
AFI				S	Sn	14 17 29.0	-21
	8.2nm,0.3s,baz=7.4,slow=11,SNR=1.9						
AFI	Afiamalu	8.34	31	Pn	Pn	14 16 07.7	-8.6
AFI	Afiamalu	8.34	31	P	Pn	14 16 12.0	-4.3
	22nm,1.1s						
MARNC	Mare, Loyalty	14.71	266		P	14 17 37.9	-0.5
MARNC	Mare, Loyalty	14.71	266	P	P	14 17 40.0	+1.6
RAR	Rarotonga	15.32	93	P	Pn	14 17 43.7	-1.1
	33nm,1.2s,baz=163,slow=5.4,SNR=3.5						
RAR				S	S	14 20 19.9	-15
	5.3nm,0.4s,baz=321,slow=13,SNR=1.6						
DZM	Mont Dzumac	16.17	264	P	Pn	14 17 56.4	+1.2
	23nm,0.7s,baz=74,slow=20,SNR=14						
DZM	Mont Dzumac	16.17	264	P	Pn	14 17 55.2	0.0
DZM				IAmb	IAmb	14 17 59.8	
	comp=Z,25nm,0.8s						
URZ	Urewera	18.01	197	P	P	14 18 12.5	-2.0
	comp=Z,5.0nm,0.4s,baz=301,slow=24,SNR=13						
URZ				S	S	14 21 16.9	-14
	comp=Z,3.4nm,0.4s,baz=121,slow=24,SNR=1.3						
URZ	Urewera	18.01	197	P	P	14 18 12.3	-2.1
URZ				IAmb	IAmb	14 18 34.9	
	comp=Z,16nm,1.1s						
URZ	Urewera	18.01	197	P	P	14 18 12.7	-1.8
KOUNC	Koumac, New Ca	18.25	268	Pn	Pn	14 18 19.6	-0.1
KOUNC				IAmb	IAmb	14 18 43.7	
	comp=Z,24nm,1.1s						
KOUNC	Koumac, New Ca	18.25	268	P	Pn	14 18 19.4	-0.3
BKZ	Black Stump Fm	19.02	198	P	P	14 18 22.1	-3.5
BKZ				IAmb	IAmb	14 19 03.3	
	comp=Z,24nm,1.3s						
BKZ	Black Stump Fm	19.02	198	P	P	14 18 23.7	-1.9
BFZ	Birch Farm	20.51	197	P	P	14 18 40.1	-1.3
QRZ	Quartz Range	21.83	204	P	P	14 18 52.6	-2.6
KHZ	Kahutara	22.89	200	P	P	14 19 03.3	-1.7
LTZ	Lake Taylor	23.64	202	P	P	14 19 10.8	-1.1
LTZ				IAmb	IAmb	14 19 14.8	
	comp=Z,15nm,0.7s						
RPZ	Rata Peaks	24.88	202	P	P	14 19 23.4	+0.3
	comp=Z,12nm,0.5s,baz=40,slow=1.1,SNR=14						
	comp=Z,12nm,0.5s						
RPZ	Rata Peaks	24.88	202	P	P	14 19 22.7	-0.4
EIDS	Eidsvold	30.31	256	P	P	14 20 11.8	+0.2
EIDS				IAmb	IAmb	14 20 53.9	
	comp=Z,20nm,1.5s						
ARMA	Armidale	30.32	246	P	P	14 20 12.7	+0.9
CAN	Canberra	33.57	238	P	P	14 20 39.7	-0.3
CAN	Canberra	33.57	238	P	P	14 20 41.5	+1.5
CTA	Charters Tower	35.11	265	P	P	14 20 54.6	+1.2
CTAO	Charters Tower	35.11	265	P	P	14 20 53.4	0.0
CTAO				IAmb	IAmb	14 20 54.5	
	comp=Z,7.0nm,0.7s						
CTAO	Charters Tower	35.11	265	P	P	14 20 54.7	+1.3
CMSA	Cobar Meteorol	35.53	245	P	P	14 20 57.9	+1.1
QLP	Quilpie	36.49	254	P	P	14 21 06.4	+1.4
TOO	Toolangi	36.90	235	P	P	14 21 08.2	-0.1
TOO				IAmb	IAmb	14 21 32.6	
	comp=Z,20nm,1.2s						
TOO	Toolangi	36.90	235	P	P	14 21 08.6	+0.2
MTSU	Mount Surprise	37.25	268	P	P	14 21 14.1	+2.6
TAU	Tasmania Unive	37.37	226	P	P	14 21 11.9	-0.3
MCQ	Macquarie Isla	38.24	203	P	P	14 21 20.1	+0.8
STKA	Stephens Creek	39.04	245	P	P	14 21 25.9	-0.4
	comp=Z,2.6nm,0.5s,baz=94,slow=9.1,SNR=9.1						
	comp=Z,2.6nm,0.5s						
STKA	Stephens Creek	39.04	245	P	P	14 21 26.5	+0.2
COEN	Coen	39.31	274	P	P	14 21 28.8	+0.1
COEN				IAmb	IAmb	14 21 30.2	
	comp=Z,13nm,0.9s						
COEN	Coen	39.31	274	P	P	14 21 29.3	+0.6
	comp=Z,15nm,1.3s						
INKA	Innaminka	39.59	252	P	P	14 21 31.8	+0.9
LCRK	Leigh Creek	41.84	248	P	P	14 21 49.7	+0.4
BBOO	Buckleboo	43.78	244	P	P	14 22 03.3	-1.5
BBOO				IAmb	IAmb	14 22 22.9	
	comp=Z,16nm,1.3s						
OOD	Oodnadatta	44.07	251	P	P	14 22 08.0	+0.8
WR0	Warramunga Arr	45.99	262	P	P	14 22 21.3	-1.2
AS31	Alice Springs	46.02	257	P	P	14 22 22.0	-0.6
ASAR	Alice Springs	46.02	257	P	P	14 22 22.0	-0.7
	comp=Z,6.2nm,0.7s,baz=91,slow=8.6,SNR=106						
ASAR				PcP	PcP	14 23 56.3	+0.4
	comp=Z,0.7nm,0.6s,baz=99,slow=3.6,SNR=5.4						
	comp=Z,6.2nm,0.7s						
ASAR	Alice Springs	46.02	257	P	P	14 22 21.4	-1.3
WB0	Warramunga Arr	46.17	263	P	P	14 22 23.0	-0.9
WB0				IAmb	IAmb	14 22 23.9	
	comp=Z,6.6nm,0.8s						
WB2	Warramunga Arr	46.17	262	P	P	14 22 22.7	-1.2
WB2				IAmb	IAmb	14 22 24.1	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	46.19	262	P	P	14 22 22.8	-1.2
	comp=Z,3.8nm,0.7s,baz=96,slow=7.7,SNR=39						
WRA				PcP	PcP	14 23 57.1	+0.6
	comp=Z,0.3nm,0.5s,baz=96,slow=3.5,SNR=2.4						
	comp=Z,3.8nm,0.7s						
WRA	Warramunga Arr	46.19	262	P	P	14 22 22.6	-1.4
FORT	Forrest	50.59	247	P	P	14 22 56.5	-0.9
KNRA	Kununurra	52.30	266	P	P	14 23 09.8	-0.5
FITZ	Fitzroy Crossi	54.62	262	P	P	14 23 26.5	-0.6
	comp=Z,2.1nm,1.0s,baz=104,slow=9.2,SNR=7.7						
	comp=Z,2.1nm,1.0s						
FITZ	Fitzroy Crossi	54.62	262	P	P	14 23 27.6	+0.4
FITZ				IAmb	IAmb	14 23 37.8	
	comp=Z,15nm,1.5s						
PSA00	Pilbara Seismi	59.17	257	P	P	14 23 58.3	-0.8
PSA00				IAmb	IAmb	14 24 00.9	
	comp=Z,10nm,1.1s						
MBWA	Marble Bar	59.36	257	P	P	14 23 59.1	-1.3
MORW	Morawa	61.15	248	P	P	14 24 11.6	-0.8
MORW				IAmb	IAmb	14 24 28.3	
	comp=Z,14nm,1.2s						
QSPA	South Pole Qui	68.92	180	P	P	14 25 03.1	+1.1
PETK	Petropavlovsk-	77.34	344	P	P	14 25 50.8	-0.3
	comp=Z,0.6nm,0.4s,baz=133,slow=8.6,SNR=6.6						
	comp=Z,0.6nm,0.4s						
NVAR	Mina Array Bea	80.35	42	P	P	14 26 08.3	+0.1
	comp=Z,0.4nm,0.7s,baz=218,slow=4.2,SNR=4.1						
	comp=Z,0.4nm,0.7s						
MAW	Mawson	81.52	199	P	P	14 26 14.2	+0.6
	comp=Z,2.0nm,0.7s,baz=121,slow=7.1,SNR=6.4						
	comp=Z,2.0nm,0.7s						
MAW	Mawson	81.52	199	P	P	14 26 14.7	+1.1
WISH	Wishkah	82.72	33	P	P	14 26 20.7	+0.7
H03S2	Juan Fernandez	84.23	124	T	T	15 58 55.9	
	baz=247						
H03S1	Juan Fernandez	84.25	124	T	T	15 58 58.8	
	baz=247						
H03S3	Juan Fernandez	84.25	124	T	T	15 58 55.9	
	baz=247						
H03N2	Juan Fernandez	84.37	124	T	T	15 59 03.9	
	baz=258,slow=71,SNR=10						
H03N3	Juan Fernandez	84.37	124	T	T	15 59 05.7	
	baz=258,slow=71,SNR=6.5						
H03N1	Juan Fernandez	84.39	124	T	T	15 59 06.3	
	baz=258,slow=71,SNR=5.9						
TXAR	Lajitas Array	85.99	57	P	P	14 26 38.1	+1.0
	comp=Z,0.8nm,1.0s,baz=215,slow=4.1,SNR=4.5						
	comp=Z,0.8nm,1.0s						
L27K	Beaver Creek,	88.19	15	P	P	14 26 46.1	-0.7
BCAR	Beaver Creek A	88.20	15	P	P	14 26 45.9	-0.9
CCB	Clear Creek Bu	88.29	12	P	P	14 26 47.1	0.0
IMAR	Indian Mountai	88.52	9	P	P	14 26 48.9	+0.7
ILAR	Eielson Array	88.58	12	P	P	14 26 48.5	0.0
	comp=Z,0.1nm,0.4s,baz=205,slow=5.1,SNR=1.9						
	comp=Z,0.1nm,0.4s						
J26L	Joseph Creek	89.03	14	P	P	14 26 51.5	+0.8
J26L				IAmb	IAmb	14 26 53.5	
	comp=Z,2.7nm,0.9s						
ARCES	ARCESS Array B	129.85	350	PKP	PKPdf	14 33 02.7	-1.0
	comp=Z,2.0nm,0.9s,baz=132,slow=1.8,SNR=5.2						
AKASG	Malin Array Be	144.38	332	PKP	PKPab	14 33 29.8	+0.2
	comp=Z,2.8nm,0.4s,baz=42,slow=4.4,SNR=26						
AKBB	Malin Array Si	144.38	332		PKPab	14 33 29.9	+0.2
BRTR	Keskin Array B	148.52	313	PKPbc	PKPbc	14 33 43.0	+0.6
	comp=Z,3.2nm,0.6s,baz=132,slow=3.7,SNR=7.6						
CLL	Collm	149.05	349	*i* PKPbc	PKPbc	14 33 43.8	+0.7
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	151.25	346	PKPbc	PKPbc	14 33 48.2	-0.4
	comp=Z,0.5nm,0.4s,baz=54,slow=6.8,SNR=5.2						

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*IDC **02** 14:15:08.9±0.8, 4°.97N×78°.38W, h0km, mb3.8/7, mbtmp3.9/10, ML3.0/3, MS3.2/6, Error ellipse: s-maj=28.9km s-min=16.8km az=58.0*
*NEIC **02** 14:15:10.4±2.2, 4°.91N±0°.03×78°.47W±0°.09, h10km±1km, mb4.2/11, Error ellipse: s-maj=14.8km s-min=4.8km az=83.0*
*RSNC **02** 14:15:11.1±1.3, 5°.01N×78°.44W, h32km±12km, ML3.3*
ISC 02 14:15:08.7±3.2**, 4°.98N**±0°.03×**78°.43W**±0°.04**, h5**km±21km**, n69,** σ2s.06/86**, mb4.1**/11**, MS3.3**/5**, 3C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	1.07	91	⇑*i*P	Pb	14 15 28.9	-0.8
PIZC				*e*S	Sb	14 15 42.1	-1.9
PIZC				*i*		14 15 47.6	
	comp=Z,797nm,0.4s						
MALC	Bahia Malaga	1.46	131	⇑*i*P	Pn	14 15 35.4	-0.4
MALC				*e*S	Sn	14 15 51.8	-3.4
SOLC	Bahia Solano	1.60	39	*e*P	Pn	14 15 36.2	-1.5
SOLC				*e*S	Sn	14 15 53.3	-5.5
GR1C	Gorgona, Isla	1.99	172	*e*P	Pn	14 15 41.2	-1.7
GR1C				*e*S	Sn	14 16 03.6	-4.7
GR1C				*i*		14 16 13.1	
	comp=Z,769nm,0.4s						
PLMC	San Jos del P	2.14	92	*e*P	Pn	14 15 44.4	-0.9
PLMC				*i*		14 16 11.6	
	comp=Z,292nm,0.5s						
PTAC	Punta Ardita,	2.24	16	*e*P	Pn	14 15 44.8	-1.7
PTAC				*i*		14 16 13.1	
	comp=Z,512nm,0.1s						
YOTC	Yotoco, Valle	2.31	115	⇑*i*P	Pn	14 15 46.7	-0.8
YOTC				*e*S	Sn	14 16 13.0	-3.4
YOTC				*i*		14 16 14.3	
	comp=Z,165nm,0.6s						
CBOC	Ciudad Bolivar	2.56	70	*e*P	Pn	14 15 50.0	-1.1
DBBC	Dabeiba	2.99	47	*e*P	Pn	14 15 58.3	+1.4
DBBC				*i*		14 16 40.2	
	comp=Z,44nm,0.6s						
POPC	Popayan, Colom	2.99	144	*e*P	Pn	14 15 56.5	-0.6
POPC				*i*		14 16 36.8	
	comp=Z,68nm,0.9s						
ANIL	Santa Ana	3.06	99	*e*P	Pn	14 15 57.5	-0.6
GUY2C	Guyana, Caldas	3.06	85	*e*P	Pn	14 15 58.7	+0.4
GUY2C				*i*		14 16 40.4	
	comp=Z,64nm,0.6s						
HELC	Santa Helena	3.13	67	*e*P	Pn	14 15 59.4	+0.3
HELC				*e*S	Sn	14 16 33.0	-4.0
BBAC	Balboa, Cauca	3.17	158	*e*P	Pn	14 15 58.6	-0.9
BBAC				*i*		14 16 44.9	
	comp=Z,47nm,0.3s						
MAPC	Malpelo	3.31	253	*e*P	Pn	14 16 01.2	-0.1
MAPC				*e*S	Sn	14 16 36.8	-4.2
AZU	Azuero	3.34	327	*e*P	Pn	14 16 00.2	-1.4
AZU				*e*S	Sn	14 16 37.9	-3.7
AZU				*i*		14 16 42.1	
	comp=Z,152nm,0.2s						
AZU	Azuero	3.34	327	*e*P	Pn	14 16 00.2	-1.4
AZU				*e*S	Sn	14 16 38.1	-3.5
CACAO	El Cacao, Vera	3.37	314	*e*P	Pn	14 16 00.2	-1.7
CACAO				*e*S	Sn	14 16 37.7	-4.7
CACAO				*i*		14 16 41.7	
	comp=Z,92nm,0.1s						
CACAO	El Cacao, Vera	3.37	314	*e*P	Pn	14 16 00.3	-1.7
CACAO				*e*S	Sn	14 16 38.4	-4.1
NORC	Norcasia	3.59	81	*e*P	Pn	14 16 06.9	+1.7
NORC				*e*S	Sn	14 16 48.1	0.0
NORC				*i*		14 16 51.8	
	comp=Z,40nm,0.5s						
CRUC	La Cruz	3.70	156	*e*P	Pn	14 16 07.5	+0.6
PRAC	Prado	3.75	109	*e*P	Pn	14 16 08.8	+1.4
PRAC				*i*		14 16 39.1	
	comp=Z,51nm,0.4s						
BETC	Betania	3.76	127	*e*P	Pn	14 16 09.7	+2.2
UREC	San Jos de Ur	3.98	46	*e*P	Pn	14 16 13.1	+2.5
UREC				*e*S	Sn	14 16 58.1	+0.4
UREC				*i*		14 17 02.0	
	comp=Z,24nm,0.8s						
GARC	Garzon, Huila	4.04	133	*e*P	Pn	14 16 13.5	+2.0
GARC				*e*S	Sn	14 16 59.5	+0.2
GARC				*i*		14 17 04.9	
	comp=Z,70nm,0.4s						
ROSC	El Rosal	4.10	92	Pn	Pn	14 16 13.4	+1.0
	comp=Z,10.0nm,0.3s,baz=264,slow=15,SNR=14						
ROSC				Sn	Sn	14 17 03.8	+2.7
	baz=124,slow=23						
	comp=Z,52nm,0.6s						
ROSC	El Rosal	4.10	92		Pn	14 16 14.1	+1.6
PTBC	PUERTO BERRIO,	4.25	68	*e*P	Pn	14 16 15.9	+1.7
PTBC				*e*S	Sn	14 17 03.2	-1.0
PTBC				*i*		14 17 10.0	
	comp=Z,22nm,0.4s						
ZARC	Zaragoza, Cauc	4.34	55	*e*P	Pn	14 16 17.5	+2.1
ZARC				*e*S	Sn	14 17 06.2	-0.3
ZARC				*i*		14 17 10.6	
	comp=Z,27nm,0.4s						
FLOC	Florencia	4.37	141	*e*P	Pn	14 16 17.7	+1.8
FLOC				*e*S	Sn	14 17 06.8	-0.5
FLOC				*i*		14 17 12.1	
	comp=Z,28nm,0.4s						
BCIP	Isla Barro Col	4.38	342	Pn	Pn	14 16 15.3	-0.7
BCIP	Isla Barro Col	4.38	342	*e*P	Pn	14 16 15.3	-0.7
BCIP				*e*S	Sn	14 17 06.0	-1.5
BCIP				*i*		14 17 10.4	
	comp=Z,44nm,0.3s						
SPBC	San Pablo de B	4.39	81	*e*P	Pn	14 16 18.1	+1.9
OTAV	Otavalo	4.71	180	Pn	Pn	14 16 18.5	-2.5
MACC	Macarena, Meta	5.37	121	*e*P	Pn	14 16 31.1	+1.4
RUSC	La Rusia	5.40	80	*e*P	Pn	14 16 33.3	+2.9
RUSC				*e*S	Sn	14 17 35.0	+1.7
RUSC				*i*		14 17 53.5	
	comp=Z,10nm,0.7s						
BARC	Barichara	5.46	73	*e*P	Pn	14 16 33.6	+2.5
SLOR	San Lorenzo -	5.68	181	Pn	Pn	14 16 31.3	-2.9
RIMA	Rio Macho	7.18	312	Pn	Pn	14 16 56.9	+2.2
SDV	Santo Domingo	8.66	63	Pn	Pn	14 17 14.1	-0.8
	comp=Z,1.9nm,0.3s,baz=311,slow=14,SNR=1.8						
SDV				Sn	Sn	14 18 49.0	-4.1
	comp=Z,1.1nm,0.3s,baz=15,slow=17,SNR=1.5						
	comp=Z,8.6nm,0.3s						
SDV	Santo Domingo	8.66	63		Pn	14 17 17.2	+2.3
BAUV	El Baul	11.04	69		Pn	14 17 46.0	-1.4
ATAH	Atahualpa	12.04	180	Pn	Pn	14 18 00.9	-0.5
	comp=Z,0.2nm,0.3s,baz=222,slow=16,SNR=1.7						
	comp=Z,1.4nm,0.3s						
NNA	Nana	16.93	175	LR	LR	14 26 45.0	
	comp=Z,39nm,21.5s,baz=349,slow=41						
BOAV	Boa Vista	18.05	98	Pn	Pn	14 19 19.2	-1.4
BOAV				IAmb	IAmb	14 19 22.3	
	comp=Z,3.6nm,0.7s						
ETMB	Extrema	19.09	140	P	P	14 19 31.3	-1.2
ETMB				IAmb	IAmb	14 19 33.4	
	comp=Z,12nm,1.4s						
SAML	Samuel	20.56	132	P	P	14 19 47.4	-1.1
SAML				IAmb	IAmb	14 19 55.9	
	comp=Z,7.6nm,0.8s						
LPAZ	La Paz	23.46	154	P	P	14 20 21.1	+1.0
	comp=Z,2.5nm,0.9s,baz=12,slow=3.4,SNR=7.1						
LPAZ				LR	LR	14 29 58.2	
	comp=Z,46nm,18.3s,baz=44,slow=38						
	comp=Z,2.5nm,0.9s						
LPAZ	La Paz	23.46	154	P	P	14 20 21.4	+1.3
PB12	IPOC Station P	24.77	161	P	P	14 20 32.5	+0.8
PB16	IPOC Station P	24.79	159	P	P	14 20 32.0	-0.4
PB16				IAmb	IAmb	14 20 46.2	
	comp=Z,3.5nm,0.7s						
MDP	Montagnes des	25.69	89	LR	LR	14 31 11.6	
	comp=Z,78nm,18.8s,baz=221,slow=38						
GO01	Chusmiza	26.13	160	P	P	14 20 44.0	-0.5
GO01				IAmb	IAmb	14 20 51.4	
	comp=Z,4.4nm,0.8s						
SIV	San Ignacio	27.01	141	P	P	14 20 51.5	-0.4
	comp=Z,0.9nm,0.4s,baz=307,slow=15,SNR=1.5						
	comp=Z,0.9nm,0.4s						
RCBR	Riachuelo	43.80	104	LR	LR	14 42 28.2	
	comp=Z,39nm,18.0s,baz=250,slow=38						
PLCA	Paso Flores	46.06	172	P	P	14 23 35.2	+1.5
	comp=Z,0.8nm,0.6s,baz=3.4,slow=6.5,SNR=4.3						
	comp=Z,0.8nm,0.6s						
PLCA	Paso Flores	46.06	172	P	P	14 23 35.0	+1.3
PLCA				IAmb	IAmb	14 23 59.2	
	comp=Z,5.2nm,1.5s						
PDAR	Pinedale Array	46.65	328	P	P	14 23 40.5	+2.0
	comp=Z,0.3nm,0.6s,baz=118,slow=9.3,SNR=3.1						
PDAR				LR	LR	14 45 51.0	
	comp=Z,16nm,19.1s,baz=108,slow=39						
	comp=Z,0.3nm,0.6s						
GCMT	Greycliff	48.88	331	P	P	14 23 57.6	+1.9
NVAR	Mina Array Bea	49.16	318	P	P	14 24 00.5	+2.4
	comp=Z,0.4nm,0.6s,baz=128,slow=5.8,SNR=3.5						
NVAR				LR	LR	14 48 23.3	
	comp=Z,27nm,18.8s,baz=166,slow=41						
	comp=Z,0.4nm,0.6s						
YKA	Yellowknife Ar	63.27	342	P	P	14 25 38.8	+0.6
	comp=Z,1.4nm,0.6s,baz=117,slow=8.8,SNR=11						
	comp=Z,1.4nm,0.6s						
IL31		76.42	336	P	P	14 27 00.4	+1.3
IL31				IAmb	IAmb	14 27 03.4	
	comp=Z,1.5nm,0.8s						
ILAR	Eielson Array	76.42	336	P	P	14 26 60.0	+0.8
	comp=Z,0.7nm,0.6s,baz=109,slow=4.5,SNR=6.4						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	76.42	336	P	P	14 27 00.1	+0.9
SVW2	Sparrevohn	79.45	331	P	P	14 27 16.3	+0.3
IMAR	Indian Mountai	79.51	336	P	P	14 27 16.9	+0.7
N18K	Kilae Creek	79.54	331	P	P	14 27 17.1	+0.6
N18K				IAmb	IAmb	14 27 20.7	
	comp=Z,6.0nm,1.1s						
ASAR	Alice Springs	143.73	236	PKhKP	PKPpre	14 34 43.1	
	comp=Z,1.0nm,0.4s,baz=121,slow=3.6,SNR=34						
WRA	Warramunga Arr	144.82	242	PKP	PKPdf	14 34 47.1	-0.8
	comp=Z,3.2nm,0.9s,baz=104,slow=3.1,SNR=19						

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*NEIC **02** 14:25:08.0±0.9, 20°.83S±0°.07×67°.9W±0°.1, h173km±13km, mb4.2/4, ML4.2(GUC), Error ellipse: s-maj=16.8km s-min=10.8km az=87.0*
*IDC **02** 14:25:07.6±0.9, 20°.94S×67°.74W, h165km±9km, mb3.5/5, mbtmp4.0/10, Error ellipse: s-maj=18.4km s-min=13.1km az=115.0*
*GUC **02** 14:25:08.5±0.7, 20°.93S×67°.96W, h183km±6km, ML4.2*
*SCB **02** 14:25:12.8±1.1, 20°.92S×67°.89W, h134km±3km, ML4.2/5, MW3.7, Error ellipse: s-maj=5.1km s-min=4.9km az=0.0*
ISC 02 14:25:06.8±0.6**, 20°.89S**±0°.04×**67°.80W**±0°.04**, h166**km±6km**, n78,** σ1s.68/98**, mb4.0**/5**, 15C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	1.58	264		Pn	14 25 38.6	+0.1
PB01	IPOC Station P	1.58	264	⇑*i*P	Pn	14 25 39.2	+0.7
PB01				*i* S	Sn	14 26 02.4	-0.6
PB01				IAML		14 26 04.7	
	comp=N,4μm,0.2s						
PB09	IPOC Station P	1.61	236		Pn	14 25 40.5	+1.5
PB09	IPOC Station P	1.61	236	⇑*i*P	Pn	14 25 40.6	+1.7
PB09				*i* S	Sn	14 26 04.9	+1.1
PB09				IAML		14 26 05.9	
	comp=N,1μm,0.3s						
GO01	Chusmiza	1.79	313		Pn	14 25 42.9	+1.7
GO01	Chusmiza	1.79	313	⇑*i*P	Pn	14 25 42.8	+1.7
GO01				*i* S	Sn	14 26 09.4	+1.9
GO01				IAML		14 26 17.9	
	comp=E,2μm,0.1s						
LVC	Limon Verde	1.99	211	P	Pn	14 25 45.0	+1.7
	comp=E,369nm,0.4s,baz=20,slow=7.2,SNR=414						
LVC				LR	LR	14 26 07.3	
	comp=E,43nm,19.2s,baz=142,slow=30						
LVC				S	Sn	14 26 12.1	+0.6
	comp=E,132nm,0.3s,baz=233,slow=21,SNR=14						
LVC	Limon Verde	1.99	211		Pn	14 25 44.6	+1.4
LVC	Limon Verde	1.99	211	⇑*i*P	Pn	14 25 44.7	+1.4
LVC				*i* S	Sn	14 26 12.6	+1.1
PB02	IPOC Station P	2.00	257		Pn	14 25 43.4	+0.3
PB02	IPOC Station P	2.00	257	⇑*i*P	Pn	14 25 43.8	+0.7
PB02				*i* S	Sn	14 26 10.2	-0.9
PB02	IPOC Station P	2.00	257	P	Pn	14 25 44.2	+1.1
PB02				IAML		14 26 12.8	
	comp=E,3μm,0.3s						
MOCB	Mochara	2.05	100	P	Pn	14 25 47.4	+3.4
MOCB				S	Sn	14 26 11.5	-1.2
MOCB				IAML		14 26 17.0	
	comp=E,903nm,0.6s						
MOCB				IAML		14 26 17.2	
	comp=E,495nm,0.6s						
AF01	San Pedro de A	2.08	190		Pn	14 25 46.4	+2.2
PB07	IPOC Station P	2.11	247		Pn	14 25 44.9	+0.5
PB07	IPOC Station P	2.11	247	⇑*i*P	Pn	14 25 45.0	+0.5
PB07				*i* S	Sn	14 26 12.3	-1.2
PATCX	Punta Patache	2.20	271		Pn	14 25 45.5	+0.2
PATCX	Punta Patache	2.20	271	⇑*i*P	Pn	14 25 45.8	+0.4
PATCX				*i* S	Sn	14 26 13.8	-1.3
PATCX				IAML		14 26 17.2	
	comp=E,2μm,0.2s						
TA01	Diego Aracena	2.25	278		Pn	14 25 45.8	0.0
TA01	Diego Aracena	2.25	278	⇑*i*P	Pn	14 25 45.9	+0.1
TA01				*i* S	Sn	14 26 14.0	-1.9
TA01				IAML		14 26 15.3	
	comp=E,1μm,0.1s						
TA02	Huaiquique	2.27	285		Pn	14 25 46.1	+0.1
TA02	Huaiquique	2.27	285	*e*P	Pn	14 25 46.5	+0.5
TA02				*i* S	Sn	14 26 14.9	-1.4
PB06	IPOC Station P	2.44	222		Pn	14 25 49.0	+0.8
PB06	IPOC Station P	2.44	222	⇑*i*P	Pn	14 25 49.1	+0.9
PB06				*i* S	Sn	14 26 20.1	-0.2
PB06				IAML		14 26 20.4	
	comp=E,1μm,0.2s						
PB06	IPOC Station P	2.44	222	P	Pn	14 25 49.3	+1.1
PB06				IAML		14 26 21.1	
	comp=E,740nm,0.4s						
YJA	Yavi	2.48	121	P	Pn	14 25 52.2	+3.2
PB04	IPOC Station P	2.61	236		Pn	14 25 50.4	+0.1
PB04	IPOC Station P	2.61	236	⇑*i*P	Pn	14 25 50.6	+0.3
PB04				*i* S	Sn	14 26 22.7	-1.2
PB04				IAML		14 26 26.8	
	comp=N,612nm,0.6s						
PB04	IPOC Station P	2.61	236	P	Pn	14 25 50.8	+0.5
PB15	IPOC Station P	2.77	214		Pn	14 25 53.4	+1.2
PB15	IPOC Station P	2.77	214	⇑*i*P	Pn	14 25 53.3	+1.0
PB15				*i* S	Sn	14 26 27.6	0.0
PB15	IPOC Station P	2.77	214	P	Pn	14 25 53.6	+1.3
PB15				S	Sn	14 26 24.4	-3.2
PB15				IAML		14 26 30.9	
	comp=N,3μm,0.4s						
PB16	IPOC Station P	3.01	327	⇑*i*P	Pn	14 25 57.7	+2.1
PB16				*i* S	Sn	14 26 34.8	+1.5
PB16				IAML		14 26 37.3	
	comp=E,149nm,0.4s						
PB12	IPOC Station P	3.29	313	Pn	Pn	14 25 57.8	-0.8
PB12	IPOC Station P	3.29	313	⇑*i*P	Pn	14 25 58.0	-0.6
PB12				*i* S	Sn	14 26 36.3	-2.4
AP01	Chacalluta	3.47	316	Pn	Pn	14 26 00.6	-0.1
PB10	IPOC Station P	3.65	224		Pn	14 26 02.7	-0.3
PB10	IPOC Station P	3.65	224	⇑*i*P	Pn	14 26 02.5	-0.5
BBOE	La Paz, Chanca	4.06	358	P	Pn	14 26 12.0	+3.1
BBOD	La Paz, Gloria	4.30	350	P	Pn	14 26 15.3	+3.3
PB14	IPOC Station P	4.42	212	Pn	Pn	14 26 12.9	-0.4
GO02	Mina Guanaco	4.56	201	Pn	Pn	14 26 15.0	0.0
GO02	Mina Guanaco	4.56	201	⇑*i*P	Pn	14 26 15.0	0.0
GO02				*i* S	Sn	14 27 05.6	-2.7
LPAZ	La Paz	4.59	356	P	Pn	14 26 18.3	+2.5
	comp=E,24nm,0.4s,baz=131,slow=4.2,SNR=128						
LPAZ				S	Sn	14 27 09.0	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,12nm,0.6s,baz=358,slow=12,SNR=4.3						
LPAZ	La Paz	4.59	356		Pn	14 26 17.9	+2.0
LPAZ	La Paz	4.59	356	P	Pn	14 26 18.5	+2.7
AC01	Pan de Azucar	5.83	206	Pn	Pn	14 26 29.4	-1.9
AC02	Maricunga	6.04	191	Pn	Pn	14 26 34.3	-0.3
GO03	Copiap	7.03	198		Pn	14 26 44.7	-2.6
AC04	Llanos de Chal	7.86	202	Pn	Pn	14 26 54.7	-3.7
SIV	San Ignacio	8.04	54	P	Pn	14 27 00.1	-0.6
	comp=E,33nm,0.4s,baz=232,slow=12,SNR=151						
SIV				S	Sn	14 28 25.4	-5.2
	comp=E,3.5nm,0.6s,baz=300,slow=18,SNR=2.2						
LCO	Las Campanas	8.50	197	Pn	Pn	14 27 03.6	-3.4
CO01	Juntas del Tor	9.28	192	Pn	Pn	14 27 15.2	-2.1
GO04	Tololo Observa	9.63	196	Pn	Pn	14 27 18.6	-3.3
PTLB	Pontes e Lacer	9.86	58	Pn	Pn	14 27 24.4	-0.4
CO03	El Pedregal	10.24	194	Pn	Pn	14 27 27.0	-2.8
CO06	Fray Jorge	10.33	199	Pn	Pn	14 27 26.2	-4.7
CO02	Combarbal	10.66	195	Pn	Pn	14 27 33.1	-2.3
VILB	Vilhena	10.73	44	Pn	Pn	14 27 36.1	-0.2
CPUP	Villa Florida	11.02	121	P	Pn	14 27 40.5	+0.6
	comp=E,0.7nm,0.4s,baz=3.8,slow=16,SNR=1.4						
CPUP				S	Sn	14 29 38.9	-3.2
	comp=E,1.5nm,0.6s,baz=230,slow=19,SNR=2.2						
ETMB	Extrema	11.12	8	Pn	Pn	14 27 39.3	-2.0
SAML	Samuel	12.69	21	Pn	Pn	14 28 00.3	-1.2
GO06	Curarrehue	18.89	189	P	Pn	14 29 16.6	-0.6
MACA	Manacapuru-AM	18.94	22	P	P	14 29 14.7	-0.6
MACA				IAmb	IAmb	14 29 18.8	
	comp=Z,76nm,0.6s						
BDFB	Brasilia	19.50	78	P	P	14 29 22.2	+0.7
	comp=Z,2.5nm,0.5s,baz=262,slow=12,SNR=2.3						
BDFB	Brasilia	19.50	78	P	P	14 29 22.5	+1.1
BDFB				IAmb	IAmb	14 29 25.7	
	comp=Z,15nm,1.4s						
PLCA	Paso Flores	19.91	186	P	P	14 29 26.5	+0.8
	comp=Z,2.8nm,0.6s,baz=12,slow=12,SNR=14						
PLCA	Paso Flores	19.91	186	P	P	14 29 27.9	+2.3
PLCA				IAmb	IAmb	14 29 30.9	
	comp=Z,8.8nm,1.1s						
TXAR	Lajitas Array	60.73	324	P	P	14 35 02.2	+1.1
	comp=Z,0.4nm,0.5s,baz=149,slow=8.8,SNR=5.0						
	comp=Z,0.4nm,0.5s						
SNAA	Sanae	62.51	161	P	P	14 35 12.8	+0.4
	comp=Z,1.4nm,0.7s,baz=303,slow=12,SNR=4.4						
	comp=Z,1.4nm,0.7s						
PDAR	Pinedale Array	74.11	329	P	P	14 36 26.2	+1.2
	comp=Z,0.3nm,0.7s,baz=116,slow=3.4,SNR=3.7						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	76.18	70	P	P	14 36 37.5	+0.3
	comp=Z,1.5nm,0.4s,baz=250,slow=5.2,SNR=10.0						
	comp=Z,1.5nm,0.4s						
YKA	Yellowknife Ar	90.97	340	P	P	14 37 52.5	+1.1
	comp=Z,1.2nm,0.7s,baz=124,slow=4.2,SNR=5.9						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	130.92	207	PKP	PKiKP	14 44 00.4	+0.2
	comp=Z,0.3nm,0.6s,baz=133,slow=1.7,SNR=7.1						
WRA	Warramunga Arr	133.99	210	PKP	PKiKP	14 44 06.2	-0.3
	comp=Z,0.5nm,0.8s,baz=168,slow=1.9,SNR=4.9						
ZALV	Zalesovo Beam	140.97	26	PKP	PKPdf	14 44 17.1	+0.2
	comp=Z,0.7nm,0.5s,baz=336,slow=3.2,SNR=1.9						
MKAR	Makanchi Array	144.54	36	PKP	PKPdf	14 44 24.3	+0.9
	comp=Z,1.7nm,0.8s,baz=320,slow=3.2,SNR=13						
SONM	Songino Array	152.72	9	PKPbc	PKiKP	14 44 44.9	+0.7
	comp=Z,0.4nm,0.3s,baz=321,slow=1.8,SNR=2.0						

*NEIC **02** 14:53:51.2±1.1, 56°.11N±0°.02×158°.86W±0°.03, h4km±9km, ML2.8/16, ML2.5(AEIC), Error ellipse: s-maj=3.5km s-min=1.2km az=143.0*

AEIC 02 14:53:50±2.1, 56°.22N±0°.02×158°.88W±0°.03, h6km±3km, Error ellipse: s-maj=3.2km s-min=1.6km az=149.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNHG	Veniaminof 1	0.16	270		Pg	14 53 54.6	+1.4
CHGN	Chignik	0.27	73		Pb	14 53 57.1	-0.2
CHGN					Sb	14 54 01.6	-0.5
CHGN	Chignik	0.27	73	IAML		14 54 02.1	
	comp=N,1μm,0.1s						
VNFG	Fog Glacier, M	0.38	280		Pb	14 53 59.5	+0.3
VNFG					Sb	14 54 05.5	+0.2
VNFG	Fog Glacier, M	0.38	280		Pb	14 53 59.4	+0.2
ANPK	Aniakchak Peak	0.75	34		Pn	14 54 06.6	-0.5
SDPT	Sand Point	1.26	227		Pn	14 54 13.5	-0.5
SDPT					Sg	14 54 29.9	-0.4
CNBA	Chernabura Isl	1.46	196		Pn	14 54 16.3	-0.5
CNBA					Sn	14 54 35.7	-0.5
S12K	Black Hills	1.86	255		Pn	14 54 23.4	+1.0
S12K					Sb	14 54 47.5	-0.3
CHIR	Chirikof Islan	1.87	101		Pb	14 54 24.3	-0.2
CHIR	Chirikof Islan	1.87	101	IAML		14 54 36.3	
	comp=N,98nm,1.5s						
CHIR				IAML		14 54 56.4	
	comp=E,102nm,1.6s						
PS4A	Pavlof South-4	1.90	244		Pb	14 54 24.6	-0.3
PN7A	Pavlof North-7	1.93	247		Pn	14 54 24.4	+1.1
R17K	Ugashik Creek	1.97	43		Pb	14 54 25.3	-0.9
R17K					Sn	14 54 49.6	+0.7
SII	Sitkinak Islan	2.63	81	Pn	Pn	14 54 34.6	+1.6
P16K	Nushagak River	2.86	9		Pb	14 54 38.8	-2.6
FALS	False Pass	2.92	244		Pn	14 54 38.1	+1.2
KDAK	Kodiak Island	3.78	63	Pn	Pn	14 54 51.2	+2.5
KDAK				IAML		14 55 16.8	
	comp=E,14nm,2.7s						
KDAK				IAML		14 55 49.5	
	comp=E,17nm,2.1s						
N19K	Bonanza Creek	5.15	25	Pn	Pn	14 55 10.7	+3.1
SVW2	Sparrevohn	5.18	18	Pn	Pn	14 55 10.8	+2.8
SVW2				IAML		14 56 15.7	
	comp=N,5.4nm,2.4s						
SVW2				IAML		14 58 10.6	
	comp=E,5.8nm,1.8s						

IDC 02 14:57:41.4±2.4, 5°.40S×138°.39E, h0km, mb3.2/1, mbtmp3.3/4, ML3.2/3, MS3.5/1, Error ellipse: s-maj=44.3km s-min=17.8km az=101.0, Near south coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.98	195	Pn	Pn	15 01 15.1	+0.5
	0.1nm,0.3s,baz=16,slow=12,SNR=2.1						
WRA				Sn	Sn	15 04 01.2	-0.3
	0.1nm,0.3s,baz=12,slow=24,SNR=2.1						
	0.4nm,0.9s						
FITZ	Fitzroy Crossi	17.73	224	P	P	15 01 50.8	-0.1
	0.1nm,0.3s,baz=34,slow=11,SNR=1.8						
FITZ				S	Sn	15 05 09.7	+1.4
	2.5nm,0.9s,baz=87,slow=19,SNR=2.1						
	0.8nm,0.7s						
ASAR	Alice Springs	18.67	193	P	Pn	15 02 02.5	+1.1
	0.1nm,0.3s,baz=25,slow=8.9,SNR=15						
ASAR				S	Sn	15 05 31.2	+0.2
	0.3nm,0.8s,baz=4.0,slow=28,SNR=1.6						
	0.5nm,0.6s						
LEM	Lembang	30.62	266	LR	LR	15 19 26.1	
	comp=Z,83nm,18.8s,baz=127,slow=43						
MKAR	Makanchi Array	71.72	323	P	P	15 09 05.2	-0.3
	0.1nm,0.4s,baz=117,slow=6.0,SNR=1.8						
	0.1nm,0.4s						

*ECX **02** 14:58:22.7±0.4, 30°.22N×114°.19W, h11km±14km, MD2.7, ML2.8*

*MEX **02** 14:58:23.1±0.7, 30°.26N×114°.05W, h10km, MD3.3*

ISC 02 14:58:21.4±1.5, 30°.18N±0°.08×114°.21W±0°.08, h10km, n10, σ1°.65/13, 1C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFX	San Felipe	1.02	327	eP	Pg	14 58 40.1	-0.9
SFX				eS	Sg	14 58 53.2	-1.2
SFX				IAML		14 58 56.1	
	comp=E,373nm,0.7s						
SFX				IAML		14 59 03.3	
	comp=N,196nm,0.6s						
SFX				⇑e		14 59 03.3	
BAHB	Baha de los	1.35	155	eP	Pn	14 58 46.5	+0.1
SPIG	San Pedro Mart	1.39	309	eP	Pn	14 58 46.1	-1.1
SPIG				i S	Sb	14 59 03.7	-1.9
SPIG	San Pedro Mart	1.39	309	eP	Pn	14 58 46.1	-1.1
SPIG				eS	Sb	14 59 05.6	0.0
ECBX	El Chinero	1.48	331	eP	Pn	14 58 47.5	-0.6
LAPR	La Primavera	1.66	78	i P	Pn	14 58 41.9	-8.8
LAPR				i S	Sn	14 58 59.8	-12
SVX	San Vicente	2.10	304	eP	Pn	14 58 57.2	+0.5
214A	Organ Pipe Nat	2.14	34	eP	Pn	14 58 57.6	+0.4
CBX	Cerro Bola	2.99	316	⇓e	Sg	15 00 00.1	+2.4
CBX				IAML		15 00 00.1	
	comp=E,30nm,1.2s						
TJIG	Tijuana	3.08	317	i P	Pn	14 59 13.6	+3.4
TJIG				i S	Sn	14 59 48.0	+0.8

*NEIC **02** 14:59:18.7±2.1, 18°.41N±0°.08×145°.6E±0°.2, h198km±5km, mb4.3/10, Error ellipse: s-maj=22.3km s-min=8.0km az=67.0*

*IDC **02** 14:59:19.1±3.3, 18°.38N×145°.57E, h193km±32km, mb3.1/6, mbtmp3.6/7, Error ellipse: s-maj=82.6km s-min=16.7km az=112.0*

ISC 02 14:59:18.9±0.8, 18°.29N±0°.08×145°.5E±0°.2, h200km, n20, σ1°.49/21, mb3.7/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.71	188	P	Pn	15 00 30.9	+1.2
	15nm,0.5s,baz=22,slow=17,SNR=1.5						
GUMO				S	Sn	15 01 22.4	-3.1
	42nm,0.8s,baz=64,slow=19,SNR=2.5						
GUMO	Guam	4.71	188	Pn	Pn	15 00 30.0	+0.2
PATS	Pohnpei	16.88	131	P	P	15 03 03.0	+0.3
JOW	Kunigami	18.04	301	P	P	15 03 14.5	-0.7
JOW				IAmb	IAmb	15 03 51.4	
	comp=Z,17nm,1.4s						
MTN	Manton Dam	34.03	206	P	P	15 05 45.6	+1.4
MTN				IAmb	IAmb	15 05 58.6	
	comp=Z,20nm,1.4s						
PETK	Petropavlovsk-	36.02	12	P	P	15 06 01.5	+0.6
	comp=Z,0.5nm,0.7s,baz=182,slow=7.2,SNR=2.3						
	comp=Z,0.5nm,0.7s						
PETK	Petropavlovsk-	36.02	12	P	P	15 05 59.1	-1.7
WB0	Warramunga Arr	39.37	197	P	P	15 06 29.0	-0.2
WB0				IAmb	IAmb	15 06 54.4	
	comp=Z,9.5nm,1.4s						
WR0	Warramunga Arr	39.51	196	P	P	15 06 30.4	0.0
WB2	Warramunga Arr	39.54	197	P	P	15 06 32.1	+1.5
WB2				IAmb	IAmb	15 06 59.8	
	comp=Z,8.8nm,1.2s						
WRA	Warramunga Arr	39.55	197	P	P	15 06 32.1	+1.4
	comp=Z,0.5nm,0.4s,baz=14,slow=8.7,SNR=3.6						
	comp=Z,0.5nm,0.4s						
FITZ	Fitzroy Crossi	41.10	209	P	P	15 06 45.5	+2.0
	comp=Z,2.5nm,1.0s,baz=30,slow=9.6,SNR=7.1						
	comp=Z,2.5nm,1.0s						
FITZ	Fitzroy Crossi	41.10	209	P	P	15 06 45.5	+2.0
FITZ				IAmb	IAmb	15 07 19.6	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs	43.21	196	P	P	15 07 01.8	+1.3
	comp=Z,0.2nm,0.6s,baz=18,slow=13,SNR=6.4						
	comp=Z,0.2nm,0.6s						
L19K	White Mountain	59.95	28	P	P	15 09 02.7	-1.1
CNPM	China Poot	60.90	31	P	P	15 09 08.6	-1.8
ILAR	Eielson Array	64.09	26	P	P	15 09 30.7	-0.6
	comp=Z,0.4nm,0.7s,baz=269,slow=4.9,SNR=5.3						
	comp=Z,0.4nm,0.7s						
BMAR	Burnt Mountain	65.56	23	P	P	15 09 42.1	+1.3
BESE	Bessie Mountai	69.19	33	P	P	15 10 02.9	-0.9
BESE				IAmb	IAmb	15 10 03.9	
	comp=Z,12nm,1.1s						
NVAR	Mina Array Bea	83.53	52	P	P	15 11 26.1	+1.1
	comp=Z,0.3nm,0.6s,baz=268,slow=5.4,SNR=2.7						
	comp=Z,0.3nm,0.6s						

*IDC **02** 15:11:46.2±1.4, 11°.54S×117°.40E, h0km, mb3.9/6, mbtmp4.1/11, ML4.2/5, MS3.2/2, Error ellipse: s-maj=42.9km s-min=18.3km az=40.0*

*NEIC **02** 15:11:48.6±2.1, 11°.56S±0°.07×117°.38E±0°.07, h27km±7km, mb4.1/10, Error ellipse: s-maj=12.5km s-min=7.0km az=219.0*

*DJA **02** 15:11:49.7±0.4, 11°S±3°×11°7E±°, h10km, M4.5/20, mb4.5/10, mB5.1/2, MLv4.5/20, Mw(mB)4.4/2*

ISC 02 15:11:48.9±0.6, 11°.61S±0°.05×117°.39E±0°.04, h34km, n77, σ2°.13/85, mb4.0/6, South of Sumbawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.77	45	P	Pn	15 12 31.0	0.0
WBSI				S	Sn	15 13 02.0	-1.4
PLAI	Plampang	2.79	8	P	Pn	15 12 31.2	-0.1
PLAI				S	Sn	15 12 58.7	-5.1
PLAI	Plampang	2.79	8	P	Pn	15 12 32.3	+1.0
TWSI	Taliwang, Sumb	2.90	350	P	Pn	15 12 32.0	-0.7
TWSI				S	Sn	15 13 01.0	-5.5
BASI	Baing, Sumba	3.42	66	P	Pn	15 12 40.1	+0.2
BASI				S	Sn	15 13 19.0	-0.3
IGBI	Denpasar	3.55	321	P	Pn	15 12 40.9	-0.8
IGBI				S	Sn	15 13 18.1	-4.4
DNP	Denpasar	3.62	323	P	Pn	15 12 40.9	-1.8
DNP				S	Sn	15 13 23.4	-0.9
SRBI	Singaraja	4.11	328	P	Pn	15 12 49.9	+0.5
SRBI				S	Sn	15 13 35.0	-1.3
JAGI	Jajag, Banyuwa	4.47	314		Pn	15 12 52.0	-2.2
JAGI	Jajag, Banyuwa	4.47	314	P	Pn	15 12 52.3	-2.0
JAGI	Jajag, Banyuwa	4.47	314	P	Pn	15 12 52.7	-1.6
ABJI	Asem Bagus	4.91	320	P	Pn	15 12 59.9	-0.4
ABJI				S	Sn	15 13 55.3	-0.7
EDFI	Ende, Flores	5.10	56	P	Pn	15 13 03.1	+0.1
GMJI	Gumukmas	5.11	310	P	Pn	15 13 01.5	-1.7
BLJI	Banyuglugur	5.37	315	P	Pn	15 13 05.8	-0.8
BLJI				S	Sn	15 14 04.0	-3.3
MMRI	Maumere	5.61	59	Pn	Pn	15 13 09.8	-0.2
MMRI	Maumere	5.61	59	P	Pn	15 13 10.8	+0.8
	0.4nm46nm,1.0s						
MMRI	Maumere	5.61	59	P	Pn	15 13 11.8	+1.8
KMMI	Kalianget	5.66	323	P	Pn	15 13 11.0	+0.4
	0.4nm54nm,0.6s						
BSSI	Bau Bau, Buton	6.24	30	P	Pn	15 13 19.8	+1.2
	0.2nm730nm44nm,0.9s						
BATI	Baumata	6.31	78	Pn	Pn	15 13 20.1	+0.4
	5.7nm,0.3s,baz=101,slow=2.5,SNR=6.2						
BATI				Sn	Sn	15 14 30.2	-0.5
	7.2nm,0.3s,baz=212,slow=21,SNR=2.2						
	11nm,0.3s						
BATI	Baumata	6.31	78	P	Pn	15 13 19.6	-0.1
	0.2nm21nm,1.2s						
PWJI	Pagerwojo	6.56	302	P	Pn	15 13 23.2	+0.1
	0.6nm66nm,0.6s						
BKSI	Bulukumba	6.81	24	P	Pn	15 13 28.0	+1.5
	0.2nm39nm,0.6s						
KAPI	Kappang	6.96	20	Pn	Pn	15 13 29.2	+0.7
	1.3nm,0.3s,baz=200,slow=14,SNR=1.7						
KAPI				Sn	Sn	15 14 39.9	-6.7
	11nm,0.3s,baz=183,slow=23,SNR=14						
	4.0nm,0.2s						
KAPI	Kappang	6.96	20	Pn	Pn	15 13 24.9	-3.6
NGJI	Ngawi	7.21	305	P	Pn	15 13 31.4	-0.6
	0.7nm106nm,2.1s						
BNSI	Bone	7.65	21	P	Pn	15 13 37.4	-0.7
	0.1nm18nm,1.2s						
UGM	Wanagama	7.71	298	Pn	Pn	15 13 38.9	+0.1
UGM	Wanagama	7.71	298	P	Pn	15 13 40.8	+2.0
	1.4nm249nm,1.6s						
UGM	Wanagama	7.71	298	P	Pn	15 13 39.1	+0.3
MBWA	Marble Bar	9.75	167		Pn	15 14 06.6	-0.3
MBWA	Marble Bar	9.75	167	P	Pn	15 14 06.7	-0.2
PSA00	Pilbara Seismi	10.18	167	Pn	Pn	15 14 11.9	-0.8
PSA00	Pilbara Seismi	10.18	167	P	Pn	15 14 12.5	-0.2
FITZ	Fitzroy Crossi	10.25	130	Pn	Pn	15 14 14.4	+0.7
	3.4nm,0.3s,baz=313,slow=11,SNR=64						
FITZ				Sn	Sn	15 16 00.4	-7.1
	1.8nm,0.3s,baz=195,slow=21,SNR=3.0						
	7.6nm,0.3s						
FITZ	Fitzroy Crossi	10.25	130		Pn	15 14 13.5	-0.1
FITZ	Fitzroy Crossi	10.25	130	P	Pn	15 14 13.8	+0.1
GIRL	Giralia	11.38	195	Pn	Pn	15 14 29.6	+0.5
GIRL	Giralia	11.38	195	P	Pn	15 14 29.9	+0.8
KNRA	Kununurra	11.76	111	Pn	Pn	15 14 34.6	+0.2
KNRA	Kununurra	11.76	111	P	Pn	15 14 34.6	+0.2
MTN	Manton Dam	13.48	97	Pn	Pn	15 14 57.8	-0.2
KDU	Kakadu	14.78	96	P	Pn	15 15 16.4	+0.8
MEEK	Meekatharra	14.99	176	P	Pn	15 15 18.7	+0.3
MNAI	Manna	16.00	296	Pn	Pn	15 15 29.8	-1.8
MNAI	Manna	16.00	296	P	Pn	15 15 30.0	-1.6
WRKA	Warakurna	16.88	144	P	Pn	15 15 43.4	+0.7
FAKI	Fak Fak	17.07	61	P	P	15 15 47.1	+0.5
FAKI				IAmb	IAmb	15 15 57.1	
	comp=Z,28nm,1.2s						
FAKI	Fak Fak	17.07	61	P	P	15 15 47.5	+0.9
MORW	Morawa	17.41	184	Pn	Pn	15 15 49.0	-0.3
MORW				IAmb	IAmb	15 16 30.9	
	comp=Z,25nm,1.4s						
MORW	Morawa	17.41	184	P	Pn	15 15 49.6	+0.3
WB0	Warramunga Arr	18.25	118	P	P	15 16 00.1	+0.5
WB0				IAmb	IAmb	15 16 32.3	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	18.28	119	P	Pn	15 16 01.1	+1.1
	comp=Z,1.2nm,0.3s,baz=285,slow=14,SNR=68						
WRA				S	Sn	15 19 11.4	-12
	comp=Z,0.3nm,0.6s,baz=291,slow=23,SNR=1.6						
	comp=Z,2.4nm,0.5s						
WRA	Warramunga Arr	18.28	119	P	P	15 16 00.3	+0.4
WRAB	Tennant Creek	18.28	119	P	Pn	15 16 02.3	+2.2
WB2	Warramunga Arr	18.29	119	P	Pn	15 16 00.9	+0.8
WR0	Warramunga Arr	18.46	119	P	Pn	15 16 02.7	+0.6
WR0				IAmb	IAmb	15 16 06.0	
	comp=Z,8.1nm,0.7s						
BLDU	Ballidu	18.92	182	P	Pn	15 16 08.9	+1.2
MYKOM	Kota Tinggi	18.94	314	P	P	15 16 06.0	-1.2
MYKOM				IAmb	IAmb	15 16 38.5	
	comp=Z,23nm,1.3s						
ASAR	Alice Springs	19.75	130	P	Pn	15 16 19.3	+1.5
	comp=Z,0.6nm,0.3s,baz=301,slow=10,SNR=84						
ASAR				S	S	15 19 48.4	-8.7
	comp=Z,0.8nm,0.6s,baz=301,slow=23,SNR=3.4						
	comp=Z,5.9nm,0.8s						
ASAR	Alice Springs	19.75	130	Pn	Pn	15 16 19.9	+2.1
AS31	Alice Springs	19.75	130		Pn	15 16 19.2	+1.4
AS31				IAmb	IAmb	15 16 24.9	
	comp=Z,3.1nm,0.5s						
RPSI	Rantau Prapat	23.23	307	P	P	15 16 56.0	+2.7
PSI	Prapat	23.29	307	P	P	15 16 56.0	+1.9
	comp=Z,4.9nm,0.5s,baz=166,slow=4.2,SNR=4.9						
	comp=Z,4.9nm,0.5s						
KULM	Kulim	23.65	314	P	P	15 16 57.5	+0.1
CMAR	Chiang Mai Arr	34.99	328	P	P	15 18 39.8	+1.5
	comp=Z,1.4nm,0.3s,baz=152,slow=9.9,SNR=1.2						
	comp=Z,1.4nm,0.3s						
JOW	Kunigami	39.65	15	LR	LR	15 34 29.5	
	comp=Z,18nm,19.9s,baz=140,slow=34						
HNR	Honiara	41.87	91	LR	LR	15 38 30.8	
	comp=Z,55nm,18.2s,baz=14,slow=38						
H08S2	Diego Garcia H	44.41	271	T	T	16 07 24.7	
	baz=96						
H08S3	Diego Garcia H	44.42	271	T	T	16 07 26.6	
	baz=96						
H08S1	Diego Carcia H	44.43	271	T	T	16 07 16.7	
	baz=96						
SONM	Songino Array	59.99	351	P	P	15 21 52.6	+0.5
	comp=Z,0.3nm,0.6s,baz=184,slow=4.0,SNR=1.4						
	comp=Z,0.3nm,0.6s						
MKAR	Makanchi Array	66.08	334	P	P	15 22 33.8	+1.3
	comp=Z,0.5nm,0.4s,baz=142,slow=7.6,SNR=5.5						
	comp=Z,0.5nm,0.4s						
MKAR	Makanchi Array	66.08	334	P	P	15 22 33.2	+0.7
ZALV	Zalesovo Beam	70.93	340	P	P	15 23 05.0	+2.4
	comp=Z,0.8nm,0.5s,baz=137,slow=5.4,SNR=3.8						
	comp=Z,0.8nm,0.5s						
PETK	Petropavlovsk-	73.09	24	P	P	15 23 19.4	+3.8
	comp=Z,0.4nm,0.5s,baz=205,slow=5.9,SNR=2.7						
	comp=Z,0.4nm,0.5s						

WEL 02 15:27:36.3±0.5, 43°S±2°×17°3E±°, h9km±3km, M2.3/5, ML2.3/9, MLv2.3/5, Error ellipse: s-maj=0.0km s-min=0.0km az=96.0, South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMCZ	Amberley	0.11	26	P	Pg	15 27 39.7	+0.9
AMCZ				S	Sg	15 27 42.1	+1.6
OXZ	Oxford	0.41	262	P	Pb	15 27 45.1	-0.6
OXZ				S	Sb	15 27 51.1	-0.9
MQZ	McQueen's Vall	0.44	174	P	Pb	15 27 45.6	-0.6
MQZ				S	Sg	15 27 51.6	+1.1
GVZ	Greta Valley S	0.45	47	P	Pb	15 27 45.9	-0.5
GVZ				S	Sb	15 27 52.5	-0.6
LTZ	Lake Taylor	0.54	335	P	Pb	15 27 47.5	-0.5
LTZ				S	Sb	15 27 55.1	-0.9
OKCZ	Okains Bay	0.57	143	P	Pb	15 27 48.2	-0.3
OKCZ				S	Sb	15 27 56.4	-0.2
AKCZ	Akaroa Harbour	0.64	159	P	Pb	15 27 49.8	+0.1
AKCZ				S	Sb	15 27 58.6	-0.2
WACZ	Wakanui South	0.86	219	P	Pg	15 27 53.0	+0.1
WACZ				S	Sb	15 28 05.4	+0.3
INZ	Inchbonnie	1.00	303	P	Pb	15 27 55.9	+0.1
KHZ	Kahutara	1.10	40	P	Pg	15 27 56.7	-0.7
KHZ				S	Sb	15 28 12.2	+0.2
TMZ	Timaru	1.59	225	P	Pn	15 28 03.4	-1.3

*SOME **02** 15:46:24.6, 40°.35N×77°.03E, h10km*

*KRNET **02** 15:46:26.9±0.1, 40°.44N×77°.06E, mb3.1*

*NNC **02** 15:46:30.3±1.6, 40°.56N×77°.01E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=11.5km s-min=10.8km az=10.0*

ISC 02 15:46:24.6±2.7, 40°.4N±0°.1×76°.95E±0°.04, h5km±17km, n46, σ1°.53/69, 13C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	1.93	344	P	Pg	15 47 02.6	+1.1
	SNR=16						
ULHL	Ulahol	1.93	344	⇑i P	Pg	15 47 02.3	+0.8
	baz=41						
ULHL				⇑i S	Sg	15 47 28.2	+1.7
	baz=41						
PRZ	Przheval'sk	2.35	27	⇓i P	Pb	15 47 07.9	+0.2
	baz=26						
PRZ				⇓i S	Sb	15 47 37.8	+0.7
	baz=26						
ARLS	Aral	2.47	307	⇑i P	Pb	15 47 10.6	+1.1
	baz=5.0						
ARLS				⇑i S	Sb	15 47 42.8	+2.5
	baz=5.0						
KBK	Karagaybulak	2.71	327	P	Pb	15 47 15.2	+1.4
	SNR=7.0						
KBK	Karagaybulak	2.71	327	⇓i P	Pb	15 47 13.7	-0.1
	baz=25						
KBK				⇓i S	Sb	15 47 48.1	+0.6
	baz=25						
TKM2	Tokmak 2	2.72	339	P	Pb	15 47 14.7	+0.8
	SNR=12						
TKM2	Tokmak 2	2.72	339	⇑Pn	Pb	15 47 14.5	+0.6
	3.1nm,0.3s						
TKM2				⇑Lg	Lg	15 47 53.4	
	14nm,0.5s						
TKM2	Tokmak 2	2.72	339	⇓i P	Pb	15 47 13.7	-0.2
	baz=37						
TKM2				⇓i S	Sb	15 47 47.7	0.0
	baz=37						
KST	Kastek	2.75	345	eP	Pg	15 47 17.4	+0.1
	4.4nm,0.8s						
KST				eS	Sg	15 47 55.5	+2.6
	26nm,0.9s						
KST	Kastek	2.75	345	Pg	Pg	15 47 17.4	+0.1
	5.6nm,0.5s						
KST				Lg	Lg	15 47 55.5	
	26nm,0.6s						
MTBS	Maitube	2.76	352	eP	Pg	15 47 16.9	-0.6
	5.1nm,0.3s						
MTBS				eS	Sg	15 47 54.6	+1.3
	23nm,0.5s						
MTBS	Maitube	2.76	352	Pg	Pg	15 47 16.9	-0.6
	5.3nm,0.2s						
MTBS				Lg	Lg	15 47 54.6	
	22nm,0.4s						
MDOK	Medeo	2.77	1	eP	Pg	15 47 17.1	-0.5
	8.2nm,0.3s						
MDOK				eS	Sg	15 47 54.5	+1.0
	53nm,0.7s						
MDOK	Medeo	2.77	1	Pn	Pb	15 47 14.3	-0.4
	11nm,0.7s						
MDOK				Pg	Pg	15 47 17.1	-0.5
	12nm,0.6s						
MDOK				⇑Lg	Lg	15 47 53.7	
	40nm,0.5s						
MDOK				Lg	Lg	15 47 54.7	
KNDC	Almaty	2.82	0	⇓Pn	Pb	15 47 13.5	-2.0
	14nm,0.5s						
KNDC				⇑Lg	Lg	15 47 56.4	
	115nm,0.7s						
SATY	Saty	2.88	22	eP	Pg	15 47 18.8	-1.0

	5.1nm,0.5s							
SATY				*e*S		**Sg**	**15 47 57.5**	**+0.4**
	38nm,0.7s							
SATY	**Saty**	**2.88**	**22**	Pg		**Pg**	**15 47 18.8**	**-1.0**
	5.3nm,0.4s							
SATY				Lg		Lg	15 47 57.5	
	26nm,0.7s							
AAK	**Ala-Archa**	**2.90**	**321**	P		**Pg**	**15 47 22.6**	**+2.4**
	SNR=7.9							
AAK	**Ala-Archa**	**2.90**	**321**	⇓*i*P		**Pb**	**15 47 16.6**	**-0.4**
	baz=20							
AAK				⇓*i*S		**Sb**	**15 47 52.7**	**-0.1**
	baz=20							
AML	**Almayashu**	**3.01**	**306**	P		**Pb**	**15 47 18.9**	**0.0**
	SNR=7.7							
CHMS	**Chumysh**	**3.08**	**328**	P		**Pb**	**15 47 19.9**	**-0.1**
	SNR=6.7							
CHMS	**Chumysh**	**3.08**	**328**	⇓Pn		**Pb**	**15 47 19.2**	**-0.7**
	4.7nm,0.3s							
CHMS				⇑Lg		Lg	15 48 04.1	
	13nm,0.5s							
CHMS	**Chumysh**	**3.08**	**328**	⇓*i*P		**Pb**	**15 47 18.6**	**-1.3**
	baz=27							
CHMS				⇓*i*S		**Sb**	**15 47 56.9**	**-0.9**
	baz=27							
UZB	**Uzynbulak**	**3.16**	**29**	*e*P		**Pg**	**15 47 23.4**	**-1.7**
	4.5nm,0.6s							
UZB				*e*S		**Sg**	**15 48 05.5**	**-0.6**
	19nm,0.6s							
UZB	**Uzynbulak**	**3.16**	**29**	Pg		**Pg**	**15 47 23.4**	**-1.7**
	4.3nm,0.4s							
UZB				Lg		Lg	15 48 05.5	
	12nm,0.8s							
KURS	**Kuram**	**3.22**	**16**	*e*P		**Pb**	**15 47 24.3**	**+2.0**
	6.3nm,0.8s							
KURS				*e*S		**Sg**	**15 48 06.5**	**-1.6**
	15nm,1.2s							
KURS	**Kuram**	**3.22**	**16**	Pg		**Pb**	**15 47 24.4**	**+2.0**
	5.2nm,0.6s							
KURS				Lg		Lg	15 48 07.6	
	15nm,0.9s							
EKS2	**Erkin-Say**	**3.29**	**315**	⇑*e*P		**Pb**	**15 47 22.0**	**-1.5**
	baz=13							
EKS2				⇑*i*S		**Sb**	**15 48 02.3**	**-1.6**
	baz=13							
KTBS	**Karatobe**	**3.32**	**357**	*e*P		**Pb**	**15 47 26.8**	**+2.7**
	2.6nm,0.6s							
KTBS				*e*S		**Sg**	**15 48 11.6**	**+0.4**
	62nm,0.7s							
KTBS	**Karatobe**	**3.32**	**357**	Pg		**Pb**	**15 47 26.8**	**+2.7**
	2.6nm,0.3s							
KTBS				Lg		Lg	15 48 11.6	
	62nm,0.6s							
USP	**Ospenovka**	**3.41**	**328**	⇓*i*P		**Pb**	**15 47 23.2**	**-2.3**
	baz=27							
USP				⇓*i*S		**Sb**	**15 48 04.3**	**-2.9**
	baz=27							
KRBS	**Karabastau**	**3.43**	**344**	*e*P		**Pg**	**15 47 29.6**	**-0.8**
	2.4nm,0.8s							
KRBS				*e*S		**Sg**	**15 48 16.3**	**+1.4**
	14nm,1.3s							
KRBS	**Karabastau**	**3.43**	**344**	Pg		**Pg**	**15 47 29.7**	**-0.7**
	4.0nm,0.5s							
KRBS				Lg		Lg	15 48 16.3	
	14nm,1.0s							
CHKK	**Chushkaly**	**3.46**	**0**	*e*P		**Pg**	**15 47 29.5**	**-1.3**
	1.5nm,0.2s							
CHKK				*e*S		**Sg**	**15 48 16.2**	**+0.5**
	38nm,0.4s							
CHKK	**Chushkaly**	**3.46**	**0**	Pg		**Pg**	**15 47 29.6**	**-1.3**
	1.1nm,0.2s							
CHKK				Lg		Lg	15 48 16.2	
	36nm,0.5s							
PDGK	**Podgornoye**	**3.49**	**32**	Pg		**Pb**	**15 47 29.0**	**+2.0**
	4.5nm,0.6s							
PDGK				Lg		Lg	15 48 15.1	
	16nm,0.7s							
PDGK	**Podgornoye**	**3.49**	**32**	⇑Pn		**Pb**	**15 47 27.7**	**+0.7**
	7.3nm,0.7s							
PDGK				⇑Lg		Lg	15 48 14.6	
	34nm,0.7s							
SGDS	**Sogindy**	**3.51**	**331**	*e*P		**Pg**	**15 47 30.9**	**-1.0**
	1.0nm,0.5s							
SGDS				*e*S		**Sg**	**15 48 18.4**	**+1.0**
	8.4nm,0.9s							
SGDS	**Sogindy**	**3.51**	**331**	Pg		**Pg**	**15 47 30.9**	**-1.0**
	3.4nm,0.3s							
SGDS				Lg		Lg	15 48 18.4	
	8.8nm,0.9s							
KUU	**Kurty**	**3.53**	**353**	*e*P		**Pg**	**15 47 30.7**	**-1.4**
	1.1nm,0.4s							
KUU				*e*S		**Sg**	**15 48 18.2**	**+0.4**
	24nm,1.0s							
KUU	**Kurty**	**3.53**	**353**	Pg		**Pg**	**15 47 30.7**	**-1.4**
	1.1nm,0.2s							
KUU				Lg		Lg	15 48 18.2	
	23nm,0.8s							
DJR	**Jarkent**	**4.46**	**27**	*e*P		**Pb**	**15 47 46.7**	**+3.2**
	1.1nm,0.3s							
DJR				*e*S		**Sg**	**15 48 45.3**	**-2.6**
	10nm,1.4s							
DJR	**Jarkent**	**4.46**	**27**	Pg		**Pb**	**15 47 46.7**	**+3.2**
	2.3nm,0.2s							
DJR				Lg		Lg	15 48 45.3	
	6.0nm,0.6s							
BTLS	**Baital**	**5.11**	**336**	*e*P		**Pg**	**15 47 60.0**	**-2.6**
	0.6nm,0.3s							
BTLS				*e*S		**Sg**	**15 49 07.7**	**-1.1**
	4.7nm,0.8s							
BTLS	**Baital**	**5.11**	**336**	Pg		**Pg**	**15 47 59.7**	**-2.8**
	0.6nm,0.4s							
BTLS				Lg		Lg	15 49 07.7	
	1.8nm,0.7s							

IDC 02 15:47:03.6±2.5,28°.36S×23°.11E,h0km,mbtmp3.1/3, ML2.5/3,Error ellipse: s-maj=22.9km s-min=18.4km az=154.0,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I47ZA	**BOSHOF INFRASO**	**1.89**	**98**	*i*			15 57 50.0	
	0.5nm,0.8s,baz=276,slow=313,SNR=9.4							
BOSA	**Boshof**	**1.90**	**98**	Pg		Pn	15 47 38.4	+0.9
	0.5nm,0.3s,baz=284,slow=17,SNR=21							
BOSA				Lg		Lg	15 48 04.3	
	2.8nm,0.3s,baz=197,slow=22,SNR=27							
BOSA				Rg		Rg	15 48 15.2	
	162nm,1.1s,baz=149,slow=2.0,SNR=26							
LBTB	**Lobatse**	**4.00**	**34**	Pn		Pn	15 48 06.9	+0.5
	0.1nm,0.3s,baz=204,slow=15,SNR=2.0							
LBTB				Sn		Sn	15 48 53.1	-1.0
	0.5nm,0.3s,baz=279,slow=21,SNR=5.3							
LBTB				Lg		Lg	15 49 05.7	
	0.4nm,0.3s,baz=240,slow=8.3,SNR=4.5 2.2nm,1.0s							
SUR	**Sutherland**	**4.47**	**206**	Pn		Pn	15 48 13.6	+0.7
	0.3nm,0.3s,baz=23,slow=13,SNR=13							
SUR				Sn		Sn	15 49 04.0	-1.7
	0.3nm,0.3s,baz=156,slow=21,SNR=7.7							
SUR				Lg		Lg	15 49 18.1	
	1.0nm,0.3s,baz=139,slow=21,SNR=10 5.4nm,1.0s							
MATP	**Matopo**	**9.30**	**33**	Pn		Pn	15 49 19.1	-0.1
	0.2nm,0.3s,baz=215,slow=12,SNR=1.8							
MATP				Lg		Lg	15 51 46.5	
	0.1nm,0.3s,baz=280,slow=1.9,SNR=1.5 0.5nm,0.4s							
I35NA	**TSUMEB INFRASO**	**10.44**	**330**	*i*			16 53 20.0	
	baz=152,slow=318,SNR=2.6							

NOU 02 15:53:28.0,16°.05S×167°.47E,h0km,MLv4.4/14,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**1.80**	**158**	P		Pn	15 53 59.6	-0.7
RTV	**Rentapao**	**1.96**	**152**	P		Pb	15 54 04.1	-0.5
KOUNC	**Koumac, New Ca**	**5.40**	**214**	P		Pn	15 54 50.8	+0.9
MARNC	**Mare, Loyalty**	**5.43**	**174**	P		Pn	15 54 50.8	+0.6
	1.0nm,1.4s							
YATNC	**Mamie plateau,**	**6.00**	**185**	P		Pn	15 54 56.2	-1.9
NOUC	**Port Laguerre**	**6.12**	**190**	P		Pn	15 54 59.7	0.0
ONTNC	**Ouen Toro**	**6.30**	**189**	P		Pn	15 55 01.3	-0.9
OUENC	**Ouen Island, N**	**6.36**	**185**	P		Pn	15 55 03.6	+0.5
PINNC	**Pines Island,**	**6.53**	**180**	P		Pn	15 55 05.4	+0.1

IDC ***02*** *16:10:31.0±0.6,35°.35N×140°.39E,h0km,mb4.0/20, mbtmp4.0/25,ML2.5/3,MS3.5/36,Error ellipse: s-maj=15.7km s-min=13.1km az=86.0*

MOS ***02*** *16:10:32.8±1.5,35°.32N×140°.35E,h22km,mb4.5/22,Error ellipse: s-maj=11.4km s-min=6.8km az=102.5*

NEIC ***02*** *16:10:34.1±1.1,35°.38N±0°.04×140°.45E±0°.08,h19km±3km, mb4.6/20,Error ellipse: s-maj=9.4km s-min=5.4km az=81.0*

JMA ***02*** *16:10:35.5±0.2,35°.5N±0°.5×140°.4E±0°.8,h27km±2km, MD4.3/19,MW4.3/19,KUJUKURI COAST BOSO PEN*

JMA Felt III J1 at KUJUKURI COAST BOSO PEN .

NIED ***02*** *16:10:35.5,35°.47N×140°.39E,h27km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.82; Mθθ-0.80; Mϕϕ1.62; Mrθ1.60; Mθϕ-0.17; Mϕr1.89; Fault plane solution: Mo2.85000×10¹⁵ NP1: ϕs322.00000°,δ27.00000°,λ-160.00000°. NP2: ϕs214.00000°,δ81.00000°,λ-65.00000°.*

ISC 02 16:10:34.6±0.7,35°.37N±0°.03×140°.43E±0°.04,h23km±4km, n177,σ1°.73/127,mb4.3/44,MS3.7/35,12C-3D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCN	**Nagara**	**0.20**	**286**	*i*P		**Pb**	**16 10 41.4**	**+1.4**
JCN	**Nagara**	**0.20**	**286**	A		A	16 10 41.4	
	comp=E,78nm,1.1s,comp=E,213nm,2.5s							
KTR	**Katsuura**	**0.24**	**204**	*i*P		**Pb**	**16 10 42.7**	**+2.2**
JSMT	**Sammumatsuo**	**0.28**	**3**	⇓*e*P		**Pb**	**16 10 41.5**	**+0.4**
JSMT	**Sammumatsuo**	**0.28**	**3**	A		A	16 10 41.5	
	comp=E,384nm,0.2s,comp=E,152nm,0.2s							
JKUC	**kamogawauchiur**	**0.28**	**223**	⇓*i*P		**Pn**	**16 10 43.0**	**-0.4**
JKUC	**kamogawauchiur**	**0.28**	**223**	A		A	16 10 43.0	
	comp=E,36nm,1.0s,comp=E,22nm,0.9s							
BSO4	**Boso 4**	**0.38**	**192**	*i*P		**Pn**	**16 10 45.9**	**+1.2**
CHOJ	**Chosi**	**0.48**	**46**	*i*P		**Pb**	**16 10 44.7**	**+0.2**
CHOJ				*e*S		**Sb**	**16 10 51.3**	**+0.1**
CHOJ	**Chosi**	**0.48**	**46**	A		A	16 10 44.7	
	comp=E,19nm,1.8s,comp=E,26nm,0.7s							
BSO3	**Boso 3**	**0.57**	**173**	*i*P		**Pn**	**16 10 47.9**	**+0.9**
JIHU	**Itakohorinouch**	**0.60**	**7**	A		A	16 10 45.7	
	comp=E,69nm,0.8s,comp=E,87nm,0.6s							
TOK	**Tokyo**	**0.64**	**300**	A		A	16 10 46.6	
	comp=E,70nm,0.5s,comp=E,54nm,1.4s							
JYO	**Yokosk**	**0.64**	**257**	A		A	16 10 47.8	
	comp=E,43nm,1.0s,comp=E,38nm,2.0s							
JYT	**Yasato**	**0.88**	**347**			**Pb**	**16 10 49.3**	**-2.0**
JYT					Sg	**Sb**	**16 11 00.3**	**-2.2**
JYT	**Yasato**	**0.88**	**347**	*i*P		**Pb**	**16 10 49.5**	**-1.7**
JYT				S		**Sb**	**16 11 00.4**	**-2.2**
JYT	**Yasato**	**0.88**	**347**	A		A	16 10 49.5	
	comp=E,20nm,0.6s,comp=E,14nm,0.4s							
JHYU	**Hitachinakayam**	**0.98**	**7**	A		A	16 10 51.7	
	comp=E,10.0nm,7.2s,comp=E,9.0nm,2.4s							
JSGW	**Sagamiharawaka**	**1.03**	**284**	A		A	16 10 53.2	
	comp=E,9.0nm,4.0s,comp=E,9.0nm,2.2s							
JIM2	**Oshima 3**	**1.04**	**232**	A		A	16 10 55.0	
	comp=E,15nm,1.1s,comp=E,17nm,1.3s							
JHU	**Hanno**	**1.05**	**298**	A		A	16 10 53.4	
	comp=E,11nm,0.9s,comp=E,8.0nm,1.4s							
JOD2	**Odawara 2**	**1.10**	**265**	A		A	16 10 55.0	
	comp=E,12nm,2.6s,comp=E,14nm,2.1s							
JHTM	**Izuhatsuma**	**1.23**	**251**	A		A	16 10 57.4	
	comp=E,16nm,1.1s,comp=E,15nm,1.4s							
JTHY	**Toshimahigashi**	**1.26**	**229**	A		A	16 10 58.4	
	comp=E,12nm,0.9s,comp=E,14nm,0.9s							
JAG	**Ashikaga**	**1.32**	**323**	A		A	16 10 57.1	
	comp=E,3.0nm,2.3s,comp=E,5.0nm,1.2s							
JRY	**Ryogami san**	**1.41**	**298**	A		A	16 10 58.8	
	comp=E,7.0nm,2.2s,comp=E,6.0nm,2.1s							
JIZS	**Izushimoda**	**1.43**	**244**	A		A	16 11 00.5	
	comp=E,8.0nm,0.9s,comp=E,7.0nm,0.8s							
JFNN	**Fujinakano**	**1.44**	**264**	A		A	16 11 00.1	
	comp=E,12nm,2.1s,comp=E,12nm,2.2s							
JSB	**Shiboa**	**1.65**	**346**	A		A	16 11 02.0	
	comp=E,8.0nm,2.2s,comp=E,8.0nm,1.2s							
JKT	**Katashina**	**1.69**	**326**	A		A	16 11 02.7	
	comp=E,10.0nm,0.4s,comp=E,7.0nm,0.8s							
SHZ3	**Shizuoka 3**	**1.84**	**261**	A		A	16 11 06.1	
	comp=E,4.0nm,4.5s,comp=E,6.0nm,2.0s							
JGK	**Kuni**	**1.88**	**310**	A		A	16 11 05.6	
	comp=E,3.0nm,2.1s,comp=E,4.0nm,2.3s							
JSG	**Sagara**	**1.97**	**250**	A		A	16 11 08.2	
	comp=E,6.0nm,8.0s,comp=E,7.0nm,2.4s							
JNY	**Yasuok**	**2.10**	**271**	A		A	16 11 09.6	
	comp=E,3.0nm,3.5s,comp=E,5.0nm,1.5s							
JFY	**Yanaizu**	**2.12**	**344**	A		A	16 11 08.8	
	comp=E,3.0nm,5.3s,comp=E,2.0nm,5.4s							
MJAR	**Matsushiro Arr**	**2.15**	**304**	Pn		**Pn**	**16 11 08.5**	**-0.6**
	1.8nm,0.3s,baz=106,slow=30,SNR=65							
MJAR					Sn	**Sb**	**16 11 36.4**	**-2.7**
	7.2nm,0.3s,baz=124,slow=18,SNR=5.5							
MJAR					LR	LR	16 12 03.4	
	comp=Z,958nm,18.6s,baz=174,slow=43 53nm,0.5s							
MAJO	**Matsushiro**	**2.15**	**304**			**Pn**	**16 11 09.5**	**+0.4**
MAJO	**Matsushiro**	**2.15**	**304**	*c*P		**Pn**	**16 11 09.6**	**+0.4**
JNG	**Nsakai**	**2.16**	**299**	A		A	16 11 09.8	
	comp=E,4.0nm,2.6s,comp=E,4.0nm,2.0s							
JHJ	**Hachijo jima 2**	**2.31**	**194**	Pn		**Pn**	**16 11 11.3**	**+0.1**
	412nm,0.3s,baz=345,slow=8.7,SNR=137							
JHJ					Sn	**Sn**	**16 11 37.0**	**-1.8**
	216nm,0.3s,baz=63,slow=21,SNR=16							
JHJ					LR	LR	16 12 15.8	
	comp=Z,371nm,19.0s,baz=100,slow=46							
JHJ2	**Mitsune**	**2.31**	**193**	Pn		**Pn**	**16 11 11.1**	**-0.1**
JMM	**Marumori**	**2.51**	**7**			**Pn**	**16 11 13.3**	**-0.8**
JGF	**Kuroka**	**2.52**	**276**			**Pn**	**16 11 15.6**	**+1.4**
JIZZ	**Izumozaki**	**2.57**	**328**	A		A	16 11 15.3	
	comp=E,6.0nm,2.5s,comp=E,7.0nm,2.6s							
INU	**Inuyama**	**2.79**	**271**			**Pn**	**16 11 18.6**	**+0.7**
JTT	**Ttatey**	**2.80**	**297**	A		A	16 11 19.0	
	comp=E,4.0nm,2.9s,comp=E,4.0nm,3.0s							
JSD	**Sado**	**3.19**	**327**			**Pn**	**16 11 22.2**	**-1.1**
JTM	**Tenmabayashi**	**5.43**	**5**			**Pn**	**16 11 55.2**	**+1.0**
JMN	**Monobe**	**5.65**	**255**			**Pn**	**16 11 59.4**	**+2.1**
JHS	**Saijyo**	**6.00**	**269**	Pn		**Pn**	**16 12 03.5**	**+1.4**
ERM	**Erimo**	**6.97**	**17**	Pn		**Pn**	**16 12 14.4**	**-0.9**
ERM	**Erimo**	**6.97**	**17**	P		**Pn**	**16 12 14.4**	**-0.9**
JNU	**Nakatsue**	**8.22**	**257**	Pn		**Pn**	**16 12 34.6**	**+2.0**
	0.2nm,0.3s,baz=105,slow=7.2,SNR=5.9							
JNU					Lg	Lg	16 14 51.0	
	0.2nm,0.3s,baz=161,slow=17,SNR=1.6							
JNU	**Nakatsue**	**8.22**	**257**	Pn		**Pn**	**16 12 35.0**	**+2.5**
JCJ	**Chichijima**	**8.38**	**169**	Pn		**Pn**	**16 12 32.5**	**-2.3**
	54nm,0.3s,baz=278,slow=22,SNR=15							
JCJ					Sn	**Sn**	**16 14 01.1**	**-7.5**
	0.4nm,0.3s,baz=334,slow=23,SNR=1.9							
JCJ	**Chichijima**	**8.38**	**169**	Pn		**Pn**	**16 12 32.6**	**-2.1**
JSU	**Suzuyama**	**9.18**	**248**	Pn		**Pn**	**16 12 46.4**	**+0.7**
SHO	**Shikotan**	**9.82**	**28**	*e*P		**Pn**	**16 12 52.2**	**-2.1**
SEHB	**SEOHWA**	**10.19**	**290**	Pn		**Pn**	**16 12 59.5**	**0.0**
KSRS	**Korea Array**	**10.29**	**285**	Pn		**Pn**	**16 13 00.9**	**0.0**
	0.2nm,0.3s,baz=99,slow=14,SNR=4.3							
KSRS					LR	LR	16 17 04.4	
	comp=Z,386nm,19.5s,baz=95,slow=38 0.9nm,0.6s							
USRK	**Ussuriysk Ar.**	**10.95**	**326**	Pn		**Pn**	**16 13 08.4**	**-1.4**
	0.1nm,0.3s,baz=132,slow=12,SNR=1.3							
USRK					LR	LR	16 17 02.3	
	comp=Z,206nm,21.8s,baz=216,slow=36 0.4nm,0.5s							
USRK	**Ussuriysk Ar.**	**10.95**	**326**			**Pn**	**16 13 09.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**10.95**	**326**	P		**Pn**	**16 13 09.1**	**-0.7**
KUR	**Kuril'sk**	**11.37**	**28**	*e*P		**Pn**	**16 13 15.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**11.71**	**8**	*e*P		**Pn**	**16 13 20.9**	**+0.7**
YSS					pmax	pmax		
	comp=Z,10.0nm,1.0s							
YSS					MLR	MLR		
	comp=N,100nm,14.0s							
YSS					MLR	MLR		
	comp=Z,200nm,14.0s							
JOW	**Kunigami**	**13.44**	**234**		LR	LR	16 18 38.5	
	comp=E,68nm,20.8s,baz=72,slow=36							
CN2	**Changchun**	**14.28**	**311**	*e*P		**Pn**	**16 13 57.9**	**+2.5**
CN2				*e*S		**Sn**	**16 16 38.7**	**+5.7**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.8s							
CN2					pmax	pmax		
	comp=Z,100nm,3.0s							
CN2					LR	LR		
	comp=N,100nm,14.0s							
CN2					LR	LR		
	comp=E,200nm,14.0s							
CN2					LR	LR		
	comp=Z,100nm,19.0s							
SNY	**Shenyang**	**14.66**	**301**	⇓P		**P**	**16 14 09.3**	**+2.7**
SNY				S		S	16 17 12.8	+12
SNY				pmax		pmax		
	comp=Z,13nm,0.7s							
SNY				LR		LR		
	comp=N,160nm,10.7s							
SNY				LR		LR		
	comp=E,260nm,18.7s							
SNY				LR		LR		
	comp=Z,290nm,19.4s							
NJ2	**Nanjing**	**18.25**	**266**	*e*P		**Pn**	**16 14 42.8**	**-3.6**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.6s							
ZEA	**Zeya**	**20.57**	**337**	*e*P		Pn	16 15 14.9	+1.0
ZEA				pmax		pmax		
	comp=N,10.0nm,0.9s							
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
ZEA				MLR		MLR		
	comp=Z,100nm,14.0s							
PEA0B	**Petropavlovsk-**	**21.53**	**29**	*ce*P		**P**	**16 15 25.7**	**+3.8**
PETK	**Petropavlovsk-**	**21.53**	**29**	P		**P**	**16 15 22.1**	**+0.2**
	comp=Z,6.4nm,1.1s,baz=214,slow=7.2,SNR=11							
PETK					LR	LR	16 24 32.5	
	comp=Z,35nm,18.6s,baz=220,slow=39 comp=Z,6.4nm,1.1s							
PETK	**Petropavlovsk-**	**21.53**	**29**	P		**P**	**16 15 21.5**	**-0.5**
PET	**Petropavlovsk**	**21.85**	**30**	*ce*P		**P**	**16 15 30.1**	**+4.7**
PET				pmax		pmax		
	comp=Z,11nm,1.3s							
HHC	**Hu-ho-hao-te**	**23.31**	**292**	*e*P		**P**	**16 15 36.3**	**-4.7**
HHC				pmax		pmax		
	comp=Z,32nm,1.0s							
HHC				pmax		pmax		
	comp=Z,89nm,4.4s							
MA2	**Magadan**	**25.15**	**12**	P		**P**	**16 15 58.0**	**+0.2**
	comp=Z,8.0nm,0.8s,baz=197,slow=7.4,SNR=13							
MA2					LR	LR	16 25 35.8	
	comp=Z,61nm,19.9s,baz=196,slow=36 comp=Z,8.0nm,0.8s							
MA2	**Magadan**	**25.15**	**12**	P		**P**	**16 15 58.6**	**+0.8**
MA2				IAmb		IAmb	16 16 08.1	
	comp=Z,9.0nm,0.8s							
MA2	**Magadan**	**25.15**	**12**	*ce*P		**P**	**16 16 00.7**	**+2.9**
MA2				pmax		pmax		
	comp=Z,9.0nm,0.8s							
ENH	**Enshi**	**26.44**	**268**	P		**P**	**16 16 08.3**	**-1.5**
ENH				IAmb		IAmb	16 16 12.2	
	comp=Z,9.7nm,0.9s							
YAK	**Yakutsk**	**27.54**	**349**	LR		LR	16 27 10.9	
	comp=Z,123nm,19.3s,baz=254,slow=36							
YAK	**Yakutsk**	**27.54**	**349**	*ce*P		**P**	**16 16 21.1**	**+1.8**
YAK				pmax		pmax		
	comp=Z,10.0nm,1.3s							
H11N2	**WAKE ISLAND Hy**	**28.04**	**117**	T		T	16 45 37.8	
	baz=309,slow=75,SNR=360							
H11N1	**WAKE ISLAND Hy**	**28.05**	**117**	T		T	16 45 47.5	
	baz=309,slow=75,SNR=287							
H11N3	**WAKE ISLAND Hy**	**28.06**	**117**	T		T	16 45 48.2	
	baz=309,slow=75,SNR=305							
SONM	**Songino Array**	**28.10**	**307**	P		**P**	**16 16 23.5**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=102,slow=8.1,SNR=3.4							
SONM					LR	LR	16 28 06.3	
	comp=Z,164nm,18.6s,baz=84,slow=38 comp=Z,1.1nm,0.8s							
SEY	**Seymchan**	**28.58**	**11**	P		**P**	**16 16 27.7**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=4.1,slow=3.8,SNR=7.5 comp=Z,1.5nm,0.8s							
SEY	**Seymchan**	**28.58**	**11**	*ce*P		**P**	**16 16 31.9**	**+3.3**
SEY				pmax		pmax		
	comp=Z,1.0nm,0.6s							
H11S1	**WAKE ISLAND Hy**	**28.68**	**119**	T		T	16 46 23.0	
	baz=312,slow=75,SNR=612							
H11S3	**WAKE ISLAND Hy**	**28.68**	**119**	T		T	16 46 23.0	
	baz=312,slow=75,SNR=362							
H11S2	**WAKE ISLAND Hy**	**28.70**	**119**	T		T	16 46 28.8	
	baz=312,slow=75,SNR=351							
PZH	**PanZhiHua**	**34.17**	**266**	P		**P**	**16 17 19.1**	**+0.8**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.9s							
PZH				pmax		pmax		
	comp=Z,70nm,3.9s							
BILL	**Bilibino**	**35.85**	**16**	⇑*e*P		P	16 17 39.3	+7.1
BILL				*e*			16 18 55.1	
BILL				*e*SS		SS	16 26 00.0	+15
BILL				pmax		pmax		
	comp=Z,7.0nm,1.1s							
BILL				MLR		MLR		
	comp=Z,44nm,16.0s							
CMAR	**Chiang Mai Arr**	**40.32**	**256**	P		**P**	**16 18 10.0**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=47,slow=7.9,SNR=1.4							
CMAR					LR	LR	16 37 37.6	
	comp=Z,53nm,19.8s,baz=170,slow=40 comp=Z,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**40.32**	**256**	P		**P**	**16 18 10.0**	**-0.5**
WMQ	**Urumqi**	**40.91**	**298**	*e*P		**P**	**16 18 16.9**	**+1.7**
ZAA0	**Zalesovo Array**	**42.47**	**314**	P		**P**	**16 18 27.4**	**-0.3**
ZAA0				IAmb		IAmb	16 18 36.8	
	comp=Z,6.6nm,0.8s							
ZALV	**Zalesovo Beam**	**42.47**	**314**	P		**P**	**16 18 27.0**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=102,slow=7.9,SNR=11							
ZALV					PcP	**PcP**	**16 20 21.5**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=84,slow=4.5,SNR=2.2							
ZALV					LR	LR	16 37 00.2	
	comp=Z,32nm,18.0s,baz=84,slow=37 comp=Z,2.4nm,0.5s							
ZALV	**Zalesov

WR0					IAmb	IAmb	16 20 15.3		
	comp=Z,6.6nm,0.8s								
WB2	**Warramunga Arr**	**55.31**	**187**	P	**P**	**P**	**16 20 05.8**	**-0.6**	
WB2					IAmb	IAmb	16 20 06.8		
	comp=Z,11nm,0.9s								
WRA	**Warramunga Arr**	**55.31**	**187**	P	**P**		**16 20 05.8**	**-0.7**	
	comp=Z,5.6nm,0.8s,baz=2.7,slow=7.6,SNR=42								
	comp=Z,5.6nm,0.8s								
WRA	**Warramunga Arr**	**55.31**	**187**	P	**P**		**16 20 05.8**	**-0.7**	
ARU	**Arti**	**57.09**	**319**	LR	LR		16 47 14.7		
	comp=Z,58nm,18.5s,baz=106,slow=39								
ARU	**Arti**	**57.09**	**319**	*c iP*	P		16 20 23.5	+4.7	
ARU							16 22 26.5		
ARU				S	S		16 28 20.9	+8.6	
ARU				pmax	pmax				
	comp=Z,4.0nm,0.7s								
HYBB	**Hyderabad (bro**	**57.37**	**269**	*eP*	**P**		**16 20 20.7**	**-0.7**	
HYBB				*es*P	**sP**		**16 20 29.7**	**-1.7**	
HYBB				*eS*	**S**		**16 28 17.1**	**0.0**	
ABKAR	**Akbulak array**	**58.41**	**311**		**P**		**16 20 28.3**	**0.0**	
AS31	**Alice Springs**	**59.03**	**187**		**P**		**16 20 32.5**	**-0.3**	
ASAR	**Alice Springs**	**59.03**	**187**	P	**P**		**16 20 32.5**	**-0.3**	
	comp=Z,1.7nm,0.8s,baz=3.1,slow=6.7,SNR=37								
	comp=Z,1.7nm,0.8s								
AKTO	**Aktyubinsk**	**59.20**	**312**	LR	LR		16 47 17.6		
	comp=Z,55nm,19.3s,baz=91,slow=37								
MBWA	**Marble Bar**	**59.55**	**203**	P	**P**		**16 20 35.7**	**-0.7**	
KIRV	**Kirov**	**61.10**	**323**	LR	LR		16 49 13.8		
	comp=Z,71nm,18.7s,baz=85,slow=38								
BELG	**Belogornoye**	**64.48**	**317**	*i* P	**P**		**16 21 10.1**	**+0.9**	
BELG				pmax	pmax				
	comp=Z,2.0nm,0.9s								
KLMR	**Klimovskoe**	**64.74**	**328**	*eP*	**P**		**16 21 14.9**	**+4.2**	
KLMR				pmax	pmax				
	comp=Z,7.0nm,1.0s								
KLMR	**Klimovskoe**	**64.74**	**328**	*eP*	**P**		**16 21 14.9**	**+4.2**	
KLMR				AMP			16 21 20.0		
	comp=Z,7.0nm,1.0s								
ARCES	**ARCESS Array B**	**65.28**	**339**	P	**P**		**16 21 14.5**	**+0.3**	
	comp=Z,2.1nm,0.9s,baz=55,slow=7.8,SNR=1.6								
ARCES				LR	LR		16 52 42.0		
	comp=Z,48nm,20.0s,baz=126,slow=39								
	comp=Z,2.1nm,0.9s								
YKA	**Yellowknife Ar**	**65.65**	**29**	P	**P**		**16 21 17.3**	**+0.7**	
	comp=Z,0.9nm,0.8s,baz=305,slow=6.6,SNR=3.8								
	comp=Z,0.9nm,0.8s								
AFI	**Afiamalu**	**66.70**	**128**	LR	LR		16 45 15.1		
	comp=Z,24nm,19.9s,baz=280,slow=31								
FORT	**Forrest**	**66.82**	**192**	P	**P**		**16 21 24.0**	**-0.4**	
OBN	**Obninsk**	**68.95**	**323**	LR	LR		16 53 40.1		
	comp=Z,16nm,20.9s,baz=8.5,slow=38								
FINES	**FINESS Array B**	**69.92**	**332**	P	**P**		**16 21 43.3**	**-0.2**	
	comp=Z,1.4nm,0.7s,baz=87,slow=4.0,SNR=4.7								
FINES				LR	LR		16 54 12.8		
	comp=Z,43nm,18.6s,baz=58,slow=38								
	comp=Z,1.4nm,0.7s								
FINES	**FINESS Array B**	**69.92**	**332**	*i* P	**P**		**16 21 44.5**	**+1.0**	
FINES				pmax	pmax				
	comp=Z,2.0nm,0.7s								
KBZ	**Khabaz**	**71.39**	**311**	P	**P**		**16 21 52.7**	**-0.1**	
	comp=Z,0.7nm,0.4s,baz=302,slow=13,SNR=2.1								
KBZ				LR	LR		16 55 31.3		
	comp=Z,42nm,21.5s,baz=63,slow=38								
	comp=Z,0.7nm,0.4s								
KBZ	**Khabaz**	**71.39**	**311**	*i* P	**P**		**16 21 53.5**	**+0.7**	
KBZ				pmax	pmax				
	comp=Z,4.0nm,0.9s								
KIV	**Kislovodsk**	**71.40**	**311**	*eP*	P		16 21 57.5	+4.5	
KIV				pmax	pmax				
	comp=Z,10.0nm,1.1s								
KIV				MLR	MLR				
	comp=Z,21nm,18.0s								
JMIC	**Jan Mayen**	**71.64**	**350**	LR	LR		16 54 30.1		
	comp=Z,14nm,18.2s,baz=48,slow=37								
GNI	**Garni**	**72.06**	**307**	LR	LR		16 56 23.7		
	comp=Z,55nm,18.3s,baz=60,slow=38								
SOC	**Sochi**	**73.42**	**312**	*eP*	**P**		**16 22 04.4**	**-0.5**	
SOC				*e*			16 24 45.1		
SOC				*e*PPP	PPP		16 26 31.5		
SOC				*eS*	**S**		**16 31 32.1**	**-0.7**	
SOC				*eS*S	**SS**		**16 36 12.9**	**-1.6**	
SOC				MLR	MLR				
	comp=Z,62nm,17.0s								
AKASG	**Malin Array Be**	**75.13**	**322**	P	**P**		**16 22 14.0**	**-0.7**	
	comp=Z,0.4nm,0.4s,baz=48,slow=5.7,SNR=4.7								
AKASG				LR	LR		16 58 04.5		
	comp=Z,98nm,18.6s,baz=16,slow=38								
	comp=Z,0.4nm,0.4s								
AKASG	**Malin Array Be**	**75.13**	**322**	*i* P	**P**		**16 22 16.2**	**+1.5**	
HFS	**Hagfors**	**75.28**	**335**	LR	LR		16 57 36.1		
	comp=Z,53nm,19.3s,baz=36,slow=38								
NB2	**NORSAR Subarra**	**75.41**	**337**	P	**P**		**16 22 19.4**	**+3.1**	
	comp=Z,3.0nm,0.9s,baz=42,slow=5.9								
NOA	**NORSAR Array B**	**75.41**	**337**	P	**P**		**16 22 15.2**	**-1.1**	
	comp=Z,0.4nm,0.7s,baz=39,slow=5.9,SNR=2.0								
NOA				LR	LR		16 57 44.7		
	comp=Z,26nm,20.3s,baz=55,slow=38								
	comp=Z,0.4nm,0.7s								
LRM	**Limekiln Ridge**	**75.90**	**44**	P	**P**		**16 22 19.0**	**-0.6**	
BOZ	**Bozeman (W)**	**76.49**	**43**	P	**P**		**16 22 23.1**	**+0.3**	
BOZ				IAmb	IAmb		16 22 36.3		
	comp=Z,3.1nm,0.9s								
BOZ	**Bozeman (W)**	**76.49**	**43**	P	**P**		**16 22 23.2**	**+0.3**	
BOZ				pmax	pmax				
	comp=Z,3.0nm,1.0s								
NVAR	**Mina Array Bea**	**76.63**	**52**	P	**P**		**16 22 24.4**	**+0.6**	
	comp=Z,0.9nm,0.7s,baz=292,slow=5.5,SNR=8.6								
	comp=Z,0.9nm,0.7s								
NVAR	**Mina Array Bea**	**76.63**	**52**	P	**P**		**16 22 24.2**	**+0.3**	
SFJD	**Kangerlussuaq**	**77.61**	**4**	LR	LR		16 59 12.1		
	comp=Z,26nm,19.4s,baz=350,slow=38								
BURAR	**Bucovina Array**	**79.12**	**321**	P	**P**		**16 22 37.1**	**-0.3**	
BURAR	**Bucovina Array**	**79.12**	**321**	P	**P**		**16 22 37.1**	**-0.3**	
BURAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								
BRTR	**Keskin Array B**	**79.36**	**311**	LR	LR		17 02 30.8		
	comp=Z,39nm,18.0s,baz=106,slow=39								
PDAR	**Pinedale Array**	**79.40**	**45**	P	**P**		**16 22 40.0**	**+0.8**	
	comp=Z,0.5nm,0.6s,baz=268,slow=3.9,SNR=4.7								
	comp=Z,0.5nm,0.6s								
PDAR	**Pinedale Array**	**79.40**	**45**	P	**P**		**16 22 39.8**	**+0.6**	
RAR	**Rarotonga**	**79.84**	**125**	LR	LR		16 51 38.5		
	comp=Z,46nm,21.6s,baz=264,slow=31								
MLR	**Muntele Rosu**	**80.14**	**319**	LR	LR		17 01 15.7		
	comp=Z,52nm,18.1s,baz=83,slow=38								
VRAC	**Vranov**	**82.08**	**327**	LR	LR		17 01 39.1		
	comp=Z,33nm,18.1s,baz=34,slow=37								
ANMO	**Albuquerque**	**86.27**	**49**	*eP*	**P**		**16 23 17.7**	**+2.8**	
ANMO				pmax	pmax				
	comp=Z,6.0nm,2.5s								
DAVOX	**Davos/Dischmat**	**86.94**	**328**	LR	LR		17 05 11.9		
	comp=Z,34nm,18.6s,baz=261,slow=38								
SCHQ	**Schefferville**	**87.15**	**15**	LR	LR		17 05 24.1		
	comp=Z,32nm,18.1s,baz=62,slow=38								
TXAR	**Lajitas Array**	**91.77**	**52**	P	**P**		**16 23 40.6**	**-0.3**	
	comp=Z,0.6nm,1.0s,baz=268,slow=3.3,SNR=4.6								
	comp=Z,0.6nm,1.0s								
ESDC	**Sonseca Array**	**98.42**	**333**	LR	LR		17 15 04.8		
	comp=Z,38nm,18.2s,baz=26,slow=39								
H03N2	**Juan Fernandez**	**147.61**	**98**	T	T		19 15 07.3		
	baz=289,slow=76,SNR=16								
H03N3	**Juan Fernandez**	**147.62**	**98**	T	T		19 15 08.7		
	baz=289,slow=76,SNR=19								
H03N1	**Juan Fernandez**	**147.62**	**98**	T	T		19 15 11.0		
	baz=289,slow=76,SNR=14								

*SOME **02** 16:21:38.0, 44°.92N×79°.52E, h10km*
*NNC **02** 16:21:39.7±0.9, 44°.88N×79°.49E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=7.2km s-min=6.6km az=56.0

ISC 02 16:21:37.5±1.3, 44°.95N±0°.03×79°.56E±0°.03, h2km±16km, n32, σ0°.56/49, 5C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.64**	**165**	*eP*		**Pg**		**16 21 50.4**	**+0.6**
	18nm,0.2s								
DJR				*eS*		**Sg**		**16 21 58.7**	**+0.6**
	69nm,0.2s								
DJR	**Jarkent**	**0.64**	**165**	P		**Pg**		**16 21 50.4**	**+0.6**
	18nm,0.2s								
DJR				S		**Sg**		**16 21 58.7**	**+0.6**
	122nm,0.4s								
TDK	**Taldyqorghan**	**0.82**	**274**	*eP*		**Pg**		**16 21 53.4**	**+0.2**
	28nm,0.3s								
TDK				*eS*		**Sg**		**16 22 03.9**	**0.0**
	70nm,0.2s								
TDK	**Taldyqorghan**	**0.82**	**274**	P		**Pg**		**16 21 53.4**	**+0.2**
	35nm,0.2s								
TDK				S		**Sg**		**16 22 03.9**	**0.0**
	62nm,0.4s								
PDGK	**Podgornoye**	**1.62**	**182**	P		**Pb**		**16 22 08.0**	**-0.2**
	19nm,0.2s								
PDGK				S		**Sb**		**16 22 28.9**	**-0.3**
	6.3nm,0.2s								
PDGK	**Podgornoye**	**1.62**	**182**	⇑P		**Pb**		**16 22 08.0**	**-0.2**
	12nm,0.3s								
PDGK				⇓S		**Sb**		**16 22 28.5**	**-0.8**
	16nm,0.5s								
KURS	**Kuram**	**1.77**	**215**	*eP*		**Pb**		**16 22 10.9**	**+0.1**
	12nm,0.8s								
KURS				*eS*		**Sg**		**16 22 33.9**	**-0.6**
	26nm,0.9s								
KURS	**Kuram**	**1.77**	**215**	P		**Pb**		**16 22 10.9**	**+0.1**
	12nm,0.5s								
KURS				S		**Sg**		**16 22 33.8**	**-0.6**
	16nm,0.6s								
UZB	**Uzynbulak**	**1.85**	**192**	*eP*		**Pb**		**16 22 11.7**	**-0.3**
	8.3nm,0.3s								
UZB				*eS*		**Sb**		**16 22 35.2**	**-0.5**
	62nm,0.4s								
UZB	**Uzynbulak**	**1.85**	**192**	P		**Pb**		**16 22 11.7**	**-0.3**
	8.3nm,0.2s								
UZB				S		**Sb**		**16 22 35.2**	**-0.5**
	22nm,0.4s								
SATY	**Saty**	**2.07**	**204**	*eP*		**Pb**		**16 22 16.0**	**+0.1**
	7.9nm,0.2s								
SATY				*eS*		**Sb**		**16 22 42.4**	**+0.4**
	56nm,0.4s								
SATY	**Saty**	**2.07**	**204**	Pg		**Pb**		**16 22 16.0**	**+0.1**
	13nm,0.4s								
SATY				Lg		Lg		16 22 42.4	
	50nm,0.2s								
CHKK	**Chushkaly**	**2.15**	**240**	*eP*		**Pb**		**16 22 16.5**	**-0.5**
	9.2nm,0.3s								
CHKK				*eS*		**Sb**		**16 22 44.1**	**-0.1**
	66nm,0.4s								
CHKK	**Chushkaly**	**2.15**	**240**	Pg		**Pb**		**16 22 16.6**	**-0.5**
	9.2nm,0.3s								
CHKK				Lg		Lg		16 22 44.3	
	66nm,0.4s								
KTBS	**Karatobe**	**2.41**	**240**	*eP*		**Pb**		**16 22 21.8**	**+0.2**
	6.8nm,0.5s								
KTBS				*eS*		**Sb**		**16 22 52.4**	**+0.6**
	96nm,0.3s								
KTBS	**Karatobe**	**2.41**	**240**	Pg		**Pb**		**16 22 21.9**	**+0.3**
	6.8nm,0.5s								
KTBS				Lg		Lg		16 22 52.8	
	96nm,0.3s								
MAKZ	**Makanchi**	**2.51**	**41**	⇑Pn		**Pb**		**16 22 23.7**	**+0.4**
	0.6nm,0.3s								
MAKZ				⇓Lg		Lg		16 22 59.2	
	6.3nm,0.5s								
KUU	**Kurty**	**2.54**	**246**	*eP*		**Pb**		**16 22 23.7**	**-0.1**
	5.8nm,0.3s								
KUU				*eS*		**Sb**		**16 22 55.8**	**+0.3**
	64nm,0.5s								
KUU	**Kurty**	**2.54**	**246**	Pg		**Pb**		**16 22 23.7**	**-0.1**
	5.8nm,0.3s								
KUU				Lg		Lg		16 22 55.8	
	64nm,0.5s								
MDOK	**Medeo**	**2.54**	**226**	*eP*		**Pb**		**16 22 24.4**	**+0.5**
	8.5nm,0.2s								
MDOK				*eS*		**Sb**		**16 22 57.1**	**+1.3**
	23nm,0.6s								
MDOK	**Medeo**	**2.54**	**226**	Pn		**Pb**		**16 22 23.0**	**-1.0**
	7.3nm,0.4s								
MDOK				Pg		**Pg**		**16 22 24.8**	**-1.5**
	12nm,0.5s								
MDOK				Sn		**Sb**		**16 22 56.5**	**+0.7**
	32nm,0.8s								
MDOK				Lg		Lg		16 22 57.7	
	23nm,0.5s								
MK31	**Makanchi Array**	**2.65**	**45**	Pn		**Pb**		**16 22 25.0**	**-0.7**
	2.0nm,0.5s,baz=216,slow=15,SNR=42								
MK31				Lg		Lg		16 23 03.2	
	4.7nm,0.4s,baz=219,slow=24,SNR=17								
MTBS	**Maitube**	**2.90**	**232**	*eP*		**Pb**		**16 22 30.2**	**+0.2**
	3.2nm,0.2s								
MTBS				*eS*		**Sb**		**16 23 07.1**	**+1.1**
	47nm,0.4s								
MTBS	**Maitube**	**2.90**	**232**	Pg		**Pb**		**16 22 30.2**	**+0.2**
	3.2nm,0.2s								
MTBS				Lg		Lg		16 23 07.1	
	47nm,0.4s								
KRBS	**Karabastau**	**3.06**	**247**	*eP*		**Pb**		**16 22 32.6**	**-0.1**
	1.3nm,0.4s								
KRBS				*eS*		**Sb**		**16 23 11.3**	**+0.8**
	14nm,1.6s								
KRBS	**Karabastau**	**3.06**	**247**	Pg		**Pb**		**16 22 32.5**	**-0.1**
	1.3nm,0.3s								
KRBS				Lg		Lg		16 23 11.3	
	10nm,0.5s								
KST	**Kastek**	**3.22**	**235**	*eP*		**Pb**		**16 22 35.5**	**0.0**
	1.0nm,0.3s								
KST				*eS*		**Sb**		**16 23 16.1**	**+0.8**
	18nm,0.6s								
KST	**Kastek**	**3.22**	**235**	Lg		Lg		16 23 16.1	
	17nm,0.4s								
TKM2	**Tokmak 2**	**3.51**	**236**	⇑Pn		**Pb**		**16 22 40.0**	**-0.4**
	1.2nm,0.5s								
TKM2				⇓Lg		Lg		16 23 33.3	
	4.8nm,0.5s								
ZSN	**Zaisan**	**4.45**	**54**	Pg		**Pg**		**16 23 02.5**	**-0.3**
KURBB	**Kurchatov Arra**	**5.72**	**353**	⇑Lg		Lg		16 24 45.8	
	8.0nm,0.7s								
KURK	**Kurchatov**	**5.80**	**354**	⇑Lg		Lg		16 24 48.4	
	4.9nm,0.9s								

IDC 02 16:30:56.3±31.0, 31°.57S×58°.36E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1087.0km s-min=52.1km az=54.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**27.20**	**32**	T		T	T	17 05 33.0	
	baz=207,slow=76,SNR=83								
H08S2	**Diego Garcia H**	**27.21**	**32**	T		T	T	17 05 32.0	
	baz=207,slow=76,SNR=30								
H08S3	**Diego Garcia H**	**27.22**	**32**	T		T	T	17 05 35.4	
	baz=207,slow=76,SNR=87								
H01W2	**Cape Leeuwin H**	**46.26**	**110**	T		T	T	17 29 10.4	
	baz=256,slow=75,SNR=35								
H01W3	**Cape Leeuwin H**	**46.27**	**110**	T		T	T	17 29 07.4	
	baz=256,slow=75,SNR=33								
H01W1	**Cape Leeuwin H**	**46.28**	**110**	T		T	T	17 29 12.1	
	baz=256,slow=75,SNR=40								
ASAR	**Alice Springs**	**66.21**	**104**	P		P	P	16 41 46.3	-0.1
	0.6nm,0.7s,baz=242,slow=6.1,SNR=7.4								
	0.6nm,0.7s								
WRA	**Warramunga Arr**	**68.21**	**101**	P		P	P	16 41 59.2	+0.2
	0.9nm,1.0s,baz=245,slow=5.3,SNR=3.4								
	0.9nm,1.0s								
MKAR	**Makanchi Array**	**80.94**	**16**	P		P	P	16 43 12.3	0.0
	0.4nm,0.8s,baz=202,slow=2.7,SNR=3.9								
	0.4nm,0.8s								

*IDC **02** 16:33:22.2±3.9, 58°.68S×26°.01W, h0km, mb4.1/1,*
mbtmp4.1/1, Error ellipse: s-maj=291.7km s-min=72.2km
az=138.0

ISC 02 16:33:35.2±1.3, 59°.1S±0°.2×24°.6W±0°.5, h100km, n13, σ1°.79/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.42**	**156**	P		P	**Pn**	**16 36 43.1**	**+2.0**
VNA3	**Neumayer Olymp**	**13.63**	**159**	P		P	**Pn**	**16 36 45.2**	**+1.3**
VNA2	**Neumayer--Watz**	**13.82**	**156**	P		P	**Pn**	**16 36 47.9**	**+1.5**
	baz=314,slow=15								
VNA2				S			**Sn**	**16 39 15.3**	**-2.9**
SNAA	**Sanae**	**15.37**	**154**	P		P	**P**	**16 37 09.3**	**+0.7**
H10S2	**ASCENSION HYDR**	**50.61**	**13**	T		T	T	17 36 52.7	
	baz=33,slow=74,SNR=6.1								
H10S3	**ASCENSION HYDR**	**50.61**	**13**	T		T	T	17 36 52.1	
	baz=187,slow=74,SNR=12								
H10N1	**ASCENSION HYDR**	**51.73**	**13**	T		T	T	17 38 10.6	
	baz=180,slow=72,SNR=5.1								
H10N3	**ASCENSION HYDR**	**51.73**	**13**	T		T	T	17 38 16.2	
	baz=180,slow=72,SNR=7.7								
H10N2	**ASCENSION HYDR**	**51.74**	**13**	T		T	T	17 38 17.0	
	baz=180,slow=72,SNR=8.0								
TORD	**Torodi Ar. Bea**	**75.10**	**26**	P		P	**P**	**16 45 05.7**	**-0.3**
	0.8nm,0.5s,baz=196,slow=6.4,SNR=10								
	0.8nm,0.5s								
FINES	**FINESS Array B**	**126.45**	**28**	PKP			**PKPdf**	**16 52 25.0**	**+0.3**
	3.4nm,0.9s,baz=183,slow=2.5,SNR=4.1								
YKA	**Yellowknife Ar**	**139.36**	**315**	PKP			**PKPdf**	**16 52 48.8**	**-0.1**
	0.6nm,0.6s,baz=121,slow=2.1,SNR=6.4								
ILAR	**Eielson Array**	**153.15**	**307**	PKPbc			**PKPbc**	**16 53 17.9**	**-1.5**
	0.3nm,0.5s,baz=96,slow=0.2,SNR=4.4								

IDC 02 16:36:45.0±4.7, 16°.57S×175°.48W, h0km, mb4.1/2, mbtmp4.1/2, Error ellipse: s-maj=249.2km s-min=40.6km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.85**	**253**	P		P	P	16 45 25.0	0.0
	2.1nm,0.5s,baz=84,slow=8.5,SNR=68								
ASAR				PcP		PcP	PcP	16 46 53.7	-0.2
	0.1nm,0.4s,baz=101,slow=3.7,SNR=4.5								
	2.1nm,0.5s								
ILAR	**Eielson Array**	**83.98**	**12**	P		P	P	16 49 17.5	+0.8
	0.5nm,0.6s,baz=216,slow=4.5,SNR=3.3								
	0.5nm,0.6s								
GERES	**GERESS Array B**	**146.95**	**349**	PKPbc			PKPdf	16 56 27.6	-0.2
	0.2nm,0.5s,baz=32,slow=2.4,SNR=2.0								

*IDC **02** 16:46:34.6±1.9, 5°.46S×150°.36E, h79km±29km, mb3.6/3,*
mbtmp4.0/5, Error ellipse: s-maj=94.1km s-min=10.7km
az=136.0
*NEIC **02** 16:46:36.5±1.0, 5°.3S±0°.3×150°.54E±0°.09, h119km±29km,*
mb4.3/11, Error ellipse: s-maj=40.0km s-min=9.3km
az=194.0

ISC 02 16:46:36.1±1.0, 5°.5S±0°.1×150°.5E±0°.1, h114km, n19, σ1°.53/21, mb4.0/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.92**	**53**	P		P	**Pn**	**16 47 07.1**	**-1.3**
	165nm,0.5s,baz=358,slow=0.2,SNR=58								
KRVT				S			**Sn**	**16 47 31.7**	**-1.2**
	134nm,0.6s,baz=310,slow=16,SNR=8.0								
RABL	**Rabaul**	**2.10**	**53**				**Pn**	**16 47 08.9**	**-1.8**
PMG	**Port Moresby**	**5.12**	**220**	P			**Pn**	**16 47 49.6**	**-1.0**
	30nm,0.5s,baz=53,slow=7.0,SNR=37								
PMG				S			**Sn**	**16 48 44.1**	**-4.4**
	14nm,0.3s,baz=206,slow=22,SNR=2.9								
EIDS	**Eidsvold**	**19.80**	**178**	P		**P**	**P**	**16 50 58.5**	**+0.8**
EIDS				IAmb		IAmb	IAmb	16 51 16.3	
	comp=Z,14nm,1.3s								
MTN	**Manton Dam**	**20.45**	**248**	P		**P**	**P**	**16 51 05.9**	**+1.2**
MTN				IAmb		IAmb	IAmb	16 51 36.4	
	comp=Z,25nm,1.3s								
WR0	**Warramunga Arr**	**21.16**	**226**	P		**P**	**P**	**16 51 12.7**	**+0.3**
WB2	**Warramunga Arr**	**21.29**	**226**	P		**P**	**P**	**16 51 14.1**	**+0.3**
WB2				IAmb		IAmb	IAmb	16 51 35.6	
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**21.30**	**226**	P		**P**	**P**	**16 51 14.2**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=51,slow=11,SNR=17								
	comp=Z,1.2nm,0.4s								
ONTNC	**Ouen Toro**	**22.78**	**139**	P		**P**	**P**	**16 51 29.5**	**+0.4**
ONTNC				IAmb		IAmb	IAmb	16 52 05.6	
	comp=Z,21nm,1.0s								
KNRA	**Kununurra**	**23.61**	**243**	P		**P**	**P**	**16 51 38.6**	**+1.6**
KNRA				IAmb		IAmb	IAmb	16 52 02.3	
	comp=Z,15nm,1.2s								
AS31	**Alice Springs**	**24.13**	**220**	P		**P**	**P**	**16 51 42.9**	**+1.3**
ASAR	**Alice Springs**	**24.13**	**220**	P		**P**	**P**	**16 51 43.0**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=55,slow=9.4,SNR=79								
	comp=Z,1.5nm,0.6s								
ASAR	**Alice Springs**	**24.13**	**220**	P		**P**	**P**	**16 51 42.5**	**+0.9**
ARMA	**Armidale**	**24.85**	**178**	P		**P**	**P**	**16 51 50.2**	**+2.1**
LHI	**Lord Howe Isla**	**27.14**	**164**	P		**P**	**P**	**16 52 09.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**27.32**	**241**	P		**P**	**P**	**16 52 11.2**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=51,slow=8.0,SNR=8.8								
	comp=Z,1.8nm,0.5s								
FITZ	**Fitzroy Crossi**	**27.32**	**241**	P		**P**	**P**	**16 52 11.1**	**+0.7**
FITZ				IAmb		IAmb	IAmb	16 52 50.5	
	comp=Z,9.9nm,1.3s								
FORT	**Forrest**	**32.84**	**217**	P		**P**	**P**	**16 52 59.8**	**+0.8**
TORD	**Torodi Ar. Bea**	**148.29**	**286**	PKPbc			**PKiKP**	**17 06 11.6**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=58,slow=3.6,SNR=1.2								

*SOME **02** 16:47:17.3, 44°.90N×79°.48E, h5km*
*NNC **02** 16:47:18.9±0.5, 44°.86N×79°.49E, h0km, mb2.8, mpv2.6,*
Error ellipse: s-maj=4.3km s-min=3.5km az=106.0

ISC 02 16:47:16.4±1.4, 44°.98N±0°.04×79°.54E±0°.04, h0km±12km, n22, σ0°.59/35, 2C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.67**	**165**	*eP*		**Pg**		**16 47 29.2**	**0.0**
	3.0nm,0.1s								
DJR				*eS*		**Sg**		**16 47 37.6**	**-0.2**
	16nm,0.3s								
DJR	**Jarkent**	**0

0.5nm,1.0s
KRBS *eS* **Sb** **16 48 49.8 +0.2**
2.0nm,0.8s
KRBS Karabastau 3.06 247 Pg **Pb** **16 48 11.8 +0.1**
0.6nm,0.6s
KRBS Lg Lg 16 48 50.0
2.2nm,0.5s
KST Kastek 3.23 234 Pg **Pb** **16 48 15.5 +0.8**
1.3nm,0.4s
KST Lg Lg 16 48 56.1
3.3nm,0.5s

ATH ***02*** *17:56:20.8, 36°.47N×27°.93E, h42km±3km, ML2.7/3, Error ellipse: s-maj=4.0km s-min=1.5km az=84.0*
THE ***02*** *17:56:22.8, 36°.41N×27°.82E, h14km±2km, ML2.6/3, Error ellipse: s-maj=2.0km s-min=0.8km az=72.0*
DDA ***02*** *17:56:22.6±0.0, 36°.40N×27°.72E, h7km±2km, ML2.4*
ISK ***02*** *17:56:22.8, 36°.42N×27°.83E, h6km, ML2.8/12*
ISC 02 17:56:22.7±1.0,**36°.41N**±0'.02×**27°.80E**±0'.02,**h12**km±10km, **n34**,σ0s**72**/52,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.33**	**127**	P	**Pg**	**17 56 29.4**	**+0.1**
ARG				S	**Sb**	**17 56 34.6**	**-1.0**
	1μm,0.3s						
ARG	**Arkhangelos**	**0.33**	**127**	P	**Pg**	**17 56 29.2**	**-0.1**
ARG				S	**Sb**	**17 56 35.6**	**0.0**
ARG				AML	AML	17 56 37.2	
	comp=N,2276μm,0.3s						
ARG				AML	AML	17 56 41.5	
	comp=E,2914μm,0.4s						
DAT	**Datca**	**0.36**	**330**	P	**Pg**	**17 56 29.5**	**-0.5**
DAT				S	**Sb**	**17 56 36.6**	**-0.2**
DAT	**Datca**	**0.36**	**330**	PG	**Pg**	**17 56 30.1**	**+0.1**
DAT				SG	**Sb**	**17 56 36.1**	**-0.7**
DAT	**Datca**	**0.36**	**330**	P	**Pg**	**17 56 29.3**	**-0.7**
TURN	**Turunc**	**0.51**	**44**	PG	**Pg**	**17 56 32.6**	**0.0**
TURN				SG	**Sb**	**17 56 40.1**	**-0.7**
TURN	**Turunc**	**0.51**	**44**	P	**Pg**	**17 56 32.2**	**-0.4**
NIS1	**Nisyros Isl.**	**0.54**	**291**	P	**Pg**	**17 56 33.4**	**+0.2**
NIS1				S	**Sb**	**17 56 42.7**	**+1.0**
	comp=E,1μm,0.4s						
NIS1	**Nisyros Isl.**	**0.54**	**291**	PG	**Pb**	**17 56 34.0**	**0.0**
NIS1				SG	**Sb**	**17 56 42.3**	**+0.6**
NIS1	**Nisyros Isl.**	**0.54**	**291**	P	**Pg**	**17 56 33.2**	**+0.1**
NIS1				S	**Sb**	**17 56 43.1**	**+1.4**
NIS1				AML	AML	17 56 48.4	
	comp=N,2183μm,0.4s						
NIS1				AML	AML	17 56 51.5	
	comp=E,2224μm,0.3s						
NISR	**Nisiros**	**0.58**	**290**	P	**Pg**	**17 56 34.3**	**+0.4**
BDRM	**Kayabasi**	**0.71**	**336**	P	**Pg**	**17 56 36.8**	**+0.3**
BDRM				S	**Sg**	**17 56 46.2**	**+0.4**
BDRM				*i* AML	AML	17 56 54.0	
	comp=E,173nm,0.7s						
KOSK	**Kos Island**	**0.74**	**297**	PG	**Pb**	**17 56 37.9**	**+0.4**
BODT	**Bodrum**	**0.76**	**329**	P	**Pg**	**17 56 36.4**	**-1.0**
BODT				S	**Sb**	**17 56 48.9**	**+0.8**
BODT	**Bodrum**	**0.76**	**329**	PG	**Pg**	**17 56 37.1**	**-0.3**
BODT				SG	**Sb**	**17 56 48.9**	**+0.8**
DALY	**Dalyan (Mula)**	**0.80**	**59**	PG	**Pb**	**17 56 38.0**	**-0.4**
YER	**Yerkesik**	**0.82**	**28**	P	**Pg**	**17 56 38.2**	**-0.3**
YER				S	**Sb**	**17 56 50.0**	**+0.2**
YER	**Yerkesik**	**0.82**	**28**	PG	**Pg**	**17 56 38.4**	**-0.1**
MULA	**Mugla, Merkez-**	**0.94**	**26**	P	**Pn**	**17 56 41.4**	**-0.3**
MULA				S	**Sn**	**17 56 55.6**	**+0.5**
MULA				*i* AML	AML	17 56 58.0	
	comp=E,104nm,1.0s						
MULA				*i* AML	AML	17 56 59.0	
	comp=E,116nm,0.6s						
KARP	**Karpathos**	**1.01**	**211**	P	**Pb**	**17 56 41.2**	**-0.8**
KARP				S	**Sb**	**17 56 55.0**	**-0.2**
	comp=E,260nm,0.3s						
KARP	**Karpathos**	**1.01**	**211**	P	**Pb**	**17 56 41.4**	**-0.6**
KARP				S	**Sg**	**17 56 56.1**	**+0.9**
KARP				AML	AML	17 56 58.8	
	comp=N,550μm,0.3s						
KARP				AML	AML	17 57 02.9	
	comp=E,471μm,0.3s						
FETY	**Fethiye**	**1.06**	**77**	PG	**Pn**	**17 56 42.9**	**-0.4**
FETY	**Fethiye**	**1.06**	**77**	P	**Pn**	**17 56 44.1**	**+0.8**
AYDN	**Tasoluk**	**1.25**	**3**	P	**Pg**	**17 56 46.3**	**-0.4**
AYDN				S	**Sb**	**17 57 01.4**	**-0.8**
AYDN				*i* AML	AML	17 57 07.0	
	comp=E,72nm,0.5s						
AYDN				*i* AML	AML	17 57 12.0	
	comp=E,69nm,0.6s						
CAME	**Cameli-Denizli**	**1.32**	**66**	PN	**Pg**	**17 56 48.1**	**+0.1**
GCAM	**G?zelcaml?**	**1.36**	**341**	PN	**Pg**	**17 56 48.9**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.38**	**40**	P	**Pg**	**17 56 49.3**	**+0.2**
TAVA				S	**Sg**	**17 57 07.3**	**+0.2**
TAVA				*i* AML	AML	17 57 16.0	
	comp=E,36nm,0.7s						
CAEL	**Denizli, Camel**	**1.41**	**59**	P	**Pg**	**17 56 52.6**	**+2.8**
AKAS	**Kas**	**1.47**	**96**	P	**Pb**	**17 56 49.4**	**-0.6**
SMG	**Samos**	**1.51**	**329**	P	**Pn**	**17 56 47.9**	**-1.6**
AYDB	**Zeytinkoy-Aydi**	**1.53**	**3**	PN	**Pb**	**17 56 51.1**	**0.0**
APMY	**Acipayam-Deniz**	**1.60**	**48**	PN	**Pb**	**17 56 52.2**	**0.0**
GOLH	**Golhisar**	**1.64**	**59**	P	**Pg**	**17 56 54.1**	**0.0**
GOLH				S	**Sg**	**17 57 16.0**	**+0.7**
GOLH				*i* AML	AML	17 57 28.0	
	comp=E,69nm,0.5s						
ZKR	**Zakros**	**1.83**	**225**	P	**Pb**	**17 56 55.6**	**-0.4**

SJA ***02*** *18:04:07.8±0.7, 21°.35S×66°.88W, h229km±4km, ML4.5, MW4.3*
IDC ***02*** *18:04:08.7±0.8, 21°.38S×66°.81W, h210km±8km, mb3.7/8, mbtmp4.3/16, Error ellipse: s-maj=12.9km s-min=10.0km az=90.0*
VAO ***02*** *18:04:08.6±0.2, 21°.32S×66°.83W, h207km, mb4.0*
NEIC ***02*** *18:04:09.8±2.6, 21°.42S±0°.07×66°.82W±0°.09, h220km±7km, mb4.3/68, Error ellipse: s-maj=11.9km s-min=9.9km az=87.0*
SCB ***02*** *18:04:10.0±1.5, 21°.41S×66°.88W, h224km±8km, ML4.6/7, MW4.0, Error ellipse: s-maj=7.8km s-min=4.7km az=0.0*
ISC 02 18:04:08.7±0.5,**21°.38S**±0°.03×**66°.89W**±0°.04,**h220**km±5km, **n249**,σ1s**38**/302,**mb4.1**/36,**4C-4D**,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.17**	**84**	P	**Pn**	**18 04 43.2**	**+1.0**
MOCB				IAML		18 05 09.7	
	5μm,0.4s						
YJA	**Yavi**	**1.50**	**122**	*eP*	**Pn**	**18 04 45.0**	**+0.3**
YJA				*eS*	**S**	**18 05 13.2**	**+0.6**
YJA	**Yavi**	**1.50**	**122**	P	**Pn**	**18 04 45.4**	**+0.7**
YJA				IAML		18 05 13.6	
	463nm,0.4s						
AF01	**San Pedro de A**	**1.97**	**217**		**Pn**	**18 04 50.3**	**+1.5**
PB09	**IPOC Station P**	**2.23**	**259**		**Pn**	**18 04 52.1**	**+0.8**
PB09	**IPOC Station P**	**2.23**	**259**	⇓*iP*	**Pn**	**18 04 52.5**	**+1.3**
PB09				*i* S	**S**	**18 05 25.6**	**+1.4**
PB09				IAML		18 05 28.0	
	comp=E,553nm,0.4s						
PB09	**IPOC Station P**	**2.23**	**259**	*eP*	**Pn**	**18 04 51.5**	**+0.2**
PB09				*eS*	**S**	**18 05 24.9**	**+0.6**
LVC	**Limon Verde**	**2.24**	**237**	P	**Pn**	**18 04 52.2**	**+0.7**
	comp=E,36nm,0.3s,baz=22,slow=3.1,SNR=109						
LVC				S	**S**	**18 05 24.9**	**0.0**
	comp=E,233nm,0.3s,baz=66,slow=20,SNR=16						
LVC	**Limon Verde**	**2.24**	**237**		**Pn**	**18 04 52.1**	**+0.6**
LVC	**Limon Verde**	**2.24**	**237**	*eP*	**Pn**	**18 04 52.1**	**+0.6**
LVC				*i* S	**S**	**18 05 24.9**	**0.0**
LVC	**Limon Verde**	**2.24**	**237**	*eP*	**Pn**	**18 04 52.0**	**+0.4**
LVC				*eS*	**S**	**18 05 24.8**	**0.0**
LVC				*eS*	S	18 05 26.3	+1.4
LVC	**Limon Verde**	**2.24**	**237**	*eP*	**Pn**	**18 04 52.2**	**+0.6**
LVC				*eS*	**S**	**18 05 24.8**	**0.0**
HJA	**Humahuaca**	**2.27**	**143**	*eP*	**Pn**	**18 04 53.1**	**+1.2**
HJA				*eS*	**S**	**18 05 26.3**	**+0.7**
HJA				IAML		18 05 29.5	
	comp=Z,939nm,0.4s						
PB01	**IPOC Station P**	**2.45**	**277**		**Pn**	**18 04 53.7**	**+0.2**
PB01	**IPOC Station P**	**2.45**	**277**	*eP*	**Pn**	**18 04 54.0**	**+0.5**
PB01				*i* S	**S**	**18 05 27.6**	**-0.6**
PB01				IAML		18 05 30.8	
	comp=N,2μm,0.1s						
PB01	**IPOC Station P**	**2.45**	**277**	*eP*	**Pn**	**18 04 54.0**	**+0.5**
PB01				*eS*	**S**	**18 05 27.9**	**-0.3**
PB01				IAML		18 05 29.2	
	comp=Z,707nm,0.2s						
GO01	**Chusmiza**	**2.75**	**308**		**Pn**	**18 04 58.2**	**+1.0**
GO01	**Chusmiza**	**2.75**	**308**	⇑*iP*	**Pn**	**18 04 58.3**	**+1.0**
GO01				*i* S	**S**	**18 05 36.2**	**+1.4**
GO01	**Chusmiza**	**2.75**	**308**	*eP*	**Pn**	**18 04 56.8**	**-0.4**
GO01				*eP*	**Pn**	**18 04 57.0**	**-0.2**
GO01				*eS*	**S**	**18 05 38.5**	**+3.6**
PB02	**IPOC Station P**	**2.81**	**271**		**Pn**	**18 04 57.6**	**+0.2**
PB02	**IPOC Station P**	**2.81**	**271**	⇑*iP*	**Pn**	**18 04 57.8**	**+0.4**
PB02				*i* S	**S**	**18 05 33.7**	**-1.5**
PB02				IAML		18 05 34.5	
	comp=N,6μm,0.4s						
PB02	**IPOC Station P**	**2.81**	**271**	*eP*	**Pn**	**18 04 57.6**	**+0.2**
PB02				*eP*	**Pn**	**18 04 58.0**	**+0.6**
PB02				*eS*	**S**	**18 05 34.2**	**-1.0**
PB02				IAML		18 05 35.8	
	comp=Z,3μm,0.3s						
PB02	**IPOC Station P**	**2.81**	**271**	P	**Pn**	**18 04 58.0**	**+0.6**
PB02				S	**S**	**18 05 32.0**	**-3.2**
PB02				IAML		18 05 34.3	
	comp=Z,4μm,0.3s						
PB02				IAML		18 05 34.4	
	comp=Z,3μm,0.3s						
PB07	**IPOC Station P**	**2.81**	**262**		**Pn**	**18 04 57.9**	**+0.4**
PB07	**IPOC Station P**	**2.81**	**262**	⇓*iP*	**Pn**	**18 04 58.1**	**+0.6**
PB07				*i* S	**S**	**18 05 33.9**	**-1.6**
PB07				IAML		18 05 34.8	
	comp=N,2μm,0.5s						
PB07	**IPOC Station P**	**2.81**	**262**	*eP*	**Pn**	**18 04 58.0**	**+0.4**
PB07				*eP*	**Pn**	**18 04 58.0**	**+0.4**
PB07				*eS*	**S**	**18 05 34.2**	**-1.3**
PB07				*eS*	S	18 05 34.6	-0.8
PB07				IAML		18 05 35.2	
	comp=Z,1μm,0.4s						
PB06	**IPOC Station P**	**2.82**	**242**		**Pn**	**18 04 57.9**	**+0.4**
PB06	**IPOC Station P**	**2.82**	**242**	*eP*	**Pn**	**18 04 57.8**	**+0.2**
PB06				*i* S	**S**	**18 05 34.5**	**-1.1**
PB06				IAML		18 05 38.7	
	comp=N,1μm,0.2s						
PB06	**IPOC Station P**	**2.82**	**242**	*eP*	**Pn**	**18 04 58.0**	**+0.4**
PB06				*eS*	**S**	**18 05 34.9**	**-0.7**
PB06				IAML		18 05 39.2	
	comp=Z,566nm,0.7s						
PB06	**IPOC Station P**	**2.82**	**242**	P	**Pn**	**18 04 57.9**	**+0.4**
PB06				IAML		18 05 40.3	
	comp=Z,498nm,0.7s						
PB15	**IPOC Station P**	**3.01**	**232**		**Pn**	**18 05 00.0**	**+0.3**
PB15	**IPOC Station P**	**3.01**	**232**	*eP*	**Pn**	**18 05 00.2**	**+0.5**
PB15				*i* S	**S**	**18 05 38.9**	**-0.6**
PB15	**IPOC Station P**	**3.01**	**232**	*eP*	**Pn**	**18 05 00.0**	**+0.3**
PB15				*eS*	**S**	**18 05 39.5**	**0.0**
PB15				*eS*	S	18 05 40.2	+0.8
PB15				IAML		18 05 41.4	
	comp=Z,3μm,0.5s						
PB15	**IPOC Station P**	**3.01**	**232**	P	**Pn**	**18 05 00.2**	**+0.5**
PB15				S	**S**	**18 05 35.6**	**-3.9**
PB15				IAML		18 05 41.8	
	comp=Z,4μm,0.4s						
HMBC	**Humberstone**	**3.02**	**291**	⇓*iP*	**Pn**	**18 04 59.7**	**0.0**
HMBC				*i* S	**S**	**18 05 37.6**	**-1.8**
HMBC				IAML		18 05 42.1	
	comp=E,2μm,0.3s						
PATCX	**Punta Patache**	**3.10**	**280**	Pn	**Pn**	**18 05 01.0**	**+0.3**
PATCX	**Punta Patache**	**3.10**	**280**	*eP*	**Pn**	**18 05 01.0**	**+0.3**
PATCX				*i* S	**S**	**18 05 39.5**	**-1.7**
PATCX	**Punta Patache**	**3.10**	**280**	*eP*	**Pn**	**18 05 01.0**	**+0.3**
PATCX				*eP*	**Pn**	**18 05 01.1**	**+0.3**
PATCX				*eP*	**Pn**	**18 05 01.1**	**+0.3**
PATCX				*eP*	**Pn**	**18 05 01.2**	**+0.5**
PATCX				*eS*	**S**	**18 05 40.0**	**-1.2**
PATCX				IAML		18 05 43.5	
	comp=Z,1μm,0.5s						
PB04	**IPOC Station P**	**3.18**	**252**		**Pn**	**18 05 01.4**	**-0.3**
PB04	**IPOC Station P**	**3.18**	**252**	⇓*iP*	**Pn**	**18 05 02.0**	**+0.4**
PB04				*i* S	**S**	**18 05 40.7**	**-2.2**
PB04	**IPOC Station P**	**3.18**	**252**	*eP*	**Pn**	**18 05 02.0**	**+0.4**
PB04				*eP*	**Pn**	**18 05 02.3**	**+0.6**
PB04				*eS*	**S**	**18 05 41.5**	**-1.4**
PB04				IAML		18 05 46.0	
	comp=Z,566nm,0.4s						
PB04	**IPOC Station P**	**3.18**	**252**	P	**Pn**	**18 05 02.3**	**+0.6**
PB04				IAML		18 05 43.5	
	comp=Z,547nm,0.3s						
TA01	**Diego Aracena**	**3.19**	**284**		**Pn**	**18 05 01.2**	**-0.3**
TA01	**Diego Aracena**	**3.19**	**284**	*eP*	**Pn**	**18 05 01.4**	**-0.2**
TA01				*i* S	**S**	**18 05 40.3**	**-2.5**
TA01	**Diego Aracena**	**3.19**	**284**	*eP*	**Pn**	**18 05 01.8**	**+0.2**
TA01				*eS*	**S**	**18 05 41.4**	**-1.4**
TA01				IAML		18 05 43.9	
	comp=Z,605nm,0.6s						
TA02	**Huaiquique**	**3.23**	**289**		**Pn**	**18 05 01.9**	**-0.2**
TA02	**Huaiquique**	**3.23**	**289**	*eP*	**Pn**	**18 05 02.1**	**0.0**
TA02				*i* S	**S**	**18 05 41.6**	**-2.2**
TA02	**Huaiquique**	**3.23**	**289**	*eP*	**Pn**	**18 05 02.3**	**+0.2**
TA02				*eS*	**S**	**18 05 42.0**	**-1.8**
TA02				IAML		18 05 43.6	
	comp=Z,954nm,0.6s						
AZAP	**Zapla**	**3.29**	**150**	*eP*	**Pn**	**18 05 03.6**	**+0.6**
AZAP				*eS*	**S**	**18 05 45.1**	**-0.4**
AZAP				IAML		18 05 46.9	
	comp=Z,666nm,0.5s						
ASTB	**Santa Barbara**	**3.40**	**139**	*eP*	**Pn**	**18 05 04.7**	**+0.4**
ASTB				*eS*	**S**	**18 05 47.3**	**-0.4**
SLA	**San Lorenzo**	**3.56**	**159**	*eP*	**Pn**	**18 05 02.3**	**-3.8**
SLA				*eP*	**Pn**	**18 05 06.2**	**+0.1**
SLA				*eS*	**S**	**18 05 47.3**	**-3.8**
SLA				*eS*	S	18 05 51.7	+0.6
ALOL	**LOMAS DE OLMED**	**3.62**	**133**	*eP*	**Pn**	**18 05 06.5**	**-0.2**
ALOL				*eS*	**S**	**18 05 50.4**	**-1.6**
PB16	**IPOC Station P**	**3.91**	**320**	Pn	**Pn**	**18 05 12.2**	**+1.5**
PB16	**IPOC Station P**	**3.91**	**320**	⇑*iP*	**Pn**	**18 05 12.4**	**+1.7**
PB16				*i* S	**S**	**18 05 59.8**	**+0.5**
PB16	**IPOC Station P**	**3.91**	**320**	*eP*	**Pn**	**18 05 10.8**	**+0.1**
PB16				*eS*	**S**	**18 05 56.8**	**-2.5**
PB16				IAML		18 06 04.3	
	comp=Z,461nm,0.5s						
PB10	**IPOC Station P**	**4.00**	**237**	Pn	**Pn**	**18 05 11.2**	**0.0**
PB10	**IPOC Station P**	**4.00**	**237**	*eP*	**Pn**	**18 05 10.8**	**-0.4**
PB10				*i* S	**S**	**18 05 56.8**	**-3.6**
PB10	**IPOC Station P**	**4.00**	**237**	*eP*	**Pn**	**18 05 11.3**	**0.0**
PB10				*eS*	**S**	**18 05 57.5**	**-2.9**
PB10				IAML		18 06 01.4	
	comp=Z,295nm,0.7s						
PB12	**IPOC Station P**	**4.25**	**310**	Pn	**Pn**	**18 05 13.5**	**-1.0**
PB12	**IPOC Station P**	**4.25**	**310**	⇑*iP*	**Pn**	**18 05 13.5**	**-1.0**
PB12				*i* S	**S**	**18 06 02.1**	**-3.9**
PB12	**IPOC Station P**	**4.25**	**310**	*eP*	**Pn**	**18 05 14.5**	**+0.1**
PB12				*eS*	**S**	**18 06 03.3**	**-2.8**
PB12				IAML		18 06 07.0	
	comp=Z,495nm,0.3s						
AP01	**Chacalluta**	**4.42**	**312**		**Pn**	**18 05 16.4**	**-0.1**
AP01					**S**	**18 06 06.7**	**-3.0**
AP01	**Chacalluta**	**4.42**	**312**	*eP*	**Pn**	**18 05 17.0**	**+0.5**
PB18	**Visviri**	**4.50**	**327**		**Pn**	**18 05 20.6**	**+2.6**
GO02	**Mina Guanaco**	**4.51**	**213**	Pn	**Pn**	**18 05 17.8**	**0.0**
GO02	**Mina Guanaco**	**4.51**	**213**	*eP*	**Pn**	**18 05 18.0**	**+0.2**
GO02				*eS*	**S**	**18 06 10.1**	**-2.1**
PB14	**IPOC Station P**	**4.58**	**224**	Pn	**Pn**	**18 05 18.1**	**-0.6**
PB14	**IPOC Station P**	**4.58**	**224**	*eP*	**Pn**	**18 05 18.1**	**-0.6**
PB14				*i* S	**S**	**18 06 10.2**	**-3.5**
BBOE	**La Paz, Chanca**	**4.66**	**347**	P	**Pn**	**18 05 21.2**	**+1.2**
FSA	**Cafayete**	**4.78**	**170**	*eP*	**Pn**	**18 05 21.0**	**-0.1**
BBOD	**La Paz, Gloria**	**4.99**	**341**	P	**Pn**	**18 05 25.1**	**+1.0**
LPAZ	**La Paz**	**5.20**	**347**	P	**Pn**	**18 05 28.2**	**+1.4**
	comp=Z,124nm,0.5s,baz=144,slow=6.6,SNR=413						
LPAZ				S	**S**	**18 06 27.9**	**-0.5**
	comp=Z,45nm,0.6s,baz=209,slow=19,SNR=5.0						
LPAZ	**La Paz**	**5.20**	**347**	Pn	**Pn**	**18 05 28.4**	**+1.5**
LPAZ	**La Paz**	**5.20**	**347**	*eP*	**Pn**	**18 05 28.0**	**+1.1**
LPAZ	**La Paz**	**5.20**	**347**	P	**Pn**	**18 05 27.9**	**+1.1**
AC02	**Maricunga**	**5.80**	**200**	Pn	**Pn**	**18 05 33.9**	**-0.4**
AC01	**Pan de Azucar**	**5.84**	**215**	Pn	**Pn**	**18 05 32.6**	**-1.6**
GO03	**Copiap**	**6.90**	**206**		**Pn**	**18 05 45.6**	**-2.2**
SIV	**San Ignacio**	**7.69**	**47**	P	**Pn**	**18 05 57.0**	**-1.0**
	comp=Z,19nm,0.5s,baz=236,slow=12,SNR=38						
SIV				S	**S**	**18 07 20.3**	**-5.1**
	comp=Z,42nm,0.7s,baz=270,slow=15,SNR=8.1						
SIV	**San Ignacio**	**7.69**	**47**	P	**Pn**	**18 05 57.5**	**-0.5**
AC04	**Llanos de Chal**	**7.79**	**208**	Pn	**Pn**	**18 05 55.8**	**-3.4**
LCO	**Las Campanas**	**8.35**	**204**	Pn	**Pn**	**18 06 03.9**	**-2.8**
CO01	**Juntas del Tor**	**9.04**	**198**		**Pn**	**18 06 14.9**	**-0.6**
CO05	**La Serena**	**9.36**	**204**	Pn	**Pn**	**18 06 18.0**	**-1.5**
PTLB	**Pontes e Lacer**	**9.43**	**53**	Pn	**Pn**	**18 06 21.2**	**+0.8**
PTLB	**Pontes e Lacer**	**9.43**	**53**	P	**Pn**	**18 06 21.7**	**+1.3**
GO04	**Tololo Observa**	**9.44**	**201**		**Pn**	**18 06 19.2**	**-1.5**
CO03	**El Pedregal**	**10.02**	**199**	Pn	**Pn**	**18 06 26.2**	**-1.8**
CPUP	**Villa Florida**	**10.04**	**121**	P	**Pn**	**18 06 28.4**	**+0.3**
	comp=Z,8.5nm,0.4s,baz=303,slow=12,SNR=21						
CPUP	**Villa Florida**	**10.04**	**121**	Pn	**Pn**	**18 06 28.2**	**0.0**
CPUP	**Villa Florida**	**10.04**	**121**	P	**Pn**	**18 06 30.3**	**+2.2**
CPUP	**Villa Florida**	**10.04**	**121**	*eP*	**Pn**	**18 06 29.0**	**+0.9**
ANTJ	**Antonio Joao (**	**10.14**	**95**	*eP*	**Pn**	**18 06 29.0**	**-0.5**
CO06	**Fray Jorge**	**10.19**	**204**	Pn	**Pn**	**18 06 27.2**	**-2.8**
ZON	**Zonda**	**10.25**	**189**		**Pn**	**18 06 30.0**	**-0.9**
CO02	**Comarbal**	**10.46**	**200**		**Pn**	**18 06 30.5**	**-3.1**
VILB	**Vilhena**	**10.54**	**38**	Pn	**Pn**	**18 06 34.1**	**-0.6**
VILB	**Vilhena**	**10.54**	**38**	*eP*	**Pn**	**18 06 34.7**	**0.0**
ETMB	**Extrema**	**11.52**	**3**	Pn	**Pn**	**18 06 46.1**	**-1.0**
ETMB	**Extrema**	**11.52**	**3**	*eP*	**Pn**	**18 06 46.2**	**-0.8**
VA03	**San Esteban**	**11.80**	**195**	P	**Pn**	**18 06 50.4**	**-0.2**
SALV	**Santo Antonio**	**11.92**	**65**	*eP*	**Pn**	**18 06 51.0**	**-1.2**
ROC1	**El Roble**	**12.12**	**197**	P	**Pn**	**18 06 54.4**	**-0.4**
PEL	**Peldehue**	**12.19**	**195**	P	**Pn**	**18 06 55.3**	**-0.2**
MT02	**Curacav**	**12.42**	**197**	P	**Pn**	**18 06 57.2**	**-1.1**
MT05	**Renca**	**12.44**	**195**		**Pn**	**18 06 58.1**	**-0.5**
MT03	**Universidad Ad**	**12.49**	**194**	P	**Pn**	**18 06 58.5**	**-0.8**
LMEL	**Las Melosas**	**12.76**	**193**	P	**Pn**	**18 07 03.7**	**+0.9**
SAML	**Samuel**	**12.86**	**17**	Pn	**Pn**	**18 07 03.3**	**-0.7**
MT09	**Talagante**	**12.87**	**196**	P	**Pn**	**18 07 02.8**	**-1.3**
VA05	**Santo Domingo**	**12.93**	**198**	P	**Pn**	**18 07 03.1**	**-1.5**
MT01	**Popeta**	**13.02**	**196**	P	**Pn**	**18 07 04.5**	**-1.3**
UNIS	**Unistalda (Bra**	**13.14**	**128**	*eP*	**Pn**	**18 07 07.8**	**+0.5**
TRCB	**Terra Rica**	**13.29**	**99**		**Pn**	**18 07 08.9**	**-0.3**
NNA	**Nana**	**13.34**	**313**	P	**P**	**18 07 11.9**	**-0.3**
	comp=Z,29nm,0.8s,baz=161,slow=10,SNR=11						
FRBT	**Francisco Belt**	**13.46**	**113**	*eP*	**Pn**	**18 07 11.6**	**+0.1**
BO01	**Tunca**	**13.48**	**195**		**Pn**	**18 07 10.6**	**-0.8**
PDRB	**Porto dos Gac**	**13.75**	**47**	*eP*	**Pn**	**18 07 14.3**	**-0.7**
RODS	**Rosario do Sul**	**13.79**	**133**	*eP*	**Pn**	**18 07 15.0**	**-0.4**
BO02	**Sierra Bellavi**	**13.79**	**194**	P	**Pn**	**18 07 15.8**	**+0.4**
PTGB	**Pitanga**	**14.04**	**106**	*eP*	**Pn**	**18 07 18.8**	**+0.2**
GO05	**Huala**	**14.29**	**197**	P	**Pn**	**18 07 21.4**	**0.0**
PCMB	**Pacaembu**	**14.55**	**94**	*eP*	**Pn**	**18 07 24.9**	**+0.2**
ALGR	**Alto Alegre (B**	**14.56**	**123**	*eP*	**P**	**18 07 25.4**	**-0.2**
ITAB	**Concordia**	**14.65**	**116**	*eP*	**Pn**	**18 07 25.5**	**-0.4**
CZSB	**Cruzeiro do Su**	**14.69**	**337**	Pn	**Pn**	**18 07 23.2**	**-3.3**
ML02	**Panimavida**	**14.87**	**195**	P	**Pn**	**18 07 28.1**	**-0.4**
CLDB	**Colider**	**14.91**	**47**	*eP*	**Pn**	**18 07 29.3**	**+0.1**
CPSB	**Cacapava Do Su**	**15.06**	**129**	*eP*	**P**	**18 07 31.0**	**0.0**
PLTB	**Pedras Altas**	**15.74**	**134**	P	**Pn**	**18 07 38.9**	**-0.1**
PLTB				IAmb	IAmb	18 07 39.6	
	comp=Z,10nm,0.6s						
PLTB	**Pedras Altas**	**15.74**	**134**	*eP*	**Pn**	**18 07 39.0**	**0.0**
FRTB	**Fartura**	**16.14**	**100**	*eP*	**Pn**	**18 07 43.5**	**-0.5**
BI05	**Punta Hualpn**	**16.27**	**198**		**Pn**	**18 07 45.0**	**-0.2**
CNLB	**Canela**	**16.49**	**122**	*eP*	**Pn**	**18 07 47.9**	**-0.2**
BB19B	**Bebedouro**	**17.12**	**92**	*eP*	**Pn**	**18 07 55.5**	**-0.1**
TRQA	**Tornquist**	**17.15**	**167**	P	**P**	**18 07 52.6**	**-1.4**
TRQA				IAmb	IAmb	18 08 01.6	
	comp=Z,12nm,0.7s						
TER01	**Tubaro-SC**	**17.59**	**117**	*eP*	**P**	**18 07 59.5**	**+0.6**
SNDB	**Serra Nova Dou**	**17.61**	**60**	*eP*	**P**	**18 07 59.7**	**+0.6**
IPMB	**Ipameri, GO**	**17.91**	**82**	*eP*	**P**	**18 08 02.9**	**+0.5**
RCLB	**Rio Claro- Sao**	**17.99**	**97**	*eP*	**P**	**18 08 03.1**	**-0.2**
ATAH	**Atahualpa**	**18.01**	**320**	P	**Pn**	**18 08 06.9**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=90,slow=9.1,SNR=2.2						
NPGB	**Novo Progresso**	**18.09**	**40**	*eP*	**P**	**18 08 04.1**	**-0.3**
PET01	**Itanhaem-SP**	**18.30**	**103**	*eP*	**P**	**18 08 07.1**	**+

comp=Z,3.7nm,0.6s
PSUT Pine Spring 74.10 323 P P 18 15 23.6 +2.5
PSUT IAmb IAmb 18 15 24.6
comp=Z,3.1nm,0.7s
GWY Greenwater Val 74.11 320 P P 18 15 23.6 +2.4
GWY IAmb IAmb 18 15 24.9
comp=Z,5.5nm,1.1s
NLU North Lily Min 74.15 325 P P 18 15 22.5 +1.1
TPNV Topopah Spring 74.38 321 P P 18 15 23.5 +0.8
TPNV IAmb IAmb 18 15 26.2
comp=Z,2.6nm,0.6s
SPR3 Spring Creek 3 74.69 323 P P 18 15 26.6 +2.0
SPR3 IAmb IAmb 18 15 27.8
comp=Z,2.1nm,0.6s
DUG Dugway, Tooele 74.72 325 P P 18 15 26.9 +2.4
ISA Isabella, Lake 74.86 319 P P 18 15 27.7 +2.3
ISA IAmb IAmb 18 15 29.0
comp=Z,3.3nm,0.8s
R11A Troy Canyon, C 74.95 322 P P 18 15 28.5 +2.5
BW06 Boulder Array 74.97 329 P P 18 15 27.6 +1.5
PDAR Pinedale Array 74.97 329 P P 18 15 27.4 +1.3
comp=Z,0.7nm,0.5s,baz=128,slow=8.3,SNR=8.1
comp=Z,0.7nm,0.5s
PDAR Pinedale Array 74.97 329 P P 18 15 27.6 +1.6
HWUT Hardware Ranch 75.09 327 P P 18 15 27.6 +0.9
BGU Big Grassy Mou 75.36 326 P P 18 15 29.6 +1.3
LCH Last Change Ra 75.39 320 P P 18 15 30.2 +1.8
TOA0 Torodi Ar. Sit 75.54 69 P P 18 15 31.0 +1.4
TOA0 IAmb IAmb 18 15 32.3
comp=Z,6.0nm,1.2s
TORD Torodi Ar. Bea 75.54 69 P P 18 15 29.6 0.0
comp=Z,1.6nm,0.4s,baz=252,slow=5.8,SNR=16
comp=Z,1.6nm,0.4s
TORD Torodi Ar. Bea 75.54 69 P P 18 15 29.6 0.0
TORD pP **pP 18 16 22.8 -0.2**
AHID Auburn Hatcher 75.72 328 P P 18 15 31.1 +0.9
AHID IAmb IAmb 18 15 33.1
comp=Z,4.0nm,0.7s
ULM Lac du Bonnet 75.79 341 P P 18 15 30.5 +0.3
comp=Z,4.4nm,0.7s,baz=68,slow=3.4,SNR=3.6
comp=Z,4.4nm,0.7s
ULM Lac du Bonnet 75.79 341 P P 18 15 29.6 -0.6
ULM IAmb IAmb 18 15 31.2
comp=Z,8.0nm,1.0s
HVU Hansel Valley 75.84 326 P P 18 15 32.2 +1.3
LOHW Long Hollow 76.11 329 P P 18 15 33.8 +1.3
NV11 Mina Array Sit 76.49 321 P P 18 15 32.6 -2.0
FLWY Flagg Ranch 76.50 329 P P 18 15 33.8 -0.9
FLWY IAmb IAmb 18 15 38.2
comp=Z,3.8nm,0.8s
NVAR Mina Array Bea 76.58 321 P P 18 15 37.7 +2.5
comp=Z,1.5nm,0.8s,baz=160,slow=6.9,SNR=11
comp=Z,1.5nm,0.8s
NVAR Mina Array Bea 76.58 321 P P 18 15 37.1 +1.9
LHV Little Huntoon 76.58 321 P P 18 15 34.2 -0.7
LHV IAmb IAmb 18 15 38.3
comp=Z,3.8nm,1.0s
RLMT Red Lodge 76.62 331 P P 18 15 35.5 +0.2
RLMT IAmb IAmb 18 15 38.3
comp=Z,2.4nm,0.7s
KVN Kaiserville 76.87 321 P P 18 15 36.8 0.0
KVN IAmb IAmb 18 15 40.3
comp=Z,4.1nm,1.0s
GCMT Greycliff 77.31 331 P P 18 15 39.8 +0.8
YERR Yerington 77.49 321 P P 18 15 41.0 +0.8
YERR IAmb IAmb 18 15 43.8
comp=Z,3.5nm,0.9s
HLID Hailey 77.96 327 P P 18 15 45.4 +2.7
HLID IAmb IAmb 18 15 46.5
comp=Z,3.2nm,0.8s
PAHR Pah Rah Range 78.05 321 P P 18 15 45.5 +2.2
PAHR IAmb IAmb 18 15 47.0
comp=Z,8.9nm,0.9s
MCMT McKenzie Canyo 78.09 328 P P 18 15 44.1 +0.6
BEKR Beckworth 78.72 321 P P 18 15 49.3 +2.3
PLID Pearl Lake 79.84 327 P P 18 15 55.0 +2.1
PLID IAmb IAmb 18 15 55.9
comp=Z,2.7nm,0.8s
BMO Blue Mountains 80.35 326 P P 18 15 57.5 +1.9
PINE Pine Mountain 81.59 324 P P 18 16 04.4 +2.1
PINE IAmb IAmb 18 16 05.8
comp=Z,4.0nm,0.8s
BOSA Boshof 81.83 117 P P 18 16 04.5 +0.6
comp=Z,2.0nm,0.6s,baz=246,slow=2.9,SNR=6.5
comp=Z,2.0nm,0.6s
BOSA Boshof 81.83 117 P P 18 16 03.7 -0.2
BOSA IAmb IAmb 18 16 06.9
comp=Z,5.2nm,1.1s
G03D McMinnville, O 83.78 324 P P 18 16 13.3 +0.2
MAW Mawson 83.89 163 P P 18 16 15.5 +2.0
comp=Z,1.9nm,0.6s,baz=226,slow=10.0,SNR=7.5
comp=Z,1.9nm,0.6s
MAW Mawson 83.89 163 P P 18 16 13.7 +0.2
YKA Yellowknife Ar 91.71 340 P P 18 16 51.9 +1.2
comp=Z,1.0nm,0.7s,baz=133,slow=4.5,SNR=6.7
comp=Z,1.0nm,0.7s
ASAR Alice Springs 130.86 205 PKP PKiKP 18 22 55.5 -0.1
comp=Z,0.4nm,1.1s,baz=132,slow=1.9,SNR=1.5
MKAR Makanchi Array 144.41 37 PKP PKPdf 18 23 19.1 +0.4
comp=Z,0.4nm,0.5s,baz=327,slow=3.6,SNR=5.9
SONM Songino Array 153.06 10 PKPbc PKiKP 18 23 40.9 +0.6
comp=Z,0.2nm,0.6s,baz=328,slow=3.2,SNR=1.8
PZH PanZhiHua 168.42 62 PKP PKPdf 18 23 48.0 -1.8

NEIC ***02*** *18:40:04.3±1.9, 18°.68N±0°.07×145°.7E±0°.1, h212km±6km, mb4.5/105, Error ellipse: s-maj=14.7km s-min=10.1km az=79.0*

IDC ***02*** *18:40:04.3±2.0, 18°.75N×145°.62E, h217km±18km, mb3.7/21, mbtmp4.3/26, MS2.6/1, Error ellipse: s-maj=14.9km s-min=9.0km az=94.0*

ISC 02 18:40:03.7±0.6, 18°.74N±0°.04×145°.68E±0°.07, h212km±5km, h212km:pP-P, n160, σ1937/170, mb4.3/68, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.18**	**189**	P	**Pn**	**18 41 20.8**	**+0.1**
	39nm,0.5s,baz=9.5,slow=18,SNR=2.0						
GUMO				S	**S**	**18 42 19.1**	**-2.3**
	36nm,0.2s,baz=324,slow=7.5,SNR=2.1						
GUMO				LR	LR	18 42 33.2	
	comp=Z,52nm,18.7s,baz=313,slow=29						
GUMO	**Guam**	**5.18**	**189**	Pn	**Pn**	**18 41 19.8**	**-0.9**
JCJ	**Chichijima**	**8.91**	**339**	P	**Pn**	**18 42 07.6**	**-1.1**
	35nm,0.8s,baz=150,slow=20,SNR=1.9						
JCJ				S	**S**	**18 43 42.0**	**-7.0**
	33nm,0.4s,baz=287,slow=23,SNR=2.7						
JCJ	**Chichijima**	**8.91**	**339**	Pn	**Pn**	**18 42 08.9**	**+0.2**
JHJ2	**Mitsune**	**15.24**	**341**		**P**	**18 43 29.1**	**+0.7**
JHJ	**Hachijo jima 2**	**15.26**	**341**	P	**Pn**	**18 43 27.5**	**-1.0**
	39nm,0.5s,baz=204,slow=24,SNR=1.6						
JHJ				S	**S**	**18 46 12.0**	**-5.4**
	43nm,0.7s,baz=106,slow=23,SNR=2.2						
PATS	**Pohnpei**	**17.07**	**132**	Pn	Pn	18 43 58.0	+7.7
PATS					**S**	**18 46 55.7**	**0.0**
JOW	**Kunigami**	**17.94**	**300**	P	**Pn**	**18 44 00.6**	**+0.2**
	14nm,0.5s,baz=134,slow=12,SNR=43						
JOW	**Kunigami**	**17.94**	**300**	P	**Pn**	**18 44 00.1**	**-0.4**
JYT	**Yasato**	**18.08**	**346**	P	**P**	**18 44 00.1**	**+0.6**
JYT				IAmb	IAmb	18 44 04.7	
	comp=Z,14nm,0.5s						
INU	**Inuyama**	**18.23**	**337**	P	**P**	**18 44 01.7**	**+0.5**
INU				IAmb	IAmb	18 44 05.0	
	comp=Z,26nm,1.5s						
JMN	**Monobe**	**18.27**	**327**	P	**Pn**	**18 44 03.0**	**-1.2**
JMN				IAmb	IAmb	18 44 41.0	
	comp=Z,16nm,1.2s						
JGF	**Kuroka**	**18.34**	**338**	P	**P**	**18 44 03.1**	**+0.8**
JGF				IAmb	IAmb	18 44 05.4	
	comp=Z,12nm,0.7s						
JSU	**Suzuyama**	**18.72**	**316**	P	**P**	**18 44 08.0**	**+1.5**
JSU				IAmb	IAmb	18 44 11.6	
	comp=Z,16nm,1.4s						
MJAR	**Matsushiro Arr**	**18.91**	**341**	P	**P**	**18 44 07.8**	**-0.7**
	comp=Z,4.8nm,0.6s,baz=167,slow=9.7,SNR=12						
MJAR				S	**S**	**18 47 27.0**	**-5.1**
	comp=Z,0.6nm,0.7s,baz=172,slow=17,SNR=1.8						
MAJO	**Matsushiro**	**18.91**	**341**	P	**P**	**18 44 09.1**	**+0.5**
MAJO				IAmb	IAmb	18 44 13.2	
	comp=Z,11nm,0.7s						
JNU	**Nakatsue**	**19.52**	**320**	P	**P**	**18 44 13.8**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=192,slow=22,SNR=2.9						
JMM	**Marumori**	**19.53**	**348**	P	**P**	**18 44 16.5**	**+1.4**
JHS	**Saijyo**	**19.66**	**328**	P	**P**	**18 44 17.1**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**19.91**	**87**	T	T	19 05 24.4	
	baz=274,slow=75,SNR=7.1						
H11S1	**WAKE ISLAND Hy**	**19.93**	**87**	T	T	19 05 25.8	
	baz=274,slow=75,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**19.93**	**87**	T	T	19 05 26.6	
	baz=274,slow=75,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**20.05**	**84**	T	T	19 05 42.5	
	baz=267,slow=75,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**20.06**	**84**	T	T	19 05 44.4	
	baz=267,slow=75,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**20.07**	**84**	T	T	19 05 42.7	
	baz=267,slow=75,SNR=6.7						
JSD	**Sado**	**20.29**	**343**	P	**P**	**18 44 23.4**	**+0.2**
JSD				IAmb	IAmb	18 44 26.1	
	comp=Z,16nm,0.7s						
MANU	**Manus Island**	**20.72**	**175**	P	**P**	**18 44 27.4**	**-0.7**
JTM	**Tenmabayashi**	**22.32**	**351**	P	**P**	**18 44 45.6**	**+1.9**
NACB	**Ninganchiao**	**23.04**	**288**	P	**P**	**18 44 51.2**	**+0.8**
NACB				IAmb	IAmb	18 45 02.9	
	comp=Z,14nm,0.7s						
YULB	**Yu-li**	**23.20**	**286**	P	**P**	**18 44 52.4**	**+0.4**
YULB				IAmb	IAmb	18 44 57.5	
	comp=Z,12nm,0.9s						
YHNB	**Yeheng**	**23.32**	**289**	P	**P**	**18 44 54.2**	**+1.2**
YHNB				IAmb	IAmb	18 44 55.4	
	comp=Z,17nm,0.7s						
SSLB	**Suanglung**	**23.57**	**287**	P	**P**	**18 44 56.0**	**+0.7**
SSLB				IAmb	IAmb	18 44 58.1	
	comp=Z,13nm,0.7s						
RABL	**Rabaul**	**23.67**	**164**	P	**P**	**18 44 55.7**	**-0.5**
TPUB	**Ta-pu**	**23.80**	**285**	P	**P**	**18 44 57.9**	**+0.4**
KSCHJ	**Chungju**	**23.83**	**323**	P	**P**	**18 44 56.7**	**-0.8**
KSCHJ				IAmb	IAmb	18 45 01.5	
	comp=Z,16nm,1.5s						
SIJI	**Sorong**	**24.09**	**218**	P	**P**	**18 45 00.2**	**+0.1**
	comp=Z,10nm,0.8s,baz=344,slow=0.9,SNR=3.5						
	comp=Z,10nm,0.8s						
KSRS	**Korea Array**	**24.27**	**324**	P	**P**	**18 45 01.3**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=142,slow=9.0,SNR=18						
KSRS				PcP	**PcP**	**18 48 36.1**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=132,slow=1.8,SNR=1.8						
	comp=Z,1.6nm,0.7s						
KSAR	**Wonju Array Be**	**24.28**	**324**	P	**P**	**18 45 00.8**	**-0.8**
FAKI	**Fak Fak**	**25.26**	**213**	P	**P**	**18 45 08.0**	**-2.7**
NJ2	**Nanjing**	**27.53**	**304**	*eP*	**P**	**18 45 28.0**	**-2.8**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MYLDM	**Lahad Datu**	**29.75**	**246**	P	**P**	**18 45 53.4**	**+2.8**
MYLDM				IAmb	IAmb	18 46 06.4	
	comp=Z,16nm,1.3s						
COEN	**Coen**	**32.59**	**185**	P	**P**	**18 46 14.5**	**-0.9**
COEN				IAmb	IAmb	18 46 23.6	
	comp=Z,22nm,1.4s						
MTN	**Manton Dam**	**34.51**	**206**	P	**P**	**18 46 32.0**	**0.0**
PETK	**Petropavlovsk-**	**35.55**	**12**	P	**P**	**18 46 42.3**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=205,slow=11,SNR=2.8						
PETK				PcP	**PcP**	**18 49 03.4**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=190,slow=8.1,SNR=5.2						
	comp=Z,0.5nm,0.6s						
PETK	**Petropavlovsk-**	**35.55**	**12**	P	**P**	**18 46 41.0**	**+0.6**
SBUM	**Sibu**	**36.54**	**248**	P	**P**	**18 46 49.7**	**+0.4**
SBUM				IAmb	IAmb	18 47 08.4	
	comp=Z,14nm,1.3s						
HHC	**Hu-ho-hao-te**	**36.56**	**314**	*eP*	**P**	**18 46 51.0**	**+1.7**
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
HIA	**Hailar**	**36.91**	**332**	P	**P**	**18 46 52.5**	**+0.4**
HIA				IAmb	IAmb	18 46 59.8	
	comp=Z,5.4nm,0.5s						
KNRA	**Kununurra**	**38.04**	**207**	P	**P**	**18 47 02.0**	**+0.2**
KNRA				IAmb	IAmb	18 47 22.2	
	comp=Z,24nm,1.2s						
KSM	**Kuching**	**38.68**	**248**	P	**P**	**18 47 05.9**	**-1.4**
KSM				IAmb	IAmb	18 47 12.6	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**39.84**	**197**	P	**P**	**18 47 17.1**	**+0.3**
WB0				IAmb	IAmb	18 47 18.3	
	comp=Z,7.3nm,0.6s						
WB2	**Warramunga Arr**	**40.02**	**197**	P	**P**	**18 47 18.8**	**+0.6**
WB2				IAmb	IAmb	18 47 20.0	
	comp=Z,6.7nm,0.7s						
WRA	**Warramunga Arr**	**40.02**	**197**	P	**P**	**18 47 18.5**	**+0.3**
	comp=Z,3.4nm,0.4s,baz=21,slow=8.8,SNR=39						
WRA				PcP	**PcP**	**18 49 18.2**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=18,slow=3.6,SNR=9.1						
	comp=Z,3.4nm,0.4s						
WRA	**Warramunga Arr**	**40.02**	**197**	P	**P**	**18 47 17.5**	**-0.7**
MA2	**Magadan**	**40.95**	**4**	P	**P**	**18 47 25.5**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=214,slow=9.4,SNR=1.7						
	comp=Z,0.7nm,0.4s						
PZH	**PanZhiHua**	**41.13**	**289**	P	**P**	**18 47 28.6**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,3.5s						
FITZ	**Fitzroy Crossi**	**41.57**	**209**	P	**P**	**18 47 31.4**	**+0.5**
ULN	**Ulaanbaatar**	**42.72**	**322**	P	**P**	**18 47 40.5**	**+0.4**
FUNA	**Funafuti**	**42.74**	**126**	P	**P**	**18 47 37.4**	**-3.0**
SONM	**Songino Array**	**43.10**	**321**	P	**P**	**18 47 43.0**	**0.0**
	comp=Z,1.5nm,0.5s,baz=136,slow=9.5,SNR=14						
	comp=Z,1.5nm,0.5s						
SONM	**Songino Array**	**43.10**	**321**	P	**P**	**18 47 43.2**	**+0.1**
AS31	**Alice Springs**	**43.69**	**196**	P	**P**	**18 47 48.0**	**+0.1**
ASAR	**Alice Springs**	**43.69**	**196**	P	**P**	**18 47 48.1**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=16,slow=8.3,SNR=30						
ASAR				PcP	**PcP**	**18 49 30.1**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=26,slow=3.9,SNR=10.0						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**43.69**	**196**	P	**P**	**18 47 48.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**44.19**	**277**	P	**P**	**18 47 53.5**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=88,slow=4.5,SNR=8.8						
CMAR				PcP	**PcP**	**18 49 32.8**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=88,slow=1.8,SNR=4.4						
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.19**	**277**	P	**P**	**18 47 54.5**	**+2.5**
MYKOM	**Kota Tinggi**	**44.30**	**253**	P	**P**	**18 47 53.9**	**+1.0**
MYKOM				IAmb	IAmb	18 47 55.9	
	comp=Z,14nm,1.1s						
SEY	**Seymchan**	**44.39**	**4**	P	**P**	**18 47 54.0**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=177,slow=8.2,SNR=7.8						
	comp=Z,1.3nm,0.5s						
YAK	**Yakutsk**	**44.67**	**349**	P	**P**	**18 47 55.3**	**+0.2**
DZM	**Mont Dzumac**	**45.37**	**152**	P	**P**	**18 48 01.3**	**+0.1**
DZM				IAmb	IAmb	18 48 20.5	
	comp=Z,22nm,1.3s						
KULM	**Kulim**	**45.88**	**259**	P	**P**	**18 48 07.3**	**+1.9**
KULM				IAmb	IAmb	18 48 16.8	
	comp=Z,26nm,1.4s						
MBWA	**Marble Bar**	**47.10**	**214**	P	**P**	**18 48 13.9**	**-0.7**
MBWA				IAmb	IAmb	18 48 47.9	
	comp=Z,43nm,1.4s						
PSA00	**Pilbara Seismi**	**47.38**	**213**	P	**P**	**18 48 16.6**	**-0.2**
PSA00				IAmb	IAmb	18 48 36.4	
	comp=Z,28nm,1.2s						
PSA00	**Pilbara Seismi**	**47.38**	**213**	P	**P**	**18 48 16.4**	**-0.4**
PSA00				IAmb	IAmb	18 48 54.6	
	comp=Z,7.6nm,1.4s						
GOMU	**GeErMu**	**47.81**	**302**	P	**P**	**18 48 22.9**	**+2.4**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,77nm,5.3s						
MNAI	**Manna**	**47.93**	**246**	P	**P**	**18 48 19.8**	**-1.4**
XMIS	**Christmas Isla**	**49.01**	**237**	P	**P**	**18 48 27.8**	**-1.6**
ARMA	**Armidale**	**49.21**	**173**	P	**P**	**18 48 30.5**	**-0.3**
GSI	**Gunungsitoli**	**50.22**	**256**	P	**P**	**18 48 38.7**	**+0.2**
GSI				IAmb	IAmb	18 49 20.7	
	comp=Z,12nm,1.0s						
SPIA	**Saint Paul Isl**	**50.31**	**29**	P	**P**	**18 48 39.0**	**+0.5**
FORT	**Forrest**	**52.07**	**199**	P	**P**	**18 48 52.0**	**+0.1**
WMQ	**Urumqi**	**54.27**	**311**	*eP*	**P**	**18 49 08.9**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
SDPT	**Sand Point**	**54.45**	**35**	P	**P**	**18 49 09.3**	**+0.4**
CNBA	**Chernabura Isl**	**54.75**	**35**	P	**P**	**18 49 12.2**	**+1.1**
MORW	**Morawa**	**55.48**	**212**	P	**P**	**18 49 15.9**	**-0.8**
NIUE	**Niue**	**57.55**	**128**	P	**P**	**18 49 30.9**	**-0.5**
ZAA0	**Zalesovo Array**	**57.97**	**322**	P	**P**	**18 49 32.8**	**-1.1**
ZALV	**Zalesovo Beam**	**57.97**	**322**	P	**P**	**18 49 33.0**	**-0.8**
	comp=Z,3.9nm,0.7s,baz=104,slow=7.1,SNR=17						
ZALV				PcP	**pP**	**18 50 22.1**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=123,slow=5.3,SNR=2.2						
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**57.97**	**322**	P	**P**	**18 49 32.7**	**-1.2**
NWAO	**Narrogin (SRO)**	**58.13**	**208**	P	**P**	**18 49 36.4**	**+1.2**
MK31	**Makanchi Array**	**58.42**	**314**	P	**P**	**18 49 37.0**	**-0.1**
MKAR	**Makanchi Array**	**58.42**	**314**	P	**P**	**18 49 37.3**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=90,slow=8.3,SNR=42						
MKAR				PcP	**pP**	**18 50 24.8**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=99,slow=4.7,SNR=2.0						
	comp=Z,3.0nm,0.5s						
N18K	**Kilae Creek**	**58.52**	**29**	P	**P**	**18 49 38.5**	**+0.9**
N18K				IAmb	IAmb	18 50 06.3	
	comp=Z,9.7nm,1.3s						
MAKZ	**Makanchi**	**58.63**	**314**	P	**P**	**18 49 38.7**	**0.0**
MAKZ				IAmb	IAmb	18 49 40.0	
	comp=Z,5.0nm,0.6s						
SVW2	**Sparrevohn**	**58.80**	**29**	P	**P**	**18 49 40.3**	**+0.8**
SVW2				IAmb	IAmb	18 49 52.5	
	comp=Z,10nm,1.2s						
KDAK	**Kodiak Island**	**59.33**	**33**	P	**P**	**18 49 44.3**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=259,slow=1.8,SNR=4.0						
	comp=Z,2.3nm,0.6s						
KDAK	**Kodiak Island**	**59.33**	**33**	P	**P**	**18 49 44.5**	**+1.4**
KDAK				IAmb	IAmb	18 50 17.2	
	comp=Z,25nm,1.4s						
J20K	**Nowinta River**	**60.43**	**26**	P	**P**	**18 49 52.2**	**+1.6**
CNPM	**China Poot**	**60.44**	**32**	P	**P**	**18 49 50.6**	**-0.1**
CAST	**Castle Rocks**	**61.06**	**27**	P	**P**	**18 49 56.2**	**+1.3**
CAST				IAmb	IAmb	18 49 57.2	
	comp=Z,5.0nm,0.7s						
IMAR	**Indian Mountai**	**61.19**	**24**	P	**P**	**18 49 57.6**	**+2.0**
KURK	**Kurchatov**	**61.23**	**318**	P	**P**	**18 49 55.4**	**-0.7**
KURK				IAmb	IAmb	18 49 57.5	
	comp=Z,5.2nm,0.8s						
NRIK	**Noril'sk**	**61.56**	**340**	P	**P**	**18 49 57.9**	**-0.2**
	comp=Z,5.6nm,0.6s,baz=117,slow=7.5,SNR=9.2						
	comp=Z,5.6nm,0.6s						
NRIK	**Noril'sk**	**61.56**	**340**	P	**P**	**18 49 58.0**	**-0.2**
NRIK				IAmb	IAmb	18 49 58.9	
	comp=Z,6.4nm,0.6s						
BPAW	**Bear Paw Mtn.**	**61.73**	**26**	P	**P**	**18 50 00.4**	**+1.1**
BPAW				IAmb	IAmb	18 50 01.5	
	comp=Z,4.0nm,0.7s						
MLY	**Manley**	**62.09**	**25**	P	**P**	**18 50 02.6**	**+0.9**
MLY				IAmb	IAmb	18 50 03.9	
	comp=Z,3.1nm,0.6s						
MDM	**Murphy Dome**	**63.10**	**26**	P	**P**	**18 50 09.7**	**+1.4**
MDM				IAmb	IAmb	18 50 11.0	
	comp=Z,2.9nm,0.5s						
HYBB	**Hyderabad (bro**	**63.47**	**281**	*eP*	**P**	**18 50 10.4**	**-1.2**
HYBB				*epP*	**pP**	**18 51 01.5**	**+2.4**
HYBB				*eS*	**S**	**18 58 29.3**	**+1.3**
TOLK	**Toolik Lake Re**	**63.56**	**22**	P	**P**	**18 50 13.3**	**+2.0**
TOLK				IAmb	IAmb	18 50 48.7	
	comp=Z,9.6nm,1.4s						
IL31		**63.61**	**26**	P	**P**	**18 50 11.7**	**0.0**
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**18 50 11.5**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=258,slow=4.9,SNR=13						
	comp=Z,1.5nm,0.5s						
RIDG	**Independent Ri**	**64.29**	**28**	P	**P**	**18 50 16.9**	**+0.7**
RIDG				IAmb	IAmb	18 50 41.0	
	comp=Z,5.5nm,0.7s						
BKZ	**Black Stump Fm**	**64.42**	**154**	P	**P**	**18 50 16.0**	**-1.3**
SCRK	**Sand Creek**	**64.70**	**27**	P	**P**	**18 50 19.7**	**+0.8**
J26L	**Joseph Creek**	**64.97**	**27**	P	**P**	**18 50 20.1**	**-0.6**
BMAR	**Burnt Mountain**	**65.08**	**24**	P	**P**	**18 50 23.1**	**+1.8**
BMAR				PcP	**PcP**	**18 50 54.1**	**+1.9**
BCAR	**Beaver Creek A**	**65.55**	**29**		**P**	**18 50 25.6**	**+1.2**
BRVK	**Borovoye**	**66.49**	**320**	P	**P**	**18 50 30.7**	**+0.2**
BRVK				IAmb	IAmb	18 50 31.9	
	comp=Z,11nm,0.9s						
KK31	**Karatay Array**	**66.72**	**310**	P	**P**	**18 50 32.0**	**-0.2**
KK31				IAmb	IAmb	18 50 33.6	
	comp=Z,4.4nm,0.8s						
KKAR	**Karatay Array**	**66.72**	**310**	P	**P**	**18 50 32.3**	**+0.2**
KKAR				IAmb	IAmb	18 50 33.6	
	comp=Z,4.4nm,0.8s						
KKAR	**Karatay Array**	**66.72**	**310**	P	**P**	**18 50 32.2**	**0.0**
GAR	**Garm**	**67.25**	**305**	P	**P**	**18 50 35.8**	**+0.1**
GAR				IAmb	IAmb	18 50 36.9	
	comp=Z,5.5nm,0.8s						
HYT	**Haines Junctio**	**67.40**	**31**	P	**P**	**18 50 38.1**	**+1.9**
HYT				IAmb	IAmb	18 50 39.2	
	comp=Z,3.6nm,0.7s						
M30M	**Minto, Yukon**	**67.80**	**29**	P	**P**	**18 50 40.4**	**+1.9**
INK	**Inuvik**	**69.34**	**23**	P	**P**	**18 50 48.5**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=251,slow=10,SNR=3.9						
	comp=Z,1.7nm,0.3s						
INK	**Inuvik**	**69.34**	**23**	P	**P**	**18 50 48.4**	**+0.6**
FARO	**Faro, Yukon**	**69.40**	**30**	P	**P**	**18 50 49.6**	**+1.2**
P33M	**Teslin, Yukon**	**69.72**	**32**	P	**P**	**18 50 50.8**	**+0.3**
DLBC	**Dease Lake**	**71.27**	**34**	P	**P**	**18 51 01.9**	**+2.0**
A36M	**Sachs Harbour**	**72.04**	**19**	P	**P**	**18 51 05.0**	**+0.9**
C36M	**Paulatuk**	**72.71**	**22**	P	**P**	**18 51 08.5**	**+0.4**
C36M				IAmb	IAmb	18 51 41.9	
	comp=Z,15nm,1.1s						
ARU	**Arti**	**73.02**	**325**	P	**P**	**18 51 09.5**	**-0.7**
ABKAR	**Akbulak array**	**73.29**	**317**	P	**P**	**18 51 10.9**	**-1.0**
ABKAR				pP	**pP**	**18 52 02.4**	**+1.5**
ABKAR	**Akbulak array**	**73.29**	**317**	P	**P**	**18 51 11.0**	**-0.9**
ABKAR				IAmb	IAmb	18 51 12.3	
	comp=Z,4.7nm,0.5s						
ABKAR				pP	**pP**	**18 52 01.3**	**+0.5**
WISH	**Wishkah**	**76.88**	**45**		**P**	**18 51 33.2**	**+0.8**
WISH				IAmb	IAmb	18 51 33.5	
	comp=Z,28nm,1.5s						
YKA	**Yellowknife Ar**	**77.96**	**28**	P	**P**	**18 51 38.7**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=292,slow=5.5,SNR=11						
	comp=Z,1.6nm,0.5s						
YKA	**Yellowknife Ar**	**77.96**	**28**	P	**P**	**18 51 38.4**	**+0.3**
DBO	**Dodson Butte**	**78.20**	**48**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.88**	**240**	Pn	**Pb**	**19 01 17.2**	**+1.9**
	133nm,0.3s,baz=72,slow=22,SNR=2.9						
RAO				Sn	**Sg**	**19 01 44.8**	**+3.5**
	635nm,0.3s,baz=84,slow=23,SNR=6.0						
	322nm,0.3s						
RAO	**Raoul Island**	**1.88**	**240**	Pn	**Pb**	**19 01 17.4**	**+2.0**
URZ	**Urewera**	**11.43**	**208**	Pn	**Pn**	**19 03 23.6**	**-0.6**
	0.6nm,0.3s,baz=121,slow=24,SNR=1.9						
URZ				Sn	**Sn**	**19 05 32.6**	**+0.6**
	0.7nm,0.3s,baz=121,slow=24,SNR=54						
URZ	**Urewera**	**11.43**	**208**	Pn	**Pn**	**19 03 20.8**	**-3.5**
BKZ	**Black Stump Fm**	**12.45**	**208**	Pn	**Pn**	**19 03 35.4**	**-2.9**
SNZO	**South Karori**	**14.99**	**208**	Pn	**Pn**	**19 04 07.5**	**-5.4**
TUWZ	**Tuamarina**	**15.41**	**209**	Pn	**Pn**	**19 04 14.0**	**-4.5**
RAR	**Rarotonga**	**16.39**	**68**	LR	LR	19 11 18.9	
	comp=Z,278nm,18.1s,baz=290,slow=39						
DZM	**Mont Dzumac**	**17.02**	**288**	LR	LR	19 09 48.2	
	comp=Z,174nm,18.9s,baz=194,slow=33						
RPZ	**Rata Peaks**	**18.52**	**211**	P	P	19 04 49.0	-8.5
KOUNC	**Koumac, New Ca**	**19.49**	**289**	P	**P**	**19 05 07.5**	**-0.7**
KOUNC				IAmb	IAmb	19 05 13.6	
	comp=Z,48nm,1.5s						
WHZ	**Wether Hill Ro**	**21.61**	**212**	P	**P**	**19 05 26.4**	**-4.7**
WHZ				IAmb	IAmb	19 05 45.6	
	comp=Z,47nm,1.4s						
PPT	**Papeete**	**26.57**	**72**	LR	LR	19 16 12.6	
	comp=Z,197nm,18.4s,baz=218,slow=35						
CTAO	**Charters Tower**	**35.23**	**275**	P	**P**	**19 07 34.6**	**-1.2**
STKA	**Stephens Creek**	**36.64**	**254**	LR	LR	19 20 42.6	
	comp=Z,111nm,18.0s,baz=41,slow=33						
ASAR	**Alice Springs**	**44.97**	**264**	P	**P**	**19 08 55.9**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=91,slow=7.8,SNR=17						
ASAR				LR	LR	19 27 50.2	
	comp=Z,162nm,18.1s,baz=136,slow=36						
	comp=Z,1.2nm,0.7s						
WB2	**Warramunga Arr**	**45.77**	**269**	P	**P**	**19 09 01.4**	**-1.6**
WB2				IAmb	IAmb	19 09 23.3	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**45.77**	**269**	P	**P**	**19 09 01.6**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=111,slow=7.2,SNR=18						
	comp=Z,0.8nm,0.5s						
WB0	**Warramunga Arr**	**45.79**	**269**		**P**	**19 09 01.3**	**-1.8**
FORT	**Forrest**	**48.25**	**253**	P	**P**	**19 09 20.9**	**-1.3**
GUMO	**Guam**	**56.28**	**313**	LR	LR	19 32 52.7	
	comp=Z,48nm,18.4s,baz=128,slow=35						
SIJI	**Sorong**	**57.22**	**289**	LR	LR	19 35 21.5	
	comp=Z,73nm,18.2s,baz=209,slow=37						
RPN	**Rapa Nui**	**58.35**	**106**	LR	LR	19 31 14.3	
	comp=Z,53nm,19.0s,baz=222,slow=31						
BATI	**Baumata**	**59.12**	**275**	LR	LR	19 37 22.6	
	comp=Z,339nm,18.1s,baz=231,slow=38						
QSPA	**South Pole Qui**	**61.77**	**180**	P	**P**	**19 10 59.0**	**-0.6**
QSPA				IAmb	IAmb	19 11 09.7	
	comp=Z,4.8nm,1.1s						
MAW	**Mawson**	**74.83**	**200**	P	P	19 12 29.9	+8.7
	comp=Z,0.9nm,0.8s,baz=121,slow=11,SNR=2.0						
VNA3	**Neumayer Olymp**	**80.24**	**176**	P	**P**	**19 12 54.3**	**+2.8**
VNA2	**Neumayer--Watz**	**80.69**	**176**	P	**P**	**19 12 56.9**	**+3.0**
	baz=176,slow=3.0						
VNA1	**Neumayer--Stat**	**80.91**	**176**	P	**P**	**19 12 58.9**	**+3.9**
PLCA	**Paso Flores**	**82.65**	**132**	LR	LR	19 42 45.2	
	comp=Z,54nm,19.2s,baz=224,slow=30						
KSRS	**Korea Array**	**83.91**	**318**	P	**P**	**19 13 11.4**	**+0.3**
	comp=Z,0.6nm,1.0s,baz=124,slow=6.0,SNR=4.2						
PETK	**Petropavlovsk-**	**84.26**	**344**	P	P	19 13 08.4	-4.1
	comp=Z,0.3nm,0.6s,baz=151,slow=6.8,SNR=2.1						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**85.57**	**42**	P	**P**	**19 13 19.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=219,slow=6.9,SNR=2.8						
	comp=Z,0.1nm,0.3s						
TXAR	**Lajitas Array**	**89.84**	**56**	P	**P**	**19 13 42.5**	**+2.2**
	comp=Z,0.1nm,0.4s,baz=223,slow=7.4,SNR=1.6						
NEW	**Newport**	**92.71**	**35**	LR	LR	19 48 25.7	
	comp=Z,113nm,20.7s,baz=186,slow=31						
ATAH	**Atahualpa**	**93.34**	**100**	LR	LR	19 48 45.7	
	comp=Z,72nm,18.2s,baz=313,slow=31						
PDAR	**Pinedale Array**	**93.47**	**43**	LR	LR	19 52 29.6	
	comp=Z,72nm,18.4s,baz=330,slow=33						
ILAR	**Eielson Array**	**95.55**	**12**	P	**P**	**19 14 03.9**	**-1.8**
	comp=Z,0.1nm,0.5s,baz=220,slow=5.5,SNR=1.5						
	comp=Z,0.1nm,0.5s						
MKAR	**Makanchi Array**	**117.74**	**311**	PKP	**PKPdf**	**19 19 25.3**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=104,slow=1.7,SNR=2.7						
FINES	**FINESS Array B**	**143.75**	**342**	PKP	PKPab	19 20 12.4	-0.1
	comp=Z,1.1nm,0.7s,baz=342,slow=2.8,SNR=3.3						
KBZ	**Khabaz**	**145.31**	**307**	PKP	**PKPab**	**19 20 19.6**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=140,slow=6.0,SNR=2.4						
NB2	**NORSAR Subarra**	**146.93**	**354**	PKP	**PKPbc**	**19 20 23.7**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=7.2,slow=4.0						
NOA	**NORSAR Array B**	**146.93**	**354**	PKPbc	**PKPdf**	**19 20 22.4**	**+1.2**
	comp=Z,1.3nm,1.0s,baz=13,slow=2.4,SNR=3.0						
AKASG	**Malin Array Be**	**150.61**	**326**	PKPbc	**PKPdf**	**19 20 29.6**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=42,slow=2.0,SNR=6.1						
TORD	**Torodi Ar. Bea**	**164.75**	**172**	PKPab	**PKPab**	**19 21 44.7**	**+3.4**
	comp=Z,0.7nm,0.8s,baz=181,slow=4.8,SNR=2.9						

TAP 02 19:09:01.3,24.07N×121.59E,h10km,ML1.4,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.02**	**40**	*i* P	Pg	19 09 03.8	+0.7
	baz=53						
HWA	**Hwalien**	**0.09**	**169**	*i* P	Pg	19 09 04.4	+0.7
	baz=164						
ETL	**Fush Village**	**0.10**	**21**	*i* P	Pg	19 09 04.7	+0.8
	baz=21						
NACB	**Ninganchiao**	**0.11**	**5**	P	Pb	19 09 04.8	-0.6
	baz=4.0						
NACB				S	Sg	19 09 06.7	+0.8
	baz=4.0						
ETM	**Tongmen**	**0.13**	**220**	P	Pb	19 09 05.2	-0.6
	baz=219						
ETM				S	Sg	19 09 07.2	+0.7
	baz=219						
ETLH	**Xiulin Townshi**	**0.17**	**326**	P	Pb	19 09 06.5	-0.1
	baz=325						
TEYL	**Yanliau Villag**	**0.20**	**177**	*eP*	Pg	19 09 05.6	+0.2
	baz=174						
TEYL				*eS*	Sg	19 09 09.1	+0.8
	baz=174						
ESL	**Shilin**	**0.29**	**209**	P	Pb	19 09 08.0	-0.5
	baz=207						
ESL				S	Sb	19 09 13.0	-0.4
	baz=207						
WHF	**Hehuan Shan**	**0.30**	**285**	P	Pb	19 09 09.1	+0.1
	baz=284						
WHF				*eS*	Sb	19 09 13.2	-1.0
	baz=284						
FUSS	**Fushou**	**0.36**	**300**	*eP*	Pg	19 09 08.9	+0.4
	baz=299						
CHGB	**Renai**	**0.38**	**269**	*eP*	Pb	19 09 09.6	-0.6
	baz=268						
CHGB				*eS*	Sb	19 09 15.8	-0.4
	baz=268						
ENA	**Nanau**	**0.39**	**22**	P	Pg	19 09 09.6	+0.6
	baz=22						
ENA				S	Sb	19 09 16.2	0.0
	baz=22						

TAP 02 19:09:03.5,24.07N×121.64E,h8km,ML1.5,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**284**	↓ *i* P	Pg	19 09 05.6	+0.5
	baz=290						
TWD				*i* S	Sg	19 09 06.8	+0.6
	baz=290						
ETL	**Fush Village**	**0.09**	**353**	P	Pg	19 09 06.5	+0.8
	baz=352						
ETL				S	Sg	19 09 08.4	+1.0
	baz=352						
HWA	**Hwalien**	**0.10**	**196**	P	Pg	19 09 06.3	+0.4
	baz=191						
HWA				S	Sg	19 09 08.4	+0.9
	baz=191						
NACB	**Ninganchiao**	**0.11**	**340**	P	Pg	19 09 07.3	+1.2
	baz=340						
NACB				S	Sg	19 09 08.8	+1.0
	baz=340						
ETLH	**Xiulin Townshi**	**0.20**	**314**	P	Pg	19 09 08.6	+1.1
	baz=313						
ESL	**Shilin**	**0.32**	**216**	*eP*	Pb	19 09 10.7	-0.6
	baz=214						
ESL				S	Sb	19 09 16.2	-0.3
	baz=214						
WHF	**Hehuan Shan**	**0.35**	**282**	P	Pb	19 09 11.4	-0.7
	baz=282						
WHF				S	Sg	19 09 16.4	+1.3
	baz=282						
ENA	**Nanau**	**0.37**	**15**	*eP*	Pg	19 09 11.3	+0.6
	baz=16						
ENA				*eS*	Sg	19 09 16.9	+1.3
	baz=16						
EWUT	**Wuta**	**0.40**	**19**	*eP*	Pb	19 09 12.4	-0.3
	baz=19						
FUSS	**Fushou**	**0.40**	**296**	*eP*	Pb	19 09 12.6	-0.3
	baz=296						
FUSS				*eS*	Sb	19 09 19.3	+0.1
	baz=296						
NNSB	**Datong**	**0.42**	**327**	*eP*	Pg	19 09 12.5	+0.7
	baz=327						
NNSB				*eS*	Sb	19 09 19.5	-0.3
	baz=327						
EGFH	**Guangfu**	**0.44**	**205**	*eP*	Pb	19 09 13.1	-0.4
	baz=205						
EGFH				*eS*	Sb	19 09 19.8	-0.5
	baz=205						

TAP 02 19:09:06.5,24.07N×121.64E,h10km,ML1.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**290**	*i* P	Pg	19 09 09.0	+0.5
	baz=296						
TWD				*i* S	Sg	19 09 10.4	+0.6
	baz=296						
ETL	**Fush Village**	**0.09**	**353**	P	Pg	19 09 09.8	+0.8
	baz=352						
ETL				S	Sg	19 09 11.8	+0.8
	baz=352						
HWA	**Hwalien**	**0.09**	**197**	P	Pg	19 09 09.6	+0.6
	baz=192						
HWA				S	Sg	19 09 11.5	+0.7
	baz=192						
NACB	**Ninganchiao**	**0.11**	**341**	P	Pb	19 09 10.1	-0.7
	baz=340						
NACB				S	Sg	19 09 12.2	+0.8
	baz=340						
ETLH	**Xiulin Townshi**	**0.20**	**315**	*eP*	Pb	19 09 11.6	-0.7
	baz=314						
ESL	**Shilin**	**0.31**	**216**	*eS*	Sb	19 09 19.9	+0.6
	baz=214						
WHF	**Hehuan Shan**	**0.35**	**283**	*eP*	Pb	19 09 14.3	-0.7
	baz=282						
WHF				*eS*	Sb	19 09 20.0	-0.8
	baz=282						
ENA	**Nanau**	**0.37**	**15**	*eS*	Sb	19 09 21.0	-0.1
	baz=16						
FUSS	**Fushou**	**0.40**	**297**	*eS*	Sb	19 09 22.4	+0.3
	baz=296						
CHGB	**Renai**	**0.42**	**269**	*eS*	Sb	19 09 22.1	-0.6
	baz=269						
NNSB	**Datong**	**0.43**	**327**	*eS*	Sb	19 09 22.0	-0.8
	baz=327						
EGFH	**Guangfu**	**0.44**	**206**	*eS*	Sb	19 09 23.0	0.0
	baz=205						
NNS	**Nan Shan**	**0.44**	**327**	*eS*	Sb	19 09 22.8	-0.5
	baz=327						

IDC ***02*** *19:11:58.2±1.6, 15.15S×174.93W, h233km±28km, mb3.8/5, mbtmp4.3/6, Error ellipse: s-maj=66.4km s-min=19.0km az=140.0*
NEIC ***02*** *19:11:59.8±0.7, 15.27S±0.08×174.9W±0.1, h245km±8km, mb4.3/12, Error ellipse: s-maj=17.9km s-min=10.1km az=106.0*
NOU ***02*** *19:12:41.8, 13.24S×171.87W, h16km, MLv2.7/4, Samoa Islands*

ISC 02 19:11:59.3±0.6,15.2S±0.1×174.83W±0.09,h250km,n26, σ0.872/28,mb4.3/11,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.23**	**67**	P	**Pn**	**19 12 54.7**	**+0.3**
	72nm,0.5s,baz=282,slow=14,SNR=18						
AFI				S	**S**	**19 13 35.8**	**-2.2**
	35nm,0.5s,baz=316,slow=20,SNR=2.1						
AFI	**Afiamalu**	**3.23**	**67**		**Pn**	**19 12 55.1**	**+0.6**
AFI	**Afiamalu**	**3.23**	**67**	P	**Pn**	**19 12 55.5**	**+1.1**
NIUE	**Niue**	**6.05**	**130**	Pn	**Pn**	**19 13 28.1**	**0.0**
MSVF	**Nonsavu**	**7.27**	**249**	Pn	**Pn**	**19 13 43.2**	**-0.3**
MARNC	**Mare, Loyalty**	**17.41**	**247**	P	**P**	**19 15 45.1**	**-0.5**
WHZ	**Wether Hill Ro**	**33.83**	**202**	P	**P**	**19 18 18.9**	**+0.8**
CTAO	**Charters Tower**	**37.34**	**257**	P	**P**	**19 18 48.1**	**-0.2**
CTAO				IAmb	IAmb	19 19 05.1	
	comp=Z,25nm,1.5s						
BBOO	**Buckleboo**	**47.71**	**239**	P	**P**	**19 20 11.0**	**-0.3**
BBOO				IAmb	IAmb	19 20 20.4	
	comp=Z,25nm,1.4s						
WB0	**Warramunga Arr**	**48.50**	**257**	P	**P**	**19 20 16.8**	**-0.7**
WRA	**Warramunga Arr**	**48.54**	**257**	P	**P**	**19 20 17.1**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=91,slow=7.0,SNR=20						
	comp=Z,1.2nm,0.5s						
WRA	**Warramunga Arr**	**48.54**	**257**	P	**P**	**19 20 16.8**	**-1.1**
AS31	**Alice Springs**	**48.85**	**252**	P	**P**	**19 20 19.9**	**-0.3**
AS31				IAmb	IAmb	19 20 21.4	
	comp=Z,4.3nm,0.6s						
ASAR	**Alice Springs**	**48.86**	**252**	P	**P**	**19 20 20.1**	**-0.1**
	comp=Z,14nm,0.5s,baz=86,slow=8.0,SNR=268						
ASAR				PcP	**PcP**	**19 21 41.4**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=94,slow=4.5,SNR=1.6						
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**48.86**	**252**	P	**P**	**19 20 19.8**	**-0.4**
MTN	**Manton Dam**	**52.37**	**265**	P	**P**	**19 20 46.6**	**+0.1**
MTN				IAmb	IAmb	19 21 28.5	
	comp=Z,36nm,1.4s						
FORT	**Forrest**	**54.27**	**243**	P	**P**	**19 20 59.3**	**-0.7**
SIJI	**Sorong**	**55.07**	**280**	P	**P**	**19 21 06.0**	**0.0**
	comp=Z,5.9nm,0.6s,baz=110,slow=12,SNR=4.8						
	comp=Z,5.9nm,0.6s						
PSA00	**Pilbara Seismi**	**61.93**	**253**	P	**P**	**19 21 52.9**	**-0.3**
PSA00				IAmb	IAmb	19 22 27.1	
	comp=Z,5.6nm,1.2s						
PSA00	**Pilbara Seismi**	**61.93**	**253**	P	**P**	**19 21 53.0**	**-0.2**
PSA00				IAmb	IAmb	19 22 06.6	
	comp=Z,29nm,1.4s						
PEA0B	**Petropavlovsk-**	**72.05**	**343**	P	**P**	**19 22 56.5**	**+0.5**
PEA0B				IAmb	IAmb	19 23 36.4	
	comp=Z,11nm,1.5s						
PETK	**Petropavlovsk-**	**72.05**	**343**	P	**P**	**19 22 56.1**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=138,slow=8.8,SNR=8.2						
	comp=Z,1.4nm,0.7s						
PETK	**Petropavlovsk-**	**72.05**	**343**	P	**P**	**19 22 56.7**	**+0.7**
QSPA	**South Pole Qui**	**74.82**	**180**	P	**P**	**19 23 13.1**	**+0.9**
ILAR	**Eielson Array**	**82.55**	**12**	P	**P**	**19 23 54.0**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=217,slow=5.6,SNR=6.8						
	comp=Z,0.3nm,0.4s						
MMAI	**Mount Meron Ar**	**147.38**	**308**	PKPbc	**PKPbc**	**19 31 14.3**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=90,slow=2.9,SNR=2.1						

IDC ***02*** *19:18:44.3±3.4, 18.73N×145.29E, h186km±31km, mb3.3/5, mbtmp3.9/6, Error ellipse: s-maj=66.1km s-min=20.3km az=113.0*
NEIC ***02*** *19:18:46.4±1.0, 18.5N±0.1×145.6E±0.2, h193km±11km, mb4.3/10, Error ellipse: s-maj=23.5km s-min=11.9km az=113.0*

ISC 02 19:18:45.9±0.7,18.59N±0.07×145.4E±0.2,h200km,n25, σ1.905/21,mb4.1/11,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.99**	**186**	P	**Pn**	**19 20 00.6**	**+0.3**
	32nm,0.3s,baz=49,slow=9.3,SNR=16						
GUMO				S	**Sn**	**19 20 59.7**	**+0.7**
	27nm,0.3s,baz=358,slow=23,SNR=1.8						
GUMO	**Guam**	**4.99**	**186**	Pn	**Pn**	**19 19 58.7**	**-1.6**
GUMO				Sn	**Sn**	**19 20 57.6**	**-1.4**
JGF	**Kuroka**	**18.37**	**339**	P	**Pn**	**19 22 48.1**	**-0.2**
JMM	**Marumori**	**19.62**	**349**	P	**Pn**	**19 23 01.2**	**-1.8**
H11S3	**WAKE ISLAND Hy**	**20.21**	**87**	T	T	19 44 25.1	
	baz=275						
H11S1	**WAKE ISLAND Hy**	**20.22**	**87**	T	T	19 44 25.1	
	baz=275						
H11S2	**WAKE ISLAND Hy**	**20.23**	**87**	T	T	19 44 25.1	
	baz=275						
H11N1	**WAKE ISLAND Hy**	**20.36**	**83**	T	T	19 44 51.8	
	baz=264						
H11N2	**WAKE ISLAND Hy**	**20.36**	**83**	T	T	19 44 51.8	
	baz=264						
H11N3	**WAKE ISLAND Hy**	**20.38**	**83**	T	T	19 44 51.8	
	baz=264						
COEN	**Coen**	**32.41**	**184**	P	**P**	**19 24 57.1**	**0.0**
COEN				IAmb	IAmb	19 25 16.7	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**39.61**	**196**	P	**P**	**19 25 59.1**	**+0.9**
WB0				IAmb	IAmb	19 26 23.8	
	comp=Z,13nm,1.4s						
WB2	**Warramunga Arr**	**39.79**	**196**	P	**P**	**19 26 00.0**	**+0.4**
WB2				IAmb	IAmb	19 26 27.8	
	comp=Z,23nm,1.5s						
WRA	**Warramunga Arr**	**39.79**	**196**	P	**P**	**19 26 00.1**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=22,slow=8.8,SNR=23						
	comp=Z,1.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**41.29**	**209**	P	**P**	**19 26 13.1**	**+1.1**
FITZ				IAmb	IAmb	19 26 50.5	
	comp=Z,7.4nm,1.2s						
ASAR	**Alice Springs**	**43.46**	**195**	P	**P**	**19 26 30.4**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=22,slow=8.0,SNR=5.1						
	comp=Z,0.5nm,0.5s						
SDPT	**Sand Point**	**54.74**	**35**	P	**P**	**19 27 54.8**	**+0.3**
I21K	**Tanana**	**61.89**	**25**	P	**P**	**19 28 44.8**	**+1.0**
I21K				IAmb	IAmb	19 29 11.4	
	comp=Z,4.3nm,1.3s						
BPAW	**Bear Paw Mtn.**	**61.99**	**26**	P	**P**	**19 28 44.3**	**-0.3**
BPAW				IAmb	IAmb	19 29 10.8	
	comp=Z,5.2nm,1.3s						
ILAR	**Eielson Array**	**63.88**	**26**	P	**P**	**19 28 56.0**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=260,slow=4.5,SNR=4.4						
	comp=Z,0.3nm,0.5s						
BMAR	**Burnt Mountain**	**65.34**	**24**	P	**P**	**19 29 07.5**	**+1.1**
ABKAR	**Akbulak array**	**73.21**	**317**	P	**P**	**19 29 56.1**	**+1.1**
ABKAR	**Akbulak array**	**73.21**	**317**	P	**P**	**19 29 56.1**	**+1.1**
ABKAR				IAmb	IAmb	19 30 38.8	
	comp=Z,1.0nm,1.0s						
NVAR	**Mina Array Bea**	**83.45**	**52**	P	**P**	**19 30 51.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=271,slow=6.1,SNR=8.4						
	comp=Z,0.7nm,0.6s						
FINES	**FINESS Array B**	**86.86**	**335**	P	**P**	**19 31 06.2**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=70,slow=4.6,SNR=1.5						
	comp=Z,0.9nm,0.6s						

ISK ***02*** *19:30:51.3, 40.33N×33.31E, h5km, ML4.1/17*
MOS ***02*** *19:30:52.3±1.1, 40.33N×33.22E, h15km, mb4.2/9, Error ellipse: s-maj=6.9km s-min=4.4km az=87.4*
IDC ***02*** *19:30:52.8±0.6, 40.33N×33.41E, h0km, mb3.9/9, mbtmp3.8/17, ML3.7/7, MS3.3/21, Error ellipse: s-maj=12.7km s-min=5.9km az=70.0*
DDA ***02*** *19:30:52.3±0.0, 40.32N×33.36E, h12km±2km, MW4.2*
NEIC ***02*** *19:30:53.6±2.5, 40.34N±0.02×33.31E±0.06, h10km±1km, mb4.0/15, ML4.1(ISK), Error ellipse: s-maj=7.8km s-min=3.0km az=109.0*
CFUSG ***02*** *19:30:54.5, 40.40N×33.30E, h5km, mb3.0/4, MD3.7/2, Central Turkey Magtype MSH 3.1 from 4 stations*
MCSM ***02*** *19:30:54.1±0.5, 40.1N±4.3×3.3E±.1, h12km±2km, mb4.2*

ISC 02 19:30:53.3±1.0,40.33N±0.01×33.33E±0.01,h6km±6km, n303,σ1.943/350,mb4.0/19,MS3.5/15,10C-23D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.18**	**25**	P	**Pg**	**19 30 56.3**	**-0.7**
CANT	**Cankiri**	**0.36**	**38**	PG	**Pg**	**19 31 00.0**	**-0.3**
CANT				SG	**Sg**	**19 31 05.9**	**+0.9**
DELI	**KIRIKKALE**	**0.56**	**126**	P	**Pg**	**19 31 03.2**	**-0.9**
DELI				S	**Sg**	**19 31 10.9**	**-0.5**
DELI				*i* AML	AML	19 31 13.0	
	comp=N,5μm,0.3s						
DELI				*i* AML	AML	19 31 16.0	
	comp=E,4μm,0.9s						
ANTO	**Ankara**	**0.61**	**222**	PG	**Pg**	**19 31 04.9**	**-0.2**
ANTO				SG	**Sg**	**19 31 13.9**	**+0.8**
ANTO	**Ankara**	**0.61**	**222**		**Pg**	**19 31 04.8**	**-0.4**
ANTO				Sg	**Sg**	**19 31 13.2**	**+0.1**
ANTO	**Ankara**	**0.61**	**222**	P	**Pg**	**19 31 04.8**	**-0.4**
ANTO						19 31 13.2	
LOD	**Lodumlu**	**0.61**	**225**	PG	**Pg**	**19 31 03.9**	**-1.2**
BR231	**Keskin MP Arra**	**0.64**	**221**		**Pg**	**19 31 05.4**	**-0.3**
BR231				Sg	**Sb**	**19 31 15.3**	**-1.1**
BR131	**Keskin Array S**	**0.65**	**158**		**Pg**	**19 31 05.0**	**-0.7**
BR131				Sg	**Sg**	**19 31 14.7**	**+0.5**
BR131	**Keskin Array S**	**0.65**	**158**	*d* iP	**Pg**	**19 31 04.9**	**-0.8**
BRTR	**Keskin Array B**	**0.65**	**158**	Pg	**Pg**	**19 31 05.2**	**-0.6**
	318nm,0.3s,baz=337,slow=16,SNR=3370						
BRTR				Lg	Lg	19 31 14.3	
	935nm,0.3s,baz=334,slow=24,SNR=39						
BRTR				LR	LR	19 31 36.3	
	comp=Z,3μm,18.6s,baz=118,slow=69						
BRTR	**Keskin Array B**	**0.65**	**158**	PG	**Pg**	**19 31 05.1**	**-0.6**
BRTR				SG	**Sg**	**19 31 14.8**	**+0.7**
BRTR	**Keskin Array B**	**0.65**	**158**		**Pg**	**19 31 04.7**	**-1.0**
CMDR	**Camlidere-ANKA**	**0.67**	**285**	P	**Pg**	**19 31 06.0**	**-0.2**
CMDR				S	**Sb**	**19 31 17.1**	**-0.1**
ILGA	**Ilgaz**	**0.78**	**22**		**Pg**	**19 31 07.3**	**-1.1**
ILGA	**Ilgaz**	**0.78**	**22**	P	**Pg**	**19 31 07.3**	**-1.1**
ILGA				S	**Sg**	**19 31 18.5**	**-0.1**
ILGA				*i* AML	AML	19 31 19.0	
	comp=N,873nm,0.7s						
ILGA				*i* AML	AML	19 31 22.0	
	comp=E,3μm,0.5s						
BBAL	**Bala**	**0.80**	**191**	P	**Pg**	**19 31 08.1**	**-0.6**
BBAL				S	**Sg**	**19 31 19.8**	**+0.8**
TOSS	**Tosya**	**0.88**	**36**	PG	**Pg**	**19 31 09.5**	**-0.8**
AFSR	**Afar-Bala (An**	**0.90**	**193**	PG	**Pg**	**19 31 09.2**	**-1.4**
PELI	**Kastamonı-Ara**	**0.97**	**359**	P	**Pg**	**19 31 11.0**	**-1.0**
PELI				S	**Sb**	**19 31 26.2**	**+0.3**
PELI				*i* AML	AML	19 31 32.0	
	comp=N,3μm,0.9s						
PELI				*i* AML	AML	19 31 32.0	
	comp=E,3μm,0.8s						
KAMT	**Kaman**	**1.00**	**163**	PG	**Pg**	**19 31 11.4**	**-1.1**
CORM	**Corum**	**1.01**	**98**	PG	**Pg**	**19 31 10.9**	**-1.7**
SAFT	**Safranbolu**	**1.

BTIN P **Pb** **19 31 21.6 -0.8**
BTIN S **Sg** **19 31 43.1 +0.2**
BTIN *i* AML AML 19 31 50.0
comp=N,2µm,0.7s
YIGI Dzce 1.57 295 P **Pn** **19 31 22.1 +0.3**
YIGI S **Sg** **19 31 44.8 +1.2**
CIDE Kastamonu/Cide 1.58 350 P **Pb** **19 31 22.5 -0.5**
KURC Kurucasile-Bar 1.58 344 PN **Pn** **19 31 19.5 -2.4**
KURC SN **Sb** **19 31 43.4 +0.2**
BOYA Sinop/Boyabat- 1.58 40 P **Pn** **19 31 21.4 -0.6**
MDUB Mudurnu 1.63 276 Pn **Pn** **19 31 21.6 -1.1**
AUSIV SIVRIHISAR 1.64 238 P **Pn** **19 31 22.0 -0.4**
AUSIV S **Sg** **19 31 48.2 +2.3**
SVRH Sivrihisar-ESK 1.64 238 PN **Pn** **19 31 22.5 -0.4**
YOZ Yozgat 1.68 113 PN **Pn** **19 31 23.8 +0.4**
CKRK Yozgat, Cekere 1.68 98 P **Pn** **19 31 22.9 -0.5**
CKRK S **Sg** **19 31 47.4 +0.1**
AKSY AKSARAY - Alti 1.71 169 P **Pn** **19 31 23.7 -0.1**
AKSY S **Sb** **19 31 47.6 +0.7**
AKSY *i* AML AML 19 31 52.0
comp=N,3µm,0.7s
AKSY *i* AML AML 19 31 52.0
comp=E,2µm,0.9s
BZK Bozkurt 1.71 17 PN **Pn** **19 31 23.4 -0.3**
BZK Bozkurt 1.71 17 **Pn** **19 31 22.7 -0.9**
BZK Sn **Sb** **19 31 47.0 0.0**
SIRC Yozgat 1.71 125 P **Pn** **19 31 23.9 0.0**
SIRC S **Sg** **19 31 48.3 -0.1**
SIRC *i* AML AML 19 31 52.0
comp=N,3µm,0.6s
SIRC *i* AML AML 19 31 55.0
comp=E,3µm,1.1s
CHBY Cihanbeyli 1.77 191 PN **Pn** **19 31 24.6 -0.1**
BTAS Taskesti 1.79 279 P **Pn** **19 31 25.0 +0.1**
BTAS S **Sg** **19 31 52.3 +1.4**
KIZT Kizilcal 1.83 218 PN **Pn** **19 31 25.1 -0.3**
AVNS Nevsehir-Avano 1.92 142 P **Pn** **19 31 27.0 +0.4**
AVNS S **Sg** **19 31 55.1 +0.1**
AVNS *i* AML AML 19 31 58.0
comp=N,1µm,0.7s
AMSY Amasya-Merkez 1.94 80 P **Pn** **19 31 27.8 +0.9**
HACI Hacifakili, Ak 1.95 108 P **Pn** **19 31 27.3 +0.2**
HACI S **Sb** **19 31 54.7 +0.8**
HACI *i* AML AML 19 32 01.0
comp=E,2µm,0.9s
SAHE Sakarya_HENDEK 1.96 286 P **Pn** **19 31 26.9 -0.3**
SAHE S **Sg** **19 31 55.3 -0.9**
SAHE *i* AML AML 19 31 59.0
comp=N,578nm,1.1s
SAHE *i* AML AML 19 32 09.0
comp=E,729nm,1.1s
HAVZ Havza 1.96 67 P **Pn** **19 31 26.2 -1.0**
HAVZ S **Sn** **19 31 52.5 +0.3**
HAVZ *i* AML AML 19 32 01.0
comp=E,2µm,0.9s
HAVZ *i* AML AML 19 32 02.0
comp=N,2µm,0.4s
DIKM Dikmen 1.97 47 PN **Pn** **19 31 27.3 0.0**
DIKM Dikmen 1.97 47 Pn **Pn** **19 31 26.8 -0.5**
CIFT Cifteler, Eski 1.99 242 PN **Pn** **19 31 27.4 -0.3**
KDHN Kadinhani 2.03 208 P **Pn** **19 31 28.9 +0.7**
KDHN S **Sg** **19 31 58.1 -0.5**
ALIN Konya, Altinte 2.06 190 P **Pn** **19 31 28.3 -0.2**
ALIN S **Sn** **19 31 54.9 +0.3**
SGAZ Eskisehir, Sey 2.07 248 P **Pn** **19 31 28.7 +0.2**
SGAZ S **Sg** **19 32 05.2 +5.3**
SRCK Saricakaya, Es 2.09 263 PN **Pn** **19 31 28.8 -0.1**
SULT Sultanhani-AKS 2.13 176 PN **Pn** **19 31 29.6 0.0**
GULT Gulveren 2.15 274 PN **Pn** **19 31 30.0 +0.1**
KVT Kavak 2.20 69 PN **Pn** **19 31 30.3 -0.2**
BORA Eskisehir 2.25 260 Pn **Pn** **19 31 30.2 -1.0**
BORA Eskisehir 2.25 260 P **Pn** **19 31 31.6 +0.4**
LADK Ladik-KONYA 2.25 200 PN **Pn** **19 31 30.3 -0.9**
GUNE Kayseri 2.27 128 P **Pn** **19 31 33.2 +1.7**
GUNE S **Sg** **19 32 07.2 +0.8**
GUNE *i* AML AML 19 32 15.0
comp=N,1µm,0.8s
GUNE *i* AML AML 19 32 16.0
comp=E,7µm,1.3s
GEYV SAKARYA_Geyve 2.32 275 P **Pn** **19 31 33.1 +1.0**
SAUV Serdivan-Sakar 2.33 281 PN **Pn** **19 31 32.1 0.0**
KAYN Sakarya, Kayna 2.36 287 P **Pn** **19 31 32.2 -0.5**
AUKIR Kırka- Seyitga 2.40 245 P **Pn** **19 31 33.4 +0.2**
SAMS Samsun-Alacam 2.40 64 P **Pn** **19 31 33.1 -0.1**
SAMS S **Sb** **19 32 05.0 -1.9**
SAMS *i* AML AML 19 32 20.0
comp=N,642nm,0.8s
TOKA Tokat 2.41 89 Pn **Pn** **19 31 32.8 -0.6**
TOKA Tokat 2.41 89 P **Pn** **19 31 33.8 +0.4**
CUSAR Sarkisla-SIVAS 2.42 111 P **Pn** **19 31 34.1 +0.5**
CUSAR S **Sb** **19 32 07.2 -0.4**
CUSAR *i* AML AML 19 32 15.0
comp=N,1µm,0.5s
BNN Bunyan 2.44 126 PN **Pn** **19 31 33.9 0.0**
BNN Bunyan 2.44 126 **Pn** **19 31 33.4 -0.4**
BNN Bunyan 2.44 126 Pn **Pn** **19 31 33.5 -0.4**
TOKT Tokat 2.46 89 PN **Pn** **19 31 34.3 +0.2**
KONT Konya--Tatoy 2.49 198 PN **Pn** **19 31 34.5 0.0**
KONT Konya--Tatoy 2.49 198 P **Pn** **19 31 34.1 -0.4**
KONT S **Sn** **19 32 05.9 +0.6**
KAND Kocaeli-Kandir 2.50 289 P **Pn** **19 31 35.9 +1.3**
YESY Yesilyurt 2.56 173 PN **Pn** **19 31 36.5 +1.0**
DOGA KONYA_Doganhis 2.56 211 P **Pn** **19 31 36.4 +0.8**
DOGA S **Sg** **19 32 14.2 -1.5**
NIDE Nigde/Merkez-G 2.58 154 P **Pn** **19 31 36.1 +0.3**
NIDE S **Sg** **19 32 15.2 -1.0**
YVAC Isparta, Yalva 2.62 219 P **Pn** **19 31 36.4 +0.2**
YVAC S **Sb** **19 32 12.5 -0.6**
BILE Bilecik/Merkez 2.65 268 P **Pn** **19 31 36.6 -0.1**
KMER Konya-Meram 2.66 197 P **Pn** **19 31 37.6 +0.8**
YAHY KAYSERI_Yahyal 2.73 144 P **Pb** **19 31 41.2 -1.4**
YAHY S **Sb** **19 32 17.8 +1.3**
ADVT Abdulvahap 2.75 273 PN **Pn** **19 31 37.8 -0.1**
ANDZ Kutahya, Merke 2.76 254 P **Pn** **19 31 38.6 +0.4**
SHUT Suhut-Afyon 2.79 231 PN **Pn** **19 31 39.5 +0.9**
CUAYA Sivas-Altinyay 2.84 111 P **Pn** **19 31 40.7 +1.3**
SVSK Karacayir 2.84 97 PN **Pn** **19 31 39.6 +0.4**
SILT Sile 2.92 288 PN **Pn** **19 31 41.9 +1.6**
SCER sogukcermik 2.95 98 P **Pn** **19 31 42.5 +1.6**
CMRD Camardi-Nigde 2.96 154 PN **Pn** **19 31 41.1 +0.1**
KERG Konya-Eregli 2.97 168 P **Pn** **19 31 42.5 +1.3**
AFYN Afyon-Dinar-K 3.00 228 P Pn 19 31 31.1 -10
AFYN S **Sn** **19 32 09.1 -8.9**
YLV Yalova 3.03 276 PN **Pn** **19 31 41.7 -0.2**
YLV Yalova 3.03 276 Pn **Pn** **19 31 41.7 -0.2**
RSDY Resadiye-TOKAT 3.06 87 PN **Pn** **19 31 42.5 +0.3**
SARI SarD1z-Kayseri 3.07 128 PN **Pn** **19 31 42.9 +0.4**
TVSB Tavsanli 3.10 255 PN **Pn** **19 31 48.6 -0.1**
KKBE Karaman, Kazim 3.12 186 P **Pb** **19 31 48.6 -0.7**
STBT Saitabat 3.14 268 P **Pn** **19 31 43.4 +0.1**
SEYD Seydisehir-KON 3.14 202 PN **Pn** **19 31 43.3 -0.2**
KURT Yalova, Merkez 3.15 276 P **Pn** **19 31 41.9 -1.7**
IGD Bursa 3.16 270 P **Pn** **19 31 41.2 -2.3**
GEMT Gemlik 3.16 273 PN **Pn** **19 31 43.5 -0.2**
SAIM ADANA 3.18 137 P **Pn** **19 31 46.6 +2.7**
GULE Gulek 3.24 159 P **Pb** **19 31 50.7 -0.7**
ISP Isparta 3.32 222 PN **Pn** **19 31 46.8 +0.9**
ISP Isparta 3.32 222 Pn **Pn** **19 31 45.7 -0.3**
ISP Isparta 3.32 222 *i* P **Pn** **19 31 47.8 +1.9**
KARA Karaisali 3.34 156 PN **Pn** **19 31 48.8 +2.6**
SUTC Sutluce-Ispart 3.38 213 PN **Pn** **19 31 47.5 +0.8**
KLYT Kilyos 3.38 287 Pn **Pn** **19 31 47.1 +0.4**
ARMT Armutlu 3.42 275 PN **Pn** **19 31 46.9 -0.3**
KOZT Kozan 3.44 145 PN **Pn** **19 31 48.8 +1.2**
MERS Mersin 3.58 164 PN **Pn** **19 31 50.8 +1.4**
DARE Darende-Malaty 3.66 117 PN **Pn** **19 31 51.7 +1.1**
CTKS Kestanelik-??a 3.77 286 PN **Pn** **19 31 52.7 +0.7**
KEBE Keben-Mersin 3.88 175 PN **Pn** **19 31 54.7 +1.0**
KULA Kula-Manisa 4.04 245 PN **Pn** **19 31 56.4 +0.6**
ARPR Arapgir-MALATY 4.05 106 PN **Pn** **19 31 57.2 +1.1**
KORT Korkueli 4.06 216 PN **Pn** **19 31 56.7 +0.6**
ESPY Espiye-Giresun 4.15 80 PN **Pn** **19 31 58.5 +1.2**
GAZI Gazipasa 4.16 191 PN **Pn** **19 31 58.8 +1.4**
TEKE Tekeli-Mersin 4.18 182 PN **Pn** **19 31 58.7 +1.0**
YAL Yalta 4.20 8 *eP* **Pn** **19 31 58.1 +0.2**
YAL *eS* **Sn** **19 32 47.4 0.0**
YAL Yalta 4.20 8 *eP* **Pn** **19 31 58.1 +0.2**
YAL Pm 19 31 59.8
comp=Z,18nm,0.4s
YAL *eS* **Sn** **19 32 47.4 0.0**
YAL Sm 19 32 47.5
comp=N,76nm,0.5s
YAL Sm 19 32 47.5
comp=E,80nm,0.2s
SEV Sevastopol' 4.22 3 *eP* **Pn** **19 31 57.7 -0.5**
SEV *eS* **Sn** **19 32 45.9 -2.0**
SEV Sevastopol' 4.22 3 *eP* **Pn** **19 31 57.7 -0.5**
SEV Pm 19 32 00.6
comp=Z,7.0nm,0.3s
SEV *eS* **Sn** **19 32 45.9 -2.0**
SEV Sm 19 32 48.8
comp=N,7.0nm,0.3s
SEV Sm 19 32 48.8
comp=E,6.0nm,0.3s
ALU Alushta 4.42 10 *eP* **Pn** **19 31 59.1 -1.9**
ALU *eS* **Sn** **19 32 51.7 -1.1**
ALU Alushta 4.42 10 *eP* **Pn** **19 31 59.1 -1.9**
ALU Pm 19 32 00.3
comp=Z,8.0nm,0.4s
ALU *eS* **Sn** **19 32 51.7 -1.1**
ALU Sm 19 32 52.6
comp=N,12nm,0.3s
ALU Sm 19 32 52.6
comp=E,7.0nm,0.3s
ELL Elmali 4.47 218 **Pn** **19 32 01.5 -0.2**
ELL Elmali 4.47 218 P **Pn** **19 32 01.5 -0.2**
SIM Simferopol' 4.66 7 *eP* **Pn** **19 32 02.5 -1.7**
SIM *eS* **Sn** **19 32 58.0 -0.6**
SIM pmax pmax
comp=Z,47nm,1.2s
SIM smax smax
comp=E,93nm,1.1s
SUDU Sudak 4.72 15 *eP* **Pn** **19 32 05.5 +0.4**
SUDU *eS* **Sn** **19 33 00.5 +0.3**
SUDU Sudak 4.72 15 *eP* **Pn** **19 32 05.5 +0.4**
SUDU Pm 19 32 17.1
comp=Z,17nm,0.6s
SUDU *eS* **Sn** **19 33 00.5 +0.3**
SUDU Sm 19 33 03.8
comp=N,26nm,0.5s
SUDU Sm 19 33 03.8
comp=E,21nm,0.4s
KTUT Trabzon 4.94 80 ⇓P **Pn** **19 32 10.7 +2.6**
KTUT ⇓S **Sg** **19 33 40.7 +8.7**
AKAS Kas 5.03 217 Pn **Pn** **19 32 10.3 +0.9**
PSN Preselentsi 5.09 313 P **Pn** **19 32 10.7 +0.5**
PRD Provadia 5.28 305 *eP* Pb 19 32 19.4 -6.6
CSS Mathiatis 5.36 180 Pn **Pn** **19 32 14.5 +0.7**
ANN Anapa 5.40 33 *eP* **Pn** **19 32 17.2 +2.8**
ANN *eS* **Sn** **19 33 19.9 +3.0**
ANN pmax pmax
comp=Z,12nm,0.6s
ANN MLR MLR
comp=Z,141nm,9.0s
TIRR Tirgusor 5.50 320 ⇑P **Pn** **19 32 15.0 -0.7**
TIRR Tirgusor 5.50 320 Pn **Pn** **19 32 15.1 -0.7**
TIRR Tirgusor 5.50 320 P **Pn** **19 32 15.1 -0.7**
ALN Alexandroupoli 5.57 278 Pn **Pn** **19 32 15.7 -1.1**
ALN Alexandroupoli 5.57 278 P **Pn** **19 32 15.7 -1.1**
ICOR Ion Corvin 5.58 315 ⇓P **Pn** **19 32 17.6 +0.6**
ARG Arkhangelos 5.79 227 Pn **Pn** **19 32 18.4 -1.5**
ARG Arkhangelos 5.79 227 P **Pn** **19 32 18.4 -1.5**
TPGR Topolog 5.80 323 ⇓P **Pn** **19 32 19.4 -0.5**
SIGR SIGRI 5.87 261 Pn **Pn** **19 32 21.0 +0.2**
SMTH Samothraki Isl 5.96 274 Pn **Pn** **19 32 21.3 -0.8**
RDO Rodhopi 5.97 280 **Pn** **19 32 21.7 -0.6**
RDO Rodhopi 5.97 280 Pn **Pn** **19 32 22.2 -0.1**
CFR Carcaliu 6.17 323 ⇑P **Pn** **19 32 24.4 -0.6**
CFR ⇓S **Sn** **19 33 31.3 -4.6**
CFR Carcaliu 6.17 323 ⇑P **Pn** **19 32 24.4 -0.6**
BCA Borcka 6.38 77 ⇓P **Pn** **19 32 29.7 +1.8**
MARD Mardin 6.55 115 Pn **Pn** **19 32 31.2 +0.9**
RZN Rozhen 6.66 285 *eP* **Pn** **19 32 32.5 +0.7**
VLDR Vladesti 6.72 327 ⇓P **Pn** **19 32 31.6 -0.9**
KARP Karpathos 6.82 228 Pn **Pn** **19 32 34.8 +0.8**
VRI Vrincioaia 7.35 321 ⇓P **Pn** **19 32 41.0 -0.2**
VRI Vrincioaia 7.35 321 ⇓P **Pn** **19 32 41.0 -0.2**
MILM Milestii Mici 7.36 335 *eP* **Pn** **19 32 40.0 -1.3**
comp=Z,20nm,0.5s
MILM *eS* **Sn** **19 34 06.0 +0.9**
MILM *eL* L 19 35 25.0
MILM LRM MLR 19 37 47.0
comp=Z,240nm,11.5s
MILM Milestii Mici 7.36 335 ⇓P **Pn** **19 32 40.2 -1.1**
MILM Milestii Mici 7.36 335 *eP* **Pn** **19 32 40.0 -1.3**
MILM *eS* **Sn** **19 34 06.0 +0.9**
MILM pmax pmax
comp=Z,20nm,0.5s
MILM MLR MLR
comp=Z,240nm,11.5s
PLOR Plostina 7.37 321 ⇓P **Pn** **19 32 41.8 +0.3**
PLOR Plostina 7.37 321 ⇓P **Pn** **19 32 41.8 +0.3**
MLR Muntele Rosu 7.48 316 ⇓P **Pn** **19 32 43.4 +0.2**
MLR Muntele Rosu 7.48 316 Pn **Pn** **19 32 44.7 +1.6**
comp=Z,0.3nm,0.3s,baz=148,slow=9.5,SNR=5.9
MLR Sn **Sn** **19 34 08.0 -0.3**
comp=Z,0.3nm,0.3s,baz=192,slow=10.0,SNR=3.5
MLR LR LR 19 35 58.8
comp=Z,162nm,20.7s,baz=134,slow=41
comp=Z,2.3nm,0.6s
MLR Muntele Rosu 7.48 316 **Pn** **19 32 43.5 +0.4**
MMAI Mount Meron Ar 7.48 166 Pn **Pn** **19 32 43.0 -0.1**
comp=Z,1.6nm,0.3s,baz=348,slow=13,SNR=12
comp=Z,5.2nm,0.6s
COVR Voineasa-Covas 7.59 319 ⇓P **Pn** **19 32 44.6 +0.1**
KIV Kislovodsk 7.84 59 **Pn** **19 32 47.0 -1.0**
KIV Kislovodsk 7.84 59 *eP* **Pn** **19 32 49.2 +1.2**
KIV pmax pmax
comp=Z,6.0nm,0.9s
KIV MLR MLR
comp=Z,42nm,10.0s
KVAR Kislovodsk Arr 7.85 59 Pn **Pn** **19 32 45.4 -2.7**
baz=53,slow=12
KVAR Sn **Sn** **19 34 16.1 -1.2**
baz=281,slow=23
TESR Tescani 7.86 324 ⇑P **Pn** **19 32 48.3 +0.1**
KBZ Khabaz 7.89 61 Pn **Pn** **19 32 48.1 -0.5**
comp=Z,0.1nm,0.3s,baz=248,slow=9.9,SNR=2.4
KBZ Sn Sn 19 34 28.6 +10
baz=110,slow=18,SNR=1.3
KBZ LR LR 19 37 04.8
comp=Z,135nm,19.7s,baz=256,slow=48
KBZ Khabaz 7.89 61 *i* P **Pn** **19 32 49.9 +1.3**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
ONI Oni 7.93 70 Pn **Pn** **19 32 49.1 -0.2**
ONI Oni 7.93 70 P **Pn** **19 32 49.1 -0.2**
VOIR 7.94 313 ⇓P **Pn** **19 32 50.1 +0.8**
VOIR 7.94 313 ⇓P **Pn** **19 32 50.1 +0.8**
DOPR Dopca 8.09 317 ⇑P **Pn** **19 32 51.3 -0.1**
ZEI Tsey 8.30 69 *eP* **Pn** **19 32 57.7 +3.3**
ZEI pmax pmax
comp=Z,9.0nm,0.8s
IDI Anoyia 8.36 236 ⇓P **Pn** **19 32 57.9 +2.7**
IDI Anoyia 8.36 236 Pn **Pn** **19 32 57.8 +2.7**
comp=Z,1.3nm,0.3s,baz=23,slow=7.8,SNR=17
IDI LR LR 19 36 05.5
comp=Z,86nm,21.8s,baz=75,slow=37
comp=Z,4.1nm,0.4s
IDI Anoyia 8.36 236 Pn **Pn** **19 32 56.3 +1.2**
AGG Agios Georgios 8.58 265 Pn **Pn** **19 32 57.4 -0.7**
AGG Agios Georgios 8.58 265 P **Pn** **19 32 57.4 -0.7**
SORM Soroca 8.58 337 ⇓P **Pn** **19 32 55.6 -2.4**
SORM Soroca 8.58 337 ⇓P **Pn** **19 32 55.6 -2.4**
ASF Jabal al Asfar 8.63 159 Pn **Pn** **19 32 57.6 -1.3**
comp=Z,0.2nm,0.3s,baz=255,slow=14,SNR=2.0
ASF Lg Lg 19 35 26.2
comp=Z,0.2nm,0.3s,baz=348,slow=23,SNR=1.9
comp=Z,0.7nm,0.4s
GNI Garni 8.73 87 Pn **Pn** **19 33 03.7 +3.4**
comp=Z,2.8nm,0.5s,baz=204,slow=23,SNR=1.8
GNI Garni 8.73 87 Pn **Pn** **19 33 02.0 +1.7**
BURAR Bucovina Array 9.34 324 ⇓P **Pn** **19 33 08.6 +0.1**
BURAR Bucovina Array 9.34 324 Pn **Pn** **19 33 07.4 -1.1**
BURAR Bucovina Array 9.34 324 ⇓P **Pn** **19 33 08.6 +0.1**
BUR08 Bucovina Ar. S 9.37 324 Pn **Pn** **19 33 07.6 -1.3**
ITM Ithomi 9.44 254 **Pn** **19 33 09.9 0.0**
KBN Korca 9.56 276 Pn **Pn** **19 33 10.0 -1.6**
KBN Korca 9.56 276 P **Pn** **19 33 10.0 -1.6**
KMPD K-Podol'skiy 9.58 332 Pn **Pn** **19 33 10.8 -1.0**
KMPD pP 19 33 15.3
KMPD sP 19 33 16.9
NE55 Skvira 9.74 346 Pn **Pn** **19 33 13.1 -0.8**
LUBAR Lubar, Ukraine 10.37 340 Pn **Pn** **19 33 21.7 -0.8**
LUBAR pP 19 33 25.4
DIVS Divibare 10.59 295 Pn **Pn** **19 33 23.8 -1.8**
AK06 Malin Array Si 10.66 346 Pn **Pn** **19 33 25.5 -1.0**
AK10 Malin Array Si 10.66 346 Pn **Pn** **19 33 25.5 -1.0**
EIL Elat 10.71 172 Pn Pn 19 33 32.7 +5.4
comp=Z,0.2nm,0.3s,baz=83,slow=9.1,SNR=3.0
EIL LR LR 19 38 03.0
comp=Z,79nm,18.3s,baz=334,slow=40
AK01 Malin Array Si 10.76 346 Pn **Pn** **19 33 26.6 -1.2**
AKASG Malin Array Be 10.77 346 Pn **Pn** **19 33 25.3 -2.7**
comp=Z,1.2nm,0.3s,baz=164,slow=12,SNR=5.5
AKASG Sn **Sn** **19 35 24.1 -4.6**
comp=Z,0.6nm,0.3s,baz=163,slow=9.8,SNR=2.4
AKASG LR LR 19 37 58.8
comp=Z,76nm,19.9s,baz=167,slow=40
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 10.77 346 Pn **Pn** **19 33 24.6 -3.3**
AKBB Malin Array Si 10.77 346 Pn **Pn** **19 33 26.0 -1.9**
AKBB Malin Array Si 10.77 346 *i* P **Pn** **19 33 29.2 +1.3**
MI30 MI30,Zelenitsa 11.02 343 Pn **Pn** **19 33 31.0 -0.5**
MI28 Mi28,Pidlybu 11.32 341 Pn **Pn** **19 33 34.6 -0.9**
MI28 pP 19 33 38.3
KOLS Kolonicke sedl 11.65 321 *eP* **Pn** **19 33 41.3 +1.1**
KOLS Kolonicke sedl 11.65 321 *e*PN **Pn** **19 33 41.2 +1.1**
VORR Voronezh 12.06 18 *eP* **Pn** **19 33 44.6 -1.0**
VORR pmax pmax
comp=Z,20nm,0.3s
RNPP8 Varash 12.17 337 Pn **Pn** **19 33 46.7 -0.5**
BELG Belogornoye 15.55 34 *i* P **Pn** **19 34 34.4 +1.4**
BELG pmax pmax
comp=Z,1.0nm,0.8s
CKRC Cesky Krumlov 15.96 308 *eP* **P** **19 34 44.2 +2.1**
GEC2 GERESS Array S 16.34 308 P **P** **19 34 46.6 +0.3**
GERES GERESS Array B 16.34 308 Pn **P** **19 34 45.4 -1.0**
comp=Z,0.1nm,0.3s,baz=119,slow=11,SNR=15
comp=Z,2.1nm,0.8s
GERES GERESS Array B 16.34 308 P **Pn** **19 34 44.1 +0.7**
PABE Paberze 16.41 341 P **Pn** **19 34 42.5 -1.5**
KHC Kasperske Hory 16.53 309 P **Pn** **19 34 45.4 -0.3**
KHC Kasperske Hory 16.53 309 *eP* **P** **19 34 48.9 +0.5**
KHC Kasperske Hory 16.53 309 *eP* **P** **19 34 48.9 +0.5**
CLL Collm 17.86 315 *eP* **P** **19 35 06.0 +3.0**
CLL *eS* **S** **19 38 25.0 -3.5**
CLL Collm 17.86 315 *es*P **P** **19 35 06.0 +3.0**
CLL *eS* **S** **19 38 25.0 -3.5**
CLL LmV 19 43 00.0
comp=Z,200nm,18.5s
GEYT Ailbeck 19.36 89 LR LR 19 44 40.8
comp=Z,78nm,20.6s,baz=168,slow=43
SENIN Lac Senin/Sane 19.82 296 **P** **19 35 23.9 -0.9**
SENIN lAmb lAmb 19 35 56.1
comp=Z,5.4nm,1.2s
AKTO Aktyubinsk 19.98 51 P **P** **19 35 25.4 -1.0**
comp=Z,0.2nm,0.3s,baz=30,slow=20,SNR=3.6
comp=Z,0.9nm,0.5s
ECH Echery 20.26 302 P **P** **19 35 26.2 -3.1**
ECH lAmb lAmb 19 35 44.0
comp=Z,8.1nm,1.1s
ECH Echery 20.26 302 P **P** **19 35 26.3 -3.1**
ECH pmax pmax
comp=Z,8.0nm,1.1s
ABKAR Akbulak array 20.80 56 **P** **19 35 34.1 -1.2**
ABKAR Akbulak array 20.80 56 P **P** **19 35 35.1 -0.1**
KLMR Klimovskoe 20.91 9 *eP* Pn 19 35 38.1 -0.6
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 20.91 9 *eP* Pn 19 35 38.1 -0.6
KLMR AMP 19 35 39.7
comp=Z,14nm,1.3s
KIRV Kirov 20.95 24 *i* P Pn 19 35 38.1 -1.2
FIA0 FINESS Array S 21.61 351 P **P** **19 35 42.7 -1.0**
FIA0 FINESS Array S 21.61 351 P **P** **19 35 42.7 -1.0**
FINES FINESS Array B 21.61 351 P **P** **19 35 44.8 +1.0**
comp=Z,3.6nm,1.1s,baz=165,slow=12,SNR=5.3
comp=Z,3.6nm,1.1s
FINES FINESS Array B 21.61 351 P **P** **19 35 44.2 +0.4**
PRGR Permogore 22.62 15 *eP* **P** **19 35 50.8 -3.8**
ARU Arti 23.05 37 P **P** **19 35 59.6 +0.5**
comp=Z,2.0nm,0.6s,baz=224,slow=8.0,SNR=6.0
comp=Z,2.0nm,0.6s
ARU Arti 23.05 37 **P** **19 35 58.7 -0.5**
ARU lAmb lAmb 19 36 14.5
comp=Z,12nm,1.4s
ARU Arti 23.05 37*d* *i* P **P** **19 35 59.6 +0.5**
ARU 19 36 23.7
ARU S **S** **19 40 10.8 +0.5**
ARU pmax pmax
comp=Z,6.0nm,0.9s
HFS Hagfors 23.30 335 P **P** **19 36 04.1 +2.4**
comp=Z,2.3nm,0.8s,baz=132,slow=14,SNR=2.8
comp=Z,2.3nm,0.8s
HRA Herat 23.68 95 P **P** **19 36 06.1 +0.2**
HRA lAmb lAmb 19 36 13.8
comp=Z,2.9nm,0.7s
NOA NORSAR Array B 24.79 334 LR LR 19 47 10.6
comp=Z,77nm,21.2s,baz=145,slow=39
BRVK Borovoye 28.03 51 *i* P **P** **19 36 45.7 +0.6**
BRVK pmax pmax
comp=Z,1.0nm,0.7s
GAR Garm 28.38 81 P **P** **19 36 48.6 +0.2**
ESDC Sonseca Array 28.44 281 LR LR 19 49 55.5
comp=Z,41nm,18.6s,baz=314,slow=40
ARCES ARCESS Array B 29.56 354 LR LR 19 49 53.3
comp=Z,83nm,21.5s,baz=178,slow=39
KURK Kurchatov 32.91 56 P **P** **19 37 28.5 +0.3**
KURK lAmb lAmb 19 37 38.2
comp=Z,2.8nm,0.9s
KURK Kurchatov 32.91 56*ce*P **P** **19 37 29.5 +1.3**
KURK pmax pmax
comp=Z,5.0nm,2.5s
MAKZ Makanchi 35.37 63 P **P** **19 37 50.5 +0.8**
MAKZ lAmb lAmb 19 37 57.3
comp=Z,1.1nm,0.9s
MAKZ Makanchi 35.37 63 P **P** **19 37 50.5 +0.8**
MAKZ pmax pmax
comp=Z,1.0nm,1.0s
MK31 Makanchi Array 35.59 63 P **P** **19 37 51.8 +0.3**
MK31 lAmb lAmb 19 37 54.4
comp=Z,4.3nm,1.4s
MK31 Makanchi Array 35.59 63 *i* P **P** **19 37 52.5 +1.0**
MKAR Makanchi Array 35.59 63 P **P** **19 37 51.8 +0.2**
comp=Z,1.5nm,0.8s,baz=277,slow=7.5,SNR=18
comp=Z,1.5nm,0.6s
MKAR Makanchi Array 35.59 63 P **P** **19 37 51.3 -0.2**
MKAR Makanchi Array 35.59 63*ce*P **P** **19 37 52.9 +1.4**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 36.74 51 P **P** **19 38 01.5 +0.3**
comp=Z,0.6nm,0.6s,baz=18,slow=30,SNR=1.7
ZALV LR LR 19 57 34.4
comp=Z,34nm,18.5s,baz=297,slow=44
comp=Z,0.6nm,0.6s
JMIC Jan Mayen 37.28 339 LR LR 19 54 02.8
comp=Z,33nm,19.4s,baz=208,slow=37
TOA0 Torodi Ar. Sit 38.76 235 P **P** **19 38 18.3 -0.4**
TOA0 lAmb lAmb 19 38 25.2
comp=Z,3.8nm,0.9s
TORD Torodi Ar. Bea 38.76 235 P **P** **19 38 20.6 +1.9**
comp=Z,2.3nm,0.8s,baz=35,slow=8.5,SNR=12
comp=Z,2.3nm,0.8s
TORD Torodi Ar. Bea 38.76 235 P **P** **19 38 18.1 -0.6**
TORD lAmb lAmb 19 38 25.2
comp=Z,2.8nm,1.0s
BORG Borgarnes 39.47 327 LR LR 19 55 44.9
comp=Z,37nm,18.4s,baz=357,slow=38
WMQ Urumqi 39.90 67 *eP* **P** **19 38 29.8 +1.7**
NRIK Noril'sk 40.42 26 *i* P **P** **19 38 33.3 +1.3**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 51.22 56 LR LR 20 04 45.9
comp=Z,44nm,19.2s,baz=314,slow=40
LSZ Lusaka 55.52 186 LR LR 20 07 10.1
comp=Z,38nm,18.7s,baz=356,slow=39
HHC Hu-ho-hao-te 57.44 62 *eP* **P** **19 40 41.8 -1.2**
HHC pmax pmax
comp=Z,34nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.4s
PZH PanZhiHua 57.44 81 P **P** **19 40 43.6 +0.3**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.8s
CMAR Chiang Mai Arr 59.84 91 P **P** **19 40 59.4 -0.5**
comp=Z,1.4nm,0.8s,baz=300,slow=7.7,SNR=9.0
comp=Z,1.4nm,0.8s
CMAR Chiang Mai Arr 59.84 91*ce*P **P** **19 41 00.4 +0.5**

CMAR pmax pmax
comp=Z,2.0nm,0.8s
SCHQ Schefferville 63.40 320 LR LR 20 07 45.0
comp=Z,65nm,20.6s,baz=281,slow=35
SEY Seymchan 66.21 26*ce*P **P 19 41 45.2 +3.6**
SEY pmax pmax
comp=Z,3.0nm,1.0s
LMN Caledonia Moun 67.33 311 P **P 19 41 48.8 -0.2**
MA2 Magadan 67.94 29 LR LR 20 17 14.6
comp=Z,36nm,18.1s,baz=354,slow=41
KSRS Korea Array 70.03 58 P **P 19 42 05.5 -0.4**
comp=Z,1.0nm,0.7s,baz=297,slow=5.2,SNR=9.9
KSRS LR LR 20 16 58.5
comp=Z,31nm,18.5s,baz=340,slow=40
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 74.33 345 P **P 19 42 30.9 -0.3**
comp=Z,0.7nm,0.7s,baz=285,slow=18,SNR=2.5
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 74.33 345*ce*P P 19 42 36.7 +5.4
YKA pmax pmax
comp=Z,2.0nm,1.0s
ILAR Eielson Array 75.24 0 LR LR 20 19 44.5
comp=Z,23nm,18.5s,baz=61,slow=39
JOW Kunigami 76.67 66 LR LR 20 21 56.3
comp=Z,29nm,20.2s,baz=166,slow=40
ELK Elko 94.39 337 LR LR 20 30 51.9
comp=Z,15nm,18.2s,baz=342,slow=38
ANMO Albuquerque 96.43 328 LR LR 20 29 15.6
comp=Z,28nm,18.7s,baz=48,slow=36

ROM 02 19:37:00.6±0.1, **42°651N**±0°002×**13°276E**±0°002,
h5km±2km, **ML0.7/1, Error ellipse: s-maj=0.2km**
s-min=0.1km az=13.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.15**	**198**	P	Pg	19 37 04.1	+0.5
RM33				S	Sg	19 37 06.6	+1.0
LNSS	**Leonessa**	**0.18**	**255**	P	Pg	19 37 04.6	+0.5
LNSS				S	Sg	19 37 07.6	+1.0
LNSS				AML	AML		
	comp=N,37μm,0.1s						
LNSS				AML	AML		
	comp=E,38μm,1.1s						
NRCA	**Norcia**	**0.22**	**327**	P	Pg	19 37 05.5	+0.7
NRCA				S	Sg	19 37 09.2	+1.4
TERO	**Teramo**	**0.24**	**97**	P	Pg	19 37 06.0	+0.7
TERO				S	Sg	19 37 10.0	+1.5

*NOU **02** 19:40:40.7, 39°04S×174°72E, h247km, MLv4.0/9, North Island, New Zealand*
*WEL **02** 19:40:45.2±0.7, 39°S±6°×17°5E±°, h207km±5km, M3.1/49, ML2.8/8, MLv3.1/49, Error ellipse: s-maj=0.0km s-min=0.0km az=153.7*
ISC 02 19:40:40.4±1.9, **39°15S**±0°07×**174°76E**±0°06,
h243km±11km, **n130, σ1946/140, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.03**	**351**	P	**Pn**	19 41 12.7	+0.9
VRZ				S	**S**	19 41 34.8	-1.5
LREZ	**Lake Rotokare**	**0.42**	**222**	P	**Pn**	19 41 13.9	+1.8
DREZ	**Durham Road**	**0.44**	**265**	P	**Pn**	19 41 13.9	+1.6
PKZ	**Pokaka**	**0.47**	**107**	P	**Pn**	19 41 13.8	+1.4
TWVZ	**Taurewa**	**0.53**	**82**	P	**Pn**	19 41 13.9	+1.2
TWVZ				S	**S**	19 41 36.3	-1.7
NEZ	**North Egmont**	**0.53**	**257**	P	**Pn**	19 41 14.5	+1.9
KHEZ	**Kahui Hut**	**0.60**	**256**	P	**Pn**	19 41 14.7	+1.8
PKE	**Pukeiti**	**0.60**	**266**	P	**Pn**	19 41 14.6	+1.7
FWVZ	**Far West T-bar**	**0.62**	**100**	P	**Pn**	19 41 14.5	+1.3
FWVZ				S	**S**	19 41 36.5	-2.3
TRVZ	**Turoa**	**0.63**	**104**	P	**Pn**	19 41 14.5	+1.4
TRVZ				S	**S**	19 41 36.9	-1.9
WAZ	**Wanganui**	**0.63**	**164**	P	**Pn**	19 41 14.9	+2.0
WAZ				S	**S**	19 41 37.3	-1.2
HIZ	**Hauiti**	**0.64**	**6**	P	**Pn**	19 41 14.0	+1.0
HIZ				S	**S**	19 41 37.0	-1.5
HIZ	**Hauiti**	**0.64**	**6**	P	**Pn**	19 41 14.0	+1.0
WTVZ	**West Tongariro**	**0.64**	**87**	P	**Pn**	19 41 14.4	+1.3
NGZ	**Ngauruhoe**	**0.65**	**93**	P	**Pn**	19 41 14.4	+1.2
WHZ	**Whangaehu Hut**	**0.66**	**102**	P	**Pn**	19 41 14.7	+1.4
NNVZ	**North Ngauruho**	**0.66**	**89**	P	**Pn**	19 41 14.6	+1.3
NNVZ				S	**S**	19 41 37.7	-1.2
WNVZ	**Wahianoa**	**0.67**	**106**	P	**Pn**	19 41 14.8	+1.5
WNVZ				S	**S**	19 41 37.3	-1.7
SNVZ	**South Ngauruho**	**0.68**	**93**	P	**Pn**	19 41 14.9	+1.6
SNVZ				S	**S**	19 41 37.9	-1.2
KRVZ	**Karewarewa**	**0.69**	**86**	P	**Pn**	19 41 14.6	+1.3
KRVZ				S	**S**	19 41 37.2	-1.8
NBEZ	**Newall Road No**	**0.71**	**260**	P	**Pn**	19 41 15.0	+1.8
NTVZ	**North Tongarir**	**0.71**	**86**	P	**Pn**	19 41 14.9	+1.5
TMVZ	**Te Maari**	**0.73**	**88**	P	**Pn**	19 41 15.1	+1.6
NMEZ	**Namu Road**	**0.74**	**249**	P	**Pn**	19 41 15.3	+2.0
ETVZ	**East Tongariro**	**0.74**	**89**	P	**Pn**	19 41 15.0	+1.5
KATZ	**Kakaramea**	**0.75**	**77**	P	**Pn**	19 41 15.2	+1.6
MOVZ	**Moawhango**	**0.81**	**109**	P	**Pn**	19 41 14.9	+1.1
RATZ	**Rangitukua**	**0.83**	**71**	P	**Pn**	19 41 15.0	+1.1
RITZ	**Rihia Road**	**0.87**	**79**	P	**Pn**	19 41 15.5	+1.5
WATZ	**Wairara**	**0.88**	**95**	P	**Pn**	19 41 15.5	+1.5
BHHZ	**Black Hill Sta**	**1.06**	**109**	P	**Pn**	19 41 16.3	+1.2
OHWZ	**Ohakea**	**1.14**	**158**	P	**Pn**	19 41 17.8	+2.4
TSZ	**Takapari Road**	**1.30**	**135**	P	**Pn**	19 41 18.3	+1.8
KWHZ	**Kaweka Forest**	**1.32**	**103**	P	**Pn**	19 41 18.6	+1.8
MRHZ	**Matea Rd**	**1.33**	**77**	P	**Pn**	19 41 17.5	+0.7
BKZ	**Black Stump Fm**	**1.34**	**91**	P	**Pn**	19 41 18.1	+1.1
BKZ	**Black Stump Fm**	**1.34**	**91**	P	**Pn**	19 41 18.2	+1.3
PNHZ	**Pukenui**	**1.35**	**125**	P	**Pn**	19 41 18.6	+1.7
POWZ	**Post Office Ro**	**1.46**	**148**	P	**Pn**	19 41 19.3	+1.6
MCHZ	**McNeill Hill**	**1.53**	**102**	P	**Pn**	19 41 20.5	+2.3
TOZ	**Tahuroa Road**	**1.53**	**22**	P	**Pn**	19 41 19.5	+1.2
DVHZ	**Dannevirke**	**1.58**	**137**	P	**Pn**	19 41 20.2	+1.6
WPHZ	**Waipukurau**	**1.58**	**126**	P	**Pn**	19 41 20.5	+1.9
NMHZ	**Naumai**	**1.59**	**89**	P	**Pn**	19 41 20.9	+2.1
MRZ	**Mangatainoka R**	**1.63**	**158**	P	**Pn**	19 41 20.5	+1.4
TARZ	**Mount Tarawera**	**1.64**	**57**	P	**Pn**	19 41 20.4	+1.1
MTHZ	**Maungataniwha**	**1.65**	**60**	P	**Pn**	19 41 20.3	+1.1
PRWZ	**Pori Road**	**1.68**	**147**	P	**Pn**	19 41 21.2	+1.8
OGWZ	**Otaki Gorge**	**1.69**	**169**	P	**Pn**	19 41 21.3	+1.8
MUGZ	**Murupara**	**1.71**	**67**	P	**Pn**	19 41 20.2	+0.5
KIW	**Kapiti Island**	**1.71**	**176**	P	**Pn**	19 41 21.3	+1.6
ARHZ	**Aropaoanui**	**1.74**	**94**	P	**Pn**	19 41 21.9	+2.0
KAHZ	**Kahuranaki**	**1.76**	**112**	P	**Pn**	19 41 22.3	+2.2
DUWZ	**D'Urville Isla**	**1.77**	**201**	P	**Pn**	19 41 21.9	+1.7
RAHZ	**Arahi**	**1.82**	**83**	P	**Pn**	19 41 22.3	+1.6
PRHZ	**Porangahau**	**1.82**	**128**	P	**Pn**	19 41 22.5	+1.9
HOWZ	**Holdsworth Sta**	**1.84**	**162**	P	**Pn**	19 41 22.2	+1.4
TIWZ	**Tintock**	**1.84**	**152**	P	**Pn**	19 41 22.4	+1.6
PXZ	**Pawanui**	**1.84**	**119**	P	**Pn**	19 41 22.7	+1.9
ANWZ	**Angora Road**	**1.86**	**135**	P	**Pn**	19 41 22.9	+2.0
CKHZ	**Cape Kidnapper**	**1.86**	**107**	P	**Pn**	19 41 23.2	+2.2
BFZ	**Birch Farm**	**1.91**	**144**	P	**Pn**	19 41 22.8	+1.5
BFZ	**Birch Farm**	**1.91**	**144**	P	**Pn**	19 41 22.9	+1.5
CAW	**Cannon Point**	**1.97**	**173**	P	**Pn**	19 41 23.5	+1.6
URZ	**Urewera**	**2.04**	**65**	P	**Pn**	19 41 22.9	+0.2
URZ	**Urewera**	**2.04**	**65**	P	**Pn**	19 41 23.0	+0.4
SNGZ	**Shannon Statio**	**2.04**	**80**	P	**Pn**	19 41 24.0	+1.3
MKAZ	**Moumakai**	**2.07**	**9**	P	**Pn**	19 41 24.4	+1.5
CPWZ	**Castlepoint**	**2.08**	**148**	P	**Pn**	19 41 24.9	+2.1
AWAZ	**Awhitu Peninsu**	**2.08**	**357**	P	**Pn**	19 41 24.1	+1.0
MTW	**Mount Morrison**	**2.08**	**164**	P	**Pn**	19 41 24.3	+1.3
TCW	**Tory Channel**	**2.09**	**190**	P	**Pn**	19 41 24.9	+1.9
WEL	**Wellington**	**2.13**	**180**	P	**Pn**	19 41 22.4	-1.0
TMWZ	**Te Maipa**	**2.14**	**157**	P	**Pn**	19 41 24.9	+1.4
SNZO	**South Karori**	**2.16**	**181**	P	**Pn**	19 41 25.4	+1.8
KNZ	**Kokohu**	**2.27**	**88**	P	**Pn**	19 41 26.2	+1.4
PAWZ	**Paruwai Farm**	**2.29**	**167**	P	**Pn**	19 41 26.4	+1.4
MSWZ	**Moikau Station**	**2.29**	**171**	P	**Pn**	19 41 26.4	+1.3
MWZ	**Matawai**	**2.31**	**70**	P	**Pn**	19 41 25.9	+0.6
NNZ	**Nelson**	**2.32**	**207**	P	**Pn**	19 41 26.9	+1.6
TKNZ	**Takaka Hill**	**2.34**	**216**	P	**Pn**	19 41 26.5	+1.1
TRWZ	**Traveller**	**2.35**	**163**	P	**Pn**	19 41 27.1	+1.5
TUWZ	**Tuamarina**	**2.38**	**195**	P	**Pn**	19 41 27.4	+1.8
MBAZ	**Motutapu North**	**2.38**	**3**	P	**Pn**	19 41 27.6	+1.7
RIGZ	**Rimuhau**	**2.38**	**80**	P	**Pn**	19 41 27.3	+1.4
QRZ	**Quartz Range**	**2.40**	**225**	P	**Pn**	19 41 27.1	+1.1
QRZ	**Quartz Range**	**2.40**	**225**	P	**Pn**	19 41 27.3	+1.3
MHGZ	**Mahia Peninsul**	**2.44**	**91**	P	**Pn**	19 41 28.3	+1.7
PLWZ	**Palliser**	**2.45**	**171**	P	**Pn**	19 41 27.8	+1.2
TKGZ	**Te Karaka**	**2.51**	**75**	P	**Pn**	19 41 28.5	+1.3
RUGZ	**Raukumara Rang**	**2.57**	**64**	P	**Pn**	19 41 27.7	-0.3
CMWZ	**Cape Campbell**	**2.63**	**189**	P	**Pn**	19 41 30.6	+2.2
BSWZ	**Blackbirch Sta**	**2.65**	**195**	P	**Pn**	19 41 30.4	+1.8
MRNZ	**Matariki Terra**	**2.72**	**214**	P	**Pn**	19 41 30.5	+1.1
HAZ	**Te Kaha**	**2.75**	**61**	P	**Pn**	19 41 29.5	-0.2
CNGZ	**Carnagh Statio**	**2.77**	**77**	P	**Pn**	19 41 31.6	+1.7
PKGZ	**Pakihiroa**	**2.89**	**65**	P	**Pn**	19 41 31.7	+0.4
PUZ	**Puketiti**	**2.94**	**70**	P	**Pn**	19 41 32.3	+0.4
GRZ	**Great Barrier**	**2.95**	**11**	P	**Pn**	19 41 33.5	+1.6
THZ	**Tophouse**	**2.97**	**208**	P	**Pn**	19 41 33.5	+1.4
WMGZ	**Waiomatatini S**	**3.16**	**66**	P	**Pn**	19 41 34.6	+0.5
MXZ	**Matakaoa Point**	**3.20**	**61**	P	**Pn**	19 41 35.2	+0.5
WCZ	**Waipu Caves**	**3.22**	**354**	P	**Pn**	19 41 37.0	+2.1
KHZ	**Kahutara**	**3.39**	**196**	P	**Pn**	19 41 38.3	+1.7
KHZ	**Kahutara**	**3.39**	**196**	P	**Pn**	19 41 38.4	+1.7
DSZ	**Denniston Nort**	**3.44**	**220**	P	**Pn**	19 41 38.4	+1.1
GVZ	**Greta Valley S**	**4.03**	**198**	P	**Pn**	19 41 45.2	+1.1
LTZ	**Lake Taylor**	**4.09**	**207**	P	**Pn**	19 41 46.1	+1.2
AMCZ	**Amberley**	**4.33**	**201**	P	**Pn**	19 41 48.8	+1.2
INZ	**Inchbonnie**	**4.37**	**214**	P	**Pn**	19 41 49.3	+1.1
OXZ	**Oxford**	**4.65**	**205**	P	**Pn**	19 41 52.3	+0.7
OKCZ	**Okains Bay**	**4.75**	**195**	P	**Pn**	19 41 53.7	+0.9
MQZ	**McQueen's Vall**	**4.82**	**199**	P	**Pn**	19 41 53.9	+0.2
AKCZ	**Akaroa Harbour**	**4.92**	**196**	P	**Pn**	19 41 55.5	+0.7
WVZ	**Waitaha Valley**	**4.96**	**217**	P	**Pn**	19 41 55.6	+0.2
RACZ	**Rakaia**	**4.98**	**202**	P	**Pn**	19 41 56.3	+0.7
WACZ	**Wakanui South**	**5.27**	**204**	P	**Pn**	19 42 00.1	+0.9
GCSZ	**Gaunt Creek Bo**	**5.34**	**217**	P	**Pn**	19 42 00.5	+0.4
RPZ	**Rata Peaks**	**5.34**	**210**	P	**Pn**	19 42 00.7	+0.6
RPZ	**Rata Peaks**	**5.34**	**210**	P	**Pn**	19 42 01.0	+0.9
ARCZ	**Arundel**	**5.50**	**208**	P	**Pn**	19 42 02.7	+0.7
FOZ	**Fox Glacier**	**5.75**	**219**	P	**Pn**	19 42 05.5	+0.4
TMZ	**Timaru**	**5.94**	**207**	P	**Pn**	19 42 08.5	+1.1
LBZ	**Lake Benmore**	**6.25**	**212**	P	**Pn**	19 42 11.8	+0.3
ODZ	**Otahua Downs**	**6.64**	**206**	P	**Pn**	19 42 17.5	+1.2
ODZ	**Otahua Downs**	**6.64**	**206**	P	**Pn**	19 42 18.1	+1.8
WKZ	**Wanaka**	**7.11**	**215**	P	**Pn**	19 42 22.2	0.0
EAZ	**Earnscleugh**	**7.30**	**212**	P	**Pn**	19 42 25.1	+0.4
MLZ	**Mavora Lakes**	**7.93**	**216**	P	**Pn**	19 42 34.5	+1.9
WHZ	**Wether Hill Ro**	**8.41**	**215**	P	**Pn**	19 42 38.1	-0.6

*NEIC **02** 19:49:45.6±2.1, 23°5S±0°2×179°9W±0°2, h529km±13km, mb4.3/17, Error ellipse: s-maj=28.9km s-min=18.7km az=52.0*
*IDC **02** 19:49:50.9±4.3, 22°83S×179°64E, h573km±43km, mb3.1/5, mbtmp4.1/6, Error ellipse: s-maj=95.8km s-min=26.1km az=153.0*
ISC 02 19:49:47.1±0.9, **23°4S**±0°1×**180°0E**±0°1, **h550**km, **n27,**
σ1928/27, mb4.0/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.92**	**342**	P	**P**	**19 51 24.9**	**-0.3**
	8.1nm,0.5s,baz=155,slow=17,SNR=6.5						
MSVF	**Nonsavu**	**5.92**	**342**	P	**P**	19 51 22.3	-2.9
MARNC	**Mare, Loyalty**	**11.20**	**277**	P	**P**	19 52 17.2	-0.3
BKZ	**Black Stump Fm**	**15.99**	**190**	P	**P**	19 53 03.2	-3.2
BKZ				IAmb	IAmb	19 53 16.5	
	comp=Z,16nm,1.3s						
TUWZ	**Tuamarina**	**18.68**	**194**	P	**P**	19 53 30.1	-0.9
THZ	**Tophouse**	**19.24**	**196**	P	**P**	19 53 35.4	-0.8
LTZ	**Lake Taylor**	**20.36**	**196**	P	**P**	19 53 44.3	-2.0
CTAO	**Charters Tower**	**31.45**	**269**	P	**P**	19 55 25.7	+1.6
CTAO				IAmb	IAmb	19 55 26.5	
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**34.88**	**247**	P	**P**	**19 55 53.8**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=81,slow=10,SNR=7.1						
	comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**34.88**	**247**	P	**P**	19 55 52.6	-0.4
BBOO	**Buckleboo**	**39.62**	**246**	P	**P**	19 56 31.0	-0.7
BBOO				IAmb	IAmb	19 56 47.9	
	comp=Z,36nm,1.4s						
AS31	**Alice Springs**	**42.09**	**260**	P	**P**	19 56 52.0	+0.5
ASAR	**Alice Springs**	**42.09**	**260**	P	**P**	19 56 52.0	+0.6
	comp=Z,1.6nm,0.4s,baz=95,slow=7.3,SNR=44						
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**42.09**	**260**	P	**P**	19 56 51.4	-0.1
WB2	**Warramunga Arr**	**42.40**	**266**	P	**P**	19 56 54.0	0.0
WB2				IAmb	IAmb	19 57 18.4	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**42.40**	**266**	P	**P**	19 56 53.8	-0.1
WB0				IAmb	IAmb	19 56 54.6	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**19 56 54.1**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=92,slow=8.3,SNR=116						
	comp=Z,3.7nm,0.7s						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	19 56 52.6	-1.5
KNRA	**Kununurra**	**48.66**	**269**	P	**P**	19 57 40.9	-0.8
GUMO	**Guam**	**50.30**	**313**	P	**P**	19 57 53.1	-0.6
FITZ	**Fitzroy Crossi**	**50.84**	**265**	P	**P**	**19 57 58.9**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=103,slow=8.9,SNR=6.8						
	comp=Z,1.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.84**	**265**	P	**P**	**19 57 58.3**	**+0.7**
FITZ				IAmb	IAmb	19 58 30.7	
	comp=Z,16nm,1.4s						
TOLI2	**Tolitoli**	**62.42**	**284**	P	**P**	**19 59 18.6**	**+1.4**
TOLI2				IAmb	IAmb	19 59 50.7	
	comp=Z,8.0nm,1.0s						
QSPA	**South Pole Qui**	**66.68**	**180**	P	**P**	**19 59 44.1**	**+0.7**
QSPA				IAmb	IAmb	19 59 44.8	
	comp=Z,2.3nm,0.6s						
SMAI	**San Martin Ant**	**76.58**	**159**	P	**P**	**20 00 42.0**	**+1.2**
SMAI				IAmb	IAmb	20 01 22.7	
	comp=Z,7.0nm,1.5s						
BELA	**Belgrano 2**	**76.93**	**173**	P	**P**	**20 00 41.8**	**-0.8**
TXAR	**Lajitas Array**	**90.19**	**58**	P	**P**	**20 01 50.7**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=224,slow=5.0,SNR=3.0						
	comp=Z,0.4nm,0.8s						

*DDA **02** 19:52:17.1±0.0, 40°34N×33°43E, h7km±2km, ML2.2*
*ISK **02** 19:52:17.2, 40°31N×33°33E, h5km, ML2.6/8*
ISC 02 19:52:17.0±1.2, **40°34N**±0°02×**33°38E**±0°03, **h1**km±12km,
n22, σ962/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.16**	**12**	P	**Pg**	**19 52 20.1**	**+0.1**
CANT	**Cankiri**	**0.32**	**34**	PG	**Pb**	19 52 25.0	-0.7
CANT				SG	**Sb**	19 52 30.5	-0.9
BRTR	**Keskin Array B**	**0.64**	**162**	PG	**Pg**	19 52 29.8	+0.5
ANTO	**Ankara**	**0.65**	**224**	PG	**Pg**	19 52 29.5	0.0
ANTO				SG	**Sg**	19 52 38.3	+0.4
LOD	**Lodumlu**	**0.65**	**227**	PG	**Pg**	19 52 28.8	-0.7
LOD				SG	**Sg**	19 52 38.3	+0.3
AFSR	**Afar-Bala (An**	**0.92**	**195**	PG	**Pg**	19 52 34.6	0.0
PELI	**Kastamonı-Ara**	**0.96**	**357**	P	**Pg**	19 52 35.8	+0.3
PELI				S	**Sg**	19 52 48.9	+0.9
PELI				*i* AML	AML	19 52 57.0	
	comp=E,56nm,0.6s						
CORM	**Corum**	**0.97**	**99**	PG	**Pb**	**19 52 36.9**	**+0.2**
KAMT	**Kaman**	**1.00**	**165**	PG	**Pg**	19 52 36.4	+0.2
CDAG	**Cicekdag**	**1.04**	**133**	P	**Pg**	19 52 36.8	-0.1
CDAG				S	**Sg**	19 52 51.0	+0.5
CDAG				*i* AML	AML	19 52 57.0	
	comp=N,54nm,0.5s						
KAGI	**orum-Kargı**	**1.15**	**46**	P	**Pg**	**19 52 39.2**	**0.0**
KAGI				S	**Sg**	19 52 54.4	+0.3
KAGI				*i* AML	AML	19 52 57.0	
	comp=N,49nm,0.4s						
KIBS	**BOLU**	**1.17**	**275**	P	**Pn**	19 52 40.3	-0.3
KIBS				S	**Sn**	19 52 59.2	+1.9
KIBS				*i* AML	AML	19 53 04.0	
	comp=E,69nm,1.0s						
KKUL	**Konya-Kulu**	**1.22**	**197**	P	**Pn**	19 52 40.7	-0.6
KKUL				S	**Sg**	19 52 55.8	-0.3
KKUL				*i* AML	AML	19 53 01.0	
	comp=E,77nm,0.3s						
KKUL				*i* AML	AML	19 53 05.0	
	comp=N,75nm,0.4s						
YUVA	**Yuva-Kibriscik**	**1.30**	**273**	PN	**Pn**	**19 52 41.6**	**-0.8**
KULU	**Kulu**	**1.33**	**193**	PN	**Pg**	19 52 43.2	+0.8
SERE	**Serefiikochisa**	**1.40**	**174**	PN	**Pg**	19 52 43.9	+0.1
BOYA	**Sinop/Boyabat-**	**1.55**	**39**	P	**Pn**	19 52 45.8	+0.1
YIGI	**Dzce**	**1.60**	**294**	P	**Pg**	19 52 48.0	+0.3
YOZ	**Yozgat**	**1.64**	**114**	PN	**Pb**	19 52 47.9	-0.3
BZK	**Bozkurt**	**1.69**	**16**	PN	**Pb**	19 52 48.6	-0.2
SIRC	**Yozgat**	**1.69**	**126**	P	**Pg**	19 52 49.5	+0.2
SIRC				S	**Sb**	19 53 10.3	-0.4
DIKM	**Dikmen**	**1.93**	**47**	PN	**Pb**	19 52 52.2	-0.8

*IDC **02** 20:21:36.6±1.0, 41°25N×112°96W, h0km, mbtmp1.9/1, ML2.9/1, Error ellipse: s-maj=37.9km s-min=5.3km az=156.0*
*NEIC **02** 20:21:37.4±1.9, 41°11N±0°02×112°87W±0°05, h0km±2km, ML2.0/57, Error ellipse: s-maj=6.7km s-min=3.0km az=111.0*
ISC 02 20:21:36.8±0.8, **41°09N**±0°03×**112°85W**±0°03, **h0**km, **n38,**
σ973/41, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.21**	**220**		**Pg**	**20 21 41.3**	**+0.4**
HVU	**Hansel Valley**	**0.69**	**5**		**Pg**	**20 21 49.4**	**-0.7**
HVU				Sg	**Sg**	20 22 00.1	+0.9
HVU				IAML		20 22 00.7	
	comp=N,80nm,0.4s						
HVU				IAML		20 22 02.7	
	comp=E,63nm,0.5s						
DUG	**Dugway, Tooele**	**0.89**	**178**	Pg	**Pb**	**20 21 55.3**	**0.0**
DUG				Sg	**Sb**	20 22 08.4	+0.6
DUG				IAML		20 22 14.9	
	comp=E,41nm,0.5s						
DUG				IAML		20 22 18.1	
	comp=E,40nm,0.4s						
CTU	**Camp Tracy**	**0.92**	**115**		**Pb**	**20 21 55.8**	**-0.1**
CTU				IAML		20 22 12.9	
	comp=E,32nm,0.4s						
CTU				IAML		20 22 17.0	
	comp=N,35nm,0.5s						
TCUT	**Toone Canyon**	**1.09**	**88**		**Pb**	**20 21 58.6**	**-0.1**
HWUT	**Hardware Ranch**	**1.10**	**61**		**Pg**	**20 21 57.8**	**-0.1**
HWUT				Sg	**Sb**	20 22 13.6	-0.2
HWUT				IAML		20 22 21.5	
	comp=N,25nm,0.5s						
JLU	**Jordanelle**	**1.17**	**114**		**Pb**	**20 21 59.6**	**-0.5**
NLU	**North Lily Min**	**1.28**	**152**		**Pb**	**20 22 01.7**	**-0.2**
MPU	**Maple Canyon**	**1.42**	**139**	Pn	**Pg**	20 22 03.4	-0.7
ELK	**Elko**	**1.84**	**260**	Pn	**Pn**	**20 22 09.7**	**-0.3**
	comp=N,2.0nm,0.3s,baz=73,slow=14,SNR=28						
ELK				Lg	Lg	20 22 32.4	
	comp=N,3.0nm,0.3s,baz=198,slow=20,SNR=10						
ELK	**Elko**	**1.84**	**260**	Pn	**Pn**	**20 22 09.6**	**-0.3**
ELK				Sn	**Sn**	20 22 34.8	+0.7
AHID	**Auburn Hatcher**	**2.12**	**37**	Pn	**Pn**	**20 22 13.6**	**-0.3**
AHID				IAML		20 22 47.4	
	comp=N,11nm,0.3s						
TMUT	**Trail Mountain**	**2.19**	**144**		**Pn**	**20 22 15.3**	**+0.5**
TMUT				IAML		20 22 54.6	
	comp=E,12nm,0.6s						
TMUT				IAML		20 22 56.1	
	comp=N,8.5nm,0.5s						
ECR	**Eagle Creek**	**2.25**	**29**	Pn	**Pn**	**20 22 15.9**	**+0.3**
SPR3	**Spring Creek 3**	**2.38**	**209**		**Pn**	**20 22 18.7**	**+1.3**
SPR3				IAML		20 23 04.8	
	comp=N,5.5nm,2.8s						
SPR3				IAML		20 23 07.1	
	comp=E,5.6nm,0.6s						
P18A	**Preston Nutter**	**2.47**	**125**	Pn	**Pb**	**20 22 20.8**	**-1.5**
MSU	**Marysvale**	**2.62**	**168**		**Pn**	**20 22 20.1**	**-0.6**
MVU	**Marysvale**	**2.63**	**169**		**Pn**	**20 22 20.3**	**-0.5**
SRU	**San Rafael Swe**	**2.66**	**137**		**Pn**	**20 22 22.1**	**+0.9**
SRU				IAML		20 22 54.0	
	comp=E,4.9nm,3.9s						
SRU				IAML		20 23 07.3	
	comp=N,4.1nm,1.1s						
PSUT	**Pine Spring**	**2.67**	**197**		**Pn**	**20 22 21.1**	**-0.2**
PSUT				IAML		20 22 49.0	
	comp=E,5.3nm,4.8s						
PSUT				IAML		20 23 09.9	
	comp=N,4.1nm,0.6s						
HLID	**Hailey**	**2.73**	**335**	Pn	**Pn**	**20 22 23.0**	**+0.9**
HLID				IAML		20 23 30.1	
	comp=N,4.1nm,0.1s						
HLID				IAML		20 23 36.6	
	comp=N,4.8nm,0.1s						
FXWY	**Fox Creek**	**2.88**	**27**	Pn	**Pn**	**20

EBER				*i* Vmb_Lg			20 56 21.0	
JBK	**JBK**	**1.54**	**141**	P	**Pn**	**20 55 59.5**	**-0.4**	
JBK				S	**Sn**	**20 56 17.2**	**-2.1**	
EGOR	**Sierra Gorda,**	**1.60**	**349**	Pn	**Pb**	**20 56 02.5**	**+0.1**	
EGOR				Sn	**Sn**	**20 56 21.8**	**+0.9**	
EGOR				*i* Vmb_Lg		20 56 31.2		
ENIJ	**Nijar**	**1.89**	**40**	Pn	**Pn**	**20 56 04.8**	**+0.1**	
ENIJ				Sn	**Sn**	**20 56 26.4**	**-1.6**	
ENIJ				*i* Vmb_Lg		20 56 34.6		
LCRM	**LCR**	**2.07**	**207**	P	**Pb**	**20 56 09.9**	**-0.4**	
EQES	**Quesada**	**2.32**	**13**	Pn	**Pn**	**20 56 12.4**	**+1.7**	
EQES				Sn	**Sb**	**20 56 41.8**	**-1.2**	
EQES				*i* Vmb_Lg		20 56 44.5		
EADA	**Adamuz**	**2.71**	**346**	Pn	**Pn**	**20 56 15.8**	**-0.2**	
EADA				Sn	**Sn**	**20 56 50.8**	**+2.6**	
EADA				*i* Vmb_Lg		20 57 02.8		
CZD	**Col de Zad**	**2.72**	**204**	P	**Pn**	**20 56 17.4**	**+1.1**	
CZD				S	**Sn**	**20 56 48.1**	**-0.7**	
MD31	**MD31**	**2.79**	**198**	P	**Pn**	**20 56 18.6**	**+1.4**	
MDT	**Midelt**	**2.81**	**195**	P	**Pn**	**20 56 18.2**	**+0.8**	
ECAB	**El Cabril**	**2.87**	**332**	Pn	**Pn**	**20 56 18.8**	**+0.7**	
ECAB				Pg	**Pb**	**20 56 23.5**	**-0.6**	
ECAB				Sn	**Sn**	**20 56 53.7**	**+1.5**	
ECAB				Sg	**Sb**	**20 56 59.5**	**+0.7**	
ECAB				*i* Vmb_Lg		20 57 01.1		
ZHG	**ZHG**	**3.18**	**230**	P	**Pn**	**20 56 24.5**	**+2.1**	
ZHG				S	**Sn**	**20 56 59.4**	**-0.4**	
EMIN	**Mina Concepcio**	**3.25**	**314**	Pn	**Pn**	**20 56 22.7**	**-0.6**	
EMIN				Sn	**Sn**	**20 57 01.2**	**-0.1**	
EMIN				*i* Vmb_Lg		20 57 13.4		
ETOB	**Tobarra**	**3.56**	**29**	Pn	**Pn**	**20 56 29.4**	**+1.7**	
ETOB				Sn	**Sn**	**20 57 10.6**	**+1.4**	
ETOB				*i* Vmb_Lg		20 57 11.8		
EGRO	**El Granado**	**3.62**	**305**	Pn	**Pn**	**20 56 27.9**	**-0.4**	
EGRO				Sn	**Sn**	**20 57 09.2**	**-1.3**	
EGRO				*i* Vmb_Lg		20 57 15.0		
PVAQ	**Vaqueiros**	**3.71**	**301**	P	**Pn**	**20 56 29.0**	**-0.6**	
PVAQ				S	**Sn**	**20 57 10.8**	**-2.0**	
PVAQ	**Vaqueiros**	**3.71**	**301**	*e*P	**Pn**	**20 56 30.4**	**+0.8**	
PVAQ				*e*S	**Sn**	**20 57 12.5**	**-0.3**	
PVAQ				A	A	20 57 13.8		
	2.7nm,0.9s							
PBAR	**Barrancos**	**3.74**	**316**	*e*P	**Pn**	**20 56 31.2**	**+1.2**	
PBAR				*e*S	**Sn**	**20 57 12.5**	**-0.9**	
PBAR				A	A	20 57 30.7		
	1.9nm,0.4s							
PBDV	**Barranco-do-Ve**	**3.79**	**298**	*e*P	**Pn**	**20 56 31.8**	**+1.0**	
PCVE	**Castro Verde**	**4.05**	**302**	*e*S	**Sn**	**20 57 20.3**	**-0.8**	
PCVE				A	A	20 57 35.1		
	3.1nm,0.8s							
MESJ	**Messejana**	**4.28**	**304**	*e*P	**Pn**	**20 56 38.2**	**+0.8**	
MESJ	**Messejana**	**4.28**	**304**	*e*P	**Pn**	**20 56 38.8**	**+1.4**	
MORF	**Marmelete**	**4.34**	**295**	*e*S	**Sn**	**20 57 27.8**	**-0.6**	
PNCL	**Nicolau / Gran**	**4.63**	**305**	*e*P	**Pn**	**20 56 43.1**	**+0.9**	
PNCL				*e*S	**Sn**	**20 57 34.9**	**-0.4**	
PMRV	**Marv??o**	**4.85**	**324**	*e*P	**Pn**	**20 56 48.2**	**+2.8**	
PMTG	**Montargil**	**5.03**	**316**	*e*P	**Pn**	**20 56 50.0**	**+2.3**	

IDC ***02*** *21:13:45.3±2.0, 1°53′N×126°73′E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=177.9km s-min=23.4km az=66.0*

DJA ***02*** *21:13:50.8±0.4, 1°N±4′×12°6′E±°, h46km±43km, M3.7/12, mb3.9/3, MLv3.7/12*

ISC 02 21:13:51.2±1.1, 1°40′N±0.08×126°44′E±0.05, h47km, n12, σ1§20/13, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.11**	**124**	P	**Pn**	**21 14 10.3**	**-0.1**
TNTI				S	**Sn**	**21 14 24.2**	**-0.4**
LBMI	**Labuha**	**2.28**	**152**	P	**Pn**	**21 14 25.8**	**-0.6**
SGSI	**Sangihe**	**2.45**	**338**	P	**Pn**	**21 14 27.5**	**-1.2**
KMSI	**Cibinong**	**2.59**	**252**	P	**Pn**	**21 14 30.6**	**-0.1**
KMSI				S	**Sn**	**21 15 01.0**	**0.0**
LUWI	**Luwuk**	**4.40**	**237**	P	**Pn**	**21 14 54.1**	**-1.4**
MRSI	**Marisa**	**4.59**	**259**	P	**Pn**	**21 14 59.6**	**+1.5**
APSI	**Ampana**	**5.32**	**244**	P	**Pn**	**21 15 06.9**	**-1.2**
	0.1nm26nm,0.6s						
MPSI	**Mapaga**	**6.63**	**261**	P	**Pn**	**21 15 24.7**	**-1.4**
WBSI	**Waikabubak, Su**	**13.03**	**212**	P	Pn	21 16 44.7	-9.0
WRA	**Warramunga Arr**	**22.58**	**160**	P	**P**	**21 18 46.6**	**-1.2**
	1.9nm,0.5s,baz=340,slow=11,SNR=32						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**25.95**	**164**	P	**P**	**21 19 21.1**	**+1.7**
	0.5nm,0.4s,baz=346,slow=10,SNR=10						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**	**21 23 49.3**	**+1.0**
	0.4nm,0.4s,baz=117,slow=7.4,SNR=14						
	0.4nm,0.4s						

IDC ***02*** *21:38:59.7±2.4, 14°57′S×172°11′E, h594km±39km, mb3.1/7, mbtmp4.1/9, Error ellipse: s-maj=60.7km s-min=16.6km az=159.0*

NEIC ***02*** *21:39:01.3±1.1, 14°9′S×172°3′E±0°2, h622km±14km, mb4.5/20, Error ellipse: s-maj=27.3km s-min=8.7km az=131.0*

ISC 02 21:38:59.7±0.7, 14°7′S±0°1×172°2′E±0°1, h600km, n37, σ0§95/37, mb4.4/18, 1C, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.40**	**119**	P	**P**	**21 40 45.0**	**+0.6**
	36nm,0.5s,baz=268,slow=11,SNR=37						
DZM	**Mont Dzumac**	**9.12**	**216**	P	**P**	**21 41 11.3**	**+1.4**
	15nm,0.6s,baz=59,slow=17,SNR=15						
DZM	**Mont Dzumac**	**9.12**	**216**	P	**P**	**21 41 11.1**	**+1.2**
OUENC	**Ouen Island, N**	**9.18**	**213**	P	**P**	**21 41 12.0**	**+1.6**
ONTNC	**Ouen Toro**	**9.30**	**215**	P	**P**	**21 41 12.7**	**+1.2**
EIDS	**Eidsvold**	**22.44**	**239**	P	**P**	**21 43 15.4**	**0.0**
EIDS				IAmb	IAmb	21 43 16.9	
	comp=Z,14nm,1.2s						
BKZ	**Black Stump Fm**	**24.65**	**172**	P	**P**	**21 43 33.3**	**-1.5**
CTAO	**Charters Tower**	**25.29**	**254**	P	**P**	**21 43 40.7**	**+0.1**
BFZ	**Birch Farm**	**26.12**	**173**	P	**P**	**21 43 45.0**	**-2.5**
COEN	**Coen**	**28.10**	**268**	P	**P**	**21 44 05.9**	**+0.6**
COEN				IAmb	IAmb	21 44 25.4	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**32.71**	**233**	P	**P**	**21 44 44.9**	**+0.4**
	comp=Z,2.5nm,0.4s,baz=58,slow=8.8,SNR=18						
	comp=Z,2.5nm,0.4s						
STKA	**Stephens Creek**	**32.71**	**233**	P	**P**	**21 44 44.9**	**+0.4**
WR0	**Warramunga Arr**	**36.24**	**256**	P	**P**	**21 45 13.3**	**-0.8**
WR0				IAmb	IAmb	21 45 16.0	
	comp=Z,7.1nm,1.2s						
WRA	**Warramunga Arr**	**36.43**	**256**	P	**P**	**21 45 14.8**	**-0.8**
	comp=Z,3.6nm,0.5s,baz=88,slow=8.4,SNR=42						
	comp=Z,3.6nm,0.5s						
WRA	**Warramunga Arr**	**36.43**	**256**	P	**P**	**21 45 14.5**	**-1.2**
AS31	**Alice Springs**	**37.12**	**250**	P	**P**	**21 45 20.9**	**-0.3**
AS31				IAmb	IAmb	21 45 21.5	
	comp=Z,3.8nm,0.4s						
ASAR	**Alice Springs**	**37.13**	**250**	P	**P**	**21 45 21.0**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=77,slow=9.2,SNR=98						
	comp=Z,4.5nm,0.5s						
ASAR	**Alice Springs**	**37.13**	**250**	P	**P**	**21 45 20.5**	**-0.8**
BBOO	**Buckleboo**	**37.40**	**235**	P	**P**	**21 45 23.4**	**+0.1**
BBOO				IAmb	IAmb	21 45 29.3	
	comp=Z,32nm,1.4s						
MTN	**Manton Dam**	**39.86**	**267**	P	**P**	**21 45 43.7**	**+0.3**
KNRA	**Kununurra**	**41.85**	**263**	P	**P**	**21 45 58.8**	**-0.2**
KNRA				IAmb	IAmb	21 46 02.6	
	comp=Z,35nm,1.4s						
FORT	**Forrest**	**43.41**	**241**	P	**P**	**21 46 10.2**	**-0.8**
FORT				IAmb	IAmb	21 46 26.1	
	comp=Z,19nm,0.9s						
FITZ	**Fitzroy Crossi**	**44.68**	**259**	P	**P**	**21 46 21.5**	**+0.6**
BATI	**Baumata**	**47.51**	**270**	P	**P**	**21 46 43.6**	**+1.2**
	comp=Z,17nm,0.5s,baz=184,slow=3.7,SNR=5.5						
MMRI	**Maumere**	**49.19**	**271**	P	**P**	**21 46 55.1**	**+0.2**
PSA00	**Pilbara Seismi**	**50.00**	**254**	P	**P**	**21 46 59.9**	**-0.8**
PSA00	**Pilbara Seismi**	**50.00**	**254**	P	**P**	**21 47 00.5**	**-0.3**
PSA00				IAmb	IAmb	21 47 12.6	
	comp=Z,29nm,1.4s						
MBWA	**Marble Bar**	**50.12**	**255**	P	**P**	**21 47 01.5**	**0.0**
MBWA				IAmb	IAmb	21 47 03.2	
	comp=Z,28nm,1.3s						
NWAO	**Narrogin (SRO)**	**52.84**	**240**	P	**P**	**21 47 20.2**	**-0.7**
NWAO				IAmb	IAmb	21 47 43.4	
	comp=Z,43nm,1.4s						
WHN	**Wuhan**	**71.52**	**310**	⇑P	**P**	**21 49 19.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**79.30**	**292**	P	**P**	**21 50 04.5**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=123,slow=5.8,SNR=4.7						
	comp=Z,1.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**79.30**	**292**	P	**P**	**21 50 05.5**	**+0.7**
L19K	**White Mountain**	**80.91**	**15**	P	**P**	**21 50 13.0**	**+0.8**
NVAR	**Mina Array Bea**	**83.71**	**48**	P	**P**	**21 50 27.4**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=248,slow=9.5,SNR=2.7						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**85.11**	**16**	P	**P**	**21 50 32.1**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=223,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**92.12**	**60**	P	**P**	**21 51 07.2**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=210,slow=5.0,SNR=2.8						
	comp=Z,0.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**170.62**	**262**	PKPab	**PKPab**	**21 59 23.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=96,slow=5.3,SNR=1.8						

NEIC ***02*** *21:43:27.5±1.6, 3°65′N±0°03×127°20′E±0°08, h10km±1km, mb4.7/39, Error ellipse: s-maj=13.1km s-min=4.3km az=281.0*

BJI ***02*** *21:43:31.6±0.0, 3°48′N×127°20′E, h69km, mb4.6/29, mB4.9/15, Ms4.1/1, Ms7 3.8/2*

DJA ***02*** *21:43:32.2±0.6, 4°N±6′×12°7′E±°, h21km±9km, M4.5/15, mb4.6/12, mB5.0/8, MLv4.6/15, Mw(mB)4.3/8*

IDC ***02*** *21:43:33.9±2.3, 3°48′N×127°06′E, h67km±23km, mb4.0/17, mbtmp4.3/19, MS3.2/15, Error ellipse: s-maj=28.4km s-min=10.4km az=66.0*

ISC 02 21:43:32.2±0.4, 3°54′N±0°04×127°13′E±0°05, h48km, n123, σ1§67/122, mb4.6/38, MS3.3/14, 2C-7D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.61**	**275**	P	**Pn**	**21 43 58.4**	**+0.2**
SGSI				S	**Sn**	**21 44 18.6**	**+0.8**
TNTI	**Ternate**	**2.76**	**175**	Pn	**Pn**	**21 44 13.2**	**-0.8**
TNTI	**Ternate**	**2.76**	**175**	P	**Pn**	**21 44 15.9**	**+1.9**
TNTI	**Ternate**	**2.76**	**175**	P	**Pn**	**21 44 16.8**	**+2.8**
DDMP	**Don Marcelino,**	**2.91**	**331**	*e*P	**Pn**	**21 44 15.3**	**-0.8**
DDMP				*e*S	**Sn**	**21 44 50.3**	**+0.4**
MATI	**Mati**	**3.49**	**346**	*e*P	**Pn**	**21 44 25.7**	**+1.6**
MATI				*e*S	Sn	21 45 15.9	+12
DAV	**Davao City (W)**	**3.83**	**336**	P	**Pn**	**21 44 31.9**	**+3.2**
	180nm,0.4s,baz=236,slow=2.4,SNR=4.6						
DAV				S	**Sn**	**21 45 18.7**	**+6.2**
	196nm,0.4s,baz=283,slow=14,SNR=2.1						
DAV				LR	LR	21 46 24.2	
	comp=Z,235nm,20.9s,baz=150,slow=44						
DAV	**Davao City (W)**	**3.83**	**336**	Pn	**Pn**	**21 44 25.9**	**-2.8**
SKMP	**Bagumbayan, Su**	**3.92**	**319**	*e*P	**Pn**	**21 44 31.3**	**+1.3**
SKMP				*e*S	**Sn**	**21 45 14.4**	**-0.4**
KCP	**Kidapawan**	**4.00**	**330**	*i*P	**Pn**	**21 44 34.4**	**+3.3**
KCP				*i*S	**Sn**	**21 45 20.5**	**+3.7**
LBMI	**Labuha**	**4.17**	**175**	P	**Pn**	**21 44 36.1**	**+2.7**
LBMI				S	**Sn**	**21 45 21.1**	**+0.3**
KMSI	**Cibinong**	**4.31**	**227**	P	**Pn**	**21 44 38.3**	**+3.0**
KMSI				S	**Sn**	**21 45 28.5**	**+4.1**
CTBH	**Cotabato--PC H**	**4.65**	**322**	*e*P	**Pn**	**21 44 41.9**	**+1.9**
BIPH	**Bislig**	**4.68**	**351**	*i*P	**Pn**	**21 44 43.6**	**+3.3**
BIPH				*i*S	Sn	21 45 45.2	+12
CGP	**Cagayan de Oro**	**5.45**	**334**	*e*P	Pn	21 44 56.7	+5.7
SANI	**Sanana**	**5.67**	**192**	P	**Pn**	**21 44 54.4**	**+0.4**
	0.3nm2µm32nm,0.8s						
SANI	**Sanana**	**5.67**	**192**	P	**Pn**	**21 44 55.1**	**+1.1**
SWI	**Sorong**	**6.01**	**137**	P	**Pn**	**21 45 00.8**	**+2.1**
	0.3nm2µm63nm,0.8s						
MRSI	**Marisa**	**6.01**	**240**	P	**Pn**	**21 45 01.2**	**+2.5**
	0.6nm1µm148nm,0.8s						
SIJI	**Sorong**	**6.02**	**137**	P	**Pn**	**21 45 01.1**	**+2.3**
	18nm,0.4s,baz=322,slow=17,SNR=21						
SIJI				S	**Sn**	**21 46 08.2**	**+1.7**
	28nm,0.5s,baz=180,slow=21,SNR=14						
GLSP	**General Luna,**	**6.28**	**351**	*e*P	**Pn**	**21 45 05.2**	**+2.8**
GLSP				*e*S	Sn	21 45 40.3	-33
LUWI	**Luwuk**	**6.30**	**224**	Pn	**Pn**	**21 45 02.3**	**-0.3**
LUWI	**Luwuk**	**6.30**	**224**	P	Pn	21 45 06.7	+4.0
	0.7nm5µm78nm,1.0s						
NLAI	**Namlea**	**6.74**	**180**	P	**Pn**	**21 45 10.3**	**+1.7**
	0.2nm2µm18nm,0.5s						
TOLI2	**Tolitoli**	**6.79**	**249**	Pn	**Pn**	**21 45 09.5**	**+0.1**
TOLI2	**Tolitoli**	**6.79**	**249**	P	**Pn**	**21 45 10.1**	**+0.8**
APSI	**Ampana**	**7.04**	**231**	P	**Pn**	**21 45 15.8**	**+3.0**
	0.3nm725nm78nm,0.6s						
MPSI	**Mapaga**	**7.90**	**246**	P	**Pn**	**21 45 25.7**	**+1.1**
	0.1nm16nm,0.6s						
FAKI	**Fak Fak**	**8.21**	**141**	P	**Pn**	**21 45 31.9**	**+3.1**
	36nm,0.9s						
FAKI	**Fak Fak**	**8.21**	**141**	P	**Pn**	**21 45 31.3**	**+2.5**
MYLDM	**Lahad Datu**	**8.76**	**281**	Pn	**Pn**	**21 45 36.5**	**+0.1**
TTSI	**Tana Toraja**	**9.81**	**228**	P	**Pn**	**21 45 49.1**	**-1.7**
KAPI	**Kappang**	**11.25**	**221**	Pn	**Pn**	**21 46 10.8**	**+0.3**
MTN	**Manton Dam**	**16.76**	**166**	Pn	**Pn**	**21 47 22.1**	**-1.6**
KSM	**Kuching**	**16.93**	**263**	Pn	**Pn**	**21 47 24.9**	**-1.0**
KNRA	**Kununurra**	**19.16**	**175**	P	**P**	**21 47 51.4**	**-0.4**
KNRA				IAmb	IAmb	21 48 20.7	
	comp=Z,50nm,1.4s						
KNRA	**Kununurra**	**19.16**	**175**	P	**Pn**	**21 47 52.4**	**-0.7**
GUMO	**Guam**	**20.16**	**59**	LR	LR	21 54 43.3	
	comp=Z,30nm,20.7s,baz=191,slow=33						
YULB	**Yu-li**	**20.53**	**345**		**P**	**21 48 03.7**	**-3.0**
YULB				IAmb	IAmb	21 48 05.4	
	comp=Z,20nm,0.6s						
TPUB	**Ta-pu**	**20.63**	**343**	P	**P**	**21 48 05.7**	**-2.1**
TPUB	**Ta-pu**	**20.63**	**343**	P	**P**	**21 48 06.4**	**-1.4**
SSLB	**Suanglung**	**21.00**	**344**	P	**P**	**21 48 09.1**	**-2.6**
SSLB				IAmb	IAmb	21 48 12.2	
	comp=Z,34nm,0.6s						
SSLB	**Suanglung**	**21.00**	**344**	P	**P**	**21 48 10.6**	**-1.1**
YOJ	**Yonaguni jima**	**21.18**	**350**	P	**P**	**21 48 12.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**21.55**	**184**	P	**P**	**21 48 17.6**	**-0.1**
FITZ				IAmb	IAmb	21 48 52.0	
	comp=Z,24nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.55**	**184**	P	**P**	**21 48 20.1**	**+2.4**
YHNB	**Yeheng**	**21.73**	**346**	P	**P**	**21 48 18.0**	**-1.7**
YHNB				IAmb	IAmb	21 48 23.7	
	comp=Z,20nm,0.6s						
YHNB	**Yeheng**	**21.73**	**346**	P	**P**	**21 48 18.7**	**-0.9**
LEM	**Lembang**	**22.04**	**242**	LR	LR	21 58 18.7	
	comp=Z,91nm,18.4s,baz=353,slow=40						
JOW	**Kunigami**	**23.19**	**3**	P	**P**	**21 48 35.0**	**+0.1**
	comp=Z,4.2nm,0.7s,baz=182,slow=10,SNR=3.9						
JOW				LR	LR	21 57 55.7	
	comp=Z,19nm,21.5s,baz=160,slow=37						
	comp=Z,4.2nm,0.7s						
JOW	**Kunigami**	**23.19**	**3**	P	**P**	**21 48 34.2**	**-0.7**
JOW				IAmb	IAmb	21 49 09.2	
	comp=Z,40nm,1.5s						
PMG	**Port Moresby**	**23.74**	**123**	LR	LR	22 00 24.6	
	comp=Z,73nm,18.6s,baz=296,slow=42						
WB0	**Warramunga Arr**	**24.24**	**163**	P	**P**	**21 48 44.0**	**-0.8**
WB0				IAmb	IAmb	21 48 45.5	
	comp=Z,21nm,0.7s						
WRA	**Warramunga Arr**	**24.39**	**163**	P	**P**	**21 48 45.3**	**-0.9**
	comp=Z,14nm,0.8s,baz=342,slow=11,SNR=72						
WRA				S	**S**	**21 53 03.9**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=246,slow=9.7,SNR=3.9						
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**24.39**	**163**	P	**P**	**21 48 44.6**	**-1.5**
WR0	**Warramunga Arr**	**24.46**	**163**	P	**P**	**21 48 46.8**	**-0.1**
MBWA	**Marble Bar**	**25.60**	**196**	P	**P**	**21 48 58.7**	**+1.6**
MBWA				IAmb	IAmb	21 49 10.2	
	comp=Z,41nm,1.5s						
PSA00	**Pilbara Seismi**	**25.96**	**196**	P	**P**	**21 49 00.9**	**+0.5**
PSA00				IAmb	IAmb	21 49 27.6	
	comp=Z,44nm,1.5s						
KRVT	**Keravat (AS076**	**26.07**	**107**	LR	LR	21 57 57.0	
	comp=Z,61nm,19.8s,baz=20,slow=33						
AS31	**Alice Springs**	**27.84**	**167**	P	**P**	**21 49 17.1**	**-0.3**
ASAR	**Alice Springs**	**27.84**	**167**	P	**P**	**21 49 16.8**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=339,slow=10,SNR=20						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**27.84**	**167**	P	**P**	**21 49 17.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**31.31**	**300**	P	**P**	**21 49 47.5**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=111,slow=6.8,SNR=12						
CMAR				LR	LR	22 03 01.9	
	comp=Z,15nm,19.9s,baz=145,slow=37						
	comp=Z,2.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.31**	**300**	P	**P**	**21 49 47.0**	**-1.2**
PZH	**PanZhiHua**	**33.36**	**316**	P	**P**	**21 50 08.6**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.1s						
KSRS	**Korea Array**	**33.76**	**1**	P	**P**	**21 50 09.3**	**0.0**
	comp=Z,2.0nm,0.8s,baz=176,slow=10,SNR=16						
KSRS				LR	LR	22 07 46.2	
	comp=Z,11nm,18.8s,baz=185,slow=43						
	comp=Z,2.0nm,0.8s						
FORT	**Forrest**	**34.14**	**179**	P	**P**	**21 50 12.7**	**-0.1**
XAN	**Xi'an**	**34.77**	**333**	P	**P**	**21 50 17.1**	**-1.1**
XAN				pmax	pmax		
	comp=Z,13nm,0.7s						
HNS	**HongShan**	**35.57**	**343**	⇓P	**P**	**21 50 25.4**	**+0.4**
HNS				pmax	pmax		
	comp=Z,12nm,1.1s						
EIDS	**Eidsvold**	**36.96**	**142**	P	**P**	**21 50 36.4**	**-0.7**
EIDS				IAmb	IAmb	21 50 51.2	
	comp=Z,34nm,1.4s						
BBOO	**Buckleboo**	**37.13**	**167**	P	**P**	**21 50 37.9**	**-0.5**
BBOO				IAmb	IAmb	21 50 53.5	
	comp=Z,33nm,1.5s						
NWAO	**Narrogin (SRO)**	**37.46**	**194**	P	**P**	**21 50 42.1**	**+0.9**
BJT	**Baijiatuau**	**37.64**	**346**	P	**P**	**21 50 42.6**	**0.0**
BJT				IAmb	IAmb	21 50 43.8	
	comp=Z,14nm,0.9s						
BJI	**Beijing**	**37.66**	**346**	P	**P**	**21 50 43.0**	**+0.2**
BJI				pmax	pmax		
	comp=Z,22nm,1.2s						
BJI				pmax	pmax		
	comp=Z,130nm,6.6s						
STKA	**Stephens Creek**	**37.81**	**160**	P	**P**	**21 50 44.0**	**-0.2**
	comp=Z,15nm,0.8s,baz=332,slow=8.6,SNR=40						
STKA				LR	LR	22 09 20.0	
	comp=Z,83nm,19.4s,baz=341,slow=41						
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**37.81**	**160**	P	**P**	**21 50 44.0**	**-0.2**
HHC	**Hu-ho-hao-te**	**39.70**	**341**	*e*P	**P**	**21 51 00.3**	**+0.3**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
BTO	**Baotou**	**40.00**	**340**	*e*P	**P**	**21 51 04.8**	**+2.3**
USRK	**Ussuriysk Ar.**	**40.72**	**5**	P	**P**	**21 51 08.3**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=163,slow=5.6,SNR=4.5						
	comp=Z,1.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**40.72**	**5**		**P**	**21 51 07.5**	**-0.7**
ARMA	**Armidale**	**41.09**	**147**	P	**P**	**21 51 11.5**	**-0.1**
H11S3	**WAKE ISLAND Hy**	**41.44**	**66**	T	T	22 34 35.3	
	baz=254,slow=74,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**41.45**	**66**	T	T	22 34 29.6	
	baz=254						
H11S2	**WAKE ISLAND Hy**	**41.45**	**66**	T	T	22 34 25.5	
	baz=254,slow=74,SNR=4.4						
LSA	**Lhasa**	**42.87**	**311**	P	**P**	**21 51 25.9**	**-0.7**
PALK	**Pallekele**	**46.35**	**277**	LR	LR	22 12 16.6	
	comp=Z,36nm,18.8s,baz=218,slow=37						
ULN	**Ulaanbaatar**	**47.42**	**342**	P	**P**	**21 52 01.4**	**-0.7**
ULN				IAmb	IAmb	21 52 03.4	
	comp=Z,11nm,1.1s						
SONM	**Songino Array**	**47.60**	**341**	P	**P**	**21 52 03.8**	**+0.3**
	comp=Z,3.6nm,1.0s,baz=162,slow=8.6,SNR=18						
SONM				PcP	**PcP**	**21 53 33.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=243,slow=16,SNR=2.7						
SONM				LR	LR	22 12 15.6	
	comp=Z,52nm,19.1s,baz=180,slow=36						
	comp=Z,3.6nm,1.0s						
SONM	**Songino Array**	**47.60**	**341**	P	**P**	**21 52 03.1**	**-0.4**
SONM				IAmb	IAmb	21 52 04.6	
	comp=Z,7.3nm,1.2s						
HYBB	**Hyderabad (bro**	**49.56**	**290**	*e*P	**P**	**21 52 18.6**	**-0.3**
HYBB				*e*sP	pP	21 52 23.2	-8.2
HYBB				*e*S	S	**21 59 27.6**	**+3.7**
HYBB				*e*ScS	**ScS**	**22 02 11.1**	**+3.9**
WMQ	**Urumqi**	**53.11**	**325**	*e*P	**P**	**21 52 46.2**	**+1.1**
MK31	**Makanchi Array**	**57.94**	**325**	P	**P**	**21 53 18.6**	**-1.1**
MKAR	**Makanchi Array**	**57.94**	**325**	P	**P**	**21 53 18.9**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=119,slow=8.2,SNR=25						
MKAR				LR	LR	22 21 26.6	
	comp=Z,24nm,18.1s,baz=116,slow=39						
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**57.94**	**325**	P	**P**	**21 53 18.6**	**-1.1**
MAKZ	**

comp=Z,19nm,1.3s
TOO Toolangi 32.15 238 P **P** **22 22 05.7 -0.7**
TOO IAmb IAmb 22 22 10.2
comp=Z,18nm,1.3s
STKA Stephens Creek 34.51 249 P **P** **22 22 27.2 +0.9**
comp=Z,0.5nm,0.3s,baz=108,slow=9.5,SNR=3.6
comp=Z,0.5nm,0.3s
STKA Stephens Creek 34.51 249 P **P** **22 22 26.8 +0.5**
COEN Coen 36.17 280 P **P** **22 22 40.1 -0.3**
BBOO Buckleboo 39.22 247 P **P** **22 23 04.8 -0.3**
BBOO IAmb IAmb 22 23 21.9
comp=Z,17nm,1.4s
AS31 Alice Springs 41.93 261 P **P** **22 23 27.8 +0.9**
ASAR Alice Springs 41.93 261 P **P** **22 23 27.1 +0.2**
comp=Z,0.5nm,0.5s,baz=94,slow=7.4,SNR=6.8
comp=Z,0.5nm,0.5s
WR0 Warramunga Arr 42.16 267 P **P** **22 23 28.4 -0.3**
WR0 IAmb IAmb 22 23 36.4
comp=Z,13nm,1.4s
WB2 Warramunga Arr 42.34 267 P **P** **22 23 29.9 -0.2**
WB2 IAmb IAmb 22 23 41.2
comp=Z,8.0nm,1.2s
WB0 Warramunga Arr 42.34 267 P **P** **22 23 30.0 -0.2**
WB0 IAmb IAmb 22 23 46.1
comp=Z,14nm,1.4s
WRA Warramunga Arr 42.35 267 P **P** **22 23 30.0 -0.2**
comp=Z,1.5nm,0.4s,baz=100,slow=8.2,SNR=19
comp=Z,1.5nm,0.4s
WRA Warramunga Arr 42.35 267 P **P** **22 23 29.8 -0.4**
KNRA Kununurra 48.66 270 P **P** **22 24 18.5 0.0**
FITZ Fitzroy Crossi 50.76 266 P **P** **22 24 34.3 +0.3**
FITZ IAmb IAmb 22 24 43.3
comp=Z,10nm,1.2s
PSA00 Pilbara Seismi 55.05 260 P **P** **22 25 04.3 -0.3**
QSPA South Pole Qui 65.67 180 P **P** **22 26 15.1 +0.8**
QSPA IAmb IAmb 22 26 16.6
comp=Z,3.6nm,0.8s
SMAI San Martin Ant 75.63 159 P **P** **22 27 13.7 +0.8**
SMAI IAmb IAmb 22 27 33.9
comp=Z,6.3nm,1.3s
BELA Belgrano 2 75.93 173 P **P** **22 27 14.1 -0.3**
TXAR Lajitas Array 90.73 58 P **P** **22 28 29.6 +0.2**
comp=Z,0.3nm,0.8s,baz=224,slow=5.0,SNR=4.0
comp=Z,0.3nm,0.8s
TORD Torodi Ar. Bea 168.67 189 PKPab **PKPab** **22 36 43.2 +0.1**
comp=Z,0.7nm,0.9s,baz=188,slow=4.0,SNR=2.2

IDC 02 22:18:53.5±3.4, 20.94S×111.77W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=273.3km s-min=31.7km az=100.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**12.23**	**346**	T		T		22 34 25.2	
	baz=55								
H10S3	**ASCENSION HYDR**	**12.24**	**346**	T		T		22 34 23.2	
	baz=165								
TORD	**Torodi Ar. Bea**	**36.37**	**22**	P		P		22 25 59.2	-0.4
	3.7nm,1.2s,baz=200,slow=9.4,SNR=7.2								
	3.7nm,1.2s								
SNAA	**Sanae**	**51.01**	**176**	P		P		22 27 56.7	-0.2
	0.8nm,0.6s,baz=343,slow=19,SNR=2.4								
	0.8nm,0.6s								
BRTR	**Keskin Array B**	**73.74**	**35**	P		P		22 30 30.0	+0.4
	0.9nm,0.9s,baz=241,slow=5.9,SNR=2.0								
	0.9nm,0.9s								
AKASG	**Malin Array Be**	**79.95**	**25**	P		P		22 31 04.1	-0.1
	0.2nm,0.3s,baz=222,slow=4.9,SNR=4.1								
	0.2nm,0.3s								
FINES	**FINESS Array B**	**87.53**	**17**	P		P		22 31 43.1	+0.3
	2.6nm,1.0s,baz=251,slow=12,SNR=1.8								
	2.6nm,1.0s								

IDC 02 22:19:10.9±3.1, 9.33N×121.76E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=403.1km s-min=28.1km az=62.0, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.62**	**157**	P		P		22 25 35.1	-0.6
	0.5nm,0.6s,baz=335,slow=9.7,SNR=2.5								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**34.88**	**160**	P		P		22 26 04.7	+0.4
	0.2nm,0.3s,baz=339,slow=6.7,SNR=4.7								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**50.17**	**325**	P		P		22 28 08.2	-0.1
	0.2nm,0.4s,baz=140,slow=7.3,SNR=5.3								
	0.2nm,0.4s								

NOU 02 22:21:33.1, 15.49S×167.61E, h21km, MLv4.0/4, Vanuatu Islands, Vanuatu Islands

IDC ***02*** *22:22:31.4±0.7, 21.02S×11.60W, h0km, mb4.2/15, mbtmp4.2/15, MS3.9/52, Error ellipse: s-maj=22.1km s-min=18.7km az=119.0*
NEIC ***02*** *22:22:34.1±1.5, 21.0S±0.1×11.50W±0.08, h10km±1km, mb4.6/18, Error ellipse: s-maj=20.6km s-min=9.2km az=207.0*
ISC 02 22:22:34.2±0.5, 21.0S±0.1×11.6W±0.1, h16km, n85, σ0.9s67/43, mb4.5/24, MS3.9/52, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**12.36**	**346**	T		T		22 38 08.3	
	baz=54,slow=74,SNR=9.1								
H10S3	**ASCENSION HYDR**	**12.37**	**345**	T		T		22 38 05.4	
	baz=166,slow=74,SNR=20								
TSUM	**Tsumeb 27.40 91**			LR		LR		22 37 42.6	
	comp=Z,522nm,19.2s,baz=264,slow=33								
RCBR	**Riachuelo 28.03 299**			LR		LR		22 37 11.9	
	comp=Z,373nm,19.6s,baz=264,slow=32								
DBIC	**Dimbokro 28.30 14**			LR		LR		22 36 39.8	
	comp=Z,191nm,21.3s,baz=180,slow=30								
SUR	**Sutherland 30.93 118**			LR		LR		22 39 13.9	
	comp=Z,197nm,19.0s,baz=305,slow=32								
BOSA	**Boshof 34.15 110**			LR		LR		22 40 58.0	
	comp=Z,172nm,19.9s,baz=318,slow=32								
LBTB	**Lobatse 34.35 104**			LR		LR		22 41 33.5	
	comp=Z,291nm,19.3s,baz=258,slow=33								
BDFB	**Brasilia 34.97 273**			P		**P**		**22 29 26.0 -0.1**	
	3.6nm,0.8s,baz=84,slow=5.2,SNR=4.5								
BDFB				LR		LR		22 41 39.4	
	comp=Z,235nm,19.1s,baz=138,slow=33								
	3.6nm,0.8s								
TOA0	**Torodi Ar. Sit**	**36.37**	**22**	P		**P**		**22 29 37.8 -0.1**	
TOA0					IAmb	IAmb		22 29 38.6	
	comp=Z,10nm,0.9s								
TORD	**Torodi Ar. Bea**	**36.37**	**22**	P		**P**		**22 29 37.2 -0.6**	
	comp=Z,6.2nm,0.8s,baz=200,slow=8.3,SNR=23								
TORD				LR		LR		22 42 03.9	
	comp=Z,162nm,19.2s,baz=210,slow=32								
	comp=Z,6.2nm,0.8s								
TORD	**Torodi Ar. Bea**	**36.37**	**22**	P		**P**		**22 29 37.6 -0.2**	
TORD					IAmb	IAmb		22 29 38.6	
	comp=Z,8.6nm,1.0s								
MATP	**Matopo 37.39 96**			P		**P**		**22 29 46.4 -0.4**	
	comp=Z,2.1nm,0.8s,baz=276,slow=9.3,SNR=4.2								
	comp=Z,2.1nm,0.8s								
LSZ	**Lusaka 38.12 88**			P		**P**		**22 29 53.5 +0.5**	
	comp=Z,0.9nm,0.3s,baz=241,slow=3.0,SNR=6.8								
LSZ				LR		LR		22 44 10.7	
	comp=Z,302nm,19.5s,baz=253,slow=34								
	comp=Z,0.9nm,0.3s								
CPUP	**Villa Florida 42.09 254**			P		**P**		**22 30 24.3 -1.4**	
	comp=Z,2.7nm,0.9s,baz=115,slow=6.2,SNR=4.2								
CPUP				LR		LR		22 45 33.9	
	comp=Z,290nm,18.6s,baz=68,slow=33								
	comp=Z,2.7nm,0.9s								
MBAR	**Mbarara 45.99 69**			LR		LR		22 48 12.7	
	comp=Z,119nm,20.1s,baz=218,slow=34								
TRQA	**Tornquist 46.47 237**			P		**P**		**22 31 01.0 +0.3**	
TRQA					IAmb	IAmb		22 31 01.8	
	comp=Z,7.0nm,1.1s								
SIV	**San Ignacio 47.08 267**			LR		LR		22 48 22.2	
	comp=Z,314nm,21.5s,baz=116,slow=33								
MDP	**Montagnes des 47.95 298**			LR		LR		22 50 08.0	
	comp=Z,98nm,19.1s,baz=124,slow=35								
SNAA	**Sanae 50.91 176**			P		**P**		**22 31 33.6 -0.8**	
	comp=Z,2.3nm,1.0s,baz=353,slow=6.5,SNR=4.3								
	comp=Z,2.3nm,1.0s								
SAML	**Samuel 51.10 275**			P		**P**		**22 31 37.8 +1.3**	
KMBO	**Kilima Mbogo 51.52 74**			LR		LR		22 50 34.0	
	comp=Z,156nm,21.4s,baz=233,slow=33								
LODK	**Lodwar 51.98 68**			P		**P**		**22 31 43.2 0.0**	
LVC	**Limon Verde 52.99 257**			LR		LR		22 54 09.7	
	comp=Z,89nm,19.0s,baz=118,slow=36								
PLCA	**Paso Flores 53.31 234**			LR		LR		22 52 53.4	
	comp=Z,139nm,18.5s,baz=90,slow=34								
LPAZ	**La Paz 53.59 265**			LR		LR		22 54 17.1	
	comp=Z,247nm,18.8s,baz=90,slow=36								
ETMB	**Extrema 53.63 273**			P		**P**		**22 31 56.0 +0.7**	
ETMB					IAmb	IAmb		22 32 02.8	
	comp=Z,6.1nm,1.2s								
GO04	**Tololo Observa 53.70 247**			P		**P**		**22 31 56.6 +0.6**	
MDT	**Midelt 53.95 7**			LR		LR		22 52 07.5	
	comp=Z,86nm,20.9s,baz=182,slow=33								
OPO	**Ambohidratompo 55.05 98**			LR		LR		22 54 55.7	
	comp=Z,60nm,18.4s,baz=15,slow=35								
PMSA	**Palmer Station 55.53 204**			LR		LR		22 51 14.8	
	comp=Z,103nm,19.8s,baz=70,slow=31								
BELA	**Belgrano 2 57.97 186**			P		**P**		**22 32 26.4 +0.9**	
BELA					IAmb	IAmb		22 32 27.4	
	comp=Z,12nm,1.5s								
KEST	**Kesra 59.82 20**			P		**P**		**22 32 39.7 +0.8**	
	comp=Z,3.8nm,0.8s,baz=135,slow=7.4,SNR=3.6								
KEST				LR		LR		22 56 35.5	
	comp=Z,103nm,20.0s,baz=304,slow=34								
	comp=Z,3.8nm,0.8s								
CZSB	**Cruzeiro do Su 60.38 273**			P		**P**		**22 32 42.7 -0.5**	
CZSB					IAmb	IAmb		22 33 02.4	
	comp=Z,10nm,0.5s								
ESDC	**Sonseca Array 60.80 7**			P		**P**		**22 32 44.5 -1.0**	
	comp=Z,0.7nm,0.9s,baz=171,slow=8.7,SNR=4.6								
ESDC				LR		LR		22 58 38.1	
	comp=Z,42nm,18.3s,baz=163,slow=36								
	comp=Z,0.7nm,0.9s								
ATD	**Arta Tunnel 62.47 64**			LR		LR		22 57 23.0	
	comp=Z,119nm,21.0s,baz=216,slow=34								
NNA	**Nana 62.89 267**			LR		LR		22 59 29.7	
	comp=Z,65nm,19.4s,baz=104,slow=35								
MAW	**Mawson 64.81 156**			P		**P**		**22 33 11.9 +0.1**	
	comp=Z,2.8nm,1.0s,baz=330,slow=5.4,SNR=5.2								
MAW				LR		LR		22 56 09.2	
	comp=Z,63nm,18.3s,baz=307,slow=31								
	comp=Z,2.8nm,1.0s								
SDV	**Santo Domingo 65.19 291**			LR		LR		22 59 56.2	
	comp=Z,332nm,19.5s,baz=110,slow=34								
TIP	**Timpagrande 65.49 24**			P		**P**		**22 33 17.1 +0.4**	
TIP					IAmb	IAmb		22 33 17.8	
	comp=Z,3.7nm,0.8s								
IDI	**Anoyia 65.81 32**			LR		LR		23 01 50.7	
	comp=Z,14nm,18.2s,baz=208,slow=36								
IDI	**Anoyia 65.81 32**			P		**P**		**22 33 19.9 +1.0**	
ATAH	**Atahualpa 65.89 272**			LR		LR		23 00 37.7	
	comp=Z,344nm,18.9s,baz=125,slow=35								
ROSC	**El Rosal 66.67 285**			LR		LR		23 01 02.7	
	comp=Z,254nm,19.6s,baz=148,slow=35								
EIL	**Eilat 67.42 43**			LR		LR		23 00 17.2	
	comp=Z,73nm,20.5s,baz=260,slow=34								
MMAI	**Mount Meron Ar 69.98 41**			LR		LR		23 02 05.5	
	comp=Z,86nm,20.4s,baz=48,slow=34								
DAVOX	**Davos/Dischmat 70.21 15**			LR		LR		23 03 26.3	
	comp=Z,75nm,19.5s,baz=255,slow=35								
ASF	**Jabal al Asfar 70.33 42**			LR		LR		23 03 01.1	
	comp=Z,120nm,21.2s,baz=288,slow=34								
GERES	**GERESS Array B 73.12 17**			P		**P**		**22 34 02.3 -1.5**	
	comp=Z,0.8nm,0.8s,baz=131,slow=6.2,SNR=4.5								
	comp=Z,0.8nm,0.8s								
GERES	**GERESS Array B 73.12 17**			P		**P**		**22 34 03.4 -0.4**	
CKRC	**Cesky Krumlov 73.26 18**			*eP*		**P**		**22 34 04.3 -0.2**	
BRTR	**Keskin Array B 73.70 35**			P		**P**		**22 34 07.7 +0.2**	
	comp=Z,2.0nm,0.8s,baz=199,slow=6.1,SNR=8.1								
BRTR				LR		LR		23 06 21.3	
	comp=Z,29nm,18.2s,baz=155,slow=36								
	comp=Z,2.0nm,0.8s								
BRTR	**Keskin Array B 73.70 35**			P		**P**		**22 34 08.2 +0.7**	
PSZ	**Piszkesteto 74.20 21**			P		**P**		**22 34 10.0 -0.2**	
PSZ					IAmb	IAmb		22 34 11.4	
	comp=Z,6.1nm,0.9s								
VRAC	**Vranov 74.37 19**			LR		LR		23 06 06.3	
	comp=Z,59nm,20.3s,baz=224,slow=35								
MLR	**Muntele Rosu 74.46 26**			LR		LR		23 07 56.2	
	comp=Z,30nm,18.6s,baz=202,slow=37								
MLR	**Muntele Rosu 74.46 26**			P		**P**		**22 34 11.0 -0.8**	
MORC	**Moravsky Berou 75.07 19**			P		**P**		**22 34 15.1 0.0**	
MORC					IAmb	IAmb		22 34 15.9	
	comp=Z,7.2nm,1.5s								
DPC	**Dobruska-Polom 75.22 18**			*eP*		**P**		**22 34 16.3 +0.4**	
OSTC	**Ostas 75.37 18**			*eP*		**P**		**22 34 17.3 +0.5**	
AKASG	**Malin Array Be 79.94 25**			P		**P**		**22 34 41.6 -0.6**	
	comp=Z,3.0nm,0.7s,baz=223,slow=4.7,SNR=17								
AKASG				LR		LR		23 10 32.5	
	comp=Z,29nm,18.6s,baz=142,slow=36								
	comp=Z,3.0nm,0.7s								
AKASG	**Malin Array Be 79.94 25**			P		**P**		**22 34 41.2 -1.1**	
AKBB	**Malin Array Si 79.94 25**			P		**P**		**22 34 41.7 -0.6**	
AKBB					IAmb	IAmb		22 34 42.9	
	comp=Z,5.2nm,0.8s								
GNI	**Garni 80.31 40**			LR		LR		23 08 32.8	
	comp=Z,25nm,20.7s,baz=246,slow=34								
GNI	**Garni 80.31 40**			P		**P**		**22 34 44.5 -0.2**	
GNI					IAmb	IAmb		22 34 47.4	
	comp=Z,9.3nm,1.2s								
WSAR	**Wadi Sarin 81.29 61**			LR		LR		23 10 32.3	
	comp=Z,175nm,20.0s,baz=249,slow=35								
KBZ	**Khabaz 81.48 37**			P		**P**		**22 34 50.8 +0.2**	
	comp=Z,1.3nm,0.8s,baz=249,slow=4.6,SNR=2.6								
KBZ				LR		LR		23 11 20.7	
	comp=Z,23nm,19.9s,baz=306,slow=36								
	comp=Z,1.3nm,0.8s								
KIV	**Kislovodsk 81.51 36**			P		**P**		**22 34 51.4 +0.4**	
NB2	**NORSAR Subarra 83.82 11**			P		**P**		**22 35 03.1 +0.6**	
	comp=Z,5.5nm,1.1s,baz=201,slow=5.6								
NOA	**NORSAR Array B 83.82 11**			P		**P**		**22 35 03.3 +0.8**	
	comp=Z,1.4nm,0.9s,baz=200,slow=5.2,SNR=4.1								
NOA				LR		LR		23 13 03.2	
	comp=Z,21nm,18.1s,baz=195,slow=36								
	comp=Z,1.4nm,0.9s								
BORG	**Borgarnes 85.83 356**			LR		LR		23 08 05.2	
	comp=Z,25nm,18.4s,baz=225,slow=32								
FINES	**FINESS Array B 87.55 17**			P		**P**		**22 35 20.8 -0.1**	
	comp=Z,2.6nm,0.9s,baz=213,slow=9.1,SNR=4.3								
FINES				LR		LR		23 15 26.2	
	comp=Z,66nm,18.8s,baz=215,slow=36								
	comp=Z,2.6nm,0.9s								
FINES	**FINESS Array B 87.55 17**			P		**P**		**22 35 21.1 +0.2**	
GEYT	**Alibeck 87.80 48**			LR		LR		23 13 26.3	
	comp=Z,66nm,21.1s,baz=184,slow=35								
TKL	**Tuckaleechee C 88.55 309**			LR		LR		23 08 59.6	
	comp=Z,46nm,18.5s,baz=120,slow=32								
SCHQ	**Schefferville 89.03 332**			LR		LR		23 12 18.7	
	comp=Z,26nm,18.4s,baz=118,slow=34								
SADO	**Sadowa 89.81 319**			LR		LR		23 06 24.9	
	comp=Z,26nm,21.5s,baz=187,slow=29								
CMIG	**Matias Romero 90.03 288**			LR		LR		23 16 17.3	
	comp=Z,42nm,21.9s,baz=168,slow=36								
SFJD	**Kangerlussuaq 92.46 346**			LR		LR		23 11 38.1	
	comp=Z,21nm,18.1s,baz=210,slow=32								
ARCES	**ARCESS Array B 94.11 12**			LR		LR		23 17 16.8	
	comp=Z,40nm,21.1s,baz=174,slow=35								
PALK	**Pallekele 94.66 84**			LR		LR		23 14 32.8	
	comp=Z,176nm,18.2s,baz=15,slow=33								
ARU	**Arti 96.89 32**			LR		LR		23 22 29.4	
	comp=Z,36nm,18.1s,baz=182,slow=37								
ILAR	**Eielson Array 127.38 338**			PKP		**PKPdf**		**22 41 37.0 -0.6**	
	comp=Z,0.7nm,0.9s,baz=342,slow=1.5,SNR=5.0								
PETK	**Petropavlovsk- 146.92 12**			PKPbc		**PKPab**		**22 42 16.7 -0.4**	
	comp=Z,0.6nm,0.4s,baz=48,slow=2.2,SNR=4.8								
MJAR	**Matsushiro Arr 149.48 53**			PKPbc		**PKPbc**		**22 42 22.6 -0.4**	
	comp=Z,0.4nm,0.3s,baz=282,slow=6.1,SNR=1.6								

EAF ***02*** *22:36:46.5±3.0, 10.42N×38.66E, h1km±3.3km*
AAE 02 22:36:46.8±0.9, 10.42N×38.66E, h0km±9km, ML3.8, 1C-1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAE	**Adis Abeba**	**1.38**	**176**	⇑*eP*		Pg		22 37 12.2	-1.1
AAE				*eS*		Sg		22 37 28.7	-2.6
AAE				IAML				22 37 33.6	
	comp=N,8μm,0.9s								
AAE	**Adis Abeba**	**1.38**	**176**	*eP*		Pg		22 37 12.3	-1.0
AAE				*eS*		Sg		22 37 28.7	-2.5
AAE	**Adis Abeba**	**1.38**	**176**	*eP*		Pg		22 37 11.8	-1.5
AAE				*eS*		Sg		22 37 29.6	-1.6
AAE	**Adis Abeba**	**1.38**	**176**	*eP*		Pg		22 37 12.1	-1.2
AAE				*eS*		Sg		22 37 28.5	-2.8
AAE	**Adis Abeba**	**1.38**	**176**	*eP*		Pg		22 37 12.2	-1.1
AAE				*eS*		Sg		22 37 28.7	-2.6
AAE				IAML				22 37 33.6	
	comp=N,8μm,0.9s								
FURI	**Furi**	**1.51**	**179**	⇓*eP*		Pn		22 37 14.6	-0.8
FURI				*eS*		Sg		22 37 33.1	-2.2
FURI				IAML				22 37 42.4	
	comp=N,1μm,0.4s								
FURI	**Furi**	**1.51**	**179**	*iP*		Pn		22 37 14.6	-0.8
FURI				*eS*		Sg		22 37 32.8	-2.6
FURI	**Furi**	**1.51**	**179**	*eP*		Pn		22 37 13.6	-1.8
FURI				*eS*		Sg		22 37 32.8	-2.6
FURI				IAML				22 37 42.4	
	comp=N,1μm,0.5s								
FURI	**Furi**	**1.51**	**179**	*eP*		Pn		22 37 14.6	-0.7
FURI				*eS*		Sg		22 37 32.9	-2.4
FURI	**Furi**	**1.51**	**179**	*eP*		Pn		22 37 14.4	-1.0
FURI				*eS*		Sg		22 37 33.1	-2.2
FURI				IAML				22 37 42.4	
	comp=N,1μm,0.4s								
ATD	**Arta Tunnel**	**4.26**	**75**	*eP*		Pn		22 37 49.4	-3.6
ATD				*eS*		Sn		22 38 41.2	-2.3
ATD	**Arta Tunnel**	**4.26**	**75**	*eP*		Pn		22 37 50.4	-2.6
ATD				*eS*		Sn		22 38 38.9	-4.6

SOME ***02*** *23:06:09.7, 39.38N×73.70E, h0km*
KRNET ***02*** *23:06:10.8±0.1, 39.39N×73.62E, mb4.2*
IDC ***02*** *23:06:10.0±0.9, 39.20N×73.59E, h0km, mb3.8/16, mbtmp3.7/23, ML2.9/7, MS3.0/4, Error ellipse: s-maj=17.4km s-min=12.8km az=173.0*
NNC ***02*** *23:06:15.7±1.5, 39.56N×73.74E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=12.2km s-min=6.3km az=177.0*
NEIC ***02*** *23:06:18.8±2.2, 39.46N±0.04×73.32E±0.08, h46km±8km, mb4.3/16, Error ellipse: s-maj=8.6km s-min=6.4km az=100.0*
ISU ***02*** *23:06:20, 41.07N×73.38E, h5km*
ISC 02 23:06:12.0±1.3, 39.31N±0.03×73.47E±0.02, h6km±8km, n129, σ2s23/161, mb3.8/20, 20C-20D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.31**	**278**				**Pn**	**23 06 37.2**	**+0.1**
DRK					Sn		**Sg**	**23 06 54.2**	**+0.1**
DRK	**Karamyk**	**1.31**	**278**	⇑*iP*			**Pb**	**23 06 37.8**	**+0.6**
	baz=74								
DRK				⇑*iS*			**Sn**	**23 06 57.0**	**+1.9**
	baz=74								
OHH	**Osh**	**1.32**	**337**	⇓*iP*			**Pn**	**23 06 35.1**	**-2.1**
	baz=31								
OHH				⇓*iS*			**Sg**	**23 06 54.0**	**-0.6**
	baz=31								
TSTA	**Tashata**	**1.48**	**329**	P			Pg	23 06 46.5	+6.1
TSTA				S			**Sn**	**23 06 58.7**	**-0.4**
FRG	**Fergana**	**1.68**	**310**	P			**Pg**	**23 06 46.0**	**+1.8**
FRG				S			**Sg**	**23 07 06.4**	**+0.4**
BTK	**Batken**	**2.18**	**291**	P			**Pn**	**23 06 51.4**	**-0.5**
BTK	**Batken**	**2.18**	**291**	⇑*iP*			**Pb**	**23 06 51.5**	**-0.5**
	baz=88								
BTK				⇑*iS*			**Sb**	**23 07 20.7**	**+1.4**
	baz=88								
BTK	**Batken**	**2.18**	**291**	P			**Pb**	**23 06 51.7**	**-0.3**
BTK				S			**Sg**	**23 07 23.2**	**+1.1**
MINT	**Mingtut**	**2.24**	**302**	P			Pg	23 07 00.7	+5.7
MINT				S			**Sg**	**23 07 27.1**	**+3.0**
GAR	**Garm**	**2.47**	**264**	Pn			**Pb**	**23 06 56.9**	**-0.1**
GAR	**Garm**	**2.47**	**264**	⇓*eP*			**Pb**	**23 06 56.3**	**-0.7**
	baz=62								
GAR				⇓*iS*			**Sb**	**23 07 29.2**	**+1.5**
	baz=62								
ARLS	**Aral**	**2.63**	**14**	⇑*iP*			**Pn**	**23 06 55.1**	**-0.2**
	baz=12								
ARLS				⇑*iS*			**Sn**	**23 07 27.4**	**-0.3**
	baz=12								
ARK	**Arkit**	**2.74**	**336**	⇓*iP*			**Pn**	**23 06 57.8**	**+1.1**
	baz=33								
ARK				⇓*iS*			**Sn**	**23 07 32.0**	**+1.7**
	baz=33								
AML	**Almayashu**	**2.83**	**3**	P			**Pn**	**23 06 58.9**	**+0.7**
	SNR=36								
TRKS	**Terek-Say**	**2.85**	**322**	⇑*eP*			**Pn**	**23 06 58.8**	**+0.6**
	baz=19								
TRKS				⇑*eS*			**Sn**	**23 07 34.0**	**+1.1**
	baz=19								
EKS2	**Erkin-Say**	**3.36**	**4**	P			**Pn**	**23 07 06.8**	**+1.5**
	SNR=19								
EKS2	**Erkin-Say**	**3.36**	**4**	⇓*iP*			**Pn**	**23 07 05.7**	**+0.5**
	baz=2.0								
EKS2				⇓*iS*			**Sn**	**23 07 45.6**	**+0.1**
	baz=2.0								
AAK	**Ala-Archa**	**3.42**	**13**	Pn			**Pn**	**23 07 08.3**	**+2.2**
	4.2nm,0.3s,baz=188,slow=10,SNR=15								
AAK				LR			LR	23 08 36.1	
	comp=Z,178nm,19.3s,baz=210,slow=42								
	26nm,0.4s								
AAK	**Ala-Archa**	**3.42**	**13**	P			**Pn**	**23 07 07.8**	**+1.7**
	SNR=19								
AAK	**Ala-Archa**	**3.42**	**13**	Pn			**Pn**	**23 07 07.8**	**+1.7**
AAK	**Ala-Archa**	**3.42**	**13**	⇑*iP*			**Pn**	**23 07 05.9**	**-0.1**
	baz=11								
AAK				⇑*iS*			**Sn**	**23 07 46.7**	**-0.3**
	baz=11								
CHGR	**Chuyangaron**	**3.42**	**260**	Pn			**Pn**	**23 07 09.5**	**+3.5**
CHGR	**Chuyangaron**	**3.42**	**260**	⇓*iP*			**Pn**	**23 07 09.4**	**+3.3**
	baz=60								
CHGR			

KK31	Karatay Array	4.40	330		Pn		Pn	23 07 21.8	+2.4	
KK31	Karatay Array	4.40	330	⇑	Pn		Pn	23 07 22.1	+2.6	
	2.0nm,0.3s,baz=130,slow=12,SNR=114									
KK31				⇑	Pg		Pg	23 07 34.5	-1.8	
	30nm,0.8s,baz=141,slow=16,SNR=14									
KK31				⇑	Sn		Sn	23 08 15.5	+4.5	
	30nm,0.6s,baz=161,slow=22,SNR=4.7									
KK31				⇑	Lg		Lg	23 08 31.6		
	61nm,0.7s,baz=163,slow=27,SNR=4.7									
KKAR	Karatay Array	4.40	330		Pn		Pn	23 07 21.1	+1.6	
KKAR	Karatay Array	4.40	330		Pn		Pn	23 07 21.8	+2.4	
MTBS	Maitube	4.42	29	e	P		Pb	23 07 30.7	+0.5	
	3.2nm,0.3s									
MTBS				e	S		Sb	23 08 29.0	+5.2	
	55nm,0.8s									
MTBS	Maitube	4.42	29		Pg		Pb	23 07 30.7	+0.5	
	4.3nm,0.2s									
MTBS					Lg		Lg	23 08 29.0		
	51nm,0.8s									
AAA	Alma-Ata	4.68	33	e	P		Pb	23 07 34.6	-0.1	
	19nm,0.1s									
AAA				e	S		Sb	23 08 36.1	+4.8	
	104nm,0.8s									
KRBS	Karabastau	4.69	20	e	P		Pb	23 07 34.9	+0.2	
	13nm,0.7s									
KRBS				e	S		Sb	23 08 36.7	+5.3	
	98nm,2.6s									
KRBS	Karabastau	4.69	20		Pg		Pb	23 07 34.9	+0.2	
	13nm,0.7s									
KRBS					Lg		Lg	23 08 36.7		
	48nm,0.9s									
MDOK	Medeo	4.70	34	e	P		Pb	23 07 35.3	+0.3	
	12nm,0.6s									
MDOK				e	S		Sb	23 08 36.9	+5.0	
	102nm,1.0s									
MDOK	Medeo	4.70	34	⇓	Pn		Pn	23 07 25.0	+1.3	
	17nm,0.6s									
MDOK					Pg		Pb	23 07 35.3	+0.3	
	12nm,0.5s									
MDOK					Lg		Lg	23 08 36.2		
	166nm,1.0s									
MDOK					Lg		Lg	23 08 36.9		
	102nm,1.3s									
PRZ	Przheval'sk	4.90	48		Pn		Pn	23 07 30.1	+3.6	
KTBS	Karatobe	5.02	28	e	P		Pb	23 07 39.7	-0.6	
	5.7nm,0.7s									
KTBS				e	S		Sb	23 08 44.9	+4.0	
	54nm,1.8s									
KTBS	Karatobe	5.02	28		Pg		Pb	23 07 39.7	-0.6	
	10nm,0.7s									
KTBS					Lg		Lg	23 08 44.9		
	54nm,0.5s									
KUU	Kurty	5.06	24	e	P		Pb	23 07 40.9	-0.2	
	7.3nm,0.8s									
KUU				e	S		Sb	23 08 46.8	+4.7	
	100nm,0.9s									
KUU	Kurty	5.06	24		Pg		Pb	23 07 40.9	-0.2	
	7.3nm,1.1s									
KUU					Lg		Lg	23 08 46.8		
	46nm,1.2s									
CHKK	Chushkaly	5.25	29	e	P		Pb	23 07 43.9	-0.4	
	0.8nm,0.2s									
CHKK				e	S		Sb	23 08 51.7	+4.0	
	45nm,0.7s									
CHKK	Chushkaly	5.25	29		Pg		Pb	23 07 44.6	+0.4	
	12nm,0.6s									
CHKK					Lg		Lg	23 08 53.4		
	35nm,0.9s									
SATY	Saty	5.28	43	e	P		Pb	23 07 44.8	0.0	
	5.8nm,0.8s									
SATY				e	S		Sb	23 08 53.0	+4.4	
	77nm,1.7s									
KURS	Kuram	5.47	39	e	P		Pb	23 07 47.5	-0.5	
	21nm,1.7s									
KURS				e	S		Sb	23 08 59.3	+5.4	
	44nm,1.7s									
CHCP	Chirah Chowk	5.64	182		P		Pn	23 07 44.0	+7.5	
NIL	Nilore	5.65	182		Pn		Pn	23 07 42.3	+5.7	
UZB	Uzynbulak	5.68	46	e	P		Pb	23 07 52.1	+0.5	
	3.6nm,0.9s									
UZB				e	S		Sb	23 09 05.7	+5.7	
	42nm,1.9s									
BTLS	Baital	5.75	4	e	P		Pb	23 07 54.0	+1.3	
	6.1nm,0.7s									
BTLS				e	S		Sb	23 09 09.2	+7.4	
	35nm,1.6s									
BTLS	Baital	5.75	4		Pg		Pb	23 07 54.0	+1.3	
SHLS	Shalkode	5.93	48	e	P		Pg	23 08 02.0	-3.6	
	1.9nm,0.5s									
SHLS				e	S		Sg	23 09 23.0	+0.5	
	22nm,2.3s									
KBL	Kabul	5.93	218		Pn		Pn	23 07 45.9	+5.2	
PDGK	Podgornoye	6.05	46	⇑	Pn		Pn	23 07 43.7	+1.5	
	3.4nm,0.7s									
PDGK				⇓	Pg		Pb	23 08 00.3	+2.3	
	15nm,0.8s									
PDGK				⇓	Lg		Lg	23 09 16.6		
	49nm,1.1s									
THW	Thamme Wali	6.65	193		P		Pn	23 07 56.5	+6.2	
JMU	Jammu	6.68	170	e	P		Pn	23 07 53.0	+2.3	
JMU				ex			x	23 09 02.0		
DJR	Jarkent	6.89	41	e	P		Pb	23 08 14.9	+2.7	
	2.1nm,0.1s									
DJR				e	S		Sg	23 09 45.1	-8.1	
	25nm,1.7s									
THN	Thein Dam	7.10	164	e	P		Pn	23 08 01.6	+5.2	
THN				e	S		Sn	23 09 20.2	+2.8	
BHK	Bhakra	8.23	162	ex			x	23 09 50.7		
SMLA	Simla	8.70	159	e	P		Pn	23 08 21.6	+3.2	
SMLA				e	S		Sn	23 09 52.8	-4.1	
SMLA					IAML			23 10 02.9		
	comp=N,30nm,1.1s									
SMLA					IAML			23 10 05.0		
	comp=E,33nm,0.6s									
MAKZ	Makanchi	9.74	37		Pn		Pn	23 08 34.7	+2.0	
MAKZ	Makanchi	9.74	37	⇓	Lg		Lg	23 11 15.1		
	comp=E,6.9nm,1.4s									
MK31	Makanchi Array	9.88	38	⇓	Lg		Lg	23 11 19.8		
	comp=E,7.5nm,0.9s,baz=220,slow=25,SNR=3.8									
MKAR	Makanchi Array	9.88	38		Pn		Pn	23 08 36.1	+1.5	
	baz=203,slow=14,SNR=3.4									
MKAR					Lg		Lg	23 11 17.1		
	baz=205,slow=23,SNR=1.8									
	comp=E,0.3nm,0.6s									
MKAR	Makanchi Array	9.88	38		Pn		Pn	23 08 35.4	+0.9	
KUDL	Kundal	11.41	166	e	P		Pn	23 09 00.9	+5.3	
KUDL				e	S		Sn	23 11 01.5	-2.0	
KURBB	Kurchatov Arra	11.86	16		Pn		Pn	23 09 00.4	-1.3	
	baz=204,slow=12,SNR=2.6									
KURBB					Lg		Lg	23 12 16.0		
	baz=206,slow=27,SNR=2.8									
KURBB					LR		LR	23 13 47.0		
	comp=E,54nm,21.9s,baz=223,slow=38									
	comp=E,0.2nm,0.6s									
KURBB	Kurchatov Arra	11.86	16	⇑	Lg		Lg	23 12 23.6		
	comp=E,49nm,1.2s									
KURK	Kurchatov	11.97	16	⇑	Lg		Lg	23 12 26.1		
	comp=E,38nm,1.4s									
GEYT	Alibeck	12.09	268		Pn		Pn	23 09 04.0	-0.9	
	comp=E,0.5nm,0.3s,baz=74,slow=12,SNR=2.2									
GEYT					Sn		Sn	23 11 22.1	+2.0	
	comp=E,0.4nm,0.3s,baz=68,slow=27,SNR=2.8									
	comp=E,1.7nm,0.6s									
GEYT	Alibeck	12.09	268		Pn		Pn	23 09 05.0	0.0	
ABKAR	Akbulak array	13.87	320		Pn		Pn	23 09 25.5	-3.6	
BRVK	Borovoye	13.93	352				Pn	23 09 27.7	-2.2	
AKTO	Aktyubinsk	15.58	321		Pn		Pn	23 09 52.2	+0.1	
	comp=E,0.2nm,0.3s,baz=128,slow=14,SNR=7.7									
AKTO					Sn		Sn	23 12 38.8	-6.2	
	baz=200,slow=22,SNR=2.3									
	comp=E,1.6nm,0.8s									
ZAA0	Zalesovo Array	16.56	24				Pn	23 10 05.3	+0.6	
ZALV	Zalesovo Beam	16.56	24		Pn		Pn	23 10 04.8	+0.2	
	comp=E,0.2nm,0.3s,baz=224,slow=4.0,SNR=6.1									
ZALV					Lg		Lg	23 14 51.0		
	comp=E,0.3nm,0.3s,baz=211,slow=16,SNR=1.8									
	comp=E,1.7nm,0.6s									
ZALV	Zalesovo Beam	16.56	24				Pn	23 10 05.6	+0.9	
ARU	Arti	19.76	335		P		P	23 10 42.5	-0.1	
	baz=216,slow=16,SNR=2.2									
ARU					Lg		Lg	23 16 39.3		
	baz=156,slow=20,SNR=1.2									
	comp=E,0.9nm,0.4s									
ARU	Arti	19.76	335		P		P	23 10 42.1	-0.4	
GNI	Garni	22.08	281		P		P	23 11 08.3	+0.4	
	comp=E,4.6nm,0.9s,baz=25,slow=5.5,SNR=4.1									
	comp=E,4.6nm,0.9s									

GNI	Garni	22.08	281		P		P	23 11 08.2	+0.2	
GNI					IAmb		IAmb	23 11 15.7		
	comp=Z,15nm,0.9s									
BELG	Belogornoye	22.11	315		P		P	23 11 09.6	+1.6	
	comp=Z,10nm,0.9s,baz=205,slow=3.9,SNR=4.5									
	comp=Z,10nm,0.9s									
HYBB	Hyderabad (bro	22.25	167	e	P		P	23 11 13.7	+3.9	
HYBB				e	S		Sn	23 15 22.0	-4.6	
ONI	Oni	22.85	288		P		P	23 11 16.3	+0.3	
ONI					IAmb		IAmb	23 11 21.2		
	comp=Z,12nm,0.8s									
KBZ	Khabaz	23.24	291		P		P	23 11 21.6	+1.6	
	comp=Z,0.8nm,0.6s,baz=108,slow=2.3,SNR=2.5									
	comp=Z,0.8nm,0.6s									
KARS	Kars	23.28	283		P		P	23 11 19.8	-0.8	
KVAR	Kislovodsk Arr	23.39	291		P		P	23 11 23.1	+1.5	
	comp=Z,2.0nm,0.8s,baz=100,slow=17,SNR=3.1									
	comp=Z,2.0nm,0.8s									
KIV	Kislovodsk	23.40	291		P		P	23 11 20.6	-1.1	
KIV					IAmb		IAmb	23 11 37.4		
	comp=Z,5.6nm,0.7s									
SONM	Songino Array	25.18	59		P		P	23 11 38.2	-0.1	
	comp=Z,1.7nm,0.9s,baz=268,slow=9.1,SNR=9.4									
	comp=Z,1.7nm,0.9s									
SONM	Songino Array	25.18	59		P		P	23 11 39.0	+0.7	
BR131	Keskin Array S	30.56	284		P		P	23 12 25.9	-0.6	
BR131					IAmb		IAmb	23 12 31.4		
	comp=Z,4.8nm,0.8s									
BRTR	Keskin Array B	30.56	284		P		P	23 12 27.4	+0.8	
	comp=Z,1.6nm,0.8s,baz=76,slow=7.8,SNR=5.9									
	comp=Z,1.6nm,0.8s									
BRTR	Keskin Array B	30.56	284		P		P	23 12 27.0	+0.4	
FINES	FINESS Array B	36.32	323		P		P	23 13 16.0	-0.3	
	comp=Z,1.2nm,0.6s,baz=114,slow=10,SNR=8.6									
FINES					LR		LR	23 28 34.8		
	comp=Z,33nm,19.7s,baz=113,slow=37									
	comp=Z,1.2nm,0.6s									
FINES	FINESS Array B	36.32	323		P		P	23 13 16.3	0.0	
ARCES	ARCESS Array B	39.35	336		P		P	23 13 40.7	-1.1	
	comp=Z,1.7nm,0.8s,baz=108,slow=7.8,SNR=7.2									
	comp=Z,1.7nm,0.8s									
GERES	GERESS Array B	42.97	303		P		P	23 14 12.2	+0.2	
	comp=Z,0.3nm,0.5s,baz=46,slow=6.5,SNR=2.5									
	comp=Z,0.3nm,0.5s									
NC303	NORSAR Array S	43.30	321		P		P	23 14 14.1	-0.2	
NC303					IAmb		IAmb	23 14 41.1		
	comp=Z,13nm,1.3s									
NB2	NORSAR Subarra	43.37	321		P		P	23 14 14.5	-0.5	
	comp=Z,0.6nm,0.6s,baz=90,slow=8.6									
NOA	NORSAR Array B	43.37	321		P		P	23 14 14.1	-0.9	
	comp=Z,0.9nm,0.6s,baz=91,slow=7.9,SNR=5.8									
NOA					LR		LR	23 32 43.5		
	comp=Z,30nm,19.3s,baz=205,slow=37									
	comp=Z,0.9nm,0.6s									
MJAR	Matsushiro Arr	50.16	72		P		P	23 15 07.4	-1.0	
	comp=Z,0.4nm,0.3s,baz=265,slow=7.3,SNR=1.6									
	comp=Z,0.4nm,0.3s									
ESDC	Sonseca Array	57.90	297		P		P	23 16 03.3	-1.6	
	comp=Z,0.5nm,0.7s,baz=61,slow=7.6,SNR=5.8									
	comp=Z,0.5nm,0.7s									
TOA0	Torodi Ar. Sit	67.73	269		P		P	23 17 08.1	-2.6	
TORD	Torodi Ar. Bea	67.73	269		P		P	23 17 08.9	-1.8	
	comp=Z,0.6nm,0.8s,baz=41,slow=4.6,SNR=3.3									
	comp=Z,0.6nm,0.8s									
TORD	Torodi Ar. Bea	67.73	269		P		P	23 17 09.9	-0.9	
TORD					IAmb		IAmb	23 17 27.8		
	comp=Z,4.5nm,1.5s									
IMAR	Indian Mountai	68.90	19		P		P	23 17 18.6	+1.4	
ILAR	Eielson Array	71.54	17		P		P	23 17 32.7	-0.8	
	comp=Z,0.6nm,0.9s,baz=347,slow=3.7,SNR=3.4									
	comp=Z,0.6nm,0.9s									
J26L	Joseph Creek	72.50	16		P		P	23 17 40.7	+1.3	
PWL	Port Wells	74.51	20		P		P	23 17 50.5	-0.6	
FITZ	Fitzroy Crossi	75.06	129		P		P	23 17 56.4	+1.6	
FITZ					IAmb		IAmb	23 18 19.2		
	comp=Z,6.7nm,1.1s									
DBIC	Dimbokro	76.78	268		P		P	23 18 04.8	0.0	
WRA	Warramunga Arr	81.87	124		P		P	23 18 29.8	-2.6	
	comp=Z,0.4nm,0.6s,baz=326,slow=5.4,SNR=2.1									
	comp=Z,0.4nm,0.6s									
ASAR	Alice Springs	84.31	127		P		P	23 18 43.5	-1.5	
	comp=Z,0.2nm,0.3s,baz=299,slow=4.1,SNR=1.6									
	comp=Z,0.2nm,0.3s									

KRNET ***02*** *23:19:41.5±0.1, 39.47N×73.49E, mb3.5*
SOME ***02*** *23:19:42.0, 39.57N×73.60E, h0km*
NNC ***02*** *23:19:48.2±2.8, 39.78N×73.37E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=23.0km s-min=11.4km az=171.0
ISC 02 23:19:40.5±1.9, 39.42N±0.07×73.83E±0.05, h15km±13km,
n32, σ1.9 44/53, 7C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	Osh	1.37	324	⇓	iP		Pn	23 20 03.9	-1.2
	baz=33								
OHH				⇓	iS		Sn	23 20 20.3	-2.7
	baz=33								
DRK	Karamyk	1.57	273	⇑	iP		Pn	23 20 06.5	-1.6
	baz=71								
DRK				⇑	iS		Sn	23 20 24.5	-3.9
	baz=71								
BTK	Batken	2.41	286	⇑	iP		Pn	23 20 20.4	+1.0
	baz=87								
BTK				⇑	iS		Sn	23 20 48.7	0.0
	baz=87								
ARLS	Aral	2.47	9	⇓	iP		Pb	23 20 25.1	+0.4
	baz=15								
ARLS				⇓	iS		Sb	23 20 56.8	+1.8
	baz=15								
GAR	Garm	2.76	262	⇑	eP		Pn	23 20 25.4	+1.1
	baz=60								
GAR				⇑	iS		Sn	23 20 57.6	+0.2
	baz=60								
TRKS	Terek-Say	2.94	317	⇓	iP		Pn	23 20 27.7	+0.8
	baz=19								
TRKS				⇓	iS		Sn	23 21 01.5	-0.5
	baz=19								
MRKS	Merke	3.36	352	e	P		Pg	23 20 43.5	-1.3
	1.8nm,0.3s								
MRKS				e	S		Sg	23 21 27.1	-1.2
	40nm,0.5s								
MRKS	Merke	3.36	352		Pg		Pg	23 20 46.2	+1.4
	3.9nm,0.2s								
MRKS					Lg		Lg	23 21 32.3	
	40nm,0.5s								
ULHL	Ulahol	3.37	32	⇓	iP		Pb	23 20 38.7	-1.3
	baz=36								
ULHL				⇓	iS		Sb	23 21 20.8	0.0
	baz=36								
TKM2	Tokmak 2	3.75	20	⇓	Pn		Pb	23 20 45.2	-1.3
	1.7nm,0.5s								
TKM2				⇓	Lg		Lg	23 21 41.1	
	14nm,0.6s								
DZA	Taraz	3.95	332		Pg		Pb	23 20 50.0	+0.2
	17nm,0.2s								
DZA					Lg		Lg	23 21 39.1	
	26nm,0.1s								
KST	Kastek	3.96	23	e	P		Pg	23 20 55.2	-1.2
	4.3nm,1.1s								
KST				e	S		Sg	23 21 48.4	+0.6
	40nm,0.8s								
KST	Kastek	3.96	23		Pg		Pg	23 20 55.2	-1.2
	4.3nm,0.8s								
KST					Lg		Lg	23 21 48.4	
	40nm,0.8s								
IUG	Iuzhnay	3.97	315	e	P		Pb	23 20 51.6	+1.4
	166nm,0.4s								
IUG				e	S		Sb	23 21 41.4	+3.3
	76nm,0.8s								
IUG	Iuzhnay	3.97	315		Pg		Pb	23 20 50.5	+0.3
	419nm,0.5s								
IUG					Lg		Lg	23 21 40.1	
	76nm,0.8s								
SGDS	Sogindy	4.08	8	e	P		Pg	23 20 56.8	-1.8
	5.6nm,0.5s								
SGDS				e	S		Sg	23 21 50.7	-0.7
	15nm,0.5s								
SGDS	Sogindy	4.08	8		Pg		Pg	23 20 56.8	-1.8
	5.6nm,0.5s								
SGDS					Lg		Lg	23 21 50.7	
	15nm,0.5s								
MTBS	Maitube	4.20	27	e	P		Pg	23 20 59.9	-0.9
	5.4nm,0.2s								
MTBS				e	S		Sg	23 21 55.8	+0.7
	12nm,0.6s								
MTBS	Maitube	4.20	27		Pg		Pg	23 20 59.9	-0.9
	5.4nm,0.2s								
MTBS					Lg		Lg	23 21 55.8	
	14nm,0.4s								
KK31	Karatay Array	4.45	327	⇓	Pn		Pn	23 20 49.8	+2.3
	0.6nm,0.4s,baz=138,slow=12,SNR=9.0								
KK31				⇓	Pg		Pb	23 20 57.5	-0.9
	3.2nm,0.5s,baz=149,slow=15,SNR=14								
KK31				⇑	Lg		Lg	23 21 50.1	
	16nm,0.8s,baz=151,slow=28,SNR=5.5								
MDOK	Medeo	4.46	32	e	P		Pg	23 21 05.1	-0.8
	4.5nm,1.3s								
MDOK				e	S		Sg	23 22 04.7	+1.1
	20nm,1.0s								
MDOK	Medeo	4.46	32		Pn		Pb	23 20 59.6	+1.0
	8.2nm,1.0s								
MDOK					Pg		Pb	23 21 05.1	-0.8
	4.5nm,0.6s								
MDOK					Lg		Lg	23 22 05.7	
	20nm,1.0s								
MDOK					Lg		Lg	23 22 09.2	
	38nm,1.1s								
KRBS	Karabastau	4.50	17	e	P		Pg	23 21 05.3	-1.3
	5.9nm,0.9s								
KRBS				e	S		Sg	23 22 04.9	+0.1
	17nm,1.5s								
KRBS	Karabastau	4.50	17		Pg		Pg	23 21 05.3	-1.3
KRBS					Lg		Lg	23 22 04.9	
KTBS	Karatobe	4.80	26	e	P		Pg	23 21 11.3	-1.1
	4.5nm,0.6s								
KTBS				e	S		Sg	23 22 15.6	+1.2
	33nm,1.0s								
KTBS	Karatobe	4.80	26		Pg		Pg	23 21 11.6	-0.7
	4.5nm,0.6s								
KTBS					Lg		Lg	23 22 15.9	
	30nm,0.5s								
KUU	Kurty	4.85	22	e	P		Pg	23 21 11.6	-1.8
	1.6nm,1.3s								
KUU				e	S		Sg	23 22 16.5	+0.3
	22nm,2.5s								
KUU	Kurty	4.85	22		Pg		Pg	23 21 12.1	-1.2
	3.8nm,0.6s								
KUU					Lg		Lg	23 22 16.5	
	20nm,0.7s								
SATY	Saty	5.01	42	e	P		Pg	23 21 16.1	-0.4
	1.8nm,0.7s								
SATY				e	S		Sg	23 22 23.6	+2.2
	11nm,1.0s								
CHKK	Chushkaly	5.03	27	e	P		Pg	23 21 15.3	-1.4
	0.5nm,0.1s								
CHKK				e	S		Sg	23 22 22.7	+0.9
	14nm,1.5s								
CHKK	Chushkaly	5.03	27		Pg		Pg	23 21 15.3	-1.4
	0.7nm,0.1s								
CHKK					Lg		Lg	23 22 22.7	
	14nm,0.5s								
UZB	Uzynbulak	5.40	45	e	P		Pg	23 21 23.1	-0.8
	0.3nm,0.1s								
UZB				e	S		Sg	23 22 35.6	+1.8
	5.2nm,1.2s								

NEIC ***02*** *23:21:45.9±1.2, 18.74N±0.04×67.42W±0.03, h21km±11km,*
Error ellipse: s-maj=6.4km s-min=4.4km az=188.0
RSPR ***02*** *23:21:46.9, 18.74N×67.42W, h4km±3km, MD3.0/10*
OSPL ***02*** *23:21:48.6±1.6, 18.62N×67.45W, h22km±28km, ML2.1*
ISC 02 23:21:46.9±1.2, 18.73N±0.06×67.42W±0.03, h26km±10km,
n39, σ0.8 79/49, 5C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IDE	Isla Desecheo	0.34	188	⇓	eP		Pb	23 21 54.6	0.0
IDE	Isla Desecheo	0.34	188	e	S		Sb	23 22 00.8	+0.9
AGPR	Aguadilla, PR	0.39	131	⇑	eP		Pb	23 21 55.0	-0.4
AGPR	Aguadilla, PR	0.39	131				Pb	23 21 54.9	-0.4
AGPR					Sg		Sb	23 22 01.0	-0.2
AGPR					IAML			23 22 02.0	
	comp=N,220nm,0.4s								
AGPR					IAML			23 22 02.1	
	comp=E,344nm,0.3s								
AGPR	Aguadilla, PR	0.39	131	i	P		Pb	23 21 55.0	-0.4
AGPR				e	S		Sb	23 22 01.2	0.0
AGPR					IAML			23 22 01.2	
	comp=Z,124nm,0.5s								
PRSN	Puerto Rico Se	0.57	152		Pg		Pb	23 21 57.5	-0.9
LSP	Las Mesas	0.64	150	⇓	eP		Pb	23 21 59.3	-0.1
LSP	Las Mesas	0.64	150	e	S		Sn	23 22 09.3	-0.1
AOPR	Arecibo Observ	0.74	121	⇑	eP		Pb	23 22 00.5	-0.6
AOPR	Arecibo Observ	0.74	121	e	S		Sb	23 22 11.1	+0.2
AOPR	Arecibo Observ	0.74	121		Pg		Pb	23 22 00.3	-0.8
AOPR					Sg		Sb	23 22 10.7	-0.2
AOPR					IAML			23 22 12.8	
	comp=N,144nm,0.2s								
CRPR	Cabo Rojo, PR	0.78	157	⇓	eP		Pb	23 22 01.5	-0.3
CRPR	Cabo Rojo, PR	0.78	157	e	S		Sn	23 22 13.1	+0.2
CRPR	Cabo Rojo, PR	0.78	157		Pg		Pb	23 22 01.4	-0.4
CRPR					Sg		Sb	23 22 12.9	+1.0
CRPR					IAML			23 22 14.5	
	comp=E,70nm,1.4s								
CRPR	Cabo Rojo, PR	0.78	157	i	P		Pb	23 22 01.6	-0.1
CRPR				e	S		Sb	23 22 10.2	-1.8
CRPR					IAML			23 22 14.3	
	comp=Z,82nm,0.2s								
UUPR	Utuado, UPR, P	0.82	125	⇓	eP		Pb	23 22 01.8	-0.7
UUPR	Utuado, UPR, P	0.82	125	e	S		Sb	23 22 13.4	+0.2
UUPR	Utuado, UPR, P	0.82	125				Pb	23 22 01.8	-0.7
UUPR							Sb	23 22 13.4	+0.2
MLPR	Magueyes Islan	0.83	154	⇓	eP		Pb	23 22 01.3	-1.5
MLPR	Magueyes Islan	0.83	154	e	S		Sb	23 22

ISLZ	**Isanotski Laza**	**1.18 6**		Pn		23 25 26.6	+0.6
AKSA	**Akutan Strait**	**1.21 300**		Pn		23 25 27.0	+0.7
AKSA	**Akutan Strait**	**1.21 300**		Pn		23 25 26.9	+0.5
AKUT	**Akutan**	**1.24 299**		Pn		23 25 27.5	+0.6
AKUT			IAML			23 25 45.4	
	comp=N,204nm,0.6s						
AKUT			IAML			23 25 45.7	
	comp=E,106nm,0.8s						
SSLN	**Shishaldin Nor**	**1.26 358**		Pn		23 25 28.5	+1.3
ISNN	**Isanotski Nort**	**1.29 4**		Pn		23 25 28.9	+1.5
WTUG	**Tugumak**	**1.33 348**		Pn		23 25 29.1	+1.0
ZRO	**Akutan Zero**	**1.33 295**		Pn		23 25 29.1	+1.0
AKMO	**Akutan Morgan**	**1.35 294**		Pn		23 25 29.4	+1.1
AKLV	**Akutan Long Va**	**1.35 298**		Pn		23 25 29.2	+0.8
AKGG	**Akutan Green G**	**1.39 299**		Pn		23 25 28.8	0.0
UNV	**Unalaska Valle**	**1.56 282**		Pn		23 25 30.8	-0.5
MNAT	**Makushin Natee**	**1.68 283**		Pn		23 25 33.8	+1.0
MSW	**Makushin Switc**	**1.74 283**		Pn		23 25 34.7	+1.1
MGOD	**Makushin Gods**	**1.77 279**		Pn		23 25 35.6	+1.4
MAPS	**Pakushin South**	**1.81 279**		Pn		23 25 35.9	+1.2
S12K	**Black Hills**	**2.41 26**		Pn		23 25 44.0	+1.1
SDPT	**Sand Point**	**2.70 47**	Pn	Pn		23 25 47.5	+0.7
SDPT			IAML			23 26 26.7	
	comp=E,43nm,0.8s						
SDPT			IAML			23 26 36.9	
	comp=N,45nm,1.4s						
CNBA	**Chernabura Isl**	**2.84 62**	Pn	Pn		23 25 49.4	+0.6
NIKH	**Nikolski High**	**3.02 261**	Pn	Pn		23 25 51.3	+0.1
CHGN	**Chignik**	**4.20 47**	Pn	Pn		23 26 09.0	+1.5

IDC ***02*** *23:33:15.0±0.6,44˚.20N×149˚.01E, h0km, mb4.2/24, mbtmp4.2/32, ML3.6/5, MS3.6/21, Error ellipse: s-maj=17.5km s-min=11.8km az=151.0*

SKHL ***02*** *23:33:18.2±0.3,44˚.00N×149˚.40E, h49km±7km, mb4.8/6*

BJI ***02*** *23:33:19.3±0.0,44˚.21N×148˚.89E, h30km, mb4.6/40, mB4.7/26, Ms4.1/18, Ms7 3.9/19*

MOS ***02*** *23:33:19.3±0.9,44˚.18N×149˚.08E, h39km, mb4.7/19, MS3.6/9, Error ellipse: s-maj=7.4km s-min=5.7km az=100.3*

NIED ***02*** *23:33:19.5,44˚.40N×149˚.04E, h30km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.47; Mθθ-0.94; Mφφ-1.53; Mrθ1.42; Mθφ-1.04; Mφr1.72; Fault plane solution: M₀3.27000×10¹⁵ NP1: φs216.00000°, δ24.00000°, λ87.00000°. NP2:φs39.00000°, δ66.00000°, λ91.00000°.*

JMA ***02*** *23:33:19.5±0.7,44˚.2N×14˚.9E±˚, h30km, MV4.3/14, SE OFF ETOROFU*

NEIC ***02*** *23:33:22.7±1.3,44˚.2N±0˚.1×149˚.0E±0˚.1, h48km±9km, mb4.6/44, Error ellipse: s-maj=17.5km s-min=11.7km az=152.0*

ISC 02 23:33:19.8±0.7, 44˚07N±0˚05×149˚03E±0˚04, h33km±3km, n285, σ1s49/302, mb4.5/80, MS3.7/29, 39C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.43**	**325**	*c i*	PN		**Pn**	**23 33 43.8**	**+0.4**
KUR	**Kuril'sk**	**1.43**	**325**	*i*	P		**Pn**	**23 33 43.8**	**+0.4**
KUR					AMB		AMB	23 33 44.4	
	3μm,0.6s								
KUR				*e*	S		**Sb**	**23 34 02.6**	**-1.0**
KUR					A		A	23 34 03.4	
	1μm,0.6s								
KUR					A		A	23 34 03.4	
	2μm,0.6s								
SHO	**Shikotan**	**1.60**	**264**	*e*	PN		**Pn**	**23 33 46.0**	**+0.3**
SHO				*e*	S		**Sb**	**23 34 08.1**	**-0.4**
SHO					pmax		pmax		
	comp=N,62nm,0.5s								
SHO					pmax		pmax		
	comp=E,119nm,0.5s								
SHO					pmax		pmax		
	comp=Z,161nm,0.5s								
SHO					smax		smax		
	comp=N,764nm,0.6s								
SHO					smax		smax		
	comp=E,1μm,0.6s								
SHO	**Shikotan**	**1.60**	**264**	*e*	P		**Pn**	**23 33 46.0**	**+0.3**
SHO					AMB		AMB	23 33 47.5	
	comp=E,160nm,0.5s								
SHO				*e*	S		**Sb**	**23 34 07.0**	**-1.5**
SHO					A		A	23 34 14.6	
	comp=E,770nm,0.5s								
SHO					A		A	23 34 14.6	
	comp=E,1μm,0.5s								
YUK	**Yuzh-Kuril'sk**	**2.28**	**270**	*e*	PN		**Pn**	**23 33 56.1**	**+1.0**
YUK					S		**Sb**	**23 34 27.2**	**-0.8**
YUK					pmax		pmax		
	comp=N,244nm,0.5s								
YUK					pmax		pmax		
	comp=Z,262nm,0.5s								
YUK					pmax		pmax		
	comp=E,357nm,0.4s								
YUK					smax		smax		
	comp=N,797nm,0.5s								
YUK					smax		smax		
	comp=E,1μm,0.5s								
YUK	**Yuzh-Kuril'sk**	**2.28**	**270**	*e*	P		**Pn**	**23 33 56.1**	**+1.0**
YUK					AMB		AMB	23 34 01.2	
	comp=E,260nm,0.5s								
YUK				*e*	S		**Sn**	**23 34 24.5**	**+2.5**
YUK					A		A	23 34 30.4	
	comp=E,800nm,0.5s								
YUK					A		A	23 34 30.4	
	comp=E,1μm,0.5s								
NEM2	**Nemuro 2**	**2.48**	**255**	*e*	P		**Pn**	**23 33 58.5**	**+0.7**
NEM2				*e*	S		**Sn**	**23 34 27.2**	**+0.2**
NMR	**Nemuro--Hokkai**	**2.49**	**255**	*e*	PN		**Pn**	**23 33 58.2**	**+0.2**
NMR					S		**Sn**	**23 34 30.1**	**+2.9**
NMR	**Nemuro--Hokkai**	**2.49**	**255**	*e*	P		**Pn**	**23 33 58.6**	**+0.6**
NMR				*e*	S		**Sn**	**23 34 29.0**	**+1.8**
RUSJ	**Misakicho**	**2.72**	**272**	*e*	PN		**Pn**	**23 34 03.4**	**+2.2**
RUSJ				*e*	S		**Sb**	**23 34 39.2**	**-1.5**
JRA	**Rausu**	**2.82**	**269**	*e*	P		**Pn**	**23 34 04.5**	**+2.0**
JNK	**Nakash**	**3.15**	**263**	*e*	P		**Pn**	**23 34 08.4**	**+1.3**
JNK				*e*	S		**Sn**	**23 34 45.6**	**+2.0**
AKK	**Akkeshi**	**3.22**	**252**	*e*	P		**Pn**	**23 34 08.9**	**+0.9**
JAK	**Akkeshi**	**3.33**	**253**	*e*	P		**Pn**	**23 34 10.4**	**+1.0**
JAK				*e*	S		**Sn**	**23 34 47.5**	**-0.3**
JTKR	**Abashiri--Toko**	**3.69**	**270**	*e*	P		**Pn**	**23 34 16.6**	**+2.1**
JAR	**Ashorobuto**	**3.89**	**260**	*e*	P		**Pn**	**23 34 19.1**	**+1.9**
JAR				*e*	S		**Sn**	**23 35 03.6**	**+1.8**
JOB	**Onbets**	**3.95**	**255**	*e*	P		**Pn**	**23 34 19.8**	**+1.7**
JCH	**Churui**	**4.38**	**253**	*e*	P		**Pn**	**23 34 25.2**	**+1.3**
JKK2	**Kamakawa 2**	**4.54**	**270**		P		**Pn**	**23 34 28.3**	**+2.2**
ERM	**Erimo**	**4.77**	**246**		Pn		**Pn**	**23 34 31.9**	**+2.7**
ERM	**Erimo**	**4.77**	**246**	*ce*	PN		**Pn**	**23 34 32.6**	**+3.3**
ERM					pmax		pmax		
	comp=Z,94nm,1.3s								
JNBK	**Urakawa-nobuka**	**4.92**	**251**	*e*	P		**Pn**	**23 34 32.5**	**+1.1**
YSS	**Yuzh-Sakhalins**	**5.26**	**305**		Pn		**Pn**	**23 34 37.8**	**+1.7**
YSS	**Yuzh-Sakhalins**	**5.26**	**305**	*e*	PN		**Pn**	**23 34 38.3**	**+2.2**
YSS				*e*	S		**Sn**	**23 35 41.2**	**+5.6**
YSS					pmax		pmax		
	comp=Z,40nm,0.8s								
YSS					smax		smax		
	comp=E,30nm,1.2s								
YSS					MLR		MLR		
	comp=Z,600nm,14.0s								
YSS					MLR		MLR		
	comp=N,300nm,12.0s								
YSS					MLR		MLR		
	comp=E,400nm,13.0s								
YSS	**Yuzh-Sakhalins**	**5.26**	**305**	*e*	P		**Pn**	**23 34 38.6**	**+2.5**
YSS					AMB		AMB	23 34 46.8	
	comp=E,30nm,0.9s								
YSS				*e*	S		**Sn**	**23 35 38.7**	**+3.1**
JEW	**Eniwo**	**5.65**	**260**		Pn		**Pn**	**23 34 43.8**	**+2.4**
JANG	**Nango**	**6.69**	**239**	*e*	P		**Pn**	**23 34 55.2**	**-0.5**
JANG				*e*	S		**Sn**	**23 36 05.8**	**-4.9**
JTM	**Tenmabayashi**	**6.74**	**244**		Pn		**Pn**	**23 34 57.0**	**+0.6**
TYV	**Tymovskoe**	**8.05**	**330**	*e*	P		**Pn**	**23 35 16.7**	**+2.5**
TYV					AMB		AMB	23 35 21.4	
	comp=E,20nm,0.3s								
SKR	**Severo-Kuril's**	**8.18**	**34**	*i*	PN		**Pn**	**23 35 17.3**	**+1.3**
SKR	**Severo-Kuril's**	**8.18**	**34**	*e*	P		**Pn**	**23 35 15.3**	**-0.7**
PAU	**Pauzhetka**	**9.06**	**33**	*e*	P		**Pn**	**23 35 27.6**	**-0.6**
PAU					AMB		AMB	23 35 30.3	
	comp=E,20nm,0.4s								
JSD	**Sado**	**10.12**	**237**		Pn		**Pn**	**23 35 42.7**	**0.0**

PEA0B	**Petropavlovsk-**	**10.71**	**29**		Pn	**Pn**	**23 35 50.4**	**-0.3**
PEA0B	**Petropavlovsk-**	**10.71**	**29**	*i*	PN	**Pn**	**23 35 50.0**	**-0.7**
PETK	**Petropavlovsk-**	**10.71**	**29**		Pn	**Pn**	**23 35 49.6**	**-1.0**
	comp=E,0.5nm,0.3s,baz=206,slow=11,SNR=14							
	comp=E,2.6nm,0.5s							
PETK	**Petropavlovsk-**	**10.71**	**29**		Pn	**Pn**	**23 35 49.9**	**-0.8**
PETK	**Petropavlovsk-**	**10.71**	**29**		PN	**Pn**	**23 35 49.9**	**-0.8**
PET	**Petropavlovsk**	**10.99**	**32**	*e*	PN	**Pn**	**23 35 56.4**	**+1.9**
PET					MLR	MLR		
	comp=Z,400nm,18.0s							
PET	**Petropavlovsk**	**10.99**	**32**	*e*	P	**Pn**	**23 35 54.2**	**-0.3**
MAJO	**Matsushiro**	**11.16**	**231**	*i*	PN	**Pn**	**23 35 59.2**	**+2.2**
MJAR	**Matsushiro Arr**	**11.16**	**231**		Pn	**Pn**	**23 35 55.7**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=72,slow=12,SNR=1.1							
MJAR					Sn	**Sn**	**23 37 56.5**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=320,slow=23,SNR=1.4							
USRK	**Ussuriysk Ar.**	**12.24**	**277**		Pn	**Pn**	**23 36 10.7**	**-1.0**
	comp=Z,3.0nm,0.7s,baz=90,slow=14,SNR=5.0							
USRK					LR	LR	23 40 29.9	
	comp=Z,133nm,20.3s,baz=202,slow=36							
KLR	**Kul'dur**	**12.93**	**300**		Pn	**Pn**	**23 36 19.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=93,slow=12,SNR=2.1							
	comp=Z,0.4nm,0.4s							
BNX	**BinXian**	**15.41**	**284**	⇑	P	**Pn**	**23 36 52.8**	**-1.8**
BNX					pmax	pmax		
	comp=Z,3.0nm,0.6s							
BNX					pmax	pmax		
	comp=Z,81nm,3.7s							
MA2	**Magadan**	**15.56**	**3**		Pn	**Pn**	**23 36 54.8**	**-1.7**
	comp=Z,4.7nm,0.6s,baz=200,slow=13,SNR=3.9							
MA2					LR	LR	23 43 04.5	
	comp=Z,146nm,19.1s,baz=204,slow=38							
SEHB	**SEOHWA**	**16.66**	**257**			**P**	**23 37 13.4**	**+0.6**
CN2	**Changchun**	**16.98**	**277**	*e*	P	**P**	**23 37 16.4**	**+0.1**
CN2					S	**Sn**	**23 40 20.8**	**-1.4**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CN2					pmax	pmax		
	comp=Z,100nm,3.0s							
CN2					LR	LR		
	comp=Z,200nm,16.0s							
CN2					LR	LR		
	comp=Z,200nm,16.0s							
CN2					LR	LR		
	comp=Z,100nm,15.1s							
ZEA	**Zeya**	**17.21**	**312**	*e*	P	**Pn**	**23 37 15.9**	**-1.6**
ZEA					MLR	MLR		
	comp=Z,100nm,14.0s							
ZEA	**Zeya**	**17.21**	**312**	*e*	P	**Pn**	**23 37 15.8**	**-1.7**
KSRS	**Korea Array**	**17.28**	**255**		P	**Pn**	**23 37 18.8**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=58,slow=11,SNR=10							
	comp=Z,2.4nm,0.9s							
JNU	**Nakatsue**	**17.87**	**238**		P	**P**	**23 37 27.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=100,slow=6.8,SNR=4.6							
	comp=Z,6.6nm,1.0s							
TJN	**Taejon**	**18.21**	**252**	*ce*	P	**P**	**23 37 32.1**	**+2.3**
SEY	**Seymchan**	**19.00**	**5**		P	**P**	**23 37 36.6**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=186,slow=8.3,SNR=12							
	comp=Z,3.2nm,0.6s							
SEY	**Seymchan**	**19.00**	**5**	*ce*	P	**P**	**23 37 37.7**	**-0.6**
SEY					pmax	pmax		
	comp=Z,10.0nm,1.3s							
SEY					MLR	MLR		
	comp=Z,637nm,17.0s							
SEY	**Seymchan**	**19.00**	**5**	*e*	P	**P**	**23 37 37.7**	**-0.6**
YAK	**Yakutsk**	**21.27**	**334**		P	**P**	**23 38 00.5**	**-2.4**
	comp=Z,8.7nm,0.4s,baz=161,slow=2.8,SNR=4.2							
YAK					LR	LR	23 46 43.6	
	comp=Z,167nm,18.7s,baz=87,slow=38							
	comp=Z,8.7nm,0.4s							
YAK	**Yakutsk**	**21.27**	**334**	*ce*	P	**P**	**23 38 01.8**	**-1.1**
YAK					pmax	pmax		
	comp=Z,23nm,0.8s							
YAK					MLR	MLR		
	comp=Z,190nm,21.0s							
YAK	**Yakutsk**	**21.27**	**334**	*e*	P	**P**	**23 38 01.8**	**-1.1**
XLT	**XiLinHaoTe**	**23.62**	**281**	*e*	P	**P**	**23 38 27.6**	**-0.3**
XLT					S	**S**	**23 42 31.7**	**-8.5**
XLT					sS	pS	23 42 50.2	+0.5
XLT					pmax	pmax		
	comp=Z,16nm,1.0s							
XLT					pmax	pmax		
	comp=Z,74nm,4.2s							
XLT					LR	LR		
	comp=Z,190nm,12.8s							
XLT					LR	LR		
	comp=Z,250nm,15.7s							
JOW	**Kunigami**	**24.01**	**231**		P	**P**	**23 38 32.6**	**+1.1**
	comp=Z,5.9nm,0.9s,baz=13,slow=5.7,SNR=4.0							
	comp=Z,5.9nm,0.9s							
BJI	**Beijing**	**24.63**	**272**		P	**P**	**23 38 37.8**	**+0.7**
BJI					S	**S**	**23 42 53.6**	**-2.5**
BJI					pmax	pmax		
	comp=Z,8.0nm,1.1s							
BJI					LR	LR		
	comp=Z,30nm,18.6s							
BJI					LR	LR		
	comp=Z,240nm,19.0s							
BJI					LR	LR		
	comp=Z,240nm,18.1s							
BILL	**Bilibino**	**25.69**	**15**	⇓	eP	**P**	**23 38 44.9**	**-1.5**
BILL					e		23 39 25.5	
BILL					pmax	pmax		
	comp=Z,4.0nm,1.1s							
BILL					MLR	MLR		
	comp=Z,102nm,14.0s							
BILL	**Bilibino**	**25.69**	**15**	*e*	P	**P**	**23 38 44.9**	**-1.5**
NJ2	**Nanjing**	**26.46**	**253**	*e*	P	**P**	**23 38 52.1**	**-1.6**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
HHC	**Hu-ho-hao-te**	**27.67**	**276**	*e*	P	**P**	**23 39 07.0**	**+2.3**
HHC					pmax	pmax		
	comp=Z,39nm,1.0s							
HHC					pmax	pmax		
	comp=Z,170nm,6.1s							
HHC					LR	LR		
	comp=Z,310nm,14.7s							
HHC					LR	LR		
	comp=Z,320nm,15.3s							
H11N2	**WAKE ISLAND Hy**	**28.50**	**143**		T	T	00 10 13.5	
	baz=333,slow=75,SNR=27							
H11N1	**WAKE ISLAND Hy**	**28.51**	**143**		T	T	00 10 12.4	
	baz=333,slow=75,SNR=30							
H11N3	**WAKE ISLAND Hy**	**28.51**	**143**		T	T	00 10 11.8	
	baz=333,slow=75,SNR=28							
BTO	**Baotou**	**28.86**	**277**	*e*	P	**P**	**23 39 18.9**	**+3.7**
BTO					S	**S**	**23 44 07.0**	**+3.8**
BTO					LR	LR		
	comp=Z,510nm,10.9s							
BTO					LR	LR		
	comp=Z,660nm,19.3s							
ULN	**Ulaanbaatar**	**29.16**	**292**		P	**P**	**23 39 18.7**	**+0.8**
ULN	**Ulaanbaatar**	**29.16**	**292**	*ce*	P	**P**	**23 39 19.1**	**+1.2**
ULN					pmax	pmax		
	comp=Z,3.0nm,0.7s							
ULN	**Ulaanbaatar**	**29.16**	**292**	*e*	P	**P**	**23 39 19.1**	**+1.2**
H11S1	**WAKE ISLAND Hy**	**29.50**	**144**		T	T	00 11 27.8	
	baz=334,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hy**	**29.50**	**144**		T	T	00 11 28.9	
	baz=334,slow=76,SNR=5.0							
H11S2	**WAKE ISLAND Hy**	**29.51**	**144**		T	T	00 11 27.2	
	baz=334,slow=76,SNR=65							
SONM	**Songino Array**	**29.60**	**293**		P	**P**	**23 39 22.6**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=81,slow=8.5,SNR=16							
SONM					LR	LR	23 52 32.8	
	comp=Z,203nm,18.0s,baz=89,slow=39							
	comp=Z,3.5nm,0.7s							
SONM	**Songino Array**	**29.60**	**293**		P	**P**	**23 39 22.4**	**+0.6**
LZH	**Lanzhou**	**35.11**	**273**	*e*	P	**P**	**23 40 12.2**	**+2.0**
LZH					pP	pwP	23 40 25.6	+1.5
LZH					sP	sP	23 40 29.5	+7.8
LZH					S	**S**	**23 45 47.6**	**+6.7**
LZH					pmax	pmax		
	comp=Z,27nm,1.0s							
LZH					pmax	pmax		
	comp=Z,120nm,4.6s							
LZH					LR	LR		
	comp=Z,130nm,12.4s							
LZH					LR	LR		
	comp=Z,210nm,10.1s							
LZH					LR	LR		
	comp=Z,130nm,13.7s							
GTA	**Gaotai**	**36.57**	**280**	*e*	P	**P**	**23 40 24.0**	**+1.3**
GTA					pP	pP	23 40 29.7	-1.3
GTA					pmax	pmax		
	comp=Z,7.0nm,1.0s							
J20K	**Nowinta River**	**37.26**	**37**		P	**P**	**23 40 29.2**	**+1.1**

IMAR	**Indian Mountai**	**37.62**	**34**		P	**P**	**23 40 31.6**	**+0.6**
H21K	**Melozitna Rive**	**37.97**	**35**		P	**P**	**23 40 34.8**	**+0.8**
H21K					IAmb	IAmb	23 40 36.2	
	comp=Z,5.8nm,1.1s							
KDAK	**Kodiak Island**	**38.03**	**48**		P	**P**	**23 40 34.2**	**-0.4**
	comp=Z,5.5nm,0.7s,baz=278,slow=13,SNR=2.2							
	comp=Z,5.5nm,0.7s							
KDAK	**Kodiak Island**	**38.03**	**48**		P	**P**	**23 40 34.6**	**0.0**
H23K	**Yukon River**	**39.32**	**35**		P	**P**	**23 40 46.3**	**+0.9**
H23K					IAmb	IAmb	23 41 00.9	
	comp=Z,5.3nm,0.8s							
NRIK	**Noril'sk**	**39.63**	**331**		LR	LR	23 58 35.7	
	comp=Z,79nm,18.8s,baz=142,slow=38							
MDM	**Murphy Dome**	**39.85**	**36**		P	**P**	**23 40 50.5**	**+0.7**
ILAR	**Eielson Array**	**40.43**	**36**		P	**P**	**23 40 53.3**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=278,slow=8.9,SNR=12							
	comp=Z,1.3nm,0.8s							
BMAR	**Burnt Mountain**	**41.34**	**32**		P	**P**	**23 41 03.4**	**+1.3**
GOMU	**GeErMu**	**41.54**	**278**		P	**P**	**23 41 05.7**	**+1.2**
GOMU					pP	pP	23 41 11.5	-1.4
GOMU					sP	sP	23 41 15.5	-0.5
GOMU					pmax	pmax		
	comp=Z,5.0nm,0.6s							
GOMU					pmax	pmax		
	comp=Z,58nm,5.1s							
PZH	**PanZhiHua**	**41.77**	**261**		P	**P**	**23 41 08.8**	**+2.6**
PZH					pmax	pmax		
	comp=Z,10.0nm,0.5s							
PZH					pmax	pmax		
	comp=Z,100nm,3.5s							
ZALV	**Zalesovo Beam**	**41.88**	**307**		P	**P**	**23 41 04.8**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=72,slow=6.8,SNR=2.2							
ZALV					PcP	**PcP**	**23 43 01.2**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=70,slow=2.5,SNR=9.5							
ZALV					LR	LR	23 59 01.3	
	comp=Z,51nm,19.3s,baz=74,slow=37							
	comp=Z,0.6nm,0.3s							
KMI	**Kunming**	**41.91**	**259**	⇓	P	**P**	**23 41 09.2**	**+1.8**
KMI					pmax	pmax		
	comp=Z,6.0nm,1.0s							
L27K	**Beaver Creek,**	**42.78**	**39**		P	**P**	**23 41 15.2**	**+1.3**
BCAR	**Beaver Creek A**	**42.80**	**39**		P	**P**	**23 41 15.1**	**+1.0**
WMQ	**Urumqi**	**43.23**	**292**	*e*	P	**P**	**23 41 19.7**	**+1.9**
WMQ					pP	pwP	23 41 33.1	+1.0
WMQ					pmax	pmax		
	comp=Z,20nm,0.9s							
WMQ					LR	LR		
	comp=Z,250nm,16.5s							
WMQ					LR	LR		
	comp=Z,140nm,21.3s							
HYT	**Haines Junctio**	**45.19**	**41**		P	**P**	**23 41 35.3**	**+1.9**
HYT					IAmb	IAmb	23 41 36.2	
	comp=Z,8.8nm,1.0s							
INK	**Inuvik**	**45.44**	**31**		P	**P**	**23 41 34.5**	**-0.5**
	comp=Z,2.0nm,0.4s,baz=301,slow=6.6,SNR=5.3							
	comp=Z,2.0nm,0.4s							
MK31	**Makanchi Array**	**45.63**	**298**		P	**P**	**23 41 37.4**	**+0.5**
MK31					IAmb	IAmb	23 41 38.3	
	comp=Z,7.3nm,0.7s							
MK31	**Makanchi Array**	**45.63**	**298**	*i*	P	**P**	**23 41 37.1**	**+0.2**
MKAR	**Makanchi Array**	**45.63**	**298**		P	**P**	**23 41 36.6**	**-0.3**
	comp=Z,8.8nm,0.7s,baz=77,slow=8.3,SNR=69							
	comp=Z,8.8nm,0.7s							
MKAR	**Makanchi Array**	**45.63**	**298**		P	**P**	**23 41 37.4**	**+0.6**
MKAR	**Makanchi Array**	**45.63**	**298**	*i*	P	**P**	**23 41 37.5**	**+0.6**
MKAR					pmax	pmax		
	comp=Z,9.0nm,0.7s							
MKAR	**Makanchi Array**	**45.63**	**298**	*e*	P	**P**	**23 41 37.5**	**+0.6**
MAKZ	**Makanchi**	**45.83**	**298**		P	**P**	**23 41 39.0**	**+0.6**
MAKZ					IAmb	IAmb	23 41 39.9	
	comp=Z,8.3nm,0.7s							
MAKZ	**Makanchi**	**45.83**	**298**		P	**P**	**23 41 39.0**	**+0.6**
MAKZ					pmax	pmax		
	comp=Z,8.0nm,0.7s							
KURK	**Kurchatov**	**46.47**	**304**		P	**P**	**23 41 42.8**	**-0.6**
KURK					IAmb	IAmb	23 41 44.8	
	comp=Z,3.4nm,0.6s							
KURK	**Kurchatov**	**46.47**	**304**	*ce*	P	**P**	**23 41 43.4**	**0.0**
KURK					pmax	pmax		
	comp=Z,4.0nm,1.3s							
KURK	**Kurchatov**	**46.47**	**304**	*e*	P	**P**	**23 41 43.4**	**0.0**
KURBB	**Kurchatov Arra**	**46.56**	**304**		P	**P**	**23 41 43.0**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=74,slow=8.6,SNR=22							
KURBB					PcP	**PcP**	**23 43 17.7**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=71,slow=4.0,SNR=7.0							
	comp=Z,2.9nm,0.7s							
C36M	**Paulatuk**	**48.56**	**28**		P	**P**	**23 42 00.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**48.92**	**255**		P	**P**	**23 42 03.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=39,slow=6.3,SNR=4.2							
CMAR					LR	LR	00 05 32.1	
	comp=Z,58nm,18.4s,baz=185,slow=40							
	comp=Z,0.4nm,0.3s							
BVAR	**Borovoye Array**	**50.34**	**310**		LR	LR	00 04 34.7	
	comp=Z,20nm,19.3s,baz=352,slow=37							
BRVK	**Borovoye**	**50.39**	**310**	*i*	P	**P**	**23 42 13.6**	**+0.1**
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.9s							
BRVK	**Borovoye**	**50.39**	**310**	*e*	P	**P**	**23 42 13.6**	**+0.1**
ULHL	**Ulahol**	**51.49**	**295**		P	**P**	**23 42 23.5**	**+1.2**
	SNR=6.4							
TKM2	**Tokmak 2**	**51.59**	**296**		P	**P**	**23 42 24.2**	**+1.3**
	SNR=9.6							
USP	**Ospenovka**	**52.13**	**297**		P	**P**	**23 42 28.0**	**+1.2**
	SNR=12							
KBK	**Karagaybulak**	**52.13**	**296**		P	**P**	**23 42 27.9**	**+0.9**
	SNR=7.2							
AAK	**Ala-Archa**	**52.44**	**296**		LR	LR	00 06 58.0	
	comp=Z,86nm,18.3s,baz=106,slow=39							
**EKS2

	comp=Z,10.0nm,1.2s									
KLMR	**Klimovskoe**	**60.88**	**328**	*e*P		**P**	**23 43 27.0**	**-1.7**
KLMR				AMP			23 43 29.2	
	comp=Z,10.0nm,1.2s									
SUMG	**Summit**	**63.54**	**3**	P		**P**	**23 43 47.0**	**+0.2**
SUMG				IAmb		IAmb	23 43 48.2	
	comp=Z,7.1nm,1.0s									
SUMG	**Summit**	**63.54**	**3**	P		**P**	**23 43 47.0**	**+0.2**
SUMG				pmax		pmax		
	comp=Z,7.0nm,1.0s									
SUMG	**Summit**	**63.54**	**3**	*i* P		**P**	**23 43 45.0**	**-1.8**
WRA	**Warramunga Arr**	**65.11**	**195**	P		**P**	**23 43 57.2**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=18,slow=7.4,SNR=1.3									
	comp=Z,0.4nm,0.7s									
FIA1	**FINESS Array S**	**65.19**	**334**	P		**P**	**23 43 56.4**	**-0.9**
FIA1				IAmb		IAmb	23 43 57.7	
	comp=Z,7.0nm,0.8s									
FINES	**FINESS Array B**	**65.20**	**334**	P		**P**	**23 43 55.5**	**-1.8**
	comp=Z,5.1nm,0.7s,baz=35,slow=8.0,SNR=22									
	comp=Z,5.1nm,0.7s									
FINES	**FINESS Array B**	**65.20**	**334**	P		**P**	**23 43 56.2**	**-1.1**
FINES	**FINESS Array B**	**65.20**	**334**	*i* P		**P**	**23 43 56.7**	**-0.6**
FINES				pmax		pmax		
	comp=Z,5.0nm,0.7s									
GEYT	**Alibeck**	**65.47**	**300**	P		**P**	**23 44 00.1**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=28,slow=13,SNR=4.3									
	comp=Z,3.8nm,0.8s									
GEYT	**Alibeck**	**65.47**	**300**	P		**P**	**23 44 00.2**	**+0.7**
GEYT				IAmb		IAmb	23 44 00.8	
	comp=Z,3.2nm,0.7s									
BOZ	**Bozeman (W)**	**65.71**	**49**	P		**P**	**23 44 01.9**	**+0.8**
BOZ				IAmb		IAmb	23 44 17.2	
	comp=Z,4.1nm,0.8s									
BOZ	**Bozeman (W)**	**65.71**	**49**	P		**P**	**23 44 01.9**	**+0.8**
BOZ				pmax		pmax		
	comp=Z,4.0nm,0.8s									
OBN	**Obninsk**	**65.85**	**324**⇑	*e*P		**P**	**23 44 01.4**	**-0.2**
OBN				*e*			23 46 32.7	
OBN				*e*S		**S**	**23 52 39.6**	**-6.3**
OBN				pmax		pmax		
	comp=Z,21nm,2.5s									
OBN				MLR		MLR		
	comp=Z,67nm,16.0s									
OBN	**Obninsk**	**65.85**	**324**	*e*P		**P**	**23 44 01.4**	**-0.2**
NVAR	**Mina Array Bea**	**66.26**	**59**	P		**P**	**23 44 05.6**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=290,slow=7.6,SNR=11									
	comp=Z,1.5nm,0.7s									
PD31	**Pinedale Array**	**68.66**	**51**	P		**P**	**23 44 20.1**	**0.0**
PDAR	**Pinedale Array**	**68.66**	**51**	P		**P**	**23 44 20.0**	**0.0**
	comp=Z,0.7nm,0.6s,baz=280,slow=2.2,SNR=8.0									
	comp=Z,0.7nm,0.6s									
PDAR	**Pinedale Array**	**68.66**	**51**	P		**P**	**23 44 20.2**	**+0.2**
ASAR	**Alice Springs**	**68.82**	**195**	P		**P**	**23 44 22.0**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=14,slow=8.0,SNR=2.4									
	comp=Z,0.5nm,0.7s									
ASAR	**Alice Springs**	**68.82**	**195**	P		**P**	**23 44 22.0**	**+1.3**
NC405	**NORSAR Array S**	**69.59**	**339**	P		**P**	**23 44 24.8**	**-0.4**
MNK	**Minsk**	**69.78**	**328**	*i* P		**P**	**23 44 27.5**	**+1.1**
MNK				*i* *PP		**pwP**	**23 44 41.7**	**+0.3**
MNK				*i*			23 44 49.9	
MNK				*i*			23 47 01.7	
MNK				*i* PPP		PPP	23 48 43.3	
MNK				*i* S		**S**	**23 53 30.9**	**-2.1**
MNK				*i* *SS		sS	23 53 57.1	+10
MNK				*i*			23 54 24.6	
MNK				*i* SS		**SS**	**23 58 02.5**	**+1.7**
MNK				pmax		pmax		
	comp=Z,20nm,0.9s									
MNK				pmax		pmax		
	comp=N,9.0nm,0.9s									
MNK				pmax		pmax		
	comp=E,2.0nm,1.0s									
MNK				MLR		MLR		
	comp=Z,65nm,18.0s									
MNK				MLR		MLR		
	comp=E,11nm,20.0s									
MNK				MLR		MLR		
	comp=N,24nm,17.0s									
MNK	**Minsk**	**69.78**	**328**	*i* P		**P**	**23 44 27.5**	**+1.1**
	comp=E,2.0nm,1.0s									
MNK				*i* P		**P**	**23 44 27.5**	**+1.1**
	comp=N,9.0nm,0.9s									
MNK				*i* P		**P**	**23 44 27.5**	**+1.1**
	comp=Z,20nm,0.9s,baz=41									
MNK				*i* pP		**pwP**	**23 44 41.7**	**+0.3**
MNK				*i* PP		**PP**	**23 47 01.8**	**+1.5**
MNK				*i* PPP		PPP	23 48 43.4	
MNK				*i* S		**S**	**23 53 30.9**	**-2.1**
MNK				*i* sS		sS	23 53 57.1	+10
MNK				*i* SS		**SS**	**23 58 02.5**	**+1.7**
MNK				*i* SSS		SSS	00 01 20.4	
MNK				*i* LQ		LQ	00 10 02.5	
MNK				*i* LR		LR	00 15 34.4	
MNK				*i* LRM		MLR	00 17 41.7	
	comp=E,11nm,20.4s									
MNK				*i* LRM		MLR	00 17 41.7	
	comp=Z,65nm,17.8s									
MNK				*i* LRM		MLR	00 18 13.5	
	comp=N,24nm,17.0s									
NB2	**NORSAR Subarra**	**69.78**	**340**	P		**P**	**23 44 25.9**	**-0.5**
	comp=Z,4.6nm,0.6s,baz=30,slow=6.5									
NOA	**NORSAR Array B**	**69.78**	**340**	P		**P**	**23 44 25.8**	**-0.5**
	comp=Z,7.6nm,0.9s,baz=32,slow=6.6,SNR=29									
NOA				LR		LR	00 18 16.3	
	comp=Z,14nm,22.0s,baz=30,slow=39									
	comp=Z,7.6nm,0.9s									
NACGM	**Naroch**	**69.89**	**329**⇓	*e*P		**P**	**23 44 27.2**	**+0.1**
	baz=40									
HFS	**Hagfors**	**69.91**	**338**	LR		LR	00 19 49.6	
	comp=Z,27nm,18.6s,baz=47,slow=40									
SEKA	**Sheki**	**69.91**	**308**	P		**P**	**23 44 28.5**	**+0.9**
ZKTA	**Zakatala**	**69.95**	**309**	P		**P**	**23 44 28.9**	**+1.2**
NORES	**NORESS Array B**	**69.96**	**339**	P		**P**	**23 44 26.8**	**-0.6**
MNGR	**Mingechevir, A**	**70.27**	**308**	P		**P**	**23 44 30.8**	**+1.2**
KIV	**Kislovodsk**	**70.55**	**313**	⇑P		**P**	**23 44 32.9**	**+1.4**
KIV	**Kislovodsk**	**70.55**	**313**	P		**P**	**23 44 32.2**	**+0.8**
KIV				IAmb		IAmb	23 44 34.0	
	comp=Z,7.1nm,0.8s									
KIV	**Kislovodsk**	**70.55**	**313**	*e*P		**P**	**23 44 32.8**	**+1.4**
KIV				pmax		pmax		
	comp=Z,10.0nm,1.1s									
KIV				MLR		MLR		
	comp=Z,94nm,18.0s									
KBZ	**Khabaz**	**70.59**	**312**	P		**P**	**23 44 31.8**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=59,slow=4.8,SNR=18									
	comp=Z,6.0nm,0.8s									
KBZ	**Khabaz**	**70.59**	**312**	*ce*P		**P**	**23 44 32.5**	**+1.0**
KBZ				pmax		pmax		
	comp=Z,7.0nm,0.9s									
KBZ	**Khabaz**	**70.59**	**312**	*e*P		**P**	**23 44 32.5**	**+1.0**
LKRN	**Lenkeran, Azer**	**70.65**	**305**	P		**P**	**23 44 33.3**	**+1.3**
ZEI	**Tsey**	**70.69**	**311**	*e*P		**P**	**23 44 32.3**	**-0.1**
ZEI				pmax		pmax		
	comp=Z,5.0nm,0.7s									
ZEI	**Tsey**	**70.69**	**311**	*e*P		**P**	**23 44 32.3**	**-0.1**
GANJ	**Ganja**	**70.78**	**308**	P		**P**	**23 44 35.1**	**+2.3**
ONI	**Oni**	**71.07**	**311**	P		**P**	**23 44 35.3**	**+0.7**
ONI				IAmb		IAmb	23 44 37.2	
	comp=Z,4.8nm,0.9s									
ONI	**Oni**	**71.07**	**311**	P		**P**	**23 44 35.3**	**+0.7**
ONI				pmax		pmax		
	comp=Z,5.0nm,0.9s									
GNI	**Garni**	**72.01**	**309**	LR		LR	00 19 39.1	
	comp=Z,25nm,19.9s,baz=66,slow=39									
AKASG	**Malin Array Be**	**72.11**	**325**	P		**P**	**23 44 40.4**	**-0.2**
	comp=Z,5.3nm,0.8s,baz=39,slow=6.5,SNR=29									
AKASG				LR		LR	00 17 52.7	
	comp=Z,28nm,20.2s,baz=21,slow=37									
	comp=Z,5.3nm,0.8s									
AKASG	**Malin Array Be**	**72.11**	**325**	*i* P		**P**	**23 44 40.4**	**-0.2**
AKASG				pmax		pmax		
	comp=Z,6.0nm,0.8s									
AKBB	**Malin Array Si**	**72.11**	**325**	P		**P**	**23 44 40.6**	**0.0**
AKBB				IAmb		IAmb	23 44 41.4	
	comp=Z,12nm,1.0s									
AKBB	**Malin Array Si**	**72.11**	**325**	*ce*P		**P**	**23 44 40.9**	**+0.3**
NAX	**Nakhchivan**	**72.24**	**307**	P		**P**	**23 44 42.9**	**+1.2**
KARS	**Kars**	**72.61**	**310**	P		**P**	**23 44 45.6**	**+1.6**
KARS	**Kars**	**72.61**	**310**	P		**P**	**23 44 45.6**	**+1.6**
KARS				pmax		pmax		
	comp=Z,13nm,0.6s									
SORM	**Soroca**	**74.44**	**323**	⇑P		**P**	**23 44 53.8**	**-0.6**
SORM	**Soroca**	**74.44**	**323**	⇑P		**P**	**23 44 53.8**	**-0.6**
GKP	**Gorka Klasztor**	**74.59**	**332**	*e*P		**P**	**23 44 55.4**	**+0.3**
GURO	**Guroymak-BITLI**	**74.63**	**309**	P		**P**	**23 44 57.2**	**+1.4**
GURO				IAmb		IAmb	23 44 58.5	
	comp=Z,3.6nm,0.7s									
ANMO	**Albuquerque**	**75.71**	**55***ce*	P		**P**	**23 45 02.6**	**+0.4**
ANMO				pmax		pmax		
	comp=Z,3.0nm,1.7s									
BUR08	**Bucovina Ar. S**	**76.15**	**325**	P		**P**	**23 45 05.1**	**+0.7**
BURAR	**Bucovina Array**	**76.17**	**325**	⇑P		**P**	**23 45 04.7**	**+0.2**
BURAR	**Bucovina Array**	**76.17**	**325**	P		**P**	**23 45 05.1**	**+0.6**
BURAR				IAmb		IAmb	23 45 06.1	
	comp=Z,4.1nm,0.6s									
BURAR	**Bucovina Array**	**76.17**	**325**	⇑P		**P**	**23 45 04.7**	**+0.2**
KOLS	**Kolonicke sedl**	**76.31**	**327**	*e*P		**P**	**23 45 05.4**	**+0.3**
KOLS				pmax		pmax		
	comp=Z,4.0nm,0.7s									
KOLS	**Kolonicke sedl**	**76.31**	**327**	*e*P		**P**	**23 45 05.4**	**+0.3**
BIZ	**Bicaz**	**76.33**	**324**	⇑P		**P**	**23 45 06.2**	**+1.0**
TESR	**Tescani**	**76.42**	**323**	⇓P		**P**	**23 45 05.7**	**-0.1**
CFR	**Carcaliu**	**76.81**	**321**	⇑P		**P**	**23 45 07.5**	**-0.4**
CFR	**Carcaliu**	**76.81**	**321**	⇑P		**P**	**23 45 07.5**	**-0.4**
SCHQ	**Schefferville**	**76.86**	**20**	LR		LR	00 23 18.4	
	comp=Z,42nm,18.9s,baz=35,slow=39									
TPGR	**Topolog**	**76.92**	**321**	⇑P		**P**	**23 45 09.5**	**+0.8**
ARCR	**ARCALIA**	**76.95**	**325**	⇑P		**P**	**23 45 09.9**	**+1.1**
COVR	**Voineasa-Covas**	**77.14**	**323**	⇑P		**P**	**23 45 08.9**	**-1.0**
TLBR	**Topalu**	**77.33**	**321**	⇑P		**P**	**23 45 09.5**	**-1.5**
DPC	**Dobruska-Polom**	**77.35**	**331**	*e*P		**P**	**23 45 11.3**	**+0.3**
DPC	**Dobruska-Polom**	**77.35**	**331**	*e*P		**P**	**23 45 11.3**	**+0.3**
MORC	**Moravsky Berou**	**77.40**	**330**	*e*P		**P**	**23 45 11.6**	**+0.3**
KRLC	**Kraliky**	**77.42**	**331**	*e*P		**P**	**23 45 12.0**	**+0.6**
KRLC	**Kraliky**	**77.42**	**331**	*e*P		**P**	**23 45 12.0**	**+0.6**
MLR	**Muntele Rosu**	**77.53**	**323**	⇑P		**P**	**23 45 12.9**	**+0.7**
MLR	**Muntele Rosu**	**77.53**	**323**	⇑P		**P**	**23 45 12.9**	**+0.7**
CLL	**Collm**	**77.64**	**334**	P		**P**	**23 45 12.5**	**0.0**
CLL	**Collm**	**77.64**	**334**⇑	*i* P		**P**	**23 45 12.6**	**0.0**
CLL				*i* *PP		**sP**	**23 45 24.8**	**+0.3**
CLL				pmax		pmax		
	comp=Z,7.0nm,0.7s									
CLL	**Collm**	**77.64**	**334**⇑	*i* P		**P**	**23 45 12.6**	**0.0**
	comp=Z,7.0nm,0.7s									
CLL				*e*PcP		**sP**	**23 45 24.0**	**-0.5**
CLL				*i* x		x	23 45 28.6	
VOIR		**77.96**	**323**	⇑P		**P**	**23 45 15.1**	**+0.6**
VOIR		**77.96**	**323**	⇑P		**P**	**23 45 15.1**	**+0.6**
VYHS	**Vyhne**	**77.99**	**329**	*e*P		**P**	**23 45 15.3**	**+0.7**
VYHS				pmax		pmax		
	comp=Z,2.0nm,0.8s									
VYHS	**Vyhne**	**77.99**	**329**	*e*P		**P**	**23 45 15.3**	**+0.7**
JAVC	**Velka Javorina**	**78.11**	**330**	*e*P		**P**	**23 45 16.8**	**+1.5**
VRAC	**Vranov**	**78.13**	**330**	LR		LR	00 23 49.4	
	comp=Z,51nm,18.3s,baz=27,slow=39									
VRAC	**Vranov**	**78.13**	**330**	*e*P		**P**	**23 45 15.4**	**+0.1**
ARR	**Arges**	**78.19**	**324**	⇑P		**P**	**23 45 17.1**	**+1.3**
PRU	**Pruhonice**	**78.26**	**332**	*e*P		**P**	**23 45 16.4**	**+0.4**
PRU	**Pruhonice**	**78.26**	**332**	*e*P		**P**	**23 45 16.4**	**+0.4**
BRTR	**Keskin Array B**	**78.29**	**315**	P		**P**	**23 45 17.1**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=72,slow=4.0,SNR=5.2									
BRTR				LR		LR	00 25 11.8			
	comp=Z,33nm,18.1s,baz=110,slow=40									
	comp=Z,1.7nm,0.7s									
BRTR	**Keskin Array B**	**78.29**	**315**	*i* P		**P**	**23 45 17.6**	**+1.0**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.7s									
KRUC	**Moravsky**	**78.41**	**330**	*e*P		**P**	**23 45 17.2**	**+0.4**
SIRR	**Siria**	**78.71**	**326**	⇑P		**P**	**23 45 19.4**	**+0.8**
GZR	**Gura Zlata**	**78.96**	**325**	⇑P		**P**	**23 45 19.9**	**-0.1**
GZR	**Gura Zlata**	**78.96**	**325**	⇑P		**P**	**23 45 19.9**	**-0.1**
BZS	**Buzias**	**79.26**	**325**	⇑P		**P**	**23 45 22.3**	**+0.7**
BZS	**Buzias**	**79.26**	**325**	⇑P		**P**	**23 45 22.3**	**+0.7**
KHC	**Kasperske Hory**	**79.32**	**332**	P		**P**	**23 45 22.1**	**+0.2**
KHC				IAmb		IAmb	23 45 24.2	
	comp=Z,6.3nm,0.7s									
KHC	**Kasperske Hory**	**79.32**	**332**	*e*P		**P**	**23 45 22.5**	**+0.6**
KHC				*e*			23 45 35.8	
KHC	**Kasperske Hory**	**79.32**	**332**	*e*P		**P**	**23 45 22.5**	**+0.6**
KHC				*e*pP		**pwP**	**23 45 35.8**	**-1.2**
CKRC	**Cesky Krumlov**	**79.34**	**331**	*e*P		**P**	**23 45 22.2**	**+0.2**
CKRC				*ex*		x	23 45 36.0	
GEC2	**GERESS Array S**	**79.53**	**332**	P		**P**	**23 45 22.7**	**-0.4**
GERES	**GERESS Array B**	**79.53**	**332**	P		**P**	**23 45 22.9**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=33,slow=5.1,SNR=16									
	comp=Z,1.8nm,0.7s									
GERES	**GERESS Array B**	**79.53**	**332**	P		**P**	**23 45 23.0**	**-0.2**
GERES	**GERESS Array B**	**79.53**	**332**	P		**P**	**23 45 23.0**	**-0.2**
CONA	**Conrad Observa**	**79.55**	**330**	*e*P		**P**	**23 45 24.1**	**+0.8**
	comp=Z,4.0nm,0.8s									
RONA	**Rosalia, Austr**	**79.59**	**330**	*e*P		**P**	**23 45 24.1**	**+0.7**
	comp=Z,2.6nm,0.9s									
MORH	**Mrgy, Hungar**	**79.95**	**328**	⇑P		**P**	**23 45 25.4**	**+0.1**
MOA	**Molin**	**80.19**	**331**	*e*P		**P**	**23 45 27.5**	**+0.8**
	comp=Z,2.6nm,0.7s									
BOVS	**Bovan**	**80.83**	**324**	⇑P		**P**	**23 45 29.5**	**-0.6**
SOKA	**Soboth**	**80.91**	**330**	*e*P		**P**	**23 45 31.3**	**+0.7**
	comp=Z,5.1nm,1.0s,SNR=6.2									
RDO	**Rodhopi**	**81.14**	**320**	P		**P**	**23 45 31.7**	**-0.1**
RDO				IAmb		IAmb	23 45 33.1	
	comp=Z,7.4nm,1.1s									
DIVS	**Divibare**	**81.16**	**326**	P		**P**	**23 45 31.0**	**-1.0**
DIVS				IAmb		IAmb	23 45 33.9	
	comp=Z,4.5nm,0.8s									
KBA	**Koelnbreinsper**	**81.17**	**331**	*e*P		**P**	**23 45 33.0**	**+0.9**
	comp=Z,4.1nm,0.6s,SNR=4.8									
TX32	**Lajitas Array**	**81.34**	**57**	P		**P**	**23 45 33.3**	**+0.1**
TXAR	**Lajitas Array**	**81.34**	**57**	P		**P**	**23 45 33.3**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=299,slow=4.0,SNR=16									
	comp=Z,2.0nm,0.7s									
TXAR	**Lajitas Array**	**81.34**	**57**	P		**P**	**23 45 33.7**	**+0.5**
WATA	**Walderalm**	**81.55**	**332**	*e*P		**P**	**23 45 35.3**	**+1.3**
	comp=Z,5.4nm,0.7s									
WTTA	**Wattenberg**	**81.59**	**332**	*e*P		**P**	**23 45 35.0**	**+0.7**
	comp=Z,8.5nm,0.9s,SNR=4.7									
PRED	**Cave del Predi**	**81.64**	**331**	P		**P**	**23 45 33.8**	**-0.7**
PRED				IAmb		IAmb	23 45 35.6	
	comp=Z,3.2nm,0.7s									
RETA	**Reutte**	**81.69**	**333**	*e*P		**P**	**23 45 35.0**	**+0.3**
	comp=Z,4.4nm,1.1s									
MOTA	**Moosalm**	**81.70**	**333**	*e*P		**P**	**23 45 35.3**	**+0.5**
	comp=Z,8.8nm,0.9s,SNR=8.2									
SQTA	**Sankt Quirin**	**81.77**	**332**	*e*P		**P**	**23 45 35.7**	**+0.5**
	comp=Z,5.4nm,0.8s									
STAL	**STALIGIAL**	**82.09**	**331**	P		**P**	**23 45 35.7**	**-1.1**
STAL				IAmb		IAmb	23 45 37.9	
	comp=Z,8.5nm,1.2s									
FETA	**Feichten**	**82.11**	**333**	*e*P		**P**	**23 45 37.8**	**+0.8**
	comp=Z,4.7nm,1.0s,SNR=4.7									
KEST	**Kesra**	**92.53**	**328**	LR		LR	00 32 43.9	
	comp=Z,60nm,18.4s,baz=266,slow=39									
ESDC	**Sonseca Array**	**93.14**	**339**	P		**P**	**23 46 30.2**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=25,slow=5.5,SNR=2.2									
	comp=Z,0.4nm,0.8s									
TORD	**Torodi Ar. Bea**	**115.75**	**324**	PKP		**PKiKP**	**23 51 57.8**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=51,slow=1.8,SNR=1.6									
H03N2	**Juan Fernandez**	**141.61**	**91**	T		T	02 31 10.3	
	baz=303									
H03N3	**Juan Fernandez**	**141.62**	**91**	T		T	02 31 10.3	
	baz=303									
H03N1	**Juan Fernandez**	**141.62**	**91**	T		T	02 31 08.0	
	baz=303									
TROLL	**Troll, Antarti**	**147.74**	**199**	PKPbc		**PKiKP**	**23 53 01.5**	**-0.3**
BDFB	**Brasilia**	**148.18**	**32**	PKPbc		**PKPbc**	**23 53 01.7**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=267,slow=4.4,SNR=3.2									
SNAA	**Sanae**	**149.16**	**197**	PKPbc		**PKiKP**	**23 53 04.5**	**-0.2**
VNA3	**Neumayer Olymp**	**150.82**	**194**	PKPab		**PKPab**	**23 53 16.8**	**+2.0**
VNA3	**Neumayer Olymp**	**150.82**	**194**	PKPbc		**PKiKP**	**23 53 09.0**	**+0.9**
KOVU	**Salmi**	**0.39**	**357**	*i* P		**Pg**	**23 47 41.4**	**-0.6**
KOVU				*i* S		**Sg**	**23 47 46.5**	**-0.5**
LANU	**Lannavaara**	**0.70**	**71**	*e*P		**Pg**	**23 47 47.3**	**-0.7**
	baz=264									
LANU				*e*S		**Sg**	**23 47 57.1**	**+0.1**
DUNU	**Dundret**	**0.73**	**169**	P		**Pg**	**23 47 48.0**	**-0.6**
DUNU				S		**Sg**	**23 47 58.3**	**+0.3**
DUNU	**Dundret**	**0.73**	**169**	*i* P		**Pg**	**23 47 48.0**	**-0.6**
DUNU				*i* S		**Sg**	**23 47 58.3**	**+0.3**
MASU	**Masugnsbyn**	**0.78**	**119**	P		**Pg**	**23 47 48.9**	**-0.6**
MASU	**Masugnsbyn**	**0.78**	**119**	*i* P		**Pg**	**23 47 48.9**	**-0.6**
SALU	**Saltoluokta**	**0.80**	**236**	P		**Pg**	**23 47 49.2**	**-0.7**
SALU	**Saltoluokta**	**0.80**	**236**	*i* P		**Pg**	**23 47 49.2**	**-0.7**
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P		**Pg**	**23 47 56.9**	**-0.6**
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*PB		**Pg**	**23 47 57.1**	**-0.3**
	baz=203									
KIF				MSG			23 48 10.8			
	comp=Z,17nm,0.2s									
KIF				*e*S		**Sg**	**23 48 12.5**	**-0.4**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**	**23 47 59.7**	**-1.4**
PAJU	**Pajala**	**1.38**	**125**	*e*P		**Pg**	**23 47 59.5**	**-1.6**
	baz=304									
PAJU				*e*SN		**Sb**	**23 48 19.3**	**-0.1**
HEF	**Hetta**	**1.41**	**64**	*e*P		**Pn**	**23 48 00.2**	**-1.3**
HEF	**Hetta**	**1.41**	**64**	*e*PG		**Pn**	**23 48 00.2**	**-1.3**
	baz=247									
HEF				MSG			23 48 18.3			
	comp=Z,10.0nm,0.2s									
HEF				*e*SB		**Sg**	**23 48 19.0**	**-0.9**
HARU	**Harads**	**1.71**	**170**	P		**Pn**	**23 48 05.3**	**-0.2**
HARU	**Harads**	**1.71**	**170**	*e*P		**Pn**	**23 48 05.3**	**-0.2**
TOF	**Tornio**	**2.39**	**136**	*e*PB		**Pn**	**23 48 16.2**	**+1.2**
	baz=313									
TOF				MSG			23 48 46.0			
	comp=Z,5.1nm,0.2s									
TOF				*e*SB		**Sb**	**23 48 48.0**	**-0.5**
SJUU	**Sjulsmark**	**2.40**	**166**	P		**Pn**	**23 48 15.8**	**+0.7**
SJUU	**Sjulsmark**	**2.40**	**166**	*e*P		**Pn**	**23 48 15.8**	**+0.7**
SGF	**Sodankyl**	**2.44**	**96**	*e*PB		**Pn**	**23 48 17.3**	**+1.6**
SGF				*e*SB		**Sn**	**23 48 47.7**	**+1.5**
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB		**Pn**	**23 48 18.8**	**+1.4**
	baz=308									
RNF				*e*SB		**Sb**	**23 48 52.8**	**-0.8**
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*SB		**Sb**	**23 48 51.9**	**-1.9**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn		**Pn**	**23 48 17.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=226,slow=16,SNR=12									
ARCES				Sn		**Sn**	**23 48 50.1**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=226,slow=25,SNR=21									
	comp=Z,0.6nm,0.3s									
KEV	**Kevo**	**3.13**	**49**	*e*S		**Sn**	**23 49 03.8**	**+0.7**
KEV				MSG			23 49 07.3			
	comp=Z,3.5nm,0.2s									
BURU	**Burvik**	**3.30**	**171**	*e*P		**Pn**	**23 48 29.3**	**+1.8**
	baz=357									
VRF	**Varrio**	**3.56**	**87**	*e*PG		**Pb**	**23 48 38.8**	**+0.4**
VRF				*e*SG		**Sb**	**23 49 25.0**	**+2.8**
OBF8	**Ulkokalla**	**3.76**	**158**	*e*PB		**Pn**	**23 48 37.5**	**+3.8**
OLKF	**Oulanka, Finla**	**3.90**	**109**	*e*P		**Pn**	**23 48 36.4**	**+0.8**
UMAU	**Umeaa**	**3.98**	**177**	*e*P		**Pn**	**23 48 38.6**	**+1.9**
KU6	**Riekki**	**4.22**	**111**	*e*PG		**Pb**	**23 48 50.1**	**+0.5**
	baz=295									
FINES	**FINESS Array B**	**6.89**	**156**	Pn		**Pn**	**23 49 16.6**	**-0.1**
	baz=341,slow=10,SNR=1.3									
FINES				Sn		**Sn**	**23 50 31.7**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=338,slow=21,SNR=2.2									
	comp=Z,1.5nm,1.0s									
NOA	**NORSAR Array B**	**7.85**	**214**	Pn		**Pn**	**23 49 30.9**	**+1.0**
	baz=40,slow=15,SNR=1.9									
NOA				Lg		Lg	23 51 43.4			
	baz=43,slow=26,SNR=2.2									
	comp=Z,0.2nm,0.8s									

*SOME **03** 00:04:35.3, 44°.92N×79°.42E, h15km*
*NNC **03** 00:04:35.8±0.9, 44°.87N×79°.48E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=9.2km s-min=5.8km az=107.0*
ISC 03 00:04:33.6±1.4, **44°.97N**±0°.04×**79°.48E**±0°.03, **h2**km±18km, **n17**, σ0**88**/31, **3C-1D**, **Eastern Kazakhstan**

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

KK31	**Karatay Array**	**6.50**	**359**	P		**Pn**	**00 06 18.0**	**+2.6**
	1.5nm,0.3s,baz=166,slow=21,SNR=61							
KK31				S		**Sn**	**00 07 27.2**	**-1.3**
	15nm,0.5s,baz=178,slow=14,SNR=26							
AAK	**Ala-Archa**	**6.70**	**25**	P		**Pn**	**00 06 19.5**	**+1.4**
	2.0nm,0.3s,baz=225,slow=4.8,SNR=2.7							
AAK				S		**Sn**	**00 07 33.9**	**+0.5**
	2.1nm,0.3s,baz=180,slow=20,SNR=1.6							
GEYT	**Alibeck**	**10.13**	**281**	P		**Pn**	**00 07 04.4**	**+0.6**
	0.7nm,0.3s,baz=101,slow=11,SNR=7.7							
GEYT				S		**Sn**	**00 08 56.4**	**+0.3**
	1.6nm,0.3s,baz=76,slow=25,SNR=6.8							
MKAR	**Makanchi Array**	**13.34**	**37**	P		**Pn**	**00 07 46.6**	**+1.0**
	1.1nm,0.7s,baz=234,slow=9.9,SNR=7.6							
AB31	**Akbulak array**	**14.89**	**332**	⇑P		**Pn**	**00 08 05.3**	**+0.4**
	1.5nm,0.5s,baz=148,slow=11,SNR=23							
AB31				S		**Sn**	**00 10 47.6**	**-2.5**
	0.8nm,0.5s,baz=153,slow=24,SNR=5.6							
KURBB	**Kurchatov Arra**	**15.10**	**19**	P		**Pn**	**00 08 09.5**	**+2.0**
	0.5nm,0.7s,baz=206,slow=10,SNR=3.6							
AKTO	**Aktyubinsk**	**16.58**	**330**	P		**P**	**00 08 27.8**	**+2.2**
	6.1nm,0.5s,baz=134,slow=11,SNR=22							
AKTO	**Aktyubinsk**	**16.58**	**330**	⇓P		**P**	**00 08 27.4**	**+1.8**
	5.5nm,0.6s							
ZALV	**Zalesovo Beam**	**19.92**	**25**	P		**P**	**00 09 01.8**	**-0.1**
	3.1nm,0.5s,baz=222,slow=12,SNR=16							
	3.1nm,0.5s							
SONM	**Songino Array**	**28.46**	**56**	P		**P**	**00 10 21.2**	**-1.8**
	0.4nm,0.7s,baz=250,slow=8.6,SNR=1.8							
	0.4nm,0.7s							
FINES	**FINESS Array B**	**37.27**	**326**	P		**P**	**00 11 39.9**	**+0.8**
	1.7nm,1.0s,baz=108,slow=8.9,SNR=1.5							
	1.7nm,1.0s							
ARCES	**ARCESS Array B**	**40.97**	**338**	P		**P**	**00 12 09.7**	**0.0**
	2.2nm,0.8s,baz=109,slow=9.9,SNR=2.9							
	2.2nm,0.8s							
NB2	**NORSAR Subarra**	**44.16**	**323**	P		**P**	**00 12 35.3**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.16**	**323**	P		**P**	**00 12 35.6**	**0.0**
	comp=Z,0.7nm,0.6s,baz=97,slow=7.8,SNR=4.5							
	comp=Z,0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**65.49**	**268**	P		**P**	**00 15 07.1**	**-2.5**
	comp=Z,0.4nm,0.9s,baz=50,slow=6.9,SNR=2.2							
	comp=Z,0.4nm,0.9s							
YKA	**Yellowknife Ar**	**81.15**	**2**	P		**P**	**00 16 39.0**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=349,slow=5.8,SNR=2.2							
	comp=Z,0.2nm,0.4s							
WRA	**Warramunga Arr**	**82.24**	**122**	P		P	00 16 42.8	-4.0
	comp=Z,0.5nm,0.4s,baz=326,slow=4.9,SNR=2.7							
	comp=Z,0.5nm,0.4s							

IDC 03 00:11:47.6±3.4,3°98S×127°89E,h0km,mb3.5/2, mbtmp3.5/3,ML3.5/1,Error ellipse: s-maj=366.4km s-min=30.3km az=67.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.07**	**159**	P	Pn	00 15 47.7	-0.2
	0.2nm,0.3s,baz=335,slow=13,SNR=2.3						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**20.41**	**164**	P	P	00 16 26.6	+0.1
	1.2nm,0.3s,baz=351,slow=9.8,SNR=19						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**64.56**	**327**	P	P	00 22 26.7	0.0
	0.2nm,0.5s,baz=116,slow=7.9,SNR=1.8						
	0.2nm,0.5s						

*NEIC **03** 00:46:23.6±2.1,21°.0S±0°.2×177°.3W±0°.1,h523km±10km, mb4.4/15,Error ellipse: s-maj=23.4km s-min=14.4km az=160.0*
*IDC **03** 00:46:29.6±5.0,19°.24S×177°.93W,h590km±31km,mb3.2/3, mbtmp4.2/5,Error ellipse: s-maj=106.2km s-min=31.6km az=136.0*

ISC 03 00:46:24.6±0.8,20°.5S±0°.1×177°.39W±0°.10,h550km,n27, σ1°.94/27,mb4.4/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.14**	**302**	P	**P**	**00 47 54.5**	**-1.3**
	10.0nm,0.3s,baz=164,slow=21,SNR=12						
MSVF				S	**S**	**00 49 05.6**	**-4.6**
	3.9nm,0.3s,baz=150,slow=20,SNR=1.5						
NIUE	**Niue**	**7.17**	**80**	P	**P**	**00 48 14.3**	**0.0**
AFI	**Afiamalu**	**8.49**	**40**	P	**P**	**00 48 26.9**	**-0.6**
MARNC	**Mare, Loyalty**	**13.65**	**263**	P	**P**	**00 49 19.8**	**-0.5**
DZM	**Mont Dzumac**	**15.15**	**261**	P	**P**	**00 49 38.8**	**+3.0**
	8.7nm,0.8s,baz=78,slow=20,SNR=5.4						
DZM	**Mont Dzumac**	**15.15**	**261**	P	**P**	**00 49 36.3**	**+0.5**
DZM				IAmb	IAmb	00 50 05.7	
	comp=Z,25nm,1.3s						
KOUNC	**Koumac, New Ca**	**17.17**	**267**	P	**P**	**00 49 56.2**	**+1.2**
BKZ	**Black Stump Fm**	**19.30**	**195**	P	**P**	**00 50 10.1**	**-4.2**
CTAO	**Charters Tower**	**34.06**	**264**	P	**P**	**00 52 24.0**	**+0.3**
CTAO				IAmb	IAmb	00 53 04.7	
	comp=Z,27nm,1.4s						
STKA	**Stephens Creek**	**38.29**	**244**	P	P	00 53 01.8	+3.3
	comp=Z,2.5nm,0.9s,baz=70,slow=7.1,SNR=4.0						
	comp=Z,2.5nm,0.9s						
BBOO	**Buckleboo**	**43.05**	**244**	P	**P**	**00 53 39.0**	**+2.6**
BBOO				IAmb	IAmb	00 53 46.9	
	comp=Z,19nm,1.3s						
WR0	**Warramunga Arr**	**44.97**	**262**	P	**P**	**00 53 51.6**	**+0.2**
AS31	**Alice Springs**	**45.07**	**257**	P	**P**	**00 53 53.1**	**+1.0**
ASAR	**Alice Springs**	**45.07**	**257**	P	**P**	**00 53 53.0**	**+0.8**
	comp=Z,2.4nm,0.6s,baz=90,slow=8.7,SNR=17						
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**45.07**	**257**	P	**P**	**00 53 52.6**	**+0.5**
WB0	**Warramunga Arr**	**45.14**	**262**	P	**P**	**00 53 52.2**	**-0.5**
WB0				IAmb	IAmb	00 54 04.7	
	comp=Z,15nm,1.2s						
WB2	**Warramunga Arr**	**45.15**	**262**	P	**P**	**00 53 52.6**	**-0.3**
WB2				IAmb	IAmb	00 54 26.7	
	comp=Z,22nm,1.4s						
WRA	**Warramunga Arr**	**45.16**	**262**	P	**P**	**00 53 52.6**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=97,slow=7.6,SNR=21						
	comp=Z,1.2nm,0.3s						
WRA	**Warramunga Arr**	**45.16**	**262**	P	**P**	**00 53 52.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**53.59**	**262**	P	**P**	**00 54 55.1**	**+0.1**
FITZ				IAmb	IAmb	00 55 03.3	
	comp=Z,16nm,1.4s						
PSA00	**Pilbara Seismi**	**58.22**	**257**	P	**P**	**00 55 26.9**	**0.0**
PSA00				IAmb	IAmb	00 55 38.5	
	comp=Z,27nm,1.4s						
MBWA	**Marble Bar**	**58.41**	**257**	P	**P**	**00 55 28.3**	**+0.1**
MBWA				IAmb	IAmb	00 55 57.2	
	comp=Z,21nm,1.2s						
ERM	**Erimo**	**72.14**	**330**	P	**P**	**00 56 58.3**	**+4.7**
PMSA	**Palmer Station**	**81.03**	**157**	P	**P**	**00 57 41.8**	**-0.2**
PMSA				IAmb	IAmb	00 57 42.8	
	comp=Z,10nm,0.7s						
BRTR	**Keskin Array B**	**147.29**	**313**	PKPbc	**PKPdf**	**01 05 04.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=101,slow=2.8,SNR=2.6						
CLL	**Collm**	**148.22**	**348**	*e*PKPbc	**PKPab**	**01 05 13.0**	**-0.9**
GERES	**GERESS Array B**	**150.39**	**345**	PKPbc	**PKPbc**	**01 05 11.7**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=28,slow=2.3,SNR=4.6						

IDC 03 01:01:58.3±7.1,10°.82N×94°.70E,h0km,mb4.0/6, mbtmp4.0/6,Error ellipse: s-maj=155.4km s-min=80.6km az=133.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**37.37**	**346**	P	P	01 09 12.3	-0.5
	0.5nm,0.4s,baz=159,slow=8.8,SNR=9.2						
	0.5nm,0.4s						
GEYT	**Alibeck**	**42.44**	**316**	P	P	01 09 55.3	+0.1
	1.1nm,0.3s,baz=114,slow=13,SNR=3.5						
	1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**43.74**	**352**	P	P	01 10 05.7	+0.4
	0.6nm,0.3s,baz=166,slow=8.9,SNR=6.3						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**70.39**	**332**	P	P	01 13 13.0	-1.0
	2.0nm,1.0s,baz=90,slow=7.8,SNR=2.0						
	2.0nm,1.0s						
ARCES	**ARCESS Array B**	**72.71**	**340**	P	P	01 13 28.2	+0.4
	3.3nm,1.0s,baz=104,slow=7.5,SNR=4.1						
	3.3nm,1.0s						
GERES	**GERESS Array B**	**76.02**	**318**	P	P	01 13 48.1	+0.3
	0.2nm,0.5s,baz=116,slow=4.5,SNR=1.8						
	0.2nm,0.5s						

*KRSC **03** 02:45:13.2±2.6,48°.59N×155°.08E,h182km±52km,ML4.4*
*MOS **03** 02:45:18.8±1.0,49°.32N×153°.82E,h159km,mb4.2/6,Error ellipse: s-maj=16.0km s-min=4.7km az=64.7*
*IDC **03** 02:45:19.3±0.7,49°.24N×153°.77E,h143km±6km,mb3.4/17, mbtmp3.8/20,Error ellipse: s-maj=16.6km s-min=9.8km az=145.0*
*NEIC **03** 02:45:20.4±1.7,49°.4N±0°.1×153°.7E±0°.2,h145km±9km, mb4.1/51,Error ellipse: s-maj=21.2km s-min=9.4km az=133.0*

ISC 03 02:45:19.4±0.5,49°.20N±0°.08×154°.02E±0°.07,h150km, n151,σ1°.72/165,mb4.0/45,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.01**	**41**	*e*PN	**Pn**	**02 45 54.8**	**+0.2**
SKR				*e*S	**Sn**	**02 46 20.6**	**-1.1**
SKR				pmax	pmax		
	comp=Z,20nm,0.6s						
SKR				smax	smax		
	comp=E,166nm,0.5s						
SKR				smax	smax		
	comp=N,195nm,0.5s						
PAU	**Pauzhetka**	**2.89**	**37**	PN	**Pn**	**02 46 05.1**	**-0.2**
PAU				S	**Sn**	**02 46 41.6**	**+0.7**
PAU	**Pauzhetka**	**2.89**	**37**	*e*P	**Pn**	**02 46 05.3**	**0.0**
PAU				*e*S	**Sn**	**02 46 41.2**	**+0.3**
KDTR	**Khodutka, Kamc**	**3.68**	**43**	PN	**Pn**	**02 46 13.3**	**-2.1**
KDTR				S	**Sn**	**02 46 55.3**	**-3.6**
KDTR	**Khodutka, Kamc**	**3.68**	**43**	P	**Pn**	**02 46 13.3**	**-2.1**
KDTR				*e*S	**Sn**	**02 46 55.2**	**-3.6**
ASAK	**Asacha**	**4.03**	**36**	PN	**Pn**	**02 46 20.1**	**+0.1**
ASAK				S	**Sn**	**02 47 09.6**	**+2.4**
ASAK	**Asacha**	**4.03**	**36**	*e*P	**Pn**	**02 46 20.1**	**+0.1**
ASAK				S	**Sn**	**02 47 07.9**	**+0.7**
MTVR	**Mutnovka**	**4.22**	**37**	PN	**Pn**	**02 46 22.9**	**+0.4**
MTVR				S	**Sn**	**02 47 11.2**	**-0.5**
MTVR	**Mutnovka**	**4.22**	**37**	*e*P	**Pn**	**02 46 22.5**	**0.0**
MTVR				*e*S	**Sn**	**02 47 11.4**	**-0.3**
APC	**Apacha**	**4.23**	**27**	PN	**Pn**	**02 46 22.7**	**+0.2**
APC	**Apacha**	**4.23**	**27**	*e*P	**Pn**	**02 46 22.9**	**+0.4**
GRL	**Gorelyy**	**4.23**	**36**	PN	**Pn**	**02 46 22.7**	**0.0**
GRL				S	**Sn**	**02 47 13.8**	**+1.9**
GRL	**Gorelyy**	**4.23**	**36**	*e*P	**Pn**	**02 46 22.7**	**0.0**
RUS	**Russkaya**	**4.32**	**40**	PN	**Pn**	**02 46 22.4**	**-1.3**
RUS				S	**Sn**	**02 47 10.4**	**-3.3**
KRMR	**Karymshinskiy**	**4.47**	**34**	PN	**Pn**	**02 46 25.7**	**0.0**
KRMR	**Karymshinskiy**	**4.47**	**34**	*e*P	**Pn**	**02 46 25.7**	**0.0**
PEA0B	**Petropavlovsk-**	**4.55**	**29**		**Pn**	**02 46 27.2**	**+0.4**
PEA0B	**Petropavlovsk-**	**4.55**	**29**	PN	**Pn**	**02 46 27.2**	**+0.4**
PETK	**Petropavlovsk-**	**4.55**	**29**	P	**Pn**	**02 46 27.2**	**+0.4**
	comp=N,26nm,0.7s,baz=205,slow=19,SNR=69						
PETK				S	**Sn**	**02 47 22.5**	**+3.2**
	comp=N,2.5nm,0.5s,baz=204,slow=10,SNR=1.4						
PETK	**Petropavlovsk-**	**4.55**	**29**		**Pn**	**02 46 26.7**	**-0.1**
PET	**Petropavlovsk**	**4.82**	**36**	Pn	**Pn**	**02 46 28.7**	**-1.6**
DALK	**Dalny**	**4.86**	**36**	P	**Pn**	**02 46 30.1**	**-0.7**
KOK	**Koryaka**	**5.02**	**33**	PN	**Pn**	**02 46 34.1**	**+1.0**
KOK	**Koryaka**	**5.02**	**33**	P	**Pn**	**02 46 33.9**	**+0.8**
UGLR	**Uglovaya**	**5.03**	**35**	PN	**Pn**	**02 46 33.5**	**+0.3**
UGLR	**Uglovaya**	**5.03**	**35**	P	**Pn**	**02 46 33.3**	**-0.2**
AVH	**Avacha**	**5.04**	**34**	PN	**Pn**	**02 46 34.1**	**+0.8**
AVH	**Avacha**	**5.04**	**34**	P	**Pn**	**02 46 33.9**	**+0.6**
SMAR	**Somma**	**5.06**	**35**	PN	**Pn**	**02 46 33.4**	**-0.3**
SMAR	**Somma**	**5.06**	**35**	P	**Pn**	**02 46 34.0**	**+0.3**
KRER	**Koryakskii**	**5.07**	**34**	PN	**Pn**	**02 46 34.4**	**+0.5**
KRER	**Koryakskii**	**5.07**	**34**	*e*P	**Pn**	**02 46 34.3**	**+0.4**
KRX	**Arik**	**5.08**	**33**	PN	**Pn**	**02 46 34.5**	**+0.6**
KRX	**Arik**	**5.08**	**33**	P	**Pn**	**02 46 34.5**	**+0.6**
SDLR	**Sedlovina**	**5.10**	**35**	PN	**Pn**	**02 46 33.9**	**-0.3**
SDLR	**Sedlovina**	**5.10**	**35**	*e*P	**Pn**	**02 46 33.9**	**-0.3**
GNL	**Ganaly**	**5.13**	**27**	PN	**Pn**	**02 46 35.2**	**+0.7**
GNL	**Ganaly**	**5.13**	**27**	*e*P	**Pn**	**02 46 35.4**	**+0.9**
NLC	**Nalytchevo**	**5.20**	**38**	*e*S	**Sn**	**02 47 28.6**	**-6.0**
SPN	**Mys Shipunski**	**5.43**	**42**	PN	**Pn**	**02 46 36.9**	**-1.5**
SPN				S	**Sn**	**02 47 34.7**	**-5.5**
SPN	**Mys Shipunski**	**5.43**	**42**	*e*P	**Pn**	**02 46 36.3**	**-2.1**
SPN				*e*S	**Sn**	**02 47 34.4**	**-5.8**
KII	**Karymskiy**	**5.91**	**33**	PN	**Pn**	**02 46 45.2**	**+0.4**
TUMR	**Tumrok**	**7.16**	**29**	PN	**Pn**	**02 47 02.6**	**+1.0**
TUMR	**Tumrok**	**7.16**	**29**	P	**Pn**	**02 47 02.4**	**+0.8**
MKZ	**Mys Kozlova**	**7.18**	**39**	PN	**Pn**	**02 46 58.7**	**-2.9**
MKZ	**Mys Kozlova**	**7.18**	**39**	*e*P	**Pn**	**02 46 58.8**	**-2.9**
MKZ				*e*S	**Sn**	**02 48 16.3**	**-5.6**
SHO	**Shikotan**	**7.28**	**226**	*i* PN	Pn	02 46 58.3	-4.8
KBTR	**Krutoberegovo**	**8.82**	**34**	PN	**Pn**	**02 47 21.0**	**-2.6**
KBTR	**Krutoberegovo**	**8.82**	**34**	*e*P	**Pn**	**02 47 20.9**	**-2.6**
KBTR				*e*S	Sn	02 48 51.4	-10
BKI	**Bering**	**9.48**	**46**	*e*P	**Pn**	**02 47 29.1**	**-3.2**
BKI				*e*S	Sn	02 49 04.3	-13
ERM	**Erimo**	**10.46**	**231**	Pn	**Pn**	**02 47 43.1**	**-2.3**
ERM	**Erimo**	**10.46**	**231**	PN	**Pn**	**02 47 43.1**	**-2.3**
KLR	**Kul'dur**	**14.55**	**279**	P	**P**	**02 48 40.1**	**-0.4**
	comp=N,4.4nm,0.5s,baz=74,slow=14,SNR=8.1						
USRK	**Ussuriysk Ar.**	**15.90**	**260**	P	**P**	**02 48 54.4**	**-1.0**
	comp=N,1.6nm,0.5s,baz=75,slow=12,SNR=6.8						
USRK	**Ussuriysk Ar.**	**15.90**	**260**		**P**	**02 48 56.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**15.90**	**260**	P	**P**	**02 48 56.5**	**+1.1**
JSD	**Sado**	**15.92**	**231**	Pn	**Pn**	**02 48 54.1**	**-0.9**
JSD				IAmb	IAmb	02 48 56.9	
	comp=Z,9.6nm,0.9s						
AMKA	**Amchitka**	**16.28**	**73**		**Pn**	**02 49 01.7**	**+2.4**
MJAR	**Matsushiro Arr**	**17.11**	**228**	P	**P**	**02 49 07.8**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=17,slow=4.2,SNR=1.6						
KIWB	**Kanaga Island**	**18.47**	**71**	P	**P**	**02 49 23.6**	**+0.1**
JHS	**Saijyo**	**20.92**	**235**	P	**P**	**02 49 52.3**	**+2.1**
SEHB	**SEOHWA**	**21.48**	**249**	P	**P**	**02 49 55.2**	**-0.9**
SEHB				IAmb	IAmb	02 49 56.8	
	comp=Z,7.2nm,0.7s						
KSRS	**Korea Array**	**22.20**	**248**	P	**P**	**02 50 03.3**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=49,slow=9.8,SNR=15						
	comp=Z,3.3nm,0.6s						
NAWB	**Namwon**	**23.87**	**245**	P	**P**	**02 50 20.5**	**+1.6**
K20K	**Telida**	**31.11**	**43**	P	**P**	**02 51 25.5**	**+2.3**
K20K				IAmb	IAmb	02 51 54.1	
	comp=Z,5.2nm,1.4s						
J20K	**Nowinta River**	**31.12**	**42**	P	**P**	**02 51 24.4**	**+1.1**
J20K				IAmb	IAmb	02 51 26.9	
	comp=Z,4.7nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**31.16**	**156**	T	T	03 23 27.2	
	baz=342,slow=76,SNR=12						
SONM	**Songino Array**	**31.17**	**286**	P	**P**	**02 51 23.6**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=79,slow=7.5,SNR=1.8						
	comp=Z,0.3nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**31.18**	**156**	T	T	03 23 34.4	
	baz=342,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**31.18**	**156**	T	T	03 23 43.0	
	baz=342,slow=76,SNR=5.8						
IMAR	**Indian Mountai**	**31.45**	**38**	P	**P**	**02 51 27.1**	**+0.9**
H21K	**Melozitna Rive**	**31.80**	**39**	P	**P**	**02 51 30.1**	**+0.8**
H21K				IAmb	IAmb	02 51 51.1	
	comp=Z,4.4nm,1.4s						
CAST	**Castle Rocks**	**32.01**	**43**	P	**P**	**02 51 32.8**	**+1.7**
CAST				IAmb	IAmb	02 51 44.8	
	comp=Z,4.0nm,1.3s						
H11S1	**WAKE ISLAND Hy**	**32.28**	**157**	T	T	03 25 02.5	
	baz=344,slow=76,SNR=72						
H11S3	**WAKE ISLAND Hy**	**32.29**	**157**	T	T	03 24 51.7	
	baz=344,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**32.30**	**157**	T	T	03 25 04.0	
	baz=344,slow=76,SNR=46						
BPAW	**Bear Paw Mtn.**	**32.50**	**42**	P	**P**	**02 51 37.3**	**+1.9**
COLD	**Coldfoot**	**32.98**	**36**	P	**P**	**02 51 37.4**	**-2.1**
COLD				IAmb	IAmb	02 52 07.4	
	comp=Z,8.2nm,1.5s						
H23K	**Yukon River**	**33.16**	**39**	P	**P**	**02 51 42.5**	**+1.4**
NEA2	**Nenana**	**33.34**	**41**	P	**P**	**02 51 44.5**	**+1.8**
NEA2				IAmb	IAmb	02 51 46.0	
	comp=Z,3.3nm,0.8s						
MDM	**Murphy Dome**	**33.70**	**40**	P	**P**	**02 51 48.7**	**+2.9**
MDM				IAmb	IAmb	02 51 48.8	
	comp=Z,2.4nm,0.7s						
SML	**Sawmill**	**33.80**	**46**	P	**P**	**02 51 49.0**	**+2.2**
H24K	**Noodor Dome**	**33.84**	**39**	P	**P**	**02 51 48.8**	**+1.8**
CCB	**Clear Creek Bu**	**33.88**	**41**	P	**P**	**02 51 48.6**	**+1.3**
CCB				IAmb	IAmb	02 51 49.2	
	comp=Z,3.7nm,1.2s						
DHY	**Denali Highway**	**34.15**	**44**	P	**P**	**02 51 50.5**	**+0.6**
IL31		**34.27**	**41**	P	**P**	**02 51 51.0**	**+0.3**
IL31				IAmb	IAmb	02 51 53.9	
	comp=Z,3.9nm,1.0s						
ILAR	**Eielson Array**	**34.27**	**41**	P	**P**	**02 51 51.6**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=266,slow=7.3,SNR=16						
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**34.27**	**41**	P	**P**	**02 51 52.4**	**+1.6**
SCM	**Sheep Creek Mo**	**34.28**	**46**	P	**P**	**02 51 52.0**	**+1.1**
SCM				pmax	pmax		
	comp=Z,12nm,1.3s						
J25K	**Salcha River,**	**34.93**	**41**	P	**P**	**02 51 56.1**	**-0.3**
DOT	**Dot Lake**	**35.59**	**43**	P	**P**	**02 52 01.3**	**-0.7**
DOT				IAmb	IAmb	02 52 36.0	
	comp=Z,3.8nm,1.2s						
I26K	**Coal Creek Min**	**35.83**	**40**	P	**P**	**02 52 06.0**	**+2.0**
K27K	**Chicken**	**36.42**	**42**	P	**P**	**02 52 10.2**	**+1.2**
K27K				IAmb	IAmb	02 52 11.3	
	comp=Z,2.4nm,0.8s						
L27K	**Beaver Creek,**	**36.66**	**43**	P	**P**	**02 52 13.3**	**+2.1**
L27K				IAmb	IAmb	02 52 15.7	
	comp=Z,4.7nm,1.1s						
BCAR	**Beaver Creek A**	**36.68**	**43**	P	**P**	**02 52 13.3**	**+2.0**
M27K	**Edge Creek, AK**	**36.75**	**45**	P	**P**	**02 52 14.2**	**+2.2**
BARN	**Barnard Glacie**	**37.09**	**47**	P	**P**	**02 52 16.9**	**+1.9**
M30M	**Minto, Yukon**	**39.02**	**43**	P	**P**	**02 52 33.1**	**+2.1**
HYT	**Haines Junctio**	**39.11**	**46**	P	**P**	**02 52 34.1**	**+2.3**
FARO	**Faro, Yukon**	**40.66**	**43**	P	**P**	**02 52 46.5**	**+2.0**
ZALV	**Zalesovo Beam**	**41.71**	**304**	P	**P**	**02 52 51.8**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=66,slow=7.0,SNR=1.6						
	comp=Z,0.4nm,0.3s						
MK31	**Makanchi Array**	**46.39**	**296**	P	**P**	**02 53 29.0**	**-1.5**
MK31	**Makanchi Array**	**46.39**	**296**	P	**P**	**02 53 29.0**	**-1.5**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**46.39**	**296**	P	**P**	**02 53 29.3**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=73,slow=8.1,SNR=9.3						
MKAR				pP	**pP**	**02 54 03.0**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=63,slow=7.2,SNR=4.9						
MKAR				PcP	**PcP**	**02 55 03.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=75,slow=4.1,SNR=2.0						
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**46.39**	**296**	P	**P**	**02 53 29.0**	**-1.5**
KURK	**Kurchatov**	**46.55**	**302**	P	**P**	**02 53 29.6**	**-1.9**
KURK				IAmb	IAmb	02 54 06.8	
	comp=Z,5.5nm,1.3s						
KURK	**Kurchatov**	**46.55**	**302**	P	**P**	**02 53 29.7**	**-1.9**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
YKA	**Yellowknife Ar**	**48.61**	**38**	P	**P**	**02 53 48.4**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=300,slow=7.2,SNR=6.8						
YKA				pP	**pP**	**02 54 19.9**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=304,slow=8.0,SNR=1.8						
	comp=Z,0.9nm,0.7s						
BRVK	**Borovoye**	**49.84**	**308**	P	**P**	**02 53 56.1**	**-0.7**
BRVK				IAmb	IAmb	02 53 56.8	
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**49.84**	**308**	P	**P**	**02 53 56.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**53.56**	**255**	P	**P**	**02 54 25.6**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=38,slow=6.0,SNR=2.2						
	comp=Z,1.7nm,0.5s						
ABKAR	**Akbulak array**	**57.34**	**309**	P	**P**	**02 54 50.8**	**-0.6**
MOD	**Modoc Plateau**	**57.38**	**62**	P	**P**	**02 54 54.1**	**+2.1**
MOD				IAmb	IAmb	02 55 26.5	
	comp=Z,5.3nm,1.4s						
PLID	**Pearl Lake**	**57.80**	**57**	P	**P**	**02 54 56.1**	**+1.1**
SUMG	**Summit**	**58.22**	**4**	P	**P**	**02 54 57.5**	**-0.1**
SUMG	**Summit**	**58.22**	**4**	P	**P**	**02 54 57.5**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PNTR	**Pine Nut**	**59.59**	**64**	P	**P**	**02 55 08.8**	**+1.4**
BOZ	**Bozeman (W)**	**59.83**	**54**	P	**P**	**02 55 10.7**	**+1.8**
BOZ				IAmb	IAmb	02 55 11.8	
	comp=Z,1.7nm,0.8s						
BOZ	**Bozeman (W)**	**59.83**	**54**	P	**P**	**02 55 10.7**	**+1.8**
BOZ				pmax	pmax		
	com

AGPR				Sn	Sb	02 48 35.2	-0.3	
AGPR				IAML		02 48 37.6		
	comp=N,2μm,0.3s							
AGPR				IAML		02 48 38.9		
	comp=E,2μm,0.3s							
AGPR	**Aguadilla, PR**	**0.98**	**144**	*i* P	**Pb**	**02 48 22.3**	**-0.3**	
AGPR				*e*S	**Sb**	**02 48 36.0**	**+0.5**	
AGPR				IAML		02 48 38.3		
	comp=Z,812nm,0.7s							
PCDR	**Punta Cana, DR**	**0.98**	**220**⇑	*e*P	**Pb**	**02 48 22.5**	**-0.1**	
PCDR	**Punta Cana, DR**	**0.98**	**220**		**Pb**	**02 48 22.4**	**-0.1**	
PCDR				Sn	**Sb**	**02 48 35.3**	**-0.3**	
PCDR				IAML		02 48 36.5		
	comp=N,3μm,0.3s							
PCDR	**Punta Cana, DR**	**0.98**	**220**	*i* P	**Pb**	**02 48 22.4**	**-0.1**	
PCDR				*e*S	**Sb**	**02 48 35.7**	**+0.2**	
PCDR				IAML		02 48 36.7		
	comp=Z,2μm,0.2s							
PRSN	**Puerto Rico Se**	**1.17**	**153**		**Pg**	**02 48 25.3**	**-0.6**	
LSP	**Las Mesas**	**1.24**	**151**⇑	*e*P	**Pb**	**02 48 26.4**	**-0.5**	
LSP	**Las Mesas**	**1.24**	**151**	*e*S	**Sn**	**02 48 44.1**	**+0.4**	
AOPR	**Arecibo Observ**	**1.29**	**135**⇑	*e*P	**Pn**	**02 48 27.1**	**-0.5**	
AOPR	**Arecibo Observ**	**1.29**	**135**	*e*S	**Sn**	**02 48 46.9**	**+1.9**	
AOPR	**Arecibo Observ**	**1.29**	**135**		**Pn**	**02 48 27.0**	**-0.6**	
AOPR				Sn	**Sn**	**02 48 45.4**	**+0.3**	
AOPR				IAML		02 48 49.7		
	comp=N,1μm,0.4s							
EMPR	**Esperanza - Ma**	**1.37**	**125**⇑	*e*P	**Pg**	**02 48 29.8**	**+0.1**	
EMPR	**Esperanza - Ma**	**1.37**	**125**	*e*S	**Sg**	**02 48 49.4**	**+1.9**	
EMPR	**Esperanza - Ma**	**1.37**	**125**	Pn	**Pn**	**02 48 28.6**	**0.0**	
EMPR				Sn	**Sg**	**02 48 48.3**	**+0.9**	
EMPR				IAML		02 48 52.0		
	comp=N,957nm,0.4s							
EMPR				IAML		02 48 53.7		
	comp=E,843nm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.38**	**155**⇑	*e*P	**Pg**	**02 48 30.2**	**+0.3**	
CRPR	**Cabo Rojo, PR**	**1.38**	**155**	*e*S	**Sg**	**02 48 48.0**	**+0.3**	
CRPR	**Cabo Rojo, PR**	**1.38**	**155**	Pn	**Pn**	**02 48 28.1**	**-0.7**	
CRPR				Sn	**Sg**	**02 48 47.4**	**-0.4**	
CRPR				IAML		02 48 50.9		
	comp=N,553nm,0.4s							
CRPR				IAML		02 48 52.9		
	comp=E,636nm,0.7s							
CRPR	**Cabo Rojo, PR**	**1.38**	**155**	*i* P	**Pn**	**02 48 28.5**	**-0.3**	
CRPR				*e*S	**Sg**	**02 48 48.0**	**+0.3**	
CRPR				IAML		02 48 50.2		
	comp=Z,991nm,0.5s							
UUPR	**Utuado, UPR, P**	**1.38**	**137**⇑	*e*P	**Pb**	**02 48 29.3**	**-0.1**	
UUPR	**Utuado, UPR, P**	**1.38**	**137**	*e*S	**Sg**	**02 48 48.1**	**+0.3**	
UUPR	**Utuado, UPR, P**	**1.38**	**137**		**Pb**	**02 48 29.3**	**-0.1**	
UUPR					**Sg**	**02 48 48.1**	**+0.3**	
MLPR	**Magueyes Islan**	**1.44**	**154**⇑	*e*P	**Pn**	**02 48 29.9**	**+0.3**	
MLPR	**Magueyes Islan**	**1.44**	**154**	*e*S	**Sg**	**02 48 49.4**	**-0.2**	
MLPR	**Magueyes Islan**	**1.44**	**154**	Pn	**Pn**	**02 48 27.9**	**-1.7**	
MLPR				Sn	**Sn**	**02 48 47.4**	**-1.2**	
MLPR				IAML		02 48 51.8		
	comp=E,617nm,0.4s							
MLPR				IAML		02 48 52.4		
	comp=N,666nm,0.5s							
GBPR	**Guanica, Bosqu**	**1.51**	**148**⇑	*e*P	**Pb**	**02 48 31.4**	**-0.2**	
GBPR	**Guanica, Bosqu**	**1.51**	**148**	*e*S	**Sg**	**02 48 51.6**	**-0.3**	
CELP	**Cerrillos**	**1.60**	**138**⇑	*e*P	**Pn**	**02 48 32.3**	**+0.4**	
CELP	**Cerrillos**	**1.60**	**138**	*e*S	**Sb**	**02 48 53.2**	**-0.2**	
CELP	**Cerrillos**	**1.60**	**138**	Pn	**Pn**	**02 48 31.4**	**-0.4**	
CELP				Sn	**Sn**	**02 48 52.4**	**-0.3**	
CELP				IAML		02 49 01.5		
	comp=N,605nm,0.7s							
CELP				IAML		02 49 01.9		
	comp=E,468nm,0.8s							
OBIP	**Obispado Ponce**	**1.61**	**139**⇑	*e*P	**Pn**	**02 48 32.4**	**+0.5**	
OBIP	**Obispado Ponce**	**1.61**	**139**	*e*S	**Sb**	**02 48 54.0**	**+0.3**	
OBIP	**Obispado Ponce**	**1.61**	**139**	Pn	**Pn**	**02 48 31.5**	**-0.5**	
OBIP				Sn	**Sb**	**02 48 53.4**	**-0.3**	
DR12	**Loma Pena Alta**	**1.65**	**253**⇑	*i* P	**Pb**	**02 48 34.1**	**+0.1**	
DR12				*e*S	**Sg**	**02 48 56.4**	**0.0**	
DR12	**Loma Pena Alta**	**1.65**	**253**	Pn	**Pb**	**02 48 33.5**	**-0.5**	
ICMP	**Isla Caja de M**	**1.77**	**140**⇑	*e*P	**Pb**	**02 48 36.4**	**+0.3**	
ICMP	**Isla Caja de M**	**1.77**	**140**	Pn	**Pb**	**02 48 35.2**	**-0.9**	
ICMP				IAML		02 49 06.6		
	comp=E,398nm,0.5s							
GCPR	**Guaynabo City**	**1.81**	**121**⇑	*e*P	**Pn**	**02 48 35.7**	**+0.9**	
GCPR	**Guaynabo City**	**1.81**	**121**	Pn	**Pn**	**02 48 34.7**	**-0.1**	
SJG	**San Juan**	**1.87**	**128**	Pn	**Pn**	**02 48 35.7**	**+0.1**	
SJG				IAML		02 49 05.5		
	comp=E,428nm,0.3s							
SJG				IAML		02 49 10.0		
	comp=E,390nm,0.4s							
IGPR	**InterUniversit**	**2.00**	**130**⇑	*e*P	**Pn**	**02 48 38.4**	**+1.0**	
IGPR	**InterUniversit**	**2.00**	**130**	*e*S	**Sn**	**02 49 02.5**	**0.0**	
CBYP	**Canovanas**	**2.02**	**119**⇑	*e*P	**Pn**	**02 48 37.9**	**+0.3**	
CBYP	**Canovanas**	**2.02**	**119**	Pn	**Pn**	**02 48 37.3**	**-0.3**	
PDPR	**Patillas Dam,**	**2.03**	**127**	Pn	**Pn**	**02 48 37.8**	**+0.1**	
PDPR				IAML		02 49 08.7		
	comp=E,320nm,3.3s							
SDD	**Santo Domingo**	**2.23**	**249**	*i* P	**Pb**	**02 48 43.3**	**-0.6**	
CUPR	**Culebra, Puert**	**2.49**	**112**⇑	*e*P	**Pn**	**02 48 44.8**	**+0.7**	
CUPR	**Culebra, Puert**	**2.49**	**112**	Pn	**Pn**	**02 48 43.6**	**-0.5**	
BANI	**BANI**	**2.65**	**251**⇑	*e*P	**Pb**	**02 48 50.7**	**-0.4**	
BANI				*e*S	**Sb**	**02 49 26.4**	**+2.5**	
BANI	**BANI**	**2.65**	**251**	Pn	**Pb**	**02 48 49.4**	**-1.8**	
BANI	**BANI**	**2.65**	**251**	*i* P	**Pb**	**02 48 49.3**	**-1.8**	
BANI				IAML		02 49 30.9		
	comp=Z,122nm,0.6s							
STVI	**Saint Thomas**	**2.77**	**109**⇑	*e*P	**Pn**	**02 48 48.6**	**+0.7**	
STVI	**Saint Thomas**	**2.77**	**109**	Pn	**Pn**	**02 48 47.6**	**-0.3**	
SJVI	**Gifft Hill Sch**	**2.94**	**108**⇑	*e*P	**Pn**	**02 48 50.8**	**+0.5**	
SJVI	**Gifft Hill Sch**	**2.94**	**108**		**Pn**	**02 48 50.8**	**+0.5**	
CDVI	**St. Croix**	**3.18**	**118**	Pn	**Pn**	**02 48 56.0**	**+2.4**	
CDVI				IAML		02 49 47.8		
	comp=N,202nm,0.5s							
SDDR	**Presa de Saban**	**3.39**	**266**	Pn	**Pn**	**02 48 59.3**	**+2.7**	
SDDR	**Presa de Saban**	**3.39**	**266**	*i* P	**Pn**	**02 48 59.8**	**+3.2**	
SDDR				IAML		02 50 01.7		
	comp=Z,101nm,0.6s							
LOBA2	**Hotel Casa Bon**	**3.42**	**250**	*i* P	Pg	02 49 43.2	+34	
LOBA2				*e*S	Sg	02 50 22.1	+29	
LOBA2				IAML		02 50 39.6		
	comp=Z,41nm,0.9s							
AUA1	**Aruba**	**7.08**	**199**	Pn	**Pn**	**02 49 45.9**	**-1.2**	
BIRV	**Birongo**	**8.85**	**171**	Pn	**Pn**	**02 50 12.4**	**+0.8**	
BAUV	**El Baul**	**10.27**	**182**	Pn	**Pn**	**02 50 32.3**	**+1.3**	
BBSR	**BB Station**	**13.33**	**11**	Pn	**Pn**	**02 51 12.5**	**-0.3**	
060A	**Indiantown**	**13.96**	**306**	Pn	**Pn**	**02 51 19.8**	**-1.6**	

WEL 03 02:57:32.6,42°S±2″×17°4E±″,h12km±3km,M2.9/17, ML3.1/20,MLv2.9/17,Error ellipse: s-maj=0.0km s-min=0.0km az=121.7,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.09**	**130**	P	Pg	02 57 35.7	+0.4
CMWZ				S	Sg	02 57 38.2	+0.9
BSWZ	**Blackbirch Sta**	**0.19**	**264**	P	Pg	02 57 37.4	+0.6
BSWZ				S	Sg	02 57 40.8	+1.1
TUWZ	**Tuamarina**	**0.30**	**332**	P	Pb	02 57 39.7	-0.1
TUWZ				S	Sb	02 57 44.9	+0.2
TCW	**Tory Channel**	**0.50**	**13**	P	Pb	02 57 43.1	-0.1
WEL	**Wellington**	**0.63**	**50**	P	Pb	02 57 45.7	+0.2
WEL				S	Sn	02 57 56.0	-1.3
NNZ	**Nelson**	**0.74**	**310**	P	Pb	02 57 47.4	0.0
KHZ	**Kahutara**	**0.84**	**211**	P	Pb	02 57 49.6	+0.5
PLWZ	**Palliser**	**0.85**	**82**	P	Pn	02 57 50.1	-0.4
MSWZ	**Moikau Station**	**0.89**	**72**	P	Pn	02 57 50.6	-0.3
DUWZ	**D'Urville Isla**	**0.91**	**350**	P	Pb	02 57 50.3	+0.1
THZ	**Tophouse**	**0.92**	**265**	P	Pb	02 57 50.6	+0.2
CAW	**Cannon Point**	**0.92**	**51**	P	Pb	02 57 50.7	+0.3
KIW	**Kapiti Island**	**1.02**	**36**	P	Pg	02 57 52.3	+0.1
PAWZ	**Paruwai Farm**	**1.02**	**73**	P	Pn	02 57 52.6	-0.2
MRNZ	**Matariki Terra**	**1.07**	**286**	P	Pn	02 57 53.8	+0.4
TKNZ	**Takaka Hill**	**1.10**	**307**	P	Pn	02 57 53.8	0.0
MTW	**Mount Morrison**	**1.16**	**63**	P	Pb	02 57 54.5	-0.1
OGWZ	**Otaki Gorge**	**1.18**	**42**	P	Pg	02 57 55.1	-0.1
TRWZ	**Traveller**	**1.21**	**76**	P	Pg	02 57 57.3	+1.5
TMWZ	**Te Maipa**	**1.45**	**67**	P	Pn	02 57 58.4	-0.2
QRZ	**Quartz Range**	**1.48**	**305**	P	Pb	02 58 00.6	+0.5
MRZ	**Mangatainoka R**	**1.50**	**47**	P	Pn	02 57 59.8	+0.4
GVZ	**Greta Valley S**	**1.51**	**212**	P	Pb	02 58 00.1	-0.4
DSZ	**Denniston Nort**	**1.74**	**268**	P	Pb	02 58 04.8	+0.3
LTZ	**Lake Taylor**	**1.75**	**231**	P	Pn	02 58 03.0	+0.1
PRWZ	**Pori Road**	**1.80**	**51**	P	Pb	02 58 04.4	-1.0
BFZ	**Birch Farm**	**1.89**	**58**	P	Pg	02 58 09.9	+1.1

WAZ	**Wanganui**	**2.04**	**19**	P	Pg	02 58 10.9	-0.8	
TSZ	**Takapari Road**	**2.15**	**41**	P	Pn	02 58 09.1	+1.0	
OXZ	**Oxford**	**2.25**	**223**	P	Pb	02 58 13.0	0.0	
PNHZ	**Pukenui**	**2.38**	**42**	P	Pb	02 58 15.7	+0.5	
MOVZ	**Moawhango**	**2.60**	**29**	P	Pb	02 58 19.4	+0.2	
WNVZ	**Wahianoa**	**2.62**	**26**	P	Pb	02 58 19.6	+0.2	
BHHZ	**Black Hill Sta**	**2.65**	**34**	P	Pb	02 58 20.4	+0.4	
WHVZ	**Whangaehu Hut**	**2.65**	**25**	P	Pb	02 58 19.7	-0.4	
FWVZ	**Far West T-bar**	**2.67**	**25**	P	Pb	02 58 21.6	+1.2	
KRVZ	**Karewarewa**	**2.84**	**24**	P	Pb	02 58 21.3	-2.0	
KWHZ	**Kaweka Forest**	**2.86**	**38**	P	Pg	02 58 25.8	-1.6	
WVZ	**Waitaha Valley**	**2.87**	**240**	P	Pb	02 58 22.9	-0.7	
RPZ	**Rata Peaks**	**3.04**	**227**	P	Pn	02 58 22.0	+1.6	
BKZ	**Black Stump Fm**	**3.10**	**36**	P	Pb	02 58 26.5	-1.2	
MUGZ	**Murupara**	**3.80**	**33**	P	Pb	02 58 35.3	-4.3	
RIGZ	**Rimuhau**	**4.08**	**44**	P	Pn	02 58 39.0	+4.2	
JCZ	**Jackson Bay**	**4.59**	**237**	P	Pn	02 58 44.7	+2.9	

*SJA **03** 03:01:21.5±0.8,29°.57S×72°.38W,h25km±5km,ML4.1, MW4.3*
*IDC **03** 03:01:24.6±1.1,29°.67S×71°.86W,h0km,mb3.9/4, mbtmp3.9/9,ML3.8/5,MS3.0/4,Error ellipse: s-maj=35.9km s-min=24.4km az=100.0*
*NEIC **03** 03:01:26.6±1.8,29°.64S±0°.04×72°.06W±0°.07,h29km±7km, mb4.3/5,ML4.2(GUC),Error ellipse: s-maj=9.1km s-min=5.0km az=114.0*
*GUC **03** 03:01:27.2±0.6,29°.76S×71°.93W,h36km±5km,ML4.2*
*VAO **03** 03:01:44.6±0.6,29°.44S×71°.53W,h183km,mb3.9*
ISC 03 03:01:25.4±1.4,29°.66S±0°.02×72°.02W±0°.04,h14km±9km, n125,σ1§62/160,mb4.2/6,5C-6D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.73**	**111**		**Pb**	**03 01 40.0**	**+0.2**
CO05				Sn	**Sb**	**03 01 50.2**	**+0.5**
CO05	**La Serena**	**0.73**	**111**⇓	*i*P	**Pb**	**03 01 39.9**	**+0.1**
CO05				*i* S	**Sb**	**03 01 49.6**	**-0.1**
CO05				IAML		03 01 54.9	
	comp=E,10μm,0.2s						
CO06	**Fray Jorge**	**1.06**	**162**		**Pb**	**03 01 45.2**	**-0.4**
CO06				Sn	**Sb**	**03 01 57.2**	**-2.1**
CO06	**Fray Jorge**	**1.06**	**162**⇑	*i*P	**Pb**	**03 01 45.2**	**-0.4**
CO06				*i* S	**Sb**	**03 01 58.7**	**-0.7**
GO04	**Tololo Observa**	**1.18**	**116**		**Pn**	**03 01 47.1**	**-0.6**
GO04	**Tololo Observa**	**1.18**	**116**⇓	*i*P	**Pn**	**03 01 47.5**	**-0.2**
GO04				*i* S	**Sb**	**03 02 02.5**	**-0.4**
GO04				IAML		03 02 12.4	
	comp=N,20μm,0.5s						
GO04	**Tololo Observa**	**1.18**	**116**	*e*P	**Pg**	**03 01 49.0**	**+0.9**
GO04				*e*S	**Sb**	**03 01 58.3**	**-4.6**
LCO	**Las Campanas**	**1.32**	**61**	Pn	**Pn**	**03 01 49.8**	**0.0**
LCO	**Las Campanas**	**1.32**	**61**⇓	*i*P	**Pn**	**03 01 49.8**	**0.0**
LCO				*i* S	**Sn**	**03 02 07.1**	**-0.2**
LCO	**Las Campanas**	**1.32**	**61**	*e*P	**Pn**	**03 01 49.8**	**0.0**
LCO				*e*S	**Sb**	**03 02 08.1**	**+1.0**
CO03	**El Pedregal**	**1.64**	**136**		**Pn**	**03 01 53.9**	**-0.1**
CO03	**El Pedregal**	**1.64**	**136**⇑	*i*P	**Pn**	**03 01 54.5**	**+0.6**
CO03				*i* S	**Sn**	**03 02 15.4**	**+0.4**
CO03				IAML		03 02 20.4	
	comp=E,3μm,0.6s						
CO03	**El Pedregal**	**1.64**	**136**	*e*P	**Pn**	**03 01 54.7**	**+0.7**
CO03				*e*S	**Sn**	**03 02 11.3**	**-3.7**
CO03				*e*S	**Sg**	**03 02 20.4**	**+2.1**
CO03				IAML		03 02 20.9	
	comp=Z,1μm,0.6s						
AC04	**Llanos de Chal**	**1.68**	**30**	Pn	**Pn**	**03 01 53.8**	**-0.6**
AC04	**Llanos de Chal**	**1.68**	**30**⇑	*i*P	**Pn**	**03 01 53.7**	**-0.6**
AC04				*i* S	**Sn**	**03 02 14.2**	**-1.5**
AC04				IAML		03 02 28.0	
	comp=N,1μm,0.5s						
AC04	**Llanos de Chal**	**1.68**	**30**	*e*P	**Pn**	**03 01 53.7**	**-0.6**
AC04				*e*S	**Sg**	**03 02 22.9**	**+3.6**
CO01	**Juntas del Tor**	**1.70**	**101**		**Pn**	**03 01 55.9**	**+1.0**
CO01	**Juntas del Tor**	**1.70**	**101**⇓	*i*P	**Pb**	**03 01 56.4**	**-0.3**
CO01				*i* S	**Sb**	**03 02 18.2**	**+0.1**
CO01	**Juntas del Tor**	**1.70**	**101**	*e*P	**Pb**	**03 01 56.3**	**-0.3**
CO01				*e*S	**Sg**	**03 02 21.1**	**+0.9**
CO01				IAML		03 02 23.8	
	comp=Z,1μm,0.6s						
CO02	**Combarbal**	**1.77**	**150**		**Pn**	**03 01 56.5**	**+0.8**
CO02	**Combarbal**	**1.77**	**150**⇑	*i*P	**Pn**	**03 01 56.5**	**+0.8**
CO02				*i* S	**Sn**	**03 02 19.0**	**+0.8**
CO02				IAML		03 02 26.6	
	comp=E,6μm,0.4s						
CO02	**Combarbal**	**1.77**	**150**	*e*P	**Pn**	**03 01 56.5**	**+0.8**
CO02				*e*S	**Sg**	**03 02 22.6**	**+0.2**
CO02				*e*S	**Sb**	**03 02 23.3**	**+3.4**
CO02				IAML		03 02 26.2	
	comp=Z,2μm,0.3s						
AROD	**Rodeo**	**2.27**	**103**	*e*P	**Pb**	**03 02 05.7**	**-0.6**
AROD				*e*S	**Sb**	**03 02 36.2**	**+1.8**
ACDV	**Cuesta del Vie**	**2.57**	**102**	*e*P	**Pb**	**03 02 10.2**	**-1.2**
ACDV				*e*S	**Sb**	**03 02 44.3**	**+1.4**
ACDV				IAML		03 02 51.9	
	comp=Z,772nm,0.6s						
GO03	**Copiap**	**2.59**	**38**		**Pn**	**03 02 07.1**	**+0.1**
GO03	**Copiap**	**2.59**	**38**	*e*P	**Pn**	**03 02 06.8**	**-0.3**
GO03				*e*S	**Sg**	**03 02 51.0**	**+2.3**
ACCO	**Cerro Coronel**	**2.72**	**110**	*e*P	**Pb**	**03 02 12.9**	**-1.2**
ACCO				*e*S	**Sb**	**03 02 46.3**	**-1.2**
RTLS	**Leoncito**	**3.17**	**133**	*e*P	**Pb**	**03 02 19.0**	**-2.7**
RTLS				*e*S	**Sn**	**03 02 52.8**	**-0.1**
RTLS				*e*S	**Sb**	**03 03 03.8**	**+3.5**
RTLS				IAML		03 03 08.5	
	comp=Z,467nm,1.1s						
VA03	**San Esteban**	**3.34**	**158**		**Pn**	**03 02 18.1**	**+0.8**
VA03	**San Esteban**	**3.34**	**158**	*e*P	**Pn**	**03 02 18.8**	**+1.5**
VA03				*i* S	**Sn**	**03 02 57.8**	**+1.0**
VA03				IAML		03 03 14.7	
	comp=E,656nm,0.5s						
VA03	**San Esteban**	**3.34**	**158**	*e*P	**Pn**	**03 02 18.6**	**+1.3**
VA03				*e*S	**Sb**	**03 03 01.6**	**-3.4**
VA03				IAML		03 03 24.0	
	comp=Z,436nm,1.1s						
VA01	**Torpederas**	**3.36**	**175**	Pn	**Pn**	**03 02 17.1**	**-0.5**
ROCH	**El Roble**	**3.41**	**166**⇑	*i*P	**Pn**	**03 02 18.9**	**+0.5**
ROCH				*i* S	**Sb**	**03 03 09.7**	**+2.5**
ROCH				IAML		03 03 16.5	
	comp=N,574nm,0.4s						
ROC1	**El Roble**	**3.41**	**166**		**Pn**	**03 02 18.5**	**+0.1**
ROC1	**El Roble**	**3.41**	**166**	*e*P	**Pn**	**03 02 18.8**	**+0.3**
ROC1				*e*S	**Sn**	**03 02 59.1**	**+0.2**
ROC1				*e*S	**Sb**	**03 03 08.8**	**+1.5**
VCA	**Vinchina**	**3.46**	**75**	*e*P	**Pn**	**03 02 18.8**	**-0.3**
VCA				*e*S	**Sb**	**03 03 08.8**	**+0.2**
VCA				*e*S	**Sg**	**03 03 15.4**	**-1.3**
VCA				IAML		03 03 21.6	
	comp=Z,725nm,1.4s						
PEL	**Peldehue**	**3.65**	**162**		**Pn**	**03 02 22.0**	**+0.4**
PEL	**Peldehue**	**3.65**	**162**	*e*P	**Pn**	**03 02 22.6**	**+1.0**
PEL				*e*S	**Sn**	**03 03 08.8**	**+4.3**
MT02	**Curacav**	**3.66**	**168**		**Pn**	**03 02 21.5**	**-0.2**
MT02	**Curacav**	**3.66**	**168**	*e*P	**Pn**	**03 02 21.5**	**-0.2**
MT02				*e*S	**Sb**	**03 03 11.3**	**-2.9**
MT02				IAML		03 03 34.0	
	comp=Z,170nm,0.5s						
AC01	**Pan de Azucar**	**3.72**	**20**	Pn	**Pn**	**03 02 20.8**	**-1.7**
AC01	**Pan de Azucar**	**3.72**	**20**	*e*P	**Pn**	**03 02 20.9**	**-1.6**
AC01				*e*S	**Sn**	**03 03 05.4**	**-0.8**
AC01				IAML		03 03 34.5	
	comp=Z,216nm,0.5s						
AC02	**Maricunga**	**3.80**	**43**	Pn	**Pn**	**03 02 25.0**	**+1.0**
AC02	**Maricunga**	**3.80**	**43**	*e*P	**Pn**	**03 02 25.1**	**+1.0**
AC02				*e*S	**Sb**	**03 03 22.8**	**+4.1**
AC02				IAML		03 03 30.1	
	comp=Z,411nm,0.7s						
MT05	**Renca**	**3.87**	**164**	Pn	**Pn**	**03 02 25.4**	**+0.7**
MT05	**Renca**	**3.87**	**164**⇓	*i*P	**Pn**	**03 02 25.6**	**+1.0**
MT05	**Renca**	**3.87**	**164**	*e*P	**Pn**	**03 02 25.6**	**+1.0**
MT05				*e*S	**Sn**	**03 03 12.4**	**+2.4**
MT05				IAML		03 03 32.5	
	comp=Z,344nm,1.6s						
VA05	**Santo Domingo**	**4.00**	**175**		**Pn**	**03 02 24.8**	**-1.5**
ASAL	**Salagasta**	**4.00**	**138**	*e*P	**Pn**	**03 02 30.8**	**+4.4**
ASAL				*e*S	**Sg**	**03 03 30.3**	**-3.5**
MT03	**Universidad Ad**	**4.03**	**162**		**Pn**	**03 02 27.1**	**+0.2**
MT03	**Universidad Ad**	**4.03**	**162**	*e*P	**Pn**	**03 02 27.9**	**+1.1**
MT03				*e*S	**Sn**	**03 03 16.9**	**+2.9**
MT03				IAML		03 03 46.1	
	comp=Z,252nm,0.5s						
AVFE	**Valle Fertil**	**4.08**	**105**	*e*P	**Pn**	**03 02 30.3**	**+2.9**
AVFE				*e*P	Pb	03 02 30.6	-6.5
AVFE				*e*S	**Sb**	**03 03 23.3**	**-2.9**
AVFE				*e*S	**Sg**	**03 03 30.3**	**-6.0**
AVFE				IAML		03 03 38.7	
	comp=Z,252nm,0.7s						
ARCO	**CERRO ARCO**	**4.13**	**141**	*e*S	**Sb**	**03 03 30.3**	**+2.6**
ARCO				IAML		03 03 49.1	
	comp=Z,245nm,1.5s						
MT09	**Talagante**	**4.19**	**168**		**Pn**	**03 02 29.6**	**+0.5**
MT09	**Talagante**	**4.19**	**168**⇓	*i*P	**Pn**	**03 02 30.0**	**+0.9**
MT09				IAML		03 03 44.8	
	comp=E,203nm,0.4s						
MT01	**Popeta**	**4.24**	**171**		**Pn**	**03 02 29.5**	**-0.1**
MT01	**Popeta**	**4.24**	**171**	*e*P	**Pn**	**03 02 29.6**	**0.0**
MT01				*e*S	**Sn**	**03 03 19.0**	**+0.1**
MT01				IAML		03 03 49.8	
	comp=Z,130nm,0.5s						
LMEL	**Las Melosas**	**4.45**	**160**		**Pn**	**03 02 33.8**	**+1.2**
BO01	**Tunca**	**4.78**	**171**	Pn	**Pn**	**03 02 36.9**	**-0.2**
BO01	**Tunca**	**4.78**	**171**	*e*P	**Pn**	**03 03 37.1**	**+0.1**
BO01				*e*S	**Sb**	**03 03 46.8**	**+0.4**
BO01				IAML		03 04 00.7	
	comp=Z,95nm,1.3s						
ACHE	**Chepes**	**4.86**	**109**	*e*P	**Pn**	**03 02 41.6**	**+3.2**
GO02	**Mina Guanaco**	**4.98**	**26**	Pn	**Pn**	**03 02 39.6**	**-0.5**
GO02	**Mina Guanaco**	**4.98**	**26**	*e*S	**Sb**	**03 03 52.8**	**+0.4**
BO02	**Sierra Bellavi**	**5.22**	**169**		**Pn**	**03 02 43.3**	**+0.1**
BO02	**Sierra Bellavi**	**5.22**	**169**	IAML		03 04 11.1	
	comp=Z,120nm,1.3s						
PB14	**IPOC Station P**	**5.22**	**16**	Pn	**Pn**	**03 02 40.7**	**-2.7**
PB14	**IPOC Station P**	**5.22**	**16**	*e*S	**Sn**	**03 03 41.6**	**-2.1**
GO05	**Huala**	**5.33**	**179**		**Pn**	**03 02 42.9**	**-1.7**
ML02	**Panimavida**	**6.10**	**175**		**Pn**	**03 02 54.5**	**-0.7**
PB10	**IPOC Station P**	**6.26**	**12**	Pn	**Pn**	**03 02 55.8**	**-1.6**
PB15	**IPOC Station P**	**6.82**	**20**		**Pn**	**03 03 04.2**	**-1.1**
H03N1	**Juan Fernandez**	**6.98**	**236**	T	T	03 10 17.7	
	baz=55,slow=71,SNR=414						
H03N2	**Juan Fernandez**	**7.00**	**236**	T	T	03 10 17.7	
	baz=55,slow=71,SNR=455						
H03N3	**Juan Fernandez**	**7.00**	**236**	T	T	03 10 17.7	
	baz=55,slow=71,SNR=392						
VA04	**Juan Fernndez**	**7.03**	**234**	Pn	**Pn**	**03 03 05.3**	**-2.6**
PB06	**IPOC Station P**	**7.27**	**18**	Pn	**Pn**	**03 03 08.6**	**-2.9**
LVC	**Limon Verde**	**7.56**	**22**	Pn	**Pn**	**03 03 13.9**	**-1.7**
	comp=Z,1.2nm,0.3s,baz=212,slow=11,SNR=8.2						
LVC				Lg	Lg	03 05 10.0	
	comp=Z,2.3nm,0.3s,baz=283,slow=21,SNR=3.6						
LVC				LR	LR	03 06 39.2	
	comp=Z,78nm,19.2s,baz=212,slow=42						
	comp=Z,2.5nm,0.3s						
LVC	**Limon Verde**	**7.56**	**22**	Pn	**Pn**	**03 03 14.5**	**-1.1**
PLCA	**Paso Flores**	**11.11**	**174**	Pn	**Pn**	**03 04 03.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=330,slow=10,SNR=13						
	comp=Z,1.1nm,0.4s						
TRQA	**Tornquist**	**11.81**	**138**		**Pn**	**03 04 13.

	comp=Z,42nm,21.8s,baz=211,slow=35 1.8nm,0.8s						
JAR	**Ashorobuto**	**7.30**	**246**	*e*P	**Pn**	**03 04 54.7**	**+2.6**
JAR				*e*S	**Sn**	**03 06 16.4**	**+2.7**
JKK2	**Kamakawa 2**	**7.69**	**252**	*e*P	**Pn**	**03 05 01.4**	**+3.9**
JCH	**Churui**	**7.92**	**243**	*e*P	**Pn**	**03 05 01.8**	**+1.2**
JCH				*e*S	**Sn**	**03 06 25.5**	**-3.3**
JNBK	**Urakawa-nobuka**	**8.48**	**243**	*e*P	**Pn**	**03 05 09.3**	**+1.1**
JANG	**Nango**	**10.39**	**237**	*e*S	Sn	03 07 21.5	-7.9
MA2	**Magadan**	**12.99**	**355**	Pn	P	03 06 10.4	-9.5
	2.8nm,0.3s,baz=171,slow=19,SNR=2.1						
MA2				LR	LR	03 10 47.6	
	comp=Z,41nm,19.3s,baz=112,slow=36						
USRK	**Ussuriysk Ar.**	**14.89**	**268**	Pn	**Pn**	**03 06 36.2**	**+0.5**
	0.2nm,0.3s,baz=71,slow=11,SNR=2.8 1.6nm,0.8s						
MJAR	**Matsushiro Arr**	**14.92**	**233**	LR	LR	03 12 32.9	
	comp=Z,37nm,19.0s,baz=54,slow=38						
YAK	**Yakutsk**	**20.32**	**328**	LR	LR	03 14 40.3	
	comp=Z,51nm,21.4s,baz=32,slow=34						
KSRS	**Korea Array**	**20.64**	**252**	P	**P**	**03 07 44.6**	**+0.4**
	1.7nm,0.8s,baz=56,slow=10,SNR=6.0						
KSRS				LR	LR	03 15 05.3	
	comp=Z,14nm,19.1s,baz=40,slow=35 1.7nm,0.8s						
TIXI	**Tiksi**	**27.51**	**344**	LR	LR	03 21 13.1	
	comp=Z,29nm,18.3s,baz=358,slow=40						
H11N2	**WAKE ISLAND Hy**	**29.21**	**152**	T	T	03 40 39.2	
	baz=340,slow=76,SNR=590						
H11N1	**WAKE ISLAND Hy**	**29.23**	**152**	T	T	03 40 31.7	
	baz=340,slow=76,SNR=463						
H11N3	**WAKE ISLAND Hy**	**29.23**	**152**	T	T	03 40 35.8	
	baz=340,slow=76,SNR=365						
H11S1	**WAKE ISLAND Hy**	**30.30**	**153**	T	T	03 41 58.8	
	baz=340,slow=76,SNR=522						
H11S3	**WAKE ISLAND Hy**	**30.30**	**153**	T	T	03 41 55.8	
	baz=340,slow=76,SNR=636						
H11S2	**WAKE ISLAND Hy**	**30.31**	**153**	T	T	03 41 52.2	
	baz=340,slow=76,SNR=541						
SONM	**Songino Array**	**31.23**	**289**	P	**P**	**03 09 24.5**	**+0.4**
	0.2nm,0.3s,baz=79,slow=7.5,SNR=1.6 0.2nm,0.3s						
ILAR	**Eielson Array**	**36.70**	**38**	P	**P**	**03 10 11.3**	**+0.2**
	0.7nm,0.9s,baz=274,slow=7.2,SNR=6.9 0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**42.55**	**306**	LR	LR	03 29 45.5	
	comp=Z,51nm,18.6s,baz=43,slow=38						
MKAR	**Makanchi Array**	**46.85**	**297**	P	**P**	**03 11 33.1**	**-1.2**
	0.7nm,0.8s,baz=71,slow=9.1,SNR=4.0						
MKAR				PcP	**PcP**	**03 13 06.6**	**-0.2**
	0.4nm,0.6s,baz=66,slow=1.5,SNR=3.6						
MKAR				LR	LR	03 32 21.7	
	comp=Z,75nm,18.4s,baz=76,slow=38 0.7nm,0.8s						
YKA	**Yellowknife Ar**	**51.08**	**37**	P	**P**	**03 12 05.6**	**-0.8**
	0.4nm,0.8s,baz=303,slow=8.7,SNR=2.7 0.4nm,0.8s						
AAK	**Ala-Archa**	**53.74**	**296**	LR	LR	03 35 24.4	
	comp=Z,32nm,19.3s,baz=114,slow=36						
AKTO	**Aktyubinsk**	**58.68**	**312**	LR	LR	03 40 02.3	
	comp=Z,47nm,18.7s,baz=76,slow=38						
JMIC	**Jan Mayen**	**61.90**	**353**	LR	LR	03 38 12.5	
	comp=Z,51nm,18.9s,baz=294,slow=34						
NVAR	**Mina Array Bea**	**62.60**	**62**	P	**P**	**03 13 28.8**	**0.0**
	0.1nm,0.3s,baz=296,slow=6.9,SNR=2.6						
NVAR				pP	**pP**	**03 13 38.8**	**+0.3**
	0.4nm,0.7s,baz=289,slow=6.3,SNR=3.1 0.1nm,0.3s						
FINES	**FINESS Array B**	**64.06**	**335**	P	**P**	**03 13 36.0**	**-1.6**
	1.6nm,0.4s,baz=32,slow=7.8,SNR=25 1.6nm,0.4s						
PDAR	**Pinedale Array**	**64.91**	**54**	P	**P**	**03 13 43.7**	**-0.2**
	0.2nm,0.3s,baz=326,slow=4.3,SNR=4.2						
PDAR				pP	**pP**	**03 13 54.0**	**+0.3**
	0.6nm,0.7s,baz=248,slow=1.6,SNR=4.4 0.2nm,0.3s						
NB2	**NORSAR Subarra**	**68.26**	**341**	P	**P**	**03 14 03.4**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.26**	**341**	P	**P**	**03 14 03.8**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=28,slow=6.4,SNR=10 comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**68.39**	**199**	P	**P**	**03 14 05.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=14,slow=7.1,SNR=2.4 comp=Z,0.5nm,0.7s						
HFS	**Hagfors**	**68.48**	**339**	LR	LR	03 46 33.7	
	comp=Z,28nm,18.1s,baz=16,slow=38						
AKASG	**Malin Array Be**	**71.54**	**326**	P	**P**	**03 14 23.7**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=22,slow=4.2,SNR=6.6 comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**72.08**	**198**	P	**P**	**03 14 29.4**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=14,slow=5.5,SNR=7.6 comp=Z,0.6nm,0.5s						
GNI	**Garni**	**72.48**	**310**	LR	LR	03 51 17.0	
	comp=Z,26nm,18.3s,baz=104,slow=40						
VRAC	**Vranov**	**77.16**	**332**	LR	LR	03 52 11.7	
	comp=Z,16nm,19.8s,baz=24,slow=38						
TXAR	**Lajitas Array**	**77.66**	**60**	P	**P**	**03 15 01.3**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=292,slow=5.2,SNR=6.9						
TXAR				pP	**PcP**	**03 15 10.9**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=303,slow=4.0,SNR=5.3						
TXAR				sP	**sP**	**03 15 15.9**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=302,slow=4.4,SNR=6.5 comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**78.35**	**317**	P	**P**	**03 15 04.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=90,slow=4.0,SNR=5.0 comp=Z,0.7nm,0.8s						
DAVOX	**Davos/Dischmat**	**81.45**	**335**	LR	LR	03 56 23.4	
	comp=Z,17nm,18.0s,baz=85,slow=39						
H03N2	**Juan Fernandez**	**138.89**	**90**	T	T	05 57 54.8	
	baz=308,slow=77,SNR=25						
H03N1	**Juan Fernandez**	**138.91**	**90**	T	T	05 57 57.6	
	baz=308,slow=77,SNR=28						
H03N3	**Juan Fernandez**	**139.91**	**90**	T	T	05 57 51.9	
	baz=308,slow=77,SNR=26						
PLCA	**Paso Flores**	**148.34**	**95**	PKPbc	**PKPbc**	**03 22 50.8**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=242,slow=7.9,SNR=3.5						

*IDC **03** 03:05:25.6±3.7,56°.22S×25°.45W,h0km,mb4.1/4, mbtmp4.1/4,Error ellipse: s-maj=121.2km s-min=41.8km az=177.0*

ISC 03 03:05:27.3±1.0,56°.3S±0°.2×25°.7W±0°.3,h10km,n10, σ1s43/10,mb4.2/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.28**	**159**	P	**Pn**	**03 09 14.6**	**-1.1**
VNA3	**Neumayer Olymp**	**16.51**	**162**	P	**Pn**	**03 09 17.3**	**-1.3**
VNA2	**Neumayer--Watz**	**16.68**	**159**	P	**Pn**	**03 09 19.8**	**-1.0**
	baz=324,slow=15						
SNAA	**Sanae**	**18.20**	**157**	P	**Pn**	**03 09 40.5**	**+0.7**
TROLL	**Troll, Antarti**	**19.68**	**154**	P	**Pn**	**03 10 00.6**	**+3.0**
LVC	**Limon Verde**	**46.15**	**299**	P	**P**	**03 13 52.9**	**+0.7**
	3.7nm,0.5s,baz=135,slow=2.9,SNR=7.7 3.7nm,0.5s						
SIV	**San Ignacio**	**48.35**	**312**	P	**P**	**03 14 08.7**	**-0.3**
	0.6nm,0.2s,baz=206,slow=18,SNR=1.7 0.6nm,0.2s						
LPAZ	**La Paz**	**51.20**	**304**	P	**P**	**03 14 31.8**	**+0.3**
	1.1nm,0.5s,baz=172,slow=6.8,SNR=9.7 1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.83**	**28**	P	**P**	**03 16 55.5**	**-0.4**
	0.5nm,0.7s,baz=209,slow=5.2,SNR=4.1 0.5nm,0.7s						
ILAR	**Eielson Array**	**150.90**	**311**	PKPbc	**PKPbc**	**03 25 18.2**	**-0.3**
	0.3nm,0.6s,baz=100,slow=1.0,SNR=5.3						

*ISK **03** 03:28:40.4,41°.71N×23°.45E,h10km,ML2.5/9*
*ATH **03** 03:28:40.9,41°.74N×23°.46E,h13km±1km,ML2.2/9,Error ellipse: s-maj=2.2km s-min=1.0km az=173.0*
*BEO **03** 03:28:40.8±0.3,41°.80N×23°.40E,h7km±2km,ML2.2/13*
*SKO **03** 03:28:41.9,41°.74N×23°.43E,h2km*
*THE **03** 03:28:41.3,41°.71N×23°.47E,h6km±1km,ML2.2/6,Error ellipse: s-maj=2.1km s-min=0.8km az=191.0*

ISC 03 03:28:39.2±1.2,41°.76N±0°.02×23°.45E±0°.02,h4km±10km, n52,σ0s92/90,10C-3D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	**0.52**	**143**	P	**Pb**	**03 28 50.4**	**-0.5**
NVR				S	**Sb**	**03 28 57.4**	**-1.3**
	308nm,0.1s						
NVR	**Nevrokopi**	**0.52**	**143**	P	**Pb**	**03 28 50.4**	**-0.5**
NVR				S	**Sb**	**03 28 57.5**	**-1.2**
NVR				AML	AML	03 29 03.6	
	comp=E,598μm,0.1s						
NVR				AML	AML	03 29 03.7	
	comp=N,607μm,0.1s						
SRS	**Serrai**	**0.65**	**170**	P	**Pb**	**03 28 53.0**	**-0.2**
SRS	**Serrai**	**0.65**	**170**	*e*Pg	**Pb**	**03 28 53.0**	**-0.2**
SRS				*e*Sg	**Sb**	**03 29 02.1**	**-0.5**
SRS	**Serrai**	**0.65**	**170**	P	**Pb**	**03 28 53.0**	**-0.2**
SRS				S	**Sb**	**03 29 02.2**	**-0.4**
SRS				AML	AML	03 29 07.0	
	comp=E,421μm,0.1s						
SRS				AML	AML	03 29 07.7	
	comp=N,429μm,0.2s						
KNT	**Kendrikon**	**0.73**	**215**	P	**Pb**	**03 28 54.3**	**-0.1**
KNT				S	**Sb**	**03 29 04.2**	**-0.5**
	comp=N,238nm,0.1s						
KNT	**Kendrikon**	**0.73**	**215**	PG	**Pb**	**03 28 54.3**	**-0.1**
KNT				SG	**Sb**	**03 29 04.1**	**-0.6**
KNT	**Kendrikon**	**0.73**	**215**	P	**Pb**	**03 28 54.5**	**0.0**
KNT				S	**Sb**	**03 29 04.2**	**-0.5**
VAY	**Valandovo**	**0.79**	**237**	*e*Pg	**Pb**	**03 28 55.7**	**+0.2**
VAY				*e*Sg	**Sb**	**03 29 06.1**	**-0.5**
SOH	**Sokhos**	**0.94**	**184**	P	**Pb**	**03 28 58.2**	**+0.1**
SOH				S	**Sb**	**03 29 11.1**	**+0.2**
	comp=N,150nm,0.4s						
SOH	**Sokhos**	**0.94**	**184**	P	**Pb**	**03 28 58.3**	**+0.1**
SOH				S	**Sb**	**03 29 11.2**	**+0.2**
SOH				AML	AML	03 29 11.6	
	comp=N,463μm,0.4s						
SOH				AML	AML	03 29 13.3	
	comp=E,238μm,0.3s						
PLD	**Plovdiv**	**1.00**	**69**	PG	**Pn**	**03 29 00.4**	**+0.4**
PLD				SG	**Sn**	**03 29 14.7**	**+0.1**
PLD	**Plovdiv**	**1.00**	**69**	*e*Pg	**Pn**	**03 29 00.4**	**+0.4**
PLD				*e*Sg	**Sn**	**03 29 13.7**	**-0.9**
BOSS	**Bosilegrad**	**1.03**	**316**	*e*Pg	**Pg**	**03 28 59.0**	**+0.1**
BOSS				*e*Sg	**Sg**	**03 29 12.5**	**+0.3**
KOKK	**Kokkinochori,**	**1.03**	**156**	P	**Pb**	**03 28 59.4**	**-0.2**
KOKK				S	**Sb**	**03 29 13.2**	**-0.3**
	comp=E,142nm,0.4s						
KOKK	**Kokkinochori,**	**1.03**	**156**	P	**Pb**	**03 28 59.7**	**+0.1**
KOKK				S	**Sb**	**03 29 13.5**	**0.0**
KVLA	**Kavala**	**1.09**	**139**	P	**Pb**	**03 29 00.3**	**-0.2**
KVLA				S	**Sb**	**03 29 14.7**	**-0.4**
KAVA	**Kavala**	**1.11**	**133**	P	**Pn**	**03 29 01.1**	**-0.4**
KAVA				S	**Sb**	**03 29 16.0**	**+0.3**
	comp=E,198nm,0.4s						
KAVA	**Kavala**	**1.11**	**133**	P	**Pb**	**03 29 01.0**	**0.0**
KAVA				S	**Sb**	**03 29 15.5**	**-0.3**
GRG	**Griva**	**1.12**	**225**	P	**Pn**	**03 29 01.7**	**-0.1**
GRG	**Griva**	**1.12**	**225**	PN	**Pn**	**03 29 01.6**	**-0.2**
GRG				SN	**Sn**	**03 29 17.1**	**-0.6**
GRG	**Griva**	**1.12**	**225**	P	**Pn**	**03 29 01.7**	**-0.1**
GRG				S	**Sb**	**03 29 16.2**	**0.0**
GRG				AML	AML	03 29 17.6	
	comp=E,163μm,0.2s						
GRG				AML	AML	03 29 18.1	
	comp=N,200μm,0.3s						
THE	**Thessaloniki**	**1.18**	**198**	P	**Pn**	**03 29 02.8**	**+0.3**
THE				S	**Sb**	**03 29 17.8**	**-0.1**
THE				AML	AML	03 29 18.9	
	comp=E,168μm,0.2s						
THE				AML	AML	03 29 19.8	
	comp=N,267μm,0.4s						
HORT	**Hortiatis**	**1.19**	**193**	PN	**Pn**	**03 29 02.8**	**+0.1**
HORT	**Hortiatis**	**1.19**	**193**	P	**Pn**	**03 29 03.0**	**+0.2**
HORT				S	**Sb**	**03 29 17.8**	**-0.4**
HORT				AML	AML	03 29 19.3	
	comp=N,103μm,0.3s						
HORT				AML	AML	03 29 19.4	
	comp=E,133μm,0.2s						
PRVS	**Prvonek**	**1.26**	**307**	*e*Pg	**Pb**	**03 29 04.4**	**+0.8**
PRVS				*e*Sg	**Sg**	**03 29 19.9**	**+0.1**
KDZ	**Kurdzhali**	**1.48**	**94**	PN	**Pn**	**03 29 06.7**	**0.0**
THAS	**Thassos island**	**1.50**	**140**	P	**Pn**	**03 29 06.6**	**-0.3**
THAS				S	**Sg**	**03 29 27.8**	**+0.4**
	comp=E,135nm,0.4s						
THAS	**Thassos island**	**1.50**	**140**	P	**Pn**	**03 29 06.8**	**-0.1**
THAS				S	**Sg**	**03 29 27.7**	**+0.3**
THAS				AML	AML	03 29 29.4	
	comp=N,328μm,0.3s						
THAS				AML	AML	03 29 30.2	
	comp=E,206μm,0.4s						
BARS	**Barje**	**1.60**	**312**	*e*Pg	**Pg**	**03 29 10.2**	**+0.2**
BARS				*e*Sg	**Sn**	**03 29 29.0**	**-0.6**
ZAPS	**Zavoj**	**1.63**	**339**	*e*Pg	**Pb**	**03 29 10.1**	**+0.3**
ZAPS				*e*Sg	**Sn**	**03 29 28.4**	**-1.8**
RDO	**Rodhopi**	**1.69**	**111**	PN	**Pb**	**03 29 10.6**	**-0.2**
RDO	**Rodhopi**	**1.69**	**111**	P	**Pg**	**03 29 11.4**	**-0.2**
RDO				S	**Sb**	**03 29 32.5**	**+0.1**
RDO				AML	AML	03 29 37.1	
	comp=E,172μm,0.2s						
RDO				AML	AML	03 29 37.2	
	comp=N,203μm,0.2s						
BLKB	**Belogradchik**	**1.95**	**343**	⇑P	**Pg**	**03 29 16.3**	**-0.2**
BLKB				⇑S	**Sg**	**03 29 41.5**	**-0.2**
BLKB	**Belogradchik**	**1.95**	**343**	*e*Pn	**Pn**	**03 29 13.5**	**+0.4**
BLKB				*e*Sn	**Sn**	**03 29 37.9**	**-0.1**
ALN	**Alexandroupoli**	**2.14**	**113**	PN	**Pn**	**03 29 16.9**	**+1.2**
ALN	**Alexandroupoli**	**2.14**	**113**	P	**Pb**	**03 29 18.2**	**-0.3**
ALN				AML	AML	03 29 51.6	
	comp=N,42μm,0.5s						
ALN				AML	AML	03 29 56.5	
	comp=E,53μm,0.8s						
ZAGS	**Zajecar**	**2.24**	**337**	*e*Pn	**Pn**	**03 29 16.2**	**-0.8**
SELS	**Selova**	**2.25**	**311**	*e*Pn	**Pn**	**03 29 16.8**	**-0.5**
SELS				*e*Sn	**Sn**	**03 29 45.8**	**+0.2**
BOVS	**Bovan**	**2.27**	**326**	⇑P	**Pb**	**03 29 19.8**	**-1.0**
BOVS				⇓S	**Sb**	**03 29 49.1**	**0.0**
BOVS	**Bovan**	**2.27**	**326**	*e*Pn	**Pn**	**03 29 18.2**	**+0.7**
BOVS				*e*Sn	**Sn**	**03 29 45.0**	**-0.9**
ENEZ	**Enez**	**2.28**	**116**	PN	**Pn**	**03 29 18.5**	**+0.8**
VLAD	**Vladila**	**2.34**	**17**	⇑S	**Sg**	**03 29 56.2**	**+1.7**
PUNG	**Punghina**	**2.54**	**352**	⇑S	**Sg**	**03 29 59.4**	**-1.5**
ERIK	**Erikli-Kesan**	**2.56**	**114**	PN	**Pn**	**03 29 22.8**	**+1.4**
SRE	**Strehaia**	**2.91**	**357**	⇑P	**Pb**	**03 29 30.1**	**-1.5**
SRE				⇑S	**Sb**	**03 29 57.8**	**+0.3**
GRUS	**Gruza**	**2.92**	**318**	*e*Pn	**Pn**	**03 29 27.5**	**+1.0**
GRUS				*e*Sn	**Sn**	**03 30 01.4**	**-0.7**
SJES	**Sjenica**	**2.97**	**301**	*e*Sn	**Sn**	**03 30 04.3**	**+0.9**
IVAS	**Ivanjica**	**3.03**	**308**	*e*Pn	**Pn**	**03 29 28.7**	**+0.7**
IVAS				*e*Sn	**Sn**	**03 30 04.7**	**-0.1**
HERR	**Herculane**	**3.21**	**347**	⇓P	**Pn**	**03 29 32.8**	**+2.4**
HERR				⇑S	**Sb**	**03 30 15.0**	**-1.2**
MDVR	**Moldovita**	**3.27**	**338**	⇑P	**Pn**	**03 29 32.9**	**+1.5**
MDVR				⇑S	**Sb**	**03 30 15.2**	**-3.0**
BZS	**Buzias**	**4.08**	**342**	⇓S	**Sn**	**03 30 35.4**	**+4.9**

KRSC 03 03:30:35.7±2.3,50°.03N×157°.35E,h59km±27km,ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.03**	**310**	*e*S	Sn	03 31 05.0	-2.6
PAU	**Pauzhetka**	**1.48**	**347**	*e*P	Pn	03 31 01.3	+1.2
PAU				*e*S	Sn	03 31 19.7	+1.3
KDTR	**Khodutka, Kamc**	**1.84**	**14**	*e*P	Pn	03 31 07.5	+2.6
KDTR				*e*S	Sn	03 31 30.6	+3.5
ASAK	**Asacha**	**2.38**	**8**	*e*P	Pn	03 31 15.1	+2.7
MTVR	**Mutnovka**	**2.51**	**12**	*e*P	Pn	03 31 17.1	+2.9
MTVR				*e*S	Sn	03 31 47.1	+3.4
RUS	**Russkaya**	**2.52**	**16**	*e*P	Pn	03 31 16.4	+2.3
RUS				*e*S	Sn	03 31 46.2	+2.6
GRL	**Gorelyy**	**2.57**	**10**	*e*P	Pn	03 31 17.9	+3.0
GRL				*e*S	Sn	03 31 49.7	+4.7
KRMR	**Karymshinskiy**	**2.85**	**10**	*e*P	Pn	03 31 21.8	+3.2
KRMR				*e*S	Sn	03 31 55.8	+4.1
UGLR	**Uglovaya**	**3.31**	**15**	*e*P	Pn	03 31 28.9	+3.8
AVH	**Avacha**	**3.35**	**14**	*e*P	Pn	03 31 29.5	+3.8
SMAR	**Somma**	**3.36**	**15**	*e*P	Pn	03 31 30.1	+4.2
KOK	**Koryaka**	**3.37**	**13**	*e*P	Pn	03 31 29.7	+3.9
NLC	**Nalytchevo**	**3.38**	**21**	*e*S	Sn	03 32 06.8	+2.0
SDLR	**Sedlovina**	**3.39**	**16**	*e*P	Pn	03 31 29.5	+3.3
KRER	**Koryakskii**	**3.39**	**14**	*e*P	Pn	03 31 29.9	+3.6
KRX	**Arik**	**3.43**	**13**	*e*P	Pn	03 31 30.5	+3.7
SPN	**Mys Shipunski**	**3.50**	**27**	*e*P	Pn	03 31 31.2	+3.7
SPN				*e*S	Sn	03 32 10.9	+3.3
GNL	**Ganaly**	**3.69**	**5**	*e*P	Pn	03 31 33.2	+2.9
MKZ	**Mys Kozlova**	**5.27**	**29**	*e*P	Pn	03 31 54.0	+2.3
TUMR	**Tumrok**	**5.53**	**17**	*e*P	Pn	03 31 59.4	+3.9
KBTR	**Krutoberegovo**	**7.01**	**26**	*e*P	Pn	03 32 18.2	+2.7

*NEIC **03** 04:40:12.6±0.9,19°.53S±0°.03×69°.91W±0°.04,h58km±8km, mb4.3/6,ML4.0(GUC),Error ellipse: s-maj=5.4km s-min=3.4km az=66.0*
*GUC **03** 04:40:13.1±0.6,19°.49S×69°.83W,h55km±5km,ML4.0*
*IDC **03** 04:40:16.0±2.4,19°.48S×69°.48W,h94km±20km,mb3.1/3, mbtmp3.6/6,MS2.5/2,Error ellipse: s-maj=45.5km s-min=14.4km az=99.0*

ISC 03 04:40:11.8±0.7,19°.50S±0°.03×69°.90W±0°.05,h56km±6km, n60,σ1s46/69,mb4.0/6,1C-10D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO01	**Chusmiza**	**0.69**	**104**		**Pn**	**04 40 26.4**	**+0.3**
GO01				Sn	**Sn**	**04 40 37.1**	**+0.6**
GO01	**Chusmiza**	**0.69**	**104**	⇓*i*P	**Pn**	**04 40 26.8**	**+0.6**
GO01				*i* S	**Sn**	**04 40 37.2**	**+0.6**
GO01				IAML		04 40 37.5	
	comp=N,42μm,0.1s						
TA02	**Huaiquique**	**0.80**	**196**		**Pn**	**04 40 27.7**	**+0.6**
TA02				Sn	**Sn**	**04 40 38.7**	**+0.5**
TA02	**Huaiquique**	**0.80**	**196**	*e*P	**Pn**	**04 40 27.8**	**+0.8**
TA02				*i* S	**Sn**	**04 40 39.4**	**+1.2**
TA02				IAML		04 40 41.1	
	comp=N,6μm,0.1s						
PB12	**IPOC Station P**	**0.97**	**335**	Pn	**Pn**	**04 40 29.8**	**+0.4**
PB12				Sn	**Sn**	**04 40 43.6**	**+1.3**
PB12	**IPOC Station P**	**0.97**	**335**	⇓*i*P	**Pn**	**04 40 30.4**	**+1.0**
PB12				*i* S	**Sn**	**04 40 43.6**	**+1.3**
PB12				IAML		04 40 44.3	
	comp=E,9μm,0.3s						
TA01	**Diego Aracena**	**1.09**	**194**	Pn	**Pn**	**04 40 31.4**	**+0.5**
TA01				Sn	**Sn**	**04 40 44.6**	**-0.5**
TA01	**Diego Aracena**	**1.09**	**194**	⇓*i*P	**Pn**	**04 40 31.5**	**+0.5**
TA01				*i* S	**Sn**	**04 40 45.9**	**+0.8**
AP01	**Chacalluta**	**1.20**	**340**		**Pn**	**04 40 33.4**	**+1.1**
AP01	**Chacalluta**	**1.20**	**340**	⇓*i*P	**Pn**	**04 40 33.5**	**+1.2**
AP01				*i* S	**Sn**	**04 40 49.0**	**+1.4**
PB16	**IPOC Station P**	**1.22**	**18**	Pn	**Pn**	**04 40 34.0**	**+0.9**
PB16	**IPOC Station P**	**1.22**	**18**	⇓*i*P	**Pn**	**04 40 34.3**	**+1.2**
PB16				*i* S	**Sn**	**04 40 50.3**	**+1.4**
PATCX	**Punta Patache**	**1.34**	**190**		**Pn**	**04 40 34.5**	**+0.2**
PB01	**IPOC Station P**	**1.58**	**166**		**Pn**	**04 40 38.0**	**+0.4**
PB01	**IPOC Station P**	**1.58**	**166**	⇓*i*P	**Pn**	**04 40 38.3**	**+0.6**
PB01				*i* S	**Sn**	**04 40 58.3**	**+1.2**
PB02	**IPOC Station P**	**1.81**	**180**		**Pn**	**04 40 41.4**	**+0.7**
PB02	**IPOC Station P**	**1.81**	**180**	⇓*i*P	**Pn**	**04 40 42.0**	**+1.3**
PB02				IAML		04 41 13.3	
	comp=E,1μm,0.4s						
PB18	**Visviri**	**1.94**	**12**		**Pn**	**04 40 46.7**	**+3.9**
PB07	**IPOC Station P**	**2.22**	**180**		**Pn**	**04 40 47.0**	**+0.7**
PB07	**IPOC Station P**	**2.22**	**180**	⇓*i*P	**Pn**	**04 40 47.5**	**+1.2**
PB07				*i* S	**Sn**	**04 41 14.0**	**+1.3**
PB07				IAML		04 41 21.1	
	comp=E,905nm,0.5s						
PB09	**IPOC Station P**	**2.37**	**165**		**Pn**	**04 40 49.9**	**+1.5**
PB09	**IPOC Station P**	**2.37**	**165**	⇑*i*P	**Pn**	**04 40 50.0**	**+1.6**
PB09				*i* S	**Sn**	**04 41 18.1**	**+1.7**
PB09				IAML		04 41 26.8	
	comp=N,594nm,0.5s						
PB04	**IPOC Station P**	**2.83**	**185**		**Pn**	**04 40 55.3**	**+0.6**
PB04	**IPOC Station P**	**2.83**	**185**	*e*P	**Pn**	**04 40 56.3**	**+1.6**
PB04				IAML		04 41 45.5	
	comp=N,459nm,0.4s						
PB06	**IPOC Station P**	**3.21**	**175**		**Pn**	**04 41 00.4**	**+0.5**
PB06	**IPOC Station P**	**3.21**	**175**	⇓*i*P	**Pn**	**04 41 00.7**	**+0.9**
PB06				*i* S	**Sn**	**04 41 38.6**	**+1.7**
PB06				IAML		04 41 58.3	
	comp=N,353nm,0.3s						
LVC	**Limon Verde**	**3.23**	**164**	P	**Pn**	**04 41 03.4**	**+3.0**
	comp=N,103nm,0.3s,baz=350,slow=9.3,SNR=137						
LVC				S	**Sn**	**04 41 41.4**	**+3.6**
	comp=N,56nm,0.3s,baz=219,slow=22,SNR=10						
LVC	**Limon Verde**	**3.23**	**164**	Pn	**Pn**	**04 41 01.6**	**+1.2**
LVC	**Limon Verde**	**3.23**	**164**	⇓*i*P	**Pn**	**04 41 02.9**	**+2.5**
LVC				*i* S	**Sn**	**04 41 39.7**	**+1.9**
LPAZ	**La Paz**	**3.61**	**28**	P	**Pn**	**04 41 08.9**	**+3.1**
	comp=N,3.7nm,0.3s,baz=217,slow=2.9,SNR=54						
LPAZ				LR	LR	04 42 52.7	
	comp=N,59nm,18.6s,baz=206,slow=46						
LPAZ	**La Paz**	**3.61**	**28**		**Pn**	**04 41 06.9**	**+1.1**
PB15	**IPOC Station P**	**3.71**	**174**		**Pn**	**04 41 07.5**	**+0.6**
PB15	**IPOC Station P**	**3.71**	**174**	*e*P

LKD2	**Lefkada island**	**0.41**	**209**	P		**Pg**	**04 43 42.6**	**+0.1**
	baz=132							
LKD2				S		**Sg**	**04 43 48.5**	**+0.5**
	baz=132							
LKD2	**Lefkada island**	**0.41**	**209**	P		**Pg**	**04 43 42.5**	**0.0**
LKD2				S		**Sg**	**04 43 48.5**	**+0.5**
LKD2				AML	AML		04 43 52.8	
	comp=N,704μm,0.4s							
LKD2				AML	AML		04 43 55.7	
	comp=E,549μm,0.3s							
NYDR	**Nydri-Lefkada**	**0.47**	**201**	P		**Pg**	**04 43 43.0**	**-0.4**
NYDR				S		**Sg**	**04 43 49.7**	**0.0**
	comp=E,220nm,0.6s							
JAN	**Janina**	**0.50**	**355**	P		**Pg**	**04 43 43.2**	**-0.9**
JAN				S		**Sg**	**04 43 51.5**	**+0.7**
	comp=E,452nm,0.6s							
JAN	**Janina**	**0.50**	**355**	P		**Pg**	**04 43 43.2**	**-0.9**
JAN				S		**Sb**	**04 43 52.2**	**-0.2**
JAN				AML	AML		04 43 53.8	
	comp=N,896μm,0.5s							
JAN				AML	AML		04 43 55.5	
	comp=E,764μm,0.3s							
EVGI	**Lefkada island**	**0.57**	**201**	P		**Pg**	**04 43 44.6**	**-0.7**
EVGI	**Lefkada island**	**0.57**	**201**	P		**Pg**	**04 43 44.7**	**-0.6**
EVGI				S		**Sb**	**04 43 54.1**	**-0.1**
IGT	**Igoumenitsa**	**0.59**	**310**	P		**Pg**	**04 43 45.4**	**-0.2**
IGT	**Igoumenitsa**	**0.59**	**310**	P		**Pg**	**04 43 45.5**	**-0.1**
	baz=356							
IGT				S		**Sb**	**04 43 54.9**	**+0.1**
	baz=356							
IGT	**Igoumenitsa**	**0.59**	**310**	P		**Pg**	**04 43 45.5**	**-0.1**
IGT				S		**Sg**	**04 43 53.9**	**+0.5**
IGT				AML	AML		04 43 59.9	
	comp=E,370μm,0.3s							
IGT				AML	AML		04 44 01.6	
	comp=N,280μm,0.4s							
PVO	**Paravola**	**0.72**	**138**	P		**Pg**	**04 43 48.0**	**-0.1**
EVR	**Evrytania**	**0.74**	**108**	P		**Pg**	**04 43 48.6**	**+0.1**
EVR				AML	AML		04 44 03.4	
	comp=E,236μm,0.4s							
EVR				AML	AML		04 44 07.4	
	comp=N,192μm,0.3s							
FSK	**Fiskardo**	**0.75**	**202**	P		**Pg**	**04 43 48.4**	**-0.2**
THL	**Klokotos Trika**	**0.95**	**64**	P		**Pb**	**04 43 52.7**	**+0.1**
THL				AML	AML		04 44 11.2	
	comp=E,109μm,0.4s							
THL				AML	AML		04 44 13.8	
	comp=N,61μm,0.3s							
KASA	**Kassiopi**	**0.96**	**308**	P		**Pn**	**04 43 53.5**	**-0.1**
KASA				S		**Sb**	**04 44 06.2**	**+0.7**
KASA				AML	AML		04 44 09.8	
	comp=E,586μm,0.3s							
KASA				AML	AML		04 44 10.3	
	comp=N,446μm,0.4s							
MAKR	**Makrakomi, Fth**	**0.96**	**98**	P		**Pg**	**04 43 51.8**	**-0.9**
MAKR	**Makrakomi, Fth**	**0.96**	**98**	P		**Pg**	**04 43 52.5**	**-0.3**
MAKR				S		**Sb**	**04 44 05.4**	**-0.1**
MAKR				AML	AML		04 44 13.5	
	comp=N,765μm,0.5s							
MAKR				AML	AML		04 44 14.2	
	comp=E,963μm,0.3s							
KEF4	**Livadi, Kephal**	**0.97**	**203**	P		**Pg**	**04 43 52.7**	**-0.3**
KEF4				S		**Sn**	**04 44 06.9**	**-0.5**
VLS	**Valsamata**	**1.01**	**195**	P		**Pg**	**04 43 53.1**	**-0.5**
VLS				S		**Sb**	**04 44 07.4**	**+0.5**
VLS				AML	AML		04 44 10.2	
	comp=E,284μm,0.3s							
VLS				AML	AML		04 44 10.8	
	comp=N,342μm,0.6s							
LSK	**Leskovik**	**1.02**	**347**	P		**Pn**	**04 43 54.5**	**0.0**
	baz=7.0							
LSK				S		**Sn**	**04 44 12.1**	**+3.3**
	baz=7.0							
LSK				AMP				
	comp=N,1.2nm,1.0s,baz=7.0							
KEK	**Kerkira**	**1.03**	**303**	P		**Pg**	**04 43 53.9**	**0.0**
KEK				S		**Sn**	**04 44 08.7**	**-0.2**
KEF3	**Kipouria, Keph**	**1.05**	**205**	P		**Pn**	**04 43 54.9**	**+0.1**
KEF3				S		**Sb**	**04 44 08.4**	**+0.5**
EFP	**Efpalio**	**1.06**	**133**	P		**Pg**	**04 43 54.7**	**0.0**
PSDA	**Pessada-Kefalo**	**1.07**	**194**	P		**Pb**	**04 43 54.1**	**-0.6**
PSDA				S		**Sg**	**04 44 08.9**	**+0.2**
AGG	**Agios Georgios**	**1.11**	**96**	P		**Pb**	**04 43 55.2**	**-0.2**
AGG	**Agios Georgios**	**1.11**	**96**	P		**Pb**	**04 43 55.2**	**-0.2**
AGG				AML	AML		04 44 15.5	
	comp=N,190μm,0.6s							
AGG				AML	AML		04 44 16.7	
	comp=E,252μm,0.4s							
RLS	**Riolos of Patr**	**1.18**	**158**	P		**Pg**	**04 43 57.4**	**+0.5**
LAKA	**Lakka**	**1.24**	**137**	P		**Pg**	**04 43 58.4**	**+0.4**
NEST	**Nestorio**	**1.26**	**5**	P		**Pg**	**04 43 58.3**	**-0.2**
NEST				AML	AML		04 44 20.9	
	comp=N,194μm,0.7s							
NEST				AML	AML		04 44 21.8	
	comp=E,205μm,0.7s							
KBN	**Korca**	**1.47**	**356**	P		**Pg**	**04 44 02.9**	**+0.5**
	baz=10.0							
KLV	**Kalavryta, Ach**	**1.47**	**138**	P		**Pg**	**04 44 02.2**	**-0.3**
FNA	**Florina**	**1.67**	**12**	P		Pn	04 43 50.2	-13
	baz=22							
VLO	**Vlora**	**1.71**	**321**	P		Pg	04 45 05.6	+59
	baz=336							
LSTV	**Lastovo**	**4.72**	**321**	*e*Pn		**Pn**	**04 44 43.8**	**-1.4**
ZIRJ	**Zirje**	**5.99**	**320**	*e*Pn		**Pn**	**04 45 01.0**	**-1.6**
DUGI	**Dugi Otok**	**6.53**	**320**	*e*Pn		**Pn**	**04 45 09.1**	**-1.0**

*AEIC **03** 05:25:22.1±1.3, 55°.36N±0°.03×158°.40W±0°.07, h10km±6km, ML3.4/33, ML3.6/26(NEIC), Error ellipse: s-maj=6.4km s-min=3.3km az=116.0*
*NEIC **03** 05:25:23.6±1.5, 55°.36N±0°.04×158°.39W±0°.08, h43km±20km, Error ellipse: s-maj=7.0km s-min=5.1km az=131.0*
*IDC **03** 05:25:23.7±4.8, 55°.75N×158°.60W, h40km±43km, mb3.4/8, mbtmp3.6/12, ML3.6/4, Error ellipse: s-maj=34.7km s-min=17.1km az=14.0*

ISC 03 05:25:22.5±0.7, 55°.40N±0°.05×158°.38W±0°.04, h33km, n88, σ1°.48/91, mb3.6/8, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.90**	**231**	P	**Pn**	**05 25 38.6**	**-0.2**
	baz=52						
CHNA				S	**Sb**	**05 25 50.8**	**-0.4**
	baz=52						
CNBA	**Chernabura Isl**	**0.90**	**231**		**Pn**	**05 25 38.6**	**-0.3**
CNBA					**Sb**	**05 25 50.8**	**-0.6**
CNBA	**Chernabura Isl**	**0.90**	**231**	IAML		05 25 55.9	
	comp=N,1μm,0.5s						
CHGN	**Chignik**	**0.91**	**359**		**Pn**	**05 25 39.1**	**+0.2**
CHGN					**Sn**	**05 25 51.3**	**+0.5**
CHGN	**Chignik**	**0.91**	**359**	P	**Pn**	**05 25 39.1**	**+0.2**
	baz=179						
CHGN				S	**Sn**	**05 25 51.3**	**+0.5**
	baz=179						
VNHG	**Veniaminof 1**	**0.94**	**332**		**Pn**	**05 25 40.0**	**+0.5**
VNFG	**Fog Glacier, M**	**1.11**	**324**		**Pn**	**05 25 42.9**	**+1.1**
VNFG					**Sb**	**05 25 58.5**	**+1.1**
SDPT	**Sand Point**	**1.20**	**269**		**Pn**	**05 25 42.9**	**0.0**
SDPT					**Sn**	**05 25 58.2**	**+0.2**
SDPT	**Sand Point**	**1.20**	**269**	IAML		05 25 59.6	
	comp=N,2μm,0.6s						
SDPT				IAML		05 26 01.4	
	comp=E,1μm,0.4s						
SDPT	**Sand Point**	**1.20**	**269**	P	**Pn**	**05 25 42.9**	**0.0**
	baz=89						
SDPT				S	**Sn**	**05 25 58.2**	**+0.2**
	baz=89						
ANPB	**Aniakchak Plen**	**1.41**	**2**		**Pn**	**05 25 47.5**	**+1.6**
ANPK	**Aniakchak Peak**	**1.46**	**6**		**Pn**	**05 25 48.1**	**+1.5**
AZAC	**Aniakchak**	**1.50**	**3**		**Pn**	**05 25 49.1**	**+1.9**
CHIR	**Chirikof Islan**	**1.62**	**74**		**Pn**	**05 25 50.0**	**+1.2**
CHIR	**Chirikof Islan**	**1.62**	**74**	IAML		05 26 19.7	
	comp=E,1μm,0.5s						
CHIR				IAML		05 26 20.4	
	comp=N,1μm,0.9s						
CHIR	**Chirikof Islan**	**1.62**	**74**	P	**Pn**	**05 25 50.0**	**+1.2**
	baz=254						
PVV	**Pavlof Volcano**	**1.94**	**271**		**Pn**	**05 25 54.6**	**+1.5**
PS4A	**Pavlof South-4**	**1.98**	**270**		**Pn**	**05 25 54.6**	**+0.9**
HAG	**Hague Volcano**	**2.01**	**269**		**Pn**	**05 25 55.9**	**+1.8**
S12K	**Black Hills**	**2.11**	**280**		**Pn**	**05 25 56.6**	**+1.1**
R16K	**Pilot Point**	**2.22**	**11**		**Pn**	**05 25 58.3**	**+1.3**
R17K	**Ugashik Creek**	**2.50**	**25**		**Pn**	**05 26 03.0**	**+2.1**

SII	**Sitkinak Islan**	**2.63**	**62**			**Pn**	**05 26 03.6**	**+1.0**
SII	**Sitkinak Islan**	**2.63**	**62**	IAML			05 26 55.2	
	comp=N,358nm,0.6s							
SII				IAML			05 27 04.1	
	comp=E,414nm,0.7s							
SII	**Sitkinak Islan**	**2.63**	**62**	P		**Pn**	**05 26 03.6**	**+1.0**
	baz=245							
ISLZ	**Isanotski Laza**	**3.14**	**260**			**Pn**	**05 26 10.5**	**+0.9**
SSLS	**Shishaldin Sou**	**3.30**	**260**			**Pn**	**05 26 13.2**	**+1.3**
OHAK	**Old Harbor**	**3.38**	**55**			**Pn**	**05 26 13.3**	**+0.4**
OHAK	**Old Harbor**	**3.38**	**55**	IAML			05 27 20.8	
	comp=N,70nm,0.8s							
OHAK	**Old Harbor**	**3.38**	**55**	P		**Pn**	**05 26 13.3**	**+0.4**
	baz=239							
KELA	**Mount Kelaz**	**3.38**	**24**			**Pn**	**05 26 14.4**	**+1.4**
P16K	**Nushagak River**	**3.65**	**3**			**Pn**	**05 26 18.2**	**+1.6**
KDAK	**Kodiak Island**	**4.00**	**51**	P		**Pn**	**05 26 21.7**	**+0.3**
	comp=N,2.6nm,0.3s,baz=254,slow=6.9,SNR=136							
KDAK				S		**Sn**	**05 27 04.6**	**-2.5**
	comp=N,12nm,0.5s,baz=282,slow=11,SNR=1.5							
	comp=N,8.2nm,0.3s							
KDAK	**Kodiak Island**	**4.00**	**51**	IAML			05 27 41.5	
	comp=N,37nm,1.7s							
KDAK				IAML			05 27 46.6	
	comp=N,38nm,1.3s							
O16K	**Kokwok River B**	**4.21**	**2**			**Pn**	**05 26 25.5**	**+1.2**
P18K	**Big Mountain,**	**4.35**	**22**			**Pn**	**05 26 27.7**	**+1.4**
P18K	**Big Mountain,**	**4.35**	**22**	P		**Pn**	**05 26 27.7**	**+1.4**
	baz=204							
Q19K	**Cape Douglas,**	**4.38**	**34**			**Pn**	**05 26 27.7**	**+1.0**
Q19K	**Cape Douglas,**	**4.38**	**34**	IAML			05 27 33.3	
	comp=N,74nm,1.4s							
Q19K	**Cape Douglas,**	**4.38**	**34**	P		**Pn**	**05 26 27.7**	**+1.0**
	baz=218							
O17K	**Koliganek Bris**	**4.44**	**8**			**Pn**	**05 26 28.6**	**+1.1**
AKUT	**Akutan**	**4.46**	**257**	Pn		**Pn**	**05 26 28.5**	**+0.8**
O18K	**Koktuh Hills**	**4.78**	**20**			**Pn**	**05 26 33.8**	**+1.6**
UNV	**Unalaska Valle**	**4.97**	**255**	Pn		**Pn**	**05 26 34.2**	**-0.6**
P19K	**Oil Pt**	**5.09**	**31**	Pn		**Pn**	**05 26 37.1**	**+0.7**
P19K				IAML			05 27 42.6	
	comp=E,27nm,0.8s							
P19K				IAML			05 28 22.3	
	comp=N,30nm,0.9s							
O19K	**Port Alsworth**	**5.28**	**23**			**Pn**	**05 26 40.1**	**+1.2**
O19K				IAML			05 28 02.3	
	comp=E,57nm,0.4s							
N18K	**Kilae Creek**	**5.46**	**13**	Pn		**Pn**	**05 26 43.6**	**+2.1**
CNPM	**China Poot**	**5.66**	**40**	Pn		**Pn**	**05 26 45.0**	**+0.8**
N19K	**Bonanza Creek**	**5.81**	**19**	Pn		**Pn**	**05 26 48.4**	**+2.0**
RSO	**Redoubt South**	**5.90**	**28**	Pn		**Pn**	**05 26 50.0**	**+2.3**
SVW2	**Sparrevohn**	**5.91**	**13**	Pn		**Pn**	**05 26 49.6**	**+2.0**
NIKH	**Nikolski High**	**6.61**	**253**	Pn		**Pn**	**05 26 58.2**	**+0.9**
SEW	**Seward**	**6.71**	**42**	Pn		**Pn**	**05 26 59.8**	**+1.2**
SPIA	**Saint Paul Isl**	**6.84**	**290**	Pn		**Pn**	**05 27 02.1**	**+1.7**
M19K	**Big River Lodg**	**6.85**	**16**			**Pn**	**05 27 02.5**	**+2.0**
L19K	**White Mountain**	**7.05**	**14**	Pn		**Pn**	**05 27 04.4**	**+1.1**
RC01	**Rabbit Creek A**	**7.30**	**35**	Pn		**Pn**	**05 27 08.0**	**+1.3**
SKT	**Skwentna**	**7.50**	**26**	Pn		**Pn**	**05 27 11.2**	**+1.7**
PWL	**Port Wells**	**7.63**	**40**			**Pn**	**05 27 10.7**	**-0.5**
TTA	**Tatalina**	**7.65**	**8**	Pn		**Pn**	**05 27 13.1**	**+1.5**
PMR	**Palmer**	**7.87**	**34**	Pn		**Pn**	**05 27 16.2**	**+1.7**
HIN	**Hinchinbrook I**	**8.07**	**47**	Pn		**Pn**	**05 27 18.4**	**+1.2**
GHO	**Glory Hole Cre**	**8.07**	**34**	Pn		**Pn**	**05 27 19.0**	**+1.6**
PPLA	**Purkeypile**	**8.16**	**20**	Pn		**Pn**	**05 27 21.9**	**+3.2**
FID	**Port Fidalgo**	**8.28**	**45**	Pn		**Pn**	**05 27 20.4**	**+0.3**
K20K	**Telida**	**8.28**	**14**	Pn		**Pn**	**05 27 22.0**	**+1.9**
SML	**Sawmill**	**8.29**	**35**	Pn		**Pn**	**05 27 20.9**	**+0.6**
EYAK	**Cordova Ski Ar**	**8.46**	**47**	Pn		**Pn**	**05 27 22.1**	**-0.5**
SCM	**Sheep Creek Mo**	**8.65**	**37**	Pn		**Pn**	**05 27 26.2**	**+0.9**
KAIM	**Kayak Island**	**8.75**	**53**	Pn		**Pn**	**05 27 27.2**	**+0.7**
KLU	**Klutina**	**8.93**	**42**	Pn		**Pn**	**05 27 30.1**	**+0.9**
J20K	**Nowinta River**	**9.06**	**12**	Pn		**Pn**	**05 27 32.7**	**+1.9**
BMRM	**Bremner River**	**9.16**	**47**	Pn		**Pn**	**05 27 32.2**	**+0.4**
M24K	**Tolsona, Glenn**	**9.23**	**38**	Pn		**Pn**	**05 27 34.1**	**+0.8**
N25K	**Chitina, Valde**	**9.51**	**44**	Pn		**Pn**	**05 27 38.7**	**+1.6**
GLB	**Gilahina Butte**	**9.74**	**46**	Pn		**Pn**	**05 27 39.6**	**-0.6**
VRDI	**Verde Repeater**	**9.78**	**47**	Pn		**Pn**	**05 27 41.8**	**+1.0**
ILAR	**Eielson Array**	**10.99**	**27**	P		**Pn**	**05 27 55.1**	**-2.1**
	comp=E,0.1nm,0.3s,baz=221,slow=13,SNR=7.1							
ILAR				S		**Sn**	**05 29 53.1**	**-5.7**
	comp=E,0.2nm,0.4s,baz=224,slow=22,SNR=4.3							
	comp=E,0.4nm,0.5s							
DLBC	**Dease Lake**	**15.72**	**67**	P		**Pn**	**05 29 03.1**	**+1.7**
	comp=E,0.2nm,0.3s,baz=253,slow=11,SNR=1.8							
	comp=E,0.7nm,0.5s							
INK	**Inuvik**	**17.27**	**32**	P		**Pn**	**05 29 19.8**	**-1.0**
	comp=E,0.3nm,0.3s,baz=236,slow=7.3,SNR=2.1							
	comp=E,1.8nm,0.6s							
YKA	**Yellowknife Ar**	**23.27**	**54**	P		**P**	**05 30 27.3**	**+0.5**
	comp=E,0.2nm,0.7s,baz=274,slow=8.5,SNR=5.2							
	comp=E,0.2nm,0.7s							
PETK	**Petropavlovsk-**	**25.44**	**283**	P		**P**	**05 30 45.2**	**-1.8**
	comp=E,1.5nm,0.8s,baz=78,slow=15,SNR=4.2							
	comp=E,1.5nm,0.8s							
SEY	**Seymchan**	**25.75**	**307**	P		**P**	**05 30 46.6**	**-3.0**
	comp=E,1.0nm,0.7s,baz=122,slow=11,SNR=4.1							
	comp=E,1.0nm,0.7s							
NEW	**Newport**	**26.16**	**88**	P		**P**	**05 30 54.7**	**+1.1**
	comp=E,1.5nm,0.7s,baz=266,slow=12,SNR=3.7							
	comp=E,1.5nm,0.7s							
NVAR	**Mina Array Bea**	**31.66**	**106**	P		**P**	**05 31 44.8**	**+2.1**
	comp=E,0.6nm,0.9s,baz=311,slow=8.2,SNR=2.2							
	comp=E,0.6nm,0.9s							
PDAR	**Pinedale Array**	**33.67**	**91**	P		**P**	**05 32 01.9**	**+1.6**
	comp=E,0.5nm,0.6s,baz=306,slow=5.0,SNR=8.3							
	comp=E,0.5nm,0.6s							
TXAR	**Lajitas Array**	**46.52**	**101**	P		**P**	**05 33 48.0**	**+1.3**
	comp=E,0.3nm,0.7s,baz=298,slow=6.5,SNR=4.0							
TXAR				pP		**sP**	**05 34 01.9**	**+1.5**
	comp=E,0.2nm,0.6s,baz=308,slow=5.8,SNR=4.0							
	comp=E,0.3nm,0.7s							
AKASG	**Malin Array Be**	**74.08**	**355**	P		**P**	**05 36 53.2**	**-1.5**
	comp=E,0.5nm,0.4s,baz=11,slow=6.2,SNR=4.4							
	comp=E,0.5nm,0.4s							

*KRSC **03** 05:33:50.0±2.6, 49°.72N×157°.03E, h16km±39km, ML4.7*
*MOS **03** 05:33:51.6±1.1, 49°.78N×156°.11E, h64km, mb4.6/11, Error ellipse: s-maj=12.6km s-min=3.9km az=74.3*
*IDC **03** 05:33:51.8±0.6, 49°.85N×155°.93E, h51km±5km, mb3.8/16, mbtmp4.1/20, MS3.3/15, Error ellipse: s-maj=18.6km s-min=10.8km az=135.0*
*NEIC **03** 05:33:53.5±1.2, 49°.9N±0°.1×155°.9E±0°.2, h68km±11km, mb4.4/17, Error ellipse: s-maj=20.9km s-min=12.9km az=137.0*

ISC 03 05:33:52.2±0.8, 49°.73N±0°.06×156°.18E±0°.06, h60km±7km, n148, σ1°.31/153, mb4.3/34, MS3.4/13, 1C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.95**	**358**	*i*P	**Pn**	**05 34 08.7**	**-0.9**
SKR				*i* S	**Sn**	**05 34 20.9**	**-1.5**
SKR				pmax	pmax		
	comp=Z,418nm,0.5s						
SKR				smax	smax		
	comp=N,3μm,0.5s						
SKR				smax	smax		
	comp=E,3μm,0.2s						
SKR	**Severo-Kuril's**	**0.95**	**358**	*e*P	**Pn**	**05 34 08.6**	**-1.0**
SKR				*e*S	**Sn**	**05 34 21.0**	**-1.5**
PAU	**Pauzhetka**	**1.78**	**13**	PN	**Pn**	**05 34 20.4**	**-0.3**
PAU				S	**Sn**	**05 34 42.0**	**-0.3**
PAU	**Pauzhetka**	**1.78**	**13**	*e*P	**Pn**	**05 34 20.4**	**-0.3**
PAU				*e*S	**Sn**	**05 34 42.0**	**-0.3**
KDTR	**Khodutka, Kamc**	**2.40**	**29**	PN	**Pn**	**05 34 28.0**	**-1.1**
KDTR				S	**Sn**	**05 34 55.5**	**-1.8**
KDTR	**Khodutka, Kamc**	**2.40**	**29**	*e*P	**Pn**	**05 34 28.0**	**-1.1**
KDTR				*e*S	**Sn**	**05 34 55.5**	**-1.8**
ASAK	**Asacha**	**2.87**	**22**	PN	**Pn**	**05 34 35.2**	**-0.3**
ASAK	**Asacha**	**2.87**	**22**	*e*P	**Pn**	**05 34 35.2**	**-0.3**
MTVR	**Mutnovka**	**3.03**	**24**	PN	**Pn**	**05 34 37.4**	**-0.4**
MTVR				S	**Sn**	**05 35 13.0**	**+0.1**
MTVR	**Mutnovka**	**3.03**	**24**	*e*P	**Pn**	**05 34 37.4**	**-0.4**
MTVR				*e*S	**Sn**	**05 35 13.0**	**+0.1**
GRL	**Gorelyy**	**3.06**	**22**	PN	**Pn**	**05 34 38.2**	**-0.1**
GRL				S	**Sn**	**05 35 14.0**	**+0.2**
GRL	**Gorelyy**	**3.06**	**22**	*e*P	**Pn**	**05 34 38.2**	**-0.1**
GRL				*e*S	**Sn**	**05 35 14.0**	**+0.2**
RUS	**Russkaya**	**3.08**	**28**	PN	**Pn**	**05 34 37.4**	**-0.9**
RUS				S	**Sn**	**05 35 11.9**	**-2.0**
RUS	**Russkaya**	**3.08**	**28**	*e*P	**Pn**	**05 34 37.4**	**-0.9**
RUS				*e*S	**Sn**	**05 35 11.9**	**-2.0**

PEA0B	**Petropavlovsk-**	**3.51**	**15**	Pn		**Pn**	**05 34 44.6**	**+0.3**
PEA0B	**Petropavlovsk-**	**3.51**	**15**	*d* PN		**Pn**	**05 34 45.4**	**+1.1**
PETK	**Petropavlovsk-**	**3.51**	**15**	P		**Pn**	**05 34 43.8**	**-0.5**
	comp=E,8.5nm,0.4s,baz=191,slow=15,SNR=37							
PETK				S		**Sn**	**05 35 24.8**	**+0.2**
	comp=E,11nm,0.5s,baz=259,slow=12,SNR=4.2							
PETK				LR	LR		05 36 27.1	
	comp=E,240nm,19.4s,baz=202,slow=45							
PETK	**Petropavlovsk-**	**3.51**	**15**	Pn		**Pn**	**05 34 44.5**	**+0.2**
PETK	**Petropavlovsk-**	**3.51**	**15**	PN		**Pn**	**05 34 44.5**	**+0.2**
PET	**Petropavlovsk**	**3.64**	**24**			**Pn**	**05 34 45.9**	**-0.1**
PET	**Petropavlovsk**	**3.64**	**24**	*e*PN		**Pn**	**05 34 46.6**	**+0.6**
PET				*e*S		**Sn**	**05 35 28.0**	**+0.4**
PET				pmax	pmax			
	comp=Z,49nm,0.4s							
PET				smax	smax			
	comp=E,497nm,0.6s							
PET				smax	smax			
	comp=N,369nm,0.5s							
PET				MLR	MLR			
	comp=Z,200nm,20.0s							
PET				MLR	MLR			
	comp=Z,300nm,12.0s							
PET	**Petropavlovsk**	**3.64**	**24**	*e*P		**Pn**	**05 34 46.7**	**+0.7**
PET				*e*S		**Sn**	**05 35 28.1**	**+0.4**
DALK	**Dalny**	**3.68**	**25**	PN		**Pn**	**05 34 47.3**	**+0.8**
DALK				S		**Sn**	**05 35 29.1**	**+0.6**
DALK	**Dalny**	**3.68**	**25**	*e*P		**Pn**	**05 34 47.3**	**+0.8**
DALK				*e*S		**Sn**	**05 35 29.1**	**+0.6**
UGLR	**Uglovaya**	**3.85**	**24**	PN		**Pn**	**05 34 50.7**	**+1.7**
UGLR	**Uglovaya**	**3.85**	**24**	*e*P		**Pn**	**05 34 50.7**	**+1.7**
KOK	**Koryaka**	**3.88**	**22**	PN		**Pn**	**05 34 51.1**	**+1.7**
KOK	**Koryaka**	**3.88**	**22**	*e*P		**Pn**	**05 34 51.1**	**+1.7**
AVH	**Avacha**	**3.88**	**23**	PN		**Pn**	**05 34 50.9**	**+1.5**
AVH	**Avacha**	**3.88**	**23**	*e*P		**Pn**	**05 34 50.9**	**+1.5**
SMAR	**Somma**	**3.90**	**24**	PN		**Pn**	**05 34 52.0**	**+2.3**
SMAR	**Somma**	**3.90**	**24**	*e*P		**Pn**	**05 34 52.0**	**+2.3**
KRER	**Koryakskii**	**3.92**	**23**	PN		**Pn**	**05 34 51.5**	**+1.5**
KRER	**Koryakskii**	**3.92**	**23**	*e*P		**Pn**	**05 34 51.5**	**+1.5**
SDLR	**Sedlovina**	**3.93**	**24**	PN		**Pn**	**05 34 50.4**	**+0.3**
SDLR	**Sedlovina**	**3.93**	**24**	*e*P		**Pn**	**05 34 50.4**	**+0.3**
KRX	**Arik**	**3.94**	**22**	PN		**Pn**	**05 34 51.8**	**+1.5**
KRX	**Arik**	**3.94**	**22**	*e*P		**Pn**	**05 34 51.8**	**+1.5**
NLC	**Nalytchevo**	**3.97**	**29**	PN		**Pn**	**05 34 50.1**	**-0.4**
NLC	**Nalytchevo**	**3.97**	**29**	*e*P		**Pn**	**05 34 50.1**	**-0.4**
GNL	**Ganaly**	**4.12**	**15**	PN		**Pn**	**05 34 54.1**	**+1.5**
GNL	**Ganaly**	**4.12**	**15**	*e*P		**Pn**	**05 34 54.1**	**+1.5**
SPN	**Mys Shipunski**	**4.14**	**34**	PN		**Pn**	**05 34 52.5**	**-0.3**
SPN				S		**Sn**	**05 35 39.4**	**-0.5**
SPN	**Mys Shipunski**	**4.14**	**34**	*e*P		**Pn**	**05 34 52.5**	**-0.3**
SPN				*e*S		**Sn**	**05 35 39.4**	**-0.5**
KII	**Karymskiy**	**4.76**	**24**	PN		**Pn**	**05 35 03.7**	**+2.3**
KII	**Karymskiy**	**4.76**	**24**	*e*P		**Pn**	**05 35 03.7**	**+2.3**
MKZ	**Mys Kozlova**	**5.92**	**33**	PN		**Pn**	**05 35 15.6**	**-1.5**
MKZ	**Mys Kozlova**	**5.92**	**33**	*e*P		**Pn**	**05 35 15.6**	**-1.5**
TUMR	**Tumrok**	**6.06**	**22**	PN		**Pn**	**05 35 21.2**	**+1.9**
TUMR	**Tumrok**	**6.06**	**22**	*e*P		**Pn**	**05 35 21.2**	**+1.9**
KUR	**Kuril'sk**	**7.21**	**235**	*i* PN		**Pn**	**05 35 35.6**	**+0.8**
KBTR	**Krutoberegovo**	**7.62**	**29**	PN		**Pn**	**05 35 40.2**	**-0.3**
KBTR	**Krutoberegovo**	**7.62**	**29**	*e*P		**Pn**	**05 35 40.2**	**-0.3**
SHO	**Shikotan**	**8.69**	**231**	*e*PN		**Pn**	**05 35 53.1**	**-2.0**
SHO				pmax	pmax			
	comp=N,8.0nm,0.2s							
SHO				pmax	pmax			
	comp=Z,22nm,0.2s							
SHO				pmax	pmax			
	comp=E,16nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**9.07**	**235**	*e*PN		**Pn**	**05 36 01.3**	**+0.9**
YUK				pmax	pmax			
	comp=Z,83nm,0.2s							
YUK				pmax

J25K IAmb IAmb 05 40 26.8
comp=Z,2.6nm,0.6s
BMAR Burnt Mountain 33.90 36 P P 05 40 29.9 +1.0
L27K Beaver Creek, 35.30 44 P P 05 40 42.2 +1.2
L27K IAmb IAmb 05 40 43.6
comp=Z,6.3nm,0.9s
BCAR Beaver Creek A 35.32 44 P P 05 40 42.2 +1.0
NRIK Noril'sk 37.32 327 *i* P **P 05 41 00.0 +1.9**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
NRIK MLR MLR
comp=Z,48nm,18.0s
INK Inuvik 38.03 35 P **P 05 41 04.5 +0.4**
comp=Z,2.2nm,0.5s,baz=304,slow=5.2,SNR=6.0
comp=Z,2.2nm,0.5s
INK Inuvik 38.03 35 P **P 05 41 04.3 +0.2**
INK IAmb IAmb 05 41 44.5
comp=Z,6.8nm,1.3s
INK Inuvik 38.03 35 P **P 05 41 04.3 +0.2**
INK pmax pmax
comp=Z,7.0nm,1.3s
LZH Lanzhou 39.88 270 *e*P **P 05 41 18.1 -2.1**
LZH pP sP 05 41 42.3 +0.2
LZH sP pP 05 41 53.1 +18
LZH pmax pmax
comp=Z,46nm,1.1s
ZALV Zalesovo Beam 42.58 304 *i* P P 05 41 48.0 +6.1
ZALV pmax pmax
comp=Z,7.0nm,0.3s
WMQ Urumqi 45.79 290 *e*P **P 05 42 08.1 +0.3**
YKA Yellowknife Ar 47.31 39 P **P 05 42 20.1 +0.9**
comp=Z,1.8nm,0.7s,baz=300,slow=7.9,SNR=9.8
comp=Z,1.8nm,0.7s
MK31 Makanchi Array 47.42 296 P **P 05 42 19.1 -1.3**
MK31 Makanchi Array 47.42 296 P **P 05 42 19.1 -1.3**
MK31 pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 47.42 296 P **P 05 42 19.3 -1.2**
comp=Z,0.8nm,0.6s,baz=58,slow=7.8,SNR=9.2
MKAR LR LR 06 03 31.9
comp=Z,78nm,18.4s,baz=23,slow=38
comp=Z,0.8nm,0.6s
MKAR Makanchi Array 47.42 296 P **P 05 42 18.6 -1.9**
KURK Kurchatov 47.45 303 P **P 05 42 19.4 -1.2**
KURK IAmb IAmb 05 42 20.6
comp=Z,4.5nm,0.9s
KURK Kurchatov 47.45 303 *i* P **P 05 42 19.2 -1.3**
KURK pmax pmax
comp=Z,4.0nm,0.9s
PZH PanZhiHua 47.48 262 P **P 05 42 22.6 +1.4**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,80nm,4.4s
NEW Newport 53.77 56 LR LR 06 08 20.6
comp=Z,20nm,18.3s,baz=232,slow=38
ARU Arti 54.21 317 LR LR 06 06 40.7
comp=Z,32nm,19.3s,baz=51,slow=36
ARU Arti 54.21 317 *d* **i** P **P 05 43 09.6 -1.6**
ARU 05 45 10.0
ARU S **S 05 50 39.4 -4.2**
ARU pmax pmax
comp=Z,2.0nm,0.5s
AAK Ala-Archa 54.36 296 LR LR 06 07 34.3
comp=Z,80nm,18.1s,baz=50,slow=37
YBH Yreka Blue Hor 54.58 65 P **P 05 43 16.3 +2.1**
comp=Z,1.8nm,0.9s,baz=178,slow=5.1,SNR=3.4
comp=Z,1.8nm,0.9s
CMAR Chiang Mai Arr 55.06 257 P **P 05 43 18.5 +0.6**
comp=Z,1.1nm,0.4s,baz=32,slow=8.1,SNR=6.0
comp=Z,1.1nm,0.4s
CMAR Chiang Mai Arr 55.06 257 *i* P **P 05 43 21.2 +3.3**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KSH Kashi 55.42 292 P P 05 43 29.7 +9.3
KSH pmax pmax
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 55.70 341 P **P 05 43 19.5 -2.4**
comp=Z,2.8nm,0.9s,baz=18,slow=6.6,SNR=2.0
ARCES LR LR 06 09 35.8
comp=Z,24nm,21.9s,baz=12,slow=39
comp=Z,2.8nm,0.9s
SUMG Summit 57.56 5 P **P 05 43 34.0 -1.4**
SUMG Summit 57.56 5 P **P 05 43 34.0 -1.4**
SUMG pmax pmax
comp=Z,7.0nm,0.9s
SUMG Summit 57.56 5 *i* P **P 05 43 34.0 -1.4**
ABKAR Akbulak array 58.09 310 P **P 05 43 37.1 -1.8**
ABKAR IAmb IAmb 05 43 38.6
comp=Z,5.5nm,1.4s
CHGR Chuyangaron 60.02 295 P **P 05 43 51.2 -1.4**
CHGR Chuyangaron 60.02 295 P **P 05 43 51.2 -1.4**
CHGR pmax pmax
comp=Z,8.0nm,0.7s
PDAR Pinedale Array 61.36 57 P **P 05 44 03.4 +1.5**
comp=Z,0.8nm,0.8s,baz=328,slow=2.3,SNR=9.1
PDAR pP **pP 05 44 17.6 -0.2**
comp=Z,2.0nm,0.9s,baz=300,slow=3.3,SNR=9.9
comp=Z,0.8nm,0.8s
FINES FINESS Array B 62.20 335 P **P 05 44 05.1 -1.8**
comp=Z,2.8nm,1.1s,baz=46,slow=8.2,SNR=5.3
FINES LR LR 06 13 01.1
comp=Z,23nm,18.9s,baz=281,slow=38
comp=Z,2.8nm,1.1s
FINES FINESS Array B 62.20 335 *i* P **P 05 44 07.3 +0.4**
FINES pmax pmax
comp=Z,1.0nm,0.8s
OBN Obninsk 63.99 326 *i* P **P 05 44 20.8 +2.0**
NOA NORSAR Array B 66.04 342 LR LR 06 17 58.2
comp=Z,17nm,19.7s,baz=50,slow=40
SCHQ Scheffervill 69.75 25 P **P 05 44 55.9 +0.4**
comp=Z,2.9nm,0.7s,baz=340,slow=6.1,SNR=7.2
comp=Z,2.9nm,0.7s
KIV Kislovodsk 70.16 315 *e*P **P 05 44 59.0 +0.7**
KIV pmax pmax
comp=Z,7.0nm,1.0s
AKASG Malin Array Be 70.17 327 LR LR 06 17 25.7
comp=Z,24nm,18.8s,baz=356,slow=37
KBZ Khabaz 70.23 315 LR LR 06 20 01.4
comp=Z,27nm,18.0s,baz=54,slow=40
WRA Warramunga Arr 72.02 202 P **P 05 45 09.6 0.0**
comp=Z,0.9nm,0.8s,baz=19,slow=6.0,SNR=4.3
WRA pP **PcP 05 45 23.9 -3.9**
comp=Z,2.1nm,1.0s,baz=13,slow=6.4,SNR=5.8
comp=Z,0.9nm,0.8s
TXAR Lajitas Array 74.28 63 P **P 05 45 24.4 +1.3**
comp=Z,1.4nm,0.7s,baz=300,slow=4.3,SNR=18
TXAR pP **PcP 05 45 38.2 +0.6**
comp=Z,1.2nm,0.8s,baz=290,slow=3.3,SNR=7.6
comp=Z,1.4nm,0.7s
VRAC Vranov 75.41 334 LR LR 06 21 02.9
comp=Z,48nm,18.2s,baz=26,slow=38
ASAR Alice Springs 75.71 201 P **P 05 45 32.4 +1.3**
comp=Z,0.9nm,0.7s,baz=13,slow=4.4,SNR=6.5
ASAR pP **PcP 05 45 46.8 +3.3**
comp=Z,1.0nm,0.8s,baz=15,slow=5.1,SNR=5.2
comp=Z,0.9nm,0.7s
BRTR Keskin Array B 77.58 318 *i* P **P 05 45 43.2 +1.4**
H03N2 Juan Fernandez 136.69 89 T T 08 25 17.7
baz=312,slow=77,SNR=47
H03N1 Juan Fernandez 136.71 89 T T 08 25 14.8
baz=312,slow=77,SNR=56
H03N3 Juan Fernandez 136.71 89 T T 08 25 21.0
baz=312,slow=77,SNR=47
CPUP Villa Florida 145.21 60 PKPbc **PKPbc 05 53 22.0 -0.5**
comp=Z,1.2nm,0.2s,baz=312,slow=5.4,SNR=4.2
CPUP Villa Florida 145.21 60 PKIKP **PKPbc 05 53 22.0 -0.5**
PLCA Paso Flores 146.36 93 PKPbc **PKPbc 05 53 26.0 +0.2**
comp=Z,2.4nm,1.0s,baz=269,slow=6.8,SNR=3.9
PLCA Paso Flores 146.36 93 PKP2 **PKPbc 05 53 26.0 +0.2**

NEIC ***03*** *05:34:20.7±2.5,24.2°S±0.07°×67.01W±0.09,h184km±8km, mb4.5/33,Md3.7(SJA), Error ellipse: s-maj=12.1km s-min=9.5km az=85.0*
IDC ***03*** *05:34:20.4±1.2,24.15S×66.91W,h174km±9km,mb3.7/9, mbtmp4.2/15, Error ellipse: s-maj=19.2km s-min=12.8km az=26.0*
GUC ***03*** *05:34:22.1±0.6,24.12S×67.44W,h203km±5km,ML4.7*
ISC 03 05:34:20.7±0.6,24.18S±0.04×67.11W±0.05,h187km±6km, n99,σ1ᵗ30/108,mb4.4/25,10C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SLA	**San Lorenzo**	**1.56**	**111**	*e*P		**Pn**	**05 34 54.6**	**+0.6**
SLA				*i* S		**Sn**	**05 35 20.1**	**+0.3**
AF01	**San Pedro de A**	**1.57**	**321**			**Pn**	**05 34 56.0**	**+1.8**
AF01	**San Pedro de A**	**1.57**	**321**	⇑*i*P		**Pn**	**05 34 56.0**	**+1.8**
AF01				*i* S		**Sn**	**05 35 22.1**	**+1.9**
LVC	**Limon Verde**	**2.27**	**313**	P		**Pn**	**05 35 02.9**	**+1.3**
	172nm,0.3s,baz=149,slow=6.6,SNR=341							
LVC				S		**Sn**	**05 35 33.8**	**+0.4**
	331nm,0.3s,baz=13,slow=22,SNR=54							
LVC	**Limon Verde**	**2.27**	**313**	⇑*i*P		**Pn**	**05 35 03.0**	**+1.3**
LVC				*i* S		**Sn**	**05 35 33.7**	**+0.2**
PB15	**IPOC Station P**	**2.37**	**294**			**Pn**	**05 35 04.1**	**+1.5**
GO02	**Mina Guanaco**	**2.46**	**246**	Pn		**Pn**	**05 35 04.5**	**+0.8**
GO02	**Mina Guanaco**	**2.46**	**246**	⇓*i*P		**Pn**	**05 35 04.8**	**+1.2**
GO02				*i* S		**Sn**	**05 35 37.8**	**+0.7**
GO02				IAML			05 35 39.8	
	comp=N,2μm,0.3s							
PB06	**IPOC Station P**	**2.69**	**303**			**Pn**	**05 35 07.5**	**+1.2**
PB06	**IPOC Station P**	**2.69**	**303**	⇑*i*P		**Pn**	**05 35 07.4**	**+1.2**
PB06				*i* S		**Sn**	**05 35 41.1**	**-0.6**
PB06				IAML			05 35 42.9	
	comp=N,2μm,0.3s							
PB14	**IPOC Station P**	**3.03**	**261**	Pn		**Pn**	**05 35 10.9**	**+0.5**
PB14	**IPOC Station P**	**3.03**	**261**	⇑*i*P		**Pn**	**05 35 11.2**	**+0.7**
PB14				*i* S		**Sn**	**05 35 47.5**	**-1.6**
PB14				IAML			05 35 50.2	
	comp=E,493nm,0.4s							
PB09	**IPOC Station P**	**3.08**	**320**			**Pn**	**05 35 12.4**	**+1.5**
PB09	**IPOC Station P**	**3.08**	**320**	⇑*i*P		**Pn**	**05 35 12.2**	**+1.3**
PB09				*i* S		**Sn**	**05 35 49.9**	**-0.1**
PB09				IAML			05 35 51.8	
	comp=N,995nm,0.5s							
AC02	**Maricunga**	**3.21**	**214**	Pn		**Pn**	**05 35 14.0**	**+1.3**
AC02	**Maricunga**	**3.21**	**214**	⇑*i*P		**Pn**	**05 35 14.0**	**+1.3**
AC02				*i* S		**Sn**	**05 35 54.9**	**+1.5**
PB04	**IPOC Station P**	**3.34**	**303**			**Pn**	**05 35 14.9**	**+0.8**
PB04	**IPOC Station P**	**3.34**	**303**	⇑*i*P		**Pn**	**05 35 14.7**	**+0.6**
PB04				*i* S		**Sn**	**05 35 54.3**	**-1.4**
PB04				IAML			05 35 56.4	
	comp=N,1μm,0.6s							
PB07	**IPOC Station P**	**3.54**	**313**			**Pn**	**05 35 17.1**	**+0.6**
PB07	**IPOC Station P**	**3.54**	**313**	⇑*i*P		**Pn**	**05 35 17.0**	**+0.6**
PB07				*i* S		**Sn**	**05 35 57.6**	**-2.4**
AC01	**Pan de Azucar**	**3.72**	**237**	Pn		**Pn**	**05 35 18.5**	**0.0**
AC01	**Pan de Azucar**	**3.72**	**237**	*e*P		**Pn**	**05 35 18.1**	**-0.4**
AC01				*i* S		**Sn**	**05 36 01.4**	**-2.4**
PB01	**IPOC Station P**	**3.82**	**324**			**Pn**	**05 35 20.0**	**+0.2**
PB01	**IPOC Station P**	**3.82**	**324**	⇑*i*P		**Pn**	**05 35 20.1**	**+0.2**
PB01				*i* S		**Sn**	**05 36 04.3**	**-1.9**
PB02	**IPOC Station P**	**3.83**	**317**			**Pn**	**05 35 20.3**	**+0.2**
PB02	**IPOC Station P**	**3.83**	**317**	⇑*i*P		**Pn**	**05 35 20.1**	**0.0**
PB02				*i* S		**Sn**	**05 36 04.2**	**-2.4**
PATCX	**Punta Patache**	**4.37**	**319**			**Pn**	**05 35 25.1**	**-1.8**
GO03	**Copiap**	**4.41**	**219**			**Pn**	**05 35 27.0**	**-0.4**
GO03	**Copiap**	**4.41**	**219**	*e*P		**Pn**	**05 35 26.8**	**-0.5**
GO03				*i* S		**Sn**	**05 36 17.0**	**-2.7**
TA01	**Diego Aracena**	**4.58**	**321**	Pn		**Pn**	**05 35 29.3**	**-0.2**
TA01	**Diego Aracena**	**4.58**	**321**	*e*P		**Pn**	**05 35 29.2**	**-0.3**
TA01				*i* S		**Sn**	**05 36 20.5**	**-3.0**
TA02	**Huaiquique**	**4.79**	**324**			**Pn**	**05 35 34.1**	**+1.9**
GO01	**Chusmiza**	**4.89**	**336**			**Pn**	**05 35 34.0**	**0.0**
GO01	**Chusmiza**	**4.89**	**336**	*e*P		**Pn**	**05 35 33.8**	**-0.1**
GO01				*i* S		**Sn**	**05 36 29.9**	**-1.5**
AC04	**Llanos de Chal**	**5.36**	**221**	Pn		**Pn**	**05 35 38.4**	**-1.1**
LCO	**Las Campanas**	**5.79**	**213**	Pn		**Pn**	**05 35 44.0**	**-1.3**
PB16	**IPOC Station P**	**6.23**	**339**	Pn		**Pn**	**05 35 51.2**	**-0.2**
GO04	**Tololo Observa**	**6.81**	**208**			**Pn**	**05 35 56.5**	**-2.2**
ZON	**Zonda**	**7.47**	**190**			**Pn**	**05 36 07.0**	**-0.1**
CO02	**Combarbal**	**7.80**	**205**	Pn		**Pn**	**05 36 09.0**	**-2.4**
LPAZ	**La Paz**	**7.91**	**353**	P		**Pn**	**05 36 13.8**	**+0.3**
	comp=N,24nm,0.4s,baz=153,slow=8.8,SNR=210							
LPAZ	**La Paz**	**7.91**	**353**			**Pn**	**05 36 13.5**	**0.0**
CPUP	**Villa Florida**	**9.11**	**106**	P		**Pn**	**05 36 26.8**	**-1.8**
	comp=N,0.7nm,0.6s,baz=286,slow=13,SNR=1.4							
MT03	**Universidad Ad**	**9.75**	**197**			**Pn**	**05 36 36.8**	**-0.1**
SIV	**San Ignacio**	**9.93**	**36**	P		**Pn**	**05 36 37.4**	**-2.0**
	comp=N,16nm,0.6s,baz=217,slow=11,SNR=100							
MT01	**Popeta**	**10.30**	**200**			**Pn**	**05 36 42.7**	**-1.4**
BO02	**Sierra Bellavi**	**11.05**	**196**			**Pn**	**05 36 52.8**	**-0.9**
VILB	**Vilhena**	**12.94**	**32**	Pn		**Pn**	**05 37 17.4**	**-0.7**
TRCB	**Terra Rica**	**13.36**	**87**	P		**P**	**05 37 26.0**	**-0.4**
ETMB	**Extrema**	**14.31**	**4**			**Pn**	**05 37 34.1**	**-1.1**
TRQA	**Tornquist**	**14.51**	**164**			**Pn**	**05 37 36.2**	**-1.2**
SAML	**Samuel**	**15.61**	**15**	P		**Pn**	**05 37 50.1**	**-0.9**
LR04	**Corral**	**16.54**	**197**	P		**P**	**05 37 59.4**	**-1.9**
PLCA	**Paso Flores**	**16.76**	**189**	P		**Pn**	**05 38 05.3**	**+0.6**
	comp=N,2.5nm,0.7s,baz=13,slow=11,SNR=8.5							
LL04	**Puerto Octay**	**17.26**	**194**	P		**P**	**05 38 09.7**	**+0.4**
LL04				IAmb		IAmb	05 38 12.0	
	comp=Z,21nm,1.3s							
BDFB	**Brasilia**	**19.85**	**68**	P		**P**	**05 38 36.4**	**-1.2**
	comp=Z,19nm,0.7s,baz=240,slow=9.9,SNR=33							
BDFB	**Brasilia**	**19.85**	**68**	P		**P**	**05 38 37.1**	**-0.5**
MACA	**Manacapuru-AM**	**21.80**	**18**	P		**P**	**05 38 56.8**	**-1.4**
MACA				IAmb		IAmb	05 38 58.7	
	comp=Z,13nm,0.8s							
SNAA	**Sanae**	**59.22**	**161**	P		**P**	**05 44 03.3**	**+1.4**
GOGA	**Godfrey**	**59.35**	**344**	P		**P**	**05 44 04.1**	**+0.9**
GOGA				IAmb		IAmb	05 44 26.9	
	comp=Z,12nm,1.4s							
V48A	**Smith Brothers**	**62.45**	**342**	IAmb		IAmb	05 44 25.4	
	comp=Z,4.8nm,0.7s							
WVT	**Waverly**	**63.10**	**341**	P		**P**	**05 44 28.6**	**+0.3**
T47A	**Sharon Grove**	**63.69**	**342**	IAmb		IAmb	05 44 33.8	
	comp=Z,6.5nm,0.7s							
TXAR	**Lajitas Array**	**63.76**	**325**	P		**P**	**05 44 35.0**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=152,slow=8.0,SNR=11							
	comp=Z,0.6nm,0.7s							
TXAR	**Lajitas Array**	**63.76**	**325**	P		**P**	**05 44 34.4**	**+1.4**
TX31	**Lajitas Ar. Si**	**63.77**	**325**	P		**P**	**05 44 34.2**	**+1.3**
TX31				IAmb		IAmb	05 44 58.7	
	comp=Z,5.9nm,1.3s							
TX32	**Lajitas Array**	**63.77**	**325**	P		**P**	**05 44 34.4**	**+1.4**
PBMO	**Poplar Bluff**	**64.50**	**339**	IAmb		IAmb	05 44 39.0	
	comp=Z,6.6nm,0.9s							
CCM	**Cathedral Cave**	**65.93**	**339**	P		**P**	**05 44 45.9**	**-0.7**
CCM				IAmb		IAmb	05 44 48.2	
	comp=Z,6.4nm,0.8s							
OK034	**N. Norfolk Rd.**	**66.08**	**334**	P		**P**	**05 44 48.9**	**+1.3**
S39A	**Bolivar**	**66.30**	**338**	P		**P**	**05 44 49.8**	**+0.9**
S39A				IAmb		IAmb	05 44 51.0	
	comp=Z,8.6nm,1.1s							
MSTX	**Muleshoe**	**67.04**	**328**	IAmb		IAmb	05 44 56.2	
	comp=Z,11nm,1.1s							
L40A	**Anamosa**	**69.58**	**341**	IAmb		IAmb	05 45 11.3	
	comp=Z,8.6nm,0.8s							
ANMO	**Albuquerque**	**69.64**	**326**	P		**P**	**05 45 12.4**	**+2.2**
I42A	**Draeger Farm,**	**70.63**	**343**	IAmb		IAmb	05 45 17.0	
	comp=Z,5.5nm,0.5s							
SDCO	**Great Sand Dun**	**71.39**	**329**	P		**P**	**05 45 23.4**	**+2.7**
E46A	**Sault Ste Mari**	**71.92**	**348**	IAmb		IAmb	05 45 24.8	
	comp=Z,6.8nm,0.8s							
MVCO	**Mesa Verde**	**72.44**	**326**	P		**P**	**05 45 29.7**	**+2.8**
E43A	**Lone Tree Farm**	**72.50**	**346**	P		**P**	**05 45 26.4**	**-0.4**
E43A				IAmb		IAmb	05 45 58.1	
	comp=Z,12nm,1.4s							
ECSD	**EROS Data Cent**	**72.81**	**338**	IAmb		IAmb	05 45 30.6	
	comp=Z,7.8nm,1.3s							
B35A	**Bob, Littlefor**	**76.05**	**342**	IAmb		IAmb	05 45 49.0	
	comp=Z,5.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.73**	**69**	P		**P**	**05 45 51.5**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=256,slow=5.1,SNR=22							
	comp=Z,1.7nm,0.6s							
PDAR	**Pinedale Array**	**77.25**	**329**	P		**P**	**05 45 56.4**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=131,slow=8.8,SNR=6.2							
	comp=Z,0.5nm,0.6s							
ULM	**Lac du Bonnet**	**78.36**	**342**	P		**P**	**05 46 01.4**	**+1.3**
	comp=Z,3.1nm,0.6s,baz=156,slow=3.7,SNR=5.2							
	comp=Z,3.1nm,0.6s							
NVAR	**Mina Array Bea**	**78.61**	**321**	P		**P**	**05 46 03.1**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=152,slow=7.3,SNR=6.5							
	comp=Z,0.6nm,0.6s							
RLMT	**Red Lodge**	**78.95**	**331**	P		**P**	**05 46 01.8**	**-1.9**
RLMT				IAmb		IAmb	05 46 19.3	
	comp=Z,13nm,1.0s							
BOSA	**Boshof**	**80.74**	**117**	P		**P**	**05 46 13.9**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=267,slow=3.6,SNR=5.2							
	comp=Z,3.6nm,0.8s							
MAW	**Mawson**	**81.30**	**163**	P		**P**	**05 46 16.6**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=195,slow=5.3,SNR=6.9							
	comp=Z,2.0nm,0.8s							
ESDC	**Sonseca Array**	**86.60**	**44**	P		**P**	**05 46 43.0**	**0.0**
	comp=Z,1.1nm,1.0s,baz=236,slow=5.0,SNR=4.6							
	comp=Z,1.1nm,1.0s							
YKA	**Yellowknife Ar**	**94.26**	**340**	P		**P**	**05 47 19.6**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=129,slow=4.4,SNR=15							
	comp=Z,1.2nm,0.7s							
ASAR	**Alice Springs**	**128.25**	**205**	PKP		**PKiKP**	**05 53 06.7**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=152,slow=2.4,SNR=9.0							
WRA	**Warramunga Arr**	**131.42**	**207**	PKP		**PKiKP**	**05 53 13.0**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=155,slow=1.7,SNR=11							
KURBB	**Kurchatov Arra**	**142.58**	**36**	PKP		**PKiKP**	**05 53 33.0**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=289,slow=2.4,SNR=5.8							
ZALV	**Zalesovo Beam**	**143.60**	**28**	PKP		**PKPdf**	**05 53 32.6**	**-0.3**
	comp=Z,3.8nm,0.7s,baz=301,slow=3.9,SNR=9.8							
KSH	**Kashi**	**145.38**	**55**	PKPbc		**PKPab**	**05 53 38.3**	**+1.0**
MKAR	**Makanchi Array**	**146.73**	**40**	PKPbc		**PKPbc**	**05 53 40.4**	**-0.2**
	comp=Z,5.0nm,0.7s,baz=316,slow=1.2,SNR=43							
HYBB	**Hyderabad (bro**	**147.26**	**95**	*e*PKiKP		**PKiKP**	**05 53 44.3**	**-0.7**
HYBB				*e*SKiKP		**SKPbc**	**05 57 02.7**	**-0.7**
KLR	**Kul'dur**	**150.94**	**334**	PKPbc		**PKiKP**	**05 53 52.0**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=36,slow=5.2,SNR=6.6							
PZH	**PanZhiHua**	**169.66**	**75**	PKP		**PKPdf**	**05 54 04.9**	**-1.6**

IDC 03 05:35:43.7±59.0,20.15S×179.23W,h0km,mb3.9/3, mbtmp3.9/3,Error ellipse: s-maj=1063.0km s-min=162.3km az=82.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**36.91**	**244**	P		P	05 42 54.4	+0.1
	1.1nm,0.6s,baz=97,slow=11,SNR=2.8							
	1.1nm,0.6s							
ASAR	**Alice Springs**	**43.48**	**257**	P		P	05 43 48.5	-0.5
	1.4nm,0.6s,baz=95,slow=7.6,SNR=15							
	1.4nm,0.6s							
WRA	**Warramunga Arr**	**43.51**	**262**	P		P	05 43 49.5	+0.1
	0.7nm,0.5s,baz=97,slow=7.7,SNR=16							
	0.7nm,0.5s							

IDC 03 05:42:53.9±8.7,16.30S×177.03E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=399.0km s-min=35.9km az=143.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.66**	**258**	P		P	05 50 36.4	+0.1
	0.2nm,0.5s,baz=90,slow=8.4,SNR=1.7							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**41.07**	**253**	P		P	05 50 39.3	-0.3
	0.5nm,0.7s,baz=82,slow=8.5,SNR=4.7							
	0.5nm,0.7s							
ILAR	**Eielson Array**	**85.37**	**15**	P		P	05 55 32.7	0.0
	0.9nm,0.8s,baz=228,slow=5.7,SNR=9.4							
	0.9nm,0.8s							

IDC ***03*** *05:48:48.3±0.6,23.92S×82.48E,h0km,mb4.3/18, mbtmp4.3/18,MS3.4/13,Error ellipse: s-maj=19.1km s-min=16.9km az=53.0*
NEIC ***03*** *05:48:50.2±2.2,23.9S±0.1×82.5E±0.1,h10km±1km, mb4.5/19,Error ellipse: s-maj=23.6km s-min=21.5km az=197.0*
ISC 03 05:48:49.8±0.5,23.91S±0.09×82.5E±0.1,h10km,n64, σ0ᵗ68/52,mb4.4/26,MS3.4/13,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H08S2	**Diego Garcia H**	**18.80**	**328**	T		T	06 12 17.8	
	baz=152,slow=74,SNR=118							
H08S1	**Diego Garcia H**	**18.81**	**328**	T		T	06 12 18.4	
	baz=152,slow=74,SNR=106							
H08S3	**Diego Garcia H**	**18.82**	**328**	T		T	06 12 27.4	
	baz=152,slow=74,SNR=208							
H01W3	**Cape Leeuwin H**	**29.54**	**119**	T		T	06 25 39.5	
	baz=284,slow=75,SNR=30							
H01W2	**Cape Leeuwin H**	**29.54**	**119**	T		T	06 25 40.0	
	baz=284,slow=75,SNR=38							
H01W1	**Cape Leeuwin H**	**29.55**	**119**	T		T	06 25 41.2	
	baz=284,slow=75,SNR=33							
PSI	**Prapat**	**30.99**	**33**	LR		LR	06 04 38.4	
	comp=Z,156nm,20.6s,baz=250,slow=31							
PALK	**Pallekele**	**31.04**	**357**	LR		LR	06 05 02.4	
	comp=Z,74nm,21.5s,baz=264,slow=31							
HYBB	**Hyderabad (bro**	**41.26**	**354**	*e*P		**P**	**05 56 34.5**	**-0.8**
HYBB				*e*S		**S**	**06 02 50.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**45.06**	**22**	P		**P**	**05 57 05.6**	**-0.5**
	0.9nm,0.3s,baz=202,slow=4.6,SNR=2.4							
CMAR				LR		LR	06 12 27.8	
	comp=Z,39nm,20.9s,baz=195,slow=32							
	0.9nm,0.3s							
ASAR	**Alice Springs**	**46.82**	**101**	P		**P**	**05 57 20.0**	**-0.1**
	8.2nm,0.7s,baz=266,slow=7.2,SNR=71							
	8.2nm,0.7s							
ASAR	**Alice Springs**	**46.82**	**101**	P		**P**	**05 57 18.8**	**-1.4**
AS31	**Alice Springs**	**46.82**	**101**	P		**P**	**05 57 20.1**	**0.0**
AS31				IAmb		IAmb	05 57 27.5	
	comp=Z,3.1nm,0.6s							
BBOO	**Buckleboo**	**47.53**	**113**	P		**P**	**05 57 25.9**	**+0.3**
WRA	**Warramunga Arr**	**48.04**	**96**	P		**P**	**05 57 30.1**	**+0.5**
	comp=Z,9.7nm,0.8s,baz=262,slow=7.9,SNR=50							
	comp=Z,9.7nm,0.8s							
WRA	**Warramunga Arr**	**48.04**	**96**	P		**P**	**05 57 30.6**	**+0.9**
WB2	**Warramunga Arr**	**48.05**	**96**	P		**P**	**05 57 28.8**	**-1.0**
WB2				IAmb		IAmb	05 57 32.6	
	comp=Z,9.1nm,0.8s							
WB0	**Warramunga Arr**	**48.13**	**96**	P		**P**	**05 57 29.7**	**-0.7**
WR0	**Warramunga Arr**	**48.22**	**96**	P		**P**	**05 57 30.4**	**-0.6**
KMBO	**Kilima Mbogo**	**49.30**	**291**	P		**P**	**05 57 39.6**	**-0.1**
KMBO				IAmb		IAmb	05 58 04.8	
	comp=Z,4.7nm,1.4s							
BOSA	**Boshof**	**51.15**	**252**	P		**P**	**05 57 53.6**	**+0.3**
	comp=Z,7.3nm,0.7s,baz=104,slow=6.5,SNR=17							
	comp=Z,7.3nm,0.7s							
BOSA	**Boshof**	**51.15**	**252**	P		**P**	**05 57 53.7**	**+0.3**
BOSA				IAmb		IAmb	05 57 53.8	
	comp=Z,11nm,0.8s							

SONM	**Songino Array**	**74.58**	**16**	P		**P**	**06 00 29.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=197,slow=4.6,SNR=3.9							
SONM				LR		LR	06 33 07.4	
	comp=Z,32nm,18.7s,baz=138,slow=36							
	comp=Z,0.3nm,0.3s							
ABKAR	**Akbulak array**	**75.56**	**345**	P		**P**	**06 00 33.9**	**-0.5**
ABKAR	**Akbulak array**	**75.56**	**345**	IAmb		IAmb	06 00 36.4	
	comp=Z,3.3nm,0.9s							
KBZ	**Khabaz**	**76.49**	**332**	P		**P**	**06 00 40.5**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=77,slow=9.7,SNR=4.6							
	comp=Z,0.9nm,0.5s							
AKTO	**Aktyubinsk**	**77.12**	**344**	P		**P**	**06 00 43.4**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=145,slow=5.9,SNR=5.4							
AKTO				LR		LR	06 34 05.0	
	comp=Z,22nm,19.2s,baz=149,slow=35							
	comp=Z,1.3nm,0.6s							
BVAR	**Borovoye Array**	**77.33**	**353**	LR		LR	06 34 15.0	
	comp=Z,13nm,18.1s,baz=34,slow=35							
ZAA0	**Zalesovo Array**	**77.56**	**1**	P		**P**	**06 00 44.5**	**-1.0**
ZAA0				IAmb		IAmb	06 00 45.8	
	comp=Z,2.7nm,0.7s							
ZALV	**Zalesovo Beam**	**77.56**	**1**	P		**P**	**06 00 45.2**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=180,slow=4.0,SNR=10							
ZALV				LR		LR	06 34 33.3	
	comp=Z,18nm,19.9s,baz=195,slow=35							
	comp=Z,2.8nm,0.7s							
ZALV	**Zalesovo Beam**	**77.56**	**1**	P		**P**	**06 00 44.7**	**-0.9**
BR131	**Keskin Array S**	**78.00**	**324**	P		**P**	**06 00 48.6**	**0.0**
BR131				IAmb		IAmb	06 00 50.1	
	comp=Z,3.8nm,0.8s							
BRTR	**Keskin Array B**	**78.00**	**324**	P		**P**	**06 00 48.5**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=142,slow=6.4,SNR=10							
	comp=Z,2.1nm,0.7s							
BRTR	**Keskin Array B**	**78.00**	**324**	P		**P**	**06 00 47.5**	**-1.1**
USRK	**Ussuriysk Ar.**	**81.51**	**34**	P		**P**	**06 01 08.0**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=11,slow=12,SNR=4.5							
	comp=Z,1.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**87.06**	**286**	P		**P**	**06 01 36.7**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=127,slow=5.4,SNR=4.9							
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**87.88**	**329**	P		**P**	**06 01 40.1**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=120,slow=4.3,SNR=6.3							
	comp=Z,1.0nm,0.6s							
ILAR	**Eielson Array**	**128.27**	**24**	PKP		**PKPdf**	**06 07 55.0**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=309,slow=3.9,SNR=5.9							
NVAR	**Mina Array Bea**	**157.13**	**46**	PKPab		**PKPab**	**06 09 17.7**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=277,slow=4.5,SNR=11							
PDAR	**Pinedale Array**	**158.71**	**25**	PKPab		**PKPab**	**06 09 22.9**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=18,slow=1.7,SNR=5.9							
TXAR	**Lajitas Array**	**172.28**	**44**	PKP		**PKPdf**	**06 09 00.2**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=132,slow=1.9,SNR=5.5							

*NIED **03** 05:56:20.3, 38˚.30N×141˚.85E, h47km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr1.28; Mθθ0.25; Mϕϕ-1.54; Mrθ1.52; Mθϕ-0.22; Mϕr2.18; Fault plane solution: M0 3.02000×10^14 NP1: φs164.00000°, δ19.00000°, λ44.00000°. NP2: φs31.00000°, δ77.00000°, λ104.00000°.*

*JMA **03** 05:56:20.3±0.1, 38˚.3N±0˚.3×141˚.9E±0˚.6, h47km, MV3.7/40, E OFF MIYAGI PREF*

JMA Felt I J1 at E OFF MIYAGI PREF .

*IDC **03** 05:56:27.3±4.3, 37˚.99N×141˚.12E, h121km±33km, mb3.4/6, mbtmp3.7/10, MS2.5/1, Error ellipse: s-maj=58.9km s-min=17.4km az=72.0*

ISC 03 05:56:18.7±1.3, 38˚.27N±0˚.05×141˚.94E±0˚.09, h51km±10km, n23, σ1§32/34, mb3.6/6, 20D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.38**	**276**	⇓*i*	P		**Pn**	**05 56 29.2**	**+0.6**
JIKH				⇓	S		**Sn**	**05 56 35.4**	**-0.4**
JIO	**Ouri**	**0.50**	**292**	⇓*i*	P		**Pn**	**05 56 30.5**	**+0.5**
JIO				⇓	S		**Sn**	**05 56 37.7**	**-0.5**
JKMT	**Kesennumamotoy**	**0.65**	**326**	⇓*i*	P		**Pn**	**05 56 32.6**	**+0.7**
JKMT				⇓	S		**Sn**	**05 56 41.0**	**-0.4**
OFUJ	**Ofunato**	**0.84**	**345**	⇓*i*	P		**Pn**	**05 56 35.1**	**+0.8**
OFUJ				⇓	S		**Sn**	**05 56 45.2**	**-0.5**
JMK	**Ichinoseki**	**0.89**	**320**	⇓*i*	P		**Pn**	**05 56 35.8**	**+0.9**
JMK				⇓	S		**Sn**	**05 56 46.4**	**-0.4**
JMM	**Marumori**	**0.99**	**246**	⇓*i*	P		**Pn**	**05 56 36.7**	**+0.4**
JMM				⇓	S		**Sn**	**05 56 48.1**	**-1.3**
JOU	**Okura**	**1.01**	**276**	⇓*i*	P		**Pn**	**05 56 37.5**	**+0.8**
JOU				⇓	*e*S		**Sn**	**05 56 50.0**	**+0.2**
JFK	**Kawauchi**	**1.24**	**223**	*i*	P		**Pn**	**05 56 40.5**	**+0.8**
JFK					*e*S		**Sn**	**05 56 55.3**	**0.0**
JOM	**Ohasama**	**1.30**	**337**	⇓*i*	P		**Pn**	**05 56 41.8**	**+1.2**
JYK	**Kaneyama**	**1.40**	**298**	⇓*i*	P		**Pn**	**05 56 42.8**	**+0.9**
JFT	**Otama**	**1.48**	**240**	⇓*e*	P		**Pn**	**05 56 44.2**	**+1.3**
JFT				⇓	*e*S		**Sn**	**05 57 01.8**	**+0.7**
JYS	**Shirataka**	**1.48**	**269**	⇓*i*	P		**Pn**	**05 56 44.0**	**+1.0**
JYS				⇓	*e*S		**Sn**	**05 57 02.0**	**+0.8**
JRG	**Rokugo**	**1.52**	**318**	*i*	P		**Pn**	**05 56 44.9**	**+1.4**
MJAR	**Matsushiro Arr**	**3.44**	**241**	P			**Pn**	**05 57 11.1**	**+1.3**
	2.3nm,0.3s,baz=68,slow=12,SNR=7.9								
JHJ	**Hachijo jima 2**	**5.43**	**200**	P			**Pn**	**05 57 39.9**	**+2.8**
	17nm,0.5s,baz=66,slow=20,SNR=1.2								
JHJ				S			**Sn**	**05 58 36.9**	**-1.4**
	41nm,0.4s,baz=261,slow=24,SNR=1.9								
USRK	**Ussuriysk Ar.**	**9.55**	**311**	P			**Pn**	**05 58 35.9**	**+2.4**
	4.2nm,0.7s,baz=126,slow=15,SNR=5.9								
KSRS	**Korea Array**	**11.12**	**270**	P			**Pn**	**05 58 55.8**	**+0.8**
	0.4nm,0.4s,baz=95,slow=12,SNR=2.0								
KSRS				LR			LR	06 02 38.9	
	comp=Z,22nm,18.2s,baz=220,slow=35								
SONM	**Songino Array**	**27.47**	**302**	P			**P**	**06 01 57.5**	**-2.6**
	0.2nm,0.3s,baz=96,slow=12,SNR=2.4								
	0.2nm,0.3s								
ZALV	**Zalesovo Beam**	**41.40**	**311**	P			**P**	**06 03 59.2**	**-0.7**
	0.8nm,0.3s,baz=86,slow=8.8,SNR=2.9								
	0.8nm,0.3s								
MKAR	**Makanchi Array**	**43.83**	**301**	P			**P**	**06 04 17.6**	**-2.0**
	0.7nm,0.6s,baz=81,slow=10,SNR=3.4								
	0.7nm,0.6s								
WRA	**Warramunga Arr**	**58.34**	**188**	P			**P**	**06 06 06.7**	**-2.0**
	0.3nm,0.5s,baz=2.1,slow=5.1,SNR=1.6								
	0.3nm,0.5s								
ARCES	**ARCESS Array B**	**62.99**	**339**	P			**P**	**06 06 41.2**	**+1.4**
	1.6nm,0.8s,baz=68,slow=9.8,SNR=1.2								
	1.6nm,0.8s								
NOA	**NORSAR Array B**	**73.21**	**337**	P			**P**	**06 07 45.5**	**+1.6**
	0.3nm,0.5s,baz=37,slow=5.9,SNR=3.4								
	0.3nm,0.5s								

*IDC **03** 06:09:51.3±1.8, 13˚.65N×144˚.99E, h91km±23km, mb3.1/4, mbtmp3.4/4, Error ellipse: s-maj=133.0km s-min=21.6km az=111.0*

*NEIC **03** 06:09:53.8±1.1, 13˚.56N±0˚.09×144˚.9E±0˚.2, h90km±4km, mb4.5/12, Error ellipse: s-maj=23.9km s-min=11.5km az=106.0*

ISC 03 06:09:53.2±0.7, 13˚.6N±0˚.1×144˚.9E±0˚.1, h100km, n21, σ1§33/23, mb4.2/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.04**	**254**			LR	LR	06 10 03.6	
	comp=Z,29nm,21.7s,baz=269,slow=92								
GUMO				P			**Pn**	**06 10 05.6**	**-1.5**
	3µm,0.3s,baz=126,slow=1.4,SNR=766								
GUMO				S			**Sn**	**06 10 15.2**	**-2.3**
	3µm,0.3s,baz=348,slow=21,SNR=21								
GUMO	**Guam**	**0.04**	**254**	Pn			**Pn**	**06 10 05.8**	**-1.3**
GUMO				Sn			**Sn**	**06 10 15.6**	**-1.9**
GUMO	**Guam**	**0.04**	**254**	P			**Pn**	**06 10 06.0**	**-1.1**
PATS	**Pohnpei**	**14.80**	**116**	Pn			**Pn**	**06 13 17.8**	**+0.3**
JOW	**Kunigami**	**20.39**	**313**	P			Pn	06 14 24.7	-0.4
JOW				IAmb			IAmb	06 15 03.8	
	comp=Z,19nm,1.5s								
JSU	**Suzuyama**	**22.22**	**326**	P			**P**	**06 14 42.2**	**+0.4**
JHS	**Saijyo**	**23.82**	**335**	P			**P**	**06 14 59.5**	**+2.4**
JHS				IAmb			IAmb	06 15 05.4	
	comp=Z,15nm,1.4s								
WB0	**Warramunga Arr**	**34.74**	**198**	P			**P**	**06 16 33.7**	**-0.3**
WB0				IAmb			IAmb	06 16 46.2	
	comp=Z,17nm,1.5s								
WR0	**Warramunga Arr**	**34.88**	**197**	P			**P**	**06 16 34.7**	**-0.5**
WR0				IAmb			IAmb	06 16 46.0	
	comp=Z,14nm,1.4s								
WB2	**Warramunga Arr**	**34.91**	**198**	P			**P**	**06 16 35.5**	**0.0**
WB2				IAmb			IAmb	06 17 17.7	
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**34.92**	**198**	P			**P**	**06 16 34.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=22,slow=9.2,SNR=6.1								
	comp=Z,0.5nm,0.6s								
WRA	**Warramunga Arr**	**34.92**	**198**	P			**P**	**06 16 35.9**	**+0.3**
ASAR	**Alice Springs**	**38.57**	**196**	P			**P**	**06 17 06.9**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=23,slow=12,SNR=6.7								
	comp=Z,0.3nm,0.5s								
PSA00	**Pilbara Seismi**	**42.74**	**216**	P			**P**	**06 17 41.4**	**+0.5**
STKA	**Stephens Creek**	**45.33**	**184**	P			**P**	**06 18 01.4**	**0.0**
BBOO	**Buckleboo**	**46.92**	**190**	P			**P**	**06 18 14.1**	**+0.2**
TOO	**Toolangi**	**50.90**	**179**	P			**P**	**06 18 46.5**	**+2.2**
HYBB	**Hyderabad (bro**	**63.78**	**283**	*e*P			**P**	**06 20 16.1**	**+0.8**
HYBB				*es*P			**sP**	**06 20 49.1**	**-1.1**
MCK	**McKinley**	**67.41**	**26**	P			**P**	**06 20 40.0**	**+2.2**
MCK				IAmb			IAmb	06 20 45.7	
	comp=Z,14nm,1.4s								
ILAR	**Eielson Array**	**68.54**	**25**	P			**P**	**06 20 43.6**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=255,slow=5.7,SNR=4.8								
	comp=Z,0.2nm,0.4s								
YKA	**Yellowknife Ar**	**82.83**	**27**	P			**P**	**06 22 05.5**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=287,slow=5.2,SNR=4.9								
	comp=Z,0.1nm,0.4s								

*IDC **03** 06:26:04.0±1.1, 23˚.61S×66˚.56W, h202km±12km, mb3.1/3, mbtmp3.7/9, Error ellipse: s-maj=17.0km s-min=15.8km az=16.0*

ISC 03 06:26:03.6±0.8, 23˚.70S±0˚.10×66˚.54W±0˚.09, h201km, n10, σ0§78/12, mb3.3/3, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.44**	**296**	P			**Pn**	**06 26 47.3**	**+0.1**
	31nm,0.3s,baz=146,slow=6.1,SNR=358								
LVC				S			**S**	**06 27 20.4**	**-0.1**
	77nm,0.3s,baz=279,slow=21,SNR=27								
LPAZ	**La Paz**	**7.52**	**348**	P			**Pn**	**06 27 51.6**	**+0.3**
	1.5nm,0.3s,baz=137,slow=4.4,SNR=32								
LPAZ				S			**S**	**06 29 16.9**	**+0.3**
	0.8nm,0.5s,baz=250,slow=13,SNR=1.9								
CPUP	**Villa Florida**	**8.76**	**109**	P			**Pn**	**06 28 06.1**	**-0.5**
	2.2nm,0.7s,baz=289,slow=10,SNR=6.7								
SIV	**San Ignacio**	**9.23**	**35**	P			**Pn**	**06 28 13.8**	**+0.8**
	2.1nm,0.6s,baz=213,slow=12,SNR=12								
PLCA	**Paso Flores**	**17.32**	**190**	P			**Pn**	**06 29 54.6**	**+1.1**
	1.6nm,0.5s,baz=1.4,slow=12,SNR=13								
BDFB	**Brasilia**	**19.18**	**69**	P			**P**	**06 30 13.0**	**+0.6**
	2.3nm,0.6s,baz=246,slow=10,SNR=3.9								
TXAR	**Lajitas Array**	**63.68**	**324**	P			**P**	**06 36 14.1**	**+0.3**
	0.1nm,0.7s,baz=160,slow=8.2,SNR=1.9								
	0.1nm,0.7s								
TORD	**Torodi Ar. Bea**	**76.07**	**69**	P			**P**	**06 37 28.8**	**-0.7**
	0.3nm,0.5s,baz=271,slow=5.5,SNR=4.2								
	0.3nm,0.5s								
YKA	**Yellowknife Ar**	**93.99**	**340**	P			**P**	**06 38 56.6**	**-1.5**
	0.4nm,0.8s,baz=134,slow=2.7,SNR=3.2								
	0.4nm,0.8s								
MKAR	**Makanchi Array**	**146.02**	**40**	PKPbc			**PKPdf**	**06 45 18.9**	**+0.3**
	0.7nm,0.6s,baz=2.9,slow=2.6,SNR=7.5								

IDC 03 06:32:41.5±3.2, 55˚.68N×86˚.07E, h0km, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=26.8km s-min=26.1km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**203**	*i*				06 44 35.0	
	baz=23,slow=319,SNR=25								
ZALV	**Zalesovo Beam**	**1.88**	**203**	Pn			Pn	06 33 14.5	-0.3
	4.0nm,0.3s,baz=23,slow=19,SNR=26								
ZALV				Lg			Lg	06 33 40.3	
	3.7nm,0.3s,baz=18,slow=30,SNR=9.8								
KURBB	**Kurchatov Arra**	**6.79**	**225**	Pn			Pn	06 34 21.9	-0.4
	0.3nm,0.3s,baz=45,slow=13,SNR=4.5								
KURBB				Lg			Lg	06 36 19.7	
	baz=41,slow=30								
	1.4nm,0.2s								
MKAR	**Makanchi Array**	**9.21**	**196**	Pn			Pn	06 34 55.6	+0.2
	0.1nm,0.3s,baz=19,slow=13,SNR=6.7								
MKAR				Lg			Lg	06 37 35.3	
	0.1nm,0.3s,baz=27,slow=29,SNR=5.6								
	0.2nm,0.4s								

*NNC **03** 06:51:54.0±5.0, 53˚.74N×88˚.22E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=40.7km s-min=23.8km az=52.0, Suspected Mining explosion.*

*IDC **03** 06:51:56.2±3.0, 53˚.76N×88˚.11E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=26.1km s-min=16.7km az=62.0*

ISC 03 06:51:56.4±4.1, 53˚.8N±0˚.1×88˚.0E±0˚.2, h0km, n8, σ1§09/10, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**276**	*i*				07 04 30.0	
	0.4nm,1.1s,baz=92,slow=320,SNR=19								
ZAA0	**Zalesovo Array**	**1.87**	**276**	⇑Pg			**Pn**	**06 52 30.0**	**+0.4**
	1.6nm,0.6s								
ZAA0				⇑Lg			Lg	06 52 58.9	
	5.1nm,0.5s								
ZALV	**Zalesovo Beam**	**1.87**	**276**	Pn			**Pb**	**06 52 30.4**	**-0.9**
	2.6nm,0.3s,baz=92,slow=11,SNR=27								
ZALV				Lg			Lg	06 52 58.4	
	6.0nm,0.3s,baz=98,slow=21,SNR=25								
KURK	**Kurchatov**	**6.51**	**245**	⇑Pn			**Pn**	**06 53 34.3**	**+0.9**
	3.1nm,1.2s								
KURK				⇑Lg			Lg	06 55 25.2	
	4.2nm,0.8s								
KURBB	**Kurchatov Arra**	**6.61**	**245**	Pn			**Pn**	**06 53 35.6**	**+0.8**
	0.2nm,0.3s,baz=63,slow=14,SNR=4.7								
KURBB				Lg			Lg	06 55 28.4	
	0.1nm,0.3s,baz=59,slow=30,SNR=10.0								
	1.3nm,0.4s								
KURBB	**Kurchatov Arra**	**6.61**	**245**	⇓Pn			**Pn**	**06 53 35.5**	**+0.7**
	2.0nm,0.3s								
KURBB				⇑Sn			**Sn**	**06 54 51.6**	**+0.8**
	4.9nm,0.7s								
KURBB				⇑Lg			Lg	06 55 26.7	
	5.5nm,0.7s								
MK31	**Makanchi Array**	**7.90**	**210**	⇓Pn			**Pn**	**06 53 52.5**	**+0.1**
	0.3nm,0.5s,baz=28,slow=14,SNR=5.0								
MK31				⇓Sn			**Sn**	**06 55 20.8**	**-1.7**
	0.4nm,0.5s,baz=212,slow=34,SNR=2.8								
MK31				⇓Lg			Lg	06 56 05.1	
	3.3nm,1.2s,baz=31,slow=32								
MKAR	**Makanchi Array**	**7.90**	**210**	Pn			**Pn**	**06 53 53.8**	**+1.3**
	0.2nm,0.3s,baz=29,slow=15,SNR=6.8								
MKAR				Sn			**Sn**	**06 55 22.5**	**0.0**
	0.2nm,0.3s,baz=32,slow=24,SNR=8.6								
MKAR				Lg			Lg	06 56 04.1	
	0.1nm,0.3s,baz=28,slow=28,SNR=2.2								
	0.3nm,0.4s								

IDC 03 06:54:41.9±3.0, 54˚.17N×86˚.40E, h0km, mbtmp2.8/2, ML2.6/1, Error ellipse: s-maj=22.4km s-min=12.9km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**257**	*i*				07 00 50.0	
	baz=76,slow=318,SNR=3.5								
ZALV	**Zalesovo Beam**	**0.96**	**257**	Pg			Pg	06 54 58.5	-1.8
	2.3nm,0.3s,baz=73,slow=17,SNR=12								
ZALV				Lg			Lg	06 55 14.4	
	3.6nm,0.3s,baz=78,slow=30,SNR=11								
KURBB	**Kurchatov Arra**	**5.99**	**237**	Pn			Pn	06 56 13.4	+1.7
	0.5nm,0.3s,baz=53,slow=14,SNR=2.5								
MKAR	**Makanchi Array**	**7.84**	**201**	Pn			Pn	06 56 38.1	+1.0
	0.1nm,0.3s,baz=24,slow=14,SNR=1.9								
MKAR				Lg			Lg	06 58 49.6	
	baz=18,slow=24,SNR=3.6								
	0.2nm,0.4s								

IDC 03 07:27:23.4±2.5, 54˚.64N×83˚.77E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=19.5km s-min=12.1km az=170.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**138**	*i*				07 33 40.0	
	baz=317,slow=318,SNR=4.3								
ZALV	**Zalesovo Beam**	**0.93**	**138**	Pg			Pg	07 27 40.4	-0.9
	1.5nm,0.3s,baz=315,slow=15,SNR=7.6								
ZALV				Lg			Lg	07 27 54.7	
	4.6nm,0.3s,baz=320,slow=28,SNR=15								

KURBB	**Kurchatov Arra**	**5.13**	**220**	Pn		Pn	07 28 41.4	-0.2
	baz=42,slow=14,SNR=3.0							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**7.92**	**187**	Pn		Pn	07 29 20.6	+0.9
	baz=14,slow=14,SNR=1.5							
	0.1nm,0.5s							

*SJA **03** 07:41:37.0±0.6, 21˚.24S×69˚.51W, h75km±2km, ML4.1, MW3.9*

*NEIC **03** 07:41:37.7±2.3, 21˚.24S±0˚.04×69˚.61W±0˚.09, h80km±3km, Error ellipse: s-maj=12.8km s-min=6.3km az=83.0*

*GUC **03** 07:41:38.5±0.8, 21˚.24S×69˚.47W, h74km±3km, ML4.1*

ISC 03 07:41:37.6±0.9, 21˚.24S±0˚.03×69˚.56W±0˚.04, h71km±6km, n63, σ1§65/90, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.20**	**20**				**Pn**	**07 41 48.8**	**+0.3**
PB01					Sn		**Sn**	**07 41 57.1**	**+0.6**
PB01	**IPOC Station P**	**0.20**	**20**	⇓*i*	P		**Pn**	**07 41 48.8**	**+0.3**
PB01				⇓	*e*S		**Sn**	**07 41 57.2**	**+0.7**
PB01	**IPOC Station P**	**0.20**	**20**	*e*	P		**Pn**	**07 41 48.9**	**+0.4**
PB01					*e*S		**Sn**	**07 41 57.7**	**+1.2**
PB01					IAML			07 42 01.8	
	comp=Z,4µm,0.1s								
PB02	**IPOC Station P**	**0.32**	**255**				**Pn**	**07 41 50.1**	**+0.9**
PB02	**IPOC Station P**	**0.32**	**255**	⇓*i*	P		**Pn**	**07 41 50.4**	**+1.1**
PB02				*i*	S		**Sn**	**07 41 59.8**	**+2.1**
PB02					IAML			07 42 01.1	
	comp=E,20µm,0.2s								
PB02	**IPOC Station P**	**0.32**	**255**	*e*	P		**Pn**	**07 41 50.2**	**+1.0**
PB02				*e*	S		**Sn**	**07 41 60.0**	**+2.2**
PB02				*e*	S			07 42 00.1	
PB02					IAML			07 42 01.0	
	comp=Z,15µm,0.1s								
PB07	**IPOC Station P**	**0.57**	**212**				**Pn**	**07 41 52.1**	**+0.7**
PB07					Sn		**Sn**	**07 42 03.2**	**+1.5**
PB07	**IPOC Station P**	**0.57**	**212**	⇑*i*	P		**Pn**	**07 41 52.4**	**+0.9**
PB07				*i*	S		**Sn**	**07 42 03.4**	**+1.7**
PB07					IAML			07 42 03.7	
	comp=N,16µm,0.1s								
PB07	**IPOC Station P**	**0.57**	**212**	*e*	P		**Pn**	**07 41 52.4**	**+0.9**
PB07				*e*	S		**Sn**	**07 42 03.5**	**+1.8**
PB07					IAML			07 42 04.9	
	comp=Z,6µm,0.3s								
PB09	**IPOC Station P**	**0.63**	**152**				**Pn**	**07 41 52.9**	**+0.8**
PB09	**IPOC Station P**	**0.63**	**152**	⇑*i*	P		**Pn**	**07 41 52.7**	**+0.7**
PB09					*e*S		**Sn**	**07 42 03.4**	**+0.7**
PB09					IAML			07 42 05.0	
	comp=E,12µm,0.2s								
PB09	**IPOC Station P**	**0.63**	**152**	*e*	P		**Pn**	**07 41 52.5**	**+0.5**
PB09					*e*S		**Sn**	**07 42 03.9**	**+1.2**
PB09					IAML			07 42 04.4	
	comp=Z,6µm,0.3s								
PATCX	**Punta Patache**	**0.69**	**307**				**Pn**	**07 41 52.9**	**+0.3**
TA01	**Diego Aracena**	**0.89**	**319**				**Pn**	**07 41 55.9**	**+1.1**
TA01	**Diego Aracena**	**0.89**	**319**	*i*	P		**Pn**	**07 41 55.7**	**+0.9**
TA01					*e*S		**Sn**	**07 42 09.3**	**+1.8**
TA01	**Diego Aracena**	**0.89**	**319**	*e*	P		**Pn**	**07 41 55.9**	**+1.1**
TA01					*e*S		**Sn**	**07 42 09.8**	**+2.3**
TA02	**Huaiquique**	**1.10**	**331**				**Pn**	**07 41 58.1**	**+0.7**
TA02	**Huaiquique**	**1.10**	**331**	*e*	P		**Pn**	**07 41 58.1**	**+0.7**
TA02					*e*S		**Sn**	**07 42 13.3**	**+1.4**
TA02	**Huaiquique**	**1.10**	**331**	*e*	P		**Pn**	**07 41 58.3**	**+0.8**
TA02					*e*P			07 41 58.3	
TA02					*e*S		**Sn**	**07 42 14.6**	**+2.4**
TA02					IAML			07 42 20.8	
	comp=Z,3µm,0.1s								
PB04	**IPOC Station P**	**1.22**	**207**				**Pn**	**07 42 00.2**	**+1.1**
PB04	**IPOC Station P**	**1.22**	**207**	*i*	P		**Pn**	**07 41 59.9**	**+0.7**
PB04					*e*S		**Sn**	**07 42 17.0**	**+1.7**
PB04					IAML			07 42 20.0	
	comp=E,3µm,0.1s								
PB04	**IPOC Station P**	**1.22**	**207**	*e*	P		**Pn**	**07 42 00.1**	**+0.9**
PB04					*e*S		**Sn**	**07 42 17.5**	**+2.3**
PB04					IAML			07 42 19.8	
	comp=Z,2µm,0.1s								
PB06	**IPOC Station P**	**1.46**	**180**				**Pn**	**07 42 02.9**	**+0.6**
PB06	**IPOC Station P**	**1.46**	**180**	⇓*i*	P		**Pn**	**07 42 02.

1.1nm,0.3s,baz=96,slow=14,SNR=11
ZALV Lg Lg 08 47 52.9
1.8nm,0.3s,baz=99,slow=25,SNR=10
KURBB **Kurchatov Arra 6.47 246** Pn Pn 08 48 31.7 +0.5
0.1nm,0.3s,baz=61,slow=13,SNR=3.6
KURBB Lg Lg 08 50 19.4
baz=63,slow=33,SNR=4.3
0.3nm,0.3s
MKAR Makanchi Array 7.69 210 Pn Pn 08 48 49.2 +1.2
0.1nm,0.3s,baz=31,slow=13,SNR=6.3
MKAR Lg Lg 08 50 58.9
0.1nm,0.3s,baz=29,slow=33,SNR=5.3
0.2nm,0.3s

*NEIC **03** 08:51:50.0±2.7,23.02°S±0.05°×68.4°W±0.1,h156km±10km, mb4.3/4,ML4.4(GUC),Error ellipse: s-maj=18.4km s-min=7.8km az=89.0*
*IDC **03** 08:51:50.0±4.7,23.16°S×67.43°W,h89km±59km,mb3.6/1, mbtmp3.9/3,ML4.2/2,Error ellipse: s-maj=113.5km s-min=33.7km az=101.0*
*GUC **03** 08:51:50.9±0.9,23.06°S×68.20°W,h124km±7km,ML4.4*
ISC 03 08:51:49.1±0.8,23.09°S±0.04°×68.17°W±0.08,h129km±8km, n59,σ1°31/71,4C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.13**	**357**		**Pn**	**08 52 07.5**	**+0.3**
LVC	**Limon Verde**	**0.83**	**305**	Pn	**Pn**	**08 52 11.5**	**+0.6**
LVC	**Limon Verde**	**0.83**	**305**	*eP*	**Pn**	**08 52 10.9**	**+0.1**
LVC				*eS*	**Sn**	**08 52 26.3**	**-1.0**
PB15	**IPOC Station P**	**1.20**	**264**		**Pn**	**08 52 15.5**	**+1.4**
PB15	**IPOC Station P**	**1.20**	**264**	*i* P	**Pn**	**08 52 15.2**	**+1.0**
PB15				*eS*	**Sn**	**08 52 33.9**	**+0.7**
PB06	**IPOC Station P**	**1.34**	**286**		**Pn**	**08 52 16.8**	**+1.2**
PB06	**IPOC Station P**	**1.34**	**286**	*eP*	**Pn**	**08 52 16.8**	**+1.2**
PB06				*eS*	**Sn**	**08 52 36.1**	**+0.4**
PB06				IAML		08 52 39.2	
	comp=N,5μm,0.3s						
PB09	**IPOC Station P**	**1.62**	**322**		**Pn**	**08 52 20.3**	**+1.5**
PB09	**IPOC Station P**	**1.62**	**322**	⇑*iP*	**Pn**	**08 52 20.2**	**+1.4**
PB09				*eS*	**Sn**	**08 52 42.2**	**+0.9**
PB04	**IPOC Station P**	**1.97**	**292**		**Pn**	**08 52 23.2**	**+0.3**
PB04	**IPOC Station P**	**1.97**	**292**	*eP*	**Pn**	**08 52 23.8**	**+0.9**
PB04				*eS*	**Sn**	**08 52 48.5**	**-0.2**
PB04				IAML		08 52 57.8	
	comp=N,3μm,0.4s						
PB07	**IPOC Station P**	**2.08**	**310**		**Pn**	**08 52 25.2**	**+1.0**
PB07	**IPOC Station P**	**2.08**	**310**	⇑*iP*	**Pn**	**08 52 25.3**	**+1.0**
PB07				*eS*	**Sn**	**08 52 51.3**	**+0.1**
PB07				IAML		08 52 56.7	
	comp=E,2μm,0.3s						
PB01	**IPOC Station P**	**2.37**	**329**		**Pn**	**08 52 28.8**	**+1.0**
PB01	**IPOC Station P**	**2.37**	**329**	⇑*iP*	**Pn**	**08 52 28.9**	**+1.0**
PB01				*eS*	**Sn**	**08 52 58.3**	**+0.9**
PB01				IAML		08 53 05.3	
	comp=E,1μm,0.4s						
PB02	**IPOC Station P**	**2.38**	**317**		**Pn**	**08 52 28.9**	**+1.0**
PB02	**IPOC Station P**	**2.38**	**317**	⇑*iP*	**Pn**	**08 52 28.7**	**+0.9**
PB02				*eS*	**Sn**	**08 52 57.4**	**-0.1**
PB02				IAML		08 53 05.4	
	comp=E,2μm,0.2s						
GO02	**Mina Guanaco**	**2.44**	**212**	Pn	**Pn**	**08 52 30.2**	**+1.4**
GO02	**Mina Guanaco**	**2.44**	**212**	⇓*iP*	**Pn**	**08 52 30.1**	**+1.4**
GO02				*eS*	**Sn**	**08 53 00.9**	**+1.5**
GO02				IAML		08 53 07.9	
	comp=N,3μm,0.1s						
PB14	**IPOC Station P**	**2.55**	**233**	Pn	**Pn**	**08 52 30.8**	**+0.5**
PB14	**IPOC Station P**	**2.55**	**233**	*eP*	**Pn**	**08 52 30.8**	**+0.5**
PB14				*eS*	**Sn**	**08 53 01.7**	**-0.2**
PATCX	**Punta Patache**	**2.91**	**320**		**Pn**	**08 52 35.0**	**+0.3**
TA01	**Diego Aracena**	**3.13**	**323**	Pn	**Pn**	**08 52 37.2**	**-0.1**
TA01	**Diego Aracena**	**3.13**	**323**	*eP*	**Pn**	**08 52 37.0**	**-0.4**
TA01				*eS*	**Sn**	**08 53 15.2**	**+0.6**
TA02	**Huaiquique**	**3.34**	**327**	*eP*	**Pn**	**08 52 39.4**	**-0.8**
GO01	**Chusmiza**	**3.53**	**344**		**Pn**	**08 52 44.5**	**+1.3**
GO01	**Chusmiza**	**3.53**	**344**	*i* P	**Pn**	**08 52 44.4**	**+1.2**
GO01				*eS*	**Sn**	**08 53 26.5**	**+1.6**
AC01	**Pan de Azucar**	**3.76**	**215**	Pn	**Pn**	**08 52 46.1**	**+0.4**
AC01	**Pan de Azucar**	**3.76**	**215**	*eP*	**Pn**	**08 52 46.0**	**+0.2**
AC02	**Maricunga**	**3.83**	**193**	Pn	**Pn**	**08 52 48.9**	**+1.8**
AC02	**Maricunga**	**3.83**	**193**	⇓*iP*	**Pn**	**08 52 48.9**	**+1.8**
GO03	**Copiap**	**4.86**	**202**		**Pn**	**08 52 59.8**	**-0.6**
GO03	**Copiap**	**4.86**	**202**	*eP*	**Pn**	**08 52 59.4**	**-1.0**
PB12	**IPOC Station P**	**4.88**	**335**	Pn	**Pn**	**08 52 59.5**	**-1.3**
PB12	**IPOC Station P**	**4.88**	**335**	*eP*	**Pn**	**08 52 59.6**	**-1.3**
PB16	**IPOC Station P**	**4.89**	**345**	Pn	**Pn**	**08 53 01.8**	**+0.4**
PB16	**IPOC Station P**	**4.89**	**345**	*eP*	**Pn**	**08 53 02.6**	**+1.3**
AC04	**Llanos de Chal**	**5.73**	**207**	Pn	**Pn**	**08 53 10.0**	**-2.0**
LCO	**Las Campanas**	**6.32**	**201**	Pn	**Pn**	**08 53 18.5**	**-1.7**
LPAZ	**La Paz**	**6.76**	**0**	P	**Pn**	**08 53 28.7**	**+2.2**
	comp=N,2.9nm,0.3s,baz=173,slow=7.0,SNR=59						
	comp=N,16nm,0.6s						
LPAZ	**La Paz**	**6.76**	**0**	Pn	**Pn**	**08 53 28.2**	**+1.7**
CO01	**Juntas del Tor**	**7.08**	**194**		**Pn**	**08 53 30.2**	**-0.2**
CO05	**La Serena**	**7.34**	**201**	Pn	**Pn**	**08 53 30.7**	**-2.9**
GO04	**Tololo Observa**	**7.44**	**198**		**Pn**	**08 53 33.5**	**-1.7**
CO02	**Combarbal**	**8.47**	**197**		**Pn**	**08 53 46.0**	**-3.0**
ROC1	**El Roble**	**10.17**	**194**	Pn	**Pn**	**08 54 11.6**	**-0.4**
MT09	**Talagante**	**10.94**	**192**	Pn	**Pn**	**08 54 22.3**	**+0.2**
MT01	**Popeta**	**11.07**	**193**	Pn	**Pn**	**08 54 23.2**	**-0.6**
PTLB	**Pontes e Lacer**	**11.42**	**50**		**Pn**	**08 54 26.6**	**-1.8**
VILB	**Vilhena**	**12.61**	**38**		**Pn**	**08 54 43.5**	**-0.6**
ETMB	**Extrema**	**13.33**	**8**	Pn	**Pn**	**08 54 51.8**	**-1.5**
SAML	**Samuel**	**14.85**	**20**		**Pn**	**08 55 12.4**	**-0.3**
TRQA	**Tornquist**	**15.84**	**162**		**P**	**08 55 25.3**	**-0.8**
TRQA				IAmb	IAmb	08 55 30.7	
	comp=Z,6.0nm,0.6s						
PLCA	**Paso Flores**	**17.71**	**186**	P	**Pn**	**08 55 50.6**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=7.3,slow=11,SNR=7.7						
	comp=Z,1.1nm,0.8s						
PLCA	**Paso Flores**	**17.71**	**186**	Pn	**Pn**	**08 55 48.5**	**+0.9**
MACA	**Manacapuru-AM**	**21.09**	**21**	P	**P**	**08 56 23.4**	**0.0**
MACA				IAmb	IAmb	08 56 24.7	
	comp=Z,9.0nm,0.5s						
BAUV	**El Baul**	**31.83**	**0**	P	**P**	**08 57 58.4**	**-3.4**
TORD	**Torodi Ar. Bea**	**77.25**	**70**	P	**P**	**09 03 31.6**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=251,slow=5.3,SNR=6.9						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**146.49**	**38**	PKPbc	**PKiKP**	**09 11 19.0**	**+1.1**
	comp=Z,1.3nm,1.0s,baz=310,slow=4.7,SNR=4.0						

IDC 03 08:59:39.5±3.4,54.22°N×87.36°E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=30.1km s-min=20.8km az=41.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**261**	*i*		09 08 40.0	
	baz=79,slow=313,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.52**	**261**	Pg	Pn	09 00 06.5	-1.4
	3.0nm,0.3s,baz=81,slow=14,SNR=19						
ZALV				Lg	Lg	09 00 27.4	
	2.0nm,0.3s,baz=79,slow=25,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.49**	**240**	Pn	Pn	09 01 16.9	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=5.9						
KURBB				Lg	Lg	09 03 08.3	
	0.1nm,0.3s,baz=58,slow=33,SNR=5.4						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**8.11**	**206**	Pn	Pn	09 01 39.6	+1.2
	0.1nm,0.3s,baz=26,slow=13,SNR=2.5						
	0.3nm,0.6s						

*IDC **03** 09:31:29.7±1.2,56.21°S×26.73W,h0km,mb4.0/4, mbtmp4.0/4,Error ellipse: s-maj=40.1km s-min=30.4km az=73.0*
*NEIC **03** 09:31:37.9±0.7,56.3°S±0.1°×26.8°W±0.2,h57km±9km, mb4.5/22,Error ellipse: s-maj=20.8km s-min=4.1km az=218.0*
ISC 03 09:31:38.4±0.9,56.25°S±0.1°×27.0°W±0.1,h63km,n27, σ0°74/28,mb4.5/15,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.77**	**286**	Pn	**Pn**	**09 33 02.0**	**+0.7**
HOPE				Sn	**Sn**	**09 34 04.4**	**-1.6**
SNAA	**Sanae**	**18.53**	**156**	P	**P**	**09 35 48.6**	**-0.9**
PMSA	**Palmer Station**	**19.86**	**229**	P	**P**	**09 36 04.1**	**+0.2**
MG01	**Puerto William**	**22.78**	**256**	P	**P**	**09 36 34.7**	**-0.6**
MG01				IAmb	IAmb	09 37 03.6	
	comp=Z,43nm,1.4s						
MG05	**Puerto Natales**	**26.77**	**260**	P	**P**	**09 37 13.2**	**+1.2**
MG05				IAmb	IAmb	09 37 25.4	
	comp=Z,31nm,1.5s						
GO09	**Cerro Castillo**	**26.88**	**261**	P	**P**	**09 37 13.7**	**+0.8**
GO09				IAmb	IAmb	09 37 16.1	
	comp=Z,20nm,1.4s						
PLTB	**Pedras Altas**	**30.70**	**312**	P	**P**	**09 37 47.6**	**+0.5**
PLTB				IAmb	IAmb	09 38 07.7	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**34.02**	**180**	P	**P**	**09 38 16.9**	**+0.9**
CPUP	**Villa Florida**	**37.01**	**311**	P	**P**	**09 38 41.2**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=112,slow=5.4,SNR=3.6						
	comp=Z,1.8nm,0.8s						
CPUP	**Villa Florida**	**37.01**	**311**	P	**P**	**09 38 41.9**	**+0.1**
MT02	**Curacav**	**37.95**	**288**	P	**P**	**09 38 48.5**	**-1.2**
ROC1	**El Roble**	**38.10**	**289**	P	**P**	**09 38 51.6**	**+0.3**
ROC1				IAmb	IAmb	09 39 00.7	
	comp=Z,8.6nm,1.0s						
AC02	**Maricunga**	**42.05**	**297**	P	**P**	**09 39 25.4**	**+1.1**
AC02				IAmb	IAmb	09 39 35.2	
	comp=Z,9.8nm,1.4s						
GO02	**Mina Guanaco**	**43.67**	**297**	P	**P**	**09 39 37.7**	**+0.5**
GO02				IAmb	IAmb	09 39 56.7	
	comp=Z,15nm,1.4s						
PB14	**IPOC Station P**	**44.52**	**297**	P	**P**	**09 39 43.6**	**-0.4**
LVC	**Limon Verde**	**45.49**	**300**	P	**P**	**09 39 52.0**	**+0.3**
LVC				IAmb	IAmb	09 39 57.0	
	comp=Z,2.6nm,0.7s						
PB04	**IPOC Station P**	**46.32**	**299**	P	**P**	**09 39 58.0**	**-0.1**
PB09	**IPOC Station P**	**46.34**	**300**	P	**P**	**09 39 58.6**	**+0.4**
PB09				IAmb	IAmb	09 40 01.9	
	comp=Z,9.2nm,1.3s						
VNDA	**Vanda**	**46.40**	**183**	P	**P**	**09 39 57.5**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=194,slow=5.8,SNR=5.6						
	comp=Z,0.9nm,0.7s						
PB07	**IPOC Station P**	**46.71**	**300**	P	**P**	**09 40 01.5**	**+0.4**
PB07				IAmb	IAmb	09 40 01.9	
	comp=Z,12nm,1.2s						
PB01	**IPOC Station P**	**47.10**	**301**	P	**P**	**09 40 04.5**	**+0.5**
PB01				IAmb	IAmb	09 40 26.6	
	comp=Z,10nm,1.5s						
LPAZ	**La Paz**	**50.57**	**305**	P	**P**	**09 40 32.0**	**+0.8**
	comp=Z,2.5nm,0.5s,baz=144,slow=12,SNR=15						
	comp=Z,2.5nm,0.5s						
LPAZ	**La Paz**	**50.57**	**305**	P	**P**	**09 40 32.1**	**+0.9**
LPAZ				IAmb	IAmb	09 40 32.4	
	comp=Z,2.6nm,0.6s						
MCQ	**Macquarie Isla**	**69.52**	**184**	P	**P**	**09 42 39.5**	**-0.3**
TOA0	**Torodi Ar. Sit**	**73.16**	**29**	P	**P**	**09 43 01.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**73.16**	**29**	P	**P**	**09 43 01.7**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=200,slow=6.4,SNR=13						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**150.32**	**311**	PKPbc	**PKPbc**	**09 51 20.2**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=126,slow=1.6,SNR=6.3						

*SOME **03** 09:38:08.4,37.27°N×70.67°E,h0km,MS4.2*
*IDC **03** 09:38:10.3±3.0,35.92°N×70.27°E,h96km±26km,mb4.0/22, mbtmp4.4/25,MS3.0/2,Error ellipse: s-maj=20.5km s-min=12.5km az=173.0*
*MOS **03** 09:38:11.9±1.0,36.29°N×70.30°E,h103km,mb4.5/17,Error ellipse: s-maj=7.2km s-min=4.1km az=85.6*
*NNC **03** 09:38:11.8±2.4,36.71°N×69.89°E,h0km,mb5.2,mpv5.1, Error ellipse: s-maj=24.1km s-min=11.8km az=155.0*
*BJI **03** 09:38:14.1±0.0,36.39°N×70.36°E,h119km,mb4.5/19, mB4.5/12*
*NEIC **03** 09:38:14.2±2.5,36.18°N±0.05°×70.22°E±0.07,h117km±2km, mb4.5/42,Error ellipse: s-maj=9.0km s-min=7.0km az=127.0*
ISC 03 09:38:12.1±0.3,36.19°N±0.04°×70.26°E±0.04,h100km,n211, σ1°80/223,mb4.5/49,12C-17D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**1.92**	**212**	Pn	**Pn**	**09 38 46.2**	**+2.3**
KBL				Sn	**Sn**	**09 39 10.8**	**+2.7**
KBL	**Kabul**	**1.92**	**212**	PN	**Pn**	**09 38 46.2**	**+2.3**
KBL						09 39 10.8	
CHGR	**Chuyangaron**	**2.62**	**341**		**Pn**	**09 38 54.0**	**+1.2**
CHGR	**Chuyangaron**	**2.62**	**341**	PN	**Pn**	**09 38 54.0**	**+1.2**
GAR	**Garm**	**2.81**	**1**		**Pn**	**09 38 57.2**	**+1.9**
NIL	**Nilore**	**3.53**	**135**		**Pn**	**09 39 06.6**	**+1.7**
NIL	**Nilore**	**3.53**	**135**	PN	**Pn**	**09 39 06.6**	**+1.7**
CHCP	**Chirah Chowk**	**3.53**	**135**	P	**Pn**	**09 39 06.5**	**+1.6**
THW	**Thamme Wali**	**3.60**	**160**	P	**Pn**	**09 39 06.7**	**+0.8**
JMU	**Jammu**	**5.16**	**131**	*eP*	**Pn**	**09 39 27.7**	**+0.8**
JMU				*eS*	**Sn**	**09 40 23.7**	**-1.5**
KSH	**Kashi**	**5.61**	**52**	P	**Pn**	**09 39 31.1**	**-2.0**
KSH				S	Sn	09 40 24.9	-11
KSH				smax	smax		
	comp=N,600nm,0.7s						
KSH				smax	smax		
	comp=E,600nm,0.7s						
THN	**Thein Dam**	**5.86**	**128**	*eP*	**Pn**	**09 39 38.0**	**+1.5**
THN				*eP*		09 39 40.0	
THN				*eS*	**Sn**	**09 40 41.0**	**-1.3**
THN				*eS*		09 40 43.1	
IUG	**Iuzhnay**	**5.95**	**358**	*d* PN	**Pn**	**09 39 38.4**	**+0.6**
IUG	**Iuzhnay**	**5.95**	**358**	*eP*	**Pn**	**09 39 40.7**	**+2.9**
	2μm,0.3s						
IUG				*eS*	**Sn**	**09 40 47.3**	**+2.7**
	926nm,0.3s						
IUG	**Iuzhnay**	**5.95**	**358**	⇓*iP*	**Pn**	**09 39 38.4**	**+0.6**
	baz=358						
CHM	**Chimkent**	**6.14**	**355**	*eP*	**Pn**	**09 39 43.2**	**+3.0**
	156nm,0.2s						
CHM				*eS*	**Sn**	**09 40 51.3**	**+2.2**
	1μm,0.4s						
AML	**Almayashu**	**6.51**	**23**	P	**Pn**	**09 39 46.1**	**+0.6**
	SNR=34						
DZA	**Taraz**	**6.75**	**7**	*e*PN	**Pn**	**09 39 48.8**	**+0.4**
DZA	**Taraz**	**6.75**	**7**	*eP*	**Pn**	**09 39 51.7**	**+3.2**
	315nm,0.7s						
DZA				*eS*	**Sn**	**09 41 06.4**	**+2.6**
	773nm,1.1s						
DZA	**Taraz**	**6.75**	**7**	*eP*	**Pn**	**09 39 48.9**	**+0.4**
	baz=6.7						
DZA				*eS*	**Sn**	**09 41 04.2**	**+0.5**
	baz=6.7						
HRA	**Herat**	**6.80**	**257**	Pn	**Pn**	**09 39 51.8**	**+2.4**
KK31	**Karatay Array**	**6.91**	**2**	Pn	**Pn**	**09 39 51.0**	**+0.3**
KK31	**Karatay Array**	**6.91**	**2**	PN	**Pn**	**09 39 51.0**	**+0.3**
KK31	**Karatay Array**	**6.91**	**2**	⇓P	**Pn**	**09 39 49.2**	**-1.5**
	53nm,0.4s,baz=197,slow=22,SNR=538						
KK31				⇑S	**Sn**	**09 41 03.5**	**-4.2**
	61nm,0.4s,baz=191,slow=22,SNR=16						
KKAR	**Karatay Array**	**6.91**	**2**	Pn	**Pn**	**09 39 51.1**	**+0.5**
KKAR	**Karatay Array**	**6.91**	**2**	PN	**Pn**	**09 39 51.1**	**+0.5**
MRKS	**Merke**	**6.94**	**18**	*eP*	Pn	09 40 00.1	+8.9
	56nm,0.4s						
MRKS				*eS*	Sn	09 41 20.2	+12
	146nm,0.5s						
BHK	**Bhakra**	**6.99**	**131**	*eS*	**Sn**	**09 41 05.8**	**-4.0**
EKS2	**Erkin-Say**	**7.01**	**22**	P	**Pn**	**09 39 53.3**	**+1.1**
	SNR=16						
AAK	**Ala-Archa**	**7.22**	**26**	P	**Pn**	**09 39 55.6**	**+0.5**
	57nm,0.4s,baz=209,slow=9.3,SNR=77						
AAK				S	**Sn**	**09 41 12.6**	**-3.0**
	30nm,0.5s,baz=349,slow=23,SNR=4.0						
AAK	**Ala-Archa**	**7.22**	**26**	P	**Pn**	**09 39 55.8**	**+0.7**
	SNR=40						
AAK	**Ala-Archa**	**7.22**	**26**		**Pn**	**09 39 55.7**	**+0.7**
KBK	**Karagaybulak**	**7.41**	**28**	P	**Pn**	**09 39 58.4**	**+0.8**
	SNR=33						
ULHL	**Ulahol**	**7.62**	**36**	P	**Pn**	**09 40 02.3**	**+1.8**
	SNR=15						
CHMS	**Chumysh**	**7.63**	**26**	P	**Pn**	**09 40 01.2**	**+0.7**
	SNR=14						
CHMS	**Chumysh**	**7.63**	**26**	PN	**Pn**	**09 40 00.5**	**0.0**
CHMS	**Chumysh**	**7.63**	**26**	⇓P	**Pn**	**09 40 00.5**	**0.0**
	97nm,0.5s						
CHMS				⇑S	**Sn**	**09 41 23.6**	**-1.7**
	53nm,0.7s						
SMLA	**Simla**	**7.65**	**129**	*eP*	**Pn**	**09 40 01.1**	**+0.3**
SMLA				*eS*	**Sn**	**09 41 19.8**	**-6.1**
SMLA				IAML		09 41 31.9	
	comp=N,179nm,0.2s						
SMLA				IAML		09 41 31.9	
	comp=E,159nm,0.3s						
USP	**Ospenovka**	**7.79**	**23**	P	**Pn**	**09 40 03.4**	**+0.8**
	SNR=47						
TKM2	**Tokmak 2**	**7.88**	**30**	P	**Pn**	**09 40 04.3**	**+0.2**
	SNR=119						
TKM2	**Tokmak 2**	**7.88**	**30**	PN	**Pn**	**09 40 04.2**	**+0.1**
TKM2	**Tokmak 2**	**7.88**	**30**	⇑P	**Pn**	**09 40 04.2**	**+0.1**
	comp=E,60nm,0.6s						
TKM2				⇓S	**Sn**	**09 41 31.8**	**+0.1**
	comp=E,24nm,0.7s						
SGDS	**Sogindy**	**7.99**	**23**	*e*PN	**Pn**	**09 40 04.7**	**-0.7**
SGDS				pmax	pmax		
	comp=Z,20nm,1.2s						
SGDS	**Sogindy**	**7.99**	**23**	*eP*	**Pn**	**09 40 04.7**	**-0.7**
	comp=Z,20nm,1.2s,baz=24						
MTBS	**Maitube**	**8.40**	**33**	*eP*	Pn	09 40 21.6	+11
	comp=Z,16nm,0.8s						
MTBS				*eS*	Sn	09 41 57.3	+13
	comp=Z,15nm,0.3s						
AAA	**Alma-Ata**	**8.68**	**34**	*e*PN	**Pn**	**09 40 16.2**	**+1.4**
AAA	**Alma-Ata**	**8.68**	**34**	*eP*	**Pn**	**09 40 16.2**	**+1.4**
	baz=34						
MDOK	**Medeo**	**8.71**	**35**	*e*PN	**Pn**	**09 40 15.4**	**+0.2**
MDOK	**Medeo**	**8.71**	**35**	*eP*	**Pn**	**09 40 15.4**	**+0.2**
	baz=35						
DDI	**Dehra Dun**	**8.76**	**130**	*eS*	**Sn**	**09 41 47.8**	**-5.2**
KUU	**Kurty**	**8.99**	**29**	*e*PN	**Pn**	**09 40 17.5**	**-1.5**
KUU				pmax	pmax		
	comp=Z,11nm,0.7s						
KUU	**Kurty**	**8.99**	**29**	*eP*	**Pn**	**09 40 17.6**	**-1.5**
	comp=Z,11nm,0.7s,baz=29						
CHKK	**Chushkaly**	**9.23**	**32**	*eP*	**Pn**	**09 40 20.3**	**-1.9**
CHKK	**Chushkaly**	**9.23**	**32**	*eP*	**Pn**	**09 40 20.3**	**-1.9**
	baz=32						
BTLS	**Baital**	**9.30**	**17**	*eP*	**Pn**	**09 40 22.1**	**-1.0**
BTLS				*eS*	**Sn**	**09 42 07.3**	**+1.5**
BTLS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BTLS	**Baital**	**9.30**	**17**	*eP*	**Pn**	**09 40 22.1**	**-1.0**
	comp=Z,4.7nm,0.7s,baz=17						
BTLS				*eS*	**Sn**	**09 42 07.4**	**+1.5**
	baz=17						
SATY	**Saty**	**9.30**	**40**	*eP*	**Pn**	**09 40 23.4**	**+0.2**
SATY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SATY	**Saty**	**9.30**	**40**	*eP*	**Pn**	**09 40 23.4**	**+0.2**
	comp=Z,3.9nm,0.7s,baz=40						
KUDL	**Kundal**	**9.60**	**145**	*eP*	**Pn**	**09 40 25.6**	**-1.7**
KUDL				*eS*	Sn	09 42 03.7	-10
UZB	**Uzynbulak**	**9.69**	**41**	*eP*	**Pn**	**09 40 29.1**	**+0.6**
UZB	**Uzynbulak**	**9.69**	**41**	*eP*	**Pn**	**09 40 29.1**	**+0.6**
	baz=42						
GEYT	**Alibeck**	**9.86**	**284**	P	**Pn**	**09 40 29.6**	**-1.3**
	comp=Z,5.1nm,0.3s,baz=116,slow=13,SNR=14						
GEYT				S	**Sn**	**09 42 15.2**	**-4.5**
	comp=Z,22nm,0.4s,baz=114,slow=24,SNR=7.1						
GEYT	**Alibeck**	**9.86**	**284**		**Pn**	**09 40 31.0**	**+0.1**
GYA0	**ALIBECK ARRAY**	**9.86**	**284**	P	**Pn**	**09 40 30.7**	**-0.2**
GYA0				S	**Sn**	**09 42 15.7**	**-4.0**
GYA0B	**ALIBECK ARRAY**	**9.86**	**284**		**Pn**	**09 40 30.9**	**0.0**
GYA0B	**ALIBECK ARRAY**	**9.86**	**284**	⇑P	**Pn**	**09 40 30.7**	**-0.2**
GYA0B				⇓S	**Sn**	**09 42 15.7**	**-4.0**
PDGK	**Podgornoye**	**10.06**	**42**	P	**Pn**	**09 40 33.5**	**-0.1**
PDGK	**Podgornoye**	**10.06**	**42**	⇓P	**Pn**	**09 40 33.0**	**-0.6**
	comp=Z,9.7nm,0.6s						
AJM	**Ajmer**	**10.38**	**158**	*eP*	**Pn**	**09 40 36.7**	**-1.2**
AJM				*ex*	Sn	09 42 25.2	-7.1
LGTI	**Lohaghat**	**10.75**	**126**	*eP*	**Pn**	09 40 40.3	-2.6
OTUK	**Ortayu**	**12.15**	**7**	P	**Pn**	**09 41 00.0**	**-1.6**
OTUK	**Ortayu**	**12.15**	**7**	⇑P	**Pn**	**09 40 60.0**	**-1.6**
	comp=Z,16nm,0.7s						
JHNI	**Jhansi**	**12.83**	**144**	*eP*	Pn	09 41 07.8	-2.9
JHNI				*eS*	Sn	09 43 13.8	-18
BHUJ	**Bhuj**	**12.90**	**183**	*eP*	**Pn**	**09 41 09.5**	**-2.2**
MAKZ	**Makanchi**	**13.75**	**36**		**Pn**	**09 41 22.6**	**-0.1**
MAKZ	**Makanchi**	**13.75**	**36**	P	**Pn**	**09 41 22.6**	**-0.1**
DANN	**Dangsing**	**13.83**	**121**	*eP*	Pn	09 41 21.4	-2.6
	comp=Z,10.0nm,0.2s						
MK31	**Makanchi Array**	**13.89**	**37**	Pn	**Pn**	**09 41 24.9**	**+0.4**
MK31	**Makanchi Array**	**13.89**	**37**	*ceP*	**Pn**	**09 41 24.3**	**-0.2**
MKAR	**Makanchi Array**	**13.89**	**37**	P	**Pn**	**09 41 23.3**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=225,slow=16,SNR=30						
MKAR	**Makanchi Array**	**13.89**	**37**	Pn	**Pn**	**09 41 24.9**	**+0.4**
MKAR	**Makanchi Array**	**13.89**	**37**	*i* P	**Pn**	**09 41 25.5**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRZS	**Berezniki**	**13.90**	**7**	*eP*	**Pn**	**09 41 22.8**	**-1.7**
BRZS	**Berezniki**	**13.90**	**7**	*eP*	**Pn**	**09 41 22.9**	**-1.6**
	baz=6.5						
GKN	**Gorkha**	**14.65**	**120**	*eP*	Pn

SVE pmax pmax
comp=Z,27nm,0.7s
ARU Arti 21.74 342 P **P** **09 42 56.5 +1.4**
comp=Z,21nm,0.6s,baz=152,slow=9.5,SNR=32
comp=Z,21nm,0.6s
ARU Arti 21.74 342 P **P** **09 42 56.5 +1.4**
ARU Arti 21.74 342 *ce*P **P** **09 42 56.4 +1.3**
ARU pmax pmax
comp=Z,32nm,0.8s
KBZ Khabaz 22.22 298 P **P** **09 43 00.8 +0.5**
comp=Z,6.8nm,0.7s,baz=116,slow=7.1,SNR=16
comp=Z,6.8nm,0.7s
KBZ Khabaz 22.22 298⇑ *e*P **P** **09 43 01.1 +0.8**
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 22.41 299 *e*P **P** **09 43 02.9 +0.5**
KIV *e*S **S** **09 47 02.1 +0.4**
KIV pmax pmax
comp=Z,10.0nm,0.9s
BELG Belogornoye 22.77 322 P **P** **09 43 06.9 +1.1**
comp=Z,39nm,0.9s,baz=337,slow=1.2,SNR=7.8
comp=Z,39nm,0.9s
BELG Belogornoye 22.77 322 *de*P **P** **09 43 06.4 +0.6**
BELG *i* *PP **pP** **09 43 28.8 +3.1**
BELG pmax pmax
comp=Z,6.0nm,0.8s
GTA Gaotai 23.52 73 *e*P **P** **09 43 14.7 +1.4**
GTA pmax pmax
comp=Z,7.0nm,0.6s
SOC Sochi 24.48 297 *e*P **P** **09 43 20.1 -1.6**
SOC *e*S **S** **09 47 32.5 -2.2**
RAYN Ar Rayn 24.83 246 P **P** **09 43 25.2 +0.1**
RAYN Ar Rayn 24.83 246 P **P** **09 43 25.2 +0.1**
RAYN pmax pmax
comp=Z,8.0nm,1.2s
KIRV Kirov 26.27 335 P **P** **09 43 38.8 +1.2**
comp=Z,12nm,0.5s,baz=146,slow=13,SNR=4.6
comp=Z,12nm,0.5s
KIRV Kirov 26.27 335⇓ *e*P **P** **09 43 38.6 +1.0**
PZH PanZhiHua 28.46 101 P **P** **09 43 58.9 +1.1**
PZH pmax pmax
comp=Z,20nm,0.7s
PZH pmax pmax
comp=Z,50nm,3.6s
BRTR Keskin Array B 28.96 288 P **P** **09 44 03.2 +1.1**
comp=Z,1.3nm,0.6s,baz=85,slow=9.0,SNR=5.1
comp=Z,1.3nm,0.6s
SONM Songino Array 29.00 55 P **P** **09 44 03.3 +0.9**
comp=Z,1.2nm,0.8s,baz=243,slow=7.5,SNR=3.7
comp=Z,1.2nm,0.8s
OBN Obninsk 29.79 320⇓ *e*P **P** **09 44 09.9 +0.8**
OBN pmax pmax
comp=Z,5.0nm,0.9s
PRGR Permogore 29.81 336 *e*P P 09 44 04.7 -4.5
KLMR Klimovskoe 31.46 331 *e*P **P** **09 44 23.0 -0.7**
KLMR pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 31.46 331 *e*P **P** **09 44 23.1 -0.7**
KLMR AMP 09 44 25.6
comp=Z,5.0nm,0.8s
HHC Hu-ho-hao-te 32.43 69 *e*P **P** **09 44 34.5 +1.9**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.6s
AKASG Malin Array Be 32.68 309 P **P** **09 44 34.4 -0.1**
comp=Z,0.6nm,0.4s,baz=82,slow=7.3,SNR=7.8
comp=Z,0.6nm,0.4s
MLR Muntele Rosu 34.41 300 LR LR 10 01 58.5
comp=Z,20nm,19.5s,baz=112,slow=41
NRIK Noril'sk 34.54 11 P **P** **09 44 52.4 +2.0**
comp=Z,5.7nm,0.5s,baz=188,slow=4.1,SNR=8.0
comp=Z,5.7nm,0.5s
NRIK Noril'sk 34.54 11 P **P** **09 44 52.5 +2.0**
NRIK IAmb IAmb 09 44 53.5
comp=Z,11nm,1.1s
BURAR Bucovina Array 34.96 303 P **P** **09 44 55.1 +0.7**
BURAR Bucovina Array 34.96 303 P **P** **09 44 55.1 +0.7**
BURAR pmax pmax
comp=Z,1.0nm,0.8s
VSU Vasula 36.06 322⇑ *e*P **P** **09 45 01.3 -2.3**
VSU pmax pmax
comp=Z,28nm,1.1s
FIA1 FINESS Array S 37.41 327 P **P** **09 45 15.9 +0.9**
FIA1 IAmb IAmb 09 45 17.2
comp=Z,12nm,1.0s
FINES FINESS Array B 37.41 327 P **P** **09 45 15.8 +0.8**
comp=Z,5.5nm,0.7s,baz=108,slow=10,SNR=15
comp=Z,5.5nm,0.7s
NJ2 Nanjing 40.11 81 *e*P **P** **09 45 36.2 -1.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KEV Kevo 40.87 339 P **P** **09 45 45.0 +1.3**
KEV Kevo 40.87 339 P **P** **09 45 45.0 +1.3**
KEV pmax pmax
comp=Z,17nm,1.1s
ARCES ARCESS Array B 41.21 338 P **P** **09 45 46.5 0.0**
comp=Z,4.0nm,0.6s,baz=106,slow=7.5,SNR=19
comp=Z,4.0nm,0.6s
ARCES ARCESS Array B 41.21 338 P **P** **09 45 47.6 +1.1**
ARCES IAmb IAmb 09 45 59.5
comp=Z,21nm,1.5s
ARCES ARCESS Array B 41.21 338 P **P** **09 45 47.6 +1.1**
ARCES pmax pmax
comp=Z,21nm,1.5s
CUC Castrocucco 42.47 292 P **P** **09 45 57.3 +0.1**
CUC IAmb IAmb 09 45 59.9
comp=Z,7.8nm,0.7s
GEC2 GERESS Array S 42.62 306 P P 09 45 54.7 -3.7
NC405 NORSAR Array S 44.04 323 P **P** **09 46 09.9 +0.4**
NC405 IAmb IAmb 09 46 16.4
comp=Z,15nm,1.2s
NC602 NORSAR Array S 44.08 323 P **P** **09 46 10.9 +1.1**
NC602 IAmb IAmb 09 46 11.9
comp=Z,16nm,1.1s
NORES NORESS Array B 44.08 323 P **P** **09 46 11.1 +1.3**
NC303 NORSAR Array S 44.22 324 P **P** **09 46 12.2 +1.2**
NC303 IAmb IAmb 09 46 25.9
comp=Z,12nm,1.1s
NB2 NORSAR Subarra 44.27 323 P **P** **09 46 11.1 -0.3**
comp=Z,3.0nm,0.5s,baz=98,slow=7.9
NOA NORSAR Array B 44.27 323 P **P** **09 46 10.7 -0.7**
comp=Z,2.3nm,0.4s,baz=104,slow=7.3,SNR=21
NOA LR LR 10 08 35.7
comp=Z,15nm,18.1s,baz=85,slow=41
comp=Z,2.3nm,0.4s
NC204 NORSAR Array S 44.52 324 P **P** **09 46 13.7 +0.4**
NC204 IAmb IAmb 09 46 15.3
comp=Z,9.9nm,0.7s
TPUB Ta-pu 45.12 92 P P 09 46 14.4 -4.2
TPUB IAmb IAmb 09 46 26.8
comp=Z,14nm,1.1s
FUORN Ofenpass-Fuorn 45.20 303 P **P** **09 46 17.2 -1.9**
FUORN IAmb IAmb 09 46 35.0
comp=Z,5.4nm,0.9s
KSRS Korea Array 45.54 70 P **P** **09 46 21.8 0.0**
comp=Z,0.9nm,0.8s,baz=38,slow=30,SNR=4.7
comp=Z,0.9nm,0.8s
MSSA Maissana 46.13 300 P **P** **09 46 26.6 +0.3**
TIXI Tiksi 46.28 22 P **P** **09 46 27.5 +0.5**
comp=Z,8.5nm,0.7s,baz=89,slow=23,SNR=12
comp=Z,8.5nm,0.7s
TIXI Tiksi 46.28 22 P **P** **09 46 27.6 +0.5**
TIXI IAmb IAmb 09 46 28.3
comp=Z,8.7nm,0.8s
TIXI Tiksi 46.28 22 *ce*P **P** **09 46 27.4 +0.3**
TIXI pmax pmax
comp=Z,5.0nm,0.6s
SENIN Lac Senin/Sane 47.26 303 P **P** **09 46 36.0 +0.7**
SENIN IAmb IAmb 09 46 37.4
comp=Z,3.7nm,0.7s
SPB2 Spitsbergen Ar 47.66 347 P **P** **09 46 39.4 +1.8**
SPITS Spitsbergen Ar 47.66 347 P **P** **09 46 39.5 +1.8**
SPITS pmax pmax
comp=Z,25nm,1.3s
KEST Kesra 48.57 288 P **P** **09 46 46.3 +0.9**
comp=Z,3.2nm,0.6s,baz=48,slow=6.1,SNR=5.6
comp=Z,3.2nm,0.6s
KEST Kesra 48.57 288 P **P** **09 46 46.5 +1.1**
KEST IAmb IAmb 09 47 07.3
comp=Z,8.6nm,1.2s
JNU Nakatsue 49.25 75 P **P** **09 46 50.2 -0.3**
JNU IAmb IAmb 09 47 15.8
comp=Z,8.6nm,1.3s
MBAR Mbarara 51.84 234 *ce*P **P** **09 47 11.6 +1.2**
MBAR pmax pmax
comp=Z,11nm,0.6s

ESDC Sonseca Array 57.08 298 P **P** **09 47 47.5 -0.4**
comp=Z,1.0nm,0.7s,baz=56,slow=8.1,SNR=6.6
comp=Z,1.0nm,0.7s
SUMG Summit 61.16 341 P **P** **09 48 16.8 +0.8**
SUMG IAmb IAmb 09 48 19.1
comp=Z,4.7nm,0.7s
SUMG Summit 61.16 341 P **P** **09 48 16.8 +0.8**
SUMG pmax pmax
comp=Z,5.0nm,0.7s
TOA0 Torodi Ar. Sit 65.11 268 P **P** **09 48 40.9 -1.6**
TOA0 IAmb IAmb 09 48 41.4
comp=Z,4.7nm,0.8s
TORD Torodi Ar. Bea 65.11 268 P **P** **09 48 40.8 -1.7**
comp=Z,4.0nm,0.7s,baz=44,slow=5.7,SNR=24
comp=Z,4.0nm,0.7s
TORD Torodi Ar. Bea 65.11 268 P **P** **09 48 40.9 -1.6**
TORD IAmb IAmb 09 48 41.4
comp=Z,3.2nm,0.7s
TOLK Toolik Lake Re 71.37 14 P **P** **09 49 21.0 +0.2**
TOLK IAmb IAmb 09 49 28.5
comp=Z,5.3nm,0.7s
IMAR Indian Mountai 72.65 17 P **P** **09 49 28.0 -0.4**
BMAR Burnt Mountain 73.38 13 P **P** **09 49 33.8 +1.1**
H23K Yukon River 73.75 16 P **P** **09 49 35.7 +0.8**
H23K IAmb IAmb 09 49 42.9
comp=Z,7.1nm,1.3s
J20K Nowinta River 74.02 19 P **P** **09 49 37.0 +0.6**
H24K Noodor Dome 74.11 15 P **P** **09 49 37.5 +0.5**
MLY Manley 74.15 17 P **P** **09 49 37.3 +0.1**
C36M Paulatuk 74.24 5 P **P** **09 49 37.4 -0.2**
INK Inuvik 74.31 9 P **P** **09 49 38.6 +0.6**
comp=Z,3.3nm,0.5s,baz=326,slow=7.6,SNR=11
comp=Z,3.3nm,0.5s
INK Inuvik 74.31 9 P **P** **09 49 38.6 +0.6**
INK IAmb IAmb 09 49 40.7
comp=Z,3.4nm,0.7s
K20K Telida 74.70 19 P **P** **09 49 40.5 +0.1**
ILAR Eielson Array 75.24 16 P **P** **09 49 42.8 -0.7**
comp=Z,0.8nm,0.8s,baz=294,slow=4.7,SNR=5.4
comp=Z,0.8nm,0.8s
J25K Salcha River, 75.70 15 P **P** **09 49 45.6 -0.6**
SCRK Sand Creek 76.55 15 P **P** **09 49 51.4 +0.3**
BCAR Beaver Creek A 77.81 14 P **P** **09 49 58.8 +0.7**
YKA Yellowknife Ar 81.58 2 P **P** **09 50 17.5 -0.9**
comp=Z,0.7nm,0.5s,baz=351,slow=5.6,SNR=15
comp=Z,0.7nm,0.5s
YKA Yellowknife Ar 81.58 2 P **P** **09 50 18.2 -0.1**
YKA Yellowknife Ar 81.58 2 *i* P **P** **09 50 17.7 -0.6**
YKA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 82.33 121 P **P** **09 50 21.0 -1.9**
comp=Z,0.5nm,0.7s,baz=325,slow=5.0,SNR=1.8
comp=Z,0.5nm,0.7s
WRA Warramunga Arr 82.33 121 *i* P **P** **09 50 25.6 +2.7**
PATS Pohnpei 84.44 86 P P **P** **09 50 34.5 +0.5**
ASAR Alice Springs 84.57 124 P P 09 50 31.4 -2.9
comp=Z,0.4nm,0.5s,baz=310,slow=4.7,SNR=6.4
comp=Z,0.4nm,0.5s

HEL 03 09:55:12.5±0.0, 63°.67N×25°.34E, h0km, ML1.3, ML1.2(UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUF	**Merijarvi**	**0.75**	**339**	*e*P	Pg	09 55 25.5	-1.4
OUF				*e*S	Sg	09 55 35.4	-1.3
OBF0	**Syolatti, Pyha**	**0.96**	**330**	*e*P	Pg	09 55 29.7	-1.3
OBF0				*e*S	Sg	09 55 42.3	-1.2
OBF4	**Vikkela, Lumij**	**1.16**	**355**	*e*PB	Pg	09 55 33.5	-1.1
	baz=179						
OBF4				*e*SB	Sg	09 55 49.3	-0.3
VAF	**Ylistaro**	**1.36**	**244**	*e*P	Pg	09 55 36.8	-1.7
	baz=62						
VAF				MSG		09 55 52.8	
	comp=Z,2.6nm,0.2s						
VAF				*e*S	Sg	09 55 54.1	-2.0
OUL	**Oulu**	**1.44**	**9**	*e*SB	Sg	09 55 57.3	-1.5
KEF	**Keuruu**	**1.52**	**188**	*e*P	Pn	09 55 39.6	-1.3
KEF				MSG		09 55 57.8	
	comp=Z,1.6nm,0.2s						
KEF				*e*SB	Sg	09 55 59.5	-1.8
KAF	**Kangasniemi**	**1.62**	**164**	*e*PG	Pn	09 55 41.8	-0.5
KAF				MSG		09 56 01.1	
	comp=Z,0.7nm,0.2s						
KAF				*e*SN	Sn	09 56 03.9	+0.1
BURU	**Burvik**	**1.97**	**300**	*e*P	Pn	09 55 47.0	0.0
BURU				*e*S	Sn	09 56 12.3	0.0
UMAU	**Umeaa**	**2.08**	**278**	*e*P	Pn	09 55 48.6	0.0
	baz=90						
UMAU				*e*S	Sn	09 56 15.1	-0.1
RMF	**Romuvaara**	**2.10**	**73**	*e*PG	Pn	09 55 50.1	+1.2
	baz=254						
RMF				*e*SG	Sb	09 56 18.2	+0.2
ODEU	**Stanfors**	**2.17**	**292**	*e*P	Pn	09 55 50.0	+0.2
ODEU				*e*S	Sn	09 56 16.7	-0.6
FIA0	**FINESS Array S**	**2.26**	**171**	*e*PB	Pn	09 55 52.0	+1.0
	baz=354						
FIA0				*e*SG	Sb	09 56 21.4	-1.1
TOF	**Tornio**	**2.46**	**350**	MSG		09 56 25.0	
	comp=Z,0.7nm,0.2s						
TOF				*e*SG	Sb	09 56 27.7	-0.7
SVAU	**Svanoeiden**	**2.67**	**291**	*e*S	Sn	09 56 29.0	-0.6
RUFX	**Ruokolahti**	**2.80**	**142**	*e*SG	Sb	09 56 38.2	+0.1
KU6	**Riekki**	**3.06**	**37**	MSG		09 56 42.8	
	comp=Z,3.2nm,0.2s						
KU6				*e*SB	Sb	09 56 44.3	-1.3

IDC 03 10:12:49.8±1.9, 13°.72S×111°.34W, h0km, mb3.5/4, mbtmp3.5/4, MS3.7/20, Error ellipse: s-maj=56.2km s-min=36.9km az=52.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**13.47**	**172**	LR	LR	10 19 53.8	
	comp=Z,421nm,18.0s,baz=330,slow=32						
ATAH	**Atahualpa**	**33.03**	**82**	LR	LR	10 29 07.2	
	comp=Z,97nm,20.9s,baz=221,slow=30						
NNA	**Nana**	**33.66**	**91**	LR	LR	10 29 57.8	
	comp=Z,93nm,20.1s,baz=255,slow=30						
H03N2	**Juan Fernandez**	**35.38**	**129**	T	T	10 57 28.6	
	baz=300,slow=76,SNR=32						
H03N3	**Juan Fernandez**	**35.40**	**129**	T	T	10 57 24.1	
	baz=300,slow=76,SNR=41						
H03N1	**Juan Fernandez**	**35.40**	**129**	T	T	10 57 24.3	
	baz=300,slow=76,SNR=53						
PPT	**Papeete**	**36.98**	**259**	LR	LR	10 29 43.7	
	comp=Z,29nm,19.5s,baz=88,slow=27						
LPIG	**La Paz**	**37.60**	**2**	LR	LR	10 31 39.9	
	comp=Z,122nm,18.2s,baz=185,slow=30						
LVC	**Limon Verde**	**41.16**	**109**	LR	LR	10 34 06.3	
	comp=Z,199nm,21.1s,baz=262,slow=31						
LPAZ	**La Paz**	**41.76**	**99**	P	P	10 20 41.9	0.0
	0.7nm,0.7s,baz=233,slow=5.1,SNR=3.6						
LPAZ				LR	LR	10 34 08.4	
	comp=Z,118nm,20.3s,baz=242,slow=31 0.7nm,0.7s						
TXAR	**Lajitas Array**	**43.44**	**10**	P	P	10 20 54.3	-0.3
	1.0nm,1.1s,baz=187,slow=8.8,SNR=6.4						
TXAR				LR	LR	10 35 37.8	
	comp=Z,63nm,18.8s,baz=184,slow=32 1.0nm,1.1s						
PLCA	**Paso Flores**	**44.58**	**135**	LR	LR	10 35 13.4	
	comp=Z,228nm,18.4s,baz=321,slow=30						
PFO	**Pinyon Flats O**	**47.32**	**354**	LR	LR	10 36 14.0	
	comp=Z,73nm,19.6s,baz=175,slow=30						
SIV	**San Ignacio**	**48.55**	**99**	LR	LR	10 39 08.8	
	comp=Z,145nm,20.9s,baz=292,slow=32						
ANMO	**Albuquerque**	**48.62**	**5**	LR	LR	10 38 35.7	
	comp=Z,61nm,18.8s,baz=185,slow=32						
CPUP	**Villa Florida**	**51.94**	**113**	LR	LR	10 39 58.5	
	comp=Z,70nm,20.0s,baz=268,slow=31						
NVAR	**Mina Array Bea**	**52.28**	**353**	P	P	10 22 03.8	+0.5
	0.6nm,0.8s,baz=181,slow=12,SNR=5.2						
NVAR				LR	LR	10 39 17.9	
	comp=Z,87nm,18.7s,baz=98,slow=30 0.6nm,0.8s						
ELK	**Elko**	**54.30**	**356**	LR	LR	10 41 10.2	
	comp=Z,74nm,18.4s,baz=170,slow=31						
YBH	**Yreka Blue Hor**	**56.16**	**350**	LR	LR	10 40 42.4	
	comp=Z,100nm,21.7s,baz=183,slow=30						
PDAR	**Pinedale Array**	**56.23**	**2**	P	P	10 22 31.5	-0.5
	0.3nm,0.7s,baz=182,slow=4.5,SNR=3.7						
PDAR				LR	LR	10 42 15.4	
	comp=Z,60nm,19.2s,baz=186,slow=31 0.3nm,0.7s						

PMSA Palmer Station 60.31 159 LR LR 10 42 21.0
comp=Z,71nm,19.7s,baz=3.0,slow=29
MDP Montagnes des 61.18 76 LR LR 10 46 39.8
comp=Z,36nm,18.3s,baz=63,slow=33
NEW Newport 61.92 356 LR LR 10 45 32.1
comp=Z,42nm,18.3s,baz=142,slow=32
CMAR Chiang Mai Arr 150.54 283 PKPbc PKPbc 10 32 44.1 -0.4
1.4nm,0.4s,baz=66,slow=1.1,SNR=6.4

*NEIC **03** 10:15:42.6±0.9, 18°.61N±0°.08×145°.6E±0°.1, h201km±8km, mb4.3/41, Error ellipse: s-maj=19.1km s-min=11.8km az=90.0*
*IDC **03** 10:15:44.5±2.3, 18°.64N×145°.50E, h230km±23km, mb3.6/17, mbtmp4.2/19, Error ellipse: s-maj=19.3km s-min=9.0km az=88.0*
ISC 03 10:15:41.8±0.4, 18°.64N±0°.05×145°.6E±0°.1, h200km, n78, σ1°.21/81, mb4.2/36, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.08**	**188**	P	**Pn**	**10 16 58.8**	**+1.5**
	20nm,0.3s,baz=359,slow=17,SNR=1.5						
GUMO				S	**Sn**	**10 17 56.0**	**-0.7**
	41nm,0.3s,baz=163,slow=20,SNR=2.4						
GUMO	**Guam**	**5.08**	**188**	Pn	**Pn**	**10 16 57.1**	**-0.2**
JCJ	**Chichijima**	**8.99**	**340**	S	**Sn**	**10 19 23.3**	**-5.4**
	47nm,0.5s,baz=300,slow=20,SNR=2.3						
JOW	**Kunigami**	**17.94**	**300**	P	**P**	**10 19 39.1**	**+2.1**
	11nm,0.8s,baz=130,slow=11,SNR=5.1						
JGF	**Kuroka**	**18.41**	**338**		**P**	**10 19 42.9**	**+0.9**
JGF				IAmb	IAmb	10 19 44.4	
	comp=Z,8.8nm,0.7s						
MJAR	**Matsushiro Arr**	**18.99**	**341**	P	**P**	**10 19 47.5**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=168,slow=9.7,SNR=7.2						
MAJO	**Matsushiro**	**18.99**	**341**	P	**P**	**10 19 50.0**	**+1.8**
JMM	**Marumori**	**19.61**	**349**	P	**P**	**10 19 57.4**	**+2.5**
JMM				IAmb	IAmb	10 19 59.0	
	comp=Z,12nm,1.0s						
JSD	**Sado**	**20.36**	**343**	P	**P**	**10 20 03.8**	**+0.8**
JSD				IAmb	IAmb	10 20 08.9	
	comp=Z,13nm,1.1s						
MANU	**Manus Island**	**20.63**	**175**	P	**P**	**10 20 05.7**	**-0.4**
JTM	**Tenmabayashi**	**22.41**	**351**	P	**P**	**10 20 24.8**	**+1.0**
KRVT	**Keravat (AS076**	**23.66**	**164**	P	**P**	**10 20 37.2**	**+1.9**
	comp=Z,13nm,0.3s,baz=19,slow=1.3,SNR=6.1						
	comp=Z,13nm,0.3s						
KSRS	**Korea Array**	**24.32**	**324**	P	**P**	**10 20 40.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=147,slow=8.7,SNR=7.2						
	comp=Z,0.8nm,0.5s						
FAKI	**Fak Fak**	**25.14**	**213**	P	**P**	**10 20 49.3**	**+0.5**
TOLI2	**Tolitoli**	**29.95**	**237**	P	**P**	**10 21 32.0**	**+0.5**
TOLI2				IAmb	IAmb	10 21 53.5	
	comp=Z,6.9nm,0.9s						
COEN	**Coen**	**32.48**	**184**	P	**P**	**10 21 53.5**	**-0.2**
COEN				IAmb	IAmb	10 21 57.1	
	comp=Z,7.2nm,0.9s						
KLR	**Kul'dur**	**32.50**	**343**	P	**P**	**10 21 53.2**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=154,slow=7.8						
	comp=Z,2.2nm,0.3s						
MTN	**Manton Dam**	**34.39**	**206**	P	**P**	**10 22 10.0**	**-0.2**
PETK	**Petropavlovsk-**	**35.66**	**13**	P	**P**	**10 22 22.4**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=195,slow=8.8,SNR=3.8						
	comp=Z,0.7nm,0.5s						
PETK	**Petropavlovsk-**	**35.66**	**13**	P	**P**	**10 22 21.8**	**+1.2**
SBUM	**Sibu**	**36.45**	**248**	P	**P**	**10 22 29.1**	**+1.3**
SBUM				IAmb	IAmb	10 22 29.6	
	comp=Z,7.8nm,0.6s						
HHC	**Hu-ho-hao-te**	**36.58**	**315**	*e*P	**P**	**10 22 30.6**	**+1.8**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,7.4s						
HHC				LR	LR		
	comp=N,230nm,15.9s						
HHC				LR	LR		
	comp=E,270nm,15.2s						
HHC				LR	LR		
	comp=Z,300nm,16.5s						
KNRA	**Kununurra**	**37.93**	**207**	P	**P**	**10 22 39.9**	**-0.2**
WB0	**Warramunga Arr**	**39.73**	**197**	P	**P**	**10 22 54.8**	**-0.3**
WB0				IAmb	IAmb	10 23 07.4	
	comp=Z,14nm,1.3s						
WR0	**Warramunga Arr**	**39.87**	**196**	P	**P**	**10 22 55.5**	**-0.7**
WR0				IAmb	IAmb	10 23 20.8	
	comp=Z,12nm,1.3s						
WRAB	**Tennant Creek**	**39.90**	**197**	P	**P**	**10 22 56.3**	**-0.2**
WRAB				IAmb	IAmb	10 22 57.2	
	comp=Z,20nm,1.2s						
WB2	**Warramunga Arr**	**39.91**	**197**	P	**P**	**10 22 56.1**	**-0.4**
WB2				IAmb	IAmb	10 22 57.3	
	comp=Z,19nm,1.1s						
WRA	**Warramunga Arr**	**39.91**	**197**	P	**P**	**10 22 56.6**	**0.0**
	comp=Z,3.7nm,0.3s,baz=13,slow=8.3,SNR=103						
WRA				PcP	**PcP**	**10 24 57.1**	**-1.0**
	comp=Z,1.5nm,0.4s,baz=17,slow=3.4,SNR=12						
	comp=Z,3.7nm,0.3s						
WRA	**Warramunga Arr**	**39.91**	**197**	P	**P**	**10 22 55.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**41.45**	**209**	P	**P**	**10 23 09.3**	**+0.2**
FITZ				IAmb	IAmb	10 23 10.6	
	comp=Z,7.2nm,0.9s						
SONM	**Songino Array**	**43.14**	**321**	P	**P**	**10 23 22.5**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=141,slow=8.6,SNR=5.4						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	**43.14**	**321**	P	**P**	**10 23 23.1**	**+0.5**
ASAR	**Alice Springs**	**43.58**	**196**	P	**P**	**10 23 25.9**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=25,slow=6.5,SNR=19						
ASAR				PcP	**PcP**	**10 25 08.8**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=23,slow=3.9,SNR=7.1						
	comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	**43.58**	**196**	P	**P**	**10 23 26.7**	**+0.4**
SEY	**Seymchan**	**44.50**	**4**	P	**P**	**10 23 33.3**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=184,slow=11,SNR=4.8						
	comp=Z,1.0nm,0.5s						
DZM	**Mont Dzumac**	**45.30**	**152**	P	**P**	**10 23 39.7**	**-0.3**
DZM				IAmb	IAmb	10 23 43.2	
	comp=Z,15nm,1.2s						
MBWA	**Marble Bar**	**46.98**	**214**	P	**P**	**10 23 52.8**	**-0.2**
MBWA				IAmb	IAmb	10 23 57.6	
	comp=Z,29nm,1.5s						
PSA00	**Pilbara Seismi**	**47.26**	**213**	P	**P**	**10 23 55.1**	**-0.1**
PSA00				IAmb	IAmb	10 24 00.9	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**50.38**	**184**	P	**P**	**10 24 16.4**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=325,slow=9.2,SNR=3.7						
	comp=Z,0.6nm,0.3s						
UNV	**Unalaska Valle**	**50.74**	**35**	P	**P**	**10 24 21.3**	**+0.2**
FORT	**Forrest**	**51.96**	**199**	P	**P**	**10 24 30.5**	**0.0**
BBOO	**Buckleboo**	**51.97**	**190**	P	**P**	**10 24 30.3**	**-0.2**
BBOO				IAmb	IAmb	10 24 40.0	
	comp=Z,14nm,1.2s						
WMQ	**Urumqi**	**54.28**	**311**	*e*P	**P**	**10 24 49.8**	**+2.3**
WMQ				LR	LR		
	comp=Z,77nm,18.7s						
SDPT	**Sand Point**	**54.56**	**35**	P	**P**	**10 24 49.8**	**+0.7**
MORW	**Morawa**	**55.37**	**212**	P	**P**	**10 24 55.0**	**-0.2**
ZALV	**Zalesovo Beam**	**58.01**	**323**	P	**P**	**10 25 11.9**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=79,slow=7.5,SNR=3.1						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**58.01**	**323**	P	**P**	**10 25 12.5**	**-1.0**
NWAO	**Narrogin (SRO)**	**58.02**	**208**	P	**P**	**10 25 14.2**	**+0.4**
MK31	**Makanchi Array**	**58.44**	**314**	P	**P**	**10 25 17.0**	**+0.2**
MKAR	**Makanchi Array**	**58.44**	**314**	P	**P**	**10 25 16.9**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=93,slow=7.7,SNR=9.8						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**58.44**	**314**	P	**P**	**10 25 17.1**	**+0.4**
MAKZ	**Makanchi**	**58.66**	**314**	P	**P**	**10 25 18.6**	**+0.4**
MAKZ				IAmb	IAmb	10 25 19.3	
	comp=Z,2.3nm,0.5s						
SVW2	**Sparrevohn**	**58.91**	**29**	P	**P**	**10 25 20.6**	**+1.0**
SVW2				IAmb	IAmb	10 25 22.3	
	comp=Z,6.3nm,1.2s						
CAST	**Castle Rocks**	**61.18**	**27**	P	**P**	**10 25 35.8**	**+0.8**
CAST				IAmb	IAmb	10 25 36.4	
	comp=Z,4.6nm,0.9s						
IMAR	**Indian Mountai**	**61.30**	**24**	P	**P**	**10 25 36.9**	**+1.2**
MLY	**Manley**	**62.20**	**25**	P	**P**	**10 25 42.5**	**+0.7**
MLY				IAmb	IAmb	10 25 43.1	
	comp=Z,3.5nm,0.8s						
ILAR	**Eielson Array**	**63.73**	**26**	P	**P**	**10 25 50.8**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=253,slow=5.1,SNR=15						
	comp=Z,1.6nm,0.7s						
J26L	**Joseph Creek**	**65.09**	**27**	P	**P**	**10 26 00.9**	**+0.1**
BMAR	**Burnt Mountain**	**65.20**	**24**	P	**P**	**10 26 02.8**	**+1.4**
BRVK	**Borovoye**	**66.53**	**320**	P	**P**	**10 26 09.8**	**-0.3**
BRVK				IA

comp=Z,4.9nm,0.9s
KK31 Karatay Array 66.74 310 P P 10 26 11.7 +0.1
KKAR Karatay Array 66.74 310 P P 10 26 11.7 +0.1
DAWY Dawson 66.84 28 P P 10 26 12.3 +0.4
INK Inuvik 69.45 23 P P 10 26 27.7 -0.3
comp=Z,3.5nm,0.8s,baz=312,slow=7.2,SNR=6.8
comp=Z,3.5nm,0.8s
ARCES ARCESS Array B 82.52 342 P P 10 27 40.8 -1.0
comp=Z,1.0nm,0.5s,baz=85,slow=8.4,SNR=11
comp=Z,1.0nm,0.5s
NVAR Mina Array Bea 83.24 52 P P 10 27 46.8 +0.5
comp=Z,2.5nm,0.6s,baz=271,slow=5.6,SNR=27
comp=Z,2.5nm,0.6s
LRM Limekiln Ridge 84.83 43 P P 10 27 54.4 +0.1
DLMT Dillon 84.91 44 P P 10 27 54.8 +0.2
DUG Dugway, Tooele 86.64 49 P P 10 28 03.5 +0.3
FIA1 FINESS Array S 86.90 335 P P 10 28 02.7 -1.0
FIA1 lAmb lAmb 10 28 27.4
comp=Z,11nm,1.4s
FINES FINESS Array B 86.90 335 P P 10 28 01.1 -2.7
comp=Z,1.2nm,0.3s,baz=65,slow=5.0,SNR=24
comp=Z,1.2nm,0.3s
FINES FINESS Array B 86.90 335 P P 10 28 01.6 -2.1
PDAR Pinedale Array 87.92 45 P P 10 28 08.6 -0.8
comp=Z,0.2nm,0.4s,baz=185,slow=2.2,SNR=8.8
comp=Z,0.2nm,0.4s
PDAR Pinedale Array 87.92 45 P P 10 28 09.0 -0.4
TROLL Troll, Antarti 122.52 193 PKPdf PKPdf 10 34 11.1 -1.7
SNAA Sanae 123.85 191 PKPdf PKPdf 10 34 13.7 -1.6
VNA2 Neumayer--Watz 125.30 191 PKPdf PKPdf 10 34 16.3 -1.7
baz=95,slow=0.4
VNA3 Neumayer Olymp 125.40 190 PKPdf PKPdf 10 34 16.8 -1.4

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*IDC **03** 10:22:15.9±0.7,44.˚19N×148.˚97E, h0km, mb4.2/20, mbtmp4.1/24, ML3.2/4, MS3.4/9, Error ellipse: s-maj=20.1km s-min=14.2km az=156.0*
*SKHL **03** 10:22:19.8±0.2,44.˚00N×149.˚30E, h56km±3km, mb5.0/7*
*MOS **03** 10:22:19.5±1.0,44.˚14N×149.˚09E, h40km, mb4.8/25, Error ellipse: s-maj=7.9km s-min=6.2km az=101.1*
*NIED **03** 10:22:20.2,44.˚31N×149.˚04E, h30km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr1.28; Mθθ-0.74; Mφφ-0.54; Mrθ1.16; Mθφ-0.72; Mφr1.21; Fault plane solution: M0 2.13000×10^15^ NP1: φs234.00000°, δ19.00000°, λ98.00000°. NP2: φs45.00000°, δ71.00000°, λ87.00000°.*
*JMA **03** 10:22:20.2±0.6,44.˚N±2.˚×14.˚9E±.˚, h30km, MV4.6/16, SE OFF ETOROFU*
*NEIC **03** 10:22:21±1.6,43.˚98N±0.˚03×149.˚2E±0.˚1, h39km±8km, mb4.4/42, Error ellipse: s-maj=12.1km s-min=4.4km az=86.0*
ISC 03 10:22:20.2±0.8, 44°02N±0.˚05×149°15E±0.˚05, h35km±2km, n205, σ1$34/215, mb4.5/72, MS3.6/10, 10C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.52**	**323**	*d* iPN	**Pn**	**10 22 43.7**	**-1.3**
KUR				*i* S	**Sn**	**10 23 02.7**	**-0.9**
KUR				pmax	pmax		
	comp=N,1μm,0.3s						
KUR				pmax	pmax		
	comp=E,2μm,0.3s						
KUR				pmax	pmax		
	comp=Z,5μm,0.3s						
KUR				smax	smax		
	comp=N,4μm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.2s						
KUR	**Kuril'sk**	**1.52**	**323**	*i* P	**Pn**	**10 22 44.2**	**-0.8**
KUR				AMB	AMB	10 22 45.1	
	comp=E,4μm,0.3s						
KUR				*i* S	**Sn**	**10 23 02.5**	**-1.1**
KUR				A	A	10 23 04.2	
	comp=E,3μm,0.4s						
KUR				A	A	10 23 04.2	
	comp=E,4μm,0.4s						
SHO	**Shikotan**	**1.69**	**266**	*c* iPN	**Pn**	**10 22 46.3**	**-0.8**
SHO				*e*S	**Sn**	**10 23 05.5**	**-2.0**
SHO				pmax	pmax		
	comp=N,151nm,0.3s						
SHO				pmax	pmax		
	comp=E,220nm,0.3s						
SHO				pmax	pmax		
	comp=Z,218nm,0.3s						
SHO				smax	smax		
	comp=N,2μm,0.3s						
SHO				smax	smax		
	comp=E,1μm,0.3s						
SHO	**Shikotan**	**1.69**	**266**	*i* P	**Pn**	**10 22 46.6**	**-0.5**
SHO				AMB	AMB	10 22 47.9	
	comp=E,320nm,0.3s						
SHO				*e*S	**Sn**	**10 23 06.9**	**-0.6**
SHO				A	A	10 23 15.2	
	comp=E,2μm,0.3s						
SHO				A	A	10 23 15.2	
	comp=E,1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.38**	**272**	*c* iPN	**Pn**	**10 22 56.4**	**-0.2**
YUK				*e*S	**Sn**	**10 23 23.2**	**-1.3**
YUK				pmax	pmax		
	comp=N,124nm,0.2s						
YUK				pmax	pmax		
	comp=E,297nm,0.2s						
YUK				pmax	pmax		
	comp=Z,590nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
YUK				smax	smax		
	comp=E,2μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.38**	**272**	*i* P	**Pn**	**10 22 56.5**	**-0.2**
YUK				AMB	AMB	10 22 57.4	
	comp=E,590nm,0.2s						
YUK				*e*S	**Sn**	**10 23 23.8**	**-0.7**
YUK				A	A	10 23 32.0	
	comp=E,2μm,0.5s						
YUK				A	A	10 23 32.0	
	comp=E,2μm,0.5s						
NEM2	**Nemuro 2**	**2.56**	**256**	*e*P	**Pn**	**10 22 58.6**	**-0.6**
NEM2				*e*S	**Sn**	**10 23 27.1**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.57**	**257**	*c* iPN	**Pn**	**10 22 58.7**	**-0.6**
NMR				*i* S	**Sn**	**10 23 28.2**	**-1.1**
NMR	**Nemuro--Hokkai**	**2.57**	**257**	*i* P	**Pn**	**10 22 59.0**	**-0.3**
NMR				*i* S	**Sn**	**10 23 28.5**	**-0.8**
RUSJ	**Misakicho**	**2.82**	**273**	*c* iPN	**Pn**	**10 23 03.4**	**+0.7**
RUSJ				*e*S	**Sn**	**10 23 35.3**	**-0.1**
JRA	**Rausu**	**2.91**	**270**	*e*P	**Pn**	**10 23 05.2**	**+1.2**
JRA				*e*S	**Sn**	**10 23 38.5**	**+0.8**
JNK	**Nakash**	**3.24**	**264**	*e*P	**Pn**	**10 23 08.8**	**+0.3**
AKK	**Akkeshi**	**3.29**	**254**	*e*P	**Pn**	**10 23 09.3**	**+0.1**
JAK	**Akkeshi**	**3.40**	**254**	*e*P	**Pn**	**10 23 10.6**	**-0.1**
JAK				*e*S	**Sn**	**10 23 47.9**	**-1.9**
JTKR	**Abashiri--Toko**	**3.79**	**271**	*e*P	**Pn**	**10 23 16.9**	**+0.9**
JAR	**Ashorobuto**	**3.97**	**261**	*e*P	**Pn**	**10 23 19.4**	**+0.8**
JAR				*e*S	**Sn**	**10 24 04.4**	**+0.4**
JOB	**Onbets**	**4.03**	**256**	*e*P	**Pn**	**10 23 20.0**	**+0.6**
JCH	**Churui**	**4.45**	**254**	*e*P	**Pn**	**10 23 25.6**	**+0.4**
JCH				*e*S	**Sn**	**10 24 14.6**	**-1.1**
JKK2	**Kamakawa 2**	**4.63**	**270**	*e*P	**Pn**	**10 23 29.4**	**+1.8**
ERM	**Erimo**	**4.83**	**248**	Pn	**Pn**	**10 23 31.7**	**+1.4**
ERM	**Erimo**	**4.83**	**248**	*ce*PN	**Pn**	**10 23 32.2**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.99**	**252**	*e*P	**Pn**	**10 23 32.7**	**+0.1**
JAB	**Ashibetsu**	**5.05**	**267**	*e*P	**Pn**	**10 23 36.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**5.37**	**305**	Pn	**Pn**	**10 23 38.4**	**+0.5**
YSS	**Yuzh-Sakhalins**	**5.37**	**305**	*e*PN	**Pn**	**10 23 38.8**	**+1.0**
YSS				*e*S	**Sn**	**10 24 38.3**	**-0.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				smax	smax		
	comp=E,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**5.37**	**305**	*e*P	**Pn**	**10 23 39.2**	**+1.4**
YSS				*e*S	**Sn**	**10 24 38.3**	**-0.1**
JEW	**Eniwo**	**5.73**	**261**	Pn	**Pn**	**10 23 43.9**	**+1.1**
JANG	**Nango**	**6.74**	**240**	*e*P	**Pn**	**10 23 55.6**	**-1.1**
JTH	**Tanohata**	**6.79**	**236**	*e*P	**Pn**	**10 23 55.6**	**-1.7**
JTH				*e*S	**Sn**	**10 25 05.9**	**-7.5**
JTM	**Tenmabayashi**	**6.80**	**244**	Pn	**Pn**	**10 23 57.7**	**+0.3**
UGL	**Uglegorsk**	**7.04**	**319**	*e*P	**Pn**	**10 24 02.7**	**+2.1**
UGL				AMB	AMB	10 24 04.9	
	comp=Z,30nm,0.4s						
TYV	**Tymovskoe**	**8.14**	**330**	*e*PN	**Pn**	**10 24 18.3**	**+2.5**
TYV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,2.4s						
TYV	**Tymovskoe**	**8.14**	**330**	*e*P	**Pn**	**10 24 17.2**	**+1.4**
TYV				AMB	AMB	10 24 19.5	
	comp=Z,10.0nm,0.7s						
TYV				*e*S	**Sn**	**10 25 45.5**	**-1.0**
SKR	**Severo-Kuril's**	**8.17**	**33**	*e*PN	**Pn**	**10 24 16.3**	**+0.1**
SKR				pmax	pmax		
	comp=Z,22nm,0.9s						
SKR				MLR	MLR		
	comp=Z,100nm,13.0s						
SKR	**Severo-Kuril's**	**8.17**	**33**	*e*P	**Pn**	**10 24 16.3**	**+0.1**
SKR				AMB	AMB	10 24 17.5	
	comp=Z,20nm,0.6s						
SKR				*e*S	**Sn**	**10 25 43.7**	**-3.5**
SKR				A	A	10 25 49.6	
	comp=Z,20nm,0.6s						
SKR				A	A	10 25 49.6	
	comp=Z,20nm,0.6s						
JMM	**Marumori**	**8.82**	**229**	Pn	**Pn**	**10 24 23.6**	**-1.5**
PAU	**Pauzhetka**	**9.06**	**32**	*e*P	**Pn**	**10 24 28.3**	**-0.1**
PAU				AMB	AMB	10 24 30.4	
	comp=Z,10.0nm,0.3s						
PAU				*e*S	**Sn**	**10 26 04.5**	**-4.6**
JSD	**Sado**	**10.16**	**238**	Pn	**Pn**	**10 24 43.4**	**-0.1**
OKH	**Okha**	**10.38**	**339**	*e*P	**Pn**	**10 24 48.0**	**+1.6**
PEA0B	**Petropavlovsk-**	**10.71**	**29**	Pn	**Pn**	**10 24 50.6**	**-0.4**
PEA0B	**Petropavlovsk-**	**10.71**	**29**	PN	**Pn**	**10 24 50.6**	**-0.4**
PETK	**Petropavlovsk-**	**10.71**	**29**	Pn	**Pn**	**10 24 49.6**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=208,slow=12,SNR=7.5						
PETK				LR	LR	10 29 28.1	
	comp=Z,126nm,18.3s,baz=233,slow=41						
	comp=Z,1.5nm,0.4s						
PETK	**Petropavlovsk-**	**10.71**	**29**	Pn	**Pn**	**10 24 50.4**	**-0.5**
PETK	**Petropavlovsk-**	**10.71**	**29**	PN	**Pn**	**10 24 50.4**	**-0.5**
PET	**Petropavlovsk**	**10.99**	**32**	Pn	**Pn**	**10 24 55.4**	**+0.7**
MAJO	**Matsushiro**	**11.20**	**232**	Pn	**Pn**	**10 24 57.9**	**+0.1**
MAJO	**Matsushiro**	**11.20**	**232**	‖*e*PN	**Pn**	**10 24 56.6**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MJAR	**Matsushiro Arr**	**11.20**	**232**	Pn	**Pn**	**10 24 57.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=55,slow=12,SNR=2.4						
	comp=Z,0.7nm,0.4s						
USRK	**Ussuriysk Ar.**	**12.34**	**277**	Pn	**Pn**	**10 25 14.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=91,slow=13,SNR=12						
USRK				LR	LR	10 29 29.0	
	comp=Z,133nm,19.4s,baz=185,slow=36						
USRK	**Ussuriysk Ar.**	**12.34**	**277**		**Pn**	**10 25 13.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**12.34**	**277**	PN	**Pn**	**10 25 13.7**	**+0.3**
KLR	**Kul'dur**	**13.04**	**300**	LR	LR	10 30 51.6	
	comp=Z,249nm,21.5s,baz=190,slow=40						
MDJ	**Mudanjiang**	**14.02**	**279**	P	**Pn**	**10 25 37.6**	**+1.4**
MDJ				sP	P	10 25 50.6	+6.9
MDJ				pmax	pmax		
	comp=Z,13nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,100nm,6.3s						
MDJ				LR	LR		
	comp=N,180nm,18.4s						
MDJ				LR	LR		
	comp=E,200nm,21.7s						
MDJ				LR	LR		
	comp=Z,260nm,15.3s						
KBG	**Krutoberegovo**	**14.98**	**30**	*e*P	Pn	10 25 44.2	-4.9
MA2	**Magadan**	**15.61**	**3**	Pn	**Pn**	**10 25 57.6**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=159,slow=16,SNR=5.0						
MA2				LR	LR	10 32 13.4	
	comp=Z,77nm,18.3s,baz=190,slow=39						
MA2	**Magadan**	**15.61**	**3**	Pn	**Pn**	**10 25 57.9**	**+0.5**
MA2	**Magadan**	**15.61**	**3**	‖*e*P	**Pn**	**10 25 55.9**	**-1.5**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MA2	**Magadan**	**15.61**	**3**	*e*P	**Pn**	**10 25 55.9**	**-1.5**
SEHB	**SEOHWA**	**16.74**	**257**		**Pn**	**10 26 10.8**	**-1.2**
ZEA	**Zeya**	**17.32**	**312**	*i* P	**Pn**	**10 26 20.0**	**+1.0**
ZEA	**Zeya**	**17.32**	**312**	*e*P	**Pn**	**10 26 17.0**	**-2.0**
KSRS	**Korea Array**	**17.35**	**255**	P	**Pn**	**10 26 18.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=59,slow=11,SNR=15						
	comp=Z,2.0nm,0.8s						
KS19	**Wonju Array Si**	**17.37**	**255**	P	**P**	**10 26 21.6**	**+0.8**
JTU	**Tsushima**	**17.96**	**245**	P	**P**	**10 26 27.8**	**+0.4**
SEY	**Seymchan**	**19.05**	**5**	P	**P**	**10 26 36.4**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=192,slow=11,SNR=10.0						
	comp=Z,2.8nm,0.5s						
SEY	**Seymchan**	**19.05**	**5**	‖*e*P	**P**	**10 26 37.3**	**-1.7**
SEY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SEY	**Seymchan**	**19.05**	**5**	*e*P	**P**	**10 26 37.3**	**-1.7**
YAK	**Yakutsk**	**21.36**	**334**	LR	LR	10 36 03.0	
	comp=Z,106nm,18.8s,baz=118,slow=39						
YAK	**Yakutsk**	**21.36**	**334**	*e*P	**P**	**10 26 59.8**	**-4.3**
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.8s						
BJI	**Beijing**	**24.72**	**272**	P	**P**	**10 27 38.1**	**0.0**
BJI				S	**S**	**10 31 52.9**	**-4.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BJI				LR	LR		
	comp=N,18nm,19.0s						
BJI				LR	LR		
	comp=E,89nm,18.2s						
BJI				LR	LR		
	comp=Z,220nm,18.2s						
NJ2	**Nanjing**	**26.54**	**254**	*e*P	**P**	**10 27 56.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC	**Hu-ho-hao-te**	**27.77**	**277**	*e*P	**P**	**10 28 06.7**	**+1.0**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
HHC				LR	LR		
	comp=N,140nm,16.5s						
HHC				LR	LR		
	comp=E,290nm,17.1s						
HHC				LR	LR		
	comp=Z,300nm,17.1s						
H11N2	**WAKE ISLAND Hy**	**28.39**	**143**	T	T	10 59 16.6	
	baz=333,slow=75,SNR=423						
H11N1	**WAKE ISLAND Hy**	**28.41**	**143**	T	T	10 59 17.6	
	baz=333,slow=75,SNR=318						
H11N3	**WAKE ISLAND Hy**	**28.41**	**143**	T	T	10 59 17.8	
	baz=333,slow=75,SNR=462						
BTO	**Baotou**	**28.95**	**277**	*e*P	**P**	**10 28 18.3**	**+2.0**
BTO				S	**S**	**10 33 06.4**	**+1.6**
BTO				LR	LR		
	comp=N,430nm,16.3s						
BTO				LR	LR		
	comp=E,570nm,17.2s						
ULN	**Ulaanbaatar**	**29.26**	**293**	P	**P**	**10 28 19.1**	**+0.1**
ULN				lAmb	lAmb	10 28 19.5	
	comp=Z,5.8nm,0.7s						
ULN	**Ulaanbaatar**	**29.26**	**293**	*i* P	**P**	**10 28 18.8**	**-0.2**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**29.26**	**293**	*e*P	**P**	**10 28 18.8**	**-0.2**
H11S1	**WAKE ISLAND Hy**	**29.40**	**144**	T	T	11 00 29.8	
	baz=334,slow=76,SNR=414						
H11S3	**WAKE ISLAND Hy**	**29.40**	**144**	T	T	11 00 31.9	
	baz=334,slow=76,SNR=235						
H11S2	**WAKE ISLAND Hy**	**29.41**	**144**	T	T	11 00 36.9	
	baz=334,slow=76,SNR=232						
SONM	**Songino Array**	**29.70**	**293**	P	**P**	**10 28 22.9**	**0.0**
	comp=Z,3.0nm,0.6s,baz=76,slow=8.5,SNR=16						
SONM				LR	LR	10 41 24.1	
	comp=Z,150nm,18.2s,baz=71,slow=39						
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**29.70**	**293**	P	**P**	**10 28 22.6**	**-0.2**
SONM	**Songino Array**	**29.70**	**293**	P	**P**	**10 28 22.7**	**-0.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	**Lanzhou**	**35.21**	**273**	*e*P	**P**	**10 29 12.4**	**+1.2**
LZH				pP	pP	10 29 20.0	+0.2
LZH				sP	sP	10 29 23.4	+0.4
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
GTA	**Gaotai**	**36.67**	**280**	*e*P	**P**	**10 29 24.5**	**+0.8**
GTA				pP	pP	10 29 28.9	-3.4
GTA				sP	sP	10 29 31.8	-3.4
GTA				pmax	pmax		
IMAR	**Indian Mountai**	**37.61**	**34**	P	**P**	**10 29 31.5**	**+0.4**
H21K	**Melozitna Rive**	**37.96**	**35**	P	**P**	**10 29 35.0**	**+0.9**
H21K				lAmb	lAmb	10 29 49.6	
	comp=Z,4.4nm,0.9s						
KDAK	**Kodiak Island**	**38.00**	**48**	P	**P**	**10 29 33.5**	**-1.0**
KDAK	**Kodiak Island**	**38.00**	**48**	P	**P**	**10 29 33.5**	**-1.0**
KDAK				pmax	pmax		
	comp=Z,26nm,1.5s						
CAST	**Castle Rocks**	**38.12**	**39**	P	**P**	**10 29 36.8**	**+1.3**
COLD	**Coldfoot**	**39.15**	**33**	P	**P**	**10 29 44.8**	**+0.7**
H23K	**Yukon River**	**39.31**	**35**	P	**P**	**10 29 46.9**	**+1.4**
H23K				lAmb	lAmb	10 30 01.0	
	comp=Z,4.6nm,0.8s						
TOLK	**Toolik Lake Re**	**39.53**	**30**	P	**P**	**10 29 47.9**	**+0.7**
TOLK				lAmb	lAmb	10 29 57.2	
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**39.72**	**331**	LR	LR	10 47 07.4	
	comp=Z,44nm,20.6s,baz=70,slow=38						
MDM	**Murphy Dome**	**39.84**	**36**	P	**P**	**10 29 50.9**	**+1.0**
WRH	**Wood River Hil**	**39.90**	**37**	P	**P**	**10 29 51.0**	**+0.7**
WRH				lAmb	lAmb	10 30 05.6	
	comp=Z,7.3nm,1.4s						
COLA	**College**	**40.00**	**36**	‖*e*P	**P**	**10 29 51.5**	**+0.4**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SCM	**Sheep Creek Mo**	**40.34**	**41**	P	**P**	**10 29 55.0**	**+0.8**
SCM				lAmb	lAmb	10 30 13.7	
	comp=Z,8.0nm,1.2s						
SCM	**Sheep Creek Mo**	**40.34**	**41**	P	**P**	**10 29 55.0**	**+0.8**
SCM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ILAR	**Eielson Array**	**40.41**	**36**	P	**P**	**10 29 55.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=255,slow=6.6,SNR=9.0						
	comp=Z,0.8nm,0.6s						
BMAR	**Burnt Mountain**	**41.33**	**32**	P	**P**	**10 30 04.0**	**+1.8**
GOMU	**GeErMu**	**41.64**	**278**	P	**P**	**10 30 06.3**	**+0.8**
GOMU				pP	pP	10 30 07.3	-6.8
GOMU				sP	sP	10 30 11.5	-5.5
GOMU				PcP	PcP	10 32 27.8	+26
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,69nm,4.4s						
PZH	**PanZhiHua**	**41.85**	**261**	P	**P**	**10 30 08.1**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,110nm,5.2s						
ZALV	**Zalesovo Beam**	**41.99**	**307**	P	**P**	**10 30 06.3**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=67,slow=7.4,SNR=3.0						
ZALV				PcP	**PcP**	**10 32 02.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=64,slow=3.4,SNR=7.1						
ZALV				LR	LR	10 48 02.7	
	comp=Z,26nm,19.6s,baz=62,slow=37						
	comp=Z,0.6nm,0.3s						
L27K	**Beaver Creek,**	**42.77**	**39**	P	**P**	**10 30 15.1**	**+1.2**
L27K				lAmb	lAmb	10 30 43.2	
	comp=Z,3.5nm,0.6s						
BCAR	**Beaver Creek A**	**42.79**	**39**	P	**P**	**10 30 15.2**	**+1.1**
WMQ	**Urumqi**	**43.34**	**292**	*e*P	**P**	**10 30 19.5**	**+0.6**
WMQ				pP	sP	10 30 31.9	+1.5
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				LR	LR		
	comp=Z,67nm,20.5s						
I29M	**Ogilvie Camp,**	**43.99**	**35**	P	**P**	**10 30 23.9**	**+0.1**
I29M				lAmb	lAmb	10 30 38.9	
	comp=Z,3.6nm,0.6s						
P29M	**Windy Craggy**	**45.34**	**43**	P	**P**	**10 30 37.3**	**+2.7**
INK	**Inuvik**	**45.44**	**31**	P	**P**	**10 30 36.0**	**+0.9**
	comp=Z,3.7nm,0.6s,baz=304,slow=10,SNR=14						
	comp=Z,3.7nm,0.6s						
INK	**Inuvik**	**45.44**	**31**	P	**P**	**10 30 35.8**	**+0.7**
INK				lAmb	lAmb	10 30 37.4	
	comp=Z,4.6nm,0.9s						
INK	**Inuvik**	**45.44**	**31**	P	**P**	**10 30 35.8**	**+0.7**
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	**45.74**	**298**	P	**P**	**10 30 37.6**	**-0.3**
MK31				lAmb	lAmb	10 30 38.4	
	comp=Z,6.9nm,0.7s						
MK31	**Makanchi Array**	**45.74**	**298**	*i* P	**P**	**10 30 37.4**	**-0.5**
MKAR	**Makanchi Array**	**45.74**	**298**	P	**P**	**10 30 37.9**	**0.0**
	comp=Z,8.6nm,0.7s,baz=76,slow=8.4,SNR=45						
MKAR				PcP	**PcP**	**10 32 15.8**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=46,slow=4.2,SNR=1.6						
MKAR				LR	LR	10 51 01.2	
	comp=Z,152nm,18.3s,baz=64,slow=38						
	comp=Z,8.6nm,0.7s						
MAKZ	**Makanchi**	**45.94**	**298**	P	**P**	**10 30 39.4**	**-0.1**
MAKZ				lAmb	lAmb	10 30 39.9	
	comp=Z,7.4nm,0.7s						
MAKZ	**Makanchi**	**45.94**	**298**	P	**P**	**10 30 39.4**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KURK	**Kurchatov**	**46.58**	**304**	P	**P**	**10 30 43.2**	**-1.2**
KURK				lAmb	lAmb	10 30 44.6	
	comp=Z,3.7nm,0.6s						
KURK	**Kurchatov**	**46.58**	**304**	*i* P	**P**	**10 30 43.2**	**-1.2**
KURK	**Kurchatov**	**46.58**	**304**	*e*P	**P**	**10 30 43.2**	**-1.2**
C36M	**Paulatuk**	**48.56**	**28**	P	**P**	**10 31 00.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**48.99**	**255**	*i* P	P	10 30 59.0	-4.5
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRVK	**Borovoye**	**50.50**	**310**	‖*e*P	**P**	**10 31 14.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	**Borovoye**	**50.50**	**310**	*e*P	**P**	**10 31 14.5**	**0.0**
YKA	**Yellowknife Ar**	**54.77**	**34**	P	**P**	**10 31 47.0**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=300,slow=6.6,SNR=8.0						
	comp=Z,1.4nm,0.8s						
KK31	**Karatay Array**	**54.86**	**299**	P	**P**	**10 31 47.0**	**0.0**
KK31	**Karatay Array**	**54.86**	**299**	P	**P**	**10 31 47.0**	**0.0**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KK31	**Karatay Array**	**54.86**	**299**	⇑P	**P**	**10 31 46.1**	**-0.9**
	comp=Z,8.6nm,0.8s,baz=137,slow=17,SNR=25						
KK31				⇑S	pP	10 32 09.0	+13
	comp=Z,2.2nm,0.6s,baz=139,slow=23,SNR=4.1						
KKAR	**Karatay Array**	**54.86**	**299**	P	**P**	**10 31 47.0**	**+0.1**
KKAR				lAmb	lAmb	10 31 47.6	
	comp=Z,8.8nm,0.9s						
KKAR	**Karatay Array**	**54.86**	**299**	P	**P**	**10 31 47.1**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARU	**Arti**	**55.14**	**317**	*d* iP	**P**	**10 31 44.8**	**-3.9**
ARU				*PP	**pP**	**10 31 57.7**	**+0.1**
ARU				S	**S**	**10 39 24.3**	**-4.7**
ARU				pmax	pmax

SPR3	**Spring Creek 3**	**68.27**	**56**	P		**P**	**10 33 18.9**	**+1.1**
SPR3				IAmb		IAmb	10 33 35.4	
	comp=Z,1.5nm,0.9s							
TPNV	**Topopah Spring**	**68.40**	**59**	P		**P**	**10 33 20.4**	**+2.0**
TPNV				IAmb		IAmb	10 33 35.8	
	comp=Z,4.0nm,1.2s							
TPNV	**Topopah Spring**	**68.40**	**59**	P		**P**	**10 33 20.5**	**+2.0**
TPNV				pmax		pmax		
	comp=Z,4.0nm,1.2s							
FRB	**Frobisher Bay**	**68.51**	**17**	P		**P**	**10 33 18.0**	**-0.5**
FRB				pmax		pmax		
	comp=Z,13nm,1.7s							
PDAR	**Pinedale Array**	**68.62**	**51**	P		**P**	**10 33 20.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=264,slow=1.5,SNR=8.0							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**68.79**	**195**	P		**P**	**10 33 23.1**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=7.4,slow=5.3,SNR=4.2							
	comp=Z,0.4nm,0.7s							
NC405	**NORSAR Array S**	**69.68**	**339**	P		**P**	**10 33 25.1**	**-0.7**
NB2	**NORSAR Subarra**	**69.87**	**340**	P		**P**	**10 33 25.7**	**-1.3**
	comp=Z,3.0nm,0.4s,baz=31,slow=6.5							
NOA	**NORSAR Array B**	**69.87**	**340**	P		**P**	**10 33 26.6**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=31,slow=6.7,SNR=30							
	comp=Z,3.0nm,0.5s							
NACGM	**Naroch**	**69.99**	**329**	*e*P		**P**	**10 33 26.2**	**-1.6**
	baz=40							
NORES	**NORESS Array B**	**70.05**	**339**	P		**P**	**10 33 26.5**	**-1.6**
RDMU	**Red Mountain**	**70.05**	**53**	IAmb		IAmb	10 33 45.3	
	comp=Z,7.5nm,0.8s							
SRU	**San Rafael Swe**	**70.46**	**54**	IAmb		IAmb	10 33 48.0	
	comp=Z,3.0nm,0.8s							
ANGG	**Ammassalik, Gr**	**70.58**	**3**	P		**P**	**10 33 32.3**	**+1.1**
KIV	**Kislovodsk**	**70.66**	**313**	*e*P		**P**	**10 33 32.4**	**+0.2**
KIV				pmax		pmax		
	comp=Z,11nm,1.1s							
KIV				MLR		MLR		
	comp=Z,74nm,17.0s							
KIV	**Kislovodsk**	**70.66**	**313**	*e*P		**P**	**10 33 32.4**	**+0.2**
KBZ	**Khabaz**	**70.70**	**312**	P		**P**	**10 33 33.3**	**+1.0**
	comp=Z,6.0nm,0.8s,baz=43,slow=3.0,SNR=16							
	comp=Z,6.0nm,0.8s							
KBZ	**Khabaz**	**70.70**	**312**	*i* P		**P**	**10 33 32.7**	**+0.4**
KBZ	**Khabaz**	**70.70**	**312**	*e*P		**P**	**10 33 32.7**	**+0.4**
ONI	**Oni**	**71.17**	**311**	P		**P**	**10 33 35.0**	**-0.3**
ONI				IAmb		IAmb	10 33 37.3	
	comp=Z,4.9nm,0.7s							
ONI	**Oni**	**71.17**	**311**	P		**P**	**10 33 35.0**	**-0.3**
ONI				pmax		pmax		
	comp=Z,5.0nm,0.7s							
PV13	**Radium Mtn., P**	**72.09**	**54**	IAmb		IAmb	10 33 57.4	
	comp=Z,3.9nm,1.0s							
AKASG	**Malin Array Be**	**72.21**	**325**	P		**P**	**10 33 40.6**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=39,slow=6.4,SNR=25							
	comp=Z,1.2nm,0.3s							
AKBB	**Malin Array Si**	**72.21**	**325**	P		**P**	**10 33 40.1**	**-1.3**
AKBB	**Malin Array Si**	**72.21**	**325**	⇓*e*P		**P**	**10 33 39.4**	**-1.9**
BUR08	**Bucovina Ar. S**	**76.25**	**325**	P		**P**	**10 34 05.6**	**+0.5**
BUR08				IAmb		IAmb	10 34 22.8	
	comp=Z,5.9nm,1.2s							
SCHQ	**Schefferville**	**76.88**	**20**	P		**P**	**10 34 08.6**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=296,slow=7.4,SNR=2.9							
	comp=Z,0.8nm,0.3s							
MORC	**Moravsky Berou**	**77.49**	**330**	P		**P**	**10 34 12.1**	**+0.1**
MORC				pmax		pmax		
	comp=Z,5.0nm,0.9s							
CLL	**Collm**	**77.73**	**334**	*i* P		**P**	**10 34 13.0**	**-0.2**
CLL				*e**PP		**sP**	**10 34 25.0**	**-0.4**
CLL				pmax		pmax		
	comp=Z,4.0nm,0.5s							
CLL	**Collm**	**77.73**	**334**	*i* P		**P**	**10 34 13.0**	**-0.2**
	comp=Z,4.0nm,0.5s							
CLL				*ep*P		**sP**	**10 34 25.0**	**-0.4**
DRGR		**77.96**	**326**	P		**P**	**10 34 13.8**	**-0.8**
DRGR				pmax		pmax		
	comp=Z,4.0nm,0.9s							
VOIR		**78.06**	**323**	P		**P**	**10 34 15.7**	**+0.5**
VOIR				pmax		pmax		
	comp=Z,7.0nm,0.8s							
BRTR	**Keskin Array B**	**78.40**	**315**	P		**P**	**10 34 17.5**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=68,slow=6.8,SNR=4.6							
	comp=Z,1.7nm,0.8s							
KRUC	**Moravsky**	**78.50**	**330**	P		**P**	**10 34 18.1**	**+0.6**
KRUC				pmax		pmax		
	comp=Z,7.0nm,0.8s							
BZS	**Buzias**	**79.36**	**326**	P		**P**	**10 34 22.2**	**0.0**
BZS				pmax		pmax		
	comp=Z,4.0nm,1.0s							
KHC	**Kasperske Hory**	**79.42**	**332**	*e*P		**P**	**10 34 22.8**	**+0.2**
KHC	**Kasperske Hory**	**79.42**	**332**	*e*P		**P**	**10 34 22.8**	**+0.2**
CKRC	**Cesky Krumlov**	**79.43**	**332**	*e*P		**P**	**10 34 22.9**	**+0.2**
GEC2	**GERESS Array S**	**79.62**	**332**	IAmb		IAmb	10 34 24.5	
	comp=Z,2.2nm,0.7s							
GEC2				P		**P**	**10 34 24.6**	**+0.9**
GERES	**GERESS Array B**	**79.62**	**332**	P		**P**	**10 34 23.8**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=42,slow=4.2,SNR=13							
	comp=Z,1.5nm,0.5s							
WET	**Wettzell**	**79.64**	**333**	P		**P**	**10 34 23.6**	**-0.2**
WET				pmax		pmax		
	comp=Z,7.0nm,0.8s							
CONA	**Conrad Observa**	**79.65**	**330**	*e*P		**P**	**10 34 24.4**	**+0.5**
	comp=Z,4.5nm,0.8s							
RONA	**Rosalia, Austr**	**79.68**	**330**	*e*P		**P**	**10 34 25.0**	**+0.9**
	comp=Z,3.9nm,0.7s							
RONA				*e*P		**P**	**10 34 25.0**	**+0.9**
SOKA	**Soboth**	**81.01**	**330**	*e*P		**P**	**10 34 31.5**	**+0.2**
	comp=Z,5.8nm,1.0s							
KBA	**Koelnbreinsper**	**81.26**	**331**	P		**P**	**10 34 32.8**	**+0.1**
KBA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
KBA	**Koelnbreinsper**	**81.26**	**331**	*e*P		**P**	**10 34 33.2**	**+0.5**
	comp=Z,2.8nm,0.5s							
TXAR	**Lajitas Array**	**81.29**	**58**	P		**P**	**10 34 34.0**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=298,slow=4.1,SNR=26							
	comp=Z,1.3nm,0.7s							
WATA	**Walderalm**	**81.64**	**332**	*e*P		**P**	**10 34 35.1**	**+0.4**
	comp=Z,7.7nm,0.9s							
WTTA	**Wattenberg**	**81.68**	**332**	P		**P**	**10 34 35.1**	**+0.1**
WTTA				pmax		pmax		
	comp=Z,14nm,0.8s							
WTTA	**Wattenberg**	**81.68**	**332**	*e*P		**P**	**10 34 35.2**	**+0.3**
	comp=Z,5.5nm,0.4s							
MOTA	**Moosalm**	**81.79**	**333**	*e*P		**P**	**10 34 35.6**	**+0.1**
	comp=Z,5.7nm,0.7s							
FETA	**Feichten**	**82.20**	**333**	*e*P		**P**	**10 34 37.8**	**+0.2**
	comp=Z,3.7nm,0.9s							
H03N2	**Juan Fernandez**	**141.52**	**91**	T		T	13 20 10.6	
	baz=304,slow=77,SNR=4.1							
H03N3	**Juan Fernandez**	**141.53**	**91**	T		T	13 20 12.8	
	baz=304,slow=77,SNR=4.1							
H03N1	**Juan Fernandez**	**141.53**	**91**	T		T	13 20 13.4	
	baz=304,slow=77,SNR=5.6							
NVL	**N'lazarevskaya**	**146.00**	**204**	*e*PKHKP		PKPpre	10 41 45.6	
NVL				pmax		pmax		
	comp=Z,13nm,0.7s							

*TAP **03** 10:22:33.6,24.°00N×122.°71E,h38km±1km,ML3.0,D*
*JMA **03** 10:22:34.0±0.1,24.°1N±0.°6×122.°6E±0.°4,h45km,MV2.4/8,*
NW OFF ISHIGAKIJIMA IS

ISC 03 10:22:33.4±1.1,23.°98N±0.°04×122.°69E±0.°02,h32km±12km,
n47,σ0.°99/67,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.53**	**26**	P	**Pn**	**10 22 44.3**	**-0.4**
JYNG				S	**Sn**	**10 22 51.7**	**-0.8**
YOJ	**Yonaguni jima**	**0.56**	**31**	P	**Pn**	**10 22 45.0**	**-0.2**
	baz=30						
YOJ				S	**Sn**	**10 22 53.3**	**-0.1**
	baz=30						
YOJ	**Yonaguni jima**	**0.56**	**31**	P	**Pn**	**10 22 45.0**	**-0.2**
YOJ				*e*S	**Sn**	**10 22 52.7**	**-0.7**
EWUT	**Wuta**	**0.95**	**299**	*e*P	**Pn**	**10 22 50.6**	**0.0**
	baz=298						
EWUT				*e*S	**Sb**	**10 23 03.8**	**0.0**
	baz=298						
ENA	**Nanau**	**0.98**	**298**	*e*P	**Pb**	**10 22 51.8**	**-0.1**
	baz=296						
TWC	**Suao**	**0.99**	**309**	P	**Pb**	**10 22 51.8**	**-0.4**
	baz=309						
TWC				*e*S	**Sb**	**10 23 04.6**	**-0.3**
	baz=309						
IRIF	**Iriomote-Funau**	**1.01**	**69**	P	**Pb**	**10 22 52.5**	**0.0**
IRIF				S	**Sb**	**10 23 06.3**	**+0.9**
HATJ	**Hateruma jima**	**1.02**	**85**	P	**Pb**	**10 22 52.7**	**+0.1**
HATJ				S	**Sb**	**10 23 06.7**	**+1.0**
NACB	**Ninganchiao**	**1.02**	**281**	*e*P	**Pn**	**10 22 51.4**	**-0.1**
	baz=267						
NDS	**Dongshan**	**1.10**	**306**	*e*P	**Pn**	**10 22 53.1**	**+0.4**
	baz=306						
NDS				*e*S	**Sb**	**10 23 07.9**	**-0.2**
	baz=306						
EGS		**1.11**	**321**	*e*P	**Pb**	**10 22 54.2**	**+0.1**
	baz=331						
ETLH	**Xiulin Townshi**	**1.13**	**282**	*e*P	**Pn**	**10 22 53.0**	**-0.1**
	baz=281						
NTC	**Toucheng**	**1.18**	**318**	*e*P	**Pb**	**10 22 55.5**	**+0.3**
	baz=328						
TWE	**Neicheng**	**1.19**	**309**	*e*P	**Pb**	**10 22 55.2**	**-0.3**
	baz=308						
LATG	**Datong**	**1.20**	**298**	P	**Pb**	**10 22 55.0**	**-0.8**
	baz=297						
TWB1	**Santiao Chiao**	**1.21**	**328**	*e*P	**Pb**	**10 22 54.7**	**-1.1**
	baz=328						
ENTT	**Nioudou**	**1.22**	**303**	*e*P	**Pb**	**10 22 55.0**	**-0.9**
	baz=302						
JKRS	**Kuro-shima**	**1.23**	**78**	P	**Pb**	**10 22 55.6**	**-0.6**
JKRS				*e*S	**Sb**	**10 23 12.7**	**+1.0**
NDT	**Datong Townshi**	**1.24**	**300**	*e*P	**Pb**	**10 22 55.8**	**-0.5**
	baz=288						
HGSD	**Ruisui**	**1.26**	**248**	*e*P	**Pn**	**10 22 53.9**	**-0.9**
	baz=247						
HGSD				*e*S	**Sn**	**10 23 09.3**	**-1.3**
	baz=247						
TIPB	**Shuangxi**	**1.27**	**322**	*e*P	**Pb**	**10 22 56.1**	**-0.7**
	baz=329						
FUSB	**Fushanzhiwuyua**	**1.27**	**308**	*e*P	**Pb**	**10 22 56.9**	**0.0**
	baz=307						
NNSB	**Datong**	**1.28**	**291**	P	**Pn**	**10 22 55.9**	**+0.7**
	baz=290						
WHF	**Hehuan Shan**	**1.31**	**278**	*e*P	**Pn**	**10 22 56.2**	**+0.3**
	baz=277						
SXI1	**Grass Mountain**	**1.34**	**326**	P	**Pn**	**10 22 56.6**	**+0.7**
	baz=338						
SXI1				*e*S	**Sn**	**10 23 12.7**	**0.0**
	baz=338						
EHY	**Hungye**	**1.34**	**250**	*e*P	**Pn**	**10 22 55.7**	**-0.2**
	baz=249						
EHY				*e*S	**Sn**	**10 23 12.2**	**-0.4**
	baz=249						
NWLT	**Wulai**	**1.34**	**307**	*e*P	**Pb**	**10 22 58.6**	**+0.5**
	baz=319						
FUSS	**Fushou**	**1.35**	**282**	*e*P	**Pn**	**10 22 57.2**	**+0.9**
	baz=281						
NWF	**Wu-fen Shan**	**1.37**	**323**	*e*P	**Pn**	**10 22 57.0**	**+0.6**
	baz=322						
JIJ	**Ishigaki jima**	**1.38**	**74**	P	**Pn**	**10 22 57.3**	**+0.9**
JIJ				*e*S	**Sb**	**10 23 14.5**	**-1.4**
YHNB	**Yeheng**	**1.38**	**300**	*e*P	**Pn**	**10 22 57.4**	**+0.8**
	baz=287						
OWD	**Renai**	**1.39**	**269**	*e*P	**Pn**	**10 22 56.9**	**+0.2**
	baz=269						
OWD				*e*S	**Sn**	**10 23 13.1**	**-0.9**
	baz=269						
CHGB	**Renai**	**1.39**	**274**	*e*P	**Pn**	**10 22 57.1**	**+0.3**
	baz=273						
CHGB				*e*S	**Sn**	**10 23 12.6**	**-1.6**
	baz=273						
NSK	**Sanguang**	**1.40**	**300**	*e*P	**Pn**	**10 22 57.2**	**+0.4**
	baz=288						
YULB	**Yu-li**	**1.41**	**246**	*e*P	**Pn**	**10 22 56.8**	**-0.1**
	baz=236						
YULB				*e*S	**Sn**	**10 23 13.9**	**-0.4**
	baz=236						
VWDT	**VWDT**	**1.44**	**261**	*e*P	**Pn**	**10 22 57.3**	**0.0**
	baz=254						
WUSB	**Renai**	**1.44**	**271**	*e*P	**Pn**	**10 22 57.8**	**+0.4**
	baz=270						
NFF	**Wufeng Townshi**	**1.58**	**295**	*e*P	**Pn**	**10 23 00.2**	**+0.9**
	baz=285						
SSLB	**Suanglung**	**1.60**	**264**	*e*P	**Pn**	**10 22 60.0**	**+0.4**
	baz=263						
SSLB				*e*S	**Sn**	**10 23 20.4**	**+1.2**
	baz=263						
EDH	**Donghe**	**1.62**	**232**	*e*P	**Pn**	**10 22 59.0**	**-0.8**
	baz=224						
EDH				*e*S	**Sn**	**10 23 17.3**	**-2.2**
	baz=224						
WHP	**Taichung City**	**1.62**	**281**	*e*P	**Pb**	**10 23 02.7**	**-0.1**
	baz=271						
LDUT	**Ludao**	**1.72**	**221**	*e*S	**Sn**	**10 23 19.1**	**-2.8**
	baz=220						
ALS	**Alishan**	**1.79**	**255**	*e*P	**Pn**	**10 23 03.3**	**+1.0**
	baz=246						
TPUB	**Ta-pu**	**2.01**	**251**	*e*P	**Pn**	**10 23 06.7**	**+1.5**
	baz=243						
TPUB				*e*S	**Sn**	**10 23 31.5**	**+2.4**
	baz=243						
CHN1	**Nanshi**	**2.14**	**249**	*e*P	**Pn**	**10 23 09.0**	**+2.1**
	baz=241						
CHN1				*e*S	**Sn**	**10 23 35.6**	**+3.3**
	baz=241						
MASBT	**Mashibuluo**	**2.33**	**235**	*e*P	**Pn**	**10 23 10.2**	**+0.6**
	baz=229						
SLIU	**Shizi**	**2.47**	**225**	*e*P	**Pn**	**10 23 11.9**	**+0.4**
	baz=225						

*KRNET **03** 10:30:02.9±0.1,39.°37N×73.°53E,mb3.0*
*SOME **03** 10:30:07.4,39.°55N×73.°58E,h5km*

ISC 03 10:30:00.8±2.0,39.°34N±0.°07×73.°62E±0.°05,h6km±18km,
n14,σ1.°926/28,6C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.35**	**332**	⇑*e*P	**Pg**	**10 30 27.2**	**+0.6**
	baz=34						
OHH				⇑*e*S	**Sg**	**10 30 45.2**	**+1.1**
	baz=34						
DRK	**Karamyk**	**1.42**	**276**	⇓*i*P	**Pg**	**10 30 28.4**	**+0.4**
	baz=75						
DRK				⇓*e*S	**Sg**	**10 30 46.9**	**+0.5**
	baz=75						
BTK	**Batken**	**2.28**	**289**	⇑*e*P	**Pb**	**10 30 42.6**	**+0.2**
	baz=89						
BTK				⇑*i*S	**Sb**	**10 31 11.8**	**+1.0**
	baz=89						
ARLS	**Aral**	**2.58**	**12**	⇓*e*P	**Pb**	**10 30 47.6**	**+0.1**
	baz=14						
ARLS				⇓*i*S	**Sb**	**10 31 20.1**	**+0.7**
	baz=14						
GAR	**Garm**	**2.59**	**264**	⇑*e*P	**Pb**	**10 30 47.2**	**-0.5**
	baz=63						
GAR				⇑*i*S	**Sb**	**10 31 19.4**	**-0.4**
	baz=63						
MRKS	**Merke**	**3.42**	**355**	*e*P	**Pg**	**10 31 07.9**	**+1.6**
	3.6nm,0.6s						
MRKS				*e*S	**Sg**	**10 31 51.7**	**+1.2**
	20nm,0.5s						
IUG	**Iuzhnay**	**3.91**	**317**	*e*P	**Pg**	**10 31 16.3**	**+0.6**
	81nm,0.3s						
IUG				*e*S	**Sg**	**10 32 06.2**	**-0.3**
	14nm,0.6s						
DZA	**Taraz**	**3.95**	**335**	*e*P	**Pg**	**10 31 17.1**	**+0.6**
	88nm,0.1s						
DZA				*e*S	**Sg**	**10 32 07.0**	**-0.6**
	192nm,0.3s						
SGDS	**Sogindy**	**4.18**	**10**	*e*P	**Pg**	**10 31 20.5**	**-0.3**
	1.6nm,0.6s						
SGDS				*e*S	**Sg**	**10 32 13.3**	**-1.7**
	4.5nm,1.0s						
CHM	**Chimkent**	**4.26**	**316**	*e*P	**Pg**	**10 31 21.5**	**-0.9**
	216nm,0.2s						
CHM				*e*S	**Sg**	**10 32 14.7**	**-2.9**
	194nm,0.4s						
MDOK	**Medeo**	**4.61**	**33**	*e*P	**Pg**	**10 31 30.6**	**+1.4**
	3.3nm,0.6s						
MDOK				*e*S	**Sg**	**10 32 30.3**	**+1.4**
	6.0nm,1.2s						
KRBS	**Karabastau**	**4.62**	**19**	*e*P	**Pg**	**10 31 28.7**	**-0.5**
	1.2nm,0.3s						
KRBS				*e*S	**Sg**	**10 32 27.0**	**-2.1**
	5.3nm,0.7s						
KTBS	**Karatobe**	**4.94**	**27**	*e*P	**Pg**	**10 31 35.6**	**+0.3**
	0.8nm,1.4s						
KTBS				*e*S	**Sg**	**10 32 39.2**	**-0.1**
	8.2nm,0.5s						
KUU	**Kurty**	**4.99**	**23**	*e*P	**Pg**	**10 31 35.2**	**-1.1**
	1.0nm,0.5s						
KUU				*e*S	**Sg**	**10 32 38.2**	**-2.6**
	5.8nm,1.9s						

*IDC **03** 10:30:15.1±2.1,1.°58N×127.°13E,h0km,mb3.7/3,*
mbtmp3.7/3,Error ellipse: s-maj=166.0km s-min=25.4km
az=66.0
*DJA **03** 10:30:22.0±0.6,2.°N±2.°×12.°7E±.°,h11km±6km,M3.9/8,*
mb4.1/2,mB5.7/1,MLv3.9/8,Mw(mB)5.3/1

ISC 03 10:30:19.7±1.1,1.°78N±0.°06×127.°06E±0.°09,h10km,n10,
σ3.°04/14,mb3.8/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.04**	**163**	P	**Pg**	**10 30 41.6**	**+1.9**
TNTI				S	**Sg**	**10 30 54.6**	**+1.3**
LBMI	**Labuha**	**2.44**	**170**	P	**Pn**	**10 31 00.7**	**+1.1**
LBMI				S	**Sn**	**10 31 31.9**	**+2.5**
SGSI	**Sangihe**	**2.44**	**321**	P	**Pn**	**10 31 00.8**	**+1.2**
SGSI				S	**Sn**	**10 31 31.4**	**+1.8**
KMSI	**Cibinong**	**3.31**	**249**	P	**Pn**	**10 31 14.1**	**+2.6**
KMSI				S	**Sn**	**10 31 53.6**	**+2.7**
SANI	**Sanana**	**3.95**	**196**	P	**Pn**	**10 31 23.3**	**+2.9**
SANI				S	**Sn**	**10 32 00.7**	**-6.1**
LUWI	**Luwuk**	**5.12**	**237**	P	**Pn**	**10 31 36.1**	**-0.4**
	0.8nm8μm58nm,0.7s						
MPSI	**Mapaga**	**7.31**	**259**	P	**Pn**	**10 32 06.1**	**-0.4**
WRA	**Warramunga Arr**	**22.73**	**162**	P	P	10 35 16.2	-5.8
	2.9nm,0.6s,baz=341,slow=11,SNR=28						
	2.9nm,0.6s						
ASAR	**Alice Springs**	**26.15**	**166**	P	**P**	**10 35 49.7**	**-4.6**
	0.3nm,0.3s,baz=350,slow=15,SNR=9.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.34**	**326**	P	**P**	**10 40 20.5**	**-1.6**
	0.4nm,0.5s,baz=125,slow=7.8,SNR=5.9						
	0.4nm,0.5s						

*VAO **03** 10:31:28.6±0.8,24.°17S×67.°26W,h159km±6km,mb4.9*
*SJA **03** 10:31:30.7±0.7,24.°20S×67.°19W,h199km±5km,ML4.4,*
MW4.4
*NEIC **03** 10:31:31.7±2.1,24.°20S±0.°05×67.°11W±0.°07,h173km±6km,*
mb4.9/44,Md4.4(SJA),Error ellipse: s-maj=10.3km
s-min=6.9km az=65.0
*IDC **03** 10:31:32.2±0.9,24.°10S×67.°00W,h166km±8km,mb4.2/11,*
mbtmp4.7/17,Error ellipse: s-maj=11.7km s-min=11.2km
az=53.0
*GUC **03** 10:31:32.6±0.8,24.°27S×67.°20W,h182km±8km,ML5.1*

ISC 03 10:31:31.4±0.5,24.°17S±0.°03×67.°19W±0.°03,h171km±4km,
n227,σ1.°68/269,mb4.7/26,6C-2D,Chile-Argentina
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.51**	**323**		**Pn**	**10 32 06.2**	**+3.1**
AF01				Sn	**Sn**	**10 32 31.6**	**+4.2**
AF01	**San Pedro de A**	**1.51**	**323**	*e*P	**Pn**	**10 32 06.1**	**+3.1**
AF01				*e*S	**Sn**	**10 32 30.9**	**+3.5**
SLA	**San Lorenzo**	**1.64**	**110**	⇓*i*P	**Pn**	**10 32 06.2**	**+2.1**
SLA				*e*S	**Sn**	**10 32 30.5**	**+1.1**
SLA	**San Lorenzo**	**1.64**	**110**	*e*P	**Pn**	**10 32 06.3**	**+2.2**
SLA				*e*S	Sn	10 32 16.0	-13
SLA				IAML		10 32 32.7	
	comp=Z,1μm,1.4s						
HJA	**Humahuaca**	**1.89**	**60**	*e*P	**Pn**	**10 32 09.4**	**+2.4**
HJA				*e*S	**Sn**	**10 32 37.8**	**+3.2**
HJA				IAML		10 32 40.4	
	comp=Z,338nm,1.2s						
AZAP	**Zapla**	**1.94**	**92**	*e*P	**Pn**	**10 32 09.2**	**+1.8**
AZAP				*e*S	**Sn**	**10 32 38.3**	**+3.0**
AZAP				IAML		10 32 40.4	
	comp=Z,1μm,1.3s						
LVC	**Limon Verde**	**2.21**	**314**	P	**Pn**	**10 32 13.2**	**+2.6**
	comp=Z,509nm,0.6s,baz=140,slow=6.5,SNR=1002						
LVC				S	**Sn**	**10 32 42.8**	**+2.0**
	comp=Z,1μm,0.4s,baz=27,slow=23,SNR=57						
LVC	**Limon Verde**	**2.21**	**314**	Pn	**Pn**	**10 32 13.3**	**+2.8**
LVC				Sn	**Sn**	**10 32 43.0**	**+2.1**
LVC	**Limon Verde**	**2.21**	**314**	*i* P	**Pn**	**10 32 13.2**	**+2.6**
LVC				*e*S	**Sn**	**10 32 42.9**	**+2.0**
LVC	**Limon Verde**	**2.21**	**314**	*e*P	**Pn**	**10 32 13.0**	**+2.4**
LVC				*e*S	**Sn**	**10 32 44.3**	**+3.4**
LVC				IAML		10 32 47.6	
	comp=Z,1μm,0.9s						
FSA	**Cafayete**	**2.23**	**151**	*e*P	**Pn**	**10 32 12.2**	**+1.6**
FSA				*e*S	**Sn**	**10 32 41.3**	**+0.3**
PB15	**IPOC Station P**	**2.29**	**294**		**Pn**	**10 32 13.6**	**+2.3**
PB15	**IPOC Station P**	**2.29**	**294**	⇑*i*P	**Pn**	**10 32 13.7**	**+2.3**
PB15				*e*S	**Sn**	**10 32 44.0**	**+1.7**
PB15	**IPOC Station P**	**2.29**	**294**	*e*P	**Pn**	**10 32 13.8**	**+2.4**
PB15				*e*S	**Sn**	**10 32 44.4**	**+2.1**
PB15				IAML		10 32 47.1	
	comp=Z,9μm,0.3s						
GO02	**Mina Guanaco**	**2.40**	**245**	Pn	**Pn**	**10 32 14.4**	**+1.8**
GO02	**Mina Guanaco**	**2.40**	**245**	*i* P	**Pn**	**10 32 14.2**	**+1.6**
GO02				*e*S	**Sn**	**10 32 45.9**	**+1.4**
GO02				IAML		10 32 47.6	
	comp=N,4μm,0.4s						
GO02	**Mina Guanaco**	**2.40**	**245**	*e*P	**Pn**	**10 32 14.2**	**+1.6**
GO02				*e*S	**Sn**	**10 32 46.6**	**+2.1**
YJA	**Yavi**	**2.51**	**38**	*e*P	**Pn**	**10 32 16.5**	**+2.3**
YJA				*e*S	**Sn**	**10 32 50.9**	**+3.6**
YJA				IAML		10 32 56.3	
	comp=Z,116nm,0.9s						
ASTB	**Santa Barbara**	**2.52**	**86**	*e*P	**Pn**	**10 32 15.5**	**+1.6**
ASTB				IAML		10 32 58.2	
	comp=Z,8.2nm,1.7s						
PB06	**IPOC Station P**	**2.62**	**303**		**Pn**	**10 32 16.9**	**+1.7**
PB06	**IPOC Station P**	**2.62**	**303**	⇑*i*P	**Pn**	**10 32 17.5**	**+2.3**
PB06				*e*S	**Sn**	**10 32 50.1**	**+0.9**
PB06				IAML		10 32 53.0	
	comp=N,5μm,0.4s						
PB06	**IPOC Station P**	**2.62**	**303**	*e*P	**Pn**	**10 32 17.2**	**+2.0**
PB06				*e*S	**Sn**	**10 32 50.9**	**+1.7**
PB06				*e*S		10 32 50.9	
PB06				IAML		10 32 53.5	
	comp=Z,4μm,0.4s						
ALOL	**LOMAS DE OLMED**	**2.96**	**84**	*e*P	**Pn**	**10 32 14.9**	**-4.2**
ALOL				*e*P		10 32 20.5	
ALOL				*

PB01 IAML 10 33 20.2
comp=Z,852nm,0.2s
PB02 IPOC Station P 3.77 318 P 10 32 30.7 +1.2
PB02 IPOC Station P 3.77 318 eP P 10 32 30.5 +1.1
PB02 eS Sn 10 33 14.0 -0.7
PB02 IPOC Station P 3.77 318 eP P 10 32 30.5 +1.1
PB02 eP Pn 10 32 30.6 +1.2
PB02 eS Sn 10 33 14.2 -0.5
PB02 eS Sn 10 33 14.9 +0.2
PB02 eS 10 33 15.5
PB02 IAML 10 33 19.2
comp=Z,2µm,0.2s
PATCX Punta Patache 4.31 320 P 10 32 37.0 +0.7
PATCX Punta Patache 4.31 320 eP Pn 10 32 36.9 +0.6
GO03 Copiap 4.38 218 P 10 32 36.2 -0.8
GO03 Copiap 4.38 218 iP Pn 10 32 36.3 -0.8
GO03 eS Sn 10 33 26.4 -2.1
TA01 Diego Aracena 4.53 322 Pn P Pn 10 32 39.5 +0.5
TA01 Diego Aracena 4.53 322 eP P Pn 10 32 39.9 +0.9
TA01 eS Sn 10 33 31.7 -0.2
TA01 IAML 10 33 52.3
comp=Z,397nm,0.6s
TA02 Huaiquique 4.74 324 P Pn 10 32 42.1 +0.4
GO01 Chusmiza 4.85 337 P Pn 10 32 44.4 +0.8
GO01 Chusmiza 4.85 337 eP Pn 10 32 44.5 +0.8
AC04 Llanos de Chal 5.32 220 Pn P Pn 10 32 47.7 -1.6
AC04 Llanos de Chal 5.32 220 iP P Pn 10 32 47.4 -1.9
LCO Las Campanas 5.76 212 Pn P Pn 10 32 53.6 -1.7
LCO Las Campanas 5.76 212 eP P Pn 10 32 53.3 -2.0
PB16 IPOC Station P 6.19 339 Pn P Pn 10 33 02.3 +0.9
PB12 IPOC Station P 6.25 332 Pn P Pn 10 33 00.5 -1.2
CO01 Juntas del Tor 6.34 203 P Pn 10 33 02.8 -0.1
CO05 La Serena 6.77 211 P Pn 10 33 06.2 -2.1
GO04 Tololo Observa 6.79 207 P Pn 10 33 06.8 -2.1
PB18 Visviri 6.88 341 P Pn 10 33 11.9 +1.4
CO03 El Pedregal 7.33 204 P Pn 10 33 13.8 -2.1
ZON Zonda 7.47 190 P Pn 10 33 16.9 -0.7
CO06 Fray Jorge 7.59 210 Pn Pn 10 33 16.2 -2.9
CO02 Combarbal 7.78 205 P Pn 10 33 18.9 -2.9
LPAZ La Paz 7.89 353 P Pn 10 33 25.5 +1.6
comp=Z,25nm,0.3s,baz=148,slow=5.0,SNR=307
LPAZ S Sn 10 34 50.9 -1.7
comp=Z,29nm,0.7s,baz=336,slow=18,SNR=6.8
LPAZ La Paz 7.89 353 Pn Pn 10 33 25.0 +1.2
VA03 San Esteban 9.06 198 P Pn 10 33 37.2 -1.6
CPUP Villa Florida 9.19 106 P Pn 10 33 39.2 -1.1
comp=Z,14nm,0.9s,baz=283,slow=11,SNR=29
CPUP Villa Florida 9.19 106 Pn 10 33 39.1 -1.3
CPUP Villa Florida 9.19 106 eP Pn 10 33 38.2 -2.1
ROC1 El Roble 9.40 200 P Pn 10 33 41.8 -1.5
MT02 Curacav 9.70 200 P Pn 10 33 43.2 -3.8
MT03 Universidad Ad 9.74 197 P Pn 10 33 47.5 -0.1
SIV San Ignacio 9.96 36 P Pn 10 33 49.1 -1.5
comp=Z,49nm,0.9s,baz=215,slow=11,SNR=186
SIV S Sn 10 35 26.3 -15
comp=Z,31nm,1.1s,baz=220,slow=16,SNR=9.5
MT09 Talagante 10.13 198 P Pn 10 33 49.1 -3.8
MT01 Popeta 10.29 199 P Pn 10 33 51.1 -3.7
ANTJ Antonio Joao (10.52 80 eP Pn 10 33 55.6 -2.3
BO01 Tunca 10.74 198 P Pn 10 33 59.8 -0.9
ITQB Itaqui 10.91 122 eP Pn 10 33 59.6 -3.3
PTLB Pontes e Lacer 11.52 43 P Pn 10 34 09.8 -1.1
PTLB Pontes e Lacer 11.52 43 eP Pn 10 34 07.9 -3.0
GO05 Huala 11.56 200 P Pn 10 34 09.6 -1.8
UNIS Unistalda (Bra 11.89 117 eP Pn 10 34 12.6 -3.0
MCR1 Marechal Candi 12.00 94 eP Pn 10 34 16.2 -0.9
ML02 Panimavida 12.12 197 P Pn 10 34 17.7 -0.8
RODS Rosario do Sul 12.32 123 eP Pn 10 34 17.4 -3.7
VILB Vilhena 12.97 32 Pn Pn 10 34 29.9 +0.3
VILB Vilhena 12.97 32 eP Pn 10 34 28.8 -0.7
TRCB Terra Rica 13.43 87 P Pn 10 34 33.7 -1.7
VA04 Juan Fernndez 13.88 225 Pn Pn 10 34 40.9 0.0
ITAB Concordia 13.92 106 P Pn 10 34 40.9 -0.6
PLTB Pedras Altas 14.19 125 P Pn 10 34 42.3 -2.5
ETMB Extrema 14.30 4 P Pn 10 34 46.2 -0.1
ETMB Extrema 14.30 4 eP Pn 10 34 43.9 -2.4
TRQA Tornquist 14.54 163 P Pn 10 34 47.6 -1.5
PCMB Pacaembu 14.90 83 eP Pn 10 34 51.8 -2.0
CNLB Canela 15.47 113 eP Pn 10 34 58.5 -2.2
SAML Samuel 15.61 15 P Pn 10 35 01.9 -0.5
GO06 Curarrehue 15.79 192 P Pn 10 35 04.7 +0.1
GO06 IAmb IAmb 10 35 08.0
comp=Z,92nm,0.9s
PDRB Porto dos Gac 15.96 40 eP Pn 10 35 05.2 -1.5
LR03 Panguipulli 16.02 195 P P 10 35 07.4 +0.1
LR03 IAmb IAmb 10 35 10.1
comp=Z,38nm,0.7s
FRTB Fartura 16.16 91 eP P 10 35 08.2 -0.9
ITRB Iturama 16.24 77 eP Pn 10 35 10.4 +0.3
LR04 Corral 16.53 197 P 10 35 12.7 -0.1
TIJ01 Guaruva-PR 16.57 98 eP P 10 35 12.1 -1.5
PLCA Paso Flores 16.76 189 P Pn 10 35 16.6 +0.4
comp=Z,24nm,0.9s,baz=9.2,slow=13,SNR=38
PLCA Paso Flores 16.76 189 P Pn 10 35 16.2 0.0
PLCA IAmb IAmb 10 35 24.6
comp=Z,43nm,0.7s
PLCA Paso Flores 16.76 189 eP P 10 35 15.1 -0.4
TER01 Tubarao-SC 16.76 109 eP P 10 35 14.7 -0.9
CLDB Colider 17.10 41 eP P 10 35 18.8 -1.7
CZSB Cruzeiro do Su 17.18 341 P P 10 35 20.0 -0.2
CZSB IAmb IAmb 10 35 30.4
comp=Z,8.5nm,0.5s
LL04 Puerto Octay 17.26 193 P P 10 35 21.2 +0.3
LL04 IAmb IAmb 10 35 22.4
comp=Z,73nm,0.8s
BB19B Bebedouro 17.51 84 eP P 10 35 23.2 -0.7
LL05 Los Muermos 17.97 195 P P 10 35 28.3 -0.4
RCLB Rio Claro- Sao 18.15 88 eP P 10 35 29.6 -1.3
PET01 Itanhaem-SP 18.17 94 eP P 10 35 30.7 -0.3
VAO Valinhos 18.58 91 eP P 10 35 35.0 -0.7
IPMB Ipameri, GO 18.74 74 eP P 10 35 37.1 -0.3
SNDB Serra Nova Dou 19.35 84 eP P 10 35 42.7 -1.3
PARB Paraibuna 19.77 92 eP P 10 35 47.7 -0.7
BDFB Brasilia 19.91 68 P P 10 35 49.9 -0.1
comp=Z,197nm,0.8s,baz=240,slow=11,SNR=219
BDFB Brasilia 19.91 68 P P 10 35 50.0 -0.1
BDFB Brasilia 19.91 68 eP P 10 35 49.8 -0.3
PMNB Patos De Minas 20.12 78 eP P 10 35 51.5 -0.8
NPGB Novo Progresso 20.46 36 eP P 10 35 53.7 -2.1
AY01 Puyuhuapi 20.69 191 P P 10 35 58.2 +0.3
AY01 IAmb IAmb 10 35 59.1
comp=Z,87nm,1.4s
MAN01 Angra dos Reis 21.34 91 eP P 10 36 03.7 -1.5
PEXB Peixe 21.56 60 eP P 10 36 06.3 -1.3
COYC Coyhaique 21.72 189 P P 10 36 08.7 -0.2
COYC IAmb IAmb 10 36 10.1
comp=Z,76nm,0.8s
MACA Manacapuru-AM 21.81 18 P P 10 36 08.9 -1.2
MACA IAmb IAmb 10 36 10.9
comp=Z,73nm,0.6s
MACA Manacapuru-AM 21.81 18 eP P 10 36 08.5 -1.6
VAS01 Vassouras-RJ 21.91 90 eP P 10 36 10.6 -0.5
ITTB Itaituba 22.57 31 eP P 10 36 15.8 -1.7
DIAM Diamantina, MG 22.68 80 eP P 10 36 17.6 -1.0
DUB01 Friburgo-RJ 22.91 90 eP P 10 36 19.0 -1.6
MC01 Montes Claros 23.00 76 eP P 10 36 19.4 -2.0
JANB Januaria 23.35 71 eP P 10 36 23.3 -1.4
CAM01 Campos-RJ 23.61 89 eP P 10 36 25.5 -1.5
SMTB Santa Maria do 24.13 54 eP P 10 36 30.8 -0.9
SDBA SAO DESIDERIO 24.14 65 eP P 10 36 30.5 -1.3
PRPB Parauapebas 24.47 46 eP P 10 36 32.7 -2.1
ALF01 Guarapari-ES 24.71 87 eP P 10 36 36.0 -0.9
SJMB Sao Joao De Ma 24.79 82 eP P 10 36 36.4 -1.3
RIB01 Linhares ES 25.34 84 eP P 10 36 41.4 -1.2
MALB Monte Alegre 25.47 31 eP P 10 36 42.6 -1.2
NAN01 Guarapari, ES 26.02 81 eP P 10 36 47.4 -1.3
GUA01 Guaratinga, BA 26.73 79 eP P 10 36 54.1 -1.0
BOAV Boa Vista 27.19 15 P P 10 36 59.7 +0.5
BOAV IAmb IAmb 10 37 00.1
comp=Z,5.8nm,0.7s
GO09 Cerro Castillo 27.35 187 IAmb IAmb 10 37 02.4
comp=Z,15nm,0.8s
CMC01 Camacan, BA 27.44 77 eP P 10 37 00.1 -1.3
MG05 Puerto Natales 27.77 187 IAmb IAmb 10 37 05.4
comp=Z,31nm,0.8s
MCPB Macapa, AP 27.84 34 eP P 10 37 02.6 -2.4
GDU01 Guandu, BA 28.06 73 eP P 10 37 05.3 -1.7
GO10 Punta Arenas 29.09 185 P P 10 37 17.8 +2.1
MG03 Isla Dawson 29.74 184 P P 10 37 22.2 +0.8
MG03 IAmb IAmb 10 37 23.1
comp=Z,36nm,0.8s
MG01 Puerto William 30.73 180 P P 10 37 30.4 +0.4

NBLA Lagarto - SE 30.86 70 eP P 10 37 29.0 -2.7
MDP Montagnes des 32.36 28 P P 10 37 44.5 -0.3
comp=Z,14nm,0.6s,baz=205,slow=11,SNR=16
comp=Z,14nm,0.6s
NBAN Anadia - AL 32.80 69 eP P 10 37 46.8 -1.9
BAUV El Baul 32.92 358 P P 10 37 49.4 -0.2
BAUV IAmb IAmb 10 37 50.4
comp=Z,18nm,0.8s
NBRF Rio Formoso - 34.28 69 eP P 10 37 59.1 -2.3
RCBR Riachuelo 35.16 64 P P 10 38 08.8 -0.3
comp=Z,28nm,0.9s,baz=21,slow=13,SNR=8.6
comp=Z,28nm,0.9s
RCBR Riachuelo 35.16 64 P P 10 38 08.5 -0.6
RCBR IAmb IAmb 10 38 10.0
comp=Z,18nm,0.8s
RCBR Riachuelo 35.16 64 eP P 10 38 08.8 -0.3
RCBR Riachuelo 35.16 64 P P 10 38 07.9 -1.1
ORCD Orcadas 39.71 163 P P 10 38 45.8 -0.9
ORCD IAmb IAmb 10 38 48.1
comp=Z,16nm,0.7s
PMSA Palmer Station 40.65 178 P P 10 38 55.9 +1.5
comp=Z,11nm,0.7s,baz=2.6,slow=8.1,SNR=7.2
comp=Z,11nm,0.7s
PMSA Palmer Station 40.65 178 P P 10 38 54.9 +0.6
PMSA pP pP 10 39 32.6 0.0
CELP Cerrillos 41.99 1 P P 10 39 05.0 -0.8
CELP IAmb IAmb 10 39 06.7
comp=Z,27nm,0.9s
SMAI San Martin Ant 43.97 180 P P 10 39 21.5 +0.4
BELA Belgrano 2 55.90 172 P P 10 40 51.3 +0.4
BELA IAmb IAmb 10 40 52.5
comp=Z,9.6nm,0.8s
PTCN Pitcairn Islan 56.71 255 P P 10 40 55.8 -1.6
VNA3 Neumayer Olymp 57.05 161 P P 10 40 59.9 +0.8
VNA1 Neumayer--Stat 57.25 160 P P 10 41 01.8 +1.3
VNA1 Neumayer--Stat 57.25 160 PcP PcP 10 41 54.2 +1.4
VNA1 Neumayer--Stat 57.25 160 pP pP 10 41 39.8 -1.5
VNA2 Neumayer--Watz 57.62 160 P P 10 41 04.0 +0.9
baz=281,slow=7.7
SNAA Sanae 59.25 161 P P 10 41 15.1 +0.6
SNAA Sanae 59.25 161 P P 10 41 15.2 +0.8
SNAA IAmb IAmb 10 41 16.1
comp=Z,33nm,1.5s
TROLL Troll, Antarti 60.97 161 P P 10 41 27.2 +1.0
TROLL Troll, Antarti 60.97 161 pP pP 10 42 09.1 +1.7
TXAR Lajitas Array 63.71 325 P P 10 41 46.9 +2.0
comp=Z,0.1nm,0.7s,baz=156,slow=9.0,SNR=3.8
QSPA South Pole Qui 66.04 180 P P 10 41 59.5 0.0
QSPA South Pole Qui 66.04 180 P P 10 41 59.9 +0.4
QSPA x x 10 42 13.1
QSPA pP pP 10 42 44.0 +2.7
S39A Bolivar 66.25 338 P P 10 42 00.7 -0.3
DBIC Dimbokro 68.02 72 P P 10 42 11.7 -1.0
comp=Z,6.7nm,0.8s,baz=182,slow=4.9,SNR=4.1
comp=Z,6.7nm,0.8s
DBIC Dimbokro 68.02 72 P P 10 42 11.4 -1.2
DBIC sP sP 10 43 07.8 -5.8
LENM Lemitar 69.24 325 P P 10 42 17.5 -2.5
E46A Sault Ste Mari 71.89 348 P P 10 42 36.2 +0.7
SBA Scott Base 73.50 190 P P 10 42 46.7 +2.0
SBA IAmb IAmb 10 42 48.7
comp=Z,18nm,1.5s
DRLN Deer Lake 73.60 7 P P 10 42 46.5 +1.0
DRLN IAmb IAmb 10 42 47.2
comp=Z,18nm,1.0s
VNDA Vanda 74.51 190 P P 10 42 53.3 +2.7
comp=Z,4.7nm,0.9s,baz=133,slow=3.5,SNR=15
comp=Z,4.7nm,0.9s
VNDA Vanda 74.51 190 P P 10 42 52.5 +1.9
TOA0 Torodi Ar. Sit 76.79 69 P P 10 43 03.3 -1.2
TOA0 IAmb IAmb 10 43 05.3
comp=Z,18nm,0.8s
TORD Torodi Ar. Bea 76.79 69 P P 10 43 04.4 -0.2
comp=Z,14nm,0.8s,baz=262,slow=6.1,SNR=68
comp=Z,14nm,0.8s
TORD Torodi Ar. Bea 76.79 69 P P 10 43 03.5 -1.1
TORD IAmb IAmb 10 43 05.3
comp=Z,14nm,0.8s
PDAR Pinedale Array 77.20 329 P P 10 43 08.6 +2.0
comp=Z,0.1nm,0.4s,baz=122,slow=8.6,SNR=2.4
ULM Lac du Bonnet 78.33 342 P P 10 43 14.3 +2.1
SCHQ Schefferville 78.67 0 P P 10 43 15.0 +0.9
comp=Z,1.4nm,0.6s,baz=248,slow=3.7,SNR=4.6
comp=Z,1.4nm,0.6s
SCHQ Schefferville 78.67 0 P P 10 43 15.0 +0.9
BOSA Boshof 80.81 117 P P 10 43 26.9 +0.3
comp=Z,1.7nm,0.4s,baz=267,slow=3.7,SNR=11
comp=Z,1.7nm,0.4s
BOSA Boshof 80.81 117 P P 10 43 27.1 +0.5
BOSA IAmb IAmb 10 43 35.4
comp=Z,27nm,1.4s
MAW Mawson 81.33 163 P P 10 43 30.1 +1.8
comp=Z,8.5nm,0.8s,baz=213,slow=5.9,SNR=24
comp=Z,8.5nm,0.8s
MAW Mawson 81.33 163 P P 10 43 29.8 +1.5
PAB San Pablo 86.32 44 P P 10 43 55.0 +0.9
PAB IAmb IAmb 10 43 56.8
comp=Z,12nm,1.2s
ESDC Sonseca Array 86.64 44 P P 10 43 56.7 +1.1
comp=Z,2.5nm,1.0s,baz=229,slow=5.8,SNR=11
comp=Z,2.5nm,1.0s
ESDC Sonseca Array 86.64 44 P P 10 43 55.4 -0.2
YKA Yellowknife Ar 94.22 340 P P 10 44 31.6 +1.3
comp=Z,0.6nm,0.7s,baz=130,slow=4.5,SNR=7.0
comp=Z,0.6nm,0.7s
ASAR Alice Springs 128.23 205 PKP PKiKP 10 50 18.6 -0.1
comp=Z,2.6nm,0.7s,baz=137,slow=1.9,SNR=32
ASAR SKPab SKiKP 10 53 21.1 -18
comp=Z,0.2nm,0.7s,baz=152,slow=3.5,SNR=5.6
WRA Warramunga Arr 131.40 207 PKP PKiKP 10 50 25.1 0.0
comp=Z,1.4nm,0.5s,baz=159,slow=1.6,SNR=31
WRA SKPbc SKPbc 10 53 33.5 +0.1
comp=Z,1.3nm,0.5s,baz=149,slow=3.5,SNR=22
ZALV Zalesovo Beam 143.62 28 PKP PKPdf 10 50 45.0 -0.4
comp=Z,4.0nm,0.7s,baz=297,slow=4.4,SNR=15
ZALV SKPbc SKiKP 10 54 09.6 +0.6
comp=Z,2.3nm,0.9s,baz=285,slow=2.9,SNR=4.8
KSH Kashi 145.44 55 PKPbc PKPab 10 50 51.2 +1.2
MKAR Makanchi Array 146.76 40 PKPbc PKPab 10 50 54.3 -0.5
comp=Z,4.8nm,0.6s,baz=307,slow=2.9,SNR=38
HYBB Hyderabad (bro 147.34 95 ePKiKP PKiKP 10 50 56.9 -0.8
HYBB ePKiKP PKPab 10 50 57.5 -0.4
LEM Lembang 148.78 170 PKPbc PKiKP 10 51 00.9 0.0
comp=Z,15nm,0.4s,baz=226,slow=19,SNR=4.0
WMQ Urumqi 151.59 40 eP PKPdf 10 50 58.7 -0.3
MJAR Matsushiro Arr 154.93 305 PKPab PKPab 10 51 30.1 +1.1
comp=Z,0.4nm,0.5s,baz=92,slow=3.0,SNR=5.7
SONM Songino Array 155.84 11 PKPab PKPab 10 51 34.2 +1.8
comp=Z,0.3nm,0.5s,baz=332,slow=4.9,SNR=3.5
HHC Hu-ho-hao-te 163.33 3 eP PKPdf 10 51 13.9 +0.2
CMAR Chiang Mai Arr 165.89 111 PKPab PKPab 10 52 16.6 -0.6
comp=Z,0.7nm,0.4s,baz=263,slow=5.9,SNR=5.0
PZH PanZhiHua 169.73 75 PKP PKPdf 10 51 17.5 -1.6
KMI Kunming 170.79 82 ⇑P PKPdf 10 51 18.2 -1.6
KMI pmax pmax
comp=Z,9.0nm,0.9s

DJA 03 10:37:57.5±1.1, 12°S±8°×12°2E±°, h32km±22km, M3.8/8, mb4.0/2, MLv3.7/8, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.26**	**52**	P		Pn	10 38 32.7	0.0
BATI				S		Sn	10 39 00.4	+0.8
EDFI	**Ende, Flores**	**2.85**	**357**	P		Pn	10 38 40.9	0.0
EDFI				S		Sn	10 39 14.7	+0.6
MMRI	**Maumere**	**2.98**	**7**	P		Pn	10 38 42.9	+0.3
MMRI				S		Sn	10 39 18.3	+1.0
SOEI	**Soe**	**3.01**	**52**	P		Pn	10 38 43.1	0.0
SOEI				S		Sn	10 39 18.3	+0.2
WBSI	**Waikabubak, Su**	**3.11**	**309**	P		Pn	10 38 41.9	-2.5
WBSI				S		Sn	10 39 21.2	+0.7
PLAI	**Plampang**	**4.87**	**304**	P		Pn	10 39 09.9	+1.3
PLAI				S		Sn	10 40 04.1	+0.2
BSSI	**Bau Bau, Buton** 0.1nm20nm,1.1s	**5.60**	**346**	P		Pn	10 39 18.3	-0.3
TWSI	**Taliwang, Sumb**	**5.66**	**300**	P		Pn	10 39 20.4	+0.9
TWSI				S		Sn	10 40 23.7	+0.2

*GUC **03** 10:50:17.5±0.8, 24°.22S×67°.24W, h180km±11km, ML4.0*
*IDC **03** 10:50:17.3±2.0, 24°.09S×67°.11W, h178km±31km, mb3.2/3, mbtmp3.7/8, Error ellipse: s-maj=39.6km s-min=18.1km az=124.0*

ISC 03 10:50:16.5±0.8, 24°.20S±0°.04×67°.23W±0°.07, h180km±10km, n27, σ1=30/41, mb3.3/3, 6C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.65**	**109**	eP		Pn	10 50 50.7	+0.6
LVC	**Limon Verde**	**2.21**	**315**	P		Pn	10 50 57.7	+1.4
	17nm,0.3s,baz=151,slow=7.1,SNR=148							
LVC				S		Sn	10 51 27.7	+0.6
	101nm,0.4s,baz=196,slow=23,SNR=58							
LVC	**Limon Verde**	**2.21**	**315**	eP		Pn	10 50 57.6	+1.3
LVC				eS		Sn	10 51 27.6	+0.4
PB15	**IPOC Station P**	**2.28**	**295**	⇑iP		Pn	10 50 58.3	+1.4
PB15				eS		Sn	10 51 28.6	+0.4
GO02	**Mina Guanaco**	**2.35**	**246**	⇑iP		Pn	10 50 58.9	+1.0
GO02				eS		Sn	10 51 30.6	+0.7
GO02				IAML			10 51 34.0	
	comp=N,473nm,0.1s							
PB06	**IPOC Station P**	**2.62**	**304**	⇑iP		Pn	10 51 02.0	+1.3
PB06				eS		Sn	10 51 34.8	-0.3
PB06				IAML			10 51 37.9	
	comp=N,623nm,0.2s							
PB14	**IPOC Station P**	**2.93**	**261**	eP		Pn	10 51 05.0	+0.4
PB14				eS		Sn	10 51 41.3	-0.7
PB09	**IPOC Station P**	**3.03**	**322**	iP		Pn	10 51 07.4	+1.7
PB09				eS		Sn	10 51 44.5	+0.5
PB09				IAML			10 51 46.1	
	comp=E,174nm,0.3s							
AC02	**Maricunga**	**3.14**	**213**	⇑iP		Pn	10 51 08.2	+1.0
PB04	**IPOC Station P**	**3.27**	**304**	⇑eP		Pn	10 51 09.3	+0.7
PB04				eS		Sn	10 51 47.8	-1.4
PB07	**IPOC Station P**	**3.48**	**315**	eP		Pn	10 51 11.9	+0.7
PB07				eS		Sn	10 51 52.1	-1.8
AC01	**Pan de Azucar**	**3.62**	**237**	⇑iP		Pn	10 51 12.3	-0.5
AC01				eS		Sn	10 51 54.6	-2.2
PB01	**IPOC Station P**	**3.77**	**326**	eP		Pn	10 51 15.0	+0.1
PB01				eS		Sn	10 51 58.8	-1.7
PB02	**IPOC Station P**	**3.78**	**319**	eP		Pn	10 51 15.1	+0.1
PB02				eS		Sn	10 51 58.9	-1.8
PATCX	**Punta Patache**	**4.32**	**321**	eP		Pn	10 51 21.8	0.0
GO03	**Copiap**	**4.33**	**218**	eP		Pn	10 51 21.0	-0.9
GO03				eS		Sn	10 52 11.0	-2.1
TA01	**Diego Aracena**	**4.54**	**322**	eP		Pn	10 51 24.5	0.0
GO01	**Chusmiza**	**4.87**	**338**	eP		Pn	10 51 30.3	+1.1
AC04	**Llanos de Chal**	**5.28**	**220**	eP		Pn	10 51 32.1	-1.9
LCO	**Las Campanas**	**5.71**	**212**	eP		Pn	10 51 38.1	-1.9
LPAZ	**La Paz**	**7.92**	**354**	P		Pn	10 52 09.7	+0.3
	comp=E,1.3nm,0.3s,baz=168,slow=6.7,SNR=18							
LPAZ				S		Sn	10 53 37.1	-1.6
	comp=E,1.9nm,0.8s,baz=348,slow=18,SNR=5.1							
SIV	**San Ignacio**	**10.00**	**36**	P		Pn	10 52 33.4	-2.9
	comp=E,1.0nm,0.4s,baz=206,slow=13,SNR=6.5							
PLCA	**Paso Flores**	**16.72**	**189**	P		Pn	10 54 01.9	+1.4
	comp=E,0.9nm,0.6s,baz=18,slow=14,SNR=1.7							
BDFB	**Brasilia**	**19.95**	**68**	P		P	10 54 35.1	0.0
	comp=E,4.4nm,0.6s,baz=246,slow=11,SNR=7.5							
SNAA	**Sanae**	**59.23**	**161**	P		P	10 59 59.8	+1.3
	comp=E,0.4nm,0.7s,baz=304,slow=11,SNR=1.9							
	comp=E,0.4nm,0.7s							
QSPA	**South Pole Qui**	**66.00**	**180**	P		P	11 00 45.1	+1.6
	comp=E,0.6nm,0.6s,baz=177,slow=1.7,SNR=2.1							
	comp=E,0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**76.83**	**69**	P		P	11 01 49.2	+0.2
	comp=E,0.3nm,0.5s,baz=249,slow=7.6,SNR=4.7							
	comp=E,0.3nm,0.5s							

*KRSC **03** 10:52:25.9±1.3, 55°.32N×165°.20E, h60km±13km, ML5.1*
*MOS **03** 10:52:27.8±0.8, 55°.36N×165°.24E, h46km, mb5.0/39, MS3.7/7, Error ellipse: s-maj=4.8km s-min=4.3km az=87.3*
*BJI **03** 10:52:27.0±0.0, 55°.60N×165°.11E, h35km, mb4.7/47, mB4.8/28, Ms4.4/29, MS7 4.2/28*
*NEIC **03** 10:52:29.3±1.0, 55°.42N±0°.09×165°.18E±0°.10, h39km±5km, mb5.0/373, Error ellipse: s-maj=13.6km s-min=7.3km az=164.0*
*IDC **03** 10:52:30.1±1.9, 55°.44N×165°.18E, h44km±17km, mb4.2/32, mbtmp4.5/36, ML4.5/4, MS3.8/61, Error ellipse: s-maj=13.6km s-min=9.0km az=150.0*

ISC 03 10:52:29.1±0.3, 55°.36N±0°.04×165°.24E±0°.03, h39km±2km, n879, σ0=91/743, mb4.9/244, MS3.9/74, 16C-13D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.45**	**110**	PN		Pn	10 52 38.1	-0.9
BKI				S		Sn	10 52 45.4	-0.6
BKI	**Bering**	**0.45**	**110**	eP		Pn	10 52 38.1	-0.9
BKI				eS		Sn	10 52 45.4	-0.6
KBTR	**Krutoberegovo**	**1.61**	**303**	PN		Pn	10 52 52.9	-2.0
KBTR				S		Sn	10 53 12.0	-2.4
KBTR	**Krutoberegovo**	**1.61**	**303**	eP		Pn	10 52 52.9	-2.0
KBTR				eS		Sn	10 53 12.0	-2.4
KBG	**Krutoberegovo**	**1.69**	**303**	PN		Pn	10 52 54.0	-2.0
KBG				S		Sn	10 53 14.6	-1.7
KBG	**Krutoberegovo**	**1.69**	**303**	eP		Pn	10 52 54.0	-2.0
KBG				eS		Sn	10 53 14.6	-1.7
MKZ	**Mys Kozlova**	**2.18**	**250**	PN		Pn	10 53 01.9	-0.8
MKZ				S		Sn	10 53 26.5	-1.9
MKZ	**Mys Kozlova**	**2.18**	**250**	eP		Pn	10 53 01.9	-0.8
MKZ				eS		Sn	10 53 26.5	-1.9
SMKR	**Semkarok**	**2.44**	**302**	PN		Pn	10 53 06.3	-0.2
SMKR				S		Sn	10 53 35.4	+0.2
SMKR	**Semkarok**	**2.44**	**302**	eP		Pn	10 53 06.3	-0.2
SMKR				eS		Sn	10 53 35.4	+0.2
BDR	**Baidarnaya**	**2.57**	**300**	PN		Pn	10 53 08.4	+0.2
BDR	**Baidarnaya**	**2.57**	**300**	eP		Pn	10 53 08.4	+0.2
ZLN	**Zelenaya**	**2.59**	**286**	PN		Pn	10 53 10.1	+1.5
ZLN	**Zelenaya**	**2.59**	**286**	eP		Pn	10 53 10.1	+1.5
SRKR	**Sorokina**	**2.63**	**301**	PN		Pn	10 53 09.4	+0.4
SRKR	**Sorokina**	**2.63**	**301**	eP		Pn	10 53 09.4	+0.4
BZGR	**Bezymyannyi-Gr**	**2.64**	**285**	PN		Pn	10 53 09.6	+0.4
BZGR	**Bezymyannyi-Gr**	**2.64**	**285**	eP		Pn	10 53 09.6	+0.4
CIRR	**Tsirk**	**2.65**	**288**	PN		Pn	10 53 09.7	+0.4
CIRR	**Tsirk**	**2.65**	**288**	eP		Pn	10 53 09.7	+0.4
LGNR	**Loginova**	**2.67**	**288**	PN		Pn	10 53 11.1	+1.3
LGNR	**Loginova**	**2.67**	**288**	eP		Pn	10 53 11.1	+1.3
BZMR	**Bezymyannaya**	**2.75**	**284**	PN		Pn	10 53 11.4	+0.6
BZMR	**Bezymyannaya**	**2.75**	**284**	eP		Pn	10 53 11.4	+0.6
BZWR	**Bezymyannyi-We**	**2.75**	**285**	PN		Pn	10 53 11.5	+0.7
BZWR	**Bezymyannyi-We**	**2.75**	**285**	eP		Pn	10 53 11.5	+0.7
KLY	**Klyuchi**	**2.75**	**292**	PN		Pn	10 53 09.7	-1.0
KLY				S		Sn	10 53 41.0	-1.6
KLY	**Klyuchi**	**2.75**	**292**	eP		Pn	10 53 09.7	-1.0
KLY				eS		Sn	10 53 41.0	-1.6
KRSR	**Krestovskiy**	**2.77**	**290**	PN		Pn	10 53 11.1	+0.1
KRSR	**Krestovskiy**	**2.77**	**290**	eP		Pn	10 53 11.1	+0.1
KIRR	**Kirishev**	**2.84**	**284**	PN		Pn	10 53 12.6	+0.7
KIRR	**Kirishev**	**2.84**	**284**	eP		Pn	10 53 12.6	+0.7
KMNR	**Kamenistaya**	**2.87**	**280**	PN		Pn	10 53 13.5	+1.2
KMNR	**Kamenistaya**	**2.87**	**280**	eP		Pn	10 53 13.5	+1.2
KPT	**Kopyto**	**2.90**	**284**	PN		Pn	10 53 13.8	+1.0
KPT	**Kopyto**	**2.90**	**284**	eP		Pn	10 53 13.8	+1.0
TUMR	**Tumrok**	**2.91**	**271**	PN		Pn	10 53 13.6	+0.7
TUMR				S		Sn	10 53 46.8

KRER Koryakskii 4.32 244 *e*P Pn 10 53 33.0 +0.6
KRER eS Sn 10 54 20.1 -1.5
UGLR Uglovaya 4.33 243 PN Pn 10 53 33.0 +0.5
UGLR S Sn 10 54 20.6 -1.1
UGLR Uglovaya 4.33 243 *e*P Pn 10 53 33.0 +0.5
UGLR eS Sn 10 54 20.6 -1.1
KRX Arik 4.34 245 PN Pn 10 53 33.2 +0.6
KRX Arik 4.34 245 *e*P Pn 10 53 33.2 +0.6
AVH Avacha 4.35 244 PN Pn 10 53 33.2 +0.6
AVH Avacha 4.35 244 *e*P Pn 10 53 33.2 +0.6
KOK Koryaka 4.38 244 PN Pn 10 53 33.8 +0.6
KOK Koryaka 4.38 244 *e*P Pn 10 53 33.8 +0.6
DALK Dalny 4.47 241 PN Pn 10 53 34.3 +0.1
DALK Dalny 4.47 241 *e*P Pn 10 53 34.3 +0.1
DALK eS Sn 10 54 21.9 -2.9
PET Petropavlovsk 4.52 241 Pn Sn 10 53 34.8 -0.1
PET Sn Sn 10 54 22.8 -3.3
PET Petropavlovsk 4.52 241 *e*PN Pn 10 53 35.0 +0.1
PET pmax pmax
comp=Z,204nm,0.3s
PET MLR MLR
comp=Z,700nm,15.0s
PET MLR MLR
comp=Z,800nm,15.0s
PET Petropavlovsk 4.52 241 P Pn 10 53 35.5 +0.6
PET Petropavlovsk 4.52 241 *e*P Pn 10 53 35.1 +0.1
PET eS Sn 10 54 24.2 -1.9
GNL Ganaly 4.57 252 PN Pn 10 53 36.5 +0.8
GNL Ganaly 4.57 252 *e*P Pn 10 53 36.5 +0.8
PALN Palana 4.71 325 PN Pn 10 53 38.2 +0.8
PALN Palana 4.71 325 *e*P Pn 10 53 38.2 +0.8
KRMR Karymshinskiy 4.89 242 PN Pn 10 53 40.6 +0.6
KRMR Karymshinskiy 4.89 242 *e*P Pn 10 53 40.6 +0.6
KRMR eS Sn 10 54 34.3 -1.0
RUS Russkaya 4.94 236 PN Pn 10 53 40.2 -0.5
RUS Russkaya 4.94 236 *e*P Pn 10 53 40.2 -0.5
PEA0B Petropavlovsk- 4.96 246 Pn Pn 10 53 41.3 +0.3
PEA0B Sn Sn 10 54 37.0 -0.1
PEA0B Petropavlovsk- 4.96 246 *d i*PN Pn 10 53 41.3 +0.3
PETK Petropavlovsk- 4.96 246 P Pn 10 53 41.3 +0.3
comp=Z,21nm,0.3s,baz=77,slow=16,SNR=101
PETK S Sn 10 54 37.2 0.0
comp=Z,111nm,0.8s,baz=76,slow=40,SNR=5.7
comp=Z,29nm,0.3s
PETK Petropavlovsk- 4.96 246 Pn Pn 10 53 40.8 -0.3
PETK Petropavlovsk- 4.96 246 PN Pn 10 53 40.8 -0.3
MTVR Mutnovka 5.07 238 PN Pn 10 53 42.7 +0.1
MTVR Mutnovka 5.07 238 *e*P Pn 10 53 42.7 +0.1
MTVR eS Sn 10 54 37.4 -2.5
GRL Gorelyy 5.08 239 PN Pn 10 53 43.4 +0.7
GRL Gorelyy 5.08 239 *e*P Pn 10 53 43.4 +0.7
TILK Tilichiki 5.12 5 PN Pn 10 53 44.5 +1.4
TILK Tilichiki 5.12 5 *e*P Pn 10 53 44.5 +1.4
APC Apacha 5.34 246 PN Pn 10 53 47.3 +1.2
APC Apacha 5.34 246 *e*P Pn 10 53 47.3 +1.2
KDTR Khodutka, Kamc 5.55 233 PN Pn 10 53 48.6 -0.5
KDTR Khodutka, Kamc 5.55 233 *e*P Pn 10 53 48.6 -0.5
SMY Shemya 5.85 113 Pn 10 53 54.0 +0.9
SMY Shemya 5.85 113 PN Pn 10 53 54.1 +0.9
KMSK Kamenskaya 7.14 4 PN Pn 10 54 12.4 +1.6
KMSK Kamenskaya 7.14 4 *e*P Pn 10 54 12.4 +1.6
KMSK eS Sn 10 55 29.5 -1.1
SKR Severo-Kuril's 7.22 233 *e*PN Pn 10 54 13.0 +1.0
SKR pmax pmax
comp=Z,56nm,0.4s
MA2 Magadan 8.86 304 P Pn 10 54 34.9 +0.5
comp=Z,1.6nm,0.3s,baz=115,slow=10,SNR=28
MA2 LR LR 10 58 11.5
comp=Z,536nm,20.2s,baz=116,slow=39
comp=Z,28nm,0.8s
MA2 Magadan 8.86 304 *de*PN Pn 10 54 35.9 +1.5
MA2 pmax pmax
comp=Z,26nm,0.9s
MA2 Magadan 8.86 304 P Pn 10 54 35.9 +1.5
AMKA Amchitka 9.30 110 Pn Pn 10 54 41.3 +0.8
SEY Seymchan 10.04 324 P Pn 10 54 52.1 +1.6
comp=Z,1.1nm,0.3s,baz=130,slow=12,SNR=26
comp=Z,6.9nm,0.6s
SEY Seymchan 10.04 324⇑ *e*PN Pn 10 54 52.1 +1.6
SEY pmax pmax
comp=Z,8.0nm,0.7s
KIWB Kanaga Island 11.03 101 Pn Pn 10 55 04.4 +0.2
ADK Adak 11.28 101 Pn Pn 10 55 08.6 +1.1
ADK Adak 11.28 101 PN Pn 10 55 08.6 +1.1
ADK Adak 11.28 101 P Pn 10 55 08.4 +0.9
BILL Bilibino 12.73 2⇑ *e*PN Pn 10 55 29.6 +2.4
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,574nm,16.0s
OKH Okha 13.09 271 *de*PN Pn 10 55 33.5 +1.3
OKH MLR MLR
comp=E,600nm,15.0s
OKH MLR MLR
comp=Z,400nm,14.0s
NIKH Nikolski High 15.33 88 P Pn 10 56 02.2 -0.2
baz=290
YSS Yuzh-Sakhalins 16.36 248 *e*P Pn 10 56 15.9 +0.2
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,300nm,16.0s
UNV Unalaska Valle 16.40 84 P Pn 10 56 16.7 +0.7
UNV Unalaska Valle 16.40 84 P Pn 10 56 16.5 +0.4
baz=287
SHO Shikotan 16.51 233 *e*P Pn 10 56 11.5 -6.0
TNA Tin City 16.56 41 P 10 56 21.5 +1.3
TNA Tin City 16.56 41 P Pn 10 56 18.3 +0.3
baz=245
SDPT Sand Point 19.38 76 P P 10 56 51.5 +0.2
baz=284
YAK Yakutsk 19.44 305 P P 10 56 51.0 -0.8
comp=Z,0.1nm,0.3s,baz=93,slow=1.4,SNR=5.6
comp=Z,7.7nm,0.3s
YAK Yakutsk 19.44 305⇓ *e*P P 10 56 51.5 -0.3
YAK pmax pmax
comp=Z,47nm,1.3s
N16K Nishlik Lake 19.61 60 P P 10 56 53.9 +0.2
baz=271,SNR=8.9
ERM Erimo 19.65 236 P P 10 56 52.6 -1.7
ERM Erimo 19.65 236 P P 10 56 52.6 -1.7
ERM pmax pmax
comp=Z,50nm,1.4s
ERM Erimo 19.65 236 P Pn 10 56 55.4 -0.6
S14K Fog Glacier 19.68 73 P P 10 56 55.1 +0.6
baz=282
O16K Kokwok River B 19.98 63 P P 10 56 58.3 +0.5
baz=274
CHNA Chernabura Isl 20.01 77 P P 10 56 58.4 +0.3
baz=286
CNBA Chernabura Isl 20.01 77 P P 10 56 57.9 -0.2
CHGN Chignik 20.29 72 P P 10 57 00.9 -0.2
CHGN IAmb IAmb 10 57 16.8
comp=Z,45nm,1.0s
CHGN Chignik 20.29 72 P P 10 57 01.8 +0.6
baz=283
O17K Koliganek Bris 20.48 62 P P 10 57 03.9 +0.8
baz=274
R16K Pilot Point 20.50 68 P P 10 57 03.6 +0.3
baz=280
GCSA Galena City Sc 20.79 48 P P 10 57 07.0 +0.6
baz=261,SNR=7.3
Q16K King Salmon 20.81 65 P P 10 57 07.4 +0.6
baz=278
P17K Kvichak River 20.86 64 P P 10 57 08.2 +0.9
baz=276
TTA Tatalina 20.98 53 P P 10 57 08.6 0.0
TTA Tatalina 20.98 53 P P 10 57 08.6 0.0
TTA pmax pmax
comp=Z,13nm,0.8s
TTA Tatalina 20.98 53 P P 10 57 09.4 +0.7
baz=267,SNR=11
N18K Kilae Creek 21.02 59 P P 10 57 09.8 +0.7
N18K Kilae Creek 21.02 59 P P 10 57 09.7 +0.7
baz=273
R17K Ugashik Creek 21.11 68 P P 10 57 10.6 +0.5
baz=280
SVW2 Sparrevohn 21.16 58 P P 10 57 11.0 +0.5
KLR Kul'dur 21.23 267 P P 10 57 11.6 +0.2
comp=Z,3.9nm,0.8s,baz=56,slow=13
KLR LR LR 11 06 45.4
comp=Z,178nm,19.9s,baz=83,slow=40
comp=Z,3.9nm,0.8s
KLR Kul'dur 21.23 267⇑ *e*P P 10 57 11.5 +0.2
KLR pmax pmax
comp=Z,7.0nm,1.2s
O18K Koktuh Hills 21.42 62 P P 10 57 13.9 +0.6
baz=276
P18K Big Mountain, 21.46 63 P P 10 57 14.2 +0.4
baz=277
L19K White Mountain 21.49 55 P P 10 57 14.6 +0.5
L19K White Mountain 21.49 55 P P 10 57 15.0 +1.0
baz=270,SNR=15
Q18K Katmai Hardscr 21.67 65 P P 10 57 16.3 +0.1
baz=279
N19K Bonanza Creek 21.71 59 P P 10 57 16.2 -0.2
N19K Bonanza Creek 21.71 59 P P 10 57 17.3 +0.8
baz=274
M19K Big River Lodg 21.71 56 P P 10 57 16.7 +0.3
M19K Big River Lodg 21.71 56 P P 10 57 17.2 +0.8
baz=271,SNR=12
O19K Port Alsworth 21.83 61 P P 10 57 17.7 0.0
baz=275
K20K Telida 21.88 52 P P 10 57 18.8 +0.6
K20K Telida 21.88 52 P P 10 57 18.7 +0.5
baz=268,SNR=18
J20K Nowinta River 21.89 50 P P 10 57 18.8 +0.5
J20K IAmb IAmb 10 57 21.3
comp=Z,34nm,0.8s
J20K Nowinta River 21.89 50 P P 10 57 18.6 +0.2
baz=266,SNR=34
ZEA Zeya 21.91 282 *e*P P 10 57 17.8 -0.8
ZEA *e* 11 01 22.9
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,100nm,16.0s
L20K Farewell, AK 21.95 54 P P 10 57 19.1 +0.1
baz=270,SNR=7.4
IMAR Indian Mountai 22.27 45 P P 10 57 22.9 +0.5
M20K Styx River 22.30 56 P P 10 57 22.8 -0.1
baz=272,SNR=11
Q19K Cape Douglas, 22.33 64 P P 10 57 22.9 -0.2
baz=279
TIXI Tiksi 22.43 331 P P 10 57 24.2 +0.2
comp=E,3.6nm,0.8s,baz=90,slow=23,SNR=3.8
TIXI LR LR 11 06 59.6
comp=E,337nm,18.3s,baz=178,slow=39
comp=E,3.6nm,0.8s
TIXI Tiksi 22.43 331⇑ *e*P P 10 57 24.6 +0.6
TIXI pmax pmax
comp=Z,4.0nm,0.9s
P19K Oil Pt 22.44 62 P P 10 57 24.3 0.0
baz=278
ILSW Iliamna Southw 22.44 61 P P 10 57 24.8 +0.4
ILSW IAmb IAmb 10 57 27.5
comp=Z,34nm,1.2s
G21K Allakaket 22.45 44 P P 10 57 24.3 -0.1
baz=260
F21K Alatna River 22.59 42 P P 10 57 25.8 -0.1
baz=259,SNR=22
H21K Melozitna Rive 22.61 46 P P 10 57 25.8 -0.3
H21K Melozitna Rive 22.61 46 P P 10 57 25.8 -0.3
baz=263,SNR=18
CHUM Lake Minchumin 22.68 51 P P 10 57 27.2 +0.4
baz=268,SNR=16
O20K Slope Mountain 22.69 61 P P 10 57 27.0 0.0
baz=277
PPLA Purkeypile 22.72 53 P P 10 57 27.0 -0.4
PPLA Purkeypile 22.72 53 P P 10 57 27.6 +0.2
baz=270,SNR=12
CAST Castle Rocks 22.77 52 P P 10 57 28.1 +0.3
baz=269,SNR=19
A21K Barrow 22.80 31 P P 10 57 27.0 -0.9
baz=246
OHAK Old Harbor 22.84 68 P P 10 57 26.8 -1.6
OHAK Old Harbor 22.84 68 P P 10 57 27.7 -0.7
baz=283
I21K Tanana 22.91 47 P P 10 57 29.1 0.0
I21K Tanana 22.91 47 P P 10 57 28.6 -0.5
baz=265,SNR=11
Q20K Shuyak Island 23.02 64 P P 10 57 29.4 -1.0
baz=280
SKT Skwentna 23.06 56 P P 10 57 30.7 0.0
baz=273
KDAK Kodiak Island 23.09 67 P P 10 57 30.4 -0.6
KDAK Kodiak Island 23.09 67 P P 10 57 30.4 -0.6
KDAK pmax pmax
comp=Z,40nm,1.4s
KDAK Kodiak Island 23.09 67 P P 10 57 30.8 -0.2
baz=282
F22K John River 23.14 41 P P 10 57 31.2 -0.3
baz=260
H22K Ishtalitna Cre 23.23 46 P P 10 57 32.2 -0.2
baz=264,SNR=15
BPAW Bear Paw Mtn. 23.27 50 P P 10 57 32.8 0.0
BPAW Bear Paw Mtn. 23.27 50 P P 10 57 32.6 -0.2
baz=269,SNR=30
G22K Bettles 23.30 43 P P 10 57 32.7 -0.3
baz=262
CAPN Captain Cook N 23.34 59 P P 10 57 31.8 -1.6
baz=276
MLY Manley 23.42 48 P P 10 57 34.4 +0.1
baz=267,SNR=23
CNPM China Poot 23.46 62 P P 10 57 33.7 -1.0
TRF Thorofare Moun 23.58 52 P P 10 57 36.1 +0.1
TRF IAmb IAmb 10 57 37.6
comp=Z,43nm,0.9s
TRF Thorofare Moun 23.58 52 P P 10 57 35.9 -0.1
baz=271,SNR=15
BRLK Bradley Lake 23.60 61 P P 10 57 35.7 -0.3
BRLK IAmb IAmb 10 57 41.5
comp=Z,46nm,1.5s
CUT Chulitna 23.62 55 IAmb IAmb 10 57 37.8
comp=Z,54nm,1.1s
CUT Chulitna 23.62 55 P P 10 57 35.3 -0.9
baz=273
BRSE Bradley Lake S 23.68 61 P P 10 57 35.1 -1.6
baz=279
M22K Willow 23.74 56 IAmb IAmb 10 57 55.8
comp=Z,26nm,0.9s
COLD Coldfoot 23.85 42 IAmb IAmb 10 57 39.7
comp=Z,39nm,0.9s
COLD Coldfoot 23.85 42 P P 10 57 37.6 -0.7
baz=262,SNR=38
G23K Bananza Creek 23.86 44 P P 10 57 38.0 -0.5
baz=264,SNR=15
USRK Ussuriysk Ar. 23.96 256 P P 10 57 38.7 -0.8
comp=Z,1.8nm,0.6s,baz=40,slow=11,SNR=5.4
USRK LR LR 11 06 33.1
comp=Z,220nm,19.3s,baz=241,slow=35
comp=Z,1.8nm,0.6s
H23K Yukon River 23.97 46 IAmb IAmb 10 57 41.4
comp=Z,48nm,1.1s
H23K Yukon River 23.97 46 P P 10 57 39.4 0.0
baz=266,SNR=36
D23K Nanushuk River 23.98 38 P P 10 57 39.1 -0.4
baz=258,SNR=6.8
RC01 Rabbit Creek A 23.99 58 P P 10 57 38.6 -1.0
baz=277
I23K Minto, Yukon-K 24.01 48 IAmb IAmb 10 57 41.6
comp=Z,41nm,0.8s
I23K Minto, Yukon-K 24.01 48 P P 10 57 39.5 -0.3
baz=268,SNR=43
O22K Cooper Landing 24.07 59 P P 10 57 39.8 -0.5
baz=278
NEA2 Nenana 24.12 49 P P 10 57 40.4 -0.4
NEA2 IAmb IAmb 10 57 42.1
comp=Z,32nm,0.7s
NEA2 Nenana 24.12 49 P P 10 57 40.2 -0.6
baz=269,SNR=29
MCK McKinley 24.18 51 P P 10 57 41.1 -0.3
MCK IAmb IAmb 10 57 43.0
comp=Z,55nm,1.3s
MCK McKinley 24.18 51 P P 10 57 41.1 -0.3
MCK pmax pmax
comp=Z,55nm,1.3s
MCK McKinley 24.18 51 P P 10 57 40.8 -0.6
baz=271,SNR=15
C23K Itkillik River 24.20 36 P P 10 57 40.9 -0.5
baz=256,SNR=10
PMR Palmer 24.23 56 P P 10 57 41.4 -0.3
baz=276
RND Reindeer 24.23 52 IAmb IAmb 10 57 42.9
comp=Z,27nm,0.7s
SEW Seward 24.26 60 P P 10 57 41.1 -1.0
baz=279
TOLK Toolik Lake Re 24.31 39 P P 10 57 42.3 -0.3
TOLK IAmb IAmb 10 57 44.0
comp=Z,51nm,0.8s
TOLK Toolik Lake Re 24.31 39 P P 10 57 41.8 -0.8
baz=260,SNR=30
WAT1 Susitna Watana 24.39 53 P P 10 57 41.9 -1.5
baz=274
MDM Murphy Dome 24.48 48 P P 10 57 43.7 -0.4
WRH Wood River Hil 24.54 49 P P 10 57 44.3 -0.4
KNK Knik Glacier 24.57 57 IAmb IAmb 10 57 46.0
comp=Z,38nm,1.1s
KNK Knik Glacier 24.57 57 P P 10 57 43.6 -1.3
baz=277,SNR=7.1
SML Sawmill 24.58 56 IAmb IAmb 10 57 46.3
comp=Z,32nm,0.8s
SML Sawmill 24.58 56 P P 10 57 44.6 -0.5
baz=276,SNR=14
E24K Your Creek 24.62 41 P P 10 57 45.1 -0.3
baz=262,SNR=55
TCOL CIGO, UAF Yank 24.64 48 IAmb IAmb 10 57 46.3
comp=Z,28nm,0.8s
TCOL CIGO, UAF Yank 24.64 48 P P 10 57 45.1 -0.4
baz=270,SNR=7.4
COLA College 24.64 48 P P 10 57 45.5 -0.1
COLA IAmb IAmb 10 57 46.3
comp=Z,28nm,0.8s
COLA College 24.64 48 *c i*P P 10 57 45.0 -0.5
COLA pmax pmax
comp=Z,21nm,0.9s
COLA College 24.64 48 P P 10 57 45.0 -0.5
baz=270
H24K Moodlor Dome 24.66 46 P P 10 57 45.6 -0.2
baz=268,SNR=13
D24K Happy Valley 24.67 38 P P 10 57 45.0 -0.8
baz=260
PWL Port Wells 24.70 58 IAmb IAmb 10 57 47.2
comp=Z,64nm,1.0s
PWL Port Wells 24.70 58 P P 10 57 45.0 -1.1
baz=278,SNR=20
F24K Squaw Lake 24.78 42 P P 10 57 46.4 -0.4
baz=264,SNR=15
WAT6 Susitna Watana 24.78 54 P P 10 57 46.0 -1.0
baz=275,SNR=8.7
POKR Poker Plat Res 24.82 48 P P 10 57 46.9 -0.3
baz=270,SNR=5.5
C24K Franklin Bluff 24.83 37 P P 10 57 46.6 -0.5
baz=258,SNR=16
G24K Hadweenzic Riv 24.87 44 P P 10 57 47.4 -0.2
baz=266,SNR=30
M23K Glacier View 24.87 56 P P 10 57 46.8 -0.9
baz=277,SNR=11
DHY Denali Highway 24.91 53 IAmb IAmb 10 57 49.1
comp=Z,31nm,1.0s
DHY Denali Highway 24.91 53 P P 10 57 47.3 -0.9
baz=274,SNR=27
HDA Harding Lake 25.04 49 IAmb IAmb 10 57 50.1
comp=Z,24nm,0.8s
HDA Harding Lake 25.04 49 P P 10 57 48.0 -1.1
baz=272,SNR=24
SCM Sheep Creek Mo 25.05 56 P P 10 57 49.4 0.0
SCM IAmb IAmb 10 57 51.6
comp=Z,51nm,0.8s
SCM Sheep Creek Mo 25.05 56 P P 10 57 49.4 0.0
SCM pmax pmax
comp=Z,51nm,0.8s
SCM Sheep Creek Mo 25.05 56 P P 10 57 49.0 -0.4
baz=277,SNR=15
IL31 25.06 49 P P 10 57 48.9 -0.4
IL31 IAmb IAmb 10 57 51.9
comp=Z,22nm,0.8s
ILAR Eielson Array 25.06 49 P P 10 57 49.2 -0.1
comp=Z,21nm,0.8s,baz=260,slow=8.7,SNR=210
ILAR PcP PcP 11 01 21.4 -1.3
comp=Z,0.8nm,0.7s,baz=277,slow=3.7,SNR=4.3
ILAR LR LR 11 08 44.1
comp=Z,362nm,18.1s,baz=275,slow=39
comp=Z,21nm,0.8s
ILAR Eielson Array 25.06 49 P P 10 57 49.0 -0.3
ILAR Eielson Array 25.06 49 P P 10 57 49.0 -0.3
P23K Montague Islan 25.29 60 P P 10 57 51.1 -0.3
baz=281
GLI Glacier Island 25.29 58 IAmb IAmb 10 57 54.2
comp=Z,21nm,0.8s
GLI Glacier Island 25.29 58 P P 10 57 51.7 +0.2
baz=279,SNR=7.3
G25K Bearman Lake 25.42 44 P P 10 57 52.0 -0.5
baz=267
H25K Birch Creek 25.51 45 P P 10 57 52.9 -0.5
baz=269
M24K Tolsona, Glenn 25.56 55 P P 10 57 54.2 +0.3
baz=277,SNR=10.0
D25K Kavik River 25.56 38 P P 10 57 53.0 -0.9
baz=262,SNR=22
K24K Donnelly Dome 25.58 51 P P 10 57 52.6 -1.5
baz=274,SNR=9.6
BNX BinXian 25.60 264 ⇑P P 10 57 54.0 -0.4
BNX pmax pmax
comp=Z,15nm,0.9s
BNX pmax pmax
comp=Z,50nm,3.8s
PRP Porcupine Dome 25.62 47 IAmb IAmb 10 57 55.5
comp=Z,33nm,0.7s
PRP Porcupine Dome 25.62 47 P P 10 57 54.4 -0.3
baz=271
F25K Christian River 25.64 42 P P 10 57 54.6 -0.1
baz=266,SNR=13
E25K Arctic Village 25.71 41 P P 10 57 55.3 +0.1
baz=265,SNR=6.8
J25K Salcha River, 25.71 49 P P 10 57 53.7 -1.7
baz=273,SNR=17
KLU Klutina 25.76 56 P P 10 57 55.2 -0.6
baz=279
PAX Paxson 25.79 53 P P 10 57 55.4 -0.6
baz=276,SNR=11
HARP HAARP 26.00 54 P P 10 57 57.7 -0.2
baz=277,SNR=6.1
RIDG Independent Ri 26.00 51 P P 10 57 56.5 -1.4
baz=275,SNR=9.3
EYAK Cordova Ski Ar 26.00 58 P P 10 57 57.7 -0.2
baz=281
BMAR Burnt Mountain 26.04 42 P P 10 57 58.8 +0.6
C26K Camden Bay 26.16 37 P P 10 57 58.5 -0.6
baz=262
F26K Sheenjek River 26.22 42 P P 10 57 59.5 -0.4
baz=267,SNR=5.1
MAJO Matsushiro 26.32 236 P P 10 58 01.5 +0.4
MAJO IAmb IAmb 10 58 08.8
comp=Z,21nm,0.7s
MAJO Matsushiro 26.32 236 *de*P P 10 58 02.4 +1.3
MAJO pmax pmax
comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 26.32 236 P P 10 58 03.2 +2.2
comp=Z,4.4nm,0.6s,baz=33,slow=8.2,SNR=23
MJAR LR LR 11 09 07.1
comp=Z,185nm,21.4s,baz=46,slow=38
comp=Z,4.4nm,0.6s
G26K Porcupine Rive 26.34 44 P P 10 58 00.9 +0.1
baz=269,SNR=10
SCRK Sand Creek 26.36 50 P P 10 57 59.8 -1.4
baz=275,SNR=19
N25K Chitina, Valde 26.37 56 P P 10 58 01.3 -0.1
baz=279,SNR=6.0
BMRM Bremner River 26.48 57 IAmb IAmb 10 58 03.2
comp=Z,26nm,1.0s
BMRM Bremner River 26.48 57 P P 10 58 02.0 -0.3
baz=281,SNR=7.8
J26L Joseph Creek 26.50 49 P P 10 58 01.2 -1.3
baz=274,SNR=9.5
C27K Jago River 26.53 38 P P 10 58 01.2 -1.4
baz=264,SNR=6.1
I26K Coal Creek Min 26.62 47 P P 10 58 02.4 -1.1
baz=273
L26K Log Cabin Wild 26.74 52 P P 10 58 03.8 -0.8
baz=278,SNR=6.0
M26K Nabesna, AK 26.99 54 P P 10 58 07.6 +0.7
M26K Nabesna, AK 26.99 54 P P 10 58 07.1 +0.3
baz=279,SNR=8.5
MCARA McCarthy VSAT 27.15 56 P P 10 58 08.4 +0.2
baz=281
G27K Doyon Strip 27.18 44 P P 10 58 08.6 +0.1
baz=271,SNR=5.5
K27K Chicken 27.19 50 IAmb IAmb 10 58 09.3
comp=Z,26nm,0.9s
K27K Chicken 27.19 50 P P 10 58 07.9 -0.6
baz=276
E27K Coleen River 27.20 41 P P 10 58 08.2 -0.5
baz=269
CRQM Cirque 27.22 57 IAmb IAmb 10 58 10.6
comp=Z,66nm,1.2s
CRQE Cirque 27.25 57 P P 10 58 08.8 -0.4
baz=282
I27K Kandik River 27.25 47 P P 10 58 08.8 -0.3

baz=274
H27K Steamboat Moun 27.25 45 P P 10 58 09.5 +0.3
baz=273
L27K Beaver Creek, 27.43 52 IAmb IAmb 10 58 12.2
comp=Z,28nm,0.9s
L27K Beaver Creek, 27.43 52 P P 10 58 11.0 +0.3
baz=279,SNR=21
M27K Edge Creek, AK 27.51 54 P P 10 58 12.0 +0.4
baz=280,SNR=8.3
BVCY Beaver Creek 27.97 53 P P 10 58 16.0 +0.4
baz=280,SNR=9.1
CTG Chitna Glacier 28.04 56 P P 10 58 16.3 0.0
baz=283
YUK3 Moose Creek 28.28 55 P P 10 58 18.2 -0.4
baz=282
DAWY Dawson 28.36 50 P P 10 58 19.4 +0.3
DAWY Dawson 28.36 50 P P 10 58 18.5 -0.5
baz=279,SNR=11
JHJ Hachijo jima 2 28.47 229 LR LR 11 09 39.7
comp=Z,41nm,21.6s,baz=92,slow=36
O28M Mount Upton 28.63 57 P P 10 58 22.0 +0.2
baz=284
I29M Ogilvie Camp, 28.64 47 P P 10 58 21.5 -0.1
I29M Ogilvie Camp, 28.64 47 P P 10 58 21.2 -0.3
baz=277,SNR=10.0
PINM Pinnacle 28.77 58 P P 10 58 22.8 0.0
baz=285
M29M Somme Creek 29.06 53 P P 10 58 25.6 +0.3
baz=282
YUK4 Talbot Arm 29.22 55 P P 10 58 26.8 -0.1
baz=284
PNL Peninsula 29.30 59 P P 10 58 27.0 -0.4
baz=286
YUK6 Outpost Mounta 29.45 56 P P 10 58 28.4 -0.7
baz=285
M30M Minto, Yukon 29.79 52 P P 10 58 31.9 +0.2
baz=283
HYT Haines Junctio 29.89 56 P P 10 58 33.6 +0.8
HYT Haines Junctio 29.89 56 P P 10 58 33.0 +0.3
baz=286,SNR=6.1
SEHB SEOHWA 30.08 251 P P 10 58 36.7 +2.2
INK Inuvik 30.20 40 P P 10 58 35.3 +0.1
comp=Z,4.7nm,0.4s,baz=280,slow=6.6,SNR=28
INK PcP PcP 11 01 34.9 -0.2
comp=Z,1.4nm,0.4s,baz=322,slow=5.9,SNR=2.3
INK LR LR 11 11 30.4
comp=Z,127nm,20.1s,baz=274,slow=38
comp=Z,4.7nm,0.4s
INK Inuvik 30.20 40 P P 10 58 35.5 +0.3
INK Inuvik 30.20 40 P P 10 58 35.0 -0.2
baz=276,SNR=6.0
P30M Million Dollar 30.35 57 P P 10 58 37.0 +0.2
baz=287
N31M Braeburn, Yuko 30.52 54 P P 10 58 38.4 +0.2
baz=286
O30N Mendenhall 30.57 56 P P 10 58 38.9 +0.2
baz=287
KS19 Wonju Array Si 30.84 250 P P 10 58 41.0 -0.2
KSRS Korea Array 30.85 250 P P 10 58 43.8 +2.5
comp=Z,3.8nm,0.9s,baz=34,slow=8.9,SNR=12
KSRS PcP PcP 11 01 38.5 +1.2
comp=Z,1.2nm,0.9s,baz=282,slow=1.1,SNR=6.0
KSRS LR LR 11 10 09.8
comp=Z,139nm,21.5s,baz=60,slow=34
comp=Z,3.8nm,0.9s
KSAR Wonju Array Be 30.88 250 P P 10 58 41.8 +0.2
KSAR Wonju Array Be 30.88 250 P P 10 58 41.8 +0.2
M31M Drury Creek, Y 30.96 52 IAmb IAmb 10 58 44.1
comp=Z,14nm,0.8s
M31M Drury Creek, Y 30.96 52 P P 10 58 42.9 +0.8
baz=285,SNR=13
SKAG Skagway 31.34 58 P P 10 58 45.9 +0.6
baz=289
N32M Quiet Lake 31.86 54 P P 10 58 50.2 +0.2
baz=288
P32M Atlin 32.07 57 P P 10 58 52.3 +0.4
baz=290
JIS Juneau Island 32.21 60 IAmb IAmb 10 58 55.4
comp=Z,22nm,1.0s
P33M Teslin, Yukon 32.29 56 P P 10 58 54.5 +0.7
baz=290
JCJ Chichijima 32.83 220 LR LR 11 12 29.2
comp=Z,10nm,19.8s,baz=118,slow=36
C36M Paulatuk 33.43 37 P P 10 59 03.6 0.0
C36M IAmb IAmb 10 59 04.2
comp=Z,29nm,1.0s
C36M Paulatuk 33.43 37 P P 10 59 02.8 -0.8
baz=282
R33M Jennings River 33.45 56 P P 10 59 04.2 +0.2
baz=292,SNR=9.2
CRAG Craig 33.97 64 P P 10 59 09.1 +0.7
baz=296
DLBC Dease Lake 34.27 58 LR LR 11 13 20.0
comp=Z,158nm,21.8s,baz=313,slow=36
DLBC Dease Lake 34.27 58 IAmb IAmb 10 59 13.5
comp=Z,11nm,0.8s
DLBC Dease Lake 34.27 58 P P 10 59 11.2 +0.1
baz=294,SNR=8.0
T35M Bob Quinn 34.76 60 P P 10 59 14.9 -0.4
baz=296,SNR=7.1
H11N2 WAKE ISLAND Hy 35.60 177 T T 11 37 16.0
baz=359,slow=76,SNR=5026
H11N3 WAKE ISLAND Hy 35.61 177 T T 11 37 21.4
baz=359,slow=76,SNR=4970
H11N1 WAKE ISLAND Hy 35.61 177 T T 11 37 19.4
baz=359,slow=76,SNR=4734
NRIK Noril'sk 35.83 324 PcP PcP 11 01 51.3 +0.5
comp=Z,2.0nm,0.5s,baz=104,slow=2.5,SNR=1.9
NRIK LR LR 11 14 54.6
comp=Z,249nm,18.6s,baz=66,slow=38
NRIK Noril'sk 35.83 324⇓*eP* P 10 59 24.3 0.0
NRIK pmax pmax
comp=Z,4.0nm,1.1s
ULN Ulaanbaatar 35.94 283 P P 10 59 25.9 +0.2
ULN Ulaanbaatar 35.94 283*ce*P P 10 59 26.8 +1.1
ULN pmax pmax
comp=Z,12nm,1.3s
SONM Songino Array 36.32 283 P P 10 59 29.7 +0.7
comp=Z,7.3nm,0.7s,baz=57,slow=8.0,SNR=38
SONM PcP PcP 11 01 52.9 0.0
comp=Z,2.1nm,0.7s,baz=73,slow=2.0,SNR=7.4
SONM LR LR 11 15 44.1
comp=Z,180nm,18.6s,baz=54,slow=38
comp=Z,7.3nm,0.7s
SONM Songino Array 36.32 283 P P 10 59 29.6 +0.7
SONM Songino Array 36.32 283 P P 10 59 29.6 +0.7
SONM pmax pmax
comp=Z,5.0nm,0.6s
ZAK Zakamensk 36.63 289 *eP* P 10 59 31.7 +0.2
ZAK pmax pmax
comp=Z,4.0nm,1.2s
H11S1 WAKE ISLAND Hy 36.81 178 T T 11 38 46.4
baz=359,slow=76,SNR=267
H11S3 WAKE ISLAND Hy 36.82 178 T T 11 38 47.5
baz=359,slow=76,SNR=129
H11S2 WAKE ISLAND Hy 36.83 178 T T 11 38 48.1
baz=359,slow=76,SNR=311
HHC Hu-ho-hao-te 37.67 270 *eP* P 10 59 40.3 -0.1
BBB Bella Bella 38.16 66 LR LR 11 13 30.1
comp=Z,175nm,20.5s,baz=309,slow=33
HNS HongShan 38.23 263 ⇓P P 10 59 46.5 +1.5
HNS S S 11 05 37.3 +1.5
HNS pmax pmax
comp=Z,8.0nm,1.2s
HNS LR LR
comp=Z,120nm,15.9s
HNS LR LR
comp=Z,310nm,16.5s
HNS LR LR
comp=Z,220nm,18.4s
BTO Baotou 38.72 271 *eP* P 10 59 50.6 +1.4
BTO S S 11 05 46.7 +3.3
BTO LR LR
comp=Z,990nm,12.6s
BTO LR LR
comp=Z,1μm,16.9s
YKA Yellowknife Ar 39.43 46 P P 10 59 55.0 +0.3
comp=Z,3.4nm,0.7s,baz=298,slow=8.1,SNR=41
YKA PcP PcP 11 02 02.4 +0.5
comp=Z,2.3nm,0.8s,baz=301,slow=3.5,SNR=12
YKA LR LR 11 18 42.3
comp=Z,168nm,18.6s,baz=318,slow=40
comp=Z,3.4nm,0.7s
YKA Yellowknife Ar 39.43 46*ce*P P 10 59 54.5 -0.2
YKA pmax pmax
comp=Z,4.0nm,0.7s
NJ2 Nanjing 39.82 254 *eP* P 10 59 59.9 +1.6
NJ2 pmax pmax
comp=Z,12nm,0.7s
LYN LuoYang 41.53 262 *eP* P 11 00 13.4 +1.0
LYN pmax pmax
comp=Z,10.0nm,0.7s
LYN LR LR
comp=Z,200nm,21.9s
LYN LR LR
comp=Z,120nm,17.3s
LYN LR LR
comp=Z,160nm,16.7s
LLLB Lillooet 42.28 65 P P 11 00 18.7 +0.3
NLWA Neilton Lookou 43.17 70 P P 11 00 26.0 +0.3
ZALV Zalesovo Beam 44.08 303 P P 11 00 35.6 +2.8
comp=Z,0.9nm,0.5s,baz=58,slow=5.4,SNR=2.6
ZALV PcP PcP 11 02 17.5 +0.1
comp=Z,2.7nm,0.6s,baz=42,slow=3.3,SNR=9.3
ZALV LR LR 11 20 41.2
comp=Z,82nm,18.7s,baz=51,slow=38
GUMO Guam 44.59 209 LR LR 11 15 25.0
comp=Z,43nm,21.1s,baz=282,slow=31
B08A Colville Reser 44.97 66 P P 11 00 40.4 +0.3
B08A IAmb IAmb 11 00 41.8
comp=Z,23nm,1.3s
GTA Gaotai 45.32 278 ⇓P P 11 00 44.6 +1.5
GTA pP pP 11 00 52.1 -0.8
GTA sP sP 11 00 56.5 -0.5
GTA pmax pmax
comp=Z,16nm,0.8s
GTA LR LR
comp=Z,110nm,17.5s
GTA LR LR
comp=Z,170nm,17.5s
GTA LR LR
comp=Z,400nm,17.5s
LZH Lanzhou 45.34 271 *eP* P 11 00 48.4 +5.1
LZH pP pwP 11 00 57.9 -1.0
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,78nm,5.8s
LZH LR LR
comp=Z,430nm,11.0s
LZH LR LR
comp=Z,390nm,12.7s
LZH LR LR
comp=Z,530nm,13.7s
SPITS Spitsbergen Ar 45.37 351 P P 11 00 42.8 -0.1
SPITS pmax pmax
comp=Z,45nm,1.2s
SPB2 Spitsbergen Ar 45.37 351 P P 11 00 42.7 -0.2
SPB2 IAmb IAmb 11 00 44.2
comp=Z,26nm,1.1s
HOOD Mount Hood Mea 45.66 71 IAmb IAmb 11 00 47.5
comp=Z,34nm,1.2s
H04A Detroit Lake 45.79 72 IAmb IAmb 11 00 48.2
comp=Z,16nm,1.3s
I03D Drain, OR 45.80 74 P P 11 00 46.2 -0.4
baz=311
J01E Myrtle Point 45.83 74 P P 11 00 47.1 +0.2
baz=311
C09A Chrisman Ranch 45.87 66 IAmb IAmb 11 00 48.6
comp=Z,21nm,1.3s
G05D Wamic, OR 45.90 71 P P 11 00 46.9 -0.6
baz=310
NEW Newport 46.17 65 LR LR 11 18 12.7
comp=Z,146nm,21.8s,baz=300,slow=33
NEW Newport 46.17 65 P P 11 00 49.9 +0.3
NEW pmax pmax
comp=Z,10.0nm,1.0s
NEW Newport 46.17 65 P P 11 00 49.7 0.0
baz=310,SNR=6.5
F07A Phinny Hill Vi 46.22 69 IAmb IAmb 11 00 51.2
comp=Z,10.0nm,0.6s
I04A Tendick Farm, 46.25 73 P P 11 00 50.4 +0.2
baz=311
ENH Enshi 46.39 261 P P 11 00 50.8 -0.7
ENH IAmb IAmb 11 00 52.9
comp=Z,18nm,0.7s
I05D Terrebonne, OR 46.47 72 P P 11 00 52.5 +0.4
baz=311
E09A Wood Farm, Sta 46.76 67 IAmb IAmb 11 00 55.6
comp=Z,28nm,1.2s
J04D Umpqua Nationa 46.78 73 IAmb IAmb 11 00 56.2
comp=Z,13nm,0.8s
J04D Umpqua Nationa 46.78 73 P P 11 00 54.8 +0.1
baz=312
PINE Pine Mountain 47.05 72 IAmb IAmb 11 00 58.9
comp=Z,14nm,1.2s
J05D Fort Rock, OR 47.23 73 P P 11 00 59.0 +0.9
baz=312,SNR=8.9
WALA Waterton Lakes 47.31 62 P P 11 00 58.7 +0.2
L04D Klamath Falls 47.35 74 IAmb IAmb 11 01 01.0
comp=Z,14nm,0.9s
L04D Klamath Falls 47.35 74 P P 11 00 59.9 +0.9
baz=312
YBH Yreka Blue Hor 47.46 75 IAmb IAmb 11 01 02.3
comp=Z,15nm,1.2s
K05A Summer Lake 47.79 73 IAmb IAmb 11 01 04.8
comp=Z,23nm,1.4s
BMO Blue Mountains 48.30 68 IAmb IAmb 11 01 07.8
comp=Z,12nm,1.1s
MOD Modoc Plateau 48.67 73 IAmb IAmb 11 01 11.2
comp=Z,24nm,1.3s
MSO Missoula 48.75 64 IAmb IAmb 11 01 11.0
comp=Z,21nm,1.4s
MSO Missoula 48.75 64 P P 11 01 09.8 +0.1
baz=312,SNR=13
PLID Pearl Lake 48.83 67 IAmb IAmb 11 01 12.0
comp=Z,13nm,1.3s
WMQ Urumqi 49.03 291 *eP* P 11 01 13.2 +1.3
WMQ sP sP 11 01 30.0 +3.8
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ LR LR
comp=Z,210nm,18.7s
WMQ LR LR
comp=Z,290nm,17.7s
WMQ LR LR
comp=Z,220nm,18.7s
KURK Kurchatov 49.07 303 P P 11 01 11.4 -0.5
KURK Kurchatov 49.07 303*c i*P P 11 01 11.5 -0.5
KURK pmax pmax
comp=Z,34nm,1.3s
KURK Kurchatov 49.07 303 P P 11 01 11.0 -1.0
KURK pP pP 11 01 22.1 -0.3
CD2 Chengdu 49.16 267 *eP* P 11 01 12.0 -1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s
WVOR Wild Horse Val 49.21 72 P P 11 01 13.7 +0.4
WVOR IAmb IAmb 11 01 15.2
comp=Z,10nm,1.1s
WVOR Wild Horse Val 49.21 72 P P 11 01 13.7 +0.4
WVOR pmax pmax
comp=Z,10.0nm,1.1s
MK31 Makanchi Array 49.86 297 P P 11 01 17.1 -0.9
MK31 Makanchi Array 49.86 297*de*P P 11 01 17.2 -0.9
MKAR Makanchi Array 49.86 297 P P 11 01 17.6 -0.4
comp=Z,2.0nm,0.7s,baz=52,slow=6.2,SNR=18
MKAR LR LR 11 23 04.2
comp=Z,159nm,20.7s,baz=44,slow=37
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 49.86 297 P P 11 01 17.5 -0.6
MKAR Makanchi Array 49.86 297 P P 11 01 17.5 -0.6
HRY Holter Researc 49.91 63 P P 11 01 19.2 +0.6
MAKZ Makanchi 50.01 297 P P 11 01 18.3 -0.9
MAKZ Makanchi 50.01 297 P P 11 01 18.3 -0.9
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
BEKR Beckworth 50.04 75 P P 11 01 20.2 +0.5
BEKR IAmb IAmb 11 01 21.4
comp=Z,12nm,1.2s
MFID Camas Ranch 50.05 69 IAmb IAmb 11 01 21.2
comp=Z,14nm,1.3s
EGMT Eagleton 50.07 61 IAmb IAmb 11 01 20.7
comp=Z,12nm,0.9s
EGMT Eagleton 50.07 61 P P 11 01 19.6 -0.2
baz=312,SNR=6.8
GOMU GeErMu 50.40 278 P P 11 01 22.1 -0.6
GOMU PcP PcP 11 02 41.5 +0.8
GOMU S S 11 08 32.6 -0.8
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,61nm,4.3s
GOMU LR LR
comp=Z,250nm,16.1s
GOMU LR LR
comp=Z,120nm,16.5s
GOMU LR LR
comp=Z,240nm,16.3s
DLMT Dillon 50.42 65 IAmb IAmb 11 01 24.8
comp=Z,13nm,1.1s
PAHR Pah Rah Range 50.69 75 IAmb IAmb 11 01 26.4
comp=Z,12nm,1.1s
HLID Hailey 50.70 68 P P 11 01 24.9 +0.2
baz=314,SNR=11
BOZ Bozeman (W) 50.76 64 P P 11 01 25.2 +0.1
baz=313,SNR=15
VCNR Virginia City 50.83 75 IAmb IAmb 11 01 27.8
comp=Z,13nm,1.0s
GYA Guiyang 50.90 260 ⇑P P 11 01 25.9 -0.4
GYA pmax pmax
comp=Z,10.0nm,1.1s
PNTR Pine Nut 51.00 75 IAmb IAmb 11 01 29.2
comp=Z,16nm,0.8s
YERR Yerington 51.27 75 IAmb IAmb 11 01 31.1
comp=Z,16nm,1.2s
SUMG Summit 51.30 9 P P 11 01 28.2 -0.8
SUMG IAmb IAmb 11 01 29.7
comp=Z,17nm,1.1s
SUMG Summit 51.30 9 P P 11 01 28.2 -0.8
SUMG pmax pmax
comp=Z,17nm,1.1s
SUMG Summit 51.30 9 *i*P P 11 01 28.0 -1.0
BVAR Borovoye Array 51.31 310 LR LR 11 25 04.5
comp=Z,83nm,20.2s,baz=282,slow=38
BRVK Borovoye 51.33 310 P P 11 01 28.8 -0.3
BRVK IAmb IAmb 11 01 30.1
comp=Z,20nm,1.1s
BRVK Borovoye 51.33 310*ce*P P 11 01 28.7 -0.3
BRVK pmax pmax
comp=Z,32nm,1.7s
BRVK Borovoye 51.33 310 P P 11 01 28.5 -0.6
BRVK pP sP 11 01 43.0 -0.4
YHL Hebgen Lake 51.50 65 IAmb IAmb 11 01 32.6
comp=Z,12nm,1.0s
YMR Madison River 51.74 65 IAmb IAmb 11 01 34.4
comp=Z,18nm,0.9s
KVN Kaiserville 51.85 74 IAmb IAmb 11 01 35.5
comp=Z,12nm,1.0s
YNR Norris Junctio 51.86 64 IAmb IAmb 11 01 35.8
comp=Z,14nm,1.0s
YFT Old Faithful 51.96 65 IAmb IAmb 11 01 37.0
comp=Z,17nm,0.9s
ARCES ARCESS Array B 52.03 343 P P 11 01 34.3 +0.3
comp=Z,2.6nm,0.8s,baz=32,slow=7.1,SNR=4.6
comp=Z,2.6nm,0.8s
YPP Pitchstone Pla 52.10 65 IAmb IAmb 11 01 38.0
comp=Z,17nm,1.3s
H17A Grant Village 52.13 65 IAmb IAmb 11 01 38.7
comp=Z,17nm,0.9s
H17A Grant Village 52.13 65 P P 11 01 37.2 +1.7
baz=314,SNR=17
NVAR Mina Array Bea 52.18 75 P P 11 01 37.2 +1.3
comp=Z,6.8nm,0.8s,baz=298,slow=7.6,SNR=50
NVAR LR LR 11 21 55.8
comp=Z,124nm,20.3s,baz=278,slow=34
comp=Z,6.8nm,0.8s
LHV Little Huntoon 52.20 75 IAmb IAmb 11 01 38.5
comp=Z,23nm,1.2s
ELK Elko 52.22 71 LR LR 11 21 29.6
comp=Z,66nm,20.8s,baz=318,slow=33
NV11 Mina Array Sit 52.26 75 IAmb IAmb 11 01 38.6
comp=Z,14nm,1.1s
FLWY Flagg Ranch 52.29 65 IAmb IAmb 11 01 39.0
comp=Z,18nm,0.9s
IMW Indian Meadow 52.29 65 IAmb IAmb 11 01 38.9
comp=Z,18nm,1.0s
RLMT Red Lodge 52.30 63 P P 11 01 37.1 +0.5
baz=314,SNR=38
MDPB Devils Postpil 52.32 76 IAmb IAmb 11 01 39.4
comp=Z,14nm,1.1s
BRZS Berezniki 52.37 305 *eP* P 11 01 35.9 -1.0
BRZS pmax pmax
comp=Z,5.0nm,1.0s
BRZS Berezniki 52.37 305 *eP* P 11 01 35.1 -1.8
comp=Z,5.1nm,1.0s,baz=306
FXWY Fox Creek 52.43 66 IAmb IAmb 11 01 39.6
comp=Z,11nm,1.0s
MLAC Mammoth, Mammo 52.46 76 P P 11 01 38.9 +1.0
baz=316
DGMT Dagmar 52.48 57 IAmb IAmb 11 01 38.9
comp=Z,14nm,0.7s
DGMT Dagmar 52.48 57 P P 11 01 37.8 +0.1
baz=314
DGMT Dagmar 52.48 57 P P 11 01 37.8 +0.1
baz=314
Q09A Carvers 52.51 74 IAmb IAmb 11 01 40.7
comp=Z,26nm,1.1s
TPAW Teton Pass 52.57 66 IAmb IAmb 11 01 39.9
comp=Z,9.5nm,0.9s
LOHW Long Hollow 52.66 65 IAmb IAmb 11 01 41.5
comp=Z,16nm,1.1s
SNOW Snow King Moun 52.69 66 IAmb IAmb 11 01 42.0
comp=Z,14nm,1.2s
LAO LASA Array 52.74 60 P P 11 01 39.1 -0.6
baz=314,SNR=14
LAO LASA Array 52.74 60 P P 11 01 40.3 +0.7
baz=314,SNR=14
HVU Hansel Valley 52.81 68 IAmb IAmb 11 01 42.4
comp=Z,10nm,1.0s
AHID Auburn Hatcher 53.00 66 IAmb IAmb 11 01 43.7
comp=Z,9.3nm,0.9s
TDK Taldyqorghan 53.06 298 *eP* P 11 01 41.6 -0.4
TDK Taldyqorghan 53.06 298 *eP* P 11 01 41.7 -0.4
baz=298
TIN Tinemaha, Big 53.20 76 P P 11 01 45.0 +1.6
baz=316
LCH Last Change Ra 53.40 76 IAmb IAmb 11 01 47.2
comp=Z,13nm,1.0s
SMMC Simmler 53.48 79 P P 11 01 46.0 +0.7
baz=317
HWUT Hardware Ranch 53.57 68 IAmb IAmb 11 01 48.1
comp=Z,13nm,1.1s
VES Vestal, Richgr 53.60 78 P P 11 01 46.7 +0.6
baz=317
PZH PanZhiHua 53.65 265 P P 11 01 47.7 +1.0
PZH pmax pmax
comp=Z,20nm,0.6s
PZH pmax pmax
comp=Z,70nm,4.0s
GRAC Grapevine Rang 53.73 76 IAmb IAmb 11 01 49.7
comp=Z,18nm,1.1s
GRAC Grapevine Rang 53.73 76 P P 11 01 48.6 +1.5
baz=316,SNR=6.5
ARU Arti 53.73 319 LR LR 11 27 00.6
comp=Z,130nm,18.5s,baz=35,slow=39
ARU Arti 53.73 319 P P 11 01 46.5 -0.3
ARU IAmb IAmb 11 01 47.5
comp=Z,11nm,0.9s
ARU Arti 53.73 319*d i*P P 11 01 46.8 +0.1
ARU 11 02 50.7
ARU 11 03 48.8
ARU S S 11 09 18.5 +0.7
ARU SS SKiKP 11 12 56.7 -0.2
ARU pmax pmax
comp=Z,14nm,0.9s
ARU MLR MLR
comp=Z,172nm,16.0s
CWC Cottonwood Cre 53.73 77 P P 11 01 48.2 +0.9
baz=317
R11A Troy Canyon, C 53.73 73 IAmb IAmb 11 01 49.3
comp=Z,11nm,1.1s
R11A Troy Canyon, C 53.73 73 P P 11 01 47.9 +0.6
baz=316,SNR=19
BW06 Boulder Array 53.80 65 IAmb IAmb 11 01 49.5
comp=Z,16nm,0.9s
BW06 Boulder Array 53.80 65 P P 11 01 48.1 +0.3
baz=315,SNR=24
PD31 Pinedale Array 53.80 65 IAmb IAmb 11 01 49.5
comp=Z,14nm,0.9s
PDAR Pinedale Array 53.80 65 P P 11 01 48.5 +0.8
comp=Z,9.2nm,0.8s,baz=326,slow=3.3,SNR=85
comp=Z,9.2nm,0.8s
SHLS Shalkode 53.82 295 *eP* P 11 01 45.2 -2.5
SHLS Shalkode 53.82 295 *eP* P 11 01 45.3 -2.5
baz=295
JMIC Jan Mayen 53.87 357 LR LR 11 25 06.7
comp=Z,20nm,18.2s,baz=50,slow=36
PKM Mcpherson Peak 53.89 79 P P 11 01 49.3 +0.9
baz=317
DUG Dugway, Tooele 53.91 70 IAmb IAmb 11 01 50.7
comp=Z,14nm,1.1s
DUG Dugway, Tooele 53.91 70 P P 11 01 49.6 +1.1

DUG pmax pmax
comp=Z,13nm,1.2s
DUG Dugway, Tooele 53.91 70 P **P 11 01 49.3 +0.8**
baz=316,SNR=16
SPR3 Spring Creek 3 53.95 72 IAmb IAmb 11 01 52.0
comp=Z,27nm,0.9s
TCUT Toone Canyon 54.00 68 IAmb IAmb 11 01 54.0
comp=Z,17nm,1.5s
ISA Isabella, Lake 54.08 78 IAmb IAmb 11 01 51.0
comp=Z,11nm,1.1s
ISA Isabella, Lake 54.08 78 P **P 11 01 49.7 0.0**
baz=317,SNR=7.1
PRGR Permogore 54.08 329 *e*P **P 11 01 47.9 -1.3**
CTU Camp Tracy 54.12 69 IAmb IAmb 11 01 51.9
comp=Z,10nm,1.0s
KMI Kunming 54.15 263 ⇑P **P 11 01 51.8 +1.3**
KMI pP pP 11 01 59.7 -1.1
KMI sP sP 11 02 04.2 +0.2
KMI pmax pmax
comp=Z,14nm,0.7s
KMI LR LR
comp=Z,250nm,20.1s
KMI LR LR
comp=Z,210nm,22.1s
KMI LR LR
comp=Z,170nm,19.2s
FRB Frobisher Bay 54.18 26 LR LR 11 27 04.4
comp=Z,57nm,20.9s,baz=7.5,slow=38
MPMC Manual Prospec 54.34 77 P **P 11 01 52.7 +1.0**
baz=317,SNR=16
TPNV Topopah Spring 54.38 75 P **P 11 01 52.8 +0.9**
baz=317,SNR=18
FURC Furnace Creek, 54.39 76 P **P 11 01 53.0 +1.3**
baz=317,SNR=19
SATY Saty 54.43 296 *e*P **P 11 01 51.5 -0.7**
SATY Saty 54.43 296 *e*P **P 11 01 51.5 -0.7**
baz=296
NLU North Lily Min 54.48 70 IAmb IAmb 11 01 54.9
comp=Z,14nm,1.0s
PSUT Pine Spring 54.54 72 IAmb IAmb 11 01 55.3
comp=Z,25nm,1.3s
LRMC Laurel Mtn Rad 54.65 77 P **P 11 01 54.7 +0.7**
baz=317,SNR=6.8
MPU Maple Canyon 54.67 69 IAmb IAmb 11 01 56.3
comp=Z,17nm,1.0s
QSM Queen of Sheba 54.75 76 IAmb IAmb 11 01 57.9
comp=Z,13nm,0.7s
KUU Kurty 54.89 298 *e*P **P 11 01 53.8 -1.6**
KUU pmax pmax
comp=Z,12nm,1.0s
KUU Kurty 54.89 298 *e*P **P 11 01 53.8 -1.6**
comp=Z,12nm,1.0s,baz=298
EDW2 Edwards Air Fo 54.91 78 P **P 11 01 56.3 +0.6**
baz=317,SNR=6.3
ULM Lac du Bonnet 55.05 51 P **P 11 01 56.6 +0.2**
comp=Z,9.6nm,0.7s,baz=312,slow=6.9,SNR=12
ULM LR LR 11 26 48.6
comp=Z,156nm,18.8s,baz=342,slow=37
comp=Z,9.6nm,0.7s
ULM Lac du Bonnet 55.05 51 P **P 11 01 56.3 -0.1**
ULM IAmb IAmb 11 01 57.6
comp=Z,18nm,1.1s
ULM Lac du Bonnet 55.05 51*ce*P **P 11 01 56.4 -0.1**
MDOK Medeo 55.05 297 *e*P **P 11 01 55.2 -1.5**
MDOK Medeo 55.05 297 *e*P **P 11 01 55.3 -1.5**
baz=297
MDND Maddock 55.10 55 P **P 11 01 57.2 +0.4**
baz=316,SNR=5.7
SHOC Shoshone, Teco 55.12 76 P **P 11 01 58.1 +0.9**
baz=317
DECC Green Verdugo 55.18 79 P **P 11 01 58.3 +0.6**
baz=318
BTLS Baital 55.21 300 *e*P **P 11 01 57.0 -0.6**
BTLS Baital 55.21 300 *e*P **P 11 01 57.0 -0.6**
baz=300
TCRU Three Creeks R 55.25 71 IAmb IAmb 11 02 00.9
comp=Z,12nm,0.9s
SNCC San Nicolas Is 55.26 80 P **P 11 01 58.4 +0.2**
baz=318
GSC Goldstone, Bar 55.27 77 P **P 11 01 59.1 +0.7**
GSC Goldstone, Bar 55.27 77 P **P 11 01 59.1 +0.7**
GSC pmax pmax
comp=Z,27nm,1.0s
GSC Goldstone, Bar 55.27 77 P **P 11 01 59.0 +0.7**
baz=317,SNR=21
KIRV Kirov 55.31 325 LR LR 11 28 43.2
comp=Z,86nm,18.8s,baz=32,slow=39
KIRV Kirov 55.31 325*ce*P **P 11 01 58.0 -0.1**
PASC Pasadena Art C 55.33 79 IAmb IAmb 11 02 00.3
comp=Z,16nm,1.0s
K22A Casper 55.45 64 IAmb IAmb 11 02 01.2
comp=Z,20nm,1.1s
K22A Casper 55.45 64 P **P 11 01 58.8 -0.8**
baz=316,SNR=7.5
K22A Casper 55.45 64 P **P 11 01 59.9 +0.3**
baz=316,SNR=7.5
E28A Huff 55.50 57 P **P 11 02 00.4 +0.6**
baz=316
CCUT Cedar City 55.52 72 IAmb IAmb 11 02 02.6
comp=Z,13nm,0.9s
P17A Butcher Ranch, 55.54 69 IAmb IAmb 11 02 03.6
comp=Z,8.5nm,0.8s
BFSC Mount Baldy Ra 55.57 78 P **P 11 02 01.4 +0.8**
baz=318,SNR=5.9
SZCU Shurtz Canyon 55.64 72 IAmb IAmb 11 02 03.3
comp=Z,14nm,1.1s
RSSD Black Hills 55.64 61 P **P 11 02 00.6 -0.5**
RSSD IAmb IAmb 11 02 02.4
comp=Z,17nm,0.9s
RSSD Black Hills 55.64 61 P **P 11 02 00.6 -0.5**
RSSD pmax pmax
comp=Z,17nm,0.9s
RSSD Black Hills 55.64 61 P **P 11 02 00.9 -0.2**
baz=316,SNR=14
RSSD Black Hills 55.64 61 P **P 11 02 01.3 +0.2**
baz=316
RSSD Black Hills 55.64 61 P **P 11 02 00.8 -0.2**
RSSD pP **pP 11 02 11.2 -1.2**
TUQ Turquoise Moun 55.66 76 P **P 11 02 01.9 +0.7**
baz=318
P18A Preston Nutter 55.69 69 IAmb IAmb 11 02 04.0
comp=Z,16nm,1.0s
Q16A Castle Valley 55.71 70 IAmb IAmb 11 02 04.0
comp=Z,20nm,0.9s
CIS Catalina Islan 55.77 79 P **P 11 02 02.5 +0.6**
baz=318
RWWY Rawlins 55.79 65 IAmb IAmb 11 02 03.6
comp=Z,19nm,1.0s
MTPU Mount Pierson 55.80 71 IAmb IAmb 11 02 05.2
comp=Z,14nm,1.0s
HEC Hector,Ludlow 55.88 77 P **P 11 02 03.6 +0.9**
baz=318,SNR=8.2
BBRC Big Bear Solar 55.97 78 P **P 11 02 04.1 +0.6**
baz=318,SNR=6.6
LCMT Little Creek M 55.98 73 IAmb IAmb 11 02 06.0
comp=Z,16nm,0.9s
SGDS Sogindy 56.07 299 *e*P **P 11 02 03.3 -0.6**
SGDS Sogindy 56.07 299 *e*P **P 11 02 03.3 -0.6**
baz=299
ELS Elsinore Mount 56.14 79 IAmb IAmb 11 02 05.7
comp=Z,7.5nm,0.8s
PKCU Pink Cliffs 56.17 72 IAmb IAmb 11 02 07.9
comp=Z,17nm,0.9s
GMRC Granite Mounta 56.28 76 P **P 11 02 06.6 +1.0**
baz=318,SNR=21
MURC Murrieta 56.30 78 P **P 11 02 06.2 +0.5**
baz=318
O20A White River Ci 56.38 67 P **P 11 02 06.9 +0.5**
baz=317,SNR=29
KLMR Klimovskoe 56.45 332 *e*P **P 11 02 04.7 -1.6**
KLMR pmax pmax
comp=Z,16nm,1.4s
KLMR Klimovskoe 56.45 332 *e*P **P 11 02 04.7 -1.6**
KLMR AMP 11 02 07.6
comp=Z,16nm,1.4s
AGMN Agassiz Nation 56.49 52 IAmb IAmb 11 02 07.9
comp=Z,18nm,1.1s
AGMN Agassiz Nation 56.49 52 P **P 11 02 06.1 -0.6**
baz=318,SNR=9.9
AGMN Agassiz Nation 56.49 52 P **P 11 02 06.6 -0.1**
baz=318,SNR=9.9
BELC Belle Mtn. Jos 56.67 77 P **P 11 02 08.9 +0.4**
baz=318,SNR=9.6
PFO Pinyon Flats O 56.71 78 P **P 11 02 08.8 +0.1**
comp=Z,5.5nm,0.9s,baz=333,slow=6.8,SNR=11
PFO LR LR 11 22 46.2
comp=Z,124nm,20.8s,baz=305,slow=32
comp=Z,5.5nm,0.9s
PFO Pinyon Flats O 56.71 78 P **P 11 02 08.4 -0.3**
PFO Pinyon Flats O 56.71 78 P **P 11 02 08.4 -0.3**
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 56.71 78 P **P 11 02 09.1 +0.4**
baz=318,SNR=6.2
TPFO Pinon Flats 56.71 78 P **P 11 02 09.0 +0.2**
baz=318,SNR=5.3
PMD Palm Desert 56.73 78 IAmb IAmb 11 02 10.0
comp=Z,10nm,0.9s
AAK Ala-Archa 56.73 298 P **P 11 02 08.3 -0.5**
AAK IAmb IAmb 11 02 09.9
comp=Z,8.0nm,0.9s
AAK Ala-Archa 56.73 298 P **P 11 02 08.3 -0.5**
AAK pmax pmax
comp=Z,8.0nm,0.9s
109C Camp Elliot, M 56.88 79 P **P 11 02 10.6 +0.8**
baz=318
U15A North Rim 56.93 73 IAmb IAmb 11 02 12.8
comp=Z,11nm,1.1s
N23A Red Feather La 57.02 65 P **P 11 02 11.9 +0.9**
baz=317,SNR=16
IRM Iron Mountain 57.03 76 P **P 11 02 11.9 +1.0**
baz=318,SNR=14
BC3 Big Chuckawall 57.23 77 P **P 11 02 12.6 +0.2**
baz=318,SNR=5.9
LSA Lhasa 57.26 276 P **P 11 02 13.9 +0.9**
LSA IAmb IAmb 11 02 16.3
comp=Z,9.3nm,0.8s
LSA Lhasa 57.26 276 P **P 11 02 13.9 +0.9**
LSA pmax pmax
comp=Z,9.0nm,0.8s
MONP2 Monument Peak 57.26 78 P **P 11 02 12.9 +0.2**
baz=318
B35A Bob, Littlefor 57.40 51 IAmb IAmb 11 02 13.6
comp=Z,7.5nm,0.7s
B35A Bob, Littlefor 57.40 51 P **P 11 02 13.3 +0.1**
baz=318,SNR=8.0
PV07 Paradox Valley 57.41 68 IAmb IAmb 11 02 15.6
comp=Z,17nm,1.0s
PDMCI Parker Dam,Lak 57.48 76 P **P 11 02 14.6 +0.6**
baz=318,SNR=5.5
SWSC Sam W. Stewart 57.57 78 P **P 11 02 14.9 +0.3**
baz=319
IKP In-Ko-Pah, Jac 57.62 78 P **P 11 02 15.7 +0.7**
baz=319
BLYC Blythe 57.68 76 IAmb IAmb 11 02 17.0
comp=Z,7.8nm,0.7s
SMCO Snowmass 57.75 67 IAmb IAmb 11 02 18.3
comp=Z,16nm,1.1s
ISCO Idaho Springs 58.00 65 IAmb IAmb 11 02 20.6
comp=Z,19nm,1.1s
ISCO Idaho Springs 58.00 65 P **P 11 02 19.4 +1.5**
ISCO pmax pmax
comp=Z,20nm,1.4s
ISCO Idaho Springs 58.00 65 P **P 11 02 19.5 +1.5**
baz=318,SNR=25
ISCO Idaho Springs 58.00 65 P **P 11 02 19.0 +1.1**
baz=318,SNR=25
WUAZ Wupatki 58.10 73 IAmb IAmb 11 02 20.4
comp=Z,7.8nm,0.8s
WUAZ Wupatki 58.10 73 P **P 11 02 19.8 +1.2**
baz=318,SNR=8.8
F33A 5 Mile Ranch, 58.11 55 P **P 11 02 18.2 0.0**
baz=318
DZA Taraz 58.12 300 *e*P **P 11 02 17.2 -1.2**
DZA Taraz 58.12 300 *e*P **P 11 02 17.2 -1.2**
baz=300
KSH Kashi 58.27 295 P **P 11 02 23.8 +4.2**
KSH pP sP 11 02 33.4 -0.6
KSH pmax pmax
comp=Z,8.0nm,0.9s
MVCO Mesa Verde 58.40 69 IAmb IAmb 11 02 22.5
comp=Z,8.5nm,1.0s
MVCO Mesa Verde 58.40 69 P **P 11 02 20.7 0.0**
baz=318,SNR=6.2
AKTO Aktyubinsk 58.46 314 LR LR 11 29 59.9
comp=Z,116nm,18.9s,baz=36,slow=38
ABKAR Akbulak array 58.56 312 P **P 11 02 21.0 -0.3**
EYMN Ely 58.69 50 P **P 11 02 22.4 +0.1**
baz=320,SNR=8.9
EYMN Ely 58.69 50 P **P 11 02 22.1 -0.1**
baz=320,SNR=8.9
X16A Lo Mia Camp, P 58.88 74 IAmb IAmb 11 02 26.5
comp=Z,9.3nm,0.9s
S22A 4UR Ranch, Cre 58.88 68 IAmb IAmb 11 02 26.7
comp=Z,12nm,1.0s
S22A 4UR Ranch, Cre 58.88 68 P **P 11 02 25.3 +1.1**
baz=318,SNR=17
FINES FINESS Array B 59.17 339 P **P 11 02 24.3 -1.0**
comp=Z,2.5nm,0.7s,baz=27,slow=8.8,SNR=7.1
FINES LR LR 11 31 10.8
comp=Z,81nm,18.5s,baz=48,slow=39
comp=Z,2.5nm,0.7s
IUG luzhnay 59.31 301 *e*P **P 11 02 26.4 -0.4**
IUG luzhnay 59.31 301 *e*P **P 11 02 26.4 -0.4**
baz=300
ECSD EROS Data Cent 59.54 56 IAmb IAmb 11 02 29.0
comp=Z,11nm,1.1s
ECSD EROS Data Cent 59.54 56 P **P 11 02 27.8 -0.4**
baz=319,SNR=11
ECSD EROS Data Cent 59.54 56 P **P 11 02 27.8 -0.4**
baz=319,SNR=11
SDCO Great Sand Dun 59.58 67 P **P 11 02 30.1 +1.1**
baz=319,SNR=13
SDCO Great Sand Dun 59.58 67 P **P 11 02 29.9 +0.9**
baz=319,SNR=13
E38A The Farm, Brul 59.69 51 P **P 11 02 28.6 -0.6**
baz=320,SNR=10
214A Organ Pipe Nat 59.98 76 IAmb IAmb 11 02 33.4
comp=Z,13nm,1.1s
214A Organ Pipe Nat 59.98 76 P **P 11 02 32.2 +0.8**
baz=319,SNR=6.2
BORG Borgarnes 60.11 3 LR LR 11 30 11.7
comp=Z,38nm,18.3s,baz=3.6,slow=38
KSCO Kaye Shedlock' 60.12 64 IAmb IAmb 11 02 33.8
comp=Z,11nm,0.9s
KSCO Kaye Shedlock' 60.12 64 P **P 11 02 32.8 +0.4**
baz=319
SPMN Marine on St. 60.18 53 P **P 11 02 32.9 +0.3**
baz=320
SPMN Marine on St. 60.18 53 P **P 11 02 32.1 -0.5**
baz=320
KRVT Keravat (AS076 60.46 195 LR LR 11 24 56.8
comp=Z,61nm,20.0s,baz=151,slow=32
BGNE Belgrade 60.56 59 P **P 11 02 35.0 -0.3**
baz=320
T25A Trinidad 60.61 67 IAmb IAmb 11 02 37.8
comp=Z,10nm,1.1s
T25A Trinidad 60.61 67 P **P 11 02 36.4 +0.4**
baz=319,SNR=6.4
TUC Tucson 60.83 75 P **P 11 02 37.1 -0.2**
TUC Tucson 60.83 75 P **P 11 02 37.1 -0.2**
TUC pmax pmax
comp=Z,8.0nm,1.2s
TUC Tucson 60.83 75 P **P 11 02 38.1 +0.8**
baz=320
I37B Waseca 60.84 54 P **P 11 02 37.4 +0.4**
baz=320,SNR=8.6
BELG Belogornoye 60.88 322 LR LR 11 30 43.7
comp=Z,80nm,20.6s,baz=304,slow=38
BELG Belogornoye 60.88 322*ce*P **P 11 02 37.7 +0.5**
BELG pmax pmax
comp=Z,5.0nm,0.9s
COWI Conover 61.14 50 IAmb IAmb 11 02 39.1
comp=Z,5.8nm,0.8s
COWI Conover 61.14 50 P **P 11 02 38.2 -0.9**
baz=321
ANMO Albuquerque 61.18 70 LR LR 11 28 00.0
comp=Z,57nm,19.2s,baz=320,slow=35
ANMO Albuquerque 61.18 70 P **P 11 02 40.2 +0.4**
ANMO IAmb IAmb 11 02 41.8
comp=Z,7.8nm,1.1s
ANMO Albuquerque 61.18 70*de*P **P 11 02 41.0 +1.2**
ANMO pmax pmax
comp=Z,10.0nm,1.3s
ANMO Albuquerque 61.18 70 P **P 11 02 40.9 +1.1**
baz=320,SNR=11
ANMO Albuquerque 61.18 70 P **P 11 02 40.5 +0.7**
baz=320
ANMO Albuquerque 61.18 70 P **P 11 02 40.0 +0.2**
G40A Rib Lake 61.32 51 P **P 11 02 39.7 -0.6**
baz=321,SNR=6.2
CMAR Chiang Mai Arr 61.56 261 P **P 11 02 43.4 +1.1**
comp=Z,4.2nm,0.7s,baz=22,slow=7.1,SNR=19
CMAR LR LR 11 32 52.7
comp=Z,96nm,18.1s,baz=60,slow=39
comp=Z,4.2nm,0.7s
Y22A Socorro 61.68 71 P **P 11 02 44.7 +1.5**
baz=320,SNR=8.4
CBKS Cedar Bluff 61.74 62 P **P 11 02 43.4 +0.1**
baz=320
CBKS Cedar Bluff 61.74 62 P **P 11 02 42.7 -0.6**
baz=320
NB2 NORSAR Subarra 62.14 346 P **P 11 02 44.9 -0.7**
comp=Z,1.1nm,0.6s,baz=16,slow=6.9
NOA NORSAR Array B 62.14 346 P **P 11 02 45.0 -0.6**
comp=Z,1.4nm,0.6s,baz=17,slow=6.8,SNR=12
NOA LR LR 11 31 37.5
comp=Z,30nm,19.2s,baz=15,slow=38
comp=Z,1.4nm,0.6s
OBN Obninsk 62.16 330 LR LR 11 33 13.0
comp=Z,13nm,18.4s,baz=12,slow=39
SCHQ Schefferville 62.19 31 P **P 11 02 45.2 -0.8**
comp=Z,3.4nm,0.7s,baz=349,slow=8.0,SNR=5.5
SCHQ LR LR 11 32 31.9
comp=Z,81nm,19.4s,baz=313,slow=39
comp=Z,3.4nm,0.7s
I40A Norwalk 62.20 52 IAmb IAmb 11 02 46.4
comp=Z,8.4nm,0.7s
121A Cookes Peak, D 62.30 72 IAmb IAmb 11 02 49.8
comp=Z,9.3nm,1.1s
121A Cookes Peak, D 62.30 72 P **P 11 02 47.6 +0.3**
baz=320,SNR=5.2
121A Cookes Peak, D 62.30 72 P **P 11 02 48.2 +0.9**
baz=320,SNR=5.2
319A Douglas 62.37 74 IAmb IAmb 11 02 50.5
comp=Z,16nm,1.1s
SCIA State Center 62.55 56 P **P 11 02 49.1 +0.4**
baz=321
SCIA State Center 62.55 56 P **P 11 02 48.4 -0.3**
baz=321
HFS Hagfors 62.64 344 LR LR 11 29 48.7
comp=Z,70nm,21.5s,baz=10,slow=36
E46A Sault Ste Mari 62.99 47 P **P 11 02 50.4 -1.1**
baz=323
KSU1 Kansas State U 63.09 60 P **P 11 02 51.2 -1.0**
baz=321
KSU1 Kansas State U 63.09 60 P **P 11 02 50.9 -1.3**
baz=321
JFWS Jewell Farm 63.14 53 P **P 11 02 52.0 -0.5**
baz=322
HSIG 63.25 77 IAmb IAmb 11 02 55.3
comp=Z,10nm,1.1s
L40A Anamosa 63.36 54 IAmb IAmb 11 02 54.0
comp=Z,11nm,0.8s
L40A Anamosa 63.36 54 P **P 11 02 53.2 -0.8**
baz=322
MSTX Muleshoe 63.89 68 P **P 11 02 57.9 +0.1**
baz=321
OK038 West end E0370 64.04 63 IAmb IAmb 11 02 59.1
comp=Z,13nm,0.8s
L42A Oliver, Polo 64.12 53 P **P 11 02 57.7 -1.3**
baz=322
NIL Nilore 64.13 292 P **P 11 02 59.2 -0.1**
NIL Nilore 64.13 292 P **P 11 02 59.2 -0.1**
NIL pmax pmax
comp=Z,24nm,1.1s
P38A Dawn 64.18 57 IAmb IAmb 11 02 59.9
comp=Z,16nm,0.8s
P38A Dawn 64.18 57 P **P 11 02 58.8 -0.6**
baz=322,SNR=6.3
VLDQ Val d'Or 64.29 41 IAmb IAmb 11 02 58.5
comp=Z,13nm,1.2s
N41A Harden Midland 64.59 55 P **P 11 03 00.8 -1.3**
baz=322,SNR=6.7
HNR Honiara 64.70 186 LR LR 11 25 32.9
comp=Z,159nm,21.9s,baz=16,slow=31
L44A Lake County Fo 64.78 52 P **P 11 03 02.5 -0.8**
baz=323
P40A Paris 64.96 56 P **P 11 03 04.0 -0.5**
baz=322,SNR=13
WMOK Wichita Mounta 65.38 64 IAmb IAmb 11 03 08.5
comp=Z,17nm,0.8s
WMOK Wichita Mounta 65.38 64 P **P 11 03 07.6 +0.3**
WMOK pmax pmax
comp=Z,23nm,1.3s
WMOK Wichita Mounta 65.38 64 P **P 11 03 07.6 +0.3**
baz=322,SNR=18
WMOK Wichita Mounta 65.38 64 P **P 11 03 07.1 -0.2**
baz=322,SNR=18
HDIL Hopedale 65.44 54 P **P 11 03 07.4 -0.2**
baz=323,SNR=5.0
HDIL Hopedale 65.44 54 P **P 11 03 06.9 -0.7**
baz=323,SNR=5.0
KBL Kabul 65.64 296 P **P 11 03 07.6 -1.7**
KBL IAmb IAmb 11 03 08.5
comp=Z,12nm,0.8s
KBL Kabul 65.64 296 P **P 11 03 07.6 -1.7**
KBL pmax pmax
comp=Z,12nm,0.8s
S39A Bolivar 65.80 58 P **P 11 03 08.7 -1.2**
baz=322,SNR=6.1
R40A Maddies Statio 65.83 57 P **P 11 03 09.3 -0.9**
baz=322,SNR=20
TUL1 Leonard 65.98 61 P **P 11 03 10.6 -0.6**
baz=322
P43A Skaggs, Pawnee 66.06 55 P **P 11 03 11.2 -0.4**
baz=323
U38A Gravette 66.26 60 P **P 11 03 12.0 -1.0**
baz=322
PMG Port Moresby 66.28 200 LR LR 11 26 15.2
comp=Z,61nm,21.2s,baz=246,slow=30
SADO Sadowa 66.40 44 LR LR 11 33 40.3
comp=Z,76nm,18.9s,baz=5.0,slow=37
L48A N Adams 66.50 50 P **P 11 03 13.5 -0.9**
baz=324
L48A P **P 11 03 13.5 -0.9**
baz=324
CCM Cathedral Cave 66.51 57 P **P 11 03 13.5 -1.0**
CCM IAmb IAmb 11 03 14.9
comp=Z,17nm,1.0s
CCM Cathedral Cave 66.51 57 P **P 11 03 13.5 -1.0**
CCM pmax pmax
comp=Z,17nm,1.0s
CCM Cathedral Cave 66.51 57 P **P 11 03 13.5 -1.0**
baz=323,SNR=9.9
CCM Cathedral Cave 66.51 57 P **P 11 03 13.9 -0.6**
baz=323
CCM Cathedral Cave 66.51 57 P **P 11 03 13.0 -1.6**
ABTX Abilene, Hawle 66.58 66 P **P 11 03 15.3 +0.2**
baz=322,SNR=7.3
ABTX Abilene, Hawle 66.58 66 P **P 11 03 15.0 -0.1**
baz=322,SNR=7.3
SFIN Lafayette 66.58 52 P **P 11 03 14.1 -0.8**
SFIN IAmb IAmb 11 03 15.1
comp=Z,10nm,1.0s
HHAR Hobbs 66.61 60 IAmb IAmb 11 03 15.2
comp=Z,12nm,0.9s
HHAR Hobbs 66.61 60 P **P 11 03 14.3 -0.9**
baz=322
MGMO Mountain Grove 66.73 58 IAmb IAmb 11 03 15.8
comp=Z,10nm,0.7s
Q44A Meyer Farm, Va 66.89 55 IAmb IAmb 11 03 17.2
comp=Z,17nm,1.0s
Q44A Meyer Farm, Va 66.89 55 P **P 11 03 16.6 -0.3**
baz=324
FVM French Village 66.96 56 P **P 11 03 17.2 -0.2**
baz=323,SNR=10
TRQ Mont Tremblant 66.96 41 IAmb IAmb 11 03 16.9
comp=Z,18nm,1.3s
TX31 Lajitas Ar. Si 67.01 72 P **P 11 03 18.2 +0.2**
TX31 Lajitas Ar. Si 67.01 72 P **P 11 03 18.1 +0.2**
baz=322,SNR=39
TX32 Lajitas Array 67.01 72 IAmb IAmb 11 03 19.6
comp=Z,20nm,1.1s
TXAR Lajitas Array 67.01 72 P **P 11 03 18.7 +0.7**
comp=Z,15nm,0.8s,baz=299,slow=4.6,SNR=127
comp=Z,15nm,0.8s
P46A Rosedale 67.15 53 P **P 11 03 18.0 -0.6**
baz=324,SNR=6.0
X37A Clayton 67.23 62 IAmb IAmb 11 03 20.0
comp=Z,7.7nm,0.9s
X37A Clayton 67.23 62 P **P 11 03 19.1 0.0**
baz=322
LPIG La Paz 67.43 80 LR LR 11 27 59.3
comp=Z,41nm,20.4s,baz=236,slow=32
OLIL Olney 67.45 54 IAmb IAmb 11 03 20.9
comp=Z,14nm,1.0s
O48B Farmland 67.55 51 P **P 11 03 20.1 -1.0**
baz=325
O48B Farmland 67.55 51 P **P 11 03 20.2 -1.0**
baz=325
S44A Carbondale 67.74 56 P **P 11 03 21.8 -0.5**
baz=324,SNR=7.8

PBMO Poplar Bluff 67.92 57 P P 11 03 23.0 -0.5
baz=324,SNR=8.5
P48A Milroy 68.08 52 P P 11 03 23.5 -1.0
baz=325,SNR=5.3
P48A P P 11 03 23.5 -1.0
baz=325,SNR=5.3
AKASG Malin Array Be 68.14 332 P P 11 03 23.3 -1.3
comp=Z,0.9nm,0.4s,baz=28,slow=5.0,SNR=9.2
AKASG LR LR 11 36 52.7
comp=Z,143nm,18.9s,baz=16,slow=39
comp=Z,0.9nm,0.4s
AKBB Malin Array Si 68.14 332 *eP* P 11 03 23.9 -0.7
MIAR Mount Ida 68.16 61 IAmb IAmb 11 03 25.9
comp=Z,18nm,0.9s
MIAR Mount Ida 68.16 61 P P 11 03 24.2 -0.8
baz=323,SNR=20
MIAR Mount Ida 68.16 61 P P 11 03 24.9 -0.1
baz=323,SNR=20
JCT Junction City 68.18 68 IAmb IAmb 11 03 26.3
comp=Z,18nm,0.9s
JCT Junction City 68.18 68 P P 11 03 25.4 +0.2
baz=322,SNR=8.5
JCT Junction City 68.18 68 P P 11 03 25.0 -0.3
baz=322,SNR=8.5
WHAR Wooly Hollow 68.21 59 IAmb IAmb 11 03 25.7
comp=Z,15nm,0.8s
WHTX Lake Whitney, 68.21 65 P P 11 03 25.1 -0.3
baz=323
ERPA Erie 68.25 47 P P 11 03 24.6 -0.9
baz=326
GEYT Alibeck 68.31 306 P P 11 03 25.5 -0.5
comp=Z,9.4nm,1.0s,baz=235,slow=10,SNR=6.9
GEYT LR LR 11 35 17.3
comp=Z,79nm,18.2s,baz=26,slow=38
comp=Z,9.4nm,1.0s
P49A Miami Univ. Ec 68.34 51 P P 11 03 24.8 -1.3
baz=325
E62A Clayton Lake 68.42 37 P P 11 03 25.7 -0.8
E62A IAmb IAmb 11 03 26.7
comp=Z,18nm,1.1s
E62A Clayton Lake 68.42 37 P P 11 03 25.5 -1.0
baz=330,SNR=6.1
E62A P P 11 03 25.5 -1.0
baz=330,SNR=6.1
M53A WI Miller and 68.53 48 P P 11 03 26.5 -0.7
baz=326,SNR=6.4
ACSO Alum Creek Sta 68.53 50 P P 11 03 26.4 -0.9
baz=325
WVNY West Valley, N 68.58 46 IAmb IAmb 11 03 27.5
comp=Z,18nm,1.0s
MMNY Mt. Morris Dam 68.59 45 IAmb IAmb 11 03 27.7
comp=Z,18nm,0.9s
435B Jarrell 69.10 66 P P 11 03 30.7 -0.3
baz=323
O52A Adamsville 69.12 49 P P 11 03 30.3 -0.7
baz=326,SNR=5.4
O52A P P 11 03 30.3 -0.7
baz=326,SNR=5.4
HRA Herat 69.18 300 P P 11 03 30.9 -0.7
HRA IAmb IAmb 11 03 32.8
comp=Z,16nm,1.3s
L56A Greenwood 69.23 45 P P 11 03 30.6 -1.1
baz=327,SNR=6.0
L56A P P 11 03 30.6 -1.1
baz=327,SNR=6.0
EKA Eskdalemuir Ar 69.26 353 P P 11 03 30.7 -0.8
baz=15,slow=5.9
O53A New Philadelph 69.28 49 P P 11 03 30.8 -1.2
baz=326
M55A Ridgway 69.30 46 IAmb IAmb 11 03 31.6
comp=Z,16nm,1.0s
M55A Ridgway 69.30 46 P P 11 03 31.1 -1.0
baz=327,SNR=5.3
M55A P P 11 03 31.1 -1.0
baz=327,SNR=5.3
T47A Sharon Grove 69.32 55 IAmb IAmb 11 03 33.1
comp=Z,20nm,0.8s
T47A Sharon Grove 69.32 55 P P 11 03 32.2 0.0
baz=325,SNR=8.1
P52A Corning 69.39 50 P P 11 03 31.7 -0.9
baz=326
Z41A Richland Creek 69.58 61 P P 11 03 33.5 -0.3
baz=324
LBNH Lisbon 69.62 40 P P 11 03 32.9 -1.0
baz=329
WVT Waverly 69.68 56 P P 11 03 34.0 -0.4
WVT Waverly 69.68 56 P P 11 03 34.0 -0.4
WVT pmax pmax
comp=Z,26nm,1.1s
WVT Waverly 69.68 56 P P 11 03 34.6 +0.2
baz=325,SNR=12
WVT Waverly 69.68 56 P P 11 03 34.3 -0.2
baz=325
WVT Waverly 69.68 56 P P 11 03 33.4 -1.1
PKME Peaks-Kenny Pk 69.68 38 P P 11 03 33.5 -0.8
baz=330
KIV Kislovodsk 69.76 320 *eP* P 11 03 33.3 -1.6
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,57nm,17.0s
BINY Binghamton 69.81 44 P P 11 03 34.7 -0.5
baz=328
NATX Nacogdoches 69.83 63 P P 11 03 35.6 +0.1
baz=323
KBZ Khabaz 69.87 319 P P 11 03 35.5 +0.1
comp=Z,7.3nm,0.9s,baz=6.2,slow=1.1,SNR=15
KBZ LR LR 11 38 00.1
comp=Z,106nm,20.7s,baz=25,slow=39
comp=Z,7.3nm,0.9s
KBZ Khabaz 69.87 319 *deP* P 11 03 35.8 +0.3
KBZ pmax pmax
comp=Z,9.0nm,1.0s
M57A Sunshine Farm, 70.08 45 P P 11 03 35.9 -0.9
baz=328
M57A P P 11 03 35.9 -0.9
baz=328
833A Chaparral WMA, 70.10 69 IAmb IAmb 11 03 38.7
comp=Z,14nm,1.0s
833A Chaparral WMA, 70.10 69 P P 11 03 37.5 +0.3
baz=323
OXF Oxford 70.23 58 P P 11 03 37.5 -0.3
baz=324,SNR=8.5
OXF Oxford 70.23 58 P P 11 03 37.5 -0.3
baz=324,SNR=8.5
U49A Red Boiling Sp 70.32 54 IAmb IAmb 11 03 39.0
comp=Z,15nm,1.1s
U49A Red Boiling Sp 70.32 54 P P 11 03 37.8 -0.6
baz=325
T50A Nancy 70.34 53 IAmb IAmb 11 03 39.1
comp=Z,30nm,1.4s
T50A Nancy 70.34 53 P P 11 03 38.1 -0.4
baz=325
T50A P P 11 03 38.1 -0.4
baz=325
MCWV Mont Chateau 70.36 48 P P 11 03 37.7 -0.8
baz=327
SSPA Standing Stone 70.36 46 P P 11 03 37.3 -1.2
baz=327
CLTN Cedars of Leba 70.41 55 IAmb IAmb 11 03 39.8
comp=Z,20nm,0.9s
V48A Smith Brothers 70.47 55 IAmb IAmb 11 03 40.0
comp=Z,21nm,0.9s
V48A Smith Brothers 70.47 55 P P 11 03 39.0 -0.2
baz=325,SNR=7.7
R53A Hurricane 70.55 50 IAmb IAmb 11 03 40.1
comp=Z,16nm,0.8s
HKT Hockley 70.68 65 P P 11 03 39.9 -0.7
L61B Northampton 70.88 42 P P 11 03 41.0 -0.7
baz=329
OJC Ojcow 70.91 337 P P 11 03 41.2 -0.4
OJC IAmb IAmb 11 03 42.9
comp=Z,14nm,1.2s
OJC Ojcow 70.91 337 P P 11 03 41.3 -0.4
OJC pmax pmax
comp=Z,14nm,1.2s
SOC Sochi 71.16 321 *eP* P 11 03 41.8 -1.5
SOC *e* 11 06 26.0
SOC *e*PPP PPP 11 08 08.4
SOC *e*S **S** 11 12 55.3 -1.8
SOC *e*SS **SS** 11 17 34.5 +4.5
SOC MLR MLR
comp=Z,95nm,20.0s
CLL Collm 71.22 342 *eP* P 11 03 43.0 -0.6
CLL pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 71.22 342 *eP* P 11 03 43.0 -0.6
HRV Adam Dziewonsk 71.25 41 P P 11 03 42.9 -1.0
baz=330
TZTN Tazewell 71.32 52 P P 11 03 43.3 -1.2
baz=326
X48A Hartselle 71.41 56 P P 11 03 44.6 -0.4
baz=325,SNR=6.6
V51A Loudon 71.56 53 IAmb IAmb 11 03 46.4
comp=Z,21nm,1.1s
V51A Loudon 71.56 53 P P 11 03 45.0 -0.9
baz=326
W50A Signal Mountai 71.61 54 IAmb IAmb 11 03 46.8
comp=Z,16nm,0.8s
W50A Signal Mountai 71.61 54 P P 11 03 45.7 -0.6
baz=326,SNR=5.5
AFI Afiamalu 71.68 156 LR LR 11 27 25.5
comp=Z,62nm,20.4s,baz=356,slow=29
CPCT Cooper Cave 71.78 54 IAmb IAmb 11 03 47.7
comp=Z,11nm,0.9s
MORC Moravsky Berou 71.81 339 P P 11 03 47.1 -0.1
MORC Moravsky Berou 71.81 339 P P 11 03 47.1 -0.1
MORC pmax pmax
comp=Z,6.0nm,1.1s
MORC Moravsky Berou 71.81 339 *eP* P 11 03 47.1 -0.1
TKL Tuckaleechee C 71.95 53 LR LR 11 37 23.4
comp=Z,206nm,18.1s,baz=330,slow=37
Z47A Carrollton 71.95 58 P P 11 03 48.1 -0.1
baz=325,SNR=5.5
BLA Blacksburg 72.15 50 P P 11 03 48.8 -0.7
baz=327
Y49A Blount Mountai 72.20 56 P P 11 03 49.4 -0.4
baz=326,SNR=8.7
GNI Garni 72.23 316 LR LR 11 40 09.7
comp=Z,110nm,19.1s,baz=25,slow=40
GNI Garni 72.23 316⇑ *eP* P 11 03 51.7 +1.6
GNI pmax pmax
comp=Z,17nm,1.3s
S57A Dark Hollow, R 72.33 48 IAmb IAmb 11 03 51.1
comp=Z,16nm,1.1s
W52A Murphy 72.34 54 IAmb IAmb 11 03 51.3
comp=Z,15nm,1.1s
W52A Murphy 72.34 54 P P 11 03 50.5 -0.1
baz=326
X51A Calhoun 72.35 55 IAmb IAmb 11 03 51.3
comp=Z,22nm,1.1s
X51A Calhoun 72.35 55 P P 11 03 50.8 +0.2
baz=326
X51A P P 11 03 50.8 +0.2
baz=326
VRAC Vranov 72.45 339 P P 11 03 51.3 +0.3
comp=Z,3.1nm,0.5s,baz=31,slow=5.6,SNR=5.1
VRAC LR LR 11 42 37.1
comp=Z,44nm,18.3s,baz=18,slow=42
comp=Z,3.1nm,0.5s
VRAC Vranov 72.45 339 *eP* P 11 03 50.9 -0.1
LRAL Lakeview Retre 72.60 57 P P 11 03 50.9 -1.2
baz=325,SNR=11
LRAL Lakeview Retre 72.60 57 P P 11 03 51.3 -0.9
baz=325,SNR=11
JAVC Velka Javorina 72.65 338 *eP* P 11 03 53.6 +1.3
KRUC Moravsky 72.72 339 *eP* P 11 03 52.7 +0.1
ZAIG Zacatecas 72.80 75 P P 11 03 53.8 -0.1
BG3 Lake Jocassee 72.88 53 P P 11 03 53.0 -0.8
BG3 IAmb IAmb 11 03 54.1
comp=Z,10nm,0.8s
Z51A Franklin 73.23 55 P P 11 03 55.0 -0.9
baz=326,SNR=5.3
Y52A Lilburn 73.30 54 IAmb IAmb 11 03 57.0
comp=Z,19nm,0.9s
Y52A Lilburn 73.30 54 P P 11 03 55.4 -0.9
baz=326,SNR=5.4
Y52A P P 11 03 55.4 -0.9
baz=326,SNR=5.4
GERES GERESS Array B 73.46 341 P P 11 03 57.5 +0.4
comp=Z,1.3nm,0.7s,baz=35,slow=4.9,SNR=10
comp=Z,1.3nm,0.7s
GERES GERESS Array B 73.46 341 P P 11 03 56.9 -0.2
GERES GERESS Array B 73.46 341 P P 11 03 56.9 -0.2
KMSC Kings Mountain 73.48 52 P P 11 03 57.0 -0.4
baz=327
KMSC Kings Mountain 73.48 52 P P 11 03 56.6 -0.7
baz=327
MLR Muntele Rosu 73.79 331 P P 11 03 60.0 +0.8
comp=Z,2.5nm,0.6s,baz=338,slow=12,SNR=4.3
MLR LR LR 11 40 13.7
comp=Z,63nm,18.3s,baz=64,slow=39
comp=Z,2.5nm,0.6s
MLR Muntele Rosu 73.79 331 P P 11 04 00.0 +0.8
HODGE Hodges 73.82 53 IAmb IAmb 11 03 59.9
comp=Z,12nm,0.7s
HODGE Hodges 73.82 53 P P 11 03 58.8 -0.5
baz=327,SNR=5.2
GOGA Godfrey 73.95 54 P P 11 03 59.3 -0.8
baz=327
152A Waverly Hall 73.98 56 IAmb IAmb 11 04 00.6
comp=Z,21nm,0.9s
152A Waverly Hall 73.98 56 P P 11 03 59.4 -0.9
baz=326,SNR=8.1
BRAL Brewton 74.10 58 P P 11 04 00.7 -0.3
baz=326
KBA Koelnbreinsper 75.22 341 *eP* P 11 04 08.6 +1.1
comp=Z,4.2nm,0.6s
OBKA Obir 75.53 340 *eP* P 11 04 09.4 +0.2
comp=Z,8.5nm,0.9s
TIGA Tifton 75.53 55 P P 11 04 09.1 -0.2
baz=327
ABTA Abfaltersbach 75.69 341 *eP* P 11 04 11.1 +1.0
comp=Z,2.5nm,0.4s
NHSC New Hope 75.70 52 P P 11 04 10.2 0.0
baz=328
FETA Feichten 75.75 342 *eP* P 11 04 11.0 +0.5
comp=Z,1.7nm,0.6s
DAVOX Davos/Dischmat 76.13 343 P P 11 04 12.6 -0.1
comp=Z,1.2nm,0.3s,baz=321,slow=13,SNR=4.4
DAVOX LR LR 11 39 00.3
comp=Z,58nm,21.9s,baz=252,slow=37
comp=Z,1.2nm,0.3s
BRTR Keskin Array B 76.69 324 P P 11 04 16.1 +0.1
comp=Z,2.7nm,0.8s,baz=58,slow=3.6,SNR=9.4
BRTR LR LR 11 44 26.6
comp=Z,37nm,18.1s,baz=360,slow=41
comp=Z,2.7nm,0.8s
BRTR Keskin Array B 76.69 324 P P 11 04 15.4 -0.5
BRTR Keskin Array B 76.69 324 P P 11 04 15.4 -0.5
DZM Mont Dzumac 77.13 179 LR LR 11 34 14.6
comp=Z,47nm,18.9s,baz=39,slow=32
RDO Rodhopi 77.92 330 IAmb IAmb 11 04 23.7
comp=Z,14nm,1.2s
TAOE Nuku Hiva Isla 78.39 125 *e*LR LR 11 28 49.2
comp=Z,115nm,25.9s
WRA Warramunga Arr 79.48 209 P P 11 04 31.1 -0.1
comp=Z,3.0nm,0.8s,baz=22,slow=6.0,SNR=21
comp=Z,3.0nm,0.8s
WSAR Wadi Sarin 80.10 297 LR LR 11 43 57.2
comp=Z,70nm,18.1s,baz=44,slow=39
PMOR Pomariorio Ree 80.44 134 *e*T T 12 33 17.9
comp=Z,0.7nm,0.2s
FITZ Fitzroy Crossi 80.50 218 LR LR 11 35 43.4
comp=Z,47nm,21.4s,baz=358,slow=32
PALK Pallekele 80.96 270 LR LR 11 46 19.6
comp=Z,56nm,18.1s,baz=177,slow=40
PPT Papeete 82.09 137 LR LR 11 35 31.7
comp=Z,81nm,19.4s,baz=326,slow=31
PPT2 Papeete2 82.11 137 *e*LR LR 11 30 32.2
comp=Z,73nm,22.0s
ASAR Alice Springs 83.14 209 P P 11 04 51.1 +0.5
comp=Z,4.3nm,0.8s,baz=16,slow=5.5,SNR=41
comp=Z,4.3nm,0.8s
IDI Anoyia 83.54 328 LR LR 11 46 18.1
comp=Z,34nm,19.3s,baz=68,slow=39
VAE Valgiornera 84.21 337 LR LR 11 48 58.5
comp=Z,29nm,18.1s,baz=331,slow=40
ESBB Sonseca Array 84.88 352 IAmb IAmb 11 05 00.9
comp=Z,15nm,1.1s
ESDC Sonseca Array 84.88 352 P P 11 04 59.3 -0.3
comp=Z,9.1nm,0.9s,baz=357,slow=5.1,SNR=43
comp=Z,9.1nm,0.9s
ESDC Sonseca Array 84.88 352 IAmb IAmb 11 05 00.9
comp=Z,15nm,1.1s
PAB San Pablo 85.04 352 P P 11 05 00.9 +0.5
PAB pmax pmax
comp=Z,8.0nm,0.9s
RAO Raoul Island 85.50 165 LR LR 11 38 22.3
comp=Z,66nm,20.6s,baz=302,slow=32
STKA Stephens Creek 89.22 200 P P 11 05 20.4 +0.1
comp=Z,3.0nm,0.9s,baz=329,slow=6.1,SNR=4.6
STKA LR LR 11 42 08.3
comp=Z,57nm,22.0s,baz=19,slow=33
comp=Z,3.0nm,0.9s
VNDA Vanda 132.63 181 PKP PKPdf 11 11 37.1 -0.5
comp=Z,0.3nm,0.5s,baz=359,slow=4.7,SNR=3.7
MAW Mawson 143.63 219 PKP PKPbc 11 11 55.5 0.0
comp=Z,4.5nm,0.9s,baz=333,slow=4.5,SNR=7.2

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*IDC **03** 11:02:18.4±2.4, 31°.47S×71°.58W, h0km, mb4.4/2, mbtmp4.1/3, ML3.3/1, MS2.9/1, Error ellipse: s-maj=88.4km s-min=46.0km az=102.0*
*GUC **03** 11:02:22.0±0.8, 31°.56S×71°.76W, h30km±3km, ML3.9*
ISC 03 11:02:19.0±1.4, **31°.53S**±0°.02×**71°.74W**±0°.07, **h6**km±9km, **n20**, σ0°.**63**/35, **8C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CO02	**Cornbarbal**	**0.71**	**63**	⇓*iP*			**Pn**	**11 02 36.0**	**+0.2**
CO02				*i*S			**Sn**	**11 02 46.2**	**-0.9**
CO02				IAML				11 02 51.3	
	comp=N,17μm,0.3s								
CO06	**Fray Jorge**	**0.86**	**6**	⇓*iP*			**Pn**	**11 02 38.4**	**+0.7**
CO06				*i*S			**Sn**	**11 02 49.8**	**-0.7**
CO06				IAML				11 02 52.9	
	comp=N,8μm,0.3s								
CO03	**El Pedregal**	**1.13**	**53**	⇓*iP*			**Pn**	**11 02 42.5**	**+0.9**
CO03				*i*S			**Sn**	**11 02 57.6**	**+0.2**
CO03				IAML				11 03 00.5	
	comp=E,4μm,0.2s								
VA01	**Torpederas**	**1.49**	**177**	*e*P			**Pb**	**11 02 47.0**	**-0.2**
VA01				*i*S			**Sn**	**11 03 06.2**	**0.0**
ROCH	**El Roble**	**1.56**	**157**	⇑*iP*			**Pg**	**11 02 49.1**	**0.0**
ROCH				⇑*iP*			**Pg**	**11 02 49.0**	**0.0**
ROCH				*i*S			**Sg**	**11 03 08.9**	**-0.5**
ROCH				*i*S			**Sb**	**11 03 09.1**	**+0.3**
ROCH				IAML				11 03 14.4	
	comp=N,2μm,0.6s								
ROCH				IAML				11 03 14.6	
	comp=N,2μm,0.7s								
GO04	**Tololo Observa**	**1.57**	**31**	⇑*iP*			**Pg**	**11 02 49.5**	**+0.3**
GO04				*i*S			**Sg**	**11 03 10.8**	**+1.1**
VA03	**San Esteban**	**1.59**	**141**	⇑*iP*			**Pg**	**11 02 50.0**	**+0.4**
VA03				*i*S			**Sg**	**11 03 10.1**	**-0.1**
VA03				IAML				11 03 12.3	
	comp=E,5μm,0.3s								
CO05	**La Serena**	**1.66**	**15**	*e*P			**Pg**	**11 02 50.6**	**-0.3**
CO05				*i*S			**Sg**	**11 03 12.4**	**0.0**
CO05				IAML				11 03 20.0	
	comp=E,2μm,0.4s								
MT02	**Curacav**	**1.80**	**164**	⇑*iP*			**Pb**	**11 02 51.6**	**-0.8**
MT02				*i*S			**Sn**	**11 03 14.3**	**+0.5**
PEL	**Peldehue**	**1.84**	**151**	⇑*iP*			**Pb**	**11 02 53.3**	**+0.2**
PEL				*i*S			**Sb**	**11 03 16.8**	**+0.3**
PEL				IAML				11 03 22.2	
	comp=E,1μm,0.4s								
MT05	**Renca**	**2.04**	**156**	⇓*iP*			**Pb**	**11 02 56.1**	**-0.4**
MT05				*i*S			**Sb**	**11 03 21.7**	**-0.5**
MT05				IAML				11 03 30.3	
	comp=E,2μm,0.5s								
CO01	**Juntas del Tor**	**2.10**	**43**	⇑*iP*			**Pb**	**11 02 57.8**	**+0.2**
CO01				*i*S			**Sg**	**11 03 24.9**	**-1.5**
CO01				IAML				11 03 27.7	
	comp=E,990nm,0.2s								
VA05	**Santo Domingo**	**2.12**	**177**	⇑*iP*			**Pn**	**11 02 55.8**	**+0.7**
VA05				IAML				11 03 30.9	
	comp=E,996nm,0.5s								
FCH	**Farellones**	**2.17**	**146**	⇓*iP*			**Pb**	**11 02 58.5**	**-0.4**
FCH				*i*S			**Sb**	**11 03 26.2**	**-0.1**
MT09	**Talagante**	**2.33**	**164**	⇓*iP*			**Pb**	**11 03 00.3**	**-1.2**
MT09				*i*S			**Sn**	**11 03 28.0**	**+0.9**
MT09				IAML				11 03 42.5	
	comp=E,702nm,0.3s								
PLCA	**Paso Flores**	**9.23**	**174**	Pn			**Pn**	**11 04 33.5**	**+0.7**
	comp=E,0.1nm,0.3s,baz=328,slow=9.1,SNR=1.7								
	comp=E,1.5nm,0.8s								
CPUP	**Villa Florida**	**13.64**	**71**	LR			LR	11 11 18.5	
	comp=E,45nm,19.8s,baz=221,slow=40								
DBIC	**Dimbokro**	**74.16**	**72**	P			**P**	**11 13 56.3**	**-0.5**
	comp=E,3.4nm,0.8s,baz=219,slow=6.5,SNR=3.0								
	comp=E,3.4nm,0.8s								
TORD	**Torodi Ar. Bea**	**83.13**	**70**	P			**P**	**11 14 46.0**	**-0.3**
	comp=E,1.9nm,0.8s,baz=245,slow=3.7,SNR=9.9								
	comp=E,1.9nm,0.8s								
ZALV	**Zalesovo Beam**	**151.99**	**30**	PKPbc			**PKPbc**	**11 22 14.5**	**-0.1**
	comp=E,4.1nm,0.4s,baz=303,slow=3.0,SNR=19								

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*IDC **03** 11:09:01.7±4.9, 12°.67S×166°.88E, h259km±53km, mb3.6/10, mbtmp4.1/11, Error ellipse: s-maj=40.2km s-min=21.9km az=144.0*
ISC 03 11:08:58.9±1.1, **12°.9S**±0°.1×**167°.3E**±0°.2, **h250**km, **n12**, σ1°.**09**/13, **mb3.8**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.12**	**185**	P			**P**	**11 11 12.4**	**-1.1**
	1.2nm,0.4s,baz=124,slow=21,SNR=10								
STKA	**Stephens Creek**	**30.18**	**227**	P			**P**	**11 14 48.4**	**+2.3**
	1.3nm,0.5s,baz=60,slow=10,SNR=6.2								
	1.3nm,0.5s								
WRA	**Warramunga Arr**	**32.30**	**253**	P			**P**	**11 15 03.4**	**-1.4**
	0.9nm,0.7s,baz=84,slow=8.6,SNR=8.5								
	0.9nm,0.7s								
ASAR	**Alice Springs**	**33.35**	**247**	P			**P**	**11 15 13.4**	**-0.4**
	1.1nm,0.7s,baz=71,slow=9.4,SNR=17								
	1.1nm,0.7s								
FITZ	**Fitzroy Crossi**	**40.38**	**257**	P			**P**	**11 16 12.6**	**-0.4**
	2.4nm,0.6s,baz=86,slow=11,SNR=6.8								
	2.4nm,0.6s								
KSRS	**Korea Array**	**62.27**	**325**	P			**P**	**11 18 53.5**	**-1.0**
	0.7nm,0.6s,baz=134,slow=7.0,SNR=6.0								
	0.7nm,0.6s								
USRK	**Ussuriysk Ar.**	**65.30**	**333**	P			**P**	**11 19 14.5**	**+0.3**
	2.4nm,0.9s,baz=151,slow=9.2,SNR=4.8								
	2.4nm,0.9s								
CMAR	**Chiang Mai Arr**	**74.23**	**294**	P			**P**	**11 20 08.6**	**-0.5**
	0.8nm,0.5s,baz=135,slow=6.3,SNR=5.4								
	0.8nm,0.5s								
ILAR	**Eielson Array**	**84.83**	**18**	P			**P**	**11 21 05.0**	**0.0**
	2.8nm,0.6s,baz=247,slow=5.0,SNR=42								
	2.8nm,0.6s								
MKAR	**Makanchi Array**	**95.91**	**317**	P			**P**	**11 21 57.0**	**-0.3**
	1.2nm,0.6s,baz=88,slow=6.5,SNR=9.5								
	1.2nm,0.6s								
ZALV	**Zalesovo Beam**	**95.95**	**324**	P			**P**	**11 21 57.2**	**-0.1**
	0.5nm,0.5s,baz=105,slow=3.4,SNR=2.2								
	0.5nm,0.5s								
ESDC	**Sonseca Array**	**152.26**	**345**	PKPbc			**PKiKP**	**11 28 26.1**	**+0.5**
	0.9nm,0.8s,baz=9.8,slow=2.5,SNR=4.9								
ESDC				PKPab			**PKPab**	**11 28 37.2**	**+1.1**
	1.5nm,0.7s,baz=7.5,slow=4.8,SNR=8.6								

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*HEL **03** 11:28:17.3±0.2, 64°.00N×28°.12E, h0km, ML1.5, Explosion*
*IDC **03** 11:28:18.7±1.6, 63°.91N×27°.48E, h0km, mbtmp2.9/1, ML1.6/1, Error ellipse: s-maj=20.9km s-min=9.6km az=109.0*
ISC 03 11:28:15.5±0.8, **63°.96N**±0°.02×**28°.18E**±0°.03, **h0**km, **n20**, σ0°.**84**/32, **Finland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.81**	**71**	PG			**Pb**	**11 28 32.8**	**+0.4**
RMF				SB			**Sb**	**11 28 43.5**	**-0.4**
OUL	**Oulu**	**1.50**	**320**	PN			**Pb**	**11 28 44.1**	**-0.1**
OUL				SN			**Sg**	**11 29 03.6**	**-0.1**
OUF	**Merijarvi**	**1.57**	**287**	PG			**Pb**	**11 28 44.9**	**-0.4**
OUF				MSG				11 29 03.2	
	comp=Z,3.4nm,0.2s								
OUF				SN			**Sn**	**11 29 04.8**	**-0.7**
OBF4	**Vikkela, Lumij**	**1.59**	**304**	PN			**Pb**	**11 28 45.5**	**-0.2**
	baz=118								
OBF4				SN			**Sg**	**11 29 06.9**	**+0.5**
OBF0	**Syolatti, Pyha**	**1.81**	**289**	PN			**Pb**	**11 28 49.1**	**-0.2**
OBF0				SN			**Sb**	**11 29 12.4**	**-0.1**
MSF	**Maaselka**	**2.00**	**10**	PG			**Pb**	**11 28 52.2**	**-0.4**
MSF				SG			**Sb**	**11 29 17.9**	**0.0**
KAF	**Kangasniemi**	**2.04**	**206**	PG			**Pg**	**11 28 53.8**	**-0.7**
KAF				MSG				11 29 18.5	
	comp=Z,2.4nm,0.2s								
KAF				SG			**Sg**	**11 29 20.6**	**-0.3**
OBF8	**Ulkokalla**	**2.11**	**282**	PG			**Pb**	**11 28 54.9**	**+0.4**
KU6	**Riekki**	**2.20**	**19**	PG			**Pb**	**11 28 56.1**	**+0.1**
KU6				MSG				11 29 21.6	
	comp=Z,3.3nm,0.2s								
KEF	**Keuruu**	**2.35**	**221**	PG			**Pb**	**11 28 58.9**	**+0.3**
KEF				MSG				11 29 27.0	
	comp=Z,2.1nm,0.2s								

KEF SG **Sb** **11 29 28.9 +0.9**
OLKF **Oulanka, Finla** **2.43 12** PG **Pb** **11 29 00.0 +0.1**
OLKF SG **Sb** **11 29 31.4 +1.0**
RUFX **Ruokolahti** **2.56 172** PB **Pb** **11 29 03.0 +0.8**
RUFX SB **Sg** **11 29 36.3 -1.4**
VAF **Ylistaro** **2.64 252** PG **Pb** **11 29 03.0 -0.5**
baz=65
VAF MSG 11 29 34.5
comp=Z,1.8nm,0.2s
VAF SG **Sb** **11 29 36.6 +0.3**
TOF **Tornio** **2.69 324** MSG 11 29 35.0
comp=Z,1.0nm,0.2s
TOF SG **Sb** **11 29 38.0 +0.3**
FIA0 **FINESS Array S** **2.70 202** PB **Pb** **11 29 04.4 -0.2**
baz=20
FIA0 SB **Sb** **11 29 38.9 +0.6**
FINES **FINESS Array B** **2.70 202** Pg **Pb** **11 29 04.2 -0.5**
comp=Z,0.2nm,0.3s,baz=18,slow=15,SNR=6.0
FINES Lg Lg 11 29 39.0
comp=Z,0.4nm,0.3s,baz=18,slow=29,SNR=8.1
RNF **Rovaniemi** **2.81 342** SG **Sb** **11 29 41.3 -0.2**
UMAU **Umeaa** **3.31 272** PN **Pn** **11 29 09.8 +1.3**
ARCES **ARCESS Array B** **5.70 350** Pn **Pn** **11 29 43.0 +1.8**
baz=169,slow=14,SNR=1.5
ARCES Sn **Sn** **11 30 44.5 -2.8**
baz=172,slow=21,SNR=1.4
ARCES Lg Lg 11 31 14.1
comp=Z,0.1nm,0.3s,baz=162,slow=33,SNR=3.8
comp=Z,1.3nm,0.8s
I37NO **I37NO** **6.40 328** *i* 12 06 10.0
baz=142,slow=322,SNR=1.4

INET ***03*** *11:29:14.8±0.5, 11.94N×87.91W, h15km±3km, MW3.1*
SNET ***03*** *11:29:17.0±0.8, 12.05N×87.81W, h18km±37km, ML3.5*
ISC 03 11:29:17.2±3.6, 12.1N±0.2×87.7W±0.1, h18km±13km**, n10, σ0.56/17, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.91**	**11**	*eP*		**Pb**	**11 29 34.4**	**-0.1**
CRIN	**San Cristobal**	**0.91**	**47**	*eP*		**Pg**	**11 29 35.2**	**+0.2**
TELN	**Telica**	**1.03**	**59**	*eP*		**Pb**	**11 29 36.8**	**+0.2**
COPN	**Copaltepe**	**1.13**	**85**	*eP*		**Pn**	**11 29 37.4**	**-0.7**
CNCH	**Conchagua**	**1.19**	**356**	*eP*		**Pn**	**11 29 38.5**	**-0.7**
CNCH				*eS*		**Sg**	**11 29 56.0**	**0.0**
CNCH				IAML			11 30 00.7	
comp=Z,1μm,0.2s								
MOMN	**Momotombo**	**1.22**	**74**	*eP*		**Pn**	**11 29 38.8**	**-0.7**
MOMN				*eS*		**Sg**	**11 29 57.3**	**+0.6**
LCND	**La Caada**	**1.23**	**353**	*eP*		**Pn**	**11 29 39.0**	**-0.5**
LCND				*eP*		**Pb**	**11 29 39.7**	**-0.3**
LCND				*eS*		**Sn**	**11 29 55.9**	**+0.1**
LCND				*eS*		**Sg**	**11 29 56.6**	**-0.5**
LCND				IAML			11 29 59.9	
comp=Z,587nm,0.4s								
COEB	**Comit de Eme**	**1.61**	**331**	*eP*		**Pn**	**11 29 44.5**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.88**	**329**	*eP*		**Pn**	**11 29 48.4**	**-0.1**
SCLA				*eS*		**Sn**	**11 30 12.8**	**+1.0**
P5NO	**Presa 5 de nov**	**2.14**	**332**	*eP*		**Pn**	**11 29 51.8**	**-0.3**
P5NO				*eS*		**Sn**	**11 30 18.8**	**+0.6**

IDC 03 11:34:53.5±14.0, 46.13N×154.55E, h0km, mb3.3/2, mbtmp3.1/3, ML2.1/1, MS3.0/1, Error ellipse: s-maj=371.3km s-min=67.3km az=84.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.28**	**15**	Pn		Pn	**11 36 41.1**	**+0.1**
0.1nm,0.3s,baz=190,slow=15,SNR=3.9								
0.3nm,0.5s								
TIXI	**Tiksi**	**28.34**	**343**	LR		LR	11 54 19.1	
comp=Z,24nm,18.1s,baz=356,slow=41								
ILAR	**Eielson Array**	**36.42**	**38**	P		P	11 41 59.1	-0.2
0.2nm,0.5s,baz=264,slow=6.5,SNR=5.1								
0.2nm,0.5s								
TXAR	**Lajitas Array**	**76.92**	**61**	P		P	11 46 48.0	+0.1
0.3nm,0.8s,baz=312,slow=2.8,SNR=3.9								
0.3nm,0.8s								

BJI ***03*** *11:37:14.7±0.0, 18.65N×145.84E, h234km, mb4.3/31, mB4.4/15*
NEIC ***03*** *11:37:16.6±1.4, 18.54N±0.07×145.6E±0.1, h218km±7km, mb4.5/184, Error ellipse: s-maj=16.1km s-min=10.6km az=88.0*
DJA ***03*** *11:37:17.4±1.5, 18°N±5'×14'6E±', h249km±16km, M5.1/51, mB5.6/16, mb5.1/51, Mw(mB)5.1/16*
IDC ***03*** *11:37:19.6±1.4, 18.52N×145.51E, h257km±13km, mb4.1/35, mbtmp4.7/38, Error ellipse: s-maj=10.1km s-min=5.9km az=95.0*
ISC 03 11:37:16.6±0.9, 18.47N±0.04×145.55E±0.06, h227km±8km**, n512, σ0.90/463, mb4.5/154, 5C-1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**4.89**	**188**	P		**Pn**	**11 38 29.8**	**-0.6**
50nm,0.3s,baz=164,slow=11,SNR=16								
GUMO				S		**S**	**11 39 25.3**	**-3.6**
104nm,0.3s,baz=0.0,slow=20,SNR=2.2								
GUMO	**Guam**	**4.89**	**188**	Pn		**Pn**	**11 38 30.2**	**-0.2**
GUMO	**Guam**	**4.89**	**188**	P		Pn	11 38 28.1	-2.3
JCJ	**Chichijima**	**9.13**	**341**	P		**Pn**	**11 39 22.6**	**-1.7**
18nm,0.3s,baz=284,slow=22,SNR=6.1								
JCJ				S		S	11 40 58.7	-8.4
90nm,0.6s,baz=296,slow=22,SNR=7.1								
JCJ	**Chichijima**	**9.13**	**341**	Pn		Pn	11 39 20.5	-3.8
JHJ2	**Mitsune**	**15.46**	**342**	P		**Pn**	**11 40 44.7**	**+1.5**
JHJ	**Hachijo jima 2**	**15.48**	**342**	P		**P**	**11 40 43.5**	**+0.5**
21nm,0.3s,baz=270,slow=22,SNR=5.3								
JOW	**Kunigami**	**17.97**	**301**	P		**Pn**	**11 41 12.6**	**-0.3**
54nm,0.5s,baz=137,slow=11,SNR=52								
JOW	**Kunigami**	**17.97**	**301**	P		**Pn**	**11 41 12.8**	**0.0**
JOW	**Kunigami**	**17.97**	**301**	P		**Pn**	**11 41 12.9**	**0.0**
JYT	**Yasato**	**18.31**	**346**			**P**	**11 41 13.9**	**0.0**
INU	**Inuyama**	**18.44**	**337**	P		**P**	**11 41 14.7**	**-0.6**
INU				IAmb		IAmb	11 41 32.3	
comp=Z,8.4nm,0.7s								
JGF	**Kuroka**	**18.55**	**339**	P		**P**	**11 41 16.9**	**+0.4**
JGF				IAmb		IAmb	11 41 19.8	
comp=Z,11nm,0.8s								
MJAR	**Matsushiro Arr**	**19.13**	**342**	P		**P**	**11 41 24.0**	**+1.2**
comp=Z,3.4nm,0.6s,baz=173,slow=10,SNR=12								
MAJO	**Matsushiro**	**19.13**	**342**	P		**P**	**11 41 21.4**	**-1.3**
MAJO				IAmb		IAmb	11 41 34.8	
comp=Z,14nm,0.6s								
MAJO	**Matsushiro**	**19.13**	**342**	P		**P**	**11 41 25.2**	**+2.4**
JNU	**Nakatsue**	**19.65**	**321**	P		**P**	**11 41 30.0**	**+1.6**
comp=Z,1.7nm,0.4s,baz=13,slow=10,SNR=5.9								
JNU	**Nakatsue**	**19.65**	**321**	P		**P**	**11 41 26.5**	**-1.8**
JNU				IAmb		IAmb	11 41 45.6	
comp=Z,13nm,1.3s								
JNU	**Nakatsue**	**19.65**	**321**	P		**P**	**11 41 30.8**	**+2.5**
JMM	**Marumori**	**19.77**	**349**	P		**P**	**11 41 30.7**	**+1.2**
JMM				IAmb		IAmb	11 41 39.2	
comp=Z,24nm,1.0s								
JHS	**Saijyo**	**19.83**	**329**	P		**P**	**11 41 30.6**	**+0.3**
MANU	**Manus Island**	**20.46**	**175**	P		**P**	**11 41 37.6**	**+0.5**
JSD	**Sado**	**20.51**	**343**	P		**P**	**11 41 37.0**	**-0.5**
JSD				IAmb		IAmb	11 41 45.1	
comp=Z,20nm,0.9s								
BIPH	**Bislig**	**21.26**	**244**	*eP*		**P**	**11 41 45.9**	**+0.4**
SMPI	**Sarmi**	**21.41**	**199**	P		**P**	**11 41 45.2**	**-1.8**
comp=Z,820nmcomp=Z,38nm,0.8s								
GENI	**Genyem**	**21.59**	**195**	P		**P**	**11 41 48.9**	**+0.2**
comp=Z,2μmcomp=Z,132nm,0.6s								
SRPI	**Serui, Papua**	**22.19**	**205**	P		**P**	**11 41 54.2**	**-0.1**
BUKP	**Musuan**	**22.52**	**245**	*eP*		**P**	**11 41 58.3**	**+0.8**
TBP	**Tagbilaran**	**22.75**	**250**	*eP*		**P**	**11 41 59.6**	**+0.1**
YULB	**Yu-li**	**23.16**	**286**	P		**P**	**11 42 03.7**	**+0.6**
YHNB	**Yeheng**	**23.29**	**290**	P		**P**	**11 42 04.9**	**+0.5**
YHNB	**Yeheng**	**23.29**	**290**	P		**P**	**11 42 05.8**	**+1.4**
LQP	**Lukban**	**23.44**	**263**	*eP*		**P**	**11 42 07.3**	**+1.4**
SSLB	**Suanglung**	**23.53**	**287**	P		**P**	**11 42 07.1**	**+0.6**
SSLB	**Suanglung**	**23.53**	**287**	P		**P**	**11 42 07.5**	**+1.0**
ERM	**Erimo**	**23.56**	**356**	P		**P**	**11 42 07.5**	**+1.0**
ERM	**Erimo**	**23.56**	**356**	P		**P**	**11 42 08.0**	**+1.5**
SWI	**Sorong**	**23.80**	**218**	P		**P**	**11 42 05.3**	**-3.7**
comp=Z,63nm,0.7s								
SIJI	**Sorong**	**23.80**	**218**	P		**P**	**11 42 10.0**	**+1.0**
comp=Z,17nm,0.4s,baz=8.7,slow=16,SNR=8.2								
comp=Z,17nm,0.4s								
KSRS	**Korea Array**	**24.42**	**324**	P		**P**	**11 42 13.6**	**-0.8**
comp=Z,2.4nm,0.6s,baz=148,slow=8.9,SNR=32								
KSRS				ScP		**ScP**	**11 49 02.6**	**-1.3**
comp=Z,1.0nm,0.8s,baz=151,slow=2.3,SNR=7.5								
comp=Z,2.4nm,0.6s								
KSAR	**Wonju Array Be**	**24.43**	**324**	P		**P**	**11 42 14.5**	**0.0**
KS19	**Wonju Array Si**	**24.48**	**324**	P		**P**	**11 42 13.8**	**-1.2**
JEW	**Eniwo**	**24.54**	**353**	P		**P**	**11 42 15.3**	**-0.1**
FAKI	**Fak Fak**	**24.96**	**213**	P		**P**	**11 42 20.0**	**+0.5**
FAKI	**Fak Fak**	**24.96**	**213**	P		**P**	**11 42 17.6**	**-1.9**
comp=Z,62nm,1.2s								
FAKI	**Fak Fak**	**24.96**	**213**	P		**P**	**11 42 19.7**	**+0.2**
LBMI	**Labuha**	**25.98**	**225**	P		**P**	**11 42 25.7**	**-3.0**
comp=Z,18nm,0.7s								
NJ2	**Nanjing**	**27.58**	**305**	*eP*		**P**	**11 42 43.2**	**+0.4**
NJ2				pmax		pmax		
comp=Z,11nm,0.5s								
PMG	**Port Moresby**	**27.74**	**177**	P		**P**	**11 42 44.4**	**+0.1**
comp=Z,15nm,0.6s,baz=107,slow=3.5,SNR=7.1								
comp=Z,15nm,0.6s								
YSS	**Yuzh-Sakhalins**	**28.50**	**356**	P		**P**	**11 42 50.8**	**0.0**
MRSI	**Marisa**	**29.27**	**235**	P		**P**	**11 42 58.5**	**+0.6**
comp=Z,55nm,1.0s								
MYLDM	**Lahad Datu**	**29.52**	**247**	P		**P**	**11 43 03.4**	**+3.3**
LUWI	**Luwuk**	**29.62**	**232**	P		**P**	**11 42 59.9**	**-1.1**
comp=Z,3μmcomp=Z,90nm,1.1s								
TOLI2	**Tolitoli**	**29.80**	**237**	P		**P**	**11 43 03.4**	**+0.8**
TOLI2	**Tolitoli**	**29.80**	**237**	P		**P**	**11 43 03.7**	**+1.1**
APSI	**Ampana**	**30.38**	**233**	P		**P**	**11 43 07.2**	**-0.5**
comp=Z,22nm,1.1s								
MPSI	**Mapaga**	**30.97**	**237**	P		**P**	**11 43 13.1**	**+0.3**
comp=Z,27nm,0.8s								
KKM	**Kota Kinabalu**	**31.14**	**250**	P		**P**	**11 43 16.1**	**+1.6**
KKM	**Kota Kinabalu**	**31.14**	**250**	P		**P**	**11 43 16.0**	**+1.5**
COEN	**Coen**	**32.30**	**184**	P		**P**	**11 43 24.5**	**+0.1**
COEN	**Coen**	**32.30**	**184**	P		**P**	**11 43 24.5**	**+0.1**
KLR	**Kul'dur**	**32.65**	**343**	P		**P**	**11 43 25.9**	**-1.1**
comp=Z,8.9nm,0.6s,baz=171,slow=5.1,SNR=30								
comp=Z,8.9nm,0.6s								
HNS	**HongShan**	**32.92**	**311**	⇑P		**P**	**11 43 30.4**	**+0.8**
HNS				pmax		pmax		
comp=Z,8.0nm,0.8s								
TTSI	**Tana Toraja**	**33.15**	**232**	P		**P**	**11 43 33.7**	**+1.9**
comp=Z,149nm,0.8s								
BJI	**Beijing**	**33.20**	**317**	P		**P**	**11 43 31.4**	**-0.6**
BJI				pmax		pmax		
comp=Z,8.0nm,0.7s								
BJI				pmax		pmax		
comp=Z,56nm,6.9s								
BJI				LR		LR		
comp=Z,73nm,10.8s								
BJI				LR		LR		
comp=Z,240nm,11.6s								
BJI				LR		LR		
comp=Z,300nm,12.0s								
KDU	**Kakadu**	**33.53**	**204**	P		**P**	**11 43 35.3**	**+0.2**
SMKI	**Samarinda**	**33.60**	**239**	P		**P**	**11 43 39.5**	**+3.8**
SPSI	**Sidrap Palu**	**33.79**	**231**	P		**P**	**11 43 38.4**	**+1.0**
comp=Z,882nmcomp=Z,74nm,0.8s								
BNSI	**Bone**	**33.84**	**230**	P		**P**	**11 43 37.5**	**-0.3**
comp=Z,82nm,0.9s								
MTN	**Manton Dam**	**34.21**	**206**	P		**P**	**11 43 41.4**	**+0.5**
MTN	**Manton Dam**	**34.21**	**206**	P		**P**	**11 43 41.2**	**+0.3**
BKSI	**Bulukumba**	**34.45**	**229**	P		**P**	**11 43 43.6**	**+0.5**
comp=Z,39nm,0.6s								
KAPI	**Kappang**	**34.51**	**230**	P		**P**	**11 43 44.9**	**+1.3**
comp=Z,29nm,0.6s,baz=59,slow=4.8,SNR=19								
comp=Z,29nm,0.6s								
KAPI	**Kappang**	**34.51**	**230**	P		**P**	**11 43 44.4**	**+0.9**
BSSI	**Bau Bau, Buton**	**34.77**	**228**	P		**P**	**11 43 46.6**	**+0.9**
comp=Z,857nmcomp=Z,101nm,0.7s								
BATI	**Banata**	**35.75**	**219**	P		**P**	**11 43 54.0**	**-0.2**
comp=Z,31nm,0.3s,baz=323,slow=0.9,SNR=7.5								
comp=Z,31nm,0.3s								
MTKI	**Muara Teweh, K**	**35.78**	**241**	P		**P**	**11 43 55.5**	**+1.1**
comp=Z,47nm,0.8s								
PEA0B	**Petropavlovsk-**	**35.85**	**13**	P		**P**	**11 43 55.1**	**+0.6**
PETK	**Petropavlovsk-**	**35.85**	**13**	P		**P**	**11 43 55.7**	**+1.3**
comp=Z,2.9nm,0.7s,baz=179,slow=7.4,SNR=14								
comp=Z,2.9nm,0.7s								
PETK	**Petropavlovsk-**	**35.85**	**13**	P		**P**	**11 43 54.3**	**-0.2**
EDFI	**Ende, Flores**	**35.85**	**223**	P		**P**	**11 43 54.5**	**-0.6**
comp=Z,503nmcomp=Z,14nm,0.5s								
PET	**Petropavlovsk**	**35.97**	**13**	P		**P**	**11 43 56.6**	**+1.1**
SBUM	**Sibu**	**36.32**	**248**	P		**P**	**11 44 00.7**	**+1.8**
MTSU	**Mount Surprise**	**36.39**	**182**	P		**P**	**11 44 00.2**	**+0.7**
HHC	**Hu-ho-hao-te**	**36.66**	**315**	*eP*		**P**	**11 44 02.7**	**+1.0**
HHC				pmax		pmax		
comp=Z,27nm,1.0s								
HHC				pmax		pmax		
comp=Z,150nm,6.2s								
HHC				LR		LR		
comp=Z,160nm,14.6s								
HHC				LR		LR		
comp=Z,170nm,14.6s								
HHC				LR		LR		
comp=Z,170nm,14.6s								
BTO	**Baotou**	**37.60**	**314**	*eP*		**P**	**11 44 13.5**	**+3.9**
KNRA	**Kununurra**	**37.74**	**207**	P		**P**	**11 44 11.6**	**+0.9**
KNRA	**Kununurra**	**37.74**	**207**	P		**P**	**11 44 11.7**	**+0.9**
WBSI	**Waikabubak, Su**	**38.03**	**225**	P		P	11 44 23.7	+10
STKI	**Sintang**	**38.13**	**245**	P		**P**	**11 44 15.1**	**+0.9**
comp=Z,10μmcomp=Z,38nm,0.7s								
CTA	**Charters Tower**	**38.32**	**179**	P		**P**	**11 44 15.8**	**+0.2**
CTAO	**Charters Tower**	**38.32**	**179**	P		**P**	**11 44 16.1**	**+0.4**
CTAO				IAmb		IAmb	11 44 16.4	
comp=Z,20nm,1.1s								
CTAO	**Charters Tower**	**38.32**	**179**	P		**P**	**11 44 15.8**	**+0.2**
KSM	**Kuching**	**38.46**	**248**	P		**P**	**11 44 17.4**	**+0.5**
KSM	**Kuching**	**38.46**	**248**	P		**P**	**11 44 17.9**	**+1.0**
PLAI	**Plampang**	**38.55**	**228**	P		**P**	**11 44 18.3**	**+0.6**
TWSI	**Taliwang, Sumb**	**39.12**	**229**	P		**P**	**11 44 22.1**	**-0.3**
comp=Z,92nm,0.7s								
QIS	**Mount Isa**	**39.22**	**189**	P		**P**	**11 44 24.0**	**+0.9**
PBKI	**Pangkalan Bun**	**39.43**	**241**	P		**P**	**11 44 27.4**	**+2.4**
WB0	**Warramunga Arr**	**39.54**	**197**	P		**P**	**11 44 26.8**	**+1.1**
WR0	**Warramunga Arr**	**39.69**	**196**	P		**P**	**11 44 27.7**	**+0.8**
WR0				IAmb		IAmb	11 44 28.7	
comp=Z,27nm,0.9s								
WRAB	**Tennant Creek**	**39.71**	**197**	P		**P**	**11 44 27.8**	**+0.7**
WRAB	**Tennant Creek**	**39.71**	**197**	P		**P**	**11 44 28.4**	**+1.3**
WB2	**Warramunga Arr**	**39.72**	**197**	P		**P**	**11 44 28.3**	**+1.1**
WRA	**Warramunga Arr**	**39.72**	**197**	P		**P**	**11 44 27.8**	**+0.5**
comp=Z,19nm,0.3s,baz=15,slow=8.5,SNR=337								
WRA				ScP		**ScP**	**11 49 55.6**	**-0.5**
comp=Z,0.7nm,0.8s,baz=13,slow=4.5,SNR=4.6								
comp=Z,19nm,0.3s								
WRA	**Warramunga Arr**	**39.72**	**197**	P		**P**	**11 44 27.1**	**-0.2**
SRBI	**Singaraja**	**39.90**	**231**	P		**P**	**11 44 29.1**	**+0.3**
comp=Z,79nm,0.7s								
KMI	**Kunming**	**40.17**	**287**	⇑P		**P**	**11 44 31.6**	**+0.4**
KMI				pmax		pmax		
comp=Z,10.0nm,1.0s								
LZH	**Lanzhou**	**40.66**	**304**	*eP*		**P**	**11 44 34.3**	**-0.7**
LZH				pP		pP	11 45 21.7	+0.3
LZH				sP		sP	11 45 45.4	-1.5
LZH				pmax		pmax		
comp=Z,12nm,1.1s								
JAGI	**Jajag, Banyuwa**	**40.94**	**232**	P		**P**	**11 44 36.9**	**-0.4**
PZH	**PanZhiHua**	**41.10**	**289**	P		**P**	**11 44 35.5**	**-3.2**
PZH				pmax		pmax		
comp=Z,20nm,0.9s								
PZH				pmax		pmax		
comp=Z,80nm,5.1s								
MA2	**Magadan**	**41.23**	**4**	P		**P**	**11 44 39.8**	**+0.7**
comp=Z,5.8nm,0.6s,baz=182,slow=8.4,SNR=9.1								
comp=Z,5.8nm,0.6s								
MA2	**Magadan**	**41.23**	**4**	P		**P**	**11 44 39.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**41.27**	**209**	P		**P**	**11 44 41.0**	**+1.1**
comp=Z,16nm,0.3s,baz=34,slow=7.4,SNR=260								
comp=Z,16nm,0.3s								
FITZ	**Fitzroy Crossi**	**41.27**	**209**	P		**P**	**11 44 40.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**41.27**	**209**	P		**P**	**11 44 41.1**	**+1.2**
PWJI	**Pagerwojo**	**42.44**	**235**	P		**P**	**11 44 49.5**	**+0.1**
comp=Z,120nm,0.8s								
ULN	**Ulaanbaatar**	**42.86**	**322**	P		**P**	**11 44 52.0**	**-0.7**
KOUNC	**Koumac, New Ca**	**42.91**	**154**	P		**P**	**11 44 53.9**	**+0.8**
KOUNC				IAmb		IAmb	11 44 58.2	
comp=Z,16nm,1.0s								
KOUNC	**Koumac, New Ca**	**42.91**	**154**	P		**P**	**11 44 53.8**	**+0.8**
SONM	**Songino Array**	**43.23**	**322**	P		**P**	**11 44 55.1**	**-0.4**
comp=Z,4.1nm,0.6s,baz=139,slow=8.9,SNR=14								
SONM				PcP		**PcP**	**11 46 40.6**	**+0.2**
comp=Z,1.1nm,0.5s,baz=123,slow=4.1,SNR=2.7								
comp=Z,4.1nm,0.6s								
SONM	**Songino Array**	**43.23**	**322**	P		**P**	**11 44 54.9**	**-0.6**
UGM	**Wanagama**	**43.37**	**236**	P		**P**	**11 44 57.6**	**+0.6**
AS31	**Alice Springs**	**43.39**	**196**	P		**P**	**11 44 56.7**	**-0.3**
AS31				IAmb		IAmb	11 44 59.1	
comp=Z,4.7nm,0.3s								
ASAR	**Alice Springs**	**43.39**	**196**	P		**P**	**11 44 57.2**	**+0.3**
comp=Z,4.2nm,0.4s,baz=17,slow=6.8,SNR=88								
ASAR				S		**S**	**11 51 06.5**	**-1.1**
comp=Z,1.2nm,0.8s,baz=21,slow=18,SNR=5.3								
comp=Z,4.2nm,0.4s								
ASAR	**Alice Springs**	**43.39**	**196**	P		**P**	**11 44 56.9**	**0.0**
CMAR	**Chiang Mai Arr**	**44.10**	**278**	P		**P**	**11 45 04.4**	**+1.6**
comp=Z,5.6nm,0.7s,baz=68,slow=7.1,SNR=28								
comp=Z,5.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**44.10**	**278**	P		**P**	**11 45 03.7**	**+0.9**
ADK	**Adak**	**44.59**	**33**	P		**P**	**11 45 06.9**	**+0.8**
ADK				IAmb		IAmb	11 45 12.3	
comp=Z,16nm,0.8s								
ADK	**Adak**	**44.59**	**33**	P		**P**	**11 45 07.3**	**+1.2**
SEY	**Seymchan**	**44.68**	**4**	P		**P**	**11 45 07.0**	**+0.4**
comp=Z,3.3nm,0.5s,baz=183,slow=7.3,SNR=14								
comp=Z,3.3nm,0.5s								
RMQ	**Roma**	**44.79**	**176**	P		**P**	**11 45 07.8**	**-0.2**
QLP	**Quilpie**	**44.80**	**182**	P		**P**	**11 45 07.8**	**-0.2**
LEM	**Lembang**	**45.07**	**240**	P		**P**	**11 45 10.8**	**+0.2**
comp=Z,32nm,0.7s,baz=323,slow=20,SNR=8.4								
comp=Z,32nm,0.7s								
LEM	**Lembang**	**45.07**	**240**	P		**P**	**11 45 10.3**	**-0.3**
comp=Z,33nm,1.2s								
NOUC	**Port Laguerre**	**45.15**	**152**	P		**P**	**11 45 10.4**	**-0.4**
DZM	**Mont Dzumac**	**45.18**	**152**	P		**P**	**11 45 11.9**	**+0.7**
comp=Z,17nm,0.5s,baz=285,slow=3.2,SNR=35								
comp=Z,17nm,0.5s								
DZM	**Mont Dzumac**	**45.18**	**152**	P		**P**	**11 45 11.8**	**+0.7**
DZM				IAmb		IAmb	11 45 12.7	
comp=Z,19nm,0.7s								
DZM	**Mont Dzumac**	**45.18**	**152**	P		**P**	**11 45 12.0**	**+0.8**
YATNC	**Mamie plateau,**	**45.37**	**152**	P		**P**	**11 45 12.5**	**-0.1**
OUENC	**Ouen Island, N**	**45.66**	**152**	P		**P**	**11 45 15.7**	**+0.9**
OUENC				IAmb		IAmb	11 45 16.7	
comp=Z,20nm,0.8s								
OUENC	**Ouen Island, N**	**45.66**	**152**	P		**P**	**11 45 15.5**	**+0.7**
KULM	**Kulim**	**45.70**	**259**	P		**P**	**11 45 17.5**	**+2.1**
PINNC	**Pines Island,**	**46.10**	**151**	P		**P**	**11 45 19.2**	**+0.9**
INKA	**Innaminka**	**46.17**	**186**	P		**P**	**11 45 18.5**	**-0.2**
BLSI	**Bandar Lampung**	**46.25**	**243**	P		**P**	**11 45 21.1**	**+1.5**
WRKA	**Warakurna**	**46.39**	**202**	P		**P**	**11 45 21.3**	**+0.8**
MBWA	**Marble Bar**	**46.80**	**214**	P		**P**	**11 45 24.4**	**+0.7**
MBWA	**Marble Bar**	**46.80**	**214**	P		**P**	**11 45 24.6**	**+0.9**
KASI	**Kota Agung**	**46.97**	**243**	P		**P**	**11 45 24.3**	**-0.9**
comp=Z,116nm,0.5s								
OOD	**Oodnadatta**	**46.97**	**192**	P		**P**	**11 45 25.5**	**+0.6**
PSA00	**Pilbara Seismi**	**47.08**	**213**	P		**P**	**11 45 26.1**	**+0.2**
LWLI	**Liwa**	**47.08**	**244**	P		**P**	**11 45 24.5**	**-1.7**
comp=Z,77nm,0.8s								
KSI	**Kapahiang**	**47.67**	**247**	P		**P**	**11 45 30.2**	**-0.5**
comp=Z,15μmcomp=Z,105nm,0.5s								
GOMU	**GeErMu**	**47.85**	**302**	P		**P**	**11 45 34.2**	**+2.0**
GOMU				PcP		**PcP**	**11 46 56.7**	**-0.4**
GOMU				pmax		pmax		
comp=Z,5.0nm,0.8s								
MSVF	**Nonsavu**	**48.12**	**137**	P		**P**	**11 45 35.5**	**+1.5**
comp=Z,2.5nm,0.5s,baz=167,slow=23,SNR=5.3								
comp=Z,2.5nm,0.5s								
MSVF	**Nonsavu**	**48.12**	**137**	P		**P**	**11 45 35.1**	**+1.1**
PPI	**Padang Panjang**	**48.17**	**252**	P		**P**	**11 45 34.3**	**-0.1**
RPSI	**Rantau Prapat**	**48.25**	**257**	P		**P**	**11 45 35.0**	**0.0**
RPSI				IAmb		IAmb	11 45 37.8	
comp=Z,29nm,0.9s								
TSI	**Tuntungan**	**48.28**	**258**	P		**P**	**11 45 35.2**	**-0.1**
KCSI	**Kotacane, Aceh**	**49.01**	**258**	P		**P**	**11 45 41.7**	**+0.8**
comp=Z,3μmcomp=Z,23nm,0.8s								
LCRK	**Leigh Creek**	**49.14**	**188**	P		**P**	**11 45 41.4**	**0.0**
NIKH	**Nikolski High**	**49.28**	**35**	P		**P**	**11 45 41.9**	**-0.4**
baz=244								
MULG	**Mulgathing**

O19K	**Port Alsworth** comp=Z,14nm,0.7s	59.41	30	IAmb	IAmb	11 46 57.1	
O19K	**Port Alsworth** baz=253	59.41	30	P	P	**11 46 55.7**	**+0.7**
N19K	**Bonanza Creek** N19K	59.52	30	P	P	**11 46 56.7**	**+0.8**
	comp=Z,14nm,1.1s			IAmb	IAmb	11 46 59.4	
N19K	**Bonanza Creek** baz=252	59.52	30	P	P	**11 46 56.1**	**+0.3**
TTA	**Tatalina** baz=250	59.52	27	P	P	**11 46 55.6**	**-0.2**
KDAK	**Kodiak Island** KDAK	59.63	33	P	P	**11 46 57.3**	**+0.8**
	comp=Z,16nm,1.1s			IAmb	IAmb	11 47 02.2	
KDAK	**Kodiak Island** baz=256	59.63	33	P	P	**11 46 56.1**	**-0.4**
L19K	**White Mountain** baz=251	59.78	28	P	P	**11 46 58.0**	**+0.5**
P19K	**Oil Pt** baz=254	59.78	31	P	P	**11 46 57.8**	**+0.2**
M19K	**Big River Lodg** baz=252	59.90	28	P	P	**11 46 58.7**	**+0.4**
Q20K	**Shuyak Island** baz=256	59.93	32	P	P	**11 46 58.7**	**+0.1**
O20K	**Slope Mountain** baz=255	60.20	31	P	P	**11 46 59.9**	**-0.5**
L20K	**Farewell, AK** baz=252	60.30	28	P	P	**11 47 01.3**	**+0.2**
M20K	**Styx River** baz=253	60.46	29	P	P	**11 47 02.1**	**-0.2**
K20K	**Telida** K20K	60.49	27	P	P	**11 47 03.5**	**+1.1**
	comp=Z,19nm,1.5s			IAmb	IAmb	11 47 04.6	
K20K	**Telida** baz=252,SNR=7.3	60.49	27	P	P	**11 47 01.8**	**-0.5**
J20K	**Nowinta River** J20K	60.73	26	P	P	**11 47 05.0**	**+1.2**
	comp=Z,7.4nm,0.9s			IAmb	IAmb	11 47 06.7	
J20K	**Nowinta River** baz=251,SNR=7.3	60.73	26	P	P	**11 47 03.6**	**-0.2**
CNPM	**China Poot** CNPM	60.73	31	P	P	**11 47 04.1**	**+0.1**
	comp=Z,17nm,1.0s			IAmb	IAmb	11 47 05.2	
BRSE	**Bradley Lake S** baz=257	61.03	31	P	P	**11 47 06.0**	**0.0**
TAU	**Tasmania Unive**	61.09	179	P	P	**11 47 06.7**	**+0.2**
TAU	**Tasmania Unive**	61.09	179	P	P	**11 47 06.7**	**+0.2**
PPLA	**Purkeypile** baz=254	61.17	28	P	P	**11 47 06.6**	**-0.5**
KURK	**Kurchatov** KURK	61.35	318	P	P	**11 47 08.6**	**+0.3**
	comp=Z,14nm,1.4s			IAmb	IAmb	11 47 08.9	
CAST	**Castle Rocks** comp=Z,14nm,0.9s	61.37	27	IAmb	IAmb	11 47 10.3	
CAST	**Castle Rocks** baz=253,SNR=10	61.37	27	P	P	**11 47 08.4**	**+0.1**
CHUM	**Lake Minchumin** baz=253,SNR=7.9	61.40	26	P	P	**11 47 08.7**	**+0.3**
O22K	**Cooper Landing** baz=257,SNR=7.9	61.69	31	P	P	**11 47 10.5**	**+0.1**
SEW	**Seward** baz=258	61.74	31	P	P	**11 47 10.5**	**-0.2**
H21K	**Melozitna Rive** comp=Z,5.7nm,0.8s	61.75	24	IAmb	IAmb	11 47 13.5	
H21K	**Melozitna Rive** baz=252,SNR=9.2	61.75	24	P	P	**11 47 10.8**	**+0.1**
G21K	**Alakaket** baz=250	61.76	23	P	P	**11 47 11.4**	**+0.7**
NRIK	**Noril'sk** comp=Z,12nm,0.6s,baz=107,slow=8.5,SNR=20	61.78	340	P	P	**11 47 09.8**	**-1.0**
NRIK	comp=Z,12nm,0.6s **Noril'sk** NRIK	61.78	340	P	P	**11 47 10.1**	**-0.7**
	comp=Z,12nm,0.7s			IAmb	IAmb	11 47 10.4	
M22K	**Willow** baz=256	61.80	29	P	P	**11 47 11.0**	**0.0**
RC01	**Rabbit Creek A** comp=Z,12nm,0.9s	61.83	30	IAmb	IAmb	11 47 13.0	
RC01	**Rabbit Creek A** baz=257	61.83	30	P	P	**11 47 11.0**	**-0.3**
CUT	**Chulitna** baz=256	61.90	28	P	P	**11 47 11.4**	**-0.3**
KTH	**Kantishna Hill** comp=Z,12nm,1.0s	61.91	27	IAmb	IAmb	11 47 14.0	
I21K	**Tanana** comp=Z,6.5nm,0.9s	61.93	25	IAmb	IAmb	11 47 14.7	
I21K	**Tanana** baz=252,SNR=8.2	61.93	25	P	P	**11 47 12.1**	**+0.2**
F21K	**Alatna River** baz=250,SNR=5.5	62.01	23	P	P	**11 47 12.6**	**+0.2**
BPAW	**Bear Paw Mtn.** comp=Z,9.4nm,0.8s	62.03	26	IAmb	IAmb	11 47 14.5	
BPAW	**Bear Paw Mtn.** baz=254	62.03	26	P	P	**11 47 13.1**	**+0.5**
TRF	**Thorofare Moun** comp=Z,9.0nm,1.0s	62.15	27	IAmb	IAmb	11 47 16.5	
TRF	**Thorofare Moun** baz=255	62.15	27	P	P	**11 47 13.2**	**-0.4**
PMR	**Palmer** comp=Z,19nm,1.5s	62.22	29	IAmb	IAmb	11 47 14.6	
PMR	**Palmer** baz=257	62.22	29	P	P	**11 47 13.3**	**-0.6**
GHO	**Glory Hole Cre** comp=Z,9.7nm,0.6s	62.36	29	IAmb	IAmb	11 47 17.5	
H22K	**Ishtalitna Cre** baz=253	62.38	24	P	P	**11 47 15.0**	**+0.1**
MLY	**Manley** comp=Z,7.9nm,0.6s	62.39	25	IAmb	IAmb	11 47 17.0	
MLY	**Manley** baz=254,SNR=19	62.39	25	P	P	**11 47 15.4**	**+0.3**
PWL	**Port Wells** baz=258,SNR=7.2	62.44	30	P	P	**11 47 15.6**	**+0.2**
KNK	**Knik Glacier** comp=Z,13nm,0.8s	62.50	30	IAmb	IAmb	11 47 17.8	
KNK	**Knik Glacier** baz=258	62.50	30	P	P	**11 47 15.9**	**+0.2**
F22K	**John River** baz=251,SNR=10.0	62.58	23	P	P	**11 47 16.2**	**0.0**
SML	**Sawmill** baz=258,SNR=8.3	62.64	29	P	P	**11 47 16.5**	**-0.3**
WAT1	**Susitna Watana** baz=257	62.77	28	P	P	**11 47 17.3**	**-0.3**
MCK	**McKinley** baz=256	62.81	27	P	P	**11 47 17.0**	**-0.8**
M23K	**Glacier View** baz=258	62.92	29	P	P	**11 47 18.4**	**-0.1**
NEA2	**Nenana** comp=Z,5.3nm,0.7s	62.96	26	IAmb	IAmb	11 47 21.5	
NEA2	**Nenana** baz=256	62.96	26	P	P	**11 47 19.1**	**+0.4**
I23K	**Minto, Yukon-K** comp=Z,8.2nm,0.6s	62.98	25	IAmb	IAmb	11 47 21.1	
I23K	**Minto, Yukon-K** baz=255	62.98	25	P	P	**11 47 19.4**	**+0.6**
GLI	**Glacier Island** baz=259	63.04	30	P	P	**11 47 18.9**	**-0.5**
WAT6	**Susitna Watana** baz=258,SNR=5.7	63.08	28	P	P	**11 47 19.5**	**-0.3**
H23K	**Yukon River** comp=Z,6.5nm,0.8s	63.09	25	IAmb	IAmb	11 47 21.8	
H23K	**Yukon River** baz=255,SNR=9.0	63.09	25	P	P	**11 47 19.5**	**-0.1**
SCM	**Sheep Creek Mo** baz=259,SNR=7.3	63.12	29	P	P	**11 47 20.5**	**+0.6**
G23K	**Bananza Creek** baz=254,SNR=6.9	63.14	24	P	P	**11 47 20.2**	**+0.3**
COLD	**Coldfoot** baz=253,SNR=6.4	63.22	23	P	P	**11 47 20.6**	**+0.2**
FID	**Port Fidalgo** comp=Z,12nm,0.9s	63.32	31	IAmb	IAmb	11 47 24.5	
WRH	**Wood River Hil** comp=Z,5.6nm,0.6s	63.34	26	IAmb	IAmb	11 47 22.1	
DHY	**Denali Highway** comp=Z,15nm,1.4s	63.34	28	IAmb	IAmb	11 47 22.3	
DHY	**Denali Highway** baz=258,SNR=5.2	63.34	28	P	P	**11 47 21.8**	**+0.3**
HYBB	**Hyderabad (bro**	63.40	281	*e*P	P	**11 47 23.0**	**+0.6**
CCB	**Clear Creek Bu** comp=Z,3.3nm,0.5s	63.50	26	IAmb	IAmb	11 47 23.6	
TCOL	**CIGO, UAF Yank** comp=Z,6.4nm,0.8s	63.53	26	IAmb	IAmb	11 47 26.1	
TCOL	**CIGO, UAF Yank** baz=257	63.53	26	P	P	**11 47 22.7**	**+0.3**
COLA	**College** COLA	63.54	26	P	P	**11 47 22.9**	**+0.5**
	comp=Z,6.2nm,0.7s			IAmb	IAmb	11 47 26.1	
COLA	**College** baz=257	63.54	26	P	P	**11 47 22.8**	**+0.3**
D23K	**Nanushuk River** baz=252	63.57	21	P	P	**11 47 23.4**	**+0.7**
EYAK	**Cordova Ski Ar** EYAK	63.64	31	P	P	**11 47 24.1**	**+0.9**
	comp=Z,19nm,1.2s			IAmb	IAmb	11 47 33.0	
EYAK	**Cordova Ski Ar** baz=261	63.64	31	P	P	**11 47 23.7**	**+0.5**
KLU	**Klutina** baz=260	63.71	30	P	P	**11 47 24.0**	**+0.2**
URZ	**Urewera**	63.74	153	P	P	**11 47 24.0**	**-0.1**
H24K	**Noodor Dome** comp=Z,6.0nm,0.6s	63.75	25	IAmb	IAmb	11 47 25.9	
H24K	**Noodor Dome** baz=256,SNR=11	63.75	25	P	P	**11 47 24.1**	**+0.1**
HDA	**Harding Lake** comp=Z,6.1nm,0.8s	63.81	27	IAmb	IAmb	11 47 26.0	
HDA	**Harding Lake** baz=258,SNR=5.7	63.81	27	P	P	**11 47 23.7**	**-0.6**
TOLK	**Toolik Lake Re** comp=Z,6.5nm,0.5s	63.86	22	IAmb	IAmb	11 47 25.9	
TOLK	**Toolik Lake Re** baz=253,SNR=6.9	63.86	22	P	P	**11 47 24.9**	**+0.3**
C23K	**Itkillik River** baz=252	63.87	20	P	P	**11 47 25.0**	**+0.4**
IL31	comp=Z,6.8nm,0.8s	63.92	26	IAmb	IAmb	11 47 25.3	
ILAR	**Eielson Array** comp=Z,4.7nm,0.8s,baz=250,slow=5.0,SNR=61	63.92	26	P	P	**11 47 23.8**	**-1.2**
E24K	comp=Z,4.7nm,0.8s **Your Creek** baz=254,SNR=5.7	64.09	22	P	P	**11 47 26.6**	**+0.5**
QRZ	**Quartz Range**	64.10	157	P	P	**11 47 26.7**	**+0.3**
G24K	**Hadweenzic Riv** baz=256,SNR=7.8	64.12	24	P	P	**11 47 26.5**	**+0.2**
F24K	**Squaw Lake** baz=255	64.16	23	P	P	**11 47 26.6**	**0.0**
PAX	**Paxon** comp=Z,8.6nm,0.6s	64.18	28	IAmb	IAmb	11 47 28.1	
PAX	**Paxson** baz=260,SNR=11	64.18	28	P	P	**11 47 26.7**	**-0.1**
K24K	**Donnelly Dome** baz=259	64.19	27	P	P	**11 47 26.9**	**0.0**
KAIM	**Kayak Island** baz=262	64.20	32	P	P	**11 47 27.0**	**+0.1**
HARP	**HAARP** baz=260	64.22	29	P	P	**11 47 27.5**	**+0.4**
BKZ	**Black Stump Fm**	64.23	154	P	P	**11 47 27.4**	**0.0**
BMRM	**Bremner River** baz=262	64.26	31	P	P	**11 47 27.6**	**+0.3**
D24K	**Happy Valley** baz=254,SNR=8.3	64.27	21	P	P	**11 47 27.6**	**+0.5**
N25K	**Chitina, Valde** baz=261	64.36	30	P	P	**11 47 28.0**	**0.0**
C24K	**Franklin Bluff** baz=254	64.47	21	P	P	**11 47 29.1**	**+0.6**
J25K	**Salcha River,** comp=Z,4.8nm,0.6s	64.52	26	IAmb	IAmb	11 47 29.3	
J25K	**Salcha River,** baz=259,SNR=7.8	64.52	26	P	P	**11 47 28.2**	**-0.8**
RIDG	**Independent Ri** comp=Z,18nm,1.2s	64.59	27	IAmb	IAmb	11 47 31.3	
RIDG	**Independent Ri** baz=260,SNR=8.9	64.59	27	P	P	**11 47 29.4**	**0.0**
PRP	**Porcupine Dome** baz=259	64.63	25	P	P	**11 47 29.6**	**-0.2**
G25K	**Bearman Lake** baz=257	64.67	24	P	P	**11 47 30.3**	**+0.6**
H25K	**Birch Creek** baz=258	64.67	25	P	P	**11 47 30.6**	**+0.8**
DOT	**Dot Lake** comp=Z,9.0nm,1.0s	64.92	28	IAmb	IAmb	11 47 43.4	
CRQE	**Cirque** baz=263	64.96	31	P	P	**11 47 32.4**	**+0.4**
MENT	**Mentasta** comp=Z,3.7nm,0.6s	64.96	28	IAmb	IAmb	11 47 36.2	
SCRK	**Sand Creek** comp=Z,6.4nm,0.7s	65.00	27	IAmb	IAmb	11 47 34.1	
SCRK	**Sand Creek** baz=261,SNR=9.3	65.00	27	P	P	**11 47 32.2**	**0.0**
F25K	**Christian Rive** baz=258,SNR=7.9	65.02	23	P	P	**11 47 32.4**	**+0.2**
MCARA	**McCarthy VSAT** baz=263	65.07	30	P	P	**11 47 32.6**	**+0.1**
L26K	**Log Cabin Wild** comp=Z,4.1nm,0.7s	65.14	28	IAmb	IAmb	11 47 39.7	
L26K	**Log Cabin Wild** baz=262	65.14	28	P	P	**11 47 33.4**	**+0.4**
D25K	**Kavik River** baz=256,SNR=7.1	65.15	21	P	P	**11 47 33.3**	**+0.4**
E25K	**Arctic Village** baz=257	65.16	23	P	P	**11 47 33.7**	**+0.6**
M26K	**Nabesna, AK** baz=262	65.22	29	P	P	**11 47 33.9**	**+0.4**
J26L	**Joseph Creek** comp=Z,17nm,1.4s	65.27	27	IAmb	IAmb	11 47 35.1	
J26L	**Joseph Creek** baz=261,SNR=11	65.27	27	P	P	**11 47 33.7**	**-0.1**
SNZO	**South Karori**	65.33	156	P	P	**11 47 34.5**	**+0.2**
NIL	**Nilore**	65.52	299	P	P	**11 47 36.1**	**+0.1**
I26K	**Coal Creek Min** baz=261	65.57	26	P	P	**11 47 35.3**	**-0.4**
G26K	**Porcupine Rive** baz=260,SNR=5.1	65.60	24	P	P	**11 47 36.2**	**+0.4**
F26K	**Sheenjek River** baz=259,SNR=8.8	65.60	23	P	P	**11 47 36.3**	**+0.5**
M27K	**Edge Creek, AK** baz=263	65.73	29	P	P	**11 47 36.8**	**-0.1**
L27K	**Beaver Creek,** baz=263,SNR=5.8	65.83	28	P	P	**11 47 38.0**	**+0.6**
CTG	**Chitna Glacier** baz=264	65.84	31	P	P	**11 47 38.3**	**+0.7**
K27K	**Chicken** baz=262	65.85	27	P	P	**11 47 38.2**	**+0.8**
C27K	**Jago River** baz=258	66.14	21	P	P	**11 47 39.7**	**+0.5**
I27K	**Kandik River** baz=262	66.25	26	P	P	**11 47 40.6**	**+0.5**
PINM	**Pinnacle** baz=266	66.30	32	P	P	**11 47 41.1**	**+0.6**
YUK3	**Moose Creek** baz=265	66.33	30	P	P	**11 47 42.0**	**+1.2**
H27K	**Steamboat Moun** baz=262	66.37	25	P	P	**11 47 41.7**	**+0.9**
O28M	**Mount Upton** baz=266	66.38	31	P	P	**11 47 42.0**	**+0.8**
G27K	**Doyon Strip** baz=262	66.41	24	P	P	**11 47 41.4**	**+0.4**
BRVK	**Borovoye**	66.62	321	P	P	**11 47 42.4**	**-0.2**
E27K	**Coleen River** baz=261	66.64	23	P	P	**11 47 43.6**	**+1.2**
PNL	**Peninsula** baz=267	66.70	32	P	P	**11 47 43.7**	**+0.8**
KK31	**Karatay Array** KK31	66.80	310	P	P	**11 47 43.8**	**-0.2**
	comp=Z,5.8nm,0.8s			IAmb	IAmb	11 47 45.0	
KKAR	**Karatay Array**	66.80	310	P	P	**11 47 43.5**	**-0.4**
KKAR	**Karatay Array** comp=Z,5.8nm,0.8s	66.80	310	IAmb	IAmb	11 47 45.0	
DAWY	**Dawson**	67.02	27	P	P	**11 47 45.4**	**+0.5**
DAWY	**Dawson** baz=265	67.02	27	P	P	**11 47 45.5**	**+0.5**
O29M	**Mount Kennedy** baz=267	67.15	32	P	P	**11 47 46.7**	**+0.8**
YUK4	**Talbot Arm** baz=267,SNR=5.1	67.17	30	P	P	**11 47 46.9**	**+0.8**
YUK6	**Outpost Mounta** baz=267	67.28	31	P	P	**11 47 47.8**	**+1.0**
M29M	**Somme Creek** baz=266	67.32	29	P	P	**11 47 48.1**	**+1.2**
P29M	**Windy Craggy** baz=268	67.54	32	P	P	**11 47 48.9**	**+0.7**
I29M	**Ogilvie Camp,** baz=265,SNR=6.2	67.60	26	P	P	**11 47 48.7**	**+0.2**
HYT	**Haines Junctio** comp=Z,14nm,1.0s	67.70	31	IAmb	IAmb	11 47 52.6	
HYT	**Haines Junctio** baz=268,SNR=6.5	67.70	31	P	P	**11 47 49.7**	**+0.3**
N30M	**Aishikik Lake** baz=268	67.92	30	P	P	**11 47 51.3**	**+0.6**
P30M	**Million Dollar** baz=269	67.95	32	P	P	**11 47 51.8**	**+1.0**
M30M	**Minto, Yukon**	68.10	29	P	P	**11 47 52.6**	**+0.9**
M30M	**Minto, Yukon** baz=268	68.10	29	P	P	**11 47 52.3**	**+0.6**
PLBC	**Pleasant Camp** baz=270	68.24	33	P	P	**11 47 53.0**	**+0.5**
O30N	**Mendenhall** baz=269	68.39	31	P	P	**11 47 54.0**	**+0.5**
N31M	**Braeburn, Yuko** comp=Z,12nm,0.8s	68.55	30	IAmb	IAmb	11 47 57.6	
N31M	**Braeburn, Yuko** baz=269	68.55	30	P	P	**11 47 55.2**	**+0.7**
SKAG	**Skagway** baz=270	68.77	33	P	P	**11 47 56.6**	**+0.8**
KBL	**Kabul** KBL	68.86	301	P	P	**11 47 57.3**	**+0.2**
	comp=Z,10nm,0.9s			IAmb	IAmb	11 47 58.3	
M31M	**Drury Creek, Y** baz=270	69.21	30	P	P	**11 47 58.7**	**+0.2**
P32M	**Atlin** baz=272	69.59	32	P	P	**11 48 01.2**	**+0.3**
INK	**Inuvik** comp=Z,5.5nm,0.5s,baz=296,slow=8.2,SNR=15	69.64	23	P	P	**11 48 00.7**	**-0.2**
INK	comp=Z,5.5nm,0.5s **Inuvik** INK	69.64	23	P	P	**11 48 01.1**	**+0.1**
	comp=Z,7.4nm,0.8s			IAmb	IAmb	11 48 02.3	
INK	**Inuvik** baz=269	69.64	23	P	P	**11 48 01.0**	**+0.1**
P33M	**Teslin, Yukon** baz=272	70.02	32	P	P	**11 48 03.3**	**-0.2**
R33M	**Jennings River** baz=274	71.00	33	P	P	**11 48 10.3**	**+0.7**
DLBC	**Dease Lake** comp=Z,5.0nm,0.5s,baz=200,slow=1.0,SNR=20	71.56	33	P	P	**11 48 14.0**	**+1.2**
DLBC	comp=Z,5.0nm,0.5s **Dease Lake** DLBC	71.56	33	P	P	**11 48 14.2**	**+1.4**
	comp=Z,26nm,1.4s			IAmb	IAmb	11 48 15.6	
DLBC	**Dease Lake** baz=275	71.56	33	P	P	**11 48 13.8**	**+0.9**
T35M	**Bob Quinn** baz=276	71.58	35	P	P	**11 48 13.9**	**+1.0**
C36M	**Paulatuk** baz=277	73.02	22	P	P	**11 48 21.0**	**-0.1**
ARU	**Arti** ARU	73.17	325	P	P	**11 48 22.1**	**-0.2**
	comp=Z,7.8nm,0.5s			IAmb	IAmb	11 48 22.7	
ABKAR	**Akbulak array**	73.41	317	P	P	**11 48 22.8**	**-1.0**
ABKAR	**Akbulak array** comp=Z,5.1nm,0.3s	73.41	317	IAmb	IAmb	11 48 23.9	
GEYT	**Alibeck** comp=Z,1.7nm,0.4s,baz=164,slow=15,SNR=3.9	76.92	306	P	P	**11 48 43.1**	**-1.0**
NLWA	comp=Z,1.7nm,0.4s **Neilton Lookou** NLWA	77.03	44	P	P	**11 48 46.2**	**+1.7**
	comp=Z,17nm,1.5s			IAmb	IAmb	11 48 49.3	
LLLB	**Lillooet**	77.55	41	P	P	**11 48 48.6**	**+1.2**
I02E	**Swisshome, OR** baz=284	77.81	47	P	P	**11 48 49.7**	**+0.8**
YKA	**Yellowknife Ar** comp=Z,5.4nm,0.7s,baz=288,slow=5.5,SNR=34	78.26	28	P	P	**11 48 50.7**	**-0.2**
YKA	comp=Z,5.4nm,0.7s **Yellowknife Ar**	78.26	28	P	P	**11 48 50.9**	**0.0**
K02D	**Willamette Mer** baz=284	78.28	49	P	P	**11 48 52.0**	**+0.4**
I04A	**Tendick Farm,** baz=285	78.89	48	P	P	**11 48 55.3**	**+0.5**
J04D	**Umpqua Nationa** baz=285	79.25	48	P	P	**11 48 57.5**	**+0.5**
G05D	**Wamic, OR** baz=285	79.27	46	P	P	**11 48 57.6**	**+0.8**
L04D	**Klamath Falls** baz=285	79.38	49	P	P	**11 48 58.2**	**+0.5**
K04D	**Chiloquin, OR** baz=286	79.66	49	P	P	**11 48 59.9**	**+0.8**
B08A	**Colville Reser** B08A	79.74	42	P	P	**11 48 59.6**	**+0.3**
	comp=Z,4.8nm,0.6s			IAmb	IAmb	11 49 00.6	
J05D	**Fort Rock, OR** baz=286	79.85	48	P	P	**11 49 01.1**	**+0.9**
PINE	**Pine Mountain** PINE	79.92	47	P	P	**11 49 01.3**	**+0.7**
	comp=Z,9.3nm,0.8s			IAmb	IAmb	11 49 03.8	
K05A	**Summer Lake** comp=Z,6.7nm,0.8s	80.25	48	IAmb	IAmb	11 49 10.0	
C09A	**Chrisman Ranch** comp=Z,4.6nm,0.7s	80.58	43	IAmb	IAmb	11 49 05.5	
NEW	**Newport** baz=288	81.18	42	P	P	**11 49 07.9**	**+0.9**
BEKR	**Beckworth** comp=Z,5.3nm,0.7s	81.44	51	IAmb	IAmb	11 49 10.0	
UOSS	**Minazif** UOSS	81.84	294	P	P	**11 49 10.7**	**-0.1**
	comp=Z,17nm,1.1s			IAmb	IAmb	11 49 12.5	
WVOR	**Wild Horse Val**	81.93	48	P	P	**11 49 11.1**	**0.0**
CMB	**Columbia Colle** comp=Z,4.4nm,0.6s	81.95	53	IAmb	IAmb	11 49 13.5	
PNTR	**Pine Nut** comp=Z,9.8nm,0.6s	82.23	52	IAmb	IAmb	11 49 15.9	
YERR	**Yerington** comp=Z,20nm,1.5s	82.53	52	IAmb	IAmb	11 49 16.0	
ARA0	**ARCESS Array S**	82.67	342	*e*P	P	**11 49 13.0**	**-1.2**
ARCES	**ARCESS Array B** comp=Z,3.2nm,0.6s,baz=85,slow=9.0,SNR=25	82.67	342	P	P	**11 49 13.0**	**-1.3**
ARCES	comp=Z,3.2nm,0.6s **ARCESS Array B**	82.67	342	P	P	**11 49 13.4**	**-0.9**
WALA	**Waterton Lakes** WALA	82.94	41	P	P	**11 49 16.7**	**+0.5**
	comp=Z,11nm,1.4s			IAmb	IAmb	11 49 19.4	
RYN	**Ryan** comp=Z,4.1nm,0.6s	83.17	52	IAmb	IAmb	11 49 19.3	
LHV	**Little Huntoon** comp=Z,5.0nm,0.6s	83.30	52	IAmb	IAmb	11 49 20.9	
KVN	**Kaiserville** comp=Z,5.0nm,0.6s	83.35	51	IAmb	IAmb	11 49 20.1	
NVAR	**Mina Array Bea** comp=Z,4.9nm,0.5s,baz=270,slow=5.8,SNR=87	83.40	52	P	P	**11 49 19.8**	**+0.9**
NVAR	comp=Z,4.9nm,0.5s **Mina Array Bea**	83.40	52	P	P	**11 49 19.3**	**+0.4**
NV11	**Mina Array Sit** comp=Z,14nm,1.5s	83.50	52	IAmb	IAmb	11 49 20.9	
JETT	**Jettan, Norway** JETT	84.10	343	*e*P	P	**11 49 20.9**	**-0.7**
	comp=Z,8.4nm,0.8s			IAmb	IAmb	11 49 22.6	
ISA	**Isabella, Lake** baz=288	84.13	55	P	P	**11 49 22.6**	**+0.1**
CWC	**Cottonwood Cre** baz=289	84.19	54	P	P	**11 49 23.0**	**+0.1**
TRO	**Tromso** TRO	84.45	344	*e*P	P	**11 49 22.0**	**-1.3**
	comp=Z,8.5nm,1.0s			IAmb	IAmb	11 49 23.5	
HLID	**Hailey** baz=290	84.50	46	P	P	**11 49 24.9**	**+0.6**
GRAC	**Grapevine Rang** baz=289	84.56	53	P	P	**11 49 25.5**	**+0.9**
MPMC	**Manual Prospec** baz=289	84.77	54	P	P	**11 49 26.2**	**+0.4**
LRMC	**Laurel Mtn Rad** baz=289	84.80	54	P	P	**11 49 26.0**	**+0.1**
SCI2	**San Clemente I** baz=289	84.92	57	P	P	**11 49 27.2**	**+0.8**
DLMT	**Dillon** comp=Z,4.9nm,0.7s	85.08	44	IAmb	IAmb	11 49 28.5	
FURC	**Furnace Creek,** baz=289	85.11	53	P	P	**11 49 27.8**	**+0.6**
TPNV	**Topopah Spring** comp=Z,5.7nm,0.6s	85.42	53	IAmb	IAmb	11 49 30.4	
TPNV	**Topopah Spring** baz=290	85.42	53	P	P	**11 49 29.4**	**+0.4**
R11A	**Troy Canyon, C** baz=290	85.44	51	P	P	**11 49 29.8**	**+0.7**
GSC	**Goldstone, Bar** baz=290	85.54	54	P	P	**11 49 29.9**	**+0.4**
BOZ	**Bozeman (W)** comp=Z,3.7nm,0.7s	85.62	43	IAmb	IAmb	11 49 31.8	
BOZ	**Bozeman (W)** baz=292	85.62	43	P	P	**11 49 30.3**	**+0.5**
SHOC	**Shoshone, Teco** baz=290	85.75	54	P	P	**11 49 31.3**	**+0.8**
SPR3	**Spring Creek 3** comp=Z,2.5nm,0.7s	86.14	50	IAmb	IAmb	11 49 35.2	
PFO	**Pinyon Flats O** baz=290	86.37	56	P	P	**11 49 34.0**	**+0.3**
TPFO	**Pinon Flats** baz=290	86.38	56	P	P	**11 49 34.0**	**+0.3**
SHPR	**Sheep Range** comp=Z,8.7nm,1.5s	86.39	53	IAmb	IAmb	11 49 35.9	
STEI	**Steigen** STEI	86.59	343	*e*P	P	**11 49 32.2**	**-1.6**
	comp=Z,11nm,0.7s			IAmb	IAmb	11 49 32.8	
GMRC	**Granite Mounta** baz=290	86.60	55	P	P	**11 49 34.8**	**0.0**
BELC	**Belle Mtn. Jos** baz=290	86.60	55	P	P	**11 49 35.0**	**+0.2**
MONP2	**Monument Peak**	86.64	57	P	P	**11 49 35.1**	**0.0**

baz=290
H17A Grant Village 86.77 44 P P 11 49 36.3 +0.7
baz=293
DUG Dugway, Tooele 86.81 49 P P 11 49 36.1 +0.5
baz=292
TPAW Teton Pass 86.87 45 IAmb IAmb 11 49 37.0
comp=Z,2.9nm,0.6s
FAUS Fauske 86.96 343 *eP* **P 11 49 33.8 -1.8**
FAUS IAmb IAmb 11 49 34.1
comp=Z,5.9nm,0.7s
FINES FINESS Array B 87.03 335 P P 11 49 33.7 -2.4
comp=Z,3.6nm,0.4s,baz=64,slow=4.7,SNR=37
comp=Z,3.6nm,0.4s
AHID Auburn Hatcher 87.04 46 IAmb IAmb 11 49 38.4
comp=Z,9.5nm,1.4s
BC3 Big Chuckawall 87.14 56 P P 11 49 37.6 +0.2
baz=290
HWUT Hardware Ranch 87.16 47 IAmb IAmb 11 49 39.5
comp=Z,7.9nm,1.2s
IRM Iron Mountain 87.21 55 P P 11 49 37.8 +0.2
baz=290
RLMT Red Lodge 87.34 43 P P 11 49 39.3 +1.1
baz=294
GLA Glamis 87.85 56 P P 11 49 41.3 +0.6
baz=291
PDMCI Parker Dam,Lak 87.94 55 P P 11 49 41.5 +0.5
baz=291
BW06 Boulder Array 88.09 45 P P 11 49 42.0 +0.2
baz=294
PDAR Pinedale Array 88.09 45 P P 11 49 41.6 -0.2
comp=Z,0.9nm,0.5s,baz=73,slow=1.7,SNR=16
comp=Z,0.9nm,0.5s
LAO LASA Array 88.63 41 P P 11 49 44.3 +0.3
baz=296
WUAZ Wupatki 89.61 53 P P 11 49 50.0 +1.0
baz=292
214A Organ Pipe Nat 89.83 56 P P 11 49 50.5 +0.6
baz=292
O20A White River Ci 90.06 47 P P 11 49 51.2 +0.2
baz=294
K22A Casper 90.17 45 P P 11 49 51.9 +0.4
baz=296
MVCO Mesa Verde 91.07 50 P P 11 49 56.5 +0.6
baz=294
RSSD Black Hills 91.15 42 P P 11 49 55.5 -0.6
baz=297
TUC Tucson 91.29 55 P P 11 49 58.4 +1.6
baz=293
N23A Red Feather La 91.32 46 P P 11 49 57.0 0.0
baz=296
ISCO Idaho Springs 92.03 47 P P 11 50 00.5 +0.1
baz=296
S22A 4UR Ranch, Cre 92.06 49 P P 11 50 01.2 +0.7
baz=295
Q24A Divide 92.72 47 P P 11 50 04.1 +0.5
baz=296
NOA NORSAR Array B 92.74 340 P P 11 50 00.4 -2.4
comp=Z,0.5nm,0.6s,baz=44,slow=4.6,SNR=3.4
comp=Z,0.5nm,0.6s
SDCO Great Sand Dun 93.01 49 P P 11 50 05.4 +0.5
baz=296
ANMO Albuquerque 93.52 52 P P 11 50 07.8 +0.6
baz=295
121A Cookes Peak, D 93.52 54 P P 11 50 08.3 +1.1
baz=294
FRB Frobisher Bay 93.88 14 P P 11 50 06.9 -0.9
comp=Z,3.0nm,0.5s,baz=342,slow=3.2,SNR=4.6
comp=Z,3.0nm,0.5s
SKAR Skarsliа 93.95 340 *eP* **P 11 50 08.2 -0.1**
T25A Trinidad 94.05 49 P P **11 50 10.2 +0.6**
baz=297
BRTR Keskin Array B 94.17 314 P P 11 50 07.8 -2.1
comp=Z,1.2nm,0.6s,baz=75,slow=4.6,SNR=6.1
comp=Z,1.2nm,0.6s
EYMN Ely 96.55 35 P P 11 50 20.9 +0.5
baz=307
TXAR Lajitas Array 98.09 56 P Pdif 11 50 28.3 +0.4
comp=Z,0.2nm,0.6s,baz=256,slow=2.8,SNR=7.5
comp=Z,0.2nm,0.6s
TROLL Troll, Antarti 122.33 193 PKPdf PKiKP 11 55 43.6 -0.6
SNAA Sanae 123.67 191 PKPdf PKPdf 11 55 45.4 -1.1
VNA2 Neumayer--Watz 125.12 191 PKPdf PKPdf 11 55 48.8 -0.3
baz=65,slow=0.9
VNA3 Neumayer Olymp 125.22 190 PKPdf PKPdf 11 55 48.7 -0.6
TORD Torodi Ar. Bea 132.49 309 PKP PKPdf 11 56 03.1 -1.7
comp=Z,0.2nm,0.5s,baz=56,slow=2.0,SNR=5.0
TORD SKPbc **SKPbc 11 59 07.8 -2.6**
comp=Z,1.2nm,0.8s,baz=45,slow=3.7,SNR=8.8
PLCA Paso Flores 141.95 133 PKhKP PKPpre 11 56 17.2
comp=Z,1.6nm,0.7s,baz=240,slow=4.1,SNR=6.2
RTLS Leoncito 145.93 120 *i* P **PKPab 11 56 30.7 -0.5**
ASAL Salagasta 146.10 121 *i* P **PKPbc 11 56 30.6 +0.2**
AROD Rodeo 146.16 117 *i* P **PKPab 11 56 31.5 -0.6**
ACCO Cerro Coronel 146.41 118 *i* P **PKPbc 11 56 31.6 -0.1**
ACDV Cuesta del Vie 146.46 117 *i* P **PKPab 11 56 32.1 -1.0**
VCA Vinchina 147.53 115 *i* P **PKPbc 11 56 35.2 +0.5**
LPAZ La Paz 147.81 91 PKPbc **PKPdf 11 56 33.9 +0.8**
comp=Z,8.2nm,0.6s,baz=253,slow=1.7,SNR=29
MRA San Martin 148.67 122 *i* P **PKPbc 11 56 37.1 -0.3**
TCA Tanti 149.91 121 *i* P **PKPbc 11 56 40.5 0.0**
CPUP Villa Florida 157.47 114 PKPab **PKPab 11 57 19.8 +0.8**
comp=Z,0.7nm,0.3s,baz=250,slow=4.6,SNR=7.4

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*IDC **03** 11:51:16.9±2.6, 60.13N×149.88W, h0km, mb3.7/1, mbtmp3.5/4, ML3.0/3, Error ellipse: s-maj=46.5km s-min=25.1km az=145.0*
*ANF **03** 11:51:28.4±0.1, 61.05N×150.20W, h46km±3km, ML3.8/86, ML3.8/85, Error ellipse: s-maj=1.2km s-min=1.1km az=146.0*
*NEIC **03** 11:51:28.2±1.1, 61.07N±0.03×150.24W±0.06, h48km±6km, Error ellipse: s-maj=4.1km s-min=3.6km az=117.0*
*AEIC **03** 11:51:28±0.8, 61.05N±0.02×150.22W±0.05, h50km±3km, ML3.4, ML3.5/164(NEIC), Error ellipse: s-maj=4.0km s-min=3.1km az=131.0*
ISC 03 11:51:27.6±0.9, 61.05N±0.03×150.21W±0.02, h54km±6km, n255, σ0s95/284, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FIS	**Fire Island**	**0.09**	**356**			**Pn**	**11 51 36.3**	**+0.5**
FIS						**Sn**	**11 51 43.6**	**+2.0**
RC01	**Rabbit Creek A**	**0.23**	**80**			**Pn**	**11 51 36.5**	**0.0**
RC01						**Sn**	**11 51 43.2**	**+0.2**
RC01	**Rabbit Creek A**	**0.23**	**80**	P		**Pn**	**11 51 36.5**	**0.0**
baz=261,SNR=758								
RC01				S		**Sn**	**11 51 43.2**	**+0.2**
baz=261								
CAPN	**Captain Cook N**	**0.54**	**239**			**Pn**	**11 51 40.8**	**+1.3**
CAPN	**Captain Cook N**	**0.54**	**239**	P		**Pn**	**11 51 40.8**	**+1.3**
baz=58,SNR=15								
SLKM	**Skilak Lake**	**0.55**	**181**			**Pn**	**11 51 39.7**	**0.0**
SLKM						**Sn**	**11 51 48.7**	**+0.4**
O22K	**Cooper Landing**	**0.62**	**157**			**Pn**	**11 51 40.9**	**+0.4**
O22K						**Sn**	**11 51 50.6**	**+0.9**
O22K	**Cooper Landing**	**0.62**	**157**	P		**Pn**	**11 51 40.9**	**+0.4**
baz=337,SNR=165								
O22K				S		**Sn**	**11 51 50.4**	**+0.6**
baz=337								
M22K	**Willow**	**0.70**	**3**			**Pn**	**11 51 41.2**	**-0.3**
M22K	**Willow**	**0.70**	**3**	P		**Pn**	**11 51 41.2**	**-0.3**
baz=184,SNR=168								
M22K				S		**Sn**	**11 51 51.8**	**+0.1**
baz=184								
PMR	**Palmer**	**0.75**	**43**			**Pn**	**11 51 42.0**	**-0.1**
PMR						**Sn**	**11 51 53.0**	**+0.2**
PMR				IAML			11 51 53.3	
comp=E,2μm,0.3s								
PMR	**Palmer**	**0.75**	**43**	P		**Pn**	**11 51 42.0**	**-0.1**
baz=224,SNR=196								
PMR				S		**Sn**	**11 51 52.9**	**+0.2**
baz=224								
STLK	**Strandline Lak**	**0.91**	**300**			**Pn**	**11 51 44.0**	**-0.2**
SPU	**Mount Spurr**	**0.91**	**279**			**Pn**	**11 51 43.8**	**-0.4**
SPCG	**Spurr Capps GI**	**0.91**	**286**			**Pn**	**11 51 44.1**	**-0.2**
SPCG						**Sn**	**11 51 56.8**	**+0.2**
KNK	**Knik Glacier**	**0.92**	**66**			**Pn**	**11 51 45.0**	**+0.6**
KNK						**Sn**	**11 51 58.0**	**+1.3**
KNK	**Knik Glacier**	**0.92**	**66**	P		**Pn**	**11 51 44.9**	**+0.6**
baz=248,SNR=52								
KNK				S		**Sn**	**11 51 57.5**	**+0.8**
baz=248								
PWL	**Port Wells**	**0.93**	**101**			**Pn**	**11 51 45.1**	**+0.6**
PWL				IAML			11 51 59.7	
comp=E,2μm,0.4s								
PWL				IAML			11 51 59.8	
comp=N,2μm,0.5s								
PWL	**Port Wells**	**0.93**	**101**	P		**Pn**	**11 51 45.1**	**+0.6**
baz=283,SNR=274								
PWL				S		**Sn**	**11 51 58.1**	**+1.2**
baz=283								
GHO	**Glory Hole Cre**	**0.95**	**40**			**Pn**	**11 51 45.0**	**+0.1**
GHO						**Sn**	**11 51 58.2**	**+0.7**
CRP	**Crater Peak**	**0.97**	**284**			**Pn**	**11 51 45.3**	**+0.1**
SPCR	**Spurr Chakacha**	**0.98**	**280**			**Pn**	**11 51 45.0**	**-0.2**
SPCR	**Spurr Chakacha**	**0.98**	**280**	P		**Pn**	**11 51 45.1**	**-0.2**
baz=98,SNR=62								
SPCR				S		**Sn**	**11 51 58.2**	**-0.1**
baz=98								
SEW	**Seward**	**1.02**	**158**			**Pn**	**11 51 45.8**	**+0.2**
SEW	**Seward**	**1.02**	**158**			**Sn**	**11 52 00.6**	**+1.7**
SEW	**Seward**	**1.02**	**158**	P		**Pn**	**11 51 46.2**	**+0.6**
baz=339,SNR=31								
SEW				S		**Sn**	**11 52 00.5**	**+1.5**
baz=339								
CKL	**Chakachamna La**	**1.04**	**279**			**Pn**	**11 51 46.0**	**-0.1**
SPWE	**Spurr West**	**1.16**	**282**			**Pn**	**11 51 47.7**	**+0.1**
SML	**Sawmill**	**1.18**	**49**			**Pn**	**11 51 48.1**	**+0.3**
SML						**Sn**	**11 52 04.0**	**+1.1**
SML				IAML			11 52 04.7	
comp=N,2μm,0.7s								
SML	**Sawmill**	**1.18**	**49**	P		**Pn**	**11 51 48.2**	**+0.3**
baz=231,SNR=196								
SML				S		**Sn**	**11 52 04.0**	**+1.1**
baz=231								
DFR	**Drift River**	**1.30**	**250**			**Pn**	**11 51 49.4**	**-0.1**
BRLK	**Bradley Lake**	**1.33**	**195**			**Pn**	**11 51 50.5**	**+0.6**
BRLK				IAML			11 52 09.4	
comp=N,683nm,0.4s								
BRLK				IAML			11 52 10.3	
comp=E,684nm,0.3s								
BRSE	**Bradley Lake S**	**1.34**	**192**			**Pn**	**11 51 50.5**	**+0.5**
BRSE	**Bradley Lake S**	**1.34**	**192**	P		**Pn**	**11 51 50.3**	**+0.3**
baz=11,SNR=87								
RDJH	**Redoubt Jeurge**	**1.35**	**251**			**Pn**	**11 51 50.3**	**+0.1**
RDJH						**Sn**	**11 52 07.6**	**+0.4**
CUT	**Chulitna**	**1.36**	**359**			**Pn**	**11 51 50.5**	**+0.3**
CUT	**Chulitna**	**1.36**	**359**	P		**Pn**	**11 51 50.5**	**+0.3**
baz=179,SNR=20								
CUT				S		**Sn**	**11 52 08.1**	**+0.9**
baz=179								
RSO	**Redoubt South**	**1.38**	**246**			**Pn**	**11 51 50.8**	**+0.1**
M23K	**Glacier View**	**1.41**	**57**			**Pn**	**11 51 51.4**	**+0.5**
M23K	**Glacier View**	**1.41**	**57**	P		**Pn**	**11 51 51.4**	**+0.5**
baz=239,SNR=74								
M23K				S		**Sn**	**11 52 09.6**	**+1.2**
baz=239								
RDWB	**Redoubt West**	**1.41**	**248**			**Pn**	**11 51 51.1**	**+0.1**
RED	**Redoubt Volcan**	**1.41**	**244**			**Pn**	**11 51 51.1**	**+0.1**
NCT	**North Crescent**	**1.42**	**251**			**Pn**	**11 51 51.3**	**+0.1**
NCT						**Sn**	**11 52 09.4**	**+0.6**
GLI	**Glacier Island**	**1.53**	**95**			**Pn**	**11 51 52.1**	**-0.3**
GLI				IAML			11 52 16.3	
comp=N,699nm,0.6s								
GLI				IAML			11 52 16.6	
comp=E,590nm,0.3s								
GLI	**Glacier Island**	**1.53**	**95**	P		**Pn**	**11 51 52.2**	**-0.3**
baz=278,SNR=58								
GLI				S		**Sn**	**11 52 11.9**	**+0.6**
baz=278								
O20K	**Slope Mountain**	**1.54**	**232**			**Pn**	**11 51 53.7**	**+0.9**
O20K	**Slope Mountain**	**1.54**	**232**	P		**Pn**	**11 51 53.7**	**+0.9**
baz=50,SNR=26								
HOM	**Homer**	**1.57**	**208**			**Pn**	**11 51 53.7**	**+0.7**
HOM	**Homer**	**1.57**	**208**	P		**Pn**	**11 51 54.0**	**+0.9**
baz=26,SNR=12								
SCM	**Sheep Creek Mo**	**1.59**	**59**			**Pn**	**11 51 54.0**	**+0.6**
SCM				IAML			11 52 18.1	
comp=N,839nm,0.9s								
SCM				IAML			11 52 18.3	
comp=E,832nm,0.5s								
SCM	**Sheep Creek Mo**	**1.59**	**59**	P		**Pn**	**11 51 54.0**	**+0.6**
baz=242,SNR=40								
SCM				S		**Sn**	**11 52 14.0**	**+1.1**
baz=242								
CNPM	**China Poot**	**1.61**	**199**			**Pn**	**11 51 54.2**	**+0.5**
CNPM				IAML			11 52 15.2	
comp=E,600nm,0.6s								
CNPM				IAML			11 52 19.2	
comp=N,870nm,0.4s								
M20K	**Styx River**	**1.63**	**302**			**Pn**	**11 51 54.8**	**+0.8**
M20K	**Styx River**	**1.63**	**302**	P		**Pn**	**11 51 54.9**	**+0.8**
baz=120,SNR=696								
M20K				S		**Sn**	**11 52 15.3**	**+1.3**
baz=120								
P23K	**Montague Islan**	**1.74**	**126**			**Pn**	**11 51 55.3**	**-0.1**
P23K	**Montague Islan**	**1.74**	**126**	P		**Pn**	**11 51 55.5**	**0.0**
baz=308								
JPK	**Jack Peak**	**1.75**	**88**			**Pn**	**11 51 55.9**	**+0.3**
ILSW	**Iliamna Southw**	**1.81**	**235**			**Pn**	**11 51 56.7**	**+0.3**
ILSW				IAML			11 52 22.9	
comp=N,306nm,0.7s								
ILSW				IAML			11 52 23.0	
comp=E,614nm,0.8s								
FID	**Port Fidalgo**	**1.85**	**98**			**Pn**	**11 51 56.3**	**-0.5**
FID				IAML			11 52 30.4	
comp=E,576nm,0.5s								
FID				IAML			11 52 40.1	
comp=N,336nm,0.6s								
VMT	**TAPS Tl Valdez**	**1.87**	**87**			**Pn**	**11 51 57.7**	**+0.6**
WAT7	**Susitna Watana**	**1.90**	**19**			**Pn**	**11 51 58.0**	**+0.4**
WAT6	**Susitna Watana**	**1.93**	**36**			**Pn**	**11 51 58.2**	**+0.1**
WAT6	**Susitna Watana**	**1.93**	**36**	P		**Pn**	**11 51 58.2**	**+0.1**
baz=218,SNR=68								
WAT6				S		**Sn**	**11 52 22.2**	**+0.9**
baz=218								
HIN	**Hinchinbrook I**	**1.94**	**108**			**Pn**	**11 51 57.9**	**-0.2**
WAT1	**Susitna Watana**	**1.95**	**23**			**Pn**	**11 51 59.0**	**+0.7**
WAT1	**Susitna Watana**	**1.95**	**23**	P		**Pn**	**11 51 58.8**	**+0.5**
baz=204								
P19K	**Oil Pt**	**2.06**	**228**	Pn		**Pn**	**11 52 01.7**	**+1.9**
P19K				IAML			11 52 47.5	
comp=N,525nm,0.4s								
P19K	**Oil Pt**	**2.06**	**228**	P		**Pn**	**11 52 00.7**	**+1.0**
baz=46								
PPLA	**Purkeypile**	**2.08**	**334**			**Pn**	**11 52 01.5**	**+1.4**
PPLA	**Purkeypile**	**2.08**	**334**	P		**Pn**	**11 52 01.1**	**+1.0**
baz=152,SNR=24								
N19K	**Bonanza Creek**	**2.10**	**265**			**Pn**	**11 52 00.9**	**+0.4**
N19K				IAML			11 52 39.7	
comp=N,220nm,0.8s								
N19K	**Bonanza Creek**	**2.10**	**265**	P		**Pn**	**11 52 00.7**	**+0.3**
baz=82,SNR=24								
N19K				S		**Sn**	**11 52 26.3**	**+0.9**
baz=82								
KLU	**Klutina**	**2.12**	**76**			**Pn**	**11 52 01.2**	**+0.6**
KLU				IAML			11 52 35.2	
comp=E,549nm,0.4s								
KLU	**Klutina**	**2.12**	**76**	P		**Pn**	**11 52 00.9**	**+0.3**
baz=260,SNR=43								
KLU				S		**Sn**	**11 52 27.0**	**+1.3**
baz=260								
DIV	**Divide**	**2.16**	**86**			**Pn**	**11 52 01.7**	**+0.5**
M19K	**Big River Lodg**	**2.18**	**295**			**Pn**	**11 52 02.1**	**+0.7**
M19K	**Big River Lodg**	**2.18**	**295**	P		**Pn**	**11 52 02.0**	**+0.6**
baz=111								
M24K	**Tolsona, Glenn**	**2.20**	**59**			**Pn**	**11 52 03.0**	**+1.2**
M24K	**Tolsona, Glenn**	**2.20**	**59**	P		**Pn**	**11 52 02.8**	**+1.1**
baz=243,SNR=55								
O19K	**Port Alsworth**	**2.20**	**249**			**Pn**	**11 52 02.1**	**+0.5**
O19K	**Port Alsworth**	**2.20**	**249**	P		**Pn**	**11 52 02.0**	**+0.3**
baz=65								
EYAK	**Cordova Ski Ar**	**2.24**	**101**			**Pn**	**11 52 02.0**	**-0.3**
EYAK	**Cordova Ski Ar**	**2.24**	**101**	P		**Pn**	**11 52 01.9**	**-0.3**
baz=285								
L20K	**Farewell, AK**	**2.26**	**311**			**Pn**	**11 52 02.8**	**+0.3**
L20K	**Farewell, AK**	**2.26**	**311**	P		**Pn**	**11 52 02.8**	**+0.3**
baz=128,SNR=89								
TRF	**Thorofare Moun**	**2.41**	**359**			**Pn**	**11 52 05.0**	**+0.3**
TRF				IAML			11 52 48.6	
comp=E,206nm,0.7s								
TRF				IAML			11 52 50.4	
comp=N,329nm,0.7s								
TRF	**Thorofare Moun**	**2.41**	**359**	P		**Pn**	**11 52 04.9**	**+0.3**
baz=179,SNR=48								
DHY	**Denali Highway**	**2.43**	**32**			**Pn**	**11 52 05.0**	**0.0**
DHY				IAML			11 52 41.5	
comp=E,297nm,0.4s								
DHY				IAML			11 52 42.3	
comp=N,188nm,0.4s								
DHY	**Denali Highway**	**2.43**	**32**	P		**Pn**	**11 52 04.9**	**0.0**
baz=215,SNR=43								
RND	**Reindeer**	**2.45**	**14**			**Pn**	**11 52 05.5**	**+0.3**
RND				IAML			11 52 48.8	
comp=E,169nm,0.6s								
L19K	**White Mountain**	**2.49**	**299**			**Pn**	**11 52 06.0**	**+0.3**
L19K	**White Mountain**	**2.49**	**299**	P		**Pn**	**11 52 06.4**	**+0.7**
baz=115,SNR=158								
Q23K	**Middleton Isla**	**2.52**	**129**	Pn		**Pn**	**11 52 06.4**	**+0.4**
Q23K				IAML			11 52 57.8	
comp=E,223nm,2.1s								
Q23K				IAML			11 53 45.5	
comp=N,202nm,1.9s								
MID	**Middleton Isla**	**2.52**	**128**	Pn		**Pn**	**11 52 06.4**	**+0.3**
MID				IAML			11 53 31.4	
comp=E,227nm,1.9s								
MID				IAML			11 53 45.5	
comp=N,181nm,1.9s								
KTH	**Kantishna Hill**	**2.53**	**353**			**Pn**	**11 52 06.8**	**+0.5**
KTH				IAML			11 52 41.2	
comp=N,294nm,0.8s								
KTH				IAML			11 52 42.0	
comp=E,303nm,0.9s								
CAST	**Castle Rocks**	**2.53**	**341**			**Pn**	**11 52 07.2**	**+0.9**
CAST				IAML			11 52 53.7	
comp=N,194nm,0.6s								
CAST				IAML			11 52 56.9	
comp=E,187nm,0.8s								
CAST	**Castle Rocks**	**2.53**	**341**	P		**Pn**	**11 52 07.2**	**+0.9**
baz=159								
SVW2	**Sparrevohn**	**2.61**	**273**			**Pn**	**11 52 07.4**	**+0.1**
SYI	**Shuyak Island**	**2.69**	**205**			**Pn**	**11 52 09.2**	**+0.9**
Q20K	**Shuyak Island**	**2.69**	**205**	P		**Pn**	**11 52 09.0**	**+0.7**
baz=23								
GOAT	**Goat Mountain**	**2.73**	**98**			**Pn**	**11 52 08.5**	**-0.4**
BMRM	**Bremner River**	**2.73**	**89**			**Pn**	**11 52 08.7**	**-0.2**
BMRM				IAML			11 52 57.7	
comp=E,271nm,0.5s								
BMRM	**Bremner River**	**2.73**	**89**	P		**Pn**	**11 52 08.8**	**-0.2**
baz=274,SNR=15								
Q19K	**Cape Douglas,**	**2.74**	**221**			**Pn**	**11 52 09.3**	**+0.2**
Q19K	**Cape Douglas,**	**2.74**	**221**	P		**Pn**	**11 52 10.0**	**+0.9**
baz=37,SNR=14								
O18K	**Koktuh Hills**	**2.75**	**246**			**Pn**	**11 52 09.4**	**+0.2**
O18K				IAML			11 52 43.0	
comp=N,247nm,0.7s								
O18K				IAML			11 52 45.1	
comp=E,131nm,0.6s								
O18K	**Koktuh Hills**	**2.75**	**246**	P		**Pn**	**11 52 09.1**	**-0.1**
baz=62								
MCK	**McKinley**	**2.75**	**12**			**Pn**	**11 52 10.0**	**+0.7**
MCK				IAML			11 52 56.6	
comp=N,144nm,0.7s								
MCK				IAML			11 52 56.9	
comp=E,156nm,0.7s								
MCK	**McKinley**	**2.75**	**12**	P		**Pn**	**11 52 09.1**	**-0.1**
baz=193,SNR=89								
HARP	**HAARP**	**2.76**	**58**			**Pn**	**11 52 10.3**	**+1.0**
HARP	**HAARP**	**2.76**	**58**	P		**Pn**	**11 52 10.3**	**+1.0**
baz=243,SNR=15								
N25K	**Chitina, Valde**	**2.76**	**76**			**Pn**	**11 52 09.7**	**+0.3**
N25K				IAML			11 52 51.7	
comp=N,288nm,0.6s								
N25K				IAML			11 52 53.4	
comp=E,264nm,0.5s								
N25K	**Chitina, Valde**	**2.76**	**76**	P		**Pn**	**11 52 09.6**	**+0.2**
baz=261,SNR=12								
RAGM	**Ragged Mountai**	**2.80**	**101**			**Pn**	**11 52 09.4**	**-0.5**
N18K	**Kilae Creek**	**2.81**	**265**			**Pn**	**11 52 10.1**	**+0.2**
N18K				IAML			11 53 01.2	
comp=N,116nm,0.7s								
N18K	**Kilae Creek**	**2.81**	**265**	P		**Pn**	**11 52 10.1**	**+0.2**
baz=80,SNR=16								
K20K	**Telida**	**2.94**	**324**			**Pn**	**11 52 12.2**	**+0.5**
K20K				IAML			11 52 54.4	
comp=N,178nm,0.9s								
K20K	**Telida**	**2.94**	**324**	P		**Pn**	**11 52 12.8**	**+1.0**
baz=140,SNR=53								
PAX	**Paxson**	**2.95**	**47**			**Pn**	**11 52 13.5**	**+1.5**
PAX	**Paxson**	**2.95**	**47**	P		**Pn**	**11 52 13.4**	**+1.4**
baz=231,SNR=40								
CHUM	**Lake Minchumin**	**3.01**	**342**			**Pn**	**11 52 13.2**	**+0.6**
CHUM	**Lake Minchumin**	**3.01**	**342**	P		**Pn**	**11 52 13.9**	**+1.2**
baz=160,SNR=58								
P18K	**Big Mountain,**	**3.01**	**239**			**Pn**	**11 52 13.0**	**+0.3**
P18K	**Big Mountain,**	**3.01**	**239**	P		**Pn**	**11 52 13.2**	**+0.4**
baz=54								
HMT	**Hamilton**	**3.01**	**101**			**Pn**	**11 52 12.0**	**-0.7**
KAIM	**Kayak Island**	**3.08**	**109**	Pn		**Pn**	**11 52 12.3**	**-1.3**
KAIM				IAML			11 52 41.7	
comp=N,175nm,2.8s								
KAIM				IAML			11 52 47.3	
comp=E,217nm,2.5s								
BPAW	**Bear Paw Mtn.**	**3.08**	**354**			**Pn**	**11 52 13.8**	**+0.1**
BPAW	**Bear Paw Mtn.**	**3.08**	**354**	P		**Pn**	**11 52 14.8**	**+1.1**
baz=173,SNR=20								
GLB	**Gilahina Butte**	**3.12**	**80**			**Pn**	**11 52 14.7**	**+0.5**
GLB				IAML			11 53 01.1	
comp=E,192nm,0.9s								
BERG	**Berg Lake**	**3.26**	**99**			**Pn**	**11 52 15.1**	**-1.1**
VRDI	**Verde Repeater**	**3.28**	**84**			**Pn**	**11 52 17.1**	**+0.5**
VRDI				IAML			11 53 05.8	
comp=N,161nm,0.6s								
VRDI				IAML			11 53 12.3	
comp=E,85nm,0.6s								
TT01	**Tatalina**	**3.32**	**307**			**Pn**	**11 52 17.1**	**+0.2**
TTA	**Tatalina**	**3.33**	**307**			**Pn**	**11 52 17.4**	**+0.3**
TTA	**Tatalina**	**3.33**	**307**	P		**Pn**	**11 52 17.2**	**+0.1**
baz=122,SNR=29								
Q18K	**Katmai Hardscr**	**3.42**	**227**	P		**Pn**	**11 52 19.0**	**+0.6**
baz=43								
K24K	**Donnelly Dome**	**3.44**	**35**	P		**Pn**	**11 52 21.8**	**+3.0**
baz=219,SNR=78								
CRQM	**Cirque**	**3.46**	**92**			**Pn**	**11 52 19.7**	**+0.5**
CRQE	**Cirque**	**3.49**	**92**	P		**Pn**	**11 52 19.9**	**+0.5**
baz=278,SNR=13								
KDAK	**Kodiak Island**	**3.50**	**201**	Pn		**Pn**	**11 52 19.1**	**-0.3**
KDAK	**Kodiak Island**	**3.50**	**201**	P		**Pn**	**11 52 18.8**	**-0.6**
baz=19								
WRH	**Wood River Hil**	**3.57**	**15**			**Pn**	**11 52 21.4**	**+1.0**
NEA2	**Nenana**	**3.59**	**8**			**Pn**	**11 52 21.4**	**+0.7**
NEA2	**Nenana**	**3.59**	**8**	P		**Pn**	**11 52 21.8**	**+1.1**
baz=189,SNR=15								
MENT	**Mentasta**	**3.60**	**55**			**Pn**	**11 52 21.4**	**+0.6**
J20K	**Nowinta River**	**3.63**	**332**			**Pn**	**11 52 21.8**	**+0.6**
J20K				IAML			11 53 15.5	
comp=E,122nm,0.6s								
J20K	**Nowinta River**	**3.63**	**332**	P		**Pn**	**11 52 22.0**	**+0.9**
baz=148,SNR=50								
P17K	**Kvichak River**	**3.63**	**242**			**Pn**	**11 52 22.3**	**+1.1**
P17K	**Kvichak River**	**3.63**	**242**	P		**Pn**	**11 52 22.1**	**+0.9**
baz=56,SNR=12								
O17K	**Koliganek Bris**	**3.65**	**252**			**Pn**	**11 52 22.3**	**+0.8**
O17K	**Koliganek Bris**	**3.65**	**252**	P		**Pn**	**11 52 22.2**	**+0.7**
baz=66								
RIDG	**Independent Ri**	**3.67**

COLA	College	3.98	15	P	Pn	11 52 27.6	+1.5
	baz=197						
MLY	Manley	4.00	357		Pn	11 52 26.7	+0.3
MLY	Manley	4.00	357	P	Pn	11 52 27.8	+1.4
	baz=176,SNR=36						
MDM	Murphy Dome	4.03	12		Pn	11 52 27.7	+1.0
MDM				IAML		11 53 35.9	
	comp=E,47nm,0.9s						
Q16K	King Salmon	4.03	237	P	Pn	11 52 27.6	+1.0
	baz=51						
IL31		4.03	21		Pn	11 52 27.4	+0.8
ILAR	Eielson Array	4.03	21	Pn	Pn	11 52 28.1	+1.4
	comp=E,3.1nm,0.3s,baz=201,slow=14,SNR=62						
ILAR				Sn	Sn	11 53 15.9	+3.4
	comp=E,2.6nm,0.3s,baz=222,slow=18,SNR=5.8						
	comp=E,8.2nm,0.4s						
ILAR	Eielson Array	4.03	21		Pn	11 52 27.2	+0.5
SCRK	Sand Creek	4.11	42		Pn	11 52 28.6	+0.6
SCRK				IAML		11 53 35.2	
	comp=N,47nm,0.7s						
SCRK				IAML		11 53 41.3	
	comp=E,47nm,0.9s						
SCRK	Sand Creek	4.11	42	P	Pn	11 52 28.7	+0.8
	baz=227,SNR=7.4						
I23K	Minto, Yukon-K	4.13	5		Pn	11 52 28.6	+0.5
I23K				IAML		11 53 34.8	
	comp=N,56nm,0.8s						
I23K				IAML		11 53 35.2	
	comp=E,47nm,0.8s						
I23K	Minto, Yukon-K	4.13	5	P	Pn	11 52 29.8	+1.7
	baz=186						
GRNC	Granite Creek	4.14	91	Pn	Pn	11 52 28.4	-0.1
GRNC				IAML		11 53 37.0	
	comp=N,80nm,0.5s						
GRNC				IAML		11 53 42.3	
	comp=E,51nm,0.7s						
OHAK	Old Harbor	4.16	204	Pn	Pn	11 52 27.5	-0.9
OHAK	Old Harbor	4.16	204	P	Pn	11 52 27.6	-0.8
	baz=21						
M27K	Edge Creek, AK	4.18	68		Pn	11 52 30.4	+1.6
M27K				IAML		11 53 47.5	
	comp=N,47nm,0.9s						
M27K	Edge Creek, AK	4.18	68	P	Pn	11 52 30.9	+2.0
	baz=255						
O16K	Kokwok River B	4.18	253		Pn	11 52 29.4	+0.6
O16K	Kokwok River B	4.18	253	P	Pn	11 52 29.2	+0.3
	baz=66						
J25K	Salcha River,	4.21	30		Pn	11 52 30.5	+1.3
J25K				IAML		11 53 27.4	
	comp=E,59nm,0.5s						
J25K				IAML		11 53 31.4	
	comp=N,62nm,0.5s						
J25K	Salcha River,	4.21	30	P	Pn	11 52 30.8	+1.7
	baz=214,SNR=85						
YAH	Yahtse	4.21	96	Pn	Pn	11 52 29.6	+0.2
YAH				IAML		11 53 41.9	
	comp=N,82nm,0.5s						
YAH				IAML		11 53 44.5	
	comp=E,95nm,0.7s						
I21K	Tanana	4.22	350		Pn	11 52 30.0	+0.7
I21K				IAML		11 53 38.0	
	comp=N,41nm,0.8s						
I21K				IAML		11 53 56.1	
	comp=E,49nm,1.1s						
I21K	Tanana	4.22	350	P	Pn	11 52 30.8	+1.5
	baz=168,SNR=16						
N16K	Nishlik Lake	4.24	266		Pn	11 52 30.2	+0.6
N16K	Nishlik Lake	4.24	266	P	Pn	11 52 29.9	+0.3
	baz=78,SNR=12						
POKR	Poker Plat Res	4.27	16		Pn	11 52 31.7	+1.7
POKR	Poker Plat Res	4.27	16	P	Pn	11 52 31.6	+1.7
	baz=198						
CTG	Chitna Glacier	4.32	87	P	Pn	11 52 31.9	+1.2
	baz=275						
CTGM	Chitina Glacie	4.32	87	Pn	Pn	11 52 31.8	+0.9
CTGM				IAML		11 53 41.1	
	comp=N,74nm,0.6s						
CTGM				IAML		11 53 45.9	
	comp=E,45nm,1.4s						
P16K	Nushagak River	4.40	246	P	Pn	11 52 32.9	+1.2
	baz=59						
L27K	Beaver Creek,	4.43	59		Pn	11 52 32.8	+0.6
L27K	Beaver Creek,	4.43	59	P	Pn	11 52 32.7	+0.6
	baz=247						
BC03		4.45	59		Pn	11 52 33.1	+0.7
BCAR	Beaver Creek A	4.45	59	Pn	Pn	11 52 32.5	0.0
TABL	Table Mountain	4.49	94	Pn	Pn	11 52 32.9	-0.3
TABL				IAML		11 53 43.7	
	comp=E,67nm,0.8s						
TABL				IAML		11 53 46.6	
	comp=N,71nm,0.7s						
J26L	Joseph Creek	4.61	38		Pn	11 52 35.5	+0.8
J26L				IAML		11 53 39.7	
	comp=E,48nm,0.5s						
J26L				IAML		11 53 41.5	
	comp=N,64nm,0.6s						
J26L	Joseph Creek	4.61	38	P	Pn	11 52 35.8	+1.0
	baz=224,SNR=43						
R17K	Ugashik Creek	4.66	225	P	Pn	11 52 36.5	+1.2
	baz=40						
H21K	Melozitna Rive	4.77	347	Pn	Pn	11 52 37.6	+0.8
H21K				IAML		11 54 02.4	
	comp=N,25nm,0.8s						
H21K				IAML		11 54 09.0	
	comp=E,34nm,1.1s						
H21K	Melozitna Rive	4.77	347	P	Pn	11 52 38.2	+1.4
	baz=165,SNR=16						
GCSA	Galena City Sc	4.80	323	P	Pn	11 52 38.0	+0.8
	baz=138						
H23K	Yukon River	4.80	3		Pn	11 52 38.3	+1.0
H23K	Yukon River	4.80	3	P	Pn	11 52 38.6	+1.3
	baz=184,SNR=6.2						
K27K	Chicken	4.80	48			11 52 38.2	+0.9
K27K				IAML		11 54 03.3	
	comp=N,24nm,0.8s						
K27K	Chicken	4.80	48	P	Pn	11 52 38.2	+0.9
	baz=235						
H22K	Ishtalitna Cre	4.89	354	P	Pn	11 52 40.2	+1.8
	baz=173,SNR=15						
O28M	Mount Upton	4.90	89	P	Pn	11 52 39.1	+0.2
	baz=278						
H24K	Noodor Dome	4.92	11	Pn	Pn	11 52 40.0	+1.1
H24K				IAML		11 54 13.3	
	comp=E,28nm,0.8s						
H24K	Noodor Dome	4.92	11	P	Pn	11 52 40.6	+1.8
	baz=193,SNR=15						
PRP	Porcupine Dome	4.96	23		Pn	11 52 40.4	+0.9
PRP				IAML		11 53 48.2	
	comp=E,34nm,0.6s						
PRP				IAML		11 54 08.4	
	comp=N,33nm,0.7s						
PRP	Porcupine Dome	4.96	23	P	Pn	11 52 41.2	+1.7
	baz=207						
IMAR	Indian Mountai	5.20	344	Pn	Pn	11 52 42.9	+0.2
I26K	Coal Creek Min	5.33	34	Pn	Pn	11 52 44.7	+0.2
I26K				IAML		11 54 14.2	
	comp=N,43nm,0.6s						
I26K				IAML		11 54 19.5	
	comp=E,40nm,0.8s						
I26K	Coal Creek Min	5.33	34	P	Pn	11 52 45.6	+1.2
	baz=220						
G23K	Bananza Creek	5.68	1	P	Pn	11 52 50.6	+1.3
	baz=181,SNR=5.1						
G24K	Hadweenzic Riv	5.80	11	P	Pn	11 52 52.4	+1.5
	baz=193,SNR=8.3						
DAWY	Dawson	5.84	54		Pn	11 52 52.1	+0.6
DAWY	Dawson	5.84	54	P	Pn	11 52 52.0	+0.4
	baz=244						
FYU	Fort Yukon	5.96	20		Pn	11 52 54.0	+1.0
I27K	Kandik River	5.98	37	P	Pn	11 52 54.4	+0.9
	baz=224						
G25K	Bearman Lake	6.01	16	P	Pn	11 52 55.0	+1.2
	baz=199,SNR=5.6						
HYT	Haines Junctio	6.20	87	Pn	Pn	11 52 56.8	+0.4
COLD	Coldfoot	6.20	0	Pn	Pn	11 52 56.7	+0.3
COLD	Coldfoot	6.20	0	P	Pn	11 52 57.4	+1.0
	baz=180						
N30M	Aishikik Lake	6.34	81	P	Pn	11 52 59.1	+0.7
	baz=272						
P29M	Windy Craggy	6.35	97	Pn	Pn	11 52 57.3	-1.2
P29M	Windy Craggy	6.35	97	P	Pn	11 52 59.0	+0.5
	baz=288						
F21K	Alatna River	6.36	348	P	Pn	11 53 00.2	+1.6
	baz=166,SNR=6.5						
H27K	Steamboat Moun	6.47	33	P	Pn	11 53 00.9	+0.8
	baz=221						
F22K	John River	6.54	353	P	Pn	11 53 02.6	+1.5
	baz=172						
G26K	Porcupine Rive	6.56	23	P	Pn	11 53 02.3	+1.1
	baz=208,SNR=5.8						
F24K	Squaw Lake	6.57	8	P	Pn	11 53 03.0	+1.5
	baz=190						
BMAR	Burnt Mountain	6.85	18	Pn	Pn	11 53 06.2	+0.9
F25K	Christian Rive	6.86	15	P	Pn	11 53 06.4	+1.0
	baz=199,SNR=6.1						
G27K	Doyon Strip	6.89	29	P	Pn	11 53 06.7	+0.8
	baz=217,SNR=6.7						
I29M	Ogilvie Camp,	6.89	46		Pn	11 53 06.2	+0.2
E24K	Your Creek	7.09	5	P	Pn	11 53 10.3	+1.7
	baz=187						
F26K	Sheenjek River	7.17	19	P	Pn	11 53 10.6	+1.0
	baz=204,SNR=5.9						
E25K	Arctic Village	7.37	14	P	Pn	11 53 13.4	+1.0
	baz=198,SNR=5.1						
TOLK	Toolik Lake Re	7.63	2	P	Pn	11 53 17.7	+1.8
	baz=182						
D23K	Nanushuk River	7.95	359	P	Pn	11 53 22.4	+2.0
	baz=178						
E27K	Coleen River	8.05	24	P	Pn	11 53 22.3	+0.6
	baz=211						
D25K	Kavik River	8.46	9	P	Pn	11 53 28.6	+1.3
	baz=193						
C23K	Itkillik River	8.82	359	P	Pn	11 53 33.0	+0.8
	baz=179						
C27K	Jago River	9.02	15	P	Pn	11 53 37.5	+2.5
	baz=201						
R33M	Jennings River	9.71	91	P	Pn	11 53 46.6	+2.1
	baz=288						
INK	Inuvik	10.16	37	Pn	Pn	11 53 51.7	+1.2
	comp=E,0.1nm,0.3s,baz=236,slow=16,SNR=2.3						
	comp=E,1.7nm,0.8s						
YKA	Yellowknife Ar	16.77	69	Pn	Pn	11 55 14.1	-4.3
	baz=277,slow=9.9,SNR=2.6						
	comp=E,0.2nm,0.8s						
KSRS	Korea Array	54.28	284	P	P	12 00 47.3	-0.6
	comp=E,0.8nm,0.8s,baz=22,slow=6.2,SNR=5.2						
	comp=E,0.8nm,0.8s						

*JMA **03** 11:54:57.0±0.2,29°.2N±0°.8×12°9E±°, h16km±3km, MV3.3/23, NEAR TOKARA ISLANDS*
JMA Felt I J1 at NEAR TOKARA ISLANDS .
*IDC **03** 11:54:56.7±1.5,29°.08N×129°.06E, h0km, mb3.8/2, mbtmp3.7/5, ML3.1/3, MS3.3/13, Error ellipse: s-maj=50.2km s-min=19.3km az=92.0*

ISC 03 11:54:56.9±1.2, 29°.12N±0°.04×129°.39E±0°.05, h6km±10km, n32, σ1s14/25, MS3.4/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.16	281	P		P	Pg	11 55 00.3	+0.1
JTAJ						eS	Sg	11 55 02.0	-0.4
JAM	Amami Oshima	0.73	165	P		P	Pg	11 55 11.3	+0.3
JNN	Nakanoshima	0.83	31	P		P	Pg	11 55 12.7	-0.2
JAMN	Amaminishikomi	0.90	192	P		P	Pb	11 55 14.3	-0.5
JAMN						eS	Sb	11 55 27.0	0.0
JZK	Kikaishima	0.96	147	P		P	Pb	11 55 17.1	+1.2
JZK						eS	Sn	11 55 32.0	+1.3
JTK	Tokunoshima	1.39	196	*i* P		Pn		11 55 21.4	-1.3
JYAK	Yakushimahirau	1.48	41	P		Pn		11 55 22.4	-1.7
JKC	Kuchinoerabu	1.51	28	*e*P		Pn		11 55 23.4	-1.0
JMTN	Minamitane	1.83	46	P		Pn		11 55 27.9	-0.9
JOKE	Okinoerabujima	1.90	202	P		Pn		11 55 29.0	-0.7
JTN	Tanegashima 3	2.06	42	P		Pn		11 55 31.2	-0.9
JYRO	Yoronjima	2.25	202	P		Pn		11 55 34.1	-0.5
JIH	Iheya	2.43	211	P		Pn		11 55 36.7	-0.3
JOW	Kunigami	2.48	204	Pn		Pn		11 55 37.6	-0.3
	6.0nm,0.3s,baz=53,slow=16,SNR=40								
JOW						Sn	Sn	11 56 08.6	+0.1
	5.8nm,0.3s,baz=75,slow=20,SNR=5.5								
JOW						LR	LR	11 56 26.1	
	comp=Z,253nm,18.2s,baz=341,slow=38								
	20nm,0.3s								
JOW	Kunigami	2.48	204	P		Pn		11 55 37.3	-0.6
JAGN	Aguni-jima	3.16	217	P		Pn		11 55 47.6	+0.5
JKE	Kume jima 2	3.62	220	P		Pn		11 55 54.4	+1.0
JNU	Nakatsue	4.19	17	Pn		Pn		11 56 04.5	+3.3
	2.3nm,0.3s,baz=182,slow=24,SNR=39								
	52nm,0.9s								
KSRS	Korea Array	8.40	352	Pn		Pn		11 57 00.4	+1.3
	0.1nm,0.3s,baz=177,slow=13,SNR=13								
KSRS						LR	LR	12 00 20.1	
	comp=Z,206nm,18.5s,baz=170,slow=38								
	1.6nm,0.9s								
JHJ	Hachijo jima 2	9.76	63	LR		LR		12 00 56.5	
	comp=Z,93nm,18.5s,baz=272,slow=36								
MJAR	Matsushiro Arr	10.47	43	LR		LR		12 02 01.0	
	comp=Z,194nm,20.6s,baz=229,slow=40								
GUMO	Guam	21.10	134	LR		LR		12 05 36.4	
	comp=Z,20nm,21.7s,baz=272,slow=30								
DAV	Davao City (W)	22.23	190	LR		LR		12 08 11.4	
	comp=Z,53nm,21.8s,baz=12,slow=36								
SIJI	Song	29.88	176	LR		LR		12 12 09.6	
	comp=Z,94nm,20.2s,baz=204,slow=35								
PETK	Petropavlovsk-	31.71	33	LR		LR		12 13 34.8	
	comp=Z,47nm,21.0s,baz=207,slow=35								
MA2	Magadan	33.75	20	LR		LR		12 14 53.7	
	comp=Z,29nm,19.5s,baz=216,slow=35								
MKAR	Makanchi Array	40.44	309	P		P		12 02 34.8	-1.2
	1.0nm,0.9s,baz=103,slow=9.6,SNR=4.9								
	1.0nm,0.9s								
TIXI	Tiksi	42.58	360	LR		LR		12 21 17.8	
	comp=Z,94nm,18.2s,baz=181,slow=37								
KURBB	Kurchatov Arra	43.52	314	LR		LR		12 23 20.7	
	comp=Z,75nm,19.2s,baz=164,slow=39								
WRA	Warramunga Arr	49.01	174	P		P		12 03 44.4	-0.2
	1.9nm,0.9s,baz=352,slow=8.0,SNR=10								
	1.9nm,0.9s								
KVAR	Kislovodsk Arr	68.20	309	LR		LR		12 40 33.8	
	comp=Z,62nm,18.7s,baz=265,slow=40								
KEST	Kesra	94.29	315	LR		LR		12 53 55.4	
	comp=Z,41nm,18.0s,baz=268,slow=38								

*MEX **03** 12:01:23.9±1.0, 15°.78N×95°.48W, h7km±10km, MD4.7*
*NEIC **03** 12:01:25.7±2.1, 15°.94N±0°.05×95°.35W±0°.05, h33km±5km, mb4.6/159, Md4.7/114(MEX), Error ellipse: s-maj=7.9km s-min=4.8km az=223.0*
*IDC **03** 12:01:26.6±3.2, 15°.89N×95°.30W, h43km±27km, mb3.8/15, mbtmp4.1/16, ML3.8/1, MS3.7/31, Error ellipse: s-maj=25.1km s-min=14.7km az=54.0*

ISC 03 12:01:21.7±1.1, 15.73N±0.03×95.51W±0.02, h15km±7km, n279, σ2s20/279, mb4.6/68, MS3.8/29, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.57	274				Pn	12 01 35.3	0.0
HUIG							Sn	12 01 43.4	-1.0
HUIG	Huatulco	0.57	274	*e*P			Pn	12 01 35.3	0.0
HUIG					*i* S		Sn	12 01 43.4	-1.0
PANG	Puerto Angel	0.93	266				Pb	12 01 39.8	+0.4
PANG							Sb	12 01 51.8	+0.2
PANG	Puerto Angel	0.93	266	*e*P			Pb	12 01 39.8	+0.4
PANG					*i* S		Sb	12 01 51.8	+0.2
NILT	Santiago Nilte	1.19	46	*e*P			Pb	12 01 42.3	-1.7
NILT					eS		Sb	12 01 57.3	-1.9
CMIG	Matias Romero	1.48	24	P			Pn	12 01 46.3	-1.4
	5µm,0.5s,baz=208,slow=11,SNR=7488								
CMIG					S		Sn	12 02 03.6	-3.1
	13µm,0.5s,baz=193,slow=18,SNR=45								
CMIG					LR		LR	12 02 34.5	
	comp=Z,3µm,20.8s,baz=181,slow=54								
CMIG	Matias Romero	1.48	24				Pn	12 01 46.5	-1.2
CMIG							Sn	12 02 04.3	-2.5
CMIG	Matias Romero	1.48	24	*e*P			Pn	12 01 46.5	-1.2
CMIG					*i* S		Sn	12 02 04.3	-2.5
PEIG	Puerto Escondi	1.59	280	*e*P			Pn	12 01 49.1	-0.2
PEIG					*i* S		Sn	12 02 07.4	-2.3
CARR	Arriaga	1.62	71	*e*P			Pn	12 01 47.9	-1.8
CARR					eS		Sn	12 02 08.1	-2.2
OXLC	Oaxaca	1.75	319	*e*P			Pg	12 01 54.1	-1.2
OXLC					eS		Sn	12 02 12.3	-1.4
OXBJ	Oaxaca	1.76	319				Pg	12 01 54.9	-0.7
OXBJ							Sn	12 02 14.1	0.0
OXBJ	Oaxaca	1.76	319	*e*P			Pg	12 01 54.9	-0.7
OXBJ					eS		Sn	12 02 14.1	0.0
VHO	Vista Hermosa	1.77	319	*e*P			Pb	12 01 53.0	-1.0
VHO					eS		Sn	12 02 12.9	-1.4
NEUV	Arroyo Zacate	1.99	352	*e*P			Pn	12 01 54.3	-0.4
NEUV					*i* S		Sn	12 02 17.2	-2.1
PCIG		2.21	90				Pn	12 01 57.2	-0.6
PCIG							Sn	12 02 22.0	-2.8
PCIG		2.21	90	*e*P			Pn	12 01 57.2	-0.6
PCIG						eS	Sn	12 02 22.0	-2.8
TUIG	Tuzandepetl	2.51	24	*e*P			Pn	12 02 02.6	+0.6
TUIG						*i* S	Sn	12 02 30.6	-1.7
TGIG		2.52	65				Pn	12 02 02.3	+0.2
TGIG							Sn	12 02 31.6	-1.0
TGIG		2.52	65	*e*P			Pn	12 02 02.3	+0.2
TGIG						*i* S	Sn	12 02 31.6	-1.0
TGBT	Tuxtla Gutierr	2.55	66				Pn	12 02 01.9	-0.6
TGBT							Sn	12 02 29.8	-3.4
TGBT	Tuxtla Gutierr	2.55	66	*e*P			Pn	12 02 01.9	-0.6
TGBT						eS	Sn	12 02 29.8	-3.4
PNIG	Pinotepa	2.60	285				Pn	12 02 03.6	+0.4
PNIG							Sn	12 02 31.0	-3.5
PNIG	Pinotepa	2.60	285	*i* P			Pn	12 02 03.6	+0.4
PNIG						*i* S	Sn	12 02 31.0	-3.5
TXIG	Tlaxiaco	2.64	305	*e*P			Pn	12 02 06.1	+2.1
TXIG						*i* S	Sn	12 02 34.9	-0.9
TOIG	Toxpalan	2.78	328	*e*P			Pb	12 02 09.2	-1.9
TOIG						eS	Sn	12 02 37.3	-1.7
HLIG	Huajuapan de L	3.03	314	*e*P			Pb	12 02 12.7	-2.7
HLIG						eS	Sn	12 02 47.2	+1.9
TPIG	Tehuac#an	3.20	327				Pb	12 02 16.1	-2.2
TPIG							Sn	12 02 49.6	0.0
TPIG	Tehuac#an	3.20	327	*e*P			Pb	12 02 16.1	-2.2
TPIG						eS	Sn	12 02 49.6	0.0
PATR	El Naranjo	3.22	101	*e*P			Pn	12 02 11.9	0.0
PATR						eS	Sn	12 02 46.9	-3.2
PAVE	Pavencul	3.26	99	*e*P			Pn	12 02 13.0	+0.6
PAVE						eS	Sn	12 02 49.1	-1.6
THEZ	Tehuacan	3.26	327	*e*P			Pb	12 02 20.7	+1.3
THEZ						*i* S	Sn	12 02 52.5	+1.4
CCIG	Comitan	3.29	80				Pn	12 02 12.8	0.0
CCIG	Comitan	3.29	80	*e*P			Pn	12 02 13.9	+1.1
CCIG						*i* S	Sn	12 02 53.0	+1.2
CHUJ	Union Juarez	3.34	101	*e*P			Pn	12 02 14.0	+0.3
CHUJ						eS	Sn	12 02 51.5	-1.7
MGIG	Malinaltepec	3.34	297	*e*P			Pn	12 02 15.3	+1.8
MGIG						eS	Sn	12 02 50.4	-2.8
TLIG	Tlapa	3.45	302	Pn			Pn	12 02 16.2	+1.3
TLIG	Tlapa	3.45	302	*e*P			Pn	12 02 16.9	+2.0
TLIG						*i* S	Sn	12 02 53.9	-1.6
OZST	Orizaba	3.46	334	*e*P			Pb	12 02 23.5	+0.8
OZST						eS	Sn	12 02 57.5	+1.6
CRIG	Cruz Grande	3.62	287				Pn	12 02 18.0	+0.8
CRIG							Sn	12 02 54.3	-5.3
CRIG	Cruz Grande	3.62	287	*e*P			Pn	12 02 18.0	+0.8
CRIG						eS	Sn	12 02 54.3	-5.3
JAUV	Jalcomulco	3.82	341	*e*P			Sn	12 02 20.1	+0.2
JAUV						*i* S	Sn	12 03 04.0	-0.6
RTAL	Retalhuleu	3.88	108				Pn	12 02 22.3	+1.6
HUEH	Huehuetenango	3.89	96				Pn	12 02 22.5	+1.4
LVIG	Laguna Verde	4.06	348	*e*P			Pn	12 02 22.5	-0.7
LVIG						eS	Sn	12 03 12.2	+1.8
PHPU	Puebla	4.16	323				Pb	12 02 32.5	-2.2
PHPU							Sn	12 03 17.1	+3.9
PHPU	Puebla	4.16	323	*e*P			Pb	12 02 32.5	-2.2
PHPU						eS	Sn	12 03 17.1	+3.9
DAIG	Los Arroyos	4.17	288				Pn	12 02 25.9	+1.1
DAIG							Sn	12 03 08.3	-5.0
DAIG	Los Arroyos	4.17	288	*e*P			Pn	12 02 25.9	+1.1
DAIG						*i* S	Sn	12 03 08.3	-5.0
ACP2	Acapulco	4.35	286				Pn	12 02 35.6	-2.2
ACP2							Sn	12 03 11.4	-6.3
ACP2	Acapulco	4.35	286	*e*P			Pn	12 02 35.6	-2.2
ACP2						eS	Sn	12 03 11.4	-6.3
PPM	Popocatepetl	4.45	319	*e*P			Pb	12 02 37.3	-2.6
PPM						eS	Sn	12 03 24.7	+3.8
MEIG	Mezcala	4.50	300				Pn	12 02 31.7	+2.4
MEIG							Sn	12 03 17.8	-3.6
MEIG	Mezcala	4.50	300	*e*P			Pn	12 02 31.7	+2.4
MEIG						eS	Sn	12 03 17.8	-3.6
YAIG	Yautepec	4.60	313				Pn	12 02 34.0	+3.1
YAIG							Sn	12 03 20.7	-3.5
YAIG	Yautepec	4.60	313	*e*P			Pn	12 02 34.0	+3.1
YAIG						eS	Sn	12 03 20.7	-3.5
PLIG	Platanillo	4.64	305				Pn	12 02 34.7	+3.3
PLIG							Sn	12 03 22.5	-2.5
PLIG	Platanillo	4.64	305	*e*P			Pn	12 02 34.7	+3.3
PLIG						eS	Sn	12 03 22.5	-2.5
CAIG	El Cayaco	4.75	287				Pn	12 02 33.8	+1.1
CAIG							Sn	12 03 21.0	-6.5
CAIG	El Cayaco	4.75	287	*e*P			Pn	12 02 33.8	+1.1
CAIG						*i* S	Sn	12 03 21.0	-6.5
CXUV	Coxquihui	4.84	336	*e*P			Pn	12 02 35.9	+2.0
CXUV						eS	Sn	12 03 28.1	-1.6
THVM	De Xico	4.85	318	*e*P			Pb	12 02 41.5	-5.1
THVM						eS	Sn	12 03 28.1	-2.3
XCVM	Xochimilco	4.91	316	*e*P			Pb	12 02 42.2	-5.2
XCVM						eS	Sn	12 03 31.1	-0.7
MAVM	Malinalco, Edo	4.97	311				Pb	12 02 43.7	-4.9
MAVM							Sn	12 03 33.3	0.0
MAVM	Malinalco, Edo	4.97	311	*e*P			Pb	12 02 43.7	-4.9
MAVM						eS	Sn	12 03 33.3	0.0
UNM	Universidad Na	5.00	316				Pn	12 02 40.5	+4.1
UNM	Universidad Na	5.00	316	*e*P			Pb	12 02 44.9	-4.2
UNM						eS	Sn	12 03 40.2	+6.1
COVM	Coyoacan	5.00	317	*e*P			Pn	12 02 33.6	-2.8
COVM						eS	Sn	12 03 31.9	-2.3
BJVM	Benito Juarez	5.03	317	*e*P			Pn	12 02 40.1	+3.3
BJVM						eS	Sn	12 03 33.9	-0.9
AOVM	Tlapan	5.05	315	*e*P			Pn	12 02 40.9	+3.5
AOVM						eS	Sn	12 03 34.0	-1.7
GMVM	Gustavo A Made	5.07	318	*e*P			Pn	12 02 38.6	+1.1

342A Flagon Creek P 15.84 10 Pn Pn 12 05 03.7 -0.5
NATX Nacogdoches 15.97 3 Pn Pn 12 05 06.2 +0.4
NATX IAmb IAmb 12 05 28.7
comp=Z,51nm,1.1s
237A Washetta, Mont 16.20 359 Pn 12 05 08.9 +0.2
237A IAmb IAmb 12 05 38.9
comp=Z,35nm,0.7s
LPIG La Paz 16.20 303 LR LR 12 11 03.5
comp=Z,515nm,18.9s,baz=136,slow=35
344A Westbrook Farm 16.25 15 Pn 12 05 08.2 -1.1
344A IAmb IAmb 12 05 17.9
comp=Z,49nm,0.9s
WHTX Lake Whitney, 16.28 354 Pn Pn 12 05 09.4 -0.4
WHTX IAmb IAmb 12 05 22.1
comp=Z,73nm,1.0s
ABTX Abilene, Hawle 17.23 348 P 12 05 22.6 -0.7
ABTX IAmb IAmb 12 05 40.2
comp=Z,45nm,0.7s
143A Socs Landing, 17.30 12 P Pn 12 05 22.6 0.0
143A IAmb IAmb 12 05 32.9
comp=Z,28nm,0.7s
Z38A Mt. Pleasant 17.46 1 P P 12 05 25.4 -0.4
Z38A IAmb IAmb 12 05 39.4
comp=Z,58nm,0.8s
Z35A Perchaven, San 17.59 355 P Pn 12 05 26.3 0.0
Z35A IAmb IAmb 12 05 46.2
comp=Z,51nm,0.7s
Z41A Richland Creek 17.62 8 P Pn 12 05 26.6 0.0
Z41A IAmb IAmb 12 05 38.1
comp=Z,56nm,0.8s
WLAR White Oak Lake 18.01 6 P Pn 12 05 28.3 -3.1
WLAR IAmb IAmb 12 05 55.9
comp=Z,41nm,0.7s
CLNB Carlsbad 18.13 337 P P 12 05 33.3 0.0
HTMS Hat Mesa 18.23 338 P P 12 05 35.8 +1.4
CLN7 Carlsbad 7 18.24 337 P 12 05 35.4 +0.9
LOOK Love County 18.24 356 Pn 12 05 34.0 -0.3
LOOK IAmb IAmb 12 05 52.1
comp=Z,66nm,0.8s
GDL2 Guadalupe Moun 18.26 335 P P 12 05 35.7 +0.9
352A Blakely 18.41 30 IAmb IAmb 12 05 45.0
comp=Z,31nm,0.8s
CCAR Cane Creek 18.42 10 IAmb IAmb 12 05 41.5
comp=Z,44nm,0.7s
MIAR Mount Ida 18.81 5 P P 12 05 39.2 -1.5
MIAR IAmb IAmb 12 06 01.4
comp=Z,24nm,0.7s
UALR University of 19.17 8 P P 12 05 42.9 -1.7
UALR IAmb IAmb 12 05 53.5
comp=Z,91nm,1.5s
MSTX Muleshoe 19.30 341 P Pn 12 05 47.1 -0.2
HSIG 19.43 316 Pn 12 05 49.9 +1.2
HSIG IAmb IAmb 12 06 05.5
comp=Z,32nm,1.2s
WHAR Wooly Hollow 19.69 8 P P 12 05 48.8 -1.5
WHAR IAmb IAmb 12 06 02.0
comp=Z,35nm,1.1s
AMTX Amarillo 19.86 345 P P 12 05 52.0 -0.3
AMTX IAmb IAmb 12 06 07.7
comp=Z,23nm,0.8s
BCOK Bluff Creek, N 19.93 355 P 12 05 51.4 -1.5
BCOK IAmb IAmb 12 06 11.8
comp=Z,46nm,0.6s
CSTR Hydro, Custer 20.03 352 P 12 05 53.9 -0.2
CSTR IAmb IAmb 12 06 06.8
comp=Z,3.1nm,0.8s
DEOK Depew 20.05 358 P 12 05 52.7 -1.5
DEOK IAmb IAmb 12 06 02.9
comp=Z,44nm,0.7s
TUL1 Leonard 20.10 359 P P 12 05 53.2 -1.5
TUL1 IAmb IAmb 12 06 18.6
comp=Z,41nm,0.8s
121A Cookes Peak, D 20.10 328 IAmb IAmb 12 06 12.6
comp=Z,39nm,0.9s
OK030 Cody Creek RV 20.14 357 P 12 05 54.1 -1.2
FCAR Ozark Folk Cen 20.30 8 IAmb IAmb 12 06 05.5
comp=Z,23nm,0.7s
RLO Rose Lookout 20.35 1 P 12 05 56.7 -0.9
RLO IAmb IAmb 12 06 05.2
comp=Z,15nm,0.8s
QUOK Quay 20.38 357 IAmb IAmb 12 06 13.7
comp=Z,87nm,1.0s
HHAR Hobbs 20.51 4 IAmb IAmb 12 06 24.2
comp=Z,16nm,0.5s
ELIS Ellis County 20.55 351 IAmb IAmb 12 06 18.4
comp=Z,23nm,0.7s
LCAR Lake Charles 20.62 10 P P 12 05 58.0 -2.4
U38A Gravette 20.65 3 P 12 05 58.8 -1.9
U38A IAmb IAmb 12 06 25.9
comp=Z,20nm,0.7s
CROK Carrier 20.80 354 IAmb IAmb 12 06 14.7
comp=Z,55nm,0.8s
SBM South Baldy 20.99 332 P P 12 06 04.3 -0.6
BLOK Blackwell 21.00 356 IAmb IAmb 12 06 32.1
comp=Z,32nm,0.9s
NOKA Haynoka 21.04 352 IAmb IAmb 12 06 13.1
comp=Z,40nm,0.9s
T35A Sooner Cattle 21.12 358 P P 12 06 04.0 -1.8
KAN13 South Haven SW 21.27 356 IAmb IAmb 12 06 23.4
comp=Z,30nm,0.8s
PBMO Poplar Bluff 21.44 11 P P 12 06 06.8 -2.5
PBMO IAmb IAmb 12 06 16.8
comp=Z,30nm,0.9s
ANMO Albuquerque 21.51 335 P P 12 06 12.7 +2.5
comp=Z,3.1nm,1.0s,baz=141,slow=14,SNR=11
comp=Z,3.1nm,1.0s
MGMO Mountain Grove 21.53 7 P P 12 06 08.9 -1.3
MGMO IAmb IAmb 12 06 25.9
comp=Z,18nm,0.8s
TUC Tucson 21.56 323 P P 12 06 12.5 +1.7
TUC IAmb IAmb 12 06 29.4
comp=Z,17nm,0.9s
S39A Bolivar 21.96 5 IAmb IAmb 12 06 42.1
comp=Z,16nm,0.8s
CGM3 Cape Girardeau 22.10 12 IAmb IAmb 12 06 38.2
comp=Z,15nm,1.0s
YOTC Yotoco, Valle 22.17 120 eP P 12 06 18.7 +1.2
GUY2C Guyana, Caldas 22.37 116 eP P 12 06 22.9 +3.0
U49A Red Boiling Sp 22.44 21 IAmb IAmb 12 06 37.5
comp=Z,21nm,1.2s
T47A Sharon Grove 22.45 18 IAmb IAmb 12 06 35.7
comp=Z,17nm,0.7s
TKL Tuckaleechee C 22.45 26 P P 12 06 21.0 +0.9
comp=Z,2.7nm,0.7s,baz=183,slow=9.1,SNR=4.5
TKL LR LR 12 18 11.9
comp=Z,107nm,18.1s,baz=206,slow=45
comp=Z,2.7nm,0.7s
CCM Cathedral Cave 22.55 9 P P 12 06 18.8 -2.4
CCM IAmb IAmb 12 06 36.8
comp=Z,16nm,0.8s
214A Organ Pipe Nat 22.55 319 IAmb IAmb 12 06 41.8
comp=Z,24nm,1.4s
S44A Carbondale 22.56 13 IAmb IAmb 12 06 37.5
comp=Z,20nm,0.7s
PTBC PUERTO BERRIO, 22.57 112 eP P 12 06 22.6 +1.0
NORC Norcasia 22.64 114 eP P 12 06 23.9 +1.5
R40A Maddies Statio 22.65 7 P P 12 06 20.6 -1.6
R40A IAmb IAmb 12 06 32.5
comp=Z,20nm,0.8s
T25A Trinidad 22.73 341 IAmb IAmb 12 06 35.5
comp=Z,20nm,0.8s
R32A Long Quarter, 22.78 354 IAmb IAmb 12 06 50.7
comp=Z,27nm,1.0s
X18A Snowflake 22.78 328 P P 12 06 25.2 +1.4
SLM Saint Louis 23.28 10 P P 12 06 26.2 -2.6
KSU1 Kansas State U 23.30 358 P P 12 06 28.1 -0.8
KSU1 IAmb IAmb 12 06 58.8
comp=Z,18nm,0.7s
ROSC El Rosal 23.46 115 P P 12 06 34.9 +3.7
comp=Z,39nm,0.8s,baz=350,slow=1.9,SNR=19
ROSC El Rosal 23.46 115 eP P 12 06 35.5 +4.2
X16A Lo Mia Camp, P 23.48 325 IAmb IAmb 12 06 47.4
comp=Z,18nm,1.2s
PRAC Prado 23.55 118 eP P 12 06 35.2 +3.5
113A Mohawk Valley, 23.70 319 P P 12 06 34.5 +1.5
113A IAmb IAmb 12 06 55.5
comp=Z,23nm,1.4s
V55A Taylorsville 23.76 30 IAmb IAmb 12 06 54.0
comp=Z,20nm,0.8s
Q44A Meyer Farm, Va 23.78 13 P P 12 06 32.4 -1.2
OLIL Olney 23.82 14 IAmb IAmb 12 06 50.4
comp=Z,24nm,0.8s
P38A Dawn 23.86 4 IAmb IAmb 12 06 60.0
comp=Z,14nm,0.8s
P40A Paris 23.90 7 IAmb IAmb 12 06 37.7
comp=Z,12nm,0.8s

RUSC La Rusia 24.08 112 eP P 12 06 38.6 +1.3
WUAZ Wupatki 24.28 327 IAmb IAmb 12 06 56.4
comp=Z,16nm,0.9s
P46A Rosedale 24.88 15 IAmb IAmb 12 06 56.4
comp=Z,23nm,0.9s
N35A Tabor 25.04 360 P P 12 06 43.6 -1.6
N38A Joes South For 25.05 4 P P 12 06 43.6 -1.6
BOSC San Juan Bosco 25.21 137 P P 12 06 49.1 +1.9
BOSC IAmb IAmb 12 07 04.2
comp=Z,15nm,0.9s
SDV Santo Domingo 25.23 103 LR LR 12 17 38.2
comp=Z,147nm,20.4s,baz=300,slow=39
PV13 Radium Mtn., P 25.23 335 IAmb IAmb 12 07 02.4
comp=Z,12nm,0.8s
MACC Macarena, Meta 25.26 120 eP P 12 06 51.6 +4.1
PV11 David Mesa, Pa 25.38 335 IAmb IAmb 12 07 10.9
comp=Z,17nm,0.9s
SMCO Snowmass 25.43 339 IAmb IAmb 12 07 04.5
comp=Z,30nm,1.2s
U15A North Rim 25.45 327 IAmb IAmb 12 07 11.5
comp=Z,26nm,1.4s
PV23 Carpenter Ridg 25.56 335 IAmb IAmb 12 07 05.8
comp=Z,23nm,0.9s
SFIN Lafayette 25.63 15 IAmb IAmb 12 07 08.5
comp=Z,16nm,0.8s
PFO Pinyon Flats O 25.97 317 P P 12 06 56.1 +2.2
comp=Z,1.2nm,0.7s,baz=122,slow=9.5,SNR=2.3
PFO LR LR 12 17 12.0
comp=Z,201nm,20.5s,baz=136,slow=36
comp=Z,1.2nm,0.7s
SCIA State Center 26.16 4 P P 12 06 53.5 -1.9
L40A Anamosa 26.50 7 P P 12 06 56.4 -2.0
L40A IAmb IAmb 12 07 08.9
comp=Z,22nm,0.8s
JFWS Jewell Farm 27.46 8 P P 12 07 04.6 -2.5
ECSD EROS Data Cent 27.92 358 P P 12 07 10.8 -0.4
SJG San Juan 28.18 81 LR LR 12 17 59.1
comp=Z,81nm,21.7s,baz=252,slow=36
S11A Rachel 28.22 325 P P 12 07 15.0 +0.9
S11A IAmb IAmb 12 07 38.1
comp=Z,16nm,1.2s
SPR3 Spring Creek 3 28.46 328 IAmb IAmb 12 07 37.9
comp=Z,6.8nm,1.2s
TCUT Toone Canyon 28.80 335 IAmb IAmb 12 07 35.4
comp=Z,16nm,1.0s
SPMN Marine on St. 29.49 4 P P 12 07 23.2 -1.9
PDAR Pinedale Array 29.51 339 P P 12 07 31.8 +6.2
comp=Z,1.6nm,0.9s,baz=148,slow=8.7,SNR=11
PDAR LR LR 12 21 48.1
comp=Z,123nm,18.1s,baz=166,slow=42
MDPB Devils Postpil 30.16 321 P P 12 07 32.2 +0.7
LHV Little Huntoon 30.22 322 P P 12 07 32.0 +0.3
NVAR Mina Array Bea 30.22 323 P P 12 07 34.4 +2.5
comp=Z,3.2nm,0.8s,baz=139,slow=8.9,SNR=25
NVAR LR LR 12 20 08.8
comp=Z,112nm,19.1s,baz=136,slow=37
comp=Z,3.2nm,0.8s
ELK Elko 30.24 329 LR LR 12 21 25.4
comp=Z,261nm,19.1s,baz=144,slow=40
REDW Red Top Meadow 30.49 338 P P 12 07 34.8 +0.5
REDW IAmb IAmb 12 07 49.7
comp=Z,9.2nm,0.8s
LOHW Long Hollow 30.62 338 IAmb IAmb 12 07 45.6
comp=Z,7.8nm,1.0s
HLID Hailey 32.08 334 IAmb IAmb 12 08 04.4
comp=Z,5.8nm,0.9s
SADO Sadowa 32.08 22 LR LR 12 23 29.4
comp=Z,109nm,18.8s,baz=198,slow=42
MDND Maddock 32.20 355 P P 12 07 48.0 -1.0
EYMN Ely 32.29 5 IAmb IAmb 12 08 04.5
comp=Z,12nm,1.4s
AGMN Agassiz Nation 32.47 360 P P 12 07 49.8 -1.6
NNA Nana 33.17 145 LR LR 12 18 37.3
comp=Z,136nm,21.8s,baz=338,slow=31
WVOR Wild Horse Val 33.20 328 IAmb IAmb 12 08 08.9
comp=Z,15nm,1.2s
J08A Circle Bar Ran 33.79 329 IAmb IAmb 12 08 25.5
comp=Z,13nm,1.0s
ULM Lac du Bonnet 34.43 360 P P 12 08 08.4 0.0
comp=Z,2.2nm,0.7s,baz=194,slow=4.2,SNR=1.9
comp=Z,2.2nm,0.7s
YBH Yreka Blue Hor 34.93 323 LR LR 12 23 57.9
comp=Z,204nm,19.0s,baz=146,slow=39
F10A Beach Ranch, E 35.21 333 IAmb IAmb 12 08 31.9
comp=Z,11nm,1.1s
NEW Newport 36.99 336 LR LR 12 25 56.2
comp=Z,151nm,20.2s,baz=155,slow=40
ETMB Extrema 38.55 129 P P 12 08 44.7 +0.7
ETMB IAmb IAmb 12 08 59.3
comp=Z,15nm,1.3s
RADR Rader Ridge 38.63 328 P P 12 08 45.4 +1.1
RADR IAmb IAmb 12 08 47.1
comp=Z,48nm,1.2s
MACA Manacapuru-AM 39.24 116 P P 12 08 50.0 +0.2
MACA IAmb IAmb 12 09 03.0
comp=Z,11nm,0.9s
SAML Samuel 40.33 125 P P 12 08 58.1 -0.7
BBB Bella Bella 44.61 332 LR LR 12 28 28.8
comp=Z,74nm,19.4s,baz=140,slow=36
RPN Rapa Nui 44.67 198 LR LR 12 23 12.9
comp=Z,64nm,21.3s,baz=329,slow=29
SCHQ Schefferville 44.88 23 LR LR 12 31 53.4
comp=Z,104nm,18.2s,baz=254,slow=41
LVC Limon Verde 46.16 145 LR LR 12 28 10.5
comp=Z,82nm,18.6s,baz=330,slow=35
SIV San Ignacio 46.36 131 P P 12 09 48.3 +0.7
comp=Z,1.9nm,0.6s,baz=300,slow=9.8,SNR=7.0
comp=Z,1.9nm,0.6s
PTLB Pontes e Lacer 47.44 129 P P 12 09 56.8 +0.9
PTLB IAmb IAmb 12 10 11.5
comp=Z,5.8nm,1.0s
YKA Yellowknife Ar 48.61 348 P P 12 10 03.7 -0.7
comp=Z,0.4nm,0.6s,baz=152,slow=7.1,SNR=4.2
comp=Z,0.4nm,0.6s
DLBC Dease Lake 49.72 337 P P 12 10 13.5 +0.5
comp=Z,1.9nm,0.8s,baz=100,slow=6.1,SNR=2.6
DLBC LR LR 12 30 53.2
comp=Z,52nm,19.2s,baz=155,slow=36
comp=Z,1.9nm,0.8s
FRB Frobisher Bay 51.46 15 LR LR 12 34 55.5
comp=Z,46nm,19.2s,baz=212,slow=39
BDFB Brasilia 56.32 121 P P 12 11 03.7 +1.3
comp=Z,4.2nm,0.6s,baz=266,slow=8.6,SNR=6.5
comp=Z,4.2nm,0.6s
BCAR Bear Creek A 57.11 337 P P 12 11 07.5 +0.2
NRS Narsarsuaq 57.64 26 P P 12 11 09.1 -1.9
FID Port Fidalgo 57.82 333 P P 12 11 13.9 +1.7
INK Inuvik 57.84 344 P P 12 11 12.0 -0.3
comp=Z,3.6nm,0.8s,baz=73,slow=3.0,SNR=5.0
INK LR LR 12 39 47.7
comp=Z,192nm,18.6s,baz=150,slow=40
comp=Z,3.6nm,0.8s
INK Inuvik 57.84 344 P P 12 11 11.7 -0.5
INK IAmb IAmb 12 11 25.6
comp=Z,7.5nm,0.8s
PAX Paxson 58.48 336 P P 12 11 17.6 +0.6
PAX IAmb IAmb 12 11 27.7
comp=Z,4.8nm,0.8s
J26L Joseph Creek 58.56 338 IAmb IAmb 12 11 31.7
comp=Z,4.8nm,1.1s
RIDG Independent Ri 58.63 337 P P 12 11 18.9 +0.9
RIDG IAmb IAmb 12 11 19.9
comp=Z,7.4nm,1.1s
SFJD Kangerlussuaq 58.94 19 LR LR 12 40 22.3
comp=Z,86nm,18.3s,baz=221,slow=40
PRP Porcupine Dome 59.81 338 IAmb IAmb 12 11 46.5
comp=Z,6.9nm,1.1s
IL31 59.93 337 IAmb IAmb 12 11 37.4
comp=Z,5.3nm,1.0s
ILAR Eielson Array 59.93 337 P P 12 11 27.0 +0.2
comp=Z,1.9nm,1.0s,baz=134,slow=5.1,SNR=15
ILAR LR LR 12 41 16.9
comp=Z,108nm,18.0s,baz=101,slow=40
comp=Z,1.9nm,1.0s
ILAR Eielson Array 59.93 337 P P 12 11 26.9 0.0
BMAR Burnt Mountain 60.52 340 P P 12 11 30.9 0.0
PLCA Paso Flores 60.77 158 P P 12 11 34.8 +1.8
comp=Z,3.5nm,0.9s,baz=345,slow=9.3,SNR=4.7
comp=Z,3.5nm,0.9s
H24K Noodor Dome 60.81 338 P P 12 11 33.4 +0.5
H24K IAmb IAmb 12 11 43.1
comp=Z,4.6nm,0.8s
M20K Styx River 61.21 333 IAmb IAmb 12 11 50.4
comp=Z,4.2nm,0.9s
CAST Castle Rocks 61.36 335 IAmb IAmb 12 11 36.7
comp=Z,3.7nm,0.8s
K20K Telida 62.16 334 P P 12 11 42.2 +0.1

J20K Nowinta River 62.50 335 P P 12 11 44.5 +0.3
J20K IAmb IAmb 12 11 54.0
comp=Z,7.2nm,1.1s
PPT Papeete 62.72 240 LR LR 12 31 47.0
comp=Z,65nm,21.5s,baz=34,slow=29
BORG Borgarnes 69.14 26 LR LR 12 42 54.4
comp=Z,67nm,19.9s,baz=278,slow=36
JMIC Jan Mayen 74.27 20 LR LR 12 48 16.4
comp=Z,43nm,18.6s,baz=252,slow=38
SPITS Spitsbergen Ar 79.07 11 LR LR 12 53 02.1
comp=Z,62nm,18.0s,baz=224,slow=39
AFI Afiamalu 80.93 253 LR LR 12 41 30.2
comp=Z,40nm,20.4s,baz=106,slow=30
ESDC Sonseca Array 81.30 51 P P 12 13 36.9 -0.8
comp=Z,1.2nm,0.9s,baz=308,slow=4.8,SNR=6.7
comp=Z,1.2nm,0.9s
ESDC Sonseca Array 81.30 51 P P 12 13 36.1 -1.6
NB2 NORSAR Subarra 84.23 28 P P 12 13 52.2 -0.3
comp=Z,0.9nm,0.7s,baz=293,slow=5.1
NOA NORSAR Array B 84.23 28 P P 12 13 53.2 +0.7
comp=Z,1.2nm,0.8s,baz=292,slow=4.9,SNR=5.0
comp=Z,1.2nm,0.8s
HFS Hagfors 85.71 28 LR LR 12 50 57.7
comp=Z,81nm,22.0s,baz=264,slow=35
SEY Seymchan 85.76 335 P P 12 14 00.4 +0.4
comp=Z,0.8nm,0.7s,baz=5.7,slow=10,SNR=3.8
comp=Z,0.8nm,0.7s
PETK Petropavlovsk- 87.29 325 LR LR 12 52 16.4
comp=Z,22nm,20.3s,baz=93,slow=35
TIXI Tiksi 87.84 347 LR LR 12 59 21.4
comp=Z,33nm,18.6s,baz=0.0,slow=40
VRAC Vranov 91.92 37 LR LR 12 56 51.0
comp=Z,34nm,19.0s,baz=271,slow=36
BOSA Boshof 124.16 114 PKP PKPdf 12 20 20.4 -0.1
comp=Z,7.2nm,1.1s,baz=187,slow=5.6,SNR=3.3
WRA Warramunga Arr 132.49 257 PKP PKPdf 12 20 37.0 +0.6
comp=Z,0.7nm,0.6s,baz=88,slow=2.9,SNR=9.9
ASAR Alice Springs 133.00 252 PKP PKPdf 12 20 37.2 0.0
comp=Z,0.6nm,0.8s,baz=100,slow=1.8,SNR=8.5
PZH PanZhiHua 134.79 338 PKP PKPdf 12 20 38.8 -2.0
HYBB Hyderabad (bro 146.54 10 ePKiKP PKiKP 12 21 06.0 -0.3
HYBB ePKiKP pPKPdf 12 21 06.2 -0.7
HYBB eSKSdf SKSdf 12 28 07.0 -3.8

IDC ***03*** *12:05:38.6±2.7, 11°.37N×85°.62W, h89km±24km, mb3.9/12, mbtmp4.2/13, MS3.1/1, Error ellipse: s-maj=29.2km s-min=12.7km az=59.0*
UCR ***03*** *12:05:39.8±1.2, 11°.19N×85°.89W, h88km±2km, ML4.2, MW4.6, mb4.7(NEIC)*
NEIC ***03*** *12:05:40.1±1.4, 11°.22N±0°.04×85°.86W±0°.06, h89km±7km, mb4.7/82, ML4.2(UCR), Error ellipse: s-maj=8.5km s-min=5.4km az=82.0*
INET ***03*** *12:05:40.4±0.7, 11°.21N×85°.84W, h83km±4km, MW4.2*
UPA ***03*** *12:05:41.7±0.7, 11°.23N×85°.63W, h10km±49km*
SNET ***03*** *12:05:48.4±2.4, 11°.81N×86°.41W, h146km±81km, ML4.3*
ISC 03 12:05:39.2±0.6, 11°.21N±0°.03×85°.90W±0°.04, h95km±5km, n186,σ1°.08/199, mb4.7/53, 3C-16D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HZTE	Horizontes, Gu	0.58	149		Pn	12 05 55.1	0.0
HZTE				Sn	Sn	12 06 07.2	+0.2
HZTE	Horizontes, Gu	0.58	149	eP	Pn	12 05 55.2	0.0
HZTE				eS	Sn	12 06 07.2	+0.2
GBS3	Finca Las Img	0.61	135	eP	Pn	12 05 55.1	-0.3
GBS3				eS	Sn	12 06 06.8	-0.7
GB1A	Borinquen Arri	0.63	129↑	eP	Pn	12 05 55.6	-0.1
GB1A				eS	Sn	12 06 07.8	-0.1
BUEV	Buena Vista	0.63	131	eP	Pn	12 05 55.7	0.0
BUEV				eS	Sn	12 06 07.5	-0.4
LAPC	Finca la Perla	0.64	134	eP	Pn	12 05 55.3	-0.3
LAPC				eS	Sn	12 06 07.0	-0.9
BUAI	Buenos Aires	0.65	121↓	eP	Pn	12 05 55.5	-0.2
BUAI				eS	Sn	12 06 08.0	-0.1
GPS2	Hotel Rincn d	0.70	131↓	eP	Pn	12 05 56.2	-0.1
GPS2				eS	Sn	12 06 08.6	-0.5
MASN	Masaya	0.81	342	eP	Pn	12 05 57.3	0.0
MASN				eS	Sn	12 06 10.7	-0.1
LIM1	Limonal	0.81	129↓	eP	Pn	12 05 57.1	-0.2
LIM1				eS	Sn	12 06 11.0	+0.1
GUAB	Guayabo de Bag	0.83	127↓	eP	Pn	12 05 57.3	-0.2
GUAB				eS	Sn	12 06 11.4	+0.3
VMAR	Armenia, Volca	0.86	118	eP	Pn	12 05 57.5	-0.4
VMAR				eS	Sn	12 06 11.0	-0.7
HORNC	Hornillas	0.86	125↓	eP	Pn	12 05 57.5	-0.4
HORNC				eS	Sn	12 06 11.8	-0.1
COLC	Colonia	0.87	129↓	eP	Pn	12 05 57.8	-0.1
COLC				eS	Sn	12 06 12.7	+0.7
CUI	Cuipilapa	0.91	127↓	iP	Pn	12 05 58.3	0.0
CUI				eS	Sn	12 06 12.9	+0.2
ORTG	Ortega, Santa	0.95	153	Pn	Pn	12 05 59.0	+0.2
ORTG				Sn	Sn	12 06 13.1	-0.4
ORTG	Ortega, Santa	0.95	153	eP	Pn	12 05 58.8	+0.1
WILN	Americas 2	0.98	343	eP	Pn	12 05 59.5	+0.4
MGAN	Managua	0.99	340	eP	Pn	12 05 59.6	+0.4
TISN	Laguna Tiscapa	0.99	338	eP	Pn	12 05 59.6	+0.4
GUAI	GUAI	1.01	158↑	iP	Pn	12 05 59.7	+0.3
GUAI				eS	Sn	12 06 14.1	-0.5
PTEN	Parque Tenorio	1.02	119↓	iP	Pn	12 05 59.5	-0.1
PTEN				eS	Sn	12 06 15.2	+0.3
ACAL	Aguas Claras	1.02	124↓	iP	Pn	12 05 59.7	+0.1
ACAL				eS	Sn	12 06 15.8	+0.9
ACON	Acoyapa	1.03	43		Pn	12 05 59.6	-0.1
ACON				Sn	Sn	12 06 14.1	-0.9
ACON	Acoyapa	1.03	43↓	iP	Pn	12 05 59.6	-0.1
ACON	Acoyapa	1.03	43	eP	Pn	12 05 59.5	-0.1
ACON				eS	Sn	12 06 14.2	-0.7
VERA	Finca Concepci	1.07	109	eP	Pn	12 05 59.9	-0.1
VERA				eS	Sn	12 06 16.1	+0.3
HUEN		1.15	346	eP	Pn	12 06 01.6	+0.6
SAJU	San Juanillo,	1.15	171	eP	Pn	12 06 00.8	-0.2
COPN	Copaltepe	1.18	325	eP	Pn	12 06 01.8	+0.4
DUNO	Dulce Nombre,	1.19	161		Pn	12 06 01.7	+0.1
DUNO				Sn	Sn	12 06 17.1	-1.2
DUNO	Dulce Nombre,	1.19	161	eP	Pn	12 06 01.7	+0.1
BOAB	BOACO BROADBAN	.25	10		Pn	12 06 02.0	-0.1
BOAB	BOACO BROADBAN	.25	10	eP	Pn	12 06 02.2	+0.1
BOAB				eS	Sn	12 06 19.1	-0.4
JTS	Las Juntas de	1.30	135	Pn	Pn	12 06 02.4	-0.5
JTS	Las Juntas de	1.30	135↓	iP	Pn	12 06 02.4	-0.5
JTS	Las Juntas de	1.30	135	eP	Pn	12 06 02.3	-0.5
JTS	Las Juntas de	1.30	135↓	eP	Pn	12 06 02.5	-0.3
JTS				eS	Sn	12 06 20.9	+0.3
MOMN	Momotombo	1.34	332	eP	Pn	12 06 03.7	+0.3
MOMN				eS	Sn	12 06 22.3	+0.7
CEDE	Laguna Cedeo	1.38	122↓	iP	Pn	12 06 03.9	+0.2
ARE1	Arenal 1	1.38	123	eP	Pn	12 06 04.0	+0.3
INDI	Punta indio, G	1.39	164	eP	Pn	12 06 03.8	-0.2
FORC	Fortuna	1.42	121↓	iP	Pn	12 06 04.3	+0.1
CNGN	Cerro Negro	1.50	329	Pn	Pn	12 06 05.8	+0.5
CNGN	Cerro Negro	1.50	329	eP	Pn	12 06 05.9	+0.5
CNGN				eS	Sn	12 06 25.9	+0.9
COVE	Coope Vega, Sa	1.55	108		Pn	12 06 04.8	-1.0
TEL3	Telica 3	1.64	326	eP	Pn	12 06 08.0	+1.0
TELN	Telica	1.66	327	eP	Pn	12 06 08.2	+0.9
LAFE	Finca La Fe, P	1.70	145	eP	Pn	12 06 07.7	-0.1
SRA1	San Ramn	1.79	129	eP	Pn	12 06 09.0	0.0
ESPN	Las Esperanzas	1.84	58		Pn	12 06 09.8	+0.2
CRIN	San Cristobal	1.86	323		Pn	12 06 10.5	+0.6
CRIN	San Cristobal	1.86	323↓	iP	Pn	12 06 10.8	+0.9
CRIN	San Cristobal	1.86	323	eP	Pn	12 06 10.7	+0.9
CRIN				eS	Sn	12 06 34.2	+1.0
JACO	JACO, Garabito	1.96	142		Pn	12 06 11.4	+0.3
JACO	JACO, Garabito	1.96	142	eP	Pn	12 06 11.5	+0.3
HDC	Heredia	2.13	124		Pn	12 06 14.0	+0.6
HDC	Heredia	2.13	124	eP	Pn	12 06 13.9	+0.6
HDC	Heredia	2.13	124↓	iP	Pn	12 06 14.0	+0.6
RCON	San Juan de Ri	2.27	354	eP	Pn	12 06 16.5	+1.2
LCR2	La Lucha 2	2.37	128	eP	Pn	12 06 18.1	+1.4
CVTR	Volcan Turrial	2.41	119		Pn	12 06 17.6	+0.2
RIMA	Rio Macho	2.46	126		Pn	12 06 18.3	+0.4
RIMA	Rio Macho	2.46	126	eP	Pn	12 06 18.3	+0.4
RIMA	Rio Macho	2.46	126	eP	Pn	12 06 18.3	+0.4
CDM	Cerro de Muert	2.67	128	eP	Pn	12 06 21.1	+0.3
CDM	Cerro de Muert	2.67	128	eP	Pn	12 06 21.7	+0.9
BATAN	Batan	2.71	114		Pn	12 06 21.7	+0.7
BATAN	Batan	2.71	114	eP	Pn	12 06 21.7	+0.7
CNCH	Conchagua	2.79	317	eP	Pn	12 06 22.6	+0.5
CNCH				IAML		12 07 00.4	
	comp=Z,2μm,0.3s						

CNCH	**Conchagua**	**2.79**	**317**	*eP*	**Pn**	**12 06 22.6**	**+0.5**
CNCH				*eS*	**Sn**	**12 06 53.7**	**-1.5**
CNCH				IAML		12 07 00.4	
	comp=Z,2µm,0.3s						
PEZE	**Perez Zeledon,**	**2.84**	**130**		**Pn**	**12 06 24.1**	**+1.3**
PEZE	**Perez Zeledon,**	**2.84**	**130**	*eP*	**Pn**	**12 06 23.6**	**+0.8**
LCND	**La Caada**	**2.85**	**317**	*eP*	**Pn**	**12 06 23.4**	**+0.5**
LCND				IAML		12 07 00.5	
	comp=Z,661nm,0.3s						
LCND	**La Caada**	**2.85**	**317**	*eP*	**Pn**	**12 06 23.4**	**+0.5**
LCND				IAML		12 07 00.5	
	comp=Z,661nm,0.3s						
TGUH	**Tegucigalpa,Un**	**3.13**	**335**		**Pn**	**12 06 28.3**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.13**	**335**	*eP*	**Pn**	**12 06 28.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.13**	**335**	*eP*	**Pn**	**12 06 28.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.13**	**335**	*eP*	**Pn**	**12 06 28.2**	**+1.5**
SRBA	**San Rafael, Bu**	**3.18**	**128**		**Pn**	**12 06 28.1**	**+0.7**
SRBA	**San Rafael, Bu**	**3.18**	**128**	*eP*	**Pn**	**12 06 27.7**	**+0.4**
DRK0	**Durika**	**3.25**	**126**		**Pn**	**12 06 30.0**	**+1.6**
DRK0	**Durika**	**3.25**	**126**	*eP*	**Pn**	**12 06 30.3**	**+1.9**
DRK0				*eS*	**Sn**	**12 07 07.0**	**+0.6**
PACA	**Pacayal**	**3.26**	**314**	*eP*	**Pn**	**12 06 30.5**	**+2.0**
	comp=Z,5µm,0.3s						
PACA				IAML		12 07 14.8	
	comp=Z,5µm,0.3s						
PACA	**Pacayal**	**3.26**	**314**	*eP*	**Pn**	**12 06 30.5**	**+2.0**
	comp=Z,5µm,0.3s						
PACA				IAML		12 07 14.8	
	comp=Z,5µm,0.3s						
EDPN	**Palmar Norte**	**3.28**	**133**	*eP*	**Pn**	**12 06 31.0**	**+2.3**
COEB	**Comit de Eme**	**3.43**	**312**	*eP*	**Pn**	**12 06 32.6**	**+1.8**
COEB				IAML		12 07 14.3	
	comp=Z,533nm,0.3s						
COEB	**Comit de Eme**	**3.43**	**312**	*eP*	**Pn**	**12 06 32.6**	**+1.8**
COEB				IAML		12 07 14.3	
	comp=Z,533nm,0.3s						
SCLA	**Alcaldia de Sa**	**3.71**	**312**	*eP*	**Pn**	**12 06 36.4**	**+1.9**
SCLA	**Alcaldia de Sa**	**3.71**	**312**	*eP*	**Pn**	**12 06 36.4**	**+1.9**
COEG	**Centro de Oper**	**3.77**	**310**	*eP*	**Pn**	**12 06 36.8**	**+1.4**
COEG				IAML		12 07 21.1	
	comp=Z,352nm,0.3s						
COEG	**Centro de Oper**	**3.77**	**310**	*eP*	**Pn**	**12 06 36.8**	**+1.4**
COEG				IAML		12 07 21.1	
	comp=Z,352nm,0.3s						
PAVA	**Las Pavas**	**3.87**	**310**	*eP*	**Pn**	**12 06 38.3**	**+1.6**
PAVA	**Las Pavas**	**3.87**	**310**	*eP*	**Pn**	**12 06 38.3**	**+1.6**
LFRS	**El Faro**	**3.91**	**308**	*eP*	**Pn**	**12 06 39.0**	**+1.7**
LFRS	**El Faro**	**3.91**	**308**	*eP*	**Pn**	**12 06 39.0**	**+1.7**
LFRS				*eS*	**Sn**	**12 07 16.1**	**-6.2**
BRU2	**Volcan**	**3.97**	**127**	*eP*	**Pn**	**12 06 39.8**	**+1.7**
BRU2				*eS*	**Sn**	**12 07 23.3**	**-0.4**
CDITO	**Canoas**	**3.97**	**131**		**Pn**	**12 06 38.8**	**+0.9**
BC3P	**Paso Ancho**	**4.02**	**126**	*eP*	**Pn**	**12 06 40.6**	**+1.8**
BCO2	**Palmira**	**4.14**	**126**⍰	*eP*	**Pn**	**12 06 41.5**	**+1.1**
BCO2				*eS*	**Sn**	**12 07 28.2**	**+0.3**
JAYA	**Jayaque - finc**	**4.23**	**305**	*eP*	**Pn**	**12 06 42.8**	**+1.1**
JAYA				IAML		12 07 32.4	
	comp=Z,686nm,0.2s						
JAYA	**Jayaque - finc**	**4.23**	**305**	*eP*	**Pn**	**12 06 42.8**	**+1.1**
JAYA				IAML		12 07 32.4	
	comp=Z,686nm,0.2s						
MTO3	**Montecristo**	**4.63**	**314**	Pn	**Pn**	**12 06 48.8**	**+1.7**
NUBE	**Las Nubes**	**4.64**	**306**	*eP*	**Pn**	**12 06 49.1**	**+2.0**
NUBE	**Las Nubes**	**4.64**	**306**	*eP*	**Pn**	**12 06 49.1**	**+2.0**
BCIP	**Isla Barro Col**	**6.30**	**108**	Pn	**Pn**	**12 07 10.1**	**+0.4**
CMIG	**Matias Romero**	**10.49**	**305**	P	**Pn**	**12 08 08.1**	**+1.4**
	comp=Z,9.9nm,0.3s,baz=162,slow=10,SNR=6.4						
CMIG				LR	LR	12 12 19.4	
	comp=Z,106nm,21.4s,baz=182,slow=38						
TLIG	**Tlapa**	**13.80**	**299**	Pn	**Pn**	**12 08 54.0**	**+3.0**
SDV	**Santo Domingo**	**15.21**	**97**	P	**Pn**	**12 09 09.5**	**+0.4**
	comp=Z,4.7nm,0.3s,baz=282,slow=2.7,SNR=3.6						
BAUV	**El Baul**	**17.72**	**96**	P	**Pn**	**12 09 39.6**	**-0.4**
152A	**Waverly Hall**	**21.38**	**3**	IAmb	IAmb	12 10 24.5	
	comp=Z,29nm,0.8s						
154A	**Montrose**	**21.45**	**6**	IAmb	IAmb	12 10 24.3	
	comp=Z,46nm,0.8s						
JCT	**Junction City**	**23.12**	**328**	P	**P**	**12 10 37.1**	**-0.1**
HODGE	**Hodges**	**23.15**	**8**	P	**P**	**12 10 38.7**	**+1.2**
HODGE				IAmb	IAmb	12 10 39.4	
	comp=Z,20nm,0.9s						
X51A	**Calhoun**	**23.27**	**2**	P	**P**	**12 10 39.2**	**+0.7**
X51A				IAmb	IAmb	12 10 40.3	
	comp=Z,20nm,0.9s						
JSC	**Jenkinsville**	**23.35**	**10**	P	**P**	**12 10 40.6**	**+1.3**
JSC				IAmb	IAmb	12 10 41.4	
	comp=Z,29nm,0.6s						
PAULI	**Pauline**	**23.79**	**8**	P	**P**	**12 10 44.7**	**+1.4**
PAULI				IAmb	IAmb	12 10 45.5	
	comp=Z,24nm,0.8s						
W52A	**Murphy**	**23.84**	**4**	P	**P**	**12 10 44.2**	**+0.4**
BIRD	**Birdtown, Kers**	**23.85**	**11**	P	**P**	**12 10 44.7**	**+1.0**
BIRD				IAmb	IAmb	12 10 46.3	
	comp=Z,17nm,0.8s						
CPCT	**Cooper Cave**	**24.16**	**3**	P	**P**	**12 10 46.8**	**+0.2**
CPCT				IAmb	IAmb	12 10 50.1	
	comp=Z,17nm,0.8s						
KMSC	**Kings Mountain**	**24.18**	**9**	P	**P**	**12 10 47.9**	**+1.2**
KMSC				IAmb	IAmb	12 10 49.4	
	comp=Z,34nm,0.8s						
MIAR	**Mount Ida**	**24.26**	**344**	P	**P**	**12 10 47.3**	**-0.2**
TKL	**Tuckaleechee C**	**24.41**	**4**	P	**P**	**12 10 46.2**	**-2.7**
	comp=Z,5.0nm,0.7s,baz=192,slow=9.3,SNR=4.8						
	comp=Z,5.0nm,0.7s						
W57A	**Gilead**	**24.43**	**12**	P	**P**	**12 10 49.9**	**+0.9**
W57A				IAmb	IAmb	12 10 50.7	
	comp=Z,15nm,0.7s						
TXAR	**Lajitas Array**	**24.49**	**320**	P	**P**	**12 10 50.6**	**+0.8**
	comp=Z,6.1nm,0.6s,baz=140,slow=10.0,SNR=52						
TXAR				ScP	**ScP**	**12 17 58.0**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=143,slow=6.3,SNR=3.5						
	comp=Z,6.1nm,0.6s						
TXAR	**Lajitas Array**	**24.49**	**320**	P	**P**	**12 10 51.1**	**+1.3**
TX32	**Lajitas Array**	**24.49**	**320**	P	**P**	**12 10 50.5**	**+0.7**
V53A	**Saluda**	**24.51**	**6**	IAmb	IAmb	12 10 54.3	
	comp=Z,22nm,0.9s						
V51A	**Loudon**	**24.52**	**3**	P	**P**	**12 10 50.9**	**+1.1**
V51A				IAmb	IAmb	12 10 51.9	
	comp=Z,17nm,0.8s						
LCAR	**Lake Charles**	**25.20**	**350**	P	**P**	**12 10 56.4**	**+0.3**
V58A	**Windy Hill, Pi**	**25.23**	**13**	P	**P**	**12 10 57.6**	**+1.3**
U54A	**Nelsons Funny**	**25.46**	**8**	IAmb	IAmb	12 11 03.0	
	comp=Z,23nm,0.9s						
U56A	**King**	**25.52**	**10**	IAmb	IAmb	12 11 01.1	
	comp=Z,22nm,0.9s						
BLA	**Blacksburg**	**26.35**	**10**	P	**P**	**12 11 07.6**	**+1.1**
BLA				IAmb	IAmb	12 11 09.3	
	comp=Z,13nm,0.8s						
S51A	**Beattyville**	**26.39**	**4**	IAmb	IAmb	12 11 08.3	
	comp=Z,16nm,0.8s						
R55A	**Marlinton**	**27.45**	**10**	IAmb	IAmb	12 11 18.5	
	comp=Z,14nm,0.8s						
Q44A	**Meyer Farm, Va**	**27.72**	**355**	P	**P**	**12 11 18.6**	**0.0**
Q44A				IAmb	IAmb	12 11 19.6	
	comp=Z,16nm,0.8s						
Q51A	**Peebles**	**27.79**	**4**	P	**P**	**12 11 20.0**	**+0.7**
Q52A	**Bidwell**	**27.82**	**6**	IAmb	IAmb	12 11 21.5	
	comp=Z,21nm,0.8s						
Q54A	**Coxs Mills**	**28.02**	**8**	IAmb	IAmb	12 11 23.1	
	comp=Z,17nm,0.7s						
P46A	**Rosedale**	**28.31**	**358**	IAmb	IAmb	12 11 25.4	
	comp=Z,12nm,0.7s						
ETMB	**Extrema**	**28.63**	**136**	P	**P**	**12 11 26.8**	**-0.2**
ETMB				IAmb	IAmb	12 11 27.9	
	comp=Z,6.5nm,0.8s						
O52A	**Adamsville**	**29.01**	**6**	IAmb	IAmb	12 11 31.4	
	comp=Z,23nm,0.8s						
P57A	**Homestead Farm**	**29.01**	**13**	IAmb	IAmb	12 11 32.6	
	comp=Z,15nm,0.8s						
ACSO	**Alum Creek Sta**	**29.02**	**5**	IAmb	IAmb	12 11 31.3	
	comp=Z,20nm,0.8s						
SFIN	**Lafayette**	**29.07**	**358**	IAmb	IAmb	12 11 30.7	
	comp=Z,9.5nm,0.8s						
HDIL	**Hopedale**	**29.38**	**355**	P	**P**	**12 11 33.2**	**-0.2**
HDIL				IAmb	IAmb	12 11 33.6	
	comp=Z,19nm,0.9s						
N49A	**Columbus Grove**	**29.63**	**3**	IAmb	IAmb	12 11 36.3	
	comp=Z,18nm,0.8s						
SSPA	**Standing Stone**	**30.15**	**12**	P	**P**	**12 11 41.0**	**+0.9**
SSPA				IAmb	IAmb	12 11 41.9	
	comp=Z,16nm,0.8s						
N58A	**Sunbury**	**30.60**	**14**	IAmb	IAmb	12 11 46.0	
	comp=Z,19nm,0.8s						
M55A	**Ridgway**	**30.78**	**11**	IAmb	IAmb	12 11 47.2	
	comp=Z,20nm,1.1s						
L56A	**Greenwood**	**31.66**	**12**	IAmb	IAmb	12 11 55.5	
	comp=Z,16nm,1.1s						
K38A	**Parkersburg**	**31.89**	**350**	IAmb	IAmb	12 11 55.6	
	comp=Z,9.6nm,0.5s						
L59A	**Walton**	**32.29**	**15**	IAmb	IAmb	12 12 00.8	
	comp=Z,16nm,0.8s						
J58A	**Remsen**	**33.33**	**14**	IAmb	IAmb	12 12 09.2	
	comp=Z,14nm,0.8s						
PB16	**IPOC Station P**	**33.52**	**151**	P	**P**	**12 12 11.0**	**+0.4**
SADO	**Sadowa**	**33.94**	**9**	P	**P**	**12 12 13.1**	**-0.2**
	comp=Z,12nm,0.6s,baz=245,slow=5.0,SNR=14						
	comp=Z,12nm,0.6s						
LONY	**Lake Ozonia**	**34.68**	**14**	IAmb	IAmb	12 12 20.6	
	comp=Z,12nm,0.8s						
GO01	**Chusmiza**	**34.82**	**152**	P	**P**	**12 12 23.6**	**+1.9**
GO01				IAmb	IAmb	12 12 24.8	
	comp=Z,8.0nm,0.7s						
COWI	**Conover**	**34.88**	**356**	P	**P**	**12 12 20.9**	**-0.6**
COWI				IAmb	IAmb	12 12 21.1	
	comp=Z,3.6nm,0.7s						
E43A	**Lone Tree Farm**	**35.06**	**359**	IAmb	IAmb	12 12 23.1	
	comp=Z,8.5nm,0.8s						
TRQ	**Mont Tremblant**	**36.20**	**13**	P	**P**	**12 12 32.8**	**-0.1**
TRQ				IAmb	IAmb	12 12 34.8	
	comp=Z,4.4nm,0.6s						
SIV	**San Ignacio**	**36.53**	**137**	P	**P**	**12 12 36.0**	**+0.1**
	comp=Z,5.6nm,0.7s,baz=314,slow=9.1,SNR=12						
	comp=Z,5.6nm,0.7s						
PDAR	**Pinedale Array**	**37.58**	**331**	P	**P**	**12 12 43.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=120,slow=9.8,SNR=4.2						
PDAR				PcP	**PcP**	**12 15 00.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=124,slow=4.9,SNR=2.5						
	comp=Z,0.3nm,0.6s						
LMQ	**La Malbaie**	**38.52**	**17**	IAmb	IAmb	12 12 52.5	
	comp=Z,7.7nm,0.7s						
NV11	**Mina Array Sit**	**39.54**	**319**	P	**P**	**12 13 02.3**	**+1.2**
NVAR	**Mina Array Bea**	**39.63**	**319**	P	**P**	**12 13 03.8**	**+1.8**
	comp=Z,1.9nm,0.7s,baz=125,slow=7.3,SNR=20						
NVAR				PcP	**PcP**	**12 15 07.6**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=116,slow=4.1,SNR=7.7						
	comp=Z,1.9nm,0.7s						
BATG	**Bathurst New B**	**39.65**	**21**	P	**P**	**12 13 02.5**	**+0.8**
BATG				IAmb	IAmb	12 13 02.6	
	comp=Z,9.1nm,0.9s						
KVN	**Kaiserville**	**39.85**	**320**	P	**P**	**12 13 04.5**	**+0.7**
HLID	**Hailey**	**40.59**	**328**	P	**P**	**12 13 10.5**	**+0.7**
CMB	**Columbia Colle**	**40.79**	**317**	P	**P**	**12 13 10.9**	**-0.5**
PNTR	**Pine Nut**	**40.84**	**319**	P	**P**	**12 13 13.7**	**+1.8**
PAHR	**Pah Rah Range**	**41.05**	**320**	P	**P**	**12 13 16.3**	**+2.7**
WVOR	**Wild Horse Val**	**42.20**	**323**	P	**P**	**12 13 24.2**	**+1.4**
H04A	**Detroit Lake**	**45.61**	**324**	P	**P**	**12 13 50.1**	**0.0**
BDFB	**Brasilia**	**46.03**	**125**	P	**P**	**12 13 52.0**	**-1.8**
	comp=Z,2.3nm,0.5s,baz=270,slow=14,SNR=3.1						
	comp=Z,2.3nm,0.5s						
SCHQ	**Schefferville**	**46.04**	**15**	P	**P**	**12 13 51.8**	**-1.5**
	comp=Z,11nm,0.6s,baz=212,slow=5.3,SNR=22						
	comp=Z,11nm,0.6s						
SCHQ	**Schefferville**	**46.04**	**15**	P	**P**	**12 13 52.3**	**-1.0**
CPUP	**Villa Florida**	**46.52**	**144**	P	**P**	**12 13 56.1**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=340,slow=9.4,SNR=3.2						
	comp=Z,0.9nm,0.4s						
PLCA	**Paso Flores**	**53.60**	**166**	P	**P**	**12 14 51.4**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=333,slow=8.7,SNR=3.7						
	comp=Z,1.2nm,0.6s						
YKA	**Yellowknife Ar**	**55.20**	**344**	P	**P**	**12 15 00.3**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=131,slow=8.4,SNR=7.2						
YKA				PcP	**PcP**	**12 16 00.7**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=140,slow=4.5,SNR=4.8						
	comp=Z,0.4nm,0.3s						
ILAR	**Eielson Array**	**67.76**	**336**	P	**P**	**12 16 25.0**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=127,slow=4.4,SNR=11						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**140.20**	**246**	PKhKP	PKPpre	12 24 50.2	
	comp=Z,0.5nm,0.7s,baz=110,slow=3.8,SNR=7.3						
ASAR				PKP	**PKPdf**	**12 24 56.5**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=90,slow=1.9,SNR=13						
WRA	**Warramunga Arr**	**140.37**	**252**	PKhKP	PKPpre	12 24 51.6	
	comp=Z,0.2nm,0.4s,baz=91,slow=3.2,SNR=17						
WRA				PKP	**PKPdf**	**12 24 58.2**	**0.0**
	comp=Z,0.5nm,0.5s,baz=94,slow=2.6,SNR=18						
PZH	**PanZhiHua**	**141.78**	**349**	PKP	**PKPdf**	**12 24 59.2**	**-1.5**
HYBB	**Hyderabad (bro**	**147.67**	**29**	*e*PKiKP	**PKPab**	**12 25 16.2**	**+0.1**

*IDC **03** 13:08:34.9±1.1, 47.80N×27.53W, h0km, mb3.7/7, mbtmp3.7/8, ML4.2/1, MS3.4/32, Error ellipse: s-maj=33.9km s-min=18.8km az=11.0*
*NEIC **03** 13:08:36.8±1.1, 47.87N±0.02×27.6W±0.1, h10km±1km, mb4.4/28, Error ellipse: s-maj=16.3km s-min=3.5km az=94.0*

ISC 03 13:08:36.4±0.6, 47.81N±0.09×27.55W±0.08, h10km, n72, σ0.973/42, mb4.3/18, MS3.4/30, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMLA	**Cha da Macela**	**10.15**	**171**	Pn	**Pn**		**13 11 03.0**	**+0.8**
DSB	**Dublin**	**14.50**	**60**	Pn	**Pn**		**13 12 00.0**	**-1.4**
COI	**Coimbra**	**15.70**	**112**	Pn	**Pn**		**13 12 17.6**	**0.0**
COI				IAmb	IAmb		13 12 58.5	
	comp=Z,27nm,1.2s							
ESK	**Eskdalemuir**	**16.83**	**54**	P	**Pn**		**13 12 32.7**	**+0.8**
ESK				IAmb	IAmb		13 12 56.0	
	comp=Z,39nm,1.5s							
NRS	**Narsarsuaq**	**16.84**	**329**	Pn	**Pn**		**13 12 31.3**	**-0.7**
EKA	**Eskdalemuir Ar**	**16.86**	**54**	LR	LR		13 18 35.3	
	comp=Z,88nm,18.1s,baz=190,slow=36							
PMOZ	**Porto Moniz, M**	**16.90**	**149**	P	**P**		**13 12 34.2**	**-0.9**
PESTR	**Estremoz**	**17.01**	**114**	P	**P**		**13 12 36.2**	**0.0**
ESBB	**Sonseca Array**	**18.83**	**107**	P	**P**		**13 12 55.3**	**-1.0**
ESDC	**Sonseca Array**	**18.83**	**107**	P	**Pn**		**13 12 57.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=300,slow=10,SNR=3.9							
ESDC				LR	LR		13 18 57.2	
	comp=Z,87nm,18.6s,baz=310,slow=33							
	comp=Z,0.3nm,0.3s							
CLF	**Chambon-Foret**	**19.93**	**78**	P	**P**		**13 13 08.7**	**+0.6**
CLF				IAmb	IAmb		13 13 11.7	
	comp=Z,39nm,1.4s							
AVE	**Averroes**	**20.99**	**126**	P	Pn		13 13 21.4	-0.9
SFJD	**Kangerlussuaq**	**22.63**	**336**	LR	LR		13 20 21.2	
	comp=Z,77nm,20.4s,baz=137,slow=31							
DAVOX	**Davos/Dischmat**	**25.25**	**78**	LR	LR		13 22 44.0	
	comp=Z,90nm,21.6s,baz=260,slow=34							
SCHQ	**Schefferville**	**25.26**	**301**	LR	LR		13 22 17.3	
	comp=Z,71nm,19.5s,baz=100,slow=32							
NOA	**NORSAR Array B**	**25.70**	**45**	LR	LR		13 22 16.7	
	comp=Z,26nm,20.2s,baz=250,slow=32							
HFS	**Hagfors**	**26.72**	**47**	LR	LR		13 23 21.6	
	comp=Z,36nm,18.3s,baz=262,slow=33							
GERES	**GERESS Array B**	**27.21**	**72**	P	**P**		**13 14 19.4**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=290,slow=5.5,SNR=5.4							
	comp=Z,0.3nm,0.5s							
GERES	**GERESS Array B**	**27.21**	**72**	P	**P**		**13 14 19.9**	**-0.3**
FRB	**Frobisher Bay**	**27.39**	**321**	LR	LR		13 22 16.1	
	comp=Z,50nm,20.2s,baz=182,slow=30							
VRAC	**Vranov**	**28.95**	**70**	LR	LR		13 25 54.0	
	comp=Z,81nm,18.3s,baz=266,slow=36							
KEST	**Kesra**	**29.77**	**100**	LR	LR		13 25 35.1	
	comp=Z,93nm,19.2s,baz=196,slow=34							
FINES	**FINESS Array B**	**32.87**	**45**	LR	LR		13 26 30.0	
	comp=Z,30nm,20.4s,baz=135,slow=33							
J58A	**Remsen**	**33.28**	**280**	P	**P**		**13 15 13.7**	**-0.1**
J58A				IAmb	IAmb		13 15 34.2	
	comp=Z,7.8nm,1.1s							
ARCES	**ARCESS Array B**	**33.49**	**31**	P	**P**		**13 15 15.6**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=240,slow=7.2,SNR=4.7							
	comp=Z,2.4nm,0.8s							
LUPA	**Lehigh Univers**	**34.57**	**276**	P	**P**		**13 15 23.1**	**-1.9**
BURAR	**Bucovina Array**	**34.93**	**70**	P	**P**		**13 15 30.3**	**+2.1**
SADO	**Sadowa**	**35.24**	**285**	LR	LR		13 28 54.3	
	comp=Z,84nm,19.1s,baz=1.0,slow=35							
SADO	**Sadowa**	**35.24**	**285**	P	**P**		**13 15 31.8**	**+1.0**
SADO				IAmb	IAmb		13 15 53.1	
	comp=Z,7.8nm,1.2s							
MLR	**Muntele Rosu**	**36.19**	**73**	LR	LR		13 30 16.4	
	comp=Z,54nm,19.8s,baz=334,slow=36							
AKASG	**Malin Array Be**	**36.39**	**64**	P	**P**		**13 15 40.1**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=285,slow=8.9,SNR=2.8							
AKASG				LR	LR		13 30 13.0	
	comp=Z,58nm,21.9s,baz=280,slow=36							
	comp=Z,0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**42.28**	**135**	P	**P**		**13 16 29.7**	**-0.3**
	comp=Z,1.9nm,1.1s,baz=322,slow=6.4,SNR=4.7							
	comp=Z,1.9nm,1.1s							
TKL	**Tuckaleechee C**	**42.79**	**275**	LR	LR		13 32 49.0	
	comp=Z,48nm,20.2s,baz=95,slow=34							

ULM	**Lac du Bonnet**	**43.43**	**300**	LR	LR		13 34 13.3	
	comp=Z,45nm,18.1s,baz=86,slow=35							
BRTR	**Keskin Array B**	**43.88**	**77**	LR	LR		13 35 41.6	
	comp=Z,45nm,19.4s,baz=321,slow=37							
KIRV	**Kirov**	**44.85**	**46**	LR	LR		13 34 26.2	
	comp=Z,33nm,20.6s,baz=309,slow=35							
BELG	**Belogornoye**	**46.41**	**55**	LR	LR		13 37 30.0	
	comp=Z,29nm,18.2s,baz=295,slow=37							
MDP	**Montagnes des**	**47.68**	**215**	LR	LR		13 31 18.0	
	comp=Z,21nm,20.5s,baz=260,slow=29							
KBZ	**Khabaz**	**47.75**	**67**	LR	LR		13 39 47.8	
	comp=Z,38nm,18.8s,baz=222,slow=39							
ARU	**Arti**	**50.24**	**46**	LR	LR		13 39 22.5	
	comp=Z,48nm,18.6s,baz=244,slow=37							
ARU	**Arti**	**50.24**	**46**	P	**P**		**13 17 32.6**	**+0.4**
LAO	**LASA Array**	**51.17**	**300**	P	**P**		**13 17 39.9**	**+0.4**
LAO				IAmb	IAmb		13 17 46.8	
	comp=Z,4.7nm,1.1s							
OK031	**S. Brethren Rd**	**51.30**	**283**	P	**P**		**13 17 40.4**	**-0.1**
INK	**Inuvik**	**51.92**	**333**	LR	LR		13 38 28.3	
	comp=Z,42nm,18.7s,baz=110,slow=34							
K22A	**Casper**	**53.57**	**296**	P	**P**		**13 17 57.6**	**+0.1**
K22A				IAmb	IAmb		13 17 59.3	
	comp=Z,6.1nm,1.1s							
PHWY	**Pilot Hill**	**53.69**	**294**	P	**P**		**13 17 58.4**	**-0.2**
PHWY				IAmb	IAmb		13 18 00.5	
	comp=Z,2.7nm,0.7s							
N23A	**Red Feather La**	**54.23**	**294**	P	**P**		**13 18 02.8**	**+0.3**
Q24A	**Divide**	**54.87**	**291**	P	**P**		**13 18 07.5**	**+0.3**
Q24A				IAmb	IAmb		13 18 32.4	
	comp=Z,2.9nm,0.8s							
BOZ	**Bozeman (W)**	**54.91**	**301**	P	**P**		**13 18 06.9**	**-0.3**
AMTX	**Amarillo**	**55.10**	**285**	P	**P**		**13 18 08.8**	**+0.2**
BW06	**Boulder Array**	**55.33**	**298**	P	**P**		**13 18 10.2**	**-0.1**
BW06				IAmb	IAmb		13 18 46.4	
	comp=Z,3.8nm,1.4s							
PDAR	**Pinedale Array**	**55.33**	**298**	P	**P**		**13 18 09.8**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=54,slow=7.7,SNR=6.5							
PDAR				LR	LR		13 41 47.6	
	comp=Z,26nm,18.1s,baz=16,slow=36							
	comp=Z,0.6nm,0.6s							
PDAR	**Pinedale Array**	**55.33**	**298**	P	**P**		**13 18 10.1**	**-0.3**
SMCO	**Snowmass**	**55.88**	**293**	P	**P**		**13 18 14.6**	**+0.1**
RDMU	**Red Mountain**	**56.64**	**295**	P	**P**		**13 18 20.1**	**+0.3**
RDMU				IAmb	IAmb		13 18 21.4	
	comp=Z,2.9nm,0.8s							
PV11	**David Mesa, Pa**	**57.59**	**293**	P	**P**		**13 18 26.6**	**+0.2**
PV11				IAmb	IAmb		13 18 40.8	
	comp=Z,4.4nm,0.7s							
P18A	**Preston Nutter**	**57.62**	**295**	P	**P**		**13 18 26.6**	**-0.2**
BVAR	**Borovoye Array**	**57.83**	**45**	LR	LR		13 42 25.1	
	comp=Z,27nm,18.4s,baz=198,slow=35							
ANMO	**Albuquerque**	**58.15**	**288**	LR	LR		13 42 24.0	
	comp=Z,39nm,19.1s,baz=34,slow=35							
ILAR	**Eielson Array**	**58.27**	**334**	P	**P**		**13 18 31.8**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=37,slow=4.6,SNR=4.7							
	comp=Z,0.5nm,0.8s							
ILAR	**Eielson Array**	**58.27**	**334**	P	**P**		**13 18 30.5**	**-0.1**
TMUT	**Trail Mountain**	**58.42**	**295**	P	**P**		**13 18 33.1**	**+0.7**
TMUT				IAmb	IAmb		13 18 40.2	
	comp=Z,2.5nm,0.7s							
BBB	**Bella Bella**	**59.60**	**315**	LR	LR		13 42 20.3	
	comp=Z,59nm,18.3s,baz=148,slow=34							
MTPU	**Mount Pierson**	**59.80**	**295**	P	**P**		**13 18 42.8**	**+0.8**
MTPU			

RAHZ Arahi 20.97 189 P P 13 25 04.5 +0.1
MRHZ Matea Rd 21.00 191 P P 13 25 03.3 -1.4
BKZ Black Stump Fm 21.31 190 P P 13 25 05.9 -1.6
ARHZ Aropaoanui 21.32 189 P P 13 25 07.4 -0.1
MCHZ McNeill Hill 21.55 190 P P 13 25 09.1 -0.4
MCHZ S S 13 28 23.8 -3.9
FWVZ Far West T-bar 21.57 192 P P 13 25 10.5 +0.5
BHHZ Black Hill Sta 21.70 191 P P 13 25 09.8 -1.1
BHHZ S S 13 28 22.0 -8.2
KAHZ Kahuranaki 21.86 189 P P 13 25 11.8 -0.6
KAHZ S S 13 28 33.2 +0.5
SNZO South Karori 23.73 193 P P 13 25 27.6 -1.2
LTZ Lake Taylor 25.69 196 P P 13 25 45.6 -0.5
LTZ IAmb IAmb 13 25 47.3
comp=Z,24nm,0.8s
RPZ Rata Peaks 26.88 197 P P 13 25 55.2 -1.3
comp=Z,33nm,1.1s,baz=13,slow=3.3,SNR=7.6
comp=Z,33nm,1.1s
PAE Paea 27.64 93 eP P 13 26 04.6 +1.2
comp=Z,16nm,1.3s
PPT2 Papeete2 27.65 93 eP P 13 26 04.3 +0.7
comp=Z,73nm,1.3s
PPT2 esP sP 13 28 50.5 -1.0
comp=Z,221nm,46.0s
PPT2 eS S 13 30 06.8 +2.9
comp=Z,93nm,15.5s
PPT Papeete 27.65 93 P P 13 26 04.0 +0.4
comp=Z,40nm,0.7s,baz=95,slow=2.7,SNR=14
comp=Z,40nm,0.7s
TIAR Tiarei 27.87 93 eP P 13 26 05.7 +0.2
comp=Z,8.2nm,0.9s
TVO Taravao 27.94 94 eP P 13 26 06.8 +0.7
comp=Z,22nm,0.8s
EIDS Eidsvold 28.96 250 P P 13 26 15.0 +0.1
baz=29,SNR=33
MLZ Mavora Lakes 29.25 199 P P 13 26 17.9 +0.9
ARMA Armidale 29.61 240 P P 13 26 21.9 +1.4
baz=30,SNR=19
ARMA Armidale 29.61 240 P P 13 26 19.4 -1.0
PMOR Pomariorio Ree 29.61 88 eP P 13 26 20.7 +0.2
comp=Z,99nm,1.1s
WHZ Wether Hill Ro 29.77 199 P P 13 26 22.0 +0.5
VAH Vaihoa 29.82 89 eP P 13 26 22.0 -0.3
comp=Z,27nm,0.8s
RMQ Roma 31.20 249 P P 13 26 35.1 +1.1
baz=31,SNR=56
CNB Canberra Magne 33.08 233 P P 13 26 51.2 +1.5
baz=33,SNR=147
CTAO Charters Tower 33.19 261 P P 13 26 51.2 +0.4
MILA Mila 33.93 230 P P 13 26 57.8 +0.9
baz=34,SNR=12
PMG Port Moresby 34.30 280 P P 13 27 01.5 +1.4
comp=Z,187nm,0.8s,baz=202,slow=5.4,SNR=11
comp=Z,187nm,0.8s
CMSA Cobar Meteorol 34.82 241 P P 13 27 05.0 +0.8
baz=35,SNR=170
MTSU Mount Surprise 35.16 264 P P 13 27 07.5 +0.3
baz=35,SNR=39
QLP Quilpie 35.23 250 P P 13 27 08.2 +0.5
baz=35,SNR=63
TOO Toolangi 36.82 231 P P 13 27 21.8 +1.2
baz=37,SNR=65
TOO Toolangi 36.82 231 P P 13 27 21.3 +0.7
COEN Coen 36.89 271 P P 13 27 22.4 +1.0
baz=37,SNR=110
COEN Coen 36.89 271 P P 13 27 21.7 +0.2
MOO Moorlands 37.73 223 P P 13 27 29.0 +1.2
baz=38,SNR=7.1
TAU Tasmania Unive 37.88 222 P P 13 27 29.6 +0.6
STKA Stephens Creek 38.30 241 P P 13 27 33.9 +1.3
comp=Z,130nm,0.8s,baz=88,slow=9.5,SNR=209
comp=Z,130nm,0.8s
STKA Stephens Creek 38.30 241 P P 13 27 34.0 +1.3
baz=38,SNR=93
STKA Stephens Creek 38.30 241 P P 13 27 33.3 +0.7
STKA IAmb IAmb 13 27 34.9
comp=Z,33nm,0.9s
TAOE Nuku Hiva Isla 38.48 81 eS S 13 32 50.9 +3.6
comp=Z,33nm,20.8s
TAOE eSS SS 13 36 12.3 +2.6
comp=Z,48nm,26.8s
ARPS Mount Arapiles 39.30 234 P P 13 27 41.3 +0.7
baz=39,SNR=35
QIS Mount Isa 39.39 260 P P 13 27 41.2 -0.3
baz=39,SNR=15
HTT Hallett 40.81 240 P P 13 27 53.7 +1.0
baz=41,SNR=61
BBOO Buckleboo 43.08 241 P P 13 28 11.0 +0.7
baz=43,SNR=165
BBOO Buckleboo 43.08 241 P P 13 28 10.3 -0.1
GENI Genyem 43.24 286 P P 13 28 12.5 +0.7
comp=Z,5µmcomp=Z,154nm,0.9s
WB0 Warramunga Arr 44.34 260 P P 13 28 19.6 -0.6
WB2 Warramunga Arr 44.36 260 P P 13 28 19.7 -0.6
baz=44
WRA Warramunga Arr 44.37 260 P P 13 28 20.2 -0.2
comp=Z,62nm,0.7s,baz=95,slow=7.3,SNR=1052
WRA ScP ScP 13 32 46.2 +2.2
comp=Z,5.5nm,1.0s,baz=87,slow=4.4,SNR=7.4
WRA S S 13 34 08.3 -3.1
comp=Z,2.1nm,0.8s,baz=94,slow=12,SNR=4.3
comp=Z,62nm,0.7s
WRA Warramunga Arr 44.37 260 P P 13 28 20.0 -0.5
AS31 Alice Springs 44.50 255 P P 13 28 21.7 +0.2
ASAR Alice Springs 44.50 255 P P 13 28 21.9 +0.5
comp=Z,349nm,0.8s,baz=88,slow=8.5,SNR=3734
ASAR ScP ScP 13 32 46.9 +2.3
comp=Z,6.3nm,1.0s,baz=99,slow=4.2,SNR=9.6
ASAR S S 13 34 11.9 -1.4
comp=Z,9.6nm,1.0s,baz=88,slow=15,SNR=23
ASAR Alice Springs 44.50 255 P P 13 28 21.7 +0.2
SMPI Sarmi 44.81 286 P P 13 28 23.4 -0.5
comp=Z,36nm,1.0s
KDU Kakadu 47.34 269 P P 13 28 42.6 -0.3
baz=47,SNR=20
MTN Manton Dam 48.58 269 P P 13 28 51.5 -0.6
baz=49,SNR=34
MTN Manton Dam 48.58 269 P P 13 28 50.9 -1.2
WRKA Warakurna 49.55 252 P P 13 28 59.4 +0.2
baz=50,SNR=388
FORT Forrest 49.69 245 P P 13 28 59.7 -0.3
baz=50,SNR=83
KNRA Kununurra 50.24 265 P P 13 29 04.1 -0.2
baz=50,SNR=19
KNRA Kununurra 50.24 265 P P 13 29 03.8 -0.5
SIJI Sorong 52.09 284 P P 13 29 17.9 +0.3
comp=Z,113nm,0.7s,baz=106,slow=5.2,SNR=31
comp=Z,113nm,0.7s
SWI Sorong 52.10 284 P P 13 29 17.3 -0.4
comp=Z,2µmcomp=Z,195nm,0.8s
FITZ Fitzroy Crossi 52.77 261 P P 13 29 22.6 +0.2
comp=Z,13nm,0.7s,baz=111,slow=5.5,SNR=57
comp=Z,13nm,0.7s
FITZ Fitzroy Crossi 52.77 261 P P 13 29 22.5 +0.2
baz=53,SNR=32
FITZ Fitzroy Crossi 52.77 261 P P 13 29 22.4 0.0
FITZ IAmb IAmb 13 29 23.7
comp=Z,56nm,1.4s
MSAI Masohi 53.38 280 P P 13 29 28.2 +1.5
comp=Z,185nmcomp=Z,11nm,0.6s
AAI Ambon 53.95 279 P P 13 29 30.1 -0.7
comp=Z,87nm,0.5s
NLAI Namlea 55.13 279 P P 13 29 39.2 +0.3
comp=Z,62nm,0.8s
LBMI Labuha 55.67 282 P P 13 29 40.5 -2.2
comp=Z,43nm,0.8s
BATI Baumata 56.31 270 P P 13 29 47.7 +0.6
comp=Z,54nm,0.6s,baz=106,slow=11,SNR=7.3
comp=Z,54nm,0.6s
BATI Baumata 56.31 270 P P 13 29 47.5 +0.4
comp=Z,48nm,0.8s
SANI Sanana 56.58 280 P P 13 29 48.4 -0.5
comp=Z,90nm,0.8s
PSA00 Pilbara Seismi 57.63 256 P P 13 29 55.5 -0.4
PSA00 IAmb IAmb 13 29 56.6
comp=Z,59nm,0.9s
PSA00 Pilbara Seismi 57.63 256 P P 13 29 55.3 -0.7
PSA00 IAmb IAmb 13 29 56.6
comp=Z,29nm,0.9s
MBWA Marble Bar 57.79 256 P P 13 29 56.5 -0.5
MBWA IAmb IAmb 13 29 57.7
comp=Z,98nm,1.4s
MMRI Maumere 58.09 271 P P 13 29 58.0 -1.1
comp=Z,64nm,0.9s
MEEK Meekatharra 58.13 250 P P 13 29 58.7 -0.5
baz=58,SNR=14
KLBR Kellerberrin 58.51 244 P P 13 30 01.4 -0.3
baz=58,SNR=20
EDFI Ende, Flores 58.58 271 P P 13 30 01.6 -0.9
comp=Z,434nmcomp=Z,40nm,1.0s
NWAO Narrogin (SRO) 58.88 242 P P 13 30 04.1 0.0
NWAO IAmb IAmb 13 30 05.1
comp=Z,24nm,0.8s
BLDU Balliduu 59.46 245 P P 13 30 07.6 -0.4
baz=60,SNR=13
MUN Mundaring 59.80 243 P P 13 30 10.6 +0.4
baz=60,SNR=6.4
LUWI Luwuk 59.94 280 P P 13 30 11.8 +0.3
comp=Z,65nm,0.8s
SBA Scott Base 60.11 184 P P 13 30 14.3 +2.8
VNDA Vanda 60.13 185 P P 13 30 13.4 +1.8
comp=Z,2.9nm,0.6s,baz=345,slow=7.4,SNR=15
comp=Z,2.9nm,0.6s
VNDA Vanda 60.13 185 P P 13 30 13.2 +1.6
MORW Morawa 60.17 246 P P 13 30 12.3 -0.4
baz=60,SNR=12
APSI Ampana 61.04 279 P P 13 30 19.4 +0.7
comp=Z,618nmcomp=Z,59nm,1.0s
BKSI Bulukumba 61.05 274 P P 13 30 18.0 -0.8
comp=Z,21nm,0.8s
MRSI Marisa 61.25 281 P P 13 30 19.2 -0.9
comp=Z,30nm,1.1s
BNSI Bone 61.35 275 P P 13 30 20.6 -0.1
comp=Z,40nm,1.1s
KAPI Kappang 61.50 274 P P 13 30 21.1 -0.5
comp=Z,6.0nm,0.3s,baz=165,slow=20,SNR=3.8
comp=Z,6.0nm,0.3s
SPSI Sidrap Palu 61.81 275 P P 13 30 22.1 -1.6
comp=Z,36nm,0.9s
PLAI Plampang 62.27 269 P P 13 30 26.3 -0.4
comp=Z,110nm,0.9s
GIRL Giralia 62.60 253 P P 13 30 29.8 +1.2
baz=63,SNR=9.5
MPSI Mapaga 63.11 280 P P 13 30 31.3 -0.7
comp=Z,304nmcomp=Z,35nm,1.0s
TWSI Taliwang, Sumb 63.15 269 P P 13 30 31.6 -0.7
comp=Z,68nm,1.0s
IGBI Denpasar 64.78 269 P P 13 30 42.0 -0.6
comp=Z,138nm,0.8s
SRBI Singaraja 64.92 269 P P 13 30 41.9 -1.5
comp=Z,41nm,1.2s
JAGI Jajag, Banyuwa 65.82 269 P P 13 30 47.7 -1.3
JAGI Jajag, Banyuwa 65.82 269 P P 13 30 47.3 -1.8
comp=Z,132nm,0.9s
BLJI Banyuglugur 66.55 269 P P 13 30 53.4 -0.1
comp=Z,50nm,0.7s
BBKI Banjar Baru 66.63 274 P P 13 30 54.2 +0.1
comp=Z,26nm,0.8s
MJAR Matsushiro Arr 68.02 324 P P 13 31 01.8 -0.3
comp=Z,1.5nm,0.6s,baz=108,slow=11,SNR=8.4
comp=Z,1.5nm,0.6s
MAJO Maushiro 68.02 324 P P 13 31 01.9 -0.1
PWJI Pagerwojo 68.17 268 P P 13 31 02.8 -0.6
comp=Z,67nm,1.4s
STKI Sintang 70.94 277 P P 13 31 21.1 +1.2
QSPA South Pole Qui 71.85 180 P P 13 31 25.3 +1.0
QSPA IAmb IAmb 13 31 26.5
comp=Z,52nm,1.0s
TPUB Ta-pu 72.24 303 P P 13 31 25.9 -1.3
TPUB IAmb IAmb 13 31 27.1
comp=Z,30nm,0.8s
LEM Lembang 72.49 268 P P 13 31 29.8 +0.7
comp=Z,74nm,0.8s,baz=58,slow=4.9,SNR=14
comp=Z,74nm,0.8s
LEM Lembang 72.49 268 P P 13 31 29.6 +0.5
comp=Z,52nm,1.0s
KSM Kuching 72.51 278 P P 13 31 29.5 +0.5
CBJI Citeko 73.34 269 P P 13 31 32.9 -0.8
DBJI Dramaga 73.39 268 P P 13 31 34.1 +0.1
comp=Z,28nm,0.5s
PETK Petropavlovsk- 73.91 345 P P 13 31 35.5 -0.5
comp=Z,1.1nm,0.6s,baz=134,slow=8.4,SNR=14
comp=Z,2.1nm,0.6s
SBJI Serang 74.11 269 P P 13 31 37.9 -0.1
comp=Z,4µmcomp=Z,150nm,1.2s
KSRS Korea Array 74.78 319 P P 13 31 42.4 +1.2
comp=Z,0.6nm,0.6s,baz=139,slow=6.3,SNR=6.2
KSRS pP pP 13 33 48.6 +0.8
comp=Z,1.1nm,1.0s,baz=144,slow=7.2,SNR=2.8
S12K Black Hills 74.94 10 P P 13 31 40.7 -1.0
baz=196
CHGN Chignik 76.15 11 P P 13 31 47.7 -0.6
baz=200
SCI2 San Clemente I 76.69 48 P P 13 31 52.8 +0.9
baz=238
PKM Mcpherson Peak 76.84 46 P P 13 31 53.7 +0.9
baz=237
SMMC Simmler 76.95 46 P P 13 31 54.4 +1.2
baz=236
CIS Catalina Islan 77.01 48 P P 13 31 54.4 +0.7
baz=238
BCW Bitter Crk WRg 77.14 46 P P 13 31 55.7 +1.3
BCW IAmb IAmb 13 31 56.8
comp=Z,19nm,0.8s
SII Sitkinak Islan 77.26 14 P P 13 31 53.6 -0.8
baz=204
ARVC Arvin 77.64 46 P P 13 31 57.9 +0.9
baz=237
CBX Cerro Bola 77.70 50 P P 13 31 58.2 +0.7
R17K Ugashik Creek 77.80 12 P P 13 31 56.8 -0.5
baz=202
MURC Murrieta 77.98 49 P P 13 31 59.5 +0.7
baz=239
BFSC Mount Baldy Ra 77.99 48 P P 13 31 59.5 +0.5
baz=238
OHAK Old Harbor 78.07 14 P P 13 31 58.4 -0.3
baz=205
EDW2 Edwards Air Fo 78.09 47 P P 13 32 00.3 +0.9
baz=238,SNR=9.4
MONP2 Monument Peak 78.17 50 P P 13 32 01.2 +1.1
baz=239,SNR=15
ISA Isabella, Lake 78.18 46 P P 13 32 00.3 +0.4
ISA IAmb IAmb 13 32 02.0
comp=Z,16nm,0.9s
ISA Isabella, Lake 78.18 46 P P 13 32 00.9 +1.0
baz=237,SNR=11
CMB Columbia Colle 78.20 43 P P 13 32 00.3 +0.3
IKP In-Ko-Pah, Jac 78.27 50 P P 13 32 01.7 +1.2
baz=239,SNR=6.8
YUH Yuha Desert 78.41 50 P P 13 32 01.5 +0.4
PFO Pinyon Flats O 78.51 49 P P 13 32 02.7 +0.9
comp=Z,3.6nm,0.6s,baz=0.8,slow=1.5,SNR=5.2
comp=Z,3.6nm,0.6s
PFO Pinyon Flats O 78.51 49 P P 13 32 02.7 +0.9
baz=239
TPFO Pinon Flats 78.51 49 P P 13 32 02.5 +0.7
baz=239
LRMC Laurel Mtn Rad 78.62 47 P P 13 32 03.2 +0.9
baz=238
SWSC Sam W. Stewart 78.65 50 P P 13 32 03.4 +1.0
baz=240
Q16K King Salmon 78.71 12 P P 13 32 01.7 -0.3
baz=201
P16K Nushagak River 78.80 11 P P 13 32 01.9 -0.6
baz=200
MDPB Devils Postpil 78.84 44 P P 13 32 04.1 +0.5
MDPB IAmb IAmb 13 32 05.5
comp=Z,15nm,0.9s
CWC Cottonwood Cre 78.86 46 P P 13 32 04.5 +0.8
baz=238
YBH Yreka Blue Hor 78.89 39 P P 13 32 04.6 +1.0
comp=Z,7.2nm,0.6s,baz=255,slow=1.2,SNR=18
comp=Z,7.2nm,0.6s
K02D Willamette Mer 78.90 38 P P 13 32 04.6 +1.0
baz=232
Q18K Katmai Hardscr 79.01 12 P P 13 32 03.5 -0.3
baz=203
J01E Myrtle Point 79.03 37 P P 13 32 05.2 +1.0
baz=232
BELC Belle Mtn. Jos 79.04 49 P P 13 32 05.6 +1.0
baz=239,SNR=8.5
MPMC Manual Prospec 79.06 46 P P 13 32 05.6 +0.9
baz=238,SNR=8.7
GSC Goldstone, Bar 79.14 47 P P 13 32 05.8 +0.7
baz=238
MPK Martis Peak 79.14 42 P P 13 32 05.1 -0.1
MPK IAmb IAmb 13 32 06.5
comp=Z,39nm,1.3s
P17K Kvichak River 79.24 11 P P 13 32 04.6 -0.2
baz=201
BEKR Beckworth 79.25 42 P P 13 32 05.8 +0.2
BC3 Big Chuckawall 79.26 49 P P 13 32 06.8 +1.1
baz=240
PNTR Pine Nut 79.30 43 P P 13 32 06.7 +0.7
PNTR IAmb IAmb 13 32 08.0
comp=Z,23nm,0.9s
O16K Kokwok River B 79.31 10 P P 13 32 03.9 -1.3
baz=200
GLA Glamis 79.41 50 P P 13 32 07.7 +1.2
GLA Glamis 79.41 50 P P 13 32 08.0 +1.6
baz=240
L04D Klamath Falls 79.42 39 P P 13 32 07.3 +0.9
baz=234
GRAC Grapevine Rang 79.64 46 P P 13 32 08.2 +0.6
GRAC IAmb IAmb 13 32 09.4
comp=Z,12nm,0.6s
GRAC Grapevine Rang 79.64 46 P P 13 32 08.8 +1.2
baz=238,SNR=6.3
P18K Big Mountain, 79.66 12 P P 13 32 06.2 -0.8
baz=203
O17K Koliganek Bris 79.66 11 P P 13 32 06.9 -0.1
baz=201
GMRC Granite Mounta 79.68 48 P P 13 32 08.8 +0.8
baz=239,SNR=5.5
GWY Greenwater Val 79.69 47 P P 13 32 08.4 +0.4
FURC Furnace Creek, 79.71 46 P P 13 32 08.7 +0.9
baz=238
IRM Iron Mountain 79.73 49 P P 13 32 09.1 +1.0
baz=240,SNR=5.9
NVAR Mina Array Bea 79.79 44 P P 13 32 09.4 +0.9
comp=Z,7.5nm,0.7s,baz=224,slow=9.0,SNR=78
NVAR pP pP 13 34 18.4 +0.8
comp=Z,1.8nm,1.0s,baz=190,slow=5.8,SNR=2.7
comp=Z,7.5nm,0.7s
NVAR Mina Array Bea 79.79 44 P P 13 32 08.9 +0.4
PAHR Pah Rah Range 79.79 42 P P 13 32 08.9 +0.5
SHOC Shoshone, Teco 79.82 47 P P 13 32 09.2 +0.7
baz=239
TUQ Turquoise Moun 79.83 48 P P 13 32 09.6 +0.9
baz=239
BLYC Blythe 79.97 50 P P 13 32 09.6 +0.3
N16K Nishlik Lake 80.03 10 P P 13 32 09.2 +0.2
baz=199
O18K Koktuh Hills 80.09 12 P P 13 32 09.2 -0.1
baz=203,SNR=6.4
J04D Umpqua Nationa 80.14 38 P P 13 32 10.9 +0.6
J04D IAmb IAmb 13 32 12.2
comp=Z,29nm,0.8s
J04D Umpqua Nationa 80.14 38 P P 13 32 11.1 +0.8
baz=234
I04A Tendick Farm, 80.30 38 P P 13 32 11.2 +0.4
baz=233
214A Organ Pipe Nat 80.36 52 P P 13 32 12.7 +1.2
baz=242
TPNV Topopah Spring 80.38 46 P P 13 32 12.6 +1.1
baz=239,SNR=9.4
HSIG 80.43 55 P P 13 32 12.2 +0.4
PDMCI Parker Dam,Lak 80.52 49 P P 13 32 13.4 +1.3
baz=240,SNR=5.6
H04D Lebanon 80.55 37 P P 13 32 13.3 +1.3
baz=233
K05A Summer Lake 80.56 39 P P 13 32 13.3 +0.9
K05A IAmb IAmb 13 32 14.7
comp=Z,25nm,0.9s
O19K Port Alsworth 80.58 12 P P 13 32 11.3 -0.4
baz=203
G03D McMinnville, O 80.67 36 P P 13 32 13.5 +0.9
baz=232
J05D Fort Rock, OR 80.69 39 P P 13 32 14.0 +1.0
baz=234
N18K Kilae Creek 80.72 11 P P 13 32 11.8 -0.8
baz=202
O20K Slope Mountain 80.82 13 P P 13 32 11.9 -1.3
baz=205
BRSE Bradley Lake S 80.93 14 P P 13 32 13.5 -0.1
baz=207
SMAI San Martin Ant 80.95 159 P P 13 32 15.6 +1.9
W13A Hualapai Mount 81.10 49 P P 13 32 15.7 +0.3
N19K Bonanza Creek 81.11 12 P P 13 32 14.4 -0.3
baz=203
I05D Terrebonne, OR 81.24 38 P P 13 32 16.5 +0.8
baz=234
SEW Seward 81.55 14 P P 13 32 16.0 -0.7
baz=208
R11A Troy Canyon, C 81.56 45 P P 13 32 17.7 +0.2
R11A Troy Canyon, C 81.56 45 P P 13 32 18.2 +0.6
baz=239,SNR=12
BMN Battle Mountai 81.57 43 P P 13 32 18.1 +0.5
BMN IAmb IAmb 13 32 19.5
comp=Z,22nm,1.0s
WVOR Wild Horse Val 81.77 40 P P 13 32 19.2 +0.7
WVOR IAmb IAmb 13 32 20.5
comp=Z,19nm,1.0s
G05D Wamic, OR 81.79 37 P P 13 32 18.9 +0.5
baz=234
GAMB Gambell 81.89 3 P P 13 32 18.3 -0.1
baz=187
SPCR Spurr Chakacha 81.92 13 P P 13 32 17.5 -1.3
baz=205
TUC Tucson 82.05 52 P P 13 32 21.3 +1.2
TUC IAmb IAmb 13 32 22.9
comp=Z,17nm,1.1s
TUC Tucson 82.05 52 P P 13 32 21.6 +1.5
baz=243
M19K Big River Lodg 82.14 11 P P 13 32 19.3 -0.4
baz=203
I07A Izee 82.17 39 P P 13 32 20.8 +0.4
I07A IAmb IAmb 13 32 22.4
comp=Z,15nm,0.9s
L19K White Mountain 82.31 11 P P 13 32 20.4 -0.2
baz=203,SNR=7.4
M20K Styx River 82.36 12 P P 13 32 20.4 -0.6
baz=204
J08A Circle Bar Ran 82.38 40 P P 13 32 21.8 +0.2
J08A IAmb IAmb 13 32 23.4
comp=Z,25nm,1.2s
PWL Port Wells 82.48 14 P P 13 32 20.8 -0.7
baz=209,SNR=5.6
LCMT Little Creek M 82.49 47 P P 13 32 22.6 +0.3
LCMT IAmb IAmb 13 32 24.3
comp=Z,12nm,0.9s
L20K Farewell, AK 82.76 11 P P 13 32 22.2 -0.7
baz=204
319A Douglas 82.77 54 P P 13 32 25.3 +1.5
319A IAmb IAmb 13 32 26.6
comp=Z,27nm,0.9s
GLI Glacier Island 82.79 15 P P 13 32 22.4 -0.6
baz=210,SNR=7.0
TTA Tatalina 82.80 10 P P 13 32 23.2 0.0
baz=202
EYAK Cordova Ski Ar 82.85 16 P P 13 32 22.6 -0.6
baz=211
M22K Willow 82.86 13 P P 13 32 22.4 -0.9
baz=207
KNK Knik Glacier 82.94 14 P P 13 32 23.2 -0.6
baz=209
PMR Palmer 82.94 14 P P 13 32 23.1 -0.6
baz=208
WUAZ Wupatki 83.10 49 P P 13 32 25.9 +0.6
WUAZ IAmb IAmb 13 32 27.7
comp=Z,17nm,1.1s
WUAZ Wupatki 83.10 49 P P 13 32 26.4 +1.1
baz=242
CUT Chulitna 83.41 13 P P 13 32 25.2 -0.9
baz=207
M23K Glacier View 83.44 14 P P 13 32 25.6 -0.6
baz=209
PPLA Purkeypile 83.47 12 P P 13 32 25.3 -1.2
baz=205
HAWA Hanford 83.47 37 P P 13 32 26.7 0.0
HAWA IAmb IAmb 13 32 28.5
comp=Z,17nm,1.0s
BMRM Bremner River 83.50 16 P P 13 32 26.3 -0.3
baz=212
MAW Mawson 83.51 200 P P 13 32 27.6 +1.0
comp=Z,5.8nm,0.6s,baz=125,slow=4.7,SNR=15
comp=Z,5.8nm,0.6s
MAW Mawson 83.51 200 P P 13 32 27.6 +1.0
baz=83,SNR=8.8
K20K Telida 83.53 11 P P 13 32 26.4 -0.3
baz=203,SNR=11
MESA MESA 83.57 17 P P 13 32 27.2 +0.1
baz=215
SCM Sheep Creek Mo 83.57 14 P P 13 32 26.7 -0.2
baz=210,SNR=8.9
KLU Klutina 83.61 15 P P 13 32 26.6 -0.6
baz=211
RPSI Rantau Prapat 83.66 275 P P 13 32 28.1 -0.3
PSI Prapat 83.69 275 P P 13 32 28.1 -0.6
comp=Z,9.6nm,0.7s,baz=179,slow=6.2,SNR=7.4
comp=Z,9.6nm,0.7s
CRQE Cirque 83.72 17 P P 13 32 27.5 -0.3

baz=214
WRAK Wrangell Islan 83.87 24 P P 13 32 28.2 -0.2
baz=224
BMO Blue Mountains 83.91 39 P P 13 32 28.9 -0.1
CAST Castle Rocks 83.96 12 P P 13 32 26.8 -2.0
CAST IAmb IAmb 13 32 28.4
comp=Z,16nm,0.8s
CAST Castle Rocks 83.96 12 P P 13 32 27.0 -1.8
baz=205,SNR=17
SEY Seymchan 84.02 347 P P 13 32 28.6 -0.4
comp=Z,5.0nm,0.7s,baz=140,slow=5.0,SNR=17
SEY pP pP 13 34 39.8 +0.2
comp=Z,1.4nm,0.9s,baz=121,slow=10,SNR=3.0
comp=Z,5.0nm,0.7s
MFID Camas Ranch 84.04 41 P P 13 32 30.2 +0.5
N25K Chitina, Valde 84.04 16 P P 13 32 29.0 -0.3
baz=212,SNR=7.7
M24K Tolsona, Glenn 84.08 15 P P 13 32 29.2 -0.2
baz=211
WAT6 Susitna Watana 84.12 14 P P 13 32 29.1 -0.7
baz=209,SNR=11
WAT1 Susitna Watana 84.16 13 P P 13 32 29.0 -0.7
baz=209
D08A Wollman Farm, 84.19 36 P P 13 32 30.9 +0.6
D08A IAmb IAmb 13 32 32.0
comp=Z,13nm,0.8s
J20K Nowinta River 84.28 11 P P 13 32 29.7 -0.6
baz=203
CHUM Lake Minchumin 84.34 11 P P 13 32 29.1 -1.4
baz=205
TRF Thorofare Moun 84.34 12 P P 13 32 29.5 -1.4
baz=207,SNR=21
CTG Chitna Glacier 84.39 17 P P 13 32 30.9 -0.2
baz=215
P29M Windy Craggy 84.40 20 P P 13 32 31.2 +0.2
baz=219
121A Cookes Peak, D 84.42 53 P P 13 32 32.6 +0.6
121A Cookes Peak, D 84.42 53 P P 13 32 33.2 +1.2
baz=244
O28M Mount Upton 84.56 18 P P 13 32 31.9 -0.2
baz=216
HARP HAARP 84.58 15 P P 13 32 31.5 -0.3
baz=212
DHY Denali Highway 84.64 14 P P 13 32 31.4 -0.9
baz=210,SNR=5.4
PLBC Pleasant Camp 84.71 20 P P 13 32 32.8 +0.4
baz=220
ZAIG Zacatecas 84.74 64 P P 13 32 35.4 +1.6
ZAIG IAmb IAmb 13 32 36.9
comp=Z,15nm,1.0s
BPAW Bear Paw Mtn. 84.79 12 P P 13 32 32.6 -0.2
baz=206
MCK McKinley 84.88 13 P P 13 32 32.4 -0.8
baz=208,SNR=5.9
PAX Paxson 84.99 15 P P 13 32 32.9 -1.0
baz=212
HLID Hailey 84.99 41 P P 13 32 34.9 +0.4
HLID IAmb IAmb 13 32 36.5
comp=Z,9.2nm,0.8s
HLID Hailey 84.99 41 P P 13 32 35.4 +0.9
baz=239,SNR=15
TMUT Trail Mountain 84.99 46 P P 13 32 34.9 +0.2
P30M Million Dollar 85.03 20 P P 13 32 34.4 +0.3
baz=219
SKAG Skagway 85.05 21 P P 13 32 34.8 +0.7
baz=221
T35M Bob Quinn 85.08 24 P P 13 32 34.5 +0.2
baz=226
M26K Nabesna, AK 85.12 16 P P 13 32 34.3 -0.2
baz=214,SNR=6.9
YUK3 Moose Creek 85.29 17 P P 13 32 35.4 -0.1
baz=216,SNR=5.2
M27K Edge Creek, AK 85.38 16 P P 13 32 35.9 +0.1
baz=215,SNR=7.1
HYT Haines Junctio 85.41 19 P P 13 32 36.2 +0.2
baz=219
YUK4 Talbot Arm 85.47 18 P P 13 32 36.1 -0.3
baz=218
L26K Log Cabin Wild 85.56 15 P P 13 32 36.3 -0.2
baz=213
I21K Tanana 85.58 11 P P 13 32 35.9 -0.6
baz=205
NEA2 Nenana 85.61 12 P P 13 32 36.0 -0.7
baz=208
K24K Donnelly Dome 85.63 14 P P 13 32 36.2 -0.6
baz=211,SNR=8.2
MLY Manley 85.67 11 P P 13 32 35.7 -1.4
baz=206
P32M Atlin 85.69 21 P P 13 32 37.7 +0.4
baz=222
BVCY Beaver Creek 85.70 17 P P 13 32 37.2 -0.1
baz=216
RIDG Independent Ri 85.80 14 P P 13 32 37.0 -0.6
baz=212,SNR=5.1
O30N Mendenhall 85.80 19 P P 13 32 38.0 +0.2
baz=220
H21K Melozitna Rive 85.87 10 P P 13 32 37.4 -0.5
baz=205
NEW Newport 85.88 36 P P 13 32 38.1 -0.3
baz=237
HDA Harding Lake 85.89 13 P P 13 32 37.1 -0.9
HDA IAmb IAmb 13 32 38.1
comp=Z,6.8nm,0.6s
HDA Harding Lake 85.89 13 P P 13 32 37.1 -0.9
baz=210,SNR=8.4
L27K Beaver Creek, 85.97 16 P P 13 32 38.2 -0.3
baz=215
IMAR Indian Mountai 86.01 10 P P 13 32 38.4 -0.2
N30M Aishikik Lake 86.03 19 P P 13 32 38.5 -0.3
baz=219
I23K Minto, Yukon-K 86.05 12 P P 13 32 37.5 -1.2
baz=208
TCOL CIGO, UAF Yank 86.11 13 P P 13 32 37.9 -1.1
baz=209,SNR=5.5
COLA College 86.11 13 P P 13 32 37.9 -1.1
baz=209
DLBC Dease Lake 86.19 23 P P 13 32 39.8 +0.1
baz=226
SCRK Sand Creek 86.20 15 P P 13 32 39.1 -0.5
baz=213
IL31 86.22 13 P P 13 32 38.7 -0.8
ILAR Eielson Array 86.22 13 P P 13 32 38.8 -0.8
comp=Z,3.2nm,0.5s,baz=232,slow=5.9,SNR=44
ILAR pP pP 13 34 51.0 -0.5
comp=Z,1.9nm,1.0s,baz=234,slow=5.8,SNR=6.4
comp=Z,3.2nm,0.5s
H22K Ishtalitna Cre 86.33 11 P P 13 32 40.1 0.0
baz=206
TX31 Lajitas Ar. Si 86.33 58 P P 13 32 42.5 +1.4
TX32 Lajitas Array 86.33 58 P P 13 32 42.6 +1.5
TX32 IAmb IAmb 13 32 44.0
comp=Z,36nm,1.1s
TXAR Lajitas Array 86.33 58 P P 13 32 42.9 +1.8
comp=Z,19nm,0.8s,baz=221,slow=5.8,SNR=178
comp=Z,19nm,0.8s
TXAR Lajitas Array 86.33 58 P P 13 32 42.6 +1.5
M29M Somme Creek 86.39 17 P P 13 32 40.6 +0.1
baz=218
J25K Salcha River, 86.42 14 P P 13 32 39.9 -0.7
J25K IAmb IAmb 13 32 40.9
comp=Z,8.3nm,0.5s
J25K Salcha River, 86.42 14 P P 13 32 39.9 -0.7
baz=212,SNR=19
ANMO Albuquerque 86.45 52 P P 13 32 42.3 +0.7
baz=245
N31M Braeburn, Yuko 86.45 19 P P 13 32 40.9 +0.2
baz=220
P33M Teslin, Yukon 86.46 21 P P 13 32 40.9 0.0
baz=223
R33M Jennings River 86.52 22 P P 13 32 41.8 +0.6
baz=225
G21K Allakaket 86.54 10 P P 13 32 41.0 -0.1
baz=204
MCMT McKenzie Canyo 86.60 41 P P 13 32 42.8 +0.7
H23K Yukon River 86.61 12 P P 13 32 40.2 -1.2
baz=208
K27K Chicken 86.71 15 P P 13 32 42.2 +0.3
baz=215
J26L Joseph Creek 86.74 14 P P 13 32 42.4 +0.3
J26L IAmb IAmb 13 32 43.3
comp=Z,12nm,0.7s
J26L Joseph Creek 86.74 14 P P 13 32 42.4 +0.3
baz=213,SNR=24
H24K Noodor Dome 86.95 12 P P 13 32 43.0 0.0
baz=209
MSO Missoula 86.95 38 P P 13 32 44.4 +0.9
baz=239
M30M Minto, Yukon 86.98 18 P P 13 32 43.1 -0.1
M30M IAmb IAmb 13 32 44.2
comp=Z,12nm,0.8s
M30M Minto, Yukon 86.98 18 P P 13 32 43.4 +0.1
baz=219,SNR=16
DLMT Dillon 87.02 40 P P 13 32 44.8 +0.8
DLMT IAmb IAmb 13 32 45.8
comp=Z,7.1nm,0.8s
PRP Porcupine Dome 87.16 13 P P 13 32 43.4 -0.7
baz=211
F21K Alatna River 87.19 10 P P 13 32 43.6 -0.5
baz=204
G23K Bananza Creek 87.31 11 P P 13 32 44.7 0.0
baz=207
HHC Hu-ho-hao-te 87.33 315 *e*P **P 13 32 48.2 +2.7**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,160nm,6.4s
S22A 4UR Ranch, Cre 87.36 49 P P 13 32 46.9 +0.9
baz=245
O20A White River Ci 87.41 46 P P 13 32 46.8 +0.8
baz=244
M31M Drury Creek, Y 87.42 19 P P 13 32 44.9 -0.5
baz=222
LOHW Long Hollow 87.43 42 P P 13 32 46.7 +0.7
DAWY Dawson 87.43 16 P P 13 32 45.2 -0.1
DAWY Dawson 87.43 16 P P 13 32 45.4 +0.1
baz=217,SNR=7.1
I26K Coal Creek Min 87.51 14 P P 13 32 45.8 +0.2
baz=214
F22K John River 87.66 10 P P 13 32 46.1 -0.2
baz=205
BW06 Boulder Array 87.71 44 P P 13 32 47.7 +0.3
baz=243
PD31 Pinedale Array 87.71 44 P P 13 32 47.2 -0.2
PD31 IAmb IAmb 13 32 48.6
comp=Z,6.9nm,0.8s
PDAR Pinedale Array 87.71 44 P P 13 32 47.9 +0.5
comp=Z,5.0nm,0.6s,baz=219,slow=3.2,SNR=53
PDAR pP pP 13 34 59.8 +0.2
comp=Z,0.5nm,0.8s,baz=264,slow=2.6,SNR=2.0
comp=Z,5.0nm,0.6s
BOZ Bozeman (W) 87.73 40 P P 13 32 48.0 +0.7
baz=241,SNR=10.0
COLD Coldfoot 87.74 11 P P 13 32 46.6 0.0
baz=207
H25K Birch Creek 87.74 13 P P 13 32 45.4 -1.2
baz=211
G24K Hadweenzic Riv 87.78 12 P P 13 32 46.7 -0.1
baz=210
H17A Grant Village 87.81 42 P P 13 32 49.8 +1.9
H17A IAmb IAmb 13 32 51.0
comp=Z,19nm,1.2s
H17A Grant Village 87.81 42 P P 13 32 49.9 +2.0
baz=242
MAYO Mayo, Yukon 88.03 18 P P 13 32 48.6 +0.5
G25K Bearan Lake 88.11 12 P P 13 32 48.0 -0.3
baz=211
I27K Kandik River 88.12 14 P P 13 32 48.1 -0.4
baz=215
COYC Coyhaique 88.23 138 P P 13 32 51.2 +1.6
SDCO Great Sand Dun 88.32 49 P P 13 32 51.0 +0.5
baz=246
F24K Squaw Lake 88.42 11 P P 13 32 49.8 -0.1
baz=209
H27K Steamboat Moun 88.66 14 P P 13 32 50.9 -0.1
baz=215
I29M Ogilvie Camp, 88.75 16 P P 13 32 51.0 -0.4
baz=218
G26K Porcupine Rive 88.75 13 P P 13 32 51.5 +0.2
baz=213
CMAR Chiang Mai Arr 88.78 290 P P 13 32 54.0 +1.4
comp=Z,1.9nm,0.8s,baz=96,slow=2.0,SNR=12
comp=Z,1.9nm,0.8s
E24K Your Creek 88.80 11 P P 13 32 51.6 -0.1
baz=208
MSTX Muleshoe 88.84 54 P P 13 32 52.7 0.0
MSTX IAmb IAmb 13 32 54.1
comp=Z,15nm,0.9s
MSTX Muleshoe 88.84 54 P P 13 32 53.1 +0.4
baz=247
T25A Trinidad 88.86 50 P P 13 32 53.1 +0.2
baz=246
F25K Christian Rive 88.92 12 P P 13 32 52.2 0.0
baz=211
RLMT Red Lodge 88.98 42 P P 13 32 54.1 +0.9
baz=243
GCMT Greycliff 89.03 41 P P 13 32 54.3 +1.0
Q24A Divide 89.07 48 P P 13 32 54.6 +0.7
baz=246
ISCO Idaho Springs 89.09 47 P P 13 32 54.8 +0.8
baz=245
PZH PanZhiHua 89.11 298 P P 13 32 52.1 -2.0
PZH pmax pmax
comp=Z,20nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.4s
G27K Doyon Strip 89.11 14 P P 13 32 52.4 -0.6
baz=215
TOLK Toolik Lake Re 89.11 10 P P 13 32 52.8 -0.2
baz=208
D23K Nanushuk River 89.22 10 P P 13 32 52.9 -0.6
baz=206
F26K Sheenjek River 89.31 12 P P 13 32 54.1 +0.2
baz=213
N23A Red Feather La 89.32 46 P P 13 32 55.8 +0.9
baz=245
E25K Arctic Village 89.39 12 P P 13 32 54.6 +0.3
baz=211
833A Chaparral WMA, 89.43 60 P P 13 32 56.7 +1.3
baz=249
CMIG Matias Romero 89.53 72 P P 13 32 57.1 +1.0
comp=Z,6.6nm,0.8s,baz=300,slow=7.4,SNR=5.9
comp=Z,6.6nm,0.8s
K22A Casper 89.67 45 P P 13 32 56.7 +0.3
baz=245
PHWY Pilot Hill 89.82 46 P P 13 32 56.8 -0.5
PHWY IAmb IAmb 13 32 58.7
comp=Z,7.2nm,0.8s
JCT Junction City 89.87 58 P P 13 32 57.5 +0.1
JCT IAmb IAmb 13 32 58.8
comp=Z,11nm,0.9s
JCT Junction City 89.87 58 P P 13 32 57.8 +0.3
baz=249
TROLL Troll, Antarti 90.01 180 P P 13 32 57.7 +0.2
C23K Itkillik River 90.02 9 P P 13 32 57.1 0.0
baz=206
AMTX Amarillo 90.02 53 P P 13 32 58.3 +0.2
baz=248
C24K Franklin Bluff 90.22 10 P P 13 32 58.5 +0.5
baz=208
E27K Coleen River 90.25 13 P P 13 32 58.2 -0.1
baz=215
SNAA Sanae 90.31 179 P P 13 32 58.6 -0.2
VNA3 Neumayer Olymp 90.46 176 P P 13 32 59.4 0.0
ABTX Abilene, Hawle 90.77 56 P P 13 33 01.2 -0.3
ABTX Abilene, Hawle 90.77 56 P P 13 33 02.1 +0.6
baz=249
VNA2 Neumayer--Watz 90.89 177 P P 13 33 01.5 +0.1
baz=182,slow=3.8
C27K Jago River 91.03 12 P P 13 33 01.3 -0.5
baz=213
VNA1 Neumayer--Stat 91.12 177 P P 13 33 02.9 +0.5
PLCA Paso Flores 91.28 134 P P 13 33 05.2 +1.2
comp=Z,3.9nm,0.8s,baz=249,slow=4.7,SNR=14
comp=Z,3.9nm,0.8s
LAO LASA Array 91.58 41 P P 13 33 06.1 +1.1
baz=245
RSSD Black Hills 91.93 44 P P 13 33 06.7 -0.1
baz=246
INK Inuvik 92.23 15 P P 13 33 06.3 -1.0
baz=222
CBKS Cedar Bluff 92.91 50 P P 13 33 11.3 0.0
baz=249
DGMT Dagmar 93.56 40 P P 13 33 14.2 +0.3
baz=247
YKA Yellowknife Ar 94.69 25 P P 13 33 18.2 -0.5
comp=Z,1.5nm,0.7s,baz=245,slow=4.5,SNR=13
comp=Z,1.5nm,0.7s
KSU1 Kansas State U 95.30 51 P P 13 33 22.8 +0.7
baz=251
MKAR Makanchi Array 109.19 314 PKiKP PKiKP 13 38 22.5 -1.0
comp=Z,1.1nm,0.5s,baz=84,slow=1.3,SNR=9.7
MKAR PKKPbc **PKKPbc 13 49 31.8 -0.9**
comp=Z,1.4nm,0.8s,baz=268,slow=5.0,SNR=5.8
BDFB Brasilia 120.87 122 PKP PKPdf 13 38 45.1 -1.8
comp=Z,1.2nm,0.4s,baz=207,slow=2.3,SNR=3.7
ARCES ARCESS Array B 126.57 350 PKP PKPdf 13 38 55.5 -0.6
comp=Z,5.5nm,0.7s,baz=15,slow=1.6,SNR=19
GEYT Alibeck 127.03 304 PKP PKiKP 13 38 58.5 -0.1
comp=Z,3.1nm,0.7s,baz=158,slow=5.9,SNR=4.6
FINES FINESS Array B 133.41 344 PKP PKPdf 13 39 08.8 -0.5
comp=Z,2.4nm,0.6s,baz=23,slow=2.5,SNR=8.2
FINES SKPbc **SKPbc 13 41 41.0 +0.6**
comp=Z,1.4nm,0.6s,baz=87,slow=3.1,SNR=2.4
NB2 NORSAR Subarra136.64 353 PKP PKPdf 13 39 08.2 -7.2
comp=Z,1.8nm,0.7s,baz=16,slow=4.1
NOA NORSAR Array B136.64 353 PKP PKPdf 13 39 14.3 -1.1
comp=Z,1.1nm,0.6s,baz=14,slow=4.0,SNR=4.5
AKASG Malin Array Be 140.72 332 PKhKP PKPpre 13 39 16.8
comp=Z,1.4nm,0.5s,baz=41,slow=4.8,SNR=9.0
AKASG SKPbc **SKiKP 13 42 02.8 -1.1**
comp=Z,0.3nm,0.3s,baz=38,slow=3.8,SNR=4.3
SORM Soroca 142.94 330 ⇑P PKPdf 13 39 23.2 -3.9
BURAR Bucovina Array 144.77 332 ⇑P PKPab 13 39 32.1 0.0
OJC Ojcow 144.81 339 *i* PKPc 13 39 30.4
BRTR Keskin Array B 144.84 314 PKP PKPdf 13 39 30.4 -0.5
comp=Z,3.5nm,0.7s,baz=131,slow=3.8,SNR=16
BRTR pPKP **pPKPdf 13 41 53.8 -0.4**
comp=Z,1.3nm,0.8s,baz=116,slow=3.4,SNR=3.5
BRTR SKPbc **SKiKP 13 42 12.7 -0.2**
comp=Z,1.8nm,0.8s,baz=107,slow=2.1,SNR=5.4
BIZ Bicaz 144.86 330 ⇑P PKPbc 13 39 31.5 +0.3
KOLS Kolonicke sedl 144.99 336 *e*PKP **PKPab 13 39 32.4 -0.3**
CFR Carcaliu 145.06 326 ⇑P PKPdf 13 39 29.5 -1.3
TPGR Topolog 145.12 326 ⇑P PKPbc 13 39 32.1 -0.1
VRI Vrincioaia 145.32 328 ⇑P PKPdf 13 39 30.7 -0.6
VRI ⇑P **PKPbc 13 39 31.2 -1.4**
CRVS Cervenica-Dubn 145.32 337 *e*PKP **PKPab 13 39 33.3 -0.8**
KSP Ksiaz 145.33 343 *i* PKPc 13 39 33.1
OSTC Ostas 145.61 343 *e*PKP **PKPbc 13 39 33.7 +0.3**
OZUR 145.62 329 ⇑P PKPbc 13 39 32.8 -0.8
CLL Collm 145.70 347 *i* PKPbc **PKPbc 13 39 33.4 -0.1**
comp=Z,51nm,0.9s
CLL *ep*PKiKP **pPKPdf 13 41 57.0 +1.7**
UPC Upice 145.71 343 *e*PKP **PKPbc 13 39 33.9 +0.3**
DPC Dobruska-Polom 145.77 343 *e*PKP **PKPbc 13 39 33.8 0.0**
LANS Liptovska Anna 145.84 339 *e*PKP **PKPab 13 39 35.5 -0.6**
KRLC Kraliky 145.88 342 *e*PKP **PKPbc 13 39 34.1 -0.1**
BRG Berggiesshubel 145.90 346 *i* PKP **PKPbc 13 39 34.4 +0.3**
BRG Amp 13 39 36.6
comp=Z,20nm,0.7s
BRG *ex* x 13 41 59.1
BRG Amp 13 42 01.2
comp=Z,5.5nm,1.2s
DOPR Dopca 145.90 330 ⇑P PKPbc 13 39 34.6 +0.3
MORC Moravsky Berou 145.92 341 ⇓P PKPbc 13 39 33.9 -0.3
MORC Moravsky Berou 145.92 341 *e*PKP **PKPbc 13 39 34.0 -0.3**
MLR Muntele Rosu 145.97 328 ⇑P PKPdf 13 39 33.3 +0.7
PVCC Panska Ves 146.07 345 *e*PKP **PKPbc 13 39 35.1 +0.5**
VOIR 146.45 329 ⇑P PKPbc 13 39 35.8 -0.1
DRGR 146.50 333 ⇑P PKPdf 13 39 34.6 +1.3
PRU Pruhonice 146.57 345 *e*PKP **PKPbc 13 39 36.0 0.0**
PRU *ex* x 13 39 39.1
VRAC Vranov 146.62 342 ⇑P PKPbc 13 39 35.8 -0.4
VRAC Vranov 146.62 342 *e*PKP **PKPbc 13 39 36.4 +0.2**
JAVC Velka Javorina 146.69 340 *e*PKP **PKiKP 13 39 37.7 -0.7**
ARR Arges 146.70 330 ⇑P PKPbc 13 39 37.0 +0.4
KRUC Moravsky 146.90 342 *e*PKP **PKPbc 13 39 36.7 -0.2**
SIRR Siria 147.37 334 ⇑P PKPbc 13 39 37.9 -0.4
MEM Membach 147.46 354 *d*PKPbc **PKPbc 13 39 38.2 -0.1**
BTNL Ternell 147.47 354 *d*PKPbc **PKPbc 13 39 38.5 +0.1**
BSTI Sart Tilman 147.52 355 *d*PKPbc **PKPbc 13 39 38.6 +0.2**
GZR Gura Zlata 147.56 331 ⇑P PKPbc 13 39 37.1 -1.7
KHC Kasperske Hory 147.61 345 *e*PKP **PKPbc 13 39 38.7 -0.1**
KHC *ex* x 13 39 43.7
CKRC Cesky Krumlov 147.71 344 *e*PKP **PKPbc 13 39 39.3 +0.3**
BHOU Houvegnez 147.71 354 *d*PKPbc **PKPbc 13 39 39.5 +0.6**
GERES GERESS Array B 147.84 345 PKPbc PKPbc 13 39 39.3 -0.2
comp=Z,8.6nm,0.8s,baz=29,slow=3.0,SNR=45
BMRD Maredsous 147.86 356 *d*PKPbc **PKPbc 13 39 39.1 -0.2**
BZS Buzias 147.90 333 ⇑P PKPbc 13 39 39.1 -0.5
RCHB Rochefort 147.97 355 *d*PKPbc **PKPbc 13 39 39.4 -0.2**
CONA Conrad Observa 148.07 341 *i* P **PKPbc 13 39 40.5 +0.4**
comp=Z,8.5nm,1.0s,SNR=13
DOU Dourbes 148.08 356 *d*PKP **PKPbc 13 39 40.0 +0.2**
HERR Herculane 148.11 331 ⇓P PKPbc 13 39 39.2 -0.9
RONA Rosalia, Austr 148.15 341 *i* P **PKPbc 13 39 40.5 +0.3**
comp=Z,8.6nm,0.8s,SNR=7.6
WLF Walferdange 148.38 354 *d*PKPbc **PKiKP 13 39 41.3 -0.4**
MDVR Moldovita 148.51 332 ⇑P PKPbc 13 39 40.7 -0.5
MOA Molln 148.61 343 *e*P **PKiKP 13 39 41.8 -0.5**
comp=Z,2.1nm,0.6s
BLKB Belogradchik 148.94 329 ⇓P PKPbc 13 39 41.7 -0.5
FRGS Fruska Gora 149.03 334 ⇓P PKPbc 13 39 42.3 -0.1
BOVS Bovan 149.39 330 ⇑P PKPbc 13 39 41.5 +1.7
SOKA Soboth 149.45 341 *i* P **PKPbc 13 39 42.8 -0.6**
comp=Z,12nm,1.0s,SNR=8.8
KBA Koelnbreinsper 149.56 344 *e*P **PKPbc 13 39 43.1 -0.7**
comp=Z,5.9nm,0.6s,SNR=5.4
OBKA Obir 149.74 342 *i* P **PKPbc 13 39 43.3 -0.8**
comp=Z,2.1nm,0.5s
WATA Walderalm 149.76 346 *e*P **PKPbc 13 39 43.9 -0.3**
comp=Z,9.0nm,0.6s
RETA Reutte 149.79 347 *i* P **PKPbc 13 39 44.1 -0.1**
comp=Z,8.9nm,0.8s,SNR=5.1
WTTA Wattenberg 149.81 346 *i* P **PKPbc 13 39 44.4 0.0**
comp=Z,22nm,0.7s,SNR=8.2
MOTA Moosalm 149.86 347 *i* P **PKPbc 13 39 44.2 -0.3**
comp=Z,14nm,0.8s,SNR=6.2
MYKA Terra Mystica 149.90 343 *i* P **PKPbc 13 39 43.6 -0.9**
comp=Z,12nm,0.8s
SQTA Sankt Quirin 149.95 347 *i* P **PKPbc 13 39 44.6 0.0**
comp=Z,18nm,0.8s,SNR=6.3
ABTA Abfaltersbach 150.09 345 *i* P **PKPbc 13 39 44.3 -0.6**
comp=Z,22nm,0.8s,SNR=8.3
DAVA Damuels 150.16 348 *i* P **PKPbc 13 39 45.1 -0.1**
comp=Z,28nm,1.2s,SNR=6.8
CRNS Crni Vrh 150.22 342 *i* PKPbc **PKPbc 13 39 44.5 -0.7**
FETA Feichten 150.25 347 *i* P **PKPbc 13 39 45.5 +0.1**
comp=Z,13nm,0.8s,SNR=6.3
VOJS Vojsko 150.37 342 *i* PKPbc **PKPbc 13 39 44.8 -0.8**
BOJS Bojanci 150.43 340 *i* PKPbc **PKPbc 13 39 45.8 +0.1**
PDG Podgorica 151.46 332 ⇑P PKPbc 13 39 47.6 -0.5
ESDC Sonseca Array 158.11 11 PKP PKPdf 13 39 51.2 +0.8
comp=Z,0.6nm,0.8s,baz=347,slow=2.7,SNR=5.1
ESDC PKPab **PKPab 13 40 27.3 -0.9**
comp=Z,0.3nm,0.7s,baz=310,slow=1.9,SNR=5.6
DBIC Dimbokro 167.03 151 PKP PKPdf 13 39 58.3 -1.3
comp=Z,5.3nm,0.9s,baz=239,slow=2.7,SNR=3.6
DBIC PKPab **PKPab 13 41 08.3 +0.4**
comp=Z,4.1nm,0.7s,baz=200,slow=6.1,SNR=3.8
TORD Torodi Ar. Bea 174.96 184 PKP PKPdf 13 40 01.6 -2.0
comp=Z,3.2nm,0.9s,baz=346,slow=1.2,SNR=12
TORD PKPab **PKPab 13 41 43.2 +0.2**
comp=Z,1.3nm,0.5s,baz=217,slow=3.1,SNR=6.6

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*IDC **03** 13:23:09.1±0.9, 19°.13N×66°.33W, h0km, mb3.8/7, mbtmp3.8/7, MS3.0/3, Error ellipse: s-maj=32.4km s-min=19.0km az=74.0*
*NEIC **03** 13:23:12.3±0.8, 19°.12N±0°.08×66°.39W±0°.03, h28km±15km, Error ellipse: s-maj=11.8km s-min=3.9km az=177.0*
*RSPR **03** 13:23:13.8, 19°.14N×66°.38W, h31km±10km, MD3.5/12*

ISC 03 13:23:12.9±0.7, 19°.07N±0°.04×66°.37W±0°.03, h28km, n85, σ0s58/79, mb3.9/7, 17C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.60**	**195**	⇑*e*P		**Pn**		**13 23 25.7**	**0.0**
EMPR	**Esperanza - Ma**	**0.60**	**195**	*e*S		**Sn**		**13 23 35.1**	**+0.6**
EMPR	**Esperanza - Ma**	**0.60**	**195**			**Pn**		**13 23 25.6**	**-0.1**
EMPR	**Esperanza - Ma**	**0.60**	**195**			**Sn**		**13 23 35.1**	**+0.6**
GCPR	**Guaynabo City**	**0.80**	**160**	⇑*e*P		**Pn**		**13 23 28.2**	**-0.2**
GCPR	**Guaynabo City**	**0.80**	**160**	*e*S		**Sb**		**13 23 39.3**	**+0.6**
GCPR	**Guaynabo City**	**0.80**	**160**			**Pn**		**13 23 28.2**	**-0.2**
GCPR	**Guaynabo City**	**0.80**	**160**			**Sb**		**13 23 39.3**	**+0.6**
GCPR	**Guaynabo City**	**0.80**	**160**		IAML			13 23 39.5	
	comp=N,2μm,0.9s								
GCPR					IAML			13 23 43.4	
	comp=E,1μm,0.4s								
AOPR	**Arecibo Observ**	**0.80**	**207**	⇑*e*P		**Pb**		**13 23 28.2**	**-0.1**
AOPR	**Arecibo Observ**	**0.80**	**207**	*e*S		**Sb**		**13 23 39.5**	**+0.7**
AOPR	**Arecibo Observ**	**0.80**	**207**			**Pb**		**13 23 28.2**	**-0.1**
AOPR	**Arecibo Observ**	**0.80**	**207**			**Sb**		**13 23 39.5**	**+0.7**
AOPR	**Arecibo Observ**	**0.80**	**207**		IAML			13 23 39.9	
	comp=N,12μm,0.5s								
AOPR					IAML			13 23 42.1	
	comp=E,17μm,0.3s								
UUPR	**Utuado, UPR, P**	**0.87**	**202**	⇑*e*P		**Pn**		**13 23 29.2**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.87**	**202**			**Pn**		**13 23 29.2**	**-0.2**

AGPR	Aguadilla, PR	0.92 230	⇑	eP	Pn	13 23 29.1	-0.9
AGPR	Aguadilla, PR	0.92 230		eS	Sb	13 23 40.8	-1.4
AGPR	Aguadilla, PR	0.92 230			Pn	13 23 29.1	-0.9
AGPR	Aguadilla, PR	0.92 230			Sb	13 23 40.8	-1.4
CBYP	Canovanas	0.93 148	⇑	eP	Pn	13 23 30.0	-0.2
CBYP	Canovanas	0.93 148		eS	Sn	13 23 42.9	+0.3
CBYP	Canovanas	0.93 148			Pn	13 23 30.1	0.0
CBYP	Canovanas	0.93 148			Sn	13 23 42.9	+0.3
CBYP	Canovanas	0.93 148	IAML			13 23 43.0	
	comp=N,9µm,0.2s						
CBYP			IAML			13 23 43.5	
	comp=E,7µm,0.2s						
SJG	San Juan	0.97 168	Pn		Pn	13 23 30.8	+0.1
	comp=E,110nm,0.3s,baz=348,slow=8.7,SNR=83						
SJG			Sn		Sn	13 23 43.3	-0.3
	comp=E,211nm,0.3s,baz=324,slow=17,SNR=16						
SJG	San Juan	0.97 168			Pb	13 23 31.0	-0.2
SJG			IAML			13 23 45.1	
	comp=E,2µm,0.3s						
CELP	Cerrillos	1.00 192	⇑	eP	Pn	13 23 31.3	+0.1
CELP	Cerrillos	1.00 192		eS	Sn	13 23 44.3	-0.1
CELP	Cerrillos	1.00 192			Pn	13 23 30.8	-0.4
CELP	Cerrillos	1.00 192			Sn	13 23 44.3	-0.1
CELP	Cerrillos	1.00 192	IAML			13 23 47.4	
	comp=N,3µm,0.8s						
CELP			IAML			13 23 50.2	
	comp=E,1µm,0.7s						
OBIP	Obispado Ponce	1.04 193	⇑	eP	Pn	13 23 31.9	+0.2
OBIP	Obispado Ponce	1.04 193		eS	Sn	13 23 45.6	+0.2
OBIP	Obispado Ponce	1.04 193			Pn	13 23 31.3	-0.4
OBIP	Obispado Ponce	1.04 193			Sn	13 23 45.6	+0.2
OBIP	Obispado Ponce	1.04 193	IAML			13 23 48.4	
	comp=N,1µm,0.5s						
PDPR	Patillas Dam,	1.09 162			Pb	13 23 32.9	-0.3
PRSN	Puerto Rico Se	1.12 221			Pn	13 23 32.4	+0.3
IGPR	InterUniversit	1.12 167	⇑	eP	Pn	13 23 33.1	+0.3
IGPR	InterUniversit	1.12 167		eS	Sn	13 23 47.7	+0.5
IGPR	InterUniversit	1.12 167			Sn	13 23 47.7	+0.5
ICMP	Isla Caja de M	1.18 187	⇑	eP	Pb	13 23 34.2	-0.5
ICMP	Isla Caja de M	1.18 187		eS	Sn	13 23 49.5	+0.7
ICMP	Isla Caja de M	1.18 187			Pn	13 23 34.0	+0.4
ICMP	Isla Caja de M	1.18 187			Sn	13 23 49.5	+0.7
ICMP	Isla Caja de M	1.18 187	IAML			13 23 56.2	
	comp=E,1µm,0.7s						
ICMP			IAML			13 23 56.3	
	comp=N,1µm,0.6s						
GBPR	Guanica, Bosqu	1.19 204	⇑	eP	Pn	13 23 34.0	+0.3
GBPR	Guanica, Bosqu	1.19 204		eS	Sn	13 23 47.7	-1.2
IDE	Isla Desecheo	1.25 237	⇑	eP	Pn	13 23 34.0	-0.5
IDE	Isla Desecheo	1.25 237		eS	Sn	13 23 49.4	-1.0
MLPR	Magueyes Islan	1.26 211	⇑	eP	Pn	13 23 34.0	-0.8
MLPR	Magueyes Islan	1.26 211		eS	Sn	13 23 50.1	-0.7
MLPR	Magueyes Islan	1.26 211			Sn	13 23 50.1	-0.7
MLPR	Magueyes Islan	1.26 211			Pn	13 23 33.8	-0.9
CRPR	Cabo Rojo, PR	1.27 214	⇑	eP	Pn	13 23 34.8	0.0
CRPR	Cabo Rojo, PR	1.27 214		eS	Sn	13 23 51.0	+0.2
CRPR	Cabo Rojo, PR	1.27 214			Pn	13 23 34.8	0.0
CRPR			IAML			13 23 54.6	
	comp=E,1µm,0.6s						
CRPR	Cabo Rojo, PR	1.27 214			Sn	13 23 51.0	+0.2
CUPR	Culebra, Puert	1.28 126	⇑	eP	Pn	13 23 34.5	-0.4
CUPR	Culebra, Puert	1.28 126		eS	Sn	13 23 50.3	-0.8
CUPR	Culebra, Puert	1.28 126			Pn	13 23 34.7	-0.2
CUPR	Culebra, Puert	1.28 126			Sn	13 23 50.3	-0.8
CUPR	Culebra, Puert	1.28 126	IAML			13 23 57.2	
	comp=N,375nm,0.5s						
CUPR			IAML			13 23 57.2	
	comp=E,607nm,0.5s						
STVI	Saint Thomas	1.52 118	⇑	eP	Pn	13 23 38.4	+0.2
STVI	Saint Thomas	1.52 118		eS	Sn	13 23 56.6	-0.4
STVI	Saint Thomas	1.52 118		Pn	Pn	13 23 38.2	0.0
STVI	Saint Thomas	1.52 118			Sn	13 23 56.6	-0.4
SJVI	Gifft Hill Sch	1.68 115	⇑	eP	Pn	13 23 40.5	0.0
SJVI	Gifft Hill Sch	1.68 115		eS	Sn	13 24 00.6	-0.5
SJVI	Gifft Hill Sch	1.68 115			Pn	13 23 40.5	0.0
SJVI					Sn	13 24 00.6	-0.5
PCDR	Punta Cana, DR	1.98 254			Pn	13 23 45.5	+0.9
CDVI	St. Croix	2.00 130			Pn	13 23 44.6	-0.4
DR12	Loma Pena Alta	2.87 265			Pn	13 23 57.0	+0.1
BANI	BANI	3.84 261			Pn	13 24 11.3	+1.0
SDDR	Presa de Saban	4.66 270			Pn	13 24 23.1	+1.6
SDDR			IAML			13 25 44.9	
	comp=E,185nm,1.1s						
SDDR			IAML			13 25 54.4	
	comp=E,125nm,0.9s						
BIRV	Birongo	8.54 179	Pn		Pn	13 25 14.5	-0.4
SDV	Santo Domingo	10.93 203	LR		LR	13 30 46.4	
	comp=E,49nm,18.1s,baz=2.0,slow=42						
TXAR	Lajitas Array	35.39 294	P		P	13 30 07.5	+0.9
	comp=E,0.5nm,0.8s,baz=114,slow=9.8,SNR=5.3						
	comp=E,0.5nm,0.8s						
SCHQ	Schefferville	35.71 360	P		P	13 30 08.7	-0.2
	comp=E,1.9nm,0.6s,baz=175,slow=6.0,SNR=5.2						
	comp=E,1.9nm,0.6s						
YKA	Yellowknife Ar	54.55 335	P		P	13 32 37.6	-0.7
	comp=E,0.4nm,0.6s,baz=107,slow=7.0,SNR=4.3						
YKA			LR		LR	13 55 28.7	
	comp=E,21nm,21.4s,baz=311,slow=36						
	comp=E,0.4nm,0.6s						
TORD	Torodi Ar. Bea	65.32 84	P		P	13 33 53.0	-0.1
	comp=E,0.4nm,0.7s,baz=302,slow=6.6,SNR=2.2						
	comp=E,0.4nm,0.7s						
ILAR	Eielson Array	68.89 333	P		P	13 34 14.7	-0.2
	comp=E,0.8nm,0.7s,baz=102,slow=3.7,SNR=5.7						
	comp=E,0.8nm,0.7s						
ARCES	ARCESS Array B	72.96 22	P		P	13 34 39.8	+0.2
	comp=E,1.4nm,0.6s,baz=275,slow=4.5,SNR=11						
	comp=E,1.4nm,0.6s						
FINES	FINESS Array B	74.61 30	P		P	13 34 50.2	+0.9
	comp=E,2.2nm,1.0s,baz=246,slow=8.4,SNR=2.4						
FINES			LR		LR	14 06 57.7	
	comp=E,10nm,18.4s,baz=64,slow=35						
	comp=E,2.2nm,1.0s						

*NEIC **03** 13:28:53.1±1.1, 19°.14N±0°.06×66°.41W±0°.03, h34km±15km, Error ellipse: s-maj=9.3km s-min=3.4km az=189.0*
*OSPL **03** 13:28:54.6±0.8, 18°.95N×66°.36W, h0km±13km, ML2.7*
*RSPR **03** 13:28:55.1, 19°.11N×66°.37W, h29km±8km, MD3.3/12*
ISC 03 13:28:52.3±1.3, 19°.11N±0°.06×66°.31W±0°.03, h28km, n63, σ0s98/70, 2C-15D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.66 199		⇓	eP		Pn	13 29 06.5	+0.6
EMPR	Esperanza - Ma	0.66 199			eS		Sn	13 29 15.2	-0.1
EMPR	Esperanza - Ma	0.66 199					Pn	13 29 06.5	+0.6
EMPR							Sn	13 29 15.2	-0.1
GCPR	Guaynabo City	0.82 165		⇓	eP		Pn	13 29 09.1	+1.0
GCPR	Guaynabo City	0.82 165			eS		Sn	13 29 19.9	+0.6
GCPR	Guaynabo City	0.82 165					Pn	13 29 09.1	+1.0
GCPR							Sn	13 29 19.9	+0.6
GCPR	Guaynabo City	0.82 165	IAML					13 29 20.7	
	comp=E,313nm,0.2s								
AOPR	Arecibo Observ	0.87 209		⇑	eP		Pb	13 29 09.0	+0.2
AOPR	Arecibo Observ	0.87 209			eS		Sb	13 29 19.7	-0.4
AOPR	Arecibo Observ	0.87 209					Pb	13 29 09.0	+0.2
AOPR							Sb	13 29 19.7	-0.4
AOPR	Arecibo Observ	0.87 209	IAML					13 29 22.8	
	comp=N,1µm,0.2s								
CBYP	Canovanas	0.93 153		⇓	eP		Pb	13 29 10.9	+0.9
CBYP	Canovanas	0.93 153			eS		Sn	13 29 22.9	+0.8
CBYP	Canovanas	0.93 153					Pb	13 29 10.9	+0.9
CBYP							Sn	13 29 22.9	+0.8
UUPR	Utuado, UPR, P	0.94 205		⇓	eP		Pb	13 29 10.2	+0.3
UUPR	Utuado, UPR, P	0.94 205			eS		Sb	13 29 21.5	-0.5
UUPR	Utuado, UPR, P	0.94 205					Pb	13 29 10.2	+0.3
UUPR							Sb	13 29 21.5	-0.5
AGPR	Aguadilla, PR	0.99 230		⇓	eP		Pn	13 29 09.9	-0.5
AGPR	Aguadilla, PR	0.99 230					Pn	13 29 09.9	-0.5
AGPR							Sn	13 29 21.4	-2.1
AGPR	Aguadilla, PR	0.99 230	IAML					13 29 21.7	
	comp=N,291nm,0.2s								
AGPR			IAML					13 29 32.1	
	comp=E,334nm,0.4s								
AGPR	Aguadilla, PR	0.99 230		*i* P			Pn	13 29 09.9	-0.5
AGPR				eS			Sn	13 29 21.3	-2.2
AGPR			IAML					13 29 22.1	
	comp=Z,227nm,0.1s								
SJG	San Juan	1.00 171					Pb	13 29 11.5	+0.4
SJG			IAML					13 29 25.7	
	comp=Z,285nm,0.2s								
SJG			IAML					13 29 25.8	
	comp=Z,254nm,0.5s								

CELP	Cerrillos	1.06 194	⇓	eP		Pb	13 29 12.2	+0.1
CELP	Cerrillos	1.06 194		eS		Sb	13 29 25.3	-0.2
CELP	Cerrillos	1.06 194				Pb	13 29 12.2	+0.1
CELP						Sb	13 29 25.3	-0.2
CELP	Cerrillos	1.06 194	IAML				13 29 27.8	
	comp=N,217nm,0.2s							
OBIP	Obispado Ponce	1.10 195	⇓	eP		Pb	13 29 12.7	+0.1
OBIP	Obispado Ponce	1.10 195		eS		Sn	13 29 25.8	-0.2
OBIP	Obispado Ponce	1.10 195				Pb	13 29 12.7	+0.1
OBIP						Sn	13 29 25.8	-0.2
OBIP	Obispado Ponce	1.10 195	IAML				13 29 35.5	
	comp=N,218nm,0.7s							
PDPR	Patillas Dam,	1.12 166				Pb	13 29 13.1	0.0
IGPR	InterUniversit	1.15 170	⇓	eP		Pb	13 29 13.4	-0.2
IGPR	InterUniversit	1.15 170		eS		Sb	13 29 28.1	0.0
LSP	Las Mesas	1.19 219	⇑	eP		Pn	13 29 13.6	+0.5
LSP	Las Mesas	1.19 219		eS		Sn	13 29 27.5	-0.8
PRSN	Puerto Rico Se	1.19 222				Pn	13 29 12.9	-0.2
ICMP	Isla Caja de M	1.23 190	Pn			Pb	13 29 15.1	+0.1
CUPR	Culebra, Puert	1.25 129	⇓	eP		Pb	13 29 15.4	0.0
CUPR	Culebra, Puert	1.25 129		eS		Sb	13 29 31.4	+0.2
CUPR	Culebra, Puert	1.25 129				Pb	13 29 15.4	0.0
IDE	Isla Desecheo	1.32 237	⇓	eP		Pn	13 29 14.7	-0.2
IDE	Isla Desecheo	1.32 237		eS		Sn	13 29 29.7	-1.9
MLPR	Magueyes Islan	1.33 212	⇓	eP		Pn	13 29 14.8	-0.3
MLPR	Magueyes Islan	1.33 212		eS		Sn	13 29 30.1	-1.7
MLPR	Magueyes Islan	1.33 212				Pn	13 29 14.8	-0.3
MLPR						Sn	13 29 30.1	-1.7
MLPR	Magueyes Islan	1.33 212	IAML				13 29 37.2	
	comp=E,169nm,0.3s							
CRPR	Cabo Rojo, PR	1.33 215	⇓	eP		Pn	13 29 15.7	+0.6
CRPR	Cabo Rojo, PR	1.33 215		eS		Sn	13 29 30.9	-1.0
CRPR	Cabo Rojo, PR	1.33 215				Pn	13 29 15.7	+0.6
CRPR						Sn	13 29 30.9	-1.0
CRPR	Cabo Rojo, PR	1.33 215		*i* P		Pn	13 29 15.7	+0.6
CRPR				eS		Sn	13 29 31.3	-0.6
CRPR			IAML				13 29 36.0	
	comp=Z,168nm,0.3s							
STVI	Saint Thomas	1.49 120	⇓	eP		Pb	13 29 19.1	-0.2
STVI	Saint Thomas	1.49 120		eS		Sb	13 29 37.3	-0.4
STVI	Saint Thomas	1.49 120				Pb	13 29 19.1	-0.2
STVI	Saint Thomas	1.49 120	IAML				13 29 39.1	
	comp=N,126nm,0.3s							
SJVI	Gifft Hill Sch	1.65 118	⇓	eP		Pb	13 29 21.2	-0.8
SJVI	Gifft Hill Sch	1.65 118		eS		Sb	13 29 41.2	-1.2
SJVI	Gifft Hill Sch	1.65 118				Pb	13 29 21.2	-0.8
SJVI						Sb	13 29 41.2	-1.2
TBVI	Tortola	1.74 113	⇓	eP		Pb	13 29 22.7	-1.0
TBVI	Tortola	1.74 113		eS		Sb	13 29 43.8	-1.3
TBVI	Tortola	1.74 113				Pb	13 29 22.7	-1.0
TBVI						Sb	13 29 43.8	-1.3
DR12	Loma Pena Alta	2.93 264				Pn	13 29 38.3	+1.2
SDDR	Presa de Saban	4.71 269	Pn			Pn	13 30 05.2	+3.5
SDDR			IAML				13 31 20.4	
	comp=N,23nm,1.3s							
SDDR	Presa de Saban	4.71 269	*i* P			Pn	13 30 04.8	+3.1

*IDC **03** 13:35:14.5±1.1, 3°.58S×150°.68E, h0km, mb3.6/5, mbtmp3.6/5, MS3.2/9, Error ellipse: s-maj=28.5km s-min=22.5km az=108.0*
ISC 03 13:35:18.1±1.0, 3.7S±0°.2×150°.8E±0°.1, h27km, n14, σ0s59/6, mb3.6/5, MS3.2/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.40 118		Pn			Pb	13 35 43.5	0.0
	0.3nm,0.3s,baz=294,slow=12,SNR=4.9								
HNR	Honiara	10.76 123		LR		LR	LR	13 42 10.5	
	comp=Z,135nm,18.7s,baz=230,slow=38								
GUMO	Guam	18.11 341		LR		LR	LR	13 44 31.5	
	comp=Z,35nm,21.1s,baz=150,slow=31								
WRA	Warramunga Arr	22.80 223		P			P	13 40 18.4	-0.5
	2.0nm,1.0s,baz=48,slow=9.9,SNR=7.0								
	2.0nm,1.0s								
DZM	Mont Dzumac	23.79 142		LR		LR	LR	13 48 44.2	
	comp=Z,76nm,21.1s,baz=278,slow=34								
ASAR	Alice Springs	25.73 218		P			P	13 40 47.0	+0.4
	0.5nm,0.9s,baz=53,slow=8.7,SNR=5.0								
	0.5nm,0.9s								
STKA	Stephens Creek	29.38 196		LR		LR	LR	13 52 47.5	
	comp=Z,68nm,18.8s,baz=40,slow=36								
JOW	Kunigami	37.31 326		LR		LR	LR	13 55 54.1	
	comp=Z,7.3nm,21.6s,baz=130,slow=33								
LEM	Lembang	43.09 264		LR		LR	LR	14 03 28.6	
	comp=Z,46nm,18.1s,baz=230,slow=39								
RPZ	Rata Peaks	43.74 159		LR		LR	LR	13 58 55.7	
	comp=Z,84nm,18.4s,baz=286,slow=32								
KSRS	Korea Array	46.09 335		P			P	13 43 40.4	+0.4
	0.2nm,0.3s,baz=144,slow=10,SNR=4.5								
	0.2nm,0.3s								
PETK	Petropavlovsk-	56.85 5		P			P	13 44 59.6	-0.6
	1.3nm,0.9s,baz=178,slow=5.0,SNR=3.9								
PETK				LR		LR	LR	14 04 22.6	
	comp=Z,17nm,20.5s,baz=176,slow=31								
	1.3nm,0.9s								
MA2	Magadan	63.03 360		LR		LR	LR	14 15 26.4	
	comp=Z,13nm,18.0s,baz=170,slow=38								
ILAR	Eielson Array	81.86 23		P			P	13 47 34.9	+0.2
	0.6nm,0.9s,baz=237,slow=5.0,SNR=3.6								
	0.6nm,0.9s								

IDC 03 13:39:27.9±4.1, 17°.60S×178°.97W, h561km±19km, mb3.2/4, mbtmp4.1/5, Error ellipse: s-maj=120.6km s-min=71.3km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.84 267		P			P	13 40 43.0	0.0
	16nm,0.6s,baz=143,slow=10,SNR=22								
STKA	Stephens Creek	38.31 241		P			P	13 46 01.6	+0.3
	1.8nm,0.8s,baz=86,slow=13,SNR=1.6								
	1.8nm,0.8s								
WRA	Warramunga Arr	44.16 259		P			P	13 46 47.0	-0.8
	0.4nm,0.3s,baz=96,slow=8.0,SNR=23								
	0.4nm,0.3s								
ASAR	Alice Springs	44.36 254		P			P	13 46 49.4	+0.1
	3.9nm,0.4s,baz=90,slow=7.8,SNR=178								
ASAR				PcP		PcP		13 48 20.5	-0.5
	0.3nm,0.4s,baz=101,slow=4.2,SNR=5.6								
	3.9nm,0.4s								
FITZ	Fitzroy Crossi	52.55 260		P			P	13 47 50.4	+0.3
	4.0nm,1.0s,baz=90,slow=6.1,SNR=2.0								
	4.0nm,1.0s								

TAP 03 13:40:21.2, 24°.49N×121°.81E, h24km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.06 216		eP			Pb	13 40 24.4	-1.0
	baz=216								
EWUT				eS			Sb	13 40 27.5	-0.8
	baz=216								
ENA	Nanau	0.09 227		eP			Pb	13 40 25.8	+0.1
	baz=223								
ENA				S			Sb	13 40 28.8	+0.1
	baz=223								
TWC	Suao	0.12 15		P			Pb	13 40 26.2	+0.3
	baz=20								
NDS	Dongshan	0.17 328		eP			Pb	13 40 26.2	-0.2
	baz=328								
NDS				*i* S			Sb	13 40 30.2	+0.2
	baz=328								
LATG	Datong	0.27 280		eP			Pb	13 40 28.2	+0.5
	baz=280								
ENTT	Nioudou	0.27 304		*i* P			Pb	13 40 28.1	+0.3
	baz=304								
ENTT				eS			Sb	13 40 33.1	+0.8
	baz=304								
NDT	Datong Townshi	0.30 292		eP			Pb	13 40 28.9	+0.8
	baz=288								

JMA 03 13:40:53.1±0.3, 24°.2N±0°.5×123°.7E±0°.7, h19km±1km, MV0.4/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.12 141		P			Pg	13 40 57.0	-0.2
HATJ				eS			Sg	13 40 59.5	-0.4
IRIF	Iriomote-Funau	0.18 3		*i* P			Pg	13 40 57.8	-0.1
IRIF				eS			Sg	13 41 01.2	0.0
JKRS	Kuro-shima	0.28 72		P			Pb	13 40 59.5	+0.1
JKRS				eS			Sg	13 41 03.9	+0.3
JIJ	Ishigaki jima	0.44 62		eP			Pg	13 41 01.8	-0.3
JIJ				eS			Sg	13 41 07.8	-0.5
JYNG	Yonagunijimaku	0.77 293		eS			Sn	13 41 19.2	-0.7
JTJ	Tarama	1.02 61		eS			Sn	13 41 26.1	0.0

ASRS 03 13:45:36.9±0.2, 52°N±1°×9°6E±°, h10km, MLh3.8/10, Error ellipse: s-maj=3.2km s-min=2.1km az=21.0, confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.74 260		Pg			Pg	13 45 50.6	-0.5
KZLR				Sg			Sg	13 46 00.5	-0.3
ARDR	Aradan	1.54 300		Pg			Pb	13 46 05.1	-0.4
ARDR				Sg			Sg	13 46 27.0	+0.6
ERNS	Erzin	1.61 191		Pg			Pn	13 46 04.0	-1.4
ERNS				Sg			Sn	13 46 24.4	-1.8
KNGR	Kungurtug, Tuv	1.72 135		Pg			Pb	13 46 08.1	-0.5
KNGR				Sg			Sb	13 46 30.0	-0.3
DJOS	Djoyskaya Sosn	2.76 292		Pg			Pg	13 46 28.8	-0.9
DJOS				Sg			Sg	13 47 03.7	-1.9
CERR	Cheremushki	2.77 293		Pn			Pn	13 46 22.4	+1.1
CERR				Pg			Pg	13 46 30.4	+0.4
CERR				Sg			Sg	13 47 04.3	-1.6
DJO	Djoy, Khakassi	2.86 291		Pn			Pn	13 46 24.2	+1.6
DJO				Pg			Pb	13 46 29.1	+1.1
DJO				Sg			Sg	13 47 06.3	-2.5
ABNR	Abakan	3.17 308		Pn			Pn	13 46 29.3	+2.6
ORY	Orie	3.18 355		Sg			Sb	13 47 14.1	+1.8
MOY	Mondy	3.34 91		Pn			Pn	13 46 31.2	+1.9
MOY				Pg			Pg	13 46 39.8	-1.1
MOY				Sg			Sb	13 47 19.7	+2.7
LUZB	Luzhba, Kemero	4.47 297		Sg			Sg	13 47 56.1	-4.3
GZLN	Zheleznogorsk	4.68 347		Pg			Pb	13 47 00.1	+1.2
GZLN				Sg			Sg	13 48 04.5	-2.5
TASR	Tashtagol	4.84 284		Pg			Pb	13 47 05.2	+3.5
TASR				Sg			Sg	13 48 08.0	-4.2
CUR	Chagan-Uzun	4.92 252		Pn			Pn	13 46 51.5	+0.6
CUR				Pg			Pb	13 47 05.5	+2.4
CUR				Sg			Sg	13 48 09.3	-5.3
ZAK	Zakamensk	5.04 104		Sg			Sg	13 48 12.0	-6.0
ARTR	Artybash	5.17 273		Pn			Pn	13 46 55.5	+1.2
ARTR				Pg			Pg	13 47 12.0	-3.9
ARTR				Sg			Sg	13 48 18.9	-4.0
AKAR	Aktash	5.27 256		Pg			Pg	13 47 15.2	-2.6
AKAR				Sg			Sg	13 48 20.9	-5.1
CHBI	Chibit, Altay	5.34 257		Pn			Pn	13 46 57.2	+0.5
CHBI				Pg			Pg	13 47 15.8	-3.3
CHBI				Sg			Sg	13 48 25.0	-3.3
ELT	Eltsovka	5.90 288		Pn			Pn	13 47 05.4	+1.2
ELT				Sg			Sg	13 48 39.6	-6.5
SALR	Pechorkino, Sa	6.50 297		Sg			Sg	13 49 03.4	-2.0
UKR	Ust'-Kan	6.85 267		Pg			Pg	13 47 45.6	-2.4
UKR				Sg			Sg	13 49 15.1	-1.5
NVSII	Novosibirsk	8.00 297		Sg			Sg	13 49 50.2	-3.2

*IDC **03** 14:28:24.0±2.7, 31°.14S×71°.53W, h0km, mb4.3/2, mbtmp4.1/3, MS3.3/2, Error ellipse: s-maj=87.4km s-min=78.0km az=61.0*
*GUC **03** 14:28:32.1±0.7, 30°.70S×71°.37W, h50km±2km, ML3.9*
ISC 03 14:28:32.2±1.0, 30°.71S±0°.03×71°.34W±0°.06, h32km±9km, n33, σ1s49/43, 4C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.26 278	⇑	*i* P			Pb	14 28 40.2	+0.8
CO06				IAML				14 28 50.4	
	comp=E,8µm,0.2s								
CO02	Combarbal	0.57 149	⇑	*i* P			Pn	14 28 44.6	+0.3
CO02				*i* S			Sn	14 28 53.6	+0.8
CO03	El Pedregal	0.58 103	⇓	*i* P			Pn	14 28 44.9	+0.6
CO03				*i* S			Sn	14 28 54.2	+1.5
CO03				IAML				14 28 54.8	
	comp=E,8µm,0.4s								
GO04	Tololo Observa	0.71 41	⇓	*i* P			Pn	14 28 46.8	+0.5
GO04				*i* S			Sn	14 28 56.8	+0.6
GO04				IAML				14 29 00.2	
	comp=N,20µm,0.2s								
CO05	La Serena	0.79 7	⇓	*i* P			Pn	14 28 47.4	+0.2
CO05				*i* S			Sb	14 28 57.1	-0.9
CO05				IAML				14 29 03.9	
	comp=E,3µm,0.4s								
CO01	Juntas del Tor	1.30 56	⇓	*i* P			Pb	14 28 55.9	-0.4
CO01				IAML				14 29 15.1	
	comp=N,835nm,0.3s								
LCO	Las Campanas	1.78 18	⇓	*i* P			Pn	14 29 01.4	+0.3
LCO				*i* S			Sn	14 29 23.7	+0.9
VA03	San Esteban	2.16 162		eP			Pn	14 29 07.1	+1.1
VA03				*i* S			Sn	14 29 33.8	+2.0
VA03				IAML				14 29 39.4	
ROCH	El Roble	2.27 173

ZALV	**Zalesovo Beam**	**151.11**	**30**	PKPbc	**PKPbc**		**14 48 19.6**	**-2.0**
	comp=N,1.9nm,0.5s,baz=299,slow=2.9,SNR=7.7							

*IDC **03** 14:29:59.2±1.6, 1°.06S×97°.42E, h0km, mb4.0/8, mbtmp3.9/10, ML3.1/1, MS3.1/4, Error ellipse: s-maj=46.9km s-min=17.4km az=68.0*

ISC 03 14:30:03.1±1.4, 1°.05S±0°.1×97°.6E±0°.3, h23km, n18, s0873/12, mb4.1/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PSI	**Prapat**	**3.99**	**20**	Pn	**Pn**		**14 31 01.8**	**-1.2**
	1.3nm,0.3s,baz=164,slow=13,SNR=2.6							
PSI				Sn	**Sn**		**14 31 49.5**	**+0.3**
	2.7nm,0.3s,baz=277,slow=15,SNR=3.6							
PSI				LR	LR		14 32 40.0	
	comp=Z,166nm,18.9s,baz=250,slow=40 3.4nm,0.3s							
CMAR	**Chiang Mai Arr**	**19.36**	**4**	P	**Pn**		**14 34 29.4**	**+1.0**
	1.1nm,0.8s,baz=192,slow=11,SNR=6.0							
CMAR				LR	LR		14 41 34.0	
	comp=Z,46nm,18.0s,baz=105,slow=36							
H08S2	**Diego Garcia H**	**25.85**	**254**	T	T		15 03 06.3	
	baz=75,slow=75,SNR=10							
H08S3	**Diego Garcia H**	**25.86**	**254**	T	T		15 03 18.7	
	baz=75,slow=75,SNR=12							
H08S1	**Diego Garcia H**	**25.87**	**254**	T	T		15 03 22.9	
	baz=75,slow=75,SNR=11							
H01W3	**Cape Leeuwin H**	**37.11**	**157**	T	T		15 16 57.6	
	baz=331,slow=74,SNR=7.5							
H01W2	**Cape Leeuwin H**	**37.12**	**157**	T	T		15 16 59.8	
	baz=331,slow=74,SNR=4.7							
H01W1	**Cape Leeuwin H**	**37.12**	**157**	T	T		15 16 57.6	
	baz=331							
WRA	**Warramunga Arr**	**40.60**	**120**	P	**P**		**14 37 41.6**	**+0.1**
	1.0nm,0.7s,baz=303,slow=8.9,SNR=16 1.0nm,0.7s							
ASAR	**Alice Springs**	**41.82**	**125**	P	**P**		**14 37 51.8**	**+0.3**
	0.4nm,0.5s,baz=298,slow=8.0,SNR=11 0.4nm,0.5s							
KSRS	**Korea Array**	**47.44**	**33**	P	**P**		**14 38 36.0**	**0.0**
	0.7nm,0.8s,baz=220,slow=9.3,SNR=6.8							
KSRS				LR	LR		15 02 19.7	
	comp=Z,22nm,18.8s,baz=225,slow=41 0.7nm,0.8s							
MKAR	**Makanchi Array**	**49.43**	**346**	P	**P**		**14 38 51.0**	**-0.3**
	1.3nm,0.6s,baz=151,slow=8.3,SNR=11 1.3nm,0.6s							
STKA	**Stephens Creek**	**51.64**	**131**	P	**P**		**14 39 07.9**	**-0.4**
	1.3nm,0.5s,baz=282,slow=8.3,SNR=3.5 1.3nm,0.5s							
MJAR	**Matsushiro Arr**	**53.06**	**41**	LR	LR		15 03 05.1	
	comp=Z,21nm,18.1s,baz=192,slow=37							
USRK	**Ussuriysk Ar.**	**54.45**	**30**	P	**P**		**14 39 29.9**	**+1.2**
	4.4nm,0.7s,baz=221,slow=5.2,SNR=8.7 4.4nm,0.7s							
ZALV	**Zalesovo Beam**	**55.75**	**351**	P	**P**		**14 39 37.5**	**-0.4**
	4.1nm,0.6s,baz=178,slow=6.1,SNR=16 4.1nm,0.6s							
KLR	**Kul'dur**	**58.03**	**26**	P	**P**		**14 39 54.7**	**+0.5**
	2.3nm,0.7s,baz=245,slow=6.5,SNR=4.6 2.3nm,0.7s							
TXAR	**Lajitas Array**	**145.29**	**34**	PKPbc	**PKPbc**		**14 49 39.5**	**-0.1**
	0.6nm,0.6s,baz=291,slow=1.9,SNR=12							

*AEIC **03** 14:32:03±1.4, 61°.06N±0°.02×150°.20W±0°.06, h53km±3km, ML3.4, ML3.6/148(NEIC), Error ellipse: s-maj=3.9km s-min=3.5km az=108.0*

*ANF **03** 14:32:03.2±0.2, 61°.04N×150°.21W, h33km±2km, ML3.8/84, ML3.8/83, Error ellipse: s-maj=1.2km s-min=1.0km az=147.0*

*NEIC **03** 14:32:03.3±1.5, 61°.07N±0°.02×150°.24W±0°.06, h49km±3km, Error ellipse: s-maj=3.9km s-min=3.4km az=98.0*

ISC 03 14:32:03.7±1.2, 61°.06N±0°.02×150°.20W±0°.02, h48km±6km, n290, s0875/280, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
FIS	**Fire Island**	**0.09**	**355**		**Sn**		**14 32 18.6**	**+2.2**
FIS	**Fire Island**	**0.09**	**355**		**Pn**		**14 32 11.4**	**+0.2**
RC01	**Rabbit Creek A**	**0.23**	**82**		**Pn**		**14 32 11.5**	**-0.5**
RC01	**Rabbit Creek A**	**0.23**	**82**	IAML			14 32 15.1	
	comp=E,699nm,0.3s							
RC01				IAML			14 32 15.2	
	comp=N,2μm,0.3s							
RC01					**Sn**		**14 32 18.3**	**+0.4**
RC01	**Rabbit Creek A**	**0.23**	**82**	P	**Pn**		**14 32 11.5**	**-0.5**
	baz=262,SNR=314							
RC01				S	**Sn**		**14 32 14.6**	**-3.3**
	baz=262							
CAPN	**Captain Cook N**	**0.55**	**238**		**Pn**		**14 32 15.9**	**+0.5**
CAPN	**Captain Cook N**	**0.55**	**238**	P	**Pn**		**14 32 15.8**	**+0.4**
	baz=58,SNR=8.0							
SLKM	**Skilak Lake**	**0.55**	**181**		**Pn**		**14 32 14.7**	**-0.8**
SLKM					**Sn**		**14 32 24.0**	**+0.1**
O22K	**Cooper Landing**	**0.63**	**158**		**Pn**		**14 32 15.9**	**-0.5**
O22K					**Sn**		**14 32 25.8**	**+0.3**
O22K	**Cooper Landing**	**0.63**	**158**	P	**Pn**		**14 32 15.9**	**-0.5**
	baz=338,SNR=171							
O22K				S	**Sn**		**14 32 25.6**	**+0.1**
	baz=338							
M22K	**Willow**	**0.70**	**3**		**Pn**		**14 32 16.3**	**-1.0**
M22K					**Sn**		**14 32 27.1**	**0.0**
M22K	**Willow**	**0.70**	**3**	P	**Pn**		**14 32 16.3**	**-1.0**
	baz=183,SNR=100							
M22K				S	**Sn**		**14 32 26.7**	**-0.4**
	baz=183							
PMR	**Palmer**	**0.74**	**44**		**Pn**		**14 32 17.0**	**-0.9**
PMR					**Sn**		**14 32 27.9**	**-0.3**
PMR	**Palmer**	**0.74**	**44**	IAML			14 32 28.2	
	comp=E,2μm,0.3s							
PMR	**Palmer**	**0.74**	**44**	P	**Pn**		**14 32 17.0**	**-0.9**
	baz=224,SNR=119							
PMR				S	**Sn**		**14 32 28.0**	**-0.2**
	baz=224							
STLK	**Strandline Lak**	**0.90**	**300**		**Pn**		**14 32 19.0**	**-1.1**
SPU	**Mount Spurr**	**0.91**	**279**		**Pn**		**14 32 18.6**	**-1.5**
SPCG	**Spurr Capps Gl**	**0.91**	**286**		**Pn**		**14 32 19.2**	**-1.1**
SPCG					**Sn**		**14 32 31.9**	**-0.5**
KNK	**Knik Glacier**	**0.92**	**66**		**Pn**		**14 32 19.9**	**-0.4**
KNK					**Sn**		**14 32 33.1**	**+0.7**
KNK	**Knik Glacier**	**0.92**	**66**	IAML			14 32 34.7	
	comp=N,2μm,0.6s							
KNK				IAML			14 32 35.3	
	comp=E,1μm,0.3s							
KNK	**Knik Glacier**	**0.92**	**66**	P	**Pn**		**14 32 19.9**	**-0.4**
	baz=248,SNR=181							
KNK				S	**Sn**		**14 32 33.1**	**+0.7**
	baz=248							
PWL	**Port Wells**	**0.93**	**102**		**Pn**		**14 32 20.2**	**-0.3**
PWL					**Sn**		**14 32 33.6**	**+0.8**
PWL	**Port Wells**	**0.93**	**102**	IAML			14 32 34.2	
	comp=E,2μm,0.3s							
PWL	**Port Wells**	**0.93**	**102**	P	**Pn**		**14 32 20.2**	**-0.3**
	baz=283,SNR=262							
PWL				S	**Sn**		**14 32 33.5**	**+0.7**
	baz=283							
GHO	**Glory Hole Cre**	**0.94**	**40**		**Pn**		**14 32 20.0**	**-0.7**
GHO					**Sn**		**14 32 33.3**	**+0.1**
CRP	**Crater Peak**	**0.97**	**283**		**Pn**		**14 32 20.3**	**-0.8**
SPCR	**Spurr Chakacha**	**0.98**	**279**		**Pn**		**14 32 19.9**	**-1.4**
SPCR	**Spurr Chakacha**	**0.98**	**279**	P	**Pn**		**14 32 19.8**	**-1.4**
	baz=98,SNR=68							
SPCR				S	**Sn**		**14 32 33.8**	**-0.3**
	baz=98							
SEW	**Seward**	**1.03**	**159**		**Pn**		**14 32 20.7**	**-1.0**
SEW					**Sn**		**14 32 35.8**	**+0.9**
SEW	**Seward**	**1.03**	**159**	P	**Pn**		**14 32 20.7**	**-1.0**
	baz=339,SNR=52							
SEW				S	**Sn**		**14 32 35.5**	**+0.6**
	baz=339							
CKL	**Chakachamna La**	**1.04**	**279**		**Pn**		**14 32 21.1**	**-1.0**
SPBG	**Spurr Blockage**	**1.07**	**282**		**Pn**		**14 32 20.4**	**-1.9**
SPWE	**Spurr West**	**1.16**	**282**		**Pn**		**14 32 22.8**	**-0.9**
SML	**Sawmill**	**1.17**	**49**		**Pn**		**14 32 23.2**	**-0.5**
SML					**Sn**		**14 32 39.4**	**+0.8**
SML	**Sawmill**	**1.17**	**49**	IAML			14 32 39.5	
	comp=E,990nm,1.0s							
SML				IAML			14 32 39.7	
	comp=N,2μm,0.7s							
SML	**Sawmill**	**1.17**	**49**	P	**Pn**		**14 32 23.2**	**-0.5**
	baz=231,SNR=66							
SML				S	**Sn**		**14 32 39.2**	**+0.6**
	baz=231							
DFR	**Drift River**	**1.30**	**250**		**Pn**		**14 32 24.5**	**-1.1**
DFR					**Sn**		**14 32 41.6**	**-0.2**
BRLK	**Bradley Lake**	**1.34**	**195**		**Pn**		**14 32 25.6**	**-0.4**
BRLK					**Sn**		**14 32 43.6**	**+0.9**
BRLK	**Bradley Lake**	**1.34**	**195**	IAML			14 32 45.2	
	comp=E,1μm,0.5s							
BRLK				IAML			14 32 47.2	
	comp=N,1μm,0.3s							
BRSE	**Bradley Lake S**	**1.35**	**192**		**Pn**		**14 32 25.5**	**-0.6**
BRSE					**Sn**		**14 32 43.5**	**+0.7**
BRSE	**Bradley Lake S**	**1.35**	**192**	P	**Pn**		**14 32 25.4**	**-0.7**
	baz=11,SNR=78							
BRSE				S	**Sn**		**14 32 43.1**	**+0.2**
	baz=11							
CUT	**Chulitna**	**1.35**	**359**		**Pn**		**14 32 25.7**	**-0.4**
CUT	**Chulitna**	**1.35**	**359**	P	**Pn**		**14 32 25.4**	**-0.7**
	baz=179,SNR=20							
CUT				S	**Sn**		**14 32 43.5**	**+0.6**
	baz=179							
RDJH	**Redoubt Jeurge**	**1.36**	**251**		**Pn**		**14 32 25.4**	**-0.9**
RSO	**Redoubt South**	**1.39**	**246**		**Pn**		**14 32 25.8**	**-1.0**
M23K	**Glacier View**	**1.40**	**57**		**Pn**		**14 32 26.5**	**-0.3**
M23K	**Glacier View**	**1.40**	**57**	P	**Pn**		**14 32 26.4**	**-0.4**
	baz=239,SNR=166							
M23K				S	**Sn**		**14 32 44.8**	**+0.7**
	baz=239							
RDWB	**Redoubt West**	**1.42**	**247**		**Pn**		**14 32 26.2**	**-0.9**
RED	**Redoubt Volcan**	**1.42**	**244**		**Pn**		**14 32 26.2**	**-0.9**
NCT	**North Crescent**	**1.43**	**251**		**Pn**		**14 32 26.4**	**-0.9**
NCT					**Sn**		**14 32 44.9**	**0.0**
GLI	**Glacier Island**	**1.53**	**95**		**Pn**		**14 32 27.2**	**-1.3**
GLI	**Glacier Island**	**1.53**	**95**	IAML			14 32 52.7	
	comp=E,633nm,0.4s							
GLI				IAML			14 32 52.9	
	comp=N,578nm,0.4s							
GLI	**Glacier Island**	**1.53**	**95**	P	**Pn**		**14 32 27.2**	**-1.3**
	baz=278,SNR=42							
O20K	**Slope Mountain**	**1.55**	**232**		**Pn**		**14 32 28.8**	**0.0**
O20K	**Slope Mountain**	**1.55**	**232**	P	**Pn**		**14 32 28.8**	**0.0**
	baz=50,SNR=49							
HOM	**Homer**	**1.58**	**208**		**Pn**		**14 32 29.4**	**+0.2**
HOM					**Sn**		**14 32 49.8**	**+1.4**
HOM	**Homer**	**1.58**	**208**	P	**Pn**		**14 32 29.2**	**0.0**
	baz=26,SNR=5.6							
SCM	**Sheep Creek Mo**	**1.58**	**59**		**Pn**		**14 32 28.9**	**-0.5**
SCM	**Sheep Creek Mo**	**1.58**	**59**	IAML			14 32 53.1	
	comp=N,638nm,0.7s							
SCM				IAML			14 32 53.9	
	comp=E,886nm,0.7s							
SCM	**Sheep Creek Mo**	**1.58**	**59**	P	**Pn**		**14 32 29.0**	**-0.5**
	baz=242,SNR=68							
SCM				S	**Sn**		**14 32 49.5**	**+0.8**
	baz=242							
CNPM	**China Poot**	**1.62**	**199**		**Pn**		**14 32 29.3**	**-0.5**
CNPM	**China Poot**	**1.62**	**199**	IAML			14 32 53.1	
	comp=N,1μm,0.5s							
M20K	**Styx River**	**1.63**	**302**		**Pn**		**14 32 29.8**	**-0.2**
M20K					**Sn**		**14 32 50.5**	**+0.7**
M20K	**Styx River**	**1.63**	**302**	IAML			14 32 51.4	
	comp=N,776nm,1.0s							
M20K	**Styx River**	**1.63**	**302**	P	**Pn**		**14 32 29.9**	**-0.2**
	baz=119,SNR=218							
M20K				S	**Sn**		**14 32 50.3**	**+0.5**
	baz=119							
IVE	**Iliamna Volcan**	**1.74**	**234**		**Pn**		**14 32 30.2**	**-1.3**
P23K	**Montague Islan**	**1.75**	**126**	P	**Pn**		**14 32 30.4**	**-1.1**
	baz=309							
JPK	**Jack Peak**	**1.75**	**89**		**Pn**		**14 32 30.8**	**-0.8**
ILSW	**Iliamna Southw**	**1.81**	**235**		**Pn**		**14 32 32.1**	**-0.4**
ILSW	**Iliamna Southw**	**1.81**	**235**	IAML			14 32 58.0	
	comp=N,285nm,0.7s							
ILSW				IAML			14 32 58.0	
	comp=E,570nm,0.8s							
FID	**Port Fidalgo**	**1.85**	**98**		**Pn**		**14 32 31.0**	**-1.9**
FID	**Port Fidalgo**	**1.85**	**98**	IAML			14 33 02.8	
	comp=E,564nm,0.5s							
FID				IAML			14 33 03.2	
	comp=N,559nm,0.4s							
WAT7	**Susitna Watana**	**1.89**	**19**		**Pn**		**14 32 33.0**	**-0.6**
WAT6	**Susitna Watana**	**1.92**	**36**		**Pn**		**14 32 33.4**	**-0.7**
WAT6					**Sn**		**14 32 57.5**	**+0.4**
WAT6	**Susitna Watana**	**1.92**	**36**	P	**Pn**		**14 32 33.1**	**-1.0**
	baz=218,SNR=45							
WAT6				S	**Sn**		**14 32 57.2**	**+0.1**
	baz=218							
HIN	**Hinchinbrook I**	**1.94**	**108**		**Pn**		**14 32 33.0**	**-1.1**
HIN	**Hinchinbrook I**	**1.94**	**108**	IAML			14 33 07.9	
	comp=E,523nm,0.5s							
HIN				IAML			14 33 09.3	
	comp=N,551nm,1.0s							
WAT1	**Susitna Watana**	**1.94**	**23**		**Pn**		**14 32 33.8**	**-0.4**
WAT1	**Susitna Watana**	**1.94**	**23**	P	**Pn**		**14 32 33.8**	**-0.4**
	baz=204							
P19K	**Oil Pt**	**2.06**	**228**		**Pn**		**14 32 35.8**	**-0.1**
P19K	**Oil Pt**	**2.06**	**228**	P	**Pn**		**14 32 35.8**	**-0.1**
	baz=46							
PPLA	**Purkeypile**	**2.07**	**334**		**Pn**		**14 32 35.6**	**-0.5**
PPLA	**Purkeypile**	**2.07**	**334**	P	**Pn**		**14 32 35.5**	**-0.5**
	baz=152,SNR=54							
N19K	**Bonanza Creek**	**2.10**	**265**		**Pn**		**14 32 35.8**	**-0.7**
N19K	**Bonanza Creek**	**2.10**	**265**	P	**Pn**		**14 32 35.8**	**-0.7**
	baz=81,SNR=58							
KLU	**Klutina**	**2.11**	**76**		**Pn**		**14 32 35.9**	**-0.7**
KLU					**Sn**		**14 33 01.9**	**+0.2**
KLU	**Klutina**	**2.11**	**76**	IAML			14 33 11.8	
	comp=E,263nm,0.6s							
KLU				IAML			14 33 13.2	
	comp=N,298nm,0.6s							
KLU	**Klutina**	**2.11**	**76**	P	**Pn**		**14 32 35.9**	**-0.7**
	baz=260,SNR=66							
KLU				S	**Sn**		**14 33 01.7**	**0.0**
	baz=260							
DIV	**Divide**	**2.15**	**86**		**Pn**		**14 32 36.5**	**-0.7**
M19K	**Big River Lodg**	**2.18**	**295**		**Pn**		**14 32 37.0**	**-0.4**
M19K	**Big River Lodg**	**2.18**	**295**	IAML			14 33 08.7	
	comp=N,280nm,0.8s							
M19K	**Big River Lodg**	**2.18**	**295**	P	**Pn**		**14 32 37.0**	**-0.4**
	baz=111,SNR=61							
M19K				S	**Sn**		**14 33 03.5**	**+0.2**
	baz=111							
M24K	**Tolsona, Glenn**	**2.19**	**60**		**Pn**		**14 32 37.9**	**+0.1**
M24K	**Tolsona, Glenn**	**2.19**	**60**	IAML			14 33 13.4	
	comp=N,419nm,0.5s							
M24K	**Tolsona, Glenn**	**2.19**	**60**	P	**Pn**		**14 32 38.0**	**+0.3**
	baz=243,SNR=106							
O19K	**Port Alsworth**	**2.21**	**249**		**Pn**		**14 32 37.2**	**-0.6**
O19K	**Port Alsworth**	**2.21**	**249**	P	**Pn**		**14 32 37.0**	**-0.8**
	baz=65,SNR=23							
EYAK	**Cordova Ski Ar**	**2.24**	**101**		**Pn**		**14 32 36.9**	**-1.4**
EYAK	**Cordova Ski Ar**	**2.24**	**101**	P	**Pn**		**14 32 36.8**	**-1.5**
	baz=285							
L20K	**Farewell, AK**	**2.25**	**311**		**Pn**		**14 32 37.9**	**-0.6**
L20K	**Farewell, AK**	**2.25**	**311**	P	**Pn**		**14 32 37.9**	**-0.6**
	baz=128,SNR=162							
AUL	**Augustine Lava**	**2.33**	**225**		**Pn**		**14 32 40.0**	**+0.4**
TRF	**Thorofare Moun**	**2.40**	**359**		**Pn**		**14 32 39.7**	**-0.9**
TRF	**Thorofare Moun**	**2.40**	**359**	IAML			14 33 20.6	
	comp=N,305nm,0.7s							
TRF				IAML			14 33 22.4	
	comp=E,240nm,0.8s							
TRF	**Thorofare Moun**	**2.40**	**359**	P	**Pn**		**14 32 40.0**	**-0.6**
	baz=179,SNR=87							
DHY	**Denali Highway**	**2.42**	**32**		**Pn**		**14 32 40.4**	**-0.5**
DHY	**Denali Highway**	**2.42**	**32**	IAML			14 33 15.9	
	comp=E,322nm,0.4s							
DHY				IAML			14 33 18.0	
	comp=N,313nm,0.5s							
DHY	**Denali Highway**	**2.42**	**32**	P	**Pn**		**14 32 40.8**	**-0.1**
	baz=214,SNR=34							
RND	**Reindeer**	**2.44**	**14**		**Pn**		**14 32 39.9**	**-1.2**
RND	**Reindeer**	**2.44**	**14**	IAML			14 33 21.4	
	comp=N,267nm,1.2s							
RND				IAML			14 33 21.9	
	comp=E,331nm,0.8s							
L19K	**White Mountain**	**2.49**	**299**		**Pn**		**14 32 41.4**	**-0.3**
L19K	**White Mountain**	**2.49**	**299**	IAML			14 33 12.7	
	comp=E,195nm,0.6s							
L19K				IAML			14 33 27.1	
	comp=N,165nm,1.0s							
L19K	**White Mountain**	**2.49**	**299**	P	**Pn**		**14 32 41.5**	**-0.2**
	baz=115,SNR=56							
KTH	**Kantishna Hill**	**2.53**	**353**		**Pn**		**14 32 42.5**	**+0.2**
KTH	**Kantishna Hill**	**2.53**	**353**	IAML			14 33 20.4	
	comp=N,208nm,0.6s							
KTH				IAML			14 33 28.2	
	comp=E,215nm,0.6s							
CAST	**Castle Rocks**	**2.53**	**340**		**Pn**		**14 32 42.5**	**+0.3**
CAST	**Castle Rocks**	**2.53**	**340**	IAML			14 33 28.6	
	comp=N,171nm,0.6s							
CAST	**Castle Rocks**	**2.53**	**340**	P	**Pn**		**14 32 42.1**	**-0.1**
	baz=159,SNR=66							
SVW2	**Sparrevohn**	**2.61**	**273**		**Pn**		**14 32 42.3**	**-1.1**
SYI	**Shuyak Island**	**2.69**	**205**		**Pn**		**14 32 44.2**	**-0.2**
Q20K	**Shuyak Island**	**2.69**	**205**	P	**Pn**		**14 32 44.1**	**-0.4**
	baz=23							
GOAT	**Goat Mountain**	**2.73**	**98**		**Pn**		**14 32 43.5**	**-1.4**
BMRM	**Bremner River**	**2.73**	**89**		**Pn**		**14 32 43.7**	**-1.4**
BMRM	**Bremner River**	**2.73**	**89**	IAML			14 33 26.5	
	comp=E,148nm,0.6s							
BMRM				IAML			14 33 29.3	
	comp=N,226nm,0.7s							
BMRM	**Bremner River**	**2.73**	**89**	P	**Pn**		**14 32 43.6**	**-1.4**
	baz=274							
MCK	**McKinley**	**2.75**	**12**		**Pn**		**14 32 45.7**	**+0.5**
MCK				IAML			14 33 30.8	
	comp=N,295nm,0.8s							
MCK				IAML			14 33 31.1	
	comp=E,214nm,0.9s							
MCK	**McKinley**	**2.75**	**12**	P	**Pn**		**14 32 45.3**	**+0.1**
	baz=193,SNR=58							
Q19K	**Cape Douglas,**	**2.75**	**220**		**Pn**		**14 32 44.8**	**-0.5**
Q19K	**Cape Douglas,**	**2.75**	**220**	P	**Pn**		**14 32 44.6**	**-0.6**
	baz=38,SNR=6.8							
HARP	**HAARP**	**2.75**	**59**		**Pn**		**14 32 45.2**	**-0.1**
HARP	**HAARP**	**2.75**	**59**	P	**Pn**		**14 32 45.2**	**-0.1**
	baz=243							
N25K	**Chitina, Valde**	**2.76**	**76**		**Pn**		**14 32 44.6**	**-0.8**
N25K	**Chitina, Valde**	**2.76**	**76**	IAML			14 33 28.2	
	comp=N,180nm,0.4s							
N25K	**Chitina, Valde**	**2.76**	**76**	P	**Pn**		**14 32 44.6**	**-0.8**
	baz=261							
O18K	**Koktuh Hills**	**2.76**	**246**		**Pn**		**14 32 44.2**	**-1.1**
O18K	**Koktuh Hills**	**2.76**	**246**	IAML			14 33 18.0	
	comp=N,155nm,0.6s							
O18K	**Koktuh Hills**	**2.76**	**246**	P	**Pn**		**14 32 44.3**	**-1.1**
	baz=62,SNR=23							
RAGM	**Ragged Mountai**	**2.80**	**102**		**Pn**		**14 32 44.2**	**-1.8**
N18K	**Kilae Creek**	**2.81**	**265**		**Pn**		**14 32 44.9**	**-1.1**
N18K	**Kilae Creek**	**2.81**	**265**	P	**Pn**		**14 32 45.0**	**-1.1**
	baz=80,SNR=24							
K20K	**Telida**	**2.93**	**324**		**Pn**		**14 32 47.0**	**-0.8**
K20K	**Telida**	**2.93**	**324**	IAML			14 33 29.5	
	comp=N,122nm,0.9s							
K20K				IAML			14 33 29.6	
	comp=E,166nm,0.6s							
K20K	**Telida**	**2.93**	**324**	P	**Pn**		**14 32 47.0**	**-0.8**
	baz=140,SNR=82							
PAX	**Paxson**	**2.94**	**47**		**Pn**		**14 32 48.5**	**+0.6**
PAX	**Paxson**	**2.94**	**47**	P	**Pn**		**14 32 48.4**	**+0.4**
	baz=231,SNR=31							
CHUM	**Lake Minchumin**	**3.00**	**342**		**Pn**		**14 32 48.5**	**-0.1**
CHUM	**Lake Minchumin**	**3.00**	**342**	P	**Pn**		**14 32 48.3**	**-0.4**
	baz=160,SNR=48							
HMT	**Hamilton**	**3.01**	**101**		**Pn**		**14 32 46.3**	**-2.5**
HMT				IAML			14 33 49.8	
	comp=N,235nm,0.7s							
P18K	**Big Mountain,**	**3.01**	**239**		**Pn**		**14 32 48.2**	**-0.7**
P18K	**Big Mountain,**	**3.01**	**239**	P	**Pn**		**14 32 48.3**	**-0.6**
	baz=54							
BPAW	**Bear Paw Mtn.**	**3.07**	**354**		**Pn**		**14 32 49.5**	**-0.3**
BPAW	**Bear Paw Mtn.**	**3.07**	**354**	P	**Pn**		**14 32 49.4**	**-0.3**
	baz=173,SNR=50							
GLB	**Gilahina Butte**	**3.11**	**80**		**Pn**		**14 32 49.5**	**-0.8**
GLB	**Gilahina Butte**	**3.11**	**80**	IAML			14 33 37.2	
	comp=N,104nm,0.7s							
VRDI	**Verde Repeater**	**3.28**	**84**		**Pn**		**14 32 51.4**	**-1.3**
TT01	**Tatalina**	**3.31**	**307**		**Pn**		**14 32 52.3**	**-0.7**
TTA	**Tatalina**	**3.32**	**307**		**Pn**		**14 32 52.5**	**-0.7**
TTA	**Tatalina**	**3.32**	**307**	IAML			14 33 48.2	
	comp=E,84nm,0.9s							
TTA	**Tatalina**	**3.32**	**307**	P	**Pn**		**14 32 52.3**	**-0.8**
	baz=122,SNR=7.7							
Q18K	**Katmai Hardscr**	**3.42**	**227**	P	**Pn**		**14 32 53.8**	**-0.8**
	baz=43							
K24K	**Donnelly Dome**	**3.44**	**35**	P	**Pn**		**14 32 56.6**	**+1.9**
	baz=219,SNR=38							
CRQM	**Cirque**	**3.46**	**92**		**Pn**		**14 32 55.0**	**-0.2**
CRQM	**Cirque**	**3.46**	**92**	IAML			14 33 48.8	
	comp=E,131nm,0.8s							
CRQM				IAML			14 33 49.5	
	comp=N,154nm,0.8s							
MCARA	**McCarthy VSAT**	**3.49**	**82**		**Pn**		**14 32 55.3**	**0.0**
MCARA	**McCarthy VSAT**	**3.49**	**82**	IAML			14 33 60.0	
	comp=E,180nm,0.7s							
MCARA				IAML			14 34 02.5	
	comp=N,163nm,0.9s							
MCARA	**McCarthy VSAT**	**3.49**	**82**	P	**Pn**		**14 32 54.9**	**-0.5**
	baz=268,SNR=7.8							
WRH	**Wood River Hil**	**3.56**	**15**		**Pn**		**14 32 57.2**	**+0.8**
WRH	**Wood River Hil**	**3.56**	**15**	IAML			14 33 51.3	
	comp=E,68nm,0.5s							
WRH				IAML			14 33 56.7	
	comp=N,70nm,1.0s							
NEA2	**Nenana**	**3.58**	**8**		**Pn**		**14 32 57.2**	**+0.5

SCRK	Sand Creek	4.11	42			Pn	14 33 03.6	-0.3	
SCRK	Sand Creek	4.11	42	IAML			14 34 02.8		
	comp=E,50nm,0.5s								
SCRK				IAML			14 34 20.2		
	comp=N,60nm,1.1s								
SCRK	Sand Creek	4.11	42	P		Pn	14 33 03.8	-0.1	
	baz=227								
MESA	MESA	4.16	99	P		Pn	14 33 03.5	-1.3	
	baz=286								
OHAK	Old Harbor	4.16	204	P		Pn	14 33 02.5	-2.1	
	baz=21								
M27K	Edge Creek, AK	4.17	68	P		Pn	14 33 05.3	+0.4	
	baz=255								
O16K	Kokwok River B	4.19	253			Pn	14 33 04.3	-0.6	
O16K	Kokwok River B	4.19	253	P		Pn	14 33 04.1	-0.8	
	baz=66,SNR=11								
J25K	Salcha River,	4.20	30			Pn	14 33 05.3	+0.2	
J25K	Salcha River,	4.20	30	IAML			14 34 04.5		
	comp=N,65nm,0.5s								
J25K	Salcha River,	4.20	30	P		Pn	14 33 05.7	+0.5	
	baz=214,SNR=30								
I21K	Tanana	4.21	350			Pn	14 33 05.5	+0.2	
I21K	Tanana	4.21	350	IAML			14 34 21.0		
	comp=E,44nm,1.4s								
I21K	Tanana	4.21	350	P		Pn	14 33 05.7	+0.4	
	baz=168,SNR=36								
N16K	Nishlik Lake	4.24	266			Pn	14 33 05.0	-0.7	
N16K	Nishlik Lake	4.24	266	P		Pn	14 33 05.0	-0.7	
	baz=78,SNR=22								
POKR	Poker Plat Res	4.26	16			Pn	14 33 06.6	+0.6	
POKR	Poker Plat Res	4.26	16	IAML			14 34 20.0		
	comp=E,60nm,1.1s								
POKR				IAML			14 34 20.0		
	comp=N,56nm,0.8s								
POKR	Poker Plat Res	4.26	16	P		Pn	14 33 06.1	+0.1	
	baz=198								
CTG	Chitna Glacier	4.32	87	P		Pn	14 33 06.9	+0.1	
	baz=275								
CTGM	Chitina Glacie	4.32	87			Pn	14 33 06.5	-0.4	
P16K	Nushagak River	4.40	246			Pn	14 33 07.5	-0.4	
P16K	Nushagak River	4.40	246	P		Pn	14 33 07.3	-0.6	
	baz=59								
L27K	Beaver Creek,	4.42	59			Pn	14 33 07.8	-0.5	
L27K	Beaver Creek,	4.42	59	P		Pn	14 33 07.7	-0.5	
	baz=247								
BC03		4.44	59			Pn	14 33 08.1	-0.3	
BCAR	Beaver Creek A	4.44	59	Pn		Pn	14 33 07.7	-0.8	
J26L	Joseph Creek	4.61	39			Pn	14 33 11.2	+0.3	
J26L	Joseph Creek	4.61	39	IAML			14 34 21.2		
	comp=E,70nm,0.8s								
J26L	Joseph Creek	4.61	39	P		Pn	14 33 11.1	+0.3	
	baz=224,SNR=18								
R17K	Ugashik Creek	4.67	225	P		Pn	14 33 11.5	0.0	
	baz=40								
YUK3	Moose Creek	4.74	77	P		Pn	14 33 12.3	-0.4	
	baz=266								
H21K	Melozitna Rive	4.76	347			Pn	14 33 12.5	-0.4	
H21K	Melozitna Rive	4.76	347	IAML			14 34 47.9		
	comp=E,28nm,0.8s								
H21K	Melozitna Rive	4.76	347	P		Pn	14 33 12.7	-0.1	
	baz=165,SNR=23								
H23K	Yukon River	4.79	3			Pn	14 33 13.7	+0.4	
H23K	Yukon River	4.79	3	P		Pn	14 33 13.6	+0.4	
	baz=184,SNR=9.2								
H22K	Ishtalitna Cre	4.88	354	P		Pn	14 33 15.1	+0.6	
	baz=173								
O28M	Mount Upton	4.90	89			Pn	14 33 14.6	-0.3	
O28M	Mount Upton	4.90	89	P		Pn	14 33 14.8	-0.2	
	baz=278								
H24K	Noodor Dome	4.91	11			Pn	14 33 15.4	+0.5	
H24K	Noodor Dome	4.91	11	IAML			14 34 44.0		
	comp=E,38nm,0.9s								
H24K	Noodor Dome	4.91	11	P		Pn	14 33 15.2	+0.3	
	baz=193,SNR=11								
PRP	Porcupine Dome	4.95	23			Pn	14 33 16.1	+0.6	
PRP	Porcupine Dome	4.95	23	IAML			14 34 40.3		
	comp=E,48nm,0.9s								
PRP	Porcupine Dome	4.95	23	P		Pn	14 33 16.3	+0.8	
	baz=207								
PINM	Pinnacle	5.00	97	P		Pn	14 33 15.8	-0.4	
	baz=285								
IM03		5.19	344			Pn	14 33 18.2	-0.4	
IMAR	Indian Mountai	5.19	344	Pn		Pn	14 33 18.0	-0.7	
I26K	Coal Creek Min	5.32	34			Pn	14 33 20.6	+0.1	
I26K	Coal Creek Min	5.32	34	P		Pn	14 33 20.7	+0.2	
	baz=220								
H25K	Birch Creek	5.58	19	P		Pn	14 33 24.9	+0.9	
	baz=202								
G21K	Allakaket	5.67	346	P		Pn	14 33 25.7	+0.5	
	baz=164								
G23K	Bananza Creek	5.67	1	P		Pn	14 33 25.5	+0.2	
	baz=181,SNR=19								
M29M	Somme Creek	5.75	71	P		Pn	14 33 26.2	-0.2	
	baz=261								
YUK6	Outpost Mounta	5.76	86	P		Pn	14 33 26.6	-0.1	
	baz=276								
G24K	Hadweenzic Riv	5.79	11	P		Pn	14 33 27.2	+0.3	
	baz=193,SNR=11								
DAWY	Dawson	5.84	54			Pn	14 33 26.8	-0.8	
DAWY	Dawson	5.84	54	P		Pn	14 33 27.0	-0.6	
	baz=244								
FYU	Fort Yukon	5.95	20			Pn	14 33 29.2	+0.2	
I27K	Kandik River	5.98	37	P		Pn	14 33 29.7	+0.2	
	baz=224								
G25K	Bearman Lake	6.01	16	P		Pn	14 33 30.4	+0.6	
	baz=199								
COLD	Coldfoot	6.19	0	Pn		Pn	14 33 33.1	+0.7	
COLD	Coldfoot	6.19	0	P		Pn	14 33 32.0	-0.5	
	baz=180,SNR=7.6								
HYT	Haines Junctio	6.19	87	Pn		Pn	14 33 31.8	-0.8	
HYT	Haines Junctio	6.19	87	P		Pn	14 33 32.1	-0.4	
	baz=278								
N30M	Aishikik Lake	6.34	81	P		Pn	14 33 33.3	-1.3	
	baz=272								
F21K	Alatna River	6.35	348	P		Pn	14 33 35.0	+0.4	
	baz=165								
H27K	Steamboat Moun	6.46	33	P		Pn	14 33 36.0	-0.2	
	baz=221								
F22K	John River	6.53	353	P		Pn	14 33 37.4	+0.4	
	baz=172								
G26K	Porcupine Rive	6.55	23	P		Pn	14 33 37.3	+0.1	
	baz=208								
F24K	Squaw Lake	6.56	8	P		Pn	14 33 37.9	+0.4	
	baz=190								
P30M	Million Dollar	6.59	92	P		Pn	14 33 37.7	-0.3	
	baz=284								
BMAR	Burnt Mountain	6.84	19	Pn		Pn	14 33 41.3	0.0	
F25K	Christian Rive	6.85	15	P		Pn	14 33 41.5	0.0	
	baz=199,SNR=6.1								
G27K	Doyon Strip	6.89	29	P		Pn	14 33 41.6	-0.3	
	baz=217								
I29M	Ogilvie Camp,	6.89	46			Pn	14 33 41.1	-0.9	
E24K	Your Creek	7.08	5	P		Pn	14 33 44.9	+0.2	
	baz=187								
F26K	Sheenjek River	7.16	19	P		Pn	14 33 45.7	+0.1	
	baz=204								
E25K	Arctic Village	7.36	14	P		Pn	14 33 48.4	0.0	
	baz=198								
TOLK	Toolik Lake Re	7.62	2	P		Pn	14 33 52.8	+0.8	
	baz=182								
D23K	Nanushuk River	7.94	359	P		Pn	14 33 55.8	-0.6	
	baz=178								
E27K	Coleen River	8.04	24	P		Pn	14 33 57.7	-0.1	
	baz=211								
D25K	Kavik River	8.45	9	P		Pn	14 34 04.0	+0.7	
	baz=193								

*IDC **03** 14:37:22.7±1.7,51°.46N×175°.65W, h0km, mb3.4/3, mbtmp3.3/4, ML3.6/1, Error ellipse: s-maj=76.7km s-min=26.8km az=170.0*

*AEIC **03** 14:37:30±0.5,51°.8N±0°.1×175°.67W±0°.09, h54km±8km, ML3.4, Error ellipse: s-maj=22.3km s-min=6.0km az=164.0*

*NEIC **03** 14:37:31.1±0.3,51°.7N±0°.2×175°.7W±0°.1, h50km±17km, Error ellipse: s-maj=27.6km s-min=1.9km az=158.0*

ISC 03 14:37:30.1±1.0,51°.7N±0°.1×175°.63W±0°.07,h47km,n43, σ0s88/34,mb3.4/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.34	328		Pn	14 37 40.1	+0.8
GSMY	Great Sitkin M	0.43	323		Pn	14 37 41.0	+0.6
GSCK	Great Sitkin C	0.46	314		Pn	14 37 41.3	+0.6
GSTR	Great Sitkin T	0.48	326		Pn	14 37 41.6	+0.7
GSTD	Great Sitkin T	0.48	319		Pn	14 37 41.5	+0.5
ETKA	Kagalaska Isla	0.51	289		Pn	14 37 42.0	+0.8
ADK	Adak	0.68	286		Pn	14 37 43.8	+0.4
KIWB	Kanaga Island	0.96	280		Pn	14 37 47.4	+0.3
KIKV	Kanaga Island	0.97	281		Pn	14 37 48.0	+0.6
KICM	Kanaga Island	1.00	283		Pn	14 37 48.4	+0.7
KIMD	Kanaga Island	1.00	274		Pn	14 37 48.4	+0.7
KOKL	Mount Kliuchef	1.08	54		Pn	14 37 49.6	+0.7
KOFP	Korovin Flat P	1.11	58		Pn	14 37 50.0	+0.7
KONE	Korovin Northe	1.16	53		Pn	14 37 51.0	+1.1
TAPA	Tanaga Point A	1.36	276		Pn	14 37 53.5	+0.9
TAFP	Tanaga Falls P	1.47	279		Pn	14 37 54.8	+0.6
TASE	Tanaga Southea	1.50	276		Pn	14 37 55.5	+0.9
GAEA	Gareloi East	1.94	274		Pn	14 38 01.7	+1.1
GALA	Gareloi Lava P	1.95	273		Pn	14 38 01.8	+1.1
GANO	Gareloi North	1.98	275		Pn	14 38 01.6	+0.6
CERA	Semis' Rag'd T	2.92	276		Pn	14 38 14.5	+0.6
CEPE	Semis' Perret	2.94	277		Pn	14 38 15.0	+0.7
CESW	Semis' Southwe	2.99	276		Pn	14 38 15.4	+0.5
AMKA	Amchitka	3.18	266		Pn	14 38 18.3	+0.8
LSSE	Little Sitkin	3.61	276		Pn	14 38 24.8	+1.4
LSNW	Little Sitkin	3.64	277		Pn	14 38 24.8	+1.0
LSSA	Little Sitkin	3.64	276		Pn	14 38 25.1	+1.2
NIKH	Nikolski High	4.35	70	Pn	Pn	14 38 35.3	+1.8
SPIA	Saint Paul Isl	6.32	28	Pn	Pn	14 39 01.6	+1.0
SDPT	Sand Point	9.73	62	Pn	Pn	14 39 47.5	+0.2
ILAR	Eielson Array	19.77	38	P	P	14 41 56.0	+0.2
	0.2nm,0.3s,baz=223,slow=10,SNR=7.6						
	0.3nm,0.5s						
H11N2	WAKE ISLAND Hy	34.73	210	T	T	15 21 08.1	
	baz=18,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	34.73	210	T	T	15 21 09.6	
	baz=18,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	34.74	210	T	T	15 21 07.9	
	baz=18,slow=76,SNR=24						
H11S1	WAKE ISLAND Hy	35.94	209	T	T	15 22 46.5	
	baz=19,slow=76,SNR=37						
H11S2	WAKE ISLAND Hy	35.95	209	T	T	15 22 49.6	
	baz=19,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	35.95	209	T	T	15 22 49.6	
	baz=19,slow=76,SNR=22						
KSRS	Korea Array	41.60	273	P	P	14 45 12.2	-1.0
	0.6nm,0.7s,baz=64,slow=5.9,SNR=6.3						
	0.6nm,0.7s						
PDAR	Pinedale Array	44.32	74	P	P	14 45 34.8	-0.7
	0.4nm,0.5s,baz=319,slow=3.6,SNR=5.0						
	0.4nm,0.5s						
TXAR	Lajitas Array	56.65	84	P	P	14 47 08.1	-0.4
	0.1nm,0.4s,baz=321,slow=7.1,SNR=2.4						
	0.1nm,0.4s						
H03N2	Juan Fernandez	119.34	108	T	T	17 07 16.4	
	baz=318,slow=78,SNR=5.2						
H03N1	Juan Fernandez	119.36	108	T	T	17 07 18.9	
	baz=318,slow=78,SNR=4.5						
H03N3	Juan Fernandez	119.36	108	T	T	17 07 17.0	
	baz=318,slow=78,SNR=4.0						

*IDC **03** 15:04:30.8±0.8,60°.14N×139°.68W, h0km, mb3.9/14, mbtmp3.8/19, ML3.7/5, MS3.2/6, Error ellipse: s-maj=17.1km s-min=8.7km az=30.0*

*ANF **03** 15:04:31.8±0.1,60°.14N×139°.50W, h0km, ML4.3/55, Error ellipse: s-maj=1.2km s-min=0.9km az=5.0*

*AEIC **03** 15:04:32±1.9,60°.16N±0°.02×139°.53W±0°.02, h10km±2km, Error ellipse: s-maj=2.4km s-min=1.7km az=167.0*

*NEIC **03** 15:04:32.7,60°.10N×139°.59W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.96; Mθθ-0.61; Mϕϕ-0.35; Mrθ0.15; Mrϕ-0.53; Mθϕ0.06; Fault plane solution: M0 1.01000×10^15^ NP1:ϕs228.87000°, δ40.73000°, λ85.46000°. NP2:ϕs54.85000°, δ49.42000°, λ93.90000°. Principal axes: T 0.9789, Plg85.0000°, Azm356.0000°; N 0.0630, Plg3.0000°, Azm232.0000°; P -1.0419, Plg4.0000°, Azm142.0000°;*

*PGC **03** 15:04:33.1±0.1,60°.16N×139°.59W, h1km, mb4.4, ML4.1/13, Mw4.2, 97km northeast of Yakutat, Ak Southeastern Alaska*

*NEIC **03** 15:04:33.3±2.3,60°.18N±0°.02×139°.59W±0°.03, h10km±2km, Error ellipse: s-maj=2.4km s-min=1.8km az=169.0*

ISC 03 15:04:32.4±0.9,60°.17N±0°.02×139°.56W±0°.01,h11km±6km, n375,σ1s37/450,mb4.2/18,MS3.1/4,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPM	Bancas Point	0.22	190	Pg	Pg	15 04 36.9	-0.2
BCPM				Sg	Sg	15 04 40.3	+0.1
PINM	Pinnacle	0.36	258	P	Pb	15 04 40.0	-0.8
	baz=80,SNR=1000						
PINM				S	Sb	15 04 45.2	-1.3
	baz=80						
PCA	Pinnacle	0.36	258		Pb	15 04 39.9	-1.0
PCA	Pinnacle	0.36	258		Sb	15 04 45.4	-1.1
PCA	Pinnacle	0.36	258	P	Pb	15 04 40.0	-0.8
PCA				S	Sb	15 04 45.4	-1.1
O29M	Mount Kennedy	0.51	75		Pg	15 04 41.7	-0.6
O29M					Sg	15 04 49.1	0.0
O29M	Mount Kennedy	0.51	75	P	Pg	15 04 41.8	-0.5
	baz=253,SNR=442						
O29M				S	Sg	15 04 48.4	-0.6
	baz=253						
PNL	Peninsula	0.51	171		Pg	15 04 41.9	-0.5
PNL					Sg	15 04 49.6	+0.4
PNL	Peninsula	0.51	171	P	Pg	15 04 41.9	-0.5
PNL				S	Sg	15 04 49.6	+0.4
PNL	Peninsula	0.51	171	P	Pg	15 04 41.9	-0.5
	baz=354,SNR=883						
PNL				S	Sg	15 04 48.3	-0.8
	baz=354						
SAMH	Samovar Hills	0.61	267		Pb	15 04 45.2	0.0
SAMH					Sb	15 04 55.4	+1.5
SAMH	Samovar Hills	0.61	267	P	Pb	15 04 45.2	0.0
SAMH				S	Sb	15 04 55.4	+1.5
YKU2	Yakutat	0.67	185	Pg	Pb	15 04 45.5	-0.6
YKU2					Sb	15 04 56.1	+0.8
YKU2				IAML		15 05 05.0	
	comp=N,14μm,0.7s						
O28M	Mount Upton	0.68	333		Pg	15 04 45.1	-0.5
O28M	Mount Upton	0.68	333	P	Pg	15 04 45.2	-0.5
	baz=151,SNR=527						
O28M				S	Sg	15 04 54.9	+0.4
	baz=151						
CHX	Chaix Hills	0.79	263		Pb	15 04 48.3	+0.1
YUK7	Dusty Glacier	0.79	62		Pg	15 04 47.3	-0.4
YUK7	Dusty Glacier	0.79	62		Pg	15 04 47.4	-0.4
YUK7					Sg	15 04 58.0	-0.1
YUK7	Dusty Glacier	0.79	62	P	Pg	15 04 47.4	-0.4
YUK7				S	Sg	15 04 58.0	-0.1
TABL	Table Mountain	0.83	290		Pg	15 04 47.2	-1.3
TABL				Sg	Sg	15 04 59.2	-0.2
TABL	Table Mountain	0.83	290	P	Pg	15 04 47.7	-0.9
TABL				S	Sg	15 04 59.4	0.0
LOGN	Logan Glacier	0.97	313		Pg	15 04 49.8	-1.2
LOGN				Sg	Sb	15 05 04.6	+0.4
LOGN				IAML		15 05 08.3	
	comp=N,7μm,0.8s						
LOGN				IAML		15 05 08.3	
	comp=E,5μm,1.0s						
LOGN	Logan Glacier	0.97	313	P	Pg	15 04 49.9	-1.2
LOGN				S	Sg	15 05 03.0	-0.7
YUK6	Outpost Mounta	0.97	37		Pg	15 04 51.0	-0.1
YUK6					Sg	15 05 04.4	+0.5
YUK6	Outpost Mounta	0.97	37		Pg	15 04 51.2	0.0
YUK6					Sg	15 05 03.7	-0.1
YUK6	Outpost Mounta	0.97	37	P	Pg	15 04 51.2	0.0
YUK6				S	Sg	15 05 03.7	-0.1
YUK6	Outpost Mounta	0.97	37	P	Pg	15 04 51.2	0.0
	baz=216,SNR=339						
YUK6				S	Sg	15 05 04.0	+0.1
	baz=216						
P29M	Windy Craggy	1.07	120		Pg	15 04 50.9	-2.0
P29M				IAML		15 05 09.9	
	comp=E,7μm,0.5s						
P29M	Windy Craggy	1.07	120	P	Pg	15 04 51.0	-1.8
	baz=301,SNR=1000						
P29M				S	Sg	15 05 05.5	-1.2
	baz=301						
YAH	Yahtse	1.11	281		Pb	15 04 53.6	-0.1
YAH				Sg	Sb	15 05 08.8	+0.5
YAH				IAML		15 05 12.8	
	comp=N,4μm,0.7s						
CTGM	Chitina Glacie	1.18	313		Pg	15 04 53.2	-2.0
CTGM				IAML		15 05 13.0	
	comp=N,4μm,0.7s						
CTGM				IAML		15 05 14.9	
	comp=E,4μm,0.6s						
CTGM	Chitina Glacie	1.18	313		Sg	15 05 09.7	-0.8
CTGM	Chitina Glacie	1.18	313	P	Pg	15 04 53.5	-1.7
CTGM				S	Sg	15 05 09.7	-0.8
CTG	Chitna Glacier	1.19	313	P	Pg	15 04 53.4	-1.8
	baz=131,SNR=322						
CTG				S	Sb	15 05 11.2	+0.8
	baz=131						
MESA	MESA	1.20	271		Pb	15 04 55.0	-0.1
MESA				IAML		15 05 24.7	
	comp=E,3μm,0.6s						
MESA				IAML		15 05 25.1	
	comp=N,4μm,1.0s						
MESA	MESA	1.20	271		Sg	15 05 10.2	-0.8
MESA	MESA	1.20	271	P	Pb	15 04 55.1	-0.1
MESA				S	Sg	15 05 10.2	-0.8
MESA	MESA	1.20	271	P	Pb	15 04 55.1	-0.1
	baz=90,SNR=210						
MESA				S	Sn	15 05 12.0	+0.4
	baz=90						
HYT	Haines Junctio	1.21	56	Pg	Pg	15 04 54.6	-1.0
HYT				IAML		15 05 16.0	
	comp=E,3μm,0.4s						
HYT	Haines Junctio	1.21	56		Pg	15 04 54.7	-0.9
HYT					Sg	15 05 10.9	-0.4
HYT	Haines Junctio	1.21	56	P	Pg	15 04 54.7	-0.9
HYT				S	Sg	15 05 10.9	-0.4
HYT	Haines Junctio	1.21	56	P	Pg	15 04 54.6	-1.0
	baz=237,SNR=277						
HYT				S	Sg	15 05 10.7	-0.7
	baz=237						
GRNC	Granite Creek	1.23	298		Pg	15 04 54.1	-1.9
GRNC				IAML		15 05 16.6	
	comp=N,6μm,0.4s						
GRNC	Granite Creek	1.23	298		Sg	15 05 11.4	-0.5
GRNC	Granite Creek	1.23	298	P	Pg	15 04 54.1	-1.9
GRNC				S	Sg	15 05 11.4	-0.5
YUK4	Talbot Arm	1.26	20	Pn	Pn	15 04 58.3	+2.1
YUK4				Sn	Sn	15 05 16.5	+3.3
YUK4	Talbot Arm	1.26	20	Pn	Pn	15 04 58.3	+2.1
YUK4				Sn	Sn	15 05 16.5	+3.3
YUK4	Talbot Arm	1.26	20	P	Pn	15 04 58.2	+2.0
	baz=201,SNR=660						
YUK4				S	Sn	15 05 16.7	+3.4
	baz=201						
YUK5	Granite Creek	1.27	40		Pg	15 04 56.5	-0.4
YUK5	Granite Creek	1.27	40	P	Pg	15 04 56.6	-0.4
YUK5				S	Sg	15 05 13.2	-0.3
BAGL	Bagley Icefiel	1.30	285		Pg	15 04 56.0	-1.3
P30M	Million Dollar	1.30	91		Pg	15 04 55.9	-1.5
P30M	Million Dollar	1.30	91	P	Pg	15 04 55.9	-1.5
	baz=273						
BARN	Barnard Glacie	1.37	312		Pg	15 04 57.0	-1.7
BARN				Sg	Sg	15 05 15.3	-1.1
BARN				IAML		15 05 17.9	
	comp=N,4μm,0.6s						
ISLE	Juniper Island	1.45	289		Pn	15 04 58.0	-0.7
ISLE				IAML		15 05 21.3	
	comp=E,4μm,0.6s						
CYK	Cape Yakataga	1.47	268		Pn	15 04 59.5	+0.7
BARK	Barkley Ridge	1.48	280		Pn	15 04 59.6	+0.5
BARK					Sn	15 05 21.7	+3.2
KIAG	Kiagna River	1.58	300	Pn	Pn	15 05 00.5	0.0
KIAG					Sn	15 05 22.1	+1.1
KIAG	Kiagna River	1.58	300	Pn	Pn	15 05 00.5	0.0
KIAG				Sg	Sn	15 05 22.1	+1.1
BALM	Baldy	1.62	303	Pn	Pn	15 05 01.0	-0.1
BALM					Sg	15 05 24.2	-0.4
BALM	Baldy	1.62	303	Pn	Pn	15 05 01.0	-0.1
BALM				Sg	Sg	15 05 24.2	-0.4
SNH	Sunshine Point	1.64	272		Pn	15 05 01.7	+0.5
SNH				IAML		15 05 28.5	
	comp=N,2μm,0.8s						
WAX	Waxell Ridge	1.66	281		Pn	15 05 02.2	+0.6
WAX				Sn	Sn	15 05 23.9	+0.9
WAX				IAML		15 05 33.4	
	comp=E,3μm,0.6s						
YUK3	Moose Creek	1.67	345		Pn	15 05 02.9	+1.1
YUK3	Moose Creek	1.67	345	Pn	Pn	15 05 03.0	+1.2
YUK3					Sg	15 05 25.9	-0.1
YUK3	Moose Creek	1.67	345	Pn	Pn	15 05 03.0	+1.2
YUK3				Sg	Sg	15 05 25.9	-0.1
YUK3	Moose Creek	1.67	345	P	Pn	15 05 02.9	+1.1
	baz=164,SNR=457						
YUK3				S	Sg	15 05 26.2	+0.2
	baz=164						
TGL	Tana Glacier	1.72	291		Pn	15 05 02.7	+0.3
TGL				Sn	Sn	15 05 25.7	+1.2
TGL				IAML		15 05 34.1	
	comp=E,2μm,0.8s						
YUK2	White River	1.74	339		Pb	15 05 04.2	-0.1
YUK2	White River	1.74	339	Pn	Pb	15 05 04.3	-0.1
YUK2				Sg	Sg	15 05 27.6	-0.7
YUK2	White River	1.74	339	Pn	Pb	15 05 04.3	-0.1
YUK2				Sg	Sg	15 05 27.6	-0.7
PTPK	Patty Peak	1.76	307	Pn	Pn	15 05 03.4	+0.4
PTPK					Sb	15 05 27.8	+0.9
PTPK	Patty Peak	1.76	307	Pn	Pn	15 05 03.4	+0.4
PTPK				Sg	Sb	15 05 27.8	+0.9
PLBC	Pleasant Camp	1.77	113		Pn	15 05 03.0	+0.1
PLBC	Pleasant Camp	1.77	113	Pn	Pn	15 05 03.0	+0.1
PLBC					Sn	15 05 27.3	+1.9
PLBC	Pleasant Camp	1.77	113	Pn	Pn	15 05 03.0	+0.1
PLBC				Sg	Sn	15 05 27.3	+1.9
PLBC	Pleasant Camp	1.77	113	P	Pn	15 05 03.0	+0.1
	baz=295,SNR=219						
N30M	Aishikik Lake	1.77	42		Pn	15 05 04.1	+1.1
N30M	Aishikik Lake	1.77	42	P	Pn	15 05 03.7	+0.6
	baz=223,SNR=332						
N30M				S	Sn	15 05 27.9	+2.3
	baz=223						
O30N	Mendenhall	1.82	69		Pn	15 05 04.2	+0.5
O30N	Mendenhall	1.82	69	P	Pn	15 05 04.1	+0.4
	baz=252,SNR=371						
O30N				S	Sn	15 05 28.6	+1.8
	baz=252						
CRQE	Cirque	1.85	290	P	Pn	15 05 04.8	+0.7
	baz=107,SNR=240						
CRQE				S	Sb	15 05 30.1	+0.7
	baz=107						
KHIT	Khitrov Hills	1.86	280		Pn	15 05 05.3	+1.0
BGLC	Bering Glacier	1.86	270		Pn	15 05 05.6	+1.4
BGLC	Bering Glacier	1.86	270	P	P

M29M Somme Creek 2.34 13 P Pn 15 05 12.8 +1.9
baz=193
HMT Hamilton 2.35 276 Pn 15 05 11.8 +0.8
GLB Gilahina Butte 2.44 303 Pn Pn 15 05 13.6 +1.3
GLB IAML 15 05 47.9
comp=N,753nm,0.7s
GLB IAML 15 05 51.9
comp=E,714nm,0.7s
KAIM Kayak Island 2.45 266 Pn Pn 15 05 13.0 +0.6
KAIM Kayak Island 2.45 266 P Pn 15 05 12.8 +0.5
baz=82
M27K Edge Creek, AK 2.46 334 Pn 15 05 14.2 +1.5
M27K IAML 15 05 54.8
comp=N,756nm,0.8s
M27K IAML 15 06 03.4
comp=E,659nm,1.1s
M27K Edge Creek, AK 2.46 334 P Pn 15 05 13.8 +1.2
baz=152,SNR=276
RAGM Ragged Mountai 2.56 277 Pn 15 05 13.9 0.0
RAGM IAML 15 05 59.7
comp=E,1µm,0.7s
GOAT Goat Mountain 2.60 281 Pn 15 05 15.3 +0.8
BMRM Bremner River 2.62 290 Pn 15 05 15.3 +0.6
BMRM Bremner River 2.62 290 P Pn 15 05 16.1 +1.4
baz=106,SNR=211
BMRM S Sn 15 05 49.5 +3.0
baz=106
M30M Minto, Yukon 2.75 28 Pn 15 05 17.9 +1.3
M30M Minto, Yukon 2.75 28 Pn Pn 15 05 18.0 +1.4
M30M Sg Sg 15 05 59.2 -1.6
M30M Minto, Yukon 2.75 28 P Pn 15 05 17.9 +1.3
baz=210,SNR=143
M26K Nabesna, AK 2.79 325 Pn 15 05 17.9 +0.9
M26K IAML 15 06 02.4
comp=N,541nm,0.6s
M26K Nabesna, AK 2.79 325 P Pn 15 05 17.9 +0.9
baz=142,SNR=108
N25K Chitina, Valde 2.85 302 Pn Pn 15 05 18.8 +0.9
N25K IAML 15 06 04.8
comp=N,564nm,0.6s
N25K Chitina, Valde 2.85 302 P Pn 15 05 19.4 +1.5
baz=118,SNR=357
N25K S Sn 15 05 55.4 +3.1
baz=118
BESE Bessie Mountai 2.89 122 Pn Pn 15 05 18.0 -0.4
BESE Bessie Mountai 2.89 122 Pn Pn 15 05 18.3 -0.2
BESE Sg Sb 15 06 00.6 +1.3
P32M Atlin 3.00 99 Pn 15 05 19.7 -0.3
P32M Atlin 3.00 99 P Pn 15 05 19.6 -0.3
baz=284,SNR=65
BC03 3.09 341 Pn 15 05 22.0 +0.9
BCAR Beaver Creek A 3.09 341 Pn 15 05 21.8 +0.6
L27K Beaver Creek, 3.10 340 Pn 15 05 21.6 +0.4
L27K Beaver Creek, 3.10 340 P Pn 15 05 22.0 +0.8
baz=158,SNR=21
EYAK Cordova Ski Ar 3.10 280 Pn 15 05 21.2 0.0
EYAK Cordova Ski Ar 3.10 280 P Pn 15 05 21.7 +0.5
baz=94,SNR=22
DIV Divide 3.21 290 Pn Pn 15 05 22.6 -0.2
DIV Divide 3.21 290 Pn Pn 15 05 23.8 +1.0
DIV Sn Sn 15 06 02.6 +1.5
M31M Drury Creek, Y 3.23 49 Pn 15 05 24.5 +1.5
M31M IAML 15 06 05.2
comp=N,362nm,0.4s
M31M IAML 15 06 22.1
comp=E,379nm,0.5s
M31M Drury Creek, Y 3.23 49 Pn Pn 15 05 24.6 +1.5
M31M Sn Sn 15 06 03.4 +2.0
M31M Sg Sg 15 06 14.6 -1.3
M31M Drury Creek, Y 3.23 49 P Pn 15 05 24.6 +1.5
baz=233,SNR=140
JIS Juneau Island 3.27 123 Pn 15 05 23.2 -0.3
JIS IAML 15 06 16.2
comp=E,453nm,0.5s
JIS IAML 15 06 17.6
comp=N,597nm,0.5s
P33M Teslin, Yukon 3.37 86 Pn 15 05 24.7 -0.3
P33M IAML 15 06 22.9
comp=N,422nm,0.7s
P33M Teslin, Yukon 3.37 86 Pn Pn 15 05 24.9 -0.1
P33M Sn Sn 15 06 05.3 +0.3
P33M Sg Sb 15 06 16.9 +3.9
P33M Teslin, Yukon 3.37 86 P Pn 15 05 24.7 -0.3
baz=272,SNR=18
KLU Klutina 3.39 296 Pn 15 05 26.6 +1.4
KLU Klutina 3.39 296 P Pn 15 05 26.8 +1.5
baz=110,SNR=220
L26K Log Cabin Wild 3.39 329 Pn Pn 15 05 25.6 +0.4
L26K IAML 15 06 26.5
comp=N,326nm,1.2s
L26K Log Cabin Wild 3.39 329 P Pn 15 05 26.3 +1.1
baz=146,SNR=148
MENT Mentasta 3.42 326 Pn Pn 15 05 26.9 +1.3
HIN Hinchinbrook I 3.47 277 Pn Pn 15 05 26.1 -0.2
FID Port Fidalgo 3.48 283 Pn Pn 15 05 26.9 +0.5
HARP HAARP 3.51 312 P Pn 15 05 28.3 +1.4
baz=127,SNR=27
JPK Jack Peak 3.58 287 Pn 15 05 28.4 +0.5
FARO Faro, Yukon 3.65 53 Pn 15 05 30.1 +1.4
FARO Faro, Yukon 3.65 53 Pn Pn 15 05 30.5 +1.7
FARO Sn Sn 15 06 11.8 +0.1
FARO Sg Sg 15 06 26.7 -2.6
M24K Tolsona, Glenn 3.75 304 P Pn 15 05 32.2 +1.9
baz=118,SNR=37
GLI Glacier Island 3.79 284 Pn 15 05 31.6 +0.8
GLI IAML 15 06 31.0
comp=E,376nm,0.7s
GLI IAML 15 06 33.9
comp=N,470nm,0.7s
GLI Glacier Island 3.79 284 P Pn 15 05 31.2 +0.4
baz=98,SNR=19
SIT Sitka 3.83 143 P Pn 15 05 31.0 -0.2
baz=327
MAYO Mayo, Yukon 3.85 25 Pn 15 05 33.6 +2.0
MAYO Mayo, Yukon 3.85 25 Sn Sn 15 06 18.9 +2.1
MAYO Sg Sg 15 06 33.2 -2.6
DAWY Dawson 3.91 1 Pn 15 05 34.2 +1.8
DAWY IAML 15 06 46.2
comp=E,228nm,1.1s
DAWY Dawson 3.91 1 Pn Pn 15 05 34.3 +1.9
DAWY Sn Sn 15 06 17.8 -0.5
DAWY Dawson 3.91 1 P Pn 15 05 34.2 +1.8
baz=181,SNR=80
P23K Montague Islan 3.93 271 P Pn 15 05 32.8 +0.1
baz=84
PAX Paxson 3.98 317 P Pn 15 05 34.5 +1.0
baz=132,SNR=26
K27K Chicken 4.05 344 Pn Pn 15 05 35.2 +0.9
K27K IAML 15 06 51.1
comp=E,202nm,1.6s
K27K Chicken 4.05 344 P Pn 15 05 35.4 +1.1
baz=162
DOT Dot Lake 4.09 331 Pn Pn 15 05 36.4 +1.5
SCM Sheep Creek Mo 4.13 297 Pn Pn 15 05 36.6 +1.0
SCM Sheep Creek Mo 4.13 297 P Pn 15 05 36.7 +1.2
baz=110,SNR=18
M23K Glacier View 4.30 296 Pn 15 05 39.3 +1.6
M23K Glacier View 4.30 296 P Pn 15 05 38.8 +1.1
baz=109,SNR=26
J29M Klondike Camp 4.34 8 Pn Pn 15 05 39.6 +1.2
J29M Klondike Camp 4.34 8 Pn Pn 15 05 40.5 +2.1
J29M Sn Sn 15 06 31.8 +2.8
SCRK Sand Creek 4.35 333 Pn 15 05 39.0 +0.4
SCRK Sand Creek 4.35 333 P Pn 15 05 39.1 +0.6
baz=149,SNR=39
RIDG Independent Ri 4.36 327 Pn Pn 15 05 39.7 +1.1
RIDG Independent Ri 4.36 327 P Pn 15 05 39.5 +0.9
baz=143,SNR=8.5
PWL Port Wells 4.39 283 Pn Pn 15 05 39.6 +0.5
PWL IAML 15 06 50.2
comp=N,161nm,1.0s
PWL IAML 15 06 55.7
comp=E,183nm,1.1s
PWL Port Wells 4.39 283 P Pn 15 05 39.5 +0.5
baz=95,SNR=5.8
R33M Jennings River 4.41 96 Pn 15 05 39.1 -0.3
R33M Jennings River 4.41 96 P Pn 15 05 38.9 -0.5
baz=284
KNK Knik Glacier 4.54 290 Pn Pn 15 05 42.5 +1.5
KNK Knik Glacier 4.54 290 P Pn 15 05 42.8 +1.8
baz=102,SNR=12
SML Sawmill 4.58 295 Pn Pn 15 05 42.4 +0.8
SML Sawmill 4.58 295 P Pn 15 05 42.8 +1.2
baz=107,SNR=14
WAT6 Susitna Watana 4.62 305 Pn 15 05 43.8 +1.5

WAT6 Susitna Watana 4.62 305 P Pn 15 05 43.0 +0.8
baz=118,SNR=16
MMPY Sheldon Lake, 4.68 55 Pn Pn 15 05 44.5 +1.5
MMPY Sn Sn 15 06 37.5 +0.1
MMPY Sg Sg 15 06 59.1 -3.5
J26L Joseph Creek 4.73 338 Pn Pn 15 05 44.5 +0.8
J26L Joseph Creek 4.73 338 P Pn 15 05 44.9 +1.2
baz=155,SNR=36
DHY Denali Highway 4.73 311 Pn Pn 15 05 45.3 +1.5
DHY Denali Highway 4.73 311 P Pn 15 05 45.0 +1.2
baz=124,SNR=16
GHO Glory Hole Cre 4.84 293 Pn Pn 15 05 46.0 +0.8
PMR Palmer 4.89 291 Pn Pn 15 05 47.3 +1.6
SEW Seward 4.95 273 Pn Pn 15 05 45.6 -1.0
SEW Seward 4.95 273 P Pn 15 05 46.4 -0.1
baz=85
WAT1 Susitna Watana 5.07 306 Pn 15 05 50.2 +1.9
WAT1 Susitna Watana 5.07 306 P Pn 15 05 49.7 +1.4
baz=118
RC01 Rabbit Creek A 5.10 285 Pn Pn 15 05 49.5 +0.8
RC01 Rabbit Creek A 5.10 285 P Pn 15 05 49.7 +1.1
baz=96
DLBC Dease Lake 5.18 105 Pn Pn 15 05 50.2 +0.2
comp=E,1.2nm,0.3s,baz=299,slow=8.9,SNR=12
DLBC Sn Sn 15 06 47.1 -2.6
comp=E,6.4nm,0.3s,baz=14,slow=19,SNR=3.2
DLBC Lg Lg 15 07 10.7
comp=E,11nm,0.3s,baz=154,slow=26,SNR=6.0
comp=E,3.0nm,0.4s
DLBC Dease Lake 5.18 105 Pn 15 05 50.2 +0.2
DLBC Dease Lake 5.18 105 Pn Pn 15 05 50.4 +0.4
DLBC Sg Sb 15 07 12.3 +7.0
DLBC Dease Lake 5.18 105 P Pn 15 05 50.1 +0.2
baz=294
WAT7 Susitna Watana 5.19 305 Pn 15 05 51.4 +1.4
J25K Salcha River, 5.21 331 Pn Pn 15 05 49.6 -0.7
J25K Salcha River, 5.21 331 P Pn 15 05 50.7 +0.4
baz=146,SNR=34
I29M Ogilvie Camp, 5.24 6 Pn Pn 15 05 51.5 +0.9
I29M Ogilvie Camp, 5.24 6 Pn Pn 15 05 52.6 +2.0
I29M Sn Sn 15 06 51.8 +0.8
I29M Ogilvie Camp, 5.24 6 P Pn 15 05 52.4 +1.8
baz=187,SNR=26
SLKM Skilak Lake 5.31 278 Pn 15 05 51.8 +0.2
WRAK Wrangell Islan 5.35 132 Pn 15 05 51.8 -0.3
WRAK IAML 15 07 26.3
comp=E,104nm,1.4s
WRAK IAML 15 07 39.6
comp=E,92nm,0.6s
WRAK Wrangell Islan 5.35 132 P Pn 15 05 52.1 0.0
baz=318,SNR=9.4
M22K Willow 5.38 292 P Pn 15 05 54.6 +2.1
baz=102,SNR=8.5
I26K Coal Creek Min 5.41 344 Pn Pn 15 05 54.3 +1.4
I26K Coal Creek Min 5.41 344 P Pn 15 05 54.7 +1.7
baz=160
HDA Harding Lake 5.47 324 Pn Pn 15 05 55.6 +1.8
RND Reindeer 5.47 310 Pn Pn 15 05 55.6 +1.7
I27K Kandik River 5.53 351 P Pn 15 05 55.9 +1.2
baz=169
CUT Chulitna 5.63 298 Pn Pn 15 05 57.6 +1.7
CUT Chulitna 5.63 298 P Pn 15 05 56.8 +0.9
baz=109,SNR=26
BRSE Bradley Lake S 5.64 270 Pn 15 05 57.5 +1.4
BRSE Bradley Lake S 5.64 270 P Pn 15 05 57.0 +0.9
baz=81
TGTN Hyland Airport 5.68 71 Pn Pn 15 05 58.7 +1.9
TGTN Sg Sg 15 07 29.6 -5.0
IL31 5.73 327 Pn Pn 15 05 57.9 +0.6
ILAR Eielson Array 5.73 327 Pn Pn 15 05 57.1 -0.2
comp=E,0.3nm,0.3s,baz=148,slow=13,SNR=24
ILAR Sn Sn 15 07 01.3 -1.7
comp=E,0.9nm,0.3s,baz=152,slow=15,SNR=5.7
ILAR Lg Lg 15 07 33.6
comp=E,1.4nm,0.3s,baz=129,slow=26,SNR=5.6
comp=E,1.8nm,0.6s
CAPN Captain Cook N 5.77 281 P Pn 15 05 58.0 +0.2
baz=91
T35M Bob Quinn 5.83 119 P Pn 15 05 58.7 0.0
baz=307
CRAG Craig 5.83 141 P Pn 15 05 58.5 -0.3
baz=327
WRH Wood River Hil 5.86 321 Pn Pn 15 06 01.7 +2.5
CNPM China Poot 5.92 269 Pn Pn 15 06 00.4 +0.4
PRP Porcupine Dome 6.02 336 Pn Pn 15 06 02.5 +1.1
PRP Porcupine Dome 6.02 336 P Pn 15 06 02.4 +0.9
baz=81
TRF Thorofare Moun 6.05 307 Pn Pn 15 06 02.7 +0.8
TRF Thorofare Moun 6.05 307 P Pn 15 06 03.0 +1.0
baz=118,SNR=18
POKR Poker Plat Res 6.14 327 P Pn 15 06 04.3 +1.3
baz=140
H27K Steamboat Moun 6.15 353 P Pn 15 06 04.7 +1.6
baz=171
SPU Mount Spurr 6.22 285 Pn Pn 15 06 04.4 +0.3
MDM Murphy Dome 6.25 324 Pn Pn 15 06 06.8 +2.2
KTH Kashwitna Hill 6.35 307 Pn Pn 15 06 07.9 +2.0
O20K Slope Mountain 6.53 275 P Pn 15 06 09.5 +1.1
baz=84
RSO Redoubt South 6.56 278 Pn Pn 15 06 10.9 +1.9
PPLA Purkeypile 6.63 300 Pn Pn 15 06 11.4 +1.6
PPLA Purkeypile 6.63 300 P Pn 15 06 10.9 +1.2
baz=109
BPAW Bear Paw Mtn. 6.65 311 Pn Pn 15 06 10.7 +0.8
BPAW Bear Paw Mtn. 6.65 311 P Pn 15 06 11.1 +1.1
baz=121
I23K Minto, Yukon-K 6.73 322 Pn Pn 15 06 12.4 +1.4
I23K Minto, Yukon-K 6.73 322 P Pn 15 06 12.7 +1.8
baz=133
G27K Doyon Strip 6.73 353 P Pn 15 06 12.2 +1.1
baz=171,SNR=6.2
H25K Birch Creek 6.74 338 P Pn 15 06 12.9 +1.8
baz=152
Q20K Shuyak Island 6.74 262 P Pn 15 06 11.9 +0.7
baz=71
CAST Castle Rocks 6.77 304 Pn Pn 15 06 12.8 +1.2
CAST Castle Rocks 6.77 304 P Pn 15 06 12.1 +0.5
baz=113,SNR=6.4
ILSW Iliamna Southw 6.80 274 Pn Pn 15 06 13.3 +1.1
M20K Styx River 6.81 290 Pn Pn 15 06 14.2 +1.9
M20K Styx River 6.81 290 P Pn 15 06 12.8 +0.5
baz=99,SNR=8.3
H24K Noodor Dome 6.83 330 Pn Pn 15 06 14.9 +2.5
H24K Noodor Dome 6.83 330 P Pn 15 06 13.4 +1.0
baz=142
P19K Oil Pt 6.90 272 Pn Pn 15 06 14.7 +1.3
P19K Oil Pt 6.90 272 P Pn 15 06 14.9 +1.5
baz=80
LIB Langara Island 6.90 146 Pn Pn 15 06 12.2 -1.2
LIB Langara Island 6.90 146 Pn Pn 15 06 12.2 -1.2
FYU Fort Yukon 6.90 341 Pn Pn 15 06 14.5 +1.1
CHUM Lake Minchumin 7.06 307 P Pn 15 06 16.3 +0.8
baz=116,SNR=13
G26K Porcupine Rive 7.06 346 P Pn 15 06 16.4 +0.9
baz=162
MLY Manley 7.09 318 Pn Pn 15 06 17.7 +1.6
MLY Manley 7.09 318 P Pn 15 06 17.2 +1.1
baz=128
G25K Bearman Lake 7.23 339 P Pn 15 06 18.3 +0.4
baz=153
H23K Yukon River 7.26 326 Pn Pn 15 06 20.3 +2.0
H23K Yukon River 7.26 326 P Pn 15 06 19.6 +1.3
baz=137
L20K Farewell, AK 7.27 295 P Pn 15 06 19.5 +1.1
baz=102,SNR=11
Q19K Cape Douglas, 7.27 266 Pn Pn 15 06 19.0 +0.5
Q19K Cape Douglas, 7.27 266 P Pn 15 06 19.1 +0.6
baz=74
N19K Bonanza Creek 7.40 281 Pn Pn 15 06 20.7 +0.3
N19K Bonanza Creek 7.40 281 P Pn 15 06 21.0 +0.6
baz=88
M19K Big River Lodg 7.41 290 Pn Pn 15 06 21.4 +1.0
M19K Big River Lodg 7.41 290 P Pn 15 06 21.4 +1.0
baz=97,SNR=5.5
G24K Hadweenzic Riv 7.45 335 P Pn 15 06 21.8 +0.9
baz=148,SNR=6.6
K20K Telida 7.58 301 Pn Pn 15 06 22.9 +0.1
K20K Telida 7.58 301 P Pn 15 06 23.2 +0.4
baz=108,SNR=8.5
I21K Tanana 7.60 317 Pn Pn 15 06 25.6 +2.7
I21K Tanana 7.60 317 P Pn 15 06 23.9 +0.9
baz=126,SNR=8.5
BMAR Burnt Mountain 7.61 345 Pn Pn 15 06 24.3 +1.1
L19K White Mountain 7.66 292 Pn Pn 15 06 24.6 +0.7
L19K White Mountain 7.66 292 P Pn 15 06 25.3 +1.5
baz=98,SNR=16
OHAK Old Harbor 7.74 254 Pn Pn 15 06 23.9 -1.0
OHAK Old Harbor 7.74 254 P Pn 15 06 24.2 -0.7
baz=62
F26K Sheenjek River 7.81 347 P Pn 15 06 27.9 +2.0
baz=163,SNR=10
O18K Koktuh Hills 7.85 274 Pn Pn 15 06 27.3 +0.8
O18K Koktuh Hills 7.85 274 P Pn 15 06 26.9 +0.5
baz=81
J20K Nowinta River 7.91 307 Pn Pn 15 06 27.7 +0.4
J20K Nowinta River 7.91 307 P Pn 15 06 28.9 +1.7
baz=114,SNR=17
F25K Christian Rive 7.91 343 P Pn 15 06 28.4 +1.0
baz=157
SVW2 Sparrevohn 7.93 284 Pn Pn 15 06 27.7 +0.2
P18K Big Mountain, 7.95 271 P Pn 15 06 29.2 +1.4
baz=78
DIB Dawson Inlet, 8.00 148 Pn Pn 15 06 27.7 -0.7
DIB Dawson Inlet, 8.00 148 Pn Pn 15 06 29.3 +0.9
DIB Dawson Inlet, 8.00 148 Pn Pn 15 06 27.7 -0.7
Q18K Katmai Hardscr 8.03 266 P Pn 15 06 29.7 +0.7
baz=72
E27K Coleen River 8.10 355 P Pn 15 06 31.1 +1.3
baz=173
N18K Kilae Creek 8.10 281 Pn Pn 15 06 30.2 +0.4
N18K Kilae Creek 8.10 281 P Pn 15 06 30.6 +0.8
baz=86
H21K Melozitna Rive 8.16 318 Pn Pn 15 06 33.5 +2.8
H21K Melozitna Rive 8.16 318 P Pn 15 06 32.3 +1.6
baz=126
F24K Squaw Lake 8.23 337 P Pn 15 06 33.0 +1.3
baz=150,SNR=21
TTA Tatalina 8.32 296 Pn Pn 15 06 32.6 -0.4
TTA Tatalina 8.32 296 P Pn 15 06 33.8 +0.8
baz=102,SNR=7.5
E25K Arctic Village 8.40 344 P Pn 15 06 35.3 +1.4
baz=159
COLD Coldfoot 8.50 331 Pn Pn 15 06 37.2 +1.9
COLD Coldfoot 8.50 331 Pn Pn 15 06 36.4 +1.1
COLD Coldfoot 8.50 331 P Pn 15 06 36.7 +1.4
baz=141
FNBB Fort Nelson 8.51 91 Pn Pn 15 06 36.5 +1.0
FNBB Sn Sn 15 08 07.1 -4.3
FNBB Sg Sg 15 08 54.9 -10
FNBB Fort Nelson 8.51 91 Pn Pn 15 06 36.5 +1.0
FNBB Sn Sn 15 08 07.1 -4.3
FNBB Sg Sg 15 08 54.9 -10
NBC2 NorthernBC 2 8.57 85 Pn Pn 15 06 35.2 -1.1
NBC2 Sn Sn 15 08 10.1 -2.8
NBC2 Sg Sg 15 08 57.9 -9.2
NBC2 NorthernBC 2 8.57 85 Pn Pn 15 06 35.2 -1.1
NBC2 Sn Sn 15 08 10.1 -2.8
NBC2 Sg Sg 15 08 57.9 -9.2
INK Inuvik 8.57 15 Pn Pn 15 06 37.0 +0.8
comp=E,1.0nm,0.3s,baz=177,slow=20,SNR=5.7
INK Sn Sn 15 08 10.5 -2.3
comp=E,1.3nm,0.3s,baz=146,slow=13,SNR=3.5
INK Lg Lg 15 08 57.8
comp=E,0.7nm,0.3s,baz=270,slow=27,SNR=1.7
comp=E,4.5nm,0.4s
INK Inuvik 8.57 15 Sn Sn 15 08 08.9 -3.9
INK Inuvik 8.57 15 Pn Pn 15 06 38.9 +2.7
INK Inuvik 8.57 15 Sn Sn 15 08 08.9 -3.9
P17K Kvichak River 8.60 271 P Pn 15 06 37.5 +0.9
baz=76
IMAR Indian Mountai 8.67 318 Pn Pn 15 06 39.1 +1.4
O17K Koliganek Bris 8.80 275 P Pn 15 06 39.9 +0.5
baz=80
E24K Your Creek 8.83 338 P Pn 15 06 42.0 +2.2
baz=150,SNR=32
R17K Ugashik Creek 9.07 261 P Pn 15 06 43.8 +0.7
baz=67
NBC5 NorthernBC 5 9.14 100 Lg 15 09 19.3
NBC5 NorthernBC 5 9.14 100 Sg Sn 15 09 19.3 +52
F22K John River 9.21 328 P Pn 15 06 46.2 +1.2
baz=137
O16K Kokwok River B 9.34 274 P Pn 15 06 47.6 +0.9
baz=78
NBC6 NorthernBC 6 9.43 92 Lg 15 09 30.2
NBC6 NorthernBC 6 9.43 92 Sg Sn 15 09 30.2 +56
TOLK Toolik Lake Re 9.52 337 Pn Pn 15 06 51.8 +2.5
TOLK Toolik Lake Re 9.52 337 P Pn 15 06 49.8 +0.4
baz=148,SNR=7.7
N16K Nishlik Lake 9.53 280 P Pn 15 06 50.2 +0.8
baz=84
E22K Anaktuvuk Pass 9.59 332 P Pn 15 06 51.5 +1.2
baz=140
D25K Kavik River 9.63 345 P Pn 15 06 53.2 +2.4
baz=159,SNR=6.8
C27K Jago River 9.65 351 P Pn 15 06 52.5 +1.4
baz=167
D23K Nanushuk River 10.02 336 P Pn 15 06 57.2 +1.1
baz=146
CHGN Chignik 10.66 257 Pn Pn 15 07 05.3 +0.5
C36M Paulatuk 11.29 29 Pn Pn 15 07 13.5 +0.1
C36M Paulatuk 11.29 29 P Pn 15 07 13.2 -0.2
baz=223
YKA Yellowknife Ar 12.18 68 Pn Pn 15 07 24.7 -0.9
comp=E,0.5nm,0.3s,baz=269,slow=13,SNR=20
YKA Sn Sn 15 09 35.6 -5.5
comp=E,0.2nm,0.3s,baz=261,slow=23,SNR=4.0
YKA Lg Lg 15 10 49.9
baz=274,slow=32
YKA LR LR 15 12 30.6
comp=E,111nm,18.9s,baz=68,slow=39
comp=E,2.9nm,0.8s
A36M Sachs Harbour 13.14 20 Pn 15 07 39.1 +0.4
A36M Sachs Harbour 13.14 20 P Pn 15 07 39.1 +0.4
baz=213
UNV Unalaska Valle 15.91 258 P P 15 08 20.5 +0.9
UNV IAmb IAmb 15 08 57.0
comp=Z,42nm,1.4s
NEW Newport 17.62 123 P Pn 15 08 37.7 0.0
comp=Z,0.2nm,0.3s,baz=78,slow=21,SNR=1.5
NEW LR LR 15 16 26.7
comp=Z,46nm,18.5s,baz=0.5,slow=41
comp=Z,1.4nm,0.6s
YPP Pitchstone Pla 23.46 120 P P 15 09 42.5 +0.4
ELK Elko 24.60 131 P P 15 09 53.0 +0.3
comp=Z,0.3nm,0.4s,baz=136,slow=16,SNR=1.4
comp=Z,0.3nm,0.4s
NVAR Mina Array Bea 25.58 139 P P 15 10 02.4 +0.9
comp=Z,0.2nm,0.7s,baz=332,slow=7.4,SNR=2.0
comp=Z,0.2nm,0.7s
SAO San Andreas Ge 26.14 145 P P 15 10 05.7 -0.7
SAO IAmb IAmb 15 10 40.8
comp=Z,6.6nm,0.9s
BBGB Big Mountain B 26.43 145 P P 15 10 08.0 -1.1
PFO Pinyon Flats O 30.58 140 LR LR 15 24 14.5
comp=Z,38nm,18.7s,baz=354,slow=39
PETK Petropavlovsk- 34.00 287 P P 15 11 14.2 -1.6
comp=Z,0.4nm,0.5s,baz=64,slow=8.6,SNR=1.8
PETK LR LR 15 25 33.4
comp=Z,38nm,18.7s,baz=85,slow=37
comp=Z,0.4nm,0.5s
SFJD Kangerlussuaq 36.87 41 LR LR 15 27 40.5
comp=Z,54nm,18.4s,baz=324,slow=38
SUMG Summit 37.17 29 P P 15 11 43.9 +0.7
SUMG IAmb IAmb 15 12 02.7
comp=Z,7.8nm,1.4s
CCM Cathedral Cave 37.43 104 P P 15 11 45.9 +0.6
SCHQ Schefferville 37.60 65 P P 15 11 47.5 +0.9
comp=Z,1.2nm,0.6s,baz=43,slow=17,SNR=1.7
comp=Z,1.2nm,0.6s
SCHQ Schefferville 37.60 65 P P 15 11 48.0 +1.3
SCHQ IAmb IAmb 15 12 24.8
comp=Z,10nm,1.5s
NRIK Noril'sk 46.45 339 P P 15 12 58.0 -0.6
comp=Z,6.6nm,0.6s,baz=47,slow=3.4,SNR=5.0
comp=Z,6.6nm,0.6s
ARCES ARCESS Array B 50.14 7 P P 15 13 26.7 -0.4
comp=Z,0.8nm,0.6s,baz=359,slow=7.2,SNR=4.7
comp=Z,0.8nm,0.6s
H11N2 WAKE ISLAND Hy 55.22 247 T T 16 13 43.4
baz=31,slow=75,SNR=22
H11N3 WAKE ISLAND Hy 55.22 247 T T 16 13 43.8
baz=31,slow=75,SNR=24
H11N1 WAKE ISLAND Hy 55.23 247 T T 16 13 44.2
baz=31,slow=75,SNR=20
H11S1 WAKE ISLAND Hy 56.37 247 T T 16 14 41.6
baz=30,slow=75,SNR=22
H11S2 WAKE ISLAND Hy 56.38 247 T T 16 14 34.3
baz=30,slow=75,SNR=13
H11S3 WAKE ISLAND Hy 56.39 247 T T 16 14 45.2
baz=30,slow=75,SNR=8.7
NOA NORSAR Array B 57.03 16 LR LR 15 40 52.1
comp=Z,9.7nm,18.1s,baz=90,slow=38

FINES FINES Array B 58.21 8 P **P** **15 14 25.5 -0.4**
comp=Z,0.9nm,0.7s,baz=17,slow=10,SNR=2.3
comp=Z,0.9nm,0.7s
KSRS Korea Array 59.54 293 P **P** **15 14 36.5 +1.0**
comp=Z,1.7nm,0.7s,baz=30,slow=6.6,SNR=14
comp=Z,1.7nm,0.7s
ULN Ulaanbaatar 59.56 314 P **P** **15 14 36.6 +0.8**
ULN IAmb IAmb 15 14 37.9
comp=Z,2.1nm,0.7s
SONM Songino Array 59.82 315 P **P** **15 14 37.8 +0.3**
comp=Z,0.6nm,0.5s,baz=30,slow=9.2,SNR=4.3
comp=Z,0.6nm,0.5s
ZALV Zalesovo Beam 60.83 332 P **P** **15 14 44.4 +0.2**
comp=Z,1.1nm,0.3s,baz=12,slow=8.0,SNR=3.8
comp=Z,1.1nm,0.3s
KURK Kurchatov 65.25 334 P **P** **15 15 12.6 -0.9**
MKAR Makanchi Array 68.07 330 P **P** **15 15 31.4 -0.3**
comp=Z,1.9nm,1.0s,baz=54,slow=4.8,SNR=6.2
comp=Z,1.9nm,1.0s
AKASG Malin Array Be 69.11 8 P **P** **15 15 37.3 -0.7**
comp=Z,0.3nm,0.3s,baz=355,slow=6.1,SNR=8.1
comp=Z,0.3nm,0.3s
ABKAR Akbulak array 69.79 347 P **P** **15 15 42.3 +0.1**
ABKAR IAmb IAmb 15 15 43.4
comp=Z,3.1nm,0.8s
ESDC Sonseca Array 74.03 34 P **P** **15 16 07.7 -0.2**
comp=Z,0.6nm,0.6s,baz=340,slow=6.6,SNR=4.1
comp=Z,0.6nm,0.6s
KKAR Karatay Array 74.17 338 P **P** **15 16 08.6 0.0**
CMAR Chiang Mai Arr 88.59 306 P **P** **15 17 26.3 +1.0**
comp=Z,1.5nm,0.8s,baz=357,slow=5.1,SNR=8.4
comp=Z,1.5nm,0.8s

IDC ***03*** *15:10:49.7±1.5, 7°.50S×128°.63E, h141km±14km, mb3.8/12, mbtmp4.3/17, Error ellipse: s-maj=15.1km s-min=10.1km az=96.0*

NEIC ***03*** *15:10:51.0±2.5, 7°.44S±0°.06×128°.57E±0°.07, h143km±7km, mb4.4/30, Error ellipse: s-maj=10.4km s-min=8.7km az=124.0*

DJA ***03*** *15:10:51.0±0.2, 8°.5±2°×12°.9E±°, h158km±4km, M4.5/28, mB5.0/10, mb4.4/28, MLv4.7/9, Mw(mB)4.4/10*

ISC 03 15:10:50.9±0.4, 7°.50S±0°.04×128°.63E±0°.05, h151km, n114, σ1s78/118, mb4.4/32, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.69**	**100**	Pn	**Pn**	**15 11 34.6**	**+0.1**
SAUI	**Saumlaki**	**2.69**	**100**	P	**Pn**	**15 11 35.8**	**+1.4**
SAUI				S	**Sn**	**15 12 07.9**	**-0.1**
SAUI	**Saumlaki**	**2.69**	**100**	P	**Pn**	**15 11 36.0**	**+1.6**
AAI	**Ambon**	**3.82**	**353**	P	**Pn**	**15 11 51.5**	**+2.6**
MSAI	**Masohi**	**4.14**	**4**	P	**Pn**	**15 11 56.1**	**+3.0**
BATI	**Baumata**	**5.59**	**241**	P	**Pn**	**15 12 12.8**	**+0.5**
	849nm,0.4s,baz=87,slow=3.0,SNR=242						
BATI				S	**Sn**	**15 13 14.0**	**-1.9**
	390nm,0.5s,baz=62,slow=6.7,SNR=3.4						
BATI	**Baumata**	**5.59**	**241**	P	**Pn**	**15 12 12.9**	**+0.6**
	13μm756nm,0.5s						
FAKI	**Fak Fak**	**5.81**	**39**	Pn	**Pn**	**15 12 13.8**	**-1.4**
FAKI	**Fak Fak**	**5.81**	**39**	P	**Pn**	**15 12 13.4**	**-1.7**
	0.5nm2μm71nm,0.5s						
MTN	**Manton Dam**	**5.85**	**155**	Pn	**Pn**	**15 12 15.3**	**-0.4**
MTN	**Manton Dam**	**5.85**	**155**	P	**Pn**	**15 12 15.8**	**+0.1**
	125nm,0.5s						
BBSI	**Bau Bau**	**6.35**	**288**	P	**Pn**	**15 12 24.4**	**+2.1**
	0.0nm140nm8.0nm,0.9s						
KDU	**Kakadu**	**6.39**	**144**	P	**Pn**	**15 12 22.8**	**-0.1**
	63nm,0.7s						
MMRI	**Maumere**	**6.43**	**259**	Pn	**Pn**	**15 12 23.5**	**+0.1**
MMRI	**Maumere**	**6.43**	**259**	P	**Pn**	**15 12 23.9**	**+0.5**
	0.8nm3μm129nm,0.6s						
MMRI	**Maumere**	**6.43**	**259**	P	**Pn**	**15 12 24.1**	**+0.7**
	159nm,1.0s						
LBMI	**Labuha**	**6.91**	**351**	P	**Pn**	**15 12 30.4**	**+0.5**
	28nm,0.9s						
EDFI	**Ende, Flores**	**6.98**	**259**	P	**Pn**	**15 12 31.0**	**+0.1**
	1μm43nm,0.9s						
SIJI	**Sorong**	**7.10**	**22**	P	**Pn**	**15 12 32.4**	**0.0**
	13nm,0.3s,baz=214,slow=23,SNR=41						
SIJI				S	**Sn**	**15 13 50.8**	**-1.1**
	16nm,0.3s,baz=272,slow=23,SNR=9.3						
SWI	**Sorong**	**7.10**	**22**	P	**Pn**	**15 12 32.5**	**+0.1**
KNRA	**Kununurra**	**8.12**	**179**	Pn	**Pn**	**15 12 45.2**	**-0.8**
KNRA	**Kununurra**	**8.12**	**179**	P	**Pn**	**15 12 45.0**	**-1.0**
	35nm,0.5s						
TNTI	**Ternate**	**8.32**	**351**	P	**Pn**	**15 12 48.5**	**-0.1**
	44nm,1.6s						
BASI	**Baing, Sumba**	**8.40**	**251**	P	**Pn**	**15 12 49.0**	**-0.7**
	194nm,1.3s						
LUWI	**Luwuk**	**8.68**	**317**	Pn	**Pn**	**15 12 49.7**	**-3.7**
BKSI	**Bulukumba**	**8.73**	**284**	P	**Pn**	**15 12 53.8**	**-0.3**
	24nm,1.1s						
BNSI	**Bone**	**9.02**	**290**	P	**Pn**	**15 12 59.5**	**+1.5**
	24nm,1.3s						
WBSI	**Waikabubak, Su**	**9.38**	**256**	P	**Pn**	**15 13 02.2**	**-0.6**
	2μm206nm,0.6s						
PLAI	**Plampang**	**10.82**	**262**	P	**Pn**	**15 13 20.9**	**-1.0**
	67nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.93**	**195**	P	**Pn**	**15 13 20.3**	**-2.9**
	7.6nm,0.4s,baz=24,slow=11,SNR=86						
FITZ				S	Sn	15 15 13.6	-11
	21nm,0.4s,baz=88,slow=20,SNR=10.0						
FITZ	**Fitzroy Crossi**	**10.93**	**195**	Pn	**Pn**	**15 13 20.4**	**-2.8**
FITZ	**Fitzroy Crossi**	**10.93**	**195**	P	**Pn**	**15 13 20.4**	**-2.8**
	15nm,0.7s						
SMPI	**Sarmi**	**11.44**	**62**	P	**Pn**	**15 13 29.2**	**-0.7**
	13nm,1.1s						
TWSI	**Taliwang, Sumb**	**11.70**	**263**	P	**Pn**	**15 13 33.1**	**-0.2**
WB0	**Warramunga Arr**	**13.41**	**156**	Pn	**Pn**	**15 13 53.5**	**-2.0**
WRAB	**Tennant Creek**	**13.54**	**156**	P	**Pn**	**15 13 55.0**	**-2.1**
	16nm,1.1s						
WRA	**Warramunga Arr**	**13.55**	**156**	P	**Pn**	**15 13 55.1**	**-2.0**
	1.2nm,0.4s,baz=332,slow=13,SNR=49						
WRA				S	Sn	15 16 15.4	-12
	13nm,0.6s,baz=329,slow=24,SNR=8.2						
WRA	**Warramunga Arr**	**13.55**	**156**	Pn	**Pn**	**15 13 54.6**	**-2.6**
WB2	**Warramunga Arr**	**13.55**	**156**	Pn	**Pn**	**15 13 54.5**	**-2.7**
WR0	**Warramunga Arr**	**13.64**	**156**	Pn	**Pn**	**15 13 55.8**	**-2.6**
JAGI	**Jajag, Banyuwa**	**14.37**	**265**	Pn	**Pn**	**15 14 05.3**	**-2.2**
JAGI	**Jajag, Banyuwa**	**14.37**	**265**	P	**Pn**	**15 14 08.3**	**+0.7**
	61nm,1.8s						
COEN	**Coen**	**15.66**	**115**	Pn	**Pn**	**15 14 21.4**	**-2.1**
MBWA	**Marble Bar**	**16.07**	**211**	Pn	**Pn**	**15 14 27.1**	**-1.4**
MBWA				IAmb	IAmb	15 14 41.8	
	comp=Z,34nm,1.5s						
MBWA	**Marble Bar**	**16.07**	**211**	P	**Pn**	**15 14 28.0**	**-0.6**
	comp=Z,9.3nm,2.7s						
MYLDM	**Lahad Datu**	**16.15**	**321**		**Pn**	**15 14 29.0**	**-0.6**
MYLDM				IAmb	IAmb	15 14 53.2	
	comp=Z,21nm,1.0s						
PSA00	**Pilbara Seismi**	**16.36**	**210**		**Pn**	**15 14 32.5**	**+0.4**
PSA00				IAmb	IAmb	15 14 48.2	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	**16.36**	**210**		**Pn**	**15 14 32.6**	**+0.5**
PSA00				IAmb	IAmb	15 14 48.8	
	comp=Z,11nm,1.5s						
PSA00	**Pilbara Seismi**	**16.36**	**210**	P	**P**	**15 14 33.2**	**+1.1**
	comp=Z,18nm,0.7s						
QIS	**Mount Isa**	**16.77**	**142**	P	**Pn**	**15 14 37.8**	**+0.7**
	comp=Z,11nm,2.4s						
AS31	**Alice Springs**	**16.85**	**163**		**Pn**	**15 14 39.1**	**+1.0**
ASAR	**Alice Springs**	**16.85**	**163**	P	**Pn**	**15 14 38.7**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=339,slow=9.8,SNR=54						
ASAR				S	**S**	**15 17 36.8**	**-8.6**
	comp=Z,3.8nm,0.4s,baz=341,slow=26,SNR=6.7						
ASAR	**Alice Springs**	**16.85**	**163**		**Pn**	**15 14 39.5**	**+1.4**
WRKA	**Warakurna**	**17.44**	**181**	P	**Pn**	**15 14 46.0**	**+0.9**
	comp=Z,15nm,0.6s						
KKM	**Kota Kinabalu**	**18.29**	**317**	P	**Pn**	**15 15 01.9**	**+6.6**
	comp=Z,21nm,1.0s						
PMG	**Port Moresby**	**18.42**	**97**	P	**P**	**15 14 54.8**	**-0.1**
	comp=Z,12nm,0.8s,baz=270,slow=9.1,SNR=1.2						
MTSU	**Mount Surprise**	**18.57**	**126**	P	**Pn**	**15 14 59.7**	**+1.2**
	comp=Z,8.0nm,0.6s						
KSM	**Kuching**	**20.34**	**295**	P	**P**	**15 15 16.2**	**+0.7**
KSM				IAmb	IAmb	15 15 21.3	
	comp=Z,12nm,0.8s						
GIRL	**Giralia**	**20.46**	**221**	P	**P**	**15 15 18.4**	**+1.7**
GIRL	**Giralia**	**20.46**	**221**	P	Pn	15 15 19.8	-0.9
	comp=Z,100nm,1.9s						
OOD	**Oodnadatta**	**21.26**	**163**	P	**P**	**15 15 26.1**	**+0.8**
	comp=Z,16nm,0.4s						
MEEK	**Meekatharra**	**21.28**	**205**	P	**P**	**15 15 28.4**	**+2.8**
	comp=Z,21nm,3.0s						
INKA	**Innaminka**	**23.17**	**152**	P	**P**	**15 15 46.5**	**+2.3**
	comp=Z,21nm,0.7s						
MULG	**Mulgathing**	**23.23**	**168**	P	**P**	**15 15 46.1**	**+1.4**
QLP	**Quilpie**	**24.09**	**144**	P	**P**	**15 15 55.9**	**+3.3**
	comp=Z,23nm,0.5s						
MORW	**Morawa**	**24.51**	**207**	P	**P**	**15 15 58.5**	**+2.1**
MORW				IAmb	IAmb	15 16 30.7	
	comp=Z,12nm,1.1s						
MORW	**Morawa**	**24.51**	**207**	P	**P**	**15 15 58.4**	**+2.0**
	comp=Z,12nm,0.7s						
LCRK	**Leigh Creek**	**24.53**	**160**	P	**P**	**15 15 58.3**	**+1.8**
	comp=Z,23nm,2.1s						
BBOO	**Buckleboo**	**26.11**	**166**	P	**P**	**15 16 11.6**	**+0.8**
BBOO				IAmb	IAmb	15 16 34.9	
	comp=Z,20nm,1.4s						
BBOO	**Buckleboo**	**26.11**	**166**	P	**P**	**15 16 11.8**	**+1.0**
	comp=Z,23nm,2.4s						
STKA	**Stephens Creek**	**27.09**	**155**	P	**P**	**15 16 19.5**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=328,slow=8.8,SNR=9.6						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**27.09**	**155**	P	**P**	**15 16 20.4**	**+0.8**
HTT	**Hallett**	**27.50**	**161**	P	**P**	**15 16 25.0**	**+1.7**
	comp=Z,11nm,1.8s						
CMSA	**Cobar Meteorol**	**28.73**	**149**	P	**P**	**15 16 35.6**	**+1.4**
	comp=Z,13nm,2.3s						
ARPS	**Mount Arapiles**	**31.52**	**159**	P	**P**	**15 17 00.7**	**+2.0**
	comp=Z,17nm,0.8s						
TPUB	**Ta-pu**	**31.60**	**346**	P	**P**	**15 16 56.8**	**-2.8**
YOJ	**Yonaguni jima**	**32.24**	**350**	P	**P**	**15 17 03.4**	**-1.7**
CAN	**Canberra**	**33.40**	**149**	P	**P**	**15 17 17.8**	**+2.6**
CAN	**Canberra**	**33.40**	**149**	P	**P**	**15 17 17.7**	**+2.5**
	comp=Z,47nm,0.5s						
TOO	**Toolangi**	**33.62**	**155**	P	**P**	**15 17 19.5**	**+2.4**
TOO				IAmb	IAmb	15 17 24.6	
	comp=Z,18nm,1.4s						
TOO	**Toolangi**	**33.62**	**155**	P	**P**	**15 17 20.2**	**+3.2**
JOW	**Kunigami**	**34.13**	**359**	P	**P**	**15 17 21.3**	**-0.2**
	comp=Z,2.9nm,0.5s,baz=159,slow=14,SNR=5.5						
	comp=Z,2.9nm,0.5s						
JOW	**Kunigami**	**34.13**	**359**	P	**P**	**15 17 20.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**39.03**	**312**	P	**P**	**15 18 02.7**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=141,slow=6.7,SNR=11						
CMAR				PcP	**PcP**	**15 20 10.8**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=183,slow=3.1,SNR=5.7						
	comp=Z,1.3nm,0.6s						
CHTO	**Chiang Mai**	**39.25**	**312**	P	**P**	**15 18 05.4**	**+0.4**
ENH	**Enshi**	**41.82**	**335**	P	**P**	**15 18 25.5**	**-0.4**
ENH				IAmb	IAmb	15 18 26.4	
	comp=Z,10nm,0.7s						
MJAR	**Matsushiro Arr**	**44.73**	**11**	P	**P**	**15 18 47.2**	**-2.0**
	comp=Z,1.6nm,0.8s,baz=186,slow=10,SNR=5.7						
	comp=Z,1.6nm,0.8s						
KSRS	**Korea Array**	**44.73**	**359**	P	**P**	**15 18 49.1**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=178,slow=9.3,SNR=11						
	comp=Z,1.1nm,0.5s						
SEHB	**SEOHWA**	**45.54**	**360**	P	**P**	**15 18 56.1**	**+0.6**
JSD	**Sado**	**46.19**	**11**	P	**P**	**15 18 59.8**	**-0.8**
JSD				IAmb	IAmb	15 19 01.0	
	comp=Z,10nm,1.4s						
JMM	**Marumori**	**46.54**	**13**	P	**P**	**15 19 03.8**	**+0.5**
JMM				IAmb	IAmb	15 19 15.2	
	comp=Z,9.7nm,1.0s						
USRK	**Ussuriysk Ar.**	**51.55**	**3**	P	**P**	**15 19 41.3**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=188,slow=7.0,SNR=6.0						
	comp=Z,1.3nm,0.4s						
USRK	**Ussuriysk Ar.**	**51.55**	**3**	P	**P**	**15 19 41.5**	**+0.2**
BKZ	**Black Stump Fm**	**53.22**	**134**	P	**P**	**15 19 54.6**	**+0.7**
ULN	**Ulaanbaatar**	**58.34**	**343**	P	**P**	**15 20 30.4**	**+0.1**
ULN				IAmb	IAmb	15 20 32.4	
	comp=Z,4.2nm,0.6s						
SONM	**Songino Array**	**58.50**	**343**	P	**P**	**15 20 31.9**	**+0.5**
	comp=Z,3.5nm,0.6s,baz=164,slow=6.7,SNR=14						
	comp=Z,3.5nm,0.6s						
SONM	**Songino Array**	**58.50**	**343**	P	**P**	**15 20 32.1**	**+0.7**
SONM				IAmb	IAmb	15 20 33.5	
	comp=Z,3.2nm,0.7s						
PEA0B	**Petropavlovsk-**	**65.23**	**19**	P	**P**	**15 21 16.2**	**+0.1**
PEA0B				IAmb	IAmb	15 21 18.4	
	comp=Z,6.3nm,1.1s						
PETK	**Petropavlovsk-**	**65.23**	**19**	P	**P**	**15 21 15.5**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=186,slow=4.8,SNR=26						
	comp=Z,2.7nm,0.6s						
MK31	**Makanchi Array**	**67.91**	**328**	P	**P**	**15 21 33.3**	**0.0**
MK31				IAmb	IAmb	15 21 33.7	
	comp=Z,3.8nm,0.7s						
MKAR	**Makanchi Array**	**67.91**	**328**	P	**P**	**15 21 33.3**	**0.0**
	comp=Z,4.0nm,0.5s,baz=118,slow=8.0,SNR=54						
	comp=Z,4.0nm,0.5s						
ZAA0	**Zalesovo Array**	**71.44**	**334**	P	**P**	**15 21 53.9**	**-0.7**
ZAA0				IAmb	IAmb	15 21 54.4	
	comp=Z,3.5nm,0.6s						
ZALV	**Zalesovo Beam**	**71.44**	**334**	P	**P**	**15 21 53.7**	**-1.0**
	comp=Z,4.0nm,0.5s,baz=131,slow=5.2,SNR=15						
	comp=Z,4.0nm,0.5s						
ZALV	**Zalesovo Beam**	**71.44**	**334**	P	**P**	**15 21 53.9**	**-0.7**
VNDA	**Vanda**	**72.12**	**173**	P	**P**	**15 21 57.2**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=309,slow=8.4,SNR=6.3						
	comp=Z,0.6nm,0.3s						
KURK	**Kurchatov**	**72.25**	**329**	P	**P**	**15 21 58.5**	**-1.1**
KURK				IAmb	IAmb	15 22 00.4	
	comp=Z,8.9nm,1.1s						
KKAR	**Karatay Array**	**72.83**	**319**	P	**P**	**15 22 03.9**	**+0.6**
SBA	**Scott Base**	**73.02**	**172**	P	**P**	**15 22 04.9**	**+1.1**
VOI	**Vohitsoka**	**79.70**	**249**	P	**P**	**15 22 43.1**	**+0.5**
ABKAR	**Akbulak array**	**82.06**	**322**	P	**P**	**15 22 53.5**	**-0.8**
ILAR	**Eielson Array**	**94.38**	**25**	P	**P**	**15 23 51.1**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=264,slow=4.2,SNR=4.7						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**126.35**	**59**	PKP	**PKPdf**	**15 29 37.3**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=205,slow=4.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**127.57**	**281**	PKP	**PKPdf**	**15 29 39.3**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=80,slow=0.7,SNR=3.5						
LPAZ	**La Paz**	**151.12**	**145**	PKPbc	**PKiKP**	**15 30 29.3**	**+0.8**
	comp=Z,1.8nm,0.4s,baz=38,slow=5.6,SNR=11						

NEIC ***03*** *15:15:17.1±1.1, 55°.8S±0°.1×27°.2W±0°.2, h8km±3km, mb5.1/60, Error ellipse: s-maj=16.6km s-min=13.4km az=49.0*

IDC ***03*** *15:15:19.2±2.9, 55°.67S×27°.11W, h22km±17km, mb4.5/14, mbtmp4.6/15, ML4.0/1, MS4.0/29, Error ellipse: s-maj=18.2km s-min=14.2km az=48.0*

GCMT ***03*** *15:15:24.1±0.3, 55°.51S±0°.02×27°.02W±0°.03, h32km, MW5.0/73, Moment Tensor Solution. s30,c35; s73,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.30±.29; $M_{\theta\theta}$-1.71±.19; $M_{\phi\phi}$-2.59±.17; $M_{r\theta}$0.51±.20; $M_{r\phi}$1.87±.07; $M_{\theta\phi}$1.30±.14; Best double couple: M_o4.39400×10^{16} NP1:ϕ_s336.00000°, δ51.00000°, λ108.00000°. NP2: ϕ_s129.00000°, δ42.00000°, λ69.00000°. Principal axes: T 4.6560, Plg75.0000°, Azm304.0000°; N -0.5240, Plg14.0000°, Azm144.0000°; P -4.1320, Plg5.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 15:15:19.6±0.3, 55°.65S±0°.06×27°.20W±0°.07, h25km, n318, σ0s99/304, mb5.1/38, MS4.1/29, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.53**	**281**	Pn	**Pn**	**15 16 39.7**	**-0.4**
ORCD	**Orcadas**	**10.55**	**234**		**Pn**	**15 17 47.3**	**-1.6**
VNA1	**Neumayer--Stat**	**17.17**	**159**	P	**P**	**15 19 19.8**	**+1.0**
VNA1	**Neumayer--Stat**	**17.17**	**159**	ScP	**ScP**	**15 27 33.5**	**+0.6**
VNA3	**Neumayer Olymp**	**17.37**	**161**	P	**P**	**15 19 20.2**	**-0.9**
VNA3				S	S	15 22 55.6	+15
VNA3	**Neumayer Olymp**	**17.37**	**161**	ScP	**ScP**	**15 27 32.4**	**-1.0**
VNA2	**Neumayer--Watz**	**17.56**	**158**	P	**P**	**15 19 23.7**	**+0.5**
	baz=318,slow=15						
VNA2				S	S	15 22 59.9	+16
VNA2	**Neumayer--Watz**	**17.56**	**158**	ScP	**ScP**	**15 27 34.4**	**+0.6**
EFI	**East Falkland**	**18.63**	**269**	P	**P**	**15 19 35.5**	**+0.5**
SNAA	**Sanae**	**19.11**	**157**	P	**P**	**15 19 39.3**	**-0.9**
SNAA				S	**S**	**15 23 24.3**	**+9.2**
SNAA	**Sanae**	**19.11**	**157**	ScP	**ScP**	**15 27 37.3**	**+0.2**
SNAA	**Sanae**	**19.11**	**157**	P	**P**	**15 19 39.3**	**-0.9**
	0.4nm,0.3s,baz=305,slow=7.9,SNR=26						
SNAA				S	**S**	**15 23 18.3**	**+3.2**
	0.7nm,0.6s,baz=316,slow=17,SNR=1.1						
SNAA				PcP	**PcP**	**15 24 02.9**	**-0.4**
	1.5nm,0.8s,baz=347,slow=21,SNR=1.8						
SNAA				LR	LR	15 25 27.1	
	comp=Z,347nm,21.2s,baz=320,slow=32						
SNAA				ScP	**ScP**	**15 27 36.5**	**-0.7**
	1.6nm,0.8s,baz=229,slow=5.0,SNR=5.6						
	10nm,0.7s						
SNAA	**Sanae**	**19.11**	**157**	P	**P**	**15 19 38.6**	**-1.6**
PMSA	**Palmer Station**	**20.16**	**228**	P	**P**	**15 19 51.8**	**+0.2**
	18nm,0.8s,baz=66,slow=9.1,SNR=12						
PMSA				LR	LR	15 26 33.2	
	comp=Z,440nm,18.4s,baz=70,slow=33						
	18nm,0.8s						
PMSA	**Palmer Station**	**20.16**	**228**	P	**P**	**15 19 51.7**	**+0.1**
TROLL	**Troll, Antarti**	**20.61**	**154**	P	**P**	**15 19 56.6**	**0.0**
SMAI	**San Martin Ant**	**22.07**	**220**	P	**P**	**15 20 09.9**	**-2.2**
BELA	**Belgrano 2**	**22.47**	**184**	P	**P**	**15 20 14.5**	**-1.9**
MG02	**Cerro Sombrero**	**24.47**	**259**	P	**P**	**15 20 36.2**	**0.0**
MG03	**Isla Dawson**	**24.74**	**256**	P	**P**	**15 20 38.5**	**-0.2**
MG03				IAmb	IAmb	15 20 45.0	
	comp=Z,38nm,1.2s						
TRQA	**Tornquist**	**29.16**	**292**	P	**P**	**15 21 18.6**	**0.0**
PLTB	**Pedras Altas**	**30.23**	**311**	P	**P**	**15 21 29.5**	**+1.4**
PLTB				IAmb	IAmb	15 21 30.7	
	comp=Z,23nm,1.0s						
PLCA	**Paso Flores**	**31.93**	**279**	P	**P**	**15 21 42.4**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=153,slow=11,SNR=3.0						
PLCA				PcP	**PcP**	**15 24 32.6**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=84,slow=2.9,SNR=3.1						
PLCA				LR	LR	15 35 11.6	
	comp=Z,181nm,18.3s,baz=126,slow=37						
	comp=Z,2.2nm,0.9s						
ITQB	**Itaqui**	**33.34**	**309**	P	**P**	**15 21 55.7**	**+0.3**
ITQB				IAmb	IAmb	15 21 57.5	
	comp=Z,41nm,1.0s						
ITAB	**Concordia**	**33.63**	**317**	P	**P**	**15 21 59.5**	**+1.6**
ITAB				IAmb	IAmb	15 22 01.2	
	comp=Z,24nm,1.0s						
QSPA	**South Pole Qui**	**34.60**	**180**	LR	LR	15 35 51.2	
	comp=Z,215nm,18.0s,baz=190,slow=36						
QSPA	**South Pole Qui**	**34.60**	**180**	P	**P**	**15 22 05.8**	**-0.4**
QSPA				IAmb	IAmb	15 22 13.3	
	comp=Z,54nm,1.4s						
CPUP	**Villa Florida**	**36.55**	**311**	P	**P**	**15 22 23.4**	**+0.4**
	comp=Z,21nm,1.0s,baz=150,slow=8.2,SNR=35						
CPUP				LR	LR	15 38 16.3	
	comp=Z,194nm,18.5s,baz=154,slow=38						
	comp=Z,21nm,1.0s						
CPUP	**Villa Florida**	**36.55**	**311**	P	**P**	**15 22 23.6**	**+0.6**
CPUP				IAmb	IAmb	15 22 25.0	
	comp=Z,32nm,1.1s						
LMEL	**Las Melosas**	**36.71**	**288**	P	**P**	**15 22 26.1**	**+1.5**
PEL	**Peldehue**	**37.50**	**288**	P	**P**	**15 22 30.3**	**-0.9**
PEL				IAmb	IAmb	15 22 38.9	
	comp=Z,29nm,0.6s						
VA05	**Santo Domingo**	**37.61**	**287**	P	**P**	**15 22 31.4**	**-0.6**
VA05				IAmb	IAmb	15 22 33.2	
	comp=Z,23nm,0.7s						
MT02	**Curacav**	**37.66**	**288**	P	**P**	**15 22 32.0**	**-0.5**
ZON	**Zonda**	**37.68**	**292**	P	**P**	**15 22 32.0**	**-0.7**
ZON				IAmb	IAmb	15 22 39.0	
	comp=Z,19nm,0.7s						
VA03	**San Esteban**	**37.72**	**289**	P	**P**	**15 22 33.7**	**+0.6**
VA03				IAmb	IAmb	15 22 41.2	
	comp=Z,23nm,0.7s						
TRCB	**Terra Rica**	**37.84**	**320**	P	**P**	**15 22 34.9**	**+0.8**
TRCB				IAmb	IAmb	15 22 36.5	
	comp=Z,31nm,0.8s						
CO01	**Juntas del Tor**	**39.66**	**292**	P	**P**	**15 22 51.1**	**+1.6**
GO04	**Tololo Observa**	**39.88**	**291**	P	**P**	**15 22 50.1**	**-1.2**
CO05	**La Serena**	**40.31**	**291**	P	**P**	**15 22 54.0**	**-0.6**
CO05				IAmb	IAmb	15 23 01.6	
	comp=Z,50nm,0.8s						
MAW	**Mawson**	**40.47**	**144**	P	**P**	**15 22 55.6**	**0.0**
	comp=Z,6.3nm,0.7s,baz=237,slow=8.9,SNR=15						
MAW				LR	LR	15 37 26.9	
	comp=Z,160nm,21.6s,baz=254,slow=33						
	comp=Z,6.3nm,0.7s						
MAW	**Mawson**	**40.47**	**144**	P	**P**	**15 22 54.6**	**-0.9**
SUR	**Sutherland**	**40.54**	**75**	P	**P**	**15 22 55.5**	**-1.3**
	comp=Z,13nm,1.1s,baz=114,slow=20,SNR=1.8						
SUR				LR	LR	15 36 46.8	
	comp=Z,278nm,18.1s,baz=214,slow=32						
	comp=Z,13nm,1.1s						
LCO	**Las Campanas**	**40.75**	**293**	P	**P**	**15 22 57.9**	**-0.7**
AC04	**Llanos de Chal**	**41.59**	**293**	P	**P**	**15 23 06.0**	**+0.7**
AC04				IAmb	IAmb	15 23 07.2	
	comp=Z,55nm,0.9s						
GO03	**Copiap**	**41.64**	**294**	P	**P**	**15 23 05.7**	**0.0**
GO03				IAmb	IAmb	15 23 16.9	
	comp=Z,24nm,0.8

MACA	Manacapuru-AM	58.86 320	P	P	15 25 15.7	-0.3	
MACA			IAmb	IAmb	15 25 16.3		
	comp=Z,16nm,0.8s						
CZSB	Cruzeiro do Su	59.75 305	P	P	15 25 22.4	+0.1	
CZSB			IAmb	IAmb	15 27 23.3		
	comp=Z,24nm,0.4s						
BOAV	Boa Vista	63.96 322	P	P	15 25 50.3	-0.2	
BOAV			IAmb	IAmb	15 25 51.7		
	comp=Z,16nm,0.9s						
DBIC	Dimbokro	64.81 25	P	P	15 25 55.5	-0.5	
	comp=Z,2.3nm,0.7s,baz=307,slow=13,SNR=1.1						
DBIC			LR	LR	15 47 34.9		
	comp=Z,137nm,20.2s,baz=188,slow=30						
	comp=Z,2.3nm,0.7s						
OPO	Ambohidratompo	66.08 88	LR	LR	15 49 04.3		
	comp=Z,198nm,21.8s,baz=12,slow=31						
BOSC	San Juan Bosco	66.49 302	P	P	15 26 07.4	+0.2	
BOSC			IAmb	IAmb	15 26 12.2		
	comp=Z,6.3nm,0.5s						
ARNL	Arenillas	66.91 300	P	P	15 26 10.9	+1.2	
OTAV	Otavalo	69.43 304	P	P	15 26 26.7	+0.7	
OTAV			IAmb	IAmb	15 26 58.4		
	comp=Z,15nm,0.9s						
TULM	Tulcn-Chalpat	69.54 304	P	P	15 26 26.5	-0.2	
PRAC	Prado	70.87 309	eP	P	15 26 35.0	+0.7	
ROSC	El Rosal	71.62 310	P	P	15 26 40.5	+1.2	
	comp=Z,4.0nm,0.3s,baz=25,slow=8.7,SNR=5.0						
ROSC			LR	LR	15 59 51.7		
	comp=Z,97nm,19.4s,baz=98,slow=37						
	comp=Z,4.0nm,0.3s						
ROSC	El Rosal	71.62 310	P	P	15 26 40.0	+0.7	
ROSC			IAmb	IAmb	15 26 41.5		
	comp=Z,18nm,1.1s						
YOTC	Yotoco, Valle	71.76 307	eP	P	15 26 39.9	+0.1	
MBAR	Mbarara	71.97 63	LR	LR	15 54 57.1		
	comp=Z,106nm,21.1s,baz=176,slow=33						
RUSC	La Rusia	72.03 311	eP	P	15 26 41.7	-0.1	
NORC	Norcasia	72.51 310	eP	P	15 26 41.4	-2.8	
PLMC	San Jos del P	72.55 308	eP	P	15 26 44.2	-0.2	
TOA0	Torodi Ar. Sit	72.71 30	P	P	15 26 46.7	+1.5	
TORD	Torodi Ar. Bea	72.71 30	P	P	15 26 45.1	-0.1	
	comp=Z,5.4nm,0.6s,baz=197,slow=5.2,SNR=31						
	comp=Z,5.4nm,0.6s						
TORD	Torodi Ar. Bea	72.71 30	P	P	15 26 45.6	+0.4	
BAUV	El Baul	72.76 317	P	P	15 26 45.7	+0.1	
PTBC	PUERTO BERRIO,	73.20 310	eP	P	15 26 46.8	-1.4	
SOCV	Socops	73.27 314	eP	P	15 26 49.6	+1.0	
BIRV	Birongo	73.50 320	P	P	15 26 51.4	+1.5	
SDV	Santo Domingo	73.72 315	LR	LR	15 58 35.3		
	comp=Z,170nm,21.7s,baz=168,slow=35						
SDV	Santo Domingo	73.72 315	P	P	15 26 51.8	+0.3	
SDV			IAmb	IAmb	15 26 53.3		
	comp=Z,30nm,1.1s						
SJCC	San Jacinto, C	76.52 311	eP	P	15 27 08.0	+0.6	
GDHS	Morne Mazeau,	77.36 326	P	P	15 27 12.9	+0.8	
DRK0	Durika	79.59 304	P	P	15 27 26.8	+2.2	
SJG	San Juan	80.52 323	LR	LR	16 02 31.4		
	comp=Z,89nm,21.9s,baz=198,slow=35						
MTO3	Montecristo	86.97 301	P	P	15 28 02.2	-0.4	
MTO3			IAmb	IAmb	15 28 16.2		
	comp=Z,25nm,1.4s						
MDT	Midelt	90.21 19	LR	LR	16 05 56.8		
	comp=Z,84nm,18.5s,baz=180,slow=34						
STKA	Stephens Creek	92.29 170	P	P	15 28 26.3	-1.1	
	comp=Z,21nm,0.7s,baz=151,slow=22,SNR=3.0						
	comp=Z,2.1nm,0.7s						
RAR	Rarotonga	93.52 224	LR	LR	16 04 19.3		
	comp=Z,84nm,18.3s,baz=110,slow=31						
KEST	Kesra	96.23 29	LR	LR	16 07 53.7		
	comp=Z,99nm,18.1s,baz=303,slow=33						
ESDC	Sonseca Array	97.00 18	LR	LR	16 09 43.2		
	comp=Z,64nm,18.6s,baz=138,slow=34						
ASAR	Alice Springs	99.37 162	P	Pdif	15 28 58.5	-1.3	
	comp=Z,0.9nm,0.7s,baz=181,slow=3.2,SNR=10						
ASAR			PP	PP	15 33 02.0	+0.1	
	comp=Z,0.5nm,0.8s,baz=189,slow=7.9,SNR=3.0						
ASAR			PKKP	PKKPdf	15 45 22.2	-0.7	
	comp=Z,0.4nm,0.7s,baz=17,slow=1.9,SNR=5.7						
ASAR			LR	LR	16 10 23.3		
	comp=Z,40nm,20.9s,baz=146,slow=33						
	comp=Z,0.9nm,0.7s						
WRA	Warramunga Arr	103.09 162	Pdiff	Pdif	15 29 14.7	-1.6	
	comp=Z,0.7nm,0.9s,baz=193,slow=4.1,SNR=3.3						
SNCC	San Nicolas Is	117.96 289	P	PKiKP	15 34 04.4	+1.0	
	baz=140						
EDW2	Edwards Air Fo	118.39 291	P	PKiKP	15 34 05.2	+0.9	
	baz=140						
TPNV	Topopah Spring	119.05 294	P	PKPdf	15 34 05.6	0.0	
	baz=140						
R11A	Troy Canyon, C	119.77 295	P	PKiKP	15 34 07.1	+0.1	
	baz=140						
NIL	Nilore	122.69 77		PKPdf	15 34 12.0	-0.5	
FINES	FINESS Array B	124.03 28	PKP	PKPdf	15 34 13.9	-0.1	
	comp=Z,2.1nm,0.7s,baz=111,slow=4.3,SNR=8.6						
GAR	Garm	125.04 71	PKPdf	PKiKP	15 34 17.6	+0.2	
CMAR	Chiang Mai Arr	125.21 110	PKP	PKPdf	15 34 17.7	-0.1	
	comp=Z,2.5nm,0.8s,baz=234,slow=3.1,SNR=11						
CMAR	Chiang Mai Arr	125.21 110	PKPdf	PKPdf	15 34 17.1	-0.6	
MSO	Missoula	125.23 303	P	PKiKP	15 34 17.9	+0.5	
	baz=136						
L04D	Klamath Falls	126.09 294	P	PKiKP	15 34 19.6	+0.3	
	baz=136						
G08A	Pilot Rock	126.57 299	PKPdf	PKPdf	15 34 19.9	+0.2	
ABKAR	Akbulak array	127.15 55	PKPdf	PKPdf	15 34 19.4	-1.0	
ABKAR	Akbulak array	127.15 55	PKPdf	PKPdf	15 34 20.4	-0.1	
KKAR	Karatay Array	128.07 67	PKPdf	PKPdf	15 34 22.1	-0.4	
I02E	Swisshome, OR	128.22 294	P	PKiKP	15 34 24.1	+0.8	
	baz=134						
KSH	Kashi	128.47 74	PKP	PKiKP	15 34 24.1	0.0	
ARCES	ARCESS Array B	130.58 22	PKP	PKPdf	15 34 26.5	+0.1	
	comp=Z,6.0nm,0.9s,baz=187,slow=3.1,SNR=9.7						
PZH	PanZhiHua	133.23 107	PKP	PKiKP	15 34 34.5	+0.4	
BRVK	Borovoye	134.54 57	PKPdf	PKPdf	15 34 34.4	0.0	
YKA	Yellowknife Ar	135.87 318	PKP	PKPdf	15 34 36.3	-0.2	
	comp=Z,1.9nm,0.7s,baz=123,slow=2.1,SNR=10.0						
YKA			PP	PP	15 37 16.4	-0.1	
	comp=Z,1.0nm,0.9s,baz=118,slow=6.9,SNR=7.9						
MK31	Makanchi Array	136.76 71	PKPdf	PKPdf	15 34 38.6	-0.1	
MKAR	Makanchi Array	136.76 71	PKP	PKPdf	15 34 38.9	+0.1	
	comp=Z,0.6nm,0.6s,baz=254,slow=4.5,SNR=5.8						
MKAR			SKPbc	SKPbc	15 38 08.7	-0.9	
	comp=Z,0.8nm,1.0s,baz=253,slow=1.5,SNR=4.3						
CD2	Chengdu	137.77 105	PKP	PKPdf	15 34 41.5	+0.3	
WMQ	Urumqi	137.83 78	ePKP	PKiKP	15 34 43.3	+0.4	
WMQ			LR	LR			
	comp=Z,160nm,18.7s						
GTA	Gaotai	141.75 92	ePKP	PKPdf	15 34 44.8	-3.4	
GTA			sPKP		15 34 54.3		
ZALV	Zalesovo Beam	142.20 63	PKhKP	PKPpre	15 34 41.4		
	comp=Z,0.9nm,0.6s,baz=266,slow=1.8,SNR=3.5						
ZALV			PKP	PKPdf	15 34 47.8	-0.6	
	comp=Z,1.9nm,0.6s,baz=252,slow=3.0,SNR=4.3						
FARO	Faro, Yukon	143.30 311	PKPpre	PKPpre	15 34 46.3		
M31M	Drury Creek, Y	143.73 311	PKPpre	PKPpre	15 34 47.5		
A36M	Sachs Harbour	143.87 329		PKPpre	15 34 49.6		
HYT	Haines Junctio	144.54 308	PKPdf	PKPdf	15 34 52.2	-0.3	
HYT	Haines Junctio	144.54 308	P	PKPdf	15 34 52.2	-0.3	
	baz=114						
N30M	Aishikik Lake	144.61 309	P	PKPdf	15 34 52.0	-0.4	
	baz=113,SNR=20						
O29M	Mount Kennedy	144.82 306	P	PKPbc	15 34 52.3	+0.1	
	baz=114						
M30M	Minto, Yukon	144.91 311		PKPab	15 34 52.6	+0.4	
M30M	Minto, Yukon	144.91 311	P	PKPab	15 34 52.4	+0.1	
	baz=112						
PNL	Peninsula	144.94 305	P	PKPab	15 34 52.7	+0.3	
	baz=114						
YUK6	Outpost Mounta	144.98 308	P	PKPbc	15 34 52.7	-0.1	
	baz=113						
LYN	LuoYang	145.26 110	⇑PKPbc	PKPbc	15 34 53.3	-0.9	
YUK4	Talbot Arm	145.26 308	P	PKPab	15 34 53.9	+0.1	
	baz=112						
INK	Inuvik	145.49 321		PKPab	15 34 54.1	0.0	
INK	Inuvik	145.49 321	P	PKPab	15 34 54.3	+0.2	
	baz=106,SNR=10						
O28M	Mount Upton	145.74 307	P	PKPbc	15 34 55.4	+0.1	
	baz=112						
YUK3	Moose Creek	146.22 308	P	PKPbc	15 34 56.4	-0.2	
	baz=111						
MESA	MESA	146.32 305	P	PKPbc	15 34 56.7	-0.2	
	baz=112						
CTG	Chitna Glacier	146.33 307	P	PKPbc	15 34 56.7	-0.1	
	baz=111						
I29M	Ogilvie Camp,	146.47 315	PKPdf	PKPbc	15 34 56.7	-0.3	
I29M	Ogilvie Camp,	146.47 315	P	PKPbc	15 34 56.7	-0.3	
	baz=107						
DAWY	Dawson	146.52 312	PKPdf	PKPbc	15 34 56.8	-0.4	
DAWY	Dawson	146.52 312	P	PKPbc	15 34 57.0	-0.2	
	baz=108						
NJ2	Nanjing	146.55 121	ePKPbc	PKPbc	15 34 57.3	-0.9	
BVCY	Beaver Creek	146.62 309	P	PKPbc	15 34 57.5	0.0	
	baz=110						
M27K	Edge Creek, AK	147.05 309	PKPdf	PKPbc	15 34 58.5	-0.4	
M27K	Edge Creek, AK	147.05 309	P	PKPbc	15 34 58.4	-0.5	
	baz=109						
CRQE	Cirque	147.06 306	P	PKPbc	15 34 58.4	-0.6	
	baz=110						
BCAR	Beaver Creek A	147.23 310	PKPdf	PKPbc	15 34 59.0	-0.3	
MCARA	McCarthy VSAT	147.24 307	P	PKPbc	15 34 59.7	+0.4	
	baz=110						
L27K	Beaver Creek,	147.25 310	PKPdf	PKPbc	15 34 59.1	-0.2	
L27K	Beaver Creek,	147.25 310	P	PKPbc	15 34 59.4	+0.1	
	baz=108						
M26K	Nabesna, AK	147.56 309	P	PKPbc	15 35 00.4	+0.3	
	baz=108						
K27K	Chicken	147.64 312	PKPdf	PKPdf	15 34 58.7	+1.2	
K27K	Chicken	147.64 312	P	PKPbc	15 35 01.0	+0.8	
	baz=106						
BMRM	Bremner River	147.83 306		PKPbc	15 35 00.3	-0.6	
BMRM	Bremner River	147.83 306	P	PKPbc	15 35 00.4	-0.6	
	baz=109						
I27K	Kandik River	147.86 315	P	PKPbc	15 35 01.5	+0.6	
	baz=104						
L26K	Log Cabin Wild	147.90 310	PKPdf	PKPbc	15 35 00.3	-0.7	
L26K	Log Cabin Wild	147.90 310	P	PKPbc	15 35 01.2	+0.2	
	baz=107						
H27K	Steamboat Moun	147.97 316	P	PKPbc	15 35 01.4	+0.2	
	baz=103						
N25K	Chitina, Valde	148.03 307	P	PKPbc	15 35 01.5	0.0	
	baz=108						
MENT	Mentasta	148.04 309		PKPbc	15 35 00.1	-1.3	
G27K	Doyon Strip	148.15 317	P	PKPbc	15 35 01.5	-0.1	
	baz=102						
EYAK	Cordova Ski Ar	148.22 304	P	PKPbc	15 35 02.0	+0.1	
	baz=109						
BTO	Baotou	148.31 100	ePKPbc	PKPbc	15 35 02.8	-0.1	
J26L	Joseph Creek	148.39 312		PKPbc	15 35 02.8	+0.4	
J26L	Joseph Creek	148.39 312	P	PKPbc	15 35 02.4	0.0	
	baz=104						
E27K	Coleen River	148.39 319	P	PKPbc	15 35 02.4	+0.2	
	baz=100						
I26K	Coal Creek Min	148.41 314	P	PKPbc	15 35 02.3	0.0	
	baz=104						
SCRK	Sand Creek	148.44 311	PKPbc	PKPbc	15 35 02.3	-0.2	
SCRK	Sand Creek	148.44 311	P	PKPbc	15 35 02.3	-0.2	
	baz=105						
HARP	HAARP	148.52 308	P	PKPbc	15 35 03.1	+0.5	
	baz=107						
HNS	HongShan	148.59 109	PKPbc	PKPbc	15 35 03.9	+0.3	
KLU	Klutina	148.60 306	PKPbc	PKPbc	15 35 02.7	-0.3	
KLU	Klutina	148.60 306	P	PKPbc	15 35 03.7	+0.8	
	baz=108,SNR=9.4						
NRIK	Noril'sk	148.70 38	PKPbc	PKPbc	15 35 03.0	+0.1	
	comp=Z,8.4nm,0.9s,baz=210,slow=1.9,SNR=8.0						
NRIK	Noril'sk	148.70 38	PKPbc	PKPbc	15 35 03.4	+0.5	
RIDG	Independent Ri	148.74 311	PKPbc	PKPbc	15 35 03.5	+0.2	
RIDG	Independent Ri	148.74 311	P	PKPbc	15 35 03.5	+0.2	
	baz=105						
PAX	Paxson	148.82 309	PKPbc	PKPbc	15 35 03.6	+0.1	
PAX	Paxson	148.82 309	P	PKPbc	15 35 03.4	-0.1	
	baz=106						
M24K	Tolsona, Glenn	148.89 307	P	PKPbc	15 35 03.8	+0.2	
	baz=106						
GLI	Glacier Island	148.96 305	P	PKPbc	15 35 03.9	+0.1	
	baz=108						
TIA	Tai'an	148.97 114	ePKPbc	PKPbc	15 35 03.6	-1.0	
G26K	Porcupine Rive	149.00 317	P	PKPbc	15 35 04.0	+0.3	
	baz=100						
K24K	Donnelly Dome	149.16 311	P	PKPbc	15 35 04.6	+0.3	
	baz=104						
J25K	Salcha River,	149.18 312	PKPbc	PKPbc	15 35 04.6	+0.3	
J25K	Salcha River,	149.18 312	P	PKPbc	15 35 04.7	+0.4	
	baz=103						
F26K	Sheenjek River	149.26 318	P	PKPbc	15 35 05.0	+0.6	
	baz=99						
HHC	Hu-ho-hao-te	149.33 101	ePKPbc	PKPdf	15 34 59.1	-2.0	
SCM	Sheep Creek Mo	149.34 306	P	PKPbc	15 35 04.9	+0.1	
	baz=106						
C27K	Jago River	149.35 322	P	PKPbc	15 35 04.9	+0.4	
	baz=96,SNR=5.2						
BMAR	Burnt Mountain	149.39 318		PKPbc	15 35 05.1	+0.3	
PRP	Porcupine Dome	149.43 314	PKPbc	PKPbc	15 35 04.5	-0.6	
PRP	Porcupine Dome	149.43 314	P	PKPbc	15 35 05.3	+0.2	
	baz=101						
FYU	Fort Yukon	149.50 316	PKPbc	PKPbc	15 35 04.8	-0.1	
M23K	Glacier View	149.51 306	P	PKPbc	15 35 04.9	-0.2	
	baz=106						
PWL	Port Wells	149.53 304	PKPbc	PKPbc	15 35 04.9	-0.3	
PWL	Port Wells	149.53 304	P	PKPbc	15 35 05.3	+0.1	
	baz=107						
DHY	Denali Highway	149.68 309	P	PKPbc	15 35 06.0	+0.3	
	baz=104,SNR=8.0						
H25K	Birch Creek	149.68 315	P	PKPbc	15 35 05.5	+0.2	
	baz=100						
WAT6	Susitna Watana	149.72 308	P	PKPbc	15 35 05.9	+0.1	
	baz=105,SNR=7.5						
KNK	Knik Glacier	149.74 305	P	PKPbc	15 35 06.0	+0.2	
	baz=106						
C26K	Camden Bay	149.79 323	P	PKiKP	15 35 06.2	-0.3	
	baz=94						
SML	Sawmill	149.79 306	PKPbc	PKPbc	15 35 05.6	-0.3	
SML	Sawmill	149.79 306	P	PKPbc	15 35 05.9	0.0	
	baz=106,SNR=5.6						
HDA	Harding Lake	149.80 311	PKPbc	PKPbc	15 35 04.9	-0.9	
HDA	Harding Lake	149.80 311	P	PKiKP	15 35 06.4	-0.3	
	baz=102						
F25K	Christian River	149.82 318	P	PKPbc	15 35 05.8	0.0	
	baz=98,SNR=10						
SEW	Seward	149.83 303	P	PKPbc	15 35 05.9	0.0	
	baz=108						
IL31		149.85 312	PKPbc	PKPbc	15 35 05.0	-0.8	
ILAR	Eielson Array	149.85 312	PKPbc	PKPbc	15 35 05.8	0.0	
	comp=Z,18nm,1.1s,baz=122,slow=1.4,SNR=60						
ILAR	Eielson Array	149.85 312		PKPbc	15 35 05.2	-0.6	
E25K	Arctic Village	149.85 319	P	PKPbc	15 35 05.9	+0.1	
	baz=97,SNR=17						
G25K	Bearman Lake	149.88 316	P	PKiKP	15 35 06.4	-0.3	
	baz=99						
GHO	Glory Hole Cre	150.05 306	PKPbc	PKPbc	15 35 06.8	+0.3	
POKR	Poker Plat Res	150.14 313	P	PKPbc	15 35 06.2	-0.3	
	baz=101						
WAT1	Susitna Watana	150.15 308	P	PKPbc	15 35 06.8	+0.1	
	baz=104						
RC01	Rabbit Creek A	150.25 304	P	PKPbc	15 35 06.4	-0.5	
	baz=106						
D25K	Kavik River	150.26 321	P	PKPbc	15 35 06.6	-0.2	
	baz=94,SNR=6.2						
COLA	College	150.27 312	P	PKPbc	15 35 06.5	-0.4	
	baz=101						
TCOL	CIGO, UAF Yank	150.28 312	P	PKPbc	15 35 06.3	-0.5	
	baz=101						
WRH	Wood River Hil	150.30 311	PKPbc	PKPbc	15 35 06.9	0.0	
BRSE	Bradley Lake S	150.34 301	P	PKPbc	15 35 06.9	-0.3	
	baz=108						
G24K	Hadweenzic Riv	150.41 316	P	PKPbc	15 35 07.0	-0.2	
	baz=98,SNR=12						
H24K	Noodor Dome	150.44 314	PKPbc	PKPbc	15 35 07.0	-0.3	
H24K	Noodor Dome	150.44 314	P	PKPbc	15 35 07.5	+0.2	
	baz=99,SNR=6.6						
MCK	McKinley	150.51 310	PKPbc	PKPbc	15 35 07.3	-0.3	
MCK	McKinley	150.51 310	P	PKPbc	15 35 07.2	-0.3	
	baz=102,SNR=7.5						
M22K	Willow	150.60 306	PKPbc	PKPbc	15 35 07.9	+0.2	
M22K	Willow	150.60 306	P	PKiKP	15 35 08.4	0.0	
	baz=104						
F24K	Squaw Lake	150.66 318	P	PKiKP	15 35 08.2	-0.3	
	baz=96,SNR=8.1						
SONM	Songino Array	150.71 86	PKP	PKPdf	15 35 02.3	-0.8	
	comp=Z,1.3nm,1.0s,baz=199,slow=3.1,SNR=4.3						
SONM			PKPbc	PKPbc	15 35 08.5	-0.1	
	comp=Z,16nm,1.0s,baz=223,slow=2.6,SNR=33						
NEA2	Nenana	150.74 311	P	PKPbc	15 35 07.7	-0.3	
	baz=100,SNR=9.8						
OHAK	Old Harbor	150.80 296	P	PKPbc	15 35 08.3	-0.1	
	baz=110						
Q20K	Shuyak Island	150.81 299	P	PKPbc	15 35 08.0	-0.3	
	baz=108						
CUT	Chulitna	150.82 307	P	PKPbc	15 35 08.2	0.0	
	baz=103						
CAPN	Captain Cook N	150.83 303	P	PKiKP	15 35 08.8	-0.1	
	baz=106						
E24K	Your Creek	150.94 319	P	PKPbc	15 35 08.7	+0.3	
	baz=94,SNR=8.9						
SII	Sitkinak Islan	151.03 294	P	PKPbc	15 35 08.8	-0.1	
	baz=111						
TRF	Thorofare Moun	151.05 309		PKPbc	15 35 08.8	-0.2	
TRF	Thorofare Moun	151.05 309	P	PKPbc	15 35 08.8	-0.2	
	baz=101						
ULN	Ulaanbaatar	151.09 86		PKPbc	15 35 08.1	-1.5	
C24K	Franklin Bluff	151.10 322	P	PKPbc	15 35 08.3	-0.4	
	baz=91						
H23K	Yukon River	151.12 314	P	PKiKP	15 35 09.6	+0.1	
	baz=98						
D24K	Happy Valley	151.12 321	P	PKiKP	15 35 09.1	-0.2	
	baz=92						
JSU	Suzuyama	151.19 138		PKPbc	15 35 08.7	-1.4	
KTH	Kantishna Hill	151.35 309		PKPbc	15 35 09.4	-0.2	
O20K	Slope Mountain	151.35 302	P	PKPbc	15 35 08.6	-1.0	
	baz=106						
TOLK	Toolik Lake Re	151.38 320	P	PKPbc	15 35 09.6	+0.2	
	baz=92						
G23K	Bananza Creek	151.41 316	P	PKPbc	15 35 09.4	-0.1	
	baz=96,SNR=12						
BPAW	Bear Paw Mtn.	151.47 310	PKPbc	PKPbc	15 35 09.4	-0.4	
BPAW	Bear Paw Mtn.	151.47 310	P	PKPbc	15 35 09.2	-0.6	
	baz=100,SNR=25						
MLY	Manley	151.51 312	P	PKiKP	15 35 10.3	0.0	
	baz=98,SNR=5.6						
COLD	Coldfoot	151.53 317	PKPbc	PKPbc	15 35 10.1	+0.2	
COLD	Coldfoot	151.53 317	P	PKPbc	15 35 10.0	+0.2	
	baz=94,SNR=7.3						
C23K	Itkillik River	151.76 322	P	PKiKP	15 35 10.5	0.0	
	baz=89						
D23K	Nanushuk River	151.79 320	P	PKiKP	15 35 10.7	0.0	
	baz=91						
PPLA	Purkeypile	151.79 307	P	PKPbc	15 35 10.6	-0.1	
	baz=101						
CAST	Castle Rocks	151.84 309	P	PKiKP	15 35 10.9	-0.1	
	baz=100						
H22K	Ishtalitna Cre	151.88 314	P	PKPbc	15 35 10.5	-0.2	
	baz=96						
CHUM	Lake Minchumin	152.02 310	P	PKPbc	15 35 10.8	-0.2	
	baz=99						
M20K	Styx River	152.02 305	PKPbc	PKPbc	15 35 10.8	-0.4	
M20K	Styx River	152.02 305	P	PKPbc	15 35 11.4	+0.2	
	baz=102						
I21K	Tanana	152.05 312	P	PKiKP	15 35 12.0	+0.7	
	baz=97						
Q18K	Katmai Hardscr	152.12 298	P	PKiKP	15 35 11.8	0.0	
	baz=107						
O19K	Port Alsworth	152.20 301	PKPbc	PKPbc	15 35 10.8	-0.7	
O19K	Port Alsworth	152.20 301	P	PKiKP	15 35 11.7	0.0	
	baz=105						
F22K	John River	152.31 317	P	PKiKP	15 35 12.1	+0.3	
	baz=92						
N19K	Bonanza Creek	152.43 303	P	PKPbc	15 35 11.9	-0.2	
	baz=103						
H21K	Melozitna Rive	152.44 313	PKPbc	PKPbc	15 35 11.6	-0.3	
H21K	Melozitna Rive	152.44 313	P	PKiKP	15 35 12.4	+0.3	
	baz=95						
L20K	Farewell, AK	152.48 306	P	PKPbc	15 35 12.1	0.0	
	baz=101						
R17K	Ugashik Creek	152.52 295	P	PKiKP	15 35 12.5	0.0	
	baz=108						
O18K	Koktuh Hills	152.55 300	P	PKiKP	15 35 12.6	0.0	
	baz=105						
M19K	Big River Lodg	152.61 305	P	PKiKP	15 35 12.8	+0.2	
	baz=101						
K20K	Telida	152.71 308	PKPbc	PKPbc	15 35 12.1	-0.5	
K20K	Telida	152.71 308	P	PKiKP	15 35 13.2	+0.4	
	baz=99						
G21K	Allakaket	152.79 315	P	PKiKP	15 35 13.6	+0.8	
	baz=93						
F21K	Alatna River	152.81 317	P	PKiKP	15 35 13.8	+0.9	
	baz=92						
IMAR	Indian Mountai	152.85 314	PKPbc	PKPbc	15 35 12.6	-0.2	
J20K	Nowinta River	152.86 310	P	PKiKP	15 35 14.3	+1.3	
	baz=97						
L19K	White Mountain	152.88 305	P	PKiKP	15 35 14.0	+0.8	
	baz=100						
Q16K	King Salmon	152.96 297	P	PKiKP	15 35 14.1	+0.7	
	baz=106						
N18K	Kilae Creek	153.07 302	P	PKiKP	15 35 14.8	+1.2	
	baz=103						
R16K	Pilot Point	153.11 295	P	PKiKP	15 35 14.6	+0.9	
	baz=108						
CHNA	Chernabura Isl	153.26 288	P	PKiKP	15 35 15.3	+1.2	
	baz=112						
O17K	Koliganek Bris	153.45 300	P	PKiKP	15 35 15.6	+1.2	
	baz=104						
TTA	Tatalina	153.52 307	P	PKiKP	15 35 15.7	+1.2	
	baz=98						
A21K	Barrow	153.62 326	P	PKiKP	15 35 15.6	+1.3	
	baz=80						
P16K	Nushagak River	153.72 298	P	PKiKP	15 35 16.0	+1.1	
	baz=104						
S14K	Fog Glacier	153.74 291	P	PKiKP	15 35 16.2	+1.0	
	baz=109						
KSAR	Wonju Array Be	155.22 127	PKPbc	PKPdf	15 35 16.7	+6.9	
KSAR				PKPab	15 35 33.6	-1.3	
KSRS	Korea Array	155.24 127	PKPab	PKPab	15 35 34.6	-0.4	
	comp=Z,1.2nm,0.9s,baz=208,slow=3.5,SNR=7.3						

*NOU **03** 15:26:45.3,20°.59S×177°.88W,h553km,mb4.3/28,Fiji Islands Region*
*IDC **03** 15:26:47.1±1.4,20°.57S×178°.21W,h554km±14km, mb3.5/14,mbtmp4.4/17,Error ellipse: s-maj=20.0km s-min=11.1km az=155.0*
*NEIC **03** 15:26:48.4±2.1,20°.3S±0°.1×178°.3W±0°.1,h554km±8km, mb4.4/63,Error ellipse: s-maj=20.4km s-min=14.3km az=154.0*

**ISC 03 15:26:45

comp=Z,28nm,1.4s
BBOO Buckleboo 42.49 243 P **P** **15 33 53.3 -0.4**
OOD Oodnadatta 42.62 251 P **P** **15 33 54.4 -0.4**
MULG Mulgathing 44.06 247 P **P** **15 34 04.9 -1.1**
WR0 Warramunga Arr 44.35 262 P **P** **15 34 07.4 -0.9**
AS31 Alice Springs 44.46 257 P **P** **15 34 08.9 -0.2**
ASAR Alice Springs 44.46 257 P **P** **15 34 08.8 -0.3**
comp=Z,11nm,0.6s,baz=92,slow=7.7,SNR=275
ASAR PcP **PcP** **15 35 39.9 -1.4**
comp=Z,1.5nm,0.5s,baz=103,slow=3.7,SNR=8.5
ASAR ScP **ScP** **15 38 40.3 -2.2**
comp=Z,0.3nm,0.7s,baz=99,slow=4.8,SNR=2.0
ASAR S **S** **15 40 01.9 -3.6**
comp=Z,1.1nm,0.8s,baz=92,slow=14,SNR=9.2
comp=Z,11nm,0.6s
ASAR Alice Springs 44.46 257 P **P** **15 34 08.6 -0.6**
WB0 Warramunga Arr 44.52 262 P **P** **15 34 08.6 -1.0**
WB2 Warramunga Arr 44.53 262 P **P** **15 34 09.0 -0.7**
WB2 IAmb IAmb 15 34 09.3
comp=Z,6.7nm,0.7s
WRAB Tennant Creek 44.53 262 P **P** **15 34 08.9 -0.8**
WRA Warramunga Arr 44.54 262 P **P** **15 34 09.0 -0.8**
comp=Z,3.5nm,0.3s,baz=96,slow=7.3,SNR=113
comp=Z,3.5nm,0.3s
WRA Warramunga Arr 44.54 262 P **P** **15 34 08.5 -1.3**
HMH Humu'ula Sheep 45.58 30 P **P** **15 34 19.7 +1.7**
KDU Kakadu 47.89 271 P **P** **15 34 34.5 -0.7**
MTN Manton Dam 49.10 271 P **P** **15 34 43.7 -0.5**
MTN Manton Dam 49.10 271 P **P** **15 34 43.4 -0.9**
FORT Forrest 49.24 247 P **P** **15 34 44.1 -1.0**
FORT Forrest 49.24 247 P **P** **15 34 44.5 -0.6**
WRKA Warakurna 49.41 254 P **P** **15 34 46.3 -0.2**
KNRA Kununurra 50.60 266 P **P** **15 34 54.9 -0.4**
KNRA Kununurra 50.60 266 P **P** **15 34 56.2 +1.0**
FAKI Fak Fak 51.44 283 P **P** **15 35 01.2 -0.2**
FAKI Fak Fak 51.44 283 P **P** **15 35 01.6 +0.2**
FITZ Fitzroy Crossi 52.97 262 P **P** **15 35 11.8 -0.5**
PSA00 Pilbara Seismi 57.61 257 P **P** **15 35 43.0 -1.7**
MBWA Marble Bar 57.79 257 P **P** **15 35 45.0 -0.9**
MBWA IAmb IAmb 15 35 45.5
comp=Z,8.6nm,0.7s
NWAO Narrogin (SRO) 58.31 243 P **P** **15 35 49.3 +0.1**
MORW Morawa 59.77 248 P **P** **15 35 58.1 -0.9**
MORW IAmb IAmb 15 36 34.2
comp=Z,30nm,1.4s
GIRL Giralia 62.49 255 P **P** **15 36 17.1 +0.1**
TOLI2 Tolitoli 63.54 282 P **P** **15 36 23.5 -0.3**
TOLI2 IAmb IAmb 15 36 23.8
comp=Z,12nm,0.9s
MJAR Matsushiro Arr 70.17 324 P **P** **15 37 03.9 -0.3**
comp=Z,1.2nm,0.5s,baz=157,slow=5.7,SNR=9.3
comp=Z,1.2nm,0.5s
JSU Suzuyama 71.47 315 P **P** **15 37 12.4 +0.3**
JSU IAmb IAmb 15 37 13.6
comp=Z,16nm,1.3s
AMKA Amchitka 71.60 358 P **P** **15 37 11.3 -1.0**
JTM Tenmabayashi 71.83 328 P **P** **15 37 14.1 +0.2**
ADK Adak 72.08 1 P **P** **15 37 15.0 -0.1**
ADK IAmb IAmb 15 37 15.4
comp=Z,13nm,0.8s
KSM Kuching 73.35 278 P **P** **15 37 23.4 +0.1**
KSM IAmb IAmb 15 37 47.3
comp=Z,26nm,1.4s
SSLB Suanglung 73.92 304 P **P** **15 37 24.1 -2.2**
SSLB IAmb IAmb 15 38 04.6
comp=Z,15nm,1.3s
YSS Yuzh-Sakhalins 75.86 333 P **P** **15 37 37.3 +0.7**
YSS IAmb IAmb 15 37 40.7
comp=Z,32nm,1.4s
PEA0B Petropavlovsk- 76.25 345 P **P** **15 37 38.7 +0.1**
PEA0B IAmb IAmb 15 37 40.0
comp=Z,25nm,1.4s
PETK Petropavlovsk- 76.25 345 P **P** **15 37 38.0 -0.6**
comp=Z,4.0nm,0.6s,baz=126,slow=7.5,SNR=14
comp=Z,4.0nm,0.6s
PETK Petropavlovsk- 76.25 345 P **P** **15 37 37.4 -1.3**
KSRS Korea Array 76.84 319 P **P** **15 37 43.2 +1.0**
comp=Z,1.6nm,0.6s,baz=128,slow=6.1,SNR=19
comp=Z,1.6nm,0.6s
KSAR Wonju Array Be 76.86 319 P **P** **15 37 40.9 -1.5**
SEHB SEOHWA 77.15 319 P **P** **15 37 45.5 +1.5**
CHIR Chirikof Islan 78.37 13 P **P** **15 37 50.0 0.0**
USRK Ussuriysk Ar. 78.92 326 P **P** **15 37 53.1 -0.2**
comp=Z,5.6nm,0.8s,baz=119,slow=3.8,SNR=8.7
comp=Z,5.6nm,0.8s
USRK Ussuriysk Ar. 78.92 326 P **P** **15 37 54.4 +1.1**
OHAK Old Harbor 80.16 13 P **P** **15 37 59.8 +0.4**
OHAK IAmb IAmb 15 38 00.7
comp=Z,29nm,1.3s
YBH Yreka Blue Hor 80.32 39 P **P** **15 38 02.6 +1.7**
L04D Klamath Falls 80.86 38 P **P** **15 38 05.3 +1.5**
L04D IAmb IAmb 15 38 11.5
comp=Z,25nm,1.5s
NVAR Mina Array Bea 81.06 43 P **P** **15 38 06.2 +1.2**
comp=Z,1.1nm,0.7s,baz=222,slow=8.8,SNR=8.1
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 81.06 43 P **P** **15 38 06.9 +1.9**
KVN Kaiserville 81.55 43 P **P** **15 38 08.8 +1.4**
TPNV Topopah Spring 81.58 46 P **P** **15 38 09.2 +1.6**
P18K Big Mountain, 81.78 12 P **P** **15 38 08.2 +0.4**
P18K IAmb IAmb 15 38 20.2
comp=Z,17nm,1.2s
K05A Summer Lake 82.00 39 P **P** **15 38 11.5 +1.9**
K05A IAmb IAmb 15 38 13.2
comp=Z,9.6nm,1.2s
O18K Koktuh Hills 82.21 11 P **P** **15 38 09.9 -0.1**
O18K IAmb IAmb 15 38 11.3
comp=Z,12nm,0.9s
CNPM China Poot 82.71 13 P **P** **15 38 13.0 +0.5**
N18K Kilae Creek 82.86 11 P **P** **15 38 13.6 +0.3**
IPM Ipoh 83.07 277 P **P** **15 38 15.1 -0.4**
IPM IAmb IAmb 15 38 16.7
comp=Z,6.5nm,0.6s
SVW2 Sparrevohn 83.30 11 P **P** **15 38 15.6 0.0**
I07A Izee 83.62 38 P **P** **15 38 19.1 +1.4**
KULM Kulim 83.71 278 P **P** **15 38 18.6 -0.1**
KULM IAmb IAmb 15 38 40.9
comp=Z,20nm,1.5s
MA2 Magadan 83.76 345 P **P** **15 38 17.2 -0.6**
MA2 IAmb IAmb 15 38 18.6
comp=Z,5.8nm,0.9s
U15A North Rim 84.00 48 P **P** **15 38 22.1 +2.2**
L19K White Mountain 84.44 11 P **P** **15 38 22.3 +1.1**
L19K IAmb IAmb 15 38 22.9
comp=Z,6.0nm,1.1s
PWL Port Wells 84.55 14 P **P** **15 38 22.3 +0.7**
PWL IAmb IAmb 15 38 37.5
comp=Z,13nm,1.4s
G08A Pilot Rock 84.65 37 P **P** **15 38 24.4 +1.7**
GLI Glacier Island 84.86 15 P **P** **15 38 22.6 -0.5**
GLI IAmb IAmb 15 38 23.9
comp=Z,8.1nm,0.8s
GSI Gunungsitoli 85.17 273 P **P** **15 38 26.4 +0.6**
F10A Beach Ranch, E 86.04 38 P **P** **15 38 30.6 +1.3**
F10A IAmb IAmb 15 38 31.8
comp=Z,5.3nm,0.8s
TRF Thorofare Moun 86.46 12 P **P** **15 38 30.4 -0.6**
TRF IAmb IAmb 15 38 31.6
comp=Z,5.1nm,0.8s
RND Reindeer 86.71 13 P **P** **15 38 32.2 +0.2**
RND IAmb IAmb 15 38 33.2
comp=Z,7.4nm,0.8s
TXAR Lajitas Array 87.11 57 P **P** **15 38 36.4 +1.7**
comp=Z,0.5nm,0.6s,baz=216,slow=7.2,SNR=7.1
comp=Z,0.5nm,0.6s
I21K Tanana 87.72 11 P **P** **15 38 36.6 0.0**
I21K IAmb IAmb 15 38 37.7
comp=Z,3.9nm,0.8s
HDA Harding Lake 87.99 13 P **P** **15 38 37.6 -0.4**
HDA IAmb IAmb 15 38 38.7
comp=Z,5.0nm,0.7s
CCB Clear Creek Bu 88.02 13 P **P** **15 38 37.4 -0.6**
CCB IAmb IAmb 15 38 38.2
comp=Z,4.9nm,0.6s
MDM Murphy Dome 88.22 12 P **P** **15 38 38.9 -0.1**
MDM IAmb IAmb 15 38 39.6
comp=Z,4.9nm,0.8s
ILAR Eielson Array 88.32 13 P **P** **15 38 39.2 -0.3**
comp=Z,1.1nm,0.5s,baz=216,slow=5.4,SNR=11
comp=Z,1.1nm,0.5s
J26L Joseph Creek 88.82 14 P **P** **15 38 42.8 +0.9**
J26L IAmb IAmb 15 38 43.9
comp=Z,4.2nm,0.8s
PDAR Pinedale Array 89.00 43 P **P** **15 38 44.4 +0.9**
comp=Z,0.8nm,0.5s,baz=194,slow=3.1,SNR=9.9
comp=Z,0.8nm,0.5s
CMAR Chiang Mai Arr 90.05 290 P **P** **15 38 50.0 +1.3**
comp=Z,2.0nm,0.7s,baz=109,slow=2.5,SNR=13
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 90.05 290 P **P** **15 38 49.2 +0.6**
CHTO Chiang Mai 90.18 290 P **P** **15 38 50.0 +0.8**
CHTO IAmb IAmb 15 38 50.7
comp=Z,5.7nm,0.8s
SONM Songino Array 95.71 319 P **P** **15 39 14.1 +0.1**
comp=Z,0.5nm,0.5s,baz=129,slow=3.9,SNR=2.2
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 110.45 321 PKiKP **PKiKP** **15 44 13.9 -2.6**
comp=Z,0.6nm,0.5s,baz=96,slow=1.1,SNR=3.6
MKAR Makanchi Array 111.15 313 PKiKP **PKiKP** **15 44 16.9 -1.3**
comp=Z,0.4nm,0.4s,baz=85,slow=3.4,SNR=4.0
ARCES ARCESS Array B 128.90 350 PKP **PKPdf** **15 44 51.3 -0.2**
comp=Z,0.7nm,0.5s,baz=48,slow=1.8,SNR=7.3
FINES FINESS Array B 135.75 344 PKP **PKPdf** **15 45 04.1 -0.5**
comp=Z,1.0nm,0.7s,baz=57,slow=7.0,SNR=4.6
NOA NORSAR Array B 138.97 353 PKhKP PKPpre 15 45 03.1
comp=Z,0.5nm,0.6s,baz=7.3,slow=2.3,SNR=3.6
AKASG Malin Array Be 142.98 331 PKP **PKPdf** **15 45 14.9 -3.1**
comp=Z,8.5nm,0.6s,baz=43,slow=4.7,SNR=33
AKASG Malin Array Be 142.98 331 PKPpre 15 45 14.1
AKBB Malin Array Si 142.98 331 PKPpre PKPpre 15 45 14.4
LDK Lodwar 143.29 247 PKPdf PKPbc 15 45 18.2 0.0
BNN Bunyan 145.58 310 PKPdf **PKPdf** **15 45 23.2 +0.1**
BR131 Keskin Array S 146.79 312 PKPdf **PKPdf** **15 45 25.4 +0.3**
BRTR Keskin Array B 146.79 312 PKPbc **PKPbc** **15 45 27.4 -0.5**
comp=Z,2.0nm,0.6s,baz=138,slow=5.5,SNR=11
BRTR Keskin Array B 146.79 312 **PKPbc** **15 45 26.5 -1.4**
BUR08 Bucovina Ar. S 147.01 331 PKPdf **PKPdf** **15 45 25.8 +0.6**
KOLS Kolonicke sedl 147.28 335 *e*PKP **PKPab** **15 45 32.7 +0.5**
CRVS Cervenica-Dubn 147.62 336 *e*PKP **PKPab** **15 45 34.3 +0.7**
CLL Collm 148.04 347 *i* PKPbc **PKPbc** **15 45 30.6 +0.1**
comp=Z,11nm,0.8s
CLL *i* PKPab **PKPab** **15 45 35.1 -0.1**
comp=Z,6.0nm,0.9s
DPC Dobruska-Polom 148.10 342 *e*PKP **PKiKP** **15 45 31.7 -0.4**
DPC *ex* x 15 45 36.0
KRLC Kraliky 148.22 342 *e*PKP **PKPbc** **15 45 31.3 +0.2**
KRLC *ex* x 15 45 36.5
MORC Moravsky Berou 148.25 341 *e*PKP **PKPbc** **15 45 31.6 +0.4**
PRU Pruhonice 148.91 344 *e*PKP **PKPbc** **15 45 32.9 +0.2**
VRAC Vranov 148.95 341 *e*PKP **PKPbc** **15 45 33.3 +0.4**
JAVC Velka Javorina 149.01 340 *e*PKP **PKiKP** **15 45 34.6 +0.6**
KRUC Moravsky 149.23 341 *e*PKP **PKPbc** **15 45 33.8 +0.3**
KHC Kasperske Hory 149.94 345 **PKPbc** **15 45 35.1 -0.2**
KHC Kasperske Hory 149.94 345 *e*PKP **PKPbc** **15 45 35.0 -0.3**
KHC *ex* x 15 45 43.6
CKRC Cesky Krumlov 150.04 344 *e*PKP **PKPbc** **15 45 35.6 +0.1**
CKRC *ex* x 15 45 43.8
GERES GERESS Array B 150.18 344 PKPbc **PKPbc** **15 45 36.0 +0.1**
comp=Z,1.7nm,0.6s,baz=28,slow=3.2,SNR=11
CONA Conrad Observa 150.40 341 *e*P **PKiKP** **15 45 36.9 -0.1**
comp=Z,2.4nm,0.5s
RONA Rosalia, Austr 150.47 340 *e*P **PKiKP** **15 45 36.9 -0.2**
comp=Z,3.7nm,0.5s
ABTA Abfaltersbach 152.42 344 *e*P **PKPbc** **15 45 40.6 -0.5**
comp=Z,4.5nm,0.5s
FETA Feichten 152.59 347 *i* P **PKPbc** **15 45 41.4 -0.1**
comp=Z,0.7nm,0.4s

*IDC **03** 15:37:55.1±0.8,29°.32S×60°.97E, h0km, mb3.9/9, mbtmp3.9/10, ML3.7/1, MS3.5/8, Error ellipse: s-maj=35.2km s-min=22.0km az=86.0*
*NEIC **03** 15:37:57.5±2.2,29°.1S±0°.1×60°.7E±0°.2, h10km±1km, mb4.4/9, Error ellipse: s-maj=28.8km s-min=17.8km az=73.0*
ISC 03 15:37:56.5±0.6,**29°.2S**±0°.1×**60°.8E**±0°.1,**h10**km,**n48,**
σ1ŝ16/35,mb4.2/13,MS3.5/8,1D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.17**	**329**	Pn	**Pn**	**15 40 07.1**	**-1.8**
FOMA	**Nahampoana Res**	**12.96**	**286**	Pn	**Pn**	**15 41 01.6**	**+0.8**
VOI	**Vohitsoka**	**14.52**	**297**		**P**	**15 41 27.2**	**-1.7**
OPO	**Ambohidratompo**	**16.27**	**307**	Pn	**P**	**15 41 48.1**	**-0.3**
	baz=82,slow=21,SNR=1.6						
OPO				Sn	Sn	15 44 35.4	-11
	baz=328,slow=11,SNR=1.5						
	1.5nm,0.6s						
H08S1	**Diego Carcia H**	**24.08**	**30**	T	T	16 08 11.1	
	baz=203,slow=76						
H08S2	**Diego Carcia H**	**24.09**	**30**	T	T	16 08 11.0	
	baz=203						
H08S3	**Diego Garcia H**	**24.10**	**30**	T	T	16 08 10.6	
	baz=203,slow=76						
BOSA	**Boshof**	**31.02**	**262**	LR	LR	15 53 49.6	
	comp=Z,61nm,19.8s,baz=176,slow=31						
LSZ	**Lusaka**	**33.04**	**288**	LR	LR	15 57 58.2	
	comp=Z,59nm,18.4s,baz=192,slow=36						
MAW	**Mawson**	**38.49**	**179**	LR	LR	15 59 18.4	
	comp=Z,82nm,18.8s,baz=4.0,slow=34						
TSUM	**Tsumeb**	**40.42**	**274**	LR	LR	16 00 23.1	
	comp=Z,41nm,21.1s,baz=148,slow=33						
H01W2	**Cape Leeuwin H**	**45.17**	**112**	T	T	16 33 56.3	
	baz=261,slow=75,SNR=6.5						
H01W3	**Cape Leeuwin H**	**45.18**	**112**	T	T	16 33 52.5	
	baz=261,slow=75,SNR=8.0						
H01W1	**Cape Leeuwin H**	**45.19**	**112**	T	T	16 33 53.7	
	baz=261,slow=75,SNR=6.6						
SNAA	**Sanae**	**54.34**	**200**	P	**P**	**15 47 21.0**	**-2.0**
	1.2nm,1.0s,baz=285,slow=10,SNR=3.4						
	1.2nm,1.0s						
SNAA	**Sanae**	**54.34**	**200**	P	**P**	**15 47 21.9**	**-1.0**
SNAA				IAmb	IAmb	15 47 40.3	
	comp=Z,7.4nm,1.5s						
CMAR	**Chiang Mai Arr**	**60.00**	**43**	P	**P**	**15 48 02.9**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=229,slow=6.8,SNR=2.1						
	comp=Z,0.9nm,0.8s						
QSPA	**South Pole Qui**	**60.99**	**180**	P	**P**	**15 48 09.2**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=211,slow=1.7,SNR=4.1						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**60.99**	**180**	P	**P**	**15 48 10.3**	**+0.5**
VNDA	**Vanda**	**64.12**	**166**	P	**P**	**15 48 30.5**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=272,slow=7.7,SNR=4.0						
VNDA				LR	LR	16 14 16.1	
	comp=Z,70nm,18.4s,baz=261,slow=34						
	comp=Z,1.2nm,0.9s						
SBA	**Scott Base**	**64.99**	**167**	P	**P**	**15 48 37.5**	**+1.4**
SBA				IAmb	IAmb	15 48 39.9	
	comp=Z,3.6nm,1.0s						
GNI	**Garni**	**70.55**	**347**	LR	LR	16 18 20.7	
	comp=Z,56nm,20.6s,baz=187,slow=34						
TOA0	**Toroci Ar. Sit**	**70.83**	**298**	P	**P**	**15 49 13.9**	**+0.2**
TORD	**Toroci Ar. Bea**	**70.83**	**298**	P	**P**	**15 49 15.2**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=97,slow=3.7,SNR=7.0						
	comp=Z,1.8nm,0.8s						
TORD	**Toroci Ar. Bea**	**70.83**	**298**	P	**P**	**15 49 13.9**	**+0.2**
DBIC	**Dimbokro**	**72.38**	**288**	LR	LR	16 21 06.3	
	comp=Z,21nm,18.2s,baz=156,slow=36						
KK31	**Karatay Array**	**72.47**	**7**	P	**P**	**15 49 23.3**	**+0.3**
KK31				IAmb	IAmb	15 49 27.0	
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**72.47**	**7**	P	**P**	**15 49 23.6**	**+0.6**
AAK	**Ala-Archa**	**72.56**	**11**	P	**P**	**15 49 25.0**	**+1.3**
AAK				IAmb	IAmb	15 49 26.9	
	comp=Z,2.3nm,0.8s						
BRTR	**Keskin Array B**	**73.03**	**338**	P	**P**	**15 49 28.6**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=188,slow=16,SNR=3.5						
	comp=Z,0.6nm,0.6s						
ABKAR	**Akbulak array**	**78.07**	**359**	P	**P**	**15 49 56.2**	**+1.1**
MK31	**Makanchi Array**	**78.07**	**15**	⇓Pn	**Pn**	**15 49 53.8**	**+0.4**
	comp=Z,0.1nm,0.2s,baz=195,slow=12,SNR=41						
MK31	**Makanchi Array**	**78.07**	**15**	P	**P**	**15 49 54.3**	**-0.9**
MK31				IAmb	IAmb	15 50 14.6	
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**78.07**	**15**	P	**P**	**15 49 53.7**	**-1.5**
KURK	**Kurchatov**	**81.08**	**11**	P	**P**	**15 50 11.5**	**+0.1**
ZALV	**Zalesovo Beam**	**85.35**	**14**	P	**P**	**15 50 34.2**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=208,slow=2.9,SNR=5.0						
	comp=Z,1.3nm,0.7s						
SONM	**Songino Array**	**86.92**	**29**	P	**P**	**15 50 41.5**	**0.0**
	comp=Z,0.5nm,0.6s,baz=212,slow=5.1,SNR=2.1						
	comp=Z,0.5nm,0.6s						
MDT	**Midelt**	**87.39**	**310**	LR	LR	16 31 21.9	
	comp=Z,41nm,18.0s,baz=137,slow=37						
ESDC	**Sonseca Array**	**91.14**	**316**	P	**P**	**15 51 03.7**	**+2.2**
	comp=Z,1.1nm,1.0s,baz=111,slow=7.1,SNR=5.7						
	comp=Z,1.1nm,1.0s						
YKA	**Yellowknife Ar**	**146.52**	**356**	PKPbc	**PKPab**	**15 57 37.8**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=357,slow=3.9,SNR=9.3						
W50A	**Signal Mountai**	**150.75**	**291**	PKPbc	**PKPbc**	**15 57 48.6**	**-0.7**
U49A	**Red Boiling Sp**	**151.05**	**293**	PKPbc	**PKiKP**	**15 57 49.5**	**-0.9**
SWET	**Sewanee**	**151.26**	**291**	PKPbc	**PKPbc**	**15 57 48.3**	**-2.1**
CLTN	**Cedars of Leba**	**151.53**	**293**	PKPbc	**PKiKP**	**15 57 50.9**	**-0.5**
EYMN	**Ely**	**151.55**	**319**	PKPbc	**PKPbc**	**15 57 50.0**	**-0.7**
ULM	**Lac du Bonnet**	**152.51**	**327**	PKPbc	**PKiKP**	**15 57 53.3**	**+0.3**
	comp=Z,3.9nm,0.8s,baz=80,slow=8.1,SNR=3.7						
WVT	**Waverly**	**152.73**	**293**	PKPbc	**PKPbc**	**15 57 52.6**	**-1.1**
TXAR	**Lajitas Array**	**166.40**	**275**	PKP	**PKPdf**	**15 58 02.1**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=120,slow=1.5,SNR=2.6						

*BJI **03** 15:39:50.9±0.0, 19°.91S×174°.71W, h60km, mb4.9/18, mB5.0/6, Ms4.9/2, Ms7 4.6/2*
*IDC **03** 15:39:51.1±2.4, 19°.99S×174°.93W, h48km±22km, mb4.3/19, mbtmp4.6/21, ML5.2/3, MS3.4/13, Error ellipse: s-maj=16.6km s-min=12.7km az=131.0*
*NEIC **03** 15:39:54.4±2.3, 19°.97S±0°.08×174°.80W±0°.08, h69km±7km, mb4.7/75, Error ellipse: s-maj=12.6km s-min=10.5km az=153.0*
*NOU **03** 15:39:56.9, 19°.87S×174°.26W, h146km, mb4.9/43, Tonga Islands*
*GCMT **03** 15:39:59.4±0.4, 20°.30S±0°.03×174°.36W±0°.02, h142km±5km, MW4.9/85, Moment Tensor Solution. s19,c19; s85,c105; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.54±.14; Mθθ=1.36±.17; Mϕϕ=0.82±.15; Mrθ=1.16±.12; Mrϕ=-0.28±.17; Mθϕ=2.06±.09; Best double couple: M=2.55800×10^16 NP1=φ=224.00000°, δ=86.00000°, λ=-116.00000°. NP2=φ=125.00000°, δ=26.00000°, λ=-10.00000°. Principal axes: T 2.1370, Plg35.0000°, Azm336.0000°; N 0.8400, Plg26.0000°, Azm226.0000°; P -2.9800, Plg44.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 15:39:55.6±0.3,**20°.11S**±0°.05×**174°.63W**±0°.05,**h100**km,
n231,σ2ŝ15/210,mb4.7/60,8C,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**4.37**	**295**	P	Pn	15 41 04.5	+4.7
NIUE	**Niue**	**4.55**	**78**	P	**Pn**	**15 41 01.5**	**-0.8**
	baz=4.6,SNR=45						
NIUE				S	**Sn**	**15 41 48.2**	**-5.9**
	baz=4.6						
NIUE	**Niue**	**4.55**	**78**	Pn	**Pn**	**15 41 01.3**	**-1.0**
NIUE	**Niue**	**4.55**	**78**	P	**Pn**	**15 41 00.8**	**-1.5**
TAVE	**Taveuni**	**6.04**	**303**	P	Pn	15 41 27.1	+4.6
DGTI	**Dogotuki**	**6.55**	**304**	P	Pn	15 41 34.3	+4.8
AFI	**Afiamalu**	**6.74**	**24**	P	Pn	15 41 27.0	-5.1
	70nm,0.3s,baz=205,slow=4.2,SNR=88						
AFI				S	Sn	15 42 36.3	-11
	188nm,0.4s,baz=128,slow=22,SNR=1.5						
AFI				LR	LR	15 43 42.8	
	comp=Z,110nm,18.6s,baz=142,slow=34						
AFI	**Afiamalu**	**6.74**	**24**	Pn	**Pn**	**15 41 28.2**	**-3.9**
AFI	**Afiamalu**	**6.74**	**24**	P	**Pn**	**15 41 28.7**	**-3.4**
MSVF	**Nonsavu**	**7.32**	**288**	P	Pn	15 41 43.4	+3.4
	46nm,0.8s,baz=129,slow=15,SNR=14						
MSVF				LR	LR	15 43 52.0	
	comp=Z,358nm,21.4s,baz=97,slow=34						
MSVF	**Nonsavu**	**7.32**	**288**	Pn	Pn	15 41 44.4	+4.4
MSVF	**Nonsavu**	**7.32**	**288**	P	Pn	15 41 45.5	+5.5
RIZ	**Raoul Island**	**9.58**	**198**	P	**Pn**	**15 42 08.5**	**-2.1**
RIZ				S	**Sn**	**15 43 53.7**	**-2.7**
RAO	**Raoul Island**	**9.58**	**198**	P	**Pn**	**15 42 08.4**	**-2.2**
	26nm,0.3s,baz=127,slow=23,SNR=2.0						
RAO				S	**Sn**	**15 43 49.5**	**-7.0**
	151nm,0.4s,baz=114,slow=21,SNR=1.6						
RAO	**Raoul Island**	**9.58**	**198**	Pn	**Pn**	**15 42 09.8**	**-0.8**
GLKZ	**Green Lake**	**9.59**	**198**	P	**Pn**	**15 42 10.6**	**-0.2**
GLKZ				S	**Sn**	**15 43 50.4**	**-6.3**
FUNA	**Funafuti**	**12.97**	**332**	Pn	**Pn**	**15 42 52.3**	**-3.9**
RAR	**Rarotonga**	**13.95**	**97**	P	**Pn**	**15 43 09.2**	**+0.2**
	27nm,0.8s,baz=252,slow=7.7,SNR=15						
RAR				S	Sn	15 45 31.9	-11
	23nm,0.6s,baz=74,slow=18,SNR=2.0						
RAR				LR	LR	15 47 55.4	
	comp=Z,119nm,19.0s,baz=320,slow=34						
MARNC	**Mare, Loyalty**	**16.27**	**262**		**P**	**15 43 40.5**	**+1.0**
MARNC	**Mare, Loyalty**	**16.27**	**262**	P	**P**	**15 43 42.4**	**+2.9**
PINNC	**Pines Island,**	**16.88**	**258**	Pn	**P**	**15 43 48.9**	**+2.7**
PINNC				IAmb	IAmb	15 44 18.9	
	comp=Z,67nm,1.0s						
YATNC	**Mamie plateau,**	**17.35**	**260**	P	**P**	**15 43 54.5**	**+3.0**
OUENC	**Ouen Island, N**	**17.42**	**259**		**Pn**	**15 43 50.5**	**-1.9**
OUENC				IAmb	IAmb	15 44 21.2	
	comp=Z,63nm,1.2s						
KNTN	**Kanton**	**17.46**	**10**		**Pn**	**15 43 52.3**	**-0.6**
DZM	**Mont Dzumac**	**17.77**	**260**	P	**Pn**	**15 43 57.7**	**+0.9**
	comp=Z,22nm,0.9s,baz=60,slow=23,SNR=15						
DZM	**Mont Dzumac**	**17.77**	**260**	*e*P	**P**	**15 43 52.8**	**-3.4**
	comp=Z,72nm,1.1s						
DZM	**Mont Dzumac**	**17.77**	**260**	Pn	**P**	**15 43 53.0**	**-3.2**
DZM				IAmb	IAmb	15 44 28.2	
	comp=Z,28nm,0.8s						
OUZ	**Omahuta**	**18.29**	**212**	P	**Pn**	**15 44 03.8**	**+1.0**
OUZ				IAmb	IAmb	15 44 05.8	
	comp=Z,41nm,1.0s						
OUZ	**Omahuta**	**18.29**	**212**	P	**P**	**15 44 00.4**	**-1.2**
OUZ	**Omahuta**	**18.29**	**212**	P	**Pn**	**15 44 03.5**	**+0.7**
KUZ	**Kuaotunu**	**18.60**	**205**	P	**Pn**	**15 44 08.8**	**+2.3**
HAZ	**Te Kaha**	**18.79**	**199**	P	**Pn**	**15 44 08.3**	**-0.4**
HAZ				S	S	15 47 21.3	-14
MWZ	**Matawai**	**19.40**	**199**	P	**Pn**	**15 44 16.6**	**+0.7**
MWZ				S	S	15 47 32.5	-15
URZ	**Urewera**	**19.46**	**200**	P	**P**	**15 44 14.0**	**-0.3**
	comp=Z,3.9nm,0.3s,baz=285,slow=2.0,SNR=21						
URZ				S	S	15 47 32.9	-16
	comp=Z,14nm,1.0s,baz=218,slow=16,SNR=2.0						
	comp=Z,17nm,0.6s						
URZ	**Urewera**	**19.46**	**200**	P	**P**	**15 44 14.8**	**+0.4**
URZ	**Urewera**	**19.46**	**200**	P	**P**	**15 44 14.6**	**+0.2**
URZ				S	S	15 47 33.0	-16
URZ	**Urewera**	**19.46**	**200**	P	**Pn**	**15 44 15.9**	**-0.6**
TOZ	**Tahuroa Road**	**19.55**	**204**	P	**Pn**	**15 44 18.4**	**+0.8**
MUGZ	**Murupara**	**19.77**	**200**	P	**P**	**15 44 15.0**	**-2.7**
MUGZ				S	S	15 47 38.4	-17
KOUNC	**Koumac, New Ca**	**19.78**	**265**	P	**Pn**	**15 44 20.9**	**+0.4**
KOUNC				IAmb	IAmb	15 44 24.2	
	comp=Z,56nm,0.9s						
KOUNC	**Koumac, New Ca**	**19.78**	**265**	P	**Pn**	**15 44 22.7**	**+2.2**
SNGZ	**Shannon Statio**	**19.86**	**199**	P	**Pn**	**15 44 20.3**	**-1.0**
SNGZ				S	S	15 47 42.0	-15
RAHZ	**Arahi**	**20.07**	**199**	P	Pn	15 44 22.2	-1.5
RAHZ				S	S	15 47 50.

comp=Z,14nm,0.4s,baz=34,slow=2.9,SNR=18
comp=Z,14nm,0.4s
RPZ Rata Peaks 26.41 204 P **P** **15 45 26.0 +3.1**
HNR Honiara 26.73 290 LR LR 15 54 20.8
comp=Z,72nm,19.0s,baz=176,slow=33
DCZ Deep Cove 29.42 207 P **P** **15 45 52.5 +2.9**
EIDS Eidsvold 32.00 254 P **P** **15 46 11.4 -1.1**
EIDS IAmb IAmb 15 46 42.5
comp=Z,22nm,1.4s
CNB Canberra Magne 35.08 237 P **P** **15 46 39.4 +0.1**
baz=35,SNR=4.9
CNB Canberra Magne 35.08 237 P **P** **15 46 39.4 +0.1**
TAOE Nuku Hiva Isla 35.13 76 *e*LR LR 15 55 14.1
comp=Z,202nm,31.8s
TAOE Nuku Hiva Isla 35.13 76 *e*T T 16 23 18.6
comp=Z,37nm,0.2s
CAN Canberra 35.36 237 P **P** **15 46 41.5 -0.2**
KRVT Keravat (AS076 36.06 291 LR LR 16 01 22.0
comp=Z,54nm,19.3s,baz=249,slow=36
CTA Charters Tower 36.67 263 P **P** **15 46 52.5 -0.6**
CTAO Charters Tower 36.67 263 P **P** **15 46 52.0 -1.1**
CTAO Charters Tower 36.67 263 P **P** **15 46 52.5 -0.6**
CMSA Cobar Meteorol 37.30 244 P **P** **15 46 56.8 -1.4**
baz=37,SNR=14
CMSA Cobar Meteorol 37.30 244 P **P** **15 46 56.9 -1.3**
TOO Toolangi 38.69 235 P **P** **15 47 08.5 -1.3**
baz=39,SNR=3.8
TOO Toolangi 38.69 235 P **P** **15 47 09.0 -0.9**
TOO IAmb IAmb 15 47 10.0
comp=Z,23nm,1.2s
TOO Toolangi 38.69 235 P **P** **15 47 09.6 -0.3**
MTSU Mount Surprise 38.77 266 P **P** **15 47 09.2 -1.5**
baz=39,SNR=14
COEN Coen 40.72 272 P **P** **15 47 26.0 -0.9**
baz=41,SNR=4.5
COEN Coen 40.72 272 P **P** **15 47 25.8 -1.2**
COEN IAmb IAmb 15 47 26.7
comp=Z,12nm,0.8s
STKA Stephens Creek 40.81 244 P **P** **15 47 26.1 -1.4**
comp=Z,3.4nm,0.5s,baz=95,slow=10,SNR=12
comp=Z,3.4nm,0.5s
STKA Stephens Creek 40.81 244 P **P** **15 47 26.2 -1.2**
baz=41,SNR=4.7
STKA Stephens Creek 40.81 244 P **P** **15 47 26.2 -1.2**
MANU Manus Island 41.22 291 P **P** **15 47 31.0 0.0**
HTT Hallett 43.21 242 P **P** **15 47 47.1 +0.1**
LCRK Leigh Creek 43.60 247 P **P** **15 47 48.7 -1.4**
BBOO Buckleboo 45.55 243 P **P** **15 48 03.4 -2.3**
BBOO IAmb IAmb 15 48 15.6
comp=Z,23nm,1.4s
BBOO Buckleboo 45.55 243 P **P** **15 48 03.9 -1.7**
MULG Mulgathing 47.19 247 P **P** **15 48 16.6 -1.8**
WR0 Warramunga Arr 47.60 261 P **P** **15 48 19.6 -2.2**
WR0 IAmb IAmb 15 48 22.0
comp=Z,5.9nm,0.8s
AS31 Alice Springs 47.68 256 P **P** **15 48 20.8 -1.6**
ASAR Alice Springs 47.68 256 P **P** **15 48 20.2 -2.2**
comp=Z,7.1nm,0.8s,baz=85,slow=8.4,SNR=128
ASAR PcP **PcP** **15 49 49.6 -0.8**
comp=Z,1.5nm,0.8s,baz=106,slow=3.7,SNR=1.5
comp=Z,7.1nm,0.8s
WB0 Warramunga Arr 47.76 261 P **P** **15 48 20.9 -2.2**
WB0 IAmb IAmb 15 48 23.3
comp=Z,7.9nm,0.7s
WB2 Warramunga Arr 47.77 261 P **P** **15 48 21.7 -1.5**
baz=48
WB2 Warramunga Arr 47.77 261 P **P** **15 48 21.6 -1.5**
WB2 IAmb IAmb 15 48 22.0
comp=Z,14nm,1.1s
WRAB Tennant Creek 47.78 261 P **P** **15 48 21.8 -1.4**
WRA Warramunga Arr 47.79 261 P **P** **15 48 21.1 -2.2**
comp=Z,2.5nm,0.3s,baz=92,slow=6.2,SNR=219
comp=Z,2.5nm,0.3s
WRA Warramunga Arr 47.79 261 P **P** **15 48 21.0 -2.2**
KDU Kakadu 51.11 270 P **P** **15 48 47.0 -1.5**
baz=51,SNR=4.4
KDU Kakadu 51.11 270 P **P** **15 48 47.5 -1.0**
MTN Manton Dam 52.33 269 P **P** **15 48 56.0 -1.6**
baz=52,SNR=4.8
MTN Manton Dam 52.33 269 P **P** **15 48 56.0 -1.6**
MTN Manton Dam 52.33 269 P **P** **15 48 56.4 -1.2**
FORT Forrest 52.35 246 P **P** **15 48 55.5 -2.1**
WRKA Warakurna 52.61 253 P **P** **15 48 57.6 -2.0**
baz=52,SNR=23
WRKA Warakurna 52.61 253 P **P** **15 48 57.6 -2.0**
KNRA Kununurra 53.84 265 P **P** **15 49 07.7 -1.0**
baz=54,SNR=6.0
KNRA Kununurra 53.84 265 P **P** **15 49 07.4 -1.3**
KNRA Kununurra 53.84 265 P **P** **15 49 07.4 -1.3**
comp=Z,29nm,1.8s
FITZ Fitzroy Crossi 56.21 261 P **P** **15 49 24.9 -0.8**
baz=56,SNR=7.5
FITZ Fitzroy Crossi 56.21 261 P **P** **15 49 25.1 -0.7**
FITZ IAmb IAmb 15 49 25.5
comp=Z,11nm,1.2s
FITZ Fitzroy Crossi 56.21 261 P **P** **15 49 25.4 -0.4**
SBA Scott Base 58.49 185 P **P** **15 49 44.8 +3.9**
SBA IAmb IAmb 15 50 27.5
comp=Z,7.8nm,1.1s
RPN Rapa Nui 59.67 110 LR LR 16 12 39.0
comp=Z,8.7nm,18.8s,baz=213,slow=33
BATI Baumata 60.09 270 LR LR 16 15 36.6
comp=Z,113nm,18.2s,baz=193,slow=36
MBWA Marble Bar 61.02 256 P **P** **15 49 56.9 -2.3**
MEEK Meekatharra 61.03 250 P **P** **15 49 57.0 -2.1**
baz=61,SNR=3.9
MEEK Meekatharra 61.03 250 P **P** **15 49 57.5 -1.7**
KLBR Kellerberrin 61.08 244 P **P** **15 49 59.0 -0.4**
comp=Z,18nm,1.0s
BLDU Ballidu 62.10 245 P **P** **15 50 05.1 -1.1**
MORW Morawa 62.90 247 P **P** **15 50 10.2 -1.4**
baz=63,SNR=3.6
MORW Morawa 62.90 247 P **P** **15 50 09.5 -2.1**
MORW IAmb IAmb 15 50 46.2
comp=Z,15nm,1.1s
MORW Morawa 62.90 247 P **P** **15 50 10.5 -1.1**
QSPA South Pole Qui 69.96 180 P **P** **15 50 58.4 +2.3**
comp=Z,6.4nm,1.0s,baz=302,slow=0.9,SNR=15
comp=Z,6.4nm,1.0s
QSPA South Pole Qui 69.96 180 P **P** **15 50 58.1 +2.0**
QSPA IAmb IAmb 15 51 31.2
comp=Z,14nm,0.9s
JYT Yasato 70.45 323 P **P** **15 51 00.5 +1.2**
JMM Marumori 71.28 324 P **P** **15 51 06.4 +2.1**
JGF Kuroka 71.68 320 P **P** **15 51 06.7 -0.1**
JGF IAmb IAmb 15 51 08.0
comp=Z,9.1nm,0.9s
ADK Adak 71.70 359 P **P** **15 51 06.5 0.0**
ADK IAmb IAmb 15 51 19.7
comp=Z,13nm,1.1s
MJAR Matsushiro Arr 71.82 322 P **P** **15 51 06.6 -0.9**
comp=Z,14nm,0.9s,baz=155,slow=6.2,SNR=37
comp=Z,14nm,0.9s
MAJO Matsushiro 71.82 322 P **P** **15 51 07.4 -0.2**
JMN Monobe 72.61 317 P **P** **15 51 13.6 +1.2**
JSD Sado 72.82 323 P **P** **15 51 14.6 +1.2**
JHS Saijyo 73.91 317 P **P** **15 51 20.8 +0.8**
JNU Nakatsue 74.20 315 P **P** **15 51 22.2 +0.5**
comp=Z,3.5nm,0.6s,baz=122,slow=4.6,SNR=4.0
comp=Z,3.5nm,0.6s
SSLB Suanglung 76.42 302 P **P** **15 51 33.0 -1.6**
SSLB IAmb IAmb 15 51 34.3
comp=Z,8.7nm,1.0s
KSM Kuching 76.50 277 P **P** **15 51 35.5 +0.2**
KSM IAmb IAmb 15 51 36.2
comp=Z,16nm,1.0s
PEA0B Petropavlovsk- 76.75 343 P **P** **15 51 36.1 +0.3**
PETK Petropavlovsk- 76.75 343 P **P** **15 51 36.4 +0.5**
comp=Z,6.3nm,0.9s,baz=120,slow=8.8,SNR=11
comp=Z,6.3nm,0.9s
PETK Petropavlovsk- 76.75 343 P **P** **15 51 35.8 0.0**
ISA Isabella, Lake 76.83 44 P **P** **15 51 39.0 +2.2**
PFO Pinyon Flats O 76.98 47 LR LR 16 17 36.6
comp=Z,38nm,19.1s,baz=175,slow=29
YSS Yuzh-Sakhalins 77.01 332 P **P** **15 51 37.4 +0.1**
SMAI San Martin Ant 77.83 159 P **P** **15 51 43.7 +1.9**
SMAI IAmb IAmb 15 51 46.0
comp=Z,12nm,1.0s
GRAC Grapevine Rang 78.34 43 P **P** **15 51 47.3 +2.2**
GRAC IAmb IAmb 15 51 49.2
comp=Z,14nm,1.3s
LHV Little Huntoon 78.36 42 P **P** **15 51 47.8 +2.7**
LHV IAmb IAmb 15 52 24.7
comp=Z,7.7nm,1.2s
BLYC Blythe 78.39 48 P **P** **15 51 47.8 +2.5**
BLYC IAmb IAmb 15 51 49.2
comp=Z,5.6nm,0.8s
NVAR Mina Array Bea 78.59 42 P **P** **15 51 49.4 +2.7**
comp=Z,2.0nm,0.8s,baz=226,slow=8.9,SNR=16
comp=Z,2.0nm,0.8s
NVAR Mina Array Bea 78.59 42 P **P** **15 51 48.5 +1.8**
NV11 Mina Array Sit 78.69 42 P **P** **15 51 48.9 +1.8**
KSRS Korea Array 78.72 317 P **P** **15 51 48.0 +0.9**
comp=Z,6.2nm,1.0s,baz=136,slow=6.2,SNR=31
comp=Z,6.2nm,1.0s
KSAR Wonju Array Be 78.74 317 P **P** **15 51 47.9 +0.7**
SEHB SEOHWA 79.00 318 P **P** **15 51 50.1 +1.5**
SEHB IAmb IAmb 15 51 51.5
comp=Z,13nm,1.1s
TPNV Topopah Spring 79.04 44 P **P** **15 51 51.1 +2.0**
SHPR Sheep Range 79.50 45 P **P** **15 51 53.2 +1.6**
PRN Pahroc Range 80.08 44 P **P** **15 51 57.6 +2.9**
PRN IAmb IAmb 15 52 28.4
comp=Z,10nm,1.3s
TUC Tucson 80.27 50 P **P** **15 51 58.2 +2.5**
USRK Ussuriysk Ar. 80.46 324 P **P** **15 51 57.2 +0.8**
comp=Z,1.4nm,0.6s,baz=134,slow=5.5,SNR=7.4
comp=Z,1.4nm,0.6s
USRK Ussuriysk Ar. 80.46 324 P **P** **15 51 57.1 +0.7**
X16A Lo Mia Camp, P 80.90 48 P **P** **15 52 01.9 +2.7**
X16A IAmb IAmb 15 52 03.6
comp=Z,10nm,1.3s
CCUT Cedar City 81.28 45 P **P** **15 52 04.2 +3.1**
U15A North Rim 81.38 46 P **P** **15 52 04.7 +2.8**
NJ2 Nanjing 82.09 308 *e*P **P** **15 52 06.3 +1.0**
NJ2 pmax pmax 17 24 59.5
comp=Z,9.0nm,0.8s
G08A Pilot Rock 82.41 36 P **P** **15 52 09.6 +2.8**
121A Cookes Peak, D 82.57 52 P **P** **15 52 10.6 +2.5**
MSU Marysvale 82.58 45 P **P** **15 52 10.7 +2.7**
H03S2 Juan Fernandez 83.59 124 T T 17 24 59.5
baz=249
H03S1 Juan Fernandez 83.60 124 T T 17 24 47.2
baz=249
H03S3 Juan Fernandez 83.61 124 T T 17 24 57.7
baz=249
TMUT Trail Mountain 83.64 44 P **P** **15 52 16.4 +2.9**
TMUT IAmb IAmb 15 52 17.8
comp=Z,9.9nm,1.0s
SBM South Baldy 83.72 51 P **P** **15 52 16.7 +2.6**
H03N2 Juan Fernandez 83.72 123 T T 17 24 57.0
baz=247,slow=72,SNR=210
H03N3 Juan Fernandez 83.72 123 T T 17 25 02.3
baz=247,slow=72,SNR=75
H03N1 Juan Fernandez 83.74 123 T T 17 24 58.2
baz=247,slow=72,SNR=81
F10A Beach Ranch, E 83.79 36 P **P** **15 52 15.5 +1.6**
F10A IAmb IAmb 15 52 25.7
comp=Z,5.3nm,0.8s
PLID Pearl Lake 83.95 37 P **P** **15 52 16.9 +2.0**
CN2 Changchun 83.95 321 *e*P **P** **15 52 14.8 +0.2**
CN2 PP **PP** **15 55 30.7 +0.8**
CN2 S **S** **16 02 34.0 +3.7**
CN2 sS pS 16 02 56.6 -5.5
CN2 pmax pmax
comp=Z,10.0nm,1.2s
BNX BinXian 83.96 323 ⇑P **P** **15 52 15.2 +0.6**
BNX pmax pmax
comp=Z,10.0nm,0.8s
BNX pmax pmax
comp=Z,75nm,5.9s
HLID Hailey 83.99 39 P **P** **15 52 17.2 +2.2**
SRU San Rafael Swe 84.00 45 P **P** **15 52 17.1 +1.9**
SRU IAmb IAmb 15 52 18.9
comp=Z,10nm,1.0s
CRNM Carthage 84.03 51 P **P** **15 52 18.4 +3.0**
TX31 Lajitas Ar. Si 84.20 56 P **P** **15 52 18.9 +2.6**
TX31 IAmb IAmb 15 52 20.2
comp=Z,13nm,1.1s
TX32 Lajitas Array 84.20 56 P **P** **15 52 18.8 +2.4**
TXAR Lajitas Array 84.20 56 P **P** **15 52 18.9 +2.6**
comp=Z,9nm,1.0s,baz=214,slow=5.9,SNR=17
comp=Z,2.9nm,1.0s
TXAR Lajitas Array 84.20 56 P **P** **15 52 18.2 +1.9**
BNM Barren Site 84.20 51 P **P** **15 52 19.1 +2.6**
P18A Preston Nutter 84.45 44 P **P** **15 52 20.4 +2.7**
TCUT Toone Canyon 84.49 43 P **P** **15 52 19.8 +2.0**
TCUT IAmb IAmb 15 52 21.4
comp=Z,12nm,1.0s
PV13 Radium Mtn., P 84.64 46 P **P** **15 52 20.6 +2.0**
PV13 IAmb IAmb 15 52 22.8
comp=Z,6.9nm,1.3s
ANMO Albuquerque 84.71 50 P **P** **15 52 20.9 +2.0**
ANMO IAmb IAmb 15 52 22.9
comp=Z,7.9nm,0.9s
GDL2 Guadalupe Moun 84.96 53 P **P** **15 52 23.0 +2.9**
RND Reindeer 85.66 11 P **P** **15 52 24.2 +1.4**
RND IAmb IAmb 15 52 54.0
comp=Z,11nm,1.0s
MCK McKinley 85.94 11 P **P** **15 52 24.5 +0.4**
MCK IAmb IAmb 15 52 55.0
comp=Z,11nm,1.0s
PDAR Pinedale Array 86.53 42 P **P** **15 52 28.0 +0.2**
comp=Z,6.6nm,0.7s,baz=205,slow=3.1,SNR=4.9
comp=Z,0.6nm,0.7s
PLCA Paso Flores 87.23 132 P **P** **15 52 33.8 +2.6**
comp=Z,3.0nm,0.9s,baz=300,slow=3.8,SNR=4.0
PLCA PP **PP** **15 56 03.4 +7.4**
comp=Z,5.7nm,1.3s,baz=59,slow=2.0,SNR=3.2
comp=Z,3.0nm,0.9s
ILAR Eielson Array 87.26 12 P **P** **15 52 31.5 +1.0**
comp=Z,1.6nm,1.1s,baz=209,slow=5.4,SNR=7.6
comp=Z,1.6nm,1.1s
HNS HongShan 87.64 311 ⇑P **P** **15 52 34.2 +1.3**
HNS pmax pmax
comp=Z,11nm,1.0s
J26L Joseph Creek 87.68 13 P **P** **15 52 34.2 +1.6**
J26L IAmb IAmb 15 53 04.3
comp=Z,5.9nm,0.9s
LYN LuoYang 87.98 308 ⇑*i*P **P** **15 52 36.1 +1.4**
LYN pmax pmax
comp=Z,20nm,0.9s
TROLL Troll, Antarti 88.10 179 P **P** **15 52 36.1 +1.3**
SNAA Sanae 88.29 177 P **P** **15 52 36.9 +1.2**
SNAA Sanae 88.29 177 LR LR 16 32 26.3
comp=Z,12nm,18.0s,baz=203,slow=36
VNA3 Neumayer Olymp 88.30 175 P **P** **15 52 37.7 +2.0**
VNA2 Neumayer--Watz 88.78 176 P **P** **15 52 39.5 +1.6**
baz=172,slow=2.9
VNA1 Neumayer--Stat 88.98 175 P **P** **15 52 40.4 +1.7**
XAN Xi'an 90.43 306 P **P** **15 52 47.7 +1.5**
XAN pP pP 15 53 01.0 -11
XAN pmax pmax
comp=Z,18nm,1.1s
KMI Kunming 92.00 296 ⇑P **P** **15 52 55.5 +1.5**
KMI pmax pmax
comp=Z,11nm,1.1s
CMAR Chiang Mai Arr 92.98 288 P **P** **15 52 59.0 +0.7**
comp=Z,5.4nm,1.1s,baz=113,slow=3.4,SNR=16
comp=Z,5.4nm,1.1s
CMAR Chiang Mai Arr 92.98 288 P **P** **15 52 58.9 +0.6**
INK Inuvik 93.09 14 P **P** **15 52 59.0 +1.4**
comp=Z,2.2nm,0.6s,baz=294,slow=6.0,SNR=3.3
comp=Z,2.2nm,0.6s
NNA Nana 93.10 104 LR LR 16 28 13.3
comp=Z,27nm,18.1s,baz=298,slow=31
YKA Yellowknife Ar 94.86 24 P **P** **15 53 06.7 +0.8**
comp=Z,0.4nm,0.7s,baz=246,slow=4.0,SNR=3.0
YKA LR LR 16 29 38.2
comp=Z,46nm,21.0s,baz=94,slow=32
comp=Z,0.4nm,0.7s
LVC Limon Verde 96.01 117 LR LR 16 27 04.9
comp=Z,26nm,20.0s,baz=234,slow=29
AKASG Malin Array Be 144.12 334 PKhKP PKPpre 15 59 16.4
comp=Z,1.9nm,0.7s,baz=39,slow=4.1,SNR=13
CLL Collm 148.29 351 *i* PKPbc **PKPab** **15 59 31.4 -1.9**
comp=Z,6.0nm,1.0s
CLL *i* PKiKP **PKiKP** **15 59 33.9 +2.3**
comp=Z,5.0nm,0.8s
CLL *ex* x 15 59 44.0
CLL *es*PKiKP **sPKPdf** **16 00 02.0 -2.4**
CRVS Cervenica-Dubn 148.49 340 *e*PKP **PKPab** **15 59 35.9 +1.6**
DPC Dobruska-Polom 148.59 346⇑ *e*PKP **PKPab** **15 59 32.3 -2.4**
KRLC Kraliky 148.75 346⇑ *e*PKP **PKPab** **15 59 33.2 -2.1**
BRTR Keskin Array B 148.86 315 PKPbc **PKiKP** **15 59 32.0 -1.4**
comp=Z,1.8nm,0.8s,baz=144,slow=4.1,SNR=8.9
MODS Modra-Piesok 150.20 344 *e*PKP **PKPbc** **15 59 39.8 +4.9**
KHC Kasperske Hory 150.30 349⇑ *e*PKP **PKiKP** **15 59 36.0 +0.1**
CKRC Cesky Krumlov 150.46 348⇑ *e*PKP **PKiKP** **15 59 36.6 +0.3**
GERES GERESS Array B 150.55 349 PKPbc **PKiKP** **15 59 37.1 +0.5**
comp=Z,1.8nm,0.9s,baz=70,slow=1.6,SNR=12
GERES PKPab **PKPab** **15 59 44.5 +1.7**
comp=Z,1.9nm,0.7s,baz=29,slow=3.0,SNR=12
ESDC Sonseca Array 158.91 20 PKPab **PKPab** **16 00 20.3 +1.8**
comp=Z,0.4nm,0.7s,baz=335,slow=6.7,SNR=4.4
TORD Torodi Ar. Bea 172.24 152 PKPab **PKPab** **16 01 19.0 +1.3**
comp=Z,0.8nm,0.8s,baz=202,slow=3.9,SNR=4.3

*IDC **03** 15:46:56.1±0.8,31°.07N×130°.02E,h152km±9km,mb3.2/5, mbtmp3.6/10,MS4.1/1,Error ellipse: s-maj=23.1km s-min=8.9km az=102.0*
*NEIC **03** 15:46:57.6±2.9,31°.14N±0°.07×130°.21E±0°.09, h162km±6km,mb4.2/5,Error ellipse: s-maj=12.4km s-min=8.8km az=127.0*
*JMA **03** 15:46:57.8±0.1,31°.1N±0°.4×130°.3E±0°.8,h159km±1km, MV3.2/39,SATSUMA PENINSULA REGION*
ISC 03 15:46:57.3±0.7,31°.09N±0°.04×130°.19E±0°.07,h162km±5km, n36,σ1°18/47,mb3.4/7,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSU	**Suzuyama**	**0.47**	**28**			**Pn**	**15 47 19.7**	**-0.2**
JSU	**Suzuyama**	**0.47**	**28**	*e*P		**Pn**	**15 47 20.0**	**0.0**
JSU				*e*S		**Sn**	**15 47 36.9**	**-0.4**
JKC	**Kuchinoerabu**	**0.63**	**180**	*e*P		**Pn**	**15 47 21.1**	**+0.4**
JKC				*e*S		**Sn**	**15 47 38.8**	**+0.3**
JTSR	**Tashiro 2**	**0.63**	**83**	*e*P		**Pn**	**15 47 20.2**	**-0.5**
JTSR				*e*S		**Sn**	**15 47 37.1**	**-1.5**
JSJ	**Shimokoshiki**	**0.71**	**325**	*e*P		**Pn**	**15 47 21.0**	**-0.2**
JSJ				*e*S		**Sn**	**15 47 39.1**	**-0.5**
JTN	**Tanegashima 3**	**0.80**	**123**	*e*P		**Pn**	**15 47 21.6**	**-0.2**
JTN				*e*S		**Sn**	**15 47 39.6**	**-0.9**
JYAK	**Yakushimahirau**	**0.89**	**162**	*e*P		**Pn**	**15 47 22.5**	**+0.1**
JYAK				*e*S		**Sn**	**15 47 41.1**	**-0.5**
JMTN	**Minamitane**	**0.92**	**138**	*e*P		**Pn**	**15 47 22.4**	**-0.2**
JMTN				*e*S		**Sn**	**15 47 41.5**	**-0.5**
JTZ	**Takazaki**	**1.11**	**43**	*e*P		**Pn**	**15 47 24.0**	**-0.2**
JTZ				*e*S		**Sn**	**15 47 43.9**	**-1.0**
JNN	**Nakanoshima**	**1.27**	**193**	*e*P		**Pn**	**15 47 26.2**	**+0.5**
JNN				*e*S		**Sn**	**15 47 48.5**	**+1.1**
JIU3	**Izumi3**	**1.55**	**20**	*e*P		**Pn**	**15 47 28.4**	**+0.2**
JIU3				*e*S		**Sn**	**15 47 51.3**	**-0.9**
JNU	**Nakatsue**	**2.11**	**16**	P		**Pn**	**15 47 34.5**	**0.0**
	46nm,0.6s,baz=248,slow=2.1,SNR=86							
JNU				S		**Sn**	**15 48 02.1**	**-1.1**
	16nm,0.7s,baz=268,slow=24,SNR=8.4							
JNU	**Nakatsue**	**2.11**	**16**	Pn		**Pn**	**15 47 33.9**	**-0.5**
JTAJ	**Takarajima**	**2.11**	**204**	*e*P		**Pn**	**15 47 35.6**	**+1.2**
JTU	**Tsushima**	**3.49**	**349**	Pn		**Pn**	**15 47 51.8**	**+0.6**
JMN	**Monobe**	**4.08**	**49**	Pn		**Pn**	**15 47 57.6**	**-1.3**
JOW	**Kunigami**	**4.56**	**202**	P		**Pn**	**15 48 04.5**	**-0.8**
	2.6nm,0.3s,baz=304,slow=30,SNR=31							
JOW				S		**Sn**	**15 48 54.3**	**-4.0**
	5.4nm,0.3s,baz=81,slow=27,SNR=14							
JOW	**Kunigami**	**4.56**	**202**	Pn		**Pn**	**15 48 04.7**	**-0.6**
JHS	**Saijyo**	**4.61**	**31**	Pn		**Pn**	**15 48 03.2**	**-2.5**
KSRS	**Korea Array**	**6.62**	**344**	P		**Pn**	**15 48 31.1**	**-1.1**
	1.3nm,0.7s,baz=167,slow=14,SNR=13							
INU	**Inuyama**	**7.12**	**52**	Pn		**Pn**	**15 48 40.2**	**+1.2**
JGF	**Kuroka**	**7.49**	**51**	Pn		**Pn**	**15 48 44.5**	**+0.6**
JHJ	**Hachijo jima 2**	**8.38**	**74**	P		**Pn**	**15 48 56.9**	**+1.1**
	30nm,0.7s,baz=252,slow=20,SNR=1.4							
MJAR	**Matsushiro Arr**	**8.60**	**49**	P		**Pn**	**15 49 00.2**	**+1.5**
	0.7nm,0.5s,baz=229,slow=16,SNR=1.4							
ENH	**Enshi**	**17.83**	**273**	Pn		**Pn**	**15 50 56.2**	**+0.7**
ENH				IAmb	IAmb		15 50 56.8	
	comp=Z,16nm,0.5s							
SONM	**Songino Array**	**24.69**	**319**	P		**P**	**15 52 03.4**	**0.0**
	comp=Z,0.2nm,0.4s,baz=111,slow=7.9,SNR=2.2							
	comp=Z,0.2nm,0.4s							
MK31	**Makanchi Array**	**39.78**	**307**	P		**P**	**15 54 14.5**	**+0.2**
PSI	**Prapat**	**40.77**	**233**	LR		LR	16 12 22.9	
	comp=Z,211nm,18.1s,baz=230,slow=38							
COEN	**Coen**	**46.49**	**162**	P		**P**	**15 55 11.7**	**+3.3**
WB0	**Warramunga Arr**	**50.73**	**175**	P		**P**	**15 55 39.3**	**-1.4**
WB0				IAmb	IAmb		15 56 02.8	
	comp=Z,9.1nm,1.2s							
WRA	**Warramunga Arr**	**50.90**	**175**	P		**P**	**15 55 41.3**	**-0.6**
	comp=Z,0.9nm,1.0s,baz=353,slow=7.8,SNR=4.6							
	comp=Z,0.9nm,1.0s							
AS31	**Alice Springs**	**54.56**	**176**	P		**P**	**15 56 08.2**	**-0.6**
AS31				IAmb	IAmb		15 56 11.8	
	comp=Z,1.6nm,1.2s							
ASAR	**Alice Springs**	**54.56**	**176**	P		**P**	**15 56 08.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=359,slow=6.5,SNR=12							
	comp=Z,0.3nm,0.7s							
FINES	**FINESS Array B**	**69.51**	**330**	P		**P**	**15 57 46.8**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=90,slow=7.6,SNR=6.1							
	comp=Z,0.7nm,0.4s							
YKA	**Yellowknife Ar**	**73.41**	**26**	P		**P**	**15 58 11.9**	**+0.6**
BRTR	**Keskin Array B**	**75.43**	**308**	P		**P**	**15 58 22.8**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=65,slow=8.1,SNR=3.6							
	comp=Z,0.7nm,0.9s							

*SOME **03** 15:48:34.9,41°.82N×82°.37E,h5km*
*NNC **03** 15:48:39.8±1.7,41°.92N×82°.17E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=13.5km s-min=7.0km az=149.0*
ISC 03 15:48:40.8±2.0,41°.94N±0°.09×82°.16E±0°.06,h14km,n25, σ2s09/41,8C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KTMS	**Ketmen**	**2.01**	**319**	*e*P		**Pb**	**15 49 16.7**	**-0.6**
	52nm,0.2s							
KTMS				*e*S		**Sg**	**15 49 46.7**	**+1.1**
	455nm,0.2s							
SHLS	**Shalkode**	**2.34**	**302**	*e*P		**Pn**	**15 49 18.4**	**-0.6**
	5.8nm,0.2s							
SHLS				*e*S		**Sb**	**15 49 49.6**	**-1.9**
	115nm,0.6s							
PDGK	**Podgornoye**	**2.41**	**306**	Pg		**Pn**	**15 49 21.9**	**+2.0**
	2.5nm,0.3s							
PDGK				Lg		Lg	15 49 56.3	
	36nm,0.5s							
PDGK	**Podgornoye**	**2.41**	**306**	⇑Pn		**Pn**	**15 49 21.8**	**+1.9**
	7.9nm,0.6s							
PDGK				⇑Lg		Lg	15 49 57.2	
	44nm,0.5s							
UZB	**Uzynbulak**	**2.61**	**299**	*e*P		**Pb**	**15 49 27.5**	**0.0**
	1.8nm,0.1s							
UZB				*e*S		**Sg**	**15 50 05.2**	**+0.4**
	51nm,0.7s							
UZB	**Uzynbulak**	**2.61**	**299**	Pg		**Pb**	**15 49 27.1**	**-0.4**
	1.9nm,0.2s							
UZB				Lg		Lg	15 50 05.2	
	51nm,0.7s							
DJR	**Jarkent**	**2.96**	**325**	*e*P		**Pb**	**15 49 32.9**	**-0.5**
	4.9nm,0.5s							
DJR				*e*S		**Sg**	**15 50 15.2**	**-0.6**
	14nm,0.5s							
SATY	**Saty**	**2.99**	**293**	*e*P		**Pb**	**15 49 34.2**	**+0.3**
	7.3nm,0.2s							
SATY				*e*S		**Sg**	**15 50 17.1**	**+0.1**
	32nm,0.5s							
ARXS	**Arharly**	**3.90**	**307**	*e*P		**Pb**	**15 49 50.6**	**+1.2**
	2.1nm,0.6s							
ARXS				*e*S		**Sg**	**15 50 45.3**	**-0.9**
	15nm,0.8s							
ARXS	**Arharly**	**3.90**	**307**	Pg		**Pb**	**15 49 50.6**	**+1.2**
	2.1nm,0.6s							
ARXS				Lg		Lg	15 50 45.3	
	15nm,0.8s							
MDOK	**Medeo**	**3.97**	**290**	*e*P		**Pb**	**15 49 50.7**	**+0.1**
	2.5nm,0.4s							
MDOK				*e*S		**Sg**	**15 50 45.4**	**-2.8**
	5.3nm,0.7s							
MDOK	**Medeo**	**3.97**	**290**	Pg		**Pb**	**15 49 50.7**	**+0.1**
	2.5nm,0.4s							
MDOK				Pg		**Pg**	**15 49 53.5**	**-3.3**
	3.8nm,0.6s							
MDOK				Lg		Lg	15 50 45.4	
	5.3nm,0.7s							
MDOK				Lg		Lg	15 50 45.7	
	9.8nm,0.7s							
TDK	**Taldyqorghan**	**4.11**	**320**	*e*P		**Pb**	**15 49 55.0**	**+2.2**
	12nm,0.2s							
TDK				*e*S		**Sg**	**15 50 52.3**	**-0.3**
	20nm,0.1s							
KTBS	**Karatobe**	**4.40**	**296**	*e*P		**Pb**	**15 49 59.2**	**+1.3**
	2.2nm,0.6s							
KTBS				*e*S		**Sg**	**15 50 59.7**	**-2.4**
	14nm,0.5s							
KTBS	**Karatobe**	**4.40**	**296**	Pg		**Pb**	**15 49 59.2**	**+1.3**
	2.2nm,0.6s							
KTBS				Lg		Lg	15 50 59.7	

	14nm,0.5s								
KUU	**Kurty**	**4.70**	**297**	*e*P		**Pb**	**15 50 05.2**	**+2.2**
	1.8nm,0.3s								
KUU				*e*S		**Sg**	**15 51 10.4**	**-1.2**
	8.1nm,0.8s								
KUU	**Kurty**	**4.70**	**297**	Pg		**Pb**	**15 50 05.2**	**+2.2**
	1.8nm,0.3s								
KUU				Lg		Lg	15 51 10.4		
	8.1nm,0.8s								
KST	**Kastek**	**4.71**	**286**	*e*P		**Pb**	**15 50 05.8**	**+2.6**
	2.7nm,0.6s								
KST				*e*S		**Sg**	**15 51 12.1**	**0.0**
	8.8nm,0.8s								
MK31	**Makanchi Array**	**4.86**	**1**	⇓Pg		**Pb**	**15 50 06.9**	**+1.2**
	1.2nm,0.5s,baz=185,slow=16,SNR=4.9								
MK31				⇑Sn		**Sn**	**15 50 55.2**	**+5.7**
	1.6nm,0.5s,baz=166,slow=17,SNR=4.2								
MK31				⇑Lg		Lg	15 51 11.6		
	7.5nm,0.6s,baz=180,slow=29,SNR=4.0								
MAKZ	**Makanchi**	**4.87**	**359**	⇑Pn		**Pn**	**15 49 54.7**	**+1.0**
	8.3nm,1.2s								
MAKZ				⇑Sn		**Sn**	**15 50 52.0**	**+2.1**
	1.7nm,0.6s								
MAKZ				⇓Lg		Lg	15 51 12.8		
	7.9nm,0.9s								
TKM2	**Tokmak 2**	**4.96**	**284**	⇑Pn		**Pn**	**15 49 55.9**	**+0.9**
	1.7nm,0.7s								
TKM2				⇑Lg		Lg	15 51 16.0		
	6.1nm,0.9s								
KRBS	**Karabastau**	**5.08**	**292**	*e*P		**Pb**	**15 50 11.4**	**+1.9**
	0.6nm,0.5s								
KRBS				*e*S		**Sg**	**15 51 21.2**	**-2.7**
	2.5nm,0.6s								
KRBS	**Karabastau**	**5.08**	**292**	Pg		**Pb**	**15 50 11.4**	**+1.9**
	0.6nm,0.5s								
KRBS				Lg		Lg	15 51 21.2		
	2.5nm,0.6s								
ZSN	**Zaisan**	**5.84**	**18**	*e*P		**Pb**	**15 50 23.6**	**+1.2**
	1.5nm,0.3s								
ZSN				*e*S		**Sg**	**15 51 41.8**	**-6.4**
	8.2nm,0.8s								
ZSN	**Zaisan**	**5.84**	**18**	Pg		**Pb**	**15 50 23.6**	**+1.2**
	1.5nm,0.3s								
ZSN				Lg		Lg	15 51 41.8		
	8.2nm,0.8s								

*SOME **03** 15:54:00.3,41.77N×80.28E,h20km*
*KRNET **03** 15:54:01.4±0.1,42.25N×80.40E,mb3.6*
*NNC **03** 15:54:01.5±1.3,41.79N×80.18E,h0km,mb4.2,mpv3.8,*
Error ellipse: s-maj=9.1km s-min=6.0km az=142.0
ISC 03 15:54:07.5±2.9,42.08N±0.08×80.05E±0.06,h2km±14km,
n40,σ1§87/63,20C-10D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.16**	**338**		*e*P		**Pn**	**15 54 27.0**	**-3.9**
	137nm,0.4s								
SHLS					*e*S		**Sn**	**15 54 46.4**	**-1.1**
	285nm,0.3s								
PRZ	**Przheval'sk**	**1.29**	**289**	⇑	*i*P		**Pn**	**15 54 29.4**	**-3.2**
	baz=80								
PRZ				⇑	*e*S		**Sn**	**15 54 49.6**	**-0.9**
	baz=80								
UZB	**Uzynbulak**	**1.31**	**325**		*e*P		**Pn**	**15 54 30.9**	**-2.0**
	18nm,0.2s								
UZB					*e*S		**Sg**	**15 54 52.9**	**+3.3**
	159nm,0.2s								
PDGK	**Podgornoye**	**1.32**	**342**	⇑	P		**Pn**	**15 54 30.5**	**-2.5**
	25nm,0.5s								
PDGK				⇓	S		**Sg**	**15 54 54.0**	**+4.1**
	94nm,0.5s								
KTMS	**Ketmen**	**1.39**	**9**		*e*P		**Pn**	**15 54 31.7**	**-2.3**
	282nm,0.2s								
KTMS					*e*S		**Sg**	**15 54 53.8**	**+1.7**
	635nm,0.7s								
SATY	**Saty**	**1.56**	**310**		*e*P		**Pn**	**15 54 35.5**	**-0.8**
	123nm,0.4s								
SATY					*e*S		**Sg**	**15 55 00.7**	**+3.0**
	144nm,0.2s								
DJR	**Jarkent**	**2.26**	**355**		*e*P		**Pb**	**15 54 47.6**	**-1.5**
	21nm,0.7s								
DJR					*e*S		**Sg**	**15 55 21.2**	**+1.0**
	106nm,0.6s								
DJR	**Jarkent**	**2.26**	**355**		Pg		**Pn**	**15 54 46.0**	**0.0**
	31nm,0.4s								
DJR					Lg		Lg	15 55 19.0	
	93nm,0.2s								
MDOK	**Medeo**	**2.47**	**297**		*e*P		**Pb**	**15 54 50.1**	**-2.4**
	41nm,0.2s								
MDOK					*e*S		**Sg**	**15 55 26.1**	**-0.6**
	136nm,0.5s								
MDOK	**Medeo**	**2.47**	**297**		Pg		**Pn**	**15 54 49.8**	**+1.0**
	41nm,0.2s								
MDOK					Pg		**Pn**	**15 54 49.9**	**+1.0**
	32nm,0.5s								
MDOK					Lg		Lg	15 55 25.7	
	111nm,0.5s								
MDOK				⇑	Lg		Lg	15 55 27.1	
	98nm,0.6s								
KNDC	**Almaty**	**2.54**	**298**	⇑	Pg		**Pb**	**15 54 51.7**	**-2.2**
	58nm,0.3s								
KNDC				⇑	Lg		Lg	15 55 30.7	
	159nm,0.7s								
ARXS	**Arharly**	**2.68**	**324**		*e*P		**Pb**	**15 54 54.9**	**-1.3**
	12nm,0.3s								
ARXS					*e*S		**Sg**	**15 55 34.2**	**+0.5**
	171nm,0.5s								
ARXS	**Arharly**	**2.68**	**324**		Pg		**Pb**	**15 54 54.9**	**-1.3**
	12nm,0.3s								
ARXS					Lg		Lg	15 55 34.2	
	171nm,0.5s								
ULHL	**Ulahol**	**2.83**	**275**	⇓	*e*P		**Pn**	**15 54 52.6**	**-1.3**
	baz=71								
ULHL				⇓	*e*S		**Sn**	**15 55 30.6**	**+1.9**
	baz=71								
CHKK	**Chushkaly**	**2.86**	**309**		*e*P		**Pb**	**15 54 58.2**	**-1.0**
	20nm,0.4s								
CHKK					*e*S		**Sg**	**15 55 39.5**	**0.0**
	134nm,0.4s								
CHKK	**Chushkaly**	**2.86**	**309**		Pg		**Pb**	**15 54 58.2**	**-1.0**
	20nm,0.4s								
CHKK					Lg		Lg	15 55 39.5	
	134nm,0.4s								
MTBS	**Maitube**	**2.87**	**293**		*e*P		**Pb**	**15 54 57.5**	**-2.0**
	27nm,0.3s								
MTBS					*e*S		**Sg**	**15 55 38.4**	**-1.3**
	71nm,0.4s								
MTBS	**Maitube**	**2.87**	**293**		Pg		**Pb**	**15 54 57.5**	**-2.0**
	27nm,0.3s								
MTBS					Lg		Lg	15 55 38.4	
	71nm,0.4s								
KTBS	**Karatobe**	**2.96**	**305**		*e*P		**Pb**	**15 54 59.7**	**-1.3**
	22nm,0.2s								
KTBS					*e*S		**Sg**	**15 55 42.3**	**-0.4**
	144nm,0.2s								
KTBS	**Karatobe**	**2.96**	**305**		Pg		**Pb**	**15 54 59.7**	**-1.3**
	22nm,0.2s								
KTBS					Lg		Lg	15 55 42.3	
	144nm,0.2s								
TDK	**Taldyqorghan**	**3.16**	**338**		*e*P		**Pb**	**15 55 03.0**	**-1.3**
	17nm,0.3s								
TDK					*e*S		**Sg**	**15 55 48.5**	**-0.4**
	30nm,0.9s								
KST	**Kastek**	**3.17**	**289**		*e*P		**Pb**	**15 55 02.2**	**-2.3**
	14nm,0.3s								
KST					*e*S		**Sb**	**15 55 46.8**	**+3.2**
	82nm,0.6s								
KST	**Kastek**	**3.17**	**289**		Pg		**Pb**	**15 55 02.2**	**-2.3**
	14nm,0.3s								
KST					Lg		Lg	15 55 46.8	
	82nm,0.6s								
KUU	**Kurty**	**3.27**	**305**		*e*P		**Pb**	**15 55 04.8**	**-1.4**
	10nm,0.4s								
KUU					*e*S		**Sg**	**15 55 50.9**	**-1.7**
	47nm,0.4s								
KUU	**Kurty**	**3.27**	**305**		Pg		**Pb**	**15 55 04.8**	**-1.4**
	10nm,0.4s								
KUU					Lg		Lg	15 55 50.9	
	47nm,0.4s								
TKM2	**Tokmak 2**	**3.40**	**286**	⇑	Pn		**Pn**	**15 55 01.1**	**-0.5**
	7.2nm,0.5s								
TKM2				⇓	Lg		Lg	15 55 55.7	
	31nm,0.7s								
TKM2	**Tokmak 2**	**3.40**	**286**	⇓	*e*P		**Pn**	**15 55 00.1**	**-1.6**
	baz=82								
TKM2				⇓	*e*S		**Sn**	**15 55 43.1**	**+0.5**
	baz=82								
KBK	**Karagaybulak**	**3.82**	**280**	⇑	*i*P		**Pn**	**15 55 06.2**	**-1.3**
	baz=78								
KBK				⇑	*e*S		**Sn**	**15 55 53.5**	**+0.5**
	baz=78								
CHMS	**Chumysh**	**4.02**	**285**	⇑	Pg		**Pb**	**15 55 19.6**	**+0.6**
	12nm,0.8s								
CHMS				⇓	Lg		Lg	15 56 14.9	
	11nm,0.7s								
AAK	**Ala-Archa**	**4.15**	**280**	⇓	*i*P		**Pn**	**15 55 11.0**	**-1.0**
	baz=77								
AAK				⇓	*e*S		**Sn**	**15 56 01.6**	**+0.4**
	baz=77								
SGDS	**Sogindy**	**4.22**	**291**		*e*P		**Pb**	**15 55 21.4**	**-1.0**
	3.2nm,0.5s								
SGDS					*e*S		**Sg**	**15 56 19.6**	**-3.4**
	14nm,0.5s								
SGDS	**Sogindy**	**4.22**	**291**		Pg		**Pb**	**15 55 21.4**	**-1.0**
	3.2nm,0.5s								
SGDS					Lg		Lg	15 56 19.6	
	14nm,0.5s								
ARLS	**Aral**	**4.27**	**269**	⇑	*i*P		**Pn**	**15 55 13.0**	**-0.6**
	baz=67								
ARLS				⇑	*e*S		**Sn**	**15 56 05.1**	**+1.0**
	baz=67								
MAKZ	**Makanchi**	**4.93**	**16**	⇑	Pn		**Pn**	**15 55 20.4**	**-2.1**
	17nm,0.8s								
MAKZ				⇑	Sn		**Sn**	**15 56 22.3**	**+2.3**
	3.3nm,0.5s								
MAKZ				⇑	Lg		Lg	15 56 43.6	
	3.0nm,0.5s								
MK31	**Makanchi Array**	**4.98**	**18**		Pn		**Pn**	**15 55 21.6**	**-1.7**
	1.0nm,0.2s,baz=198,slow=13,SNR=193								
MK31				⇑	Sn		**Sn**	**15 56 23.7**	**+2.3**
	5.1nm,0.5s,baz=190,slow=33,SNR=13								
MK31				⇑	Lg		Lg	15 56 46.0	
	6.4nm,0.6s,baz=195,slow=28								
MRKS	**Merke**	**5.09**	**280**		*e*P		**Pb**	**15 55 39.6**	**+2.3**
	1.8nm,0.3s								
MRKS					*e*S		**Sg**	**15 56 51.1**	**0.0**
	16nm,0.7s								
MRKS	**Merke**	**5.09**	**280**		Pg		**Pb**	**15 55 39.6**	**+2.3**
	1.8nm,0.3s								
MRKS					Lg		Lg	15 56 51.1	
	16nm,0.7s								
KK31	**Karatay Array**	**7.11**	**282**	⇑	Pg		**Pb**	**15 56 13.8**	**+2.1**
	0.4nm,0.3s,baz=83,slow=17,SNR=4.8								
KK31				⇑	Lg		Lg	15 57 53.7	
	3.0nm,0.6s,baz=94,slow=27,SNR=7.9								
KURBB	**Kurchatov Arra**	**8.61**	**354**	⇓	Lg		Lg	15 58 45.4	
	9.6nm,0.7s								
KURK	**Kurchatov**	**8.70**	**354**	⇑	Lg		Lg	15 58 49.3	
	12nm,1.0s								

*IDC **03** 16:15:14.6±1.1,65.37N×16.47W,h0km,mb3.3/8,*
mbtmp3.3/8,MS2.8/6,Error ellipse: s-maj=38.6km
s-min=20.8km az=24.0
*REY **03** 16:15:17.2,64.68N×17.50W,h5km*
ISC 03 16:15:16.4±0.8,64.67N±0.02×17.44W±0.03,h10km±5km,
n53,σ0§99/55,mb3.3/8,MS3.2/3,Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IKIS	**Kista**	**0.05**	**271**		P		**Pg**	**16 15 18.6**	**-0.1**
	baz=260								
IKIS					S		**Sg**	**16 15 19.8**	**-0.5**
	baz=260								
IDYN	**Dyngjuhals**	**0.12**	**14**		P		**Pg**	**16 15 20.3**	**+0.9**
	baz=26								
IDYN					S		**Sg**	**16 15 23.0**	**+1.4**
	baz=26								
IVON	**Vonarskard**	**0.14**	**270**		P		**Pg**	**16 15 19.3**	**-0.4**
	baz=267								
IVON					S		**Sg**	**16 15 22.0**	**+0.1**
	baz=267								
IDJK	**Dyngjujokull**	**0.19**	**153**		P		**Pg**	**16 15 21.5**	**+0.9**
	baz=147								
IGRF	**Grimsfjall**	**0.28**	**165**		P		**Pg**	**16 15 23.3**	**+1.2**
	baz=160								
IHUS	**Husbondi**	**0.39**	**194**		P		**Pg**	**16 15 24.9**	**+0.7**
	baz=190								
IVOT	**Vottur**	**0.42**	**165**		P		**Pg**	**16 15 25.2**	**+0.6**
	baz=162								
ISKR	**Skrokkalda**	**0.42**	**255**		P		**Pg**	**16 15 25.1**	**+0.4**
	baz=253								
IKRE	**Kreppuhraun**	**0.47**	**76**		P		**Pg**	**16 15 26.0**	**+0.5**
	baz=77								
IKRE					S		**Sg**	**16 15 33.0**	**+1.3**
	baz=77								
IJOK	**Jokulheimar**	**0.50**	**224**		P		**Pg**	**16 15 26.4**	**+0.3**
	baz=221								
IMKO	**Mokollar**	**0.56**	**56**		P		**Pg**	**16 15 27.9**	**+0.6**
	baz=58								
IMKO					S		**Sb**	**16 15 36.4**	**0.0**
	baz=58								
ISVA	**Svartarkot**	**0.67**	**6**		P		**Pg**	**16 15 29.6**	**+0.2**
	baz=8.7								
IHAE	**Haedir**	**0.68**	**163**		P		**Pg**	**16 15 29.2**	**-0.3**
	baz=161								
IKAL	**Kalfafell**	**0.74**	**189**		P		**Pg**	**16 15 30.5**	**-0.1**
	baz=187								
IVSH	**V-Sauoahnukur**	**0.74**	**79**		P		**Pg**	**16 15 30.6**	**-0.2**
	baz=80								
IVAT	**Vatnsfell**	**0.81**	**233**		P		**Pb**	**16 15 31.8**	**-0.7**
	baz=232								
IADA	**Aoalbol**	**0.87**	**66**		P		**Pb**	**16 15 32.6**	**-1.0**
	baz=67								
IADA					S		**Sb**	**16 15 44.8**	**-0.4**
	baz=67								
IFAG	**Fagurholsmyri**	**0.87**	**157**		P		**Pb**	**16 15 32.8**	**-0.7**
	baz=155								
ISTE	**Stelbrattur**	**0.96**	**282**		P		**Pb**	**16 15 33.9**	**-1.2**
	baz=282								
IMEL	**Melhnausar**	**0.96**	**20**		P		**Pb**	**16 15 34.2**	**-0.8**
	baz=21								
IREN	**Reynihlio**	**1.00**	**13**		P		**Pb**	**16 15 35.1**	**-0.8**
	baz=14								
IKVO	**Krokottuvotn**	**1.07**	**12**		P		**Pb**	**16 15 36.0**	**-1.0**
	baz=14								
ISNB	**Snabyli**	**1.08**	**210**		P		**Pb**	**16 15 36.2**	**-0.8**
	baz=208								
IGRS	**Grimsstaoir**	**1.12**	**29**		P		**Pb**	**16 15 37.0**	**-0.8**
	baz=30								
ISLY	**Slysaalda**	**1.13**	**221**		P		**Pb**	**16 15 37.0**	**-0.9**
	baz=220								
IFED	**Fedgar**	**1.18**	**237**		P		**Pn**	**16 15 38.3**	**-0.6**
	baz=236								
IRJU	**Rjupnafell**	**1.19**	**208**		P		**Pn**	**16 15 38.3**	**-0.8**
	baz=206								
ISKI	**Skildingahlsh**	**1.21**	**8**		P		**Pn**	**16 15 38.5**	**-0.9**
	baz=9.2								
ISKI					S		**Sg**	**16 15 56.8**	**+1.3**
	baz=9.2								
IGHA	**Grjothals**	**1.22**	**15**		P		**Pn**	**16 15 38.6**	**-0.9**
	baz=16								
IMJO	**Mjoaskard**	**1.23**	**234**		P		**Pn**	**16 15 39.2**	**-0.4**
	baz=233								
IGRA	**Granastaoir**	**1.25**	**357**		P		**Pn**	**16 15 38.9**	**-1.0**
	baz=358								
IGRA					S		**Sb**	**16 15 56.6**	**+0.4**
	baz=358								
IGYG	**Gygjarholskot**	**1.27**	**253**		P		**Pn**	**16 15 39.5**	**-0.6**
	baz=252								
IGYG					S		**Sg**	**16 15 60.0**	**+2.9**
	baz=252								
IHAU	**Haukadalur**	**1.31**	**238**		P		**Pn**	**16 15 40.1**	**-0.6**
	baz=238								
IDIM	**Dimmadalss**	**1.31**	**9**		P		**Pn**	**16 15 39.9**	**-0.8**
	baz=10								
IGOD	**Go??abunga**	**1.31**	**220**		P		**Pn**	**16 15 40.5**	**-0.3**
	baz=219								
IHLA	**Hella**	**1.34**	**343**		P		**Pn**	**16 15 40.4**	**-0.6**
	baz=344								
IHLA					S		**Sn**	**16 15 58.6**	**-0.2**
	baz=344								
IALF	**Alftagrof**	**1.41**	**214**		P		**Pn**	**16 15 42.0**	**-0.2**
	baz=213								
IHED	**Heoinshofoi**	**1.42**	**2**		P		**Pn**	**16 15 41.4**	**-0.8**
	baz=3.1								
IHED					S		**Sn**	**16 16 00.6**	**-0.2**
	baz=3.1								
IESK	**Eystri-Skogar**	**1.45**	**218**		P		**Pn**	**16 15 42.5**	**-0.2**
	baz=217								
BORG	**Borgarnes**	**1.67**	**274**		LR		LR	16 16 22.6	
	comp=Z,123nm,18.3s,baz=157,slow=32								
SCO	**Scoresbysund**	**6.08**	**346**	*i*	P		**Pn**	**16 16 48.0**	**+1.8**
JMIC	**Jan Mayen**	**7.17**	**24**		LR		LR	16 18 30.3	
	comp=Z,16nm,18.7s,baz=207,slow=31								
NOA	**NORSAR Array B**	**13.51**	**92**		LR		LR	16 23 38.5	
	comp=Z,24nm,19.8s,baz=205,slow=38								
GERES	**GERESS Array B**	**22.93**	**119**		P		**P**	**16 20 19.9**	**-0.5**
	0.1nm,0.5s,baz=324,slow=9.6,SNR=2.2								
	0.1nm,0.5s								
VRAC	**Vranov**		**23.67**	**114**	LR		LR	16 30 54.7	
	comp=Z,39nm,18.0s,baz=240,slow=40								
ESDC	**Sonseca Array**		**26.25**	**156**	P		P	16 20 54.2	+2.8
	0.8nm,1.0s,baz=352,slow=7.8,SNR=3.0								
	0.8nm,1.0s								
AKASG	**Malin Array Be**		**27.82**	**98**	P		**P**	**16 21 02.4**	**-2.9**
	0.1nm,0.3s,baz=327,slow=10.0,SNR=1.1								
	0.1nm,0.3s								
KIRV	**Kirov**		**30.95**	**69**	LR		LR	16 32 30.7	
	comp=Z,52nm,18.1s,baz=206,slow=34								
BRTR	**Keskin Array B**		**38.45**	**105**	P		P	16 22 37.9	-0.3
	0.2nm,0.4s,baz=343,slow=9.4,SNR=2.0								
	0.2nm,0.4s								
MKAR	**Makanchi Array**		**52.70**	**58**	P		P	16 24 24.0	-6.6
	0.3nm,0.9s,baz=331,slow=5.4,SNR=2.3								
	0.3nm,0.9s								
TORD	**Torodi Ar. Bea**		**53.14**	**156**	P		P	16 24 37.7	+3.6
	0.5nm,0.8s,baz=342,slow=7.0,SNR=2.4								
	0.5nm,0.8s								
PDAR	**Pinedale Array**		**53.20**	**293**	P		**P**	**16 24 35.0**	**+0.5**
	0.5nm,0.5s,baz=51,slow=7.2,SNR=6.3								
PDAR					LR		LR	16 46 36.0	
	comp=Z,32nm,18.8s,baz=92,slow=35								
	0.5nm,0.5s								
TXAR	**Lajitas Array**		**62.31**	**280**	P		**P**	**16 25 40.6**	**+2.0**
	0.3nm,0.8s,baz=40,slow=7.1,SNR=2.4								
	0.3nm,0.8s								

*JMA **03** 16:16:40.4±0.1,23.9N±0.4×121.6E±0.6,h20km,MV2.8/12,*
TAIWAN REGION
*TAP **03** 16:16:42.8,24.20N×121.76E,h16km,ML3.5,C*
*ASIES **03** 16:16:43.2,24.23N×121.69E,h19km,MW3.3*
ISC 03 16:16:43.0±0.8,24.18N±0.01×121.75E±0.02,h20km±3km,
n129,σ1§04/223,9C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**257**	⇓	*i*P		**Pg**	**16 16 46.8**	**-0.3**
	baz=253								
ETL					*i* S		**Sg**	**16 16 49.6**	**-0.2**
	baz=253								
EHP	**Heping Village**	**0.12**	**358**	⇓	*i*P		**Pg**	**16 16 46.6**	**-0.6**
	baz=355								
EHP					*i* S		**Sg**	**16 16 49.4**	**-0.6**
	baz=355								
NACB	**Ninganchiao**	**0.14**	**266**	⇓	*i*P		**Pg**	**16 16 47.0**	**-0.3**
	baz=262								
NACB					*i* S		**Sg**	**16 16 50.0**	**-0.2**
	baz=262								
TWD	**Chiawan**	**0.17**	**233**	⇓	*i*P		**Pg**	**16 16 47.5**	**-0.2**
	baz=237								
TWD					*i* S		**Sg**	**16 16 50.7**	**-0.2**
	baz=237								
ETLH	**Xiulin Townshi**	**0.24**	**275**	⇓	*i*P		**Pg**	**16 16 48.8**	**0.0**
	baz=272								
ETLH					S		**Sg**	**16 16 53.0**	**+0.3**
	baz=272								
ENA	**Nanau**	**0.24**	**359**	⇓	*i*P		**Pg**	**16 16 48.3**	**-0.4**
	baz=356								
ENA					*i* S		**Sg**	**16 16 52.2**	**-0.5**
	baz=356								
HWA	**Hwalien**	**0.24**	**212**		*e*P		**Pg**	**16 16 49.4**	**+0.7**
	baz=221								
HWA					*e*S		**Sg**	**16 16 54.7**	**+2.1**
	baz=221								
EWUT	**Wuta**	**0.26**	**7**	⇓	*i*P		**Pb**	**16 16 47.7**	**-1.2**
	baz=2.0								
EWUT					*i* S		**Sb**	**16 16 51.8**	**-1.1**
	baz=2.0								
LATG	**Datong**	**0.40**	**330**	⇓	*i*P		**Pb**	**16 16 51.5**	**-0.1**
	baz=327								
LATG					S		**Sb**	**16 16 57.5**	**0.0**
	baz=327								
NNSB	**Datong**	**0.41**	**306**	⇓	*i*P		**Pb**	**16 16 51.8**	**0.0**
	baz=304								
NNSB					*i* S		**Sb**	**16 16 57.7**	**0.0**
	baz=304								
NNS	**Nan Shan**	**0.42**	**307**	⇓	*i*P		**Pg**	**16 16 51.0**	**-0.9**
	baz=304								
NNS					*i* S		**Sb**	**16 16 57.1**	**-0.9**
	baz=304								
TWC	**Suao**	**0.43**	**13**	⇓	*i*P		**Pg**	**16 16 51.7**	**-0.3**
	baz=7.0								
TWC					S		**Sg**	**16 16 57.8**	**-0.2**
	baz=7.0								
WHF	**Hehuan Shan**	**0.44**	**265**	⇓	*i*P		**Pb**	**16 16 52.5**	**+0.1**
	baz=264								
WHF					*i* S		**Sb**	**16 16 58.9**	**+0.2**
	baz=264								
NDS	**Dongshan**	**0.45**	**357**	⇓	*i*P		**Pg**	**16 16 51.2**	**-1.0**
	baz=353								
NDS					S		**Sg**	**16 16 57.6**	**-0.8**
	baz=353								
FUSS	**Fushou**	**0.46**	**278**	⇓	*i*P		**Pn**	**16 16 53.0**	**-1.8**
	baz=277								
FUSS					*i* S		**Sb**	**16 16 59.5**	**+0.3**
	baz=277								
ESL	**Shilin**	**0.47**	**218**	⇑	*i*P		**Pb**	**16 16 52.5**	**0.0**
	baz=224								
ESL					*e*S		**Sn**	**16 17 01.0**	**-1.3**
	baz=224								
NDT	**Datong Townshi**	**0.47**	**333**	⇓	*i*P		**Pb**	**16 16 52.7**	**+0.1**
	baz=329								
NDT					S		**Sb**	**16 16 59.6**	**+0.5**
	baz=329								
ENTT	**Nioudou**	**0.48**	**340**	⇓	*i*P		**Pg**	**16 16 51.9**	**-1.0**
	baz=337								
ENTT					*i* S		**Sb**	**16 16 58.8**	**-0.8**
	baz=337								
TEGC	**Jichi Village**	**0.51**	**202**		P		**Pb**	**16 16 54.0**	**+0.8**
	baz=195								
TEGC					*e*S		**Sn**	**16 17 03.5**	**+0.2**
	baz=195								
TWT	**Tachien**	**0.52**	**278**	⇓	*i*P		**Pn**	**16 16 54.5**	**-1.0**
	baz=276								
TWT					*i* S		**Sn**	**16 17 01.9**	**-2.1**
	baz=276								
CHGB	**Renai**	**0.54**	**257**	⇑	*i*P		**Pn**	**16 16 54.3**	**-1.4**
	baz=252								
CHGB					S		**Sn**	**16 17 01.8**	**-2.5**
	baz=252								
TWE	**Neicheng**	**0.54**	**352**	⇓	*i*P		**Pg**	**16 16 53.7**	**-0.1**
	baz=350								

NTC	**Toucheng**	0.67	7	⇓*i*P	Pg	16 16 56.1	-0.2
	baz=4.0							
NTC				*e*S	Sg	16 17 05.0	-0.4
	baz=4.0							
EGS		0.68	14	*e*P	Pg	16 16 56.6	+0.1
	baz=17							
EGS				*e*S	Sb	16 17 05.1	-0.1
	baz=17							
VWDT	**VWDT**	0.70	232	⇑*i*P	Pn	16 16 57.1	-0.6
	baz=233							
VWDT				*e*S	Sn	16 17 07.2	-0.8
	baz=233							
NFF	**Wufeng Townshi**	0.72	308	*e*P	Pg	16 16 56.8	-0.5
	baz=306							
NFF				*e*S	Sg	16 17 05.9	-1.1
	baz=306							
WHP	**Taichung City**	0.74	277	*e*P	Pn	16 16 58.0	-0.3
	baz=277							
WHP				*e*S	Sn	16 17 08.2	-0.9
	baz=277							
WPL	**Puli Township**	0.74	257	P	Pn	16 16 58.2	-0.1
	baz=257							
WPL				S	Sn	16 17 08.9	-0.2
	baz=257							
HGSD	**Ruisui**	0.75	203	*e*P	Pn	16 16 58.0	-0.5
	baz=194							
HGSD				*e*S	Sn	16 17 11.4	+2.2
	baz=194							
WCS	**Beigang Elemen**	0.77	261	*e*P	Pg	16 16 57.1	-1.0
	baz=261							
WCS				*e*S	Sn	16 17 08.4	-1.4
	baz=261							
EHY	**Hungye**	0.78	210	*e*P	Pb	16 16 57.0	-0.9
	baz=222							
EHY				*e*S	Sg	16 17 08.5	-0.2
	baz=222							
TIPB	**Shuangxi**	0.79	5	*e*P	Pg	16 16 58.3	-0.2
	baz=2.0							
TIPB				*e*S	Sb	16 17 08.2	-0.2
	baz=2.0							
NHDH	**Xindian Distri**	0.80	346	*e*P	Pn	16 16 59.0	-0.2
	baz=342							
NHDH				*e*S	Sn	16 17 09.8	-0.7
	baz=342							
TWA	**Mucha**	0.81	350	*e*P	Pn	16 16 59.1	-0.2
	baz=346							
TWA				*e*S	Sn	16 17 09.9	-0.9
	baz=346							
LIOB	**Emei**	0.81	305	*e*P	Pn	16 16 59.6	+0.3
	baz=303							
LIOB				*e*S	Sn	16 17 09.7	-1.0
	baz=303							
NSTT	**Nanjuang**	0.81	303	*e*P	Pn	16 16 59.2	-0.2
	baz=302							
NSTT				*e*S	Sn	16 17 10.3	-0.6
	baz=302							
SSLB	**Suanglung**	0.82	242	⇑P	Pn	16 16 58.9	-0.6
	baz=249							
SSLB				*e*S	Sn	16 17 10.1	-1.1
	baz=249							
SMLT	**Sun Moon Lake**	0.83	249	*e*P	Pn	16 16 59.2	-0.5
	baz=249							
SMLT				*e*S	Sn	16 17 11.3	-0.1
	baz=249							
TWB1	**Santiao Chiao**	0.85	15	*e*P	Pb	16 16 59.0	0.0
	baz=12							
TWB1				*e*S	Sb	16 17 10.1	0.0
	baz=12							
TYC	**Yuchr**	0.86	251	*e*P	Pn	16 16 59.5	-0.5
	baz=251							
TYC				*e*S	Sn	16 17 12.1	+0.1
	baz=251							
NWF	**Wu-fen Shan**	0.88	2	*e*P	Pn	16 17 00.4	0.0
	baz=352							
NWF				*e*S	Sn	16 17 12.1	-0.6
	baz=352							
WFSB	**Wu-fen Shan**	0.88	2	*e*P	Pn	16 17 00.1	-0.2
	baz=359							
HSN1	**Hsinchu**	0.89	312	*e*P	Pn	16 17 00.5	+0.1
	baz=310							
HSN1				*e*S	Sn	16 17 13.5	+0.8
	baz=310							
YULB	**Yu-li**	0.89	208	*e*P	Pb	16 16 58.5	-1.2
	baz=220							
TWQ1	**Liyutan**	0.90	281	*e*P	Pn	16 17 01.1	+0.5
	baz=280							
TWQ1				*e*S	Sn	16 17 13.2	+0.1
	baz=280							
SXI1	**Grass Mountain**	0.91	7	P	Pn	16 17 01.0	+0.2
	baz=4.0							
SXI1				*e*S	Sn	16 17 13.3	-0.1
	baz=4.0							
EYUL	**Yuli**	0.92	205	*e*P	Pb	16 16 59.5	-0.8
	baz=222							
EYUL				*e*S	Sn	16 17 14.1	+0.5
	baz=222							
SBCB	**Hsinchu**	0.92	311	*e*P	Pn	16 17 01.6	+0.8
	baz=309							
SBCB				*e*S	Sn	16 17 16.1	+2.6
	baz=309							
NSY	**Sanyi**	0.93	285	*e*P	Pn	16 17 02.4	+1.4
	baz=284							
NSY				*e*S	Sn	16 17 14.0	+0.3
	baz=284							
NCUH	**Zhongli**	0.93	327	*e*P	Pn	16 17 01.7	+0.7
	baz=323							
NCUH				*e*S	Sn	16 17 16.2	+2.4
	baz=323							
NCU	**National Centr**	0.93	327	*e*P	Pn	16 17 02.3	+1.3
	baz=325							
NCU				*e*S	Sn	16 17 15.3	+1.4
	baz=325							
HSN	**Hsinchu**	0.94	311	*e*P	Pn	16 17 02.2	+1.1
	baz=304							
HSN				*e*S	Sn	16 17 15.7	+1.8
	baz=304							
NMLH	**Miaoli**	0.94	292	*e*P	Pn	16 17 02.5	+1.4
	baz=291							
NMLH				*e*S	Sn	16 17 15.2	+1.2
	baz=291							
WHYT	**Xinyi Township**	0.95	239	P	Pn	16 17 01.7	+0.4
	baz=247							
WHYT				*e*S	Sn	16 17 15.3	+1.0
	baz=247							
TWS1	**Kuangyinshan**	0.96	342	*e*P	Pg	16 17 01.9	+0.2
	baz=345							
TWS1				*e*S	Sn	16 17 14.5	0.0
	baz=345							
YM01	**YM01**	0.97	351	*e*P	Pg	16 17 02.3	+0.4
	baz=347							
TCU	**Taichung**	0.98	268	*e*P	Pg	16 17 03.5	+1.5
	baz=268							
TCU				*e*S	Sn	16 17 18.3	+3.4
	baz=268							
WJS	**Zhushan**	1.00	249	*e*P	Pg	16 17 03.1	+0.7
	baz=247							
WJS				*e*S	Sn	16 17 17.2	+1.8
	baz=247							
YUS	**Yu-Shan**	1.00	227	⇑*i*P	Pn	16 17 02.2	-0.2
	baz=217							
YUS				*e*S	Sn	16 17 17.3	+1.1
	baz=217							
WNT1	**Nantou City**	1.01	254	*e*P	Pg	16 17 03.3	+0.6
	baz=252							
WNT1				*e*S	Sn	16 17 18.4	+2.7
	baz=252							
WNT	**Mingjian**	1.02	253	P	Pg	16 17 03.7	+0.9
	baz=250							
WNT				*e*S	Sn	16 17 18.8	+3.0
	baz=250							
ANP	**Anpu**	1.02	348	*e*P	Pg	16 17 02.8	0.0
	baz=345							
ANP				*e*S	Sn	16 17 17.3	+1.2
	baz=345							
WDJ	**Dajia District**	1.02	279	*e*P	Pg	16 17 03.9	+1.0
	baz=279							
WDJ				*e*S	Sn	16 17 18.2	+2.2
	baz=279							
FULB	**Fuli**	1.06	203	*e*P	Pb	16 17 02.3	-0.5
	baz=220							
FULB				*e*S	Sg	16 17 19.1	+1.4
	baz=220							
WCHH	**Zhanghua**	1.09	265	*e*P	Pg	16 17 04.8	+0.7
	baz=265							
WCHH				*e*S	Sg	16 17 20.3	+1.8
	baz=265							
ALS	**Alishan**	1.09	232	⇑*i*P	Pg	16 17 03.9	-0.3
	baz=233							
TWY	**Chenhua**	1.09	353	*e*P	Pg	16 17 04.0	-0.3
	baz=334							
TWY				*e*S	Sg	16 17 18.2	-0.5
	baz=334							
JYNG	**Yonagunijimaku**	1.13	76	P	Pn	16 17 03.9	+0.2
CHN5	**Tsauling**	1.14	239	P	Pg	16 17 04.5	-0.6
	baz=241							
CHN5				*e*S	Sg	16 17 21.9	+1.9
	baz=241							
YOJ	**Yonaguni jima**	1.19	76	P	Pn	16 17 04.5	+0.1
	baz=65							
YOJ				*e*S	Sn	16 17 21.5	+1.4
	baz=65							
YOJ	**Yonaguni jima**	1.19	76	P	Pn	16 17 04.6	+0.1
YOJ				S	Sn	16 17 21.2	+1.2
ELDTW	**Lidau**	1.20	214	*e*P	Pn	16 17 03.7	-1.0
	baz=202							
WDLH	**Douliu**	1.21	246	*e*P	Pg	16 17 06.4	0.0
	baz=247							
WDLH				*e*S	Sg	16 17 24.6	+2.4
	baz=247							
EDH	**Donghe**	1.27	199	*e*P	Pn	16 17 04.6	-1.0
	baz=185							
EDH				*e*S	Sg	16 17 23.2	-1.1
	baz=185							
WRL	**Guolierlin Hig**	1.28	258	*e*P	Pb	16 17 06.1	-0.3
	baz=258							
WTK	**Tuku**	1.34	249	P	Pg	16 17 08.4	-0.4
	baz=235							
WTK				*e*S	Sg	16 17 28.1	+1.8
	baz=235							
STYH	**Taoyuan**	1.34	222	*e*P	Pn	16 17 06.4	-0.3
	baz=222							
TPUB	**Ta-pu**	1.35	230	P	Pg	16 17 08.0	-1.0
	baz=231							
TPUB				*e*S	Sg	16 17 27.2	+0.5
	baz=231							
CHY	**Chiayi**	1.39	241	*e*P	Pg	16 17 09.2	-0.7
	baz=241							
LONT	**Longtian**	1.39	204	*e*P	Pn	16 17 06.2	-1.2
	baz=205							
WTP	**Ta-pu**	1.40	228	*i* P	Pg	16 17 09.0	-0.9
	baz=229							
WTP				*e*S	Sg	16 17 29.3	+1.1
	baz=229							
PCYT	**Pengchaiyu**	1.47	12	*e*P	Pn	16 17 08.3	-0.1
	baz=7.0							
TWK	**Hsinying**	1.47	232	P	Pg	16 17 10.3	-1.1
	baz=232							
TWK				*e*S	Sg	16 17 30.2	-0.3
	baz=232							
SNST	**Tainan City**	1.49	230	*e*P	Pg	16 17 11.1	-0.7
	baz=230							
CHN1	**Nanshi**	1.50	229	*e*P	Pg	16 17 10.5	-1.3
	baz=229							
CHN1				*e*S	Sg	16 17 31.2	-0.2
	baz=229							
WSF	**Szhu**	1.50	249	*e*P	Pg	16 17 10.8	-1.1
	baz=251							
WSF				*e*S	Sg	16 17 32.6	+1.2
	baz=251							
LDUT	**Ludao**	1.52	190	*e*P	Pn	16 17 07.4	-1.8
	baz=180							
LDUT				*e*S	Sn	16 17 28.1	-0.4
	baz=180							
SGST	**Jiashian**	1.53	224	*e*P	Pb	16 17 10.2	-0.5
	baz=225							
SGST				*e*S	Sg	16 17 32.5	+0.1
	baz=225							
WSL	**Shuilin Townsh**	1.54	245	P	Pg	16 17 11.4	-1.2
	baz=247							
WSL				*e*S	Sg	16 17 34.4	+1.7
	baz=247							
ICHU	**Yijhu**	1.57	239	*e*P	Pb	16 17 11.4	0.0
	baz=240							
ICHU				*e*S	Sg	16 17 34.5	+0.6
	baz=240							
CHN8	**Yiju**	1.64	240	*e*P	Pg	16 17 12.8	-1.7
	baz=224							
CHN8				*e*S	Sg	16 17 34.9	-0.9
	baz=224							
SHHT	**Tainan City**	1.73	228	*e*P	Pb	16 17 14.0	-0.1
	baz=227							
SCST	**Cishan**	1.73	222	*e*P	Pb	16 17 14.2	+0.2
	baz=221							
SCST				*e*S	Sg	16 17 37.2	-1.6
	baz=221							
ECL	**Taimali**	1.74	205	*e*P	Pn	16 17 11.8	-0.3
	baz=192							
SSD	**Sandimen**	1.76	216	*e*P	Pb	16 17 14.0	-0.6
	baz=227							
IRIF	**Iriomote-Funau**	1.82	85	P	Pn	16 17 13.3	+0.1
IRIF				*e*S	Sn	16 17 36.7	+1.0
SGLT	**Jiouru**	1.85	219	*e*P	Pg	16 17 17.9	-0.7
	baz=203							
MASBT	**Mashibuluo**	1.87	213	*e*P	Pn	16 17 14.3	+0.5
	baz=212							
HATJ	**Hateruma jima**	1.89	93	P	Pn	16 17 13.2	-0.9
HATJ				*e*S	Sn	16 17 38.0	+0.7
EAST	**Anshuo**	1.97	205	*e*P	Pn	16 17 14.8	-0.5
	baz=193							
TAW	**Tawu**	1.98	203	*e*P	Pb	16 17 17.2	-1.1
	baz=192							
TAWH	**Dawu Township**	2.00	203	*e*P	Pn	16 17 16.1	+0.5
	baz=192							
SSPT	**Xinbi**	2.01	213	*e*P	Pb	16 17 18.0	-0.9
	baz=195							
JKRS	**Kuro-shima**	2.07	88	P	Pn	16 17 16.5	-0.1
JKRS				*e*S	Sn	16 17 43.2	+1.4
SCZT	**Fangliau**	2.08	210	*e*P	Pb	16 17 18.2	-1.9
	baz=194							
PNG	**Penghu**	2.10	253	*e*P	Pn	16 17 17.7	+0.7
	baz=254							
PHUB	**P'eng-hu**	2.10	252	*e*P	Pn	16 17 17.6	+0.6
	baz=253							
WDGT	**Dungji**	2.12	245	*e*P	Pb	16 17 18.9	-1.8
	baz=246							
LAY	**Lan-yu**	2.14	185	*e*P	Pn	16 17 17.0	-0.7
	baz=186							
SLIU	**Shizi**	2.14	204	*e*P	Pn	16 17 18.9	+1.3
	baz=195							
JIJ	**Ishigaki jima**	2.19	85	P	Pn	16 17 18.5	+0.1
JIJ				*e*S	Sn	16 17 45.0	0.0
VWUC	**VWUC**	2.24	291	*e*P	Pn	16 17 19.1	+0.1
	baz=279							
VCHM	**Qimei**	2.33	246	*e*P	Pn	16 17 21.5	+1.2
	baz=231							
JISG	**Ishigakijimahi**	2.37	80	P	Pn	16 17 20.8	0.0
TWKBT	**Hengchun**	2.39	201	*e*P	Pn	16 17 22.2	+1.1
	baz=188							
MATB	**Ma-tsu**	2.55	321	*e*P	Pn	16 17 23.4	+0.2
	baz=316							
JTJ	**Tarama**	2.73	80	P	Pn	16 17 26.9	+1.1
JTJ				*e*S	Sn	16 17 59.3	+1.0
KNMB	**Chin-men Tao**	3.08	276	*e*P	Pn	16 17 31.3	+0.8
	baz=276							
JMJ2	**Miyako jima3**	3.31	80	P	Pn	16 17 35.6	+1.9
ZPLA	**Ao Xicun**	3.66	267	*e*P	Pn	16 17 39.0	+0.5
	baz=268							

*IDC **03** 16:28:59.7±0.6, 18°.49N×145°.70E, h190km±5km, mb3.8/23, mbtmp4.4/27, MS2.9/1, Error ellipse: s-maj=14.2km s-min=6.9km az=94.0*

*NEIC **03** 16:29:01.1±1.8, 18°.45N±0°.06×145°.69E±0°.06, h193km±6km, mb4.5/95, Error ellipse: s-maj=10.6km s-min=4.5km az=136.0*

ISC 03 16:29:00.4±0.5, 18°.51N±0°.04×145°.70E±0°.07, h195km±5km, h195km;pP-P, n186, σ1°.13/191, mb4.4/64, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.96**	**189**	P		Pn	Pn	**16 30 13.9**	**-0.3**
	47nm,0.3s,baz=106,slow=4.3,SNR=31								
GUMO				S			Sn	16 31 12.3	0.0
	115nm,0.3s,baz=291,slow=23,SNR=9.3								
GUMO	**Guam**	**4.96**	**189**	Pn		Pn	Pn	16 30 14.9	+0.8
GUMO	**Guam**	**4.96**	**189**	P		Pn	Pn	16 30 15.1	+0.9
JCJ	**Chichijima**	**9.14**	**340**	P		Pn	Pn	16 31 08.2	-0.4
	118nm,1.0s,baz=357,slow=22,SNR=1.5								
JCJ				S			Sn	16 32 44.6	-6.3
	59nm,0.5s,baz=125,slow=23,SNR=1.9								
JCJ	**Chichijima**	**9.14**	**340**	Pn		Pn	Pn	16 31 09.0	+0.5
JHJ	**Hachijo jima 2**	**15.49**	**341**	P		Pn	Pn	16 32 28.7	0.0
	16nm,0.3s,baz=76,slow=20,SNR=1.8								
PATS	**Pohnpei**	**16.89**	**132**	Pn		Pn	Pn	16 32 54.4	+8.6
PATS	**Pohnpei**	**16.89**	**132**	P		Pn	Pn	**16 32 45.7**	**-0.1**
JOW	**Kunigami**	**18.08**	**300**	P		Pn	Pn	**16 33 00.1**	**+0.5**
	14nm,0.6s,baz=148,slow=11,SNR=16								
JOW				LR		LR	LR	16 37 54.8	
	comp=Z,38nm,21.7s,baz=328,slow=30								
JOW	**Kunigami**	**18.08**	**300**				Pn	**16 32 60.0**	**+0.3**
JOW				IAmb		IAmb	IAmb	16 33 01.4	
	comp=Z,18nm,0.7s								
JOW	**Kunigami**	**18.08**	**300**	P		Pn	Pn	**16 33 01.1**	**+1.5**
JYT	**Yasato**	**18.31**	**346**	P		Pn	Pn	**16 33 02.0**	**-0.3**
JYT				IAmb		IAmb	IAmb	16 33 07.1	
	comp=Z,18nm,1.0s								
JMN	**Monobe**	**18.48**	**327**	P		Pn	Pn	**16 33 04.7**	**+0.4**
JMN				IAmb		IAmb	IAmb	16 33 09.7	
	comp=Z,13nm,1.2s								
JGF	**Kuroka**	**18.56**	**338**	P		P	P	**16 33 04.0**	**+1.3**
JGF				IAmb		IAmb	IAmb	16 33 06.1	
	comp=Z,6.7nm,0.6s								
MJAR	**Matsushiro Arr**	**19.14**	**341**	P		P	P	**16 33 08.9**	**0.0**
	comp=Z,1.7nm,0.5s,baz=167,slow=9.6,SNR=10								
MAJO	**Matsushiro**	**19.14**	**341**	P		P	P	**16 33 10.0**	**+1.1**
MAJO				IAmb		IAmb	IAmb	16 33 19.2	
	comp=Z,6.8nm,0.8s								
MAJO	**Matsushiro**	**19.14**	**341**	P		Pn	Pn	**16 33 11.9**	**-0.2**
JMM	**Marumori**	**19.76**	**348**	P		P	P	**16 33 17.7**	**+2.2**
JMM				IAmb		IAmb	IAmb	16 33 20.4	
	comp=Z,20nm,1.0s								
JHS	**Saijyo**	**19.87**	**328**	P		P	P	**16 33 17.0**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**19.90**	**87**	T		T	T	16 54 20.9	
	baz=274,slow=74,SNR=6.1								
H11S1	**WAKE ISLAND Hy**	**19.91**	**87**	T		T	T	16 54 23.7	
	baz=274,slow=74,SNR=5.0								
H11S2	**WAKE ISLAND Hy**	**19.92**	**87**	T		T	T	16 54 22.3	
	baz=274,slow=74,SNR=5.1								
H11N1	**WAKE ISLAND Hy**	**20.06**	**83**	T		T	T	16 54 40.4	
	baz=266,slow=74,SNR=4.2								
H11N2	**WAKE ISLAND Hy**	**20.07**	**83**	T		T	T	16 54 48.4	
	baz=266,slow=74,SNR=6.8								
H11N3	**WAKE ISLAND Hy**	**20.08**	**83**	T		T	T	16 54 44.0	
	baz=266,slow=74,SNR=4.4								
MANU	**Manus Island**	**20.49**	**175**	P		P	P	**16 33 23.4**	**-0.1**
JSD	**Sado**	**20.52**	**343**	P		P	P	**16 33 24.2**	**+0.7**
JSD				IAmb		IAmb	IAmb	16 33 35.8	
	comp=Z,6.9nm,0.6s								
YOJ	**Yonaguni jima**	**21.92**	**290**	P		P	P	**16 33 36.9**	**-1.4**
YOJ				IAmb		IAmb	IAmb	16 34 12.8	
	comp=Z,29nm,1.1s								
JTM	**Tenmabayashi**	**22.56**	**351**	P		P	P	**16 33 44.5**	**+0.4**
YULB	**Yu-li**	**23.29**	**286**	P		P	P	**16 33 51.0**	**+0.1**
YULB				IAmb		IAmb	IAmb	16 33 55.5	
	comp=Z,13nm,1.3s								
YHNB	**Yeheng**	**23.42**	**289**	P		P	P	**16 33 52.1**	**-0.1**
YHNB				IAmb		IAmb	IAmb	16 33 54.6	
	comp=Z,16nm,0.9s								
YHNB	**Yeheng**	**23.42**	**289**	P		P	P	**16 33 53.8**	**+1.6**
RABL	**Rabaul**	**23.44**	**164**	P		P	P	**16 33 52.2**	**-0.1**
RABL	**Rabaul**	**23.44**	**164**	P		P	P	**16 33 52.6**	**+0.3**
KRVT	**Keravat (AS076**	**23.51**	**164**	P		P	P	**16 33 52.5**	**-0.5**
	comp=Z,11nm,0.5s,baz=59,slow=11,SNR=2.1								
	comp=Z,11nm,0.5s								
SSLB	**Suanglung**	**23.66**	**287**	P		P	P	**16 33 54.9**	**+0.6**
SSLB				IAmb		IAmb	IAmb	16 33 57.0	
	comp=Z,14nm,0.6s								
SSLB	**Suanglung**	**23.66**	**287**	P		P	P	**16 33 55.5**	**+1.2**
TPUB	**Ta-pu**	**23.89**	**286**	P		P	P	**16 33 57.0**	**+0.6**
TPUB				IAmb		IAmb	IAmb	16 34 38.3	
	comp=Z,25nm,1.4s								
TPUB	**Ta-pu**	**23.89**	**286**	P		P	P	**16 33 57.6**	**+1.2**
SIJI	**Sorong**	**23.92**	**218**	P		P	P	**16 33 56.4**	**-0.3**
	comp=Z,11nm,0.6s,baz=288,slow=22,SNR=5.2								
	comp=Z,11nm,0.6s								
KSRS	**Korea Array**	**24.47**	**324**	P		P	P	**16 34 01.4**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=146,slow=8.9,SNR=13								
	comp=Z,1.1nm,0.5s								
JEW	**Eniwo**	**24.52**	**352**	P		P	P	**16 34 04.5**	**+2.6**
FAKI	**Fak Fak**	**25.08**	**213**	P		P	P	**16 34 07.0**	**-0.3**
FAKI	**Fak Fak**	**25.08**	**213**	P		P	P	**16 34 07.3**	**+0.1**
PMG	**Port Moresby**	**27.77**	**177**	P		P	P	**16 34 30.8**	**-0.4**
	comp=Z,13nm,0.8s,baz=78,slow=4.4,SNR=6.8								
	comp=Z,13nm,0.8s								
MYLDM	**Lahad Datu**	**29.67**	**247**	P		P	P	**16 34 50.7**	**+2.5**
MYLDM				IAmb		IAmb	IAmb	16 35 05.9	
	comp=Z,21nm,1.3s								
TOLI2	**Tolitoli**	**29.95**	**238**	P		P	P	**16 34 51.1**	**+0.5**
TOLI2				IAmb		IAmb	IAmb	16 35 23.7	
	comp=Z,9.2nm,0.9s								
KKM	**Kota Kinabalu**	**31.30**	**250**	P		P	P	**16 35 03.7**	**+1.1**
KKM				IAmb		IAmb	IAmb	16 35 04.6	
	comp=Z,16nm,0.8s								
COEN	**Coen**	**32.35**	**185**	P		P	P	**16 35 10.3**	**-1.3**
COEN				IAmb		IAmb	IAmb	16 35 35.1	
	comp=Z,34nm,1.4s								
MTN	**Manton Dam**	**34.31**	**206**	P		P	P	**16 35 28.3**	**-0.2**
PETK	**Petropavlovsk-**	**35.77**	**12**	P		P	P	**16 35 41.3**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=180,slow=9.7,SNR=1.5								
PETK				PcP		PcP	PcP	**16 38 03.3**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=173,slow=3.3,SNR=2.3								
	comp=Z,0.5nm,0.3s								
BATI	**Baumata**	**35.87**	**219**	P		P	P	**16 35 40.9**	**-1.0**
	comp=Z,42nm,1.0s,baz=208,slow=14,SNR=2.3								
	comp=Z,42nm,1.0s								
SBUM	**Sibu**	**36.47**	**248**	P		P	P	**16 35 48.5**	**+1.4**
SBUM				IAmb		IAmb	IAmb	16 35 50.9	
	comp=Z,13nm,1.4s								
KNRA	**Kununurra**	**37.84**	**207**	P		P	P	**16 35 58.8**	**+0.3**
CTAO	**Charters Tower**	**38.36**	**179**	P		P	P	**16 36 01.7**	**-1.0**
CTAO				IAmb		IAmb	IAmb	16 36 15.0	
	comp=Z,31nm,1.4s								
CTAO	**Charters Tower**	**38.36**	**179**	P		P	P	**16 36 03.3**	**+0.5**
KSM	**Kuching**	**38.61**	**248**	P		P	P	**16 36 04.8**	**-0.2**
KSM				IAmb		IAmb	IAmb	16 36 39.7	
	comp=Z,12nm,1.1s								
PLAI	**Plampang**	**38.69**	**228**	P		P	P	**16 36 05.5**	**-0.1**
QIS	**Mount Isa**	**39.28**	**189**	P		P	P	**16 36 10.2**	**-0.2**
WB0	**Warramunga Arr**	**39.62**	**197**	P		P	P	**16 36 12.9**	**-0.4**
WB0				IAmb		IAmb	IAmb	16 36 13.9	
	comp=Z,11nm,0.7s								
WR0	**Warramunga Arr**	**39.77**	**197**	P		P	P	**16 36 14.1**	**-0.3**
WR0				IAmb		IAmb	IAmb	16 36 15.1	
	comp=Z,8.9nm,0.8s								
WRAB	**Tennant Creek**	**39.79**	**197**	P		P	P	**16 36 15.2**	**+0.6**
WRAB	**Tennant Creek**	**39.79**	**197**	P		P	P	**16 36 14.9**	**+0.2**
WB2	**Warramunga Arr**	**39.80**	**197**	P		P	P	**16 36 14.2**	**-0.5**
WB2				IAmb		IAmb	IAmb	16 36 15.4	
	comp=Z,12nm,0.5s								
WRA	**Warramunga Arr**	**39.80**	**197**	P		P	P	**16 36 14.4**	**-0.4**
	comp=Z,6.6nm,0.4s,baz=13,slow=8.7,SNR=82								
WRA				PcP		PcP	PcP	**16 38

ADK	**Adak**	**44.48**	**33**	P	**P**	**16 36 53.9**	**+1.8**
ADK				IAmb	IAmb	16 36 55.9	
	comp=Z,16nm,1.2s						
ADK	**Adak**	**44.48**	**33**	P	**P**	**16 36 54.1**	**+2.0**
SEY	**Seymchan**	**44.63**	**4**	P	**P**	**16 36 53.7**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=109,slow=21,SNR=4.3						
	comp=Z,0.6nm,0.5s						
RMQ	**Roma**	**44.82**	**176**	P	**P**	**16 36 53.8**	**-1.3**
YAK	**Yakutsk**	**44.91**	**349**	P	**P**	**16 36 54.5**	**-0.8**
YAK				IAmb	IAmb	16 36 55.9	
	comp=Z,7.6nm,0.7s						
DZM	**Mont Dzumac**	**45.15**	**152**	P	**P**	**16 36 57.2**	**-0.6**
DZM				IAmb	IAmb	16 36 58.6	
	comp=Z,11nm,0.6s						
DZM	**Mont Dzumac**	**45.15**	**152**	P	**P**	**16 36 58.5**	**+0.6**
YATNC	**Mamie plateau,**	**45.34**	**152**	P	**P**	**16 36 59.8**	**+0.6**
OUENC	**Ouen Island, N**	**45.63**	**152**	P	**P**	**16 37 01.5**	**0.0**
OUENC				IAmb	IAmb	16 37 02.4	
	comp=Z,15nm,0.5s						
OUENC	**Ouen Island, N**	**45.63**	**152**	P	**P**	**16 37 02.0**	**+0.5**
KULM	**Kulim**	**45.86**	**259**	P	**P**	**16 37 05.4**	**+1.9**
KULM				IAmb	IAmb	16 37 06.4	
	comp=Z,11nm,0.7s						
INKA	**Innaminka**	**46.22**	**186**	P	**P**	**16 37 04.9**	**-1.2**
WRKA	**Warakurna**	**46.48**	**202**	P	**P**	**16 37 08.5**	**+0.3**
MBWA	**Marble Bar**	**46.92**	**214**	P	**P**	**16 37 11.3**	**-0.3**
MBWA				IAmb	IAmb	16 37 12.0	
	comp=Z,8.1nm,0.6s						
MBWA	**Marble Bar**	**46.92**	**214**	P	**P**	**16 37 11.9**	**+0.3**
OOD	**Oodnadatta**	**47.04**	**192**	P	**P**	**16 37 11.7**	**-0.7**
PSA00	**Pilbara Seismi**	**47.20**	**214**	P	**P**	**16 37 13.6**	**-0.2**
PSA00				IAmb	IAmb	16 37 36.5	
	comp=Z,29nm,1.5s						
PSA00	**Pilbara Seismi**	**47.20**	**214**	P	**P**	**16 37 14.3**	**+0.6**
MSVF	**Nonsavu**	**48.05**	**137**	P	**P**	**16 37 19.3**	**-1.2**
MSVF				IAmb	IAmb	16 37 26.5	
	comp=Z,32nm,1.5s						
NIKH	**Nikolski High**	**49.16**	**35**	P	**P**	**16 37 29.6**	**+1.2**
LCRK	**Leigh Creek**	**49.20**	**189**	P	**P**	**16 37 28.3**	**-0.6**
CMSA	**Cobar Meteorol**	**49.76**	**180**	P	**P**	**16 37 32.2**	**-0.9**
MULG	**Mulgathing**	**49.78**	**193**	P	**P**	**16 37 33.1**	**-0.2**
GSI	**Gunungsitoli**	**50.18**	**256**	P	**P**	**16 37 37.1**	**+0.4**
GSI				IAmb	IAmb	16 37 38.2	
	comp=Z,18nm,0.6s						
GSI	**Gunungsitoli**	**50.18**	**256**	P	**P**	**16 37 37.6**	**+0.9**
STKA	**Stephens Creek**	**50.25**	**185**	P	**P**	**16 37 35.3**	**-1.5**
	comp=Z,1.2nm,0.4s,baz=3.4,slow=7.6,SNR=16						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**50.25**	**185**	P	**P**	**16 37 35.4**	**-1.5**
STKA	**Stephens Creek**	**50.25**	**185**	P	**P**	**16 37 35.8**	**-1.0**
GIRL	**Giralia**	**51.17**	**218**	P	**P**	**16 37 43.4**	**-0.4**
GIRL	**Giralia**	**51.17**	**218**	P	**P**	**16 37 45.6**	**+1.7**
BBOO	**Buckleboo**	**51.85**	**190**	P	**P**	**16 37 47.9**	**-0.8**
BBOO				IAmb	IAmb	16 37 51.9	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**51.85**	**190**	P	**P**	**16 37 48.0**	**-0.8**
FORT	**Forrest**	**51.86**	**199**	P	**P**	**16 37 48.5**	**-0.3**
FORT	**Forrest**	**51.86**	**199**	P	**P**	**16 37 49.2**	**+0.4**
MEEK	**Meekatharra**	**52.01**	**211**	P	**P**	**16 37 49.7**	**-0.4**
HTT	**Hallett**	**52.05**	**187**	P	**P**	**16 37 49.7**	**-0.5**
TIXI	**Tiksi**	**54.06**	**353**	P	**P**	**16 38 04.0**	**-0.3**
ARPS	**Mount Arapiles**	**55.10**	**184**	P	**P**	**16 38 12.4**	**+0.2**
MORW	**Morawa**	**55.29**	**212**	P	**P**	**16 38 13.5**	**-0.3**
MORW	**Morawa**	**55.29**	**212**	P	**P**	**16 38 13.8**	**0.0**
BLDU	**Ballidu**	**56.24**	**210**	P	**P**	**16 38 20.4**	**-0.1**
KLBR	**Kellerberrin**	**56.57**	**209**	P	**P**	**16 38 22.7**	**-0.2**
MUN	**Mundaring**	**57.61**	**210**	P	**P**	**16 38 30.1**	**0.0**
NWAO	**Narrogin (SRO)**	**57.94**	**208**	P	**P**	**16 38 32.2**	**-0.2**
NWAO	**Narrogin (SRO)**	**57.94**	**208**	P	**P**	**16 38 32.7**	**+0.3**
ZALV	**Zalesovo Beam**	**58.17**	**323**	P	**P**	**16 38 32.2**	**-1.6**
	comp=Z,2.6nm,0.8s,baz=100,slow=8.3,SNR=6.4						
ZALV				pP	**pP**	**16 39 18.0**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=104,slow=6.6,SNR=2.9						
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**58.17**	**323**	P	**P**	**16 38 32.7**	**-1.0**
MK31	**Makanchi Array**	**58.60**	**314**	P	**P**	**16 38 37.2**	**+0.3**
MKAR	**Makanchi Array**	**58.60**	**314**	P	**P**	**16 38 37.3**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=90,slow=7.9,SNR=17						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**58.60**	**314**	P	**P**	**16 38 37.0**	**+0.1**
N18K	**Kilae Creek**	**58.71**	**29**	P	**P**	**16 38 39.4**	**+2.0**
N18K				IAmb	IAmb	16 38 43.4	
	comp=Z,12nm,1.4s						
OHAK	**Old Harbor**	**59.01**	**34**	P	**P**	**16 38 41.1**	**+1.6**
OHAK				IAmb	IAmb	16 38 52.9	
	comp=Z,16nm,1.4s						
N19K	**Bonanza Creek**	**59.41**	**29**	P	**P**	**16 38 44.4**	**+2.0**
N19K				IAmb	IAmb	16 39 05.7	
	comp=Z,8.6nm,1.2s						
RSO	**Redoubt South**	**60.13**	**30**	P	**P**	**16 38 47.7**	**+0.4**
K20K	**Telida**	**60.39**	**27**	P	**P**	**16 38 51.4**	**+2.6**
CNPM	**China Poot**	**60.62**	**31**	P	**P**	**16 38 50.3**	**-0.2**
CNPM				IAmb	IAmb	16 38 50.7	
	comp=Z,15nm,1.2s						
SPU	**Mount Spurr**	**60.65**	**29**	P	**P**	**16 38 52.2**	**+1.5**
SKT	**Skwentna**	**61.11**	**29**	P	**P**	**16 38 54.3**	**+0.6**
IMAR	**Indian Mountai**	**61.39**	**24**	P	**P**	**16 38 57.4**	**+1.9**
H21K	**Melozitna Rive**	**61.65**	**24**	P	**P**	**16 38 59.0**	**+1.7**
H21K				IAmb	IAmb	16 39 05.9	
	comp=Z,6.1nm,1.4s						
NRIK	**Noril'sk**	**61.79**	**340**	P	**P**	**16 38 57.9**	**-0.2**
	comp=Z,5.4nm,0.6s,baz=105,slow=8.9,SNR=11						
	comp=Z,5.4nm,0.6s						
NRIK	**Noril'sk**	**61.79**	**340**	P	**P**	**16 38 57.9**	**-0.2**
NRIK				IAmb	IAmb	16 38 58.4	
	comp=Z,5.5nm,0.6s						
I21K	**Tanana**	**61.83**	**25**	P	**P**	**16 38 59.7**	**+1.2**
BPAW	**Bear Paw Mtn.**	**61.92**	**26**	P	**P**	**16 39 00.3**	**+1.2**
BPAW				IAmb	IAmb	16 39 22.7	
	comp=Z,8.2nm,1.4s						
MLY	**Manley**	**62.29**	**25**	P	**P**	**16 39 02.6**	**+1.0**
PWL	**Port Wells**	**62.33**	**30**	P	**P**	**16 39 03.2**	**+1.3**
PWL				IAmb	IAmb	16 39 28.9	
	comp=Z,9.6nm,1.3s						
H23K	**Yukon River**	**62.99**	**25**	P	**P**	**16 39 07.1**	**+0.9**
WRH	**Wood River Hil**	**63.24**	**26**	P	**P**	**16 39 07.9**	**+0.1**
HYBB	**Hyderabad (bro**	**63.53**	**281**	*eP*	**P**	**16 39 11.1**	**+0.5**
HYBB				epP	**pP**	**16 39 56.1**	**+1.6**
H24K	**Noodor Dome**	**63.65**	**25**	P	**P**	**16 39 12.1**	**+1.6**
URZ	**Urewera**	**63.70**	**153**	P	**P**	**16 39 10.3**	**-0.8**
TOLK	**Toolik Lake Re**	**63.77**	**22**	P	**P**	**16 39 12.8**	**+1.6**
TOLK				IAmb	IAmb	16 39 15.9	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**63.81**	**26**	P	**P**	**16 39 11.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=253,slow=6.1,SNR=7.0						
ILAR				pP	**pP**	**16 39 55.2**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=262,slow=6.0,SNR=4.0						
	comp=Z,0.7nm,0.6s						
QRZ	**Quartz Range**	**64.08**	**158**	P	**P**	**16 39 13.4**	**-0.2**
BKZ	**Black Stump Fm**	**64.20**	**154**	P	**P**	**16 39 13.0**	**-1.4**
RIDG	**Independent Ri**	**64.49**	**27**	P	**P**	**16 39 17.1**	**+1.1**
NNZ	**Nelson**	**64.73**	**157**	P	**P**	**16 39 16.8**	**-0.9**
SCRK	**Sand Creek**	**64.90**	**27**	P	**P**	**16 39 20.1**	**+1.3**
J26L	**Joseph Creek**	**65.17**	**27**	P	**P**	**16 39 20.6**	**+0.1**
BMAR	**Burnt Mountain**	**65.29**	**23**	P	**P**	**16 39 23.0**	**+1.8**
LTZ	**Lake Taylor**	**65.71**	**159**	P	**P**	**16 39 22.9**	**-1.1**
BCAR	**Beaver Creek A**	**65.75**	**28**	P	**P**	**16 39 24.8**	**+0.7**
BRVK	**Borovoye**	**66.69**	**321**	P	**P**	**16 39 30.4**	**+0.1**
BRVK				IAmb	IAmb	16 39 31.3	
	comp=Z,5.1nm,0.7s						
KK31	**Karatay Array**	**66.89**	**310**	P	**P**	**16 39 31.6**	**-0.1**
KKAR	**Karatay Array**	**66.89**	**310**	P	**P**	**16 39 31.2**	**-0.5**
KKAR	**Karatay Array**	**66.89**	**310**	P	**P**	**16 39 31.5**	**-0.2**
KKAR				IAmb	IAmb	16 39 33.4	
	comp=Z,3.1nm,0.8s						
HYT	**Haines Junctio**	**67.59**	**31**	P	**P**	**16 39 37.2**	**+1.2**
HYT				IAmb	IAmb	16 39 41.6	
	comp=Z,5.8nm,1.2s						
M30M	**Minto, Yukon**	**67.99**	**29**	P	**P**	**16 39 39.7**	**+1.4**
HG4B	**Hotspring**	**71.40**	**40**	P	**P**	**16 40 01.7**	**+2.5**
ARU	**Arti**	**73.22**	**325**	P	**P**	**16 40 09.9**	**0.0**
ARU				IAmb	IAmb	16 40 10.2	
	comp=Z,5.2nm,0.5s						
ABKAR	**Akbulak array**	**73.48**	**317**	P	**P**	**16 40 10.4**	**-1.2**
YKA	**Yellowknife Ar**	**78.16**	**28**	P	**P**	**16 40 37.0**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=296,slow=5.4,SNR=5.4						
YKA				pP	**pP**	**16 41 22.4**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=290,slow=5.2,SNR=4.1						
	comp=Z,0.9nm,0.6s						
K05A	**Summer Lake**	**80.11**	**48**	P	**P**	**16 40 49.1**	**+0.1**
K05A				IAmb	IAmb	16 40 53.9	
	comp=Z,5.6nm,1.0s						
BMO	**Blue Mountains**	**81.97**	**45**	P	**P**	**16 41 01.4**	**+2.7**
ARCES	**ARCESS Array B**	**82.67**	**342**	P	**P**	**16 41 01.4**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=85,slow=8.7,SNR=30						
	comp=Z,1.2nm,0.4s						
RYN	**Ryan**	**83.03**	**52**	P	**P**	**16 41 05.5**	**+1.1**
KVN	**Kaiserville**	**83.21**	**51**	P	**P**	**16 41 05.2**	**-0.2**
NVAR	**Mina Array Bea**	**83.25**	**52**	P	**P**	**16 41 06.2**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=261,slow=6.5,SNR=14						
NVAR				pP	**pP**	**16 41 51.7**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=254,slow=5.3,SNR=4.6						
	comp=Z,1.6nm,0.6s						
NVAR	**Mina Array Bea**	**83.25**	**52**	P	**P**	**16 41 06.0**	**+0.3**
ELK	**Elko**	**84.74**	**49**	P	**P**	**16 41 13.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=278,slow=10.0,SNR=5.0						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**87.06**	**335**	P	**P**	**16 41 21.1**	**-2.6**
	comp=Z,2.3nm,0.3s,baz=64,slow=4.5,SNR=62						
PDAR	**Pinedale Array**	**87.96**	**45**	P	**P**	**16 41 28.3**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=258,slow=2.7,SNR=2.2						
	comp=Z,0.5nm,0.4s						
FRB	**Frobisher Bay**	**93.80**	**15**	P	**P**	**16 41 53.8**	**-1.2**
	comp=Z,7.7nm,1.1s,baz=172,slow=17,SNR=1.8						
	comp=Z,7.7nm,1.1s						
LPAZ	**La Paz**	**147.67**	**91**	PKP	**PKPdf**	**16 48 18.6**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=167,slow=0.7,SNR=3.5						
LPAZ				PKPbc	**PKPbc**	**16 48 24.4**	**+0.9**
	comp=Z,5.6nm,0.5s,baz=306,slow=2.1,SNR=17						

SOME ***03*** *17:07:15.5, 39°.20N×74°.00E, h15km*
KRNET ***03*** *17:07:15.5±0.1, 39°.37N×73°.51E, mb2.8*
ISC 03 17:07:12.2±2.3, 39°.17N±0°.09×73°.72E±0°.06, h9km±13km, n14, σ3s30/28, 4C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.52**	**282**	⇑	*iP*		**Pb**	**17 07 40.8**	**+0.1**
	baz=75								
DRK				⇑	*iS*		**Sb**	**17 07 59.4**	**-0.8**
	baz=75								
OHH	**Osh**	**1.53**	**332**	⇑	*iP*		**Pn**	**17 07 39.9**	**+0.1**
	baz=34								
OHH				⇑	*iS*		**Sn**	**17 07 57.6**	**-2.3**
	baz=34								
BTK	**Batken**	**2.41**	**292**	⇓	*iP*		**Pb**	**17 07 55.2**	**-0.5**
	baz=89								
BTK				⇓	*iS*		**Sb**	**17 08 24.2**	**-1.4**
	baz=89								
GAR	**Garm**	**2.65**	**267**	⇓	*iP*		**Pb**	**17 07 59.7**	**-0.2**
	baz=62								
GAR				⇓	*iS*		**Sb**	**17 08 31.9**	**-0.7**
	baz=62								
ARLS	**Aral**	**2.73**	**10**	⇓	*iP*		**Pb**	**17 08 00.4**	**-0.8**
	baz=14								
ARLS				⇓	*iS*		**Sb**	**17 08 33.2**	**-1.6**
	baz=14								
TRKS	**Terek-Say**	**3.07**	**321**	⇓	*iP*		**Pn**	**17 08 03.1**	**+2.0**
	baz=20								
TRKS				⇓	*iS*		**Sn**	**17 08 37.8**	**-0.2**
	baz=20								
MRKS	**Merke**	**3.59**	**354**	*eP*			**Pg**	**17 08 20.8**	**-0.2**
	1.7nm,0.2s								
MRKS				*eS*			**Sg**	**17 09 07.7**	**+0.2**
	7.8nm,0.3s								
IUG	**Iuzhnay**	**4.08**	**318**	*eP*			**Pg**	**17 08 31.4**	**+0.9**
	66nm,0.4s								
IUG				*eS*			**Sg**	**17 09 26.1**	**+2.7**
	11nm,0.8s								
KST	**Kastek**	**4.22**	**23**	*eP*			**Pb**	**17 08 29.6**	**+2.9**
	1.4nm,0.3s								
KST				*eS*			**Sg**	**17 09 22.8**	**-5.0**
	5.0nm,0.9s								
SGDS	**Sogindy**	**4.33**	**9**	*eP*			**Pg**	**17 08 37.0**	**+1.8**
	0.9nm,0.6s								
SGDS				*eS*			**Sg**	**17 09 35.8**	**+4.5**
	1.8nm,0.2s								
MDOK	**Medeo**	**4.71**	**31**	*eP*			**Pb**	**17 08 38.8**	**+3.7**
	1.8nm,0.3s								
MDOK				*eS*			**Sg**	**17 09 38.7**	**-4.9**
	1.8nm,0.3s								
KRBS	**Karabastau**	**4.75**	**17**	*eP*			**Pb**	**17 08 38.7**	**+2.9**
	0.9nm,0.4s								
KRBS				*eS*			**Sg**	**17 09 38.8**	**-6.0**
	2.1nm,0.4s								
KUU	**Kurty**	**5.11**	**22**	*eP*			**Pb**	**17 08 45.6**	**+3.8**
	1.0nm,1.1s								
KUU				*eS*			**Sg**	**17 09 50.5**	**-5.8**
	2.4nm,0.5s								
CHKK	**Chushkaly**	**5.28**	**27**	*eP*			**Pb**	**17 08 49.2**	**+4.5**
	0.5nm,0.1s								
CHKK				*eS*			**Sg**	**17 09 56.5**	**-5.3**
	2.1nm,0.5s								

NAO ***03*** *17:20:42.7±2.0, 73°.47N×7°.70E, ML3.5*
BER ***03*** *17:20:45.5±4.1, 73°.51N×7°.85E, h10km, ML3.5(NAO), Confirmed Earthquake*
IDC ***03*** *17:20:46.5±6.9, 73°.14N×8°.06E, h0km, mb3.3/2, mbtmp3.4/5, ML2.7/3, MS3.3/31, Error ellipse: s-maj=91.0km s-min=33.6km az=154.0*
HEL ***03*** *17:20:50.5±0.3, 73°.30N×9°.29E, h10km, ML3.0, Confirmed Earthquake*
KOLA ***03*** *17:20:56.7, 73°.08N×10°.44E, h0km, ML2.4*
ISC 03 17:20:48.1±2.3, 73°.3N±0°.1×9°.4E±0°.1, h10km, n81, σ2s64/70, MS3.3/27, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.96**	**61**	Pn			Pn	17 21 34.3	-0.7
BJO1	**Bjornoya**	**2.96**	**61**	*eP*			Pn	17 21 34.4	-0.7
HSPB	**Hornsund (broa**	**4.06**	**20**	Pn			Pn	17 21 45.3	-4.9
HSPB	**Hornsund (broa**	**4.06**	**20**	*eP*			Pn	17 21 45.2	-4.9
TRO	**Tromso**	**4.77**	**136**	*eP*			**Pn**	**17 22 02.8**	**+2.9**
TRO				*eS*			**Sn**	**17 22 56.1**	**+1.0**
TRO				IAML				17 23 01.4	
	comp=Z,16nm,0.6s								
TRO	**Tromso**	**4.77**	**136**	*eP*			**Pn**	**17 22 02.2**	**+2.3**
TRO				*eS*			**Sn**	**17 22 55.7**	**+0.6**
BRBA	**Barentsburg A**	**4.95**	**12**	Pn			Pn	17 21 58.0	-4.5
BRBA	**Barentsburg A**	**4.95**	**12**	Pn			Pn	17 21 58.0	-4.5
JETT	**Jettan, Norway**	**5.14**	**131**	Pn			**Pn**	**17 22 08.0**	**+2.9**
JETT				*eS*			**Sn**	**17 23 07.1**	**+2.7**
HAMF	**Hammerfest**	**5.17**	**114**	Pn			**Pn**	**17 22 07.5**	**+2.0**
HAMF				Sn			**Sn**	**17 23 05.2**	**0.0**
HAMF	**Hammerfest**	**5.17**	**114**	*eP*			**Pn**	**17 22 07.1**	**+1.7**
HAMF				*eS*			**Sn**	**17 23 04.8**	**-0.3**
HAMF				IAML				17 23 07.2	
	comp=Z,8.8nm,0.5s								
HOPEN	**Hopen**	**5.21**	**44**	Pn			Pn	17 22 03.9	-2.1
HOPEN				Sn			Sn	17 23 01.1	-4.8
HOPEN	**Hopen**	**5.21**	**44**	*eP*			Pn	17 22 03.4	-2.5
SPA0	**Spitsbergen Ar**	**5.21**	**16**	Pn			Pn	17 22 01.6	-4.5
	baz=197,slow=12								
SPA0	**Spitsbergen Ar**	**5.21**	**16**	Pn			Pn	17 22 01.6	-4.5
	baz=197,slow=12								
LOF	**Lofoten**	**5.36**	**163**	*eP*			**Pn**	**17 22 09.2**	**+1.2**
LOF				*eS*			**Sn**	**17 23 07.4**	**-2.2**
LOF				IAML				17 23 10.9	
	comp=Z,20nm,0.5s								
KIF	**Kilpisjarvi**	**5.67**	**134**	Pn			**Pn**	**17 22 15.1**	**+2.8**
KIF				Sn			**Sn**	**17 23 19.3**	**+2.0**
KIF	**Kilpisjarvi**	**5.67**	**134**	*eP*			**Pn**	**17 22 15.0**	**+2.8**
KIF				*eS*			**Sn**	**17 23 19.2**	**+2.0**
KIF	**Kilpisjarvi**	**5.67**	**134**	*eP*			**Pn**	**17 22 14.8**	**+2.6**
KIF				*eS*			**Sn**	**17 23 17.3**	**0.0**
KIF				MSN				17 23 19.8	
	comp=Z,7.0nm,0.2s								
KBS	**Kingsbay**	**5.71**	**5**	Pn			Pn	17 22 06.4	-6.4
KBS	**Kingsbay**	**5.71**	**5**	*e*			Pn	17 22 03.0	-10
KBS				*eP*			Pb	17 22 07.0	-21
STEI	**Steigen**	**5.72**	**157**	*eP*			**Pn**	**17 22 14.2**	**+1.2**
STEI				*eS*			**Sn**	**17 23 18.0**	**-0.5**
STEI				IAML				17 23 20.5	
	comp=Z,6.6nm,0.6s								
JMIC	**Jan Mayen**	**5.95**	**256**	*eP*			Pn	17 22 08.4	-7.6
FAUS	**Fauske**	**6.25**	**158**	*eP*			**Pn**	**17 22 21.6**	**+1.3**
FAUS				*eS*			**Sn**	**17 23 29.9**	**-1.8**
ARA0	**ARCESS Array S**	**6.37**	**118**	Pn			**Pn**	**17 22 24.6**	**+2.6**
	baz=322,slow=12								
ARA0				Sn			**Sn**	**17 23 36.0**	**+1.4**
	baz=311,slow=22								
ARA0	**ARCESS Array S**	**6.37**	**118**	Pn			**Pn**	**17 22 24.6**	**+2.6**
	baz=322,slow=12								
ARA0				*eP*			Pb	17 22 24.7	-14
ARA0				*eS*			**Sn**	**17 23 35.2**	**+0.6**
ARA0				Sn			Sb	17 23 36.0	-19
	baz=311,slow=22								
ARA0				IAML				17 23 41.0	
	comp=Z,5.7nm,0.4s								
ARA0	**ARCESS Array S**	**6.37**	**118**	*eP*			**Pn**	**17 22 24.5**	**+2.6**
ARA0				*eS*			**Sn**	**17 23 34.9**	**+0.3**
ARCES	**ARCESS Array B**	**6.37**	**118**	Pn			**Pn**	**17 22 24.5**	**+2.6**
	comp=Z,0.6nm,0.3s,baz=322,slow=12,SNR=38								
ARCES				Sn			**Sn**	**17 23 35.9**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=309,slow=20,SNR=12								
	comp=Z,2.2nm,0.4s								
ARCES	**ARCESS Array B**	**6.37**	**118**	P			**Pn**	**17 22 25.0**	**+3.1**
ARCES				S			**Sn**	**17 23 31.4**	**-3.3**
KEV	**Kevo**	**6.62**	**114**	*eP*			**Pn**	**17 22 27.8**	**+2.6**
KEV				*eS*			**Sn**	**17 23 40.4**	**-0.2**
KEV	**Kevo**	**6.62**	**114**	*eP*			**Pn**	**17 22 27.4**	**+2.1**
KEV				*eS*			**Sn**	**17 23 39.9**	**-0.7**
KEV				MSN				17 23 45.0	
	comp=Z,4.0nm,0.2s								
SALU	**Saltoluokta**	**6.68**	**148**	*eP*			**Pn**	**17 22 27.7**	**+1.6**
SALU				*eS*			**Sn**	**17 23 41.5**	**-0.6**
LANU	**Lannavaara**	**6.71**	**135**	*eP*			**Pn**	**17 22 29.1**	**+2.5**
LANU				*eS*			**Sn**	**17 23 42.9**	**0.0**
HEF	**Hetta**	**6.77**	**129**	*eP*			**Pn**	**17 22 30.0**	**+2.6**
HEF				*eS*			**Sn**	**17 23 45.8**	**+1.3**
HEF	**Hetta**	**6.77**	**129**	*eP*			**Pn**	**17 22 29.1**	**+1.6**
HEF				*eS*			**Sn**	**17 23 44.2**	**-0.2**
KONS	**Konsvik**	**6.94**	**167**	*eP*			**Pn**	**17 22 31.3**	**+1.7**
KONS				*eS*			**Sn**	**17 23 43.8**	**-4.6**
KONS				IAML				17 23 50.5	
	comp=Z,5.6nm,0.4s								
STOK	**Stokkvaagen**	**7.09**	**168**	*e*			**Pn**	**17 22 36.0**	**+4.2**
MOR8	**Moi Rana**	**7.36**	**164**	*eS*			**Sn**	**17 23 53.9**	**-4.9**
PRVG	**Vayda Guba**	**8.04**	**105**	P			**Pn**	**17 22 47.4**	**+2.6**
PRVG				S			**Sn**	**17 24 10.7**	**-4.8**
SGF	**Sodankyl**	**8.20**	**127**	*eP*			**Pn**	**17 22 48.8**	**+1.9**
SGF				*eS*			**Sn**	**17 24 18.8**	**-0.7**
DBG	**Daneborg**	**8.28**	**291**	Pn			Pn	17 22 34.4	-14
DBG				Sn			Sn	17 23 55.6	-26
DBG	**Daneborg**	**8.28**	**291**	Pn			Pn	17 22 34.4	-14
DBG				Sn			Sn	17 23 55.6	-26
RNF	**Rovaniemi**	**8.77**	**131**	*eP*			**Pn**	**17 22 55.4**	**+0.6**
RNF				*eS*			**Sn**	**17 24 31.3**	**-2.2**
TERR	**Teriberka**	**9.19**	**104**	P			Pn	**17 23 02.6**	**+2.2**
TERR				S			**Sn**	**17 24 37.6**	**-6.1**
APA0	**Apatity Array**	**9.69**	**114**	Pn			Pn	**17 23 08.5**	**+1.2**
	baz=326,slow=11								
APA0				Sn			**Sn**	**17 24 50.6**	**-5.4**
	baz=313,slow=22								
APA0	**Apatity Array**	**9.69**	**114**	Pn			**Pn**	**17 23 08.5**	**+1.2**
	baz=326,slow=11								
APA0				Sn			**Sn**	**17 24 50.6**	**-5.4**
	baz=313,slow=22								
APA0	**Apatity Array**	**9.69**	**114**	P			**Pn**	**17 23 09.0**	**+1.7**
APA0				S			**Sn**	**17 24 49.0**	**-6.9**
OLKF	**Oulanka, Finla**	**9.78**	**125**	*eS*			**Sn**	**17 24 55.2**	**-3.1**
MSF	**Maaselka**	**10.03**	**127**	*eS*			**Sn**	**17 25 00.8**	**-3.6**
NOA	**NORSAR Array B**	**12.32**	**176**	Pn			**Pn**	**17 23 42.2**	**-1.2**
	baz=350,slow=14,SNR=1.5								
NOA				LR			LR	17 28 14.9	
	comp=Z,69nm,19.6s,baz=0.0,slow=37								
	comp=Z,1.4nm,0.9s								
HFS	**Hagfors**	**13.31**	**171**	LR			LR	17 28 55.9	
	comp=Z,106nm,18.7s,baz=346,slow=37								
FINES	**FINESS Array B**	**13.43**	**143**	Pn			**Pn**	**17 23 59.8**	**+1.3**
	comp=Z,0.1nm,0.3

H11N3	**WAKE ISLAND Hy**	**21.23**	**72**	T	T	17 53 56.3			
	baz=258,slow=75								
FAKI	**Fak Fak**	**21.37**	**219**	P	**P**	**17 30 49.8**	**+1.3**		
FAKI				IAmb	IAmb	17 31 19.0			
	comp=Z,29nm,1.1s								
YULB	**Yu-li**	**24.72**	**296**	P	**P**	**17 31 19.7**	**-1.4**		
YULB				IAmb	IAmb	17 31 57.3			
	comp=Z,22nm,1.5s								
KSRS	**Korea Array**	**28.10**	**329**	P	**P**	**17 31 51.7**	**+0.5**		
	comp=Z,0.4nm,0.7s,baz=148,slow=8.9,SNR=4.1								
KSRS				LR	LR	17 42 33.0			
	comp=Z,8.0nm,19.9s,baz=20,slow=35								
	comp=Z,0.4nm,0.7s								
KNRA	**Kununurra**	**33.84**	**210**	P	**P**	**17 32 41.1**	**-0.9**		
WB0	**Warramunga Arr**	**35.32**	**198**	P	**P**	**17 32 53.8**	**-1.0**		
WR0	**Warramunga Arr**	**35.46**	**198**	P	**P**	**17 32 55.0**	**-0.9**		
WR0				IAmb	IAmb	17 33 29.2			
	comp=Z,12nm,1.3s								
WB2	**Warramunga Arr**	**35.50**	**198**	P	**P**	**17 32 55.2**	**-1.0**		
WB2				IAmb	IAmb	17 33 38.5			
	comp=Z,12nm,1.2s								
WRA	**Warramunga Arr**	**35.50**	**198**	P	**P**	**17 32 55.1**	**-1.2**		
	comp=Z,1.2nm,0.6s,baz=21,slow=9.6,SNR=15								
	comp=Z,1.2nm,0.6s								
FITZ	**Fitzroy Crossi**	**37.46**	**212**	P	**P**	**17 33 12.1**	**-0.8**		
	comp=Z,1.1nm,0.4s,baz=27,slow=10,SNR=12								
	comp=Z,1.1nm,0.4s								
AS31	**Alice Springs**	**39.15**	**197**	P	**P**	**17 33 25.6**	**-1.4**		
ASAR	**Alice Springs**	**39.15**	**197**	P	**P**	**17 33 26.2**	**-0.9**		
	comp=Z,0.5nm,0.7s,baz=20,slow=6.8,SNR=18								
	comp=Z,0.5nm,0.7s								
STKA	**Stephens Creek**	**45.80**	**185**	P	**P**	**17 34 19.4**	**-1.4**		
	comp=Z,1.2nm,0.5s,baz=355,slow=11,SNR=4.0								
	comp=Z,1.2nm,0.5s								
STKA	**Stephens Creek**	**45.80**	**185**	P	**P**	**17 34 19.2**	**-1.5**		
BBOO	**Buckleboo**	**47.45**	**191**	P	**P**	**17 34 33.0**	**-0.6**		
BBOO				IAmb	IAmb	17 34 35.1			
	comp=Z,12nm,1.2s								
MKAR	**Makanchi Array**	**61.61**	**316**	P	**P**	**17 36 15.5**	**-0.5**		
	comp=Z,0.2nm,0.5s,baz=94,slow=6.5,SNR=5.7								
	comp=Z,0.2nm,0.5s								

TAP 03 17:28:54.3,24°22N×121°74E,h21km,ML1.0,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.09**	**1**	*e*P	Pb	17 28 58.7	+0.3
	baz=5.0						
ETL	**Fush Village**	**0.12**	**241**	*e*P	Pb	17 28 58.7	-1.7
ETL	baz=242			*e*S	Sb	17 29 01.3	-3.3
	baz=242						
NACB	**Ninganchiao**	**0.14**	**252**	*i* P	Pb	17 28 58.7	-1.5
NACB	baz=253			S	Sb	17 29 01.7	-2.6
	baz=253						
TWD	**Chiawan**	**0.19**	**224**	*i* P	Pb	17 28 59.4	-0.6
TWD	baz=224			S	Sb	17 29 03.2	-0.8
	baz=224						
ENA	**Nanau**	**0.21**	**0**	P	Pb	17 28 60.0	-0.1
ENA	baz=1.0			*e*S	Sb	17 29 03.8	-0.3
	baz=1.0						
EWUT	**Wuta**	**0.23**	**9**	P	Pb	17 28 59.4	-0.9
EWUT	baz=3.0			S	Sb	17 29 03.5	-0.8
	baz=3.0						
ETLH	**Xiulin Townshi**	**0.23**	**267**	P	Pb	17 29 00.5	+0.1
ETLH	baz=267			S	Sb	17 29 04.6	0.0
	baz=267						
LATG	**Datong**	**0.37**	**329**	*e*P	Pb	17 29 03.1	+0.9
LATG	baz=328			*e*S	Sb	17 29 08.8	+1.3
	baz=328						
NNSB	**Datong**	**0.39**	**303**	*e*P	Pb	17 29 03.4	+1.0
NNSB	baz=303			*e*S	Sb	17 29 09.5	+1.6
	baz=303						
NNSH	**Datong**	**0.39**	**303**	*e*P	Pb	17 29 03.2	+0.7
NNSH	baz=303			*e*S	Sb	17 29 09.3	+1.3
	baz=303						
NNS	**Nan Shan**	**0.40**	**304**	P	Pb	17 29 02.9	+0.2
NNS	baz=304			S	Sb	17 29 08.8	+0.5
	baz=304						
NDS	**Dongshan**	**0.41**	**357**	*e*P	Pb	17 29 02.8	-0.1
NDS	baz=356			S	Sb	17 29 09.2	+0.5
	baz=356						
NDT	**Datong Townshi**	**0.43**	**332**	*e*P	Pb	17 29 04.3	+1.1
NDT	baz=337			*e*S	Sn	17 29 11.1	-1.6
	baz=337						
ENTT	**Nioudou**	**0.45**	**339**	*e*P	Pb	17 29 03.7	+0.2
ENTT	baz=339			*e*S	Sb	17 29 10.4	+0.7
	baz=339						
FUSB	**Fushanzhiwuyua**	**0.56**	**346**	*e*S	Sn	17 29 14.6	-1.2
	baz=340						

*ISK **03** 17:29:48.6,38°83N×25°80E,h9km,ML3.1/21*
*THE **03** 17:29:49.7,38°83N×25°81E,h7km±1km,ML2.7/6,Error ellipse: s-maj=1.6km s-min=0.5km az=85.0*
*DDA **03** 17:29:49.2±0.0,38°82N×25°84E,h7km±4km,ML2.7*
*ATH **03** 17:29:49.8,38°83N×25°84E,h15km±3km,ML3.0/4,Error ellipse: s-maj=3.6km s-min=1.0km az=107.0*

ISC 03 17:29:49.6±0.9,38°83N±0°02×25°82E±0°02,h12km±8km,n55,σ0°47/77,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSRA	**Psara**	**0.35**	**215**	P	**Pb**	**17 29 57.7**	**-0.1**
PSRA				S	**Sg**	**17 30 02.2**	**+0.8**
PSRA				AML	AML	17 30 03.1	
	comp=E,7314μm,0.2s						
PSRA				AML	AML	17 30 04.6	
	comp=N,5052μm,0.2s						
SIGR	**SIGRI**	**0.38**	**4**	P	**Pg**	**17 29 57.0**	**-0.2**
SIGR				S	**Sg**	**17 30 03.2**	**+0.9**
	comp=N,2μm,0.2s						
SIGR	**SIGRI**	**0.38**	**4**	PG	**Pg**	**17 29 57.1**	**-0.2**
SIGR				SG	**Sg**	**17 30 02.4**	**+0.1**
SIGR	**SIGRI**	**0.38**	**4**	P	**Pg**	**17 29 57.0**	**-0.2**
SIGR				S	**Sg**	**17 30 02.7**	**+0.3**
SIGR				AML	AML	17 30 03.8	
	comp=E,8332μm,0.4s						
SIGR				AML	AML	17 30 03.9	
	comp=N,9177μm,0.2s						
CHOS	**Chios island**	**0.48**	**158**	P	**Pg**	**17 29 59.0**	**-0.1**
CHOS				S	**Sg**	**17 30 06.0**	**+0.5**
	comp=N,3μm,0.3s						
CHOS	**Chios island**	**0.48**	**158**	PG	**Pg**	**17 29 58.9**	**-0.1**
CHOS				SG	**Sg**	**17 30 05.6**	**+0.1**
CHOS	**Chios island**	**0.48**	**158**	P	**Pg**	**17 29 59.1**	**-0.1**
CHOS				S	**Sg**	**17 30 05.2**	**-0.3**
CHOS				AML	AML	17 30 06.3	
	comp=N,3788μm,0.3s						
CHOS				AML	AML	17 30 07.4	
	comp=E,7440μm,0.2s						
PRK	**Paraskevi**	**0.54**	**40**	P	**Pb**	**17 30 00.8**	**-0.2**
PRK				S	**Sb**	**17 30 08.5**	**-0.2**
	comp=E,755nm,0.3s						
PRK	**Paraskevi**	**0.54**	**40**	P	**Pb**	**17 30 00.8**	**-0.2**
PRK				S	**Sg**	**17 30 07.8**	**+0.4**
PRK				AML	AML	17 30 09.1	
	comp=N,1750μm,0.4s						
PRK				AML	AML	17 30 16.5	
	comp=E,1078μm,0.3s						
GPNR	**Gulpinar-Canak**	**0.67**	**21**	P	**Pg**	**17 30 02.2**	**-0.4**
KOCA	**Canakkale, Ayv**	**0.71**	**20**	P	**Pg**	**17 30 02.9**	**-0.5**
KOCA				S	**Sb**	**17 30 14.6**	**+0.9**
KOCA				*i* AML	AML	17 30 17.0	
	comp=E,861nm,0.4s						
KOCA				*i* AML	AML	17 30 17.0	
	comp=E,825nm,0.8s						
FOCM	**Foa**	**0.72**	**99**	PG	**Pg**	**17 30 03.5**	**-0.1**
URLA	**Izmir**	**0.77**	**128**	PG	**Pg**	**17 30 03.2**	**-1.3**
URLA				SG	**Sb**	**17 30 15.0**	**-0.3**
ZEYE	**Izmir, Urla-Ze**	**0.80**	**138**	P	**Pg**	**17 30 04.7**	**-0.3**
ZEYE				S	**Sg**	**17 30 15.6**	**+0.2**
ZEYE				*i* AML	AML	17 30 19.0	
	comp=E,561nm,0.4s						
ZEYE				*i* AML	AML	17 30 19.0	
	comp=E,330nm,0.4s						
DKL	**Dikili**	**0.88**	**74**	PG	**Pg**	**17 30 06.1**	**-0.5**
DKL				SG	**Sb**	**17 30 18.9**	**+0.5**
EFSA	**Agios Efstrati**	**0.96**	**318**	P	**Pg**	**17 30 07.9**	**-0.2**
SKY	**Skiros Island**	**0.99**	**273**	P	**Pg**	**17 30 08.8**	**+0.1**
BOZC	**Bozcaada**	**1.02**	**10**	PG	**Pg**	**17 30 08.4**	**-0.9**
BOZC				SG	**Sb**	**17 30 23.3**	**+0.7**
BLCB	**Balcova**	**1.05**	**115**	P	**Pg**	**17 30 09.4**	**-0.5**
BLCB				S	**Sn**	**17 30 24.7**	**0.0**
BLCB	**Balcova**	**1.05**	**115**	PG	**Pg**	**17 30 09.4**	**-0.5**
EZN	**Ezine**	**1.07**	**21**	P	**Pg**	**17 30 09.2**	**-0.9**
EZN				S	**Sn**	**17 30 25.2**	**+0.2**
	comp=E,740nm,0.4s						
EZN	**Ezine**	**1.07**	**21**	PG	**Pg**	**17 30 09.2**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.07**	**32**	P	**Pg**	**17 30 09.3**	**-0.9**
BAYC				S	**Sn**	**17 30 25.4**	**+0.3**
BAYC				*i* AML	AML	17 30 26.0	
	comp=E,244nm,0.2s						
BAYC				*i* AML	AML	17 30 26.0	
	comp=E,224nm,0.3s						
DGB	**zmir**	**1.14**	**133**	P	**Pb**	**17 30 10.6**	**-0.6**
DGB				S	**Sn**	**17 30 26.7**	**-0.1**
DGB				*i* AML	AML	17 30 29.0	
	comp=E,100nm,0.5s						
DGB				*i* AML	AML	17 30 29.0	
	comp=E,79nm,0.2s						
LIA	**Limnos Island**	**1.17**	**335**	P	**Pb**	**17 30 11.4**	**-0.4**
LIA				S	**Sg**	**17 30 27.8**	**+0.3**
	comp=E,255nm,0.4s						
LIA	**Limnos Island**	**1.17**	**335**	P	**Pb**	**17 30 11.4**	**-0.4**
BUHA	**Balikesir, Bur**	**1.18**	**55**	P	**Pb**	**17 30 11.5**	**-0.4**
BUHA				S	**Sg**	**17 30 27.8**	**0.0**
BUHA				*i* AML	AML	17 30 29.0	
	comp=E,159nm,0.4s						
BUHA				*i* AML	AML	17 30 31.0	
	comp=E,298nm,0.3s						
ECEA	**Canakkale, Ece**	**1.24**	**13**	P	**Pn**	**17 30 12.6**	**0.0**
ECEA				S	**Sg**	**17 30 29.6**	**0.0**
GADA	**Gvkgeada**	**1.36**	**2**	PN	**Pn**	**17 30 14.1**	**-0.2**
KYMI	**Kymi, Euboea I**	**1.36**	**262**	P	**Pn**	**17 30 13.9**	**-0.5**
KYMI	**Kymi, Euboea I**	**1.36**	**262**	P	**Pn**	**17 30 13.8**	**-0.5**
SMG	**Samos**	**1.38**	**144**	P	**Pn**	**17 30 15.0**	**+0.4**
SMG	**Samos**	**1.38**	**144**	P	**Pb**	**17 30 15.3**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.57**	**69**	P	**Pn**	**17 30 17.4**	**+0.1**
STEP				*i* AML	AML	17 30 42.0	
	comp=E,126nm,0.5s						
STEP				*i* AML	AML	17 30 45.0	
	comp=E,155nm,0.3s						
GCAM	**G?zelcaml?**	**1.58**	**135**	PN	**Pn**	**17 30 17.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.64**	**18**	PN	**Pn**	**17 30 18.2**	**0.0**
SMTH	**Samothraki Isl**	**1.65**	**352**	P	**Pn**	**17 30 17.9**	**-0.5**
APE	**Apeiranthos**	**1.77**	**188**	PN	**Pn**	**17 30 19.7**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.85**	**118**	PN	**Pn**	**17 30 21.2**	**0.0**
GONE	**Gonen-Balikesi**	**1.89**	**49**	PN	**Pn**	**17 30 21.9**	**+0.3**
ERIK	**Erikli-Kesan**	**1.91**	**16**	PN	**Pn**	**17 30 22.1**	**+0.2**
ALN	**Alexandroupoli**	**2.07**	**5**	P	**Pn**	**17 30 23.7**	**-0.4**
ALN				S	**Sn**	**17 30 50.6**	**+0.8**
	comp=E,55nm,0.4s						
ALN	**Alexandroupoli**	**2.07**	**5**	PN	**Pn**	**17 30 24.2**	**+0.1**
BODT	**Bodrum**	**2.12**	**146**	PN	**Pn**	**17 30 25.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**2.13**	**29**	PN	**Pn**	**17 30 25.2**	**+0.2**
EDC	**Edincik**	**2.19**	**46**	PN	**Pn**	**17 30 26.3**	**+0.6**
GZKV	**Gazikoy-Tekird**	**2.24**	**31**	PN	**Pn**	**17 30 26.6**	**+0.2**
KULA	**Kula-Manisa**	**2.25**	**97**	PN	**Pn**	**17 30 26.9**	**+0.3**
RDO	**Rodhopi**	**2.32**	**355**	P	**Pn**	**17 30 27.5**	**-0.1**
RDO	**Rodhopi**	**2.32**	**355**	PN	**Pn**	**17 30 27.5**	**-0.1**
KCTX	**Karacabey (Bur**	**2.43**	**53**	PN	**Pn**	**17 30 29.5**	**+0.5**
SIMA	**Simav-Kutahya**	**2.48**	**83**	PN	**Pn**	**17 30 30.5**	**+0.7**
HORT	**Hortiatis**	**2.74**	**311**	PN	**Pn**	**17 30 33.4**	**0.0**
KDZ	**Kurdzhali**	**2.83**	**354**	PN	**Pn**	**17 30 34.3**	**-0.3**
ARMT	**Armutlu**	**2.92**	**53**	PN	**Pn**	**17 30 36.7**	**+1.0**

*IDC **03** 17:35:01.3±2.4,12°41N×124°61E,h0km,mb3.5/4,*
mbtmp3.5/4,Error ellipse: s-maj=198.6km s-min=25.9km az=88.0
*MAN **03** 17:35:03,12°73N×125°67E,h78km,Ms2.8*

ISC 03 17:35:03.7±1.3,12°86N±0°06×125°70E±0°10,h35km,n18,σ1§75/19,mb3.2/4,2C-8D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.28**	**191**	⇓*e*P	**Pn**	**17 35 24.6**	**-0.5**
BESP				*e*S	**Sn**	**17 35 41.6**	**+0.7**
PVCP	**Virac**	**1.67**	**296**	⇓*e*P	**Pn**	**17 35 28.9**	**-1.5**
PVCP				*e*S	**Sn**	**17 35 51.1**	**+0.5**
MSLP	**Maasin**	**2.83**	**197**	⇑*e*P	**Pn**	**17 35 47.6**	**+1.2**
LLP	**Lapu-Lapu**	**3.04**	**214**	*e*P	Pn	17 35 41.6	-7.7
LLP				*e*S	Sn	17 35 56.9	-28
GLSP	**General Luna,**	**3.09**	**172**	⇓*e*P	**Pn**	**17 35 50.0**	**+0.1**
GLSP				*e*S	**Sn**	**17 36 23.9**	**-1.7**
RCP	**Roxas**	**3.16**	**246**	⇑*e*P	**Pn**	**17 35 50.5**	**-0.5**
RCP				*e*S	**Sn**	**17 36 28.5**	**+1.0**
JCNP	**Jose Panganiba**	**3.24**	**296**	⇓*e*P	**Pn**	**17 35 53.3**	**+1.3**
JCNP				*e*S	**Sn**	**17 36 31.5**	**+2.0**
GUIM	**Jordan**	**3.77**	**234**	⇓*e*P	**Pn**	**17 35 58.1**	**-1.2**
LQP	**Lukban**	**4.23**	**288**	⇓*e*P	**Pn**	**17 36 07.6**	**+1.8**
BALP	**Baler**	**4.91**	**306**	⇓*e*P	**Pn**	**17 36 14.8**	**-0.2**
BALP				*e*S	**Sn**	**17 37 05.7**	**-5.0**
CAUP	**Cauayan**	**5.52**	**318**	⇓*e*P	**Pn**	**17 36 24.8**	**+1.4**
KSRS	**Korea Array**	**24.57**	**4**	P	P	17 40 27.7	+7.4
	0.4nm,0.6s,baz=182,slow=9.2,SNR=4.3						
	0.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.76**	**180**	P	**P**	**17 41 14.9**	**-1.0**
	3.8nm,1.1s,baz=355,slow=11,SNR=2.0						
	3.8nm,1.1s						
WRA	**Warramunga Arr**	**33.69**	**165**	P	**P**	**17 41 42.5**	**+0.9**
	0.4nm,1.1s,baz=342,slow=8.9,SNR=1.7						
	0.4nm,1.1s						
ASAR	**Alice Springs**	**37.18**	**167**	P	**P**	**17 42 12.8**	**+1.2**
	0.3nm,0.8s,baz=351,slow=7.2,SNR=10						
	0.3nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**40.05**	**75**	T	T	18 26 02.5	
	baz=270,slow=75						
H11N2	**WAKE ISLAND Hy**	**40.05**	**75**	T	T	18 26 03.6	
	baz=270,slow=75						
H11N3	**WAKE ISLAND Hy**	**40.07**	**75**	T	T	18 26 04.0	
	baz=270,slow=75						

*KRNET **03** 17:36:19.8±0.1,39°20N×72°63E,h15km,mb3.3*
*SOME **03** 17:36:22.4,39°13N×73°00E,h5km*
*NNC **03** 17:36:24.4±2.7,39°27N×72°86E,h0km,mb3.9,mpv3.4,Error ellipse: s-maj=21.9km s-min=13.1km az=13.0*

ISC 03 17:36:19.3±1.7,38°98N±0°08×72°91E±0°05,h10km,n17,σ3§45/27,12C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.99**	**300**	⇑*e*P	Pg	17 36 33.0	-5.4
	baz=94						
DRK				⇑*e*S	Sg	17 36 42.9	-8.5
	baz=94						
OHH	**Osh**	**1.54**	**357**	⇑*e*P	**Pn**	**17 36 44.6**	**-2.3**
	baz=5.0						
OHH				⇑*e*S	**Sb**	**17 37 02.9**	**-4.7**
	baz=5.0						
BTK	**Batken**	**1.94**	**304**	⇑*e*P	Pn	17 36 49.9	-2.5
	baz=2.0						
BTK				⇑*e*S	**Sn**	**17 37 12.1**	**-4.8**
	baz=2.0						
GAR	**Garm**	**2.02**	**271**	⇓*i*P	**Pn**	**17 36 53.2**	**-0.3**
	baz=64						
GAR				⇓*e*S	**Sn**	**17 37 17.6**	**-1.3**
	baz=64						
ARLS	**Aral**	**3.07**	**20**	⇑*e*P	**Pn**	**17 37 09.8**	**+1.8**
	baz=26						
ARLS				⇑*e*S	**Sn**	**17 37 46.0**	**+1.1**
	baz=26						
MRKS	**Merke**	**3.77**	**4**	*e*P	**Pg**	**17 37 34.1**	**+2.7**
	16nm,0.4s						
MRKS				*e*S	**Sg**	**17 38 26.1**	**+6.0**
	12nm,0.6s						
IUG	**luzhnay**	**3.84**	**326**	*e*P	**Pb**	**17 37 31.2**	**+3.9**
	403nm,0.4s						
IUG				*e*S	**Sg**	**17 38 21.0**	**-1.7**
	20nm,1.1s						
IUG	**luzhnay**	**3.84**	**326**	Pg	**Pn**	**17 37 22.0**	**+3.4**
	190nm,0.4s						
IUG				Lg	Lg	17 38 07.0	
	21nm,0.6s						
DZA	**Taraz**	**4.08**	**344**	*e*P	**Pg**	**17 37 35.9**	**-1.5**
	26nm,0.1s						
DZA				*e*S	**Sg**	**17 38 29.0**	**-1.4**
	66nm,0.2s						
TKM2	**Tokmak 2**	**4.43**	**27**	⇑Pn	**Pn**	**17 37 30.6**	**+3.9**
	1.9nm,0.7s						
TKM2				⇑Lg	Lg	17 38 38.6	
	2.6nm,0.6s						
KK31	**Karatay Array**	**4.50**	**337**	Pn	**Pn**	**17 37 29.3**	**+1.8**
	1.3nm,0.3s,baz=156,slow=11,SNR=16						
KK31				⇑Sn	**Sn**	**17 38 21.7**	**+1.9**
	5.6nm,0.6s,baz=163,slow=23,SNR=6.0						
KK31				⇑Lg	Lg	17 38 35.3	
	1.5nm,0.4s						
SGDS	**Sogindy**	**4.65**	**16**	*e*P	**Pb**	**17 37 44.4**	**+3.4**
	2.0nm,0.3s						
SGDS				*e*S	**Sg**	**17 38 43.7**	**-4.8**
	2.3nm,0.5s						
KST	**Kastek**	**4.67**	**29**	*e*P	**Pg**	**17 37 47.4**	**-1.3**
	1.5nm,0.3s						
KST				*e*S	**Sg**	**17 38 48.9**	**-0.2**
	4.9nm,0.6s						
KRBS	**Karabastau**	**5.15**	**23**	*e*P	**Pg**	**17 37 53.8**	**-4.1**
	1.4nm,0.5s						
KRBS				*e*S	**Sg**	**17 39 00.3**	**-4.3**
	3.1nm,0.7s						
KRBS	**Karabastau**	**5.15**	**23**	Pg	**Pb**	**17 37 53.0**	**+3.6**
	1.4nm,0.5s						
KRBS				Lg	Lg	17 39 00.3	
	3.1nm,0.7s						
KTBS	**Karatobe**	**5.51**	**30**	*e*P	**Pg**	**17 38 00.7**	**-4.2**
	0.7nm,0.7s						
KTBS				*e*S	**Sg**	**17 39 12.1**	**-4.1**
	5.5nm,0.5s						
KTBS	**Karatobe**	**5.51**	**30**	Pg	**Pb**	**17 37 59.2**	**+3.6**
	1.6nm,0.6s						
KTBS				Lg	Lg	17 39 11.0	
	5.5nm,0.5s						

*KRNET **03** 17:43:06.7±0.1,39°45N×73°51E,mb3.0*
*SOME **03** 17:43:06.6,39°33N×73°43E,h15km*
*NNC **03** 17:43:09.2±3.3,39°47N×73°64E,h0km,mb3.7,mpv3.2,Error ellipse: s-maj=23.5km s-min=10.0km az=178.0*
*ISU **03** 17:43:09,39°61N×73°58E,h16km*

ISC 03 17:43:10.8±1.6,39°63N±0°05×73°32E±0°04,h4km±11km,n27,σ2§27/47,15C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.98**	**335**	⇓*i*P	**Pb**	**17 43 29.7**	**-0.7**
	baz=33						
OHH				⇓*i*S	**Sn**	**17 43 46.8**	**+1.0**
	baz=33						
TSTA	**Tashata**	**1.15**	**326**	S	**Sn**	**17 43 51.3**	**+1.5**
DRK	**Karamyk**	**1.19**	**263**	⇓*e*P	**Pb**	**17 43 32.2**	**-1.8**
	baz=72						
DRK				⇓*i*S	**Sg**	**17 43 50.4**	**+1.5**
	baz=72						
FRG	**Fergana**	**1.39**	**303**	P	**Pg**	**17 43 38.3**	**+0.8**
FRG				S	**Sg**	**17 43 59.5**	**+3.9**
BTK	**Batken**	**1.97**	**283**	⇓*e*P	**Pb**	**17 43 46.3**	**-1.0**
	baz=87						
BTK				⇓*i*S	**Sg**	**17 44 14.9**	**+0.8**
	baz=87						
MINT	**Mingtut**	**1.98**	**296**	P	**Pb**	**17 43 48.2**	**+0.8**
MINT				S	**Sg**	**17 44 17.6**	**+3.1**
ARLS	**Aral**	**2.35**	**19**	⇑*i*P	**Pn**	**17 43 50.6**	**+0.2**
	baz=14						
ARLS				⇑*i*S	**Sb**	**17 44 22.8**	**-0.5**
	baz=14						
GAR	**Garm**	**2.41**	**256**	⇑*i*P	**Pn**	**17 43 51.1**	**0.0**
	baz=61						
GAR				⇑*i*S	**Sb**	**17 44 23.7**	**-1.3**
	baz=61						
TRKS	**Terek-Say**	**2.52**	**320**	⇑*e*P	**Pn**	**17 43 53.6**	**+1.0**
	baz=19						
TRKS				⇑*i*S	**Sg**	**17 44 27.8**	**-3.9**
	baz=19						
EKS2	**Erkin-Say**	**3.05**	**6**	⇑*e*P	**Pn**	**17 44 00.7**	**+0.9**
	baz=3.0						
EKS2				⇑*i*S	**Sb**	**17 44 40.1**	**-3.1**
	baz=3.0						
MRKS	**Merke**	**3.11**	**359**	*e*P	**Pg**	**17 44 11.8**	**+1.4**
	1.7nm,0.2s						
MRKS				*e*S	**Sg**	**17 44 58.7**	**+8.0**
	5.9nm,0.8s						
KBK	**Karagaybulak**	**3.26**	**22**	⇑*e*P	**Pn**	**17 44 03.2**	**+0.3**
	baz=18						
KBK				⇑*i*S	**Sn**	**17 44 44.4**	**+2.2**
	baz=18						
CHGR	**Chuyangaron**	**3.38**	**255**	⇑*e*P	**Pn**	**17 44 04.3**	**-0.1**
	baz=58						
CHGR				⇑*i*S	**Sn**	**17 44 46.7**	**+1.7**
	baz=58						
ULHL	**Ulahol**	**3.42**	**39**	⇓*e*P	**Pn**	**17 44 04.6**	**-0.5**
	baz=36						
ULHL				⇓*i*S	**Sn**	**17 44 46.6**	**+0.4**
	baz=36						
IUG	**luzhnay**	**3.54**	**316**	*e*P	**Pb**	**17 44 14.8**	**+0.8**
	116nm,0.5s						
IUG				*e*S	**Sg**	**17 45 03.5**	**-0.9**
	15nm,1.1s						
IUG	**luzhnay**	**3.54**	**316**	Pg	**Pb**	**17 44 10.2**	**-3.8**
	119nm,0.3s						
IUG				Lg	Lg	17 44 56.3	
	19nm,0.6s						
DZA	**Taraz**	**3.59**	**336**	*e*P	**Pb**	**17 44 14.9**	**+0.2**
	30nm,0.2s						
DZA				*e*S	**Sg**	**17 45 04.2**	**-1.8**
	62nm,0.2s						
TKM2	**Tokmak 2**	**3.71**	**27**	⇑Pg	**Pb**	**17 44 19.3**	**+2.4**
	1.1nm,0.5s						
TKM2				⇓Lg	Lg	17 45 09.0	
	3.3nm,0.7s						
KST	**Kastek**	**3.95**	**29**	*e*P	**Pb**	**17 44 21.7**	**+0.7**
	1.0nm,0.4s						
KST				*e*S	**Sg**	**17 45 16.0**	**-1.5**
	7.5nm,1.0s						
KST	**Kastek**	**3.95**	**29**	Pg	**Pb**	**17 44 21.7**	**+0.7**
	1.7nm,0.5s						
KST				Lg	Lg	17 45 16.0	
	7.5nm,1.0s						
KK31	**Karatay Array**	**4.06**	**330**	⇑Pg	**Pg**	**17 44 26.3**	**-2.2**
	0.5nm,0.3s,baz=146,slow=15,SNR=5.4						
KK31				⇑Sn	**Sb**	**17 45 09.3**	**-3.0**
	1.6nm,0.5s,baz=141,slow=22,SNR=3.7						
KK31				⇓Lg	Lg	17 45 24.1	
	0.9nm,0.3s						
KRBS	**Karabastau**	**4.43**	**23**	*

KRVT	**Keravat (AS076**	**2.58**	**297**	P	**Pn**	**18 05 26.1**	**+1.6**
	18nm,0.5s,baz=146,slow=11,SNR=11						
KRVT				S	**Sn**	**18 05 56.6**	**+0.8**
	88nm,0.4s,baz=180,slow=21,SNR=11						
HNR	**Honiara**	**6.81**	**126**	Pn	Pn	18 06 16.3	-4.9
PMG	**Port Moresby**	**8.12**	**241**	P	**Pn**	**18 06 40.5**	**+1.6**
	14nm,0.7s,baz=64,slow=9.7,SNR=11						
PMG				S	**Sn**	**18 08 09.7**	**+0.6**
	19nm,0.6s,baz=74,slow=20,SNR=3.2						
KOUNC	**Koumac, New Ca**	**17.83**	**148**	P	**P**	**18 08 44.3**	**+0.7**
KOUNC				IAmb	IAmb	18 08 57.0	
	comp=Z,12nm,1.0s						
EIDS	**Eidsvold**	**20.03**	**189**	P	**P**	**18 09 06.7**	**-0.8**
EIDS				IAmb	IAmb	18 09 28.1	
	comp=Z,16nm,1.2s						
DZM	**Mont Dzumac**	**20.24**	**146**	P	**P**	**18 09 11.1**	**+1.2**
	comp=Z,5.2nm,0.5s,baz=304,slow=6.4,SNR=16						
	comp=Z,5.2nm,0.5s						
DZM	**Mont Dzumac**	**20.24**	**146**	P	**P**	**18 09 11.2**	**+1.4**
OUENC	**Ouen Island, N**	**20.73**	**146**	P	**P**	**18 09 15.7**	**+0.6**
OUENC				IAmb	IAmb	18 09 17.1	
	comp=Z,16nm,1.0s						
WR0	**Warramunga Arr**	**24.04**	**231**	P	**P**	**18 09 48.3**	**+0.2**
WR0				IAmb	IAmb	18 09 54.2	
	comp=Z,6.3nm,1.1s						
WB0	**Warramunga Arr**	**24.05**	**232**	P	**P**	**18 09 47.8**	**-0.5**
WB0				IAmb	IAmb	18 10 00.3	
	comp=Z,6.1nm,1.0s						
WB2	**Warramunga Arr**	**24.18**	**232**	P	**P**	**18 09 49.4**	**0.0**
WB2				IAmb	IAmb	18 10 00.8	
	comp=Z,8.2nm,1.1s						
WRA	**Warramunga Arr**	**24.19**	**232**	P	**P**	**18 09 48.6**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=56,slow=10,SNR=16						
WRA				PcP	**PcP**	**18 13 27.3**	**+0.1**
	comp=Z,0.8nm,1.1s,baz=52,slow=2.6,SNR=1.8						
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**24.19**	**232**	P	**P**	**18 09 49.3**	**-0.2**
AS31	**Alice Springs**	**26.73**	**225**	P	**P**	**18 10 11.1**	**-1.3**
ASAR	**Alice Springs**	**26.73**	**225**	P	**P**	**18 10 10.9**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=58,slow=9.5,SNR=12						
ASAR				PcP	**PcP**	**18 13 33.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=51,slow=1.6,SNR=2.2						
	comp=Z,0.4nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**26.75**	**27**	T	T	18 38 34.5	
	baz=207						
H11S2	**WAKE ISLAND Hy**	**26.75**	**27**	T	T	18 38 35.9	
	baz=207						
H11S1	**WAKE ISLAND Hy**	**26.77**	**27**	T	T	18 38 35.9	
	baz=207						
STKA	**Stephens Creek**	**28.85**	**203**	P	**P**	**18 10 30.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**30.70**	**243**	P	**P**	**18 10 46.5**	**-1.2**
BATI	**Baumata**	**30.74**	**259**	LR	LR	18 27 00.4	
	comp=Z,305nm,18.0s,baz=246,slow=44						
NIUE	**Niue**	**37.34**	**114**	P	**P**	**18 11 45.7**	**+0.6**
TUWZ	**Tuamarina**	**39.86**	**157**	P	**P**	**18 12 06.0**	**+0.3**
LTZ	**Lake Taylor**	**40.41**	**160**	P	**P**	**18 12 10.7**	**+0.3**
KSRS	**Korea Array**	**49.30**	**332**	P	**P**	**18 13 20.1**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=123,slow=7.1,SNR=3.4						
	comp=Z,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**59.55**	**295**	P	**P**	**18 14 35.4**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=133,slow=6.3,SNR=3.0						
	comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**67.71**	**327**	P	**P**	**18 15 28.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=145,slow=5.3,SNR=3.9						
	comp=Z,0.5nm,0.4s						
VNDA	**Vanda**	**72.11**	**178**	P	**P**	**18 15 54.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=20,slow=8.7,SNR=3.9						
	comp=Z,0.6nm,0.6s						
IMAR	**Indian Mountai**	**80.51**	**19**	P	**P**	**18 16 42.8**	**+0.3**
MK31	**Makanchi Array**	**81.84**	**319**	P	**P**	**18 16 47.5**	**-2.4**
MK31				IAmb	IAmb	18 16 51.0	
	comp=Z,1.5nm,1.1s						
MKAR	**Makanchi Array**	**81.84**	**319**	P	**P**	**18 16 49.8**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=101,slow=6.3,SNR=5.6						
	comp=Z,0.8nm,0.9s						
MAKZ	**Makanchi**	**82.05**	**319**	P	**P**	**18 16 48.9**	**-2.1**
MAKZ				IAmb	IAmb	18 17 02.0	
	comp=Z,4.0nm,1.2s						
ZALV	**Zalesovo Beam**	**82.56**	**326**	P	**P**	**18 16 51.7**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=101,slow=6.0,SNR=2.0						
	comp=Z,0.5nm,0.4s						
QSPA	**South Pole Qui**	**84.49**	**180**	P	**P**	**18 17 02.3**	**-1.0**
QSPA				IAmb	IAmb	18 17 03.7	
	comp=Z,4.1nm,0.7s						
KURBB	**Kurchatov Arra**	**85.27**	**322**	P	**P**	**18 17 06.5**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=98,slow=5.3,SNR=5.5						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**91.30**	**52**	P	**P**	**18 17 38.1**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=237,slow=6.3,SNR=2.6						
	comp=Z,0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**151.97**	**288**	PKPbc	**PKPbc**	**18 24 25.4**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=64,slow=3.7,SNR=1.7						

*KOLA **03** 18:12:43.0, 70.43N×22.06E, h0km, ML2.2*
*HEL **03** 18:12:46.3±0.2, 70.32N×22.65E, h0km, ML1.6, ML1.7(UPP), Explosion*
*IDC **03** 18:12:46.1±1.1, 70.26N×22.60E, h0km, mbtmp3.3/1, ML2.0/1, Error ellipse: s-maj=16.1km s-min=3.5km az=51.0*
*UPP **03** 18:12:47.1±2.4, 70.28N×22.48E, h0km, ML1.7, Suspected explosion*
*BER **03** 18:12:47.6±2.0, 70.37N×22.61E, h0km, ML1.3, ML1.6(HEL), Suspected explosion*

ISC 03 18:12:46.0±1.0, 70.30N±0.04×22.74E±0.03, h0km, n40, σ0s99/60, Northern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
HAMF	**Hammerfest**	**0.47**	**42**	*eP*		**Pg**		**18 12 55.2**	**+0.3**
HAMF				*eS*		**Sb**		**18 13 02.8**	**-1.7**
HAMF				IAML				18 13 06.3	
	comp=Z,11nm,0.1s								
JETT	**Jettan, Norway**	**1.10**	**228**	*eP*		**Pg**		**18 13 07.3**	**+0.2**
JETT				IAML				18 13 27.7	
	comp=Z,18nm,0.2s								
ARA0	**ARCESS Array S**	**1.23**	**128**	*eP*		**Pg**		**18 13 09.2**	**-0.2**
ARA0				*eS*		**Sb**		**18 13 27.1**	**+0.7**
ARA0				IAML				18 13 30.8	
	comp=Z,11nm,0.2s								
ARA0	**ARCESS Array S**	**1.23**	**128**	*eP*		**Pg**		**18 13 09.1**	**-0.4**
ARA0				*eS*		**Sg**		**18 13 25.3**	**0.0**
ARCES	**ARCESS Array B**	**1.23**	**128**	Pg		**Pg**		**18 13 08.8**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=303,slow=15,SNR=96								
ARCES				Lg		Lg		18 13 25.8	
	comp=Z,2.6nm,0.3s,baz=310,slow=25,SNR=16								
ARCES	**ARCESS Array B**	**1.23**	**128**	P		**Pg**		**18 13 08.9**	**-0.5**
ARCES				S		**Sn**		**18 13 29.2**	**+1.6**
KIF	**Kilpisjarvi**	**1.47**	**208**	*eP*		**Pn**		**18 13 11.8**	**-1.9**
KIF	**Kilpisjarvi**	**1.47**	**208**	*eP*		**Pn**		**18 13 11.8**	**-1.9**
KIF				*eS*		**Sg**		**18 13 30.6**	**-2.5**
KIF				MSG				18 13 38.2	
	comp=Z,4.5nm,0.1s								
TRO	**Tromso**	**1.48**	**245**	*eP*		**Pn**		**18 13 13.3**	**-0.4**
TRO				*eS*		**Sg**		**18 13 33.2**	**-0.1**
TRO				IAML				18 13 37.1	
	comp=Z,4.9nm,0.2s								
KEV	**Kevo**	**1.56**	**109**	*eP*		**Pn**		**18 13 15.0**	**0.0**
KEV				*eS*		**Sg**		**18 13 37.2**	**+1.1**
KEV	**Kevo**	**1.56**	**109**	*eP*		**Pn**		**18 13 14.8**	**-0.2**
KEV				*eS*		**Sn**		**18 13 35.1**	**-0.8**
KEV				MSG				18 13 39.4	
	comp=Z,4.4nm,0.1s								
I37NO	**I37NO**	**1.90**	**231**	*i*				18 24 30.0	
	baz=48,slow=322,SNR=12								
HEF	**Hetta**	**1.93**	**170**	*eP*		**Pn**		**18 13 21.2**	**+1.1**
HEF				*eS*		**Sb**		**18 13 46.6**	**0.0**
HEF	**Hetta**	**1.93**	**170**	*eP*		**Pn**		**18 13 20.8**	**+0.8**
HEF				*eS*		**Sn**		**18 13 44.8**	**-0.2**
LANU	**Lannavaara**	**2.28**	**187**	*eP*		**Pn**		**18 13 25.5**	**+0.7**
LANU				*eS*		**Sn**		**18 13 53.5**	**-0.1**
KOVU	**Salmi**	**2.28**	**205**	P		**Pn**		**18 13 24.9**	**0.0**
KOVU				S		**Sn**		**18 13 53.9**	**+0.2**
KOVU	**Salmi**	**2.28**	**205**	P		**Pn**		**18 13 24.9**	**0.0**
KOVU				S		**Sn**		**18 13 53.9**	**+0.2**
KOVU	**Salmi**	**2.28**	**205**	*eP*		**Pn**		**18 13 24.9**	**0.0**
KOVU				*eS*		**Sn**		**18 13 53.9**	**+0.2**
RATU	**Laukkuluspa**	**2.74**	**206**	P		**Pn**		**18 13 31.7**	**+0.6**
RATU				S		**Sn**		**18 14 05.0**	**+0.1**
RATU	**Laukkuluspa**	**2.74**	**206**	P		**Pn**		**18 13 31.7**	**+0.6**
RATU				S		**Sn**		**18 14 05.0**	**+0.1**
RATU	**Laukkuluspa**	**2.74**	**206**	*eP*		**Pn**		**18 13 31.7**	**+0.6**
RATU				*eS*		**Sn**		**18 14 05.0**	**+0.1**
SGF	**Sodankyl**	**3.18**	**153**	*eS*		**Sn**		**18 14 15.6**	**-0.2**
PRVG	**Vayda Guba**	**3.29**	**95**	P		**Pn**		**18 13 38.8**	**+0.2**
PRVG				S		**Sn**		**18 14 19.5**	**+1.1**
PAJU	**Pajala**	**3.30**	**177**	P		**Pn**		**18 13 39.4**	**+0.6**
PAJU	**Pajala**	**3.30**	**177**	P		**Pn**		**18 13 39.4**	**+0.6**
PAJU	**Pajala**	**3.30**	**177**	*eP*		**Pn**		**18 13 39.4**	**+0.6**
PAJU				*eS*		**Sn**		**18 14 18.2**	**-0.5**
SALU	**Saltoluokta**	**3.31**	**210**	P		**Pn**		**18 13 39.3**	**+0.3**
SALU	**Saltoluokta**	**3.31**	**210**	P		**Pn**		**18 13 39.3**	**+0.3**
SALU	**Saltoluokta**	**3.31**	**210**	*eP*		**Pn**		**18 13 39.3**	**+0.3**
VRF	**Varrio**	**3.56**	**133**	*eS*		**Sn**		**18 14 24.9**	**-0.3**
STEI	**Steigen**	**3.59**	**232**	*eP*		**Pn**		**18 13 42.6**	**-0.1**
STEI				*eSg*		**Sb**		**18 14 38.1**	**+3.9**
RNF	**Rovaniemi**	**3.90**	**160**	*eS*		**Sn**		**18 14 32.6**	**-0.9**
LOF	**Lofoten**	**3.94**	**241**	*eP*		**Pn**		**18 13 47.6**	**0.0**
HARU	**Harads**	**4.21**	**190**	P		**Pn**		**18 13 51.8**	**+0.5**
HARU	**Harads**	**4.21**	**190**	P		**Pn**		**18 13 51.8**	**+0.5**
HARU	**Harads**	**4.21**	**190**	*eP*		**Pn**		**18 13 51.8**	**+0.5**
LILU	**Lilltraesk**	**5.16**	**194**	P		**Pn**		**18 14 04.6**	**+0.3**
LILU	**Lilltraesk**	**5.16**	**194**	P		**Pn**		**18 14 04.6**	**+0.3**
LILU	**Lilltraesk**	**5.16**	**194**	*eP*		**Pn**		**18 14 04.6**	**+0.3**
FINES	**FINESS Array B**	**9.00**	**170**	Pn		**Pn**		**18 14 57.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=2.3								
FINES				Sn		**Sn**		**18 16 35.5**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=357,slow=26,SNR=2.5								
	comp=Z,1.3nm,0.9s								

KRSC 03 18:18:51.8±1.9, 50.07N×157.06E, h92km±26km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SKR	**Severo-Kuril's**	**0.86**	**316**	P		Pn		18 19 10.5	+0.4
SKR				S		Sn		18 19 22.8	-1.0
PAU	**Pauzhetka**	**1.40**	**354**	P		Pn		18 19 17.6	+1.5
PAU				S		Sn		18 19 36.4	+1.4
KDTR	**Khodutka, Kamc**	**1.85**	**20**	P		Pn		18 19 24.3	+2.2
KDTR				S		Sn		18 19 47.6	+2.4
MTVR	**Mutnovka**	**2.51**	**16**	P		Pn		18 19 33.6	+2.6
MTVR				S		Sn		18 20 03.6	+2.6
RUS	**Russkaya**	**2.53**	**21**	P		Pn		18 19 32.9	+1.9
RUS				S		Sn		18 20 02.5	+1.3
GRL	**Gorelyy**	**2.56**	**14**	P		Pn		18 19 34.4	+2.8
GRL				S		Sn		18 20 05.5	+3.4
PET	**Petropavlovsk**	**3.12**	**18**	P		Pn		18 19 41.3	+2.4
PET				S		Sn		18 20 17.9	+2.8
DALK	**Dalny**	**3.14**	**19**	P		Pn		18 19 42.0	+2.8
DALK				S		Sn		18 20 19.2	+3.4
UGLR	**Uglovaya**	**3.33**	**19**	P		Pn		18 19 44.7	+2.9
AVH	**Avacha**	**3.36**	**17**	P		Pn		18 19 45.5	+3.2
AVH				S		Sn		18 20 24.1	+2.9
KOK	**Koryaka**	**3.37**	**16**	P		Pn		18 19 45.6	+3.2
KRER	**Koryakskii**	**3.40**	**17**	P		Pn		18 19 45.7	+2.8
KRER				S		Sn		18 20 23.9	+1.6
SDLR	**Sedlovina**	**3.40**	**19**	P		Pn		18 19 45.1	+2.2
KRX	**Arik**	**3.43**	**16**	P		Pn		18 19 46.0	+2.7
KRX				S		Sn		18 20 25.7	+2.6
SPN	**Mys Shipunski**	**3.55**	**30**	P		Pn		18 19 47.6	+2.9
SPN				S		Sn		18 20 26.7	+1.2
GNL	**Ganaly**	**3.67**	**8**	P		Pn		18 19 48.2	+1.8
MKZ	**Mys Kozlova**	**5.32**	**31**	P		Pn		18 20 10.3	+1.6
MKZ				S		Sn		18 21 08.0	-0.6
KBTR	**Krutoberegovo**	**7.05**	**27**	P		Pn		18 20 34.6	+2.4

IDC 03 18:31:17.1±14.0, 21.60N×143.32E, h344km±130km, mb2.9/5, mbtmp3.6/5, Error ellipse: s-maj=174.4km s-min=17.5km az=78.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
KSRS	**Korea Array**	**20.67**	**323**	P		P		18 35 31.6	+0.1
	0.8nm,0.6s,baz=147,slow=9.1,SNR=9.0								
	0.8nm,0.6s								
WRA	**Warramunga Arr**	**42.22**	**193**	P		P		18 38 37.7	0.0
	0.7nm,0.5s,baz=13,slow=9.3,SNR=12								
	0.7nm,0.5s								
ASAR	**Alice Springs**	**45.92**	**192**	P		P		18 39 06.3	-0.5
	0.3nm,0.7s,baz=17,slow=6.6,SNR=2.0								
	0.3nm,0.7s								
MKAR	**Makanchi Array**	**54.86**	**313**	P		P		18 40 12.8	-0.1
	0.1nm,0.5s,baz=94,slow=7.5,SNR=1.6								
	0.1nm,0.5s								
FINES	**FINESS Array B**	**83.32**	**335**	P		P		18 43 05.5	-0.3
	3.3nm,1.1s,baz=94,slow=7.5,SNR=2.2								
	3.3nm,1.1s								

IDC 03 18:42:19.8±1.8, 8.54S×157.43E, h0km, mb3.5/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=52.4km s-min=30.2km az=179.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
HNR	**Honiara**	**2.64**	**110**	Pn		Pn		18 43 03.4	-0.3
	7.8nm,0.3s,baz=204,slow=7.7,SNR=9.1								
	41nm,0.4s								
WRA	**Warramunga Arr**	**25.05**	**241**	P		P		18 47 46.5	+0.5
	0.9nm,0.7s,baz=64,slow=9.4,SNR=6.7								
	0.9nm,0.7s								
ASAR	**Alice Springs**	**27.08**	**234**	P		P		18 48 03.4	-1.1
	0.4nm,1.0s,baz=67,slow=9.6,SNR=1.1								
	0.4nm,1.0s								
MKAR	**Makanchi Array**	**86.15**	**318**	P		P		18 55 03.6	+0.5
	0.3nm,0.7s,baz=111,slow=6.3,SNR=2.6								
	0.3nm,0.7s								

*RSPR **03** 18:46:34.8, 18.17N×67.30W, h24km±1km, MD2.3/11*
*OSPL **03** 18:46:34.1±0.9, 18.16N×67.12W, h39km±12km, ML2.6*

ISC 03 18:46:33.6±1.2, 18.18N±0.03×67.27W±0.04, h34km±1km, n24, σ0s49/26, 7C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PRSN	**Puerto Rico Se**	**0.13**	**71**	*eP*		**Pb**		**18 46 39.3**	**-0.4**
PRSN	**Puerto Rico Se**	**0.13**	**71**	*eS*		**Sb**		**18 46 43.3**	**-0.6**
LSP	**Las Mesas**	**0.18**	**90**	*eP*		**Pb**		**18 46 39.9**	**-0.3**
LSP	**Las Mesas**	**0.18**	**90**	*eS*		**Sb**		**18 46 44.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.23**	**137**	*eP*		**Pn**		**18 46 40.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.23**	**137**	*eS*		**Sb**		**18 46 45.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.23**	**137**	*i*	P	**Pn**		**18 46 40.2**	**+0.3**
CRPR				*eS*		**Sb**		**18 46 45.0**	**-0.4**
CRPR				IAML				18 46 45.2	
	comp=Z,1μm,0.2s								
IDE	**Isla Desecheo**	**0.28**	**318**	*eP*		**Pn**		**18 46 40.7**	**-0.4**
IDE	**Isla Desecheo**	**0.28**	**318**	*eS*		**Sn**		**18 46 45.6**	**+0.1**
MLPR	**Magueyes Islan**	**0.30**	**133**	*eP*		**Pn**		**18 46 40.4**	**-1.0**
MLPR	**Magueyes Islan**	**0.30**	**133**	*eS*		**Sn**		**18 46 45.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.33**	**28**	*eP*		**Pn**		**18 46 41.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.33**	**28**	*i*	P	**Pn**		**18 46 41.8**	**-0.1**
AGPR				*eS*		**Sn**		**18 46 47.3**	**+0.3**
AGPR				IAML				18 46 47.8	
	comp=Z,527nm,0.2s								
GBPR	**Guanica, Bosqu**	**0.42**	**118**	*eP*		**Pb**		**18 46 43.4**	**+0.3**
GBPR	**Guanica, Bosqu**	**0.42**	**118**	*eS*		**Sb**		**18 46 49.7**	**0.0**
AOPR	**Arecibo Observ**	**0.52**	**71**	*eP*		**Pb**		**18 46 44.5**	**-0.1**
AOPR	**Arecibo Observ**	**0.52**	**71**	*eS*		**Sb**		**18 46 52.0**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.53**	**82**	*eP*		**Pb**		**18 46 44.5**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.53**	**82**	*eS*		**Sb**		**18 46 52.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.65**	**102**	*eP*		**Pn**		**18 46 46.6**	**+0.4**
OBIP	**Obispado Ponce**	**0.65**	**102**	*eS*		**Sn**		**18 46 55.5**	**+0.2**
EMPR	**Esperanza - Ma**	**0.77**	**67**	*eP*		**Pn**		**18 46 48.5**	**+0.6**
EMPR	**Esperanza - Ma**	**0.77**	**67**	*eS*		**Sb**		**18 46 59.5**	**+0.7**
PCDR	**Punta Cana, DR**	**1.11**	**288**	*i*	P	**Pn**		**18 46 53.6**	**+1.0**
PCDR				IAML				18 47 13.5	
	comp=Z,87nm,1.2s								

*IDC **03** 19:08:22.5±3.0, 1.82N×126.35E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=302.8km s-min=27.5km az=66.0*
*DJA **03** 19:08:34.2±0.2, 1.1N±2.2×12.6E±°, h51km±15km, M4.0/17, mb4.1/6, MLv4.0/17*

ISC 03 19:08:32.6±1.0, 1.33N±0.05×125.94E±0.05, h54km, n17, σ2s30/23, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TNTI	**Ternate**	**1.53**	**111**	P		**Pn**		**19 09 00.2**	**+2.6**
KMSI	**Cibinong**	**2.10**	**249**	P		**Pn**		**19 09 07.5**	**+2.1**
KMSI				S		**Sn**		**19 09 32.1**	**+1.8**
SGSI	**Sangihe**	**2.38**	**350**	P		**Pn**		**19 09 09.7**	**+0.4**
SGSI				S		**Sn**		**19 09 37.8**	**+0.5**
LBMI	**Labuha**	**2.50**	**141**	P		**Pn**		**19 09 13.1**	**+2.3**
LBMI				S		**Sn**		**19 09 42.5**	**+2.4**
SANI	**Sanana**	**3.35**	**179**	P		**Pn**		**19 09 23.2**	**+0.6**
SANI				S		**Sn**		**19 09 58.6**	**-2.5**
LUWI	**Luwuk**	**3.95**	**233**	P		**Pn**		**19 09 33.9**	**+3.2**
MRSI	**Marisa**	**4.09**	**258**	P		**Pn**		**19 09 34.0**	**+1.4**
MRSI				S		**Sn**		**19 10 20.2**	**+0.9**
NLAI	**Namlea**	**4.68**	**166**	P		**Pn**		**19 09 42.0**	**+1.3**
NLAI				S		**Sn**		**19 10 31.9**	**-1.9**
APSI	**Ampana**	**4.83**	**243**	P		**Pn**		**19 09 44.7**	**+1.8**
AAI	**Ambon**	**5.46**	**156**	P		**Pn**		**19 09 54.8**	**+3.3**
	0.2nm25nm,0.9s								
MSAI	**Masohi**	**5.52**	**147**	P		**Pn**		**19 09 56.2**	**+3.9**
MPSI	**Mapaga**	**6.12**	**261**	P		**Pn**		**19 10 03.2**	**+2.6**
	0.1nm20nm,0.8s								
TTSI	**Tana Toraja**	**7.50**	**235**	P		**Pn**		**19 10 21.2**	**+1.7**
	0.1nm12nm,0.8s								
BNSI	**Bone**	**8.14**	**226**	P		**Pn**		**19 10 29.1**	**+0.8**
WRA	**Warramunga Arr**	**22.68**	**159**	P		**P**		**19 13 29.0**	**-0.8**
	0.7nm,0.4s,baz=339,slow=9.9,SNR=14								
	0.7nm,0.4s								
ASAR	**Alice Springs**	**26.02**	**163**	P		**P**		**19 14 00.6**	**-0.3**
	0.6nm,0.6s,baz=342,slow=10,SNR=20								
	0.6nm,0.6s								
MKAR	**Makanchi Array**	**59.09**	**326**	P		**P**		**19 18 23.8**	**-3.7**
	0.2nm,0.3s,baz=124,slow=8.0,SNR=2.6								
	0.2nm,0.3s								

*IDC **03** 19:14:36.5±0.7, 6.21S×122.60E, h0km, mb4.1/10, mbtmp4.2/15, ML4.1/5, MS3.5/29, Error ellipse: s-maj=23.4km s-min=14.7km az=53.0*
*NEIC **03** 19:14:38.3±2.1, 6.18S±0.06×122.56E±0.07, h10km±1km, mb4.5/30, Error ellipse: s-maj=13.6km s-min=7.2km az=57.0*
*DJA **03** 19:14:38.2±0.4, 6.2S±1×12.3E±°, h13km±3km, M4.5/31, mB5.0/7, mb4.7/31, MLv4.5/18, Mw(mB)4.4/7*

ISC 03 19:14:37.8±0.4, 6.19S±0.04×122.57E±0.04, h10km, n139, σ1s20/128, mb4.5/29, MS3.5/22, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
BBSI	**Bau Bau**	**0.70**	**360**	P		**Pg**		**19 14 51.0**	**-0.4**
BBSI				S		**Sb**		**19 15 01.8**	**0.0**
BSSI	**Bau Bau, Buton**	**2.07**	**271**	P		**Pn**		**19 15 11.8**	**-0.9**
BSSI				S		**Sn**		**19 15 38.1**	**-0.5**
MMRI	**Maumere**	**2.45**	**188**			**Pn**		**19 15 18.1**	**+0.1**
MMRI	**Maumere**	**2.45**	**188**	P		**Pn**		**19 15 18.9**	**+0.9**
MMRI	**Maumere**	**2.45**	**188**	P		**Pn**		**19 15 18.6**	**+0.6**
BKSI	**Bulukumba**	**2.58**	**289**	P		**Pn**		**19 15 19.3**	**-0.5**
BKSI				S		**Sn**		**19 15 50.3**	**-1.0**
EDFI	**Ende, Flores**	**2.69**	**199**	P		**Pn**		**19 15 20.9**	**-0.4**
EDFI				S		**Sn**		**19 15 52.6**	**-1.4**
BNSI	**Bone**	**3.03**	**306**	P		**Pn**		**19 15 25.5**	**-0.4**
BNSI				S		**Sn**		**19 16 03.1**	**+0.8**
KAPI	**Kappang**	**3.04**	**292**	Pn		**Pn**		**19 15 26.3**	**+0.3**
	67nm,0.3s,baz=127,slow=7.9,SNR=216								
KAPI				Sn		**Sn**		**19 16 03.0**	**+0.5**
	58nm,0.3s,baz=204,slow=22,SNR=3.2								
KAPI				LR		LR		19 16 44.6	
	comp=Z,1μm,18.2s,baz=111,slow=42								
	287nm,0.4s								
KAPI	**Kappang**	**3.04**	**292**			**Pn**		**19 15 25.8**	**-0.3**
KAPI	**Kappang**	**3.04**	**292**	P		**Pn**		**19 15 26.5**	**+0.5**
SPSI	**Sidrap Palu**	**3.56**	**308**	P		**Pn**		**19 15 33.2**	**0.0**
SPSI				S		**Sn**		**19 16 15.0**	**-0.4**
BATI	**Baumata**	**4.13**	**165**	Pn		**Pn**		**19 15 45.3**	**+4.2**
	40nm,0.3s,baz=11,slow=3.0,SNR=58								
BATI				LR		LR		19 17 36.6	
	comp=Z,2μm,20.2s,baz=337,slow=44								
BATI	**Baumata**	**4.13**	**165**	P		**Pn**		**

comp=Z,120nm,18.6s,baz=327,slow=38
5.4nm,0.6s
ASAR Alice Springs 20.51 149 Pn Pn 19 19 18.2 -0.4
MEEK Meekatharra 20.68 190 P **P** **19 19 19.1 +0.9**
COEN Coen 21.69 112 P **P** **19 19 29.6 +0.4**
COEN IAmb IAmb 19 19 43.9
comp=Z,20nm,0.9s
COEN Coen 21.69 112 P **P** **19 19 29.4 +0.3**
QIS Mount Isa 21.84 132 P **P** **19 19 31.8 +1.1**
MORW Morawa 23.58 194 P **P** **19 19 48.4 -0.4**
MORW IAmb IAmb 19 20 02.5
comp=Z,12nm,1.0s
MORW Morawa 23.58 194 P **P** **19 19 48.9 +0.1**
IPM Ipoh 23.98 296 P **P** **19 19 54.5 +1.7**
IPM IAmb IAmb 19 19 57.3
comp=Z,13nm,0.8s
PMG Port Moresby 24.57 99 LR LR 19 30 28.0
comp=Z,107nm,19.8s,baz=245,slow=39
KULM Kulim 24.68 297 P **P** **19 20 00.1 +0.8**
KULM IAmb IAmb 19 20 37.0
comp=Z,16nm,1.1s
OOD Oodnadatta 24.84 151 P **P** **19 20 01.9 +1.4**
BLDU Ballidu 24.91 192 P **P** **19 20 01.8 +0.6**
RPSI Rantau Prapat 25.21 290 P **P** **19 20 04.6 +0.6**
RPSI IAmb IAmb 19 20 09.0
comp=Z,17nm,1.1s
PSI Prapat 25.25 290 P **P** **19 20 05.4 +0.9**
comp=Z,8.9nm,0.7s,baz=118,slow=9.7,SNR=7.0
comp=Z,8.9nm,0.7s
KLBR Kellerberrin 25.67 190 P **P** **19 20 08.2 +0.2**
comp=Z,28nm,0.9s
GSI Gunungsitoli 26.04 286 P **P** **19 20 12.1 +0.5**
GSI Gunungsitoli 26.04 286 P **P** **19 20 12.5 +0.9**
MULG Mulgathing 26.29 157 P **P** **19 20 14.3 +0.6**
LCRK Leigh Creek 28.26 151 P **P** **19 20 31.6 +0.2**
BBOO Buckleboo 29.31 156 P **P** **19 20 41.1 +0.4**
GUMO Guam 29.60 48 LR LR 19 31 45.2
comp=Z,21nm,21.1s,baz=280,slow=35
HTT Hallett 31.07 153 P **P** **19 20 57.4 +1.1**
STKA Stephens Creek 31.13 148 P **P** **19 20 57.2 +0.4**
comp=Z,3.0nm,0.8s,baz=325,slow=13,SNR=6.3
STKA LR LR 19 34 09.8
comp=Z,78nm,18.2s,baz=340,slow=38
comp=Z,3.0nm,0.8s
JOW Kunigami 33.29 9 LR LR 19 36 01.9
comp=Z,23nm,20.1s,baz=261,slow=39
CMAR Chiang Mai Arr 33.81 317 P **P** **19 21 21.6 +1.2**
comp=Z,0.5nm,0.6s,baz=143,slow=7.4,SNR=5.5
CMAR LR LR 19 37 52.3
comp=Z,84nm,19.0s,baz=130,slow=41
comp=Z,0.5nm,0.6s
ARPS Mount Arapiles 35.17 153 P **P** **19 21 32.5 +0.5**
ENH Enshi 38.36 342 P **P** **19 21 59.3 0.0**
ENH IAmb IAmb 19 22 00.6
comp=Z,4.8nm,0.7s
XAN Xi'an 42.05 343 P **P** **19 22 29.6 -0.2**
XAN pP sP 19 22 33.5 -0.1
XAN pmax pmax
comp=Z,7.0nm,0.9s
KSRS Korea Array 43.70 6 P **P** **19 22 43.8 +0.7**
comp=Z,0.5nm,0.8s,baz=177,slow=9.1,SNR=2.5
KSRS LR LR 19 40 51.2
comp=Z,14nm,21.4s,baz=175,slow=36
comp=Z,0.5nm,0.8s
PALK Pallekele 43.86 287 LR LR 19 41 56.3
comp=Z,39nm,18.6s,baz=206,slow=37
LZH Lanzhou 45.58 339 *eP* P 19 22 46.0 -12
LZH pP pP 19 22 59.8 -1.3
LZH pmax pmax
comp=Z,13nm,1.0s
LSA Lhasa 46.73 321 P **P** **19 23 06.7 -1.2**
LSA IAmb IAmb 19 23 24.4
comp=Z,5.1nm,0.9s
USRK Ussuriysk Ar. 50.87 9 P **P** **19 23 38.0 -0.9**
comp=Z,2.3nm,0.7s,baz=204,slow=8.2,SNR=4.1
comp=Z,2.3nm,0.7s
ULN Ulaanbaatar 55.54 347 P **P** **19 24 13.1 -0.4**
ULN IAmb IAmb 19 24 18.6
comp=Z,3.3nm,0.9s
SONM Songino Array 55.65 347 P **P** **19 24 14.8 +0.6**
comp=Z,2.2nm,0.9s,baz=162,slow=8.0,SNR=8.7
comp=Z,2.2nm,0.9s
SONM Songino Array 55.65 347 P **P** **19 24 14.9 +0.6**
RPZ Rata Peaks 56.52 139 LR LR 19 51 03.0
comp=Z,65nm,18.2s,baz=283,slow=39
KSH Kashi 62.58 321 P **P** **19 25 04.3 +1.9**
KSH pmax pmax
comp=Z,4.0nm,1.1s
MK31 Makanchi Array 63.68 330 P **P** **19 25 10.3 +0.8**
MK31 IAmb IAmb 19 25 23.8
comp=Z,4.2nm,1.1s
MKAR Makanchi Array 63.68 330 P **P** **19 25 10.2 +0.6**
comp=Z,3.1nm,0.7s,baz=137,slow=6.8,SNR=27
MKAR LR LR 19 56 38.5
comp=Z,21nm,18.1s,baz=162,slow=40
comp=Z,3.1nm,0.7s
MKAR Makanchi Array 63.68 330 P **P** **19 25 09.9 +0.4**
MAKZ Makanchi 63.85 330 P **P** **19 25 11.0 +0.4**
MAKZ IAmb IAmb 19 25 12.2
comp=Z,4.0nm,1.1s
KBL Kabul 64.70 313 P **P** **19 25 16.1 -0.5**
AAK Ala-Archa 65.30 323 LR LR 19 56 11.7
comp=Z,35nm,19.7s,baz=111,slow=38
AAK Ala-Archa 65.30 323 P **P** **19 25 19.1 -1.3**
AAK IAmb IAmb 19 25 25.7
comp=Z,2.7nm,0.8s
GAR Garm 65.98 318 P **P** **19 25 24.6 -0.2**
PETK Petropavlovsk- 66.12 22 P **P** **19 25 25.9 +0.7**
comp=Z,1.6nm,0.8s,baz=202,slow=11,SNR=4.9
comp=Z,1.6nm,0.8s
PETK Petropavlovsk- 66.12 22 P **P** **19 25 25.4 +0.2**
CHGR Chuyangaron 66.59 317 P **P** **19 25 27.8 -0.8**
ZAA0 Zalesovo Array 67.77 337 P **P** **19 25 35.2 -0.5**
ZALV Zalesovo Beam 67.77 337 P **P** **19 25 35.2 -0.5**
comp=Z,2.5nm,0.7s,baz=126,slow=4.0,SNR=10
ZALV LR LR 19 56 51.9
comp=Z,16nm,18.3s,baz=198,slow=37
comp=Z,2.5nm,0.7s
ZALV Zalesovo Beam 67.77 337 P **P** **19 25 35.5 -0.2**
KK31 Karatay Array 67.99 321 P **P** **19 25 36.3 -1.1**
KK31 IAmb IAmb 19 25 41.7
comp=Z,1.6nm,0.8s
KKAR Karatay Array 67.99 321 P **P** **19 25 36.0 -1.4**
KKAR Karatay Array 67.99 321 P **P** **19 25 36.1 -1.2**
KKAR IAmb IAmb 19 25 41.7
comp=Z,1.6nm,0.8s
KURK Kurchatov 68.14 332 P **P** **19 25 38.6 +0.6**
MA2 Magadan 69.28 15 P **P** **19 25 45.2 +0.1**
MA2 IAmb IAmb 19 25 58.3
comp=Z,3.0nm,0.7s
BRVK Borovoye 73.64 330 P **P** **19 26 11.6 +0.2**
BRVK IAmb IAmb 19 26 33.9
comp=Z,2.1nm,0.8s
VNDA Vanda 74.22 172 LR LR 19 57 59.4
comp=Z,38nm,19.4s,baz=322,slow=35
ABKAR Akbulak array 77.37 323 P **P** **19 26 31.4 -1.6**
ABKAR Akbulak array 77.37 323 P **P** **19 26 31.8 -1.2**
ABKAR IAmb IAmb 19 26 44.2
comp=Z,2.1nm,1.1s
ARU Arti 81.20 330 LR LR 20 05 09.7
comp=Z,17nm,19.8s,baz=138,slow=37
QSPA South Pole Qui 83.78 180 LR LR 20 04 51.0
comp=Z,32nm,19.6s,baz=330,slow=36
KMBO Kilima Mbogo 85.23 269 LR LR 20 01 10.8
comp=Z,41nm,18.1s,baz=92,slow=33
GURO Guroymak-BITLI 86.46 309 P **P** **19 27 20.7 -0.6**
GURO IAmb IAmb 19 27 26.1
comp=Z,4.0nm,1.0s
KIRV Kirov 86.58 330 LR LR 20 09 03.2
comp=Z,28nm,19.7s,baz=119,slow=38
EIL Elat 90.96 300 LR LR 20 14 21.5
comp=Z,25nm,18.1s,baz=85,slow=39
MBAR Mbarara 91.76 269 LR LR 20 10 13.3
comp=Z,27nm,18.5s,baz=86,slow=36
LBTB Lobatse 93.70 244 LR LR 20 04 51.4
comp=Z,18nm,19.8s,baz=100,slow=32
SUR Sutherland 96.57 236 LR LR 20 10 32.6
comp=Z,20nm,18.4s,baz=106,slow=35
MLR Muntele Rosu 99.02 315 LR LR 20 22 57.9
comp=Z,24nm,18.5s,baz=106,slow=41
TORD Torodi Ar. Bea 121.42 282 PKP **PKPdf** **19 33 32.5 -0.1**
comp=Z,0.4nm,0.8s,baz=130,slow=2.4,SNR=1.7
CPUP Villa Florida 147.67 180 PKPbc **PKPbc** **19 34 23.1 -0.3**
comp=Z,0.8nm,0.5s,baz=117,slow=4.5,SNR=1.9

IDC 03 19:24:35.4±8.8, 30.79S×176.87W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=389.7km s-min=55.6km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.06**	**267**	P	P	19 32 45.4	+0.1
	0.4nm,0.8s,baz=104,slow=7.2,SNR=4.9						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**45.08**	**272**	P	P	19 32 53.0	-0.5
	0.2nm,0.3s,baz=113,slow=6.3,SNR=27						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**145.84**	**341**	PKPbc	PKPdf	19 44 15.2	-0.1
	1.4nm,0.8s,baz=49,slow=4.2,SNR=8.9						

*ISK **03** 19:32:00.9, 36.14N×31.22E, h18km, ML2.4/12*
*DDA **03** 19:32:01.4±0.0, 36.09N×31.20E, h9km±2km, ML2.1*
*NIC **03** 19:32:03.0±0.0, 36.27N×31.48E, h35km±29km, ML2.5/2*
ISC 03 19:32:00.9±1.2, 36.08N±0.03×31.22E±0.02, h10km±10km, n39, σ1.35/57, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.74**	**289**	P	**Pn**	**19 32 18.2**	**+0.8**
AKUM				S	**Sn**	**19 32 31.7**	**+2.9**
KEPZ	**Antalya-Kepez**	**0.87**	**21**	P	**Pg**	**19 32 17.8**	**+0.1**
KEPZ				*i* AML	AML	19 32 28.0	
	comp=E,80nm,0.5s						
KEPZ				S	**Sg**	**19 32 28.7**	**-0.4**
KEPZ				*i* AML	AML	19 32 30.0	
	comp=N,74nm,0.4s						
GAZI	**Gazipasa**	**0.90**	**80**	PG	**Pg**	**19 32 18.8**	**+0.5**
GAZI				SG	**Sb**	**19 32 31.7**	**+1.0**
GAZI	**Gazipasa**	**0.90**	**80**	P	**Pg**	**19 32 19.2**	**+0.9**
GAZI				S	**Sg**	**19 32 31.2**	**+1.1**
GAZI				*i* AML	AML	19 32 32.0	
	comp=N,45nm,0.4s						
GAZI				*i* AML	AML	19 32 32.0	
	comp=E,75nm,0.2s						
KORT	**Korkueli**	**1.15**	**323**	PN	**Pg**	**19 32 22.3**	**-0.7**
KORT	**Korkueli**	**1.15**	**323**	P	**Pg**	**19 32 21.8**	**-1.2**
KORT				S	**Sn**	**19 32 41.7**	**+2.7**
KORT				*i* AML	AML	19 32 47.0	
	comp=E,60nm,0.5s						
KORT				*i* AML	AML	19 32 47.0	
	comp=N,34nm,0.5s						
ELL	**Elmali**	**1.25**	**303**	PN	**Pb**	**19 32 23.7**	**-0.9**
ELL	**Elmali**	**1.25**	**303**	P	**Pg**	**19 32 25.2**	**+0.3**
ELL				S	**Sn**	**19 32 43.3**	**+1.9**
AKAS	**Kas**	**1.31**	**277**	PN	**Pn**	**19 32 24.7**	**-0.7**
AKAS	**Kas**	**1.31**	**277**	P	**Pn**	**19 32 24.5**	**-0.8**
AKAS				S	**Sb**	**19 32 41.9**	**-0.7**
AKAS				*i* AML	AML	19 32 42.0	
	comp=N,51nm,0.4s						
AKAS				*i* AML	AML	19 32 51.0	
	comp=E,43nm,0.5s						
SUTC	**Sutluce-Ispart**	**1.40**	**353**	PN	**Pn**	**19 32 25.5**	**-1.1**
AKMS	**Akamas**	**1.40**	**139**	S	**Sb**	**19 32 44.8**	**-0.3**
SEYD	**Seydisehir-KON**	**1.41**	**21**	PN	**Pn**	**19 32 25.7**	**-1.0**
SEYD				SN	**Sb**	**19 32 43.2**	**-2.3**
ALFC	**Alefka**	**1.46**	**129**	P	**Pn**	**19 32 27.3**	**0.0**
ALFC				S	**Sn**	**19 32 44.7**	**-1.8**
ALFC				AML	AML	19 32 50.8	
	0.3nm,0.2s						
ALFC				AML	AML	19 32 50.8	
	0.3nm,0.2s						
ALFC				AML	AML	19 32 54.3	
	0.3nm,0.5s						
ALFC				AML	AML	19 32 54.3	
	0.3nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.54**	**87**	PN	**Pn**	**19 32 28.6**	**+0.2**
BERE	**Bereket-Mersin**	**1.65**	**80**	PN	**Pn**	**19 32 29.7**	**-0.3**
LEF	**Lefka**	**1.67**	**125**	PN	**Pn**	**19 32 29.0**	**-0.3**
LEF	**Lefka**	**1.67**	**125**	P	**Pn**	**19 32 29.9**	**-0.3**
LEF				S	**Sn**	**19 32 49.9**	**-1.8**
GOLH	**Golhisar**	**1.76**	**311**	P	**Pb**	**19 32 33.4**	**+0.1**
CAME	**Cameli-Denizli**	**1.76**	**300**	PN	**Pn**	**19 32 32.1**	**+0.5**
KKBE	**Karaman, Kazim**	**1.79**	**50**	P	**Pn**	**19 32 33.0**	**+1.0**
KKBE				S	**Sn**	**19 32 55.3**	**+0.5**
KKBE				*i* AML	AML	19 32 58.0	
	comp=E,21nm,0.5s						
KKBE				*i* AML	AML	19 32 59.0	
	comp=N,24nm,0.4s						
FETY	**Fethiye**	**1.81**	**288**	PN	**Pn**	**19 32 31.9**	**-0.2**
TEVE	**Tevekalti-Mers**	**1.83**	**78**	PN	**Pn**	**19 32 32.4**	**-0.1**
GULN	**MERSIN_Gulnar**	**1.89**	**86**	P	**Pn**	**19 32 34.1**	**+0.9**
GULN				S	**Sn**	**19 32 58.5**	**+1.5**
GULN				*i* AML	AML	19 33 02.0	
	comp=N,12nm,0.3s						
GULN				*i* AML	AML	19 33 03.0	
	comp=E,14nm,0.5s						
AKKU	**Akkuyu-Mersin**	**1.89**	**87**	PN	**Pn**	**19 32 33.4**	**+0.2**
KMER	**Konya-Meram**	**1.92**	**28**	P	**Pn**	**19 32 33.6**	**-0.1**
KMER				*i* AML	AML	19 32 58.0	
	comp=E,15nm,0.3s						
KMER				S	**Sn**	**19 32 59.1**	**+1.2**
KMER				*i* AML	AML	19 33 00.0	
	comp=N,26nm,0.6s						
KRMN	**Karaman**	**1.97**	**56**	PN	**Pn**	**19 32 34.1**	**-0.4**
DOGA	**KONYA_Doganhis**	**2.05**	**10**	P	**Pn**	**19 32 36.1**	**+0.6**
DOGA				S	**Sn**	**19 32 59.9**	**-1.4**
CSS	**Mathiatis**	**2.06**	**122**	PN	**Pn**	**19 32 36.1**	**+0.6**
CSS	**Mathiatis**	**2.06**	**122**	P	**Pn**	**19 32 35.4**	**-0.1**
CSS				S	**Sn**	**19 32 58.6**	**-2.6**
APMY	**Acipayam-Deniz**	**2.07**	**313**	PN	**Pn**	**19 32 35.4**	**-0.3**
KONT	**Konya--Tatoy**	**2.07**	**26**	P	**Pn**	**19 32 35.9**	**+0.2**
KONT				*i* AML	AML	19 33 03.0	
	comp=N,8.8nm,0.3s						
KONT				*i* AML	AML	19 33 03.0	
	comp=E,18nm,0.7s						
YVAC	**Isparta, Yalva**	**2.18**	**0**	P	**Pn**	**19 32 36.9**	**-0.4**
YVAC				S	**Sn**	**19 33 02.5**	**-2.0**
YVAC				*i* AML	AML	19 33 03.0	
	comp=E,15nm,0.5s						
YVAC				*i* AML	AML	19 33 06.0	
	comp=N,8.2nm,0.7s						
MVOU	**Mavrovouni**	**2.24**	**118**	P	**Pn**	**19 32 37.2**	**-0.9**
MVOU				S	**Sn**	**19 33 02.9**	**-2.8**
MVOU				AML	AML	19 33 08.4	
	0.1nm,0.4s						
MVOU				AML	AML	19 33 08.4	
	0.1nm,0.4s						
MVOU				AML	AML	19 33 08.4	
	0.1nm,0.6s						
MVOU				AML	AML	19 33 08.4	
	0.1nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.31**	**307**	P	**Pn**	**19 32 39.7**	**+0.7**
TAVA				*i* AML	AML	19 33 20.0	
	comp=N,14nm,0.5s						
ALIN	**Konya, Altinte**	**2.58**	**31**	P	**Pn**	**19 32 42.6**	**-0.2**
PASA	**Karahalli, USA**	**2.65**	**329**	P	**Pn**	**19 32 43.8**	**+0.1**
PASA				*i* AML	AML	19 33 19.0	
	comp=E,5.3nm,0.4s						
PASA				*i* AML	AML	19 33 20.0	
	comp=N,5.8nm,0.5s						
KERG	**Konya-Eregli**	**2.69**	**60**	P	**Pn**	**19 32 46.7**	**+2.4**
KERG				S	**Sn**	**19 33 20.3**	**+3.3**
OSC2	**CSNet OBS 4**	**3.12**	**164**	S	**Sn**	**19 33 30.5**	**+3.0**

*IDC **03** 19:44:08.7±1.6, 35.36N×140.67E, h0km, mb3.6/5, mbtmp3.5/7, ML2.8/2, MS2.2/1, Error ellipse: s-maj=45.7km s-min=18.0km az=71.0*
*JMA **03** 19:44:09.2±0.2, 35.6N±0.5×141.0E±0.9, h18km±1km, MV3.6/34, NEAR CHOSHI CITY*
*NIED **03** 19:44:09.2, 35.61N×140.95E, h18km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-2.20; Mθθ-0.87; Mϕϕ3.07; Mrθ1.72; Mθϕ-1.22; Mϕr0.02; Fault plane solution: M0 3.45000×10^14 NP1: ϕs195.00000°, δ51.00000°, λ-41.00000°. NP2: ϕs313.00000°, δ60.00000°, λ-133.00000°.*
ISC 03 19:44:08.9±1.1, 35.54N±0.05×140.88E±0.08, h10km±8km, n27, σ1.56/23, mb3.5/5, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.16**	**354**	⇓P	**Pg**	**19 44 13.1**	**+0.6**
CHOJ				⇓S	**Sg**	**19 44 15.8**	**+0.9**
JSMT	**Sammumatsuo**	**0.37**	**286**	*i* P	**Pb**	**19 44 17.9**	**+0.5**
JIHU	**Itakohorinouch**	**0.51**	**326**	P	**Pg**	**19 44 19.7**	**+0.9**
JIHU				*e*S	**Sb**	**19 44 27.3**	**-0.2**
JCN	**Nagara**	**0.57**	**258**	P	**Pn**	**19 44 22.4**	**-0.6**
KTR	**Katsuura**	**0.60**	**230**	P	**Pn**	**19 44 22.5**	**-1.0**
BSO4	**Boso 4**	**0.71**	**219**	P	**Pn**	**19 44 24.9**	**+0.1**
BSO3	**Boso 3**	**0.80**	**202**	⇓P	**Pn**	**19 44 25.7**	**-0.3**
JYT	**Yasato**	**0.88**	**321**	P	**Pg**	**19 44 24.9**	**-1.0**
JYT				S	**Sg**	**19 44 36.7**	**-0.8**
BSO1	**Boso 1**	**0.89**	**175**	⇓P	**Pb**	**19 44 25.8**	**-0.3**
JHO	**Hitachi**	**1.10**	**347**	*e*P	**Pb**	**19 44 27.6**	**-2.3**
JHO				*e*S	**Sg**	**19 44 41.8**	**-2.5**
MJAR	**Matsushiro Arr**	**2.38**	**296**	Pn	**Pn**	**19 44 47.6**	**-0.5**
MJAR	1.4nm,0.3s,baz=94,slow=8.9,SNR=36						
				Sn	**Sn**	**19 45 18.1**	**+0.7**
	0.8nm,0.3s,baz=90,slow=22,SNR=3.2						
	3.3nm,0.4s						
JHJ	**Hachijo jima 2**	**2.58**	**201**	Pn	**Pn**	**19 44 50.2**	**-0.6**
	9.7nm,0.3s,baz=150,slow=22,SNR=6.7						
JHJ				Sn	**Sn**	**19 45 18.8**	**-3.4**
	17nm,0.3s,baz=66,slow=20,SNR=2.3						
	23nm,0.2s						
KSRS	**Korea Array**	**10.60**	**284**	LR	LR	19 50 19.9	
	comp=Z,13nm,21.2s,baz=225,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.80**	**118**	T	T	20 18 55.3	
	baz=310,slow=75,SNR=103						
H11N1	**WAKE ISLAND Hy**	**27.80**	**118**	T	T	20 18 51.3	
	baz=310,slow=75,SNR=80						
H11N3	**WAKE ISLAND Hy**	**27.82**	**118**	T	T	20 18 56.5	
	baz=310,slow=75,SNR=98						
H11S3	**WAKE ISLAND Hy**	**28.45**	**120**	T	T	20 19 43.4	
	baz=312,slow=76,SNR=718						
H11S1	**WAKE ISLAND Hy**	**28.45**	**120**	T	T	20 19 43.4	
	baz=312,slow=76,SNR=699						
H11S2	**WAKE ISLAND Hy**	**28.47**	**120**	T	T	20 19 45.0	
	baz=312,slow=76,SNR=492						
ZALV	**Zalesovo Beam**	**42.62**	**314**	P	**P**	**19 52 07.5**	**+2.4**
	0.4nm,0.5s,baz=104,slow=12,SNR=1.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**46.59**	**309**	P	**P**	**19 52 36.1**	**-0.8**
	0.5nm,0.4s,baz=82,slow=7.6,SNR=4.6						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**55.53**	**187**	P	**P**	**19 53 43.4**	**-0.9**
	0.8nm,0.7s,baz=5.7,slow=7.3,SNR=8.0						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**59.25**	**187**	P	**P**	**19 54 10.8**	**+0.2**
	0.3nm,0.7s,baz=16,slow=11,SNR=4.3						
	0.3nm,0.7s						
NOA	**NORSAR Array B**	**75.39**	**337**	P	**P**	**19 55 55.5**	**+3.1**
	0.3nm,0.7s,baz=40,slow=5.6,SNR=1.8						
	0.3nm,0.7s						
H03N2	**Juan Fernandez**	**147.27**	**98**	T	T	22 48 18.0	
	baz=289,slow=75,SNR=54						
H03N3	**Juan Fernandez**	**147.28**	**98**	T	T	22 48 19.0	
	baz=289,slow=75,SNR=52						
H03N1	**Juan Fernandez**	**147.29**	**98**	T	T	22 48 19.2	
	baz=289,slow=75,SNR=63						

IDC 03 19:46:31.2±5.2, 29.89S×177.19W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=343.4km s-min=66.8km az=165.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**9.59**	**208**	Sn	Sn	19 50 33.3	-5.7
	0.3nm,0.3s,baz=14,slow=20,SNR=1.9						
ASAR	**Alice Springs**	**43.84**	**266**	P	P	19 54 39.5	+0.1
	0.5nm,0.6s,baz=104,slow=7.2,SNR=7.8						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**44.79**	**271**	P	P	19 54 46.7	-0.3
	0.2nm,0.3s,baz=111,slow=8.6,SNR=1.7						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**144.91**	**341**	PKP	PKPbc	20 06 08.8	+0.1
	1.0nm,0.4s,baz=45,slow=3.4,SNR=16						

IDC 03 19:58:55.4±5.0, 18.96N×145.61E, h223km±32km, mb3.0/4, mbtmp3.7/5, Error ellipse: s-maj=132.9km s-min=25.6km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.38**	**188**	P	Pn	20 00 16.2	+0.9
	97nm,1.1s,baz=346,slow=12,SNR=1.9						
GUMO				S	S	20 01 18.1	-0.4
	69nm,1.0s,baz=63,slow=22,SNR=2.2						
WRA	**Warramunga Arr**	**40.21**	**197**	P	P	20 06 10.6	+0.2
	0.5nm,0.6s,baz=5.7,slow=9.0,SNR=5.3						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**43.88**	**196**	P	P	20 06 39.9	-0.2
	0.3nm,0.8s,baz=13,slow=6.2,SNR=5.3						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**58.22**	**314**	P	P	20 08 27.4	+0.9
	0.2nm,0.6s,baz=98,slow=7.6,SNR=2.1						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**86.61**	**335**	P	P	20 11 12.2	-1.2
	0.4nm,0.3s,baz=58,slow=3.4,SNR=6.1						
	0.4nm,0.3s						

*IDC **03** 20:01:19.6±1.8, 36.80N×26.40E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=66.7km s-min=29.4km az=158.0*
*DDA **03** 20:01:19.5±0.0, 36.91N×26.39E, h9km±7km, ML2.9*
*ISK **03** 20:01:19.9, 36.95N×26.48E, h13km, ML3.3/22*
*ATH **03** 20:01:20.9, 36.91N×26.49E, h17km±2km, ML3.4/5, Error ellipse: s-maj=2.9km s-min=1.0km az=159.0*
*THE **03** 20:01:20.6, 36.93N×26.48E, h1km±1km, ML3.3/4, Error ellipse: s-maj=1.1km s-min=0.3km az=189.0*
ISC 03 20:01:20.5±1.1, 36.91N±0.02×26.48E±0.02, h10km±9km, n58, σ0.78/78, mb3.3/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOSK	**Kos Island**	**0.43**	**112**	P	**Pb**	**20 01 29.1**	**-1.1**
KOSK				S	**Sb**	**20 01 36.0**	**-0.8**
	3μm,0.5s						
KOSK	**Kos Island**	**0.43**	**112**	PG	**Pb**	**20 01 29.6**	**-0.6**
KOSK				SG	**Sb**	**20 01 36.0**	**-0.8**
KOSK	**Kos Island**	**0.43**	**112**	P	**Pb**	**20 01 29.7**	**-0.6**
KOSK				S	**Sg**	**20 01 35.2**	**+0.6**
KOSK				AML	AML	20 01 38.1	
	comp=N,20424μm,0.4s						
KOSK				AML	AML	20 01 39.0	
	comp=E,18810μm,0.4s						
AMGA	**Amorgos Island**	**0.48**	**260**	P	**Pb**	**20 01 30.4**	**-0.7**
AMGA				S	**Sb**	**20 01 37.4**	**-0.8**
	comp=E,6μm,0.3s						
AMGA	**Amorgos Island**	**0.48**	**260**	P	**Pb**	**20 01 30.1**	**-0.9**
AMGA				S	**Sb**	**20 01 37.0**	**-1.2**
AMGA				AML	AML	20 01 41.4	
	comp=N,9328μm,0.3s						
AMGA				AML	AML	20 01 41.4	
	comp=E,12911μm,0.3s						
NISR	**Nisiros**	**0.60**	**120**	P	**Pb**	**20 01 32.6**	**-0.5**
NISR	**Nisiros**	**0.60**	**120**	P	**Pb**	**20 01 33.1**	**0.0**
NIS1	**Nisyros Isl.**	**0.64**	**119**	P	**Pb**	**20 01 33.5**	**-0.3**
NIS1	**Nisyros Isl.**	**0.64**	**119**	PG	**Pb**	**20 01 33.7**	**-0.1**
NIS1	**Nisyros Isl.**	**0.64**	**119**	P	**Pb**	**20 01 33.5**	**-0.3**
NIS1				AML	AML	20 01 47.7	
	comp=E,4330μm,0.6s						
NIS1				AML	AML	20 01 48.3	
	comp=N,3352μm,0.3s						
BODT	**Bodrum**	**0.68**	**77**	P	**Pg**	**20 01 33.5**	**-0.1**
BODT				S	**Sb**	**20 01 44.1**	**+0.1**
BODT	**Bodrum**	**0.68**	**77**	PG	**Pg**	**20 01 33.0**	**-0.6**
BODT				SG	**Sb**	**20 01 42.9**	**-1.1**
APE	**Apeiranthos**	**0.78**	**282**	P	**Pb**	**20 01 35.6**	**-0.6**
APE				S	**Sb**	**20 01 47.4**	**+0.6**
	comp=N,2μm,0.2s						
APE	**Apeiranthos**	**0.78**	**282**	PG	**Pb**	**20 01 35.4**	**-0.8**
APE				SG	**Sb**	**20 01 46.5**	**-0.3**
APE	**Apeiranthos**	**0.78**	**282**	P	**Pb**	**20 01 35.5**	**-0.6**
APE				S	**Sb**	**20 01 46.7**	**-0.1**
APE				AML	AML	20 01 48.4	
	comp=N,4620μm,0.3s						
APE				AML	AML	20 01 49.8	
	comp=E,4019μm,0.2s						
DDIM	**Aydin, Didim**	**0.81**	**48**	P	**Pg**	**20 01 35.1**	**-1.1**
DDIM				S	**Sb

SMG S **Sg** **20 01 47.5 -0.2**
SMG AML AML 20 01 51.5
comp=N,6690µm,0.2s
SMG AML AML 20 01 53.4
comp=E,7141µm,0.3s
DAT Datca 0.90 102 P **Pn** **20 01 38.4 -0.9**
DAT S **Sn** **20 01 51.7 -0.8**
DAT Datca 0.90 102 PG **Pb** **20 01 38.2 -0.1**
DAT SG **Sn** **20 01 51.2 -1.3**
DAT Datca 0.90 102 P **Pn** **20 01 38.5 -0.9**
DAT S **Sn** **20 01 52.5 0.0**
DAT *i* AML AML 20 01 53.0
comp=E,298nm,0.3s
DAT *i* AML AML 20 01 53.0
comp=E,256nm,0.5s
THR8 Santorini-Mono 0.95 238 P **Pb** **20 01 38.9 -0.2**
THR8 Santorini-Mono 0.95 238 P **Pb** **20 01 38.8 -0.3**
SANT Santorini 0.98 237 PG **Pb** **20 01 39.4 -0.3**
SANT Santorini 0.98 237 P **Pb** **20 01 39.2 -0.5**
GCAM G?zelcaml? 0.99 37 PG **Pb** **20 01 39.5 -0.2**
GCAM SG **Sb** **20 01 52.9 +0.1**
THR3 Thira Island, 1.00 240 P **Pn** **20 01 39.9 -0.8**
THR6 Thira Island, 1.03 238 P **Pn** **20 01 40.4 -0.7**
THR6 Thira Island, 1.03 238 P **Pb** **20 01 40.0 -0.5**
DGB zmir 1.18 16 P **Pb** **20 01 41.8 -1.2**
DGB S **Sn** **20 02 00.9 +1.7**
DGB *i* AML AML 20 02 01.0
comp=E,431nm,0.6s
DGB *i* AML AML 20 02 01.0
comp=E,350nm,0.4s
TNSA Tinos 1.22 301 P **Pg** **20 01 44.2 +0.2**
ZEYE Izmir, Urla-Ze 1.32 1 P **Pn** **20 01 43.9 -1.1**
ZEYE S **Sg** **20 02 04.5 +1.4**
ZEYE *i* AML AML 20 02 06.0
comp=E,318nm,0.3s
ZEYE *i* AML AML 20 02 07.0
comp=E,753nm,0.5s
TURN Turunc 1.42 95 PN **Pn** **20 01 46.1 -0.3**
URLA Izmir 1.45 4 PN **Pn** **20 01 46.2 -0.6**
YER Yerkesik 1.46 81 P **Pb** **20 01 47.0 -0.8**
YER Yerkesik 1.46 81 PN **Pn** **20 01 46.8 -0.2**
KARP Karpathos 1.47 158 PN **Pn** **20 01 46.8 -0.4**
KARP Karpathos 1.47 158 P **Pn** **20 01 46.7 -0.4**
ARG Arkhangelos 1.50 117 PN **Pn** **20 01 46.9 -0.6**
CHOS Chios island 1.51 347 PN **Pn** **20 01 46.4 -1.3**
AYDB Zeytinkoy-Aydi 1.52 47 PN **Pn** **20 01 47.7 -0.3**
BLCB Balcova 1.53 17 P **Pn** **20 01 47.4 -0.5**
BLCB Balcova 1.53 17 PN **Pn** **20 01 47.5 -0.5**
DALY Dalyan (Mula) 1.75 93 PN **Pn** **20 01 51.0 +0.1**
ZKR Zakros 1.81 187 PN **Pn** **20 01 52.0 +0.2**
TAVA DENIZLI_Tavas 2.02 73 P **Pn** **20 01 55.4 +0.6**
IDI Anoyia 2.07 219 PN **Pn** **20 01 55.6 +0.1**
FETY Fethiye 2.11 97 PN **Pn** **20 01 56.3 +0.4**
SIGR SIGRI 2.35 348 P **Pn** **20 01 58.1 -1.0**
IMMV Iera Moni Meta 2.49 235 PN **Pn** **20 02 01.7 +0.6**
BUHA Balikesir, Bur 2.62 10 P **Pn** **20 02 02.6 -0.4**
BUHA *i* AML AML 20 02 54.0
comp=E,85nm,0.4s
BUHA *i* AML AML 20 02 56.0
comp=E,78nm,0.6s
USAK Uak-Merkez 2.69 47 P **Pg** **20 02 12.4 +0.2**
USAK S **Sg** **20 02 49.9 +2.8**
KNDR Palaiochora Ch 2.82 234 PN **Pn** **20 02 06.2 +0.6**
BAYC CANAKKALE_Bayr 2.82 1 P **Pn** **20 02 04.5 -1.3**
BAYC *i* AML AML 20 02 55.0
comp=E,30nm,0.6s
BAYC *i* AML AML 20 02 58.0
comp=E,23nm,0.4s
GVD Gavdhos 2.84 224 PN **Pn** **20 02 06.6 +0.6**
ESDC Sonseca Array 24.00 286 P **P** **20 06 35.7 +0.3**
comp=E,0.8nm,0.9s,baz=83,slow=10,SNR=5.5
comp=E,0.8nm,0.9s
TORD Torodi Ar. Bea 32.44 230 P **P** **20 07 50.4 -0.6**
comp=E,0.3nm,0.4s,baz=36,slow=10,SNR=2.2
comp=E,0.3nm,0.4s
MKAR Makanchi Array 41.93 58 P **P** **20 09 12.7 +1.3**
comp=E,0.4nm,0.6s,baz=270,slow=7.9,SNR=4.6
comp=E,0.4nm,0.6s

*IDC **03** 20:25:27.4±0.8, 8°.58S×147°.76E, h110km±6km, mb3.6/9, mbtmp4.0/11, MS3.5/1, Error ellipse: s-maj=19.5km s-min=11.6km az=124.0*
ISC 03 20:25:27.5±0.6, 8°.54S±0°.09×147°.8E±0°.1, h109km, n28, σ0s71/29, mb3.9/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PMG	**Port Moresby**	**1.04**	**215**	P		**Pn**	**20 25 50.2**	**+1.2**
	425nm,0.3s,baz=23,slow=8.0,SNR=466							
PMG				S		**Sn**	**20 26 05.0**	**-0.4**
	375nm,0.3s,baz=60,slow=9.1,SNR=15							
KRVT	**Keravat (AS076**	**5.97**	**45**	P		**Pn**	**20 26 53.9**	**+0.3**
	20nm,0.3s,baz=153,slow=2.8,SNR=3.5							
KRVT				S		**Sn**	**20 28 01.5**	**+0.8**
	31nm,0.3s,baz=112,slow=22,SNR=7.4							
COEN	**Coen**	**7.01**	**219**	P		**Pn**	**20 27 09.0**	**+1.4**
QIS	**Mount Isa**	**14.31**	**213**	P		**P**	**20 28 48.5**	**-0.5**
WRAB	**Tennant Creek**	**17.22**	**227**	P		**Pn**	**20 29 22.6**	**+1.2**
WRA	**Warramunga Arr**	**17.23**	**227**	P		**Pn**	**20 29 21.6**	**0.0**
	3.0nm,0.4s,baz=52,slow=11,SNR=35							
KNRA	**Kununurra**	**19.87**	**247**	P		**P**	**20 29 50.1**	**-0.2**
ASAR	**Alice Springs**	**20.05**	**220**	P		**P**	**20 29 52.5**	**+0.3**
	1.4nm,0.5s,baz=53,slow=9.4,SNR=31							
	1.4nm,0.5s							
INKA	**Innaminka**	**20.21**	**198**	P		**P**	**20 29 54.5**	**+0.6**
OOD	**Oodnadatta**	**22.29**	**209**	P		**P**	**20 30 15.9**	**-0.1**
DZM	**Mont Dzumac**	**22.45**	**129**	P		**P**	**20 30 17.8**	**0.0**
	2.6nm,0.7s,baz=300,slow=20,SNR=1.2							
	2.6nm,0.7s							
FITZ	**Fitzroy Crossi**	**23.50**	**244**	P		**P**	**20 30 27.2**	**-0.6**
	2.2nm,0.3s,baz=61,slow=5.8,SNR=29							
	2.2nm,0.3s							
FITZ	**Fitzroy Crossi**	**23.50**	**244**	P		**P**	**20 30 27.2**	**-0.6**
LCRK	**Leigh Creek**	**23.55**	**201**	P		**P**	**20 30 28.0**	**-0.1**
STKA	**Stephens Creek**	**23.92**	**193**	P		**P**	**20 30 30.8**	**-0.6**
	2.5nm,0.5s,baz=1.1,slow=9.6,SNR=11							
	2.5nm,0.5s							
STKA	**Stephens Creek**	**23.92**	**193**	P		**P**	**20 30 31.2**	**-0.2**
WRKA	**Warakurna**	**24.77**	**226**	P		**P**	**20 30 38.6**	**-0.7**
MULG	**Mulgathing**	**25.14**	**209**	P		**P**	**20 30 42.4**	**-0.2**
HTT	**Hallett**	**26.08**	**197**	P		**P**	**20 30 51.3**	**+0.2**
MEEK	**Meekatharra**	**32.97**	**233**	P		**P**	**20 31 51.9**	**-0.2**
AFI	**Afiamalu**	**40.01**	**101**	LR		LR	20 46 28.3	
	comp=Z,61nm,18.5s,baz=110,slow=32							
KSRS	**Korea Array**	**49.38**	**339**	P		**P**	**20 34 06.1**	**+0.1**
	0.9nm,0.7s,baz=161,slow=9.1,SNR=6.4							
	0.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**55.13**	**299**	P		**P**	**20 34 49.8**	**+0.9**
	0.9nm,0.4s,baz=127,slow=5.4,SNR=5.1							
	0.9nm,0.4s							
VNDA	**Vanda**	**69.35**	**177**	P		**P**	**20 36 22.2**	**-0.7**
	1.3nm,0.5s,baz=334,slow=8.1,SNR=9.5							
	1.3nm,0.5s							
MKAR	**Makanchi Array**	**79.92**	**321**	P		**P**	**20 37 24.1**	**-0.4**
	0.3nm,0.5s,baz=103,slow=5.6,SNR=5.6							
	0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**81.55**	**328**	P		**P**	**20 37 31.6**	**-1.3**
	1.0nm,0.6s,baz=118,slow=4.0,SNR=5.1							
	1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**146.38**	**281**	PKPbc		**PKPbc**	**20 44 56.9**	**+0.1**
	0.7nm,0.7s,baz=71,slow=3.6,SNR=4.8							
DBIC	**Dimbokro**	**152.79**	**269**	PKPbc		**PKPbc**	**20 45 11.5**	**-1.4**
	4.3nm,0.9s,baz=346,slow=17,SNR=1.5							

*IDC **03** 20:49:57.2±9.0, 48°.98N×156°.90E, h75km±62km, mb3.4/3, mbtmp3.6/4, ML2.3/1, Error ellipse: s-maj=111.0km s-min=53.7km az=117.0*
*MOS **03** 20:49:58.3±1.6, 49°.20N×156°.32E, h38km, mb4.3/1, Error ellipse: s-maj=36.3km s-min=6.3km az=79.6*
*KRSC **03** 20:50:03.6±1.9, 49°.64N×156°.99E, h48km±30km, ML4.0*
ISC 03 20:49:56.0±1.8, 49°.2N±0°.1×156°.5E±0°.1, h35km, n40, σ3s10/50, mb3.7/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SKR	**Severo-Kuril's**	**1.56**	**350**	PN		**Pn**	**20 50 23.6**	**+2.4**
SKR				S		**Sn**	**20 50 38.1**	**-2.1**
SKR	**Severo-Kuril's**	**1.56**	**350**	P		**Pn**	**20 50 23.6**	**+2.4**
SKR				S		**Sn**	**20 50 38.1**	**-2.1**
PAU	**Pauzhetka**	**2.33**	**4**	PN		**Pn**	**20 50 34.5**	**+2.7**
PAU				S		**Sn**	**20 50 57.4**	**-1.8**
PAU	**Pauzhetka**	**2.33**	**4**	P		**Pn**	**20 50 34.5**	**+2.7**
PAU				S		**Sn**	**20 50 57.4**	**-1.8**
KDTR	**Khodutka, Kamc**	**2.84**	**20**	PN		**Pn**	**20 50 41.6**	**+2.8**
KDTR				S		**Sn**	**20 51 10.0**	**-1.8**
KDTR	**Khodutka, Kamc**	**2.84**	**20**	P		**Pn**	**20 50 41.6**	**+2.8**
KDTR				S		**Sn**	**20 51 10.0**	**-1.8**
MTVR	**Mutnovka**	**3.50**	**17**	PN		**Pn**	**20 50 51.3**	**+3.3**
MTVR				S		**Sn**	**20 51 26.3**	**-2.0**
MTVR	**Mutnovka**	**3.50**	**17**	P		**Pn**	**20 50 51.3**	**+3.3**
MTVR				S		**Sn**	**20 51 26.3**	**-2.0**
RUS	**Russkaya**	**3.52**	**20**	PN		**Pn**	**20 50 50.7**	**+2.5**
RUS				S		**Sn**	**20 51 25.7**	**-2.9**
RUS	**Russkaya**	**3.52**	**20**	P		**Pn**	**20 50 50.7**	**+2.5**
RUS				S		**Sn**	**20 51 25.7**	**-2.9**
GRL	**Gorelyy**	**3.55**	**15**	PN		**Pn**	**20 50 52.2**	**+3.5**
GRL				S		**Sn**	**20 51 28.0**	**-1.4**
GRL	**Gorelyy**	**3.55**	**15**	P		**Pn**	**20 50 52.2**	**+3.5**
GRL				S		**Sn**	**20 51 28.0**	**-1.4**
PETK	**Petropavlovsk-**	**4.03**	**10**	P		**Pn**	**20 50 58.0**	**+2.8**
	0.9nm,0.3s,baz=173,slow=11,SNR=18							
PETK				S		**Sn**	**20 51 46.6**	**+5.4**
	1.8nm,0.4s,baz=222,slow=19,SNR=3.6							
	2.2nm,0.4s							
PET	**Petropavlovsk**	**4.11**	**18**	*e*PN		Pn	20 51 05.4	+9.2
PET				*e*S		**Sn**	**20 51 41.6**	**-1.4**
PET				smax		smax		
	comp=E,24nm,0.4s							
PET				smax		smax		
	comp=N,34nm,0.5s							
DALK	**Dalny**	**4.13**	**19**	PN		**Pn**	**20 50 59.8**	**+3.2**
DALK				S		**Sn**	**20 51 41.9**	**-1.7**
DALK	**Dalny**	**4.13**	**19**	P		**Pn**	**20 50 59.8**	**+3.2**
DALK				S		**Sn**	**20 51 41.9**	**-1.7**
UGLR	**Uglovaya**	**4.32**	**19**	PN		**Pn**	**20 51 03.6**	**+4.4**
UGLR	**Uglovaya**	**4.32**	**19**	P		**Pn**	**20 51 03.6**	**+4.4**
AVH	**Avacha**	**4.35**	**18**	PN		**Pn**	**20 51 04.1**	**+4.4**
AVH	**Avacha**	**4.35**	**18**	P		**Pn**	**20 51 04.1**	**+4.4**
KOK	**Koryaka**	**4.36**	**17**	PN		**Pn**	**20 51 04.3**	**+4.5**
KOK	**Koryaka**	**4.36**	**17**	P		**Pn**	**20 51 04.3**	**+4.5**
KRER	**Koryakskii**	**4.39**	**18**	S		**Sn**	**20 51 49.7**	**-0.6**
SDLR	**Sedlovina**	**4.39**	**19**	PN		**Pn**	**20 51 03.9**	**+3.6**
SDLR	**Sedlovina**	**4.39**	**19**	P		**Pn**	**20 51 03.9**	**+3.6**
SPN	**Mys Shipunski**	**4.53**	**28**	PN		**Pn**	**20 51 05.3**	**+3.3**
SPN	**Mys Shipunski**	**4.53**	**28**	P		**Pn**	**20 51 05.3**	**+3.3**
SPN				S		**Sn**	**20 51 51.1**	**-2.2**
GNL	**Ganaly**	**4.64**	**10**	PN		**Pn**	**20 51 07.5**	**+3.8**
GNL	**Ganaly**	**4.64**	**10**	P		**Pn**	**20 51 07.5**	**+3.8**
MKZ	**Mys Kozlova**	**6.30**	**29**	S		**Sn**	**20 52 31.9**	**-5.1**
H11N2	**WAKE ISLAND Hy**	**30.51**	**160**	T		T	21 29 14.1	
	baz=347,slow=76,SNR=7.8							
H11N1	**WAKE ISLAND Hy**	**30.52**	**161**	T		T	21 29 15.9	
	baz=347,slow=76,SNR=5.7							
H11N3	**WAKE ISLAND Hy**	**30.52**	**160**	T		T	21 29 18.2	
	baz=347,slow=76,SNR=9.2							
H11S1	**WAKE ISLAND Hy**	**31.65**	**161**	T		T	21 30 41.0	
	baz=347,slow=76,SNR=31							
H11S3	**WAKE ISLAND Hy**	**31.66**	**161**	T		T	21 30 43.6	
	baz=347,slow=76,SNR=99							
H11S2	**WAKE ISLAND Hy**	**31.67**	**161**	T		T	21 30 37.8	
	baz=347,slow=76,SNR=30							
ZALV	**Zalesovo Beam**	**43.10**	**305**	P		**P**	**20 57 51.6**	**-0.8**
	comp=N,0.7nm,0.4s,baz=64,slow=6.6,SNR=2.9							
	comp=N,0.7nm,0.4s							
MKAR	**Makanchi Array**	**47.89**	**297**	P		**P**	**20 58 30.2**	**-0.2**
	comp=N,0.4nm,0.7s,baz=68,slow=7.2,SNR=4.3							
	comp=N,0.4nm,0.7s							
ARCES	**ARCESS Array B**	**56.33**	**341**	P		**P**	**20 59 31.0**	**-1.8**
	comp=N,1.0nm,0.6s,baz=41,slow=8.4,SNR=1.3							
	comp=N,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**56.33**	**341**	P		**P**	**20 59 31.0**	**-1.8**

IDC 03 20:55:06.5±53.0, 17°.33S×178°.27W, h594km±68km, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=985.4km s-min=132.3km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MSVF	**Nonsavu**	**3.54**	**263**	P		P	20 56 28.5	0.0
	6.3nm,0.6s,baz=82,slow=3.2,SNR=4.5							
STKA	**Stephens Creek**	**39.03**	**241**	P		P	21 01 43.5	-0.1
	1.3nm,0.9s,baz=90,slow=15,SNR=3.6							
	1.3nm,0.9s							
WRA	**Warramunga Arr**	**44.87**	**259**	P		P	21 02 29.1	-0.5
	0.6nm,0.7s,baz=95,slow=7.0,SNR=6.1							
	0.6nm,0.7s							
ASAR	**Alice Springs**	**45.08**	**254**	P		P	21 02 31.2	+0.1
	2.6nm,0.6s,baz=88,slow=8.3,SNR=45							
	2.6nm,0.6s							

*KRNET **03** 21:15:01.1±0.1, 39°.44N×73°.48E, mb3.5*
*ISU **03** 21:15:02, 39°.58N×73°.49E, h2km*
*NNC **03** 21:15:10.1±1.9, 39°.70N×73°.41E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=14.9km s-min=7.0km az=175.0*
*SOME **03** 21:15:11.8, 39°.75N×73°.38E, h0km*
ISC 03 21:15:02.1±1.1, 39°.41N±0°.05×73°.47E±0°.03, h10km, n47, σ1s84/75, 14C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
OHH	**Osh**	**1.23**	**335**	⇑*i*	P	**Pb**	**21 15 24.2**	**-1.3**
	baz=34							
OHH				⇑*i*	S	**Sg**	**21 15 41.0**	**-0.9**
	baz=34							
OHH	**Osh**	**1.23**	**335**	P		**Pb**	**21 15 24.3**	**-1.3**
OHH				S		**Sg**	**21 15 41.0**	**-0.9**
DRK	**Karamyk**	**1.29**	**274**	⇑*i*	P	**Pn**	**21 15 25.9**	**-0.7**
	baz=73							
DRK				⇑*i*	S	**Sn**	**21 15 44.0**	**-0.1**
	baz=73							
TSTA	**Tashata**	**1.40**	**327**	P		**Pb**	**21 15 28.0**	**-0.3**
TSTA				S		**Sn**	**21 15 45.8**	**-0.4**
ANR	**Andizhan**	**1.59**	**328**	S		**Sg**	**21 15 54.1**	**+0.7**
FRG	**Fergana**	**1.62**	**307**	P		**Pb**	**21 15 31.4**	**-0.7**
FRG				S		**Sg**	**21 15 52.7**	**-1.4**
BTK	**Batken**	**2.15**	**288**	⇑*i*	P	**Pb**	**21 15 40.1**	**-1.1**
	baz=88							
BTK				⇑*i*	S	**Sb**	**21 16 08.6**	**+0.8**
	baz=88							
BTK	**Batken**	**2.15**	**288**	P		**Pb**	**21 15 40.0**	**-1.1**
BTK				S		**Sg**	**21 16 09.6**	**-1.5**
MINT	**Mingtut**	**2.19**	**300**	S		**Sg**	**21 16 12.1**	**-0.4**
GAR	**Garm**	**2.48**	**262**	⇑*i*	P	**Pb**	**21 15 45.0**	**-1.9**
	baz=61							
GAR				⇑*i*	S	**Sb**	**21 16 17.0**	**-0.6**
	baz=61							
ARLS	**Aral**	**2.54**	**15**	⇑*i*	P	**Pb**	**21 15 45.1**	**-2.7**
	baz=15							
ARLS				⇑*i*	S	**Sb**	**21 16 17.2**	**-1.9**
	baz=15							
CHDK	**Chadak**	**2.60**	**308**	S		**Sg**	**21 16 22.9**	**-2.9**
ARK	**Arkit**	**2.65**	**335**	P		**Pb**	**21 15 47.9**	**-1.8**
ARK				S		**Sb**	**21 16 23.2**	**+0.8**
TRKS	**Terek-Say**	**2.77**	**321**	⇓*i*	P	**Pn**	**21 15 47.7**	**+1.0**
	baz=20							
TRKS				⇓*i*	S	**Sn**	**21 16 21.7**	**+1.5**
	baz=20							
EKS2	**Erkin-Say**	**3.26**	**4**	⇓*i*	P	**Pn**	**21 15 55.3**	**+1.9**
	baz=4.0							
EKS2				⇓*i*	S	**Sn**	**21 16 34.8**	**+2.5**
	baz=4.0							
AAK	**Ala-Archa**	**3.32**	**13**	⇓*i*	P	**Pn**	**21 15 56.1**	**+1.8**
	baz=13							
AAK				⇓*i*	S	**Sn**	**21 16 36.2**	**+2.4**
	baz=13							
MRKS	**Merke**	**3.34**	**357**	*e*P		Pg	21 16 10.8	+4.7
	11nm,0.3s							
MRKS				*e*S		**Sg**	**21 16 53.3**	**+3.9**
	48nm,0.4s							
CHMG	**Chimgan**	**3.40**	**310**	S		**Sg**	**21 16 47.8**	**-3.4**
KBK	**Karagaybulak**	**3.43**	**19**	⇑*i*	P	**Pn**	**21 15 57.8**	**+1.9**
	baz=19							
KBK				⇑*i*	S	**Sn**	**21 16 39.0**	**+2.3**
	baz=19							
CHGR	**Chuyangaron**	**3.44**	**259**	⇓*e*	P	**Pn**	**21 15 58.3**	**+2.4**
	baz=58							
CHGR				⇓*i*	S	**Sn**	**21 16 40.1**	**+3.3**
	baz=58							
CHRV	**Charvak**	**3.49**	**311**	S		**Sg**	**21 16 51.5**	**-2.7**
YBZ	**Yangibazar**	**3.52**	**304**	S		**Sb**	**21 16 46.4**	**-0.9**
CHMS	**Chumysh**	**3.72**	**15**	⇓Pn		**Pb**	**21 16 04.8**	**-3.0**
	2.8nm,0.5s							
CHMS				⇑Lg		Lg	21 16 60.0	
	8.0nm,0.6s							
IUG	**Iuzhnay**	**3.78**	**317**	*e*P		**Pg**	**21 16 15.0**	**+0.4**
	246nm,0.5s							
IUG				*e*S		**Sg**	**21 17 00.4**	**-3.2**
	50nm,0.6s							
IUG	**Iuzhnay**	**3.78**	**317**	Pg		**Pg**	**21 16 15.0**	**+0.4**
	377nm,0.0s							
IUG				Lg		Lg	21 17 00.4	
	95nm,1.0s							
DZA	**Taraz**	**3.84**	**336**	*e*P		**Pg**	**21 16 16.4**	**+0.8**
	13nm,0.1s							
DZA				*e*S		**Sg**	**21 17 03.1**	**-2.2**
	86nm,0.5s							
DZA	**Taraz**	**3.84**	**336**	Pg		**Pg**	**21 16 16.4**	**+0.8**
	13nm,0.1s							
DZA				Lg		Lg	21 17 03.1	
	111nm,0.6s							
TKM2	**Tokmak 2**	**3.86**	**24**	⇓Pg		**Pg**	**21 16 14.3**	**-1.8**
	4.3nm,0.7s							
TKM2				⇓Lg		Lg	21 17 05.4	
	5.2nm,0.4s							
KST	**Kastek**	**4.09**	**27**	*e*P		**Pg**	**21 16 22.4**	**+1.9**
	2.1nm,0.3s							
KST				*e*S		**Sg**	**21 17 13.1**	**-0.4**
	34nm,0.6s							
KST	**Kastek**	**4.09**	**27**	Pg		**Pg**	**21 16 22.4**	**+1.9**
	2.1nm,0.3s							
KST				Lg		Lg	21 17 13.1	
	34nm,0.6s							
SGDS	**Sogindy**	**4.13**	**12**	*e*P		**Pg**	**21 16 21.3**	**0.0**
	2.5nm,0.6s							
SGDS				*e*S		**Sg**	**21 17 11.4**	**-3.4**
	9.2nm,0.8s							
SGDS	**Sogindy**	**4.13**	**12**	Pg		**Pg**	**21 16 21.3**	**0.0**
	2.5nm,0.6s							
SGDS				Lg		Lg	21 17 11.5	
	4.9nm,0.7s							
KK31	**Karatay Array**	**4.31**	**330**	⇑Pn		**Pn**	**21 16 10.7**	**+2.9**
	0.9nm,0.3s,baz=141,slow=12,SNR=16							
KK31				⇓Pg		**Pg**	**21 16 23.1**	**-1.6**
	1.9nm,0.5s,baz=144,slow=15,SNR=7.4							
KK31				⇓Sn		**Sn**	**21 17 02.5**	**+4.4**
	1.7nm,0.3s,baz=152,slow=28,SNR=4.2							
KK31				⇓Lg		Lg	21 17 17.6	
	4.0nm,0.3s,baz=140,slow=30,SNR=3.1							
MTBS	**Maitube**	**4.34**	**30**	*e*P		**Pg**	**21 16 26.8**	**+1.7**
	2.9nm,0.2s							
MTBS				*e*S		**Sg**	**21 17 20.8**	**-0.5**
	9.7nm,0.2s							
MTBS	**Maitube**	**4.34**	**30**	Pg		**Pg**	**21 16 26.8**	**+1.7**
	2.9nm,0.2s							
MTBS				Lg		Lg	21 17 20.8	
	9.7nm,0.2s							
KRBS	**Karabastau**	**4.59**	**20**	*e*P		**Pg**	**21 16 30.6**	**+0.5**
	5.1nm,0.6s							
KRBS				*e*S		**Sg**	**21 17 27.1**	**-2.5**
	8.1nm,0.7s							
KRBS	**Karabastau**	**4.59**	**20**	Pg		**Pg**	**21 16 30.6**	**+0.5**
	5.1nm,0.6s							
KRBS				Lg		Lg	21 17 27.1	
	8.1nm,0.7s							
MDOK	**Medeo**	**4.62**	**35**	*e*P		**Pg**	**21 16 31.5**	**+0.9**
	1.9nm,0.3s							
MDOK				*e*S		**Sg**	**21 17 29.0**	**-1.4**
	11nm,0.7s							
MDOK	**Medeo**	**4.62**	**35**	⇓Pg		**Pg**	**21 16 29.5**	**-1.1**
	2.3nm,0.5s							
MDOK				Pg		Pb	21 16 31.5	+8.2
	1.9nm,0.3s							
MDOK				Lg		Lg	21 17 29.0	
	11nm,0.7s							
MDOK				Lg		Lg	21 17 30.3	
	14nm,0.8s							
KTBS	**Karatobe**	**4.93**	**28**	*e*P		**Pg**	**21 16 36.8**	**+0.2**
	1.6nm,0.5s							
KTBS				*e*S		**Sg**	**21 17 38.2**	**-2.2**
	16nm,0.5s							
KTBS	**Karatobe**	**4.93**	**28**	Pg		**Pg**	**21 16 36.7**	**+0.2**
	1.6nm,0.5s							
KTBS				Lg		Lg	21 17 38.2	
	16nm,0.5s							
KUU	**Kurty**	**4.97**	**25**	*e*P		**Pg**	**21 16 37.2**	**-0.1**
	1.7nm,0.5s							
KUU				*e*S		**Sg**	**21 17 38.6**	**-3.0**
	9.0nm,0.6s							
KUU	**Kurty**	**4.97**	**25**	Pg		**Pg**	**21 16 37.2**	**-0.1**
	1.7nm,0.5s							
KUU				Lg		Lg	21 17 38.6	
	9.0nm,0.6s							
CHKK	**Chushkaly**	**5.17**	**30**	*e*P		**Pg**	**21 16 41.1**	**0.0**
	1.1nm,0.1s							
CHKK				*e*S		**Sg**	**21 17 45.2**	**-2.7**
	6.2nm,0.3s							
CHKK	**Chushkaly**	**5.17**	**30**	Pg		**Pg**	**21 16 41.1**	**0.0**
	1.1nm,0.1s							
CHKK				Lg		Lg	21 17 45.2	
	6.2nm,0.3s							
KURS	**Kuram**	**5.39**	**39**	*e*P		**Pg**	**21 16 45.8**	**+0.5**
	1.5nm,0.3s							
KURS				*e*S		**Sg**	**21 17 53.7**	**-1.5**
	5.6nm,1.0s							
KURS	**Kuram**	**5.39**	**39**	Pg		**Pg**	**21 16 45.8**	**+0.5**
	1.5nm,0.3s							
KURS				Lg		Lg	21 17 53.7	
	5.6nm,1.0s							

*TAP **03** 21:25:37.8, 24°.92N×122°.97E, h36km, ML2.6, D*
*JMA **03** 21:25:39.3±0.3, 25°.N±2°.×12°.3E±°, h31km±4km, MV1.9/7, NW OFF ISHIGAKIJIMA IS*
ISC 03 21:25:36.7±1.4, 24°.98N±0°.06×122°.92E±0°.04, h11km±13km, n28, σ0s64/33, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**171**	*i* P		**Pb**	**21 25 48.0**	**0.0**
	baz=176							
YOJ				*e*S		**Sg**	**21 25 54.3**	**+0.4**
	baz=176							
YOJ	**Yonaguni jima**	**0.53**	**171**	P		**Pb**	**21 25 47.7**	**-0.2**
YOJ				S		**Sg**	**21 25 54.0**	**+0.1**

YULB	**Yu-li** baz=238	**2.17**	**223**	*e*P	**Pn**	**21 26 11.8**	**-1.0**
YUS	**Yu-Shan** baz=233	**2.33**	**231**	P	**Pn**	**21 26 15.5**	**0.0**

GUC ***03*** *21:26:23.0±0.8, 22.°86S×68.°71W, h105km±3km, ML3.7*
NEIC ***03*** *21:26:23.6±0.9, 22.°83S±0.°04×68.°71W±0.°05, h100km±5km, Error ellipse: s-maj=6.7km s-min=6.1km az=147.0*
ISC 03 21:26:23.2±1.1,**22.84S**±0.04×**68.71W**±0.05,**h99**km±7km, **n36**,σ0**59**/56,**7C-2D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
LVC	**Limon Verde**	**0.29**	**320**			**Pn**	**21 26 37.7**	**-0.4**
LVC				Sn		**Sn**	**21 26 48.7**	**-0.5**
LVC	**Limon Verde**	**0.29**	**320**	⇓*i*	P	**Pn**	**21 26 37.7**	**-0.4**
LVC				*i* S		**Sn**	**21 26 48.5**	**-0.7**
AF01	**San Pedro de A**	**0.50**	**104**			**Pn**	**21 26 39.1**	**-0.2**
AF01				Sn		**Sn**	**21 26 51.8**	**+0.6**
AF01	**San Pedro de A**	**0.50**	**104**	⇓*i*	P	**Pn**	**21 26 39.2**	**0.0**
AF01				*i* S		**Sn**	**21 26 51.6**	**+0.4**
AF01				IAML			21 26 52.4	
	comp=N,5μm,0.4s							
PB15	**IPOC Station P**	**0.80**	**242**			**Pn**	**21 26 42.1**	**+0.3**
PB15				Sn		**Sn**	**21 26 56.3**	**+0.7**
PB15	**IPOC Station P**	**0.80**	**242**	⇑*i*	P	**Pn**	**21 26 42.2**	**+0.5**
PB15				*i* S		**Sn**	**21 26 56.0**	**+0.4**
PB06	**IPOC Station P**	**0.81**	**279**			**Pn**	**21 26 41.8**	**0.0**
PB06				Sn		**Sn**	**21 26 55.9**	**+0.2**
PB06	**IPOC Station P**	**0.81**	**279**	⇑*i*	P	**Pn**	**21 26 41.8**	**0.0**
PB06				*i* S		**Sn**	**21 26 55.9**	**+0.2**
PB06				IAML			21 26 57.0	
	comp=N,3μm,0.1s							
PB09	**IPOC Station P**	**1.15**	**334**			**Pn**	**21 26 46.0**	**+0.6**
PB09				Sn		**Sn**	**21 27 03.5**	**+1.4**
PB09	**IPOC Station P**	**1.15**	**334**	*e*P		**Pn**	**21 26 46.1**	**+0.6**
PB09				*i* S		**Sn**	**21 27 03.5**	**+1.4**
PB09				IAML			21 27 04.8	
	comp=N,703nm,0.3s							
PB04	**IPOC Station P**	**1.43**	**290**			**Pn**	**21 26 48.5**	**-0.2**
PB04				Sn		**Sn**	**21 27 08.2**	**+0.3**
PB04	**IPOC Station P**	**1.43**	**290**	⇑*i*	P	**Pn**	**21 26 48.4**	**-0.2**
PB04				*i* S		**Sn**	**21 27 08.4**	**+0.4**
PB04				IAML			21 27 14.4	
	comp=E,793nm,0.2s							
PB07	**IPOC Station P**	**1.55**	**315**			**Pn**	**21 26 50.4**	**0.0**
PB07				Sn		**Sn**	**21 27 10.8**	**0.0**
PB07	**IPOC Station P**	**1.55**	**315**	⇑*i*	P	**Pn**	**21 26 50.2**	**-0.1**
PB07				*i* S		**Sn**	**21 27 11.0**	**+0.2**
PB10	**IPOC Station P**	**1.83**	**248**			**Pn**	**21 26 54.0**	**+0.4**
PB10				Sn		**Sn**	**21 27 17.8**	**+1.1**
PB10	**IPOC Station P**	**1.83**	**248**	*e*P		**Pn**	**21 26 53.3**	**-0.3**
PB10				*i* S		**Sn**	**21 27 16.6**	**-0.1**
PB10				IAML			21 27 23.9	
	comp=N,288nm,0.3s							
PB02	**IPOC Station P**	**1.87**	**324**			**Pn**	**21 26 54.3**	**+0.1**
PB02				Sn		**Sn**	**21 27 18.3**	**+0.5**
PB02	**IPOC Station P**	**1.87**	**324**	⇑*i*	P	**Pn**	**21 26 54.4**	**+0.1**
PB02				*i* S		**Sn**	**21 27 18.2**	**+0.5**
PB02				IAML			21 27 21.5	
	comp=E,1μm,0.3s							
PB01	**IPOC Station P**	**1.93**	**338**			**Pn**	**21 26 55.5**	**+0.5**
PB01				Sn		**Sn**	**21 27 19.6**	**+0.4**
PB01	**IPOC Station P**	**1.93**	**338**	⇑*i*	P	**Pn**	**21 26 55.3**	**+0.4**
PB01				*i* S		**Sn**	**21 27 19.5**	**+0.4**
PB01				IAML			21 27 23.3	
	comp=E,2μm,0.2s							
PB14	**IPOC Station P**	**2.37**	**221**			**Pn**	**21 27 01.5**	**+0.6**
PATCX	**Punta Patache**	**2.42**	**326**			**Pn**	**21 27 01.1**	**-0.2**
PATCX	**Punta Patache**	**2.42**	**326**	*e*P		**Pn**	**21 27 00.6**	**-0.7**
PATCX				IAML			21 27 37.5	
	comp=E,347nm,0.5s							
GO02	**Mina Guanaco**	**2.45**	**199**	Pn		**Pn**	**21 27 02.5**	**+0.4**
GO02	**Mina Guanaco**	**2.45**	**199**	⇑*i*	P	**Pn**	**21 27 02.1**	**+0.1**
GO02				IAML			21 27 41.2	
	comp=N,301nm,0.4s							
TA01	**Diego Aracena**	**2.64**	**328**			**Pn**	**21 27 02.2**	**-2.0**
TA02	**Huaiquique**	**2.88**	**332**			**Pn**	**21 27 07.6**	**+0.2**
GO01	**Chusmiza**	**3.18**	**352**			**Pn**	**21 27 12.1**	**+0.1**
GO01	**Chusmiza**	**3.18**	**352**	*e*P		**Pn**	**21 27 12.2**	**+0.3**
AC01	**Pan de Azucar**	**3.72**	**207**	Pn		**Pn**	**21 27 17.3**	**-1.4**
AC02	**Maricunga**	**4.00**	**185**	Pn		**Pn**	**21 27 23.0**	**+0.1**
PB12	**IPOC Station P**	**4.47**	**340**	Pn		**Pn**	**21 27 28.6**	**-0.2**
PB16	**IPOC Station P**	**4.54**	**350**	Pn		**Pn**	**21 27 30.7**	**+0.4**
LPAZ	**La Paz**	**6.54**	**5**	Pn		**Pn**	**21 27 57.4**	**-0.1**
TOA0	**Torodi Ar. Sit**	**77.63**	**70**	P		**P**	**21 38 08.8**	**-0.5**
TOA0				IAmb		IAmb	21 38 20.0	
	comp=Z,8.3nm,1.5s							
TORD	**Torodi Ar. Bea**	**77.63**	**70**	P		**P**	**21 38 08.6**	**-0.7**
TORD				IAmb		IAmb	21 38 20.0	
	comp=Z,1.6nm,1.4s							

SOME ***03*** *21:37:22.0, 44.°92N×79.°43E, h15km*
NNC ***03*** *21:37:22.4±0.6, 44.°88N×79.°43E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=5.8km s-min=3.7km az=117.0*
ISC 03 21:37:19.5±1.2,**45.02N**±0.03×**79.55E**±0.03,**h1**km±12km, **n20**,σ0**70**/35,**3C-2D**,**Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
DJR	**Jarkent** 1.4nm,0.1s	**0.71**	**166**	*e*P		**Pg**	**21 37 33.5**	**+0.4**
DJR				*e*S		**Sg**	**21 37 41.5**	**-0.7**
DJR	**Jarkent** 1.8nm,0.2s	**0.71**	**166**	P		**Pg**	**21 37 33.5**	**+0.4**
DJR				S		**Sg**	**21 37 41.5**	**-0.7**
TDK	**Taldyqorghan** 11nm,0.3s	**0.81**	**269**	*e*P		**Pg**	**21 37 35.5**	**+0.5**
TDK				*e*S		**Sg**	**21 37 45.0**	**-0.6**
ARXS	**Arharly** 1.6nm,0.2s	**1.47**	**237**	*e*P		**Pn**	**21 37 47.6**	**+0.4**
ARXS				*e*S		**Sg**	**21 38 06.0**	**-0.8**
ARXS	**Arharly** 1.7nm,0.3s	**1.47**	**237**	P		**Pb**	**21 37 47.9**	**+0.3**
ARXS				S		**Sg**	**21 38 06.4**	**-0.3**
PDGK	**Podgornoye** 1.4nm,0.2s	**1.69**	**182**	P		**Pn**	**21 37 50.8**	**+0.6**
PDGK				S		**Sn**	**21 38 11.6**	**-1.0**
PDGK	**Podgornoye** 0.7nm,0.2s	**1.69**	**182**	⇓P		**Pn**	**21 37 50.9**	**+0.6**
PDGK				⇑S		**Sn**	**21 38 11.8**	**-0.7**
SHLS	**Shalkode** 0.6nm,0.2s	**1.86**	**182**	*e*P		**Pg**	**21 37 55.3**	**+0.1**
SHLS				*e*S		**Sb**	**21 38 19.1**	**+0.9**
UZB	**Uzynbulak** 0.9nm,0.1s	**1.91**	**192**	*e*P		**Pg**	**21 37 56.0**	**-0.1**
UZB				*e*S		**Sb**	**21 38 20.3**	**+0.7**
UZB	**Uzynbulak** 0.9nm,0.1s	**1.91**	**192**	P		**Pg**	**21 37 56.0**	**-0.1**
UZB				S		**Sb**	**21 38 20.3**	**+0.7**
SATY	**Saty** 1.8nm,0.2s	**2.13**	**203**	*e*P		**Pb**	**21 37 58.7**	**-0.1**
SATY				*e*S		**Sb**	**21 38 25.3**	**-0.5**
SATY	**Saty** 1.8nm,0.2s	**2.13**	**203**	Pg		**Pb**	**21 37 58.7**	**-0.1**
SATY				Lg		Lg	21 38 25.3	
	6.0nm,0.1s							
KTBS	**Karatobe** 1.4nm,0.3s	**2.44**	**239**	*e*P		**Pb**	**21 38 03.9**	**-0.3**
KTBS				*e*S		**Sb**	**21 38 34.3**	**-0.4**
	9.4nm,0.3s							
KTBS	**Karatobe** 1.4nm,0.3s	**2.44**	**239**	Pg		**Pb**	**21 38 03.9**	**-0.3**
KTBS				Lg		Lg	21 38 34.3	
	9.4nm,0.3s							
MAKZ	**Makanchi** 1.2nm,0.7s	**2.46**	**43**	⇓Sn		**Sg**	**21 38 40.4**	**+1.9**
KUU	**Kurty** 1.2nm,0.5s	**2.56**	**245**	*e*P		**Pb**	**21 38 06.1**	**-0.1**
KUU				*e*S		**Sb**	**21 38 37.6**	**-0.6**
	6.7nm,0.8s							
KUU	**Kurty** 1.2nm,0.5s	**2.56**	**245**	Pg		**Pb**	**21 38 06.1**	**-0.1**
KUU				Lg		Lg	21 38 37.7	
	6.7nm,0.8s							
MK31	**Makanchi Array** 0.1nm,0.2s,baz=218,slow=13,SNR=8.3	**2.61**	**46**	⇑Pn		**Pg**	**21 38 08.3**	**-1.1**
MK31				⇑Sn		**Sg**	**21 38 42.4**	**-0.8**
	0.4nm,0.4s,baz=219,slow=24,SNR=8.2							
KRBS	**Karabastau** 0.2nm,0.2s	**3.08**	**246**	*e*P		**Pb**	**21 38 15.6**	**+0.6**
KRBS				*e*S		**Sb**	**21 38 54.2**	**+1.0**
	1.1nm,0.3s							
KRBS	**Karabastau** 0.2nm,0.2s	**3.08**	**246**	Pg		**Pb**	**21 38 15.6**	**+0.6**
KRBS				Lg		Lg	21 38 54.2	
	1.1nm,0.3s							

ISK ***03*** *22:04:32.3, 38.°08N×22.°32E, h4km, ML3.4/12*
IDC ***03*** *22:04:32.7±1.2, 38.°15N×22.°35E, h0km, mb3.5/8, mbtmp3.6/11, ML3.5/2, Error ellipse: s-maj=27.0km s-min=18.1km az=151.0*
THE ***03*** *22:04:34.3, 38.°09N×22.°30E, h4km±1km, ML3.4/21, Error ellipse: s-maj=1.2km s-min=0.2km az=228.0*
ATH ***03*** *22:04:34.0, 38.°08N×22.°29E, h11km±1km, ML3.4/23, Error ellipse: s-maj=1.4km s-min=0.5km az=219.0*
ISC 03 22:04:34.1±0.8,**38.08N**±0.02×**22.30E**±0.02,**h11**km±5km, **n115**,σ0**89**/160,**mb3.6**/7,**4C-4D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
KLV	**Kalavryta, Ach** 16μm,0.2s	**0.12**	**251**	P		**Pg**	**22 04 36.9**	**-0.3**
KLV				S		**Sg**	**22 04 39.0**	**-0.4**
KLV	**Kalavryta, Ach**	**0.12**	**251**	P		**Pg**	**22 04 36.8**	**-0.4**
KLV				S		**Sg**	**22 04 38.9**	**-0.5**
KLV				AML	AML		22 04 39.0	
	comp=E,32567μm,0.3s							
KLV				AML	AML		22 04 39.4	
	comp=N,38865μm,0.1s							
GUR	**Goura**	**0.15**	**166**	P		**Pg**	**22 04 37.6**	**-0.1**
GUR				S		**Sg**	**22 04 39.7**	**-0.5**
	comp=N,95μm,0.3s							
GUR	**Goura**	**0.15**	**166**	P		**Pg**	**22 04 37.5**	**-0.1**
GUR				S		**Sg**	**22 04 39.9**	**-0.2**
GUR				AML	AML		22 04 40.2	
GUR				AML	AML		22 04 40.6	
ALIK	**Aliki, Aigiali**	**0.23**	**320**	P		**Pg**	**22 04 39.0**	**+0.1**
ALIK				S		**Sg**	**22 04 42.6**	**+0.4**
THAL	**Thalero**	**0.29**	**99**	P		**Pg**	**22 04 40.2**	**+0.1**
THAL				S		**Sg**	**22 04 43.9**	**-0.1**
	comp=N,35μm,0.2s							
THAL	**Thalero**	**0.29**	**99**	P		**Pg**	**22 04 40.2**	**+0.1**
THAL				S		**Sg**	**22 04 44.2**	**+0.2**
THAL				AML	AML		22 04 44.8	
	comp=N,52407μm,0.2s							
THAL				AML	AML		22 04 45.4	
	comp=E,76929μm,0.4s							
LAKA	**Lakka**	**0.30**	**302**	P		**Pg**	**22 04 39.8**	**-0.3**
LAKA				S		**Sg**	**22 04 43.9**	**-0.3**
	comp=E,23μm,0.2s							
LAKA	**Lakka**	**0.30**	**302**	P		**Pg**	**22 04 39.8**	**-0.3**
LAKA				S		**Sg**	**22 04 44.5**	**+0.4**
LAKA				AML	AML		22 04 44.7	
	comp=N,50110μm,0.3s							
LAKA				AML	AML		22 04 44.8	
	comp=E,47431μm,0.3s							
SERG	**Sergoula**	**0.38**	**330**	P		**Pg**	**22 04 41.4**	**-0.3**
SERG				S		**Sg**	**22 04 46.8**	**+0.1**
	comp=E,5μm,0.3s							
SERG	**Sergoula**	**0.38**	**330**	P		**Pg**	**22 04 41.3**	**-0.3**
SERG				S		**Sg**	**22 04 46.8**	**+0.1**
SERG				AML	AML		22 04 48.5	
	comp=N,15076μm,0.2s							
SERG				AML	AML		22 04 48.8	
	comp=E,11252μm,0.4s							
DLFA	**Delphi**	**0.42**	**22**	P		**Pg**	**22 04 42.0**	**-0.5**
DLFA				S		**Sg**	**22 04 47.9**	**-0.3**
DLFA				AML	AML		22 04 50.6	
	comp=E,3720μm,0.4s							
DLFA				AML	AML		22 04 53.5	
	comp=N,4065μm,0.5s							
UPR	**University Cam**	**0.45**	**296**	P		**Pg**	**22 04 42.9**	**-0.1**
UPR				S		**Sg**	**22 04 50.1**	**+1.2**
EFP	**Efpalio**	**0.46**	**318**	P		**Pg**	**22 04 42.9**	**-0.3**
EFP				S		**Sg**	**22 04 49.7**	**+0.4**
	comp=N,3μm,0.4s							
EFP	**Efpalio**	**0.46**	**318**	P		**Pg**	**22 04 42.8**	**-0.4**
EFP				S		**Sg**	**22 04 49.6**	**+0.4**
EFP				AML	AML		22 04 52.0	
	comp=N,4951μm,0.3s							
EFP				AML	AML		22 04 53.8	
	comp=E,6939μm,0.4s							
DRO	**Drossia**	**0.48**	**254**	P		**Pg**	**22 04 43.3**	**-0.3**
DRO				S		**Sg**	**22 04 50.4**	**+0.5**
	comp=E,15μm,0.4s							
DRO	**Drossia**	**0.48**	**254**	P		**Pg**	**22 04 43.2**	**-0.4**
DRO				S		**Sg**	**22 04 50.4**	**+0.5**
DRO				AML	AML		22 04 51.4	
	comp=N,26351μm,0.6s							
DRO				AML	AML		22 04 53.2	
	comp=E,31991μm,0.3s							
ACOR	**Acrocorinthos**	**0.49**	**113**	P		**Pg**	**22 04 43.5**	**-0.3**
ACOR				S		**Sg**	**22 04 50.7**	**+0.5**
ACOR				AML	AML		22 04 51.4	
	comp=E,3231μm,0.5s							
ACOR				AML	AML		22 04 54.7	
	comp=N,2647μm,0.4s							
LTK	**Loutraki**	**0.53**	**96**	P		**Pg**	**22 04 44.5**	**0.0**
LTK				S		**Sb**	**22 04 52.2**	**-1.0**
	comp=N,3μm,0.4s							
LTK	**Loutraki**	**0.53**	**96**	P		**Pg**	**22 04 44.4**	**-0.1**
LTK				S		**Sb**	**22 04 52.3**	**-0.9**
LTK				AML	AML		22 04 52.9	
	comp=E,9746μm,0.3s							
LTK				AML	AML		22 04 53.3	
	comp=N,6986μm,0.2s							
LOUT	**Loutraki**	**0.54**	**100**	P		**Pg**	**22 04 44.7**	**0.0**
LOUT				S		**Sb**	**22 04 53.0**	**-0.5**
	comp=N,2μm,0.2s							
LOUT	**Loutraki**	**0.54**	**100**	P		**Pg**	**22 04 44.6**	**-0.1**
RLS	**Riolos of Patr**	**0.66**	**268**	P		**Pg**	**22 04 46.2**	**-0.7**
RLS				S		**Sg**	**22 04 56.3**	**+0.8**
	comp=N,3μm,0.2s							
RLS	**Riolos of Patr**	**0.66**	**268**	P		**Pg**	**22 04 46.0**	**-0.9**
RLS				S		**Sg**	**22 04 55.6**	**+0.1**
RLS				AML	AML		22 04 58.5	
	comp=N,6987μm,0.3s							
RLS				AML	AML		22 04 58.6	
	comp=E,4686μm,0.2s							
AXAR	**Agios Charalam**	**0.74**	**23**	P		**Pg**	**22 04 47.8**	**-0.7**
AXAR				S		**Sb**	**22 04 58.9**	**-0.3**
	comp=E,8μm,0.4s							
AXAR	**Agios Charalam**	**0.74**	**23**	P		**Pg**	**22 04 47.8**	**-0.7**
AXAR				S		**Sb**	**22 04 58.9**	**-0.3**
AXAR				AML	AML		22 05 04.3	
	comp=N,16952μm,0.5s							
AXAR				AML	AML		22 05 06.6	
	comp=E,15332μm,0.4s							
VIL2	**Platees**	**0.78**	**80**	P		**Pb**	**22 04 49.5**	**-0.2**
VIL2				S		**Sb**	**22 05 01.3**	**+1.1**
VIL2				AML	AML		22 05 03.6	
	comp=N,7423μm,0.5s							
VIL2				AML	AML		22 05 05.2	
	comp=E,6138μm,0.6s							
EPID	**Epidavros**	**0.80**	**126**	P		**Pg**	**22 04 49.2**	**-0.4**
EPID				S		**Sb**	**22 05 01.0**	**0.0**
	comp=E,3μm,0.2s							
EPID	**Epidavros**	**0.80**	**126**	P		**Pg**	**22 04 49.1**	**-0.4**
EPID				S		**Sb**	**22 05 00.6**	**-0.4**
VILL	**Villia**	**0.81**	**84**	P		**Pg**	**22 04 49.7**	**0.0**
PVO	**Paravola**	**0.81**	**311**	P		**Pg**	**22 04 49.3**	**-0.4**
PVO				S		**Sg**	**22 05 01.2**	**+0.9**
	comp=E,3μm,0.5s							
PVO	**Paravola**	**0.81**	**311**	P		**Pg**	**22 04 49.0**	**-0.7**
ATAL	**Atalanti**	**0.83**	**43**	P		**Pg**	**22 04 49.3**	**-0.9**
ATAL				S		**Sb**	**22 05 01.8**	**-0.1**
	comp=E,3μm,0.5s							
ATAL	**Atalanti**	**0.83**	**43**	P		**Pg**	**22 04 49.4**	**-0.9**
ATAL				S		**Sb**	**22 05 01.7**	**-0.1**
ATAL				AML	AML		22 05 05.2	
	comp=E,3925μm,0.6s							
ATAL				AML	AML		22 05 05.5	
	comp=N,6183μm,0.6s							

EVR	**Evrytania**	**0.92**	**335**	P		**Pg**	**22 04 51.0**	**-0.8**
EVR				S		**Sb**	**22 05 05.2**	**+0.9**
	comp=N,2μm,0.4s							
EVR	**Evrytania**	**0.92**	**335**	P		**Pg**	**22 04 50.8**	**-1.0**
AGG	**Agios Georgios**	**0.94**	**2**	PG		**Pg**	**22 04 50.9**	**-1.3**
AGG				SG		**Sg**	**22 05 04.7**	**+0.3**
AGG	**Agios Georgios**	**0.94**	**2**	P		**Pg**	**22 04 50.8**	**-1.5**
MAKR	**Makrakomi, Fth**	**0.94**	**352**	P		**Pg**	**22 04 52.3**	**+0.1**
MAKR				S		**Sb**	**22 05 05.2**	**+0.3**
	comp=N,4μm,0.6s							
MAKR	**Makrakomi, Fth**	**0.94**	**352**	P		**Pg**	**22 04 51.2**	**-1.0**
MAKR				S		**Sg**	**22 05 04.6**	**+0.2**
MAKR				AML	AML		22 05 09.7	
	comp=E,6923μm,0.7s							
MAKR				AML	AML		22 05 09.7	
	comp=N,8498μm,0.5s							
ITM	**Ithomi**	**0.95**	**198**	P		**Pg**	**22 04 51.6**	**-0.8**
ITM				S		**Sb**	**22 05 05.8**	**+0.6**
	comp=N,2μm,0.5s							
ITM	**Ithomi**	**0.95**	**198**	PG		**Pg**	**22 04 51.3**	**-1.1**
ITM				SG		**Sg**	**22 05 05.0**	**+0.2**
ITM	**Ithomi**	**0.95**	**198**	P		**Pg**	**22 04 51.1**	**-1.3**
ITM				AML	AML		22 05 07.0	
	comp=N,3338μm,0.5s							
ITM				AML	AML		22 05 08.4	
	comp=E,3332μm,0.6s							
KRND	**KRANIDI**	**0.97**	**136**	P		**Pg**	**22 04 52.7**	**-0.2**
KRND				S		**Sb**	**22 05 07.3**	**+1.4**
	comp=E,3μm,0.4s							
KRND	**KRANIDI**	**0.97**	**136**	P		**Pg**	**22 04 52.4**	**-0.5**
ATH	**Athens Observa**	**1.13**	**95**	P		**Pb**	**22 04 56.0**	**+0.3**
ATH				S		**Sn**	**22 05 11.6**	**+0.3**
	comp=E,2μm,0.3s							
ATH	**Athens Observa**	**1.13**	**95**	P		**Pb**	**22 04 55.9**	**+0.3**
ATH				S		**Sb**	**22 05 10.4**	**+0.1**
ATH				AML	AML		22 05 12.3	
	comp=N,3513μm,0.3s							
ATH				AML	AML		22 05 12.8	
	comp=E,4176μm,0.3s							
ATHU	**Athens Univers**	**1.18**	**95**	P		**Pg**	**22 04 56.3**	**-0.5**
ATHU	**Athens Univers**	**1.18**	**95**	P		**Pg**	**22 04 56.2**	**-0.5**
ATHU				AML	AML		22 05 14.9	
	comp=N,1750μm,0.3s							
ATHU				AML	AML		22 05 15.3	
	comp=E,663μm,0.6s							
VLY	**Voula,Athens**	**1.21**	**101**	P		**Pg**	**22 04 56.8**	**-0.5**
VLY				S		**Sn**	**22 05 14.1**	**+0.8**
	comp=E,2μm,0.3s							
VLY	**Voula,Athens**	**1.21**	**101**	P		**Pg**	**22 04 56.7**	**-0.6**
LTHK	**Lithakia**	**1.21**	**253**	P		**Pg**	**22 04 57.1**	**-0.4**
PYL	**PYLOS**	**1.27**	**201**	P		**Pg**	**22 04 56.7**	**-1.8**
DION	**Dionisos Attik**	**1.29**	**90**	P		**Pg**	**22 04 58.0**	**-0.9**
DION	**Dionisos Attik**	**1.29**	**90**	P		**Pg**	**22 04 57.8**	**-1.1**
DION				S		**Sn**	**22 05 15.7**	**+0.3**
DION				AML	AML		22 05 16.8	
	comp=E,8093μm,0.3s							
DION				AML	AML		22 05 17.1	
	comp=N,4667μm,0.7s							
VLS	**Valsamata**	**1.35**	**274**	P		**Pn**	**22 04 58.2**	**-0.8**
VLS				AML	AML		22 05 25.0	
	comp=N,1471μm,0.3s							
VLS				AML	AML		22 05 25.0	
	comp=E,1052μm,0.5s							
FSK	**Fiskardo**	**1.42**	**286**	P		**Pn**	**22 05 00.4**	**+0.5**
NEO	**Neokhori**	**1.42**	**30**	P		**Pn**	**22 05 00.1**	**+0.2**
NEO	**Neokhori**	**1.42**	**30**	P		**Pn**	**22 04 59.9**	**0.0**
NEO				AML	AML		22 05 23.6	
	comp=E,1069μm,0.4s							
NEO				AML	AML		22 05 27.7	
	comp=N,1871μm,0.4s							
VLI	**Veliai**	**1.46**	**159**	P		**Pn**	**22 05 00.5**	**+0.1**
VLI	**Veliai**	**1.46**	**159**	P		**Pn**	**22 05 00.4**	**0.0**
VLI				AML	AML		22 05 23.7	
	comp=E,1794μm,0.5s							
VLI				AML	AML		22 05 25.7	
	comp=N,1987μm,0.6s							
XOR	**Xorichti**	**1.46**	**28**	P		**Pn**	**22 05 00.7**	**+0.2**
XOR	**Xorichti**	**1.46**	**28**	P		**Pn**	**22 05 00.4**	**0.0**
THL	**Klokotos Trika**	**1.50**	**352**	P		**Pn**	**22 05 01.3**	**+0.3**
THL	**Klokotos Trika**	**1.50**	**352**	P		**Pn**	**22 05 01.2**	**+0.3**
THL				AML	AML		22 05 25.1	
	comp=N,951μm,0.4s							
THL				AML	AML		22 05 25.4	
	comp=E,1085μm,0.5s							
KYMI	**Kymi, Euboea I**	**1.52**	**68**	P		**Pn**	**22 05 01.2**	**-0.1**
KYMI	**Kymi, Euboea I**	**1.52**	**68**	P		**Pn**	**22 05 01.0**	**-0.3**
TYRN	**Tyrnavos**	**1.62**	**358**	P		**Pn**	**22 05 03.1**	**+0.4**
KZN	**Kozani**	**2.26**	**350**	P		**Pn**	**22 05 12.2**	**+0.7**
HORT	**Hortiatis**	**2.59**	**14**	PN		**Pn**	**22 05 16.0**	**0.0**
APE	**Apeiranthos**	**2.76**	**111**	⇑P		**Pn**	**22 05 18.8**	**+0.4**
APE	**Apeiranthos**	**2.76**	**111**	PN		**Pn**	**22 05 18.6**	**+0.2**
FNA	**Florina**	**2.79**	**345**	PN		**Pn**	**22 05 19.7**	**+0.9**
GRG	**Griva**	**2.87**	**2**	PN		**Pn**	**22 05 20.4**	**+0.5**
IMMV	**Iera Moni Meta**	**2.95**	**152**	PN		**Pn**	**22 05 21.7**	**+0.8**
CHOS	**Chios island**	**2.97**	**83**	PN		**Pn**	**22 05 21.7**	**+0.4**
SIGR	**SIGRI**	**3.00**	**67**	PN		**Pn**	**22 05 22.0**	**+0.3**
KNDR	**Palaiochora Ch**	**3.06**	**158**	PN		**Pn**	**22 05 22.7**	**+0.3**
KNT	**Kendrikon**	**3.11**	**8**	PN		**Pn**	**22 05 23.9**	**+0.8**
URLA	**Izmir**	**3.40**	**84**	PN		**Pn**	**22 05 26.8**	**-0.3**
IDI	**Anoyia**	**3.48**	**142**	⇑P		**Pn**	**22 05 28.1**	**-0.2**
IDI				⇑S		**Sn**	**22 06 09.6**	**0.0**
IDI	**Anoyia**	**3.48**	**142**	PN		**Pn**	**22 05 29.0**	**+0.7**
HRKL	**Herakleio**	**3.57**	**140**	PN		**Pn**	**22 05 29.8**	**+0.4**
MMB	**Musomiste**	**3.67**	**17**	*i* P		**Pn**	**22 05 31.8**	**+0.9**
KKB	**Krupnik**	**3.83**	**9**	*i* P		**Pn**	**22 05 34.2**	**+1.2**
RZN	**Rozhen**	**4.05**	**27**	*i* P		**Pn**	**22 05 36.7**	**+0.4**
KDZ	**Kurdzhali**	**4.29**	**33**	*i* P		**Pn**	**22 05 38.7**	**-0.7**
TIP	**Timpagrande**	**4.47**	**286**	⇓P		**Pn**	**22 05 44.4**	**+2.5**
VTS	**Vitosha**	**4.58**	**9**	⇓P		**Pn**	**22 05 45.8**	**+2.2**
BLKB	**Belogradchik**	**5.54**	**3**	⇓P		**Pn**	**22 05 58.1**	**+1.6**
DBRK	**Dubrovnik**	**5.57**	**327**	*e*Pn		**Pn**	**22 05 55.3**	**-1.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.06**	**204**	*i* P	Pg	22 08 23.6	-0.1
DUNU				*i* S	Sg	22 08 24.7	+0.2
MASU	**Masugnsbyn**	**0.60**	**62**	*i* P	Pg	22 08 33.3	-0.6
MASU				*i* S	Sg	22 08 41.0	-0.6
RATU	**Laukkuluspa**	**0.76**	**329**	*i* P	Pg	22 08 36.0	-1.1
RATU				*i* S	Sg	22 08 45.9	-1.0
SALU	**Saltoluokta**	**0.85**	**285**	*i* P	Pg	22 08 37.9	-0.8
PAJU	**Pajala** baz=286	**0.98**	**98**	*e*P	Pg	22 08 39.9	-1.3
PAJU				*e*SB	Sb	22 08 57.0	+1.1
LANU	**Lannavaara**	**1.01**	**30**	*e*P	Pg	22 08 40.6	-1.3
HARU	**Harads**	**1.03**	**172**	*e*P	Pg	22 08 40.8	-1.4
KOVU	**Salmi**	**1.06**	**350**	*e*P	Pg	22 08 41.7	-1.1
HEF	**Hetta** baz=222	**1.69**	**42**	*e*P	Pn	22 08 52.4	-0.8
HEF				MSG		22 09 12.2	
	comp=Z,1.5nm,0.2s						
HEF				*e*S	Sn	22 09 14.0	-1.5
KALU	**Kalix** baz=319	**1.72**	**139**	*e*PG	Pn	22 08 53.2	-0.4
KALU				*e*SN	Sg	22 09 18.3	+0.7
SJUU	**Sjulsmark**	**1.73**	**166**	*e*P	Pn	22 08 53.1	-0.6
KIF	**Kilpisjarvi** baz=177	**1.83**	**2**	*e*PG	Pb	22 08 56.0	-0.8
KIF				MSG		22 09 18.2	
	comp=Z,1.1nm,0.2s						
KIF				*e*SG	Sg	22 09 21.4	0.0
TOF	**Tornio**	**1.84**	**125**	*e*PN	Pn	22 08 55.4	+0.1
TOF				MSG		22 09 17.2	
	comp=Z,1.6nm,0.2s						
RNF	**Rovaniemi**	**2.20**	**103**	*e*PB	Pn	22 09 01.0	+0.8
RNF				*e*SG	Sb	22 09 30.2	-0.6
SGF	**Sodankyl**	**2.30**	**81**	*e*SG	Sb	22 09 33.3	-0.4
ARA0	**ARCESS Array S**	**2.98**	**35**	*e*PB	Pn	22 09 13.2	+2.3
ARA0				*e*S	Sn	22 09 48.0	+0.8
UMAU	**Umeaa**	**3.31**	**180**	*e*S	Sn	22 09 55.6	+0.1

UPP 03 22:09:12.6±0.1, 67°.18N×20°.64E, h1km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.06**	**206**	P	Pg	22 09 13.9	+0.2
DUNU				S	Sg	22 09 14.9	+0.4
MASU	**Masugnsbyn**	**0.60**	**61**	P	Pg	22 09 23.9	-0.1
MASU				S	Sg	22 09 32.0	+0.2
RATU	**Laukkuluspa**	**0.76**	**329**	P	Pg	22 09 26.8	-0.5
SALU	**Saltoluokta**	**0.85**	**285**	P	Pg	22 09 28.6	-0.3
PAJU	**Pajala**	**0.98**	**98**	P	Pg	22 09 30.4	-0.9
PAJU				S	Sg	22 09 43.7	-0.4
HARU	**Harads**	**1.03**	**172**	P	Pg	22 09 31.3	-0.9

*IDC **03** 22:13:04.1±1.1, 24°.73N×122°.55E, h0km, mb3.5/8, mbtmp3.5/9, ML2.8/1, MS3.2/14, Error ellipse: s-maj=29.0km s-min=19.9km az=68.0*
*JMA **03** 22:13:05.6±0.2, 25°.N±1°.×122°.8E±0°.8, h27km±3km, MV3.2/10, NW OFF ISHIGAKIJIMA IS*
ISC 03 22:13:07.4±0.8, 24°.75N±0°.08×122°.8E±0°.1, h35km, n28, σ1s25/17, mb3.5/7, MS3.4/10, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**158**	P	**Pn**	**22 13 14.5**	**-1.2**
JYNG				S	**Sn**	**22 13 20.8**	**-0.6**
YOJ	**Yonaguni jima**	**0.34**	**148**	P	**Pn**	**22 13 14.7**	**-1.3**
YOJ				S	**Sn**	**22 13 20.9**	**-0.8**
IRIF	**Iriomote-Funau**	**0.94**	**116**	P	**Pn**	**22 13 23.4**	**-0.7**
HATJ	**Hateruma jima**	**1.14**	**127**	P	**Pn**	**22 13 27.2**	**+0.3**
JKRS	**Kuro-shima**	**1.21**	**115**	P	**Pn**	**22 13 27.8**	**-0.1**
JIJ	**Ishigaki jima**	**1.28**	**107**	P	**Pn**	**22 13 28.1**	**-0.7**
JTJ	**Tarama**	**1.73**	**93**	P	**Pn**	**22 13 35.4**	**+0.4**
JOW	**Kunigami** 0.6nm,0.3s,baz=106,slow=2.2,SNR=4.1 4.8nm,0.7s	**5.34**	**66**	Pn	Pn	22 14 27.8	+3.1
KSRS	**Korea Array** baz=210,slow=22,SNR=1.1	**13.39**	**18**	Pn	**P**	**22 16 21.5**	**-2.4**
KSRS				LR	LR	22 22 07.8	
	comp=Z,145nm,18.5s,baz=205,slow=40						
JHJ	**Hachijo jima 2** comp=Z,23nm,18.9s,baz=258,slow=39	**17.02**	**57**	LR	LR	22 24 24.6	
MJAR	**Matsushiro Arr** comp=Z,45nm,19.2s,baz=253,slow=37	**17.68**	**45**	LR	LR	22 24 04.0	
DAV	**Davao City (W)** comp=Z,46nm,20.8s,baz=334,slow=37	**17.78**	**171**	LR	LR	22 24 01.4	
USRK	**Ussuriysk Ar.** 0.5nm,0.5s,baz=174,slow=29,SNR=1.6 0.5nm,0.5s	**20.80**	**19**	P	Pn	22 17 49.0	+0.9
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=56,slow=11,SNR=1.9	**23.04**	**259**	P	**P**	**22 18 09.4**	**-0.4**
CMAR				LR	LR	22 28 01.6	
	comp=Z,24nm,21.5s,baz=155,slow=39 0.4nm,0.3s						
SONM	**Songino Array** 1.0nm,0.8s,baz=134,slow=10,SNR=4.0	**26.45**	**335**	P	**P**	**22 18 42.6**	**+1.4**
SONM				LR	LR	22 28 35.2	
	comp=Z,25nm,19.6s,baz=188,slow=35 1.0nm,0.8s						
PETK	**Petropavlovsk-** comp=Z,46nm,18.6s,baz=208,slow=37	**38.57**	**34**	LR	LR	22 36 44.9	
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=104,slow=12,SNR=2.9 0.7nm,0.8s	**38.97**	**315**	P	**P**	**22 20 29.8**	**-0.5**
MA2	**Magadan** comp=Z,54nm,18.6s,baz=232,slow=39	**39.90**	**22**	LR	LR	22 39 05.1	
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=93,slow=8.7,SNR=2.2 0.4nm,0.4s	**40.59**	**326**	P	**P**	**22 20 44.3**	**+0.8**
KURBB	**Kurchatov Arra** 0.3nm,0.8s,baz=115,slow=8.3,SNR=3.3 0.3nm,0.8s	**42.64**	**319**	P	**P**	**22 21 00.5**	**+0.2**
FITZ	**Fitzroy Crossi** comp=Z,35nm,18.7s,baz=270,slow=39	**42.68**	**176**	LR	LR	22 40 47.8	
AAK	**Ala-Archa** comp=Z,48nm,18.5s,baz=139,slow=38	**43.35**	**307**	LR	LR	22 40 04.1	
WRA	**Warramunga Arr** 1.4nm,0.8s,baz=347,slow=8.3,SNR=5.7 1.4nm,0.8s	**45.82**	**165**	P	**P**	**22 21 28.2**	**+2.1**
ASAR	**Alice Springs** 0.7nm,0.9s,baz=350,slow=12,SNR=4.5 0.7nm,0.9s	**49.32**	**167**	P	**P**	**22 21 55.2**	**+1.9**
GNI	**Garni** comp=Z,15nm,19.9s,baz=172,slow=38	**65.70**	**305**	LR	LR	22 54 11.5	
ILAR	**Eielson Array** comp=Z,25nm,18.6s,baz=252,slow=39	**68.03**	**28**	LR	LR	22 56 58.8	
FINES	**FINESS Array B** comp=Z,35nm,19.8s,baz=56,slow=39	**71.70**	**330**	LR	LR	22 59 20.4	
HFS	**Hagfors** comp=Z,49nm,19.3s,baz=55,slow=38	**77.79**	**331**	LR	LR	23 02 39.7	

*NEIC **03** 22:14:12.6±0.9, 43°.73N±0°.05×105°.32W±0°.08, h0km±2km, ML3.3/53, Error ellipse: s-maj=10.4km s-min=9.0km az=101.0*
*IDC **03** 22:14:12.2±1.3, 44°.03N×105°.69W, h0km, mb4.2/1, mbtmp3.3/6, ML3.0/4, Error ellipse: s-maj=22.3km s-min=11.2km az=149.0*
ISC 03 22:14:11.2±0.8, 43°.73N±0°.06×105°.35W±0°.06, h0km, n53, σ1s41/53, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.02**	**67**		**Pg**	**22 14 31.2**	**+0.4**
K22A	**Casper**	**1.38**	**219**		**Pg**	**22 14 37.0**	**-0.7**
K22A				IAML		22 14 59.9	
	comp=E,329nm,0.4s						
K22A				IAML		22 15 00.1	
	comp=N,362nm,0.4s						
PHWY	**Pilot Hill**	**2.43**	**182**		**Pn**	**22 14 52.8**	**+0.4**
PHWY				IAML		22 15 28.8	
	comp=N,126nm,0.6s						
PHWY				IAML		22 15 33.1	
	comp=N,78nm,0.5s						
RWWY	**Rawlins**	**2.46**	**215**		**Pn**	**22 14 54.7**	**+1.9**
N23A	**Red Feather La**	**2.87**	**189**	Pn	**Pn**	**22 14 59.6**	**+1.2**
N23A				IAML		22 15 41.0	
	comp=E,99nm,0.4s						
N23A				IAML		22 15 41.1	
	comp=N,115nm,0.7s						
LAO	**LASA Array**	**3.03**	**348**	Pn	**Pn**	**22 15 00.3**	**-0.1**
RLMT	**Red Lodge**	**3.14**	**298**		**Pn**	**22 15 04.0**	**+1.8**
RLMT				IAML		22 15 23.8	
	comp=N,45nm,0.5s						
RLMT				IAML		22 16 01.9	
	comp=N,60nm,0.7s						
PD31	**Pinedale Array**	**3.22**	**254**		**Pn**	**22 15 04.5**	**+1.1**
PDAR	**Pinedale Array** comp=N,11nm,0.4s,baz=71,slow=16,SNR=46	**3.22**	**254**	Pn	**Pn**	**22 15 05.0**	**+1.7**
PDAR				Lg	Lg	22 15 48.5	
	comp=N,22nm,0.3s,baz=70,slow=31,SNR=14						
PDAR	**Pinedale Array**	**3.22**	**254**		**Pn**	**22 15 03.8**	**+0.4**
OGNE	**Ogallala**	**3.71**	**137**		**Pn**	**22 15 11.2**	**+1.4**
LOHW	**Long Hollow**	**3.82**	**270**		**Pn**	**22 15 13.0**	**+1.5**
FLWY	**Flagg Ranch**	**3.89**	**277**		**Pn**	**22 15 14.0**	**+1.6**
FLWY				IAML		22 16 28.8	
	comp=N,48nm,1.3s						
MOOW	**Moose Ponds**	**3.91**	**272**		**Pn**	**22 15 14.3**	**+1.5**
ISCO	**Idaho Springs**	**3.93**	**183**		**Pn**	**22 15 14.4**	**+1.3**
ISCO				IAML		22 16 18.9	
	comp=N,23nm,1.0s						
YPP	**Pitchstone Pla**	**3.98**	**280**		**Pn**	**22 15 15.6**	**+1.9**
YPP				IAML		22 16 36.8	
	comp=E,21nm,1.6s						
REDW	**Red Top Meadow**	**4.02**	**267**		**Pn**	**22 15 15.1**	**+0.8**
REDW				IAML		22 16 29.9	
	comp=E,62nm,1.3s						
FXWY	**Fox Creek**	**4.12**	**271**		**Pn**	**22 15 17.4**	**+1.7**
O20A	**White River Ci**	**4.19**	**212**		**Pn**	**22 15 17.6**	**+1.1**
O20A				IAML		22 16 35.1	
	comp=E,46nm,0.9s						
AHID	**Auburn Hatcher**	**4.31**	**259**		**Pn**	**22 15 19.3**	**+1.0**
AHID				IAML		22 16 36.2	
	comp=E,28nm,0.6s						
AHID				IAML		22 16 48.6	
	comp=E,33nm,0.7s						
YHL	**Hebgen Lake**	**4.34**	**287**		**Pn**	**22 15 21.7**	**+3.0**
YHL				IAML		22 16 37.4	
	comp=N,34nm,1.1s						
YHL				IAML		22 16 45.0	
	comp=E,36nm,1.0s						
E28A	**Huff**	**4.35**	**48**	Pn	**Pn**	**22 15 19.9**	**+1.2**
RDMU	**Red Mountain**	**4.45**	**226**		**Pn**	**22 15 20.9**	**+0.8**
RDMU				IAML		22 16 37.7	
	comp=E,34nm,1.1s						
RDMU				IAML		22 16 39.1	
	comp=N,37nm,1.0s						
QLMT	**Earthquake Lak**	**4.51**	**286**		**Pn**	**22 15 22.0**	**+1.1**
DGMT	**Dagmar**	**4.81**	**9**		**Pn**	**22 15 26.4**	**+1.5**
BOZ	**Bozeman (W)**	**4.86**	**295**		**Pn**	**22 15 27.1**	**+1.4**
BOZ				IAML		22 16 52.8	
	comp=N,13nm,0.8s						
BOZ				IAML		22 17 01.5	
	comp=N,13nm,1.4s						
HWUT	**Hardware Ranch**	**5.05**	**247**	Pn	**Pn**	**22 15 29.7**	**+1.3**
HWUT				IAML		22 17 01.0	
	comp=N,29nm,1.0s						
HWUT				IAML		22 17 04.4	
	comp=N,26nm,1.7s						
KSCO	**Kaye Shedlock'**	**5.14**	**156**		**Pn**	**22 15 29.2**	**-0.3**
TCUT	**Toone Canyon**	**5.19**	**242**		**Pn**	**22 15 31.6**	**+1.3**
EGMT	**Eagleton**	**5.29**	**326**		**Pn**	**22 15 32.8**	**+1.3**
DLMT	**Dillon**	**5.43**	**290**		**Pn**	**22 15 35.0**	**+1.4**
LRM	**Limekiln Ridge**	**5.47**	**295**		**Pn**	**22 15 34.4**	**+0.1**
P18A	**Preston Nutter**	**5.50**	**224**		**Pn**	**22 15 35.8**	**+1.2**
MCMT	**McKenzie Canyo**	**5.50**	**284**		**Pn**	**22 15 35.4**	**+0.8**
JLU	**Jordanelle**	**5.51**	**238**		**Pn**	**22 15 34.5**	**-0.2**
HVU	**Hansel Valley**	**5.81**	**253**	Pn	**Pn**	**22 15 40.0**	**+1.3**
PV07	**Paradox Valley**	**5.84**	**206**		**Pn**	**22 15 40.5**	**+1.2**
PV15	**Paradox Valley**	**5.88**	**205**		**Pn**	**22 15 40.8**	**+1.0**
SDCO	**Great Sand Dun**	**5.98**	**181**	Pn	**Pn**	**22 15 42.4**	**+1.2**
ECSD	**EROS Data Cent**	**6.33**	**87**	Pn	**Pn**	**22 15 46.2**	**+0.5**
CBKS	**Cedar Bluff**	**6.47**	**137**	Pn	**Pn**	**22 15 48.5**	**+0.7**
HLID	**Hailey**	**6.58**	**272**		**Pn**	**22 15 50.8**	**+1.4**
DUG	**Dugway, Tooele**	**6.59**	**240**		**Pn**	**22 15 50.7**	**+1.2**
T25A	**Trinidad**	**6.62**	**174**	Pn	**Pn**	**22 15 49.4**	**-0.6**
F33A	**5 Mile Ranch,**	**6.78**	**69**	Pn	**Pn**	**22 15 52.0**	**+0.1**
MSO	**Missoula**	**6.81**	**300**	Pn	**Pn**	**22 15 53.3**	**+0.9**
MVU	**Marysvale**	**7.35**	**227**	Pn	**Pn**	**22 16 01.4**	**+1.4**
JTMT	**Jette**	**7.43**	**306**	Pn	**Pn**	**22 16 02.6**	**+1.6**
ELK	**Elko**	**7.92**	**251**	Pn	**Pn**	**22 16 10.1**	**+2.2**
	comp=N,0.1nm,0.3s,baz=65,slow=8.8,SNR=2.2						
ELK				Lg	Lg	22 18 17.6	
	comp=N,0.1nm,0.3s,baz=82,slow=16,SNR=1.4 comp=N,0.6nm,0.5s						
NVAR	**Mina Array Bea** comp=N,0.1nm,0.3s,baz=56,slow=14,SNR=2.4 comp=N,0.2nm,0.4s	**11.12**	**246**	Pn	**Pn**	**22 16 54.4**	**+2.8**
TXAR	**Lajitas Array** baz=358,slow=9.0,SNR=2.4	**14.43**	**174**	Pn	**P**	**22 17 43.2**	**-0.7**
TXAR				Lg	Lg	22 21 51.5	
	baz=7.7,slow=34,SNR=3.9 comp=N,0.2nm,0.6s						
YKA	**Yellowknife Ar** comp=N,0.1nm,0.3s,baz=156,slow=8.1,SNR=1.8 comp=N,0.3nm,0.6s	**19.57**	**347**	P	**P**	**22 18 36.9**	**-3.4**
ARCES	**ARCESS Array B** comp=N,2.1nm,0.8s,baz=328,slow=6.7,SNR=8.7 comp=N,2.1nm,0.8s	**61.44**	**18**	P	**P**	**22 24 28.8**	**-0.1**

*ARE **03** 22:35:41±3.8, 13°.32S±0°.07×74°.83W±0°.08, h112km±5km, Error ellipse: s-maj=0.0km s-min=0.0km az=144.0*
*IDC **03** 22:35:42.1±1.3, 13°.32S×74°.74W, h85km±12km, mb3.8/12, mbtmp4.2/16, MS3.2/2, Error ellipse: s-maj=23.8km s-min=10.1km az=42.0*
*NEIC **03** 22:35:42±1.2, 13°.28S±0°.07×74°.68W±0°.09, h79km±4km, mb4.6/55, ML4.8(ARE), Error ellipse: s-maj=13.5km s-min=8.5km az=57.0*
ISC 03 22:35:38.9±0.4, 13°.32S±0°.06×74°.66W±0°.07, h50km, n121, σ1s97/111, mb4.6/37, 1C, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.51**	**302**	P	**Pn**	**22 36 20.5**	**+3.3**
	3μm,0.3s,baz=133,slow=11,SNR=402						
NNA				S	**Sn**	**22 36 49.8**	**+3.0**
	4μm,0.4s,baz=134,slow=11,SNR=9.0						
NNA	**Nana**	**2.51**	**302**	Pn	**Pn**	**22 36 20.6**	**+3.3**
NNA				Sn	**Sn**	**22 36 50.4**	**+3.6**
CZSB	**Cruzeiro do Su**	**5.88**	**19**	Pn	**Pn**	**22 37 06.6**	**+3.1**
AP01	**Chacalluta**	**6.52**	**141**	Pn	**Pn**	**22 37 16.5**	**+4.3**
PB12	**IPOC Station P**	**6.71**	**142**	Pn	**Pn**	**22 37 18.3**	**+3.3**
LPAZ	**La Paz**	**6.97**	**116**	P	Pn	22 37 25.0	+6.0
	26nm,0.3s,baz=308,slow=9.4,SNR=160						
LPAZ	**La Paz**	**6.97**	**116**	Pn	Pn	22 37 24.4	+5.4
LPAZ	**La Paz**	**6.97**	**116**	*e*P	Pn	22 37 24.8	+5.8
PB16	**IPOC Station P**	**7.03**	**136**	Pn	**Pn**	**22 37 24.2**	**+4.4**
ATAH	**Atahualpa** 38nm,0.6s,baz=160,slow=5.6,SNR=35	**7.16**	**329**	P	**Pn**	**22 37 25.1**	**+3.6**
ATAH				S	**Sn**	**22 38 43.7**	**+1.9**
	43nm,0.7s,baz=146,slow=14,SNR=2.1						
TA02	**Huaiquique**	**8.16**	**149**		**Pn**	**22 37 37.4**	**+2.7**
GO01	**Chusmiza**	**8.20**	**141**		**Pn**	**22 37 38.9**	**+3.1**
TA01	**Diego Aracena**	**8.38**	**150**	Pn	**Pn**	**22 37 40.6**	**+2.8**
PATCX	**Punta Patache**	**8.61**	**151**	Pn	**Pn**	**22 37 43.5**	**+2.5**
ETMB	**Extrema**	**8.97**	**68**	Pn	**Pn**	**22 37 49.2**	**+3.2**
PB01	**IPOC Station P**	**9.13**	**148**		**Pn**	**22 37 50.5**	**+2.4**
PB02	**IPOC Station P**	**9.16**	**151**		**Pn**	**22 37 51.0**	**+2.4**
PB07	**IPOC Station P**	**9.52**	**152**		**Pn**	**22 37 56.1**	**+2.6**
PB09	**IPOC Station P**	**9.88**	**149**		**Pn**	**22 38 01.7**	**+3.1**
PB04	**IPOC Station P**	**9.94**	**155**		**Pn**	**22 38 01.5**	**+2.2**
PB06	**IPOC Station P**	**10.51**	**153**	Pn	**Pn**	**22 38 09.9**	**+2.7**
LVC	**Limon Verde** 7.2nm,0.4s,baz=318,slow=8.4,SNR=18	**10.73**	**150**	P	**Pn**	**22 38 12.9**	**+2.6**
LVC				S	**Sn**	**22 40 07.3**	**-2.0**
	4.6nm,0.6s,baz=203,slow=18,SNR=1.6						
LVC	**Limon Verde**	**10.73**	**150**		**Pn**	**22 38 13.5**	**+3.2**
BOSC	**San Juan Bosco**	**10.79**	**339**	Pn	**Pn**	**22 38 10.0**	**-1.0**
SAML	**Samuel**	**12.06**	**70**		**Pn**	**22 38 30.1**	**+1.9**
PORT	**Chimborazo Vol**	**12.46**	**341**	Pn	**Pn**	**22 38 37.2**	**+2.9**
CHSH	**Refugio Sur-Vo**	**12.47**	**340**	Pn	**Pn**	**22 38 37.4**	**+3.1**
SLOR	**San Lorenzo -**	**13.07**	**343**	Pn	**Pn**	**22 38 44.4**	**+1.9**
AC01	**Pan de Azucar**	**13.32**	**164**	Pn	**Pn**	**22 38 47.4**	**+2.0**
SIV	**San Ignacio** 1.9nm,0.3s,baz=286,slow=10,SNR=9.9	**13.41**	**103**	P	**Pn**	**22 38 48.7**	**+2.0**
OTAV	**Otavalo**	**13.98**	**344**		**Pn**	**22 38 55.6**	**+0.7**
VILB	**Vilhena**	**14.09**	**90**	Pn	**Pn**	**22 38 56.3**	**+0.4**
AC02	**Maricunga**	**14.41**	**160**		**Pn**	**22 39 03.6**	**+3.1**
FLOC	**Florencia**	**14.84**	**356**	*e*P	Pn	22 39 01.6	-4.2
PTLB	**Pontes e Lacer** comp=Z,4.3nm,1.0s	**15.18**	**100**	Pn	**Pn**	**22 39 12.7**	**+2.4**
PTLB				IAmb	IAmb	22 39 19.1	
MACC	**Macarena, Meta**	**15.38**	**3**	*e*P	**Pn**	**22 39 17.8**	**+4.9**
BBAC	**Balboa, Cauca**	**15.46**	**350**	*e*P	**Pn**	**22 39 18.2**	**+4.2**
POPC	**Popayan, Colom**	**15.88**	**353**	*e*P	**P**	**22 39 24.7**	**+2.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**16.04**	**167**	Pn	**Pn**	**22 39 23.0**	**+1.5**
MACA	**Manacapuru-AM**	**17.11**	**55**	Pn	**Pn**	**22 39 33.9**	**-0.8**
MACA				IAmb	IAmb	22 40 12.8	
	comp=Z,12nm,0.6s						
ROSC	**El Rosal** comp=Z,64nm,19.6s,baz=237,slow=41	**18.04**	**1**	LR	LR	22 48 06.0	
GUY2C	**Guyana, Caldas**	**18.44**	**358**	*e*P	**P**	**22 39 54.1**	**+3.2**
RUSC	**La Rusia**	**19.15**	**5**	*e*P	**P**	**22 40 01.1**	**+2.4**
BARC	**Barichara**	**19.84**	**4**	*e*P	**P**	**22 40 07.7**	**+1.7**
PAYG	**Puerto Ayora**	**19.94**	**308**	*e*P	P	22 39 54.1	-13
H03N1	**Juan Fernandez** baz=12,slow=74,SNR=387	**20.40**	**190**	T	T	22 59 38.0	
H03N2	**Juan Fernandez** baz=12,slow=74,SNR=574	**20.41**	**190**	T	T	22 59 38.8	
H03N3	**Juan Fernandez** baz=12,slow=74,SNR=318	**20.42**	**190**	T	T	22 59 34.2	
PAMC	**Pamplona, Colo**	**20.62**	**6**	*e*P	**P**	**22 40 17.1**	**+2.4**
MT09	**Talagante**	**20.64**	**171**	P	**P**	**22 40 15.0**	**+0.6**
ZARC	**Zaragoza, Cauc**	**20.68**	**359**	*e*P	**P**	**22 40 15.4**	**+0.5**
CPUP	**Villa Florida** comp=Z,3.5nm,0.9s,baz=300,slow=10,SNR=5.4 comp=Z,3.5nm,0.9s	**20.78**	**131**	P	**P**	**22 40 16.4**	**+0.4**
CPUP	**Villa Florida**	**20.78**	**131**	P	**P**	**22 40 16.6**	**+0.6**
BOAV	**Boa Vista**	**20.99**	**43**	P	**P**	**22 40 19.0**	**+0.8**
BOAV				IAmb	IAmb	22 40 22.3	
	comp=Z,4.9nm,0.8s						
BO02	**Sierra Bellavi**	**21.66**	**171**	P	**P**	**22 40 26.7**	**+1.3**
SDV	**Santo Domingo** comp=Z,7.1nm,0.4s,baz=27,slow=9.1,SNR=4.6 comp=Z,7.1nm,0.4s	**22.42**	**10**	P	**P**	**22 40 34.4**	**+0.6**
SDV	**Santo Domingo** comp=Z,17nm,1.1s	**22.42**	**10**	P	**P**	**22 40 33.6**	**-0.2**
SDV				IAmb	IAmb	22 40 36.4	
BAUV	**El Baul**	**23.07**	**17**	P	**P**	**22 40 39.8**	**-0.6**
PLCA	**Paso Flores** comp=Z,3.1nm,1.0s,baz=165,slow=12,SNR=2.8 comp=Z,3.1nm,1.0s	**27.55**	**173**	P	**P**	**22 41 21.4**	**+0.2**
CELP	**Cerrillos**	**32.20**	**15**	P	**P**	**22 42 01.9**	**-0.4**
CBYP	**Canovanas**	**32.57**	**16**	P	**P**	**22 42 04.6**	**-1.1**
CBYP				IAmb	IAmb	22 42 06.5	
	comp=Z,16nm,0.9s						
CUPR	**Culebra, Puert**	**32.76**	**17**	P	P	22 42 05.7	-1.6
TEIG	**Tepich**	**35.93**	**338**	P	**P**	**22 42 34.1**	**-0.5**
WLAR	**White Oak Lake**	**49.95**	**340**	P	**P**	**22 44 27.4**	**-0.5**
T57A	**Hurt**	**50.23**	**355**	P	**P**	**22 44 28.6**	**-1.4**
T57A				IAmb	IAmb	22 44 30.0	
	comp=Z,7.2nm,0.8s						
TX32	**Lajitas Array**	**50.82**	**327**	P	**P**	**22 44 34.0**	**-0.7**
TX32				IAmb	IAmb	22 44 35.0	
	comp=Z,3.0nm,0.8s						
TXAR	**Lajitas Array** comp=Z,2.6nm,0.7s,baz=150,slow=8.9,SNR=35	**50.82**	**327**	P	**P**	**22 44 34.0**	**-0.7**
TXAR				PcP	**PcP**	**22 45 49.8**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=141,slow=5.5,SNR=4.4 comp=Z,2.6nm,0.7s						
TXAR	**Lajitas Array**	**50.82**	**327**	P	**P**	**22 44 34.0**	**-0.7**
MIAR	**Mount Ida**	**50.88**	**340**	P	**P**	**22 44 34.0**	**-0.9**
MIAR				IAmb	IAmb	22 44 35.4	
	comp=Z,5.9nm,0.8s						
Z35A	**Perchaven, San**	**51.16**	**336**	P	**P**	**22 44 36.1**	**-0.9**
X37A	**Clayton**	**51.55**	**338**	P	**P**	**22 44 39.7**	**-0.2**
X37A				IAmb	IAmb	22 44 40.5	
	comp=Z,7.9nm,0.8s						
ABTX	**Abilene, Hawle**	**51.56**	**333**	P	**P**	**22 44 39.1**	**-0.9**
HHAR	**Hobbs**	**52.59**	**340**	P	**P**	**22 44 46.5**	**-1.2**
HHAR				IAmb	IAmb	22 44 47.3	
	comp=Z,6.7nm,0.7s						
MGMO	**Mountain Grove**	**52.87**	**342**	P	**P**	**22 44 48.4**	**-1.3**
MGMO				IAmb	IAmb	22 44 49.1	
	comp=Z,6.9nm,0.8s						
U38A	**Gravette**	**52.88**	**340**	P	**P**	**22 44 48.3**	**-1.5**
U38A				IAmb	IAmb	22 44 49.4	
	comp=Z,5.8nm,1.0s						
TUL1	**Leonard**	**52.88**	**338**	P	**P**	**22 44 48.8**	**-1.0**
OLIL	**Olney**	**53.28**	**347**	P	P	22 44 50.6	-2.1
Q44A	**Meyer Farm, Va**	**53.66**	**346**	P	P	22 44 53.7	-1.8
BINY	**Binghamton**	**55.25**	**359**	P	**P**	**22 45 06.3**	**-0.7**
BINY				IAmb	IAmb	22 45 07.8	
	comp=Z,10nm,0.9s						
ANMO	**Albuquerque**	**56.69**	**329**	P	**P**	**22 45 16.4**	**-1.3**
SADO	**Sadowa**	**57.95**	**356**	P	P	22 45 24.1	-2.0
SADO				IAmb	IAmb	22 45 24.7	
	comp=Z,4.9nm,0.6s						
SDCO	**Great Sand Dun**	**58.47**	**332**	P	**P**	**22 45 29.6**	**-0.6**
SDCO				IAmb	IAmb	22 45 30.5	
	comp=Z,6.1nm,0.7s						
X16A	**Lo Mia Camp, P**	**58.95**	**325**	P	**P**	**22 45 32.9**	**-0.7**
X16A				IAmb	IAmb	22 45 34.4	
	comp=Z,3.1nm,0.7s						
LMN	**Caledonia Moun**	**59.56**	**8**	P	**P**	**22 45 36.8**	**-0.5**
WUAZ	**Wupatki**	**59.72**	**326**	P	**P**	**22 45 38.4**	**-0.5**
WUAZ				IAmb	IAmb	22 45 39.7	
	comp=Z,7.2nm,0.9s						
ECSD	**EROS Data Cent**	**60.22**	**342**	P	**P**	**22 45

comp=Z,0.4nm,0.8s
GERES GERESS Array B 98.83 42 P **P** **22 49 12.7 -0.8**
comp=Z,0.3nm,0.7s,baz=204,slow=2.9,SNR=3.7
comp=Z,0.3nm,0.7s
ASAR Alice Springs 133.83 217 PKP **PKPdf** **22 54 49.6 -1.7**
comp=Z,0.3nm,0.5s,baz=158,slow=2.7,SNR=3.1
WRA Warramunga Arr 136.34 221 PKP **PKPdf** **22 54 54.0 -1.9**
comp=Z,0.5nm,0.5s,baz=134,slow=2.1,SNR=5.2
ZALV Zalesovo Beam 136.35 17 PKP **PKPdf** **22 54 53.6 -1.3**
comp=Z,0.4nm,0.3s,baz=18,slow=3.1,SNR=2.8
MKAR Makanchi Array 141.42 26 PKP **PKPdf** **22 55 04.6 +0.1**
comp=Z,1.0nm,1.1s,baz=343,slow=1.5,SNR=1.6
SONM Songino Array 145.58 359 PKPbc **PKPdf** **22 55 11.3 -0.6**
comp=Z,2.9nm,0.9s,baz=326,slow=2.4,SNR=16
KSRS Korea Array 148.64 324 PKPbc **PKPdf** **22 55 19.2 +2.1**
comp=Z,1.7nm,1.0s,baz=30,slow=1.1,SNR=8.2
PZH PanZhiHua 166.46 14 PKP **PKPdf** **22 55 35.6 -4.0**

NOU ***03*** *22:39:59.6, 17°.33S×178°.65W, h548km, mb4.3/17, Fiji Islands Region*
NEIC ***03*** *22:39:59.6±1.7, 17°.6S±0°.1×178°.8W±0°.1, h526km±9km, mb4.2/31, Error ellipse: s-maj=20.8km s-min=15.4km az=145.0*
IDC ***03*** *22:40:01.8±1.3, 17°.78S×178°.97W, h551km±15km, mb3.5/9, mbtmp4.4/11, Error ellipse: s-maj=23.4km s-min=12.5km az=146.0*
ISC 03 22:40:00.0±0.5**, 17°.6S**±0°.1×**178°.77W**±0°.08**, h539**km**, n78,** σ1**9**§**59/81, mb4.1/25, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TAVE	**Taveuni**	**1.37**	**308**	P		**P**	**P**	**22 41 06.9**	**+0.6**
MSVF	**Nonsavu**	**3.03**	**266**	P		**P**	**P**	**22 41 15.5**	**+1.1**
	197nm,0.6s,baz=54,slow=3.8,SNR=135								
MSVF	**Nonsavu**	**3.03**	**266**	P		**P**		**22 41 15.5**	**+1.1**
AFI	**Afiamalu**	**7.65**	**63**	P		**P**	**P**	**22 41 51.9**	**-2.3**
	20nm,0.5s,baz=65,slow=3.9,SNR=4.9								
AFI				S			**S**	**22 43 20.7**	**-6.9**
	22nm,0.5s,baz=60,slow=22,SNR=4.2								
AFI	**Afiamalu**	**7.65**	**63**	P		**P**		**22 41 52.0**	**-2.1**
AFI	**Afiamalu**	**7.65**	**63**	P		**P**		**22 41 52.0**	**-2.1**
NIUE	**Niue**	**8.54**	**102**	P		**P**		**22 42 02.6**	**-0.3**
NIUE	**Niue**	**8.54**	**102**	P		**P**		**22 42 02.6**	**-0.3**
FUNA	**Funafuti**	**9.19**	**347**	P		**P**		**22 42 08.9**	**-0.8**
PINNC	**Pines Island,**	**13.88**	**247**	P		**P**		**22 42 56.7**	**-1.4**
DZM	**Mont Dzumac**	**14.62**	**250**	P		**P**		**22 43 04.1**	**-1.7**
	12nm,1.2s,baz=207,slow=15,SNR=2.1								
DZM	**Mont Dzumac**	**14.62**	**250**	P		**P**	**P**	**22 43 04.3**	**-1.5**
DZM	**Mont Dzumac**	**14.62**	**250**	P		**P**	**P**	**22 43 08.4**	**+2.6**
	9.0nm,1.1s								
OUZ	**Omahuta**	**18.86**	**200**	P		**P**	**P**	**22 43 47.7**	**+1.6**
URZ	**Urewera**	**20.94**	**189**	P		**P**	**P**	**22 44 02.5**	**-2.4**
	11nm,0.6s,baz=254,slow=1.0,SNR=12								
	11nm,0.6s								
URZ	**Urewera**	**20.94**	**189**	P		**P**		**22 44 02.8**	**-2.1**
BKZ	**Black Stump Fm**	**21.92**	**190**	P		**P**		**22 44 12.2**	**-1.6**
BFZ	**Birch Farm**	**23.44**	**190**	P		**P**		**22 44 29.3**	**+1.9**
	112nm,2.9s								
QRZ	**Quartz Range**	**24.37**	**196**	P		**P**		**22 44 37.4**	**+1.8**
EIDS	**Eidsvold**	**29.06**	**249**	P		**P**	**P**	**22 45 16.5**	**-0.6**
EIDS				IAmb		IAmb	IAmb	22 45 18.7	
	comp=Z,12nm,1.1s								
ARMA	**Armidale**	**29.82**	**239**	P		**P**	**P**	**22 45 23.7**	**0.0**
ARMA	**Armidale**	**29.82**	**239**	P		**P**		**22 45 24.4**	**+0.7**
RMQ	**Roma**	**31.31**	**248**	P		**P**		**22 45 37.0**	**+0.5**
CTAO	**Charters Tower**	**33.16**	**260**	P		**P**		**22 45 51.6**	**-0.7**
CTAO				IAmb		IAmb	IAmb	22 46 05.1	
	comp=Z,22nm,1.4s								
CMSA	**Cobar Meteorol**	**35.02**	**240**	P		**P**	**P**	**22 46 07.7**	**0.0**
QLP	**Quilpie**	**35.33**	**249**	P		**P**	**P**	**22 46 10.3**	**-0.1**
COEN	**Coen**	**36.76**	**270**	P		**P**	**P**	**22 46 21.9**	**-0.3**
GLAD	**Gladstone**	**36.86**	**224**	P		**P**	**P**	**22 46 23.0**	**+0.3**
TOO	**Toolangi**	**37.12**	**230**	P		**P**	**P**	**22 46 25.2**	**+0.2**
TOO				IAmb		IAmb	IAmb	22 46 43.8	
	comp=Z,12nm,1.2s								
TOO	**Toolangi**	**37.12**	**230**	P		**P**	**P**	**22 46 25.9**	**+0.9**
STKA	**Stephens Creek**	**38.49**	**241**	P		**P**	**P**	**22 46 36.7**	**+0.4**
	comp=Z,4.9nm,0.4s,baz=94,slow=11,SNR=15								
	comp=Z,4.9nm,0.4s								
STKA	**Stephens Creek**	**38.49**	**241**	P		**P**	**P**	**22 46 36.5**	**+0.2**
INKA	**Innaminka**	**38.56**	**247**	P		**P**	**P**	**22 46 36.9**	**+0.1**
BBOO	**Buckleboo**	**43.27**	**241**	P		**P**		**22 47 14.1**	**-0.1**
BBOO				IAmb		IAmb	IAmb	22 47 33.8	
	comp=Z,17nm,1.4s								
WB0	**Warramunga Arr**	**44.32**	**259**	P		**P**	**P**	**22 47 21.3**	**-1.2**
WB0				IAmb		IAmb	IAmb	22 47 34.5	
	comp=Z,23nm,1.5s								
WRA	**Warramunga Arr**	**44.35**	**259**	P		**P**	**P**	**22 47 21.4**	**-1.4**
	comp=Z,2.9nm,0.7s,baz=97,slow=7.1,SNR=22								
	comp=Z,2.9nm,0.7s								
WRA	**Warramunga Arr**	**44.35**	**259**	P		**P**	**P**	**22 47 21.6**	**-1.2**
AS31	**Alice Springs**	**44.55**	**254**	P		**P**	**P**	**22 47 23.8**	**-0.5**
AS31				IAmb		IAmb	IAmb	22 47 24.5	
	comp=Z,8.7nm,0.6s								
ASAR	**Alice Springs**	**44.55**	**254**	P		**P**	**P**	**22 47 23.9**	**-0.4**
	comp=Z,21nm,0.4s,baz=89,slow=8.1,SNR=264								
ASAR				PcP		**PcP**	**PcP**	**22 48 56.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=100,slow=4.3,SNR=2.6								
ASAR				S		**S**	**S**	**22 53 15.9**	**-5.1**
	comp=Z,0.9nm,0.8s,baz=86,slow=15,SNR=4.4								
	comp=Z,21nm,0.4s								
MTN	**Manton Dam**	**48.46**	**268**	P		**P**	**P**	**22 47 53.4**	**-0.6**
FORT	**Forrest**	**49.84**	**244**	P		**P**	**P**	**22 48 03.2**	**-0.7**
KNRA	**Kununurra**	**50.18**	**264**	P		**P**	**P**	**22 48 06.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.74**	**260**	P		**P**	**P**	**22 48 25.1**	**0.0**
FITZ				IAmb		IAmb	IAmb	22 48 26.6	
	comp=Z,5.9nm,0.9s								
PSA00	**Pilbara Seismi**	**57.66**	**255**	P		**P**	**P**	**22 48 58.7**	**-0.7**
PSA00	**Pilbara Seismi**	**57.66**	**255**	P		**P**	**P**	**22 48 58.5**	**-0.8**
PSA00				IAmb		IAmb	IAmb	22 48 59.7	
	comp=Z,11nm,0.8s								
MBWA	**Marble Bar**	**57.82**	**256**	P		**P**	**P**	**22 48 59.6**	**-0.8**
MBWA				IAmb		IAmb	IAmb	22 49 06.4	
	comp=Z,21nm,1.3s								
MORW	**Morawa**	**60.30**	**246**	P		**P**	**P**	**22 49 16.2**	**-0.8**
MORW				IAmb		IAmb	IAmb	22 49 37.1	
	comp=Z,22nm,1.3s								
MJAR	**Matsushiro Arr**	**67.42**	**323**	P		**P**	**P**	**22 50 02.5**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=122,slow=4.4,SNR=4.1								
	comp=Z,0.5nm,0.4s								
QSPA	**South Pole Qui**	**72.49**	**180**	P		**P**	**P**	**22 50 33.0**	**+1.0**
QSPA				IAmb		IAmb	IAmb	22 50 37.0	
	comp=Z,6.9nm,1.3s								
BEKR	**Beckworth**	**78.86**	**42**	P		**P**	**P**	**22 51 09.4**	**+1.7**
P18K	**Big Mountain,**	**79.05**	**12**	P		**P**	**P**	**22 51 08.9**	**+0.8**
P18K				IAmb		IAmb	IAmb	22 51 20.9	
	comp=Z,12nm,1.4s								
LCH	**Last Change Ra**	**79.22**	**45**	P		**P**	**P**	**22 51 11.7**	**+2.0**
NVAR	**Mina Array Bea**	**79.42**	**44**	P		**P**	**P**	**22 51 12.8**	**+2.0**
	comp=Z,1.1nm,0.6s,baz=226,slow=8.5,SNR=9.7								
	comp=Z,1.1nm,0.6s								
NVAR	**Mina Array Bea**	**79.42**	**44**	P		**P**	**P**	**22 51 12.1**	**+1.4**
O18K	**Koktuh Hills**	**79.48**	**12**	P		**P**	**P**	**22 51 11.6**	**+1.2**
O18K				IAmb		IAmb	IAmb	22 51 12.4	
	comp=Z,7.0nm,1.1s								
KVN	**Kaiserville**	**79.88**	**44**	P		**P**	**P**	**22 51 15.1**	**+2.0**
K05A	**Summer Lake**	**80.15**	**39**	P		**P**	**P**	**22 51 16.7**	**+2.2**
K05A				IAmb		IAmb	IAmb	22 51 24.9	
	comp=Z,9.9nm,1.4s								
TTA	**Tatalina**	**82.19**	**10**	P		**P**	**P**	**22 51 25.9**	**+1.5**
GLI	**Glacier Island**	**82.21**	**15**	P		**P**	**P**	**22 51 24.9**	**+0.6**
GLI				IAmb		IAmb	IAmb	22 51 25.9	
	comp=Z,3.7nm,0.8s								
TRF	**Thorofare Moun**	**83.75**	**12**				**P**	**22 51 32.6**	**+0.3**
TRF				IAmb		IAmb	IAmb	22 51 33.9	
	comp=Z,3.1nm,0.6s								
IMAR	**Indian Mountai**	**85.40**	**10**	P		**P**	**P**	**22 51 40.8**	**+0.8**
IL31		**85.63**	**13**	P		**P**	**P**	**22 51 41.9**	**+0.9**
ILAR	**Eielson Array**	**85.63**	**13**	P		**P**	**P**	**22 51 41.5**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=223,slow=5.5,SNR=14								
	comp=Z,0.7nm,0.4s								
TXAR	**Lajitas Array**	**86.10**	**58**	P		**P**	**P**	**22 51 47.5**	**+3.1**
	comp=Z,1.6nm,0.8s,baz=215,slow=5.4,SNR=14								
	comp=Z,1.6nm,0.8s								
TXAR	**Lajitas Array**	**86.10**	**58**	P		**P**	**P**	**22 51 47.1**	**+2.8**
PD31	**Pinedale Array**	**87.34**	**44**	P		**P**	**P**	**22 51 51.6**	**+1.6**
PD31				IAmb		IAmb	IAmb	22 51 52.4	
	comp=Z,1.3nm,0.6s								
PDAR	**Pinedale Array**	**87.34**	**44**	P		**P**	**P**	**22 51 51.9**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=196,slow=3.5,SNR=8.4								
	comp=Z,1.1nm,0.6s								
PDAR	**Pinedale Array**	**87.34**	**44**				**P**	**22 51 51.7**	**+1.6**
BMAR	**Burnt Mountain**	**88.39**	**13**	P		**P**	**P**	**22 51 55.6**	**+1.4**
ARCES	**ARCESS Array B**	**125.91**	**350**	PKP		**PKiKP**	**PKiKP**	**22 58 00.1**	**-0.6**

comp=Z,1.6nm,0.8s,baz=357,slow=3.6,SNR=1.8
CLL Collm 145.05 347 *i* PKPbc **PKPab** **22 58 38.0 +0.4**
comp=Z,4.0nm,0.7s
GERES GERESS Array B 147.19 345 PKPbc **PKiKP** **22 58 44.1 -0.5**
comp=Z,0.9nm,0.5s,baz=29,slow=3.0,SNR=11
CONA Conrad Observa 147.42 342 *e*P **PKiKP** **22 58 45.4 +0.2**
comp=Z,1.2nm,0.6s
RONA Rosalia, Austr 147.49 341 *e*P **PKiKP** **22 58 46.0 +0.8**
comp=Z,1.3nm,0.6s
KBA Koelnbreinsper 148.91 344 *e*P **PKiKP** **22 58 48.4 0.0**
comp=Z,0.9nm,0.5s
WATA Walderalm 149.10 346 *e*P **PKiKP** **22 58 48.7 0.0**
comp=Z,1.1nm,0.3s
WTTA Wattenberg 149.16 346 *e*P **PKiKP** **22 58 49.1 +0.3**
comp=Z,1.5nm,0.3s
ABTA Abfaltersbach 149.43 345 *e*P **PKiKP** **22 58 49.4 +0.1**
comp=Z,1.4nm,0.5s

JMA ***03*** *22:49:05.8±0.1, 24°.6N±0°.4×122°.1E±0°.4, h38km±4km, MV3.2/11, TAIWAN REGION*
TAP ***03*** *22:49:05.5, 24°.68N×122°.11E, h11km, ML3.6, C*
ISC 03 22:49:03.6±1.0**, 24°.64N**±0°.02×**122°.22E**±0°.01**, h6**km±9km**, n128,** σ0§**93/249, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EGS		**0.34**	**308**	P			**Pg**	**22 49 10.8**	**+0.6**
	baz=316								
EGS				S			**Sg**	**22 49 14.1**	**-0.5**
	baz=316								
TWC	**Suao**	**0.34**	**266**	P			**Pg**	**22 49 10.7**	**+0.4**
	baz=258								
TWC				*e*S			**Sg**	**22 49 14.4**	**-0.3**
	baz=258								
NTC	**Toucheng**	**0.42**	**301**	P			**Pg**	**22 49 12.4**	**+0.7**
	baz=304								
NTC				S			**Sg**	**22 49 16.8**	**-0.5**
	baz=304								
TWB1	**Santiao Chiao**	**0.43**	**330**	P			**Pg**	**22 49 12.9**	**+0.9**
	baz=342								
TWB1				*e*S			**Sg**	**22 49 16.5**	**-1.0**
	baz=342								
EWUT	**Wuta**	**0.45**	**245**	P			**Pg**	**22 49 12.1**	**-0.2**
	baz=232								
EWUT				S			**Sg**	**22 49 18.8**	**+0.7**
	baz=232								
ILA	**Ilan**	**0.45**	**287**	*e*P			**Pb**	**22 49 13.4**	**-0.5**
	baz=276								
ILA				*e*S			**Sb**	**22 49 20.0**	**-1.0**
	baz=276								
NDS	**Dongshan**	**0.46**	**270**	P			**Pg**	**22 49 12.2**	**-0.4**
	baz=263								
NDS				S			**Sg**	**22 49 18.5**	**0.0**
	baz=263								
ENA	**Nanau**	**0.48**	**245**	P			**Pb**	**22 49 13.7**	**-0.9**
	baz=232								
ENA				*e*S			**Sb**	**22 49 20.3**	**-1.6**
	baz=232								
TIPB	**Shuangxi**	**0.49**	**313**	P			**Pg**	**22 49 14.0**	**+0.9**
	baz=311								
TIPB				S			**Sg**	**22 49 18.4**	**-1.2**
	baz=311								
TWE	**Neicheng**	**0.51**	**280**	P			**Pg**	**22 49 13.9**	**+0.3**
	baz=269								
TWE				S			**Sg**	**22 49 21.0**	**+0.8**
	baz=269								
EHP	**Heping Village**	**0.55**	**234**	*e*P			**Pb**	**22 49 15.6**	**0.0**
	baz=230								
EHP				*e*S			**Sb**	**22 49 22.9**	**-0.8**
	baz=230								
SXI1	**Grass Mountain**	**0.56**	**325**	P			**Pb**	**22 49 15.5**	**-0.3**
	baz=338								
SXI1				S			**Sg**	**22 49 22.6**	**+1.0**
	baz=338								
NWF	**Wu-fen Shan**	**0.59**	**317**	P			**Pb**	**22 49 16.3**	**-0.1**
	baz=317								
NWF				*e*S			**Sg**	**22 49 21.5**	**-1.2**
	baz=317								
FUSB	**Fushanzhiwuyua**	**0.59**	**282**	P			**Pg**	**22 49 15.6**	**+0.6**
	baz=279								
FUSB				*e*S			**Sg**	**22 49 22.4**	**-0.3**
	baz=279								
ENTT	**Nioudou**	**0.60**	**271**	P			**Pg**	**22 49 15.0**	**-0.2**
	baz=265								
ENTT				*e*S			**Sg**	**22 49 22.2**	**-0.8**
	baz=265								
LATG	**Datong**	**0.64**	**261**	P			**Pg**	**22 49 16.5**	**+0.5**
	baz=247								
LATG				S			**Sg**	**22 49 24.6**	**+0.3**
	baz=247								
NDT	**Datong Townshi**	**0.65**	**267**	P			**Pg**	**22 49 16.1**	**0.0**
	baz=262								
NDT				*e*S			**Sg**	**22 49 24.3**	**-0.2**
	baz=262								
NWLT	**Wulai**	**0.67**	**282**	P			**Pg**	**22 49 17.1**	**+0.5**
	baz=280								
NWLT				S			**Sg**	**22 49 24.6**	**-0.7**
	baz=280								
TWA	**Mucha**	**0.67**	**301**	P			**Pg**	**22 49 17.4**	**+0.8**
	baz=295								
TWA				S			**Sg**	**22 49 24.5**	**-0.9**
	baz=295								
JYNG	**Yonagunijimaku**	**0.68**	**105**	P			**Pn**	**22 49 20.6**	**+0.8**
JYNG				S			**Sn**	**22 49 31.0**	**+0.2**
NHDH	**Xindian Distri**	**0.71**	**297**	*e*P			**Pg**	**22 49 17.5**	**+0.1**
	baz=298								
NHDH				*e*S			**Sg**	**22 49 26.4**	**-0.2**
	baz=298								
ETL	**Fush Village**	**0.72**	**229**	P			**Pb**	**22 49 18.5**	**-0.2**
	baz=221								
ETL				*e*S			**Sb**	**22 49 28.4**	**-0.5**
	baz=221								
NACB	**Ninganchiao**	**0.73**	**231**	P			**Pb**	**22 49 18.3**	**-0.5**
	baz=223								
NACB				S			**Sb**	**22 49 28.7**	**-0.4**
	baz=223								
YOJ	**Yonaguni jima**	**0.74**	**103**	P			**Pn**	**22 49 21.4**	**+0.7**
	baz=104								
YOJ				*e*S			**Sn**	**22 49 32.9**	**+0.8**
	baz=104								
YOJ	**Yonaguni jima**	**0.74**	**103**	P			**Pn**	**22 49 21.3**	**+0.7**
YOJ				S			**Sn**	**22 49 32.4**	**+0.3**
TAP	**Taipei**	**0.77**	**302**	*e*S			**Sg**	**22 49 27.8**	**-0.5**
	baz=296								
YHNB	**Yeheng**	**0.77**	**273**	P			**Pg**	**22 49 18.9**	**+0.4**
	baz=269								
YHNB				S			**Sg**	**22 49 28.0**	**-0.5**
	baz=269								
YM01	**YM01**	**0.78**	**311**	P			**Pb**	**22 49 19.8**	**+0.2**
	baz=304								
YM01				S			**Sg**	**22 49 28.6**	**-0.2**
	baz=304								
NSK	**Sanguang**	**0.79**	**273**	P			**Pg**	**22 49 18.2**	**-0.6**
	baz=270								
NSK				S			**Sg**	**22 49 27.9**	**-1.1**
	baz=270								
NNSB	**Datong**	**0.79**	**255**	P			**Pg**	**22 49 19.1**	**+0.2**
	baz=249								
NNSB				S			**Sg**	**22 49 29.1**	**-0.1**
	baz=249								
TWD	**Chiawan**	**0.80**	**226**	P			**Pb**	**22 49 19.9**	**0.0**
	baz=226								
TWD				S			**Sb**	**22 49 30.8**	**0.0**
	baz=226								
NNS	**Nan Shan**	**0.80**	**256**	P			**Pg**	**22 49 18.8**	**-0.2**
	baz=242								
NNS				S			**Sg**	**22 49 29.0**	**-0.3**
	baz=242								
ETLH	**Xiulin Townshi**	**0.80**	**238**	P			**Pb**	**22 49 19.5**	**-0.5**
	baz=231								
ETLH				S			**Sb**	**22 49 30.2**	**-0.9**
	baz=231								
ANP	**Anpu**	**0.84**	**311**	*e*P			**Pg**	**22 49 19.7**	**-0.1**
	baz=313								
ANP				*e*S			**Sg**	**22 49 30.0**	**-0.7**
	baz=313								
HWA	**Hwalien**	**0.86**	**221**	*e*P			**Pn**	**22 49 23.6**	**+1.3**
	baz=222								
HWA				*e*S			**Sn**	**22 49 33.6**	**-1.6**
	baz=222								
TWS1	**Kuangyinshan**	**0.86**	**302**	P			**Pn**	**22 49 22.0**	**-0.4**
	baz=296								
TWS1				S			**Sg**	**22 49 31.8**	**+0.3**
	baz=296								
NTST	**Danshui**	**0.88**	**307**	*e*P			**Pb**	**22 49 22.0**	**+0.7**
	baz=309								
NTST				*e*S			**Sg**	**22 49 32.1**	**+0.2**
	baz=309								
FUSS	**Fushou**	**0.97**	**247**	P			**Pb**	**22 49 23.2**	**+0.2**
	baz=242								
FUSS				S			**Sg**	**22 49 35.1**	**+0.1**
	baz=242								
NCU	**National Centr**	**1.00**	**290**	*e*P			**Pg**	**22 49 22.2**	**-0.6**
	baz=289								
NCU				*e*S			**Sg**	**22 49 35.4**	**-0.4**
	baz=289								
NCUH	**Zhongli**	**1.00**	**290**	*e*P			**Pb**	**22 49 23.8**	**+0.5**
	baz=288								
NCUH				*e*S			**Sg**	**22 49 36.4**	**+0.6**
	baz=288								
PCYT	**Pengchaiyu**	**1.00**	**352**	P			**Pb**	**22 49 23.7**	**+0.4**
	baz=360								
PCYT				*e*S			**Sg**	**22 49 36.8**	**+1.0**
	baz=360								
WHF	**Hehuan Shan**	**1.00**	**241**	P			**Pb**	**22 49 23.3**	**-0.3**
	baz=235								
WHF				S			**Sg**	**22 49 35.8**	**-0.1**
	baz=235								
NFF	**Wufeng Townshi**	**1.01**	**270**	*e*P			**Pg**	**22 49 22.7**	**-0.2**
	baz=257								
NFF				*e*S			**Sg**	**22 49 35.2**	**-0.8**
	baz=257								
TWT	**Tachien**	**1.03**	**248**	P			**Pn**	**22 49 24.2**	**-0.5**
	baz=237								
TWT				*e*S			**Sb**	**22 49 36.9**	**-0.9**
	baz=237								
TDCB	**Techi**	**1.04**	**249**	P			**Pn**	**22 49 24.4**	**-0.6**
	baz=238								
TDCB				*e*S			**Sg**	**22 49 37.2**	**0.0**
	baz=238								
ESL	**Shilin**	**1.09**	**222**	*e*P			**Pn**	**22 49 25.5**	**0.0**
	baz=223								
ESL				*e*S			**Sn**	**22 49 40.2**	**-0.7**
	baz=223								
LIOB	**Emei**	**1.10**	**271**	P			**Pn**	**22 49 26.6**	**+1.0**
	baz=259								
LIOB				*e*S			**Sb**	**22 49 40.2**	**+0.6**
	baz=259								
NSTT	**Nanjuang**	**1.11**	**270**	P			**Pn**	**22 49 26.4**	**+0.6**
	baz=256								
NSTT				S			**Sb**	**22 49 40.0**	**-0.1**
	baz=256								
CHGB	**Renai**	**1.11**	**239**	P			**Pn**	**22 49 25.7**	**-0.3**
	baz=234								
CHGB				*e*S			**Sb**	**22 49 39.9**	**-0.4**
	baz=234								
SBCB	**Hsinchu**	**1.14**	**278**	*e*P			**Pn**	**22 49 26.6**	**+0.5**
	baz=275								
SBCB				*e*S			**Sb**	**22 49 41.1**	**+0.4**
	baz=275								
HSN	**Hsinchu**	**1.15**	**279**	*e*P			**Pg**	**22 49 24.2**	**-1.5**
	baz=294								
HSN				*e*S			**Sg**	**22 49 38.6**	**-2.0**
	baz=294								
OWD	**Renai**	**1.17**	**235**	P			**Pn**	**22 49 26.4**	**-0.3**
	baz=230								
OWD				*e*S			**Sb**	**22 49 41.8**	**-0.1**
	baz=230								
WUSB	**Renai**	**1.20**	**238**	P			**Pn**	**22 49 27.2**	**+0.2**
	baz=233								
WUSB				*e*S			**Sb**	**22 49 42.3**	**-0.2**
	baz=233								
EGFH	**Guangfu**	**1.21**	**217**	*e*P			**Pn**	**22 49 27.8**	**+0.7**
	baz=229								
EGFH				*e*S			**Sn**	**22 49 44.7**	**+1.0**
	baz=229								
WHP	**Taichung City**	**1.22**	**253**	*e*P			**Pn**	**22 49 27.7**	**+0.5**
	baz=249								
WHP				*e*S			**Sg**	**22 49 42.5**	**-0.3**
	baz=249								
NMLH	**Miaoli**	**1.31**	**266**	*e*P			**Pg**	**22 49 30.0**	**+1.3**
	baz=255								
NMLH				*e*S			**Sn**	**22 49 47.5**	**+1.3**
	baz=255								
VWDT	**VWDT**	**1.32**	**229**	P			**Pg**	**22 49 29.1**	**+0.2**
	baz=231								
VWDT				S			**Sn**	**22 49 46.3**	**-0.2**
	baz=231								
WCS	**Beigang Elemen**	**1.33**	**245**	P			**Pg**	**22 49 28.9**	**-0.2**
	baz=248								
WCS				*e*S			**Sg**	**22 49 45.7**	**-0.6**
	baz=248								
NSY	**Sanyi**	**1.35**	**261**	*e*P			**Pg**	**22 49 30.6**	**+1.1**
	baz=250								
NSY				*e*S			**Sn**	**22 49 47.1**	**-0.2**
	baz=250								
TWQ1	**Liyutan**	**1.35**	**258**	*e*P			**Pg**	**22 49 31.2**	**+1.7**
	baz=254								
TWQ1				*e*S			**Sn**	**22 49 46.9**	**-0.4**
	baz=254								
HGSD	**Ruisui**	**1.35**	**213**	P			**Pg**	**22 49 30.0**	**+0.4**
	baz=190								
HGSD				*e*S			**Sn**	**22 49 47.9**	**+0.6**
	baz=190								
EHY	**Hungye**	**1.39**	**216**	P			**Pg**	**22 49 30.2**	**-0.2**
	baz=227								
EHY				*e*S			**Sn**	**22 49 48.8**	**+0.5**
	baz=227								
IRIF	**Iriomote-Funau**	**1.41**	**102**	P			**Pg**	**22 49 30.7**	**+0.1**
IRIF				*e*S			**Sg**	**22 49 49.2**	**+0.4**
SMLT	**Sun Moon Lake**	**1.42**	**238**	*e*P			**Pg**	**22 49 31.4**	**+0.5**
	baz=227								
SMLT				*e*S			**Sn**	**22 49 49.6**	**+0.5**
	baz=227								
SSLB	**Suanglung**	**1.43**	**234**	P			**Pg**	**22 49 31.1**	**0.0**
	baz=230								
SSLB				*e*S			**Sg**	**22 49 49.8**	**+0.1**
	baz=230								

	baz=234							
ELDTW	**Lidau**	**1.81**	**218**	*e*P		**Pb**	**22 49 36.6**	**-0.7**
	baz=214							
ELDTW				*e*S		**Sb**	**22 49 59.5**	**-0.9**
	baz=214							
WRL	**Guolierlin Hig**	**1.84**	**247**	*e*P		**Pb**	**22 49 37.3**	**-0.3**
	baz=256							
WRL				*e*S		**Sb**	**22 50 01.3**	**+0.4**
	baz=256							
EDH	**Donghe**	**1.86**	**207**	*e*P		**Pn**	**22 49 36.4**	**+0.4**
	baz=189							
EDH				*e*S		**Sb**	**22 50 00.1**	**-1.4**
	baz=189							
JISG	**Ishigakijimahi**	**1.90**	**91**	S		**Sb**	**22 50 03.3**	**+0.6**
WTK	**Tuku**	**1.92**	**241**	*e*P		**Pb**	**22 49 38.9**	**-0.2**
	baz=237							
WTK				*e*S		**Sg**	**22 50 04.5**	**-1.0**
	baz=237							
CHN2	**Minshiung**	**1.94**	**236**	*e*S		**Sg**	**22 50 06.0**	**0.0**
	baz=232							
CHN4	**Tsaushan**	**1.96**	**230**	*e*P		**Pb**	**22 49 40.0**	**+0.2**
	baz=226							
CHN4				*e*S		**Sg**	**22 50 07.1**	**+0.3**
	baz=226							
STYH	**Taoyuan**	**1.97**	**223**	*e*P		**Pb**	**22 49 39.8**	**-0.1**
	baz=207							
STYH				*e*S		**Sg**	**22 50 05.7**	**-1.2**
	baz=207							
TPUB	**Ta-pu**	**1.97**	**228**	*e*P		**Pg**	**22 49 40.7**	**-0.7**
	baz=225							
TPUB				*e*S		**Sg**	**22 50 06.3**	**-0.8**
	baz=225							
LONT	**Longtian**	**1.99**	**210**	*e*P		**Pb**	**22 49 39.0**	**-1.2**
	baz=191							
LONT				*e*S		**Sb**	**22 50 04.2**	**-1.1**
	baz=191							
CHY	**Chiayi**	**2.00**	**236**	*e*P		**Pb**	**22 49 40.6**	**+0.3**
	baz=232							
CHY				*e*S		**Sg**	**22 50 06.6**	**-1.2**
	baz=232							
WTP	**Ta-pu**	**2.02**	**227**	*e*P		**Pb**	**22 49 41.2**	**+0.4**
	baz=224							
WTP				*e*S		**Sg**	**22 50 08.7**	**+0.1**
	baz=224							
LDUT	**Ludao**	**2.07**	**200**	*e*P		**Pn**	**22 49 38.5**	**-0.4**
	baz=183							
LDUT				*e*S		**Sn**	**22 50 05.1**	**0.0**
	baz=183							
WSF	**Szhu**	**2.08**	**242**	*e*P		**Pb**	**22 49 41.1**	**-0.7**
	baz=238							
WSF				*e*S		**Sb**	**22 50 07.5**	**-0.3**
	baz=238							
TWK	**Hsinying**	**2.09**	**230**	*e*P		**Pg**	**22 49 42.5**	**-1.2**
	baz=226							
TWK				*e*S		**Sg**	**22 50 10.5**	**-0.4**
	baz=226							
SNST	**Tainan City**	**2.12**	**229**	*e*P		**Pg**	**22 49 43.2**	**-1.0**
	baz=226							
SNST				*e*S		**Sg**	**22 50 10.2**	**-1.5**
	baz=226							
CHN1	**Nanshi**	**2.12**	**227**	*e*P		**Pg**	**22 49 43.3**	**-1.0**
	baz=225							
CHN1				*e*S		**Sg**	**22 50 12.0**	**+0.3**
	baz=225							
WSL	**Shuilin Townsh**	**2.13**	**239**	*e*P		**Pb**	**22 49 42.4**	**-0.2**
	baz=234							
WSL				*e*S		**Sb**	**22 50 10.1**	**+0.7**
	baz=234							
SGST	**Jiashian**	**2.16**	**224**	*e*P		**Pb**	**22 49 42.5**	**-0.5**
	baz=207							
SGST				*e*S		**Sb**	**22 50 10.5**	**+0.4**
	baz=207							
ICHU	**Yijhu**	**2.18**	**235**	*e*P		**Pb**	**22 49 43.5**	**0.0**
	baz=231							
ICHU				*e*S		**Sg**	**22 50 12.2**	**-1.6**
	baz=231							
JTJ	**Tarama**	**2.26**	**89**	*e*P		**Pb**	**22 49 43.7**	**-1.1**
JTJ				*e*S		**Sb**	**22 50 11.8**	**-1.1**
ECL	**Taimali**	**2.34**	**210**	*e*P		**Pn**	**22 49 43.9**	**+1.3**
	baz=196							
ECL				*e*S		**Sn**	**22 50 12.7**	**+1.0**
	baz=196							
SSD	**Sandimen**	**2.38**	**218**	*e*P		**Pb**	**22 49 46.5**	**-0.4**
	baz=216							
SSD				*e*S		**Sb**	**22 50 17.3**	**+0.8**
	baz=216							
MASBT	**Mashibuluo**	**2.49**	**216**	*e*P		**Pb**	**22 49 48.3**	**-0.4**
	baz=199							
MASBT				*e*S		**Sb**	**22 50 19.7**	**+0.1**
	baz=199							
VWUC	**VWUC**	**2.54**	**279**	*e*P		**Pn**	**22 49 46.2**	**+0.7**
	baz=275							
VWUC				*e*S		**Sn**	**22 50 16.3**	**-0.5**
	baz=275							
MATB	**Ma-tsu**	**2.55**	**307**	*e*P		**Pn**	**22 49 45.6**	**+0.1**
	baz=305							
MATB				*e*S		**Sn**	**22 50 14.7**	**-2.3**
	baz=305							
EAST	**Anshuo**	**2.57**	**210**	*e*P		**Pn**	**22 49 46.3**	**+0.4**
	baz=195							
EAST				*e*S		**Sn**	**22 50 18.4**	**+0.9**
	baz=195							
TAW	**Tawu**	**2.57**	**209**	*e*P		**Pn**	**22 49 47.2**	**+1.4**
	baz=193							
TAW				*e*S		**Sn**	**22 50 18.0**	**+0.5**
	baz=193							
TAWH	**Dawu Township**	**2.59**	**208**	*e*P		**Pb**	**22 49 48.1**	**-2.5**
	baz=199							
SSPT	**Xinbi**	**2.63**	**216**	*e*P		**Pb**	**22 49 50.2**	**-0.9**
	baz=200							
SSPT				*e*S		**Sb**	**22 50 22.4**	**-1.2**
	baz=200							
LAY	**Lan-yu**	**2.66**	**194**	*e*P		**Pn**	**22 49 47.4**	**+0.4**
	baz=180							
LAY				*e*S		**Sn**	**22 50 18.9**	**-0.7**
	baz=180							
PNG	**Penghu**	**2.66**	**247**	*e*P		**Pn**	**22 49 48.5**	**+1.5**
	baz=241							
PNG				*e*S		**Sn**	**22 50 20.5**	**+0.9**
	baz=241							
PHUB	**P'eng-hu**	**2.67**	**246**	*e*P		**Pn**	**22 49 48.5**	**+1.4**
	baz=240							
PHUB				*e*S		**Sn**	**22 50 20.6**	**+0.8**
	baz=240							
LYUB	**Lan-yu**	**2.69**	**193**	*e*P		**Pn**	**22 49 47.6**	**+0.2**
	baz=191							
LYUB				*e*S		**Sn**	**22 50 19.6**	**-0.7**
	baz=191							
SCZT	**Fangliau**	**2.69**	**213**	*e*P		**Pb**	**22 49 50.2**	**-2.0**
	baz=197							
SCZT				*e*S		**Sb**	**22 50 24.0**	**-1.4**
	baz=197							
WDGT	**Dungji**	**2.71**	**240**	*e*P		**Pn**	**22 49 48.2**	**+0.4**
	baz=235							
WDGT				*e*S		**Sn**	**22 50 20.4**	**-0.5**
	baz=235							
SLIU	**Shizi**	**2.74**	**209**	*e*P		**Pb**	**22 49 52.0**	**-1.0**
	baz=195							
SLIU				*e*S		**Sn**	**22 50 23.5**	**+1.9**
	baz=195							
PTMZ	**Houxiangcun**	**2.85**	**279**	*e*P		**Pn**	**22 49 49.9**	**+0.3**
	baz=275							
PTMZ				*e*S		**Sn**	**22 50 22.4**	**-1.8**
	baz=275							
VCHM	**Qimei**	**2.92**	**241**	*e*P		**Pn**	**22 49 52.6**	**+2.0**
	baz=236							
VCHM				*e*S		**Sn**	**22 50 27.8**	**+1.6**
	baz=236							
LYJJ	**Jianjiangzhen**	**2.93**	**311**	*e*P		**Pn**	**22 49 51.3**	**+0.6**
	baz=310							
LYJJ				*e*S		**Sn**	**22 50 24.7**	**-1.5**
	baz=310							
XPSS	**Dashiqiu**	**2.93**	**322**	*e*P		**Pn**	**22 49 50.4**	**-0.3**
	baz=323							
XPSS				*e*S		**Sn**	**22 50 24.1**	**-2.1**
	baz=323							
TWKBT	**Hengchun**	**2.98**	**206**	*e*P		**Pn**	**22 49 53.0**	**+1.5**
	baz=192							
TWKBT				*e*S		**Sn**	**22 50 28.8**	**+1.3**
	baz=192							
MHZQ	**Yeshan**	**3.23**	**297**	*e*S		**Sn**	**22 50 32.2**	**-1.6**
	baz=294							
KNM	**Kinmen**	**3.46**	**267**	*e*P		**Pn**	**22 50 01.3**	**+3.3**
	baz=262							
KNM				*e*S		**Sn**	**22 50 42.6**	**+3.4**
	baz=262							
KNMB	**Chin-men Tao**	**3.50**	**268**	*e*P		**Pn**	**22 50 00.0**	**+1.5**
	baz=263							
KNMB				*e*S		**Sn**	**22 50 40.2**	**0.0**
	baz=263							
ZPLA	**Ao Xicun**	**4.14**	**261**	*e*P		**Pn**	**22 50 09.0**	**+1.6**
	baz=268							
ZPLA				*e*S		**Sn**	**22 50 56.7**	**+0.5**
	baz=268							

*JMA **03** 23:26:24.6±0.2,24°N±1°×122°6E±0°9,h41km,MV1.6/7, NW OFF ISHIGAKIJIMA IS*
*TAP **03** 23:26:24.4,23°97N×122°67E,h39km±1km,ML2.5,D*
ISC 03 23:26:23.4±1.3,**23°91N**±0°05×**122°64E**±0°02,**h19**km±3km, **n45**,σ**0°50**/**77**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.60**	**27**	P		**Pg**	**23 26 35.7**	**+0.2**
JYNG				S		**Sg**	**23 26 43.1**	**-0.5**
YOJ	**Yonaguni jima**	**0.64**	**31**	*e*P		**Pg**	**23 26 36.2**	**0.0**
	baz=32							
YOJ	**Yonaguni jima**	**0.64**	**31**	P		**Pg**	**23 26 36.4**	**+0.3**
YOJ				*e*S		**Sg**	**23 26 44.2**	**-0.6**
EWUT	**Wuta**	**0.95**	**304**	P		**Pb**	**23 26 41.2**	**0.0**
	baz=301							
EWUT				S		**Sg**	**23 26 54.4**	**-0.2**
	baz=301							
ENA	**Nanau**	**0.97**	**302**	P		**Pn**	**23 26 42.3**	**+0.3**
	baz=299							
ENA				S		**Sn**	**23 26 55.6**	**+0.4**
	baz=299							
TWD	**Chiawan**	**0.97**	**280**	P		**Pb**	**23 26 42.3**	**+0.7**
	baz=277							
TWD				*e*S		**Sb**	**23 26 54.5**	**+0.4**
	baz=277							
NACB	**Ninganchiao**	**0.99**	**285**	P		**Pb**	**23 26 41.6**	**-0.3**
	baz=270							
NACB				*e*S		**Sb**	**23 26 54.9**	**+0.3**
	baz=270							
TWC	**Suao**	**1.00**	**314**	*i* P		**Pb**	**23 26 42.0**	**-0.1**
	baz=301							
TWC				S		**Sg**	**23 26 55.0**	**-1.2**
	baz=301							
HATJ	**Hateruma jima**	**1.07**	**82**	P		**Pb**	**23 26 43.4**	**+0.1**
IRIF	**Iriomote-Funau**	**1.08**	**67**	P		**Pb**	**23 26 43.9**	**+0.5**
IRIF				*e*S		**Sn**	**23 26 58.4**	**+0.5**
ETLH	**Xiulin Townshi**	**1.10**	**286**	P		**Pb**	**23 26 43.3**	**-0.6**
	baz=273							
ETLH				*e*S		**Sb**	**23 26 58.0**	**+0.1**
	baz=273							
NDS	**Dongshan**	**1.11**	**311**	P		**Pb**	**23 26 43.6**	**-0.4**
	baz=308							
NDS				*e*S		**Sb**	**23 26 57.8**	**-0.3**
	baz=308							
ESL	**Shilin**	**1.11**	**265**	*e*S		**Sb**	**23 26 57.9**	**-0.2**
	baz=254							
EGS		**1.13**	**325**	P		**Pg**	**23 26 45.2**	**-0.2**
	baz=333							
HGSD	**Ruisui**	**1.19**	**250**	*e*P		**Pn**	**23 26 45.4**	**+0.4**
	baz=247							
HGSD				*e*S		**Sb**	**23 26 59.2**	**-1.1**
	baz=247							
LATG	**Datong**	**1.19**	**302**	P		**Pn**	**23 26 45.4**	**+0.3**
	baz=299							
LATG				*e*S		**Sn**	**23 27 01.3**	**+0.4**
	baz=299							
NTC	**Toucheng**	**1.20**	**322**	*e*P		**Pg**	**23 26 46.8**	**+0.2**
	baz=320							
NTC				*e*S		**Sg**	**23 27 02.8**	**+0.5**
	baz=320							
TWE	**Neicheng**	**1.20**	**312**	P		**Pb**	**23 26 45.7**	**+0.2**
	baz=310							
TWE				*e*S		**Sb**	**23 26 59.9**	**-0.7**
	baz=310							
ENTT	**Nioudou**	**1.22**	**307**	P		**Pn**	**23 26 44.5**	**-0.9**
	baz=292							
ENTT				S		**Sn**	**23 27 01.7**	**+0.3**
	baz=292							
NDT	**Datong Townshi**	**1.24**	**304**	*e*P		**Pn**	**23 26 45.7**	**+0.1**
	baz=290							
NDT				*e*S		**Sb**	**23 27 01.4**	**-0.4**
	baz=290							
NNSB	**Datong**	**1.26**	**294**	P		**Pn**	**23 26 46.0**	**0.0**
	baz=292							
NNSB				*e*S		**Sb**	**23 27 02.0**	**-0.5**
	baz=292							
FUSB	**Fushanzhiwuyua**	**1.28**	**312**	P		**Pb**	**23 26 47.2**	**+0.3**
	baz=297							
FUSB				*e*S		**Sg**	**23 27 05.5**	**+0.5**
	baz=297							
WHF	**Hehuan Shan**	**1.28**	**281**	P		**Pn**	**23 26 46.5**	**-0.1**
	baz=278							
WHF				S		**Sn**	**23 27 04.0**	**+0.6**
	baz=278							
JKRS	**Kuro-shima**	**1.29**	**75**	*e*P		**Pn**	**23 26 46.3**	**0.0**
TIPB	**Shuangxi**	**1.29**	**325**	*e*P		**Pb**	**23 26 47.3**	**+0.2**
	baz=323							
FUSS	**Fushou**	**1.32**	**285**	*e*P		**Pn**	**23 26 47.5**	**+0.5**
	baz=283							
FUSS				*e*S		**Sb**	**23 27 05.4**	**+1.1**
	baz=283							
YULB	**Yu-li**	**1.34**	**248**	*e*P		**Pn**	**23 26 46.8**	**-0.3**
	baz=236							
YULB				*e*S		**Sn**	**23 27 03.7**	**-0.5**
	baz=236							
OWD	**Renai**	**1.34**	**272**	P		**Pn**	**23 26 47.2**	**0.0**
	baz=270							
OWD				*e*S		**Sn**	**23 27 03.4**	**-1.2**
	baz=270							
NWLT	**Wulai**	**1.35**	**310**	*e*P		**Pb**	**23 26 47.9**	**-0.1**
	baz=308							
NWLT				*e*S		**Sb**	**23 27 05.3**	**+0.4**
	baz=308							
CHGB	**Renai**	**1.35**	**277**	*e*P		**Pn**	**23 26 47.4**	**-0.1**
	baz=274							
CHGB				*e*S		**Sn**	**23 27 04.5**	**-0.5**
	baz=274							
SXI1	**Grass Mountain**	**1.37**	**329**	P		**Pn**	**23 26 47.7**	**+0.2**
	baz=338							
YHNB	**Yeheng**	**1.38**	**303**	*e*P		**Pn**	**23 26 48.4**	**+0.7**
	baz=301							
YHNB				*e*S		**Sb**	**23 27 05.7**	**-0.2**
	baz=301							
TWT	**Tachien**	**1.38**	**285**	*e*P		**Pn**	**23 26 49.0**	**+1.2**
	baz=273							
TWT				*e*S		**Sn**	**23 27 05.5**	**-0.2**
	baz=273							
NWF	**Wu-fen Shan**	**1.40**	**326**	*e*P		**Pb**	**23 26 49.0**	**+0.1**
	baz=324							
NSK	**Sanguang**	**1.40**	**303**	P		**Pn**	**23 26 47.2**	**-0.7**
	baz=301							
NSK				S		**Sn**	**23 27 05.3**	**-0.6**
	baz=301							
WUSB	**Renai**	**1.40**	**274**	*e*P		**Pn**	**23 26 48.1**	**+0.1**
	baz=271							
WUSB				*e*S		**Sn**	**23 27 05.9**	**0.0**
	baz=271							
TDCB	**Techi**	**1.40**	**284**	P		**Pn**	**23 26 48.5**	**+0.5**
	baz=273							
TDCB				S		**Sn**	**23 27 05.8**	**-0.2**
	baz=273							
JIJ	**Ishigaki jima**	**1.44**	**72**	*e*P		**Pn**	**23 26 48.2**	**-0.3**
JIJ				*e*S		**Sn**	**23 27 06.7**	**-0.1**
NFF	**Wufeng Townshi**	**1.56**	**298**	*e*P		**Pn**	**23 26 50.9**	**+0.7**
	baz=296							
NFF				*e*S		**Sn**	**23 27 10.1**	**+0.1**
	baz=296							
WCS	**Beigang Elemen**	**1.59**	**276**	*e*P		**Pn**	**23 26 50.6**	**+0.2**
	baz=268							
WCS				*e*S		**Sn**	**23 27 10.4**	**0.0**
	baz=268							
WHP	**Taichung City**	**1.59**	**284**	*e*P		**Pb**	**23 26 53.0**	**+0.8**
	baz=273							
YUS	**Yu-Shan**	**1.60**	**255**	P		**Pn**	**23 26 51.3**	**+0.2**
	baz=253							
LIOB	**Emei**	**1.66**	**297**	*e*P		**Pn**	**23 26 52.2**	**+0.8**
	baz=295							
NSTT	**Nanjuang**	**1.66**	**296**	*e*P		**Pb**	**23 26 53.1**	**-0.3**
	baz=294							
ALS	**Alishan**	**1.73**	**257**	P		**Pn**	**23 26 53.8**	**+1.1**
	baz=247							

*BJI **03** 23:28:51.3±0.0,56°33N×110°88E,h8km,mb4.1/19, mB4.5/15,Ms4.0/13,Ms7 3.8/12*
*IDC **03** 23:28:52.8±0.7,56°00N×110°62E,h0km,mb3.9/20, mbtmp4.0/26,ML4.4/5,MS3.4/30,Error ellipse: s-maj=16.8km s-min=9.4km az=167.0*
*MOS **03** 23:28:52.6±1.3,55°91N×110°69E,h11km,mb4.4/6,Error ellipse: s-maj=8.3km s-min=5.7km az=80.3*
MOS Felt (II) at Kumora.
*NEIC **03** 23:28:54.8±0.9,56°07N±0°08×110°6E±0°1,h10km±1km, mb4.4/34,Error ellipse: s-maj=14.6km s-min=13.2km az=136.0*
*BYKL **03** 23:28:55.3±0.2,55°86N×110°76E,h18km±2km, Mw4.2/12(IEC),#STATIONS MA2 MAJO ENH KMI CHTO LSA AAK ARU GRFO LVZ KEV DBG FELT I=IV MSK at Kumora*
ISC 03 23:28:56.6±0.8,**56°01N**±0°03×**110°78E**±0°02,**h28**km±6km, **n175**,σ**2°36**/232,**mb4.2**/38,**MS3.3**/24,**17C-12D**,**Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.27**	**118**	⇓*i*PG		**Pb**	**23 29 00.8**	**-2.6**
KMO				*e*			23 29 04.7	
KMO				pmax		pmax		
	comp=Z,9μm,0.2s							
KMO				smax		smax		
	comp=N,51μm,0.4s							
KMO	**Kumora**	**0.27**	**118**	⇓*i*Pg		**Pb**	**23 29 00.8**	**-2.6**
KMO				Pmax			23 29 01.2	
	comp=N,9μm,0.2s							
KMO				*e*Sg		**Sb**	**23 29 04.8**	**-3.3**
KMO				Smax			23 29 05.4	
	comp=N,58μm,0.3s							
NIZ	**Nizh Angarsk**	**0.74**	**252**	⇓*i*PG		**Pn**	**23 29 09.0**	**-2.2**
NIZ				*e*			23 29 19.2	
NIZ				pmax		pmax		
	comp=Z,458nm,0.2s							
NIZ				smax		smax		
	comp=N,6μm,0.3s							
NIZ	**Nizh Angarsk**	**0.74**	**252**	⇓*i*Pg		**Pn**	**23 29 09.0**	**-2.2**
NIZ				Pmax			23 29 12.5	
	comp=N,708nm,0.2s							
NIZ				*e*Sg		**Sb**	**23 29 18.9**	**-1.6**
NIZ				Smax			23 29 23.6	
	comp=N,7μm,0.3s							
YLYR	**Ulyunkhan**	**1.16**	**169**	⇓*i*Pg		**Pn**	**23 29 13.7**	**-3.3**
	comp=N,4μm,0.8s							
YLYR				⇑*i*Pg		**Pn**	**23 29 13.7**	**-3.3**
	comp=N,786nm,0.8s							
YLYR				⇑*i*Pg		**Pn**	**23 29 13.7**	**-3.3**
	comp=N,4μm,0.8s							
YLYR				Pmax			23 29 14.0	
	comp=N,3μm,0.4s							
YLYR				*e*Sg		**Sn**	**23 29 27.4**	**-4.5**
YLYR				*e*Sb		**Sb**	**23 29 31.1**	**-1.5**
YLYR				max			23 29 32.2	
	comp=N,7μm,0.3s							
SVKR	**Severomuysk**	**1.56**	**85**	⇓*i*PN		**Pn**	**23 29 23.5**	**+0.9**
SVKR				*e*			23 29 45.6	
SVKR				pmax		pmax		
	comp=Z,4μm,0.7s							
SVKR				smax		smax		
	comp=N,6μm,0.7s							
SVKR	**Severomuysk**	**1.56**	**85**	*e*Pg		**Pn**	**23 29 23.5**	**+0.9**
SVKR				*e*Pb		**Pb**	**23 29 24.4**	**-0.5**
SVKR				max			23 29 24.8	
	comp=N,4μm,0.4s							
SVKR				*e*Sg		**Sb**	**23 29 45.4**	**+1.2**
SVKR				Smax			23 29 48.1	
	comp=N,19μm,0.5s							
UKT	**Uakit**	**1.69**	**107**	⇓*i*PN		**Pn**	**23 29 24.5**	**+0.1**
UKT				*e*			23 29 46.6	
UKT				pmax		pmax		
	comp=Z,411nm,0.2s							
UKT				smax		smax		
	comp=N,4μm,0.3s							
UKT	**Uakit**	**1.69**	**107**	⇓*i*Pn		**Pn**	**23 29 24.6**	**+0.1**
UKT				*e*Pg		**Pb**	**23 29 25.1**	**-2.0**
UKT				*e*			23 29 31.8	
UKT				max			23 29 32.1	
	comp=N,1μm,0.8s							
UKT				*e*Sg		**Sb**	**23 29 46.8**	**-1.2**
UKT				Smax			23 29 49.9	
	comp=N,7μm,0.7s							
SYVR	**Suvo**	**2.40**	**191**	⇑*i*PN		**Pn**	**23 29 32.5**	**-1.5**
SYVR				*e*			23 29 35.3	
SYVR				*e*			23 30 04.3	
SYVR				pmax		pmax		
	comp=Z,1μm,0.6s							
SYVR				smax		smax		
	comp=N,8μm,0.9s							
SYVR	**Suvo**	**2.40**	**191**	⇑*i*Pn		**Pn**	**23 29 32.6**	**-1.5**
SYVR				*e*Pg		**Pb**	**23 29 35.2**	**-3.9**
SYVR				*e*			23 29 38.8	
SYVR				max			23 29 39.1	
	comp=N,1μm,0.5s							
SYVR				*e*			23 29 41.5	
SYVR				*e*Sg		**Sb**	**23 30 06.0**	**-2.3**
SYVR				*e*SgSg		**SnSn**	**23 30 11.9**	**-1.4**
SYVR				max			23 30 12.8	
	comp=N,8μm,1.3s							
BOD	**Bodaibo**	**2.53**	**43**	⇑*i*PN		**Pn**	**23 29 38.0**	**+2.2**
BOD				*e*			23 29 41.7	
BOD				*e*			23 30 15.7	
BOD				pmax		pmax		
	comp=Z,414nm,0.6s							
BOD				smax		smax		
	comp=E,3μm,0.4s							
BOD	**Bodaibo**	**2.53**	**43**	*e*Pn		**Pn**	**23 29 38.0**	**+2.2**
BOD				*e*Pg		**Pb**	**23 29 42.9**	**+1.6**
BOD				Pmax			23 29 51.5	
	comp=E,413nm,0.5s							
BOD				*e*Sn		**Sb**	**23 30 10.5**	**-1.5**
BOD				*e*Sg		Sn	23 30 16.8	+11
BOD				Smax			23 30 20.9	
	comp=E,3μm,0.8s							
MXMB	**Maximikha**	**3.00**	**204**	*e*Pn		**Pn**	**23 29 41.1**	**-1.2**
MXMB				*e*Pg		**Pb**	**23 29 47.5**	**-1.8**
MXMB				*e*Sn		**Sn**	**23 30 14.6**	**-2.7**
MXMB				*e*Sg		**Sb**	**23 30 24.6**	**-0.8**
OGRR	**Ongureny**	**3.00**	**219**	*e*PN		**Pn**	**23 29 43.5**	**+1.2**
OGRR				*e*			23 30 26.4	
OGRR				pmax		pmax		
	comp=Z,256nm,0.5s							
OGRR				smax		smax		
	comp=E,3μm,0.6s							
OGRR	**Ongureny**	**3.00**	**219**	⇑*i*Pn		**Pn**	**23 29 43.5**	**+1.2**
OGRR				*e*Pg		**Pb**	**23 29 47.9**	**-1.5**
OGRR				Pmax			23 29 56.6	
	comp=E,259nm,0.4s							
OGRR				*e*			23 30 18.6	
OGRR				*e*Sg		**Sb**	**23 30 26.1**	**+0.5**
OGRR				Smax			23 30 29.9	
	comp=E,3μm,0.5s							
VTMR	**Vitim**	**3.57**	**15**	*e*Pn		**Pn**	**23 29 51.8**	**+1.8**
VTMR				*e*Pg		**Pb**	**23 30 02.3**	**+3.4**
VTMR				*e*Sn		**Sn**	**23 30 34.8**	**+3.6**
VTMR				*e*Sg		**Sb**	**23 30 49.9**	**+8.2**
KELR	**Kotokel**	**3.62**	**207**	*e*Pn		**Pn**	**23 29 49.2**	**-1.6**
KELR				*e*Pg		**Pb**	**23 29 57.9**	**-1.9**
KELR				*e*Sn		**Sn**	**23 30 30.0**	**-2.6**
KELR				*e*Sg		**Sb**	**23 30 42.6**	**-0.7**
ZRHB	**Zarechye**	**4.07**	**213**	*e*Pn		**Pn**	**23 29 56.0**	**-0.9**
ZRHB				*e*Pg		**Pb**	**23 30 06.9**	**-0.5**
ZRHB				Pmax			23 30 26.8	
	comp=E,681nm,1.0s							
ZRHB				*e*Sn		**Sn**	**23 30 40.1**	**-3.4**
ZRHB				*e*Sg		**Sb**	**23 30 58.2**	**+2.2**
ZRHB				Smax			23 31 07.8	
	comp=E,6μm,1.0s							
TRG	**Tyrgan**	**4.16**	**220**	⇑*i*PN		**Pn**	**23 29 57.2**	**-1.0**
TRG				*e*			23 30 07.2	
TRG				*e*S		**Sn**	**23 30 43.9**	**-2.1**
TRG				*e*			23 30 59.9	
TRG				pmax		pmax		
	comp=Z,201nm,0.4s							
TRG				smax		smax		
	comp=E,1μm,0.8s							
TRG	**Tyrgan**	**4.16**	**220**	⇑*i*Pn		**Pn**	**23 29 57.3**	**-1.0**
TRG				*e*Pg		**Pb**	**23 30 08.6**	**-0.5**
TRG				*e*			23 30 11.8	
TRG				max			23 30 13.0	
	comp=E,202nm,0.4s					

CRS Chara 4.25 75 *e*Pn **Pn** **23 30 00.6 +1.1**
CRS *e*Pg **Pb** **23 30 14.0 +3.4**
CRS Pmax 23 30 16.1
comp=E,536nm,1.0s
CRS *e*Sg **Sb** **23 31 08.8 +7.4**
CRS Smax 23 31 14.0
comp=E,2µm,1.3s
CIT Chita 4.32 157 *e*PN **Pn** **23 29 58.1 -2.4**
CIT *e* 23 30 09.7
CIT *e* 23 31 04.6
CIT pmax pmax
comp=Z,463nm,0.9s
CIT smax smax
comp=E,2µm,1.2s
CIT Chita 4.32 157 *e*Pg **Pb** **23 30 10.0 -1.8**
CIT Pmax 23 30 16.4
comp=E,463nm,0.8s
CIT *e*Sn **Sn** **23 30 45.7 -4.2**
CIT *e*Sg **Sb** **23 31 04.6 +1.1**
CIT Smax 23 31 08.0
comp=E,2µm,1.0s
FFNB Fofonovo 4.62 212 *e*Pn **Pn** **23 30 02.9 -1.7**
FFNB *e*Pg **Pb** **23 30 16.3 -0.6**
FFNB *e*Sn **Sn** **23 30 54.0 -3.3**
FFNB *e*Sg **Sb** **23 31 13.4 +1.3**
KAB Kabansk 4.66 213 *e*Pg **Pb** **23 30 17.0 -0.4**
KAB Pmax 23 30 39.9
comp=E,295nm,1.0s
KAB *e*Sg **Sb** **23 31 16.2 +3.2**
KAB Smax 23 31 36.1
comp=E,3µm,1.0s
HRMR Khuramsha 4.94 209⇑ *i*Pn **Pn** **23 30 08.0 -1.0**
HRMR *e*Pg **Pb** **23 30 21.7 -0.6**
HRMR Pmax 23 30 32.7
comp=E,438nm,0.6s
HRMR *e*Sn **Sn** **23 31 01.2 -4.0**
HRMR *e*Sg **Sb** **23 31 23.8 +2.5**
HRMR Smax 23 31 27.7
comp=E,4µm,0.6s
BGT Bolshoye Golou 5.08 221 *e*Pn **Pn** **23 30 09.2 -1.7**
BGT *e*Pg **Pb** **23 30 23.6 -1.1**
BGT Pmax 23 30 34.5
comp=E,132nm,0.6s
BGT *e*Sg **Sb** **23 31 28.3 +3.1**
BGT Smax 23 31 37.5
comp=E,1µm,0.6s
KHNR Khani 5.18 76 *e*Pn **Pn** **23 30 13.1 +0.8**
KHNR *e*Pg **Pb** **23 30 29.3 +2.9**
KHNR *e*Sg **Sb** **23 31 36.3 +8.1**
IRK Irkutsk 5.37 228 *e*PN **Pn** **23 30 12.1 -2.8**
IRK *e* 23 30 31.4
IRK *e* 23 31 37.5
IRK pmax pmax
comp=Z,300nm,0.1s
IRK smax smax
comp=N,201nm,0.4s
IRK Irkutsk 5.37 228 *e*Pn **Pn** **23 30 15.4 +0.5**
IRK *e* 23 31 12.8
IRK *e*Sg **Sb** **23 31 39.1 +5.4**
IRK Smax 23 31 47.9
comp=N,3µm,0.5s
LSTR Listvyanka 5.44 223 *e*Pn **Pn** **23 30 14.1 -1.6**
LSTR *e* 23 30 28.2
LSTR max 23 30 42.5
comp=N,56nm,0.6s
LSTR *e*Sn **Sn** **23 31 13.3 -4.0**
LSTR *e*Sg **Sb** **23 31 38.4 +2.9**
LSTR Smax 23 31 44.4
comp=N,763nm,1.2s
TUP Tupik 5.49 103 *e*PN **Pn** **23 30 15.5 -1.0**
TUP *e* 23 30 32.3
TUP *e* 23 31 44.8
TUP pmax pmax
comp=Z,56nm,0.6s
TUP smax smax
comp=N,1µm,0.7s
TUP Tupik 5.49 103 *e*Pn **Pn** **23 30 15.4 -1.0**
TUP *e* 23 30 23.7
TUP *e*Pg **Pb** **23 30 33.9 +2.2**
TUP Pmax 23 30 36.4
comp=N,56nm,0.4s
TUP *e*Sn **Sn** **23 31 14.8 -3.9**
TUP *e*Sg **Sb** **23 31 44.5 +7.5**
TUP Smax 23 31 48.5
comp=N,1µm,0.8s
IVK Ivanovka 5.65 224 *e*Pn **Pn** **23 30 17.1 -1.6**
IVK *e* 23 30 25.4
IVK max 23 30 51.7
comp=N,70nm,0.8s
IVK *e*Sn **Sn** **23 31 19.4 -3.2**
IVK *e*Sg **Sb** **23 31 45.2 +3.6**
IVK Smax 23 31 46.5
comp=N,1µm,1.6s
TLY Talaya 6.05 227 *e*Pn **Pn** **23 30 22.6 -1.6**
TLY *e*Pg **Pb** **23 30 42.1 +0.9**
TLY Pmax 23 30 56.5
comp=N,88nm,0.7s
TLY *e*Sn **Sn** **23 31 29.2 -3.3**
TLY *e*Sg **Sb** **23 31 58.7 +5.5**
TLY Smax 23 32 02.1
comp=N,1µm,1.0s
YKLR Yuktali 6.08 80 *e*Pn **Pn** **23 30 25.4 +0.8**
YKLR *e*Pg **Pb** **23 30 45.5 +3.8**
YKLR *e*Sg Sb 23 32 03.9 +10
KPC Khapcheranga 6.39 171 *e*PN **Pn** **23 30 26.3 -2.7**
KPC *e* 23 30 47.0
KPC *e* 23 32 05.2
KPC pmax pmax
comp=Z,48nm,0.6s
KPC smax smax
comp=E,613nm,1.0s
KPC Khapcheranga 6.39 171 *e*Pn **Pn** **23 30 25.6 -3.4**
KPC *e* 23 30 36.0
KPC *e*Pg **Pb** **23 30 47.1 0.0**
KPC Pmax 23 31 01.7
comp=E,69nm,0.6s
KPC *e*Sg **Sb** **23 32 08.2 +5.2**
KPC Smax 23 32 13.6
comp=E,618nm,0.9s
ARS Arshan 6.41 234 *e*Pn **Pn** **23 30 27.9 -1.3**
ARS *e*Pg **Pb** **23 30 48.5 +1.2**
ARS Pmax 23 31 06.0
comp=E,244nm,0.5s
ARS *e*Sn **Sn** **23 31 37.8 -3.6**
ARS *e*Sg **Sb** **23 32 10.1 +6.6**
ARS Smax 23 32 13.8
comp=E,3µm,0.9s
ZAK Zakamensk 7.21 222 *e*PN **Pn** **23 30 38.4 -1.8**
ZAK *e* 23 32 33.4
ZAK pmax pmax
comp=Z,18nm,0.7s
ZAK smax smax
comp=N,673nm,1.1s
ZAK Zakamensk 7.21 222 *e*Pn **Pn** **23 30 39.4 -0.8**
ZAK *e*Pg **Pb** **23 31 02.4 +1.4**
ZAK Pmax 23 31 19.7
comp=N,31nm,0.6s
ZAK *e* 23 32 00.4
ZAK *e*Sg **Sb** **23 32 34.5 +7.9**
ZAK Smax 23 32 40.3
comp=N,679nm,1.2s
MOY Mondy 7.24 237 *e*PN **Pn** **23 30 40.7 +0.1**
MOY *e* 23 31 04.7
MOY *e*S **Sn** **23 31 59.2 -2.7**
MOY *e* 23 32 37.6
MOY Mondy 7.24 237 *e*Pn **Pn** **23 30 40.9 +0.3**
MOY *e* 23 30 45.8
MOY max 23 30 47.1
comp=N,273nm,1.2s
MOY *e*Sn **Sn** **23 31 58.0 -3.9**
MOY *e*Sg Sb 23 32 37.7 +10
MOY Smax 23 32 41.6
comp=N,1µm,1.4s
ORL Orlik 7.30 246 *e*PG **Pb** **23 31 06.2 +3.7**
ORL *e*S **Sn** **23 31 59.9 -3.5**
ORL *e* 23 32 40.6
ORL pmax pmax
comp=Z,252nm,1.1s
ORL smax smax
comp=E,570nm,1.6s
ORL Orlik 7.30 246 *e*Pn **Pn** **23 30 42.5 +1.1**
ORL *e* 23 30 46.9
ORL max 23 30 48.0
comp=E,251nm,1.3s

ORL *e*Sn **Sn** **23 32 00.3 -3.1**
ORL *e*Sg Sb 23 32 39.0 +10
ORL Smax 23 32 54.4
comp=E,566nm,1.5s
CLNS Chul'man 7.87 78 *e*Pg Pb 23 31 18.4 +6.2
CLNS *e*Sg Sb 23 33 00.1 +15
ULN Ulaanbaatar 8.48 197 Pn **Pn** **23 30 56.3 -1.3**
ULN Ulaanbaatar 8.48 197 *de*PN **Pn** **23 30 55.9 -1.7**
ULN pmax pmax
comp=Z,10.0nm,1.3s
ULN Ulaanbaatar 8.48 197 *e*Pn **Pn** **23 30 56.9 -0.7**
ULN *e*Pg **Pb** **23 31 25.7 +3.1**
ULN *e*Sg Sb 23 33 14.7 +12
SONM Songino Array 8.62 200 Pn **Pn** **23 30 58.8 -0.8**
comp=Z,5.1nm,0.3s,baz=11,slow=14,SNR=6.3
SONM Lg Lg 23 33 19.3
comp=Z,5.1nm,0.3s,baz=21,slow=26,SNR=3.8
SONM LR LR 23 34 31.2
comp=Z,448nm,20.0s,baz=14,slow=39
comp=Z,7.7nm,0.4s
SONM Songino Array 8.62 200 Pn **Pn** **23 30 58.5 -1.1**
SONM Songino Array 8.62 200 *e*PN **Pn** **23 30 58.5 -1.1**
HIA Hailar 8.68 137 Pn **Pn** **23 31 01.5 +1.3**
HIA Hailar 8.68 137 *de*PN **Pn** **23 31 00.0 -0.2**
HIA Hailar 8.68 137 *e*Sg Sn 23 33 20.5 +43
ZEA Zeya 9.76 97⇑ *e*P **Pn** **23 31 15.1 +0.1**
YAK Yakutsk 11.43 50 Pn **Pn** **23 31 33.3 -4.5**
comp=Z,0.3nm,0.3s,baz=90,slow=1.4,SNR=1.9
YAK Sn **Sn** **23 33 37.1 -7.2**
comp=Z,0.3nm,0.3s,baz=28,slow=2.9,SNR=1.9
YAK Lg Lg 23 34 49.5
comp=Z,0.2nm,0.3s,baz=294,slow=20,SNR=12
YAK LR LR 23 36 10.7
comp=Z,187nm,19.5s,baz=268,slow=38
comp=Z,9.3nm,0.3s
YAK Yakutsk 11.43 50 Pn **Pn** **23 31 36.1 -1.6**
YAK Yakutsk 11.43 50⇑ *e*P **Pn** **23 31 39.7 +2.0**
YAK pmax pmax
comp=Z,12nm,0.6s
KLR Kul'dur 14.40 109 Pn **Pn** **23 32 17.9 -0.5**
comp=Z,0.5nm,0.3s,baz=306,slow=14,SNR=4.3
KLR Lg Lg 23 36 22.4
comp=Z,0.4nm,0.3s,baz=53,slow=20,SNR=5.8
comp=Z,2.3nm,0.6s
ZAA0 Zalesovo Array 15.02 273 Pn **Pn** **23 32 25.5 -1.1**
ZALV Zalesovo Beam 15.02 273 Pn **Pn** **23 32 26.7 +0.1**
comp=Z,2.2nm,0.6s,baz=70,slow=12,SNR=10
ZALV Lg Lg 23 36 44.7
comp=Z,0.1nm,0.3s,baz=262,slow=33,SNR=1.9
ZALV LR LR 23 37 26.3
comp=Z,23nm,20.3s,baz=104,slow=34
ZALV Zalesovo Beam 15.02 273 **Pn** **23 32 25.7 -0.9**
BJT Baijiatuau 16.40 165 Pn **Pn** **23 32 43.9 -0.7**
BJT Baijiatuau 16.40 165 P **Pn** **23 32 43.9 -0.7**
BJT pmax pmax
comp=Z,8.0nm,1.1s
NRIK Noril'sk 16.92 331 Pn **Pn** **23 32 47.5 -3.5**
comp=Z,0.7nm,0.3s,baz=140,slow=10,SNR=12
NRIK Sn Sn 23 35 45.9 -12
comp=Z,1.2nm,0.3s,baz=358,slow=15,SNR=4.8
NRIK Lg Lg 23 37 42.7
baz=232,slow=19
NRIK LR LR 23 40 01.5
comp=Z,258nm,20.5s,baz=159,slow=40
NRIK Noril'sk 16.92 331 Pn **Pn** **23 32 48.2 -2.8**
NRIK IAmb IAmb 23 33 06.4
comp=Z,15nm,0.6s
NRIK Noril'sk 16.92 331 *ce*P **P** **23 32 54.2 +1.4**
TIXI Tiksi 17.46 19 P **Pn** **23 32 55.3 -2.4**
comp=Z,16nm,0.5s,baz=266,slow=24,SNR=7.4
TIXI S Sn 23 35 59.3 -12
comp=Z,9.5nm,0.7s,baz=90,slow=23,SNR=2.8
TIXI Lg Lg 23 37 56.2
comp=Z,70nm,0.3s,baz=269,slow=23,SNR=3.3
TIXI LR LR 23 39 59.9
comp=Z,232nm,18.4s,baz=181,slow=38
TIXI Tiksi 17.46 19 **Pn** **23 32 54.9 -2.8**
TIXI IAmb IAmb 23 32 59.5
comp=Z,30nm,1.1s
TIXI Tiksi 17.46 19 *ce*P **Pn** **23 32 58.8 +1.1**
TIXI pmax pmax
comp=Z,26nm,1.0s
USRK Ussuriysk Ar. 17.93 122 Lg Lg 23 38 12.8
comp=Z,0.1nm,0.3s,baz=323,slow=31,SNR=8.5
USRK LR LR 23 40 25.8
comp=Z,82nm,18.1s,baz=93,slow=38
WMQ Urumqi 19.12 240 *e*P **Pn** **23 33 20.3 +2.1**
WMQ LR LR
comp=Z,190nm,11.9s
WMQ LR LR
comp=Z,99nm,16.1s
KURK Kurchatov 19.79 268 P **P** **23 33 24.0 -0.4**
KURK IAmb IAmb 23 33 33.3
comp=Z,15nm,0.8s
KURK Kurchatov 19.79 268 *de*P **P** **23 33 24.1 -0.3**
KURK pmax pmax
comp=Z,16nm,0.8s
KURBB Kurchatov Arra 19.88 268 P **P** **23 33 24.5 -0.9**
comp=Z,0.2nm,0.3s,baz=63,slow=10.0,SNR=10
KURBB S **Sn** **23 37 10.4 +0.8**
comp=Z,0.2nm,0.3s,baz=199,slow=6.0,SNR=1.6
KURBB Lg Lg 23 39 15.5
comp=Z,0.1nm,0.3s,baz=52,slow=32,SNR=1.9
comp=Z,0.7nm,0.3s
MK31 Makanchi Array 19.89 254 P **P** **23 33 25.2 -0.4**
MK31 Makanchi Array 19.89 254 *ce*P **P** **23 33 25.4 -0.2**
MKAR Makanchi Array 19.89 254 P **P** **23 33 25.4 -0.3**
comp=Z,0.9nm,0.3s,baz=52,slow=8.7,SNR=53
MKAR LR LR 23 41 21.1
comp=Z,141nm,20.9s,baz=44,slow=38
comp=Z,1.9nm,0.4s
MKAR Makanchi Array 19.89 254 P **P** **23 33 25.2 -0.5**
MAKZ Makanchi 20.05 255 P **P** **23 33 26.1 -1.3**
MAKZ IAmb IAmb 23 33 53.1
comp=Z,19nm,1.3s
MAKZ Makanchi 20.05 255 P **P** **23 33 26.1 -1.3**
MAKZ pmax pmax
comp=Z,19nm,1.3s
MA2 Magadan 21.38 64 P **P** **23 33 42.9 +1.4**
comp=Z,5.4nm,0.3s,baz=303,slow=12,SNR=7.1
MA2 LR LR 23 42 11.8
comp=Z,62nm,19.2s,baz=287,slow=37
comp=Z,5.4nm,0.3s
MA2 Magadan 21.38 64 P **P** **23 33 41.6 +0.1**
MA2 IAmb IAmb 23 33 44.0
comp=Z,12nm,0.8s
MA2 Magadan 21.38 64 *e*P **P** **23 33 42.9 +1.4**
MA2 pmax pmax
comp=Z,21nm,1.2s
KSRS Korea Array 21.86 141 P **P** **23 33 48.5 +1.7**
comp=Z,0.6nm,0.6s,baz=347,slow=10,SNR=1.7
KSRS LR LR 23 43 24.1
comp=Z,37nm,20.2s,baz=15,slow=40
comp=Z,0.6nm,0.6s
SEY Seymchan 21.90 55 P **P** **23 33 48.8 +1.7**
comp=Z,1.4nm,0.3s,baz=10,slow=22,SNR=1.6
comp=Z,1.4nm,0.3s
SEY Seymchan 21.90 55⇓ *e*P **P** **23 33 49.0 +1.9**
SEY pmax pmax
comp=Z,9.0nm,1.7s
GOMU GeErMu 22.59 215 P **P** **23 33 58.7 +3.5**
GOMU pP pP 23 34 03.3 +0.4
GOMU sP sP 23 34 10.5 +3.9
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,44nm,4.5s
BVAR Borovoye Array 23.39 280 LR LR 23 44 06.4
comp=Z,53nm,18.3s,baz=306,slow=39
BRVK Borovoye 23.44 280 P **P** **23 34 02.9 -0.4**
BRVK IAmb IAmb 23 34 15.8
comp=Z,9.7nm,0.7s
BRVK Borovoye 23.44 280 P **P** **23 34 02.9 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,0.7s
AAK Ala-Archa 26.81 255 LR LR 23 45 40.9
comp=Z,94nm,20.8s,baz=71,slow=38
MJAR Matsushiro Arr 26.88 125 LR LR 23 45 03.1
comp=Z,34nm,19.6s,baz=314,slow=36
PEA0B Petropavlovsk- 26.95 76⇑ *e*P **P** **23 34 34.8 -0.6**
PETK Petropavlovsk- 26.95 76 P **P** **23 34 36.8 +1.4**
comp=Z,0.9nm,0.5s,baz=258,slow=7.1,SNR=2.8
PETK LR LR 23 45 08.0
comp=Z,64nm,21.6s,baz=287,slow=36
comp=Z,0.9nm,0.5s
ARU Arti 28.46 293 P **P** **23 34 47.1 -1.7**
comp=Z,1.1nm,0.4s,baz=38,slow=4.3,SNR=3.1

ARU LR LR 23 48 01.5
comp=Z,63nm,19.0s,baz=61,slow=40
comp=Z,1.1nm,0.4s
ARU Arti 28.46 293 P **P** **23 34 44.8 -4.0**
ARU S **S** **23 39 30.6 -3.6**
KK31 Karatay Array 28.69 260 P **P** **23 34 50.6 -0.4**
KK31 Karatay Array 28.69 260 P **P** **23 34 50.7 -0.4**
KK31 pmax pmax
comp=Z,2.0nm,1.0s
KKAR Karatay Array 28.69 260 P **P** **23 34 51.3 +0.3**
KKAR Karatay Array 28.69 260 P **P** **23 34 51.3 +0.3**
PZH PanZhiHua 30.20 196 P **P** **23 35 08.4 +3.8**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,50nm,4.1s
ABKAR Akbulak array 30.97 279 P **P** **23 35 10.8 -0.2**
ABKAR Akbulak array 30.97 279 P **P** **23 35 11.0 -0.1**
ABKAR IAmb IAmb 23 35 33.0
comp=Z,1.7nm,0.9s
AKTO Aktyubinsk 31.41 282 P **P** **23 35 13.1 -1.9**
comp=Z,1.8nm,0.5s,baz=70,slow=8.7,SNR=5.8
comp=Z,1.8nm,0.5s
JOW Kunigami 31.78 149 LR LR 23 49 30.3
comp=Z,70nm,18.2s,baz=270,slow=39
KLMR Klimovskoe 35.92 308 *e*P **P** **23 35 53.5 -0.5**
KLMR pmax pmax
comp=Z,8.0nm,1.2s
KLMR Klimovskoe 35.92 308 *e*P **P** **23 35 53.6 -0.5**
KLMR AMP 23 36 08.3
comp=Z,8.0nm,1.2s
BELG Belogornoye 35.98 291 LR LR 23 52 03.9
comp=Z,38nm,19.5s,baz=130,slow=39
KEV Kevo 37.17 325 P **P** **23 36 04.5 0.0**
KEV Kevo 37.17 325 P **P** **23 36 04.5 0.0**
KEV pmax pmax
comp=Z,36nm,1.5s
ARCES ARCESS Array B 37.74 325 P **P** **23 36 09.3 -0.1**
comp=Z,2.8nm,0.8s,baz=71,slow=8.6,SNR=15
ARCES LR LR 23 55 59.9
comp=Z,72nm,18.4s,baz=70,slow=43
comp=Z,2.8nm,0.8s
ARCES ARCESS Array B 37.74 325 P **P** **23 36 08.7 -0.7**
ARCES IAmb IAmb 23 36 16.0
comp=Z,13nm,1.4s
FIA1 FINESS Array S 41.36 314 P **P** **23 36 39.7 +0.2**
FINES FINESS Array B 41.36 314 P **P** **23 36 40.2 +0.6**
comp=Z,2.4nm,0.7s,baz=68,slow=10,SNR=10
FINES LR LR 23 54 38.7
comp=Z,37nm,19.6s,baz=47,slow=37
comp=Z,2.4nm,0.7s
FINES FINESS Array B 41.36 314 P **P** **23 36 39.8 +0.2**
IMAR Indian Mountai 42.86 37 P **P** **23 36 52.6 +0.8**
H21K Melozitna Rive 43.37 37 P **P** **23 36 56.7 +0.8**
H21K IAmb IAmb 23 37 07.0
comp=Z,6.1nm,1.3s
KIV Kislovodsk 43.64 284 P **P** **23 36 59.5 +1.0**
KIV IAmb IAmb 23 37 01.3
comp=Z,4.7nm,0.8s
KIV Kislovodsk 43.64 284 *e*P **P** **23 37 00.5 +2.0**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,23nm,16.0s
KBZ Khabaz 43.68 283 P **P** **23 36 57.2 -1.4**
comp=Z,0.9nm,0.7s,baz=99,slow=8.2,SNR=1.9
comp=Z,0.9nm,0.7s
MLY Manley 44.44 37 P **P** **23 37 05.3 +0.7**
BMAR Burnt Mountain 44.89 32 P **P** **23 37 09.7 +1.6**
CAST Castle Rocks 44.96 39 P **P** **23 37 10.3 +1.5**
CAST IAmb IAmb 23 37 11.2
comp=Z,2.9nm,0.9s
GNI Garni 45.07 278 LR LR 00 00 18.0
comp=Z,27nm,19.0s,baz=118,slow=42
COLA College 45.50 36⇑ *e*P **P** **23 37 14.9 +2.0**
COLA pmax pmax
comp=Z,3.0nm,0.8s
TRF Thorofare Moun 45.58 38 P **P** **23 37 14.9 +1.2**
TRF IAmb IAmb 23 37 16.2
comp=Z,3.4nm,0.8s
WRH Wood River Hil 45.68 36 P **P** **23 37 15.1 +0.7**
WRH IAmb IAmb 23 37 25.1
comp=Z,6.5nm,1.3s
PRP Porcupine Dome 45.84 34 P **P** **23 37 16.8 +1.0**
PRP IAmb IAmb 23 37 18.4
comp=Z,3.5nm,0.7s
IL31 45.88 36 P **P** **23 37 16.6 +0.7**
IL31 IAmb IAmb 23 37 18.3
comp=Z,5.2nm,1.1s
ILAR Eielson Array 45.88 36 P **P** **23 37 17.1 +1.2**
comp=Z,2.8nm,0.9s,baz=299,slow=6.6,SNR=27
comp=Z,2.8nm,0.9s
ILAR Eielson Array 45.88 36 P **P** **23 37 16.0 +0.1**
JMIC Jan Mayen 46.24 337 LR LR 23 58 04.8
comp=Z,50nm,19.5s,baz=66,slow=38
AKASG Malin Array Be 46.29 300 P **P** **23 37 17.7 -1.6**
comp=Z,0.3nm,0.3s,baz=44,slow=8.6,SNR=8.3
AKASG LR LR 23 58 37.3
comp=Z,54nm,20.1s,baz=19,slow=39
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 46.29 300 *ce*P **P** **23 37 20.1 +0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
I26K Coal Creek Min 46.72 34 P **P** **23 37 23.4 +0.9**
I26K IAmb IAmb 23 37 25.2
comp=Z,2.9nm,0.8s
DHY Denali Highway 46.83 38 P **P** **23 37 24.3 +0.7**
NC303 NORSAR Array S 47.18 319 P **P** **23 37 26.4 +0.2**
RIDG Independent Ri 47.23 36 P **P** **23 37 26.9 +0.2**
NB2 NORSAR Subarra 47.36 319 P **P** **23 37 27.8 +0.2**
comp=Z,3.0nm,0.7s,baz=46,slow=7.4
NOA NORSAR Array B 47.36 319 P **P** **23 37 28.0 +0.4**
comp=Z,1.6nm,0.7s,baz=47,slow=7.1,SNR=7.1
NOA LR LR 23 58 51.0
comp=Z,29nm,21.4s,baz=70,slow=38
comp=Z,1.6nm,0.7s
K27K Chicken 47.93 35 P **P** **23 37 33.4 +1.4**
K27K IAmb IAmb 23 37 33.8
comp=Z,2.9nm,0.7s
L27K Beaver Creek, 48.69 35 P **P** **23 37 39.3 +1.4**
BCAR Beaver Creek A 48.70 35 P **P** **23 37 39.3 +1.3**
M27K Edge Creek, AK 49.17 36 P **P** **23 37 42.5 +0.8**
BURAR Bucovina Array 50.30 299 P **P** **23 37 50.8 +0.3**
MLR Munteln Rosu 51.41 296 LR LR 00 01 16.9
comp=Z,49nm,19.5s,baz=8.5,slow=38
BRTR Keskin Array B 51.46 286 LR LR 00 01 55.7
comp=Z,32nm,19.1s,baz=132,slow=39
M31M Drury Creek, Y 51.66 33 P **P** **23 38 01.2 +0.9**
M31M IAmb IAmb 23 38 02.5
comp=Z,4.8nm,0.8s
VRAC Vranov 53.22 305 LR LR 00 03 30.4
comp=Z,44nm,18.4s,baz=37,slow=39
P33M Teslin, Yukon 53.69 34 P **P** **23 38 15.9 +0.5**
P33M IAmb IAmb 23 38 17.3
comp=Z,4.3nm,0.9s
PALK Pallekele 54.11 218 LR LR 00 03 07.8
comp=Z,66nm,18.7s,baz=187,slow=38
BORG Borgarnes 54.13 337 LR LR 00 02 40.0
comp=Z,36nm,19.5s,baz=20,slow=38
GERES GERESS Array B 54.87 307 P **P** **23 38 24.8 +0.6**
comp=Z,0.4nm,0.7s,baz=54,slow=3.4,SNR=4.9
comp=Z,0.4nm,0.7s
DLBC Dease Lake 55.97 34 LR LR 00 03 31.9
comp=Z,30nm,19.1s,baz=128,slow=37
YKA Yellowknife Ar 56.66 23 P **P** **23 38 36.6 -0.1**
comp=Z,1.4nm,0.7s,baz=333,slow=7.6,SNR=5.3
comp=Z,1.4nm,0.7s
DAVOX Davos/Dischmat 58.12 307 LR LR 00 05 08.5
comp=Z,51nm,18.8s,baz=53,slow=38
SCHQ Schefferville 69.50 359 P **P** **23 40 02.5 +0.4**
comp=Z,2.5nm,0.8s,baz=32,slow=9.5,SNR=2.9
comp=Z,2.5nm,0.8s
SCHQ Schefferville 69.50 359 P **P** **23 40 02.5 +0.4**
ESDC Sonseca Array 69.83 312 P **P** **23 40 05.2 +0.8**
comp=Z,0.8nm,0.9s,baz=22,slow=7.4,SNR=4.7
comp=Z,0.8nm,0.9s
ESDC Sonseca Array 69.83 312 P **P** **23 40 04.9 +0.5**
NVAR Mina Array Bea 77.10 38 P **P** **23 40 48.7 +1.3**
comp=Z,0.7nm,0.7s,baz=354,slow=3.6,SNR=4.8
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 77.10 38 P **P** **23 40 48.2 +0.8**
WRA Warramunga Arr 78.25 157 P **P** **23 40 54.4 +0.9**
comp=Z,0.8nm,0.6s,baz=352,slow=5.7,SNR=2.0
comp=Z,0.8nm,0.6s
ASAR Alice Springs 81.76 159 P **P** **23 41 11.8 -0.7**
comp=Z,0.5nm,0.9s,baz=4.0,slow=5.5,SNR=2.2
comp=Z,0.5nm,0.9s

TKL	**Tuckaleechee C**	**87.85**	**12**	LR	LR	00 23 29.8		
	comp=Z,29nm,18.1s,baz=324,slow=37							
TORD	**Torodi Ar. Bea**	**89.53**	**293**	P	**P**	**23 41 51.5**	**+0.2**	
	comp=Z,0.3nm,0.6s,baz=58,slow=4.5,SNR=2.2							
	comp=Z,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**89.53**	**293**	P	**P**	**23 41 51.2**	**-0.2**	
TROLL	**Troll, Antarti**	**147.26**	**213**	PKPdf	**PKPbc**	**23 48 36.3**	**+0.5**	
SNAA	**Sanae**	**148.88**	**214**	PKPdf	**PKPbc**	**23 48 40.0**	**0.0**	
VNA2	**Neumayer--Watz**	**150.29**	**216**	PKPdf	**PKiKP**	**23 48 43.7**	**-0.4**	
	baz=80,slow=2.8							
VNA1	**Neumayer--Stat**	**150.57**	**216**	PKPdf	**PKiKP**	**23 48 45.2**	**+0.5**	
VNA3	**Neumayer Olymp**	**151.04**	**215**	PKPdf	**PKiKP**	**23 48 45.1**	**-0.6**	

*REN **03** 23:30:24.7±0.6,39.°29N±0.°03×115.°21W±0.°02, h10km±6km, ML2.8/14, ML2.8/68(NEIC), Error ellipse: s-maj=4.1km s-min=2.6km az=179.0*

NEIC 03 23:30:24.9±1.7, 39.°30N±0.°03×115.°16W±0.°02, h5km±2km, Error ellipse: s-maj=4.2km s-min=2.2km az=194.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Q12A	**Willow Creek R**	**0.36**	**136**		Pg	23 30 32.1	+0.1
Q12A					Sg	23 30 37.8	+1.0
SPR3	**Spring Creek 3**	**0.71**	**115**		Pb	23 30 39.7	-0.3
SPR3				IAML		23 30 54.2	
	comp=E,142nm,0.2s						
SPR3				IAML		23 30 56.9	
	comp=N,138nm,0.3s						
R11A	**Troy Canyon, C**	**1.01**	**200**		Pg	23 30 43.3	-0.9
R11A				IAML		23 30 57.4	
	comp=E,209nm,0.2s						
R11A				IAML		23 30 57.8	
	comp=N,194nm,0.2s						
PSUT	**Pine Spring**	**1.27**	**127**		Pg	23 30 48.5	-0.8
PSUT					Sg	23 31 05.9	+0.2
PSUT				IAML		23 31 07.2	
	comp=N,178nm,0.6s						
PSUT				IAML		23 31 10.4	
	comp=E,169nm,0.7s						
ELK	**Elko**	**1.44**	**357**		Pn	23 30 51.8	-0.2
ELK					Sg	23 31 11.3	0.0
Q09A	**Carvers**	**1.65**	**254**		Pn	23 30 53.8	-0.9
Q09A					Sg	23 31 18.2	+0.4
S11A	**Rachel**	**1.72**	**196**		Pn	23 30 55.7	0.0
PRN	**Pahroc Range**	**1.89**	**177**		Pn	23 30 58.3	+0.2
BMN	**Battle Mountai**	**1.95**	**306**		Pn	23 30 58.5	-0.3
BMN	**Battle Mountai**	**1.95**	**306**	IAML		23 31 28.9	
	comp=E,70nm,0.4s						
BMN				IAML		23 31 28.9	
	comp=N,109nm,0.5s						
DUG	**Dugway, Tooele**	**2.01**	**63**	Pn	Pn	23 31 00.3	+0.5
DUG				IAML		23 31 15.1	
	comp=N,54nm,1.8s						
DUG				IAML		23 31 32.7	
	comp=N,52nm,0.8s						
TPH	**Tonopah**	**2.03**	**234**		Pn	23 30 59.5	-0.5
TCRU	**Three Creeks R**	**2.22**	**107**		Pn	23 31 02.5	-0.2
TCRU				IAML		23 31 37.0	
	comp=N,44nm,0.6s						
TCRU				IAML		23 31 49.6	
	comp=E,35nm,0.8s						
CCUT	**Cedar City**	**2.25**	**141**		Pn	23 31 03.3	+0.3
CCUT				IAML		23 31 37.9	
	comp=E,79nm,0.7s						
BGU	**Big Grassy Mou**	**2.30**	**44**		Pn	23 31 04.0	+0.4
KVN	**Kaiserville**	**2.30**	**265**		Pn	23 31 03.1	-0.6
SZCU	**Shurtz Canyon**	**2.35**	**136**		Pn	23 31 04.6	+0.1
SZCU				IAML		23 31 45.1	
	comp=E,70nm,0.4s						
MVU	**Marysvale**	**2.43**	**108**		Pn	23 31 06.0	+0.5
MSU	**Marysvale**	**2.45**	**108**	Pn	Pn	23 31 06.2	+0.4
NV11	**Mina Array Sit**	**2.50**	**251**		Pn	23 31 05.7	-0.7
NV11				IAML		23 31 47.2	
	comp=N,31nm,0.8s						
TPNV	**Topopah Spring**	**2.50**	**201**		Pn	23 31 05.8	-0.7
TPNV				IAML		23 31 54.5	
	comp=N,30nm,0.8s						
TPNV				IAML		23 31 54.9	
	comp=N,31nm,0.8s						
NVAR	**Mina Array Bea**	**2.61**	**251**		Pn	23 31 06.0	-1.9
MTPU	**Mount Pierson**	**2.64**	**117**		Pn	23 31 09.0	+0.4
RYN	**Ryan**	**2.71**	**257**		Pn	23 31 08.2	-1.1
RYN				IAML		23 31 53.9	
	comp=N,47nm,0.8s						
RYN				IAML		23 31 60.0	
	comp=E,39nm,0.7s						
SHPR	**Sheep Range**	**2.79**	**180**		Pn	23 31 10.1	-0.4
MPU	**Maple Canyon**	**2.81**	**74**	Pn	Pn	23 31 11.1	+0.4
LHV	**Little Huntoon**	**2.82**	**249**		Pn	23 31 10.2	-0.4
LHV				IAML		23 31 55.7	
	comp=E,49nm,0.7s						
LHV				IAML		23 32 06.2	
	comp=N,51nm,0.9s						
LCH	**Last Change Ra**	**2.85**	**224**		Pn	23 31 10.4	-0.7
PKCU	**Pink Cliffs**	**2.91**	**129**	Pn	Pn	23 31 11.9	-0.2
PKCU				IAML		23 31 59.4	
	comp=N,45nm,0.4s						
AMDNV	**Amargosa**	**2.98**	**198**		Pn	23 31 14.9	+2.1
HVU	**Hansel Valley**	**3.07**	**35**		Pn	23 31 14.4	+0.2
HVU				IAML		23 32 07.8	
	comp=E,19nm,0.4s						
HVU				IAML		23 32 12.0	
	comp=N,34nm,0.6s						
YERR	**Yerington**	**3.19**	**266**		Pn	23 31 14.3	-1.6
YERR				IAML		23 32 07.9	
	comp=N,25nm,0.6s						
YERR				IAML		23 32 09.4	
	comp=E,36nm,0.4s						
GWY	**Greenwater Val**	**3.33**	**202**	Pn	Pn	23 31 16.7	-1.2
GWY				IAML		23 32 20.1	
	comp=N,14nm,0.5s						
GWY				IAML		23 32 23.7	
	comp=E,15nm,0.7s						
PNTR	**Pine Nut**	**3.46**	**268**		Pn	23 31 18.7	-1.0
PNTR				IAML		23 32 29.7	
	comp=E,28nm,1.0s						
U15A	**North Rim**	**3.66**	**141**	Pn	Pn	23 31 23.2	+0.8
U15A				IAML		23 32 23.8	
	comp=N,15nm,0.8s						
U15A				IAML		23 32 25.4	
	comp=E,17nm,1.2s						
HLID	**Hailey**	**4.29**	**7**		Pn	23 31 31.1	0.0

*IDC **03** 23:52:28.4±1.8, 17.°90S×178.°10W, h531km±19km, mb3.2/9, mbtmp4.1/11, Error ellipse: s-maj=24.5km s-min=17.5km az=132.0*

*NEIC **03** 23:52:29.8±1.9, 18.°1S±0.°2×178.°1W±0.°1, h538km±10km, mb4.4/19, Error ellipse: s-maj=27.7km s-min=11.6km az=141.0*

ISC 03 23:52:30.2±0.7, 17.°8S±0.°1×178.°3W±0.°1, h550km, n34, σ1§35/35, mb4.1/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.51**	**271**	P	**P**	**23 53 47.5**	**-1.1**
	140nm,0.7s,baz=123,slow=6.8,SNR=78						
DZM	**Mont Dzumac**	**14.97**	**251**	P	**P**	**23 55 38.1**	**-1.5**
	3.2nm,1.0s,baz=231,slow=23,SNR=2.8						
DZM	**Mont Dzumac**	**14.97**	**251**	P	**P**	**23 55 40.4**	**+0.8**
DZM				IAmb	IAmb	23 55 54.0	
	comp=Z,19nm,1.3s						
KOUNC	**Koumac, New Ca**	**16.70**	**258**	P	**P**	**23 55 56.3**	**0.0**
URZ	**Urewera**	**20.74**	**190**	P	**P**	**23 56 29.9**	**-2.9**
	comp=Z,4.5nm,0.3s,baz=251,slow=4.1,SNR=10						
	comp=Z,4.5nm,0.3s						
URZ	**Urewera**	**20.74**	**190**	P	**P**	**23 56 29.8**	**-3.0**
URZ				IAmb	IAmb	23 56 49.8	
	comp=Z,19nm,1.1s						
BKZ	**Black Stump Fm**	**21.73**	**191**	P	**P**	**23 56 39.1**	**-2.8**
ARMA	**Armidale**	**30.09**	**240**	P	**P**	**23 57 56.0**	**+0.4**
ARMA				IAmb	IAmb	23 58 08.3	
	comp=Z,19nm,1.2s						
CAN	**Canberra**	**33.85**	**233**	P	**P**	**23 58 27.7**	**+0.2**
TOO	**Toolangi**	**37.31**	**231**	P	**P**	**23 58 57.0**	**+0.9**
STKA	**Stephens Creek**	**38.78**	**241**	P	**P**	**23 59 09.2**	**+1.2**
	comp=Z,4.3nm,0.8s,baz=88,slow=8.1,SNR=7.6						
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	**38.78**	**241**	P	**P**	**23 59 07.5**	**-0.5**
BBOO	**Buckleboo**	**43.55**	**241**	P	**P**	**23 59 46.3**	**+0.4**
BBOO				IAmb	IAmb	23 59 47.5	
	comp=Z,14nm,0.9s						
WB0	**Warramunga Arr**	**44.74**	**260**	P	**P**	**23 59 57.2**	**+2.0**
WB0				IAmb	IAmb	00 00 09.2	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**23 59 55.2**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=94,slow=7.4,SNR=5.9						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**23 59 54.7**	**-0.8**
AS31	**Alice Springs**	**44.93**	**254**	P	**P**	**23 59 56.9**	**+0.2**
AS31				IAmb	IAmb	23 59 57.8	
	comp=Z,4.7nm,0.7s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**23 59 57.2**	**+0.5**
	comp=Z,16nm,0.6s,baz=89,slow=8.2,SNR=158						
ASAR				PcP	**PcP**	**00 01 26.9**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=99,slow=5.7,SNR=2.9						
	comp=Z,16nm,0.6s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**23 59 56.2**	**-0.5**
FORT	**Forrest**	**50.16**	**245**	P	**P**	**00 00 34.9**	**-0.8**
FORT				IAmb	IAmb	00 00 53.7	
	comp=Z,17nm,0.8s						
PSA00	**Pilbara Seismi**	**58.05**	**255**	P	**P**	**00 01 31.7**	**+0.3**
PSA00				IAmb	IAmb	00 01 33.6	
	comp=Z,14nm,1.1s						
SBA	**Scott Base**	**60.50**	**184**	P	**P**	**00 01 48.7**	**+2.0**
VNDA	**Vanda**	**60.52**	**185**	P	**P**	**00 01 48.0**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=20,slow=6.9,SNR=1.9						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**60.52**	**185**	P	**P**	**00 01 47.8**	**+0.9**
MORW	**Morawa**	**60.63**	**246**	P	**P**	**00 01 48.7**	**+0.2**
MORW				IAmb	IAmb	00 01 49.4	
	comp=Z,25nm,1.4s						
QSPA	**South Pole Qui**	**72.22**	**180**	P	**P**	**00 03 00.5**	**+0.9**
QSPA				IAmb	IAmb	00 03 01.3	
	comp=Z,5.8nm,1.0s						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**00 03 38.6**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=226,slow=9.2,SNR=5.3						
	comp=Z,0.7nm,0.7s						
BELA	**Belgrano 2**	**82.22**	**173**	P	**P**	**00 03 53.4**	**-0.2**
BELA				IAmb	IAmb	00 03 54.4	
	comp=Z,4.4nm,1.0s						
MAW	**Mawson**	**83.97**	**200**	P	**P**	**00 04 02.9**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=132,slow=4.1,SNR=3.0						
	comp=Z,1.6nm,0.8s						
MAW	**Mawson**	**83.97**	**200**	P	**P**	**00 04 02.8**	**+0.4**
ILAR	**Eielson Array**	**85.79**	**13**	P	**P**	**00 04 09.4**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=224,slow=5.1,SNR=1.8						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**85.85**	**58**	P	**P**	**00 04 12.7**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=217,slow=6.0,SNR=7.0						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**85.85**	**58**	P	**P**	**00 04 12.6**	**+0.2**
GERES	**GERESS Array B**	**147.58**	**345**	PKPbc	**PKPdf**	**00 11 12.4**	**+3.0**
	comp=Z,0.1nm,0.2s,baz=35,slow=4.9,SNR=4.3						

*AEIC **04** 00:16:45±2.3, 51.°35N±0.°08×173.°72W±0.°07, h24km±5km, Error ellipse: s-maj=11.0km s-min=6.0km az=175.0*

*NEIC **04** 00:16:47.6±1.8, 51.°46N±0.°05×173.°73W±0.°07, h35km±1km, mb4.0/35, ML3.6/29(AEIC), Error ellipse: s-maj=7.1km s-min=5.9km az=189.0*

*IDC **04** 00:16:51.8±6.2, 51.°90N×173.°73W, h67km±56km, mb3.5/15, mbtmp3.8/16, ML3.9/1, MS3.2/12, Error ellipse: s-maj=33.5km s-min=14.9km az=1.0*

ISC 04 00:16:47.2±0.6, 51.°43N±0.°08×173.°73W±0.°04, h37km, n121, σ1§05/107, mb3.9/19, MS3.3/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.87**	**345**		**Pn**	**00 17 02.5**	**-0.5**
KOFP					**Sn**	**00 17 15.2**	**+0.7**
KOSE	**Korovin Southe**	**0.93**	**348**		**Pn**	**00 17 03.7**	**-0.1**
KOKL	**Mount Kliuchef**	**0.94**	**342**		**Pn**	**00 17 03.4**	**-0.4**
KONE	**Korovin Northe**	**0.99**	**346**		**Pn**	**00 17 04.2**	**-0.3**
GSMY	**Great Sitkin M**	**1.57**	**294**		**Pn**	**00 17 11.7**	**-0.8**
GSTR	**Great Sitkin T**	**1.59**	**296**		**Pn**	**00 17 12.1**	**-0.7**
GSCK	**Great Sitkin C**	**1.62**	**292**		**Pn**	**00 17 12.4**	**-0.7**
GSTD	**Great Sitkin T**	**1.62**	**294**		**Pn**	**00 17 12.5**	**-0.8**
GSTD					**Sn**	**00 17 34.5**	**+1.6**
ADK	**Adak**	**1.89**	**285**	Pn	**Pn**	**00 17 16.4**	**-0.5**
ADK	**Adak**	**1.89**	**285**		**Sn**	**00 17 41.7**	**+2.3**
KIWB	**Kanaga Island**	**2.17**	**283**	Pn	**Pn**	**00 17 20.5**	**-0.2**
KIKV	**Kanaga Island**	**2.19**	**283**		**Pn**	**00 17 20.9**	**0.0**
KIMD	**Kanaga Island**	**2.21**	**280**		**Pn**	**00 17 20.9**	**-0.3**
KICM	**Kanaga Island**	**2.21**	**284**		**Pn**	**00 17 21.6**	**+0.4**
TAFP	**Tanaga Falls P**	**2.69**	**282**		**Pn**	**00 17 27.8**	**0.0**
TAFP					**Sn**	**00 18 01.3**	**+2.2**
TASE	**Tanaga Southea**	**2.71**	**280**		**Pn**	**00 17 28.8**	**+0.6**
CLES	**Cleveland East**	**2.75**	**58**		**Pn**	**00 17 28.2**	**-0.3**
CLCO	**Concord Point,**	**2.82**	**60**		**Pn**	**00 17 29.9**	**+0.3**
NIKH	**Nikolski High**	**3.37**	**61**	Pn	**Pn**	**00 17 38.2**	**+1.0**
NIKH	**Nikolski High**	**3.37**	**61**		**Sn**	**00 18 17.7**	**+1.7**
OKCE	**Okmok Cone E**	**3.95**	**57**		**Pn**	**00 17 46.0**	**+0.8**
CEPE	**Semis' Perret**	**4.15**	**280**		**Pn**	**00 17 49.2**	**+1.3**
AMKA	**Amchitka**	**4.36**	**272**	Pn	**Pn**	**00 17 51.0**	**+0.2**
MAPS	**Pakushin South**	**4.77**	**57**		**Pn**	**00 17 56.5**	**+0.1**
LSSE	**Little Sitkin**	**4.82**	**279**		**Pn**	**00 17 57.8**	**+0.8**
LSNW	**Little Sitkin**	**4.85**	**279**		**Pn**	**00 17 58.8**	**+1.3**
LSSA	**Little Sitkin**	**4.85**	**279**		**Pn**	**00 17 58.5**	**+0.9**
UNV	**Unalaska Vale**	**5.02**	**58**	Pn	**Pn**	**00 18 01.8**	**+2.0**
AKUT	**Akutan**	**5.54**	**58**	Pn	**Pn**	**00 18 08.8**	**+1.9**
SPIA	**Saint Paul Isl**	**6.11**	**18**	Pn	**Pn**	**00 18 16.0**	**+1.3**
CHGN	**Chignik**	**10.27**	**56**	Pn	**Pn**	**00 19 1.8**	**+1.1**
OHAK	**Old Harbor**	**13.24**	**56**	Pn	**Pn**	**00 19 50.9**	**-1.4**
N18K	**Kilae Creek**	**13.56**	**40**	Pn	**Pn**	**00 19 57.1**	**+0.4**
Q19K	**Cape Douglas,**	**13.67**	**49**	Pn	**Pn**	**00 20 00.8**	**+2.5**
SVW2	**Sparrevohn**	**13.93**	**39**	Pn	**Pn**	**00 20 03.8**	**+2.1**
N19K	**Bonanza Creek**	**14.21**	**41**	Pn	**Pn**	**00 20 06.7**	**+1.0**
L19K	**White Mountain**	**14.86**	**36**	Pn	**P**	**00 20 17.2**	**-2.4**
M19K	**Big River Lodg**	**14.87**	**38**	Pn	**Pn**	**00 20 16.4**	**+2.0**
TTA	**Tatalina**	**14.93**	**33**		**Pn**	**00 20 17.5**	**+2.2**
K20K	**Telida**	**15.88**	**34**		**P**	**00 20 30.0**	**-0.9**
J20K	**Nowinta River**	**16.39**	**31**	P	**P**	**00 20 36.4**	**-0.2**
J20K				IAmb	IAmb	00 20 52.9	
	comp=Z,11nm,1.4s						
CAST	**Castle Rocks**	**16.62**	**35**	P	**P**	**00 20 38.5**	**-0.7**
KTH	**Kantishna Hill**	**17.13**	**36**	P	**P**	**00 20 44.8**	**0.0**
KTH				IAmb	IAmb	00 21 01.1	
	comp=Z,13nm,1.2s						
BPAW	**Bear Paw Mtn.**	**17.42**	**35**	P	**P**	**00 20 48.0**	**+0.1**
BPAW				IAmb	IAmb	00 20 51.1	
	comp=Z,9.0nm,1.1s						
PETK	**Petropavlovsk-**	**17.52**	**287**	LR	LR	00 27 11.2	
	comp=Z,40nm,18.7s,baz=93,slow=36						
I21K	**Tanana**	**17.75**	**31**	P	**P**	**00 20 51.8**	**+0.2**
IMAR	**Indian Mountai**	**17.77**	**27**		**P**	**00 20 52.9**	**+1.2**
H21K	**Melozitna Rive**	**17.82**	**29**		**P**	**00 20 53.1**	**+0.8**
MLY	**Manley**	**18.07**	**32**	P	**P**	**00 20 55.9**	**+0.8**
MLY				IAmb	IAmb	00 21 00.2	
	comp=Z,7.2nm,0.9s						
NEA2	**Nenana**	**18.39**	**35**	P	**Pn**	**00 20 59.1**	**+0.3**
RAGM	**Ragged Mountai**	**18.45**	**50**	P	**Pn**	**00 20 59.6**	**0.0**
I23K	**Minto, Yukon-K**	**18.61**	**33**	P	**Pn**	**00 21 01.5**	**+0.1**
I23K				IAmb	IAmb	00 21 16.7	
	comp=Z,17nm,1.4s						
WRH	**Wood River Hil**	**18.68**	**36**	P	**P**	**00 21 01.9**	**+0.2**
WRH				IAmb	IAmb	00 21 16.3	
	comp=Z,11nm,1.5s						
CCB	**Clear Creek Bu**	**18.87**	**36**	P	**P**	**00 21 03.6**	**-0.2**
BERG	**Berg Lake**	**18.91**	**50**	P	**P**	**00 21 04.7**	**+0.3**
H23K	**Yukon River**	**18.95**	**31**	P	**Pn**	**00 21 05.6**	**-0.1**
H23K				IAmb	IAmb	00 21 11.7	
	comp=Z,11nm,1.4s						
HDA	**Harding Lake**	**19.07**	**37**	P	**P**	**00 21 06.0**	**0.0**
HDA				IAmb	IAmb	00 21 07.6	
	comp=Z,6.7nm,0.7s						
IL31		**19.27**	**36**	P	**P**	**00 21 08.0**	**-0.3**
ILAR	**Eielson Array**	**19.27**	**36**	P	**P**	**00 21 06.7**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=231,slow=8.3,SNR=17						
ILAR				LR	LR	00 29 22.4	
	comp=Z,58nm,19.1s,baz=156,slow=40						
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**19.27**	**36**	P	**P**	**00 21 08.7**	**+0.4**
H24K	**Noodor Dome**	**19.51**	**33**	P	**P**	**00 21 11.2**	**+0.3**
H24K				IAmb	IAmb	00 21 26.1	
	comp=Z,9.8nm,1.0s						
J25K	**Salcha River,**	**19.76**	**37**	P	**P**	**00 21 12.9**	**-0.8**
SCRK	**Sand Creek**	**20.02**	**40**	P	**P**	**00 21 16.0**	**-0.5**
SCRK				IAmb	IAmb	00 21 30.8	
	comp=Z,6.2nm,0.5s						
PRP	**Porcupine Dome**	**20.15**	**35**	P	**P**	**00 21 17.6**	**-0.4**
M27K	**Edge Creek, AK**	**20.31**	**45**	P	Pn	00 21 21.8	-0.2
M27K				IAmb	IAmb	00 21 40.8	
	comp=Z,3.8nm,0.8s						
J26L	**Joseph Creek**	**20.41**	**39**	P	**P**	**00 21 20.0**	**-0.7**

BCAR	**Beaver Creek A**	**20.58**	**43**	P	Pn	00 21 24.9	-0.1	
TOLK	**Toolik Lake Re**	**20.80**	**25**	P	**P**	**00 21 24.1**	**-0.7**	
TOLK				IAmb	IAmb	00 21 34.5		
	comp=Z,9.3nm,1.1s							
K27K	**Chicken**	**20.81**	**41**	P	**P**	**00 21 25.1**	**+0.1**	
K27K				IAmb	IAmb	00 21 31.3		
	comp=Z,6.9nm,1.2s							
I26K	**Coal Creek Min**	**20.92**	**37**	P	**P**	**00 21 25.3**	**-0.8**	
SEY	**Seymchan**	**21.38**	**316**	P	**P**	**00 21 28.9**	**-2.2**	
	comp=Z,0.7nm,0.4s,baz=126,slow=14,SNR=2.1							
	comp=Z,0.7nm,0.4s							
MA2	**Magadan**	**21.46**	**306**	LR	LR	00 29 11.2		
	comp=Z,58nm,20.1s,baz=113,slow=35							
BMAR	**Burnt Mountain**	**21.50**	**31**	P	**P**	**00 21 32.8**	**+0.5**	
HYT	**Haines Junctio**	**21.99**	**51**	P	**P**	**00 21 37.5**	**-0.3**	
HYT				IAmb	IAmb	00 21 55.2		
	comp=Z,7.1nm,1.4s							
H02S1	**DAWSON INLET T**	**25.04**	**70**	T	T	00 48 02.0		
	SNR=50							
DLBC	**Dease Lake**	**25.68**	**57**	P	**P**	**00 22 13.2**	**-0.1**	
	comp=Z,1.6nm,0.5s,baz=315,slow=26,SNR=2.6							
DLBC				LR	LR	00 32 05.0		
	comp=Z,69nm,18.1s,baz=222,slow=36							
	comp=Z,1.6nm,0.5s							
DLBC	**Dease Lake**	**25.68**	**57**	P	**P**	**00 22 13.2**	**-0.1**	
DLBC				IAmb	IAmb	00 22 38.6		
	comp=Z,6.3nm,1.1s							
YAK	**Yakutsk**	**31.76**	**312**	LR	LR	00 36 30.6		
	comp=Z,85nm,18.0s,baz=91,slow=38							
H11N2	**WAKE ISLAND Hy**	**35.11**	**213**	T	T	01 01 43.1		
	baz=21,slow=76,SNR=5.2							
H11N3	**WAKE ISLAND Hy**	**35.12**	**213**	T	T	01 01 41.4		
	baz=21,slow=76,SNR=7.8							
H11N1	**WAKE ISLAND Hy**	**35.13**	**213**	T	T	01 01 46.5		
	baz=21,slow=76,SNR=6.9							
H11S1	**WAKE ISLAND Hy**	**36.31**	**212**	T	T	01 03 04.6		
	baz=19,slow=74							
H11S2	**WAKE ISLAND Hy**	**36.33**	**212**	T	T	01 03 00.0		
	baz=19,slow=74							
H11S3	**WAKE ISLAND Hy**	**36.33**	**212**	T	T	01 02 52.4		
	baz=19							
USRK	**Ussuriysk Ar.**	**36.42**	**280**	P	**P**	**00 23 48.3**	**+0.4**	
	comp=Z,2.6nm,0.7s,baz=57,slow=7.0,SNR=4.3							
	comp=Z,2.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**36.42**	**280**	P	**P**	**00 23 48.0**	**+0.1**	
MCMT	**McKenzie Canyo**	**40.12**	**75**	P	**P**	**00 24 19.8**	**+0.4**	
NVAR	**Mina Array Bea**	**40.39**	**86**	P	**P**	**00 24 23.2**	**+1.6**	
	comp=Z,0.4nm,0.4s,baz=292,slow=8.6,SNR=3.0							
	comp=Z,0.1nm,0.4s							
BOZ	**Bozeman (W)**	**40.45**	**73**	P	**P**	**00 24 23.4**	**+1.5**	
BOZ				IAmb	IAmb	00 24 38.0		
	comp=Z,2.1nm,0.6s							
KSRS	**Korea Array**	**42.80**	**275**	P	**P**	**00 24 43.5**	**+2.4**	
	comp=Z,2.9nm,0.9s,baz=57,slow=8.2,SNR=14							
KSRS				LR	LR	00 42 07.3		
	comp=Z,11nm,20.3s,baz=65,slow=35							
	comp=Z,2.9nm,0.9s							
KSAR	**Wonju Array Be**	**42.84**	**275**	P	**P**	**00 24 42.0**	**+0.7**	
PD31	**Pinedale Array**	**43.25**	**75**	P	**P**	**00 24 46.1**	**+1.2**	
PD31				IAmb	IAmb	00 25 01.1		
	comp=Z,2.8nm,0.6s							
PDAR	**Pinedale Array**	**43.25**	**75**	P	**P**	**00 24 46.2**	**+1.3**	
	comp=Z,0.6nm,0.4s,baz=59,slow=46,SNR=3.9							
	comp=Z,0.6nm,0.4s							
PDAR	**Pinedale Array**	**43.25**	**75**	P	**P**	**00 24 45.5**	**+0.6**	
SONM	**Songino Array**	**49.43**	**299**	P	**P**	**00 25 33.1**	**-0.2**	
	comp=Z,0.7nm,0.5s,baz=52,slow=8.0,SNR=4.6							
SONM				LR	LR	00 46 53.5		
	comp=Z,46nm,19.6s,baz=64,slow=37							
	comp=Z,0.7nm,0.5s							
TXAR	**Lajitas Array**	**55.50**	**85**	P	**P**	**00 26 18.3**	**-0.1**	
	comp=Z,0.4nm,0.9s,baz=316,slow=6.3,SNR=4.0							
	comp=Z,0.4nm,0.9s							
ARCES	**ARCESS Array B**	**58.52**	**352**	PcP	**PcP**	**00 27 29.2**	**+0.1**	
	comp=Z,2.4nm,0.8s,baz=24,slow=5.0,SNR=4.9							
ARCES				LR	LR	00 54 23.4		
	comp=Z,22nm,18.1s,baz=334,slow=39							
KURK	**Kurchatov**	**61.23**	**316**	P	**P**	**00 26 58.0**	**+0.1**	
KURBB	**Kurchatov Arra**	**61.23**	**316**	P	**P**	**00 26 57.8**	**-0.9**	
	comp=Z,1.1nm,0.5s,baz=44,slow=6.8,SNR=6.0							
KURBB				PcP	**PcP**	**00 27 42.0**	**+1.3**	
	comp=Z,0.7nm,0.3s,baz=50,slow=5.0,SNR=1.9							
	comp=Z,1.1nm,0.5s							
MK31	**Makanchi Array**	**62.44**	**311**	P	**P**	**00 27 06.3**	**+

baz=8.0
GAR Garm 2.76 262 ⇑*i*P **Pb 00 21 29.1 -1.6**
baz=62
GAR ⇑*i*S **Sb 00 22 04.2 -0.6**
baz=62
CHDK Chadak 2.80 304 P **Pb 00 21 30.9 -0.5**
CHDK S **Sg 00 22 08.8 -2.0**
EKS2 Erkin-Say 3.21 359 ⇓*i*P **Pb 00 21 34.7 -3.7**
baz=59
EKS2 ⇓*i*S **Sb 00 22 14.0 -3.8**
baz=59
MRKS Merke 3.32 352 *e*P **Pb 00 21 41.4 +1.1**
5.0nm,0.3s
MRKS *e*S **Sb 00 22 23.9 +2.8**
20nm,0.3s
MRKS Merke 3.32 352 Pg **Pb 00 21 41.4 +1.1**
5.0nm,0.3s
MRKS Lg Lg 00 22 23.9
20nm,0.3s
CHMS Chumysh 3.62 11 ⇓Pg **Pg 00 21 50.8 +0.7**
3.5nm,0.7s
CHMS ⇓Lg Lg 00 22 35.4
13nm,0.8s
TKM2 Tokmak 2 3.72 21 ⇑Pn **Pb 00 21 44.1 -3.0**
2.1nm,0.5s
TKM2 ⇓Lg Lg 00 22 41.5
6.0nm,0.7s
KST Kastek 3.94 24 *e*P **Pg 00 21 56.0 -0.3**
KST *e*S **Sg 00 22 48.8 +1.5**
12nm,0.5s
KST Kastek 3.94 24 Pg **Pg 00 21 55.9 -0.3**
KST Lg Lg 00 22 48.8
12nm,0.5s
IUG Iuzhnay 3.94 314 *e*P **Pb 00 21 49.3 -1.6**
84nm,0.3s
IUG *e*S **Sb 00 22 37.4 -1.5**
23nm,0.3s
IUG Iuzhnay 3.94 314 Pg **Pb 00 21 49.3 -1.6**
84nm,0.3s
IUG Lg Lg 00 22 37.4
23nm,0.3s
SGDS Sogindy 4.04 8 *e*P **Pg 00 21 56.1 -2.3**
2.5nm,0.3s
SGDS *e*S **Sg 00 22 49.0 -1.7**
4.0nm,0.4s
SGDS Sogindy 4.04 8 Pg **Pg 00 21 56.1 -2.3**
2.5nm,0.3s
SGDS Lg Lg 00 22 49.0
4.0nm,0.4s
KK31 Karatay Array 4.42 327 ⇑Pn **Pn 00 21 50.5 +1.9**
0.2nm,0.3s,baz=149,slow=13,SNR=5.8
KK31 ⇑Pg **Pb 00 22 01.4 +2.5**
0.9nm,0.3s,baz=142,slow=13,SNR=4.3
KK31 ⇑Lg Lg 00 22 56.2
3.7nm,0.6s,baz=150,slow=30,SNR=5.4
MDOK Medeo 4.43 32 *e*P **Pg 00 22 05.8 +0.1**
2.4nm,0.3s
MDOK *e*S **Sg 00 23 06.1 +2.9**
5.9nm,0.5s
MDOK Medeo 4.43 32 Pg **Pg 00 22 05.8 +0.1**
2.4nm,0.3s
MDOK ⇓Pg Pb 00 22 06.5 +7.3
3.1nm,0.6s
MDOK Lg Lg 00 23 05.6
6.7nm,0.8s
MDOK Lg Lg 00 23 06.1
5.9nm,0.5s
KRBS Karabastau 4.46 18 *e*P **Pg 00 22 04.9 -1.4**
2.3nm,0.3s
KRBS *e*S **Sg 00 23 04.4 +0.2**
5.0nm,0.5s
KRBS Karabastau 4.46 18 Pg **Pg 00 22 04.9 -1.4**
2.3nm,0.3s
KRBS Lg Lg 00 23 04.4
5.0nm,0.5s
KTBS Karatobe 4.77 26 *e*P **Pg 00 22 11.5 -0.6**
1.6nm,0.3s
KTBS *e*S **Sg 00 23 15.8 +1.9**
10nm,0.2s
KTBS Karatobe 4.77 26 Pg **Pg 00 22 11.5 -0.6**
1.6nm,0.3s
KTBS Lg Lg 00 23 15.8
10nm,0.2s
KUU Kurty 4.82 22 *e*P **Pg 00 22 11.8 -1.4**
2.5nm,0.4s
KUU *e*S **Sg 00 23 16.3 +0.6**
5.8nm,0.3s
KUU Kurty 4.82 22 Pg **Pg 00 22 11.8 -1.4**
2.5nm,0.4s
KUU Lg Lg 00 23 16.3
5.8nm,0.3s
CHKK Chushkaly 5.00 27 *e*P **Pg 00 22 15.9 -0.7**
1.0nm,0.1s
CHKK *e*S **Sg 00 23 23.0 +1.7**
4.1nm,0.1s
CHKK Chushkaly 5.00 27 Pg **Pg 00 22 15.9 -0.7**
1.0nm,0.1s
CHKK Lg Lg 00 23 23.0
4.1nm,0.1s
ARXS Arharly 5.62 31 *e*P **Pg 00 22 27.9 -0.5**
2.8nm,0.4s
ARXS *e*S **Sg 00 23 43.9 +2.6**
6.7nm,0.3s
ARXS Arharly 5.62 31 Pg **Pg 00 22 27.9 -0.5**
2.8nm,0.4s
ARXS Lg Lg 00 23 43.9
6.7nm,0.3s

*SJA **04** 00:39:49.4±0.7,21°.36S×66°.68W,h254km±7km, ML4.3, MW4.0*
*IDC **04** 00:39:50.6±0.8,21°.38S×66°.58W,h215km±7km, mb3.9/11, mbtmp4.4/19, Error ellipse: s-maj=12.0km s-min=9.9km az=105.0*
*NEIC **04** 00:39:50.9±1.7,21°.34S±0°.06×66°.62W±0°.08, h218km±6km, mb4.4/58, Error ellipse: s-maj=11.2km s-min=8.7km az=81.0*
*GUC **04** 00:39:51.9±0.8,21°.46S×66°.88W,h254km±9km, ML4.4*
*SCB **04** 00:39:52.4±1.3,21°.38S×66°.66W,h230km±9km, ML4.5/5, MW3.8, Error ellipse: s-maj=6.1km s-min=4.4km az=0.0*

ISC 04 00:39:51.1±0.5,21°.35S±0°.03×66°.69W±0°.04,h225km±5km, n184,σ1$33/234,mb4.3/36,15C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**0.99**	**85**	P			**Pn**	**00 40 24.7**	**+0.8**
MOCB				S			**S**	**00 40 47.6**	**-1.8**
MOCB				IAML				00 40 50.1	
1μm,0.8s									
YJA	**Yavi**	**1.37**	**127**	*e*P			**Pn**	**00 40 27.4**	**+0.9**
YJA				*e*S			**S**	**00 40 53.6**	**-0.4**
YJA	**Yavi**	**1.37**	**127**	P			**Pn**	**00 40 27.4**	**+0.9**
AF01	**San Pedro de A**	**2.11**	**220**				**Pn**	**00 40 34.3**	**+1.5**
AF01				Sn			**S**	**00 41 08.0**	**+2.6**
HJA	**Humahuaca**	**2.20**	**148**	*e*P			**Pn**	**00 40 35.0**	**+1.1**
HJA				*e*S			**S**	**00 41 10.1**	**+2.8**
HJA				IAML				00 41 11.0	
comp=Z,507nm,0.5s									
LVC	**Limon Verde**	**2.41**	**238**	P			**Pn**	**00 40 35.9**	**-0.1**
comp=Z,26nm,0.3s,baz=28,slow=10,SNR=118									
LVC				S			**S**	**00 41 10.7**	**-0.3**
comp=Z,128nm,0.4s,baz=112,slow=19,SNR=46									
LVC	**Limon Verde**	**2.41**	**238**				**Pn**	**00 40 36.5**	**+0.6**
LVC				Sn			**S**	**00 41 10.4**	**-0.6**
LVC	**Limon Verde**	**2.41**	**238**	⇑*i*P			**Pn**	**00 40 36.8**	**+0.8**
LVC				*i*S			**S**	**00 41 10.9**	**-0.1**
LVC	**Limon Verde**	**2.41**	**238**	*e*P			**Pn**	**00 40 36.8**	**+0.8**
LVC				*e*S			**S**	**00 41 11.9**	**+0.9**
PB09	**IPOC Station P**	**2.41**	**259**				**Pn**	**00 40 36.9**	**+1.1**
PB09				Sn			**S**	**00 41 11.9**	**+1.2**
PB09	**IPOC Station P**	**2.41**	**259**	*e*P			**Pn**	**00 40 36.9**	**+1.1**
PB09				*e*S			**S**	**00 41 11.2**	**+0.5**
PB09				IAML				00 41 16.3	
comp=E,340nm,0.1s									
PB09	**IPOC Station P**	**2.41**	**259**	*e*P			**Pn**	**00 40 36.9**	**+1.1**
PB09				*e*S			**S**	**00 41 12.2**	**+1.5**
PB09				IAML				00 41 13.8	
comp=Z,344nm,0.6s									
PB01	**IPOC Station P**	**2.62**	**276**				**Pn**	**00 40 38.5**	**+0.5**
PB01				Sn			**S**	**00 41 14.4**	**-0.2**
PB01	**IPOC Station P**	**2.62**	**276**	⇑*e*P			**Pn**	**00 40 38.3**	**+0.3**
PB01				*e*S			**S**	**00 41 14.3**	**-0.2**
PB01				IAML				00 41 16.6	
comp=E,687nm,0.1s									
PB01	**IPOC Station P**	**2.62**	**276**	*e*P			**Pn**	**00 40 38.8**	**+0.8**
PB01				*e*S			**S**	**00 41 15.3**	**+0.7**
PB01				IAML				00 41 16.6	
comp=Z,588nm,0.2s									
GO01	**Chusmiza**	**2.88**	**305**				**Pn**	**00 40 42.5**	**+1.2**
GO01	**Chusmiza**	**2.88**	**305**	⇑*i*P			**Pn**	**00 40 42.3**	**+1.1**
GO01				*e*S			**S**	**00 41 22.1**	**+1.8**
GO01				IAML				00 41 27.7	
comp=N,1μm,0.1s									
GO01	**Chusmiza**	**2.88**	**305**	*e*P			**Pn**	**00 40 42.4**	**+1.2**
GO01				*e*P				00 40 43.0	
GO01				*e*S			**S**	**00 41 25.0**	**+4.7**
PB02	**IPOC Station P**	**2.98**	**270**				**Pn**	**00 40 42.5**	**+0.5**
PB02	**IPOC Station P**	**2.98**	**270**	⇑*e*P			**Pn**	**00 40 42.5**	**+0.5**
PB02				*e*S			**S**	**00 41 20.4**	**-1.4**
PB02	**IPOC Station P**	**2.98**	**270**	P			**Pn**	**00 40 42.7**	**+0.7**
PB02				S			**S**	**00 41 19.5**	**-2.3**
PB02				IAML				00 41 21.2	
comp=N,2μm,0.4s									
PB02				IAML				00 41 21.3	
comp=N,2μm,0.5s									
PB06	**IPOC Station P**	**2.99**	**243**				**Pn**	**00 40 42.6**	**+0.4**
PB06	**IPOC Station P**	**2.99**	**243**	⇑*e*P			**Pn**	**00 40 42.4**	**+0.3**
PB06				*e*S			**S**	**00 41 20.9**	**-1.2**
PB06	**IPOC Station P**	**2.99**	**243**	*e*P			**Pn**	**00 40 42.7**	**+0.6**
PB06				*e*P				00 40 43.0	
PB06				*e*S			**S**	**00 41 21.5**	**-0.5**
PB06				*e*S			S	00 41 21.7	-0.3
PB06				IAML				00 41 29.1	
comp=Z,328nm,0.3s									
PB06	**IPOC Station P**	**2.99**	**243**	P			**Pn**	**00 40 42.8**	**+0.6**
PB06				IAML				00 41 27.6	
comp=Z,98nm,0.3s									
PB07	**IPOC Station P**	**3.00**	**262**				**Pn**	**00 40 42.5**	**+0.3**
PB07	**IPOC Station P**	**3.00**	**262**	*e*P			**Pn**	**00 40 42.6**	**+0.5**
PB07				*e*S			**S**	**00 41 20.6**	**-1.5**
PB07	**IPOC Station P**	**3.00**	**262**	*e*P			**Pn**	**00 40 42.7**	**+0.5**
PB07				*e*S			**S**	**00 41 21.5**	**-0.6**
PB07				IAML				00 41 22.7	
comp=Z,639nm,0.2s									
PB15	**IPOC Station P**	**3.17**	**234**				**Pn**	**00 40 44.7**	**+0.4**
PB15	**IPOC Station P**	**3.17**	**234**	⇑*e*P			**Pn**	**00 40 44.6**	**+0.4**
PB15				*e*S			**S**	**00 41 24.8**	**-0.9**
PB15	**IPOC Station P**	**3.17**	**234**	*e*P			**Pn**	**00 40 44.6**	**+0.4**
PB15				*e*P				00 40 45.0	
PB15				*e*S			**S**	**00 41 25.3**	**-0.4**
PB15	**IPOC Station P**	**3.17**	**234**	P			**Pn**	**00 40 44.8**	**+0.6**
PB15				IAML				00 41 29.1	
comp=Z,3μm,0.2s									
AZAP	**Zapla**	**3.23**	**153**	*e*P			**Pn**	**00 40 45.0**	**+0.1**
AZAP				*e*S			**S**	**00 41 27.7**	**+0.5**
AZAP				IAML				00 41 31.3	
comp=Z,687nm,0.5s									
PATCX	**Punta Patache**	**3.27**	**279**				**Pn**	**00 40 45.5**	**+0.2**
PATCX	**Punta Patache**	**3.27**	**279**	⇑*i*P			**Pn**	**00 40 45.5**	**+0.2**
PATCX				*e*S			**S**	**00 41 26.3**	**-1.4**
PATCX	**Punta Patache**	**3.27**	**279**	*e*P			**Pn**	**00 40 45.7**	**+0.5**
PATCX				*e*P			**Pn**	**00 40 45.7**	**+0.5**
PATCX				*e*P				00 40 45.8	
PATCX				*e*S			**S**	**00 41 26.5**	**-1.1**
PATCX				IAML				00 41 28.7	
comp=Z,340nm,0.4s									
ASTB	**Santa Barbara**	**3.31**	**142**	*e*P			**Pn**	**00 40 45.7**	**-0.1**
ASTB				*e*P				00 40 46.0	
ASTB				*e*S			**S**	**00 41 27.0**	**-1.8**
TA01	**Diego Aracena**	**3.35**	**283**	Pn			**Pn**	**00 40 46.0**	**-0.1**
TA01	**Diego Aracena**	**3.35**	**283**	⇑*e*P			**Pn**	**00 40 45.8**	**-0.2**
TA01				*e*S			**S**	**00 41 26.9**	**-2.3**
TA01	**Diego Aracena**	**3.35**	**283**	*e*P			**Pn**	**00 40 45.9**	**-0.1**
TA01				*e*S			**S**	**00 41 28.5**	**-0.6**
TA01				IAML				00 41 30.5	
comp=Z,229nm,0.5s									
PB04	**IPOC Station P**	**3.36**	**252**				**Pn**	**00 40 46.6**	**+0.3**
PB04	**IPOC Station P**	**3.36**	**252**	⇑*e*P			**Pn**	**00 40 46.6**	**+0.3**
PB04				*e*S			**S**	**00 41 27.2**	**-2.3**
PB04	**IPOC Station P**	**3.36**	**252**	*e*P			**Pn**	**00 40 46.7**	**+0.3**
PB04				*e*S			**S**	**00 41 27.4**	**-2.2**
PB04				*e*S			S	00 41 27.7	-1.9
PB04				*e*S			S	00 41 27.8	-1.8
PB04				IAML				00 41 30.8	
comp=Z,551nm,0.1s									
PB04	**IPOC Station P**	**3.36**	**252**	P			**Pn**	**00 40 46.5**	**+0.3**
TA02	**Huaiquique**	**3.39**	**288**				**Pn**	**00 40 46.4**	**-0.1**
TA02	**Huaiquique**	**3.39**	**288**	⇑*e*P			**Pn**	**00 40 46.5**	**-0.1**
TA02				*e*S			**S**	**00 41 27.8**	**-2.2**
TA02	**Huaiquique**	**3.39**	**288**	*e*P			**Pn**	**00 40 47.0**	**+0.5**
TA02				*e*S			**S**	**00 41 28.4**	**-1.5**
TA02				IAML				00 41 29.3	
comp=Z,1μm,0.1s									
PB16	**IPOC Station P**	**4.00**	**318**				**Pn**	**00 40 55.5**	**+1.1**
PB16	**IPOC Station P**	**4.00**	**318**	⇑*i*P			**Pn**	**00 40 56.1**	**+1.7**
PB16				*i*S			**S**	**00 41 46.0**	**+1.9**
PB16	**IPOC Station P**	**4.00**	**318**	*e*P			**Pn**	**00 40 56.1**	**+1.7**
PB16				*e*S			**S**	**00 41 43.0**	**-1.1**
PB16				*e*S			S	00 41 45.7	+1.6
PB16				IAML				00 41 48.6	
comp=Z,150nm,0.5s									
PB10	**IPOC Station P**	**4.17**	**238**	Pn			**Pn**	**00 40 55.5**	**-0.3**
PB10	**IPOC Station P**	**4.17**	**238**	⇑*i*P			**Pn**	**00 40 55.5**	**-0.3**
PB10				*e*S			**S**	**00 41 43.1**	**-3.8**
PB10	**IPOC Station P**	**4.17**	**238**	*e*P			**Pn**	**00 40 55.8**	**-0.1**
PB10				*e*S			**S**	**00 41 42.7**	**-4.2**
PB10				*e*S			S	00 41 43.0	-3.9
PB10				*e*S			S	00 41 43.8	-3.1
PB10				IAML				00 41 45.3	
comp=Z,232nm,0.7s									
PB12	**IPOC Station P**	**4.37**	**308**				**Pn**	**00 40 57.5**	**-0.9**
PB12	**IPOC Station P**	**4.37**	**308**	⇑*i*P			**Pn**	**00 40 57.5**	**-0.9**
PB12				*e*S			**S**	**00 41 48.5**	**-3.0**
PB12	**IPOC Station P**	**4.37**	**308**	*e*P			**Pn**	**00 40 58.2**	**-0.2**
PB12				*e*S			**S**	**00 41 48.6**	**-2.8**
PB12				IAML				00 41 52.7	
comp=Z,193nm,0.1s									
AP01	**Chacalluta**	**4.53**	**310**	Pn			**Pn**	**00 40 59.8**	**-0.5**
AP01	**Chacalluta**	**4.53**	**310**	*e*P			**Pn**	**00 40 59.9**	**-0.5**
AP01				IAML				00 41 58.9	
comp=Z,373nm,0.6s									
PB18	**Visviri**	**4.57**	**324**	Pn			**Pn**	**00 41 03.6**	**+2.3**
PB18	**Visviri**	**4.57**	**324**	⇑*i*P			**Pn**	**00 41 04.2**	**+2.9**
GO02	**Mina Guanaco**	**4.64**	**214**	Pn			**Pn**	**00 41 01.9**	**+0.1**
GO02	**Mina Guanaco**	**4.64**	**214**	*e*P			**Pn**	**00 41 01.8**	**-0.1**
GO02				*e*S			**S**	**00 41 55.5**	**-2.3**
GO02				*e*S			S	00 41 56.1	-1.7
BBOE	**La Paz, Chanca**	**4.67**	**345**	P			**Pn**	**00 41 04.3**	**+1.6**
PB14	**IPOC Station P**	**4.72**	**226**	Pn			**Pn**	**00 41 02.3**	**-0.6**
PB14	**IPOC Station P**	**4.72**	**226**	⇑*i*P			**Pn**	**00 41 02.5**	**-0.5**
PB14				*e*S			**S**	**00 41 55.9**	**-3.9**
FSA	**Cafayete**	**4.79**	**172**	*e*P			**Pn**	**00 41 04.8**	**+1.2**
BBOD	**La Paz, Gloria**	**5.02**	**339**	P			**Pn**	**00 41 08.6**	**+1.6**
LPAZ	**La Paz**	**5.21**	**345**	P			**Pn**	**00 41 10.9**	**+1.5**
comp=Z,46nm,0.6s,baz=150,slow=7.3,SNR=198									
LPAZ				S			**S**	**00 42 11.8**	**+0.4**
comp=Z,63nm,1.0s,baz=150,slow=20,SNR=8.6									
LPAZ	**La Paz**	**5.21**	**345**	*e*P			**Pn**	**00 41 11.0**	**+1.5**
LPAZ	**La Paz**	**5.21**	**345**	P			**Pn**	**00 41 10.9**	**+1.5**
AC02	**Maricunga**	**5.90**	**202**	Pn			**Pn**	**00 41 17.5**	**-0.4**
AC01	**Pan de Azucar**	**5.97**	**216**	Pn			**Pn**	**00 41 16.6**	**-1.7**
GO03	**Copiap**	**7.00**	**207**				**Pn**	**00 41 29.4**	**-2.1**
SIV	**San Ignacio**	**7.53**	**46**	P			**Pn**	**00 41 37.2**	**-1.2**
comp=Z,87nm,0.5s,baz=241,slow=10,SNR=498									
SIV				S			**S**	**00 43 00.2**	**-4.1**
comp=Z,7.0nm,0.5s,baz=192,slow=19,SNR=1.8									
SIV	**San Ignacio**	**7.53**	**46**	P			**Pn**	**00 41 38.3**	**-0.2**
AC04	**Llanos de Chal**	**7.90**	**209**				**Pn**	**00 41 39.6**	**-3.4**
LCO	**Las Campanas**	**8.45**	**205**				**Pn**	**00 41 47.6**	**-2.7**
CO01	**Juntas del Tor**	**9.12**	**199**				**Pn**	**00 41 57.4**	**-1.6**
PTLB	**Pontes e Lacer**	**9.27**	**52**				**Pn**	**00 41 59.3**	**-1.3**
GO04	**Tololo Observa**	**9.53**	**202**				**Pn**	**00 42 01.1**	**-3.1**
CPUP	**Villa Florida**	**9.90**	**122**	P			**Pn**	**00 42 08.4**	**-0.3**
comp=Z,2.9nm,0.5s,baz=299,slow=14,SNR=2.6									
CPUP	**Villa Florida**	**9.90**	**122**	Pn			**Pn**	**00 42 08.2**	**-0.5**
CPUP	**Villa Florida**	**9.90**	**122**	P			**Pn**	**00 42 11.1**	**+2.4**
CO03	**El Pedregal**	**10.11**	**200**				**Pn**	**00 42 08.4**	**-3.0**
ZON	**Zonda**	**10.31**	**190**	Pn			**Pn**	**00 42 12.4**	**-1.5**
VILB	**Vilhena**	**10.40**	**38**	Pn			**Pn**	**00 42 14.3**	**-0.9**
CO02	**Combarbal**	**10.55**	**201**				**Pn**	**00 42 14.4**	**-2.6**
ETMB	**Extrema**	**11.47**	**2**	Pn			**Pn**	**00 42 28.7**	**0.0**
VA03	**San Esteban**	**11.88**	**196**				**Pn**	**00 42 33.7**	**-0.1**
ROC1	**El Roble**	**12.20**	**197**				**Pn**	**00 42 36.8**	**-1.3**
MT02	**Curacav**	**12.50**	**197**				**Pn**	**00 42 40.3**	**-1.2**
MT03	**Universidad Ad**	**12.56**	**195**				**Pn**	**00 42 42.0**	**-0.4**
SAML	**Samuel**	**12.78**	**16**				**Pn**	**00 42 44.9**	**-0.3**
MT09	**Talagante**	**12.95**	**196**				**Pn**	**00 42 46.1**	**-1.1**
MT01	**Popeta**	**13.10**	**197**				**Pn**	**00 42 47.6**	**-1.4**
TRCB	**Terra Rica**	**13.12**	**99**				**P**	**00 42 50.8**	**-0.8**
NNA	**Nana**	**13.45**	**312**	P			**P**	**00 42 55.6**	**+0.2**
comp=Z,8.9nm,0.5s,baz=148,slow=11,SNR=4.9									
NNA				S			**S**	**00 45 17.2**	**-5.3**
comp=Z,2.8nm,0.3s,baz=87,slow=18,SNR=1.5									
NNA	**Nana**	**13.45**	**312**	P			**P**	**00 42 54.9**	**-0.6**
BO01	**Tunca**	**13.56**	**196**	Pn			**Pn**	**00 42 54.1**	**-0.5**
BO02	**Sierra Bellavi**	**13.87**	**194**				**Pn**	**00 42 58.4**	**-0.1**
ITAB	**Concordia**	**14.51**	**117**				**Pn**	**00 43 05.7**	**-0.7**
CZSB	**Cruzeiro do Su**	**14.73**	**336**				**Pn**	**00 43 08.7**	**-0.4**
ML02	**Panimavida**	**14.95**	**195**	P			**Pn**	**00 43 10.9**	**-0.6**
PLTB	**Pedras Altas**	**15.63**	**134**				**Pn**	**00 43 19.1**	**-0.7**
TRQA	**Tornquist**	**17.14**	**167**	P			**P**	**00 43 35.4**	**-0.5**
TRQA				IAmb			IAmb	00 43 40.2	
comp=Z,17nm,1.4s									
ATAH	**Atahualpa**	**18.10**	**320**	P			**Pn**	**00 43 49.5**	**-0.1**
comp=Z,1.9nm,0.5s,baz=172,slow=15,SNR=3.0									
BDFB	**Brasilia**	**18.60**	**75**	P			**P**	**00 43 52.2**	**+0.2**
comp=Z,2.4nm,0.4s,baz=259,slow=9.1,SNR=5.3									
BDFB	**Brasilia**	**18.60**	**75**	P			**P**	**00 43 51.6**	**-0.4**
GO06	**Curarrehue**	**18.63**	**192**	P			**P**	**00 43 52.1**	**0.0**
GO06				IAmb			IAmb	00 43 57.0	
comp=Z,17nm,0.7s									
MACA	**Manacapuru-AM**	**19.00**	**19**	P			**P**	**00 43 55.4**	**-0.8**
MACA				IAmb			IAmb	00 43 56.1	
comp=Z,71nm,0.6s									
PLCA	**Paso Flores**	**19.60**	**189**	P			**P**	**00 44 03.0**	**+0.5**
comp=Z,1.0nm,0.4s,baz=359,slow=11,SNR=4.8									
BOSC	**San Juan Bosco**	**21.42**	**326**	P			**P**	**00 44 22.5**	**+0.5**
SLOR	**San Lorenzo -**	**23.51**	**329**	P			**P**	**00 44 43.6**	**+2.0**
SLOR				IAmb			IAmb	00 44 48.5	
comp=Z,12nm,1.2s									
BOAV	**Boa Vista**	**24.36**	**15**	P			**P**	**00 44 48.4**	**-0.4**
BOAV				IAmb			IAmb	00 44 52.5	
comp=Z,5.0nm,1.1s									
MDP	**Montagnes des**	**29.68**	**29**	P			**P**	**00 45 36.1**	**-0.1**
comp=Z,3.6nm,0.6s,baz=188,slow=2.4,SNR=4.6									
comp=Z,3.6nm,0.6s									
BAUV	**El Baul**	**30.13**	**357**	P			**P**	**00 45 39.2**	**-1.0**
BIRV	**Birongo**	**31.63**	**1**	P			**P**	**00 45 52.9**	**-0.4**
FDF	**Fort de France**	**36.27**	**9**	P			**P**	**00 46 32.7**	**-0.4**
MLPR	**Magueyes Islan**	**39.08**	**359**	P			**P**	**00 46 56.0**	**-0.6**
CELP	**Cerrillos**	**39.18**	**0**	P			**P**	**00 46 56.2**	**-1.3**
CUPR	**Culebra, Puert**	**39.44**	**2**	P			**P**	**00 46 57.8**	**-1.8**
CUPR				IAmb			IAmb	00 46 59.2	
comp=Z,16nm,1.2s									
DR12	**Loma Pena Alta**	**39.98**	**356**	P			**P**	**00 47 02.5**	**-1.5**
TEIG	**Tepich**	**46.40**	**332**	P			**P**	**00 47 55.8**	**+0.5**
TEIG				IAmb			IAmb	00 47 56.4	
comp=Z,20nm,0.8s									
W57A	**Gilead**	**57.59**	**347**	P			**P**	**00 49 16.9**	**-0.6**
W57A				IAmb			IAmb	00 49 18.9	
comp=Z,16nm,1.2s									
833A	**Chaparral WMA,**	**58.62**	**326**	P			**P**	**00 49 25.5**	**+0.8**
X48A	**Hartselle**	**58.77**	**340**	P			**P**	**00 49 25.3**	**-0.3**
X48A				IAmb			IAmb	00 49 26.4	
comp=Z,6.1nm,0.8s									
W50A	**Signal Mountai**	**58.95**	**342**	P			**P**	**00 49 26.4**	**-0.5**
W50A				IAmb			IAmb	00 49 27.8	
comp=Z,6.9nm,0.9s									
TKL	**Tuckaleechee C**	**58.96**	**344**	P			**P**	**00 49 26.4**	**-0.6**
TKL				IAmb			IAmb	00 49 30.9	
comp=Z,14nm,1.4s									
PLAL	**Pickwick Lake**	**59.59**	**340**	P			**P**	**00 49 30.6**	**-0.7**
PLAL				IAmb			IAmb	00 49 31.5	
comp=Z,8.0nm,1.1s									
V48A	**Smith Brothers**	**59.89**	**341**	P			**P**	**00 49 33.0**	**-0.3**
V48A				IAmb			IAmb	00 49 33.9	
comp=Z,8.9nm,0.8s									
WLAR	**White Oak Lake**	**60.24**	**335**	P			**P**	**00 49 36.5**	**+0.8**
WVT	**Waverly**	**60.56**	**340**	P			**P**	**00 49 37.2**	**-0.6**
MIAR	**Mount Ida**	**61.18**	**335**	P			**P**	**00 49 42.3**	**+0.2**
MIAR				IAmb			IAmb	00 49 43.2	
comp=Z,14nm,1.3s									
LCAR	**Lake Charles**	**61.62**	**338**	P			**P**	**00 49 45.0**	**+0.1**
LCAR				IAmb			IAmb	00 49 45.5	
comp=Z,5.1nm,0.7s									
TXAR	**Lajitas Array**	**61.71**	**323**	P			**P**	**00 49 46.7**	**+0.8**
comp=Z,1.2nm,0.6s,baz=148,slow=8.6,SNR=20									
comp=Z,1.2nm,0.6s									
TXAR	**Lajitas Array**	**61.71**	**323**	P			**P**	**00 49 46.5**	**+0.7**
TX32	**Lajitas Array**	**61.71**	**323**	P			**P**	**00 49 46.5**	**+0.7**
SNAA	**Sanae**	**61.75**	**161**	P			**P**	**00 49 46.7**	**+1.2**
SNAA	**Sanae**	**61.75**	**161**	P			**P**	**00 49 46.2**	**+0.7**
FCAR	**Ozark Folk Cen**	**61.81**	**337**	P			**P**	**00 49 45.8**	**-0.4**
FCAR				IAmb			IAmb	00 49 46.7	
comp=Z,9.1nm,1.2s									
X37A	**Clayton**	**61.95**	**333**	P			**P**	**00 49 48.2**	**+1.0**
X37A				IAmb			IAmb	00 49 49.2	
comp=Z,6.4nm,0.8s									
HHAR	**Hobbs**	**62.84**	**335**	P			**P**	**00 49 53.2**	**+0.1**
HHAR				IAmb			IAmb	00 49 54.0	
comp=Z,5.6nm,0.7s									
CCM	**Cathedral Cave**	**63.44**	**338**	P			**P**	**00 49 56.7**	**-0.2**
TROLL	**Troll, Antarti**	**63.46**	**161**	P			**P**	**00 49 57.4**	**+0.5**
R40A	**Maddies Statio**	**64.00**	**338**	P			**P**	**00 50 00.6**	**0.0**
R40A				IAmb			IAmb	00 50 01.2	
comp=Z,7.7nm,0.7s									
MSTX	**Muleshoe**	**64.86**	**327**	P			**P**

MAW	**Mawson**	**83.87**	**163**	P		**P**	**00 51 56.8**	**+1.6**
	comp=Z,2.6nm,0.7s,baz=193,slow=7.7,SNR=7.1							
	comp=Z,2.6nm,0.7s							
MAW	**Mawson**	**83.87**	**163**	P		**P**	**00 51 56.5**	**+1.4**
PAB	**San Pablo**	**83.97**	**44**	P		**P**	**00 51 56.7**	**+0.5**
ESDC	**Sonseca Array**	**84.29**	**44**	P		**P**	**00 51 58.5**	**+0.7**
	comp=Z,1.5nm,1.1s,baz=250,slow=5.9,SNR=5.8							
	comp=Z,1.5nm,1.1s							
YKA	**Yellowknife Ar**	**91.74**	**340**	P		**P**	**00 52 33.4**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=124,slow=4.3,SNR=20							
	comp=Z,3.4nm,0.7s							
ASAR	**Alice Springs**	**130.97**	**205**	PKP		**PKiKP**	**00 58 36.5**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=119,slow=2.0,SNR=6.8							
ASAR				SKPbc		**SKPab**	**01 01 39.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=165,slow=4.6,SNR=5.3							
WRA	**Warramunga Arr**	**134.09**	**208**	PKP		**PKiKP**	**00 58 43.5**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=147,slow=1.8,SNR=5.0							
ZALV	**Zalesovo Beam**	**140.92**	**27**	PKP		**PKiKP**	**00 58 55.4**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=299,slow=3.3,SNR=6.8							
MKAR	**Makanchi Array**	**144.28**	**37**	PKP		**PKPdf**	**00 58 59.8**	**-0.4**
	comp=Z,6.4nm,0.7s,baz=316,slow=3.8,SNR=40							
SONM	**Songino Array**	**152.99**	**10**	PKP		**PKPdf**	**00 59 15.7**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=340,slow=0.9,SNR=4.5							
SONM				PKPbc		**PKiKP**	**00 59 22.7**	**+0.8**
	comp=Z,2.8nm,0.8s,baz=317,slow=1.8,SNR=7.5							
SONM				PKPab		**PKPab**	**00 59 34.9**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=343,slow=4.6,SNR=3.7							
PZH	**PanZhiHua**	**168.25**	**62**	PKP		**PKPdf**	**00 59 31.3**	**-0.1**

DJA 04 00:39:57.7±1.0, 0°S±3°×122°5E±°, h21km±8km, M3.8/10, mb3.9/2, MLv3.7/10, Southern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMSI	**Cibinong**	**1.36**	**307**	P		Pn	00 40 19.8	-1.7
KMSI				S		Sn	00 40 35.6	-3.3
SANI	**Sanana**	**2.01**	**153**	P		Pn	00 40 29.2	-1.2
SANI				S		Sn	00 40 52.9	-2.0
LUWI	**Luwuk**	**2.43**	**251**	P		Pn	00 40 36.6	+0.4
LUWI				S		Sb	00 41 08.4	-1.8
LBMI	**Labuha**	**2.46**	**99**	P		Pn	00 40 35.3	-1.3
LBMI				S		Sb	00 41 09.2	-2.0
MRSI	**Marisa**	**3.21**	**283**	P		Pn	00 40 47.3	+0.4
APSI	**Ampana**	**3.48**	**259**	P		Pn	00 40 49.7	-1.0
SPSI	**Sidrap Palu**	**6.46**	**235**	P		Pn	00 41 31.3	-0.3
	0.1nm7.6nm,0.8s							
BKSI	**Bulukumba**	**7.06**	**224**	P		Pn	00 41 41.4	+1.6

*SOME **04** 00:41:05.5, 39°.37N×73°.57E, h15km*
*KRNET **04** 00:41:06.5±0.1, 39°.42N×73°.55E, mb3.6*
*NNC **04** 00:41:10.4±1.5, 39°.63N×73°.40E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=12.0km s-min=6.6km az=179.0*

ISC 04 00:41:07.0±1.2, 39°.55N±0°.05×73°.51E±0°.03, h10km, n47, σ2s06/69, 15C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.12**	**331**	⇑*iP*		**Pn**	**00 41 30.2**	**+1.3**
	baz=32							
OHH				⇑*iS*		**Sn**	**00 41 47.6**	**+3.2**
	baz=32							
DRK	**Karamyk**	**1.32**	**268**	⇑*iP*		**Pg**	**00 41 32.3**	**-0.1**
	baz=73							
DRK				⇑*iS*		**Sn**	**00 41 50.9**	**+1.3**
	baz=73							
BTK	**Batken**	**2.13**	**285**	⇓*iP*		**Pg**	**00 41 46.3**	**-1.6**
	baz=88							
BTK				⇓*iS*		**Sg**	**00 42 15.1**	**-0.5**
	baz=88							
ARLS	**Aral**	**2.39**	**15**	⇑*iP*		**Pb**	**00 41 50.4**	**+0.1**
	baz=13							
ARLS				⇑*iS*		**Sg**	**00 42 22.5**	**-1.5**
	baz=13							
GAR	**Garm**	**2.54**	**259**	⇓*iP*		**Pb**	**00 41 50.9**	**-1.8**
	baz=62							
GAR				⇓*iS*		**Sb**	**00 42 23.5**	**-0.5**
	baz=62							
ARK	**Arkit**	**2.54**	**333**	⇑*eP*		**Pb**	**00 41 52.7**	**0.0**
	baz=34							
ARK				⇑*iS*		**Sg**	**00 42 26.5**	**-2.0**
	baz=34							
AML	**Almayashu**	**2.59**	**3**	P		**Pg**	**00 41 54.9**	**-1.7**
	SNR=51							
EKS2	**Erkin-Say**	**3.12**	**4**	P		**Pb**	**00 42 02.7**	**+0.1**
	SNR=13							
EKS2	**Erkin-Say**	**3.12**	**4**	⇓*iP*		**Pb**	**00 42 00.7**	**-1.9**
	baz=3.0							
EKS2				⇓*iS*		**Sb**	**00 42 40.3**	**-0.5**
	baz=3.0							
AAK	**Ala-Archa**	**3.18**	**13**	P		**Pb**	**00 42 04.1**	**+0.4**
	SNR=13							
MRKS	**Merke**	**3.20**	**356**	*eP*		**Pb**	**00 42 05.0**	**+1.0**
	19nm,0.4s							
MRKS				*eS*		**Sg**	**00 42 48.0**	**-1.8**
	38nm,0.3s							
MRKS	**Merke**	**3.20**	**356**	Pg		**Pb**	**00 42 05.0**	**+1.0**
	19nm,0.4s							
MRKS				Lg		Lg	00 42 48.0	
	38nm,0.3s							
KBK	**Karagaybulak**	**3.29**	**19**	P		**Pg**	**00 42 07.6**	**-2.5**
	SNR=6.0							
ULHL	**Ulahol**	**3.40**	**37**	P		**Pg**	**00 42 11.8**	**-0.4**
	SNR=15							
CHMS	**Chumysh**	**3.57**	**15**	P		**Pb**	**00 42 09.1**	**-1.3**
	SNR=6.5							
CHMS	**Chumysh**	**3.57**	**15**	⇑Pn		**Pb**	**00 42 07.4**	**-2.9**
	6.1nm,0.5s							
CHMS				⇓Lg		Lg	00 43 04.0	
	21nm,0.7s							
IUG	**luzhnay**	**3.70**	**316**	*eP*		**Pg**	**00 42 15.8**	**-2.1**
	376nm,0.6s							
IUG				*eS*		**Sg**	**00 43 06.5**	**+0.6**
	32nm,0.5s							
IUG	**luzhnay**	**3.70**	**316**	Pg		**Pb**	**00 42 11.6**	**-0.9**
	769nm,0.5s							
IUG				Lg		Lg	00 42 59.4	
	66nm,0.2s							
TKM2	**Tokmak 2**	**3.72**	**24**	⇓Pn		**Pb**	**00 42 09.8**	**-3.2**
	4.8nm,0.5s							
TKM2				⇑Lg		Lg	00 43 08.1	
	24nm,0.7s							
USP	**Ospenovka**	**3.79**	**11**	P		**Pb**	**00 42 11.8**	**-2.2**
	SNR=8.4							
KST	**Kastek**	**3.95**	**27**	*eP*		**Pg**	**00 42 20.6**	**-2.2**
	12nm,0.3s							
KST				*eS*		**Sg**	**00 43 14.8**	**+0.9**
	34nm,0.6s							
KST	**Kastek**	**3.95**	**27**	Pg		**Pg**	**00 42 20.6**	**-2.2**
	12nm,0.3s							
KST				Lg		Lg	00 43 14.8	
	34nm,0.6s							
SGDS	**Sogindy**	**3.99**	**12**	*eP*		**Pg**	**00 42 20.4**	**-3.1**
	8.1nm,0.2s							
SGDS				*eS*		**Sg**	**00 43 14.7**	**-0.5**
	10nm,0.4s							
SGDS	**Sogindy**	**3.99**	**12**	Pg		**Pg**	**00 42 20.4**	**-3.1**
	8.1nm,0.2s							
SGDS				Lg		Lg	00 43 14.7	
	10nm,0.4s							
MTBS	**Maitube**	**4.20**	**31**	*eP*		**Pg**	**00 42 24.8**	**-2.7**
	8.5nm,0.4s							
MTBS				*eS*		**Sg**	**00 43 22.0**	**+0.1**
	17nm,0.3s							
MTBS	**Maitube**	**4.20**	**31**	Pg		**Pg**	**00 42 24.8**	**-2.7**
	8.5nm,0.4s							
MTBS				Lg		Lg	00 43 22.0	
	17nm,0.3s							
KK31	**Karatay Array**	**4.21**	**329**	⇓Pn		Pb	00 42 15.8	-5.4
	1.5nm,0.4s,baz=147,slow=12,SNR=9.6							
KK31				⇓Pg		**Pg**	**00 42 26.5**	**-1.1**
	2.7nm,0.4s,baz=144,slow=15,SNR=11							
KK31				⇑Sn		**Sn**	**00 43 05.8**	**+5.3**
	6.3nm,0.5s,baz=138,slow=24,SNR=5.1							
KK31				⇓Lg		Lg	00 43 22.8	
	3.7nm,0.3s,baz=138,slow=24,SNR=5.1							
KRBS	**Karabastau**	**4.45**	**21**	*eP*		**Pg**	**00 42 30.7**	**-1.6**
	9.4nm,0.7s							
KRBS				*eS*		**Sg**	**00 43 32.3**	**+2.4**
	8.2nm,0.6s							
KRBS	**Karabastau**	**4.45**	**21**	Pg		**Pg**	**00 42 30.7**	**-1.6**
	9.4nm,0.7s							
KRBS				Lg		Lg	00 43 32.3	
	8.2nm,0.6s							
MDOK	**Medeo**	**4.49**	**35**	*eP*		**Pg**	**00 42 31.4**	**-1.7**
	5.9nm,0.4s							
MDOK				*eS*		**Sg**	**00 43 33.4**	**+2.2**
	16nm,0.9s							
MDOK	**Medeo**	**4.49**	**35**	⇑Pn		Pb	00 42 20.1	-5.9
	2.6nm,0.8s							
MDOK				Pg		**Pg**	**00 42 31.4**	**-1.7**
	5.9nm,0.4s							
MDOK				⇑Pg		Pn	00 42 33.0	+18
	5.9nm,0.6s							
MDOK				⇓Lg		Lg	00 43 32.3	
	21nm,0.8s							
MDOK				Lg		Lg	00 43 33.4	
	16nm,0.9s							
KTBS	**Karatobe**	**4.79**	**29**	*eP*		**Pg**	**00 42 36.3**	**-2.6**
	6.3nm,0.3s							
KTBS				*eS*		**Sg**	**00 43 41.7**	**+0.8**
	22nm,0.3s							
KTBS	**Karatobe**	**4.79**	**29**	Pg		**Pg**	**00 42 36.3**	**-2.6**
	6.3nm,0.3s							
KTBS				Lg		Lg	00 43 41.7	
	22nm,0.3s							
KUU	**Kurty**	**4.83**	**25**	*eP*		**Pg**	**00 42 37.8**	**-1.8**
	5.4nm,0.5s							
KUU				*eS*		**Sg**	**00 43 44.5**	**+2.3**
	21nm,0.3s							
KUU	**Kurty**	**4.83**	**25**	Pg		**Pg**	**00 42 37.8**	**-1.8**
	5.4nm,0.5s							
KUU				Lg		Lg	00 43 44.5	
	21nm,0.3s							
CHKK	**Chushkaly**	**5.03**	**30**	*eP*		**Pg**	**00 42 40.8**	**-2.5**
	3.9nm,0.2s							
CHKK				*eS*		**Sg**	**00 43 49.8**	**+1.2**
	15nm,0.3s							
CHKK	**Chushkaly**	**5.03**	**30**	Pg		**Pg**	**00 42 40.8**	**-2.5**
	3.9nm,0.2s							
CHKK				Lg		Lg	00 43 49.8	
	15nm,0.3s							
SATY	**Saty**	**5.09**	**45**	*eP*		**Pg**	**00 42 43.4**	**-1.1**
	9.3nm,0.3s							
SATY				*eS*		**Sg**	**00 43 54.2**	**+3.7**
	13nm,0.5s							
SATY	**Saty**	**5.09**	**45**	Pg		**Pg**	**00 42 43.4**	**-1.1**
	9.3nm,0.3s							
SATY				Lg		Lg	00 43 54.2	
	13nm,0.5s							
KURS	**Kuram**	**5.27**	**40**	*eP*		**Pg**	**00 42 45.2**	**-2.7**
	4.5nm,0.5s							
KURS				*eS*		**Sg**	**00 43 57.3**	**+1.1**
	11nm,1.0s							
KURS	**Kuram**	**5.27**	**40**	Pg		**Pg**	**00 42 45.2**	**-2.7**
	4.5nm,0.5s							
KURS				Lg		Lg	00 43 57.3	
	11nm,1.0s							
UZB	**Uzynbulak**	**5.49**	**47**	*eP*		**Pg**	**00 42 49.8**	**-2.4**
	2.5nm,0.3s							
UZB				*eS*		**Sg**	**00 44 05.1**	**+1.8**
	4.5nm,0.4s							
UZB	**Uzynbulak**	**5.49**	**47**	Pg		**Pg**	**00 42 49.8**	**-2.4**
	2.5nm,0.3s							
UZB				Lg		Lg	00 44 05.1	
	4.5nm,0.4s							
ARXS	**Arharly**	**5.67**	**33**	*eP*		**Pg**	**00 42 52.6**	**-3.0**
	10nm,0.5s							
ARXS				*eS*		**Sg**	**00 44 09.9**	**+0.9**
	14nm,0.5s							
ARXS	**Arharly**	**5.67**	**33**	Pg		**Pg**	**00 42 52.6**	**-3.0**
	10nm,0.5s							
ARXS				Lg		Lg	00 44 09.9	
	14nm,0.5s							
PDGK	**Podgornoye**	**5.87**	**48**	Pg		**Pg**	**00 42 57.3**	**-2.2**
	1.7nm,0.6s							
PDGK				Lg		Lg	00 44 18.0	
	3.7nm,0.4s							
PDGK	**Podgornoye**	**5.87**	**48**	⇑Pn		Pn	00 42 39.6	+5.4
	2.8nm,0.7s							
PDGK				⇓Pg		**Pg**	**00 42 58.4**	**-1.1**
	5.7nm,1.1s							
PDGK				⇑Lg		Lg	00 44 18.0	
	9.3nm,0.8s							

*KOLA **04** 00:42:21.5, 67°.64N×19°.85E, h0km, ML2.4*
*IDC **04** 00:42:23.1±1.0, 67°.74N×20°.74E, h0km, mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=17.3km s-min=6.3km az=122.0*

ISC 04 00:42:22.5±1.1, 67°.77N±0°.07×20°.22E±0°.09, h10km, n6, σ1s74/11, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARCES	**ARCESS Array B**	**2.63**	**45**	Pn		**Pn**	**00 43 06.1**	**+1.2**
	1.1nm,0.3s,baz=225,slow=15,SNR=18							
ARCES				Lg		Lg	00 43 41.1	
	3.4nm,0.3s,baz=231,slow=25,SNR=14							
	1.9nm,0.3s							
ARCES	**ARCESS Array B**	**2.63**	**45**	P		**Pb**	**00 43 07.3**	**-2.3**
ARCES				S		**Sb**	**00 43 41.2**	**-0.6**
APA0	**Apatity Array**	**4.87**	**86**	P		**Pn**	**00 43 36.7**	**+1.0**
APA0				S		**Sn**	**00 44 33.4**	**+1.4**
FINES	**FINESS Array B**	**6.83**	**156**	Pn		**Pn**	**00 44 03.7**	**+1.2**
	0.1nm,0.3s,baz=345,slow=12,SNR=1.6							
FINES				Sn		**Sn**	**00 45 19.1**	**-1.0**
	0.2nm,0.3s,baz=346,slow=22,SNR=3.7							
FINES				Lg		Lg	00 45 53.6	
	0.4nm,0.3s,baz=349,slow=29,SNR=5.6							
	0.7nm,0.7s							
NOA	**NORSAR Array B**	**7.79**	**214**	Pn		**Pn**	**00 44 17.0**	**+1.2**
	baz=24,slow=11,SNR=1.8							
NOA				Sn		**Sn**	**00 45 42.5**	**-1.4**
	baz=34,slow=23,SNR=2.2							
NOA				Lg		Lg	00 46 28.8	
	0.1nm,0.3s,baz=45,slow=21,SNR=4.7							
	0.6nm,0.8s							
HFS	**Hagfors**	**8.18**	**204**	Pn		**Pn**	**00 44 22.8**	**+1.7**
	0.1nm,0.3s,baz=14,slow=12,SNR=5.3							
HFS				Sn		**Sn**	**00 45 51.0**	**-2.3**
	0.1nm,0.3s,baz=23,slow=24,SNR=2.0							
HFS				Lg		Lg	00 46 42.0	
	0.6nm,0.3s,baz=24,slow=26,SNR=4.5							
	2.0nm,0.9s							

*IDC **04** 00:52:42.9±1.5, 5°.45S×154°.30E, h386km±11km, mb3.2/8, mbtmp3.9/8, Error ellipse: s-maj=27.2km s-min=16.9km az=92.0*

ISC 04 00:52:44.1±1.0, 5°.5S±0°.2×154°.2E±0°.2, h400km, n10, σ1s18/12, mb3.6/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.42**	**298**	P		**Pn**	**00 53 42.5**	**-0.4**
	376nm,0.4s,baz=115,slow=19,SNR=34							
KRVT				S		**S**	**00 54 28.0**	**-2.4**
	32nm,0.4s,baz=127,slow=20,SNR=1.0							
DZM	**Mont Dzumac**	**20.35**	**145**	P		**P**	**00 56 51.4**	**-0.5**
	1.7nm,0.4s,baz=348,slow=14,SNR=1.3							
	1.7nm,0.4s							
WRA	**Warramunga Arr**	**24.08**	**231**	P		**P**	**00 57 26.4**	**+0.7**
	1.0nm,0.4s,baz=57,slow=9.1,SNR=13							
WRA				PcP		**PcP**	**01 00 54.8**	**+0.2**
	0.2nm,0.3s,baz=40,slow=2.1,SNR=2.4							
	1.0nm,0.4s							
ASAR	**Alice Springs**	**26.63**	**225**	P		**P**	**00 57 48.6**	**+0.2**
	0.6nm,0.3s,baz=56,slow=9.2,SNR=8.1							
	0.6nm,0.3s							
KSRS	**Korea Array**	**49.20**	**332**	P		**P**	**01 00 54.5**	**+0.7**
	1.2nm,0.7s,baz=143,slow=8.1,SNR=2.9							
	1.2nm,0.7s							
SONM	**Songino Array**	**67.60**	**327**	P		**P**	**01 03 01.0**	**+1.6**
	0.5nm,0.4s,baz=120,slow=3.7,SNR=3.7							
	0.5nm,0.4s							
MKAR	**Manchi Array**	**81.71**	**319**	P		**P**	**01 04 20.4**	**+1.0**
	1.3nm,0.8s,baz=100,slow=5.9,SNR=8.3							
	1.3nm,0.8s							
ILAR	**Eielson Array**	**82.25**	**22**	P		**P**	**01 04 20.5**	**-1.1**
	0.4nm,0.6s,baz=240,slow=5.2,SNR=3.3							
	0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**82.45**	**326**	P		**P**	**01 04 22.7**	**-0.2**
	0.6nm,0.5s,baz=131,slow=5.9,SNR=3.1							
	0.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**151.81**	**288**	PKPbc		**PKiKP**	**01 11 53.1**	**-0.5**
	0.3nm,0.4s,baz=58,slow=2.4,SNR=6.8							

*IDC **04** 00:55:08.2±0.9, 6°.84N×76°.99W, h0km, mb3.4/5, mbtmp3.7/7, ML3.2/2, MS3.0/5, Error ellipse: s-maj=35.6km s-min=21.7km az=40.0*
*UPA **04** 00:55:12.7±0.6, 6°.57N×76°.72W, h71km±6km, MW4.2*

*RSNC **04** 00:55:13.1±0.8, 6°.67N×76°.63W, h3km±3km, ML3.6, Mw4.0*

ISC 04 00:55:09.6±1.3, 6°.74N±0°.02×76°.73W±0°.02, h8km±9km, n68, σ2s26/103, mb3.5/5, 4C-10D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBBC	**Dabeiba**	**0.59**	**62**	⇑*iP*		**Pb**	**00 55 23.0**	**+0.8**
DBBC				*eS*		**Sb**	**00 55 31.1**	**+0.5**
SOLC	**Bahia Solano**	**0.84**	**233**	⇑*iP*		**Pb**	**00 55 28.7**	**+2.2**
SOLC				*eS*		**Sb**	**00 55 41.1**	**+3.1**
SOLC				*i*			00 55 45.5	
	comp=Z,3μm,0.3s							
CBOC	**Ciudad Bolivar**	**1.13**	**141**	⇓*iP*		**Pg**	**00 55 30.7**	**-0.6**
CBOC				*i*			00 55 42.9	
	comp=Z,2μm,0.4s							
CBOC				*eS*		**Sg**	**00 55 44.6**	**-1.3**
CBOC				*i*			00 55 49.8	
	comp=Z,1μm,0.5s							
PTAC	**Punta Ardita,**	**1.14**	**291**	*eP*		**Pn**	**00 55 33.6**	**+1.7**
PTAC				*eS*		**Sn**	**00 55 50.3**	**+2.5**
PTAC	**Punta Ardita,**	**1.14**	**291**	*eP*		**Pn**	**00 55 33.7**	**+1.8**
PTAC				*eS*		**Sn**	**00 55 50.1**	**+2.4**
HELC	**Santa Helena**	**1.31**	**114**	⇓*iP*		**Pn**	**00 55 33.8**	**-0.8**
HELC				*eS*		**Sb**	**00 55 50.1**	**-1.8**
HELC				*i*			00 55 55.2	
	comp=Z,1μm,0.5s							
UREC	**San Jos de Ur**	**1.56**	**50**	⇑*iP*		**Pb**	**00 55 39.5**	**+0.8**
UREC				*eS*		**Sg**	**00 56 00.0**	**+0.3**
UREC				*i*			00 56 02.1	
	comp=Z,1μm,0.3s							
UREC	**San Jos de Ur**	**1.56**	**50**	*eP*		**Pb**	**00 55 39.5**	**+0.8**
UREC				*eS*		**Sg**	**00 56 00.1**	**+0.4**
PIZC	**Pizarro, Choco**	**1.87**	**200**	*eP*		**Pn**	**00 55 43.5**	**+1.6**
PIZC				*eS*		**Sn**	**00 56 08.9**	**+3.1**
PIZC				*i*			00 56 23.4	
	comp=Z,411nm,0.4s							
PLMC	**San Jos del P**	**1.88**	**166**	⇓*iP*		**Pn**	**00 55 40.0**	**-2.0**
PLMC				*eS*		**Sn**	**00 56 01.7**	**-4.3**
PLMC				*i*			00 56 04.2	
	comp=Z,901nm,0.2s							
ZARC	**Zaragoza, Cauc**	**2.00**	**68**	⇑*iP*		**Pn**	**00 55 45.9**	**+2.1**
ZARC				*eS*		**Sn**	**00 56 10.4**	**+1.4**
ZARC				*i*			00 56 12.2	
	comp=Z,1μm,0.4s							
GUY2C	**Guyana, Caldas**	**2.03**	**138**	⇓*iP*		**Pn**	**00 55 45.7**	**+1.2**
GUY2C				*i*			00 56 11.8	
	comp=Z,518nm,0.6s							
LCBC	**Los crdobas,**	**2.13**	**10**	⇓*eP*		**Pb**	**00 55 48.6**	**0.0**
LCBC				*eS*		**Sb**	**00 56 14.4**	**-0.8**
LCBC				*i*			00 56 26.7	
	comp=Z,283nm,0.3s							
LCBC	**Los crdobas,**	**2.13**	**10**	*eP*		**Pb**	**00 55 49.1**	**+0.5**
LCBC				*eS*		**Sg**	**00 56 18.1**	**-0.2**
NORC	**Norcasia**	**2.19**	**122**	⇓*eP*		**Pn**	**00 55 48.0**	**+1.6**
NORC				*eS*		**Sn**	**00 56 15.5**	**+1.9**
NORC				*i*			00 56 17.5	
	comp=Z,540nm,0.5s							
UPD2	**Meteti**	**2.20**	**325**	*eP*		**Pn**	**00 55 48.6**	**+2.1**
UPD2				*eS*		**Sb**	**00 56 16.9**	**-0.3**
UPD2				*i*			00 56 30.0	
	comp=Z,693nm,0.6s							
UPD2	**Meteti**	**2.20**	**325**	*eP*		**Pn**	**00 55 48.8**	**+2.4**
UPD2				*eS*		**Sn**	**00 56 16.4**	**+2.5**
ANIL	**Santa Ana**	**2.60**	**149**	*eP*		**Pn**	**00 55 54.1**	**+1.9**
ANIL				*eS*		**Sn**	**00 56 24.9**	**+0.8**
ANIL				*i*			00 56 30.3	
	comp=Z,775nm,0.4s							
YOTC	**Yotoco, Valle**	**2.77**	**172**	⇓*iP*		**Pn**	**00 55 52.8**	**-1.5**
YOTC				*eS*		**Sn**	**00 56 22.8**	**-5.2**
YOTC				*i*			00 56 24.7	
	comp=Z,300nm,0.4s							
MALC	**Bahia Malaga**	**2.77**	**193**	*eP*		**Pn**	**00 55 56.1**	**+1.7**
SPBC	**San Pablo de B**	**2.86**	**112**	⇓*eP*		**Pn**	**00 55 58.4**	**+2.8**
SPBC				*eS*		**Sn**	**00 56 32.9**	**+2.7**
SPBC				*i*			00 56 45.8	
	comp=Z,232nm,0.6s							
BRRC	**Barranca, Sant**	**3.02**	**83**	*eP*		**Pn**	**00 56 00.1**	**+2.3**
BRRC				*eS*		**Sn**	**00 56 35.1**	**+1.0**
BRRC				*i*			00 56 48.5	
	comp=Z,284nm,0.5s							
ROSC	**El Rosal**	**3.05**	**128**	Pn		**Pn**	**00 56 02.6**	**+4.1**
	comp=Z,82nm,0.3s,baz=318,slow=18,SNR=68							
ROSC				Sn		**Sn**	**00 56 33.7**	**-1.8**
	comp=Z,18nm,0.3s,baz=345,slow=20,SNR=1.4							
ROSC				LR		LR	00 57 40.1	
	comp=Z,290nm,18.4s,baz=288,slow=46							
	comp=Z,344nm,0.5s							
ROSC	**El Rosal**	**3.05**	**128**	⇓*iP*		**Pn**	**00 56 02.3**	**+3.8**
ROSC				*i*			00 56 51.2	
	comp=Z,200nm,0.6s							
CHPO	**Chepo, Panama**	**3.38**	**316**	*eP*		**Pn**	**00 56 04.4**	**+1.7**
CHPO				*eS*		**Sn**	**00 56 43.6**	**+0.7**
SJCC	**San Jacinto, C**	**3.49**	**26**	*eP*		**Pn**	**00 56 06.0**	**+1.7**
SJCC				*eS*		**Sn**	**00 56 44.3**	**-1.6**
SJCC				*i*			00 56 51.9	
	comp=Z,81nm,0.5s							
PRAC	**Prado**	**3.52**	**148**	*eP*		**Pn**	**00 56 07.5**	**+2.8**
PRAC				*eS*		**Sn**	**00 56 50.3**	**+3.7**
PRAC				*i*			00 57 18.5	
	comp=Z,95nm,0.6s							
BARC	**Barichara**	**3.53**	**92**	*eP*		**Pn**	**00 56 05.9**	**+1.0**
BARC				*eS*		**Sn**	**00 56 51.8**	**+4.8**
UPA	**Univ. de Panam**	**3.56**	**309**	*eP*		**Pn**	**00 56 06.1**	**+1.0**
UPA				*i*			00 57 00.2	
	comp=Z,50nm,0.5s							
UPA	**Univ. de Panam**	**3.56**	**309**	*eP*		**Pn**	**00 56 06.2**	**+1.0**
UPA				*eS*		**Sn**	**00 56 47.2**	**-0.2**
AZU	**Azuero**	**3.67**	**287**	*eP*		**Pn**	**00 56 08.5**	**+1.9**
AZU			

MACC	**Macarena, Meta**	**5.39**	**148**	*eP*		**Pn**	**00 56 32.0**	**+1.5**
MACC				*i*			00 58 13.2	
	comp=Z,47nm,0.6s							
GCUF	**Volcan Galeras**	**5.51**	**186**	*eP*		**Pn**	**00 56 35.3**	**+2.8**
GCUF				*i*			00 57 53.1	
	comp=Z,15nm,0.4s							
CRJC	**Cerrejon, Guaj**	**5.71**	**42**	*eP*		**Pn**	**00 56 36.3**	**+1.5**
CRJC				*eS*		**Sn**	**00 57 36.0**	**-4.5**
CRJC				*i*			00 57 43.8	
	comp=Z,72nm,0.3s							
SDV	**Santo Domingo**	**6.41**	**70**	Pn		**Pn**	**00 56 47.7**	**+3.2**
	comp=Z,2.4nm,0.3s,baz=242,slow=15,SNR=5.2							
SDV				Sn		**Sn**	**00 57 53.9**	**-4.1**
	comp=Z,11nm,0.3s,baz=240,slow=20,SNR=1.9							
SDV				LR		LR	00 59 38.7	
	comp=Z,224nm,18.3s,baz=248,slow=41							
	comp=Z,19nm,0.4s							
OTAV	**Otavalo**	**6.68**	**195**	*eP*		**Pn**	**00 56 50.6**	**+2.1**
PTLC	**Puerto Leguiza**	**6.80**	**163**	*eP*		Pn	00 56 54.8	+5.0
PTLC				*i*			00 58 32.1	
	comp=Z,12nm,0.5s							
SJG	**San Juan**	**15.30**	**41**	LR		LR	01 06 30.7	
	comp=Z,38nm,18.1s,baz=256,slow=44							
NNA	**Nana**	**18.61**	**180**	LR		LR	01 07 22.0	
	comp=Z,35nm,21.7s,baz=7.5,slow=39							
LPAZ	**La Paz**	**24.41**	**160**	P		**P**	**01 00 31.3**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=312,slow=15,SNR=2.6							
	comp=Z,0.7nm,0.6s							
TXAR	**Lajitas Array**	**33.91**	**315**	P		**P**	**01 01 50.6**	**-2.8**
	comp=Z,0.4nm,1.0s,baz=118,slow=7.2,SNR=2.7							
	comp=Z,0.4nm,1.0s							
NVAR	**Mina Array Bea**	**49.02**	**316**	P		**P**	**01 03 55.4**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=115,slow=7.3,SNR=1.1							
	comp=Z,0.3nm,0.6s							
YKA	**Yellowknife Ar**	**62.14**	**341**	P		**P**	**01 05 30.5**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=142,slow=6.1,SNR=2.7							
	comp=Z,0.5nm,0.7s							
BORG	**Borgarnes**	**69.68**	**22**	LR		LR	01 33 32.5	
	comp=Z,10nm,21.9s,baz=277,slow=33							
TORD	**Torodi Ar. Bea**	**77.26**	**78**	P		**P**	**01 07 05.3**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=294,slow=7.1,SNR=1.9							
	comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**146.11**	**237**	PKPbc		**PKPdf**	**01 14 50.0**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=126,slow=3.8,SNR=14							
WRA	**Warramunga Arr**	**147.12**	**243**	PKPbc		**PKPdf**	**01 14 52.6**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=102,slow=3.5,SNR=8.9							

NEIC ***04*** *01:26:08.9±1.5, 7°.27S×0°.07×129°.44E×0°.05, h35km±2km, mb4.5/15, Error ellipse: s-maj=14.1km s-min=4.7km az=31.0*

DJA ***04*** *01:26:09.6±0.9, 7°.2S×13°.0E±°, h30km±9km, M4.6/31, mB5.3/7, mb4.8/31, MLv4.5/14, Mw(mB)4.7/7*

IDC ***04*** *01:26:10.1±6.5, 7°.33S×129°.45E, h28km±46km, mb4.0/5, mbtmp4.5/9, ML4.7/3, MS3.3/9, Error ellipse: s-maj=31.0km s-min=20.3km az=81.0*

ISC 04 01:26:09.7±0.5, 7°.31S±0°.05×129°.57E±0°.06, h35km, n101, σ2§90/94, mb4.4/9, MS3.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.84**	**111**		**Pn**	**01 26 39.5**	**+0.7**
SAUI	**Saumlaki**	**1.84**	**111**	P	**Pn**	**01 26 42.7**	**+3.9**
SAUI				S	**Sn**	**01 27 01.0**	**+0.1**
SAUI	**Saumlaki**	**1.84**	**111**	P	Pn	01 26 44.2	+5.4
BNDI	**Bandanaira**	**2.79**	**7**	P	**Pn**	**01 26 52.2**	**+0.3**
BNDI				S	**Sn**	**01 27 23.1**	**-1.3**
AAI	**Ambon**	**3.85**	**339**	P	**Pn**	**01 27 06.1**	**-0.4**
MSAI	**Masohi**	**3.99**	**351**	P	**Pn**	**01 27 08.6**	**+0.2**
NLAI	**Namlea**	**4.74**	**329**	P	**Pn**	**01 27 18.1**	**-0.6**
FAKI	**Fak Fak**	**5.12**	**32**		**Pn**	**01 27 23.2**	**-0.7**
FAKI	**Fak Fak**	**5.12**	**32**	P	**Pn**	**01 27 23.4**	**-0.5**
	0.7nm2µm200nm,0.6s						
FAKI				S	**Sn**	**01 28 20.1**	**-1.7**
	0.7nm2µm200nm,0.6s						
MTN	**Manton Dam**	**5.71**	**164**	P	**Pn**	**01 27 32.7**	**+0.7**
	baz=5.7,SNR=45						
MTN	**Manton Dam**	**5.71**	**164**		**Pn**	**01 27 32.2**	**+0.2**
MTN	**Manton Dam**	**5.71**	**164**	P	**Pn**	**01 27 32.4**	**+0.4**
KDU	**Kakadu**	**6.06**	**152**	P	**Pn**	**01 27 36.7**	**-0.1**
	baz=6.1,SNR=32						
KDU	**Kakadu**	**6.06**	**152**	P	**Pn**	**01 27 36.7**	**-0.1**
SANI	**Sanana**	**6.33**	**326**	P	**Pn**	**01 27 41.5**	**+0.9**
	0.2nm47nm,0.7s						
BATI	**Baumata**	**6.51**	**243**	Pn	**Pn**	**01 27 43.6**	**+0.6**
	19nm,0.3s,baz=224,slow=1.5,SNR=5.2						
BATI				LR	LR	01 30 04.9	
	comp=Z,165nm,18.6s,baz=116,slow=37						
	60nm,0.4s						
BATI	**Baumata**	**6.51**	**243**	P	**Pn**	**01 27 43.3**	**+0.3**
	0.3nm57nm,0.8s						
SIJI	**Sorong**	**6.62**	**15**	Pn	**Pn**	**01 27 45.3**	**+0.7**
	14nm,0.3s,baz=253,slow=22,SNR=15						
SIJI				LR	LR	01 31 19.8	
	comp=Z,193nm,19.1s,baz=192,slow=46						
	32nm,0.3s						
SWI	**Sorong**	**6.63**	**15**	P	**Pn**	**01 27 45.0**	**+0.4**
	0.4nm56nm,0.5s						
LBMI	**Labuha**	**6.95**	**343**	P	**Pn**	**01 27 51.8**	**+2.8**
	0.3nm71nm,0.8s						
EDFI	**Ende, Flores**	**7.93**	**259**	P	Pn	01 28 05.1	+2.4
	0.0nm10.0nm,0.9s						
KNRA	**Kununurra**	**8.35**	**185**	P	**Pn**	**01 28 07.6**	**-0.7**
	baz=8.3,SNR=46						
KNRA	**Kununurra**	**8.35**	**185**	Pn	**Pn**	**01 28 07.3**	**-1.0**
KNRA	**Kununurra**	**8.35**	**185**	P	**Pn**	**01 28 07.3**	**-1.0**
BAKI	**Biak**	**8.91**	**47**	P	**Pn**	**01 28 16.2**	**+0.1**
	74nm,0.9s						
LUWI	**Luwuk**	**9.21**	**312**	Pn	**Pn**	**01 28 16.6**	**-3.5**
LUWI	**Luwuk**	**9.21**	**312**	P	**Pn**	**01 28 19.8**	**-0.3**
	5µm71nm,0.5s						
BKSI	**Bulukumba**	**9.60**	**281**	P	**Pn**	**01 28 27.3**	**+1.9**
	20nm,0.6s						
BNSI	**Bone**	**9.85**	**287**	P	**Pn**	**01 28 30.7**	**+1.8**
	27nm,0.7s						
SPSI	**Sidrap Palu**	**10.30**	**288**	P	**Pn**	**01 28 36.0**	**+0.9**
	5µm18nm,0.6s						
WBSI	**Waikabubak, Su**	**10.33**	**256**	P	**Pn**	**01 28 36.9**	**+1.4**
	54nm,1.0s						
MRSI	**Marisa**	**10.85**	**315**	P	**Pn**	**01 28 44.0**	**+1.3**
	28nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.38**	**199**	Pn	**Pn**	**01 28 48.4**	**-1.5**
	3.0nm,0.3s,baz=19,slow=10,SNR=69						
FITZ				Sn	Sn	01 30 44.0	-12
	1.9nm,0.3s,baz=32,slow=13,SNR=2.7						
FITZ				LR	LR	01 33 42.3	
	comp=Z,168nm,19.1s,baz=24,slow=40						
	6.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.38**	**199**	P	**Pn**	**01 28 48.1**	**-1.7**
	baz=11,SNR=8.3						
FITZ	**Fitzroy Crossi**	**11.38**	**199**	Pn	**Pn**	**01 28 48.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**11.38**	**199**	P	**Pn**	**01 28 48.4**	**-1.5**
PLAI	**Plampang**	**11.77**	**262**	P	Pn	01 28 58.7	+3.4
	27nm,0.7s						
PLAI	**Plampang**	**11.77**	**262**	P	Pn	01 29 02.4	+7.1
WRAB	**Tennant Creek**	**13.37**	**160**	P	**Pn**	**01 29 13.6**	**-3.5**
WRA	**Warramunga Arr**	**13.38**	**160**	Pn	**Pn**	**01 29 13.3**	**-3.9**
	2.7nm,0.3s,baz=341,slow=13,SNR=55						
WRA				Sn	Sn	01 31 36.2	-8.6
	1.9nm,0.3s,baz=328,slow=23,SNR=6.3						
WRA				LR	LR	01 35 14.6	
	comp=Z,246nm,20.1s,baz=72,slow=41						
WB2	**Warramunga Arr**	**13.38**	**160**	P	**Pn**	**01 29 13.3**	**-4.0**
	baz=13						
SMKI	**Samarinda**	**14.09**	**298**	P	P	01 29 28.3	-5.8
	69nm,0.5s						
COEN	**Coen**	**14.91**	**117**	P	**Pn**	**01 29 36.6**	**-1.4**
	baz=15,SNR=16						
COEN	**Coen**	**14.91**	**117**	Pn	**Pn**	**01 29 36.8**	**-1.3**
COEN				IAmb	IAmb	01 29 56.5	
	comp=Z,16nm,0.7s						
QIS	**Mount Isa**	**16.36**	**145**	P	**Pn**	**01 29 54.2**	**-2.6**
	baz=16,SNR=6.7						
QIS	**Mount Isa**	**16.36**	**145**	P	**Pn**	**01 29 54.3**	**-2.6**
MBWA	**Marble Bar**	**16.73**	**214**	Pn	**Pn**	**01 29 58.6**	**-2.9**
MBWA				IAmb	IAmb	01 30 22.7	
	comp=Z,54nm,1.5s						
MBWA	**Marble Bar**	**16.73**	**214**	P	**Pn**	**01 30 01.0**	**-0.5**
AS31	**Alice Springs**	**16.78**	**166**	Pn	**Pn**	**01 29 59.8**	**-2.4**
ASAR	**Alice Springs**	**16.78**	**166**	Pn	**Pn**	**01 29 59.7**	**-2.5**
	comp=Z,1.2nm,0.3s,baz=352,slow=11,SNR=34						
ASAR				Sn	**Sn**	**01 33 00.8**	**-6.8**
	comp=Z,0.5nm,0.3s,baz=348,slow=24,SNR=5.5						
ASAR				LR	LR	01 37 10.8	
	comp=Z,186nm,20.8s,baz=342,slow=39						
PSA00	**Pilbara Seismi**	**17.00**	**213**	Pn	**Pn**	**01 30 01.9**	**-3.0**
PSA00				IAmb	IAmb	01 30 09.6	
	comp=Z,19nm,0.9s						
PSA00	**Pilbara Seismi**	**17.00**	**213**	Pn	**Pn**	**01 30 02.6**	**-2.3**
PSA00				IAmb	IAmb	01 30 17.4	
	comp=Z,18nm,1.4s						
PSA00	**Pilbara Seismi**	**17.00**	**213**	P	**Pn**	**01 30 02.6**	**-2.3**
PMG	**Port Moresby**	**17.53**	**98**	P	**P**	**01 30 14.7**	**+2.4**
	comp=Z,26nm,0.8s,baz=260,slow=4.2,SNR=5.1						
WRKA	**Warakurna**	**17.67**	**184**	P	**Pn**	**01 30 09.4**	**-3.7**
	baz=18,SNR=9.4						
WRKA	**Warakurna**	**17.67**	**184**	P	**Pn**	**01 30 09.7**	**-3.5**
MTSU	**Mount Surprise**	**17.94**	**128**	P	**Pn**	**01 30 16.5**	**-0.1**
	baz=18,SNR=9.5						
CTA	**Charters Tower**	**20.56**	**130**	P	Pn	01 30 49.8	+1.8
CTAO	**Charters Tower**	**20.56**	**130**	P	**P**	**01 30 45.4**	**-0.2**
CTAO				IAmb	IAmb	01 30 52.4	
	comp=Z,34nm,1.1s						
CTAO	**Charters Tower**	**20.56**	**130**	P	Pn	01 30 49.6	+1.6
OOD	**Oodnadatta**	**21.18**	**165**	P	**P**	**01 30 53.7**	**+1.6**
LEM	**Lembang**	**21.79**	**270**	LR	LR	01 39 52.2	
	comp=Z,79nm,20.1s,baz=177,slow=38						
MEEK	**Meekatharra**	**21.86**	**207**	P	**P**	**01 30 59.2**	**-0.4**
	baz=22,SNR=5.4						
INKA	**Innaminka**	**22.91**	**154**	P	**P**	**01 31 12.8**	**+2.2**
MULG	**Mulgathing**	**23.23**	**170**	P	**P**	**01 31 14.8**	**+0.9**
FORT	**Forrest**	**23.39**	**183**	P	**P**	**01 31 16.6**	**+1.2**
	baz=23,SNR=7.9						
FORT	**Forrest**	**23.39**	**183**	P	**P**	**01 31 15.7**	**+0.3**
FORT				IAmb	IAmb	01 31 49.7	
	comp=Z,33nm,0.9s						
FORT	**Forrest**	**23.39**	**183**	P	**P**	**01 31 16.4**	**+1.0**
QLP	**Quilpie**	**23.70**	**146**	P	**P**	**01 31 21.4**	**+2.9**
	baz=24,SNR=6.2						
LCRK	**Leigh Creek**	**24.40**	**162**	P	**P**	**01 31 27.5**	**+2.6**
MORW	**Morawa**	**25.12**	**209**	P	**P**	**01 31 30.3**	**-1.2**
MORW				IAmb	IAmb	01 31 42.1	
	comp=Z,16nm,1.1s						
MORW	**Morawa**	**25.12**	**209**	P	**P**	**01 31 34.5**	**+3.0**
BBOO	**Buckleboo**	**26.08**	**167**	P	**P**	**01 31 41.2**	**+1.1**
	baz=26,SNR=13						
BBOO	**Buckleboo**	**26.08**	**167**	P	**P**	**01 31 40.5**	**+0.4**
BBOO				IAmb	IAmb	01 31 41.8	
	comp=Z,18nm,0.7s						
BBOO	**Buckleboo**	**26.08**	**167**	P	**P**	**01 31 41.2**	**+1.1**
BLDU	**Ballidu**	**26.13**	**206**	P	**P**	**01 31 42.1**	**+1.5**
STKA	**Stephens Creek**	**26.89**	**157**	P	**P**	**01 31 49.3**	**+1.8**
	comp=Z,5.9nm,0.8s,baz=332,slow=11,SNR=9.6						
	comp=Z,5.9nm,0.8s						
STKA	**Stephens Creek**	**26.89**	**157**	P	**P**	**01 31 49.2**	**+1.7**
	baz=27,SNR=5.9						
STKA	**Stephens Creek**	**26.89**	**157**	P	**P**	**01 31 47.1**	**-0.3**
STKA	**Stephens Creek**	**26.89**	**157**	P	**P**	**01 31 51.1**	**+3.7**
HTT	**Hallett**	**27.39**	**163**	P	**P**	**01 31 53.6**	**+1.6**
	baz=28,SNR=6.6						
HTT	**Hallett**	**27.39**	**163**	P	**P**	**01 31 53.8**	**+1.8**
NWAO	**Narrogin (SRO)**	**27.94**	**203**	P	**P**	**01 31 56.3**	**-0.5**
CMSA	**Cobar Meteorol**	**28.42**	**150**	P	**P**	**01 32 01.7**	**+0.6**
	baz=28,SNR=6.9						
CMSA	**Cobar Meteorol**	**28.42**	**150**	P	**P**	**01 32 03.8**	**+2.7**
RKGY	**Rocky Gully**	**29.54**	**201**	P	**P**	**01 32 14.3**	**+3.3**
ARPS	**Mount Arapiles**	**31.38**	**161**	P	**P**	**01 32 29.6**	**+2.3**
	baz=32,SNR=8.1						
ARPS	**Mount Arapiles**	**31.38**	**161**	P	**P**	**01 32 29.8**	**+2.5**
TOO	**Toolangi**	**33.41**	**157**	P	**P**	**01 32 44.5**	**-0.6**
LHI	**Lord Howe Isla**	**36.57**	**135**	P	**P**	**01 33 12.9**	**+0.6**
MJAR	**Matsushiro Arr**	**44.37**	**10**	LR	LR	01 50 45.3	
	comp=Z,17nm,19.5s,baz=192,slow=33						
KSRS	**Korea Array**	**44.56**	**358**	LR	LR	01 51 41.0	
	comp=Z,12nm,21.2s,baz=210,slow=34						
SEHB	**SEOHWA**	**45.36**	**359**	P	**P**	**01 34 23.1**	**-1.6**
SEHB				IAmb	IAmb	01 34 56.0	
	comp=Z,6.9nm,1.3s						
MKAR	**Makanchi Array**	**68.25**	**327**	P	**P**	**01 37 07.0**	**0.0**
	comp=Z,1.4nm,0.6s,baz=125,slow=8.2,SNR=3.7						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**71.67**	**334**	P	**P**	**01 37 30.4**	**+2.6**
	comp=Z,0.6nm,0.5s,baz=140,slow=5.6,SNR=2.0						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**72.19**	**173**	P	**P**	**01 37 32.3**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=338,slow=4.6,SNR=5.1						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**82.67**	**180**	P	**P**	**01 38 30.6**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=302,slow=1.7,SNR=20						
	comp=Z,2.6nm,0.7s						
QSPA	**South Pole Qui**	**82.67**	**180**	P	**P**	**01 38 28.8**	**-0.7**
QSPA				IAmb	IAmb	01 38 49.1	
	comp=Z,3.4nm,0.9s						
SNAA	**Sanae**	**95.26**	**194**	LR	LR	02 22 26.7	
	comp=Z,22nm,18.1s,baz=68,slow=36						
MGMO	**Mountain Grove**	**131.80**	**46**		**PKPdf**	**01 45 17.5**	**-2.2**
LPAZ	**La Paz**	**150.73**	**143**	PKPbc	**PKiKP**	**01 46 00.8**	**0.0**
	comp=Z,0.8nm,0.4s,baz=245,slow=6.4,SNR=5.5						

SOME ***04*** *01:42:29.6, 44°.90N×79°.48E, h15km*

NNC ***04*** *01:42:30.2±0.3, 44°.87N×79°.43E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=2.6km s-min=1.8km az=126.0*

ISC 04 01:42:29.3±1.3, 44°.93N±0°.03×79°.62E±0°.04, h12km±12km, n41, σ1§21/60, 9C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**0.61**	**168**	*eP*	**Pg**	**01 42 41.1**	**-0.1**
	49nm,0.1s						
DJR				*eS*	**Sg**	**01 42 49.3**	**+0.1**
	301nm,0.4s						
DJR	**Jarkent**	**0.61**	**168**	P	**Pg**	**01 42 41.1**	**-0.1**
	49nm,0.1s						
DJR				S	**Sg**	**01 42 49.3**	**+0.1**
	100nm,0.2s						
ARXS	**Arharly**	**1.46**	**241**	*eP*	**Pn**	**01 42 55.4**	**-0.3**
	18nm,0.1s						
ARXS				*eS*	**Sn**	**01 43 13.6**	**-1.2**
	208nm,0.3s						
ARXS	**Arharly**	**1.46**	**241**	P	**Pn**	**01 42 55.4**	**-0.3**
	19nm,0.2s						
ARXS				S	**Sn**	**01 43 13.6**	**-1.2**
	208nm,0.3s						
PDGK	**Podgornoye**	**1.60**	**183**	P	**Pb**	**01 42 58.8**	**-0.2**
	50nm,0.2s						
PDGK				S	**Sb**	**01 43 19.4**	**+0.3**
	33nm,0.2s						
PDGK	**Podgornoye**	**1.60**	**183**	⇓P	**Pb**	**01 42 58.7**	**-0.2**
	35nm,0.3s						
PDGK				⇑S	**Sb**	**01 43 19.6**	**+0.5**
	32nm,0.8s						
KURS	**Kuram**	**1.77**	**216**	*eP*	**Pb**	**01 43 01.1**	**-0.8**
	35nm,0.2s						
KURS				*eS*	**Sb**	**01 43 23.3**	**-0.8**
	61nm,0.3s						
KURS	**Kuram**	**1.77**	**216**	P	**Pb**	**01 43 01.1**	**-0.8**
	35nm,0.2s						
KURS				S	**Sb**	**01 43 23.3**	**-0.8**
	61nm,0.3s						
UZB	**Uzynbulak**	**1.83**	**194**	*eP*	**Pb**	**01 43 02.6**	**-0.2**
	22nm,0.1s						
UZB				*eS*	**Sb**	**01 43 26.0**	**+0.3**
	50nm,0.3s						
UZB	**Uzynbulak**	**1.83**	**194**	P	**Pb**	**01 43 02.6**	**-0.2**
	22nm,0.1s						
UZB				S	**Sb**	**01 43 26.0**	**+0.3**
	50nm,0.3s						
SATY	**Saty**	**2.06**	**205**	*eP*	**Pb**	**01 43 06.4**	**-0.4**
	34nm,0.1s						
SATY				*eS*	**Sb**	**01 43 32.6**	**+0.2**
	131nm,0.2s						
SATY	**Saty**	**2.06**	**205**	Pg	**Pb**	**01 43 06.4**	**-0.4**
	34nm,0.1s						
SATY				Lg	Lg	01 43 32.6	
	131nm,0.2s						
CHKK	**Chushkaly**	**2.17**	**241**	*eP*	**Pb**	**01 43 07.4**	**-1.1**
	23nm,0.3s						
CHKK				*eS*	**Sb**	**01 43 34.5**	**-0.8**
	172nm,0.3s						
CHKK	**Chushkaly**	**2.17**	**241**	Pg	**Pb**	**01 43 07.4**	**-1.1**
	23nm,0.3s						
CHKK				Lg	Lg	01 43 34.5	
	172nm,0.3s						
KTBS	**Karatobe**	**2.43**	**241**	*eP*	**Pb**	**01 43 11.7**	**-1.3**
	26nm,0.2s						
KTBS				*eS*	**Sb**	**01 43 41.6**	**-1.4**
	233nm,0.3s						
KTBS	**Karatobe**	**2.43**	**241**	Pg	**Pb**	**01 43 11.7**	**-1.3**
	26nm,0.2s						
KTBS				Lg	Lg	01 43 41.6	
	233nm,0.3s						
MAKZ	**Makanchi**	**2.50**	**40**	⇑Pn	**Pb**	**01 43 14.1**	**-0.1**
	2.3nm,0.4s						
MAKZ				⇑Sn	**Sg**	**01 43 48.3**	**-1.4**
	18nm,0.5s						
MDOK	**Medeo**	**2.56**	**227**	*eP*	**Pb**	**01 43 15.0**	**-0.3**
	26nm,0.3s						
MDOK				*eS*	**Sb**	**01 43 47.3**	**+0.6**
	68nm,0.6s						
MDOK	**Medeo**	**2.56**	**227**	Pg	**Pb**	**01 43 15.0**	**-0.3**
	26nm,0.3s						
MDOK				Lg	Lg	01 43 47.3	
	68nm,0.6s						
KNDC	**Almaty**	**2.56**	**229**	⇓Lg	Lg	01 43 47.7	
	164nm,0.7s						
KUU	**Kurty**	**2.57**	**247**	*eP*	**Pb**	**01 43 14.3**	**-1.0**
	13nm,0.3s						
KUU				*eS*	**Sb**	**01 43 46.3**	**-0.5**
	167nm,0.3s						
KUU	**Kurty**	**2.57**	**247**	Pg	**Pb**	**01 43 14.3**	**-1.0**
	13nm,0.3s						
KUU				Lg	Lg	01 43 46.3	
	167nm,0.3s						
MK31	**Makanchi Array**	**2.64**	**44**	⇑Pn	**Pb**	**01 43 16.0**	**-0.7**
	1.7nm,0.2s,baz=217,slow=14,SNR=166						
MK31				⇑Sn	**Sb**	**01 43 50.4**	**+1.3**
	12nm,0.4s,baz=219,slow=24,SNR=19						
MTBS	**Maitube**	**2.92**	**233**	*eP*	**Pb**	**01 43 20.7**	**-0.6**
	15nm,0.2s						
MTBS				*eS*	**Sb**	**01 43 57.1**	**+0.1**
	123nm,0.2s						
MTBS	**Maitube**	**2.92**	**233**	Pg	**Pb**	**01 43 20.7**	**-0.6**
	15nm,0.2s						
MTBS				Lg	Lg	01 43 57.1	
	123nm,0.2s						
KRBS	**Karabastau**	**3.08**	**248**	*eP*	**Pb**	**01 43 23.4**	**-0.7**
	3.8nm,0.1s						
KRBS				*eS*	**Sb**	**01 44 01.6**	**-0.2**
	27nm,0.3s						
KRBS	**Karabastau**	**3.08**	**248**	Pg	**Pb**	**01 43 23.4**	**-0.7**
	3.8nm,0.1s						
KRBS				Lg	Lg	01 44 01.6	
	27nm,0.3s						
KST	**Kastek**	**3.24**	**236**	*eP*	**Pb**	**01 43 26.8**	**-0.1**
	7.5nm,0.2s						
KST				*eS*	**Sb**	**01 44 07.4**	**+1.1**
	47nm,0.3s						
KST	**Kastek**	**3.24**	**236**	Pg	**Pb**	**01 43 26.8**	**-0.1**
	7.5nm,0.2s						
KST				Lg	Lg	01 44 07.4	
	47nm,0.3s						
TKM2	**Tokmak 2**	**3.53**	**237**	⇑Pn	**Pn**	**01 43 25.5**	**+1.3**
	0.7nm,0.3s						
TKM2				⇑Pg	**Pb**	**01 43 33.1**	**+1.3**
	2.8nm,0.5s						
TKM2				⇑Lg	Lg	01 44 16.7	
	13nm,0.5s						
SGDS	**Sogindy**	**3.88**	**249**	*eP*	**Pb**	**01 43 38.1**	**+0.4**
	4.4nm,0.2s						
SGDS				*eS*	**Sb**	**01 44 27.0**	**+2.4**
	32nm,0.6s						
SGDS	**Sogindy**	**3.88**	**249**	Pg	**Pb**	**01 43 38.1**	**+0.4**
	4.4nm,0.2s						
SGDS				Lg	Lg	01 44 27.0	
	32nm,0.6s						
CHMS	**Chumysh**	**4.01**	**243**	⇓Pg	**Pb**	**01 43 41.2**	**+1.3**
	4.9nm,0.6s						
CHMS				⇓Lg	Lg	01 44 33.9	
	15nm,0.6s						
ZSN	**Zaisan**	**4.43**	**53**	*eP*	**Pb**	**01 43 47.1**	**0.0**
	2.2nm,0.2s						
ZSN				*eS*	**Sb**	**01 44 41.5**	**+0.9**
	6.9nm,0.4s						
ZSN	**Zaisan**	**4.43**	**53**	Pg	**Pb**	**01 43 48.5**	**+1.4**
	3.0nm,0.2s						
ZSN				Lg	Lg	01 44 45.2	
	6.9nm,0.4s						
MRKS	**Merke**	**5.11**	**247**	*eP*	**Pb**	**01 44 00.9**	**+2.2**
	1.9nm,0.2s						
MRKS				*eS*	**Sb**	**01 45 05.9**	**+5.8**
	11nm,0.4s						
MRKS	**Merke**	**5.11**	**247**	Pg	**Pb**	**01 44 00.9**	**+2.2**
	1.9nm,0.2s						
MRKS				Lg	Lg	01 45 05.9	
	11nm,0.4s						
KURBB	**Kurchatov Arra**	**5.75**	**353**	⇑Lg	Lg	01 45 33.8	
	24nm,0.7s						
KURK	**Kurchatov**	**5.83**	**354**	⇓Lg	Lg	01 45 36.7	
	21nm,0.9s						
KK31	**Karatay Array**	**6.81**	**258**	⇓Lg	Lg	01 46 03.7	
	5.1nm,0.7s,baz=70,slow=30,SNR=11						
IUG	**luzhnay**	**7.50**	**252**	Pg	Pg	01 44 47.3	-5.5
	67nm,0.4s						
IUG				Lg	Lg	01 46 25.9	
	18nm,1.0s						

BJI ***04*** *02:20:06.0±0.0, 35°.49N×69°.11E, h14km, mb4.6/39, mB4.7/24, ML5.0/2, Ms4.2/30, Ms7 3.9/27*

MOS ***04*** *02:20:06.1±1.3, 35°.46N×69°.29E, h10km, mb4.7/32, Error ellipse: s-maj=5.6km s-min=3.6km az=84.5*

NEIC ***04*** *02:20:06.5±1.7, 35°.28N±0°.04×69°.19E±0°.03, h

SMLA IAML 02 24 20.7
comp=N,688nm,1.1s
SMLA IAML 02 24 22.4
comp=E,587nm,0.9s
EKS2 Erkin-Say 8.15 24 P **Pn 02 22 05.8 -0.5**
SNR=8.8
AAK Ala-Archa 8.39 28 Pn **Pn 02 22 09.2 -0.4**
comp=E,57nm,0.4s,baz=214,slow=8.9,SNR=50
AAK Sn **Sn 02 23 40.7 -2.5**
comp=E,2.2nm,0.3s,baz=80,slow=11,SNR=1.4
AAK LR LR 02 25 43.3
comp=E,333nm,20.7s,baz=217,slow=41
AAK Ala-Archa 8.39 28 P **Pn 02 22 09.2 -0.4**
SNR=41
AAK Ala-Archa 8.39 28 Pn **Pn 02 22 08.9 -0.8**
AAK Ala-Archa 8.39 28*c i*P **Pn 02 22 09.2 -0.4**
AAK pmax pmax
comp=Z,82nm,0.8s
KBK Karagaybulak 8.59 30 P **Pn 02 22 12.1 -0.2**
SNR=29
CHMS Chumysh 8.80 28 P **Pn 02 22 14.8 -0.4**
SNR=28
CHMS Chumysh 8.80 28 *i* P **Pn 02 22 13.9 -1.2**
CHMS pmax pmax
comp=Z,147nm,0.5s
CHMS Chumysh 8.80 28 ⇑P **Pn 02 22 13.9 -1.2**
comp=Z,147nm,0.6s
CHMS ⇓S **Sn 02 23 50.7 -2.3**
comp=Z,178nm,1.0s
ULHL Ulahol 8.84 36 P **Pn 02 22 15.4 -0.3**
SNR=25
USP Ospenovka 8.94 26 P **Pn 02 22 16.6 -0.4**
SNR=23
TKM2 Tokmak 2 9.07 31 P **Pn 02 22 18.0 -1.0**
SNR=98
TKM2 Tokmak 2 9.07 31 *i* P **Pn 02 22 17.8 -1.2**
TKM2 pmax pmax
comp=Z,90nm,0.8s
TKM2 Tokmak 2 9.07 31 ⇑P **Pn 02 22 17.9 -1.2**
comp=Z,90nm,0.8s
SGDS Sogindy 9.15 26*c i*P **Pn 02 22 17.9 -2.0**
SGDS *e*S **Sn 02 24 02.6 +1.0**
SGDS Sogindy 9.15 26⇑*i*P **Pn 02 22 18.0 -2.0**
baz=26
SGDS *e*S **Sn 02 24 02.6 +1.0**
baz=26
KHET Khetri 9.15 140 *e*P **Pn 02 22 21.0 +1.0**
KHET *e*S **Sn 02 23 59.1 -2.5**
GEYT Alibeck 9.29 290 Pn **Pn 02 22 20.6 -1.2**
comp=Z,4.6nm,0.3s,baz=118,slow=12,SNR=33
GEYT Sn **Sn 02 24 04.1 -0.9**
comp=Z,2.2nm,0.3s,baz=123,slow=21,SNR=1.4
GEYT LR LR 02 27 07.3
comp=Z,56nm,19.4s,baz=134,slow=45
comp=Z,15nm,0.5s
GEYT Alibeck 9.29 290 Pn **Pn 02 22 20.2 -1.6**
GYA0 ALIBECK ARRAY 9.29 290 P **Pn 02 22 20.7 -1.1**
GYA0B ALIBECK ARRAY 9.29 290 Pn **Pn 02 22 19.7 -2.1**
GYA0B ALIBECK ARRAY 9.29 290 ⇑P **Pn 02 22 20.7 -1.1**
KUDL Kundal 9.46 137 *e*P **Pn 02 22 22.6 -1.6**
MTBS Maitube 9.61 33 P **Pn 02 22 25.5 -0.7**
comp=Z,86nm,0.5s
KRBS Karabastau 9.75 29 Lg Lg 02 24 09.2
comp=Z,26nm,0.5s
MDOK Medeo 9.92 35 *i* P **Pn 02 22 29.5 -1.0**
MDOK *e*S **Sn 02 24 22.6 +2.0**
MDOK Medeo 9.92 35 *i* P **Pn 02 22 29.6 -1.0**
baz=35
MDOK *e*S **Sn 02 24 22.7 +2.0**
baz=35
MDOK Medeo 9.92 35 ⇓P **Pn 02 22 30.0 -0.5**
comp=Z,128nm,0.9s
KNDC Almaty 9.92 35 P **Pn 02 22 30.6 +0.1**
KNDC Almaty 9.92 35 ⇓P **Pn 02 22 30.6 +0.1**
comp=Z,276nm,0.9s
AJM Ajmer 9.97 151 *i* S **Sn 02 24 13.0 -8.8**
AJM *e*P **Pn 02 22 30.0 -1.2**
AJM *e*P **Pn 02 22 30.7 -0.5**
AJM *e*S 02 24 16.3
KTBS Karatobe 10.18 32 P **Pn 02 22 32.0 -2.1**
comp=Z,25nm,0.4s
KUU Kurty 10.18 31 *e*P **Pn 02 22 32.1 -1.9**
KUU Kurty 10.18 31 *e*P **Pn 02 22 32.2 -1.9**
baz=30
KUU Kurty 10.18 31 P **Pn 02 22 32.1 -1.9**
comp=Z,25nm,0.0s
BTLS Baital 10.40 19 *i* P **Pn 02 22 35.1 -1.8**
BTLS pmax pmax
comp=Z,2.0nm,0.6s
BTLS Baital 10.40 19 *i* P **Pn 02 22 35.1 -1.8**
comp=Z,1.8nm,0.6s,baz=19
CHKK Chushkaly 10.43 33 *e*P **Pn 02 22 35.4 -2.0**
CHKK Chushkaly 10.43 33 *e*P **Pn 02 22 35.5 -2.0**
baz=33
CHKK Chushkaly 10.43 33 P **Pn 02 22 35.2 -2.2**
comp=Z,25nm,0.5s
SATY Saty 10.52 40 *e*P **Pn 02 22 37.2 -1.5**
SATY Saty 10.52 40 *e*P **Pn 02 22 37.3 -1.5**
baz=40
SATY Saty 10.52 40 P **Pn 02 22 37.7 -1.1**
comp=Z,21nm,0.5s
KURS Kuram 10.71 38 P **Pn 02 22 40.3 -0.9**
comp=Z,31nm,0.5s
UZB Uzynbulak 10.91 41 *e*P **Pn 02 22 43.1 -1.0**
UZB Uzynbulak 10.91 41 *e*P **Pn 02 22 43.1 -1.0**
baz=41
UZB Uzynbulak 10.91 41 P **Pn 02 22 43.6 -0.5**
comp=Z,14nm,0.3s
ARXS Arharly 11.09 34 *e*P **Pn 02 22 43.8 -2.7**
ARXS Arharly 11.09 34 P **Pn 02 22 43.9 -2.5**
comp=Z,76nm,0.5s
SHLS Shalkode 11.16 42 *e*P **Pn 02 22 49.4 +2.0**
SHLS Shalkode 11.16 42 *e*P **Pn 02 22 49.5 +2.0**
baz=43
PDGK Podgornoye 11.29 42 P **Pn 02 22 48.5 -0.7**
PDGK Podgornoye 11.29 42 P **Pn 02 22 48.0 -1.2**
comp=Z,17nm,0.5s
PDGK Podgornoye 11.29 42 ⇓P **Pn 02 22 48.6 -0.7**
comp=Z,36nm,0.8s
JHNI Jhansi 12.69 138 *e*P **Pn 02 23 05.7 -2.7**
OTUK Ortayu 13.13 9 P **Pn 02 23 10.4 -3.9**
OTUK S Sn 02 25 29.1 -10
OTUK Ortayu 13.13 9 ⇓P **Pn 02 23 10.4 -3.9**
comp=Z,28nm,0.9s
BHPL Bhopal 14.00 147 *e*P **Pn 02 23 23.4 -2.9**
BHPL *e*S **Sn 02 25 52.8 -7.6**
DANN Dangsing 14.18 115 *e*P **Pn 02 23 24.6 -4.4**
comp=Z,100nm,0.7s
DANN *e*S **Sn 02 25 56.4 -8.8**
BRZS Berezniki 14.88 9 *e*P **Pn 02 23 35.1 -2.9**
BRZS Berezniki 14.88 9 *e*P **Pn 02 23 35.2 -2.9**
baz=8.6
MAKZ Makanchi 14.97 36 **Pn 02 23 38.9 -0.3**
MAKZ Makanchi 14.97 36 P **Pn 02 23 40.2 +0.9**
MAKZ Makanchi 14.97 36 ⇓P **Pn 02 23 39.0 -0.3**
comp=Z,72nm,0.6s
GKN Gorkha 15.02 115 *e*P **Pn 02 23 35.2 -5.0**
comp=Z,55nm,0.4s
MK31 Makanchi Array 15.11 37 Pn **Pn 02 23 38.7 -2.5**
MK31 Makanchi Array 15.11 37*ce*P **Pn 02 23 38.4 -2.8**
MK31 pmax pmax
comp=Z,53nm,0.6s
MKAR Makanchi Array 15.11 37 Pn **Pn 02 23 39.0 -2.2**
comp=Z,0.3nm,0.3s,baz=221,slow=14,SNR=20
MKAR LR LR 02 29 43.2
comp=Z,372nm,19.4s,baz=225,slow=39
comp=Z,7.3nm,0.8s
MKAR Makanchi Array 15.11 37 Pn **Pn 02 23 38.5 -2.7**
MKAR Makanchi Array 15.11 37 *i* P **Pn 02 23 38.7 -2.5**
MKAR pmax pmax
comp=Z,7.0nm,0.8s
WSAR Wadi Sarin 15.15 220 LR LR 02 30 00.9
comp=Z,130nm,20.3s,baz=51,slow=39
JBP Jabalpur 15.31 139 *e*P **Pn 02 23 40.3 -3.6**
JBP IAmb IAmb 02 23 47.6
comp=Z,20nm,0.6s
JBP ⇓*e*S **Sn 02 26 23.9 -8.6**
AB31 Akbulak array 15.51 337 *e*P **Pn 02 23 41.6 -4.7**
AB31 S **Sn 02 26 29.1 -7.7**
AB31 Akbulak array 15.51 337 P **Pn 02 23 41.6 -4.7**
comp=Z,8.0nm,0.5s,baz=155,slow=12,SNR=293
AB31 ⇑S **Sn 02 26 29.2 -7.7**
comp=Z,11nm,0.6s
ABKAR Akbulak array 15.51 337 Pn **Pn 02 23 41.4 -4.9**
DMN Daman 15.58 115 *e*P **Pn 02 23 42.4 -5.3**
comp=Z,96nm,0.5s

KKN Kakani 15.61 114 *e*P **Pn 02 23 42.9 -5.1**
comp=Z,27nm,0.6s
PKIN Phulchoki 15.81 115 *e*P **Pn 02 23 45.4 -5.3**
comp=Z,104nm,0.5s
PKI Pulchoki 15.83 115 *e*P **Pn 02 23 45.5 -5.4**
comp=Z,81nm,0.5s
PKI *e*S **Sn 02 26 36.2 -9.1**
GUN Gumba 16.00 113 *e*P **Pn 02 23 48.6 -4.5**
comp=Z,21nm,0.5s
JIRN Jiri 16.36 113 *e*P **Pn 02 23 53.2 -4.6**
comp=Z,40nm,0.5s
WMQ Urumqi 16.57 54 *e*P **P 02 24 01.3 -1.0**
WMQ pP pP 02 24 06.4 -6.1
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,140nm,3.7s
WMQ LR LR
comp=Z,960nm,18.7s
WMQ LR LR
comp=Z,460nm,17.7s
LKRN Lenkeran, Azer 16.66 288 P **P 02 24 03.9 +0.7**
KURBB Kurchatov Arra 16.73 21 Pn **Pn 02 23 56.4 -5.5**
comp=Z,0.2nm,0.3s,baz=211,slow=12,SNR=41
KURBB LR LR 02 31 18.9
comp=Z,167nm,18.3s,baz=195,slow=41
comp=Z,6.9nm,0.7s
KURK Kurchatov 16.84 21 Pn **Pn 02 23 57.5 -5.8**
KURK IAmb IAmb 02 24 12.3
comp=Z,41nm,1.1s
KURK Kurchatov 16.84 21 P **Pn 02 23 57.5 -5.8**
KURK pmax pmax
comp=Z,41nm,1.1s
KURK Kurchatov 16.84 21 ⇑P **Pn 02 23 57.4 -5.9**
comp=Z,52nm,1.4s
ZSN Zaisan 16.85 39 *e*P **Pn 02 24 03.2 -0.2**
ZSN Zaisan 16.85 39 *e*P **Pn 02 24 03.2 -0.2**
baz=39
RAMN Ramite 17.05 114 *e*P **Pn 02 24 01.7 -4.7**
AKTO Aktyubinsk 17.16 335 P **Pn 02 24 05.0 -2.4**
comp=Z,1.9nm,0.3s,baz=159,slow=9.3,SNR=35
comp=Z,32nm,0.7s
AKTO Aktyubinsk 17.16 335 P **Pn 02 24 05.8 -1.5**
AKTO Aktyubinsk 17.16 335 ⇑P **Pn 02 24 06.2 -1.2**
comp=Z,34nm,0.8s
TAPN Taplejung 17.67 112 *e*P **Pn 02 24 10.1 -4.0**
comp=Z,22nm,0.5s
ODAN Odare 17.69 113 *e*P **Pn 02 24 10.4 -3.9**
comp=Z,34nm,0.6s
BVA0 Borovoye Array 17.73 2 *i* P **Pn 02 24 09.7 -4.6**
BVA0 Borovoye Array 17.73 2 ⇑P **Pn 02 24 09.8 -4.6**
comp=Z,27nm,0.8s,baz=182,slow=11,SNR=88
BVAR Borovoye Array 17.73 2 LR LR 02 31 16.0
comp=Z,80nm,19.1s,baz=72,slow=38
BRVK Borovoye 17.76 2 P **Pn 02 24 10.4 -4.3**
SEKA Sheki 18.24 295 P **Pn 02 24 22.4 +1.7**
MAK Makhachkala 18.45 301 *e*P **P 02 24 16.6 -6.3**
MAK *e*S **Sn 02 27 41.5 -6.8**
MAK pmax pmax
comp=Z,144nm,1.0s
MAK MLR MLR
comp=Z,238nm,10.0s
NAX Nakhchivan 19.25 289 P **Pn 02 24 34.1 +1.1**
LSA Lhasa 19.32 101 P **P 02 24 32.5 -0.6**
LSA IAmb IAmb 02 24 44.8
comp=Z,23nm,0.7s
LSA Lhasa 19.32 101 P **P 02 24 32.5 -0.6**
LSA pmax pmax
comp=Z,23nm,0.7s
HYBB Hyderabad (bro 19.67 153 *e*P **P 02 24 35.7 -0.8**
HYBB *e*S **Sn 02 28 18.0 -0.1**
GNI Garni 19.92 291 P **Pn 02 24 42.1 +1.0**
comp=Z,28nm,1.0s,baz=142,slow=5.6,SNR=15
GNI LR LR 02 34 17.2
comp=Z,68nm,18.6s,baz=96,slow=43
GNI Garni 19.92 291 P **Pn 02 24 40.0 -1.1**
GNI IAmb IAmb 02 24 51.5
comp=Z,56nm,1.2s
GNI Garni 19.92 291⇑*e*P **P 02 24 39.5 +0.3**
GNI pmax pmax
comp=Z,37nm,1.2s
GUDG Gudauri 20.49 298 P **P 02 24 44.0 -1.4**
GOMU GeErMu 20.79 80 P **P 02 24 49.6 +0.7**
GOMU pP Pn 02 24 54.9 +3.4
GOMU sP sP 02 25 01.4 -2.8
GOMU S **S 02 28 41.4 +2.1**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU LR LR
comp=Z,86nm,10.0s
GOMU LR LR
comp=Z,120nm,10.1s
GOMU LR LR
comp=Z,100nm,10.2s
ZEI Tsey 20.97 298 *e*P Pn 02 24 52.0 -1.3
ZEI pmax pmax
comp=Z,24nm,1.3s
KARS Kars 21.23 292 P **P 02 24 49.7 -3.7**
KARS Kars 21.23 292 P **P 02 24 49.7 -3.7**
ONI Oni 21.25 298 P **P 02 24 53.4 -0.1**
ONI IAmb IAmb 02 25 09.2
comp=Z,30nm,1.2s
ONI Oni 21.25 298 P **P 02 24 53.4 -0.1**
ONI pmax pmax
comp=Z,30nm,1.2s
NCK Nalchik 21.35 300⇑*e*P **P 02 24 55.1 +0.6**
NCK pmax pmax
comp=Z,34nm,0.8s
ZAA0 Zalesovo Array 21.61 26 P **P 02 24 55.8 -1.2**
ZAA0 Zalesovo Array 21.61 26 ⇓P **P 02 24 55.4 -1.7**
comp=Z,9.1nm,0.6s
ZALV Zalesovo Beam 21.61 26 P **P 02 24 55.7 -1.4**
comp=Z,41nm,0.5s,baz=219,slow=10,SNR=117
ZALV LR LR 02 33 56.1
comp=Z,118nm,19.6s,baz=235,slow=39
comp=Z,41nm,0.5s
ZALV Zalesovo Beam 21.61 26 P **P 02 24 55.9 -1.2**
KBZ Khabaz 21.90 301 P **P 02 25 00.7 +0.3**
comp=Z,5.1nm,0.8s,baz=137,slow=9.1,SNR=15
KBZ LR LR 02 35 39.3
comp=Z,91nm,18.2s,baz=136,slow=43
comp=Z,5.1nm,0.8s
KBZ Khabaz 21.90 301*ce*P **P 02 25 00.6 +0.3**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 22.10 301 ⇓P **P 02 25 02.8 +0.2**
KIV Kislovodsk 22.10 301 P **P 02 25 01.7 -0.9**
KIV Kislovodsk 22.10 301 *e*P **P 02 25 02.6 0.0**
KIV *e*S **S 02 29 07.4 +3.2**
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,57nm,14.0s
GOF Gofitskoye 22.15 304⇑*e*P **P 02 25 04.4 +1.4**
GOF pmax pmax
comp=Z,61nm,0.8s
SVE Sverdlovsk 22.29 348 *e*P **P 02 25 02.7 -1.7**
SVE *e*S **S 02 29 04.4 -2.9**
SVE pmax pmax
comp=Z,32nm,1.5s
ARU Arti 22.33 344 P **P 02 25 02.6 -2.3**
comp=Z,38nm,0.6s,baz=120,slow=11,SNR=11
ARU LR LR 02 34 31.6
comp=Z,107nm,18.2s,baz=156,slow=39
comp=Z,38nm,0.6s
ARU Arti 22.33 344 P **P 02 25 02.4 -2.5**
ARU Arti 22.33 344*c i*P **P 02 25 03.3 -1.5**
ARU PPP PPP 02 25 33.6
ARU S **S 02 29 10.0 +1.9**
ARU SS **SnSn 02 29 37.8 +0.7**
ARU pmax pmax
comp=Z,44nm,0.7s
BELG Belogornoye 22.96 325 P **P 02 25 11.5 0.0**
comp=Z,37nm,0.8s,baz=350,slow=1.9,SNR=13
comp=Z,37nm,0.8s
BELG Belogornoye 22.96 325*c i*P **P 02 25 11.5 0.0**
BELG pmax pmax
comp=Z,9.0nm,1.0s
MARD Mardin 22.96 283 P **P 02 25 09.4 -2.5**
MARD IAmb IAmb 02 25 20.5
comp=Z,25nm,1.3s
RAYN Ar Rayn 23.69 247 P **P 02 25 18.1 -1.0**
RAYN Ar Rayn 23.69 247 ⇑P **P 02 25 19.7 +0.7**
SOC Sochi 24.13 299 *e*P **P 02 25 27.2 +4.3**
SOC *e*PPP PPP 02 25 59.4
SOC *e*SS **SnSn 02 30 26.3 +5.1**
SOC *e*SSS SSS 02 30 44.6
SOC pmax pmax
comp=Z,16nm,0.8s
GTA Gaotai 24.61 71 *e*P **P 02 25 28.5 +1.0**
GTA pP pP 02 25 33.5 -5.0
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,57nm,4.4s
GTA LR LR
comp=Z,260nm,14.9s
GTA LR LR
comp=Z,210nm,13.1s
GTA LR LR
comp=Z,190nm,15.6s
VRH Novokhopyorsk 25.34 317 *e*P **P 02 25 35.0 +1.2**
VRH pmax pmax
comp=Z,9.0nm,0.7s
KNGR Kungurtug, Tuv 25.54 45⇑*e*P **P 02 25 37.0 +1.2**
KNGR pmax pmax
comp=Z,25nm,0.7s
ANN Anapa 25.96 301 *e*P **P 02 25 39.7 +0.2**
ANN pmax pmax
comp=Z,31nm,1.2s
KIRV Kirov 26.71 337 LR LR 02 36 28.1
comp=Z,94nm,20.3s,baz=147,slow=37
KIRV Kirov 26.71 337⇓*e*P **P 02 25 46.3 +0.2**
VORR Voronezh 26.96 317 *e*P **P 02 25 50.1 +1.7**
VORR pmax pmax
comp=Z,10.0nm,0.3s
LPSR Galich'ya Gora 27.52 318 *e*P **P 02 25 57.2 +3.7**
LPSR pmax pmax
comp=Z,8.0nm,0.8s
MMAI Mount Meron Ar 27.99 275 LR LR 02 38 36.0
comp=Z,99nm,18.5s,baz=239,slow=40
LZH Lanzhou 28.06 78 *e*P P 02 25 51.8 -6.9
LZH pP pP 02 25 58.0 -12
LZH pmax pmax
comp=Z,23nm,1.0s
LZH LR LR
comp=N,280nm,12.7s
LZH LR LR
comp=E,210nm,12.9s
LZH LR LR
comp=Z,190nm,13.2s
BRTR Keskin Array B 28.43 290 P **P 02 26 03.0 +1.0**
comp=Z,2.0nm,0.9s,baz=98,slow=11,SNR=3.7
BRTR LR LR 02 38 38.1
comp=Z,73nm,18.1s,baz=134,slow=39
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 28.43 290 P **P 02 26 03.0 +1.0**
ZAK Zakamensk 28.87 48 *e*P **P 02 26 09.4 +3.7**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
PZH PanZhiHua 29.16 98 P **P 02 26 08.5 0.0**
PZH pmax pmax
comp=Z,20nm,0.6s
PZH pmax pmax
comp=Z,100nm,4.6s
EIL Elat 29.34 269 LR LR 02 39 50.0
comp=Z,164nm,18.0s,baz=74,slow=40
MOS Moscow 29.70 323 *e*P **P 02 26 08.2 -4.6**
MOS *e* 02 27 03.5
MOS *e* 02 29 14.1
PALK Pallekele 29.84 157 LR LR 02 39 53.3
comp=Z,85nm,19.7s,baz=96,slow=40
OBN Obninsk 29.92 322 LR LR 02 38 56.1
comp=Z,35nm,18.6s,baz=332,slow=38
OBN Obninsk 29.92 322 *i* P **P 02 26 15.2 +0.4**
OBN *i* 02 26 22.2
OBN *i* 02 27 09.6
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,115nm,20.0s
SONM Songino Array 30.21 54 P **P 02 26 18.4 +0.7**
comp=Z,1.3nm,0.5s,baz=261,slow=8.9,SNR=5.7
SONM LR LR 02 39 35.1
comp=Z,163nm,18.2s,baz=208,slow=39
comp=Z,1.3nm,0.5s
PRGR Permogore 30.28 338 *e*P **P 02 26 13.7 -4.2**
CMAR Chiang Mai Arr 31.23 115 P **P 02 26 26.3 -0.4**
comp=Z,1.3nm,0.4s,baz=306,slow=8.9,SNR=8.0
CMAR LR LR 02 41 28.5
comp=Z,60nm,18.8s,baz=300,slow=41
comp=Z,1.3nm,0.4s
CMAR Chiang Mai Arr 31.23 115 *i* P **P 02 26 26.7 0.0**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
KLMR Klimovskoe 31.83 333 *e*P **P 02 26 30.8 -0.7**
KLMR pmax pmax
comp=Z,14nm,1.1s
KLMR Klimovskoe 31.83 333 *e*P **P 02 26 30.9 -0.6**
KLMR AMP 02 26 41.8
comp=Z,14nm,1.1s
BTO Baotou 32.40 68 *e*P **P 02 26 36.9 -0.1**
BTO S **S 02 31 53.1 +4.1**
BTO LR LR
comp=Z,2μm,17.5s
BTO LR LR
comp=Z,830nm,15.3s
XAN Xi'an 32.54 81 P P 02 26 44.5 +6.3
XAN pmax pmax
comp=Z,11nm,1.1s
XAN LR LR
comp=Z,250nm,14.4s
XAN LR LR
comp=Z,160nm,13.3s
XAN LR LR
comp=Z,190nm,12.8s
AKASG Malin Array Be 32.58 311 P **P 02 26 39.2 +1.0**
comp=Z,2.9nm,0.8s,baz=88,slow=7.3,SNR=8.0
comp=Z,2.9nm,0.8s
AKASG Malin Array Be 32.58 311*ce*P **P 02 26 39.0 +0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 32.58 311*ce*P **P 02 26 39.9 +1.7**
HHC Hu-ho-hao-te 33.55 68 *e*P **P 02 26 46.9 -0.1**
HHC pmax pmax
comp=Z,26nm,1.1s
HHC pmax pmax
comp=Z,120nm,5.4s
HHC LR LR
comp=Z,430nm,14.2s
HHC LR LR
comp=Z,320nm,16.2s
HHC LR LR
comp=Z,270nm,15.8s
VRI Vrincioaia 33.58 301 ⇓P **P 02 26 49.2 +2.2**
VRI Vrincioaia 33.58 301 ⇓P **P 02 26 49.2 +2.2**
PLOR Plostina 33.63 301 ⇑P **P 02 26 50.1 +2.6**
PLOR Plostina 33.63 301 ⇑P **P 02 26 50.1 +2.6**
COVR Voineasa-Covas 33.94 301 ⇓P **P 02 26 54.4 +4.2**
MLR Muntele Rosu 34.11 301 ⇑P **P 02 26 54.0 +2.2**
MLR Muntele Rosu 34.11 301 P **P 02 26 51.4 -0.4**
MLR Muntele Rosu 34.11 301 ⇑P **P 02 26 54.0 +2.2**
MNK Minsk 34.34 317 *i* P **P 02 26 51.6 -1.9**
MNK *i* 02 28 06.0
MNK *i* S **S 02 32 19.8 +1.3**
MNK *i* SS **SnSn 02 34 30.5 +0.8**
MNK pmax pmax
comp=Z,6.0nm,1.0s
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK MLR MLR
comp=E,29nm,24.0s
MNK MLR MLR
comp=Z,230nm,24.0s
MNK Minsk 34.34 317 *i* P **P 02 26 51.6 -1.9**
comp=E,4.0nm,0.9s
MNK *i* P **P 02 26 51.6 -1.9**
MNK *i* P **P 02 26 51.6 -1.9**
comp=Z,6.0nm,1.0s,baz=286
MNK *i* PP **PP 02 28 06.0 -5.5**
MNK *i* S **S 02 32 19.9 +1.3**
MNK *i* SS **SnSn 02 34 30.6 +0.8**
MNK *i* LQ LQ 02 38 15.5
MNK *i* LR LR 02 40 52.3
MNK *i* LRM MLR 02 42 09.6
comp=E,29nm,23.9s
MNK *i* LRM MLR 02 42 09.6
MNK *i* LRM MLR 02 42 09.6
comp=Z,230nm,23.9s
BURAR Bucovina Array 34.73 304 ⇓P **P 02 26 58.3 +1.2**
BURAR Bucovina Array 34.73 304 ⇓P **P 02 26 58.3 +1.2**
LYN LuoYang 35.27 78 ⇓P **P 02 27 04.7 +2.9**

LYN LR LR
comp=Z,210nm,22.0s
LYN LR LR
comp=Z,160nm,18.0s
LYN LR LR
comp=Z,90nm,15.2s
NRIK Noril'sk 35.56 11 P **P 02 27 03.9 +0.1**
comp=Z,7.4nm,0.8s,baz=225,slow=8.0,SNR=7.3
comp=Z,7.4nm,0.8s
NRIK Noril'sk 35.56 11 P **P 02 27 03.5 -0.4**
NRIK Noril'sk 35.56 11 *ce*P **P 02 27 05.6 +1.7**
NRIK pmax pmax
comp=Z,9.0nm,0.9s
DRGR 36.39 303 ⇑P **P 02 27 12.7 +1.3**
DRGR 36.39 303 ⇑P **P 02 27 12.7 +1.3**
HNS HongShan 36.44 73 ⇓P P 02 27 20.5 +8.8
KWP Kalwaria Pacla 36.56 308 P P 02 27 18.5 +5.8
XLT XiLinHaoTe 36.70 62 *e*P **P 02 27 12.5 -1.6**
XLT pP pP 02 27 17.8 -7.6
XLT PcP **PcP 02 29 36.2 0.0**
XLT S **S 02 32 57.5 +2.3**
XLT sS sS 02 33 06.7 -6.7
XLT pmax pmax
comp=Z,7.0nm,1.2s
XLT pmax pmax
comp=Z,100nm,4.3s
XLT LR LR
comp=Z,43nm,19.4s
XLT LR LR
comp=Z,190nm,13.9s
XLT LR LR
comp=Z,180nm,14.3s
KOLS Kolonicke sedl 36.78 306 *e*P **P 02 27 18.7 +4.1**
KOLS Kolonicke sedl 36.78 306 *e*P **P 02 27 18.7 +4.1**
SIRR Siria 37.11 302 ⇑P **P 02 27 19.2 +1.7**
BZS Buzias 37.15 301 ⇓P **P 02 27 19.0 +1.3**
BZS Buzias 37.15 301 ⇓P **P 02 27 19.0 +1.3**
BOD Bodaibo 37.19 39 *e*P **P 02 27 20.9 +3.0**
BOD pmax pmax
comp=Z,13nm,1.1s
FINES FINESS Array B 37.68 327 P **P 02 27 22.4 +0.5**
comp=Z,4.0nm,0.8s,baz=96,slow=5.9,SNR=7.7
comp=Z,4.0nm,0.8s
FINES FINESS Array B 37.68 327 *i* P **P 02 27 24.2 +2.2**
FINES pmax pmax
comp=Z,4.0nm,0.8s
WHN Wuhan 37.94 84 ⇑P P 02 27 32.2 +7.6
NIE Niedzica 38.11 307 P P 02 27 31.7 +5.9
TIA Tai'an 38.58 74 P **P 02 27 31.7 +1.7**
TIA pmax pmax
comp=Z,4.0nm,0.4s
TIA pmax pmax
comp=Z,36nm,2.7s
TIA LR LR
comp=Z,300nm,17.6s
TIA LR LR
comp=Z,170nm,9.4s
TIA LR LR
comp=Z,100nm,11.8s
MORH Mrgy, Hungar 39.21 302 P P 02 27 40.1 +5.1
KOVH Kovagotottos 39.59 302 P **P 02 27 42.2 +4.0**
KRLC Kraliky 40.41 308 *e*P **P 02 27 49.5 +4.4**
KRLC Kraliky 40.41 308 *e*P **P 02 27 49.5 +4.4**
VRAC Vranov 40.52 307 LR LR 02 45 43.1
comp=Z,46nm,20.9s,baz=88,slow=38
DPC Dobruska-Polom 40.71 308 *e*P **P 02 27 48.1 +0.6**
DPC Dobruska-Polom 40.71 308 *e*P **P 02 27 48.1 +0.6**
RONA Rosalia, Austr 40.76 304 *e*P P 02 27 52.9 +5.0
comp=Z,2.5nm,0.9s
CONA Conrad Observa 41.04 305 *e*P P 02 27 55.5 +5.2
comp=Z,3.0nm,0.9s
NJ2 Nanjing 41.10 80 *e*P **P 02 27 47.3 -3.6**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
SOKA Soboth 41.67 303 *e*P P 02 28 00.1 +4.5
comp=Z,6.5nm,1.0s
ARCES ARCESS Array B 41.70 339 P **P 02 27 56.2 +0.9**
comp=Z,3.4nm,0.8s,baz=122,slow=9.2,SNR=10
ARCES LR LR 02 46 03.2
comp=Z,138nm,18.3s,baz=132,slow=37
comp=Z,3.4nm,0.8s
CKRC Cesky Krumlov 42.04 306 *e*P **P 02 28 02.3 +3.9**
MOA Molln 42.12 305 *e*P P 02 28 03.9 +4.8
comp=Z,4.5nm,1.0s
GERES GERESS Array B 42.44 306 P **P 02 28 04.6 +2.8**
comp=Z,1.1nm,0.8s,baz=82,slow=12,SNR=7.2
comp=Z,1.1nm,0.8s
PSI Prapat 42.49 133 P **P 02 28 05.7 +3.1**
comp=Z,8.6nm,0.5s,baz=226,slow=2.7,SNR=4.8
PSI LR LR 02 45 52.9
comp=Z,157nm,18.5s,baz=260,slow=36
comp=Z,8.6nm,0.5s
KHC Kasperske Hory 42.51 307 *e*P **P 02 28 04.1 +1.8**
KHC Kasperske Hory 42.51 307 *e*P **P 02 28 04.1 +1.8**
BIOA Bad Ischl, Aus 42.55 305 *e*P P 02 28 07.1 +4.5
comp=Z,2.6nm,0.8s
CLL Collm 42.82 310 *e*P **P 02 28 05.0 +0.3**
CLL Collm 42.82 310 *e*P **P 02 28 05.0 +0.3**
CLL *e*SS SS 02 37 54.0 +16
HFS Hagfors 43.12 323 LR LR 02 48 02.9
comp=Z,73nm,18.4s,baz=96,slow=39
ZEA Zeya 43.94 47 ⇓*e*P **P 02 28 15.1 +1.4**
NORES NORESS Array B 44.26 324 P **P 02 28 19.5 +3.3**
MOTA Moosalm 44.29 304 *e*P **P 02 28 20.3 +3.4**
comp=Z,2.4nm,0.8s
NB2 NORSAR Subarra 44.46 324 P **P 02 28 17.1 -0.8**
comp=Z,3.0nm,0.6s,baz=99,slow=7.9
NOA NORSAR Array B 44.46 324 P **P 02 28 17.7 -0.1**
comp=Z,1.5nm,0.6s,baz=99,slow=8.0,SNR=9.4
NOA LR LR 02 49 21.9
comp=Z,54nm,18.8s,baz=100,slow=40
comp=Z,1.5nm,0.6s
FETA Feichten 44.58 304 *e*P **P 02 28 20.1 +0.9**
comp=Z,3.5nm,1.5s
DAVA Damuels 45.12 304 *i* P **P 02 28 27.6 +4.1**
comp=Z,12nm,1.4s
DAVOX Davos/Dischmat 45.19 304 LR LR 02 51 32.1
comp=Z,58nm,18.1s,baz=83,slow=42
YAK Yakutsk 45.77 35 *de*P **P 02 28 30.8 +2.7**
YAK pmax pmax
comp=Z,19nm,0.8s
KSAR Wonju Array Be 46.63 69 P **P 02 28 35.6 +0.4**
KSAR Wonju Array Be 46.63 69 P **P 02 28 35.6 +0.4**
KSRS Korea Array 46.65 69 P **P 02 28 34.8 -0.7**
comp=Z,2.0nm,0.7s,baz=274,slow=6.5,SNR=10
KSRS LR LR 02 49 54.5
comp=Z,66nm,18.9s,baz=280,slow=38
comp=Z,2.0nm,0.7s
KMBO Kilima Mbogo 46.96 226 LR LR 02 51 07.1
comp=Z,33nm,20.3s,baz=64,slow=40
KLR Kul'dur 47.02 53 LR LR 02 49 57.2
comp=Z,173nm,20.3s,baz=216,slow=38
KLR Kul'dur 47.02 53 *ce*P **P 02 28 37.8 -0.4**
KLR pmax pmax
comp=Z,2.0nm,0.6s
TIXI Tiksi 47.42 22 LR LR 02 49 40.5
comp=Z,68nm,20.2s,baz=182,slow=38
TIXI Tiksi 47.42 22 P **P 02 28 41.4 +0.5**
TIXI Tiksi 47.42 22 P **P 02 28 41.4 +0.5**
TIXI pmax pmax
comp=Z,9.0nm,0.8s
USRK Ussuriysk Ar. 48.02 59 P **P 02 28 48.3 +2.3**
comp=Z,2.2nm,0.7s,baz=283,slow=6.4,SNR=5.9
KEST Kesra 48.03 289 P **P 02 28 48.8 +2.4**
comp=Z,4.6nm,0.9s,baz=5.9,slow=4.9,SNR=9.7
comp=Z,4.6nm,0.9s
MBAR Mbarara 50.63 234 LR LR 02 51 42.4
comp=Z,34nm,19.9s,baz=12,slow=37
EKA Eskdalemuir Ar 52.13 316 LR LR 02 53 27.6
comp=Z,49nm,18.1s,baz=66,slow=38
JMIC Jan Mayen 53.08 336 LR LR 02 51 46.5
comp=Z,46nm,18.0s,baz=69,slow=36
YSS Yuzh-Sakhalins 54.70 54 *e*P **P 02 29 40.2 +4.3**
YSS pmax pmax
comp=Z,20nm,0.9s
MJAR Matsushiro Arr 54.75 67 LR LR 02 53 07.9
comp=Z,61nm,21.6s,baz=298,slow=36
MA2 Magadan 56.19 37 LR LR 02 54 34.9
comp=Z,54nm,18.4s,baz=290,slow=37
TAM Tamanrasset 56.20 275 P **P 02 29 45.4 -1.9**
TAM Tamanrasset 56.20 275 P **P 02 29 45.4 -1.9**
TAM pmax pmax
comp=Z,2.0nm,0.7s
SEY Seymchan 56.21 33 ⇑*e*P **P 02 29 46.8 +0.2**
SEY pmax pmax
comp=Z,3.0nm,0.6s

ESDC Sonseca Array 56.72 298 P **P 02 29 51.7 +1.0**
comp=Z,1.6nm,0.8s,baz=60,slow=6.8,SNR=17
ESDC LR LR 02 58 57.8
comp=Z,12nm,19.6s,baz=64,slow=41
comp=Z,1.6nm,0.8s
BORG Borgarnes 58.90 330 LR LR 02 56 35.3
comp=Z,32nm,18.7s,baz=68,slow=37
BILL Bilibino 60.31 25 *i* P **P 02 30 15.0 -0.1**
BILL pmax pmax
comp=Z,14nm,1.6s
BILL MLR MLR
comp=Z,39nm,16.0s
PETK Petropavlovsk- 61.83 43 LR LR 02 58 15.2
comp=Z,51nm,18.1s,baz=287,slow=37
LSZ Lusaka 63.59 225 LR LR 02 58 45.2
comp=Z,34nm,19.8s,baz=33,slow=36
TORD Torodi Ar. Bea 64.23 268 P **P 02 30 43.8 +1.6**
comp=Z,2.9nm,0.7s,baz=54,slow=6.0,SNR=11
comp=Z,2.9nm,0.7s
SFJD Kangerlussuaq 68.33 338 LR LR 03 02 39.1
comp=Z,30nm,20.3s,baz=50,slow=37
TOLK Toolik Lake Re 72.43 14 P **P 02 31 32.0 -0.7**
TOLK IAmb IAmb 02 31 51.6
comp=Z,6.0nm,0.9s
H21K Melozitna Rive 74.23 17 P **P 02 31 42.9 -0.4**
BMAR Burnt Mountain 74.43 13 P **P 02 31 45.3 +0.8**
J20K Nowinta River 75.12 18 P **P 02 31 48.6 +0.2**
J20K IAmb IAmb 02 32 03.4
comp=Z,4.0nm,0.8s
INK Inuvik 75.30 9 P **P 02 31 49.3 -0.1**
INK IAmb IAmb 02 32 11.1
comp=Z,5.4nm,0.8s
INK Inuvik 75.30 9 P **P 02 31 49.3 -0.1**
INK pmax pmax
comp=Z,5.0nm,0.8s
FRB Frobisher Bay 75.75 342 LR LR 03 06 20.9
comp=Z,23nm,18.0s,baz=9.0,slow=37
MDM Murphy Dome 75.86 15 P **P 02 31 52.4 -0.3**
MDM IAmb IAmb 02 32 02.0
comp=Z,6.7nm,1.2s
NEA2 Nenana 75.98 16 P **P 02 31 52.4 -1.0**
NEA2 IAmb IAmb 02 32 09.8
comp=Z,8.5nm,1.3s
COLA College 76.01 15 ⇓*e*P **P 02 31 53.0 -0.5**
COLA pmax pmax
comp=Z,3.0nm,1.0s
CAST Castle Rocks 76.26 18 P **P 02 31 54.6 -0.5**
CAST IAmb IAmb 02 32 11.1
comp=Z,6.3nm,0.8s
ILAR Eielson Array 76.31 15 P **P 02 31 54.1 -1.2**
comp=Z,0.8nm,0.9s,baz=315,slow=4.9,SNR=7.5
ILAR LR LR 03 12 24.7
comp=Z,24nm,19.3s,baz=9.5,slow=41
comp=Z,0.8nm,0.9s
ILAR Eielson Array 76.31 15 P **P 02 31 53.8 -1.5**
J26L Joseph Creek 77.23 14 P **P 02 31 59.9 -0.7**
SCRK Sand Creek 77.61 14 P **P 02 32 02.9 +0.1**
DHY Denali Highway 77.68 16 P **P 02 32 04.1 +0.9**
DHY IAmb IAmb 02 32 10.8
comp=Z,3.2nm,0.6s
M27K Edge Creek, AK 79.49 14 P **P 02 32 13.6 +0.4**
M27K IAmb IAmb 02 32 31.5
comp=Z,9.1nm,1.2s
YKA Yellowknife Ar 82.48 2 P **P 02 32 29.8 +0.9**
comp=Z,1.4nm,0.8s,baz=350,slow=5.7,SNR=7.8
YKA LR LR 03 13 00.8
comp=Z,37nm,19.1s,baz=324,slow=38
comp=Z,1.4nm,0.8s
SCHQ Schefferville 82.60 336 P **P 02 32 34.0 +4.3**
comp=Z,2.2nm,0.8s,baz=27,slow=3.4,SNR=3.9
P33M Teslin, Yukon 83.11 11 P **P 02 32 32.2 -0.1**
P33M IAmb IAmb 02 32 46.6
comp=Z,6.0nm,1.1s
BBB Bella Bella 91.56 11 LR LR 03 18 33.1
comp=Z,29nm,19.2s,baz=237,slow=38
NEW Newport 96.60 4 LR LR 03 20 04.6
comp=Z,24nm,20.8s,baz=328,slow=37
TROLL Troll, Antarti 116.51 199 PKP **PKiKP 02 38 54.4 +4.8**
VNA2 Neumayer~Watz 118.76 201 PKP **PKiKP 02 38 58.2 +4.4**
baz=22,slow=3.3
VNA3 Neumayer Olymp 119.57 201 PKP PKiKP 02 39 04.7 +9.3

*IDC **04** 02:24:29.0±3.5, 8.°69S×124.°31E, h47km±37km, mb3.9/6, mbtmp4.4/9, ML4.6/3, MS3.2/8, Error ellipse: s-maj=47.8km s-min=19.6km az=66.0*
*DJA **04** 02:24:34.5±0.3, 9.°5S×12.°4E±.°, h98km±4km, M4.5/14, mb4.7/8, mB5.2/6, MLv4.4/14, Mw(mB)4.6/6*
*NEIC **04** 02:24:35.4±1.8, 9.06S±0.09×124.16E±0.09, h118km±7km, mb4.5/8, Error ellipse: s-maj=16.3km s-min=7.0km az=46.0*
ISC 04 02:24:34.7±0.7, **8.94S**±0.05×**124.28E**±0.05, **h108**km±7km, **n106**, σ2°**03**/109, **mb4.2**/10, **Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.81**	**181**	Pn		**Pn**	**Pn**	**02 24 54.8**	**+0.8**
SOEI				Sn		**Sn**	**Sn**	**02 25 08.6**	**+0.1**
BATI	**Baumata**	**1.39**	**206**	P		**Pn**	**Pn**	**02 25 01.5**	**+1.3**
	1μm,0.3s,baz=54,slow=1.6,SNR=203								
BATI				S		**Sn**	**Sn**	**02 25 19.4**	**0.0**
	2μm,0.4s,baz=94,slow=5.3,SNR=44								
BATI	**Baumata**	**1.39**	**206**	P		**Pn**	**Pn**	**02 25 00.7**	**+0.5**
BATI				S		**Sn**	**Sn**	**02 25 20.6**	**+1.1**
MMRI	**Maumere**	**2.04**	**278**	Pn		**Pn**	**Pn**	**02 25 08.2**	**+0.2**
MMRI				Sn		**Sn**	**Sn**	**02 25 33.2**	**-0.4**
MMRI	**Maumere**	**2.04**	**278**	P		**Pn**	**Pn**	**02 25 08.3**	**+0.2**
MMRI				S		**Sn**	**Sn**	**02 25 33.5**	**-0.1**
MMRI	**Maumere**	**2.04**	**278**	P		**Pn**	**Pn**	**02 25 08.5**	**+0.4**
EDFI	**Ende, Flores**	**2.56**	**274**	P		**Pn**	**Pn**	**02 25 15.1**	**+0.1**
BBSI	**Bau Bau**	**3.83**	**334**	P		**Pn**	**Pn**	**02 25 32.6**	**+0.8**
BASI	**Baing, Sumba**	**3.86**	**251**	P		**Pn**	**Pn**	**02 25 32.0**	**-0.2**
BSSI	**Bau Bau, Buton**	**4.67**	**306**	P		**Pn**	**Pn**	**02 25 43.7**	**+0.6**
WBSI	**Waikabubak, Su**	**4.87**	**261**	P		**Pn**	**Pn**	**02 25 44.5**	**-1.4**
BKSI	**Bulukumba**	**5.47**	**311**	P		**Pn**	**Pn**	**02 25 54.2**	**+0.3**
	0.3nm926nm68nm,0.6s								
KAPI	**Kappang**	**5.95**	**311**	P		**Pn**	**Pn**	**02 26 01.6**	**+1.2**
	12nm,0.5s,baz=154,slow=5.7,SNR=7.9								
KAPI				LR		LR	LR	02 28 30.9	
	comp=Z,65nm,19.8s,baz=102,slow=42								
KAPI	**Kappang**	**5.95**	**311**				**Pn**	**02 26 00.8**	**+0.4**
BNSI	**Bone**	**6.12**	**317**	P		**Pn**	**Pn**	**02 26 04.0**	**+1.2**
	0.1nm36nm,0.6s								
PLAI	**Plampang**	**6.42**	**271**	P		**Pn**	**Pn**	**02 26 06.1**	**-0.8**
	0.8nm3μm144nm,0.6s								
PLAI	**Plampang**	**6.42**	**271**	P		**Pn**	**Pn**	**02 26 06.9**	**0.0**
SPSI	**Sidrap Palu**	**6.67**	**318**	P		**Pn**	**Pn**	**02 26 11.0**	**+0.8**
	0.1nm17nm,0.8s								
TWSI	**Taliwang, Sumb**	**7.31**	**271**	P		**Pn**	**Pn**	**02 26 17.9**	**-1.0**
	0.3nm1μm36nm,0.4s								
MTN	**Manton Dam**	**7.77**	**121**	P		**Pn**	**Pn**	**02 26 24.8**	**-0.4**
	baz=7.7,SNR=28								
MTN				S		**Sn**	**Sn**	**02 27 46.2**	**-5.3**
	baz=7.7								
MTN	**Manton Dam**	**7.77**	**121**	Pn		**Pn**	**Pn**	**02 26 25.0**	**-0.1**
KNRA	**Kununurra**	**8.00**	**147**	P		**Pn**	**Pn**	**02 26 27.4**	**-0.8**
	baz=7.8,SNR=62								
KNRA				S		**Sn**	**Sn**	**02 27 50.8**	**-6.3**
	baz=7.8								
KNRA	**Kununurra**	**8.00**	**147**	Pn		**Pn**	**Pn**	**02 26 27.3**	**-0.9**
KNRA	**Kununurra**	**8.00**	**147**	P		**Pn**	**Pn**	**02 26 27.5**	**-0.8**
KDU	**Kakadu**	**8.87**	**116**	P		**Pn**	**Pn**	**02 26 38.8**	**-1.2**
	baz=8.8,SNR=52								
KDU	**Kakadu**	**8.87**	**116**	P		**Pn**	**Pn**	**02 26 39.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**9.20**	**172**	P		**Pn**	**Pn**	**02 26 42.4**	**-2.0**
	7.3nm,0.3s,baz=4.8,slow=9.5,SNR=348								
FITZ				S		**Sn**	**Sn**	**02 28 17.9**	**-8.3**
	116nm,0.5s,baz=102,slow=2.6,SNR=19								
FITZ				LR		LR	LR	02 30 25.1	
	comp=Z,54nm,19.6s,baz=342,slow=38								
	18nm,0.3s								
FITZ	**Fitzroy Crossi**	**9.20**	**172**	P		**Pn**	**Pn**	**02 26 42.1**	**-2.4**
	baz=9.0,SNR=117								
FITZ	**Fitzroy Crossi**	**9.20**	**172**	Pn		**Pn**	**Pn**	**02 26 42.6**	**-1.9**
FITZ	**Fitzroy Crossi**	**9.20**	**172**	P		**Pn**	**Pn**	**02 26 42.5**	**-2.0**
FAKI	**Fak Fak**	**9.93**	**53**	Pn		**Pn**	**Pn**	**02 26 55.5**	**+1.0**
JAGI	**Jajag, Banyuwa**	**10.02**	**272**	P		**Pn**	**Pn**	**02 26 51.8**	**-3.9**
MBWA	**Marble Bar**	**12.91**	**199**	Pn		Pn	**Pn**	02 27 29.3	-5.0
MBWA	**Marble Bar**	**12.91**	**199**	P		**Pn**	**Pn**	**02 27 35.7**	**+1.4**
PSA00	**Pilbara Seismi**	**13.26**	**198**	P		**Pn**	**Pn**	**02 27 40.0**	**+1.2**
UGM	**Wanagama**	**13.64**	**273**	Pn		**Pn**	**Pn**	**02 27 41.6**	**-2.3**
UGM	**Wanagama**	**13.64**	**273**	P		**Pn**	**Pn**	**02 27 45.4**	**+1.5**
WB0	**Warramunga Arr**	**14.55**	**139**	Pn		**Pn**	**Pn**	**02 27 52.6**	**-2.9**
WRA	**Warramunga Arr**	**14.64**	**139**	P		**Pn**	**Pn**	**02 27 53.8**	**-2.9**
	2.3nm,0.3s,baz=314,slow=14,SNR=52								
WRA				S		Sn		02 30 23.8	-14
	32nm,0.8s,baz=321,slow=23,SNR=23								
	4.2nm,0.5s								
WRA	**Warramunga Arr**	**14.64**	**139**	Pn		**Pn**	**Pn**	**02 27 53.4**	**-3.2**
WB2	**Warramunga Arr**	**14.65**	**139**	P		**Pn**	**Pn**	**02 27 54.3**	**-2.5**
	baz=14								
WB2	**Warramunga Arr**	**14.65**	**139**	Pn		**Pn**	**Pn**	**02 27 54.0**	**-2.7**
WR0	**Warramunga Arr**	**14.78**	**139**	Pn		**Pn**	**Pn**	**02 27 55.6**	**-2.8**
DAV	**Davao City (W)**	**15.96**	**5**	LR		LR		02 34 30.2	
	comp=Z,24nm,20.0s,baz=156,slow=38								
WRKA	**Warakurna**	**16.46**	**167**	P		**Pn**	**Pn**	**02 28 18.6**	**-0.7**
	baz=16,SNR=64								
WRKA	**Warakurna**	**16.46**	**167**	P		**Pn**	**Pn**	**02 28 18.8**	**-0.6**
AS31	**Alice Springs**	**17.30**	**149**	P		**Pn**	**Pn**	**02 28 28.9**	**-0.7**
AS31				IAmb		IAmb	IAmb	02 28 34.4	
	comp=Z,11nm,0.6s								
ASAR	**Alice Springs**	**17.30**	**149**	P		**Pn**	**Pn**	**02 28 29.3**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=323,slow=12,SNR=50								
ASAR				S		Sn		02 31 29.8	-13
	comp=Z,25nm,0.7s,baz=313,slow=16,SNR=20								
ASAR				LR		LR		02 34 51.1	
	comp=Z,90nm,19.1s,baz=342,slow=36								
	comp=Z,29nm,0.7s								
ASAR	**Alice Springs**	**17.30**	**149**				**Pn**	**02 28 28.5**	**-1.1**
CBJI	**Citeko**	**17.45**	**277**	P		**P**	**P**	**02 28 30.3**	**-0.8**
MEEK	**Meekatharra**	**18.40**	**196**	P		**P**	**Pn**	**02 28 42.8**	**0.0**
	baz=18,SNR=3.7								
MEEK	**Meekatharra**	**18.40**	**196**	P		**Pn**		**02 28 43.2**	**+0.3**
QIS	**Mount Isa**	**18.77**	**130**	P		**Pn**		**02 28 48.3**	**+1.0**
	baz=19,SNR=27								
QIS	**Mount Isa**	**18.77**	**130**	P		**Pn**		**02 28 48.3**	**+1.0**
COEN	**Coen**	**19.18**	**107**	P		**Pn**		**02 28 52.1**	**0.0**
	baz=19,SNR=14								
COEN	**Coen**	**19.18**	**107**	Pn		**Pn**		**02 28 52.3**	**+0.2**
COEN				IAmb		IAmb		02 29 12.1	
	comp=Z,34nm,1.3s								
COEN	**Coen**	**19.18**	**107**	P		**Pn**		**02 28 52.7**	**+0.6**
PMBI	**Palembang**	**20.29**	**286**	P		**P**		**02 28 60.0**	**-2.2**
MTSU	**Mount Surprise**	**21.50**	**117**	P		**P**		**02 29 17.7**	**+2.6**
	baz=21,SNR=5.9								
OOD	**Oodnadatta**	**21.62**	**152**	P		**P**		**02 29 19.0**	**+2.7**
FORT	**Forrest**	**22.01**	**171**	P		**P**		**02 29 21.5**	**+1.1**
	baz=22,SNR=11								
FORT	**Forrest**	**22.01**	**171**	P		**P**		**02 29 21.0**	**+0.7**
FORT	**Forrest**	**22.01**	**171**	P		**P**		**02 29 21.7**	**+1.4**
PMG	**Port Moresby**	**22.59**	**93**	LR		LR		02 39 20.6	
	comp=Z,87nm,18.3s,baz=283,slow=40								
BLDU	**Ballidu**	**22.69**	**197**	P		**P**		**02 29 27.9**	**+0.6**
	baz=23,SNR=9.4								
BLDU	**Ballidu**	**22.69**	**197**	P		**P**		**02 29 28.3**	**+1.0**
MULG	**Mulgathing**	**23.12**	**158**	P		**P**		**02 29 33.6**	**+2.1**
KLBR	**Kellerberrin**	**23.34**	**194**	P		**P**		**02 29 34.5**	**+1.0**
	comp=Z,28nm,0.9s								
CTA	**Charters Tower**	**23.95**	**120**	P		**P**		**02 29 42.0**	**+2.8**
	baz=24								
CTAO	**Charters Tower**	**23.95**	**120**	P		**P**		**02 29 39.8**	**+0.6**
CTAO				IAmb		IAmb		02 29 44.1	
	comp=Z,31nm,1.3s								
CTAO	**Charters Tower**	**23.95**	**120**	P		**P**		**02 29 43.2**	**+4.0**
	comp=Z,20nm,1.2s								
INKA	**Innaminka**	**24.32**	**142**	P		**P**		**02 29 45.0**	**+2.6**
LCRK	**Leigh Creek**	**25.05**	**151**	P		**P**		**02 29 51.0**	**+2.0**
BBOO	**Buckleboo**	**26.13**	**157**	P		**P**		**02 30 00.8**	**+1.9**
	baz=26,SNR=6.3								
BBOO	**Buckleboo**	**26.13**	**157**	P		**P**		**02 29 59.2**	**+0.4**
BBOO				IAmb		IAmb		02 30 18.8	
	comp=Z,36nm,1.4s								
BBOO	**Buckleboo**	**26.13**	**157**	P		**P**		**02 30 00.7**	**+1.9**
HTT	**Hallett**	**27.86**	**153**	P		**P**		**02 30 17.0**	**+2.6**
	baz=28,SNR=3.9								
HTT	**Hallett**	**27.86**	**153**	P		**P**		**02 30 17.3**	**+2.9**
STKA	**Stephens Creek**	**27.92**	**147**	P		**P**		**02 30 17.1**	**+2.3**
	comp=Z,3.5nm,0.8s,baz=322,slow=8.3,SNR=7.4								
STKA				LR		LR		02 43 16.1	
	comp=Z,111nm,21.4s,baz=195,slow=40								
	comp=Z,3.5nm,0.8s								
STKA	**Stephens Creek**	**27.92**	**147**	P		**P**		**02 30 17.3**	**+2.5**
	baz=28,SNR=5.4								
STKA	**Stephens Creek**	**27.92**	**147**	P		**P**		**02 30 18.1**	**+3.3**
CMSA	**Cobar Meteorol**	**30.03**	**141**	P		**P**		**02 30 36.9**	**+3.3**
	baz=30,SNR=12								
CMSA	**Cobar Meteorol**	**30.03**	**141**	P		**P**		**02 30 37.1**	**+3.5**
ARPS	**Mount Arapiles**	**31.96**	**153**	P		**P**		**02 30 53.7**	**+3.3**
	baz=32,SNR=6.2								
ARPS	**Mount Arapiles**	**31.96**	**153**	P		**P**		**02 30 53.2**	**+2.7**
	comp=Z,25nm,0.7s								
CMAR	**Chiang Mai Arr**	**36.96**	**318**	P		**P**		**02 31 33.9**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=136,slow=6.7,SNR=6.5								
	comp=Z,1.5nm,0.5s								
DZM	**Mont Dzumac**	**42.53**	**113**	LR		LR		02 51 07.2	
	comp=Z,40nm,18.8s,baz=66,slow=38								
MJAR	**Matsushiro Arr**	**47.10**	**15**	P		**P**		**02 32 55.1**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=182,slow=10,SNR=6.6								
	comp=Z,1.3nm,0.4s								
TAPN	**Taplejung**	**50.56**	**317**	*e*P		**P**		**02 33 23.1**	**+0.2**
	comp=Z,13nm,0.3s								
RAMN	**Ramite**	**51.07**	**315**	*e*P		**P**		**02 33 26.4**	**-0.3**
JIRN	**Jiri**	**51.80**	**316**	*e*P		**P**		**02 33 31.7**	**-0.5**
	comp=Z,9.8nm,0.5s								
PKI	**Pulchoki**	**52.28**	**315**	*e*P		**P**		**02 33 35.1**	**-0.7**
	comp=Z,9.2nm,0.2s								
PKIN	**Phulchoki**	**52.29**	**315**	*e*P		**P**		**02 33 35.1**	**-0.7**
	comp=Z,15nm,0.3s								
GKN	**Gorkha**	**53.09**	**315**	*e*P		**P**		**02 33 41.2**	**-0.3**
	comp=Z,9.2nm,0.3s								
SONM	**Songino Array**	**58.71**	**346**	P		**P**		**02 34 20.6**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=166,slow=9.7,SNR=4.5								
	comp=Z,0.8nm,0.7s								
MKAR	**Makanchi Array**	**66.90**	**330**	P		**P**		**02 35 14.8**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=132,slow=7.8,SNR=12								
	comp=Z,2.1nm,0.7s								
MKAR	**Makanchi Array**	**66.90**	**330**	P		**P**		**02 35 14.6**	**-0.9**
ZALV	**Zalesovo Beam**	**70.95**	**337**	P		**P**		**02 35 38.5**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=155,slow=4.9,SNR=5.7								
	comp=Z,1.6nm,0.6s								
ZALV	**Zalesovo Beam**	**70.95**	**337**	P		**P**		**02 35 38.6**	**-1.7**
KURBB	**Kurchatov Arra**	**71.33**	**331**	LR		LR		03 08 12.4	
	comp=Z,40nm,21.3s,baz=208,slow=37								
KURK	**Kurchatov**	**71.35**	**331**	P		**P**		**02 35 41.7**	**-1.1**
QSPA	**South Pole Qui**	**81.05**	**180**	P		**P**		**02 36 36.5**	**-1.1**
TROLL	**Troll, Antarti**	**90.85**	**195**	P		**P**		**02 37 28.8**	**+2.9**
SNAA	**Sanae**	**92.41**	**195**	P		**P**		**02 37 35.8**	**+2.7**
TORD	**Torodi Ar. Bea**	**123.58**	**280**	PKP		**PKPdf**		**02 43 21.5**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=35,slow=2.2,SNR=6.1								
CPUP	**Villa Florida**	**144.90**	**177**	PKPbc		**PKPdf**		**02 44 01.7**	**+1.7**
	comp=Z,2.5nm,0.6s,baz=189,slow=1.0,SNR=7.9								

*PRU **04** 03:11:43.6±0.0, 49.°83N×18.°51E, h0km, Mining Induced Event Csm, E=3.1e+06*
*IPEC **04** 03:11:43.2±0.2, 49.°84N×18.°58E, h1km±3km, ML2.8/6, Error ellipse: s-maj=1.5km s-min=1.0km az=166.0*
*BGR **04** 03:11:44.0±0.3, 49.°86N×18.°51E, h1km, ML3.0/7, Error ellipse: s-maj=6.7km s-min

LANS	**Liptovska Anna**	**0.92**	**139**	*e*PG	**Pb**	**03 12 01.1 -0.3**
LANS				*e*SG	**Sn**	**03 12 16.5 -0.2**
LANS				*e*LG	Lg	03 12 17.7
JAVC	**Velka Javorina**	**1.14**	**210**	*e*Pg	**Pn**	**03 12 05.5 -0.3**
	baz=31					
JAVC	**Velka Javorina**	**1.14**	**210**	*e*PG	**Pn**	**03 12 05.5 -0.3**
JAVC	**Velka Javorina**	**1.14**	**210**	*e*Pg	**Pn**	**03 12 06.3 +0.5**
KRLC	**Kraliky**	**1.16**	**282**	*e*PG	**Pg**	**03 12 04.9 +0.1**
KRLC				*e*SG	**Sb**	**03 12 20.6 -0.6**
	comp=Z,215nm,0.6s					
NIE	**Niedzica**	**1.22**	**110**	*e*Pg	**Pb**	**03 12 06.5 0.0**
NIE				*e*Sg	**Sn**	**03 12 24.8 +0.7**
NIE	**Niedzica**	**1.22**	**110**	*e*PG	**Pb**	**03 12 06.4 0.0**
NIE				*e*SG	**Sn**	**03 12 25.7 +1.6**
VRAC	**Vranov**	**1.38**	**248**	⇑P	**Pg**	**03 12 08.8 -0.1**
VRAC				⇓S	**Sn**	**03 12 27.7 -0.3**
VRAC	**Vranov**	**1.38**	**248**	*e*Pg	**Pb**	**03 12 09.2 +0.1**
	baz=67					
VRAC				*e*Sg	**Sg**	**03 12 26.7 0.0**
	169nm,0.5s,baz=67					
VRAC	**Vranov**	**1.38**	**248**	*e*PG	**Pb**	**03 12 09.3 +0.1**
VRAC				*e*SG	**Sg**	**03 12 26.8 0.0**
VRAC	**Vranov**	**1.38**	**248**	*e*Pg	**Pb**	**03 12 09.3 +0.1**
VRAC				*e*Sg	**Sn**	**03 12 28.8 +0.8**
DPC	**Dobruska-Polom**	**1.52**	**290**	*e*PG	**Pg**	**03 12 11.7 0.0**
DPC				*e*SG	**Sn**	**03 12 31.6 +0.1**
	comp=Z,105nm,0.3s					
DPC	**Dobruska-Polom**	**1.52**	**290**	*e*Pn	**Pb**	**03 12 11.4 -0.2**
DPC				*e*Pg	**Pg**	**03 12 11.9 +0.2**
DPC				*e*Sg	**Sn**	**03 12 31.8 +0.2**
KRUC	**Moravsky**	**1.60**	**242**	*e*Pg	**Pb**	**03 12 12.5 -0.5**
	baz=60					
KRUC				*e*Sg	**Sb**	**03 12 33.7 -0.2**
	102nm,0.5s,baz=60					
KRUC	**Moravsky**	**1.60**	**242**	*e*PG	**Pb**	**03 12 12.6 -0.5**
KRUC				*e*SG	**Sb**	**03 12 33.7 -0.2**
KRUC	**Moravsky**	**1.60**	**242**	*e*Pg	**Pb**	**03 12 12.7 -0.4**
KRUC				*e*Sg	**Sg**	**03 12 34.4 +0.4**
OSTC	**Ostas**	**1.66**	**296**	*e*PG	**Pg**	**03 12 14.4 +0.1**
OSTC				*e*SG	**Sg**	**03 12 36.0 +0.2**
	comp=Z,134nm,0.8s					
MODS	**Modra-Piesok**	**1.69**	**210**	*e*PG	**Pn**	**03 12 12.6 -0.7**
MODS				*e*SG	**Sn**	**03 12 34.9 -0.8**
MODS				*e*LG	Lg	03 12 36.8
KSP	**Ksiaz**	**1.76**	**306**	*e*Pg	**Pb**	**03 12 15.0 -0.6**
KSP				*e*Sg	**Sn**	**03 12 37.7 +0.4**
KSP	**Ksiaz**	**1.76**	**306**	*e*Pn	**Pb**	**03 12 15.1 -0.6**
KSP				*e*Pg	**Pg**	**03 12 18.1 +1.9**
KSP				*e*Sg	**Sg**	**03 12 39.0 0.0**
UPC	**Upice**	**1.76**	**293**	*e*PG	**Pb**	**03 12 15.8 +0.1**
UPC				*e*SG	**Sg**	**03 12 38.7 -0.4**
	comp=Z,74nm,0.4s					
CHVC	**Chvalec**	**1.77**	**296**	*e*PG	**Pg**	**03 12 16.2 -0.2**
CHVC				*e*SG	**Sg**	**03 12 39.1 -0.2**
KECS	**Kecovo**	**1.86**	**136**	*e*PN	**Pn**	**03 12 15.6 -0.1**
KECS				*e*SN	**Sn**	**03 12 40.0 +0.1**
ZST	**Bratislava**	**1.90**	**211**	*e*PG	**Pb**	**03 12 17.2 -0.9**
ZST				*e*SG	**Sb**	**03 12 41.4 -1.0**
TREC	**Trest**	**2.06**	**256**	*e*PG	**Pb**	**03 12 20.2 -0.7**
TREC				*e*SG	**Sg**	**03 12 48.1 -0.7**
	comp=Z,47nm,0.4s					
PSZ	**Piszkesteto**	**2.12**	**155**	⇑P	**Pn**	**03 12 19.4 +0.1**
PSZ				⇓S	**Sn**	**03 12 44.5 -1.9**
PSZ	**Piszkesteto**	**2.12**	**155**	P	**Pn**	**03 12 19.8 +0.5**
CRVS	**Cervenica-Dubn**	**2.13**	**115**	*e*PN	**Pg**	**03 12 23.0 -0.3**
EGYH	**Egyhazaskeszo**	**2.56**	**199**	S	**Sn**	**03 12 55.9 -1.1**
PRU	**Pruhonice**	**2.59**	**275**	*e*PG	**Pg**	**03 13 31.1 -1.1**
PRU				*e*SG	**Sg**	**03 13 04.9 -0.9**
	comp=Z,22nm,0.4s					
KOLS	**Kolonicke sedl**	**2.60**	**109**	*e*PG	**Pg**	**03 12 33.4 +1.0**
CONA	**Conrad Observa**	**2.61**	**224**	*i* Pn	**Pn**	**03 12 25.7 -0.3**
	3.7nm,0.3s,SNR=16					
CONA				*i* Sn	**Sn**	**03 12 55.9 -2.5**
	15nm,0.4s					
RONA	**Rosalia, Austr**	**2.61**	**216**	*e*Pn	**Pn**	**03 12 26.3 +0.3**
	1.8nm,0.1s,SNR=16					
RONA				*e*Sg	**Sn**	**03 12 58.1 -0.3**
	18nm,0.4s					
PVCC	**Panska Ves**	**2.65**	**287**	*e*PG	**Pb**	**03 12 31.7 +0.9**
PVCC				*e*SG	**Sg**	**03 13 07.6 +0.1**
	comp=Z,60nm,0.4s					
MPLH	**Magyarpolny**	**2.76**	**194**	P	**Pn**	**03 12 28.2 +0.2**
MPLH				S	**Sn**	**03 13 01.4 -0.5**
CKRC	**Cesky Krumlov**	**2.95**	**251**	*e*PG	**Pb**	**03 12 37.2 +1.2**
CKRC				*e*SG	**Sg**	**03 13 16.3 -1.1**
BRG	**Berggiesshubel**	**3.12**	**291**	Pg	**Pg**	**03 12 41.2 -1.2**
BRG				Sg	**Sg**	**03 13 21.6 -1.2**
BRG				Amp		03 13 25.2
	comp=Z,19nm,0.5s					
BRG	**Berggiesshubel**	**3.12**	**291**	*e*Pg	**Pg**	**03 12 41.2 -1.2**
BRG				*e*Sg	**Sg**	**03 13 21.7 -1.1**
ARSA	**Arzberg**	**3.28**	**219**	*i* Pn	**Pn**	**03 12 36.5 +1.3**
	comp=Z,2.0nm,0.3s					
ARSA				*e*Sg	**Sg**	**03 13 31.7 +3.9**
	comp=Z,8.0nm,0.6s					
KHC	**Kasperske Hory**	**3.31**	**260**	*e*PN	**Pn**	**03 12 37.0 +1.3**
KHC				*e*PG	**Pb**	**03 12 43.6 +1.4**
KHC				*e*SG	**Sg**	**03 13 27.4 -1.6**
	comp=Z,22nm,0.4s					
GEC2	**GERESS Array S**	**3.32**	**254**	*e*Sg	**Sg**	**03 13 26.5 -2.7**
MOA	**Molln**	**3.46**	**236**	*i* Pn	**Pn**	**03 12 37.6 0.0**
	comp=Z,0.7nm,0.1s					
MOA				*e*Sg	**Sg**	**03 13 32.7 -0.9**
	comp=Z,30nm,0.5s					
FBE	**Freiberg**	**3.49**	**290**	*e*Sg	**Sg**	**03 13 33.7 -1.0**
BEHE	**Becsehely**	**3.58**	**200**	S	**Sn**	**03 13 22.0 -0.2**
MORH	**Mrgy, Hungar**	**3.63**	**179**	⇑P	**Pn**	**03 12 39.9 0.0**
MORH				⇓S	**Sn**	**03 13 20.2 -3.2**
KOVH	**Kovagotottos**	**3.77**	**185**	P	**Pn**	**03 12 41.9 0.0**
KOVH				S	**Sn**	**03 13 23.6 -3.3**
CLL	**Collm**	**3.83**	**295**	*e*Pg	**Pg**	**03 12 56.0 +0.2**
CLL				*e*Sg	**Sg**	**03 13 44.0 -1.4**
	comp=Z,20nm,0.7s					
BIOA	**Bad Ischl, Aus**	**3.89**	**238**	Pn	**Pb**	**03 12 52.5 +0.4**
	comp=Z,2.7nm,0.3s					
BIOA				*e*Sg	**Sg**	**03 13 45.8 -1.8**
	comp=Z,34nm,0.5s					
SOKA	**Soboth**	**3.94**	**218**	*e*Pn	**Pn**	**03 12 45.6 +1.3**
	comp=Z,0.5nm,0.3s					
SOKA				*e*Sn	**Sn**	**03 13 34.3 +3.1**
	comp=Z,1.5nm,0.5s					
NKC	**Novy Kostel**	**3.95**	**278**	*e*PG	**Pb**	**03 12 55.0 +2.0**
NKC				*e*SG	**Sg**	**03 13 49.5 +0.1**
	comp=Z,20nm,0.7s					
WERD	**Werda**	**4.06**	**281**	*e*Sg	**Sg**	**03 13 50.3 -2.6**
DRGR		**4.13**	**136**	⇓P	**Pn**	**03 12 46.9 0.0**
DRGR				⇓S	**Sn**	**03 13 34.6 -1.3**
OBKA	**Obir**	**4.27**	**220**	*e*Pn	**Pn**	**03 12 50.4 +1.5**
	comp=Z,1.0nm,0.3s					
BZS	**Buzias**	**4.71**	**153**	⇑P	**Pn**	**03 12 54.1 -0.7**
BZS				⇓S	**Sn**	**03 13 49.1 -1.0**
MOTA	**Moosalm**	**5.53**	**246**	Pn	**Pg**	**03 13 30.1 +1.6**
	comp=Z,1.6nm,0.5s					
MOTA				*e*Sg	**Sg**	**03 14 45.6 +5.4**
	comp=Z,14nm,0.6s					
RETA	**Reutte**	**5.67**	**248**	*e*Sg	**Sg**	**03 14 46.6 +2.0**
	comp=Z,13nm,0.6s					
DAVA	**Damuels**	**6.29**	**249**	*e*Sg	**Sg**	**03 15 08.7 +4.1**
	comp=Z,12nm,0.6s					

NCEDC ***04*** *04:18:31.4±1.9,38.78N±0.01×122.76W±0.02,h-0km±7km, Md3.0/77,ML2.7/48(NEIC),Error ellipse: s-maj=2.6km s-min=1.7km az=69.0*

NEIC 04 04:18:31.9±1.3,38.77N±0.01×122.72W±0.02,h8km±1km, Error ellipse: s-maj=2.6km s-min=2.1km az=77.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCRM	**Castle Rock Sp**	**0.00**	**59**		Pg	04 18 32.1	-1.3
GBGM	**Boggs Mountain**	**0.05**	**36**		Pg	04 18 33.2	-0.5
GAXM	**Alexander Vall**	**0.07**	**206**		Pg	04 18 34.2	+0.4
GDXM	**Geysers**	**0.07**	**301**		Pg	04 18 32.4	-1.5
GDXM	**Geysers**	**0.07**	**301**	IAML		04 18 33.4	
	comp=N,46μm,0.2s						
GDXM				IAML		04 18 33.5	
	comp=E,48μm,0.6s						
GSGM	**Seigler Mounta**	**0.10**	**4**		Pg	04 18 34.1	-0.1
GRTM	**Round Top Moun**	**0.17**	**13**		Pg	04 18 35.4	-0.1
GPMM	**Pine Mountain**	**0.19**	**293**		Pg	04 18 35.3	-0.5
NMTM	**Middletown**	**0.21**	**81**		Pg	04 18 36.6	+0.4
MAC	**Mark West Spri**	**0.22**	**181**		Pg	04 18 36.4	+0.1
GCVM	**Cloverdale**	**0.23**	**270**		Pg	04 18 36.1	-0.4
MNRC	**McLaughlin Min**	**0.24**	**64**		Pg	04 18 37.5	+0.8
GSSM	**Skaggs Springs**	**0.24**	**253**		Pg	04 18 36.4	-0.3
HOPS	**Hopland Field**	**0.35**	**309**		Pg	04 18 38.6	-0.2
HOPS	**Hopland Field**	**0.35**	**309**	IAML		04 18 45.6	
	comp=E,881nm,0.8s						
HOPS				IAML		04 18 48.6	
	comp=N,716nm,1.4s						
FTR	**Fort Ross**	**0.43**	**234**		Pg	04 18 40.2	0.0
CVS	**Carmenet Viney**	**0.47**	**154**		Pg	04 18 41.2	+0.2
GTSM	**Trough Springs**	**0.55**	**9**		Pb	04 18 43.2	-0.6
GGUM	**Gualala**	**0.61**	**278**		Pg	04 18 43.8	0.0
SNT	**Sears Point**	**0.62**	**160**		Pg	04 18 44.0	0.0
GWRM	**Wonder Ranch**	**0.63**	**314**		Pg	04 18 43.6	-0.4
NGVM		**0.63**	**141**		Pb	04 18 45.2	+0.1
MCCM	**Marconi Confer**	**0.64**	**192**		Pg	04 18 44.6	+0.5
MCCM	**Marconi Confer**	**0.64**	**192**	IAML		04 18 56.3	
	comp=E,493nm,0.8s						
MCCM				IAML		04 18 56.8	
	comp=N,400nm,0.7s						
GHOM	**Hamilton Openi**	**0.70**	**293**		Pg	04 18 45.3	0.0
NOLM	**Olema**	**0.73**	**185**		Pg	04 18 46.2	+0.2
NPRM	**Point Reyes**	**0.81**	**197**		Pg	04 18 47.2	-0.2
OSUM	**Sutter Buttes**	**0.84**	**53**		Pb	04 18 48.6	-0.1
CPMM	**Point Molate**	**0.86**	**163**		Pb	04 18 49.0	-0.1
SUTB	**Sutter Butte**	**0.86**	**58**		Pg	04 18 48.1	-0.2
GASB	**Alder Springs**	**0.88**	**0**		Pb	04 18 49.7	+0.1
GTC	**Three Chop Rid**	**0.90**	**314**		Pb	04 18 49.6	-0.3
CTAM	**Taylor**	**0.93**	**143**		Pb	04 18 50.7	+0.5
VAK	**Adit at Lawren**	**0.97**	**157**		Pg	04 18 50.4	0.0
BL67	**Building 67, L**	**0.97**	**158**		Pb	04 18 50.8	-0.2
CVPM	**Vollmer Peak**	**0.97**	**156**		Pg	04 18 50.0	-0.4
BKS	**Berkeley--Byer**	**0.97**	**157**		Pg	04 18 50.4	-0.2
JPRM	**Presidio of Sa**	**0.99**	**169**		Pg	04 18 50.6	-0.3
CYBM	**Yerba Buena Is**	**1.00**	**164**		Pg	04 18 51.0	0.0
KFPM	**Farley Peak**	**1.02**	**328**		Pb	04 18 52.1	+0.2
FARB	**Farallon Islan**	**1.09**	**192**		Pg	04 18 51.8	-1.1
JSBM	**San Bruno Moun**	**1.12**	**167**		Pg	04 18 52.5	-0.9
KCPM	**Cahto Peak**	**1.13**	**324**		Pg	04 18 53.5	-0.1
KCPM	**Cahto Peak**	**1.13**	**324**	IAML		04 19 16.6	
	comp=N,122nm,0.8s						
KCPM				IAML		04 19 17.8	
	comp=E,168nm,1.2s						
CSLM	**San Leandro Hi**	**1.15**	**156**		Pb	04 18 54.1	+0.1
JMGM	**Milagra Ridge**	**1.15**	**170**		Pg	04 18 53.6	-0.3
PAM	**Palermo**	**1.15**	**54**		Pg	04 18 52.7	-1.3
CLCB	**Lake Chabot**	**1.15**	**153**		Pg	04 18 53.3	-0.7
ORV	**Oroville**	**1.23**	**50**		Pb	04 18 54.5	-0.9
CVLM	**Vallecito**	**1.34**	**148**		Pn	04 18 56.5	-0.4
JHPM	**Huddart Park**	**1.37**	**166**		Pn	04 18 56.1	-1.2
WENL	**Wente Vineyard**	**1.38**	**146**		Pb	04 18 57.7	-0.2
JRSC	**Jasper Ridge**	**1.42**	**164**		Pn	04 18 56.3	-1.6
CALM	**Calaveras Res.**	**1.50**	**151**		Pn	04 18 57.9	-1.3
KMRM	**Mail Ridge**	**1.64**	**332**		Pn	04 19 00.7	-0.4
KMRM				IAML		04 19 39.3	
	comp=N,76nm,4.0s						
KMRM				IAML		04 19 43.9	
	comp=E,76nm,3.3s						
CCOB	**Coe Ranch Numb**	**1.72**	**151**		Pn	04 19 02.2	+0.1
AMC	**Almaden**	**1.75**	**157**		Pn	04 19 01.1	-1.5
MCUB	**Copperopolis B**	**1.83**	**115**		Pn	04 19 03.5	-0.2
GHS	**Gilroy Hot Spr**	**1.95**	**149**		Pn	04 19 04.5	-0.9
DONR	**Donner Summit**	**1.95**	**72**		Pn	04 19 06.2	+0.6
CMB	**Columbia Colle**	**1.97**	**111**		Pn	04 19 05.6	-0.1
TNK	**Tinkers Knob**	**2.00**	**75**		Pn	04 19 07.1	+0.9
EMB	**Emerald Bay**	**2.05**	**84**		Pn	04 19 07.8	+0.9
EMB	**Emerald Bay**	**2.05**	**84**	IAML		04 19 37.0	
	comp=E,80nm,0.8s						
EMB				IAML		04 19 44.3	
	comp=N,76nm,0.7s						
KBF	**Kyburz Flat**	**2.08**	**69**		Pn	04 19 07.1	-0.3
LOY	**Loyalton**	**2.12**	**65**		Pn	04 19 08.6	+0.8
BEKR	**Beckworth**	**2.13**	**58**		Pn	04 19 08.9	+0.9
MPK	**Martis Peak**	**2.16**	**75**		Pn	04 19 08.2	-0.3
VCNR	**Virginia City**	**2.45**	**77**		Pn	04 19 11.9	-0.4
VCNR				IAML		04 20 00.3	
	comp=N,30nm,0.8s						
PNTR	**Pine Nut**	**2.45**	**82**		Pn	04 19 13.3	+0.9
PNTR				IAML		04 20 05.3	
	comp=N,55nm,0.9s						
BJCM	**Johnson Can.**	**2.46**	**154**		Pn	04 19 10.6	-1.7
YERR	**Yerington**	**2.72**	**84**		Pn	04 19 16.6	+0.5
YERR				IAML		04 20 01.9	
	comp=N,24nm,0.5s						
PAHR	**Pah Rah Range**	**2.75**	**69**		Pn	04 19 16.6	+0.1
MDPB	**Devils Postpil**	**3.08**	**111**		Pn	04 19 22.4	+1.2
MDPB				IAML		04 20 07.1	
	comp=E,26nm,0.7s						
MDPB				IAML		04 20 09.3	
	comp=N,26nm,1.0s						
RYN	**Ryan**	**3.29**	**91**		Pn	04 19 24.3	+0.5
RYN				IAML		04 20 21.4	
	comp=E,17nm,1.2s						
LHV	**Little Huntoon**	**3.35**	**98**	Pn	Pn	04 19 25.6	+1.1
LHV				IAML		04 20 31.8	
	comp=N,23nm,1.2s						
NVAR	**Mina Array Bea**	**3.48**	**94**		Pn	04 19 26.9	+0.4
NV11	**Mina Array Sit**	**3.59**	**94**		Pn	04 19 28.3	+0.3
NV11				IAML		04 20 28.2	
	comp=N,8.9nm,1.4s						
NV11				IAML		04 20 29.3	
	comp=E,10nm,1.3s						
KVN	**Kaiserville**	**3.61**	**84**		Pn	04 19 28.6	+0.3
LCH	**Last Change Ra**	**4.29**	**109**	Pn	Pn	04 19 37.6	0.0
LCH				IAML		04 20 55.5	
	comp=E,9.4nm,2.7s						
LCH				IAML		04 21 09.9	
	comp=N,7.2nm,4.8s						
TPH	**Tonopah**	**4.37**	**97**	Pn	Pn	04 19 38.2	-0.6
GRAC	**Grapevine Rang**	**4.59**	**111**	Pn	Pn	04 19 41.3	-0.4

NEIC ***04*** *04:55:34.8,40.16N×120.21W,h16km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.59; Mθθ-5.95; Mφφ5.35; Mrθ-0.03; Mθφ-1.28; Mφr0.48; Fault plane solution: M0 5.84000×10^15^ NP1:φs308.50000°, δ85.97000°,λ176.20000°. NP2:φs38.76000°,δ86.21000°, λ4.04000°. Principal axes: T 5.5423, Plg6.0000°, Azm264.0000°; N 0.5478, Plg84.0000°, Azm82.0000°; P -6.0902, Plg0.0000°, Azm174.0000°;*

NEIC ***04*** *04:55:34.4,40.15N×120.21W,h14km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.18; Mθθ-6.54; Mφφ6.36; Mrθ-0.06; Mθφ-1.04; Mφr1.07; Fault plane solution: M0 6.62000×10^15^ NP1:φs310.02000°, δ83.18000°,λ173.47000°. NP2:φs40.80000°,δ83.51000°, λ6.86000°. Principal axes: T 6.6179, Plg9.0000°, Azm265.0000°; N 0.0029, Plg81.0000°, Azm84.0000°; P -6.6208, Plg0.0000°, Azm175.0000°;*

REN ***04*** *04:55:34.5±1.8,40.16N±0.02×120.21W±0.03,h16km±4km Error ellipse: s-maj=3.6km s-min=3.2km az=195.0*

IDC ***04*** *04:55:35.0±0.6,40.23N×120.13W,h0km,mb4.0/4, mbtmp4.0/13,ML3.9/9,MS3.5/27,Error ellipse: s-maj=9.1km s-min=4.9km az=51.0*

NEIC ***04*** *04:55:35.3±1.6,40.16N±0.02×120.19W±0.03,h12km±4km, Error ellipse: s-maj=3.3km s-min=2.3km az=107.0*

NEIC ***04*** *04:55:35,40.15N×120.21W,h14km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.19; Mθθ-4.79; Mφφ4.60; Mrθ-0.45; Mθφ-1.15; Mφr0.90; Fault plane solution: M0 4.94000×10^15^ NP1:φs308.00000°, δ85.00000°,λ169.00000°. NP2:φs39.00000°,δ79.00000°, λ5.00000°. Principal axes: T 4.9287, Plg11.0000°, Azm263.0000°; N 0.0229, Plg78.0000°, Azm102.0000°; P -4.9515, Plg4.0000°, Azm353.0000°;*

NCEDC ***04*** *04:55:35.0±1.0,40.15N±0.02×120.21W±0.01,h7km±6km, Mwr4.5/6,mb4.5/72(NEIC),ML4.6/101(NEIC), Mwr4.4/125(NEIC),Mwr4.4(REN),Mww4.5(NEIC) Error ellipse: s-maj=2.4km s-min=0.9km az=207.0*

ANF ***04*** *04:55:36.9±1.5,40.14N×120.29W,h15km±11km,ML4.9/28, Error ellipse: s-maj=2.7km s-min=1.1km az=60.0*

NEIC ***04*** *04:55:38,40.08N×120.29W,h16km,Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^15^Nm; Mrr0.06; Mθθ-6.64; Mφφ6.58; Mrθ-1.37; Mθφ-1.22; Mφr-0.79; Fault plane solution: M0 6.91000×10^15^ NP1: φs130.00000°,δ78.00000°,λ-175.00000°. NP2: φs39.00000°,δ86.00000°,λ-12.00000°. Principal axes: T 6.7595, Plg6.0000°, Azm85.0000°; N 0.2832, Plg77.0000°, Azm202.0000°; P -7.0427, Plg12.0000°, Azm354.0000°;*

ISC 04 04:55:34.1±1.1,40.21N±0.02×120.23W±0.02,h2km±8km, n375,σ1s48/330,mb4.5/31,MS3.6/20,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMRR	**Black Mountain**	**0.12**	**205**		Pg	**04 55 37.8**	**+1.4**
BEKR	**Beckworth**	**0.36**	**196**		Pg	**04 55 41.2**	**+0.2**
BEKR				Sg	**Sg**	**04 55 45.4**	**-0.4**
BEKR				IAML		04 55 46.2	
	comp=N,116μm,0.4s						
WVA	**Winnemucca Val**	**0.41**	**131**		Pg	**04 55 42.4**	**+0.4**
WVA					Sg	**04 55 47.8**	**+0.5**
LOY	**Loyalton**	**0.55**	**181**		Pg	**04 55 44.5**	**-0.2**
BABR	**Babbit Peak**	**0.62**	**171**		Pg	**04 55 45.9**	**-0.1**
PEAR	**Peavine Mounta**	**0.64**	**161**		Pg	**04 55 46.2**	**-0.2**
PEAR					Sg	**04 55 54.5**	**-0.1**
KBF	**Kyburz Flat**	**0.71**	**179**		Pg	**04 55 47.3**	**-0.4**
VPK	**Verdi Peak**	**0.75**	**169**		Pg	**04 55 48.4**	**-0.2**
PLTX	**Planet X, Gerl**	**0.76**	**49**		Pb	**04 55 49.9**	**-0.2**
PLTX					Sb	**04 56 00.1**	**-0.9**
PLTX				IAML		04 56 04.9	
	comp=E,279μm,0.8s						
PLTX				IAML		04 56 05.2	
	comp=N,245μm,0.8s						
IND	**Independence**	**0.78**	**184**		Pg	**04 55 48.3**	**-0.7**
PAHR	**Pah Rah Range**	**0.82**	**128**		Pg	**04 55 49.6**	**-0.3**
PAHR					Sg	**04 55 59.9**	**-0.6**
PAHR				IAML		04 56 04.0	
	comp=E,25μm,0.4s						
DONR	**Donner Summit**	**0.86**	**185**		Pg	**04 55 50.0**	**-0.7**
DONR					Sg	**04 56 01.1**	**-0.8**
MPK	**Martis Peak**	**0.93**	**170**		Pg	**04 55 51.0**	**-0.9**
MPK				IAML		04 56 06.0	
	comp=E,22μm,0.3s						
MPK				IAML		04 56 12.6	
	comp=N,22μm,0.8s						
TNK	**Tinkers Knob**	**0.94**	**180**		Pg	**04 55 51.7**	**-0.6**
LRDM	**Redding Peak**	**0.97**	**285**		Pb	**04 55 53.7**	**0.0**
LCMM	**Colby Mountain**	**0.99**	**267**		Pb	**04 55 53.9**	**-0.3**
VCNR	**Virginia City**	**1.02**	**154**		Pg	**04 55 53.2**	**-0.5**
VCNR	**Virginia City**	**1.02**	**154**		Sg	**04 56 05.7**	**-1.2**
LMEM	**Manzanita Entr**	**1.07**	**288**		Pn	**04 55 55.7**	**-0.6**
HATC	**Hat Creek Radi**	**1.12**	**303**		Pn	**04 55 56.5**	**-0.3**
ORV	**Oroville**	**1.18**	**237**		Pb	**04 55 56.3**	**-0.8**
ORV					Sb	**04 56 11.4**	**-1.5**
ORV	**Oroville**	**1.18**	**237**	IAML		04 56 14.4	
	comp=N,15μm,0.8s						
ORV				IAML		04 56 14.4	
	comp=E,10μm,1.1s						
OGOM	**Van Goodin Ran**	**1.20**	**243**		Pn	**04 55 56.9**	**-1.0**
PNTR	**Pine Nut**	**1.22**	**156**		Pb	**04 55 56.9**	**-1.1**
PNTR	**Pine Nut**	**1.22**	**156**		Sb	**04 56 12.6**	**-1.7**
OWYM	**Wyandotte**	**1.23**	**232**		Pn	**04 55 56.8**	**-1.5**
EMB	**Emerald Bay**	**1.24**	**175**		Pn	**04 55 56.8**	**-1.8**
EMB	**Emerald Bay**	**1.24**	**175**		Sb	**04 56 13.3**	**-1.5**
EMB				IAML		04 56 14.9	
	comp=N,11μm,0.5s						
EMB				IAML		04 56 15.6	
	comp=E,9μm,0.9s						
PAM	**Palermo**	**1.25**	**233**		Pn	**04 55 57.5**	**-1.1**
OHCM	**Honcut**	**1.31**	**228**		Pn	**04 55 57.7**	**-1.6**
LTIM	**Timbered Crate**	**1.36**	**315**		Pg	**04 56 00.6**	**+0.5**
YERR	**Yerington**	**1.44**	**148**		Pn	**04 55 60.0**	**-1.4**
YERR					Sn	**04 56 17.6**	**-3.4**
LTCM	**Tuscan Springs**	**1.45**	**270**		Pn	**04 56 01.0**	**-0.3**
SUTB	**Sutter Butte**	**1.55**	**231**		Pn	**04 56 02.5**	**-0.2**
OSUM	**Sutter Buttes**	**1.57**	**234**		Pb	**04 56 03.2**	**-0.6**
MOD	**Modoc Plateau**	**1.69**	**358**		Pb	**04 56 05.0**	**-0.9**
MOD	**Modoc Plateau**	**1.69**	**358**	IAML		04 56 33.4	
	comp=N,6μm,0.7s						
MOD				IAML		04 56 37.5	
	comp=E,7μm,0.7s						
LBFM	**Black Fox Moun**	**1.70**	**312**		Pb	**04 56 05.5**	**-0.7**
LMHM	**Little Mount H**	**1.74**	**322**		Pb	**04 56 06.4**	**-0.6**
M03C	**McCloud**	**1.79**	**307**		Pb	**04 56 06.8**	**-0.8**
GFC	**Funks Creek**	**1.82**	**242**		Pn	**04 56 06.4**	**0.0**
GCK	**Clark Valley**	**1.83**	**249**		Pn	**04 56 06.6**	**+0.1**
LGMM	**Garner Mountai**	**1.84**	**319**		Pb	**04 56 07.8**	**-0.8**
GROM	**Round Mountain**	**1.90**	**262**		Pn	**04 56 07.1**	**-0.5**
GVV	**Valley View**	**1.93**	**258**		Pn	**04 56 07.5**	**-0.6**
LMPM	**Military Pass**	**1.94**	**312**		Pb	**04 56 10.7**	**+0.4**
NDHM	**Dunnigan Hills**	**1.95**	**223**		Pn	**04 56 08.4**	**+0.3**
GASB	**Alder Springs**	**1.99**	**255**		Pn	**04 56 08.2**	**-0.7**
KVN	**Kaiserville**	**2.01**	**125**		Pn	**04 56 08.0**	**-1.2**
KVN	**Kaiserville**	**2.01**	**125**	IAML		04 56 39.7	
	comp=E,6μm,0.7s						
LKVW	**Lakeview

L04D Sb Sg 04 56 56.3 +0.5
baz=142
CVS Carmenet Viney 2.54 224 Pn 04 56 16.0 -0.4
MAC Mark West Spri 2.55 230 Pn 04 56 16.1 -0.3
K05A Summer Lake 2.56 349 Pb 04 56 18.3 -2.6
K05A Summer Lake 2.56 349 IAML 04 57 07.5
comp=N,2µm,1.3s
GWRM Wonder Ranch 2.57 248 Pn 04 56 17.0 +0.2
GCVM Cloverdale 2.59 237 Pn 04 56 16.6 -0.4
NTYM Taylor 2.62 227 Pn 04 56 17.3 -0.1
KCPM Cahto Peak 2.63 260 Pn 04 56 18.1 +0.4
KCPM Cahto Peak 2.63 260 IAML 04 56 36.8
comp=E,2µm,0.6s
CBSNC Byron Hot Spri 2.63 205 Pn 04 56 17.8 +0.2
NBRB Beebe Ranch Br 2.66 224 Pn 04 56 17.4 -0.5
KMRM Mail Ridge 2.67 271 Pn 04 56 18.5 +0.4
KMRM Mail Ridge 2.67 271 IAML 04 57 10.6
comp=E,2µm,0.8s
KMRM IAML 04 57 15.9
comp=N,1µm,1.0s
MDCM Deadman Creek 2.67 159 Pn 04 56 18.3 0.0
SNT Sears Point 2.67 221 Pn 04 56 17.7 -0.3
K04D Chiloquin, OR 2.67 335 P Pn 04 56 19.6 +1.4
baz=154,SNR=348
K04D Sb Sg 04 57 00.8 +0.9
baz=154
GTC Three Chop Rid 2.69 253 Pn 04 56 18.2 -0.2
CMOB Morgan Territo 2.69 208 Pn 04 56 18.5 0.0
MDYM Dry Creek 2.72 159 Pn 04 56 19.4 +0.3
MDPB Devils Postpil 2.73 160 Pn 04 56 19.2 +0.1
Q09A Carvers 2.73 119 Pn 04 56 18.9 -0.2
MMLB Mammoth Lakes 2.73 159 Pn 04 56 19.6 +0.4
MEMM East Mammoth H 2.73 158 Pn 04 56 19.5 +0.3
MLIM Lincoln Peak 2.74 159 Pn 04 56 19.9 +0.5
MMSM Mammoth Summit 2.74 160 Pn 04 56 19.6 +0.2
KHMM Horse Mountain 2.75 285 Pn Pb 04 56 21.3 -2.8
KHMM IAML 04 57 12.7
comp=N,2µm,1.1s
MCBM Casa Benchmark 2.77 158 Pn 04 56 20.0 +0.3
MLAC Mammoth, Mammo 2.80 157 P Pn 04 56 20.6 +0.5
baz=337
BENR Benton 2.81 152 Pn 04 56 17.4 -2.8
WENL Wente Vineyard 2.85 205 Pn 04 56 20.3 -0.3
ORC Owens River 2.85 154 Pn 04 56 20.3 -0.6
MCCM Marconi Confer 2.92 226 Pn Pn 04 56 21.4 -0.1
MCCM IAML 04 57 02.9
comp=E,2µm,0.9s
MCCM IAML 04 57 04.3
comp=N,2µm,0.9s
RCCR Rock Creek Can 2.96 156 Pn 04 56 20.8 -1.7
KCC Kaiser Creek 2.97 166 Pn 04 56 22.6 +0.3
MLNR Milner Canyon 3.00 150 Pn 04 56 20.9 -1.9
KRPM Rodgers 3.04 289 Pn Pn 04 56 23.9 +0.7
HUMO Hull Mountain 3.15 320 Pn Pn 04 56 26.6 +1.9
J05D Fort Rock, OR 3.16 347 P Pn 04 56 27.3 +2.3
baz=166,SNR=1000
J05D Sb Sg 04 57 15.8 +0.1
baz=166
L02F Cave Junction 3.16 308 P Pn 04 56 27.3 +2.4
baz=127
TPH Tonopah 3.17 131 Pn 04 56 23.5 -1.6
J04D Umpqua Nationa 3.34 336 P Pn 04 56 29.7 +2.2
baz=155,SNR=400
J04D Sb Sg 04 57 20.3 -1.0
baz=155
DSP Deep Springs 3.34 147 Pn 04 56 27.4 +0.1
J08A Circle Bar Ran 3.41 22 Pn 04 56 29.2 +0.9
TIN Tinemaha, Big 3.52 153 P Pn 04 56 30.5 +0.6
baz=334
SAO San Andreas Ge 3.57 196 Pn 04 56 30.2 -0.3
K02D Willamette Mer 3.58 315 P Pn 04 56 33.2 +2.5
baz=133,SNR=11
K02D Sb Sg 04 57 26.1 -3.0
baz=133
LCH Last Change Ra 3.60 145 Pn 04 56 31.2 +0.2
BBGB Big Mountain B 3.69 190 Pn 04 56 31.6 -0.6
ELK Elko 3.84 80 Pn Pn 04 56 34.3 -0.1
comp=N,21nm,0.3s,baz=264,slow=17,SNR=379
ELK Pg Pb 04 56 42.6 -0.1
comp=N,42nm,0.3s,baz=267,slow=17,SNR=28
ELK Lg Lg 04 57 34.3
comp=N,90nm,0.3s,baz=197,slow=21,SNR=11
ELK LR LR 04 58 08.2
comp=N,487nm,21.8s,baz=182,slow=41
comp=N,44nm,0.3s
ELK Elko 3.84 80 Pn 04 56 33.4 -1.1
I07A Izee 3.90 8 Pn 04 56 38.0 +2.9
GRAC Grapevine Rang 3.92 144 IAML 04 57 49.3
comp=E,982nm,1.1s
GRAC IAML 04 57 56.6
comp=N,1µm,1.2s
GRAC Grapevine Rang 3.92 144 P Pn 04 56 35.9 +0.6
baz=326
GRAC Sb Sb 04 57 35.2 +3.5
baz=326
I04A Tendick Farm, 3.93 336 P Pn 04 56 37.2 +1.8
baz=155,SNR=17
I04A Sb Sg 04 57 38.1 -2.2
baz=155
VOG Valley Oaks Go 3.94 170 P Pn 04 56 36.0 +0.4
baz=351
J01E Myrtle Point 4.05 318 IAML 04 57 57.5
comp=E,809nm,1.3s
J01E Myrtle Point 4.05 318 Pb Pb 04 56 47.1 +1.1
baz=136
R11A Troy Canyon, C 4.05 116 Pn 04 56 37.3 0.0
R11A Troy Canyon, C 4.05 116 IAML 04 57 42.5
comp=E,581nm,1.0s
R11A IAML 04 57 45.5
comp=N,654nm,1.3s
R11A Troy Canyon, C 4.05 116 P Pn 04 56 37.3 0.0
baz=298
R11A Sb Sg 04 57 40.6 -3.8
baz=298
CWC Cottonwood Cre 4.13 155 P Pn 04 56 39.0 +0.7
baz=336
I03D Drain, OR 4.19 327 P Pn 04 56 42.0 +3.1
baz=146,SNR=8.2
I03D Sb Sg 04 57 45.5 -3.1
baz=146
I05D Terrebonne, OR 4.20 349 P Pn 04 56 41.6 +2.4
baz=168,SNR=20
VES Vestal, Richgr 4.46 168 P Pn 04 56 43.1 +0.5
baz=349
VES Sb Sb 04 57 49.3 +2.1
baz=349
BUCK Buck Mountain 4.48 334 IAML 04 58 07.8
comp=N,443nm,1.2s
BUCK IAML 04 58 08.6
comp=E,524nm,1.2s
TPNV Topopah Spring 4.51 135 IAML 04 58 02.9
comp=E,812nm,1.1s
TPNV Topopah Spring 4.51 135 P Pn 04 56 44.0 +0.4
baz=317
FURC Furnace Creek, 4.58 144 P Pn 04 56 44.9 +0.6
baz=326
MFID Camas Ranch 4.59 44 Pn Pn 04 56 44.5 0.0
MPMC Manual Prospec 4.68 152 P Pn 04 56 46.2 +0.3
baz=333
H04D Lebanon 4.69 337 IAML 04 58 12.7
comp=E,391nm,1.7s
H04D IAML 04 58 22.0
comp=N,494nm,1.1s
H04D Lebanon 4.69 337 P Pn 04 56 48.9 +3.1
baz=156,SNR=11
H04A Detroit Lake 4.70 343 Pn Pn 04 56 49.5 +3.5
SPR3 Spring Creek 3 4.71 103 Pn Pn 04 56 47.5 +1.0
I02E Swisshome, OR 4.73 327 IAML 04 58 11.4
comp=N,375nm,2.1s
I02E Swisshome, OR 4.73 327 P Pn 04 56 48.6 +2.2
baz=144,SNR=6.2
ISA Isabella, Lake 4.75 162 IAML 04 58 12.4
comp=N,568nm,0.8s
ISA Isabella, Lake 4.75 162 P Pn 04 56 48.5 +1.7
baz=344
SMMC Simmler 4.89 178 P Pn 04 56 49.8 +1.1
baz=358
SMMC Sb Sb 04 58 02.4 +2.6
baz=358
COR Corvallis 4.93 333 Pn 04 56 49.9 +0.8
COR IAML 04 58 30.1
comp=N,327nm,1.4s
G05D Wamic, OR 5.09 351 P Pn 04 56 55.2 +3.8
baz=171,SNR=15
LRMC Laurel Mtn Rad 5.14 156 P Pn 04 56 54.0 +1.8
baz=338

ARVC Arvin 5.20 167 P Pn 04 56 53.8 +0.9
baz=348
ARVC Sb Sb 04 58 12.8 +4.3
baz=348
PKM Mcpherson Peak 5.33 176 P Pn 04 56 56.6 +1.8
baz=357
PKM Sb Sb 04 58 15.0 +2.6
baz=357
SHPR Sheep Range 5.44 131 Pn Pn 04 56 57.1 +0.8
G03D McMinnville, O 5.47 337 P Pn 04 56 59.5 +2.9
baz=155,SNR=19
HLID Hailey 5.48 50 Pn Pn 04 56 57.2 +0.4
HLID Hailey 5.48 50 Pn Pn 04 56 58.6 +1.8
baz=234
GSC Goldstone, Bar 5.60 150 P Pn 04 56 59.0 +0.5
baz=332
EDW2 Edwards Air Fo 5.61 161 P Pn 04 57 00.1 +1.5
baz=342
DUG Dugway, Tooele 5.68 88 P Pn 04 57 00.8 +1.2
baz=272
SBC Santa Barbara 5.78 176 Sb Sb 04 58 27.8 +2.6
baz=356
HVU Hansel Valley 5.85 72 Pn Pn 04 57 01.3 -0.6
TUQ Turquoise Moun 5.86 143 P Pn 04 57 02.6 +0.5
baz=326
RRX Edison Barstow 5.91 153 P Pn 04 57 05.0 +2.3
baz=335
DECC Green Verdugo 6.14 165 P Pn 04 57 06.5 +0.7
baz=346
HEC Hector,Ludlow 6.20 149 P Pn 04 57 07.3 +0.6
baz=331
F04D Rainier, OR 6.21 342 P Pn 04 57 10.0 +3.3
baz=160
BFSC Mount Baldy Ra 6.31 160 P Pn 04 57 09.7 +1.5
baz=342
BBRC Big Bear Solar 6.50 155 P Pn 04 57 13.5 +2.6
baz=337
GMRC Granite Mounta 6.52 145 P Pn 04 57 11.9 +0.7
baz=327
MPU Maple Canyon 6.59 89 Pn 04 57 11.8 -0.3
CIS Catalina Islan 6.95 167 P Pn 04 57 16.6 -0.4
baz=348
SNCC San Nicolas Is 6.97 175 P Pn 04 57 17.5 +0.2
baz=356
MURC Murrieta 7.03 159 P Pn 04 57 19.3 +1.2
baz=341
BELC Belle Mtn. Jos 7.06 150 P Pn 04 57 19.7 +1.1
baz=333
PFO Pinyon Flats O 7.25 154 Pn Pn 04 57 24.1 +3.0
comp=N,1.3nm,0.3s,baz=331,slow=9.5,SNR=21
PFO Lg Lg 04 59 24.9
comp=N,1.8nm,0.3s,baz=131,slow=12,SNR=4.2
PFO LR LR 05 00 39.2
comp=N,498nm,18.3s,baz=335,slow=42
comp=N,15nm,0.8s
PFO Pinyon Flats O 7.25 154 P Pn 04 57 22.9 +1.8
baz=336
TPFO Pinon Flats 7.25 154 P Pn 04 57 22.9 +1.7
baz=336
IRM Iron Mountain 7.28 145 P Pn 04 57 22.1 +0.6
baz=328
BC3 Big Chuckawall 7.58 148 P Pn 04 57 25.6 0.0
baz=331
PDMCI Parker Dam,Lak 7.64 139 P Pn 04 57 27.8 +1.5
baz=322
109C Camp Elliot, M 7.73 160 P Pn 04 57 28.2 +0.6
baz=342
MONP2 Monument Peak 7.92 156 P Pn 04 57 31.5 +1.1
baz=338
MSO Missoula 8.04 33 P Pn 04 57 34.6 +2.8
baz=216
SWSC Sam W. Stewart 8.08 152 P Pn 04 57 33.9 +1.5
baz=335
NEW Newport 8.35 14 Pn Pn 04 57 39.3 +3.2
comp=N,0.5nm,0.3s,baz=190,slow=13,SNR=34
comp=N,12nm,0.8s
NEW Newport 8.35 14 P Pn 04 57 39.5 +3.4
baz=196
BW06 Boulder Array 8.40 69 P Pn 04 57 39.5 +2.4
baz=256
PDAR Pinedale Array 8.40 69 Pn Pn 04 57 39.1 +2.0
comp=N,0.7nm,0.3s,baz=230,slow=12,SNR=31
PDAR LR LR 05 00 48.1
comp=N,169nm,18.2s,baz=260,slow=38
comp=N,2.2nm,0.5s
WUAZ Wupatki 8.42 121 P Pn 04 57 38.7 +1.4
baz=306
O20A White River Ci 9.18 87 P Pn 04 57 51.4 +3.7
baz=274
RLMT Red Lodge 9.44 55 P Pn 04 57 54.9 +3.6
baz=242
MVCO Mesa Verde 9.64 104 P Pn 04 57 56.3 +2.2
baz=292
W18A Petrified Fore 9.75 118 P Pn 04 57 57.5 +2.0
baz=304
K22A Casper 10.57 72 P Pn 04 58 08.5 +1.8
baz=261
S22A 4UR Ranch, Cre 10.72 99 P Pn 04 58 11.0 +2.1
baz=287
EGMT Eagleton 10.84 40 P Pn 04 58 11.3 +1.1
baz=227
N23A Red Feather La 10.89 82 P Pn 04 58 13.3 +2.1
baz=271
TUC Tucson 10.96 133 P Pn 04 58 13.4 +1.4
baz=319
ISCO Idaho Springs 11.22 87 P Pn 04 58 17.0 +1.3
baz=276
Q24A Divide 11.70 91 P Pn 04 58 25.0 +2.6
baz=281
SDCO Great Sand Dun 11.72 97 P Pn 04 58 25.3 +2.7
baz=286
ANMO Albuquerque 12.12 111 Pn Pn 04 58 29.2 +1.3
comp=N,0.2nm,0.3s,baz=305,slow=16,SNR=5.7
ANMO Lg Lg 05 01 52.1
comp=N,0.1nm,0.3s,baz=175,slow=20,SNR=4.6
ANMO LR LR 05 04 09.2
comp=N,71nm,19.4s,baz=296,slow=43
comp=N,0.7nm,0.4s
ANMO Albuquerque 12.12 111 P Pn 04 58 28.9 +0.9
baz=300
RSSD Black Hills 12.63 67 Pn 04 58 34.5 -0.4
RSSD Black Hills 12.63 67 P Pn 04 58 35.0 +0.1
baz=257
T25A Trinidad 12.74 99 P Pn 04 58 39.1 +2.7
baz=289
BBB Bella Bella 13.15 338 LR LR 05 03 22.1
comp=N,106nm,20.8s,baz=153,slow=36
OGNE Ogallala 13.85 81 P Pn 04 58 52.7 +1.2
baz=273
MSTX Muleshoe 15.25 109 Pn Pn 04 59 08.3 -2.2
MSTX Muleshoe 15.25 109 P P 04 59 12.5 -3.1
baz=299
CLNB Carlsbad 15.38 116 Pn Pn 04 59 10.6 -1.6
AMTX Amarillo 15.64 104 P 04 59 18.6 -1.3
AMTX IAmb IAmb 04 59 27.7
comp=Z,24nm,1.1s
AMTX Amarillo 15.64 104 P P 04 59 18.0 -1.9
baz=295
CBKS Cedar Bluff 15.88 88 Pn Pn 04 59 18.3 -0.3
CBKS IAmb IAmb 04 59 24.6
comp=Z,20nm,0.8s
TXAR Lajitas Array 17.38 124 Pn P 04 59 40.9 +1.7
baz=300,slow=12,SNR=8.0
comp=Z,0.5nm,0.7s
WMOK Wichita Mounta 17.86 101 P P 04 59 44.5 0.0
baz=294
ECSD EROS Data Cent 17.89 71 Pn Pn 04 59 42.1 -1.9
ECSD EROS Data Cent 17.89 71 P P 04 59 44.3 -0.5
baz=267
WRAK Wrangell Islan 18.06 338 P P 04 59 47.5 +1.1
baz=149
ABTX Abilene, Hawle 18.19 108 P P 04 59 48.7 +0.5
baz=300
KSU1 Kansas State U 18.21 86 P P 04 59 49.0 +0.7
baz=281
F33A 5 Mile Ranch, 18.35 64 Pn 04 59 48.5 -1.1
N35A Tabor 18.69 80 IAmb IAmb 04 59 56.1
comp=Z,53nm,1.4s
AGMN Agassiz Nation 19.18 57 P Pn 04 59 58.7 -0.9
AGMN IAmb IAmb 05 00 25.4
comp=Z,9.8nm,0.5s
JCT Junction City 19.25 114 P Pn 04 59 60.0 -0.7
baz=306
DLBC Dease Lake 19.29 344 P Pn 05 00 02.5 +1.6
comp=Z,0.1nm,0.3s,baz=164,slow=13,SNR=4.9
DLBC LR LR 05 08 37.5
comp=Z,98nm,21.9s,baz=158,slow=41
comp=Z,3.9nm,1.0s

DLBC Dease Lake 19.29 344 P Pn 05 00 00.3 -0.7
DLBC Dease Lake 19.29 344 P Pn 05 00 03.3 +2.3
baz=157
TUL1 Leonard 19.69 95 P Pn 05 00 05.0 -0.9
baz=290
WHTX Lake Whitney, 20.11 107 IAmb IAmb 05 00 15.7
comp=Z,20nm,0.9s
WHTX Lake Whitney, 20.11 107 P Pn 05 00 09.8 -1.0
baz=300
F36A Milaca 20.27 65 P P 05 00 10.6 -0.1
R33M Jennings River 20.36 344 P Pn 05 00 13.2 -0.6
baz=156
P38A Dawn 20.46 83 IAmb IAmb 05 00 21.3
comp=Z,34nm,1.1s
X37A Clayton 20.50 98 P 05 00 12.9 -0.4
X37A IAmb IAmb 05 00 20.3
comp=Z,38nm,1.3s
U38A Gravette 20.60 92 P P 05 00 14.1 -0.3
U38A IAmb IAmb 05 00 24.8
comp=Z,15nm,0.8s
K38A Parkersburg 20.70 74 IAmb IAmb 05 00 24.3
comp=Z,26nm,1.1s
SPMN Marine on St. 20.71 67 IAmb IAmb 05 00 16.7
comp=Z,35nm,1.4s
SPMN Marine on St. 20.71 67 P Pn 05 00 16.2 -1.7
baz=266
P32M Atlin 21.17 341 P P 05 00 23.0 +2.6
baz=150
P40A Paris 21.61 83 IAmb IAmb 05 00 34.0
comp=Z,24nm,0.9s
R40A Maddies Statio 21.70 86 IAmb IAmb 05 00 31.3
comp=Z,12nm,0.8s
MIAR Mount Ida 21.88 96 P P 05 00 27.8 -0.4
MIAR IAmb IAmb 05 00 41.3
comp=Z,13nm,1.0s
MIAR Mount Ida 21.88 96 P P 05 00 29.8 +1.6
baz=293
L40A Anamosa 21.88 76 IAmb IAmb 05 00 34.7
comp=Z,16nm,1.0s
EYMN Ely 21.95 60 P P 05 00 27.7 -1.2
baz=260
MGMO Mountain Grove 22.00 89 IAmb IAmb 05 00 32.5
comp=Z,13nm,0.8s
I40A Norwalk 22.23 71 IAmb IAmb 05 00 39.2
comp=Z,14nm,0.9s
HKT Hockley 22.37 110 P P 05 00 31.3 -2.1
P30M Million Dollar 22.50 338 P P 05 00 36.1 +1.4
baz=145
FCAR Ozark Folk Cen 22.50 92 IAmb IAmb 05 00 49.5
comp=Z,15nm,1.1s
JFWS Jewell Farm 22.54 73 IAmb IAmb 05 00 35.5
comp=Z,16nm,0.8s
JFWS Jewell Farm 22.54 73 P P 05 00 34.4 -0.8
baz=273
CCM Cathedral Cave 22.54 86 P P 05 00 35.3 0.0
CCM IAmb IAmb 05 00 37.2
comp=Z,15nm,0.9s
CCM Cathedral Cave 22.54 86 P P 05 00 35.7 +0.4
baz=284
YKA Yellowknife Ar 22.57 7 P P 05 00 36.0 +0.7
comp=Z,1.0nm,0.7s,baz=190,slow=9.9,SNR=5.9
comp=Z,1.0nm,0.7s
WHAR Wooly Hollow 22.59 94 P P 05 00 35.4 -0.3
WHAR IAmb IAmb 05 00 41.8
comp=Z,24nm,1.3s
O30N Mendenhall 22.80 340 P P 05 00 39.5 +1.6
baz=147
L42A Oliver, Polo 23.04 76 IAmb IAmb 05 00 46.0
comp=Z,17nm,1.1s
FVM French Village 23.19 86 IAmb IAmb 05 00 49.1
comp=Z,27nm,1.4s
LCAR Lake Charles 23.19 91 IAmb IAmb 05 00 48.3
comp=Z,26nm,1.3s
HYT Haines Junctio 23.23 338 P P 05 00 42.4 0.0
baz=145
I42A Draeger Farm, 23.47 71 P P 05 00 43.8 -1.0
CCAR Cane Creek 23.50 96 P P 05 00 43.8 -1.5
HDIL Hopedale 23.51 79 P P 05 00 43.9 -1.4
HDIL IAmb IAmb 05 00 50.5
comp=Z,13nm,0.7s
HDIL Hopedale 23.51 79 P P 05 00 44.1 -1.2
baz=279
PBMO Poplar Bluff 23.52 89 IAmb IAmb 05 00 47.0
comp=Z,23nm,1.1s
CGM3 Cape Girardeau 23.96 87 IAmb IAmb 05 00 55.1
comp=Z,29nm,1.4s
S44A Carbondale 24.16 86 IAmb IAmb 05 00 58.8
comp=Z,10nm,0.8s
SIUC Southern Illin 24.18 86 IAmb IAmb 05 01 07.5
comp=Z,13nm,0.8s
M30M Minto, Yukon 24.51 341 P P 05 00 52.5 -2.1
baz=148
E43A Lone Tree Farm 24.84 65 IAmb IAmb 05 01 03.9
comp=Z,6.0nm,0.7s
OXF Oxford 25.07 93 P P 05 01 00.0 +0.2
baz=292
WVT Waverly 25.71 89 P P 05 01 03.4 -2.2
WVT IAmb IAmb 05 01 06.3
comp=Z,11nm,0.8s
WVT Waverly 25.71 89 P P 05 01 05.7 0.0
baz=289
PLAL Pickwick Lake 25.92 91 IAmb IAmb 05 01 09.3
comp=Z,11nm,0.9s
T47A Sharon Grove 26.00 86 IAmb IAmb 05 01 24.7
comp=Z,8.1nm,0.8s
L27K Beaver Creek, 26.26 338 P P 05 01 09.4 -1.0
baz=140
DAWY Dawson 26.41 341 P P 05 01 12.8 +1.1
baz=146
J29M Klondike Camp 26.45 343 P P 05 01 10.3 -1.8
V48A Smith Brothers 26.61 89 IAmb IAmb 05 01 19.2
comp=Z,16nm,1.4s
LRAL Lakeview Retre 27.50 95 IAmb IAmb 05 01 22.8
comp=Z,6.9nm,1.1s
LRAL Lakeview Retre 27.50 95 P P 05 01 21.5 -0.3
baz=295
SCRK Sand Creek 27.59 337 P P 05 01 22.7 +0.3
baz=138
I26K Coal Creek Min 28.37 340 P P 05 01 30.9 +1.6
baz=141
TKL Tuckaleechee C 28.98 87 P P 05 01 34.7 -0.3
comp=Z,9.4nm,0.9s,baz=261,slow=5.7,SNR=6.7
TKL LR LR 05 13 15.4
comp=Z,75nm,21.3s,baz=260,slow=37
comp=Z,9.4nm,0.9s
TKL Tuckaleechee C 28.98 87 IAmb IAmb 05 01 40.0
comp=Z,11nm,0.8s
ILAR Eielson Array 29.03 337 P P 05 01 37.5 +2.3
comp=Z,0.9nm,0.9s,baz=147,slow=7.4,SNR=4.4
comp=Z,0.9nm,0.9s
INK Inuvik 29.06 350 P P 05 01 36.6 +1.3
comp=Z,2.5nm,0.7s,baz=163,slow=11,SNR=7.6
INK LR LR 05 14 46.6
comp=Z,83nm,18.2s,baz=114,slow=40
comp=Z,2.5nm,0.7s
INK Inuvik 29.06 350 P P 05 01 35.7 +0.3
baz=159
G27K Doyon Strip 29.21 343 P P 05 01 37.8 +1.0
baz=145
M20K Styx River 29.43 328 P P 05 01 40.0 +1.2
baz=122
POKR Poker Plat Res 29.44 337 P P 05 01 39.7 +0.9
baz=135
V53A Saluda 29.71 87 IAmb IAmb 05 01 46.9
comp=Z,9.0nm,0.9s
G26K Porcupine Rive 29.82 342 P P 05 01 43.6 +1.5
baz=142
GOGA Godfrey 30.05 91 P P 05 01 43.8 -0.7
baz=294
L20K Farewell, AK 30.05 329 P P 05 01 45.7 +1.4
baz=122
G25K Bearman Lake 30.27 340 P P 05 01 44.2 -1.8
baz=138
E27K Coleen River 30.34 344 P P 05 01 44.8 -2.0
baz=146
SADO Sadowa 30.40 68 LR LR 05 13 50.0
comp=Z,94nm,19.8s,baz=222,slow=36
MLY Manley 30.42 335 P P 05 01 46.7 -0.8
baz=130
SDPT Sand Point 30.49 313 P P 05 01 48.4 +0.2
baz=103
F26K Sheenjek River 30.50 342 P P 05 01 50.2 +2.0
baz=142
K20K Telida 30.59 330 P P 05 01 50.7 +1.7
baz=123
F25K Christian Rive 30.78 341 P P 05 01 51.0 +0.3
baz=140
KMSC Kings Mountain 31.02 87 P P 05 01 53.2 +0.1

	baz=291						
J20K	**Nowinta River**	**31.08**	**332**	P	**P**	**05 01 55.2**	**+1.9**
	baz=124						
TTA	**Tatalina**	**31.12**	**329**	P	**P**	**05 01 55.3**	**+1.5**
	baz=120						
E25K	**Arctic Village**	**31.17**	**342**	P	**P**	**05 01 56.6**	**+2.5**
	baz=141						
H22K	**Ishtalitna Cre**	**31.18**	**336**	P	**P**	**05 01 56.2**	**+2.0**
	baz=130						
N16K	**Nishlik Lake**	**31.20**	**323**	P	**P**	**05 01 56.5**	**+2.0**
	baz=113						
F24K	**Squaw Lake**	**31.30**	**340**	P	**P**	**05 01 57.5**	**+2.3**
	baz=137						
G23K	**Bananza Creek**	**31.32**	**338**	P	**P**	**05 01 56.0**	**+0.6**
	baz=133						
H21K	**Melozitna Rive**	**31.49**	**335**	P	**P**	**05 01 57.9**	**+1.0**
	baz=128						
E24K	**Your Creek**	**31.86**	**340**	P	**P**	**05 02 01.6**	**+1.4**
	baz=137						
C27K	**Jago River**	**31.97**	**345**	P	**P**	**05 02 03.0**	**+2.0**
	baz=145						
G21K	**Allakaket**	**32.25**	**336**	P	**P**	**05 02 04.3**	**+0.8**
	baz=128						
D25K	**Kavik River**	**32.29**	**343**	P	**P**	**05 02 04.8**	**+0.9**
	baz=141						
TOLK	**Toolik Lake Re**	**32.55**	**341**	P	**P**	**05 02 08.2**	**+2.0**
	baz=136						
NHSC	**New Hope**	**32.69**	**90**	P	**P**	**05 02 07.6**	**-0.2**
	baz=294						
E22K	**Anaktuvuk Pass**	**32.79**	**339**	P	**P**	**05 02 09.9**	**+1.6**
	baz=132						
D23K	**Nanushuk River**	**33.06**	**340**	P	**P**	**05 02 12.9**	**+2.2**
	baz=135						
C24K	**Franklin Bluff**	**33.13**	**342**	P	**P**	**05 02 12.3**	**+1.1**
	baz=138						
SCHQ	**Schefferville**	**37.93**	**49**	LR	LR	05 18 14.0	
	comp=Z,132nm,19.3s,baz=36,slow=36						
FRB	**Frobisher Bay**	**38.08**	**34**	LR	LR	05 18 29.6	
	comp=Z,121nm,20.5s,baz=304,slow=36						
SJG	**San Juan**	**51.24**	**99**	LR	LR	05 29 36.1	
	comp=Z,23nm,18.2s,baz=272,slow=40						
ROSC	**El Rosal**	**54.21**	**118**	LR	LR	05 35 16.9	
	comp=Z,52nm,19.1s,baz=258,slow=44						
PETK	**Petropavlovsk-**			LR	LR	05 24 54.5	
	comp=Z,22nm,21.6s,baz=83,slow=32						
MA2	**Magadan**	**55.92**	**322**	LR	LR	05 28 16.9	
	comp=Z,33nm,18.2s,baz=120,slow=35						
BORG	**Borgarnes**	**57.99**	**30**	LR	LR	05 28 55.9	
	comp=Z,78nm,19.4s,baz=291,slow=34						
ARCES	**ARCESS Array B**	**67.70**	**12**	LR	LR	05 35 06.6	
	comp=Z,50nm,20.3s,baz=301,slow=35						
MDP	**Montagnes des**	**69.66**	**101**	LR	LR	05 41 21.4	
	comp=Z,18nm,18.3s,baz=296,slow=40						
NOA	**NORSAR Array B**	**71.63**	**23**	LR	LR	05 37 08.3	
	comp=Z,35nm,19.3s,baz=290,slow=35						
AFI	**Afiamalu**	**72.01**	**233**	LR	LR	05 32 47.9	
	comp=Z,38nm,21.0s,baz=92,slow=31						
LPAZ	**La Paz**	**74.19**	**128**	LR	LR	05 42 13.1	
	comp=Z,39nm,18.0s,baz=298,slow=38						
FINES	**FINESS Array B**	**75.06**	**16**	P	P	05 07 21.7	+4.9
	comp=Z,1.3nm,0.7s,baz=316,slow=5.3,SNR=4.0						
VRAC	**Vranov**	**83.07**	**27**	LR	LR	05 47 39.3	
	comp=Z,34nm,18.9s,baz=324,slow=38						
ARU	**Arti**	**83.72**	**1**	LR	LR	05 49 49.3	
	comp=Z,26nm,18.1s,baz=338,slow=39						
HHC	**Hu-ho-hao-te**	**86.58**	**323**	*eP*	**P**	**05 08 16.2**	**-2.8**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.9s						
BVAR	**Borovoye Array**	**86.68**	**354**	LR	LR	05 52 09.9	
	comp=Z,12nm,18.9s,baz=193,slow=39						
RCBR	**Riachuelo**	**89.40**	**98**	LR	LR	05 56 11.8	
	comp=Z,21nm,18.0s,baz=319,slow=41						
AKTO	**Aktyubinsk**	**89.72**	**1**	LR	LR	05 52 16.3	
	comp=Z,22nm,19.6s,baz=336,slow=38						
WMQ	**Urumqi**	**92.64**	**340**	*eP*	**P**	**05 08 49.1**	**+1.7**

REN ***04*** *04:58:32.7±1.8,40.14N±0.02×120.22W±0.02,h8km±5km, Error ellipse: s-maj=2.9km s-min=2.0km az=55.0*

NCEDC ***04*** *04:58:32.6±1.5,40.15N±0.01×120.22W±0.02,h5km±6km, Mwr4.0/5,ML4.2/44(NEIC),Mwr3.9/64(NEIC), Error ellipse: s-maj=2.7km s-min=0.6km az=47.0*

NEIC ***04*** *04:58:32.7,40.14N×120.23W,h15km,Moment Tension Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.04; $M_{\theta\theta}$=0.88; $M_{\phi\phi}$0.91; $M_{r\theta}$0.30; $M_{\theta\phi}$-0.09; $M_{r\phi}$0.40; Fault plane solution: $M_0$1.03000×10^{15} NP1:ϕ_s221.72000°, δ89.99000°,λ-28.99000°. NP2:ϕ_s311.73000°,δ61.01000°, λ-179.98000°. Principal axes: T 1.0571, Plg20.0000°, Azm271.0000°; N -0.0581, Plg61.0000°, Azm42.0000°; P -0.9990, Plg20.0000°, Azm173.0000°;*

NEIC ***04*** *04:58:32.5,40.13N×120.23W,h14km,Moment Tension Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.04; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$ 1.07; $M_{r\theta}$0.29; $M_{\theta\phi}$-0.09; $M_{r\phi}$0.37; Fault plane solution: $M_0$1.19000×10^{15} NP1:ϕ_s43.22000°, δ87.66000°,λ23.16000°. NP2:ϕ_s312.22000°,δ66.86000°, λ177.45000°. Principal axes: T 1.1951, Plg18.0000°, Azm270.0000°; N -0.0033, Plg67.0000°, Azm49.0000°; P -1.1918, Plg14.0000°, Azm175.0000°;*

NEIC 04 04:58:32.8±1.6, 40.14N±0.01×120.24W±0.02, h5km±2km
Error ellipse: s-maj=3.0km s-min=2.9km az=48.0,
Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEKR	**Beckworth**	**0.28**	**199**	Pg	Pg	04 58 38.7	+0.3
WVA	**Winnemucca Val**	**0.37**	**121**		Pg	04 58 39.8	-0.3
WVA					Sg	04 58 45.2	+0.1
LOY	**Loyalton**	**0.48**	**180**		Pg	04 58 42.0	0.0
BABR	**Babbit Peak**	**0.54**	**169**		Pg	04 58 43.3	0.0
PEAR	**Peavine Mounta**	**0.57**	**158**		Pg	04 58 43.8	-0.1
PEAR					Sg	04 58 51.9	+0.7
KBF	**Kyburz Flat**	**0.63**	**178**		Pg	04 58 44.8	-0.2
VPK	**Verdi Peak**	**0.68**	**167**		Pg	04 58 45.8	-0.1
REN	**Reno**	**0.68**	**151**		Pg	04 58 45.8	-0.1
DONR	**Donner Summit**	**0.79**	**184**		Pg	04 58 47.5	-0.5
DONR					Sg	04 58 58.5	+0.4
PAHR	**Pah Rah Range**	**0.79**	**123**		Pg	04 58 47.2	-0.8
PAHR				IAML		04 59 01.3	
	comp=E,9μm,0.4s						
PAHR				IAML		04 59 01.4	
	comp=N,8μm,0.7s						
PAHR	**Pah Rah Range**	**0.79**	**123**		Sg	04 58 57.4	-0.8
PLTX	**Planet X, Gerl**	**0.82**	**46**	Pg	Pg	04 58 47.4	-1.2
PLTX				IAML		04 59 02.4	
	comp=E,54μm,0.8s						
PLTX				IAML		04 59 02.7	
	comp=N,31μm,0.8s						
MPK	**Martis Peak**	**0.85**	**169**	Pg	Pg	04 58 48.5	-0.7
MPK				IAML		04 59 00.9	
	comp=N,14μm,0.3s						
MPK				IAML		04 59 01.0	
	comp=E,12μm,0.3s						
TNK	**Tinkers Knob**	**0.87**	**180**		Pg	04 58 49.2	-0.3
VCNR	**Virginia City**	**0.95**	**151**	Pg	Pg	04 58 50.5	-0.7
VCNR				IAML		04 59 04.2	
	comp=N,9μm,0.7s						
LCMM	**Colby Mountain**	**0.98**	**271**		Pg	04 58 51.4	-0.2
LMEM	**Manzanita Entr**	**1.09**	**292**		Pg	04 58 53.3	-0.5
ORV	**Oroville**	**1.13**	**239**	Pg	Pg	04 58 53.9	-0.6
ORV				IAML		04 59 11.8	
	comp=N,4μm,0.7s						
ORV	**Oroville**	**1.13**	**239**		Sg	04 59 08.8	-0.4
HATC	**Hat Creek Radi**	**1.15**	**307**		Pg	04 58 54.1	-0.9
PNTR	**Pine Nut**	**1.16**	**154**		Pg	04 58 54.4	-0.6
PNTR	**Pine Nut**	**1.16**	**154**	IAML		04 59 13.7	
	comp=E,7μm,0.9s						
PNTR				IAML		04 59 15.3	
	comp=N,6μm,0.7s						
OGOM	**Van Goodin Ran**	**1.16**	**246**		Pg	04 58 54.5	-0.5
EMB	**Emerald Bay**	**1.17**	**175**		Pg	04 58 54.4	-0.8
EMB	**Emerald Bay**	**1.17**	**175**	IAML		04 59 12.0	
	comp=E,7μm,0.3s						
EMB				IAML		04 59 12.1	
	comp=N,6μm,0.2s						
OWYM	**Wyandotte**	**1.18**	**235**		Pg	04 58 54.5	-0.9
PAM	**Palermo**	**1.20**	**236**		Pg	04 58 55.1	-0.7
OHCM	**Honcut**	**1.25**	**231**		Pg	04 58 55.4	-1.4
YERR	**Yerington**	**1.39**	**146**		Pn	04 58 58.0	-1.0
LTIM	**Timbered Crate**	**1.41**	**318**		Pn	04 58 58.6	-0.7
LTCM	**Tuscan Springs**	**1.44**	**273**		Pn	04 58 59.3	-0.3
SUTB	**Sutter Butte**	**1.50**	**233**		Pn	04 59 00.4	+0.1
OSUM	**Sutter Buttes**	**1.51**	**236**		Pn	04 59 00.8	+0.3
LBFM	**Black Fox Moun**	**1.74**	**315**		Pn	04 59 04.3	+0.3
MOD	**Modoc Plateau**	**1.77**	**359**		Pn	04 59 03.8	-0.4
MOD	**Modoc Plateau**	**1.77**	**359**	IAML		04 59 31.4	
	comp=N,2μm,0.7s						
GFC	**Funks Creek**	**1.77**	**244**		Pn	04 59 03.9	-0.2
GCK	**Clark Valley**	**1.79**	**251**		Pn	04 59 04.4	0.0
LMHM	**Little Mount H**	**1.80**	**324**		Pn	04 59 05.0	+0.2
M03C	**McCloud**	**1.83**	**309**		Pn	04 59 04.3	-0.7
GROM	**Round Mountain**	**1.88**	**264**		Pn	04 59 05.0	-0.7
NDHM	**Dunnigan Hills**	**1.88**	**224**		Pn	04 59 06.2	+0.6
LGMM	**Garner Mountai**	**1.90**	**321**		Pn	04 59 06.6	+0.6
GVV	**Valley View**	**1.91**	**260**		Pn	04 59 05.5	-0.9
GASB	**Alder Springs**	**1.96**	**257**		Pn	04 59 06.9	0.0
KVN	**Kaiserville**	**1.98**	**123**	Pn	Pn	04 59 07.7	+0.5
KVN				IAML		04 59 36.5	
	comp=N,2μm,0.5s						
KVN				IAML		04 59 36.5	
	comp=E,3μm,0.6s						
LMPM	**Military Pass**	**1.99**	**313**		Pn	04 59 08.3	+1.0
RYN	**Ryan**	**2.01**	**138**	Pn	Pn	04 59 07.5	0.0
LBPM	**Beegum Peak**	**2.03**	**276**		Pn	04 59 06.9	-0.9
LBKM	**Bonanza King**	**2.07**	**298**		Pn	04 59 08.9	+0.4
LCSM	**College of the**	**2.07**	**309**		Pn	04 59 09.1	+0.7
LKVW	**Lakeview**	**2.09**	**358**		Pn	04 59 08.9	+0.3
CMB	**Columbia Colle**	**2.10**	**183**		Pn	04 59 08.6	-0.1
CMB	**Columbia Colle**	**2.10**	**183**	IAML		04 59 39.2	
	comp=E,2μm,0.7s						
CMB				IAML		04 59 40.6	
	comp=N,1μm,0.4s						
NBPM	**Berryessa Peak**	**2.11**	**227**		Pn	04 59 09.7	+1.0
LHEM	**Herd Peak**	**2.11**	**315**		Pb	04 59 10.5	-1.3
MNRC	**McLaughlin Min**	**2.12**	**234**		Pn	04 59 09.4	+0.5
LGPM	**Granite Peak**	**2.12**	**292**		Pn	04 59 08.8	-0.3
NMTM	**Middletown**	**2.16**	**233**		Pn	04 59 09.7	+0.1
MCUB	**Copperopolis B**	**2.18**	**188**		Pn	04 59 09.8	+0.1
GRTM	**Round Top Moun**	**2.23**	**238**		Pn	04 59 11.1	+0.6
LUL	**Lundy Lake**	**2.24**	**158**		Pn	04 59 11.0	+0.2
KBNM	**Bluenose Ridge**	**2.28**	**265**		Pn	04 59 12.5	+1.2
GSGM	**Seigler Mounta**	**2.29**	**237**		Pn	04 59 11.8	+0.6
GBGM	**Boggs Mountain**	**2.30**	**236**		Pn	04 59 12.1	+0.6
NAPC	**Atlas Peak**	**2.30**	**223**		Pn	04 59 11.2	-0.3
LHV	**Little Huntoon**	**2.32**	**144**		Pn	04 59 11.9	+0.3
LHV	**Little Huntoon**	**2.32**	**144**	IAML		04 59 47.7	
	comp=E,2μm,0.8s						
BMN	**Battle Mountai**	**2.33**	**82**		Pn	04 59 09.5	-2.5
LAMM	**Antelope Mount**	**2.33**	**310**		Pn	04 59 13.5	+1.5
KHBM	**Hayfork Bally**	**2.33**	**284**		Pn	04 59 12.9	+0.9
GCRM	**Castle Rock Sp**	**2.35**	**235**		Pn	04 59 11.9	-0.2
NHSM	**Mount Saint He**	**2.36**	**232**		Pn	04 59 12.2	-0.1
B040	**Montague**	**2.36**	**316**		Pn	04 59 13.3	+0.9
HOG	**Hogback Mounta**	**2.38**	**333**		Pb	04 59 14.5	-1.8
KPPM	**Pickett Peak**	**2.40**	**276**		Pn	04 59 14.3	+1.3
GHLM	**Highland Sprin**	**2.41**	**244**		Pn	04 59 13.0	0.0
GAXM	**Alexander Vall**	**2.41**	**235**		Pn	04 59 12.7	-0.2
YBH	**Yreka Blue Hor**	**2.46**	**311**		Pn	04 59 13.5	-0.2
GWRM	**Wonder Ranch**	**2.54**	**250**		Pn	04 59 16.2	+1.5
MDCM	**Deadman Creek**	**2.60**	**159**		Pb	04 59 20.6	+0.5
MDYM	**Dry Creek**	**2.65**	**158**		Pb	04 59 21.4	+0.3
MDPB	**Devils Postpil**	**2.66**	**160**		Pb	04 59 21.5	+0.4
MMLB	**Mammoth Lakes**	**2.66**	**158**		Pb	04 59 22.3	+1.1
MRDM	**Red Cones**	**2.70**	**160**		Pb	04 59 22.6	+0.9
MLCM	**Laurel Creek C**	**2.72**	**157**		Pg	04 59 23.7	-1.3
K04D	**Chiloquin, OR**	**2.73**	**336**		Pb	04 59 20.5	-1.8
FTR	**Fort Ross**	**2.78**	**235**		Pn	04 59 19.8	+1.8
KCC	**Kaiser Creek**	**2.90**	**165**		Pb	04 59 25.6	+0.5
JCC	**Jacoby Creek,**	**2.97**	**284**	Pn	Pn	04 59 20.1	-0.5
WMD		**2.97**	**155**		Pn	04 59 20.3	-0.3
KMPM	**Mount Pierce**	**2.98**	**277**	Pn	Pn	04 59 20.5	-0.4
KRPM	**Rodgers**	**3.05**	**291**	Pn	Pn	04 59 21.6	-0.3
KSXB	**Camp Six Broad**	**3.23**	**303**	Pn	Pn	04 59 24.9	+0.6
214A	**Organ Pipe Nat**	**10.13**	**141**		Pn	05 00 58.3	-0.8

KRSC 04 05:00:34.6±1.9, 49.96N×155.21E, h230km±17km, ML3.9,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**2.59**	**43**	*eP*	Pn	05 01 21.0	-0.3
KDTR				*eS*	S	05 01 57.5	-0.5
MTVR	**Mutnovka**	**3.14**	**35**	*eP*	Pn	05 01 29.3	+1.8
GRL	**Gorelyy**	**3.16**	**34**	*eP*	Pn	05 01 29.6	+1.9
RUS	**Russkaya**	**3.23**	**39**	*eP*	Pn	05 01 28.8	+0.4
RUS				*eS*	S	05 02 11.7	+1.0
UGLR	**Uglovaya**	**3.96**	**33**	*eP*	Pn	05 01 39.8	+2.8
KOK	**Koryaka**	**3.96**	**31**	*eP*	Pn	05 01 39.8	+2.8
SDLR	**Sedlovina**	**4.04**	**33**	*eP*	Pn	05 01 40.3	+2.4
SPN	**Mys Shipunski**	**4.35**	**42**	*eP*	Pn	05 01 43.3	+1.7
SPN				*eS*	S	05 02 34.3	-0.3
MKZ	**Mys Kozlova**	**6.10**	**39**	*eP*	Pn	05 02 04.1	+0.7
MKZ				*eS*	S	05 03 13.4	-0.7
KBTR	**Krutoberegovo**	**7.75**	**33**	*eP*	Pn	05 02 25.7	+1.3
BKI	**Bering**	**8.40**	**47**	*eP*	Pn	05 02 35.7	+3.0
BKI				*eS*	S	05 04 04.4	-3.2

IDC ***04*** *05:09:36.6±1.1,43.89S×38.77E,h0km,mb4.2/7, mbtmp4.3/9,ML4.4/2,MS3.7/25,Error ellipse: s-maj=34.5km s-min=21.4km az=67.0*

NEIC ***04*** *05:09:38.4±1.3,43.94S±0.06×38.8E±0.2,h10km±1km, mb4.6/17,Error ellipse: s-maj=23.1km s-min=7.6km az=71.0*

ISC 04 05:09:38.1±0.7, 43.87S±0.09×38.61E±0.10, h10km, n65,
σ1s 93/45, mb4.5/14, MS3.7/23, Prince Edward Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOE	**Somerset East**	**15.11**	**313**		**Pn**	**05 13 10.6**	**-1.1**
ELIM	**Elim**	**17.27**	**296**	*eP*	**P**	**05 13 42.1**	**+1.3**
ELIM				IAmb	IAmb	05 13 45.4	
	comp=Z,78nm,1.5s						
GRAN	**Grantham**	**17.31**	**306**	*eP*	**Pn**	**05 13 40.1**	**+0.3**
GRAN				IAmb	IAmb	05 13 42.7	
	comp=Z,17nm,0.7s						
POGA	**Pongola**	**17.40**	**339**	P	**P**	**05 13 43.3**	**+1.0**
POGA	**Pongola**	**17.40**	**339**	*eP*	**P**	**05 13 42.8**	**+0.5**
	comp=Z,19nm,0.6s						
POGA				IAmb	IAmb	05 13 48.0	
	comp=Z,19nm,0.6s						
NWCL	**Newcastle**	**17.56**	**334**	*eP*	**P**	**05 13 45.7**	**+1.5**
NWCL				IAmb	IAmb	05 13 57.1	
	comp=Z,61nm,1.4s						
MATJ	**Matjiesfontein**	**17.59**	**301**	*eP*	**P**	**05 13 46.5**	**+2.0**
MATJ				IAmb	IAmb	05 13 52.8	
	comp=Z,43nm,1.0s						
SUR	**Sutherland**	**18.06**	**303**	P	**P**	**05 13 51.7**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=121,slow=16,SNR=46						
SUR				S	**Sn**	**05 17 03.0**	**-7.8**
	comp=Z,5.3nm,0.8s,baz=202,slow=11,SNR=1.7						
SUR				LR	LR	05 19 22.7	
	comp=Z,258nm,18.2s,baz=132,slow=32						
	comp=Z,23nm,1.0s						
SUR	**Sutherland**	**18.06**	**303**	P	**P**	**05 13 51.6**	**+1.9**
SUR				IAmb	IAmb	05 13 56.5	
	comp=Z,53nm,1.4s						
SUR	**Sutherland**	**18.06**	**303**	*eP*	**P**	**05 13 51.9**	**+2.2**
SUR				IAmb	IAmb	05 13 54.8	
	comp=Z,22nm,1.0s						
CER	**Ceres**	**18.34**	**298**	*eP*	**P**	**05 13 56.1**	**+3.5**
CER				IAmb	IAmb	05 13 57.1	
	comp=Z,69nm,0.8s						
BOSA	**Boshof**	**18.61**	**320**	P	**Pn**	**05 13 57.2**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=155,slow=13,SNR=28						
BOSA				LR	LR	05 19 55.4	
	comp=Z,277nm,19.9s,baz=164,slow=33						
	comp=Z,31nm,0.9s						
BOSA	**Boshof**	**18.61**	**320**	P	**Pn**	**05 13 57.2**	**+1.2**
BOSA				IAmb	IAmb	05 13 59.5	
	comp=Z,42nm,0.9s						
BOSA	**Boshof**	**18.61**	**320**	*eP*	**Pn**	**05 13 57.8**	**+1.8**
PKA	**Prieska**	**18.98**	**313**	*eP*	**Pn**	**05 14 05.4**	**+4.9**
PKA				IAmb	IAmb	05 14 38.4	
	comp=Z,89nm,2.0s						
PRYS	**Parys**	**19.20**	**328**	*eP*	**Pn**	**05 14 02.8**	**-0.4**
PRYS				IAmb	IAmb	05 14 05.5	
	comp=Z,483nm,2.9s						
CVNA	**Calvinia**	**19.32**	**303**	*eP*	**Pn**	**05 14 07.6**	**+3.1**
CVNA				IAmb	IAmb	05 14 08.3	
	comp=Z,480nm,2.8s						
WDLM	**Western Deep L**	**19.63**	**329**	*eP*	**P**	**05 14 06.1**	**-0.9**
WDLM				IAmb	IAmb	05 14 13.8	
	comp=Z,39nm,1.2s						
SWZ	**Schweizer**	**19.80**	**323**	*eP*	**P**	**05 14 09.3**	**+0.5**
SWZ				IAmb	IAmb	05 14 15.2	
	comp=Z,40nm,0.6s						
SLR	**Silverton**	**19.95**	**332**	*eP*	**P**	**05 14 10.6**	**+0.1**
SLR				IAmb	IAmb	05 14 12.1	
	comp=Z,37nm,0.9s						
KEIM	**Keimoes**	**20.70**	**311**	*eP*	Pn	05 14 20.1	-0.7
KEIM				IAmb	IAmb	05 14 26.1	
	comp=Z,215nm,2.3s						
UPI	**Upington**	**20.82**	**312**	*eP*	Pn	05 14 21.7	-0.5
UPI				IAmb	IAmb	05 14 41.2	
	comp=Z,4.0nm,0.7s						
MOPA	**Mopani**	**21.15**	**341**	*eP*	**P**	**05 14 23.0**	**-0.3**
MOPA				IAmb	IAmb	05 14 24.2	
	comp=Z,68nm,1.4s						
LBTB	**Lobatse**	**21.60**	**326**	P	**P**	**05 14 29.5**	**+1.2**
	comp=Z,20nm,0.9s,baz=160,slow=9.3,SNR=11						
LBTB				LR	LR	05 21 54.9	
	comp=Z,151nm,18.5s,baz=149,slow=34						
	comp=Z,20nm,0.9s						
LBTB	**Lobatse**	**21.60**	**326**	P	**P**	**05 14 29.3**	**+1.0**
LBTB				IAmb	IAmb	05 14 40.4	
	comp=Z,21nm,0.7s						
LBTB	**Lobatse**	**21.60**	**326**	*eP*	**P**	**05 14 28.2**	**-0.1**
LBTB				IAmb	IAmb	05 14 40.2	
	comp=Z,22nm,0.6s						
LEPH	**Lephalale, Lim**	**21.85**	**333**	*eP*	**P**	**05 14 30.2**	**-0.7**
LEPH				IAmb	IAmb	05 14 42.6	
	comp=Z,139nm,1.8s						
MUSN	**Musina, Limpop**	**22.71**	**339**	*eP*	P	05 14 31.5	-8.6
MUSN				IAmb	IAmb	05 14 48.4	
	comp=Z,7.7nm,0.8s						
VOI	**Vohitsoka**	**22.93**	**20**	P	**P**	**05 14 40.4**	**-2.1**
VOI				IAmb	IAmb	05 14 41.7	
	comp=Z,22nm,1.3s						
MATP	**Matopo**	**24.85**	**337**	P	**P**	**05 15 01.2**	**+0.3**
	comp=Z,15nm,0.8s,baz=170,slow=12,SNR=9.4						
	comp=Z,1.5nm,0.8s						
ABPO	**Ambohimpanom**	**25.82**	**19**	P	**P**	**05 15 08.3**	**-1.4**
ABPO				IAmb	IAmb	05 15 32.1	
	comp=Z,16nm,1.4s						
OPO	**Ambohidratompo**	**26.24**	**19**	P	**P**	**05 15 13.9**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=186,slow=10,SNR=3.8						
OPO				LR	LR	05 22 06.0	
	comp=Z,111nm,20.3s,baz=345,slow=29						
	comp=Z,2.5nm,0.7s						
RER	**Riviere de l'E**	**26.76**	**38**	P	**P**	**05 15 17.4**	**-0.7**
MAW	**Mawson**	**27.06**	**160**	LR	LR	05 23 13.4	
	comp=Z,136nm,21.0s,baz=337,slow=30						
LSZ	**Lusaka**	**29.85**	**339**	P	**P**	**05 15 45.0**	**-0.7**
	comp=Z,4.4nm,0.8s,baz=178,slow=8.9,SNR=6.9						
LSZ				LR	LR	05 26 29.0	
	comp=Z,102nm,18.3s,baz=154,slow=34						
	comp=Z,4.4nm,0.8s						
LSZ	**Lusaka**	**29.85**	**339**	P	**P**	**05 15 45.3**	**-0.5**
LSZ				IAmb	IAmb	05 15 55.6	
	comp=Z,6.5nm,0.7s						
AIS	**Amsterdam Isla**	**29.89**	**92**	P	**P**	**05 15 46.3**	**+0.4**
TSUM	**Tsumeb**	**30.26**	**318**	LR	LR	05 27 08.4	
	comp=Z,158nm,19.9s,baz=142,slow=35						
TSUM	**Tsumeb**	**30.26**	**318**	P	**P**	**05 15 49.7**	**+0.4**
TSUM				IAmb	IAmb	05 15 54.4	
	comp=Z,8.4nm,1.1s						
SNAA	**Sanae**	**34.24**	**202**	P	**P**	**05 16 23.3**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=110,slow=9.9,SNR=2.1						
SNAA				LR	LR	05 26 57.6	
	comp=Z,76nm,20.8s,baz=291,slow=30						
	comp=Z,0.7nm,0.8s						
SNAA	**Sanae**	**34.24**	**202**	P	**P**	**05 16 23.7**	**0.0**
KMBO	**Kilima Mbogo**	**42.58**	**358**	LR	LR	05 33 19.4	
	comp=Z,138nm,19.6s,baz=110,slow=33						
KMBO	**Kilima Mbogo**	**42.58**	**358**	P	**P**	**05 17 33.9**	**-0.6**
MBAR	**Mbarara**	**43.65**	**349**	LR	LR	05 35 11.3	
	comp=Z,108nm,18.4s,baz=155,slow=35						
QSPA	**South Pole Qui**	**46.34**	**180**	LR	LR	05 36 01.5	
	comp=Z,86nm,19.0s,baz=250,slow=34						
QSPA	**South Pole Qui**	**46.34**	**180**	P	**P**	**05 18 01.8**	**-2.3**
HOPE	**Hope Point**	**48.05**	**230**	P	**P**	**05 18 17.4**	**+0.1**
VNDA	**Vanda**	**54.00**	**167**	LR	LR	05 40 21.9	
	comp=Z,60nm,20.0s,baz=225,slow=34						
PMSA	**Palmer Station**	**56.22**	**210**	LR	LR	05 38 42.8	
	comp=Z,36nm,21.9s,baz=124,slow=31						
TOA0	**Torodi Ar. Sit**	**65.97**	**320**	P	**P**	**05 20 25.2**	**+0.6**
TOA0				IAmb	IAmb	05 20 47.5	
	comp=Z,3.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.97**	**320**	P	**P**	**05 20 24.9**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=146,slow=4.7,SNR=6.1						
	comp=Z,1.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.97**	**320**	P	**P**	**05 20 25.4**	**+0.8**
TORD	

*IDC **04** 05:41:47.3±0.7,23°.96S×82°.45E, h0km, mb4.2/12, mbtmp4.2/12, MS3.5/8, Error ellipse: s-maj=24.1km s-min=18.9km az=28.0*

ISC 04 05:41:48.9±0.7, 24.0S±0°.2×82°.5E±0°.1, h10km, n24, σ0$65/12, mb4.2/12, MS3.5/8, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**18.85**	**328**	T	T	06 05 23.2	
	baz=151,slow=74,SNR=31						
H08S1	**Diego Garcia H**	**18.86**	**328**	T	T	06 05 26.9	
	baz=151,slow=74,SNR=23						
H08S3	**Diego Garcia H**	**18.87**	**328**	T	T	06 05 25.1	
	baz=151,slow=74,SNR=218						
H01W3	**Cape Leeuwin H**	**29.53**	**119**	T	T	06 18 43.5	
	baz=284,slow=74,SNR=7.2						
H01W2	**Cape Leeuwin H**	**29.53**	**119**	T	T	06 18 42.4	
	baz=284,slow=74,SNR=10						
H01W1	**Cape Leeuwin H**	**29.55**	**119**	T	T	06 18 43.4	
	baz=284,slow=74,SNR=8.1						
PSI	**Prapat**	**31.07**	**33**	LR	LR	05 58 22.2	
	comp=Z,96nm,18.1s,baz=244,slow=32						
PALK	**Pallekele**	**31.12**	**357**	LR	LR	05 57 52.4	
	comp=Z,90nm,20.8s,baz=271,slow=31						
CMAR	**Chiang Mai Arr**	**45.15**	**22**	LR	LR	06 08 26.9	
	comp=Z,17nm,18.0s,baz=210,slow=35						
ASAR	**Alice Springs**	**46.84**	**101**	P	**P**	**05 50 19.2**	**-0.1**
	6.7nm,0.7s,baz=265,slow=7.1,SNR=28						
	6.7nm,0.7s						
WRA	**Warramunga Arr**	**48.06**	**96**	P	**P**	**05 50 29.1**	**+0.1**
	8.0nm,0.8s,baz=261,slow=8.0,SNR=17						
	8.0nm,0.8s						
BOSA	**Boshof**	**51.09**	**252**	P	**P**	**05 50 52.2**	**+0.2**
	6.2nm,0.7s,baz=97,slow=6.7,SNR=12						
	6.2nm,0.7s						
STKA	**Stephens Creek**	**52.29**	**113**	P	**P**	**05 51 00.7**	**-0.1**
	0.8nm,0.3s,baz=266,slow=6.9,SNR=4.4						
	0.8nm,0.3s						
VNDA	**Vanda**	**64.46**	**166**	LR	LR	06 16 09.2	
	comp=Z,34nm,21.2s,baz=273,slow=32						
QSPA	**South Pole Qui**	**66.12**	**180**	P	**P**	**05 52 36.1**	**-0.1**
	2.1nm,0.7s,baz=275,slow=1.7,SNR=8.7						
QSPA				LR	LR	06 17 17.4	
	comp=Z,58nm,20.4s,baz=309,slow=32						
	2.1nm,0.7s						
AAK	**Ala-Archa**	**66.70**	**354**	LR	LR	06 21 22.1	
	comp=Z,56nm,18.1s,baz=182,slow=36						
MKAR	**Makanchi Array**	**70.44**	**360**	P	**P**	**05 53 02.4**	**-0.9**
	0.6nm,0.7s,baz=173,slow=6.8,SNR=6.0						
MKAR				LR	LR	06 22 14.6	
	comp=Z,17nm,21.4s,baz=186,slow=34						
	0.6nm,0.7s						
KSRS	**Korea Array**	**74.59**	**36**	P	**P**	**05 53 29.0**	**+0.9**
	0.6nm,0.3s,baz=227,slow=5.8,SNR=7.6						
	0.6nm,0.3s						
SONM	**Songino Array**	**74.66**	**16**	LR	LR	06 26 09.0	
	comp=Z,35nm,20.4s,baz=50,slow=36						
KBZ	**Khabaz**	**76.54**	**332**	P	**P**	**05 53 39.8**	**+0.7**
	1.2nm,0.7s,baz=170,slow=11,SNR=4.5						
	1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**77.64**	**1**	P	**P**	**05 53 43.8**	**-1.3**
	1.7nm,0.6s,baz=183,slow=3.7,SNR=5.7						
	1.7nm,0.6s						
BRTR	**Keskin Array B**	**78.05**	**324**	P	**P**	**05 53 48.3**	**+0.4**
	1.4nm,0.7s,baz=134,slow=7.1,SNR=5.0						
	1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**87.04**	**286**	P	**P**	**05 54 35.1**	**-0.1**
	1.0nm,0.9s,baz=111,slow=3.2,SNR=3.9						
	1.0nm,0.9s						
AKASG	**Malin Array Be**	**87.93**	**329**	P	**P**	**05 54 38.6**	**0.0**
	0.2nm,0.3s,baz=129,slow=3.9,SNR=4.5						
	0.2nm,0.3s						

*IDC **04** 05:45:18.5±2.2, 7°.17S×129°.78E, h128km±25km, mb3.9/1, mbtmp4.3/6, MS2.8/2, Error ellipse: s-maj=37.7km s-min=20.4km az=94.0*

*DJA **04** 05:45:19.1±0.4, 7°.5±3°×13°.0E±°, h173km±11km, M4.4/9, mb4.2/7, mB5.0/3, MLv4.5/9, Mw(mB)4.3/3*

ISC 04 05:45:17.1±0.8, 7°.16S±0°.05×129°.83E±0°.07, h200km, n15, σ3$46/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.67**	**119**	P	**Pn**	**05 45 53.8**	**+1.4**
SAUI				S	**Sn**	**05 46 17.7**	**-2.1**
MSAI	**Masohi**	**3.89**	**347**	P	**Pn**	**05 46 20.4**	**+2.8**
FAKI	**Fak Fak**	**4.85**	**30**	P	**Pn**	**05 46 30.0**	**+0.3**
FAKI				S	**Sn**	**05 47 22.7**	**-4.2**
SOEI	**Soe**	**6.08**	**244**	P	**Pn**	**05 46 46.4**	**+0.9**
	0.8nm43nm,0.8s						
SIJI	**Sorong**	**6.41**	**13**	P	**Pn**	**05 46 50.7**	**+0.9**
	13nm,0.3s,baz=200,slow=23,SNR=29						
SIJI				S	**Sn**	**05 47 59.3**	**-3.9**
	24nm,0.2s,baz=212,slow=22,SNR=9.8						
SWI	**Sorong**	**6.42**	**13**	P	**Pn**	**05 46 51.0**	**+1.2**
	0.3nm1μm22nm,0.6s						
BATI	**Baumata**	**6.80**	**243**	P	**Pn**	**05 46 56.9**	**+2.0**
	32nm,0.4s,baz=84,slow=8.1,SNR=2.5						
BATI				S	**Sn**	**05 48 08.1**	**-4.3**
	104nm,0.4s,baz=353,slow=21,SNR=12						
BATI	**Baumata**	**6.80**	**243**	P	**Pn**	**05 46 56.5**	**+1.6**
	0.4nm31nm,1.5s						
EDFI	**Ende, Flores**	**8.21**	**258**	P	**Pn**	**05 47 15.4**	**+2.1**
	8.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**11.61**	**200**	P	**Pn**	**05 47 58.1**	**+1.0**
	4.4nm,0.3s,baz=34,slow=11,SNR=39						
FITZ				S	**Sn**	**05 49 60.0**	**-6.7**
	9.5nm,0.6s,baz=84,slow=16,SNR=5.0						
WRA	**Warramunga Arr**	**13.44**	**161**	P	**P**	**05 48 23.6**	**+0.9**
	2.9nm,0.5s,baz=339,slow=10,SNR=41						
WRA				S	**S**	**05 50 45.7**	**-4.4**
	4.4nm,0.5s,baz=330,slow=24,SNR=11						
ASAR	**Alice Springs**	**16.87**	**167**	P	**Pn**	**05 49 08.6**	**+6.6**
	1.0nm,0.4s,baz=334,slow=9.0,SNR=15						
ASAR				S	**S**	**05 52 08.1**	**+1.4**
	2.9nm,0.6s,baz=345,slow=25,SNR=6.2						
JOW	**Kunigami**	**33.82**	**358**	LR	LR	06 07 00.6	
	comp=Z,13nm,18.5s,baz=196,slow=38						
MKAR	**Makanchi Array**	**68.26**	**327**	P	P	05 56 05.5	+9.1
	1.4nm,0.5s,baz=117,slow=8.2,SNR=22						
	1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**71.65**	**334**	LR	LR	06 30 27.0	
	comp=Z,7.0nm,20.9s,baz=276,slow=38						

*NEIC **04** 05:54:37.0±1.0, 51°.27N±0°.03×177°.73W±0°.05, h36km±46km, Error ellipse: s-maj=4.7km s-min=4.2km az=120.0*

AEIC 04 05:54:35±1.2, 51°.21N±0°.05×177°.73W±0°.04, h26km±8km, ML3.5/35, Error ellipse: s-maj=7.6km s-min=3.7km az=167.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAFL	**Tanaga Flats**	**0.56**	**349**		Pn	05 54 47.3	+0.1
TAPA	**Tanaga Point A**	**0.61**	**355**		Pn	05 54 48.1	+0.1
KIMD	**Kanaga Island**	**0.63**	**29**		Pn	05 54 48.3	0.0
TASE	**Tanaga Southea**	**0.66**	**343**		Pn	05 54 49.0	+0.4
TAFP	**Tanaga Falls P**	**0.71**	**347**		Sn	05 54 59.1	-0.4
KIWB	**Kanaga Island**	**0.74**	**29**		Pn	05 54 49.9	+0.1
TANO	**Tanaga North**	**0.75**	**341**		Pn	05 54 50.3	+0.4
TANO					Sn	05 55 00.7	+0.3
KIKV	**Kanaga Island**	**0.76**	**27**		Pn	05 54 50.2	+0.1
GAKI	**Gareloi-Kavalg**	**0.76**	**297**		Pb	05 54 49.8	+0.2
KICM	**Kanaga Island**	**0.79**	**25**		Pn	05 54 50.8	+0.4
GALAA	**Gareloi Lava P**	**0.85**	**311**		Pn	05 54 51.9	+0.5
GAEA	**Gareloi East**	**0.86**	**313**		Pn	05 54 52.0	+0.6
GASW	**Gareloi Southw**	**0.91**	**309**		Pn	05 54 52.4	+0.3
GANO	**Gareloi North**	**0.91**	**313**		Pn	05 54 52.3	+0.2
ADK	**Adak**	**0.94**	**44**	Pn	Pb	05 54 52.6	0.0
ADK				Sn	Sb	05 55 04.8	+0.1
GSCK	**Great Sitkin C**	**1.27**	**50**		Pb	05 54 57.8	-0.4
GSTD	**Great Sitkin T**	**1.30**	**49**		Pb	05 54 58.2	-0.6
GSTD					Sb	05 55 15.2	0.0
GSMY	**Great Sitkin M**	**1.34**	**51**		Pn	05 54 58.6	+0.6
GSTR	**Great Sitkin T**	**1.37**	**49**		Pb	05 54 59.4	-0.5
CERAA	**Semis' Rag'd T**	**1.76**	**294**		Pn	05 55 04.8	+1.0
CERB	**Semis' Cerberu**	**1.80**	**295**		Sn	05 55 27.2	+0.8
CEPE	**Semis' Perret**	**1.80**	**296**		Pn	05 55 05.4	+1.0
CESW	**Semis' Southwe**	**1.83**	**293**		Pn	05 55 05.5	+0.8
AMKA	**Amchitka**	**1.87**	**276**		Pn	05 55 05.2	-0.1
AMKA					Sn	05 55 28.5	+0.4
LSSE	**Little Sitkin**	**2.42**	**289**		Pn	05 55 14.3	+1.4
LSPA	**Little Sitkin**	**2.42**	**289**		Pn	05 55 14.4	+1.4
LSSA	**Little Sitkin**	**2.46**	**289**		Pn	05 55 15.3	+1.9
KOKL	**Mount Kliuchef**	**2.46**	**62**		Pn	05 55 15.1	+1.6
LSNW	**Little Sitkin**	**2.46**	**289**		Pn	05 55 15.1	+1.7
KOFP	**Korovin Flat P**	**2.50**	**63**		Pn	05 55 15.7	+1.7
KOSE	**Korovin Southe**	**2.55**	**62**		Pn	05 55 16.6	+1.9
SMY	**Shemya**	**5.28**	**290**	Pn	Pn	05 55 53.0	+0.9

*IDC **04** 05:56:57.4±0.9, 11°.42N×86°.12W, h0km, mb4.4/9, mbtmp4.4/10, ML4.0/1, MS4.0/40, Error ellipse: s-maj=40.3km s-min=18.4km az=42.0*

*UCR **04** 05:56:59.8±1.7, 10°.82N×86°.73W, h37km±263km, ML4.2, MW4.8, mb4.9(NEIC)*

*INET **04** 05:56:59.6±0.6, 10°.76N×86°.76W, h26km, MW4.6*

*NEIC **04** 05:56:59.0±2.4, 10°.95N±0°.06×86°.57W±0°.07, h15km±4km, mb4.9/374, Error ellipse: s-maj=11.6km s-min=6.0km az=52.0*

*SNET **04** 05:57:02.4±0.8, 10°.92N×86°.90W, h34km±999km, ML4.4*

*GCMT **04** 05:57:04.0±0.5, 10°.71N±0°.03×86°.93W±0°.03, h23km±1km, MW4.8/71, Moment Tensor Solution. s26,c29; s71,c87; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.47±.14; Mθθ=0.93±.08; Mφφ=0.54±.08; Mrθ=0.71±.10; Mrφ=0.66±.04; Mθφ=1.08±.13; Best double couple: Mo=1.94000×10^16 NP1:φs=139.00000°, δ66.00000°, λ100.00000°. NP2: φs=296.00000°, δ26.00000°, λ69.00000°. Principal axes: T 1.9970, Plg67.0000°, Azm68.0000°; N -0.1130, Plg9.0000°, Azm315.0000°; P -1.8830, Plg21.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 05:56:59.0±0.5, 10°.86N±0°.05×86°.70W±0°.04, h21km±5km, n601, σ1$23/440, mb4.8/185, MS4.0/39, 18C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**1.09**	**98**		**Pn**	**05 57 19.1**	**0.0**
HZTE	**Horizontes, Gu**	**1.09**	**98**	*eP*	**Pn**	05 57 19.1	0.0
HZTE				*eS*	**Sn**	**05 57 34.6**	**+1.0**
HZTE	**Horizontes, Gu**	**1.09**	**98**	*eP*	**Pn**	05 57 19.1	0.0
GBS3	**Finca Las Img**	**1.22**	**94**	⇑*eP*	**Pn**	**05 57 20.7**	**-0.2**
GBS3				*eS*	**Sn**	**05 57 37.3**	**+0.3**
LAPC	**Finca la Perla**	**1.25**	**94**	⇑*iP*	**Pn**	**05 57 21.0**	**-0.3**
LAPC				*eS*	**Sn**	**05 57 37.3**	**-0.2**
SAJU	**San Juanillo,**	**1.25**	**129**	*eP*	**Pn**	**05 57 19.6**	**-1.7**
CONN	**Concepcion**	**1.26**	**56**	*eP*	**Pn**	**05 57 21.7**	**+0.2**
BUEV	**Buena Vista**	**1.27**	**93**	⇑*eP*	**Pn**	**05 57 21.6**	**-0.1**
BUEV				*eS*	**Sn**	**05 57 38.2**	**+0.1**
GB1A	**Borinquen Arri**	**1.28**	**92**	⇑*iP*	**Pn**	**05 57 21.7**	**0.0**
GB1A				*eS*	**Sn**	**05 57 38.7**	**+0.3**
GPS3	**Bodega del ICE**	**1.31**	**95**	*eP*	**Pn**	05 57 21.9	-0.3
ORTG	**Ortega, Santa**	**1.32**	**112**	Pn	**Pn**	**05 57 21.5**	**-0.8**
ORTG	**Ortega, Santa**	**1.32**	**112**	*eP*	**Pn**	05 57 21.3	-0.9
ORTG	**Ortega, Santa**	**1.32**	**112**	*eP*	**Pn**	05 57 21.6	-0.8
GPS2	**Hotel Rincn d**	**1.33**	**95**	⇑*eP*	**Pn**	05 57 22.2	-0.2
GPS2				*eS*	**Sn**	05 57 39.3	-0.2
TISN	**Laguna Tiscapa**	**1.34**	**18**	*eP*	**Pb**	05 57 23.2	-0.2
BUAI	**Buenos Aires**	**1.34**	**89**	⇑*iP*	**Pn**	05 57 22.8	+0.2
MGAN	**Managua**	**1.35**	**19**	*eP*	**Pb**	05 57 23.3	-0.3
WILN	**Americas 2**	**1.38**	**21**	*eP*	**Pn**	05 57 23.6	+0.5
APYN	**Apoyeque**	**1.40**	**14**	*eP*	**Pn**	05 57 23.8	+0.3
GRZA	**Playa Garza**	**1.41**	**132**	*eP*	**Pn**	05 57 21.7	-1.8
DUNO	**Dulce Nombre,**	**1.42**	**123**		**Pn**	**05 57 22.5**	**-1.1**
DUNO	**Dulce Nombre,**	**1.42**	**123**	*eP*	**Pn**	05 57 22.4	-1.2
PLVR	**Palo Verde**	**1.42**	**111**	*eP*	**Pn**	**05 57 21.8**	**-2.0**
NICO	**Nicoya**	**1.43**	**120**	*eP*	**Pn**	05 57 22.9	-0.9
GUAB	**Guayabo de Bag**	**1.45**	**96**	⇑*eP*	**Pn**	05 57 24.0	-0.1
COLC	**Colonia**	**1.48**	**98**	⇑*eP*	**Pn**	05 57 24.5	0.0
COLC				*eS*	**Sn**	**05 57 43.5**	**+0.1**
HORNC	**Hornillas**	**1.50**	**96**	⇑*eP*	**Pn**	05 57 24.8	0.0
CUI	**Cuipilapa**	**1.52**	**98**	⇑*iP*	**Pn**	05 57 25.2	+0.2
CUI				*eS*	**Sn**	05 57 43.7	-0.6
INDI	**Punta indio, G**	**1.54**	**130**	*eP*	**Pn**	05 57 24.0	-1.2
MOMN	**Momotombo**	**1.54**	**6**	*eP*	**Pn**	05 57 25.5	+0.2
VMAR	**Armenia, Volca**	**1.55**	**92**	*eP*	**Pn**	05 57 26.2	+0.7
CNGN	**Cerro Negro**	**1.63**	**360**	Pn	**Pn**	05 57 27.0	+0.5
CNGN	**Cerro Negro**	**1.63**	**360**	*eP*	**Pn**	05 57 27.0	+0.5
ACAL	**Aguas Claras**	**1.65**	**98**	*eP*	**Pn**	05 57 27.5	+0.6
PTEN	**Parque Tenorio**	**1.69**	**95**	⇑*eP*	**Pn**	05 57 28.1	+0.7
TEL3	**Telica 3**	**1.70**	**355**	*eP*	**Pn**	05 57 28.1	+0.5
VERA	**Finca Concepci**	**1.80**	**90**	*eP*	**Pn**	05 57 29.5	+0.7
JTS	**Las Juntas de**	**1.81**	**108**		**Pn**	**05 57 28.6**	**-0.3**
JTS	**Las Juntas de**	**1.81**	**108**	*eP*	**Pn**	05 57 28.7	-0.3
ACON	**Acoyapa**	**1.85**	**54**		**Pn**	05 57 29.6	0.0
ACON	**Acoyapa**	**1.85**	**54**	*eP*	**Pn**	05 57 29.6	0.0
ACON	**Acoyapa**	**1.85**	**54**	⇑*eP*	**Pn**	05 57 29.4	-0.2
CRIN	**San Cristobal**	**1.86**	**349**		**Pn**	05 57 30.3	+0.6
CRIN	**San Cristobal**	**1.86**	**349**	*eP*	**Pn**	05 57 30.1	+0.4
CRIN	**San Cristobal**	**1.86**	**349**	*eP*	**Pn**	05 57 30.3	+0.6
BOAB	**BOACO BROADBAN**	**1.87**	**33**		**Pn**	05 57 30.1	+0.3
ARE1	**Arenal 1**	**1.99**	**101**	⇑*eP*	**Pn**	05 57 32.1	+0.6
CEDE	**Laguna Cedeo**	**2.00**	**101**	*eP*	**Pn**	05 57 32.2	+0.6
CEDE				⇑*eP*	**Pn**	05 57 32.2	+0.6
FORC	**Fortuna**	**2.03**	**101**	⇓*eP*	**Pn**	05 57 32.7	+0.6
LAFE	**Finca La Fe, P**	**2.05**	**121**	*eP*	**Pn**	05 57 31.1	-1.1
COVE	**Coope Vega, Sa**	**2.26**	**93**		**Pn**	05 57 35.0	-0.2
COVE	**Coope Vega, Sa**	**2.26**	**93**	*eP*	**Pn**	05 57 35.1	-0.2
CSGN	**Cosiguina Volc**	**2.26**	**338**	*eP*	**Pn**	05 57 35.9	+0.6
JACO	**JACO, Garabito**	**2.33**	**121**		**Pn**	05 57 36.8	+0.6
CNCH	**Conchagua**	**2.64**	**335**	⇑*eP*	**Pn**	05 57 41.1	+0.5
CNCH				*eS*	**Sn**	**05 58 11.8**	**-0.2**
CNCH	**Conchagua**	**2.64**	**335**	⇑*iP*	**Pn**	05 57 41.1	+0.5
CNCH				*eS*	**Sn**	**05 58 11.8**	**-0.2**
RCON	**San Juan de Ri**	**2.66**	**11**	*eP*	**Pn**	05 57 41.8	+1.0
HDC	**Heredia**	**2.68**	**108**		**Pn**	05 57 42.3	+1.2
LCND	**La Caada**	**2.69**	**334**	⇑*iP*	**Pn**	05 57 41.7	+0.5
LCND				*eS*	**Sn**	**05 58 12.8**	**-0.4**
LCND				IAML		05 58 20.7	
	comp=Z,1μm,0.4s						
LCND	**La Caada**	**2.69**	**334**	⇑*iP*	**Pn**	05 57 41.7	+0.5
LCND				*eS*	**Sn**	**05 58 12.8**	**-0.4**
LCND				IAML		05 58 20.7	
	comp=Z,1μm,0.4s						
ESPN	**Las Esperanzas**	**2.70**	**60**		**Pn**	05 57 41.6	+0.4
ESPN	**Las Esperanzas**	**2.70**	**60**	*eP*	**Pn**	05 57 42.0	+0.8
LCR2	**La Lucha 2**	**2.88**	**113**	*eP*	**Pn**	05 57 45.6	+1.8
CNRM	**Centro Naciona**	**2.97**	**331**	*eP*	**Pn**	05 57 46.1	+1.2
CNRM				*eS*	**Sn**	**05 58 19.2**	**-0.7**
CNRM	**Centro Naciona**	**2.97**	**331**	*eP*	**Pn**	05 57 46.1	+1.2
CNRM				*eS*	**Sn**	**05 58 19.2**	**-0.7**
RIMA	**Rio Macho**	**3.00**	**111**		**Pn**	05 57 46.6	+1.1
RIMA	**Rio Macho**	**3.00**	**111**	*eP*	**Pn**	05 57 46.4	+0.9
CVTR	**Volcan Turrial**	**3.01**	**106**		**Pn**	05 57 46.4	+0.5
PACA	**Pacayal**	**3.04**	**329**	*eP*	**Pn**	05 57 47.1	+1.1
PACA				*eS*	**Sn**	**05 58 21.1**	**-0.8**
PACA	**Pacayal**	**3.04**	**329**	*eP*	**Pn**	05 57 47.1	+1.1
PACA				*eS*	**Sn**	**05 58 21.1**	**-0.8**
CDM	**Cerro de Muert**	**3.17**	**114**	*eP*	**Pn**	05 57 49.2	+1.1
COEB	**Comit de Eme**	**3.17**	**326**	*eP*	**Pn**	05 57 48.1	+0.3
COEB	**Comit de Eme**	**3.17**	**326**	*eP*	**Pn**	05 57 48.1	+0.3
TGUH	**Tegucigalpa,Un**	**3.22**	**350**		**Pn**	05 57 50.0	+1.5
TGUH	**Tegucigalpa,Un**	**3.22**	**350**	*eP*	**Pn**	05 57 49.9	+1.3
PEZE	**Perez Zeledon,**	**3.32**	**116**		**Pn**	05 57 50.9	+1.0
BATAN	**Batan**	**3.35**	**103**		**Pn**	**05 57 51.1**	**+0.9**
COEG	**Centro de Oper**	**3.47**	**322**	*eP*	**Pn**	**05 57 52.3**	**+0.4**
COEG				IAML		05 58 39.0	
	comp=Z,1μm,0.4s						
COEG	**Centro de Oper**	**3.47**	**322**	*eP*	**Pn**	**05 57 52.3**	**+0.4**
COEG				IAML		05 58 39.0	
	comp=Z,1μm,0.4s						
LFRS	**El Faro**	**3.58**	**320**	*eP*	**Pn**	**05 57 54.2**	**+0.7**
LFRS	**El Faro**	**3.58**	**320**	*eP*	**Pn**	**05 57 54.2**	**+0.7**
SRBA	**San Rafael, Bu**	**3.67**	**116**		**Pn**	**05 57 56.4**	**+1.8**
SRBA	**San Rafael, Bu**	**3.67**	**116**	*eP*	**Pn**	**05 57 55.0**	**+0.4**
SNET	**Serv Nac Est T**	**3.74**	**319**		**Pn**	**05 57 56.1**	**+0.4**
DRK0	**Durika**	**3.75**	**115**		**Pn**	**05 57 59.1**	**+3.2**
MTO3	**Montecristo**	**4.37**	**324**		**Pn**	**05 58 05.8**	**+1.4**
CDITO	**Canoas**	**4.41**	**121**		**Pn**	**05 58 04.3**	**-0.4**
BRU2	**Volcan**	**4.45**	**117**		**Pn**	**05 58 07.1**	**+1.6**
BRU2	**Volcan**	**4.45**	**117**	*eP*	**Pn**	**05 58 08.8**	**+3.3**
ESQI	**Esquipulas**	**4.49**	**325**		**Pn**	**05 58 07.5**	**+1.6**
RTAL	**Retalhuleu**	**6.08**	**307**	Pn	**Pn**	**05 58 30.8**	**+3.0**
HUEH	**Huehuetenango**	**6.44**	**314**		**Pn**	**05 58 35.6**	**+2.7**
CACAO	**El Cacao, Vera**	**6.74**	**121**	*eP*	**Pn**	**05 58 37.7**	**+0.9**
PETF	**Flores**	**6.76**	**333**		**Pn**	**05 58 40.1**	**+3.1**
BCIP	**Isla Barro Col**	**6.96**	**103**	*eP*	**Pn**	**05 58 42.2**	**+2.3**
AZU	**Azuero**	**7.04**	**115**	*eP*	Pb	05 58 52.1	-8.5
CCIG	**Comitan**	**7.55**	**316**		**Pn**	**05 58 49.1**	**+1.1**
CMIG	**Matias Romero**	**10.07**	**309**	Pn	**Pn**	**05 59 24.9**	**+2.4**
	comp=Z,1.3nm,0.3s,baz=151,slow=8.3,SNR=26						
	comp=Z,18nm,0.8s						
SJCC	**San Jacinto, C**	**11.37**	**94**	*eP*	**Pn**	**05 59 43.4**	**+3.0**
TLIG	**Tlapa**	**13.29**	**301**	Pn	**Pn**	**06 00 10.7**	**+4.0**
SPBC	**San Pablo de B**	**13.52**	**112**	*eP*	**P**	**06 00 21.8**	**+2.9**
ROSC	**El Rosal**	**13.64**	**115**	LR	LR	06 05 24.8	
	comp=Z,577nm,19.8s,baz=294,slow=38						
SLOR	**San Lorenzo -**	**14.11**	**144**		**Pn**	**06 00 15.2**	**-3.1**
PORT	**Chimborazo Vol**	**14.56**	**147**		**Pn**	**06 00 24.6**	**0.0**
UNM	**Universidad Na**	**14.69**	**306**	Pn	**Pn**	**06 00 25.5**	**-0.5**
SDV	**Santo Domingo**	**15.95**	**96**	LR	LR	06 09 02.8	
	comp=Z,658nm,18.8s,baz=267,slow=47						
SDV	**Santo Domingo**	**15.95**	**96**		**Pn**	**06 00 40.8**	**-1.7**
BOSC	**San Juan Bosco**	**16.14**	**149**		**Pn**	**06 00 46.1**	**+1.2**
MOIG	**Morelia**	**16.49**	**304**		**P**	**06 00 50.5**	**-1.5**
MOIG				IAmb	IAmb	06 01 11.4	
	comp=Z,135nm,1.2s						
DWPF	**Disney Wildern**	**17.86**	**15**	P	**P**	**06 01 07.7**	**+1.0**
	baz=197						
BAUV	**El Baul**	**18.48**	**94**	P	**P**	**06 01 12.1**	**-1.8**
ZAIG	**Zacatecas**	**19.23**	**310**	P	**Pn**	**06 01 24.6**	**+1.2**
ATAH	**Atahualpa**	**19.70**	**155**	LR	LR	06 08 11.0	
	comp=Z,862nm,19.0s,baz=334,slow=34						
BRAL	**Brewton**	**20.21**	**359**	P	Pn	06 01 33.7	-0.8
	baz=178						
352A	**Blakely**	**20.58**	**4**	IAmb	IAmb	06 01 53.8	
	comp=Z,72nm,1.0s						
346A	**Big Creek Wild**	**20.58**	**353**	IAmb	IAmb	06 01 39.0	
	comp=Z,48nm,1.0s						
TIGA	**Tifton**	**20.68**	**8**	P	Pn	06 01 38.7	-1.3
	baz=188,SNR=6.5						
HKT	**Hockley**	**20.81**	**337**	P	Pn	06 01 40.0	-1.6
HKT				IAmb	IAmb	06 01 41.5	
	comp=Z,64nm,1.1s						
250A	**Grady**	**21.02**	**1**	P	**P**	**06 01 40.6**	**-0.7**
250A				IAmb	IAmb	06 01 57.4	
	comp=Z,53nm,1.2s						
833A	**Chaparral WMA,**	**21.06**	**327**	P	**P**	**06 01 41.7**	**-0.1**
833A				IAmb	IAmb	06 01 52.8	
	comp=Z,37nm,0.9s						
833A	**Chaparral WMA,**	**21.06**	**327**	P	**P**	**06 01 41.4**	**-0.5**
	baz=143,SNR=13						
342A	**Flagon Creek P**	**21.07**	**347**	IAmb	IAmb	06 01 48.3	
	comp=Z,70nm,0.9s						
SJG	**San Juan**	**21.15**	**68**	LR	LR	06 09 22.4	
	comp=Z,189nm,21.1s,baz=340,slow=36						
PDPR	**Patillas Dam,**	**21.23**	**68**	P	**P**	**06 01 45.8**	**+2.0**
PDPR				IAmb	IAmb	06 01 54.5	
	comp=Z,41nm,0.8s						
VBMS	**Vicksburg**	**21.54**	**351**	P	**P**	**06 01 47.0**	**+0.1**
VBMS	**Vicksburg**	**21.54**	**351**	P	**P**	**06 01 47.1**	**+0.1**
	baz=169						
152A	**Waverly Hall**	**21.78**	**5**	IAmb	IAmb	06 01 53.1	
	comp=Z,59nm,0.8s						
NATX	**Nacogdoches**	**22.06**	**342**	P	**P**	**06 01 52.6**	**0.0**
NATX	**Nacogdoches**	**22.06**	**342**

comp=Z,39nm,0.9s
KMSC **Kings Mountain** 24.66 11 P P 06 02 17.7 -0.7
baz=192,SNR=12
ABTX **Abilene, Hawle** 24.72 333 IAmb IAmb 06 02 33.5
comp=Z,25nm,1.0s
ABTX **Abilene, Hawle** 24.72 333 P P 06 02 18.4 -0.6
baz=148
NNA **Nana** 24.72 156 LR LR 06 11 01.4
comp=Z,152nm,19.4s,baz=353,slow=34
V48A **Smith Brothers** 24.77 360 P P 06 02 18.7 -0.6
V48A IAmb IAmb 06 02 20.4
comp=Z,29nm,1.1s
TKL **Tuckaleechee C** 24.82 6 P P 06 02 20.1 +0.2
comp=Z,16nm,0.9s,baz=183,slow=12,SNR=11
TKL LR LR 06 12 49.7
comp=Z,319nm,18.5s,baz=16,slow=39
TKL **Tuckaleechee C** 24.82 6 P P 06 02 19.4 -0.5
TKL IAmb IAmb 06 02 30.1
comp=Z,33nm,1.1s
WHAR **Wooly Hollow** 24.84 349 P P 06 02 18.5 -1.5
WHAR IAmb IAmb 06 02 19.8
comp=Z,31nm,0.9s
X37A **Clayton** 24.91 343 IAmb IAmb 06 02 23.6
comp=Z,46nm,1.1s
V51A **Loudon** 24.92 5 P P 06 02 20.2 -0.6
V51A IAmb IAmb 06 02 21.7
comp=Z,24nm,0.8s
W57A **Gilead** 24.94 13 IAmb IAmb 06 02 21.5
comp=Z,23nm,0.9s
LOOK **Love County** 24.94 339 IAmb IAmb 06 02 24.1
comp=Z,88nm,0.8s
V53A **Saluda** 24.95 8 IAmb IAmb 06 02 31.0
comp=Z,38nm,1.2s
V52A **Sevierville** 25.02 6 IAmb IAmb 06 02 29.0
comp=Z,31nm,1.4s
CLTN **Cedars of Leba** 25.12 1 IAmb IAmb 06 02 24.7
comp=Z,30nm,0.8s
WVT **Waverly** 25.17 358 P P 06 02 21.2 -1.8
WVT **Waverly** 25.17 358 P P 06 02 21.4 -1.6
baz=177
V55A **Taylorsville** 25.37 10 IAmb IAmb 06 02 28.3
comp=Z,25nm,0.9s
FCAR **Ozark Folk Cen** 25.40 350 P P 06 02 23.7 -1.4
FCAR IAmb IAmb 06 02 25.1
comp=Z,27nm,1.1s
LCAR **Lake Charles** 25.42 352 P P 06 02 23.5 -1.7
LCAR IAmb IAmb 06 02 24.7
comp=Z,31nm,1.0s
U49A **Red Boiling Sp** 25.55 2 IAmb IAmb 06 02 26.9
comp=Z,33nm,1.4s
CNNC **Cliffs of the** 25.55 17 P P 06 02 25.2 -1.2
baz=200
TZTN **Tazewell** 25.73 6 IAmb IAmb 06 02 31.4
comp=Z,16nm,1.0s
TZTN **Tazewell** 25.73 6 P P 06 02 27.4 -0.6
baz=187
PARMO **Parma** 25.83 354 P P 06 02 27.8 -1.2
U54A **Nelsons Funny** 25.92 9 IAmb IAmb 06 02 33.9
comp=Z,42nm,1.0s
U56A **King** 26.01 12 IAmb IAmb 06 02 31.8
comp=Z,30nm,1.1s
T47A **Sharon Grove** 26.01 359 IAmb IAmb 06 02 30.5
comp=Z,34nm,1.1s
PBMO **Poplar Bluff** 26.02 353 IAmb IAmb 06 02 30.3
comp=Z,23nm,1.0s
LPIG **La Paz** 26.03 303 LR LR 06 13 21.7
comp=Z,164nm,19.1s,baz=110,slow=38
HHAR **Hobbs** 26.14 347 IAmb IAmb 06 02 31.5
comp=Z,13nm,0.9s
WMOK **Wichita Mounta** 26.20 337 P P 06 02 33.3 +0.9
baz=152,SNR=39
TUL1 **Leonard** 26.26 343 P P 06 02 31.4 -1.5
baz=159,SNR=19
RLO **Rose Lookout** 26.29 345 IAmb IAmb 06 02 32.9
comp=Z,12nm,1.0s
U38A **Gravette** 26.39 346 IAmb IAmb 06 02 34.3
comp=Z,23nm,1.0s
DEOK **Depew** 26.41 342 IAmb IAmb 06 02 34.1
comp=Z,30nm,0.9s
OK025 **Westminster Rd** 26.44 340 IAmb IAmb 06 02 39.9
comp=Z,23nm,0.7s
CGM3 **Cape Girardeau** 26.45 355 IAmb IAmb 06 02 34.3
comp=Z,13nm,0.8s
OK030 **Cody Creek RV** 26.58 341 P 06 02 34.4 -1.4
BCOK **Bluff Creek, N** 26.60 340 IAmb IAmb 06 02 39.1
comp=Z,26nm,0.8s
MGMO **Mountain Grove** 26.65 350 IAmb IAmb 06 02 36.2
comp=Z,17nm,1.1s
OK029 **Liberty Lake** 26.67 340 IAmb IAmb 06 02 37.0
comp=Z,31nm,0.8s
QUOK **Quay** 26.78 342 IAmb IAmb 06 02 37.5
comp=Z,48nm,0.8s
S51A **Beattyville** 26.81 5 IAmb IAmb 06 02 38.1
comp=Z,15nm,0.8s
S44A **Carbondale** 26.81 356 IAmb IAmb 06 02 37.6
comp=Z,24nm,0.8s
SIUC **Southern Illin** 26.83 356 IAmb IAmb 06 02 37.8
comp=Z,27nm,0.9s
BLA **Blacksburg** 26.84 11 IAmb IAmb 06 02 39.2
comp=Z,33nm,1.1s
BLA **Blacksburg** 26.84 11 P P 06 02 37.7 -0.5
baz=193
T57A **Hurt** 26.87 13 IAmb IAmb 06 02 39.2
comp=Z,19nm,0.8s
CSTR **Hydro, Custer** 26.97 338 IAmb IAmb 06 02 43.4
comp=Z,5.8nm,0.9s
USIN **University of** 27.00 358 P P 06 02 38.4 -1.1
USIN IAmb IAmb 06 02 39.4
comp=Z,52nm,1.4s
S54A **Dingess, Beckl** 27.25 9 IAmb IAmb 06 02 41.8
comp=Z,17nm,0.9s
MSTX **Muleshoe** 27.30 330 IAmb IAmb 06 02 46.6
comp=Z,20nm,0.8s
MSTX **Muleshoe** 27.30 330 P P 06 02 41.5 -1.0
baz=143,SNR=10
R49A **Shelbyville** 27.35 3 IAmb IAmb 06 02 42.6
comp=Z,22nm,0.9s
S39A **Bolivar** 27.37 349 IAmb IAmb 06 02 42.9
comp=Z,27nm,0.9s
CCM **Cathedral Cave** 27.38 352 P P 06 02 40.9 -2.1
CCM IAmb IAmb 06 02 42.4
comp=Z,25nm,1.0s
CCM **Cathedral Cave** 27.38 352 P P 06 02 41.1 -1.9
baz=170
R50A **Paris** 27.38 4 IAmb IAmb 06 02 43.3
comp=Z,14nm,0.8s
T35A **Sooner Cattle** 27.41 343 IAmb IAmb 06 02 43.6
comp=Z,23nm,1.1s
CROK **Carrier** 27.49 340 IAmb IAmb 06 02 43.9
comp=Z,22nm,0.9s
AMTX **Amarillo** 27.54 333 IAmb IAmb 06 03 00.9
comp=Z,28nm,0.9s
AMTX **Amarillo** 27.54 333 P P 06 02 43.6 -0.9
baz=146
ELIS **Ellis County** 27.61 337 IAmb IAmb 06 02 49.9
comp=Z,55nm,0.8s
R53A **Hurricane** 27.68 8 IAmb IAmb 06 02 45.9
comp=Z,26nm,0.8s
OK038 **West end E0370** 27.73 339 IAmb IAmb 06 03 05.9
comp=Z,25nm,1.0s
R40A **Maddies Statio** 27.76 351 IAmb IAmb 06 02 45.6
comp=Z,19nm,1.3s
OLIL **Olney** 27.78 358 IAmb IAmb 06 02 46.4
comp=Z,22nm,0.9s
OK032 **Salt Plains WL** 27.84 340 IAmb IAmb 06 02 47.1
comp=Z,25nm,1.0s
KAN17 **Caldwell West** 27.91 341 IAmb IAmb 06 02 52.3
comp=Z,17nm,0.9s
R55A **Marlinton** 27.93 11 IAmb IAmb 06 02 49.0
comp=Z,24nm,0.8s
NOKA **Waynoka** 27.94 339 IAmb IAmb 06 02 52.5
comp=Z,39nm,0.7s
KAN01 **Argonia South** 28.01 341 IAmb IAmb 06 02 52.9
comp=Z,18nm,0.8s
R58B **Mineral** 28.12 15 IAmb IAmb 06 02 50.4
comp=Z,15nm,1.2s
BLO **Bloomington** 28.19 0 IAmb IAmb 06 02 49.8
comp=Z,30nm,0.9s
CBN **Corbin Frederi** 28.48 16 P P 06 02 52.3 -0.4
baz=199
P49A **Miami Univ. Ec** 28.61 3 IAmb IAmb 06 02 53.3
comp=Z,21nm,0.8s
P49A **Miami Univ. Ec** 28.61 3 P P 06 02 52.0 -1.9
baz=184,SNR=8.1
P51A **Williamsport** 28.68 6 IAmb IAmb 06 02 54.6
comp=Z,18nm,0.8s
ETMB **Extrema** 28.93 135 P P 06 02 58.4 +1.3
ETMB IAmb IAmb 06 03 27.3
comp=Z,7.8nm,1.0s
ETMB **Extrema** 28.93 135 eP P 06 02 58.1 +1.1
P52A **Corning** 28.94 7 P P 06 02 55.9 -0.9
baz=189,SNR=18
121A **Cookes Peak, D** 29.02 321 IAmb IAmb 06 03 16.7
comp=Z,18nm,1.2s
121A **Cookes Peak, D** 29.02 321 P P 06 02 58.0 +0.1
baz=133
O44A **Mansfield** 29.21 357 P P 06 02 57.6 -1.6
319A **Douglas** 29.21 318 P P 06 03 00.0 +0.5
319A IAmb IAmb 06 03 20.5
comp=Z,10nm,0.9s
O49A **Covington** 29.28 4 IAmb IAmb 06 02 59.6
comp=Z,22nm,0.9s
P38A **Dawn** 29.28 349 IAmb IAmb 06 02 59.1
comp=Z,24nm,0.9s
O48B **Farmland** 29.31 2 P P 06 02 58.2 -1.9
baz=183,SNR=10
MCWV **Mont Chateau** 29.32 11 IAmb IAmb 06 03 00.7
comp=Z,16nm,0.8s
MCWV **Mont Chateau** 29.32 11 P P 06 02 59.4 -0.8
baz=194
SFIN **Lafayette** 29.40 359 P P 06 02 59.0 -1.9
baz=179
MACA **Manacapuru-AM** 29.40 117 P P 06 03 00.8 -0.4
MACA IAmb IAmb 06 03 04.3
comp=Z,18nm,1.0s
MACA **Manacapuru-AM** 29.40 117 eP P 06 03 01.2 0.0
ACSO **Alum Creek Sta** 29.43 6 P P 06 02 59.7 -1.5
baz=187,SNR=11
R32A **Long Quarter,** 29.47 341 IAmb IAmb 06 03 02.2
comp=Z,16nm,0.8s
KSU1 **Kansas State U** 29.48 344 P P 06 03 00.1 -1.5
baz=160
P57A **Homestead Farm** 29.53 14 IAmb IAmb 06 03 03.5
comp=Z,24nm,0.8s
HDIL **Hopedale** 29.66 356 P P 06 03 01.5 -1.7
baz=174,SNR=13
O53A **New Philadelph** 29.67 8 P P 06 03 02.2 -1.1
baz=191,SNR=28
O54A **Avella** 29.73 10 IAmb IAmb 06 03 04.0
comp=Z,14nm,0.9s
SDMD **Soldier's Deli** 29.75 16 IAmb IAmb 06 03 04.8
comp=Z,9.2nm,0.8s
N47A **Urbana** 29.91 2 IAmb IAmb 06 03 04.3
comp=Z,12nm,0.8s
N41A **Harden Midland** 29.95 354 IAmb IAmb 06 03 04.7
comp=Z,19nm,0.8s
ANMO **Albuquerque** 29.98 326 P P 06 03 07.9 +1.5
comp=Z,5.8nm,0.8s,baz=144,slow=6.9,SNR=25
ANMO PcP PcP 06 06 10.6 +1.9
comp=Z,1.7nm,0.9s,baz=155,slow=4.5,SNR=4.5
comp=Z,5.8nm,0.8s
ANMO **Albuquerque** 29.98 326 P P 06 03 06.8 +0.4
ANMO **Albuquerque** 29.98 326 P P 06 03 06.7 +0.3
baz=138
N51A **Ashland** 30.18 7 IAmb IAmb 06 03 07.5
comp=Z,18nm,0.8s
N53A **Lisbon** 30.27 9 P P 06 03 07.1 -1.6
M44A **Midewin, Midew** 30.43 358 IAmb IAmb 06 03 08.8
comp=Z,26nm,1.0s
T25A **Trinidad** 30.64 332 P P 06 03 13.0 +0.8
baz=144,SNR=5.5
SSPA **Standing Stone** 30.66 13 P P 06 03 11.3 -0.8
SSPA **Standing Stone** 30.66 13 P P 06 03 11.5 -0.5
baz=197
TUC **Tucson** 30.80 318 P P 06 03 16.9 +3.4
TUC **Tucson** 30.80 318 P P 06 03 13.9 +0.4
baz=128
N35A **Tabor** 30.90 347 P P 06 03 12.8 -1.5
M53A **WI Miller and** 30.91 9 P P 06 03 13.3 -1.0
baz=191,SNR=19
L44A **Lake County Fo** 31.21 358 P P 06 03 14.6 -2.3
baz=177,SNR=5.7
LUPA **Lehigh Univers** 31.26 17 IAmb IAmb 06 03 18.4
comp=Z,14nm,0.8s
M55A **Ridgway** 31.27 12 IAmb IAmb 06 03 17.7
comp=Z,20nm,1.1s
L40A **Anamosa** 31.33 354 P P 06 03 16.4 -1.5
KSCO **Kaye Shedlock'** 31.43 336 P P 06 03 18.1 -1.0
baz=149
SCIA **State Center** 31.45 351 P P 06 03 17.6 -1.4
SCIA IAmb IAmb 06 03 18.5
comp=Z,22nm,1.1s
SDCO **Great Sand Dun** 31.65 331 P P 06 03 21.3 +0.1
baz=143,SNR=16
ERPA **Erie** 31.68 10 P P 06 03 19.9 -1.2
baz=192,SNR=11
K50A **Casco** 31.99 6 IAmb IAmb 06 03 23.2
comp=Z,18nm,0.9s
BGNE **Belgrade** 32.05 344 P P 06 03 22.9 -1.4
baz=158
PAL **Palisades** 32.07 18 P P 06 03 23.7 -0.8
baz=204
JFWS **Jewell Farm** 32.08 355 P P 06 03 22.4 -2.2
baz=173,SNR=20
K38A **Parkersburg** 32.10 352 IAmb IAmb 06 03 23.9
comp=Z,20nm,0.8s
WVNY **West Valley, N** 32.21 11 IAmb IAmb 06 03 25.9
comp=Z,16nm,0.9s
J47A **Sunmer** 32.29 3 IAmb IAmb 06 03 25.1
comp=Z,20nm,0.9s
S22A **4UR Ranch, Cre** 32.30 329 P P 06 03 27.1 +0.2
baz=140,SNR=16
BINY **Binghamton** 32.59 15 P P 06 03 28.4 -0.7
baz=200,SNR=11
LPAZ **La Paz** 32.64 145 LR LR 06 17 11.5
comp=Z,324nm,18.3s,baz=330,slow=37
LPAZ **La Paz** 32.64 145 eP P 06 03 31.7 +1.2
MMNY **Mt. Morris Dam** 32.66 12 IAmb IAmb 06 03 29.5
comp=Z,20nm,0.9s
MVCO **Mesa Verde** 32.76 327 IAmb IAmb 06 03 33.9
comp=Z,10nm,0.9s
MVCO **Mesa Verde** 32.76 327 P P 06 03 31.3 +0.4
baz=137,SNR=8.4
WUAZ **Wupatki** 33.23 322 IAmb IAmb 06 03 40.8
comp=Z,9.0nm,0.9s
WUAZ **Wupatki** 33.23 322 P P 06 03 35.8 +0.9
baz=131,SNR=5.5
ISCO **Idaho Springs** 33.35 333 P P 06 03 36.4 +0.3
baz=144
SMCO **Snowmass** 33.48 331 P P 06 03 37.1 -0.3
PV13 **Radium Mtn., P** 33.63 328 IAmb IAmb 06 03 41.5
comp=Z,7.6nm,0.8s
PV07 **Paradox Valley** 33.75 328 IAmb IAmb 06 03 53.4
comp=Z,12nm,1.2s
L61B **Northampton** 33.77 19 P P 06 03 38.1 -1.2
baz=205
PV11 **David Mesa, Pa** 33.77 328 IAmb IAmb 06 03 43.4
comp=Z,14nm,0.7s
ECSD **EROS Data Cent** 33.86 347 P P 06 03 38.4 -1.7
ECSD IAmb IAmb 06 03 39.0
comp=Z,23nm,1.0s
ECSD **EROS Data Cent** 33.86 347 P P 06 03 37.9 -2.2
baz=162,SNR=24
J58A **Remsen** 33.86 15 IAmb IAmb 06 03 40.2
comp=Z,15nm,0.9s
GLMI **Grayling** 33.89 3 P P 06 03 37.8 -2.5
baz=183,SNR=5.6
PV10 **Paradox Valley** 33.91 328 IAmb IAmb 06 03 43.1
comp=Z,14nm,0.7s
J59A **Piesco** 34.16 16 IAmb IAmb 06 03 42.0
comp=Z,15nm,1.1s
MDP **Montagnes des** 34.19 97 LR LR 06 18 36.6
comp=Z,192nm,19.2s,baz=292,slow=39
PDMCI **Parker Dam,Lak** 34.24 317 P P 06 03 43.7 +0.2
baz=126
ITTB **Itaituba** 34.34 115 eP P 06 03 45.1 +0.5
N23A **Red Feather La** 34.39 334 P P 06 03 45.3 +0.2
baz=145
SADO **Sadowa** 34.41 10 LR LR 06 18 27.6
comp=Z,235nm,18.2s,baz=192,slow=38
SADO **Sawa** 34.41 10 IAmb IAmb 06 03 44.1
comp=Z,21nm,0.9s
G40A **Rib Lake** 34.41 356 IAmb IAmb 06 03 43.8
comp=Z,21nm,0.9s
J61A **Chester** 34.62 18 IAmb IAmb 06 03 47.4
comp=Z,16nm,1.1s
SPMN **Marine on St.** 34.64 352 P P 06 03 44.1 -2.7
baz=169,SNR=23
MALB **Monte Alegre** 34.65 109 eP P 06 03 47.5 +0.1
IKP **In-Ko-Pah, Jac** 34.67 313 P P 06 03 47.8 +0.4
baz=122
BC3 **Big Chuckawall** 34.75 315 P P 06 03 49.8 +1.7
baz=124
F42A **Maple Grove Fa** 34.80 358 IAmb IAmb 06 03 54.2
comp=Z,7.4nm,0.6s
IRM **Iron Mountain** 34.83 316 P P 06 03 49.8 +1.1
baz=125
O20A **White River Ci** 34.84 330 IAmb IAmb 06 03 58.5
comp=Z,12nm,1.1s
O20A **White River Ci** 34.84 330 P P 06 03 49.4 +0.5
baz=141
PKCU **Pink Cliffs** 35.08 323 IAmb IAmb 06 04 06.9
comp=Z,32nm,1.4s
SUSD **Miller** 35.09 345 P P 06 03 48.5 -2.2
baz=158
COWI **Conover** 35.18 357 P P 06 03 49.1 -2.4
COWI IAmb IAmb 06 03 50.0
comp=Z,19nm,0.8s
LONY **Lake Ozonia** 35.22 15 IAmb IAmb 06 03 51.7
comp=Z,21nm,1.1s
LONY **Lake Ozonia** 35.22 15 P P 06 03 50.2 -1.7
baz=201,SNR=8.4
SRU **San Rafael Swe** 35.24 327 IAmb IAmb 06 03 54.8
comp=Z,12nm,0.8s
BELC **Belle Mtn. Jos** 35.32 315 P P 06 03 53.9 +0.8
baz=124
F36A **Milaca** 35.36 352 IAmb IAmb 06 03 52.1
comp=Z,20nm,0.9s
VILB **Vilhena** 35.38 131 P P 06 03 57.0 +3.4
VILB IAmb IAmb 06 04 01.7
comp=Z,12nm,1.0s
VILB **Vilhena** 35.38 131 eP P 06 03 54.0 +0.4
TPFO **Pinon Flats** 35.42 314 P P 06 03 54.9 +0.9
baz=122
PFO **Pinyon Flats O** 35.43 314 LR LR 06 21 13.6
comp=Z,197nm,19.0s,baz=130,slow=41
PFO **Pinyon Flats O** 35.43 314 P P 06 03 54.5 +0.5
baz=122
P18A **Preston Nutter** 35.47 328 IAmb IAmb 06 03 57.3
comp=Z,7.9nm,0.8s
GMRC **Granite Mounta** 35.53 317 P P 06 03 56.8 +1.9
baz=125
P17A **Butcher Ranch,** 35.62 327 IAmb IAmb 06 03 58.5
comp=Z,18nm,0.9s
MVU **Marysvale** 35.74 325 IAmb IAmb 06 04 00.5
comp=Z,18nm,0.9s
NPGB **Novo Progresso** 35.91 118 eP P 06 03 57.7 -0.5
MURC **Murrieta** 35.94 314 P P 06 03 59.9 +1.6
baz=122
TCRU **Three Creeks R** 35.95 325 IAmb IAmb 06 04 05.7
comp=Z,8.2nm,0.9s
HEC **Hector,Ludlow** 36.02 316 P P 06 03 59.7 +0.8
baz=124
K22A **Casper** 36.08 335 P P 06 03 59.9 +0.3
baz=145
D41A **Chassel** 36.11 358 IAmb IAmb 06 03 58.3
comp=Z,19nm,1.0s
MCPB **Macapa, AP** 36.20 106 eP P 06 03 59.5 -1.2
MNTQ **Montreal, Queb** 36.29 16 IAmb IAmb 06 04 00.7
comp=Z,17nm,1.0s
RSSD **Black Hills** 36.37 339 P P 06 04 02.4 +0.4
baz=150
MPU **Maple Canyon** 36.48 327 P P 06 04 03.4 +0.4
GSC **Goldstone, Bar** 36.60 317 P P 06 04 04.9 +1.0
baz=124
SIV **San Ignacio** 36.81 136 LR LR 06 19 13.8
comp=Z,222nm,20.8s,baz=328,slow=36
G62A **West of Eustis** 36.94 19 IAmb IAmb 06 04 07.1
comp=Z,15nm,1.0s
EYMN **Ely** 37.18 355 P P 06 04 05.9 -2.7
baz=172
EDW2 **Edwards Air Fo** 37.18 315 P P 06 04 11.0 +2.1
baz=122
TPNV **Topopah Spring** 37.19 319 P P 06 04 11.7 +2.7
baz=126,SNR=6.3
PDRB **Porto dos Gac** 37.22 126 eP P 06 04 09.5 +0.2
DUG **Dugway, Tooele** 37.25 326 P P 06 04 09.9 +0.4
baz=134
S11A **Rachel** 37.29 320 IAmb IAmb 06 04 15.8
comp=Z,16nm,1.1s
SPR3 **Spring Creek 3** 37.30 323 IAmb IAmb 06 04 25.6
comp=Z,2.6nm,0.9s
SPR3 PcP PcP 06 06 31.3 +1.9
FURC **Furnace Creek,** 37.30 318 P P 06 04 11.3 +1.5
baz=125
PKME **Peaks-Kenny Pk** 37.39 20 P P 06 04 09.7 -0.7
baz=209
MPMC **Manual Prospec** 37.48 317 P P 06 04 12.4 +0.8
baz=124
BW06 **Boulder Array** 37.51 332 P P 06 04 10.9 -0.9
baz=141,SNR=6.5
PDAR **Pinedale Array** 37.51 332 P P 06 04 11.5 -0.3
comp=Z,2.9nm,0.7s,baz=129,slow=8.2,SNR=26
PDAR PcP PcP 06 06 29.9 0.0
comp=Z,2.0nm,1.1s,baz=115,slow=6.7,SNR=5.5
comp=Z,2.9nm,0.7s
PDAR **Pinedale Array** 37.51 332 P P 06 04 11.4 -0.4
CLDB **Colider** 37.55 124 eP P 06 04 12.0 -0.2
HWUT **Hardware Ranch** 37.60 329 IAmb IAmb 06 04 14.9
comp=Z,14nm,0.8s
R11A **Troy Canyon, C** 37.63 322 P P 06 04 12.4 -0.4
baz=129
PTLB **Pontes e Lacer** 37.80 133 P P 06 04 13.3 -0.8
PTLB IAmb IAmb 06 04 17.7
comp=Z,6.3nm,0.9s
PTLB **Pontes e Lacer** 37.80 133 eP P 06 04 14.8 +0.7
VLDQ **Val d'Or** 37.93 10 P P 06 04 13.2 -1.7
GRAC **Grapevine Rang** 37.94 318 IAmb IAmb 06 04 19.6
comp=Z,16nm,1.1s
GRAC **Grapevine Rang** 37.94 318 P P 06 04 17.8 +2.5
baz=125,SNR=9.7
AGMN **Agassiz Nation** 38.10 350 IAmb IAmb 06 04 15.3
comp=Z,26nm,1.0s
AGMN **Agassiz Nation** 38.10 350 P P 06 04 14.2 -2.2
baz=165,SNR=14
LATQ **La Tuque** 38.25 15 IAmb IAmb 06 04 17.1
comp=Z,16nm,1.0s
MDND **Maddock** 38.43 346 P P 06 04 17.3 -1.8
baz=159,SNR=5.5
REDW **Red Top Meadow** 38.57 331 P P 06 04 20.4 -0.4
REDW IAmb IAmb 06 04 23.0
comp=Z,18nm,0.9s
SNOW **Snow King Moun** 38.60 332 IAmb IAmb 06 04 23.4
comp=Z,15nm,0.8s
RLMT **Red Lodge** 39.24 335 P P 06 04 25.5 -0.8
baz=143,SNR=5.7
NVAR **Mina Array Bea** 39.38 320 P P 06 04 29.9 +2.4
comp=Z,5.9nm,0.9s,baz=134,slow=6.1,SNR=34
NVAR PcP PcP 06 06 38.0 +2.2
comp=Z,4.7nm,0.8s,baz=139,slow=4.3,SNR=21
comp=Z,5.9nm,0.9s
BATG **Bathurst New B** 40.26 22 P P 06 04 33.8 -0.7
BATG IAmb IAmb 06 04 47.1
comp=Z,23nm,1.4s
HLID **Hailey** 40.47 329 P P 06 04 36.6 +0.2
HLID **Hailey** 40.47 329 P P 06 04 36.6 +0.2
baz=135
PNTR **Pine Nut** 40.58 319 P P 06 04 41.1 +3.5
SALV **Santo Antonio** 40.61 130 eP P 06 04 38.0 +0.3
MCMT **McKenzie Canyo** 40.62 331 P P 06 04 38.5 +0.7
BOZ **Bozeman (W)** 40.65 333 P P 06 04 37.6 -0.3
BOZ **Bozeman (W)** 40.65 333 P P 06 04 37.7 -0.2
baz=140,SNR=8.8
DLMT **Dillon** 40.91 332 P P 06 04 40.7 +0.7
MPK **Martis Peak** 40.98 319 P P 06 04 43.5 +2.6
MPK IAmb IAmb 06 04 44.1
comp=Z,19nm,1.1s
BEKR **Beckworth** 41.51 320 P P 06 04 46.3 +1.2
SNDB **Serra Nova Dou** 41.85 122 eP P 06 04 48.6 +0.6
WVOR **Wild Horse Val** 42.01 324 P P 06 04 49.4 +0.3
PLID **Pearl Lake** 42.35 329 P P 06 04 51.4 -0.6
MSO **Missoula** 42.62 332 P P 06 04 53.3 -0.7
MSO **Missoula** 42.62 332 P P 06 04 53.5 -0.6
baz=138,SNR=5.8
SMTB **Santa Maria do** 43.57 115 eP P 06 05 01.7 -0.2
RPN **Rapa Nui** 43.69 210 LR LR 06 18 36.5
comp=Z,233nm,18.1s,baz=27,slow=29
YBH **Yreka Blue Hor** 44.03 321 LR LR 06 26 23.2
comp=Z,250nm,20.9s,baz=144,slow=40
PEXB **Peixe** 44.44 120 eP P 06 05 08.4 -0.6
H03N2 **Juan Fernandez** 44.67 171 T T 06 52 56.3
baz=349,slow=76,SNR=17
H03N1 **Juan Fernandez** 44.68 171 T T 06 53 00.0
baz=349,slow=76,SNR=14
H03N3 **Juan Fernandez** 44.69 171 T T 06 52 57.0
baz=349,slow=76,SNR=17
I05D **Terrebonne, OR** 44.74 325 P P 06 05 10.5 -0.5
baz=127
E08A **Dider Farm, El** 44.87 328 P P 06 05 12.5 +0.6
E08A IAmb IAmb 06 05 13.9
comp=Z,10nm,1.2s
I04A **Tendick Farm,** 45.03 323 P P 06 05 12.8 -0.6
baz=126

HAWA **Hanford** 45.05 328 IAmb IAmb 06 05 15.0
comp=Z,7.8nm,0.8s
NEW **Newport** 45.15 331 P **P** 06 05 13.2 -0.9
baz=135
K02D **Willamette Mer** 45.16 321 P **P** 06 05 14.1 -0.3
baz=123
G05D **Wamic, OR** 45.28 326 P **P** 06 05 15.4 +0.2
baz=128
I03D **Drain, OR** 45.53 323 P **P** 06 05 17.2 0.0
baz=124
J01E **Myrtle Point** 45.58 322 P **P** 06 05 17.5 -0.1
baz=124
H04D **Lebanon** 45.65 324 P **P** 06 05 18.1 -0.1
baz=126
G03D **McMinnville, O** 46.36 324 P **P** 06 05 23.8 +0.1
baz=126
BDFB **Brasilia** 46.48 124 P **P** 06 05 26.0 +0.8
comp=Z,7.1nm,0.8s,baz=288,slow=6.0,SNR=12
BDFB LR LR 06 25 40.0
comp=Z,476nm,18.1s,baz=307,slow=37
comp=Z,7.1nm,0.8s
BDFB **Brasilia** 46.48 124 P **P** 06 05 25.3 +0.1
BDFB IAmb IAmb 06 05 26.8
comp=Z,16nm,1.1s
BDFB **Brasilia** 46.48 124 *e*P **P** 06 05 26.0 +0.8
SCHQ **Schefferville** 46.59 16 P **P** 06 05 22.3 -3.1
comp=Z,10nm,1.0s,baz=208,slow=5.9,SNR=9.9
SCHQ PcP **PcP** 06 06 58.1 -1.2
comp=Z,1.6nm,0.8s,baz=315,slow=1.4,SNR=2.0
SCHQ LR LR 06 25 41.1
comp=Z,391nm,18.8s,baz=213,slow=38
comp=Z,10nm,1.0s
SCHQ **Schefferville** 46.59 16 P **P** 06 05 22.4 -2.9
SCHQ IAmb IAmb 06 05 23.6
comp=Z,8.3nm,0.9s
CPUP **Villa Florida** 46.71 143 LR LR 06 25 48.8
comp=Z,116nm,18.6s,baz=330,slow=37
CPUP **Villa Florida** 46.71 143 *e*P **P** 06 05 26.8 0.0
SDBA **SAO DESIDERIO** 47.51 118 *e*P **P** 06 05 32.8 -0.4
IPMB **Ipameri, GO** 47.60 127 *e*P **P** 06 05 34.6 +0.8
LLLB **Lillooet** 49.01 331 IAmb IAmb 06 05 46.3
comp=Z,9.0nm,1.0s
JANB **Januaria** 49.26 121 *e*P **P** 06 05 46.5 -0.2
PMNB **Patos De Minas** 49.31 126 *e*P **P** 06 05 47.9 +0.9
MC01 **Montes Claros** 50.38 122 *e*P **P** 06 05 54.8 -0.4
ITAB **Concordia** 50.58 139 *e*P **P** 06 05 56.7 +0.2
DIAM **Diamantina, MG** 51.41 124 *e*P **P** 06 06 01.8 -1.2
VAO **Valinhos** 51.44 131 *e*P **P** 06 06 05.1 +2.0
PLTB **Pedras Altas** 52.92 144 *e*P **P** 06 06 15.6 +1.7
BBB **Bella Bella** 53.05 329 LR LR 06 31 56.1
comp=Z,114nm,20.9s,baz=130,slow=40
RCBR **Riachuelo** 53.21 106 LR LR 06 31 02.3
comp=Z,364nm,18.9s,baz=84,slow=39
NAN01 **Guarapari, ES** 54.12 121 *e*P **P** 06 06 21.8 -1.1
FRB **Frobisher Bay** 54.35 10 LR LR 06 30 12.7
comp=Z,252nm,19.3s,baz=196,slow=37
YKA **Yellowknife Ar** 55.33 345 P **P** 06 06 28.9 -2.1
comp=Z,2.0nm,0.8s,baz=136,slow=7.2,SNR=18
YKA PcP **PcP** 06 07 31.4 +0.1
comp=Z,0.5nm,0.8s,baz=138,slow=3.9,SNR=4.5
comp=Z,2.0nm,0.8s
TAOE **Nuku Hiva Isla** 56.67 252 *e*LR LR 06 23 23.4
comp=Z,116nm,22.8s
DLBC **Dease Lake** 57.65 335 LR LR 06 35 13.1
comp=Z,146nm,19.0s,baz=108,slow=40
DLBC **Dease Lake** 57.65 335 P **P** 06 06 48.4 +0.7
DLBC IAmb IAmb 06 06 49.2
comp=Z,12nm,1.2s
DLBC **Dease Lake** 57.65 335 P **P** 06 06 47.4 -0.3
baz=127
R33M **Jennings River** 58.61 335 P **P** 06 06 53.4 -1.1
baz=126
P33M **Teslin, Yukon** 59.85 335 P **P** 06 07 01.7 -1.3
baz=125
P32M **Atlin** 59.87 335 P **P** 06 07 02.2 -1.0
baz=124
PLBC **Pleasant Camp** 60.94 334 P **P** 06 07 09.8 -0.6
baz=121
SFJD **Kangerlussuaq** 61.04 15 LR LR 06 34 21.5
comp=Z,288nm,18.2s,baz=217,slow=37
O30N **Mendenhall** 61.51 335 P **P** 06 07 13.3 -1.0
baz=122
P30M **Million Dollar** 61.54 334 P **P** 06 07 13.0 -1.5
baz=121
M31M **Drury Creek, Y** 61.62 337 P **P** 06 07 13.2 -1.7
baz=124
P29M **Windy Craggy** 61.63 333 P **P** 06 07 13.4 -1.7
baz=120
N31M **Braeburn, Yuko** 61.77 336 P **P** 06 07 14.8 -1.2
baz=122
N30M **Aishikik Lake** 62.29 335 P **P** 06 07 18.0 -1.5
baz=121
M30M **Minto, Yukon** 62.76 336 P **P** 06 07 21.5 -1.1
M30M **Minto, Yukon** 62.76 336 P **P** 06 07 20.8 -1.8
baz=122
MAYO **Mayo, Yukon** 62.97 338 P **P** 06 07 23.8 -0.2
MAYO IAmb IAmb 06 07 38.4
comp=Z,9.6nm,0.7s
DAWY **Dawson** 64.53 337 P **P** 06 07 33.2 -1.1
DAWY **Dawson** 64.53 337 P **P** 06 07 32.9 -1.4
baz=120
M27K **Edge Creek, AK** 64.71 335 P **P** 06 07 34.3 -1.3
baz=117
I29M **Ogilvie Camp,** 64.80 339 P **P** 06 07 34.8 -1.2
baz=122
INK **Inuvik** 64.93 343 P **P** 06 07 35.4 -1.3
INK IAmb IAmb 06 07 36.8
comp=Z,7.8nm,1.1s
INK **Inuvik** 64.93 343 P **P** 06 07 35.7 -1.0
baz=128,SNR=5.6
BCAR **Beaver Creek A** 64.99 336 P **P** 06 07 36.8 -0.5
L27K **Beaver Creek,** 65.01 336 IAmb IAmb 06 07 38.1
comp=Z,6.7nm,1.1s
L27K **Beaver Creek,** 65.01 336 P **P** 06 07 36.9 -0.5
baz=117,SNR=8.1
M26K **Nabesna, AK** 65.19 335 P **P** 06 07 38.1 -0.5
baz=116
N25K **Chitina, Valde** 65.54 334 P **P** 06 07 40.2 -0.8
baz=114
K27K **Chicken** 65.55 337 P **P** 06 07 40.4 -0.4
baz=117
L26K **Log Cabin Wild** 65.61 335 P **P** 06 07 40.5 -0.8
baz=116
PMOR **Pomariorio Ree** 65.85 248 *e*T T 07 19 34.0
comp=Z,2.1nm,0.2s
KLU **Klutina** 66.08 333 P **P** 06 07 43.9 -0.5
baz=112
DOT **Dot Lake** 66.17 336 IAmb IAmb 06 07 45.6
comp=Z,7.2nm,1.0s
SCRK **Sand Creek** 66.28 336 P **P** 06 07 44.9 -0.8
baz=115,SNR=5.1
J26L **Joseph Creek** 66.34 337 IAmb IAmb 06 07 47.1
comp=Z,9.5nm,1.2s
J26L **Joseph Creek** 66.34 337 P **P** 06 07 44.8 -1.2
baz=116,SNR=9.0
GLI **Glacier Island** 66.38 332 P **P** 06 07 44.5 -1.7
baz=111
M24K **Tolsona, Glenn** 66.43 334 P **P** 06 07 45.1 -1.5
baz=112
PAX **Paxson** 66.47 335 P **P** 06 07 45.8 -1.1
baz=113
RIDG **Independent Ri** 66.53 336 IAmb IAmb 06 07 57.4
comp=Z,6.4nm,1.0s
RIDG **Independent Ri** 66.53 336 P **P** 06 07 46.5 -0.7
baz=114
I26K **Coal Creek Min** 66.55 338 IAmb IAmb 06 07 47.7
comp=Z,7.9nm,1.0s
I26K **Coal Creek Min** 66.55 338 P **P** 06 07 46.0 -1.2
baz=117
G27K **Doyon Strip** 66.71 339 P **P** 06 07 47.5 -0.8
baz=119
K24K **Donnelly Dome** 66.93 336 P **P** 06 07 49.0 -0.8
baz=114
J25K **Salcha River,** 67.10 336 P **P** 06 07 50.2 -0.6
J25K IAmb IAmb 06 07 51.1
comp=Z,5.9nm,1.1s
J25K **Salcha River,** 67.10 336 P **P** 06 07 50.1 -0.8
baz=114,SNR=6.2
SML **Sawmill** 67.27 333 P **P** 06 07 50.8 -1.2
baz=110
WAT6 **Susitna Watana** 67.28 334 P **P** 06 07 51.1 -1.1
baz=111
E27K **Coleen River** 67.37 341 P **P** 06 07 51.3 -1.1
baz=119
G26K **Porcupine Rive** 67.52 339 P **P** 06 07 52.4 -1.0
baz=117
PRP **Porcupine Dome** 67.53 337 IAmb IAmb 06 07 54.1
comp=Z,5.0nm,1.0s
PRP **Porcupine Dome** 67.53 337 P **P** 06 07 52.4 -1.3
baz=114
HDA **Harding Lake** 67.64 336 IAmb IAmb 06 07 54.5
comp=Z,14nm,1.2s
HDA **Harding Lake** 67.64 336 P **P** 06 07 53.2 -1.0
baz=112,SNR=5.6
RC01 **Rabbit Creek A** 67.66 332 P **P** 06 07 53.6 -0.7
baz=109
IL31 67.76 336 IAmb IAmb 06 07 55.2
comp=Z,15nm,1.4s
ILAR **Eielson Array** 67.76 336 P **P** 06 07 53.6 -1.3
comp=Z,3.4nm,1.0s,baz=112,slow=4.5,SNR=25
ILAR PP **PP** 06 10 23.6 -0.7
comp=Z,0.7nm,0.9s,baz=98,slow=5.5,SNR=4.3
ILAR LR LR 06 41 34.3
comp=Z,145nm,20.5s,baz=119,slow=40
comp=Z,3.4nm,1.0s
ILAR **Eielson Array** 67.76 336 P **P** 06 07 54.1 -0.8
F26K **Sheenjek River** 67.98 340 P **P** 06 07 55.7 -0.7
baz=116
WRH **Wood River Hil** 68.12 336 IAmb IAmb 06 08 03.2
comp=Z,7.5nm,1.4s
MCK **McKinley** 68.20 335 IAmb IAmb 06 07 59.0
comp=Z,8.7nm,1.0s
MCK **McKinley** 68.20 335 P **P** 06 07 57.3 -0.5
baz=110
PPT **Papeete** 68.22 246 LR LR 06 32 42.0
comp=Z,59nm,19.1s,baz=85,slow=31
PPT2 **Papeete2** 68.23 246 *e*LR LR 06 28 44.5
comp=Z,95nm,22.5s
G25K **Bearman Lake** 68.27 338 P **P** 06 07 57.6 -0.5
baz=114
F25K **Christian Rive** 68.45 339 P **P** 06 07 58.9 -0.4
baz=115
H24K **Noodor Dome** 68.56 337 IAmb IAmb 06 08 00.6
comp=Z,5.4nm,1.1s
H24K **Noodor Dome** 68.56 337 P **P** 06 07 59.3 -0.7
baz=112,SNR=6.2
E25K **Arctic Village** 68.66 340 P **P** 06 08 00.3 -0.3
baz=115
TRF **Thorofare Moun** 68.68 334 P **P** 06 07 59.9 -1.0
baz=109
C27K **Jago River** 68.73 342 P **P** 06 07 59.9 -1.1
baz=118
G24K **Hadweenzic Riv** 68.74 338 P **P** 06 08 00.3 -0.8
baz=113,SNR=5.7
I23K **Minto, Yukon-K** 68.88 336 IAmb IAmb 06 08 02.6
comp=Z,15nm,1.3s
I23K **Minto, Yukon-K** 68.88 336 P **P** 06 08 01.1 -0.8
baz=110,SNR=7.3
KTH **Kantishna Hill** 68.98 334 IAmb IAmb 06 08 11.2
comp=Z,7.3nm,1.1s
BPAW **Bear Paw Mtn.** 69.18 335 IAmb IAmb 06 08 04.1
comp=Z,11nm,1.0s
BPAW **Bear Paw Mtn.** 69.18 335 P **P** 06 08 02.9 -1.0
baz=108,SNR=12
H23K **Yukon River** 69.19 337 P **P** 06 08 02.8 -1.1
baz=111
F24K **Squaw Lake** 69.21 339 P **P** 06 08 03.8 -0.2
baz=113
C26K **Camden Bay** 69.24 342 P **P** 06 08 03.7 -0.3
baz=116
PPLA **Purkeypile** 69.32 334 IAmb IAmb 06 08 05.1
comp=Z,8.1nm,1.1s
PPLA **Purkeypile** 69.32 334 P **P** 06 08 04.2 -0.7
baz=107
MLY **Manley** 69.39 336 IAmb IAmb 06 08 05.5
comp=Z,9.1nm,1.0s
MLY **Manley** 69.39 336 P **P** 06 08 03.9 -1.2
baz=109,SNR=9.3
CAST **Castle Rocks** 69.43 334 IAmb IAmb 06 08 04.7
comp=Z,5.3nm,1.0s
CAST **Castle Rocks** 69.43 334 P **P** 06 08 04.2 -1.2
baz=107
D25K **Kavik River** 69.44 341 P **P** 06 08 04.2 -1.2
baz=115
M20K **Styx River** 69.45 332 P **P** 06 08 04.7 -1.0
baz=106
CHUM **Lake Minchumin** 69.67 335 P **P** 06 08 05.7 -1.1
baz=107
G23K **Bananza Creek** 69.69 338 P **P** 06 08 06.6 -0.4
baz=110,SNR=7.9
BORG **Borgarnes** 69.83 25 LR LR 06 37 31.6
comp=Z,51nm,19.0s,baz=244,slow=35
H22K **Ishtalitna Cre** 69.92 337 P **P** 06 08 07.8 -0.6
baz=109
O18K **Koktuh Hills** 69.92 330 P **P** 06 08 07.5 -1.0
baz=103
I21K **Tanana** 69.93 336 IAmb IAmb 06 08 09.2
comp=Z,7.3nm,1.1s
I21K **Tanana** 69.93 336 P **P** 06 08 07.6 -0.8
baz=108,SNR=5.2
COLD **Coldfoot** 69.93 338 IAmb IAmb 06 08 09.9
comp=Z,7.2nm,1.1s
COLD **Coldfoot** 69.93 338 P **P** 06 08 08.4 0.0
baz=110,SNR=11
R17K **Ugashik Creek** 70.05 328 P **P** 06 08 09.2 -0.1
baz=101
K20K **Telida** 70.27 334 IAmb IAmb 06 08 10.7
comp=Z,9.7nm,1.1s
K20K **Telida** 70.27 334 P **P** 06 08 09.3 -1.3
baz=105,SNR=5.2
H21K **Melozitna Rive** 70.41 336 P **P** 06 08 10.5 -0.8
baz=107
N18K **Kilae Creek** 70.44 331 P **P** 06 08 10.5 -1.1
baz=103
J20K **Nowinta River** 70.53 335 IAmb IAmb 06 08 24.5
comp=Z,8.9nm,1.4s
J20K **Nowinta River** 70.53 335 P **P** 06 08 11.0 -1.1
baz=106
D23K **Nanushuk River** 70.72 340 P **P** 06 08 13.0 -0.3
baz=110
F22K **John River** 70.75 338 P **P** 06 08 12.9 -0.6
baz=109
E22K **Anaktuvuk Pass** 70.82 339 P **P** 06 08 13.6 -0.3
baz=109
O17K **Koliganek Bris** 70.84 330 P **P** 06 08 13.9 -0.1
baz=101
CHGN **Chignik** 70.90 326 P **P** 06 08 14.6 +0.1
baz=99
G21K **Allakaket** 70.94 337 P **P** 06 08 14.3 -0.3
baz=107,SNR=12
C23K **Itkillik River** 71.01 341 P **P** 06 08 14.4 -0.5
baz=111
TTA **Tatalina** 71.02 333 P **P** 06 08 13.7 -1.5
baz=103
F21K **Alatna River** 71.14 338 P **P** 06 08 15.0 -0.8
baz=107,SNR=16
N16K **Nishlik Lake** 71.79 330 P **P** 06 08 19.9 0.0
baz=100
JMIC **Jan Mayen** 75.95 19 LR LR 06 43 56.2
comp=Z,48nm,18.2s,baz=264,slow=38
ESDC **Sonseca Array** 77.59 52 P **P** 06 08 51.6 -2.4
comp=Z,0.6nm,0.7s,baz=294,slow=6.1,SNR=5.0
ESDC LR LR 06 38 02.5
comp=Z,76nm,21.4s,baz=261,slow=32
comp=Z,0.6nm,0.7s
MDT **Midelt** 77.59 59 LR LR 06 41 03.2
comp=Z,96nm,18.4s,baz=296,slow=34
RAR **Rarotonga** 78.49 246 LR LR 06 34 03.6
comp=Z,107nm,21.7s,baz=94,slow=28
ADK **Adak** 81.54 321 P **P** 06 09 16.1 +1.0
SPITS **Spitsbergen Ar** 82.10 12 LR LR 06 47 52.2
comp=Z,186nm,18.4s,baz=255,slow=38
NOA **NORSAR Array B** 84.39 29 LR LR 06 47 58.1
comp=Z,41nm,18.1s,baz=265,slow=37
HFS **Hagfors** 85.79 30 LR LR 06 48 59.8
comp=Z,43nm,18.0s,baz=294,slow=37
DAVOX **Davos/Dischmat** 86.64 43 LR LR 06 45 34.2
comp=Z,56nm,18.9s,baz=278,slow=34
ARCES **ARCESS Array B** 87.44 19 LR LR 06 51 15.3
comp=Z,30nm,18.1s,baz=289,slow=38
VRAC **Vranov** 90.36 40 LR LR 06 44 33.5
comp=Z,76nm,20.1s,baz=276,slow=32
FINES **FINESS Array B** 91.06 26 LR LR 06 46 37.4
comp=Z,66nm,21.8s,baz=299,slow=33
PETK **Petropavlovsk-** 96.11 327 LR LR 06 58 16.1
comp=Z,22nm,18.3s,baz=67,slow=38
AKASG **Malin Array Be** 97.39 35 LR LR 06 51 16.0
comp=Z,61nm,21.1s,baz=258,slow=34
MSVF **Nonsavu** 98.19 254 LR LR 06 45 44.1
comp=Z,82nm,18.5s,baz=139,slow=30
NRIK **Norilʹsk** 99.89 2 LR LR 06 57 24.3
comp=Z,70nm,20.0s,baz=330,slow=36
TROLL **Troll, Antarti** 100.01 162 Pdiff **Pdif** 06 10 47.5 +5.1
KURBB **Kurchatov Arra** 117.43 11 PKP **PKiKP** 06 15 43.3 +0.1
comp=Z,0.2nm,0.5s,baz=341,slow=2.2,SNR=4.7
MKAR **Makanchi Array** 121.76 9 PKP **PKPdf** 06 15 50.6 -1.1
comp=Z,0.6nm,0.8s,baz=342,slow=2.3,SNR=3.5
KSRS **Korea Array** 122.00 328 PKP **PKiKP** 06 15 53.4 +0.8
comp=Z,3.3nm,0.8s,baz=20,slow=1.4,SNR=16
CD2 **Chengdu** 137.27 347 PKP **PKPdf** 06 16 20.7 -1.0
ASAR **Alice Springs** 139.34 246 PKP **PKPdf** 06 16 26.0 +0.4
comp=Z,0.5nm,0.8s,baz=111,slow=1.6,SNR=5.3
WRA **Warramunga Arr** 139.51 252 PKP **PKPdf** 06 16 26.9 +1.0
comp=Z,1.4nm,1.1s,baz=89,slow=2.5,SNR=2.9
PZH **PanZhiHua** 141.96 348 PKP **PKPdf** 06 16 29.5 -0.9
HYBB **Hyderabad (bro** 148.34 28 *e*PKiKP **PKiKP** 06 16 46.0 -0.5
CMAR **Chiang Mai Arr** 150.34 349 PKP **PKPdf** 06 16 46.0 +1.4
comp=Z,1.4nm,0.3s,baz=1.9,slow=1.0,SNR=7.0
CMAR PKPbc **PKiKP** 06 16 50.8 +0.2
comp=Z,2.1nm,0.4s,baz=344,slow=3.4,SNR=2.9

AUST ***04*** *06:03:38.5±3.3,20.00S×133.97E,h0km±29km, Error ellipse: s-maj=17.3km s-min=10.6km az=55.0*
NOU ***04*** *06:03:39.4,20.15S×134.02E,h0km,mb3.6/7, Northern Territory, Australia*
ISC 04 06:03:38.8±0.8,20.08S±0.06×133.97E±0.06,h12km,n20,
σ2s00/25,Northern Territory

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr** baz=0.4	**0.39**	**69**	P		**Pg**	**06 03 46.3**	**-0.2**
WB2				S		**Sg**	**06 03 50.1**	**-1.6**
WRAB	**Tennant Creek**	**0.39**	**68**	P		**Pg**	**06 03 46.5**	**-0.1**
ASPA	**Alice Springs** baz=3.7	**3.57**	**181**	P		**Pb**	**06 04 40.0**	**-1.9**
ASPA				S		**Sb**	**06 05 22.3**	**-3.0**
QIS	**Mount Isa** baz=5.3	**5.31**	**96**	P		**Pn**	**06 04 59.9**	**+1.8**
QIS	**Mount Isa**	**5.31**	**96**	P		**Pn**	**06 04 59.8**	**+1.8**
AUKAT	**Katherine High** baz=5.8	**5.82**	**344**	P		**Pn**	**06 05 05.5**	**+0.5**
KNRA	**Kununurra** baz=6.6	**6.61**	**311**	P		**Pn**	**06 05 16.1**	**+0.2**
WRKA	**Warakurna** baz=7.3	**7.20**	**226**	P		**Pn**	**06 05 25.8**	**+1.9**
WRKA				S		**Sn**	**06 06 46.4**	**+0.7**
WRKA	**Warakurna**	**7.20**	**226**	P		**Pn**	**06 05 26.1**	**+2.2**
KDU	**Kakadu** baz=7.5	**7.49**	**349**	P		**Pn**	**06 05 27.5**	**-0.4**
OOD	**Oodnadatta** baz=8.0	**7.84**	**169**	P		**Pn**	**06 05 36.4**	**+3.8**
FITZ	**Fitzroy Crossi** baz=8.1	**8.12**	**283**	P		**Pn**	**06 05 38.9**	**+2.3**
FITZ				S		**Sn**	**06 07 04.6**	**-3.7**
FITZ	**Fitzroy Crossi**	**8.12**	**283**	P		**Pn**	**06 05 39.3**	**+2.7**
INKA	**Innaminka** baz=9.9	**9.82**	**142**	P		**Pn**	**06 06 01.5**	**+1.5**
MULG	**Mulgathing** baz=10	**10.16**	**180**	P		**Pn**	**06 06 06.8**	**+2.3**
MULG				S		**Sn**	**06 07 57.8**	**-0.6**
MULG	**Mulgathing**	**10.16**	**180**	P		**Pn**	**06 06 05.5**	**+1.0**
LCRK	**Leigh Creek** baz=11	**11.01**	**160**	P		**Pn**	**06 06 18.1**	**+1.9**
LCRK	**Leigh Creek**	**11.01**	**160**	P		**Pn**	**06 06 16.7**	**+0.5**
FORT	**Forrest** baz=12	**11.91**	**205**	P		**Pn**	**06 06 29.9**	**+1.4**
FORT	**Forrest**	**11.91**	**205**	P		**Pn**	**06 06 29.4**	**+0.9**

AEIC ***04*** *06:12:10±1.0,52.0N±0.2×170.8W±0.1,h58km±10km, ML3.3/30, Error ellipse: s-maj=34.3km s-min=2.8km az=161.0*
NEIC ***04*** *06:12:13.9±1.3,52.5N±0.2×171.08W±0.09,h34km±13km, Error ellipse: s-maj=30.0km s-min=3.7km az=167.0*
IDC ***04*** *06:12:35.0±9.2,52.19N×171.49W,h299km±112km, mb3.1/5,mbtmp3.7/7,MS2.6/2,Error ellipse: s-maj=51.2km s-min=26.7km az=156.0*
ISC 04 06:12:12.8±1.1,52.1N±0.2×170.84W±0.06,h42km,n38,
σ1s09/37,mb3.6/5,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**0.97**	**36**			**Pn**	**06 12 28.9**	**-1.0**
CLCO	**Concord Point,**	**1.01**	**42**			**Pn**	**06 12 29.4**	**-1.0**
NIKH	**Nikolski High**	**1.53**	**52**			**Pn**	**06 12 35.4**	**-2.2**
NIKH	**Nikolski High**	**1.53**	**52**			**Sn**	**06 12 56.8**	**+0.6**
KOFP	**Korovin Flat P**	**2.02**	**278**			**Pn**	**06 12 43.7**	**-0.6**
KOFP						**Sn**	**06 13 09.9**	**+1.6**
KOKL	**Mount Kliuchef**	**2.09**	**279**			**Pn**	**06 12 45.0**	**-0.3**
OKSO	**Okmok South**	**2.10**	**50**			**Pn**	**06 12 44.9**	**-0.5**
OKCE	**Okmok Cone E**	**2.14**	**49**			**Pn**	**06 12 45.2**	**-0.8**
OKNC	**Okmok New Cone**	**2.17**	**48**			**Pn**	**06 12 46.2**	**-0.2**
OKFG	**Magazine Ridge**	**2.25**	**51**			**Pn**	**06 12 46.1**	**-1.3**
MAPS	**Pakushin South**	**2.95**	**52**			**Pn**	**06 12 56.4**	**-0.6**
MAPS						**Sn**	**06 13 30.5**	**-0.7**
MGOD	**Makushin Gods**	**2.97**	**52**			**Pn**	**06 12 57.1**	**-0.4**
MSW	**Makushin Switc**	**3.09**	**51**			**Pn**	**06 12 58.6**	**-0.4**
MNAT	**Makushin Natee**	**3.12**	**52**			**Pn**	**06 12 59.1**	**-0.3**
MTBL	**Makushin Table**	**3.17**	**51**			**Pn**	**06 13 00.1**	**0.0**
UNV	**Unalaska Valle**	**3.18**	**54**			**Pn**	**06 12 57.8**	**-2.4**
GSTR	**Great Sitkin T**	**3.22**	**273**			**Pn**	**06 12 58.3**	**-2.5**
GSTD	**Great Sitkin T**	**3.27**	**272**			**Pn**	**06 13 01.2**	**-0.4**
GSTD						**Sn**	**06 13 39.2**	**-0.1**
GSCK	**Great Sitkin C**	**3.29**	**272**			**Pn**	**06 13 01.0**	**-0.7**
GSSP	**Great Sitkin S**	**3.29**	**273**			**Pn**	**06 13 01.3**	**-0.5**
ADK	**Adak**	**3.62**	**270**		Pn	**Pn**	**06 13 05.7**	**-0.5**
AKGG	**Akutan Green G**	**3.63**	**52**			**Pn**	**06 13 05.4**	**-1.1**
KIWB	**Kanaga Island**	**3.91**	**270**			Pn	06 13 03.0	-7.2
KIKV	**Kanaga Island**	**3.92**	**270**			**Pn**	**06 13 09.8**	**-0.6**
KIMD	**Kanaga Island**	**3.97**	**268**			**Pn**	**06 13 10.3**	**-0.8**
TAFP	**Tanaga Falls P**	**4.42**	**271**			**Pn**	**06 13 17.0**	**-0.2**
AMKA	**Amchitka**	**6.16**	**268**		Pn	**Pn**	**06 13 40.7**	**-0.5**
SDPT	**Sand Point**	**6.99**	**58**		Pn	**Pn**	**06 13 53.2**	**+0.7**
CHGN	**Chignik**	**8.44**	**55**		Pn	**Pn**	**06 14 13.5**	**0.0**
ILAR	**Eielson Array** 0.6nm,0.6s,baz=230,slow=8.0,SNR=15	**17.73**	**35**	P		P	06 16 22.9	+6.3
PETK	**Petropavlovsk-** 0.7nm,0.4s,baz=83,slow=15,SNR=2.7	**19.07**	**286**	P		**Pn**	**06 16 31.4**	**-1.1**
DLBC	**Dease Lake** 4.2nm,1.1s,baz=266,slow=12,SNR=6.1 4.2nm,1.1s	**23.83**	**58**	P		**P**	**06 17 24.6**	**+2.9**
INK	**Inuvik** 2.3nm,0.4s,baz=248,slow=6.1,SNR=11 2.3nm,0.4s	**24.11**	**33**	P		**P**	**06 17 24.1**	**0.0**
YKA	**Yellowknife Ar** 1.0nm,0.8s,baz=271,slow=7.6,SNR=10 1.0nm,0.8s	**31.14**	**48**	P		**P**	**06 18 27.6**	**+0.7**
NVAR	**Mina Array Bea** 0.4nm,0.8s,baz=280,slow=5.3,SNR=4.3 0.4nm,0.8s	**38.57**	**89**	P		**P**	**06 19 32.1**	**+0.5**
JHJ	**Hachijo jima 2** comp=Z,6.0nm,19.3s,baz=120,slow=39	**40.08**	**262**	LR		LR	06 38 19.6	
KSRS	**Korea Array** comp=Z,8.2nm,20.6s,baz=35,slow=35	**44.54**	**276**	LR		LR	06 38 04.3	
TXAR	**Lajitas Array** 0.4nm,0.6s,baz=302,slow=6.0,SNR=6.3 0.4nm,0.6s	**53.66**	**88**	P		**P**	**06 21 29.8**	**-0.4**

NNC ***04*** *06:13:06.8±2.3,54.15N×86.40E,h0km,mb3.6,mpv2.6, Error ellipse: s-maj=27.8km s-min=10.9km az=179.0, Suspected Mining explosion.*
IDC 04 06:13:07.9±2.5,54.14N×86.39E,h0km,mbtmp3.1/2,
ML2.7/2,4C-3D,Error ellipse: s-maj=19.6km
s-min=12.4km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=79,slow=312,SNR=3.1	**0.94**	**259**	*i*			06 19 14.5	
ZAA0	**Zalesovo Array** 0.2nm,0.3s	**0.94**	**259**	⇑P		Pg	06 13 25.0	-1.0
ZAA0	4.5nm,1.1s			⇑S		Sg	06 13 38.2	-0.1
ZAA0				||Rg		Rg	06 13 41.9	
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=73,slow=16,SNR=6.7	**0.94**	**259**	Pg		Pg	06 13 24.8	-1.2
ZALV				Lg		Lg	06 13 39.2	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=55,slow=14,SNR=7.9 1.8nm,0.3s,baz=78,slow=29,SNR=18	**5.96**	**237**	Pn		Pn	06 14 38.6	+1.3
KURBB				Lg		Lg	06 16 19.2	

baz=49,slow=32
1.6nm,0.6s
KURBB Kurchatov Arra 5.96 237 ⇓Pn Pn 06 14 36.8 -0.5
3.0nm,0.8s
KURBB ⇑Lg Lg 06 16 16.0
7.2nm,0.9s
MK31 Makanchi Array 7.81 201 Pn Pn 06 15 01.6 -1.1
0.6nm,0.7s,baz=25,slow=14,SNR=12
MK31 ⇓Sn Sn 06 16 32.0 +0.3
0.3nm,0.5s,baz=251,slow=11,SNR=2.5
MK31 ⇑Lg Lg 06 17 15.4
0.7nm,0.6s,baz=20,slow=25,SNR=5.0
MKAR Makanchi Array 7.81 201 Pn Pn 06 15 03.4 +0.7
0.1nm,0.3s,baz=23,slow=13,SNR=7.9
MKAR Lg Lg 06 17 14.7
0.1nm,0.3s,baz=18,slow=20,SNR=8.0
0.7nm,0.7s

*IDC **04** 06:23:51.5±2.6, 52°.80N×171°.51E, h0km, mb3.5/3, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=75.8km s-min=32.7km az=4.0*
*NEIC **04** 06:23:54.2±1.5, 52°.9N±0°.4×171°.3E±0°.1, h34km±11km, ML3.2/2, Error ellipse: s-maj=52.5km s-min=5.5km az=191.0*
*KRSC **04** 06:23:58.1±2.2, 52°.60N×170°.33E, h30km±65km, ML3.8*
ISC 04 06:23:53.6±1.0, 52°.5N±0°.1×171°.13E±0°.06, h35km, n26, σ2s27/22, mb3.7/3, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SMY	**Shemya**	**1.83**	**80**			**Pn**	**06 24 21.3**	**-1.2**
SMY				Sn		**Sn**	**06 24 40.1**	**-4.4**
SMY				IAML			06 24 41.5	
	comp=E,273nm,0.3s							
SMY				IAML			06 24 47.2	
	comp=N,194nm,0.6s							
BKI	**Bering**	**4.11**	**314**	S		**Sn**	**06 25 38.9**	**-1.8**
AMKA	**Amchitka**	**5.17**	**99**	Pn		**Pn**	**06 25 09.0**	**+0.6**
MKZ	**Mys Kozlova**	**5.99**	**294**	P		**Pn**	**06 25 22.7**	**+3.1**
MKZ				S		**Sn**	**06 26 25.8**	**-1.1**
KBTR	**Krutoberegovo**	**6.14**	**311**	P		**Pn**	**06 25 24.2**	**+2.5**
SPN	**Mys Shipunski**	**6.77**	**280**	S		**Sn**	**06 26 43.3**	**-2.8**
TUMR	**Tumrok**	**7.09**	**298**	P		Pn	06 25 38.2	+3.4
KRX	**Arik**	**7.60**	**282**	P		**Pn**	**06 25 43.9**	**+2.0**
KRX				S		**Sn**	**06 27 03.7**	**-3.1**
RUS	**Russkaya**	**7.71**	**275**	P		Pn	06 25 46.7	+3.5
RUS				S		**Sn**	**06 27 07.4**	**-1.8**
MTVR	**Mutnovka**	**7.91**	**275**	S		**Sn**	**06 27 12.9**	**-1.4**
KRMR	**Karymshinskiy**	**7.92**	**278**	S		**Sn**	**06 27 12.5**	**-1.8**
GNL	**Ganaly**	**8.04**	**284**	P		Pn	06 25 52.7	+4.8
GNL				S		**Sn**	**06 27 15.2**	**-2.3**
KDTR	**Khodutka, Kamc**	**8.06**	**271**	S		**Sn**	**06 27 14.4**	**-3.4**
PEA0B	**Petropavlovsk-**	**8.17**	**280**	Pn		**Pn**	**06 25 50.1**	**+0.5**
PETK	**Petropavlovsk-**	**8.17**	**280**	Pn		Pn	06 25 54.0	+4.4
	comp=N,0.2nm,0.3s,baz=98,slow=16,SNR=2.7							
PETK				Sn		**Sn**	**06 27 19.7**	**-0.9**
	comp=N,0.4nm,0.3s,baz=119,slow=13,SNR=2.4							
	comp=N,0.7nm,0.4s							
PETK	**Petropavlovsk-**	**8.17**	**280**	P		**Pn**	**06 25 50.9**	**+1.3**
ILAR	**Eielson Array**	**24.56**	**44**	P		**P**	**06 29 08.4**	**-1.3**
	comp=N,0.2nm,0.6s,baz=250,slow=6.9,SNR=4.4							
	comp=N,0.2nm,0.6s							
BMAR	**Burnt Mountain**	**26.02**	**38**	P		**P**	**06 29 21.6**	**-1.3**
H11N2	**WAKE ISLAND Hy**	**32.82**	**187**	T		T	07 05 54.1	
	baz=5.2,slow=76,SNR=23							
H11N3	**WAKE ISLAND Hy**	**32.84**	**187**	T		T	07 05 58.6	
	baz=5.2,slow=76,SNR=23							
H11N1	**WAKE ISLAND Hy**	**32.84**	**187**	T		T	07 06 01.4	
	baz=5.2,slow=76,SNR=24							
H11S1	**WAKE ISLAND Hy**	**34.05**	**188**	T		T	07 07 34.4	
	baz=5.1,slow=76,SNR=34							
H11S3	**WAKE ISLAND Hy**	**34.06**	**188**	T		T	07 07 34.3	
	baz=5.1,slow=76,SNR=24							
H11S2	**WAKE ISLAND Hy**	**34.07**	**188**	T		T	07 07 33.4	
	baz=5.1,slow=76,SNR=28							
TXAR	**Lajitas Array**	**64.52**	**75**	P		**P**	**06 34 28.2**	**+1.3**
	comp=N,0.5nm,0.4s,baz=304,slow=5.4,SNR=21							
	comp=N,0.5nm,0.4s							
NOA	**NORSAR Array B**	**65.72**	**349**	P		**P**	**06 34 35.5**	**+1.3**
	comp=N,0.3nm,0.5s,baz=355,slow=4.8,SNR=2.6							
	comp=N,0.3nm,0.5s							

*IDC **04** 06:59:43.1±1.0, 11°.16S×163°.40E, h0km, mb3.9/7, mbtmp4.0/9, ML4.5/2, MS3.5/14, Error ellipse: s-maj=28.3km s-min=24.9km az=107.0*
ISC 04 06:59:47.8±0.8, 11°.2S±0°.1×163°.5E±0°.1, h31km, n31, σ1s83/15, mb3.9/8, MS3.4/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**3.93**	**296**	Pn		**Pn**	**07 00 43.9**	**-2.1**
	90nm,0.3s,baz=137,slow=6.8,SNR=8.8							
HNR				Sn		**Sn**	**07 01 33.2**	**+2.1**
	51nm,0.3s,baz=180,slow=19,SNR=1.9							
	234nm,0.4s							
NOUC	**Port Laguerre**	**11.20**	**167**	P		**Pn**	**07 02 25.6**	**-0.3**
DZM	**Mont Dzumac**	**11.21**	**166**	Pn		**Pn**	**07 02 24.6**	**-1.4**
	1.4nm,0.3s,baz=298,slow=16,SNR=24							
DZM				LR		LR	07 06 14.1	
	comp=Z,214nm,18.8s,baz=16,slow=35							
	5.7nm,0.5s							
DZM	**Mont Dzumac**	**11.21**	**166**	P		**Pn**	**07 02 25.4**	**-0.6**
YATNC	**Mamie plateau,**	**11.31**	**164**	P		**Pn**	**07 02 26.2**	**-1.2**
OUENC	**Ouen Island, N**	**11.64**	**165**	P		**Pn**	**07 02 32.0**	**+0.1**
PMG	**Port Moresby**	**16.21**	**275**	LR		LR	07 09 00.3	
	comp=Z,144nm,21.2s,baz=82,slow=35							
AFI	**Afiamalu**	**24.25**	**99**	LR		LR	07 12 28.8	
	comp=Z,86nm,18.5s,baz=204,slow=31							
STKA	**Stephens Creek**	**28.90**	**221**	P		**P**	**07 05 46.5**	**+2.4**
	1.2nm,0.2s,baz=68,slow=12,SNR=3.5							
WRA	**Warramunga Arr**	**29.41**	**249**	P		**P**	**07 05 46.5**	**-2.4**
	1.4nm,0.6s,baz=79,slow=9.0,SNR=10							
WRA				LR		LR	07 17 06.4	
	comp=Z,92nm,19.4s,baz=263,slow=36							
	1.4nm,0.6s							
H11S2	**WAKE ISLAND Hy**	**29.62**	**6**	T		T	07 36 03.6	
	baz=184,slow=76,SNR=40							
H11S3	**WAKE ISLAND Hy**	**29.62**	**6**	T		T	07 36 00.6	
	baz=184,slow=76,SNR=33							
H11S1	**WAKE ISLAND Hy**	**29.64**	**6**	T		T	07 36 02.3	
	baz=184,slow=76,SNR=29							
ASAR	**Alice Springs**	**30.82**	**242**	P		**P**	**07 05 58.5**	**-2.7**
	0.7nm,0.7s,baz=65,slow=9.7,SNR=6.7							
	0.7nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**30.85**	**6**	T		T	07 37 32.3	
	baz=184,slow=76,SNR=46							
H11N3	**WAKE ISLAND Hy**	**30.86**	**6**	T		T	07 37 30.6	
	baz=184,slow=76,SNR=28							
H11N2	**WAKE ISLAND Hy**	**30.87**	**6**	T		T	07 37 33.8	
	baz=184,slow=76,SNR=23							
RPZ	**Rata Peaks**	**33.09**	**170**	LR		LR	07 17 28.6	
	comp=Z,132nm,20.7s,baz=344,slow=32							
RAR	**Rarotonga**	**36.55**	**111**	LR		LR	07 17 44.0	
	comp=Z,92nm,21.6s,baz=283,slow=30							
FITZ	**Fitzroy Crossi**	**37.26**	**255**	LR		LR	07 21 31.1	
	comp=Z,62nm,18.2s,baz=95,slow=35							
BATI	**Baumata**	**39.17**	**268**	LR		LR	07 24 34.9	
	comp=Z,269nm,18.1s,baz=170,slow=38							
PPT	**Papeete**	**45.78**	**104**	LR		LR	07 25 46.0	
	comp=Z,29nm,18.5s,baz=313,slow=34							
JHJ	**Hachijo jima 2**	**49.51**	**334**	LR		LR	07 30 24.7	
	comp=Z,12nm,18.9s,baz=302,slow=37							
MJAR	**Matsushiro Arr**	**53.10**	**334**	LR		LR	07 28 18.3	
	comp=Z,21nm,21.8s,baz=94,slow=32							
PETK	**Petropavlovsk-**	**64.20**	**356**	LR		LR	07 33 05.9	
	comp=Z,26nm,20.9s,baz=122,slow=31							
PSI	**Prapat**	**65.74**	**278**	LR		LR	07 42 40.4	
	comp=Z,73nm,18.4s,baz=14,slow=39							
VNDA	**Vanda**	**66.36**	**180**	P		**P**	**07 10 35.0**	**+1.9**
	1.1nm,1.0s,baz=338,slow=8.2,SNR=4.2							
VNDA				LR		LR	07 35 06.7	
	comp=Z,26nm,20.2s,baz=332,slow=32							
	1.1nm,1.0s							
SONM	**Songino Array**	**77.48**	**325**	P		**P**	**07 11 42.0**	**+1.5**
	0.6nm,0.6s,baz=157,slow=7.9,SNR=4.3							
	0.6nm,0.6s							
ILAR	**Eielson Array**	**84.31**	**19**	P		**P**	**07 12 15.1**	**-1.3**
	0.4nm,0.7s,baz=250,slow=4.9,SNR=5.1							
	0.4nm,0.7s							
NVAR	**Mina Array Bea**	**87.75**	**50**	P		**P**	**07 12 34.2**	**-0.1**
	0.6nm,0.9s,baz=241,slow=8.0,SNR=3.6							
	0.6nm,0.9s							
MKAR	**Makanchi Array**	**92.12**	**317**	P		**P**	**07 12 55.2**	**+0.9**

0.9nm,0.6s,baz=96,slow=6.2,SNR=8.5
0.9nm,0.6s

IDC 04 07:02:25.6±2.8, 53°.72N×86°.93E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=24.9km s-min=16.1km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**281**	*i*			07 10 00.0	
	baz=100,slow=313,SNR=8.6							
ZALV	**Zalesovo Beam**	**1.27**	**281**	Pg		Pg	07 02 49.0	-1.0
	1.0nm,0.3s,baz=104,slow=16,SNR=6.6							
ZALV				Lg		Lg	07 03 06.5	
	1.1nm,0.3s,baz=101,slow=29,SNR=9.2							
KURBB	**Kurchatov Arra**	**6.03**	**242**	Pn		Pn	07 03 57.5	+1.5
	0.1nm,0.3s,baz=60,slow=13,SNR=3.6							
KURBB				Lg		Lg	07 05 38.1	
	baz=55,slow=29							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**7.54**	**205**	Pn		Pn	07 04 17.6	+0.8
	0.1nm,0.3s,baz=25,slow=14,SNR=3.2							
	0.1nm,0.3s							

*NOU **04** 07:10:12.1, 14°.93S×167°.51E, h119km, MLv4.5/10, Vanuatu Islands*
*IDC **04** 07:10:13.1±13.0, 15°.26S×165°.86E, h0km, mb4.1/3, mbtmp4.1/4, ML4.0/1, Error ellipse: s-maj=230.8km s-min=36.5km az=56.0*
ISC 04 07:10:09.4±2.6, 14°.8S±0°.2×166°.9E±0°.2, h35km, n10, σ1s85/11, mb4.0/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**3.16**	**157**	P		**Pn**	**07 10 57.3**	**+0.6**
YATNC	**Mamie plateau,**	**7.21**	**180**	P		Pn	**07 11 51.7**	**-0.6**
DZM	**Mont Dzumac**	**7.23**	**183**	Pn		**Pn**	**07 11 54.6**	**+1.9**
	2.7nm,0.3s,baz=299,slow=8.3,SNR=51							
DZM				Sn		**Sn**	**07 13 11.7**	**-2.0**
	0.8nm,0.3s,baz=51,slow=14,SNR=2.2							
	5.5nm,0.3s							
DZM	**Mont Dzumac**	**7.23**	**183**	P		**Pn**	**07 11 54.4**	**+1.7**
NOUC	**Port Laguerre**	**7.27**	**184**	P		**Pn**	**07 11 55.6**	**+2.4**
ONTNC	**Ouen Toro**	**7.46**	**183**	P		**Pn**	**07 11 58.5**	**+2.6**
OUENC	**Ouen Island, N**	**7.56**	**180**	P		**Pn**	**07 11 58.8**	**+1.6**
STKA	**Stephens Creek**	**28.64**	**229**	P		**P**	**07 16 02.8**	**-0.1**
	2.0nm,0.3s,baz=76,slow=8.3,SNR=4.9							
	2.0nm,0.3s							
WRA	**Warramunga Arr**	**31.43**	**256**	P		**P**	**07 16 27.0**	**-0.6**
	0.4nm,0.5s,baz=84,slow=9.1,SNR=5.2							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**32.28**	**249**	P		**P**	**07 16 34.4**	**-0.7**
	1.4nm,0.6s,baz=82,slow=9.3,SNR=19							
	1.4nm,0.6s							

IDC 04 07:17:42.8±3.2, 54°.45N×86°.79E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=29.1km s-min=19.9km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**247**	*i*			07 25 40.0	
	baz=67,slow=318,SNR=8.1							
ZALV	**Zalesovo Beam**	**1.26**	**247**	Pn		Pg	07 18 05.8	-1.1
	1.0nm,0.3s,baz=64,slow=16,SNR=7.4							
ZALV				Lg		Lg	07 18 22.8	
	1.0nm,0.3s,baz=70,slow=21,SNR=3.6							
KURBB	**Kurchatov Arra**	**6.33**	**236**	Pn		Pn	07 19 18.1	+0.9
	0.1nm,0.3s,baz=53,slow=14,SNR=9.1							
KURBB				Lg		Lg	07 21 06.6	
	baz=54,slow=32,SNR=2.9							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**8.18**	**202**	Pn		Pn	07 19 44.0	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=7.1							
	0.1nm,0.3s							

*IDC **04** 07:29:51.4±3.1, 13°.78N×90°.97W, h0km, mb3.8/6, mbtmp3.8/8, ML4.3/2, MS3.0/4, Error ellipse: s-maj=62.7km s-min=37.5km az=2.0*
*GCG **04** 07:30:04.8±0.8, 14°.28N×91°.53W, h65km±10km, MD4.3*
*NEIC **04** 07:30:04.6±2.8, 14°.24N±0°.08×91°.49W±0°.08, h56km±13km, mb4.1/11, Md4.3(SNET), Error ellipse: s-maj=14.3km s-min=7.4km az=47.0*
*SNET **04** 07:30:06.8±0.6, 13°.89N×91°.25W, h14km±4km, ML3.9*
*UCR **04** 07:30:06.7±0.5, 13°.89N×91°.25W, h14km±4km, ML3.8, mb4.1(NEIC)*
ISC 04 07:30:04.1±1.2, 14°.12N±0°.08×91°.52W±0°.07, h65km±11km, n61, σ1s40/65, mb4.1/11, 2C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.43**	**337**	Pn		**Pn**	**07 30 14.5**	**-1.4**
STG3	**Santiaguito 3,**	**0.58**	**355**	*eP*		**Pn**	**07 30 17.2**	**-0.4**
FUG	**Fuego 3**	**0.73**	**64**	*eP*		**Pn**	**07 30 19.4**	**+0.2**
PCG	**Pacaya**	**0.92**	**73**	*eP*		**Pn**	**07 30 22.3**	**+0.6**
PCG				*eS*		**Sn**	**07 30 37.1**	**+2.5**
HUEH	**Huehuetenango**	**1.19**	**1**	Pn		**Pn**	**07 30 24.7**	**-0.4**
NBG	**Las Nubes**	**1.23**	**68**	*eP*		**Pn**	**07 30 26.9**	**+1.3**
NBG				*eS*		**Sn**	**07 30 43.1**	**+1.6**
SLOZ	**Alcaldia de Sa**	**1.69**	**93**	⇓*eP*		**Pn**	**07 30 31.6**	**+0.1**
SLOZ				*eS*		**Sn**	**07 30 51.7**	**-0.5**
NUBE	**Las Nubes**	**1.70**	**97**	*eP*		**Pn**	**07 30 31.6**	**-0.2**
NUBE				*eS*		**Sn**	**07 30 51.0**	**-1.8**
NUBE	**Las Nubes**	**1.70**	**97**	*eP*		**Pn**	**07 30 31.6**	**-0.2**
NUBE				*eS*		**Sn**	**07 30 51.0**	**-1.8**
CEVE	**Cerro Verde**	**1.86**	**99**	*eP*		**Pn**	**07 30 34.8**	**+0.7**
CEVE				*eS*		**Sn**	**07 30 56.5**	**-0.3**
CEVE				IAML			07 31 10.6	
	comp=Z,3μm,0.4s							
CEVE	**Cerro Verde**	**1.86**	**99**	*eP*		**Pn**	**07 30 34.8**	**+0.7**
CEVE				*eS*		**Sn**	**07 30 56.5**	**-0.3**
CEVE				IAML			07 31 10.6	
	comp=Z,3μm,0.4s							
MRL	**Marmol**	**2.02**	**62**	*eP*		**Pn**	**07 30 36.9**	**+0.8**
MRL				*eS*		**Sn**	**07 31 04.8**	**+4.4**
JAYA	**Jayaque - finc**	**2.06**	**103**	*eP*		**Pn**	**07 30 36.5**	**-0.2**
JAYA				IAML			07 31 06.6	
	comp=Z,1μm,0.3s							
JAYA	**Jayaque - finc**	**2.06**	**103**	*eP*		**Pn**	**07 30 36.5**	**-0.2**
JAYA				IAML			07 31 06.6	
	comp=Z,1μm,0.3s							
CEDA	**San Andres**	**2.09**	**99**	*eP*		**Pn**	**07 30 37.5**	**+0.5**
CEDA				IAML			07 31 15.2	
	comp=Z,839nm,0.5s							
CEDA	**San Andres**	**2.09**	**99**	*eP*		**Pn**	**07 30 37.5**	**+0.5**
CEDA				IAML			07 31 15.2	
	comp=Z,839nm,0.5s							
MTO3	**Montecristo**	**2.11**	**82**			**Pn**	**07 30 36.6**	**-0.8**
ESQI	**Esquipulas**	**2.15**	**78**			**Pn**	**07 30 37.6**	**-0.3**
CCIG	**Comitan**	**2.23**	**345**			**Pn**	**07 30 39.3**	**+0.4**
SNET	**Serv Nac Est T**	**2.26**	**101**			**Pn**	**07 30 39.8**	**+0.4**
COEG	**Centro de Oper**	**2.61**	**101**	*eP*		**Pn**	**07 30 44.8**	**+0.7**
COEG	**Centro de Oper**	**2.61**	**101**	*eP*		**Pn**	**07 30 44.8**	**+0.7**
SCLA	**Alcaldia de Sa**	**2.74**	**98**	*eP*		**Pn**	**07 30 46.3**	**+0.4**
SCLA	**Alcaldia de Sa**	**2.74**	**98**	*eP*		**Pn**	**07 30 46.3**	**+0.4**
COEB	**Comit de Eme**	**2.97**	**102**	⇑*iP*		**Pn**	**07 30 49.5**	**+0.5**
COEB	**Comit de Eme**	**2.97**	**102**	⇑*iP*		**Pn**	**07 30 49.5**	**+0.5**
PETF	**Flores**	**3.20**	**30**			**Pn**	**07 30 52.1**	**0.0**
TGUH	**Tegucigalpa,Un**	**4.12**	**90**			**Pn**	**07 31 03.9**	**-0.8**
CMIG	**Matias Romero**	**4.38**	**313**	Pn		**Pn**	**07 31 07.8**	**-0.5**
	comp=Z,20nm,0.3s,baz=148,slow=8.8,SNR=79							
CMIG				Sn		**Sn**	**07 31 58.8**	**+0.7**
	comp=Z,29nm,0.3s,baz=245,slow=20,SNR=7.6							
CMIG				LR		LR	07 33 06.5	
	comp=Z,116nm,21.9s,baz=106,slow=39							
	comp=Z,47nm,0.3s							
CRIN	**San Cristobal**	**4.57**	**108**			**Pn**	**07 31 13.5**	**+2.6**
CNGN	**Cerro Negro**	**4.96**	**108**	Pn		**Pn**	**07 31 15.0**	**-1.2**
BOAB	**BOACO BROADBAN**	**5.94**	**106**	Pn		**Pn**	**07 31 29.6**	**+0.1**
TEIG	**Tepich**	**6.81**	**27**			**Pn**	**07 31 41.2**	**-0.3**
ORTG	**Ortega, Santa**	**7.00**	**122**	Pn		**Pn**	**07 31 46.1**	**+1.8**
DUNO	**Dulce Nombre,**	**7.13**	**124**	Pn		**Pn**	**07 31 47.5**	**+1.6**
RIMA	**Rio Macho**	**8.65**	**119**			**Pn**	**07 32 09.9**	**+3.0**
SRBA	**San Rafael, Bu**	**9.35**	**120**	Pn		**Pn**	**07 32 18.8**	**+2.4**
SOR	**Soroa**	**11.81**	**42**	Pn		**Pn**	**07 32 47.7**	**-2.0**
553A	**Crawfordville**	**17.27**	**21**	P		**Pn**	**07 33 59.6**	**-1.4**
553A				IAmb		IAmb	07 34 30.5	
	comp=Z,107nm,1.1s							
TXAR	**Lajitas Array**	**18.86**	**325**	P		**P**	**07 34 20.8**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=146,slow=10,SNR=13							
TXAR	**Lajitas Array**	**18.86**	**325**			**P**	**07 34 20.6**	**+1.5**
TX31	**Lajitas Ar. Si**	**18.86**	**325**	P		**P**	**07 34 19.6**	**+0.5**
TX32	**Lajitas Array**	**18.86**	**325**	P		**P**	**07 34 20.8**	**+1.6**
Y49A	**Blount Mountai**	**20.18**	**12**	P		**P**	**07 34 32.8**	**-0.8**
Y49A				IAmb		IAmb	07 34 45.2	
	comp=Z,7.0nm,1.0s							
LCAR	**Lake Charles**	**21.86**	**1**	P		**P**	**07 34 48.7**	**-2.7**
LCAR				IAmb		IAmb	07 34 51.1	
	comp=Z,5.1nm,0.6s							
WVT	**Waverly**	**22.16**	**8**	P		**P**	**07 34 53.1**	**-1.6**
WVT				IAmb		IAmb	07 35 23.1	
	comp=Z,3.1nm,0.8s							
TKL	**Tuckaleechee C**	**22.55**	**17**	P		**P**	**07 34 56.9**	**-1.9**
	comp=Z,2.0nm,0.6s,baz=188,slow=12,SNR=5.9							
TKL				LR		LR	07 44 38.9	
	comp=Z,29nm,18.4s,baz=188,slow=39							
	comp=Z,2.0nm,0.6s							
AMTX	**Amarillo**	**22.61**	**338**	P		**P**	**07 34 58.0**	**-1.7**
AMTX				IAmb		IAmb	07 34 58.8	
	comp=Z,6.0nm,0.7s							
V52A	**Sevierville**	**22.77**	**17**	P		**P**	**07 34 59.6**	**-1.6**
V52A				IAmb		IAmb	07 35 15.7	
	comp=Z,15nm,1.4s							
S39A	**Bolivar**	**23.53**	**356**	P		**P**	**07 35 06.0**	**-2.5**
S39A				IAmb		IAmb	07 35 07.1	
	comp=Z,4.1nm,0.6s							
KAN06	**Argonia West S**	**23.71**	**347**	P		**P**	**07 35 09.1**	**-1.2**
KAN12	**Harper NE Stat**	**23.79**	**347**	P		**P**	**07 35 10.9**	**-0.1**
SBM	**South Baldy**	**24.33**	**327**	P		**P**	**07 35 15.3**	**-1.0**
ANMO	**Albuquerque**	**24.73**	**330**	P		**P**	**07 35 20.3**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=148,slow=15,SNR=3.8							
	comp=Z,0.7nm,0.7s							
ATAH	**Atahualpa**	**24.82**	**148**	LR		LR	07 43 28.5	
	comp=Z,47nm,18.5s,baz=320,slow=34							
SADO	**Sadowa**	**32.31**	**17**	LR		LR	07 49 35.4	
	comp=Z,26nm,20.9s,baz=44,slow=36							
NVAR	**Mina Array Bea**	**33.87**	**321**	P		**P**	**07 36 42.3**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=134,slow=9.1,SNR=22							
	comp=Z,2.0nm,0.8s							
SCHQ	**Schefferville**	**44.95**	**20**	P		P	07 38 08.6	-4.0
	comp=Z,4.6nm,1.0s,baz=216,slow=12,SNR=5.2							
	comp=Z,4.6nm,1.0s							
YKA	**Yellowknife Ar**	**51.01**	**346**	P		P	07 38 56.4	-2.9
	comp=Z,0.3nm,0.6s,baz=140,slow=8.7,SNR=5.9							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**62.91**	**337**	P		P	07 40 21.1	-2.3
	comp=Z,0.9nm,0.9s,baz=119,slow=5.4,SNR=11							
	comp=Z,0.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**146.02**	**342**	PKPbc		**PKPdf**	**07 49 36.1**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=328,slow=3.5,SNR=13							

*SOME **04** 07:46:43.5, 39°.35N×73°.68E, h15km*
*KRNET **04** 07:46:45.2±0.1, 39°.40N×73°.68E, mb4.2*
*IDC **04** 07:46:46.1±1.1, 39°.38N×73°.58E, h0km, mb3.8/7, mbtmp3.7/12, ML3.1/5, MS2.9/5, Error ellipse: s-maj=20.7km s-min=17.2km az=109.0*
*NNC **04** 07:46:49.2±1.4, 39°.66N×73°.58E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=11.6km s-min=6.3km az=173.0*
ISC 04 07:46:48.6±0.8, 39°.53N±0°.04×73°.56E±0°.03, h10km, n78, σ2s36/111, mb3.8/7, 29C-21D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.16**	**329**	⇓*eP*		**Pn**	**07 47 10.1**	**-0.9**
	baz=29							
OHH				⇓*eS*		**Sn**	**07 47 28.6**	**+1.7**
	baz=29							
BTK	**Batken**	**2.18**	**285**	⇑*eP*		**Pb**	**07 47 26.6**	**-1.5**
	baz=87							
BTK				⇑*eS*		**Sb**	**07 47 56.8**	**+1.6**
	baz=87							
ARLS	**Aral**	**2.40**	**14**	⇑*eP*		**Pn**	**07 47 29.2**	**+1.1**
	baz=11							
ARLS				⇑*eS*		**Sb**	**07 48 01.4**	**-0.3**
	baz=11							
GAR	**Garm**	**2.57**	**259**	⇑*eP*		**Pn**	**07 47 31.1**	**+0.7**
	baz=62							
GAR				⇑*eS*		**Sb**	**07 48 04.8**	**-1.8**
	baz=62							
AML	**Almayashu**	**2.60**	**2**	P		**Pb**	**07 47 34.1**	**-1.5**
	SNR=25							
TRKS	**Terek-Say**	**2.72**	**318**	⇑*eP*		**Pn**	**07 47 33.8**	**+1.3**
	baz=18							
TRKS				⇑*eS*		**Sb**	**07 48 09.1**	**-1.8**
	baz=18							
EKS2	**Erkin-Say**	**3.13**	**3**	P		**Pb**	**07 47 42.6**	**-1.9**
	SNR=15							
EKS2	**Erkin-Say**	**3.13**	**3**	⇓*eP*		**Pn**	**07 47 39.8**	**+1.7**
	baz=1.0							
EKS2				⇓*eS*		**Sb**	**07 48 19.6**	**-3.2**
	baz=1.0					

IUG	**Iuzhnay**	**3.74**	**315**	Pg	**Pb**	**07 47 52.7**	**-2.2**
	568nm,0.3s						
IUG				Lg	Lg	07 48 42.9	
	141nm,0.7s						
DZA	**Taraz**	**3.76**	**334**	⇑*iP*	**Pb**	**07 47 53.7**	**-1.3**
	52nm,0.1s						
DZA				*eS*	**Sb**	**07 48 44.5**	**+3.8**
	151nm,0.2s						
DZA	**Taraz**	**3.76**	**334**	Pg	**Pb**	**07 47 53.7**	**-1.3**
	52nm,0.1s						
DZA				Lg	Lg	07 48 44.4	
	151nm,0.2s						
USP	**Ospenovka**	**3.80**	**10**	P	**Pb**	**07 47 51.0**	**-4.8**
	SNR=5.1						
USP	**Ospenovka**	**3.80**	**10**	⇓*eP*	**Pn**	**07 47 48.7**	**+1.5**
	baz=9.0						
USP				⇓*eS*	**Sn**	**07 48 35.1**	**+3.1**
	baz=9.0						
KST	**Kastek**	**3.95**	**26**	*eP*	**Pb**	**07 47 57.7**	**-0.6**
	13nm,0.7s						
KST				*eS*	**Sg**	**07 48 51.5**	**-3.9**
	72nm,0.8s						
KST	**Kastek**	**3.95**	**26**	Pg	**Pb**	**07 47 57.7**	**-0.6**
	13nm,0.7s						
KST				Lg	Lg	07 48 51.5	
	72nm,0.8s						
SGDS	**Sogindy**	**4.00**	**11**	*eP*	**Pb**	**07 47 58.4**	**-0.8**
	19nm,0.3s						
SGDS				*eS*	**Sg**	**07 48 52.6**	**-4.5**
	29nm,0.3s						
SGDS	**Sogindy**	**4.00**	**11**	Pg	**Pb**	**07 47 58.4**	**-0.8**
	19nm,0.3s						
SGDS				Lg	Lg	07 48 52.6	
	29nm,0.3s						
MTBS	**Maitube**	**4.20**	**30**	*eP*	**Pb**	**07 48 02.7**	**+0.2**
	33nm,0.3s						
MTBS				*eS*	**Sg**	**07 49 00.3**	**-3.0**
	37nm,0.5s						
MTBS	**Maitube**	**4.20**	**30**	Pg	**Pb**	**07 48 02.7**	**+0.2**
	33nm,0.3s						
MTBS				Lg	Lg	07 49 00.3	
	37nm,0.5s						
KK31	**Karatay Array**	**4.25**	**328**	⇑Pn	**Pb**	**07 47 56.0**	**+2.7**
	2.7nm,0.2s,baz=128,slow=12,SNR=66						
KK31				⇓Pg	**Pb**	**07 48 05.6**	**+2.3**
	5.3nm,0.4s,baz=150,slow=15,SNR=9.6						
KK31				⇑Sn	**Sn**	**07 48 46.3**	**+3.3**
	13nm,0.2s,baz=138,slow=23,SNR=5.2						
KK31				⇑Lg	Lg	07 49 03.0	
	10nm,0.7s,baz=164,slow=10,SNR=6.3						
KKAR	**Karatay Array**	**4.25**	**328**	⇑*iP*	**Pn**	**07 47 55.7**	**+2.4**
	baz=28						
KKAR				⇑*eS*	**Sn**	**07 48 47.0**	**+4.0**
	baz=28						
KRBS	**Karabastau**	**4.46**	**20**	*eP*	**Pb**	**07 48 05.8**	**-1.1**
	16nm,0.2s						
KRBS				*eS*	**Sb**	**07 49 05.8**	**+5.1**
	32nm,0.9s						
KRBS	**Karabastau**	**4.46**	**20**	Pg	**Pb**	**07 48 05.8**	**-1.1**
	16nm,0.2s						
KRBS				Lg	Lg	07 49 05.8	
	32nm,0.9s						
MDOK	**Medeo**	**4.48**	**35**	*eP*	**Pb**	**07 48 07.3**	**-0.1**
	11nm,0.2s						
MDOK				*eS*	**Sg**	**07 49 08.1**	**-4.3**
	20nm,0.4s						
MDOK	**Medeo**	**4.48**	**35**	Pg	**Pb**	**07 48 07.3**	**-0.1**
	11nm,0.2s						
MDOK				Pg	Pg	07 48 08.1	-6.3
	11nm,0.5s						
MDOK				Lg	Lg	07 49 07.9	
	32nm,0.6s						
MDOK				Lg	Lg	07 49 08.1	
	20nm,0.4s						
KTBS	**Karatobe**	**4.79**	**28**	*eP*	**Pb**	**07 48 13.5**	**+0.9**
	10.0nm,0.3s						
KTBS				*eS*	**Sg**	**07 49 18.7**	**-3.6**
	58nm,0.3s						
KTBS	**Karatobe**	**4.79**	**28**	Pg	**Pb**	**07 48 13.5**	**+0.9**
	10.0nm,0.3s						
KTBS				Lg	Lg	07 49 18.7	
	58nm,0.3s						
KUU	**Kurty**	**4.83**	**25**	*eP*	**Pb**	**07 48 14.3**	**+1.0**
	11nm,0.4s						
KUU				*eS*	**Sg**	**07 49 20.2**	**-3.5**
	46nm,0.4s						
KUU	**Kurty**	**4.83**	**25**	Pg	**Pb**	**07 48 14.3**	**+1.0**
	11nm,0.4s						
KUU				Lg	Lg	07 49 20.2	
	46nm,0.4s						
CHKK	**Chushkaly**	**5.03**	**30**	*eP*	**Pb**	**07 48 17.8**	**+1.2**
	9.2nm,0.4s						
CHKK				*eS*	**Sg**	**07 49 26.1**	**-3.8**
	31nm,0.4s						
CHKK	**Chushkaly**	**5.03**	**30**	Pg	**Pb**	**07 48 17.8**	**+1.2**
	9.2nm,0.4s						
CHKK				Lg	Lg	07 49 26.1	
	31nm,0.4s						
SATY	**Saty**	**5.07**	**44**	*eP*	**Pb**	**07 48 18.4**	**+0.9**
	15nm,0.6s						
SATY				*eS*	**Sg**	**07 49 27.2**	**-4.3**
	28nm,0.7s						
SATY	**Saty**	**5.07**	**44**	Pg	**Pb**	**07 48 18.4**	**+0.9**
	15nm,0.6s						
SATY				Lg	Lg	07 49 27.2	
	28nm,0.7s						
KURS	**Kuram**	**5.25**	**40**	*eP*	**Pb**	**07 48 22.2**	**+1.7**
	11nm,1.3s						
KURS				*eS*	**Sg**	**07 49 33.7**	**-3.6**
	20nm,1.0s						
KURS	**Kuram**	**5.25**	**40**	Pg	**Pb**	**07 48 22.2**	**+1.7**
	11nm,1.3s						
KURS				Lg	Lg	07 49 33.7	
	20nm,1.0s						
UZB	**Uzynbulak**	**5.47**	**47**	*eP*	**Pb**	**07 48 25.8**	**+1.5**
	7.7nm,0.4s						
UZB				*eS*	**Sg**	**07 49 39.5**	**-4.8**
	17nm,0.5s						
UZB	**Uzynbulak**	**5.47**	**47**	Pg	**Pb**	**07 48 25.8**	**+1.5**
	7.7nm,0.4s						
UZB				Lg	Lg	07 49 39.5	
	17nm,0.5s						
ARXS	**Arharly**	**5.66**	**33**	*eP*	**Pb**	**07 48 29.4**	**+2.0**
	15nm,0.5s						
ARXS				*eS*	**Sg**	**07 49 45.8**	**-4.5**
	37nm,0.7s						
ARXS	**Arharly**	**5.66**	**33**	Pg	**Pb**	**07 48 29.4**	**+2.0**
	15nm,0.5s						
ARXS				Lg	Lg	07 49 45.8	
	37nm,0.7s						
PDGK	**Podgornoye**	**5.85**	**48**	Pg	**Pb**	**07 48 32.1**	**+1.4**
	4.3nm,0.3s						
PDGK				Lg	Lg	07 49 50.7	
	10.0nm,0.4s						
PDGK	**Podgornoye**	**5.85**	**48**	⇑Pn	**Pn**	**07 48 15.7**	**+0.2**
	2.5nm,0.6s						
PDGK				⇓Pg	Pg	07 48 35.0	-5.7
	6.7nm,0.6s						
PDGK				⇓Lg	Lg	07 49 52.4	
	43nm,1.1s						
DJR	**Jarkent**	**6.68**	**42**	Pg	**Pb**	**07 48 48.3**	**+3.5**
	4.6nm,0.3s						
DJR				Lg	Lg	07 50 18.4	
	12nm,0.6s						
MKAR	**Makanchi Array**	**9.66**	**38**	Pn	**Pn**	**07 49 10.4**	**+2.8**
	0.1nm,0.3s,baz=200,slow=12,SNR=3.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**11.63**	**16**	Pn	**Pn**	**07 49 34.5**	**-0.1**
	baz=180,slow=11,SNR=2.7						
KURBB				Lg	Lg	07 52 56.6	
	baz=207,slow=26,SNR=6.5						
	0.2nm,0.4s						
GEYT	**Alibeck**	**12.17**	**267**	LR	LR	07 55 09.4	
	comp=Z,60nm,18.2s,baz=146,slow=41						
BVA0	**Borovoye Array**	**13.68**	**352**	⇓Pn	**Pn**	**07 50 04.0**	**+1.6**
	3.1nm,0.6s,baz=157,slow=9.9,SNR=7.2						
AB31	**Akbulak array**	**13.74**	**319**	⇓Pn	**Pn**	**07 50 04.0**	**+0.7**
	1.2nm,0.7s,baz=126,slow=13,SNR=16						
AB31				⇑Sn	**Sn**	**07 52 36.5**	**+0.6**
	1.7nm,0.8s,baz=134,slow=21,SNR=4.9						
AKTO	**Aktyubinsk**	**15.45**	**320**	Pn	**Pn**	**07 50 26.4**	**-0.1**
	0.2nm,0.3s,baz=128,slow=15,SNR=5.6						
	0.7nm,0.4s						
AKTO	**Aktyubinsk**	**15.45**	**320**	⇑Pn	**Pn**	**07 50 28.0**	**+1.4**
	3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**16.33**	**24**	Pn	**Pn**	**07 50 38.2**	**+0.5**
	0.3nm,0.3s,baz=222,slow=11,SNR=6.9						
ZALV				LR	LR	07 57 09.5	
	comp=Z,26nm,19.7s,baz=116,slow=38						
	2.1nm,0.6s						
FINES	**FINESS Array B**	**36.19**	**323**	P	**P**	**07 53 51.4**	**+0.4**
	1.1nm,0.7s,baz=110,slow=7.6,SNR=3.4						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**39.17**	**336**	P	**P**	**07 54 16.1**	**-0.1**
	1.6nm,0.9s,baz=99,slow=7.7,SNR=6.1						
	1.6nm,0.9s						
VRAC	**Vranov**	**40.96**	**303**	LR	LR	08 15 27.9	
	comp=Z,24nm,18.6s,baz=36,slow=42						
HFS	**Hagfors**	**42.00**	**320**	P	**P**	**07 54 39.4**	**-0.2**
	3.9nm,0.9s,baz=90,slow=13,SNR=4.4						
	3.9nm,0.9s						
NOA	**NORSAR Array B**	**43.24**	**321**	P	**P**	**07 54 49.7**	**-0.1**
	0.7nm,0.8s,baz=91,slow=7.9,SNR=3.3						
	0.7nm,0.8s						
MA2	**Magadan**	**50.74**	**40**	LR	LR	08 19 40.0	
	comp=Z,26nm,18.3s,baz=112,slow=39						
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P	**P**	**07 57 45.7**	**-1.3**
	0.5nm,0.6s,baz=20,slow=4.7,SNR=3.6						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**81.94**	**124**	P	**P**	**07 59 08.0**	**-0.6**
	0.7nm,0.8s,baz=328,slow=5.0,SNR=6.4						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**84.38**	**127**	P	**P**	**07 59 18.7**	**-2.5**
	0.5nm,0.9s,baz=309,slow=4.4,SNR=2.9						
	0.5nm,0.9s						

IDC 04 07:54:44.5±3.2, 53°44N×87°43E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=36.9km s-min=22.5km az=90.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**289**	*i*		08 04 20.0	
	0.1nm,1.0s,baz=109,slow=317,SNR=6.7						
ZALV	**Zalesovo Beam**	**1.63**	**289**	Pn	Pn	07 55 13.9	-0.6
	0.9nm,0.3s,baz=102,slow=14,SNR=5.0						
KURBB	**Kurchatov Arra**	**6.17**	**246**	Pn	Pn	07 56 17.7	+0.8
	0.1nm,0.3s,baz=61,slow=14,SNR=2.8						
KURBB				Lg	Lg	07 58 00.4	
	baz=63,slow=31,SNR=3.0						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.43**	**208**	Pn	Pn	07 56 35.2	+1.1
	0.1nm,0.3s,baz=23,slow=15,SNR=6.1						
MKAR				Lg	Lg	07 58 41.8	
	0.1nm,0.3s,baz=33,slow=30,SNR=3.6						
	0.2nm,0.3s						

ISC 04 07:54:58.3±1.2, 49°27N±0°.05×16°.94E±0°.07, h8km, n8, σ0s37/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRAC	**Vranov**	**0.23**	**279**	*e*PG	**Pg**	**07 55 03.1**	**+0.2**
VRAC				*e*SG	**Sg**	**07 55 06.3**	**+0.3**
KRUC	**Moravsky**	**0.41**	**240**	*e*PG	**Pg**	**07 55 06.5**	**+0.2**
KRUC				*e*SG	**Sg**	**07 55 11.5**	**-0.3**
JAVC	**Velka Javorina**	**0.63**	**130**	*e*PG	**Pb**	**07 55 11.7**	**+0.1**
MORC	**Moravsky Berou**	**0.64**	**38**	*e*PG	**Pb**	**07 55 11.3**	**-0.4**
CONA	**Conrad Observa**	**1.52**	**208**	*i* Pg	**Pn**	**07 55 26.1**	**+0.2**
	comp=Z,1.7nm,0.2s						
CONA	**Conrad Observa**	**1.52**	**208**	*e*Sg	**Sb**	**07 55 46.4**	**+0.2**
	comp=N,2.3nm,0.2s						
RONA	**Rosalia, Austr**	**1.63**	**195**	*i* Pg	**Pb**	**07 55 28.0**	**-0.6**
	comp=Z,0.8nm,0.2s						
RONA	**Rosalia, Austr**	**1.63**	**195**	Sg	**Sn**	**07 55 48.2**	**-0.3**
	comp=E,1.0nm,0.2s						

NIED ***04*** *07:57:42.6, 31°.12N×129°.02E, h9km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=2.02; Mθθ=2.18; Mϕϕ=4.20; Mrθ=2.13; Mθϕ=4.79; Mϕr=1.45; Fault plane solution: M₀6.29000×10¹⁴ NP1: ϕs163.00000°, δ64.00000°, λ-173.00000°. NP2: ϕs70.00000°, δ84.00000°, λ-27.00000°.*

JMA 04 07:57:42.6±0.3, 31°.1N±0°.4×12°.9E±°, h9km±2km, MD3.9/27, MV4.2/27, 1D, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.81**	**46**	⇓P	Pg	07 57 57.7	-0.6
JSJ	**Shimokoshiki**	**0.81**	**46**	A	A	07 57 57.7	
	comp=E,5.0nm,0.3s,comp=E,6.0nm,0.5s						
JKC	**Kuchinoerabu**	**1.20**	**123**	P	Pb	07 58 04.6	-1.0
JKC	**Kuchinoerabu**	**1.20**	**123**	A	A	07 58 04.6	
	comp=E,2.0nm,0.3s,comp=E,2.0nm,1.1s						
JSU	**Suzuyama**	**1.28**	**72**	P	Pn	07 58 06.6	-0.3
JSU				S	Sb	07 58 23.1	-0.6
JSU	**Suzuyama**	**1.28**	**72**	A	A	07 58 06.6	
	comp=E,6.0nm,0.2s,comp=E,9.0nm,0.3s						
JNN	**Nakanoshima**	**1.47**	**150**	P	Pn	07 58 08.9	-0.5
JNN	**Nakanoshima**	**1.47**	**150**	A	A	07 58 08.9	
	comp=E,7.0nm,1.0s,comp=E,7.0nm,0.7s						
JFU	**Fukue jima 2**	**1.55**	**351**	P	Pb	07 58 11.0	-0.5
JYAK	**Yakushimahirau**	**1.55**	**124**	P	Pn	07 58 09.7	-0.8
JTN	**Tanegashima 3**	**1.74**	**105**	P	Pn	07 58 12.7	-0.4
JMTN	**Minamitane**	**1.77**	**113**	P	Pn	07 58 13.0	-0.5
JNKG	**Nichinankitago**	**2.08**	**74**	A	A	07 58 18.5	
	comp=E,3.0nm,1.6s,comp=E,3.0nm,1.8s						

KRNET ***04*** *07:59:47.5±0.1, 39°.04N×73°.98E, mb3.3*
SOME ***04*** *07:59:48.1, 39°.55N×73°.35E, h5km*

ISC 04 07:59:52.5±2.3, 39°2N±0°.1×73°8E±0°.1, h10km, n8, σ2s78/15, 2C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**2.43**	**292**	⇓*i*P	**Pn**	**08 00 31.8**	**-0.6**
	baz=94						
BTK				⇓*i*S	**Sn**	**08 01 04.9**	**+2.7**
	baz=94						
GAR	**Garm**	**2.69**	**267**	⇓*i*P	**Pn**	**08 00 35.3**	**-0.7**
	baz=70						
GAR				⇓*i*S	**Sn**	**08 01 09.4**	**+0.8**
	baz=70						
ARLS	**Aral**	**2.69**	**9**	⇑*i*P	**Pn**	**08 00 34.9**	**-1.2**
	baz=5.0						
ARLS				⇑*i*S	**Sn**	**08 01 08.9**	**0.0**
	baz=5.0						
IUG	**luzhnay**	**4.09**	**317**	*eP*	**Pn**	**08 00 55.0**	**-0.2**
	87nm,0.4s						
IUG				*eS*	**Sn**	**08 01 43.2**	**0.0**
	11nm,0.2s						
KST	**Kastek**	**4.19**	**23**	*eP*	**Pb**	**08 01 03.1**	**-3.2**
	2.1nm,0.4s						
KST				*eS*	**Sb**	**08 01 56.9**	**-0.1**
	5.9nm,0.4s						
KRBS	**Karabastau**	**4.72**	**17**	*eP*	Pb	08 01 10.9	-4.5
	1.3nm,0.3s						
KRBS				*eS*	**Sb**	**08 02 10.8**	**-1.5**
	2.3nm,0.5s						
KTBS	**Karatobe**	**5.02**	**25**	*eP*	**Pb**	**08 01 18.1**	**-2.3**
	1.1nm,0.4s						
KTBS				*eS*	**Sb**	**08 02 23.0**	**+2.2**
	3.8nm,0.2s						
ARXS	**Arharly**	**5.86**	**30**	*eP*	**Pb**	**08 01 35.5**	**+0.7**
	1.5nm,0.6s						
ARXS				*eS*	**Sb**	**08 02 52.9**	**+7.7**
	3.3nm,0.6s						

IDC ***04*** *09:01:10.4±0.5, 4°.15S×143°.60E, h0km, mb4.9/30, mbtmp4.9/31, ML4.8/1, MS4.1/53, Error ellipse: s-maj=17.2km s-min=11.2km az=89.0*
BJI ***04*** *09:01:17.5±0.0, 4°.33S×143°.74E, h75km, mb5.1/79, mB5.1/56, Ms4.7/66, Ms7 4.4/67*
MOS ***04*** *09:01:17.7±0.9, 4°.19S×143°.48E, h64km, mb5.4/39, Error ellipse: s-maj=9.1km s-min=5.2km az=115.4*
DJA ***04*** *09:01:20.7±0.3, 4°S±2°×14°.3E±°, h67km±3km, M5.2/65, mb5.3/65, mB5.6/42, MLv6.0/5, Mw(mB)5.2/42, MwMwp5.0/15, Mwp5.3/15*
NEIC ***04*** *09:01:21.3±2.5, 4°.27S±0°.07×143°.45E±0°.07, h73km±4km, mb5.2/144, Error ellipse: s-maj=10.8km s-min=9.8km az=170.0*
GCMT ***04*** *09:01:23.3±0.1, 4°.22S±0°.01×143°.38E±0°.01, h73km±1km, MW5.3/116, Moment Tensor Solution. s98,c143; s116,c212; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.11±.02; Mθθ-1.09±.02; Mϕϕ0.98±.02; Mrθ-0.42±.01; Mθϕ0.54±.02; Mϕr-0.20±.02; Best double couple: M₀1.25800×10¹⁷ NP1:ϕs239.00000°, δ89.00000°, λ22.00000°. NP2:ϕs149.00000°, δ68.00000°, λ179.00000°. Principal axes: T 1.1980, Plg16.0000°, Azm106.0000°; N 0.1220, Plg68.0000°, Azm242.0000°; P -1.3170, Plg15.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 09:01:20.4±0.3, 4°.35S±0°.03×143°.44E±0°.04, h76km±2km, h76km:pP-P, n669, σ1s72/671, mb5.2/162, 21C-9D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**3.70**	**298**	P	**Pn**	**09 02 14.9**	**-0.4**
GENI				S	**Sn**	**09 02 56.1**	**-1.7**
GENI	**Genyem**	**3.70**	**298**	P	**Pn**	**09 02 15.8**	**+0.5**
MANU	**Manus Island**	**4.54**	**60**		**Pn**	**09 02 27.6**	**+0.9**
SMPI	**Sarmi**	**5.27**	**296**	P	**Pn**	**09 02 36.4**	**-0.3**
	6.7nm10µm15µm1µm,0.8s						
PMG	**Port Moresby**	**6.24**	**144**	Pn	**Pn**	**09 02 51.0**	**+1.1**
	47nm,0.3s,baz=329,slow=13,SNR=81						
PMG				Sn	**Sn**	**09 03 59.3**	**-0.5**
	33nm,0.3s,baz=349,slow=20,SNR=1.3						
SRPI	**Serui, Papua**	**7.60**	**289**	P	**Pn**	**09 03 08.7**	**+0.2**
	4.0nm5µm7µm648nm,0.8s						
BAKI	**Biak**	**7.96**	**293**	P	**Pn**	**09 03 14.2**	**+0.6**
	481nm,0.9s						
KRVT	**Keravat (AS076**	**8.56**	**90**	Pn	**Pn**	**09 03 23.5**	**+1.8**
	11nm,0.3s,baz=236,slow=6.7,SNR=84						
RABL	**Rabaul**	**8.70**	**89**	Pn	**Pn**	**09 03 26.2**	**+2.6**
RABL	**Rabaul**	**8.70**	**89**	P	Pn	09 03 28.6	+4.9
COEN	**Coen**	**9.55**	**182**	P	**Pn**	**09 03 37.2**	**+1.9**
	baz=9.6,SNR=94						
COEN	**Coen**	**9.55**	**182**	Pn	**Pn**	**09 03 37.3**	**+2.1**
COEN	**Coen**	**9.55**	**182**	P	**Pn**	**09 03 37.3**	**+2.1**
FAKI	**Fak Fak**	**11.26**	**277**	Pn	**Pn**	**09 03 57.6**	**-0.9**
FAKI	**Fak Fak**	**11.26**	**277**	P	**Pn**	**09 03 58.5**	**0.0**
	4µm3µm181nm,0.7s						
FAKI	**Fak Fak**	**11.26**	**277**	P	**Pn**	**09 03 57.1**	**-1.4**
SAUI	**Saumlaki**	**12.60**	**253**	Pn	**Pn**	**09 04 15.6**	**-1.1**
SAUI	**Saumlaki**	**12.60**	**253**	P	**Pn**	**09 04 17.3**	**+0.6**
	1µm,0.9s						
SIJI	**Sorong**	**12.64**	**286**	Pn	**Pn**	**09 04 17.3**	**0.0**
	5.3nm,0.3s,baz=83,slow=14,SNR=12						
SIJI				Sn	**Sn**	**09 06 39.2**	**+2.9**
	baz=131,slow=20						
SIJI				LR	LR	09 10 09.6	
	comp=Z,2µm,18.4s,baz=98,slow=42						
SWI	**Sorong**	**12.65**	**286**	P	**Pn**	**09 04 15.9**	**-1.5**
SWI				pmax	pmax		
	comp=Z,261nm,0.8s						
SWI	**Sorong**	**12.65**	**286**	P	**Pn**	**09 04 17.8**	**+0.4**
	comp=Z,4µmcomp=Z,2µmcomp=Z,257nm,0.7s						
BNDI	**Bandanaira**	**13.49**	**269**	P	**Pn**	**09 04 29.9**	**+1.1**
	comp=Z,690nm,1.0s						
KDU	**Kakadu**	**13.64**	**232**	P	**Pn**	**09 04 29.6**	**-1.1**
	baz=14,SNR=71						
KDU	**Kakadu**	**13.64**	**232**	P	**Pn**	**09 04 29.8**	**-0.8**
MTSU	**Mount Surprise**	**13.73**	**176**	P	**P**	**09 04 35.1**	**-2.8**
	baz=14,SNR=15						
MTSU	**Mount Surprise**	**13.73**	**176**	P	**Pn**	**09 04 34.5**	**+2.7**
MSAI	**Masohi**	**14.51**	**273**	P	**Pn**	**09 04 42.6**	**+0.5**
	comp=Z,23nm,0.7s						
MTN	**Manton Dam**	**14.80**	**234**	P	**Pn**	**09 04 44.8**	**-0.9**
	baz=15,SNR=15						
MTN	**Manton Dam**	**14.80**	**234**	Pn	**Pn**	**09 04 44.9**	**-0.9**
MTN	**Manton Dam**	**14.80**	**234**	P	**Pn**	**09 04 44.9**	**-0.9**
AAI	**Ambon**	**15.22**	**272**	P	**Pn**	**09 04 50.5**	**-0.7**
AAI				pmax	pmax		
	comp=Z,191nm,0.7s						
AAI	**Ambon**	**15.22**	**272**	P	**Pn**	**09 04 52.1**	**+0.9**
	comp=Z,3µmcomp=Z,192nm,0.7s						
CTA	**Charters Tower**	**15.88**	**170**	P	**P**	**09 05 02.7**	**+0.9**
CTA				pmax	pmax		
	comp=Z,90nm,1.1s						
CTA	**Charters Tower**	**15.88**	**170**	P	**P**	**09 05 02.2**	**+0.4**
CTAO	**Charters Tower**	**15.88**	**170**	Pn	**P**	**09 05 01.6**	**-0.2**
CTAO	**Charters Tower**	**15.88**	**170**	P	**P**	**09 05 01.6**	**-0.2**
CTAO	**Charters Tower**	**15.88**	**170**	P	**P**	**09 05 03.4**	**+1.6**
NLAI	**Namlea**	**16.34**	**273**	P	**P**	**09 05 06.3**	**-0.6**
	comp=Z,14µmcomp=Z,135nm,1.3s						
LBMI	**Labuha**	**16.34**	**283**	P	**Pn**	**09 05 05.9**	**+0.6**
	comp=Z,4µmcomp=Z,172nm,1.3s						
QIS	**Mount Isa**	**16.54**	**193**	P	**P**	**09 05 09.1**	**+0.1**
	baz=17,SNR=31						
QIS	**Mount Isa**	**16.54**	**193**	P	**P**	**09 05 10.4**	**+1.3**
TNTI	**Ternate**	**16.84**	**287**		**P**	**09 05 13.0**	**+0.5**
TNTI	**Ternate**	**16.84**	**287**	P	**Pn**	**09 05 12.0**	**+0.4**
	comp=Z,2µmcomp=Z,4µmcomp=Z,282nm,1.6s						
HNR	**Honiara**	**17.15**	**108**	Pn	**Pn**	**09 05 13.5**	**-1.8**
	comp=Z,1nm,0.3s,baz=241,slow=13,SNR=11						
HNR	**Honiara**	**17.15**	**108**	P	**Pn**	**09 05 14.1**	**-1.2**
HNR	**Honiara**	**17.15**	**108**	P	**Pn**	**09 05 14.1**	**-1.2**
HNR	**Honiara**	**17.15**	**108**	P	**P**	**09 05 17.3**	**+1.5**
SANI	**Sanana**	**17.57**	**277**	P	**Pn**	**09 05 20.4**	**-0.1**
	comp=Z,2µmcomp=Z,2µmcomp=Z,132nm,1.2s						
SANI	**Sanana**	**17.57**	**277**	P	**P**	**09 05 21.2**	**+0.7**
WB0	**Warramunga Arr**	**17.68**	**209**		**Pn**	**09 05 21.9**	**+0.1**
WR0	**Warramunga Arr**	**17.77**	**208**	P	**Pn**	**09 05 23.0**	**+0.1**
WRAB	**Tennant Creek**	**17.84**	**209**	P	**Pn**	**09 05 24.6**	**+0.8**
WRAB	**Tennant Creek**	**17.84**	**209**	*ce*P	**Pn**	**09 05 23.7**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,325nm,1.3s						
WRAB	**Tennant Creek**	**17.84**	**209**	P	**P**	**09 05 23.6**	**+0.1**
WB2	**Warramunga Arr**	**17.85**	**209**	P	**Pn**	**09 05 25.0**	**+1.1**
	baz=18						
WB2	**Warramunga Arr**	**17.85**	**209**		**Pn**	**09 05 24.3**	**+0.4**
WRA	**Warramunga Arr**	**17.86**	**209**	P	**P**	**09 05 23.1**	**-0.5**
	comp=Z,3.4nm,0.3s,baz=32,slow=12,SNR=99						
WRA				S	**Sn**	**09 08 34.7**	**-8.0**
	comp=Z,36nm,1.0s,baz=30,slow=25,SNR=5.4						
WRA				Lg	Lg	09 10 41.9	
	comp=Z,0.3nm,0.3s,baz=311,slow=29,SNR=1.4						
WRA				LR	LR	09 12 52.4	
	comp=Z,2µm,19.2s,baz=24,slow=39						
	comp=Z,96nm,0.9s						
WRA	**Warramunga Arr**	**17.86**	**209**	P	**P**	**09 05 23.5**	**-0.1**
WRA	**Warramunga Arr**	**17

ASAR Alice Springs 21.30 205 P **P** **09 06 03.4 +2.3**
MMRI Maumere 21.49 257 P **P** **09 06 02.8 -0.3**
MMRI IAmb IAmb 09 06 24.3
comp=Z,127nm,0.8s
MMRI Maumere 21.49 257 P **P** **09 06 03.0 -0.1**
comp=Z,4µmcomp=Z,171nm,0.7s
MRSI Marisa 22.01 282 P **P** **09 06 10.1 +1.4**
comp=Z,2µmcomp=Z,3µmcomp=Z,135nm,0.7s
APSI Ampana 22.03 278 P **P** **09 06 10.4 +1.4**
comp=Z,2µmcomp=Z,4µmcomp=Z,332nm,1.2s
EDFI Ende, Flores 22.04 257 P **P** **09 06 07.8 -1.4**
comp=Z,846nmcomp=Z,74nm,1.1s
QLP Quilpie 22.12 178 P **P** **09 06 13.1 +3.3**
baz=22,SNR=7.5
QLP Quilpie 22.12 178 P **P** **09 06 13.4 +3.6**
FITZ Fitzroy Crossi 22.13 230 P **P** **09 06 11.0 +1.0**
comp=Z,33nm,0.6s,baz=56,slow=12,SNR=39
FITZ S **S** **09 10 01.7 -7.9**
comp=Z,20nm,0.9s,baz=69,slow=14,SNR=1.7
FITZ Lg Lg 09 13 00.1
comp=Z,0.5nm,0.3s,baz=74,slow=6.0,SNR=2.8
FITZ LR LR 09 15 22.2
comp=Z,514nm,20.8s,baz=50,slow=38
comp=Z,33nm,0.6s
FITZ Fitzroy Crossi 22.13 230 P **P** **09 06 11.4 +1.4**
baz=22,SNR=25
FITZ Fitzroy Crossi 22.13 230 P **P** **09 06 11.5 +1.5**
FITZ Fitzroy Crossi 22.13 230 P **P** **09 06 11.4 +1.4**
EIDS Eidsvold 22.15 161 P **P** **09 06 14.1 +3.9**
baz=22,SNR=13
EIDS Eidsvold 22.15 161 P **P** **09 06 12.8 +2.7**
EIDS IAmb IAmb 09 06 35.2
comp=Z,109nm,1.0s
EIDS Eidsvold 22.15 161 P **P** **09 06 14.0 +3.9**
RMQ Roma 22.59 168 P **P** **09 06 17.9 +3.0**
baz=23,SNR=29
RMQ Roma 22.59 168 P **P** **09 06 18.4 +3.5**
BSSI Bau Bau, Buton 22.92 265 P **P** **09 06 19.9 +1.5**
comp=Z,3µmcomp=Z,216nm,1.2s
BKSI Bulukumba 23.25 267 P **P** **09 06 23.3 +1.7**
comp=Z,1µmcomp=Z,2µmcomp=Z,144nm,0.8s
BNSI Bone 23.26 269 P **P** **09 06 23.4 +1.7**
comp=Z,3µmcomp=Z,180nm,0.9s
TOLI2 Tolitoli 23.28 283 P **P** **09 06 23.1 +1.2**
BASI Baing, Sumba 23.40 254 P **P** **09 06 24.8 +1.8**
comp=Z,4µmcomp=Z,332nm,0.8s
INKA Innaminka 23.40 186 P **P** **09 06 24.7 +1.9**
TTSI Tana Toraja 23.61 272 P **P** **09 06 26.5 +1.7**
comp=Z,3µmcomp=Z,211nm,1.3s
SPSI Sidrap Palu 23.61 270 P **P** **09 06 26.6 +1.7**
comp=Z,2µmcomp=Z,94nm,0.9s
KAPI Kappang 23.62 267 P **P** **09 06 25.2 +0.3**
comp=Z,5.5nm,0.5s,baz=159,slow=11,SNR=2.6
comp=Z,5.5nm,0.5s
KAPI Kappang 23.62 267 P **P** **09 06 26.2 +1.2**
KAPI IAmb IAmb 09 06 56.2
comp=Z,54nm,0.8s
KAPI Kappang 23.62 267 *i* P **P** **09 06 24.4 -0.5**
KAPI Kappang 23.62 267 P **P** **09 06 26.6 +1.7**
MPSI Mapaga 23.98 281 P **P** **09 06 29.8 +1.7**
comp=Z,2µmcomp=Z,64nm,1.6s
WBSI Waikabubak, Su 24.43 256 P **P** **09 06 34.2 +1.9**
comp=Z,2µmcomp=Z,203nm,1.1s
OOD Oodnadatta 24.46 197 P **P** **09 06 33.8 +1.5**
WRKA Warakurna 25.20 214 P **P** **09 06 39.6 +0.5**
baz=25,SNR=88
WRKA Warakurna 25.20 214 P **P** **09 06 39.7 +0.5**
PLAI Plampang 25.87 259 P **P** **09 06 44.1 -1.3**
comp=Z,82nm,0.9s
PLAI Plampang 25.87 259 P **P** **09 06 44.2 -1.2**
KOUNC Koumac, New Ca 25.90 130 P **P** **09 06 45.9 +0.3**
KOUNC Koumac, New Ca 25.90 130 P **P** **09 06 47.3 +1.8**
LCRK Leigh Creek 26.42 190 P **P** **09 06 50.3 +0.2**
MYLDM Lahad Datu 26.65 291 P **P** **09 06 52.4 0.0**
CMSA Cobar Meteorol 27.13 176 P **P** **09 06 59.2 +2.7**
baz=27,SNR=9.9
CMSA Cobar Meteorol 27.13 176 P **P** **09 07 00.3 +3.8**
MULG Mulgathing 27.27 198 P **P** **09 06 59.5 +1.7**
STKA Stephens Creek 27.44 183 P **P** **09 07 00.7 +1.5**
comp=Z,4.0nm,0.5s,baz=2.1,slow=8.5,SNR=17
STKA LR LR 09 19 07.1
comp=Z,1µm,18.8s,baz=359,slow=39
comp=Z,4.0nm,0.5s
STKA Stephens Creek 27.44 183 P **P** **09 07 02.5 +3.3**
baz=28,SNR=19
STKA Stephens Creek 27.44 183 P **P** **09 07 01.3 +2.0**
STKA Stephens Creek 27.44 183 *i* P **P** **09 07 01.6 +2.3**
STKA Stephens Creek 27.44 183 P **P** **09 07 01.5 +2.3**
DZM Mont Dzumac 28.41 130 P **P** **09 07 08.2 0.0**
comp=Z,15nm,0.7s,baz=266,slow=9.4,SNR=16
DZM LR LR 09 17 46.1
comp=Z,755nm,20.8s,baz=308,slow=35
comp=Z,15nm,0.7s
DZM Mont Dzumac 28.41 130 *e*P **P** **09 07 07.5 -0.7**
comp=Z,102nm,1.4s
DZM *e*LR LR 09 14 32.9
comp=Z,2µm,31.6s
DZM Mont Dzumac 28.41 130 P **P** **09 07 07.2 -1.0**
DZM IAmb IAmb 09 07 10.1
comp=Z,108nm,1.5s
DZM Mont Dzumac 28.41 130 P **P** **09 07 08.8 +0.6**
MBWA Marble Bar 28.45 232 P **P** **09 07 08.6 +0.2**
MBWA IAmb IAmb 09 08 06.4
comp=Z,92nm,1.1s
MBWA Marble Bar 28.45 232 P **P** **09 07 09.4 +1.0**
PSA00 Pilbara Seismi 28.59 231 P **P** **09 07 11.1 +1.5**
PSA00 IAmb IAmb 09 07 51.5
comp=Z,47nm,1.0s
PSA00 Pilbara Seismi 28.59 231 P **P** **09 07 10.3 +0.7**
PSA00 IAmb IAmb 09 08 12.3
comp=Z,14nm,0.9s
PSA00 Pilbara Seismi 28.59 231 P **P** **09 07 11.4 +1.8**
YATNC Mamie plateau, 28.75 130 P **P** **09 07 12.0 +0.9**
OUENC Ouen Island, N 28.91 131 P **P** **09 07 13.4 +0.9**
BBOO Buckleboo 29.14 193 P **P** **09 07 15.6 +1.2**
baz=29,SNR=9.5
BBOO Buckleboo 29.14 193 P **P** **09 07 15.7 +1.3**
BBOO Buckleboo 29.14 193 P **P** **09 07 15.8 +1.3**
HTT Hallett 29.24 188 P **P** **09 07 17.7 +2.4**
baz=29,SNR=14
HTT Hallett 29.24 188 P **P** **09 07 17.7 +2.4**
FORT Forrest 30.02 207 P **P** **09 07 23.0 +0.8**
baz=30
FORT Forrest 30.02 207 P **P** **09 07 22.8 +0.6**
FORT Forrest 30.02 207 P **P** **09 07 25.0 +2.8**
CAN Canberra 31.25 171 P **P** **09 07 34.7 +1.7**
CAN IAmb IAmb 09 07 52.5
comp=Z,57nm,1.1s
CAN Canberra 31.25 171 P **P** **09 07 34.7 +1.7**
CAN pmax pmax
comp=Z,57nm,1.1s
CAN Canberra 31.25 171 P **P** **09 07 34.3 +1.3**
JCJ Chichijima 31.28 358 P **P** **09 07 30.8 -2.6**
comp=Z,66nm,0.7s,baz=277,slow=15,SNR=2.2
JCJ LR LR 09 20 32.4
comp=Z,159nm,18.4s,baz=170,slow=37
comp=Z,66nm,0.7s
SBUM Sibu 31.92 282 P **P** **09 07 40.2 +1.1**
SBUM IAmb IAmb 09 08 03.8
comp=Z,63nm,1.4s
H11S3 WAKE ISLAND Hy 32.25 45 T T 09 41 41.9
baz=225,slow=75
H11S2 WAKE ISLAND Hy 32.26 45 T T 09 41 46.1
baz=225
H11S1 WAKE ISLAND Hy 32.27 45 T T 09 41 44.2
baz=225,slow=75
ARPS Mount Arapiles 32.30 182 P **P** **09 07 45.8 +3.6**
baz=32,SNR=6.5
MEEK Meekatharra 32.47 224 P **P** **09 07 44.7 +0.9**
baz=32,SNR=19
MEEK Meekatharra 32.47 224 P **P** **09 07 44.8 +0.9**
TOO Toolangi 33.12 177 P **P** **09 07 51.1 +1.7**
TOO IAmb IAmb 09 08 16.5
comp=Z,81nm,1.6s
TOO Toolangi 33.12 177 P **P** **09 07 51.1 +1.7**
TOO pmax pmax
comp=Z,81nm,1.6s
GIRL Giralia 33.60 235 P **P** **09 07 55.2 +1.5**
baz=34,SNR=8.4
GIRL Giralia 33.60 235 P **P** **09 07 55.2 +1.5**
GIRL Giralia 33.60 235 P **P** **09 07 55.6 +1.9**
JOW Kunigami 34.29 335 LR LR 09 18 52.4
comp=Z,439nm,21.2s,baz=124,slow=31
JOW Kunigami 34.29 335 IAmb IAmb 09 08 26.8
comp=Z,46nm,1.1s
YOJ Yonaguni jima 34.86 326 P **P** **09 08 03.1 -1.5**
YOJ Yonaguni jima 34.86 326 P **P** **09 08 03.1 -1.5**
YOJ pmax pmax
comp=Z,50nm,0.9s
YULB Yu-li 35.03 323 IAmb IAmb 09 08 47.7
comp=Z,39nm,1.2s
TPUB Ta-pu 35.37 322 P **P** **09 08 07.7 -1.3**
TPUB IAmb IAmb 09 08 39.4
comp=Z,49nm,1.1s
SSLB Suanglung 35.53 323 IAmb IAmb 09 08 32.5
comp=Z,21nm,0.9s
LEM Lembang 35.73 264 LR LR 09 25 24.2
comp=Z,244nm,21.5s,baz=22,slow=40
MORW Morawa 35.76 224 P **P** **09 08 13.5 +1.1**
baz=36,SNR=13
MORW Morawa 35.76 224 P **P** **09 08 13.6 +1.3**
YHNB Yeheng 35.95 324 IAmb IAmb 09 08 45.0
comp=Z,43nm,0.9s
YHNB Yeheng 35.95 324 P **P** **09 08 15.3 +1.3**
TATO Taipei 36.12 325 P **P** **09 08 15.7 +0.3**
KLBR Kellerberrin 36.28 219 P **P** **09 08 17.0 +0.3**
baz=36,SNR=12
KLBR Kellerberrin 36.28 219 P **P** **09 08 16.9 +0.2**
BLDU Ballidu 36.30 221 P **P** **09 08 17.2 +0.3**
baz=36,SNR=27
BLDU Ballidu 36.30 221 P **P** **09 08 17.4 +0.5**
MSVF Nonsavu 36.39 114 P **P** **09 08 16.8 -1.1**
comp=Z,5.8nm,0.8s,baz=326,slow=7.3,SNR=2.2
comp=Z,5.8nm,0.8s
GLAD Gladstone 36.70 174 P **P** **09 08 22.6 +2.5**
JHJ Hachijo jima 2 37.42 355 LR LR 09 20 38.9
comp=Z,418nm,20.8s,baz=240,slow=31
MUN Mundaring 37.51 220 P **P** **09 08 28.2 +1.0**
baz=38,SNR=5.2
MUN Mundaring 37.51 220 P **P** **09 08 28.4 +1.2**
NWAO Narrogin (SRO) 37.51 218 P **P** **09 08 28.3 +1.1**
JSU Suzuyama 37.74 342 P **P** **09 08 29.7 +0.6**
QZH Quanzhou 37.83 322 ⇓ *i* P **P** **09 08 30.7 +0.8**
QZH pP **pP** **09 08 48.4 +0.3**
QZH S **S** **09 14 16.2 +0.6**
QZH pmax pmax
comp=Z,55nm,0.8s
QZH LR LR
comp=Z,590nm,29.8s
MOO Moorlands 38.08 175 P **P** **09 08 34.4 +2.7**
baz=38,SNR=4.1
MOO Moorlands 38.08 175 P **P** **09 08 34.9 +3.1**
TAU Tasmania Unive 38.55 175 P **P** **09 08 38.7 +3.0**
JMN Monobe 38.94 347 P **P** **09 08 38.9 -0.1**
JNU Nakatsue 39.12 343 LR LR 09 21 41.9
comp=Z,290nm,21.6s,baz=157,slow=32
JNU Nakatsue 39.12 343 P **P** **09 08 39.9 -0.7**
JNU IAmb IAmb 09 08 42.3
comp=Z,42nm,0.9s
JNU pP **pP** **09 08 58.8 -0.2**
JNU Nakatsue 39.12 343 P **P** **09 08 41.6 +0.9**
LWLI Liwa 39.25 267 P P 09 08 59.2 +17
JGF Kuroka 40.15 352 IAmb IAmb 09 08 49.5
comp=Z,24nm,1.0s
QIZ Qiongzhong 40.42 306 P **P** **09 08 53.1 +1.5**
QIZ sP **sP** **09 09 15.8 -2.9**
QIZ S **S** **09 14 56.6 +1.9**
QIZ LR LR
comp=Z,470nm,21.2s
QIZ LR LR
comp=Z,300nm,15.4s
QIZ LR LR
comp=Z,560nm,35.3s
MJAR Matsushiro Arr 40.97 354 P **P** **09 08 53.2 -2.7**
comp=Z,8.5nm,0.7s,baz=175,slow=6.4,SNR=28
MJAR LR LR 09 22 15.3
comp=Z,256nm,21.2s,baz=174,slow=31
comp=Z,8.5nm,0.7s
MAJO Matsushiro 40.97 354 P **P** **09 08 54.5 -1.4**
MAJO IAmb IAmb 09 09 21.2
comp=Z,33nm,0.9s
MAJO Matsushiro 40.97 354 *d* P **P** **09 08 54.7 -1.2**
MAJO pmax pmax
comp=Z,67nm,1.5s
MAJO Matsushiro 40.97 354 P **P** **09 08 56.7 +0.8**
MAJO Matsushiro 40.97 354 P **P** **09 08 53.3 -2.6**
MAJO sP **sP** **09 09 28.2 +5.1**
SSE Sheshan 41.15 330 P **P** **09 08 57.7 +0.3**
SSE S **S** **09 15 06.1 +0.9**
SSE pmax pmax
comp=Z,27nm,0.8s
SSE pmax pmax
comp=Z,81nm,3.5s
SSE LR LR
comp=Z,130nm,13.7s
SSE LR LR
comp=Z,220nm,13.4s
OUZ Omahuta 41.48 142 P **P** **09 09 02.9 +2.8**
OUZ Omahuta 41.48 142 P **P** **09 09 03.6 +3.5**
OUZ Omahuta 41.48 142 P **P** **09 09 03.1 +3.0**
JMM Marumori 42.07 357 IAmb IAmb 09 09 05.7
comp=Z,45nm,0.9s
JSD Sado 42.44 354 P **P** **09 09 07.0 -0.8**
NJ2 Nanjing 43.10 329 *e*P P 09 09 18.6 +5.4
NJ2 pmax pmax
comp=Z,16nm,0.6s
NJ2 LR LR
comp=N,350nm,13.3s
NJ2 LR LR
comp=E,290nm,11.8s
NJ2 LR LR
comp=Z,510nm,21.1s
TJN Taejon 43.22 341 *i* P **P** **09 09 15.5 +1.4**
KSCHJ Chungju 43.48 342 IAmb IAmb 09 09 18.2
comp=Z,78nm,1.4s
GULI GuiLin 43.58 314 ⇑ P **P** **09 09 21.5 +4.2**
GULI S **S** **09 15 46.8 +5.6**
GULI pmax pmax
comp=Z,20nm,0.9s
GULI LR LR
comp=Z,470nm,21.1s
GULI LR LR
comp=Z,280nm,19.5s
GULI LR LR
comp=Z,320nm,23.9s
KSRS Korea Array 44.03 342 P **P** **09 09 21.1 +0.5**
comp=Z,33nm,0.8s,baz=161,slow=9.4,SNR=131
KSRS S **S** **09 15 49.6 +2.3**
comp=Z,0.4nm,0.4s,baz=158,slow=20,SNR=2.6
KSRS LR LR 09 25 15.5
comp=Z,364nm,21.4s,baz=165,slow=33
KS19 Wonju Array Si 44.09 342 P **P** **09 09 21.6 +0.4**
KS19 IAmb IAmb 09 09 22.8
comp=Z,40nm,0.9s
INCN Inchon 44.46 341 P **P** **09 09 25.4 +1.3**
INCN Inchon 44.46 341 P **P** **09 09 25.4 +1.3**
INCN pmax pmax
comp=Z,59nm,0.9s
WHN Wuhan 44.46 323 ⇑ P **P** **09 09 26.3 +2.1**
WHN pP **pP** **09 09 44.5 +1.6**
WHN S **S** **09 15 55.3 +1.4**
WHN LR LR
comp=Z,1µm,19.6s
WHN LR LR
comp=Z,250nm,13.1s
WHN LR LR
comp=Z,2µm,46.0s
SEHB SEOHWA 44.68 343 IAmb IAmb 09 09 28.1
comp=Z,37nm,1.1s
PSI Prapat 45.04 278 LR LR 09 30 54.9
comp=Z,291nm,18.8s,baz=119,slow=40
PSI Prapat 45.04 278 P **P** **09 09 29.1 -0.2**
PSI pmax pmax
comp=Z,266nm,0.9s
AFI Afiamalu 45.15 105 LR LR 09 26 28.4
comp=Z,246nm,21.7s,baz=262,slow=34
WTVZ West Tongariro 45.24 144 P **P** **09 09 34.3 +3.8**
NNVZ North Ngauruho 45.27 144 P **P** **09 09 34.5 +3.7**
HJU Haeju 45.27 340 P **P** **09 09 31.6 +1.1**
HJU pP **pP** **09 09 48.8 -0.4**
HJU S **S** **09 16 08.7 +3.4**
HJU AmB
comp=Z,135nm,0.9s
HJU AMS AMS
comp=N,263nm,3.3s
HJU AMS AMS
comp=E,197nm,2.5s
HJU AMS AMS
comp=Z,275nm,3.4s
NGZ Ngauruhoe 45.29 144 P **P** **09 09 34.6 +3.7**
FWVZ Far West T-bar 45.31 145 P **P** **09 09 34.6 +3.4**
OTVZ Oturere 45.32 144 P **P** **09 09 35.1 +4.0**
SNVZ South Ngauruho 45.32 144 P **P** **09 09 35.0 +3.8**
ETVZ East Tongariro 45.33 144 P **P** **09 09 35.3 +4.2**
WHVZ Whangaehu Hut 45.35 145 P **P** **09 09 36.2 +4.7**
WNVZ Wahianoa 45.39 145 P **P** **09 09 36.0 +4.3**
URZ Urewera 45.59 142 LR LR 09 27 03.4
comp=Z,433nm,20.6s,baz=331,slow=34
URZ Urewera 45.59 142 P **P** **09 09 35.4 +2.3**
RUGZ Raukumara Rang 45.76 142 P **P** **09 09 36.8 +2.2**
BHHZ Black Hill Sta 45.77 144 P **P** **09 09 36.7 +2.2**
BKZ Black Stump Fm 45.80 144 P **P** **09 09 36.2 +1.3**
BKZ IAmb IAmb 09 10 06.5
comp=Z,45nm,1.0s
BKZ Black Stump Fm 45.80 144 P **P** **09 09 37.0 +2.2**
BKZ Black Stump Fm 45.80 144 P **P** **09 09 37.1 +2.2**
PKGZ Pakihiroa 45.96 141 P **P** **09 09 37.0 +0.9**
RAHZ Arahi 46.00 143 P **P** **09 09 39.2 +2.9**
TWGZ Tauwhareparae 46.08 142 P **P** **09 09 39.5 +2.5**
PNHZ Pukenui 46.12 145 P **P** **09 09 39.5 +2.2**
WMGZ Waiomatatini S 46.13 141 P **P** **09 09 39.5 +2.1**
TKGZ Te Karaka 46.16 142 P **P** **09 09 39.7 +2.2**
RPZ Rata Peaks 46.17 152 LR LR 09 28 29.0
comp=Z,356nm,20.8s,baz=312,slow=35
RPZ Rata Peaks 46.17 152 P **P** **09 09 39.1 +1.5**
PYAG Pyongyang 46.17 341 P **P** **09 09 38.8 +1.2**
PUZ Puketiti 46.18 141 P **P** **09 09 39.6 +1.7**
RIGZ Rimuhau 46.27 142 P **P** **09 09 40.4 +1.9**
KHZ Kahutara 46.41 149 P **P** **09 09 41.6 +2.1**
HHU Hamhung 46.43 343 P **P** **09 09 40.6 +1.0**
HHU pP **pP** **09 09 59.3 +1.0**
HHU S **S** **09 16 25.6 +3.7**
HHU AmB
comp=Z,327nm,2.8s
HHU AMS AMS
comp=N,187nm,2.8s
HHU AMS AMS
comp=E,191nm,2.8s
HHU AMS AMS
comp=Z,236nm,3.5s
BFZ Birch Farm 46.66 145 P **P** **09 09 43.1 +1.6**
GYA Guiyang 46.95 313 ⇑ *i* P **P** **09 09 46.0 +1.9**
GYA pP pP 09 10 04.6 +1.7
GYA sP sP 09 10 12.0 +0.5
GYA PcP **PcP** **09 11 18.0 +2.4**
GYA S **S** **09 16 31.9 +1.8**
GYA pmax pmax
comp=Z,38nm,1.4s
GYA pmax pmax
comp=Z,130nm,4.0s
ODZ Otahua Downs 47.01 154 P **P** **09 09 45.1 +1.0**
TIA Tai'an 47.27 331 P **P** **09 09 46.5 +0.2**
TIA pP **pP** **09 10 04.8 -0.3**
TIA sP **sP** **09 10 09.9 -3.8**
TIA S **S** **09 16 33.4 -0.7**
TIA pmax pmax
comp=Z,20nm,0.8s
TIA LR LR
comp=Z,160nm,12.8s
TIA LR LR
comp=Z,350nm,17.7s
TIA LR LR
comp=Z,500nm,34.9s
DL2 Dalian 47.53 337 P **P** **09 09 48.7 +0.5**
DL2 pP **pP** **09 10 07.8 +0.8**
DL2 S **S** **09 16 38.8 +1.2**
DL2 sS **sS** **09 17 12.8 +3.1**
DL2 SS **SS** **09 20 01.9 -4.8**
DL2 pmax pmax
comp=Z,17nm,1.0s
DL2 pmax pmax
comp=Z,120nm,5.2s
DL2 LR LR
comp=Z,220nm,19.5s
DL2 LR LR
comp=Z,170nm,14.7s
DL2 LR LR
comp=Z,440nm,28.1s
SUJ Sinuiju 47.54 340 P **P** **09 09 49.0 +0.8**
SUJ pP **pP** **09 10 06.3 -0.8**
SUJ S **S** **09 16 41.1 +3.4**
SUJ AmB
comp=Z,268nm,2.1s
SUJ AMS AMS
comp=N,146nm,8.6s
SUJ AMS AMS
comp=E,16nm,0.9s
SUJ AMS AMS
comp=Z,38nm,2.2s
LYN LuoYang 48.46 325 ⇓ *i* P **P** **09 09 55.2 -0.3**
LYN pP pP 09 10 12.4 -1.9
LYN S **S** **09 16 49.5 -1.4**
LYN pmax pmax
comp=Z,10.0nm,0.7s
LYN LR LR
comp=Z,220nm,18.1s
LYN LR LR
comp=Z,170nm,17.2s
LYN LR LR
comp=Z,270nm,20.0s
KMI Kunming 49.19 309 ⇓ P **P** **09 10 03.1 +1.5**
KMI pP pP 09 10 20.8 +0.3
KMI sP sP 09 10 27.4 -1.7
KMI S **S** **09 17 04.4 +2.4**
KMI sS sS 09 17 38.8 +4.6
KMI pmax pmax
comp=Z,33nm,0.8s
KMI pmax pmax
comp=Z,140nm,3.5s
KMI LR LR
comp=Z,220nm,18.0s
KMI LR LR
comp=Z,310nm,26.4s
KMI LR LR
comp=Z,520nm,26.3s
CMAR Chiang Mai Arr 49.35 299 P **P** **09 10 02.8 +0.3**
comp=Z,6.6nm,0.8s,baz=120,slow=6.1,SNR=26
CMAR LR LR 09 32 28.5
comp=Z,70nm,18.6s,baz=110,slow=38
comp=Z,6.6nm,0.8s
CMAR Chiang Mai Arr 49.35 299 P **P** **09 10 02.6 0.0**
CMAR Chiang Mai Arr 49.35 299 *ce* P **P** **09 10 03.9 +1.3**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
SNY Shenyang 49.39 340 ⇑ P **P** **09 10 03.3 +0.9**
SNY S **S** **09 17 09.0 +5.3**
SNY pmax pmax
comp=Z,39nm,0.8s
SNY pmax pmax
comp=Z,290nm,4.6s
SNY LR LR
comp=Z,220nm,12.0s
SNY LR LR
comp=Z,130nm,12.8s
SNY LR LR
comp=Z,400nm,20.6s
HNS HongShan 49.40 330 ⇓ P **P** **09 10 03.2 +0.6**
HNS pP **pP** **09 10 21.6 +0.1**
HNS sP **sP** **09 10 27.9 -2.2**
HNS S **S** **09 17 05.1 +1.1**
HNS sS **sS** **09 17 35.7 -0.5**
HNS pmax pmax
comp=Z,51nm,1.3s
HNS LR LR
comp=Z,260nm,18.6s
HNS LR LR
comp=Z,350nm,18.2s
HNS LR LR
comp=Z,490nm,23.5s
USA0B Ussuriysk Arra 49.41 349 IAmb IAmb 09 10 04.3
comp=Z,24nm,1.1s
USRK Ussuriysk Ar. 49.41 349 P **P** **09 10 00.8 -1.8**
comp=Z,23nm,0.8s,baz=168,slow=8.1,SNR=54
USRK LR LR 09 28 46.5
comp=Z,174nm,21.5s,baz=238,slow=34
comp=Z,23nm,0.8s
CHTO Chiang Mai 49.49 299 P **P** **09 10 03.9 +0.3**
CHTO pP **pP** **09 10 20.8 -1.8**
CHTO IAmb IAmb 09 10 28.9
comp=Z,23nm,1.0s
CHTO Chiang Mai 49.49 299 P **P** **09 10 03.9 +0.3**
CHTO pmax pmax
comp=Z,23nm,1.0s
XAN Xi'an 50.19 322 P **P** **09 10 08.8 +0.1**
XAN pP pP 09 10 28.3 +0.6
XAN S **S** **09 17 15.6 +0.3**

XAN pmax pmax
comp=Z,22nm,1.4s
XAN pmax pmax
comp=Z,140nm,3.5s
XAN LR LR
comp=Z,320nm,18.2s
XAN LR LR
comp=Z,170nm,16.2s
XAN LR LR
comp=Z,580nm,23.8s
XAN Xi'an 50.19 322 P **P** **09 10 07.1 -1.7**
XAN pP **pP** **09 10 27.5 -0.2**
XAN sP **sP** **09 10 36.6 +0.4**
MDJ Mudanjiang 50.30 347 IAmb IAmb 09 10 36.1
comp=Z,28nm,1.1s
MDJ Mudanjiang 50.30 347 P **P** **09 10 09.5 +0.2**
MDJ pP pP 09 10 27.8 -0.5
MDJ sP sP 09 10 37.7 +0.8
MDJ ScS ScS 09 19 52.6 -0.7
MDJ pmax pmax
comp=Z,27nm,1.4s
MDJ pmax pmax
comp=Z,160nm,4.4s
MDJ LR LR
comp=Z,360nm,22.3s
MDJ LR LR
comp=Z,200nm,19.1s
MDJ LR LR
comp=Z,830nm,21.4s
CN2 Changchun 50.60 343 *e*P **P** **09 10 12.5 +0.9**
CN2 S **S** **09 17 20.5 0.0**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,300nm,17.0s
CN2 LR LR
comp=Z,200nm,17.0s
CN2 LR LR
comp=Z,200nm,19.0s
PZH PanZhiHua 50.67 310 P **P** **09 10 16.8 +4.2**
PZH pP **pP** **09 10 32.5 +0.9**
PZH sP **sP** **09 10 44.3 +4.1**
PZH S **S** **09 17 23.9 +1.5**
PZH ScS **ScS** **09 19 51.4 -5.4**
PZH SS **SS** **09 20 54.1 -3.7**
PZH pmax pmax
comp=Z,20nm,0.6s
PZH pmax pmax
comp=Z,80nm,4.0s
PZH LR LR
comp=Z,530nm,21.6s
PZH LR LR
comp=Z,570nm,19.2s
PZH LR LR
comp=Z,720nm,22.0s
BJT Baijiatuau 50.77 333 P **P** **09 10 13.7 +0.7**
BJT **pP** **09 10 31.2 -0.8**
BJT Baijiatuau 50.77 333 P **P** **09 10 13.7 +0.7**
BJT *PP **pP** **09 10 31.2 -0.8**
BJT pmax pmax
comp=Z,46nm,0.9s
BJT Baijiatuau 50.77 333 P **P** **09 10 11.7 -1.2**
BJT pP **pP** **09 10 30.2 -1.7**
BJT sP **sP** **09 10 37.7 -2.8**
BJI Beijing 50.79 333 P **P** **09 10 13.4 +0.4**
BJI pP **pP** **09 10 30.8 -1.2**
BJI sP **sP** **09 10 39.3 -1.3**
BJI S **S** **09 17 23.1 -0.1**
BJI sS **sS** **09 17 55.8 +0.2**
BJI pmax pmax
comp=Z,54nm,1.1s
BJI pmax pmax
comp=Z,170nm,3.5s
BJI LR LR
comp=Z,79nm,18.5s
BJI LR LR
comp=Z,400nm,16.0s
BJI LR LR
comp=Z,420nm,20.6s
YSS Yuzh-Sakhalins 51.09 359 P **P** **09 10 15.4 +0.3**
YSS IAmb IAmb 09 10 52.6
comp=Z,39nm,1.1s
YSS Yuzh-Sakhalins 51.09 359 *b i*P **P** **09 10 15.4 +0.3**
YSS *e*PP **pP** **09 10 34.2 0.0**
YSS *e*S **S** **09 17 27.0 -0.1**
YSS *e*SSS SSS 09 22 43.6
YSS pmax pmax
comp=Z,30nm,0.9s
YSS smax smax
comp=E,100nm,8.1s
YSS MLR MLR
comp=Z,100nm,16.0s
YSS MLR MLR
comp=E,100nm,15.0s
CD2 Chengdu 51.60 316 P **P** **09 10 20.7 +1.3**
CD2 S **S** **09 17 37.0 +2.0**
CD2 pmax pmax
comp=E,40nm,0.5s
CD2 LR LR
comp=E,190nm,13.2s
CD2 LR LR
comp=E,260nm,15.7s
BNX BinXian 51.87 346 ⇓P **P** **09 10 21.1 0.0**
BNX pP **pP** **09 10 38.8 -1.3**
BNX sP **sP** **09 10 48.6 -0.1**
BNX S **S** **09 17 35.6 -2.4**
BNX sS **sS** **09 18 09.2 -1.3**
BNX pmax pmax
comp=E,81nm,1.1s
BNX pmax pmax
comp=E,170nm,3.6s
BNX LR LR
comp=E,280nm,18.2s
BNX LR LR
comp=E,130nm,14.1s
BNX LR LR
comp=E,400nm,30.6s
HHC Hu-ho-hao-te 53.61 330 *e*P **P** **09 10 34.8 +0.7**
HHC sP sP 09 10 59.0 -2.8
HHC S **S** **09 18 02.8 +0.7**
HHC sS sS 09 18 33.4 +0.5
HHC pmax pmax
comp=E,50nm,0.9s
HHC pmax pmax
comp=E,280nm,4.0s
HHC LR LR
comp=E,660nm,17.9s
HHC LR LR
comp=E,230nm,15.2s
HHC LR LR
comp=E,910nm,19.8s
BTO Baotou 54.21 329 *e*P **P** **09 10 40.3 +1.8**
BTO S **S** **09 18 09.5 -0.7**
BTO LR LR
comp=E,1μm,17.5s
BTO LR LR
comp=E,1μm,18.6s
KLR Kul'dur 54.32 351 P **P** **09 10 38.2 -0.8**
comp=E,13nm,0.9s,baz=158,slow=8.2
KLR LR LR 09 29 51.0
comp=E,121nm,19.2s,baz=166,slow=32
comp=E,13nm,0.9s
KLR Kul'dur 54.32 351 *c e*P **P** **09 10 39.2 +0.2**
KLR pmax pmax
comp=Z,43nm,1.5s
LZH Lanzhou 54.67 321 *e*P **P** **09 10 42.4 +0.3**
LZH pP pP 09 11 01.7 +0.4
LZH sP sP 09 11 09.4 -0.4
LZH S **S** **09 18 17.8 +1.1**
LZH pmax pmax
comp=Z,36nm,1.2s
LZH pmax pmax
comp=Z,93nm,4.3s
LZH LR LR
comp=Z,310nm,13.4s
LZH LR LR
comp=Z,290nm,18.9s
LZH LR LR
comp=Z,450nm,18.9s
TYV Tymovskoe 55.00 359 *e*P **P** **09 10 44.2 +0.3**
TYV *e*S **S** **09 18 21.1 +0.9**
TYV pmax pmax
comp=Z,100nm,2.2s
TYV pmax pmax
comp=Z,13nm,0.9s
TYV smax smax
comp=N,300nm,4.3s
RAR Rarotonga 57.54 112 LR LR 09 32 43.7
comp=N,87nm,21.2s,baz=289,slow=33
PEA0B Petropavlovsk- 58.50 10 P **P** **09 11 08.4 -0.3**
PEA0B pP **pP** **09 11 27.1 -1.0**
PEA0B Petropavlovsk- 58.50 10 *c e*P **P** **09 11 09.1 +0.5**
PETK Petropavlovsk- 58.50 10 P **P** **09 11 07.7 -0.9**
comp=N,11nm,0.8s,baz=162,slow=6.1,SNR=16
PETK LR LR 09 32 12.9
comp=N,87nm,21.9s,baz=193,slow=32
comp=N,11nm,0.8s
PETK Petropavlovsk- 58.50 10 P **P** **09 11 08.6 -0.1**
PETK Petropavlovsk- 58.50 10 P **P** **09 11 08.6 -0.1**
PET Petropavlovsk 58.59 11 *e*P **P** **09 11 09.9 +0.7**
PET *e*S **S** **09 19 09.4 +2.0**
PET *e*SS **SS** **09 22 57.1 -4.3**
GTA Gaotai 59.23 322 ⇓P **P** **09 11 15.2 +1.0**
GTA pP pP 09 11 31.0 -2.6
GTA sP sP 09 11 39.4 -2.7
GTA S **S** **09 19 17.6 +1.0**
GTA sS sS 09 19 47.4 -2.2
GTA pmax pmax
comp=N,18nm,1.2s
GTA pmax pmax
comp=N,110nm,5.6s
GTA LR LR
comp=N,110nm,15.6s
GTA LR LR
comp=N,170nm,18.5s
GTA LR LR
comp=N,280nm,18.9s
ZEA Zeya 59.45 349 *e*P **P** **09 11 15.3 +0.1**
ZEA pmax pmax
comp=N,30nm,1.4s
ZEA pmax pmax
comp=Z,30nm,1.4s
LSA Lhasa 60.42 308 IAmb IAmb 09 12 09.1
comp=Z,21nm,0.9s
GOMU GeErMu 60.73 316 P **P** **09 11 26.2 +1.4**
GOMU S **S** **09 19 43.7 +7.2**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU pmax pmax
comp=Z,44nm,5.2s
GOMU LR LR
comp=Z,110nm,16.3s
GOMU LR LR
comp=Z,150nm,16.4s
GOMU LR LR
comp=Z,220nm,16.3s
ULN Ulaanbaatar 61.00 333 P **P** **09 11 27.0 +0.8**
ULN Ulaanbaatar 61.00 333 *c e*P **P** **09 11 26.9 +0.8**
ULN pmax pmax
comp=Z,63nm,1.8s
ULN Ulaanbaatar 61.00 333 P **P** **09 11 26.0 -0.1**
ULN pP **pP** **09 11 45.9 +0.3**
SONM Songino Array 61.28 332 P **P** **09 11 27.5 -0.5**
comp=Z,10nm,0.9s,baz=148,slow=8.7,SNR=41
SONM LR LR 09 36 37.9
comp=Z,285nm,21.4s,baz=112,slow=35
SONM PKP2bc 09 40 51.0
comp=Z,5.7nm,1.0s,baz=318,slow=2.0,SNR=9.8
comp=Z,10nm,0.9s
SONM Songino Array 61.28 332 P **P** **09 11 28.8 +0.8**
SONM Songino Array 61.28 332 P **P** **09 11 28.8 +0.8**
SONM pmax pmax
comp=Z,50nm,1.5s
CIT Chita 61.64 340 *e*P **P** **09 11 29.6 -0.6**
CIT *e* 09 11 46.6
CIT *e* 09 12 14.4
CIT pmax pmax
comp=Z,144nm,2.2s
DRV Dumont d'Urvil 62.25 182 P **P** **09 11 31.6 -2.4**
DRV pP **sP** **09 11 58.3 -3.8**
DRV sP **PcP** **09 12 05.6 -7.5**
TAPN Taplejung 62.29 304 *e*P **P** **09 11 36.7 +1.3**
comp=Z,92nm,1.0s
ODAN Odare 62.38 303 *e*P **P** **09 11 37.6 +1.7**
RAMN Ramite 63.07 303 *e*P **P** **09 11 41.9 +1.4**
comp=Z,60nm,0.8s
AMKA Amchitka 63.40 24 P **P** **09 11 41.7 -0.1**
AMKA pP **pP** **09 12 01.5 0.0**
JIRN Jiri 63.66 304 *e*P **P** **09 11 45.8 +1.2**
comp=Z,54nm,0.9s
PALK Pallekele 63.66 280 LR LR 09 44 18.9
comp=Z,54nm,18.4s,baz=216,slow=41
MA2 Magadan 63.99 4 P **P** **09 11 43.7 -1.9**
comp=Z,8.0nm,0.7s,baz=151,slow=6.4,SNR=7.0
MA2 LR LR 09 36 42.2
comp=Z,58nm,21.4s,baz=196,slow=33
comp=Z,8.0nm,0.7s
MA2 Magadan 63.99 4 P **P** **09 11 44.8 -0.8**
MA2 IAmb IAmb 09 12 26.5
comp=Z,25nm,1.1s
MA2 Magadan 63.99 4 *c e*P **P** **09 11 45.5 -0.1**
MA2 pmax pmax
comp=Z,25nm,1.6s
GUN Gumba 64.00 304 *e*P **P** **09 11 48.3 +1.5**
comp=Z,126nm,0.9s
PKI Pulchoki 64.28 303 *e*P **P** **09 11 49.6 +1.0**
PKIN Phulchoki 64.29 303 *e*P **P** **09 11 49.6 +1.0**
KKN Kakani 64.46 303 *e*P **P** **09 11 50.6 +1.0**
ZAK Zakamensk 64.53 333 *e*P **P** **09 11 49.8 +0.3**
ZAK *e* 09 12 09.5
ZAK pmax pmax
comp=Z,69nm,1.1s
ZAK pmax pmax
comp=Z,39nm,1.4s
DMN Daman 64.54 303 *e*P **P** **09 11 51.6 +1.4**
comp=Z,171nm,1.0s
GKN Gorkha 65.07 303 *e*P **P** **09 11 54.7 +1.2**
comp=Z,86nm,0.6s
KIWB Kanaga Island 65.24 26 pP pP 09 12 16.5 +2.8
IRK Irkutsk 65.42 335 *e*P **P** **09 11 55.2 +0.1**
IRK pmax pmax
comp=Z,69nm,2.1s
ADK Adak 65.47 26 P **P** **09 11 55.7 +0.3**
ADK **pP** **09 12 15.9 +0.8**
ADK IAmb IAmb 09 12 22.4
comp=Z,38nm,1.1s
ADK Adak 65.47 26 P **P** **09 11 55.7 +0.3**
ADK *PP **pP** **09 12 15.9 +0.8**
ADK pmax pmax
comp=Z,38nm,1.1s
DANN Dangsing 65.91 304 *e*P **P** **09 12 00.0 +0.9**
comp=Z,102nm,0.6s
CASY Casey 65.95 194 P **P** **09 11 59.4 +1.2**
CASY Casey 65.95 194 P **P** **09 11 59.0 +0.8**
BOD Bodaibo 66.35 343 *e*P **P** **09 12 00.8 -0.1**
BOD pmax pmax
comp=Z,34nm,1.4s
MOY Mondy 66.46 333 *e*P **P** **09 12 03.0 +1.1**
MOY pmax pmax
comp=Z,64nm,1.6s
PPT Papeete 66.77 107 LR LR 09 37 34.0
comp=Z,87nm,21.7s,baz=282,slow=33
PPT2 Papeete2 66.77 107 *e*S **S** **09 20 51.6 +0.2**
comp=Z,155nm,26.0s
PPT2 *e*S S 09 20 51.9 +0.5
comp=Z,147nm,25.8s
PPT2 Papeete2 66.77 107 *e*LR LR 09 32 18.8
comp=Z,520nm,28.5s
PPT2 *e*LR LR 09 32 19.4
comp=Z,336nm,28.2s
YAK Yakutsk 67.03 353 P **P** **09 12 04.7 -0.5**
comp=Z,16nm,0.4s,baz=220,slow=0.7,SNR=4.7
YAK LR LR 09 39 17.7
comp=Z,122nm,21.4s,baz=175,slow=34
comp=Z,16nm,0.4s
YAK Yakutsk 67.03 353 *e*P **P** **09 12 05.3 +0.1**
YAK *e**PP **pP** **09 12 25.3 +0.3**
YAK *e* 09 12 30.1
YAK *e*S **S** **09 20 52.4 -0.3**
YAK *e**SS **sS** **09 21 31.9 +5.4**
YAK *e* 09 21 54.4
YAK *e*SS **SS** **09 25 09.5 -3.5**
YAK pmax pmax
comp=N,22nm,1.2s
YAK pmax pmax
comp=Z,44nm,1.2s
YAK smax smax
comp=E,81nm,2.9s
YAK smax smax
comp=N,52nm,2.8s
SEY Seymchan 67.44 4 *c e*P **P** **09 12 07.4 -0.3**
SEY pmax pmax
comp=Z,15nm,1.6s
HYBB Hyderabad (bro 67.56 291 *e*P **P** **09 12 09.9 +0.4**
HYBB *e*S **S** **09 21 04.8 +3.9**
WMQ Urumqi 69.25 320 ⇑P **P** **09 12 20.8 +1.2**
WMQ pP PcP 09 12 42.1 -0.7
WMQ pmax pmax
comp=Z,64nm,0.9s
WMQ pmax pmax
comp=Z,240nm,4.7s
WMQ LR LR
comp=Z,180nm,22.7s
CCD Concordia, Ant 71.64 185 P **P** **09 12 34.8 +0.8**
CCD pP **PcP** **09 12 51.8 -1.0**
ZSN Zaisan 72.69 323 *e*P **P** **09 12 39.8 -0.4**
ZSN pmax pmax
comp=Z,12nm,1.3s
ZSN Zaisan 72.69 323 *e*P **P** **09 12 39.8 -0.4**
comp=Z,12nm,1.3s,baz=322
ZSN *i*S **S** **09 22 02.8 +3.2**
baz=322
VNDA Vanda 73.78 176 P **P** **09 12 47.0 +0.9**
comp=Z,4.2nm,0.8s,baz=333,slow=6.9,SNR=21
VNDA LR LR 09 45 01.1
comp=Z,233nm,18.1s,baz=348,slow=36
comp=Z,4.2nm,0.8s
VNDA Vanda 73.78 176 P **P** **09 12 46.2 +0.1**
VNDA Vanda 73.78 176 P **P** **09 12 47.0 +0.9**
BILL Bilibino 73.98 9 *i*P **P** **09 12 46.7 -0.7**
BILL *i* 09 13 04.3
BILL *i* 09 15 35.3
BILL *i*S **S** **09 22 11.6 -1.9**
BILL pmax pmax
comp=Z,6.0nm,1.2s
MK31 Makanchi Array 73.99 321 IAmb IAmb 09 12 49.6
comp=Z,38nm,1.1s
MK31 Makanchi Array 73.99 321 *i*P **P** **09 12 48.1 +0.2**
MK31 pmax pmax
comp=Z,25nm,0.7s
MKAR Makanchi Array 73.99 321 P **P** **09 12 48.3 +0.4**
comp=Z,31nm,0.8s,baz=105,slow=7.9,SNR=197
comp=Z,31nm,0.8s
MKAR Makanchi Array 73.99 321 *c e*P **P** **09 12 48.5 +0.6**
MKAR pmax pmax
comp=Z,31nm,0.8s
MAKZ Makanchi 74.19 321 P **P** **09 12 49.2 +0.1**
MAKZ Makanchi 74.19 321 P **P** **09 12 49.2 +0.1**
MAKZ pmax pmax
comp=Z,43nm,0.8s
SHLS Shalkode 74.41 317 *e*P **P** **09 12 48.2 -2.3**
SHLS pmax pmax
comp=Z,11nm,0.9s
SHLS Shalkode 74.41 317 *e*P **P** **09 12 48.3 -2.3**
comp=Z,11nm,0.9s,baz=317
PDGK Podgornoye 74.45 317 P **P** **09 12 50.6 -0.2**
SBA Scott Base 74.48 175 P **P** **09 12 52.0 +1.8**
SBA Scott Base 74.48 175 P **P** **09 12 52.0 +1.8**
SBA pmax pmax
comp=Z,99nm,2.0s
S12K Black Hills 74.59 29 P **P** **09 12 51.7 +0.5**
baz=237
UZB Uzunbulak 74.70 317 *e*P **P** **09 12 52.1 -0.2**
UZB pmax pmax
comp=Z,7.0nm,0.7s
UZB Uzunbulak 74.70 317 *e*P **P** **09 12 52.1 -0.2**
comp=Z,6.7nm,0.7s,baz=317
SATY Saty 75.09 317 *e*P **P** **09 12 54.8 +0.3**
SATY pmax pmax
comp=Z,15nm,0.8s
SATY Saty 75.09 317 *e*P **P** **09 12 54.9 +0.3**
comp=Z,15nm,0.8s,baz=316
SDPT Sand Point 75.17 29 P **P** **09 12 54.6 +0.1**
baz=239
CHNA Chernabura Isl 75.34 30 P **P** **09 12 55.6 +0.1**
baz=240
KSH Kashi 75.65 312 P **P** **09 13 00.7 +2.9**
KSH sP sP 09 13 32.6 +6.3
KSH pmax pmax
comp=Z,22nm,1.2s
ZAA0 Zalesovo Array 75.75 329 IAmb IAmb 09 12 58.8
comp=Z,28nm,0.7s
ZALV Zalesovo Beam 75.75 329 P **P** **09 12 57.6 -0.2**
comp=Z,31nm,0.7s,baz=110,slow=5.6,SNR=103
ZALV LR LR 09 45 27.3
comp=Z,173nm,21.4s,baz=121,slow=35
comp=Z,31nm,0.7s
ZALV Zalesovo Beam 75.75 329 *i*P **P** **09 12 57.7 -0.2**
ZALV pmax pmax
comp=Z,32nm,0.7s
PAF Port-aux-Franc 75.81 220 P **P** **09 12 59.0 +0.7**
TAOE Nuku Hiva Isla 75.94 98 *e*LR LR 09 36 31.2
comp=Z,228nm,28.9s
MDOK Medeo 76.06 316 *e*P **P** **09 12 59.6 -0.5**
MDOK Medeo 76.06 316 *e*P **P** **09 12 59.6 -0.5**
baz=316
NIL Nilore 76.09 306 P **P** **09 13 00.8 +0.5**
NIL Nilore 76.09 306 P **P** **09 13 00.8 +0.5**
NIL pmax pmax
comp=Z,46nm,0.7s
CHKK Chushkaly 76.34 317 *e*P **P** **09 13 01.2 -0.2**
CHKK Chushkaly 76.34 317 *e*P **P** **09 13 01.3 -0.2**
baz=317
TIXI Tiksi 76.45 355 P **P** **09 13 01.4 -0.1**
comp=Z,5.0nm,0.5s,baz=90,slow=20,SNR=3.7
TIXI LR LR 09 45 53.5
comp=Z,65nm,21.6s,baz=182,slow=35
comp=Z,5.0nm,0.5s
KUU Kurty 76.79 317 *e*P **P** **09 13 03.5 -0.5**
KUU pmax pmax
comp=Z,28nm,0.8s
KUU Kurty 76.79 317 *e*P **P** **09 13 03.5 -0.5**
comp=Z,28nm,0.8s,baz=317
TKM2 Tokmak 2 76.99 316 P **P** **09 13 06.5 +1.1**
SNR=21
TKM2 Tokmak 2 76.99 316 *i*P **P** **09 13 05.8 +0.4**
TKM2 pmax pmax
comp=Z,19nm,0.7s
KBK Karagaybulak 77.36 315 P **P** **09 13 08.3 +0.9**
SNR=6.9
UCH Uchtor 77.53 315 P **P** **09 13 10.4 +1.7**
SNR=28
CHMS Chumysh 77.60 316 P **P** **09 13 09.6 +0.9**
SNR=8.6
CHMS Chumysh 77.60 316 *i*P **P** **09 13 08.9 +0.3**
CHMS pmax pmax
comp=Z,35nm,1.0s
AAK Ala-Archa 77.67 315 P **P** **09 13 09.9 +0.8**
comp=Z,8.8nm,0.7s,baz=118,slow=4.9,SNR=20
AAK LR LR 09 46 34.1
comp=Z,63nm,21.6s,baz=106,slow=35
comp=Z,8.8nm,0.7s
AAK Ala-Archa 77.67 315 P **P** **09 13 10.5 +1.3**
SNR=5.8
AAK Ala-Archa 77.67 315 P **P** **09 13 09.5 +0.3**
AAK Ala-Archa 77.67 315 *c e*P **P** **09 13 09.7 +0.5**
AAK pmax pmax
comp=Z,25nm,1.3s
KURK Kurchatov 77.78 324 P **P** **09 13 08.8 -0.5**
KURK IAmb IAmb 09 13 10.7
comp=Z,35nm,0.9s
KURK Kurchatov 77.78 324 *c e*P **P** **09 13 09.2 -0.2**
KURK pmax pmax
comp=Z,42nm,1.0s
KURBB Kurchatov Arra 77.80 324 LR LR 09 48 32.7
comp=Z,80nm,19.8s,baz=91,slow=37
SGDS Sogindy 77.83 316 *e*P **P** **09 13 08.7 -1.2**
SGDS Sogindy 77.83 316 *e*P **P** **09 13 08.7 -1.2**
baz=316
USP Ospenovka 77.86 316 P **P** **09 13 11.2 +1.1**
SNR=21
AML Almayashu 78.08 315 P **P** **09 13 13.3 +1.5**
SNR=22
EKS2 Erkin-Say 78.18 315 P **P** **09 13 13.4 +1.4**
SNR=17
R17K Ugashik Creek 78.28 28 P **P** **09 13 11.7 -0.3**
baz=242
ANM Nome 78.35 20 P **P** **09 13 12.6 +0.4**
baz=232
O16K Kokwok River B 78.44 26 P **P** **09 13 12.8 0.0**
baz=240
Q16K King Salmon 78.64 27 P **P** **09 13 14.1 +0.2**
baz=242
BTLS Baital 78.71 317 *e*P **P** **09 13 14.4 -0.2**

BTLS pmax pmax
comp=Z,14nm,0.9s
BTLS Baital 78.71 317 *e*P **P 09 13 14.4 -0.2**
comp=Z,14nm,0.9s,baz=317
SII Sitkinak Islan 78.86 30 P **P 09 13 15.1 -0.1**
baz=244
O17K Koliganek Bris 78.97 26 P **P 09 13 16.1 +0.4**
baz=241
P17K Kvichak River 78.99 27 P **P 09 13 14.4 -1.4**
baz=242
Q18K Katmai Hardscr 79.39 28 P **P 09 13 16.8 -1.4**
baz=243
OHAK Old Harbor 79.59 30 P **P 09 13 19.2 0.0**
OHAK pP **pP 09 13 39.1 -0.3**
OHAK IAmb IAmb 09 14 10.0
comp=Z,23nm,1.0s
OHAK Old Harbor 79.59 30 P **P 09 13 19.1 0.0**
baz=245
P18K Big Mountain, 79.63 27 P **P 09 13 19.1 -0.3**
baz=243
KBL Kabul 79.69 306 P **P 09 13 19.7 -0.8**
KBL pmax pmax
comp=Z,10.0nm,0.9s
GAR Garm 79.72 311 IAmb IAmb 09 14 15.2
comp=Z,32nm,1.0s
O18K Koktuh Hills 79.85 27 P **P 09 13 19.9 -0.6**
baz=243
N18K Kilae Creek 79.93 26 P **P 09 13 20.9 -0.1**
N18K Kilae Creek 79.93 26 P **P 09 13 21.5 +0.5**
baz=242
DZA Taraz 79.97 315 *e*P **P 09 13 21.6 0.0**
DZA pmax pmax
comp=Z,21nm,1.0s
DZA Taraz 79.97 315 *e*P **P 09 13 21.7 0.0**
comp=Z,21nm,1.0s,baz=315
Q19K Cape Douglas, 80.15 28 P **P 09 13 21.4 -0.8**
baz=244
CHGR Chuyangaron 80.52 310 IAmb IAmb 09 13 26.0
comp=Z,40nm,1.0s
CHGR Chuyangaron 80.52 310 P **P 09 13 24.5 -0.3**
CHGR pmax pmax
comp=Z,39nm,0.9s
N19K Bonanza Creek 80.61 26 P **P 09 13 25.0 +0.3**
N19K IAmb IAmb 09 13 49.9
comp=Z,35nm,1.1s
N19K Bonanza Creek 80.61 26 P **P 09 13 24.5 -0.2**
baz=243
KK31 Karatay Array 80.61 315 *i* P **P 09 13 25.2 +0.2**
KKAR Karatay Array 80.61 315 P **P 09 13 25.0 0.0**
KKAR Karatay Array 80.61 315 IAmb IAmb 09 13 26.4
comp=Z,18nm,1.1s
KKAR Karatay Array 80.61 315 P **P 09 13 25.0 0.0**
IUG luzhnay 80.71 314 *e*P **P 09 13 25.2 -0.5**
IUG luzhnay 80.71 314 *e*P **P 09 13 25.2 -0.5**
baz=314
OTUK Ortayu 80.80 320 P **P 09 13 25.9 0.0**
TTA Tatalina 80.95 24 pP pP 09 13 48.5 +1.7
TTA Tatalina 80.95 24 P **P 09 13 26.5 0.0**
baz=242
L19K White Mountain 81.07 25 IAmb IAmb 09 14 03.1
comp=Z,22nm,0.9s
L19K White Mountain 81.07 25 P **P 09 13 27.5 +0.5**
baz=243
BRZS Berezniki 81.11 322 *e*P **P 09 13 26.9 -0.6**
BRZS pmax pmax
comp=Z,12nm,1.1s
BRZS Berezniki 81.11 322 *e*P **P 09 13 26.9 -0.6**
comp=Z,12nm,1.1s,baz=322
M19K Big River Lodg 81.14 25 P **P 09 13 27.7 +0.3**
baz=243
GCSA Galena City Sc 81.50 22 P **P 09 13 29.3 +0.1**
baz=240
CNPM China Poot 81.53 28 P **P 09 13 28.7 -0.8**
CNPM IAmb IAmb 09 14 08.0
comp=Z,29nm,1.1s
L20K Farewell, AK 81.61 25 P **P 09 13 30.1 +0.2**
baz=244
M20K Styx River 81.67 25 IAmb IAmb 09 14 01.5
comp=Z,19nm,0.8s
M20K Styx River 81.67 25 P **P 09 13 30.4 +0.1**
baz=244
BRSE Bradley Lake S 81.84 28 P **P 09 13 30.4 -0.8**
baz=247
K20K Telida 81.93 24 P **P 09 13 30.9 -0.6**
baz=243
J20K Nowinta River 82.27 23 IAmb IAmb 09 14 04.3
comp=Z,25nm,1.1s
J20K Nowinta River 82.27 23 P **P 09 13 33.2 -0.1**
baz=243
SKT Skwentna 82.39 26 pP 09 13 56.0 +1.5
SKT Skwentna 82.39 26 P **P 09 13 32.1 -1.9**
baz=246
MAW Mawson 82.40 202 P **P 09 13 35.1 +1.2**
comp=Z,5.6nm,0.8s,baz=89,slow=6.5,SNR=12
MAW LR LR 09 47 16.0
comp=Z,145nm,19.7s,baz=76,slow=34
comp=Z,5.6nm,0.8s
MAW Mawson 82.40 202 P **P 09 13 35.8 +1.9**
baz=82,SNR=6.9
PPLA Purkeypile 82.50 25 P **P 09 13 33.8 -0.9**
baz=245
SUA Susitna One 82.53 26 P **P 09 13 33.3 -1.5**
baz=247
SEW Seward 82.58 28 P **P 09 13 33.6 -1.3**
baz=248
NRIK Noril'sk 82.64 343 P **P 09 13 34.2 -0.9**
comp=Z,14nm,0.7s,baz=130,slow=5.8,SNR=22
NRIK LR LR 09 48 39.4
comp=Z,228nm,21.6s,baz=125,slow=34
comp=Z,14nm,0.7s
NRIK Noril'sk 82.64 343 *ce*P **P 09 13 34.7 -0.4**
NRIK pmax pmax
comp=Z,34nm,0.9s
CAST Castle Rocks 82.76 24 P **P 09 13 35.3 -0.6**
baz=245
RC01 Rabbit Creek A 82.83 27 P **P 09 13 35.3 -0.9**
baz=248
CHUM Lake Minchumin 82.86 24 P **P 09 13 36.2 -0.1**
baz=245
M22K Willow 82.92 26 P **P 09 13 35.5 -1.2**
baz=247
IMAR Indian Mountai 83.24 22 P **P 09 13 37.4 -0.9**
IMAR **pP 09 13 57.4 -1.3**
PMR Palmer 83.29 26 P **P 09 13 37.3 -1.2**
baz=248
KTH Kantishna Hill 83.29 24 IAmb IAmb 09 14 28.9
comp=Z,28nm,1.2s
BVA0 Borovoye Array 83.36 324 *i* P **P 09 13 39.0 -0.2**
BVAR Borovoye Array 83.36 324 LR LR 09 51 23.6
comp=Z,51nm,20.1s,baz=346,slow=36
PWL Port Wells 83.38 27 IAmb IAmb 09 14 06.7
comp=Z,30nm,1.0s
PWL Port Wells 83.38 27 P **P 09 13 37.6 -1.5**
baz=249
BRVK Borovoye 83.43 324 P **P 09 13 39.4 -0.2**
BRVK Borovoye 83.43 324 *ce*P **P 09 13 39.5 -0.1**
BRVK pmax pmax
comp=Z,52nm,0.9s
H21K Melozitna Rive 83.44 22 P **P 09 13 40.1 +0.7**
H21K pP **pP 09 13 59.0 -0.8**
H21K Melozitna Rive 83.44 22 P **P 09 13 37.6 -1.8**
baz=244
BPAW Bear Paw Mtn. 83.49 24 P **P 09 13 38.7 -0.9**
baz=246
TRF Thorofare Moun 83.51 24 P **P 09 13 37.9 -2.0**
baz=247
KNK Knik Glacier 83.52 27 P **P 09 13 38.0 -1.9**
baz=249
I21K Tanana 83.55 23 IAmb IAmb 09 14 17.9
comp=Z,29nm,1.4s
I21K Tanana 83.55 23 P **P 09 13 38.1 -1.7**
baz=245
G21K Allakaket 83.57 21 P **P 09 13 39.3 -0.7**
baz=244
SML Sawmill 83.72 26 IAmb IAmb 09 14 11.0
comp=Z,32nm,0.9s
SML Sawmill 83.72 26 P **P 09 13 40.2 -0.7**
baz=249
Q23K Middleton Isla 83.81 29 P **P 09 13 39.9 -1.3**
baz=251
F21K Alatna River 83.89 20 P **P 09 13 41.1 -0.5**
baz=243
GLI Glacier Island 83.95 27 P **P 09 13 41.0 -1.1**
baz=250
MLY Manley 83.97 23 IAmb IAmb 09 14 13.0
comp=Z,24nm,1.2s
MLY Manley 83.97 23 P **P 09 13 41.8 -0.3**
baz=246
WAT1 Susitna Watana 84.00 25 P **P 09 13 41.2 -1.1**
baz=248
H22K Ishtalitna Cre 84.08 22 P **P 09 13 42.1 -0.5**
baz=246
RND Reindeer 84.09 25 IAmb IAmb 09 14 08.5
comp=Z,25nm,0.8s
SCM Sheep Creek Mo 84.18 26 IAmb IAmb 09 14 07.9
comp=Z,44nm,1.2s
SCM Sheep Creek Mo 84.18 26 P **P 09 13 42.4 -0.9**
baz=250
MCK McKinley 84.18 24 IAmb IAmb 09 14 12.6
comp=Z,26nm,1.0s
MCK McKinley 84.18 24 P **P 09 13 41.8 -1.4**
baz=248
WAT6 Susitna Watana 84.26 26 P **P 09 13 42.7 -1.1**
baz=249
NEA2 Nenana 84.45 24 IAmb IAmb 09 14 21.1
comp=Z,18nm,1.1s
NEA2 Nenana 84.45 24 P **P 09 13 43.0 -1.5**
baz=248
F22K John River 84.47 20 P **P 09 13 44.8 +0.2**
baz=245
I23K Minto, Yukon-K 84.55 23 P **P 09 13 44.2 -0.7**
baz=247
DHY Denali Highway 84.59 25 IAmb IAmb 09 14 12.2
comp=Z,20nm,0.8s
DHY Denali Highway 84.59 25 P **P 09 13 44.7 -0.7**
baz=249
DIV Divide 84.64 27 pP 09 14 08.2 +2.0
KLU Klutina 84.69 27 IAmb IAmb 09 14 12.7
comp=Z,17nm,0.9s
KLU Klutina 84.69 27 P **P 09 13 44.6 -1.3**
baz=251
H23K Yukon River 84.74 22 P **P 09 13 45.9 0.0**
baz=247
M24K Tolsona, Glenn 84.78 26 IAmb IAmb 09 14 26.6
comp=Z,26nm,0.8s
M24K Tolsona, Glenn 84.78 26 P **P 09 13 46.1 -0.2**
baz=251
WRH Wood River Hil 84.80 24 IAmb IAmb 09 14 35.7
comp=Z,17nm,1.0s
A21K Barrow 84.86 16 P **P 09 13 44.7 -1.6**
baz=240
E22K Anaktuvuk Pass 84.86 20 P **P 09 13 46.4 -0.1**
baz=245
KAIM Kayak Island 84.90 29 P **P 09 13 46.8 0.0**
baz=252
G23K Bananza Creek 84.91 21 P **P 09 13 47.0 +0.2**
baz=247,SNR=5.9
CCB Clear Creek Bu 84.98 24 IAmb IAmb 09 14 12.5
comp=Z,16nm,0.9s
TCOL CIGO, UAF Yank 85.04 24 P **P 09 13 45.9 -1.5**
baz=249
COLA College 85.04 24 P **P 09 13 46.4 -1.0**
COLA College 85.04 24 *i* P **P 09 13 46.3 -1.1**
COLA pmax pmax
comp=Z,6.0nm,0.9s
COLA College 85.04 24 P **P 09 13 45.8 -1.5**
baz=249
COLD Coldfoot 85.05 21 pP pP 09 14 07.6 -0.4
COLD Coldfoot 85.05 21 P **P 09 13 47.6 +0.2**
baz=246
HMT Hamilton 85.10 28 IAmb IAmb 09 14 15.1
comp=Z,31nm,1.0s
BMRM Bremner River 85.13 28 IAmb IAmb 09 14 12.7
comp=Z,40nm,1.4s
BMRM Bremner River 85.13 28 P **P 09 13 47.7 -0.3**
baz=252
HDA Harding Lake 85.24 24 pP 09 14 08.9 -0.2
HDA Harding Lake 85.24 24 P **P 09 13 48.1 -0.3**
baz=250
HARP HAARP 85.33 26 P **P 09 13 46.8 -2.1**
baz=252
N25K Chitina, Valde 85.33 27 P **P 09 13 48.1 -1.0**
baz=252
PAX Paxson 85.38 26 P **P 09 13 47.8 -1.5**
baz=251
H24K Noodor Dome 85.38 23 P **P 09 13 48.5 -0.6**
baz=249,SNR=6.0
ILAR Eielson Array 85.39 24 P **P 09 13 47.3 -1.9**
comp=Z,5.3nm,0.7s,baz=257,slow=5.0,SNR=52
comp=Z,5.3nm,0.7s
D23K Nanushuk River 85.59 19 P **P 09 13 48.7 -1.4**
baz=246,SNR=15
QSPA South Pole Qui 85.61 180 LR LR 09 53 04.2
comp=Z,728nm,18.6s,baz=12,slow=36
QSPA South Pole Qui 85.61 180 P **P 09 13 50.9 +0.5**
CRQM Cirque 85.75 28 IAmb IAmb 09 14 20.7
comp=Z,29nm,1.0s
CRQE Cirque 85.77 28 P **P 09 13 50.3 -1.1**
baz=254,SNR=5.0
TOLK Toolik Lake Re 85.83 20 P **P 09 13 50.7 -0.7**
baz=247,SNR=5.6
G24K Hadweenzic Riv 85.84 22 P **P 09 13 49.4 -2.1**
baz=249,SNR=6.4
RIDG Independent Ri 85.89 25 IAmb IAmb 09 14 18.2
comp=Z,26nm,1.0s
RIDG Independent Ri 85.89 25 P **P 09 13 49.9 -1.8**
baz=252
J25K Salcha River, 85.95 24 IAmb IAmb 09 14 21.6
comp=Z,18nm,1.0s
J25K Salcha River, 85.95 24 P **P 09 13 51.0 -1.1**
baz=251,SNR=8.9
C23K Itkillik River 85.97 19 P **P 09 13 50.7 -1.3**
baz=246,SNR=11
E24K Your Creek 85.98 20 P **P 09 13 51.1 -1.1**
baz=248
MCARA McCarthy VSAT 85.98 28 P **P 09 13 51.2 -1.0**
baz=254
F24K Squaw Lake 85.99 21 P **P 09 13 51.0 -1.2**
baz=249,SNR=12
PRP Porcupine Dome 86.18 23 P **P 09 13 51.7 -1.6**
baz=251
DOT Dot Lake 86.19 25 IAmb IAmb 09 14 19.7
comp=Z,21nm,1.0s
D24K Happy Valley 86.28 19 P **P 09 13 51.9 -1.6**
baz=248
M26K Nabesna, AK 86.29 27 P **P 09 13 52.7 -1.1**
baz=253
L26K Log Cabin Wild 86.31 26 P **P 09 13 51.7 -2.1**
baz=253,SNR=6.6
H25K Birch Creek 86.32 23 P **P 09 13 51.5 -2.3**
baz=251
SCRK Sand Creek 86.33 25 P **P 09 13 52.6 -1.4**
baz=252
G25K Bearman Lake 86.38 22 P **P 09 13 53.0 -1.0**
baz=250
BARN Barnard Glacie 86.53 28 IAmb IAmb 09 14 26.3
comp=Z,16nm,0.7s
C24K Franklin Bluff 86.54 19 P **P 09 13 52.8 -1.9**
baz=248
FYU Fort Yukon 86.64 22 IAmb IAmb 09 14 22.6
comp=Z,16nm,1.0s
CTG Chitna Glacier 86.66 28 P **P 09 13 55.7 0.0**
baz=255,SNR=5.1
J26L Joseph Creek 86.66 24 P **P 09 13 55.1 -0.5**
baz=253
CTGM Chitina Glacie 86.66 28 IAmb IAmb 09 14 23.2
comp=Z,23nm,0.9s
M27K Edge Creek, AK 86.78 27 IAmb IAmb 09 14 23.3
comp=Z,23nm,0.8s
M27K Edge Creek, AK 86.78 27 P **P 09 13 56.1 -0.2**
baz=254,SNR=18
LOGN Logan Glacier 86.78 28 P **P 09 13 56.0 -0.3**
LOGN **pP 09 14 17.6 +0.7**
LOGN IAmb IAmb 09 14 26.9
comp=Z,19nm,0.9s
F25K Christian Rive 86.83 21 P **P 09 13 56.2 -0.1**
baz=251
WSAR Wadi Sarin 86.94 293 LR LR 09 53 44.1
comp=Z,47nm,22.0s,baz=117,slow=36
PINM Pinnacle 86.96 29 P **P 09 13 56.5 -0.6**
baz=256
L27K Beaver Creek, 86.99 26 P **P 09 13 57.1 -0.1**
baz=254,SNR=7.0
E25K Arctic Village 87.03 21 P **P 09 13 57.4 +0.1**
baz=251
I26K Coal Creek Min 87.06 24 pP 09 14 16.3 -1.7
I26K Coal Creek Min 87.06 24 P **P 09 13 56.4 -1.0**
baz=253
K27K Chicken 87.15 25 IAmb IAmb 09 14 51.8
comp=Z,23nm,1.1s
K27K Chicken 87.15 25 P **P 09 13 58.0 +0.2**
baz=254
O28M Mount Upton 87.15 29 P **P 09 13 56.9 -1.4**
baz=256,SNR=5.2
D25K Kavik River 87.16 20 P **P 09 13 57.5 -0.4**
baz=250,SNR=7.5
BVCY Beaver Creek 87.25 27 P **P 09 13 57.9 -0.5**
baz=255
YUK3 Moose Creek 87.27 28 P **P 09 13 56.9 -1.9**
baz=256,SNR=5.6
PNL Peninsula 87.28 30 P **P 09 13 58.1 -0.5**
baz=257
G26K Porcupine Rive 87.31 22 P **P 09 13 58.6 +0.1**
baz=252,SNR=9.6
F26K Sheenjek River 87.40 21 P **P 09 13 58.8 -0.2**
baz=252,SNR=7.9
I27K Kandik River 87.76 24 P **P 09 13 59.3 -1.6**
baz=254
O29M Mount Kennedy 87.82 29 P **P 09 14 01.6 +0.3**
baz=258
C26K Camden Bay 87.84 19 P **P 09 14 01.6 +0.7**
baz=251
H27K Steamboat Moun 87.97 23 P **P 09 14 02.0 +0.2**
baz=255
YUK4 Talbot Arm 88.02 28 P **P 09 14 02.5 +0.1**
baz=257
YUK6 Outpost Mounta 88.06 29 P **P 09 14 02.1 -0.5**
baz=258
G27K Doyon Strip 88.07 22 P **P 09 14 00.7 -1.5**
baz=254,SNR=5.6
P29M Windy Craggy 88.09 30 pP 09 14 20.3 -2.9
P29M Windy Craggy 88.09 30 P **P 09 14 02.7 +0.2**
baz=258
C27K Jago River 88.14 20 P **P 09 14 02.8 +0.3**
baz=252,SNR=6.0
DAWY Dawson 88.30 25 IAmb IAmb 09 14 39.9
comp=Z,19nm,1.1s
DAWY Dawson 88.30 25 P **P 09 14 03.4 0.0**
baz=257,SNR=7.5
M29M Somme Creek 88.34 27 P **P 09 14 02.9 -0.9**
baz=258
HYT Haines Junctio 88.45 29 IAmb IAmb 09 14 40.8
comp=Z,31nm,1.3s
HYT Haines Junctio 88.45 29 P **P 09 14 04.2 0.0**
baz=258,SNR=7.0
E27K Coleen River 88.47 21 P **P 09 14 04.0 -0.1**
baz=254,SNR=5.3
P30M Million Dollar 88.57 30 P **P 09 14 04.6 -0.2**
baz=259
PLBC Pleasant Camp 88.74 30 P **P 09 14 05.0 -0.5**
baz=259
N30M Aishikik Lake 88.77 28 P **P 09 14 05.1 -0.6**
baz=259
GEYT Alibeck 88.96 308 LR LR 09 57 11.5
comp=Z,49nm,20.8s,baz=118,slow=38
AB31 Akbulak array 89.02 319 *i* P **P 09 14 05.7 -1.3**
ABKAR Akbulak array 89.02 319 P **P 09 14 05.8 -1.2**
ABKAR Akbulak array 89.02 319 IAmb IAmb 09 14 06.9
comp=Z,5.2nm,0.7s
I29M Ogilvie Camp, 89.04 24 IAmb IAmb 09 14 43.1
comp=Z,20nm,1.2s
I29M Ogilvie Camp, 89.04 24 P **P 09 14 05.6 -1.2**
baz=258,SNR=6.8
O30N Mendenhall 89.12 29 P **P 09 14 06.5 -0.8**
baz=260
M30M Minto, Yukon 89.13 27 IAmb IAmb 09 14 43.7
comp=Z,16nm,1.4s
M30M Minto, Yukon 89.13 27 P **P 09 14 06.4 -1.0**
baz=259
SKAG Skagway 89.26 30 P **P 09 14 07.8 -0.2**
baz=260
N31M Braeburn, Yuko 89.39 28 P **P 09 14 08.2 -0.4**
baz=260
P32M Atlin 90.10 30 P **P 09 14 11.5 -0.4**
baz=262
M31M Drury Creek, Y 90.16 28 P **P 09 14 11.8 -0.4**
baz=261
WRAK Wrangell Islan 90.39 34 P **P 09 14 13.3 0.0**
baz=263
AKTO Aktyubinsk 90.40 320 P **P 09 14 11.8 -1.7**
comp=Z,3.3nm,0.8s,baz=83,slow=7.1,SNR=7.7
AKTO LR LR 09 56 05.6
comp=Z,36nm,19.3s,baz=96,slow=36
comp=Z,3.3nm,0.8s
AKTO Aktyubinsk 90.40 320 P **P 09 14 12.2 -1.3**
N32M Quiet Lake 90.63 29 P **P 09 14 13.8 -0.5**
baz=262
P33M Teslin, Yukon 90.63 30 P **P 09 14 13.8 -0.6**
baz=262
FARO Faro, Yukon 90.65 28 IAmb IAmb 09 14 50.3
comp=Z,17nm,1.5s
ARU Arti 90.75 326 P **P 09 14 13.1 -1.8**
comp=Z,3.6nm,0.5s,baz=325,slow=4.7,SNR=5.0
ARU LR LR 09 56 55.7
comp=Z,90nm,19.6s,baz=96,slow=37
comp=Z,3.6nm,0.5s
ARU Arti 90.75 326 *d* P **P 09 14 12.7 -2.3**
ARU *PP **pP 09 14 32.4 -3.3**
ARU 09 17 49.1
ARU S **SKSac 09 24 37.1 -2.8**
ARU pmax pmax
comp=Z,12nm,1.2s
INK Inuvik 91.43 22 P **P 09 14 15.2 -2.6**
comp=Z,1.8nm,1.0s,baz=276,slow=6.0,SNR=2.3
INK LR LR 09 50 32.3
comp=Z,90nm,21.5s,baz=235,slow=32
comp=Z,1.8nm,1.0s
INK Inuvik 91.43 22 P **P 09 14 16.6 -1.2**
baz=262
R33M Jennings River 91.46 31 P **P 09 14 15.9 -2.5**
baz=264
T35M Bob Quinn 91.60 33 P **P 09 14 17.3 -1.7**
baz=265
DLBC Dease Lake 91.86 32 LR LR 09 47 23.8
comp=Z,103nm,22.0s,baz=286,slow=30
DLBC Dease Lake 91.86 32 P **P 09 14 18.8 -1.4**
baz=265
BBB Bella Bella 92.45 38 LR LR 09 46 57.7
comp=Z,106nm,21.8s,baz=278,slow=30
YBH Yreka Blue Hor 95.75 49 LR LR 09 49 07.5
comp=Z,94nm,21.1s,baz=265,slow=30
KIRV Kirov 95.78 328 LR LR 09 59 26.1
comp=Z,114nm,19.6s,baz=91,slow=36
BELG Belogornoye 96.97 322 P **P 09 14 42.5 -1.1**
comp=Z,13nm,0.8s,baz=326,slow=2.7,SNR=4.1
BELG LR LR 10 00 21.9
comp=Z,58nm,19.5s,baz=2.4,slow=37
comp=Z,13nm,0.8s
NVAR Mina Array Bea 99.16 52 P **Pdif 09 14 52.6 -1.4**
comp=Z,0.2nm,0.6s,baz=236,slow=11,SNR=2.3
NVAR LR LR 09 51 10.9
comp=Z,171nm,21.6s,baz=268,slow=30
comp=Z,0.2nm,0.6s
YKA Yellowknife Ar 99.36 27 P **Pdif 09 14 52.7 -1.4**
comp=Z,0.8nm,0.9s,baz=215,slow=13,SNR=3.0
YKA LR LR 09 55 44.1
comp=Z,88nm,22.0s,baz=308,slow=33
comp=Z,0.8nm,0.9s
GNI Garni 99.44 310 LR LR 10 03 23.9
comp=Z,20nm,21.4s,baz=80,slow=38
NEW Newport 99.52 42 LR LR 10 01 08.8
comp=Z,20nm,18.2s,baz=270,slow=36
TROLL Troll, Antarti 99.72 191 Pdiff **Pdif 09 14 56.7 +1.0**
TROLL Troll, Antarti 99.72 191 pPdiff pP 09 15 14.1 -2.5
KLMR Klimovskoe 100.55 331 *e*P **Pdif 09 14 56.8 -2.6**
KLMR pmax pmax
comp=Z,7.0nm,1.2s
KLMR Klimovskoe 100.55 331 *e*P **Pdif 09 14 56.9 -2.5**
KLMR AMP 09 14 58.7
comp=Z,7.0nm,1.2s
KLMR *e*pP **pPdif 09 15 15.4 -4.8**
SOC Sochi 102.92 314 *e*P **Pdif 09 15 08.8 -1.6**
SOC *e*PPP PPP 09 21 34.8
SOC *e*S **SKSac 09 25 44.1 +0.5**
SOC *e*SS **SS 09 34 00.4 -0.6**
SOC *e*SSS SSS 09 38 02.1
ARCES ARCESS Array B 103.58 341 Pdiff **Pdif 09 15 11.9 -0.8**
comp=Z,1.0nm,0.7s,baz=70,slow=8.0,SNR=4.7
PDAR Pinedale Array 105.41 47 PKKPbc PKKPbc 09 31 00.6 -1.4
comp=Z,0.3nm,0.6s,baz=100,slow=6.2,SNR=4.0
PDAR PKKP **PKKPab 09 31 15.6 -2.6**
comp=Z,0.1nm,0.2s,baz=238,slow=35,SNR=3.6
TXAR Lajitas Array 112.05 60 PKKPbc PKKPbc 09 30 47.9 +7.7
comp=Z,0.8nm,0.8s,baz=121,slow=6.9,SNR=8.7
CLL Collm 117.68 327 *e*PKIKP **PKPdf 09 19 57.0 -0.9**
CLL *e* 09 20 18.0
CLL Collm 117.68 327 *e*PKiKP **PKPdf 09 19 57.0 -0.9**
CLL *ep*PKiKP **pPKPdf 09 20 18.0 -1.5**
CLL *ex* x 09 20 42.0
CLL *ex* x 09 31 36.0
CLL *e*PPS PPS 09 32 12.0
CLL *e*SS SS 09 37 18.0 +0.5

CLL				*e*SSSS			09 45 12.0		
CLL				LmV			10 14 00.0		
	comp=Z,200nm,20.1s								
SCHQ	**Schefferville**	**124.03**	**21**	PKP	**PKPdf**		**09 20 10.1**	**+0.1**	
	comp=Z,2.1nm,0.8s,baz=333,slow=4.5,SNR=2.6								
PLCA	**Paso Flores**	**125.40**	**149**	PKP	**PKiKP**		**09 20 13.9**	**+0.3**	
	comp=Z,5.1nm,0.8s,baz=246,slow=2.4,SNR=12								
KEST	**Kesra**	**127.47**	**313**	PKP	**PKiKP**		**09 20 17.7**	**-0.1**	
	comp=Z,0.9nm,0.5s,baz=157,slow=14,SNR=1.4								
BO02	**Sierra Bellavi**	**129.48**	**143**		**PKiKP**		**09 20 22.3**	**+0.3**	
PNME	**Penonome**	**136.34**	**82**	*e*P	**PKiKP**		**09 20 35.5**	**-0.8**	
PLMC	**San Jos del P**	**140.41**	**88**	*e*P	**PKiKP**		**09 20 50.3**	**+5.6**	
TORD	**Torodi Ar. Bea**	**141.24**	**286**	PKhKP	PKPpre		09 20 36.9		
	comp=Z,0.7nm,0.6s,baz=74,slow=3.1,SNR=6.0								
TORD	**Torodi Ar. Bea**	**141.24**	**286**		**PKPdf**		**09 20 40.1**	**-3.4**	
GUY2C	**Guyana, Caldas**	**141.33**	**87**	*e*P	**PKPdf**		**09 20 43.1**	**-1.1**	
PTLC	**Puerto Leguiza**	**141.58**	**95**	*e*P	PKPdf		09 20 33.8	-10	
ZARC	**Zaragoza, Cauc**	**141.79**	**83**	*e*P	**PKPdf**		**09 20 38.1**	**-6.4**	
CZSB	**Cruzeiro do Su**	**142.00**	**108**	PKPdf	**PKPdf**		**09 20 40.9**	**-4.0**	
SPBC	**San Pablo de B**	**142.62**	**86**	*e*P	**PKPdf**		**09 20 41.3**	**-4.8**	
LPAZ	**La Paz**	**142.65**	**124**	PKhKP	PKPpre		09 20 43.5		
	comp=Z,3.9nm,1.0s,baz=243,slow=0.6,SNR=10								
LPAZ	**La Paz**	**142.65**	**124**	PKPdf	**PKPdf**		**09 20 43.7**	**-3.0**	
LPAZ	**La Paz**	**142.65**	**124**	PKIKP	**PKPdf**		**09 20 43.7**	**-3.0**	
LPAZ	**La Paz**	**142.65**	**124**	*e*P	**PKPdf**		**09 20 43.3**	**-3.4**	
CPUP	**Villa Florida**	**143.47**	**148**	PKhKP	PKPpre		09 20 45.1		
	comp=Z,3.4nm,0.6s,baz=224,slow=2.7,SNR=7.0								
CPUP	**Villa Florida**	**143.47**	**148**		**PKPbc**		09 20 44.1	-0.4	
CPUP	**Villa Florida**	**143.47**	**148**	PKIKP	PKPbc		09 20 44.1	-0.4	
RUSC	**La Rusia**	**143.60**	**86**	*e*P	PKPab		09 20 44.9	-0.1	
SOCV	**Socops**	**145.70**	**82**	*e*P	**PKPdf**		**09 20 50.4**	**-1.0**	
ETMB	**Extrema**	**147.28**	**116**	PKPdf	**PKPdf**		**09 20 53.8**	**-0.2**	
SJG	**San Juan**	**147.99**	**62**		**PKPbc**		**09 20 56.8**	**-1.4**	
SJG	**San Juan**	**147.99**	**62**	PKP2	**PKPbc**		**09 20 56.8**	**-1.4**	
KIC	**Kosan Boka**	**148.26**	**275**⇑	*e*PKP1	**PKPbc**		**09 20 59.3**	**+0.2**	
	comp=Z,8.9nm,0.6s								
DBIC	**Dimbokro**	**148.36**	**276**	PKPbc	**PKPbc**		**09 20 58.4**	**-0.9**	
	comp=Z,7.9nm,0.8s,baz=77,slow=2.6,SNR=4.4								
DBIC	**Dimbokro**	**148.36**	**276**		**PKPdf**		**09 20 56.5**	**+0.7**	
DBIC	**Dimbokro**	**148.36**	**276**	PKIKP	**PKPdf**		**09 20 56.5**	**+0.7**	
TIC	**Toumodi**	**148.52**	**276**⇑	*i*PKP1	**PKPbc**		**09 20 59.9**	**+0.1**	
	comp=Z,16nm,0.8s								
LIC	**Lamto**	**148.55**	**275**⇑	*e*PKP1	**PKPbc**		**09 21 00.4**	**+0.6**	
	comp=Z,33nm,0.7s								
SAML	**Samuel**	**150.35**	**116**		**PKPdf**		**09 20 58.0**	**-1.0**	
SAML	**Samuel**	**150.35**	**116**	PKIKP	**PKPdf**		**09 20 58.0**	**-1.0**	
VILB	**Vilhena**	**150.90**	**127**		**PKPbc**		**09 21 05.7**	**+0.1**	
BDFB	**Brasilia**	**157.13**	**151**	PKP	**PKPdf**		**09 21 09.1**	**+0.4**	
	comp=Z,2.5nm,0.7s,baz=98,slow=7.1,SNR=2.3								

*NNC **04** 09:02:28.2±1.2,53˚.89N×87˚.02E,h0km,mb3.1,mpv3.0,*
Error ellipse: s-maj=17.0km s-min=6.4km az=17.0,
Suspected Mining explosion.

IDC 04 09:02:02.9±3.3,53˚.67N×88˚.03E,h0km,mbtmp2.8/2,
ML2.6/2,2C-4D,Error ellipse: s-maj=29.6km
s-min=18.1km az=52.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**280**	*i*		09 13 52.6	
	0.1nm,1.2s,baz=98,slow=318,SNR=0.9						
ZAA0	**Zalesovo Array**	**1.92**	**280**	⇓P	Pg	09 02 52.4	+13
	0.9nm,0.5s						
ZAA0				⇓S	Sg	09 03 10.6	+5.9
	4.0nm,0.6s						
ZALV	**Zalesovo Beam**	**1.92**	**280**	Pg	Pn	09 02 37.2	+0.4
	1.6nm,0.3s,baz=96,slow=16,SNR=12						
ZALV				Lg	Lg	09 03 04.0	
	4.0nm,0.3s,baz=96,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.59**	**246**	Pn	Pn	09 03 41.8	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=8.3						
KURBB				Lg	Lg	09 05 31.4	
	0.1nm,0.3s,baz=64,slow=31,SNR=3.9						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**6.59**	**246**	⇓Pn	Pb	09 04 01.0	+2.6
	2.4nm,0.4s						
KURBB				⇑Lg	Lg	09 05 41.7	
	6.6nm,0.6s						
MK31	**Makanchi Array**	**7.80**	**210**	⇓Pn	Pb	09 04 22.2	+3.1
	0.5nm,0.5s,baz=24,slow=12,SNR=12						
MK31				⇑Lg	Lg	09 06 31.0	
	1.6nm,0.8s,baz=24,slow=32,SNR=4.3						
MKAR	**Makanchi Array**	**7.80**	**210**	Pn	Pn	09 03 58.8	+1.0
	0.1nm,0.3s,baz=31,slow=14,SNR=4.1						
MKAR				Lg	Lg	09 06 12.2	
	0.1nm,0.3s,baz=32,slow=30,SNR=2.1						
	0.1nm,0.3s						

*MCSM **04** 09:04:32.4±0.4,52˚.N±3˚×1˚.6E±˚,h3km±2km,ML3.4*
*IPEC **04** 09:04:32.3±0.2,51˚.52N×16˚.27E,h1km,ML3.2/5,Error*
ellipse: s-maj=2.0km s-min=1.1km az=33.0
*PRU **04** 09:04:34.0±0.0,51˚.44N×16˚.19E,h0km*
*BGR **04** 09:04:34.1±0.6,51˚.41N×16˚.22E,h1km,ML3.3/10,Error*
ellipse: s-maj=10.0km s-min=4.4km az=29.0
*IDC **04** 09:04:34.6±1.5,51˚.41N×16˚.11E,h10km±12km,mb3.6/1,*
mbtmp3.4/8,ML3.1/7,Error ellipse: s-maj=10.1km
s-min=7.1km az=104.0

ISC 04 09:04:31.6±0.6,51˚.52N±0˚.03×16˚.20E±0˚.02,h0km,n78,
σ1§41/141,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**175**	*e*Pg	**Pg**	**09 04 45.6**	**+1.1**
KSP				*e*Sg	**Sg**	**09 04 53.5**	**+0.2**
KSP	**Ksiaz**	**0.68**	**175**	*e*Pg	**Pg**	**09 04 45.6**	**+1.1**
KSP				*e*Sg	**Sg**	**09 04 53.2**	**-0.1**
KSP	**Ksiaz**	**0.68**	**175**	Pg	**Pg**	**09 04 45.2**	**+0.7**
CHVC	**Chvalec**	**0.94**	**186**	*e*Pg	**Pb**	**09 04 50.5**	**-0.2**
CHVC				*e*Sg	**Sg**	**09 05 01.8**	**+0.2**
CHVC	**Chvalec**	**0.94**	**186**	Pg	**Pb**	**09 04 50.5**	**-0.2**
OSTC	**Ostas**	**0.96**	**179**	*e*PG	**Pb**	**09 04 51.1**	**0.0**
OSTC				*e*SG	**Sg**	**09 05 02.2**	**-0.2**
	comp=Z,203nm,0.6s						
OSTC	**Ostas**	**0.96**	**179**	Pg	**Pb**	**09 04 51.1**	**0.0**
UPC	**Upice**	**1.02**	**187**	*e*PG	**Pg**	**09 04 51.8**	**+0.7**
UPC				*e*SG	**Sg**	**09 05 04.4**	**+0.2**
	comp=Z,531nm,0.4s						
UPC	**Upice**	**1.02**	**187**	Pg	**Pg**	**09 04 51.8**	**+0.7**
DPC	**Dobruska-Polom**	**1.17**	**176**	*e*PG	**Pg**	**09 04 54.5**	**+0.5**
DPC				*e*SG	**Sg**	**09 05 09.1**	**0.0**
	comp=Z,267nm,0.5s						
DPC	**Dobruska-Polom**	**1.17**	**176**	*e*Pn	**Pg**	**09 04 54.5**	**+0.5**
DPC				*e*Sg	**Sg**	**09 05 08.8**	**-0.4**
DPC	**Dobruska-Polom**	**1.17**	**176**	Pg	**Pg**	**09 04 54.4**	**+0.5**
PVCC	**Panska Ves**	**1.43**	**227**	*e*PG	**Pb**	**09 04 59.9**	**+0.8**
PVCC				*e*SG	**Sg**	**09 05 18.4**	**+0.9**
	comp=Z,667nm,0.3s						
PVCC	**Panska Ves**	**1.43**	**227**	Pn	**Pb**	**09 05 00.1**	**+1.0**
KRLC	**Kraliky**	**1.49**	**165**	*e*PG	**Pn**	**09 05 00.0**	**+0.4**
KRLC				*e*SG	**Sg**	**09 05 18.3**	**-1.1**
	comp=Z,128nm,0.6s						
BRG	**Berggiesshubel**	**1.56**	**246**	Pn	**Pn**	**09 05 01.2**	**+0.7**
BRG				Pg	**Pg**	**09 05 03.3**	**+1.9**
BRG				Sg	**Sg**	**09 05 23.3**	**+1.6**
BRG				Amp		09 05 25.7	
	comp=Z,162nm,0.5s						
BRG	**Berggiesshubel**	**1.56**	**246**	*e*Pn	**Pn**	**09 05 01.2**	**+0.7**
BRG				*e*Sg	**Sg**	**09 05 23.3**	**+1.6**
RUE	**Ruedersdorf**	**1.78**	**304**	Pn	**Pb**	**09 05 05.0**	**0.0**
GOPC	**GO Pecny, Ondr**	**1.84**	**210**	Pn	**Pn**	**09 05 05.6**	**+1.2**
PRU	**Pruhonice**	**1.86**	**215**	*e*PG	**Pb**	**09 05 06.9**	**+0.5**
PRU				*e*SG	**Sb**	**09 05 30.8**	**+0.6**
	comp=Z,151nm,1.0s						
FBE	**Freiberg**	**1.89**	**253**	*e*Pn	**Pb**	**09 05 07.8**	**+0.9**
FBE				*e*Sg	**Sg**	**09 05 33.8**	**+1.6**
RAC	**Raciborz**	**1.91**	**138**	*e*PG	**Pg**	**09 05 08.7**	**+0.5**
RAC				*e*SG	**Sg**	**09 05 34.2**	**+1.2**
MORC	**Moravsky Berou**	**1.94**	**153**	*e*Pn	**Pn**	**09 05 06.1**	**+0.3**
	baz=336						
MORC				*e*Sg	**Sb**	**09 05 33.0**	**+0.5**
	comp=Z,162nm,1.1s,baz=336						
MORC	**Moravsky Berou**	**1.94**	**153**	*e*PN	**Pn**	**09 05 06.1**	**+0.3**
MORC				*e*SG	**Sb**	**09 05 33.1**	**+0.5**
MORC	**Moravsky Berou**	**1.94**	**153**	*e*Pn	**Pn**	**09 05 06.2**	**+0.4**
MORC				*e*Sg	**Sn**	**09 05 31.0**	**+0.1**
CLL	**Collm**	**2.02**	**265**	*e*Pn	**Pn**	**09 05 08.0**	**+1.2**
CLL				*i* Pg	**Pg**	**09 05 10.7**	**+0.6**
CLL				*e*Sg	**Sg**	**09 05 38.0**	**+1.8**
	comp=Z,76nm,0.7s						
CLL	**Collm**	**2.02**	**265**	*e*Pn	**Pn**	**09 05 08.2**	**+1.4**
CLL				*e*Pg	**Pg**	**09 05 10.9**	**+0.7**

OKC	**Ostrava-Krasne**	**2.09**	**143**	*e*PG	**Pb**		**09 05 10.9**	**+0.6**	
OKC				*e*SG	**Sb**		**09 05 37.0**	**+0.3**	
VRAC	**Vranov**	**2.23**	**173**	Pn	**Pn**		**09 05 09.6**	**-0.1**	
	comp=Z,5.4nm,0.3s,baz=350,slow=15,SNR=15								
VRAC				Lg	Lg		09 05 40.5		
	comp=Z,16nm,0.3s,baz=76,slow=19,SNR=11								
	comp=Z,14nm,0.4s								
VRAC	**Vranov**	**2.23**	**173**	*e*Pn	**Pn**		**09 05 10.4**	**+0.7**	
	baz=355								
VRAC				*e*Sg	**Sb**		**09 05 41.8**	**+1.1**	
	comp=Z,140nm,0.9s,baz=355								
VRAC	**Vranov**	**2.23**	**173**	*e*PN	**Pn**		**09 05 10.4**	**+0.7**	
VRAC				*e*SG	**Sb**		**09 05 41.8**	**+1.1**	
TREC	**Trest**	**2.27**	**192**	*e*PG	**Pb**		**09 05 13.7**	**+0.3**	
TREC				*e*SG	**Sb**		**09 05 43.0**	**+0.9**	
	comp=Z,50nm,0.3s								
KRUC	**Moravsky**	**2.46**	**177**	*e*Pn	**Pn**		**09 05 13.5**	**+0.6**	
	baz=358								
KRUC				*e*Sg	**Sg**		**09 05 49.7**	**-0.8**	
	comp=Z,138nm,1.2s,baz=358								
KRUC	**Moravsky**	**2.46**	**177**	*e*PN	**Pn**		**09 05 13.5**	**+0.6**	
KRUC				*e*SG	**Sg**		**09 05 49.8**	**-0.8**	
TANN	**Tannenbergstha**	**2.61**	**246**	*e*Pn	**Pn**		**09 05 16.5**	**+1.5**	
TANN				*e*Sg	**Sg**		**09 05 55.3**	**0.0**	
OJC	**Ojcow**	**2.62**	**118**	*e*Pg	**Pg**		**09 05 22.5**	**+0.7**	
OJC				*e*Sg	**Sg**		**09 05 57.1**	**+1.3**	
NKC	**Novy Kostel**	**2.70**	**243**	*e*PN	**Pn**		**09 05 17.9**	**+1.6**	
NKC				*e*PG	**Pg**		**09 05 22.8**	**-0.5**	
NKC				*e*SG	**Sg**		**09 05 59.1**	**+0.7**	
	comp=Z,134nm,0.7s								
NKC	**Novy Kostel**	**2.70**	**243**	Pn	**Pn**		**09 05 17.8**	**+1.5**	
NKC				Sn	**Sb**		**09 05 53.1**	**-1.4**	
JAVC	**Velka Javorina**	**2.82**	**160**	*e*Pn	**Pn**		**09 05 18.4**	**+0.4**	
	baz=342								
JAVC	**Velka Javorina**	**2.82**	**160**	*e*PN	**Pn**		**09 05 18.4**	**+0.4**	
KHC	**Kasperske Hory**	**2.92**	**216**	*e*PN	**Pn**		**09 05 20.4**	**+1.1**	
KHC				*e*PG	**Pb**		**09 05 26.2**	**+1.7**	
KHC				*e*SG	**Sg**		**09 06 05.1**	**-0.3**	
	comp=Z,67nm,0.7s								
CKRC	**Cesky Krumlov**	**2.96**	**205**	*e*PN	**Pn**		**09 05 21.0**	**+1.2**	
CKRC				*e*PG	**Pb**		**09 05 27.1**	**+1.9**	
CKRC				*e*SG	**Sb**		**09 06 04.9**	**+3.0**	
CKRC	**Cesky Krumlov**	**2.96**	**205**	Pn	**Pn**		**09 05 21.1**	**+1.2**	
MOX	**Moxa**	**3.02**	**255**	*e*Sg	**Sg**		**09 06 09.5**	**+0.9**	
GEC2	**GERESS Array S**	**3.12**	**212**	*e*Pn	**Pn**		**09 05 23.9**	**+1.9**	
GEC2				*e*PG	**Pb**		**09 05 29.9**	**+2.0**	
GERES	**GERESS Array B**	**3.12**	**212**	Pn	**Pn**		**09 05 22.5**	**+0.4**	
	comp=Z,1.7nm,0.3s,baz=35,slow=14,SNR=21								
GERES				Pg	**Pb**		**09 05 29.9**	**+2.0**	
	comp=Z,17nm,0.3s,baz=30,slow=18,SNR=63								
GERES				Sn	**Sn**		**09 05 57.4**	**-2.7**	
	comp=Z,5.0nm,0.3s,baz=34,slow=25,SNR=2.8								
GERES				Lg	Lg		09 06 09.3		
	comp=Z,17nm,0.3s,baz=32,slow=28,SNR=10								
	comp=Z,3.7nm,0.5s								
LANS	**Liptovska Anna**	**3.16**	**137**	*e*PG	**Pg**		**09 05 32.9**	**+0.8**	
LANS				*e*SG	**Sg**		**09 06 13.5**	**+0.4**	
WET	**Wettzell**	**3.19**	**223**	*e*Pn	**Pn**		**09 05 24.0**	**+1.0**	
WET				*e*Pg	**Pb**		**09 05 30.6**	**+1.5**	
MODS	**Modra-Piesok**	**3.22**	**167**	*e*PG	**Pg**		**09 05 32.8**	**-0.5**	
MODS				*e*SG	**Sg**		**09 06 14.2**	**-0.8**	
ZST	**Bratislava**	**3.38**	**170**	*e*PG	**Pg**		**09 05 35.8**	**-0.4**	
ZST				*e*SG	**Sg**		**09 06 17.8**	**-2.1**	
CONA	**Conrad Observa**	**3.60**	**184**	*i* Pn	**Pn**		**09 05 30.0**	**+1.3**	
	comp=Z,3.1nm,0.5s,SNR=6.6								
CONA				*e*Sg	**Sg**		**09 06 27.3**	**+0.1**	
	comp=Z,36nm,0.4s								
BSD	**Bornholm Skovb**	**3.69**	**348**	*i* P	**Pn**		**09 05 31.0**	**+1.3**	
BSD				*i* S	**Sn**		**09 06 13.2**	**-0.6**	
RONA	**Rosalia, Austr**	**3.82**	**179**	*e*Pn	**Pn**		**09 05 33.9**	**+2.3**	
	comp=Z,2.2nm,0.4s								
RONA				*e*Sg	**Sg**		**09 06 33.9**	**-0.4**	
	comp=Z,18nm,0.4s								
MOA	**Molln**	**3.88**	**200**	Pn	**Pn**		**09 05 33.7**	**+1.2**	
	comp=Z,5.5nm,0.3s,SNR=7.5								
MOA				*e*Pg	**Pg**		**09 05 46.0**	**+0.1**	
	comp=Z,12nm,0.3s								
MOA				*e*Sg	**Sg**		**09 06 36.8**	**+0.6**	
	comp=Z,32nm,0.4s								
BIOA	**Bad Ischl, Aus**	**4.18**	**205**	*i* Pn	**Pn**		**09 05 39.3**	**+2.8**	
	comp=Z,7.5nm,0.3s								
BIOA				*e*Sg	**Sg**		**09 06 45.1**	**-0.6**	
	comp=Z,91nm,0.7s								
CRVS	**Cervenica-Dubn**	**4.27**	**126**	*e*PG	**Pg**		**09 05 54.1**	**+0.7**	
CRVS				*e*SG	**Sg**		**09 06 47.0**	**-1.8**	
ARSA	**Arzberg**	**4.29**	**186**	*e*Pn	**Pn**		**09 05 41.0**	**+2.9**	
	comp=Z,2.4nm,0.4s								
ARSA				*e*Sg	**Sg**		**09 06 46.0**	**-3.4**	
	comp=Z,27nm,0.6s								
PSZ	**Piszkesteto**	**4.33**	**145**	P	**Pn**		**09 05 39.4**	**+0.7**	
KOLS	**Kolonicke sedl**	**4.68**	**121**	*e*PG	**Pg**		**09 06 05.2**	**+4.1**	
KOLS				*e*SG	**Sg**		**09 07 03.7**	**+2.0**	
BLEU	**Blekinge**	**4.80**	**357**	*e*P	**Pn**		**09 05 47.0**	**+2.0**	
BLEU				*i* S	**Sn**		**09 06 40.0**	**-1.3**	
BJUU	**Bjuv**	**4.94**	**339**	*e*S	**Sn**		**09 06 42.4**	**-2.3**	
DEL	**Delary**	**5.15**	**345**	*i* P	**Pn**		**09 05 51.0**	**+1.2**	
DEL				*i* S	**Sn**		**09 06 49.8**	**-0.1**	
WTTA	**Wattenberg**	**5.20**	**217**	*i* Pn	**Pn**		**09 05 53.0**	**+2.4**	
	comp=Z,5.0nm,0.5s								
WTTA				*e*Sg	**Sg**		**09 07 16.7**	**-1.7**	
	comp=Z,32nm,0.6s								
MORH	**Mrgy, Hungar**	**5.55**	**162**	P	**Pn**		**09 05 58.9**	**+3.6**	
RNPP9	**Sopachiv**	**6.06**	**87**	Pn	**Pn**		**09 06 01.3**	**-1.0**	
RNPP9				pP	**Pn**		**09 06 02.1**	**-0.2**	
RNPP9				sP	**Pn**		**09 06 02.9**	**+0.6**	
RNPP2	**Kostyukhnivka**	**6.06**	**88**	Pn	**Pn**		**09 06 01.9**	**-0.5**	
DAVOX	**Davos/Dischmat**	**6.30**	**224**	Pn	**Pn**		**09 06 05.6**	**-0.2**	
	comp=Z,0.6nm,0.3s,baz=42,slow=15,SNR=2.6								
DAVOX				Sn	**Sn**		**09 07 18.0**	**-0.5**	
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=1.2								
DAVOX				Lg	Lg		09 07 50.7		
	comp=Z,0.6nm,0.3s,baz=108,slow=20,SNR=5.1								
	comp=Z,1.6nm,0.4s								
MI28	**Mi28,Pidlybu**	**7.23**	**90**	Pn	**Pn**		**09 06 17.7**	**-0.6**	
MI28				sP	**Pn**		**09 06 18.6**	**+0.3**	
KMPD	**K-Podol'skiy**	**7.24**	**110**	Pn	**Pn**		**09 06 17.4**	**-1.1**	
MI29	**MI29, Kamyanyy**	**7.44**	**94**	Sn	**Sn**		**09 07 44.6**	**-1.7**	
MI30	**MI30,Zelenitsa**	**7.58**	**91**	Sn	**Sn**		**09 07 48.7**	**-1.1**	
AKASG	**Malin Array Be**	**8.24**	**91**	Pn	**Pn**		**09 06 31.4**	**-0.8**	
	comp=Z,1.0nm,0.3s,baz=280,slow=12,SNR=5.7								
AKASG				Pg	**Pb**		**09 06 59.5**	**+4.5**	
	comp=Z,0.3nm,0.3s,baz=275,slow=11,SNR=1.6								
AKASG				Sn	**Sn**		**09 08 02.5**	**-3.4**	
	comp=Z,1.1nm,0.3s,baz=275,slow=24,SNR=2.2								
AKASG				Lg	Lg		09 08 57.9		
	comp=Z,0.7nm,0.3s,baz=277,slow=30,SNR=4.2								
	comp=Z,0.7nm,0.4s								
HFS	**Hagfors**	**8.75**	**352**	Pn	**Pn**		**09 06 39.8**	**+0.6**	
	comp=Z,0.4nm,0.3s,baz=172,slow=15,SNR=7.9								
HFS				Sn	**Sn**		**09 08 16.6**	**-1.8**	
	comp=Z,0.2nm,0.3s,baz=165,slow=30,SNR=1.9								
	comp=Z,1.1nm,0.4s								
NOA	**NORSAR Array B**	**9.94**	**346**	Pn	**Pn**		**09 06 54.4**	**-1.1**	
	baz=162,slow=12,SNR=5.6								
	comp=Z,0.2nm,0.3s								
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**		**09 07 13.8**	**-0.7**	
	comp=Z,0.4nm,0.3s,baz=215,slow=11,SNR=14								
FINES				Sn	**Sn**		**09 09 19.7**	**-2.0**	
	comp=Z,0.5nm,0.3s,baz=211,slow=19,SNR=5.9								
	comp=Z,1.6nm,0.4s								
EKA	**Eskdalemuir Ar**	**12.15**	**296**	Pn	**Pn**		**09 07 24.7**	**-1.1**	
	baz=102,slow=13								
KEST	**Kesra**	**16.53**	**200**	Sn	**Sn**		**09 11 24.1**	**-4.7**	
	comp=Z,0.5nm,0.3s,baz=9.6,slow=23,SNR=7.9								
TORD	**Torodi Ar. Bea**	**40.03**	**202**	P	**P**		**09 12 09.2**	**+1.0**	
	comp=Z,1.0nm,0.9s,baz=10,slow=7.3,SNR=4.1								
	comp=Z,1.0nm,0.9s								

*IDC **04** 09:28:56.9±4.1,38˚.03N×74˚.00E,h175km±35km,mb3.2/6,*
mbtmp3.7/11,MS3.8/1,Error ellipse: s-maj=38.3km
s-min=20.7km az=38.0

ISC 04 09:28:54.4±1.1,38˚.0N±0˚.1×74˚.1E±0˚.2,h152km,n12,
σ1§20/12,mb3.5/6,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.66**	**4**	P	**Pn**	**09 30 05.7**	**+2.3**
	4.3nm,0.5s,baz=189,slow=6.5,SNR=6.0						
AAK				S	**Sn**	**09 30 56.0**	**-1.2**
	6.9nm,0.4s,baz=184,slow=19,SNR=9						
MKAR	**Makanchi Array**	**10.70**	**32**	P	**Pn**	**09 31 24.5**	**+1.1**
	0.4nm,0.3s,baz=217,slow=16,SNR=0.7						
KURBB	**Kurchatov Arra**	**13.03**	**13**	P	**P**	**09 31 56.6**	**-1.7**
	1.0nm,0.5s,baz=203,slow=10,SNR=1.6						

AKTO	**Aktyubinsk**	**16.89**	**323**	P		**Pn**	**09 32 42.6**	**+1.0**	
	1.4nm,0.7s,baz=111,slow=15,SNR=4.1								
ZALV	**Zalesovo Beam**	**17.60**	**21**	P		**P**	**09 32 48.4**	**-0.4**	
	1.7nm,0.4s,baz=211,slow=11,SNR=6.5								
FINES	**FINESS Array B**	**37.65**	**324**	P		**P**	**09 35 54.2**	**-0.1**	
	1.4nm,0.7s,baz=104,slow=10,SNR=1.6								
	1.4nm,0.7s								
ARCES	**ARCESS Array B**	**40.73**	**336**	P		**P**	**09 36 19.3**	**-0.4**	
	1.6nm,0.9s,baz=113,slow=9.3,SNR=8.7								
	1.6nm,0.9s								
SPITS	**Spitsbergen Ar**	**46.62**	**346**	LR		LR	09 59 56.0		
	comp=Z,109nm,21.4s,baz=14,slow=40								
TORD	**Torodi Ar. Bea**	**68.17**	**270**	P		**P**	**09 39 37.7**	**-0.7**	
	0.1nm,0.5s,baz=72,slow=8.5,SNR=1.8								
	0.1nm,0.5s								
YKA	**Yellowknife Ar**	**79.62**	**4**	P		**P**	**09 40 44.0**	**-0.2**	
	0.4nm,0.5s,baz=11,slow=6.0,SNR=2.8								
	0.4nm,0.5s								
WRA	**Warramunga Arr**	**80.76**	**124**	P		**P**	**09 40 51.2**	**+0.3**	
	0.8nm,0.7s,baz=323,slow=5.3,SNR=8.2								
	0.8nm,0.7s								
ASAR	**Alice Springs**	**83.16**	**127**	P		**P**	**09 41 03.9**	**+0.4**	
	0.3nm,0.6s,baz=316,slow=4.9,SNR=4.6								
	0.3nm,0.6s								

*NNC **04** 09:38:39.5±1.0,41˚.63N×74˚.41E,h0km,mb4.4,mpv4.1,*
Error ellipse: s-maj=8.3km s-min=5.1km az=162.0
*SOME **04** 09:38:39.4,41˚.58N×74˚.52E,h10km*
*KRNET **04** 09:38:40.1±0.1,41˚.63N×74˚.45E,h19km,mb4.0*
*MOS **04** 09:38:41.7±1.3,41˚.71N×74˚.29E,h10km,mb3.7/1,Error*
ellipse: s-maj=9.5km s-min=5.0km az=73.1
MOS Felt (III) at Ak-Kel', Sary-Bulak; (II-III) at Aral,
Kyzyl-Korgon, Tabylgy.
*KNET **04** 09:38:41.4±0.5,41˚.72N×74˚.40E,h17km±3km,ml3.0,Error*
ellipse: s-maj=3.5km s-min=2.5km az=9.0

ISC 04 09:38:41.3±1.1,41˚.68N±0˚.03×74˚.42E±0˚.02,h10km±7km,
n109,σ1§24/166,36C-33D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.19**	**338**⇓	*e*PG	**Pg**	**09 38 45.2**	**-0.2**
ARLS	**Aral**	**0.19**	**338**⇓	*e*P	**Pg**	**09 38 45.2**	**-0.2**
	baz=39						
ARLS				⇓*e*S	**Sg**	**09 38 48.

	84nm,0.4s								
KST	**Kastek**	**1.78**	**40**	*e*P		**Pn**	**09 39 13.3**	**+1.0**
	16nm,0.4s								
KST				*e*S		**Sb**	**09 39 37.7**	**+1.2**
	361nm,0.6s								
KST	**Kastek**	**1.78**	**40**	P		**Pn**	**09 39 13.3**	**+1.0**
	16nm,0.4s								
KST				S		**Sb**	**09 39 37.7**	**+1.2**
	361nm,0.6s								
KRBS	**Karabastau**	**2.21**	**24**	*e*P		**Pb**	**09 39 21.7**	**+0.2**
	183nm,0.4s								
KRBS				*e*S		**Sg**	**09 39 52.5**	**0.0**
	341nm,0.5s								
KRBS	**Karabastau**	**2.21**	**24**	Pg		**Pb**	**09 39 21.7**	**+0.2**
	183nm,0.4s								
KRBS				Lg		Lg	09 39 52.5		
	341nm,0.5s								
AAA	**Alma-Ata**	**2.40**	**50**	*e*PN		**Pb**	**09 39 24.4**	**-0.2**
AAA				*e*			09 39 58.0		
AAA	**Alma-Ata**	**2.40**	**50**	*e*Pg		**Pb**	**09 39 24.5**	**-0.2**
	baz=48								
AAA				*e*Lg		Lg	09 39 58.0		
	baz=48								
KNDC	**Almaty**	**2.43**	**50**	PN		**Pb**	**09 39 26.0**	**+0.8**
KNDC	**Almaty**	**2.43**	**50**	⇓Pg		**Pb**	**09 39 26.0**	**+0.8**
	147nm,0.5s								
KNDC				⇑Lg		Lg	09 39 56.5		
	517nm,0.9s								
MDOK	**Medeo**	**2.45**	**52**	*i* PN		**Pb**	**09 39 25.5**	**0.0**
MDOK				*i*			09 39 59.1		
MDOK	**Medeo**	**2.45**	**52**	*e*P		**Pb**	**09 39 25.8**	**+0.3**
	76nm,0.2s								
MDOK				*e*S		**Sg**	**09 39 59.1**	**-0.8**
	123nm,0.8s								
MDOK	**Medeo**	**2.45**	**52**	*i* Pg		**Pb**	**09 39 25.5**	**0.0**
	baz=51								
MDOK				*i* Lg		Lg	09 39 59.1		
	baz=51								
MDOK	**Medeo**	**2.45**	**52**	⇑Pg		**Pb**	**09 39 25.2**	**-0.3**
	27nm,0.3s								
MDOK				Pg		**Pb**	**09 39 25.8**	**+0.3**
	76nm,0.2s								
MDOK				⇑Lg		Lg	09 39 57.5		
	119nm,0.6s								
MDOK				Lg		Lg	09 39 59.1		
	123nm,0.8s								
TRKS	**Terek-Say**	**2.46**	**268**	*e*PN		**Pn**	**09 39 22.1**	**+0.4**
TRKS				*e*S		**Sn**	**09 39 52.9**	**+0.9**
TRKS	**Terek-Say**	**2.46**	**268**	⇑*e*P		**Pn**	**09 39 22.1**	**+0.4**
	baz=67								
TRKS				⇑*e*S		**Sn**	**09 39 52.9**	**+0.9**
	baz=67								
DZA	**Taraz**	**2.59**	**299**	*e*PN		**Pb**	**09 39 28.4**	**+0.5**
DZA				*e*			09 40 04.6		
DZA	**Taraz**	**2.59**	**299**	*e*P		**Pg**	**09 39 30.1**	**-0.8**
	89nm,0.1s								
DZA				*e*S		**Sg**	**09 40 06.4**	**+2.0**
	567nm,0.4s								
DZA	**Taraz**	**2.59**	**299**	*e*Pg		**Pb**	**09 39 28.4**	**+0.5**
	baz=300								
DZA				*e*Lg		Lg	09 40 04.7		
	baz=300								
DZA	**Taraz**	**2.59**	**299**	Pg		**Pg**	**09 39 30.1**	**-0.8**
	89nm,0.1s								
DZA				Lg		Lg	09 40 06.4		
	567nm,0.4s								
KUU	**Kurty**	**2.62**	**32**	*i* PN		**Pb**	**09 39 26.9**	**-1.5**
KUU				*e*			09 40 04.1		
KUU	**Kurty**	**2.62**	**32**	*e*P		**Pb**	**09 39 27.7**	**-0.8**
	42nm,0.3s								
KUU				*e*S		**Sb**	**09 40 02.4**	**+1.6**
	374nm,0.7s								
KUU	**Kurty**	**2.62**	**32**	*i* Pg		**Pb**	**09 39 27.0**	**-1.5**
	baz=31								
KUU				*e*Lg		Lg	09 40 04.1		
	baz=31								
KUU	**Kurty**	**2.62**	**32**	Pg		**Pb**	**09 39 27.7**	**-0.8**
	42nm,0.3s								
KUU				Lg		Lg	09 40 02.4		
	374nm,0.7s								
KTBS	**Karatobe**	**2.63**	**39**	*e*P		**Pb**	**09 39 28.4**	**-0.1**
	115nm,0.5s								
KTBS				*e*S		**Sg**	**09 40 04.4**	**-1.3**
	520nm,0.6s								
KTBS	**Karatobe**	**2.63**	**39**	Pg		**Pb**	**09 39 28.4**	**-0.1**
	115nm,0.5s								
KTBS				Lg		Lg	09 40 04.4		
	520nm,0.6s								
CHKK	**Chushkaly**	**2.88**	**40**	*e*PN		**Pn**	**09 39 30.1**	**+2.8**
CHKK				*e*			09 40 12.1		
CHKK	**Chushkaly**	**2.88**	**40**	*e*P		**Pb**	**09 39 33.2**	**+0.4**
	24nm,0.5s								
CHKK				*e*S		**Sg**	**09 40 11.8**	**-2.0**
	168nm,0.6s								
CHKK	**Chushkaly**	**2.88**	**40**	*e*Pb		**Pn**	**09 39 30.1**	**+2.8**
	baz=40								
CHKK				*e*Pg		**Pb**	**09 39 32.8**	**0.0**
	baz=40								
CHKK				*e*Lg		Lg	09 40 12.2		
	baz=40								
CHKK	**Chushkaly**	**2.88**	**40**	Pg		**Pb**	**09 39 33.2**	**+0.4**
	24nm,0.5s								
CHKK				Lg		Lg	09 40 11.8		
	168nm,0.6s								
PRZ	**Przheval'sk**	**3.07**	**74**	*e*PN		**Pn**	**09 39 30.4**	**+0.3**
PRZ				*e*S		**Sn**	**09 40 07.2**	**+0.2**
PRZ	**Przheval'sk**	**3.07**	**74**	⇑*e*P		**Pn**	**09 39 30.4**	**+0.3**
	baz=72								
PRZ				⇑*e*S		**Sn**	**09 40 07.2**	**+0.2**
	baz=72								
BTK	**Batken**	**3.17**	**240**	*e*PN		**Pn**	**09 39 31.8**	**+0.3**
BTK				*e*S		**Sn**	**09 40 09.5**	**0.0**
BTK	**Batken**	**3.17**	**240**	⇑*i*P		**Pn**	**09 39 31.8**	**+0.3**
	baz=42								
BTK				⇑*e*S		**Sn**	**09 40 09.5**	**0.0**
	baz=42								
KK31	**Karatay Array**	**3.22**	**297**	PN		**Pb**	**09 39 38.6**	**0.0**
KK31				S		**Sg**	**09 40 21.5**	**-3.3**
KK31	**Karatay Array**	**3.22**	**297**	⇓Pg		**Pb**	**09 39 38.6**	**0.0**
	16nm,0.5s,baz=107,slow=14,SNR=166								
KK31				⇑Lg		Lg	09 40 22.8		
	39nm,0.5s,baz=120,slow=28,SNR=9.1								
KKAR	**Karatay Array**	**3.22**	**297**	⇓*e*PN		**Pn**	**09 39 33.3**	**+1.2**
KKAR				*e*S		**Sn**	**09 40 11.7**	**+1.2**
KKAR	**Karatay Array**	**3.22**	**297**	⇓*e*P		**Pn**	**09 39 33.3**	**+1.2**
	baz=98								
KKAR				⇓*e*S		**Sn**	**09 40 11.7**	**+1.2**
	baz=98								
SATY	**Saty**	**3.26**	**64**	*e*PN		**Pb**	**09 39 37.9**	**-1.5**
SATY				*e*			09 40 22.7		
SATY	**Saty**	**3.26**	**64**	*e*P		**Pb**	**09 39 39.1**	**-0.2**
	26nm,0.4s								
SATY				*e*S		**Sb**	**09 40 22.1**	**+2.9**
	159nm,0.9s								
SATY	**Saty**	**3.26**	**64**	*e*Pb		**Pb**	**09 39 37.9**	**-1.5**
	baz=63								
SATY				*e*Pg		**Pg**	**09 39 39.8**	**-4.0**
	baz=63								
SATY				*e*Lg		Lg	09 40 22.8		
	baz=63								
SATY	**Saty**	**3.26**	**64**	Pg		**Pb**	**09 39 39.1**	**-0.2**
	26nm,0.4s								
SATY				Lg		Lg	09 40 22.1		
	159nm,0.9s								
IUG	**luzhnay**	**3.31**	**280**	*e*PN		**Pn**	**09 39 35.9**	**+2.6**
IUG				*e*			09 39 41.4		
IUG				*e*			09 40 26.6		
IUG	**luzhnay**	**3.31**	**280**	*e*P		**Pb**	**09 39 41.6**	**+1.4**
	2μm,0.7s								
IUG				*e*S		**Sg**	**09 40 26.4**	**-1.1**
	263nm,0.5s								
IUG	**luzhnay**	**3.31**	**280**	*e*Pb		**Pn**	**09 39 36.0**	**+2.6**
	baz=281								
IUG				*e*Pg		**Pb**	**09 39 41.5**	**+1.4**
	baz=281								
IUG				*e*Lg		Lg	09 40 26.6		
	baz=281								
IUG	**luzhnay**	**3.31**	**280**	Pg		**Pb**	**09 39 41.6**	**+1.4**
	2μm,0.7s								
IUG				Lg		Lg	09 40 26.4		
	263nm,0.5s								
KURS	**Kuram**	**3.31**	**56**	*e*P		**Pb**	**09 39 39.8**	**-0.3**
	21nm,0.5s								
KURS				*e*S		**Sb**	**09 40 23.9**	**+3.5**
	79nm,0.6s								
KURS	**Kuram**	**3.31**	**56**	Pg		**Pb**	**09 39 39.8**	**-0.3**
	21nm,0.5s								
KURS				Lg		Lg	09 40 23.9		
	79nm,0.6s								
BTLS	**Baital**	**3.37**	**356**	*e*PN		**Pb**	**09 39 38.1**	**-3.0**
BTLS				*e*			09 39 41.8		
BTLS				*e*			09 40 26.6		
BTLS	**Baital**	**3.37**	**356**	*e*Pb		**Pb**	**09 39 38.1**	**-3.0**
	baz=356								
BTLS				*e*Pg		**Pg**	**09 39 41.8**	**-4.0**
	baz=356								
BTLS				*e*Lg		Lg	09 40 26.6		
	baz=356								
ARXS	**Arharly**	**3.56**	**44**	*e*P		**Pb**	**09 39 44.7**	**+0.2**
	20nm,0.3s								
ARXS				*e*S		**Sb**	**09 40 31.4**	**+3.7**
	181nm,0.5s								
ARXS	**Arharly**	**3.56**	**44**	Pg		**Pb**	**09 39 44.7**	**+0.2**
	20nm,0.3s								
ARXS				Lg		Lg	09 40 31.4		
	181nm,0.5s								
UZB	**Uzynbulak**	**3.71**	**65**	*e*PN		**Pb**	**09 39 45.9**	**-1.2**
UZB				*e*			09 40 36.7		
UZB	**Uzynbulak**	**3.71**	**65**	*e*P		**Pb**	**09 39 46.2**	**-0.9**
	16nm,0.3s								
UZB				*e*S		**Sb**	**09 40 34.1**	**+1.9**
	75nm,0.7s								
UZB	**Uzynbulak**	**3.71**	**65**	*e*Pb		**Pb**	**09 39 45.9**	**-1.2**
	baz=64								
UZB				*e*Lg		Lg	09 40 36.7		
	baz=64								
UZB	**Uzynbulak**	**3.71**	**65**	Pg		**Pb**	**09 39 46.2**	**-0.9**
	16nm,0.3s								
UZB				Lg		Lg	09 40 34.1		
	75nm,0.7s								
SHLS	**Shalkode**	**4.01**	**67**	*e*PN		**Pg**	**09 39 59.1**	**+0.9**
SHLS				*e*			09 40 56.0		
SHLS	**Shalkode**	**4.01**	**67**	*e*Pg		**Pg**	**09 39 59.2**	**+0.9**
	baz=67								
SHLS				*e*Lg		Lg	09 40 56.1		
	baz=67								
PDGK	**Podgornoye**	**4.09**	**65**	PN		**Pb**	**09 39 54.3**	**+0.7**
PDGK	**Podgornoye**	**4.09**	**65**	Pg		**Pb**	**09 39 53.0**	**-0.6**
	3.5nm,0.4s								
PDGK				Lg		Lg	09 40 45.8		
	36nm,0.6s								
PDGK	**Podgornoye**	**4.09**	**65**	⇑Pg		**Pb**	**09 39 54.4**	**+0.7**
	12nm,0.6s								
PDGK				⇓Lg		Lg	09 40 49.1		
	60nm,0.6s								
GAR	**Garm**	**4.12**	**231**	⇓*e*P		**Pn**	**09 39 45.0**	**+0.5**
	baz=32								
GAR				⇓*e*S		**Sn**	**09 40 32.1**	**-0.8**
	baz=32								
DJR	**Jarkent**	**4.75**	**54**	*e*P		**Pb**	**09 40 05.8**	**+1.1**
	4.7nm,0.3s								
DJR				*e*S		**Sb**	**09 41 07.6**	**+5.7**
	35nm,0.7s								
DJR	**Jarkent**	**4.75**	**54**	Pg		**Pb**	**09 40 05.8**	**+1.1**
	4.7nm,0.3s								
DJR				Lg		Lg	09 41 07.6		
	35nm,0.7s								
OTUK	**Ortayu**	**6.72**	**348**	⇓Lg		Lg	09 42 16.3		
	9.4nm,0.6s								
BRZS	**Berezniki**	**8.39**	**352**	*i* Pn		**Pn**	**09 40 40.5**	**-2.5**
	baz=352								
KURBB	**Kurchatov Arra**	**9.38**	**16**	⇑Lg		Lg	09 43 39.7		
	14nm,0.5s								
KURK	**Kurchatov**	**9.49**	**16**	*i* P		**Pn**	**09 40 57.5**	**-0.5**
BRVK	**Borovoye**	**11.72**	**348**	*i* P		**Pn**	**09 41 27.8**	**-0.7**
ARU	**Arti**	**17.98**	**331**	*i* P		**P**	**09 42 52.3**	**+0.6**
ARU				pmax		pmax			
	comp=Z,6.0nm,1.3s								
BELG	**Belogornoye**	**21.05**	**310**	*i* P		**P**	**09 43 24.2**	**-1.0**
BELG				pmax		pmax			
	comp=Z,1.0nm,0.9s								

GCG ***04*** *09:41:32.0±0.4, 14°.40N×93°.11W, h6km±999km, MD4.1*
IDC ***04*** *09:41:35.0±7.6, 14°.95N×92°.69W, h0km, mb3.5/4, mbtmp3.4/6, ML3.5/2, Error ellipse: s-maj=174.4km s-min=67.0km az=20.0*
MEX ***04*** *09:41:34.8±0.9, 14°.23N×93°.09W, h20km±88km, MD4.0*
ISC 04 09:41:32.0±2.5, 14°.39N±0°.09×93°.09W±0°.06, h2km±13km, n19, σ1°902/30, mb3.6/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THIG		**0.96**	**57**	*e*P		**Pg**	**09 41 51.3**	**+1.0**
THIG				*e*S		**Sg**	**09 42 02.7**	**0.0**
PATR	**El Naranjo**	**1.11**	**49**	*e*P		**Pg**	**09 41 53.2**	**0.0**
PATR				*e*S		**Sg**	**09 42 06.8**	**-0.8**
CHUJ	**Union Juarez**	**1.19**	**53**	*e*P		**Pb**	**09 41 54.4**	**-0.9**
CHUJ				*e*S		**Sg**	**09 42 10.0**	**-0.1**
PAVE	**Pavencul**	**1.20**	**48**	*e*P		**Pb**	**09 41 54.8**	**-0.7**
PAVE				*e*S		**Sg**	**09 42 10.2**	**-0.3**
STG3	**Santiaguito 3,**	**1.51**	**77**	*e*P		**Pn**	**09 41 59.7**	**-0.5**
CARR	**Arriaga**	**2.01**	**337**	*e*P		**Pn**	**09 42 06.6**	**-0.4**
CARR				*e*S		**Sn**	**09 42 32.1**	**-0.6**
CCIG	**Comitan**	**2.10**	**26**	*e*P		**Pb**	**09 42 10.5**	**-0.4**
CCIG				*e*S		**Sn**	**09 42 35.4**	**+0.3**
FUG	**Fuego 3**	**2.18**	**88**	*e*P		**Pn**	**09 42 09.4**	**-0.1**
FUG				*e*S		**Sn**	**09 42 35.1**	**-2.0**
TGIG		**2.38**	**359**	*e*P		**Pn**	**09 42 13.2**	**+1.1**
TGIG				*e*S		**Sn**	**09 42 42.2**	**+0.4**
PCG	**Pacaya**	**2.41**	**90**	*e*P		**Pn**	**09 42 12.6**	**0.0**
PCG				*e*S		**Sn**	**09 42 42.1**	**-0.8**
NBG	**Las Nubes**	**2.67**	**85**	*e*P		**Pn**	**09 42 17.8**	**+1.6**
CMIG	**Matias Romero**	**3.19**	**328**	Pn		**Pn**	**09 42 23.4**	**+0.2**
	9.5nm,0.3s,baz=164,slow=13,SNR=68								
CMIG				Lg		Lg	09 43 01.9		
	14nm,0.3s,baz=49,slow=19,SNR=9.6								
	22nm,0.3s								
CMIG	**Matias Romero**	**3.19**	**328**	*e*P		**Pn**	**09 42 23.3**	**+0.1**
CMIG				*e*S		**Sn**	**09 42 59.2**	**-2.7**
NEUV	**Arroyo Zacate**	**4.21**	**322**	*e*P		**Pn**	**09 42 36.6**	**-0.6**
NEUV				*e*S		**Sn**	**09 43 26.6**	**-0.3**
TXAR	**Lajitas Array**	**17.80**	**328**	P		**Pn**	**09 45 40.0**	**-1.1**
	baz=148,slow=14,SNR=3.8								
	0.3nm,0.9s								
PDAR	**Pinedale Array**	**31.64**	**337**	P		**P**	**09 47 58.1**	**+1.4**
	0.2nm,0.5s,baz=129,slow=8.3,SNR=4.6								
	0.2nm,0.5s								
NVAR	**Mina Array Bea**	**32.71**	**322**	P		**P**	**09 48 08.1**	**+1.9**
	0.9nm,0.8s,baz=138,slow=8.2,SNR=8.1								
	0.9nm,0.8s								
YKA	**Yellowknife Ar**	**50.41**	**347**	P		**P**	**09 50 30.1**	**-0.4**
	0.4nm,0.4s,baz=151,slow=7.2,SNR=9.7								
	0.4nm,0.4s								
ILAR	**Eielson Array**	**62.07**	**337**	P		**P**	**09 51 54.3**	**+0.5**
	0.2nm,0.6s,baz=122,slow=6.5,SNR=2.9								
	0.2nm,0.6s								

HEL ***04*** *09:59:23.3±0.3, 64°.79N×30°.66E, h0km, ML2.0, Explosion*
BER ***04*** *09:59:23.4±0.5, 64°.77N×31°.44E, h0km, ML1.4, Suspected explosion*
IDC ***04*** *09:59:25.8±2.0, 64°.83N×29°.88E, h0km, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=34.2km s-min=8.2km az=98.0*
UPP ***04*** *09:59:30.6±3.0, 64°.74N×29°.31E, h0km, ML1.8, Suspected explosion*
ISC 04 09:59:23.5±1.0, 64°.83N±0°.03×30°.44E±0°.05, h0km, n41, σ1°964/61, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.65**	**200**	PG		**Pg**	**09 59 35.0**	**-1.0**
	baz=27							
KU6	**Riekki**	**1.22**	**349**	PG		**Pg**	**09 59 46.2**	**-0.7**
	baz=162							
KU6				MSG			10 00 01.9	
	comp=Z,8.6nm,0.2s							
KU6				SB		**Sg**	**10 00 03.0**	**+0.3**
MSF	**Maaselka**	**1.23**	**332**	PG		**Pg**	**09 59 45.9**	**-1.2**
MSF				SG		**Sg**	**10 00 04.1**	**+1.0**
OLKF	**Oulanka, Finla**	**1.56**	**344**	PG		**Pn**	**09 59 52.2**	**-0.2**
OLKF				SN		**Sg**	**10 00 14.4**	**+0.8**
OUL	**Oulu**	**1.95**	**280**	PG		**Pn**	**09 59 59.6**	**+1.8**
	baz=98							
OUL				SG		**Sb**	**10 00 26.1**	**+1.4**
OBF4	**Vikkela, Lumij**	**2.28**	**272**	PB		**Pn**	**10 00 04.5**	**+2.1**
OUF	**Merijarvi**	**2.50**	**262**	PN		**Pn**	**10 00 07.0**	**+1.6**
OUF				MSG			10 00 39.7	
	comp=Z,13nm,0.2s							
OUF				SB		**Sb**	**10 00 42.1**	**+1.5**
RNF	**Rovaniemi**	**2.56**	**316**	PN		**Pn**	**10 00 07.3**	**+1.1**
	baz=130							
RNF				SB		**Sb**	**10 00 43.3**	**+1.2**
OBF0	**Syolatti, Pyha**	**2.69**	**266**	PN		**Pn**	**10 00 09.6**	**+1.6**
	baz=81							
TOF	**Tornio**	**2.84**	**299**	PB		**Pn**	**10 00 12.3**	**+2.2**
TOF				MSG			10 00 49.8	
	comp=Z,6.4nm,0.2s							
TOF				SG		**Sb**	**10 00 53.1**	**+2.7**
VRF	**Varrio**	**2.95**	**354**	PB		**Pn**	**10 00 12.5**	**+0.9**
VRF				MSG			10 00 51.4	
	comp=Z,3.1nm,0.2s							
VRF				SG		**Sb**	**10 00 54.6**	**+1.1**
OBF8	**Ulkokalla**	**3.06**	**264**	PN		**Pn**	**10 00 14.2**	**+1.2**
SGF	**Sodankyl**	**3.07**	**331**	PN		**Pn**	**10 00 14.1**	**+1.0**
SGF				SB		**Sb**	**10 00 56.6**	**-0.3**
KALU	**Kalix**	**3.14**	**292**	PN		**Pn**	**10 00 15.9**	**+1.7**
KAF	**Kangasniemi**	**3.30**	**216**	PB		**Pn**	**10 00 18.2**	**+1.8**
KAF				SG		**Sb**	**10 01 05.7**	**+2.3**
RUFX	**Ruokolahti**	**3.48**	**192**	PN		**Pn**	**10 00 19.2**	**+0.3**
LVZ	**Lovozero**	**3.52**	**27**	PN		**Pn**	**10 00 19.2**	**-0.2**
KEF	**Keuruu**	**3.66**	**226**	PB		**Pn**	**10 00 24.1**	**+2.8**
PAJU	**Pajala**	**3.72**	**310**	PN		**Pn**	**10 00 22.9**	**+0.7**
PAJU				SG		**Sb**	**10 01 20.6**	**+4.9**
SJUU	**Sjulsmark**	**3.79**	**284**	P		**Pn**	**10 00 23.8**	**+0.7**
SJUU				S		**Sn**	**10 01 04.3**	**-3.9**
VAF	**Ylistaro**	**3.87**	**246**	PN		**Pn**	**10 00 26.1**	**+1.9**
BURU	**Burvik**	**3.90**	**270**	P		**Pn**	**10 00 24.7**	**+0.2**
BURU	**Burvik**	**3.90**	**270**	PN		**Pn**	**10 00 25.5**	**+0.9**
	baz=79							
BURU				SG		**Sg**	**10 01 28.1**	**-0.5**
FIA0	**FINESS Array S**	**3.93**	**212**	PN		**Pn**	**10 00 25.3**	**+0.2**
FIA0				SG		**Sb**	**10 01 24.2**	**+2.5**
FINES	**FINESS Array B**	**3.93**	**212**	Pn		**Pn**	**10 00 25.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=9.3							
FINES				Pg		**Pb**	**10 00 33.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=26,slow=15,SNR=2.1							
FINES				Sn		**Sn**	**10 01 11.4**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=30,slow=21,SNR=1.9							
FINES				Lg		Lg	10 01 23.9	
	comp=Z,1.2nm,0.3s,baz=28,slow=27,SNR=12							
	comp=Z,2.3nm,0.9s							
HARU	**Harads**	**4.16**	**293**	P		**Pn**	**10 00 29.4**	**+1.2**
ODEU	**Stanfors**	**4.21**	**269**	P		**Pn**	**10 00 28.7**	**-0.2**
UMAU	**Umeaa**	**4.35**	**262**	P		**Pn**	**10 00 30.2**	**-0.5**
UMAU	**Umeaa**	**4.35**	**262**	PN		**Pn**	**10 00 30.4**	**-0.3**
UMAU				SG		**Sg**	**10 01 41.3**	**-1.8**
HEF	**Hetta**	**4.49**	**326**	*e*P		**Pn**	**10 00 34.9**	**+2.1**
HEF	**Hetta**	**4.49**	**326**	PN		**Pn**	**10 00 33.8**	**+1.1**
HEF				SG		**Sg**	**10 01 44.2**	**-3.4**
LILU	**Lilltraesk**	**4.51**	**281**	P		**Pn**	**10 00 34.3**	**+1.4**
SVAU	**Svanoeiden**	**4.68**	**271**	P		**Pn**	**10 00 35.7**	**+0.4**
ARA0	**ARCESS Array S**	**5.10**	**340**	*e*P		**Pn**	**10 00 41.4**	**+0.3**
ARA0				*e*S		**Sn**	**10 01 39.6**	**-1.0**
ARA0				IAML			10 01 43.0	
	comp=Z,1.1nm,0.2s							
ARCES	**ARCESS Array B**	**5.10**	**340**	Pn		**Pn**	**10 00 41.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=155,slow=13,SNR=58							
ARCES				Sn		**Sn**	**10 01 39.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=158,slow=24,SNR=4.6							
ARCES				Lg		Lg	10 01 59.9	
	comp=Z,0.4nm,0.3s,baz=155,slow=33,SNR=8.9							
	comp=Z,1.0nm,0.2s							
KEV	**Kevo**	**5.12**	**347**	*e*P		**Pn**	**10 00 41.6**	**+0.3**
BREU	**Bredtraesk**	**5.24**	**265**	P		**Pn**	**10 00 43.0**	**+0.1**
HEMU	**Hemsoen**	**5.91**	**254**	P		**Pn**	**10 00 51.9**	**-0.3**
SOLU	**Sollefteaa**	**6.00**	**261**	P		**Pn**	**10 00 52.7**	**-0.7**
JETT	**Jettan, Norway**	**6.13**	**325**	*e*P		**Pn**	**10 00 56.6**	**+1.3**
NOA	**NORSAR Array B**	**9.53**	**255**	Pn		**Pn**	**10 01 37.9**	**-4.0**
	baz=58,slow=12,SNR=1.5							
	comp=Z,0.5nm,0.8s							

REN ***04*** *10:13:52.3±1.7, 40°.14N±0°.02×120°.21W±0°.03, h8km±7km, Error ellipse: s-maj=3.5km s-min=2.7km az=216.0*
NCEDC ***04*** *10:13:52.2±1.9, 40°.15N±0°.02×120°.21W±0°.03, h5km±7km, ML3.3/17, ML3.2/77(NEIC), Mwr3.3(REN), Error ellipse: s-maj=4.1km s-min=2.7km az=224.0*
NEIC ***04*** *10:13:54, 40°.14N×120°.21W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-0.03; $M_{\theta\theta}$-8.36; $M_{\phi\phi}$8.38; $M_{r\theta}$0.69; $M_{\theta\phi}$-1.38; $M_{\phi r}$3.58; Fault plane solution: M_{ϕ}9.23000×10^{13} NP1:ϕ_s42.00000°, δ81.00000°, λ19.00000°. NP2:ϕ_s309.00000°, δ71.00000°, λ171.00000°. Principal axes: T 9.7629, Plg20.0000°, Azm266.0000°; N -1.1708, Plg69.0000°, Azm65.0000°; P -8.5921, Plg7.0000°, Azm174.0000°;*
NEIC 04 10:13:52.3±1.8, 40°.15N±0°.02×120°.23W±0°.03, h8km±7km
Error ellipse: s-maj=4.0km s-min=2.7km az=224.0, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BMRR	**Black Mountain**	**0.06**	**233**			Pg	10 13 55.0	+0.6
BEKR	**Beckworth**	**0.30**	**200**			Pg	10 13 58.3	+0.1
BEKR						Sg	10 14 02.9	+0.7
BEKR	**Beckworth**	**0.30**	**200**	IAML			10 14 02.9	
	comp=N,11μm,0.3s							
BEKR				IAML			10 14 03.0	
	comp=E,10μm,0.4s							
WVA	**Winnemucca Val**	**0.37**	**123**			Pg	10 13 59.4	-0.2
WVA						Sg	10 14 04.7	+0.3
LOY	**Loyalton**	**0.49**	**181**			Pg	10 14 01.6	-0.2
BABR	**Babbit Peak**	**0.55**	**170**			Pg	10 14 02.9	-0.1
PEAR	**Peavine Mounta**	**0.57**	**159**			Pg	10 14 03.4	-

LGMM	**Garner Mountai**	**1.90**	**320**		Pb	10 14 26.3	-1.0
NDHM	**Dunnigan Hills**	**1.90**	**224**		Pb	10 14 26.5	-0.7
GVV	**Valley View**	**1.92**	**260**		Pn	10 14 24.7	-0.8
KVN	**Kaiserville**	**1.97**	**123**		Pn	10 14 25.4	-0.8
KVN	**Kaiserville**	**1.97**	**123**	IAML		10 14 55.6	
	comp=N,181nm,0.5s						
KVN				IAML		10 14 56.1	
	comp=E,312nm,0.5s						
GASB	**Alder Springs**	**1.98**	**256**		Pn	10 14 26.1	-0.2
RYN	**Ryan**	**2.01**	**138**		Pn	10 14 26.1	-0.7
GTSM	**Trough Springs**	**2.01**	**246**		Pn	10 14 27.3	+0.6
GBMM	**Baldy Mountain**	**2.02**	**241**		Pn	10 14 27.5	+0.7
LBPM	**Beegum Peak**	**2.04**	**276**		Pn	10 14 26.6	-0.5
LKVW	**Lakeview**	**2.08**	**357**		Pn	10 14 28.0	+0.3
LBKM	**Bonanza King**	**2.08**	**298**		Pn	10 14 28.4	+0.7
CMB	**Columbia Colle**	**2.11**	**183**		Pn	10 14 28.2	+0.1
CMB	**Columbia Colle**	**2.11**	**183**	IAML		10 14 58.8	
	comp=E,152nm,0.6s						
CMB				IAML		10 15 00.2	
	comp=N,128nm,0.3s						
LHEM	**Herd Peak**	**2.12**	**315**		Pb	10 14 30.0	-1.1
NBPM	**Berryessa Peak**	**2.12**	**227**		Pn	10 14 29.2	+1.1
LGPM	**Granite Peak**	**2.13**	**292**		Pn	10 14 29.7	+1.4
MNRC	**McLaughlin Min**	**2.13**	**234**		Pn	10 14 28.8	+0.5
MCUB	**Copperopolis B**	**2.19**	**188**		Pn	10 14 29.4	+0.4
LUL	**Lundy Lake**	**2.24**	**158**		Pn	10 14 30.8	+0.8
NV09	**Mina Array Sit**	**2.25**	**139**		Pn	10 14 29.8	-0.3
NVAR	**Mina Array Bea**	**2.27**	**138**		Pn	10 14 30.3	-0.1
NV08	**Mina Array Sit**	**2.28**	**139**		Pn	10 14 30.2	-0.3
BMN	**Battle Mountai**	**2.32**	**82**		Pn	10 14 29.0	-2.0
BMN	**Battle Mountai**	**2.32**	**82**	IAML		10 15 07.5	
	comp=N,112nm,0.7s						
LHV	**Little Huntoon**	**2.32**	**144**		Pn	10 14 30.9	+0.1
LHV	**Little Huntoon**	**2.32**	**144**	IAML		10 15 07.7	
	comp=E,243nm,0.6s						
NAPC	**Atlas Peak**	**2.32**	**223**		Pn	10 14 32.0	+1.2
KHBM	**Hayfork Bally**	**2.34**	**284**		Pn	10 14 32.4	+1.1
NV11	**Mina Array Sit**	**2.35**	**136**		Pn	10 14 31.3	-0.1
NV11	**Mina Array Sit**	**2.35**	**136**	IAML		10 15 07.4	
	comp=E,182nm,0.8s						
NV11				IAML		10 15 09.3	
	comp=N,123nm,0.7s						
B040	**Montague**	**2.37**	**316**		Pb	10 14 33.7	-1.5
NHSM	**Mount Saint He**	**2.37**	**232**		Pn	10 14 33.0	+1.3
GDXM	**Geysers**	**2.40**	**237**	Pn	Pn	10 14 32.2	+0.2
GHLM	**Highland Sprin**	**2.42**	**244**		Pn	10 14 33.5	+1.1
GAXM	**Alexander Vall**	**2.43**	**235**		Pn	10 14 32.3	0.0
YBH	**Yreka Blue Hor**	**2.46**	**311**	Pn	Pn	10 14 33.4	+0.5
HOPS	**Hopland Field**	**2.48**	**243**	Pn	Pn	10 14 34.4	+1.3
CVS	**Carmenet Viney**	**2.50**	**225**		Pn	10 14 33.5	+0.2
KIPM	**Iron Peak**	**2.52**	**263**		Pn	10 14 34.1	+0.3
GWRM	**Wonder Ranch**	**2.55**	**249**		Pn	10 14 35.8	+1.7
WVOR	**Wild Horse Val**	**2.58**	**27**		Pn	10 14 34.3	-0.2
L04D	**Klamath Falls**	**2.60**	**324**	Pn	Pn	10 14 36.5	+1.7
L04D				IAML		10 15 14.9	
	comp=N,78nm,1.2s						
L04D				IAML		10 15 18.9	
	comp=E,189nm,1.1s						
MDCM	**Deadman Creek**	**2.60**	**159**		Pn	10 14 36.1	+1.1
KCPM	**Cahto Peak**	**2.62**	**261**	Pn	Pn	10 14 35.4	+0.3
KCPM				IAML		10 15 18.3	
	comp=E,80nm,3.4s						
KCPM				IAML		10 15 23.0	
	comp=N,69nm,3.8s						
K05A	**Summer Lake**	**2.63**	**349**	Pn	Pb	10 14 38.4	-1.4
K05A				IAML		10 15 24.1	
	comp=N,70nm,1.2s						
MDYM	**Dry Creek**	**2.66**	**159**		Pn	10 14 36.8	+1.0
MDPB	**Devils Postpil**	**2.67**	**160**		Pn	10 14 36.7	+0.9
MDPB	**Devils Postpil**	**2.67**	**160**	IAML		10 15 18.2	
	comp=N,60nm,0.5s						
KMRM	**Mail Ridge**	**2.67**	**273**	Pn	Pn	10 14 36.0	+0.2
KMRM				IAML		10 15 28.8	
	comp=E,63nm,1.9s						
BENR	**Benton**	**2.75**	**151**		Pn	10 14 37.9	+0.9
KHMM	**Horse Mountain**	**2.77**	**286**	Pn	Pn	10 14 38.4	+1.2
KHMM				IAML		10 15 56.9	
	comp=N,55nm,3.0s						
ORC	**Owens River**	**2.79**	**153**		Pn	10 14 38.3	+0.7
MCCM	**Marconi Confer**	**2.87**	**227**	Pn	Pn	10 14 39.3	+0.9
MCCM				IAML		10 15 19.7	
	comp=E,82nm,0.9s						
MCCM				IAML		10 15 52.2	
	comp=N,70nm,3.0s						
MLNR	**Milner Canyon**	**2.94**	**149**		Pn	10 14 40.5	+0.9
TPH	**Tonopah**	**3.12**	**131**		Pn	10 14 42.5	+0.5
KSXB	**Camp Six Broad**	**3.23**	**303**	Pn	Pn	10 14 43.8	+0.3
DSP	**Deep Springs**	**3.29**	**147**		Pn	10 14 45.0	+0.9
J08A	**Circle Bar Ran**	**3.47**	**22**		Pn	10 14 47.0	+0.3
LCH	**Last Change Ra**	**3.54**	**144**		Pn	10 14 48.5	+0.7
PINE	**Pine Mountain**	**3.68**	**352**	Pn	Pn	10 14 51.5	+1.7
ELK	**Elko**	**3.85**	**79**		Pn	10 14 51.1	-1.0
GRAC	**Grapevine Rang**	**3.86**	**144**		Pn	10 14 53.3	+1.2
GRAC				IAML		10 16 03.2	
	comp=E,28nm,0.9s						
GRAC				IAML		10 16 12.5	
	comp=N,32nm,1.7s						
R11A	**Troy Canyon, C**	**4.03**	**115**		Pn	10 14 54.7	+0.2
SGV	**South Grapevin**	**4.03**	**141**		Pn	10 14 55.1	+0.6
S11A	**Rachel**	**4.29**	**124**		Pn	10 14 58.0	-0.2
Q12A	**Willow Creek R**	**4.31**	**103**		Pn	10 14 59.5	+1.0
TPNV	**Topopah Spring**	**4.46**	**134**		Pn	10 15 01.4	+0.9
TPNV	**Topopah Spring**	**4.46**	**134**	IAML		10 16 17.6	
	comp=N,30nm,0.8s						
TPNV				IAML		10 16 22.1	
	comp=N,32nm,1.3s						
MFID	**Camas Ranch**	**4.63**	**44**	Pn	Pn	10 15 02.6	-0.2
MFID				IAML		10 16 21.0	
	comp=N,24nm,0.7s						
MFID				IAML		10 16 24.0	
	comp=N,24nm,0.6s						
ISA	**Isabella, Lake**	**4.69**	**162**	Pn	Pn	10 15 05.8	+2.4
ISA				IAML		10 16 20.1	
	comp=E,34nm,0.5s						
ISA				IAML		10 16 23.3	
	comp=N,19nm,1.0s						
SPR3	**Spring Creek 3**	**4.70**	**102**		Pn	10 15 04.9	+1.1
AMDNV	**Amargosa**	**4.82**	**139**		Pn	10 15 06.6	+1.4
GWY	**Greenwater Val**	**4.85**	**144**	Pn	Pn	10 15 05.9	+0.1
PRN	**Pahroc Range**	**4.88**	**122**		Pn	10 15 07.0	+0.8
PSUT	**Pine Spring**	**5.20**	**106**	Pn	Pn	10 15 11.0	+0.4
SHPR	**Sheep Range**	**5.39**	**131**		Pn	10 15 14.3	+1.1
DUG	**Dugway, Tooele**	**5.68**	**87**		Pn	10 15 18.0	+0.9

*ROM **04** 10:14:17.5±0.2, 38°.79N±0'.02×14°.65E±0'.02, h322^{km}±1^{km}, ML3.6/32, Error ellipse: s-maj=1.8km s-min=0.8km az=139.0*

*IDC **04** 10:14:20.2±0.7, 38°.96N×14°.55E, h335^{km}±11^{km}, mb3.2/6, mbtmp3.9/17, Error ellipse: s-maj=18.6km s-min=16.2km az=170.0*

*LDG **04** 10:14:20.2±0.1, 38°.92N×14°.59E, h300^{km}, Ml2.9/3, Error ellipse: s-maj=2.8km s-min=2.2km az=38.0*

ISC 04 10:14:18.2±0.6, **38°.86N**±0'.07×**14°.73E**±0'.05, **h320**^{km}±7^{km}, **n120**, σ1^{s}**25**/139, **mb3.5**/6, **1C-14D**, **Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IFIL	**Filicudi I Eol**	**0.33**	**204**	P	**Pn**	**10 14 59.4**	**+0.6**
IST3	**Stromboli F**	**0.40**	**99**	P	**Pn**	**10 15 00.2**	**+1.3**
IST3				AML	AML		
	comp=N,345μm,1.1s						
IST3				AML	AML		
	comp=E,276μm,1.4s						
IST3				AML	AML		
	comp=N,344μm,1.1s						
LLI	**Lipari**	**0.45**	**158**	P	**Pn**	**10 15 00.1**	**+1.0**
VPL	**Vulcano Piano**	**0.52**	**158**	P	**Pn**	**10 14 59.9**	**+0.6**
VPL				AML	AML		
	comp=N,788μm,0.8s						
VPL				AML	AML		
	comp=E,937μm,0.8s						
VPL				AML	AML		
	comp=N,788μm,0.8s						
MILZ	**Milazzo**	**0.71**	**146**	P	**Pn**	**10 14 59.9**	**+0.2**
MILZ				S	**S**	**10 15 32.0**	**-0.7**
MSFR	**San Fratello**	**0.83**	**188**	P	**Pn**	**10 15 00.7**	**+0.4**
MSFR				AML	AML		
	comp=E,45μm,1.1s						
MSFR				AML	AML		
	comp=N,54μm,1.2s						
MSFR				AML	AML		
	comp=E,45μm,1.1s						
MSRU	**Castanea**	**0.85**	**134**	⇓P	**Pn**	**10 15 00.3**	**+0.1**
MSRU				S	**S**	**10 15 32.8**	**-0.9**
MSRU				AML	AML		
	comp=E,592μm,0.4s						
MSRU				AML	AML		
	comp=N,402μm,0.4s						
MNO	**Monte Soro**	**0.93**	**182**	P	**Pn**	**10 15 01.3**	**+0.5**
MNO				AML	AML		
	comp=E,179μm,0.6s						
MNO				AML	AML		
	comp=E,179μm,0.6s						
MNO				AML	AML		
	comp=N,175μm,0.4s						
MNO				AML	AML		
	comp=N,176μm,0.4s						
JOPP	**Joppolo**	**0.94**	**105**	⇓P	**Pn**	**10 15 01.2**	**+0.7**
JOPP				S	**S**	**10 15 33.0**	**-1.2**
JOPP				AML	AML		
	comp=N,342μm,0.3s						
JOPP				AML	AML		
	comp=E,352μm,1.2s						
AIO	**Antillo**	**0.97**	**156**	P	**Pn**	**10 15 01.6**	**+0.8**
AIO				AML	AML		
	comp=N,226μm,0.8s						
AIO				AML	AML		
	comp=E,182μm,0.9s						
PLLN	**Pollina**	**0.98**	**208**	P	**Pn**	**10 15 01.0**	**+0.2**
PLLN				AML	AML		
	comp=E,212μm,0.4s						
PLLN				AML	AML		
	comp=N,352μm,1.5s						
GIB	**Gibilmanna**	**1.03**	**213**	⇓P	**Pn**	**10 15 00.8**	**-0.3**
GIB				S	**S**	**10 15 33.4**	**-1.8**
GIB				AML	AML		
	comp=E,264μm,0.5s						
GIB				AML	AML		
	comp=E,264μm,0.5s						
GIB				AML	AML		
	comp=N,210μm,1.3s						
EPZF	**Pizzo Felice**	**1.04**	**175**	P	**Pn**	**10 15 02.4**	**+1.3**
MSCL	**Scilla**	**1.04**	**127**	P	**Pn**	**10 15 01.7**	**+0.6**
MSCL				AML	AML		
	comp=E,932μm,0.8s						
MSCL				AML	AML		
	comp=N,661μm,0.6s						
CSLB	**Castelbuono**	**1.06**	**210**	P	**Pn**	**10 15 00.9**	**-0.2**
CSLB				AML	AML		
	comp=E,53μm,0.5s						
CSLB				AML	AML		
	comp=N,63μm,1.2s						
CEL	**Celeste**	**1.09**	**123**	P	**Pn**	**10 15 01.6**	**+0.3**
CEL				S	**S**	**10 15 34.4**	**-1.2**
CEL				AML	AML		
	comp=N,257μm,1.3s						
CEL				AML	AML		
	comp=E,339μm,0.5s						
CEL				AML	AML		
	comp=E,282μm,0.4s						
CEL				AML	AML		
	comp=N,256μm,1.3s						
CEL				AML	AML		
	comp=E,340μm,0.5s						
CEL				AML	AML		
	comp=N,304μm,1.3s						
PETRA	**Petralia Sopra**	**1.14**	**205**	⇓P	**Pn**	**10 15 01.8**	**+0.1**
PETRA				AML	AML		
	comp=E,201μm,0.5s						
PETRA				AML	AML		
	comp=E,202μm,0.5s						
PETRA				AML	AML		
	comp=N,240μm,0.4s						
MTTG	**Motta San Giov**	**1.14**	**138**	⇓P	**Pn**	**10 15 02.2**	**+0.7**
MTTG				S	**S**	**10 15 35.4**	**-0.6**
MTTG				AML	AML		
	comp=E,352μm,1.2s						
MTTG				AML	AML		
	comp=N,342μm,0.4s						
CET2	**Cetraro**	**1.16**	**55**	P	**Pn**	**10 15 02.7**	**+1.2**
CET2				S	**S**	**10 15 36.2**	**+0.2**
SOLUN	**Solunto**	**1.22**	**231**	⇓P	**Pn**	**10 15 01.6**	**-0.2**
SOLUN				S	**S**	**10 15 34.8**	**-1.8**
SOLUN				AML	AML		
	comp=E,124μm,1.4s						
SOLUN				AML	AML		
	comp=N,130μm,1.0s						
CAR1	**CAROLEI**	**1.22**	**71**	P	**Pn**	**10 15 02.7**	**+0.9**
CAR1				S	**S**	**10 15 35.9**	**-0.6**
CAR1				AML	AML		
	comp=N,1008μm,0.5s						
CAR1				AML	AML		
	comp=E,994μm,0.5s						
CAR1				AML	AML		
	comp=N,962μm,0.8s						
CAR1				AML	AML		
	comp=E,827μm,0.4s						
CAGR	**Agira**	**1.25**	**188**	P	**Pn**	**10 15 03.0**	**+0.9**
CAGR				AML	AML		
	comp=E,159μm,1.1s						
CAGR				AML	AML		
	comp=N,184μm,1.2s						
MPG	**Monte Pellegri**	**1.28**	**237**	⇓P	**Pn**	**10 15 02.2**	**0.0**
MPG				AML	AML		
	comp=N,210μm,0.4s						
MPG				AML	AML		
	comp=E,363μm,0.6s						
SOI	**Samo**	**1.30**	**127**	⇓P	**Pn**	**10 15 03.0**	**+0.7**
SOI				S	**S**	**10 15 36.2**	**-1.3**
SOI				AML	AML		
	comp=E,186μm,0.6s						
SOI				AML	AML		
	comp=N,213μm,0.4s						
BULG	**Bulgheria - Ca**	**1.31**	**22**	P	**Pn**	**10 15 04.0**	**+1.8**
GRI	**Girifalco**	**1.32**	**91**	P	**Pn**	**10 15 03.7**	**+1.3**
GRI				AML	AML		
	comp=N,890μm,0.4s						
GRI				AML	AML		
	comp=E,882μm,0.4s						
SPS2	**Spezzano della**	**1.32**	**70**	P	**Pn**	**10 15 03.6**	**+1.2**
SPS2				AML	AML		
	comp=E,230μm,0.4s						
SPS2				AML	AML		
	comp=N,342μm,0.4s						
ALJA	**Alia**	**1.35**	**215**	⇓P	**Pn**	**10 15 03.2**	**+0.5**
ALJA				AML	AML		
	comp=N,328μm,1.3s						
ALJA				AML	AML		
	comp=E,490μm,1.2s						
ALJA				AML	AML		
	comp=N,328μm,1.3s						
PLAC	**Placanica**	**1.40**	**107**	⇓P	**Pn**	**10 15 03.8**	**+1.0**
PLAC				S	**S**	**10 15 36.9**	**-1.5**
PLAC				AML	AML		
	comp=E,370μm,0.5s						
PLAC				AML	AML		
	comp=N,383μm,0.5s						
PLAC				AML	AML		
	comp=N,384μm,0.3s						
PLAC				AML	AML		
	comp=E,408μm,0.3s						
VAE	**Valguarnera**	**1.40**	**190**	P	**Pn**	**10 15 06.4**	**+3.4**
	comp=E,11nm,0.5s,baz=246,slow=2.0,SNR=2.0						
VAE				S	**S**	**10 15 44.6**	**+6.0**
	comp=E,19nm,0.6s,baz=246,slow=3.8,SNR=1.7						
CUC	**Castrocucco**	**1.41**	**36**	P	**Pn**	**10 15 04.2**	**+1.5**
MGR	**Morigerati**	**1.42**	**26**	P	**Pn**	**10 15 04.5**	**+1.7**
CORL	**Corleone**	**1.48**	**230**	P	**Pn**	**10 15 03.3**	**-0.1**
CELI	**Celico**	**1.48**	**68**	P	**Pn**	**10 15 05.3**	**+1.9**
CELI				S	**S**	**10 15 40.0**	**+0.6**
CELI				AML	AML		
	comp=N,1048μm,0.5s						
CELI				AML	AML		
	comp=E,570μm,1.3s						
MCT	**Mte Cammarata**	**1.50**	**215**	P	**Pn**	**10 15 04.4**	**+0.8**
MCT				AML	AML		
	comp=E,216μm,0.9s						
MCT				AML	AML		
	comp=N,272μm,0.6s						
MCT				AML	AML		
	comp=N,272μm,0.6s						
MCT				AML	AML		
	comp=E,217μm,0.9s						
HLNI	**Lentini**	**1.52**	**176**	P	**Pn**	**10 15 03.5**	**0.0**
CMPR	**Campora**	**1.52**	**17**	P	**Pn**	**10 15 05.2**	**+1.7**
SERS	**Sersale**	**1.54**	**83**	⇓P	**Pn**	**10 15 05.2**	**+1.5**
SERS				S	**S**	**10 15 39.6**	**-0.4**
SERS				AML	AML		
	comp=E,456μm,0.4s						
SERS				AML	AML		
	comp=N,591μm,0.5s						
SIRI	**Monte Sirino -**	**1.58**	**33**	P	**Pn**	**10 15 05.3**	**+1.4**
MTSN	**Montesano sull**	**1.61**	**29**	P	**Pn**	**10 15 05.6**	**+1.6**
TIP	**Timpagrande**	**1.61**	**78**	⇓P	**Pn**	**10 15 05.8**	**+1.7**
TIP				S	**S**	**10 15 40.2**	**-0.6**
TIP				AML	AML		
	comp=N,248μm,0.9s						
TIP				AML	AML		
	comp=E,428μm,0.7s						
TIP				AML	AML		
	comp=E,358μm,0.6s						
TIP				AML	AML		
	comp=N,318μm,0.9s						
RAFF	**Raffo Rosso**	**1.66**	**190**	P	**Pn**	**10 15 04.9**	**+0.4**
RAFF				AML	AML		
	comp=E,97μm,1.2s						
RAFF				AML	AML		
	comp=E,98μm,1.2s						
RAFF				AML	AML		
	comp=N,96μm,1.2s						
MCEL	**Monticello**	**1.68**	**29**	P	**Pn**	**10 15 07.1**	**+2.6**
SCHR	**S. Chirico Rap**	**1.69**	**37**	P	**Pn**	**10 15 06.9**	**+2.3**
SSY	**Sortino**	**1.73**	**171**	P	**Pn**	**10 15 05.0**	**+0.1**
SSY				AML	AML		
	comp=E,93μm,0.4s						
SSY				AML	AML		
	comp=N,152μm,0.5s						
PIPA	**Pietrapaola**	**1.73**	**68**	P	**Pn**	**10 15 06.7**	**+1.8**
PIPA				S	**S**	**10 15 42.9**	**+0.8**
PIPA				AML	AML		
	comp=N,400μm,0.9s						
PIPA				AML	AML		
	comp=N,408μm,1.1s						
PIPA				AML	AML		
	comp=E,520μm,1.0s						
PIPA				AML	AML		
	comp=E,502μm,0.6s						
MEU	**Monte Lauro**	**1.77**	**175**	P	**Pn**	**10 15 05.8**	**+0.5**
MEU				AML	AML		
	comp=N,140μm,0.4s						
MEU				AML	AML		
	comp=E,130μm,0.4s						
LADO	**San Nicola del**	**1.80**	**76**	P	**Pn**	**10 15 06.8**	**+1.5**
LADO				S	**S**	**10 15 43.1**	**+0.2**
FAVR	**Favara**	**1.80**	**208**	P	**Pn**	**10 15 06.2**	**+0.8**
FAVR				AML	AML		
	comp=N,138μm,1.3s						
FAVR				AML	AML		
	comp=E,148μm,1.1s						
FAVR				AML	AML		
	comp=N,131μm,0.8s						
CLTA	**Licata**	**1.81**	**200**	⇓P	**Pn**	**10 15 06.1**	**+0.6**
CLTA				AML	AML		
	comp=N,371μm,1.4s						
CLTA				AML	AML		
	comp=E,282μm,0.8s						
MMGO	**Monte Magaggia**	**1.83**	**230**	⇑P	**Pn**	**10 15 05.4**	**-0.2**
HMDC	**Modica**	**1.90**	**179**	⇓P	**Pn**	**10 15 07.1**	**+0.9**
HMDC				AML	AML		
	comp=E,137μm,0.6s						
HMDC				AML	AML		
	comp=N,95μm,1.3s						
HAVL	**Avola**	**1.92**	**171**	P	**Pn**	**10 15 07.0**	**+0.6**
VSL	**Villasalto**	**4.21**	**280**	P	**Pn**	**10 15 28.3**	**+0.6**
CGL	**Cagliari Serpe**	**4.26**	**278**	P	**Pn**	**10 15 28.7**	**+0.4**
KEST	**Kesra**	**5.31**	**236**	P	**Pn**	**10 15 42.2**	**+2.0**
	comp=N,4.4nm,0.6s,baz=286,slow=4.6,SNR=5.7						
PGF	**Pioggiola**	**5.70**	**312**	*e*P	**Pn**	**10 15 45.2**	**+0.6**
SBF	**Sospel**	**7.42**	**315**	*e*P	**Pn**	**10 16 06.2**	**+1.3**
SBF				*e*Sn	**S**	**10 17 30.6**	**-0.9**
	comp=N,1.7nm,0.3s						
OBKA	**Obir**	**7.64**	**359**	*e*Pn	**Pn**	**10 16 09.0**	**+1.3**
	comp=N,5.2nm,0.5s						
LMR	**La Mourre**	**7.65**	**308**	*e*P	**Pn**	**10 16 09.5**	**+1.9**
LMR				*e*Sn	**S**	**10 17 36.6**	**+0.2**
	comp=N,0.8nm,0.2s						
MYKA	**Terra Mystica**	**7.80**	**354**	*e*Pn	**Pn**	**10 16 10.9**	**+1.4**
	comp=N,5.9nm,0.6s						
SOKA	**Soboth**	**7.81**	**2**	*e*Pn	**Pn**	**10 16 10.8**	**+1.1**
	comp=N,2.7nm,0.5s						
ABTA	**Abfaltersbach**	**8.05**	**349**	*i* Pn	**Pn**	**10 16 13.8**	**+1.4**
	comp=N,28nm,0.7s,SNR=14						
KBA	**Koelnbreinsper**	**8.28**	**353**	*e*Pn	**P**	**10 16 18.1**	**-1.5**
	comp=N,8.3nm,0.6s						
MBDF	**Montbardon**	**8.35**	**317**	*e*P	**Pn**	**10 16 18.2**	**+2.0**
MBDF	**Montbardon**	**8.35**	**317**	*e*Pn	**P**	**10 16 21.9**	**+1.5**
MBDF				*e*Sn	**S**	**10 17 52.2**	**+0.1**
	comp=N,0.4nm,0.3s						
ARSA	**Arzberg**	**8.40**	**4**	*e*Pn	**Pn**	**10 16 17.7**	**+1.0**
	comp=N,4.4nm,0.5s						
SMRF	**Simiane la Rot**	**8.57**	**310**	*e*P	**P**	**10 16 20.9**	**-2.1**
FETA	**Feichten**	**8.66**	**342**	*i* Pn	**Pn**	**10 16 21.4**	**+1.3**
	comp=N,35nm,0.9s,SNR=19						
DAVOX	**Davos/Dischmat**	**8.68**	**337**	P	**Pn**	**10 16 21.6**	**+1.4**
	comp=N,16nm,0.4s,baz=181,slow=9.9,SNR=33						
SQTA	**Sankt Quirin**	**8.74**	**344**	*i* Pn	**P**	**10 16 23.3**	**-1.7**
	comp=N,19nm,0.6s,SNR=7.7						
WATA	**Walderalm**	**8.78**	**346**	*e*Pn	**P**	**10 16 23.6**	**-1.7**
	comp=N,7.2nm,0.6s						
BIOA	**Bad Ischl, Aus**	**8.86**	**355**	*e*Pn	**P**	**10 16 25.1**	**-1.1**
	comp=N,9.0nm,0.8s						
IDI	**Anoyia**	**8.87**	**111**	P	**P**	**10 16 26.7**	**+0.3**
	comp=N,5.9nm,0.4s,baz=287,slow=12,SNR=12						
MOTA	**Moosalm**	**8.88**	**344**	*i* Pn	**Pn**	**10 16 24.6**	**+1.9**
	comp=N,22nm,1.1s,SNR=7.5						
LPG	**La Plagne**	**8.89**	**321**	*e*P	**P**	**10 16 25.3**	**-1.5**
LPG				*e*S	**S**	**10 18 03.0**	**-1.4**
RONA	**Rosalia, Austr**	**8.91**	**7**	*e*Pn	**Pn**	**10 16 24.9**	**+2.1**
	comp=N,4.9nm,0.8s						
LPL	**La Plagne**	**8.91**	**321**	*e*P	**P**	**10 16 25.8**	**-1.2**
ORIF	**Oris-en-Rattie**	**8.95**	**315**	*e*P	**P**	**10 16 25.7**	**-1.6**
ORIF	**Oris-en-Rattie**	**8.95**	**315**	*e*Pn	**P**	**10 16 28.6**	**+1.3**
MOA	**Molln**	**8.99**	**358**	*e*Pn	**Pn**	**10 16 25.4**	**+1.6**
	comp=N,3.0nm,0.5s						
RETA	**Reutte**	**9.09**	**343**	*e*Pn	**Pn**	**10 16 26.7**	**+1.5**
	comp=N,4.6nm,0.6s						
CONA	**Conrad Observa**	**9.10**	**5**	*e*Pn	**Pn**	**10 16 26.9**	**+1.7**
	comp=N,2.5nm,0.8s						
DAVA	**Damuels**	**9.14**	**339**	*i* Pn	**Pn**	**10 16 26.8**	**+1.1**
	comp=N,14nm,0.5s,SNR=6.8						
VIVF	**Saint-Julien-l**	**9.60**	**312**	*e*P	**P**	**10 16 33.0**	**-1.4**
GERES	**GERESS Array B**	**10.01**	**356**	P	**Pn**	**10 16 37.0**	**+0.7**
	comp=N,3.7nm,0.6s,baz=174,slow=13,SNR=26						
CABF	**La Chapelle**	**10.01**	**323**	*e*P	**Pn**	**10 16 36.3**	**0.0**
MTLF	**Montolieu**	**10.45**	**299**	*e*P	**P**	**10 16 44.0**	**+0.2**
VRAC	**Vranov**	**10.53**	**7**	P	**P**	**10 16 43.8**	**-0.8**
	comp=N,3.9nm,0.6s,baz=199,slow=8.9,SNR=4.4						
MLR	**Muntele Rosu**	**10.63**	**48**	P	**P**	**10 16 46.5**	**+0.6**
	comp=N,1.7nm,0.5s,baz=150,slow=20,SNR=2.0						
CDF	**Champ du Feu**	**10.96**	**333**	*e*P	**Pn**	**10 16 47.2**	**-0.6**
HAU	**Haudompre**	**10.98**	**329**	*e*P	**Pn**	**10 16 47.4**	**-0.5**
SMF	**Signal de Mont**	**11.15**	**318**	*e*P	**P**	**10 16 52.2**	**+0.6**
AVF	**Avril sur Loir**	**11.51**	**317**	*e*P	**P**	**10 16 55.2**	**-0.3**
LOR	**Lormes**	**11.56**	**320**	*e*P	**Pn**	**10 16 54.9**	**0.0**
	baz=135						
LOR	**Lormes**	**11.56**	**320**	*e*Pn	P	10 17 03.1	+7.0
	baz=147						
SSF	**Saint Saul

HFS	**Hagfors**	**21.30**	**359**	P		**P**	**10 18 39.3**	**-0.7**	
	comp=Z,3.0nm,0.3s,baz=187,slow=12,SNR=26								
	comp=Z,3.0nm,0.3s								
NB2	**NORSAR Subarra**	**22.31**	**355**	P		**P**	**10 18 49.1**	**-0.1**	
	comp=Z,0.9nm,0.6s,baz=173,slow=11								
NOA	**NORSAR Array B**	**22.31**	**355**	P		**P**	**10 18 49.4**	**+0.2**	
	comp=Z,0.7nm,0.4s,baz=171,slow=9.7,SNR=8.6								
	comp=Z,0.7nm,0.4s								
FINES	**FINESS Array B**	**23.68**	**14**	P		**P**	**10 19 01.6**	**+0.1**	
	comp=Z,2.1nm,0.3s,baz=189,slow=9.8,SNR=28								
	comp=Z,2.1nm,0.3s								
ARCES	**ARCESS Array B**	**31.27**	**7**	P		**P**	**10 20 08.3**	**-0.4**	
	comp=Z,0.8nm,0.5s,baz=191,slow=9.2,SNR=18								
	comp=Z,0.8nm,0.5s								
SCHQ	**Scheffervill**	**54.84**	**316**	P		**P**	**10 23 15.0**	**-0.7**	
	comp=Z,0.9nm,0.4s,baz=352,slow=11,SNR=1.9								
	comp=Z,0.9nm,0.4s								
YKA	**Yellowknife Ar**	**71.11**	**338**	P		**P**	**10 25 01.4**	**-0.5**	
	comp=Z,0.2nm,0.5s,baz=287,slow=14,SNR=5.1								
	comp=Z,0.2nm,0.5s								

IDC 04 10:15:55.8±4.0, 49°.92S×125°.10E, h0km, mb3.8/2, mbtmp3.8/2, MS3.4/6, Error ellipse: s-maj=148.8km s-min=70.8km az=122.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**17.02**	**328**	T	T	10 37 01.8	
	baz=153,slow=74,SNR=19						
H01W2	**Cape Leeuwin H**	**17.03**	**328**	T	T	10 37 16.2	
	baz=153,slow=74,SNR=17						
H01W3	**Cape Leeuwin H**	**17.04**	**328**	T	T	10 37 06.9	
	baz=153,slow=74,SNR=16						
STKA	**Stephens Creek**	**21.83**	**41**	P	P	10 20 49.8	+0.1
	4.3nm,1.0s,baz=188,slow=14,SNR=5.6						
STKA				LR	LR	10 27 29.2	
	comp=Z,67nm,21.8s,baz=204,slow=32						
	4.3nm,1.0s						
ASAR	**Alice Springs**	**27.10**	**18**	P	P	10 21 40.2	-0.1
	1.1nm,0.8s,baz=185,slow=10.0,SNR=7.7						
ASAR				LR	LR	10 31 27.1	
	comp=Z,63nm,18.6s,baz=189,slow=34						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**30.80**	**17**	LR	LR	10 33 12.2	
	comp=Z,66nm,20.0s,baz=146,slow=34						
MAW	**Mawson**	**34.90**	**216**	LR	LR	10 33 51.3	
	comp=Z,48nm,20.2s,baz=34,slow=31						
URZ	**Urewera**	**38.40**	**93**	LR	LR	10 36 36.3	
	comp=Z,86nm,19.9s,baz=248,slow=32						
SNAA	**Sanae**	**53.27**	**198**	LR	LR	10 47 01.8	
	comp=Z,51nm,18.6s,baz=88,slow=35						
H08S2	**Diego Garcia H**	**60.66**	**295**	T	T	11 31 43.5	
	baz=144						
H08S1	**Diego Carcia H**	**60.67**	**295**	T	T	11 31 44.2	
	baz=144						
H08S3	**Diego Garcia H**	**60.68**	**295**	T	T	11 31 43.7	
	baz=144						
ILAR	**Eielson Array**	**132.83**	**36**	PKP	PKPdf	10 35 11.1	-0.4
	0.4nm,0.9s,baz=267,slow=3.3,SNR=4.2						

*NNC **04** 10:20:08.8±1.6, 43°.69N×69°.75E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=12.0km s-min=7.3km az=74.0, Suspected Mining explosion.*

SOME 04 10:20:07.7, 43°.75N×69°.62E, h10km, 5C-1D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.92**	**134**	P	Pg	10 20 23.9	-1.5
	1.9nm,0.3s,baz=319,slow=17,SNR=96						
KK31				S	Sg	10 20 35.5	-1.8
	16nm,0.4s,baz=293,slow=29,SNR=144						
IUG	**Iuzhnay**	**1.63**	**169**	*e*P	Pb	10 20 37.8	-0.1
	316nm,0.4s						
IUG				*e*S	Sg	10 20 59.9	-0.3
	90nm,0.5s						
IUG	**Iuzhnay**	**1.63**	**169**	P	Pb	10 20 37.8	-0.1
	316nm,0.4s						
IUG				S	Sg	10 20 59.9	-0.3
	90nm,0.5s						
MRKS	**Merke**	**2.82**	**110**	*e*P	Pb	10 20 57.7	-0.5
	5.7nm,0.5s						
MRKS				*e*S	Sb	10 21 34.3	+1.4
	17nm,0.5s						
MRKS	**Merke**	**2.82**	**110**	Pg	Pg	10 21 02.3	+0.5
	5.7nm,0.5s						
MRKS				Lg	Lg	10 21 41.8	
	17nm,0.5s						
SGDS	**Sogindy**	**3.65**	**93**	*e*P	Pg	10 21 15.1	-2.6
	3.7nm,0.3s						
SGDS				*e*S	Sg	10 22 03.1	-1.9
	14nm,0.4s						
SGDS	**Sogindy**	**3.65**	**93**	Pg	Pg	10 21 15.1	-2.6
	3.7nm,0.3s						
SGDS				Lg	Lg	10 22 03.1	
	14nm,0.4s						
CHMS	**Chumysh**	**3.82**	**100**	⇑Pg	Pb	10 21 17.4	+2.3
	3.3nm,0.4s						
CHMS				⇑Lg	Lg	10 22 07.2	
	6.8nm,0.5s						
KRBS	**Karabastau**	**4.39**	**89**	*e*P	Pb	10 21 27.9	+2.9
	3.9nm,0.3s						
KRBS				*e*S	Sg	10 22 25.4	-3.2
	7.4nm,0.4s						
KRBS	**Karabastau**	**4.39**	**89**	Pg	Pb	10 21 27.9	+2.9
	3.9nm,0.3s						
KRBS				Lg	Lg	10 22 25.4	
	7.4nm,0.4s						
TKM2	**Tokmak 2**	**4.44**	**99**	⇑Pg	Pb	10 21 27.6	+1.7
	2.6nm,0.6s						
TKM2				⇓Lg	Lg	10 22 25.7	
	9.6nm,0.8s						
KUU	**Kurty**	**4.87**	**86**	*e*P	Pg	10 21 37.0	-3.8
	1.1nm,0.2s						
KUU				*e*S	Sg	10 22 40.8	-3.1
	12nm,0.5s						
KUU	**Kurty**	**4.87**	**86**	Pg	Pg	10 21 37.0	-3.8
	1.1nm,0.2s						
KUU				Lg	Lg	10 22 40.8	
	12nm,0.5s						
OTUK	**Ortayu**	**4.88**	**22**	⇑Pn	Pn	10 21 24.3	+3.2
	2.0nm,0.2s						
OTUK				⇑Sn	Sn	10 22 19.5	+1.9
	2.2nm,0.7s						
KTBS	**Karatobe**	**5.12**	**88**	*e*P	Pg	10 21 42.7	-3.1
	2.8nm,0.6s						
KTBS				*e*S	Sg	10 22 50.6	-1.4
	25nm,0.6s						
KTBS	**Karatobe**	**5.12**	**88**	Pg	Pg	10 21 42.7	-3.1
	2.8nm,0.6s						
KTBS				Lg	Lg	10 22 50.6	
	25nm,0.6s						

IDC 04 10:24:57.7±9.8, 19°.21N×144°.75E, h139km±74km, mb3.1/3, mbtmp3.7/4, Error ellipse: s-maj=146.6km s-min=32.1km az=120.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.59**	**179**	P	Pn	10 26 20.8	+2.0
	108nm,0.9s,baz=55,slow=21,SNR=2.5						
GUMO				S	Sn	10 27 20.9	-1.3
	83nm,0.9s,baz=250,slow=15,SNR=1.9						
WRA	**Warramunga Arr**	**40.23**	**195**	P	P	10 32 21.2	+0.3
	0.2nm,0.4s,baz=2.3,slow=8.6,SNR=7.3						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**43.91**	**194**	P	P	10 32 50.5	-0.2
	0.7nm,1.1s,baz=15,slow=5.8,SNR=2.0						
	0.7nm,1.1s						
NVAR	**Mina Array Bea**	**83.53**	**52**	P	P	10 37 10.2	-0.4
	0.4nm,0.6s,baz=286,slow=3.7,SNR=5.2						
	0.4nm,0.6s						

*SIGU **04** 10:49:38.9, 45°.37N×24°.97E, h2km, mb3.2*
*BEO **04** 10:49:38.7±0.3, 45°.30N×24°.98E, h0km, ML2.8/14*
*BUC **04** 10:49:40.0±0.2, 45°.39N×24°.95E, h2km, ml2.9/30, Error ellipse: s-maj=1.6km s-min=1.4km az=39.0*

ISC 04 10:49:39.5±1.1, 45°.36N±0°.02×24°.95E±0°.01, h2km±9km, n91, σ0°.89/132, 78C-18D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOIR		**0.10**	**41**	⇓P	**Pg**	**10 49 41.5**	**-0.1**
VOIR					⇑S	**Sg**	**10 49 43.2**	**+0.2**
VOIR		**0.10**	**41**	⇓P	**Pg**	**10 49 41.5**	**-0.1**
VOIR					⇑S	**Sg**	**10 49 43.2**	**+0.2**
ARR	**Arges**	**0.23**	**272**	⇑P	**Pg**	**10 49 44.3**	**+0.5**
ARR					⇑S	**Sg**	**10 49 48.2**	**+1.4**
ARR	**Arges**	**0.23**	**272**	⇑P	**Pg**	**10 49 44.3**	**+0.5**
ARR					⇑S	**Sg**	**10 49 48.2**	**+1.4**
STFAR	**Stefanesti-Arg**	**0.50**	**179**	⇑P	**Pb**	**10 49 50.8**	**-0.2**
STFAR					⇑S	**Sb**	**10 49 58.1**	**-0.6**
STFAR	**Stefanesti-Arg**	**0.50**	**179**	⇑P	**Pb**	**10 49 50.8**	**-0.2**
STFAR					⇑S	**Sb**	**10 49 58.1**	**-0.6**
DOPR	**Dopca**	**0.68**	**26**	⇑P	**Pg**	**10 49 51.8**	**-0.8**
DOPR					⇑S	**Sg**	**10 50 01.3**	**-0.1**
DOPR	**Dopca**	**0.68**	**26**	⇑P	**Pg**	**10 49 51.8**	**-0.8**
DOPR					⇑S	**Sg**	**10 50 01.3**	**-0.1**
MLR	**Muntele Rosu**	**0.71**	**79**	⇑S	**Sb**	**10 50 03.8**	**-1.2**
MLR	**Muntele Rosu**	**0.71**	**79**	⇑S	**Sb**	**10 50 03.8**	**-1.2**
MLR	**Muntele Rosu**	**0.71**	**79**	*e*Pg	**Pg**	**10 49 52.3**	**-0.8**
MLR				*e*Sg	**Sg**	**10 50 01.2**	**-1.2**
HUMR	**Humele**	**0.83**	**179**	⇑S	**Sb**	**10 50 08.7**	**+0.5**
HUMR	**Humele**	**0.83**	**179**	⇑S	**Sb**	**10 50 08.7**	**+0.5**
MDB	**Medias**	**0.88**	**333**	⇑P	**Pb**	**10 49 57.2**	**-0.3**
MDB					⇑S	**Sb**	**10 50 08.9**	**-0.8**
MDB	**Medias**	**0.88**	**333**	⇑P	**Pb**	**10 49 57.2**	**-0.3**
MDB					⇑S	**Sb**	**10 50 08.9**	**-0.8**
OZUR		**0.94**	**38**	⇑P	**Pg**	**10 49 56.6**	**-0.9**
OZUR					⇑S	**Sg**	**10 50 10.2**	**+0.5**
OZUR		**0.94**	**38**	⇑P	**Pg**	**10 49 56.6**	**-0.9**
OZUR					⇑S	**Sg**	**10 50 10.2**	**+0.5**
NEHR	**Nehoiu**	**0.95**	**85**	⇑P	**Pb**	**10 49 58.2**	**-0.4**
NEHR	**Nehoiu**	**0.95**	**85**	⇑P	**Pb**	**10 49 58.2**	**-0.4**
COVR	**Voineasa-Covas**	**1.00**	**61**	⇓S	**Sb**	**10 50 13.8**	**+0.5**
COVR	**Voineasa-Covas**	**1.00**	**61**	⇓S	**Sb**	**10 50 13.8**	**+0.5**
SULR		**1.15**	**126**	⇓P	**Pb**	**10 50 01.9**	**-0.1**
SULR					⇑S	**Sn**	**10 50 19.8**	**+1.1**
SULR		**1.15**	**126**	⇓P	**Pb**	**10 50 01.9**	**-0.1**
SULR					⇑S	**Sn**	**10 50 19.8**	**+1.1**
COPA	**Copaceanca**	**1.24**	**171**	⇑S	**Sn**	**10 50 21.7**	**+0.6**
COPA	**Copaceanca**	**1.24**	**171**	⇑S	**Sn**	**10 50 21.7**	**+0.6**
BUC1	**Bucharest**	**1.27**	**143**	⇑S	**Sn**	**10 50 22.6**	**+0.9**
BUC1	**Bucharest**	**1.27**	**143**	⇑S	**Sn**	**10 50 22.6**	**+0.9**
PLOR	**Plostina**	**1.29**	**67**	⇑P	**Pg**	**10 50 03.3**	**-0.9**
PLOR	**Plostina**	**1.29**	**67**	⇑P	**Pg**	**10 50 03.3**	**-0.9**
VRI	**Vrincioaia**	**1.34**	**67**	⇓P	**Pg**	**10 50 05.1**	**-0.2**
VRI					⇓S	**Sn**	**10 50 24.7**	**+1.0**
VRI	**Vrincioaia**	**1.34**	**67**	⇓P	**Pg**	**10 50 05.1**	**-0.2**
VRI					⇓S	**Sn**	**10 50 24.7**	**+1.0**
SGRR	**Singureni**	**1.35**	**147**	⇓P	**Pn**	**10 50 04.8**	**-0.5**
SGRR					⇓S	**Sn**	**10 50 24.2**	**+0.5**
SGRR	**Singureni**	**1.35**	**147**	⇓P	**Pn**	**10 50 04.8**	**-0.5**
SGRR					⇓S	**Sn**	**10 50 24.2**	**+0.5**
VLAD	**Vladila**	**1.42**	**196**	⇑S	**Sn**	**10 50 26.7**	**+1.3**
VLAD	**Vladila**	**1.42**	**196**	⇑S	**Sn**	**10 50 26.7**	**+1.3**
PGOR	**Pogoanele**	**1.51**	**107**	⇓S	**Sg**	**10 50 30.5**	**+2.6**
PGOR	**Pogoanele**	**1.51**	**107**	⇓S	**Sg**	**10 50 30.5**	**+2.6**
DEV	**Deva**	**1.53**	**291**	⇑P	**Pn**	**10 50 07.9**	**0.0**
DEV					⇑S	**Sg**	**10 50 29.8**	**+1.1**
DEV	**Deva**	**1.53**	**291**	⇑P	**Pn**	**10 50 07.9**	**0.0**
DEV					⇑S	**Sg**	**10 50 29.8**	**+1.1**
GZR	**Gura Zlata**	**1.53**	**272**	*e*Pn	**Pn**	**10 50 07.1**	**-0.9**
PANC	**Panciu**	**1.62**	**71**	⇑P	**Pn**	**10 50 08.8**	**-0.3**
PANC	**Panciu**	**1.62**	**71**	⇑P	**Pn**	**10 50 08.8**	**-0.3**
CJR	**Cluj-Napoca**	**1.65**	**326**	⇑P	**Pb**	**10 50 10.1**	**-0.6**
CJR					⇑S	**Sg**	**10 50 33.5**	**+0.9**
CJR	**Cluj-Napoca**	**1.65**	**326**	⇑P	**Pb**	**10 50 10.1**	**-0.6**
CJR					⇑S	**Sg**	**10 50 33.5**	**+0.9**
TESR	**Tescani**	**1.65**	**45**	⇑P	**Pn**	**10 50 09.1**	**-0.4**
TESR	**Tescani**	**1.65**	**45**	⇑P	**Pn**	**10 50 09.1**	**-0.4**
BIZ	**Bicaz**	**1.77**	**26**	⇑P	**Pn**	**10 50 11.6**	**+0.4**
BIZ	**Bicaz**	**1.77**	**26**	⇑P	**Pn**	**10 50 11.6**	**+0.4**
ARCR	**ARCALIA**	**1.78**	**347**	⇑P	**Pb**	**10 50 12.3**	**-0.5**
ARCR	**ARCALIA**	**1.78**	**347**	⇑P	**Pb**	**10 50 12.3**	**-0.5**
HERR	**Herculane**	**1.86**	**256**	⇓P	**Pn**	**10 50 13.0**	**+0.7**
HERR	**Herculane**	**1.86**	**256**	⇓P	**Pn**	**10 50 13.0**	**+0.7**
RASA	**Rasa**	**1.94**	**125**	⇑S	**Sg**	**10 50 41.2**	**-0.6**
RASA	**Rasa**	**1.94**	**125**	⇑S	**Sg**	**10 50 41.2**	**-0.6**
DRGR		**2.12**	**313**	⇑P	**Pn**	**10 50 15.9**	**-0.1**
DRGR					⇑S	**Sb**	**10 50 44.5**	**-0.9**
DRGR		**2.12**	**313**	⇑P	**Pn**	**10 50 15.9**	**-0.1**
DRGR					⇑S	**Sb**	**10 50 44.5**	**-0.9**
DRGR		**2.12**	**313**	*e*Pn	**Pn**	**10 50 15.5**	**-0.5**
DRGR					*e*Sn	**Sn**	**10 50 43.0**	**+0.1**
CFR	**Carcaliu**	**2.25**	**93**	⇓P	**Pn**	**10 50 18.0**	**+0.2**
CFR					⇑S	**Sb**	**10 50 48.9**	**-0.3**
CFR	**Carcaliu**	**2.25**	**93**	⇓P	**Pn**	**10 50 18.0**	**+0.2**
CFR					⇑S	**Sb**	**10 50 48.9**	**-0.3**
BUR01	**Bucovina Ar. S**	**2.26**	**5**	⇑P	**Pn**	**10 50 17.7**	**-0.3**
BUR01	**Bucovina Ar. S**	**2.26**	**5**	⇑P	**Pn**	**10 50 17.7**	**-0.3**
BZS	**Buzias**	**2.36**	**277**	⇑P	**Pn**	**10 50 20.4**	**+1.2**
BZS	**Buzias**	**2.36**	**277**	⇑P	**Pn**	**10 50 20.4**	**+1.2**
BZS	**Buzias**	**2.36**	**277**	*e*Pn	**Pn**	**10 50 19.1**	**-0.1**
BZS					*e*Sn	**Sn**	**10 50 49.9**	**+1.1**
MDVR	**Moldovita**	**2.37**	**257**	*e*Pn	**Pn**	**10 50 18.1**	**-1.3**
SIRR	**Siria**	**2.48**	**293**	⇑P	**Pn**	**10 50 20.8**	**-0.1**
SIRR					⇑S	**Sn**	**10 50 51.9**	**+0.2**
SIRR	**Siria**	**2.48**	**293**	⇑P	**Pn**	**10 50 20.8**	**-0.1**
SIRR					⇑S	**Sn**	**10 50 51.9**	**+0.2**
SIRR	**Siria**	**2.48**	**293**	*e*Pn	**Pn**	**10 50 22.0**	**+1.1**
ZAGS	**Zajecar**	**2.48**	**232**	*e*Pn	**Pn**	**10 50 19.0**	**-1.9**
TPGR	**Topolog**	**2.50**	**100**	⇑S	**Sn**	**10 50 53.4**	**+1.0**
TPGR	**Topolog**	**2.50**	**100**	⇑S	**Sn**	**10 50 53.4**	**+1.0**
KUBS	**Kucevo**	**2.52**	**249**	*e*Pn	**Pn**	**10 50 20.1**	**-1.3**
TIRR	**Tirgusor**	**2.62**	**109**	⇑P	**Pn**	**10 50 24.1**	**+1.3**
TIRR					⇑S	**Sn**	**10 50 56.3**	**+1.2**
TIRR	**Tirgusor**	**2.62**	**109**	⇑P	**Pn**	**10 50 24.1**	**+1.3**
TIRR					⇑S	**Sn**	**10 50 56.3**	**+1.2**
ZAPS	**Zavoj**	**2.67**	**219**	*e*Pn	**Pn**	**10 50 22.0**	**-1.5**
ZAPS					*e*Sn	**Sn**	**10 50 55.6**	**-0.8**
NSLU	**Nyzhne Selyshc**	**2.86**	**353**	*e*P	**Pn**	**10 50 28.3**	**+2.2**
NSLU					*e*S	**Sb**	**10 51 05.8**	**-0.9**
BOVS	**Bovan**	**2.89**	**235**	*e*Pn	**Pn**	**10 50 25.2**	**-1.4**
TRSU	**Trosnyk**	**3.06**	**334**	*i* P	**Pn**	**10 50 28.8**	**-0.1**
TRSU				*i* S	**Sn**	**10 51 06.8**	**+0.8**
KORU	**Korolevo**	**3.07**	**337**	*e*P	**Pn**	**10 50 28.8**	**-0.1**
KORU				*e*S	**Sn**	**10 51 07.0**	**+0.9**
MEZ	**Mezhgor'ye**	**3.31**	**343**	*e*P	**Pn**	**10 50 32.7**	**+0.4**
MEZ				*e*S	**Sn**	**10 51 13.0**	**+0.9**
GRUS	**Gruza**	**3.36**	**246**	*e*Pn	**Pn**	**10 50 32.3**	**-0.7**
GRUS				*e*Sn	**Sn**	**10 51 12.4**	**-1.1**
BOSI	**Bosilegrad**	**3.37**	**213**	*e*Pn	**Pn**	**10 50 32.2**	**+1.0**
BARS	**Barje**	**3.40**	**223**	*e*Pn	**Pn**	**10 50 32.7**	**-0.9**
TRUS	**Trudelj**	**3.43**	**252**	*e*Pn	**Pn**	**10 50 34.3**	**+0.3**
MUKU	**Mukachevo**	**3.46**	**334**	*e*P	**Pn**	**10 50 34.8**	**+0.4**
SELS	**Selova**	**3.49**	**234**	*e*Pn	**Pn**	**10 50 33.8**	**-0.9**
SELS				*e*Sn	**Sn**	**10 51 16.7**	**+0.1**
PRVS	**Prvonek**	**3.53**	**217**	*e*Pn	**Pn**	**10 50 33.1**	**-2.2**
NDNU	**Novodnistrovsk**	**3.63**	**26**	*e*P	**Pn**	**10 50 37.2**	**+0.5**
MORS	**Morshin**	**3.84**	**350**	*e*P	**Pn**	**10 50 40.2**	**+0.6**
MORS				*e*S	**Sn**	**10 51 26.7**	**+1.3**
IVAS	**Ivanjica**	**3.87**	**244**	*e*Pn	**Pn**	**10 50 39.0**	**-1.1**
BBLS	**Lazići**	**4.23**	**251**	*e*Pn	**Pn**	**10 50 44.0**	**-1.1**

*MOS **04** 10:54:39.5±0.7, 45°.63N×26°.52E, h149km, mb4.2/3, Error ellipse: s-maj=9.1km s-min=7.2km az=79.2*
*SIGU **04** 10:54:39.0, 45°.68N×26°.51E, h160km, mb3.3*
*IDC **04** 10:54:40.2±0.5, 45°.65N×26°.42E, h141km±4km, mb3.7/8, mbtmp3.9/14, MS2.9/1, Error ellipse: s-maj=18.6km s-min=13.2km az=135.0*
*MCSM **04** 10:54:40.2±0.4, 46°.N±4°.×2°.7E±1°.1, h141km±4km, ML4.1*
*BUC **04** 10:54:40.8±0.2, 45°.59N×26°.55E, h140km±2km, ml4.4/57, Error ellipse: s-maj=1.6km s-min=1.3km az=167.0*
*SOF **04** 10:54:41.5, 45°.57N×26°.51E, h120km, MD3.6*
*BEO **04** 10:54:48.5±0.9, 45°.41N×25°.88E, h72km±7km, ML3.6/16*

ISC 04 10:54:40.5±0.6, 45°.61N±0°.02×26°.55E±0°.02, h147km±4km, n256, σ1°.9/376, mb4.0/9, 171C-72D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.25**	**15**	⇑P	**Pn**	**10 55 00.5**	**-0.2**
PLOR				⇑S	**Sn**	**10 55 15.3**	**-0.8**
PLOR	**Plostina**	**0.25**	**15**	⇑P	**Pn**	**10 55 00.5**	**-0.2**
PLOR				⇑S	**Sn**	**10 55 15.3**	**-0.8**
PLOR	**Plostina**	**0.25**	**15**	P	**Pn**	**10 55 00.4**	**-0.2**
PLOR				S	**Sn**	**10 55 15.2**	**-0.8**
PLOR	**Plostina**	**0.25**	**15**	P	**Pn**	**10 55 00.4**	**-0.2**
NEHR	**Nehoiu**	**0.26**	**226**	⇑P	**Pn**	**10 55 00.8**	**+0.2**
NEHR				⇑S	**Sn**	**10 55 16.1**	**+0.3**
NEHR					⇑P	**Pn**	**10 55 00.8**	**+0.2**
NEHR					⇑S	**Sn**	**10 55 16.1**	**+0.3**
VRI	**Vrincioaia**	**0.29**	**25**	⇑P	**Pn**	**10 55 00.7**	**0.0**
VRI					⇑S	**Sn**	**10 55 16.0**	**-0.2**
VRI	**Vrincioaia**	**0.29**	**25**	⇑P	**Pn**	**10 55 00.7**	**0.0**
VRI					⇑S	**Sn**	**10 55 16.0**	**-0.2**
VRI	**Vrincioaia**	**0.29**	**25**	P	**Pn**	**10 55 00.6**	**0.0**
VRI					S	**Sn**	**10 55 15.9**	**-0.2**
COVR	**Voineasa-Covas**	**0.34**	**314**	⇑P	**Pn**	**10 55 00.6**	**-0.2**
COVR					⇑S	**Sn**	**10 55 15.4**	**-1.1**
COVR	**Voineasa-Covas**	**0.34**	**314**	⇑P	**Pn**	**10 55 00.6**	**-0.2**
COVR					⇑S	**Sn**	**10 55 15.4**	**-1.1**
MLR	**Muntele Rosu**	**0.44**	**255**	⇓P	**Pn**	**10 55 01.4**	**0.0**
MLR					⇓S	**Sn**	**10 55 16.8**	**-0.5**
MLR	**Muntele Rosu**	**0.44**	**255**	⇓P	**Pn**	**10 55 01.4**	**0.0**
MLR					⇓S	**Sn**	**10 55 16.8**	**-0.5**
MLR	**Muntele Rosu**	**0.44**	**255**	P	**Pn**	**10 55 01.4**	**0.0**
	551nm,0.3s,baz=301,slow=0.8,SNR=1084						
MLR				S	**Sn**	**10 55 16.5**	**-0.8**
	629nm,0.4s,baz=178,slow=12,SNR=23						
MLR	**Muntele Rosu**	**0.44**	**255**	P	**Pn**	**10 55 01.3**	**0.0**
ISR	**Istrita**	**0.49**	**181**	⇓P	**Pn**	**10 55 01.8**	**+0.3**
ISR				⇓S	**Sn**	**10 55 18.0**	**+0.5**
ISR	**Istrita**	**0.49**	**181**	⇓P	**Pn**	**10 55 01.8**	**+0.3**
ISR				⇓S	**Sn**	**10 55 18.0**	**+0.5**
PANC	**Panciu**	**0.49**	**57**	⇑P	**Pn**	**10 55 01.8**	**+0.4**
PANC				⇑S	**Sn**	**10 55 17.2**	**-0.3**
PANC	**Panciu**	**0.49**	**57**	⇑P	**Pn**	**10 55 01.8**	**+0.4**
PANC				⇑S	**Sn**	**10 55 17.2**	**-0.3**
SECR		**0.67**	**211**	⇑P	**Pn**	**10 55 03.0**	**+0.5**
SECR		**0.67**	**211**	⇑P	**Pn**	**10 55 03.0**	**+0.5**
OZUR		**0.73**	**313**	⇑P	**Pn**	**10 55 02.5**	**-0.4**
OZUR				⇑S	**Sn**	**10 55 18.3**	**-1.7**
OZUR		**0.73**	**313**	⇑P	**Pn**	**10 55 02.5**	**-0.4**
OZUR				⇑S	**Sn**	**10 55 18.3**	**-1.7**
GHRR		**0.75**	**52**	⇑P	**Pn**	**10 55 03.5**	**+0.5**
GHRR				⇑S	**Sn**	**10 55 20.3**	**+0.1**
GHRR		**0.75**	**52**	⇑P	**Pn**	**10 55 03.5**	**+0.5**
GHRR				⇑S	**Sn**	**10 55 20.3**	**+0.1**
PGOR	**Pogoanele**	**0.76**	**156**	⇑P	**Pn**	**10 55 03.6**	**+0.5**
PGOR				⇑S	**Sn**	**10 55 20.3**	**0.0**
PGOR	**Pogoanele**	**0.76**	**156**	⇑P	**Pn**	**10 55 03.6**	**+0.5**
PGOR				⇑S	**Sn**	**10 55 20.3**	**0.0**
TUDR		**0.78**	**90**	⇓P	**Pn**	**10 55 03.4**	**+0.2**
TUDR				⇓S	**Sn**	**10 55 19.9**	**-0.6**
TUDR		**0.78**	**90**	⇓P	**Pn**	**10 55 03.4**	**+0.2**
TUDR				⇓S	**Sn**	**10 55 19.9**	**-0.6**
PLAR	**PLOIESTI**	**0.79**	**208**	⇓P	**Pn**	**10 55 03.8**	**+0.5**
PLAR	**PLOIESTI**	**0.79**	**208**	⇓P	**Pn**	**10 55 03.8**	**+0.5**
IZVR	**Izvoarele**	**0.85**	**94**	⇓P	**Pn**	**10 55 03.7**	**0.0**
IZVR				⇓S	**Sn**	**10 55 20.4**	**-1.0**
IZVR	**Izvoarele**	**0.85**	**94**	⇓P	**Pn**	**10 55 03.7**	**0.0**
IZVR				⇓S	**Sn**	**10 55 20.4**	**-1.0**
DOPR	**Dopca**	**0.89**	**294**	⇑P	**Pn**	**10 55 03.9**	**-0.2**
DOPR				⇑S	**Sn**	**10 55 21.4**	**-0.8**
DOPR	**Dopca**	**0.89**	**294**	⇑P	**Pn**	**10 55 03.9**	**-0.2**
DOPR				⇑S	**Sn**	**10 55 21.4**	**-0.8**
SCHL	**Schela**	**0.90**	**96**	⇑P	**Pn**	**10 55 03.6**	**-0.5**
SCHL				⇑S	**Sn**	**10 55 21.3**	**-0.8**
SCHL	**Schela**	**0.90**	**96**	⇑P	**Pn**	**10 55 03.6**	**-0.5**
SCHL				⇑S	**Sn**	**10 55 21.3**	**-0.8**
TESR	**Tescani

LEOM	**Leova**	**1.46**	**53**	P		**Pn**	**10 55 09.6**	**+0.2**
TLBR	**Topalu**	**1.50**	**135**	⇑P		**Pn**	**10 55 09.9**	**+0.2**
TLBR				⇑S		**Sn**	**10 55 30.5**	**-1.6**
TLBR	**Topalu**	**1.50**	**135**	⇑P		**Pn**	**10 55 09.9**	**+0.2**
TLBR				⇑S		**Sn**	**10 55 30.5**	**-1.6**
TPGR	**Topolog**	**1.52**	**119**	⇓P		**Pn**	**10 55 09.7**	**-0.3**
TPGR	**Topolog**	**1.52**	**119**	⇓P		**Pn**	**10 55 09.7**	**-0.3**
HUMR	**Humele**	**1.55**	**227**	⇑P		**Pn**	**10 55 10.1**	**-0.3**
HUMR				⇑S		**Sn**	**10 55 32.1**	**-1.1**
HUMR	**Humele**	**1.55**	**227**	⇑P		**Pn**	**10 55 10.1**	**-0.3**
HUMR				⇑S		**Sn**	**10 55 32.1**	**-1.1**
TLCR		**1.65**	**104**	⇑P		**Pn**	**10 55 11.3**	**-0.1**
TLCR				⇓S		**Sn**	**10 55 34.5**	**-0.6**
TLCR		**1.65**	**104**	⇑P		**Pn**	**10 55 11.3**	**-0.1**
TLCR				⇓S		**Sn**	**10 55 34.5**	**-0.6**
TLCR		**1.65**	**104**	P		**Pn**	**10 55 11.2**	**-0.1**
TLCR				S		**Sn**	**10 55 34.4**	**-0.6**
CVDA	**Cernavoda**	**1.65**	**140**	⇑P		**Pn**	**10 55 11.7**	**+0.2**
CVDA				⇑S		**Sn**	**10 55 33.8**	**-1.3**
CVDA	**Cernavoda**	**1.65**	**140**	⇑P		**Pn**	**10 55 11.7**	**+0.2**
CVDA				⇑S		**Sn**	**10 55 33.8**	**-1.3**
IAS	**Iasi**	**1.73**	**23**	⇓P		**Pn**	**10 55 12.2**	**-0.1**
IAS				⇑S		**Sn**	**10 55 35.7**	**-1.1**
IAS	**Iasi**	**1.73**	**23**	⇓P		**Pn**	**10 55 12.2**	**-0.1**
IAS				⇑S		**Sn**	**10 55 35.7**	**-1.1**
ICOR	**Ion Corvin**	**1.73**	**149**	⇑P		**Pn**	**10 55 12.6**	**+0.3**
ICOR				⇑S		**Sn**	**10 55 35.7**	**-1.1**
ICOR	**Ion Corvin**	**1.73**	**149**	⇑P		**Pn**	**10 55 12.6**	**+0.3**
ICOR				⇑S		**Sn**	**10 55 35.7**	**-1.1**
TIRR	**Tirgusor**	**1.75**	**130**	⇓P		**Pn**	**10 55 12.5**	**0.0**
TIRR	**Tirgusor**	**1.75**	**130**	⇓P		**Pn**	**10 55 12.5**	**0.0**
TIRR	**Tirgusor**	**1.75**	**130**	P		**Pn**	**10 55 12.5**	**0.0**
COPA	**Copaceanca**	**1.75**	**213**	⇑P		**Pn**	**10 55 12.3**	**-0.3**
COPA				⇓S		**Sn**	**10 55 35.5**	**-1.6**
COPA	**Copaceanca**	**1.75**	**213**	⇑P		**Pn**	**10 55 12.3**	**-0.3**
COPA				⇓S		**Sn**	**10 55 35.5**	**-1.6**
JURR	**Jurilovca**	**1.84**	**116**	⇑P		**Pn**	**10 55 13.8**	**+0.2**
JURR	**Jurilovca**	**1.84**	**116**	⇑P		**Pn**	**10 55 13.8**	**+0.2**
MFTR	**Murfatlar**	**1.95**	**136**	⇑P		**Pn**	**10 55 14.5**	**-0.3**
MFTR	**Murfatlar**	**1.95**	**136**	⇑P		**Pn**	**10 55 14.5**	**-0.3**
RAZG	**Razgrad**	**2.04**	**181**	⇑P		**Pn**	**10 55 15.8**	**-0.1**
RAZG				⇓S		**Sn**	**10 55 41.6**	**-1.5**
RAZG	**Razgrad**	**2.04**	**181**	⇑P		**Pn**	**10 55 15.8**	**-0.1**
RAZG				⇓S		**Sn**	**10 55 41.6**	**-1.5**
MILM	**Milestii Mici**	**2.04**	**49**	⇓*i*P		**Pn**	**10 55 15.9**	**0.0**
	900nm,0.4s							
MILM				*i* S		**Sn**	**10 55 41.0**	**-2.1**
	320nm,0.3s							
MILM	**Milestii Mici**	**2.04**	**49**	⇑P		**Pn**	**10 55 15.9**	**0.0**
MILM	**Milestii Mici**	**2.04**	**49**	⇑P		**Pn**	**10 55 15.9**	**0.0**
MILM	**Milestii Mici**	**2.04**	**49**	*d* P		**Pn**	**10 55 15.9**	**0.0**
MILM				*i* S		**Sn**	**10 55 41.0**	**-2.1**
MILM				pmax	pmax			
	comp=Z,900nm,0.4s							
MILM				smax	smax			
	comp=N,500nm,0.4s							
MILM				smax	smax			
	comp=E,1μm,1.3s							
MILM	**Milestii Mici**	**2.04**	**49**	⇑*i*P		**Pn**	**10 55 15.9**	**0.0**
MILM				Pm			10 55 16.0	
MILM				m			10 55 28.5	
MILM				*i* S		**Sn**	**10 55 41.0**	**-2.1**
MILM				Sm			10 55 41.2	
TSCT	**Constanta Port**	**2.08**	**133**	⇑S		**Sn**	**10 55 42.7**	**-1.2**
TSCT	**Constanta Port**	**2.08**	**133**	⇑S		**Sn**	**10 55 42.7**	**-1.2**
KIS	**Kishinev**	**2.10**	**48**	⇓*i*P		**Pn**	**10 55 16.5**	**0.0**
	comp=E,500nm,0.3s							
KIS				*i* S		**Sn**	**10 55 42.7**	**-1.6**
	comp=E,830nm,0.3s							
KIS	**Kishinev**	**2.10**	**48**	⇑P		**Pn**	**10 55 16.5**	**0.0**
KIS	**Kishinev**	**2.10**	**48**	⇑P		**Pn**	**10 55 16.5**	**0.0**
KIS	**Kishinev**	**2.10**	**48**	*d* P		**Pn**	**10 55 16.5**	**0.0**
KIS				*i* S		**Sn**	**10 55 42.7**	**-1.6**
KIS				pmax	pmax			
	comp=Z,500nm,0.3s							
KIS				smax	smax			
	comp=N,900nm,0.3s							
KIS				smax	smax			
	comp=E,1μm,0.3s							
KIS	**Kishinev**	**2.10**	**48**	⇑*i*P		**Pn**	**10 55 16.5**	**0.0**
KIS				Pm			10 55 17.0	
KIS				*i* S		**Sn**	**10 55 42.7**	**-1.6**
KIS				Sm			10 55 42.8	
KIS				m			10 55 43.2	
EFOR	**EFORIE**	**2.12**	**135**	⇓S		**Sn**	**10 55 43.9**	**-0.9**
EFOR	**EFORIE**	**2.12**	**135**	⇓S		**Sn**	**10 55 43.9**	**-0.9**
ZIMR		**2.12**	**204**	⇑P		**Pn**	**10 55 16.7**	**-0.2**
ZIMR				⇓S		**Sn**	**10 55 43.3**	**-1.6**
ZIMR		**2.12**	**204**	⇑P		**Pn**	**10 55 16.7**	**-0.2**
ZIMR				⇓S		**Sn**	**10 55 43.3**	**-1.6**
BURAR	**Bucovina Array**	**2.21**	**336**	⇓P		**Pn**	**10 55 19.4**	**+1.4**
BURAR	**Bucovina Array**	**2.21**	**336**	⇓P		**Pn**	**10 55 19.4**	**+1.4**
VLAD	**Vladila**	**2.22**	**224**	⇑P		**Pn**	**10 55 17.4**	**-0.6**
VLAD	**Vladila**	**2.22**	**224**	⇑P		**Pn**	**10 55 17.4**	**-0.6**
PSN	**Preselentsi**	**2.25**	**148**	*i* P		**Pn**	**10 55 18.8**	**+0.4**
TSSL	**Sulina**	**2.28**	**100**	⇑P		**Pn**	**10 55 19.0**	**+0.3**
TSSL				⇑S		**Sn**	**10 55 48.3**	**+0.2**
TSSL	**Sulina**	**2.28**	**100**	⇑P		**Pn**	**10 55 19.0**	**+0.3**
TSSL				⇑S		**Sn**	**10 55 48.3**	**+0.2**
MANR	**Mangalia**	**2.30**	**140**	⇑P		**Pn**	**10 55 19.4**	**+0.4**
MANR				⇑S		**Sn**	**10 55 47.7**	**-1.0**
MANR	**Mangalia**	**2.30**	**140**	⇑P		**Pn**	**10 55 19.4**	**+0.4**
MANR				⇑S		**Sn**	**10 55 47.7**	**-1.0**
TSMN	**Mangalia Port-**	**2.32**	**140**	⇑S		**Sn**	**10 55 48.3**	**-0.7**
TSMN	**Mangalia Port-**	**2.32**	**140**	⇑S		**Sn**	**10 55 48.3**	**-0.7**
CJR	**Cluj-Napoca**	**2.33**	**299**	⇑P		**Pn**	**10 55 19.7**	**+0.3**
CJR	**Cluj-Napoca**	**2.33**	**299**	⇑P		**Pn**	**10 55 19.7**	**+0.3**
SZH	**Strazhica**	**2.38**	**191**	*i* P		**Pn**	**10 55 19.7**	**-0.3**
PRD	**Provadia**	**2.48**	**166**	*i* P		**Pn**	**10 55 21.9**	**+0.7**
PURM	**Purcari**	**2.49**	**67**	⇑P		**Pn**	**10 55 21.3**	**+0.1**
PURM				⇑S		**Sn**	**10 55 51.6**	**-1.1**
PURM	**Purcari**	**2.49**	**67**	⇑P		**Pn**	**10 55 21.3**	**+0.1**
PURM				⇑S		**Sn**	**10 55 51.6**	**-1.1**
PVL	**Pavlikeni**	**2.54**	**201**	*e*P		**Pn**	**10 55 23.1**	**+1.1**
ROIA	**ROIAK**	**2.58**	**166**	*i* P		**Pn**	**10 55 22.8**	**+0.3**
GZR	**Gura Zlata**	**2.67**	**267**	⇑P		**Pn**	**10 55 23.6**	**+0.1**
GZR				⇑S		**Sn**	**10 55 56.4**	**-0.3**
GZR	**Gura Zlata**	**2.67**	**267**	⇑P		**Pn**	**10 55 23.6**	**+0.1**
GZR				⇑S		**Sn**	**10 55 56.4**	**-0.3**
GZR	**Gura Zlata**	**2.67**	**267**	*e*Pn		**Sn**	**10 55 22.3**	**-1.2**
GZR				*e*Sn		Sn	10 55 44.4	-12
PUNG	**Punghina**	**2.89**	**244**	*e*Sn		Sn	10 55 50.6	-11
DRGR		**2.92**	**295**	⇓P		**Pn**	**10 55 26.0**	**-0.7**
DRGR		**2.92**	**295**	⇓P		**Pn**	**10 55 26.0**	**-0.7**
DRGR		**2.92**	**295**	*e*Pn		**Pn**	**10 55 26.0**	**-0.7**
RAKU	**Rahkiv**	**2.92**	**327**	*e*P		**Pn**	**10 55 24.7**	**-2.0**
KMPD	**K-Podol'skiy**	**2.96**	**359**	*i* P		**Pn**	**10 55 25.7**	**-1.4**
KMPD				*i* S		**Sn**	**10 56 02.2**	**-1.0**
KMPD	**K-Podol'skiy**	**2.96**	**359**	P		**Pn**	**10 55 25.5**	**-1.6**
NSLU	**Nyzhne Selyshc**	**2.96**	**332**	*e*P		**Pn**	**10 55 30.8**	**+3.6**
NSLU				Pm			10 55 35.4	
NSLU				*e*S		**Sn**	**10 56 10.6**	**+7.2**
NSLU				Sm			10 56 38.5	
HERR	**Herculane**	**3.01**	**258**	⇑P		**Pn**	**10 55 27.0**	**-0.8**
HERR	**Herculane**	**3.01**	**258**	⇑P		**Pn**	**10 55 27.0**	**-0.8**
NDNU	**Novodnistrovsk**	**3.04**	**10**	*i* P		**Pn**	**10 55 27.5**	**-0.7**
NDNU				*i* S		**Sn**	**10 56 04.4**	**-0.7**
BLKB	**Belogradchik**	**3.41**	**236**	⇑P		**Pn**	**10 55 31.8**	**-1.2**
BLKB	**Belogradchik**	**3.41**	**236**	⇑P		**Pn**	**10 55 31.8**	**-1.2**
STNU	**Starunia**	**3.41**	**336**	*e*S		**Sn**	**10 56 12.4**	**-1.1**
BZS	**Buzias**	**3.46**	**272**	⇑P		**Pn**	**10 55 33.0**	**-0.6**
BZS	**Buzias**	**3.46**	**272**	⇑P		**Pn**	**10 55 33.0**	**-0.6**
BZS	**Buzias**	**3.46**	**272**	*e*Pn		**Pn**	**10 55 32.8**	**-0.8**
BZS				*e*Sn		Sn	10 56 02.6	-12
SIRR	**Siria**	**3.48**	**283**	⇓P		**Pn**	**10 55 33.7**	**-0.1**
SIRR	**Siria**	**3.48**	**283**	⇓P		**Pn**	**10 55 33.7**	**-0.1**
SIRR	**Siria**	**3.48**	**283**	*e*Pn		**Pn**	**10 55 33.4**	**-0.4**
PGB	**Panagyurishte**	**3.51**	**210**	*e*P		**Pn**	**10 55 35.2**	**+0.9**
MDVR	**Moldovita**	**3.52**	**258**	⇑P		**Pn**	**10 55 34.1**	**-0.4**
MDVR	**Moldovita**	**3.52**	**258**	⇑P		**Pn**	**10 55 34.1**	**-0.4**
MDVR	**Moldovita**	**3.52**	**258**	*e*Pn		**Pn**	**10 55 33.5**	**-0.9**
MDVR				*e*Sn		Sn	10 56 04.6	-12
ZAGS	**Zajecar**	**3.56**	**241**	*e*Pn		**Pn**	**10 55 33.0**	**-1.9**
ZAGS				*e*Sn		Sn	10 56 04.4	-13
HORU	**Horodok**	**3.61**	**359**	*e*P		**Pn**	**10 55 34.1**	**-1.4**
HORU				*i* S		**Sn**	**10 56 16.5**	**-1.7**
ZAPS	**Zavoj**	**3.65**	**232**	*e*Pn		**Pn**	**10 55 35.2**	**-0.9**
ZAPS				*e*Sn		Sn	10 56 06.2	-13
KUBS	**Kucevo**	**3.66**	**253**	*e*Pn		**Pn**	**10 55 34.0**	**-2.2**
KUBS				*e*Sn		Sn	10 56 06.2	-13
VTS	**Vitosha**	**3.83**	**220**	*e*P		**Pn**	**10 55 39.5**	**+1.0**
MORS	**Morshin**	**3.96**	**334**	*e*P		**Pn**	**10 55 38.9**	**-1.2**
MORS				*i* S		**Sn**	**10 56 24.8**	**-1.6**
BOVS	**Bovan**	**3.98**	**242**	*e*Pn		**Pn**	**10 55 39.2**	**-1.2**
BOVS				*e*Sn		Sn	10 56 14.7	-12
BOSS	**Bosilegrad**	**4.28**	**225**	*e*Pn		**Pn**	**10 55 44.4**	**+0.1**
BOSS				*e*Sn		Sn	10 56 20.5	-13
LUBAR	**Lubar, Ukraine**	**4.39**	**10**	P		**Pn**	**10 55 44.5**	**-1.2**
LUBAR				sP			10 56 16.1	
BARS	**Barje**	**4.40**	**232**	*e*Pn		**Pn**	**10 55 45.5**	**-0.4**
BARS				*e*Sn		Sn	10 56 22.7	-14
KOLS	**Kolonicke sedl**	**4.42**	**320**	*e*P		**Pn**	**10 55 46.7**	**+0.6**
KOLS	**Kolonicke sedl**	**4.42**	**320**	*e*P		**Pn**	**10 55 46.7**	**+0.6**
PRVS	**Prvonek**	**4.47**	**228**	*e*Pn		**Pn**	**10 55 46.6**	**-0.3**
PRVS				*e*Sn		Sn	10 56 26.2	-12
GRUS	**Gruza**	**4.50**	**250**	*e*Pn		**Pn**	**10 55 45.8**	**-1.4**
GRUS				*e*Sn		Sn	10 56 25.0	-14
RDO	**Rodhopi**	**4.52**	**190**	P		**Pn**	**10 55 47.4**	**0.0**
SELS	**Selova**	**4.57**	**240**	*e*Pn		**Pn**	**10 55 47.2**	**-0.9**
SELS				*e*Sn		Sn	10 56 28.3	-12
TRUS	**Trudelj**	**4.58**	**255**	*e*Pn		**Pn**	**10 55 47.2**	**-1.0**
TRUS				*e*Sn		Sn	10 56 27.4	-14
NE55	**Skvira**	**4.62**	**26**	P		**Pn**	**10 55 48.1**	**-0.5**
NVR	**Nevrokopi**	**4.68**	**206**	P		**Pn**	**10 55 49.8**	**+0.1**
MI29	**MI29, Kamyanyy**	**4.89**	**10**	P		**Pn**	**10 55 52.1**	**-0.2**
DIVS	**Divibare**	**4.90**	**254**	*e*Pn		**Pn**	**10 55 50.9**	**-1.7**
DIVS				*e*Sn		Sn	10 56 34.9	-14
IVAS	**Ivanjica**	**5.00**	**248**	*e*Pn		**Pn**	**10 55 52.3**	**-1.6**
IVAS				*e*Sn		Sn	10 56 38.0	-13
SJES	**Sjenica**	**5.26**	**246**	*e*Pn		**Pn**	**10 55 57.1**	**-0.3**
AK16	**Malin Array Si**	**5.35**	**18**	P		**Pn**	**10 55 57.8**	**-0.5**
AK17	**Malin Array Si**	**5.35**	**17**	P		**Pn**	**10 55 57.5**	**-0.8**
AK19	**Malin Array Si**	**5.38**	**17**	P		**Pn**	**10 55 57.6**	**-1.1**
SIM	**Simferopol'**	**5.38**	**94**	*e*P		**Pn**	**10 56 01.1**	**+2.3**
SIM				S		**Sn**	**10 56 55.9**	**-4.0**
SIM				S		**Sn**	**10 56 55.9**	**-4.0**
SIM				pmax	pmax			
	comp=Z,28nm,0.9s							
SIM				smax	smax			
	comp=E,48nm,1.2s							
SIM				smax	smax			
	comp=N,20nm,0.8s							
MI28	**Mi28,Pidlybu**	**5.38**	**8**	P		**Pn**	**10 55 58.4**	**-0.3**
MI28				sP			10 56 29.8	
BBLS	**Lazići**	**5.38**	**254**	*e*Pn		**Pn**	**10 55 58.9**	**0.0**
AK18	**Malin Array Si**	**5.39**	**17**	P		**Pn**	**10 55 58.0**	**-0.8**
AK20	**Malin Array Si**	**5.40**	**17**	P		**Pn**	**10 55 58.2**	**-0.7**
AKASG	**Malin Array Si**	**5.40**	**18**	P		**Pn**	**10 55 58.5**	**-0.6**
	comp=N,2.2nm,0.4s,baz=208,slow=11,SNR=11							
AKASG				S		**Sn**	**10 56 54.6**	**-5.8**
	comp=N,13nm,0.5s,baz=202,slow=21,SNR=4.8							
AKBB	**Malin Array Si**	**5.40**	**18**	*i* P		**Pn**	**10 55 58.1**	**-0.9**
AKBB	**Malin Array Si**	**5.40**	**18**	P		**Pn**	**10 55 58.3**	**-0.7**
AK22	**Malin Array Si**	**5.43**	**17**	P		**Pn**	**10 55 58.5**	**-0.8**
AK21	**Malin Array Si**	**5.43**	**17**	P		**Pn**	**10 55 58.5**	**-1.0**
AK23	**Malin Array Si**	**5.44**	**17**	P		**Pn**	**10 55 58.7**	**-0.8**
YAL	**Yalta**	**5.50**	**99**	*e*P		**Pn**	**10 56 00.0**	**-0.4**
YAL				*e*S		**Sn**	**10 57 03.5**	**+0.7**
YAL	**Yalta**	**5.50**	**99**	*e*P		**Pn**	**10 56 00.0**	**-0.4**
YAL				Pm			10 56 00.5	
	comp=Z,18nm,0.3s							
YAL				*e*S		**Sn**	**10 57 03.5**	**+0.7**
YAL	**Yalta**	**5.50**	**99**	*e*P		**Pn**	**10 56 00.0**	**-0.4**
YAL				Pm			10 56 00.5	
YAL				*e*S		**Sn**	**10 57 03.5**	**+0.7**
MORH	**Mrgy, Hungar**	**5.55**	**279**	P		**Pn**	**10 56 01.7**	**+0.6**
RNPP5	**Staryi Chortor**	**5.64**	**356**	P		**Pn**	**10 56 01.5**	**-0.8**
RNPP5				sP			10 56 33.4	
RNPP1	**Kostyukhnivka**	**5.77**	**355**	P		**Pn**	**10 56 03.3**	**-0.6**
KOVH	**Kovagototos**	**5.93**	**278**	P		**Pn**	**10 56 06.9**	**+0.8**
SUDU	**Sudak**	**6.01**	**94**	⇓*e*P		**Pn**	**10 56 05.4**	**-1.7**
SUDU				*e*S		**Sn**	**10 57 14.1**	**-0.8**
SUDU	**Sudak**	**6.01**	**94**	⇓*e*P		**Pn**	**10 56 05.4**	**-1.7**
SUDU				Pm			10 56 06.1	
	comp=Z,45nm,0.6s							
SUDU				*e*S		**Sn**	**10 57 14.1**	**-0.8**
SUDU	**Sudak**	**6.01**	**94**	*e*P		**Pn**	**10 56 05.4**	**-1.7**
SUDU				Pm			10 56 06.1	
SUDU				*e*S		**Sn**	**10 57 14.1**	**-0.8**
BRTR	**Keskin Array B**	**7.86**	**136**	P		**Pn**	**10 56 32.3**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=334,slow=16,SNR=2.9							
GERES	**GERESS Array B**	**9.33**	**295**	P		**Pn**	**10 56 50.7**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=104,slow=16,SNR=6.2							
VORR	**Voronezh**	**10.34**	**49**	*e*P		**Pn**	**10 57 01.0**	**-3.7**
VORR				pmax	pmax			
	comp=Z,50nm,0.4s							
KIV	**Kislovodsk**	**11.59**	**92**	*e*P		**Pn**	**10 57 22.8**	**+1.4**
KIV				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BELG	**Belogornoye**	**15.37**	**56**	P		**Pn**	**10 58 09.5**	**+0.2**
	comp=Z,15nm,0.7s,baz=14,slow=2.4,SNR=5.6							
BELG	**Belogornoye**	**15.37**	**56**	*i* P		**Pn**	**10 58 09.3**	**0.0**
BELG				pmax	pmax			
	comp=Z,3.0nm,0.8s							
FINES	**FINESS Array B**	**15.87**	**359**	P		**Pn**	**10 58 12.1**	**-3.3**
	comp=Z,1.5nm,0.5s,baz=165,slow=14,SNR=9.2							
FINES	**FINESS Array B**	**15.87**	**359**	*i* P		**Pn**	**10 58 14.1**	**-1.3**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KEST	**Kesra**	**16.33**	**239**	LR		LR	11 06 17.9	
	comp=Z,41nm,20.4s,baz=90,slow=43							
HFS	**Hagfors**	**16.44**	**337**	P		**Pn**	**10 58 21.7**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=143,slow=11,SNR=4.8							
NB2	**NORSAR Subarra**	**17.89**	**335**	P		**Pn**	**10 58 39.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=146,slow=12							
NOA	**NORSAR Array B**	**17.89**	**335**	P		**P**	**10 58 37.2**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=148,slow=11,SNR=4.0							
NOA	**NORSAR Array B**	**17.89**	**335**	*e*P		**Pn**	**10 58 39.6**	**-0.3**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KIRV	**Kirov**	**19.01**	**39**	*i* P		**P**	**10 58 50.0**	**-0.5**
ARU	**Arti**	**22.65**	**50**	P		**P**	**10 59 28.8**	**-0.1**
	comp=Z,5.3nm,0.2s,baz=287,slow=8.5,SNR=6.7							
	comp=Z,5.3nm,0.2s							
ARU	**Arti**	**22.65**	**50**	*c i*P		**P**	**10 59 29.2**	**+0.4**
ARU							11 00 01.3	
ARU				S		**S**	**11 03 27.2**	**+1.8**
ARU				pmax	pmax			
	comp=Z,20nm,2.6s							
LVZ	**Lovozero**	**22.75**	**8**	*i* P		**P**	**10 59 29.8**	**+0.1**
ARCES	**ARCESS Array B**	**24.00**	**359**	P		**P**	**10 59 40.8**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=182,slow=9.6,SNR=13							
	comp=Z,1.2nm,0.6s							
ARCES	**ARCESS Array B**	**24.00**	**359**	*e*P		**P**	**10 59 41.2**	**+0.1**
BRVK	**Borovoye**	**29.07**	**59**	*i* P		**P**	**11 00 28.2**	**+1.5**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ZALV	**Zalesovo Beam**	**37.56**	**56**	P		**P**	**11 01 40.9**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=288,slow=10,SNR=6.4							
	comp=Z,1.4nm,0.4s							
ZALV	**Zalesovo Beam**	**37.56**	**56**	*e*P		**P**	**11 01 41.4**	**+1.3**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**37.91**	**68**	P		**P**	**11 01 44.6**	**+1.5**
	comp=Z,0.6nm,0.5s							
	comp=Z,0.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**38.61**	**221**	P		**P**	**11 01 49.6**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=20,slow=8.6,SNR=14							
	comp=Z,1.5nm,0.6s							
DBIC	**Dimbokro**	**47.37**	**225**	P		**P**	**11 02 59.0**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=30,slow=6.3,SNR=4.1							
	comp=Z,1.8nm,0.3s							
DBIC	**Dimbokro**	**47.37**	**225**	P		**P**	**11 02 59.0**	**-0.7**
SONM	**Songino Array**	**52.43**	**57**	P		**P**	**11 03 38.6**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=305,slow=5.1,SNR=3.3							
	comp=Z,1.1nm,0.6s							
CMAR	**Chiang Mai Arr**	**64.80**	**89**	P		**P**	**11 05 04.7**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=301,slow=7.9,SNR=5.8							
	comp=Z,1.0nm,0.5s							

LJU 04 11:04:51.5, 46°.39N×15°.07E, h0km, Confirmed Rockburst, Northwestern Balkan Peninsula

BUC 04 11:05:45.2±0.3, 46°.35N×23°.16E, h5km, ml1.6/5, 32C-4D, Error ellipse: s-maj=2.3km s-min=2.2km az=58.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DRGR		**0.54**	**325**	⇑P		Pg	11 05 55.9	+0.4
DRGR				⇑S		Sg	11 06 03.0	+0.5
GZR	**Gura Zlata**	**1.00**	**196**	⇑P		Pg	11 06 03.3	-0.9
GZR				⇓S		Sb	11 06 18.6	+0.2
GZR	**Gura Zlata**	**1.00**	**196**	⇑P		Pg	11 06 03.3	-0.9
GZR				⇓S		Sb	11 06 18.6	+0.2
LOT	**Lotru**	**1.00**	**154**	⇑P		Pg	11 06 03.8	-0.6
LOT				⇑S		Sg	11 06 17.7	+0.3
LOT	**Lotru**	**1.00**	**154**	⇑P		Pg	11 06 03.8	-0.6
LOT				⇑S		Sg	11 06 17.7	+0.3
SIRR	**Siria**	**1.04**	**266**	⇑S		Sg	11 06 19.0	+0.3
SIRR	**Siria**	**1.04**	**266**	⇑S		Sg	11 06 19.0	+0.3
BZS	**Buzias**	**1.30**	**236**	⇑P		Pn	11 06 09.4	-0.7
BZS				⇑S		Sb	11 06 27.4	+0.2
BZS	**Buzias**	**1.30**	**236**	⇑P		Pn	11 06 09.4	-0.7
BZS				⇑S		Sb	11 06 27.4	+0.2
ARR	**Arges**	**1.43**	**133**	⇓S		Sg	11 06 32.5	+1.5
ARR	**Arges**	**1.43**	**133**	⇓S		Sg	11 06 32.5	+1.5
HERR	**Herculane**	**1.56**	**200**	⇑P		Pn	11 06 13.3	-0.3
HERR				⇑S		Sg	11 06 35.8	+0.5
HERR	**Herculane**	**1.56**	**200**	⇑P		Pn	11 06 13.3	-0.3
HERR				⇑S		Sg	11 06 35.8	+0.5
VOIR		**1.61**	**124**	⇑P		Pb	11 06 14.9	-0.5
VOIR				⇑S		Sg	11 06 36.5	-0.4
VOIR		**1.61**	**124**	⇑P		Pb	11 06 14.9	-0.5
VOIR				⇑S		Sg	11 06 36.5	-0.4
MDVR	**Moldovita**	**1.87**	**213**	⇑P		Pb	11 06 19.2	-0.7
MDVR				⇑S		Sb	11 06 44.1	+0.6
MDVR	**Moldovita**	**1.87**	**213**	⇑P		Pb	11 06 19.2	-0.7
MDVR				⇑S		Sb	11 06 44.1	+0.6
BURAR	**Bucovina Array**	**1.89**	**47**	⇑P		Pn	11 06 18.5	+0.3
BURAR				⇑S		Sb	11 06 43.5	-0.8
BURAR	**Bucovina Array**	**1.89**	**47**	⇑P		Pn	11 06 18.5	+0.3
BURAR				⇑S		Sb	11 06 43.5	-0.8

NEIC ***04*** *11:06:49.5±1.2, 18°.0N×0°.2×68°.45W×0°.05, h75km±30km, Error ellipse: s-maj=31.1km s-min=5.6km az=189.0*
RSPR ***04*** *11:06:49.2, 18°.06N×68°.51W, h66km±3km, MD3.4/8*
OSPL ***04*** *11:06:50.5±1.2, 17°.99N×68°.57W, h31km±21km, ML2.2*
ISC 04 11:06:50.1±1.5, 18°.09N±0°.08×68°.47W±0°.04, h35km, n42, σ0°.77/49, 7C-2D, Mona Passage

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

RITX	**Riito Sonora**	**0.24**	**96**	⇑*iP*		**Pb**	**11 08 29.5**	**0.0**
RITX				*eS*		**Sb**	**11 08 34.2**	**+0.5**
CTLX	**Tlaxcala, TLX**	**0.29**	**17**	⇑*iP*		**Pb**	**11 08 29.7**	**-0.3**
CTLX				*eS*		**Sb**	**11 08 35.1**	**+0.5**
CTLX				IAML			11 08 53.6	
	comp=N,7μm,0.6s							
CTLX				⇓*e*			11 08 53.6	
YUCAX	**Ej. Yucatɲn**	**0.43**	**17**	⇑*eP*		**Pb**	**11 08 32.5**	**+0.2**
YUCAX				*eS*		**Sb**	**11 08 39.3**	**+1.0**
YUCAX				IAML			11 08 40.1	
	comp=N,5μm,0.3s							
UABX	**UABC, Campus M**	**0.47**	**339**			**Sn**	**11 08 41.0**	**-1.7**
UABX	**UABC, Campus M**	**0.47**	**339**		Pg	**Pb**	**11 08 32.4**	**-0.6**
UABX	**UABC, Campus M**	**0.47**	**339**		IAML		11 08 41.4	
	comp=E,7μm,0.3s							
UABX					IAML		11 08 47.0	
	comp=N,3μm,0.4s							
UABX	**UABC, Campus M**	**0.47**	**339**	*i* P		**Pb**	**11 08 33.6**	**+0.6**
UABX				*eS*		**Sn**	**11 08 41.0**	**-1.7**
UABX				⇓*e*			11 08 47.1	
UABX					IAML		11 08 47.1	
	comp=N,3μm,0.5s							
ICBC	**Inst. de Cultu**	**0.51**	**338**	*eS*		**Sb**	**11 08 42.0**	**+1.3**
SLRCX	**San Luis Rio C**	**0.53**	**60**	⇑*iP*		**Pb**	**11 08 33.8**	**-0.2**
SLRCX				*eS*		**Sb**	**11 08 41.8**	**+0.5**
SLRCX				IAML			11 08 42.7	
	comp=N,3μm,0.4s							
SLRCX				⇑*e*			11 08 42.7	
EMSC	**East Mesa**	**0.59**	**22**			**Pb**	**11 08 34.6**	**-0.5**
EMSC						**Sb**	**11 08 43.5**	**+0.4**
EMSC	**East Mesa**	**0.59**	**22**	⇑*iP*		**Pb**	**11 08 34.7**	**-0.5**
EMSC				*eS*		**Sb**	**11 08 43.5**	**+0.4**
SGL	**Mount Signal**	**0.61**	**318**			**Pb**	**11 08 35.1**	**-0.4**
SGL						**Sb**	**11 08 43.5**	**-0.3**
SGL	**Mount Signal**	**0.61**	**318**	⇓*iP*		**Pb**	**11 08 35.1**	**-0.4**
SGL				*eS*		**Sb**	**11 08 43.5**	**-0.3**
DREC	**Desert Rsrch C**	**0.64**	**344**			**Pb**	**11 08 36.0**	**+0.1**
DREC						**Sn**	**11 08 46.1**	**-0.6**
DREC	**Desert Rsrch C**	**0.64**	**344**	*eP*		**Pb**	**11 08 35.5**	**-0.4**
COA	**Coachella**	**0.68**	**9**			**Pb**	**11 08 36.0**	**-0.7**
COA						**Sn**	**11 08 46.8**	**-1.0**
COA	**Coachella**	**0.68**	**9**	⇑*iP*		**Pb**	**11 08 36.0**	**-0.7**
COA				*eS*		**Sn**	**11 08 46.8**	**-1.0**
SNR	**Schaffner Ranc**	**0.69**	**346**			**Pb**	**11 08 36.7**	**-0.1**
SNR						**Sn**	**11 08 47.7**	**-0.4**
YMD	**Yuma Desert**	**0.69**	**58**			**Pb**	**11 08 36.1**	**-0.8**
YMD	**Yuma Desert**	**0.69**	**58**	⇑*iP*		**Pb**	**11 08 36.1**	**-0.8**
WESC	**Westside Schoo**	**0.70**	**324**			**Pb**	**11 08 36.9**	**0.0**
WESC						**Sb**	**11 08 46.9**	**+0.7**
WESC	**Westside Schoo**	**0.70**	**324**	⇓*eP*		**Pb**	**11 08 36.8**	**-0.2**
YUH2	**Yuha Desert**	**0.73**	**309**	⇑*iP*		**Pb**	**11 08 36.9**	**-0.6**
YUH	**Yuha Desert**	**0.73**	**309**			**Pb**	**11 08 37.1**	**-0.4**
YUH	**Yuha Desert**	**0.73**	**309**			**Pb**	**11 08 37.2**	**-0.3**
YUH	**Yuha Desert**	**0.73**	**309**			**Sb**	**11 08 46.7**	**-0.4**
YUH	**Yuha Desert**	**0.73**	**309**		IAML		11 08 47.4	
	comp=E,627nm,0.4s							
YUH					IAML		11 08 48.8	
	comp=N,329nm,0.3s							
ECBX	**El Chinero**	**0.73**	**167**	⇓*eP*		**Pb**	**11 08 37.3**	**-0.2**
ECBX				*eS*		**Sn**	**11 08 48.2**	**-1.0**
IMPE	**Imperial**	**0.76**	**339**			**Pb**	**11 08 37.6**	**-0.3**
IMPE						**Sn**	**11 08 49.3**	**-0.4**
COK2	**Cook Ranch 2**	**0.77**	**328**			**Pb**	**11 08 37.8**	**-0.4**
COK2						**Sn**	**11 08 50.0**	**-0.1**
COK2	**Cook Ranch 2**	**0.77**	**328**	*eP*		**Pb**	**11 08 37.8**	**-0.4**
RUN	**Ruthven**	**0.81**	**16**			**Pb**	**11 08 37.5**	**-1.3**
RUN						**Sb**	**11 08 49.4**	**0.0**
RMX	**La Rumorosa**	**0.82**	**300**			**Pb**	**11 08 37.6**	**-1.4**
RMX						**Sb**	**11 08 47.8**	**-1.9**
RMX	**La Rumorosa**	**0.82**	**300**	⇑*eP*		**Pb**	**11 08 37.7**	**-1.4**
RMX					IAML		11 08 48.2	
	comp=N,1μm,0.3s							
RMX				⇑*e*			11 08 48.2	
RMX				⇑*e*			11 08 48.2	
RMX					IAML		11 08 48.2	
	comp=E,1μm,0.4s							
IKP	**In-Ko-Pah, Jac**	**0.86**	**302**			**Pb**	**11 08 39.1**	**-0.7**
IKP						**Sb**	**11 08 50.8**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.86**	**302**	P		**Pb**	**11 08 39.1**	**-0.7**
	baz=118,SNR=64							
IKP				S		**Sb**	**11 08 50.7**	**-0.3**
	baz=118							
IKP	**In-Ko-Pah, Jac**	**0.86**	**302**	⇑*eP*		**Pb**	**11 08 39.1**	**-0.7**
SWSC	**Sam W. Stewart**	**0.89**	**328**			**Pb**	**11 08 38.6**	**-1.5**
SWSC						**Sn**	**11 08 52.5**	**-0.5**
SWSC	**Sam W. Stewart**	**0.89**	**328**	P		**Pb**	**11 08 39.1**	**-1.0**
	baz=145,SNR=12							
SWSC				S		**Sb**	**11 08 49.7**	**-1.8**
	baz=145							
CRR	**Carrizo Plain**	**0.93**	**319**			**Pb**	**11 08 40.5**	**-0.2**
CRR						**Sn**	**11 08 53.2**	**-0.7**
GLA	**Glamis**	**0.93**	**22**			**Pb**	**11 08 39.4**	**-1.5**
GLA					IAML		11 08 52.7	
	comp=E,439nm,0.6s							
GLA					IAML		11 08 53.8	
	comp=N,345nm,0.4s							
GLA	**Glamis**	**0.93**	**22**			**Pb**	**11 08 39.5**	**-1.4**
GLA	**Glamis**	**0.93**	**22**			**Sb**	**11 08 50.8**	**-2.0**
GLA	**Glamis**	**0.93**	**22**	P		**Pb**	**11 08 39.4**	**-1.5**
	baz=203,SNR=73							
GLA				S		**Sb**	**11 08 50.9**	**-1.9**
	baz=203							
GLA	**Glamis**	**0.93**	**22**	⇑*eP*		**Pb**	**11 08 39.4**	**-1.5**
SPIG	**San Pedro Mart**	**1.16**	**189**	*eP*		**Pn**	**11 08 44.4**	**-0.4**
SPIG				*eS*		**Sb**	**11 08 59.4**	**-0.2**
SPIG	**San Pedro Mart**	**1.16**	**189**	⇓*eP*		**Pn**	**11 08 44.4**	**-0.4**
SFX	**San Felipe**	**1.20**	**164**			**Pb**	**11 08 46.4**	**+1.0**
SFX					IAML		11 09 03.3	
	comp=E,182nm,0.2s							
SFX					IAML		11 09 05.6	
	comp=N,195nm,0.5s							
SFX	**San Felipe**	**1.20**	**164**	⇓*eP*		**Pn**	**11 08 43.7**	**-1.2**
CBX	**Cerro Bola**	**1.21**	**276**			**Pn**	**11 08 45.0**	**-0.3**
CBX					IAML		11 09 02.8	
	comp=E,440nm,0.5s							
CBX					IAML		11 09 09.9	
	comp=N,260nm,0.7s							
CBX	**Cerro Bola**	**1.21**	**276**	⇑*eP*		**Pn**	**11 08 44.9**	**-0.3**
TKX	**Tecate**	**1.21**	**288**		Pn	**Pb**	**11 08 45.8**	**+0.1**
TKX					IAML		11 09 01.7	
	comp=E,597nm,0.2s							
MONP2	**Monument Peak**	**1.22**	**305**			**Pb**	**11 08 45.9**	**0.0**
MONP2	**Monument Peak**	**1.22**	**305**	P		**Pn**	**11 08 44.4**	**-1.1**
	baz=122,SNR=47							
MONP2				S		**Sb**	**11 09 00.5**	**-0.7**
	baz=122							
MONP2	**Monument Peak**	**1.22**	**305**	*eP*		**Pn**	**11 08 45.3**	**-0.2**
SVX	**San Vicente**	**1.22**	**225**	⇓*eP*		**Pb**	**11 08 45.5**	**-0.2**
TJIG	**Tijuana**	**1.23**	**282**	*eP*		**Pn**	**11 08 45.1**	**-0.4**
TJIG				*eS*		**Sn**	**11 09 01.2**	**-0.3**
TJIG	**Tijuana**	**1.23**	**282**	⇑*eP*		**Pn**	**11 08 45.1**	**-0.4**
CCX	**Cicese**	**1.25**	**255**			**Pb**	**11 08 45.9**	**-0.3**
CCX	**Cicese**	**1.25**	**255**	⇑*eP*		**Pb**	**11 08 45.9**	**-0.3**
BAR	**Barrett**	**1.30**	**292**			**Pn**	**11 08 46.0**	**-0.4**
BAR					IAML		11 09 04.3	
	comp=N,696nm,0.3s							
BAR					IAML		11 09 05.5	
	comp=E,508nm,0.2s							
BAR	**Barrett**	**1.30**	**292**	*eP*		**Pn**	**11 08 46.0**	**-0.4**
BAR				*eS*		**Sb**	**11 09 03.6**	**+0.1**
SLH	**Sleepy Hollow**	**1.31**	**320**			**Pb**	**11 08 47.2**	**-0.2**
113A	**Mohawk Valley,**	**1.38**	**65**			**Pn**	**11 08 46.4**	**-1.0**
113A					IAML		11 09 03.9	
	comp=E,132nm,0.4s							
JUEM	**Julian Eagle M**	**1.45**	**308**			**Pb**	**11 08 50.1**	**+0.4**
EML	**El Monte Cty P**	**1.52**	**298**	⇓*eP*		**Pn**	**11 08 49.6**	**+0.1**
TJX	**Tijuana**	**1.56**	**282**			**Pb**	**11 08 51.2**	**-0.4**
109C	**Camp Elliot, M**	**1.72**	**294**		Pb	**Pb**	**11 08 54.0**	**-0.3**
	baz=112							
109C					Sb	**Sb**	**11 09 16.0**	**+0.5**
	baz=112							
PMD	**Palm Desert**	**1.74**	**327**			**Pn**	**11 08 52.4**	**-0.1**
PMD					IAML		11 09 18.4	
	comp=E,38nm,0.6s							
PMD					IAML		11 09 28.0	
	comp=N,24nm,0.4s							
PFO	**Pinyon Flats O**	**1.75**	**325**			**Pn**	**11 08 51.9**	**-0.8**
PFO	**Pinyon Flats O**	**1.75**	**325**	P		**Pn**	**11 08 51.3**	**-1.4**
	baz=143							
214A	**Organ Pipe Nat**	**2.08**	**96**			**Pn**	**11 08 56.1**	**-1.0**
214A					IAML		11 09 29.5	
	comp=N,64nm,0.2s							
214A					IAML		11 09 37.1	
	comp=E,64nm,0.4s							
214A	**Organ Pipe Nat**	**2.08**	**96**	P		**Pn**	**11 08 55.8**	**-1.3**
	baz=279,SNR=5.6							
214A					Sb	**Sb**	**11 09 27.3**	**+1.5**
	baz=279							
214A	**Organ Pipe Nat**	**2.08**	**96**	⇑*eP*		**Pn**	**11 08 55.8**	**-1.3**
HMTC	**Hemet**	**2.12**	**316**			**Pb**	**11 09 02.5**	**+1.4**
ELS	**Elsinore Mount**	**2.34**	**309**	Pn		**Pn**	**11 09 02.2**	**+1.4**
ELS					IAML		11 09 36.7	
	comp=N,52nm,0.5s							
ELS					IAML		11 09 39.9	
	comp=E,69nm,0.5s							
Y14A	**Wickenburg**	**2.56**	**47**	Pn		**Pn**	**11 09 04.0**	**+0.1**
BFSC	**Mount Baldy Ra**	**2.88**	**316**	Sb		**Sb**	**11 09 50.5**	**+1.6**
	baz=134							
CIS	**Catalina Islan**	**2.93**	**295**	Sb		**Sb**	**11 09 51.9**	**+1.5**
	baz=112							
W13A	**Hualapai Mount**	**3.11**	**21**	Pn		**Pn**	**11 09 12.0**	**+0.4**
X16A	**Lo Mia Camp, P**	**3.88**	**54**			**Pn**	**11 09 22.7**	**+0.6**
WUAZ	**Wupatki**	**4.62**	**43**			**Pn**	**11 09 33.9**	**+1.6**
U15A	**North Rim**	**4.88**	**29**			**Pn**	**11 09 37.6**	**+1.7**
X18A	**Snowflake**	**5.01**	**61**			**Pn**	**11 09 38.3**	**+0.8**
LCMT	**Little Creek M**	**5.08**	**18**	Pn		**Pn**	**11 09 39.9**	**+1.3**
CCUT	**Cedar City**	**5.57**	**16**	Pn		**Pn**	**11 09 45.5**	**+0.3**

*DRS **04** 11:26:37.4±0.0,41.08N×43.65E,h20km*
*TIF **04** 11:26:40.0,41.38N×44.02E,h15km*
*ISK **04** 11:26:39.9,41.39N×44.02E,h9km,ML2.9/8*
*DDA **04** 11:26:40.2±0.0,41.35N×43.93E,h8km±4km,ML3.1*
*NORS **04** 11:26:41.3±0.0,41.51N×43.98E,h4km,MPVA4.3*

ISC 04 11:26:40.0±0.8,**41.39N**±0.02×**44.02E**±0.02,**h15**km±6km,
n43,σ1°**02**/80,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMNI	**Dmanisi**	**0.14**	**114**	P	**Pg**	**11 26 43.8**	**-0.1**
DMNI				S	**Sg**	**11 26 46.1**	**-0.3**
TRLG	**Trialeti**	**0.17**	**22**	P	**Pb**	**11 26 45.3**	**+0.3**
TRLG				S	**Sg**	**11 26 48.0**	**+0.8**
BRNG	**Burnasheti**	**0.28**	**329**	P	**Pb**	**11 26 46.9**	**+0.1**
BRNG				S	**Sb**	**11 26 51.7**	**+0.2**
KZRT	**Kazreti**	**0.28**	**90**	P	**Pg**	**11 26 46.2**	**+0.1**
KZRT				S	**Sg**	**11 26 50.2**	**0.0**
BGD	**Bogdanovka**	**0.34**	**249**	P	**Pb**	**11 26 47.5**	**-0.4**
BGD				S	**Sb**	**11 26 52.6**	**-0.6**
AKH	**Akhalkalaki**	**0.40**	**274**	P	**Pb**	**11 26 48.6**	**-0.3**
AKH				S	**Sb**	**11 26 54.1**	**-0.8**
AKH	**Akhalkalaki**	**0.40**	**274**	PG	**Pb**	**11 26 48.5**	**-0.3**
AKH				SG	**Sb**	**11 26 53.9**	**-1.0**
BKRG	**Bakuriani**	**0.53**	**315**	P	**Pb**	**11 26 51.2**	**0.0**
BKRG				S	**Sb**	**11 26 59.1**	**+0.4**
SEAG	**Tbilisi Sea**	**0.70**	**57**	P	**Pb**	**11 26 54.3**	**+0.3**
SEAG				S	**Sb**	**11 27 04.4**	**+0.9**
EAK	**Akyaka**	**0.77**	**204**	P	**Pg**	**11 26 53.4**	**-1.5**
EAK				S	**Sg**	**11 27 03.8**	**-1.3**
ABS	**Abastumani**	**0.98**	**293**	P	**Pb**	**11 26 58.8**	**0.0**
ABS				S	**Sn**	**11 27 12.6**	**-0.4**
DGRG	**David-gareji**	**1.02**	**86**	P	**Pg**	**11 26 58.8**	**-0.9**
DGRG				S	**Sn**	**11 27 14.5**	**+0.6**
KARS	**Kars**	**1.04**	**224**	PG	**Pb**	**11 27 00.0**	**+0.2**
KARS				SG	**Sn**	**11 27 14.9**	**+0.4**
DIGO	**Kars**	**1.09**	**207**	P	**Pg**	**11 26 59.7**	**-1.3**
DIGO				S	**Sg**	**11 27 14.3**	**-0.9**
DIGO				*i* AML	AML	11 27 18.0	
	comp=N,548nm,0.7s						
GUDG	**Gudauri**	**1.13**	**17**	P	**Pg**	**11 27 01.1**	**-0.8**
GUDG				S	**Sn**	**11 27 17.9**	**+0.9**
TKB	**Tkibuli**	**1.23**	**322**	P	**Pg**	**11 27 03.6**	**-0.1**
TKB				S	**Sn**	**11 27 20.6**	**+1.5**
ONI	**Oni**	**1.28**	**341**	P	**Pg**	**11 27 04.1**	**-0.5**
ONI				S	**Sn**	**11 27 21.8**	**+1.5**
ONI	**Oni**	**1.28**	**341**	PN	**Pg**	**11 27 04.1**	**-0.5**
ONI				SN	**Sn**	**11 27 22.2**	**+1.9**
PNSH	**Pansheti**	**1.32**	**19**	P	**Pg**	**11 27 05.3**	**-0.2**
GNI	**Garni**	**1.35**	**156**	PN	**Pg**	**11 27 05.9**	**-0.1**
GNI				SN	**Sg**	**11 27 24.4**	**+0.8**
TASB	**TASBURUN-IGDIR**	**1.41**	**173**	PN	**Pb**	**11 27 06.3**	**+0.2**
SENK	**Senkaya-Erzuru**	**1.51**	**237**	PN	**Pb**	**11 27 07.8**	**0.0**
IGDI	**IGDIR**	**1.52**	**178**	P	**Pb**	**11 27 07.7**	**-0.2**
IGDI				S	**Sb**	**11 27 27.9**	**+0.9**
DAGI	**Agillar**	**1.62**	**260**	P	**Pg**	**11 27 10.3**	**-0.8**
DAGI				S	**Sg**	**11 27 31.9**	**-0.2**
KOTA	**Agri, Merkez-K**	**1.70**	**202**	P	**Pg**	**11 27 12.5**	**-0.1**
KOTA				S	**Sg**	**11 27 38.2**	**+3.4**
LGD	**Lagodekhi**	**1.73**	**74**	P	**Pb**	**11 27 11.8**	**+0.4**
LGD				S	**Sg**	**11 27 35.4**	**-0.1**
BATM	**Batumi**	**1.76**	**278**	P	**Pb**	**11 27 12.6**	**+0.5**
BATM				S	**Sg**	**11 27 35.8**	**-0.9**
DBOC	**Borcka**	**1.77**	**269**	P	**Pb**	**11 27 12.2**	**0.0**
DBOC				S	**Sg**	**11 27 35.7**	**-1.3**
DDEM	**Demirkent**	**1.78**	**255**	P	**Pb**	**11 27 12.6**	**+0.1**
DDEM				S	**Sb**	**11 27 35.6**	**+0.9**
DDEM				*i* AML	AML	11 27 38.0	
	comp=E,330nm,0.4s						
DBAD	**Bademkaya**	**1.79**	**259**	P	**Pb**	**11 27 13.0**	**+0.4**
DBAD				S	**Sg**	**11 27 36.3**	**-1.4**
BCA	**Borcka**	**1.80**	**273**	PN	**Pb**	**11 27 12.2**	**-0.6**
EATA	**Eleskirt**	**1.92**	**218**	P	**Pg**	**11 27 16.0**	**-0.8**
EATA				S	**Sg**	**11 27 42.2**	**+0.5**
HOPA	**Hopa-Artvin**	**1.94**	**271**	PN	**Pb**	**11 27 14.7**	**-0.3**
AGRB	**Hanur-Agry**	**1.97**	**204**	PN	**Pn**	**11 27 13.9**	**+0.8**
GROC	**Groznyy**	**2.24**	**35**	*ePn*	**Pb**	**11 27 21.2**	**+0.9**
	90nm,0.3s						
GROC				*eSn*	**Sg**	**11 27 52.9**	**+0.8**
	127nm,0.4s						
XNZR	**Khunzakh**	**2.31**	**59**	*ePn*	**Pb**	**11 27 21.2**	**-0.3**
	28nm,0.6s						
XNZR				*eSn*	**Sg**	**11 27 52.8**	**-1.6**
	111nm,0.5s						
KMKR	**Kumukh**	**2.42**	**71**	*ePn*	**Pb**	**11 27 22.9**	**-0.5**
	20nm,0.4s						
KMKR				*eSn*	**Sg**	**11 27 55.9**	**-2.0**
	165nm,0.4s						
ARKR	**Arakani**	**2.53**	**60**	*ePn*	**Pb**	**11 27 25.6**	**+0.5**
	12nm,0.4s						
ARKR				*eSn*	**Sg**	**11 27 59.9**	**-1.4**
	24nm,0.3s						
DLMR	**Dylym**	**2.57**	**48**	*ePn*	**Pb**	**11 27 26.3**	**+0.5**
	48nm,0.2s						
DLMR				*eSn*	**Sg**	**11 28 01.1**	**-1.4**
	32nm,0.3s						
KRNR	**Karanay**	**2.59**	**55**	*ePn*	**Pb**	**11 27 25.6**	**-0.6**
	1.0nm,0.1s						
KRNR				*eSn*	**Sg**	**11 28 00.4**	**-2.7**
	223nm,0.6s						
DBC	**Dubki**	**2.65**	**51**	*ePn*	**Pb**	**11 27 27.0**	**-0.2**
	8.0nm,0.1s						
DBC				*eSn*	**Sg**	**11 28 03.1**	**-2.1**
	79nm,0.4s						
AKT	**Akhty**	**2.79**	**87**	*ePn*	**Pb**	**11 27 27.5**	**-2.1**
	17nm,0.3s						
AKT				*eSn*	**Sb**	**11 28 03.7**	**0.0**
	108nm,0.2s						
URKR	**Urkarakh**	**2.81**	**73**	*ePn*	**Pb**	**11 27 27.7**	**-2.3**
	10.0nm,0.8s						
URKR				*eSn*	**Sb**	**11 28 04.3**	**0.0**

*NNC **04** 11:31:51.7±3.8,40.98N×73.07E,h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=31.1km s-min=12.9km az=176.0
*ISU **04** 11:31:53,40.76N×73.88E,h8km*
*SOME **04** 11:31:53.1,41.35N×73.02E,h10km*
*KRNET **04** 11:31:55.1±0.1,41.49N×72.95E,h15km,mb3.2*
*KNET **04** 11:31:57.2±0.4,41.59N×73.03E,h0km,ml2.5,Error*
ellipse: s-maj=6.6km s-min=2.7km az=124.0

ISC 04 11:31:57.5±1.2,**41.45N**±0.03×**73.14E**±0.03,**h5**km±10km,
n47,σ1°**55**/78,**36C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.80**	**31**	⇑P	**Pg**	**11 32 11.6**	**-1.3**
	43nm,0.2s,SNR=80						
AML				⇑S	**Sg**	**11 32 23.3**	**0.0**
	37nm,0.2s						
ANR	**Andizhan**	**0.91**	**221**	P	**Pg**	**11 32 16.4**	**+1.5**
ANR				S	**Sn**	**11 32 33.2**	**+2.8**
ARLS	**Aral**	**0.98**	**64**	⇑*iP*	**Pg**	**11 32 15.9**	**-0.3**
	baz=70						
ARLS				⇑*iS*	**Sn**	**11 32 31.3**	**-1.0**
	baz=70						
TSTA	**Tashata**	**1.00**	**210**	S	**Sb**	**11 32 29.8**	**-1.0**
UCH	**Uchtor**	**1.29**	**52**	⇑P	**Pb**	**11 32 21.1**	**-1.3**
	13nm,0.1s,SNR=29						
UCH				⇓S	**Sn**	**11 32 41.8**	**+1.4**
	38nm,0.2s						
UCH	**Uchtor**	**1.29**	**52**	⇑*iP*	**Pb**	**11 32 21.4**	**-1.1**
	baz=57						
UCH				⇑*iS*	**Sn**	**11 32 40.7**	**+0.3**
	baz=57						
MRKS	**Merke**	**1.30**	**3**	*eP*	**Pn**	**11 32 20.7**	**-1.7**
	6.7nm,0.2s						
MRKS				*eS*	**Sn**	**11 32 40.5**	**+0.3**
	41nm,0.3s						
MRKS	**Merke**	**1.30**	**3**	P	**Pg**	**11 32 26.3**	**+3.9**
	5.6nm,0.2s						
MRKS				S	Sn	11 32 50.8	+11
	41nm,0.3s						
EKS2	**Erkin-Say**	**1.30**	**21**	⇑P	**Pn**	**11 32 20.0**	**-2.5**
	6.0nm,0.1s,SNR=11						
EKS2	**Erkin-Say**	**1.30**	**21**	⇑*iP*	**Pn**	**11 32 20.4**	**-2.0**
	baz=27						
EKS2				⇑*iS*	**Sg**	**11 32 38.9**	**-0.5**
	baz=27						
FRG	**Fergana**	**1.48**	**224**	P	**Pn**	**11 32 23.5**	**-1.3**
FRG				S	**Sn**	**11 32 46.2**	**+1.6**
TRKS	**Terek-Say**	**1.51**	**274**	⇑*iP*	Pn	11 32 20.4	-4.9
	baz=70						
TRKS				⇑*iS*	**Sn**	**11 32 39.0**	**-6.3**
	baz=70						
AAK	**Ala-Archa**	**1.56**	**40**	⇓P	**Pn**	**11 32 25.7**	**-0.3**
	15nm,0.2s,SNR=14						
AAK				⇓S	**Sg**	**11 32 49.2**	**+1.6**
	38nm,0.3s						
AAK	**Ala-Archa**	**1.56**	**40**	⇑*iP*	**Pn**	**11 32 25.7**	**-0.3**
	baz=45						
AAK				⇑*iS*	**Sg**	**11 32 47.9**	**+0.3**
	baz=45						
KBK	**Karagaybulak**	**1.81**	**47**	⇓P	**Pb**	**11 32 31.0**	**-0.2**
	12nm,0.2s,SNR=12						
KBK				⇓S	**Sg**	**11 32 56.9**	**+1.3**
	83nm,0.3s						
KBK	**Karagaybulak**	**1.81**	**47**	⇑*iP*	**Pb**	**11 32 30.4**	**-0.8**
	baz=51						
KBK				⇑*iS*	**Sg**	**11 32 55.9**	**+0.3**
	baz=51						
CHMS	**Chumysh**	**1.96**	**37**	⇓P	**Pb**	**11 32 33.0**	**-0.6**
	24nm,0.2s,SNR=6.4						
CHMS				⇑S	**Sg**	**11 33 00.8**	**+0.4**
	24nm,0.4s						
CHMS	**Chumysh**	**1.96**	**37**	⇑Pn	**Pb**	**11 32 33.4**	**-0.3**
	8.7nm,0.4s						
CHMS				⇓Sn	**Sg**	**11 33 01.1**	**+0.7**
	19nm,0.5s						
CHMS	**Chumysh**	**1.96**	**37**	⇑*iP*	**Pb**	**11 32 32.4**	**-1.2**
	baz=41						
CHMS				⇑*iS*	**Sg**	**11 32 59.5**	**-0.9**
	baz=41						
USP	**Ospenovka**	**2.08**	**28**	⇑P	**Pb**	**11 32 34.3**	**-1.4**
	26nm,0.3s,SNR=32						
USP				⇓S	**Sg**	**11 33 03.5**	**-0.8**
	77nm,0.4s						
USP	**Ospenovka**	**2.08**	**28**	⇑*eP*	**Pn**	**11 32 33.7**	**+0.7**
	baz=32						
USP				⇑*iS*	**Sb**	**11 33 02.0**	**+0.2**
	baz=32						
DRK	**Karamyk**	**2.21**	**208**	⇑*iP*	**Pn**	**11 32 34.9**	**-0.2**
	baz=4.0						
DRK				⇑*iS*	**Sn**	**11 33 03.9**	**+0.9**
	baz=4.0						
BTK	**Batken**	**2.25**	**233**	⇑*iP*	**Pn**	**11 32 34.2**	**-1.1**
	baz=29						
BTK				⇑*iS*	**Sn**	**11 33 02.7**	**-0.7**
	baz=29						
SGDS	**Sogindy**	**2.29**	**28**	*eP*	**Pb**	**11 32 37.9**	**-1.4**
	41nm,0.3s						
SGDS				*eS*	**Sg**	**11 33 10.4**	**-0.6**
	27nm,0.5s						
SGDS	**Sogindy**	**2.29**	**28**	Pg	**Pb**	**11 32 37.9**	**-1.4**
	41nm,0.3s						
SGDS				Lg	Lg	11 33 10.4	
	27nm,0.5s						
BOOM	**Boomskoye usch**	**2.33**	**63**	⇑*eP*	**Pb**	**11 32 38.4**	**-1.7**
	baz=65						
BOOM				⇑*iS*	**Sg**	**11 33 09.9**	**-2.5**
	baz=65						
TKM2	**Tokmak 2**	**2.34**	**50**	⇑P	**Pb**	**11 32 40.2**	**-0.2**
	24nm,0.2s,SNR=57						
TKM2	**Tokmak 2**	**2.34**	**50**	⇓Pn	**Pb**	**11 32 39.6**	**-0.7**
	18nm,0.4s						
TKM2				⇑Sn	**Sg**	**11 33 12.7**	**-0.1**
	53nm,0.8s						
TKM2	**Tokmak 2**	**2.34**	**50**	⇑*iP*	**Pn**	**11 32 38.4**	**+1.6**
	baz=53						

ISC 04 11:39:54.1±0.8, 18°3S±0.2×177°7W±0.1, h550km, n13, σ1§32/16, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.12**	**277**	P	**P**	**11 41 18.6**	**+1.6**
	25nm,0.5s,baz=11,slow=22,SNR=61						
AFI	**Afiamalu**	**7.15**	**53**	P	**P**	**11 41 43.1**	**-0.6**
	27nm,0.8s,baz=261,slow=20,SNR=2.3						
AFI				S	**S**	**11 43 11.2**	**-2.2**
	18nm,0.6s,baz=138,slow=20,SNR=1.4						
DZM	**Mont Dzumac**	**15.38**	**253**	P	**P**	**11 43 06.1**	**-1.5**
	4.0nm,0.9s,baz=109,slow=19,SNR=1.4						
STKA	**Stephens Creek**	**39.06**	**242**	P	**P**	**11 46 34.0**	**-0.1**
	2.0nm,0.7s,baz=63,slow=9.0,SNR=3.2						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**45.26**	**260**	P	**P**	**11 47 22.8**	**-0.3**
	1.5nm,0.5s,baz=98,slow=6.8,SNR=38						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**45.37**	**255**	P	**P**	**11 47 24.4**	**+0.5**
	5.6nm,0.6s,baz=88,slow=8.7,SNR=108						
ASAR				PcP	**PcP**	**11 48 52.9**	**+1.2**
	1.2nm,0.5s,baz=104,slow=3.8,SNR=15						
ASAR				S	**S**	**11 53 22.6**	**-2.6**
	0.8nm,0.9s,baz=84,slow=15,SNR=5.5						
	5.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.66**	**261**	P	**P**	**11 48 25.4**	**+0.5**
	1.5nm,0.7s,baz=95,slow=6.8						
	1.5nm,0.7s						
VNDA	**Vanda**	**60.10**	**185**	P	**P**	**11 49 07.8**	**-0.1**
	0.3nm,0.6s,baz=333,slow=15,SNR=1.5						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**85.61**	**57**	P	**P**	**11 51 36.8**	**+1.7**
	0.2nm,0.6s,baz=234,slow=7.7,SNR=2.5						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**86.12**	**13**	P	**P**	**11 51 37.1**	**+0.5**
	0.1nm,0.4s,baz=213,slow=6.5,SNR=2.0						
	0.1nm,0.4s						
ARCES	**ARCESS Array B**	**126.84**	**350**	PKP	**PKiKP**	**11 57 56.0**	**+0.6**
	1.1nm,0.9s,baz=25,slow=3.2,SNR=3.6						
BRTR	**Keskin Array B**	**145.57**	**315**	PKPbc	**PKPab**	**11 58 32.7**	**-0.6**
	1.1nm,0.7s,baz=23,slow=6.7,SNR=4.3						
GERES	**GERESS Array B**	**148.18**	**346**	PKPbc	**PKiKP**	**11 58 39.1**	**-0.5**
	0.5nm,0.5s,baz=31,slow=2.3,SNR=1.7						

*BJI **04** 11:49:43.0±0.0, 0°.20N×126°.30E, h60km, mb4.9/55, mB4.8/30, Ms4.1/8, Ms7 3.8/10*
*DJA **04** 11:49:45.8±0.1, 0°N±2°×12°6E±°, h58km±4km, M4.7/33, mB5.2/13, mb4.8/33, MLv4.8/24, Mw(mB)4.6/13*
*NEIC **04** 11:49:46±1.7, 0°.20N±0°.07×126°.28E±0°.05, h61km±7km, mb4.8/53, Error ellipse: s-maj=11.3km s-min=7.3km az=161.0*
*IDC **04** 11:49:46.3±1.4, 0°.20N×126°.29E, h70km±12km, mb4.6/30, mbtmp4.9/35, MS3.2/13, Error ellipse: s-maj=11.7km s-min=9.1km az=63.0*

ISC 04 11:49:45.3±0.4, 0°.19N±0°.04×126°27E±0°.04, h62km±3km, h63km:pP-P, n232, σ1§19/250, mb4.8/60, 19C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.24**	**62**	Pn	**Pn**	**11 50 06.7**	**0.0**
TNTI	**Ternate**	**1.24**	**62**	P	**Pn**	**11 50 06.6**	**0.0**
TNTI				S	**Sn**	**11 50 22.2**	**-0.4**
TNTI	**Ternate**	**1.24**	**62**	P	**Pn**	**11 50 06.5**	**-0.1**
LBMI	**Labuha**	**1.48**	**124**	P	**Pn**	**11 50 10.2**	**+0.3**
LBMI				S	**Sn**	**11 50 29.0**	**+0.6**
SANI	**Sanana**	**2.24**	**187**	P	**Pn**	**11 50 19.2**	**-0.9**
SANI	**Sanana**	**2.24**	**187**	P	**Pn**	**11 50 19.3**	**-0.9**
KMSI	**Cibinong**	**2.32**	**279**	P	**Pn**	**11 50 21.2**	**+0.1**
NLAI	**Namlea**	**3.51**	**166**	P	**Pn**	**11 50 37.3**	**-0.1**
SGSI	**Sangihe**	**3.55**	**348**	P	**Pn**	**11 50 38.2**	**+0.2**
LUWI	**Luwuk**	**3.70**	**251**	Pn	**Pn**	**11 50 40.1**	**0.0**
LUWI	**Luwuk**	**3.70**	**251**	P	**Pn**	**11 50 40.0**	**-0.1**
LUWI	**Luwuk**	**3.70**	**251**	P	**Pn**	**11 50 42.1**	**+2.0**
AAI	**Ambon**	**4.31**	**153**	P	**Pn**	**11 50 49.3**	**+0.9**
MRSI	**Marisa**	**4.33**	**274**	P	**Pn**	**11 50 48.0**	**-0.7**
MSAI	**Masohi**	**4.41**	**143**	P	**Pn**	**11 50 50.4**	**+0.6**
APSI	**Ampana**	**4.75**	**257**	P	**Pn**	**11 50 54.8**	**+0.4**
SWI	**Sorong**	**5.10**	**102**	P	**Pn**	**11 51 00.4**	**+1.1**
	0.6nm2µm173nm,0.6s						
SIJI	**Sorong**	**5.11**	**102**	P	**Pn**	**11 51 01.1**	**+1.7**
	83nm,0.5s,baz=295,slow=9.8,SNR=37						
SIJI				S	**Sn**	**11 51 57.0**	**-0.2**
	24nm,0.5s,baz=266,slow=23,SNR=0.9						
SIJI				LR	LR	11 53 18.9	
	comp=Z,383nm,21.1s,baz=260,slow=42						
TOLI2	**Tolitoli**	**5.56**	**279**	Pn	**Pn**	**11 51 06.1**	**+0.6**
TOLI2	**Tolitoli**	**5.56**	**279**	P	**Pn**	**11 51 06.6**	**+1.1**
DDMP	**Don Marcelino,**	**5.90**	**355**⇑	*eP*	**Pn**	**11 51 08.7**	**-1.6**
MPSI	**Mapaga**	**6.37**	**271**	P	**Pn**	**11 51 16.9**	**+0.3**
	0.4nm2µm100nm,0.6s						
SKMP	**Bagumbayan, Su**	**6.52**	**345**⇑	*eP*	**Pn**	**11 51 19.1**	**+0.4**
MATI	**Mati**	**6.71**	**360**⇑	*eP*	**Pn**	**11 51 22.7**	**+1.4**
FAKI	**Fak Fak**	**6.73**	**117**	Pn	**Pn**	**11 51 21.8**	**+0.2**
FAKI	**Fak Fak**	**6.73**	**117**	P	**Pn**	**11 51 22.0**	**+0.4**
	0.3nm94nm,1.0s						
FAKI	**Fak Fak**	**6.73**	**117**	P	**Pn**	**11 51 22.1**	**+0.4**
BBSI	**Bau Bau**	**6.74**	**213**	P	**Pn**	**11 51 24.0**	**+2.3**
	0.1nm288nm17nm,0.9s						
DAV	**Davao City (W)**	**6.87**	**354**	LR	LR	11 54 01.3	
	comp=Z,207nm,18.9s,baz=156,slow=37						
KCP	**Kidapawan**	**6.87**	**350**⇑	*eP*	**Pn**	**11 51 25.8**	**+2.2**
KCP				*i* S	**Sn**	**11 52 44.5**	**+4.1**
TTSI	**Tana Toraja**	**7.20**	**243**	P	**Pn**	**11 51 28.8**	**+0.8**
	1.5nm5µm387nm,0.6s						
CTBH	**Cotabato--PC H**	**7.27**	**344**⇑	*eP*	**Pn**	**11 51 29.2**	**+0.3**
BNSI	**Bone**	**7.66**	**233**	P	**Pn**	**11 51 35.2**	**+0.9**
	0.6nm2µm212nm,0.6s						
SPSI	**Sidrap Palu**	**7.69**	**237**	P	**Pn**	**11 51 35.7**	**+0.9**
	3.0nm11µm657nm,0.6s						
BUKP	**Musuan**	**7.73**	**351**⇑	*eP*	**Pn**	**11 51 34.3**	**-1.0**
BIPH	**Bislig**	**7.94**	**1**⇓	*eP*	**Pn**	**11 51 36.7**	**-1.5**
PAGZ	**Pagadian**	**8.13**	**339**⇑	*eP*	**Pn**	**11 51 40.5**	**-0.3**
BKSI	**Bulukumba**	**8.22**	**228**	P	**Pn**	**11 51 43.2**	**+1.2**
	1µm107nm,0.8s						
KAPI	**Kappang**	**8.31**	**231**	P	**Pn**	**11 51 45.0**	**+1.8**
	40nm,0.3s,baz=17,slow=6.3,SNR=21						
KAPI				S	**Sn**	**11 53 12.1**	**-3.6**
	43nm,0.3s,baz=196,slow=22,SNR=12						
KAPI	**Kappang**	**8.31**	**231**	Pn	**Pn**	**11 51 44.4**	**+1.1**
KAPI					**Sn**	**11 53 15.3**	**-0.4**
KAPI	**Kappang**	**8.31**	**231**	P	**Pn**	**11 51 45.2**	**+2.0**
BSSI	**Bau Bau, Buton**	**8.53**	**222**	P	**Pn**	**11 51 48.1**	**+1.8**
	43nm,0.5s						
MYLDM	**Lahad Datu**	**9.20**	**303**	Pn	**Pn**	**11 51 58.3**	**+2.9**
BKB	**Balikpapan**	**9.48**	**261**	P	**Pn**	**11 51 59.9**	**+0.7**
	102nm,0.9s						
GLSP	**General Luna,**	**9.53**	**359**⇑	*eP*	**Pn**	**11 51 57.8**	**-2.1**
TBP	**Tagbilaran**	**9.74**	**346**	*eP*	**Pn**	**11 52 01.8**	**-1.0**
BAKI	**Biak**	**9.94**	**98**	P	**Pn**	**11 52 07.6**	**+2.1**
	3µm228nm,1.5s						
MSLP	**Maasin**	**9.98**	**352**⇑	*eP*	**Pn**	**11 52 05.0**	**-1.0**
EDFI	**Ende, Flores**	**9.98**	**207**	P	**Pn**	**11 52 09.2**	**+3.0**
	18nm,0.7s						
BATI	**Baumata**	**10.65**	**194**	P	**Pn**	**11 52 17.0**	**+1.7**
	20nm,0.6s,baz=124,slow=20,SNR=1.0						
BATI	**Baumata**	**10.65**	**194**	P	**Pn**	**11 52 16.3**	**+1.1**
	45nm,1.1s						
KKM	**Kota Kinabalu**	**11.60**	**300**	Pn	**Pn**	**11 52 29.8**	**+1.6**
BBKI	**Banjar Baru**	**11.98**	**252**	P	**Pn**	**11 52 34.6**	**+1.2**
	30nm,0.7s						
SMPI	**Sarmi**	**12.63**	**100**	P	**Pn**	**11 52 43.0**	**+0.7**
	28nm,1.4s						
MTN	**Manton Dam**	**13.82**	**160**	P	**Pn**	**11 52 57.9**	**-0.5**
	baz=14,SNR=14						
MTN	**Manton Dam**	**13.82**	**160**	Pn	**Pn**	**11 52 57.5**	**-0.9**
KDU	**Kakadu**	**14.20**	**155**	P	**Pn**	**11 53 01.7**	**-1.7**
	baz=14,SNR=7.8						
KDU	**Kakadu**	**14.20**	**155**	P	**Pn**	**11 53 01.7**	**-1.7**
SBUM	**Sibu**	**14.22**	**279**	Pn	**Pn**	**11 53 03.6**	**0.0**
IGBI	**Denpasar**	**14.24**	**231**	P	**Pn**	**11 53 04.9**	**+1.0**
	104nm,0.8s						
LQP	**Lukban**	**14.60**	**342**⇓	*eP*	**Pn**	**11 53 08.5**	**-0.4**
LUBP	**Lubang**	**14.72**	**336**⇑	*eP*	**Pn**	**11 53 10.4**	**+0.2**
JAGI	**Jajag, Banyuwa**	**14.82**	**234**	P	**Pn**	**11 53 12.1**	**+0.5**
JAGI	**Jajag, Banyuwa**	**14.82**	**234**	P	**Pn**	**11 53 12.2**	**+0.6**
	70nm,1.2s						
GMJI	**Gumukmas**	**15.30**	**236**	P	**Pn**	**11 53 19.1**	**+1.5**
	54nm,1.2s						
KNRA	**Kununurra**	**15.96**	**171**	P	**Pn**	**11 53 25.9**	**-0.1**
	baz=16,SNR=14						
KNRA	**Kununurra**	**15.96**	**171**	P	**Pn**	**11 53 26.9**	**+0.8**
KNRA	**Kununurra**	**15.96**	**171**	P	**P**	**11 53 27.5**	**-1.0**
KSM	**Kuching**	**16.01**	**275**	Pn	**Pn**	**11 53 27.2**	**+0.5**
KSM				IAmb	IAmb	11 53 31.2	
	comp=Z,65nm,0.9s						
KSM	**Kuching**	**16.01**	**275**	P	**P**	**11 53 28.2**	**-0.9**
BALP	**Baler**	**16.13**	**344**⇑	*eP*	**Pn**	**11 53 26.8**	**-1.4**
NGJI	**Ngawi**	**16.57**	**243**	P	**P**	**11 53 35.2**	**-0.1**
	comp=Z,76nm,0.9s						
PWJI	**Pagerwojo**	**16.57**	**240**	P	**P**	**11 53 35.7**	**+0.4**
	comp=Z,126nm,1.1s						
SMPP	**San Manuel, Pa**	**16.79**	**341**⇑	*eP*	**Pn**	**11 53 35.8**	**-0.7**
PCJI	**Pacitan**	**17.19**	**241**	P	**Pn**	**11 53 41.1**	**-0.4**
	comp=Z,103nm,1.3s						
CAUP	**Cauayan**	**17.21**	**345**⇑	*eP*	**Pn**	**11 53 39.6**	**-2.1**
BOLP	**Bolinao**	**17.26**	**339**⇑	*eP*	**Pn**	**11 53 40.3**	**-2.0**
SAMP	**Sagada Mountai**	**17.59**	**343**⇑	*eP*	**Pn**	**11 53 46.4**	**0.0**
FITZ	**Fitzroy Crossi**	**18.18**	**182**	P	**Pn**	**11 53 53.7**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=13,slow=10,SNR=8.5						
FITZ				LR	LR	12 00 34.0	
	comp=Z,60nm,20.2s,baz=12,slow=36						
FITZ	**Fitzroy Crossi**	**18.18**	**182**	P	**Pn**	**11 53 53.8**	**+0.2**
	baz=18,SNR=9.0						
APYP	**Conner**	**18.24**	**345**⇑	*eP*	**P**	**11 53 51.5**	**-2.3**
LEM	**Lembang**	**19.87**	**249**	P	**P**	**11 54 13.0**	**+1.2**
	comp=Z,75nm,0.8s,baz=48,slow=3.6,SNR=13						
LEM	**Lembang**	**19.87**	**249**	P	**Pn**	**11 54 13.3**	**-0.6**
	comp=Z,51nm,0.8s						
CBJI	**Citeko**	**20.46**	**251**	P	Pn	11 54 20.9	+0.2
WB0	**Warramunga Arr**	**21.38**	**159**	P	**P**	**11 54 27.5**	**-0.3**
WB0				IAmb	IAmb	11 54 39.1	
	comp=Z,26nm,0.9s						
WRAB	**Tennant Creek**	**21.51**	**159**	P	**P**	**11 54 29.3**	**0.0**
WRA	**Warramunga Arr**	**21.52**	**159**	P	**P**	**11 54 29.0**	**-0.4**
	comp=Z,13nm,0.5s,baz=337,slow=11,SNR=225						
WRA				ScP	**ScP**	**12 02 00.8**	**-1.2**
	comp=Z,1.2nm,1.1s,baz=334,slow=2.7,SNR=3.0						
	comp=Z,13nm,0.5s						
WB2	**Warramunga Arr**	**21.52**	**159**	P	**P**	**11 54 29.0**	**-0.3**
	baz=22						
WB2	**Warramunga Arr**	**21.52**	**159**	P	**P**	**11 54 29.2**	**-0.2**
WB2				IAmb	IAmb	11 54 33.3	
	comp=Z,42nm,1.1s						
WR0	**Warramunga Arr**	**21.61**	**158**	P	**P**	**11 54 30.1**	**-0.2**
COEN	**Coen**	**21.86**	**131**	P	**P**	**11 54 32.7**	**-0.4**
	baz=22,SNR=8.9						
COEN	**Coen**	**21.86**	**131**	P	**P**	**11 54 32.0**	**-1.1**
COEN	**Coen**	**21.86**	**131**	P	**P**	**11 54 32.9**	**-0.2**
MBWA	**Marble Bar**	**22.16**	**196**	P	**P**	**11 54 36.2**	**0.0**
PSA00	**Pilbara Seismi**	**22.52**	**196**	P	**P**	**11 54 40.0**	**-0.1**
GUMO	**Guam**	**22.73**	**53**	P	**P**	**11 54 41.5**	**-0.9**
	comp=Z,27nm,0.5s,baz=55,slow=14,SNR=1.2						
GUMO				LR	LR	12 03 10.9	
	comp=Z,22nm,20.7s,baz=276,slow=35						
	comp=Z,27nm,0.5s						
PMG	**Port Moresby**	**22.88**	**115**	P	**P**	**11 54 44.5**	**+0.6**
	comp=Z,9.6nm,0.6s,baz=203,slow=16,SNR=2.1						
PMG				LR	LR	12 04 49.4	
	comp=Z,126nm,20.4s,baz=252,slow=40						
	comp=Z,9.6nm,0.6s						
YULB	**Yu-li**	**23.56**	**349**	P	**P**	**11 54 45.9**	**-4.5**
YULB				IAmb	IAmb	11 54 55.7	
	comp=Z,20nm,0.8s						
SSLB	**Suanglung**	**24.02**	**348**	P	**P**	**11 54 53.0**	**-1.5**
YOJ	**Yonaguni jima**	**24.33**	**353**	P	**P**	**11 54 56.2**	**-1.1**
YOJ	**Yonaguni jima**	**24.33**	**353**	P	**P**	**11 54 58.5**	**+1.2**
QIS	**Mount Isa**	**24.41**	**148**	P	**P**	**11 54 59.3**	**+1.2**
	baz=24,SNR=27						
QIS	**Mount Isa**	**24.41**	**148**	P	**P**	**11 54 59.5**	**+1.4**
YHNB	**Yeheng**	**24.79**	**349**	P	**P**	**11 55 00.3**	**-1.3**
AS31	**Alice Springs**	**24.85**	**163**	P	**P**	**11 55 02.5**	**+0.3**
AS31				IAmb	IAmb	11 55 05.0	
	comp=Z,11nm,0.4s						
ASAR	**Alice Springs**	**24.85**	**163**	P	**P**	**11 55 02.5**	**+0.4**
	comp=Z,11nm,0.4s,baz=345,slow=12,SNR=303						
ASAR				PcP	**PcP**	**11 58 37.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=356,slow=2.8,SNR=2.1						
ASAR				ScP	**ScP**	**12 02 10.1**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=343,slow=2.9,SNR=4.0						
	comp=Z,11nm,0.4s						
ASAR	**Alice Springs**	**24.85**	**163**	P	**P**	**11 55 03.0**	**+0.8**
WRKA	**Warakurna**	**25.16**	**176**	P	**P**	**11 55 05.9**	**+0.9**
	baz=25,SNR=18						
WRKA	**Warakurna**	**25.16**	**176**	P	**P**	**11 55 05.8**	**+0.9**
MTSU	**Mount Surprise**	**25.43**	**137**	P	**P**	**11 55 08.3**	**+0.8**
	baz=26,SNR=8.4						
KRVT	**Keravat (AS076**	**26.12**	**100**	P	**P**	**11 55 14.3**	**+0.5**
	comp=Z,54nm,0.9s,baz=288,slow=11,SNR=12						
	comp=Z,54nm,0.9s						
RABL	**Rabaul**	**26.24**	**100**	P	**P**	**11 55 15.2**	**+0.3**
RABL	**Rabaul**	**26.24**	**100**	P	**P**	**11 55 14.7**	**-0.2**
JOW	**Kunigami**	**26.56**	**4**	LR	LR	12 04 59.2	
	comp=Z,29nm,21.5s,baz=291,slow=34						
JOW	**Kunigami**	**26.56**	**4**	P	**P**	**11 55 18.8**	**+1.3**
MEEK	**Meekatharra**	**27.67**	**195**	P	**P**	**11 55 27.7**	**+0.1**
	baz=26,SNR=6.7						
CTAO	**Charters Tower**	**28.10**	**137**	P	**P**	**11 55 31.5**	**+0.1**
MORW	**Morawa**	**30.69**	**198**	P	**P**	**11 55 55.2**	**+0.9**
MORW				IAmb	IAmb	11 56 18.2	
	comp=Z,19nm,1.2s						
JCJ	**Chichijima**	**30.82**	**29**	P	**P**	**11 55 54.2**	**-1.3**
FORT	**Forrest**	**30.85**	**177**	P	**P**	**11 55 56.1**	**+0.4**
	baz=31,SNR=11						
CMAR	**Chiang Mai Arr**	**32.40**	**306**	P	**P**	**11 56 09.4**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=137,slow=6.8,SNR=1.2						
CMAR				PcP	**PcP**	**11 58 56.2**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=140,slow=1.5,SNR=5.7						
CMAR				ScP	**ScP**	**12 02 32.9**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=152,slow=4.1,SNR=2.6						
CMAR				LR	LR	12 10 32.7	
	comp=Z,19nm,19.2s,baz=120,slow=38						
NJ2	**Nanjing**	**32.45**	**348**	*eP*	**P**	**11 56 14.1**	**+4.4**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JNU	**Nakatsue**	**33.04**	**7**	P	**P**	**11 56 14.9**	**0.0**
RK1H	**Rockhampton Ha**	**33.22**	**137**	P	**P**	**11 56 17.4**	**+0.8**
ENH	**Enshi**	**33.91**	**333**	P	**P**	**11 56 20.6**	**-1.9**
NWAO	**Narrogin (SRO)**	**34.02**	**194**	P	**P**	**11 56 24.1**	**+0.6**
	baz=314,slow=22,SNR=1.5						
BBOO	**Buckleboo**	**34.10**	**165**	P	**P**	**11 56 24.6**	**+0.5**
	baz=34,SNR=12						
HNR	**Honiara**	**34.87**	**107**	P	**P**	**11 56 30.4**	**-0.6**
	comp=Z,58nm,0.7s,baz=360,slow=4.8,SNR=4.9						
	comp=Z,58nm,0.7s						
STKA	**Stephens Creek**	**35.04**	**157**	P	**P**	**11 56 32.0**	**-0.2**
	comp=Z,9nm,0.4s,baz=333,slow=7.1,SNR=14						
	comp=Z,2.9nm,0.4s						
STKA	**Stephens Creek**	**35.04**	**157**	P	**P**	**11 56 32.9**	**+0.6**
	baz=35,SNR=12						
STKA	**Stephens Creek**	**35.04**	**157**	P	**P**	**11 56 33.0**	**+0.8**
JHS	**Saijyo**	**35.22**	**10**	P	**P**	**11 56 33.9**	**+0.2**
PZH	**PanZhiHua**	**35.24**	**320**	P	**P**	**11 56 36.4**	**+2.2**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,70nm,4.3s						
HTT	**Hallett**	**35.50**	**162**	P	**P**	**11 56 36.8**	**+0.5**
	baz=36,SNR=3.4						
TJN	**Taejon**	**36.02**	**2**	P	**P**	**11 56 41.1**	**+0.6**
TJN	**Taejon**	**36.02**	**2**	P	**P**	**11 56 41.4**	**+0.9**
INU	**Inuyama**	**36.39**	**15**	P	**P**	**11 56 43.8**	**+0.1**
INU	**Inuyama**	**36.39**	**15**	P	**P**	**11 56 43.8**	**+0.1**
INU				pP	**pP**	**11 56 58.4**	**-0.1**
TIA	**Tai'an**	**36.83**	**348**	P	**P**	**11 56 47.6**	**+0.1**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSRS	**Korea Array**	**37.11**	**2**	P	**P**	**11 56 50.5**	**+0.8**
	comp=Z,21nm,0.7s,baz=180,slow=9.9,SNR=153						
KSRS				ScP	**ScP**	**12 02 50.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=186,slow=4.9,SNR=4.6						
KSRS				LR	LR	12 12 23.3	
	comp=Z,16nm,21.3s,baz=180,slow=37						
	comp=Z,21nm,0.7s						
XAN	**Xi'an**	**37.39**	**336**	P	**P**	**11 56 51.0**	**-1.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**37.39**	**336**	P	**P**	**11 56 51.0**	**-1.4**
XAN				x	x	11 57 00.8	
MJAR	**Matsushiro Arr**	**37.83**	**16**	P	**P**	**11 56 53.2**	**-2.8**
	comp=Z,9.2nm,0.6s,baz=178,slow=9.0,SNR=38						
MAJO	**Matsushiro**	**37.83**	**16**	P	**P**	**11 56 54.6**	**-1.4**
MAJO	**Matsushiro**	**37.83**	**16**	P	**P**	**11 56 55.2**	**-0.8**
MAJO	**Matsushiro**	**37.83**	**16**	P	**P**	**11 56 53.1**	**-2.8**
MAJO				pP	**pP**	**11 57 11.2**	**+0.4**
SEHB	**SEOHWA**	**37.94**	**3**	IAmb	IAmb	11 56 59.1	
	comp=Z,14nm,1.0s						
HNS	**HongShan**	**38.53**	**345**	⇑P	**P**	**11 57 01.8**	**0.0**
HNS				pmax	pmax		
	comp=Z,15nm,0.9s						
DL2	**Dalian**	**38.76**	**354**	P	**P**	**11 57 04.5**	**+0.8**
ARMA	**Armidale**	**38.84**	**144**	P	**P**	**11 57 06.3**	**+1.6**
	baz=39,SNR=6.4						
JSD	**Sado**	**39.25**	**15**	P	**P**	**11 57 06.9**	**-0.9**
ARPS	**Mount Arapiles**	**39.51**	**160**	P	**P**	**11 57 11.7**	**+1.6**
	baz=40,SNR=13						
BJI	**Beijing**	**40.72**	**348**	P	**P**	**11 57 20.1**	**+0.2**
BJI				sP	**sP**	**11 57 42.5**	**+0.6**
BJI				pmax	pmax		
	comp=Z,43nm,0.7s						
HHC	**Hu-ho-hao-te**	**42.62**	**343**	*eP*	**P**	**11 57 38.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC				pmax	pmax		
	comp=Z,91nm,4.2s						
BTO	**Baotou**	**42.85**	**342**	*eP*	P	11 57 42.8	+5.3
USA0B	**Ussuriysk Arra**	**44.11**	**6**	P	**P**	**11 57 48.1**	**+0.7**
USA0B				IAmb	IAmb	11 57 48.8	
	comp=Z,11nm,0.6s						
USRK	**Ussuriysk Ar.**	**44.11**	**6**	P	**P**	**11 57 48.0**	**+0.5**
	comp=Z,36nm,0.6s,baz=184,slow=6.5,SNR=76						
	comp=Z,36nm,0.6s						
USRK	**Ussuriysk Ar.**	**44.11**	**6**	P	**P**	**11 57 48.2**	**+0.7**
MDJ	**Mudanjiang**	**44.33**	**3**	P	**P**	**11 57 50.1**	**+0.9**
MDJ				S	**S**	**12 04 23.2**	**+4.3**
MDJ				pmax	pmax		
	comp=Z,38nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,80nm,4.8s						
MDJ				LR	LR		
	comp=Z,65nm,5.5s						
MDJ				LR	LR		
	comp=Z,66nm,4.6s						
MDJ				LR	LR		
	comp=Z,130nm,10.4s						
XLT	**XiLinHaoTe**	**44.46**	**349**	*eP*	**P**	**11 57 50.7**	**+0.3**
XLT				pP	pP	11 58 05.5	-0.1
XLT				sP	sP	11 58 14.4	+1.9
XLT				PP	**PP**	**11 59 34.3**	**-0.9**
XLT				S	**S**	**12 04 22.6**	**+1.7**
XLT				sS	sS	12 04 43.7	-2.8
XLT				pmax	pmax		
	comp=Z,76nm,0.7s						
XLT				pmax	pmax		
	comp=Z,95nm,4.0s						
DZM	**Mont Dzumac**	**44.97**	**122**	P	**P**	**11 57 54.8**	**0.0**
	comp=Z,2.3nm,0.5s,baz=327,slow=21,SNR=5.9						
	comp=Z,2.3nm,0.5s						
BNX	**BinXian**	**45.37**	**1**	⇑P	**P**	**11 57 57.2**	**-0.2**
BNX				pmax	pmax		
	comp=Z,11nm,0.8s						
BNX				pmax	pmax		
	comp=Z,49nm,3.5s						
GTA	**Gaotai**	**45.92**	**331**	*eP*	**P**	**11 58 01.6**	**-0.5**
GTA				pP	pP	11 58 16.8	-0.5
GTA				sP	sP	11 58 22.9	-1.2
GTA				PcP	**PcP**	**11 59 39.9**	**+1.7**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,99nm,7.7s						
GTA				LR	LR		
	comp=Z,59nm,15.6s						
GTA				LR	LR		
	comp=Z,56nm,16.4s						
GTA				LR	LR		
	comp=Z,67nm,16.4s						
GOMU	**GeErMu**	**46.21**	**324**	P	**P**	**11 58 04.3**	**-0.4**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,46nm,4.6s						
HYBB	**Hyderabad (bro**	**49.96**	**293**	*eP*	**P**	**11 58 32.6**	**-1.0**
ULN	**Ulaanbaatar**	**50.34**	**343**	P	**P**	**11 58 36.8**	**+0.8**
SONM	**Songino Array**	**50.50**	**343**	P	**P**	**11 58 37.6**	**+0.3**
	comp=Z,9.1nm,0.5s,baz=161,slow=8.0,S

comp=Z,30nm,0.6s
ARU Arti 77.67 328 P P 12 01 34.9 -0.2
comp=Z,14nm,0.7s,baz=87,slow=1.2,SNR=19
ARU LR LR 12 36 07.0
comp=Z,19nm,21.7s,baz=84,slow=36
comp=Z,14nm,0.7s
ARU Arti 77.67 328 P P 12 01 34.9 -0.2
VNDA Vanda 80.00 173 P P 12 01 48.6 +1.1
comp=Z,1.3nm,0.7s,baz=322,slow=7.6,SNR=5.0
VNDA LR LR 12 37 14.6
comp=Z,29nm,18.3s,baz=351,slow=36
comp=Z,1.3nm,0.7s
MAW Mawson 80.30 200 P P 12 01 49.9 +0.7
comp=Z,2.0nm,0.7s,baz=16,slow=5.7,SNR=4.4
MAW LR LR 12 33 57.0
comp=Z,25nm,21.3s,baz=65,slow=33
comp=Z,2.0nm,0.7s
RAYN Ar Rayn 81.45 294 P P 12 01 56.4 0.0
RAYN IAmb IAmb 12 01 58.1
comp=Z,13nm,0.9s
KIRV Kirov 82.99 329 P P 12 02 04.0 +0.5
comp=Z,16nm,0.4s,baz=36,slow=4.7,SNR=6.4
comp=Z,16nm,0.4s
KBZ Khabaz 85.07 314 P P 12 02 14.1 -0.4
comp=Z,4.1nm,0.7s,baz=81,slow=3.7,SNR=11
comp=Z,4.1nm,0.7s
KLMR Klimovskoe 88.24 331 *e*P **P 12 02 27.9 -1.7**
KLMR AMP 12 02 30.3
comp=Z,13nm,1.2s
KMBO Kilima Mbogo 89.02 269 P P 12 02 35.0 +0.3
comp=Z,1.0nm,0.5s,baz=20,slow=5.7,SNR=3.6
KMBO LR LR 12 41 17.2
comp=Z,20nm,18.4s,baz=91,slow=35
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 91.91 310 P P 12 02 45.7 -1.7
comp=Z,1.0nm,0.6s,baz=114,slow=6.1,SNR=5.0
comp=Z,1.0nm,0.6s
M30M Minto, Yukon 93.04 27 IAmb IAmb 12 02 54.7
comp=Z,5.5nm,1.2s
ARCES ARCESS Array B 93.59 340 P P 12 02 53.6 -0.7
comp=Z,3.4nm,0.6s,baz=81,slow=6.6,SNR=29
comp=Z,3.4nm,0.6s
INK Inuvik 93.60 22 P P 12 02 53.0 -1.3
comp=Z,2.0nm,0.8s,baz=264,slow=5.5,SNR=4.6
comp=Z,2.0nm,0.8s
INK Inuvik 93.60 22 P P 12 02 54.0 -0.4
SPITS Spitsbergen Ar 93.84 349 P P 12 02 54.0 -1.3
comp=Z,2.6nm,0.7s,baz=90,slow=10,SNR=4.3
comp=Z,2.6nm,0.7s
FINES FINESS Array B 94.71 332 P P 12 02 57.9 -1.7
comp=Z,1.7nm,0.7s,baz=114,slow=9.4,SNR=4.7
FINES LR LR 12 50 42.8
comp=Z,18nm,18.2s,baz=27,slow=39
comp=Z,1.7nm,0.7s
DLBC Dease Lake 97.00 31 P P 12 03 08.8 -1.3
comp=Z,0.7nm,0.3s,baz=343,slow=6.9,SNR=2.8
comp=Z,0.7nm,0.3s
HFS Hagfors 100.91 332 P Pdif 12 03 26.1 -1.4
comp=Z,1.2nm,0.6s,baz=121,slow=11,SNR=4.1
NB2 NORSAR Subarra101.72 333 P Pdif 12 03 29.5 -1.7
comp=Z,0.8nm,0.6s,baz=68,slow=4.6
NOA NORSAR Array B101.72 333 P Pdif 12 03 29.6 -1.6
comp=Z,0.7nm,0.6s,baz=68,slow=4.5,SNR=4.9
TORD Torodi Ar. Bea 123.50 286 PKP PKiKP 12 08 37.1 +0.2
comp=Z,2.8nm,0.6s,baz=61,slow=1.8,SNR=18
TXAR Lajitas Array 124.09 54 PKP PKPdf 12 08 37.3 -0.3
comp=Z,0.3nm,0.6s,baz=296,slow=0.7,SNR=5.3
SCHQ Schefferville 124.11 9 PKP PKiKP 12 08 37.1 +0.1
comp=Z,1.9nm,0.6s,baz=4.3,slow=1.6,SNR=6.5
DBIC Dimbokro 130.76 279 PKP PKPdf 12 08 49.1 -1.4
comp=Z,2.5nm,0.6s,baz=100,slow=17,SNR=1.7

NEIC ***04*** *11:59:59.7±1.1,57.84N±0.02×154.83W±0.06, h64km±12km, Error ellipse: s-maj=5.3km s-min=1.5km az=128.0*
ANF ***04*** *11:59:59.2±0.2,57.85N×154.84W,h75km±4km, ML3.9/44, Error ellipse: s-maj=1.9km s-min=1.6km az=138.0*
AEIC ***04*** *12:00:00.1.2,57.84N±0.03×154.86W±0.07, h64km±7km, ML3.6,ML3.8/70(NEIC), Error ellipse: s-maj=5.1km s-min=4.8km az=111.0*
IDC ***04*** *12:00:02.1±4.7,57.58N×152.53W, h0km, mb3.5/3, mbtmp3.6/6, ML3.6/3, MS3.1/1, Error ellipse: s-maj=86.6km s-min=16.7km az=83.0*
ISC 04 11:59:59.2±0.8, 57.86N±0.03×154.84W±0.03, h73km±8km, n338, σ0°79/343, mb3.3/3, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KABR	**Katmai Barrier**	**0.28**	**346**		**Pn**	**12 00 10.6**	**-0.1**
KJL	**Kejulik**	**0.44**	**297**		**Pn**	**12 00 11.8**	**0.0**
ACHA	**Angle Creek He**	**0.44**	**324**		**Pn**	**12 00 12.0**	**+0.2**
ACHA					**Sn**	**12 00 20.6**	**-0.5**
KCG	**Knife Ck. Glac**	**0.48**	**343**		**Pn**	**12 00 12.2**	**+0.1**
KAHG	**Katmai Hook Gl**	**0.66**	**14**		**Pn**	**12 00 14.4**	**+0.4**
KELA	**Mount Kelaz**	**0.76**	**321**		**Pn**	**12 00 14.8**	**-0.3**
KAPH	**Katmai Pasha**	**0.79**	**19**		**Pn**	**12 00 15.7**	**+0.3**
KAPH					**Sn**	**12 00 28.2**	**+0.9**
KAHC	**Katmai Hardscr**	**0.80**	**354**		**Pn**	**12 00 15.6**	**0.0**
Q18K	**Katmai Hardscr** baz=174	**0.80**	**354**	P	**Pn**	**12 00 15.4**	**-0.2**
Q18K				S	**Sn**	**12 00 27.7**	**0.0**
baz=174							
R17K	**Ugashik Creek**	**0.86**	**256**		**Pn**	**12 00 16.2**	**+0.1**
R17K					**Sn**	**12 00 29.3**	**+0.6**
R17K	**Ugashik Creek** baz=75,SNR=215	**0.86**	**256**	P	**Pn**	**12 00 16.5**	**+0.4**
R17K				S	**Sn**	**12 00 28.9**	**+0.3**
baz=75							
OHAK	**Old Harbor**	**1.05**	**126**		**Pn**	**12 00 18.3**	**-0.2**
OHAK	**Old Harbor**	**1.05**	**126**		**Sn**	**12 00 33.0**	**+0.2**
OHAK	**Old Harbor** baz=307,SNR=214	**1.05**	**126**	P	**Pn**	**12 00 18.3**	**-0.2**
OHAK				S	**Sn**	**12 00 32.6**	**-0.2**
baz=307							
Q19K	**Cape Douglas,**	**1.25**	**30**		**Pn**	**12 00 21.5**	**+0.5**
Q19K	**Cape Douglas,** comp=E,2μm,0.8s	**1.25**	**30**	IAML		12 00 42.0	
Q19K				IAML		12 00 42.3	
comp=N,2μm,0.8s							
Q19K	**Cape Douglas,** baz=211,SNR=32	**1.25**	**30**	P	**Pn**	**12 00 21.2**	**+0.2**
Q19K				S	**Sn**	**12 00 37.9**	**+0.6**
baz=211							
Q16K	**King Salmon**	**1.26**	**311**		**Pn**	**12 00 21.2**	**+0.1**
Q16K					**Sn**	**12 00 37.5**	**0.0**
Q16K	**King Salmon** baz=131,SNR=40	**1.26**	**311**	P	**Pn**	**12 00 21.3**	**+0.1**
Q16K				S	**Sn**	**12 00 37.6**	**0.0**
baz=131							
SII	**Sitkinak Islan**	**1.35**	**164**		**Pn**	**12 00 22.2**	**-0.1**
SII	**Sitkinak Islan** comp=N,2μm,0.5s	**1.35**	**164**	IAML		12 00 47.5	
SII	**Sitkinak Islan** baz=344,SNR=45	**1.35**	**164**	P	**Pn**	**12 00 22.2**	**-0.1**
SII				S	**Sn**	**12 00 39.3**	**-0.3**
baz=344							
R16K	**Pilot Point**	**1.49**	**260**		**Pn**	**12 00 24.2**	**+0.1**
R16K					**Sn**	**12 00 43.0**	**0.0**
R16K	**Pilot Point** baz=78	**1.49**	**260**	P	**Pn**	**12 00 24.2**	**+0.1**
R16K				S	**Sn**	**12 00 42.9**	**0.0**
baz=78							
Q20K	**Shuyak Island** baz=241,SNR=26	**1.50**	**59**	P	**Pn**	**12 00 25.0**	**+0.8**
Q20K				S	**Sn**	**12 00 43.8**	**+0.7**
baz=241							
SYI	**Shuyak Island**	**1.50**	**59**		**Pn**	**12 00 25.0**	**+0.8**
P18K	**Big Mountain,**	**1.56**	**353**		**Pn**	**12 00 24.9**	**-0.1**
P18K					**Sn**	**12 00 44.0**	**-0.5**
P18K	**Big Mountain,** comp=N,747nm,0.7s	**1.56**	**353**	IAML		12 00 44.8	
P18K	**Big Mountain,** baz=173,SNR=30	**1.56**	**353**	P	**Pn**	**12 00 24.9**	**-0.1**
P18K				S	**Sn**	**12 00 44.0**	**-0.5**
baz=173							
P17K	**Kvichak River**	**1.58**	**329**		**Pn**	**12 00 25.7**	**+0.4**
P17K	**Kvichak River** baz=148,SNR=147	**1.58**	**329**	P	**Pn**	**12 00 25.7**	**+0.4**
P17K				S	**Sn**	**12 00 45.3**	**+0.2**
baz=148							
AUCH	**Augustine Cone**	**1.68**	**25**		**Pn**	**12 00 27.9**	**+1.2**
AUQ	**Augustine Qik'**	**1.68**	**26**		**Pn**	**12 00 27.9**	**+1.3**
AUH	**Augustine H**	**1.68**	**25**		**Pn**	**12 00 27.9**	**+1.2**
OPT	**Oil Point**	**1.99**	**24**		**Pn**	**12 00 31.9**	**+1.1**
O18K	**Koktuh Hills**	**2.01**	**355**		**Pn**	**12 00 31.4**	**+0.3**
O18K	**Koktuh Hills** comp=N,882nm,0.7s	**2.01**	**355**	IAML		12 00 56.3	
O18K	**Koktuh Hills** baz=175,SNR=63	**2.01**	**355**	P	**Pn**	**12 00 31.4**	**+0.3**
O18K				S	**Sn**	**12 00 55.3**	**-0.1**
baz=175							
P16K	**Nushagak River**	**2.03**	**307**		**Pn**	**12 00 32.0**	**+0.7**
P16K	**Nushagak River** baz=124	**2.03**	**307**	P	**Pn**	**12 00 31.8**	**+0.5**
P16K				S	**Sn**	**12 00 56.2**	**+0.5**
baz=124							
CHIR	**Chirikof Islan**	**2.08**	**192**		**Pn**	**12 00 31.7**	**-0.3**
CHIR	**Chirikof Islan** comp=N,778nm,0.8s	**2.08**	**192**	IAML		12 01 09.8	
CHIR				IAML		12 01 10.8	
comp=E,652nm,0.7s							
CHIR	**Chirikof Islan** baz=11	**2.08**	**192**	P	**Pn**	**12 00 31.5**	**-0.5**
CHIR				S	**Sn**	**12 00 56.1**	**-0.9**
baz=11							
ANPB	**Aniakchak Plen**	**2.14**	**242**		**Pn**	**12 00 33.8**	**+1.0**
O17K	**Koliganek Bris**	**2.25**	**330**		**Pn**	**12 00 34.5**	**+0.2**
O17K	**Koliganek Bris** baz=148,SNR=55	**2.25**	**330**	P	**Pn**	**12 00 34.5**	**+0.2**
O17K				S	**Sn**	**12 01 01.0**	**-0.1**
baz=148							
ILSW	**Iliamna Southw**	**2.31**	**22**		**Pn**	**12 00 36.1**	**+0.9**
O19K	**Port Alsworth**	**2.36**	**6**		**Pn**	**12 00 36.2**	**+0.4**
O19K	**Port Alsworth** comp=N,549nm,0.5s	**2.36**	**6**	IAML		12 01 17.5	
O19K				IAML		12 01 23.1	
comp=E,539nm,0.5s							
O19K	**Port Alsworth** baz=187,SNR=22	**2.36**	**6**	P	**Pn**	**12 00 36.2**	**+0.4**
O19K				S	**Sn**	**12 01 03.9**	**+0.2**
baz=187							
IVE	**Iliamna Volcan**	**2.37**	**23**		**Pn**	**12 00 36.7**	**+0.8**
O16K	**Kokwok River B**	**2.43**	**317**		**Pn**	**12 00 36.9**	**+0.2**
O16K	**Kokwok River B** baz=135,SNR=27	**2.43**	**317**	P	**Pn**	**12 00 36.9**	**+0.2**
O16K				S	**Sn**	**12 01 05.0**	**-0.4**
baz=135							
HOM	**Homer**	**2.46**	**41**		**Pn**	**12 00 38.5**	**+1.4**
HOM	**Homer** baz=224	**2.46**	**41**	P	**Pn**	**12 00 38.4**	**+1.3**
HOM				S	**Sn**	**12 01 07.3**	**+1.3**
baz=224							
CHGN	**Chignik**	**2.50**	**233**	Pn	**Pn**	**12 00 38.0**	**+0.4**
CHGN				IAML		12 01 10.0	
comp=E,451nm,0.2s							
CHGN	**Chignik** baz=50	**2.50**	**233**	P	**Pn**	**12 00 38.0**	**+0.4**
O20K	**Slope Mountain**	**2.51**	**26**		**Pn**	**12 00 39.0**	**+1.2**
O20K	**Slope Mountain** baz=208,SNR=38	**2.51**	**26**	P	**Pn**	**12 00 39.0**	**+1.2**
O20K				S	**Sn**	**12 01 09.0**	**+1.6**
baz=208							
CNPM	**China Poot**	**2.52**	**47**		**Pn**	**12 00 38.8**	**+0.8**
CNPM	**China Poot** comp=E,515nm,0.8s	**2.52**	**47**	IAML		12 01 15.5	
CNPM				IAML		12 01 16.1	
comp=N,494nm,0.7s							
RED	**Redoubt Volcan**	**2.78**	**22**		**Pn**	**12 00 42.6**	**+1.0**
BRLK	**Bradley Lake**	**2.81**	**45**		**Pn**	**12 00 42.3**	**+0.5**
BRLK	**Bradley Lake** comp=N,309nm,0.5s	**2.81**	**45**	IAML		12 01 21.6	
BRLK				IAML		12 01 22.3	
comp=E,335nm,0.7s							
RSO	**Redoubt South**	**2.83**	**21**		**Pn**	**12 00 43.4**	**+1.1**
RDWB	**Redoubt West**	**2.83**	**20**		**Pn**	**12 00 43.3**	**+1.0**
BRSE	**Bradley Lake S**	**2.85**	**47**		**Pn**	**12 00 42.6**	**+0.2**
BRSE	**Bradley Lake S** baz=230,SNR=6.1	**2.85**	**47**	P	**Pn**	**12 00 42.6**	**+0.2**
BRSE				S	**Sn**	**12 01 14.0**	**-1.7**
baz=230							
VNHG	**Veniaminof 1**	**2.87**	**237**		**Pn**	**12 00 43.8**	**+1.0**
N18K	**Kilae Creek**	**2.88**	**350**		**Pn**	**12 00 43.2**	**+0.4**
N18K	**Kilae Creek** baz=169,SNR=23	**2.88**	**350**	P	**Pn**	**12 00 43.3**	**+0.4**
N18K				S	**Sn**	**12 01 16.6**	**+0.2**
baz=169							
NCT	**North Crescent**	**2.89**	**19**		**Pn**	**12 00 44.1**	**+1.1**
RDJH	**Redoubt Jeurge**	**2.94**	**20**		**Pn**	**12 00 44.8**	**+1.2**
DFR	**Drift River**	**2.96**	**21**		**Pn**	**12 00 45.1**	**+1.1**
N19K	**Bonanza Creek**	**2.97**	**3**		**Pn**	**12 00 45.0**	**+0.9**
N19K	**Bonanza Creek** baz=184,SNR=50	**2.97**	**3**	P	**Pn**	**12 00 45.0**	**+0.9**
N19K				S	**Sn**	**12 01 18.4**	**-0.3**
baz=184							
SVW2	**Sparrevohn**	**3.27**	**354**		**Pn**	**12 00 48.5**	**+0.4**
N16K	**Nishlik Lake**	**3.31**	**324**		**Pn**	**12 00 49.5**	**+0.8**
N16K	**Nishlik Lake** baz=141,SNR=47	**3.31**	**324**	P	**Pn**	**12 00 49.5**	**+0.8**
N16K				S	**Sn**	**12 01 27.1**	**+0.2**
baz=141							
SLKM	**Skilak Lake**	**3.57**	**40**		**Pn**	**12 00 52.7**	**+0.5**
CKL	**Chakachamna La**	**3.59**	**20**		**Pn**	**12 00 53.3**	**+0.8**
SEW	**Seward**	**3.59**	**49**		**Pn**	**12 00 53.1**	**+0.7**
SEW	**Seward** baz=233,SNR=5.8	**3.59**	**49**	P	**Pn**	**12 00 52.8**	**+0.4**
SPCR	**Spurr Chakacha**	**3.61**	**21**		**Pn**	**12 00 54.5**	**+1.7**
SPCR	**Spurr Chakacha** baz=203,SNR=25	**3.61**	**21**	P	**Pn**	**12 00 54.1**	**+1.3**
SPWE	**Spurr West**	**3.62**	**18**		**Pn**	**12 00 54.8**	**+1.8**
SPU	**Mount Spurr**	**3.63**	**22**		**Pn**	**12 00 54.0**	**+1.0**
O22K	**Cooper Landing**	**3.73**	**43**		**Pn**	**12 00 58.4**	**+4.1**
SPCG	**Spurr Capps Gl**	**3.73**	**21**		**Pn**	**12 00 55.6**	**+1.1**
STLK	**Strandline Lak**	**3.96**	**21**		**Pn**	**12 00 58.5**	**+1.0**
SDPT	**Sand Point**	**4.00**	**233**		**Pn**	**12 00 58.6**	**+0.7**
SDPT	**Sand Point** comp=E,120nm,0.6s	**4.00**	**233**	IAML		12 01 48.2	
SDPT				IAML		12 01 57.6	
comp=N,123nm,0.6s							
SDPT	**Sand Point** baz=49	**4.00**	**233**	P	**Pn**	**12 00 58.7**	**+0.7**
CHNA	**Chernabura Isl** baz=39	**4.02**	**223**	S	**Sn**	**12 01 42.6**	**-1.5**
CNBA	**Chernabura Isl**	**4.03**	**223**		**Pn**	**12 00 58.3**	**-0.1**
CNBA	**Chernabura Isl** comp=E,96nm,0.9s	**4.03**	**223**	IAML		12 01 59.6	
CNBA				IAML		12 02 02.0	
comp=N,80nm,0.5s							
M19K	**Big River Lodg**	**4.07**	**3**		**Pn**	**12 00 59.6**	**+0.7**
M19K	**Big River Lodg** baz=184	**4.07**	**3**	P	**Pn**	**12 00 59.7**	**+0.7**
M20K	**Styx River**	**4.13**	**11**		**Pn**	**12 01 01.4**	**+1.5**
M20K	**Styx River** baz=193,SNR=108	**4.13**	**11**	P	**Pn**	**12 01 01.2**	**+1.4**
RC01	**Rabbit Creek A**	**4.16**	**37**		**Pn**	**12 01 01.1**	**+0.9**
RC01	**Rabbit Creek A** comp=E,121nm,0.4s	**4.16**	**37**	IAML		12 01 48.9	
RC01				IAML		12 02 00.6	
comp=N,90nm,0.6s							
RC01	**Rabbit Creek A** baz=221,SNR=14	**4.16**	**37**	P	**Pn**	**12 01 00.8**	**+0.6**
SUA	**Susitna One**	**4.17**	**28**		**Pn**	**12 01 01.2**	**+0.7**
SUA	**Susitna One** comp=E,133nm,1.0s	**4.17**	**28**	IAML		12 01 56.8	
SUA				IAML		12 01 59.2	
comp=N,86nm,0.8s							
SUA	**Susitna One** baz=212	**4.17**	**28**	P	**Pn**	**12 01 01.3**	**+0.8**
L19K	**White Mountain**	**4.34**	**360**		**Pn**	**12 01 03.5**	**+0.8**
L19K	**White Mountain** comp=N,63nm,0.9s	**4.34**	**360**	IAML		12 01 53.3	
L19K	**White Mountain** baz=180,SNR=43	**4.34**	**360**	P	**Pn**	**12 01 03.5**	**+0.8**
P23K	**Montague Islan**	**4.41**	**58**		**Pn**	**12 01 03.3**	**-0.3**
P23K	**Montague Islan** baz=244	**4.41**	**58**	P	**Pn**	**12 01 03.4**	**-0.3**
PWL	**Port Wells**	**4.49**	**45**		**Pn**	**12 01 04.5**	**-0.2**
PWL	**Port Wells** comp=E,106nm,0.5s	**4.49**	**45**	IAML		12 01 55.6	
PWL	**Port Wells** baz=231,SNR=8.6	**4.49**	**45**	P	**Pn**	**12 01 04.5**	**-0.2**
S12K	**Black Hills**	**4.52**	**245**		**Pn**	**12 01 05.8**	**+0.7**
S12K	**Black Hills** baz=58	**4.52**	**245**	P	**Pn**	**12 01 06.2**	**+1.1**
M22K	**Willow**	**4.58**	**29**		**Pn**	**12 01 06.8**	**+1.0**
PN7A	**Pavlof North-7**	**4.64**	**241**		**Pn**	**12 01 07.1**	**+0.3**
L20K	**Farewell, AK**	**4.66**	**6**		**Pn**	**12 01 08.3**	**+1.2**
L20K	**Farewell, AK** baz=186,SNR=34	**4.66**	**6**	P	**Pn**	**12 01 08.3**	**+1.2**
Q23K	**Middleton Isla**	**4.71**	**67**		**Pn**	**12 01 07.1**	**-0.6**
Q23K	**Middleton Isla** comp=N,91nm,2.4s	**4.71**	**67**	IAML		12 01 59.1	
Q23K				IAML		12 04 12.7	
comp=E,89nm,2.3s							
Q23K	**Middleton Isla** baz=254	**4.71**	**67**	P	**Pn**	**12 01 07.0**	**-0.6**
MID	**Middleton Isla**	**4.71**	**67**		**Pn**	**12 01 07.1**	**-0.6**
MID	**Middleton Isla** comp=N,77nm,1.9s	**4.71**	**67**	IAML		12 02 55.5	
PMR	**Palmer**	**4.73**	**35**		**Pn**	**12 01 08.5**	**+0.6**
PMR	**Palmer** comp=E,47nm,0.5s	**4.73**	**35**	IAML		12 02 03.2	
PMR	**Palmer** baz=220,SNR=22	**4.73**	**35**	P	**Pn**	**12 01 07.9**	**-0.1**
KNK	**Knik Glacier**	**4.82**	**40**		**Pn**	**12 01 09.9**	**+0.7**
KNK	**Knik Glacier** comp=E,84nm,0.6s	**4.82**	**40**	IAML		12 02 03.0	
KNK	**Knik Glacier** baz=225	**4.82**	**40**	P	**Pn**	**12 01 08.8**	**-0.4**
GHO	**Glory Hole Cre**	**4.93**	**35**		**Pn**	**12 01 11.6**	**+0.8**
GLI	**Glacier Island**	**4.99**	**49**		**Pn**	**12 01 10.7**	**-0.8**
GLI	**Glacier Island** comp=E,55nm,0.6s	**4.99**	**49**	IAML		12 02 04.5	
GLI	**Glacier Island** baz=236	**4.99**	**49**	P	**Pn**	**12 01 11.3**	**-0.2**
HIN	**Hinchinbrook I**	**5.00**	**56**		**Pn**	**12 01 11.5**	**-0.1**
TT01	**Tatalina**	**5.10**	**354**		**Pn**	**12 01 13.6**	**+0.6**
CUT	**Chulitna**	**5.10**	**25**		**Pn**	**12 01 14.0**	**+1.0**
CUT				IAML		12 02 47.5	
comp=E,67nm,0.7s							
TTA	**Tatalina**	**5.12**	**354**		**Pn**	**12 01 13.8**	**+0.4**
TTA	**Tatalina** comp=E,37nm,1.0s	**5.12**	**354**	IAML		12 02 50.2	
TTA	**Tatalina** baz=173	**5.12**	**354**	P	**Pn**	**12 01 13.8**	**+0.4**
SML	**Sawmill**	**5.15**	**37**		**Pn**	**12 01 14.2**	**+0.6**
SML	**Sawmill** comp=N,69nm,0.9s	**5.15**	**37**	IAML		12 02 27.1	
SML				IAML		12 02 31.2	
comp=E,48nm,1.3s							
SML	**Sawmill** baz=222	**5.15**	**37**	P	**Pn**	**12 01 14.0**	**+0.3**
FID	**Port Fidalgo**	**5.17**	**52**		**Pn**	**12 01 12.4**	**-1.6**
FID	**Port Fidalgo** comp=N,49nm,0.4s	**5.17**	**52**	IAML		12 02 12.3	
FID				IAML		12 02 14.3	
comp=E,55nm,0.7s							
PPLA	**Purkeypile**	**5.23**	**13**		**Pn**	**12 01 15.5**	**+0.6**
PPLA	**Purkeypile** baz=196,SNR=8.0	**5.23**	**13**	P	**Pn**	**12 01 15.1**	**+0.3**
JPK	**Jack Peak**	**5.29**	**49**		**Pn**	**12 01 16.4**	**+0.8**
M23K	**Glacier View**	**5.34**	**39**		**Pn**	**12 01 16.7**	**+0.4**
M23K	**Glacier View** baz=225	**5.34**	**39**	P	**Pn**	**12 01 16.8**	**+0.6**
EYAK	**Cordova Ski Ar**	**5.40**	**56**		**Pn**	**12 01 16.8**	**-0.3**
EYAK	**Cordova Ski Ar** baz=244	**5.40**	**56**	P	**Pn**	**12 01 16.6**	**-0.4**
SCM	**Sheep Creek Mo**	**5.50**	**40**		**Pn**	**12 01 18.6**	**+0.1**
SCM	**Sheep Creek Mo** baz=227	**5.50**	**40**	P	**Pn**	**12 01 18.6**	**+0.1**
K20K	**Telida**	**5.53**	**4**		**Pn**	**12 01 19.6**	**+0.7**
K20K	**Telida** baz=184,SNR=83	**5.53**	**4**	P	**Pn**	**12 01 19.4**	**+0.5**
DIV	**Divide**	**5.67**	**51**		**Pn**	**12 01 21.0**	**+0.2**
CAST	**Castle Rocks**	**5.75**	**12**		**Pn**	**12 01 22.3**	**+0.5**
CAST	**Castle Rocks** baz=195,SNR=28	**5.75**	**12**	P	**Pn**	**12 01 22.3**	**+0.5**
KAIM	**Kayak Island**	**5.79**	**65**		**Pn**	**12 01 22.7**	**+0.3**
KAIM	**Kayak Island** baz=253	**5.79**	**65**	P	**Pn**	**12 01 22.5**	**+0.1**
KLU	**Klutina**	**5.81**	**47**		**Pn**	**12 01 22.9**	**+0.2**
KLU	**Klutina** baz=235,SNR=9.3	**5.81**	**47**	P	**Pn**	**12 01 22.9**	**+0.2**
WAT7	**Susitna Watana**	**5.81**	**28**		**Pn**	**12 01 22.6**	**-0.1**
RAGM	**Ragged Mountai**	**5.82**	**60**		**Pn**	**12 01 22.6**	**-0.3**
GOAT	**Goat Mountain**	**5.87**	**58**		**Pn**	**12 01 23.2**	**-0.4**
WAT1	**Susitna Watana**	**5.88**	**29**		**Pn**	**12 01 23.7**	**+0.1**
WAT1	**Susitna Watana** baz=215	**5.88**	**29**	P	**Pn**	**12 01 23.8**	**+0.1**
WAT6	**Susitna Watana**	**5.91**	**34**		**Pn**	**12 01 24.0**	**-0.2**
WAT6	**Susitna Watana** baz=220,SNR=13	**5.91**	**34**	P	**Pn**	**12 01 24.1**	**-0.2**
HMT	**Hamilton**	**5.99**	**61**		**Pn**	**12 01 25.0**	**-0.2**
KTH	**Kantishna Hill**	**6.03**	**17**		**Pn**	**12 01 26.0**	**+0.3**
TRF	**Thorofare Moun**	**6.04**	**20**		**Pn**	**12 01 26.2**	**+0.2**
TRF	**Thorofare Moun** baz=204,SNR=5.4	**6.04**	**20**	P	**Pn**	**12 01 26.1**	**+0.2**
BMRM	**Bremner River**	**6.09**	**55**		**Pn**	**12 01 25.8**	**-0.7**
BMRM	**Bremner River** baz=244	**6.09**	**55**	P	**Pn**	**12 01 26.5**	**0.0**
M24K	**Tolsona, Glenn**	**6.09**	**42**		**Pn**	**12 01 26.8**	**+0.3**
M24K	**Tolsona, Glenn** baz=229	**6.09**	**42**	P	**Pn**	**12 01 27.0**	**+0.5**
NICHA	**Nichawak Mount**	**6.10**	**62**		**Pn**	**12 01 26.6**	**0.0**
SUCK	**Suckling Hills**	**6.14**	**64**		**Pn**	**12 01 27.6**	**+0.4**
CHUM	**Lake Minchumin** baz=193	**6.17**	**10**	P	**Pn**	**12 01 28.3**	**+0.7**
BERG	**Berg Lake**	**6.27**	**61**		**Pn**	**12 01 28.6**	**-0.4**
J20K	**Nowinta River**	**6.35**	**3**		**Pn**	**12 01 30.5**	**+0.4**
J20K	**Nowinta River** baz=183,SNR=18	**6.35**	**3**	P	**Pn**	**12 01 30.4**	**+0.4**
BGLC	**Bering Glacier** baz=254	**6.39**	**64**	P	**Pn**	**12 01 30.8**	**+0.2**
N25K	**Chitina, Valde**	**6.40**	**50**		**Pn**	**12 01 30.6**	**-0.2**
N25K	**Chitina, Valde** baz=238	**6.40**	**50**	P	**Pn**	**12 01 30.6**	**-0.2**
DHY	**Denali Highway**	**6.40**	**32**		**Pn**	**12 01 30.9**	**0.0**
DHY	**Denali Highway** baz=218,SNR=7.2	**6.40**	**32**	P	**Pn**	**12 01 30.6**	**-0.3**
GRIN	**Grindle Hills**	**6.42**	**63**		**Pn**	**12 01 31.2**	**+0.2**
KHIT	**Khitrov Hills**	**6.50**	**62**		**Pn**	**12 01 31.8**	**-0.4**
BPAW	**Bear Paw Mtn.**	**6.54**	**15**		**Pn**	**12 01 32.0**	**-0.7**
BPAW	**Bear Paw Mtn.** baz=198,SNR=15	**6.54**	**15**	P	**Pn**	**12 01 32.2**	**-0.5**
MCK	**McKinley**	**6.56**	**24**		**Pn**	**12 01 32.1**	**-0.9**
MCK	**McKinley** baz=209	**6.56**	**24**	P	**Pn**	**12 01 33.4**	**+0.4**
SNH	**Sunshine Point**	**6.62**	**64**		**Pn**	**12 01 33.8**	**0.0**
HARP	**HAARP**	**6.64**	**43**		**Pn**	**12 01 34.4**	**+0.3**
HARP	**HAARP** baz=231	**6.64**	**43**	P	**Pn**	**12 01 34.0**	**-0.1**
GLB	**Gilahina Butte**	**6.65**	**53**		**Pn**	**12 01 33.2**	**-0.9**
CRQM	**Cirque**	**6.66**	**59**		**Pn**	**12 01 33.9**	**-0.5**
CRQE	**Cirque** baz=249	**6.68**	**59**	P	**Pn**	**12 01 34.2**	**-0.5**
WAX	**Waxell Ridge**	**6.69**	**62**		**Pn**	**12 01 34.4**	**-0.4**
BARK	**Barkley Ridge**	**6.85**	**63**		**Pn**	**12 01 37.0**	**0.0**
PAX	**Paxson**	**6.91**	**38**		**Pn**	**12 01 37.8**	**0.0**
PAX	**Paxson** baz=226,SNR=11	**6.91**	**38**	P	**Pn**	**12 01 38.4**	**+0.6**
MCARA

RIDG	Independent Ri	7.66	35		Pn	12 01 48.3	+0.3
RIDG	Independent Ri baz=224,SNR=8.7	7.66	35	P	Pn	12 01 48.5	+0.6
LOGN	Logan Glacier	7.67	61		Pn	12 01 47.9	-0.4
L26K	Log Cabin Wild	7.69	43		Pn	12 01 49.4	+1.0
UNV	Unalaska Valle	7.69	243		Pn	12 01 48.3	-0.1
UNV	Unalaska Valle baz=54	7.69	243	P	Pn	12 01 47.9	-0.5
I23K	Minto, Yukon-K	7.77	17		Pn	12 01 49.0	-0.3
I23K	Minto, Yukon-K baz=202	7.77	17	P	Pn	12 01 49.1	-0.3
TCOL	CIGO, UAF Yank	7.79	22		Pn	12 01 49.3	-0.4
TCOL	CIGO, UAF Yank baz=209	7.79	22	P	Pn	12 01 49.5	-0.2
COLA	College	7.80	23		Pn	12 01 49.2	-0.6
COLA	College baz=209	7.80	23	P	Pn	12 01 49.5	-0.3
MDM	Murphy Dome	7.80	21		Pn	12 01 48.9	-0.9
DOT	Dot Lake	7.84	38		Pn	12 01 51.0	+0.6
PCA	Pinnacle	7.86	67		Pn	12 01 50.4	-0.5
PINM	Pinnacle baz=260	7.87	67	P	Pn	12 01 50.3	-0.5
H21K	Melozitna Rive	7.89	6		Pn	12 01 51.7	+0.7
H21K	Melozitna Rive baz=188,SNR=46	7.89	6	P	Pn	12 01 51.6	+0.6
M27K	Edge Creek, AK	7.89	50		Pn	12 01 50.3	-0.9
M27K	Edge Creek, AK baz=241	7.89	50	P	Pn	12 01 50.9	-0.3
IL31		7.92	26		Pn	12 01 51.1	-0.3
ILAR	Eielson Array comp=E,1.2nm,0.3s,baz=215,slow=14,SNR=45	7.92	26	Pn	Pn	12 01 50.4	-1.0
ILAR	comp=E,0.5nm,0.3s,baz=206,slow=15,SNR=4.1 comp=E,2.1nm,0.5s			Sn	Sn	12 03 14.1	-5.3
ILAR	Eielson Array	7.92	26		Pn	12 01 49.7	-1.8
O28M	Mount Upton	8.04	63		Pn	12 01 53.8	+0.3
O28M	Mount Upton baz=255,SNR=7.0	8.04	63	P	Pn	12 01 53.6	+0.2
SCRK	Sand Creek	8.10	36		Pn	12 01 54.0	0.0
SCRK	Sand Creek baz=226,SNR=6.7	8.10	36	P	Pn	12 01 54.0	0.0
POKR	Poker Plat Res	8.10	23		Pn	12 01 53.6	-0.3
POKR	Poker Plat Res baz=209,SNR=6.7	8.10	23	P	Pn	12 01 53.6	-0.3
BCPM	Bancas Point	8.15	69		Pn	12 01 54.6	0.0
J25K	Salcha River,	8.17	30		Pn	12 01 54.4	-0.5
J25K	Salcha River, baz=218,SNR=16	8.17	30	P	Pn	12 01 54.6	-0.2
IM03		8.18	3		Pn	12 01 54.5	-0.4
IMAR	Indian Mountai	8.18	3	Pn	Pn	12 01 55.2	+0.2
H22K	Ishtalitna Cre	8.23	10		Pn	12 01 55.0	-0.7
H22K	Ishtalitna Cre baz=193,SNR=11	8.23	10	P	Pn	12 01 55.4	-0.3
PNL	Peninsula	8.23	71		Pn	12 01 55.5	-0.3
PNL	Peninsula baz=264	8.23	71	P	Pn	12 01 55.2	-0.5
YUK3	Moose Creek baz=248	8.24	55	P	Pn	12 01 55.9	-0.1
L27K	Beaver Creek,	8.27	45		Pn	12 01 56.3	0.0
L27K	Beaver Creek, baz=237	8.27	45	P	Pn	12 01 55.5	-0.8
BC03		8.29	46		Pn	12 01 56.7	+0.2
BCAR	Beaver Creek A	8.29	46		Pn	12 01 56.8	+0.2
H23K	Yukon River	8.38	15		Pn	12 01 56.6	-1.1
H23K	Yukon River baz=200,SNR=31	8.38	15	P	Pn	12 01 57.1	-0.7
J26L	Joseph Creek	8.60	34		Pn	12 02 00.3	-0.5
J26L	Joseph Creek baz=224,SNR=18	8.60	34	P	Pn	12 02 00.7	-0.1
H24K	Noodor Dome	8.65	19		Pn	12 02 00.8	-0.7
H24K	Noodor Dome baz=206,SNR=5.9	8.65	19	P	Pn	12 02 00.6	-0.9
G21K	Allakaket	8.71	4		Pn	12 02 02.5	+0.2
G21K	Allakaket baz=185	8.71	4	P	Pn	12 02 02.3	0.0
O29M	Mount Kennedy	8.73	67		Pn	12 02 02.8	+0.2
O29M	Mount Kennedy baz=261,SNR=7.7	8.73	67	P	Pn	12 02 02.1	-0.5
K27K	Chicken baz=231	8.76	40	P	Pn	12 02 02.9	0.0
PRP	Porcupine Dome	8.86	26		Pn	12 02 03.0	-1.4
PRP	Porcupine Dome baz=214	8.86	26	P	Pn	12 02 03.5	-0.9
YUK4	Talbot Arm baz=254	8.92	60	P	Pn	12 02 06.1	+0.8
YUK6	Outpost Mounta baz=257	8.95	63	P	Pn	12 02 04.9	-0.8
G23K	Bananza Creek	9.16	12		Pn	12 02 07.9	-0.6
G23K	Bananza Creek baz=196,SNR=7.9	9.16	12	P	Pn	12 02 08.0	-0.5
I26K	Coal Creek Min	9.31	32	Pn	Pn	12 02 10.6	+0.2
I26K	Coal Creek Min baz=222	9.31	32	P	Pn	12 02 10.2	-0.2
M29M	Somme Creek	9.36	54		Pn	12 02 11.1	-0.1
M29M	Somme Creek baz=248	9.36	54	P	Pn	12 02 10.8	-0.5
F21K	Alatna River	9.42	3		Pn	12 02 11.3	-0.6
F21K	Alatna River baz=184,SNR=9.0	9.42	3	P	Pn	12 02 11.4	-0.6
H25K	Birch Creek baz=211	9.43	23	P	Pn	12 02 11.6	-0.4
P30M	Million Dollar baz=264	9.50	69	P	Pn	12 02 12.8	-0.3
G24K	Hadweenzic Riv	9.51	18		Pn	12 02 11.3	-1.8
G24K	Hadweenzic Riv baz=204,SNR=13	9.51	18	P	Pn	12 02 11.0	-2.2
COLD	Coldfoot	9.64	11	Pn	Pn	12 02 14.5	-0.4
COLD	Coldfoot baz=195	9.64	11	P	Pn	12 02 14.6	-0.4
N30M	Aishikik Lake baz=256	9.67	61	P	Pn	12 02 14.7	-0.8
DAWY	Dawson	9.74	44		Pn	12 02 16.0	-0.3
DAWY	Dawson baz=237	9.74	44	P	Pn	12 02 16.1	-0.2
F22K	John River	9.77	6		Pn	12 02 16.4	-0.2
F22K	John River baz=188,SNR=8.2	9.77	6	P	Pn	12 02 16.0	-0.6
FYU	Fort Yukon	9.81	23		Pn	12 02 16.4	-0.8
G25K	Bearman Lake baz=208	9.81	21	P	Pn	12 02 15.9	-1.3
I27K	Kandik River	9.97	33		Pn	12 02 18.9	-0.5
O30N	Mendenhall	10.01	65		Pn	12 02 19.2	-0.9
F24K	Squaw Lake	10.20	15		Pn	12 02 22.1	-0.5
F24K	Squaw Lake baz=202,SNR=5.8	10.20	15	P	Pn	12 02 21.8	-0.8
E22K	Anaktuvuk Pass	10.41	6		Pn	12 02 23.6	-1.8
E22K	Anaktuvuk Pass baz=189	10.41	6	P	Pn	12 02 23.1	-2.3
H27K	Steamboat Moun baz=223	10.45	31	P	Pn	12 02 25.0	-0.9
G26K	Porcupine Rive baz=214	10.45	25	P	Pn	12 02 24.5	-1.3
F25K	Christian Rive	10.63	19		Pn	12 02 26.5	-2.0
F25K	Christian Rive baz=208	10.63	19	P	Pn	12 02 25.8	-2.7
E24K	Your Creek	10.65	13		Pn	12 02 27.3	-1.4
E24K	Your Creek baz=199	10.65	13	P	Pn	12 02 26.9	-1.8
BM03	Burnt Mountain	10.67	22		Pn	12 02 27.5	-1.5
BMAR	Burnt Mountain	10.68	22		Pn	12 02 27.0	-2.2
BM01	Burnt Mountain	10.71	22		Pn	12 02 28.4	-1.1
G27K	Doyon Strip baz=220	10.85	29	P	Pn	12 02 29.8	-1.6
E25K	Arctic Village baz=207,SNR=13	11.11	18	P	Pn	12 02 33.2	-1.8
INK	Inuvik comp=E,0.2nm,0.3s,baz=169,slow=9.1,SNR=11 comp=E,1.2nm,0.5s	14.14	34	Pn	Pn	12 03 17.5	+1.9
YKA	Yellowknife Ar comp=E,0.2nm,0.3s,baz=271,slow=9.2,SNR=7.2 comp=E,1.0nm,0.6s	20.29	60	P	P	12 04 28.9	+0.2
NVAR	Mina Array Bea comp=E,0.4nm,0.6s,baz=304,slow=8.6,SNR=3.6 comp=E,0.4nm,0.6s	30.63	113	P	P	12 06 07.5	+1.0
PDAR	Pinedale Array comp=E,0.3nm,0.5s,baz=311,slow=4.5,SNR=4.9 comp=E,0.3nm,0.5s	31.93	98	P	P	12 06 17.7	-0.2
TXAR	Lajitas Array comp=E,0.4nm,0.8s,baz=298,slow=3.8,SNR=4.8 comp=E,0.4nm,0.8s	45.21	107	P	P	12 08 10.6	+1.7
TKL	Tuckaleechee C comp=E,20nm,18.1s,baz=32,slow=35	50.82	84	LR	LR	12 29 09.1	
SNAA	Sanae	162.00	151	PKPab	PKPab	12 20 36.7	-0.4
SNAA	Sanae	162.00	151	PKPdf	PKPdf	12 19 49.0	-1.3

JMA ***04*** *12:01:16.5±0.1,39.˚1N±0.˚3×142.˚2E±0.˚7,h43km,MV3.9/37, E OFF IWATE PREF*
JMA Felt II J1 at E OFF IWATE PREF .
NIED ***04*** *12:01:16.5,39.˚10N×142.˚21E,h43km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr6.92; Mθθ-0.72; Mφφ-6.20; Mrθ2.97; Mrφ-1.76; Mθφ6.67; Fault plane solution: M₀9.99000×10¹⁴ NP1: φs191.00000°,δ22.00000°,λ80.00000°. NP2:φs22.00000°, δ69.00000°,λ94.00000°.*
NEIC ***04*** *12:01:17.4±2.0,39.˚09N±0.˚04×142.˚4E±0.˚1,h55km±10km, mb4.5/6 Error ellipse: s-maj=16.5km s-min=1.4km az=110.0*
IDC ***04*** *12:01:18.8±3.1,39.˚02N×142.˚18E,h71km±27km,mb3.7/13, mbtmp4.0/16,MS3.1/5,Error ellipse: s-maj=25.4km s-min=16.1km az=83.0*

ISC 04 12:01:16.1±1.6,39.˚09N±0.˚05×142.˚3E±0.˚1,h42km±13km, n56,σt1s36/56,mb4.0/15,MS3.5/3,17D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.48	270	↓iP	Pn	12 01 26.4	-0.3
OFUJ				↓S	Sn	12 01 33.2	-1.0
MIYJ	Miyakonagasawa	0.61	324	↓iP	Pn	12 01 28.1	-0.3
MIYJ				↓eS	Sn	12 01 36.0	-1.2
JKMT	Kesennumamotoy	0.69	247	↓iP	Pn	12 01 29.0	-0.4
JKMT				↓S	Sn	12 01 37.6	-1.4
JMK	Ichinoseki	0.84	261	↓iP	Pn	12 01 31.2	-0.3
JMK				↓eS	Sn	12 01 41.8	-0.9
JOM	Ohasama	0.86	297	↓iP	Pn	12 01 31.6	-0.3
JTH	Tanohata	0.91	339	↓iP	Pn	12 01 32.2	-0.3
JTH				↓eS	Sn	12 01 44.0	-0.5
JIO	Ouri	0.97	230	↓iP	Pn	12 01 32.8	-0.4
JIO				↓S	Sn	12 01 44.0	-1.7
JKZ	Kuzumaki	1.16	321	↓iP	Pn	12 01 36.3	+0.4
JKZ				↓eS	Sn	12 01 50.8	+0.2
JRG	Rokugo	1.32	284	↓iP	Pn	12 01 38.0	-0.1
JANG	Nango	1.42	335	↓P	Pn	12 01 39.4	0.0
JMM	Marumori	1.69	224	Pn	Pn	12 01 42.8	-0.3
JTM	Tenmabayashi	1.94	331	Pn	Pn	12 01 47.0	+0.5
ERM	Erimo	3.00	12	Pn	Pn	12 02 02.0	+0.9
JYT	Yasato	3.30	211	Pn	Pn	12 02 06.1	+0.8
JSD	Sado	3.33	253	Pn	Pn	12 02 05.8	+0.3
JEW	Eniwo	3.80	351	Pn	Pn	12 02 15.2	+3.1
JEW					Sn	12 02 57.0	+1.4
MAJO	Matsushiro	4.11	233	Pn	Pn	12 02 18.8	+2.5
MJAR	Matsushiro Arr 6.4nm,0.5s,baz=38,slow=12,SNR=34	4.11	233	P	Pn	12 02 17.6	+1.2
MJAR				S	Sn	12 03 08.4	+5.2
MJAR	3.3nm,0.5s,baz=105,slow=15,SNR=4.5			LR	LR	12 04 01.4	
JGF	comp=Z,109nm,20.9s,baz=66,slow=41 Kuroka	5.25	230	Pn	Pn	12 02 34.6	+2.6
INU	Inuyama	5.62	230		Pn	12 02 39.4	+2.3
JHS	Saijyo	8.39	244	Pn	Pn	12 03 17.7	+2.6
USRK	Ussuriysk Ar. 1.7nm,0.5s,baz=132,slow=13,SNR=6.9	9.25	307	P	Pn	12 03 28.1	+1.3
USRK				S	Sn	12 04 55.5	-14
USRK	2.8nm,0.7s,baz=234,slow=49,SNR=1.9			LR	LR	12 06 48.1	
KSRS	comp=Z,52nm,19.6s,baz=204,slow=36 Korea Array	11.41	266	P	Pn	12 03 58.2	+1.8
SEY	0.6nm,0.4s,baz=74,slow=14,SNR=2.3 Seymchan	24.65	11	P	P	12 06 33.1	+0.8
H11N2	1.4nm,0.8s,baz=226,slow=9.2,SNR=4.7 1.4nm,0.8s WAKE ISLAND Hy	28.68	125	T	T	12 37 31.2	
H11N1	baz=317,slow=75,SNR=2400 WAKE ISLAND Hy	28.69	125	T	T	12 37 32.3	
H11N3	baz=317,slow=75,SNR=2026 WAKE ISLAND Hy	28.70	125	T	T	12 37 35.4	
H11S1	baz=317,slow=75,SNR=2470 WAKE ISLAND Hy	29.47	127	T	T	12 38 33.9	
H11S3	baz=319,slow=76,SNR=150 WAKE ISLAND Hy	29.47	127	T	T	12 38 27.7	
H11S2	baz=319,slow=76,SNR=164 WAKE ISLAND Hy	29.49	127	T	T	12 38 32.0	
ZALV	baz=319,slow=76,SNR=160 Zalesovo Beam 1.5nm,0.5s,baz=88,slow=7.0,SNR=5.1	41.07	311	P	P	12 08 54.9	-0.4
MKAR	1.5nm,0.5s Makanchi Array 2.0nm,0.7s	43.65	300	P	P	12 09 16.2	-0.2
KURK	2.0nm,0.7s Kurchatov	45.24	307	P	P	12 09 28.8	-0.2
KURK	comp=E,5.8nm,0.9s			IAmb	IAmb	12 09 29.4	
KURBB	Kurchatov Arra comp=E,5.5nm,0.6s,baz=81,slow=8.2,SNR=31 comp=E,5.5nm,0.6s	45.31	307	P	P	12 09 29.3	-0.2
ILAR	Eielson Array comp=Z,0.6nm,0.7s,baz=268,slow=6.5,SNR=8.9 comp=Z,0.6nm,0.7s	47.40	33	P	P	12 09 46.9	+1.1
ARU	Arti comp=Z,3.6nm,0.4s,baz=358,slow=2.1,SNR=6.6 comp=Z,3.6nm,0.4s	55.29	318	P	P	12 10 45.0	+0.1
ABKAR	Akbulak array	57.16	309	P	P	12 10 58.3	-0.1
ABKAR	comp=Z,3.4nm,0.6s			IAmb	IAmb	12 10 58.9	
ABKAR	Akbulak array	57.16	309	P	P	12 10 58.0	-0.3
AKTO	Aktyubinsk comp=Z,1.8nm,0.6s,baz=76,slow=16,SNR=7.0 comp=Z,1.8nm,0.6s	57.83	311	P	P	12 11 02.8	-0.3
WB0	Warramunga Arr	59.01	189	P	P	12 11 11.0	-0.6
WR0	Warramunga Arr	59.18	188	P	P	12 11 12.2	-0.5
WB2	Warramunga Arr	59.19	189	P	P	12 11 11.4	-1.4
WRA	Warramunga Arr comp=Z,0.4nm,0.4s,baz=6.2,slow=7.0,SNR=18 comp=Z,0.4nm,0.4s	59.19	189	P	P	12 11 11.8	-1.0
WRA	Warramunga Arr	59.19	189	P	P	12 11 12.2	-0.6
ASAR	Alice Springs comp=Z,0.4nm,0.8s,baz=18,slow=11,SNR=4.5 comp=Z,0.4nm,0.8s	62.91	189	P	P	12 11 37.4	-0.6
ASAR	Alice Springs	62.91	189	P	P	12 11 38.7	+0.7
FINES	FINESS Array B comp=Z,1.9nm,0.6s,baz=97,slow=7.7,SNR=5.1 comp=Z,1.9nm,0.6s	67.32	332	P	P	12 12 05.9	-0.3
FINES	FINESS Array B	67.32	332	P	P	12 12 06.3	+0.1
NOA	NORSAR Array B comp=Z,1.1nm,0.8s,baz=38,slow=6.2,SNR=4.1 comp=Z,1.1nm,0.8s	72.56	337	P	P	12 12 38.4	0.0
AKASG	Malin Array Be comp=Z,1.0nm,0.5s,baz=46,slow=6.7,SNR=6.1 comp=Z,1.0nm,0.5s	73.10	322	P	P	12 12 40.1	-1.6
BRTR	Keskin Array B comp=Z,18nm,18.5s,baz=136,slow=41	78.01	312	LR	LR	12 54 12.1	
MLR	Muntele Rosu comp=Z,32nm,21.7s,baz=136,slow=36	78.27	320	LR	LR	12 48 35.1	
CLL	Collm	79.66	330	eP	P	12 13 19.0	+0.1
GERES	GERESS Array B comp=Z,0.4nm,0.2s,baz=61,slow=2.8,SNR=3.4 comp=Z,0.4nm,0.2s	81.33	329	P	P	12 13 27.7	-0.4
ESDC	Sonseca Array comp=Z,13nm,18.2s,baz=315,slow=38	95.75	334	LR	LR	13 02 36.4	
LPAZ	La Paz comp=Z,0.5nm,0.4s,baz=169,slow=11,SNR=1.3	145.04	58	PKPbc	PKPbc	12 20 47.1	-2.2

IDC ***04*** *12:13:46.1±1.3,6.˚36S×148.˚15E,h0km,mb4.0/3, mbtmp3.9/6,ML3.4/2,MS3.2/3,Error ellipse: s-maj=55.5km s-min=20.9km az=131.0*

ISC 04 12:13:51.0±1.1,6.˚4S±0.˚2×148.˚2E±0.˚2,h35km,n10, σ0s68/8,mb3.9/3,MS3.1/3,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.16	198	Pn	Pn	12 14 38.5	+0.2
PMG	14nm,0.5s,baz=22,slow=11,SNR=3.4			Sn	Sn	12 15 14.7	-0.1
KRVT	3.1nm,0.3s,baz=196,slow=13,SNR=3.2 Keravat (AS076	4.37	62	Pn	Pn	12 14 55.3	+0.4
WRA	0.9nm,0.3s,baz=154,slow=17,SNR=1.3 12nm,0.9s Warramunga Arr	19.02	224	P	P	12 18 09.7	-0.4
ASAR	0.2nm,0.3s,baz=50,slow=12,SNR=11 1.1nm,0.5s Alice Springs	21.98	217	P	P	12 18 41.8	-0.4
FITZ	3.2nm,0.6s,baz=51,slow=9.7,SNR=77 3.2nm,0.6s Fitzroy Crossi	24.86	240	P	P	12 19 11.3	+0.8
STKA	3.6nm,0.5s,baz=46,slow=8.5,SNR=16 3.6nm,0.5s Stephens Creek	26.09	193	LR	LR	12 30 14.1	
MJAR	comp=Z,43nm,19.4s,baz=26,slow=38 Matsushiro Arr	43.71	348	LR	LR	12 40 02.6	
ILAR	comp=Z,21nm,19.0s,baz=190,slow=36 Eielson Array 0.5nm,0.6s,baz=247,slow=5.5,SNR=7.1 0.5nm,0.6s	85.38	23	P	P	12 26 23.6	-0.9
DLBC	Dease Lake comp=Z,23nm,19.4s,baz=134,slow=33	91.12	31	LR	LR	13 03 51.2	
TORD	Torodi Ar. Bea 0.6nm,0.7s,baz=73,slow=2.0,SNR=3.6	146.30	284	PKPbc	PKPbc	12 33 29.7	+0.6

IDC ***04*** *12:16:13.5±2.6,18.˚65N×145.˚44E,h194km±23km,mb3.5/5, mbtmp4.1/6,Error ellipse: s-maj=45.6km s-min=18.2km az=107.0*
NEIC ***04*** *12:16:13.7±1.4,18.˚64N±0.˚08×145.˚6E±0.˚2,h191km±10km, mb4.5/17,Error ellipse: s-maj=25.9km s-min=11.1km az=88.0*

ISC 04 12:16:13.8±0.6,18.˚64N±0.˚06×145.˚5E±0.˚2,h200km,n27, σ0s91/28,mb4.3/14,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam 30nm,0.3s,baz=63,slow=4.6,SNR=9.1	5.06	187	P	Pn	12 17 29.1	+0.1
GUMO				S	Sn	12 18 27.6	-0.7
JCJ	46nm,0.4s,baz=354,slow=22,SNR=2.4 Chichijima	8.97	340	Pn	Pn	12 18 19.1	-0.5
JMZ	Minamidaito 2	15.05	301		P	12 19 38.2	+1.0
COEN	Coen	32.47	184	P	P	12 22 25.6	+0.1
COEN	comp=Z,26nm,1.4s			IAmb	IAmb	12 22 52.4	
KLR	Kul'dur comp=Z,0.7nm,0.3s,baz=179,slow=4.9,SNR=2.8 comp=Z,0.7nm,0.3s	32.48	343	P	P	12 22 25.6	+0.2
PEA0B	Petropavlovsk-	35.68	13	P	P	12 22 50.3	-2.5
PEA0B	comp=Z,8.8nm,1.0s			IAmb	IAmb	12 23 33.3	
PETK	Petropavlovsk-	35.68	13	P	P	12 22 51.2	-1.5
KNRA	Kununurra	37.89	207	P	P	12 23 11.2	-0.6
KNRA	comp=Z,18nm,1.2s			IAmb	IAmb	12 23 30.4	
WB0	Warramunga Arr	39.70	197	P	P	12 23 27.1	+0.3
WB0	comp=Z,16nm,1.4s			IAmb	IAmb	12 23 32.1	
WR0	Warramunga Arr	39.84	196	P	P	12 23 27.5	-0.5
WB2	Warramunga Arr	39.88	197	P	P	12 23 27.9	-0.3
WB2	comp=Z,14nm,1.3s			IAmb	IAmb	12 23 29.6	
WRA	Warramunga Arr comp=Z,1.1nm,0.3s,baz=13,slow=8.1,SNR=16 comp=Z,1.1nm,0.3s	39.88	197	P	P	12 23 28.5	+0.2
WRA	Warramunga Arr	39.88	197	P	P	12 23 27.7	-0.6
FITZ	Fitzroy Crossi comp=Z,1.5nm,0.4s,baz=27,slow=8.2,SNR=21 comp=Z,1.5nm,0.4s	41.41	209	P	P	12 23 40.8	0.0
FITZ	Fitzroy Crossi	41.41	209	P	P	12 23 40.8	0.0
AS31	Alice Springs	43.55	196	P	P	12 23 56.5	-1.5
ASAR	Alice Springs comp=Z,0.5nm,0.4s,baz=14,slow=6.8,SNR=9.5 comp=Z,0.5nm,0.4s	43.55	196	P	P	12 23 57.9	-0.1
ASAR	Alice Springs	43.55	196	P	P	12 23 58.4	+0.3
KIWB	Kanaga Island	44.20	33	P	P	12 24 04.2	+1.4
ADK	Adak	44.45	33	P	P	12 24 06.1	+1.3
ADK	comp=Z,24nm,1.4s			IAmb	IAmb	12 24 21.6	
DZM	Mont Dzumac	45.33	152	P	P	12 24 11.9	-0.3
DZM	comp=Z,32nm,1.4s			IAmb	IAmb	12 24 43.2	
UNV	Unalaska Valle	50.79	35	P	P	12 24 53.8	+0.4
UNV	comp=Z,61nm,1.5s			IAmb	IAmb	12 25 11.5	
AKUT	Akutan	51.30	34	P	P	12 24 58.2	+1.0
BBOO	Buckleboo	51.95	190	P	P	12 25 03.0	+0.6
BBOO	comp=Z,14nm,1.3s			IAmb	IAmb	12 25 13.7	
SDPT	Sand Point	54.61	35	P	P	12 25 22.1	+0.7
CHGN	Chignik	56.02	34	P	P	12 25 32.1	+0.7
NVAR	Mina Array Bea comp=Z,1.0nm,0.7s,baz=264,slow=6.1,SNR=9.7 comp=Z,1.0nm,0.7s	83.30	52	P	P	12 28 19.2	+0.5

REN ***04*** *12:53:42.4±2.6,38.˚67N±0.˚01×119.˚38W±0.˚02,h11km±6km, ML2.7/21,ML2.6/31(NEIC),Error ellipse: s-maj=2.5km s-min=0.9km az=221.0*
NCEDC ***04*** *12:53:50.3±0.5,37.˚40N±0.˚04×118.˚38W±0.˚02,h4km±7km, Error ellipse: s-maj=5.1km s-min=2.6km az=168.0*

NEIC 04 12:53:42.4±1.9,38.˚66N±0.˚03×119.˚35W±0.˚02,h19km±2km, Error ellipse: s-maj=3.7km s-min=2.1km az=194.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YERR	Yerington	0.33	14		Pg	12 53 49.4	-0.4
YERR					Sb	12 53 54.8	-0.1
YERR	Yerington comp=N,479nm,0.3s	0.33	14	IAML		12 53 55.0	
YERR				IAML		12 53 55.6	
PNTR	comp=E,1μm,0.4s Pine Nut	0.47	335		Pg	12 53 51.7	-0.5
PNTR					Sg	12 53 58.6	-0.1
PNTR	Pine Nut comp=E,697nm,0.7s	0.47	335	IAML		12 54 06.2	
TVH1	TV Hill, Hawth	0.50	114		Pb	12 53 52.8	0.0
TVH1					Sb	12 54 00.7	+0.8
LUL	Lundy Lake	0.62	168		Pb	12 53 54.8	+0.1
RYN	Ryan	0.65	93		Pg	12 53 55.7	+0.4
RYN					Sn	12 54 05.4	-1.1
RYN	Ryan comp=N,196nm,0.2s	0.65	93	IAML		12 54 07.1	
RYN				IAML		12 54 08.8	
EMB	comp=E,266nm,0.3s Emerald Bay	0.67	298		Pb	12 53 55.2	-0.3
EMB					Sb	12 54 04.4	-0.1
EMB	Emerald Bay comp=N,205nm,0.4s	0.67	298	IAML		12 54 05.2	
VCNR	Virginia City	0.68	340		Pb	12 53 55.4	-0.3
VCNR					Sg	12 54 05.0	0.0
VCNR	Virginia City comp=N,386nm,0.3s	0.68	340	IAML		12 54 05.4	
VCNR	comp=E,429nm,0.3s			IAML		12 54 06.8	
LHV	Little Huntoon	0.78	122		Pn	12 53 58.2	-0.2
LHV					Sn	12 54 09.7	+0.2
LHV	Little Huntoon comp=N,243nm,0.4s	0.78	122	IAML		12 54 10.0	
NV09	Mina Array Sit	0.82	106		Pg	12 53 58.9	+0.3
MPK	Martis Peak	0.83	320		Pb	12 53 57.6	-0.7
MPK					Sg	12 54 09.8	0.0
MPK	Martis Peak comp=N,193nm,0.4s	0.83	320	IAML		12 54 15.4	
NV08	Mina Array Sit	0.85	107		Pg	12 53 59.3	+0.2
NVAR	Mina Array Bea	0.85	106		Pg	12 53 59.3	+0.2
NV11	Mina Array Sit	0.96	103		Pg	12 54 01.3	+0.1
NV11	Mina Array Sit comp=E,134nm,0.6s	0.96	103	IAML		12 54 19.7	
NV11				IAML		12 54 19.8	
VPK	comp=N,176nm,0.6s Verdi Peak	0.97	327		Pb	12 54 00.9	0.0
MDCM	Deadman Creek	0.98	166		Pn	12 54 01.3	-0.2
LMCR	Lookout Mounta	0.98	161		Pg	12 54 01.8	+0.1
CMB	Columbia Colle	1.03	233		Pb	12

MRDM	**Red Cones**	**1.09**	**168**			Pb	12 54 01.5	-1.4
MGPM	**Gravel Pit**	**1.09**	**161**			Pb	12 53 59.8	-3.1
MDRNC	**Doe Ridge**	**1.10**	**158**			Pb	12 53 59.1	-3.9
MLCM	**Laurel Creek C**	**1.10**	**162**			Pb	12 53 59.7	-3.4
MLAC	**Mammoth, Mammo**	**1.11**	**158**			Pb	12 53 59.0	-4.1
BABR	**Babbit Peak**	**1.11**	**328**			Pb	12 54 03.0	-0.2
MCVM	**Convict Lake**	**1.15**	**159**			Pn	12 53 58.3	-5.4
MRCM	**Red Rock Canyo**	**1.19**	**146**			Pn	12 54 00.8	-3.4
LOY	**Loyalton**	**1.21**	**325**			Pn	12 54 04.7	+0.1
WVA	**Winnemucca Val**	**1.33**	**344**			Pb	12 54 07.2	+0.3
WVA						Sg	12 54 25.7	0.0
BEKR	**Beckworth**	**1.44**	**327**			Pb	12 54 09.0	+0.3
BMRR	**Black Mountain**	**1.62**	**333**			Pb	12 54 11.8	-0.1
Q09A	**Carvers**	**1.70**	**84**			Pn	12 54 13.3	0.0
TPH	**Tonopah**	**1.77**	**109**			Pn	12 54 12.5	+0.2
ORV	**Oroville**	**1.90**	**299**			Pb	12 54 15.3	-1.2
ORV				IAML			12 54 45.3	
	comp=E,45nm,0.7s							
BMSM	**Mercy Hot Spri**	**2.31**	**210**			Pb	12 54 23.9	+0.4
BMN	**Battle Mountai**	**2.41**	**42**			Pn	12 54 22.3	+1.2
R11A	**Troy Canyon, C**	**2.97**	**95**			Pn	12 54 30.9	+2.2
S11A	**Rachel**	**3.01**	**109**			Pn	12 54 31.6	+2.4
PMCM	**McMillan Canyo**	**3.04**	**196**			Pn	12 54 29.6	0.0
PRN	**Pahroc Range**	**3.62**	**109**			Pn	12 54 38.9	+1.4
ELK	**Elko**	**3.79**	**55**			Pn	12 54 40.9	+0.9
SPR3	**Spring Creek 3**	**3.93**	**84**	Pn		Pn	12 54 43.6	+1.6

*IDC **04** 13:02:47.5±0.9, 23°.77S×82°.43E, h0km, mb4.1/7, mbtmp4.1/7, MS3.0/2, Error ellipse: s-maj=33.5km s-min=24.0km az=16.0*

ISC 04 13:02:48.9±0.8, 23°.8S±0°.2×82°.4E±0°.2, h10km, n17, σ0°72/9, mb4.3/7, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.65**	**328**	T	T	13 26 21.3	
	baz=152,slow=74,SNR=98						
H08S1	**Diego Carcia H**	**18.66**	**328**	T	T	13 26 23.6	
	baz=152,slow=74,SNR=76						
H08S3	**Diego Garcia H**	**18.67**	**328**	T	T	13 26 24.0	
	baz=152,slow=74,SNR=161						
H01W3	**Cape Leeuwin H**	**29.66**	**119**	T	T	13 39 43.0	
	baz=284,slow=75,SNR=7.6						
H01W2	**Cape Leeuwin H**	**29.66**	**119**	T	T	13 39 42.5	
	baz=284,slow=75,SNR=8.3						
H01W1	**Cape Leeuwin H**	**29.68**	**119**	T	T	13 39 41.8	
	baz=284,slow=75,SNR=13						
CMAR	**Chiang Mai Arr**	**44.95**	**22**	LR	LR	13 27 03.6	
	comp=Z,10nm,20.4s,baz=200,slow=32						
ASAR	**Alice Springs**	**46.90**	**101**	P	**P**	**13 11 19.9**	**-0.1**
	3.3nm,0.7s,baz=264,slow=7.4,SNR=58						
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**48.11**	**96**	P	**P**	**13 11 29.9**	**+0.6**
	3.6nm,0.7s,baz=261,slow=8.0,SNR=31						
	3.6nm,0.7s						
BOSA	**Boshof**	**51.14**	**252**	P	**P**	**13 11 52.9**	**+0.4**
	3.4nm,0.7s,baz=85,slow=11,SNR=5.7						
	3.4nm,0.7s						
ATD	**Arta Tunnel**	**52.23**	**308**	LR	LR	13 31 33.8	
	comp=Z,20nm,18.7s,baz=352,slow=33						
STKA	**Stephens Creek**	**52.40**	**113**	P	**P**	**13 12 01.2**	**-0.5**
	0.8nm,0.2s,baz=297,slow=6.8,SNR=2.9						
	0.8nm,0.2s						
VNDA	**Vanda**	**64.68**	**166**	P	**P**	**13 13 26.7**	**+0.1**
	0.8nm,0.8s,baz=288,slow=7.9,SNR=4.4						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**77.41**	**1**	P	**P**	**13 14 44.6**	**+0.8**
	1.7nm,0.7s,baz=168,slow=6.6,SNR=4.4						
	1.7nm,0.7s						
AKASG	**Malin Array Be**	**87.72**	**329**	P	**P**	**13 15 36.7**	**-1.1**
	0.2nm,0.3s,baz=134,slow=4.7,SNR=1.8						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**128.16**	**24**	PKiKP	**PKiKP**	**13 21 54.8**	**-0.6**
	0.4nm,0.8s,baz=285,slow=3.4,SNR=3.2						
NVAR	**Mina Array Bea**	**157.07**	**46**	PKPab	**PKPab**	**13 23 16.3**	**+0.5**
	0.8nm,0.7s,baz=284,slow=4.5,SNR=3.8						

IDC 04 13:08:11.5±1.7, 1°.80S×127°.46E, h0km, mb3.4/2, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=43.9km s-min=28.0km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.92**	**76**	Pn	Pn	13 09 13.6	+0.6
	7.9nm,0.3s,baz=253,slow=19,SNR=39						
SIJI					Sn	13 09 47.8	-12
	4.0nm,0.3s,baz=53,slow=20,SNR=7.9						
	15nm,0.3s						
WRA	**Warramunga Arr**	**19.25**	**160**	P	P	13 12 36.5	-1.3
	0.1nm,0.3s,baz=344,slow=12,SNR=7.8						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**22.62**	**164**	P	P	13 13 15.2	+0.9
	0.8nm,0.6s,baz=350,slow=11,SNR=14						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**62.51**	**327**	P	P	13 18 36.7	-0.3
	0.5nm,0.9s,baz=124,slow=7.2,SNR=2.7						
	0.5nm,0.9s						

*NNC **04** 13:09:44.4±0.5, 50°.78N×73°.52E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=5.6km s-min=4.3km az=44.0, Suspected Mining explosion.*

*IDC **04** 13:09:49.1±4.3, 50°.90N×73°.88E, h0km, mbtmp2.8/2, ML1.7/2, Error ellipse: s-maj=35.2km s-min=32.2km az=72.0*

ISC 04 13:09:47.9±1.4, 50°.7N±0°.1×73°.83E±0°.07, h0km, n17, σ0°91/9, 8C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	**Ortayu**	**2.66**	**202**	⇑Pg	**Pn**	**13 10 32.1**	**0.0**
	4.6nm,0.9s						
OTUK				⇑Lg	Lg	13 11 10.1	
	35nm,0.8s						
KURBB	**Kurchatov Arra**	**2.99**	**90**	Pn	**Pn**	**13 10 36.6**	**+0.1**
	0.1nm,0.3s,baz=279,slow=13,SNR=7.9						
KURBB				Lg	Lg	13 11 23.2	
	0.2nm,0.3s,baz=278,slow=30,SNR=11						
	4.1nm,0.8s						
KURBB	**Kurchatov Arra**	**2.99**	**90**	⇓Pn	**Pn**	**13 10 36.9**	**+0.4**
	11nm,1.1s						
KURBB				⇑Lg	Lg	13 11 24.4	
	149nm,1.0s						
KURK	**Kurchatov**	**3.04**	**88**	⇑Pn	**Pn**	**13 10 36.6**	**-0.6**
	6.2nm,0.9s						
KURK				⇑Lg	Lg	13 11 25.0	
	102nm,1.2s						
BVA0	**Borovoye Array**	**3.14**	**319**	⇓Pg	**Pn**	**13 10 38.4**	**-0.3**
	4.5nm,0.8s,baz=237,slow=38,SNR=21						
BVA0				⇓Lg	Lg	13 11 18.3	
	31nm,0.9s,baz=130,slow=29,SNR=19						
BRVK	**Borovoye**	**3.21**	**318**	⇑Pg	**Pn**	**13 10 39.8**	**+0.2**
	4.7nm,0.8s						
BRVK				⇓Lg	Lg	13 11 20.2	
	101nm,1.0s						
MK05	**Makanchi Array**	**6.83**	**122**	⇑Lg	Lg	13 13 26.3	
	8.5nm,0.8s						
MKAR	**Makanchi Array**	**6.83**	**122**	Pg	**Pb**	**13 11 48.1**	**+0.6**
	0.1nm,0.3s,baz=310,slow=18,SNR=3.6						
MKAR				Lg	Lg	13 13 28.3	
	0.6nm,0.3s,baz=323,slow=22,SNR=12						
ZALV	**Zalesovo Beam**	**7.47**	**60**	Pn	**Pn**	**13 11 39.3**	**+1.3**
	0.1nm,0.3s,baz=235,slow=18,SNR=1.6						
ZALV				Sn	**Sn**	**13 13 01.8**	**-1.5**
	0.2nm,0.3s,baz=255,slow=22,SNR=2.3						
ZALV				Lg	Lg	13 13 43.1	
	0.1nm,0.3s,baz=252,slow=24,SNR=2.7						
	0.4nm,0.4s						
CHMS	**Chumysh**	**7.75**	**175**	⇓Lg	Lg	13 13 52.9	
	25nm,0.9s						
TKM2	**Tokmak 2**	**7.90**	**171**	⇓Lg	Lg	13 13 57.9	
	27nm,1.1s						
AAK	**Ala-Archa**	**8.10**	**177**	Lg	Lg	13 14 07.8	
	0.4nm,0.3s,baz=22,slow=22,SNR=3.7						
PDGK	**Podgornoye**	**8.34**	**150**	⇓Lg	Lg	13 14 12.6	
	19nm,1.4s						
AB31	**Akbulak array**	**9.07**	**266**	⇑Lg	Lg	13 14 27.2	
	3.3nm,1.0s,baz=78,slow=29,SNR=4.3						
I31KZ	**AKTYUBINSK INF**	**10.06**	**274**	*i*		14 06 50.0	
	baz=81,slow=310,SNR=1.0						
AKTO	**Aktyubinsk**	**10.07**	**274**	Lg	Lg	13 15 01.1	
	0.1nm,0.3s,baz=357,slow=7.6,SNR=5.8						
ARU	**Arti**	**10.72**	**308**	Lg	Lg	13 15 20.9	
	baz=0.3,slow=23						

*IDC **04** 13:12:35.2±1.3, 38°.05N×22°.34E, h0km, mb3.5/4, mbtmp3.8/6, ML2.9/2, Error ellipse: s-maj=29.6km s-min=23.5km az=157.0*

*ISK **04** 13:12:35.3, 38°.09N×22°.29E, h3km, ML3.5/9*

*ATH **04** 13:12:36.5, 38°.07N×22°.29E, h11km±1km, ML3.2/19, Error ellipse: s-maj=1.6km s-min=0.5km az=294.0*

*THE **04** 13:12:36.8, 38°.07N×22°.30E, h6km, ML3.3/15, Error ellipse: s-maj=0.8km s-min=0.3km az=320.0*

ISC 04 13:12:36.5±0.8, 38°.07N±0°.02×22°.30E±0°.02, h10km±6km, n83, σ0°62/112, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLV	**Kalavryta, Ach**	**0.12**	**259**	P	**Pg**	**13 12 39.5**	**+0.1**
KLV				S	**Sg**	**13 12 40.9**	**-0.5**
	15μm,0.1s						
KLV	**Kalavryta, Ach**	**0.12**	**259**	P	**Pg**	**13 12 39.4**	**0.0**
KLV				S	**Sg**	**13 12 41.3**	**-0.1**
KLV				AML	AML	13 12 42.0	
	comp=E,41954μm,0.2s						
KLV				AML	AML	13 12 43.0	
	comp=N,22266μm,0.2s						
ALIK	**Aliki, Aigiali**	**0.24**	**322**	P	**Pg**	**13 12 41.7**	**+0.3**
THAL	**Thalero**	**0.29**	**96**	P	**Pb**	**13 12 42.8**	**-1.0**
THAL				S	**Sg**	**13 12 46.6**	**+0.5**
	comp=N,23μm,0.1s						
THAL	**Thalero**	**0.29**	**96**	P	**Pb**	**13 12 42.7**	**-1.0**
THAL				S	**Sg**	**13 12 46.2**	**+0.1**
THAL				AML	AML	13 12 47.0	
	comp=N,47309μm,0.1s						
THAL				AML	AML	13 12 49.5	
	comp=E,33617μm,0.2s						
LAKA	**Lakka**	**0.31**	**304**	P	**Pg**	**13 12 42.5**	**-0.1**
LAKA				S	**Sg**	**13 12 47.1**	**+0.4**
	comp=E,12μm,0.2s						
LAKA	**Lakka**	**0.31**	**304**	P	**Pg**	**13 12 42.5**	**-0.1**
LAKA				S	**Sg**	**13 12 46.7**	**0.0**
LAKA				AML	AML	13 12 47.4	
	comp=E,20332μm,0.3s						
LAKA				AML	AML	13 12 48.0	
	comp=N,29692μm,0.2s						
SERG	**Sergoula**	**0.40**	**331**	P	**Pg**	**13 12 44.0**	**-0.3**
SERG				S	**Sg**	**13 12 50.5**	**+1.0**
	comp=N,3μm,0.2s						
SERG	**Sergoula**	**0.40**	**331**	P	**Pg**	**13 12 43.9**	**-0.3**
SERG				S	**Sg**	**13 12 49.2**	**-0.3**
SERG				AML	AML	13 12 51.4	
	comp=N,9440μm,0.2s						
SERG				AML	AML	13 12 52.6	
	comp=E,5047μm,0.3s						
DLFA	**Delphi**	**0.44**	**21**	P	**Pg**	**13 12 44.6**	**-0.4**
DLFA				S	**Sg**	**13 12 50.9**	**0.0**
DLFA				AML	AML	13 12 51.8	
	comp=N,4370μm,0.2s						
DLFA				AML	AML	13 12 52.4	
	comp=E,4640μm,0.3s						
UPR	**University Cam**	**0.46**	**298**	P	**Pg**	**13 12 45.8**	**+0.4**
EFP	**Efpalio**	**0.47**	**319**	P	**Pg**	**13 12 45.8**	**+0.1**
EFP	**Efpalio**	**0.47**	**319**	P	**Pg**	**13 12 45.4**	**-0.3**
EFP				S	**Sg**	**13 12 52.5**	**+0.5**
DRO	**Drossia**	**0.48**	**256**	P	**Pg**	**13 12 45.7**	**-0.1**
DRO				S	**Sg**	**13 12 53.2**	**+1.1**
	comp=E,7μm,0.2s						
DRO	**Drossia**	**0.48**	**256**	P	**Pg**	**13 12 45.3**	**-0.6**
DRO				S	**Sg**	**13 12 52.5**	**+0.4**
DRO				AML	AML	13 12 58.3	
	comp=N,16239μm,0.3s						
DRO				AML	AML	13 12 59.2	
	comp=E,16836μm,0.3s						
ACOR	**Acrocorinthos**	**0.48**	**111**	P	**Pg**	**13 12 45.9**	**+0.1**
ACOR				S	**Sg**	**13 12 52.3**	**+0.1**
ACOR				AML	AML	13 12 53.3	
	comp=N,1609μm,0.2s						
ACOR				AML	AML	13 12 53.6	
	comp=E,1683μm,0.2s						
LOUT	**Loutraki**	**0.54**	**98**	P	**Pg**	**13 12 47.1**	**+0.2**
LOUT	**Loutraki**	**0.54**	**98**	P	**Pb**	**13 12 47.6**	**-0.4**
LOUT				S	**Sb**	**13 12 54.6**	**-1.2**
RLS	**Riolos of Patr**	**0.66**	**269**	P	**Pg**	**13 12 48.5**	**-0.7**
RLS				S	**Sb**	**13 12 59.0**	**-0.3**
	comp=E,2μm,0.3s						
RLS	**Riolos of Patr**	**0.66**	**269**	P	**Pg**	**13 12 48.5**	**-0.7**
RLS				S	**Sg**	**13 12 58.3**	**+0.5**
AXAR	**Agios Charalam**	**0.75**	**22**	P	**Pg**	**13 12 50.5**	**-0.5**
AXAR				S	**Sb**	**13 13 02.1**	**0.0**
	comp=E,7μm,0.4s						
AXAR	**Agios Charalam**	**0.75**	**22**	P	**Pg**	**13 12 50.5**	**-0.5**
AXAR				AML	AML	13 13 04.4	
	comp=E,16825μm,0.4s						
AXAR				AML	AML	13 13 06.9	
	comp=N,11697μm,0.4s						
VIL2	**Platees**	**0.78**	**79**	P	**Pb**	**13 12 52.0**	**-0.1**
VIL2				AML	AML	13 13 06.4	
	comp=N,5005μm,0.6s						
VIL2				AML	AML	13 13 08.0	
	comp=E,4626μm,0.4s						
EPID	**Epidavros**	**0.79**	**125**	P	**Pg**	**13 12 51.7**	**0.0**
EPID	**Epidavros**	**0.79**	**125**	P	**Pg**	**13 12 51.7**	**0.0**
EPID				S	**Sb**	**13 13 03.0**	**-0.2**
VILL	**Villia**	**0.80**	**83**	P	**Pb**	**13 12 52.4**	**-0.2**
VILL				S	**Sb**	**13 13 04.4**	**+0.9**
	comp=E,3μm,0.5s						
PVO	**Paravola**	**0.82**	**312**	P	**Pg**	**13 12 52.0**	**-0.3**
PVO				S	**Sb**	**13 13 04.3**	**+0.4**
	comp=E,1μm,0.5s						
PVO	**Paravola**	**0.82**	**312**	P	**Pg**	**13 12 51.9**	**-0.3**
ATAL	**Atalanti**	**0.84**	**42**	P	**Pg**	**13 12 51.8**	**-0.9**
ATAL				AML	AML	13 13 08.1	
	comp=N,4179μm,0.6s						
ATAL				AML	AML	13 13 08.4	
	comp=E,4426μm,0.5s						
EVR	**Evrytania**	**0.93**	**336**	P	**Pg**	**13 12 53.7**	**-0.7**
EVR	**Evrytania**	**0.93**	**336**	P	**Pg**	**13 12 53.6**	**-0.8**
EVR				S	**Sg**	**13 13 06.9**	**+0.3**
EVR				AML	AML	13 13 10.2	
	comp=N,1599μm,0.5s						
EVR				AML	AML	13 13 11.0	
	comp=E,2073μm,0.5s						
ITM	**Ithomi**	**0.93**	**199**	P	**Pg**	**13 12 54.0**	**-0.5**
ITM				S	**Sb**	**13 13 08.2**	**+1.0**
	comp=E,1μm,0.3s						
ITM	**Ithomi**	**0.93**	**199**	PG	**Pg**	**13 12 53.9**	**-0.5**
ITM				SG	**Sb**	**13 13 08.2**	**+1.0**
ITM	**Ithomi**	**0.93**	**199**	P	**Pg**	**13 12 53.8**	**-0.7**
ITM				AML	AML	13 13 09.9	
	comp=E,2998μm,0.3s						
ITM				AML	AML	13 13 10.8	
	comp=N,1974μm,0.3s						
AGG	**Agios Georgios**	**0.95**	**1**	P	**Pg**	**13 12 54.4**	**-0.4**
AGG	**Agios Georgios**	**0.95**	**1**	PG	**Pg**	**13 12 54.2**	**-0.6**
AGG				SG	**Sg**	**13 13 07.5**	**+0.2**
AGG	**Agios Georgios**	**0.95**	**1**	P	**Pg**	**13 12 53.4**	**-1.4**
MAKR	**Makrakomi, Fth**	**0.95**	**352**	P	**Pg**	**13 12 54.7**	**-0.1**
MAKR				S	**Sb**	**13 13 08.3**	**+0.4**
	comp=N,4μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.95**	**352**	P	**Pb**	**13 12 55.3**	**+0.1**
MAKR				S	**Sg**	**13 13 07.6**	**+0.3**
MAKR				AML	AML	13 13 11.5	
	comp=N,8291μm,0.4s						
MAKR				AML	AML	13 13 12.9	
	comp=E,5763μm,0.3s						
KRND	**KRANIDI**	**0.96**	**135**	P	**Pg**	**13 12 54.2**	**-0.7**
ATH	**Athens Observa**	**1.12**	**94**	P	**Pb**	**13 12 57.9**	**-0.1**
ATH				AML	AML	13 13 14.8	
	comp=E,2913μm,0.2s						
ATH				AML	AML	13 13 14.9	
	comp=N,2387μm,0.3s						
ATHU	**Athens Univers**	**1.18**	**94**	P	**Pg**	**13 12 58.8**	**-0.3**
ATHU	**Athens Univers**	**1.18**	**94**	P	**Pb**	**13 12 58.5**	**-0.4**
ATHU				AML	AML	13 13 16.2	
	comp=N,1012μm,0.6s						
ATHU				AML	AML	13 13 17.0	
	comp=E,511μm,0.3s						
VLY	**Voula,Athens**	**1.20**	**100**	P	**Pg**	**13 12 59.2**	**-0.3**
VLY				S	**Sn**	**13 13 16.4**	**+0.7**
	comp=E,882nm,0.4s						
VLY	**Voula,Athens**	**1.20**	**100**	P	**Pb**	**13 12 59.0**	**-0.3**
VLY				AML	AML	13 13 16.3	
	comp=N,1506μm,0.6s						
VLY				AML	AML	13 13 17.9	
	comp=E,2014μm,0.3s						
PYL	**PYLOS**	**1.25**	**201**	P	**Pn**	**13 12 59.3**	**-0.7**
PYL				S	**Sn**	**13 13 18.3**	**+1.4**
	comp=E,645nm,0.3s						
PYL	**PYLOS**	**1.25**	**201**	P	**Pn**	**13 12 59.1**	**-0.9**
DION	**Dionisos Attik**	**1.29**	**89**	P	**Pn**	**13 13 00.4**	**-0.2**
DION				S	**Sn**	**13 13 18.9**	**+1.0**
	comp=E,3μm,0.4s						
DION	**Dionisos Attik**	**1.29**	**89**	P	**Pn**	**13 13 00.4**	**-0.2**
DION				AML	AML	13 13 20.1	
	comp=N,2546μm,0.6s						
DION				AML	AML	13 13 20.2	
	comp=E,4275μm,0.4s						
VLS	**Valsamata**	**1.35**	**275**	P	**Pn**	**13 13 00.8**	**-0.7**
VLS	**Valsamata**	**1.35**	**275**	P	**Pn**	**13 13 00.6**	**-0.8**
VLS				AML	AML	13 13 28.4	
	comp=N,1066μm,0.4s						
VLS				AML	AML	13 13 29.8	
	comp=E,776μm,0.4s						
PSDA	**Pessada-Kefalo**	**1.35**	**272**	P	**Pn**	**13 13 01.1**	**-0.4**
PSDA	**Pessada-Kefalo**	**1.35**	**272**	P	**Pn**	**13 13 01.0**	**-0.4**
FSK	**Fiskardo**	**1.42**	**287**	P	**Pb**	**13 13 03.1**	**0.0**
NEO	**Neokhori**	**1.43**	**30**	P	**Pn**	**13 13 02.4**	**-0.1**
VLI	**Veliai**	**1.44**	**159**	P	**Pn**	**13 13 02.7**	**+0.1**
VLI	**Veliai**	**1.44**	**159**	P	**Pn**	**13 13 02.8**	**+0.1**
VLI				AML	AML	13 13 27.0	
	comp=N,961μm,0.7s						
VLI				AML	AML	13 13 27.6	
	comp=E,1007μm,0.5s						
XOR	**Xorichti**	**1.47**	**28**	P	**Pn**	**13 13 03.0**	**-0.1**
LKD2	**Lefkada island**	**1.48**	**300**	P	**Pn**	**13 13 03.4**	**+0.2**
LKD2	**Lefkada island**	**1.48**	**300**	P	**Pn**	**13 13 03.1**	**-0.1**
KEF4	**Livadi, Kephal**	**1.49**	**278**	P	**Pn**	**13 13 03.5**	**+0.2**
THL	**Klokotos Trika**	**1.51**	**352**	P	**Pn**	**13 13 03.9**	**+0.3**
THL	**Klokotos Trika**	**1.51**	**352**	P	**Pn**	**13 13 03.6**	**0.0**
KYMI	**Kymi, Euboea I**	**1.52**	**68**	P	**Pn**	**13 13 03.5**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.52**	**68**	P	**Pn**	**13 13 03.2**	**-0.6**
KEF3	**Kipouria, Keph**	**1.54**	**276**	P	**Pn**	**13 13 04.0**	**-0.1**
AOS	**Alonnisos**	**1.66**	**48**	PN	**Pn**	**13 13 06.3**	**+0.7**
KTHR	**Kythira**	**1.89**	**162**	P	**Pb**	**13 13 10.0**	**-1.0**
HORT	**Hortiatis**	**2.60**	**14**	PN	**Pn**	**13 13 18.9**	**+0.2**
APE	**Apeiranthos**	**2.75**	**110**	PN	**Pn**	**13 13 21.6**	**+0.9**
IMMV	**Iera Moni Meta**	**2.93**	**152**	PN	**Pn**	**13 13 24.6**	**+1.5**
CHOS	**Chios island**	**2.97**	**83**	PN	**Pn**	**13 13 24.7**	**+0.9**
SIGR	**SIGRI**	**3.01**	**67**	PN	**Pn**	**13 13 25.2**	**+1.0**
KNDR	**Palaiochora Ch**	**3.04**	**158**	PN	**Pn**	**13 13 26.0**	**+1.4**
KNT	**Kendrikon**	**3.12**	**8**	PN	**Pn**	**13 13 26.9**	**+1.1**
URLA	**Izmir**	**3.40**	**84**	PN	**Pn**	**13 13 29.9**	**+0.3**
IDI	**Anoyia**	**3.47**	**142**	Pn	**Pn**	**13 13 31.4**	**+0.8**
	comp=E,0.8nm,0.3s,baz=308,slow=16,SNR=15						
IDI				Sn	**Sn**	**13 14 11.4**	**-0.4**
	comp=E,3.5nm,0.3s,baz=99,slow=21,SNR=2.9						
	comp=E,21nm,1.2s						
IDI	**Anoyia**	**3.47**	**142**	PN	**Pn**	**13 13 32.6**	**+2.0**
GNI	**Garni**	**17.54**	**76**	P	**Pn**	**13 16 40.9**	**-0.3**
	comp=E,2.3nm,0.3s,baz=338,slow=12,SNR=2.1						
	comp=E,6.6nm,0.3s						
ESDC	**Sonseca Array**	**20.49**	**283**	P	Pn	13 17 16.0	-0.7
	comp=E,0.6nm,1.0s,baz=67,slow=9.9,SNR=2.4						
	comp=E,0.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**30.86**	**222**	P	**P**	**13 18 52.4**	**-0.6**
	comp=E,0.3nm,0.6s,baz=42,slow=9.9,SNR=2.1						
	comp=E,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**41.17**	**54**	P	**P**	**13 20 20.9**	**+0.1**
	comp=E,0.8nm,0.6s,baz=279,slow=9.1,SNR=6.7						
	comp=E,0.8nm,0.6s						
MKAR	**Makanchi Array**	**44.16**	**59**	P	**P**	**13 20 45.0**	**-0.3**
	comp=E,1.6nm,0.5s,baz=272,slow=7.6,SNR=12						
	comp=E,1.6nm,0.5s						

IDC 04 13:27:45.1±3.6, 18°.91N×145°.46E, h165km±35km, mb3.2/4, mbtmp3.8/5, Error ellipse: s-maj=98.0km s-min=22.9km az=107.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.32**	**186**	P	Pn	13 29 04.8	+1.7
	63nm,0.7s,baz=229,slow=10,SNR=2.1						
GUMO				S	Sn	13 30 03.4	-0.8
	25nm,0.4s,baz=12,slow=22,SNR=1.1						
PETK	**Petropavlovsk-**	**35.43**	**13**	P	P	13 34 25.2	-0.1
	2.2nm,0.8s,baz=212,slow=9.7,SNR=3.0						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**40.12**	**196**	P	P	13 35 04.8	-0.1
	0.4nm,0.3s,baz=23,slow=8.9,SNR=6.5						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**63.56**	**26**	P	P	13 37 56.7	-1.1
	0.2nm,0.5s,baz=262,slow=6.1,SNR=2.3						
	0.2nm,0.5s						
NVAR	**Mina Array Bea**	**83.19**	**52**	P	P	13 39 54.2	+0.8
	0.3nm,0.6s,baz=278,slow=5.9,SNR=4.8						
	0.3nm,0.6s						

*SJA **04** 14:15:09.9±0.7, 22°.29S×66°.02W, h299km±4km, ML5.2, MW5.6*

*MOS **04** 14:15:10.1±1.3, 22°.25S×65°.87W, h248km, mb5.9/51, Error ellipse: s-maj=7.9km s-min=5.1km az=79.9*

*NEIC **04** 14:15:11.6, 22°.34S×66°.01W, h275km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 0.50; Mθθ 0.11; Mϕϕ -0.61; Mrθ 0.30; Mrϕ -0.00; Mθϕ -1.83; Fault plane solution: M0 1.94000×10^18 NP1: ϕs 170.93000°, δ 81.76000°, λ 86.69000°. NP2: ϕs 12.90000°, δ 8.87000°, λ 111.72000°. Principal axes: T 1.8902, Plg 53.0000°, Azm 77.0000°; N 0.0888, Plg 3.0000°, Azm 171.0000°; P -1.9790, Plg 37.0000°, Azm 264.0000°;*

*GUC **04** 14:15:11.5±0.5, 22°.43S×66°.20W, h293km±6km, mb6.0*

*VAO **04** 14:15:11.0±0.2, 22°.26S×66°.01W, h249km, mb5.9*

*IDC **04** 14:15:11.6±0.6, 22°.24S×65°.87W, h250km±5km, mb5.2/27, mbtmp5.8/35, Error ellipse: s-maj=7.6km s-min=6.5km az=80.

AF01 eS S 14 16 34.8 +1.4
ASTB Santa Barbara 2.16 140 eP Pn 14 15 58.7 +0.9
ASTB IAML 14 17 01.1
comp=Z,720nm,1.3s
ALOL LOMAS DE OLMED 2.38 130 eP Pn 14 16 00.3 +0.7
SLA San Lorenzo 2.45 170 eP Pn 14 16 01.3 +0.8
SLA i S S 14 16 38.6 +0.1
SLA San Lorenzo 2.45 170 eP Pn 14 16 01.5 +1.1
SLA eS S 14 16 29.9 -8.6
SLA IAML 14 16 48.7
comp=Z,4µm,2.3s
LVC Limon Verde 2.73 263 P Pn 14 16 03.1 -0.3
comp=Z,10µm,0.6s,baz=82,slow=5.9,SNR=6678
LVC S S 14 16 42.2 -1.6
comp=Z,8µm,0.5s,baz=296,slow=21,SNR=28
LVC Limon Verde 2.73 263 Pn 14 16 02.9 -0.6
LVC Limon Verde 2.73 263 eP Pn 14 16 02.7 -0.8
LVC eS S 14 16 41.8 -2.0
LVC Limon Verde 2.73 263 eP Pn 14 16 03.2 -0.3
LVC eS S 14 16 46.2 +2.4
LVC IAML 14 16 54.5
comp=Z,4µm,0.9s
LVC Limon Verde 2.73 263 eP Pn 14 16 02.9 -0.6
PB09 IPOC Station P 3.07 279 Pn 14 16 06.3 -0.5
PB09 IPOC Station P 3.07 279⇑ iP Pn 14 16 06.8 0.0
PB09 eS S 14 16 47.9 -2.0
PB09 IPOC Station P 3.07 279 eP Pn 14 16 06.7 -0.1
PB09 eS S 14 16 48.3 -1.6
PB09 IAML 14 16 55.7
comp=Z,28µm,0.2s
PB06 IPOC Station P 3.35 262 Pn 14 16 08.6 -1.2
PB06 IPOC Station P 3.35 262⇑ iP Pn 14 16 08.8 -1.0
PB06 i S S 14 16 52.3 -3.0
PB06 IPOC Station P 3.35 262 eP Pn 14 16 09.0 -0.8
PB06 eS S 14 16 49.3 -6.0
PB06 eS S 14 16 52.9 -2.4
PB06 IAML 14 16 57.1
comp=Z,19µm,0.3s
PB15 IPOC Station P 3.35 254 Pn 14 16 08.6 -1.2
PB15 IPOC Station P 3.35 254⇑ iP Pn 14 16 09.0 -0.9
PB15 i S S 14 16 52.4 -3.0
PB15 IPOC Station P 3.35 254 eP Pn 14 16 09.2 -0.7
PB15 eS S 14 16 53.3 -2.1
PB15 IAML 14 16 59.5
comp=Z,111µm,0.2s
PB01 IPOC Station P 3.50 290 Pn 14 16 10.1 -1.3
PB01 IPOC Station P 3.50 290⇑ iP Pn 14 16 10.8 -0.6
PB01 i S S 14 16 55.1 -3.0
PB01 IPOC Station P 3.50 290 eP Pn 14 16 10.8 -0.6
PB01 eS S 14 16 49.3 -8.8
PB01 eS S 14 16 55.5 -2.6
PB01 IAML 14 17 00.1
comp=Z,44µm,0.2s
PB07 IPOC Station P 3.67 278 Pn 14 16 11.9 -1.6
PB07 IPOC Station P 3.67 278⇑ iP Pn 14 16 12.5 -0.9
PB07 i S S 14 16 57.6 -4.3
PB07 IPOC Station P 3.67 278 eP Pn 14 16 12.5 -0.9
PB07 eS S 14 16 58.8 -3.1
PB07 IAML 14 17 04.0
comp=Z,38µm,0.3s
PB02 IPOC Station P 3.77 284 Pn 14 16 12.7 -1.7
PB02 IPOC Station P 3.77 284⇑ iP Pn 14 16 13.4 -1.0
PB02 i S S 14 16 59.7 -4.0
PB02 IPOC Station P 3.77 284 eP Pn 14 16 13.5 -1.0
PB02 eS S 14 17 00.8 -2.9
PB02 IAML 14 17 04.2
comp=Z,106µm,0.4s
FSA Cafayete 3.80 180 eP Pn 14 16 14.6 -0.2
FSA eS S 14 17 04.3 -0.1
PB04 IPOC Station P 3.87 269 Pn 14 16 13.7 -1.9
PB04 IPOC Station P 3.87 269⇑ iP Pn 14 16 14.5 -1.1
PB04 i S S 14 17 01.7 -4.0
PB04 IPOC Station P 3.87 269 eP Pn 14 16 14.5 -1.1
PB04 eP 14 16 14.6
PB04 eS S 14 17 02.4 -3.4
PB04 IAML 14 17 07.4
comp=Z,38µm,0.8s
GO01 Chusmiza 3.98 310 Pn 14 16 17.2 0.0
GO01 Chusmiza 3.98 310⇑ iP Pn 14 16 17.3 0.0
GO01 eS S 14 17 07.2 -1.6
GO01 Chusmiza 3.98 310 eP Pn 14 16 17.3 0.0
GO01 eS S 14 17 04.8 -4.0
PATCX Punta Patache 4.16 290 Pn 14 16 17.6 -1.3
PATCX Punta Patache 4.16 290⇑ iP Pn 14 16 17.6 -1.3
PATCX i S S 14 17 07.3 -4.4
PATCX Punta Patache 4.16 290 eP Pn 14 16 17.7 -1.1
PATCX eP 14 16 17.7
PATCX eP Pn 14 16 17.8 -1.1
PATCX eP Pn 14 16 17.8 -1.1
PATCX eP Pn 14 16 17.8 -1.1
PATCX IAML 14 17 14.1
comp=Z,66µm,0.5s
HMBC Humberstone 4.16 298⇑ iP Pn 14 16 17.7 -1.3
HMBC i S S 14 17 07.6 -4.4
TA01 Diego Aracena 4.28 293 Pn Pn 14 16 18.6 -1.6
TA01 Diego Aracena 4.28 293 iP Pn 14 16 17.3 -1.6
TA01 i S S 14 17 09.2 -5.0
TA01 Diego Aracena 4.28 293 eP Pn 14 16 18.8 -1.4
TA01 eS S 14 17 10.5 -3.7
TA01 IAML 14 17 13.9
comp=Z,25µm,0.6s
TA02 Huaiquique 4.37 297 Pn 14 16 18.7 -2.5
TA02 Huaiquique 4.37 297⇑ eP Pn 14 16 19.7 -1.5
TA02 Huaiquique 4.37 297 eP Pn 14 16 20.0 -1.3
TA02 eS S 14 17 06.3 -10
TA02 IAML 14 17 17.1
comp=Z,230µm,0.8s
GO02 Mina Guanaco 4.37 229 Pn Pn 14 16 19.6 -2.0
GO02 Mina Guanaco 4.37 229 iP Pn 14 16 20.4 -1.2
GO02 i S S 14 17 12.7 -3.9
GO02 Mina Guanaco 4.37 229 eP Pn 14 16 20.4 -1.2
GO02 eS S 14 17 13.3 -3.3
PB10 IPOC Station P 4.39 253 Pn Pn 14 16 19.5 -2.0
PB10 IPOC Station P 4.39 253 iP Pn 14 16 19.4 -2.0
PB10 i S S 14 17 11.1 -5.5
PB10 IPOC Station P 4.39 253 eP Pn 14 16 19.7 -1.8
PB10 eS S 14 17 12.2 -4.4
PB10 eS S 14 17 13.3 -3.3
PB10 IAML 14 17 21.4
comp=Z,20µm,0.6s
AHML Horco Molle 4.51 173 eP Pn 14 16 22.6 -0.3
AHML i S S 14 17 17.0 -2.1
PB14 IPOC Station P 4.68 239 Pn Pn 14 16 23.2 -2.1
PB14 IPOC Station P 4.68 239 iP Pn 14 16 23.3 -2.0
PB14 i S S 14 17 17.3 -5.9
PB14 IPOC Station P 4.68 239 eP Pn 14 16 23.7 -1.5
PB14 eS S 14 17 17.7 -5.6
PB14 eS S 14 17 17.8 -5.5
PB14 eS S 14 17 18.0 -5.2
PB14 IAML 14 17 24.8
comp=Z,38µm,0.7s
PB16 IPOC Station P 5.15 319 Pn Pn 14 16 31.1 -0.1
PB16 IPOC Station P 5.15 319⇑ iP Pn 14 16 31.6 +0.5
PB16 i S S 14 17 32.5 -1.5
PB16 IPOC Station P 5.15 319 eP Pn 14 16 31.7 +0.5
PB16 IAML 14 17 38.4
comp=Z,13µm,0.5s
AC02 Maricunga 5.36 212 Pn Pn 14 16 32.3 -1.2
AC02 Maricunga 5.36 212 iP Pn 14 16 32.4 -1.2
AC02 i S S 14 17 34.0 -4.3
AC02 Maricunga 5.36 212 eP Pn 14 16 32.3 -1.2
AC02 IAML 14 17 47.8
comp=Z,2µm,0.6s
PB12 IPOC Station P 5.48 311 Pn Pn 14 16 31.9 -2.9
PB12 IPOC Station P 5.48 311⇑ iP Pn 14 16 32.3 -2.5
PB12 i S S 14 17 34.1 -6.4
AP01 Chacalluta 5.66 313 Pn 14 16 34.9 -2.0
AP01 Chacalluta 5.66 313 eP Pn 14 16 34.8 -2.0
AP01 i S S 14 17 38.7 -5.6
AC01 Pan de Azucar 5.70 227 Pn Pn 14 16 34.3 -2.9
AC01 Pan de Azucar 5.70 227 iP Pn 14 16 34.4 -2.9
AC01 i S S 14 17 38.2 -7.0
LPAZ La Paz 6.31 341 P Pn 14 16 46.0 +0.5
comp=Z,349nm,0.3s,baz=144,slow=7.6,SNR=557
LPAZ S S 14 17 57.5 -2.5
comp=Z,3µm,1.0s,baz=298,slow=18,SNR=17
LPAZ La Paz 6.31 341 Pn Pn 14 16 46.0 +0.5
LPAZ La Paz 6.31 341 eP Pn 14 16 45.7 +0.2
GO03 Copiap 6.54 215 Pn 14 16 44.6 -3.1
AC04 Llanos de Chal 7.48 217 Pn Pn 14 16 55.6 -3.7
SIV San Ignacio 7.80 37 P Pn 14 17 03.1 -0.3
comp=Z,3µm,0.9s,baz=228,slow=11,SNR=2028

LCO Las Campanas 7.93 212 Pn Pn 14 17 01.9 -3.4
LCO Las Campanas 7.93 212 P Pn 14 17 01.9 -3.4
CO01 Juntas del Tor 8.50 205 Pn 14 17 10.7 -1.6
CPUP Villa Florida 8.85 119 P Pn 14 17 15.1 -1.4
comp=Z,76nm,0.8s,baz=305,slow=12,SNR=100
CPUP Villa Florida 8.85 119 Pn Pn 14 17 14.5 -2.1
CPUP Villa Florida 8.85 119 eP Pn 14 17 15.5 -1.1
CO05 La Serena 8.94 211 Pn 14 17 14.6 -3.0
GO04 Tololo Observa 8.96 208 Pn 14 17 14.7 -3.5
ANTJ Antonio Joao (9.25 90 eP Pn 14 17 21.9 +0.2
PTLB Pontes e Lacer 9.39 45 Pn Pn 14 17 23.4 -0.1
PTLB Pontes e Lacer 9.39 45 eP Pn 14 17 23.2 -0.2
CO03 El Pedregal 9.50 205 Pn 14 17 22.1 -2.7
ZON Zonda 9.52 194 Pn Pn 14 17 22.9 -2.1
ZON Zonda 9.52 194 P Pn 14 17 22.9 -2.1
CO06 Fray Jorge 9.76 210 Pn Pn 14 17 24.5 -3.4
CO02 Combarbal 9.94 206 Pn 14 17 27.0 -3.3
VILB Vilhena 10.80 32 Pn 14 17 41.1 0.0
VILB Vilhena 10.80 32 eP Pn 14 17 41.0 -0.1
ITQB Itaqui 11.16 133 Pn 14 17 45.4 0.0
ITQB Itaqui 11.16 133 eP Pn 14 17 45.1 -0.4
MCR1 Marechal Candi 11.18 103 eP Pn 14 17 45.6 -0.1
VA03 San Esteban 11.19 200 P Pn 14 17 45.0 -0.8
ROC1 El Roble 11.54 202 P Pn 14 17 47.6 -2.7
PEL Peldehue 11.58 200 P Pn 14 17 48.5 -2.1
PEL Peldehue 11.58 200 P Pn 14 17 48.5 -2.1
SALV Santo Antonio 11.61 59 eP Pn 14 17 50.9 -0.3
VA01 Torpederas 11.81 204 Pn 14 17 51.7 -1.6
MT05 Renca 11.83 200 Pn 14 17 53.9 +0.1
MT02 Curacav 11.84 202 P Pn 14 17 51.5 -2.2
MT03 Universidad Ad 11.85 199 P Pn 14 17 54.0 -0.1
UNIS Unistalda (Bra 11.92 127 eP Pn 14 17 54.6 -0.2
CRSM Crissiumal (Br 12.00 118 eP Pn 14 17 56.2 +0.4
LMEL Las Melosas 12.10 197 P Pn 14 17 57.2 +0.1
MT09 Talagante 12.26 200 P Pn 14 17 57.1 -2.0
TRCB Terra Rica 12.34 95 P Pn 14 18 00.2 0.0
TRCB Terra Rica 12.34 95 eP Pn 14 17 59.9 -0.2
FRBT Francisco Belt 12.35 110 eP Pn 14 18 00.3 +0.1
VA05 Santo Domingo 12.36 203 P Pn 14 17 57.8 -2.4
ETMB Extrema 12.41 359 Pn 14 18 00.6 -0.4
ETMB Extrema 12.41 359 eP Pn 14 18 00.4 -0.6
MT01 Popeta 12.43 201 P Pn 14 17 58.7 -2.3
RODS Rosario do Sul 12.55 132 eP Pn 14 18 02.3 -0.3
BO01 Tunca 12.86 199 Pn 14 18 04.8 -1.6
PTGB Pitanga 12.99 103 eP Pn 14 18 08.3 +0.2
BO02 Sierra Bellavi 13.15 198 P Pn 14 18 08.6 -1.3
ALGR Alto Alegre (B 13.36 122 eP Pn 14 18 12.3 -0.2
ITAB Concordia 13.50 114 Pn 14 18 14.0 -0.2
ITAB Concordia 13.50 114 eP Pn 14 18 13.8 -0.4
SAML Samuel 13.54 12 P Pn 14 18 14.4 -0.4
SAML Samuel 13.54 12 P Pn 14 18 14.4 -0.4
PCMB Pacaembu 13.67 90 eP Pn 14 18 16.4 0.0
GO05 Huala 13.70 201 P Pn 14 18 14.6 -2.0
GO05 Huala 13.70 201‖ eP Pn 14 18 14.7 -1.9
GO05 eS S 14 20 44.6 -3.6
GO05 Huala 13.70 201‖ eP Pn 14 18 14.7 -1.9
GO05 eS S 14 20 44.6 -3.6
PDRB Porto dos Gac 13.81 41 eP Pn 14 18 17.3 -0.9
CPSB Cacapava Do Su 13.83 128 eP Pn 14 18 17.6 -0.6
ML02 Panimavida 14.23 198 P Pn 14 18 21.4 -1.6
ML02 Panimavida 14.23 198 eP Pn 14 18 21.3 -1.7
ML02 eS S 14 20 55.4 -4.9
ML02 Panimavida 14.23 198 eP Pn 14 18 21.3 -1.7
ML02 eS S 14 20 55.4 -4.9
LPA La Plata 14.41 152 *i P* P 14 18 17.2 -7.8
LPA sP 14 19 26.1
LPA S S 14 20 54.0 -10
LPA PCP **PcP** 14 23 14.6 -6.1
LPA SCS **ScS** 14 30 08.9 +2.0
LPA PKIKP **PKiKP** 14 31 21.4 +5.1
LPA SKIKP 14 34 27.6
LPA PKIKS 14 34 33.2
LPA SKIKS 14 37 54.8
PLTB Pedras Altas 14.50 133 P P 14 18 25.4 -0.6
PLTB Pedras Altas 14.50 133 eP P 14 18 25.0 -1.1
NNA Nana 14.58 313 P Pn 14 18 27.7 +0.3
comp=Z,502nm,0.8s,baz=157,slow=10,SNR=135
NNA S S 14 21 05.0 -3.3
comp=Z,99nm,0.3s,baz=232,slow=20,SNR=5.8
NNA ScP **ScP** 14 26 30.7 +0.8
comp=Z,36nm,0.7s,baz=217,slow=1.3,SNR=4.8
NNA Nana 14.58 313 Pn 14 18 27.4 -0.1
ITRB Iturama 14.81 83 eP Pn 14 18 30.3 +0.2
CLDB Colider 14.96 42 eP P 14 18 31.1 -0.3
FRTB Fartura 15.17 97 eP Pn 14 18 34.5 +0.1
CNLB Canela 15.30 120 eP P 14 18 34.2 -0.8
BI05 Punta Hualpn 15.70 202 P 14 18 39.3 +0.1
BI05 Punta Hualpn 15.70 202 eP P 14 18 38.0 -1.2
BI05 eS S 14 21 27.4 -3.6
BI05 Punta Hualpn 15.70 202 eP P 14 18 38.0 -1.2
BI05 eS S 14 21 27.4 -3.6
TIJ01 Guaruva-PR 15.82 104 eP Pn 14 18 41.8 -0.4
CZSB Cruzeiro do Su 15.87 335 P P 14 18 39.5 -1.8
CZSB Cruzeiro do Su 15.87 335 eP P 14 18 39.8 -1.5
H03N1 Juan Fernandez 15.93 223 P Pn 14 18 42.4 -0.4
baz=113,slow=16,SNR=345
H03N2 Juan Fernandez 15.94 223 P Pn 14 18 42.7 -0.3
baz=113,slow=16,SNR=214
H03N3 Juan Fernandez 15.94 223 P Pn 14 18 42.5 -0.7
baz=113,slow=16,SNR=275
VA04 Juan Fernndez 16.01 222 P 14 18 42.7 +0.1
TRQA Tornquist 16.08 169 P P 14 18 40.5 -2.9
TRQA Tornquist 16.08 169 P P 14 18 40.5 -2.9
H03S3 Juan Fernandez 16.18 222 P Pn 14 18 50.7 +4.9
SNR=406
H03S1 Juan Fernandez 16.19 222 P Pn 14 18 50.6 +4.6
SNR=184
H03S2 Juan Fernandez 16.20 222 P Pn 14 18 50.7 +4.7
SNR=322
BB19B Bebedouro 16.27 89 eP P 14 18 46.2 +0.6
TER01 Tubaro-SC 16.43 116 eP P 14 18 46.8 -0.5
RCLB Rio Claro- Sao 17.06 94 eP P 14 18 54.3 0.0
IPMB Ipameri, GO 17.22 79 eP P 14 18 57.0 +0.9
PET01 Itanhaem-SP 17.30 100 eP P 14 18 56.8 0.0
SNDB Serra Nova Dou 17.37 56 eP P 14 18 57.8 +0.1
VAO Valinhos 17.56 96 eP P 14 18 59.6 -0.2
GO06 Curarrehue 17.86 194 P P 14 19 02.2 -0.7
GO06 Curarrehue 17.86 194‖ eP P 14 19 02.1 -0.7
GO06 IAmb IAmb 14 19 04.8
comp=Z,1µm,1.2s
GO06 eS S 14 22 12.7 -1.5
GO06 Curarrehue 17.86 194‖ eP P 14 19 02.1 -0.7
GO06 IVmB_BB 14 19 03.9
comp=Z,6µm,1.3s
GO06 IAmb IAmb 14 19 04.8
comp=Z,1µm,1.2s
GO06 eS S 14 22 12.7 -1.5
LR03 Panguipulli 18.12 196 eP P 14 19 04.2 -1.3
LR03 IAmb IAmb 14 19 10.3
comp=Z,628nm,0.7s
LR03 eS S 14 22 15.7 -3.3
LR03 Panguipulli 18.12 196 eP P 14 19 04.2 -1.3
LR03 IAmb IAmb 14 19 10.3
comp=Z,628nm,0.7s
LR03 eS S 14 22 15.7 -3.3
BDFB Brasilia 18.22 72 P P 14 19 07.4 +0.5
comp=Z,357nm,0.5s,baz=250,slow=12,SNR=191
BDFB Brasilia 18.22 72 eP P 14 19 07.5 +0.5
NPGB Novo Progresso 18.29 36 eP P 14 19 06.1 -1.6
LR04 Corral 18.64 198 P P 14 19 10.2 -0.9
LR04 Corral 18.64 198 eP P 14 19 10.1 -1.0
LR04 IAmb IAmb 14 19 15.7
comp=Z,527nm,0.7s
LR04 Corral 18.64 198 eP P 14 19 10.1 -1.0
LR04 IAmb IAmb 14 19 15.7
comp=Z,527nm,0.7s
LR04 IVmB_BB 14 19 15.8
comp=Z,5µm,0.7s
PMNB Patos De Minas 18.69 82 eP P 14 19 11.5 -0.4
PLCA Paso Flores 18.79 191 P P 14 19 11.8 -1.0
comp=Z,133nm,0.8s,baz=11,slow=12,SNR=100
PLCA ScP **ScP** 14 26 39.5 +1.5
comp=Z,75nm,1.2s,baz=3.0,slow=1.5,SNR=5.9
PLCA Paso Flores 18.79 191 eP P 14 19 12.1 -0.6
PARB Paraibuna 18.79 97 eP P 14 19 11.7 -1.3
ATAH Atahualpa 19.25 320 P P 14 19 20.1 +1.8
comp=Z,167nm,1.0s,baz=150,slow=8.8,SNR=77
ATAH S S 14 22 48.6 +6.2
comp=Z,69nm,1.1s,baz=273,slow=20,SNR=1.4
ATAH ScP **ScP** 14 26 41.9 +2.0
comp=Z,87nm,1.1s,baz=26,slow=2.5,SNR=4.3
LL04 Puerto Octay 19.34 195 P P 14 19 17.1 -1.5

LL04 Puerto Octay 19.34 195‖ eP P 14 19 16.9 -1.7
LL04 IAmb IAmb 14 19 25.0
comp=Z,335nm,0.8s
LL04 Puerto Octay 19.34 195‖ eP P 14 19 16.9 -1.7
LL04 IVmB_BB 14 19 24.3
comp=Z,5µm,0.8s
LL04 IAmb IAmb 14 19 25.0
comp=Z,335nm,0.8s
LL03 Petrohue 19.55 195 P P 14 19 19.4 -1.5
LL03 Petrohue 19.55 195 eP P 14 19 19.3 -1.5
LL03 IAmb IAmb 14 19 26.5
comp=Z,648nm,0.7s
LL03 Petrohue 19.55 195 eP P 14 19 19.3 -1.5
LL03 IAmb IAmb 14 19 26.5
comp=Z,648nm,0.7s
LL03 IVmB_BB 14 19 26.6
comp=Z,7µm,0.8s
PEXB Peixe 19.67 62 eP P 14 19 21.5 -0.9
MACA Manacapuru-AM 19.70 16 P P 14 19 21.0 -1.7
MACA Manacapuru-AM 19.70 16 eP P 14 19 21.1 -1.7
LL05 Los Muermos 20.07 197 P P 14 19 24.4 -2.0
LL05 Los Muermos 20.07 197 eP P 14 19 24.6 -1.8
LL05 IAmb IAmb 14 19 28.9
comp=Z,822nm,1.2s
LL05 Los Muermos 20.07 197 eP P 14 19 24.6 -1.8
LL05 IAmb IAmb 14 19 28.9
comp=Z,822nm,1.2s
MAN01 Angra dos Reis 20.33 96 eP P 14 19 28.6 -0.9
ITTB Itaituba 20.40 31 eP P 14 19 28.8 -1.3
VAS01 Vassouras-RJ 20.85 94 eP P 14 19 34.4 -0.4
DIAM Diamantina, MG 21.29 83 eP P 14 19 38.3 -1.0
LL02 Futaleuf 21.40 192 P P 14 19 38.5 -1.3
LL02 Futaleuf 21.40 192‖ eP P 14 19 38.1 -1.8
LL02 Futaleuf 21.40 192‖ eP P 14 19 38.1 -1.8
LL02 IAmb IAmb 14 19 40.1
comp=Z,210nm,0.9s
MC01 Montes Claros 21.49 79 eP P 14 19 39.3 -1.8
GO07 Milladeo Hill, 21.73 195‖ eP P 14 19 41.3 -1.5
GO07 IAmb IAmb 14 19 42.6
comp=Z,515nm,0.5s
GO07 Milladeo Hill, 21.73 195‖ eP P 14 19 41.3 -1.5
GO07 IAmb IAmb 14 19 42.6
comp=Z,515nm,0.5s
JANB Januaria 21.73 74 eP P 14 19 42.5 -0.7
DUB01 Friburgo-RJ 21.85 94 eP P 14 19 43.3 -1.0
SMTB Santa Maria do 22.15 56 eP P 14 19 46.6 -0.4
SDBA SAO DESIDERIO 22.36 67 eP P 14 19 48.0 -1.0
PRPB Paraupebas 22.37 47 eP P 14 19 47.4 -1.6
CAM01 Campos-RJ 22.54 93 eP P 14 19 49.4 -1.0
BOSC San Juan Bosco 22.58 326 P P 14 19 51.0 -0.1
AY01 Puyuhuapi 22.75 192‖ eP P 14 19 52.1 0.0
AY01 IAmb IAmb 14 19 57.4
comp=Z,195nm,0.5s
AY01 Puyuhuapi 22.75 192‖ eP P 14 19 52.1 0.0
AY01 IAmb IAmb 14 19 57.4
comp=Z,195nm,0.5s
ARNL Arenillas 23.11 322 P P 14 19 56.6 +0.9
MALB Monte Alegre 23.29 31 eP P 14 19 56.1 -1.3
SJMB Sao Joao De Ma 23.49 86 eP P 14 19 58.5 -0.6
ALF01 Guarapari-ES 23.55 91 eP P 14 19 58.9 -0.8
COYC Coyhaique 23.75 191 P P 14 20 00.5 -0.3
COYC Coyhaique 23.75 191 eP P 14 20 00.6 -0.6
COYC Coyhaique 23.75 191 eP P 14 20 00.6 -0.6
PTLC Puerto Leguiza 23.93 338 eP P 14 19 57.6 -5.5
RIB01 Linhares ES 24.09 88 eP P 14 20 03.8 -0.8
BOAV Boa Vista 25.11 13 P P 14 20 12.6 -1.2
BOAV IAmb IAmb 14 20 16.3
comp=Z,406nm,1.1s
BOAV Boa Vista 25.11 13 eP P 14 20 12.9 -0.9
GUA01 Guaratinga, BA 25.30 82 eP P 14 20 14.7 -0.8
MACC Macarena, Meta 25.48 341 eP P 14 20 16.7 -0.4
OTAV Otavalo 25.48 330 P P 14 20 17.1 -0.6
OTAV IAmb IAmb 14 20 30.8
comp=Z,337nm,1.5s
OTAV Otavalo 25.48 330 P P 14 20 17.1 -0.6
OTAV pmax pmax
comp=Z,337nm,1.5s
FLOC Florencia 25.54 337 eP P 14 20 17.1 -0.6
MCPB Macapa, AP 25.67 34 eP P 14 20 17.7 -1.1
GCUF Volcan Galeras 25.88 333 eP P 14 20 22.9 +1.7
CMC01 Camacan, BA 25.95 79 eP P 14 20 20.5 -0.9
GARC Garzon, Huila 26.05 338 eP P 14 20 22.7 +0.2
TMAB Tom-Au,PA,Br 26.34 44 eP P 14 20 24.1 -0.7
GDU01 Guandu, BA 26.48 76 eP P 14 20 25.1 -1.0
BBAC Balboa, Cauca 26.56 334 eP P 14 20 27.9 +0.9
POPC Popayan, Colom 26.80 336 eP P 14 20 30.5 +1.2
PTGC Puerto Gaitan, 27.01 346 eP P 14 20 30.0 -0.8
PRAC Prado 27.28 340 eP P 14 20 32.1 -1.1
VILC Villavicencio, 27.31 343 eP P 14 20 34.3 +0.7
ANIL Santa Ana 28.17 340 eP P 14 20 41.5 +0.1
ROSC El Rosal 28.18 342 P P 14 20 42.6 +1.1
comp=Z,27nm,0.3s,baz=216,slow=7.8,SNR=13
ROSC S S 14 25 13.0 +5.3
comp=Z,35nm,1.0s,baz=342,slow=21,SNR=1.7
comp=Z,27nm,0.3s
ROSC El Rosal 28.18 342 eP P 14 20 42.4 +0.8
MALC Bahia Malaga 28.41 336 eP P 14 20 44.6 +1.5
ROSB Rosrio 28.66 51 eP P 14 20 44.0 -1.5
GUY2C Guyana, Caldas 28.85 340 eP P 14 20 46.8 -0.8
PLMC San Jos del P 28.85 338 eP P 14 20 45.7 -1.5
RUSC La Rusia 28.86 345 eP P 14 20 47.9 +0.2
SPBC San Pablo de B 28.88 343 eP P 14 20 47.1 -0.4
NORC Norcasia 29.02 342 eP P 14 20 47.0 -1.6
GO09 Cerro Castillo 29.34 188 P P 14 20 51.4 +0.4
BARC Barichara 29.56 345 eP P 14 20 51.9 -1.7
CBOC Ciudad Bolivar 29.66 339 eP P 14 20 52.9 -1.5
MG05 Puerto Natales 29.77 188 P P 14 20 54.8 +0.1
MG05 ScP **ScP** 14 27 09.7 +1.7
MG05 Puerto Natales 29.77 188‖ eP P 14 20 55.1 +0.4
MG05 Puerto Natales 29.77 188‖ eP P 14 20 55.1 +0.4
HELC Santa Helena 29.82 341 eP P 14 20 54.0 -2.0
EFI East Falkland 29.96 170 P P 14 20 56.3 -0.1
EFI IAmb IAmb 14 21 00.8
comp=Z,175nm,1.0s
EFI PcP **PcP** 14 23 52.8 +1.0
EFI ScP **ScP** 14 27 10.0 +1.4
EFI East Falkland 29.96 170*c* eP P 14 20 55.8 -0.7
EFI pmax pmax
comp=Z,96nm,0.8s
EFI East Falkland 29.96 170 P P 14 20 55.8 -0.7
PAMC Pamplona, Colo 30.18 347 eP P 14 20 58.2 -1.1
BRRC Barranca, Sant 30.19 345 eP P 14 20 57.6 -1.2
MDP Montagnes des 30.19 27 P P 14 20 57.9 -1.0
comp=Z,187nm,0.4s,baz=205,slow=9.8,SNR=168
MDP S S 14 25 28.8 -10
comp=Z,9.0nm,0.7s,baz=91,slow=21,SNR=1.1
comp=Z,187nm,0.4s
MPGF Montagnes des 30.20 27 P P 14 20 56.1 -2.8
MPGF pP **pP** 14 21 50.5 -1.3
MAPC Malpelo 30.28 328 eP P 14 21 01.4 +1.7
MG02 Cerro Sombrero 30.54 184 P P 14 21 02.7 +1.2
SOCV Socops 30.76 351 eP P 14 21 03.5 -0.4
ZARC Zaragoza, Cauc 30.86 343 eP P 14 21 02.0 -2.7
GO10 Punta Arenas 31.05 186 P P 14 21 04.4 -1.6
GO10 IAmb IAmb 14 21 11.9
comp=Z,212nm,1.1s
BAUV El Baul 31.11 356 P P 14 21 05.9 -1.0
NBAN Anadia - AL 31.12 71 eP P 14 21 05.7 -1.4
URCC San Jos de Ur 31.30 342 eP P 14 21 05.9 -2.7
SDV Santo Domingo 31.32 351 P P 14 21 08.2 -0.8
comp=Z,66nm,0.3s,baz=182,slow=8.1,SNR=37
SDV S S 14 25 51.6 -4.8
comp=Z,18nm,0.6s,baz=113,slow=13,SNR=3.8
comp=Z,66nm,0.3s
SDV Santo Domingo 31.32 351 P P 14 21 08.1 -0.9
SDV IAmb IAmb 14 21 17.3
comp=Z,336nm,1.4s
SDV Santo Domingo 31.32 351 eP P 14 21 07.9 -1.1
PAYG Puerto Ayora 31.97 309 P P 14 21 15.1 +0.7
USHA Ushuaia 32.54 183 P P 14 21 20.0 +1.1
comp=Z,18nm,0.5s,baz=22,slow=2.1,SNR=14
comp=Z,18nm,0.5s
BIRV Birongo 32.57 359 P P 14 21 19.5 -0.1
BIRV IAmb IAmb 14 21 22.3
comp=Z,280nm,1.2s
NBRF Rio Formoso - 32.58 70 eP P 14 21 18.1 -1.6
LCBC Los crdobas, 32.59 341 eP P 14 21 19.7 -0.1
MG01 Puerto William 32.62 182 eP P 14 21 18.6 -0.9
MG01 IAmb IAmb 14 21 28.7
comp=Z,229nm,1.0s
MG01 Puerto William 32.62 182 eP P 14 21 18.6 -0.9
MG01 IAmb IAmb 14 21 28.7
comp=Z,229nm,1.0s

TPP Pointe-a-Pierr 32.71 8 eP P 14 21 21.6 +0.8
CACAO El Cacao, Vera 32.87 332 eP P 14 21 20.9 -1.3
ARGC Ariguani, Magd 32.97 345 eP P 14 21 21.0 -2.0
AZU Azuero 33.02 333 eP P 14 21 25.1 +1.6
AZU Azuero 33.02 333 eP P 14 21 24.8 +1.3
TRN Trinidad (W) 33.04 8 eP P 14 21 22.3 -1.4
SJCC San Jacinto, C 33.24 343 eP P 14 21 23.4 -2.1
RCBR Riachuelo 33.34 65 P P 14 21 26.3 -0.1
comp=Z,617nm,0.9s,baz=19,slow=9.8,SNR=81
comp=Z,617nm,0.9s
RCBR Riachuelo 33.34 65 P P 14 21 26.2 -0.2
RCBR Riachuelo 33.34 65 eP P 14 21 25.8 -0.6
BOT Bacolet 33.65 9 eP P 14 21 28.6 -0.4
CRJC Cerrejon, Guaj 33.79 348 eP P 14 21 26.6 -3.6
TOSP Speyside 33.81 10 P P 14 21 29.9 -0.4
TOSP Speyside 33.81 10 eP P 14 21 29.6 -0.7
BCIP Isla Barro Col 34.09 335 P P 14 21 33.2 +0.5
BCIP Isla Barro Col 34.09 335 P P 14 21 33.2 +0.5
BCIP pmax pmax
comp=Z,66nm,0.7s
BCIP Isla Barro Col 34.09 335 eP P 14 21 33.4 +0.6
BCIP Isla Barro Col 34.09 335 eP P 14 21 32.9 +0.1
SMRC Santa Marta, M 34.22 346 eP P 14 21 31.2 -2.6
GRGR Grenville 34.48 7 P P 14 21 35.5 -0.5
GRGR Grenville 34.48 7 eP P 14 21 34.9 -1.1
BCO2 Palmira 34.83 330 eP P 14 21 41.0 +1.7
GCMP Grenada, Carri 34.85 8 eP P 14 21 37.5 -1.7
CDITO Canoas 34.86 330 eP P 14 21 41.2 +1.9
BRU2 Volcan 34.97 330 eP P 14 21 42.1 +1.7
BRU2 Volcan 34.97 330 eP P 14 21 40.7 +0.2
SVB Belmont 35.65 8 eP P 14 21 43.7 -2.2
BBSP Saint Philip 35.76 11 eP P 14 21 48.4 +1.6
MCLT Moule a Chique 36.12 8 P P 14 21 49.1 -0.9
MCLT IAmb IAmb 14 21 51.3
comp=Z,285nm,0.9s
MCLT Moule a Chique 36.12 8 eP P 14 21 48.6 -1.4
SLB Belfond 36.22 8 eP P 14 21 51.1 +0.3
RIMA Rio Macho 36.37 329 eP P 14 21 54.2 +1.9
SLBI Saint Lucia, B 36.42 8 eP P 14 21 50.2 -2.3
BATAN Batan 36.43 330 eP P 14 21 56.5 +3.9
VTCV VTCV, Calle Va 36.50 330 eP P 14 21 56.4 +3.0
CVTR Volcan Turrial 36.54 330 eP P 14 21 56.3 +2.2
VTUN Crater Central 36.55 330 eP P 14 21 56.9 +2.8
JACO JACO, Garabito 36.66 328 P P 14 21 55.6 +1.0
JACO IAmb IAmb 14 21 59.5
comp=Z,268nm,1.3s
HDC Heredia 36.69 329 eP P 14 21 58.2 +3.2
H05S1 Guadeloupe/Mar 36.84 8 P P 14 21 55.9 -0.1
SNR=124
MPOM Morne Pois Mar 36.85 8 P P 14 21 54.8 -1.3
MPOM IAmb IAmb 14 21 56.9
comp=Z,211nm,0.6s
MPOM Morne Pois Mar 36.85 8 eP P 14 21 54.7 -1.4
BIM Bigot 36.90 8 P P 14 21 55.5 -1.0
BIM Bigot 36.90 8 eP P 14 21 55.0 -1.6
FDF Fort de France 37.10 8 P P 14 21 57.3 -0.9
FDF Fort de France 37.10 8 P P 14 21 57.3 -0.9
FDF pmax pmax
comp=Z,824nm,0.8s
FDF Fort de France 37.10 8 eP P 14 21 56.4 -1.9
ILAM Ilet Lapin Mar 37.18 8 P P 14 21 57.9 -1.0
ILAM IAmb IAmb 14 22 01.9
comp=Z,390nm,0.9s
ILAM Ilet Lapin Mar 37.18 8 eP P 14 21 56.7 -2.1
SVN Savane Anatole 37.21 8 P P 14 21 58.5 -0.6
JTS Las Juntas de 37.35 328 d iP P 14 22 02.5 +2.1
JTS pmax pmax
comp=Z,285nm,1.0s
JTS Las Juntas de 37.35 328 eP P 14 22 02.3 +1.9
JTS Las Juntas de 37.35 328 P P 14 22 01.0 +0.6
ARE1 Arenal 1 37.38 329 eP P 14 22 03.8 +3.1
CEDE Laguna Cedeo 37.40 329 eP P 14 22 04.0 +3.2
COVE Coope Vega, Sa 37.46 329 eP P 14 22 03.6 +2.4
MDN Morne-Daniel 37.65 7 eP P 14 21 59.3 -3.5
DLPL La Plaine 37.68 7 P P 14 22 02.1 -1.0
DLPL La Plaine 37.68 7 eP P 14 21 59.9 -3.2
ACAL Aguas Claras 37.69 328 eP P 14 22 04.9 +1.6
DSLB Salisbury 37.76 7 eP P 14 22 00.4 -3.4
CUI Cuipilapa 37.77 328 eP P 14 22 05.7 +1.8
COLC Colonia 37.80 328 eP P 14 22 05.9 +1.8
MDCT Cottage Hill, 37.94 7 eP P 14 22 00.5 -4.7
TDBA Terre de Bas, 38.15 7 P P 14 22 06.6 -0.3
TDBA Terre de Bas, 38.15 7 eP P 14 22 04.5 -2.4
TBG Guadaloupe-3 38.15 7 eP P 14 22 04.7 -2.2
MAGL Barre de l'Ile 38.28 7 P P 14 22 06.9 -1.1
MAGL IAmb IAmb 14 22 10.0
comp=Z,341nm,0.9s
MAGL Barre de l'ile 38.28 7 eP P 14 22 06.6 -1.5
CBE Ff, Capester 38.37 7 eP P 14 22 08.9 +0.1
GDSD La Dsirade Is 38.67 8 P P 14 22 09.4 -1.9
GDSD IAmb IAmb 14 22 11.7
comp=Z,216nm,0.5s
ABD La Joyeuse, An 38.78 7 eP P 14 22 10.4 -1.7
HOPE Hope Point 38.90 153 P P 14 22 11.8 -0.8
HOPE Hope Point 38.90 153 P P 14 22 11.9 -0.8
HOPE pmax pmax
comp=Z,148nm,1.2s
MLYT Lee's Yard 38.95 6 eP P 14 22 12.4 -1.3
MBFL Flemmings, Mon 38.98 6 eP P 14 22 11.7 -2.1
ANBD Bethesda, Anti 39.32 6 eP P 14 22 13.2 -3.3
SKI Saint Kitts 39.51 5 eP P 14 22 20.6 +2.4
RPN Rapa Nui 39.54 254 P P 14 22 19.1 +0.7
comp=Z,239nm,0.9s,baz=335,slow=2.2,SNR=8.9
comp=Z,239nm,0.9s
RPN Rapa Nui 39.54 254 P P 14 22 19.6 +1.2
RPN pP pP 14 23 18.9 +5.4
BOAB BOACO BROADBAN 39.56 329 P P 14 22 19.9 +1.3
SEUS St. Eustatius 39.65 4 eP P 14 22 17.7 -1.7
CDVI St. Croix 39.82 2 P P 14 22 18.4 -2.3
CDVI IAmb IAmb 14 22 30.6
comp=Z,324nm,1.1s
ANWB Willy Bob 39.93 6 P P 14 22 19.1 -2.5
ANWB Willy Bob 39.93 6 eP P 14 22 18.9 -2.6
ANWB Willy Bob 39.93 6 eP P 14 22 18.6 -2.9
ANWB Willy Bob 39.93 6 eP P 14 22 18.9 -2.6
ICMP Isla Caja de M 39.94 359 P P 14 22 20.2 -1.4
ICMP IAmb IAmb 14 22 25.1
comp=Z,346nm,1.0s
MLPR Magueyes Islan 40.03 358 P P 14 22 20.2 -2.2
MLPR IAmb IAmb 14 22 22.1
comp=Z,218nm,0.7s
PDPR Patillas Dam, 40.06 360 P P 14 22 20.8 -1.9
PDPR IAmb IAmb 14 22 24.7
comp=Z,282nm,1.0s
CRPR Cabo Rojo, PR 40.07 358 P P 14 22 21.0 -1.7
CRPR IAmb IAmb 14 22 26.2
comp=Z,289nm,0.8s
OBIP Obispado Ponce 40.09 359 P P 14 22 20.9 -2.1
OBIP IAmb IAmb 14 22 25.9
comp=Z,310nm,0.6s
CELP Cerrillos 40.13 359 P P 14 22 21.6 -1.6
CELP IAmb IAmb 14 22 23.7
comp=Z,284nm,0.7s
SJG San Juan 40.16 360 P P 14 22 22.0 -1.5
comp=Z,261nm,0.7s,baz=263,slow=0.5,SNR=59
SJG S S 14 28 04.1 -5.9
comp=Z,61nm,1.1s,baz=46,slow=17,SNR=13
comp=Z,261nm,0.7s
SJG San Juan 40.16 360 P P 14 22 22.0 -1.5
SJG IAmb IAmb 14 22 24.3
comp=Z,306nm,0.8s
SJG San Juan 40.16 360 P P 14 22 22.0 -1.5
SJG San Juan 40.16 360 P P 14 22 21.3 -2.2
SMRT St. Maarten 40.20 4 P P 14 22 21.4 -2.4
SMRT St. Maarten 40.20 4 eP P 14 22 21.1 -2.7
PRSN Puerto Rico Se 40.28 358 P P 14 22 22.9 -1.5
PRSN IAmb IAmb 14 22 24.3
comp=Z,354nm,0.8s
CBYP Canovanas 40.32 0 P P 14 22 22.8 -2.1
CBYP IAmb IAmb 14 22 26.7
comp=Z,464nm,1.6s
GCPR Guaynabo City 40.35 360 P P 14 22 23.0 -2.1
CUPR Culebra, Puert 40.36 1 P P 14 22 22.8 -2.3
CUPR PcP PcP 14 24 23.2 +0.3
AOPR Arecibo Observ 40.40 359 P P 14 22 23.5 -1.9
AOPR IAmb IAmb 14 22 27.4
comp=Z,511nm,1.4s
STVI Saint Thomas 40.41 1 P P 14 22 24.1 -1.4
AGPR Aguadilla, PR 40.53 358 P P 14 22 24.1 -2.4
BANI BANI 40.66 354 P P 14 22 27.0 -0.7
DR12 Loma Pena Alta 40.97 355 P P 14 22 27.8 -2.4
TGUH Tegucigalpa,Un 41.73 328 eP P 14 22 36.8 +0.4

MTDJ Mount Denham 41.83 343 P P 14 22 35.9 -1.2
PMSA Palmer Station 42.48 179 P P 14 22 42.7 +1.0
comp=Z,23nm,0.7s,baz=5.1,slow=7.4,SNR=17
comp=Z,23nm,0.7s
PMSA Palmer Station 42.48 179 P P 14 22 42.1 +0.3
PMSA Palmer Station 42.48 179 P P 14 22 43.3 +1.5
GTBY Guantanamo Bay 42.90 347 P P 14 22 44.2 -1.4
GRTK Grand Turk 43.83 353 P P 14 22 52.3 -0.7
GRTK IAmb IAmb 14 22 56.4
comp=Z,384nm,0.9s
CCIG Comitan 46.11 324 P P 14 23 11.3 +0.1
SOR Soroa 47.78 339 P P 14 23 23.7 -0.1
SOR Soroa 47.78 339 P P 14 23 23.7 -0.1
SOR pmax pmax
comp=Z,82nm,0.8s
CMIG Matias Romero 48.30 322 P P 14 23 28.1 +0.3
comp=Z,64nm,0.6s,baz=126,slow=6.1,SNR=68
comp=Z,64nm,0.6s
061Z Ochoppi 50.02 342 P P 14 23 40.9 +0.3
061Z IAmb IAmb 14 23 41.7
comp=Z,178nm,0.7s
061Z Ochoppi 50.02 342 P P 14 23 41.1 +0.5
baz=162
061Z S S 14 30 29.0 -1.8
baz=162
H10S3 ASCENSION HYDR 50.93 83 P P 14 23 44.4 -3.0
baz=200,slow=74,SNR=4.5
H10S2 ASCENSION HYDR 50.95 83 P P 14 23 45.1 -2.4
baz=20,slow=74,SNR=4.3
H10N3 ASCENSION HYDR 51.49 82 P P 14 23 51.6 +0.1
baz=215,slow=6.9,SNR=15
H10N1 ASCENSION HYDR 51.51 82 P P 14 23 51.7 0.0
baz=215,slow=6.9,SNR=19
H10N2 ASCENSION HYDR 51.51 82 P P 14 23 51.8 +0.1
baz=215,slow=6.9,SNR=11
DWPF Disney Wildern 52.29 343 P P 14 23 58.1 +0.7
baz=162
DWPF Disney Wildern 52.29 343 P P 14 23 57.3 0.0
baz=162
DWPF S S 14 30 59.0 -2.8
baz=162
656A Willston 53.78 342 P P 14 24 08.6 +0.4
baz=161,SNR=6.7
656A S S 14 31 19.5 -2.4
baz=161
BBSR BB Station 54.37 1 P P 14 24 11.9 -0.5
BBSR BB Station 54.37 1 P P 14 24 12.1 -0.3
baz=182,SNR=7.1
BBSR S S 14 31 28.4 -1.2
baz=182
456A Hilliard 54.92 343 P P 14 24 16.7 +0.3
baz=162,SNR=5.9
456A S S 14 31 36.5 -0.6
baz=162
553A Crawfordville 55.12 340 P P 14 24 18.2 +0.4
553A IAmb IAmb 14 24 19.3
comp=Z,291nm,0.8s
553A Crawfordville 55.12 340 P P 14 24 18.2 +0.4
baz=159,SNR=13
TIGA Tifton 56.03 342 S S 14 31 49.4 -2.3
baz=160
255A Hazlehurst 56.18 343 P P 14 24 25.2 -0.1
255A Hazlehurst 56.18 343 P P 14 24 25.2 -0.1
baz=162,SNR=6.5
352A Blakely 56.47 341 P P 14 24 27.1 -0.2
baz=159,SNR=24
NHSC New Hope 56.73 346 P P 14 24 29.8 +0.7
baz=164,SNR=6.2
NHSC S S 14 32 00.2 -0.6
baz=164
NHSC New Hope 56.73 346 P P 14 24 29.7 +0.5
baz=164,SNR=6.2
NHSC S S 14 31 59.2 -1.6
baz=164
BRAL Brewton 56.87 338 P P 14 24 29.7 -0.5
BRAL Brewton 56.87 338 P P 14 24 30.3 +0.2
baz=157,SNR=11
BRAL S S 14 32 00.5 -2.3
baz=157
BRAL Brewton 56.87 338 P P 14 24 30.2 0.0
baz=157,SNR=11
BRAL S S 14 32 00.0 -2.7
baz=157
SHEL Horse Pasture 56.95 95 P P 14 24 31.1 0.0
SHEL Horse Pasture 56.95 95 P P 14 24 31.1 0.0
154A Montrose 57.00 343 P P 14 24 30.4 -0.6
154A IAmb IAmb 14 24 32.2
comp=Z,234nm,0.8s
154A Montrose 57.00 343 P P 14 24 31.1 0.0
baz=161,SNR=18
154A S S 14 32 01.3 -3.1
baz=161
Y60A Bolivia 57.19 348 P P 14 24 31.5 -0.8
Y60A IAmb IAmb 14 24 33.4
comp=Z,286nm,0.8s
Y60A Bolivia 57.19 348 P P 14 24 32.5 +0.3
baz=167,SNR=8.0
Y60A P P 14 24 32.5 +0.3
baz=167,SNR=8.0
HAW Hawthorne Fire 57.32 344 P P 14 24 33.4 +0.2
baz=163,SNR=42
HAW S S 14 32 05.1 -3.4
baz=163
250A Grady 57.35 340 P P 14 24 33.3 -0.2
250A IAmb IAmb 14 24 34.0
comp=Z,180nm,0.8s
250A Grady 57.35 340 P P 14 24 33.0 -0.5
baz=158,SNR=16
250A S S 14 32 04.5 -4.5
baz=158
Y58A Scranton 57.39 346 P P 14 24 34.3 +0.6
baz=165,SNR=7.4
Y58A P P 14 24 34.3 +0.6
baz=165,SNR=7.4
152A Waverly Hall 57.51 341 P P 14 24 34.0 -0.6
152A Waverly Hall 57.51 341 P P 14 24 34.2 -0.5
baz=160,SNR=31
152A S S 14 32 06.8 -4.3
baz=160
Y57A Sumter 57.66 346 P P 14 24 36.0 +0.4
baz=164
Y57A P P 14 24 36.0 +0.4
baz=164
Y57A S S 14 32 10.5 -2.4
baz=164
Y57A S S 14 32 10.5 -2.4
baz=164
GOGA Godfrey 57.85 343 P P 14 24 36.4 -0.5
GOGA Godfrey 57.85 343 P P 14 24 36.4 -0.5
GOGA pmax pmax
comp=Z,60nm,0.9s
GOGA Godfrey 57.85 343 P P 14 24 36.5 -0.5
baz=161,SNR=28
GOGA S S 14 32 11.8 -3.6
baz=161
GOGA Godfrey 57.85 343 P P 14 24 36.5 -0.5
baz=161,SNR=28
GOGA S S 14 32 11.1 -4.4
baz=161
346A Big Creek Wild 57.93 336 P P 14 24 37.7 +0.2
baz=154
346A S S 14 32 13.4 -3.1
baz=154
X58A Rowland 57.95 347 P P 14 24 38.0 +0.4
baz=166,SNR=6.8
X58A P P 14 24 38.0 +0.4
baz=166,SNR=6.8
X58A S S 14 32 14.3 -2.3
baz=166
X58A S S 14 32 14.3 -2.3
baz=166
JSC Jenkinsville 58.11 345 P P 14 24 38.1 -0.6
JSC Jenkinsville 58.11 345 P P 14 24 38.1 -0.6
JSC pmax pmax
comp=Z,106nm,0.9s
JSC Jenkinsville 58.11 345 P P 14 24 38.6 -0.1
baz=163,SNR=26
Z51A Franklin 58.25 341 P P 14 24 39.4 -0.3
baz=159
Z51A S S 14 32 15.9 -4.8
baz=159
BIRD Birdtown, Kers 58.27 346 P P 14 24 39.9 +0.1
BIRD IAmb IAmb 14 24 40.9
comp=Z,117nm,0.8s
BIRD Birdtown, Kers 58.27 346 P P 14 24 40.1 +0.3
baz=164,SNR=33
BIRD S S 14 32 18.6 -2.2
baz=164
HODGE Hodges 58.31 344 P P 14 24 40.1 0.0
baz=162,SNR=29
HODGE S S 14 32 19.2 -2.1
baz=162
CNNC Cliffs of the 58.32 349 P P 14 24 40.4 +0.3
baz=167
CNNC S S 14 32 19.2 -2.2
baz=167
KVTX Kingsville 58.37 327 S S 14 32 23.4 +1.1
baz=145
Y52A Lilburn 58.44 342 P P 14 24 39.8 -1.3
Y52A Lilburn 58.44 342 P P 14 24 40.6 -0.4
baz=160,SNR=27
Y52A P P 14 24 40.6 -0.4
baz=160,SNR=27
Y52A S S 14 32 18.9 -4.2
baz=160
Y52A S S 14 32 18.9 -4.2
baz=160
VNA3 Neumayer Olymp 58.46 162 P P 14 24 41.4 +0.7
VNA3 S S 14 32 28.9 +6.4
VNA3 Neumayer Olymp 58.46 162 PKPPKP 14 54 23.9
344A Westbrook Farm 58.47 335 P P 14 24 41.5 +0.3
baz=153,SNR=10
344A S S 14 32 21.9 -1.6
baz=153
LRAL Lakeview Retre 58.56 339 P P 14 24 41.3 -0.6
LRAL IAmb IAmb 14 24 42.2
comp=Z,111nm,0.7s
LRAL Lakeview Retre 58.56 339 P P 14 24 41.5 -0.4
baz=157,SNR=50
LRAL S S 14 32 20.3 -4.3
baz=157
LRAL Lakeview Retre 58.56 339 P P 14 24 41.2 -0.6
baz=157,SNR=50
LRAL S S 14 32 20.4 -4.3
baz=157
VNA1 Neumayer--Stat 58.63 161 P P 14 24 43.1 +1.3
VNA1 Neumayer--Stat 58.63 161 PKPPKP 14 54 23.8
W57A Gilead 58.66 347 P P 14 24 42.2 -0.3
W57A Gilead 58.66 347 P P 14 24 42.5 0.0
baz=165,SNR=36
W57A P P 14 24 42.5 0.0
baz=165,SNR=36
W57A S S 14 32 23.9 -1.9
baz=165
W57A S S 14 32 23.9 -1.9
baz=165
PAULI Pauline 58.76 345 P P 14 24 43.5 +0.3
PAULI IAmb IAmb 14 24 44.4
comp=Z,127nm,0.7s
PAULI Pauline 58.76 345 P P 14 24 43.8 +0.6
baz=163,SNR=28
PAULI S S 14 32 25.6 -1.5
baz=163
441A DeRidder 58.86 333 P P 14 24 45.8 +1.8
baz=150,SNR=8.5
441A S S 14 32 30.1 +1.6
baz=150
146A Union 58.91 337 P P 14 24 44.5 +0.3
baz=155,SNR=11
146A S S 14 32 26.3 -2.8
baz=155
KMSC Kings Mountain 58.95 345 P P 14 24 44.8 +0.3
KMSC IAmb IAmb 14 24 45.6
comp=Z,129nm,0.8s
KMSC Kings Mountain 58.95 345 P P 14 24 44.8 +0.3
baz=164,SNR=40
KMSC S S 14 32 28.0 -1.5
baz=164
KMSC Kings Mountain 58.95 345 P P 14 24 44.7 +0.2
baz=164,SNR=40
KMSC S S 14 32 27.9 -1.7
baz=164
VNA2 Neumayer--Watz 59.01 161 P P 14 24 45.1 +0.7
baz=294,slow=8.5
VNA2 S S 14 32 33.8 +4.3
VNA2 Neumayer--Watz 59.01 161 PKPPKP 14 54 23.0
342B Flagon Creek P 59.04 334 P P 14 24 46.3 +1.2
baz=152,SNR=13
342B S S 14 32 29.9 -0.9
baz=152
VBMS Vicksburg 59.07 336 P P 14 24 45.7 +0.3
baz=154,SNR=7.3
VBMS S S 14 32 28.3 -2.8
baz=154
VBMS Vicksburg 59.07 336 P P 14 24 45.2 -0.1
baz=154,SNR=7.3
VBMS S S 14 32 27.5 -3.6
baz=154
Z47A Carrollton 59.07 338 P P 14 24 45.3 -0.1
baz=156,SNR=8.9
Z47A S S 14 32 26.8 -4.4
baz=156
V58A Windy Hill, Pi 59.10 348 P P 14 24 45.3 -0.2
baz=166,SNR=14
V58A P P 14 24 45.3 -0.2
baz=166,SNR=14
V58A S S 14 32 28.8 -2.6
baz=166
V58A S S 14 32 28.8 -2.6
baz=166
Y49A Blount Mountai 59.14 340 P P 14 24 45.5 -0.3
Y49A IAmb IAmb 14 24 46.5
comp=Z,153nm,0.8s
Y49A Blount Mountai 59.14 340 P P 14 24 45.0 -0.8
baz=158,SNR=39
Y49A S S 14 32 27.7 -4.3
baz=158
BG3 Lake Jocassee 59.20 344 P P 14 24 46.6 +0.3
BG3 IAmb IAmb 14 24 47.8
comp=Z,142nm,0.7s
CASEE Lake Jocassee 59.20 344 P P 14 24 46.5 +0.3
baz=162,SNR=55
CASEE S S 14 32 30.7 -2.1
baz=162
X51A Calhoun 59.33 342 P P 14 24 47.2 +0.1
X51A Calhoun 59.33 342 P P 14 24 46.9 -0.2
baz=160,SNR=73
X51A P P 14 24 46.9 -0.2
baz=160,SNR=73
X51A S S 14 32 30.4 -4.0
baz=160
X51A S S 14 32 30.4 -4.0
baz=160
HKT Hockley 59.35 330 d iP P 14 24 47.8 +0.5
HKT pmax pmax
comp=Z,143nm,1.3s
HKT Hockley 59.35 330 P P 14 24 48.2 +1.0
baz=148
HKT S S 14 32 34.7 0.0
baz=148
HKT Hockley 59.35 330 P P 14 24 46.0 -1.2
HKT pP pP 14 25 49.6 +2.7
U59A Littleton 59.39 349 P P 14 24 47.4 0.0
baz=167,SNR=7.4
U59A P P 14 24 47.4 0.0
baz=167,SNR=7.4
U59A S S 14 32 32.6 -2.5
baz=167
U59A S S 14 32 32.6 -2.5
baz=167
735A Kenedy 59.39 327 P P 14 24 48.5 +0.9
baz=146,SNR=6.7
735A S S 14 32 34.3 -1.2
baz=146
FPAL Fort Paine 59.52 341 P P 14 24 48.0 -0.5
FPAL IAmb IAmb 14 24 48.8
comp=Z,146nm,0.7s
W52A Murphy 59.56 343 P P 14 24 48.7 0.0
W52A Murphy 59.56 343 P P 14 24 48.6 0.0
baz=161,SNR=28
W52A S S 14 32 34.5 -3.0
baz=161
V55A Taylorsville 59.60 346 P P 14 24 49.6 +0.7
V55A Taylorsville 59.60 346 P P 14 24 49.3 +0.4
baz=164,SNR=103
V55A P P 14 24 49.3 +0.4
baz=164,SNR=103
V55A S S 14 32 37.3 -0.6
baz=164
V55A S S 14 32 37.3 -0.6
baz=164
833A Chaparral WMA, 59.77 326 P P 14 24 50.6 +0.4
baz=144,SNR=76
833A S S 14 32 38.5 -1.7

baz=144
833A Chaparral WMA, 59.77 326 P **P** **14 24 50.6 +0.4**
baz=144,SNR=76
833A S **S** **14 32 38.9 -1.3**
baz=144
V53A Saluda 59.81 344 P **P** **14 24 50.3 -0.2**
V53A lAmb lAmb 14 24 51.3
comp=Z,131nm,0.8s
V53A Saluda 59.81 344 P **P** **14 24 50.5 +0.1**
baz=162,SNR=68
V53A P **P** **14 24 50.5 +0.1**
baz=162,SNR=68
V53A S **S** **14 32 38.3 -2.4**
baz=162
V53A S **S** **14 32 38.3 -2.4**
baz=162
143A Socs Landing, 59.84 335 P **P** **14 24 51.0 +0.4**
baz=153,SNR=10
143A S **S** **14 32 37.7 -3.3**
baz=153
X48A Hartselle 59.88 340 P **P** **14 24 50.5 -0.3**
X48A Hartselle 59.88 340 P **P** **14 24 50.5 -0.3**
baz=158,SNR=101
X48A S **S** **14 32 37.0 -4.5**
baz=158
U56A King 59.89 347 P **P** **14 24 51.5 +0.6**
baz=165,SNR=17
U56A P **P** **14 24 51.5 +0.6**
baz=165,SNR=17
U56A S **S** **14 32 41.1 -0.5**
baz=165
U56A S **S** **14 32 41.1 -0.5**
baz=165
T59A Double "B" Far 59.95 349 P **P** **14 24 51.5 +0.3**
baz=168,SNR=21
T59A P **P** **14 24 51.5 +0.3**
baz=168,SNR=21
T59A S **S** **14 32 39.7 -2.5**
baz=168
T59A S **S** **14 32 39.7 -2.5**
baz=168
T60A Surry 59.98 350 S **S** **14 32 41.3 -1.2**
baz=169
T60A S **S** **14 32 41.3 -1.2**
baz=169
W50A Signal Mountai 60.05 342 P **P** **14 24 51.8 -0.2**
W50A lAmb lAmb 14 24 52.7
comp=Z,186nm,0.7s
W50A Signal Mountai 60.05 342 P **P** **14 24 51.8 -0.2**
baz=159,SNR=71
W50A S **S** **14 32 40.5 -3.2**
baz=159
TKL Tuckaleechee C 60.05 343 P **P** **14 24 51.7 -0.3**
comp=Z,162nm,0.8s,baz=163,slow=7.7,SNR=144
comp=Z,162nm,0.8s
TKL Tuckaleechee C 60.05 343 P **P** **14 24 51.4 -0.6**
baz=161,SNR=86
TKL S **S** **14 32 40.6 -3.1**
baz=161
CPCT Cooper Cave 60.06 343 P **P** **14 24 51.4 -0.6**
CPCT lAmb lAmb 14 24 52.6
comp=Z,123nm,0.8s
V52A Sevierville 60.18 344 P **P** **14 24 52.5 -0.4**
baz=161,SNR=65
V52A S **S** **14 32 41.6 -3.7**
baz=161
Y45A Yeager Farm, C 60.19 337 P **P** **14 24 53.2 +0.3**
baz=155,SNR=16
Y45A S **S** **14 32 42.0 -3.3**
baz=155
SWET Sewanee 60.25 341 P **P** **14 24 52.8 -0.5**
SWET lAmb lAmb 14 24 54.3
comp=Z,303nm,0.9s
T57A Hurt 60.29 348 P **P** **14 24 53.4 -0.1**
T57A Hurt 60.29 348 P **P** **14 24 53.6 +0.1**
baz=166,SNR=19
T57A P **P** **14 24 53.6 +0.1**
baz=166,SNR=19
T57A S **S** **14 32 45.1 -1.4**
baz=166
T57A S **S** **14 32 45.1 -1.4**
baz=166
MBO M'Bour 60.30 57 P **P** **14 24 53.4 -0.6**
MBO M'Bour 60.30 57 P **P** **14 24 53.5 -0.6**
MBO pP **pP** **14 25 55.8 +2.5**
V51A Loudon 60.34 343 P **P** **14 24 53.6 -0.3**
V51A Loudon 60.34 343 P **P** **14 24 53.5 -0.5**
baz=160,SNR=25
V51A S **S** **14 32 43.8 -3.5**
baz=160
NATX Nacogdoches 60.36 332 P **P** **14 24 55.2 +1.1**
baz=149,SNR=23
NATX S **S** **14 32 48.9 +1.3**
baz=149
NATX Nacogdoches 60.36 332 P **P** **14 24 55.0 +0.9**
baz=149,SNR=23
NATX S **S** **14 32 48.5 +0.9**
baz=149
U54A Nelsons Funny 60.38 345 P **P** **14 24 54.5 +0.2**
U54A lAmb lAmb 14 24 55.8
comp=Z,309nm,0.9s
U54A Nelsons Funny 60.38 345 P **P** **14 24 54.5 +0.2**
baz=163,SNR=56
U54A P **P** **14 24 54.5 +0.2**
baz=163,SNR=56
U54A S **S** **14 32 46.5 -1.4**
baz=163
U54A S **S** **14 32 46.5 -1.4**
baz=163
SNAA Sanae 60.65 161 P **P** **14 24 56.2 +0.5**
SNAA S **S** **14 32 55.6 +5.1**
SNAA Sanae 60.65 161 PKPPKP 14 54 17.7
SNAA Sanae 60.65 161 P **P** **14 24 56.1 +0.5**
comp=Z,114nm,0.8s,baz=264,slow=10.0,SNR=131
comp=Z,114nm,0.8s
SNAA Sanae 60.65 161 P **P** **14 24 56.1 +0.5**
SNAA lAmb lAmb 14 25 00.7
comp=Z,309nm,1.1s
SNAA Sanae 60.65 161 *c i* P **P** **14 24 56.1 +0.5**
SNAA pmax pmax
comp=Z,379nm,1.2s
PLAL Pickwick Lake 60.70 339 P **P** **14 24 55.5 -0.9**
PLAL lAmb lAmb 14 24 56.5
comp=Z,151nm,0.8s
OXF Oxford 60.73 338 P **P** **14 24 55.3 -1.2**
OXF Oxford 60.73 338 P **P** **14 24 55.3 -1.2**
OXF pmax pmax
comp=Z,439nm,0.8s
OXF Oxford 60.73 338 P **P** **14 24 55.5 -1.0**
baz=155,SNR=34
OXF S **S** **14 32 47.0 -5.1**
baz=155
OXF Oxford 60.73 338 P **P** **14 24 55.5 -1.0**
baz=155,SNR=34
OXF S **S** **14 32 48.3 -3.8**
baz=155
BLA Blacksburg 60.73 347 P **P** **14 24 57.1 +0.5**
baz=165,SNR=19
BLA S **S** **14 32 51.5 -0.7**
baz=165
BLA Blacksburg 60.73 347 P **P** **14 24 57.0 +0.4**
baz=165,SNR=19
BLA S **S** **14 32 52.0 -0.2**
baz=165
TZTN Tazewell 60.83 344 P **P** **14 24 56.6 -0.6**
TZTN Tazewell 60.83 344 P **P** **14 24 56.8 -0.4**
baz=161,SNR=18
TZTN S **S** **14 32 49.6 -3.8**
baz=161
TZTN Tazewell 60.83 344 P **P** **14 24 56.8 -0.4**
baz=161,SNR=18
TZTN S **S** **14 32 50.4 -3.0**
baz=161
435B Jarrell 60.88 329 P **P** **14 24 58.3 +0.7**
baz=146,SNR=7.5
435B S **S** **14 32 52.4 -1.8**
baz=146
435B Jarrell 60.88 329 P **P** **14 24 57.8 +0.1**
baz=146
435B S **S** **14 32 52.2 -2.0**
baz=146
Z41A Richland Creek 60.88 334 S **S** **14 32 53.0 -1.1**
baz=152
Z41A S **S** **14 32 53.0 -1.1**
baz=152
Z41A Richland Creek 60.88 334 P **P** **14 24 57.6 0.0**
baz=152
Z41A S **S** **14 32 52.8 -1.4**
baz=152
R61A Willards 60.94 352 S **S** **14 32 58.2 +3.5**
baz=170
R61A S **S** **14 32 58.2 +3.5**
baz=170
S57A Dark Hollow, R 60.97 348 P **P** **14 24 57.6 -0.5**
S57A Dark Hollow, R 60.97 348 P **P** **14 24 58.3 +0.2**
baz=166,SNR=13
S57A P **P** **14 24 58.3 +0.2**
baz=166,SNR=13
S57A S **S** **14 32 54.0 -1.2**
baz=166
S57A S **S** **14 32 54.0 -1.2**
baz=166
R58B Mineral 60.97 349 P **P** **14 24 58.2 +0.1**
baz=168,SNR=20
R58B P **P** **14 24 58.2 +0.1**
baz=168,SNR=20
R58B S **S** **14 32 53.6 -1.5**
baz=168
R58B S **S** **14 32 53.6 -1.5**
baz=168
V48A Smith Brothers 61.00 341 P **P** **14 24 57.8 -0.6**
V48A lAmb lAmb 14 24 58.8
comp=Z,204nm,0.7s
V48A Smith Brothers 61.00 341 P **P** **14 24 58.0 -0.4**
baz=158,SNR=100
V48A S **S** **14 32 51.4 -4.2**
baz=158
CCAR Cane Creek 61.06 336 P **P** **14 24 58.7 -0.1**
baz=153,SNR=10
CCAR S **S** **14 32 54.5 -1.8**
baz=153
237A Washetta, Mont 61.07 331 P **P** **14 24 59.7 +0.7**
baz=148,SNR=14
237A S **S** **14 32 57.3 +0.6**
baz=148
CBN Corbin Frederi 61.12 350 P **P** **14 24 59.8 +0.7**
baz=168
CBN S **S** **14 32 55.3 -1.6**
baz=168
CLTN Cedars of Leba 61.18 341 P **P** **14 24 59.0 -0.6**
CLTN lAmb lAmb 14 25 00.3
comp=Z,165nm,0.7s
W45A Hickory Valley 61.23 338 P **P** **14 24 59.5 -0.5**
baz=156,SNR=13
W45A S **S** **14 32 54.1 -4.4**
baz=156
U49A Red Boiling Sp 61.41 342 **P** **14 25 00.2 -0.9**
U49A lAmb lAmb 14 25 01.2
comp=Z,99nm,0.7s
U49A Red Boiling Sp 61.41 342 P **P** **14 25 00.6 -0.5**
baz=159,SNR=42
U49A S **S** **14 32 56.6 -4.1**
baz=159
S54A Dingess, Beckl 61.49 346 P **P** **14 25 01.5 -0.2**
S54A lAmb lAmb 14 25 02.7
comp=Z,186nm,0.7s
S54A Dingess, Beckl 61.49 346 P **P** **14 25 01.6 0.0**
baz=164,SNR=44
S54A P **P** **14 25 01.6 0.0**
baz=164,SNR=44
S54A S **S** **14 33 00.4 -1.3**
baz=164
S54A S **S** **14 33 00.4 -1.3**
baz=164
T50A Nancy 61.62 343 P **P** **14 25 01.9 -0.6**
T50A lAmb lAmb 14 25 02.6
comp=Z,98nm,0.7s
T50A Nancy 61.62 343 P **P** **14 25 01.9 -0.6**
baz=160
T50A P **P** **14 25 01.9 -0.6**
baz=160
T50A S **S** **14 32 59.6 -3.8**
baz=160
T50A S **S** **14 32 59.6 -3.8**
baz=160
WVT Waverly 61.68 340 P **P** **14 25 02.0 -0.8**
WVT pP **pP** **14 26 03.8 +0.7**
WVT Waverly 61.68 340 P **P** **14 25 02.0 -0.8**
baz=157,SNR=246
WVT S **S** **14 32 59.0 -5.0**
baz=157
WVT Waverly 61.68 340 P **P** **14 25 01.9 -0.9**
baz=157
WVT S **S** **14 32 58.8 -5.2**
baz=157
R55A Marlinton 61.70 347 P **P** **14 25 03.7 +0.7**
R55A lAmb lAmb 14 26 11.9
comp=Z,237nm,1.6s
R55A Marlinton 61.70 347 P **P** **14 25 03.8 +0.7**
baz=165,SNR=14
R55A P **P** **14 25 03.8 +0.7**
baz=165,SNR=14
R55A S **S** **14 33 04.3 -0.1**
baz=165
R55A S **S** **14 33 04.3 -0.1**
baz=165
JCT Junction City 61.72 327 P **P** **14 25 03.4 +0.1**
JCT lAmb lAmb 14 25 04.8
comp=Z,108nm,0.7s
JCT Junction City 61.72 327 P **P** **14 25 03.4 +0.1**
JCT pmax pmax
comp=Z,108nm,0.7s
JCT Junction City 61.72 327 P **P** **14 25 03.0 -0.3**
baz=144,SNR=45
JCT S **S** **14 33 03.2 -1.7**
baz=144
JCT Junction City 61.72 327 P **P** **14 25 03.5 +0.1**
baz=144,SNR=45
JCT S **S** **14 33 02.2 -2.7**
baz=144
Z38A Mt. Pleasant 61.79 333 P **P** **14 25 04.6 +0.9**
baz=150,SNR=14
Z38A S **S** **14 33 05.9 +0.4**
baz=150
WHTX Lake Whitney, 61.82 330 P **P** **14 25 04.5 +0.5**
WHTX lAmb lAmb 14 25 05.0
comp=Z,121nm,0.7s
WHTX Lake Whitney, 61.82 330 P **P** **14 25 04.0 0.0**
baz=147,SNR=24
WHTX S **S** **14 33 04.6 -1.3**
baz=147
WHTX Lake Whitney, 61.82 330 P **P** **14 25 04.0 0.0**
baz=147,SNR=24
WHTX S **S** **14 33 04.2 -1.7**
baz=147
S51A Beattyville 61.88 344 P **P** **14 25 03.6 -0.6**
S51A Beattyville 61.88 344 P **P** **14 25 03.5 -0.6**
baz=162,SNR=23
S51A P **P** **14 25 03.5 -0.6**
baz=162,SNR=23
S51A S **S** **14 33 03.4 -3.2**
baz=162
S51A S **S** **14 33 03.4 -3.2**
baz=162
HBAR Harrisburg 62.11 337 S **S** **14 33 06.4 -3.0**
baz=154
R53A Hurricane 62.14 346 P **P** **14 25 05.9 0.0**
R53A lAmb lAmb 14 25 07.2
comp=Z,149nm,0.8s
R53A Hurricane 62.14 346 P **P** **14 25 05.7 -0.2**
baz=163,SNR=30
R53A P **P** **14 25 05.7 -0.2**
baz=163,SNR=30
R53A S **S** **14 33 08.0 -1.8**
baz=163
R53A S **S** **14 33 08.0 -1.8**
baz=163
LNXT Lenox 62.19 339 P **P** **14 25 06.3 0.0**
LNXT Lenox 62.19 339 P **P** **14 25 06.1 -0.2**
baz=156,SNR=12
SDMD Soldier's Deli 62.22 350 P **P** **14 25 06.6 +0.2**
baz=169,SNR=7.2
SDMD S **S** **14 33 09.3 -1.4**
baz=169
T47A Sharon Grove 62.24 341 P **P** **14 25 06.2 -0.4**
T47A Sharon Grove 62.24 341 P **P** **14 25 05.8 -0.8**
baz=158,SNR=72
T47A S **S** **14 33 07.3 -3.7**
baz=158
Q56A Snyder Ridge, 62.26 348 P **P** **14 25 07.2 +0.5**
baz=166,SNR=29
Q56A P **P** **14 25 07.2 +0.5**
baz=166,SNR=29
Q56A S **S** **14 33 11.1 -0.1**
baz=166
Q56A S **S** **14 33 11.1 -0.1**
baz=166
GLAT Glass 62.28 339 P **P** **14 25 06.5 -0.4**
MIAR Mount Ida 62.32 334 P **P** **14 25 06.8 -0.4**
MIAR lAmb lAmb 14 25 10.2
comp=Z,428nm,1.8s
MIAR Mount Ida 62.32 334 P **P** **14 25 06.8 -0.4**
MIAR pmax pmax
comp=Z,428nm,1.8s
MIAR Mount Ida 62.32 334 P **P** **14 25 07.0 -0.2**
baz=151,SNR=76
MIAR S **S** **14 33 09.2 -2.9**
baz=151
MIAR Mount Ida 62.32 334 P **P** **14 25 07.0 -0.2**
baz=151,SNR=76
MIAR S **S** **14 33 09.9 -2.2**
baz=151
TROLL Troll, Antarti 62.36 161 P **P** **14 25 07.9 +0.8**
TROLL S **S** **14 33 16.5 +4.5**
TROLL Troll, Antarti 62.36 161 ScP **ScP** **14 29 23.7 +3.3**
GEDE Greenville 62.44 352 P **P** **14 25 07.8 0.0**
baz=170,SNR=6.5
GEDE S **S** **14 33 11.6 -1.8**
baz=170
WHAR Wooly Hollow 62.47 336 P **P** **14 25 07.8 -0.3**
WHAR lAmb lAmb 14 26 15.4
comp=Z,413nm,1.8s
P57A Homestead Farm 62.48 350 P **P** **14 25 08.9 +0.8**
baz=168,SNR=25
P57A P **P** **14 25 08.9 +0.8**
baz=168,SNR=25
P57A S **S** **14 33 14.0 +0.1**
baz=168
P57A S **S** **14 33 14.0 +0.1**
baz=168
Q54A Coxs Mills 62.52 347 P **P** **14 25 08.3 -0.1**
baz=165,SNR=17
Q54A P **P** **14 25 08.3 -0.1**
baz=165,SNR=17
Q54A S **S** **14 33 13.4 -1.1**
baz=165
Q54A S **S** **14 33 13.4 -1.1**
baz=165
SLBS Sierra La Lagu 62.59 314 pP pP 14 26 13.6 +4.1
R50A Paris 62.67 344 P **P** **14 25 09.1 -0.3**
baz=161,SNR=18
R50A P **P** **14 25 09.1 -0.3**
baz=161,SNR=18
R50A S **S** **14 33 13.0 -3.4**
baz=161
R50A S **S** **14 33 13.0 -3.4**
baz=161
TUPA Temple Univers 62.73 352 P **P** **14 25 09.9 +0.2**
baz=170,SNR=14
TUPA S **S** **14 33 15.8 -1.1**
baz=170
LCAR Lake Charles 62.75 337 P **P** **14 25 09.5 -0.5**
LCAR Lake Charles 62.75 337 P **P** **14 25 09.2 -0.7**
baz=154,SNR=36
LCAR S **S** **14 33 13.4 -3.9**
baz=154
T45B Paducah 62.75 340 P **P** **14 25 09.3 -0.6**
baz=156,SNR=42
T45B S **S** **14 33 13.7 -3.7**
baz=156
PARMO Parma 62.79 339 P **P** **14 25 10.0 -0.2**
Q52A Bidwell 62.82 346 P **P** **14 25 10.2 -0.1**
baz=163,SNR=26
Q52A P **P** **14 25 10.2 -0.1**
baz=163,SNR=26
Q52A S **S** **14 33 16.2 -2.0**
baz=163
Q52A S **S** **14 33 16.2 -2.0**
baz=163
Z35A Perchaven, San 62.85 331 P **P** **14 25 11.4 +0.7**
baz=148,SNR=15
Z35A S **S** **14 33 18.0 -0.7**
baz=148
TXAR Lajitas Array 62.87 323 P **P** **14 25 10.8 -0.2**
comp=Z,14nm,0.6s,baz=148,slow=8.6,SNR=174
TXAR S **S** **14 33 17.2 -2.2**
comp=Z,0.4nm,0.8s,baz=209,slow=41,SNR=1.2
TXAR PKP2bc 14 54 11.7
comp=Z,1.2nm,0.9s,baz=337,slow=6.1,SNR=4.2
comp=Z,14nm,0.6s
TXAR Lajitas Array 62.87 323 P **P** **14 25 10.9 0.0**
TXAR Lajitas Array 62.87 323 P **P** **14 25 11.0 0.0**
TX31 Lajitas Ar. Si 62.87 323 P **P** **14 25 10.9 -0.2**
TX31 lAmb lAmb 14 26 22.2
comp=Z,387nm,1.8s
TX31 Lajitas Ar. Si 62.87 323 P **P** **14 25 11.2 +0.1**
baz=141,SNR=58
TX31 S **S** **14 33 17.4 -2.0**
baz=141
TX32 Lajitas Array 62.87 323 P **P** **14 25 10.9 -0.1**
PANJ Princeton 62.88 353 P **P** **14 25 11.1 +0.4**
baz=171,SNR=15
PANJ S **S** **14 33 17.8 -1.0**
baz=171
R49A Shelbyville 62.90 343 P **P** **14 25 10.1 -0.8**
baz=160,SNR=15
R49A P **P** **14 25 10.1 -0.8**
baz=160,SNR=15
R49A S **S** **14 33 15.2 -4.1**
baz=160
R49A S **S** **14 33 15.2 -4.1**
baz=160
FCAR Ozark Folk Cen 62.94 336 P **P** **14 25 10.2 -1.0**
MCWV Mont Chateau 62.98 348 P **P** **14 25 11.9 +0.4**
baz=166,SNR=9.4
MCWV S **S** **14 33 19.5 -0.7**
baz=166
MCWV Mont Chateau 62.98 348 P **P** **14 25 11.8 +0.4**
baz=166,SNR=9.4
MCWV S **S** **14 33 20.0 -0.2**
baz=166
X37A Clayton 63.09 333 P **P** **14 25 12.5 +0.3**
X37A Clayton 63.09 333 P **P** **14 25 13.0 +0.7**
baz=150,SNR=80
X37A S **S** **14 33 22.1 +0.3**
baz=150
LPIG La Paz 63.11 314 P **P** **14 25 13.4 +0.8**
comp=Z,51nm,0.3s,baz=340,slow=2.4,SNR=7.3
comp=Z,51nm,0.3s
P53A Whipple 63.13 347 P **P** **14 25 12.3 0.0**
P53A lAmb lAmb 14 25 13.9
comp=Z,174nm,0.8s
P53A Whipple 63.13 347 P **P** **14 25 12.7 +0.3**
baz=164,SNR=55
P53A P **P** **14 25 12.7 +0.3**
baz=164,SNR=55
P53A S **S** **14 33 19.6 -2.4**
baz=164
P53A S **S** **14 33 19.6 -2.4**
baz=164
PBMO Poplar Bluff 63.13 338 P **P** **14 25 12.1 -0.3**
PBMO Poplar Bluff 63.13 338 P **P** **14 25 12.5 0.0**
baz=155,SNR=133
PBMO S **S** **14 33 18.7 -3.3**
baz=155
Q51A Peebles 63.13 345 P **P** **14 25 12.3 -0.1**
baz=162,SNR=16
Q51A P **P** **14 25 12.3 -0.1**
baz=162,SNR=16
Q51A S **S** **14 33 19.2 -2.9**
baz=162
Q51A S **S** **14 33 19.2 -2.9**
baz=162
BRNJ Basking Ridge 63.16 353 P **P** **14 25 13.0 +0.5**
baz=171,SNR=9.1
BRNJ S **S** **14 33 21.5 -0.7**
baz=171
FOR Fordham 63.26 353 P **P** **14 25 13.6 +0.4**
baz=172
FOR S **S** **14 33 23.0 -0.5**
baz=172
N62A Caumsett State 63.28 354 S **S** **14 33 22.8 -1.0**
baz=172
N62A S **S** **14 33 22.8 -1.0**
baz=172
USIN University of 63.31 341 P **P** **14 25 11.8 -1.8**
USIN lAmb lAmb 14 25 13.6
comp=Z,124nm,0.7s
CGM3 Cape Girardeau 63.34 339 P **P** **14 25 13.1 -0.7**
CGM3 lAmb lAmb 14 26 19.9
comp=Z,539nm,1.5s
ABTX Abilene, Hawle 63.38 328 P **P** **14 25 14.4 +0.2**

baz=145,SNR=23
ABTX S **S** **14 33 23.0 -2.5**
baz=145
ABTX Abilene, Hawle 63.38 328 P **P** **14 25 13.9 -0.3**
baz=145,SNR=23
ABTX S **S** **14 33 23.4 -2.1**
baz=145
PAL Palisades 63.41 353 P **P** **14 25 14.8 +0.6**
baz=172,SNR=6.0
PAL S **S** **14 33 24.0 -1.3**
baz=172
PAL Palisades 63.41 353 P **P** **14 25 14.2 0.0**
baz=172,SNR=6.0
PAL S **S** **14 33 24.7 -0.6**
baz=172
P52A Corning 63.43 346 P **P** **14 25 13.9 -0.5**
P52A IAmb IAmb 14 25 14.8
comp=Z,140nm,0.8s
P52A Corning 63.43 346 P **P** **14 25 14.0 -0.4**
baz=163,SNR=44
P52A S **S** **14 33 22.9 -2.8**
baz=163
P51A Williamsport 63.50 345 P **P** **14 25 14.3 -0.4**
baz=162,SNR=11
P51A P **P** **14 25 14.3 -0.4**
baz=162,SNR=11
P51A S **S** **14 33 23.8 -2.8**
baz=162
P51A S **S** **14 33 23.8 -2.8**
baz=162
ODNJ Ogdensburg 63.56 353 P **P** **14 25 15.4 +0.3**
baz=171,SNR=9.0
ODNJ S **S** **14 33 26.5 -0.7**
baz=171
S44A Carbondale 63.56 340 P **P** **14 25 14.3 -1.0**
S44A IAmb IAmb 14 25 16.8
comp=Z,144nm,1.0s
S44A Carbondale 63.56 340 P **P** **14 25 14.6 -0.6**
baz=156,SNR=28
S44A S **S** **14 33 23.4 -4.0**
baz=156
SIUC Southern Illin 63.57 340 P **P** **14 25 14.4 -0.9**
SIUC IAmb IAmb 14 25 16.9
comp=Z,180nm,1.1s
SSPA Standing Stone 63.58 350 pP pP 14 26 22.1 +6.3
SSPA Standing Stone 63.58 350 P **P** **14 25 15.7 +0.3**
baz=168,SNR=12
SSPA S **S** **14 33 26.6 -0.9**
baz=168
SSPA Standing Stone 63.58 350 P **P** **14 25 15.6 +0.3**
baz=168
SSPA S **S** **14 33 28.4 +0.8**
baz=168
SSPA Standing Stone 63.58 350 P **P** **14 25 13.7 -1.6**
SSPA pP **pP** **14 26 21.3 +5.5**
O54A Avella 63.59 348 P **P** **14 25 15.4 0.0**
baz=165,SNR=7.2
O54A P **P** **14 25 15.4 0.0**
baz=165,SNR=7.2
O54A S **S** **14 33 26.6 -1.1**
baz=165
O54A S **S** **14 33 26.6 -1.1**
baz=165
N58A Sunbury 63.60 351 P **P** **14 25 15.9 +0.5**
baz=169,SNR=29
N58A P **P** **14 25 15.9 +0.5**
baz=169,SNR=29
N58A S **S** **14 33 26.7 -1.0**
baz=169
N58A S **S** **14 33 26.7 -1.0**
baz=169
M63A Gales Ferry 63.62 355 S **S** **14 33 26.8 -1.2**
baz=174
M63A S **S** **14 33 26.8 -1.2**
baz=174
UPAO U. Pittsburgh 63.81 348 P **P** **14 25 17.4 +0.6**
baz=166
UPAO S **S** **14 33 29.2 -1.1**
baz=166
BRNY Black Rk. Fore 63.82 353 P **P** **14 25 16.9 +0.1**
baz=172,SNR=9.9
BRNY S **S** **14 33 29.4 -1.0**
baz=172
O53A New Philadelph 63.82 347 P **P** **14 25 16.7 -0.2**
O53A IAmb IAmb 14 25 17.7
comp=Z,82nm,0.8s
O53A New Philadelph 63.82 347 P **P** **14 25 16.8 -0.1**
baz=164,SNR=27
O53A S **S** **14 33 28.6 -1.9**
baz=164
O52A Adamsville 63.83 346 P **P** **14 25 16.7 -0.2**
O52A IAmb IAmb 14 25 18.0
comp=Z,103nm,0.8s
O52A Adamsville 63.83 346 P **P** **14 25 16.7 -0.2**
baz=164,SNR=28
O52A P **P** **14 25 16.7 -0.2**
baz=164,SNR=28
O52A S **S** **14 33 27.4 -3.1**
baz=164
O52A S **S** **14 33 27.4 -3.1**
baz=164
P49A Miami Univ. Ec 63.95 344 P **P** **14 25 17.0 -0.8**
baz=161,SNR=33
P49A S **S** **14 33 28.1 -4.1**
baz=161
P49A Miami Univ. Ec 63.95 344 P **P** **14 25 16.8 -1.0**
baz=161,SNR=33
P49A S **S** **14 33 27.5 -4.6**
baz=161
PSWB Penn State Wil 63.96 352 P **P** **14 25 18.2 +0.4**
baz=170
PSWB S **S** **14 33 31.5 -0.6**
baz=170
HHAR Hobbs 63.98 335 P **P** **14 25 17.9 -0.2**
HHAR IAmb IAmb 14 25 19.2
comp=Z,155nm,0.8s
HHAR Hobbs 63.98 335 P **P** **14 25 18.1 +0.1**
baz=151
HHAR S **S** **14 33 30.2 -2.4**
baz=151
L64A Middleborough 64.06 356 P **P** **14 25 18.9 +0.5**
baz=175,SNR=10
L64A P **P** **14 25 18.9 +0.5**
baz=175,SNR=10
P48A Milroy 64.07 343 P **P** **14 25 17.5 -1.0**
P48A IAmb IAmb 14 25 18.1
comp=Z,96nm,0.7s
P48A Milroy 64.07 343 P **P** **14 25 17.4 -1.1**
baz=160,SNR=28
P48A P **P** **14 25 17.4 -1.1**
baz=160,SNR=28
P48A S **S** **14 33 28.9 -4.6**
baz=160
P48A S **S** **14 33 28.9 -4.6**
baz=160
MGMO Mountain Grove 64.12 337 P **P** **14 25 18.7 -0.2**
MGMO IAmb IAmb 14 25 20.1
comp=Z,190nm,0.8s
M57A Sunshine Farm, 64.15 351 P **P** **14 25 19.7 +0.7**
baz=169,SNR=16
M57A P **P** **14 25 19.7 +0.7**
baz=169,SNR=16
M57A S **S** **14 33 33.3 -1.2**
baz=169
M57A S **S** **14 33 33.3 -1.2**
baz=169
OLIL Olney 64.15 341 P **P** **14 25 17.9 -1.2**
baz=157,SNR=8.1
OLIL S **S** **14 33 29.3 -5.3**
baz=157
NPNY Mohonk Preserv 64.17 353 P **P** **14 25 19.6 +0.5**
baz=172,SNR=21
NPNY S **S** **14 33 34.4 -0.3**
baz=172
KSPA Keystone Colle 64.17 352 P **P** **14 25 19.1 -0.1**
KSPA Keystone Colle 64.17 352 P **P** **14 25 19.7 +0.5**
baz=170,SNR=16
KSPA S **S** **14 33 33.6 -1.2**
baz=170
ACSO Alum Creek Sta 64.19 346 P **P** **14 25 19.1 -0.2**
baz=163,SNR=35
ACSO S **S** **14 33 31.6 -3.5**
baz=163
ACSO Alum Creek Sta 64.19 346 P **P** **14 25 18.9 -0.4**
baz=163,SNR=35
ACSO S **S** **14 33 31.0 -4.1**
baz=163
PSDB Penn State Uni 64.20 349 P **P** **14 25 19.4 +0.1**
baz=167
FVM French Village 64.21 339 P **P** **14 25 19.3 -0.2**
FVM IAmb IAmb 14 25 19.9
comp=Z,175nm,0.7s
FVM French Village 64.21 339 P **P** **14 25 19.3 -0.2**
FVM pmax pmax
comp=Z,175nm,0.7s
FVM French Village 64.21 339 P **P** **14 25 19.0 -0.5**
baz=155,SNR=49
FVM S **S** **14 33 32.2 -3.2**
baz=155
N53A Lisbon 64.28 348 P **P** **14 25 19.9 0.0**
baz=165,SNR=14
N53A P **P** **14 25 19.9 0.0**
baz=165,SNR=14
N53A S **S** **14 33 34.2 -1.9**
baz=165
N53A S **S** **14 33 34.2 -1.9**
baz=165
U38A Gravette 64.29 335 P **P** **14 25 20.0 -0.1**
baz=151,SNR=35
U38A S **S** **14 33 34.3 -2.2**
baz=151
RLO Rose Lookout 64.31 334 P **P** **14 25 19.9 -0.2**
RLO IAmb IAmb 14 25 22.9
comp=Z,262nm,1.1s
TUL1 Leonard 64.40 333 P **P** **14 25 20.8 0.0**
TUL1 IAmb IAmb 14 25 23.4
comp=Z,228nm,1.2s
TUL1 Leonard 64.40 333 P **P** **14 25 21.0 +0.3**
baz=150,SNR=22
TUL1 S **S** **14 33 36.3 -1.5**
baz=150
TUL1 Leonard 64.40 333 P **P** **14 25 20.7 -0.1**
baz=150,SNR=22
TUL1 S **S** **14 33 36.2 -1.6**
baz=150
O49A Covington 64.47 344 P **P** **14 25 20.6 -0.6**
O49A IAmb IAmb 14 25 21.7
comp=Z,144nm,0.8s
O49A Covington 64.47 344 P **P** **14 25 20.6 -0.6**
baz=161,SNR=32
O49A P **P** **14 25 20.6 -0.6**
baz=161,SNR=32
O49A S **S** **14 33 34.3 -4.2**
baz=161
O49A S **S** **14 33 34.3 -4.2**
baz=161
M55A Ridgway 64.54 349 P **P** **14 25 21.5 0.0**
baz=167,SNR=26
M55A P **P** **14 25 21.5 0.0**
baz=167,SNR=26
M55A S **S** **14 33 38.2 -1.0**
baz=167
M55A S **S** **14 33 38.2 -1.0**
baz=167
WES Weston 64.54 356 P **P** **14 25 21.9 +0.4**
baz=175,SNR=9.3
WES S **S** **14 33 38.5 -0.7**
baz=175
CCM Cathedral Cave 64.56 338 P **P** **14 25 21.3 -0.4**
CCM Cathedral Cave 64.56 338 P **P** **14 25 21.3 -0.4**
CCM pmax pmax
comp=Z,356nm,0.7s
CCM Cathedral Cave 64.56 338 P **P** **14 25 21.3 -0.4**
baz=154,SNR=246
CCM S **S** **14 33 35.9 -3.6**
baz=154
CCM Cathedral Cave 64.56 338 P **P** **14 25 21.1 -0.6**
baz=154
CCM S **S** **14 33 36.0 -3.6**
baz=154
Q44A Meyer Farm, Va 64.59 340 P **P** **14 25 20.5 -1.4**
baz=156,SNR=26
Q44A S **S** **14 33 34.3 -5.6**
baz=156
HRV Adam Dziewonsk 64.68 355 P **P** **14 25 22.4 +0.1**
HRV IAmb IAmb 14 25 24.1
comp=Z,94nm,0.9s
HRV Adam Dziewonsk 64.68 355 P **P** **14 25 22.5 +0.1**
HRV pmax pmax
comp=Z,94nm,0.9s
HRV Adam Dziewonsk 64.68 355 P **P** **14 25 22.9 +0.5**
baz=174,SNR=19
HRV S **S** **14 33 40.6 -0.3**
baz=174
HRV Adam Dziewonsk 64.68 355 P **P** **14 25 22.5 +0.1**
baz=174
HRV S **S** **14 33 38.4 -2.5**
baz=174
L59A Walton 64.70 353 P **P** **14 25 23.3 +0.7**
baz=171,SNR=50
L59A P **P** **14 25 23.3 +0.7**
baz=171,SNR=50
L59A S **S** **14 33 41.1 -0.2**
baz=171
L59A S **S** **14 33 41.1 -0.2**
baz=171
P46A Rosedale 64.71 342 P **P** **14 25 21.4 -1.2**
baz=158,SNR=14
P46A S **S** **14 33 35.1 -6.3**
baz=158
N51A Ashland 64.71 346 P **P** **14 25 22.4 -0.2**
baz=163,SNR=15
N51A P **P** **14 25 22.4 -0.2**
baz=163,SNR=15
N51A S **S** **14 33 37.8 -3.6**
baz=163
N51A S **S** **14 33 37.8 -3.6**
baz=163
L61B Northampton 64.72 355 P **P** **14 25 22.9 +0.3**
baz=173,SNR=19
L61B S **S** **14 33 40.3 -1.1**
baz=173
L61B Northampton 64.72 355 P **P** **14 25 22.2 -0.4**
baz=173,SNR=19
L61B S **S** **14 33 39.9 -1.5**
baz=173
WMOK Wichita Mounta 64.72 330 P **P** **14 25 22.2 -0.7**
WMOK Wichita Mounta 64.72 330 P **P** **14 25 22.2 -0.7**
WMOK pmax pmax
comp=Z,57nm,1.1s
WMOK Wichita Mounta 64.72 330 P **P** **14 25 22.2 -0.7**
baz=146,SNR=44
WMOK S **S** **14 33 39.5 -2.2**
baz=146
WMOK Wichita Mounta 64.72 330 P **P** **14 25 22.2 -0.7**
baz=146,SNR=44
WMOK S **S** **14 33 39.1 -2.7**
baz=146
SLM Saint Louis 64.74 339 P **P** **14 25 22.3 -0.6**
baz=155
SLM S **S** **14 33 38.0 -3.8**
baz=155
O48B Farmland 64.75 344 P **P** **14 25 21.9 -1.0**
baz=160,SNR=67
O48B S **S** **14 33 37.3 -4.5**
baz=160
O48B Farmland 64.75 344 P **P** **14 25 22.0 -0.8**
baz=160,SNR=67
O48B S **S** **14 33 37.1 -4.8**
baz=160
BINY Binghamton 64.83 352 P **P** **14 25 24.1 +0.7**
baz=170,SNR=54
BINY S **S** **14 33 42.4 -0.5**
baz=170
BINY Binghamton 64.83 352 P **P** **14 25 24.1 +0.7**
baz=170,SNR=54
BINY S **S** **14 33 42.5 -0.3**
baz=170
M53A WI Miller and 64.86 348 P **P** **14 25 23.4 -0.1**
M53A IAmb IAmb 14 25 24.4
comp=Z,82nm,0.8s
M53A WI Miller and 64.86 348 P **P** **14 25 23.6 0.0**
baz=165,SNR=20
M53A S **S** **14 33 41.3 -1.8**
baz=165
K62A Royalston 64.89 355 P **P** **14 25 24.2 +0.4**
baz=174,SNR=13
K62A P **P** **14 25 24.2 +0.4**
baz=174,SNR=13
K62A S **S** **14 33 43.0 -0.4**
baz=174
K62A S **S** **14 33 43.0 -0.4**
baz=174
ALLY Alegheny Colle 64.96 348 P **P** **14 25 24.4 +0.2**
baz=166,SNR=12
ALLY S **S** **14 33 42.7 -1.7**
baz=166
S39A Bolivar 64.98 336 P **P** **14 25 24.2 -0.2**
baz=152,SNR=360
S39A S **S** **14 33 41.8 -3.0**
baz=152
L56A Greenwood 65.00 351 P **P** **14 25 24.9 +0.4**
baz=168,SNR=30
L56A P **P** **14 25 24.9 +0.4**
baz=168,SNR=30
L56A S **S** **14 33 43.2 -1.6**
baz=168
L56A S **S** **14 33 43.2 -1.6**
baz=168
TRY Troy 65.09 354 P **P** **14 25 26.0 +1.0**
baz=172,SNR=30
TRY S **S** **14 33 46.6 +0.8**
baz=172
M52A Chesterland 65.09 347 P **P** **14 25 25.0 -0.1**
baz=164,SNR=8.1
M52A P **P** **14 25 25.0 -0.1**
baz=164,SNR=8.1
M52A S **S** **14 33 43.7 -2.3**
baz=164
M52A S **S** **14 33 43.7 -2.3**
baz=164
NVL N'lazarevskaya 65.12 159⇧ *i*P **P** **14 25 26.2 +1.3**
NVL *i*S **S** **14 33 37.6 -8.1**
NVL pmax pmax
comp=Z,338nm,1.0s
NVL MLR MLR
comp=Z,898nm,18.0s
R40A Maddies Statio 65.13 337 P **P** **14 25 25.1 -0.2**
baz=153,SNR=120
R40A S **S** **14 33 43.7 -2.8**
baz=153
HCNY Howe Caverns 65.13 353 P **P** **14 25 26.3 +1.0**
baz=172,SNR=17
HCNY S **S** **14 33 46.8 +0.4**
baz=172
N49A Columbus Grove 65.13 345 P **P** **14 25 24.9 -0.4**
baz=162,SNR=85
N49A P **P** **14 25 24.9 -0.4**
baz=162,SNR=85
N49A S **S** **14 33 42.1 -4.3**
baz=162
N49A S **S** **14 33 42.1 -4.3**
baz=162
UNH University of 65.22 356 P **P** **14 25 26.5 +0.7**
baz=175,SNR=11
UNH S **S** **14 33 47.2 -0.1**
baz=175
M50A Fremont 65.32 346 P **P** **14 25 26.2 -0.4**
baz=163,SNR=20
M50A P **P** **14 25 26.2 -0.4**
baz=163,SNR=20
M50A S **S** **14 33 45.4 -3.3**
baz=163
M50A S **S** **14 33 45.4 -3.3**
baz=163
SFIN Lafayette 65.38 342 P **P** **14 25 25.8 -1.2**
baz=159,SNR=41
SFIN S **S** **14 33 43.1 -6.4**
baz=159
SFIN Lafayette 65.38 342 P **P** **14 25 25.8 -1.2**
baz=159,SNR=41
SFIN S **S** **14 33 43.3 -6.2**
baz=159
ERPA Erie 65.39 349 P **P** **14 25 27.2 +0.3**
baz=166,SNR=25
ERPA S **S** **14 33 47.6 -1.9**
baz=166
ERPA Erie 65.39 349 P **P** **14 25 27.2 +0.3**
baz=166,SNR=25
ERPA S **S** **14 33 47.6 -1.9**
baz=166
P43A Skaggs, Pawnee 65.42 340 P **P** **14 25 26.0 -1.2**
baz=156,SNR=19
P43A S **S** **14 33 43.9 -6.2**
baz=156
WVNY West Valley, N 65.42 350 P **P** **14 25 27.6 +0.4**
baz=167,SNR=30
WVNY S **S** **14 33 48.2 -1.8**
baz=167
K57A Scipio Center 65.43 351 P **P** **14 25 27.3 +0.1**
baz=169,SNR=29
K57A S **S** **14 33 48.4 -1.6**
baz=169
N47A Urbana 65.47 344 P **P** **14 25 26.6 -0.9**
baz=160,SNR=66
N47A P **P** **14 25 26.6 -0.9**
baz=160,SNR=66
N47A S **S** **14 33 45.8 -4.8**
baz=160
N47A S **S** **14 33 45.8 -4.8**
baz=160
T35B Sooner Cattle 65.56 333 P **P** **14 25 28.3 +0.1**
baz=149,SNR=78
T35B S **S** **14 33 50.9 -1.0**
baz=149
O44A Mansfield 65.57 341 P **P** **14 25 26.7 -1.5**
baz=157,SNR=8.6
O44A S **S** **14 33 45.9 -5.9**
baz=157
J61A Chester 65.59 355 P **P** **14 25 29.2 +1.0**
baz=173,SNR=16
J61A P **P** **14 25 29.2 +1.0**
baz=173,SNR=16
J61A S **S** **14 33 52.9 +0.9**
baz=173
J61A S **S** **14 33 52.9 +0.9**
baz=173
ACCN Adirondack Com 65.73 354 P **P** **14 25 29.8 +0.7**
baz=172,SNR=9.5
ACCN S **S** **14 33 55.1 +1.5**
baz=172
J58A Remsen 65.89 353 P **P** **14 25 30.5 +0.4**
baz=171,SNR=21
J58A P **P** **14 25 30.5 +0.4**
baz=171,SNR=21
J58A S **S** **14 33 55.1 -0.4**
baz=171
J58A S **S** **14 33 55.1 -0.4**
baz=171
J59A Piesco 65.90 353 P **P** **14 25 30.9 +0.6**
baz=171,SNR=187
J59A P **P** **14 25 30.9 +0.6**
baz=171,SNR=187
J59A S **S** **14 33 56.0 +0.3**
baz=171
J59A S **S** **14 33 56.0 +0.3**
baz=171
HNH Hanover 65.93 355 P **P** **14 25 31.5 +1.2**
baz=174,SNR=33
HNH S **S** **14 33 56.9 +1.0**
baz=174
J56A Wolcott 66.01 351 P **P** **14 25 31.1 +0.2**
baz=169,SNR=58
J56A P **P** **14 25 31.1 +0.2**
baz=169,SNR=58
J56A S **S** **14 33 55.3 -1.6**
baz=169
J56A S **S** **14 33 55.3 -1.6**
baz=169
MSTX Muleshoe 66.01 327 P **P** **14 25 31.2 -0.1**
baz=143,SNR=100
MSTX S **S** **14 33 55.2 -2.4**
baz=143
MSTX Muleshoe 66.01 327 P **P** **14 25 31.2 -0.1**
baz=143,SNR=100
MSTX S **S** **14 33 55.5 -2.2**
baz=143
LIC Lamto 66.02 72⇧ *e*P **P** **14 25 30.2 -1.4**
comp=Z,80nm,0.4s
I62A Tamworth 66.03 356 P **P** **14 25 32.0 +1.1**
baz=175,SNR=13
I62A P **P** **14 25 32.0 +1.1**
baz=175,SNR=13
I62A S **S** **14 33 57.5 +0.4**
baz=175
I62A S **S** **14 33 57.5 +0.4**
baz=175
J57A Williamstown 66.03 352 P **P** **14 25 31.5 +0.6**
baz=170,SNR=42
J57A P **P** **14 25 31.5 +0.6**
baz=170,SNR=42
J57A S **S** **14 33 56.1 -1.0**
baz=170
J57A S **S** **14 33 56.1 -1.0**

	baz=170							
J55A	**Hilton**	**66.14**	**351**	P	**P**	**14 25 31.6**	**-0.1**
	baz=168,SNR=12							
J55A				P	**P**	**14 25 31.6**	**-0.1**
	baz=168,SNR=12							
J55A				S	**S**	**14 33 56.6**	**-1.9**
	baz=168							
J55A				S	**S**	**14 33 56.6**	**-1.9**
	baz=168							
I63A	**Otisfield**	**66.15**	**356**	P	**P**	**14 25 32.6**	**+0.9**
	baz=175,SNR=27							
I63A				P	**P**	**14 25 32.6**	**+0.9**
	baz=175,SNR=27							
I63A				S	**S**	**14 33 59.6**	**+1.0**
	baz=175							
I63A				S	**S**	**14 33 59.6**	**+1.0**
	baz=175							
P40A	**Paris**	**66.16**	**338**	P	**P**	**14 25 31.4**	**-0.5**
	baz=154,SNR=75							
P40A				S	**S**	**14 33 54.2**	**-4.6**
	baz=154							
L48A	**N Adams**	**66.16**	**345**	P	**P**	**14 25 31.2**	**-0.6**
	baz=161,SNR=54							
L48A				P	**P**	**14 25 31.2**	**-0.6**
	baz=161,SNR=54							
L48A				S	**S**	**14 33 54.5**	**-4.3**
	baz=161							
L48A				S	**S**	**14 33 54.5**	**-4.3**
	baz=161							
U32A	**Winter Ranch,**	**66.18**	**331**	P	**P**	**14 25 32.2**	**+0.1**
	baz=147,SNR=7.7							
U32A				S	**S**	**14 33 57.9**	**-1.5**
	baz=147							
HDIL	**Hopedale**	**66.19**	**341**	P	**P**	**14 25 31.4**	**-0.7**
	baz=156,SNR=26							
HDIL				S	**S**	**14 33 53.7**	**-5.6**
	baz=156							
HDIL	**Hopedale**	**66.19**	**341**	P	**P**	**14 25 31.0**	**-1.0**
	baz=156,SNR=26							
HDIL				S	**S**	**14 33 53.8**	**-5.4**
	baz=156							
AMTX	**Amarillo**	**66.20**	**328**	IAmb	IAmb	14 25 34.9		
	comp=Z,156nm,1.1s							
AMTX	**Amarillo**	**66.20**	**328**	P	**P**	**14 25 32.2**	**-0.2**
	baz=144,SNR=32							
AMTX	**Amarillo**	**66.20**	**328**	P	**P**	**14 25 32.1**	**-0.3**
	baz=144							
AMTX				S	**S**	**14 33 56.1**	**-3.8**
	baz=144							
TIC	**Toumodi**	**66.22**	**72**	*e*P	**P**	**14 25 31.2**	**-1.7**
	comp=Z,221nm,0.9s							
MCVT	**Middlebury Col**	**66.23**	**354**	P	**P**	**14 25 33.1**	**+0.8**
	baz=173,SNR=31							
MCVT				S	**S**	**14 34 01.3**	**+1.6**
	baz=173							
J54A	**Appleton**	**66.27**	**350**	P	**P**	**14 25 33.0**	**+0.4**
	baz=167,SNR=9.5							
J54A				P	**P**	**14 25 33.0**	**+0.4**
	baz=167,SNR=9.5							
J54A				S	**S**	**14 33 57.5**	**-2.6**
	baz=167							
J54A				S	**S**	**14 33 57.5**	**-2.6**
	baz=167							
KIDD	**KIDD Seismic O**	**66.30**	**323**	P	**P**	**14 25 33.2**	**+0.1**
	baz=139,SNR=6.7							
AAM	**Ann Arbor**	**66.32**	**346**	P	**P**	**14 25 32.9**	**0.0**
	baz=162							
AAM				S	**S**	**14 33 56.5**	**-4.2**
	baz=162							
AAM	**Ann Arbor**	**66.32**	**346**	P	**P**	**14 25 32.2**	**-0.7**
	baz=162							
AAM				S	**S**	**14 33 56.9**	**-3.8**
	baz=162							
KIC	**Kosan Boka**	**66.33**	**72**	*e*P	**P**	**14 25 32.4**	**-1.2**
	comp=Z,135nm,0.5s							
NCB	**Newcomb**	**66.37**	**354**	P	**P**	**14 25 33.6**	**+0.4**
	baz=172,SNR=44							
NCB				S	**S**	**14 34 00.8**	**-0.5**
	baz=172							
DBIC	**Dimbokro**	**66.37**	**72**	P	**P**	**14 25 32.4**	**-1.4**
	comp=Z,270nm,1.0s,baz=244,slow=2.9,SNR=76							
	comp=Z,270nm,1.0s							
LBNH	**Lisbon**	**66.43**	**355**	P	**P**	**14 25 34.4**	**+0.9**
	baz=174,SNR=46							
LBNH				S	**S**	**14 34 03.3**	**+1.2**
	baz=174							
LBNH	**Lisbon**	**66.43**	**355**	P	**P**	**14 25 34.4**	**+0.9**
	baz=174,SNR=46							
LBNH				S	**S**	**14 34 03.2**	**+1.1**
	baz=174							
K50A	**Casco**	**66.54**	**347**	P	**P**	**14 25 33.9**	**-0.3**
	baz=163,SNR=17							
K50A				P	**P**	**14 25 33.9**	**-0.3**
	baz=163,SNR=17							
K50A				S	**S**	**14 33 59.6**	**-3.8**
	baz=163							
K50A				S	**S**	**14 33 59.6**	**-3.8**
	baz=163							
WCNY	**West Carthage**	**66.54**	**352**	P	**P**	**14 25 34.7**	**+0.5**
	baz=170,SNR=60							
WCNY				S	**S**	**14 34 02.8**	**-0.5**
	baz=170							
M44A	**Midewin, Midew**	**66.59**	**342**	P	**P**	**14 25 33.4**	**-1.2**
	baz=158,SNR=14							
M44A				S	**S**	**14 33 56.8**	**-7.2**
	baz=158							
VT1	**Waterbury**	**66.59**	**355**	P	**P**	**14 25 35.2**	**+0.6**
	baz=173,SNR=8.0							
WVL	**Waterville**	**66.62**	**357**	P	**P**	**14 25 35.5**	**+0.8**
	baz=176,SNR=19							
EMMW	**East Machias**	**66.69**	**359**	P	**P**	**14 25 35.7**	**+0.6**
	baz=179,SNR=12							
EMMW				S	**S**	**14 34 03.9**	**-1.1**
	baz=179							
L46A	**Eue Claire**	**66.69**	**344**	P	**P**	**14 25 34.0**	**-1.2**
	baz=160,SNR=13							
L46A				P	**P**	**14 25 34.0**	**-1.2**
	baz=160,SNR=13							
L46A				S	**S**	**14 33 59.4**	**-5.8**
	baz=160							
L46A				S	**S**	**14 33 59.4**	**-5.8**
	baz=160							
H62A	**Milan**	**66.71**	**356**	P	**P**	**14 25 36.2**	**+0.9**
	baz=175,SNR=17							
H62A				P	**P**	**14 25 36.2**	**+0.9**
	baz=175,SNR=17							
H62A				S	**S**	**14 34 06.1**	**+0.8**
	baz=175							
H62A				S	**S**	**14 34 06.1**	**+0.8**
	baz=175							
P38A	**Dawn**	**66.76**	**337**	P	**P**	**14 25 35.4**	**-0.4**
	baz=152,SNR=186							
P38A				S	**S**	**14 34 02.6**	**-3.6**
	baz=152							
N41A	**Harden Midland**	**66.82**	**340**	P	**P**	**14 25 35.4**	**-0.6**
	baz=155,SNR=51							
N41A				S	**S**	**14 34 02.0**	**-4.8**
	baz=155							
LONY	**Lake Ozonia**	**67.05**	**353**	IAmb	IAmb	14 25 39.3		
	comp=Z,131nm,0.9s							
LONY	**Lake Ozonia**	**67.05**	**353**	P	**P**	**14 25 37.8**	**+0.4**
	baz=171,SNR=86							
LONY				S	**S**	**14 34 10.2**	**+0.8**
	baz=171							
FRNY	**Flat Rock**	**67.16**	**354**	P	**P**	**14 25 38.5**	**+0.4**
	baz=172,SNR=31							
FRNY				S	**S**	**14 34 11.5**	**+0.8**
	baz=172							
G65A	**Princeton**	**67.18**	**359**	P	**P**	**14 25 39.0**	**+0.8**
	baz=178,SNR=19							
G65A				P	**P**	**14 25 39.0**	**+0.8**
	baz=178,SNR=19							
G65A				S	**S**	**14 34 10.2**	**-0.7**
	baz=178							
G65A				S	**S**	**14 34 10.2**	**-0.7**
	baz=178							
BMNY	**Brushton-Moira**	**67.26**	**353**	P	**P**	**14 25 39.3**	**+0.6**
	baz=172,SNR=54							
BMNY				S	**S**	**14 34 11.6**	**-0.2**
	baz=172							
L44A	**Lake County Fo**	**67.28**	**342**	P	**P**	**14 25 37.8**	**-1.1**
	baz=158							
L44A				S	**S**	**14 34 05.1**	**-7.1**
	baz=158							
PKME	**Peaks-Kenny Pk**	**67.30**	**357**	P	**P**	**14 25 39.5**	**+0.5**
	baz=177,SNR=27							
PKME				S	**S**	**14 34 11.9**	**-0.5**
	baz=177							
PKME	**Peaks-Kenny Pk**	**67.30**	**357**	P	**P**	**14 25 39.3**	**+0.4**
	baz=177,SNR=27							
PKME				S	**S**	**14 34 11.8**	**-0.5**
	baz=177							
G62A	**West of Eustis**	**67.31**	**357**	P	**P**	**14 25 39.8**	**+0.7**
	baz=176,SNR=34							
G62A				P	**P**	**14 25 39.8**	**+0.7**
	baz=176,SNR=34							
G62A				S	**S**	**14 34 13.2**	**+0.6**
	baz=176							
G62A				S	**S**	**14 34 13.2**	**+0.6**
	baz=176							
DELO	**Deloro Mine**	**67.33**	**351**	IAmb	IAmb	14 25 40.1		
	comp=Z,105nm,0.7s							
KSU1	**Kansas State U**	**67.47**	**335**	IAmb	IAmb	14 25 40.9		
	comp=Z,208nm,0.8s							
KSU1	**Kansas State U**	**67.47**	**335**	P	**P**	**14 25 40.0**	**-0.2**
	baz=149,SNR=24							
KSU1				S	**S**	**14 34 13.4**	**-1.2**
	baz=149							
KSU1	**Kansas State U**	**67.47**	**335**	P	**P**	**14 25 39.8**	**-0.4**
	baz=149,SNR=24							
KSU1				S	**S**	**14 34 13.4**	**-1.2**
	baz=149							
J47A	**Sunmer**	**67.48**	**345**	P	**P**	**14 25 39.7**	**-0.4**
	baz=161,SNR=13							
J47A				P	**P**	**14 25 39.7**	**-0.4**
	baz=161,SNR=13							
J47A				S	**S**	**14 34 09.8**	**-4.7**
	baz=161							
J47A				S	**S**	**14 34 09.8**	**-4.7**
	baz=161							
GBN	**Guysborough**	**67.50**	**3**	P	**P**	**14 25 39.9**	**-0.3**
121A	**Cookes Peak, D**	**67.59**	**322**	P	**P**	**14 25 42.8**	**+1.5**
	baz=138,SNR=86							
121A				S	**S**	**14 34 17.6**	**+0.9**
	baz=138							
121A	**Cookes Peak, D**	**67.59**	**322**	P	**P**	**14 25 42.5**	**+1.2**
	baz=138,SNR=86							
121A				S	**S**	**14 34 17.9**	**+1.2**
	baz=138							
L42A	**Oliver, Polo**	**67.63**	**341**	P	**P**	**14 25 40.4**	**-0.7**
	baz=156,SNR=29							
L42A				S	**S**	**14 34 12.0**	**-4.3**
	baz=156							
N38A	**Joes South For**	**67.69**	**338**	P	**P**	**14 25 41.0**	**-0.5**
	baz=153,SNR=29							
N38A				S	**S**	**14 34 12.5**	**-4.7**
	baz=153							
I49A	**Point Hope**	**67.70**	**347**	P	**P**	**14 25 41.2**	**-0.2**
	baz=163,SNR=22							
I49A				P	**P**	**14 25 41.2**	**-0.2**
	baz=163,SNR=22							
F63A	**Nahmakanta, Br**	**67.73**	**358**	P	**P**	**14 25 42.5**	**+0.8**
	baz=177,SNR=16							
F63A				P	**P**	**14 25 42.5**	**+0.8**
	baz=177,SNR=16							
F63A				S	**S**	**14 34 16.1**	**-1.4**
	baz=177							
F63A				S	**S**	**14 34 16.1**	**-1.4**
	baz=177							
R32A	**Long Quarter,**	**67.76**	**333**	P	**P**	**14 25 42.9**	**+0.8**
	baz=147,SNR=23							
R32A				S	**S**	**14 34 16.9**	**-1.3**
	baz=147							
SADO	**Sadowa**	**67.81**	**350**	IAmb	IAmb	14 25 42.8		
	comp=Z,83nm,0.7s							
F64A	**Sherman**	**67.86**	**358**	IAmb	IAmb	14 25 44.2		
	comp=Z,119nm,0.8s							
F64A	**Sherman**	**67.86**	**358**	P	**P**	**14 25 42.9**	**+0.4**
	baz=178,SNR=39							
F64A				P	**P**	**14 25 42.9**	**+0.4**
	baz=178,SNR=39							
F64A				S	**S**	**14 34 18.5**	**-0.4**
	baz=178							
F64A				S	**S**	**14 34 18.5**	**-0.4**
	baz=178							
K43A	**Burlington**	**67.88**	**342**	P	**P**	**14 25 42.1**	**-0.6**
	baz=158,SNR=56							
K43A				S	**S**	**14 34 14.2**	**-5.2**
	baz=158							
QSPA	**South Pole Qui**	**67.90**	**180**	PKP2bc		14 53 58.1		
	comp=Z,10nm,1.0s,baz=312,slow=3.1,SNR=6.9							
L40A	**Anamosa**	**68.16**	**340**	P	**P**	**14 25 43.9**	**-0.5**
	baz=155,SNR=64							
L40A				S	**S**	**14 34 17.8**	**-4.9**
	baz=155							
Y22A	**Socorro**	**68.19**	**324**	P	**P**	**14 25 46.1**	**+1.1**
	baz=139,SNR=27							
Y22A				S	**S**	**14 34 25.0**	**+1.4**
	baz=139							
Y22D	**IRIS PASSCAL I**	**68.27**	**324**	P	**P**	**14 25 46.6**	**+1.2**
	baz=139							
Y22D				S	**S**	**14 34 27.6**	**+3.0**
	baz=139							
E63A	**Oxbow**	**68.42**	**358**	P	**P**	**14 25 46.5**	**+0.6**
	baz=178,SNR=24							
E63A				P	**P**	**14 25 46.5**	**+0.6**
	baz=178,SNR=24							
E63A				S	**S**	**14 34 24.6**	**-1.0**
	baz=178							
E63A				S	**S**	**14 34 24.6**	**-1.0**
	baz=178							
CBKS	**Cedar Bluff**	**68.53**	**332**	P	**P**	**14 25 48.0**	**+1.2**
	baz=147,SNR=36							
CBKS				S	**S**	**14 34 26.7**	**-0.5**
	baz=147							
CBKS	**Cedar Bluff**	**68.53**	**332**	P	**P**	**14 25 47.4**	**+0.6**
	baz=147,SNR=36							
CBKS				S	**S**	**14 34 26.9**	**-0.3**
	baz=147							
I45A	**Fountain**	**68.57**	**344**	S	**S**	**14 34 21.8**	**-5.6**
	baz=160							
I45A				S	**S**	**14 34 21.8**	**-5.6**
	baz=160							
N35A	**Tabor**	**68.62**	**336**	P	**P**	**14 25 46.9**	**-0.4**
	baz=151,SNR=16							
N35A				S	**S**	**14 34 25.7**	**-2.4**
	baz=151							
JFWS	**Jewell Farm**	**68.63**	**341**	IAmb	IAmb	14 25 47.9		
	comp=Z,174nm,0.7s							
JFWS	**Jewell Farm**	**68.63**	**341**	P	**P**	**14 25 47.1**	**-0.2**
	baz=156,SNR=50							
JFWS				S	**S**	**14 34 23.6**	**-4.6**
	baz=156							
JFWS	**Jewell Farm**	**68.63**	**341**	P	**P**	**14 25 47.2**	**-0.1**
	baz=156,SNR=50							
JFWS				S	**S**	**14 34 24.3**	**-3.9**
	baz=156							
TRQ	**Mont Tremblant**	**68.63**	**354**	IAmb	IAmb	14 25 48.6		
	comp=Z,145nm,1.0s							
E62A	**Clayton Lake**	**68.66**	**357**	P	**P**	**14 25 48.0**	**+0.6**
	baz=176,SNR=35							
E62A				P	**P**	**14 25 48.0**	**+0.6**
	baz=176,SNR=35							
E62A				S	**S**	**14 34 28.0**	**-0.4**
	baz=176							
E62A				S	**S**	**14 34 28.0**	**-0.4**
	baz=176							
SCIA	**State Center**	**68.67**	**338**	P	**P**	**14 25 47.7**	**+0.1**
	baz=153,SNR=11							
SCIA				S	**S**	**14 34 24.1**	**-4.7**
	baz=153							
SCIA	**State Center**	**68.67**	**338**	P	**P**	**14 25 47.4**	**-0.2**
	baz=153,SNR=11							
SCIA				S	**S**	**14 34 23.8**	**-4.9**
	baz=153							
ANMO	**Albuquerque**	**68.68**	**325**	P	**P**	**14 25 48.8**	**+0.8**
ANMO				IAmb	IAmb	14 25 52.6		
	comp=Z,296nm,1.6s							
ANMO	**Albuquerque**	**68.68**	**325**	*d* iP	**P**	**14 25 48.8**	**+0.8**
ANMO				pmax	pmax			
	comp=Z,174nm,1.5s							
ANMO	**Albuquerque**	**68.68**	**325**	P	**P**	**14 25 48.8**	**+0.8**
	baz=140,SNR=118							
ANMO				S	**S**	**14 34 28.5**	**-1.0**
	baz=140							
ANMO	**Albuquerque**	**68.68**	**325**	P	**P**	**14 25 48.9**	**+0.8**
	baz=140							
ANMO				S	**S**	**14 34 28.2**	**-1.2**
	baz=140							
GLMI	**Grayling**	**68.93**	**346**	P	**P**	**14 25 49.6**	**+0.5**
	baz=162,SNR=6.9							
GLMI	**Grayling**	**68.93**	**346**	P	**P**	**14 25 48.8**	**-0.3**
	baz=162,SNR=6.9							
GLMI				S	**S**	**14 34 27.4**	**-4.2**
	baz=162							
I42A	**Draeger Farm,**	**69.14**	**342**	P	**P**	**14 25 50.3**	**-0.1**
	baz=157,SNR=40							
I42A				S	**S**	**14 34 29.9**	**-4.2**
	baz=157							
TUC	**Tucson**	**69.16**	**320**	pP	pP	14 26 57.1	+4.6
TUC	**Tucson**	**69.16**	**320**	P	**P**	**14 25 51.7**	**+0.8**
	baz=136							
TUC				S	**S**	**14 34 35.8**	**+0.8**
	baz=136							
TUC	**Tucson**	**69.16**	**320**	P	**P**	**14 25 50.4**	**-0.5**
TUC				pP	**pP**	**14 26 56.8**	**+4.3**
TUC				sP	**sP**	**14 27 27.5**	**+6.3**
K38A	**Parkersburg**	**69.19**	**339**	P	**P**	**14 25 50.5**	**-0.3**
	baz=154,SNR=26							
K38A				S	**S**	**14 34 30.1**	**-4.6**
	baz=154							
N33B	**J Bar K, Exete**	**69.21**	**335**	P	**P**	**14 25 51.1**	**+0.2**
	baz=149,SNR=5.9							
N33B				S	**S**	**14 34 33.8**	**-1.2**
	baz=149							
T25A	**Trinidad**	**69.33**	**328**	P	**P**	**14 25 52.9**	**+0.9**
	baz=142,SNR=107							
T25A				S	**S**	**14 34 38.0**	**+0.9**
	baz=142							
H43A	**Windswept, Lux**	**69.37**	**343**	P	**P**	**14 25 51.4**	**-0.4**
	baz=159,SNR=28							
H43A				S	**S**	**14 34 31.6**	**-5.2**
	baz=159							
G45A	**Suttons Bay**	**69.38**	**345**	IAmb	IAmb	14 25 52.5		
	comp=Z,147nm,0.8s							
G45A	**Suttons Bay**	**69.38**	**345**	P	**P**	**14 25 51.6**	**-0.2**
	baz=161,SNR=12							
G45A				P	**P**	**14 25 51.6**	**-0.2**
	baz=161,SNR=12							
G45A				S	**S**	**14 34 31.8**	**-5.0**
	baz=161							
G45A				S	**S**	**14 34 31.8**	**-5.0**
	baz=161							
I40A	**Norwalk**	**69.64**	**341**	P	**P**	**14 25 53.4**	**-0.1**
	baz=156,SNR=18							
I40A				S	**S**	**14 34 35.6**	**-4.3**
	baz=156							
L34A	**Svendsen Farm,**	**69.85**	**336**	P	**P**	**14 25 54.5**	**-0.3**
	baz=150,SNR=67							
L34A				S	**S**	**14 34 39.6**	**-3.0**
	baz=150							
CALA	**Caldeira**	**69.92**	**30**	*e*P	**P**	**14 25 54.9**	**-0.5**
	comp=Z,354nm,1.1s							
PCAN	**Candelaria**	**69.93**	**31**	*e*P	**P**	**14 25 54.5**	**-0.8**
	comp=Z,347nm,1.0s							
PCED	**Cedros**	**69.96**	**30**	*e*P	**P**	**14 25 54.9**	**-0.6**
	comp=Z,231nm,1.1s							
KSCO	**Kaye Shedlock'**	**69.98**	**330**	P	**P**	**14 25 57.2**	**+1.4**
	baz=144,SNR=15							
KSCO	**Kaye Shedlock'**	**69.98**	**330**	P	**P**	**14 25 56.7**	**+0.9**
	baz=144,SNR=15							
KSCO				S	**S**	**14 34 44.2**	**-0.1**
	baz=144							
PPNO	**Prainha do Nor**	**70.04**	**31**	*e*P	**P**	**14 25 55.7**	**-0.4**
	comp=Z,403nm,1.3s							
BGNE	**Belgrade**	**70.05**	**335**	P	**P**	**14 25 56.0**	**0.0**
	baz=148,SNR=14							
BGNE				S	**S**	**14 34 43.9**	**-1.0**
	baz=148							
BGNE	**Belgrade**	**70.05**	**335**	P	**P**	**14 25 56.3**	**+0.2**
	baz=148,SNR=14							
BGNE				S	**S**	**14 34 44.8**	**-0.1**
	baz=148							
PID	**Ribeirinha**	**70.08**	**31**	*e*P	**P**	**14 25 56.1**	**-0.2**
	comp=Z,392nm,1.0s							
214A	**Organ Pipe Nat**	**70.13**	**319**	P	**P**	**14 25 58.0**	**+1.3**
	baz=134,SNR=26							
214A				S	**S**	**14 34 49.2**	**+3.0**
	baz=134							
ROSA	**Rosais**	**70.25**	**31**	*e*P	**P**	**14 25 58.1**	**+0.9**
	comp=Z,483nm,1.0s							
PMAN	**Manadas**	**70.25**	**31**	*e*P	**P**	**14 25 57.7**	**+0.5**
	comp=Z,558nm,1.0s							
E46A	**Sault Ste Mari**	**70.33**	**347**	P	**P**	**14 25 57.3**	**-0.3**
	baz=162,SNR=99							
E46A				S	**S**	**14 34 43.6**	**-4.2**
	baz=162							
SDCO	**Great Sand Dun**	**70.34**	**328**	P	**P**	**14 25 59.4**	**+1.1**
	baz=141,SNR=285							
SDCO				S	**S**	**14 34 50.5**	**+1.6**
	baz=141							
SDCO	**Great Sand Dun**	**70.34**	**328**	P	**P**	**14 25 59.3**	**+1.1**
	baz=141,SNR=285							
SDCO				S	**S**	**14 34 50.2**	**+1.2**
	baz=141							
PSMN	**Pico do Norte,**	**70.47**	**34**	*e*P	**P**	**14 25 57.7**	**-0.9**
	comp=Z,238nm,1.2s							
W18A	**Petrified Fore**	**70.59**	**323**	P	**P**	**14 26 00.7**	**+1.0**
	baz=137							
W18A				S	**S**	**14 34 54.1**	**+2.4**
	baz=137							
I37B	**Waseca**	**70.61**	**339**	P	**P**	**14 25 59.1**	**-0.2**
	baz=153,SNR=38							
I37B				S	**S**	**14 34 48.0**	**-3.2**
	baz=153							
PGRA	**Graciosa**	**70.61**	**31**	*e*P	**P**	**14 25 59.5**	**0.0**
	comp=Z,267nm,0.8s							
F42A	**Maple Grove Fa**	**70.66**	**344**	P	**P**	**14 25 59.4**	**-0.2**
	baz=158							
PSCM	**Serra do Cume**	**70.77**	**31**	*e*P	**P**	**14 26 00.9**	**+0.5**
	comp=Z,456nm,1.0s							
PSET	**Sete Cidades**	**70.77**	**33**	*e*P	**P**	**14 25 58.9**	**-1.5**
	comp=Z,320nm,0.8s							
G40A	**Rib Lake**	**70.77**	**342**	P	**P**	**14 26 00.1**	**-0.2**
	baz=156,SNR=32							
G40A				S	**S**	**14 34 48.8**	**-4.2**
	baz=156							
PAGU	**Agualva, Azore**	**70.79**	**31**	*e*P	**P**	**14 26 00.3**	**-0.2**
	comp=Z,379nm,0.9s							
CMLA	**Cha da Macela**	**70.82**	**33**	*e*P	**P**	**14 26 00.5**	**-0.2**
	comp=Z,203nm,0.8s							
PCALD	**Caldeiras da R**	**70.87**	**33**	*e*P	**P**	**14 26 00.7**	**-0.3**
	comp=Z,209nm,0.7s							
PGRON	**Lagoa das Cont**	**70.90**	**33**	*e*P	**P**	**14 26 00.5**	**-0.8**
E43A	**Lone Tree Farm**	**70.95**	**345**	P	**P**	**14 26 01.1**	**-0.2**
	baz=160,SNR=42							
E43A				S	**S**	**14 34 50.0**	**-4.9**
	baz=160							
BART	**Pico Bartolome**	**71.01**	**33**	*e*P	**P**	**14 26 00.6**	**-1.4**
	comp=Z,311nm,0.9s							
S22A	**4UR Ranch, Cre**	**71.01**	**327**	P	**P**	**14 26 03.2**	**+0.9**
	baz=140,SNR=80							
S22A				S	**S**	**14 34 58.0**	**+1.3**
	baz=140							
Q24A	**Divide**	**71.12**	**329**	P	**P**	**14 26 04.0**	**+1.0**
	baz=142,SNR=105							
Q24A				S	**S**	**14 35 00.6**	**+2.7**
	baz=142							
COWI	**Conover**	**71.24**	**343**	P	**P**	**14 26 02.9**	**-0.2**
	baz=158							
COWI				S	**S**	**14 34 54.2**	**-4.2**
	baz=158							
OGNE	**Ogallala**	**71.28**	**332**	P	**P**	**14 26 05.0**	**+1.4**
	baz=145,SNR=8.8							
OGNE				S	**S**	**14 35 00.1**	**+0.9**
	baz=145							
OGNE	**Ogallala**	**71.28**	**332**	P	**P**	**14 26 04.4**	**+0.9**
	baz=145,SNR=8.8							
OGNE				S	**S**	**14 34 59.7**	**+0.5**
	baz=145							
K31A	**O'Neill**	**71.32**	**335**	P	**P**	**14 26 04.0**	**+0.3**
	baz=148,SNR=12							
K31A				S	**S**	**14 34 58.4**	**-1.1**
	baz=148							
MVCO	**Mesa Verde**	**71.47**	**325**	P	**P**	**14 26 05.7**	**+0.8**
MVCO	**Mesa Verde**	**71.47**	**325**	P	**P**	**14 26 06.0**	**+1.1**
	baz=139,SNR=126							
MVCO				S	**S**	**14 35 03.1**	**+1.3**
	baz=139							
ECSD	**EROS Data Cent**	**71.47**	**337**	P	**P**	**14 26 04.2**	**-0.3**
ECSD				IAmb	IAmb	14 26 08.5		
	comp=Z,231nm,1.4s							
ECSD	**EROS Data Cent**	**71.47**	**337**	P	**P**	**14 26 04.2**	**-0.3**
	baz=150,SNR=99							
ECSD				S	**S**	**14 34 58.2**	**-2.9**
	baz=150							
ECSD	**EROS Data Cent**	**71.47**	**337**	P	**P**	**14 26 04.2**	**-0.3**
	baz=150,SNR=99							
ECSD				S	**S**	**14 34 58.4**	**-2.6**
	baz=150							
SPMN	**Marine on St.**	**71.51**	**340**	P	**P**	**14 26 04.2**	**-0.4**
SPMN				IAmb	IAmb	14 26 05.1		
	comp=Z,126nm,0.8s							
SPMN	**Marine on St.**	**71.51**	**340**	P	**P**	**14 26 04.3**	**-0.4**
	baz=154,SNR=23							

SPMN S **S** **14 34 58.0 -3.3**
baz=154
SPMN **Marine on St.** **71.51 340** P **P** **14 26 04.1 -0.5**
baz=154,SNR=23
SPMN S **S** **14 34 58.4 -3.0**
baz=154
WUAZ **Wupatki** **71.80 322** P **P** **14 26 06.9 +0.1**
WUAZ **Wupatki** **71.80 322** P **P** **14 26 08.3 +1.5**
baz=136,SNR=70
WUAZ S **S** **14 35 09.2 +3.7**
baz=136
PMOZ **Porto Moniz, M** **71.92 42** *e*P **P** **14 26 06.9 -0.6**
comp=Z,204nm,0.9s
D41A **Chassel** **71.98 344** P **P** **14 26 07.9 +0.5**
baz=158,SNR=55
D41A S **S** **14 35 03.2 -3.4**
baz=158
ISCO **Idaho Springs** **72.00 329** P **P** **14 26 09.2 +1.0**
baz=142,SNR=91
ISCO S **S** **14 35 08.7 +0.7**
baz=142
ISCO **Idaho Springs** **72.00 329** P **P** **14 26 09.2 +1.0**
baz=142,SNR=91
ISCO S **S** **14 35 08.4 +0.4**
baz=142
TAOE **Nuku Hiva Isla** **72.10 268** *e*P **P** **14 26 10.5 +1.5**
comp=Z,544nm,1.3s
TAOE *e*S **S** **14 35 12.4 +2.7**
comp=Z,2μm,28.4s
TAOE **Nuku Hiva Isla** **72.10 268** *e*LR LR 14 48 34.9
comp=Z,1μm,22.5s
GLA **Glamis** **72.12 318** P **P** **14 26 09.8 +1.1**
baz=133,SNR=9.3
GLA S **S** **14 35 11.6 +2.6**
baz=133
F36A **Milaca** **72.30 340** P **P** **14 26 08.9 -0.5**
F36A IAmb IAmb 14 26 09.8
comp=Z,152nm,0.7s
F36A **Milaca** **72.30 340** P **P** **14 26 08.8 -0.5**
baz=153,SNR=128
F36A S **S** **14 35 06.9 -3.5**
baz=153
E38A **The Farm, Brul** **72.38 342** P **P** **14 26 09.8 0.0**
baz=155,SNR=8.2
E38A S **S** **14 35 08.0 -3.2**
baz=155
PDMCI **Parker Dam,Lak** **72.56 320** P **P** **14 26 12.0 +0.9**
baz=134,SNR=8.9
PDMCI S **S** **14 35 15.5 +1.7**
baz=134
PMPST **Porto Santo, M** **72.62 42** *e*P **P** **14 26 13.7 +2.2**
IKP **In-Ko-Pah, Jac** **72.64 317** P **P** **14 26 13.0 +1.2**
baz=132,SNR=16
IKP S **SKiKP** **14 35 16.8 -1.3**
baz=132
SWSC **Sam W. Stewart** **72.65 318** P **P** **14 26 12.7 +1.1**
baz=132,SNR=9.8
SWSC S **SKiKP** **14 35 19.4 +1.4**
baz=132
BC3 **Big Chuckawall** **72.91 318** P **P** **14 26 14.4 +1.0**
baz=133,SNR=32
BC3 S **SKiKP** **14 35 22.2 +3.7**
baz=133
SUSD **Miller** **72.94 336** P **P** **14 26 13.5 +0.3**
baz=148,SNR=10
SUSD S **S** **14 35 16.3 -1.5**
baz=148
SUSD **Miller** **72.94 336** P **P** **14 26 13.0 -0.2**
baz=148,SNR=10
SUSD S **S** **14 35 16.0 -1.8**
baz=148
MONP2 **Monument Peak** **73.00 317** P **P** **14 26 15.1 +1.1**
baz=132,SNR=22
MONP2 S **S** **14 35 22.7 +3.5**
baz=132
N23A **Red Feather La** **73.02 329** P **P** **14 26 15.1 +1.0**
baz=142,SNR=102
N23A S **S** **14 35 20.3 +1.1**
baz=142
IRM **Iron Mountain** **73.06 319** P **P** **14 26 15.4 +1.3**
baz=133,SNR=38
IRM S **S** **14 35 22.8 +3.3**
baz=133
NEE2 **Needles Airpor** **73.16 320** P **P** **14 26 15.7 +1.0**
baz=134
NEE2 S **S** **14 35 24.4 +3.8**
baz=134
F33A **5 Mile Ranch,** **73.19 338** P **P** **14 26 14.1 -0.5**
baz=151,SNR=26
F33A S **SKiKP** **14 35 16.9 -1.5**
baz=151
109C **Camp Elliot, M** **73.43 317** P **P** **14 26 17.3 +1.0**
baz=131
109C S **S** **14 35 27.1 +3.5**
baz=131
BELC **Belle Mtn. Jos** **73.48 318** P **P** **14 26 17.8 +1.1**
baz=132,SNR=26
BELC S **S** **14 35 28.4 +4.0**
baz=132
TPFO **Pinon Flats** **73.50 318** P **P** **14 26 18.1 +1.3**
baz=132,SNR=15
TPFO S **S** **14 35 29.1 +4.5**
baz=132
PFO **Pinyon Flats O** **73.50 318** P **P** **14 26 17.9 +1.0**
comp=Z,15nm,0.7s,baz=122,slow=5.0,SNR=22
comp=Z,15nm,0.7s
PFO **Pinyon Flats O** **73.50 318** P **P** **14 26 17.9 +1.0**
PFO **Pinyon Flats O** **73.50 318** *d* P **P** **14 26 18.0 +1.2**
PFO pmax pmax
comp=Z,87nm,1.7s
PFO **Pinyon Flats O** **73.50 318** P **P** **14 26 18.1 +1.2**
baz=132,SNR=18
PFO S **S** **14 35 29.5 +4.8**
baz=132
O20A **White River Ci** **73.55 327** P **P** **14 26 18.3 +1.3**
baz=140,SNR=69
O20A S **S** **14 35 27.2 +2.1**
baz=140
EYMN **Ely** **73.58 342** P **P** **14 26 16.3 -0.5**
baz=156,SNR=16
EYMN S **SKiKP** **14 35 20.8 +1.7**
baz=156
EYMN **Ely** **73.58 342** P **P** **14 26 16.2 -0.6**
baz=156,SNR=16
EYMN S **SKiKP** **14 35 20.7 +1.7**
baz=156
GMRC **Granite Mounta** **73.80 319** P **P** **14 26 19.9 +1.3**
baz=133,SNR=94
GMRC S **S** **14 35 32.2 +4.2**
baz=133
MURC **Murrieta** **73.96 317** P **P** **14 26 20.5 +1.1**
baz=132,SNR=7.2
MURC S **S** **14 35 33.0 +3.5**
baz=132
BBRC **Big Bear Solar** **74.22 318** P **P** **14 26 22.5 +1.4**
baz=132
BBRC S **S** **14 35 37.4 +4.5**
baz=132
HEC **Hector,Ludlow** **74.24 319** P **P** **14 26 22.2 +1.2**
baz=132,SNR=46
HEC S **S** **14 35 37.2 +4.5**
baz=132
TUQ **Turquoise Moun** **74.40 320** P **P** **14 26 23.1 +1.2**
baz=133
TUQ S **S** **14 35 38.8 +4.2**
baz=133
SCI2 **San Clemente I** **74.41 316** P **P** **14 26 22.7 +0.8**
baz=130
SCI2 S **S** **14 35 38.8 +4.2**
baz=130
D32B **Dogwood Acres,** **74.56 339** P **P** **14 26 23.0 +0.5**
baz=150
D32B S **S** **14 35 32.1 -3.5**
baz=150
CIS **Catalina Islan** **74.60 317** P **P** **14 26 24.1 +1.1**
baz=131
CIS S **S** **14 35 40.8 +4.1**
baz=131
B35A **Bob, Littlefor** **74.60 341** P **P** **14 26 22.4 -0.2**
baz=154,SNR=59
B35A S **S** **14 35 31.7 -4.3**
baz=154
WP01 **e3381** **74.61 107** *i* P P 14 26 16.2 -7.4
WP01 *i* S **PcP** **14 26 31.9 -4.7**
K22A **Casper** **74.66 330** P **P** **14 26 24.4 +1.1**
baz=142,SNR=60
K22A S **S** **14 35 38.6 +1.4**
baz=142
K22A **Casper** **74.66 330** P **P** **14 26 24.4 +1.1**
baz=142,SNR=60
K22A S **S** **14 35 39.0 +1.8**
baz=142
BFSC **Mount Baldy Ra** **74.67 318** P **P** **14 26 24.5 +1.0**
baz=131,SNR=15
BFSC S **S** **14 35 41.2 +3.6**
baz=131
RRX **Edison Barstow** **74.67 318** P **P** **14 26 24.8 +1.3**
baz=132
RRX S **S** **14 35 41.0 +3.5**
baz=132
RSSD **Black Hills** **74.72 333** P **P** **14 26 24.4 +0.7**
RSSD **Black Hills** **74.72 333** P **P** **14 26 24.4 +0.7**
RSSD pmax pmax
comp=Z,67nm,0.9s
RSSD **Black Hills** **74.72 333** P **P** **14 26 24.5 +0.8**
baz=144,SNR=54
RSSD S **S** **14 35 39.9 +1.9**
baz=144
RSSD **Black Hills** **74.72 333** P **P** **14 26 24.4 +0.7**
baz=144
RSSD S **S** **14 35 39.1 +1.1**
baz=144
GSC **Goldstone, Bar** **74.84 319** P **P** **14 26 25.7 +1.3**
baz=132,SNR=36
GSC S **S** **14 35 42.6 +3.2**
baz=132
SHOC **Shoshone, Teco** **74.92 320** P **P** **14 26 26.0 +1.2**
baz=133,SNR=10
SHOC S **S** **14 35 44.0 +3.9**
baz=133
TOA0 **Torodi Ar. Sit** **75.08 69** P **P** **14 26 25.0 -1.1**
TORD **Torodi Ar. Bea** **75.08 69** P **P** **14 26 25.0 -1.1**
comp=Z,117nm,0.4s,baz=253,slow=5.8,SNR=1202
TORD S **S** **14 35 38.0 -4.6**
comp=Z,7.9nm,0.9s,baz=251,slow=10,SNR=6.7
comp=Z,117nm,0.4s
DECC **Green Verdugo** **75.10 317** P **P** **14 26 26.8 +1.0**
baz=131
DECC S **S** **14 35 44.6 +2.5**
baz=131
AGMN **Agassiz Nation** **75.20 340** P **P** **14 26 26.1 0.0**
baz=152,SNR=65
AGMN S **S** **14 35 39.2 -3.4**
baz=152
AGMN **Agassiz Nation** **75.20 340** P **P** **14 26 26.1 0.0**
baz=152,SNR=65
AGMN S **S** **14 35 38.8 -3.8**
baz=152
SNCC **San Nicolas Is** **75.21 316** P **P** **14 26 27.2 +0.8**
baz=130
SNCC S **S** **14 35 47.8 +4.4**
baz=130
EDW2 **Edwards Air Fo** **75.30 318** P **P** **14 26 27.8 +0.8**
baz=131,SNR=23
EDW2 S **S** **14 35 46.4 +2.0**
baz=131
E28A **Huff** **75.40 336** P **P** **14 26 28.3 +1.0**
baz=147,SNR=26
E28A S **S** **14 35 43.7 -1.3**
baz=147
LRMC **Laurel Mtn Rad** **75.50 319** P **P** **14 26 29.2 +1.0**
baz=132,SNR=7.4
LRMC S **S** **14 35 50.1 +3.4**
baz=132
OTJO **Outjo** **75.51 106** *i* P **P** **14 26 29.3 +0.6**
OTJO *i* S **PcP** **14 26 34.5 -6.0**
SBA **Scott Base** **75.53 190** P **P** **14 26 29.5 +1.9**
SBA **Scott Base** **75.53 190** P **P** **14 26 29.5 +1.9**
SBA pmax pmax
comp=Z,55nm,1.4s
TPNV **Topopah Spring** **75.61 320** P **P** **14 26 30.5 +1.5**
baz=133,SNR=88
TPNV S **S** **14 35 51.1 +3.1**
baz=133
FURC **Furnace Creek,** **75.66 320** P **P** **14 26 30.4 +1.5**
baz=132,SNR=37
FURC S **S** **14 35 52.0 +4.0**
baz=132
MPMC **Manual Prospec** **75.76 319** P **P** **14 26 30.7 +0.9**
baz=132,SNR=45
MPMC S **S** **14 35 53.2 +3.5**
baz=132
SUR **Sutherland** **75.82 119** P **P** **14 26 30.3 -0.1**
SUR **Sutherland** **75.82 119** P **P** **14 26 30.7 +0.3**
DUG **Dugway, Tooele** **75.95 325** P **P** **14 26 32.0 +1.3**
baz=136,SNR=44
DUG S **S** **14 35 53.5 +2.0**
baz=136
ARVC **Arvin** **75.97 318** P **P** **14 26 31.8 +1.0**
baz=131
ARVC S **S** **14 35 53.7 +2.1**
baz=131
MDND **Maddock** **76.08 337** P **P** **14 26 32.2 +1.2**
baz=148,SNR=36
MDND S **S** **14 35 50.8 -1.5**
baz=148
MDND **Maddock** **76.08 337** P **P** **14 26 31.7 +0.6**
baz=148,SNR=36
MDND S **S** **14 35 51.0 -1.2**
baz=148
SBC **Santa Barbara** **76.09 317** P **P** **14 26 32.1 +0.7**
baz=130
ISA **Isabella, Lake** **76.10 318** P **P** **14 26 32.9 +1.3**
baz=131,SNR=44
ISA S **S** **14 35 55.7 +2.5**
baz=131
BW06 **Boulder Array** **76.18 328** P **P** **14 26 32.5 +0.4**
baz=139,SNR=90
BW06 S **S** **14 35 56.8 +2.7**
baz=139
PDAR **Pinedale Array** **76.18 328** P **P** **14 26 32.4 +0.3**
comp=Z,20nm,0.6s,baz=135,slow=7.9,SNR=162
PDAR PKPPKP P'P'df 14 53 55.6 +9.5
comp=Z,1.0nm,0.9s,baz=248,slow=6.7,SNR=6.2
comp=Z,20nm,0.6s
R11A **Troy Canyon, C** **76.18 322** P **P** **14 26 33.6 +1.5**
baz=134,SNR=116
R11A S **S** **14 35 57.2 +3.1**
baz=134
GRAC **Grapevine Rang** **76.31 320** P **P** **14 26 34.0 +1.4**
baz=132
GRAC S **S** **14 35 59.8 +4.5**
baz=132
MEH **Mehetia** **76.32 256** *e*P **P** **14 26 34.6 +1.4**
comp=Z,51nm,1.3s
CWC **Cottonwood Cre** **76.37 319** P **P** **14 26 34.3 +1.1**
baz=131
CWC S **S** **14 36 00.4 +4.2**
baz=131
PKM **Mcpherson Peak** **76.44 317** P **P** **14 26 34.8 +1.2**
baz=130,SNR=26
PKM S **S** **14 36 00.1 +3.0**
baz=130
VNDA **Vanda** **76.53 190** P **P** **14 26 35.0 +1.7**
comp=Z,13nm,1.0s,baz=144,slow=4.4,SNR=45
comp=Z,13nm,1.0s
VES **Vestal, Richgr** **76.59 318** P **P** **14 26 35.4 +1.1**
baz=131,SNR=7.2
VAH **Vaihoa** **76.80 259** *e*P **P** **14 26 37.4 +1.6**
comp=Z,158nm,1.1s
VAH *e*pP **pP** **14 27 32.8 -6.3**
comp=Z,62nm,1.1s
SCHQ **Schefferville** **76.81 359** P **P** **14 26 35.2 +0.2**
comp=Z,96nm,0.8s,baz=175,slow=4.2,SNR=134
comp=Z,96nm,0.8s
SCHQ **Schefferville** **76.81 359** IAmb IAmb 14 26 36.4
comp=Z,97nm,0.8s
SMMC **Simmler** **76.83 317** P **P** **14 26 37.0 +1.4**
baz=130,SNR=12
SMMC S **S** **14 36 04.8 +3.8**
baz=130
TIN **Tinemaha, Big** **76.86 319** P **P** **14 26 37.2 +1.4**
baz=131
TIN S **S** **14 36 05.1 +3.6**
baz=131
VOG **Valley Oaks Go** **77.09 318** P **P** **14 26 37.0 0.0**
baz=130
PMOR **Pomariorio Ree** **77.12 259** *e*P **P** **14 26 39.0 +1.4**
comp=Z,369nm,1.3s
TSUM **Tsumeb** **77.20 106** P **P** **14 26 37.8 -0.4**
TSUM IAmb IAmb 14 26 42.3
comp=Z,164nm,0.9s
TIAR **Tiarei** **77.58 256** *e*P **P** **14 26 41.1 +0.9**
comp=Z,14nm,1.2s
MLAC **Mammoth, Mammo** **77.61 320** P **P** **14 26 41.5 +1.3**
baz=131,SNR=6.0
MLAC S **S** **14 36 12.3 +2.7**
baz=131
LAO **LASA Array** **77.70 333** P **P** **14 26 41.1 +1.0**
baz=142,SNR=13
LAO S **S** **14 36 10.1 +0.2**
baz=142
LAO **LASA Array** **77.70 333** P **P** **14 26 40.9 +0.7**
baz=142,SNR=13
LAO S **S** **14 36 11.0 +1.1**
baz=142
PAE **Paea** **77.75 256** *e*P **P** **14 26 42.4 +1.3**
comp=Z,55nm,1.2s
PAE *e*pP **pP** **14 27 38.2 -6.3**
comp=Z,34nm,1.3s
PPT2 **Papeete2** **77.78 256** *e*P **P** **14 26 42.5 +1.2**
comp=Z,222nm,1.4s
PPT2 **Papeete2** **77.78 256** *e*P **P** **14 26 43.0 +1.7**
comp=Z,485nm,23.2s
PPT2 **Papeete2** **77.78 256** *e*P **P** **14 26 43.5 +2.2**
comp=Z,293nm,23.0s
PPT2 *e*pP **pP** **14 27 37.5 -7.2**
comp=Z,774nm,24.0s
PPT2 *e*pP **pP** **14 27 37.9 -6.8**
comp=Z,1μm,16.0s
PPT2 *e*pP **pP** **14 27 38.4 -6.3**
comp=Z,101nm,1.3s
PPT2 *e*S **S** **14 36 12.0 0.0**
comp=Z,3μm,29.2s
PPT2 *e*S **S** **14 36 12.6 +0.6**
comp=Z,2μm,38.8s
PPT2 **Papeete2** **77.78 256** *e*LR LR 14 51 11.1
comp=Z,2μm,30.5s
PPT2 *e*LR LR 14 51 13.1
comp=Z,3μm,28.8s
PPT **Papeete** **77.78 256** P **P** **14 26 43.9 +2.6**
comp=Z,103nm,1.0s,baz=90,slow=13,SNR=5.9
comp=Z,103nm,1.0s
NVAR **Mina Array Bea** **77.82 321** P **P** **14 26 42.2 +0.9**
comp=Z,36nm,1.0s,baz=146,slow=5.4,SNR=165
NVAR PKPPKP **P'P'df** **14 53 48.2 +4.9**
comp=Z,2.1nm,1.1s,baz=319,slow=2.6,SNR=4.8
comp=Z,36nm,1.0s
RLMT **Red Lodge** **77.83 330** P **P** **14 26 41.9 +0.8**
baz=140,SNR=88
RLMT S **S** **14 36 12.6 +0.9**
baz=140
H17A **Grant Village** **77.89 329** P **P** **14 26 43.4 +1.8**
baz=138,SNR=22
H17A S **S** **14 36 15.7 +3.3**
baz=138
DGMT **Dagmar** **78.31 335** P **P** **14 26 45.0 +1.6**
baz=144,SNR=18
DGMT S **S** **14 36 17.1 +1.0**
baz=144
DGMT **Dagmar** **78.31 335** P **P** **14 26 44.8 +1.3**
baz=144,SNR=18
DGMT S **S** **14 36 17.2 +1.0**
baz=144
AVE **Averroes** **78.55 47** P **P** **14 26 45.5 +0.4**
AVE S **S** **14 36 18.0 -1.4**
HLID **Hailey** **79.19 326** P **P** **14 26 50.1 +1.6**
baz=135,SNR=327
HLID S **S** **14 36 30.3 +4.3**
baz=135
BOZ **Bozeman (W)** **79.28 329** P **P** **14 26 49.7 +0.7**
baz=138,SNR=55
BOZ S **S** **14 36 28.4 +1.4**
baz=138
GAMM **Gam** **79.73 108** *i* P P 14 26 39.1 -13
GAMM *i* S **PcP** **14 26 59.7 +0.9**
PFVI **Vila Bisbo** **79.93 43** *e*P **P** **14 26 52.8 +0.4**
comp=Z,283nm,1.4s
MORF **Marmelete** **80.15 43** *e*P **P** **14 26 53.8 +0.1**
MORF IAmb IAmb 14 26 57.4
comp=Z,204nm,1.2s
MORF *e*S **S** **14 36 37.6 +1.4**
MORF **Marmelete** **80.15 43** *e*P **P** **14 26 53.7 +0.1**
MORF *e*S **S** **14 36 37.5 +1.4**
MORF pmax pmax
comp=Z,204nm,1.2s
MORF **Marmelete** **80.15 43** *e*P **P** **14 26 53.5 -0.2**
comp=Z,323nm,1.4s
IFR **Ifrane** **80.24 48** P **P** **14 26 54.5 +0.1**
IFR S **S** **14 36 36.4 -1.0**
PTEO **Sao Teotonio** **80.25 43** *e*P **P** **14 26 54.7 +0.6**
comp=Z,544nm,1.4s
EGMT **Eagleton** **80.25 332** P **P** **14 26 54.3 +0.3**
baz=140,SNR=78
EGMT S **S** **14 36 37.0 +0.3**
baz=140
PBDV **Barranco-do-Ve** **80.57 43** *e*P **P** **14 26 56.1 +0.2**
comp=Z,357nm,1.3s
BOSA **Boshof** **80.67 117** P **P** **14 26 55.8 -1.0**
comp=Z,22nm,0.4s,baz=262,slow=3.8,SNR=30
comp=Z,22nm,0.4s
BOSA **Boshof** **80.67 117** IAmb IAmb 14 27 01.2
comp=Z,143nm,1.2s
BOSA **Boshof** **80.67 117** *i* P **P** **14 26 55.1 -1.7**
BOSA **Boshof** **80.67 117** *i* P **P** **14 26 55.1 -1.7**
PMST **Lisbon--Monsan** **80.70 42** *e*P **P** **14 26 56.9 +0.4**
comp=Z,318nm,1.2s
LIS **Lisbon** **80.71 42** *e*P **P** **14 26 56.6 +0.1**
LIS IAmb IAmb 14 26 59.9
comp=Z,560nm,1.8s
LIS *e*S **S** **14 36 43.2 +1.5**
LIS **Lisbon** **80.71 42** *e*P **P** **14 26 56.6 +0.1**
LIS *e*S **S** **14 36 43.1 +1.5**
LIS pmax pmax
comp=Z,560nm,1.8s
LIS **Lisbon** **80.71 42** *e*P **P** **14 26 57.1 +0.6**
comp=Z,350nm,2.1s
PNCL **Nicolau / Gran** **80.72 42** *e*P **P** **14 26 56.7 +0.1**
comp=Z,154nm,1.1s
PCVE **Castro Verde** **80.73 43** *e*P **P** **14 26 56.9 +0.2**
comp=Z,205nm,1.1s
MESJ **Messejana** **80.75 43** *e*P **P** **14 26 56.9 +0.1**
MESJ IAmb IAmb 14 26 59.9
comp=Z,469nm,1.8s
MESJ *e*pP **pP** **14 27 57.2 -2.8**
MESJ *e*S **S** **14 36 43.7 +1.6**
MESJ **Messejana** **80.75 43** *e*P **P** **14 26 56.8 +0.1**
MESJ *e**PP **pP** **14 27 57.1 -2.8**
MESJ *e*S **S** **14 36 43.7 +1.6**
MESJ pmax pmax
comp=Z,469nm,1.8s
MESJ **Messejana** **80.75 43** *e*P **P** **14 26 57.0 +0.3**
comp=Z,241nm,1.0s
PMAFR **Mafra** **80.77 41** *e*P **P** **14 26 57.3 +0.4**
comp=Z,305nm,1.1s
PVAQ **Vaqueiros** **80.80 43** *e*P **P** **14 26 57.3 +0.3**
comp=Z,226nm,1.7s
PACT **Alcochete** **80.93 42** *e*P **P** **14 26 58.4 +0.7**
comp=Z,477nm,1.7s
PBEJ **Beja** **81.08 43** *e*P **P** **14 26 58.7 +0.2**
comp=Z,203nm,1.1s
MSO **Missoula** **81.28 329** P **P** **14 27 00.5 +1.0**
baz=136,SNR=26
MSO S **S** **14 36 49.4 +1.8**
baz=136
EVO **Evora** **81.30 42** P **P** **14 26 59.7 +0.1**
EVO S **S** **14 36 47.7 -0.1**
EVO **Evora** **81.30 42** *e*P **P** **14 26 59.6 0.0**
comp=Z,123nm,1.5s
PSBE **So Bento** **81.42 41** *e*P **P** **14 27 00.7 +0.4**
comp=Z,527nm,1.3s
PMTG **Montargil** **81.49 42** *e*P **P** **14 27 00.7 +0.1**
comp=Z,364nm,1.3s
PBAR **Barrancos** **81.69 43** *e*P **P** **14 27 01.7 0.0**
comp=Z,200nm,1.1s
PESTR **Estremoz** **81.76 42** *e*P **P** **14 27 02.2 +0.1**
comp=Z,275nm,1.2s
PCAS **Casmilo, Conde** **81.93 41** *e*P **P** **14 27 03.0 +0.1**
comp=Z,394nm,1.0s
COI **Coimbra** **82.07 41** *e*P **P** **14 27 04.0 +0.4**
comp=Z,485nm,1.2s
LBTB **Lobatse** **82.21 114** IAmb IAmb 14 27 07.6
comp=Z,220nm,1.4s
LBTB **Lobatse** **82.21 114** ‖ *i* P **P** **14 27 02.9 -2.1**
LBTB **Lobatse** **82.21 114** ‖ *i* P **P** **14 27 02.9 -2.1**
PMRV **Marv??o** **82.22 42** *e*P **P** **14 27 04.0 -0.5**
comp=Z,155nm,1.2s
PCBR **Castelo Branco** **82.42 41** *e*P **P** **14 27 05.1 -0.3**
comp=Z,178nm,1.1s
PTO **Porto** **82.53 40** *e*P **P** **14 27 06.7 +0.8**
comp=Z,368nm,2.2s
K04D **Chiloquin, OR** **82.53 322** P **P** **14 27 06.7 +0.5**
baz=130,SNR=7.3

K04D S **S** **14 37 02.0 +1.5**
baz=130
EMAL Malaga-Limoner 82.56 45 P **P** **14 27 07.6 +1.5**
EMAL S **S** **14 36 55.8 -4.8**
L04D Klamath Falls 82.59 321 P **P** **14 27 06.5 0.0**
baz=129,SNR=7.0
L04D S **S** **14 37 02.3 +1.2**
baz=129
J05D Fort Rock, OR 82.66 323 P **P** **14 27 07.6 +0.8**
baz=130,SNR=29
J05D S **S** **14 37 04.9 +3.1**
baz=130
PVIS Viseu 82.70 41 *e*P **P** **14 27 07.3 +0.4**
comp=Z,231nm,1.4s
MTE Manteigas 82.72 41 IAmb IAmb 14 27 09.9
comp=Z,130nm,0.8s
MTE Manteigas 82.72 41 *e*P **P** **14 27 07.0 0.0**
comp=Z,266nm,2.5s
WMELI Melilla 82.73 47 P **P** **14 27 05.2 -2.0**
WMELI S **S** **14 36 59.4 -3.1**
MAW Mawson 82.77 162 P **P** **14 27 07.8 +0.9**
comp=Z,78nm,0.8s,baz=233,slow=6.9,SNR=82
comp=Z,78nm,0.8s
MAW Mawson 82.77 162 P **P** **14 27 07.7 +0.9**
MAW Mawson 82.77 162 P **P** **14 27 07.7 +0.9**
MAW pmax pmax
comp=Z,27nm,1.0s
WALA Waterton Lakes 82.87 331 P **P** **14 27 08.0 +0.3**
J04D Umpqua Nationa 83.13 322 P **P** **14 27 09.2 -0.1**
baz=129,SNR=12
J04D S **S** **14 37 08.2 +1.6**
baz=129
PVRL Vila Real 83.14 40 *e*P **P** **14 27 09.2 0.0**
comp=Z,438nm,1.3s
POLO Lamas de Olo 83.16 40 *e*P **P** **14 27 09.1 -0.2**
comp=Z,154nm,2.0s
PCAB Cabril 83.22 40 *e*P **P** **14 27 09.5 -0.1**
comp=Z,368nm,1.3s
PGAV Gavieira, Arco 83.24 39 *e*P **P** **14 27 09.4 -0.3**
comp=Z,364nm,2.0s
L02F Cave Junction 83.27 321 P **P** **14 27 10.6 +0.8**
baz=128,SNR=8.2
L02F S **S** **14 37 08.9 +1.2**
baz=128
I05D Terrebonne, OR 83.40 324 P **P** **14 27 11.3 +0.9**
baz=130,SNR=9.4
I05D S **S** **14 37 11.8 +2.9**
baz=130
MVO Moncorvo 83.49 41 *e*P **P** **14 27 11.1 +0.1**
comp=Z,505nm,1.1s
I04A Tendick Farm, 83.65 323 P **P** **14 27 11.5 -0.1**
baz=129
I04A S **S** **14 37 12.1 +0.7**
baz=129
K02D Willamette Mer 83.68 321 P **P** **14 27 12.8 +0.9**
baz=128,SNR=9.9
K02D S **S** **14 37 13.2 +1.3**
baz=128
NEW Newport 83.82 328 P **P** **14 27 11.8 -0.7**
NEW Newport 83.82 328 P **P** **14 27 11.8 -0.7**
NEW pmax pmax
comp=Z,19nm,0.8s
NEW Newport 83.82 328 P **P** **14 27 12.1 -0.4**
baz=134,SNR=23
NEW S **S** **14 37 13.1 +0.1**
baz=134
G05D Wamic, OR 83.96 324 P **P** **14 27 14.3 +1.1**
baz=130,SNR=21
G05D S **S** **14 37 17.8 +3.4**
baz=130
FCC Fort Churchill 84.04 346 IAmb IAmb 14 27 14.6
comp=Z,136nm,0.8s
PBRG Braganca 84.05 40 *e*P **P** **14 27 13.9 +0.2**
comp=Z,446nm,1.6s
I03D Drain, OR 84.12 322 P **P** **14 27 14.9 +1.0**
baz=128,SNR=5.6
I03D S **S** **14 37 17.3 +1.4**
baz=128
J01E Myrtle Point 84.12 321 P **P** **14 27 14.7 +0.7**
baz=128
J01E S **S** **14 37 18.5 +2.6**
baz=128
PAB San Pablo 84.20 43 P **P** **14 27 14.6 0.0**
PAB San Pablo 84.20 43 ⇑P **P** **14 27 14.8 +0.2**
H04D Lebanon 84.29 323 P **P** **14 27 15.0 +0.2**
baz=129
H04D S **S** **14 37 18.8 +1.2**
baz=129
IVI Ivigtut 84.44 9 *i* P **P** **14 27 15.6 +0.5**
IVI IAmb IAmb 14 27 19.1
comp=Z,150nm,0.9s
ESDC Sonseca Array 84.52 43 P **P** **14 27 16.4 +0.3**
comp=Z,187nm,1.0s,baz=241,slow=5.2,SNR=174
comp=Z,187nm,1.0s
ESBB Sonseca Array 84.52 43 P **P** **14 27 16.2 0.0**
COR Corvallis 84.64 323 P **P** **14 27 20.6 +4.1**
I02E Swisshome, OR 84.65 322 P **P** **14 27 17.9 +1.3**
baz=128
I02E S **S** **14 37 22.2 +1.0**
baz=128
NRS Narsarsuaq 84.80 10 P **P** **14 27 17.1 +0.2**
NRS IAmb IAmb 14 27 19.1
comp=Z,97nm,0.8s
NRS Narsarsuaq 84.80 10 P **P** **14 27 17.1 +0.2**
NRS pmax pmax
comp=Z,97nm,0.8s
NRS Narsarsuaq 84.80 10 *i* P **P** **14 27 17.2 +0.3**
NRS IAmb IAmb 14 27 19.4
comp=Z,110nm,0.9s
G03D McMinnville, O 85.01 323 P **P** **14 27 18.3 0.0**
baz=129
G03D S **S** **14 37 25.5 +0.9**
baz=129
CART Cartagena 85.29 46 P **P** **14 27 18.0 -1.9**
CART S **SKSac** **14 37 18.4 -0.9**
F04D Rainier, OR 85.42 324 P **P** **14 27 21.0 +0.6**
baz=129
MATP Matopo 86.38 110 *i* P **P** **14 27 25.6 -0.4**
MATP Matopo 86.38 110 *i* P **P** **14 27 25.6 -0.4**
BLWY Bulawayo 86.59 110 *i* P **P** **14 27 25.6 -1.4**
BLWY Bulawayo 86.59 110 *i* P **P** **14 27 25.6 -1.4**
MUSN Musina, Limpop 86.85 113 *i* P **P** **14 27 27.0 -1.1**
MUSN Musina, Limpop 86.85 113 *i* P **P** **14 27 27.0 -1.1**
NUUK Nuuk 86.90 6 *i* P **P** **14 27 27.6 +0.5**
NUUK IAmb IAmb 14 27 30.7
comp=Z,159nm,1.0s
MOPA Mopani 87.67 114 ⇓*i* P **P** **14 27 31.9 0.0**
MOPA Mopani 87.67 114 ⇓*i* P **P** **14 27 31.9 0.0**
LLLB Lillooet 87.70 328 IAmb IAmb 14 27 35.7
comp=Z,112nm,1.1s
SJPF Ste Jean 88.14 42 *e*P **P** **14 27 33.8 +0.2**
SJPF pmax pmax
comp=Z,101nm,0.9s
ETSF Etsaut 88.44 42 *e*P **P** **14 27 33.8 -1.2**
ETSF pmax pmax
comp=Z,66nm,0.9s
OZB Mount Ozzard 88.51 325 IAmb IAmb 14 27 40.2
comp=Z,89nm,1.1s
EPF Esparros 89.06 42 *e*P **P** **14 27 36.5 -1.4**
EPF pmax pmax
comp=Z,73nm,0.7s
QUIF Quistinic 89.68 37 *e*P **P** **14 27 40.5 -0.1**
QUIF pmax pmax
comp=Z,120nm,0.8s
DY2G Dye2 89.74 8 *i* P **P** **14 27 41.8 +1.0**
DY2G IAmb IAmb 14 27 44.7
comp=Z,413nm,1.3s
SFJD Kangerlussuaq 89.76 6 *i* P **P** **14 27 40.9 +0.4**
SFJD IAmb IAmb 14 27 43.3
comp=Z,263nm,1.9s
ROSF Rostrenen 89.86 36 *e*P **P** **14 27 41.5 +0.1**
ROSF pmax pmax
comp=Z,292nm,0.9s
MAHO Mahon 90.01 46 P **P** **14 27 41.7 -0.5**
MAHO S **SKSac** **14 37 49.7 +2.1**
SGMF Saint Gilles 90.21 37 *e*P **P** **14 27 42.8 -0.2**
SGMF pmax pmax
comp=Z,79nm,1.0s
ANGG Ammassalik, Gr 90.27 11 *i* P **P** **14 27 43.3 +0.4**
ANGG IAmb IAmb 14 27 45.6
comp=Z,122nm,1.1s
LFF La Frestale 90.32 41 *e*P **P** **14 27 42.5 -1.1**
LFF pmax pmax
comp=Z,123nm,0.8s
MTLF Montolieu 90.40 43 *e*P **P** **14 27 42.8 -1.3**
MTLF pmax pmax
comp=Z,143nm,0.9s
MFF Saint Martin d 90.67 39 *e*P **P** **14 27 43.3 -1.9**
MFF pmax pmax
comp=Z,183nm,0.8s
DYA Yadsworthy 90.71 34 *e*P **P** **14 27 44.5 -0.8**
DYA IAmb IAmb 14 27 48.0
comp=Z,176nm,1.1s
JVM Valle D.L. Mar 90.94 36 *e*P **P** **14 27 46.1 -0.2**
JSA Saint Aubin 90.94 36 *e*P **P** **14 27 45.7 -0.7**
JSA IAmb IAmb 14 27 49.2
comp=Z,188nm,1.1s
RJF Les Rejaudoux 90.98 41 *e*P **P** **14 27 45.3 -1.4**
RJF pmax pmax
comp=Z,122nm,1.2s
JQE Queens East 91.02 36 *e*P **P** **14 27 46.3 -0.4**
CAF Calviac 91.11 41 *e*P **P** **14 27 45.5 -1.9**
CAF pmax pmax
comp=Z,36nm,0.7s
RSBS Rosebush, Pemb 91.17 33 *e*P **P** **14 27 46.5 -0.9**
RSBS IAmb IAmb 14 27 49.1
comp=Z,208nm,1.3s
GRR Gorron 91.23 37 *e*P **P** **14 27 46.0 -1.8**
GRR pmax pmax
comp=Z,187nm,0.9s
KEST Kesra 91.62 52 P **P** **14 27 50.6 +0.5**
comp=Z,82nm,0.8s,baz=266,slow=1.9,SNR=34
comp=Z,82nm,0.8s
KEST Kesra 91.62 52 P **P** **14 27 50.5 +0.4**
ILTH Belurgan, Co L 91.63 31 *e*P **P** **14 27 48.4 -1.0**
FLN La Foliniere 91.64 37 *e*P **P** **14 27 48.1 -1.6**
FLN pmax pmax
comp=Z,252nm,1.2s
CASY Casey 91.66 179 P **P** **14 27 49.4 -0.2**
CASY IAmb IAmb 14 27 52.3
comp=Z,66nm,0.9s
LDF La Druitiere 91.75 37 *e*P **P** **14 27 48.5 -1.7**
LDF pmax pmax
comp=Z,129nm,0.9s
ILULI Ilulissat 91.88 5 *i* P **P** **14 27 50.8 +0.5**
ILULI IAmb IAmb 14 27 53.3
comp=Z,62nm,1.0s
TCF Toulx Ste Croi 91.90 40 *e*P **P** **14 27 48.6 -2.4**
TCF pmax pmax
comp=Z,48nm,0.8s
YRC Rhoscolyn 92.01 32 *e*P **P** **14 27 51.0 -0.2**
MCH1 Michaelchurch 92.08 33 *e*P **P** **14 27 50.6 -1.0**
MCH1 IAmb IAmb 14 27 54.7
comp=Z,109nm,1.2s
MONM Monmouth 92.09 34 *e*P **P** **14 27 50.9 -0.8**
MONM IAmb IAmb 14 27 54.2
comp=Z,182nm,1.1s
WLF1 Llynfaes 92.12 32 *e*P **P** **14 27 51.5 -0.2**
WLF1 IAmb IAmb 14 27 53.6
comp=Z,402nm,1.6s
YLL Llanberis 92.15 32 *e*P **P** **14 27 51.2 -0.6**
WME Myndd Eilian 92.23 32 *e*P **P** **14 27 51.4 -0.9**
BGF Bois d'Agland 92.41 40 *e*P **P** **14 27 52.0 -1.3**
BGF pmax pmax
comp=Z,173nm,1.2s
HLM1 Long Mynd 92.43 33 *e*P **P** **14 27 52.3 -1.0**
HLM1 IAmb IAmb 14 27 55.1
comp=Z,97nm,1.0s
FOEL Foel Wylfa 92.48 33 *e*P **P** **14 27 52.8 -0.7**
FOEL IAmb IAmb 14 27 55.1
comp=Z,176nm,1.1s
WIM Isle of Man 92.49 31 *e*P **P** **14 27 53.3 -0.1**
VIVF Saint-Julien-l 92.69 42 *e*P **P** **14 27 54.7 0.0**
VIVF pmax pmax
comp=Z,44nm,0.8s
AVF Avril sur Loir 92.83 40 *e*P **P** **14 27 53.6 -1.6**
AVF pmax pmax
comp=Z,105nm,1.2s
YKA Yellowknife Ar 92.86 340 P **P** **14 27 55.3 +0.4**
comp=Z,91nm,0.7s,baz=126,slow=4.3,SNR=416
comp=Z,91nm,0.7s
GAL1 Galloway 92.89 30 *e*P **P** **14 27 54.3 -1.0**
SSF Saint Saulge 93.06 40 *e*P **P** **14 27 54.5 -1.8**
SSF pmax pmax
comp=Z,103nm,1.0s
ICESG Greenland Ices 93.10 9 *i* P **P** **14 27 56.7 +0.3**
ICESG IAmb IAmb 14 27 59.9
comp=Z,156nm,1.5s
NEWG New Galloway 93.26 30 *e*P **P** **14 27 55.9 -1.0**
BORG Borgarnes 93.33 18 P **P** **14 27 58.7 +1.7**
BORG IAmb IAmb 14 28 00.2
comp=Z,91nm,1.4s
BORG Borgarnes 93.33 18 P **P** **14 27 58.7 +1.7**
BORG pmax pmax
comp=Z,91nm,1.4s
LOR Lormes 93.37 40 *e*P **P** **14 27 55.9 -1.8**
LOR pmax pmax
comp=Z,75nm,1.0s
LAWE Loch Awe, Argy 93.39 29 *e*P **P** **14 27 57.0 -0.5**
LAWE IAmb IAmb 14 27 59.5
comp=Z,116nm,1.3s
ORIF Oris-en-Rattie 93.47 43 *e*P **P** **14 27 58.7 +0.4**
ORIF pmax pmax
comp=Z,73nm,0.8s
LBWR Ladybower, Pea 93.51 33 *e*P **P** **14 27 58.1 -0.1**
LBWR IAmb IAmb 14 28 00.2
comp=Z,528nm,2.0s
GRNB Grenville Isla 93.62 328 **P** **14 27 59.4 +0.7**
EAB Aberfoyle 93.83 30 *e*P **P** **14 27 58.4 -1.1**
KPL Plockton 93.92 28 *e*P **P** **14 27 58.9 -1.0**
MBDF Montbardon 93.94 43 *e*P **P** **14 27 59.9 -0.7**
MBDF pmax pmax
comp=Z,83nm,1.0s
BNI Bardonecchia 94.03 43 P **P** **14 28 00.9 -0.1**
BNI IAmb IAmb 14 28 05.2
comp=Z,56nm,1.1s
BNI Bardonecchia 94.03 43 P **P** **14 28 00.9 -0.1**
BNI pmax pmax
comp=Z,56nm,1.1s
INVG Invergeldie, C 94.10 29 *e*P **P** **14 28 00.9 +0.1**
LPL La Plagne 94.28 42 *e*P **P** **14 28 02.0 -0.2**
LPL pmax pmax
comp=Z,120nm,1.0s
LPG La Plagne 94.28 42 *e*P **P** **14 28 01.2 -1.1**
LPG pmax pmax
comp=Z,96nm,0.9s
WACR West Acre 94.34 34 *e*P **P** **14 28 01.5 -0.4**
WACR IAmb IAmb 14 28 03.6
comp=Z,260nm,1.0s
CABF La Chapelle 94.39 41 *e*P **P** **14 28 01.4 -1.1**
CABF pmax pmax
comp=Z,49nm,0.8s
MDO Dochfour 94.54 29 *e*P **P** **14 28 02.8 0.0**
BAIF Baives 94.94 37 *e*P **P** **14 28 04.7 -0.1**
BAIF pmax pmax
comp=Z,46nm,1.0s
SENIN Lac Senin/Sane 95.02 42 P **P** **14 28 05.7 +0.1**
SENIN IAmb IAmb 14 28 09.6
comp=Z,57nm,1.1s
DOU Dourbes 95.17 38 *d*P **P** **14 28 05.2 -0.7**
comp=Z,52nm,1.2s
SNF Seneffe 95.19 37 *d*P **P** **14 28 05.8 -0.2**
comp=Z,37nm,0.9s
HAU Haudompre 95.20 40 *e*P **P** **14 28 04.3 -1.8**
HAU pmax pmax
comp=Z,48nm,1.0s
GIVF Givet 95.30 38 *e*P **P** **14 28 04.9 -1.6**
GIVF pmax pmax
comp=Z,186nm,1.2s
BMRD Maredsous 95.37 37 *d*P **P** **14 28 06.2 -0.6**
comp=Z,71nm,1.1s
HINF Hinteralfeld 95.42 40 *e*P **P** **14 28 05.3 -1.8**
HINF pmax pmax
comp=Z,33nm,1.0s
T35M Bob Quinn 95.48 330 P **P** **14 28 07.5 +0.3**
baz=123,SNR=5.6
T35M S **SKSac** **14 38 20.2 +3.2**
baz=123
T35M S **S** **14 38 59.3 -0.6**
baz=123
MSSA Maissana 95.51 44 P **P** **14 28 07.4 -0.3**
MSSA IAmb IAmb 14 28 11.0
comp=Z,96nm,1.2s
RCHB Rochefort 95.56 38 *d*P **P** **14 28 06.7 -0.9**
comp=Z,37nm,1.2s
BCLA Clavier 95.72 38 *d*P **P** **14 28 07.5 -0.8**
comp=Z,22nm,0.8s
ECH Echery 95.78 40 P **P** **14 28 08.0 -0.7**
ECH IAmb IAmb 14 28 12.0
comp=Z,93nm,1.2s
ECH Echery 95.78 40 P **P** **14 28 08.0 -0.7**
ECH pmax pmax
comp=Z,93nm,1.2s
WLF Walferdange 95.86 38 *d*P **P** **14 28 09.0 0.0**
comp=Z,90nm,1.1s
CDF Champ du Feu 95.94 40 *e*P **P** **14 28 07.1 -2.4**
CDF pmax pmax
comp=Z,67nm,1.0s
BSTI Sart Tilman 95.95 37 *d*P **P** **14 28 09.2 -0.2**
comp=Z,9.9nm,1.2s
CRAG Craig 96.04 328 P **P** **14 28 10.4 +0.7**
baz=121
CRAG S **S** **14 39 04.0 -0.7**
baz=121
BHOU Houvegnez 96.09 38 *d*P **P** **14 28 09.6 -0.4**
comp=Z,55nm,1.0s
BEBN Eben Emael 96.11 37 *d*P **P** **14 28 09.8 -0.3**
WRAK Wrangell Islan 96.16 329 P **P** **14 28 10.4 +0.2**
baz=122,SNR=5.8
WRAK S **S** **14 39 03.3 -2.4**
baz=122
DLBC Dease Lake 96.18 332 P **P** **14 28 11.2 +0.8**
baz=123,SNR=26
DLBC S **S** **14 39 04.3 -1.6**
baz=123
MEM Membach 96.21 38 *d*P **P** **14 28 11.5 +0.9**
comp=Z,29nm,0.9s
BTNL Ternell 96.27 38 *d*P **P** **14 28 10.6 -0.2**
comp=Z,28nm,1.3s
SUMG Summit 96.44 8 **P** **14 28 11.8 +0.2**
SUMG IAmb IAmb 14 28 16.8
comp=Z,50nm,1.0s
SUMG Summit 96.44 8 P **P** **14 28 11.8 +0.2**
SUMG pmax pmax
comp=Z,50nm,1.0s
SUMG Summit 96.44 8 *i* P **P** **14 28 12.4 +0.7**
SUMG IAmb IAmb 14 28 18.1
comp=Z,41nm,0.9s
ZCCA Zocca 96.47 45 P **P** **14 28 12.3 +0.3**
BFO Black Forest 96.53 40 P **P** **14 28 11.8 -0.3**
BFO Black Forest 96.53 40 P **P** **14 28 11.8 -0.3**
BFO pmax pmax
comp=Z,36nm,1.2s
DAVA Damuels 97.02 42 *i* P **P** **14 28 14.5 0.0**
comp=Z,120nm,1.2s,SNR=28
R33M Jennings River 97.11 332 P Pdif 14 28 14.7 +0.1
baz=122,SNR=8.3
R33M S **S** **14 39 10.7 -3.3**
baz=122
STU Stuttgart 97.24 40 P Pdif 14 28 16.6 +1.3
AQU L'Aquila 97.28 47 P Pdif 14 28 18.4 +2.7
FETA Feichten 97.43 42 *i* P **P** **14 28 16.3 -0.1**
comp=Z,154nm,1.1s,SNR=68
CTI Castel Tesino 97.61 43 P **P** **14 28 17.0 -0.1**
CTI IAmb IAmb 14 28 20.8
comp=Z,48nm,0.8s
CTI Castel Tesino 97.61 43 P **P** **14 28 17.0 -0.1**
CTI pmax pmax
comp=Z,48nm,0.8s
RETA Reutte 97.65 42 *i* P **P** **14 28 17.2 0.0**
comp=Z,117nm,1.0s,SNR=41
MOTA Moosalm 97.80 42 *i* P **P** **14 28 17.9 -0.1**
comp=Z,151nm,0.9s,SNR=64
SQTA Sankt Quirin 97.81 42 *i* P Pdif 14 28 18.1 0.0
comp=Z,237nm,1.0s,SNR=72
SIT Sitka 97.90 329 P Pdif 14 28 18.1 +0.1
baz=119
SIT S **S** **14 39 17.9 -2.4**
baz=119
WATA Walderalm 98.09 42 *i* P **P** **14 28 19.2 -0.1**
comp=Z,150nm,1.1s,SNR=30
WTTA Wattenberg 98.10 42 *i* P Pdif 14 28 19.5 +0.1
comp=Z,223nm,1.1s,SNR=67
P33M Teslin, Yukon 98.33 332 P **P** **14 28 20.4 +0.4**
P33M Teslin, Yukon 98.33 332 P **P** **14 28 20.2 +0.2**
baz=121,SNR=16
P32M Atlin 98.41 332 P **P** **14 28 21.0 +0.7**
baz=120,SNR=6.4
TIP Timpagrande 98.41 51 ⇑P Pdif 14 28 18.4 -2.5
ABTA Abfaltersbach 98.44 43 *i* P **P** **14 28 21.1 +0.3**
comp=Z,76nm,0.9s,SNR=18
CLUD Cludinico 98.56 43 P Pdif 14 28 21.0 -0.3
MATE Matera 98.92 50 ⇑P **P** **14 28 23.2 +0.3**
N32M Quiet Lake 98.92 333 P **P** **14 28 22.7 +0.1**
baz=120
VOJS Vojsko 99.03 44 *e*Pdiff **Pdif** **14 28 23.5 0.0**
VOJS *e*PP **PP** **14 32 23.6 -6.1**
VOJS *e*SKSac **SKSac** **14 38 38.1 +2.3**
VOJS *e*Sdiff **Sdif** **14 39 31.7 +1.0**
SKAG Skagway 99.06 331 P **Pdif** **14 28 23.1 0.0**
baz=119
KBA Koelnbreinsper 99.09 43 *i* P **Pdif** **14 28 23.3 -0.6**
comp=Z,31nm,0.7s,SNR=26
MYKA Terra Mystica 99.11 43 *i* P **Pdif** **14 28 23.9 +0.1**
comp=Z,56nm,0.9s,SNR=21
GBRS Gornja Briga 99.44 45 *e*Pdiff **Pdif** **14 28 25.4 +0.2**
GBRS *e*PP **PP** **14 32 27.2 -5.5**
LJU Ljubljana 99.45 44 *e*Pdiff **Pdif** **14 28 25.3 +0.1**
LJU *e*Sdiff **S** **14 39 35.9 +1.9**
LJU *e* 14 46 20.3
BIOA Bad Ischl, Aus 99.51 42 *i* P **Pdif** **14 28 25.2 -0.3**
comp=Z,59nm,1.0s,SNR=17
PLBC Pleasant Camp 99.53 331 P **Pdif** **14 28 24.9 -0.3**
baz=118,SNR=5.8
OBKA Obir 99.64 44 *i* P **Pdif** **14 28 26.3 +0.1**
comp=Z,44nm,1.2s,SNR=19
BOJS Bojanci 99.72 45 *e*SKSac **SKSac** **14 38 40.9 +1.8**
NKC Novy Kostel 99.78 40 *e*P **Pdif** **14 28 27.2 +0.6**
NKC Novy Kostel 99.78 40 *e*PDIFF **Pdif** **14 28 27.2 +0.6**
MOA Molln 99.97 42 *i* P **Pdif** **14 28 27.2 -0.3**
comp=Z,42nm,0.7s,SNR=20
M31M Drury Creek, Y 99.99 334 P **Pdif** **14 28 27.9 +0.7**
baz=119,SNR=11
GERES GERESS Array B 99.99 41 P **Pdif** **14 28 27.4 -0.3**
comp=Z,12nm,0.9s,baz=217,slow=4.2,SNR=47
GERES PKKPbc **PKKPbc** **14 44 47.1 -0.3**
comp=Z,0.4nm,0.4s,baz=140,slow=3.3,SNR=5.0
comp=Z,12nm,0.9s
SOKA Soboth 100.01 44 *i* P **Pdif** **14 28 28.1 +0.3**
comp=Z,24nm,1.3s,SNR=13
O30N Mendenhall 100.02 332 P **Pdif** **14 28 27.2 -0.3**
baz=118,SNR=8.5
KHC Kasperske Hory 100.03 41 *e*P **Pdif** **14 28 27.4 -0.3**
KHC *e* 14 38 41.5
KHC Kasperske Hory 100.03 41 *e*PDIFF **Pdif** **14 28 27.4 -0.3**
KHC *e*PP PP 14 32 28.3 -8.7
KHC *e*SKS 14 38 41.5
P30M Million Dollar 100.10 331 P **Pdif** **14 28 27.6 -0.2**
baz=117
N31M Braeburn, Yuko 100.22 333 P **Pdif** **14 28 28.7 +0.4**
baz=118,SNR=9.2
P29M Windy Craggy 100.23 331 P **Pdif** **14 28 28.4 0.0**
baz=117
GROS Grobnik 100.23 44 *e*PP PP 14 32 29.7 -9.0
C36M Paulatuk 100.31 342 P **Pdif** **14 28 28.4 0.0**
baz=127
ASK Askoy 100.35 28 *e*P **Pdif** **14 28 27.6 -1.2**
CKRC Cesky Krumlov 100.36 41 *e*PDIFF **Pdif** **14 28 29.1 -0.1**
CKRC *e*PP **PP** **14 32 32.9 -6.6**
CKRC *e*SKS 14 38 41.7
BER Bergen 100.37 29 *e*P **Pdif** **14 28 29.4 +0.5**
MUD Monsted U'grnd 100.48 33 *e*P **Pdif** **14 28 31.2 +1.7**
CLL Collm 100.52 39 *e*P **Pdif** **14 28 29.0 -0.8**
CLL *e* 14 38 48.0
CLL *e*S **Sdif** **14 39 44.0 +1.4**
CLL pmax pmax
comp=Z,41nm,1.3s
CLL Collm 100.52 39 *e*Pdif **Pdif** **14 28 29.0 -0.8**
comp=Z,41nm,1.3s
CLL *e*pPdif pP 14 29 37.0 +2.2
CLL *e*sPdif sP 14 30 05.0 +2.5
CLL *e*x x 14 31 46.0
CLL *e*PP **PP** **14 32 35.0 -5.5**
comp=Z,49nm,1.9s
CLL *e*pPP 14 33 37.0
CLL *e*sPP 14 34 02.0
CLL *e*SKSac **SKSac** **14 38 47.0 +4.4**
CLL *e*SKKSac **SKKSac** **14 39 18.0 -0.4**
CLL *e*Sdif **Sdif** **14 39 44.0 +1.4**
CLL *e*sSKSac **sSKSac** **14 40 48.0 +4.9**
CLL *e*SP **SP** **14 41 16.0 +1.7**
CLL *e*x x 14 41 36.0
CLL *e*PS **PS** **14 41 52.0 +4.4**
CLL *e*PPS PPS 14 42 36.0
CLL *e*sPS 14 43 09.0
CLL *e*PKKPdf **PKKPdf** **14 44 50.0 -0.8**

CLL eSS SS 14 46 44.0 -1.8
CLL esSS 14 48 24.0
CLL eSSS SSS 14 50 36.0
CLL esSSS 14 52 18.0
CLL eSSSS 14 54 00.0
CLL Lm MLR 15 10 00.0
comp=Z,600nm,20.8s
ARSA Arzberg 100.54 43 *i* P **Pdif 14 28 30.3 +0.2**
comp=Z,28nm,1.4s,SNR=9.1
HYT Haines Junctio 100.66 332 P **Pdif 14 28 30.7 +0.3**
baz=117
N30M Aishikik Lake 100.77 332 P **Pdif 14 28 31.3 +0.5**
baz=117,SNR=11
FOO Floro 100.79 27 *e*P **Pdif 14 28 32.7 +1.9**
BRG Berggiesshubel 100.90 39 *e*P **Pdif 14 28 31.8 +0.2**
BRG Amp 14 28 35.6
comp=Z,25nm,1.4s
BRG Berggiesshubel 100.90 39 ⇓pPiff 14 29 31.0
BRG Berggiesshubel 100.90 39 PS PS 14 41 58.0 +6.3
BRG Berggiesshubel 100.90 39 SS SS 14 46 51.0 -0.2
BRG Berggiesshubel 100.90 39 *e*P **Pdif 14 28 31.7 +0.2**
BRG 14 38 49.0
BRG S **Sdif 14 39 47.0 +1.1**
BRG SP **SP 14 41 23.0 +4.6**
BRG pmax pmax
comp=Z,25nm,1.4s
BRG MLR MLR
comp=E,511nm,19.4s
BRG MLR MLR
comp=N,229nm,19.1s
O29M Mount Kennedy 100.91 331 P **Pdif 14 28 31.2 -0.3**
baz=116
PRU Pruhonice 100.93 40 *e*P **Pdif 14 28 31.6 -0.1**
PRU *e* 14 32 39.3
PRU *e* 14 38 41.7
PRU Pruhonice 100.93 40 *e*PDIFF **Pdif 14 28 31.6 -0.1**
PRU *e*PP **PP 14 32 39.3 -4.4**
PRU *e*SKS 14 38 41.7
CONA Conrad Observa 100.99 43 *i* P **Pdif 14 28 32.3 +0.2**
comp=N,28nm,1.1s,SNR=16
PNL Peninsula 101.00 330 P **Pdif 14 28 31.6 -0.2**
baz=115
YUK6 Outpost Mounta 101.09 332 P **Pdif 14 28 32.1 -0.3**
baz=116
PVCC Panska Ves 101.14 40 *e*P **Pdif 14 28 35.9 +3.3**
PVCC *e* 14 38 41.7
PVCC Panska Ves 101.14 40 *e*PDIFF **Pdif 14 28 35.9 +3.3**
PVCC *e*SKS 14 38 41.7
M30M Minto, Yukon 101.15 334 P **Pdif 14 28 32.3 -0.2**
baz=117,SNR=9.4
RONA Rosalia, Austr 101.19 43 *i* P **Pdif 14 28 33.3 +0.3**
comp=N,20nm,1.1s,SNR=6.5
TREC Trest 101.25 41 *e*P **Pdif 14 28 34.6 +1.4**
TREC Trest 101.25 41 *e*PDIFF **Pdif 14 28 34.6 +1.4**
SOP Sopron 101.35 43 P **Pdif 14 28 37.6 +4.0**
SOP Sopron 101.35 43 P **Pdif 14 28 35.0 +1.4**
YUK4 Talbot Arm 101.39 332 P **Pdif 14 28 33.5 -0.2**
baz=116,SNR=9.5
PINM Pinnacle 101.58 331 P **Pdif 14 28 34.4 0.0**
baz=115
KRUC Moravsky 101.73 42 *e*PDIFF **Pdif 14 28 35.1 -0.1**
KRUC *e*PP **PP 14 32 46.5 -3.2**
KRUC *e*SKS 14 38 49.5
M29M Somme Creek 101.79 333 P **Pdif 14 28 35.0 -0.4**
baz=116
KOVH Kovagotottos 101.79 45 P **Pdif 14 28 36.4 +0.8**
MPLH Magyarpolny 101.79 44 P **Pdif 14 28 37.6 +2.0**
O28M Mount Upton 101.83 331 P **Pdif 14 28 35.4 -0.4**
baz=114
ZST Bratislava 101.87 43 *e*P **Pdif 14 28 39.8 +3.9**
ZST Bratislava 101.87 43 *e*PDIFF **Pdif 14 28 39.8 +3.9**
AKN Aaknes 101.88 27 *e*P **Pdif 14 28 36.8 +1.1**
VRAC Vranov 101.93 42 ⇑P **Pdif 14 28 35.9 -0.3**
VRAC Vranov 101.93 42 ⇑P **Pdif 14 28 35.9 -0.3**
VRAC Vranov 101.93 42 *e*PDIFF **Pdif 14 28 35.9 -0.3**
VRAC *e*PP **PP 14 32 48.2 -3.1**
VRAC *e*SKS 14 38 53.2
UPC Upice 102.00 40 *e*P **Pdif 14 28 36.8 +0.4**
UPC *e* 14 38 49.4
UPC Upice 102.00 40 *e*PDIFF **Pdif 14 28 36.8 +0.4**
UPC *e*PP **PP 14 32 44.7 -7.0**
UPC *e*SKS 14 38 49.4
MODS Modra-Piesok 102.04 43 *e*P **Pdif 14 28 38.6 +1.9**
MODS Modra-Piesok 102.04 43 *e*PDIFF **Pdif 14 28 38.6 +1.9**
CHVC Chvalec 102.05 40 *e*PDIFF **Pdif 14 28 36.6 -0.1**
DPC Dobruska-Polom 102.13 40 *e*P **Pdif 14 28 37.4 +0.3**
DPC *e* 14 32 47.1
DPC *e* 14 38 54.0
DPC Dobruska-Polom 102.13 40 *e*PDIFF **Pdif 14 28 37.4 +0.3**
DPC *e*PP **PP 14 32 47.1 -5.7**
DPC *e*SKS 14 38 54.0
OSTC Ostas 102.14 40 *e*PDIFF **Pdif 14 28 38.0 +0.9**
OSTC *e*PP **PP 14 32 49.1 -3.7**
OSTC *e*SKS 14 38 46.0
MORH Mrgy, Hungar 102.19 45 ⇑P **Pdif 14 28 37.9 +0.6**
MORH Mrgy, Hungar 102.19 45 P **Pdif 14 28 37.5 +0.1**
A36M Sachs Harbour 102.19 344 P **Pdif 14 28 36.6 -0.2**
baz=126
KSP Ksiaz 102.28 40 *e*Pdifc **Pdif 14 28 38.3 +0.6**
KSP *e*SKS 14 38 56.9
KSP *e*Sdif **Sdif 14 40 02.6 +5.2**
KSP Ksiaz 102.28 40 P **Pdif 14 28 39.5 +1.8**
KRLC Kraliky 102.31 41 *e*P **Pdif 14 28 38.5 +0.6**
KRLC *e* 14 38 53.2
KRLC Kraliky 102.31 41 *e*PDIFF **Pdif 14 28 38.5 +0.6**
KRLC *e*SKS 14 38 53.2
YUK3 Moose Creek 102.36 332 P **Pdif 14 28 37.8 -0.2**
baz=114,SNR=6.8
MESA MESA 102.39 330 P **Pdif 14 28 37.3 -0.9**
baz=113
CTG Chitna Glacier 102.42 331 P **Pdif 14 28 37.7 -0.6**
baz=114
JAVC Velka Javorina 102.45 42 *e*PDIFF **Pdif 14 28 39.3 +0.8**
JAVC *e*PP **PP 14 32 52.1 -3.1**
JAVC *e*SKS 14 38 55.1
J29M Klondike Camp 102.56 335 P **Pdif 14 28 37.9 -0.8**
baz=115
INK Inuvik 102.63 339 P **Pdif 14 28 39.4 +0.6**
comp=N,6.4nm,0.7s,baz=78,slow=5.9,SNR=18
INK Inuvik 102.63 339 P **Pdif 14 28 38.4 -0.4**
baz=119,SNR=10
MORC Moravsky Berou 102.67 41 *e*PDIFF **Pdif 14 28 40.0 +0.5**
MORC *e*PP **PP 14 32 51.9 -4.9**
MORC *e*SKS 14 38 56.2
BVCY Beaver Creek 102.79 333 P **Pdif 14 28 38.7 -1.0**
baz=114,SNR=5.9
DAWY Dawson 102.86 334 P **Pdif 14 28 39.4 -0.6**
baz=114,SNR=10.0
I29M Ogilvie Camp, 102.98 336 P **Pdif 14 28 40.0 -0.5**
baz=115,SNR=8.2
CRQE Cirque 103.13 331 P **Pdif 14 28 40.5 -0.9**
baz=112
M27K Edge Creek, AK 103.20 332 P **Pdif 14 28 40.4 -1.3**
baz=113,SNR=6.0
NB2 NORSAR Subarra 103.27 29 P **Pdif 14 28 42.6 +0.7**
comp=Z,72nm,2.5s,baz=235,slow=5.3
NB2 NORSAR Subarra 103.27 29 P **Pdif 14 28 42.8 +0.9**
comp=Z,74nm,2.5s,baz=236,slow=5.3
NB2 NORSAR Subarra 103.27 29 P **Pdif 14 28 42.6 +0.7**
baz=235,slow=5.3
NOA NORSAR Array B 103.27 29 Pdiff **Pdif 14 28 42.8 +0.9**
comp=Z,2.2nm,0.9s,baz=240,slow=4.9,SNR=4.7
MCARA McCarthy VSAT 103.34 331 P **Pdif 14 28 41.8 -0.3**
baz=112
BOVS Bovan 103.42 48 ⇓P **Pdif 14 28 45.7 +2.8**
BOVS Bovan 103.42 48 ⇑P **PKiKP 14 32 59.1 -1.3**
BCAR Beaver Creek A 103.44 333 Pdif **Pdif 14 28 43.5 +0.8**
KAIM Kayak Island 103.44 330 P **Pdif 14 28 42.5 -0.1**
baz=111
L27K Beaver Creek, 103.46 333 Pdif **Pdif 14 28 43.4 +0.7**
L27K Beaver Creek, 103.46 333 P **Pdif 14 28 43.2 +0.5**
baz=113,SNR=13
LANS Liptovska Anna 103.66 42 *e*P **Pdif 14 28 46.3 +2.4**
LANS Liptovska Anna 103.66 42 *e*PDIFF **Pdif 14 28 46.3 +2.4**
M26K Nabesna, AK 103.70 332 P **Pdif 14 28 42.9 -0.9**
baz=112
MDVR Moldovita 103.78 47 ⇑P **Pdif 14 28 47.5 +2.9**
BMRM Bremner River 103.90 330 P **Pdif 14 28 43.8 -0.9**
baz=111
K27K Chicken 103.93 334 P **Pdif 14 28 44.5 -0.1**
baz=112
BZS Buzias 103.97 46 ⇑P **Pdif 14 28 45.8 +0.5**
BZS Buzias 103.97 46 ⇑P **Pdif 14 28 45.8 +0.5**
L26K Log Cabin Wild 104.08 333 P **Pdif 14 28 45.5 0.0**
baz=111
N25K Chitina, Valde 104.12 331 P **Pdif 14 28 45.5 -0.2**
baz=111
Q23K Middleton Isla 104.18 329 P **Pdif 14 28 44.9 -0.9**
baz=110
VTS Vitosha 104.19 50 ⇑P **PP 14 33 12.2 +3.9**
SIRR Siria 104.19 46 ⇑P **Pdif 14 28 48.5 +2.2**
SIRR Siria 104.19 46 ⇑P **PKiKP 14 33 02.4 +0.6**
OJC Ojcow 104.19 41 *i* Pdifc 14 28 46.2
OJC *e*SKS 14 39 02.7
OJC *e*Sdif **Sdif 14 40 20.3 +6.9**
OJC Ojcow 104.19 41 P **Pdif 14 28 48.9 +2.7**
NIE Niedzica 104.26 42 *i* Pdifc 14 28 48.1
NIE *e*SKS 14 39 05.6
NIE *e*Sdif **Sdif 14 40 22.8 +8.8**
NIE Niedzica 104.26 42 P **Pdif 14 28 50.8 +4.2**
EYAK Cordova Ski Ar 104.28 330 P **Pdif 14 28 45.6 -0.7**
baz=110
HERR Herculane 104.29 47 ⇓P **Pdif 14 28 48.4 +1.7**
HERR Herculane 104.29 47 ⇑P **PKiKP 14 33 02.8 +0.8**
I27K Kandik River 104.34 335 P **Pdif 14 28 46.7 +0.1**
baz=112
H27K Steamboat Moun 104.55 336 P **Pdif 14 28 47.4 -0.1**
baz=112
KLU Klutina 104.68 331 P **Pdif 14 28 47.4 -0.8**
baz=110,SNR=8.8
GZR Gura Zlata 104.68 47 ⇑P **Pdif 14 28 51.2 +2.7**
GZR Gura Zlata 104.68 47 ⇑P **Pdif 14 28 51.2 +2.7**
SCRK Sand Creek 104.69 334 Pdif **Pdif 14 28 48.6 +0.4**
SCRK Sand Creek 104.69 334 P **Pdif 14 28 48.4 +0.1**
baz=111,SNR=11
J26L Joseph Creek 104.71 334 P **Pdif 14 28 48.0 -0.3**
baz=111,SNR=14
CRVS Cervenica-Dubn 104.84 43 *e*P **Pdif 14 28 53.1 +4.0**
CRVS Cervenica-Dubn 104.84 43 *e*PDIFF **Pdif 14 28 53.1 +4.0**
GLI Glacier Island 105.01 330 P **PKiKP 14 33 02.6 -0.2**
baz=109
DRGR 105.04 45 ⇑P **Pdif 14 28 50.4 +0.3**
DRGR 105.04 45 ⇑P **PKiKP 14 33 03.7 +0.3**
DRGR 105.04 45 P **Pdif 14 28 54.0 +3.9**
J25K Salcha River, 105.48 334 Pdif **Pdif 14 28 52.1 +0.4**
PWL Port Wells 105.58 330 P **PKiKP 14 33 04.9 +1.0**
baz=108
DHY Denali Highway 105.83 332 P **PKiKP 14 33 04.2 -0.2**
baz=108
PRP Porcupine Dome 105.83 335 P **PKiKP 14 33 04.5 +0.1**
baz=109
SML Sawmill 105.87 331 P **PKiKP 14 33 04.6 +0.2**
baz=108
ARR Arges 105.93 47 ⇑P **Pdif 14 28 56.6 +2.5**
ARR Arges 105.93 47 ⇑P **PKiKP 14 33 05.7 +0.7**
F26K Sheenjek River 106.03 337 P **PKiKP 14 33 04.6 +0.1**
baz=110
ILAR Eielson Array 106.15 334 Pdiff **Pdif 14 28 54.7 +0.2**
comp=Z,1.6nm,0.8s,baz=149,slow=3.6,SNR=17
ILAR PKiKPbc **PKKPbc 14 44 26.7 -2.9**
comp=Z,2.3nm,0.9s,baz=292,slow=3.5,SNR=11
VOIR 106.23 47 ⇑P **Pdif 14 28 57.4 +1.9**
VOIR 106.23 47 ⇑P **Pdif 14 28 57.4 +1.9**
COLA College 106.57 334 ⇑P **Pdif 14 28 56.0 -0.4**
E25K Arctic Village 106.68 337 P **PKiKP 14 33 05.2 -0.5**
baz=108
LVV L'vov 106.70 43 *e*P **Pdif 14 28 45.9 -11**
LVV *e* 14 33 21.8
LVV *e* 14 39 04.9
LVV *e*SS SS 14 48 03.4 -7.2
MLR Muntele Rosu 106.85 47 ⇑P **Pdif 14 29 01.3 +3.0**
MLR Muntele Rosu 106.85 47 ⇑P PKiKP 14 33 16.9 +10
MLR Muntele Rosu 106.85 47 ⇑P **Pdif 14 29 01.3 +3.0**
H24K Noodor Dome 106.86 335 P **PKiKP 14 33 05.1 -1.1**
baz=107
BURAR Bucovina Array 106.91 45 ⇑P **Pdif 14 28 59.7 +1.3**
BURAR Bucovina Array 106.91 45 ⇑P **PKiKP 14 33 06.6 -0.3**
BURAR Bucovina Array 106.91 45 ⇑P **Pdif 14 28 59.7 +1.3**
NEA2 Nenana 106.99 333 P **PKiKP 14 33 07.2 +0.8**
baz=106
COVR Voineasa-Covas 107.12 47 ⇑P **Pdif 14 29 02.0 +2.7**
D25K Kavik River 107.32 338 P **PKiKP 14 33 06.9 0.0**
baz=107
BIZ Bicaz 107.32 46 ⇑P **Pdif 14 29 03.5 +3.2**
SII Sitkinak Islan 107.34 325 P **PKiKP 14 33 06.3 -0.9**
baz=104
O20K Slope Mountain 107.41 328 P **PKiKP 14 33 06.5 -0.9**
baz=104
PLOR Plostina 107.42 47 ⇑P **Pdif 14 29 09.7 +9.0**
PLOR Plostina 107.42 47 ⇑P **PKiKP 14 33 07.3 -0.5**
PLOR Plostina 107.42 47 ⇑P **Pdif 14 29 09.7 +9.0**
VRI Vrincioaia 107.48 47 ⇑P **Pdif 14 29 07.9 +7.0**
VRI Vrincioaia 107.48 47 ⇑P **PKiKP 14 33 07.7 -0.1**
VRI Vrincioaia 107.48 47 ⇑P **Pdif 14 29 07.9 +7.0**
H23K Yukon River 107.52 335 P **PKiKP 14 33 07.0 -0.3**
baz=105
BPAW Bear Paw Mtn. 107.67 333 P **PKiKP 14 33 07.4 -0.2**
baz=104
CAST Castle Rocks 107.97 332 P **PKiKP 14 33 07.5 -0.7**
baz=104
M20K Styx River 108.08 330 P **PKiKP 14 33 07.5 -1.1**
baz=103
COLD Coldfoot 108.13 336 P **PKiKP 14 33 07.7 -0.7**
baz=104
TOLK Toolik Lake Re 108.25 337 P **PKiKP 14 33 08.1 -0.6**
baz=104
H22K Ikhtina Cre 108.27 334 P **PKiKP 14 33 08.0 -0.8**
baz=104
CFR Carcaliu 108.28 48 ⇓P **PKiKP 14 33 09.6 +0.3**
I21K Tanana 108.34 334 P **PKiKP 14 33 08.9 +0.1**
baz=103
H21K Melozitna Rive 108.79 334 P **PKiKP 14 33 09.7 0.0**
baz=102
C23K Itkillik River 108.89 339 P **PKiKP 14 33 10.2 +0.4**
baz=103
SORM Soroca 109.08 45 ⇑P **Pdif 14 29 07.5 -0.4**
SORM Soroca 109.08 45 ⇑P **PKiKP 14 33 09.5 -1.2**
SORM Soroca 109.08 45 ⇑P **Pdif 14 29 07.5 -0.4**
MILM Milestii Mici 109.12 46 ⇑*i*P **Pdif 14 29 07.0 -1.2**
comp=Z,100nm,3.0s
MILM *e*pP **pPdif 14 30 20.0 +7.0**
MILM *e*sP **sPdif 14 30 43.0 +2.3**
MILM Milestii Mici 109.12 46 *e*PP **PP 14 33 39.0 -5.1**
MILM *e*SKS SKSac 14 39 08.0 -14
MILM *e*SKKS SKSdf 14 39 20.0 -37
MILM *i*S **Sdif 14 40 54.0 -0.6**
MILM Milestii Mici 109.12 46 ⇓P **PKiKP 14 33 11.3 +0.5**
MILM Milestii Mici 109.12 46*c i*P **Pdif 14 29 07.0 -1.2**
MILM *e* 14 39 20.0
MILM pmax pmax
comp=Z,100nm,3.0s
IMAR Indian Mountai 109.23 334 Pdif **Pdif 14 29 08.8 +0.5**
R16K Pilot Point 109.37 325 P **PKiKP 14 33 10.8 -0.2**
baz=101
F21K Alatna River 109.37 336 P **PKiKP 14 33 10.5 -0.3**
baz=101
NACGM Naroch 109.49 38 PP **PP 14 33 39.6 -6.9**
baz=259
TTA Tatalina 109.61 331 P **PKiKP 14 33 11.2 -0.3**
baz=101
VSU Vasula 110.11 34 *i* PKiKP **PKiKP 14 33 12.3 0.0**
AKASG Malin Array Be 110.15 42 Pdiff **Pdif 14 29 12.8 +0.1**
comp=Z,0.5nm,0.5s,baz=261,slow=4.1,SNR=2.4
AKASG PKiKP **PKiKP 14 33 11.7 -0.9**
comp=Z,1.9nm,0.3s,baz=270,slow=2.7,SNR=15
AKASG PKKPbc **PKKPbc 14 44 15.2 -1.2**
comp=Z,1.4nm,0.6s,baz=57,slow=4.1,SNR=6.2
AKASG SKKPbc SKKPbc 14 47 35.2 -1.0
comp=Z,0.2nm,0.3s,baz=64,slow=2.2,SNR=4.3
AKBB Malin Array Si 110.15 42*c i*PKiKP **PKiKP 14 33 12.0 -0.7**
FINES FINESS Array B 110.29 31 Pdiff **Pdif 14 29 23.9 +11**
comp=Z,5.5nm,1.0s,baz=264,slow=11,SNR=3.7
FINES PKiKP **PKiKP 14 33 12.1 -0.5**
comp=Z,1.7nm,0.8s,baz=294,slow=1.4,SNR=3.6
FINES PKKPbc **PKKPbc 14 44 14.6 -1.7**
comp=Z,3.8nm,1.0s,baz=76,slow=5.9,SNR=4.2
BR131 Keskin Array S 111.06 55 *i* PKiKP **PKiKP 14 33 15.3 +0.3**
BR131 Keskin Array S 111.06 55 P **PKiKP 14 33 16.0 +1.0**
BRTR Keskin Array B 111.06 55 PKiKP **PKiKP 14 33 14.9 -0.1**
comp=Z,7.5nm,1.1s,baz=194,slow=2.5,SNR=8.1
BRTR PP **PP 14 33 54.5 -3.9**
comp=Z,6.4nm,1.0s,baz=239,slow=7.0,SNR=6.6
BRTR PKKPab **PKKPab 14 44 23.6 +1.7**
comp=Z,2.4nm,0.8s,baz=104,slow=4.5,SNR=4.6
A21K Barrow 111.13 340 P **PKiKP 14 33 14.6 +0.7**
baz=97
ARCES ARCESS Array B 111.19 22 Pdiff **Pdif 14 29 28.4 +11**
comp=Z,2.2nm,0.9s,baz=294,slow=2.5,SNR=5.2
ARCES PKiKP **PKiKP 14 33 13.2 -0.9**
comp=Z,1.0nm,0.8s,baz=245,slow=3.9,SNR=1.7
ARCES PKKPbc **PKKPbc 14 44 13.4 -0.3**
comp=Z,0.8nm,0.5s,baz=81,slow=5.9,SNR=2.0
DZM Mont Dzumac 112.52 233 PKKPbc PKKPbc 14 44 14.7 +6.9
comp=Z,14nm,0.9s,baz=175,slow=8.6,SNR=5.9
DZM Mont Dzumac 112.52 233 *e*SP SP 14 43 18.5 +2.8
comp=Z,1um,26.5s
DZM Mont Dzumac 112.52 233 *e*LR LR 15 07 18.2
comp=Z,997nm,24.8s
APA Apatity 113.97 24 ⇓*i*PKiKP **PKiKP 14 33 14.0 -5.4**
APA *i* 14 34 12.0
APA *i* PS PKKPdf 14 45 23.0 +57
APA pmax pmax
comp=Z,6.0nm,1.0s
LVZ Lovozero 114.44 24 ⇑PKiKP **PKiKP 14 33 20.8 +0.4**
ANN Anapa 114.69 50 *i* PKiKP PKPdf 14 33 18.1 -3.4
ANN *e* 14 34 20.0
ANN *e* 14 39 45.1
ANN pmax pmax
comp=Z,22nm,0.7s
OBN Obninsk 115.11 38*c i*PKiKP **PKiKP 14 33 22.7 +0.8**
OBN *i* 14 34 23.5
OBN pmax pmax
comp=Z,36nm,1.0s
MOS Moscow 115.74 38 *i* PKiKP **PKiKP 14 33 25.2 +2.0**
MOS *e* 14 34 27.7
MOS *e* 14 34 34.5
MOS pmax pmax
comp=Z,59nm,0.6s
KTUT Trabzon 115.89 54 ⇑P **PKPdf 14 33 23.8 -0.2**
SOC Sochi 116.18 51 *i* PKiKP **PKPdf 14 33 20.7 -3.7**
SOC *e* 14 34 21.5
SOC *e*PPP PPP 14 37 05.2
SOC *e*SS SS 14 50 18.7 +2.2
SOC *e*SSS SSS 14 54 38.8
VSLR Vesyoloye 116.39 51 *i* PKiKP **PKiKP 14 33 25.5 +0.6**
VORR Voronezh 116.50 42 *e*PKiKP **PKPdf 14 33 24.7 -0.1**
VORR pmax pmax
comp=Z,70nm,0.4s
KLMR Klimovskoe 116.75 32 *e*PKiKP **PKiKP 14 33 25.0 0.0**
KLMR *e* 14 34 34.8
KLMR pmax pmax
comp=Z,35nm,1.0s
KLMR Klimovskoe 116.75 32 *e*PKPdf **PKiKP 14 33 25.0 0.0**
KLMR AMP 14 33 28.7
comp=Z,35nm,1.0s
KLMR *e*PP **PP 14 34 34.9 -2.6**
KLMR *e*SKKPbc SKKPbc 14 47 13.4 -3.5
BCA Borcka 117.34 54 ⇑P **PKPdf 14 33 25.6 -1.2**
RAYN Ar Rayn 117.45 74 ⇑PKiKP **PKiKP 14 33 27.9 +0.3**
RAYN Ar Rayn 117.45 74 P **PKiKP 14 33 28.3 +0.7**
RAYN Ar Rayn 117.45 74 *i* PKiKP **PKiKP 14 33 28.3 +0.7**
SNR=8.1
KIV Kislovodsk 118.35 51 ⇑P **PKiKP 14 33 29.3 +0.6**
KIV Kislovodsk 118.35 51 *i* P **Pdif 14 29 50.6 +1.2**
KIV *i* 14 33 29.6
KIV *e* 14 34 50.2
KIV *e*PPP PPP 14 37 23.1
KIV *e* 14 39 58.5
KIV *e*PS **PS 14 44 41.2 +1.8**
KIV *e*SS SS 14 50 48.3 +3.5
KIV pmax pmax
comp=Z,48nm,1.1s
KIV MLR MLR
comp=Z,130nm,22.0s
KIV Kislovodsk 118.35 51 P **PKiKP 14 33 29.4 +0.6**
KIV Kislovodsk 118.35 51 *i* PKiKP **PKiKP 14 33 29.2 +0.4**
SNR=6.8
KBZ Khabaz 118.49 51 PKP **PKiKP 14 33 29.5 +0.6**
comp=Z,34nm,0.9s,baz=221,slow=4.8,SNR=46
NCK Nalchik 118.98 52 *i* PKiKP **PKPdf 14 33 28.9 -0.1**
ZEI Tsey 119.15 52 *i* PKiKP **PKiKP 14 33 31.4 +0.9**
ZEI pmax pmax
comp=Z,21nm,1.0s
GNI Garni 119.56 56 PKP **PKiKP 14 33 31.8 +0.5**
baz=156,slow=20
GNI Garni 119.56 56*c i*PKiKP **PKiKP 14 33 32.1 +0.7**
GNI pmax pmax
comp=Z,27nm,1.0s
GNI Garni 119.56 56 P **PKiKP 14 33 32.6 +1.2**
GNI Garni 119.56 56 PKiKP **PKiKP 14 33 32.3 +0.9**
PRGR Permogore 119.62 31 *e*PKiKP **PKPdf 14 33 29.4 -1.1**
PRGR *e* 14 34 53.5
ADK Adak 119.93 318 PKPdf **PKPdf 14 33 30.7 -0.7**
ADK Adak 119.93 318 PKiKP **PKPdf 14 33 30.7 -0.7**
STKA Stephens Creek 120.02 207 PKP **PKPdf 14 33 32.3 0.0**
comp=Z,8.1nm,0.8s,baz=49,slow=3.2,SNR=14
STKA SKP 14 36 44.7
comp=Z,2.6nm,0.7s,baz=37,slow=1.5,SNR=3.5
STKA PKKPbc **PKKPbc 14 43 41.5 -0.7**
comp=Z,2.9nm,0.6s,baz=334,slow=4.1,SNR=8.4
BELG Belogornoye 121.69 41 PKP **PKPdf 14 33 34.8 +0.1**
baz=311,slow=20
BELG PKKPbc **PKKPab 14 43 34.2 -0.2**
comp=Z,18nm,1.0s,baz=87,slow=6.0,SNR=4.2
MAK Makhachkala 121.80 52 *e*P **Pdif 14 30 05.4 +0.8**
MAK *e*PPP PPP 14 37 50.9
MAK *e* 14 40 06.4
MAK *e*PS **PS 14 45 07.1 -2.7**
MAK *e*SSS SSS 14 55 56.6
MAK pmax pmax
comp=Z,73nm,0.6s
KIRV Kirov 121.96 34*c i*PKiKP **PKPdf 14 33 35.1 +0.1**
ABTO Aybut 122.98 83 P **PKPdf 14 33 38.1 -0.2**
SLWR Sila 123.10 75 P **PKiKP 14 33 39.3 +0.7**
WHFO Wadi Hawf 123.56 83 P **PKPdf 14 33 38.3 -1.1**
BILL Bilibino 124.25 339 *i* PKiKP **PKiKP 14 33 39.9 +0.4**
BILL *e* 14 35 26.7
BILL pmax pmax
comp=Z,18nm,1.0s
JRN Qarnain Island 124.30 74 P **PKPdf 14 33 40.6 0.0**
MZR Muzera 124.48 77 P **PKiKP 14 33 41.7 +0.3**
SNR=5.9
MZR Muzera 124.48 77 *i* PKiKP **PKiKP 14 33 41.7 +0.3**
SNR=18
MZWR Madinat Zayed 125.00 76 P **PKiKP 14 33 42.3 -0.1**
AJN Ajban 126.14 75 P **PKiKP 14 33 45.3 +0.7**
ASUD Al Ashush, Dub 126.46 75 P **PKiKP 14 33 45.5 +0.3**
ASUD Al Ashush, Dub 126.46 75 *i* PKiKP **PKiKP 14 33 45.4 +0.1**
SNR=8.8
ALNE Al Ain 126.73 76 P **PKiKP 14 33 45.6 -0.2**
ALNE Al Ain 126.73 76 *i* PKiKP **PKiKP 14 33 45.7 -0.2**
SNR=7.4
NAZ Nazwa, Dubai 126.82 75 P **PKPdf 14 33 45.3 -0.2**
NAZ Nazwa, Dubai 126.82 75 PKiKP **PKPdf 14 33 45.6 +0.1**
UMQ Umm Al-Quwin 126.91 74 PKiKP **PKPdf 14 33 45.6 0.0**
ASHO Ashiyiah 127.12 75 P **PKPdf 14 33 45.9 -0.2**
ASHO Ashiyiah 127.12 75 PKiKP **PKPdf 14 33 45.9 -0.2**
HATD Hatta, Dubai 127.21 75 P **PKPdf 14 33 46.3 0.0**
HATD Hatta, Dubai 127.21 75 PKiKP **PKPdf 14 33 46.2 0.0**
ARU Arti 127.25 35 PKP **PKiKP 14 33 46.5 +0.7**
comp=Z,42nm,0.7s,baz=312,slow=1.3,SNR=7.7
ARU Arti 127.25 35 *i* PKiKP **PKiKP 14 33 45.8 0.0**
ARU 14 35 47.4
ARU PPP PPP 14 38 33.1
ARU 14 40 27.4
ARU PS **PS 14 45 50.1 -7.0**
ARQ Araqi 127.30 77 P **PKPdf 14 33 46.5 +0.1**
UOSS Minazif 127.30 75 PKPdf **PKPdf 14 33 45.5 -0.9**
UOSS Minazif 127.30 75 P **PKPdf 14 33 46.5 +0.2**
UOSS Minazif 127.30 75 PKiKP **PKPdf 14 33 46.5 +0.2**
MSFE Esma-Masafi 127.33 74 PKiKP **PKPdf 14 33 46.4 0.0**
MASF Masafi 127.33 74 P **PKPdf 14 33 46.7 +0.2**
SHME Shamm 127.42 74 P **PKiKP 14 33 47.0 -0.2**
SNR=5.4
SHME Shamm 127.42 74 *i* PKiKP **PKiKP 14 33 47.1 0.0**
SNR=14
BANOM Banah 127.54 74 P **PKPdf 14 33 46.1 -0.7**
BANOM Banah 127.54 74 PKiKP **PKPdf 14 33 46.8 0.0**
BSY Bisya 127.80 78 P **PKPdf 14 33 46.6 -0.8**
HOQ Hoqain 128.05 77 P **PKPdf 14 33 47.1 -0.7**
MHTO MHTO 128.14 80 P **PKPdf 14 33 48.0 0.0**
SVE Sverdlovsk 128.22 34 *e*PKiKP **PKiKP 14 33 48.0 +0.2**
SVE pmax pmax
comp=Z,40nm,1.3s
AKTO Aktyubinsk 128.40 43 PKP **PKiKP 14 33 48.6 +0.3**
comp=Z,29nm,1.0s,baz=267,slow=0.8,SNR=38
AKTO SKPbc SKPbc 14 36 46.1
comp=Z,7.1nm,0.7s,baz=316,slow=4.2,SNR=7.4
AKTO Aktyubinsk 128.40 43 PKiKP **PKPdf 14 33 47.7 0.0**
JMDO Jabal Madar 128.54 79 P **PKPdf 14 33 48.7 -0.1**
SMDO Samad 128.62 78 P **PKPdf 14 33 49.2 +0.1**
SNR=8.8

BIDO Bidbid 128.78 77 P **PKiKP 14 33 49.7 -0.2**
JASK Jask - Hormozg 128.93 74 P **PKiKP 14 33 51.1 +1.0**
WSAR Wadi Sarin 129.18 78 PKP **PKiKP 14 33 50.8 0.0**
comp=Z,57nm,0.9s,baz=214,slow=2.4,SNR=15
WSAR SKPbc SKPbc 14 36 49.5 +3.4
comp=Z,16nm,1.0s,baz=247,slow=4.2,SNR=5.0
WSAR Wadi Sarin 129.18 78 P **PKiKP 14 33 50.7 0.0**
WBK Wadi Bani Khal 129.37 78 P **PKiKP 14 33 51.3 +0.1**
SNR=6.7
ABKAR Akbulak array 129.86 44 PKPdf **PKiKP 14 33 51.6 +0.3**
TIXI Tiksi 129.89 354 PKP **PKPdf 14 33 48.9 -1.0**
comp=Z,17nm,0.8s,baz=271,slow=22,SNR=10
TIXI SKPbc SKPbc 14 36 47.7 +0.5
comp=Z,69nm,0.9s,baz=95,slow=23,SNR=24
TIXI Tiksi 129.89 354 *c i*PKIKP **PKPdf 14 33 49.4 -0.5**
TIXI pmax pmax
comp=Z,21nm,1.0s
GEYT Alibeck 129.90 59 PKP **PKiKP 14 33 52.4 +0.6**
comp=Z,20nm,0.9s,baz=251,slow=4.5,SNR=17
GEYT PP **PP 14 36 06.9 +0.4**
comp=Z,7.2nm,0.8s,baz=25,slow=8.3,SNR=5.0
GEYT SKPbc SKPbc 14 36 50.6 +2.2
comp=Z,25nm,0.9s,baz=257,slow=5.9,SNR=12
NRIK Noril'sk 130.31 12 PKP **PKiKP 14 33 51.8 +0.2**
comp=Z,12nm,0.9s,baz=23,slow=1.3,SNR=9.5
NRIK SKPbc **SKPab 14 36 50.1 +1.1**
comp=Z,6.7nm,0.8s,baz=73,slow=1.9,SNR=5.8
NRIK Noril'sk 130.31 12 *c i*PKIKP **PKiKP 14 33 51.6 0.0**
ASAR Alice Springs 130.39 204 PKiKP PKPpre 14 33 32.2
comp=Z,0.6nm,0.7s,baz=142,slow=2.3,SNR=7.5
ASAR PKP **PKPdf 14 33 52.4 -0.1**
comp=Z,26nm,0.8s,baz=135,slow=1.9,SNR=64
ASAR SKPbc **SKPbc 14 36 50.0 -0.8**
comp=Z,53nm,0.8s,baz=146,slow=3.3,SNR=37
ASAR PKKP **PKKPdf 14 43 51.9 -0.9**
comp=Z,0.3nm,0.5s,baz=355,slow=1.6,SNR=4.7
ASAR SKKP 14 46 49.5
comp=Z,3.0nm,0.9s,baz=344,slow=3.9,SNR=7.1
ASAR Alice Springs 130.39 204 PKPdf **PKiKP 14 33 51.9 -0.5**
ASAR Alice Springs 130.39 204 PKIKP **PKPdf 14 33 51.9 -0.5**
SEY Seymchan 131.88 338 PKhKP PKPpre 14 33 36.5
comp=Z,3.0nm,0.9s,baz=134,slow=17,SNR=5.3
SEY PKP **PKiKP 14 33 55.1 +0.1**
comp=Z,44nm,0.9s,baz=80,slow=2.0,SNR=40
SEY PP **PP 14 36 16.1 -2.0**
comp=Z,12nm,1.1s,baz=113,slow=5.2,SNR=4.0
SEY SKPbc **SKPab 14 36 55.7 -0.2**
comp=Z,26nm,1.0s,baz=55,slow=4.6,SNR=8.1
SEY Seymchan 131.88 338 *c i*PKIKP **PKiKP 14 33 54.6 -0.4**
SEY pmax pmax
comp=Z,57nm,1.0s
WRA Warramunga Arr 133.57 207 PKhKP PKPpre 14 33 40.6
comp=Z,0.5nm,0.4s,baz=161,slow=2.1,SNR=10
WRA PKP **PKPdf 14 33 58.8 +0.3**
comp=Z,14nm,0.5s,baz=161,slow=1.7,SNR=37
WRA PP **PP 14 36 30.6 +2.0**
comp=Z,5.3nm,0.8s,baz=157,slow=2.6,SNR=3.9
WRA SKPbc **SKPbc 14 37 02.5 +0.5**
comp=Z,109nm,1.0s,baz=153,slow=2.9,SNR=22
WRA SKKPbc **SKKPbc 14 46 23.3 +7.4**
comp=Z,3.5nm,0.9s,baz=338,slow=5.8,SNR=5.5
WRAB Tennant Creek 133.57 207 *c i*PKIKP **PKPdf 14 33 58.6 +0.1**
WRAB pmax pmax
comp=Z,35nm,1.0s
WB0 Warramunga Arr 133.70 207 PKPdf **PKPdf 14 33 56.9 -1.9**
PET Petropavlovsk 134.33 324 *i* PKIKP **PKPdf 14 33 56.1 -2.7**
PET *e* 14 36 35.3
PET *e*SPP SPP 14 48 13.8
PET *e*SS **SS 14 54 00.6 -1.4**
PET pmax pmax
comp=Z,33nm,1.0s
PET pmax pmax
comp=Z,400nm,10.6s
PET pmax pmax
comp=Z,400nm,16.7s
MA2 Magadan 134.62 335 PKhKP PKPpre 14 33 45.0
comp=Z,4.3nm,0.8s,baz=106,slow=18,SNR=1.8
MA2 PP **PP 14 36 34.4 -1.1**
comp=Z,14nm,0.9s,baz=19,slow=2.5,SNR=4.5
MA2 SKPbc **SKPbc 14 37 05.1 +1.1**
comp=Z,52nm,1.1s,baz=91,slow=3.4,SNR=11
BRVK Borovoye 134.80 36 PKPdf **PKiKP 14 34 01.0 -0.1**
BRVK Borovoye 134.80 36 *c i*PKIKP **PKiKP 14 34 01.1 -0.1**
BRVK pmax pmax
comp=Z,57nm,2.5s
BRVK Borovoye 134.80 36 P **PKiKP 14 34 01.0 -0.1**
PEA0B Petropavlovsk- 134.81 324 *c i*PKIKP **PKPdf 14 33 57.9 -1.8**
PETK Petropavlovsk- 134.81 324 PKhKP PKPpre 14 33 50.6
comp=Z,1.3nm,0.4s,baz=197,slow=3.1,SNR=3.6
PETK PKP **PKPdf 14 34 00.3 +0.6**
comp=Z,6.3nm,0.6s,baz=118,slow=5.2,SNR=6.8
PETK SKPbc **SKPbc 14 37 06.1 +1.2**
comp=Z,63nm,1.0s,baz=67,slow=11,SNR=24
BVA0 Borovoye Array 134.87 36 *i* PKIKP **PKPdf 14 34 00.4 +0.6**
BRZS Berezniki 137.47 39 *e*PKIKP **PKPdf 14 34 04.3 -0.4**
BRZS *e* 14 36 53.6
BRZS Berezniki 137.47 39 *e*PKP **PKPdf 14 34 04.3 -0.4**
baz=39
BRZS *e*PP **PP 14 36 53.7 0.0**
baz=39
OTUK Ortayu 137.97 42 PKIKP **PKPdf 14 34 01.7 -4.1**
FITZ Fitzroy Crossi 138.28 197 PKP **PKiKP 14 34 08.4 -0.9**
FITZ SKPbc **SKiKP 14 37 18.4 -1.8**
comp=Z,26nm,0.8s,baz=201,slow=3.5,SNR=9.1
IUG luzhnay 138.39 51 *e*PKIKP **PKPdf 14 34 05.1 -1.7**
IUG luzhnay 138.39 51 *e*PKP **PKPdf 14 34 05.2 -1.6**
baz=51
IUG *e*SKP 14 37 14.7
baz=51
KK31 Karatay Array 138.48 50 *i* PKIKP **PKPdf 14 34 03.7 -3.2**
YAK Yakutsk 138.86 349 PKhKP PKPpre 14 33 57.2
comp=Z,9.6nm,0.5s,baz=130,slow=0.4,SNR=2.2
YAK SKPbc **SKiKP 14 37 18.7 -1.2**
comp=Z,31nm,0.8s,baz=161,slow=1.4,SNR=9.7
YAK Yakutsk 138.86 349 *e*PKIKP **PKPdf 14 34 02.0 -4.9**
YAK *e* 14 35 09.3
YAK *e* 14 36 59.1
YAK pmax pmax
comp=Z,43nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=Z,181nm,2.5s
YAK pmax pmax
comp=N,84nm,2.3s
YAK pmax pmax
comp=E,50nm,2.5s
DZA Taraz 139.12 50 *e*PKIKP **PKPdf 14 34 07.3 -0.8**
DZA Taraz 139.12 50 *e*PKP **PKPdf 14 34 07.4 -0.7**
baz=50
KURK Kurchatov 140.45 35 PKHKP PKPpre 14 34 05.1
KURBB Kurchatov Arra 140.45 36 PKhKP PKPpre 14 34 05.8
comp=E,14nm,0.9s,baz=295,slow=3.2,SNR=24
KURBB PP **PP 14 37 11.3 -0.5**
comp=E,6.0nm,0.9s,baz=300,slow=7.1,SNR=4.4
KURBB SKPbc **SKPbc 14 37 21.8 +0.6**
comp=E,11nm,1.0s,baz=291,slow=3.8,SNR=5.4
KURBB SKKPbc **SKKPab 14 45 52.3 -0.5**
comp=E,2.5nm,1.1s,baz=122,slow=3.3,SNR=5.5
SGDS Sogindy 141.23 48 *e*PKIKP **PKPdf 14 34 10.8 -1.1**
SGDS *e* 14 37 19.9
SGDS Sogindy 141.23 48 *e*PKP **PKPdf 14 34 10.8 -1.1**
baz=48
SGDS *e*SKP 14 37 19.9
baz=48
AAK Ala-Archa 141.41 49 PKhKP PKPpre 14 34 08.1
comp=E,18nm,0.7s,baz=232,slow=3.0,SNR=15
AAK SKPbc **SKiKP 14 37 26.7 +0.7**
comp=E,22nm,0.9s,baz=150,slow=0.6,SNR=11
AAK Ala-Archa 141.41 49 *i* PKPdf **PKPdf 14 34 08.8 -3.6**
SNR=13
ZALV Zalesovo Beam 141.45 28 PKhKP PKPpre 14 34 06.7
comp=E,18nm,0.8s,baz=304,slow=4.7,SNR=25
ZALV SKP 14 37 25.5
comp=E,16nm,0.7s,baz=302,slow=3.5,SNR=6.8
ZALV SKKPbc SKKPbc 14 45 49.4 +0.2
comp=E,2.0nm,0.8s,baz=129,slow=3.9,SNR=3.6
KUU Kurty 142.23 46 *e*PKIKP **PKPdf 14 34 11.9 -1.7**
KUU *e* 14 37 20.8
KUU Kurty 142.23 46 *e*PKP **PKPdf 14 34 12.0 -1.7**
baz=46
KUU *e*SKP 14 37 20.9
baz=46
CHKK Chushkaly 142.68 46 *e*PKIKP **PKPdf 14 34 13.0 -1.4**
CHKK Chushkaly 142.68 46 *e*PKP **PKPdf 14 34 13.0 -1.4**
baz=46
AAA Alma-Ata 142.88 47 *e*PKIKP **PKPdf 14 34 13.8 -1.0**
AAA Alma-Ata 142.88 47 *e*PKP **PKPdf 14 34 13.9 -0.9**
baz=47
MDOK Medeo 142.98 47 *e*PKIKP **PKPdf 14 34 13.3 -1.9**
MDOK Medeo 142.98 47 *e*PKP **PKPdf 14 34 13.4 -1.8**
baz=47
KOD Kodaikanal 143.02 103 *e*P **PKPdf 14 34 15.4 -0.8**
NKL Nikolayevsk 143.09 333 *i* PKIKP PKPbc 14 34 12.8 +0.4
NKL *e* 14 37 27.2
TDK Taldyqorghan 143.12 44 *e*PKIKP PKPbc 14 34 13.4 +0.5
TDK Taldyqorghan 143.12 44 *e*PKP PKPbc 14 34 13.4 +0.5
baz=44
KSH Kashi 143.44 53 PKP PKPab 14 34 13.5 +0.6
KSH SKKS 14 43 57.3
KSH AMB AMB
comp=E,770nm,4.8s
SATY Saty 143.94 46 *e*PKIKP PKPbc 14 34 15.2 -0.2
SATY Saty 143.94 46 *e*PKP PKPbc 14 34 15.2 -0.2
baz=47
JMU Jammu 143.96 65 *e*P PKPab 14 34 14.9 0.0
AJM Ajmer 143.99 75 *e*P PKPab 14 34 14.5 -0.9
KUR Kuril'sk 144.14 318 *c i*PKIKP PKPbc 14 34 16.2 +0.5
KUR *e* 14 37 33.1
KUR 14 49 44.8
KUR *e*SS SS 14 55 59.7 +2.5
KUR SSS SSS 15 01 26.4
KUR pmax pmax
comp=Z,827nm,2.1s
KUR pmax pmax
comp=Z,422nm,1.2s
SALM Salem 144.23 101 *e*P **PKPab 14 34 16.6 +0.1**
UZB Uzynbulak 144.32 46 *e*PKIKP PKPbc 14 34 16.8 +0.3
UZB Uzynbulak 144.32 46 *e*PKP PKPbc 14 34 16.8 +0.3
baz=46
MAKZ Makanchi 144.42 39 PKPdf **PKPdf 14 34 17.1 -0.3**
MAKZ Makanchi 144.42 39 PKIKP **PKPdf 14 34 17.1 -0.3**
BOD Bodaibo 144.51 0 *e*PKIKP **PKPab 14 34 15.9 -0.4**
BOD pmax pmax
comp=Z,347nm,1.0s
PDGK Podgornoye 144.55 46 PKIKP **PKPab 14 34 17.1 0.0**
PALK Pallekele 144.60 110 PKP PKPbc 14 34 18.4 +0.3
comp=Z,289nm,1.0s,baz=7.0,slow=4.5,SNR=42
PALK Pallekele 144.60 110 PKPdf **PKPdf 14 34 18.7 0.0**
PALK Pallekele 144.60 110 ⇑PKIKP **PKPdf 14 34 18.7 0.0**
SHLS Shalkode 144.60 46 *e*PKIKP PKPbc 14 34 17.6 +0.2
SHLS Shalkode 144.60 46 *e*PKP PKPbc 14 34 17.6 +0.2
baz=46
MKAR Makanchi Array 144.61 39 PKP **PKPdf 14 34 17.7 0.0**
comp=Z,187nm,0.7s,baz=328,slow=3.0,SNR=878
THN Thein Dam 144.67 65 *ex* x 14 30 50.5
THN *e*P PKPbc 14 34 16.8 -0.9
UGL Uglegorsk 145.25 327 ⇑*i*PKP2 **PKPab 14 34 20.0 +0.6**
UGL pmax pmax
comp=Z,250nm,1.1s
BHK Bhakra 145.38 67 *e*P **PKPbc 14 34 20.0 0.0**
AKL Akola 145.58 86 *e*P **PKPab 14 34 21.3 -0.3**
ZSN Zaisan 145.68 36 *e*PKIKP **PKPdf 14 34 18.4 -1.1**
ZSN Zaisan 145.68 36 *e*PKP **PKPdf 14 34 18.4 -1.1**
baz=36
SONA Sohna 146.16 72 *e*P **PKPbc 14 34 21.9 -0.4**
YSS Yuzh-Sakhalins 146.21 324 PKPdf **PKPbc 14 34 21.7 -0.2**
YSS Yuzh-Sakhalins 146.21 324 *i* PKIKP **PKPdf 14 34 21.0 +0.7**
YSS *e* 14 37 47.5
YSS *e*SS SS 14 56 27.8 +7.5
YSS pmax pmax
comp=Z,160nm,0.7s
YSS pmax pmax
comp=Z,600nm,10.0s
HYB Hyderabad 146.34 92 *e*P **PKPdf 14 34 21.0 -0.5**
HYBB Hyderabad (bro 146.34 92 *e*PKPab **PKPbc 14 34 22.9 -0.3**
HYBB IVmB_BB 14 34 24.3
comp=Z,2µm,3.0s
HYBB *e*PKiKP **PKPab 14 34 24.5 0.0**
HYBB *ep*PKiKP **pPKiKP 14 35 32.7 -1.1**
HYBB *e*PP **PP 14 37 47.3 -1.2**
HYBB *e*SKSdf **SKSdf 14 41 01.7 -3.6**
HYBB *e*SKKSac **SKKSac 14 44 13.9 0.0**
BATI Baumata 146.35 197 PKPbc **PKPbc 14 34 23.7 +0.4**
comp=Z,194nm,1.0s,baz=207,slow=1.4,SNR=11
GRNR Gornyy 146.63 334 *e*PKP2 **PKPbc 14 34 22.4 -0.6**
ZEA Zeya 147.03 346 *e*PKIKP **PKPdf 14 34 22.4 +0.9**
ZEA pmax pmax
comp=Z,200nm,2.8s
ZEA pmax pmax
comp=Z,130nm,1.0s
JHNI Jhansi 147.46 77 *e*P **PKPbc 14 34 25.1 -1.0**
NGP Nagpur 147.53 85 *e*P **PKPbc 14 34 26.6 +0.2**
SRPI Serui, Papua 147.64 225 P **PKiKP 14 34 28.8 +0.1**
JWK2 Keihoku 147.66 322 P **PKPbc 14 34 26.6 +0.7**
WBSI Waikabubak, Su 147.83 190 P **PKiKP 14 34 29.7 +0.6**
ASAJ Asahikawa 147.94 320 P **PKPdf 14 34 24.6 +1.3**
VJD Vijayawada 148.05 94 *e*P **PKPbc 14 34 28.5 +0.7**
MMRI Maumere 148.22 196 P **PKPbc 14 34 28.5 +0.1**
comp=Z,2µmcomp=Z,194nm,1.0s
EDFI Ende, Flores 148.25 195 P **PKPdf 14 34 25.1 +0.2**
comp=Z,1µmcomp=Z,100nm,1.1s
JEM Erimo 148.69 316 P **PKiKP 14 34 30.0 0.0**
ERM Erimo 148.69 316 *c i*PKP2 **PKPbc 14 34 28.5 -0.2**
ERM pmax pmax
comp=Z,220nm,1.0s
PTH Pithoragarh 148.83 69 *e*P **PKPbc 14 34 30.0 +0.3**
PLAI Plampang 148.85 187 P **PKiKP 14 34 30.6 -0.6**
comp=Z,2µmcomp=Z,264nm,0.9s
MOY Mondy 148.99 16 *e*PKHKP **PKPdf 14 34 27.5 +2.5**
MOY pmax pmax
comp=Z,244nm,1.4s
TWSI Taliwang, Sumb 149.03 185 P **PKPdf 14 34 27.0 +1.0**
comp=Z,2µmcomp=Z,189nm,1.1s
IGBI Denpasar 149.06 182 P **PKiKP 14 34 32.0 +0.4**
comp=Z,4µmcomp=Z,369nm,1.1s
IRK Irkutsk 149.17 12 *e*PKHKP **PKPdf 14 34 26.1 +1.0**
IRK pmax pmax
comp=Z,320nm,2.3s
FAKI Fak Fak 149.26 218 PKP **PKPab 14 34 34.7 -1.6**
JAGI Jajag, Banyuwa 149.43 180 P **PKPbc 14 34 30.7 -0.7**
comp=Z,3µmcomp=Z,349nm,1.0s
WMQ Urumqi 149.44 39 PKPbc **PKPdf 14 34 27.7 +1.8**
WMQ PKPab **PKPab 14 34 39.1 +2.7**
WMQ PP **PP 14 38 08.7 +3.4**
WMQ SKKS 14 44 31.2
WMQ AMB AMB
comp=Z,530nm,4.9s
GUMO Guam 149.46 259 PKPbc **PKPbc 14 34 31.1 -0.3**
comp=Z,197nm,0.8s,baz=187,slow=9.0,SNR=3.9
PCJI Pacitan 149.57 174 P **PKiKP 14 34 32.9 +0.3**
comp=Z,4µmcomp=Z,454nm,1.1s
GMJI Gumukmas 149.62 179 P **PKPbc 14 34 32.0 +0.2**
comp=Z,2µmcomp=Z,189nm,1.2s
KLR Kul'dur 149.67 337 PKPbc **PKPbc 14 34 30.9 0.0**
UGM Wanagama 149.78 173 P **PKiKP 14 34 34.8 +1.7**
comp=Z,235nm,1.2s
SRBI Singaraja 149.79 182 P **PKPdf 14 34 28.1 +0.9**
comp=Z,2µmcomp=Z,221nm,1.2s
PWJI Pagerwojo 149.79 176 P **PKPdf 14 34 28.5 +1.3**
CNJI Cibinong 149.81 166 P **PKPbc 14 34 32.7 +0.4**
YOGI Yogyakarta 149.85 173 P **PKiKP 14 34 33.4 +0.1**
comp=Z,277nm,1.1s
SKJI Sukabumi 149.98 165 P **PKiKP 14 34 33.6 +0.1**
ABJI Asem Bagus 150.10 180 P **PKPdf 14 34 27.4 -0.3**
comp=Z,139nm,1.2s
ABJI Asem Bagus 150.10 180 PKP **PKiKP 14 34 34.9 +1.2**
BLJI Banyuglugur 150.14 179 P **PKiKP 14 34 34.4 +0.6**
JSH Shimam 150.31 319 P **PKiKP 14 34 33.1 -0.2**
CIT Chita 150.32 1 *e*PKIKP **PKPdf 14 34 26.4 -0.6**
CIT *e* 14 35 54.0
CIT *e* 14 38 05.5
CIT pmax pmax
comp=Z,232nm,2.2s
LEM Lembang 150.39 167 PKPbc **PKiKP 14 34 35.1 +0.5**
comp=Z,466nm,0.9s,baz=134,slow=3.0,SNR=33
NGJI Ngawi 150.41 175 P **PKiKP 14 34 36.5 +2.1**
DBJI Dramaga 150.46 165 P **PKiKP 14 34 34.3 -0.2**
comp=Z,34µmcomp=Z,146nm,1.0s
DBJI Dramaga 150.46 165 PKP **PKiKP 14 34 34.5 0.0**
BLSP Bilaspur 150.50 84 *e*P **PKPbc 14 34 34.0 +0.2**
SMRI Semarang 150.63 173 P **PKiKP 14 34 36.1 +1.2**
AAI Ambon 150.69 210 PKP **PKPbc 14 34 34.3 -0.1**
SBJI Serang 150.72 164 P **PKiKP 14 34 38.0 +3.0**
comp=Z,5µmcomp=Z,124nm,0.5s
SBJI Serang 150.72 164 PKP **PKiKP 14 34 38.0 +3.0**
ZAK Zakamensk 150.72 14 *e*PKIKP **PKPdf 14 34 29.1 +1.4**
ZAK pmax pmax
comp=Z,12nm,1.1s
TEY Ternei 150.73 326 ⇑*e*PKIKP **PKiKP 14 34 34.4 +0.3**
TEY *e* 14 35 37.1
TEY pmax pmax
comp=N,20nm,0.8s
TEY pmax pmax
comp=E,20nm,0.8s
TEY pmax pmax
comp=Z,400nm,0.8s
KASI Kota Agung 150.82 160 P **PKiKP 14 34 35.8 +0.6**
comp=Z,3µmcomp=Z,324nm,1.1s
KMMI Kalianget 150.84 180 P **PKiKP 14 34 35.8 +0.5**
LWLI Liwa 151.16 159 P **PKiKP 14 34 36.6 +0.5**
comp=Z,2µmcomp=Z,3µmcomp=Z,96nm,0.7s
JOM Ohasama 151.16 313 P **PKPbc 14 34 34.8 +0.1**
BLSI Bandar Lampung 151.20 162 P **PKiKP 14 34 38.5 +2.5**
BLSI Bandar Lampung 151.20 162 PKP **PKiKP 14 34 38.5 +2.5**
SIJI Sorong 151.49 218 PKPbc **PKiKP 14 34 36.9 +0.2**
comp=Z,139nm,0.7s,baz=9.8,slow=4.8,SNR=37
KLI Kotabumi 151.56 161 P **PKiKP 14 34 38.7 +1.9**
PPSI Pulau Pagai 151.58 149 P **PKiKP 14 34 41.3 +4.5**
comp=Z,262nm,1.3s
DANN Dangsing 152.03 71 *e*P **PKPdf 14 34 31.1 +0.5**
comp=Z,134nm,1.0s
VLK Valmikinagar 152.21 73 *e*P **PKiKP 14 34 38.0 +0.3**
MASI Maura Aman, Be 152.22 154 P **PKPdf 14 34 28.4 -2.6**
comp=Z,3µmcomp=Z,230nm,1.2s
KAPI Kappang 152.29 192 PKPbc **PKiKP 14 34 39.2 +0.9**
comp=Z,69nm,0.8s,baz=203,slow=2.7,SNR=20
SISI Saibi 152.37 146 P **PKiKP 14 34 41.0 +2.6**
JYA Atsumi 152.66 312 P **PKiKP 14 34 39.1 +0.8**
KRJI Kerinci 152.84 152 P **PKPdf 14 34 33.2 +1.2**
GKN Gorkha 152.84 72 *e*P **PKPdf 14 34 32.4 +0.7**
SANI Sanana 153.13 207 PKP **PKiKP 14 34 40.4 +0.4**
DMN Daman 153.29 73 *e*P **PKPdf 14 34 33.7 +1.2**
KKN Kakani 153.42 72 *e*P **PKPdf 14 34 33.2 +0.6**
PKIN Phulchoki 153.54 73 *e*P **PKPdf 14 34 33.4 +0.6**
PKI Pulchoki 153.56 73 *e*P **PKPdf 14 34 33.2 +0.3**
comp=Z,93nm,1.4s
USRK Ussuriysk Ar. 153.60 330 PKP **PKPdf 14 34 32.7 +0.7**
comp=Z,4.2nm,0.8s,baz=36,slow=3.5,SNR=10
USRK PKPbc **PKiKP 14 34 40.4 +0.4**
comp=Z,32nm,0.7s,baz=39,slow=3.3,SNR=20
USRK PKPab **PKPab 14 34 54.7 +1.1**
comp=Z,10nm,0.7s,baz=18,slow=2.5,SNR=5.9
PPI Padang Panjang 153.77 148 P **PKPdf 14 34 35.8 +2.6**
SONM Songino Array 153.79 12 PKP **PKPdf 14 34 33.5 +1.2**
comp=Z,22nm,0.9s,baz=310,slow=0.7,SNR=55
SONM PKPbc **PKiKP 14 34 41.0 +0.4**
comp=Z,35nm,1.0s,baz=304,slow=1.9,SNR=15
ULN Ulaanbaatar 153.88 11 *c i*PKIKP **PKPdf 14 34 33.6 +1.1**
ULN pmax pmax
comp=Z,30nm,1.0s
GUN Gumba 153.94 72 *e*P **PKPdf 14 34 33.4 -0.1**
BNX BinXian 154.19 338 ⇑PKPbc **PKPdf 14 34 32.8 0.0**
BNX AMB AMB
comp=Z,160nm,5.3s
BNX LR LR
comp=Z,230nm,21.7s
BNX LR LR
comp=Z,190nm,20.6s
BNX LR LR
comp=Z,470nm,24.9s
JIRN Jiri 154.24 72 *e*P **PKPdf 14 34 34.3 +0.4**
MDJ Mudanjiang 154.31 334 PKPbc **PKPdf 14 34 32.4 -0.6**
MDJ AMB AMB
comp=Z,140nm,6.0s
JOD2 Odawara 2 154.60 306 P **PKPdf 14 34 34.2 +0.5**
RAMN Ramite 154.66 74 *e*P **PKPdf 14 34 35.3 +0.9**
MJAR Matsushiro Arr 154.69 309 PKP **PKPdf 14 34 34.5 +0.7**
comp=Z,3.3nm,0.8s,baz=106,slow=3.1,SNR=9.9
MJAR PKPbc **PKiKP 14 34 42.8 +0.2**
comp=Z,19nm,0.8s,baz=98,slow=3.3,SNR=20
MJAR PKPab **PKPab 14 34 58.6 -0.1**
comp=Z,12nm,0.8s,baz=80,slow=3.7,SNR=6.2
ODAN Odare 155.38 74 *e*P **PKPdf 14 34 36.1 +0.8**
TAPN Taplejung 155.61 73 *e*P **PKPdf 14 34 36.3 +0.6**
PSI Prapat 155.70 141 PKP **PKPdf 14 34 36.4 +0.4**
comp=Z,21nm,1.0s,baz=198,slow=7.0,SNR=7.3
PSI PKPab **PKPab 14 35 04.0 +0.4**
comp=Z,34nm,0.8s,baz=233,slow=4.5,SNR=11
CN2 Changchun 156.56 339 *e*PKP **PKPdf 14 34 35.8 -0.2**
CN2 PP **PP 14 38 47.6 +3.0**
LSA Lhasa 158.18 65 PKP **PKPdf 14 34 40.7 +1.6**
LSA PKPab **PKPab 14 35 14.9 +0.4**
LSA sPKP 14 36 03.2
LSA AMB AMB
comp=Z,99nm,5.0s
GOMU GeErMu 158.31 46 PKP **PKPdf 14 34 40.8 +1.8**
GOMU PP **PP 14 38 55.4 -0.2**
GOMU SKKS 14 45 21.7
GOMU AMB AMB
comp=Z,170nm,4.8s
GOMU LR LR
comp=Z,140nm,17.1s
GOMU LR LR
comp=Z,230nm,17.2s
GOMU LR LR
comp=Z,200nm,17.6s
XLT XiLinHaoTe 158.38 356 *e*PKP **PKPdf 14 34 39.7 +1.2**
XLT PKPab **PKPab 14 35 15.5 +1.2**
XLT PP **PP 14 38 56.4 +1.9**
XLT AMB AMB
comp=Z,480nm,5.5s
SNY Shenyang 158.94 340 ⇓PKP **PKPdf 14 34 44.1 +5.1**
SNY PP PP 14 39 06.0 +8.5
SNY AMB AMB
comp=Z,260nm,9.4s
SNY LR LR
comp=Z,250nm,14.1s
SNY LR LR
comp=Z,300nm,13.9s
SNY LR LR
comp=Z,490nm,21.6s
GTA Gaotai 159.07 32 ⇑PKP **PKPdf 14 34 40.6 +1.1**
GTA PKPab **PKPab 14 35 17.6 0.0**
GTA pPKP pPKPdf 14 35 49.3 +1.4
GTA SKKS 14 45 22.2
GTA SS **SS 14 58 41.0 +0.3**
GTA AMB AMB
comp=Z,250nm,7.1s
GTA LR LR
comp=Z,220nm,20.0s
GTA LR LR
comp=Z,280nm,22.5s
GTA LR LR
comp=Z,350nm,21.1s
KSRS Korea Array 160.71 325 PKP **PKPdf 14 34 42.2 +1.1**
comp=Z,18nm,1.0s,baz=68,slow=0.9,SNR=68
KSRS PKPab **PKPab 14 35 25.9 +1.4**
comp=Z,19nm,1.0s,baz=48,slow=4.0,SNR=19
KSRS PP **PP 14 39 09.1 +1.5**
comp=Z,4.2nm,1.0s,baz=26,slow=6.7,SNR=3.9
HHC Hu-ho-hao-te 161.38 6 *e*PKP **PKPdf 14 34 44.0 +2.1**
HHC PP **PP 14 39 10.4 -0.2**
HHC SKKS 14 45 41.2
HHC SS **SS 14 59 03.8 +0.1**
HHC AMB AMB
comp=Z,630nm,10.8s
BTO Baotou 161.43 10 *e*PKP **PKPdf 14 34 43.5 +1.5**
BTO LR LR
comp=Z,1µm,21.1s
BTO LR LR
comp=Z,1µm,18.1s
DL2 Dalian 162.21 340 ⇑*i*PKP **PKPdf 14 34 43.4 +0.7**
DL2 PKPab **PKPab 14 35 30.1 -0.9**
DL2 AMB AMB
comp=Z,160nm,6.4s
BJI Beijing 162.22 355 PKP **PKPdf 14 34 44.6 +2.0**
BJI PP **PP 14 39 16.3 +1.5**
BJI AMB AMB
comp=Z,210nm,3.8s
LZH Lanzhou 163.65 31 PKP **PKPdf 14 34 45.8 +1.4**
LZH PKPab **PKPab 14 35 38.3 +0.6**
LZH SKKS 14 45 46.9
LZH SS **SS 14 59 26.0 -2.2**
LZH AMB AMB
comp=Z,1µm,4.8s
TIY Taiyuan 164.57 5 *e*PKP **PKPdf 14 34 46.3 +1.3**
TIY PP **PP 14 39 27.4 +0.1**
TIY SKKS 14 45 54.8
TIY AMB AMB
comp=Z,410nm,14.3s
HNS HongShan 164.94 358 ⇓PKP **PKPdf 14 34 46.5 +1.3**
HNS PKPab **PKPab 14 35 43.3 +0.3**

HNS					pPKP	**pPKPdf**	**14 35 51.7**	**-2.1**
HNS					PP	**PP**	**14 39 30.5**	**+1.5**
HNS					SKS	**SKSdf**	**14 41 24.8**	**+0.5**
HNS					AMB	AMB		
	comp=Z,370nm,8.1s							
HNS					LR	LR		
	comp=Z,220nm,20.0s							
HNS					LR	LR		
	comp=Z,290nm,21.6s							
HNS					LR	LR		
	comp=Z,480nm,24.3s							
CMAR	**Chiang Mai Arr**	**165.35**	**102**		PKP	**PKPdf**	**14 34 46.9**	**+0.7**
	comp=Z,12nm,0.9s,baz=269,slow=2.2,SNR=43							
CMAR					PKPab	**PKPab**	**14 35 45.4**	**-0.3**
	comp=Z,17nm,0.8s,baz=249,slow=5.9,SNR=13							
CMAR					PP	**PP**	**14 39 35.8**	**+2.4**
	comp=Z,12nm,1.1s,baz=243,slow=5.7,SNR=9.3							
TIA	**Tai'an**	**165.87**	**350**		PKP	**PKPdf**	**14 34 47.2**	**+1.1**
TIA					AMB	AMB		
	comp=Z,390nm,6.5s							
TIA					LR	LR		
	comp=Z,180nm,15.2s							
TIA					LR	LR		
	comp=Z,150nm,18.6s							
TIA					LR	LR		
	comp=Z,320nm,14.9s							
CD2	**Chengdu**	**167.44**	**45**		PKP	**PKPdf**	**14 34 48.0**	**+0.5**
CD2					pPKP	PKPab	14 35 54.0	-0.5
CD2					sPKP		14 36 17.5	
CD2					PP	**PP**	**14 39 44.8**	**+1.7**
CD2					SKKS		14 46 03.9	
CD2					AMB	AMB		
	comp=Z,550nm,7.4s							
XAN	**Xi'an**	**167.47**	**20**	⇑	PKP	**PKPdf**	**14 34 48.6**	**+1.2**
XAN					PKPab	**PKPab**	**14 35 53.6**	**-0.8**
XAN					pPKP	pPKPdf	14 35 57.2	+1.2
XAN					SKKS		14 46 06.9	
XAN					SS	**SS**	**15 00 04.6**	**-1.5**
XAN					AMB	AMB		
	comp=Z,1μm,14.2s							
XAN					LR	LR		
	comp=Z,390nm,24.6s							
XAN					LR	LR		
	comp=Z,340nm,18.9s							
XAN					LR	LR		
	comp=Z,620nm,19.7s							
LYN	**LuoYang**	**167.71**	**6**	*e*	PKP	**PKPdf**	**14 34 48.2**	**+0.7**
LYN					PKPab	**PKPab**	**14 35 53.6**	**-1.7**
LYN					AMB	AMB		
	comp=Z,580nm,9.3s							
PZH	**PanZhiHua**	**168.05**	**67**		PKP	**PKPdf**	**14 34 48.5**	**+0.4**
PZH					PP	**PP**	**14 39 49.5**	**+2.3**
PZH					SKS	**SKSdf**	**14 41 27.5**	**+0.5**
PZH					SKKS	**SKKSac**	**14 46 07.1**	**-1.2**
PZH					SS	**SS**	**15 00 10.4**	**-4.7**
PZH					AMB	AMB		
	comp=Z,950nm,7.6s							
PZH					LR	LR		
	comp=Z,240nm,21.6s							
PZH					LR	LR		
	comp=Z,180nm,18.1s							
PZH					LR	LR		
	comp=Z,300nm,19.6s							
SSE	**Sheshan**	**169.15**	**325**		PKP	PKPdf	14 34 40.7	-7.8
SSE					PP	**PP**	**14 39 51.2**	**-0.1**
KMI	**Kunming**	**169.28**	**73**	⇑	PKP	**PKPdf**	**14 34 49.4**	**+0.3**
NJ2	**Nanjing**	**169.38**	**337**	⇓	PKP	**PKPdf**	**14 34 49.2**	**+0.6**
NJ2					PKPab	**PKPab**	**14 36 02.4**	**-0.4**
NJ2					PP	**PP**	**14 39 53.9**	**+1.9**
NJ2					SKS	**SKSdf**	**14 41 28.2**	**+1.1**
NJ2					SS	**SS**	**15 00 23.6**	**-1.4**
NJ2					AMB	AMB		
	comp=Z,250nm,3.5s							
WHN	**Wuhan**	**171.78**	**358**		PKP	**PKPdf**	**14 34 51.1**	**+1.1**
WHN					pPKP	**pPKPdf**	**14 35 55.1**	**-3.5**
WHN					PKPab	**PKPab**	**14 36 14.8**	**+1.4**
WHN					PP	**PP**	**14 40 05.2**	**+1.6**
WHN					LR	LR		
	comp=Z,1μm,25.6s							
GYA	**Guiyang**	**172.11**	**57**	⇓ *i*	PKP	**PKPdf**	**14 34 51.5**	**+1.1**
GYA					pPKP	pPKPdf	14 35 59.7	+0.5
GYA					PKPab	**PKPab**	**14 36 15.8**	**+0.3**
GYA					PP	**PP**	**14 40 08.3**	**+1.2**
GYA					SKKS		14 46 28.5	
GYA					AMB	AMB		
	comp=Z,1μm,14.1s							
CNSH	**ChangSha**	**174.06**	**9**		PKP	**PKPdf**	**14 34 49.1**	**-1.9**
CNSH					PKPab	**PKPab**	**14 36 24.3**	**+0.7**
CNSH					PP	**PP**	**14 40 14.1**	**-0.7**
CNSH					SKKS		14 46 39.8	
CNSH					LR	LR		
	comp=Z,2μm,16.9s							
CNSH					LR	LR		
	comp=Z,3μm,17.5s							
CNSH					LR	LR		
	comp=Z,610nm,26.0s							
QIZ	**Qiongzhong**	**174.91**	**129**		PKP	**PKPdf**	**14 34 52.6**	**+1.1**
QIZ					SKKS		14 46 44.7	
QIZ					SS	**SS**	**15 01 22.0**	**+1.2**
QIZ					AMB	AMB		
	comp=Z,660nm,12.1s							
QZH	**Quanzhou**	**175.05**	**303**	*e*	PKP	**PKPdf**	**14 34 51.7**	**+0.3**
QZH					PKPab	**PKPab**	**14 36 29.6**	**+1.2**
QZH					PP	**PP**	**14 40 20.0**	**-1.1**
QZH					SKKS		14 46 42.0	
QZH					SS	**SS**	**15 01 27.0**	**+4.5**
QZH					AMB	AMB		
	comp=Z,300nm,6.8s							
QZH					LR	LR		
	comp=Z,460nm,21.3s							

*DJA **04** 14:48:20.2±0.4,3°S±2′×12′8E± °, h10km±3km, M4.8/36, mb5.0/36, mB5.3/18, MLv4.9/25, Mw(mB)4.7/18*
*IDC **04** 14:48:21.8±1.4,3.15S×127.60E, h49km±13km, mb4.1/23, mbtmp4.4/27, ML4.4/4, MS4.0/4, Error ellipse: s-maj=12.8km s-min=11.2km az=110.0*
*NEIC **04** 14:48:22.4±1.2,3.06S±0.05×127.57E±0.06, h58km±9km, mb4.5/20, Error ellipse: s-maj=10.8km s-min=4.2km az=49.0*
ISC 04 14:48:21.6±0.3,3°11S±0.04×127°53E±0.04,h42km,n146,
σ1s88/152,mb4.5/39,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.45**	**253**	P	**Pn**	**14 48 28.6**	**-3.1**
NLAI				S	**Sn**	**14 48 35.0**	**-3.8**
AAI	**Ambon**	**0.88**	**131**	P	**Pn**	**14 48 35.5**	**-2.0**
MSAI	**Masohi**	**1.42**	**100**	P	**Pn**	**14 48 46.0**	**+1.1**
SANI	**Sanana**	**1.86**	**304**	P	**Pn**	**14 48 48.5**	**-2.5**
SANI				S	**Sn**	**14 49 08.5**	**-4.9**
SANI	**Sanana**	**1.86**	**304**	P	**Pn**	**14 48 52.0**	**+1.0**
LBMI	**Labuha**	**2.46**	**359**	P	**Pn**	**14 48 58.8**	**-0.4**
LBMI				S	**Sn**	**14 49 29.5**	**+1.5**
BNDI	**Bandanaira**	**2.76**	**121**	P	**Pn**	**14 49 04.8**	**+1.5**
BNDI	**Bandanaira**	**2.76**	**121**	P	**Pn**	**14 49 06.5**	**+3.2**
TNTI	**Ternate**	**3.86**	**358**		**Pn**	**14 49 18.2**	**-0.3**
TNTI	**Ternate**	**3.86**	**358**	P	**Pn**	**14 49 18.0**	**-0.5**
TNTI				S	**Sn**	**14 50 03.1**	**+0.5**
TNTI	**Ternate**	**3.86**	**358**	P	**Pn**	**14 49 18.9**	**+0.4**
SWI	**Sorong**	**4.35**	**59**	P	**Pn**	**14 49 24.4**	**-0.8**
SWI				S	**Sn**	**14 50 13.4**	**-1.2**
SIJI	**Sorong**	**4.35**	**59**	P	**Pn**	**14 49 24.5**	**-0.7**
	42nm,0.3s,baz=243,slow=21,SNR=147						
SIJI				S	**Sn**	**14 50 14.0**	**-0.7**
	129nm,0.6s,baz=44,slow=22,SNR=11						
	98nm,0.2s						
FAKI	**Fak Fak**	**4.72**	**88**		**Pn**	**14 49 30.4**	**+0.1**
FAKI	**Fak Fak**	**4.72**	**88**	P	**Pn**	**14 49 30.1**	**-0.2**
FAKI				S	**Sn**	**14 50 23.6**	**-0.2**
KMSI	**Cibinong**	**5.09**	**316**	P	**Pn**	**14 49 34.6**	**-0.9**
	5.6nm6μm249nm,0.7s						
KMSI				S	**Sn**	**14 50 31.0**	**-2.1**
	5.6nm6μm249nm,0.7s						
LUWI	**Luwuk**	**5.18**	**293**		**Pn**	**14 49 35.9**	**-0.7**
LUWI	**Luwuk**	**5.18**	**293**	P	**Pn**	**14 49 36.5**	**-0.1**
	2.6nm5μm353nm,0.9s						
LUWI	**Luwuk**	**5.18**	**293**	P	**Pn**	**14 49 36.8**	**+0.2**
BBSI	**Bau Bau**	**5.48**	**244**	P	**Pn**	**14 49 44.8**	**+4.1**
	0.2nm467nm57nm,1.0s						
APSI	**Ampana**	**6.27**	**290**	P	**Pn**	**14 49 52.3**	**+0.7**
	2.1nm4μm369nm,0.8s						
MRSI	**Marisa**	**6.62**	**302**	P	**Pn**	**14 49 56.2**	**-0.3**
	2.2nm2μm216nm,0.7s						
SGSI	**Sangihe**	**7.04**	**344**	P	**Pn**	**14 50 00.8**	**-1.4**
	1.2nm160nm,0.5s						
BNSI	**Bone**	**7.51**	**260**	P	**Pn**	**14 50 13.1**	**+4.4**
	0.2nm798nm52nm,0.7s						
MMRI	**Maumere**	**7.60**	**224**	Pn	**Pn**	**14 50 12.6**	**+2.6**
MMRI	**Maumere**	**7.60**	**224**	P	Pn	14 50 15.1	+5.2
	0.6nm2μm208nm,1.1s						
BSSI	**Bau Bau, Buton**	**7.63**	**246**	P	Pn	14 50 16.1	+5.8
	0.3nm86nm,0.6s						
TTSI	**Tana Toraja**	**7.70**	**270**	P	**Pn**	**14 50 14.5**	**+3.3**
	0.2nm2μm68nm,0.9s						
BKSI	**Bulukumba**	**7.70**	**253**	P	**Pn**	**14 50 14.4**	**+3.1**
	0.6nm2μm161nm,1.1s						
SPSI	**Sidrap Palu**	**7.79**	**264**	P	**Pn**	**14 50 15.6**	**+3.1**
	0.3nm1μm83nm,0.8s						
TOLI2	**Tolitoli**	**7.94**	**302**	Pn	**Pn**	**14 50 16.3**	**+1.7**
TOLI2	**Tolitoli**	**7.94**	**302**	P	**Pn**	**14 50 16.5**	**+2.0**
KAPI	**Kappang**	**7.98**	**256**	P	**Pn**	**14 50 17.4**	**+2.3**
	14nm,0.3s,baz=118,slow=7.2,SNR=17						
KAPI				S	**Sn**	**14 51 50.7**	**+6.5**
	7.3nm,0.6s,baz=251,slow=20,SNR=1.0						
KAPI				LR	LR	14 53 33.0	
	comp=Z,847nm,21.0s,baz=44,slow=39						
	42nm,0.5s						
KAPI	**Kappang**	**7.98**	**256**	Pn	**Pn**	**14 50 18.3**	**+3.2**
KAPI	**Kappang**	**7.98**	**256**	P	**Pn**	**14 50 19.1**	**+4.0**
BATI	**Baumata**	**8.03**	**208**	P	**Pn**	**14 50 19.6**	**+3.8**
	51nm,0.7s,baz=115,slow=4.0,SNR=6.9						
BATI				LR	LR	14 53 22.4	
	comp=Z,1μm,21.5s,baz=12,slow=37						
EDFI	**Ende, Flores**	**8.07**	**226**	P	**Pn**	**14 50 20.2**	**+3.8**
	778nm95nm,0.8s						
MPSI	**Mapaga**	**8.36**	**294**	P	**Pn**	**14 50 22.1**	**+1.8**
	0.3nm956nm99nm,0.8s						
BAKI	**Biak**	**8.78**	**78**	P	**Pn**	**14 50 27.3**	**+1.2**
	0.3nm94nm,0.9s						
MTN	**Manton Dam**	**10.31**	**160**	Pn	**Pn**	**14 50 49.4**	**+2.4**
WBSI	**Waikabubak, Su**	**10.36**	**231**	P	Pn	14 51 01.1	+13
KDU	**Kakadu**	**10.70**	**153**	P	**Pn**	**14 50 52.8**	**+0.4**
SMPI	**Sarmi**	**11.23**	**85**	P	**Pn**	**14 50 59.9**	**+0.3**
	20nm,0.9s						
PLAI	**Plampang**	**11.24**	**239**	P	Pn	14 51 04.9	+5.2
	1μm112nm,1.1s						
PLAI	**Plampang**	**11.24**	**239**	P	**Pn**	**14 51 04.0**	**+4.3**
TWSI	**Taliwang, Sumb**	**11.97**	**242**	P	Pn	14 51 15.6	+5.8
	27nm,0.9s						
KNRA	**Kununurra**	**12.55**	**175**	Pn	**Pn**	**14 51 18.1**	**+0.5**
KNRA	**Kununurra**	**12.55**	**175**	P	**Pn**	**14 51 17.6**	**0.0**
GENI	**Genyem**	**12.64**	**88**	P	**Pn**	**14 51 20.9**	**+2.0**
	66nm,1.1s						
JAGI	**Jajag, Banyuwa**	**14.33**	**248**	Pn	**Pn**	**14 51 42.0**	**+0.1**
JAGI	**Jajag, Banyuwa**	**14.33**	**248**	P	**P**	**14 51 49.1**	**+0.9**
	48nm,1.3s						
GMJI	**Gumukmas**	**14.92**	**249**	P	P	14 52 02.7	+7.9
FITZ	**Fitzroy Crossi**	**15.01**	**187**	P	**Pn**	**14 51 50.4**	**-0.6**
	0.1nm,0.3s,baz=14,slow=16,SNR=4.5						
FITZ				LR	LR	14 57 55.7	
	comp=Z,406nm,19.6s,baz=7.0,slow=38						
	9.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**15.01**	**187**		**Pn**	**14 51 51.7**	**+0.7**
FITZ				IAmb	IAmb	14 51 58.9	
	comp=Z,28nm,1.2s						
FITZ	**Fitzroy Crossi**	**15.01**	**187**	P	**Pn**	**14 51 50.9**	**-0.1**
STKI	**Sintang**	**16.35**	**281**	P	**P**	**14 52 11.0**	**+0.3**
	comp=Z,4μmcomp=Z,7.4nm,0.6s						
PWJI	**Pagerwojo**	**16.39**	**252**	P	**P**	**14 52 12.6**	**+1.5**
	comp=Z,33nm,0.6s						
PCJI	**Pacitan**	**17.03**	**252**	P	**P**	**14 52 22.2**	**+4.0**
	comp=Z,91nm,0.9s						
UGM	**Wanagama**	**17.58**	**254**		**Pn**	**14 52 23.6**	**0.0**
WB0	**Warramunga Arr**	**17.86**	**158**		**Pn**	**14 52 26.7**	**-0.4**
WB0				IAmb	IAmb	14 52 29.6	
	comp=Z,38nm,0.9s						
WRAB	**Tennant Creek**	**18.00**	**159**	P	**Pn**	**14 52 28.6**	**-0.2**
WRA	**Warramunga Arr**	**18.00**	**159**	P	**Pn**	**14 52 27.9**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=341,slow=12,SNR=104						
WRA				ScP	**ScP**	**15 00 33.5**	**-1.2**
	comp=Z,1.8nm,1.0s,baz=331,slow=2.4,SNR=6.5						
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**18.00**	**159**	P	**Pn**	**14 52 27.8**	**-1.0**
WB2	**Warramunga Arr**	**18.01**	**159**		**Pn**	**14 52 27.9**	**-1.0**
WB2				IAmb	IAmb	14 52 41.3	
	comp=Z,43nm,1.1s						
WR0	**Warramunga Arr**	**18.09**	**158**	P	**Pn**	**14 52 29.4**	**-0.6**
COEN	**Coen**	**18.84**	**126**	P	**P**	**14 52 35.9**	**-2.2**
COEN				IAmb	IAmb	14 52 57.1	
	comp=Z,20nm,0.8s						
COEN	**Coen**	**18.84**	**126**	P	**P**	**14 52 37.4**	**-0.8**
MBWA	**Marble Bar**	**19.48**	**202**	P	**P**	**14 52 42.7**	**-2.4**
MBWA	**Marble Bar**	**19.48**	**202**	P	**P**	**14 52 45.6**	**+0.5**
PSA00	**Pilbara Seismi**	**19.81**	**202**	P	**P**	**14 52 48.3**	**-0.4**
PSA00				IAmb	IAmb	14 52 52.8	
	comp=Z,27nm,0.9s						
PSA00	**Pilbara Seismi**	**19.81**	**202**	P	**P**	**14 52 47.6**	**-1.1**
PSA00				IAmb	IAmb	14 52 52.8	
	comp=Z,11nm,1.0s						
PSA00	**Pilbara Seismi**	**19.81**	**202**	P	**P**	**14 52 49.6**	**+0.8**
LEM	**Lembang**	**20.17**	**259**	P	**P**	**14 52 53.9**	**+1.0**
	comp=Z,38nm,0.6s,baz=77,slow=9.0,SNR=12						
	comp=Z,38nm,0.6s						
CBJI	**Cilelo**	**20.86**	**260**	P	Pn	14 53 07.8	+4.8
QIS	**Mount Isa**	**20.96**	**147**	P	**P**	**14 53 02.3**	**+1.1**
AS31	**Alice Springs**	**21.35**	**164**	P	**P**	**14 53 04.9**	**-0.5**
AS31				IAmb	IAmb	14 53 14.0	
	comp=Z,13nm,0.7s						
ASAR	**Alice Springs**	**21.35**	**164**	P	**P**	**14 53 04.8**	**-0.5**
	comp=Z,17nm,0.7s,baz=344,slow=12,SNR=154						
ASAR				PcP	**PcP**	**14 57 07.8**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=350,slow=1.4,SNR=6.4						
ASAR				ScP	**ScP**	**15 00 40.6**	**-1.8**
	comp=Z,1.4nm,0.9s,baz=336,slow=2.4,SNR=6.8						
	comp=Z,17nm,0.7s						
ASAR	**Alice Springs**	**21.35**	**164**	P	**P**	**14 53 04.6**	**-0.8**
PPBI	**Pangkal Pinang**	**21.39**	**272**	P	**P**	**14 53 10.8**	**+4.9**
	comp=Z,5μmcomp=Z,40nm,1.0s						
WRKA	**Warakurna**	**21.81**	**178**	P	**P**	**14 53 10.2**	**-0.2**
MTSU	**Mount Surprise**	**22.22**	**133**	P	**P**	**14 53 15.7**	**+0.9**
KLI	**Kotabumi**	**22.68**	**265**	P	**P**	**14 53 20.9**	**+1.1**
	comp=Z,214nm,0.9s						
DSRI	**Dabo**	**23.08**	**276**	P	**P**	**14 53 27.3**	**+3.4**
	comp=Z,15nm,0.9s						
GIRL	**Giralia**	**23.31**	**212**	P	**P**	**14 53 25.9**	**-0.1**
GIRL	**Giralia**	**23.31**	**212**	P	**P**	**14 53 25.5**	**-0.5**
JMBI	**JAMBI**	**23.91**	**273**	P	**P**	**14 53 36.5**	**+4.7**
KRVT	**Keravat (AS076**	**24.48**	**94**	P	**P**	**14 53 37.1**	**+0.1**
	comp=Z,22nm,0.7s,baz=334,slow=17,SNR=5.8						
	comp=Z,22nm,0.7s						
MEEK	**Meekatharra**	**24.91**	**199**	P	**P**	**14 53 40.1**	**-0.7**
MASI	**Maura Aman, Be**	**25.25**	**269**	P	**P**	**14 53 49.6**	**+5.5**
	comp=Z,117nm,1.0s						
OOD	**Oodnadatta**	**25.75**	**163**	P	**P**	**14 53 47.5**	**-0.9**
KRJI	**Kerinci**	**26.06**	**272**	P	P	14 54 01.1	+10
PPI	**Padang Panjang**	**27.24**	**275**	P	**P**	**14 54 03.0**	**+0.9**
	comp=Z,12nm,0.4s						
FORT	**Forrest**	**27.53**	**179**	P	**P**	**14 54 03.6**	**-0.8**
INKA	**Innaminka**	**27.56**	**154**	P	**P**	**14 54 04.4**	**-0.3**
MULG	**Mulgathing**	**27.72**	**168**	P	**P**	**14 54 05.6**	**-0.6**
YOJ	**Yonaguni jima**	**27.76**	**351**	P	**P**	**14 54 04.4**	**-2.1**
YOJ				IAmb	IAmb	14 54 15.4	
	comp=Z,15nm,1.0s						
LCRK	**Leigh Creek**	**29.01**	**161**	P	**P**	**14 54 16.8**	**-0.8**
PSI	**Prapat**	**29.19**	**281**	P	**P**	**14 54 19.5**	**-0.1**
	comp=Z,4.3nm,0.6s,baz=128,slow=14,SNR=2.1						
	comp=Z,4.3nm,0.6s						
BBOO	**Buckleboo**	**30.61**	**166**	P	**P**	**14 54 30.4**	**-1.4**
BBOO				IAmb	IAmb	14 54 46.6	
	comp=Z,10nm,0.9s						
BBOO	**Buckleboo**	**30.61**	**166**	P	**P**	**14 54 30.8**	**-1.0**
NWAO	**Narrogin (SRO)**	**31.19**	**197**	P	**P**	**14 54 36.0**	**-0.9**
NWAO	**Narrogin (SRO)**	**31.19**	**197**	P	**P**	**14 54 36.3**	**-0.6**
STKA	**Stephens Creek**	**31.53**	**157**	P	**P**	**14 54 38.5**	**-1.4**
	comp=Z,2.8nm,0.4s,baz=336,slow=9.5,SNR=11						
	comp=Z,2.8nm,0.4s						
STKA	**Stephens Creek**	**31.53**	**157**	P	**P**	**14 54 38.7**	**-1.2**
HTT	**Hallett**	**31.99**	**162**	P	**P**	**14 54 43.5**	**-0.5**
CMSA	**Cobar Meteorol**	**33.05**	**151**	P	**P**	**14 54 53.0**	**-0.2**
TWOA	**Tennyson Woods**	**33.38**	**163**	P	**P**	**14 54 56.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**35.38**	**308**	P	**P**	**14 55 14.6**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=126,slow=6.3,SNR=7.2						
	comp=Z,0.9nm,0.7s						
NJ2	**Nanjing**	**35.93**	**347**	*e* P		**P**	**14 55 19.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARPS	**Mount Arapiles**	**36.00**	**160**	P		**P**	**14 55 18.9**	**+0.2**
CAN	**Canberra**	**37.73**	**151**	P		**P**	**14 55 33.9**	**+0.4**
CAN	**Canberra**	**37.73**	**151**	P		**P**	**14 55 34.1**	**+0.6**
PZH	**PanZhiHua**	**38.58**	**321**	P		**P**	**14 55 42.6**	**+1.8**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
KSRS	**Korea Array**	**40.36**	**0**	P		**P**	**14 55 55.6**	**+0.3**
	comp=Z,5.6nm,1.0s,baz=181,slow=9.8,SNR=21							
	comp=Z,5.6nm,1.0s							
MJAR	**Matsushiro Arr**	**40.69**	**13**	P		**P**	**14 55 56.9**	**-1.2**
	comp=Z,2.1nm,0.6s,baz=185,slow=9.5,SNR=10							
	comp=Z,2.1nm,0.6s							
JMM	**Marumori**	**42.59**	**16**	P		**P**	**14 56 13.2**	**-0.4**
JMM				IAmb	IAmb	14 56 31.6		
	comp=Z,33nm,1.5s							
LZH	**Lanzhou**	**44.84**	**333**	*e* P		P	14 56 26.9	-5.0
LZH				pP	pP		14 56 42.2	-0.9
LZH				sP	sP		14 56 48.5	+0.7
LZH				pmax	pmax			
	comp=Z,15nm,1.0s							
HHC	**Hu-ho-hao-te**	**46.12**	**343**	*e* P		**P**	**14 56 44.2**	**+2.3**
HHC				pmax	pmax			
	comp=Z,30nm,1.0s							
HHC				pmax	pmax			
	comp=Z,180nm,6.2s							
USRK	**Ussuriysk Ar.**	**47.27**	**4**	P		**P**	**14 56 50.8**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=193,slow=5.6,SNR=4.9							
	comp=Z,3.2nm,0.6s							
USRK	**Ussuriysk Ar.**	**47.27**	**4**	P		**P**	**14 56 49.2**	**-1.5**
MDJ	**Mudanjiang**	**47.55**	**2**	P		**P**	**14 56 53.6**	**+0.7**
MDJ				pP	sP		14 57 07.7	-0.3
MDJ				sP	pwP		14 57 12.4	+3.8
MDJ				ScP	**ScP**		**15 02 10.3**	**-3.1**
MDJ				S	**S**		**15 03 47.1**	**+2.0**
MDJ				sS	sS		15 04 11.3	+7.0
MDJ				ScS	**ScS**		**15 06 41.7**	**-1.5**
MDJ				pmax	pmax			
	comp=Z,7.0nm,1.3s							
MDJ				pmax	pmax			
	comp=Z,180nm,9.4s							
MDJ				LR	LR			
	comp=N,280nm,13.9s							
MDJ				LR	LR			
	comp=E,320nm,17.7s							
MDJ				LR	LR			
	comp=Z,520nm,20.1s							
GTA	**Gaotai**	**49.40**	**332**	*e* P		**P**	**14 57 08.5**	**+1.1**
GTA				pP	pP		14 57 15.4	-3.3
GTA				sP	pwP		14 57 20.2	-1.3
GTA				pmax	pmax			
	comp=Z,2.0nm,1.1s							
SONM	**Songino Array**	**54.01**	**343**	P		**P**	**14 57 41.9**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=168,slow=8.6,SNR=5.5							
	comp=Z,1.3nm,0.6s							
WMQ	**Urumqi**	**58.81**	**327**	*e* P		**P**	**14 58 17.3**	**+1.4**
PETK	**Petropavlovsk-**	**61.48**	**20**	P		**P**	**14 58 33.8**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=146,slow=2.8,SNR=3.0							
	comp=Z,2.2nm,0.8s							
KSH	**Kashi**	**63.51**	**317**	P		**P**	**14 58 48.9**	**+1.0**
KSH				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**63.64**	**327**	P		**P**	**14 58 48.4**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=129,slow=8.0,SNR=40							
	comp=Z,4.1nm,0.7s							
YAK	**Yakutsk**	**64.98**	**1**	P		**P**	**14 58 57.2**	**+0.4**
	comp=Z,9.0nm,0.7s,baz=239,slow=0.0,SNR=7.2							
	comp=Z,9.0nm,0.7s							
YAK	**Yakutsk**	**64.98**	**1**	P		**P**	**14 58 55.3**	**-1.5**
ZALV	**Zalesovo Beam**	**67.03**	**334**	P		**P**	**14 59 09.0**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=111,slow=8.1,SNR=5.0							
	comp=Z,0.7nm,0.4s							
KURBB	**Kurchatov Arra**	**67.93**	**329**	P		**P**	**14 59 15.8**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=127,slow=5.8,SNR=41							
	comp=Z,3.8nm,0.7s							
SEY	**Seymchan**	**68.50**	**12**	P		**P**	**14 59 20.1**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=252,slow=2.8,SNR=9.9							
	comp=Z,3.1nm,0.8s							
TIXI	**Tiksi**	**74.63**	**0**	P		**P**	**14 59 55.9**	**-0.2**
	comp=Z,4.6nm,0.5s,baz=272,slow=22,SNR=7.4							
	comp=Z,4.6nm,0.5s							
NRIK	**Noril'sk**	**77.22**	**346**	P		**P**	**15 00 10.1**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=143,slow=10.0,SNR=2.0							
	comp=Z,1.2nm,0.3s							
MAW	**Mawson**	**77.67**	**201**	P		**P**	**15 00 12.2**	**-1.2**
	comp=Z,2.3nm,0.6s,baz=60,slow=6.8,SNR=6.7							
	comp=Z,2.3nm,0.6s							
MAW	**Mawson**	**77.67**	**201**	P		**P**	**15 00 11.7**	**-1.8**
ABKAR	**Akbulak array**	**77.95**	**322**	P		**P**	**15 00 13.1**	**-2.3**
AKTO	**Aktyubinsk**	**79.51**	**322**	P		**P**	**15 00 22.6**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=88,slow=9.5,SNR=5.4							
	comp=Z,1.2nm,0.7s							
KBZ	**Khabaz**	**88.24**	**314**	P		**P**	**15 01 08.6**	**0.0**
	comp=Z,0.9nm,0.4s,baz=290,slow=6.7,SN

baz=267,slow=74,SNR=9.0
H11N2 WAKE ISLAND Hy 20.16 83 T T 15 31 40.9
baz=267,slow=74,SNR=6.9
H11N3 WAKE ISLAND Hy 20.17 83 T T 15 31 40.4
baz=267,slow=74,SNR=8.9
JSD Sado 20.52 343 P **P** **15 10 24.0 +0.9**
JSD IAmb IAmb 15 10 25.3
comp=Z,8.6nm,0.7s
JTU Tsushima 21.54 321 P **P** **15 10 33.5 -0.4**
YOJ Yonaguni jima 21.84 290 P **P** **15 10 39.0 +2.0**
YOJ IAmb IAmb 15 11 02.4
comp=Z,19nm,1.2s
KSBUS Busan 22.21 322 P **P** **15 10 40.9 +0.4**
KSBUS IAmb IAmb 15 10 41.9
comp=Z,78nm,1.4s
JTM Tenmabayashi 22.58 351 P **P** **15 10 45.0 +1.1**
JTM IAmb IAmb 15 10 46.9
comp=Z,26nm,1.0s
YULB Yu-li 23.21 286 P **P** **15 10 51.7 +2.0**
YHNB Yeheng 23.34 290 P **P** **15 10 51.9 +0.9**
YHNB IAmb IAmb 15 11 03.4
comp=Z,20nm,1.2s
SSLB Suanglung 23.58 287 P **P** **15 10 54.5 +1.4**
SSLB IAmb IAmb 15 10 59.6
comp=Z,9.5nm,0.6s
TPUB Ta-pu 23.81 286 P **P** **15 10 56.0 +0.7**
TPUB IAmb IAmb 15 11 17.4
comp=Z,21nm,1.3s
KSRS Korea Array 24.45 324 P **P** **15 11 00.9 +0.2**
comp=Z,1.9nm,0.6s,baz=146,slow=9.2,SNR=17
comp=Z,1.9nm,0.6s
KSAR Wonju Array Be 24.46 324 P **P** **15 11 00.7 -0.2**
KS19 Wonju Array Si 24.51 324 P **P** **15 11 01.3 -0.1**
KS19 IAmb IAmb 15 11 33.8
comp=Z,14nm,1.5s
JEW Eniwo 24.55 353 P **P** **15 11 03.7 +2.0**
MTN Manton Dam 34.23 206 P **P** **15 12 27.4 0.0**
PEA0B Petropavlovsk- 35.83 12 P **P** **15 12 41.0 +0.4**
PEA0B IAmb IAmb 15 12 50.5
comp=Z,25nm,1.4s
PETK Petropavlovsk- 35.83 12 P **P** **15 12 41.2 +0.6**
comp=Z,1.5nm,0.6s,baz=137,slow=7.2,SNR=7.7
comp=Z,1.5nm,0.6s
PETK Petropavlovsk- 35.83 12 P **P** **15 12 41.8 +1.2**
SBUM Sibu 36.37 248 P **P** **15 12 46.9 +1.1**
HHC Hu-ho-hao-te 36.69 315 *eP* **P** **15 12 49.3 +1.0**
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,270nm,4.2s
KNRA Kununurra 37.77 207 P **P** **15 12 58.1 +0.6**
KSM Kuching 38.51 248 P **P** **15 13 05.0 +1.2**
KSM IAmb IAmb 15 13 35.0
comp=Z,21nm,1.5s
WB0 Warramunga Arr 39.56 197 P **P** **15 13 12.5 +0.2**
WB0 IAmb IAmb 15 13 49.9
comp=Z,9.4nm,1.1s
WR0 Warramunga Arr 39.71 196 P **P** **15 13 13.6 +0.1**
WB2 Warramunga Arr 39.74 197 P **P** **15 13 13.9 +0.1**
WB2 IAmb IAmb 15 13 41.7
comp=Z,7.5nm,1.1s
WRA Warramunga Arr 39.74 197 P **P** **15 13 13.4 -0.4**
comp=Z,0.9nm,0.3s,baz=12,slow=8.5,SNR=40
WRA PcP **PcP** **15 15 15.8 -0.6**
comp=Z,0.8nm,0.4s,baz=17,slow=3.6,SNR=8.6
comp=Z,0.9nm,0.3s
WRA Warramunga Arr 39.74 197 P **P** **15 13 13.7 -0.1**
PZH PanZhiHua 41.15 289 P **P** **15 13 29.2 +3.7**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,5.1s
MA2 Magadan 41.22 4 P **P** **15 13 26.7 +1.3**
comp=Z,2.8nm,0.5s,baz=116,slow=17,SNR=2.2
comp=Z,2.8nm,0.5s
FITZ Fitzroy Crossi 41.30 209 P **P** **15 13 27.2 +0.7**
comp=Z,2.2nm,0.3s,baz=38,slow=9.5,SNR=42
comp=Z,2.2nm,0.3s
FITZ Fitzroy Crossi 41.30 209 P **P** **15 13 27.1 +0.6**
FITZ IAmb IAmb 15 13 52.6
comp=Z,12nm,1.4s
SMRI Semarang 42.97 237 P **P** **15 13 40.6 +0.4**
SONM Songino Array 43.26 322 P **P** **15 13 41.8 -0.4**
comp=Z,2.4nm,0.6s,baz=128,slow=6.8,SNR=5.4
comp=Z,2.4nm,0.6s
SONM Songino Array 43.26 322 P **P** **15 13 42.4 +0.2**
AS31 Alice Springs 43.41 196 P **P** **15 13 43.5 -0.1**
ASAR Alice Springs 43.41 196 P **P** **15 13 43.2 -0.3**
comp=Z,0.3nm,0.4s,baz=18,slow=6.7,SNR=14
ASAR PcP **PcP** **15 15 27.6 -0.8**
comp=Z,0.5nm,0.5s,baz=18,slow=2.8,SNR=6.2
comp=Z,0.3nm,0.4s
ASAR Alice Springs 43.41 196 P **P** **15 13 43.7 +0.2**
CMAR Chiang Mai Arr 44.16 278 P **P** **15 13 47.5 -2.2**
comp=Z,0.4nm,0.3s,baz=19,slow=21,SNR=2.6
comp=Z,0.4nm,0.3s
KIWB Kanaga Island 44.30 33 P **P** **15 13 49.4 -0.9**
ADK Adak 44.56 33 P **P** **15 13 52.5 +0.2**
ADK IAmb IAmb 15 13 54.4
comp=Z,17nm,1.1s
SEY Seymchan 44.67 4 P **P** **15 13 53.5 +0.5**
comp=Z,1.4nm,0.7s,baz=186,slow=10,SNR=5.2
comp=Z,1.4nm,0.7s
YAK Yakutsk 44.92 349 P **P** **15 13 54.2 -0.8**
YAK IAmb IAmb 15 13 56.0
comp=Z,14nm,0.8s
DZM Mont Dzumac 45.16 152 P **P** **15 13 57.7 +0.2**
MBWA Marble Bar 46.84 214 P **P** **15 14 11.0 +0.5**
MBWA IAmb IAmb 15 14 25.2
comp=Z,26nm,1.4s
PSA00 Pilbara Seismi 47.12 214 P **P** **15 14 12.9 +0.2**
PSA00 IAmb IAmb 15 14 45.8
comp=Z,22nm,1.4s
PSA00 Pilbara Seismi 47.12 214 P **P** **15 14 13.2 +0.5**
PSA00 IAmb IAmb 15 14 45.8
comp=Z,5.5nm,1.3s
BKNI Bangkinang 47.31 253 P **P** **15 14 15.2 +0.8**
NIKH Nikolski High 49.24 35 P **P** **15 14 28.4 -0.1**
NIKH Nikolski High 49.24 35 P **P** **15 14 28.7 +0.1**
baz=243
STKA Stephens Creek 50.21 184 P **P** **15 14 34.4 -1.6**
comp=Z,0.5nm,0.3s,baz=342,slow=11,SNR=3.1
comp=Z,0.5nm,0.3s
SPIA Saint Paul Isl 50.58 29 P **P** **15 14 39.2 +0.7**
SPIA Saint Paul Isl 50.58 29 P **P** **15 14 38.9 +0.4**
baz=239
GIRL Giralia 51.09 218 P **P** **15 14 43.0 +0.2**
AKUT Akutan 51.41 34 P **P** **15 14 45.0 +0.3**
FORT Forrest 51.79 199 P **P** **15 14 48.2 +0.3**
FORT IAmb IAmb 15 15 06.9
comp=Z,19nm,0.9s
BBOO Buckleboo 51.80 190 P **P** **15 14 47.0 -0.9**
BBOO IAmb IAmb 15 15 08.9
comp=Z,32nm,1.5s
GAMB Gambell 53.70 22 P **P** **15 15 01.8 +0.4**
baz=233
S12K Black Hills 53.99 34 P **P** **15 15 03.9 +0.2**
baz=248
TIXI Tiksi 54.08 354 P **P** **15 15 03.7 -0.3**
TIXI IAmb IAmb 15 15 06.5
comp=Z,6.0nm,1.0s
WMQ Urumqi 54.39 311 *eP* **P** **15 15 10.4 +3.5**
SDPT Sand Point 54.71 34 P **P** **15 15 08.4 -0.4**
SDPT Sand Point 54.71 34 P **P** **15 15 09.2 +0.4**
baz=250
CNBA Chernabura Isl 55.01 35 P **P** **15 15 11.6 +0.6**
MORW Morawa 55.22 212 P **P** **15 15 12.8 0.0**
MORW IAmb IAmb 15 15 55.9
comp=Z,20nm,1.4s
MORW PcP **PcP** **15 16 08.2 -3.1**
MWH Moku'aweowe 55.37 79 P **P** **15 15 12.9 -1.9**
S14K Fog Glacier 55.52 34 P **P** **15 15 14.9 +0.2**
baz=250
TNA Tin City 56.06 21 P **P** **15 15 18.8 +0.6**
baz=236
CHGN Chignik 56.12 34 P **P** **15 15 18.6 -0.2**
CHGN PcP **PcP** **15 16 14.0 -0.4**
N16K Nishlik Lake 57.38 29 P **P** **15 15 28.6 +0.8**
baz=248
O16K Kokwok River B 57.38 30 P **P** **15 15 28.6 +0.9**
baz=249
CHIR Chirikof Islan 57.48 35 P **P** **15 15 28.2 -0.3**
baz=254
R17K Ugashik Creek 57.59 33 P **P** **15 15 29.3 +0.1**
baz=252
NWAO Narrogin (SRO) 57.86 208 P **P** **15 15 31.5 +0.1**
NWAO IAmb IAmb 15 16 03.8
comp=Z,19nm,1.3s
O17K Koliganek Bris 57.92 30 P **P** **15 15 31.9 +0.5**
baz=250
ZALV Zalesovo Beam 58.14 323 P **P** **15 15 31.3 -1.8**
comp=Z,1.4nm,0.5s,baz=104,slow=6.7,SNR=5.6
comp=Z,1.4nm,0.5s
SII Sitkinak Islan 58.45 34 P **P** **15 15 35.8 +0.6**
SII Sitkinak Islan 58.45 34 P **P** **15 15 35.7 +0.5**
baz=255
MKAR Makanchi Array 58.55 314 P **P** **15 15 36.4 +0.2**
comp=Z,1.2nm,0.5s,baz=92,slow=7.8,SNR=21
comp=Z,1.2nm,0.5s
MAKZ Makanchi 58.77 314 P **P** **15 15 38.4 +0.8**
MAKZ IAmb IAmb 15 15 39.0
comp=Z,6.2nm,1.2s
N18K Kilae Creek 58.79 29 P **P** **15 15 37.2 -0.3**
N18K IAmb IAmb 15 16 14.9
comp=Z,9.3nm,1.2s
N18K Kilae Creek 58.79 29 P **P** **15 15 37.5 0.0**
baz=251
O18K Koktuh Hills 58.85 30 P **P** **15 15 38.3 +0.4**
O18K IAmb IAmb 15 15 59.8
comp=Z,21nm,1.3s
SVW2 Sparrevohn 59.07 29 P **P** **15 15 40.1 +0.7**
SVW2 IAmb IAmb 15 15 41.4
comp=Z,6.9nm,1.2s
OHAK Old Harbor 59.09 34 P **P** **15 15 40.6 +1.1**
OHAK Old Harbor 59.09 34 P **P** **15 15 40.2 +0.7**
baz=255
O19K Port Alsworth 59.38 30 P **P** **15 15 42.3 +0.8**
baz=253
N19K Bonanza Creek 59.49 29 P **P** **15 15 42.2 -0.2**
N19K IAmb IAmb 15 15 44.5
comp=Z,5.0nm,0.8s
N19K Bonanza Creek 59.49 29 P **P** **15 15 43.8 +1.4**
baz=252
TTA Tatalina 59.49 27 P **P** **15 15 42.9 +0.5**
TTA Tatalina 59.49 27 P **P** **15 15 42.8 +0.5**
baz=250
L19K White Mountain 59.75 28 P **P** **15 15 44.1 0.0**
L19K White Mountain 59.75 28 P **P** **15 15 44.8 +0.8**
baz=251
M19K Big River Lodg 59.87 28 P **P** **15 15 45.0 +0.1**
M19K IAmb IAmb 15 15 57.5
comp=Z,5.5nm,1.2s
Q20K Shuyak Island 59.90 32 P **P** **15 15 45.1 +0.1**
baz=255
L20K Farewell, AK 60.27 28 P **P** **15 15 48.3 +0.7**
baz=252
M20K Styx River 60.43 29 P **P** **15 15 48.7 -0.1**
M20K IAmb IAmb 15 16 12.6
comp=Z,7.3nm,1.4s
M20K Styx River 60.43 29 P **P** **15 15 49.4 +0.6**
baz=253
K20K Telida 60.47 27 P **P** **15 15 49.6 +0.8**
K20K Telida 60.47 27 P **P** **15 15 49.9 +1.0**
baz=251
J20K Nowinta River 60.70 26 P **P** **15 15 51.6 +1.2**
J20K Nowinta River 60.70 26 P **P** **15 15 51.3 +0.9**
baz=251
CNPM China Poot 60.70 31 P **P** **15 15 50.6 +0.1**
PPLA Purkeypile 61.14 28 P **P** **15 15 54.3 +0.7**
baz=253
CAST Castle Rocks 61.34 27 P **P** **15 15 55.5 +0.7**
CAST IAmb IAmb 15 15 55.9
comp=Z,5.2nm,0.5s
CAST Castle Rocks 61.34 27 P **P** **15 15 55.5 +0.7**
baz=253
KURK Kurchatov 61.38 318 P **P** **15 15 55.7 +0.5**
KURK IAmb IAmb 15 15 56.6
comp=Z,5.8nm,1.4s
IMAR Indian Mountai 61.46 24 P **P** **15 15 56.2 +0.7**
IMAR PcP **PcP** **15 16 35.7 +0.1**
SEW Seward 61.71 31 P **P** **15 15 57.6 +0.4**
baz=257
H21K Melozitna Rive 61.72 24 P **P** **15 15 58.3 +1.1**
H21K Melozitna Rive 61.72 24 P **P** **15 15 57.3 0.0**
baz=251
G21K Allakaket 61.73 23 P **P** **15 15 57.3 -0.1**
baz=250
NRIK Noril'sk 61.79 340 P **P** **15 15 56.6 -1.0**
comp=Z,2.8nm,0.4s,baz=108,slow=9.2,SNR=5.5
comp=Z,2.8nm,0.4s
NRIK Noril'sk 61.79 340 P **P** **15 15 57.8 +0.2**
NRIK IAmb IAmb 15 15 58.6
comp=Z,3.6nm,0.6s
RC01 Rabbit Creek A 61.79 30 P **P** **15 15 57.9 +0.1**
RC01 Rabbit Creek A 61.79 30 P **P** **15 15 58.2 +0.4**
baz=257
I21K Tanana 61.90 25 P **P** **15 15 59.6 +1.2**
I21K IAmb IAmb 15 15 60.0
comp=Z,3.4nm,0.6s
I21K Tanana 61.90 25 P **P** **15 15 59.3 +0.9**
baz=252
F21K Alatna River 61.98 23 P **P** **15 15 59.7 +0.6**
baz=250
BPAW Bear Paw Mtn. 62.00 26 P **P** **15 15 59.8 +0.7**
BPAW IAmb IAmb 15 16 00.6
comp=Z,7.4nm,1.1s
BPAW Bear Paw Mtn. 62.00 26 P **P** **15 15 59.5 +0.4**
baz=254
TRF Thorofare Moun 62.12 27 P **P** **15 16 00.0 -0.1**
TRF IAmb IAmb 15 16 00.9
comp=Z,6.7nm,1.1s
TRF PcP **PcP** **15 16 37.5 -1.0**
TRF Thorofare Moun 62.12 27 P **P** **15 16 00.4 +0.2**
baz=255
PMR Palmer 62.19 29 P **P** **15 16 01.0 +0.5**
baz=257
GHO Glory Hole Cre 62.33 29 P **P** **15 16 01.7 +0.2**
GHO IAmb IAmb 15 16 02.3
comp=Z,4.1nm,0.8s
GHO PcP **PcP** **15 16 39.0 -0.3**
H22K Ishtalitna Cre 62.35 24 P **P** **15 16 01.9 +0.4**
baz=252
MLY Manley 62.36 25 P **P** **15 16 02.1 +0.5**
MLY IAmb IAmb 15 16 02.7
comp=Z,3.6nm,0.6s
MLY PcP **PcP** **15 16 39.1 -0.2**
MLY Manley 62.36 25 P **P** **15 16 02.2 +0.6**
baz=254
PWL Port Wells 62.41 30 P **P** **15 16 02.1 +0.2**
PWL IAmb IAmb 15 16 32.8
comp=Z,18nm,1.4s
PWL PcP **PcP** **15 16 39.3 -0.3**
PWL Port Wells 62.41 30 P **P** **15 16 02.4 +0.5**
baz=258
KNK Knik Glacier 62.47 30 P **P** **15 16 02.8 +0.5**
baz=258
A21K Barrow 62.54 18 P **P** **15 16 03.4 +0.9**
A21K IAmb IAmb 15 16 36.1
comp=Z,10nm,0.8s
F22K John River 62.55 23 P **P** **15 16 03.3 +0.5**
baz=251,SNR=5.5
SML Sawmill 62.61 29 P **P** **15 16 03.7 +0.4**
SML IAmb IAmb 15 16 04.4
comp=Z,7.6nm,0.8s
SML PcP **PcP** **15 16 40.6 +0.2**
SML Sawmill 62.61 29 P **P** **15 16 03.7 +0.4**
baz=258
WAT1 Susitna Watana 62.74 28 P **P** **15 16 04.2 +0.1**
baz=257
E22K Anaktuvuk Pass 62.89 22 P **P** **15 16 05.5 +0.5**
baz=251,SNR=6.9
NEA2 Nenana 62.93 26 P **P** **15 16 06.0 +0.7**
NEA2 Nenana 62.93 26 P **P** **15 16 05.7 +0.4**
baz=255
I23K Minto, Yukon-K 62.95 25 P **P** **15 16 06.0 +0.6**
I23K IAmb IAmb 15 16 07.2
comp=Z,3.5nm,0.6s
I23K Minto, Yukon-K 62.95 25 P **P** **15 16 06.2 +0.8**
baz=255
GLI Glacier Island 63.01 30 P **P** **15 16 06.5 +0.6**
GLI Glacier Island 63.01 30 P **P** **15 16 06.2 +0.3**
baz=259
WAT6 Susitna Watana 63.05 28 P **P** **15 16 06.4 +0.1**
baz=258
H23K Yukon River 63.06 25 P **P** **15 16 07.0 +0.8**
H23K PcP **PcP** **15 16 41.6 -0.5**
H23K Yukon River 63.06 25 P **P** **15 16 06.8 +0.6**
baz=254
SCM Sheep Creek Mo 63.08 29 P **P** **15 16 06.8 +0.3**
SCM IAmb IAmb 15 16 14.8
comp=Z,22nm,1.5s
SCM Sheep Creek Mo 63.08 29 P **P** **15 16 07.0 +0.6**
baz=258
G23K Bananza Creek 63.12 24 P **P** **15 16 07.0 +0.5**
baz=254
COLD Coldfoot 63.20 23 P **P** **15 16 07.6 +0.6**
COLD Coldfoot 63.20 23 P **P** **15 16 07.6 +0.6**
baz=253
HIN Hinchinbrook I 63.21 31 P **P** **15 16 07.5 +0.3**
HIN PcP **PcP** **15 16 42.7 -0.1**
FID Port Fidalgo 63.28 31 P **P** **15 16 08.2 +0.5**
WRH Wood River Hil 63.31 26 P **P** **15 16 07.4 -0.4**
WRH IAmb IAmb 15 16 08.2
comp=Z,4.9nm,1.2s
DHY Denali Highway 63.31 28 P **P** **15 16 07.7 -0.4**
DHY PcP **PcP** **15 16 43.2 -0.2**
DHY Denali Highway 63.31 28 P **P** **15 16 08.4 +0.3**
baz=258
MDM Murphy Dome 63.37 26 P **P** **15 16 08.0 -0.2**
MDM IAmb IAmb 15 16 09.7
comp=Z,3.3nm,0.7s
CCB Clear Creek Bu 63.48 26 P **P** **15 16 08.5 -0.4**
CCB PcP **PcP** **15 16 43.0 -0.8**
D23K Nanushuk River 63.55 21 P **P** **15 16 10.0 +0.7**
baz=252
EYAK Cordova Ski Ar 63.60 31 P **P** **15 16 10.3 +0.6**
EYAK IAmb IAmb 15 16 17.5
comp=Z,16nm,1.3s
EYAK Cordova Ski Ar 63.60 31 P **P** **15 16 10.1 +0.4**
baz=260
KLU Klutina 63.68 30 P **P** **15 16 10.5 +0.2**
KLU IAmb IAmb 15 16 39.5
comp=Z,7.2nm,1.2s
KLU Klutina 63.68 30 P **P** **15 16 10.6 +0.3**
baz=260
H24K Noodor Dome 63.73 25 P **P** **15 16 11.1 +0.5**
H24K PcP **PcP** **15 16 45.4 +0.5**
H24K Noodor Dome 63.73 25 P **P** **15 16 11.0 +0.4**
baz=256
POKR Poker Plat Res 63.74 26 P **P** **15 16 11.1 +0.5**
POKR Poker Plat Res 63.74 26 P **P** **15 16 11.0 +0.4**
baz=257
HDA Harding Lake 63.78 27 P **P** **15 16 09.7 -1.2**
HDA Harding Lake 63.78 27 P **P** **15 16 11.1 +0.2**
baz=258
TOLK Toolik Lake Re 63.84 22 P **P** **15 16 12.2 +1.0**
TOLK IAmb IAmb 15 16 13.0
comp=Z,4.6nm,0.8s
TOLK Toolik Lake Re 63.84 22 P **P** **15 16 11.9 +0.7**
baz=253
C23K Itkillik River 63.85 20 P **P** **15 16 11.9 +0.7**
baz=251,SNR=6.2
IL31 63.89 26 P **P** **15 16 10.4 -1.1**
ILAR Eielson Array 63.89 26 P **P** **15 16 09.6 -2.0**
comp=Z,1.6nm,0.5s,baz=250,slow=6.1,SNR=28
comp=Z,1.6nm,0.5s
ILAR Eielson Array 63.89 26 P **P** **15 16 10.3 -1.2**
ILAR PcP **PcP** **15 16 42.9 -2.6**
E24K Your Creek 64.06 22 P **P** **15 16 13.4 +0.7**
baz=254,SNR=5.4
G24K Hadweenzic Riv 64.09 24 P **P** **15 16 13.6 +0.8**
baz=256
F24K Squaw Lake 64.14 23 P **P** **15 16 13.9 +0.7**
baz=255
PAX Paxson 64.15 28 P **P** **15 16 13.9 +0.5**
PAX IAmb IAmb 15 16 14.5
comp=Z,2.5nm,0.6s
PAX Paxson 64.15 28 P **P** **15 16 13.9 +0.5**
baz=260
KAIM Kayak Island 64.17 32 P **P** **15 16 14.7 +1.3**
HARP HAARP 64.19 29 P **P** **15 16 14.3 +0.7**
baz=260
BKZ Black Stump Fm 64.21 154 P **P** **15 16 12.9 -1.2**
BMRM Bremner River 64.22 31 P **P** **15 16 14.8 +0.9**
BMRM IAmb IAmb 15 16 16.1
comp=Z,7.9nm,1.0s
BMRM Bremner River 64.22 31 P **P** **15 16 14.5 +0.6**
baz=261
D24K Happy Valley 64.24 21 P **P** **15 16 14.9 +1.1**
baz=254
N25K Chitina, Valde 64.32 30 P **P** **15 16 15.3 +0.7**
N25K Chitina, Valde 64.32 30 P **P** **15 16 15.2 +0.7**
baz=261
C24K Franklin Bluff 64.44 21 P **P** **15 16 16.1 +1.0**
baz=253
J25K Salcha River, 64.49 26 P **P** **15 16 14.8 -0.8**
J25K Salcha River, 64.49 26 P **P** **15 16 15.0 -0.6**
baz=259
SUCK Suckling Hills 64.51 32 P **P** **15 16 15.7 0.0**
RIDG Independent Ri 64.56 27 P **P** **15 16 16.1 +0.1**
RIDG IAmb IAmb 15 16 17.5
comp=Z,7.6nm,1.1s
RIDG Independent Ri 64.56 27 P **P** **15 16 16.4 +0.4**
baz=260
PRP Porcupine Dome 64.61 25 P **P** **15 16 15.9 -0.5**
G25K Bearman Lake 64.64 24 P **P** **15 16 17.2 +0.8**
baz=257
H25K Birch Creek 64.64 25 P **P** **15 16 16.4 0.0**
baz=258
GLB Gilahina Butte 64.67 30 P **P** **15 16 16.6 -0.1**
GLB IAmb IAmb 15 16 18.5
comp=Z,11nm,1.4s
NNZ Nelson 64.74 157 P **P** **15 16 16.4 -0.9**
DOT Dot Lake 64.89 28 P **P** **15 16 17.8 -0.3**
DOT IAmb IAmb 15 16 18.9
comp=Z,3.7nm,0.8s
CRQM Cirque 64.91 31 P **P** **15 16 18.9 +0.4**
CRQM IAmb IAmb 15 16 20.6
comp=Z,15nm,1.4s
CRQE Cirque 64.93 31 P **P** **15 16 18.8 +0.3**
baz=263
SCRK Sand Creek 64.97 27 P **P** **15 16 18.1 -0.7**
SCRK Sand Creek 64.97 27 P **P** **15 16 18.9 +0.1**
baz=260
F25K Christian River 64.99 23 P **P** **15 16 19.4 +0.7**
baz=257,SNR=5.9
MCARA McCarthy VSAT 65.04 30 P **P** **15 16 19.6 +0.5**
baz=263
L26K Log Cabin Wild 65.11 28 P **P** **15 16 19.9 +0.3**
L26K Log Cabin Wild 65.11 28 P **P** **15 16 19.7 +0.2**
baz=262
D25K Kavik River 65.13 21 P **P** **15 16 20.3 +0.7**
baz=256,SNR=7.7
E25K Arctic Village 65.14 23 P **P** **15 16 20.2 +0.6**
baz=257
M26K Nabesna, AK 65.19 29 P **P** **15 16 20.7 +0.6**
M26K Nabesna, AK 65.19 29 P **P** **15 16 20.6 +0.6**
baz=262
J26L Joseph Creek 65.24 27 P **P** **15 16 20.0 -0.4**
J26L Joseph Creek 65.24 27 P **P** **15 16 20.4 0.0**
baz=261,SNR=6.2
BMAR Burnt Mountain 65.36 23 P **P** **15 16 22.5 +1.4**
BMAR PcP **PcP** **15 16 52.9 +1.3**
I26K Coal Creek Min 65.54 26 P **P** **15 16 21.8 -0.5**
baz=261
G26K Porcupine Rive 65.57 24 P **P** **15 16 23.2 +0.8**
baz=259
F26K Sheenjek River 65.58 23 P **P** **15 16 23.3 +0.9**
baz=259,SNR=7.6
GRNC Granite Creek 65.58 31 P **P** **15 16 23.3 +0.5**
GRNC IAmb IAmb 15 16 24.3
comp=Z,4.6nm,0.8s
M27K Edge Creek, AK 65.70 29 P **P** **15 16 24.2 +0.7**
M27K Edge Creek, AK 65.70 29 P **P** **15 16 24.0 +0.5**
baz=263
C26K Camden Bay 65.77 21 P **P** **15 16 24.5 +0.9**
baz=257
L27K Beaver Creek, 65.80 28 P **P** **15 16 23.8 -0.2**
L27K PcP **PcP** **15 16 54.5 +1.0**
L27K Beaver Creek, 65.80 28 P **P** **15 16 24.8 +0.7**
baz=263
CTG Chitna Glacier 65.81 31 P **P** **15 16 25.0 +0.8**
baz=264
K27K Chicken 65.82 27 P **P** **15 16 24.5 +0.5**
baz=262
C27K Jago River 66.11 21 P **P** **15 16 26.7 +0.9**
baz=258
BVCY Beaver Creek 66.17 29 P **P** **15 16 27.0 +0.6**
baz=264
YUK3 Moose Creek 66.30 30 P **P** **15 16 28.2 +0.7**
baz=265
H27K Steamboat Moun 66.35 25 P **P** **15 16 27.9 +0.5**
baz=262
O28M Mount Upton 66.35 31 P **P** **15 16 28.5 +0.7**
baz=265
G27K Doyon Strip 66.38 24 P **P** **15 16 28.3 +0.7**
baz=261
E27K Coleen River 66.61 23 P **P** **15 16 29.7 +0.7**

baz=261
BRVK Borovoye 66.65 321 P **P** **15 16 30.0 +0.5**
BRVK IAmb IAmb 15 16 30.9
comp=Z,5.1nm,0.6s
KKAR Karatay Array 66.84 310 P **P** **15 16 31.2 +0.3**
DAWY Dawson 66.99 27 P **P** **15 16 32.5 +0.9**
baz=265
O29M Mount Kennedy 67.11 32 P **P** **15 16 33.5 +1.0**
baz=267
YUK4 Talbot Arm 67.14 30 P **P** **15 16 33.9 +1.2**
baz=267
YUK6 Outpost Mounta 67.25 31 P **P** **15 16 34.5 +1.1**
baz=267
M29M Somme Creek 67.29 29 P **P** **15 16 34.7 +1.2**
baz=266
P29M Windy Craggy 67.51 32 P **P** **15 16 36.1 +1.2**
baz=268
HYT Haines Junctio 67.67 31 P **P** **15 16 36.8 +0.9**
HYT IAmb IAmb 15 16 38.6
comp=Z,5.6nm,1.0s
HYT Haines Junctio 67.67 31 P **P** **15 16 37.0 +1.1**
baz=268
N30M Aishikik Lake 67.89 30 P **P** **15 16 38.3 +1.0**
baz=268
P30M Million Dollar 67.92 32 P **P** **15 16 38.2 +0.8**
baz=269
M30M Minto, Yukon 68.07 29 P **P** **15 16 39.2 +0.9**
baz=268
PLBC Pleasant Camp 68.20 33 P **P** **15 16 39.8 +0.6**
baz=269
N31M Braeburn, Yuko 68.52 30 P **P** **15 16 41.4 +0.3**
baz=269
M31M Drury Creek, Y 69.18 30 P **P** **15 16 45.8 +0.6**
baz=270
INK Inuvik 69.61 23 P **P** **15 16 46.8 -0.8**
comp=Z,2.3nm,0.3s,baz=248,slow=5.7,SNR=6.9
comp=Z,2.3nm,0.3s
INK Inuvik 69.61 23 P **P** **15 16 48.4 +0.7**
baz=268
P33M Teslin, Yukon 69.98 32 P **P** **15 16 51.0 +0.9**
baz=272
R33M Jennings River 70.96 33 P **P** **15 16 56.8 +0.6**
baz=274
DLBC Dease Lake 71.53 33 P **P** **15 16 59.9 +0.4**
comp=Z,2.1nm,0.5s,baz=284,slow=17,SNR=6.9
comp=Z,2.1nm,0.5s
DLBC Dease Lake 71.53 33 P **P** **15 17 00.3 +0.8**
baz=275
C36M Paulatuk 72.99 22 P **P** **15 17 07.9 +0.1**
baz=277
ABKAR Akbulak array 73.44 317 P **P** **15 17 09.5 -1.4**
YKA Yellowknife Ar 78.23 28 P **P** **15 17 37.3 -0.4**
comp=Z,1.5nm,0.6s,baz=289,slow=5.5,SNR=11
comp=Z,1.5nm,0.6s
B08A Colville Reser 79.70 42 P **P** **15 17 46.4 +0.3**
B08A IAmb IAmb 15 17 47.2
comp=Z,3.4nm,0.6s
J05D Fort Rock, OR 79.81 48 P **P** **15 17 47.3 +0.4**
baz=286
PINE Pine Mountain 79.88 47 P **P** **15 17 47.9 +0.6**
PINE IAmb IAmb 15 17 49.6
comp=Z,7.2nm,0.9s
NEW Newport 81.14 42 P **P** **15 17 54.0 +0.2**
baz=288
ARCES ARCESS Array B 82.68 342 P **P** **15 18 00.0 -1.3**
comp=Z,0.3nm,0.3s,baz=82,slow=8.2,SNR=21
comp=Z,0.3nm,0.3s
KVN Kaiserville 83.31 51 P **P** **15 18 05.2 -0.2**
NVAR Mina Array Bea 83.35 52 P **P** **15 18 06.2 +0.5**
comp=Z,1.9nm,0.7s,baz=270,slow=6.0,SNR=17
comp=Z,1.9nm,0.7s
NVAR Mina Array Bea 83.35 52 P **P** **15 18 06.0 +0.4**
MFID Camas Ranch 83.53 46 P **P** **15 18 06.5 +0.2**
MFID IAmb IAmb 15 18 07.6
comp=Z,3.7nm,0.8s
HLID Hailey 84.45 46 P **P** **15 18 11.5 +0.4**
baz=290
MPMC Manual Prospec 84.72 54 P **P** **15 18 13.1 +0.5**
baz=289
ELK Elko 84.84 49 P **P** **15 18 12.8 -0.3**
TPNV Topopah Spring 85.37 53 P **P** **15 18 16.0 +0.2**
baz=290
R11A Troy Canyon, C 85.40 51 P **P** **15 18 16.4 +0.5**
baz=290
BOZ Bozeman (W) 85.58 43 P **P** **15 18 16.7 +0.1**
baz=292
DUG Dugway, Tooele 86.76 49 P **P** **15 18 22.7 +0.2**
baz=291
FINES FINESS Array B 87.05 335 P **P** **15 18 20.5 -2.7**
comp=Z,3.0nm,0.6s,baz=62,slow=4.8,SNR=12
comp=Z,3.0nm,0.6s
IRM Iron Mountain 87.16 55 P **P** **15 18 24.2 -0.2**
baz=290
PDAR Pinedale Array 88.05 45 P **P** **15 18 28.0 -0.7**
comp=Z,0.3nm,0.4s,baz=326,slow=0.5,SNR=6.1
comp=Z,0.3nm,0.4s
WUAZ Wupatki 89.56 53 P **P** **15 18 35.9 +0.1**
baz=292
TUC Tucson 91.24 55 P **P** **15 18 44.2 +0.6**
baz=293
N23A Red Feather La 91.28 46 P **P** **15 18 43.9 +0.1**
baz=296
HFS Hagfors 92.56 338 P **P** **15 18 46.1 -2.8**
comp=Z,1.3nm,0.7s,baz=90,slow=3.0,SNR=6.4
comp=Z,1.3nm,0.7s
M53A WI Miller and 106.59 35 P **PKiKP** **15 24 02.7 +0.6**
baz=314
SNAA Sanae 123.69 191 PKP **PKPdf** **15 24 31.7 -2.0**
comp=Z,0.3nm,0.5s,baz=90,slow=14,SNR=1.2
LPAZ La Paz 147.76 91 PKPbc **PKPbc** **15 25 23.2 -0.1**
comp=Z,2.8nm,0.5s,baz=319,slow=4.9,SNR=10

*IDC **04** 15:10:50.1±1.2, 13.˚31N×120.˚55E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=61.9km s-min=20.3km az=59.0*

*MAN **04** 15:10:51, 13.˚17N×120.˚25E, h1km, Ms3.2*

ISC 04 15:10:51.5±1.4, 13.˚17N±0.˚03×120.˚27E±0.˚05, h6km±10km, n24, σ1°82/38, mb3.6/5, 14C-5D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.56**	**358**	⇓*e*P	**Pg**	**15 11 02.7**	**+0.4**
LUBP				*e*S	**Sg**	**15 11 09.8**	**+0.2**
PGP	**Puerto Galera**	**0.74**	**64**	⇓*e*P	**Pb**	**15 11 06.2**	**-0.7**
PGP				*i* S	**Sb**	**15 11 16.7**	**-0.7**
SJMP	**San Jose**	**1.09**	**130**	⇑*e*P	**Pn**	**15 11 14.1**	**+0.8**
SJMP				*e*S	**Sn**	**15 11 29.8**	**+1.1**
TGY	**Tagaytay City**	**1.13**	**35**	⇓*e*P	**Pn**	**15 11 14.4**	**+0.4**
TGY				*i* S	**Sn**	**15 11 31.6**	**+1.7**
BUSP	**Coron**	**1.16**	**183**	⇑*e*P	**Pn**	**15 11 15.3**	**+1.0**
BUSP				*e*S	**Sn**	**15 11 31.2**	**+0.7**
MACP	**Maragondon, Ca**	**1.17**	**22**	⇑*e*P	**Pb**	**15 11 13.9**	**-0.3**
MACP				*e*S	**Sb**	**15 11 29.5**	**-0.1**
LQP	**Lukban**	**1.55**	**53**	⇑*e*P	**Pb**	**15 11 20.2**	**-0.6**
LQP				*e*S	**Sn**	**15 11 36.2**	**-4.2**
BOAC	**Boac**	**1.56**	**79**	⇑*e*P	**Pg**	**15 11 20.8**	**-0.6**
BOAC				*e*S	**Sg**	**15 11 41.7**	**0.0**
QVP	**Quezon City--P**	**1.61**	**26**	⇑*e*P	**Pb**	**15 11 21.7**	**0.0**
CUYO	**Cuyo Island**	**2.42**	**162**	⇑*e*P	**Pn**	**15 11 32.5**	**+0.8**
CUYO				*e*S	**Sn**	**15 12 00.9**	**-0.7**
PCPH	**Palayan**	**2.51**	**19**	⇓*e*P	**Pn**	**15 11 33.2**	**+0.4**
PCPH				*e*S	**Sb**	**15 12 06.6**	**-1.6**
BALP	**Baler**	**2.85**	**26**	⇑*e*P	**Pn**	**15 11 38.5**	**+0.9**
BALP				*e*S	**Sn**	**15 12 14.6**	**+2.3**
RCP	**Roxas**	**2.90**	**123**	⇑*e*P	**Pg**	**15 11 47.4**	**+0.2**
JAP	**San Jose, Anti**	**2.92**	**146**	⇓*e*P	**Pn**	**15 11 40.3**	**+1.8**
SMPP	**San Manuel, Pa**	**2.99**	**8**	⇑*e*P	**Pn**	**15 11 39.9**	**+0.3**
SMPP				*e*S	**Sn**	**15 12 17.7**	**+2.0**
BOLP	**Bolinao**	**3.21**	**354**	⇑*e*P	**Pb**	**15 11 46.0**	**-2.9**
BOLP				*e*S	**Sb**	**15 12 25.9**	**-2.4**
GUIM	**Jordan**	**3.40**	**138**	⇑*e*P	**Pn**	**15 11 48.3**	**+3.2**
CAUP	**Cauayan**	**4.04**	**22**	⇑*e*P	**Pn**	**15 11 58.4**	**+4.5**
APYP	**Conner**	**4.76**	**11**	⇑*e*P	**Pn**	**15 12 08.1**	**+4.3**
CMAR	**Chiang Mai Arr**	**21.17**	**287**	P	**P**	**15 15 39.5**	**+1.7**
	1.6nm,0.9s,baz=101,slow=8.9,SNR=6.6 1.6nm,0.9s						
WRA	**Warramunga Arr**	**35.70**	**157**	P	**P**	**15 17 50.4**	**-0.6**
	0.6nm,0.4s,baz=338,slow=9.5,SNR=8.8 0.6nm,0.4s						
SONM	**Songino Array**	**36.45**	**344**	P	**P**	**15 17 56.6**	**-0.7**
	0.7nm,0.6s,baz=157,slow=7.8,SNR=2.1 0.7nm,0.6s						
ASAR	**Alice Springs**	**38.96**	**160**	P	**P**	**15 18 19.0**	**+0.3**
ASAR	0.7nm,0.4s,baz=336,slow=6.8,SNR=48			PcP	**PcP**	**15 20 27.7**	**-1.6**
	0.4nm,1.0s,baz=343,slow=2.9,SNR=2.9 0.7nm,0.4s						
MKAR	**Makanchi Array**	**46.21**	**324**	P	**P**	**15 19 17.1**	**-0.3**
	0.2nm,0.6s,baz=134,slow=8.4,SNR=1.8 0.2nm,0.6s						

*IDC **04** 15:16:54.9±1.6, 42.˚64S×15.˚62W, h0km, mb3.9/3, mbtmp3.9/3, MS3.8/2, Error ellipse: s-maj=67.3km s-min=39.1km az=166.0*

ISC 04 15:16:56.2±1.6, 42.˚7S±0.˚4×15.˚6W±0.˚3, h10km, n17, σ0°48/7, mb4.0/3, Tristan da Cunha region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**30.47**	**82**	LR	LR	15 33 12.5	
	comp=Z,168nm,20.2s,baz=286,slow=32						
H10S2	**ASCENSION HYDR**	**33.60**	**2**	T	T	15 57 51.1	
	baz=182,slow=74,SNR=25						
H10S3	**ASCENSION HYDR**	**33.61**	**2**	T	T	15 57 51.5	
	baz=38,slow=74,SNR=68						
H10N1	**ASCENSION HYDR**	**34.71**	**2**	T	T	15 59 21.3	
	baz=190,slow=78,SNR=17						
H10N3	**ASCENSION HYDR**	**34.72**	**2**	T	T	15 59 21.8	
	baz=190,slow=78,SNR=62						
H10N2	**ASCENSION HYDR**	**34.73**	**2**	T	T	15 59 16.0	
	baz=190,slow=78,SNR=23						
BOSA	**Boshof**	**35.71**	**80**	LR	LR	15 37 02.8	
	comp=Z,175nm,18.9s,baz=334,slow=34						
CPUP	**Villa Florida**	**37.62**	**282**	P	**P**	**15 24 10.9**	**-0.2**
	3.1nm,0.9s,baz=110,slow=4.4,SNR=5.3 3.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**57.79**	**20**	P	**P**	**15 26 47.1**	**-0.5**
	1.1nm,1.1s,baz=189,slow=7.3,SNR=2.7 1.1nm,1.1s						
ESDC	**Sonseca Array**	**82.66**	**9**	P	**P**	**15 29 20.0**	**+0.6**
	0.8nm,0.7s,baz=178,slow=5.9,SNR=6.2 0.8nm,0.7s						
H01W2	**Cape Leeuwin H**	**90.17**	**141**	T	T	17 12 25.8	
	baz=217,slow=74						
H01W1	**Cape Leeuwin H**	**90.18**	**141**	T	T	17 12 33.3	
	baz=217,slow=74						
H01W3	**Cape Leeuwin H**	**90.18**	**141**	T	T	17 12 29.5	
	baz=217						
MKAR	**Makanchi Array**	**124.10**	**55**	PKP	**PKPdf**	**15 35 54.0**	**-0.3**
	0.4nm,0.9s,baz=243,slow=1.6,SNR=1.7						
YKA	**Yellowknife Ar**	**130.67**	**323**	PKP	**PKiKP**	**15 36 07.4**	**+0.3**
	0.7nm,0.9s,baz=99,slow=2.5,SNR=4.2						
ILAR	**Eielson Array**	**144.96**	**326**	PKP	**PKPdf**	**15 36 32.7**	**+0.3**
	0.7nm,0.9s,baz=82,slow=2.6,SNR=4.3						
KSRS	**Korea Array**	**151.77**	**88**	PKPbc	**PKPbc**	**15 36 50.5**	**-0.2**
	0.4nm,0.8s,baz=248,slow=1.3,SNR=1.9						

WEL 04 15:18:55.5, 43.˚3S±3.˚3×17.˚3E±.˚, h14km±4km, M2.4/3, ML2.6/11, MLv2.4/3, Error ellipse: s-maj=0.0km s-min=0.0km az=65.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVZ	**Greta Valley S**	**0.31**	**160**	P	Pb	15 19 03.1	+0.3
GVZ				S	Sb	15 19 08.3	+0.6
LTZ	**Lake Taylor**	**0.47**	**257**	P	Pb	15 19 06.3	+0.8
LTZ				S	Sb	15 19 13.6	+1.3
AMCZ	**Amberley**	**0.53**	**199**	P	Pn	15 19 07.7	-0.8
KHZ	**Kahutara**	**0.55**	**62**	P	Pb	15 19 06.8	0.0
KHZ				S	Sb	15 19 14.5	0.0
OXZ	**Oxford**	**0.90**	**224**	P	Pn	15 19 13.7	0.0
OXZ				S	Sn	15 19 26.8	+0.3
THZ	**Tophouse**	**0.92**	**1**	P	Pn	15 19 13.6	-0.4
THZ				S	Sg	15 19 24.9	-0.3
MQZ	**McQueen's Vall**	**1.04**	**189**	P	Pb	15 19 15.0	-0.2
OKCZ	**Okains Bay**	**1.05**	**173**	P	Pg	15 19 15.8	0.0
INZ	**Inchbonnie**	**1.07**	**267**	P	Pg	15 19 17.3	+1.3
RACZ	**Rakaia**	**1.18**	**207**	P	Pn	15 19 17.5	-0.1
AKCZ	**Akaroa Harbour**	**1.19**	**179**	P	Pn	15 19 17.2	-0.5
BSWZ	**Blackbirch Sta**	**1.21**	**38**	P	Pg	15 19 19.0	+0.3
BSWZ				S	Sg	15 19 37.0	+2.5
DSZ	**Denniston Nort**	**1.23**	**319**	P	Pg	15 19 20.0	+0.8
DSZ				S	Sg	15 19 37.3	+2.1
WACZ	**Wakanui South**	**1.48**	**211**	P	Pn	15 19 21.5	-0.1
RPZ	**Rata Peaks**	**1.70**	**232**	P	Pn	15 19 24.9	+0.2
RPZ				S	Sn	15 19 46.0	-0.1
ARCZ	**Arundel**	**1.78**	**224**	P	Pn	15 19 25.9	+0.1
ARCZ				S	Sn	15 19 48.2	-0.1
TMZ	**Timaru**	**2.19**	**218**	P	Pn	15 19 31.5	+0.1
ODZ	**Otahua Downs**	**2.87**	**214**	P	Pn	15 19 40.4	-0.3

IDC 04 15:32:25.3±1.2, 5.˚04S×150.˚78E, h0km, mb3.4/4, mbtmp3.5/5, ML1.2/1, MS3.6/1, Error ellipse: s-maj=47.8km s-min=16.0km az=141.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.44**	**59**	Pn	Pb	15 32 53.5	+0.5
	92nm,0.3s,baz=216,slow=1.1,SNR=122						
KRVT				Sn	Sn	15 33 12.8	+0.5
	122nm,0.3s,baz=218,slow=16,SNR=15						
PMG	**Port Moresby**	**5.63**	**219**	Pn	Pn	15 33 52.0	+1.6
	0.5nm,0.3s,baz=90,slow=20,SNR=1.7						
PMG				Sn	Sn	15 34 55.7	0.0
	0.9nm,0.3s,baz=131,slow=20,SNR=2.0 18nm,1.0s						
WRA	**Warramunga Arr**	**21.80**	**226**	P	P	15 37 18.9	-0.3
	0.3nm,0.5s,baz=53,slow=9.9,SNR=4.7 0.3nm,0.5s						
ASAR	**Alice Springs**	**24.65**	**220**	P	P	15 37 46.7	-1.3
	0.2nm,0.5s,baz=58,slow=8.6,SNR=4.6 0.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**27.79**	**240**	P	P	15 38 18.2	+2.0
	2.0nm,0.9s,baz=79,slow=10,SNR=1.2 2.0nm,0.9s						
MSVF	**Nonsavu**	**29.50**	**118**	LR	LR	15 49 48.7	
	comp=Z,114nm,20.8s,baz=335,slow=35						
SONM	**Songino Array**	**65.47**	**329**	P	P	15 43 09.3	-1.1
	0.3nm,0.4s,baz=147,slow=8.2,SNR=1.7 0.3nm,0.4s						

JMA 04 15:46:57.8±0.2, 24.˚2N±0.˚3×123.˚7E±0.˚5, h20km±1km, MV0.3/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.13**	**136**	P	Pg	15 47 01.8	-0.2
HATJ				*e*S	Sg	15 47 04.9	0.0
IRIF	**Iriomote-Funau**	**0.18**	**7**	P	Pg	15 47 02.6	0.0
IRIF				*e*S	Sg	15 47 05.8	-0.2
JKRS	**Kuro-shima**	**0.29**	**73**	P	Pg	15 47 04.2	-0.1
JKRS				*e*S	Sg	15 47 08.8	0.0
JIJ	**Ishigaki jima**	**0.45**	**62**	*e*S	Sg	15 47 13.0	-0.4
JISG	**Ishigakijimahi**	**0.70**	**52**	*e*P	Pb	15 47 11.0	-0.3
JISG				*e*S	Sb	15 47 20.5	-0.1
JTJ	**Tarama**	**1.03**	**62**	S	Sg	15 47 31.4	-0.1

TAP 04 15:47:28.8, 25.˚17N×121.˚59E, h3km, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YM08	**YM08**	**0.02**	**357**	P	Pg	15 47 29.4	-0.1
	baz=356						
YM08				S	Sg	15 47 29.9	-0.1
	baz=356						
YM01	**YM01**	**0.03**	**224**	P	Pg	15 47 29.6	0.0
	baz=223						
YM01				*i* S	Sg	15 47 30.1	-0.1
	baz=223						
ANP	**Anpu**	**0.07**	**288**	*e*P	Pg	15 47 30.0	-0.2
	baz=286						
ANP				S	Sg	15 47 30.9	-0.3
	baz=286						

*IDC **04** 16:04:43.0±5.1, 34.˚67N×137.˚24E, h0km, mb3.3/2, mbtmp3.2/3, ML2.0/1, Error ellipse: s-maj=407.4km s-min=22.4km az=108.0*

*JMA **04** 16:04:45.9±0.2, 35.˚2N±0.˚6×140.˚2E±1.˚0, h65km±1km, MV2.7/39, SOUTHERN BOSO PENINSULA*

ISC 04 16:04:46.2±1.1, 35.˚20N±0.˚05×140.˚16E±0.˚05, h64km±7km, n18, σ0°49/29, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKUC	**kamogawauchiur**	**0.05**	**138**	P	**Pn**	**16 04 55.5**	**-0.2**
JKUC				S	**Sn**	**16 05 02.0**	**-0.5**
KTR	**Katsuura**	**0.14**	**110**	P	**Pn**	**16 04 55.7**	**-0.2**
KTR				S	**Sn**	**16 05 02.3**	**-0.5**
JCN	**Nagara**	**0.23**	**8**	*e*P	**Pn**	**16 04 56.5**	**+0.3**
JCN				*e*S	**Sn**	**16 05 04.9**	**+1.3**
BSO4	**Boso 4**	**0.25**	**145**	P	**Pn**	**16 04 56.7**	**+0.4**
BSO3	**Boso 3**	**0.49**	**144**	*i* P	**Pn**	**16 04 58.4**	**+0.3**
JSMT	**Sammumatsuo**	**0.51**	**28**	S	**Sn**	**16 05 07.4**	**-0.1**
JIM2	**Oshima 3**	**0.77**	**232**	*i* P	**Sn**	**16 05 01.4**	**-0.1**
JIM2				S	**Sn**	**16 05 12.5**	**-0.3**
BSO1	**Boso 1**	**0.86**	**129**	P	**Pn**	**16 05 02.1**	**0.0**
JOD2	**Odawara 2**	**0.88**	**275**	*i* P	**Pn**	**16 05 02.8**	**-0.1**
JOD2				S	**Sn**	**16 05 14.5**	**-0.8**
JIZS	**Izushimoda**	**1.16**	**246**	P	**Pn**	**16 05 06.6**	**+0.2**
JIZS				S	**Sn**	**16 05 21.2**	**-0.3**
JFNN	**Fujinakano**	**1.21**	**270**	P	**Pn**	**16 05 07.6**	**+0.4**
JFNN				S	**Sn**	**16 05 23.4**	**+0.6**
JRY	**Ryogami san**	**1.31**	**309**	*i* P	**Pn**	**16 05 08.6**	**0.0**
JRY				*e*S	**Sn**	**16 05 25.2**	**0.0**
JAG	**Ashikaga**	**1.36**	**335**	*i* P	**Pn**	**16 05 08.6**	**-0.4**
JYN	**Shimob**	**1.36**	**283**	P	**Pn**	**16 05 09.2**	**+0.1**
JYN				S	**Sn**	**16 05 26.4**	**+0.1**
JMKN	**Mikurajimanish**	**1.38**	**200**	P	**Pn**	**16 05 09.7**	**+0.3**
JMKN				S	**Sn**	**16 05 27.1**	**+0.3**
MJAR	**Matsushiro Arr**	**2.08**	**311**	Pn	**Pn**	**16 05 18.6**	**-0.2**
	0.5nm,0.3s,baz=170,slow=13,SNR=28						
MJAR				Sn	**Sn**	**16 05 44.9**	**+1.2**
	0.7nm,0.3s,baz=95,slow=40,SNR=3.8 1.8nm,0.3s						
WRA	**Warramunga Arr**	**55.11**	**187**	P	**P**	**16 14 12.0**	**+0.1**
	0.3nm,0.8s,baz=1.4,slow=7.1,SNR=4.5 0.3nm,0.8s						
ASAR	**Alice Springs**	**58.84**	**187**	P	**P**	**16 14 37.7**	**-0.5**
	0.5nm,1.0s,baz=9.2,slow=7.5,SNR=2.2 0.5nm,1.0s						

*IDC **04** 16:11:35.6±2.1, 6.˚49S×148.˚08E, h0km, mb3.8/3, mbtmp3.7/6, ML3.2/2, MS3.4/1, Error ellipse: s-maj=49.8km s-min=27.2km az=135.0*

ISC 04 16:11:40.7±1.5, 6.˚4S±0.˚2×148.˚1E±0.˚2, h51km, n6, σ1°12/7, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.12**	**197**	Pn	**Pn**	**16 12 26.8**	**-0.7**
	24nm,0.7s,baz=24,slow=10.0,SNR=12						
PMG				Sn	**Sn**	**16 13 04.1**	**+0.6**
	3.9nm,0.3s,baz=262,slow=2.6,SNR=5.2						
KRVT	**Keravat (AS076**	**4.45**	**62**	Pn	**Pn**	**16 12 45.3**	**-0.3**
	0.3nm,0.3s,baz=311,slow=19,SNR=2.3 8.2nm,0.8s						
WRA	**Warramunga Arr**	**18.95**	**223**	P	**P**	**16 15 56.7**	**-1.2**
	0.1nm,0.3s,baz=52,slow=11,SNR=5.2 0.9nm,0.6s						
ASAR	**Alice Springs**	**21.92**	**217**	P	**P**	**16 16 29.1**	**-0.8**
	1.6nm,0.7s,baz=50,slow=9.7,SNR=27						
ASAR				LR	LR	16 24 48.1	
	comp=Z,106nm,20.8s,baz=286,slow=36 1.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.78**	**240**	P	**P**	**16 16 59.1**	**+1.1**
	1.5nm,0.3s,baz=69,slow=8.6,SNR=9.9 1.5nm,0.3s						
STKA	**Stephens Creek**	**26.06**	**193**	P	**P**	**16 17 10.4**	**+0.9**
	0.6nm,0.3s,baz=22,slow=6.5,SNR=2.9 0.6nm,0.3s						

*KRNET **04** 16:18:23.8±0.1, 40.˚22N×77.˚63E, mb3.9*
*SOME **04** 16:18:23.0, 40.˚32N×77.˚08E, h10km*
*NNC **04** 16:18:28.4±0.7, 40.˚49N×77.˚14E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=5.0km s-min=3.8km az=167.0*

ISC 04 16:18:30.5±1.6, 40.˚62N±0.˚07×77.˚12E±0.˚03, h10km, n53, σ1°55/77, 21C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.75**	**338**	P	**Pb**	**16 19 01.9**	**-1.0**
	SNR=154						
ULHL	**Ulahol**	**1.75**	**338**	⇑*i*P	**Pb**	**16 19 01.6**	**-1.2**
	baz=33						
ULHL				⇑*i*S	**Sg**	**16 19 29.3**	**+2.5**
	baz=33						
BOOM	**Boomskoye usch**	**2.06**	**335**	⇑*i*P	**Pb**	**16 19 06.2**	**-2.0**
	baz=31						
BOOM				⇑*i*S	**Sg**	**16 19 37.2**	**+0.4**
	baz=31						
ARLS	**Aral**	**2.44**	**301**	⇑*e*P	**Pn**	**16 19 11.4**	**+0.8**
	baz=4.0						
ARLS				⇑*i*S	**Sb**	**16 19 46.1**	**+1.3**
	baz=4.0						
UCH	**Uchtor**	**2.53**	**310**	P	**Pn**	**16 19 12.3**	**+0.3**
	SNR=27						
UCH	**Uchtor**	**2.53**	**310**	⇑*e*P	**Pn**	**16 19 13.0**	**+0.9**
	baz=12						
UCH				⇑*i*S	**Sb**	**16 19 49.2**	**+1.6**
	baz=12						
MDOK	**Medeo**	**2.54**	**359**	*e*P	**Pb**	**16 19 15.9**	**-0.3**
	28nm,0.2s						
MDOK				*e*S	**Sg**	**16 19 54.2**	**+2.2**
	134nm,0.7s						
MDOK	**Medeo**	**2.54**	**359**	⇑Pn	**Pb**	**16 19 13.9**	**-2.3**
	46nm,0.7s						
MDOK				Pg	**Pg**	**16 19 17.6**	**-1.5**
	28nm,0.2s						
MDOK				Lg	Lg	16 19 54.2	
	134nm,0.7s						
MDOK				⇓Lg	Lg	16 19 54.6	
	122nm,0.5s						
MTBS	**Maitube**	**2.56**	**349**	*e*P	**Pb**	**16 19 16.1**	**-0.4**
	16nm,0.3s						
MTBS				*e*S	**Sg**	**16 19 53.9**	**+1.3**
	94nm,0.4s						
MTBS	**Maitube**	**2.56**	**349**	Pg	**Pb**	**16 19 16.9**	**+0.4**
	16nm,0.3s						
MTBS				Lg	Lg	16 19 53.4	
	94nm,0.4s						
TKM2	**Tokmak 2**	**2.56**	**334**	P	**Pb**	**16 19 14.0**	**-2.6**
	SNR=40						
TKM2	**Tokmak 2**	**2.56**	**334**	⇑Pn	**Pb**	**16 19 14.0**	**-2.6**
	9.5nm,0.3s						
TKM2				⇑Lg	Lg	16 19 54.6	
	44nm,0.4s						
TKM2	**Tokmak 2**	**2.56**	**334**	⇑*i*P	**Pn**	**16 19 13.0**	**+0.7**
	baz=31						
TKM2				⇑*i*S	**Sb**	**16 19 49.2**	**+0.9**
	baz=31						
KST	**Kastek**	**2.57**	**341**	*e*P	**Pb**	**16 19 16.5**	**-0.2**
	32nm,0.6s						
KST				*e*S	**Sg**	**16 19 55.1**	**+2.2**
	90nm,0.6s						
KST	**Kastek**	**2.57**	**341**	Pg	**Pg**	**16 19 18.1**	**-1.6**
	32nm,0.6s						
KST				Lg	Lg	16 19 55.1	
	90nm,0.6s						
KNDC	**Almaty**	**2.59**	**358**	⇓Pg	**Pb**	**16 19 17.4**	**+0.3**
	44nm,0.5s						
KNDC				⇑Lg	Lg	16 19 56.3	
	399nm,0.6s						
KBK	**Karagaybulak**	**2.60**	**322**	P	**Pn**	**16 19 14.4**	**+1.6**
	SNR=24						
KBK	**Karagaybulak**	**2.60**	**322**	⇑*e*P	**Pn**	**16 19 14.1**	**+1.3**
	baz=21						
KBK				⇑*i*S	**Sb**	**16 19 50.7**	**+1.3**
	baz=21						
SATY	**Saty**	**2.62**	**21**	*e*P	**Pb**	**16 19 17.5**	**-0.1**
	18nm,0.3s						
SATY				*e*S	**Sg**	**16 19 56.6**	**+2.0**
	129nm,0.6s						
SATY	**Saty**	**2.62**	**21**	Pg	**Pb**	**16 19 18.0**	**+0.5**
	18nm,0.3s						
SATY				Lg	Lg	16 19 55.6	
	129nm,0.6s						
AAK	**Ala-Archa**	**2.81**	**317**	P	**Pb**	**16 19 22.1**	**+1.2**
	SNR=19

CHMS	**Chumysh** SNR=7.1	**2.96**	**324**	P	**Pn**	**16 19 19.3**	**+1.8**
CHMS	**Chumysh** 18nm,0.5s	**2.96**	**324**	⇑Pn	**Pn**	**16 19 18.7**	**+1.2**
CHMS	50nm,0.5s			⇑Lg	Lg	16 20 04.4	
CHMS	**Chumysh** baz=23	**2.96**	**324**	⇑*i*P	**Pn**	**16 19 18.8**	**+1.2**
CHMS	baz=23			⇑*i*S	**Sb**	**16 19 58.9**	**-0.7**
KURS	**Kuram** 19nm,0.8s	**2.97**	**15**	*e*P	**Pb**	**16 19 22.9**	**-0.6**
KURS	55nm,0.9s			*e*S	**Sg**	**16 20 06.4**	**+0.6**
KURS	**Kuram** 19nm,0.8s	**2.97**	**15**	Pg	**Pg**	**16 19 24.7**	**-2.7**
KURS	55nm,0.9s			Lg	Lg	16 20 06.4	
AML	**Almayashu** SNR=25	**2.98**	**301**	P	**Pn**	**16 19 18.3**	**+0.1**
KTBS	**Karatobe** 9.2nm,0.4s	**3.10**	**354**	*e*P	**Pb**	**16 19 26.2**	**+0.5**
KTBS	190nm,0.3s			*e*S	**Sg**	**16 20 11.5**	**+1.3**
KTBS	**Karatobe** 9.2nm,0.4s	**3.10**	**354**	Pg	**Pg**	**16 19 27.6**	**-2.3**
KTBS	190nm,0.3s			Lg	Lg	16 20 11.5	
EKS2	**Erkin-Say** SNR=14	**3.23**	**310**	P	**Pn**	**16 19 22.7**	**+1.4**
CHKK	**Chushkaly** 24nm,0.7s	**3.23**	**358**	*e*P	**Pb**	**16 19 28.3**	**+0.4**
CHKK	126nm,0.3s			*e*S	**Sg**	**16 20 15.8**	**+1.5**
CHKK	**Chushkaly** 24nm,0.7s	**3.23**	**358**	Pg	**Pg**	**16 19 30.0**	**-2.3**
CHKK	126nm,0.3s			Lg	Lg	16 20 15.8	
PDGK	**Podgornoye** 13nm,0.5s	**3.23**	**32**	Pg	**Pb**	**16 19 28.8**	**+0.8**
PDGK	53nm,0.7s			Lg	Lg	16 20 14.0	
PDGK	**Podgornoye** 1.7nm,0.5s	**3.23**	**32**	⇓Pn	**Pn**	**16 19 21.7**	**+0.4**
PDGK	22nm,0.6s			⇑Pg	**Pb**	**16 19 28.2**	**+0.2**
PDGK	110nm,0.7s			⇓Lg	Lg	16 20 14.9	
KRBS	**Karabastau** 18nm,0.3s	**3.25**	**341**	*e*P	**Pb**	**16 19 28.6**	**+0.2**
KRBS	57nm,0.8s			*e*S	**Sg**	**16 20 16.0**	**+1.0**
KRBS	**Karabastau** 18nm,0.3s	**3.25**	**341**	Pg	**Pg**	**16 19 30.3**	**-2.5**
KRBS	57nm,0.8s			Lg	Lg	16 20 16.0	
USP	**Ospenovka** SNR=8.6	**3.29**	**324**	P	**Pn**	**16 19 24.1**	**+2.1**
KUU	**Kurty** 6.4nm,0.4s	**3.32**	**350**	*e*P	**Pb**	**16 19 29.5**	**+0.1**
KUU	86nm,0.7s			*e*S	**Sg**	**16 20 17.3**	**+0.2**
KUU	**Kurty** 6.4nm,0.4s	**3.32**	**350**	Pg	**Pb**	**16 19 31.1**	**+1.6**
KUU	86nm,0.7s			Lg	Lg	16 20 17.3	
SGDS	**Sogindy** 8.5nm,0.7s	**3.38**	**328**	*e*P	**Pb**	**16 19 29.6**	**-0.9**
SGDS	18nm,0.6s			*e*S	**Sg**	**16 20 17.8**	**-1.3**
SGDS	**Sogindy** 8.5nm,0.7s	**3.38**	**328**	Pg	**Pb**	**16 19 31.4**	**+0.9**
SGDS	18nm,0.6s			Lg	Lg	16 20 17.8	
MRKS	**Merke** 6.1nm,0.4s	**3.60**	**307**	*e*P	**Pb**	**16 19 32.4**	**-2.0**
MRKS	32nm,0.6s			*e*S	**Sg**	**16 20 22.9**	**-3.3**
MRKS	**Merke** 6.1nm,0.4s	**3.60**	**307**	Pg	**Pb**	**16 19 34.9**	**+0.6**
MRKS	32nm,0.6s			Lg	Lg	16 20 24.5	
ARXS	**Arharly** 14nm,0.5s	**3.63**	**8**	*e*P	**Pb**	**16 19 34.8**	**+0.1**
ARXS	57nm,0.5s			*e*S	**Sg**	**16 20 26.2**	**-0.7**
ARXS	**Arharly** 14nm,0.5s	**3.63**	**8**	Pg	**Pb**	**16 19 36.1**	**+1.4**
ARXS	57nm,0.5s			Lg	Lg	16 20 26.2	
DJR	**Jarkent** 7.6nm,0.3s	**4.20**	**27**	*e*P	**Pb**	**16 19 44.7**	**+0.2**
DJR	32nm,0.5s			*e*S	**Sg**	**16 20 43.3**	**-2.1**
DJR	**Jarkent** 7.6nm,0.3s	**4.20**	**27**	Pg	**Pb**	**16 19 46.1**	**+1.6**
DJR	32nm,0.5s			Lg	Lg	16 20 43.3	
KK31	**Karatay Array** 0.9nm,0.4s,baz=133,slow=17,SNR=9.3	**5.52**	**299**	⇓Pg	**Pb**	**16 20 09.0**	**+2.0**
KK31	4.0nm,0.5s,baz=118,slow=26,SNR=6.2			⇓Lg	Lg	16 21 24.9	
IUG	**Iuzhnay** 74nm,0.5s	**5.54**	**288**	*e*P	**Pb**	**16 20 09.2**	**+1.8**
IUG	22nm,0.6s			*e*S	**Sg**	**16 21 25.6**	**-2.8**
IUG	**Iuzhnay** 74nm,0.5s	**5.54**	**288**	Pg	**Pb**	**16 20 10.8**	**+3.4**
IUG	22nm,0.6s			Lg	Lg	16 21 25.6	
MK05	**Makanchi Array** 0.3nm,0.3s	**7.22**	**30**	⇓Pn	**Pn**	**16 20 16.5**	**+0.5**

*BJI **04** 16:24:33.0±0.0,25.°00N×142.°00E,h520km,mb6.2/93, mB6.5/82*

*NEIC **04** 16:24:33.7,24.°96N×142.°01E,h516km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.18; Mθθ=0.34; Mφφ=0.85; Mrθ=-0.57; Mrφ=-1.18; Mθφ=-2.86; Fault plane solution: M₀3.31000×10¹⁸ NP1:φs114.27000°, δ24.53000°,λ-155.34000°. NP2:φs1.60000°,δ80.03000°, λ-67.47000°. Principal axes: T 3.0261, Plg31.0000°, Azm73.0000°; N 0.5169, Plg22.0000°, Azm177.0000°; P -3.5430, Plg50.0000°, Azm297.0000°;*

*NEIC **04** 16:24:33.5±1.6,24.°95N±0.°07×142.°01E±0.°08, h510km±1km,mb5.8/637,Mwb6.3/85,Mwc6.2/71,Mww6.3 Error ellipse: s-maj=12.8km s-min=11.5km az=292.0*

*NIED **04** 16:24:34.7,25.°13N×141.°90E,h534km,MW6.2,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁸Nm; Mrr=0.75; Mθθ=0.30; Mφφ=0.45; Mrθ=-0.46; Mrφ=0.81; Mθφ=-1.99; Fault plane solution: M₀2.26000×10¹⁸ NP1: φs112.00000°,δ24.00000°,λ-158.00000°. NP2:φs3.00000°, δ81.00000°,λ-68.00000°.*

*JMA **04** 16:24:34.7±0.3,25.°N±1.°×14.°2E±.°,h534km±2km,MD6.4/67, MW6.2/67,IOTO ISLANDS REGION*

JMA Felt II J1 at IOTO ISLANDS REGION .

*MOS **04** 16:24:34.1±0.7,24.°91N×142.°00E,h538km,mb6.2/73, MS5.2/15,Error ellipse: s-maj=7.6km s-min=4.0km az=110.9*

*IDC **04** 16:24:34.9±0.4,24.°95N×141.°97E,h530km±3km,mb5.4/56, mbtmp6.3/59,Error ellipse: s-maj=7.4km s-min=4.7km az=81.0*

*NEIC **04** 16:24:36,24.°88N×141.°96E,h520km,Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10¹⁸Nm; Mrr=1.21; Mθθ=0.58; Mφφ=0.63; Mrθ=-0.50; Mrφ=-1.18; Mθφ=-2.74; Fault plane solution: M₀3.20000×10¹⁸ NP1: φs111.00000°,δ26.00000°,λ-155.00000°. NP2: φs358.00000°,δ79.00000°,λ-66.00000°. Principal axes: T 2.8138, Plg31.0000°, Azm69.0000°; N 0.6645, Plg23.0000°, Azm174.0000°; P -3.4783, Plg50.0000°, Azm294.0000°;*

*GCMT **04** 16:24:37.5±0.1,24.°98N±0.°01×141.°91E±0.°01, h523km,MW6.3/169,Moment Tensor Solution. s169,c420; s151,c228; Duration: 3s3 Moment tensor: Scale 10¹⁸Nm; Mrr=1.27±.01; Mθθ=0.50±.02; Mφφ=0.76±.02; Mrθ=0.50±.02; Mrφ=-1.37±.02; Mθφ=-2.64±.02; Best double couple: M₀3.17900×10¹⁸ NP1:φs357.00000°,δ78.00000°, λ-63.00000°. NP2:φs110.00000°,δ30.00000°, λ-155.00000°. Principal axes: T 2.9080, Plg28.0000°, Azm66.0000°; N 0.5430, Plg27.0000°, Azm171.0000°; P -3.4510, Plg50.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*KEA **04** 16:24:39.6,25.°22N×141.°98E,h529km,MS6.1/4*

*NEIC **04** 16:24:48.3,24.°86N×141.°85E,h526km,Moment Tensor Solution. Duration: 7s4 Moment tensor: Scale 10¹⁸Nm; Mrr=1.00; Mθθ=0.49; Mφφ=0.51; Mrθ=-0.29; Mθφ=-1.10; Mφr=2.63; Fault plane solution: M₀2.96000×10¹⁸ NP1: φs107.78000°,δ24.46000°,λ-157.29000°. NP2: φs356.93000°,δ80.80000°,λ-67.23000°. Principal axes: T 2.7275, Plg32.0000°, Azm68.0000°; N 0.4740, Plg22.0000°, Azm173.0000°; P -3.2015, Plg49.0000°, Azm292.0000°;*

ISC 04 16:24:34.6±0.2,24.°94N±0.°02×142.°00E±0.°02,h529km±1km, h529km:pP-P,n2465,σ1s56/2776,mb5.8/588,173C-141D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.69**	**5**	P	**P**	**16 25 41.7**	**+0.7**
JHH2				S	**S**	**16 26 34.1**	**-1.0**
JHH2	**Haha-jima-NKT2**	**1.69**	**5**	A	A	16 25 41.7	
	comp=E,420nm,1.2s,comp=E,409nm,1.9s						
CBIJ	**Chichi jima**	**2.15**	**4**	P	**P**	**16 25 43.1**	**+0.1**
CBIJ				*e*S	**S**	**16 26 37.1**	**-1.8**
CBIJ	**Chichi jima**	**2.15**	**4**	A	A	16 25 43.1	
	comp=E,186nm,1.3s,comp=E,253nm,4.7s						
JCJ	**Chichijima**	**2.15**	**4**	P	**P**	**16 25 42.7**	**-0.3**
	8μm,0.3s,baz=155,slow=1.1,SNR=1428						
JCJ				S	**S**	**16 26 34.0**	**-4.8**
	10μm,0.4s,baz=282,slow=21,SNR=3.7						
JCJ	**Chichijima**	**2.15**	**4**	P	**P**	**16 25 43.1**	**0.0**
JCJ				S	**S**	**16 26 36.1**	**-2.7**
JCJ	**Chichijima**	**2.15**	**4**	P	**P**	**16 25 43.2**	**+0.2**
JAOM	**Aogashimamukai**	**7.75**	**346**	P	**P**	**16 26 28.2**	**-0.9**
JAOM	**Aogashimamukai**	**7.75**	**346**	A	A	16 26 28.2	
	comp=E,90nm,6.5s,comp=E,181nm,6.1s						
JHCJ	**Hachijojimakas**	**8.33**	**347**	A	A	16 26 34.2	
	comp=E,35nm,4.2s,comp=E,31nm,6.5s						
JHJ2	**Mitsune**	**8.37**	**347**		**P**	**16 26 34.3**	**-0.9**
JHJ2				S	**S**	**16 28 11.2**	**-3.2**
JHJ2	**Mitsune**	**8.37**	**347**	P	**P**	**16 26 34.6**	**-0.7**
JHJ2	**Mitsune**	**8.37**	**347**	P	**P**	**16 26 34.4**	**-0.9**
JHJ2				*e*S	**S**	**16 28 09.8**	**-4.6**
JHJ2	**Mitsune**	**8.37**	**347**	A	A	16 26 34.4	
	comp=E,58nm,3.0s,comp=E,47nm,6.3s						
JMKN	**Mikurajimanish**	**9.17**	**347**	P	**P**	**16 26 42.3**	**-1.2**
JMKN				*e*S	**S**	**16 28 23.9**	**-5.5**
JMKN	**Mikurajimanish**	**9.17**	**347**	A	A	16 26 42.3	
	comp=E,36nm,7.9s,comp=E,64nm,5.3s						
JKO	**Kozu shima**	**9.55**	**346**	A	A	16 26 46.7	
	comp=E,83nm,5.2s,comp=E,62nm,2.5s						
JSKK	**Shikinejimakit**	**9.67**	**346**	A	A	16 26 48.0	
	comp=E,50nm,2.2s,comp=E,42nm,5.2s						
JNIO	**Niijimaoohara**	**9.68**	**346**	A	A	16 26 48.1	
	comp=E,77nm,3.0s,comp=E,78nm,3.2s						
TK02	**Tokai 2**	**9.71**	**339**	P	**P**	**16 26 48.6**	**-0.2**
BSO1	**Boso 1**	**9.72**	**355**	P	**P**	**16 26 48.9**	**+0.3**
JKDJ	**Kitadaitoujima**	**9.73**	**278**	A	A	16 26 49.5	
	comp=E,166nm,4.5s,comp=E,67nm,8.7s						
TTO1	**TONANKAI O.B.S**	**9.78**	**333**	P	**P**	**16 26 49.8**	**+0.3**
TTO2	**TONANKAI O.B.S**	**9.78**	**335**	P	**P**	**16 26 49.8**	**+0.3**
JMZ	**Minamidaito 2**	**9.79**	**277**	P	**P**	**16 26 49.5**	**-0.6**
JMZ				S	**S**	**16 28 38.8**	**-2.6**
JMZ	**Minamidaito 2**	**9.79**	**277**	P	**P**	**16 26 49.6**	**-0.4**
JMZ	**Minamidaito 2**	**9.79**	**277**	A	A	16 26 49.6	
	comp=E,126nm,7.8s,comp=E,58nm,6.8s						
JTHY	**Toshimahigashi**	**9.84**	**347**	A	A	16 26 49.7	
	comp=E,75nm,4.9s,comp=E,71nm,4.5s						
BSO3	**Boso 3**	**9.91**	**353**	P	**P**	**16 26 51.1**	**+0.1**
JIM2	**Oshima 3**	**10.00**	**348**	A	A	16 26 51.4	
	comp=E,81nm,2.7s,comp=E,63nm,2.3s						
JIM2	**Oshima 3**	**10.00**	**348**	P	**P**	**16 26 51.5**	**-0.6**
JIM2				S	**S**	**16 28 43.6**	**-1.6**
TK04	**Tokai 4**	**10.07**	**340**	P	**P**	**16 26 52.7**	**-0.1**
JWKM	**Wakayamakushim**	**10.08**	**329**	A	A	16 26 52.2	
	comp=E,28nm,5.9s,comp=E,36nm,4.2s						
JIZS	**Izushimoda**	**10.12**	**345**	A	A	16 26 52.6	
	comp=E,16nm,3.2s,comp=E,43nm,4.3s						
JIZS	**Izushimoda**	**10.12**	**345**	P	**P**	**16 26 52.5**	**-0.8**
BSO4	**Boso 4**	**10.12**	**352**	P	**P**	**16 26 53.4**	**+0.2**
JSG	**Sagara**	**10.25**	**342**	A	A	16 26 54.0	
	comp=E,34nm,3.8s,comp=E,29nm,6.8s						
JMMH	**Miemihama**	**10.27**	**331**	A	A	16 26 54.1	
	comp=E,12nm,4.9s,comp=E,12nm,4.3s						
JKUC	**kamogawauchiur**	**10.31**	**352**	A	A	16 26 54.6	
	comp=E,89nm,3.9s,comp=E,107nm,7.8s						
JHTM	**Izuhatsuma**	**10.32**	**346**	A	A	16 26 54.7	
	comp=E,85nm,3.5s,comp=E,103nm,2.0s						
JKKS	**Kakegawashinom**	**10.38**	**341**	A	A	16 26 55.3	
	comp=E,40nm,5.4s,comp=E,30nm,10.1s						
JYO	**Yokosk**	**10.45**	**349**	A	A	16 26 56.1	
	comp=E,62nm,3.7s,comp=E,84nm,6.6s						
JTNC	**Tanabenakahech**	**10.46**	**329**	A	A	16 26 56.1	
	comp=E,21nm,5.5s,comp=E,22nm,4.9s						
JTNC	**Tanabenakahech**	**10.46**	**329**	P	**P**	**16 26 57.2**	**+0.3**
JIE	**Ise**	**10.48**	**335**	A	A	16 26 56.4	
	comp=E,12nm,4.4s,comp=E,15nm,4.2s						
JIE	**Ise**	**10.48**	**335**	P	**P**	**16 26 57.2**	**+0.1**
JIE				S	**S**	**16 28 57.9**	**+3.5**
JKN2	**Miekihoku**	**10.52**	**333**	P	**P**	**16 26 57.2**	**-0.3**
JKN2	**Miekihoku**	**10.52**	**333**	A	A	16 26 57.2	
	comp=E,12nm,2.3s,comp=E,17nm,1.7s						
JAA	**Atsumi**	**10.54**	**338**	A	A	16 26 57.0	
	comp=E,11nm,4.2s,comp=E,15nm,4.7s						
HMMJ	**Hamamatsu 2**	**10.56**	**340**	P	**P**	**16 26 57.1**	**-0.8**
HMMJ				*e*S	**S**	**16 28 51.1**	**-4.7**
HMMJ	**Hamamatsu 2**	**10.56**	**340**	A	A	16 26 57.1	
	comp=E,12nm,5.1s,comp=E,9.0nm,6.2s						
JCN	**Nagara**	**10.56**	**352**	A	A	16 26 57.3	
	comp=E,127nm,5.3s,comp=E,121nm,4.1s						
JOD2	**Odawara 2**	**10.59**	**347**	A	A	16 26 57.6	
	comp=E,35nm,4.8s,comp=E,47nm,4.6s						
JOD2	**Odawara 2**	**10.59**	**347**	P	**P**	**16 26 57.4**	**-0.9**
JWM	**Minabe**	**10.60**	**328**	A	A	16 26 57.6	
	comp=E,34nm,3.7s,comp=E,31nm,3.4s						
JWM	**Minabe**	**10.60**	**328**	P	**P**	**16 26 58.8**	**+0.4**
SHZ3	**Shizuoka 3**	**10.61**	**343**	A	A	16 26 57.8	
	comp=E,20nm,3.9s,comp=E,14nm,7.2s						
SHZ3	**Shizuoka 3**	**10.61**	**343**	P	**P**	**16 26 57.9**	**-0.7**
JFNN	**Fujinakano**	**10.62**	**345**	A	A	16 26 57.8	
	comp=E,40nm,3.8s,comp=E,69nm,7.1s						
JFNN	**Fujinakano**	**10.62**	**345**	P	**P**	**16 26 58.0**	**-0.5**
JSSY	**Shinshiroyabe**	**10.68**	**340**	A	A	16 26 58.4	
	comp=E,15nm,4.6s,comp=E,9.0nm,5.2s						
JNTK	**Naratenkawa**	**10.71**	**332**	A	A	16 26 58.7	
	comp=E,18nm,2.5s,comp=E,13nm,5.4s						
JSMT	**Sammumatsuo**	**10.75**	**353**	A	A	16 26 59.3	
	comp=E,103nm,5.4s,comp=E,129nm,6.0s						
CHOJ	**Chosi**	**10.77**	**355**	A	A	16 26 59.5	
	comp=E,59nm,4.7s,comp=E,50nm,4.8s						
JWY	**Kouya**	**10.80**	**330**	A	A	16 26 59.6	
	comp=E,32nm,3.0s,comp=E,32nm,4.1s						
JWY	**Kouya**	**10.80**	**330**	P	**P**	**16 27 01.0**	**+0.5**
JWY				S	**S**	**16 28 59.4**	**-1.1**
MRT2	**Murotomisaki 2**	**10.86**	**323**	A	A	16 27 00.3	
	comp=E,33nm,5.3s,comp=E,35nm,4.5s						
TSUJ	**Tsu 2**	**10.88**	**335**	A	A	16 27 00.4	
	comp=E,26nm,2.5s,comp=E,29nm,2.2s						
TSUJ	**Tsu 2**	**10.88**	**335**	P	**P**	**16 27 01.0**	**-0.2**
TOK	**Tokyo**	**10.89**	**350**	A	A	16 27 00.6	
	comp=E,131nm,3.2s,comp=E,144nm,3.9s						
JSGW	**Sagamiharawaka**	**10.90**	**348**	A	A	16 27 00.7	
	comp=E,21nm,4.2s,comp=E,37nm,5.5s						
JYN	**Shimob**	**10.94**	**345**	A	A	16 27 01.1	
	comp=E,35nm,5.3s,comp=E,36nm,7.6s						
JYN	**Shimob**	**10.94**	**345**	P	**P**	**16 27 01.4**	**-0.6**
JNY	**Yasuok**	**10.98**	**342**	P	**P**	**16 27 01.8**	**-0.7**
JNY	**Yasuok**	**10.98**	**342**	A	A	16 27 01.8	
	comp=E,21nm,4.9s,comp=E,12nm,7.8s						
JAI	**Aioi**	**11.01**	**325**	A	A	16 27 01.8	
	comp=E,34nm,4.6s,comp=E,46nm,4.3s						
JAI	**Aioi**	**11.01**	**325**	P	**P**	**16 27 03.3**	**+0.7**
JAI				S	**S**	**16 29 04.5**	**+0.1**
JIHU	**Itakohorinouch**	**11.06**	**354**	A	A	16 27 02.5	
	comp=E,117nm,3.9s,comp=E,213nm,4.0s						
JAO	**Obara**	**11.08**	**339**	P	**P**	**16 27 02.8**	**-0.7**
JAO	**Obara**	**11.08**	**339**	A	A	16 27 02.8	
	comp=E,20nm,5.6s,comp=E,13nm,5.3s						
JHE	**Heguri**	**11.12**	**332**	A	A	16 27 03.0	
	comp=E,28nm,5.0s,comp=E,30nm,4.8s						
JHE	**Heguri**	**11.12**	**332**	P	**P**	**16 27 03.7**	**-0.2**
JHU	**Hanno**	**11.13**	**348**	P	**P**	**16 27 03.0**	**-0.8**
JHU	**Hanno**	**11.13**	**348**	A	A	16 27 03.0	
	comp=E,18nm,2.9s,comp=E,27nm,5.7s						
INU	**Inuyama**	**11.23**	**339**	P	**P**	**16 27 03.9**	**-1.1**
INU	**Inuyama**	**11.23**	**339**	P	**P**	**16 27 04.4**	**-0.6**
JMTN	**Minamitane**	**11.24**	**301**	A	A	16 27 04.5	
	comp=E,71nm,4.0s,comp=E,37nm,4.9s						
JMTN	**Minamitane**	**11.24**	**301**	P	**P**	**16 27 05.9**	**+0.8**
JMTN				S	**S**	**16 29 10.9**	**+1.9**
JICN	**Ichinomiyachia**	**11.25**	**338**	A	A	16 27 04.3	
	comp=E,41nm,3.4s,comp=E,24nm,2.4s						
JEG	**Eigenji**	**11.26**	**336**	P	**P**	**16 27 05.0**	**-0.3**
JEG	**Eigenji**	**11.26**	**336**	A	A	16 27 05.0	
	comp=E,33nm,3.0s,comp=E,17nm,7.7s						
JMN	**Monobe**	**11.26**	**323**	P	**P**	**16 27 05.4**	**+0.1**
JMN	**Monobe**	**11.26**	**323**	A	A	16 27 04.5	
	comp=E,28nm,4.7s,comp=E,43nm,4.5s						
JMN	**Monobe**	**11.26**	**323**	P	**P**	**16 27 06.2**	**+0.9**
JMN				S	**S**	**16 29 10.4**	**+1.0**
JZK	**Kikaishima**	**11.28**	**290**	A	A	16 27 05.2	
	comp=E,219nm,4.1s,comp=E,195nm,4.3s						
JTO	**Tosashimizu**	**11.28**	**317**	A	A	16 27 04.7	
	comp=E,34nm,4.2s,comp=E,22nm,4.2s						
JTO	**Tosashimizu**	**11.28**	**317**	P	**P**	**16 27 06.1**	**+0.6**
JTO				S	**S**	**16 29 11.2**	**+1.6**
JTN	**Tanegashima 3**	**11.29**	**303**	A	A	16 27 05.1	
	comp=E,44nm,4.9s,comp=E,19nm,5.7s						
JTN	**Tanegashima 3**	**11.29**	**303**	P	**P**	**16 27 06.6**	**+0.9**
JKHR	**Kochiharuno**	**11.31**	**321**	A	A	16 27 05.0	
	comp=E,37nm,4.6s,comp=E,30nm,4.7s						
JAWN	**Awajishima-nag**	**11.34**	**329**	A	A	16 27 05.2	
	comp=E,27nm,5.8s,comp=E,33nm,4.8s						
JAWN	**Awajishima-nag**	**11.34**	**329**	P	**P**	**16 27 05.8**	**-0.3**
JMAF	**Mimaanabuki**	**11.36**	**325**	A	A	16 27 05.4	
	comp=E,34nm,5.0s,comp=E,41nm,4.9s						
JGF	**Kuroka**	**11.36**	**340**	P	**P**	**16 27 04.9**	**-1.4**
JGF	**Kuroka**	**11.36**	**340**	A	A	16 27 05.4	
	comp=E,19nm,4.6s,comp=E,8.0nm,5.5s						
JRY	**Ryogami san**	**11.36**	**347**	A	A	16 27 05.5	
	comp=E,29nm,3.7s,comp=E,33nm,5.5s						
JRY	**Ryogami san**	**11.36**	**347**	P	**P**	**16 27 05.9**	**-0.4**
JRY				S	**S**	**16 29 08.6**	**-2.6**
JYT	**Yasato**	**11.36**	**353**	P	**P**	**16 27 05.5**	**-0.7**
JYT	**Yasato**	**11.36**	**353**	P	**P**	**16 27 05.6**	**-0.7**
JYT	**Yasato**	**11.36**	**353**	A	A	16 27 05.6	
	comp=E,31nm,5.1s,comp=E,36nm,5.6s						
JNT	**Takato**	**11.40**	**344**	A	A	16 27 05.9	
	comp=E,20nm,6.8s,comp=E,20nm,5.0s						
JKU	**Kubokawa**	**11.42**	**319**	A	A	16 27 06.2	
	comp=E,49nm,4.5s,comp=E,26nm,4.1s						
JKU	**Kubokawa**	**11.42**	**319**	P	**P**	**16 27 07.7**	**+0.6**
JKU				S	**S**	**16 29 16.0**	**+3.5**
JHYU	**Hitachinakayam**	**11.43**	**354**	A	A	16 27 06.3	
	comp=E,65nm,4.2s,comp=E,55nm,4.9s						
JYAK	**Yakushimahirau**	**11.48**	**300**	A	A	16 27 07.0	
	comp=E,41nm,4.2s,comp=E,43nm,4.0s						
JYAK	**Yakushimahirau**	**11.48**	**300**	P	**P**	**16 27 08.2**	**+0.6**
JNKG	**Nichinankitago**	**11.51**	**308**	A	A	16 27 07.2	
	comp=E,39nm,3.5s,comp=E,38nm,4.8s						
JNAR	**Kushima--Naru**	**11.51**	**307**	A	A	16 27 07.2	
	comp=E,24nm,4.4s,comp=E,42nm,4.7s						
JMIK	**Miki**	**11.53**	**330**	A	A	16 27 07.2	
	comp=E,29nm,3.9s,comp=E,33nm,4.7s						
JYTA	**Yamagatataniai**	**11.55**	**338**	A	A	16 27 07.4	
	comp=E,24nm,4.5s,comp=E,9.0nm,8.9s						
JYTA	**Yamagatataniai**	**11.55**	**338**	P	**P**	**16 27 07.3**	**-1.0**
JTSR	**Tashiro 2**	**11.58**	**305**	A	A	16 27 08.0	
	comp=E,29nm,4.9s,comp=E,34nm,4.2s						
GUMO	**Guam**	**11.61**	**166**	P	**P**	**16 27 09.3**	**+0.2**
	4μm,0.9s,baz=145,slow=0.2,SNR=100						
GUMO				S	**S**	**16 29 16.3**	**-0.1**
	356nm,0.5s,baz=31,slow=22,SNR=9.8						
GUMO	**Guam**	**11.61**	**166**	P	**P**	**16 27 09.0**	**-0.2**
GUMO	**Guam**	**11.61**	**166**	P	**P**	**16 27 09.0**	**-0.2**
GUMO	**Guam**	**11.61**	**166**	P	**P**	**16 27 10.3**	**+1.1**
JAM	**Amami Oshima**	**11.61**	**290**	A	A	16 27 08.7	
	comp=E,57nm,4.3s,comp=E,64nm,4.1s						
JAM	**Amami Oshima**	**11.61**	**290**	P	**P**	**16 27 10.6**	**+1.6**
UWA2	**Uwa jima 2**	**11.62**	**317**	A	A	16 27 08.3	
	comp=E,44nm,5.1s,comp=E,32nm,5.0s						
UWA2	**Uwa jima 2**	**11.62**	**317**	P	**P**	**16 27 09.7**	**+0.5**
UWA2				S	**S**	**16 29 17.6**	**+1.2**
JAG	**Ashikaga**	**11.66**	**350**	P	**P**	**16 27 08.4**	**-0.9**
JAG				S	**S**	**16 29 10.4**	**-6.4**
JAG	**Ashikaga**	**11.66**	**350**	A	A	16 27 08.4	
	comp=E,40nm,3.9s,comp=E,50nm,6.2s						
JHO	**Hitachi**	**11.70**	**354**	P	**P**	**16 27 09.5**	**-0.3**
JHO	**Hitachi**	**11.70**	**354**	A	A	16 27 09.5	
	comp=E,51nm,4.2s,comp=E,38nm,5.3s						
JJS	**Sakaide**	**11.73**	**325**	A	A	16 27 09.3	
	comp=E,41nm,4.1s,comp=E,36nm,5.9s						
JJS	**Sakaide**	**11.73**	**325**	P	**P**	**16 27 10.5**	**+0.4**
JJS				S	**S**	**16 29 16.9**	**-1.3**
JTSN	**Tsuno**	**11.75**	**311**	A	A	16 27 09.6	
	comp=E,19nm,3.5s,comp=E,18nm,5.6s						
JFM	**Mihama**	**11.76**	**335**	A	A	16 27 09.6	
	comp=E,23nm,5.0s,comp=E,24nm,5.5s						
JET	**Tanbara**	**11.77**	**321**	A	A	16 27 09.7	
	comp=E,50nm,4.2s,comp=E,28nm,3.9s						
JET	**Tanbara**	**11.77**	**321**	P	**P**	**16 27 11.2**	**+0.6**
JET				S	**S**	**16 29 19.1**	**+0.1**
JHHC	**Hyugahichiya**	**11.77**	**312**	A	A	16 27 09.8	
	comp=E,14nm,7.4s,comp=E,16nm,5.5s						
JKS	**Kasai**	**11.77**	**330**	A	A	16 27 09.7	
	comp=E,13nm,5.9s,comp=E,26nm,4.9s						
JKS	**Kasai**	**11.77**	**330**	P	**P**	**16 27 09.7**	**-0.9**
JWT	**Wachi**	**11.78**	**333**	P	**P**	**16 27 09.5**	**-1.2**
JWT	**Wachi**	**11.78**	**333**	A	A	16 27 09.8	
	comp=E,11nm,5.9s,comp=E,21nm,5.2s						
JWT	**Wachi**	**11.78**	**333**	P	**P**	**16 27 09.9**	**-0.8**
JSKE	**Saikikamae**	**11.81**	**314**	A	A	16 27 10.2	
	comp=E,30nm,5.4s,comp

ONAJ Iwakimizuishiy 12.17 355 A A 16 27 13.9
comp=E,52nm,4.8s,comp=E,23nm,5.7s
JFFD Fukushimafurud 12.18 355 A A 16 27 14.0
comp=E,40nm,5.2s,comp=E,47nm,8.0s
JKY Yasaka 12.20 332 A A 16 27 14.1
comp=E,12nm,8.1s,comp=E,25nm,6.1s
JKY Yasaka 12.20 332 P **P** **16 27 13.8 -1.3**
JTT Ttatey 12.30 342 A A 16 27 15.1
comp=E,27nm,3.2s,comp=E,22nm,5.6s
JOKE Okinoerabujima 12.30 284 A A 16 27 15.9
comp=E,36nm,7.6s,comp=E,38nm,4.6s
JOKE Okinoerabujima 12.30 284 P **P** **16 27 17.1 +0.8**
JOKE S **S** **16 29 29.8 +0.3**
JKG Kaga 12.31 338 A A 16 27 15.2
comp=E,23nm,4.5s,comp=E,17nm,7.3s
JZO Okuchi 12.32 308 A A 16 27 15.6
comp=E,19nm,4.7s,comp=E,13nm,5.3s
JHM Kurahashi 12.32 320 A A 16 27 15.4
comp=E,31nm,6.5s,comp=E,22nm,4.0s
JHM Kurahashi 12.32 320 P **P** **16 27 16.6 +0.3**
JJG Jouge 12.34 324 A A 16 27 15.6
comp=E,43nm,4.5s,comp=E,51nm,4.4s
JKSM Kasumi 12.36 331 A A 16 27 15.7
comp=E,11nm,5.7s,comp=E,29nm,5.1s
JKSM Kasumi 12.36 331 P **P** **16 27 15.8 -0.9**
JYRO Yoronjima 12.37 283 A A 16 27 16.6
comp=E,34nm,5.3s,comp=E,29nm,5.0s
JYRO Yoronjima 12.37 283 P **P** **16 27 17.7 +0.8**
JYRO S **S** **16 29 27.4 -3.3**
JIU3 Izumi3 12.40 310 A A 16 27 16.3
comp=E,21nm,6.4s,comp=E,16nm,8.3s
JIU3 Izumi3 12.40 310 P **P** **16 27 17.5 +0.3**
JFK Kawauchi 12.43 356 P **P** **16 27 17.4 -0.1**
JFK Kawauchi 12.43 356 A A 16 27 17.4
comp=E,50nm,4.8s,comp=E,23nm,4.2s
JBEP Beppuamama 12.47 315 A A 16 27 17.0
comp=E,38nm,5.7s,comp=E,39nm,5.5s
JUON Uonuma 12.49 349 A A 16 27 17.1
comp=E,29nm,3.0s,comp=E,24nm,4.1s
JUON Uonuma 12.49 349 P **P** **16 27 17.2 -0.8**
JUON S **S** **16 29 30.2 -2.4**
JOW Kunigami 12.50 282 P **P** **16 27 18.6 +0.2**
JOW Kunigami 12.50 282 P **P** **16 27 19.3 +0.9**
JOW Kunigami 12.50 282 A A 16 27 18.0
comp=E,37nm,5.3s,comp=E,35nm,4.9s
JOW Kunigami 12.50 282 P **P** **16 27 19.2 +0.8**
JOW S **S** **16 29 33.8 +0.5**
JKI Kunimi 12.56 316 A A 16 27 17.9
comp=E,36nm,6.4s,comp=E,24nm,5.2s
JJN Nakama 12.56 346 A A 16 27 17.9
comp=E,27nm,4.0s,comp=E,21nm,8.5s
JKR Kurayoshi 12.58 329 A A 16 27 18.0
comp=E,35nm,4.3s,comp=E,34nm,4.5s
JFY Yanaizu 12.58 352 A A 16 27 18.1
comp=E,55nm,4.3s,comp=E,32nm,6.0s
JFY Yanaizu 12.58 352 P **P** **16 27 19.0 -0.1**
JFT Otama 12.62 354 A A 16 27 18.5
comp=E,113nm,3.1s,comp=E,44nm,4.3s
JFT Otama 12.62 354 P **P** **16 27 19.9 +0.5**
JFT S **S** **16 29 37.4 +2.1**
JHS Saijyo 12.64 325 P **P** **16 27 19.2 -0.4**
JHS Saijyo 12.64 325 A A 16 27 18.6
comp=E,44nm,4.7s,comp=E,32nm,4.6s
JHS Saijyo 12.64 325 P **P** **16 27 19.1 -0.6**
JKD Kudamatsu 12.65 318 A A 16 27 18.8
comp=E,21nm,3.6s,comp=E,19nm,4.2s
JNU Nakatsue 12.69 313 P **P** **16 27 19.6 -0.7**
JNU Nakatsue 12.69 313 A A 16 27 19.3
comp=E,29nm,4.0s,comp=E,18nm,6.3s
JNTH Nagotoyohara 12.70 280 A A 16 27 20.1
comp=E,36nm,4.6s,comp=E,20nm,5.1s
JSJ Shimokoshiki 12.73 305 A A 16 27 19.8
comp=E,18nm,6.1s,comp=E,22nm,5.0s
JSJ Shimokoshiki 12.73 305 P **P** **16 27 19.9 -0.9**
JJH Hakui 12.76 341 A A 16 27 19.8
comp=E,20nm,3.4s,comp=E,15nm,6.4s
JHT Toyohira 12.76 322 A A 16 27 19.9
comp=E,29nm,3.7s,comp=E,23nm,5.5s
JHT Toyohira 12.76 322 P **P** **16 27 20.5 -0.5**
JMST Minamisoumatoc 12.78 356 A A 16 27 20.2
comp=E,70nm,4.2s,comp=E,37nm,3.2s
JIH Iheya 12.80 282 A A 16 27 21.0
comp=E,53nm,6.5s,comp=E,24nm,5.3s
JIH Iheya 12.80 282 P **P** **16 27 22.6 +1.2**
JIH S **S** **16 29 39.9 +1.0**
JHD Hondo 12.83 308 A A 16 27 20.7
comp=E,14nm,12.2s,comp=E,20nm,5.7s
JTA Tamana 12.83 311 A A 16 27 20.7
comp=E,26nm,7.3s,comp=E,17nm,7.5s
JIZZ Izumozaki 12.87 348 A A 16 27 21.0
comp=E,72nm,5.0s,comp=E,81nm,3.9s
JIZZ Izumozaki 12.87 348 P **P** **16 27 22.0 +0.1**
JJT3 Tamagusuku3 12.89 278 A A 16 27 22.1
comp=E,97nm,3.8s,comp=E,67nm,4.0s
JJT3 Tamagusuku3 12.89 278 P **P** **16 27 23.7 +1.2**
JMM Marumori 12.93 356 P **P** **16 27 22.6 0.0**
JMM Marumori 12.93 356 A A 16 27 21.7
comp=E,63nm,4.1s,comp=E,39nm,6.5s
JMM Marumori 12.93 356 P **P** **16 27 23.0 +0.4**
JHIK Hikimi 12.95 320 A A 16 27 21.9
comp=E,25nm,3.6s,comp=E,30nm,6.2s
JGT2 ShimaneMisato 13.01 323 A A 16 27 22.4
comp=E,27nm,4.0s,comp=E,34nm,5.7s
JGT2 ShimaneMisato 13.01 323 P **P** **16 27 22.9 -0.6**
JYAR Yonezawaarcadi 13.03 353 A A 16 27 22.7
comp=E,81nm,3.9s,comp=E,33nm,1.3s
JNS Sasagawa 13.04 351 A A 16 27 22.8
comp=E,46nm,4.8s,comp=E,30nm,4.3s
JNS Sasagawa 13.04 351 P **P** **16 27 23.9 +0.1**
JNM Ikuma 13.06 326 A A 16 27 23.0
comp=E,28nm,6.6s,comp=E,39nm,4.7s
JSZ Suzu 13.09 343 A A 16 27 23.2
comp=E,17nm,6.3s,comp=E,10.0nm,5.0s
JSZ Suzu 13.09 343 P **P** **16 27 22.8 -1.4**
JFA Akaike 13.11 314 A A 16 27 23.5
comp=E,16nm,11.5s,comp=E,13nm,2.6s
NGSJ Nagasakinomoza 13.16 308 A A 16 27 24.1
comp=E,14nm,5.1s,comp=E,17nm,7.9s
JISK Izumosakaura 13.16 325 A A 16 27 23.9
comp=E,25nm,9.0s,comp=E,32nm,5.8s
JISK Izumosakaura 13.16 325 P **P** **16 27 24.2 -0.9**
JFI Itaya 13.20 313 A A 16 27 24.5
comp=E,26nm,3.7s,comp=E,12nm,7.2s
JTY Toyota 13.29 317 A A 16 27 25.3
comp=E,35nm,4.2s,comp=E,20nm,3.3s
JUR Ureshino 13.30 310 A A 16 27 25.6
comp=E,18nm,4.3s,comp=E,11nm,5.9s
JYS Shirataka 13.35 353 A A 16 27 25.9
comp=E,74nm,3.8s,comp=E,45nm,2.7s
JYS Shirataka 13.35 353 P **P** **16 27 28.1 +1.1**
JAGN Aguni-jima 13.40 280 A A 16 27 27.2
comp=E,77nm,7.4s,comp=E,41nm,3.9s
JAGN Aguni-jima 13.40 280 P **P** **16 27 28.6 +0.8**
JOU Okura 13.44 355 A A 16 27 26.8
comp=E,57nm,5.3s,comp=E,39nm,4.0s
JOU Okura 13.44 355 P **P** **16 27 28.6 +0.7**
JSD Sado 13.44 347 P **P** **16 27 26.8 -1.2**
JSD Sado 13.44 347 A A 16 27 26.8
comp=E,32nm,4.5s,comp=E,13nm,5.0s
JSD Sado 13.44 347 P **P** **16 27 27.4 -0.5**
JSD S **S** **16 29 49.0 -1.8**
JIO Ouri 13.49 358 A A 16 27 27.4
comp=E,35nm,4.1s,comp=E,12nm,6.1s
JIO Ouri 13.49 358 P **P** **16 27 28.6 +0.2**
JHG Hegura jima 13.58 343 A A 16 27 28.2
comp=E,23nm,6.8s,comp=E,24nm,4.3s
JOI OKI 13.59 328 A A 16 27 28.2
comp=E,15nm,4.1s,comp=E,9.0nm,6.2s
JOI OKI 13.59 328 P **P** **16 27 27.7 -1.8**
JHGM Hagimishima 13.59 319 A A 16 27 28.3
comp=E,41nm,7.5s,comp=E,19nm,2.2s
JHGM Hagimishima 13.59 319 P **P** **16 27 28.4 -1.2**
JOFO Osakifurukawao 13.65 356 A A 16 27 29.0
comp=E,180nm,4.3s,comp=E,197nm,4.0s
JAW Awa shima 13.68 351 A A 16 27 29.2
comp=E,59nm,7.9s,comp=E,60nm,5.5s
JAW Awa shima 13.68 351 P **P** **16 27 30.8 +0.4**
JYA Atsumi 13.75 352 A A 16 27 30.0
comp=E,86nm,4.4s,comp=E,43nm,2.7s
JYA Atsumi 13.75 352 P **P** **16 27 31.9 +0.6**
JKE Kume jima 2 13.80 279 A A 16 27 31.3
comp=E,57nm,5.2s,comp=E,24nm,3.2s
JKE Kume jima 2 13.80 279 P **P** **16 27 31.8 -0.1**
JKMT Kesennumamotoy 13.84 358 A A 16 27 30.9
comp=E,27nm,5.2s,comp=E,14nm,9.2s
JII Iki 13.86 312 A A 16 27 31.1
comp=E,21nm,5.2s,comp=E,15nm,2.4s
JII Iki 13.86 312 P **P** **16 27 32.0 -0.4**
JFU Fukue jima 2 13.93 307 A A 16 27 31.9
comp=E,14nm,5.0s,comp=E,8.0nm,5.0s
JMK Ichinoseki 13.99 357 A A 16 27 32.4
comp=E,31nm,4.1s,comp=E,10.0nm,3.0s
JMK Ichinoseki 13.99 357 P **P** **16 27 34.0 +0.4**
JYK Kaneyama 14.01 355 A A 16 27 32.6
comp=E,40nm,11.1s,comp=E,26nm,4.2s
JYK Kaneyama 14.01 355 P **P** **16 27 34.2 +0.3**
OFUJ Ofunato 14.10 359 A A 16 27 33.6
comp=E,35nm,4.4s,comp=E,13nm,5.5s
JYYZ Yamagatayuza 14.15 353 A A 16 27 33.9
comp=E,141nm,5.4s,comp=E,152nm,4.2s
JTB Tobi-shima 14.37 352 A A 16 27 36.1
comp=E,52nm,7.9s,comp=E,32nm,3.3s
JTSM Tsushimamitsus 14.41 313 A A 16 27 36.6
comp=E,40nm,3.8s,comp=E,13nm,2.7s
JRG Rokugo 14.46 356 A A 16 27 37.1
comp=E,43nm,6.5s,comp=E,39nm,7.2s
JRG Rokugo 14.46 356 P **P** **16 27 39.1 +0.5**
JOM Ohasama 14.51 358 A A 16 27 37.6
comp=E,44nm,4.8s,comp=E,14nm,5.3s
JOM Ohasama 14.51 358 P **P** **16 27 39.2 +0.1**
JTU Tsushima 14.52 314 P **P** **16 27 38.6 -0.7**
MIYJ Miyakonagasawa 14.60 359 A A 16 27 38.5
comp=E,51nm,6.5s,comp=E,17nm,5.0s
JYW Yuwa 14.64 355 A A 16 27 38.9
comp=E,56nm,5.2s,comp=E,39nm,4.6s
JSZI Iwateshizukuis 14.79 357 A A 16 27 40.4
comp=E,73nm,5.2s,comp=E,38nm,2.6s
JTH Tanohata 14.96 360 A A 16 27 42.1
comp=E,44nm,5.2s,comp=E,25nm,5.6s
JKZ Kuzumaki 15.02 358 A A 16 27 42.6
comp=E,40nm,5.0s,comp=E,23nm,5.8s
JOGS Gusukube 15.07 273 A A 16 27 44.1
comp=E,67nm,7.9s,comp=E,69nm,4.7s
JOGS Gusukube 15.07 273 *eP* **P** **16 27 45.4 +0.2**
JOG3 Og3 15.14 351 A A 16 27 42.9
comp=E,44nm,6.3s,comp=E,32nm,5.8s
JMJ2 Miyako jima3 15.14 273 A A 16 27 44.8
comp=E,57nm,7.0s,comp=E,71nm,8.2s
KSBUS Busan 15.15 316 P **P** **16 27 43.8 -2.0**
JMJ Miyako jima 2 15.17 273 P **P** **16 27 46.9 +0.7**
JIKM Ikemajima 15.20 273 A A 16 27 45.3
comp=E,93nm,4.6s,comp=E,63nm,4.9s
JKEN Kujiedanarisaw 15.23 359 A A 16 27 44.7
comp=E,46nm,4.4s,comp=E,41nm,4.5s
JAH Hinai 15.25 356 A A 16 27 44.9
comp=E,49nm,4.4s,comp=E,30nm,6.3s
JAH Hinai 15.25 356 P **P** **16 27 47.1 +0.3**
JIRB Irabujima 15.28 273 A A 16 27 46.1
comp=E,62nm,4.8s,comp=E,49nm,4.2s
JNTW Noshirotokiwa 15.37 355 A A 16 27 46.1
comp=E,120nm,5.1s,comp=E,84nm,3.9s
JANG Nango 15.40 359 A A 16 27 46.4
comp=E,45nm,4.7s,comp=E,21nm,4.7s
JIW Iwasaki 15.70 354 A A 16 27 49.3
comp=E,47nm,8.2s,comp=E,36nm,5.8s
JIW Iwasaki 15.70 354 P **P** **16 27 51.6 +0.1**
JTJ Tarama 15.72 273 A A 16 27 50.4
comp=E,73nm,5.1s,comp=E,39nm,4.5s
JHHS Hirosakihyakuz 15.73 355 A A 16 27 49.6
comp=E,104nm,5.4s,comp=E,71nm,5.8s
JTM Tenmabayashi 15.82 357 P **P** **16 27 52.1 -0.6**
JTM Tenmabayashi 15.82 357 A A 16 27 50.6
comp=E,56nm,4.4s,comp=E,49nm,5.7s
JTM Tenmabayashi 15.82 357 P **P** **16 27 52.5 -0.3**
JTM S **S** **16 30 34.4 -0.9**
JARK Aomorirokkasho 16.03 358 A A 16 27 52.6
comp=E,82nm,4.1s,comp=E,41nm,5.7s
JSI2 Shiura 2 16.13 356 A A 16 27 53.6
comp=E,42nm,4.8s,comp=E,22nm,5.5s
JIJ Ishigaki jima 16.25 272 A A 16 27 55.7
comp=E,49nm,7.1s,comp=E,18nm,6.3s
JAHD Aomorihigashid 16.29 358 A A 16 27 55.2
comp=E,77nm,3.2s,comp=E,43nm,5.4s
NAWB Namwon 16.37 313 P **P** **16 27 56.3 -1.9**
JKRS Kuro-shima 16.38 271 A A 16 27 57.0
comp=E,114nm,5.8s,comp=E,55nm,6.3s
JOT Ohata 16.42 357 A A 16 27 56.4
comp=E,50nm,5.4s,comp=E,47nm,4.2s
JOT Ohata 16.42 357 P **P** **16 27 58.6 0.0**
JOT S **S** **16 30 48.9 +3.4**
HATJ Hateruma jima 16.59 271 A A 16 27 59.0
comp=E,75nm,5.9s,comp=E,38nm,6.0s
HATJ Hateruma jima 16.59 271 P **P** **16 28 01.0 +0.5**
JSR Shiriuchi 16.60 356 P **P** **16 28 00.3 0.0**
JOMM Oshimamatsumae 16.63 355 A A 16 27 58.4
comp=E,42nm,4.8s,comp=E,29nm,4.8s
JOMM Oshimamatsumae 16.63 355 P **P** **16 28 00.8 +0.3**
IRIF Iriomote-Funau 16.63 272 A A 16 27 59.3
comp=E,52nm,6.3s,comp=E,12nm,4.9s
KSCHJ Chungju 16.90 318 P **P** **16 28 01.6 -1.7**
JKB Kayabe 16.92 358 A A 16 28 01.3
comp=E,28nm,7.1s,comp=E,27nm,5.2s
JKB Kayabe 16.92 358 P **P** **16 28 03.6 +0.2**
TJN Taejon 16.96 316 P **P** **16 28 02.3 -1.6**
TJN Taejon 16.96 316 *ceP* **P** **16 28 02.7 -1.2**
TJN Taejon 16.96 316 P **P** **16 28 03.5 -0.4**
ERM Erimo 17.06 3 P **P** **16 28 02.8 -1.9**
ERM Erimo 17.06 3 *ceP* **P** **16 28 05.9 +1.2**
ERM pmax pmax
comp=Z,3μm,1.0s
JEM Erimo 17.06 3 A A 16 28 02.7
comp=Z,14nm,7.3s,comp=Z,11nm,5.6s
JEM Erimo 17.06 3 P **P** **16 28 05.8 +1.1**
JYM2 Yakumo 2 17.19 356 P **P** **16 28 06.2 +0.3**
JOSM Okushiri--Mats 17.23 354 P **P** **16 28 06.4 +0.2**
JOSM S **S** **16 30 59.8 +0.9**
YOJ Yonaguni jima 17.27 272 P **P** **16 28 05.8 -1.1**
YOJ Yonaguni jima 17.27 272 P **P** **16 28 05.8 -1.1**
YOJ Yonaguni jima 17.27 272 P **P** **16 28 06.2 -0.7**
JNBK Urakawa-nobuka 17.31 2 A A 16 28 05.1
comp=Z,25nm,4.4s,comp=Z,21nm,7.7s
JNBK Urakawa-nobuka 17.31 2 P **P** **16 28 08.3 +1.3**
KSRS Korea Array 17.32 319 P **P** **16 28 06.5 -0.6**
comp=Z,3μm,0.8s,baz=134,slow=9.3,SNR=659
KSRS S **S** **16 31 02.5 +2.0**
comp=Z,26nm,0.9s,baz=133,slow=8.6,SNR=1.0
KSRS PcP **PcP** **16 32 18.8 +0.6**
comp=Z,29nm,0.8s,baz=154,slow=1.7,SNR=4.8
KSRS ScP **ScP** **16 35 02.5 -0.7**
comp=Z,32nm,1.0s,baz=167,slow=1.9,SNR=14
KSRS PKiKP **PKiKP** **16 40 09.7 -0.4**
comp=Z,2.5nm,0.7s,baz=90,slow=1.0,SNR=8.0
JYNG Yonaguni jima 17.33 272 P **P** **16 28 06.3 -1.1**
KSAR Wonju Array Be 17.33 319 P **P** **16 28 05.0 -2.3**
KSAR Wonju Array Be 17.33 319 P **P** **16 28 05.0 -2.3**
JTHR Tokachihiroo 17.34 3 A A 16 28 05.4
comp=Z,19nm,7.4s,comp=Z,16nm,6.6s
KS19 Wonju Array Si 17.38 319 P **P** **16 28 05.7 -2.0**
JSHD Hidakashinhida 17.43 1 A A 16 28 06.2
comp=Z,37nm,5.0s,comp=Z,32nm,4.5s
JNB Noboribetsu 17.50 358 A A 16 28 06.9
comp=Z,18nm,4.3s,comp=Z,10.0nm,10.0s
JNB Noboribetsu 17.50 358 P **P** **16 28 08.9 +0.2**
JNB S **S** **16 31 05.4 +2.0**
JHST Hiyamasetana 17.53 355 A A 16 28 07.1
comp=Z,47nm,3.7s,comp=Z,16nm,6.1s
JHST Hiyamasetana 17.53 355 P **P** **16 28 09.6 +0.6**
JIAM Iburiatsuma 17.64 360 A A 16 28 08.2
comp=Z,30nm,4.2s,comp=Z,28nm,6.4s
JCH Churui 17.67 3 A A 16 28 08.5
comp=Z,16nm,9.2s,comp=Z,14nm,5.7s
JCH Churui 17.67 3 P **P** **16 28 10.9 +0.7**
SEHB SEOHWA 17.68 322 P **P** **16 28 08.5 -2.0**
JSH Shimam 17.73 355 A A 16 28 09.1
comp=Z,16nm,5.2s,comp=Z,13nm,4.2s
JSH Shimam 17.73 355 P **P** **16 28 11.1 +0.3**
JBT2 Biratori 2 17.80 1 A A 16 28 09.7
comp=Z,16nm,5.3s,comp=Z,14nm,5.7s
JEW Eniwo 17.86 359 P **P** **16 28 12.0 -0.1**
JEW Eniwo 17.86 359 A A 16 28 10.3
comp=Z,22nm,6.1s,comp=Z,23nm,3.7s
JEW Eniwo 17.86 359 P **P** **16 28 12.8 +0.8**
JEW S **S** **16 31 11.6 +2.3**
JOB Onbets 17.98 4 A A 16 28 11.6
comp=Z,24nm,5.8s,comp=Z,32nm,5.0s
INCN Inchon 18.11 317 P **P** **16 28 14.1 -0.4**
INCN Inchon 18.11 317 P **P** **16 28 14.1 -0.4**
INCN Inchon 18.11 317 P **P** **16 28 15.4 +0.9**
INCN P **P** **16 28 15.4 +0.9**
INCN Inchon 18.11 317 P **P** **16 28 14.9 +0.4**
JAK Akkeshi 18.15 6 A A 16 28 13.2
comp=Z,17nm,4.5s,comp=Z,12nm,3.4s
JAK Akkeshi 18.15 6 P **P** **16 28 15.3 +0.7**
JFR Furan 18.19 1 A A 16 28 38.7
comp=Z,16nm,4.0s,comp=Z,7.0nm,7.3s
JFR Furan 18.19 1 P **P** **16 28 15.9 +0.9**
JKHN Kushirohamanak 18.29 7 A A 16 28 37.6
comp=Z,20nm,4.4s,comp=Z,9.0nm,5.2s
JKHN Kushirohamanak 18.29 7 P **P** **16 28 16.6 +0.8**
JISS Ishikarishitsu 18.30 359 A A 16 28 37.6
comp=Z,19nm,4.7s,comp=Z,19nm,5.1s
JISS Ishikarishitsu 18.30 359 P **P** **16 28 17.1 +1.1**
JAR Ashorobuto 18.37 4 A A 16 28 36.5
comp=Z,26nm,4.1s,comp=Z,10.0nm,4.5s
JAR Ashorobuto 18.37 4 P **P** **16 28 17.4 +0.7**
JSK Shakotan 18.41 356 A A 16 28 36.1
comp=Z,19nm,3.4s,comp=Z,8.0nm,11.9s
JSK Shakotan 18.41 356 *eP* **P** **16 28 18.2 +1.1**
JAB Ashibetsu 18.52 1 A A 16 28 34.3
comp=Z,23nm,4.2s,comp=Z,13nm,5.5s
NACB Ninganchiao 18.58 272 P **P** **16 28 17.9 -0.9**
TATO Taipei 18.60 274 P **P** **16 28 18.0 -1.1**
TATO Taipei 18.60 274 P **P** **16 28 18.6 -0.5**
TATO P **P** **16 28 18.6 -0.5**
NEM2 Nemuro 2 18.64 9 A A 16 28 26.6
comp=Z,15nm,4.0s,comp=Z,6.0nm,4.1s
NEM2 Nemuro 2 18.64 9 P **P** **16 28 19.2 +0.1**
NMR Nemuro--Hokkai 18.64 9 *iP* **P** **16 28 18.9 -0.2**
NMR *i* S **S** **16 31 20.7 -1.1**
YHNB Yeheng 18.73 274 P **P** **16 28 19.8 -0.6**
YHNB Yeheng 18.73 274 P **P** **16 28 20.8 +0.5**
JNK Nakash 18.73 6 A A 16 28 25.0
comp=Z,12nm,4.4s,comp=Z,6.0nm,3.8s
JNK Nakash 18.73 6 P **P** **16 28 20.0 +0.1**
JHR Hokuryu 18.76 359 A A 16 28 24.8
comp=Z,18nm,4.4s,comp=Z,11nm,11.3s
JKK2 Kamakawa 2 18.90 2 A A 16 28 23.0
comp=Z,16nm,4.1s,comp=Z,7.0nm,5.7s
JKK2 Kamakawa 2 18.90 2 P **P** **16 28 22.6 +1.1**
JNSB Nemuroshibetsu 18.95 7 A A 16 28 22.5
comp=Z,57nm,4.6s,comp=Z,24nm,3.6s
YULB Yu-li 18.96 270 P **P** **16 28 21.8 -0.5**
HJU Haeju 19.02 317 P **P** **16 28 23.3 +0.6**
HJU pP sP 16 29 48.8 -48
HJU S **S** **16 31 26.7 -1.5**
HJU AMS AMS
comp=N,8μm,6.1s
HJU AMS AMS
comp=E,5μm,3.9s
HJU AMS AMS
comp=Z,2μm,1.7s
JTKR Abashiri--Toko 19.05 4 A A 16 28 21.9
comp=Z,13nm,4.2s,comp=Z,6.0nm,3.4s
JTKR Abashiri--Toko 19.05 4 P **P** **16 28 23.9 +1.1**
JMP Maruseppu 19.06 3 A A 16 28 21.8
comp=Z,15nm,4.1s,comp=Z,6.0nm,4.7s
JMP Maruseppu 19.06 3 P **P** **16 28 24.1 +1.1**
JRA Rausu 19.12 7 A A 16 28 21.5
comp=Z,21nm,4.2s,comp=Z,11nm,5.8s
JRA Rausu 19.12 7 P **P** **16 28 24.3 +0.8**
ASAJ Asahikawa 19.14 1 A A 16 28 21.5
comp=Z,12nm,4.4s,comp=Z,5.0nm,3.8s
ASAJ Asahikawa 19.14 1 P **P** **16 28 24.7 +1.0**
SSLB Suanglung 19.21 271 P **P** **16 28 24.4 -0.3**
SSLB Suanglung 19.21 271 P **P** **16 28 25.5 +0.8**
HHU Hamhung 19.26 324 P **P** **16 28 25.1 +0.3**
HHU pP sP 16 29 54.0 -46
HHU S **S** **16 31 33.2 +1.1**
HHU AMS AMS
comp=N,11μm,4.5s
HHU AMS AMS
comp=E,16μm,6.3s
HHU AMS AMS
comp=Z,13μm,5.1s
SHO Shikotan 19.30 11 *diP* **P** **16 28 25.1 0.0**
SHO *i* S **S** **16 31 31.0 -1.4**
SHO pmax pmax
comp=Z,1μm,1.6s
SHO pmax pmax
comp=Z,78nm,0.4s
SHO pmax pmax
comp=E,27nm,0.3s
SHO pmax pmax
comp=N,16nm,0.2s
RUSJ Misakicho 19.30 7 *diP* **P** **16 28 25.9 +0.8**
RUSJ *i* S **S** **16 31 33.1 +0.6**
YUK Yuzh-Kuril'sk 19.31 8 *diP* **P** **16 28 25.4 +0.2**
YUK *i* S **S** **16 31 32.3 -0.3**
YUK pmax pmax
comp=N,71nm,0.6s
YUK pmax pmax
comp=Z,510nm,0.6s
YUK pmax pmax
comp=Z,3μm,1.3s
SSE Sheshan 19.36 293 P **P** **16 28 25.0 -0.9**
SSE S **S** **16 31 33.7 -0.2**
SSE pmax pmax
comp=Z,370nm,1.0s
SSE pmax pmax
comp=Z,8μm,3.5s
JSS Shosan 19.42 360 A A 16 28 22.0
comp=Z,21nm,4.3s,comp=Z,8.0nm,5.0s
JYG Yagishiri 19.45 359 A A 16 28 22.2
comp=Z,14nm,4.4s,comp=Z,10.0nm,5.3s
TPUB Ta-pu 19.58 270 P **P** **16 28 27.2 -0.8**
TPUB Ta-pu 19.58 270 P **P** **16 28 28.1 +0.1**
PYAG Pyongyang 19.65 320 P **P** **16 28 29.9 +1.5**
PYAG pP sP 16 29 59.0 -45
PYAG S **S** **16 31 39.6 +1.4**
PYAG AMS AMS
comp=N,29μm,5.3s
PYAG AMS AMS
comp=E,27μm,5.0s
PYAG AMS AMS
comp=Z,41μm,7.6s
SGCP Gonzaga 19.71 254⇑ *eP* **P** **16 28 29.6 +0.4**
SGCP Gonzaga 19.71 254⇑ *eP* **ScP** **16 35 09.2 +0.4**
MSHR Mys Shultsa 19.74 336 *ceP* **P** **16 28 30.1 +0.9**
MSHR pmax pmax
comp=Z,917nm,1.0s
PALP Palanan 19.87 251⇑ *eP* **P** **16 28 31.9 +1.2**
VLA Vladivostok 19.95 338 *cP* **P** **16 28 32.7 +1.6**
VLA pmax pmax
comp=Z,3μm,1.2s
JSE Soyaes 19.98 1 P **P** **16 28 32.3 +1.0**
JRR Rishiri 20.16 359 A A 16 28 32.1
comp=Z,23nm,7.3s,comp=Z,31nm,4.2s
PVCP Virac 20.25 239⇑ *eP* **P** **16 28 34.9 +0.8**
PVCP *eS* **sP** **16 30 53.8 +3.2**
JWK2 Keihoku 20.33 360 A A 16 28 33.7
comp=Z,13nm,4.3s,comp=Z,8.0nm,5.3s
CAUP Cauayan 20.44 251⇑ *eP* **P** **16 28 36.5 +0.7**
CAUP Cauayan 20.44 251⇑ *eP* **ScS** **16 38 55.8 +1.3**
JRBN Rebuntou 20.45 358 A A 16 28 34.7
comp=Z,11nm,5.3s,comp=Z,4.0nm,4.4s
JRBN Rebuntou 20.45 358 P **P** **16 28 36.4 +0.9**
TEY Ternei 20.52 349⇑ *eP* **P** **16 28 37.1 +0.9**
TEY *e* 16 30 54.0
TEY *e* 16 31 51.3
TEY pmax pmax
comp=N,10.0nm,0.7s
TEY pmax pmax
comp=E,20nm,0.7s
TEY pmax pmax
comp=Z,80nm,0.7s
BESP Borongan 20.54 233⇑ *eP* **P** **16 28 37.5 +0.7**
KUR Kuril'sk 20.80 12 *ijP* **P** **16 28 39.3 +0.6**
USA0B Ussuriysk Arra 20.88 339 P **P** **16 28 39.6 +0.1**
USA0B Ussuriysk Arra 20.88 339 P **P** **16 28 39.6 +0.1**
USRK Ussuriysk Ar. 20.88 339 P **P** **16 28 39.2 -0.2**
comp=Z,218nm,0.7s,baz=165,slow=8.7,SNR=320
USRK S **S** **16 31 57.8 +0.1**
comp=Z,17nm,0.6s,baz=164,slow=4.4,SNR=1.8
USRK ScP **ScP** **16 35 09.7 -1.5**
comp=Z,60nm,1.0s,baz=202,slow=2.1,SNR=16
USRK P3KPbc 17 02 24.1
comp=Z,3.4nm,0.7s,baz=336,slow=4.2,SNR=16
comp=Z,218nm,0.7s
USRK Ussuriysk Ar. 20.88 339 P **P** **16 28 39.9 +0.5**
USRK Ussuriysk Ar. 20.88 339 P **P** **16 28 39.9 +0.5**
JCNP Jose Panganiba 21.02 243⇑ *eP* **P** **16 28 40.5 -0.6**
JCNP *eS* **sP** **16 31 02.0 +2.9**
JCNP Jose Panganiba 21.02 243⇑ *eP* **P** **16 28 42.8 +1.7**
JCNP Jose Panganiba 21.02 243⇑ *eP* sP 16 30 57.6 -1.4
SUJ Sinuiju 21.07 320 P **P** **16 28 42.5 +1.2**
SUJ pP sP 16 30 13.9 -46

SUJ				S	**S**	**16 31 58.1**	**-2.8**		
SUJ				AMS	AMS				
	comp=N,29μm,8.1s								
SUJ				AMS	AMS				
	comp=E,28μm,7.8s								
SUJ				AMS	AMS				
	comp=Z,24μm,6.8s								
SAMP	**Sagada Mountai**	**21.17 252**⇑	*eP*	**P**	**16 28 41.4**	**-1.2**			
SAMP			*eS*	**sP**	**16 31 04.1**	**+3.4**			
QZH	**Quanzhou**	**21.23 275**⇓	*iP*	**P**	**16 28 42.6**	**-0.3**			
QZH			sP	**sP**	**16 30 58.2**	**-3.1**			
QZH			S	**S**	**16 32 01.6**	**-2.1**			
QZH			ScP	**ScP**	**16 35 13.0**	**+0.5**			
QZH			ScS	**ScS**	**16 38 59.2**	**+2.0**			
QZH			pmax	pmax					
	comp=Z,2μm,0.7s								
QZH			pmax	pmax					
	comp=Z,6μm,5.1s								
GLSP	**General Luna,**	**21.33 228**⇑	*eP*	**P**	**16 28 45.0**	**+1.0**			
GLSP			*eS*	**sP**	**16 31 04.2**	**+1.7**			
GQP	**Guinayangan**	**21.43 243**⇓	*eP*	**P**	**16 28 44.6**	**-0.2**			
KNMB	**Chin-men Tao**	**21.46 274**	P	**P**	**16 28 44.7**	**-0.3**			
NJ2	**Nanjing**	**21.52 294**⇓	*iP*	**P**	**16 28 45.3**	**-0.1**			
NJ2			sP	**sP**	**16 31 03.6**	**-0.9**			
NJ2			S	**S**	**16 32 08.6**	**+0.4**			
NJ2			PcP	**PcP**	**16 32 27.8**	**+1.8**			
NJ2			ScP	**ScP**	**16 35 14.3**	**+1.2**			
NJ2			ScS	**ScS**	**16 38 58.9**	**+0.8**			
NJ2			pmax	pmax					
	comp=Z,64nm,0.7s								
SCPH	**Surigao**	**21.77 229**	*eP*	**P**	**16 28 48.5**	**+0.6**			
SCPH	**Surigao**	**21.77 229**	*eS*	**S**	**16 32 12.2**	**-0.3**			
SMPP	**San Manuel, Pa**	**21.77 250**⇑	*eP*	**P**	**16 28 48.0**	**+0.1**			
SMPP			*eS*	**sP**	**16 31 10.3**	**+3.0**			
MSLP	**Maasin**	**21.96 231**⇑	*eP*	**P**	**16 28 50.2**	**+0.6**			
YSS	**Yuzh-Sakhalins**	**21.98 1**	P	**P**	**16 28 48.7**	**-0.6**			
YSS	**Yuzh-Sakhalins**	**21.98 1**κ	*iP*	**P**	**16 28 49.4**	**+0.1**			
YSS			*eS*	**S**	**16 32 13.5**	**-1.5**			
YSS			*e*		16 38 57.6				
YSS			pmax	pmax					
	comp=Z,2μm,2.8s								
YSS			pmax	pmax					
	comp=N,900nm,2.5s								
YSS			pmax	pmax					
	comp=E,400nm,2.6s								
YSS			pmax	pmax					
	comp=Z,220nm,0.9s								
YSS			smax	smax					
	comp=N,5μm,5.5s								
YSS			smax	smax					
	comp=E,9μm,5.5s								
YSS			smax	smax					
	comp=N,1μm,1.1s								
YSS			MLR	MLR					
	comp=Z,5μm,10.0s								
YSS	**Yuzh-Sakhalins**	**21.98 1**	P	**P**	**16 28 49.6**	**+0.3**			
LQP	**Lukban**	**22.06 245**⇓	*eP*	**P**	**16 28 47.0**	**-3.7**			
MDJ	**Mudanjiang**	**22.07 336**	P	**P**	**16 28 50.7**	**+0.5**			
MDJ	**Mudanjiang**	**22.07 336**	P	**P**	**16 28 51.0**	**+0.8**			
MDJ			S	**S**	**16 32 18.2**	**+1.6**			
MDJ			pmax	pmax					
	comp=Z,620nm,1.4s								
MDJ			pmax	pmax					
	comp=Z,8μm,4.3s								
DL2	**Dalian**	**22.14 314**	P	**P**	**16 28 50.4**	**-0.5**			
DL2			sP	**sP**	**16 31 15.3**	**+4.0**			
DL2			S	**S**	**16 32 17.2**	**-0.5**			
DL2			PcP	**PcP**	**16 32 27.8**	**+0.7**			
DL2			ScP	**ScP**	**16 35 13.9**	**-0.6**			
DL2			PcS	**PcS**	**16 36 06.2**	**0.0**			
DL2			ScS	**ScS**	**16 38 57.9**	**-2.2**			
DL2			pmax	pmax					
	comp=Z,1μm,0.8s								
DL2			pmax	pmax					
	comp=Z,7μm,5.0s								
BOAC	**Boac**	**22.16 243**⇑	*eP*	**P**	**16 28 52.0**	**+0.6**			
BOAC	**Boac**	**22.16 243**⇑	*eP*	**ScS**	**16 39 01.0**	**+0.1**			
BUTP	**Butuan**	**22.27 227**⇑	*eP*	**P**	**16 28 53.4**	**+1.0**			
BOLP	**Bolinao**	**22.33 252**⇑	*eP*	**P**	**16 28 51.4**	**-1.5**			
BIPH	**Bislig**	**22.37 225**⇓	*eP*	**P**	**16 28 52.1**	**-1.2**			
BIPH	**Bislig**	**22.37 225**⇑	*eP*	**ScP**	**16 35 12.5**	**-3.1**			
LLP	**Lapu-Lapu**	**22.47 233**⇑	*eP*	**P**	**16 28 55.6**	**+1.4**			
LLP			*eS*	**S**	**16 32 23.8**	**+0.1**			
TGY	**Tagaytay City**	**22.56 245**⇑	*eP*	**P**	**16 28 55.2**	**+0.2**			
RCP	**Roxas**	**22.58 237**⇑	*eP*	**P**	**16 28 55.6**	**+0.5**			
RCP	**Roxas**	**22.58 237**⇑	*eP*	**ScP**	**16 35 14.9**	**-1.3**			
RCP	**Roxas**	**22.58 237**⇑	*eP*	**ScS**	**16 39 01.3**	**-1.3**			
SNY	**Shenyang**	**22.73 322**⇓	P	**P**	**16 28 55.5**	**-0.7**			
SNY			sP	**sP**	**16 31 16.6**	**-1.2**			
SNY			pmax	pmax					
	comp=Z,220nm,0.7s								
SNY			pmax	pmax					
	comp=Z,4μm,3.5s								
PGP	**Puerto Galera**	**22.86 244**⇓	*eP*	**P**	**16 28 57.5**	**-0.3**			
TBP	**Tagbilaran**	**22.97 232**⇓	*eP*	**P**	**16 28 57.7**	**-1.0**			
TBP			*iS*	**sP**	**16 31 20.0**	**-0.6**			
CN2	**Changchun**	**23.18 328**	P	**P**	**16 29 00.1**	**0.0**			
CN2			PcP	**PcP**	**16 32 28.7**	**-0.6**			
CN2			S	**S**	**16 32 34.2**	**+0.2**			
CN2			ScP	**ScP**	**16 35 17.1**	**-0.1**			
CN2			ScS	**ScS**	**16 39 03.0**	**-1.0**			
CN2			pmax	pmax					
	comp=Z,140nm,1.1s								
CN2			pmax	pmax					
	comp=Z,3μm,4.0s								
GUIM	**Jordan**	**23.28 236**⇑	*eP*	**P**	**16 28 59.1**	**-2.3**			
GUIM			*eS*	**sP**	**16 31 27.3**	**+3.2**			
SJMP	**San Jose**	**23.31 242**⇑	*eP*	**P**	**16 29 01.4**	**-0.3**			
SJMP	**San Jose**	**23.31 242**⇑	*eP*	**ScS**	**16 38 58.9**	**-6.5**			
LUBP	**Lubang**	**23.32 245**⇑	*eP*	**P**	**16 29 01.4**	**-0.4**			
LUBP			*eS*	**sP**	**16 31 28.9**	**+4.5**			
MATI	**Mati**	**23.39 223**⇑	*eP*	**P**	**16 29 02.1**	**-0.3**			
MATI			*eS*	**sP**	**16 31 26.1**	**+0.9**			
MATI	**Mati**	**23.39 223**⇑	*eP*	**ScS**	**16 39 05.8**	**-0.1**			
WAKE	**Wake Island**	**23.50 99**	P	**P**	**16 29 02.7**	**-0.6**			
WAKE	**Wake Island**	**23.50 99**	P	**P**	**16 29 04.2**	**+0.9**			
H11N1	**WAKE ISLAND Hy**	**23.59 98**	P	**P**	**16 29 04.2**	**+0.3**			
	baz=264,slow=10,SNR=100								
H11N2	**WAKE ISLAND Hy**	**23.59 98**	P	**P**	**16 29 04.4**	**+0.5**			
	baz=264,slow=10,SNR=172								
H11N3	**WAKE ISLAND Hy**	**23.60 98**	P	**P**	**16 29 04.4**	**+0.4**			
	baz=264,slow=10,SNR=113								
SNPH	**Sibulan**	**23.66 232**	*eP*	**P**	**16 29 04.0**	**-0.9**			
JAP	**San Jose, Anti**	**23.69 237**⇑	*eP*	**P**	**16 29 05.7**	**+0.7**			
DAV	**Davao City (W)**	**23.72 224**	P	**P**	**16 29 05.5**	**+0.2**			
	comp=Z,290nm,0.7s,baz=72,slow=4.5,SNR=8.2								
DAV			S	**S**	**16 32 44.5**	**+1.3**			
	comp=Z,155nm,0.4s,baz=276,slow=20,SNR=6.0								
	comp=Z,290nm,0.7s								
DAV	**Davao City (W)**	**23.72 224**	P	**P**	**16 29 06.4**	**+1.1**			
DAV	**Davao City (W)**	**23.72 224**	P	**P**	**16 29 07.1**	**+1.8**			
DAV	**Davao City (W)**	**23.72 224**	P	**P**	**16 29 06.9**	**+1.6**			
CNOP	**Candoni, Negro**	**23.77 234**⇑	*eP*	**P**	**16 29 05.1**	**-0.7**			
CNOP			*iS*	**sP**	**16 31 29.0**	**-0.3**			
PATS	**Pohnpei**	**23.83 136**	P	**P**	**16 29 05.3**	**-0.9**			
PATS	**Pohnpei**	**23.83 136**	P	**P**	**16 29 06.3**	**0.0**			
BNX	**BinXian**	**23.85 334**⇓	P	**P**	**16 29 06.3**	**+0.2**			
BNX			S	**S**	**16 32 47.9**	**+3.3**			
BNX			ScS	**ScS**	**16 39 05.8**	**-0.9**			
BNX			pmax	pmax					
	comp=Z,250nm,0.5s								
BNX			pmax	pmax					
	comp=Z,7μm,6.2s								
KCP	**Kidapawan**	**24.08 225**⇑	*eP*	**P**	**16 29 10.6**	**+2.0**			
KCP			*iS*	**S**	**16 32 44.9**	**-4.1**			
KCP	**Kidapawan**	**24.08 225**⇓	*iP*	**ScS**	**16 39 08.9**	**+0.2**			
UGL	**Uglegorsk**	**24.10 0**⇑	*iP*	**P**	**16 29 09.1**	**+0.9**			
UGL			*eS*	**S**	**16 32 47.2**	**-1.1**			
UGL			*e*		16 39 08.5				
UGL			pmax	pmax					
	comp=Z,3μm,2.5s								
UGL			pmax	pmax					
	comp=Z,250nm,1.3s								
UGL			smax	smax					
	comp=E,13μm,9.5s								
UGL			smax	smax					
	comp=N,8μm,12.0s								
DCPH	**Dipolog City**	**24.10 231**⇓	*eP*	**P**	**16 29 06.7**	**-2.0**			
TIA	**Tai'an**	**24.12 304**	P	**P**	**16 29 08.5**	**-0.1**			
TIA			sP	**sP**	**16 31 33.1**	**+0.3**			
TIA			PcP	**PcP**	**16 32 33.8**	**+2.3**			
TIA			S	**S**	**16 32 46.4**	**-2.7**			
TIA			ScP	**ScP**	**16 35 21.4**	**+1.4**			
TIA			ScS	**ScS**	**16 39 07.8**	**-0.4**			
TIA			pmax	pmax					
	comp=N,43nm,0.5s								
TIA			pmax	pmax					
	comp=N,5μm,6.4s								
BUSP	**Coron**	**24.31 242**⇑	*eP*	**P**	**16 29 10.7**	**+0.1**			
CUYO	**Cuyo Island**	**24.34 239**⇑	*eP*	**P**	**16 29 11.7**	**+0.8**			
DDMP	**Don Marcelino,**	**24.38 223**⇑	*eP*	**P**	**16 29 09.9**	**-1.3**			
DDMP			*eS*	**S**	**16 32 47.2**	**-6.5**			
DDMP	**Don Marcelino,**	**24.38 223**⇑	*eP*	**ScS**	**16 39 07.0**	**-2.9**			
CTBH	**Cotabato--PC H**	**24.47 227**⇑	*iP*	**P**	**16 29 12.9**	**+0.9**			
PAGZ	**Pagadian**	**24.60 229**⇑	*eP*	**P**	**16 29 13.6**	**+0.5**			
PAGZ			*eS*	**sP**	**16 31 38.7**	**+0.5**			
SKMP	**Bagumbayan, Su**	**24.80 225**⇑	*eP*	**P**	**16 29 18.3**	**+3.4**			
SKMP			*eS*	**sP**	**16 31 36.8**	**-3.6**			
WHN	**Wuhan**	**25.07 289**	⇓P	**P**	**16 29 17.3**	**+0.2**			
WHN			sP	**sP**	**16 31 40.1**	**-2.9**			
WHN			S	**S**	**16 33 01.8**	**-2.4**			
WHN			pmax	pmax					
	comp=N,8μm,4.4s								
KLR	**Kul'dur**	**25.54 344**	P	**P**	**16 29 21.4**	**+0.4**			
	comp=N,866nm,0.8s,baz=156,slow=8.5,SNR=725								
KLR			ScP	**ScP**	**16 35 23.9**	**+0.1**			
	comp=N,103nm,0.6s,baz=167,slow=5.0,SNR=21								
	comp=N,866nm,0.8s								
TYV	**Tymovskoe**	**25.89 1**	*eP*	**P**	**16 29 20.9**	**-3.1**			
TYV			*eS*	**S**	**16 33 18.6**	**+2.2**			
TYV			pmax	pmax					
	comp=Z,2μm,2.4s								
TYV			pmax	pmax					
	comp=Z,143nm,0.7s								
TYV			smax	smax					
	comp=N,11μm,3.8s								
TYV			smax	smax					
	comp=E,8μm,3.8s								
TYV			smax	smax					
	comp=N,399nm,1.6s								
TYV			smax	smax					
	comp=E,398nm,1.6s								
GRNR	**Gornyy**	**26.15 352**⇓	*iP*	P	16 29 17.2	-9.1			
GRNR			*eS*	**S**	**16 33 31.0**	**+10**			
GRNR			pmax	pmax					
	comp=N,10.0nm,0.5s								
GRNR			pmax	pmax					
	comp=E,10.0nm,0.5s								
GRNR			pmax	pmax					
	comp=Z,60nm,0.5s								
GRNR			smax	smax					
	comp=N,9.0nm,0.8s								
GRNR			MLR	MLR					
	comp=E,1μm,13.0s								
GRNR			MLR	MLR					
	comp=N,2μm,11.0s								
GRNR			MLR	MLR					
	comp=Z,2μm,11.0s								
CNSH	**ChangSha**	**26.18 284**	⇓P	**P**	**16 29 27.0**	**+0.1**			
CNSH			sP	**sP**	**16 31 49.6**	**-4.0**			
CNSH			S	**S**	**16 33 21.6**	**0.0**			
CNSH			pmax	pmax					
	comp=Z,4μm,3.8s								
MCO	**Taipa Grande**	**26.21 270**	P	**P**	**16 29 28.0**	**+0.7**			
GZH	**Guangzhou**	**26.22 272**	P	**P**	**16 29 24.6**	**-2.8**			
GZH			sP	**sP**	**16 31 50.5**	**-3.5**			
GZH			S	**S**	**16 33 18.3**	**-4.1**			
GZH			pmax	pmax					
	comp=Z,4μm,6.6s								
HNS	**HongShan**	**26.35 305**	⇓P	**P**	**16 29 28.3**	**0.0**			
HNS			sP	**sP**	**16 31 57.0**	**+1.9**			
HNS			PcP	**PcP**	**16 32 38.6**	**+2.0**			
HNS			S	**S**	**16 33 22.2**	**-1.9**			
HNS			ScP	**ScP**	**16 35 27.8**	**+1.4**			
HNS			PcS	**PcS**	**16 36 15.8**	**-2.5**			
HNS			ScS	**ScS**	**16 39 18.6**	**+1.0**			
HNS			pmax	pmax					
	comp=Z,1μm,1.1s								
HNS			pmax	pmax					
	comp=Z,6μm,6.8s								
BJI	**Beijing**	**26.36 311**	P	**P**	**16 29 27.7**	**-0.6**			
BJI			PcP	**PcP**	**16 32 37.7**	**+1.2**			
BJI			ScP	**ScP**	**16 35 27.1**	**+0.7**			
BJI			pmax	pmax					
	comp=Z,75nm,0.5s								
BJI			pmax	pmax					
	comp=Z,4μm,5.8s								
SGSI	**Sangihe**	**26.42 220**	P	**P**	**16 29 28.1**	**-1.1**			
	comp=Z,4μmcomp=Z,352nm,0.6s								
BAKI	**Biak**	**26.60 193**	P	**P**	**16 29 31.4**	**+0.7**			
	comp=Z,3μmcomp=Z,227nm,0.6s								
SMPI	**Sarmi**	**26.96 187**	P	**P**	**16 29 34.0**	**+0.1**			
	comp=Z,2μmcomp=Z,181nm,0.9s								
SRPI	**Serui, Papua**	**27.23 193**	P	**P**	**16 29 36.2**	**-0.1**			
	comp=Z,149nm,0.9s								
LYN	**LuoYang**	**27.29 297**⇓	*iP*	**P**	**16 29 35.9**	**-0.7**			
LYN			sP	sP	16 32 00.4	-3.1			
LYN			PcP	**PcP**	**16 32 40.0**	**+1.0**			
LYN			S	**S**	**16 33 40.0**	**+1.1**			
LYN			ScP	**ScP**	**16 35 28.7**	**-0.6**			
LYN			PcS	**PcS**	**16 36 22.5**	**+1.2**			
LYN			ScS	**ScS**	**16 39 21.7**	**-0.3**			
LYN			pmax	pmax					
	comp=Z,620nm,1.1s								
LYN			pmax	pmax					
	comp=Z,4μm,7.6s								
MANU	**Manus Island**	**27.32 168**	P	**P**	**16 29 36.5**	**-0.6**			
GENI	**Genyem**	**27.42 184**	P	**P**	**16 29 39.2**	**+1.2**			
	comp=Z,2μmcomp=Z,129nm,1.6s								
GENI	**Genyem**	**27.42 184**	P	**P**	**16 29 38.6**	**+0.6**			
SWI	**Sorong**	**27.68 204**	P	**P**	**16 29 40.4**	**+0.2**			
	comp=Z,4μmcomp=Z,3μmcomp=Z,250nm,0.5s								
SIJI	**Sorong**	**27.68 204**	P	**P**	**16 29 39.5**	**-0.8**			
	comp=Z,188nm,0.5s,baz=9.9,slow=13,SNR=62								
SIJI			S	**S**	**16 33 44.9**	**-0.5**			
	comp=Z,77nm,1.1s,baz=276,slow=21,SNR=18								
	comp=Z,188nm,0.5s								
TNTI	**Ternate**	**27.88 213**	P	**P**	**16 29 42.6**	**+0.6**			
TNTI	**Ternate**	**27.88 213**	P	**P**	**16 29 45.3**	**+3.3**			
	comp=Z,4μmcomp=Z,1μmcomp=Z,83nm,0.6s								
TNTI	**Ternate**	**27.88 213**	P	**P**	**16 29 42.6**	**+0.6**			
SKR	**Severo-Kuril's**	**27.92 19**	*eP*	**P**	**16 29 44.1**	**+2.3**			
SKR			*eS*	**S**	**16 33 44.7**	**-3.4**			
SKR			pmax	pmax					
	comp=Z,445nm,1.3s								
SKR			pmax	pmax					
	comp=Z,500nm,4.0s								
BATP	**Bataraza**	**28.10 239**⇑	*eP*	**P**	**16 29 46.0**	**+2.1**			
TIY	**Taiyuan**	**28.16 304**	⇓P	**P**	**16 29 45.9**	**+1.6**			
TIY			sP	**sP**	**16 32 12.8**	**+1.0**			
TIY			S	**S**	**16 33 50.4**	**-2.1**			
TIY			pmax	pmax					
	comp=Z,150nm,0.7s								
TIY			pmax	pmax					
	comp=Z,6μm,4.1s								
NKL	**Nikolayevsk**	**28.19 358**	*eP*	**P**	**16 29 44.3**	**+0.1**			
NKL			*eS*	**S**	**16 33 44.5**	**-7.8**			
NKL			pmax	pmax					
	comp=E,4.0nm,0.9s								
NKL			pmax	pmax					
	comp=N,558nm,1.0s								
NKL			pmax	pmax					
	comp=Z,529nm,1.3s								
NKL			pmax	pmax					
	comp=Z,298nm,1.6s								
NKL			smax	smax					
	comp=E,3.0nm,1.3s								
NKL			smax	smax					
	comp=N,1μm,2.9s								
NKL			MLR	MLR					
	comp=Z,2μm,13.0s								
XLT	**XiLinHaoTe**	**28.36 318**	*eP*	**P**	**16 29 45.6**	**-0.4**			
XLT			sP	sP	16 32 11.7	-2.0			
XLT			PcP	**PcP**	**16 32 37.4**	**-4.2**			
XLT			S	**S**	**16 33 53.2**	**-2.3**			
XLT			ScP	**ScP**	**16 35 32.9**	**+0.3**			
XLT			ScS	**ScS**	**16 39 22.4**	**-4.4**			
XLT			pmax	pmax					
	comp=Z,800nm,1.0s								
XLT			pmax	pmax					
	comp=Z,7μm,3.9s								
GULI	**GuiLin**	**28.61 278**	⇓P	**P**	**16 29 51.4**	**+3.1**			
GULI			sP	**sP**	**16 32 16.9**	**+0.4**			
GULI			S	**S**	**16 34 04.3**	**+4.6**			
GULI			pmax	pmax					
	comp=Z,990nm,0.9s								
LBMI	**Labuha**	**29.05 211**	P	**P**	**16 29 53.2**	**+1.0**			
	comp=Z,3μmcomp=Z,203nm,1.1s								
FAKI	**Fak Fak**	**29.27 200**	P	**P**	**16 29 53.5**	**-0.6**			
FAKI	**Fak Fak**	**29.27 200**	P	**P**	**16 29 54.0**	**-0.1**			
	comp=Z,2μmcomp=Z,220nm,0.6s								
FAKI	**Fak Fak**	**29.27 200**	P	**P**	**16 29 54.0**	**-0.1**			
KMSI	**Cibinong**	**29.84 218**	P	**P**	**16 30 01.1**	**+2.1**			
	comp=Z,663nm,0.5s								
HIA	**Hailar**	**29.87 330**	P	**P**	**16 29 59.2**	**+0.3**			
HHC	**Hu-ho-hao-te**	**29.89 310**⇓	*iP*	**P**	**16 29 59.6**	**+0.3**			
HHC			sP	sP	16 32 26.8	-0.6			
HHC			S	**S**	**16 34 21.8**	**+2.5**			
HHC			ScS	**ScS**	**16 39 36.2**	**+1.9**			
HHC			pmax	pmax					
	comp=Z,1μm,1.1s								
HHC			pmax	pmax					
	comp=Z,9μm,5.4s								
MYLDM	**Lahad Datu**	**29.91 233**	P	**P**	**16 30 00.3**	**+0.6**			
MYLDM			pP	**pP**	**16 31 26.9**	**+0.3**			
XAN	**Xi'an**	**30.08 295**	⇓P	**P**	**16 30 01.1**	**+0.1**			
XAN			sP	sP	16 32 30.2	+1.4			
XAN			S	**S**	**16 34 20.5**	**-1.8**			
XAN			SS	SS	16 36 59.7	-31			
XAN			pmax	pmax					
	comp=Z,100nm,0.6s								
XAN			pmax	pmax					
	comp=Z,9μm,5.1s								
XAN	**Xi'an**	**30.08 295**	P	**P**	**16 30 01.0**	**0.0**			
XAN			sP	**PcP**	**16 32 47.4**	**+1.2**			
QIZ	**Qiongzhong**	**30.35 265**	P	**P**	**16 30 04.2**	**+0.8**			
QIZ			sP	**sP**	**16 32 29.7**	**-1.7**			
QIZ			S	**S**	**16 34 28.0**	**+1.3**			
QIZ			pmax	pmax					
	comp=Z,760nm,0.9s								
QIZ			pmax	pmax					
	comp=Z,4μm,4.8s								
PEA0B	**Petropavlovsk-**	**30.52 19**	P	**P**	**16 30 04.5**	**0.0**			
PEA0B	**Petropavlovsk-**	**30.52 19**c	*eP*	**P**	**16 30 05.8**	**+1.4**			
PETK	**Petropavlovsk-**	**30.52 19**	P	**P**	**16 30 04.4**	**-0.1**			
	comp=Z,148nm,1.0s,baz=193,slow=6.1,SNR=41								
PETK			ScP	**ScP**	**16 35 39.0**	**-0.3**			
	comp=Z,62nm,0.9s,baz=187,slow=3.0,SNR=11								
PETK			PKiKP	**PKiKP**	**16 40 16.4**	**-0.3**			
	comp=Z,2.0nm,0.5s,baz=106,slow=4.8,SNR=4.9								
	comp=Z,148nm,1.0s								
PETK	**Petropavlovsk-**	**30.52 19**	P	**P**	**16 30 04.7**	**+0.3**			
PETK	**Petropavlovsk-**	**30.52 19**	P	**P**	**16 30 04.7**	**+0.3**			
RABL	**Rabaul**	**30.59 160**	P	**P**	**16 30 03.8**	**-1.7**			
RABL			IAmb	IAmb	16 30 41.1				
	comp=Z,299nm,0.8s								
RABL	**Rabaul**	**30.59 160**	P	**P**	**16 30 06.0**	**+0.4**			
KRVT	**Keravat (AS076**	**30.66 160**	P	**P**	**16 30 05.0**	**-1.1**			
	comp=Z,180nm,0.8s,baz=208,slow=1.8,SNR=28								
KRVT			ScP	**ScP**	**16 35 40.1**	**-0.3**			
	comp=Z,82nm,0.9s,baz=283,slow=9.4,SNR=5.2								
	comp=Z,180nm,0.8s								
PET	**Petropavlovsk**	**30.73 20**	P	**P**	**16 30 06.3**	**+0.1**			
PET	**Petropavlovsk**	**30.73 20**c	*eP*	**P**	**16 30 06.8**	**+0.6**			
PET			*e**PP	**pP**	**16 31 33.8**	**+0.6**			
PET			*e**SP	**sP**	**16 32 36.0**	**+2.0**			
PET			*iS	**S**	**16 34 33.0**	**+1.4**			
PET			*e*		16 39 35.3				
PET			pmax	pmax					
	comp=Z,2μm,16.5s								
PET			pmax	pmax					
	comp=Z,711nm,1.2s								
PET	**Petropavlovsk**	**30.73 20**	P	**P**	**16 30 07.2**	**+1.0**			
ZEA	**Zeya**	**30.81 343**	*eP*	**P**	**16 30 07.4**	**+0.5**			
ZEA			*eS*	**S**	**16 34 32.4**	**-0.5**			
ZEA					16 37 13.8				
ZEA			pmax	pmax					
	comp=E,500nm,1.7s								
ZEA			pmax	pmax					
	comp=N,1μm,1.3s								
ZEA			pmax	pmax					
	comp=Z,2μm,1.4s								
ZEA			pmax	pmax					
	comp=N,730nm,1.2s								
ZEA			pmax	pmax					
	comp=Z,1μm,1.2s								
ZEA			smax	smax					
	comp=N,3μm,4.0s								
ZEA			smax	smax					
	comp=E,7μm,3.9s								
ZEA			MLR	MLR					
	comp=Z,2μm,13.0s								
MSAI	**Masohi**	**30.85 206**	P	**P**	**16 30 11.7**	**+3.9**			
	comp=Z,460nmcomp=Z,32nm,0.6s								
BTO	**Baotou**	**30.89 308**	*eP*	**P**	**16 30 09.3**	**+1.3**			
BTO			S	**S**	**16 34 41.4**	**+6.7**			
SANI	**Sanana**	**31.00 212**	P	**P**	**16 30 09.7**	**+0.7**			
	comp=Z,3μmcomp=Z,3μmcomp=Z,215nm,0.5s								
SANI	**Sanana**	**31.00 212**	P	**P**	**16 30 09.2**	**+0.1**			
KKM	**Kota Kinabalu**	**31.04 237**	P	**P**	**16 30 08.8**	**-0.8**			
KKM			IAmb	IAmb	16 30 13.8				
	comp=Z,312nm,0.9s								
KKM			pP	**pP**	**16 31 37.4**	**+0.1**			
KKM	**Kota Kinabalu**	**31.04 237**	P	**P**	**16 30 10.3**	**+0.8**			
MRSI	**Marisa**	**31.11 222**	P	**P**	**16 30 11.4**	**+1.4**			
	comp=Z,1μm,0.7s								
TOLI2	**Tolitoli**	**31.33 224**	P	**P**	**16 30 11.5**	**-0.4**			
TOLI2	**Tolitoli**	**31.33 224**	P	**P**	**16 30 12.5**	**+0.6**			
AAI	**Ambon**	**31.46 207**	P	**P**	**16 30 14.2**	**+1.2**			
	comp=Z,4μmcomp=Z,418nm,1.1s								
NLAI	**Namlea**	**31.53 209**	P	**P**	**16 30 16.5**	**+2.9**			
	comp=Z,152nm,0.6s								
SPMM	**Sapulut**	**31.72 235**	P	**P**	**16 30 16.0

comp=Z,227nm,0.7s
MA2 Magadan 35.16 8 P **P** **16 30 43.4 -0.2**
MA2 Magadan 35.16 8*d* *i*P **P** **16 30 43.9 +0.4**
MA2 pmax pmax
comp=Z,888nm,1.5s
MA2 Magadan 35.16 8 P **P** **16 30 44.1 +0.5**
KMI Kunming 35.49 279 ⇓P **P** **16 30 48.2 +1.0**
KMI pP pP 16 32 18.5 +1.5
KMI PcP **PcP** **16 33 04.3 +2.3**
KMI sP sP 16 33 20.5 +3.6
KMI S **S** **16 35 45.0 -0.1**
KMI ScP **ScP** **16 35 59.1 +1.4**
KMI ScS **ScS** **16 40 06.9 +2.4**
KMI pmax pmax
comp=Z,500nm,1.0s
KMI pmax pmax
comp=Z,7μm,6.2s
KMI Kunming 35.49 279 P **P** **16 30 45.7 -1.5**
KMI sP **PcP** **16 33 03.7 +1.8**
BKB Balikpapan 35.64 227 P **P** **16 30 47.6 -0.6**
BKB Balikpapan 35.64 227 P **P** **16 30 49.6 +1.4**
comp=Z,8μmcomp=Z,12μmcomp=Z,1μm,0.8s
BKB Balikpapan 35.64 227 P **P** **16 30 49.2 +1.0**
ULN Ulaanbaatar 35.80 319 P **P** **16 30 50.0 +0.6**
ULN Ulaanbaatar 35.80 319*ce* P **P** **16 30 50.0 +0.6**
ULN pmax pmax
comp=Z,1μm,1.0s
ULN Ulaanbaatar 35.80 319 P **P** **16 30 50.3 +1.0**
SONM Songino Array 36.18 318 P **P** **16 30 53.2 +0.7**
comp=Z,472nm,0.7s,baz=128,slow=7.9,SNR=435
SONM PcP **PcP** **16 33 05.1 +1.5**
comp=Z,126nm,0.8s,baz=126,slow=2.3,SNR=6.6
SONM ScP **ScP** **16 36 00.6 +0.9**
comp=Z,69nm,0.7s,baz=142,slow=3.8,SNR=14
SONM P3KPbc 17 01 21.6
comp=Z,2.5nm,0.9s,baz=266,slow=4.6,SNR=11
SONM P4KPbc 17 09 07.6
comp=Z,0.7nm,0.6s,baz=82,slow=6.2,SNR=3.9
comp=Z,472nm,0.7s
SONM Songino Array 36.18 318 P **P** **16 30 52.5 +0.1**
PZH PanZhiHua 36.20 281 ⇓P **P** **16 30 53.6 +0.7**
PZH pP **pP** **16 32 23.3 +0.2**
PZH PcP **PcP** **16 33 05.7 +1.7**
PZH sP **sP** **16 33 25.2 +2.3**
PZH S **S** **16 35 55.1 -0.5**
PZH ScP **ScP** **16 36 02.4 +2.2**
PZH PcS **PcS** **16 36 52.1 -0.7**
PZH sS **sS** **16 38 42.8 -0.2**
PZH SS **SS** **16 38 58.7 -6.9**
PZH ScS **ScS** **16 40 07.3 -0.9**
PZH pmax pmax
comp=Z,1μm,0.9s
PZH pmax pmax
comp=Z,8μm,4.0s
MIDW Midway 36.37 76 P **P** **16 30 53.3 -0.8**
MIDW Midway 36.37 76 P **P** **16 30 54.0 -0.1**
SBUM Sibu 36.39 237 P **P** **16 30 54.0 -0.4**
SBUM IAmb IAmb 16 30 58.2
comp=Z,472nm,1.6s
SBUM **ScP** **16 36 00.6 -0.2**
MTKI Muara Teweh, K 36.76 230 P **P** **16 30 57.6 +0.1**
comp=Z,3μmcomp=Z,5μmcomp=Z,556nm,0.7s
KAPI Kappang 36.81 219 P **P** **16 30 59.2 +1.4**
comp=Z,240nm,0.8s,baz=50,slow=3.2,SNR=60
KAPI ScP **ScP** **16 36 02.5 +0.1**
comp=Z,234nm,1.2s,baz=198,slow=1.0,SNR=11
comp=Z,240nm,0.8s
KAPI Kappang 36.81 219 P **P** **16 30 56.9 -0.9**
KAPI IAmb IAmb 16 31 02.3
comp=Z,284nm,0.9s
KAPI **ScP** **16 36 02.1 -0.2**
KAPI Kappang 36.81 219 P **P** **16 30 59.6 +1.8**
KAPI Kappang 36.81 219 P **P** **16 30 59.1 +1.2**
SMY Shemya 36.81 33 P **P** **16 30 57.7 +0.3**
SMY **ScP** **16 35 59.7 -2.0**
TARA Tarawa 37.96 123 P **P** **16 31 05.7 -1.6**
TARA IAmb IAmb 16 31 09.7
comp=Z,372nm,0.8s
YAK Yakutsk 38.01 351 P **P** **16 31 06.7 -0.3**
comp=Z,660nm,0.9s,baz=216,slow=0.3,SNR=165
YAK ScP **ScP** **16 36 06.1 +0.1**
comp=Z,88nm,0.8s,baz=116,slow=1.7,SNR=6.5
YAK S **S** **16 36 20.1 -0.9**
comp=Z,41nm,0.8s,baz=203,slow=22,SNR=20
comp=Z,660nm,0.9s
YAK Yakutsk 38.01 351 P **P** **16 31 06.3 -0.6**
YAK Yakutsk 38.01 351*d* *i*P **P** **16 31 06.6 -0.3**
YAK *e* 16 32 50.8
YAK *e* 16 33 10.3
YAK *e*S **S** **16 36 18.6 -2.4**
YAK *e**SS **sS** **16 39 06.0 -3.8**
YAK *e*SS **SS** **16 39 27.6 -11**
YAK *e* 16 40 13.7
YAK pmax pmax
comp=Z,2μm,1.0s
YAK pmax pmax
comp=N,552nm,1.1s
YAK pmax pmax
comp=E,79nm,1.3s
YAK pmax pmax
comp=Z,837nm,3.0s
YAK pmax pmax
comp=N,340nm,2.2s
YAK pmax pmax
comp=E,117nm,1.2s
YAK smax smax
comp=E,3μm,1.9s
YAK smax smax
comp=N,2μm,1.5s
GTA Gaotai 38.16 303 ⇓P **P** **16 31 09.3 +0.5**
GTA pP pP 16 32 41.7 +1.5
GTA PP **PP** **16 32 52.1 -0.7**
GTA ScP **ScP** **16 36 07.9 +0.5**
GTA S **S** **16 36 24.5 +0.2**
GTA PcS **PcS** **16 36 57.8 -2.1**
GTA SS **SS** **16 39 30.7 -12**
GTA ScS **ScS** **16 40 18.2 -0.9**
GTA pmax pmax
comp=N,130nm,1.0s
GTA pmax pmax
comp=N,6μm,8.2s
HNR Honiara 38.38 151 P **P** **16 31 09.4 -1.3**
comp=N,42nm,0.3s,baz=341,slow=3.2,SNR=13
HNR S **S** **16 36 26.4 -1.4**
comp=N,52nm,0.9s,baz=71,slow=6.4,SNR=4.0
HNR Honiara 38.38 151 P **P** **16 31 09.7 -1.0**
HNR IAmb IAmb 16 31 53.8
comp=Z,524nm,1.3s
HNR Honiara 38.38 151 P **P** **16 31 10.0 -0.7**
BOD Bodaibo 38.45 336 *e*P **P** **16 31 10.8 +0.2**
BOD pmax pmax
comp=Z,509nm,1.4s
KSM Kuching 38.47 238 P **P** **16 31 11.2 -0.3**
KSM IAmb IAmb 16 31 14.3
comp=Z,147nm,0.7s
KSM Kuching 38.47 238 P **P** **16 31 11.8 +0.3**
STKI Sintang 38.51 235 P **P** **16 31 12.1 +0.3**
comp=Z,6μmcomp=Z,457nm,0.8s
MMRI Maumere 38.53 212 P **P** **16 31 11.9 0.0**
MMRI IAmb IAmb 16 31 22.8
comp=Z,222nm,0.7s
MMRI Maumere 38.53 212 P **P** **16 31 13.8 +1.9**
comp=Z,7μmcomp=Z,333nm,0.9s
MMRI Maumere 38.53 212 P **P** **16 31 12.7 +0.8**
KDU Kakadu 38.53 195 P **P** **16 31 12.0 +0.1**
SEY Seymchan 38.61 8 P **P** **16 31 12.7 +0.8**
comp=Z,121nm,0.6s,baz=184,slow=9.2,SNR=311
SEY ScP **ScP** **16 36 08.7 +0.3**
comp=Z,80nm,0.8s,baz=170,slow=3.1,SNR=9.8
SEY S **S** **16 36 29.9 -0.1**
comp=Z,22nm,0.9s,baz=127,slow=22,SNR=9.0
comp=Z,121nm,0.6s
SEY Seymchan 38.61 8*d* *i*P **P** **16 31 12.7 +0.8**
SEY pmax pmax
comp=Z,446nm,1.5s
BBKI Banjar Baru 38.64 227 P **P** **16 31 13.7 +0.9**
comp=Z,4μmcomp=Z,9μmcomp=Z,196nm,1.1s
COEN Coen 38.68 178 P **P** **16 31 13.9 +0.8**
COEN IAmb IAmb 16 31 14.9
comp=Z,295nm,0.8s
COEN Coen 38.68 178 P **P** **16 31 13.9 +0.8**
AMKA Amchitka 38.80 37 P **P** **16 31 13.8 +0.2**
EDFI Ende, Flores 38.90 213 P **P** **16 31 15.7 +0.7**
comp=Z,3μmcomp=Z,258nm,1.0s
MTN Manton Dam 39.02 197 P **P** **16 31 15.3 -0.5**
MTN IAmb IAmb 16 31 16.6
comp=Z,173nm,0.8s
MTN Manton Dam 39.02 197 P **P** **16 31 15.7 -0.1**
PBKT Sadao Pong 39.14 266 P **P** **16 31 16.7 -0.1**
PBKT IAmb IAmb 16 31 19.7
comp=Z,219nm,0.8s
ZAK Zakamensk 39.14 321 *e*P **P** **16 31 16.6 0.0**
ZAK pmax pmax
comp=Z,1μm,1.1s
ZAK pmax pmax
comp=Z,114nm,1.1s
BATI Baumata 39.24 209 P **P** **16 31 17.5 -0.2**
comp=Z,396nm,0.5s,baz=79,slow=1.5,SNR=90
BATI ScP **ScP** **16 36 11.3 -0.4**
comp=Z,286nm,1.1s,baz=205,slow=1.2,SNR=6.8
BATI S **S** **16 36 38.7 -1.7**
comp=Z,2μm,1.4s,baz=204,slow=20,SNR=17
comp=Z,396nm,0.5s
BATI Baumata 39.24 209 P **P** **16 31 18.9 +1.2**
comp=Z,5μmcomp=Z,355nm,0.9s
IRK Irkutsk 39.45 324 *e*P **P** **16 31 18.8 -0.1**
IRK *e*S **S** **16 36 48.6 +6.0**
IRK pmax pmax
comp=Z,2μm,1.2s
PBKI Pangkalan Bun 40.27 231 P **P** **16 31 27.0 +1.1**
comp=Z,10μmcomp=Z,752nm,1.1s
CHTO Chiang Mai 40.29 270 P **P** **16 31 25.8 -0.4**
CHTO Chiang Mai 40.29 270 P **P** **16 31 25.8 -0.4**
CHTO pmax pmax
comp=Z,538nm,0.9s
CHTO Chiang Mai 40.29 270 P **P** **16 31 26.7 +0.5**
CHTO P **P** **16 31 26.7 +0.5**
CHTO Chiang Mai 40.29 270 P **P** **16 31 26.4 +0.2**
CM31 Chiang Mai Arr 40.40 270 P **P** **16 31 26.6 -0.4**
CM31 Chiang Mai Arr 40.40 270 P **P** **16 31 27.9 +0.9**
SNR=107
CM31 P **P** **16 31 27.9 +0.9**
SNR=107
CMAR Chiang Mai Arr 40.40 270 P **P** **16 31 26.6 -0.3**
comp=Z,321nm,0.8s,baz=58,slow=7.5,SNR=286
CMAR PcP **PcP** **16 33 19.7 +2.4**
comp=Z,78nm,0.7s,baz=71,slow=1.8,SNR=11
CMAR ScP **ScP** **16 36 17.9 +1.6**
comp=Z,56nm,1.0s,baz=80,slow=1.8,SNR=13
CMAR PKiKP **PKiKP** **16 40 24.9 -0.5**
comp=Z,3.0nm,0.7s,baz=292,slow=1.1,SNR=4.9
comp=Z,321nm,0.8s
CMAR Chiang Mai Arr 40.40 270 *i* P **P** **16 31 27.6 +0.6**
CMAR pmax pmax
comp=Z,352nm,0.8s
KIWB Kanaga Island 40.99 38 P **P** **16 31 31.0 -0.2**
MOY Mondy 41.00 321 *e*P **P** **16 31 31.7 +0.3**
MOY pmax pmax
comp=Z,703nm,1.6s
PLAI Plampang 41.04 218 P **P** **16 31 32.5 +0.4**
comp=Z,3μmcomp=Z,5μmcomp=Z,318nm,0.6s
PLAI Plampang 41.04 218 P **P** **16 31 32.9 +0.8**
ADK Adak 41.26 38 P **P** **16 31 33.2 -0.1**
ADK Adak 41.26 38 P **P** **16 31 33.2 -0.1**
ADK pmax pmax
comp=Z,2μm,1.8s
ADK Adak 41.26 38 P **P** **16 31 34.1 +0.8**
ADK Adak 41.26 38 P **P** **16 31 33.6 +0.3**
LKP Lekhapani 41.33 284 *e*P **P** **16 31 35.2 +0.9**
LKP *i* x x 16 33 25.5
LKP *e*x x 16 36 19.4
TWSI Taliwang, Sumb 41.47 219 P **P** **16 31 36.3 +0.8**
comp=Z,2μmcomp=Z,128nm,0.7s
GSTR Great Sitkin T 41.70 38 P **P** **16 31 36.3 -0.5**
GOMU GeErMu 41.79 297 P **P** **16 31 38.9 +0.6**
GOMU PcP **PcP** **16 33 24.9 +2.8**
GOMU S **S** **16 37 13.4 -4.3**
GOMU pmax pmax
comp=Z,71nm,0.6s
DIBR DIBRUGARH 42.13 284 *e*P **P** **16 31 43.0 +2.4**
KNRA Kununurra 42.38 199 P **P** **16 31 42.4 -0.2**
KNRA IAmb IAmb 16 31 46.5
comp=Z,159nm,0.7s
KNRA Kununurra 42.38 199 P **P** **16 31 43.0 +0.4**
IGBI Denpasar 42.56 221 P **P** **16 31 45.4 +1.4**
comp=Z,3μmcomp=Z,184nm,0.5s
MOKO MOKOCHONG 42.65 282 *e*P **P** **16 31 44.8 -0.1**
MOKO IAmb IAmb 16 31 51.6
comp=Z,222nm,0.8s
JORH JORHAT 42.82 283 *e*P **P** **16 31 46.9 +0.9**
MTSU Mount Surprise 42.87 177 P **P** **16 31 46.9 +0.4**
JAGI Jajag, Banyuwa 42.89 223 P **P** **16 31 45.7 -1.0**
JAGI IAmb IAmb 16 31 48.0
comp=Z,167nm,0.5s
JAGI Jajag, Banyuwa 42.89 223 P **P** **16 31 47.2 +0.5**
comp=Z,4μmcomp=Z,266nm,1.0s
JAGI Jajag, Banyuwa 42.89 223 P **P** **16 31 46.3 -0.4**
ZIRO ZIRO 43.06 284 *e*P **P** **16 31 49.0 +0.9**
ITAN ITANAGAR 43.23 284 *e*P **P** **16 31 50.5 +1.3**
ITAN *i* x x 16 33 43.3
TPRI Tanjung Pinang 43.36 242 P **P** **16 31 52.5 +2.1**
comp=Z,10μmcomp=Z,701nm,1.0s
MYKOM Kota Tinggi 43.40 244 P **P** **16 31 50.5 -0.2**
SRIT Nakonsritamara 43.51 256 P **P** **16 31 52.0 +0.4**
PPBI Pangkal Pinang 43.99 237 P **P** **16 31 56.0 +0.7**
comp=Z,7μmcomp=Z,436nm,1.4s
TEZP TEZPUR 44.12 283 *e*P **P** **16 31 56.7 +0.6**
DSRI Dabo 44.16 241 P **P** **16 31 57.7 +1.1**
comp=Z,5μmcomp=Z,6μmcomp=Z,297nm,1.0s
KULM Kulim 44.19 251 P **P** **16 31 56.7 -0.1**
SMRI Semarang 44.22 228 P **P** **16 31 57.0 -0.1**
SMRI IAmb IAmb 16 31 59.7
comp=Z,168nm,0.7s
SMRI Semarang 44.22 228 P **P** **16 31 58.7 +1.7**
comp=Z,8μmcomp=Z,281nm,0.7s
SMRI Semarang 44.22 228 P **P** **16 31 57.7 +0.7**
IPM Ipoh 44.29 249 P **P** **16 31 57.1 -0.5**
IPM PcP **PcP** **16 33 30.3 -0.2**
IPM Ipoh 44.29 249 P **P** **16 31 57.9 +0.3**
AZL Aizawl 44.75 279 *e*P **P** **16 31 02.1 +0.1**
UGM Wanagama 44.80 227 P **P** **16 31 01.6 +0.1**
UGM IAmb IAmb 16 32 03.6
comp=Z,329nm,0.7s
UGM Wanagama 44.80 227 P **P** **16 32 02.3 +0.8**
comp=Z,6μmcomp=Z,9μmcomp=Z,549nm,1.1s
UGM Wanagama 44.80 227 P **P** **16 32 01.6 +0.1**
YOGI Yogyakarta 44.88 228 P **P** **16 32 03.1 +1.0**
comp=Z,6μmcomp=Z,488nm,0.9s
CTA Charters Tower 44.95 174 P **P** **16 32 02.7 +0.2**
CTAO Charters Tower 44.95 174 P **P** **16 32 02.5 0.0**
CTAO IAmb IAmb 16 32 05.4
comp=Z,432nm,1.5s
CTAO Charters Tower 44.95 174 P **P** **16 32 02.5 0.0**
CTAO pmax pmax
comp=Z,432nm,1.5s
CTAO Charters Tower 44.95 174 P **P** **16 32 02.8 +0.2**
WB0 Warramunga Arr 45.05 190 P **P** **16 32 03.3 0.0**
SHL Shillong 45.11 282 *e*P **P** **16 32 04.4 +0.3**
SHL IAmb IAmb 16 32 08.3
comp=Z,523nm,1.0s
LSA Lhasa 45.14 288 P **P** **16 32 06.4 +1.9**
LSA S **S** **16 38 11.8 +6.0**
LSA sS **sS** **16 41 01.2 +0.7**
LSA pmax pmax
comp=Z,150nm,0.5s
LSA Lhasa 45.14 288 P **P** **16 32 06.3 +1.8**
GUWA GUWAHATI 45.17 283 *e*P **P** **16 32 04.2 0.0**
GUWA *i* x x 16 33 59.2
GUWA *e*x x 16 36 30.4
WR0 Warramunga Arr 45.22 190 P **P** **16 32 04.6 0.0**
WRAB Tennant Creek 45.22 190 P **P** **16 32 04.5 -0.1**
WRAB Tennant Creek 45.22 190*c* *i*P **P** **16 32 04.8 +0.2**
WRAB pmax pmax
comp=Z,743nm,1.0s
WRAB Tennant Creek 45.22 190 P **P** **16 32 04.7 +0.2**
WB2 Warramunga Arr 45.23 190 P **P** **16 32 04.8 +0.1**
WRA Warramunga Arr 45.23 190 P **P** **16 32 04.5 -0.2**
comp=Z,286nm,0.5s,baz=13,slow=8.7,SNR=1023
WRA pP **pP** **16 33 42.2 +1.8**
comp=Z,47nm,0.8s,baz=3.9,slow=8.6,SNR=1.8
WRA ScP **ScP** **16 36 35.8 +0.1**
comp=Z,107nm,0.8s,baz=8.7,slow=4.6,SNR=16
WRA S **S** **16 37 58.6 -7.5**
comp=Z,96nm,1.2s,baz=0.8,slow=13,SNR=17
WRA PKiKP **PKiKP** **16 40 29.2 -0.5**
comp=Z,4.6nm,0.5s,baz=319,slow=1.6,SNR=5.9
WRA P4KPbc 17 09 46.6
comp=Z,1.3nm,0.5s,baz=11,slow=5.0,SNR=16
comp=Z,286nm,0.5s
WRA Warramunga Arr 45.23 190 P **P** **16 32 04.3 -0.4**
QIS Mount Isa 45.28 183 P **P** **16 32 05.7 +0.6**
CLES Cleveland East 45.48 39 P **P** **16 32 06.2 +0.1**
CLES IAmb IAmb 16 32 10.2
comp=Z,1μm,0.7s
PMBI Palembang 45.52 238 P **P** **16 32 07.5 +0.5**
PMBI Palembang 45.52 238 P **P** **16 32 08.7 +1.6**
comp=Z,9μmcomp=Z,26μmcomp=Z,2μm,0.8s
PMBI Palembang 45.52 238 P **P** **16 32 08.3 +1.2**
BILL Bilibino 45.59 12 P **P** **16 32 07.0 +0.3**
BILL IAmb IAmb 16 32 10.9
comp=Z,403nm,0.9s
BILL Bilibino 45.59 12*c* *i*P **P** **16 32 06.9 +0.2**
BILL *i* 16 33 33.9
BILL *i* *PP **pwP** **16 33 49.4 -1.7**
BILL *i* 16 34 04.1
BILL *i* S **S** **16 38 10.7 +0.7**
BILL *i* *SS **ScS** **16 40 58.0 -6.0**
BILL pmax pmax
comp=Z,559nm,1.1s
BILL Bilibino 45.59 12 P **P** **16 32 07.3 +0.6**
JMBI JAMBI 45.60 240 P **P** **16 32 10.7 +3.1**
comp=Z,10μmcomp=Z,758nm,0.7s
FITZ Fitzroy Crossi 45.65 202 P **P** **16 32 08.4 +0.5**
comp=Z,176nm,0.7s,baz=17,slow=8.3,SNR=113
FITZ ScP **ScP** **16 36 36.9 -0.6**
comp=Z,150nm,1.0s,baz=3.5,slow=6.7,SNR=12
FITZ S **S** **16 38 10.6 -1.5**
comp=Z,316nm,1.2s,baz=132,slow=18,SNR=37
comp=Z,176nm,0.7s
FITZ Fitzroy Crossi 45.65 202 P **P** **16 32 08.2 +0.3**
FITZ IAmb IAmb 16 32 11.5
comp=Z,176nm,0.8s
FITZ Fitzroy Crossi 45.65 202 P **P** **16 32 08.6 +0.7**
JOHN Johnston Islan 45.83 91 P **P** **16 32 08.7 -0.7**
JOHN Johnston Islan 45.83 91 P **P** **16 32 10.7 +1.3**
AGT Agartala 46.01 280 *e*P **P** **16 32 12.6 +1.9**
LEM Lembang 46.02 231 P **P** **16 32 11.3 +0.3**
comp=Z,1μm,0.8s,baz=28,slow=4.2,SNR=135
LEM pP **pP** **16 33 48.0 +1.0**
comp=Z,90nm,0.7s,baz=72,slow=9.4,SNR=1.8
LEM S **S** **16 38 15.0 -2.7**
comp=Z,32nm,0.8s,baz=296,slow=20,SNR=14
comp=Z,1μm,0.8s
NIKH Nikolski High 46.12 39 P **P** **16 32 10.7 -0.4**
NIKH Nikolski High 46.12 39 P **P** **16 32 10.6 -0.5**
baz=252,SNR=74
NIKH S **S** **16 38 18.1 +0.2**
baz=252
TNG Tangerang 46.26 233 P **P** 16 32 19.7 +7.1
BKNI Bangkinang 46.53 245 P **P** **16 32 14.6 -0.2**
BKNI Bangkinang 46.53 245 P **P** **16 32 15.9 +1.1**
comp=Z,9μmcomp=Z,13μmcomp=Z,1μm,0.8s
BKNI Bangkinang 46.53 245 P **P** **16 32 15.0 +0.2**
SBJI Serang 46.60 233 P **P** **16 32 16.9 +1.7**
comp=Z,8μmcomp=Z,364nm,1.4s
SPIA Saint Paul Isl 46.83 34 P **P** **16 32 16.8 +0.4**
SPIA Saint Paul Isl 46.83 34 P **P** **16 32 17.1 +0.7**
baz=247,SNR=20
SPIA S **S** **16 38 29.8 +2.2**
baz=247
TSI Tuntungan 46.89 250 P **P** **16 32 18.2 +0.8**
comp=Z,10μmcomp=Z,9μmcomp=Z,665nm,0.9s
PSI Prapat 46.95 249 P **P** **16 32 18.5 +0.5**
PSI 16 33 40.5
PSI pmax pmax
comp=Z,1μm,0.7s
PSI Prapat 46.95 249 P **P** **16 32 18.7 +0.7**
RPSI Rantau Prapat 47.00 249 P **P** **16 32 18.5 +0.2**
RPSI PcP **PcP** **16 33 40.5 +0.3**
TIXI Tiksi 47.33 354 P **P** **16 32 19.7 -0.2**
comp=Z,199nm,0.8s,baz=87,slow=23,SNR=127
TIXI S **S** **16 38 32.6 -1.5**
comp=Z,64nm,1.0s,baz=270,slow=23,SNR=22
comp=Z,199nm,0.8s
TIXI Tiksi 47.33 354 P **P** **16 32 19.5 -0.4**
TIXI IAmb IAmb 16 32 24.8
comp=Z,266nm,0.9s
TIXI Tiksi 47.33 354*d* *i*P **P** **16 32 19.6 -0.2**
TIXI pmax pmax
comp=Z,270nm,0.9s
LHMI Lhok Sumawe 47.42 253 P **P** **16 32 22.0 +0.6**
LHMI Lhok Sumawe 47.42 253 P **P** **16 32 23.6 +2.2**
comp=Z,17μmcomp=Z,30μmcomp=Z,3μm,0.7s
LHMI Lhok Sumawe 47.42 253 P **P** **16 32 21.8 +0.4**
KCSI Kotacane, Aceh 47.55 251 P **P** **16 32 21.4 -1.1**
comp=Z,8μmcomp=Z,663nm,0.8s
DGPR DIGLIPUR 47.60 265 *e*P **P** **16 32 23.2 +0.4**
GTK Tadong 47.70 285 *e*P **P** **16 32 24.5 +0.9**
UNV Unalaska Valle 47.72 39 P **P** **16 32 22.1 -1.0**
UNV IAmb IAmb 16 32 26.0
comp=Z,462nm,0.9s
UNV Unalaska Valle 47.72 39 P **P** **16 32 22.6 -0.5**
baz=254,SNR=52
UNV S **S** **16 38 39.5 -0.5**
baz=254
UNV Unalaska Valle 47.72 39 P **P** **16 32 23.7 +0.6**
WMQ Urumqi 47.72 307 ⇓P **P** **16 32 24.5 +1.1**
WMQ PcP **PcP** **16 33 43.7 +1.4**
WMQ pP pP 16 34 03.2 +2.7
WMQ sP sP 16 34 59.5 +1.0
WMQ ScP **ScP** **16 36 46.4 +0.3**
WMQ S **S** **16 38 41.6 +1.0**
WMQ ScS **ScS** **16 41 19.3 0.0**
WMQ sS sS 16 41 37.5 +0.1
WMQ pmax pmax
comp=Z,3μm,1.1s
WMQ pmax pmax
comp=Z,11μm,4.1s
MNAI Manna 47.83 238 P **P** **16 32 23.5 -1.0**
MNAI Manna 47.83 238 P **P** **16 32 25.0 +0.5**
comp=Z,28μmcomp=Z,2μm,0.8s
MNAI Manna 47.83 238 P **P** **16 32 25.9 +1.4**
SLGI Shiliguri 47.97 284 *e*P **P** **16 32 26.1 +0.7**
AKUT Akutan 48.22 39 P **P** **16 32 26.0 -0.8**
RK1H Rockhampton Ha 48.74 170 P **P** **16 32 31.1 +0.1**
ODAN Odare 48.84 285 *e*P **P** **16 32 33.1 +0.9**
GSI Gunungsitoli 48.88 248 P **P** **16 32 31.6 -0.8**
GSI PcP **PcP** **16 33 48.4 +1.5**
GSI Gunungsitoli 48.88 248 P **P** **16 32 32.1 -0.3**
GSI Gunungsitoli 48.88 248 P **P** **16 32 32.8 +0.4**
AS31 Alice Springs 48.95 190 P **P** **16 32 31.9 -0.7**
AS31 PcP **PcP** **16 33 49.1 +2.2**
ASAR Alice Springs 48.95 190 P **P** **16 32 32.5 -0.2**
comp=Z,31nm,0.3s,baz=8.8,slow=7.6,SNR=1087
ASAR PcP **PcP** **16 33 48.5 +1.5**
comp=Z,47nm,0.7s,baz=17,slow=3.7,SNR=9.9
ASAR ScP **ScP** **16 36 51.5 +0.1**
comp=Z,32nm,0.7s,baz=6.7,slow=4.6,SNR=7.6
ASAR S **S** **16 38 55.8 -1.9**
comp=Z,28nm,0.9s,baz=19,slow=20,SNR=9.6
ASAR P4KPbc 17 10 02.2
comp=Z,1.1nm,0.7s,baz=5.3,slow=4.5,SNR=15
comp=Z,31nm,0.3s
ASAR Alice Springs 48.95 190 P **P** **16 32 32.2 -0.5**
ASAR PcP **PcP** **16 33 47.9 +0.9**
SISI Saibi 49.07 244 P **P** 16 32 41.9 +8.1
GAMB Gambell 49.13 25 P **P** **16 32 33.3 -0.1**
GAMB IAmb IAmb 16 32 38.4
comp=Z,823nm,1.7s
GAMB Gambell 49.13 25 P **P** **16 32 34.4 +1.0**
baz=240,SNR=19
GAMB S **S** **16 39 02.5 +3.5**
baz=240
FUNA Funafuti 49.19 128 P **P** **16 32 33.5 -1.1**
FUNA IAmb IAmb 16 32 37.1
comp=Z,251nm,0.9s
RAMN Ramite 49.52 285 *e*P **P** **16 32 37.9 +0.6**
comp=Z,2μm,0.8s
JIRN Jiri 49.75 286 *e*P **P** **16 32 40.3 +1.2**
comp=Z,3μm,0.7s
XMI Christmas Isla 49.91 230 P **P** **16 32 40.2 +0.3**
XMIS Christmas Isla 49.96 230 P **P** **16 32 39.6 -0.6**
XMIS IAmb IAmb 16 32 41.8
comp=Z,260nm,0.8s
XMIS **pP** **16 34 17.2 -1.5**
XMIS Christmas Isla 49.96 230 P **P** **16 32 40.4 +0.1**
GUN Gumba 49.98 286 *e*P **P** **16 32 41.9 +1.2**
ZSN Zaisan 50.04 312 *d* *i*P **P** **16 32 41.3 +0.9**
ZSN *e*S **S** **16 39 14.2 +2.3**
ZSN pmax pmax
comp=Z,474nm,1.2s
ZSN Zaisan 50.04 312 ⇓*i*P **P** **16 32 41.3 +0.9**
comp=Z,474nm,1.2s,baz=312
ZSN *e*S **S** **16 39 14.3 +2.3**
baz=312

KOUNC **Koumac, New Ca** 50.14 152 P P 16 32 41.2 -0.2
KOUNC **Koumac, New Ca** 50.14 152 P P 16 32 42.8 +1.4
PKI Pulchoki 50.45 286 *e*P P 16 32 44.6 +0.4
PKIN Phulchoki 50.46 286 *e*P P 16 32 44.6 +0.4
comp=Z,1µm,0.7s
KKN Kakani 50.52 286 *e*P P 16 32 45.2 +0.7
comp=Z,965nm,0.8s
MBWA Marble Bar 50.68 207 P P 16 32 44.9 -0.4
MBWA Marble Bar 50.68 207 P P 16 32 45.5 +0.1
MBWA Marble Bar 50.68 207 P P 16 32 45.4 +0.1
S12K Black Hills 50.69 37 P P 16 32 43.9 -1.1
baz=256,SNR=30
S12K S S 16 39 18.4 -2.1
baz=256
DMN Daman 50.71 286 *e*P P 16 32 46.7 +0.8
comp=Z,1µm,0.6s
EIDS Eidsvold 50.78 169 P P 16 32 45.8 -0.2
EIDS IAmb IAmb 16 32 48.8
comp=Z,420nm,1.6s
EIDS Eidsvold 50.78 169 P P 16 32 46.5 +0.5
BOK Bokaro 50.81 281 *e*P P 16 32 47.4 +0.9
BOK IAmb IAmb 16 32 50.8
comp=Z,1µm,0.5s
PSA00 Pilbara Seismi 51.00 207 P P 16 32 47.6 -0.2
PSA00 PcP PcP 16 33 55.1 +0.5
PSA00 Pilbara Seismi 51.00 207 P P 16 32 47.5 -0.2
PSA00 PcP PcP 16 33 55.4 +0.8
PSA00 IAmb IAmb 16 34 30.6
comp=Z,142nm,1.2s
PSA00 Pilbara Seismi 51.00 207 P P 16 32 48.3 +0.6
ZAA0 Zalesovo Array 51.02 320 P P 16 32 47.3 -0.2
ZALV Zalesovo Beam 51.02 320 P P 16 32 47.3 -0.2
comp=Z,719nm,0.6s,baz=108,slow=8.0,SNR=1137
ZALV PcP PcP 16 33 53.7 -0.5
comp=Z,390nm,0.7s,baz=118,slow=3.1,SNR=13
ZALV ScP ScP 16 37 00.2 +0.3
comp=Z,54nm,0.7s,baz=114,slow=3.7,SNR=5.5
ZALV ScS ScS 16 41 38.9 -2.5
comp=Z,18nm,1.0s,baz=84,slow=7.6,SNR=4.5
ZALV PKPPKP P'P'df 17 03 16.5 -4.9
comp=Z,1.7nm,0.8s,baz=306,slow=3.5,SNR=3.8
ZALV P4KPbc 17 10 08.8
comp=Z,4.9nm,0.8s,baz=113,slow=4.5,SNR=13
comp=Z,719nm,0.6s
ZALV Zalesovo Beam 51.02 320 P P 16 32 47.2 -0.3
ZALV PcP PcP 16 33 54.9 +0.7
GKN Gorkha 51.04 287 *e*P P 16 32 49.0 +0.7
QLP Quilpie 51.27 177 P P 16 32 49.6 +0.1
TNA Tin City 51.41 24 P P 16 32 49.9 -0.2
TNA IAmb IAmb 16 32 55.2
comp=Z,595nm,1.3s
TNA Tin City 51.41 24 P P 16 32 50.9 +0.9
baz=243,SNR=29
TNA S S 16 39 32.3 +2.5
baz=243
WRKA Warakurna 51.42 196 P P 16 32 50.7 -0.1
SDPT Sand Point 51.49 38 P P 16 32 50.3 -0.4
SDPT Sand Point 51.49 38 P P 16 32 50.4 -0.4
baz=258,SNR=78
SDPT S S 16 39 30.5 -0.7
baz=258
RMQ Roma 51.54 172 P P 16 32 51.8 +0.3
MKAR Makanchi Array 51.74 311 P P 16 32 53.4 +0.5
comp=Z,1µm,0.9s,baz=91,slow=7.4,SNR=1152
MKAR PcP PcP 16 33 56.9 -0.3
comp=Z,188nm,0.9s,baz=70,slow=4.1,SNR=3.8
MKAR ScP ScP 16 37 04.0 +0.8
comp=Z,86nm,0.7s,baz=87,slow=5.0,SNR=9.1
MKAR PKPPKP P'P'df 17 03 23.6 +2.7
comp=Z,3.3nm,1.0s,baz=284,slow=4.9,SNR=12
MKAR P4KPbc 17 10 12.0
comp=Z,3.9nm,0.7s,baz=78,slow=5.2,SNR=10
comp=Z,1µm,0.9s
DANN Dangsing 51.74 287 *e*P P 16 32 54.6 +1.1
comp=Z,12µm,0.8s
BWNR Bhubaneshwar 51.78 277 *e*P P 16 32 53.6 +0.1
VLK Valmikinagar 51.84 286 *e*P P 16 32 54.7 +0.8
CNBA Chernabura Isl 51.89 39 P P 16 32 53.2 -0.5
CNBA IAmb IAmb 16 32 56.8
comp=Z,440nm,0.7s
CHNA Chernabura Isl 51.89 39 P P 16 32 53.7 0.0
baz=259,SNR=30
CHNA S S 16 39 37.0 +0.5
baz=259
MAKZ Makanchi 51.95 311 P P 16 32 54.4 0.0
MAKZ Makanchi 51.95 311 P P 16 32 54.7 +0.3
ANM Nome 51.96 26 P P 16 32 54.5 +0.4
ANM Nome 51.96 26 P P 16 32 54.5 +0.4
ANM pmax pmax
comp=Z,1µm,1.4s
ANM Nome 51.96 26 P P 16 32 55.5 +1.4
baz=246,SNR=38
ANM S S 16 39 40.7 +3.4
baz=246
S14K Fog Glacier 52.19 37 P P 16 32 56.0 0.0
baz=258,SNR=14
S14K S S 16 39 40.0 -0.8
baz=258
NOUC Port Laguerre 52.38 151 P P 16 32 59.3 +1.7
INKA Innaminka 52.39 181 P P 16 32 57.8 +0.2
DZM Mont Dzumac 52.41 151 *e*P P 16 32 57.9 -0.1
comp=Z,1µm,1.3s
DZM *e*pP pP 16 34 37.0 -1.5
comp=Z,936nm,27.2s
DZM Mont Dzumac 52.41 151 *e*LR LR 16 48 51.0
comp=Z,2µm,24.5s
DZM Mont Dzumac 52.41 151 P P 16 32 58.4 +0.4
DZM IAmb IAmb 16 33 01.9
comp=Z,428nm,1.0s
DZM Mont Dzumac 52.41 151 P P 16 32 59.4 +1.4
YATNC Mamie plateau, 52.60 151 P P 16 33 00.7 +1.5
ONTNC Ouen Toro 52.62 151 P P 16 32 59.3 -0.1
OOD Oodnadatta 52.78 187 P P 16 33 00.5 +0.1
CHGN Chignik 52.82 37 P P 16 32 59.6 -0.7
CHGN IAmb IAmb 16 33 02.8
comp=Z,448nm,0.6s
CHGN PcP PcP 16 34 00.7 -0.3
CHGN Chignik 52.82 37 P P 16 32 60.0 -0.4
baz=259,SNR=61
CHGN S S 16 39 46.7 -2.2
baz=259
OUENC Ouen Island, N 52.89 151 P P 16 33 01.0 -0.3
OUENC IAmb IAmb 16 33 05.6
comp=Z,1µm,1.8s
OUENC Ouen Island, N 52.89 151 P P 16 33 03.3 +2.0
VAR Varanasi 53.01 284 *e*P P 16 33 02.7 +0.4
KEKH Kekaha 53.20 80 P P 16 33 04.2 +0.6
KEKH IAmb IAmb 16 33 08.0
comp=Z,402nm,0.8s
JHSG JHARSUGUGA 53.21 279 *e*P P 16 33 04.1 +0.4
PINNC Pines Island, 53.33 150 P P 16 33 03.8 -0.6
SEM Semipalatinsk 53.33 315 *d* iP P 16 33 04.0 -0.4
SEM *e*S S 16 39 55.6 -0.8
SEM pmax pmax
comp=Z,728nm,0.9s
SEM smax smax
comp=N,551nm,3.3s
SEM Semipalatinsk 53.33 315 ⇓ *i*P P 16 33 04.0 -0.4
comp=N,728nm,0.9s,baz=315
SEM *e*S S 16 39 55.6 -0.8
comp=N,550nm,3.3s,baz=315
R16K Pilot Point 53.51 36 P P 16 33 04.7 -0.5
baz=259,SNR=9.2
R16K S S 16 39 57.4 -0.5
baz=259
N16K Nishlik Lake 53.54 32 P P 16 33 06.4 +0.9
baz=256,SNR=195
N16K S S 16 40 01.1 +2.8
baz=256
P16K Nushagak River 53.59 34 P P 16 33 06.9 +1.1
baz=256,SNR=20
P16K S S 16 40 00.9 +1.9
baz=258
O16K Kokwok River B 53.66 33 P P 16 33 07.0 +0.8
baz=257,SNR=87
O16K S S 16 40 02.5 +2.6
baz=257
PDGK Podgornoye 53.67 307 P P 16 33 07.0 +0.2
SHLS Shalkode 53.69 306 *d* iP P 16 33 05.4 -1.6
SHLS *e*S S 16 39 59.3 -1.9
SHLS smax smax
comp=N,216nm,2.1s
SHLS Shalkode 53.69 306 ⇓ *i*P P 16 33 05.5 -1.6
baz=306
SHLS *e*S S 16 39 59.4 -1.9
comp=N,216nm,2.1s,baz=306

BRCI Bahraich 53.78 287 *e*P P 16 33 07.8 +0.1
UZB Uzynbulak 54.01 306 *e*P P 16 33 09.8 +0.5
UZB *e*S S 16 40 08.0 +2.6
UZB smax smax
comp=N,328nm,2.6s
UZB Uzynbulak 54.01 306 *e*P P 16 33 09.9 +0.5
baz=306
UZB *e*S S 16 40 08.1 +2.6
comp=N,328nm,2.6s,baz=306
R17K Ugashik Creek 54.15 36 P P 16 33 08.9 -0.9
baz=260,SNR=14
R17K S S 16 40 04.5 -1.9
baz=260
O17K Koliganek Bris 54.19 33 P P 16 33 10.8 +0.8
baz=258,SNR=122
O17K S S 16 40 09.4 +2.5
baz=258
Q16K King Salmon 54.20 34 P P 16 33 09.8 -0.3
baz=259,SNR=5.2
Q16K S S 16 40 07.4 +0.4
baz=259
RAGD RAYAGADA 54.20 276 *e*P P 16 33 10.8 +0.1
CHIR Chirikof Islan 54.29 38 P P 16 33 10.8 0.0
CHIR Chirikof Islan 54.29 38 P P 16 33 11.5 +0.7
baz=262,SNR=26
CHIR S S 16 40 09.9 +1.7
baz=262
KURK Kurchatov 54.39 316 P P 16 33 11.2 -0.4
KURK PcP PcP 16 34 07.2 +0.1
KURK Kurchatov 54.39 316 *d i*P P 16 33 11.6 0.0
KURK pmax pmax
comp=Z,2µm,0.9s
KURK Kurchatov 54.39 316 P P 16 33 11.8 +0.2
KURK P P 16 33 11.8 +0.2
P17K Kvichak River 54.41 34 P P 16 33 12.2 +0.6
baz=259,SNR=91
P17K S S 16 40 11.4 +1.7
baz=259
TDK Taldyqorghan 54.41 309 *d* iP P 16 33 12.8 +0.9
TDK *e*S S 16 40 11.6 +1.2
TDK pmax pmax
comp=Z,861nm,0.8s
TDK smax smax
comp=N,1µm,4.0s
TDK Taldyqorghan 54.41 309 ⇓ *i*P P 16 33 12.8 +0.9
comp=N,861nm,0.8s,baz=309
TDK *e*S S 16 40 11.7 +1.2
comp=N,1µm,4.0s,baz=309
GIRL Giralia 54.44 212 P P 16 33 12.2 -0.1
GIRL IAmb IAmb 16 33 17.4
comp=Z,985nm,1.5s
GIRL Giralia 54.44 212 P P 16 33 14.1 +1.9
KURBB Kurchatov Arra 54.44 316 P P 16 33 12.1 +0.2
comp=Z,2µm,0.8s,baz=93,slow=7.7,SNR=1916
KURBB PcP PcP 16 34 07.4 0.0
comp=Z,140nm,0.8s,baz=93,slow=4.0,SNR=4.8
KURBB ScP ScP 16 37 15.2 +0.3
comp=Z,14nm,0.8s,baz=96,slow=3.8,SNR=4.1
KURBB S S 16 40 09.9 -0.5
comp=Z,14nm,1.0s,baz=91,slow=9.7,SNR=7.3
comp=Z,2µm,0.8s
SATY Saty 54.47 306 *d* iP P 16 33 13.4 +1.0
SATY *e*S S 16 40 13.9 +2.5
SATY pmax pmax
comp=Z,603nm,1.3s
SATY smax smax
comp=N,277nm,3.2s
SATY Saty 54.47 306 ⇓ *i*P P 16 33 13.5 +1.0
comp=N,603nm,1.3s,baz=306
SATY *e*S S 16 40 13.9 +2.5
comp=N,277nm,3.2s,baz=306
LGTI Lohaghat 54.56 289 *e*P P 16 33 14.4 +1.3
PTH Pithoragarh 54.57 290 *e*P P 16 33 13.9 +0.5
BLSP Bilaspur 54.58 280 *e*P P 16 33 13.5 +0.1
NRIK Noril'sk 54.59 339 P P 16 33 12.9 +0.2
comp=N,760nm,0.9s,baz=110,slow=8.7,SNR=260
NRIK PcP PcP 16 34 07.7 0.0
comp=N,141nm,0.8s,baz=53,slow=3.6,SNR=5.3
NRIK ScP ScP 16 37 15.5 +0.2
comp=N,205nm,0.7s,baz=114,slow=3.7,SNR=12
NRIK S S 16 40 12.3 +0.4
comp=N,68nm,1.0s,baz=218,slow=23,SNR=13
comp=N,760nm,0.9s
NRIK Noril'sk 54.59 339 P P 16 33 12.7 0.0
NRIK PcP PcP 16 34 07.3 -0.3
NRIK Noril'sk 54.59 339 *d* iP P 16 33 12.7 0.0
NRIK pmax pmax
comp=Z,1µm,0.9s
VIS Vishakhapatnam 54.78 275 *e*P P 16 33 10.8 -4.0
OPA Opana 54.80 80 IAmb IAmb 16 33 18.6
comp=Z,718nm,1.1s
ARXS Arharly 54.85 308 *e*P P 16 33 15.6 +0.6
KIP Kipapa 54.87 81 P P 16 33 15.6 +0.2
KIP IAmb IAmb 16 33 19.8
comp=Z,578nm,0.9s
KIP Kipapa 54.87 81 P P 16 33 15.6 +0.2
KIP pmax pmax
comp=Z,578nm,0.9s
KIP Kipapa 54.87 81 P P 16 33 16.7 +1.2
KIP Kipapa 54.87 81 P P 16 33 16.6 +1.2
HON Honolulu 54.91 81 IAmb IAmb 16 33 20.1
comp=Z,696nm,0.9s
N18K Kilae Creek 54.97 32 P P 16 33 16.7 +1.2
baz=258,SNR=91
N18K S S 16 40 20.1 +3.0
baz=258
P18K Big Mountain, 55.05 34 P P 16 33 16.3 +0.2
baz=260,SNR=27
P18K S S 16 40 18.7 +0.5
baz=260
MSVF Nonsavu 55.07 137 P P 16 33 18.0 +1.2
MSVF Nonsavu 55.07 137 P P 16 33 18.0 +1.2
MSVF pmax pmax
comp=Z,210nm,0.8s
MSVF Nonsavu 55.07 137 P P 16 33 18.4 +1.6
DGTI Dogotuki 55.08 134 P P 16 33 18.6 +1.8
O18K Koktuh Hills 55.15 33 P P 16 33 18.0 +1.2
baz=260,SNR=179
O18K S S 16 40 23.2 +3.8
baz=260
SII Sitkinak Islan 55.18 37 IAmb IAmb 16 33 20.7
comp=Z,477nm,0.6s
SII Sitkinak Islan 55.18 37 P P 16 33 17.7 +0.6
baz=263,SNR=30
SII S S 16 40 22.2 +2.2
baz=263
SII Sitkinak Islan 55.18 37 P P 16 33 18.0 +1.0
LCRK Leigh Creek 55.19 184 P P 16 33 17.9 +0.5
SVW2 Sparrevohn 55.20 32 IAmb IAmb 16 33 21.5
comp=Z,251nm,0.8s
TTA Tatalina 55.39 29 IAmb IAmb 16 33 23.2
comp=Z,429nm,1.3s
TTA Tatalina 55.39 29 P P 16 33 19.3 +0.8
baz=257,SNR=156
TTA S S 16 40 24.8 +2.1
baz=257
MULG Mulgathing 55.43 188 P P 16 33 19.1 0.0
MDOK Medeo 55.46 306 *i* P P 16 33 20.7 +1.3
MDOK *e*S S 16 40 26.7 +2.4
MDOK Medeo 55.46 306 *i* P P 16 33 20.8 +1.3
baz=306
MDOK *e*S S 16 40 26.7 +2.4
baz=306
CHKK Chushkaly 55.47 307 ⇓ *i*P P 16 33 19.9 +0.6
CHKK Chushkaly 55.47 307 ⇓ *i*P P 16 33 19.9 +0.6
baz=307
GCSA Galena City Sc 55.47 27 P P 16 33 19.3 +0.5
baz=255,SNR=56
GCSA S S 16 40 25.4 +2.1
baz=255
AAA Alma-Ata 55.55 306 *e*P P 16 33 21.2 +1.2
AAA Alma-Ata 55.55 306 ⇓ *i*P P 16 33 21.5 +1.5
comp=Z,3µm,0.9s,baz=306
AAA *e*S S 16 40 27.9 +2.5
baz=306
TAVE Taveuni 55.60 134 P P 16 33 21.9 +1.4
O19K Port Alsworth 55.64 33 IAmb IAmb 16 33 24.2
comp=Z,517nm,0.7s
O19K Port Alsworth 55.64 33 P P 16 33 21.1 +0.9
baz=260,SNR=74
O19K S S 16 40 27.9 +2.1
baz=260
N19K Bonanza Creek 55.67 32 P P 16 33 20.4 0.0
N19K IAmb IAmb 16 33 26.3
comp=Z,656nm,1.4s
N19K Bonanza Creek 55.67 32 P P 16 33 21.6 +1.1
baz=260,SNR=190
N19K S S 16 40 29.6 +3.3
baz=260
OHAK Old Harbor 55.75 37 IAmb IAmb 16 33 24.1
comp=Z,220nm,0.7s
OHAK Old Harbor 55.75 37 P P 16 33 21.2 +0.3
baz=263,SNR=44
OHAK S S 16 40 27.7 +0.5
baz=263
L19K White Mountain 55.76 30 IAmb IAmb 16 33 25.9
comp=Z,578nm,1.3s
L19K White Mountain 55.76 30 P P 16 33 22.1 +1.1
baz=258,SNR=248
L19K S S 16 40 29.9 +2.6
baz=258
Q19K Cape Douglas, 55.78 34 IAmb IAmb 16 33 23.6
comp=Z,364nm,0.6s
Q19K Cape Douglas, 55.78 34 P P 16 33 20.6 -0.6
baz=262,SNR=25
Q19K S S 16 40 24.9 -2.9
baz=262
ARMA Armidale 55.81 170 P P 16 33 22.6 +0.8
M19K Big River Lodg 55.92 31 IAmb IAmb 16 33 28.0
comp=Z,427nm,1.4s
M19K Big River Lodg 55.92 31 P P 16 33 23.3 +1.2
baz=259,SNR=105
M19K S S 16 40 32.9 +3.5
baz=259
KUU Kurty 55.93 307 *d* iP P 16 33 23.2 +0.7
KUU *e*S S 16 40 32.0 +1.8
KUU pmax pmax
comp=Z,2µm,0.8s
KUU smax smax
comp=N,757nm,2.7s
KUU Kurty 55.93 307 ⇓ *i*P P 16 33 23.2 +0.7
comp=N,2µm,0.8s,baz=307
KUU *e*S S 16 40 32.0 +1.8
comp=N,757nm,2.7s,baz=307
MEEK Meekatharra 56.03 205 P P 16 33 23.4 +0.1
ULHL Ulahol 56.11 305 P P 16 33 25.1 +1.1
SNR=131
ILSW Iliamna Southw 56.19 33 IAmb IAmb 16 33 27.4
comp=Z,672nm,1.7s
JBP Jabalpur 56.22 282 ⇓ *e*P P 16 33 24.6 -0.2
JBP *ex* x 16 35 37.2
DDI Dehra Dun 56.26 291 *e*P P 16 33 25.7 +0.6
L20K Farewell, AK 56.26 30 P P 16 33 25.7 +1.3
baz=259,SNR=157
L20K S S 16 40 37.1 +3.3
baz=259
CMSA Cobar Meteorol 56.27 176 P P 16 33 25.5 +0.7
K20K Telida 56.35 29 IAmb IAmb 16 33 29.8
comp=Z,512nm,1.1s
K20K Telida 56.35 29 P P 16 33 26.6 +1.6
baz=258,SNR=329
K20K S S 16 40 38.6 +3.7
baz=258
Q20K Shuyak Island 56.39 35 P P 16 33 25.3 -0.1
baz=263,SNR=86
Q20K S S 16 40 34.0 -1.5
baz=263
O20K Slope Mountain 56.46 33 P P 16 33 25.9 -0.1
baz=262,SNR=34
O20K S S 16 40 35.7 -0.9
baz=262
J20K Nowinta River 56.48 28 IAmb IAmb 16 33 31.3
comp=Z,636nm,1.1s
J20K Nowinta River 56.48 28 P P 16 33 27.5 +1.6
baz=258,SNR=499
J20K S S 16 40 41.7 +5.1
baz=258
STKA Stephens Creek 56.50 180 P P 16 33 26.4 -0.1
comp=Z,57nm,0.6s,baz=353,slow=7.1,SNR=211
STKA ScP ScP 16 37 23.7 -0.4
comp=Z,20nm,0.8s,baz=1.6,slow=2.6,SNR=3.2
STKA S S 16 40 37.9 +0.3
comp=Z,65nm,1.1s,baz=154,slow=18,SNR=14
comp=Z,57nm,0.6s
STKA Stephens Creek 56.50 180 P P 16 33 26.0 -0.4
STKA Stephens Creek 56.50 180 P P 16 33 26.3 -0.1
M20K Styx River 56.50 31 P P 16 33 27.5 +1.3
baz=260,SNR=118
M20K S S 16 40 40.0 +2.9
baz=260
TKM2 Tokmak 2 56.53 306 P P 16 33 28.1 +1.2
SNR=49
KSH Kashi 56.56 302 P P 16 33 31.6 +4.5
KSH PcS PcS 16 38 21.7 +4.0
KSH S S 16 40 47.7 +9.0
KSH ScS ScS 16 42 23.5 +1.4
KSH sS sS 16 43 46.4 +3.5
KSH pmax pmax
comp=Z,2µm,0.8s
KSH pmax pmax
comp=Z,7µm,8.1s
SPCR Spurr Chakacha 56.83 32 P P 16 33 29.0 +0.6
baz=262,SNR=24
SPCR S S 16 40 41.9 +0.7
baz=262
SMLA Simla 56.86 292 ⇓ *i*P P 16 33 29.3 +0.2
SMLA IAmb IAmb 16 33 32.4
comp=Z,2µm,0.7s
HOM Homer 56.90 34 P P 16 33 28.9 +0.1
baz=263
HOM S S 16 40 40.5 -1.5
baz=263
JHNI Jhansi 56.91 285 *e*P P 16 33 28.2 -1.3
FORT Forrest 56.99 194 P P 16 33 29.5 -0.3
FORT IAmb IAmb 16 33 32.6
comp=Z,379nm,1.1s
FORT PcP PcP 16 34 19.6 +2.0
FORT Forrest 56.99 194 P P 16 33 29.9 +0.1
KBK Karagaybulak 57.03 306 P P 16 33 31.4 +1.1
SNR=105
PPLA Purkeypile 57.10 30 IAmb IAmb 16 33 36.2
comp=Z,681nm,1.2s
PPLA Purkeypile 57.10 30 P P 16 33 31.5 +1.1
baz=260,SNR=142
PPLA S S 16 40 47.2 +2.3
baz=260
CHMS Chumysh 57.15 306 P P 16 33 32.2 +1.3
SNR=8.8
BISR Bishrakh 57.15 289 *e*P P 16 33 32.0 +0.9
SGDS Sogindy 57.20 307 *d* iP P 16 33 31.8 +0.5
SGDS *e*S S 16 40 48.5 +1.9
SGDS Sogindy 57.20 307 ⇓ *i*P P 16 33 31.9 +0.5
baz=307
SGDS *e*S S 16 40 48.6 +1.9
baz=307
CHUM Lake Minchumin 57.22 29 P P 16 33 32.5 +1.5
baz=260,SNR=40
CHUM S S 16 40 49.2 +3.2
baz=260
CAST Castle Rocks 57.24 29 IAmb IAmb 16 33 35.4
comp=Z,400nm,0.7s
CAST Castle Rocks 57.24 29 P P 16 33 32.3 +1.2
baz=260,SNR=536
CAST S S 16 40 47.8 +1.4
baz=260
G21K Allakaket 57.26 25 P P 16 33 32.5 +1.3
baz=257,SNR=414
G21K S S 16 40 50.1 +3.6
baz=257
CAPN Captain Cook N 57.28 32 P P 16 33 32.4 +1.0
baz=263
CAPN S S 16 40 47.1 +0.3
baz=263
BRLK Bradley Lake 57.29 34 P P 16 33 30.9 -0.7
KHLU Kahalu`u 57.30 82 IAmb IAmb 16 33 36.1
comp=Z,416nm,0.7s
KHLU PcP PcP 16 34 16.8 -2.5
USP Ospenovka 57.31 307 P P 16 33 32.8 +0.8
SNR=488
HPAH Hawaii Prepara 57.35 81 IAmb IAmb 16 33 36.8
comp=Z,593nm,0.8s
H21K Melozitna Rive 57.35 27 IAmb IAmb 16 33 37.2
comp=Z,923nm,1.4s
H21K Melozitna Rive 57.35 27 P P 16 33 33.3 +1.4
baz=258,SNR=446
H21K S S 16 40 51.6 +3.9
baz=258
BRSE Bradley Lake S 57.36 34 P P 16 33 31.6 -0.4
baz=264,SNR=31
BRSE S S 16 40 45.6 -2.5
baz=264
AAK Ala-Archa 57.37 306 P P 16 33 33.4 +0.9
comp=Z,290nm,0.7s,baz=97,slow=5.9,SNR=204

AAK PcP **PcP** **16 34 19.7 +0.5**
comp=Z,164nm,0.7s,baz=180,slow=6.0,SNR=4.6
AAK ScP **ScP** **16 37 28.0 -0.2**
comp=Z,40nm,0.9s,baz=66,slow=2.3,SNR=3.9
comp=Z,290nm,0.7s
AAK Ala-Archa 57.37 306 P **P** **16 33 33.5 +0.9**
SNR=195
AAK Ala-Archa 57.37 306 P **P** **16 33 33.0 +0.4**
AAK IAmb IAmb 16 33 36.0
comp=Z,621nm,1.1s
AAK PcP **PcP** **16 34 19.9 +0.6**
AAK Ala-Archa 57.37 306 *d* iP **P** **16 33 33.4 +0.9**
AAK pmax pmax
comp=Z,608nm,1.1s
AAK Ala-Archa 57.37 306 P **P** **16 33 33.4 +0.9**
AAK Ala-Archa 57.37 306 *i* P **P** **16 33 33.4 +0.9**
SNR=20
KKR Kurukshetra 57.38 291 *e*P **P** **16 33 33.2 +0.5**
UCH Uchtor 57.39 305 P **P** **16 33 34.7 +1.6**
SNR=160
LKBA Tubou, Lakemba 57.42 135 P **P** **16 33 34.8 +1.8**
BHK Bhakra 57.43 293 *e*P **P** **16 33 33.7 +0.7**
F21K Alatna River 57.43 25 P **P** **16 33 33.0 +0.6**
baz=256,SNR=183
F21K S **S** **16 40 51.5 +2.8**
baz=256
COCO West Island 57.46 235 P **P** **16 33 32.6 -0.7**
COCO IAmb IAmb 16 33 35.6
comp=Z,383nm,0.8s
COCO PcP **PcP** **16 34 20.4 +0.6**
COCO West Island 57.46 235 P **P** **16 33 33.9 +0.6**
COCO pmax pmax
comp=Z,383nm,0.8s
BTLS Baital 57.50 309 *e*P **P** **16 33 33.8 +0.6**
BTLS *e*S **S** **16 40 51.1 +0.8**
BTLS pmax pmax
comp=Z,541nm,0.9s
BTLS Baital 57.50 309 *e*P **P** **16 33 33.9 +0.6**
comp=Z,541nm,0.9s,baz=309
BTLS *e*S **S** **16 40 51.1 +0.8**
baz=309
A21K Barrow 57.52 20 IAmb IAmb 16 33 37.4
comp=Z,420nm,1.1s
A21K Barrow 57.52 20 P **P** **16 33 33.7 +0.9**
baz=251,SNR=23
A21K S **S** **16 40 51.2 +1.6**
baz=251
SONA Sohna 57.52 289 *e*P **P** **16 33 33.6 0.0**
POHA Pohakuloa 57.58 82 P **P** **16 33 35.5 +1.1**
POHA IAmb IAmb 16 33 38.5
comp=Z,888nm,1.1s
POHA Pohakuloa 57.58 82 P **P** **16 33 36.4 +2.0**
POHA Pohakuloa 57.58 82 P **P** **16 33 35.9 +1.5**
POHA pP **pwP** **16 35 25.3 +1.2**
VJD Vijayawada 57.59 274 *e*P **P** **16 33 35.3 +1.1**
I21K Tanana 57.59 27 IAmb IAmb 16 33 38.8
comp=Z,784nm,1.1s
I21K Tanana 57.59 27 P **P** **16 33 35.1 +1.7**
baz=259,SNR=506
I21K S **S** **16 40 53.3 +2.5**
baz=259
MWH Moku'aweowe 57.60 82 IAmb IAmb 16 33 39.1
comp=Z,385nm,0.9s
MLOA Mauna Loa Obse 57.60 82 IAmb IAmb 16 33 39.2
comp=Z,680nm,0.9s
NGP Nagpur 57.60 280 *e*P **P** **16 33 34.5 +0.2**
KHU Kahuku 57.66 82 P **P** **16 33 36.1 +1.1**
KHU Kahuku 57.66 82 P **P** **16 33 36.1 +1.1**
KHU pmax pmax
comp=Z,866nm,1.0s
HMH Humu'ula Sheep 57.67 82 P **P** **16 33 36.0 +0.8**
HMH IAmb IAmb 16 33 40.7
comp=Z,497nm,1.0s
BBOO Buckleboo 57.70 186 P **P** **16 33 34.2 -0.5**
BBOO Buckleboo 57.70 186 P **P** **16 33 34.6 -0.1**
AIN Ainahou 57.76 82 P **P** **16 33 35.9 +0.3**
KTH Kantishna Hill 57.77 29 IAmb IAmb 16 33 39.3
comp=Z,494nm,1.4s
MLH Mauna Loa 57.79 82 P **P** **16 33 37.0 +1.1**
WHYH Whyalla 57.80 184 P **P** **16 33 35.6 +0.3**
THN Thein Dam 57.82 294 *e*P **P** **16 33 35.5 -0.1**
BPAW Bear Paw Mtn. 57.83 29 P **P** **16 33 36.2 +1.1**
baz=261,SNR=265
BPAW S **S** **16 40 55.2 +1.3**
baz=261
EKS2 Erkin-Say 57.89 306 P **P** **16 33 37.1 +1.0**
SNR=459
WRMHI West Rim 57.89 82 IAmb IAmb 16 33 40.1
comp=Z,357nm,1.0s
UWE Uwekahuna 57.89 82 P **P** **16 33 36.4 -0.1**
UWE IAmb IAmb 16 33 57.2
comp=Z,282nm,0.8s
M22K Willow 57.90 31 P **P** **16 33 35.2 -0.3**
baz=263,SNR=30
M22K S **S** **16 40 55.3 +0.7**
baz=263
SDHHI Sand Hill 57.90 82 IAmb IAmb 16 33 40.1
comp=Z,469nm,0.8s
CUT Chulitna 57.91 31 P **P** **16 33 35.4 -0.2**
baz=263,SNR=61
CUT S **S** **16 40 55.1 +0.3**
baz=263
SBLHI Steaming Bluff 57.91 82 P **P** **16 33 36.3 -0.3**
PTPS Port Pirie 57.91 184 P **P** **16 33 36.5 +0.5**
O22K Cooper Landing 57.95 33 P **P** **16 33 35.9 0.0**
baz=264,SNR=50
O22K S **S** **16 40 54.8 -0.6**
baz=264
H22K Ishtalitna Cre 57.98 26 P **P** **16 33 37.7 +1.6**
baz=259,SNR=370
H22K S **S** **16 40 59.5 +3.9**
baz=259
PUH Pauahi 57.98 82 IAmb IAmb 16 33 42.0
comp=Z,611nm,1.0s
F22K John River 57.99 24 P **P** **16 33 37.6 +1.4**
baz=258,SNR=358
F22K S **S** **16 40 59.0 +3.2**
baz=258
RC01 Rabbit Creek A 58.00 32 IAmb IAmb 16 33 39.9
comp=Z,688nm,1.4s
RC01 Rabbit Creek A 58.00 32 P **P** **16 33 36.2 -0.2**
baz=264,SNR=47
RC01 S **S** **16 40 54.2 -1.9**
baz=264
AML Almayashu 58.01 305 P **P** **16 33 38.6 +1.4**
SNR=1296
TRF Thorofare Moun 58.04 29 P **P** **16 33 36.4 -0.3**
TRF IAmb IAmb 16 33 40.2
comp=Z,286nm,0.8s
TRF Thorofare Moun 58.04 29 P **P** **16 33 37.0 +0.3**
baz=262,SNR=186
TRF S **S** **16 40 56.6 -0.3**
baz=262
SEW Seward 58.05 33 IAmb IAmb 16 33 39.8
comp=Z,440nm,0.8s
SEW Seward 58.05 33 P **P** **16 33 36.6 0.0**
baz=265,SNR=73
SEW S **S** **16 40 55.7 -0.9**
baz=265
MLY Manley 58.09 27 IAmb IAmb 16 33 41.2
comp=Z,345nm,0.9s
MLY Manley 58.09 27 P **P** **16 33 38.1 +1.2**
baz=260,SNR=620
MLY S **S** **16 40 59.7 +2.5**
baz=260
HTT Hallett 58.12 183 P **P** **16 33 37.9 +0.4**
G22K Bettles 58.12 25 P **P** **16 33 37.9 +0.9**
baz=259
G22K S **S** **16 40 58.7 +1.3**
baz=259
BRZS Berezniki 58.19 315 *d* iP **P** **16 33 37.9 +0.1**
BRZS *e*S **S** **16 40 59.1 +0.3**
BRZS pmax pmax
comp=Z,319nm,0.9s
BRZS smax smax
comp=N,730nm,4.9s
BRZS Berezniki 58.19 315 ‖ *i* P **P** **16 33 38.0 +0.1**
comp=N,319nm,0.9s,baz=315
BRZS *e*S **S** **16 40 59.2 +0.4**
comp=N,730nm,4.9s,baz=315
NTLH Newcastle Hard 58.25 170 P **P** **16 33 39.8 +1.5**
E22K Anaktuvuk Pass 58.26 24 P **P** **16 33 39.2 +1.2**
baz=258,SNR=263
E22K S **S** **16 41 01.1 +1.9**
baz=258
PMR Palmer 58.35 32 IAmb IAmb 16 33 42.1
comp=Z,421nm,1.2s
PMR Palmer 58.35 32 P **P** **16 33 38.4 -0.2**
baz=264,SNR=76
PMR S **S** **16 40 59.3 -1.1**
baz=264
JMU Jammu 58.44 294 *e*P **P** **16 33 40.9 +1.1**
JMU *i* x x 16 35 58.8
GHO Glory Hole Cre 58.46 31 IAmb IAmb 16 33 47.8
comp=Z,331nm,1.1s
LHI Lord Howe Isla 58.46 163 P **P** **16 33 39.4 -0.4**
LHI IAmb IAmb 16 33 43.3
comp=Z,479nm,1.4s
LHI Lord Howe Isla 58.46 163 P **P** **16 33 41.4 +1.6**
BHPL Bhopal 58.47 283 *e*P **P** **16 33 38.9 -1.3**
BHPL IAmb IAmb 16 33 42.1
comp=Z,540nm,0.9s
BHPL *e*S **S** **16 41 01.2 -2.1**
OTUK Ortayu 58.48 313 P **P** **16 33 40.2 +0.3**
KNK Knik Glacier 58.65 32 P **P** **16 33 41.0 +0.3**
baz=265,SNR=124
KNK S **S** **16 41 04.4 +0.1**
baz=265
G23K Bananza Creek 58.66 26 P **P** **16 33 42.1 +1.4**
baz=260,SNR=432
G23K S **S** **16 41 08.4 +4.1**
baz=260
KHET Khetri 58.66 289 *e*P **P** **16 33 41.5 +0.1**
PWL Port Wells 58.66 33 IAmb IAmb 16 33 44.6
comp=Z,533nm,1.0s
PWL Port Wells 58.66 33 P **P** **16 33 40.9 +0.1**
baz=265,SNR=101
PWL S **S** **16 41 04.8 +0.3**
baz=265
MCK McKinley 58.68 29 P **P** **16 33 41.0 +0.1**
baz=263,SNR=220
MCK S **S** **16 41 04.0 -0.7**
baz=263
COLD Coldfoot 58.68 25 P **P** **16 33 42.2 +1.3**
baz=260,SNR=140
COLD S **S** **16 41 08.0 +3.4**
baz=260
I23K Minto, Yukon-K 58.68 27 IAmb IAmb 16 33 45.6
comp=Z,1μm,1.9s
I23K Minto, Yukon-K 58.68 27 P **P** **16 33 41.9 +1.1**
baz=262,SNR=192
I23K S **S** **16 41 06.5 +1.9**
baz=262
H23K Yukon River 58.71 27 IAmb IAmb 16 33 46.3
comp=Z,924nm,1.5s
H23K Yukon River 58.71 27 P **P** **16 33 42.5 +1.5**
baz=261,SNR=384
H23K S **S** **16 41 09.1 +4.1**
baz=261
NEA2 Nenana 58.73 28 IAmb IAmb 16 33 45.7
comp=Z,399nm,0.8s
NEA2 Nenana 58.73 28 P **P** **16 33 41.4 +0.2**
baz=262,SNR=302
NEA2 S **S** **16 41 06.5 +1.2**
baz=262
SML Sawmill 58.75 31 P **P** **16 33 41.4 -0.1**
SML IAmb IAmb 16 33 44.8
comp=Z,494nm,0.8s
SML Sawmill 58.75 31 P **P** **16 33 41.6 +0.2**
baz=265,SNR=203
SML S **S** **16 41 05.4 -0.3**
baz=265
WAT1 Susitna Watana 58.75 30 P **P** **16 33 41.3 -0.1**
baz=264
WAT1 S **S** **16 41 05.7 +0.1**
baz=264
D23K Nanushuk River 58.84 23 P **P** **16 33 43.5 +1.6**
baz=258,SNR=295
D23K S **S** **16 41 09.6 +3.2**
baz=258
SYDH Sydney Hard Ro 58.97 172 P **P** **16 33 44.5 +1.4**
M23K Glacier View 59.03 31 P **P** **16 33 43.4 +0.1**
baz=265,SNR=69
M23K S **S** **16 41 09.1 0.0**
baz=265
C23K Itkillik River 59.05 22 P **P** **16 33 44.4 +1.2**
baz=258,SNR=314
C23K S **S** **16 41 11.0 +2.0**
baz=258
P23K Montague Islan 59.06 34 P **P** **16 33 44.2 +0.7**
baz=267
P23K S **S** **16 41 11.3 +1.8**
baz=267
WAT6 Susitna Watana 59.09 31 P **P** **16 33 44.1 +0.2**
baz=265,SNR=292
WAT6 S **S** **16 41 10.7 +0.5**
baz=265
MDM Murphy Dome 59.13 28 IAmb IAmb 16 33 48.4
comp=Z,1μm,1.9s
WRH Wood River Hil 59.13 28 IAmb IAmb 16 33 47.7
comp=Z,382nm,1.4s
MDRS Chennai 59.15 271 *e*P **P** **16 33 46.1 +1.3**
TOLK Toolik Lake Re 59.17 23 IAmb IAmb 16 33 49.2
comp=Z,244nm,0.9s
TOLK Toolik Lake Re 59.17 23 P **P** **16 33 45.3 +1.1**
baz=259,SNR=105
TOLK S **S** **16 41 13.5 +2.7**
baz=259
HYB Hyderabad 59.19 276 *e*P **P** **16 33 45.0 -0.1**
HYBB Hyderabad (bro 59.19 276 *e*P **P** **16 33 45.3 +0.2**
HYBB IVmB_BB 16 33 46.5
comp=Z,2μm,1.3s
HYBB *e*PcP **PcP** **16 34 26.7 -0.2**
HYBB *e*pP **pP** **16 35 27.8 -0.5**
HYBB *e*PP **PP** **16 36 04.2 0.0**
HYBB *e*sP **sP** **16 36 21.9 -2.6**
HYBB *e*ScP **ScP** **16 37 37.4 +0.8**
HYBB *e*PcS **PcS** **16 38 29.9 0.0**
HYBB *e*S **S** **16 41 14.1 +1.5**
HYBB *e*ScS **ScS** **16 42 42.9 +0.9**
HYBB *e*SS **SS** **16 45 20.4 +1.8**
MORW Morawa 59.21 206 P **P** **16 33 44.4 -0.6**
MORW Morawa 59.21 206 P **P** **16 33 45.0 +0.1**
SCM Sheep Creek Mo 59.22 31 IAmb IAmb 16 33 48.2
comp=Z,661nm,1.1s
SCM Sheep Creek Mo 59.22 31 P **P** **16 33 45.2 +0.5**
baz=266,SNR=155
SCM S **S** **16 41 13.0 +1.3**
baz=266
GLI Glacier Island 59.27 33 IAmb IAmb 16 33 48.8
comp=Z,660nm,1.4s
GLI Glacier Island 59.27 33 P **P** **16 33 45.0 +0.1**
baz=266,SNR=26
GLI S **S** **16 41 13.6 +1.5**
baz=266
CCB Clear Creek Bu 59.28 28 P **P** **16 33 44.5 -0.3**
CCB IAmb IAmb 16 33 48.8
comp=Z,354nm,1.2s
CCB PcP **PcP** **16 34 24.6 -1.6**
TCOL CIGO, UAF Yank 59.28 28 P **P** **16 33 45.1 +0.2**
baz=263,SNR=15
TCOL S **S** **16 41 12.9 +0.9**
baz=263
COLA College 59.28 28 P **P** **16 33 44.7 -0.2**
COLA College 59.28 28 *d* iP **P** **16 33 44.7 -0.2**
COLA pmax pmax
comp=Z,168nm,1.2s
COLA College 59.28 28 P **P** **16 33 44.9 +0.1**
baz=263
COLA S **S** **16 41 13.2 +1.1**
baz=263
DHY Denali Highway 59.30 30 P **P** **16 33 45.2 -0.1**
baz=265,SNR=102
DHY S **S** **16 41 14.3 +1.4**
baz=265
AFI Afiamalu 59.35 125 P **P** **16 33 45.0 -1.1**
AFI IAmb IAmb 16 33 49.1
comp=Z,211nm,0.8s
AFI Afiamalu 59.35 125 P **P** **16 33 45.1 -1.1**
AFI pmax pmax
comp=Z,211nm,0.8s
AFI Afiamalu 59.35 125 P **P** **16 33 48.9 +2.7**
AFI Afiamalu 59.35 125 P **P** **16 33 46.0 -0.2**
H24K Noodor Dome 59.39 27 P **P** **16 33 47.0 +1.4**
baz=263,SNR=272
H24K S **S** **16 41 17.6 +4.0**
baz=263
E24K Your Creek 59.47 24 P **P** **16 33 47.6 +1.4**
baz=261,SNR=400
E24K S **S** **16 41 18.5 +3.9**
baz=261
POKR Poker Plat Res 59.49 28 IAmb IAmb 16 33 50.2
comp=Z,353nm,1.2s
POKR Poker Plat Res 59.49 28 P **P** **16 33 46.4 +0.1**
baz=264,SNR=41
POKR S **S** **16 41 16.3 +1.5**
baz=264
BVA0 Borovoye Array 59.53 318 *i* P **P** **16 33 47.0 +0.3**
D24K Happy Valley 59.53 23 P **P** **16 33 47.8 +1.4**
baz=260
D24K S **S** **16 41 17.9 +2.8**
baz=260
HIN Hinchinbrook I 59.53 33 IAmb IAmb 16 33 50.4
comp=Z,415nm,1.0s
AKL Akola 59.55 280 *e*P **P** **16 33 48.3 +0.8**
Q23K Middleton Isla 59.57 34 IAmb IAmb 16 33 51.0
comp=Z,601nm,0.9s
Q23K Middleton Isla 59.57 34 P **P** **16 33 47.9 +1.1**
baz=268,SNR=7.5
Q23K S **S** **16 41 20.5 +4.6**
baz=268
MID Middleton Isla 59.57 34 IAmb IAmb 16 33 51.0
comp=Z,542nm,0.9s
BRVK Borovoye 59.59 318 P **P** **16 33 47.7 +0.6**
BRVK Borovoye 59.59 318 *d* iP **P** **16 33 47.7 +0.6**
BRVK pmax pmax
comp=Z,3μm,0.9s
BRVK Borovoye 59.59 318 P **P** **16 33 47.6 +0.4**
BRVK P **P** **16 33 47.6 +0.4**
F24K Squaw Lake 59.61 25 P **P** **16 33 48.5 +1.4**
baz=262,SNR=201
F24K S **S** **16 41 21.0 +4.7**
baz=262
GHSS Government Hou 59.62 183 P **P** **16 33 48.4 +0.9**
HDA Harding Lake 59.62 28 IAmb IAmb 16 33 50.5
comp=Z,623nm,1.4s
HDA Harding Lake 59.62 28 P **P** **16 33 46.8 -0.4**
baz=264,SNR=194
HDA S **S** **16 41 15.7 -0.8**
baz=264
HDA S **S** **16 41 15.7 -0.8**
baz=264
NIL Nilore 59.62 296 P **P** **16 33 48.1 +0.3**
NIL Nilore 59.62 296 P **P** **16 33 48.1 +0.3**
NIL pmax pmax
comp=Z,2μm,0.9s
NIL Nilore 59.62 296 P **P** **16 33 49.0 +1.3**
DZA Taraz 59.66 307 *e*P **P** **16 33 48.3 +0.5**
DZA *e*S **S** **16 41 19.2 +1.6**
DZA pmax pmax
comp=Z,351nm,0.8s
DZA Taraz 59.66 307 *e*P **P** **16 33 48.3 +0.5**
comp=Z,351nm,0.8s,baz=307
DZA *e*S **S** **16 41 19.3 +1.6**
baz=307
G24K Hadweenzic Riv 59.66 26 P **P** **16 33 49.0 +1.6**
baz=263,SNR=335
G24K S **S** **16 41 21.5 +4.6**
baz=263
C24K Franklin Bluff 59.67 22 P **P** **16 33 48.2 +0.8**
baz=260
C24K S **S** **16 41 18.2 +1.3**
baz=260
IL31 59.68 28 IAmb IAmb 16 33 50.7
comp=Z,423nm,1.1s
ILAR Eielson Array 59.68 28 P **P** **16 33 47.0 -0.6**
comp=Z,253nm,1.0s,baz=259,slow=5.3,SNR=485
ILAR ScP **ScP** **16 37 36.9 -0.9**
comp=Z,37nm,0.9s,baz=280,slow=4.4,SNR=7.8
ILAR S **S** **16 41 17.9 +0.7**
comp=Z,0.8nm,0.5s,baz=54,slow=26,SNR=4.4
ILAR PKKPbc PKKPbc 16 55 00.9
comp=Z,1.0nm,0.7s,baz=342,slow=3.2,SNR=5.1
ILAR PKPPKP 17 03 04.6
comp=Z,1.1nm,0.7s,baz=39,slow=1.2,SNR=5.3
comp=Z,253nm,1.0s
ILAR Eielson Array 59.68 28 P **P** **16 33 47.0 -0.6**
TWOA Tennyson Woods 59.73 183 P **P** **16 33 48.7 +0.5**
M24K Tolsona, Glenn 59.79 31 IAmb IAmb 16 33 54.0
comp=Z,269nm,0.6s
M24K Tolsona, Glenn 59.79 31 P **P** **16 33 49.2 +0.8**
baz=266,SNR=66
M24K S **S** **16 41 22.0 +3.3**
baz=266
KLU Klutina 59.87 32 IAmb IAmb 16 33 53.2
comp=Z,526nm,1.2s
KLU Klutina 59.87 32 P **P** **16 33 49.6 +0.6**
baz=267,SNR=160
KLU S **S** **16 41 21.7 +1.9**
baz=267
EYAK Cordova Ski Ar 59.91 33 P **P** **16 33 49.8 +0.7**
baz=268,SNR=27
EYAK S **S** **16 41 22.1 +2.0**
baz=268
DIV Divide 59.93 32 IAmb IAmb 16 33 54.0
comp=Z,461nm,1.5s
AJM Ajmer 60.05 287 *e*P **P** **16 33 50.9 +0.1**
K24K Donnelly Dome 60.08 29 P **P** **16 33 50.2 -0.1**
baz=266,SNR=140
K24K S **S** **16 41 22.5 +0.3**
baz=266
PAX Paxson 60.16 30 IAmb IAmb 16 33 54.6
comp=Z,183nm,0.7s
PAX Paxson 60.16 30 P **P** **16 33 51.5 +0.6**
baz=267,SNR=320
PAX S **S** **16 41 23.7 +0.2**
baz=267
G25K Bearman Lake 60.21 26 P **P** **16 33 52.4 +1.4**
baz=264,SNR=91
G25K S **S** **16 41 28.9 +5.3**
baz=264
KK31 Karatay Array 60.23 307 *i* P **P** **16 33 52.1 +0.5**
H25K Birch Creek 60.27 26 P **P** **16 33 52.6 +1.2**
baz=264
H25K S **S** **16 41 27.4 +3.0**
baz=264
HARP HAARP 60.28 31 P **P** **16 33 52.5 +0.9**
baz=267,SNR=145
HARP S **S** **16 41 27.3 +2.6**
baz=267
CAN Canberra 60.30 173 P **P** **16 33 52.2 +0.2**
CAN Canberra 60.30 173 P **P** **16 33 52.2 +0.2**
CAN pmax pmax
comp=Z,110nm,0.9s
CAN Canberra 60.30 173 P **P** **16 33 53.3 +1.2**
J25K Salcha River, 60.32 28 P **P** **16 33 51.0 -0.9**
baz=266,SNR=142
J25K S **S** **16 41 24.7 -0.6**
baz=266
BLDU Ballidu 60.32 205 P **P** **16 33 52.7 +0.4**
PRP Porcupine Dome 60.32 27 P **P** **16 33 51.0 -1.0**
baz=265
PRP S **S** **16 41 25.8 +0.3**
baz=265
CNB Canberra Magne 60.33 173 P **P** **16 33 53.3 +1.0**
D25K Kavik River 60.42 23 P **P** **16 33 53.6 +1.2**
baz=262,SNR=331
D25K S **S** **16 41 28.0 +1.6**
baz=262
BTK Batken 60.43 303 IAmb IAmb 16 33 56.2
comp=Z,582nm,1.1s
RAGM Ragged Mountai 60.44 33 IAmb IAmb 16 33 56.6
comp=Z,486nm,1.4s
F25K Christian Rive 60.48 25 P **P** **16 33 54.6 +1.8**
baz=264,SNR=388
F25K S **S** **16 41 31.3 +4.2**
baz=264
BMRM Bremner River 60.49 32 P **P** **16 33 53.5 +0.5**
BMRM Bremner River 60.49 32 P **P** **16 33 53.8 +0.8**
baz=269,SNR=209
BMRM S **S** **16 41 29.6 +2.1**
baz=269
RIDG Independent Ri 60.49 29 P **P** **16 33 53.2 +0.2**
RIDG IAmb IAmb 16 33 56.3
comp=Z,322nm,0.9s
RIDG PcP **PcP** **16 34 31.9 +0.7**
RIDG Independent Ri 60.49 29 P **P** **16 33 53.3 +0.3**
baz=267,SNR=240
RIDG S **S** **16 41 28.5 +1.0**
baz=267
N25K Chitina, Valde 60.51 32 P **P** **16 33 54.1 +0.8**
baz=268,SNR=91
N25K S **S** **16 41 30.0 +2.2**
baz=268
KAIM Kayak Island 60.56 34 IAmb IAmb 16 33 58.3
comp=Z,736nm,1.2s
KAIM Kayak Island 60.56 34 P **P** **16 33 54.5 +1.1**
baz=269,SNR=28
KAIM S **S** **16 41 32.4 +4.1**
baz=269

E25K	**Arctic Village**	**60.56**	**24**	P		**P**		**16 33 55.1**	**+1.7**
	baz=264,SNR=307								
E25K				S		**S**		**16 41 33.1**	**+4.9**
	baz=264								
LATR	**Latur**	**60.67**	**278**	*e*P		**P**		**16 33 54.9**	**+0.1**
IUG	**luzhnay**	**60.71**	**306**	*d i*P		**P**		**16 33 55.8**	**+0.9**
IUG				*e*S		**S**		**16 41 33.2**	**+2.3**
IUG	**luzhnay**	**60.71**	**306**	ǁ *i*P		**P**		**16 33 55.9**	**+0.9**
	baz=306								
IUG				*e*S		**S**		**16 41 33.3**	**+2.3**
	baz=306								
KLBR	**Kellerberrin**	**60.80**	**204**	P		**P**		**16 33 55.5**	**+0.1**
DOT	**Dot Lake**	**60.83**	**29**	IAmb		IAmb		16 33 59.1	
	comp=Z,452nm,1.0s								
SCRK	**Sand Creek**	**60.88**	**29**	P		**P**		**16 33 55.9**	**+0.3**
SCRK				IAmb		IAmb		16 33 59.6	
	comp=Z,587nm,1.0s								
SCRK	**Sand Creek**	**60.88**	**29**	P		**P**		**16 33 56.0**	**+0.3**
	baz=267,SNR=794								
SCRK				S		**S**		**16 41 32.9**	**+0.5**
	baz=267								
GLB	**Gilahina Butte**	**60.88**	**32**	IAmb		IAmb		16 34 00.9	
	comp=Z,459nm,1.3s								
SUCK	**Suckling Hills**	**60.88**	**34**	IAmb		IAmb		16 34 00.6	
	comp=Z,316nm,1.1s								
MENT	**Mentasta**	**60.96**	**30**	IAmb		IAmb		16 34 00.8	
	comp=Z,157nm,0.5s								
PALK	**Pallekele**	**60.97**	**264**	P		**P**		**16 33 56.9**	**-0.1**
PALK				IAmb		IAmb		16 33 59.4	
	comp=Z,252nm,1.0s								
PALK	**Pallekele**	**60.97**	**264**	P		**P**		**16 33 56.9**	**-0.1**
PALK				pmax		pmax			
	comp=Z,252nm,1.0s								
PALK	**Pallekele**	**60.97**	**264**	P		**P**		**16 33 57.2**	**+0.3**
PALK				P		**P**		**16 33 57.2**	**+0.3**
PALK	**Pallekele**	**60.97**	**264**	P		**P**		**16 33 57.3**	**+0.3**
PALK				pP		**pP**		**16 35 42.2**	**+1.1**
GAR	**Garm**	**60.98**	**302**	P		**P**		**16 33 57.2**	**+0.4**
GAR				PcP		**PcP**		**16 34 34.7**	**+0.8**
C26K	**Camden Bay**	**61.01**	**22**	P		**P**		**16 33 58.0**	**+1.8**
	baz=263,SNR=58								
C26K				S		**S**		**16 41 36.6**	**+3.2**
	baz=263								
VRDI	**Verde Repeater**	**61.05**	**32**	IAmb		IAmb		16 34 01.2	
	comp=Z,550nm,1.6s								
F26K	**Sheenjek River**	**61.06**	**25**	P		**P**		**16 33 58.5**	**+1.8**
	baz=265,SNR=333								
F26K				S		**S**		**16 41 38.6**	**+4.3**
	baz=265								
J26L	**Joseph Creek**	**61.09**	**28**	IAmb		IAmb		16 34 00.7	
	comp=Z,371nm,0.8s								
J26L	**Joseph Creek**	**61.09**	**28**	P		**P**		**16 33 57.2**	**+0.2**
	baz=268,SNR=717								
J26L				S		**S**		**16 41 35.2**	**+0.2**
	baz=268								
BGLC	**Bering Glacier**	**61.13**	**33**	P		**P**		**16 33 58.5**	**+1.3**
	baz=270,SNR=5.8								
BGLC				S		**S**		**16 41 38.9**	**+3.7**
	baz=270								
L26K	**Log Cabin Wild**	**61.13**	**30**	IAmb		IAmb		16 34 01.2	
	comp=Z,227nm,0.7s								
L26K	**Log Cabin Wild**	**61.13**	**30**	P		**P**		**16 33 58.2**	**+1.0**
	baz=268,SNR=323								
L26K				S		**S**		**16 41 37.8**	**+2.4**
	baz=268								
G26K	**Porcupine Rive**	**61.14**	**26**	P		**P**		**16 33 58.7**	**+1.6**
	baz=266,SNR=248								
G26K				S		**S**		**16 41 39.4**	**+4.2**
	baz=266								
CRQM	**Cirque**	**61.20**	**33**	IAmb		IAmb		16 34 01.7	
	comp=Z,408nm,0.9s								
CRQE	**Cirque**	**61.23**	**33**	P		**P**		**16 33 58.6**	**+0.6**
	baz=270,SNR=129								
CRQE				S		**S**		**16 41 38.8**	**+2.1**
	baz=270								
MCARA	**McCarthy VSAT**	**61.26**	**32**	IAmb		IAmb		16 34 02.4	
	comp=Z,367nm,1.0s								
MCARA	**McCarthy VSAT**	**61.26**	**32**	P		**P**		**16 33 58.8**	**+0.7**
	baz=270,SNR=103								
MCARA				S		**S**		**16 41 38.6**	**+1.7**
	baz=270								
M26K	**Nabesna, AK**	**61.28**	**31**	P		**P**		**16 33 58.8**	**+0.6**
	baz=269,SNR=141								
M26K				S		**S**		**16 41 39.9**	**+2.6**
	baz=269								
I26K	**Coal Creek Min**	**61.30**	**28**	P		**P**		**16 33 57.6**	**-0.7**
	baz=267								
I26K				S		**S**		**16 41 36.9**	**-0.3**
	baz=267								
SNH	**Sunshine Point**	**61.35**	**33**	IAmb		IAmb		16 34 03.0	
	comp=Z,256nm,1.0s								
TGL	**Tana Glacier**	**61.35**	**33**	IAmb		IAmb		16 34 02.5	
	comp=Z,366nm,1.1s								
TAS	**Tashkent**	**61.37**	**305**	P		**P**		**16 33 59.5**	**+0.3**
TAS	**Tashkent**	**61.37**	**305**	P		**P**		**16 33 59.5**	**+0.3**
TAS				pmax		pmax			
	comp=Z,1μm,1.0s								
ARPS	**Mount Arapiles**	**61.38**	**180**	P		**P**		**16 33 59.3**	**+0.2**
C27K	**Jago River**	**61.39**	**23**	P		**P**		**16 34 00.0**	**+1.2**
	baz=264,SNR=147								
C27K				S		**S**		**16 41 41.0**	**+2.7**
	baz=264								
SALM	**Salem**	**61.53**	**270**	*e*P		**P**		**16 34 00.7**	**+0.1**
ISLE	**Juniper Island**	**61.60**	**33**	IAmb		IAmb		16 34 05.3	
	comp=Z,267nm,1.0s								
K27K	**Chicken**	**61.73**	**29**	IAmb		IAmb		16 34 05.3	
	comp=Z,307nm,1.4s								
K27K	**Chicken**	**61.73**	**29**	P		**P**		**16 34 02.0**	**+1.0**
	baz=269								
K27K				S		**S**		**16 41 43.7**	**+1.1**
	baz=269								
MUN	**Mundaring**	**61.73**	**205**	P		**P**		**16 34 02.9**	**+1.4**
MESA	**MESA**	**61.80**	**33**	IAmb		IAmb		16 34 05.8	
	comp=Z,199nm,0.8s								
MESA	**MESA**	**61.80**	**33**	P		**P**		**16 34 02.7**	**+0.8**
	baz=271,SNR=36								
MESA				S		**S**		**16 41 46.3**	**+2.3**
	baz=271								
M27K	**Edge Creek, AK**	**61.80**	**31**	IAmb		IAmb		16 34 05.6	
	comp=Z,240nm,1.1s								
M27K	**Edge Creek, AK**	**61.80**	**31**	P		**P**		**16 34 02.5**	**+0.7**
	baz=270,SNR=183								
M27K				S		**S**		**16 41 45.8**	**+1.9**
	baz=270								
L27K	**Beaver Creek,**	**61.83**	**30**	P		**P**		**16 34 02.7**	**+0.9**
	baz=270,SNR=211								
L27K				S		**S**		**16 41 46.4**	**+2.5**
	baz=270								
MTKN	**Mount Kenneth**	**61.85**	**205**	P		**P**		**16 34 03.3**	**+1.0**
GRNC	**Granite Creek**	**61.88**	**33**	IAmb		IAmb		16 34 06.0	
	comp=Z,182nm,0.6s								
YAH	**Yahtse**	**61.90**	**33**	IAmb		IAmb		16 34 06.4	
	comp=Z,360nm,1.3s								
BARN	**Barnard Glacie**	**61.92**	**32**	IAmb		IAmb		16 34 07.1	
	comp=Z,303nm,1.5s								
I27K	**Kandik River**	**61.95**	**27**	P		**P**		**16 34 02.9**	**+0.4**
	baz=269								
I27K				S		**S**		**16 41 46.8**	**+1.3**
	baz=269								
G27K	**Doyon Strip**	**61.97**	**26**	P		**P**		**16 34 03.7**	**+1.0**
	baz=268,SNR=131								
G27K				S		**S**		**16 41 49.2**	**+3.6**
	baz=268								
H27K	**Steamboat Moun**	**62.00**	**27**	P		**P**		**16 34 04.2**	**+1.3**
	baz=268								
H27K				S		**S**		**16 41 47.7**	**+1.6**
	baz=268								
E27K	**Coleen River**	**62.05**	**24**	P		**P**		**16 34 04.5**	**+1.3**
	baz=267,SNR=226								
E27K				S		**S**		**16 41 49.5**	**+2.9**
	baz=267								
CTG	**Chitna Glacier**	**62.08**	**32**	P		**P**		**16 34 04.3**	**+0.7**
	baz=271,SNR=57								
CTG				S		**S**		**16 41 48.3**	**+1.0**
	baz=271								
BRAT	**Ballarat**	**62.18**	**178**	P		**P**		**16 34 05.5**	**+1.2**
TABL	**Table Mountain**	**62.19**	**33**	IAmb		IAmb		16 34 08.2	
	comp=Z,196nm,0.8s								
NWAO	**Narrogin (SRO)**	**62.20**	**203**	P		**P**		**16 34 03.9**	**-0.6**
NWAO				IAmb		IAmb		16 34 07.7	
	comp=Z,372nm,1.0s								
NWAO				PcP		**PcP**		**16 34 38.3**	**-0.2**
NWAO	**Narrogin (SRO)**	**62.20**	**203**	P		**P**		**16 34 04.9**	**+0.3**
NWAO	**Narrogin (SRO)**	**62.20**	**203**	P		**P**		**16 34 05.1**	**+0.6**
LOGN	**Logan Glacier**	**62.25**	**33**	IAmb		IAmb		16 34 09.2	
	comp=Z,483nm,1.8s								
TOO	**Toolangi**	**62.26**	**177**	P		**P**		**16 34 05.0**	**+0.1**
TOO	**Toolangi**	**62.26**	**177**	P		**P**		**16 34 05.0**	**+0.1**
TOO				pmax		pmax			
	comp=Z,146nm,1.1s								
TOO	**Toolangi**	**62.26**	**177**	P		**P**		**16 34 06.0**	**+1.1**
BVCY	**Beaver Creek**	**62.28**	**31**	P		**P**		**16 34 05.6**	**+0.9**
	baz=271,SNR=78								
BVCY				S		**S**		**16 41 51.2**	**+1.7**
	baz=271								
YUK3	**Moose Creek**	**62.48**	**32**	P		**P**		**16 34 06.9**	**+0.6**
	baz=272,SNR=299								
YUK3				S		**S**		**16 41 53.5**	**+1.1**
	baz=272								
XMAS	**Kiritimati**	**62.55**	**101**	P		**P**		**16 34 06.9**	**-0.4**
XMAS	**Kiritimati**	**62.55**	**101**	P		**P**		**16 34 10.6**	**+3.3**
PCA	**Pinnacle**	**62.65**	**33**	IAmb		IAmb		16 34 13.2	
	comp=Z,318nm,1.0s								
O28M	**Mount Upton**	**62.65**	**33**	P		**P**		**16 34 08.4**	**+1.0**
	baz=272,SNR=157								
O28M				S		**S**		**16 41 55.9**	**+1.3**
	baz=272								
PINM	**Pinnacle**	**62.65**	**33**	P		**P**		**16 34 07.9**	**+0.7**
	baz=273,SNR=66								
PINM				S		**S**		**16 41 56.2**	**+2.0**
	baz=273								
KOD	**Kodaikanal**	**62.73**	**269**	*e*P		**P**		**16 34 08.9**	**+0.1**
GEXS	**Deakin Univers**	**62.84**	**178**	P		**P**		**16 34 09.8**	**+1.3**
KBL	**Kabul**	**62.85**	**298**	P		**P**		**16 34 08.8**	**-0.4**
KBL	**Kabul**	**62.85**	**298**	P		**P**		**16 34 08.8**	**-0.4**
KBL				pmax		pmax			
	comp=Z,3μm,0.9s								
KBL	**Kabul**	**62.85**	**298**	P		**P**		**16 34 09.5**	**+0.4**
	SNR=40								
KBL				P		**P**		**16 34 09.5**	**+0.4**
	SNR=40								
DAWY	**Dawson**	**62.91**	**29**	P		**P**		**16 34 09.7**	**+0.9**
	baz=272,SNR=156								
DAWY				S		**S**		**16 42 00.3**	**+3.2**
	baz=272								
BCPM	**Bancas Point**	**62.97**	**34**	IAmb		IAmb		16 34 14.0	
	comp=Z,593nm,1.5s								
POO	**Poona**	**63.06**	**279**	*e*P		**P**		**16 34 10.4**	**-0.2**
PNL	**Peninsula**	**63.10**	**34**	P		**P**		**16 34 11.0**	**+1.0**
	baz=274,SNR=61								
PNL				S		**S**		**16 42 02.8**	**+3.1**
	baz=274								
JASL	**Jaisalmer**	**63.16**	**289**	*e*P		**P**		**16 34 11.1**	**+0.1**
KAD	**Karad**	**63.17**	**278**	*e*P		**P**		**16 34 11.0**	**-0.3**
I29M	**Ogilvie Camp,**	**63.33**	**27**	P		**P**		**16 34 12.2**	**+0.7**
	baz=272,SNR=72								
I29M				S		**S**		**16 42 04.4**	**+2.2**
	baz=272								
YUK4	**Talbot Arm**	**63.37**	**32**	P		**P**		**16 34 13.6**	**+1.6**
	baz=274,SNR=264								
YUK4				S		**S**		**16 42 06.8**	**+3.6**
	baz=274								
M29M	**Somme Creek**	**63.39**	**31**	P		**P**		**16 34 13.4**	**+1.4**
	baz=273								
M29M				S		**S**		**16 42 06.8**	**+3.6**
	baz=273								
J29M	**Klondike Camp**	**63.41**	**29**	P		**P**		**16 34 13.3**	**+1.3**
	baz=272,SNR=12								
J29M				S		**S**		**16 42 06.0**	**+2.8**
	baz=272								
O29M	**Mount Kennedy**	**63.47**	**33**	P		**P**		**16 34 14.2**	**+1.6**
	baz=274,SNR=182								
O29M				S		**S**		**16 42 08.6**	**+4.3**
	baz=274								
YUK6	**Outpost Mounta**	**63.53**	**32**	P		**P**		**16 34 14.6**	**+1.5**
	baz=274,SNR=72								
YUK6				S		**S**		**16 42 09.4**	**+4.2**
	baz=274								
BHV	**Bhavnagar**	**63.57**	**283**	*e*P		**P**		**16 34 14.1**	**+0.4**
PCHI	**Peechi**	**63.63**	**270**	ǁ *e*P		**P**		**16 34 14.2**	**0.0**
PCHI				*e*S		**S**		**16 42 07.1**	**-0.2**
RKGY	**Rocky Gully**	**63.80**	**203**	P		**P**		**16 34 15.8**	**+1.0**
TRD	**Trivandrum**	**63.86**	**267**	*e*P		**P**		**16 34 16.1**	**+0.4**
BOM	**Bombay**	**63.87**	**280**	*e*P		**P**		**16 34 17.0**	**+1.3**
P29M	**Windy Craggy**	**63.95**	**34**	IAmb		IAmb		16 34 20.2	
	comp=Z,252nm,0.8s								
P29M	**Windy Craggy**	**63.95**	**34**	P		**P**		**16 34 17.0**	**+1.5**
	baz=275,SNR=160								
P29M				S		**S**		**16 42 13.0**	**+3.1**
	baz=275								
HYT	**Haines Junctio**	**63.96**	**33**	IAmb		IAmb		16 34 20.3	
	comp=Z,445nm,1.1s								
HYT	**Haines Junctio**	**63.96**	**33**	P		**P**		**16 34 17.0**	**+1.3**
	baz=275,SNR=331								
HYT				S		**S**		**16 42 13.1**	**+2.9**
	baz=275								
NIUE	**Niue**	**64.06**	**129**	P		**P**		**16 34 17.4**	**+0.6**
NIUE	**Niue**	**64.06**	**129**	P		**P**		**16 34 18.4**	**+1.7**
GOA	**Goa**	**64.11**	**276**	*e*P		**P**		**16 34 18.2**	**+1.0**
N30M	**Aishikik Lake**	**64.11**	**32**	P		**P**		**16 34 17.9**	**+1.4**
	baz=275,SNR=194								
N30M				S		**S**		**16 42 14.9**	**+3.1**
	baz=275								
M30M	**Minto, Yukon**	**64.16**	**31**	IAmb		IAmb		16 34 21.1	
	comp=Z,122nm,0.8s								
M30M	**Minto, Yukon**	**64.16**	**31**	P		**P**		**16 34 18.1**	**+1.3**
	baz=274,SNR=177								
M30M				S		**S**		**16 42 15.9**	**+3.6**
	baz=274								
P30M	**Million Dollar**	**64.29**	**33**	P		**P**		**16 34 19.2**	**+1.5**
	baz=276,SNR=235								
P30M				S		**S**		**16 42 17.0**	**+3.0**
	baz=276								
O30N	**Mendenhall**	**64.66**	**33**	P		**P**		**16 34 21.0**	**+1.0**
	baz=276,SNR=91								
O30N				S		**S**		**16 42 20.9**	**+2.5**
	baz=276								
PLBC	**Pleasant Camp**	**64.66**	**34**	P		**P**		**16 34 21.3**	**+1.4**
	baz=276,SNR=218								
PLBC				S		**S**		**16 42 21.4**	**+3.1**
	baz=276								
N31M	**Braeburn, Yuko**	**64.73**	**32**	IAmb		IAmb		16 34 24.9	
	comp=Z,319nm,0.9s								
N31M	**Braeburn, Yuko**	**64.73**	**32**	P		**P**		**16 34 21.8**	**+1.4**
	baz=276,SNR=190								
N31M				S		**S**		**16 42 22.8**	**+3.5**
	baz=276								
SVE	**Sverdlovsk**	**64.84**	**323**	*c i*P		**P**		**16 34 20.8**	**-0.3**
SVE				*e*				16 36 51.7	
SVE				*e*PPP		PPP		16 38 36.5	
SVE				*i*S		**S**		**16 42 20.1**	**-0.4**
SVE				*e*				16 43 19.3	
SVE				*e*				16 49 48.7	
SVE				pmax		pmax			
	comp=Z,2μm,0.9s								
SVE				pmax		pmax			
	comp=Z,2μm,9.8s								
INK	**Inuvik**	**65.05**	**24**	S		**S**		**16 42 23.1**	**+0.3**
	comp=Z,33nm,1.0s,baz=162,slow=31,SNR=28								
INK				PKPPKP				17 02 59.3	
	comp=Z,1.5nm,0.3s,baz=70,slow=6.1,SNR=8.4								
INK	**Inuvik**	**65.05**	**24**	P		**P**		**16 34 22.4**	**+0.1**
	baz=275,SNR=85								
INK				S		**S**		**16 42 23.4**	**+0.7**
	baz=275								
SKAG	**Skagway**	**65.19**	**34**	IAmb		IAmb		16 34 27.6	
	comp=Z,156nm,0.6s								
SKAG	**Skagway**	**65.19**	**34**	P		**P**		**16 34 24.5**	**+1.3**
	baz=277,SNR=63								
SKAG				S		**S**		**16 42 28.2**	**+3.6**
	baz=277								
BHUJ	**Bhuj**	**65.30**	**285**	*e*P		**P**		**16 34 25.6**	**+1.0**
M31M	**Drury Creek, Y**	**65.31**	**31**	IAmb		IAmb		16 34 28.0	
	comp=Z,162nm,0.8s								
M31M	**Drury Creek, Y**	**65.31**	**31**	P		**P**		**16 34 24.9**	**+0.9**
	baz=277,SNR=51								
M31M				S		**S**		**16 42 28.7**	**+2.6**
	baz=277								
SIT	**Sitka**	**65.52**	**37**	P		**P**		**16 34 26.3**	**+1.0**
SIT	**Sitka**	**65.52**	**37**	P		**P**		**16 34 26.3**	**+1.0**
SIT				pmax		pmax			
	comp=Z,97nm,1.1s								
SIT	**Sitka**	**65.52**	**37**	P		**P**		**16 34 26.5**	**+1.1**
	baz=278,SNR=5.4								
SIT				S		**S**		**16 42 33.3**	**+4.7**
	baz=278								
BESE	**Bessie Mountai**	**65.55**	**35**	IAmb		IAmb		16 34 30.0	
	comp=Z,280nm,0.8s								
GLAD	**Gladstone**	**65.82**	**175**	P		**P**		**16 34 28.2**	**+0.8**
P32M	**Atlin**	**65.98**	**34**	P		**P**		**16 34 29.4**	**+1.0**
	baz=278,SNR=97								
P32M				S		**S**		**16 42 37.8**	**+3.5**
	baz=278								
ARU	**Arti**	**66.03**	**323**	P		**P**		**16 34 28.6**	**0.0**
	comp=Z,935nm,0.6s,baz=92,slow=3.9,SNR=527								
ARU				S		**S**		**16 42 34.8**	**0.0**
	comp=Z,26nm,0.9s,baz=208,slow=21,SNR=6.1								
	comp=Z,935nm,0.6s								
ARU	**Arti**	**66.03**	**323**	P		**P**		**16 34 28.6**	**0.0**
ARU	**Arti**	**66.03**	**323**	*d i*P		**P**		**16 34 28.6**	**0.0**
ARU								16 34 52.7	
ARU				*PP		**pP**		**16 36 15.2**	**-0.1**
ARU								16 37 00.2	
ARU				*SP		**sP**		**16 37 13.0**	**+2.1**
ARU				PPP		PPP		16 38 46.5	
ARU				S		**S**		**16 42 34.3**	**-0.4**
ARU								16 43 29.7	
ARU				SS		**SS**		**16 47 02.4**	**-0.3**
ARU				pmax		pmax			
	comp=Z,2μm,0.8s								
N32M	**Quiet Lake**	**66.06**	**32**	P		**P**		**16 34 29.6**	**+0.7**
	baz=278								
N32M				S		**S**		**16 42 36.9**	**+1.8**
	baz=278								
CORO	**Coronation Par**	**66.22**	**176**	P		**P**		**16 34 30.9**	**+1.0**
P33M	**Teslin, Yukon**	**66.33**	**33**	IAmb		IAmb		16 34 34.7	
	comp=Z,166nm,1.1s								
P33M	**Teslin, Yukon**	**66.33**	**33**	P		**P**		**16 34 31.5**	**+0.9**
	baz=279,SNR=114								
P33M				S		**S**		**16 42 41.8**	**+3.3**
	baz=279								
AB31	**Akbulak array**	**66.49**	**315**	*i*P		**P**		**16 34 31.3**	**-0.3**
OUZ	**Omahuta**	**66.90**	**152**	P		**P**		**16 34 34.8**	**+0.6**
OUZ				IAmb		IAmb		16 34 38.8	
	comp=Z,228nm,1.4s								
CRAG	**Craig**	**66.99**	**38**	IAmb		IAmb		16 34 38.9	
	comp=Z,132nm,0.8s								
CRAG	**Craig**	**66.99**	**38**	P		**P**		**16 34 35.8**	**+1.3**
	baz=281,SNR=15								
CRAG				S		**S**		**16 42 49.6**	**+3.5**
	baz=281								
MOO	**Moorlands**	**67.21**	**176**	P		**P**		**16 34 36.8**	**+0.8**
WRAK	**Wrangell Islan**	**67.24**	**37**	IAmb		IAmb		16 34 40.4	
	comp=Z,194nm,1.0s								
WRAK	**Wrangell Islan**	**67.24**	**37**	P		**P**		**16 34 37.1**	**+1.0**
	baz=281,SNR=46								
WRAK				S		**S**		**16 42 52.2**	**+3.3**
	baz=281								
A36M	**Sachs Harbour**	**67.36**	**20**	P		**P**		**16 34 36.9**	**+0.4**
	baz=281,SNR=53								
A36M				S		**S**		**16 42 51.2**	**+1.3**
	baz=281								
R33M	**Jennings River**	**67.40**	**34**	P		**P**		**16 34 38.6**	**+1.4**
	baz=281,SNR=93								
R33M				S		**S**		**16 42 55.0**	**+4.0**
	baz=281								
AKTO	**Aktyubinsk**	**67.47**	**316**	P		**P**		**16 34 37.1**	**-0.5**
	comp=Z,266nm,0.8s,baz=91,slow=8.1,SNR=322								
	comp=Z,266nm,0.8s								
TAU	**Tasmania Unive**	**67.69**	**176**	P		**P**		**16 34 39.2**	**+0.3**
TAU				IAmb		IAmb		16 34 42.2	
	comp=Z,205nm,1.2s								
TAU	**Tasmania Unive**	**67.69**	**176**	P		**P**		**16 34 39.2**	**+0.3**
TAU				pmax		pmax			
	comp=Z,205nm,1.2s								
TAU	**Tasmania Unive**	**67.69**	**176**	P		**P**		**16 34 39.6**	**+0.8**
TAU	**Tasmania Unive**	**67.69**	**176**	P		**P**		**16 34 39.7**	**+0.8**
TAU				pP		**pwP**		**16 36 30.9**	**+1.4**
DIB	**Dawson Inlet,**	**67.81**	**40**	IAmb		IAmb		16 34 43.0	
	comp=Z,185nm,0.7s								
HMDM	**Hanimaadhoo**	**67.98**	**267**	P		**P**		**16 34 40.9**	**-0.5**
HMDM	**Hanimaadhoo**	**67.98**	**267**	P		**P**		**16 34 40.6**	**-0.8**
DLBC	**Dease Lake**	**68.07**	**35**	S		**S**		**16 43 00.0**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=360,slow=27,SNR=8.2								
DLBC	**Dease Lake**	**68.07**	**35**	IAmb		IAmb		16 34 45.9	
	comp=Z,224nm,1.1s								
DLBC	**Dease Lake**	**68.07**	**35**	P		**P**		**16 34 42.6**	**+1.4**
	baz=282,SNR=148								
DLBC				S		**S**		**16 43 02.3**	**+3.6**
	baz=282								
T35M	**Bob Quinn**	**68.26**	**36**	P		**P**		**16 34 43.9**	**+1.6**
	baz=282,SNR=62								
T35M				S		**S**		**16 43 05.6**	**+4.6**
	baz=282								
C36M	**Paulatuk**	**68.29**	**22**	IAmb		IAmb		16 34 45.8	
	comp=Z,348nm,1.2s								
C36M	**Paulatuk**	**68.29**	**22**	P		**P**		**16 34 42.1**	**-0.1**
	baz=283,SNR=82								
C36M				S		**S**		**16 43 00.1**	**-0.6**
	baz=283								
HRA	**Herat**	**68.33**	**299**	P		**P**		**16 34 43.8**	**+0.3**
HG4B	**Hotspring**	**68.78**	**41**	IAmb		IAmb		16 34 48.8	
	comp=Z,164nm,0.8s								
GRNB	**Grenville Isla**	**69.14**	**39**	IAmb		IAmb		16 34 51.6	
	comp=Z,102nm,0.6s								
TOZ	**Tahuroa Road**	**69.84**	**152**	P		**P**		**16 34 53.0**	**+1.1**
KMRZ	**Kaimai**	**70.12**	**152**	P		**P**		**16 34 55.6**	**+1.9**
TGRZ	**Tauranga**	**70.16**	**152**	P		**P**		**16 34 55.4**	**+1.5**
HIZ	**Hauiti**	**70.23**	**153**	P		**P**		**16 34 54.5**	**+0.2**
HIZ				IAmb		IAmb		16 34 58.1	
	comp=Z,314nm,0.9s								
HIZ	**Hauiti**	**70.23**	**153**	P		**P**		**16 34 55.7**	**+1.4**
HIZ	**Hauiti**	**70.23**	**153**	P		**P**		**16 34 55.9**	**+1.6**
TLZ	**Tolley Road**	**70.36**	**153**	P		**P**		**16 34 56.6**	**+1.5**
KIRV	**Kirov**	**70.38**	**326**	P		**P**		**16 34 55.2**	**+0.2**
	comp=Z,2μm,0.8s,baz=80,slow=2.5,SNR=196								
KIRV				S		**S**		**16 43 24.1**	**-0.9**
	comp=Z,20nm,0.8s,baz=186,slow=22,SNR=12								
	comp=Z,2μm,0.8s								
KARZ	**Kaharoa**	**70.39**	**152**	P		**P**		**16 34 56.6**	**+1.2**
OMRZ	**Omania**	**70.52**	**152**	P		**P**		**16 34 57.5**	**+1.4**
GEYT	**Alibeck**

MWZ Matawai 71.21 151 P **P** 16 34 59.4 -0.7
MTVZ Mangateitei 71.22 153 P **P** 16 34 57.2 -3.0
WNVZ Wahianoa 71.22 153 P **P** 16 35 00.7 +0.3
TWGZ Tauwhareparae 71.28 151 P **P** 16 35 00.2 -0.3
QRZ Quartz Range 71.31 156 IAmb IAmb 16 35 03.6
comp=Z,342nm,0.9s
QRZ Quartz Range 71.31 156 P **P** 16 35 01.5 +0.9
PRGR Permogore 71.32 330 ⇓*i*P **P** 16 35 00.5 +0.1
PRGR *e* 16 35 16.8
PRGR *e* 16 37 46.9
PRGR *e*S **S** 16 43 34.5 -1.1
PRGR pmax pmax
comp=Z,2µm,0.9s
WAZ Wanganui 71.34 154 P **P** 16 35 01.6 +0.8
MTHZ Maungataniwha 71.35 152 P **P** 16 35 00.6 -0.3
MOVZ Moawhango 71.36 153 P **P** 16 35 00.9 -0.1
TKGZ Te Karaka 71.44 151 P **P** 16 35 00.8 -0.6
BKZ Black Stump Fm 71.46 152 P **P** 16 35 00.9 -0.7
BKZ IAmb IAmb 16 35 03.3
comp=Z,180nm,0.7s
BKZ Black Stump Fm 71.46 152 P **P** 16 35 01.0 -0.6
BKZ Black Stump Fm 71.46 152 P **P** 16 35 01.4 -0.2
SNGZ Shannon Statio 71.50 152 P **P** 16 35 01.5 -0.3
RAHZ Arahi 71.50 152 P **P** 16 35 01.7 -0.1
NMHZ Naumai 71.54 152 P **P** 16 35 02.4 +0.3
BHHZ Black Hill Sta 71.55 153 P **P** 16 35 01.9 -0.3
RIGZ Rimuhau 71.62 151 P **P** 16 35 02.1 -0.4
CNGZ Carnagh Statio 71.64 151 P **P** 16 35 02.3 -0.3
KWHZ Kaweka Forest 71.65 153 P **P** 16 35 02.7 0.0
ARHZ Aropaoanui 71.76 152 P **P** 16 35 03.2 -0.1
MCHZ McNeill Hill 71.78 152 P **P** 16 35 03.6 +0.2
OHWZ Ohakea 71.86 154 P **P** 16 35 04.2 +0.4
PRGZ Paritu Road 71.86 151 P **P** 16 35 03.7 -0.2
HOPEN Hopen 71.89 347 *e*P **P** 16 35 04.2 +0.7
HOPEN IVmB_BB 16 35 06.2
comp=Z,5µm,1.0s
PNHZ Pukenui 71.97 153 P **P** 16 35 04.1 -0.4
NNZ Nelson 71.97 156 IAmb IAmb 16 35 06.5
comp=Z,388nm,0.9s
TSZ Takapari Road 71.99 153 P **P** 16 35 04.3 -0.4
NGCH Negor - Chabah 72.00 290 P **P** 16 35 06.5 +1.4
SNR=9.6
NGCH P **P** 16 35 08.3 +3.2
SNR=7.6
EUNU Eureka 72.05 8 IAmb IAmb 16 35 07.6
comp=Z,200nm,0.8s
CKHZ Cape Kidnapper 72.12 152 P **P** 16 35 05.6 +0.3
KAHZ Kahuranaki 72.15 152 P **P** 16 35 05.8 +0.2
WPHZ Waipukurau 72.19 153 P **P** 16 35 05.6 -0.2
POWZ Post Office Ro 72.20 154 P **P** 16 35 05.9 +0.1
THZ Tophouse 72.27 156 IAmb IAmb 16 35 07.8
comp=Z,193nm,0.8s
PXZ Pawanui 72.34 153 P **P** 16 35 06.6 0.0
SPB2 Spitsbergen Ar 72.47 350 IAmb IAmb 16 35 11.1
comp=Z,166nm,0.8s
SPITS Spitsbergen Ar 72.47 350 P **P** 16 35 06.9 0.0
comp=Z,116nm,0.8s,baz=93,slow=8.4,SNR=84
SPITS S **S** 16 43 48.1 0.0
comp=Z,28nm,1.1s,baz=154,slow=16,SNR=5.1
comp=Z,116nm,0.8s
SNZO South Karori 72.56 155 P **P** 16 35 06.6 -1.2
SNZO IAmb IAmb 16 35 09.4
comp=Z,428nm,0.9s
SNZO South Karori 72.56 155 P **P** 16 35 07.2 -0.6
BFZ Birch Farm 72.64 153 P **P** 16 35 07.4 -0.9
BFZ IAmb IAmb 16 35 10.3
comp=Z,385nm,0.9s
BFZ Birch Farm 72.64 153 P **P** 16 35 08.1 -0.2
KBS Kingsbay 72.64 351 P **P** 16 35 08.3 +0.5
KBS IAmb IAmb 16 35 10.9
comp=Z,176nm,0.7s
KBS Kingsbay 72.64 351 P **P** 16 35 08.3 +0.5
KBS pmax pmax
comp=Z,176nm,0.7s
KBS Kingsbay 72.64 351 ⇓*i*P **P** 16 35 08.3 +0.5
KBS Kingsbay 72.64 351 *e*P **P** 16 35 08.5 +0.7
KBS IVmBBB 16 35 10.7
comp=Z,2µm,0.9s
FOZ Fox Glacier 72.77 159 IAmb IAmb 16 35 12.2
comp=Z,358nm,1.5s
RAR Rarotonga 72.83 124 P **P** 16 35 11.5 +1.7
MSWZ Moikau Station 72.86 154 P **P** 16 35 08.3 -1.3
LTZ Lake Taylor 72.93 157 IAmb IAmb 16 35 12.8
comp=Z,154nm,0.8s
PLWZ Palliser 72.99 155 P **P** 16 35 10.3 -0.1
KHZ Kahutara 73.07 156 IAmb IAmb 16 35 12.0
comp=Z,382nm,0.9s
KHZ Kahutara 73.07 156 P **P** 16 35 09.9 -0.8
NOR Nord 73.12 357 *i*P **P** 16 35 10.0 -0.6
NOR IAmb IAmb 16 35 12.4
comp=Z,106nm,1.2s
OZB Mount Ozzard 73.19 43 IAmb IAmb 16 35 15.9
comp=Z,291nm,0.7s
BELG Belogornoye 73.21 320 P **P** 16 35 11.4 -0.1
comp=Z,3µm,0.9s,baz=326,slow=0.8,SNR=118
BELG S **S** 16 43 56.8 -0.1
comp=Z,50nm,1.0s,baz=237,slow=23,SNR=8.6
RPZ Rata Peaks 73.34 158 P **P** 16 35 11.8 -0.5
comp=Z,163nm,0.9s,baz=55,slow=2.9,SNR=22
comp=Z,163nm,0.9s
RPZ Rata Peaks 73.34 158 IAmb IAmb 16 35 16.5
comp=Z,236nm,1.0s
HSPB Hornsund (broa 73.36 349 *e*P **P** 16 35 12.4 +0.4
HSPB *i*Sc 16 43 58.0
LVZ Lovozero 73.40 338 P **P** 16 35 11.7 -0.7
LVZ Lovozero 73.40 338 ⇓P **P** 16 35 12.3 -0.1
LBZ Lake Benmore 73.65 159 P **P** 16 35 12.9 -1.1
WKZ Wanaka 73.68 160 P **P** 16 35 15.6 +1.4
DCZ Deep Cove 73.72 162 P **P** 16 35 14.3 0.0
MLZ Mavora Lakes 73.90 161 P **P** 16 35 15.0 -0.5
APA Apatity 73.97 338 ⇑*i*P **P** 16 35 15.4 -0.2
APA *i* 16 35 23.0
APA *i*S **S** 16 44 02.0 -2.8
APA *i* 16 44 31.0
APA *i*SS **SS** 16 49 08.0 +5.2
APA *i*SSS SSS 16 52 28.0
APA pmax pmax
comp=Z,89nm,0.8s
APA MLR MLR
comp=Z,2µm,15.0s
C03A Quillayute Air 74.11 44 IAmb IAmb 16 35 21.5
comp=Z,272nm,1.1s
YKA Yellowknife Ar 74.11 28 P **P** 16 35 16.6 +0.1
comp=Z,44nm,0.4s,baz=295,slow=6.1,SNR=455
YKA S **S** 16 44 04.9 -1.6
comp=Z,2.1nm,0.8s,baz=295,slow=12,SNR=3.7
YKA PKKPbc **PKKPbc** 16 54 41.4 -1.5
comp=Z,0.8nm,0.5s,baz=108,slow=2.5,SNR=7.9
YKA PKPPKP **P'P'df** 17 02 46.1 +1.9
comp=Z,0.6nm,0.8s,baz=120,slow=2.2,SNR=3.5
comp=Z,44nm,0.4s
BJO1 Bjornoya 74.28 346 *e*P **P** 16 35 16.8 -0.4
BJO1 IVmBBB 16 35 18.3
comp=Z,2µm,0.9s
WHZ Wether Hill Ro 74.33 161 P **P** 16 35 17.3 -0.5
KLMR Klimovskoe 74.36 330 *e*P **P** 16 35 15.9 -2.0
KLMR *e* 16 38 06.4
KLMR *e*S **S** 16 44 05.4 -3.9
KLMR *e*SSS SSS 16 52 29.7
KLMR pmax pmax
comp=Z,1µm,1.1s
KLMR Klimovskoe 74.36 330 *e*P **P** 16 35 15.9 -2.0
KLMR AMP 16 35 20.3
comp=Z,1µm,1.1s
KLMR *e*PP **PP** 16 38 06.4 -6.6
KLMR *e*S **S** 16 44 05.4 -3.9
KLMR *e*S **S** 16 44 05.4 -3.9
KLMR *e*SS **SS** 16 49 01.4 -7.6
KLMR *e*SS **SS** 16 49 01.4 -7.6
KLMR *e*SSS SSS 16 52 29.7
KLMR *e*SSS SSS 16 52 29.7
JASK Jask - Hormozg 74.60 292 P **P** 16 35 21.9 +1.9
SNR=22
NLWA Neilton Lookou 74.74 45 IAmb IAmb 16 35 25.2
comp=Z,238nm,0.8s
B04A Port Angeles 74.74 44 IAmb IAmb 16 35 25.0
comp=Z,180nm,0.8s
WBK Wadi Bani Khal 74.81 288 P **P** 16 35 21.8 +0.5
SNR=41
LLLB Lillooet 74.84 41 IAmb IAmb 16 35 25.1
comp=Z,216nm,0.7s
WSAR Wadi Sarin 74.88 289 P **P** 16 35 21.9 +0.3
SNR=24
WISH Wishkah 74.89 45 IAmb IAmb 16 35 26.3
comp=Z,290nm,0.8s
KEV Kevo 74.96 341 P **P** 16 35 20.8 -0.3
KEV Kevo 74.96 341 P **P** 16 35 20.8 -0.3
KEV pmax pmax
comp=Z,656nm,1.0s
RADR Rader Ridge 75.12 46 IAmb IAmb 16 35 26.8
comp=Z,374nm,1.1s
BIDO Bidbid 75.21 289 P **P** 16 35 24.1 +0.7
SNR=76
HAMF Hammerfest 75.42 342 *e*P **P** 16 35 23.5 -0.1
HAMF IVmB_BB 16 35 25.5
comp=Z,5µm,0.9s
SMDO Samad 75.44 289 P **P** 16 35 25.0 +0.2
SNR=27
ARCES ARCESS Array B 75.52 341 P **P** 16 35 24.6 +0.3
comp=Z,471nm,0.7s,baz=73,slow=7.6,SNR=1193
ARCES S **S** 16 44 21.3 -0.3
comp=Z,14nm,0.9s,baz=76,slow=10,SNR=6.5
ARCES PKKPbc **PKKPbc** 16 54 39.5 -0.7
comp=Z,0.9nm,0.7s,baz=199,slow=2.2,SNR=3.6
comp=Z,471nm,0.7s
HEBO Mount Hebo 75.57 47 IAmb IAmb 16 35 29.1
comp=Z,238nm,1.0s
JMDO Jabal Madar 75.64 288 P **P** 16 35 25.9 0.0
SNR=27
F04D Rainier, OR 75.75 46 P **P** 16 35 27.4 +1.4
F04D baz=8.5 S **S** 16 44 25.3 +0.5
baz=291
HOQ Hoqain 75.89 290 P **P** 16 35 27.4 +0.2
SNR=36
G03D McMinnville, O 75.90 47 P **P** 16 35 27.8 +1.0
G03D IAmb IAmb 16 35 31.3
comp=Z,234nm,0.8s
G03D McMinnville, O 75.90 47 P **P** 16 35 28.2 +1.4
G03D baz=291,SNR=21 S **S** 16 44 29.2 +2.7
baz=291
BANOM Banah 75.90 292 P **P** 16 35 28.0 +0.7
SNR=26
BANOM Banah 75.90 292 *i*P **P** 16 35 28.0 +0.7
SNR=26
I02E Swisshome, OR 75.91 48 IAmb IAmb 16 35 31.4
comp=Z,187nm,0.7s
I02E Swisshome, OR 75.91 48 P **P** 16 35 28.3 +1.4
I02E baz=291,SNR=12 S **S** 16 44 29.2 +2.6
baz=291
SHME Shamm 75.99 292 P **P** 16 35 28.4 +0.6
SNR=284
SHME Shamm 75.99 292 *i*P **P** 16 35 28.4 +0.6
SNR=284
D05A Enumclaw 76.01 44 IAmb IAmb 16 35 31.7
comp=Z,342nm,1.2s
KEBM Edson Butte 76.02 49 IAmb IAmb 16 35 32.3
comp=Z,395nm,0.8s
COR Corvallis 76.10 47 P **P** 16 35 29.6 +1.6
COR IAmb IAmb 16 35 32.4
comp=Z,288nm,1.1s
COR Corvallis 76.10 47 P **P** 16 35 29.6 +1.6
COR pmax pmax
comp=Z,288nm,1.1s
F04A Amboy 76.19 46 IAmb IAmb 16 35 32.6
comp=Z,385nm,0.9s
J01E Myrtle Point 76.19 49 IAmb IAmb 16 35 32.5
comp=Z,289nm,0.9s
J01E Myrtle Point 76.19 49 P **P** 16 35 29.9 +1.4
baz=291,SNR=20
J01E S **S** 16 44 31.5 +1.8
baz=291
MASF Masafi 76.22 292 P **P** 16 35 29.7 +0.6
SNR=166
MSFE Esma-Masafi 76.22 292 *i*P **P** 16 35 29.7 +0.6
SNR=166
MHTO MHTO 76.26 287 P **P** 16 35 29.4 +0.1
SNR=88
BSY Bisya 76.28 289 P **P** 16 35 29.6 +0.2
SNR=63
KBO Bosley Butte 76.33 50 IAmb IAmb 16 35 33.6
comp=Z,215nm,1.0s
UOSS Minazif 76.33 291 P **P** 16 35 29.4 -0.3
UOSS Minazif 76.33 291 *i*P **P** 16 35 29.7 0.0
SNR=144
I03D Drain, OR 76.39 48 P **P** 16 35 31.0 +1.4
baz=292,SNR=43
I03D S **S** 16 44 34.7 +2.9
baz=292
HATD Hatta, Dubai 76.44 291 P **P** 16 35 30.6 +0.4
SNR=177
HATD Hatta, Dubai 76.44 291 *i*P **P** 16 35 30.5 +0.3
SNR=177
BUCK Buck Mountain 76.45 47 IAmb IAmb 16 35 34.8
comp=Z,477nm,0.8s
H04D Lebanon 76.50 47 P **P** 16 35 31.7 +1.5
baz=292,SNR=20
H04D S **S** 16 44 35.2 +2.3
baz=292
K02D Willamette Mer 76.54 49 P **P** 16 35 31.6 +1.1
baz=292,SNR=46
K02D S **S** 16 44 35.5 +1.8
baz=292
ASHO Ashiyiah 76.55 291 P **P** 16 35 31.1 +0.2
SNR=46
ASHO Ashiyiah 76.55 291 *i*P **P** 16 35 31.1 +0.2
SNR=50
MAK Makhachkala 76.56 311 *e*P **P** 16 35 26.3 -4.2
MAK *e**PP **pP** 16 37 20.9 -0.5
MAK *e**SP **sP** 16 38 16.2 +0.5
MAK *e* 16 38 30.4
MAK *e*PPP PPP 16 40 22.9
MAK *e*S **S** 16 44 26.6 -7.0
MAK *e*SS **SS** 16 49 41.6 -1.1
MAK *e*SSS SSS 16 53 11.5
MAK pmax pmax
comp=Z,1µm,0.9s
MAK MLR MLR
comp=Z,2µm,14.0s
UMQ Umm Al-Quwin 76.58 292 P **P** 16 35 31.8 +0.9
SNR=6.3
UMQ Umm Al-Quwin 76.58 292 *i*P **P** 16 35 32.0 +1.0
SNR=12
ARQ Araqi 76.65 290 P **P** 16 35 32.0 +0.5
SNR=120
KSXB Camp Six Broad 76.71 50 IAmb IAmb 16 35 35.6
comp=Z,239nm,1.0s
NAZ Nazwa, Dubai 76.78 292 P **P** 16 35 32.1 0.0
SNR=31
NAZ Nazwa, Dubai 76.78 292 *i*P **P** 16 35 32.1 0.0
SNR=106
L02F Cave Junction 76.82 50 P **P** 16 35 33.4 +1.4
baz=292,SNR=36
L02F S **S** 16 44 39.1 +2.6
baz=292
HOOD Mount Hood Mea 76.92 46 IAmb IAmb 16 35 36.9
comp=Z,299nm,0.9s
JETT Jettan, Norway 76.97 342 *e*P **P** 16 35 32.5 +0.1
JETT IVmB_BB 16 35 34.5
comp=Z,8µm,0.8s
I04A Tendick Farm, 76.99 48 P **P** 16 35 33.7 +0.8
baz=292
I04A S **S** 16 44 37.7 -0.6
baz=292
TULEG Thule 77.00 7 P **P** 16 35 32.2 -0.1
TULEG IAmb IAmb 16 35 35.2
comp=Z,405nm,0.9s
TULEG Thule 77.00 7 ⇓*i*P **P** 16 35 32.5 +0.3
TULEG IAmb IAmb 16 35 34.9
comp=Z,388nm,0.9s
DQM DQM 77.03 286 P **P** 16 35 33.6 +0.1
SNR=23
ALNE Al Ain 77.04 291 P **P** 16 35 33.8 +0.3
SNR=64
ALNE Al Ain 77.04 291 *i*P **P** 16 35 33.9 +0.3
SNR=123
VRH Novokhopyorsk 77.06 321 *e*P **P** 16 35 32.9 -0.2
VRH *e**SP **sP** 16 38 19.5 +1.0
VRH *e*S **S** 16 44 34.3 -4.2
VRH pmax pmax
comp=Z,1µm,0.8s
VRH pmax pmax
comp=Z,1µm,0.8s
VRH smax smax
comp=N,4µm,3.8s
VRH MLR MLR
comp=Z,2µm,15.0s
KMPM Mount Pierce 77.06 51 IAmb IAmb 16 35 38.1
comp=Z,336nm,0.9s
G05D Wamic, OR 77.17 46 P **P** 16 35 35.1 +1.2
G05D baz=292,SNR=22 S **S** 16 44 41.9 +1.8
baz=292
KHMM Horse Mountain 77.17 51 IAmb IAmb 16 35 38.8
comp=Z,321nm,0.9s
ASUD Al Ashush, Dub 77.19 291 P **P** 16 35 34.9 +0.5
SNR=30
ASUD Al Ashush, Dub 77.19 291 *i*P **P** 16 35 34.8 +0.4
SNR=40
B08A Colville Reser 77.22 43 IAmb IAmb 16 35 38.0
comp=Z,174nm,0.7s
TRO Tromso 77.33 343 *e*P **P** 16 35 34.0 -0.2
TRO IVmB_BB 16 35 36.0
comp=Z,6µm,0.9s
MOS Moscow 77.39 326 *e*P **P** 16 35 33.6 -1.2
MOS *e**PP **pP** 16 37 25.0 -1.5
MOS *e*S S 16 44 32.9 -9.0
MOS pmax pmax
comp=Z,2µm,1.8s
MOS pmax pmax
comp=N,500nm,1.6s
MOS pmax pmax
comp=E,400nm,1.5s
MOS pmax pmax
comp=Z,1µm,1.3s
MOS smax smax
comp=N,4µm,3.3s
MOS MLR MLR
comp=Z,2µm,18.0s
J04D Umpqua Nationa 77.40 48 IAmb IAmb 16 35 39.5
comp=Z,432nm,0.8s
J04D Umpqua Nationa 77.40 48 P **P** 16 35 36.5 +1.1
baz=292,SNR=78
J04D S **S** 16 44 44.8 +1.8
baz=292
I05D Terrebonne, OR 77.50 47 P **P** 16 35 36.6 +0.9
baz=293,SNR=21
I05D S **S** 16 44 45.5 +1.8
baz=293
AJN Ajban 77.50 291 P **P** 16 35 35.9 -0.1
SNR=53
AJN Ajban 77.50 291 *i*P **P** 16 35 35.9 -0.1
SNR=11
YBH Yreka Blue Hor 77.56 50 S **S** 16 44 45.0 +0.5
comp=Z,0.9nm,0.4s,baz=95,slow=19,SNR=10
GROC Groznyy 77.63 312 *e*P **P** 16 35 36.4 +0.1
GROC *e* 16 35 43.5
GROC *e* 16 38 40.4
GROC *e*S **S** 16 44 43.8 -1.1
GROC pmax pmax
comp=Z,935nm,0.7s
L04D Klamath Falls 77.65 49 P **P** 16 35 37.1 +0.4
L04D IAmb IAmb 16 35 40.7
comp=Z,262nm,0.7s
L04D Klamath Falls 77.65 49 P **P** 16 35 37.8 +1.0
baz=292,SNR=62
L04D S **S** 16 44 45.7 +0.1
baz=292
KCPM Cahto Peak 77.72 52 IAmb IAmb 16 35 41.4
comp=Z,435nm,0.8s
F07A Phinny Hill Vi 77.81 45 IAmb IAmb 16 35 41.6
comp=Z,280nm,1.2s
DAG Danmarks Havn 77.83 356 *i*P **P** 16 35 36.4 -0.4
DAG IAmb IAmb 16 35 38.5
comp=Z,144nm,1.0s
HAWA Hanford 77.87 44 IAmb IAmb 16 35 41.7
comp=Z,134nm,0.5s
K04D Chiloquin, OR 77.88 49 P **P** 16 35 39.1 +1.3
baz=293,SNR=78
K04D S **S** 16 44 48.7 +0.9
baz=293
J05D Fort Rock, OR 77.97 48 P **P** 16 35 39.8 +1.3
baz=293,SNR=194
J05D S **S** 16 44 49.7 +0.8
baz=293
PINE Pine Mountain 77.97 47 IAmb IAmb 16 35 42.9
comp=Z,524nm,0.8s
D08A Wollman Farm, 77.99 44 IAmb IAmb 16 35 42.2
comp=Z,212nm,0.8s
LPSR Galich'ya Gora 78.05 323 *e*P **P** 16 35 38.5 +0.1
LPSR *e* 16 35 39.3
LPSR *e**SP **sP** 16 38 24.2 0.0
LPSR *e*S **S** 16 44 45.3 -3.7
LPSR pmax pmax
comp=Z,1µm,0.8s
LPSR pmax pmax
comp=Z,1µm,0.8s
LPSR smax smax
comp=N,2µm,3.9s
LPSR MLR MLR
comp=Z,1µm,18.0s
C09A Chrisman Ranch 78.09 43 IAmb IAmb 16 35 42.3
comp=Z,364nm,1.2s
OBN Obninsk 78.21 326 ⇑P **P** 16 35 39.2 0.0
OBN Obninsk 78.21 326 P **P** 16 35 39.0 -0.2
comp=Z,154nm,0.9s,baz=72,slow=2.4,SNR=135
OBN S **S** 16 44 48.9 -1.5
comp=Z,7.1nm,0.6s,baz=153,slow=23,SNR=11
comp=Z,154nm,0.9s
OBN Obninsk 78.21 326 P **P** 16 35 38.7 -0.5
OBN Obninsk 78.21 326*d* *i*P **P** 16 35 38.9 -0.2
OBN *i* 16 35 46.1
OBN *i**PP **pwP** 16 37 32.9 -2.1
OBN *i* 16 38 45.1
OBN *i*S **S** 16 44 48.1 -2.4
OBN pmax pmax
comp=Z,806nm,1.0s
VORR Voronezh 78.29 322 *e*P **P** 16 35 38.9 -0.8
VORR *e*S **S** 16 44 51.1 -0.5
VORR pmax pmax
comp=Z,775nm,1.2s
VORR smax smax
comp=E,1.0nm,2.0s
K05A Summer Lake 78.42 48 IAmb IAmb 16 35 45.2
comp=Z,353nm,0.8s
NEW Newport 78.61 42 IAmb IAmb 16 35 45.5
comp=Z,212nm,0.8s
NEW Newport 78.61 42 P **P** 16 35 42.5 +0.9
baz=295,SNR=189
NEW S **S** 16 44 55.3 +0.2
baz=295
E09A Wood Farm, Sta 78.70 44 IAmb IAmb 16 35 46.2
comp=Z,232nm,0.8s
GOF Gofitskoye 78.72 314 ⇑*e*P **P** 16 35 44.1 +1.9
GOF pmax pmax
comp=Z,2µm,0.9s
MZWR Madinat Zayed 78.74 291 P **P** 16 35 43.7 +1.1
PPT Papeete 78.89 115 P **P** 16 35 45.9 +2.4
comp=Z,292nm,0.9s,baz=61,slow=1.3,SNR=18
comp=Z,292nm,0.9s
PPT2 Papeete2 78.90 115 *e*P **P** 16 35 44.7 +1.1
comp=Z,322nm,23.2s
PPT2 Papeete2 78.90 115 *e*P **P** 16 35 44.9 +1.3
comp=Z,254nm,1.0s
PPT2 Papeete2 78.90 115 *e*P **P** 16 35 44.9 +1.3
comp=Z,173nm,21.8s
PPT2 *e*pP **pP** 16 37 34.7 -0.1
comp=Z,119nm,1.4s
PPT2 *e*pP **pP** 16 37 35.0 +0.2
comp=Z,1µm,28.2s
PPT2 *e*pP **pP** 16 37 35.2 +0.4
comp=Z,740nm,37.8s
PPT2 *e*S **S** 16 45 00.2 +1.2
comp=Z,2µm,19.2s
PPT2 *e*S **S** 16 45 01.2 +2.2
comp=Z,850nm,23.2s
PPT2 Papeete2 78.90 115 *e*LR LR 17 01 09.7
comp=Z,2µm,21.2s
PPT2 *e*LR LR 17 01 10.2
comp=Z,2µm,18.2s
PPTF Pamatai, Papee 78.91 115 P **P** 16 35 44.4 +0.7
PPTF IAmb IAmb 16 35 50.9
comp=Z,363nm,1.0s
PPTF Pamatai, Papee 78.91 115 P **P** 16 35 45.3 +1.6
PAE Paea 78.93 115 *e*P **P** 16 35 44.9 +1.2
comp=Z,27nm,0.9s
PMOR Pomariorio Ree 79.01 112 *e*P **P** 16 35 45.3 +1.2
comp=Z,415nm,0.9s
PMOR *e*pP **pP** 16 37 35.5 0.0
comp=Z,415nm,1.4s
PMOR Pomariorio Ree 79.01 112 *e*T T 18 03 59.9
comp=Z,8.6nm,0.2s
ZEI Tsey 79.07 312 *e*P **P** 16 35 42.0 -2.4
ZEI pmax pmax
comp=Z,1µm,0.9s
TIAR Tiarei 79.07 115 *e*P **P** 16 35 45.9 +1.4

comp=Z,36nm,0.9s
TIAR e P pP 16 37 35.8 +0.1
comp=Z,20nm,1.1s
MOD Modoc Plateau 79.15 49 P P 16 35 45.1 +0.4
JRN Qarnain Island 79.16 292 P P 16 35 44.4 -0.5
SNR=26
TVO Taravao 79.26 115 e P P 16 35 46.8 +1.3
comp=Z,104nm,1.0s
TVO e pP pP 16 37 37.0 +0.1
comp=Z,112nm,1.3s
VAH Vaihoa 79.35 112 e P P 16 35 46.9 +1.0
comp=Z,135nm,1.0s
KBZ Khabaz 79.36 313 P P 16 35 46.3 +0.8
comp=Z,2μm,0.8s,baz=100,slow=2.6,SNR=611
KBZ S S 16 45 02.8 -0.1
comp=Z,6.1nm,0.9s,baz=279,slow=22,SNR=14
KBZ Khabaz 79.36 313 d i P P 16 35 46.3 +0.8
KBZ pmax pmax
comp=Z,2μm,0.8s
MZR Muzera 79.37 290 P P 16 35 46.2 +0.2
SNR=96
MZR Muzera 79.37 290 i P P 16 35 46.2 +0.2
SNR=12
KVAR Kislovodsk Arr 79.40 314 P P 16 35 47.2 +1.3
comp=Z,356nm,0.8s
comp=Z,356nm,0.8s
KIV Kislovodsk 79.40 314 ⇑P P 16 35 46.9 +1.0
KIV Kislovodsk 79.40 314 P P 16 35 46.3 +0.4
KIV Kislovodsk 79.40 314 e P P 16 35 46.4 +0.4
KIV e* PP pP 16 37 39.1 +1.1
KIV e* SP sP 16 38 32.4 +0.5
KIV e 16 38 56.0
KIV e PPP PPP 16 40 48.6
KIV e S S 16 45 04.5 +0.9
KIV e SS SS 16 50 27.9 +2.7
KIV e SSS SSS 16 53 59.8
KIV pmax pmax
comp=Z,2μm,4.4s
KIV pmax pmax
comp=Z,1μm,1.1s
KIV Kislovodsk 79.40 314 P P 16 35 46.5 +0.5
KIV Kislovodsk 79.40 314 i P P 16 35 46.6 +0.7
SNR=272
SHAO Shalim 79.42 285 P P 16 35 48.0 +1.6
SHAO Shalim 79.42 285 i P P 16 35 47.0 +0.5
SNR=15
STEI Steigen 79.46 342 e P P 16 35 45.5 -0.2
STEI IVmB_BB 16 35 47.5
comp=Z,15μm,0.9s
GHWR Ruwais 79.51 292 P P 16 35 46.6 -0.1
GNI Garni 79.55 309 P P 16 35 47.9 +1.1
comp=Z,218nm,0.8s,baz=187,slow=0.2,SNR=76
GNI S S 16 45 05.4 0.0
comp=Z,9.3nm,0.7s,baz=96,slow=21,SNR=6.4
comp=Z,218nm,0.8s
GNI Garni 79.55 309 P P 16 35 47.4 +0.4
GNI IAmb IAmb 16 35 55.9
comp=Z,576nm,1.2s
GNI Garni 79.55 309 d i P P 16 35 47.7 +0.8
GNI pmax pmax
comp=Z,440nm,1.0s
GNI Garni 79.55 309 P P 16 35 48.0 +1.1
J08A Circle Bar Ran 79.79 47 IAmb IAmb 16 35 52.1
comp=Z,226nm,0.7s
LOF Lofoten 79.79 343 e P P 16 35 46.6 -0.8
LOF IVmBBB 16 35 48.3
comp=Z,2μm,0.7s
FINES FINESS Array B 79.80 334 P P 16 35 46.9 -0.7
comp=Z,450nm,0.6s,baz=68,slow=4.9,SNR=1885
FINES PP PP 16 38 58.4 +0.6
comp=Z,38nm,0.8s,baz=73,slow=13,SNR=4.9
FINES S S 16 45 04.4 -2.4
comp=Z,31nm,0.9s,baz=57,slow=12,SNR=11
comp=Z,450nm,0.6s
FINES FINESS Array B 79.80 334 P P 16 35 46.7 -0.8
FAUS Fauske 79.82 342 e P P 16 35 47.1 -0.4
FAUS IVmBBB 16 35 49.8
comp=Z,6μm,1.1s
BMO Blue Mountains 79.92 45 IAmb IAmb 16 35 52.6
comp=Z,165nm,0.7s
BEKR Beckworth 79.93 51 IAmb IAmb 16 35 52.4
comp=Z,212nm,0.8s
DMTO DMTO 80.14 285 P P 16 35 51.6 +1.4
SNR=12
WALA Waterton Lakes 80.18 40 IAmb IAmb 16 35 54.4
comp=Z,350nm,1.1s
MEH Mehetia 80.28 115 e P P 16 35 51.9 +1.1
comp=Z,61nm,1.3s
DBG Daneborg 80.32 355 i P P 16 35 49.5 -0.5
DBG IAmb IAmb 16 35 51.6
comp=Z,125nm,1.0s
SHMA Al-Shehemyia 80.38 294 P P 16 35 50.9 -0.4
MPK Martis Peak 80.40 51 IAmb IAmb 16 35 54.4
comp=Z,239nm,1.0s
SAO San Andreas Ge 80.40 54 P P 16 35 51.7 +0.5
SAO San Andreas Ge 80.40 54 P P 16 35 51.7 +0.5
SAO pmax pmax
comp=Z,90nm,1.1s
SLWR Sila 80.47 292 P P 16 35 51.7 -0.1
JTMT Jette 80.55 42 IAmb IAmb 16 35 55.9
comp=Z,184nm,0.7s
CMB Columbia Colle 80.66 52 IAmb IAmb 16 35 56.3
comp=Z,180nm,0.8s
PLID Pearl Lake 80.66 45 P P 16 35 52.4 -0.3
BBGB Big Mountain B 80.78 54 P P 16 35 53.9 +0.6
BBGB IAmb IAmb 16 35 57.5
comp=Z,259nm,0.9s
RBK Rabkut 80.87 285 P P 16 35 54.9 +0.9
SNR=20
SMRA Abu-Samra 80.93 293 P P 16 35 53.9 -0.3
KONS Konsvik 81.05 342 e P P 16 35 53.3 -0.6
KONS IVmBBB 16 35 54.8
comp=Z,2μm,1.1s
WHFO Wadi Hawf 81.09 286 P P 16 35 56.0 +0.8
SNR=12
BCA Borcka 81.17 312 ⇓P P 16 35 54.7 -0.4
MSO Missoula 81.17 42 P P 16 35 55.1 0.0
baz=297,SNR=18
MSO S S 16 45 21.4 -0.2
baz=297
MEF Metsahovi 81.18 333 e P P 16 35 53.8 -0.9
VSU Vasula 81.20 331 d i P P 16 35 54.3 -0.5
VSU pmax pmax
comp=Z,3μm,0.9s
VSU Vasula 81.20 331 e P P 16 35 54.3 -0.5
MFID Camas Ranch 81.51 46 IAmb IAmb 16 36 00.5
comp=Z,237nm,1.1s
SOC Sochi 81.51 314 e P P 16 35 56.5 -0.3
SOC e PPP PPP 16 41 07.7
SOC e S S 16 45 24.7 -0.1
SOC e SS SS 16 51 00.8 +4.9
SOC pmax pmax
comp=Z,463nm,0.8s
PAGB Antelope Grade 81.71 55 IAmb IAmb 16 36 02.1
comp=Z,246nm,0.8s
ABTO Aybut 81.73 285 P P 16 35 58.5 0.0
SNR=23
RAF Rauma 81.74 335 e P P 16 35 57.2 -0.4
UPNV Upernavik 81.76 5 ⇓i P P 16 35 57.6 +0.2
UPNV IAmb IAmb 16 35 59.7
comp=Z,133nm,0.8s
MDPB Devils Postpil 81.77 52 P P 16 35 58.9 +0.3
KVN Kaiserville 81.86 51 IAmb IAmb 16 36 02.3
comp=Z,237nm,1.2s
LHV Little Huntoon 81.92 52 IAmb IAmb 16 36 02.9
comp=Z,220nm,1.1s
MLAC Mammoth, Mammo 81.94 52 P P 16 35 59.6 +0.2
baz=295,SNR=7.1
MLAC S S 16 45 30.6 +0.6
baz=295
NVAR Mina Array Bea 81.98 51 P P 16 36 00.5 +0.8
comp=Z,141nm,0.8s,baz=285,slow=5.5,SNR=198
NVAR pP pP 16 37 54.1 +1.5
comp=Z,20nm,0.7s,baz=276,slow=5.5,SNR=3.0
NVAR PKKPbc PKKPbc 16 54 23.6 -1.7
comp=Z,3.1nm,0.6s,baz=146,slow=1.9,SNR=11
NVAR PKPPKP P'P'df 17 02 30.4 -0.8
comp=Z,0.8nm,0.7s,baz=140,slow=4.3,SNR=3.9
comp=Z,141nm,0.8s
SMMC Simmler 82.07 55 P P 16 36 01.1 +1.2
baz=295,SNR=10
SMMC S S 16 45 30.2 -0.7
baz=295
VOG Valley Oaks Go 82.10 54 P P 16 36 00.4 +0.5
baz=295
VOG S S 16 45 29.4 -1.7
baz=295
JMIC Jan Mayen 82.12 351 e P P 16 36 00.2 +0.9
JMIC IVmB_BB 16 36 02.1
comp=Z,4μm,1.1s
GURO Guroymak-BITLI 82.12 309 P P 16 36 00.8 +0.6
MTSE Matsula 82.31 332 e P P 16 35 59.8 -0.7
HLID Hailey 82.36 45 P P 16 36 02.2 +0.8
baz=297,SNR=137
HLID S S 16 45 32.4 -1.4
baz=297
PKM Mcpherson Peak 82.39 55 P P 16 36 02.7 +1.1
baz=295,SNR=59
PKM S S 16 45 32.7 -1.7
baz=295
ANN Anapa 82.42 316 d i P P 16 36 00.5 -0.9
ANN e* PP pwP 16 37 57.0 -2.5
ANN e 16 39 22.5
ANN eS S 16 45 29.2 -4.7
ANN pmax pmax
comp=Z,861nm,1.1s
HRY Holter Researc 82.51 42 P P 16 36 02.5 +0.5
VES Vestal, Richgr 82.52 54 P P 16 36 02.0 -0.1
baz=295,SNR=7.8
VES S S 16 45 35.7 +0.4
baz=295
Q09A Carvers 82.60 51 IAmb IAmb 16 36 06.0
comp=Z,209nm,1.0s
TIN Tinemaha, Big 82.62 53 P P 16 36 03.8 +1.1
baz=296,SNR=66
TIN S S 16 45 35.7 -0.8
baz=296
KTUT Trabzon 82.63 312 ⇑P P 16 36 03.1 +0.6
SBC Santa Barbara 82.65 56 P P 16 36 03.8 +1.1
baz=295,SNR=5.7
SBC S S 16 45 35.6 -0.9
baz=295
BCW Bitter Crk WRg 82.66 55 IAmb IAmb 16 36 06.7
comp=Z,197nm,0.9s
DLMT Dillon 82.68 43 IAmb IAmb 16 36 06.9
comp=Z,265nm,1.1s
SUMG Summit 82.74 0 P P 16 36 03.3 +0.3
SUMG IAmb IAmb 16 36 05.8
comp=Z,199nm,0.8s
SUMG Summit 82.74 0 P P 16 36 03.3 +0.3
SUMG pmax pmax
comp=Z,199nm,0.8s
SUMG Summit 82.74 0 i P P 16 36 03.8 +0.8
SUMG IAmb IAmb 16 36 05.7
comp=Z,197nm,0.7s
NSS Namsos 82.79 341 e P P 16 36 01.6 -1.2
NSS IVmB_BB 16 36 03.7
comp=Z,4μm,0.9s
TAOE Nuku Hiva Isla 82.84 103 e P P 16 36 04.9 +0.8
comp=Z,355nm,1.1s
TAOE eS S 16 45 39.5 +0.3
comp=Z,1μm,27.2s
TAOE Nuku Hiva Isla 82.84 103 P P 16 36 03.1 -1.1
MNK Minsk 82.86 328 i P P 16 36 03.6 +0.3
MNK i *PP pP 16 37 56.5 -0.4
MNK i 16 39 23.0
MNK i PPP PPP 16 41 19.0
MNK i S S 16 45 34.6 -3.3
MNK i SS SS 16 51 17.9 +2.8
MNK i SSS SSS 16 54 53.1
MNK pmax pmax
comp=E,105nm,0.8s
MNK pmax pmax
comp=Z,2μm,0.8s
MNK MLR MLR
comp=E,219nm,19.0s
MNK MLR MLR
comp=Z,1μm,15.0s
MNK Minsk 82.86 328 i P P 16 36 03.7 +0.3
comp=E,105nm,0.8s,baz=236
MNK i P P 16 36 03.7 +0.3
MNK i P P 16 36 03.7 +0.3
comp=Z,2μm,0.8s
MNK i pP pP 16 37 56.5 -0.4
MNK i PP PP 16 39 23.1 +0.3
MNK i PPP PPP 16 41 19.1
MNK i S S 16 45 34.6 -3.3
MNK i sS sS 16 49 01.1 +0.9
MNK i SS SS 16 51 18.0 +2.8
MNK i SSS SSS 16 54 53.2
MNK i LR LR 17 09 57.5
MNK i LRM MLR 17 14 44.8
comp=E,219nm,19.2s
MNK i LRM MLR 17 14 50.7
comp=Z,1μm,15.1s
MNK i LRM MLR 17 15 30.6
TPH Tonopah 82.90 51 P P 16 36 04.2 -0.1
TPH Tonopah 82.90 51 P P 16 36 04.2 -0.1
TPH pmax pmax
comp=Z,756nm,1.0s
LCH Last Change Ra 82.97 52 IAmb IAmb 16 36 07.8
comp=Z,213nm,1.1s
CWC Cottonwood Cre 83.00 53 P P 16 36 05.1 +0.4
baz=296
CWC S S 16 45 39.4 -0.9
baz=296
ARVC Arvin 83.01 55 P P 16 36 05.2 +0.6
baz=296,SNR=12
ARVC S S 16 45 40.0 -0.2
baz=296
ISA Isabella, Lake 83.05 54 P P 16 36 04.7 -0.2
baz=296,SNR=76
ISA S S 16 45 39.0 -1.7
baz=296
ELK Elko 83.09 48 IAmb IAmb 16 36 08.7
comp=Z,265nm,1.1s
ISAL Salakas 83.10 329 e P P 16 36 04.3 -0.2
EGMT Eagleton 83.11 40 IAmb IAmb 16 36 08.7
comp=Z,191nm,0.9s
EGMT Eagleton 83.11 40 P P 16 36 05.7 +0.7
baz=300,SNR=58
EGMT S S 16 45 41.3 +0.5
baz=300
BOZ Bozeman (W) 83.17 43 P P 16 36 05.9 +0.6
baz=299,SNR=239
BOZ S S 16 45 41.2 -0.5
baz=299
NACGM Naroch 83.17 328 ⇑e P P 16 36 05.1 +0.1
baz=56
IIGN Ignalina 83.18 329 e P P 16 36 04.6 -0.4
NUUG Nuugaatsiaq 83.20 5 i P P 16 36 05.0 +0.2
NUUG IAmb IAmb 16 36 06.7
comp=Z,78nm,1.2s
GRAC Grapevine Rang 83.27 52 IAmb IAmb 16 36 09.3
comp=Z,296nm,1.1s
GRAC Grapevine Rang 83.27 52 P P 16 36 06.1 +0.2
baz=296,SNR=6.0
GRAC S S 16 45 43.3 +0.5
baz=296
SNCC San Nicolas Is 83.30 57 P P 16 36 06.4 +0.4
baz=295,SNR=5.4
SNCC S S 16 45 43.5 +0.5
baz=295
MARD Mardin 83.56 308 P P 16 36 07.2 -0.2
MPMC Manual Prospec 83.59 53 P P 16 36 08.5 +0.8
baz=296,SNR=193
MPMC S S 16 45 45.2 -1.2
baz=296
CCAC Calif City Air 83.60 54 IAmb IAmb 16 36 11.0
comp=Z,306nm,1.0s
SLIT Silifke, Latvi 83.60 332 e P P 16 36 05.5 -1.6
LRMC Laurel Mtn Rad 83.71 54 P P 16 36 08.6 +0.4
baz=296,SNR=57
LRMC S S 16 45 47.8 +0.5
baz=296
EDW2 Edwards Air Fo 83.74 55 P P 16 36 08.8 +0.5
baz=296,SNR=134
EDW2 S S 16 45 48.0 +0.5
baz=296
DECC Green Verdugo 83.76 55 P P 16 36 08.6 +0.2
baz=296,SNR=13
DECC S S 16 45 48.1 +0.5
baz=296
FURC Furnace Creek, 83.87 53 P P 16 36 09.4 +0.6
baz=296,SNR=310
FURC S S 16 45 48.3 -0.1
baz=296
VSVD Vaisvydziai 83.88 330 e P P 16 36 07.7 -0.7
R11A Troy Canyon, C 83.94 51 IAmb IAmb 16 36 12.7
comp=Z,168nm,1.0s
R11A Troy Canyon, C 83.94 51 P P 16 36 09.9 +0.5
baz=297,SNR=390
R11A S S 16 45 49.5 0.0
baz=297
CIS Catalina Islan 84.07 56 P P 16 36 09.8 -0.1
baz=296,SNR=22
CIS S S 16 45 51.0 +0.3
baz=296
TPNV Topopah Spring 84.09 52 P P 16 36 10.6 +0.4
TPNV Topopah Spring 84.09 52 P P 16 36 10.6 +0.4
TPNV pmax pmax
comp=Z,484nm,0.9s
TPNV Topopah Spring 84.09 52 P P 16 36 10.6 +0.4
baz=297,SNR=580
TPNV S S 16 45 51.3 +0.2
baz=297
S11A Rachel 84.14 51 IAmb IAmb 16 36 14.2
comp=Z,226nm,0.8s
PABE Paberze 84.14 330 e P P 16 36 09.1 -0.6
SCI2 San Clemente I 84.15 56 P P 16 36 10.1 -0.2
baz=296,SNR=5.5
SCI2 S S 16 45 51.2 -0.2
baz=296
SCO Scoresbysund 84.16 355 IAmb IAmb 16 36 12.7
comp=Z,523nm,1.9s
SCO Scoresbysund 84.16 355 i P P 16 36 10.4 +0.9
SCO IAmb IAmb 16 36 11.6
comp=Z,184nm,1.3s
YNR Norris Junctio 84.18 43 IAmb IAmb 16 36 15.9
comp=Z,312nm,1.0s
YFT Old Faithful 84.22 43 IAmb IAmb 16 36 16.6
comp=Z,360nm,1.0s
TBLU Trondheim 84.23 340 e P P 16 36 07.5 -2.6
TBLU IVmB_BB 16 36 09.5
comp=Z,5μm,0.8s
AKASG Malin Array Be 84.25 324 P P 16 36 09.3 -1.1
comp=Z,135nm,0.6s,baz=51,slow=5.6,SNR=524
AKASG PP PP 16 39 33.9 -0.2
comp=Z,56nm,1.0s,baz=51,slow=9.1,SNR=7.0
AKASG S SKSac 16 45 40.1 -3.3
comp=Z,2.3nm,0.7s,baz=53,slow=6.4,SNR=5.8
AKASG PKKPbc PKKPbc 16 54 19.6 -0.6
comp=Z,1.6nm,0.4s,baz=265,slow=2.4,SNR=18
AKASG SKKPbc SKKPbc 16 57 04.4 -0.1
comp=Z,1.2nm,0.5s,baz=262,slow=2.5,SNR=7.5
comp=Z,135nm,0.6s
AKASG Malin Array Be 84.25 324 IAmb IAmb 16 36 11.5
comp=Z,260nm,0.8s
AKASG Malin Array Be 84.25 324 i P P 16 36 09.3 -1.1
AKASG pmax pmax
comp=Z,171nm,0.6s
AKBB Malin Array Si 84.25 324 P P 16 36 09.0 -1.4
AKBB Malin Array Si 84.25 324 P P 16 36 09.0 -1.4
AKBB pmax pmax
comp=Z,312nm,0.7s
BFSC Mount Baldy Ra 84.27 55 P P 16 36 11.0 0.0
baz=296,SNR=22
BFSC S S 16 45 52.2 -0.6
baz=296
YUF Upper Falls 84.29 43 IAmb IAmb 16 36 15.6
comp=Z,216nm,1.2s
H17A Grant Village 84.41 43 P P 16 36 14.2 +2.6
baz=300
SIM Simferopol' 84.42 317 e P P 16 36 09.1 -2.3
SIM e 16 39 33.7
SIM eS SKSac 16 45 42.7 -2.0
SIM pmax pmax
comp=Z,618nm,1.1s
SIM pmax pmax
comp=Z,318nm,16.0s
IMW Indian Meadow 84.42 44 IAmb IAmb 16 36 16.3
comp=Z,167nm,0.8s
GSC Goldstone, Bar 84.43 54 IAmb IAmb 16 36 15.5
comp=Z,289nm,0.8s
GSC Goldstone, Bar 84.43 54 P P 16 36 12.6 +0.9
baz=297,SNR=263
GSC S S 16 45 54.6 +0.3
baz=297
LKWY Lake 84.43 43 IAmb IAmb 16 36 17.7
comp=Z,307nm,1.0s
RRX Edison Barstow 84.48 54 P P 16 36 12.7 +0.8
baz=297,SNR=5.8
RRX S S 16 45 54.8 +0.3
baz=297
FLWY Flagg Ranch 84.48 44 IAmb IAmb 16 36 16.9
comp=Z,223nm,0.8s
FXWY Fox Creek 84.49 44 P P 16 36 12.8 +0.7
SPR3 Spring Creek 3 84.51 50 IAmb IAmb 16 36 16.0
comp=Z,96nm,1.1s
SHOC Shoshone, Teco 84.55 53 P P 16 36 12.9 +0.7
baz=297
SHOC S S 16 45 55.8 +0.6
baz=297
PRN Pahroc Range 84.74 51 P P 16 36 13.7 +0.4
PRN IAmb IAmb 16 36 17.3
comp=Z,241nm,0.9s
PBUR Paburge 84.75 331 e P P 16 36 11.8 -0.9
BBRC Big Bear Solar 84.81 55 P P 16 36 14.0 +0.2
baz=297,SNR=5.5
BBRC S S 16 45 57.1 -1.1
baz=297
RLMT Red Lodge 84.85 42 P P 16 36 14.9 +1.1
baz=300,SNR=243
RLMT S S 16 45 58.7 +0.5
baz=300
MURC Murrieta 84.90 55 P P 16 36 14.1 +0.1
baz=297,SNR=35
MURC S S 16 45 59.4 +0.7
baz=297
HEC Hector,Ludlow 84.98 54 P P 16 36 14.9 +0.5
baz=297,SNR=366
HEC S S 16 45 59.4 -0.2
baz=297
DUG Dugway, Tooele 84.98 48 IAmb IAmb 16 36 18.3
comp=Z,142nm,0.8s
DUG Dugway, Tooele 84.98 48 P P 16 36 15.2 +0.7
baz=298,SNR=142
DUG S S 16 46 00.6 +1.1
baz=298
TUQ Turquoise Moun 85.01 53 P P 16 36 15.6 +0.9
baz=297,SNR=267
TUQ S S 16 46 00.4 +0.4
baz=297
PSUT Pine Spring 85.06 50 IAmb IAmb 16 36 21.2
comp=Z,181nm,1.0s
SHPR Sheep Range 85.08 52 IAmb IAmb 16 36 18.6
comp=Z,204nm,1.0s
HWUT Hardware Ranch 85.14 46 P P 16 36 15.4 +0.2
HWUT IAmb IAmb 16 36 19.1
comp=Z,154nm,0.9s
TOKA Tokat 85.15 312 IAmb IAmb 16 36 17.3
comp=Z,114nm,0.8s
109C Camp Elliot, M 85.28 56 IAmb IAmb 16 36 18.8
comp=Z,240nm,1.0s
109C Camp Elliot, M 85.28 56 P P 16 36 16.2 +0.4
baz=297,SNR=16
109C S S 16 46 01.3 -1.0
baz=297
DIKM Dikmen 85.32 314 ⇑P P 16 36 15.4 -0.5
HFS Hagfors 85.33 337 P P 16 36 13.9 -1.6
comp=Z,222nm,0.5s,baz=100,slow=3.5,SNR=1043
HFS PP PP 16 39 42.2 -0.1
comp=Z,94nm,0.9s,baz=51,slow=7.8,SNR=7.1
HFS PKKPbc PKKPbc 16 54 16.5 -1.7
comp=Z,1.9nm,0.6s,baz=176,slow=5.0,SNR=8.6
HFS SKKPbc SKKPbc 16 56 59.8 -2.4
comp=Z,2.0nm,0.6s,baz=145,slow=5.4,SNR=6.4
comp=Z,222nm,0.5s
NC303 NORSAR Array S 85.36 338 e P P 16 36 14.3 -1.3
NC303 IVmB_BB 16 36 16.5
comp=Z,5μm,1.1s
PFO Pinyon Flats O 85.44 55 P P 16 36 16.8 +0.1
PFO IAmb IAmb 16 36 19.8
comp=Z,307nm,1.1s
PFO Pinyon Flats O 85.44 55 P P 16 36 16.8 +0.1
PFO pmax pmax
comp=Z,307nm,1.1s
PFO Pinyon Flats O 85.44 55 P P 16 36 17.2 +0.4
baz=297,SNR=193
PFO S S 16 46 03.0 -1.1
baz=297
TPFO Pinon Flats 85.45 55 P P 16 36 17.0 +0.2
baz=297,SNR=232
TPFO S S 16 46 03.0 -1.2
baz=297
PMD Palm Desert 85.48 55 IAmb IAmb 16 36 19.8
comp=Z,274nm,1.1s
GMRC Granite Mounta 85.50 54 P P 16 36 17.5 +0.5
baz=297,SNR=313

GMRC S S 16 46 04.2 -0.5
baz=297
DOMB Dombas 85.50 340 *e*P P 16 36 15.3 -1.0
DOMB IVmB_BB 16 36 17.4
comp=Z,5µm,0.9s
NC204 NORSAR Array S 85.52 339 P P 16 36 15.1 -1.4
NB2 NORSAR Subarra 85.55 338 P P 16 36 15.1 -1.5
comp=Z,388nm,0.9s,baz=42,slow=4.6
NB2 NORSAR Subarra 85.55 338 P P 16 36 15.1 -1.5
baz=42,slow=4.6
NOA NORSAR Array B 85.55 338 P P 16 36 15.1 -1.5
comp=Z,261nm,0.8s,baz=54,slow=6.6,SNR=310
NOA PP PP 16 39 44.5 +0.5
comp=Z,95nm,0.9s,baz=44,slow=8.0,SNR=15
comp=Z,261nm,0.8s
MOL Molde 85.57 341 *e*P P 16 36 15.3 -1.3
MOL IVmBBB 16 36 17.5
comp=Z,3µm,1.0s
BELC Belle Mtn. Jos 85.61 55 P P 16 36 17.9 +0.4
baz=297,SNR=176
BELC S S 16 46 03.8 -2.0
baz=297
ILULI Ilulissat 85.64 5 P P 16 36 16.3 -0.5
ILULI IAmb IAmb 16 36 19.6
comp=Z,198nm,0.8s
ILULI Ilulissat 85.64 5 P P 16 36 16.3 -0.5
ILULI pmax pmax
comp=Z,198nm,0.8s
ILULI Ilulissat 85.64 5 *i* P P 16 36 16.9 +0.2
ILULI IAmb IAmb 16 36 19.3
comp=Z,190nm,0.8s
NC602 NORSAR Array S 85.66 338 IAmb IAmb 16 36 18.1
comp=Z,257nm,0.8s
NORES NORESS Array B 85.66 338 P P 16 36 18.0 +1.0
NORES pmax pmax
comp=Z,21nm,0.8s
NBO00 NORSAR Array S 85.70 338 P P 16 36 15.7 -1.6
BAR Barrett 85.70 56 IAmb IAmb 16 36 20.8
comp=Z,214nm,1.1s
MONP2 Monument Peak 85.79 56 P P 16 36 19.0 +0.4
baz=297,SNR=196
MONP2 S S 16 46 07.7 0.0
baz=297
NAO01 NORSAR Array S 85.80 338 P P 16 36 15.7 -2.0
TKX Tecate 85.80 56 IAmb IAmb 16 36 21.7
comp=Z,134nm,0.8s
LAO LASA Array 85.85 40 IAmb IAmb 16 36 21.8
comp=Z,186nm,1.2s
LAO LASA Array 85.85 40 P P 16 36 19.0 +0.7
baz=302
LAO LASA Array 85.85 40 P P 16 36 18.8 +0.4
baz=302,SNR=20
LAO S S 16 46 08.6 +1.1
baz=302
BW06 Boulder Array 85.86 44 P P 16 36 18.5 -0.2
baz=300,SNR=58
BW06 S S 16 46 06.8 -1.2
baz=300
PDAR Pinedale Array 85.86 44 P P 16 36 18.7 0.0
comp=Z,21nm,0.7s,baz=277,slow=2.8,SNR=63
PDAR pP **pwP** 16 38 15.8 -2.8
comp=Z,14nm,1.0s,baz=280,slow=4.2,SNR=3.6
PDAR PP PP 16 39 47.5 +0.1
comp=Z,16nm,1.0s,baz=294,slow=4.7,SNR=5.2
PDAR PKKPbc **PKKPbc** 16 54 15.4 -1.2
comp=Z,4.2nm,0.7s,baz=123,slow=3.6,SNR=18
PDAR PKPPKP **P'P'df** 17 02 20.2 -3.7
comp=Z,1.0nm,0.8s,baz=123,slow=5.5,SNR=3.7
comp=Z,21nm,0.7s
CCUT Cedar City 85.86 50 P P 16 36 19.1 +0.2
RAYN Ar Rayn 85.87 294 P P 16 36 18.3 -0.6
RAYN Ar Rayn 85.87 294 ⇓P P 16 36 19.0 +0.1
RAYN Ar Rayn 85.87 294 P P 16 36 18.9 0.0
RAYN Ar Rayn 85.87 294 *i* P P 16 36 18.9 0.0
SNR=41
BZK Bozkurt 85.98 315 ⇓P P 16 36 17.2 -1.8
DGMT Dagmar 86.03 38 IAmb IAmb 16 36 22.4
comp=Z,136nm,1.1s
DGMT Dagmar 86.03 38 P P 16 36 19.6 +0.5
baz=304
DGMT Dagmar 86.03 38 P P 16 36 19.0 -0.2
baz=304,SNR=9.3
DGMT S S 16 46 08.7 -0.3
baz=304
AKN Aaknes 86.04 341 *e*P P 16 36 18.5 -0.4
AKN IVmB_BB 16 36 20.4
comp=Z,3µm,0.9s
CCX Cicese 86.07 57 IAmb IAmb 16 36 22.4
comp=Z,141nm,1.0s
IKP In-Ko-Pah, Jac 86.14 56 P P 16 36 20.7 +0.7
baz=297,SNR=116
IKP S S 16 46 10.7 0.0
baz=297
SORM Soroca 86.14 322 ⇑P P 16 36 17.2 -2.3
SORM Soroca 86.14 322 ⇑P P 16 36 17.2 -2.3
PURM Purcari 86.15 320 ⇓P P 16 36 19.0 -0.6
IRM Iron Mountain 86.17 54 P P 16 36 21.0 +0.9
baz=298,SNR=171
IRM S S 16 46 10.3 -0.5
baz=298
BC3 Big Chuckawall 86.17 55 P P 16 36 20.9 +0.7
baz=298,SNR=190
BC3 S S 16 46 10.1 -0.9
baz=298
RMX La Rumorosa 86.18 56 IAmb IAmb 16 36 24.3
comp=Z,195nm,0.8s
LCMT Little Creek M 86.20 51 IAmb IAmb 16 36 23.8
comp=Z,164nm,1.1s
MVU Marysvale 86.20 49 P P 16 36 20.3 -0.1
SWSC Sam W. Stewart 86.23 55 P P 16 36 20.8 +0.5
baz=297,SNR=48
SWSC S S 16 46 10.9 -0.5
baz=297
ICESG Greenland Ices 86.24 1 *i* P P 16 36 20.2 +0.1
ICESG IAmb IAmb 16 36 22.3
comp=Z,288nm,0.8s
NEE2 Needles Airpor 86.27 53 P P 16 36 21.1 +0.6
baz=298,SNR=7.8
NEE2 S S 16 46 12.0 +0.3
baz=298
YUH Yuha Desert 86.28 56 IAmb IAmb 16 36 23.7
comp=Z,228nm,1.1s
KIS Kishinev 86.50 321 *e*P P 16 36 20.0 -1.3
comp=Z,240nm,0.7s
KIS *e*pP **pwP** 16 38 19.0 -1.4
KIS *i* SKS **SKSac** 16 45 56.0 -1.4
KIS *i* S **SKKSac** 16 46 09.0 +1.5
comp=Z,1µm,6.3s
KIS Kishinev 86.50 321 ⇑P P 16 36 21.4 0.0
KIS Kishinev 86.50 321 *e*P P 16 36 20.0 -1.3
KIS *e**PP **pwP** 16 38 19.0 -1.4
KIS *e* 16 39 54.0
KIS *i* 16 45 56.0
KIS *i* S **SKKSac** 16 46 09.0 +1.5
KIS pmax pmax
comp=Z,240nm,0.7s
KIS smax smax
comp=N,1µm,6.3s
KIS smax smax
comp=E,2µm,8.1s
OSL Oslo 86.52 338 *e*P P 16 36 19.8 -1.3
OSL IVmB_BB 16 36 21.9
comp=Z,3µm,0.8s
MILM Milestii Mici 86.55 321 ⇓ *i*P P 16 36 20.0 -1.5
comp=Z,390nm,0.9s
MILM *e*pP **pP** 16 38 10.0 -6.2
MILM Milestii Mici 86.55 321 *e*PP PP 16 39 51.0 -1.4
MILM *i* SKS **SKSac** 16 45 56.0 -1.6
MILM *i* S **SKKSac** 16 46 10.0 +2.2
MILM *i* sS sS 16 49 28.0 -10
MILM *e*L L 17 10 28.0
MILM LQM 17 11 38.0
comp=Z,900nm,19.0s
MILM LRM MLR 17 16 07.0
comp=Z,1µm,13.5s
MILM Milestii Mici 86.55 321 ⇑P P 16 36 20.1 -1.4
MILM Milestii Mici 86.55 321 *d i*P P 16 36 20.0 -1.5
MILM *e* 16 39 51.0
MILM *i* 16 45 56.0
MILM *i* S **SKKSac** 16 46 10.0 +2.2
MILM pmax pmax
comp=Z,2µm,4.7s
MILM pmax pmax
comp=N,400nm,4.1s
MILM MLR MLR
comp=Z,1µm,15.5s

ILGA Ilgaz 86.62 314 P P 16 36 21.7 -0.6
W13A Hualapai Mount 86.65 53 P P 16 36 22.4 -0.1
SKAR Skarslia 86.77 339 *e*P P 16 36 21.6 -0.8
SKAR IVmBBB 16 36 23.1
comp=Z,2µm,1.3s
BLYC Blythe 86.81 54 P P 16 36 23.8 +0.7
BLYC IAmb IAmb 16 36 26.6
comp=Z,130nm,1.0s
PDMCI Parker Dam,Lak 86.83 54 P P 16 36 23.8 +0.7
baz=298,SNR=45
PDMCI S S 16 46 18.3 +1.3
baz=298
GLA Glamis 86.91 55 IAmb IAmb 16 36 27.2
comp=Z,319nm,1.2s
GLA Glamis 86.91 55 P P 16 36 24.2 +0.6
baz=298,SNR=49
GLA S S 16 46 19.4 +1.5
baz=298
RDMU Red Mountain 86.96 46 P P 16 36 24.0 +0.1
SOEG Soedalen 87.01 358 *e*P P 16 36 23.1 -0.2
SOEG IAmb IAmb 16 36 24.7
comp=Z,87nm,1.0s
HYA Hoyanger 87.07 340 *e*P P 16 36 22.9 -0.8
HYA IVmB_BB 16 36 25.0
comp=Z,2µm,1.0s
HYA *e*SKSac **SKSac** 16 46 01.4 +1.2
FOO Floro 87.07 341 *e*P P 16 36 23.0 -0.6
FOO IVmBBB 16 36 24.4
comp=Z,2µm,1.5s
IAS Iasi 87.11 322 ⇓P P 16 36 23.5 -0.7
IAS Iasi 87.11 322 ⇓P P 16 36 23.5 -0.7
KONO Kongsberg 87.11 338 P P 16 36 22.3 -1.6
KONO Kongsberg 87.11 338 ⇑P P 16 36 22.9 -1.0
KONO Kongsberg 87.11 338 *e*P P 16 36 22.6 -1.3
KONO IVmBBB 16 36 23.9
comp=Z,1µm,1.4s
LEOM Leova 87.12 321 ⇓P P 16 36 23.6 -0.6
LEOM Leova 87.12 321 ⇓P P 16 36 23.6 -0.6
U15A North Rim 87.15 51 P P 16 36 25.3 +0.3
VASR Vaslui 87.28 321 ⇑P P 16 36 24.7 -0.3
BR131 Keskin Array S 87.34 313 P P 16 36 24.5 -1.1
SNR=312
BRTR Keskin Array B 87.34 313 P P 16 36 24.6 -1.1
comp=Z,507nm,0.8s,baz=95,slow=3.3,SNR=222
BRTR PP PP 16 39 58.6 -0.6
comp=Z,46nm,0.9s,baz=93,slow=6.2,SNR=5.7
BRTR PKKPbc **PKKPbc** 16 54 12.7 -0.2
comp=Z,0.7nm,0.5s,baz=219,slow=4.3,SNR=4.3
BRTR SKKPbc SKKPbc 16 56 59.3 +1.4
comp=Z,0.6nm,0.5s,baz=215,slow=2.4,SNR=4.6
comp=Z,507nm,0.8s
BRTR Keskin Array B 87.34 313 P P 16 36 24.3 -1.3
BRTR Keskin Array B 87.34 313 *i* P P 16 36 24.6 -1.1
BRTR pmax pmax
comp=Z,517nm,0.8s
TLCR 87.50 319 ⇑P P 16 36 24.6 -1.4
TLCR 87.50 319 ⇑P P 16 36 24.6 -1.4
LVV L'vov 87.50 325 *e*P P 16 36 24.7 -1.3
LVV *e* 16 39 57.0
LVV *e* 16 46 02.0
LVV *e*S S 16 46 18.8 -3.8
LVV *e*SS SS 16 52 30.8 +8.3
LVV MLR MLR
comp=Z,2µm,16.0s
VLDR Vladesti 87.56 320 ⇑P P 16 36 25.7 -0.6
SUE Sulen 87.58 341 *e*P P 16 36 25.6 -0.5
SUE IVmB_BB 16 36 27.7
comp=Z,3µm,2.5s
BIR Birlad 87.59 321 ⇑P P 16 36 27.0 +0.6
BIR Birlad 87.59 321 ⇑P P 16 36 27.0 +0.6
VARL Varlezi 87.67 320 ⇑P P 16 36 26.6 -0.2
GIUM Giurgiulesti 87.69 320 ⇑P P 16 36 27.0 +0.1
JURR Jurilovca 87.69 319 ⇑P P 16 36 26.6 -0.4
SCTR Scanteiesti 87.71 320 ⇑P P 16 36 26.7 -0.3
TATR Tatarca 87.72 320 ⇑P P 16 36 26.0 -1.0
K22A Casper 87.83 43 P P 16 36 28.2 +0.3
baz=302
K22A Casper 87.83 43 P P 16 36 28.1 +0.2
baz=302,SNR=27
K22A S S 16 46 26.4 +0.1
baz=302
SFX San Felipe 87.83 57 P P 16 36 28.2 +0.3
SFX IAmb IAmb 16 36 31.1
comp=Z,115nm,1.0s
GHRR 87.83 321 ⇑P P 16 36 27.5 0.0
ANTO Ankara 87.83 313 ⇓P P 16 36 27.0 -0.8
ANTO Ankara 87.83 313 P P 16 36 27.1 -0.8
ANTO Ankara 87.83 313 P P 16 36 27.1 -0.8
ANTO pmax pmax
comp=Z,391nm,0.8s
ANTO Ankara 87.83 313 P P 16 36 26.9 -1.0
SFJD Kangerlussuaq 87.86 5 P P 16 36 26.4 -0.8
SFJD IAmb IAmb 16 36 29.7
comp=Z,84nm,0.7s
SFJD Kangerlussuaq 87.86 5 P P 16 36 26.4 -0.8
SFJD pmax pmax
comp=Z,84nm,0.7s
SFJD Kangerlussuaq 87.86 5 ⇓ *i*P P 16 36 27.0 -0.2
SFJD IAmb IAmb 16 36 28.9
comp=Z,133nm,1.1s
BEL Belsk 87.88 328 *e*P P 16 36 27.5 -0.2
BEL *e*PP PP 16 40 04.3 +1.5
BEL *e*SKS **SKSac** 16 46 05.4 -0.1
BEL *i* Sc 16 46 25.8
SLCR Slobozia Conac 87.89 320 ⇑P P 16 36 27.6 -0.2
ODD1 Odda 87.90 339 *e*P P 16 36 26.9 -0.8
ODD1 IVmBBB 16 36 28.3
comp=Z,1µm,1.0s
SCHL Schela 87.90 320 ⇓P P 16 36 28.8 +0.9
CFR Carcaliu 87.90 320 ⇓P P 16 36 26.9 -1.0
CFR Carcaliu 87.90 320 ⇓P S 16 46 27.1 +0.6
CFR Carcaliu 87.90 320 ⇓P P 16 36 26.9 -1.0
ASK Askoy 87.91 340 *e*P P 16 36 27.4 -0.2
ASK IVmBBB 16 36 29.5
comp=Z,3µm,1.1s
RWWY Rawlins 87.91 44 P P 16 36 27.9 -0.5
TPGR Topolog 87.91 319 ⇑P P 16 36 27.3 -0.7
IZVR Izvoarele 87.91 320 ⇑P P 16 36 27.7 -0.3
BER Bergen 87.94 340 *e*P P 16 36 27.3 -0.5
BER IVmBBB 16 36 28.2
comp=Z,2µm,1.8s
TUDR 87.94 320 ⇑P P 16 36 29.2 +1.1
KDZE Karadeniz Ereo 87.96 315 ⇓P P 16 36 28.0 -0.3
TESR Tescani 88.01 321 ⇑P P 16 36 27.8 -0.6
TESR Tescani 88.01 321 ⇓P S 16 46 27.4 -0.1
O20A White River Ci 88.05 46 P P 16 36 29.3 +0.2
baz=301,SNR=15
O20A S S 16 46 26.6 -2.0
baz=301
BIZ Bicaz 88.07 322 ⇓P P 16 36 28.4 -0.3
PANC Panciu 88.09 321 ⇑P P 16 36 29.3 +0.5
TIRR Tirgusor 88.14 319 ⇑P P 16 36 28.5 -0.6
TIRR Tirgusor 88.14 319 ⇑P P 16 36 28.5 -0.6
TIRR Tirgusor 88.14 319 ⇑P P 16 36 28.5 -0.6
TSCT Constanta Port 88.16 319 ⇑P P 16 36 29.7 +0.5
BURAR Bucovina Array 88.17 323 ⇑P P 16 36 29.2 -0.1
BURAR Bucovina Array 88.17 323 ⇑P P 16 36 29.2 -0.1
ODBI Odobesti 88.20 321 ⇓P P 16 36 29.9 +0.6
EFOR EFORIE 88.22 319 ⇑P P 16 36 28.5 -0.9
WUAZ Wupatki 88.24 51 IAmb IAmb 16 36 34.0
comp=Z,100nm,0.8s
WUAZ Wupatki 88.24 51 P P 16 36 30.7 +0.7
baz=300,SNR=119
WUAZ S S 16 46 30.8 +0.4
baz=300
MFTR Murfatlar 88.29 319 ⇑P P 16 36 29.0 -0.8
HARR Harsova 88.29 319 ⇑P P 16 36 29.4 -0.4
HARR Harsova 88.29 319 ⇑P P 16 36 29.4 -0.4
KWP Kalwaria Pacla 88.30 325 *e*P P 16 36 29.4 -0.3
KWP *e*PP PP 16 40 07.4 +1.2
KWP *e*SKS **SKSac** 16 46 08.1 +0.1
KWP *i* Sc 16 46 27.4
KWP *e*L L 17 19 20.7
comp=Z,2µm,18.9s
TLBR Topalu 88.31 319 ⇑P P 16 36 29.4 -0.4
VRI Vrincioaia 88.33 321 ⇑P P 16 36 29.6 -0.4
VRI Vrincioaia 88.33 321 ⇑P P 16 36 29.6 -0.4
BLS5 Blasjo 88.33 339 *e*P P 16 36 29.0 -0.7
BLS5 IVmBBB 16 36 35.5
comp=Z,1µm,1.2s
BSD Bornholm Skovb 88.36 333 *e*P P 16 36 29.2 -0.7
BSD Bornholm Skovb 88.36 333 *i* P P 16 36 29.0 -0.8
BSD IAmb IAmb 16 36 30.6
comp=Z,186nm,1.0s
PLOR Plostina 88.38 321 ⇑P P 16 36 29.7 -0.5
PLOR Plostina 88.38 321 ⇑P S 16 46 38.1 +7.0
PLOR Plostina 88.38 321 ⇑P P 16 36 29.7 -0.5
MANR Mangalia 88.39 318 ⇑P P 16 36 30.6 +0.4
ROCAM Rodrigues Isla 88.42 247 P P 16 36 30.4 -0.3
HWQ Hawqa 88.44 307 *e*P P 16 36 29.7 -1.2
GRER 88.47 320 ⇑P P 16 36 31.5 +0.9
HOMB Homborsund 88.53 337 *e*P P 16 36 29.7 -0.9
HOMB IVmB_BB 16 36 31.1
comp=Z,2µm,0.8s
RSSD Black Hills 88.55 41 P P 16 36 30.8 -0.5
RSSD Black Hills 88.55 41 P P 16 36 30.8 -0.5
RSSD pmax pmax
comp=Z,54nm,0.8s
RSSD Black Hills 88.55 41 P P 16 36 31.2 0.0
baz=304
RSSD Black Hills 88.55 41 P P 16 36 31.4 +0.1
baz=304
RSSD S S 16 46 31.1 -1.9
baz=304
GKP Gorka Klasztor 88.61 330 *e*P P 16 36 30.0 -1.0
GKP *e*PP PP 16 40 10.3 +1.9
GKP *i* SKSc 16 46 09.6
GKP *e*L L 17 19 24.3
comp=Z,3µm,16.8s
GKP Gorka Klasztor 88.61 330 *e*P P 16 36 30.0 -1.0
COVR Voineasa-Covas 88.64 321 ⇑P P 16 36 30.8 -0.6
DY2G Dye2 88.66 3 *i* P P 16 36 30.9 -0.4
DY2G IAmb IAmb 16 36 34.5
comp=Z,127nm,0.8s
PV13 Radium Mtn., P 88.69 48 IAmb IAmb 16 36 35.1
comp=Z,119nm,1.2s
AMRR Amara 88.69 320 ⇑P P 16 36 32.7 +1.1
AMRR Amara 88.69 320 ⇑P P 16 36 32.7 +1.1
ICOR Ion Corvin 88.69 319 ⇑P P 16 36 31.6 0.0
PSN Preselentsi 88.70 318 P P 16 36 31.0 -0.7
PSN Preselentsi 88.70 318 P P 16 36 31.0 -0.7
PGOR Pogoanele 88.73 320 ⇑P P 16 36 33.4 +1.7
OZUR 88.74 321 ⇓P P 16 36 31.6 -0.2
ASF Jabal al Asfar 88.76 305 P P 16 36 31.8 -0.6
comp=Z,147nm,0.9s
comp=Z,147nm,0.9s
MSEY Mahe Island 88.80 264 P P 16 36 32.3 -0.4
MSEY IAmb IAmb 16 36 34.5
comp=Z,105nm,0.8s
MSEY Mahe Island 88.80 264 P P 16 36 32.3 -0.4
MSEY pmax pmax
comp=Z,105nm,0.8s
MSEY Mahe Island 88.80 264 P P 16 36 33.8 +1.0
NEHR Nehoiu 88.83 321 ⇑P P 16 36 31.8 -0.6
BHL Bhannes 88.84 307 *e*P P 16 36 31.6 -1.1
ISR Istrita 88.86 320 ⇑P P 16 36 32.4 -0.1
ISR Istrita 88.86 320 ⇑P P 16 36 32.4 -0.1
KMY Karmoy 88.89 339 *e*P P 16 36 31.4 -0.8
KMY IVmBBB 16 36 35.1
comp=Z,2µm,2.4s
MDND Maddock 88.90 36 IAmb IAmb 16 36 36.2
comp=Z,105nm,0.7s
MDND Maddock 88.90 36 P P 16 36 33.4 +0.8
baz=307
MDND Maddock 88.90 36 P P 16 36 32.8 +0.2
baz=307
MDND S S 16 46 34.1 -1.6
baz=307
SNART Snartemo 88.92 338 *e*P P 16 36 31.4 -1.0
214A Organ Pipe Nat 88.93 55 P P 16 36 33.1 0.0
214A Organ Pipe Nat 88.93 55 P P 16 36 34.0 +0.9
baz=299,SNR=33
214A S S 16 46 37.8 +1.2
baz=299
KOLS Kolonicke sedl 88.95 325 *e*P P 16 36 32.3 -0.5
KOLS pmax pmax
comp=Z,242nm,1.0s
KOLS Kolonicke sedl 88.95 325 *e*P P 16 36 32.3 -0.5
ARCR ARCALIA 88.95 323 ⇑P P 16 36 33.1 +0.3
COP Copenhagen 88.96 334 *i* P P 16 36 33.0 +0.4
COP IAmb IAmb 16 36 33.8
comp=Z,618nm,0.9s
MLR Muntele Rosu 89.00 321 ⇑P P 16 36 33.1 -0.1
MLR Muntele Rosu 89.00 321 P P 16 36 32.3 -0.9
comp=Z,50nm,0.7s
comp=Z,50nm,0.7s
MLR Muntele Rosu 89.00 321 IAmb IAmb 16 36 35.1
comp=Z,197nm,1.5s
MLR Muntele Rosu 89.00 321 ⇑P P 16 36 33.1 -0.1
RASA Rasa 89.02 319 ⇑P P 16 36 33.5 +0.4
DOPR Dopca 89.04 321 ⇑P P 16 36 33.0 -0.3
E28A Huff 89.07 38 IAmb IAmb 16 36 37.1
comp=Z,148nm,1.1s
E28A Huff 89.07 38 P P 16 36 33.9 +0.5
baz=306
BMR Baia Mare 89.07 324 ⇑P P 16 36 33.5 +0.2
BMR Baia Mare 89.07 324 ⇑P P 16 36 33.5 +0.2
LEHL Lehliu 89.07 320 ⇑P P 16 36 34.6 +1.2
UZH Uzhgorod 89.12 325 *e*P P 16 36 32.0 -1.5
UZH *e* 16 40 11.0
UZH *e*PPP PPP 16 42 22.6
UZH *e* 16 46 14.4
UZH *e*S S 16 46 36.2 -1.4
UZH *e*PS SP 16 47 44.4 -1.2
N23A Red Feather La 89.14 45 IAmb IAmb 16 36 38.0
comp=Z,202nm,1.1s
N23A Red Feather La 89.14 45 P P 16 36 35.4 +1.2
baz=303,SNR=128
N23A S S 16 46 39.0 +0.3
baz=303
TGMR Targu Mures 89.19 322 ⇑P P 16 36 34.9 +1.0
GOET G??ttrup 89.20 336 *i* P P 16 36 33.3 -0.4
GOET IAmb IAmb 16 36 35.2
comp=Z,472nm,0.8s
PHWY Pilot Hill 89.23 44 IAmb IAmb 16 36 38.3
comp=Z,84nm,0.9s
SULR 89.28 320 ⇑P P 16 36 34.0 -0.4
CRVS Cervenica-Dubn 89.39 325 *e*P P 16 36 34.8 0.0
CRVS pmax pmax
comp=Z,830nm,1.0s
CRVS Cervenica-Dubn 89.39 325 *e*P P 16 36 34.8 0.0
CRVS *e*PP PP 16 40 15.5 +0.8
CRVS *e*S SKSac 16 46 15.4 +1.0
MVCO Mesa Verde 89.39 49 P P 16 36 35.8 +0.4
MVCO Mesa Verde 89.39 49 P P 16 36 35.3 -0.1
baz=301,SNR=22
MVCO S S 16 46 40.1 -1.0
baz=301
OJC Ojcow 89.39 327 *e*P P 16 36 33.5 -1.3
OJC *e*PP PP 16 40 14.9 +0.2
OJC *i* SKSc 16 46 12.9
OJC *i* Sc 16 46 35.0
OJC *e*L L 17 18 57.7
comp=Z,2µm,17.3s
PRD Provadia 89.45 318 P P 16 36 34.0 -1.2
PRD Provadia 89.45 318 P P 16 36 34.0 -1.2
MMAI Mount Meron Ar 89.46 306 P P 16 36 34.5 -1.0
comp=Z,173nm,0.8s,baz=17,slow=3.0,SNR=12
MMAI PP PP 16 40 21.6 +5.7
comp=Z,22nm,0.9s,baz=34,slow=9.1,SNR=3.6
comp=Z,173nm,0.8s
MDB Medias 89.50 322 ⇑P P 16 36 37.1 +1.7
MDB Medias 89.50 322 ⇑P P 16 36 37.1 +1.7
VOIR 89.54 321 ⇑P P 16 36 34.9 -0.8
VOIR 89.54 321 ⇑P P 16 36 34.9 -0.8
CBBR Cluj-Babes-Bol 89.58 323 ⇑P P 16 36 36.2 +0.5
CJR Cluj-Napoca 89.59 323 ⇑P P 16 36 35.6 -0.3
CJR Cluj-Napoca 89.59 323 ⇑P P 16 36 35.6 -0.3
W18A Petrified Fore 89.60 51 P P 16 36 36.8 +0.5
baz=301
W18A S S 16 46 42.9 0.0
baz=301
CEI Carei 89.62 324 ⇑P P 16 36 36.5 +0.6
CEI Carei 89.62 324 ⇑P P 16 36 36.5 +0.6
MUD Monsted U'grnd 89.65 336 *i* P P 16 36 36.2 +0.4
MUD IAmb IAmb 16 36 37.0
comp=Z,230nm,0.9s
MTUR Matau 89.66 321 ⇑P P 16 36 37.2 +1.0
MTUR Matau 89.66 321 ⇑P P 16 36 37.2 +1.0
NIE Niedzica 89.66 326 *e*P P 16 36 36.0 -0.1
NIE *e*PP PP 16 40 19.6 +2.8
NIE *i* SKSc 16 46 17.3
NIE *i* Sc 16 46 39.4
BORG Borgarnes 89.67 353 P P 16 36 35.3 -0.4
BORG Borgarnes 89.67 353 P P 16 36 36.7 +1.0
BORG IAmb IAmb 16 36 39.2
comp=Z,129nm,0.9s

BORG	**Borgarnes**		**89.67**	**353**	P	**P**				
BORG					pmax	pmax				
	comp=Z,129nm,0.9s									
MESR	**Meseseni**		**89.68**	**323**	⇑P	**P**	**16**	**36**	**36.4**	**+0.2**
ANGG	**Ammassalik, Gr**		**89.74**	**360**	*i* P	**P**	**16**	**36**	**35.2**	**-0.8**
ANGG					IAmb	IAmb	16	36	37.2	
	comp=Z,85nm,0.9s									
X18A	**Snowflake**		**89.75**	**52**	P	**P**	**16**	**36**	**37.0**	**0.0**
RAZG	**Razgrad**		**89.78**	**319**	⇑P	**P**	**16**	**36**	**36.3**	**-0.4**
ARR	**Arges**		**89.82**	**321**	⇓P	**P**	**16**	**36**	**36.9**	**-0.1**
STFAR	**Stefanesti-Arg**		**89.93**	**321**	⇑P	**P**	**16**	**36**	**36.3**	**-1.1**
ISCO	**Idaho Springs**		**89.94**	**45**	P	**P**	**16**	**36**	**38.5**	**+0.5**
ISCO					IAmb	IAmb	16	36	41.5	
	comp=Z,94nm,1.1s									
ISCO	**Idaho Springs**		**89.94**	**45**	P	**P**	**16**	**36**	**38.5**	**+0.5**
ISCO					pmax	pmax				
	comp=Z,94nm,1.1s									
ISCO	**Idaho Springs**		**89.94**	**45**	P	**P**	**16**	**36**	**39.0**	**+1.1**
	baz=303									
ISCO	**Idaho Springs**		**89.94**	**45**	P	**P**	**16**	**36**	**38.9**	**+0.9**
	baz=303,SNR=65									
ISCO					S	**S**	**16**	**46**	**45.5**	**-0.6**
	baz=303									
CSS	**Mathiatis**		**89.97**	**309**	IAmb	IAmb	16	36	41.6	
	comp=Z,128nm,0.9s									
DRGR			**90.03**	**323**	⇓P	**P**	**16**	**36**	**37.1**	**-0.8**
DRGR			**90.03**	**323**	⇓P	**P**	**16**	**36**	**37.1**	**-0.8**
LRW	**Lerwick**		**90.04**	**343**	*e*P	**P**	**16**	**36**	**37.2**	**-0.3**
LRW					IAmb	IAmb	16	36	39.5	
	comp=Z,305nm,1.0s									
LTVH	**Ltavrtes, Hu**		**90.10**	**324**	⇑P	**P**	**16**	**36**	**36.8**	**-1.2**
LTVH	**Ltavrtes, Hu**		**90.10**	**324**	P	**P**	**16**	**36**	**38.3**	**+0.2**
HUMR	**Humele**		**90.11**	**320**	⇑P	**P**	**16**	**36**	**37.8**	**-0.4**
KECS	**Kecovo**		**90.16**	**325**	*e*P	**P**	**16**	**36**	**38.5**	**+0.1**
KECS					pmax	pmax				
	comp=Z,295nm,0.9s									
KECS	**Kecovo**		**90.16**	**325**	*e*P	**P**	**16**	**36**	**38.5**	**+0.1**
KECS					*e*PP	**PP**	**16**	**40**	**19.3**	**-1.4**
S22A	**4UR Ranch, Cre**		**90.25**	**48**	P	**P**	**16**	**36**	**40.1**	**+0.7**
	baz=302,SNR=76									
S22A					S	**S**	**16**	**46**	**48.8**	**-0.1**
	baz=302									
LANS	**Liptovska Anna**		**90.25**	**326**	*e*P	**P**	**16**	**36**	**39.1**	**+0.3**
LANS					pmax	pmax				
	comp=Z,64nm,0.7s									
LANS	**Liptovska Anna**		**90.25**	**326**	*e*P	**P**	**16**	**36**	**39.1**	**+0.3**
TUC	**Tucson**		**90.25**	**54**	P	**P**	**16**	**36**	**39.6**	**+0.3**
TUC	**Tucson**		**90.25**	**54**	P	**P**	**16**	**36**	**39.6**	**+0.3**
TUC					pmax	pmax				
	comp=Z,45nm,1.0s									
TUC	**Tucson**		**90.25**	**54**	P	**P**	**16**	**36**	**40.2**	**+0.9**
	baz=300									
TUC					S	**S**	**16**	**46**	**48.3**	**-0.4**
	baz=300									
LOT	**Lotru**		**90.26**	**322**	⇑P	**P**	**16**	**36**	**38.4**	**-0.7**
RAC	**Raciborz**		**90.27**	**328**	*e*P	**P**	**16**	**36**	**38.0**	**-0.8**
RAC	**Raciborz**		**90.27**	**328**	*e*P	**P**	**16**	**36**	**38.0**	**-0.8**
RAC					*e*		16	46	16.4	
RAC					MLR	MLR				
	comp=Z,2µm,18.9s									
SZH	**Strazhica**		**90.29**	**319**	P	**P**	**16**	**36**	**37.0**	**-2.1**
SZH	**Strazhica**		**90.29**	**319**	P	**P**	**16**	**36**	**37.0**	**-2.1**
BORR	**Bors**		**90.35**	**324**	⇓P	**P**	**16**	**36**	**39.1**	**-0.1**
ZIMR			**90.40**	**320**	⇑P	**P**	**16**	**36**	**39.3**	**-0.3**
ZIMR			**90.40**	**320**	⇑P	**P**	**16**	**36**	**39.3**	**-0.3**
ISP	**Isparta**		**90.41**	**313**	IAmb	IAmb	16	36	40.5	
	comp=Z,63nm,0.8s									
OKC	**Ostrava-Krasne**		**90.45**	**327**	*e*PCP	**P**	**16**	**36**	**38.8**	**-0.9**
OKC					*e*PP	**PP**	**16**	**40**	**20.3**	**-2.6**
OKC					*e*SKS	**SKSac**	**16**	**46**	**19.9**	**-0.5**
OKC					*e*SS	**SS**	**16**	**53**	**12.0**	**+7.3**
DEV	**Deva**		**90.48**	**322**	⇑P	**P**	**16**	**36**	**39.2**	**-0.7**
DEV	**Deva**		**90.48**	**322**	⇑P	**P**	**16**	**36**	**39.2**	**-0.7**
NUUK	**Nuuk**		**90.53**	**6**	*i* P	**P**	**16**	**36**	**39.5**	**-0.2**
NUUK					IAmb	IAmb	16	36	42.1	
	comp=Z,82nm,0.9s									
AGMN	**Agassiz Nation**		**90.59**	**34**	P	**P**	**16**	**36**	**40.0**	**-0.4**
AGMN					IAmb	IAmb	16	36	43.7	
	comp=Z,61nm,0.8s									
AGMN	**Agassiz Nation**		**90.59**	**34**	P	**P**	**16**	**36**	**40.4**	**0.0**
	baz=310									
AGMN	**Agassiz Nation**		**90.59**	**34**	P	**P**	**16**	**36**	**40.0**	**-0.4**
	baz=310									
AGMN					S	**S**	**16**	**46**	**49.9**	**-1.0**
	baz=310									
KSP	**Ksiaz**		**90.67**	**329**	*e*P	**P**	**16**	**36**	**40.2**	**-0.5**
KSP					*e*PP	**PP**	**16**	**40**	**26.6**	**+2.0**
KSP					*i* SKSc		16	46	21.8	
KSP					*i* Sd		16	46	46.5	
RUE	**Ruedersdorf**		**90.68**	**331**	*e*P	**P**	**16**	**36**	**40.8**	**+0.2**
Q24A	**Divide**		**90.70**	**46**	IAmb	IAmb	16	36	44.8	
	comp=Z,90nm,0.9s									
Q24A	**Divide**		**90.70**	**46**	P	**P**	**16**	**36**	**42.0**	**+0.5**
	baz=303,SNR=64									
Q24A					S	**S**	**16**	**46**	**52.0**	**-0.9**
	baz=303									
VLAD	**Vladila**		**90.76**	**320**	⇓P	**P**	**16**	**36**	**40.8**	**-0.4**
MORC	**Moravsky Berou**		**90.79**	**328**	⇑P	**P**	**16**	**36**	**40.5**	**-0.8**
MORC	**Moravsky Berou**		**90.79**	**328**	IAmb	IAmb	16	36	42.8	
	comp=Z,107nm,0.8s									
MORC	**Moravsky Berou**		**90.79**	**328**	⇑P	**P**	**16**	**36**	**40.5**	**-0.8**
MORC	**Moravsky Berou**		**90.79**	**328**	*e*P	**P**	**16**	**36**	**40.6**	**-0.7**
MORC					*e*PP	**PP**	**16**	**40**	**27.0**	**+1.4**
MORC					*e*		16	42	30.1	
MORC					*e*SKS	**SKSac**	**16**	**46**	**22.6**	**+0.2**
PSZ	**Piszkesteto**		**90.82**	**325**	⇑P	**P**	**16**	**36**	**41.3**	**-0.2**
PSZ	**Piszkesteto**		**90.82**	**325**	⇑P	**P**	**16**	**36**	**41.3**	**-0.2**
PSZ	**Piszkesteto**		**90.82**	**325**	P	**P**	**16**	**36**	**41.6**	**+0.1**
GZR	**Gura Zlata**		**90.85**	**322**	⇑P	**P**	**16**	**36**	**41.7**	**0.0**
GZR	**Gura Zlata**		**90.85**	**322**	⇑P	**P**	**16**	**36**	**41.7**	**0.0**
OSTC	**Ostas**		**90.90**	**329**	*e*PCP	**P**	**16**	**36**	**40.8**	**-1.0**
OSTC					*e*PP	**PP**	**16**	**40**	**24.8**	**-1.6**
OSTC					*e*SKS	**SKSac**	**16**	**46**	**22.0**	**-0.9**
OSTC					*e*SS	**SS**	**16**	**53**	**06.4**	**-4.7**
SIRR	**Siria**		**90.92**	**323**	⇓P	**P**	**16**	**36**	**41.2**	**-0.8**
CHVC	**Chvalec**		**90.95**	**329**	*e*PCP	**P**	**16**	**36**	**41.3**	**-0.7**
KRLC	**Kraliky**		**90.95**	**328**	*e*PCP	**P**	**16**	**36**	**41.3**	**-0.8**
KRLC					*e*PP	**PP**	**16**	**40**	**25.6**	**-1.3**
KRLC					*e*SKS	**SKSac**	**16**	**46**	**20.8**	**-2.5**
KRLC					*e*SS	**SS**	**16**	**53**	**11.6**	**-0.4**
DPC	**Dobruska-Polom**		**90.99**	**329**	*e*PCP	**P**	**16**	**36**	**41.5**	**-0.7**
DPC					*e*PP	**PP**	**16**	**40**	**25.7**	**-1.4**
DPC					*e*SKS	**SKSac**	**16**	**46**	**20.8**	**-2.7**
DPC					*e*SS	**SS**	**16**	**53**	**18.5**	**+6.1**
BSZH	**Besenyszg**		**91.02**	**325**	⇑P	**P**	**16**	**36**	**42.1**	**-0.3**
BSZH	**Besenyszg**		**91.02**	**325**	P	**P**	**16**	**36**	**42.6**	**+0.2**
UPC	**Upice**		**91.03**	**329**	*e*PCP	**P**	**16**	**36**	**41.6**	**-0.7**
UPC					*e*PP	**PP**	**16**	**40**	**24.8**	**-2.6**
UPC					*e*SKS	**SKSac**	**16**	**46**	**22.0**	**-1.6**
UPC					*e*SS	**SS**	**16**	**53**	**12.6**	**-0.3**
SRE	**Strehaia**		**91.05**	**321**	⇑P	**P**	**16**	**36**	**42.5**	**-0.1**
SRE	**Strehaia**		**91.05**	**321**	⇑P	**P**	**16**	**36**	**42.5**	**-0.1**
SDCO	**Great Sand Dun**		**91.13**	**47**	IAmb	IAmb	16	36	46.8	
	comp=Z,100nm,1.2s									
SDCO	**Great Sand Dun**		**91.13**	**47**	P	**P**	**16**	**36**	**44.5**	**+1.0**
	baz=303									
SDCO	**Great Sand Dun**		**91.13**	**47**	P	**P**	**16**	**36**	**44.1**	**+0.6**
	baz=303,SNR=110									
SDCO					S	**S**	**16**	**46**	**55.4**	**-1.3**
	baz=303									
DIM	**Dimitrovgrad**		**91.24**	**318**	P	**P**	**16**	**36**	**42.0**	**-1.5**
DIM	**Dimitrovgrad**		**91.24**	**318**	P	**P**	**16**	**36**	**42.0**	**-1.5**
SUSD	**Miller**		**91.32**	**39**	P	**P**	**16**	**36**	**42.8**	**-1.1**
SUSD					IAmb	IAmb	16	36	46.8	
	comp=Z,108nm,0.7s									
SUSD	**Miller**		**91.32**	**39**	P	**P**	**16**	**36**	**43.8**	**-0.1**
	baz=308									
SUSD					S	**S**	**16**	**46**	**55.6**	**-2.0**
	baz=308									
JAVC	**Velka Javorina**		**91.33**	**327**	*e*P	**P**	**16**	**36**	**44.2**	**+0.3**
JAVC					*e*PP	**PP**	**16**	**40**	**31.7**	**+1.8**
JAVC					*e*		16	42	36.4	
JAVC					*e*SKS	**SKSac**	**16**	**46**	**28.6**	**+3.1**
RMGR	**Halanga-Turnu**		**91.34**	**322**	⇑P	**P**	**16**	**36**	**44.4**	**+0.5**
BZS	**Buzias**		**91.35**	**323**	⇓P	**P**	**16**	**36**	**42.7**	**-1.2**
BZS	**Buzias**		**91.35**	**323**	⇓P	**P**	**16**	**36**	**42.7**	**-1.2**
BAIL	**Bailesti**		**91.36**	**321**	⇑P	**P**	**16**	**36**	**44.7**	**+0.7**
HERR	**Herculane**		**91.36**	**322**	⇑P	**P**	**16**	**36**	**43.1**	**-0.9**
ELL	**Elmali**		**91.40**	**312**	P	**P**	**16**	**36**	**43.3**	**-1.2**
ELL	**Elmali**		**91.40**	**312**	P	**P**	**16**	**36**	**43.3**	**-1.2**
ELL					pmax	pmax				
	comp=Z,301nm,0.7s									
EIL	**Elat**		**91.44**	**304**	P	**P**	**16**	**36**	**43.6**	**-1.0**
	comp=Z,132nm,0.8s									
EIL					PP	**PP**	**16**	**40**	**34.4**	**+3.0**
	comp=Z,140nm,1.1s,baz=24,slow=2.4,SNR=10.0									
	comp=Z,132nm,0.8s									
KDZ	**Kurdzhali**		**91.54**	**318**	P	**P**	**16**	**36**	**42.0**	**-2.9**
KDZ	**Kurdzhali**		**91.54**	**318**	P	**P**	**16**	**36**	**42.0**	**-2.9**
BUD	**Budapest**		**91.55**	**325**	P	**P**	**16**	**36**	**44.6**	**-0.2**
VRAC	**Vranov**		**91.56**	**328**	⇑P	**P**	**16**	**36**	**44.2**	**-0.7**
VRAC	**Vranov**		**91.56**	**328**	P	**P**	**16**	**36**	**44.4**	**-0.5**
	comp=Z,167nm,0.8s,baz=52,slow=4.0,SNR=112									
VRAC					PP	**PP**	**16**	**40**	**33.7**	**+2.1**
	comp=Z,74nm,1.1s,baz=54,slow=9.5,SNR=8.1									
	comp=Z,167nm,0.8s									
VRAC	**Vranov**		**91.56**	**328**	⇑P	**P**	**16**	**36**	**44.2**	**-0.7**
VRAC	**Vranov**		**91.56**	**328**	*e*P	**P**	**16**	**36**	**44.2**	**-0.7**
VRAC					*e*PP	**PP**	**16**	**40**	**31.9**	**+0.3**
VRAC					*e*		16	42	37.8	
VRAC					*e*SKS	**SKSac**	**16**	**46**	**27.3**	**+0.6**
OGNE	**Ogallala**		**91.57**	**43**	P	**P**	**16**	**36**	**44.9**	**-0.3**
	baz=305									
OGNE					S	**S**	**16**	**46**	**58.9**	**-1.1**
	baz=305									
ALN	**Alexandroupoli**		**91.59**	**317**	IAmb	IAmb	16	36	45.8	
	comp=Z,79nm,0.8s									
B35A	**Bob, Littlefor**		**91.63**	**33**	IAmb	IAmb	16	36	48.9	
	comp=Z,112nm,1.3s									
B35A	**Bob, Littlefor**		**91.63**	**33**	P	**P**	**16**	**36**	**45.4**	**+0.2**
	baz=311									
SMOL	**Smolenice**		**91.68**	**327**	*e*P	**P**	**16**	**36**	**45.5**	**+0.1**
SMOL					pmax	pmax				
	comp=Z,91nm,1.0s									
PVCC	**Panska Ves**		**91.68**	**330**	*e*PCP	**P**	**16**	**36**	**44.8**	**-0.6**
PVCC					*e*PP	**PP**	**16**	**40**	**26.5**	**-5.9**
PVCC					*e*SS	SS	16	53	26.3	+4.2
SRO	**Srobarova**		**91.70**	**326**	*e*P	**P**	**16**	**36**	**46.3**	**+0.8**
SRO					pmax	pmax				
	comp=Z,94nm,1.0s									
SRO	**Srobarova**		**91.70**	**326**	*e*P	**P**	**16**	**36**	**46.3**	**+0.8**
SRO					*e*PP	**PP**	**16**	**40**	**32.0**	**-0.6**
PLD	**Plovdiv**		**91.70**	**319**	P	**P**	**16**	**36**	**43.0**	**-2.6**
PLD	**Plovdiv**		**91.70**	**319**	P	**P**	**16**	**36**	**43.0**	**-2.6**
BRG	**Berggiesshubel**		**91.73**	**330**	*i* P	**P**	**16**	**36**	**44.6**	**-0.9**
BRG					Amp		16	36	47.4	
	comp=Z,127nm,0.9s									
BRG					*ex*	x	16	37	03.0	
BRG					Amp		16	37	05.5	
	comp=Z,36nm,0.9s									
BRG					PP	**PP**	**16**	**40**	**34.4**	**+1.6**
BRG					Amp		16	40	35.6	
	comp=Z,478nm,1.8s									
BRG	**Berggiesshubel**		**91.73**	**330**	sS	sS	16	50	17.0	-12
BRG	**Berggiesshubel**		**91.73**	**330**	SS	SS	16	53	22.0	-0.8
BRG					Amp		17	23	46.0	
	comp=Z,2.2nm,16.2s									
BRG					Amp		17	23	49.0	
	comp=N,1.2nm,14.9s									
BRG					Amp		17	23	51.0	
	comp=E,1.2nm,16.1s									
BRG	**Berggiesshubel**		**91.73**	**330**	*i* P	**P**	**16**	**36**	**44.6**	**-0.9**
BRG							16	40	34.3	
BRG							16	46	28.0	
BRG					SS	SS	16	53	22.0	-0.8
BRG					pmax	pmax				
	comp=Z,127nm,0.9s									
BRG					pmax	pmax				
	comp=Z,478nm,1.8s									
BRG					MLR	MLR				
	comp=N,1µm,14.9s									
BRG					MLR	MLR				
	comp=E,1µm,16.1s									
RDO	**Rodhopi**		**91.76**	**317**	IAmb	IAmb	16	36	47.3	
	comp=Z,100nm,1.0s									
PGB	**Panagyurishte**		**91.76**	**319**	P	**P**	**16**	**36**	**44.0**	**-2.0**
PGB	**Panagyurishte**		**91.76**	**319**	P	**P**	**16**	**36**	**44.0**	**-2.0**
HSIG			**91.76**	**57**	IAmb	IAmb	16	36	49.6	
	comp=Z,76nm,1.0s									
BANR	**Banloc**		**91.76**	**323**	⇑P	**P**	**16**	**36**	**47.2**	**+1.4**
KRUC	**Moravsky**		**91.82**	**328**	*e*P	**P**	**16**	**36**	**45.3**	**-0.7**
KRUC					*e*PP	**PP**	**16**	**40**	**34.2**	**+0.6**
KRUC					*e*		16	42	38.6	
KRUC					*e*SKS	**SKSac**	**16**	**46**	**28.8**	**+0.7**
319A	**Douglas**		**91.83**	**54**	IAmb	IAmb	16	36	50.6	
	comp=Z,58nm,0.8s									
CLL	**Collm**		**91.84**	**331**	*i* P	**P**	**16**	**36**	**44.8**	**-1.3**
CLL					*e*		16	40	35.0	
CLL					*e*		16	46	27.0	
CLL					*e*S	**ScS**	**16**	**47**	**03.0**	**-0.2**
CLL					pmax	pmax				
	comp=Z,206nm,0.9s									
CLL					pmax	pmax				
	comp=Z,146nm,1.0s									
CLL	**Collm**		**91.84**	**331**	*i* P	**P**	**16**	**36**	**44.8**	**-1.3**
	comp=Z,37nm,0.7s									
CLL					⇓*i*Pmax		16	36	46.5	
	comp=Z,206nm,0.9s									
CLL					*e*(sP)	sP	16	39	26.0	-10
CLL					*e*PP	**PP**	**16**	**40**	**35.0**	**+1.4**
	comp=Z,146nm,1.0s									
CLL					*e*pPP		16	42	07.0	
CLL					*e*PPP	PPP	16	42	40.0	
CLL					*e*sPP		16	43	06.0	
CLL					*e*PPPP		16	44	24.0	
CLL					*e*pPPPP		16	45	42.0	
CLL					*e*SKSac	**SKSac**	**16**	**46**	**27.0**	**-1.1**
CLL					*e*S	**ScS**	**16**	**47**	**03.0**	**-0.2**
	comp=N,1µm,27.4s									
CLL					*e*S	**ScS**	**16**	**47**	**03.0**	**-0.2**
	comp=E,1µm,26.8s									
CLL					*e*SP	**SP**	**16**	**48**	**16.0**	**+0.5**
CLL					*e*sSKSac	**sSKSac**	**16**	**50**	**07.0**	**-0.8**
CLL					*e*SS	**SS**	**16**	**53**	**24.0**	**-0.3**
CLL					*e*sSS		16	56	19.0	
CLL					*e*SSSS		17	00	31.0	
CLL					*ex*	x	17	07	06.0	
CLL					LmV		17	19	00.0	
	comp=Z,2µm,18.8s									
MODS	**Modra-Piesok**		**91.85**	**327**	*e*P	**P**	**16**	**36**	**46.2**	**0.0**
MODS					pmax	pmax				
	comp=Z,414nm,1.2s									
MODS	**Modra-Piesok**		**91.85**	**327**	*e*P	**P**	**16**	**36**	**46.2**	**0.0**
MODS					*e*PP	**PP**	**16**	**40**	**34.4**	**+0.5**
MODS					*e*S	**SKSac**	**16**	**46**	**29.1**	**+0.8**
F33A	**5 Mile Ranch,**		**91.93**	**37**	P	**P**	**16**	**36**	**45.7**	**-0.9**
F33A	**5 Mile Ranch,**		**91.93**	**37**	P	**P**	**16**	**36**	**47.0**	**+0.4**
	baz=310									
BLKB	**Belogradchik**		**91.99**	**321**	⇑P	**P**	**16**	**36**	**46.2**	**-0.8**
ANMO	**Albuquerque**		**91.99**	**50**	P	**P**	**16**	**36**	**47.4**	**0.0**
ANMO	**Albuquerque**		**91.99**	**50**	P	**P**	**16**	**36**	**47.4**	**0.0**
ANMO					pmax	pmax				
	comp=Z,47nm,1.1s									
ANMO	**Albuquerque**		**91.99**	**50**	P	**P**	**16**	**36**	**48.3**	**+0.9**
	baz=302									
ANMO	**Albuquerque**		**91.99**	**50**	P	**P**	**16**	**36**	**47.6**	**+0.3**
	baz=302									
ANMO					S	**S**	**16**	**47**	**03.1**	**-1.1**
	baz=302									
CSKK	**Cskako**		**92.02**	**326**	P	**P**	**16**	**36**	**46.6**	**-0.4**
ZST	**Bratislava**		**92.06**	**327**	*e*P	**P**	**16**	**36**	**47.9**	**+0.8**
ZST					pmax	pmax				
	comp=Z,298nm,1.2s									
ZST	**Bratislava**		**92.06**	**327**	*e*P	**P**	**16**	**36**	**47.9**	**+0.8**
ZST					*e*PP	**PP**	**16**	**40**	**36.7**	**+1.3**
ZST					*e*S	**SKSac**	**16**	**46**	**31.2**	**+1.8**
PRU	**Pruhonice**		**92.07**	**329**	*e*PCP	**P**	**16**	**36**	**45.9**	**-1.2**
PRU					*e*PP	**PP**	**16**	**40**	**32.2**	**-3.2**
PRU					*e*SKS	**SKSac**	**16**	**46**	**25.3**	**-4.1**
PRU					*e*SS	**SS**	**16**	**53**	**21.0**	**-6.7**
TREC	**Trest**		**92.10**	**328**	*e*PCP	**P**	**16**	**36**	**46.4**	**-0.9**
TREC					*e*PP	**PP**	**16**	**40**	**31.9**	**-3.9**
TREC					*e*SKS	**SKSac**	**16**	**46**	**28.8**	**-0.9**
TREC					*e*SS	**SS**	**16**	**53**	**28.1**	**-0.1**
Y22D	**IRIS PASSCAL I**		**92.13**	**51**	P	**P**	**16**	**36**	**48.5**	**+0.6**
	baz=302									
Y22D					S	**S**	**16**	**47**	**04.4**	**-0.9**
	baz=302									
Y22A	**Socorro**		**92.17**	**51**	P	**P**	**16**	**36**	**49.2**	**+1.0**
	baz=302									
T25A	**Trinidad**		**92.19**	**47**	P	**P**	**16**	**36**	**48.2**	**-0.1**
T25A					IAmb	IAmb	16	36	51.7	
	comp=Z,104nm,1.2s									
T25A	**Trinidad**		**92.19**	**47**	P	**P**	**16**	**36**	**49.2**	**+0.9**
	baz=304,SNR=44									
T25A					S	**S**	**16**	**47**	**03.7**	**-2.2**
	baz=304									
VTS	**Vitosha**		**92.27**	**320**	⇑P	**P**	**16**	**36**	**48.3**	**-0.1**
VTS	**Vitosha**		**92.27**	**320**	IAmb	IAmb	16	36	50.2	
	comp=Z,91nm,0.9s									
VTS	**Vitosha**		**92.27**	**320**	⇑P	**P**	**16**	**36**	**48.3**	**-0.1**
VTS	**Vitosha**		**92.27**	**320**	P	**P**	**16**	**36**	**46.0**	**-2.4**
VTS	**Vitosha**		**92.27**	**320**	P	**P**	**16**	**36**	**46.0**	**-2.4**
BNM	**Barren Site**		**92.30**	**51**	P	**P**	**16**	**36**	**47.9**	**-1.0**
KSCO	**Kaye Shedlock'**		**92.30**	**45**	IAmb	IAmb	16	36	53.5	
	comp=Z,84nm,1.2s									
KSCO	**Kaye Shedlock'**		**92.30**	**45**	P	**P**	**16**	**36**	**48.7**	**+0.1**
	baz=305									
KSCO					S	**S**	**16**	**47**	**03.4**	**-3.1**
	baz=305									
121A	**Cookes Peak, D**		**92.32**	**52**	P	**P**	**16**	**36**	**49.8**	**+0.9**
	baz=302									
121A	**Cookes Peak, D**		**92.32**	**52**	P	**P**	**16**	**36**	**49.4**	**+0.5**
	baz=302,SNR=24									
121A					S	**S**	**16**	**47**	**06.7**	**-0.4**
	baz=302									
EGYH	**Egyhazaskeszo**		**92.46**	**326**	P	**P**	**16**	**36**	**48.7**	**-0.3**
TIH	**Tihany**		**92.52**	**325**	P	**P**	**16**	**36**	**48.8**	**-0.5**
BOVS	**Bovan**		**92.53**	**321**	⇑P	**P**	**16**	**36**	**47.7**	**-1.7**
K31A	**O'Neill**		**92.55**	**40**	P	**P**	**16**	**36**	**49.7**	**+0.2**
	baz=308									
MORH	**Mrgy, Hungar**		**92.57**	**325**	⇑P	**P**	**16**	**36**	**48.7**	**-0.8**
MORH	**Mrgy, Hungar**		**92.57**	**325**	⇓*i*P	**P**	**16**	**36**	**48.0**	**-1.5**
MORH	**Mrgy, Hungar**		**92.57**	**325**	P	**P**	**16**	**36**	**48.7**	**-0.8**
MMB	**Musomiste**		**92.60**	**319**	P	**P**	**16**	**36**	**48.0**	**-1.8**
MMB	**Musomiste**		**92.60**	**319**	P	**P**	**16**	**36**	**48.0**	**-1.8**
SOP	**Sopron**		**92.67**	**327**	P	**P**	**16**	**36**	**49.6**	**-0.4**
MCD	**Coleburn Disti**		**92.78**	**342**	*e*P	**P**	**16**	**36**	**48.8**	**-1.5**
RONA	**Rosalia, Austr**		**92.79**	**327**	*i* P	**P**	**16**	**36**	**50.0**	**-0.6**
	comp=Z,73nm,0.8s,SNR=46									
RONA					*i* P	**PP**	**16**	**40**	**43.0**	**+1.9**
	comp=Z,26nm,1.1s									
CONA	**Conrad Observa**		**92.85**	**327**	*i* P	**P**	**16**	**36**	**50.5**	**-0.4**
	comp=Z,156nm,0.9s,SNR=79									
CONA					*i* P	**PP**	**16**	**40**	**44.5**	**+2.8**
	comp=Z,31nm,1.0s,SNR=6.7									
NKC	**Novy Kostel**		**92.86**	**330**	*e*PCP	**P**	**16**	**36**	**49.8**	**-1.0**
NKC					*e*PP	**PP**	**16**	**40**	**41.1**	**-0.4**
NKC					*e*SKS	**SKSac**	**16**	**46**	**32.7**	**-1.1**
NKC					*e*SS	**SS**	**16**	**53**	**33.7**	**-5.1**
ARG	**Arkhangelos**		**92.89**	**312**	IAmb	IAmb	16	36	52.5	
	comp=Z,122nm,0.9s									
KOVH	**Kovagotottos**		**92.94**	**325**	P	**P**	**16**	**36**	**50.4**	**-0.8**
CKRC	**Cesky Krumlov**		**92.99**	**328**	*e*PCP	**P**	**16**	**36**	**50.7**	**-0.7**
CKRC					*e*PP	**PP**	**16**	**40**	**37.6**	**-5.0**
CKRC					*e*SKS	**SKSac**	**16**	**46**	**33.6**	**-1.0**
CKRC					*e*SS	**SS**	**16**	**53**	**36.0**	**-4.8**
EYMN	**Ely**		**93.02**	**33**	P	**P**	**16**	**36**	**50.6**	**-1.0**
EYMN	**Ely**

CBKS Cedar Bluff 94.25 44 IAmb IAmb 16 36 59.8
comp=Z,39nm,0.8s
CBKS Cedar Bluff 94.25 44 P **P** **16 36 57.1 -0.3**
baz=307
CBKS Cedar Bluff 94.25 44 P **P** **16 36 55.8 -1.6**
baz=307
CBKS S **S** **16 47 20.1 -3.2**
baz=307
KOME Kolasin 94.27 322 ⇓*i*P **P** **16 36 56.6 -0.9**
EBL Broad Law 94.27 341 *e*P **P** **16 36 56.1 -1.0**
EAB Aberfoyle 94.29 342 *e*P **P** **16 36 56.0 -1.1**
BLY Banja Luka 94.31 324 *e*P **P** **16 36 55.8 -1.7**
L34A Svendsen Farm, 94.34 40 P **P** **16 36 56.3 -1.4**
L34A IAmb IAmb 16 39 05.1
comp=Z,44nm,0.8s
L34A Svendsen Farm, 94.34 40 P **P** **16 36 57.3 -0.4**
baz=309
UPM Unac-Piva 94.39 322 ⇓*i*P **P** **16 36 56.4 -1.7**
UPM Unac-Piva 94.39 322 ⇓*i*P **P** **16 36 56.5 -1.7**
N33A J Bar K, Exete 94.47 41 IAmb IAmb 16 37 00.8
comp=Z,63nm,1.1s
OBKA Obir 94.48 327 *i*P **P** **16 36 56.8 -1.5**
comp=Z,42nm,0.8s,SNR=33
OBKA *i*P **PP** **16 40 53.7 -0.5**
comp=Z,50nm,0.9s,SNR=8.5
CRES Cresnjev 94.49 326 ⇓*i*P **P** **16 36 56.5 -1.8**
SANT Santorini 94.58 314 ⇑P **P** **16 36 56.9 -2.0**
MGRS Mrkonjic Grad 94.58 324 ⇓*i*P **P** **16 36 58.4 -0.4**
OZLJ Ozalj 94.63 326 *i*P **P** **16 36 57.4 -1.5**
NKME Niksic 94.64 322 ⇓*i*P **P** **16 36 57.9 -1.2**
PGBU Glenifferbraes 94.66 342 *e*P **P** **16 36 58.0 -0.8**
PGBU IAmb IAmb 16 37 00.3
comp=Z,202nm,1.0s
KBA Koelnbreinsper 94.67 328 *i*P **P** **16 36 57.7 -1.7**
comp=Z,45nm,0.8s,SNR=42
I37A Lemond, Waseca 94.68 37 IAmb IAmb 16 39 01.9
comp=Z,80nm,1.4s
I37B Waseca 94.68 37 P **P** **16 36 58.9 -0.3**
baz=312
EKA Eskdalemuir Ar 94.68 341 P **P** **16 36 57.8 -1.1**
comp=Z,61nm,0.9s,baz=35,slow=4.1,SNR=56
EKA PP **PP** **16 40 57.3 +2.1**
comp=Z,30nm,0.8s,baz=39,slow=5.8,SNR=8.5
comp=Z,61nm,0.9s
PDG Podgorica 94.69 321 ⇓P **P** **16 36 58.3 -1.0**
PDG Podgorica 94.69 321 *e*P **P** **16 36 58.0 -1.2**
TTG Podgorica 94.69 321 ⇓*i*P **P** **16 36 58.2 -1.0**
ESK Eskdalemuir 94.71 341 *e*P **P** **16 36 58.1 -1.0**
ESK IAmb IAmb 16 37 00.4
comp=Z,63nm,0.8s
ESK Eskdalemuir 94.71 341 P **P** **16 36 57.5 -1.5**
ESK IAmb IAmb 16 37 00.6
comp=Z,68nm,0.8s
ESK Eskdalemuir 94.71 341 P **P** **16 36 57.6 -1.5**
ESK pmax pmax
comp=Z,68nm,0.9s
EDMD Edmundbyers 94.75 340 *e*P **P** **16 36 58.0 -1.3**
EDMD IAmb IAmb 16 36 59.8
comp=Z,64nm,1.0s
BRY Bratogost 94.78 322 ⇓*i*P **P** **16 36 58.2 -1.7**
CEME Cevo 94.80 322 ⇓*i*P **P** **16 36 58.6 -1.3**
LJU Ljubljana 94.81 326 *i*P **P** **16 36 58.3 -1.5**
LJU *i* 16 47 21.4
LJU *e* 17 03 53.4
MYKA Terra Mystica 94.84 327 *i*P **P** **16 36 58.1 -1.8**
comp=Z,30nm,0.6s,SNR=26
MYKA *i*P **PP** **16 40 58.7 +1.8**
comp=Z,89nm,1.0s,SNR=9.3
DRME Dracevica, Mon 94.88 321 ⇓*i*P **P** **16 36 59.0 -1.2**
DRME Dracevica, Mon 94.88 321 ⇓*i*P **P** **16 36 59.2 -1.0**
GDL2 Guadalupe Moun 94.94 51 P **P** **16 37 00.2 -0.6**
BUM Brajici-Budva 94.97 321 ⇓*i*P **P** **16 36 59.9 -0.8**
ULC Ulcinj 94.99 321 ⇓*i*P **P** **16 36 59.9 -0.8**
AGG Agios Georgios 95.00 317 IAmb IAmb 16 37 00.7
comp=Z,82nm,0.9s
TREB Trebinje 95.01 322 *e*P **P** **16 36 58.7 -2.0**
PRED Cave del Predi 95.01 327 IAmb IAmb 16 37 01.5
comp=Z,41nm,0.8s
TIR Tirane 95.03 320 ⇑P **P** **16 37 01.7 +0.9**
TIR Tirane 95.03 320 ⇑P **P** **16 37 01.7 +0.9**
MSTX Muleshoe 95.07 49 P **P** **16 36 59.6 -1.7**
baz=305
MSTX S **S** **16 47 28.5 -2.2**
baz=305
CEY Cerknica 95.07 326 *e*P **P** **16 36 59.3 -1.7**
HCY Herceg Novi 95.11 322 ⇓*i*P **P** **16 36 59.6 -1.6**
HCY Herceg Novi 95.11 322 ⇓*i*P **P** **16 36 59.7 -1.5**
VOJS Vojsko 95.14 327 *e*SKSac **SKSac** **16 46 43.6 -2.6**
VOJS *e* 16 47 24.1
DBRK Dubrovnik 95.16 322 *i*P **P** **16 36 58.5 -2.9**
RICI Ricice 95.17 323 *i*P **P** **16 36 59.6 -1.9**
SLBS Sierra La Lagu 95.19 61 P **P** **16 37 02.9 +0.9**
UDBI Udbina 95.21 325 *i*P **P** **16 36 59.9 -1.8**
CLN7 Carlsbad 7 95.22 51 P **P** **16 37 01.1 -0.9**
KIJV Kijevo 95.22 324 *i*P **P** **16 36 59.9 -1.7**
STON Ston 95.27 322 *e*P **P** **16 36 58.3 -3.5**
STON Ston 95.27 322 *i*P **P** **16 36 58.7 -3.2**
AMTX Amarillo 95.29 48 P **P** **16 37 02.4 +0.1**
AMTX IAmb IAmb 16 37 06.9
comp=Z,53nm,1.0s
AMTX Amarillo 95.29 48 P **P** **16 37 02.9 +0.7**
baz=305
AMTX Amarillo 95.29 48 P **P** **16 37 01.8 -0.5**
baz=305
AMTX S **S** **16 47 31.5 -1.0**
baz=305
BTNL Ternell 95.30 334 *d*P **P** **16 37 00.6 -1.2**
comp=Z,26nm,1.0s
ABTA Abfaltersbach 95.31 328 *i*P **P** **16 36 59.8 -2.3**
comp=Z,99nm,1.0s,SNR=72
BEBN Eben Emael 95.32 334 *d*P **P** **16 37 01.8 -0.1**
SABO M.te Sabotino 95.32 327 IAmb IAmb 16 37 02.6
comp=Z,89nm,1.0s
MEM Membach 95.33 334 *d*P **P** **16 37 01.3 -0.7**
comp=Z,26nm,1.0s
WATA Walderalm 95.34 329 *i*P **P** **16 37 00.9 -1.4**
comp=Z,24nm,0.7s,SNR=20
WATA *i*P **PP** **16 41 01.3 +0.6**
comp=Z,88nm,1.1s,SNR=12
WTTA Wattenberg 95.36 329 *i*P **P** **16 37 01.2 -1.2**
comp=Z,52nm,1.0s,SNR=24
WTTA *i*P **PP** **16 41 02.3 +1.3**
comp=Z,84nm,1.0s,SNR=9.5
STU Stuttgart 95.38 331 IAmb IAmb 16 37 03.9
comp=Z,87nm,0.9s
HPK Haverah Park 95.38 339 *e*P **P** **16 37 01.6 -0.5**
HPK IAmb IAmb 16 37 03.8
comp=Z,102nm,0.9s
RER Riviere de l'E 95.46 249 IAmb IAmb 16 37 04.7
comp=Z,93nm,0.9s
COWI Conover 95.46 33 P **P** **16 37 02.2 -0.5**
baz=315
G40A Rib Lake 95.51 34 P **P** **16 37 02.3 -0.7**
G40A Rib Lake 95.51 34 P **P** **16 37 02.9 -0.1**
baz=314
BSTI Sart Tilman 95.53 334 *d*P **P** **16 37 03.1 +0.3**
MOTA Moosalm 95.55 329 *i*P **P** **16 37 01.9 -1.4**
comp=Z,32nm,0.8s,SNR=30
MOTA *i*P **PP** **16 41 03.9 +1.5**
comp=Z,63nm,0.9s,SNR=6.5
STAL STALIGIAL 95.56 327 IAmb IAmb 16 37 03.8
comp=Z,91nm,0.9s
IDI Anoyia 95.58 313 ⇑P **P** **16 37 02.9 -0.7**
IDI Anoyia 95.58 313 P **P** **16 37 01.7 -1.8**
comp=Z,26nm,0.6s,baz=79,slow=4.4,SNR=18
comp=Z,26nm,0.6s
IDI Anoyia 95.58 313 IAmb IAmb 16 37 21.6
comp=Z,55nm,0.9s
SQTA Sankt Quirin 95.59 329 *i*P **P** **16 37 02.1 -1.4**
comp=Z,49nm,0.8s,SNR=26
SQTA *i*P **PP** **16 41 04.6 +1.9**
comp=Z,50nm,1.0s,SNR=6.8
RETA Reutte 95.61 329 *i*P **P** **16 37 02.3 -1.1**
comp=Z,16nm,0.8s,SNR=20
WACR West Acre 95.66 338 *e*P **P** **16 37 02.2 -1.2**
WACR IAmb IAmb 16 37 06.0
comp=Z,285nm,0.9s
CIMO Cimolais 95.66 328 IAmb IAmb 16 37 03.7
comp=Z,53nm,1.1s
MORI Morici 95.69 324 *i*P **P** **16 37 01.7 -2.0**
VIRC Vir 95.74 325 *i*P **P** **16 37 01.3 -2.6**
BCLA Clavier 95.76 334 *d*P **P** **16 37 03.4 -0.6**
comp=Z,28nm,1.0s
ZIRJ Zirje 95.87 324 *i*P **P** **16 37 02.6 -2.0**
LBWR Ladybower, Pea 95.88 339 *e*P **P** **16 37 02.9 -1.5**
LBWR IAmb IAmb 16 37 05.7
comp=Z,112nm,0.9s
DUGI Dugi Otok 95.95 325 *i*P **P** **16 37 01.2 -3.7**
FETA Feichten 95.96 329 *i*P **P** **16 37 03.9 -1.3**
comp=Z,46nm,0.9s,SNR=46
FETA *i*P **PP** **16 41 06.1 +0.6**
comp=Z,34nm,1.1s,SNR=6.8
RCHB Rochefort 96.00 334 *d*P **P** **16 37 03.4 -1.6**
comp=Z,50nm,0.9s
KSU1 Kansas State U 96.00 42 IAmb IAmb 16 37 07.9
comp=Z,38nm,0.7s
KSU1 Kansas State U 96.00 42 P **P** **16 37 05.1 -0.2**
baz=309
KSU1 Kansas State U 96.00 42 P **P** **16 37 04.3 -1.0**
baz=309
KSU1 S **S** **16 47 33.9 -4.3**
baz=309
WLF Walferdange 96.00 333 *d*P **P** **16 37 04.6 -0.5**
comp=Z,71nm,1.0s
BMRD Maredsous 96.06 334 *d*P **P** **16 37 04.1 -1.2**
comp=Z,33nm,1.0s
BFO Black Forest 96.09 331 P **P** **16 37 04.2 -1.3**
BFO IAmb IAmb 16 37 07.0
comp=Z,80nm,1.0s
BFO Black Forest 96.09 331 P **P** **16 37 04.2 -1.3**
BFO pmax pmax
comp=Z,80nm,1.0s
ELIS Ellis County 96.09 46 IAmb IAmb 16 39 14.1
comp=Z,74nm,1.4s
SNF Seneffe 96.09 334 *d*P **P** **16 37 05.7 +0.3**
comp=Z,38nm,0.9s
DAVA Damuels 96.17 329 *i*P **P** **16 37 05.0 -1.0**
comp=Z,37nm,0.6s,SNR=30
SCIA State Center 96.17 38 P **P** **16 37 04.7 -1.2**
baz=312
SCIA S **S** **16 47 37.6 -2.0**
baz=312
GIVF Givet 96.20 334 *e*P **P** **16 37 05.3 -0.6**
GIVF pmax pmax
comp=Z,88nm,1.6s
CTI Castel Tesino 96.23 328 P **P** **16 37 04.1 -2.2**
CTI IAmb IAmb 16 37 11.9
comp=Z,46nm,1.0s
CTI Castel Tesino 96.23 328 P **P** **16 37 04.1 -2.2**
CTI pmax pmax
comp=Z,46nm,1.0s
DOU Dourbes 96.30 334 *d*P **P** **16 37 06.0 -0.3**
comp=Z,16nm,1.1s
CWF Charnwood Fore 96.30 339 *e*P **P** **16 37 04.1 -2.1**
E43A Lone Tree Farm 96.31 32 P **P** **16 37 06.0 -0.5**
baz=316
ITM Ithomi 96.38 316 P **P** **16 37 04.2 -2.8**
BAIF Baives 96.48 334 *e*P **P** **16 37 05.3 -1.8**
BAIF pmax pmax
comp=Z,35nm,1.1s
CDF Champ du Feu 96.49 332 *e*P **P** **16 37 06.1 -1.3**
CDF pmax pmax
comp=Z,69nm,0.9s
DAVOX Davos/Dischmat 96.54 329 P **P** **16 37 06.7 -1.1**
comp=Z,42nm,0.7s,baz=52,slow=1.8,SNR=59
DAVOX PP **PP** **16 41 11.0 +1.1**
comp=Z,133nm,1.1s,baz=350,slow=2.2,SNR=14
DAVOX S **SKSac** **16 46 52.9 -0.8**
comp=Z,5.7nm,0.8s,baz=218,slow=13,SNR=7.4
comp=Z,42nm,0.7s
ECH Echery 96.69 331 IAmb IAmb 16 37 09.5
comp=Z,47nm,0.9s
TEOL Teolo 96.71 327 IAmb IAmb 16 37 09.6
comp=Z,71nm,0.9s
SCHQ Schefferville 96.78 16 P **P** **16 37 08.0 -0.5**
comp=Z,11nm,0.7s,baz=330,slow=4.3,SNR=14
SCHQ S **SKSac** **16 46 54.4 +0.2**
comp=Z,17nm,1.2s,baz=173,slow=17,SNR=12
SCHQ PKKPbc **PKKPdf** **16 53 48.1 -0.2**
comp=Z,9.1nm,0.7s,baz=159,slow=1.1,SNR=12
comp=Z,11nm,0.7s
FOEL Foel Wylfa 96.78 340 IAmb IAmb 16 37 08.9
comp=Z,120nm,0.8s
WLF1 Llynfaes 96.81 340 *e*P **P** **16 37 07.5 -1.1**
HLM1 Long Mynd 97.00 339 *e*P **P** **16 37 08.2 -1.3**
HLM1 IAmb IAmb 16 37 10.9
comp=Z,37nm,1.0s
TX31 Lajitas Ar. Si 97.02 53 P Pdif 16 37 10.8 +0.6
baz=304
TX32 Lajitas Array 97.02 53 IAmb IAmb 16 39 11.7
comp=Z,50nm,1.3s
TXAR Lajitas Array 97.02 53 P **P** **16 37 09.8 -0.4**
comp=Z,5.4nm,0.5s,baz=298,slow=2.7,SNR=51
TXAR pP **pwP** **16 39 08.2 -1.8**
comp=Z,20nm,1.1s,baz=270,slow=2.4,SNR=5.9
TXAR S **SKSac** **16 46 55.9 -0.7**
comp=Z,2.8nm,1.1s,baz=309,slow=4.5,SNR=4.5
TXAR PKKPbc **PKKPdf** **16 53 47.6 -0.5**
comp=Z,2.9nm,0.6s,baz=142,slow=5.0,SNR=13
TXAR PKPPKP **P'P'df** **17 02 02.9 -0.2**
comp=Z,0.6nm,0.9s,baz=132,slow=1.9,SNR=4.6
comp=Z,5.4nm,0.5s
JFWS Jewell Farm 97.11 36 Pdiff **P** **16 37 09.1 -1.1**
baz=314
JFWS S **S** **16 47 44.5 -3.0**
baz=314
HINF Hinteralfeld 97.12 331 *e*P **P** **16 37 08.5 -1.7**
HINF pmax pmax
comp=Z,29nm,1.0s
I42A Draeger Farm, 97.13 34 P **P** **16 37 10.2 0.0**
baz=315
L40A Anamosa 97.17 37 IAmb IAmb 16 39 12.8
comp=Z,133nm,1.9s
HAU Haudompre 97.20 332 *e*P **P** **16 37 08.9 -1.6**
HAU pmax pmax
comp=Z,36nm,0.9s
MATE Matera 97.30 321 ⇑P Pdif 16 37 10.4 -0.7
WMOK Wichita Mounta 97.30 46 P Pdif 16 37 11.3 +0.1
baz=307
WMOK Wichita Mounta 97.30 46 Pdiff **P** **16 37 10.6 -0.6**
baz=307
WMOK S **S** **16 47 47.6 -1.8**
baz=307
T35A Sooner Cattle 97.42 44 IAmb IAmb 16 39 12.6
comp=Z,88nm,1.7s
DSB Dublin 97.44 341 IAmb IAmb 16 37 12.7
comp=Z,35nm,0.9s
MCH1 Michaelchurch 97.48 339 *e*P Pdif 16 37 10.4 -1.2
MCH1 IAmb IAmb 16 37 12.8
comp=Z,73nm,0.7s
P38A Dawn 97.50 40 IAmb IAmb 16 39 13.8
comp=Z,86nm,1.5s
P38A Dawn 97.50 40 P **P** **16 37 12.6 +0.7**
baz=311
MONM Monmouth 97.55 339 *e*P Pdif 16 37 10.8 -1.1
MONM IAmb IAmb 16 37 13.5
comp=Z,82nm,0.8s
E46A Sault Ste Mari 97.57 30 IAmb IAmb 16 39 14.8
comp=Z,118nm,1.8s
E46A Sault Ste Mari 97.57 30 P Pdif 16 37 11.7 -0.4
baz=319
NRCA Norcia 97.77 325 IAmb IAmb 16 37 15.1
comp=Z,62nm,0.9s
MURB Monte Urbino 97.78 325 IAmb IAmb 16 37 18.4
comp=Z,46nm,0.7s
ZCCA Zocca 97.78 327 P Pdif 16 37 13.0 -0.1
ZCCA IAmb IAmb 16 37 26.0
comp=Z,57nm,0.8s
ABTX Abilene, Hawle 97.98 49 Pdiff Pdif 16 37 13.5 -0.9
baz=306
TIP Timpagrande 98.24 320 ⇓P Pdif 16 37 15.0 -0.3
N41A Harden Midland 98.30 38 Pdif 16 37 15.1 -0.4
N41A IAmb IAmb 16 39 17.6
comp=Z,119nm,1.9s
P40A Paris 98.42 39 P Pdif 16 37 14.7 -1.4
baz=312
LOR Lormes 98.83 333 *e*P Pdif 16 37 17.3 -0.4
LOR pmax pmax
comp=Z,39nm,1.0s
S39A Bolivar 98.89 41 P Pdif 16 37 17.1 -1.1
baz=311
LPL La Plagne 98.93 330 *e*P Pdif 16 37 17.2 -1.3
LPL pmax pmax
comp=Z,31nm,0.8s
LPG La Plagne 98.94 330 *e*P Pdif 16 37 17.4 -1.2
LPG pmax pmax
comp=Z,34nm,0.8s
R40A Maddies Statio 99.11 40 P **Pdif** **16 37 18.5 -0.7**
baz=312
JCT Junction City 99.13 50 P **Pdif** **16 37 19.8 +0.3**
baz=306
JCT Junction City 99.13 50 Pdiff **Pdif** **16 37 19.1 -0.3**
baz=306
SSF Saint Saulge 99.14 333 *e*P **Pdif** **16 37 17.9 -1.2**
SSF pmax pmax
comp=Z,39nm,1.0s
HDIL Hopedale 99.26 37 Pdiff **Pdif** **16 37 18.4 -1.4**
baz=314
SMF Signal de Mont 99.33 332 *e*P **Pdif** **16 37 19.5 -0.5**
SMF pmax pmax
comp=Z,40nm,0.8s
FLN La Foliniere 99.33 336 *e*P **Pdif** **16 37 19.7 -0.2**
FLN pmax pmax
comp=Z,28nm,0.9s
LDF La Druitiere 99.33 336 *e*P **Pdif** **16 37 18.3 -1.6**
LDF pmax pmax
comp=Z,16nm,0.7s
AVF Avril sur Loir 99.42 333 *e*P **Pdif** **16 37 18.3 -2.0**
AVF pmax pmax
comp=Z,59nm,1.0s
MBDF Montbardon 99.52 329 *e*P **Pdif** **16 37 19.9 -1.1**
MBDF pmax pmax
comp=Z,15nm,0.7s
GRR Gorron 99.78 336 *e*P **Pdif** **16 37 22.7 +0.8**
GRR pmax pmax
comp=Z,37nm,1.0s
ORIF Oris-en-Rattie 99.78 330 *e*P **Pdif** **16 37 21.6 -0.5**
ORIF pmax pmax
comp=Z,10.0nm,0.8s
BGF Bois d'Agland 99.81 333 *e*P **Pdif** **16 37 21.9 -0.2**
BGF pmax pmax
comp=Z,23nm,1.0s
SBF Sospel 99.86 328 *e*P **Pdif** **16 37 21.1 -1.4**
SBF pmax pmax
comp=Z,26nm,0.7s
CCM Cathedral Cave 99.87 40 **Pdif** **16 37 21.6 -1.0**
CCM Cathedral Cave 99.87 40 *i*P **Pdif** **16 37 21.6 -1.0**
CCM pmax pmax
comp=Z,29nm,1.4s
CCM Cathedral Cave 99.87 40 P **Pdif** **16 37 22.2 -0.4**
baz=312
CCM Cathedral Cave 99.87 40 Pdiff **Pdif** **16 37 20.6 -1.9**
baz=312
PGF Pioggiola 100.08 327 *e*P **Pdif** **16 37 22.7 -0.8**
PGF pmax pmax
comp=Z,27nm,0.9s
TCF Toulx Ste Croi 100.29 333 *e*P **Pdif** **16 37 24.0 -0.3**
TCF pmax pmax
comp=Z,27nm,1.2s
VIVF Saint-Julien-l 100.37 331 *e*P **Pdif** **16 37 25.3 +0.6**
VIVF pmax pmax
comp=Z,23nm,1.0s
435B Jarrell 100.48 49 Pdiff **Pdif** **16 37 24.4 -1.1**
baz=307
SGMF Saint Gilles 100.51 337 *e*P **Pdif** **16 37 24.9 -0.2**
SGMF pmax pmax
comp=Z,119nm,2.0s
833A Chaparral WMA, 100.68 52 Pdiff **Pdif** **16 37 25.6 -0.7**
baz=306
ROSF Rostrenen 100.69 337 *e*P **Pdif** **16 37 26.7 +0.7**
ROSF pmax pmax
comp=Z,40nm,0.9s
LMR La Mourre 100.70 329 *e*P **Pdif** **16 37 26.2 +0.1**
LMR pmax pmax
comp=Z,33nm,0.9s
VAE Valguarnera 100.75 320 P **Pdif** **16 37 27.4 +0.8**
comp=Z,6.6nm,0.4s,baz=344,slow=11,SNR=3.8
VAE PP **PP** **16 41 44.8 +3.1**
comp=Z,16nm,0.3s,baz=13,slow=23,SNR=3.3
MIAR Mount Ida 100.77 44 Pdiff **Pdif** **16 37 25.9 -0.7**
baz=310
RAFF Raffo Rosso 100.95 320 **Pdif** **16 37 27.4 0.0**
QUIF Quistinic 101.01 337 *e*P **Pdif** **16 37 31.2 +3.8**
QUIF pmax pmax
comp=Z,129nm,1.9s
RJF Les Rejaudoux 101.37 333 *e*P **Pdif** **16 37 27.4 -1.7**
RJF pmax pmax
comp=Z,28nm,1.0s
CAF Calviac 101.45 332 *e*P **Pdif** **16 37 29.8 +0.3**
CAF pmax pmax
comp=Z,26nm,1.2s
O48B Farmland 101.68 35 Pdiff **Pdif** **16 37 29.7 -0.9**
baz=317
LFF La Frestale 101.99 333 *e*P **Pdif** **16 37 32.0 +0.2**
LFF pmax pmax
comp=Z,23nm,0.8s
MTLF Montolieu 102.65 331 *e*P **Pdif** **16 37 36.0 +1.2**
MTLF pmax pmax
comp=Z,21nm,1.4s
ERPA Erie 102.82 31 Pdiff **Pdif** **16 37 34.2 -1.4**
baz=322
VNDA Vanda 102.92 176 P **Pdif** **16 37 35.0 0.0**
comp=Z,0.5nm,0.8s,baz=333,slow=10,SNR=2.1
VNDA PP **PP** **16 41 56.7 -1.0**
comp=Z,2.7nm,0.6s,baz=307,slow=4.3,SNR=10
VNDA PKKPbc **PKKPbc** **16 53 32.7 0.0**
comp=Z,3.2nm,1.0s,baz=216,slow=2.4,SNR=5.3
M53A WI Miller and 103.02 32 Pdiff **Pdif** **16 37 35.2 -1.3**
baz=321
LONY Lake Ozonia 103.12 26 Pdiff **Pdif** **16 37 35.5 -1.4**
baz=326
O53A New Philadelph 103.68 33 Pdiff **Pdif** **16 37 37.4 -2.1**
baz=320
P52A Corning 103.69 34 Pdiff **Pdif** **16 37 37.8 -1.7**
baz=320
EPF Esparros 103.71 332 *e*P **Pdif** **16 37 43.7 +4.1**
EPF pmax pmax
comp=Z,5.0nm,0.8s
KMBO Kilima Mbogo 103.84 275 Pdiff **Pdif** **16 37 41.4 +0.5**
comp=Z,8.7nm,0.9s,baz=52,slow=7.7,SNR=14
KMBO PP **PP** **16 42 08.5 +2.5**
comp=Z,9.6nm,1.0s,baz=64,slow=7.1,SNR=5.3
KMBO Kilima Mbogo 103.84 275 *i*P **Pdif** **16 37 42.7 +1.7**
SNR=8.0
ETSF Etsaut 104.20 333 *e*P **Pdif** **16 37 43.0 +1.2**
ETSF pmax pmax
comp=Z,11nm,0.9s
MAHO Mahon 104.42 328 P **Pdif** **16 37 42.8 +0.1**
MAHO Mahon 104.42 328 PPP PPP 16 42 06.8
LBNH Lisbon 104.47 24 Pdiff **Pdif** **16 37 40.5 -2.4**
baz=328
PKME Peaks-Kenny Pk 104.54 22 Pdiff **Pdif** **16 37 41.1 -2.0**
baz=331
KEST Kesra 104.88 322 Pdiff **Pdif** **16 37 45.3 +0.4**
comp=Z,5.1nm,0.6s,baz=172,slow=3.0,SNR=8.8
KEST PP **PP** **16 42 12.7 +0.7**
comp=Z,19nm,1.0s,baz=284,slow=5.2,SNR=8.0
L61B Northampton 105.70 26 Pdiff **PKiKP** **16 41 57.8 -0.2**
baz=328
V52A Sevierville 105.76 37 P **PKiKP** **16 41 57.8 -0.5**
baz=318
TKL Tuckaleechee C 105.80 37 P **PKiKP** **16 41 58.2 -0.2**
baz=315
LRAL Lakeview Retre 105.83 41 Pdiff **PKiKP** **16 41 57.7 -0.8**
baz=315
GOGA Godfrey 107.62 39 Pdiff **PKiKP** **16 42 00.8 -1.0**
baz=317
PGAV Gavieira, Arco 107.97 337 *e*PKiKP **PKiKP** **16 42 04.3 +1.9**
PGAV Gavieira, Arco 107.97 337 *e*PP **PP** **16 42 34.6 +0.6**
PGAV Gavieira, Arco 107.97 337 *e*LQ LQ 17 08 19.0
PGAV A A 17 29 16.4
comp=Z,849nm,20.0s
PCAB Cabril 108.11 337 *e*PKiKP **PKiKP** **16 42 04.7 +2.1**
MVO Moncorvo 108.23 336 *e*PKiKP **PKiKP** **16 42 04.8 +2.0**
MVO Moncorvo 108.23 336 *e*PP **PP** **16 42 37.1 +1.3**
MVO Moncorvo 108.23 336 *e*LQ LQ 17 10 33.4
MVO A A 17 35 03.3
comp=Z,640nm,18.0s
ESDC Sonseca Array 108.30 333 Pdiff **Pdif** **16 37 59.6 -0.5**
comp=Z,2.4nm,0.8s,baz=32,slow=4.0,SNR=7.7
ESDC PP **PP** **16 42 40.5 +4.0**
comp=Z,25nm,1.1s,baz=33,slow=6.1,SNR=5.3
ESDC PKKPbc **PKKPbc** **16 53 16.4 +0.3**
comp=Z,1.6nm,0.7s,baz=217,slow=2.7,SNR=7.9
ESDC PKKP **PKKPab** **16 53 30.5 -2.8**
comp=Z,4.2nm,0.8s,baz=224,slow=4.6,SNR=16
ESDC SKKPbc SKKPbc 16 56 06.3 +0.7
comp=Z,1.4nm,0.6s,baz=246,slow=2.5,SNR=7.6
POLO Lamas de Olo 108.32 336 ⇑*e*PKiKP **PKiKP** **16 42 05.0 +1.9**
POLO Lamas de Olo 108.32 336 *e*PP **PP** **16 42 37.9 +1.4**
PVRL Vila Real 108.38 336 *e*PKiKP **PKiKP** **16 42 05.3 +2.2**
CART Cartagena 108.74 330 P **Pdif** **16 37 59.1 -2.9**
MAW Mawson 108.77 203 PKiKP **PKiKP** **16 42 03.8 +1.1**
comp=Z,9.0nm,0.6s,baz=92,slow=2.0,SNR=27
MAW PKKPbc **PKKPbc** **16 53 13.2 -1.5**
comp=Z,2.4nm,0.5s,baz=261,slow=2.1,SNR=9.0
MAW SKKPbc SKKPbc 16 56 05.0 -4.8
comp=Z,5.9nm,0.8s,baz=281,slow=11,SNR=7.1

PVIS Viseu 108.94 336 ePKiKP PKiKP 16 42 06.3 +2.1
MTE Manteigas 109.08 336 ePKiKP PKiKP 16 42 06.2 +1.7
MTE Manteigas 109.08 336 eLQ LQ 17 08 34.7
MTE eLR LR 17 15 40.3
comp=Z,644nm,18.0s
PCBR Castelo Branco 109.55 335 ePKiKP PKiKP 16 42 06.9 +1.7
PCBR Castelo Branco 109.55 335 ePP PP 16 42 46.5 +1.3
PCAS Casmilo, Conde 109.74 336 ePP PP 16 42 47.9 +1.4
KIL Kilembe 109.79 280 eP PKiKP 16 42 01.4 -5.2
KIL eS PKiKP 16 42 05.5 -1.1
PMRV Marv??o 109.87 335 eLQ LQ 17 08 39.6
PMRV eLR LR 17 14 31.0
comp=Z,598nm,18.0s
PSBE So Bento 110.32 336 ePKiKP PKiKP 16 42 07.9 +1.1
PSBE So Bento 110.32 336 ePP PP 16 42 51.8 +1.1
PESTR Estremoz 110.44 335 ePKiKP PKiKP 16 42 08.6 +1.6
PMTG Montargil 110.50 336 ePKiKP PKiKP 16 42 08.8 +1.7
CMIG Matias Romero 110.60 59 SKiKP SKiKP 16 44 52.9 -0.1
comp=Z,16nm,0.8s,baz=352,slow=4.3,SNR=8.0
CMIG PKKPbc PKKPbc 16 53 08.8 +0.8
comp=Z,13nm,0.7s,baz=66,slow=2.3,SNR=14
PBAR Barrancos 110.82 334 ePKiKP PKiKP 16 42 09.3 +1.6
PBAR Barrancos 110.82 334 ePP PP 16 42 55.3 +1.0
EVO Evora 110.89 335 P Pdif 16 38 14.7 +3.2
EVO Evora 110.89 335 ePKiKP PKiKP 16 42 09.6 +1.8
EVO Evora 110.89 335 ePP PP 16 42 55.5 +0.8
EMAL Malaga-Limoner 110.95 332 P Pdif 16 38 11.8 0.0
LIS Lisbon 111.15 336 ePP PP 16 42 57.7 +1.1
PBEJ Beja 111.28 335 ePKiKP PKiKP 16 42 10.4 +1.8
PBEJ Beja 111.28 335 ePP PP 16 42 58.2 +0.7
PNCL Nicolau / Gran 111.45 335 ePKiKP PKiKP 16 42 10.7 +1.8
PNCL Nicolau / Gran 111.45 335 ePP PP 16 43 02.1 +3.4
WMELI Melilla 111.50 330 P Pdif 16 38 11.5 -2.9
MESJ Messejana 111.57 335 ePdif Pdif 16 38 14.6 0.0
MESJ ePP PP 16 43 00.5 +0.9
MESJ eSKSac SKSac 16 48 02.2 +0.5
MESJ Messejana 111.57 335 ePKiKP PKiKP 16 42 11.1 +2.0
MESJ Messejana 111.57 335 ePP PP 16 43 02.1 +2.5
PCVE Castro Verde 111.69 335 ePKiKP PKiKP 16 42 11.0 +1.6
PCVE Castro Verde 111.69 335 ePP PP 16 43 03.3 +2.9
PVAQ Vaqueiros 111.76 334 ePP PP 16 43 03.7 +2.8
PVAQ Vaqueiros 111.76 334 eLR LR 17 13 53.7
comp=Z,1jum,18.0s
PBDV Barranco-do-Ve 111.98 334 ePKiKP PKiKP 16 42 12.2 +2.2
PBDV Barranco-do-Ve 111.98 334 ePP PP 16 43 05.9 +3.4
MORF Marmelete 112.20 335 ePP PP 16 43 05.0 +1.0
MORF Marmelete 112.20 335 ePKiKP PKiKP 16 42 12.0 +1.5
PFVI Vila Bisbo 112.42 335 ePKiKP PKiKP 16 42 12.3 +1.5
PFVI Vila Bisbo 112.42 335 ePP PP 16 43 08.6 +3.0
IFR Ifrane 113.99 330 P Pdif 16 38 26.2 +0.6
MDT Midelt 114.34 329 PKKPbc PKKPbc 16 53 02.4 +5.9
comp=Z,6.5nm,0.8s,baz=325,slow=1.2,SNR=9.8
QSPA South Pole Qui 114.72 180 PKKPbc PKKPbc 16 52 53.3 -2.6
comp=Z,14nm,0.7s,baz=232,slow=0.7,SNR=17
QSPA SKKPbc SKKPbc 16 55 47.8 -5.3
comp=Z,11nm,0.8s,baz=330,slow=0.5,SNR=5.6
QSPA South Pole Qui 114.72 180 PKPdf 16 42 12.7 -1.5
AVE Averroes 115.18 332 P Pdif 16 38 41.3 +11
PMOZ Porto Moniz, M 119.23 340 eLQ LQ 17 15 20.2
PMOZ eLR LR 17 20 12.4
comp=Z,427nm,20.0s
PMAR Madeira 119.24 340 ePKiKP PKiKP 16 42 25.1 +0.8
ACON Acoyapa 121.16 57 PKPdf 16 42 26.6 -1.5
JTS Las Juntas de 122.37 58 PKPdf 16 42 29.3 -1.2
JTS Las Juntas de 122.37 58 PKIKP PKPdf 16 42 29.3 -1.2
LBTB Lobatse 122.86 255 PKKPbc PKKPbc 16 52 27.9 +2.5
comp=Z,8.8nm,0.9s,baz=195,slow=5.6,SNR=5.7
LBTB SKKPbc SKKPbc 16 55 24.3 +0.8
comp=Z,4.4nm,0.7s,baz=232,slow=2.7,SNR=6.8
BOSA Boshof 123.99 251 PKP PKPdf 16 42 33.0 -0.3
comp=Z,29nm,0.5s,baz=91,slow=1.6,SNR=40
BOSA SKKPbc SKKPbc 16 55 20.8 +0.8
comp=Z,5.3nm,0.7s,baz=258,slow=4.2,SNR=6.6
BOSA Boshof 123.99 251 PKPdf 16 42 30.7 -2.6
BOSA Boshof 123.99 251 PKIKP PKPdf 16 42 33.0 -0.3
TORD Torodi Ar. Bea 125.85 310 PKP PKPdf 16 42 36.3 -0.9
comp=Z,71nm,0.7s,baz=22,slow=1.7,SNR=64
TORD PP PP 16 44 38.3 +0.7
comp=Z,87nm,1.0s,baz=45,slow=6.0,SNR=12
TORD PKKPbc PKKPab 16 52 15.8 +0.4
comp=Z,6.1nm,0.9s,baz=234,slow=3.2,SNR=8.3
TORD SKKPbc SKKPbc 16 55 12.8 +1.1
comp=Z,4.2nm,0.7s,baz=236,slow=3.0,SNR=6.8
NVL N'lazarevskaya 126.13 198⇑ iPKIKP PKiKP 16 42 38.1 +1.7
NVL e 16 49 01.9
NVL eSSS SSS 17 05 45.7
NVL pmax pmax
comp=Z,27nm,0.9s
BCIP Isla Barro Col 126.97 56 PKPdf 16 42 37.7 -1.6
BCIP Isla Barro Col 126.97 56 PKIKP PKPdf 16 42 37.7 -1.6
TROLL Troll, Antarti 127.81 195 PKPdf PKPdf 16 42 39.5 +0.2
TROLL Troll, Antarti 127.81 195 Pdiff Pdif 16 39 24.4 -1.6
TROLL Troll, Antarti 127.81 195 SKKPbc SKKPbc 16 55 03.6 -6.1
SUR Sutherland 128.41 247 PKPdf 16 42 40.5 -1.3
TSUM Tsumeb 128.47 265 SKKPbc SKKPbc 16 55 05.8 +1.6
comp=Z,4.3nm,0.7s,baz=90,slow=5.4,SNR=6.3
TSUM Tsumeb 128.47 265 PKPpre 16 42 30.9
TSUM PKPdf PKPdf 16 42 41.3 -0.8
SJG San Juan 129.18 35 SKPbc SKPab 16 45 13.9 -1.1
comp=Z,391nm,0.7s,baz=2.4,slow=2.4,SNR=86
SNAA Sanae 129.24 194 PKPdf PKiKP 16 42 43.2 +0.4
SNAA Sanae 129.24 194 SKKPbc SKKPbc 16 55 00.5 -4.1
SNAA Sanae 129.24 194 sPdiff sPdif 16 42 27.5 +5.6
STVI Saint Thomas 129.59 34 PKPdf 16 42 42.8 -1.4
VNA2 Neumayer--Watz 130.76 193 PKPdf PKPdf 16 42 45.0 +0.2
baz=99,slow=0.7
VNA2 Neumayer--Watz 130.76 193 SKKPbc SKKPbc 16 54 55.0 -4.1
VNA2 Neumayer--Watz 130.76 193 sPdiff sPdif 16 42 27.7 -0.9
VNA3 Neumayer Olymp 130.94 192 PKPdf PKiKP 16 42 45.8 -0.4
VNA3 Neumayer Olymp 130.94 192 SKKPbc SKKPbc 16 54 53.8 -4.7
VNA1 Neumayer--Stat 131.15 193 PKPdf PKiKP 16 42 46.5 0.0
VNA1 Neumayer--Stat 131.15 193 SKKPbc SKKPbc 16 54 53.5 -4.2
GDSD La Dsirade Is 133.24 31 PKPdf 16 42 49.9 -1.2
SMAI San Martin Ant 133.31 165 PKPpre 16 42 38.5
SMAI PKPdf PKiKP 16 42 50.4 -0.5
OTAV Otavalo 133.56 64 PKPpre 16 42 36.9
OTAV PKPdf PKPdf 16 42 51.8 -0.5
OTAV Otavalo 133.56 64 PKHKP PKPpre 16 42 36.9
OTAV 16 42 51.8
BARC Barichara 133.58 52 iP PKPpre 16 42 39.8
BARC eP PP 16 45 29.9 +2.4
SDV Santo Domingo 133.72 48 PKHKP PKPpre 16 42 43.6
comp=Z,8.4nm,0.4s,baz=33,slow=4.0,SNR=5.3
SDV PKP PKPdf 16 42 52.4 +0.1
comp=Z,81nm,0.7s,baz=92,slow=1.1,SNR=24
SDV SKPbc SKPbc 16 45 30.4 -1.3
comp=Z,268nm,0.8s,baz=309,slow=2.0,SNR=47
SDV Santo Domingo 133.72 48 PKPpre 16 42 38.9
SDV PKPdf PKPdf 16 42 52.2 -0.1
ROSC El Rosal 133.93 55 PKP PKPdf 16 42 53.3 +0.4
comp=Z,28nm,0.6s,baz=32,slow=3.4,SNR=9.2
ROSC SKPbc SKPbc 16 45 31.5 -1.1
comp=Z,23nm,0.3s,baz=0.4,slow=5.2,SNR=17
DBIC Dimbokro 134.97 310 PKHKP PKPpre 16 42 42.7
comp=Z,18nm,0.7s,baz=59,slow=3.2,SNR=11
DBIC PKP PKPdf 16 42 55.1 +0.7
comp=Z,94nm,0.7s,baz=53,slow=2.3,SNR=32
DBIC SKPbc SKPbc 16 45 34.4 -1.1
comp=Z,104nm,0.6s,baz=66,slow=3.2,SNR=23
DBIC Dimbokro 134.97 310 PKPpre 16 42 40.6
DBIC PKPdf PKPdf 16 42 54.3 -0.1
TIC Toumodi 135.10 310⇑ ePKP2 PKPpre 16 42 43.0
comp=Z,24nm,0.8s
KIC Kosan Boka 135.10 309⇑ ePKP2 PKPpre 16 42 43.1
comp=Z,28nm,0.6s
LIC Lamto 135.40 310⇑ ePKP2 PKPpre 16 42 41.9
comp=Z,72nm,0.8s
PMSA Palmer Station 136.75 164 SKPbc SKPbc 16 45 38.4 -0.7
comp=Z,15nm,0.6s,baz=33,slow=3.0,SNR=7.8
ATAH Atahualpa 137.55 72 PKHKP PKPpre 16 42 52.0
comp=Z,22nm,0.9s,baz=31,slow=1.3,SNR=11
ATAH PKP PKPdf 16 42 58.6 -1.1
comp=Z,22nm,1.0s,baz=146,slow=20,SNR=5.7
ATAH SKPbc SKPbc 16 45 43.5 -0.1
comp=Z,69nm,0.7s,baz=312,slow=2.9,SNR=24
NNA Nana 141.11 78 PKHKP PKPpre 16 43 00.8
comp=Z,23nm,0.5s,baz=313,slow=5.9,SNR=10
NNA SKPbc SKPbc 16 45 52.6 -0.1
comp=Z,94nm,0.8s,baz=289,slow=4.5,SNR=13
USHA Ushuaia 142.64 151 SKPbc SKPbc 16 45 54.6 -0.5
comp=Z,60nm,0.8s,baz=260,slow=3.0,SNR=3.1
VA04 Juan Fernndez 143.54 113 PKPbc 16 43 08.3 +0.3
ORCD Orcadas 143.92 174 PKPbc 16 43 07.1 -1.2

COYC Coyhaique 145.75 136 PKPdf 16 43 12.7 0.0
LL02 Futaleuf 146.87 132 PKPbc 16 43 16.5 -1.0
MDP Montagnes des 146.92 27 PKP PKPdf 16 43 16.4 +0.7
comp=Z,89nm,0.7s,baz=269,slow=1.4,SNR=41
MDP PKPbc PKPbc 16 43 18.4 -0.1
comp=Z,89nm,0.7s,baz=324,slow=2.7,SNR=37
MDP pPKPbc pPKPbc 16 45 20.6 +0.3
comp=Z,42nm,0.8s,baz=313,slow=4.2,SNR=3.1
MDP SKPbc SKiKP 16 46 06.7 +0.2
comp=Z,48nm,0.8s,baz=352,slow=2.5,SNR=5.6
MDP SKKPbc SKKPbc 16 53 51.9 -0.8
comp=Z,13nm,1.0s,baz=170,slow=6.3,SNR=4.2
LL03 Petrohue 147.20 128 PKPbc 16 43 18.9 +0.4
GO06 Curarrehue 148.36 126 PKPdf 16 43 16.0 -1.5
GO06 PKPbc PKiKP 16 43 22.5 -0.3
PLCA Paso Flores 148.66 128 PKP PKPdf 16 43 18.1 +0.3
comp=Z,9.0nm,0.8s,baz=262,slow=3.0,SNR=7.9
PLCA PKPbc PKiKP 16 43 23.2 -0.2
comp=Z,119nm,1.0s,baz=237,slow=3.4,SNR=33
PLCA pPKPbc pPKPab 16 45 26.0 +0.7
comp=Z,31nm,0.7s,baz=216,slow=5.6,SNR=5.8
PLCA SKKPbc 16 53 45.0
comp=Z,9.6nm,0.9s,baz=49,slow=2.3,SNR=5.8
EFI East Falkland 149.21 155 PKPdf PKPdf 16 43 17.6 -0.6
EFI PKiKP 16 43 23.7 -0.3
EFI East Falkland 149.21 155 PKP2 PKiKP 16 43 23.7 -0.3
ETMB Extrema 149.25 66 PKPdf 16 43 17.9 -1.6
LPAZ La Paz 150.57 79 PKP PKPdf 16 43 22.7 +0.5
comp=Z,6.4nm,0.6s,baz=309,slow=1.7,SNR=25
LPAZ PKPbc PKiKP 16 43 28.9 +0.2
comp=Z,82nm,0.7s,baz=312,slow=2.9,SNR=59
LPAZ pPKPbc pPKPab 16 45 33.4 -2.1
comp=Z,50nm,0.9s,baz=339,slow=4.8,SNR=4.1
LCO Las Campanas 150.63 105 PKPdf 16 43 20.9 -0.6
LCO PKPbc PKPbc 16 43 27.6 0.0
LCO PKPab PKPab 16 43 38.9 +2.0
HOPE Hope Point 150.67 182 PKPbc 16 43 26.1 -0.4
HOPE Hope Point 150.67 182 PKIKP PKPbc 16 43 26.1 -0.4
CO01 Juntas del Tor 151.14 107 PKPdf 16 43 24.9 +2.6
LVC Limon Verde 151.65 92 PKP PKPdf 16 43 24.1 +0.7
comp=Z,3.2nm,0.5s,baz=274,slow=2.8,SNR=3.0
LVC PKPbc PKiKP 16 43 30.4 0.0
comp=Z,39nm,0.7s,baz=296,slow=2.6,SNR=24
LVC SKKPbc 16 53 33.4
comp=Z,6.3nm,0.5s,baz=56,slow=3.3,SNR=10
SIV San Ignacio 156.65 72 PKP PKPdf 16 43 30.1 +0.1
comp=Z,5.5nm,0.6s,baz=227,slow=1.0,SNR=37
SIV PKPab PKPab 16 44 02.0 -0.6
comp=Z,46nm,0.9s,baz=294,slow=4.3,SNR=24
RCBR Riachuelo 160.89 354 PKP PKPdf 16 43 35.6 +0.6
comp=Z,12nm,0.8s,baz=83,slow=2.5,SNR=5.8
RCBR PKPab PKPab 16 44 19.8 -1.1
comp=Z,48nm,0.8s,baz=170,slow=5.1,SNR=11
RCBR PP PP 16 48 10.0 +6.0
comp=Z,26nm,0.9s,baz=162,slow=7.6,SNR=4.6
CPUP Villa Florida 162.51 99 PKP PKPdf 16 43 36.8 +0.5
comp=Z,4.6nm,0.6s,baz=260,slow=0.6,SNR=11
CPUP PKPab PKPab 16 44 27.4 -0.6
comp=Z,25nm,0.9s,baz=286,slow=5.3,SNR=18
CPUP Villa Florida 162.51 99 PKPdf 16 43 34.9 -1.3
CPUP PKPab 16 44 28.1 0.0
BDFB Brasilia 166.82 47 PKP PKPdf 16 43 40.3 -0.1
comp=Z,11nm,0.8s,baz=115,slow=1.9,SNR=12

NOU 04 16:29:42.8, 21°47S×169°64E, h0km, MLv4.4/10, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	2.33	240	P		16 30 22.5	+0.1
YATNC	Mamie plateau,	2.62	257	P		16 30 25.6	-0.8
OUENC	Ouen Island, N	2.76	250	P		16 30 28.6	+0.2
DZM	Mont Dzumac	3.03	258	P		16 30 31.8	-0.3
ONTNC	Ouen Toro	3.07	254	P		16 30 32.5	-0.1
NOUC	Port Laguerre	3.16	258	P		16 30 33.9	0.0
RTV	Rentapao	3.83	342	P		16 30 43.2	+0.1
DVP	Devils Point	3.97	340	P		16 30 45.8	+0.9
KOUNC	Koumac, New Ca	5.08	279	P		16 31 00.3	0.0

PRU 04 16:33:57.4±0.0, 50°17N×119°29E, h0km, 1C, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.33	81	ePg	Pg	16 34 03.6	-0.1
OJC				eSg	Sg	16 34 08.6	+0.6
OKC	Ostrava-Krasne	0.81	246	ePG	Pg	16 34 12.8	-0.1
OKC				eSG	Sg	16 34 23.5	+0.1
comp=Z,8.0nm,0.5s							
NIE	Niedzica	1.00	139	ePg	Pg	16 34 16.1	-0.4
NIE				eSg	Sg	16 34 29.6	+0.3
LANS	Liptovska Anna	1.03	173	ePG	Pg	16 34 16.2	-0.9
LANS				eSG	Sg	16 34 29.4	-0.9
LANS				eLG	Lg	16 34 34.8	
MORC	Moravsky Berou	1.20	251	ePG	Pg	16 34 20.1	-0.2
MORC				eSG	Sg	16 34 35.9	+0.1
KRLC	Kraliky	1.62	268	ePG	Pn	16 34 25.8	-1.4
KRLC				eSG	Sb	16 34 49.1	0.0
comp=Z,4.5nm,0.3s							
DPC	Dobruska-Polom	1.91	277	ePG	Pn	16 34 32.2	+0.9
DPC				eSG	Sg	16 34 58.6	-0.2
comp=Z,6.1nm,0.5s							
OSTC	Ostas	2.01	282	eSG	Sg	16 35 02.1	+0.3
comp=Z,1.6nm,0.4s							
PETR	Petresti	6.94	127	⇑P	Pn	16 35 38.4	-1.9

IDC 04 16:56:57.6±9.7, 5°66S×149°70E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=146.6km s-min=87.7km az=17.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.61	225	P	P	17 01 37.3	-1.3
0.3nm,0.6s,baz=52,slow=11,SNR=5.9							
0.3nm,0.6s							
ASAR	Alice Springs	23.49	219	P	P	17 02 09.2	-0.1
0.6nm,0.5s,baz=55,slow=9.3,SNR=22							
0.6nm,0.5s							
STKA	Stephens Creek	27.16	195	P	P	17 02 43.8	+1.0
1.0nm,0.7s,baz=7.1,slow=8.1,SNR=1.3							
1.0nm,0.7s							

*UPP **04** 17:01:09.8±0.1, 67°.05N×20°.96E, h1km, ML2.3, Explosion*
*IDC **04** 17:01:10.6±0.9, 67°.03N×21°.00E, h0km, mbtmp2.9/4, ML1.8/4, Error ellipse: s-maj=12.7km s-min=7.5km az=120.0*
*HEL **04** 17:01:10.5±0.0, 67°.06N×20°.97E, h0km, ML2.3, ML2.3(UPP), Explosion*
*BER **04** 17:01:11.9±2.4, 66°.94N×21°.00E, h0km, ML1.7, Suspected explosion*

ISC 04 17:01:09.8±0.7, 67°.05N±0°.02×20°.94E±0°.02, h0km, n58, σ1°24/90, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.16	296	P	Pg	17 01 13.2	+0.3
DUNU				S	Sg	17 01 16.0	+1.0
DUNU	Dundret	0.16	296	iP	Pg	17 01 13.2	+0.3
DUNU				iS	Sg	17 01 16.0	+1.0
MASU	Masugnsbyn	0.58	45	P	Pg	17 01 20.7	-0.2
MASU	Masugnsbyn	0.58	45	iP	Pg	17 01 20.7	-0.2
PAJU	Pajala	0.85	91	P	Pg	17 01 25.5	-0.7
PAJU	Pajala	0.85	91	eP	Pg	17 01 25.2	-0.9
baz=274							
PAJU				eS	Sg	17 01 33.9	-3.2
HARU	Harads	0.89	179	P	Pg	17 01 26.4	-0.5
HARU	Harads	0.89	179	iP	Pg	17 01 26.4	-0.5
RATU	Laukkuluspa	0.93	327	P	Pg	17 01 27.1	-0.5
RATU	Laukkuluspa	0.93	327	eP	Pg	17 01 27.1	-0.5
SALU	Saltoluokta	1.00	290	eP	Pg	17 01 28.8	-0.2
SALU				eS	Sb	17 01 43.8	0.0
SALU	Saltoluokta	1.00	290	P	Pg	17 01 28.6	-0.4
SALU	Saltoluokta	1.00	290	eP	Pg	17 01 28.6	-0.4
LANU	Lannavaara	1.08	21	eP	Pg	17 01 29.3	-1.1
LANU				eSB	Sb	17 01 46.0	0.0
KOVU	Salmi	1.21	346	P	Pg	17 01 32.2	-0.9
KOVU				S	Sg	17 01 49.1	+0.3
KOVU	Salmi	1.21	346	eP	Pg	17 01 32.2	-0.9
KOVU				eS	Sg	17 01 49.1	+0.3
KALU	Kalix	1.54	140	eP	Pn	17 01 37.8	-0.7
KALU				eSN	Sn	17 01 59.5	+0.3
SJUU	Sjulsmark	1.57	170	P	Pn	17 01 38.4	-0.5
SJUU	Sjulsmark	1.57	170	eP	Pn	17 01 38.4	-0.5
TOF	Tornio	1.67	124	eP	Pn	17 01 40.0	-0.3
TOF				MSG		17 01 59.6	
comp=Z,31nm,0.2s							
TOF				eSN	Sn	17 02 02.4	+0.1
HEF	Hetta	1.71	36	eP	Pn	17 01 40.9	0.0
HEF				eS	Sn	17 02 04.0	+0.5
HEF	Hetta	1.71	36	eP	Pn	17 01 40.5	-0.3
baz=217							
HEF				MSG		17 01 59.9	
comp=Z,30nm,0.2s							
HEF				eSN	Sb	17 02 04.5	+0.3
KIF	Kilpisjarvi	1.96	359	eP	Pb	17 01 46.2	-0.1
KIF				eS	Sg	17 02 13.6	+0.9
KIF	Kilpisjarvi	1.96	359	ePG	Pb	17 01 45.9	-0.4
KIF				MSG		17 02 09.5	
comp=Z,23nm,0.2s							
KIF				eSG	Sg	17 02 13.6	+0.9
RNF	Rovaniemi	2.06	100	ePB	Pn	17 01 46.2	+0.6
RNF				eSG	Sb	17 02 14.5	+0.5
SGF	Sodankyl	2.21	77	ePB	Pn	17 01 48.5	+0.9
SGF				eSG	Sb	17 02 19.3	+1.0
I37NO	I37NO	2.21	338	i		17 15 01.6	
baz=156,slow=324,SNR=2.8							
FAUS	Fauske	2.23	281	eP	Pb	17 01 49.6	-1.3
FAUS				IAML		17 02 22.2	
comp=Z,26nm,0.2s							
STEI	Steigen	2.36	295	eP	Pn	17 01 50.9	+1.1
STEI				eS	Sn	17 02 20.1	+0.7
STEI				IAML		17 02 30.0	
comp=Z,3.9nm,0.1s							
BURU	Burvik	2.49	176	eP	Pn	17 01 52.5	+1.0
BURU				eSB	Sb	17 02 25.8	-0.6
JETT	Jettan, Norway	2.52	356	eP	Pb	17 01 54.5	-1.5
JETT				eS	Sb	17 02 25.5	-2.0
JETT				IAML		17 02 32.4	
comp=Z,15nm,0.2s							
TRO	Tromso	2.70	345	eP	Pn	17 01 56.2	+1.8
TRO				eS	Sb	17 02 30.1	-2.3
TRO				IAML		17 02 37.8	
comp=Z,9.4nm,0.2s							
TRO	Tromso	2.70	345	ePB	Pn	17 01 56.3	+1.9
TRO				eSB	Sb	17 02 31.3	-1.2
OBF4	Vikkela, Lumij	2.82	141	eP	Pn	17 01 56.8	+0.7
baz=329							
OBF4				eSG	Sb	17 02 38.3	+2.3
OUL	Oulu	2.83	132	eP	Pn	17 01 57.0	+0.9
OBF0	Syolatti, Pyha	2.90	151	eP	Pn	17 01 58.2	+1.0
OBF8	Ulkokalla	2.92	158	eP	Pn	17 01 58.8	+1.3
ARA0	ARCESS Array S	3.02	32	eP	Pn	17 01 59.4	+0.6
ARA0				IAML		17 02 44.0	
comp=Z,7.1nm,0.2s							
ARCES	ARCESS Array B	3.02	32	Pn	Pn	17 01 59.1	+0.3
comp=Z,0.3nm,0.3s,baz=212,slow=15,SNR=77							
ARCES				Sn	Sn	17 02 38.0	+2.5
comp=Z,0.6nm,0.3s,baz=216,slow=18,SNR=7.8							
comp=Z,1.0nm,0.2s							
LOF	Lofoten	3.04	294	eP	Pn	17 01 59.0	0.0
LOF				IAML		17 02 54.2	
comp=Z,3.7nm,0.2s							
OUF	Merijarvi	3.12	148	eP	Pn	17 02 01.3	+1.1
baz=333							
OUF				MSG		17 02 42.1	
comp=Z,3.6nm,0.2s							
OUF				eSG	Sb	17 02 46.4	+1.8
KONS	Konsvik	3.15	263	eP	Pn	17 02 01.5	+0.9
KONS				IAML		17 02 54.2	
comp=Z,3.4nm,0.3s							
UMAU	Umeaa	3.19	182	eP	Pn	17 02 01.9	+0.8
baz=359							
VRF	Varrio	3.42	74	eP	Pn	17 02 05.0	+0.7
baz=263							
VRF				eSB	Sn	17 02 50.0	+4.5
MSF	Maaselka	3.44	106	eP	Pn	17 02 05.7	+1.0
MSF				eSG	Sb	17 02 55.5	+1.6
OLKF	Oulanka, Finla	3.44	98	eP	Pn	17 02 05.2	+0.5
OLKF				eSG	Sb	17 02 56.1	+2.2
KEV	Kevo	3.52	37	eP	Pn	17 02 06.6	+0.9
KEV				eS	Sn	17 02 47.3	-0.6
KEV	Kevo	3.52	37	eP	Pn	17 02 06.4	+0.7
KU6	Riekki	3.73	102	eP	Pn	17 02 08.8	+0.3
baz=286							
KU6				eSG	Sb	17 03 04.2	+2.2
HAMF	Hammerfest	3.74	14	eP	Pn	17 02 10.8	+2.0
HAMF				IAML		17 03 05.3	
comp=Z,3.4nm,0.2s							
HUSU	Husum	3.80	192	eP	Pn	17 02 10.4	+0.9
baz=11							
HUSU				eS	Sn	17 02 54.6	-0.1
VAF	Ylistaro	4.09	169	eP	Pn	17 02 14.8	+1.2
VAF				eS	Sn	17 03 02.3	+0.2
NSS	Namsos	4.48	240	eP	Pn	17 02 20.4	+1.6
NSS				IAML		17 03 33.3	
comp=Z,2.0nm,0.2s							
HEMU	Hemsoen	4.57	197	eP	Pn	17 02 20.8	+0.8
HEMU				eS	Sn	17 03 12.5	-1.2
RMF	Romuvaara	4.69	123	eP	Pn	17 02 22.6	+0.9
FINES	FINESS Array B	6.06	156	Pn	Pn	17 02 41.8	+1.2
comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=14							
FINES				Sn	Sn	17 03 48.7	-1.7
comp=Z,0.4nm,0.3s,baz=344,slow=22,SNR=8.7							
FINES				Lg	Lg	17 04 19.4	
comp=Z,0.2nm,0.3s,baz=337,slow=32,SNR=3.4							
comp=Z,1.4nm,0.7s							
NOA	NORSAR Array B	7.38	220	Pn	Pn	17 02 58.7	0.0
baz=33,slow=12,SNR=2.0							
comp=Z,0.1nm,0.4s							
HFS	Hagfors	7.65	208	Pn	Pn	17 03 00.9	-1.5
comp=Z,0.1nm,0.3s,baz=34,slow=14,SNR=6.1							
HFS				Sn	Sn	17 04 26.7	-3.0
comp=Z,0.2nm,0.3s,baz=26,slow=27,SNR=1.8							
comp=Z,1.9nm,0.9s							

JMA 04 17:09:19.9±0.4, 25°N×122°4E±0°.6, h19km, MV2.1/4, TAIWAN REGION, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.55	107	P	Pb	17 09 30.4	-0.4
JYNG				S	Sb	17 09 37.9	-0.3
YOJ	Yonaguni jima	0.60	104	P	Pb	17 09 31.6	-0.1
YOJ				S	Sg	17 09 40.2	+0.2
IRIF	Iriomote-Funau	1.27	102	P	Pn	17 09 42.2	-0.4
IRIF				S	Sn	17 09 58.3	-0.8

TAP 04 17:09:29.7, 23°10N×120°97E, h3km±1km, ML0.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	Lidau	0.10	25	P	Pg	17 09 32.5	+0.7
baz=29							
ELDTW				S	Sg	17 09 34.0	+0.8
baz=29							
STYH	Taoyuan	0.19	292	eP	Pg	17 09 33.2	-0.3
baz=292							
STYH				eS	Sg	17 09 36.0	0.0
baz=292							
STYT	Tauyuan	0.21	288	P	Pg	17 09 34.4	+0.6
baz=289							
STYT				S	Sg	17 09 37.4	+0.9
baz=289							
LONT	Longtian	0.24	142	eP	Pg	17 09 35.1	+0.8
baz=142							
LONT				eS	Sg	17 09 38.5	+0.9
baz=142							
FULB	Fuli	0.31	71	eP	Pb	17 09 37.1	-0.9
baz=58							
FULB				eS	Sb	17 09 42.2	-1.2
baz=58							
TTN	Taitung	0.38	155	eP	Pb	17 09 38.5	-0.5
baz=154		

KNGR	**Kungurtug, Tuv**	**0.72 202**	Pg	Pb	17 10 08.6	-0.4
KNGR			Sg	Sg	17 10 16.8	-0.4
MOY	**Mondy**	**1.94 77**	Pg	Pg	17 10 32.4	+1.3
MOY			Sg	Sg	17 11 00.1	+3.7
ERNS	**Erzin**	**2.04 241**	Pg	Pb	17 10 32.1	+0.6
ERNS			Sg	Sg	17 10 59.5	0.0
KZLR	**Kyzyl**	**2.23 283**	Pg	Pg	17 10 38.2	+1.7
KZLR			Sg	Sg	17 11 08.6	+3.3
ARDR	**Aradan**	**3.09 297**	Pg	Pg	17 10 54.9	+1.9
ARDR			Sg	Sg	17 11 35.4	+2.4
ZAK	**Zakamensk**	**3.50 103**	Pn	Pb	17 10 52.7	-3.6
ZAK			Pg	Pg	17 10 58.6	-2.2
ZAK			Sg	Sg	17 11 46.7	+0.5
DJOS	**Djoyskaya Sosn**	**4.32 293**	Sg	Sg	17 12 17.5	+4.9
CERR	**Cheremushki**	**4.33 294**	Sg	Sg	17 12 18.1	+5.2
DJO	**Djoy, Khakassi**	**4.42 293**	Pg	Pg	17 11 18.6	+0.1
DJO			Sg	Sg	17 12 20.2	+4.4
GZLN	**Zheleznogorsk**	**5.68 336**	Sg	Sg	17 13 01.0	+4.8
SHTK	**Zheleznogorsk-**	**5.68 335**	Pg	Pg	17 11 42.3	-0.4
SHTK			Sg	Sg	17 12 58.0	+1.8
LUZB	**Luzhba, Kemero**	**6.02 297**	Pg	Pg	17 11 48.4	-0.8
LUZB			Sg	Sg	17 13 06.1	-1.0
CUR	**Chagan-Uzun**	**6.21 263**	Pg	Pg	17 11 53.0	+0.2
CUR			Sg	Sg	17 13 11.1	-2.2

*JMA **04** 17:11:25.2±0.1,24°.9N±0°.5×122°.9E±0°.5, h19km±1km, MV2.3/8, NW OFF ISHIGAKIJIMA IS*
*TAP **04** 17:11:26.5,24°.70N×122°.93E, h40km, ML2.7, D*
ISC 04 17:11:27.1±1.1,**24°.71N**±0°.05×**122°.85E**±0°.03,**h29**km±8km, **n50**,σ0**°80**/76,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.27 162**		P	**Pn**	**17 11 34.3**	**-0.9**
JYNG				*e*S	**Sn**	**17 11 41.0**	**+0.6**
YOJ	**Yonaguni jima**	**0.29 150**		*i* P	**Pb**	**17 11 34.3**	**0.0**
YOJ	baz=162			*i* S	**Sb**	**17 11 39.8**	**+0.5**
YOJ	**Yonaguni jima**	**0.29 150**		P	**Pb**	**17 11 34.4**	**0.0**
YOJ	baz=162			S	**Sn**	**17 11 40.7**	**0.0**
TWB1	**Santiao Chiao**	**0.84 291**		S	**Sn**	**17 11 55.0**	**+0.7**
EGS	baz=290	**0.85 279**		*e*S	**Sn**	**17 11 55.4**	**+0.8**
IRIF	baz=271 **Iriomote-Funau**	**0.88 115**		*e*P	**Pn**	**17 11 43.2**	**-0.4**
IRIF				S	**Sn**	**17 11 56.2**	**+0.9**
SXI1	**Grass Mountain**	**0.97 293**		*e*S	**Sn**	**17 11 57.3**	**-0.3**
TIPB	baz=292 **Shuangxi**	**0.97 286**		*e*P	**Pn**	**17 11 44.5**	**-0.3**
EWUT	baz=292 **Wuta**	**1.01 255**		*e*P	**Pn**	**17 11 44.5**	**-0.9**
EWUT	baz=255			*e*S	**Sb**	**17 11 58.2**	**-0.9**
NDS	baz=255 **Dongshan**	**1.04 266**		*e*P	**Pb**	**17 11 46.1**	**-0.4**
NDS	baz=266			*e*S	**Sb**	**17 11 59.5**	**-0.3**
ENA	baz=266 **Nanau**	**1.05 255**		*e*P	**Pn**	**17 11 45.4**	**-0.5**
ENA	baz=254			*e*S	**Sb**	**17 12 00.1**	**-0.1**
TWE	baz=254 **Neicheng**	**1.08 271**		*e*S	**Sn**	**17 12 01.2**	**+1.0**
HATJ	baz=270 **Hateruma jima**	**1.09 127**		P	**Pb**	**17 11 46.9**	**-0.4**
HATJ				S	**Sn**	**17 12 02.1**	**+1.7**
FUSB	**Fushanzhiwuyua**	**1.15 273**		*e*P	**Pn**	**17 11 46.8**	**-0.5**
FUSB	baz=272			*e*S	**Sn**	**17 12 03.7**	**+1.6**
JKRS	baz=272 **Kuro-shima**	**1.15 114**		P	**Pb**	**17 11 47.5**	**-0.9**
JKRS				S	**Sn**	**17 12 03.1**	**+1.0**
PCYT	**Pengchaiyu**	**1.16 322**		*e*S	**Sn**	**17 12 05.1**	**+3.0**
ENTT	baz=330 **Nioudou**	**1.17 267**		*e*P	**Pn**	**17 11 46.8**	**-0.8**
ENTT	baz=266			*e*S	**Sb**	**17 12 03.0**	**-0.7**
LATG	baz=266 **Datong**	**1.22 262**		*e*P	**Pn**	**17 11 48.0**	**-0.3**
LATG	baz=270			*e*S	**Sn**	**17 12 04.2**	**+0.3**
JIJ	baz=270 **Ishigaki jima**	**1.22 106**		P	**Pb**	**17 11 48.2**	**-1.5**
NDT	**Datong Townshi**	**1.23 265**		P	**Pb**	**17 11 49.0**	**-0.7**
NDT	baz=264			*e*S	**Sn**	**17 12 03.9**	**0.0**
NWLT	baz=264 **Wulai**	**1.23 273**		*e*P	**Pb**	**17 11 49.2**	**-0.6**
NWLT	baz=272			*e*S	**Sb**	**17 12 04.9**	**-0.4**
NACB	baz=272 **Ninganchiao**	**1.27 245**		*e*P	**Pb**	**17 11 49.7**	**-0.7**
NACB	baz=251			*e*S	**Sn**	**17 12 05.7**	**+0.7**
TWD	baz=251 **Chiawan**	**1.31 241**		*e*P	**Pn**	**17 11 49.9**	**+0.4**
TWD	baz=241			*e*S	**Sn**	**17 12 06.6**	**+0.7**
YHNB	**Yeheng**	**1.35 268**		*e*P	**Pn**	**17 11 48.8**	**-1.2**
YHNB	baz=267			*e*S	**Sn**	**17 12 06.8**	**-0.1**
ETLH	baz=267 **Xiulin Townshi**	**1.35 248**		P	**Pb**	**17 11 51.2**	**-0.7**
ETLH	baz=255			*e*S	**Sn**	**17 12 07.5**	**+0.4**
NSK	baz=255 **Sanguang**	**1.36 269**		*e*P	**Pn**	**17 11 49.6**	**-0.7**
NSK	baz=268			*e*S	**Sn**	**17 12 07.8**	**+0.5**
NNSB	baz=268 **Datong**	**1.37 258**		*e*P	**Pb**	**17 11 51.0**	**-1.2**
NNSB	baz=264			*e*S	**Sn**	**17 12 07.6**	**0.0**
NNS	baz=264 **Nan Shan**	**1.38 259**		*e*P	**Pn**	**17 11 50.3**	**-0.2**
NNS	baz=264			*e*S	**Sb**	**17 12 10.0**	**+0.5**
FUSS	baz=264 **Fushou**	**1.54 253**		*e*P	**Pb**	**17 11 54.4**	**-0.7**
WHF	baz=252 **Hehuan Shan**	**1.56 249**		*e*P	**Pn**	**17 11 53.9**	**+0.7**
ESL	baz=248 **Shilin**	**1.58 236**		*e*P	**Pn**	**17 11 53.6**	**+0.5**
ESL	baz=234			*e*S	**Sn**	**17 12 12.9**	**+0.4**
NFF	baz=234 **Wufeng Townshi**	**1.58 267**		*e*P	**Pn**	**17 11 54.0**	**+0.7**
NFF	baz=275			*e*S	**Sn**	**17 12 14.0**	**+1.3**
CHGB	baz=275 **Renai**	**1.66 247**		*e*P	**Pn**	**17 11 55.1**	**+0.6**
EGFH	baz=235 **Guangfu**	**1.67 232**		*e*S	**Sn**	**17 12 15.1**	**+0.3**
LIOB	baz=219 **Emei**	**1.67 268**		*e*P	**Pb**	**17 11 57.2**	**-0.2**
LIOB	baz=266			*e*S	**Sb**	**17 12 17.4**	**-0.6**
NSTT	baz=266 **Nanjuang**	**1.69 268**		*e*P	**Pb**	**17 11 57.8**	**+0.3**
OWD	baz=278 **Renai**	**1.71 244**		*e*P	**Pn**	**17 11 55.9**	**+0.8**
WUSB	baz=232 **Renai**	**1.74 246**		*e*P	**Pn**	**17 11 56.6**	**+1.1**
HGSD	baz=234 **Ruisui**	**1.79 227**		*e*P	**Pn**	**17 11 56.5**	**+0.5**
VWDT	baz=227 **VWDT**	**1.83 239**		*e*P	**Pn**	**17 11 57.5**	**+0.8**
VWDT	baz=237			*e*S	**Sn**	**17 12 18.8**	**0.0**
WCS	baz=237 **Beigang Elemen**	**1.89 250**		*e*P	**Pn**	**17 11 58.4**	**+1.0**
YULB	baz=239 **Yu-li**	**1.94 228**		*e*P	**Pn**	**17 11 57.5**	**-0.7**
EYUL	baz=218 **Yuli**	**1.96 226**		*e*P	**Pn**	**17 11 59.0**	**+0.6**
SSLB	baz=225 **Suanglung**	**1.96 242**		*e*P	**Pn**	**17 11 59.2**	**+0.8**
SMLT	baz=230 **Sun Moon Lake**	**1.97 246**		*e*P	**Pn**	**17 11 59.2**	**+0.7**
TYC	baz=234 **Yuchr**	**1.99 247**		*e*P	**Pn**	**17 11 59.7**	**+0.8**
TYC	baz=233			*e*S	**Sn**	**17 12 23.3**	**+0.5**
FULB	**Fuli**	**2.08 224**		*e*P	**Pn**	**17 12 00.6**	**+0.6**
YUS	baz=223 **Yu-Shan**	**2.12 235**		*e*P	**Pn**	**17 12 01.3**	**+0.2**
EDH	baz=224 **Donghe**	**2.24 220**		*e*P	**Pn**	**17 12 02.4**	**+0.2**
MASBT	baz=218 **Mashibuluo**	**2.92 225**		*e*P	**Pn**	**17 12 12.5**	**+0.9**
	baz=215						

*IDC **04** 17:12:41.6±1.2,24°.38N×121°.06E, h0km, mb3.5/6, mbtmp3.6/7, ML3.1/1, Error ellipse: s-maj=66.2km s-min=20.4km az=66.0*
*JMA **04** 17:12:43.9±0.1,24°.9N±0°.7×122°.9E±0°.6, h19km±2km, MV2.9/10, NW OFF ISHIGAKIJIMA IS*
ISC 04 17:12:40.5±1.9,**25°.06N**±0°.08×**122°.84E**±0°.07,**h9**km±12km, **n14**,σ1**°61**/19,**mb3.5**/6,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.61 171**		P	**Pg**	**17 12 52.9**	**+0.6**
JYNG				S	**Sg**	**17 12 59.4**	**-0.8**
YOJ	**Yonaguni jima**	**0.61 165**		P	**Pg**	**17 12 53.0**	**+0.7**
YOJ				S	**Sg**	**17 12 59.1**	**-1.2**
IRIF	**Iriomote-Funau**	**1.08 131**		P	**Pg**	**17 13 01.9**	**+0.7**
IRIF				S	**Sb**	**17 13 14.5**	**-1.0**
HATJ	**Hateruma jima**	**1.33 138**		P	**Pb**	**17 13 05.8**	**+0.3**
HATJ				S	**Sb**	**17 13 21.7**	**-0.8**
JKRS	**Kuro-shima**	**1.34 127**		P	**Pb**	**17 13 06.3**	**+0.6**
JKRS				S	**Sb**	**17 13 22.8**	**-0.1**
JIJ	**Ishigaki jima**	**1.37 120**		P	**Pb**	**17 13 06.7**	**+0.5**
JIJ				S	**Sn**	**17 13 24.1**	**+0.1**
JTJ	**Tarama**	**1.74 103**		*e*P	**Pg**	**17 13 13.6**	**-0.2**
KSRS	**Korea Array**	**13.10 18**		Pn	P	17 16 03.8	+6.9
	0.1nm,0.3s,baz=195,slow=13,SNR=13 1.9nm,0.9s						
SONM	**Songino Array**	**26.19 334**		P	**P**	**17 18 19.1**	**+3.6**
	1.2nm,0.9s,baz=147,slow=8.0,SNR=3.9 1.2nm,0.9s						
MKAR	**Makanchi Array**	**38.78 315**		P	**P**	**17 20 02.2**	**-3.2**
	1.0nm,0.8s,baz=91,slow=6.1,SNR=8.2 1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**40.35 326**		P	**P**	**17 20 17.1**	**-1.2**
	0.4nm,0.4s,baz=111,slow=7.9,SNR=1.5 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**42.43 319**		P	**P**	**17 20 32.8**	**-2.6**
	0.2nm,0.7s,baz=114,slow=7.5,SNR=3.0 0.2nm,0.7s						
WRA	**Warramunga Arr**	**46.11 165**		P	**P**	**17 21 05.9**	**+0.8**
	1.2nm,0.8s,baz=344,slow=8.4,SNR=4.9 1.2nm,0.8s						
ASAR	**Alice Springs**	**49.61 167**		P	**P**	**17 21 33.2**	**+1.0**
	0.3nm,0.8s,baz=346,slow=9.8,SNR=2.1 0.3nm,0.8s						

*JMA **04** 17:13:43.6±0.2,24°.8N±0°.9×125°.1E±0°.4, h29km±2km, MV1.5/6, NEAR MIYAKOJIMA ISLAND*
*IDC **04** 17:13:45.7±1.3,24°.44N×121°.92E, h0km, mb3.5/6, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=70.4km s-min=20.2km az=67.0*
ISC 04 17:13:41.2±1.0,**24°.9N**±0°.1×**125°.05E**±0°.08,**h45**km±10km, **n13**,σ1**°47**/15,**mb3.4**/6,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRB	**Irabujima**	**0.12 109**		P	**Pn**	**17 13 48.8**	**+0.3**
JIRB				*e*S	**Sn**	**17 13 52.7**	**-0.9**
JIKM	**Ikemajima**	**0.19 73**		*e*P	**Pn**	**17 13 50.3**	**+1.4**
JIKM				*e*S	**Sn**	**17 13 55.0**	**+0.7**
JMJ2	**Miyako jima3**	**0.28 116**		P	**Pn**	**17 13 50.1**	**+0.4**
JMJ2				*e*S	**Sn**	**17 13 55.2**	**-0.5**
JOGS	**Gusukube**	**0.34 108**		P	**Pn**	**17 13 51.1**	**+0.8**
JOGS				*e*S	**Sn**	**17 13 57.0**	**+0.3**
JTJ	**Tarama**	**0.39 234**		*i* P	**Pn**	**17 13 51.1**	**+0.3**
JTJ				*e*S	**Sn**	**17 13 56.7**	**-0.8**
JKRS	**Kuro-shima**	**1.14 237**		*e*P	**Pn**	**17 14 02.7**	**+2.1**
KSRS	**Korea Array**	**12.79 10**		Pn	P	17 17 05.7	+16
	0.1nm,0.3s,baz=189,slow=13,SNR=4.5 1.5nm,0.9s						
SONM	**Songino Array**	**27.27 332**		P	**P**	**17 19 23.3**	**+2.1**
	0.7nm,0.8s,baz=145,slow=11,SNR=2.2 0.7nm,0.8s						
MKAR	**Makanchi Array**	**40.35 314**		P	**P**	**17 21 11.9**	**-2.5**
	0.5nm,0.7s,baz=115,slow=9.7,SNR=2.7 0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**41.65 325**		P	**P**	**17 21 24.0**	**-0.9**
	0.3nm,0.4s,baz=148,slow=8.5,SNR=1.5 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**43.90 318**		P	**P**	**17 21 41.6**	**-1.7**
	0.4nm,0.8s,baz=109,slow=8.2,SNR=3.2 0.4nm,0.8s						
WRA	**Warramunga Arr**	**45.45 168**		P	P	17 22 07.8	+12
	0.8nm,0.7s,baz=347,slow=8.7,SNR=2.6 0.8nm,0.7s						
ASAR	**Alice Springs**	**49.01 169**		P	P	17 22 36.6	+13
	1.0nm,1.1s,baz=351,slow=11,SNR=8.1 1.0nm,1.1s						

*JMA **04** 17:17:02.0±0.2,24°.9N±0°.7×122°.9E±0°.7, h20km±2km, MV2.7/8, NW OFF ISHIGAKIJIMA IS*
*IDC **04** 17:17:02.9±6.7,24°.27N×122°.54E, h0km, mb3.4/2, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=321.7km s-min=41.7km az=96.0*
ISC 04 17:17:02.3±2.5,**24°.82N**±0°.08×**122°.88E**±0°.09,**h15**km±14km, **n9**,σ0**°62**/15,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.37 170**		P	**Pb**	**17 17 10.7**	**+0.1**
JYNG				S	**Sb**	**17 17 17.1**	**+0.9**
YOJ	**Yonaguni jima**	**0.38 161**		P	**Pb**	**17 17 10.8**	**+0.2**
YOJ				S	**Sb**	**17 17 16.8**	**+0.5**
IRIF	**Iriomote-Funau**	**0.92 122**		P	**Pg**	**17 17 19.8**	**-0.3**
IRIF				S	**Sg**	**17 17 32.4**	**+0.3**
HATJ	**Hateruma jima**	**1.14 132**		P	**Pb**	**17 17 23.4**	**-0.3**
HATJ				S	**Sb**	**17 17 38.5**	**+0.2**
JKRS	**Kuro-shima**	**1.18 119**		P	**Pn**	**17 17 23.9**	**-0.4**
JKRS				S	**Sb**	**17 17 40.5**	**+0.9**
JIJ	**Ishigaki jima**	**1.24 111**		P	**Pn**	**17 17 24.7**	**-0.4**
JIJ				S	**Sb**	**17 17 41.7**	**+0.4**
KSRS	**Korea Array**	**13.31 18**		Pn	**P**	**17 20 21.2**	**+0.8**
	0.1nm,0.3s,baz=199,slow=12,SNR=5.1 0.7nm,0.8s						
WRA	**Warramunga Arr**	**45.87 165**		P	**P**	**17 25 23.6**	**-0.6**
	0.5nm,0.6s,baz=345,slow=8.7,SNR=4.7 0.5nm,0.6s						
ASAR	**Alice Springs**	**49.37 167**		P	**P**	**17 25 50.7**	**-0.7**
	0.3nm,0.8s,baz=354,slow=7.0,SNR=2.0 0.3nm,0.8s						

*BJI **04** 17:20:42.3±0.0,36°.47N×70°.70E, h201km, mb4.4/28, mB4.8/12*
*MOS **04** 17:20:42.3±0.8,36°.47N×70°.80E, h202km, mb4.3/14, Error ellipse: s-maj=8.9km s-min=3.8km az=80.7*
*IDC **04** 17:20:43.4±0.9,36°.38N×70°.66E, h206km±8km, mb3.9/20, mbtmp4.4/26, Error ellipse: s-maj=9.8km s-min=9.2km az=47.0*
*NEIC **04** 17:20:44.1±1.9,36°.44N±0°.06×70°.62E±0°.08, h208km±6km, mb4.4/60, Error ellipse: s-maj=9.9km s-min=8.2km az=112.0*
*NNC **04** 17:20:47.3±2.1,36°.83N×70°.75E, h196km±23km, mb3.7, mpv5.1, Error ellipse: s-maj=18.9km s-min=12.1km az=20.0*
ISC 04 17:20:42.6±0.4,**36°.44N**±0°.03×**70°.71E**±0°.04,**h192**km±4km, **h192km:pP-P**,**n386**,σ1**°05**/428,**mb4.3**/61,**17C-18D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.33 216**		Pn	**Pn**	**17 21 25.6**	**+1.3**
KBL				Sn	**Sn**	**17 21 56.9**	**0.0**
KBL	**Kabul**	**2.33 216**		PN	**Pn**	**17 21 25.7**	**+1.3**
KBL				S	**Sn**	**17 21 56.8**	**0.0**
KBL	**Kabul**	**2.33 216**		P	**Pn**	**17 21 25.7**	**+1.3**
	SNR=222						
CHGR	**Chuyangaron**	**2.53 331**			**Pn**	**17 21 27.5**	**+1.0**
CHGR	**Chuyangaron**	**2.53 331**		PN	**Pn**	**17 21 27.5**	**+1.0**
GAR	**Garm**	**2.58 353**			**Pn**	**17 21 28.1**	**+1.1**
CHCP	**Chirah Chowk**	**3.48 142**		P	**Pn**	**17 21 39.8**	**+2.1**
NIL	**Nilore**	**3.48 142**		Pn	**Pn**	**17 21 39.7**	**+2.0**
NIL	**Nilore**	**3.48 142**		PN	**Pn**	**17 21 39.7**	**+2.0**
THW	**Thamme Wali**	**3.73 167**		P	**Pn**	**17 21 42.3**	**+1.4**
TAS	**Tashkent**	**5.00 348**		Pn	**Pn**	**17 21 57.5**	**+0.7**
TAS	**Tashkent**	**5.00 348**		PN	**Pn**	**17 21 57.5**	**+0.7**
JMU	**Jammu**	**5.07 136**		*e*P	**Pn**	**17 21 58.0**	**+0.2**
JMU				*e*S	**Sn**	**17 22 55.2**	**-1.8**
KSH	**Kashi**	**5.17 52**		P	**Pn**	**17 21 55.8**	**-3.3**
KSH				S	Sn	17 22 49.0	-10
KSH	comp=N,700nm,0.6s			smax	smax		
KSH	comp=E,460nm,0.5s			smax	smax		
IUG	**luzhnay**	**5.72 355**		*d* iPN	**Pn**	**17 22 07.2**	**+1.0**
IUG				*e*S	**Sn**	**17 23 09.8**	**-2.5**
IUG	**luzhnay**	**5.72 355**		⇓*i*P	**Pn**	**17 22 07.2**	**+1.0**
IUG	baz=354			*e*S	**Sn**	**17 23 09.8**	**-2.5**
THN	baz=354 **Thein Dam**	**5.75 133**		*e*P	**Pn**	**17 22 07.7**	**+1.1**
THN				*e*S	**Sn**	**17 23 11.4**	**-1.4**
CHM	**Chimkent**	**5.94 352**		*e*PN	**Pn**	**17 22 08.8**	**0.0**
CHM				*e*S	**Sn**	**17 23 14.4**	**-2.6**
CHM	**Chimkent**	**5.94 352**		*e*P	**Pn**	**17 22 08.8**	**0.0**
CHM	baz=351			*e*S	**Sn**	**17 23 14.4**	**-2.6**
AML	baz=351 **Almayashu**	**6.14 21**		P	**Pn**	**17 22 12.2**	**+0.3**
DZA	SNR=212 **Taraz**	**6.46 4**		*e*PN	**Pn**	**17 22 15.2**	**-0.5**
DZA				*e*S	**Sn**	**17 23 28.0**	**-1.5**
DZA	**Taraz**	**6.46 4**		*e*P	**Pn**	**17 22 15.3**	**-0.5**
DZA	baz=3.4			*e*S	**Sn**	**17 23 28.0**	**-1.5**
UCH	baz=3.4 **Uchtor**	**6.49 26**		P	**Pn**	**17 22 16.9**	**+0.4**
EKS2	SNR=73 **Erkin-Say**	**6.65 20**		P	**Pn**	**17 22 18.9**	**+0.6**
KK31	SNR=86 **Karatay Array**	**6.66 359**		Pn	**Pn**	**17 22 18.4**	**+0.1**
KK31	**Karatay Array**	**6.66 359**		PN	**Pn**	**17 22 18.4**	**+0.1**
KK31	**Karatay Array**	**6.66 359**		⇑P	**Pn**	**17 22 18.4**	**+0.1**
KK31	39nm,0.7s,baz=179,slow=12,SNR=192			⇓S	**Sn**	**17 23 29.5**	**-4.6**
KKAR	75nm,0.7s,baz=186,slow=17,SNR=14 **Karatay Array**	**6.66 359**		Pn	**Pn**	**17 22 18.3**	**0.0**
KKAR	**Karatay Array**	**6.66 359**			**Pn**	**17 22 18.4**	**+0.2**
KKAR	**Karatay Array**	**6.66 359**		PN	**Pn**	**17 22 18.3**	**0.0**
AAK	**Ala-Archa**	**6.85 24**		P	**Pn**	**17 22 21.5**	**+0.6**
AAK	59nm,0.5s,baz=202,slow=7.6,SNR=100 83nm,0.8s,baz=325,slow=23,SNR=23			S	**Sn**	**17 23 36.5**	**-2.2**
AAK	**Ala-Archa** SNR=57	**6.85 24**		P	**Pn**	**17 22 21.5**	**+0.6**
AAK	**Ala-Archa**	**6.85 24**		Pn	**Pn**	**17 22 21.2**	**+0.3**
AAK	**Ala-Archa**	**6.85 24**		*ce*PN	**Pn**	**17 22 21.2**	**+0.3**
AAK	comp=Z,56nm,0.6s			pmax	pmax		
AAK	**Ala-Archa**	**6.85 24**		P	**Pn**	**17 22 21.6**	**+0.6**
AAK	**Ala-Archa** SNR=65	**6.85 24**		*i* P	**Pn**	**17 22 21.5**	**+0.6**
BHK	**Bhakra**	**6.90 135**		*e*P	**Pn**	**17 22 24.9**	**+3.4**
BHK				*e*S	**Sn**	**17 23 37.2**	**-2.6**
KBK	**Karagaybulak** SNR=53	**7.02 26**		P	**Pn**	**17 22 24.0**	**+0.9**
HRA	**Herat**	**7.21 256**		Pn	**Pn**	**17 22 25.7**	**0.0**
ULHL	**Ulahol** SNR=11	**7.21 35**		P	**Pn**	**17 22 26.4**	**+0.7**
CHMS	**Chumysh** SNR=48	**7.25 24**		P	**Pn**	**17 22 26.2**	**+0.1**
CHMS	**Chumysh**	**7.25 24**		PN	**Pn**	**17 22 25.9**	**-0.2**
CHMS				S	**Sn**	**17 23 45.3**	**-2.8**
CHMS	**Chumysh**	**7.25 24**		⇑P	**Pn**	**17 22 25.9**	**-0.2**
CHMS	comp=Z,62nm,0.6s comp=Z,65nm,0.7s			⇑S	**Sn**	**17 23 45.4**	**-2.8**
USP	**Ospenovka** SNR=34	**7.42 22**		P	**Pn**	**17 22 27.8**	**-0.5**
TKM2	**Tokmak 2** SNR=302	**7.49 29**		P	**Pn**	**17 22 29.7**	**+0.4**
TKM2	**Tokmak 2**	**7.49 29**		PN	**Pn**	**17 22 29.6**	**+0.3**
TKM2				S	**Sn**	**17 23 51.4**	**-2.6**
TKM2	**Tokmak 2**	**7.49 29**		⇓P	**Pn**	**17 22 29.6**	**+0.3**
TKM2	comp=Z,252nm,1.1s			⇓S	**Sn**	**17 23 51.4**	**-2.6**
SMLA	comp=Z,52nm,0.9s **Simla**	**7.54 133**		*e*P	**Pn**	**17 22 29.8**	**-0.2**
SMLA				*e*S	**Sn**	**17 23 51.1**	**-4.0**
SMLA	comp=E,106nm,0.5s			IAML		17 23 54.7	
SMLA	comp=N,102nm,0.4s			IAML		17 23 55.2	
SGDS	**Sogindy**	**7.62 22**		⇓*i*PN	**Pn**	**17 22 30.4**	**-0.5**
SGDS	comp=Z,9.0nm,0.6s			pmax	pmax		
SGDS	**Sogindy**	**7.62 22**		⇓*i*P	**Pn**	**17 22 30.4**	**-0.5**
SGDS	comp=Z,9.0nm,0.6s,baz=22 baz=22			*e*S	**Sn**	**17 23 53.5**	**-3.4**
AAA	**Alma-Ata**	**8.28 33**		*e*PN	**Pn**	**17 22 39.8**	**+0.4**
AAA				*e*S	**Sn**	**17 24 11.1**	**-1.3**
AAA	**Alma-Ata**	**8.28 33**		*e*P	**Pn**	**17 22 39.9**	**+0.4**
AAA	baz=33			*e*S	**Sn**	**17 24 11.1**	**-1.3**
MDOK	baz=33 **Medeo**	**8.30 34**		*i* PN	**Pn**	**17 22 40.0**	**+0.2**
MDOK				*e*S	**Sn**	**17 24 11.2**	**-1.9**
MDOK	**Medeo**	**8.30 34**		*i* P	**Pn**	**17 22 40.0**	**+0.2**
MDOK	baz=34			*e*S	**Sn**	**17 24 11.2**	**-1.9**
MDOK	baz=34 **Medeo**	**8.30 34**		⇑P	**Pn**	**17 22 40.2**	**+0.3**
KNDC	comp=Z,72nm,0.6s **Almaty**	**8.30 33**		PN	**Pn**	**17 22 40.7**	**+0.9**
KNDC	**Almaty**	**8.30 33**		⇓P	**Pn**	**17 22 40.7**	**+0.9**
KUU	comp=Z,142nm,0.6s **Kurty**	**8.60 28**		*d* iPN	**Pn**	**17 22 42.7**	**-0.9**
KUU	comp=Z,5.0nm,0.5s			pmax	pmax		
KUU	**Kurty**	**8.60 28**		⇓*i*P	**Pn**	**17 22 42.8**	**-0.9**
CHKK	comp=Z,5.2nm,0.5s,baz=28 **Chushkaly**	**8.83 31**		*e*PN	**Pn**	**17 22 45.5**	**-1.1**
CHKK	**Chushkaly**	**8.83 31**		*e*P	**Pn**	**17 22 45.6**	**-1.1**
SATY	baz=31 **Saty**	**8.88 40**		*d* iPN	**Pn**	**17 22 46.8**	**-0.6**
SATY	comp=Z,6.0nm,0.8s			pmax	pmax		
SATY	**Saty**	**8.88 40**		⇓*i*P	**Pn**	**17 22 46.8**	**-0.6**
BTLS	comp=Z,6.3nm,0.8s,baz=39 **Baital**	**8.96 15**		*e*PN	**Pn**	**17 22 47.4**	**-0.9**
BTLS	**Baital**	**8.96 15**		*e*P	**Pn**	**17 22 47.4**	**-0.9**
UZB	baz=15 **Uzynbulak**	**9.26 41**		*e*P	**Pn**	**17 22 52.1**	**-0.3**
UZB	**Uzynbulak**	**9.26 41**		*e*P	**Pn**	**17 22 52.1**	**-0.3**
SHLS	baz=41 **Shalkode**	**9.50 42**		*e*P	**Pn**	**17 22 57.8**	**+2.3**
SHLS	comp=Z,6.0nm,0.7s			pmax	pmax		
SHLS	**Shalkode**	**9.50 42**		*e*P	**Pn**	**17 22 57.8**	**+2.3**
PDGK	comp=Z,6.1nm,0.7s,baz=44 **Podgornoye**	**9.63 42**		P	**Pn**	**17 22 56.1**	**-1.1**
PDGK	**Podgornoye**	**9.63 42**		⇓P	**Pn**	**17 22 56.1**	**-1.1**
GEYT	comp=Z,15nm,0.8s **Alibeck**	**10.16 282**		P	**Pn**	**17 23 02.9**	**-1.1**
GEYT	comp=Z,3.7nm,0.5s,baz=185,slow=16,SNR=6.7			S	**Sn**	**17 24 54.3**	**-3.0**
GEYT	comp=Z,6.9nm,0.7s,baz=98,slow=22,SNR=2.5 **Alibeck**	**10.16 282**		Pn	**Pn**	**17 23 03.1**	**-0.9**
TDK	**Taldyqorghan**	**10.35 32**		*e*P	**Pn**	**17 23 05.7**	**-0.7**
TDK	comp=Z,9.0nm,0.6s			pmax	pmax		
TDK	**Taldyqorghan**	**10.35 32**		*e*P	**Pn**	**17 23 05.7**	**-0.7**
AJM	comp=Z,9.4nm,0.6s,baz=32 **Aj

comp=Z,10nm,0.8s
BRZS Berezniki 13.61 5 *e*P Pn 17 23 47.0 -0.9
BRZS Berezniki 13.61 5 *e*P Pn 17 23 47.0 -0.9
baz=5.1
DANN Dangsing 13.65 123 *e*P Pn 17 23 48.4 -0.5
comp=Z,16nm,0.4s
BHPL Bhopal 14.38 154 *e*P P 17 24 00.1 +0.9
BHPL *ex* x 17 26 25.7
GKN Gorkha 14.47 122 *e*P Pn 17 23 58.4 -0.5
comp=Z,15nm,0.4s
WMQ Urumqi 14.92 55 *e*P P 17 24 07.0 +1.9
AB31 Akbulak array 15.03 332 P P 17 24 06.7 +0.6
AB31 Akbulak array 15.03 332 ⇑P P 17 24 06.7 +0.6
comp=Z,0.9nm,0.4s,baz=160,slow=11,SNR=5.0
ABKAR Akbulak array 15.03 332 Pn 17 24 05.0 -0.3
ABKAR Akbulak array 15.03 332 P Pn 17 24 04.5 -0.7
DMN Daman 15.04 122 *e*P Pn 17 24 05.4 -0.6
KKN Kakani 15.05 121 *e*P Pn 17 24 05.4 -0.6
comp=Z,11nm,0.5s
ZSN Zaisan 15.21 39 *e*P Pn 17 24 06.2 -1.3
ZSN Zaisan 15.21 39 *e*P Pn 17 24 06.2 -1.3
baz=39
JASK Jask - Hormozg 15.21 230 P Pn 17 24 07.2 -0.7
KURBB Kurchatov Arra 15.26 19 P Pn 17 24 07.3 -0.8
comp=Z,3.5nm,0.4s,baz=205,slow=10,SNR=38
KURBB S S 17 26 56.6 -1.3
comp=Z,2.1nm,1.0s,baz=200,slow=19,SNR=4.7
KURBB Kurchatov Arra 15.26 19 P Pn 17 24 06.5 -1.6
KURBB Kurchatov Arra 15.26 19 ⇓P Pn 17 24 06.5 -1.6
comp=Z,3.8nm,0.4s
PKIN Phulchoki 15.26 121 *e*P Pn 17 24 07.9 -0.8
comp=Z,15nm,0.5s
PKI Pulchoki 15.27 121 *e*P Pn 17 24 08.1 -0.8
comp=Z,8.1nm,0.3s
KURK Kurchatov 15.37 19 Pn 17 24 08.6 -0.8
KURK Kurchatov 15.37 19 *ce*P Pn 17 24 08.8 -0.6
KURK pmax pmax
comp=Z,5.0nm,0.8s
KURK Kurchatov 15.37 19 P Pn 17 24 08.5 -0.8
GUN Gumba 15.39 119 *e*P Pn 17 24 10.2 -0.1
comp=Z,16nm,0.3s
SEM Semipalatinsk 15.57 23 *e*P Pn 17 24 11.4 -0.7
SEM Semipalatinsk 15.57 23 *e*P Pn 17 24 11.5 -0.7
baz=23
JIRN Jiri 15.76 119 *e*P P 17 24 14.7 -0.1
comp=Z,45nm,0.3s
BANOM Banah 16.16 234 P Pn 17 24 19.5 +0.1
SNR=19
BANOM Banah 16.16 234 *i* P Pn 17 24 19.4 +0.1
SNR=19
SHME Shamm 16.18 234 P Pn 17 24 19.7 +0.2
SHME Shamm 16.18 234 *i* P P 17 24 18.8 -0.3
SNR=5.6
RAMN Ramite 16.48 121 *e*P P 17 24 22.8 +0.1
comp=Z,60nm,0.5s
BVA0 Borovoye Array 16.59 359 P Pn 17 24 24.4 +0.3
BVA0 Borovoye Array 16.59 359 ⇑P Pn 17 24 24.4 +0.3
comp=Z,3.2nm,0.5s,baz=153,slow=10,SNR=51
BRVK Borovoye 16.62 359 P 17 24 24.0 +0.4
BRVK Borovoye 16.62 359 *ce*P Pn 17 24 24.3 -0.2
BRVK pmax pmax
comp=Z,10.0nm,1.3s
BRVK Borovoye 16.62 359 P Pn 17 24 25.2 +0.7
BRVK Borovoye 16.62 359 ⇓P Pn 17 24 24.4 -0.1
comp=Z,9.0nm,1.2s
MASF Masafi 16.64 233 P Pn 17 24 27.1 +2.0
SNR=5.4
AKTO Aktyubinsk 16.72 331 P P 17 24 24.6 -0.1
comp=Z,6.2nm,0.7s,baz=136,slow=12,SNR=20
AKTO Aktyubinsk 16.72 331 ⇓P Pn 17 24 25.6 -0.1
comp=Z,5.6nm,0.7s
WSAR Wadi Sarin 16.80 222 P Pn 17 24 27.8 +0.9
UOSS Minazif 16.91 231 Pn 17 24 28.1 -0.1
UOSS Minazif 16.91 231 P Pn 17 24 28.2 -0.1
UOSS Minazif 16.91 231 P P 17 24 26.1 -1.0
HATD Hatta, Dubai 17.05 231 P Pn 17 24 30.4 +0.5
HATD Hatta, Dubai 17.05 231 P P 17 24 28.4 -0.2
ODAN Odare 17.09 119 *e*P Pn 17 24 30.6 -0.1
comp=Z,25nm,0.6s
WBK Wadi Bani Khal 17.13 220 P Pn 17 24 32.3 +1.3
ASHO Ashiyiah 17.19 231 P Pn 17 24 31.4 -0.2
SNR=8.8
ASHO Ashiyiah 17.19 231 *i* P Pn 17 24 31.1 -0.5
SNR=12
NAZ Nazwa, Dubai 17.23 233 P Pn 17 24 33.9 +1.8
SNR=6.8
NAZ Nazwa, Dubai 17.23 233 P Pn 17 24 31.5 -0.5
SMDO Samad 17.26 223 P Pn 17 24 32.3 -0.2
ASUD Al Ashush, Dub 17.70 233 P Pn 17 24 37.0 -0.6
SNR=11
ASUD Al Ashush, Dub 17.70 233 *i* P P 17 24 34.8 -0.9
SNR=11
JMDO Jabal Madar 17.78 221 P Pn 17 24 38.4 -0.2
ALNE Al Ain 17.84 230 P Pn 17 24 38.5 -0.8
SNR=9.5
ALNE Al Ain 17.84 230 *i* P Pn 17 24 38.5 -0.8
SNR=9.6
AJN Ajban 17.96 233 P P 17 24 39.3 +0.7
BSY Bisya 17.98 224 P Pn 17 24 40.4 -0.5
JRN Qarnain Island 19.13 238 P P 17 24 50.8 -0.4
MZWR Madinat Zayed 19.24 234 P P 17 24 52.4 0.0
GOMU GeErMu 19.42 84 P P 17 24 56.2 +1.5
GOMU pP Pn 17 24 58.1 0.0
GOMU pmax pmax
comp=Z,4.0nm,0.6s
GOMU pmax pmax
comp=Z,130nm,5.2s
GHWR Ruwais 19.76 236 P P 17 24 58.4 +0.4
SHMA Al-Shehemyia 19.89 244 P P 17 24 59.2 -0.2
MZR Muzera 20.04 233 P P 17 25 01.2 +0.2
MZR Muzera 20.04 233 P P 17 25 00.1 -0.9
ZAA0 Zalesovo Array 20.07 25 P P 17 25 01.2 +0.2
ZALV Zalesovo Beam 20.07 25 P P 17 25 01.1 +0.1
comp=Z,22nm,0.3s,baz=216,slow=11,SNR=100
ZALV S S 17 28 35.8 +0.1
comp=Z,1.7nm,0.6s,baz=238,slow=14,SNR=3.9
comp=Z,22nm,0.3s
ZALV Zalesovo Beam 20.07 25 P P 17 25 01.3 +0.3
SLWR Sila 20.49 238 P P 17 25 06.2 +0.3
SMRA Abu-Samra 20.66 241 P P 17 25 07.7 +0.1
ARU Arti 21.61 341 P P 17 25 17.5 +0.2
comp=Z,8.1nm,0.5s,baz=148,slow=7.5,SNR=16
comp=Z,8.1nm,0.5s
ARU Arti 21.61 341 P P 17 25 17.9 +0.5
ARU Arti 21.61 341 *c* *i* P P 17 25 18.7 +1.4
ARU S S 17 29 06.9 +3.3
ARU pmax pmax
comp=Z,12nm,0.7s
KBZ Khabaz 22.42 298 *i* P P 17 25 26.5 +1.3
KIV Kislovodsk 22.61 298 *e*P P 17 25 28.3 +1.2
KIV *e*S S 17 29 21.8 +1.7
KIV pmax pmax
comp=Z,5.0nm,1.0s
BELG Belogornoye 22.79 322 P P 17 25 28.4 -0.1
comp=Z,12nm,0.7s,baz=231,slow=1.2,SNR=5.3
comp=Z,12nm,0.7s
BELG Belogornoye 22.79 322 *i* P P 17 25 29.4 +0.9
BELG pmax pmax
comp=Z,2.0nm,0.8s
GTA Gaotai 23.11 74 *e*P P 17 25 33.2 +1.5
GTA pP pP 17 26 13.5 +5.4
GTA pmax pmax
comp=Z,8.0nm,0.8s
WHFO Wadi Hawf 23.75 224 P P 17 25 37.5 -0.1
ABTO Aybut 24.47 224 P P 17 25 44.8 +0.7
RAYN Ar Rayn 25.26 246 P P 17 25 51.1 -0.2
RAYN IAmb IAmb 17 25 52.8
comp=Z,11nm,1.1s
RAYN Ar Rayn 25.26 246 P P 17 25 51.1 -0.2
RAYN pmax pmax
comp=Z,11nm,1.1s
RAYN Ar Rayn 25.26 246 P P 17 25 51.4 +0.2
RAYN Ar Rayn 25.26 246 *i* P P 17 25 51.4 +0.2
SNR=8.0
KIRV Kirov 26.19 334 P P 17 25 59.5 +0.3
comp=Z,16nm,0.5s,baz=156,slow=2.6,SNR=8.0
comp=Z,16nm,0.5s
KIRV Kirov 26.19 334 *ce*P P 17 26 00.0 +0.8
LZH Lanzhou 26.65 81 *e*P P 17 26 14.4 +11
LZH pP pP 17 26 52.4 +8.5
LZH sP PP 17 27 16.6 +8.8
LZH pmax pmax
comp=Z,30nm,1.2s

PZH PanZhiHua 28.16 102 P P 17 26 18.7 +1.5
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,110nm,5.1s
SONM Songino Array 28.56 55 P P 17 26 20.7 +0.2
comp=Z,1.3nm,0.8s,baz=256,slow=9.1,SNR=7.3
SONM pP pP 17 27 04.2 +3.2
comp=Z,0.4nm,0.3s,baz=262,slow=11,SNR=2.4
comp=Z,1.3nm,0.8s
ULN Ulaanbaatar 29.00 55 *ce*P P 17 26 25.3 +0.8
ULN pmax pmax
comp=Z,5.0nm,2.5s
PALK Pallekele 30.43 160 P P 17 26 37.7 +0.4
comp=Z,16nm,1.0s,baz=342,slow=4.7,SNR=3.6
comp=Z,16nm,1.0s
CMAR Chiang Mai Arr 30.63 118 P P 17 26 39.3 +0.3
comp=Z,2.5nm,0.8s,baz=296,slow=8.1,SNR=16
CMAR PcP PcP 17 29 31.6 -0.8
comp=Z,0.2nm,0.3s,baz=297,slow=4.5,SNR=4.2
comp=Z,2.5nm,0.8s
CMAR Chiang Mai Arr 30.63 118 *ce*P P 17 26 40.0 +1.0
CMAR pmax pmax
comp=Z,3.0nm,0.8s
KLMR Klimovskoe 31.42 331 *e*P P 17 26 44.5 -0.9
KLMR pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 31.42 331 *e*P P 17 26 44.5 -0.9
KLMR AMP 17 26 46.3
comp=Z,6.0nm,0.7s
HHC Hu-ho-hao-te 32.00 69 *e*P P 17 26 51.8 +0.9
HHC pmax pmax
comp=Z,47nm,0.9s
HHC pmax pmax
comp=Z,180nm,4.3s
AKASG Malin Array Be 32.80 309 P P 17 26 57.5 0.0
comp=Z,0.4nm,0.4s,baz=81,slow=6.7,SNR=4.3
NRIK Noril'sk 34.23 11 P P 17 27 10.7 +1.0
comp=Z,13nm,0.5s,baz=200,slow=5.0,SNR=24
comp=Z,13nm,0.5s
NRIK Noril'sk 34.23 11 P P 17 27 10.6 +1.0
NRIK Noril'sk 34.23 11 *ce*P P 17 27 11.2 +1.6
NRIK pmax pmax
comp=Z,13nm,0.6s
MNK Minsk 34.38 315 *i* P P 17 27 10.3 -0.8
MNK *i* *PP pP 17 27 51.7 +0.6
MNK *i* 17 28 32.7
MNK *i* S S 17 32 23.2 -1.0
MNK *i* *SS sS 17 33 35.4 -1.0
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK Minsk 34.38 315 *i* P P 17 27 10.3 -0.8
comp=E,2.0nm,0.8s
MNK *i* P P 17 27 10.3 -0.8
MNK *i* P P 17 27 10.3 -0.8
comp=Z,5.0nm,0.8s,baz=105
MNK *i* pP pP 17 27 51.7 +0.6
MNK *i* PP PP 17 28 32.7 -0.3
MNK *i* S S 17 32 23.3 -1.0
MNK *i* sS sS 17 33 35.5 -1.0
MNK *i* SS SS 17 35 00.7 +1.4
FIA1 FINESS Array S 37.40 326 P P 17 27 37.2 +0.5
FIA1 IAmb IAmb 17 27 38.0
comp=Z,9.3nm,0.8s
FINES FINESS Array B 37.40 326 P P 17 27 37.4 +0.7
comp=Z,4.8nm,0.6s,baz=118,slow=10,SNR=23
comp=Z,4.8nm,0.6s
LVZ Lovozero 37.43 339 P P 17 27 37.4 +0.4
LVZ IAmb IAmb 17 27 47.4
comp=Z,15nm,1.3s
LVZ Lovozero 37.43 339 *i* P P 17 27 37.3 +0.4
NJ2 Nanjing 39.72 82 *e*P P 17 27 52.9 -3.4
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
KEV Kevo 40.77 338 P P 17 28 05.1 +0.6
KEV IAmb IAmb 17 28 19.2
comp=Z,25nm,1.5s
KEV Kevo 40.77 338 P P 17 28 05.1 +0.6
KEV pmax pmax
comp=Z,25nm,1.5s
ARA0 ARCESS Array S 41.11 338 *e*P P 17 28 08.3 +1.0
ARCES ARCESS Array B 41.11 338 P P 17 28 08.1 +0.8
comp=Z,4.0nm,0.4s,baz=112,slow=7.5,SNR=105
comp=Z,4.0nm,0.4s
ARCES ARCESS Array B 41.11 338 P P 17 28 08.2 +0.8
ARCES IAmb IAmb 17 28 08.9
comp=Z,11nm,1.0s
ARCES ARCESS Array B 41.11 338 P P 17 28 08.2 +0.9
ARCES pmax pmax
comp=Z,11nm,1.0s
HAMF Hammerfest 42.20 339 *e*P P 17 28 17.3 +1.3
JETT Jettan, Norway 42.72 337 *e*P P 17 28 21.1 +0.7
GSI Gunungsitoli 42.90 138 P P 17 28 23.3 +0.9
FAUS Fauske 43.75 333 *e*P P 17 28 29.0 +0.5
MOR8 Moi Rana 43.76 331 *e*P P 17 28 28.4 -0.3
STEI Steigen 43.92 333 *e*P P 17 28 30.3 +0.5
NC405 NORSAR Array S 44.05 323 P P 17 28 31.7 +0.6
NC602 NORSAR Array S 44.10 323 P P 17 28 31.8 +0.3
NC602 IAmb IAmb 17 28 49.4
comp=Z,18nm,1.4s
NORES NORESS Array B 44.10 323 P P 17 28 31.8 +0.4
YAK Yakutsk 44.15 35 P P 17 28 31.0 -0.8
comp=Z,3.0nm,0.3s,baz=124,slow=0.6,SNR=6.8
comp=Z,3.0nm,0.3s
YAK Yakutsk 44.15 35 *ce*P P 17 28 32.1 +0.3
YAK pmax pmax
comp=Z,7.0nm,0.6s
NC303 NORSAR Array S 44.23 323 P P 17 28 33.0 +0.6
NB201 NORSAR Array S 44.25 323 P P 17 28 32.6 -0.1
NB201 IAmb IAmb 17 29 06.5
comp=Z,23nm,1.2s
NB2 NORSAR Subarra 44.29 323 P P 17 28 32.5 -0.5
comp=Z,1.1nm,0.5s,baz=97,slow=7.9
NB2 NORSAR Subarra 44.29 323 P P 17 28 32.5 -0.5
baz=97,slow=7.9
NOA NORSAR Array B 44.29 323 P P 17 28 32.1 -0.9
comp=Z,1.4nm,0.6s,baz=104,slow=7.3,SNR=12
NOA pP pP 17 29 17.7 +2.9
comp=Z,0.9nm,0.7s,baz=98,slow=8.1,SNR=2.5
comp=Z,1.4nm,0.6s
KONS Konsvik 44.35 331 *e*P P 17 28 33.6 +0.4
NBO00 NORSAR Array S 44.50 323 P P 17 28 34.6 0.0
NBO00 IAmb IAmb 17 29 08.5
comp=Z,28nm,1.4s
NC204 NORSAR Array S 44.53 323 P P 17 28 35.0 +0.1
NC204 IAmb IAmb 17 28 55.9
comp=Z,22nm,1.5s
LOF Lofoten 44.59 333 *e*P P 17 28 35.3 +0.2
KSRS Korea Array 45.12 71 P P 17 28 39.9 +0.1
comp=Z,0.7nm,0.5s,baz=272,slow=7.3,SNR=7.5
comp=Z,0.7nm,0.5s
BJO1 Bjornoya 45.26 343 *e*P P 17 28 41.1 +0.8
TIXI Tiksi 45.92 22 P P 17 28 45.8 +0.3
TIXI Tiksi 45.92 22 *ce*P P 17 28 45.7 +0.1
TIXI pmax pmax
comp=Z,21nm,0.8s
SPB2 Spitsbergen Ar 47.49 347 P P 17 28 58.8 +1.1
SPA0 Spitsbergen Ar 47.50 347 *e*P P 17 28 59.2 +1.4
SPITS Spitsbergen Ar 47.50 347 P P 17 28 59.0 +1.2
SPITS pmax pmax
comp=Z,23nm,1.2s
KMBO Kilima Mbogo 48.62 227 P P 17 29 07.6 +0.2
comp=Z,1.2nm,0.5s,baz=26,slow=13,SNR=4.4
comp=Z,1.2nm,0.5s
KMBO Kilima Mbogo 48.62 227 *i* P P 17 29 09.1 +1.7
KMBO pmax pmax
comp=Z,1.0nm,0.3s
JOW Kunigami 49.31 84 P P 17 29 12.3 0.0
JOW IAmb IAmb 17 29 13.3
comp=Z,12nm,1.1s
SEY Seymchan 54.60 34 *ce*P P 17 29 51.6 +0.8
SEY pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 58.77 26 *i* P P 17 30 19.5 -0.5
BILL pmax pmax
comp=Z,7.0nm,1.0s
TORD Torodi Ar. Bea 65.48 268 P P 17 31 03.0 -2.5
comp=Z,0.6nm,0.4s,baz=51,slow=6.5,SNR=12
TORD pP pP 17 31 50.9 -0.2
comp=Z,0.6nm,0.8s,baz=42,slow=5.3,SNR=1.8
comp=Z,0.6nm,0.4s
C23K Itkillik River 69.84 14 P P 17 31 32.6 +0.8
baz=326,SNR=5.1
C24K Franklin Bluff 70.30 14 P P 17 31 35.0 +0.4
baz=327
D23K Nanushuk River 70.55 15 P P 17 31 36.5 +0.3
baz=326
D24K Happy Valley 70.76 14 P P 17 31 38.1 +0.7
baz=327
E22K Anaktuvuk Pass 70.99 16 P P 17 31 38.9 0.0
baz=325
TOLK Toolik Lake Re 71.04 15 P P 17 31 39.4 +0.2
TOLK IAmb IAmb 17 31 40.3
comp=Z,12nm,1.1s
TOLK Toolik Lake Re 71.04 15 P P 17 31 39.5 +0.3
baz=327,SNR=9.1
D25K Kavik River 71.08 13 P P 17 31 40.2 +0.8
baz=329,SNR=5.7
C27K Jago River 71.28 12 P P 17 31 41.5 +1.0
baz=331
A36M Sachs Harbour 71.29 5 P P 17 31 40.8 +0.3
baz=347
F21K Alatna River 71.36 17 P P 17 31 41.2 0.0
baz=324
F22K John River 71.43 16 P P 17 31 41.8 +0.3
baz=325
E24K Your Creek 71.74 14 P P 17 31 43.6 +0.2
baz=328,SNR=6.2
G21K Allakaket 71.93 17 P P 17 31 44.2 -0.3
baz=324
COLD Coldfoot 72.09 16 P P 17 31 45.5 0.0
COLD IAmb IAmb 17 31 47.2
comp=Z,5.0nm,0.9s
COLD Coldfoot 72.09 16 P P 17 31 45.8 +0.4
baz=326,SNR=7.5
E25K Arctic Village 72.27 13 P P 17 31 46.7 +0.2
baz=330
IMAR Indian Mountai 72.30 18 P P 17 31 46.4 -0.3
F24K Squaw Lake 72.33 15 P P 17 31 47.0 +0.1
baz=328
G23K Bananga Creek 72.56 16 P P 17 31 49.2 +0.9
baz=327
F25K Christian Rive 72.71 14 P P 17 31 49.8 +0.6
baz=330
H21K Melozitna Rive 72.80 17 P P 17 31 49.8 +0.1
H21K Melozitna Rive 72.80 17 P P 17 31 49.9 +0.3
baz=325,SNR=6.5
F26K Sheenjek River 72.90 13 P P 17 31 50.5 +0.3
baz=331
E27K Coleen River 72.92 12 P P 17 31 50.8 +0.4
baz=333
H22K Ishtalitna Cre 72.94 17 P P 17 31 50.8 +0.3
baz=326
BMAR Burnt Mountain 73.06 13 P P 17 31 51.7 +0.5
G24K Hadweenzic Riv 73.12 15 P P 17 31 51.9 +0.4
baz=329
G25K Bearman Lake 73.34 14 P P 17 31 53.5 +0.8
baz=330
I21K Tanana 73.39 17 P P 17 31 53.4 +0.3
baz=325
H23K Yukon River 73.41 16 P P 17 31 53.5 +0.2
H23K Yukon River 73.41 16 P P 17 31 54.1 +0.8
baz=327
G26K Porcupine Rive 73.63 13 P P 17 31 54.4 0.0
baz=332
J20K Nowinta River 73.66 19 P P 17 31 54.9 +0.2
J20K IAmb IAmb 17 31 56.0
comp=Z,5.3nm,0.8s
J20K Nowinta River 73.66 19 P P 17 31 55.1 +0.4
baz=324
H24K Noodor Dome 73.77 16 P P 17 31 55.9 +0.5
H24K Noodor Dome 73.77 16 P P 17 31 55.9 +0.5
baz=328
MLY Manley 73.81 17 P P 17 31 55.8 +0.2
MLY Manley 73.81 17 P P 17 31 55.9 +0.3
baz=326
H25K Birch Creek 73.83 15 P P 17 31 56.4 +0.8
baz=330
C36M Paulatuk 73.96 5 P P 17 31 56.2 -0.2
C36M Paulatuk 73.96 5 P P 17 31 56.1 -0.2
baz=348,SNR=16
INK Inuvik 74.00 9 P P 17 31 57.0 +0.4
INK Inuvik 74.00 9 P P 17 31 57.0 +0.4
INK pmax pmax
comp=Z,15nm,1.3s
INK Inuvik 74.00 9 P P 17 31 56.9 +0.3
baz=340
I23K Minto, Yukon-K 74.03 16 P P 17 31 57.4 +0.6
baz=327
G27K Doyon Strip 74.14 13 P P 17 31 58.1 +0.6
baz=333,SNR=9.2
TTA Tatalina 74.16 20 P P 17 31 57.9 +0.1
baz=322
K20K Telida 74.35 19 P P 17 31 58.9 +0.2
K20K IAmb IAmb 17 32 00.1
comp=Z,5.9nm,1.0s
K20K Telida 74.35 19 P P 17 31 59.1 +0.4
baz=324,SNR=5.1
MDM Murphy Dome 74.44 16 P P 17 31 59.2 0.0
MDM IAmb IAmb 17 32 00.8
comp=Z,4.3nm,0.8s
POKR Poker Plat Res 74.48 16 P P 17 32 00.1 +0.6
baz=329
BPAW Bear Paw Mtn. 74.52 18 P P 17 32 00.6 +0.8
baz=326
PRP Porcupine Dome 74.54 15 P P 17 32 00.3 +0.4
baz=330
NEA2 Nenana 74.56 17 P P 17 31 59.9 0.0
NEA2 IAmb IAmb 17 32 00.7
comp=Z,8.1nm,1.0s
NEA2 Nenana 74.56 17 P P 17 32 00.2 +0.2
baz=328,SNR=7.5
TCOL CIGO, UAF Yank 74.60 16 P P 17 32 00.4 +0.4
baz=329
COLA College 74.60 16 P P 17 32 00.5 +0.4
baz=329
CCB Clear Creek Bu 74.81 16 P P 17 32 01.1 -0.1
CAST Castle Rocks 74.81 18 P P 17 32 01.0 -0.4
CAST IAmb IAmb 17 32 02.5
comp=Z,11nm,1.0s
CAST Castle Rocks 74.81 18 P P 17 32 02.0 +0.6
baz=326,SNR=6.4
ILAR Eielson Array 74.90 16 P P 17 32 00.9 -0.9
comp=Z,2.0nm,0.8s,baz=319,slow=4.2,SNR=15
comp=Z,2.0nm,0.8s
ILAR Eielson Array 74.90 16 P P 17 32 01.1 -0.7
ILAR Eielson Array 74.90 16 P P 17 32 01.1 -0.7
KTH Kantishna Hill 75.00 18 P P 17 32 02.3 -0.2
KTH IAmb IAmb 17 32 03.2
comp=Z,6.4nm,1.0s
L19K White Mountain 75.08 20 P P 17 32 03.2 +0.2
baz=324
L20K Farewell, AK 75.11 20 P P 17 32 03.3 +0.2
baz=324
I26K Coal Creek Min 75.20 14 P P 17 32 03.8 +0.2
I26K Coal Creek Min 75.20 14 P P 17 32 04.7 +1.2
baz=332
PPLA Purkeypile 75.22 19 P P 17 32 03.5 -0.4
baz=326
I27K Kandik River 75.23 13 P P 17 32 03.8 0.0
baz=334
N16K Nishlik Lake 75.27 23 P P 17 32 05.0 +1.0
baz=321
J25K Salcha River, 75.36 15 P P 17 32 04.2 -0.4
J25K Salcha River, 75.36 15 P P 17 32 03.9 -0.6
baz=331,SNR=5.2
J26L Joseph Creek 75.84 15 P P 17 32 07.3 0.0
J26L IAmb IAmb 17 32 08.1
comp=Z,4.9nm,0.8s
J26L Joseph Creek 75.84 15 P P 17 32 07.0 -0.3
baz=332,SNR=9.2
K24K Donnelly Dome 75.98 16 P P 17 32 08.3 +0.2
baz=330
I29M Ogilvie Camp, 76.04 12 P P 17 32 08.1 -0.3
I29M IAmb IAmb 17 32 08.9
comp=Z,2.9nm,0.7s
I29M Ogilvie Camp, 76.04 12 P P 17 32 08.2 -0.1
baz=336
O16K Kokwok River B 76.17 23 P P 17 32 09.8 +0.7
baz=321
WAT1 Susitna Watana 76.19 17 P P 17 32 08.1 -1.1
baz=328
SCRK Sand Creek 76.22 15 P P 17 32 09.5 0.0
SCRK Sand Creek 76.22 15 P P 17 32 09.4 0.0
baz=332,SNR=5.5
RIDG Independent Ri 76.24 15 P P 17 32 09.4 -0.1
baz=331
DHY Denali Highway 76.25 17 P P 17 32 09.3 -0.4
DHY IAmb IAmb 17 32 10.6
comp=Z,4.0nm,0.6s
DHY Denali Highway 76.25 17 P P 17 32 09.6 -0.2

	baz=329							
K27K	**Chicken**	**76.56**	**14**	P		**P**	17 32 11.3	**+0.1**
	baz=333							
WAT6	**Susitna Watana**	**76.59**	**17**	P		**P**	17 32 10.8	**-0.9**
	baz=329							
PAX	**Paxson**	**76.78**	**16**	P		**P**	17 32 12.2	**-0.4**
PAX				IAmb		IAmb	17 32 13.1	
	comp=Z,4.1nm,0.7s							
PAX	**Paxson**	**76.78**	**16**	P		**P**	17 32 12.2	**-0.4**
PAX				pmax		pmax		
	comp=Z,4.0nm,0.7s							
PAX	**Paxson**	**76.78**	**16**	P		**P**	17 32 12.4	**-0.3**
	baz=331,SNR=5.4							
P17K	**Kvichak River**	**77.01**	**23**	P		**P**	17 32 14.4	**+0.6**
	baz=323							
SML	**Sawmill**	**77.12**	**18**	P		**P**	17 32 14.2	**-0.3**
SML	**Sawmill**	**77.12**	**18**	P		**P**	17 32 14.2	**-0.3**
SML				pmax		pmax		
	comp=Z,11nm,0.9s							
SML	**Sawmill**	**77.12**	**18**	P		**P**	17 32 14.2	**-0.3**
	baz=329							
L26K	**Log Cabin Wild**	**77.19**	**15**	P		**P**	17 32 15.3	**+0.5**
	baz=332							
M23K	**Glacier View**	**77.28**	**18**	P		**P**	17 32 15.3	**0.0**
	baz=329							
SCM	**Sheep Creek Mo**	**77.34**	**17**	P		**P**	17 32 15.6	**-0.1**
SCM				IAmb		IAmb	17 32 17.9	
	comp=Z,10.0nm,1.1s							
SCM	**Sheep Creek Mo**	**77.34**	**17**	P		**P**	17 32 15.6	**-0.1**
SCM				pmax		pmax		
	comp=Z,10.0nm,1.1s							
SCM	**Sheep Creek Mo**	**77.34**	**17**	P		**P**	17 32 15.6	**-0.1**
	baz=330							
HARP	**HAARP**	**77.35**	**16**	P		**P**	17 32 16.2	**+0.5**
	baz=331							
M24K	**Tolsona, Glenn**	**77.38**	**17**	P		**P**	17 32 16.4	**+0.5**
	baz=330							
KNK	**Knik Glacier**	**77.42**	**18**	P		**P**	17 32 16.6	**+0.5**
	baz=329							
L27K	**Beaver Creek,**	**77.48**	**15**			**P**	17 32 17.1	**+0.6**
L27K	**Beaver Creek,**	**77.48**	**15**	P		**P**	17 32 16.6	**+0.1**
	baz=334,SNR=5.1							
BCAR	**Beaver Creek A**	**77.48**	**15**	P		**P**	17 32 16.9	**+0.4**
BOSA	**Boshof**	**77.55**	**220**	P		**P**	17 32 17.1	**-0.2**
	comp=Z,2.7nm,0.8s,baz=352,slow=3.2,SNR=4.6							
	comp=Z,2.7nm,0.8s							
M26K	**Nabesna, AK**	**77.83**	**15**	P		**P**	17 32 18.6	**+0.2**
	baz=333							
KLU	**Klutina**	**77.97**	**17**	P		**P**	17 32 19.4	**+0.1**
	baz=331							
M27K	**Edge Creek, AK**	**78.10**	**15**	P		**P**	17 32 20.8	**+0.8**
M27K				IAmb		IAmb	17 32 21.5	
	comp=Z,8.1nm,1.0s							
M27K	**Edge Creek, AK**	**78.10**	**15**	P		**P**	17 32 20.5	**+0.5**
	baz=334,SNR=7.1							
N25K	**Chitina, Valde**	**78.18**	**16**	P		**P**	17 32 20.6	**+0.2**
	baz=332							
M29M	**Somme Creek**	**78.69**	**13**	P		**P**	17 32 23.5	**+0.3**
	baz=336							
BMRM	**Bremner River**	**78.74**	**17**	P		**P**	17 32 23.5	**0.0**
	baz=332							
EYAK	**Cordova Ski Ar**	**78.84**	**17**	P		**P**	17 32 24.1	**+0.3**
	baz=331							
M30M	**Minto, Yukon**	**78.87**	**13**	P		**P**	17 32 24.3	**+0.2**
	baz=338							
P23K	**Montague Islan**	**78.91**	**18**	P		**P**	17 32 24.4	**+0.1**
	baz=330							
YUK3	**Moose Creek**	**78.92**	**15**	P		**P**	17 32 24.6	**0.0**
	baz=335							
CRQE	**Cirque**	**79.28**	**16**	P		**P**	17 32 26.5	**0.0**
	baz=333							
CTG	**Chitna Glacier**	**79.47**	**15**	P		**P**	17 32 27.6	**+0.1**
	baz=334							
OHAK	**Old Harbor**	**79.59**	**23**	P		**P**	17 32 27.8	**-0.2**
OHAK	**Old Harbor**	**79.59**	**23**	P		**P**	17 32 27.9	**-0.1**
	baz=325							
M31M	**Drury Creek, Y**	**79.63**	**12**	P		**P**	17 32 28.1	**-0.1**
M31M				IAmb		IAmb	17 32 29.2	
	comp=Z,4.5nm,1.0s							
M31M	**Drury Creek, Y**	**79.63**	**12**	P		**P**	17 32 28.5	**+0.3**
	baz=340							
LOGN	**Logan Glacier**	**79.67**	**15**	P		**P**	17 32 27.6	**-1.0**
YUK4	**Talbot Arm**	**79.67**	**14**	P		**P**	17 32 28.4	**-0.2**
	baz=336							
FARO	**Faro, Yukon**	**79.77**	**11**	P		**P**	17 32 29.2	**+0.2**
N30M	**Aishikik Lake**	**79.86**	**13**	P		**P**	17 32 29.7	**+0.3**
	baz=338							
MESA	**MESA**	**80.04**	**16**	P		**P**	17 32 30.2	**-0.4**
	baz=334							
N31M	**Braeburn, Yuko**	**80.07**	**13**	P		**P**	17 32 30.9	**+0.4**
	baz=339							
YUK6	**Outpost Mounta**	**80.09**	**14**	P		**P**	17 32 31.0	**+0.1**
	baz=337							
HYT	**Haines Junctio**	**80.37**	**14**	P		**P**	17 32 32.8	**+0.5**
HYT				IAmb		IAmb	17 32 33.7	
	comp=Z,4.6nm,0.8s							
HYT	**Haines Junctio**	**80.37**	**14**	P		**P**	17 32 32.4	**+0.1**
	baz=337,SNR=5.2							
PINM	**Pinnacle**	**80.49**	**15**	P		**P**	17 32 33.0	**+0.1**
	baz=335							
O30N	**Mendenhall**	**80.68**	**13**	P		**P**	17 32 33.8	**0.0**
	baz=338							
YKA	**Yellowknife Ar**	**81.32**	**2**	P		**P**	17 32 36.8	**-0.3**
	comp=Z,2.5nm,0.5s,baz=350,slow=5.6,SNR=29							
	comp=Z,2.5nm,0.5s							
P33M	**Teslin, Yukon**	**81.77**	**12**	P		**P**	17 32 39.3	**-0.3**
P33M				IAmb		IAmb	17 32 40.2	
	comp=Z,6.7nm,0.7s							
P33M	**Teslin, Yukon**	**81.77**	**12**	P		**P**	17 32 39.3	**-0.3**
	baz=341,SNR=8.6							
PLBC	**Pleasant Camp**	**81.85**	**14**	P		**P**	17 32 40.1	**+0.1**
	baz=338							
SKAG	**Skagway**	**82.04**	**13**	P		**P**	17 32 40.6	**-0.4**
	baz=339							
WRA	**Warramunga Arr**	**82.16**	**122**	P		**P**	17 32 39.9	**-2.3**
	comp=Z,2.8nm,0.7s,baz=326,slow=4.8,SNR=39							
	comp=Z,2.8nm,0.7s							
WB2	**Warramunga Arr**	**82.17**	**122**	P		**P**	17 32 40.2	**-2.0**
WB2				IAmb		IAmb	17 32 41.1	
	comp=Z,7.6nm,0.9s							
P32M	**Atlin**	**82.21**	**12**	P		**P**	17 32 41.5	**-0.4**
	baz=340							
WR0	**Warramunga Arr**	**82.31**	**122**	P		**P**	17 32 40.8	**-2.1**
WR0				IAmb		IAmb	17 33 12.9	
	comp=Z,13nm,1.4s							
R33M	**Jennings River**	**82.84**	**11**	P		**P**	17 32 45.2	**-0.1**
	baz=343							
SIT	**Sitka**	**84.30**	**14**	P		**P**	17 32 52.5	**0.0**
	baz=339							
AS31	**Alice Springs**	**84.41**	**125**	P		**P**	17 32 51.7	**-1.9**
ASAR	**Alice Springs**	**84.41**	**125**	P		**P**	17 32 52.0	**-1.6**
	comp=Z,2.0nm,0.6s,baz=315,slow=4.7,SNR=48							
	comp=Z,2.0nm,0.6s							
ASAR	**Alice Springs**	**84.41**	**125**	P		**P**	17 32 51.8	**-1.8**
ASAR	**Alice Springs**	**84.41**	**125**	P		**P**	17 32 52.0	**-1.6**
TROLL	**Troll, Antarti**	**117.97**	**199**	PKPdf		**PKiKP**	17 39 06.0	**+0.6**
VNA3	**Neumayer Olymp**	**121.06**	**202**	PKPdf		**PKiKP**	17 39 11.2	**0.0**

IDC 04 17:23:06.4±2.1,2°94.N×124°86.E,h0km,mb3.4/3,
mbtmp3.4/3,Error ellipse: s-maj=195.6km
s-min=28.8km az=64.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.57**	**158**	P	P	17 28 28.6	**+0.3**
	1.3nm,0.9s,baz=337,slow=11,SNR=13						
	1.3nm,0.9s						
ASAR	**Alice Springs**	**27.87**	**162**	P	P	17 28 58.0	-0.1
	0.2nm,0.6s,baz=342,slow=8.0,SNR=5.6						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**57.16**	**326**	P	P	17 32 54.9	-0.3
	0.3nm,0.7s,baz=116,slow=6.6,SNR=2.1						
	0.3nm,0.7s						

MAN 04 17:24:29,13°23N×123°82E,h6km,Ms2.5,5C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.49**	**42**	*e*P	Pg	17 24 39.0	+0.5
PVCP				*e*S	Sb	17 24 46.3	-1.1
GQP	**Guinayangan**	**1.50**	**297**	*e*P	Pn	17 24 56.1	-0.3
GQP				*e*S	Sn	17 25 16.3	+0.1
JCNP	**Jose Panganiba**	**1.52**	**314**	*e*P	Pn	17 24 56.7	0.0
JCNP				*e*S	Sb	17 25 17.0	0.0
BOAC	**Boac**	**1.94**	**277**	*e*P	Pb	17 25 04.7	0.0
BOAC				*e*S	Sg	17 25 32.5	+1.2
RCP	**Roxas**	**1.96**	**212**	*e*P	Sn	17 25 27.2	-0.6

*AZER **04** 17:40:41.2±1.1,37°.84N×41°.85E,h7km,Error ellipse:*
s-maj=14.0km s-min=10.0km az=177.0
*IDC **04** 17:40:50.5±2.7,38°.26N×42°.78E,h0km,mb3.6/3,*
mbtmp3.5/6,ML3.0/3,Error ellipse: s-maj=54.7km
s-min=17.3km az=174.0
*ISK **04** 17:40:50.2,38°.26N×42°.85E,h5km,ML3.7/21*
*DDA **04** 17:40:50.5±0.0,38°.26N×42°.84E,h12km±1km,MW3.9*
*TEH **04** 17:40:50.6,38°.27N×42°.86E,h6km,ML3.7*
ISC 04 17:40:50.9±1.1,38°.25N±0°.02×42°.81E±0°.02,h3km±9km,
n116,σ1s50/149,mb3.5/3,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKDM	**Akdamar-Van**	**0.16**	**59**	PG	**Pg**	17 40 53.9	**-0.2**
AKDM				SG	**Sg**	17 40 55.6	**-0.7**
AKDM	**Akdamar-Van**	**0.16**	**59**	*e*Pg	**Pg**	17 40 53.8	**-0.3**
GEVA	**Gevas**	**0.21**	**71**	*e*Pg	**Pg**	17 40 54.6	**-0.4**
GEVA	**Gevas**	**0.21**	**71**	P	**Pg**	17 40 54.7	**-0.4**
GEVA				S	**Sg**	17 40 57.6	**-0.3**
TVAN	**Van**	**0.55**	**59**	*e*Pg	**Pg**	17 41 00.3	**-1.2**
TVAN	**Van**	**0.55**	**59**	P	**Pg**	17 41 00.3	**-1.2**
ADCV	**BITLIS_Adilcev**	**0.57**	**354**	*e*Pg	**Pg**	17 41 01.7	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.57**	**354**	P	**Pg**	17 41 01.7	**-0.1**
ADCV				S	**Sg**	17 41 09.8	**+0.6**
BLIS	**Bitlis-Merkez**	**0.57**	**288**	*e*Pg	**Pg**	17 41 01.9	**+0.1**
BLIS	**Bitlis-Merkez**	**0.57**	**288**	P	**Pg**	17 41 02.0	**+0.1**
BLIS				S	**Sg**	17 41 09.6	**+0.3**
VANB	**Van**	**0.58**	**52**	PG	**Pg**	17 41 00.2	**-1.8**
VANB				SG	**Sg**	17 41 07.9	**-1.6**
VANB	**Van**	**0.58**	**52**	*e*Pg	**Pg**	17 41 00.1	**-1.9**
GURO	**Guroymak-BITLI**	**0.68**	**297**	PG	**Pg**	17 41 03.8	**-0.2**
GURO	**Guroymak-BITLI**	**0.68**	**297**	*e*Pg	**Pg**	17 41 03.6	**-0.4**
MLAZ	**Malazgirt-MUS**	**0.92**	**347**	PG	**Pg**	17 41 07.9	**-0.6**
MLAZ				SG	**Sg**	17 41 20.8	**+0.4**
MLAZ	**Malazgirt-MUS**	**0.92**	**347**	*e*Pg	**Pg**	17 41 07.7	**-0.8**
HAKT	**HAKKARI**	**0.99**	**134**	*e*Pn	**Pg**	17 41 09.6	**-0.3**
HAKT	**HAKKARI**	**0.99**	**134**	P	**Pg**	17 41 09.6	**-0.3**
HAKT				S	**Sb**	17 41 24.6	**+0.2**
OZAP	**Van, Ozalp-Mer**	**1.02**	**66**	P	**Pg**	17 41 09.0	**-1.6**
MUSM	**Mu-Merkez**	**1.12**	**296**	*e*Pn	**Pg**	17 41 11.6	**-0.9**
MUSM	**Mu-Merkez**	**1.12**	**296**	P	**Pg**	17 41 11.6	**-0.9**
MUSM				S	**Sg**	17 41 26.4	**-0.6**
EKAR	**Karacoban**	**1.16**	**330**	P	**Pg**	17 41 12.3	**-1.0**
EKAR				S	**Sb**	17 41 29.6	**+0.1**
CUKT	**Cukurca**	**1.18**	**147**	PN	**Pg**	17 41 12.4	**-1.2**
CUKT	**Cukurca**	**1.18**	**147**	*e*Pn	**Pg**	17 41 12.2	**-1.4**
CUKT	**Cukurca**	**1.18**	**147**	P	**Pg**	17 41 12.1	**-1.5**
CUKT				S	**Sn**	17 41 30.4	**-0.8**
CLDR	**Caldiran**	**1.25**	**44**	PN	**Pg**	17 41 11.8	**-3.1**
BTMN	**Batman**	**1.26**	**254**	*e*Pn	**Pn**	17 41 15.8	**+0.2**
BTMN	**Batman**	**1.26**	**254**	P	**Pn**	17 41 15.9	**+0.2**
BTMN				S	**Sn**	17 41 34.1	**+1.0**
SVAN	**Silvan-Diyarba**	**1.27**	**266**	PN	**Pn**	17 41 15.8	**+0.1**
SVAN	**Silvan-Diyarba**	**1.27**	**266**	*e*Pn	**Pn**	17 41 15.7	**+0.1**
SVAN	**Silvan-Diyarba**	**1.27**	**266**	P	**Pn**	17 41 15.7	**+0.1**
SVAN				S	**Sn**	17 41 34.0	**+0.7**
AGRB	**Hanur-Agry**	**1.34**	**6**	PN	**Pg**	17 41 15.0	**-1.6**
AGRB	**Hanur-Agry**	**1.34**	**6**	*e*Pn	**Pg**	17 41 15.7	**-0.9**
YOVA	**Hakkari_Yksek**	**1.34**	**119**	*e*Pn	**Pg**	17 41 15.7	**-1.0**
YOVA	**Hakkari_Yksek**	**1.34**	**119**	P	**Pg**	17 41 15.8	**-1.0**
YOVA				S	**Sb**	17 41 35.2	**+0.5**
MIDY	**Mardin/Midyat-**	**1.39**	**234**	P	**Pn**	17 41 18.0	**+0.6**
MIDY				S	**Sn**	17 41 37.3	**+0.9**
VRTB	**Varto-Mus**	**1.40**	**311**	PN	**Pg**	17 41 16.7	**-1.0**
VRTB	**Varto-Mus**	**1.40**	**311**	*e*Pn	**Pg**	17 41 16.8	**-1.0**
DYDN	**Diyadin**	**1.47**	**28**	P	**Pn**	17 41 17.0	**-1.6**
SLHN	**Bingol, Solhan**	**1.57**	**298**	P	**Pg**	17 41 20.5	**-0.5**
SLHN				S	**Sg**	17 41 43.6	**+2.3**
KOTA	**Agri, Merkez-K**	**1.59**	**11**	P	**Pn**	17 41 19.4	**-0.8**
EATA	**Eleskirt**	**1.63**	**351**	P	**Pn**	17 41 20.3	**-0.7**
EATA				S	**Sn**	17 41 42.6	**-0.1**
KARO	**Karlova-Bingo**	**1.74**	**308**	PN	**Pn**	17 41 22.1	**-0.1**
BNGB	**Bingl**	**1.82**	**295**	PN	**Pb**	17 41 23.9	**-1.2**
MAKU	**Maku**	**1.84**	**52**	*e*Pn	**Pn**	17 41 22.7	**-0.9**
MARD	**Mardin**	**1.86**	**241**	P	**Pb**	17 41 24.3	**-1.3**
MARD				S	**Sg**	17 41 50.7	**+0.2**
KOPR	**Koprukoy-ERZUR**	**1.90**	**337**	PN	**Pn**	17 41 24.0	**-0.4**
HANI	**Diyarbakir_Han**	**1.90**	**276**	P	**Pb**	17 41 25.0	**-1.3**
IGDI	**IGDIR**	**1.90**	**31**	P	**Pn**	17 41 24.5	**+0.1**
IGDI				S	**Sn**	17 41 46.9	**-2.0**
HOMI	**Horasan**	**1.93**	**339**	P	**Pn**	17 41 24.8	**-0.1**
HOMI				S	**Sb**	17 41 52.3	**+0.7**
ERZM	**Erzurum**	**2.00**	**326**	P	**Pb**	17 41 27.6	**-0.6**
MAZI	**Mazidag**	**2.02**	**248**	PN	**Pb**	17 41 26.2	**-2.3**
YEDI	**Yedisu-Bingol**	**2.13**	**305**	PN	**Pn**	17 41 27.8	**+0.2**
HYR	**Heyderabad**	**2.17**	**47**	P	**Pn**	17 41 30.0	**+1.9**
	SNR=20						
HYR				S	**Sg**	17 42 05.8	**+5.2**
ISHB	**Shabestar**	**2.21**	**88**	*e*Pn	**Pn**	17 41 28.6	**-0.2**
EMRE	**Erzurum,Aziziy**	**2.28**	**322**	P	**Pb**	17 41 33.4	**+0.5**
NAX	**Nakhchivan**	**2.30**	**65**	P	**Pn**	17 41 31.1	**+1.2**
	SNR=14						
NAX				S	**Sg**	17 42 10.5	**+5.6**
IMRD	**Marand**	**2.32**	**77**	*e*Pn	**Pn**	17 41 30.8	**+0.6**
IMRD				*e*		17 41 34.8	
	comp=Z,6μm,0.9s						
SENK	**Senkaya-Erzuru**	**2.34**	**351**	PN	**Pn**	17 41 30.5	**0.0**
KARS	**Kars**	**2.39**	**5**	PN	**Pn**	17 41 30.6	**-0.6**
GNI	**Garni**	**2.42**	**38**	PN	**Pn**	17 41 30.8	**-0.9**
SBZ	**Shahbuz**	**2.44**	**61**	P	**Pn**	17 41 32.7	**+1.0**
	SNR=26						
SBZ				S	**Sg**	17 42 15.2	**+6.1**
EAK	**Akyaka**	**2.52**	**14**	P	**Pb**	17 41 36.5	**-0.4**
KOPT	**Kop Dagi**	**2.52**	**315**	P	**Pg**	17 41 38.5	**-0.8**
IAZR	**Azarshahr**	**2.57**	**102**	*e*Pn	**Pn**	17 41 35.5	**+1.7**
IAZR				*e*		17 41 47.3	
	comp=Z,4μm,0.5s						
ORD	**Ordubad**	**2.59**	**74**	P	**Pn**	17 41 34.6	**+0.8**
	SNR=60						
ORD				S	**Sg**	17 42 16.3	**+2.2**
ITBZ	**Tabriz**	**2.63**	**89**	*e*Pn	**Pn**	17 41 34.1	**-0.4**
TNCL	**Tunceli-Merkez**	**2.70**	**290**	P	**Pn**	17 41 37.7	**-0.6**
MAHB	**Mahabad**	**2.74**	**122**	*e*Pn	**Pn**	17 41 37.5	**+1.6**
MAHB				*e*		17 42 20.3	
	comp=Z,3μm,0.7s						
PTK	**Pertek**	**2.75**	**285**	PN	**Pn**	17 41 37.0	**+0.8**
ERZN	**Erzincan**	**2.75**	**300**	PN	**Pn**	17 41 36.8	**+0.7**
DDEM	**Demirkent**	**2.77**	**343**	P	**Pb**	17 41 41.4	**+0.2**
DBAD	**Bademkaya**	**2.90**	**343**	P	**Pn**	17 41 39.1	**+0.9**
DAGI	**Agillar**	**2.91**	**347**	P	**Pn**	17 41 39.3	**+1.0**
ELZG	**Elazig**	**3.01**	**276**	P	**Pn**	17 41 40.4	**+0.7**
SANL	**SANLIURFA_Merk**	**3.21**	**252**	P	**Pn**	17 41 42.4	**0.0**
URFA	**Urfa**	**3.25**	**257**	PN	**Pn**	17 41 43.8	**+0.8**
CHOM	**Cayeli-Rize**	**3.26**	**332**	PN	**Pn**	17 41 43.6	**+0.7**
IBST	**Bostanabad**	**3.27**	**98**	*e*Pn	**Pn**	17 41 44.4	**+1.0**
BCA	**Borcka**	**3.32**	**344**	PN	**Pn**	17 41 44.2	**+0.3**
IHRS	**Isparta**	**3.33**	**87**	*e*Pn	**Pn**	17 41 45.2	**+1.0**
KELT	**Kelkit**	**3.35**	**306**	P	**Pg**	17 41 54.6	**-0.5**
GDB	**GEDABAY**	**3.36**	**42**	P	**Pn**	17 41 46.2	**+1.6**
	SNR=9.2						
GDB				S	**Sg**	17 42 38.9	**-0.2**
QZX	**Qazax, Azerbai**	**3.44**	**34**	P	**Pn**	17 41 46.0	**+0.5**
	SNR=10						
QZX				S	**Sb**	17 42 37.3	**+2.6**
KEMA	**Kemaliye**	**3.52**	**288**	P	**Pn**	17 41 49.0	**+2.3**
ARPR	**Arapgir-MALATY**	**3.60**	**285**	PN	**Pn**	17 41 48.8	**+1.0**
SURC	**SANLIURFA_SURC**	**3.60**	**249**	P	**Pn**	17 41 47.6	**-0.1**
GANJ	**Ganja**	**3.63**	**48**	P	**Pn**	17 41 49.3	**+1.2**
	SNR=5.2						
QRD	**Qoradiz**	**3.73**	**70**	P	**Pn**	17 41 50.7	**+1.3**
	SNR=7.6						
QRD				S	**Sb**	17 42 46.2	**+3.2**
AGDM	**Agdam**	**3.83**	**60**	P	**Pn**	17 41 52.0	**+1.2**
	SNR=5.2						
AGDM				S	**Sb**	17 42 47.7	**+1.8**
ISRB	**Sarab**	**3.86**	**95**	*e*Pn	**Pn**	17 41 52.7	**+1.3**
BLQ	**Beylaqan**	**3.99**	**67**	P	**Pn**	17 41 55.6	**+2.6**
	SNR=10.0						
BLQ				S	**Sb**	17 42 55.4	**+5.0**
GRMI	**Germi**	**4.03**	**80**	*e*Pn	**Pn**	17 41 54.5	**+0.8**
DARE	**Darende-Malaty**	**4.19**	**276**	PN	**Pn**	17 41 57.4	**+1.5**
YRD	**Yardimli**	**4.31**	**79**	P	**Pn**	17 41 58.3	**+0.7**
	SNR=47						
YRD				S	**Sb**	17 42 57.9	**-2.2**
LRK	**Lerik**	**4.36**	**83**	P	**Pn**	17 41 59.5	**+1.2**
	SNR=18						
LRK				S	**Sb**	17 43 00.9	**-0.6**
GLBA	**Clilabad**	**4.48**	**75**	P	**Pn**	17 42 01.5	**+1.7**
	SNR=6.5						
GLBA				S	**Sb**	17 43 02.4	**-2.2**
IDHR	**Dehrash**	**4.56**	**140**	*e*Pn	**Pn**	17 42 02.8	**+1.7**
LKRN	**Lenkeran, Azer**	**4.71**	**82**	P	**Pn**	17 42 04.3	**+1.4**
	SNR=7.9						
LKRN				S	**Sb**	17 43 11.3	**+0.1**
ASTR	**Astara**	**4.71**	**84**	P	**Pn**	17 42 03.9	**+0.9**
	SNR=7.0						
ASTR				S	**Sb**	17 43 08.3	**-3.0**
ILIN	**Lien**	**4.71**	**134**	*e*Pn	**Pn**	17 42 04.9	**+1.7**
SNGE	**Sanandaj**	**4.82**	**129**	*e*Pn	**Pn**	17 42 06.6	**+2.0**
ZNJK	**Zanjan**	**4.93**	**107**	*e*Pn	**Pn**	17 42 07.5	**+1.3**
IGHG	**Ghaleghazi**	**4.95**	**141**	*e*Pn	**Pn**	17 42 07.9	**+1.5**
IKOM	**Komasi**	**5.56**	**135**	*e*Pn	**Pn**	17 42 16.4	**+1.6**
IDOB	**Doab**	**6.22**	**134**	*e*Pn	**Pn**	17 42 25.4	**+1.5**
IKFM	**Kafar-mosalman**	**6.24**	**138**	*e*Pn	**Pn**	17 42 25.1	**+1.2**
CHTH	**Charan**	**7.05**	**107**	*e*Pn	**Pn**	17 42 36.9	**+1.6**
BRTR	**Keskin Array B**	**7.29**	**285**	Pn	**Pn**	17 42 40.3	**+1.8**
	comp=Z,0.1nm,0.3s,baz=104,slow=12,SNR=6.7						
	comp=Z,1.2nm,0.8s						
IPIR	**Pirpir**	**8.62**	**128**	*e*Pn	**Pn**	17 42 58.3	**+1.5**
IGLO	**Ghaloghah**	**8.95**	**98**	*e*Pn	**Pn**	17 43 03.3	**+2.0**
AKASG	**Malin Array Be**	**15.75**	**327**	Pn	**Pn**	17 44 32.3	**-1.3**
	comp=Z,0.3nm,0.3s,baz=136,slow=11,SNR=5.2						
	comp=Z,0.2nm,0.4s						
AKTO	**Aktyubinsk**	**16.30**	**37**	Pn	**Pn**	17 44 39.5	**-1.3**
	comp=Z,0.1nm,0.3s,baz=240,slow=8.1,SNR=3.0						
	comp=Z,1.3nm,0.6s						
ARU	**Arti**	**21.00**	**25**	P	**P**	17 45 33.9	**-1.4**
	comp=Z,1.9nm,0.5s,baz=219,slow=5.9,SNR=4.7						
	comp=Z,1.9nm,0.5s						
KURBB	**Kurchatov Arra**	**28.07**	**52**	P	**P**	17 46 44.2	**+0.7**
	comp=Z,0.8nm,1.0s,baz=261,slow=9.2,SNR=4.4						
	comp=Z,0.8nm,1.0s						
MKAR	**Makanchi Array**	**30.07**	**61**	P	**P**	17 47 01.1	**-0.3**
	comp=Z,0.4nm,0.6s,baz=274,slow=8.5,SNR=4.4						
	comp=Z,0.4nm,0.6s						

IDC 04 17:42:00.6±1.9,4°41S×150°18E,h0km,mb4.0/3,
mbtmp4.0/3,Error ellipse: s-maj=69.2km s-min=24.3km
az=159.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.85**	**87**	Pn	Pn	17 42 33.5	0.0
	2.5nm,0.3s,baz=277,slow=8.4,SNR=1						
KRVT				Sn	Sn	17 42 49.1	-8.5
	4.3nm,0.3s,baz=274,slow=18,SNR=5.2						
WRA	**Warramunga Arr**	**21.83**	**224**	P	P	17 46 53.9	-0.9
	5.1nm,1.1s,baz=46,slow=11,SNR=11						
	5.1nm,1.1s						
ASAR	**Alice Springs**	**24.76**	**218**	P	P	17 47 23.6	-0.7
	1.5nm,0.9s,baz=49,slow=9.2,SNR=5.2						
	1.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**27.59**	**239**	P	P	17 47 51.1	+1.3
	4.2nm,0.7s,baz=55,slow=10,SNR=9.2						
	4.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**147.70**	**288**	PKPbc	PKPbc	18 01 47.4	-0.9
	0.9nm,0.9s,baz=81,slow=2.6,SNR=3.4						

*MDD **04** 17:44:45.0±0.3,41°.71N×8°.64W,h12km,mb_Lg2.6/12,*
Error ellipse: s-maj=3.4km s-min=1.7km az=104.0
*INMG **04** 17:44:45.4±2.2,41°.71N×8°.64W,h3km±4km,ML2.3,Error*
ellipse: s-maj=5.0km s-min=2.3km az=92.0
ISC 04 17:44:44.5±1.0,41°.74N±0°.02×8°.58W±0°.03,h17km±8km,
n38,σ1s74/83,1C-2D,Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

EBAD			Sn	**Sn**	**17 46 09.5**	**-2.4**
EBAD			Sg	**Sg**	**17 46 23.5**	**-4.2**
EBAD			*i* Vmb_Lg		17 46 27.2	
EVO	**Evora**	**3.23 172**	*e*Pn	**Pn**	**17 45 35.4**	**+1.0**
EVO			*e*Sn	**Sn**	**17 46 11.9**	**-0.6**
EVO			*e*Sg	**Sg**	**17 46 26.7**	**-1.6**
EVO			A	A	17 46 27.8	
	6.0nm,0.6s					
GUD	**Guadarrama**	**3.51 107**	Pn	**Pn**	**17 45 39.6**	**+1.2**
GUD			Sn	**Sn**	**17 46 19.3**	**-0.3**
GUD			Sg	**Sg**	**17 46 33.5**	**-3.8**
GUD			*i* Vmb_Lg		17 46 39.3	
PNCL	**Nicolau / Gran**	**3.62 179**	*e*Sn	**Sn**	**17 46 20.4**	**-1.7**
PNCL			A	A	17 46 51.4	
	2.9nm,0.7s					
PBAR	**Barrancos**	**3.75 161**	*e*Pn	**Pn**	**17 45 41.6**	**+0.1**
PBAR			*e*Sg	**Sg**	**17 46 43.4**	**-1.5**
PBAR			A	A	17 46 49.2	
	3.7nm,0.3s					
PAB	**San Pablo**	**3.89 123**	Pn	**Pn**	**17 45 44.3**	**+0.7**
PAB			Sn	**Sn**	**17 46 26.7**	**-2.1**
PAB			Sg	**Sb**	**17 46 44.5**	**+5.0**
PAB			*i* Vmb_Lg		17 46 53.7	
MESJ	**Messejana**	**3.90 176**	*e*Pn	**Pn**	**17 45 44.0**	**+0.4**
ESDC	**Sonseca Array**	**4.07 119**	Pn	**Pn**	**17 45 46.9**	**+0.9**
ESDC			Sn	**Sn**	**17 46 31.0**	**-2.2**
ESDC			Sg	**Sg**	**17 46 50.8**	**-4.3**
ELAN	**Lanestosa**	**4.08 67**	Pn	**Pn**	**17 45 46.3**	**+0.1**
ELAN			Sn	**Sn**	**17 46 31.5**	**-2.1**
ELAN			Sg	**Sg**	**17 46 51.5**	**-4.2**
ELAN			*i* Vmb_Lg		17 47 00.2	
EMIN	**Mina Concepcio**	**4.23 159**	Pn	**Pn**	**17 45 48.1**	**0.0**
EMIN			Sn	**Sn**	**17 46 33.7**	**-3.3**
EMIN			Sg	**Sb**	**17 46 54.2**	**+5.1**
EMIN			*i* Vmb_Lg		17 46 59.7	
PVAQ	**Vaqueiros**	**4.38 171**	*e*Pn	**Pn**	**17 45 50.4**	**+0.2**
ECAB	**El Cabril**	**4.39 145**	Pn	**Pn**	**17 45 50.7**	**+0.3**
ECAB			Sn	**Sn**	**17 46 38.5**	**-2.6**
ECAB			Sg	**Sb**	**17 46 59.5**	**+5.7**
ECAB			*i* Vmb_Lg		17 47 07.8	
PBDV	**Barranco-do-Ve**	**4.52 173**	*e*Sn	**Sn**	**17 46 42.0**	**-2.2**

*JMA **04** 17:56:37.9±0.2,25°N±1°×122°9E±0°.8, h28km±3km, MV2.7/10, NW OFF ISHIGAKIJIMA IS*
*IDC **04** 17:56:39.0±1.6,24°.28N×121°.99E, h0km, mb3.5/3, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=73.5km s-min=27.3km az=70.0*
ISC 04 17:56:40.7±1.5,24°.8N±0°.1×122°.99E±0°.08, h23km±12km, n11, σ1s10/16, mb3.5/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.29**	**176**	P	**Pb**	**Pb**	**17 56 46.9**	**-0.5**
YOJ				S	**Sb**	**Sb**	**17 56 52.8**	**+0.8**
JYNG	**Yonagunijimaku**	**0.30**	**187**	P	**Pb**	**Pb**	**17 56 46.8**	**-0.8**
JYNG				*e*S	**Sb**	**Sb**	**17 56 53.3**	**+1.0**
IRIF	**Iriomote-Funau**	**0.79**	**122**	P	**Pb**	**Pb**	**17 56 55.2**	**-0.6**
IRIF				*e*S	**Sn**	**Sn**	**17 57 07.6**	**0.0**
HATJ	**Hateruma jima**	**1.02**	**133**	P	**Pb**	**Pb**	**17 56 59.1**	**-0.6**
HATJ				*e*S	**Sn**	**Sn**	**17 57 14.9**	**+1.8**
JKRS	**Kuro-shima**	**1.06**	**119**	P	**Pb**	**Pb**	**17 56 59.5**	**-0.9**
JIJ	**Ishigaki jima**	**1.12**	**110**	P	**Pn**	**Pn**	**17 56 59.7**	**-1.3**
JIJ				*e*S	**Sn**	**Sn**	**17 57 15.8**	**+0.1**
JTJ	**Tarama**	**1.56**	**94**	P	**Pn**	**Pn**	**17 57 06.8**	**-0.3**
KSRS	**Korea Array**	**13.34**	**17**	Pn	**P**	**P**	**18 00 00.0**	**+1.9**
	0.1nm,0.3s,baz=196,slow=12,SNR=4.1 0.6nm,0.7s							
MKAR	**Makanchi Array**	**39.09**	**315**	P	**P**	**P**	**18 04 04.9**	**-1.2**
	0.3nm,0.7s,baz=108,slow=7.7,SNR=2.6 0.3nm,0.7s							
WRA	**Warramunga Arr**	**45.78**	**165**	P	**P**	**P**	**18 05 00.5**	**-0.2**
	1.4nm,0.9s,baz=347,slow=8.8,SNR=8.4 1.4nm,0.9s							
ASAR	**Alice Springs**	**49.28**	**167**	P	**P**	**P**	**18 05 28.2**	**+0.3**
	0.3nm,0.6s,baz=349,slow=10,SNR=5.0 0.3nm,0.6s							

*IDC **04** 18:03:17.2±0.7,29°.23S×61°.17E, h0km, mb3.9/9, mbtmp3.9/9, Error ellipse: s-maj=27.5km s-min=20.6km az=82.0*
ISC 04 18:03:18.6±0.7,29°.2S±0°.1×61°.0E±0°.2, h10km, n20, σ0s87/14, mb4.0/9, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.48**	**307**	Pn	**Pn**	**Pn**	**18 07 08.5**	**-1.7**
	baz=115,slow=14,SNR=2.1							
OPO				Sn	Sn	Sn	18 10 01.3	-12
	0.1nm,0.3s,baz=234,slow=16,SNR=2.4							
H08S1	**Diego Carcia H**	**23.98**	**29**	T	T	T	18 33 16.9	
	baz=204,slow=76,SNR=16							
H08S2	**Diego Garcia H**	**23.99**	**29**	T	T	T	18 33 17.5	
	baz=204,slow=76,SNR=10							
H08S3	**Diego Garcia H**	**24.00**	**29**	T	T	T	18 33 18.6	
	baz=204,slow=76,SNR=20							
H01W2	**Cape Leeuwin H**	**44.93**	**111**	T	T	T	18 59 14.0	
	baz=261,slow=74,SNR=16							
H01W3	**Cape Leeuwin H**	**44.94**	**111**	T	T	T	18 59 15.8	
	baz=261,slow=74,SNR=8.6							
H01W1	**Cape Leeuwin H**	**44.95**	**111**	T	T	T	18 59 15.6	
	baz=261,slow=74,SNR=18							
SNAA	**Sanae**	**54.41**	**200**	P	**P**	**P**	**18 12 45.6**	**+0.1**
	0.9nm,0.8s,baz=245,slow=14,SNR=2.2 0.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**59.85**	**42**	P	**P**	**P**	**18 13 24.4**	**-0.2**
	0.4nm,0.4s,baz=232,slow=6.8,SNR=4.1 0.4nm,0.4s							
QSPA	**South Pole Qui**	**60.97**	**180**	P	**P**	**P**	**18 13 31.5**	**-0.4**
	baz=254,slow=2.1							
VNDA	**Vanda**	**64.03**	**166**	P	**P**	**P**	**18 13 51.6**	**-0.3**
	0.7nm,0.7s,baz=261,slow=8.7,SNR=4.4 0.7nm,0.7s							
ASAR	**Alice Springs**	**64.54**	**104**	P	**P**	**P**	**18 13 55.6**	**-0.6**
	0.9nm,0.8s,baz=246,slow=6.4,SNR=7.0 0.9nm,0.8s							
WRA	**Warramunga Arr**	**66.36**	**100**	P	**P**	**P**	**18 14 07.4**	**-0.6**
	0.9nm,0.7s,baz=247,slow=5.9,SNR=4.5 0.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**71.06**	**298**	P	**P**	**P**	**18 14 38.3**	**+1.1**
	1.3nm,0.7s,baz=108,slow=5.3,SNR=6.8 1.3nm,0.7s							
BRTR	**Keskin Array B**	**73.15**	**338**	P	**P**	**P**	**18 14 49.1**	**-0.3**
	0.7nm,0.9s,baz=158,slow=3.7,SNR=4.2 0.7nm,0.9s							
MKAR	**Makanchi Array**	**78.03**	**15**	P	**P**	**P**	**18 15 17.7**	**+0.6**
	0.9nm,0.8s,baz=187,slow=4.6,SNR=6.4 0.9nm,0.8s							
ZALV	**Zalesovo Beam**	**85.31**	**14**	P	**P**	**P**	**18 15 55.6**	**+0.3**
	0.8nm,0.4s,baz=214,slow=5.2,SNR=4.9 0.8nm,0.4s							
YKA	**Yellowknife Ar**	**146.56**	**356**	PKPbc		**PKPbc**	**18 22 59.6**	**+0.1**
	0.8nm,0.5s,baz=352,slow=3.6,SNR=12							
PDAR	**Pinedale Array**	**164.47**	**333**	PKP		**PKPdf**	**18 23 23.2**	**+0.4**
	0.3nm,0.3s,baz=90,slow=1.4,SNR=4.4							
TXAR	**Lajitas Array**	**166.65**	**274**	PKP		**PKPdf**	**18 23 26.5**	**+1.7**
	0.3nm,0.7s,baz=90,slow=0.9,SNR=3.8							

*NEIC **04** 18:07:10.9±1.1,4°.8S±0°.1×154°.6E±0°.1, h464km±15km, mb4.4/16, Error ellipse: s-maj=21.8km s-min=14.2km az=72.0*
*IDC **04** 18:07:11.4±1.0,4°.92S×154°.47E, h454km±9km, mb3.0/8, mbtmp3.9/10, Error ellipse: s-maj=20.4km s-min=14.6km az=66.0*
ISC 04 18:07:09.9±0.6,4°.88S±0°.09×154°.70E±0°.09, h450km, n33, σ1s58/34, mb4.2/15, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.61**	**285**	P	**P**	**P**	**18 08 14.1**	**-0.1**
KRVT	**Keravat (AS076**	**2.72**	**282**	P	**P**	**P**	**18 08 15.9**	**+1.0**
	178nm,0.3s,baz=189,slow=0.6,SNR=16							
KRVT				S	**S**	**S**	**18 09 07.3**	**-0.4**
	57nm,0.4s,baz=72,slow=20,SNR=2.1							
HNR	**Honiara**	**6.90**	**131**	P	**P**	**P**	**18 08 56.7**	**+3.1**
	35nm,0.4s,baz=220,slow=17,SNR=5.0							
HNR	**Honiara**	**6.90**	**131**	P	**P**	**P**	**18 08 51.1**	**-2.5**
PMG	**Port Moresby**	**8.73**	**239**	P	**P**	**P**	**18 09 13.1**	**-0.1**
	11nm,0.9s,baz=106,slow=20,SNR=2.3							
PATS	**Pohnpei**	**12.18**	**17**	P	**P**	**P**	**18 09 49.5**	**-1.3**
COEN	**Coen**	**14.50**	**231**	P	**P**	**P**	**18 10 16.8**	**+1.0**
KOUNC	**Koumac, New Ca**	**18.16**	**150**	P	**P**	**P**	**18 10 49.8**	**-4.4**
DZM	**Mont Dzumac**	**20.53**	**147**	P	**P**	**P**	**18 11 18.3**	**+2.0**
	3.7nm,0.5s,baz=282,slow=6.2,SNR=12 3.7nm,0.5s							
DZM	**Mont Dzumac**	**20.53**	**147**	P	**P**	**P**	**18 11 13.5**	**-2.8**
SAUI	**Saumlaki**	**23.45**	**261**	P	**P**	**P**	**18 11 43.1**	**+0.4**
WR0	**Warramunga Arr**	**24.69**	**231**	P	**P**	**P**	**18 11 54.2**	**+0.4**
WR0				IAmb	IAmb	IAmb	18 12 38.3	
	comp=Z,11nm,1.4s							
WB0	**Warramunga Arr**	**24.70**	**231**	P	**P**	**P**	**18 11 53.1**	**-0.7**
WB0				IAmb	IAmb	IAmb	18 12 30.5	
	comp=Z,19nm,1.5s							
WB2	**Warramunga Arr**	**24.83**	**231**	P	**P**	**P**	**18 11 54.8**	**-0.1**
WB2				IAmb	IAmb	IAmb	18 12 25.5	
	comp=Z,10nm,1.3s							
WRA	**Warramunga Arr**	**24.84**	**231**	P	**P**	**P**	**18 11 54.8**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=55,slow=8.4,SNR=22 comp=Z,0.8nm,0.4s							
WRA	**Warramunga Arr**	**24.84**	**231**	P	**P**	**P**	**18 11 54.2**	**-0.8**
ASAR	**Alice Springs**	**27.40**	**225**	P	**P**	**P**	**18 12 16.7**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=55,slow=9.2,SNR=16 comp=Z,0.6nm,0.5s							
KNRA	**Kununurra**	**27.64**	**245**	P	**P**	**P**	**18 12 19.1**	**-0.7**
KNRA				IAmb	IAmb	IAmb	18 12 36.8	
	comp=Z,34nm,1.4s							
STKA	**Stephens Creek**	**29.54**	**203**	P	**P**	**P**	**18 12 36.5**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=20,slow=12,SNR=5.5 comp=Z,0.8nm,0.4s							
FITZ	**Fitzroy Crossi**	**31.29**	**243**	P	**P**	**P**	**18 12 50.6**	**-1.1**
BBOO	**Buckleboo**	**32.79**	**210**	P	**P**	**P**	**18 13 04.4**	**+0.1**
BBOO				IAmb	IAmb	IAmb	18 13 05.7	
	comp=Z,26nm,1.4s							
FORT	**Forrest**	**35.95**	**221**	P	**P**	**P**	**18 13 30.8**	**-0.2**
FORT				IAmb	IAmb	IAmb	18 14 07.9	
	comp=Z,30nm,1.1s							
MBWA	**Marble Bar**	**37.58**	**241**	P	**P**	**P**	**18 13 43.9**	**-0.9**
MBWA				IAmb	IAmb	IAmb	18 14 24.4	
	comp=Z,18nm,1.3s							
PSA00	**Pilbara Seismi**	**37.63**	**241**	P	**P**	**P**	**18 13 42.9**	**-2.2**
PSA00	**Pilbara Seismi**	**37.63**	**241**	P	**P**	**P**	**18 13 42.4**	**-2.7**
PSA00				IAmb	IAmb	IAmb	18 14 13.4	
	comp=Z,22nm,1.4s							
BKZ	**Black Stump Fm**	**39.43**	**153**	P	**P**	**P**	**18 14 00.2**	**+0.5**
TUWZ	**Tuamarina**	**40.26**	**157**	P	**P**	**P**	**18 14 07.6**	**+1.4**
MJAR	**Matsushiro Arr**	**43.99**	**341**	P	**P**	**P**	**18 14 35.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=157,slow=16,SNR=2.7 comp=Z,0.7nm,0.5s							
SONM	**Songino Array**	**67.41**	**327**	P	**P**	**P**	**18 17 20.9**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=112,slow=17,SNR=2.4 comp=Z,0.2nm,0.4s							
VNDA	**Vanda**	**72.69**	**178**	P	**P**	**P**	**18 17 51.9**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=354,slow=5.9,SNR=2.8 comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**81.63**	**319**	P	**P**	**P**	**18 18 41.0**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=89,slow=5.1,SNR=5.1 comp=Z,0.5nm,0.6s							
QSPA	**South Pole Qui**	**85.08**	**180**	P	**P**	**P**	**18 18 57.8**	**+0.8**
TORD	**Torodi Ar. Bea**	**152.12**	**289**	PKPbc		**PKPbc**	**18 26 14.0**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=52,slow=2.3,SNR=3.2							

*NOU **04** 18:17:00.9,21°.80S×170°.33E, h0km, MLv4.2/9, Southeast of Loyalty Islands*
*IDC **04** 18:17:06.3±8.3,22°.14S×170°.17E, h90km±51km, mb3.4/3, mbtmp3.6/4, ML3.3/1, MS3.9/1, Error ellipse: s-maj=111.3km s-min=61.1km az=5.0*
ISC 04 18:16:59.9±2.5,22°.0S±0°.1×170°.6E±0°.2, h51km, n12, σ2s06/12, mb3.4/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**2.96**	**258**	P	**Pn**	**Pn**	**18 17 46.8**	**+2.5**
YATNC	**Mamie plateau,**	**3.42**	**268**	P	**Pn**	**Pn**	**18 17 51.6**	**+0.9**
OUENC	**Ouen Island, N**	**3.48**	**263**	P	**Pn**	**Pn**	**18 17 53.8**	**+2.3**
DZM	**Mont Dzumac**	**3.83**	**268**	P	**Pn**	**Pn**	**18 17 58.4**	**+1.9**
	2.8nm,0.3s,baz=97,slow=18,SNR=93							
DZM				S	**Sn**	**Sn**	**18 18 38.4**	**-1.8**
	48nm,0.3s,baz=127,slow=20,SNR=24 8.1nm,0.4s							
DZM	**Mont Dzumac**	**3.83**	**268**	P	**Pn**	**Pn**	**18 17 58.5**	**+2.1**
NOUC	**Port Laguerre**	**3.96**	**268**	P	**Pn**	**Pn**	**18 18 00.1**	**+2.0**
RTV	**Rentapao**	**4.65**	**334**	P	**Pn**	**Pn**	**18 18 09.2**	**+1.6**
DVP	**Devils Point**	**4.81**	**332**	P	**Pn**	**Pn**	**18 18 11.2**	**+1.4**
STKA	**Stephens Creek**	**27.57**	**243**	P	**P**	**P**	**18 22 39.7**	**-2.5**
	2.6nm,0.9s,baz=78,slow=19,SNR=3.9 2.6nm,0.9s							
ASAR	**Alice Springs**	**33.78**	**260**	P	**P**	**P**	**18 23 37.3**	**+0.2**
	0.4nm,0.7s,baz=72,slow=8.3,SNR=13 0.4nm,0.7s							
WRA	**Warramunga Arr**	**33.85**	**267**	P	**P**	**P**	**18 23 37.0**	**-0.7**
	0.3nm,0.6s,baz=102,slow=8.4,SNR=6.9 0.3nm,0.6s							
JCJ	**Chichijima**	**56.01**	**329**	LR	LR		18 48 56.2	
	comp=Z,112nm,21.1s,baz=104,slow=34							

IDC 04 18:18:49.0±4.9,14°.86S×172°.89W, h65km±41km, mb3.0/3, mbtmp3.3/3, Error ellipse: s-maj=156.8km s-min=26.4km az=151.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.43**	**49**	P	P	Pn	18 19 13.2	+0.2
	37nm,0.3s,baz=231,slow=13,SNR=17							
AFI				S		Sn	18 19 30.9	-0.1
	189nm,0.4s,baz=180,slow=20,SNR=11							
WRA	**Warramunga Arr**	**50.45**	**256**	P	P	P	18 27 40.9	+0.3
	0.3nm,0.8s,baz=95,slow=6.4,SNR=1.3 0.3nm,0.8s							
ASAR	**Alice Springs**	**50.75**	**251**	P	P	P	18 27 42.3	-0.5
	0.5nm,0.6s,baz=87,slow=7.9,SNR=8.2 0.5nm,0.6s							
TXAR	**Lajitas Array**	**79.90**	**56**	P	P	P	18 30 51.5	+0.2
	0.1nm,0.4s,baz=186,slow=2.5,SNR=1.9 0.1nm,0.4s							

*IDC **04** 18:43:34.2±2.7, 18°.71N×145°.48E, h193km±26km, mb3.2/8, mbtmp3.8/9, Error ellipse: s-maj=29.4km s-min=18.3km az=84.0*
*NEIC **04** 18:43:34.4±0.9, 18°.63N±0°.07×145°.7E±0°.4, h189km±14km, mb4.3/13, Error ellipse: s-maj=53.0km s-min=7.6km az=97.0*
ISC 04 18:43:34.6±0.7, 18°.68N±0°.06×145°.5E±0°.2, h200km, n25, σ0s88/27, mb3.6/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.10**	**187**	P	**Pn**	**Pn**	**18 44 51.2**	**+0.8**
	39nm,0.3s,baz=180,slow=4.7,SNR=5.3							
GUMO				S	**Sn**	**Sn**	**18 45 49.4**	**-0.7**
	22nm,0.3s,baz=350,slow=16,SNR=1.5							
GUMO	**Guam**	**5.10**	**187**	Pn	**Pn**	**Pn**	**18 44 49.7**	**-0.6**
GUMO				Sn	**Sn**	**Sn**	**18 45 49.4**	**-0.7**
JGF	**Kuroka**	**18.32**	**339**	P	**Pn**	**Pn**	**18 47 35.6**	**-0.8**
MAJO	**Matsushiro**	**18.91**	**342**	P	**Pn**	**Pn**	**18 47 41.9**	**-1.3**
JMM	**Marumori**	**19.55**	**349**	P	**Pn**	**Pn**	**18 47 48.6**	**-2.1**
JSD	**Sado**	**20.29**	**343**	P	**P**	**P**	**18 47 56.1**	**+1.2**
JSD				IAmb	IAmb	IAmb	18 48 29.8	
	comp=Z,12nm,1.4s							
MANU	**Manus Island**	**20.68**	**175**	P	**P**	**P**	**18 47 58.8**	**-0.6**
MANU				IAmb	IAmb	IAmb	18 48 01.6	
	comp=Z,5.5nm,0.8s							
COEN	**Coen**	**32.51**	**184**	P	**P**	**P**	**18 49 47.5**	**+0.7**
MTN	**Manton Dam**	**34.37**	**205**	P	**P**	**P**	**18 50 02.2**	**-0.6**
WB0	**Warramunga Arr**	**39.73**	**196**	P	**P**	**P**	**18 50 48.2**	**+0.4**
WB0				IAmb	IAmb	IAmb	18 51 01.3	
	comp=Z,11nm,1.4s							
WR0	**Warramunga Arr**	**39.87**	**196**	P	**P**	**P**	**18 50 48.9**	**-0.1**
WR0				IAmb	IAmb	IAmb	18 51 30.2	
	comp=Z,7.3nm,1.2s							
WRAB	**Tennant Creek**	**39.90**	**196**	P	**P**	**P**	**18 50 49.4**	**+0.1**
WRAB				IAmb	IAmb	IAmb	18 51 23.0	
	comp=Z,9.7nm,0.8s							
WB2	**Warramunga Arr**	**39.91**	**196**	P	**P**	**P**	**18 50 49.5**	**+0.1**
WB2				IAmb	IAmb	IAmb	18 50 53.7	
	comp=Z,12nm,1.2s							
WRA	**Warramunga Arr**	**39.91**	**196**	P	**P**	**P**	**18 50 49.8**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=14,slow=8.5,SNR=6.5 comp=Z,0.7nm,0.3s							
FITZ	**Fitzroy Crossi**	**41.42**	**209**	P	**P**	**P**	**18 51 02.5**	**+0.7**
FITZ				IAmb	IAmb	IAmb	18 51 29.3	
	comp=Z,11nm,1.4s							
SONM	**Songino Array**	**43.02**	**322**	P	**P**	**P**	**18 51 15.5**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=135,slow=8.9,SNR=2.4 comp=Z,0.4nm,0.6s							
AS31	**Alice Springs**	**43.58**	**195**	P	**P**	**P**	**18 51 18.4**	**-0.7**
ASAR	**Alice Springs**	**43.58**	**195**	P	**P**	**P**	**18 51 19.4**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=17,slow=6.1,SNR=13 comp=Z,0.2nm,0.4s							
ASAR	**Alice Springs**	**43.58**	**195**	P	**P**	**P**	**18 51 18.8**	**-0.3**
MKAR	**Makanchi Array**	**58.32**	**314**	P	**P**	**P**	**18 53 09.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=87,slow=7.6,SNR=2.6 comp=Z,0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**61.19**	**318**	P	**P**	**P**	**18 53 27.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=96,slow=7.7,SNR=1.9 comp=Z,0.2nm,0.3s							
YKA	**Yellowknife Ar**	**78.10**	**28**	P	**P**	**P**	**18 55 10.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=313,slow=5.0,SNR=2.6 comp=Z,0.4nm,0.5s							
NVAR	**Mina Array Bea**	**83.31**	**52**	P	**P**	**P**	**18 55 39.7**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=268,slow=6.3,SNR=7.1 comp=Z,0.8nm,0.7s							
FINES	**FINESS Array B**	**86.81**	**335**	P	**P**	**P**	**18 55 55.0**	**-1.1**
	comp=Z,1.9nm,0.9s,baz=51,slow=5.5,SNR=3.8 comp=Z,1.9nm,0.9s							
LPAZ	**La Paz**	**147.88**	**91**	PKPab		**PKPab**	**19 03 02.4**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=291,slow=7.9,SNR=2.2							

*SOME **04** 18:43:55.7, 38°.78N×72°.82E, h5km*
*NNC **04** 18:44:02.8±1.9, 39°.26N×72°.20E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=15.6km s-min=9.4km az=178.0*
*IDC **04** 18:44:04.5±5.5, 38°.93N×72°.66E, h93km±49km, mb3.4/4, mbtmp3.6/9, Error ellipse: s-maj=50.8km s-min=28.8km az=33.0*
ISC 04 18:44:03.1±1.7, 39°.28N±0°.10×72°.21E±0°.05, h10km, n35, σ2s64/45, mb3.8/4, 9C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.06**	**21**	P	**Pn**	**Pn**	**18 44 53.0**	**+1.1**
	SNR=50							
IUG	**luzhnay**	**3.31**	**331**	*e*P	**Pg**	**Pb**	**18 45 10.9**	**+4.5**
	996nm,0.6s							
IUG				*e*S	Sg	Sb	18 46 04.6	+15
	88nm,0.9s							
IUG	**luzhnay**	**3.31**	**331**	Pg	**Pb**	**Pb**	**18 45 01.2**	**-0.6**
	654nm,0.8s							
IUG				Lg	Lg	Lg	18 45 45.1	
	93nm,0.5s							
UCH	**Uchtor**	**3.42**	**30**	P	**Pn**	**Pn**	**18 44 58.1**	**+1.2**
	SNR=15							
MRKS	**Merke**	**3.54**	**12**	*e*P	**Pb**	**Pb**	**18 45 06.4**	**+0.5**
	12nm,0.6s							
MRKS				*e*S	**Sg**	**Sg**	**18 45 57.4**	**+0.5**
	20nm,0.5s							
MRKS	**Merke**	**3.54**	**12**	Pg	**Pb**	**Pb**	**18 45 08.2**	**+2.3**
	12nm,0.6s							
MRKS				Lg	Lg	Lg	18 45 57.4	
	20nm,0.5s							
EKS2	**Erkin-Say**	**3.58**	**19**	P	**Pn**	**Pn**	**18 44 59.7**	**+0.9**
	SNR=6.5							
DZA	**Taraz**	**3.67**	**350**	*e*P	**Pg**	**Pb**	**18 45 15.8**	**+2.5**
	36nm,0.1s							
DZA				*e*S	Sg	Sb	18 46 13.9	+13
	48nm,0.5s							
DZA	**Taraz**	**3.67**	**350**	Pg	**Pb**	**Pb**	**18 45 06.2**	**-1.8**
	102nm,0.4s							
DZA				Lg	Lg	Lg	18 45 54.1	
	111nm,0.5s							
AAK	**Ala-Archa**	**3.77**	**27**	P	**Pn**	**Pn**	**18 45 04.1**	**+2.7**
	14nm,0.4s,baz=192,slow=7.0,SNR=12							
AAK				S	**Sb**	**Sb**	**18 45 53.0**	**-2.6**
	13nm,0.7s,baz=129,slow=22,SNR=11							
AAK	**Ala-Archa**	**3.77**	**27**	P	**Pn**	**Pn**	**18 45 04.2**	**+2.7**
	SNR=8.9							
KK31	**Karatay Array**	**4.03**	**342**	⇑Pn	**Pn**	**Pn**	**18 45 07.0**	**+2.2**
	19nm,0.8s,baz=146,slow=11,SNR=116							
KK31				⇑Sn	**Sb**	**Sb**	**18 46 01.1**	**-1.7**
	19nm,0.9s,baz=164,slow=26,SNR=4.9							
CHMS	**Chumysh**	**4.18**	**27**	P	**Pn**	**Pn**	**18 45 09.9**	**+2.9**
	SNR=9.7							
CHMS	**Chumysh**	**4.18**	**27**	⇑Pn	**Pn**	**Pn**	**18 45 08.6**	**+1.7**
	13nm,0.7s							
CHMS				⇓Sn	**Sn**	**Sn**	**18 46 00.1**	**+4.3**
	9.0nm,0.7s							
TKM2	**Tokmak 2**	**4.45**	**34**	P	**Pn**	**Pn**	**18 45 12.8**	**+2.0**
	SNR=5.3							
TKM2	**Tokmak 2**	**4.45**	**34**	⇑Pn	**Pn**	**Pn**	**18 45 12.4**	**+1.6**
	2.5nm,0.7s							
TKM2				⇑Pg	**Pb**	**Pb**	**18 45 24.2**	**+2.8**
	7.2nm,0.7s							
TKM2				⇑Lg	Lg	Lg	18 46 27.0	
	23nm,1.2s							
KST	**Kastek**	**4.71**	**36**	*e*P	**Pb**	**Pb**	**18 45 25.1**	**-0.7**
	4.8nm,0.7s							
KST				*e*S	**Sg**	**Sg**	**18 46 29.2**	**-4.9**
	13nm,0.6s							
KST	**Kastek**

n93,σ1ᵍ78/183, 1C-3D, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EPF	**Esparros**	**0.11**	**103**	*e*Pg	**Pg**	**18 58 13.0**	**+0.1**
EPF				*e*Sg	**Sg**	**18 58 15.5**	**0.0**
	422nm,0.2s						
EPF	**Esparros**	**0.11**	**103**	Pg	**Pg**	**18 58 13.0**	**+0.1**
EPF				Sg	**Sg**	**18 58 15.5**	**0.0**
PYLO	**Lourdes**	**0.18**	**284**	P	**Pb**	**18 58 14.2**	**+1.0**
PYLO				S	**Sb**	**18 58 17.2**	**+1.3**
	13µm,0.2s						
PYLO	**Lourdes**	**0.18**	**284**	⇓Pg	**Pb**	**18 58 13.7**	**+0.6**
PYLO				Sg	**Sb**	**18 58 16.9**	**+1.0**
VIEF	**Viey**	**0.21**	**216**	⇓Pg	**Pb**	**18 58 13.2**	**-0.8**
VIEF				Sg	**Sb**	**18 58 15.9**	**-1.4**
ECHI	**Chisagues Biel**	**0.39**	**180**	Pg	**Pg**	**18 58 16.0**	**-1.1**
ECHI				Sg	**Sg**	**18 58 20.3**	**-2.4**
ECHI	**Chisagues Biel**	**0.39**	**180**	Pg	**Pg**	**18 58 16.0**	**-1.1**
ECHI				Sg	**Sg**	**18 58 20.3**	**-2.4**
ETSF	**Etsaut**	**0.57**	**254**	*e*Pg	**Pb**	**18 58 19.9**	**-0.5**
ETSF				*e*Sg	**Sg**	**18 58 27.0**	**-1.1**
	187nm,0.2s						
ETSF	**Etsaut**	**0.57**	**254**	Pg	**Pb**	**18 58 19.9**	**-0.5**
CARA	**Val d'Aran**	**0.58**	**127**	P	**Pg**	**18 58 20.2**	**-0.4**
CARA				S	**Sg**	**18 58 27.5**	**-0.9**
	293nm,0.2s						
CANF	**Canfranc**	**0.60**	**241**	⇓Pg	**Pb**	**18 58 20.0**	**-0.9**
CANF				Sg	**Sg**	**18 58 27.6**	**-1.3**
ATE	**Arette**	**0.65**	**273**	P	**Pb**	**18 58 21.9**	**+0.1**
ATE				S	**Sb**	**18 58 31.3**	**+0.7**
	37nm,0.2s						
ATE	**Arette**	**0.65**	**273**	⇑Pg	**Pb**	**18 58 21.3**	**-0.5**
ATE				Sg	**Sb**	**18 58 30.9**	**+0.4**
CTRE	**Tremp**	**0.85**	**149**	P	**Pb**	**18 58 24.3**	**-0.9**
CTRE				S	**Sb**	**18 58 35.4**	**-0.9**
	7.7nm,0.2s						
CEST	**Esterri de Car**	**0.91**	**120**	P	**Pb**	**18 58 25.9**	**-0.3**
CEST				S	**Sb**	**18 58 38.2**	**+0.2**
	30nm,0.1s						
CSOR	**Sort**	**0.97**	**134**	P	**Pb**	**18 58 27.0**	**-0.4**
CSOR				S	**Sb**	**18 58 39.4**	**-0.5**
	18nm,0.2s						
SJPF	**Ste Jean**	**1.04**	**274**	*e*Pn	**Pb**	**18 58 28.7**	**+0.3**
SJPF	**Ste Jean**	**1.04**	**274**	*e*Pg	**Pn**	**18 58 29.6**	**+1.0**
SJPF				*e*Sg	**Sb**	**18 58 43.2**	**+1.5**
	16nm,0.2s						
SJPF	**Ste Jean**	**1.04**	**274**	Pg	**Pn**	**18 58 29.6**	**+1.0**
SJPF				Sg	**Sb**	**18 58 43.2**	**+1.5**
OSSF	**Osses**	**1.08**	**281**	Pg	**Pb**	**18 58 29.6**	**+0.5**
EORO	**Oroz-Betelu**	**1.11**	**262**	Pg	**Pn**	**18 58 29.9**	**+0.2**
EORO				Sg	**Sn**	**18 58 45.4**	**+0.8**
EORO	**Oroz-Betelu**	**1.11**	**262**	Pg	**Pn**	**18 58 29.9**	**+0.2**
EORO				Sg	**Sn**	**18 58 45.4**	**+0.8**
EORO				*i* Vmb_Lg		18 58 50.3	
PAND	**Andorre**	**1.13**	**118**	P	**Pb**	**18 58 30.0**	**-0.1**
PAND				S	**Sb**	**18 58 45.2**	**+0.7**
	27nm,0.2s						
PAND	**Andorre**	**1.13**	**118**	Pg	**Pb**	**18 58 30.7**	**+0.6**
ARBS	**La Rabassa**	**1.17**	**121**	P	**Pn**	**18 58 30.7**	**0.0**
ARBS				S	**Sb**	**18 58 46.2**	**+0.5**
	27nm,0.3s						
CORG	**Organya**	**1.17**	**134**	P	**Pn**	**18 58 30.6**	**+0.1**
CORG				S	**Sb**	**18 58 45.7**	**+0.1**
	12nm,0.3s						
CAVN	**Les Avellanes**	**1.24**	**160**	P	**Pn**	**18 58 31.4**	**-0.1**
CAVN				S	**Sb**	**18 58 47.0**	**-0.6**
	54nm,0.2s						
EALK	**Alkurruntz**	**1.25**	**278**	Pg	**Pb**	**18 58 33.1**	**+1.0**
EALK	**Alkurruntz**	**1.25**	**278**	Pg	**Pb**	**18 58 33.1**	**+1.0**
EALK				Sg	**Sn**	**18 58 49.9**	**+1.8**
EALK				*i* Vmb_Lg		18 58 54.8	
EALK	**Alkurruntz**	**1.25**	**278**	Pn	**Pn**	**18 58 31.7**	**+0.1**
EARA	**Aranguren**	**1.33**	**258**	Pn	**Pn**	**18 58 33.4**	**+0.7**
EARA	**Aranguren**	**1.33**	**258**	Pn	**Pn**	**18 58 33.4**	**+0.7**
EARA				Sn	**Sn**	**18 58 49.7**	**-0.2**
EARA				*i* Vmb_Lg		18 58 55.7	
FNEB	**Nbias**	**1.42**	**95**	P	**Pb**	**18 58 35.4**	**+0.6**
FNEB				S	**Sg**	**18 58 54.5**	**-0.2**
	20nm,0.2s						
FNEB	**Nbias**	**1.42**	**95**	Pn	**Pb**	**18 58 36.2**	**+1.3**
ESAC	**San Caprasio**	**1.42**	**200**	Pg	**Pn**	**18 58 34.8**	**+0.9**
ESAC	**San Caprasio**	**1.42**	**200**	Pg	**Pn**	**18 58 34.8**	**+0.9**
ESAC				Sg	**Sb**	**18 58 53.9**	**+1.2**
ESAC				*i* Vmb_Lg		18 58 54.7	
CLLI	**Llivia**	**1.43**	**113**	P	**Pb**	**18 58 35.4**	**+0.1**
CLLI				S	**Sg**	**18 58 54.9**	**-0.4**
	14nm,0.3s						
MONQ	**Montcuq**	**1.50**	**29**	Pn	**Pn**	**18 58 35.7**	**+0.7**
MONQ				Pg	**Pg**	**18 58 39.3**	**+1.4**
MONQ				Sn	**Sg**	**18 58 59.8**	**+2.3**
EMIR	**Miracle**	**1.51**	**139**	Pn	**Pn**	**18 58 35.9**	**+0.8**
EMIR				Pg	**Pb**	**18 58 37.2**	**+0.8**
EMIR				Sg	**Sg**	**18 58 57.3**	**-0.4**
EMIR	**Miracle**	**1.51**	**139**	Pn	**Pn**	**18 58 35.9**	**+0.8**
EMIR				Pg	**Pb**	**18 58 37.2**	**+0.8**
EMIR				Sn	**Sn**	**18 58 54.1**	**-0.2**
EMIR				Sg	**Sg**	**18 58 57.3**	**-0.4**
EMIR				*i* Vmb_Lg		18 58 58.9	
MTLF	**Montolieu**	**1.51**	**78**	*e*P	**Pn**	**18 58 35.9**	**+0.8**
MTLF	**Montolieu**	**1.51**	**78**	*e*Pg	**Pb**	**18 58 37.5**	**+1.1**
MTLF				*e*Sn	**Sn**	**18 58 52.1**	**-2.2**
MTLF				*e*Sg	**Sb**	**18 58 56.6**	**+1.4**
	62nm,0.3s						
CBRU	**Bruguera**	**1.66**	**117**	P	**Pb**	**18 58 39.1**	**+0.1**
CBRU				S	**Sb**	**18 59 00.5**	**+0.9**
	24nm,0.4s						
CORI	**Orista**	**1.75**	**128**	P	**Pn**	**18 58 39.9**	**+1.5**
CORI				S	**Sb**	**18 59 02.4**	**+0.3**
	51nm,0.4s						
FILF	**Fillols**	**1.81**	**105**	P	**Pn**	**18 58 40.2**	**+0.8**
FILF				S	**Sn**	**18 59 02.1**	**+0.2**
	8.9nm,0.3s						
EPOB	**Poblet**	**1.82**	**159**	P	**Pn**	**18 58 40.7**	**+1.2**
EPOB				S	**Sn**	**18 59 03.1**	**+1.0**
	15nm,0.4s						
EPOB	**Poblet**	**1.82**	**159**	Pn	**Pn**	**18 58 40.6**	**+1.2**
EPOB				Pg	**Pb**	**18 58 42.6**	**+0.7**
EPOB				Sn	**Sn**	**18 59 02.4**	**+0.2**
EPOB				Sg	**Sb**	**18 59 05.1**	**+0.7**
EPOB				*i* Vmb_Lg		18 59 05.6	
LFF	**La Frestale**	**1.93**	**12**	*e*Pn	**Pn**	**18 58 40.5**	**-0.3**
LFF	**La Frestale**	**1.93**	**12**	*e*Pg	**Pb**	**18 58 45.9**	**+2.4**
LFF				*e*Sg	**Sg**	**18 59 11.1**	**+0.1**
	22nm,0.3s						
CBEU	**Beuda**	**2.00**	**113**	P	**Pn**	**18 58 44.0**	**+2.1**
CBEU				S	**Sb**	**18 59 08.8**	**-0.6**
	25nm,0.4s						
SJAF	**Saint Jean de**	**2.06**	**105**	P	**Pn**	**18 58 44.7**	**+2.0**
SJAF				S	**Sb**	**18 59 10.7**	**-0.4**
EJON	**La Jonquera**	**2.08**	**106**	Pn	**Pn**	**18 58 44.3**	**+1.4**
EJON				Pg	**Pb**	**18 58 48.1**	**+1.9**
EJON				Sn	**Sn**	**18 59 08.4**	**0.0**
EJON				Sg	**Sg**	**18 59 15.5**	**-0.4**
EJON				*i* Vmb_Lg		18 59 20.8	
ERTA	**Horta de San J**	**2.10**	**177**	P	**Pn**	**18 58 44.2**	**+0.9**
ERTA				S	**Sn**	**18 59 09.4**	**+0.5**
	13nm,0.3s						
ERTA	**Horta de San J**	**2.10**	**177**	Pn	**Pn**	**18 58 43.6**	**+0.4**
ERTA				Pg	**Pb**	**18 58 47.1**	**+0.6**
ERTA				Sn	**Sn**	**18 59 07.8**	**-1.1**
ERTA				Sg	**Sb**	**18 59 13.3**	**+1.1**
ERTA				*i* Vmb_Lg		18 59 15.8	
CFON	**Fontmartina**	**2.11**	**127**	P	**Pn**	**18 58 44.9**	**+1.5**
CFON				S	**Sn**	**18 59 10.5**	**+1.4**
	63nm,0.2s						
CGAR	**Garraf**	**2.18**	**143**	P	**Pn**	**18 58 45.5**	**+1.2**
CGAR				S	**Sn**	**18 59 12.1**	**+1.3**
	11nm,0.6s						
CAF	**Calviac**	**2.31**	**35**	*e*Pn	**Pn**	**18 58 45.7**	**-0.4**
CAF	**Calviac**	**2.31**	**35**	*e*Pg	**Pb**	**18 58 52.5**	**+2.4**
CAF				*e*Sn	**Sn**	**18 59 12.8**	**-1.2**
CAF				*e*Sg	**Sb**	**18 59 21.8**	**+3.5**
	11nm,0.2s						
CPAL	**Palau Saverder**	**2.31**	**108**	S	**Sn**	**18 59 16.4**	**+2.3**
CCAS	**Cassa de la Se**	**2.33**	**119**	S	**Sn**	**18 59 16.5**	**+2.1**
	10nm,0.5s						
CMAS	**Mas de Barbera**	**2.33**	**178**	P	**Pn**	**18 58 47.1**	**+0.7**
CMAS				S	**Sn**	**18 59 15.2**	**+0.7**
	11nm,0.3s						
RJF	**Les Rejaudoux**	**2.44**	**23**	*e*Pn	**Pn**	**18 58 47.4**	**-0.5**
RJF	**Les Rejaudoux**	**2.44**	**23**	*e*Pg	**Pb**	**18 58 54.7**	**+2.3**
RJF				*e*Sn	**Sn**	**18 59 15.7**	**-1.6**
RJF				*e*Sg	**Sg**	**18 59 27.2**	**-0.3**
	9.7nm,0.2s						
ELAN	**Lanestosa**	**2.66**	**275**	Pn	**Pn**	**18 58 52.0**	**+1.1**
ELAN				Sn	**Sn**	**18 59 23.0**	**+0.3**
ELAN				*i* Vmb_Lg		18 59 31.0	
EMOS	**Mosqueruela**	**2.73**	**191**	P	**Pn**	**18 58 52.9**	**+0.8**
EMOS				S	**Sn**	**18 59 25.4**	**+0.7**
	7.5nm,0.7s						
EMOS	**Mosqueruela**	**2.73**	**191**	Pn	**Pn**	**18 58 52.3**	**+0.2**
EMOS				Sn	**Sn**	**18 59 23.3**	**-1.5**
EMOS				Sg	**Sb**	**18 59 32.5**	**+1.8**
EMOS				*i* Vmb_Lg		18 59 36.1	
ETOR	**Torete**	**2.79**	**218**	Pn	**Pn**	**18 58 54.1**	**+1.3**
ETOR				Sn	**Sn**	**18 59 24.6**	**-1.5**
ETOR				Sg	**Sb**	**18 59 35.3**	**+3.0**
ETOR				*i* Vmb_Lg		18 59 40.7	
LASF	**Ste Croix**	**2.85**	**68**	*e*Pn	**Pn**	**18 58 53.5**	**-0.1**
LASF	**Ste Croix**	**2.85**	**68**	*e*Pn	**Pn**	**18 58 55.4**	**+1.8**
LASF	**Ste Croix**	**2.85**	**68**	*e*Pg	**Pb**	**18 59 02.0**	**+2.6**
LASF				*e*Sn	**Sn**	**18 59 24.2**	**-3.3**
LASF				*e*Sg	**Sg**	**18 59 38.7**	**-2.0**
	4.2nm,0.2s						
TCF	**Toulx Ste Croi**	**3.54**	**23**	*e*Pn	**Pn**	**18 59 02.4**	**-0.6**
TCF	**Toulx Ste Croi**	**3.54**	**23**	*e*Pg	**Pb**	**18 59 14.3**	**+3.3**
TCF				*e*Sn	**Sn**	**18 59 41.2**	**-3.2**
TCF				*e*Sg	**Sg**	**19 00 01.1**	**-1.5**
	4.4nm,0.3s						
MFF	**Saint Martin d**	**3.56**	**356**	*e*Pn	**Pn**	**18 59 03.0**	**-0.2**
MFF				*e*Sn	**Sn**	**18 59 42.6**	**-2.1**
MFF				*e*Sg	**Sb**	**18 59 59.9**	**+5.8**
	2.9nm,0.3s						
VIVF	**Saint-Julien-l**	**3.70**	**59**	*e*Pn	**Pn**	**18 59 05.3**	**0.0**
VIVF	**Saint-Julien-l**	**3.70**	**59**	*e*Pg	Pb	18 59 17.5	+3.7
VIVF				*e*Sg	**Sg**	**19 00 05.0**	**-2.9**
	6.9nm,0.3s						
EARI	**Arriondas**	**3.96**	**275**	Pn	**Pn**	**18 59 10.5**	**+1.7**
EARI				Sn	**Sn**	**18 59 53.6**	**-1.1**
BGF	**Bois d'Agland**	**3.98**	**27**	*e*Pn	**Pn**	**18 59 07.9**	**-1.2**
BGF				*e*Sn	**Sn**	**18 59 52.2**	**-3.0**
BGF				*e*Sg	**Sg**	**19 00 14.5**	**-2.2**
	17nm,0.3s						
SMRF	**Simiane la Rot**	**4.02**	**75**	*e*Sg	**Sg**	**19 00 15.7**	**-2.4**
	4.9nm,0.5s						
GUD	**Guadarrama**	**4.04**	**235**	Pn	**Pn**	**18 59 10.5**	**+0.5**
GUD				Sn	**Sn**	**18 59 55.0**	**-2.0**
GUD				Sg	**Sb**	**19 00 13.8**	**+5.5**
AVF	**Avril sur Loir**	**4.36**	**30**	*e*Pn	**Pn**	**18 59 14.3**	**+0.1**
AVF				*e*Sn	**Sn**	**19 00 01.3**	**-3.2**
AVF				*e*Sg	**Sg**	**19 00 25.7**	**-3.1**
	2.9nm,0.4s						
SMF	**Signal de Mont**	**4.43**	**35**	*e*Pn	**Pn**	**18 59 15.0**	**-0.2**
SMF				*e*Sg	**Sg**	**19 00 28.0**	**-3.1**
	1.3nm,0.2s						
HYF	**Humbligny**	**4.55**	**21**	*e*Pn	**Pn**	**18 59 17.1**	**+0.1**
LMR	**La Mourre**	**4.63**	**84**	*e*Sg	**Sg**	**19 00 33.9**	**-3.6**
	0.8nm,0.2s						
SSF	**Saint Saulge**	**4.64**	**29**	*e*Pn	**Pn**	**18 59 17.6**	**-0.6**
SSF				*e*Sn	**Sn**	**19 00 08.5**	**-3.1**
SSF				*e*Sg	**Sg**	**19 00 35.3**	**-2.7**
	2.5nm,0.4s						
PAB	**San Pablo**	**4.90**	**226**	Pn	**Pn**	**18 59 22.4**	**+0.7**
PAB				Sn	**Sn**	**19 00 15.4**	**-2.6**
PAB				*i* Vmb_Lg		19 00 19.2	
PAB				Sg	**Sb**	**19 00 38.9**	**+6.2**
LOR	**Lormes**	**4.95**	**30**	*e*Sg	**Sg**	**19 00 44.1**	**-3.6**
	2.1nm,0.3s						
ECAL	**Calabor**	**5.24**	**260**	Pn	**Pn**	**18 59 27.4**	**+0.9**
ECAL				Sn	**Sn**	**19 00 24.0**	**-2.4**
ECAL				*i* Vmb_Lg		19 00 29.0	
GRR	**Gorron**	**5.38**	**353**	*e*Pn	**Pn**	**18 59 26.8**	**-1.5**
GRR				*e*Sn	**Sn**	**19 00 24.9**	**-4.9**
	0.2nm,0.1s						
QUIF	**Quistinic**	**5.40**	**335**	*e*Pn	**Pn**	**18 59 27.9**	**-0.7**
QUIF				*e*Sn	**Sn**	**19 00 26.3**	**-3.9**
	0.2nm,0.2s						
SGMF	**Saint Gilles**	**5.54**	**341**	*e*Pn	**Pn**	**18 59 29.4**	**-1.1**
SGMF				*e*Sn	**Sn**	**19 00 28.8**	**-4.9**
	0.2nm,0.2s						
FLN	**La Foliniere**	**5.73**	**356**	*e*Pn	**Pn**	**18 59 31.6**	**-1.4**
	baz=175						
FLN				*e*Sn	**Sn**	**19 00 33.5**	**-4.7**
	0.7nm,0.2s						
ROSF	**Rostrenen**	**5.81**	**337**	*e*Pn	**Pn**	**18 59 33.2**	**-1.0**
ROSF				*e*Sn	**Sn**	**19 00 35.5**	**-4.8**
	1.0nm,0.5s						
PAGF	**Fort de Pagny**	**6.72**	**33**	*e*Pg	Pb	19 00 10.9	+5.7

IDC 04 19:08:27.9±0.9,23°30S×83°02E,h0ᵏᵐ,mb3.8/4, mbtmp3.8/4,MS3.5/2,Error ellipse: s-maj=323.9km s-min=32.4km az=43.0,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**18.56**	**325**	T	T	19 31 59.6	
	baz=152,slow=74,SNR=109						
H08S1	**Diego Garcia H**	**18.57**	**325**	T	T	19 32 00.2	
	baz=152,slow=74,SNR=91						
H08S3	**Diego Garcia H**	**18.58**	**325**	T	T	19 32 00.8	
	baz=152,slow=74,SNR=191						
H01W3	**Cape Leeuwin H**	**29.43**	**120**	T	T	19 45 21.3	
	baz=285,slow=74,SNR=4.5						
H01W2	**Cape Leeuwin H**	**29.43**	**120**	T	T	19 45 23.0	
	baz=285,slow=74,SNR=7.3						
H01W1	**Cape Leeuwin H**	**29.44**	**120**	T	T	19 45 21.6	
	baz=285						
ASAR	**Alice Springs**	**46.47**	**101**	P	P	19 16 56.6	-0.4
	1.8nm,0.7s,baz=264,slow=7.1,SNR=17						
	1.8nm,0.7s						
WRA	**Warramunga Arr**	**47.63**	**96**	P	P	19 17 06.3	+0.2
	2.8nm,0.9s,baz=261,slow=8.0,SNR=15						
	2.8nm,0.9s						
LBTB	**Lobatse**	**52.08**	**256**	LR	LR	19 34 47.1	
	comp=Z,26nm,20.6s,baz=128,slow=30						
LSZ	**Lusaka**	**52.11**	**268**	LR	LR	19 36 51.4	
	comp=Z,87nm,18.3s,baz=128,slow=33						
MKAR	**Makanchi Array**	**69.76**	**359**	P	P	19 19 40.0	+0.3
	0.3nm,0.7s,baz=184,slow=5.4,SNR=2.8						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**76.94**	**1**	P	P	19 20 21.6	-0.2
	0.4nm,0.5s,baz=180,slow=4.3,SNR=2.1						
	0.4nm,0.5s						

TRN 04 19:11:38.8,18°08N×62°07W,h31ᵏᵐ,MD3.8,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.49**	**146**	*e*P	Pn	19 11 50.5	+0.8
ANWB				*e*S	Sn	19 11 58.7	+1.5
SMRT	**St. Maarten**	**0.95**	**268**	*e*P	Pb	19 11 56.6	-0.2
SMRT				*e*S	Sb	19 12 10.4	+1.2
SKI	**Saint Kitts**	**0.98**	**221**	*e*P	Pb	19 11 58.3	+1.0
SKI				*e*S	Sb	19 12 11.9	+2.1
ANDO	**Antigua, Disas**	**0.99**	**167**	*e*P	Pb	19 11 57.5	+0.1
ANDO				*e*S	Sb	19 12 11.1	+1.0
SEUS	**St. Eustatius**	**1.05**	**236**	*e*P	Pb	19 11 59.1	+0.8
SEUS				*e*S	Sb	19 12 13.2	+1.5
ANBD	**Bethesda, Anti**	**1.07**	**164**	*e*P	Pb	19 11 58.5	-0.3
ANBD				*e*S	Sb	19 12 12.9	+0.6
MBFL	**Flemmings, Mon**	**1.33**	**186**	*e*P	Pb	19 12 03.3	+0.1
MBFL				*e*S	Sb	19 12 21.1	+1.2
MLYT	**Lee's Yard**	**1.36**	**185**	*e*P	Pb	19 12 04.0	+0.3
MLYT				*e*S	Sb	19 12 22.5	+1.9
ABD	**La Joyeuse, An**	**1.69**	**161**	*e*P	Pb	19 12 07.9	-1.4
ABD				*e*S	Sb	19 12 28.8	-1.3
CBE	**Ff, Capester**	**2.05**	**167**	*e*P	Pb	19 12 13.6	-1.8
CBE				*e*S	Sn	19 12 37.2	+1.4
MAGL	**Barre de l'ile**	**2.25**	**160**	*e*P	Pn	19 12 16.1	+2.1
MAGL				*e*S	Sn	19 12 42.8	+2.2
TBG	**Guadaloupe-3**	**2.25**	**170**	*e*P	Pb	19 12 16.7	-2.2
TDBA	**Terre de Bas,**	**2.26**	**169**	*e*P	Pn	19 12 16.0	+2.0
TDBA				*e*S	Sn	19 12 42.7	+1.8
MDVC	**Dominica, Viel**	**2.53**	**165**	*e*P	Pn	19 12 19.7	+1.9
DSLB	**Salisbury**	**2.70**	**167**	*e*P	Pn	19 12 23.0	+2.8
DSLB				*e*S	Sn	19 12 54.1	+2.3
MPOM	**Morne Pois Mar**	**3.80**	**162**	*e*P	Pn	19 12 37.4	+2.1
MPOM				*e*S	Sn	19 13 19.1	+0.2

*IDC **04** 19:16:38.7±0.6,29°22S×61°16E,h0ᵏᵐ,mb4.1/12, mbtmp4.1/13,ML4.6/1,MS3.7/27,Error ellipse:*

s-maj=23.5km s-min=17.3km az=86.0
*NEIC **04** 19:16:40.2±1.4,29°19S±0°10×61°06E±0°09,h10ᵏᵐ±1ᵏᵐ, mb4.6/17,Error ellipse: s-maj=20.6km s-min=6.7km az=219.0*

ISC 04 19:16:40.0±0.5,29°14S±0°09×61°16E±0°10,h10ᵏᵐ,n67, σ1ᵍ11/40,mb4.4/19,MS3.7/27,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.34**	**327**	Pn	**Pn**	**19 18 51.9**	**-2.8**
FOMA	**Nahampoana Res**	**13.30**	**285**	Pn	**Pn**	**19 19 46.5**	**-2.4**
VOI	**Vohitsoka**	**14.83**	**296**	Pn	**Pn**	**19 20 10.2**	**+0.3**
ABPO	**Ambohimpanom**	**16.22**	**305**	P	**Pn**	**19 20 29.4**	**+1.2**
OPO	**Ambohidratompo**	**16.54**	**306**	Pn	**Pn**	**19 20 31.7**	**-0.6**
	0.2nm,0.3s,baz=122,slow=14,SNR=15						
OPO				Sn	Sn	19 23 22.3	-14
	0.3nm,0.3s,baz=270,slow=23,SNR=6.5						
	4.1nm,0.3s						
H08S1	**Diego Carcia H**	**23.89**	**29**	T	T	19 46 37.1	
	baz=204,slow=76,SNR=17						
H08S2	**Diego Garcia H**	**23.89**	**29**	T	T	19 46 37.9	
	baz=204,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**23.91**	**29**	T	T	19 46 38.6	
	baz=204,slow=76,SNR=28						
BOSA	**Boshof**	**31.38**	**262**	LR	LR	19 34 04.9	
	comp=Z,119nm,18.7s,baz=110,slow=33						
LSZ	**Lusaka**	**33.37**	**287**	P	**P**	**19 23 19.3**	**+0.5**
LSZ				IAmb	IAmb	19 23 21.5	
	comp=Z,6.7nm,1.0s						
SUR	**Sutherland**	**34.69**	**254**	LR	LR	19 35 45.3	
	comp=Z,121nm,18.1s,baz=116,slow=33						
KMBO	**Kilima Mbogo**	**35.99**	**316**	LR	LR	19 35 36.8	
	comp=Z,146nm,19.8s,baz=93,slow=32						
MAW	**Mawson**	**38.51**	**179**	P	**P**	**19 24 02.4**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=348,slow=12,SNR=2.7						
MAW				LR	LR	19 36 53.5	
	comp=Z,114nm,18.1s,baz=30,slow=32						
	comp=Z,1.8nm,0.6s						
MBAR	**Mbarara**	**40.59**	**309**	LR	LR	19 39 44.2	
	comp=Z,110nm,19.7s,baz=126,slow=34						
ATD	**Arta Tunnel**	**44.13**	**334**	LR	LR	19 40 21.0	
	comp=Z,162nm,21.5s,baz=121,slow=32						
H01W2	**Cape Leeuwin H**	**44.85**	**112**	T	T	20 12 32.7	
	baz=261,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	**44.85**	**111**	T	T	20 12 32.8	
	baz=261,slow=75,SNR=14						
H01W1	**Cape Leeuwin H**	**44.87**	**111**	T	T	20 12 35.4	
	baz=261,slow=75,SNR=22						
CASY	**Casey**	**47.67**	**155**	P	**P**	**19 25 16.1**	**0.0**
CASY				IAmb	IAmb	19 25 18.3	
	comp=Z,6.4nm,1.1s						
WSAR	**Wadi Sarin**	**52.13**	**357**	LR	LR	19 43 04.2	
	comp=Z,49nm,19.9s,baz=183,slow=30						
PSA00	**Pilbara Seismi**	**53.11**	**96**	P	**P**	**19 25 57.2**	**-0.8**
SNAA	**Sanae**	**54.49**	**200**	P	**P**	**19 26 07.0**	**-0.4**
	comp=Z,4.0nm,1.2s,baz=71,slow=2.5,SNR=4.3						
	comp=Z,4.0nm,1.2s						
SNAA	**Sanae**	**54.49**	**200**	P	**P**	**19 26 06.4**	**-1.1**
SNAA				IAmb	IAmb	19 26 08.7	
	comp=Z,8.4nm,1.4s						
CMAR	**Chiang Mai Arr**	**59.74**	**42**	P	**P**	**19 26 45.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=226,slow=7.9,SNR=9.6						
CMAR				LR	LR	19 49 08.7	
	comp=Z,48nm,19.8s,baz=210,slow=33						
	comp=Z,1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**59.74**	**42**	P	**P**	**19 26 45.8**	**+0.6**
QSPA	**South Pole Qui**	**61.02**	**180**	P	**P**	**19 26 52.7**	**-0.9**
	comp=Z,3.4nm,1.0s,baz=274,slow=1.3,SNR=12						
QSPA				LR	LR	19 49 43.8	
	comp=Z,86nm,21.5s,baz=258,slow=33						
	comp=Z,3.4nm,1.0s						
QSPA	**South Pole Qui**	**61.02**	**180**	P	**P**	**19 26 53.3**	**-0.3**
QSPA				IAmb	IAmb	19 27 00.7	
	comp=Z,5.2nm,1.1s						
NIL	**Nilore**	**63.49**	**11**	P	**P**	**19 27 07.0**	**-3.2**
EIL	**Elat**	**63.61**	**335**	LR	LR	19 51 26.5	
	comp=Z,89nm,19.9s,baz=107,slow=33						
KBL	**Kabul**	**63.77**	**7**	P	**P**	**19 27 13.0**	**+0.7**
KBL				IAmb	IAmb	19 27 18.0	
	comp=Z,5.0nm,1.1s						
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**19 27 13.2**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=268,slow=8.2,SNR=11						
VNDA				LR	LR	19 53 11.3	
	comp=Z,114nm,18.7s,baz=260,slow=34						
	comp=Z,1.8nm

*ATH **04** 19:30:03.7, 38°.06N×22°.29E, h9km±3km, ML2.0/1, Error ellipse: s-maj=3.8km s-min=0.9km az=238.0*
*THE **04** 19:30:03.9, 38°.08N×22°.30E, h7km±3km, ML2.5/5, Error ellipse: s-maj=3.9km s-min=0.6km az=200.0*

ISC 04 19:30:03.6±0.9, 38°.06N±0°.04×22°.29E±0°.03, h11km±7km, n16, σ0.41/25, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLV	**Kalavryta, Ach**	**0.11**	**260**	P	**Pg**	**19 30 06.3**	**-0.3**
KLV				S	**Sg**	**19 30 08.4**	**-0.2**
	1μm,0.2s						
KLV	**Kalavryta, Ach**	**0.11**	**260**	P	**Pg**	**19 30 06.2**	**-0.3**
KLV				S	**Sg**	**19 30 08.4**	**-0.2**
KLV				AML	AML	19 30 08.9	
	comp=E,3391μm,0.1s						
KLV				AML	AML	19 30 10.0	
	comp=N,1808μm,0.2s						
GUR	**Goura**	**0.13**	**161**	P	**Pg**	**19 30 06.9**	**0.0**
GUR				S	**Sg**	**19 30 09.4**	**+0.1**
	comp=N,7μm,0.2s						
ALIK	**Aliki, Aigiali**	**0.24**	**325**	P	**Pg**	**19 30 08.8**	**+0.2**
ALIK				S	**Sg**	**19 30 12.8**	**+0.8**
THAL	**Thalero**	**0.30**	**95**	P	**Pg**	**19 30 09.7**	**0.0**
THAL				S	**Sg**	**19 30 13.8**	**+0.1**
	comp=N,2μm,0.2s						
THAL	**Thalero**	**0.30**	**95**	P	**Pg**	**19 30 09.6**	**0.0**
THAL				S	**Sg**	**19 30 13.8**	**+0.1**
LAKA	**Lakka**	**0.30**	**306**	P	**Pg**	**19 30 09.4**	**-0.3**
LAKA				S	**Sg**	**19 30 13.9**	**+0.1**
	comp=N,1μm,0.3s						
LAKA	**Lakka**	**0.30**	**306**	P	**Pg**	**19 30 09.5**	**-0.3**
LAKA				S	**Sg**	**19 30 14.0**	**+0.1**
DLFA	**Delphi**	**0.45**	**22**	P	**Pg**	**19 30 11.6**	**-0.8**
DRO	**Drossia**	**0.47**	**257**	P	**Pg**	**19 30 12.7**	**-0.1**
DRO				S	**Sb**	**19 30 20.8**	**0.0**
	comp=N,768nm,0.4s						
ACOR	**Acrocorinthos**	**0.49**	**110**	P	**Pg**	**19 30 12.4**	**-0.8**
LOUT	**Loutraki**	**0.55**	**98**	P	**Pg**	**19 30 14.6**	**+0.3**
VIL2	**Platees**	**0.79**	**79**	P	**Pb**	**19 30 19.4**	**+0.1**
ATAL	**Atalanti**	**0.85**	**42**	P	**Pg**	**19 30 19.4**	**-0.7**
ITM	**Ithomi**	**0.93**	**198**	P	**Pg**	**19 30 20.9**	**-0.5**
DION	**Dionisos Attik**	**1.30**	**89**	P	**Pn**	**19 30 28.0**	**+0.3**

DJA 04 19:33:45.1±1.1, 3°S±2°×13°0E±°, h15km±8km, M3.4/9, MLv3.4/9, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.32**	**241**	P	Pb	19 34 09.5	-0.1
MSAI				S	Sn	19 34 27.0	+0.6
BNDI	**Bandanaira**	**1.81**	**186**	P	Pn	19 34 15.7	-0.1
BNDI				S	Sn	19 34 39.2	+0.7
AAI	**Ambon**	**2.13**	**243**	P	Pn	19 34 19.8	-0.3
FAKI	**Fak Fak**	**2.17**	**96**	P	Pn	19 34 20.8	+0.1
SWI	**Sorong**	**2.18**	**33**	P	Pn	19 34 21.9	+1.1
SWI				S	Sn	19 34 48.2	+0.7
NLAI	**Namlea**	**3.03**	**260**	P	Pn	19 34 32.0	-0.6
LBMI	**Labuha**	**3.31**	**308**	P	Pn	19 34 35.7	-0.7
LBMI				S	Sn	19 35 16.6	+1.1

IDC 04 19:34:42.3±6.0, 7°.66S×128°.99E, h182km±65km, mb2.9/1, mbtmp3.6/5, Error ellipse: s-maj=59.2km s-min=20.9km az=41.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.83**	**244**	P	Pn	19 36 08.6	+1.3
	14nm,0.4s,baz=85,slow=3.3,SNR=6.3						
BATI				S	Sn	19 37 12.9	-1.2
	18nm,0.4s,baz=186,slow=19,SNR=8.9						
FITZ	**Fitzroy Crossi**	**10.87**	**197**	P	Pn	19 37 14.3	+1.0
	1.2nm,0.7s,baz=12,slow=8.0,SNR=6.2						
FITZ				S	Sn	19 39 10.8	-3.4
	0.8nm,0.4s,baz=151,slow=13,SNR=1.2						
WRA	**Warramunga Arr**	**13.27**	**158**	P	Pn	19 37 45.3	+1.4
	1.0nm,0.8s,baz=338,slow=11,SNR=19						
WRA				S	Sn	19 40 09.9	-1.6
	0.3nm,0.4s,baz=347,slow=26,SNR=7.1						
ASAR	**Alice Springs**	**16.60**	**164**	P	Pn	19 38 24.7	-0.2
	1.0nm,0.6s,baz=350,slow=9.7,SNR=20						
MKAR	**Makanchi Array**	**68.23**	**327**	P	P	19 45 23.2	-0.1
	0.1nm,0.4s,baz=127,slow=8.5,SNR=4.3						

IDC 04 19:54:34.1±3.9, 5°.65S×129°.03E, h382km±45km, mb2.8/2, mbtmp3.8/4, Error ellipse: s-maj=105.2km s-min=13.6km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.12**	**160**	P	P	19 57 48.8	+0.2
	2.2nm,0.6s,baz=337,slow=12,SNR=45						
WRA				S	S	20 00 33.8	+4.1
	0.6nm,0.6s,baz=343,slow=25,SNR=2.2						
ASAR	**Alice Springs**	**18.52**	**166**	P	P	19 58 24.9	-0.1
	2.7nm,0.5s,baz=345,slow=12,SNR=40						
ASAR				S	S	20 01 36.4	+0.6
	1.7nm,0.8s,baz=352,slow=22,SNR=9.1						
MKAR	**Makanchi Array**	**66.57**	**327**	P	P	20 04 44.6	+0.1
	0.3nm,0.4s,baz=118,slow=7.9,SNR=7.4						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**70.86**	**329**	P	P	20 05 10.3	-0.2
	0.2nm,0.5s,baz=123,slow=5.2,SNR=2.4						
	0.2nm,0.5s						

*IDC **04** 19:57:51.3±0.7, 8°.09N×39°.25W, h0km, mb4.2/14, mbtmp4.2/15, ML4.0/1, MS3.5/43, Error ellipse: s-maj=21.0km s-min=15.5km az=142.0*
*NEIC **04** 19:57:53.2±1.2, 8°.1N±0°.1×39°.3W±0°.1, h10km±1km, mb4.7/35, Error ellipse: s-maj=22.3km s-min=19.4km az=80.0*

ISC 04 19:57:53.2±0.5, 8°.14N±0°.07×39°.32W±0°.07, h14km, n124, σ1.27/86, mb4.5/32, MS3.6/41, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSB	**Rosrio**	**11.97**	**204**	*eP*	**Pn**	**20 00 42.9**	**-0.7**
MDP	**Montagnes des**	**13.57**	**258**	Pn	**Pn**	**20 01 01.8**	**-3.6**
	0.5nm,0.3s,baz=58,slow=14,SNR=11						
MDP				Sn	Sn	20 03 22.1	-14
	0.7nm,0.3s,baz=112,slow=4.5,SNR=5.1						
MDP				LR	LR	20 05 31.0	
	comp=Z,173nm,20.8s,baz=74,slow=34						
TMAB	**Tom-Au,PA,Br**	**13.63**	**220**	*eP*	**Pn**	**20 01 05.6**	**-0.6**
RCBR	**Riachuelo**	**14.29**	**166**	Pn	**Pn**	**20 01 12.7**	**-2.6**
	0.7nm,0.3s,baz=140,slow=11,SNR=11						
RCBR				LR	LR	20 05 26.0	
	comp=Z,112nm,19.2s,baz=146,slow=32						
	3.1nm,0.3s						
RCBR	**Riachuelo**	**14.29**	**166**	Pn	**Pn**	**20 01 14.4**	**-1.0**
RCBR	**Riachuelo**	**14.29**	**166**	*eP*	**Pn**	**20 01 15.6**	**+0.2**
MCPB	**Macapa, AP**	**15.25**	**237**	*eP*	**Pn**	**20 01 27.9**	**-0.4**
SACV	**Santiago Islan**	**16.82**	**65**		**Pn**	**20 01 44.1**	**-4.4**
NBRF	**Rio Formoso -**	**17.23**	**166**	*eP*	**P**	**20 01 56.9**	**+1.8**
PRPB	**Parauapebas**	**17.66**	**217**	*eP*	**Pn**	**20 01 57.4**	**-1.6**
MALB	**Monte Alegre**	**17.91**	**237**	*eP*	**Pn**	**20 02 00.3**	**-1.8**
NBAN	**Anadia - AL**	**17.95**	**170**	*eP*	**P**	**20 02 03.7**	**+0.6**
SMTB	**Santa Maria do**	**18.79**	**206**	*eP*	**Pn**	**20 02 12.9**	**0.0**
ITTB	**Itaituba**	**20.55**	**233**	*eP*	**P**	**20 02 31.6**	**-0.1**
SDBA	**SAO DESIDERIO**	**21.16**	**195**	*eP*	**P**	**20 02 38.5**	**+0.3**
GDU01	**Guandu, BA**	**21.72**	**181**	*eP*	**P**	**20 02 46.1**	**+1.9**
BOAV	**Boa Vista**	**21.86**	**256**	P	**P**	**20 02 45.2**	**-0.6**
BOAV				IAmb	IAmb	20 02 46.8	
	comp=Z,46nm,0.9s						
BOAV	**Boa Vista**	**21.86**	**256**	*eP*	**P**	**20 02 45.8**	**0.0**
NPGB	**Novo Progresso**	**21.98**	**227**	*eP*	**P**	**20 02 46.9**	**-0.2**
H05S1	**Guadeloupe/Mar**	**21.99**	**288**	T	T	20 25 21.8	
	SNR=16						
PEXB	**Peixe**	**22.01**	**204**	*eP*	**P**	**20 02 48.5**	**+1.1**
SVN	**Savane Anatole**	**22.41**	**289**	P	**P**	**20 02 50.5**	**-1.2**
SNDB	**Serra Nova Dou**	**23.26**	**211**	*eP*	**P**	**20 03 01.6**	**+1.1**
CMC01	**Camacan, BA**	**23.35**	**180**	*eP*	**P**	**20 03 04.0**	**+2.6**
JANB	**Januaria**	**23.57**	**192**	*eP*	**P**	**20 03 03.7**	**0.0**
MACA	**Manacapuru-AM**	**24.09**	**243**	P	**P**	**20 03 07.3**	**-1.2**
MACA				IAmb	IAmb	20 03 10.3	
	comp=Z,25nm,1.1s						
MACA	**Manacapuru-AM**	**24.09**	**243**	*eP*	**P**	**20 03 09.3**	**+0.7**
GUA01	**Guaratinga, BA**	**24.57**	**181**	*eP*	**P**	**20 03 15.3**	**+2.4**
CLDB	**Colider**	**25.01**	**221**	*eP*	**P**	**20 03 16.9**	**-0.1**
MC01	**Montes Claros**	**25.11**	**190**	*eP*	**P**	**20 03 18.5**	**+0.6**
BDFB	**Brasilia**	**25.15**	**200**	P	**P**	**20 03 19.0**	**+0.7**
	comp=Z,5.1nm,0.7s,baz=26,slow=12,SNR=7.8						
	comp=Z,5.1nm,0.7s						
BDFB	**Brasilia**	**25.15**	**200**	P	**P**	**20 03 18.7**	**+0.3**
BDFB	**Brasilia**	**25.15**	**200**	*eP*	**P**	**20 03 20.1**	**+1.7**
PDRB	**Porto dos Gac**	**26.17**	**222**	*eP*	**P**	**20 03 27.9**	**+0.4**
SJMB	**Sao Joao De Ma**	**26.74**	**184**	*eP*	**P**	**20 03 34.6**	**+2.0**
SJG	**San Juan**	**27.91**	**293**	LR	LR	20 12 32.5	
	comp=Z,63nm,20.4s,baz=103,slow=32						
BAUV	**El Baul**	**28.41**	**274**	P	**P**	**20 03 47.1**	**-0.6**
BAUV				IAmb	IAmb	20 03 48.9	
	comp=Z,18nm,1.1s						
SALV	**Santo Antonio**	**28.87**	**214**	*eP*	**P**	**20 03 52.5**	**+0.8**
SAML	**Samuel**	**29.21**	**235**	P	**P**	**20 03 54.4**	**-0.4**
H10N3	**ASCENSION HYDR**	**29.40**	**122**	T	T	20 34 56.1	
	baz=303,slow=75,SNR=37						
H10N2	**ASCENSION HYDR**	**29.40**	**122**	T	T	20 34 56.9	
	baz=303,slow=75,SNR=35						
H10N1	**ASCENSION HYDR**	**29.42**	**122**	T	T	20 34 57.4	
	baz=303,slow=75,SNR=42						
H10S3	**ASCENSION HYDR**	**29.86**	**124**	T	T	20 35 31.3	
	baz=299,slow=74,SNR=15						
H10S2	**ASCENSION HYDR**	**29.88**	**124**	T	T	20 35 32.7	
	baz=281,slow=74,SNR=8.3						
PTLB	**Pontes e Lacer**	**30.58**	**220**	P	**P**	**20 04 08.1**	**+1.3**
PTLB				IAmb	IAmb	20 04 09.3	
	comp=Z,13nm,1.1s						
PTLB	**Pontes e Lacer**	**30.58**	**220**	*eP*	**P**	**20 04 08.2**	**+1.3**
SDV	**Santo Domingo**	**30.97**	**274**	LR	LR	20 16 17.7	
	comp=Z,57nm,18.6s,baz=72,slow=36						
ETMB	**Extrema**	**32.18**	**237**	P	**P**	**20 04 21.4**	**+0.5**
ETMB				IAmb	IAmb	20 04 22.5	
	comp=Z,11nm,1.0s						
ETMB	**Extrema**	**32.18**	**237**	*eP*	**P**	**20 04 21.6**	**+0.6**
SIV	**San Ignacio**	**32.23**	**222**	LR	LR	20 17 11.2	
	comp=Z,152nm,18.2s,baz=110,slow=36						
FRTB	**Fartura**	**32.86**	**198**	*eP*	**P**	**20 04 28.0**	**+1.2**
DBIC	**Dimbokro**	**34.20**	**90**	P	**P**	**20 04 37.6**	**-1.1**
	comp=Z,3.9nm,0.8s,baz=288,slow=9.4,SNR=3.8						
	comp=Z,3.9nm,0.8s						
ROSC	**El Rosal**	**34.92**	**267**	P	**P**	**20 04 47.4**	**+2.0**
	comp=Z,9.4nm,0.5s,baz=55,slow=23,SNR=4.6						
ROSC				LR	LR	20 18 42.2	
	comp=Z,119nm,21.7s,baz=58,slow=36						
	comp=Z,9.4nm,0.5s						
LPAZ	**La Paz**	**37.45**	**230**	P	**P**	**20 05 08.4**	**+1.2**
	comp=Z,10nm,0.5s,baz=47,slow=6.3,SNR=24						
LPAZ				LR	LR	20 19 54.5	
	comp=Z,60nm,20.7s,baz=30,slow=35						
	comp=Z,10nm,0.5s						
LPAZ	**La Paz**	**37.45**	**230**	P	**P**	**20 05 07.7**	**+0.5**
LPAZ				IAmb	IAmb	20 05 09.3	
	comp=Z,25nm,1.1s						
LPAZ	**La Paz**	**37.45**	**230**	*eP*	**P**	**20 05 07.5**	**+0.3**
CPUP	**Villa Florida**	**38.47**	**206**	LR	LR	20 21 24.0	
	comp=Z,167nm,18.2s,baz=20,slow=37						
OTAV	**Otavalo**	**39.77**	**261**	*eP*	**P**	**20 05 27.9**	**+1.2**
MDT	**Midelt**	**40.43**	**48**	LR	LR	20 20 26.6	
	comp=Z,70nm,18.2s,baz=251,slow=34						
TOA0	**Torodi Ar. Sit**	**40.58**	**79**	P	**P**	**20 05 32.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**40.58**	**79**	P	**P**	**20 05 32.1**	**-0.7**
	comp=Z,4.7nm,0.7s,baz=274,slow=8.5,SNR=26						
TORD				LR	LR	20 20 40.8	
	comp=Z,83nm,19.8s,baz=230,slow=34						
	comp=Z,4.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**40.58**	**79**	P	**P**	**20 05 32.4**	**-0.4**
BOSC	**San Juan Bosco**	**40.65**	**256**	P	**P**	**20 05 32.4**	**-1.2**
ATAH	**Atahualpa**	**41.81**	**250**	LR	LR	20 23 50.1	
	comp=Z,89nm,20.0s,baz=67,slow=37						
LVC	**Limon Verde**	**42.12**	**223**	LR	LR	20 23 53.1	
	comp=Z,64nm,18.4s,baz=11,slow=37						
LVC	**Limon Verde**	**42.12**	**223**	*eP*	**P**	**20 05 44.9**	**-0.8**
NNA	**Nana**	**42.33**	**242**	LR	LR	20 24 22.4	
	comp=Z,95nm,18.2s,baz=52,slow=38						
MCRA	**Macar, Loja**	**42.39**	**254**	P	**P**	**20 05 46.9**	**-0.9**
MCRA				IAmb	IAmb	20 05 47.8	
	comp=Z,6.4nm,0.7s						
PB15	**IPOC Station P**	**42.90**	**223**	P	**P**	**20 05 51.2**	**-0.7**
PB15				IAmb	IAmb	20 05 54.6	
	comp=Z,12nm,0.6s						
GO02	**Mina Guanaco**	**44.33**	**221**		**P**	**20 06 03.3**	**-0.1**
ESDC	**Sonseca Array**	**44.55**	**40**	LR	LR	20 21 49.9	
	comp=Z,102nm,19.0s,baz=216,slow=32						
AC02	**Maricunga**	**45.22**	**219**	P	**P**	**20 06 11.0**	**+0.2**
AC02				IAmb	IAmb	20 06 12.4	
	comp=Z,7.1nm,0.9s						
AC04	**Llanos de Chal**	**47.40**	**219**	P	**P**	**20 06 27.1**	**-0.3**
TKL	**Tuckaleechee C**	**48.91**	**311**	LR	LR	20 22 32.8	
	comp=Z,35nm,21.8s,baz=107,slow=30						
O52A	**Adamsville**	**49.46**	**317**	P	**P**	**20 06 43.1**	**-0.1**
SCHQ	**Schefferville**	**51.48**	**340**	P	**P**	**20 07 00.3**	**+2.2**
	comp=Z,3.3nm,0.8s,baz=136,slow=6.6,SNR=3.7						
SCHQ				LR	LR	20 25 15.4	
	comp=Z,53nm,21.3s,baz=158,slow=32						
	comp=Z,3.3nm,0.8s						
BO02	**Sierra Bellavi**	**52.04**	**213**	P	**P**	**20 07 02.1**	**-0.6**
BO02				IAmb	IAmb	20 07 04.4	
	comp=Z,9.1nm,0.8s						
KEST	**Kesra**	**52.13**	**51**	P	**P**	**20 07 04.7**	**+1.2**
	comp=Z,3.1nm,0.9s,baz=212,slow=6.2,SNR=4.6						
KEST				LR	LR	20 29 07.2	
	comp=Z,76nm,19.1s,baz=223,slow=36						
	comp=Z,3.1nm,0.9s						
WVT	**Waverly**	**52.15**	**310**	P	**P**	**20 07 03.8**	**+0.4**
WVT				IAmb	IAmb	20 07 04.6	
	comp=Z,5.8nm,0.8s						
EKA	**Eskdalemuir Ar**	**55.10**	**24**	LR	LR	20 27 10.9	
	comp=Z,38nm,19.2s,baz=187,slow=32						
P40A	**Paris**	**56.43**	**312**	P	**P**	**20 07 34.0**	**-0.7**
P40A				IAmb	IAmb	20 07 35.2	
	comp=Z,6.1nm,0.7s						
PLCA	**Paso Flores**	**56.50**	**208**	P	**P**	**20 07 34.5**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=54,slow=7.2,SNR=7.2						
PLCA				LR	LR	20 32 52.4	
	comp=Z,80nm,18.2s,baz=26,slow=37						
	comp=Z,3.0nm,0.8s						
PLCA	**Paso Flores**	**56.50**	**208**	*eP*	**P**	**20 07 35.0**	**-0.1**
VAE	**Valguarnera**	**56.55**	**50**	LR	LR	20 31 33.0	
	comp=Z,48nm,19.5s,baz=278,slow=36						
DAVOX	**Davos/Dischmat**	**56.85**	**38**	LR	LR	20 28 21.9	
	comp=Z,84nm,21.6s,baz=260,slow=32						
FRB	**Frobisher Bay**	**59.32**	**345**	LR	LR	20 29 40.7	
	comp=Z,38nm,21.4s,baz=5.0,slow=32						
VRAC	**Vranov**	**61.99**	**38**	LR	LR	20 33 30.9	
	comp=Z,34nm,18.9s,baz=232,slow=34						
TSUM	**Tsumeb**	**62.30**	**117**	LR	LR	20 29 24.1	
	comp=Z,66nm,19.4s,baz=328,slow=30						
TX31	**Lajitas Ar. Si**	**63.72**	**299**	P	**P**	**20 08 24.6**	**-0.4**
TX31				IAmb	IAmb	20 08 35.9	
	comp=Z,3.7nm,1.0s						
TX32	**Lajitas Array**	**63.72**	**299**	P	**P**	**20 08 24.6**	**-0.4**
TXAR	**Lajitas Array**	**63.72**	**299**	P	**P**	**20 08 25.1**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=97,slow=6.8,SNR=12						
	comp=Z,0.6nm,0.5s						
TXAR	**Lajitas Array**	**63.72**	**299**	P	**P**	**20 08 25.0**	**0.0**
IDI	**Anoyia**	**64.32**	**55**	LR	LR	20 35 55.3	
	comp=Z,37nm,21.8s,baz=264,slow=36						
NOA	**NORSAR Array B**	**64.58**	**25**	LR	LR	20 33 21.6	
	comp=Z,26nm,18.9s,baz=240,slow=33						
HFS	**Hagfors**	**65.17**	**26**	LR	LR	20 33 53.3	
	comp=Z,26nm,19.2s,baz=244,slow=33						
JMIC	**Jan Mayen**	**65.69**	**11**	LR	LR	20 29 43.7	
	comp=Z,24nm,21.5s,baz=228,slow=29						
MLR	**Muntele Rosu**	**66.96**	**44**	LR	LR	20 36 40.3	
	comp=Z,23nm,19.6s,baz=250,slow=35						
SUR	**Sutherland**	**69.99**	**129**	LR	LR	20 31 17.9	
	comp=Z,74nm,19.4s,baz=305,slow=29						
AKASG	**Malin Array Be**	**70.19**	**39**	P	**P**	**20 09 06.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=257,slow=6.1,SNR=4.4						
AKASG				LR	LR	20 37 04.8	
	comp=Z,38nm,21.3s,baz=315,slow=34						
	comp=Z,0.2nm,0.3s						
WUAZ	**Wupatki**	**70.72**	**305**		**P**	**20 09 09.6**	**+0.2**
WUAZ				IAmb	IAmb	20 09 11.5	
	comp=Z,5.8nm,0.8s						
IMW	**Indian Meadow**	**71.16**	**314**	P	**P**	**20 09 12.1**	**+0.1**
IMW				IAmb	IAmb	20 09 13.4	
	comp=Z,2.8nm,0.8s						
LBTB	**Lobatse**	**71.24**	**120**	LR	LR	20 33 35.7	
	comp=Z,31nm,21.7s,baz=241,slow=30						
FINES	**FINESS Array B**	**71.25**	**27**	P	**P**	**20 09 14.1**	**+2.2**
	comp=Z,1.6nm,0.9s,baz=198,slow=18,SNR=1.3						
FINES				LR	LR	20 39 33.0	
	comp=Z,30nm,18.3s,baz=64,slow=35						
	comp=Z,1.6nm,0.9s						
HWUT	**Hardware Ranch**	**71.37**	**311**		**P**	**20 09 13.1**	**-0.1**
HWUT				IAmb	IAmb	20 09 15.4	
	comp=Z,7.2nm,0.9s						
U15A	**North Rim**	**71.52**	**306**	P	**P**	**20 09 12.2**	**-2.2**
U15A				IAmb	IAmb	20 09 25.1	
	comp=Z,6.0nm,1.4s						
MTPU	**Mount Pierson**	**71.54**	**307**	P	**P**	**20 09 14.1**	**-0.4**
BOSA	**Boshof**	**72.14**	**123**	LR	LR	20 34 34.1	
	comp=Z,28nm,21.1s,baz=9.0,slow=31						
EIL	**Eilat**	**72.37**	**62**	LR	LR	20 40 00.7	
	comp=Z,56nm,21.4s,baz=270,slow=35						
BGU	**Big Grassy Mou**	**72.41**	**310**	P	**P**	**20 09 19.9**	**+0.5**
BGU				IAmb	IAmb	20 09 21.0	
	comp=Z,7.7nm,0.8s						
DLMT	**Dillon**	**72.50**	**315**		**P**	**20 09 21.2**	**+1.3**
DLMT				IAmb	IAmb	20 09 22.1	
	comp=Z,9.1nm,1.2s						
W13A	**Hualapai Mount**	**72.75**	**304**	P	**P**	**20 09 23.0**	**+1.4**
ARCES	**ARCESS Array B**	**73.75**	**19**	P	**P**	**20 09 26.9**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=357,slow=21,SNR=2.1						
ARCES				LR	LR	20 37 21.8	
	comp=Z,20nm,20.4s,baz=262,slow=32						
	comp=Z,1.0nm,0.9s						
ELK	**Elko**	**74.07**	**310**	P	**P**	**20 09 30.0**	**+0.6**
PMSA	**Palmer Station**	**75.03**	**191**	*eP*	**P**	**20 09 37.0**	**+3.0**
NEW	**Newport**	**75.85**	**318**	LR	LR	20 40 52.4	
	comp=Z,44nm,18.7s,baz=94,slow=34						
YKA	**Yellowknife Ar**	**76.03**	**332**	P	**P**	**20 09 39.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=327,slow=34,SNR=2.8						
	comp=Z,0.4nm,0.6s						
RPN	**Rapa Nui**	**76.25**	**240**	LR	LR	20 39 31.7	
	comp=Z,19nm,20.9s,baz=212,slow=33						
NVAR	**Mina Array Bea**	**76.37**	**308**	P	**P**	**20 09 41.8**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=118,slow=5.9,SNR=3.7						
	comp=Z,0.6nm,0.7s						
MOD	**Modoc Plateau**	**77.91**	**311**	P	**P**	**20 09 52.1**	**+1.0**
MOD				IAmb	IAmb	20 09 53.4	
	comp=Z,5.7nm,0.8s						
BELG	**Belogornoye**	**81.75**	**38**	LR	LR	20 45 47.2	
	comp=Z,18nm,19.1s,baz=140,slow=35						
DLBC	**Dease Lake**	**83.50**	**328**	LR	LR	20 43 42.6	
	comp=Z,30nm,20.6s,baz=122,slow=33						
INK	**Inuvik**	**84.05**	**338**	LR	LR	20 43 44.7	
	comp=Z,40nm,21.9s,baz=102,slow=33						
WSAR	**Wadi Sarin**	**94.06**	**66**	LR	LR	20 55 42.7	
	comp=Z,20nm,19.1s,baz=232,slow=37						
BVAR	**Borovoye Array**	**95.14**	**35**	LR	LR	20 53 13.7	
	comp=Z,31nm,19.2s,baz=192,slow=35						

*IDC **04** 20:12:33.1±0.9, 24°.68N×142°.42E, h538km±7km, mb3.1/10, mbtmp4.0/12, Error ellipse: s-maj=31.4km s-min=12.8km az=82.0*

ISC 04 20:12:33.5±1.1, 24°.7N±0°.1×142°.5E±0°.3, h550km, n12, σ0.90/13, mb3.5/10, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.39**	**354**	P	**P**	**20 13 44.2**	**-0.8**
	73nm,0.3s,baz=287,slow=23,SNR=23						
JCJ				S	**S**	**20 14 41.3**	**-2.1**
	56nm,0.3s,baz=268,slow=23,SNR=8.4						
KSRS	**Korea Array**	**17.77**	**319**	P	**P**	**20 16 09.1**	**-0.1**
	1.8nm,0.7s,baz=145,slow=8.6,SNR=14						
KLR	**Kul'dur**	**25.88**	**344**	P	**P**	**20 17 22.9**	**+1.2**
	3.9nm,0.6s,baz=168,slow=8.5						
	3.9nm,0.6s						
SONM	**Songino Array**	**36.64**	**318**	P	**P**	**20 18 54.2**	**+0.3**
	0.6nm,0.4s,baz=127,slow=8.9,SNR=6.0						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**45.08**	**191**	P	**P**	**20 20 01.3**	**+0.3**
	4.4nm,0.5s,baz=13,slow=8.7,SNR=60						
	4.4nm,0.5s						
ASAR	**Alice Springs**	**48.80**	**190**	P	**P**	**20 20 28.5**	**-0.5**
	0.4nm,0.3s,baz=8.5,slow=6.1,SNR=6.5						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**51.48**	**320**	P	**P**	**20 20 47.8**	**-0.3**
	1.0nm,0.4s,baz=111,slow=8.1,SNR=5.5						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**52.22**	**311**	P	**P**	**20 20 53.7**	**+0.1**
	0.4nm,0.3s,baz=90,slow=8.2,SNR=16						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**59.68**	**28**	P	**P**	**20 21 45.4**	**+0.6**
	0.6nm,0.8s,baz=251,slow=5.5,SNR=3.6						
	0.6nm,0.8s						
ARCES	**ARCESS Array B**	**75.88**	**341**	P	**P**	**20 23 24.2**	**+0.9**
	0.4nm,0.5s,baz=72,slow=7.9,SNR=10.0						
	0.4nm,0.5s						
**FINES

WRA	**Warramunga Arr**	**42.63**	**266**	P	**P**	**20**	**32**	**48.2**	**-1.7**
	comp=Z,2.4nm,0.4s,baz=97,slow=8.3,SNR=94								
	comp=Z,2.4nm,0.4s								
WRA	**Warramunga Arr**	**42.63**	**266**	P	**P**	**20**	**32**	**48.6**	**-1.3**
MTN	**Manton Dam**	**47.70**	**274**	P	**P**	**20**	**33**	**27.5**	**-1.4**
KNRA	**Kununurra**	**48.92**	**270**	P	**P**	**20**	**33**	**37.5**	**-0.4**
KNRA				IAmb	IAmb	20	33	38.4	
	comp=Z,46nm,1.3s								
FITZ	**Fitzroy Crossi**	**51.05**	**266**	P	**P**	**20**	**33**	**53.6**	**0.0**
FITZ				IAmb	IAmb	20	34	35.6	
	comp=Z,12nm,1.4s								
MORW	**Morawa**	**57.04**	**250**	P	**P**	**20**	**34**	**35.2**	**-0.7**
MORW				IAmb	IAmb	20	35	12.8	
	comp=Z,22nm,1.4s								
QSPA	**South Pole Qui**	**66.01**	**180**	P	**P**	**20**	**35**	**35.1**	**+1.0**
KKM	**Kota Kinabalu**	**69.18**	**287**	P	**P**	**20**	**35**	**54.2**	**-0.2**
JOW	**Kunigami**	**71.28**	**312**	P	**P**	**20**	**36**	**06.8**	**+0.3**
JOW				IAmb	IAmb	20	36	10.8	
	comp=Z,8.8nm,0.9s								
KSRS	**Korea Array**	**78.53**	**320**	P	**P**	**20**	**36**	**47.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=144,slow=6.4,SNR=5.2								
	comp=Z,0.6nm,0.6s								
TXAR	**Lajitas Array**	**90.32**	**58**	P	**P**	**20**	**37**	**46.1**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=205,slow=6.0,SNR=3.3								
	comp=Z,0.3nm,0.6s								
AKASG	**Malin Array Be**	**145.24**	**327**	PKPbc	**PKPdf**	**20**	**44**	**17.1**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=47,slow=2.5,SNR=3.8								
BRTR	**Keskin Array B**	**147.87**	**307**	PKPbc	**PKPbc**	**20**	**44**	**26.1**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=90,slow=2.9,SNR=1.7								
CLL	**Collm**	**151.09**	**343**	*i* PKPbc	**PKPbc**	**20**	**44**	**33.5**	**-0.2**

*ISK **04** 21:07:02.5,41.42N×44.05E,h6km,ML2.7/10*
*TIF **04** 21:07:02.9,41.39N×44.03E,h16km*
*DDA **04** 21:07:03.8±0.0,41.30N×43.91E,h7km±5km,ML2.7*
*NORS **04** 21:07:03.3±0.0,41.48N×43.98E,h3km,MPVA3.8*
*DRS **04** 21:07:04.2±0.0,41.35N×43.40E,h26km*

ISC 04 21:07:03.3±0.9,41.38N±0.02×43.99E±0.02,h9km±7km,
n46,σ1§18/79,Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.16**	**109**	P		**Pg**		**21 07 06.7**	**0.0**
DMNI				S		**Sg**		**21 07 09.0**	**-0.2**
TRLG	**Trialeti**	**0.18**	**29**	P		**Pg**		**21 07 08.1**	**+1.1**
TRLG				S		**Sg**		**21 07 10.8**	**+1.1**
BRNG	**Burnasheti**	**0.27**	**333**	P		**Pb**		**21 07 09.7**	**-0.8**
BRNG				S		**Sb**		**21 07 14.5**	**-0.7**
KZRT	**Kazreti**	**0.31**	**89**	P		**Pg**		**21 07 09.0**	**-0.4**
KZRT				S		**Sg**		**21 07 13.0**	**-0.6**
BGD	**Bogdanovka**	**0.32**	**248**	P		**Pb**		**21 07 10.5**	**-0.7**
BGD				S		**Sb**		**21 07 15.8**	**-0.8**
AKH	**Akhalkalaki**	**0.37**	**274**	P		**Pb**		**21 07 11.5**	**-0.7**
AKH	**Akhalkalaki**	**0.37**	**274**	PG		**Pb**		**21 07 11.5**	**-0.7**
AKH				SG		**Sb**		**21 07 17.3**	**-0.9**
BKRG	**Bakuriani**	**0.51**	**317**	P		**Pb**		**21 07 14.0**	**-0.6**
BKRG				S		**Sb**		**21 07 22.0**	**-0.3**
BTNK	**Botanikuri**	**0.68**	**64**	P		Pg		21 07 09.1	-7.2
BTNK				S		**Sg**		**21 07 18.7**	**-6.6**
SEAG	**Tbilisi Sea**	**0.72**	**58**	P		**Pg**		**21 07 16.9**	**-0.2**
SEAG				S		**Sg**		**21 07 27.2**	**+0.6**
EAK	**Akyaka**	**0.75**	**203**	P		**Pg**		**21 07 16.8**	**-1.0**
EAK				S		**Sg**		**21 07 27.0**	**-0.6**
EAK				*i* AML		AML		21 07 28.0	
	comp=E,288nm,0.4s								
EPOS	**Posof**	**0.95**	**278**	P		**Pg**		**21 07 21.1**	**-0.5**
ABS	**Abastumani**	**0.96**	**293**	P		**Pb**		**21 07 21.9**	**-0.3**
ABS				S		**Sb**		**21 07 35.8**	**+0.8**
KARS	**Kars**	**1.02**	**223**	PN		**Pb**		**21 07 23.3**	**+0.1**
DGRG	**David-gareji**	**1.04**	**86**	P		**Pg**		**21 07 21.6**	**-1.7**
DGRG				S		**Sg**		**21 07 37.4**	**+0.5**
DIGO	**Kars**	**1.07**	**206**	P		**Pg**		**21 07 22.8**	**-1.1**
DIGO				S		**Sg**		**21 07 36.5**	**-1.3**
DIGO				*i* AML		AML		21 07 38.0	
	comp=N,421nm,0.5s								
DIGO				*i* AML		AML		21 07 40.0	
	comp=E,398nm,0.4s								
GUDG	**Gudauri**	**1.14**	**19**	P		**Pg**		**21 07 24.7**	**-0.5**
GUDG				S		**Sb**		**21 07 40.5**	**+0.1**
TKB	**Tkibuli**	**1.22**	**323**	P		**Pg**		**21 07 26.3**	**-0.3**
TKB				S		**Sn**		**21 07 43.5**	**+0.3**
ONI	**Oni**	**1.27**	**342**	P		**Pn**		**21 07 26.9**	**-0.4**
ONI				S		**Sn**		**21 07 44.8**	**+0.2**
ONI	**Oni**	**1.27**	**342**	PN		**Pn**		**21 07 26.9**	**-0.4**
ONI				SN		**Sb**		**21 07 44.3**	**+0.4**
PNSH	**Pansheti**	**1.34**	**20**	P		**Pn**		**21 07 28.0**	**-0.3**
PNSH				S		**Sn**		**21 07 46.5**	**+0.2**
GNI	**Garni**	**1.36**	**155**	PN		**Pn**		**21 07 28.8**	**+0.2**
GNI				SN		**Sn**		**21 07 47.9**	**+1.0**
TASB	**TASBURUN-IGDIR**	**1.41**	**172**	PN		**Pn**		**21 07 29.4**	**+0.2**
SENK	**Senkaya-Erzuru**	**1.49**	**237**	PN		**Pb**		**21 07 31.5**	**+0.3**
IGDI	**IGDIR**	**1.52**	**177**	P		**Pn**		**21 07 29.8**	**-0.8**
IGDI				S		**Sn**		**21 07 50.7**	**+0.1**
DAGI	**Agillar**	**1.59**	**260**	P		**Pb**		**21 07 33.3**	**+0.4**
DAGI				S		**Sg**		**21 07 55.5**	**+1.0**
DDFL	**Dedoflistskaro**	**1.60**	**87**	P		**Pg**		**21 07 34.2**	**+0.2**
DDFL				S		**Sg**		**21 07 58.9**	**+4.0**
KOTA	**Agri, Merkez-K**	**1.69**	**201**	P		**Pg**		**21 07 35.4**	**-0.2**
BATM	**Batumi**	**1.74**	**278**	P		**Pb**		**21 07 35.4**	**+0.1**
BATM				S		**Sg**		**21 07 58.4**	**-0.6**
DBOC	**Borcka**	**1.75**	**270**	P		**Pb**		**21 07 35.6**	**+0.1**
DBOC				S		**Sb**		**21 07 58.2**	**+0.6**
LGD	**Lagodekhi**	**1.75**	**74**	P		**Pn**		**21 07 34.4**	**+0.5**
LGD				S		**Sb**		**21 07 57.5**	**-0.2**
DDEM	**Demirkent**	**1.76**	**255**	P		**Pb**		**21 07 35.5**	**-0.3**
DDEM				S		**Sb**		**21 07 58.3**	**+0.3**
DDEM				*i* AML		AML		21 08 04.0	
	comp=N,87nm,0.4s								
DDEM				*i* AML		AML		21 08 07.0	
	comp=E,84nm,0.4s								
DBAD	**Bademkaya**	**1.77**	**259**	P		**Pb**		**21 07 35.8**	**-0.1**
DBAD				S		**Sg**		**21 08 00.0**	**0.0**
DBAD				*i* AML		AML		21 08 02.0	
	comp=N,81nm,0.8s								
BCA	**Borcka**	**1.78**	**273**	PN		**Pn**		**21 07 35.2**	**+0.9**
HOPA	**Hopa-Artvin**	**1.91**	**271**	PN		**Pb**		**21 07 37.4**	**-0.9**
AGRB	**Hanur-Agry**	**1.96**	**203**	PN		**Pn**		**21 07 38.1**	**+1.2**
GROC	**Groznyy**	**2.26**	**36**	*e*Pn		**Pn**		**21 07 41.5**	**+0.6**
	37nm,0.4s								
GROC				*e*Sn		**Sb**		**21 08 11.8**	**-0.5**
	26nm,0.4s								
XNZR	**Khunzakh**	**2.33**	**59**	*e*Pn		**Pn**		**21 07 43.4**	**+1.4**
	12nm,0.4s								
XNZR				*e*Sn		**Sb**		**21 08 15.6**	**+0.9**
	65nm,0.2s								
KMKR	**Kumukh**	**2.44**	**71**	*e*Pn		**Pn**		**21 07 45.1**	**+1.5**
	20nm,0.2s								
KMKR				*e*Sn		**Sb**		**21 08 18.4**	**+0.5**
	35nm,0.4s								
CHOM	**Cayeli-Rize**	**2.45**	**264**	PN		**Pn**		**21 07 44.8**	**+1.3**
ARKR	**Arakani**	**2.55**	**60**	*e*Pn		**Pn**		**21 07 45.6**	**+0.7**
	10.0nm,0.6s								
ARKR				*e*Sn		**Sb**		**21 08 19.8**	**-0.9**
	18nm,0.4s								
DLMR	**Dylym**	**2.59**	**48**	*e*Pn		**Pn**		**21 07 46.2**	**+0.8**
	23nm,0.4s								
DLMR				*e*Sn		**Sb**		**21 08 20.7**	**-1.0**
	23nm,0.3s								
KRNR	**Karanay**	**2.61**	**55**	*e*Pn		**Pn**		**21 07 46.0**	**+0.3**
	3.0nm,0.2s								
KRNR				*e*Sn		**Sb**		**21 08 20.7**	**-1.8**
	114nm,0.4s								
KIV	**Kislovodsk**	**2.74**	**340**	PN		**Pn**		**21 07 47.9**	**+0.3**
AKT	**Akhty**	**2.82**	**87**	*e*Pn		**Pn**		**21 07 50.4**	**+1.8**
	9.0nm,0.3s								
AKT				*e*Sn		**Sb**		**21 08 28.0**	**-0.4**
BAYT	**Aydıntepe-Bayb**	**3.08**	**253**	PN		**Pn**		**21 07 54.1**	**+1.8**

JMA 04 21:14:13.6±0.2,28°N±2°×14°0E±°,h513km,MV3.5/22,W
OFF OGASAWARA,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.06**	**121**	P		P		21 15 20.6	+0.4
CBIJ				*e*S		S		21 16 13.4	-0.9
JIE	**Ise**	**6.88**	**335**	P		P		21 16 00.7	+1.9
JKN2	**Miekihoku**	**6.92**	**332**	P		P		21 16 00.2	+0.9
JOD2	**Odawara 2**	**7.13**	**353**	P		P		21 16 02.7	+1.3
JHU	**Hanno**	**7.70**	**354**	*e*P		P		21 16 08.1	+1.1
JHU				*e*S		S		21 17 39.5	-0.7
JRY	**Ryogami san**	**7.90**	**352**	P		P		21 16 10.2	+1.0
JAG	**Ashikaga**	**8.26**	**356**	P		P		21 16 13.1	+0.4
JAG				S		S		21 17 47.7	-2.9
JHO	**Hitachi**	**8.42**	**2**	P		P		21 16 16.2	+1.8

*IDC **04** 21:34:33.4±0.6,38.77N×72.56E,h0km,mb4.3/25,*
mbtmp4.3/33,ML3.9/8,MS3.4/20,Error ellipse:
s-maj=12.9km s-min=10.4km az=175.0
*MOS **04** 21:34:34.5±1.3,38.84N×72.48E,h30km,mb4.7/52,Error*
ellipse: s-maj=4.7km s-min=3.3km az=96.8
*NNC **04** 21:34:35.9±1.8,38.91N×72.37E,h0km,mb5.2,mpv4.8,*
Error ellipse: s-maj=14.8km s-min=9.9km az=164.0
*BJI **04** 21:34:38.8±0.0,38.84N×72.58E,h35km,mb4.3/26,*
mB4.5/15,ML4.1/7,Ms4.0/15,Ms7 3.7/13
*NEIC **04** 21:34:41.1±2.1,38.78N±0.05×72.38E±0.08,h45km±7km,*
mb4.5/110,Error ellipse: s-maj=8.8km s-min=7.5km
az=101.0

ISC 04 21:34:38.5±0.3,38.82N±0.03×72.52E±0.03,h31km,n451,
σ1§75/459,mb4.5/138,MS3.4/23,41C-11D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**1.73**	**277**				**Pn**	**21 35 05.5**	**-1.0**
BTK	**Batken**	**1.81**	**314**				**Pn**	**21 35 06.2**	**-1.3**
BTK	**Batken**	**1.81**	**314**	PN			**Pn**	**21 35 06.2**	**-1.3**
CHGR	**Chuyangaron**	**2.63**	**267**				**Pn**	**21 35 20.6**	**+1.7**
CHGR	**Chuyangaron**	**2.63**	**267**	PN			**Pn**	**21 35 20.6**	**+1.7**
KSH	**Kashi**	**2.77**	**74**	P			**Pn**	**21 35 17.6**	**-3.3**
KSH				S			**Sn**	**21 35 49.0**	**-4.4**
KSH				*s*max			*s*max		
	comp=N,3μm,0.7s								
KSH				*s*max			*s*max		
	comp=E,2μm,0.8s								
AML	**Almayashu**	**3.43**	**15**	P			**Pn**	**21 35 32.6**	**+2.5**
	SNR=310								
TAS	**Tashkent**	**3.52**	**316**				**Pn**	**21 35 33.5**	**+2.5**
TAS	**Tashkent**	**3.52**	**316**	PN			**Pn**	**21 35 33.5**	**+2.5**
UCH	**Uchtor**	**3.73**	**23**	P			**Pn**	**21 35 36.5**	**+2.2**
	SNR=113								
IUG	**luzhnay**	**3.83**	**331**	*e*PN			**Pn**	**21 35 37.6**	**+2.3**
IUG	**luzhnay**	**3.83**	**331**	*e*P			**Pn**	**21 35 37.7**	**+2.3**
	baz=330								
IUG	**luzhnay**	**3.83**	**331**	Pg			**Pn**	**21 35 38.3**	**+3.0**
	9μm,0.7s								
IUG				Lg			Lg	21 36 24.7	
	1μm,0.5s								
EKS2	**Erkin-Say**	**3.95**	**14**	P			**Pn**	**21 35 41.0**	**+3.9**
	SNR=54								
MRKS	**Merke**	**3.96**	**8**	Pg			**Pb**	**21 35 46.3**	**-1.2**
	137nm,0.5s								
MRKS				Lg			Lg	21 36 38.1	
	129nm,0.3s								
AAK	**Ala-Archa**	**4.10**	**21**	Pn			**Pn**	**21 35 40.9**	**+1.7**
	27nm,0.3s,baz=182,slow=5.5,SNR=39								
AAK				Sn			**Sn**	**21 36 31.9**	**+5.9**
	17nm,0.3s,baz=124,slow=23,SNR=10								
	90nm,0.4s								
AAK	**Ala-Archa**	**4.10**	**21**	P			**Pn**	**21 35 41.8**	**+2.7**
	SNR=87								
AAK	**Ala-Archa**	**4.10**	**21**				**Pn**	**21 35 42.1**	**+3.0**
AAK	**Ala-Archa**	**4.10**	**21**	*ce*PN			**Pn**	**21 35 40.8**	**+1.7**
AAK				*p*max			*p*max		
	comp=Z,189nm,1.3s								
AAK	**Ala-Archa**	**4.10**	**21**	Pn			**Pn**	**21 35 42.6**	**+3.5**
DZA	**Taraz**	**4.17**	**348**	*e*PN			**Pn**	**21 35 41.4**	**+1.5**
DZA	**Taraz**	**4.17**	**348**	*e*P			**Pn**	**21 35 41.5**	**+1.5**
	baz=347								
DZA	**Taraz**	**4.17**	**348**	Pg			**Pn**	**21 35 44.5**	**+4.6**
	comp=Z,1μm,0.4s								
DZA				Lg			Lg	21 36 34.7	
	comp=Z,1μm,0.7s								
KBK	**Karagaybulak**	**4.25**	**25**	P			**Pn**	**21 35 44.6**	**+3.4**
	SNR=37								
ULHL	**Ulahol**	**4.44**	**38**	P			**Pn**	**21 35 46.5**	**+2.6**
	SNR=22								
CHMS	**Chumysh**	**4.50**	**21**	P			**Pn**	**21 35 47.4**	**+2.9**
	SNR=13								
CHMS	**Chumysh**	**4.50**	**21**	PN			**Pn**	**21 35 46.8**	**+2.2**
CHMS				S			**Sb**	**21 36 45.0**	**-5.6**
CHMS	**Chumysh**	**4.50**	**21**	⇓Pn			**Pn**	**21 35 46.6**	**+2.0**
	comp=Z,128nm,0.6s								
CHMS				⇑Sn			**Sn**	**21 36 39.9**	**+4.0**
	comp=Z,140nm,0.7s								
CHMS				⇑Lg			Lg	21 37 00.7	
	comp=Z,138nm,0.6s								
KK31	**Karatay Array**	**4.54**	**341**				**Pn**	**21 35 47.1**	**+2.1**
KK31	**Karatay Array**	**4.54**	**341**	PN			**Pn**	**21 35 47.1**	**+2.1**
KK31	**Karatay Array**	**4.54**	**341**	⇓Pn			**Pn**	**21 35 46.8**	**+1.8**
	comp=Z,114nm,0.5s,baz=155,slow=13,SNR=1353								
KK31				⇑Sn			**Sn**	**21 36 39.4**	**+2.6**
	comp=Z,135nm,0.5s,baz=164,slow=30,SNR=5.0								
KK31				⇓Lg			Lg	21 36 58.0	
	comp=Z,163nm,0.5s								
KKAR	**Karatay Array**	**4.54**	**341**				**Pn**	**21 35 47.1**	**+2.1**
KKAR	**Karatay Array**	**4.54**	**341**				**Pn**	**21 35 46.8**	**+1.8**
KKAR	**Karatay Array**	**4.54**	**341**	PN			**Pn**	**21 35 47.1**	**+2.1**
USP	**Ospenovka**	**4.69**	**18**	P			**Pn**	**21 35 50.4**	**+3.3**
	SNR=17								
TKM2	**Tokmak 2**	**4.71**	**29**	P			**Pn**	**21 35 49.8**	**+2.2**
	SNR=66								
TKM2	**Tokmak 2**	**4.71**	**29**	PN			**Pn**	**21 35 50.2**	**+2.6**
TKM2	**Tokmak 2**	**4.71**	**29**	⇑Pn			**Pn**	**21 35 49.5**	**+1.9**
	comp=Z,30nm,0.6s								
TKM2				⇓Pg			**Pb**	**21 36 03.0**	**+2.6**
	comp=Z,133nm,0.8s								
TKM2				⇑Lg			Lg	21 37 07.4	
	comp=Z,170nm,0.7s								
SGDS	**Sogindy**	**4.89**	**18**	*e*PN			**Pn**	**21 35 50.3**	**+0.4**
SGDS	**Sogindy**	**4.89**	**18**	*e*P			**Pn**	**21 35 50.4**	**+0.4**
	baz=18								
SGDS	**Sogindy**	**4.89**	**18**	Pg			**Pb**	**21 36 02.1**	**-1.3**
	comp=Z,31nm,0.4s								
SGDS				Lg			Lg	21 37 05.0	
	comp=Z,83nm,0.6s								
KST	**Kastek**	**4.96**	**31**	Pg			**Pb**	**21 36 03.9**	**-0.7**
	comp=Z,37nm,0.7s								
KST				Lg			Lg	21 37 08.0	
	comp=Z,154nm,0.6s								
CEP	**Cherat**	**5.01**	**186**	P			**Pn**	**21 35 54.8**	**+3.1**
KBL	**Kabul**	**5.10**	**214**	Pn			**Pn**	**21 35 56.8**	**+3.8**
KBL	**Kabul**	**5.10**	**214**	PN			**Pn**	**21 35 56.8**	**+3.8**
CHCP	**Chirah Chowk**	**5.19**	**173**	P			**Pn**	**21 35 57.4**	**+3.4**
NIL	**Nilore**	**5.19**	**173**	Pn			**Pn**	**21 35 56.5**	**+2.4**
NIL	**Nilore**	**5.19**	**173**	PN			**Pn**	**21 35 56.5**	**+2.4**
MTBS	**Maitube**	**5.22**	**33**	Pg			**Pb**	**21 36 09.0**	**-0.1**
	comp=Z,44nm,0.5s								
MTBS				Lg			Lg	21 37 19.0	
	comp=Z,81nm,0.4s								
KRBS	**Karabastau**	**5.42**	**25**	Pg			**Pb**	**21 36 12.0**	**-0.4**
	comp=Z,22nm,0.4s								
KRBS				Lg			Lg	21 37 21.9	
	comp=Z,78nm,0.7s								
AAA	**Alma-Ata**	**5.50**	**36**	*e*PN			**Pn**	**21 35 58.5**	**+0.2**
AAA	**Alma-Ata**	**5.50**	**36**	*e*P			**Pn**	**21 35 58.5**	**+0.2**
	baz=36								
MDOK	**Medeo**	**5.53**	**37**	*e*PN			**Pn**	**21 36 01.4**	**+2.7**
MDOK	**Medeo**	**5.53**	**37**	*e*P			**Pn**	**21 36 01.4**	**+2.7**
	baz=37								
MDOK	**Medeo**	**5.53**	**37**	⇑Pn			**Pn**	**21 36 01.4**	**+2.7**
	comp=Z,34nm,0.6s								
MDOK				Pg			**Pb**	**21 36 15.0**	**+0.7**
	comp=Z,31nm,0.6s								
MDOK				⇑Pg				21 36 17.9	
	comp=Z,71nm,0.6s								
MDOK				Lg			Lg	21 37 27.4	
	comp=Z,102nm,0.7s								
MDOK				⇑Lg			Lg	21 37 32.4	
	comp=Z,156nm,0.8s								
KNDC	**Almaty**	**5.53**	**36**	PN			**Pn**	**21 36 01.3**	**+2.6**
KNDC	**Almaty**	**5.53**	**36**	⇓Pn			**Pn**	**21 36 00.6**	**+1.9**
	comp=Z,82nm,0.5s								
KNDC				⇑Pg			**Pb**	**21 36 16.8**	**+2.5**
	comp=Z,229nm,0.7s								
KNDC				⇓Lg			Lg	21 37 34.1	
	comp=Z,968nm,0.8s								
KTBS	**Karatobe**	**5.81**	**31**	Pg			**Pb**	**21 36 20.7**	**+1.8**
	comp=Z,42nm,0.4s								
KTBS				Lg			Lg	21 37 37.0	
	comp=Z,150nm,0.4s								
KUU	**Kurty**	**5.83**	**28**	*e*PN			**Pn**	**21 36 03.5**	**+0.8**
KUU				*p*max			*p*max		
	comp=Z,7.0nm,0.8s								
KUU	**Kurty**	**5.83**	**28**	*e*P			**Pn**	**21 36 03.5**	**+0.8**
	comp=Z,6.8nm,0.8s,baz=29								
KUU	**Kurty**	**5.83**	**28**	Pg			**Pb**	**21 36 19.2**	**0.0**
	comp=Z,40nm,0.4s								
KUU				Lg			Lg	21 37 34.5	
	comp=Z,160nm,0.6s								
THW	**Thamme Wali**	**6.05**	**186**	P			**Pn**	**21 36 07.5**	**+1.7**
CHKK	**Chushkaly**	**6.05**	**32**	*e*PN			**Pn**	**21 36 07.3**	**+1.6**
CHKK	**Chushkaly**	**6.05**	**32**	*e*P			**Pn**	**21 36 07.4**	**+1.6**
	baz=33								
CHKK	**Chushkaly**	**6.05**	**32**	Pg			**Pb**	**21 36 22.8**	**-0.3**
	comp=Z,20nm,0.7s								
CHKK				Lg			Lg	21 37 40.2	
	comp=Z,90nm,0.6s								
SATY	**Saty**	**6.15**	**45**	*e*PN			**Pn**	**21 36 07.9**	**+0.7**
SATY				*p*max			*p*max		
	comp=Z,5.0nm,0.8s								
SATY	**Saty**	**6.15**	**45**	*e*P			**Pn**	**21 36 07.9**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=45								
BTLS	**Baital**	**6.32**	**10**	*e*PN			**Pn**	**21 36 10.2**	**+0.8**
BTLS				*p*max			*p*max		
	comp=Z,5.0nm,0.3s								
BTLS	**Baital**	**6.32**	**10**	*e*P			**Pn**	**21 36 10.3**	**+0.8**
	comp=Z,5.2nm,0.3s,baz=9.9								
JMU	**Jammu**	**6.39**	**162**	*e*P			**Pn**	**21 36 09.4**	**-1.0**
UZB	**Uzynbulak**	**6.55**	**47**	*e*PN			**Pn**	**21 36 13.1**	**+0.4**
UZB	**Uzynbulak**	**6.55**	**47**	*e*P			**Pn**	**21 36 13.1**	**+0.4**
	baz=47								
SHLS	**Shalkode**	**6.81**	**48**	*e*PN			**Pn**	**21 36 20.4**	**+4.2**
SHLS				*p*max			*p*max		
	comp=Z,4.0nm,0.4s								
SHLS	**Shalkode**	**6.81**	**48**	*e*P			**Pn**	**21 36 20.5**	**+4.2**
	comp=Z,3.5nm,0.4s,baz=50								
THN	**Thein Dam**	**6.88**	**157**	*e*P			**Pn**	**21 36 18.3**	**+1.1**
THN				*e*S			**Sn**	**21 37 33.8**	**-0.6**
PDGK	**Podgornoye**	**6.93**	**47**	PN			**Pn**	**21 36 18.2**	**+0.2**
PDGK	**Podgornoye**	**6.93**	**47**	⇓Pn			**Pn**	**21 36 18.2**	**+0.2**
	comp=Z,17nm,0.6s								
PDGK				⇑Pg			Pb	21 36 43.5	+5.4
	comp=Z,68nm,0.8s								
PDGK				⇑Lg			Lg	21 38 16.3	
	comp=Z,178nm,1.1s								
TDK	**Taldyqorghan**	**7.58**	**34**	*e*P			**Pn**	**21 36 28.5**	**+1.8**
TDK	**Taldyqorghan**	**7.58**	**34**	*e*P			**Pn**	**21 36 28.6**	**+1.8**
	baz=34								
BHK	**Bhakra**	**8.05**	**155**	*e*P			**Pn**	**21 36 34.1**	**+0.8**
SMLA	**Simla**	**8.57**	**152**	*e*P			**Pn**	**21 36 39.4**	**-0.9**
SMLA				*e*S			Sn	21 38 02.5	-13
SMLA				IAML				21 38 19.2	
	comp=N,190nm,0.6s								
SMLA				IAML				21 38 20.6	
	comp=E,165nm,0.9s								
HRA	**Herat**	**9.37**	**245**	Pn			**Pn**	**21 36 52.1**	**+0.6**
OTUK	**Ortayu**	**9.42**	**359**	P			**Pn**	**21 36 52.3**	**+0.3**
OTUK	**Ortayu**	**9.42**	**359**	⇑Pn			**Pn**	**21 36 52.3**	**+0.3**
	comp=E,9.5nm,0.7s								
DDI	**Dehra Dun**	**9.63**	**150**	*e*P			**Pn**	**21 36 53.8**	**-1.1**
MAKZ	**Makanchi**	**10.58**	**38**	Pn			**Pn**	**21 37 10.7**	**+2.9**
MAKZ	**Makanchi**	**10.58**	**38**	P			**Pn**	**21 37 10.7**	**+2.9**
MKAR	**Makanchi Array**	**10.72**	**39**	Pn			**Pn**	**21 37 10.6**	**+0.9**
	comp=E,0.6nm,0.3s,baz=224,slow=16,SNR=28								
	comp=E,1.8nm,0.5s								
MKAR	**Makanchi Array**	**10.72**	**39**	Pn			**Pn**	**21 37 12.3**	**+2.5**
MKAR	**Makanchi Array**	**10.72**	**39**	*i* P			**Pn**	**21 37 12.1**	**+2.3**
MKAR				*p*max			*p*max		
	comp=Z,3.0nm,0.6s								
BRZS	**Berezniki**	**11.16**	**1**	*e*P			**Pn**	**21 37 14.6**	**-1.2**
BRZS				*e*S			**Sn**	**21 39 18.0**	**-1.4**
BRZS				*p*max			*p*max		
	comp=Z,3.0nm,1.3s								
BRZS	**Berezniki**	**11.16**	**1**	*e*P			**Pn**	**21 37 14.6**	**-1.2**
	comp=Z,3.0nm,1.3s,baz=0.4								
BRZS				*e*S			**Sn**	**21 39 18.0**	**-1.4**
	baz=0.4								
**

ARU **Arti** 19.90 337 P **P** 21 39 06.1 -1.0
baz=118,slow=10,SNR=12
ARU LR LR 21 47 15.4
comp=Z,110nm,18.4s,baz=151,slow=38
comp=Z,4.7nm,0.4s
ARU Arti 19.90 337 P **P** 21 39 07.1 -0.1
ARU Arti 19.90 337*d* *i*P **P** 21 39 06.5 -0.7
ARU S **S** 21 42 47.9 -1.4
ARU pmax pmax
comp=Z,7.0nm,0.9s
GUWA GUWAHATI 20.44 122 *e*P **P** 21 39 13.3 0.0
ALNE Al Ain 20.48 229 P **P** 21 39 12.8 -0.9
GROC Groznyy 20.60 291 *e*P **P** 21 39 15.5 +0.7
GROC *e**SP **sP** 21 39 31.8 +2.9
GROC *e*S **S** 21 43 03.0 -0.4
GROC pmax pmax
comp=Z,28nm,0.6s
TEZP TEZPUR 20.91 120 *e*P **P** 21 39 18.3 0.0
TEZP IAmb IAmb 21 39 22.8
comp=Z,26nm,1.0s
SHL Shillong 21.00 123 *e*P **P** 21 39 18.2 -1.3
ZIRO ZIRO 21.06 116 *e*P **P** 21 39 20.2 +0.1
ZIRO IAmb IAmb 21 39 24.1
comp=Z,19nm,0.7s
GTA Gaotai 21.16 80 *e*P **P** 21 39 21.9 +0.7
GTA pP pP 21 39 32.5 +1.7
GTA sP sP 21 39 37.3 +2.0
GTA S **S** 21 43 15.8 +0.9
GTA pmax pmax
comp=Z,10.0nm,0.9s
GTA pmax pmax
comp=Z,110nm,4.4s
GTA LR LR
comp=Z,120nm,14.9s
GTA LR LR
comp=Z,150nm,16.0s
GTA LR LR
comp=Z,170nm,14.9s
KNGR Kungurtug, Tuv 21.20 48 *i* P **P** 21 39 22.0 +0.5
GNI Garni 21.45 282 P **P** 21 39 25.7 +1.4
comp=Z,15nm,0.8s,baz=1.6,slow=5.5,SNR=14
GNI LR LR 21 48 57.4
comp=Z,34nm,20.1s,baz=78,slow=40
comp=Z,15nm,0.8s
GNI Garni 21.45 282 P **P** 21 39 25.5 +1.3
GNI Garni 21.45 282 *i* P **P** 21 39 25.3 +1.1
GNI pmax pmax
comp=Z,33nm,0.9s
GNI Garni 21.45 282 P **P** 21 39 26.7 +2.5
BELG Belogornoye 21.94 316 P **P** 21 39 28.4 -0.8
comp=Z,39nm,0.9s,baz=144,slow=1.3,SNR=17
BELG LR LR 21 49 05.5
comp=Z,83nm,18.2s,baz=140,slow=40
comp=Z,39nm,0.9s
BELG Belogornoye 21.94 316 *i* P **P** 21 39 27.9 -1.2
BELG pmax pmax
comp=Z,9.0nm,1.0s
HYBB Hyderabad (bro 21.97 164 *e*P **P** 21 39 31.0 +1.3
HYBB *es*P **sP** 21 39 47.9 +3.8
HYBB *e*S **S** 21 43 31.7 +1.1
HYB Hyderabad 21.97 164 *e*P **P** 21 39 30.0 +0.2
ZEI Tsey 21.97 290 *e*P **P** 21 39 32.8 +2.9
ZEI pmax pmax
comp=Z,14nm,0.9s
NCK Nalchik 22.21 291 *i* P **P** 21 39 33.9 +1.6
NCK pmax pmax
comp=Z,21nm,0.6s
MOKO MOKOCHONG 22.27 118 *e*P **P** 21 39 32.5 -0.7
ONI Oni 22.30 289 P **P** 21 39 35.5 +2.2
ONI Oni 22.30 289 P **P** 21 39 35.5 +2.2
ONI pmax pmax
comp=Z,52nm,1.1s
MZR Muzera 22.63 231 P **P** 21 39 35.0 -1.8
KARS Kars 22.67 284 P **P** 21 39 36.5 -0.8
KARS Kars 22.67 284 P **P** 21 39 36.5 -0.8
KARS pmax pmax
comp=Z,90nm,1.1s
GOF Gofitskoye 22.72 295⇑ *e*P **P** 21 39 35.2 -2.4
KBZ Khabaz 22.73 292 P **P** 21 39 37.2 -0.5
comp=Z,6.4nm,0.8s,baz=136,slow=8.0,SNR=11
KBZ LR LR 21 50 35.7
comp=Z,93nm,19.0s,baz=87,slow=42
comp=Z,6.4nm,0.8s
KBZ Khabaz 22.73 292 *ce*P **P** 21 39 36.7 -1.0
KBZ pmax pmax
comp=Z,6.0nm,0.8s
AZL Aizawl 22.80 125 *e*P **P** 21 39 37.8 -0.9
AZL IAmb IAmb 21 39 41.0
comp=Z,26nm,1.0s
KVAR Kislovodsk Arr 22.89 293 P **P** 21 39 38.6 -0.8
comp=Z,1.9nm,0.5s,baz=272,slow=19,SNR=3.2
comp=Z,1.9nm,0.5s
KIV Kislovodsk 22.89 293 P **P** 21 39 39.7 +0.1
KIV IAmb IAmb 21 40 03.5
comp=Z,16nm,0.7s
KIV Kislovodsk 22.89 293 *e*P **P** 21 39 38.6 -0.9
KIV *e*S **S** 21 43 46.4 -0.9
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,24nm,14.0s
KIV Kislovodsk 22.89 293 P **P** 21 39 40.4 +0.8
GEVA Gevas 23.00 278 P **P** 21 39 40.4 -0.4
GEVA IAmb IAmb 21 39 49.0
comp=Z,14nm,0.9s
MOY Mondy 23.64 48 *e*P **P** 21 39 49.5 +2.6
MOY pmax pmax
comp=Z,10.0nm,1.4s
GURO Guroymak-BITLI 23.75 279 P **P** 21 39 48.4 +0.2
ZAK Zakamensk 24.59 52 *e*P **P** 21 39 55.9 +0.2
ZAK pmax pmax
comp=Z,5.0nm,1.0s
ZAK pmax pmax
comp=Z,3.0nm,1.1s
KOPT Kop Dagi 24.70 283 P **P** 21 39 56.4 -0.7
KIRV Kirov 24.74 331 P **P** 21 39 57.0 +0.1
comp=Z,33nm,0.9s,baz=127,slow=4.4,SNR=9.6
comp=Z,33nm,0.9s
KIRV Kirov 24.74 331 *ce*P **P** 21 39 57.2 +0.4
VRH Novokhopyorsk 24.84 310 *e*P **P** 21 39 58.2 +0.3
VRH pmax pmax
comp=Z,10.0nm,0.7s
LZH Lanzhou 24.96 86 *e*P **P** 21 40 02.4 +3.1
LZH pP sP 21 40 13.0 -1.0
LZH sP pP 21 40 17.4 +7.8
LZH pmax pmax
comp=Z,11nm,1.0s
LZH LR LR
comp=Z,210nm,12.7s
LZH LR LR
comp=Z,160nm,10.7s
LZH LR LR
comp=Z,220nm,13.7s
MARD Mardin 24.97 277 P **P** 21 39 58.9 -0.5
MARD IAmb IAmb 21 40 14.7
comp=Z,8.1nm,0.8s
SOC Sochi 25.04 292 *e*P **P** 21 39 55.8 -3.9
SOC *e*PPP PPP 21 40 45.7
SOC *e*S **S** 21 44 15.8 -6.0
SOC *e*SSS SSS 21 45 25.0
SOC MLR MLR
comp=Z,59nm,16.0s
SONM Songino Array 26.06 59 P **P** 21 40 09.8 +0.7
comp=Z,2.1nm,0.8s,baz=263,slow=10,SNR=11
SONM LR LR 21 51 32.9
comp=Z,156nm,19.8s,baz=275,slow=39
comp=Z,2.1nm,0.8s
SONM Songino Array 26.06 59 P **P** 21 40 10.2 +1.0
SONM Songino Array 26.06 59 P **P** 21 40 10.2 +1.0
SONM pmax pmax
comp=Z,4.0nm,1.0s
VORR Voronezh 26.49 310 *e*P **P** 21 40 12.7 0.0
VORR pmax pmax
comp=Z,10.0nm,0.4s
ULN Ulaanbaatar 26.51 59 P **P** 21 40 14.3 +1.1
ULN Ulaanbaatar 26.51 59 *ce*P **P** 21 40 14.6 +1.4
ULN pmax pmax
comp=Z,5.0nm,1.1s
LPSR Galich'ya Gora 26.92 312 *e*P **P** 21 40 16.2 -0.4
LPSR pmax pmax
comp=Z,10.0nm,0.8s
PZH PanZhiHua 27.38 108 P **P** 21 40 22.1 +1.0
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,50nm,4.3s
RAYN Ar Rayn 27.56 244 P **P** 21 40 22.1 -0.5
RAYN IAmb IAmb 21 40 24.7
comp=Z,8.6nm,1.0s
RAYN Ar Rayn 27.56 244 P **P** 21 40 22.2 -0.5
RAYN pmax pmax
comp=Z,9.0nm,1.0s
RAYN Ar Rayn 27.56 244 P **P** 21 40 22.9 +0.3
PRGR Permogore 28.21 333 *e*P **P** 21 40 26.2 -1.8
BNN Bunyan 28.45 282 P **P** 21 40 29.5 -1.1
BNN IAmb IAmb 21 41 13.3
comp=Z,7.2nm,0.9s
MOS Moscow 28.69 318 *e*P **P** 21 40 31.6 -0.8
MOS *e* 21 41 22.4
MOS *e* 21 45 24.8
OBN Obninsk 29.03 316 P **P** 21 40 36.8 +1.3
comp=Z,3.7nm,0.7s,baz=109,slow=22,SNR=4.5
comp=Z,3.7nm,0.7s
OBN Obninsk 29.03 316 P **P** 21 40 35.0 -0.4
OBN IAmb IAmb 21 40 38.3
comp=Z,15nm,0.8s
OBN Obninsk 29.03 316 *i* P **P** 21 40 36.0 +0.6
OBN *i* 21 41 26.2
OBN *i* S **S** 21 45 27.7 +3.1
OBN pmax pmax
comp=Z,13nm,0.9s
OBN MLR MLR
comp=Z,62nm,17.0s
SIM Simferopol' 29.04 295 *e*P **P** 21 40 38.6 +3.0
SIM *e* 21 41 31.6
SIM pmax pmax
comp=Z,11nm,0.7s
HHC Hu-ho-hao-te 29.89 74 *e*P **P** 21 40 45.6 +2.3
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.2s
BR131 Keskin Array S 29.95 284 P **P** 21 40 43.9 -0.1
BR131 Keskin Array S 29.95 284 P **P** 21 40 43.9 -0.1
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 29.95 284 P **P** 21 40 44.5 +0.6
comp=Z,1.4nm,0.9s,baz=86,slow=7.6,SNR=6.8
comp=Z,1.4nm,0.9s
BRTR Keskin Array B 29.95 284 P **P** 21 40 43.9 -0.1
BRTR Keskin Array B 29.95 284 *ce*P **P** 21 40 45.4 +1.4
BRTR pmax pmax
comp=Z,1.0nm,0.8s
KLMR Klimovskoe 30.10 328 *e*P **P** 21 40 45.1 +0.2
KLMR pmax pmax
comp=Z,6.0nm,1.0s
KLMR Klimovskoe 30.10 328 *e*P **P** 21 40 45.1 +0.2
KLMR AMP 21 40 48.0
comp=Z,6.0nm,1.0s
CMAR Chiang Mai Arr 30.63 124 P **P** 21 40 49.6 -0.3
comp=Z,0.4nm,0.3s,baz=301,slow=11,SNR=2.6
comp=Z,0.4nm,0.3s
CSS Mathiatis 31.41 275 P **P** 21 40 55.2 -1.6
CSS IAmb IAmb 21 41 18.3
comp=Z,8.6nm,1.0s
ENH Enshi 31.45 94 P **P** 21 40 58.8 +1.6
ENH IAmb IAmb 21 41 07.1
comp=Z,5.9nm,0.9s
NRIK Noril'sk 31.63 10 P **P** 21 40 58.5 +0.3
comp=Z,5.6nm,0.9s,baz=227,slow=4.2,SNR=3.8
comp=Z,5.6nm,0.9s
NRIK Noril'sk 31.63 10 P **P** 21 40 59.0 +0.7
NRIK IAmb IAmb 21 41 02.0
comp=Z,10nm,1.1s
NRIK Noril'sk 31.63 10 *ce*P **P** 21 40 57.8 -0.5
NRIK pmax pmax
comp=Z,7.0nm,1.1s
EIL Elat 32.18 265 LR LR 21 57 27.1
comp=Z,84nm,20.2s,baz=88,slow=43
PALK Pallekele 32.27 165 P **P** 21 41 02.9 -1.5
PALK Pallekele 32.27 165 P **P** 21 41 02.9 -1.5
PALK pmax pmax
comp=Z,28nm,1.3s
AKASG Malin Array Be 32.50 306 P **P** 21 41 06.2 +0.1
comp=Z,0.4nm,0.4s,baz=79,slow=7.9,SNR=5.8
AKASG LR LR 21 56 23.3
comp=Z,64nm,21.4s,baz=44,slow=40
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 32.50 306 *i* P **P** 21 41 10.5 +4.4
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 32.50 306 *ce*P **P** 21 41 06.8 +0.7
BOD Bodaibo 32.80 41 *e*P **P** 21 41 08.4 -0.2
BOD pmax pmax
comp=Z,14nm,1.0s
CFR Carcaliu 33.26 296 ⇑P **P** 21 41 13.6 +0.9
CFR Carcaliu 33.26 296 P **P** 21 41 13.6 +0.9
MNK Minsk 33.76 312 *i* P **P** 21 41 15.6 -1.4
MNK *i* 21 42 30.4
MNK *i* S **S** 21 46 37.0 -1.4
MNK *i* SS **SnSn** 21 48 46.5 +2.4
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,15nm,0.9s
MNK MLR MLR
comp=E,8.0nm,16.0s
MNK MLR MLR
comp=Z,115nm,22.0s
MNK Minsk 33.76 312 *i* P **P** 21 41 15.6 -1.4
comp=E,2.0nm,0.9s
MNK *i* P **P** 21 41 15.6 -1.4
MNK *i* P **P** 21 41 15.6 -1.4
comp=Z,15nm,0.9s,baz=280
MNK *i* PP **PnPn** 21 42 30.4 +0.8
MNK *i* S **S** 21 46 37.0 -1.4
MNK *i* SS **SnSn** 21 48 46.6 +2.4
MNK *i* LQ LQ 21 52 25.8
MNK *i* LR LR 21 54 59.2
MNK *i* LRM MLR 21 56 16.9
comp=E,8.0nm,16.4s
MNK *i* LRM MLR 21 56 16.9
MNK *i* LRM MLR 21 56 17.4
comp=Z,115nm,21.9s
PLOR Plostina 34.24 297 ⇑P **P** 21 41 22.3 +0.9
PLOR Plostina 34.24 297 P **P** 21 41 22.3 +0.9
NACGM Naroch 34.45 313⇑ *e*P **P** 21 41 23.6 +0.6
baz=99
BIZ Bicaz 34.54 299 ⇑P **P** 21 41 24.6 +0.7
COVR Voineasa-Covas 34.55 297 ⇑P **P** 21 41 25.2 +1.2
MLR Muntele Rosu 34.77 296 ⇑P **P** 21 41 27.2 +1.2
MLR Muntele Rosu 34.77 296 P **P** 21 41 26.2 +0.1
MLR IAmb IAmb 21 41 46.0
comp=Z,8.2nm,0.9s
MLR Muntele Rosu 34.77 296 P **P** 21 41 26.2 +0.1
MLR pmax pmax
comp=Z,8.0nm,0.9s
IIGN Ignalina 34.84 314 *e*P **P** 21 41 27.1 +0.7
ISAL Salakas 34.93 314 *e*P **P** 21 41 27.7 +0.6
BURAR Bucovina Array 35.10 300 ⇑P **P** 21 41 29.9 +1.0
BURAR Bucovina Array 35.10 300 P **P** 21 41 29.5 +0.7
BURAR Bucovina Array 35.10 300 P **P** 21 41 29.9 +1.0
BUR08 Bucovina Ar. S 35.11 300 P **P** 21 41 29.3 +0.4
ARR Arges 35.70 296 ⇑P **P** 21 41 35.4 +1.4
LVZ Lovozero 35.78 337 *ce*P **P** 21 41 35.8 +1.4
LVZ pmax pmax
comp=Z,15nm,1.3s
PABE Paberze 36.13 314 P **P** 21 41 38.1 +0.6
PABE Paberze 36.13 314 *e*P **P** 21 41 38.4 +0.9
VSVD Vaisvydziai 36.22 314 *e*P **P** 21 41 38.7 +0.5
FIA1 FINESS Array S 36.27 324 P **P** 21 41 38.6 0.0
FINES FINESS Array B 36.27 324 P **P** 21 41 38.5 -0.1
comp=Z,7.5nm,0.5s,baz=109,slow=8.6,SNR=46
FINES LR LR 21 57 18.3
comp=Z,68nm,18.6s,baz=103,slow=38
comp=Z,7.5nm,0.5s
KWP Kalwaria Pacla 36.67 304 P **P** 21 41 42.5 +0.3
KWP pmax pmax
comp=Z,6.0nm,1.3s
MTSE Matsula 36.72 319 *e*P **P** 21 41 42.5 +0.1
DRGR 36.87 299 ⇑P **P** 21 41 45.1 +1.2
DRGR 36.87 299 P **P** 21 41 47.9 +3.9
DRGR pmax pmax
comp=Z,4.0nm,1.2s
KOLS Kolonicke sedl 36.99 303 *e*P P 21 41 52.1 +7.2
KOLS Kolonicke sedl 36.99 303 *e*P P 21 41 52.1 +7.2
VTS Vitosha 37.12 292 P **P** 21 41 46.3 0.0
VTS pmax pmax
comp=Z,4.0nm,1.2s
SIRR Siria 37.65 298 ⇑P **P** 21 41 52.1 +1.5
BZS Buzias 37.77 297 ⇑P **P** 21 41 53.0 +1.4
BZS Buzias 37.77 297 P **P** 21 41 52.9 +1.4
ATD Arta Tunnel 37.89 232 LR LR 22 01 04.2
comp=Z,27nm,18.4s,baz=0.0,slow=42
NIE Niedzica 38.25 304 P **P** 21 41 57.0 +1.4
NIE pmax pmax
comp=Z,3.0nm,1.0s
OJC Ojcow 38.52 305 IAmb IAmb 21 42 00.6
comp=Z,8.1nm,0.9s
OJC Ojcow 38.52 305 P **P** 21 41 57.6 -0.2
OJC pmax pmax
comp=Z,12nm,0.9s
AGG Agios Georgios 38.64 287 P **P** 21 41 59.4 +0.4
AGG IAmb IAmb 21 42 05.7
comp=Z,11nm,1.3s
AGG Agios Georgios 38.64 287 P **P** 21 41 59.4 +0.4
AGG pmax pmax
comp=Z,11nm,1.3s
ITM Ithomi 39.49 284 P **P** 21 42 06.0 -0.1
ITM IAmb IAmb 21 42 11.5
comp=Z,11nm,1.1s
ARA0 ARCESS Array S 39.49 336 *e*P **P** 21 42 05.6 0.0
ARCES ARCESS Array B 39.49 336 P **P** 21 42 05.6 0.0
comp=Z,4.5nm,0.5s,baz=111,slow=8.4,SNR=101
ARCES LR LR 21 59 14.1
comp=Z,76nm,20.8s,baz=117,slow=37
comp=Z,4.5nm,0.5s
ARCES ARCESS Array B 39.49 336 P **P** 21 42 05.8 +0.2
ARCES IAmb IAmb 21 42 08.7
comp=Z,6.2nm,0.7s
ARCES ARCESS Array B 39.49 336 P **P** 21 42 05.8 +0.2
ARCES pmax pmax
comp=Z,6.0nm,0.7s
MORH Mrgy, Hungar 39.73 299 ⇓P **P** 21 42 08.6 +0.6
MORH Mrgy, Hungar 39.73 299 P **P** 21 42 08.3 +0.4
MORC Moravsky Berou 40.00 304 ⇑P **P** 21 42 09.9 -0.3
MORC Moravsky Berou 40.00 304 P **P** 21 42 09.9 -0.3
MORC Moravsky Berou 40.00 304 *e*P **P** 21 42 13.9 +3.7
JAVC Velka Javorina 40.02 303 *e*P **P** 21 42 14.1 +3.7
KOVH Kovagotottos 40.12 299 P **P** 21 42 12.1 +0.9
HAMF Hammerfest 40.53 337 *e*P **P** 21 42 14.6 +0.3
VRAC Vranov 40.67 304 ⇑P **P** 21 42 16.8 +1.1
VRAC Vranov 40.67 304 LR LR 21 59 58.2
comp=Z,39nm,21.6s,baz=92,slow=37
VRAC Vranov 40.67 304 P **P** 21 42 17.3 +1.6
VRAC pmax pmax
comp=Z,6.0nm,1.1s
VRAC Vranov 40.67 304 *e*P **P** 21 42 18.7 +3.0
KSP Ksiaz 40.70 306 P **P** 21 42 17.5 +1.6
KSP pmax pmax
comp=Z,3.0nm,0.8s
DPC Dobruska-Polom 40.73 305 *e*P **P** 21 42 17.1 +0.9
DPC Dobruska-Polom 40.73 305 *e*P **P** 21 42 17.1 +0.9
KRUC Moravsky 40.83 303 P **P** 21 42 18.5 +1.5
KRUC pmax pmax
comp=Z,5.0nm,1.0s
KRUC Moravsky 40.83 303 *e*P **P** 21 42 18.3 +1.3
JETT Jettan, Norway 41.14 335 *e*P **P** 21 42 20.0 +0.6
CONA Conrad Observa 41.34 302 *e*P **P** 21 42 23.0 +1.6
comp=Z,5.4nm,0.9s
YAK Yakutsk 41.38 37 *e*P **P** 21 42 22.2 +0.8
YAK pmax pmax
comp=Z,11nm,0.8s
TRO Tromso 41.66 335 *e*P **P** 21 42 23.5 0.0
ARSA Arzberg 41.67 301 *e*P **P** 21 42 24.6 +0.6
comp=Z,2.6nm,0.9s
PRU Pruhonice 41.91 305 *e*P **P** 21 42 26.6 +0.8
PRU Pruhonice 41.91 305 *e*P **P** 21 42 26.6 +0.8
SOKA Soboth 42.11 300 *e*P **P** 21 42 28.5 +0.9
comp=Z,5.6nm,1.2s
BRG Berggiesshubel 42.18 306 *e*P **P** 21 42 29.0 +1.0
BRG Amp 21 42 34.2
comp=Z,3.5nm,0.8s
BRG Berggiesshubel 42.18 306 *e*P **P** 21 42 29.0 +1.0
BRG pmax pmax
comp=Z,4.0nm,0.8s
CKRC Cesky Krumlov 42.22 303 *e*P **P** 21 42 32.5 +4.0
FAUS Fauske 42.33 331 *e*P **P** 21 42 29.2 +0.2
MOA Molln 42.41 302 *e*P **P** 21 42 28.9 -1.1
comp=Z,1.7nm,1.2s
MOR8 Moi Rana 42.41 329 *e*P **P** 21 42 28.9 -0.8
OBKA Obir 42.47 300 *e*P **P** 21 42 29.9 -0.6
comp=Z,7.5nm,1.1s
STEI Steigen 42.47 332 *e*P **P** 21 42 30.7 +0.6
GEC2 GERESS Array S 42.62 303 P **P** 21 42 33.0 +1.2
GERES GERESS Array B 42.62 303 P **P** 21 42 32.5 +0.7
comp=Z,1.4nm,0.7s,baz=66,slow=10,SNR=14
comp=Z,1.4nm,0.7s
GERES GERESS Array B 42.62 303 P **P** 21 42 33.0 +1.2
GERES GERESS Array B 42.62 303 P **P** 21 42 33.0 +1.2
KHC Kasperske Hory 42.65 304 P **P** 21 42 32.9 +0.8
KHC IAmb IAmb 21 42 36.0
comp=Z,5.0nm,0.8s
KHC Kasperske Hory 42.65 304 *e*P **P** 21 42 32.8 +0.8
KHC *e* 21 42 34.9
KHC Kasperske Hory 42.65 304 *e*P **P** 21 42 32.8 +0.8
KHC *ex* x 21 42 34.9
KHC *ex* x 21 44 33.0
CLL Collm 42.71 307 *e*P **P** 21 42 32.0 -0.4
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 42.71 307 *e*P **P** 21 42 32.0 -0.4
CLL *i* Pmax 21 42 36.8
comp=Z,5.0nm,0.8s
CLL *e*pP **pP** 21 42 43.0 -0.2
CLL *es*P **sP** 21 42 51.0 +3.5
CLL *e*PP **PP** 21 44 10.0 -1.5
CLL *ex* x 21 44 18.0
CLL *e*PPP PPP 21 44 48.0
SGRT San Giovanni R 42.74 293 P **P** 21 42 33.1 +0.3
SGRT IAmb IAmb 21 43 03.7
comp=Z,9.6nm,1.0s
TIP Timpagrande 42.74 289 P **P** 21 42 32.5 -0.3
TIP IAmb IAmb 21 43 01.2
comp=Z,9.8nm,1.4s
BIOA Bad Ischl, Aus 42.86 302 *e*P **P** 21 42 34.2 +0.5
comp=Z,3.1nm,1.0s
KONS Konsvik 43.00 330 *e*P **P** 21 42 35.1 +0.7
KSAR Wonju Array Be 43.00 74 P **P** 21 42 36.3 +1.4
KSAR Wonju Array Be 43.00 74 P **P** 21 42 36.3 +1.4
KSRS Korea Array 43.03 74 P **P** 21 42 35.0 0.0
comp=Z,0.6nm,0.5s,baz=278,slow=7.5,SNR=5.4
comp=Z,0.6nm,0.5s
NC405 NORSAR Array S 43.04 322 P **P** 21 42 36.1 +1.1
NORES NORESS Array B 43.11 321 P **P** 21 42 40.7 +5.2
PRED Cave del Predi 43.15 300 P **P** 21 42 37.4 +1.3
TIXI Tiksi 43.17 23 P **P** 21 42 35.4 -0.4
TIXI IAmb IAmb 21 42 38.6
comp=Z,12nm,0.8s
TIXI Tiksi 43.17 23 *ce*P **P** 21 42 34.9 -0.9
TIXI pmax pmax
comp=Z,13nm,0.8s
CUC Castrocucco 43.19 290 P **P** 21 42 37.0 +0.5
NC303 NORSAR Array S 43.22 322 P **P** 21 42 36.6 +0.2
SABO M.te Sabotino 43.22 299 P **P** 21 42 36.9 +0.3
SABO IAmb IAmb 21 42 45.6
comp=Z,14nm,1.0s
NB2 NORSAR Subarra 43.28 321 P **P** 21 42 36.3 -0.6
comp=Z,3.6nm,0.7s,baz=90,slow=7.9
NB2 NORSAR Subarra 43.28 321 P **P** 21 42 36.3 -0.6
baz=90,slow=7.9
NOA NORSAR Array B 43.28 321 P **P** 21 42 36.4 -0.5
comp=Z,3.0nm,0.7s,baz=92,slow=7.9,SNR=16
NOA LR LR 22 00 44.1
comp=Z,44nm,20.5s,baz=105,slow=36
comp=Z,3.0nm,0.7s
BJO1 Bjornoya 43.43 342 *e*P **P** 21 42 38.2 +0.4
NAO01 NORSAR Array S 43.44 321 P **P** 21 42 39.6 +1.5
NBO00 NORSAR Array S 43.50 321 P **P** 21 42 39.0 +0.4
NC204 NORSAR Array S 43.51 322 P **P** 21 42 38.6 -0.2
NC204 IAmb IAmb 21 42 55.1
comp=Z,9.4nm,1.1s
STAL STALIGIAL 43.77 300 P **P** 21 42 41.4 +0.4
PAOL Paolisi 43.79 292 P **P** 21 42 41.7 +0.4
PAOL IAmb IAmb 21 43 12.4
comp=Z,11nm,1.4s
NACB Ninganchiao 43.81 95 P **P** 21 42 42.0 +0.4
NACB IAmb IAmb 21 43 20.2
comp=Z,12nm,0.8s
CIMO Cimolais 43.94 300 P **P** 21 42 41.2 -1.1
CIMO IAmb IAmb 21 42 53.5
comp=Z,3.2nm,0.9s
GRF Grafenberg Arr 44.08 305 P **P** 21 42 43.5 +0.1
GRF pmax pmax

comp=Z,10.0nm,0.9s
WTTA Wattenberg 44.27 302 *e*P **P 21 42 45.4 +0.2**
comp=Z,3.8nm,0.9s
WATA Walderalm 44.30 302 *e*P **P 21 42 46.7 +1.3**
comp=Z,5.3nm,1.3s
NRCA Norcia 44.32 295 P **P 21 42 44.7 -0.9**
CTI Castel Tesino 44.53 300 P **P 21 42 46.4 -0.8**
CTI Castel Tesino 44.53 300 P **P 21 42 46.4 -0.8**
CTI pmax pmax
comp=Z,5.0nm,1.1s
MOTA Moosalm 44.61 302 *e*P **P 21 42 49.6 +1.8**
comp=Z,4.0nm,0.8s
TEOL Teolo 44.68 299 P **P 21 42 47.8 -0.5**
TEOL lAmb lAmb 21 42 57.2
comp=Z,11nm,0.9s
FUORN Ofenpass-Fuorn 45.33 301 P **P 21 42 51.1 -2.7**
FUORN lAmb lAmb 21 43 29.4
comp=Z,6.6nm,1.0s
DAVA Damuels 45.43 302 *e*P **P 21 42 54.6 +0.2**
comp=Z,3.9nm,0.5s
OSSC Osservatorio P 45.45 296 lAmb lAmb 21 43 04.7
comp=Z,6.2nm,1.0s
KBS Kingsbay 46.63 347 *e*P **P 21 43 03.9 +0.6**
HINF Hinteralfeld 47.30 303 *e*P **P 21 43 11.0 +2.0**
HINF pmax pmax
comp=Z,2.0nm,0.5s
HAU Haudompre 47.58 304 *e*P **P 21 43 12.2 +1.1**
HAU pmax pmax
comp=Z,23nm,1.8s
LPG La Plagne 47.98 300 *e*P **P 21 43 17.8 +3.2**
LPG pmax pmax
comp=Z,4.0nm,0.6s
LPL La Plagne 47.99 300 *e*P **P 21 43 15.1 +0.5**
LPL pmax pmax
comp=Z,3.0nm,0.4s
BNI Bardonecchia 48.16 300 P **P 21 43 15.8 0.0**
BNI lAmb lAmb 21 43 45.3
comp=Z,7.0nm,1.1s
BNI Bardonecchia 48.16 300 P **P 21 43 15.8 0.0**
BNI pmax pmax
comp=Z,7.0nm,1.1s
MBDF Montbardon 48.19 299 *e*P **P 21 43 17.7 +1.6**
MBDF pmax pmax
comp=Z,4.0nm,0.8s
ORIF Oris-en-Rattie 48.74 300 *e*P **P 21 43 23.7 +3.5**
ORIF pmax pmax
comp=Z,9.0nm,1.3s
LMR La Mourre 48.80 298 *e*P **P 21 43 21.4 +0.8**
LMR pmax pmax
comp=Z,8.0nm,1.2s
VIVF Saint-Julien-l 49.58 300 *e*P **P 21 43 26.7 +0.1**
VIVF pmax pmax
comp=Z,44nm,2.0s
SMF Signal de Mont 49.59 303 *e*P **P 21 43 28.4 +1.8**
SMF pmax pmax
comp=Z,11nm,1.2s
AVF Avril sur Loir 49.87 303 *e*P **P 21 43 28.6 -0.1**
AVF pmax pmax
comp=Z,6.0nm,0.9s
JMIC Jan Mayen 50.97 335 LR LR 22 05 36.5
comp=Z,30nm,18.1s,baz=189,slow=36
MJAR Matsushiro Arr 51.02 71 P **P 21 43 39.0 +1.5**
comp=Z,2.3nm,0.8s,baz=289,slow=6.8,SNR=5.7
MJAR LR LR 22 06 02.9
comp=Z,32nm,20.1s,baz=348,slow=37
comp=Z,2.3nm,0.8s
CAF Calviac 51.31 301 *e*P **P 21 43 40.3 +0.7**
CAF pmax pmax
comp=Z,10.0nm,1.2s
EKA Eskdalemuir Ar 51.48 315 LR LR 22 08 02.2
comp=Z,42nm,19.4s,baz=127,slow=39
EKA Eskdalemuir Ar 51.48 315 P **P 21 43 40.8 +0.1**
LDF La Druitiere 51.56 306 *e*P **P 21 43 40.8 -0.6**
LDF pmax pmax
comp=Z,21nm,1.3s
GRR Gorron 52.09 306 *e*P **P 21 43 44.7 -0.7**
GRR pmax pmax
comp=Z,38nm,1.6s
LFF La Frestale 52.19 301 *e*P **P 21 43 46.6 +0.5**
LFF pmax pmax
comp=Z,11nm,1.1s
MFF Saint Martin d 52.22 304 *e*P **P 21 43 43.6 -2.7**
MFF pmax pmax
comp=Z,46nm,1.9s
DAG Danmarks Havn 52.85 343 *i*P **P 21 43 50.0 -0.6**
QUIF Quistinic 53.71 306 *e*P **P 21 43 54.5 -2.8**
QUIF pmax pmax
comp=Z,52nm,1.6s
ETSF Etsaut 53.80 299 *e*P **P 21 43 58.4 +0.2**
ETSF pmax pmax
comp=Z,7.0nm,1.1s
MBAR Mbarara 54.83 235 P **P 21 44 07.0 +1.0**
comp=Z,1.2nm,0.3s,baz=35,slow=15,SNR=3.9
comp=Z,1.2nm,0.3s
BILL Bilibino 56.00 27 *i*P **P 21 44 13.9 +0.4**
BILL *i* 21 45 17.3
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL MLR MLR
comp=Z,43nm,16.0s
ESDC Sonseca Array 57.46 297 P **P 21 44 24.3 -0.1**
comp=Z,1.3nm,0.8s,baz=55,slow=7.2,SNR=14
comp=Z,1.3nm,0.8s
SUMG Summit 59.26 341 *i*P **P 21 44 38.0 +1.1**
TOA0 Torodi Ar. Sit 66.98 269 P **P 21 45 27.9 -0.6**
TOA0 lAmb lAmb 21 45 34.9
comp=Z,8.6nm,1.2s
TORD Torodi Ar. Bea 66.98 269 P **P 21 45 27.8 -0.6**
comp=Z,4.0nm,0.5s,baz=50,slow=5.7,SNR=67
comp=Z,4.0nm,0.5s
TORD Torodi Ar. Bea 66.98 269 P **P 21 45 28.0 -0.4**
TORD lAmb lAmb 21 45 28.2
comp=Z,2.8nm,0.7s
LSZ Lusaka 67.92 227 LR LR 22 16 14.3
comp=Z,41nm,18.2s,baz=246,slow=37
TOLK Toolik Lake Re 68.37 15 P **P 21 45 38.8 +2.3**
A36M Sachs Harbour 68.78 6 P **P 21 45 40.9 +2.0**
COLD Coldfoot 69.41 16 P **P 21 45 44.4 +1.4**
COLD lAmb lAmb 21 45 48.4
comp=Z,5.2nm,0.8s
IMAR Indian Mountai 69.60 18 P **P 21 45 43.7 -0.4**
H21K Melozitna Rive 70.09 18 P **P 21 45 49.2 +2.1**
H21K lAmb lAmb 21 45 49.9
comp=Z,3.8nm,1.0s
BMAR Burnt Mountain 70.40 14 P **P 21 45 51.3 +2.2**
H23K Yukon River 70.73 17 lAmb lAmb 21 45 56.5
comp=Z,2.8nm,0.8s
J20K Nowinta River 70.94 20 P **P 21 45 53.9 +1.6**
J20K lAmb lAmb 21 45 57.5
comp=Z,3.3nm,0.7s
H24K Noodor Dome 71.09 16 P **P 21 45 54.8 +1.5**
H24K lAmb lAmb 21 45 58.6
comp=Z,2.9nm,0.8s
INK Inuvik 71.42 10 P **P 21 45 56.3 +1.2**
INK lAmb lAmb 21 45 58.4
comp=Z,6.7nm,1.0s
INK Inuvik 71.42 10 P **P 21 45 56.3 +1.2**
INK pmax pmax
comp=Z,7.0nm,1.0s
C36M Paulatuk 71.45 6 P **P 21 45 56.1 +0.8**
K20K Telida 71.62 20 P **P 21 45 58.5 +1.9**
K20K lAmb lAmb 21 46 01.6
comp=Z,3.8nm,0.8s
MDM Murphy Dome 71.75 17 P **P 21 45 57.3 0.0**
MDM lAmb lAmb 21 46 00.9
comp=Z,5.0nm,1.1s
BPAW Bear Paw Mtn. 71.82 19 lAmb lAmb 21 46 00.1
comp=Z,3.5nm,0.9s
NEA2 Nenana 71.87 18 P **P 21 45 59.3 +1.4**
NEA2 lAmb lAmb 21 46 00.5
comp=Z,5.9nm,1.0s
PRP Porcupine Dome 71.87 16 P **P 21 46 00.3 +2.2**
TCOL CIGO, UAF Yank 71.91 17 P **P 21 45 58.8 +0.6**
COLA College 71.91 17 P **P 21 45 58.8 +0.6**
COLA College 71.91 17 P **P 21 45 58.8 +0.6**
COLA pmax pmax
comp=Z,12nm,0.4s
CAST Castle Rocks 72.10 19 P **P 21 46 01.0 +1.6**
CAST lAmb lAmb 21 46 02.3
comp=Z,4.2nm,0.9s
MACI Morro de la Ar 72.20 292 P **P 21 45 59.1 -1.7**
IL31 72.22 17 P **P 21 46 00.4 +0.5**
ILAR Eielson Array 72.22 17 P **P 21 45 58.5 -1.6**
comp=Z,1.8nm,0.8s,baz=314,slow=5.9,SNR=14
comp=Z,1.8nm,0.8s
ILAR Eielson Array 72.22 17 P **P 21 46 00.6 +0.6**
ILAR Eielson Array 72.22 17 P **P 21 46 00.6 +0.6**
KTH Kantishna Hill 72.29 19 P **P 21 46 03.1 +2.6**
KTH lAmb lAmb 21 46 10.3
comp=Z,5.2nm,0.8s
L19K White Mountain 72.35 21 P **P 21 46 03.4 +2.5**
PPLA Purkeypile 72.50 20 P **P 21 46 04.1 +2.2**
PPLA lAmb lAmb 21 46 34.3
comp=Z,13nm,1.3s
I26K Coal Creek Min 72.54 15 P **P 21 46 02.9 +0.9**
J25K Salcha River, 72.69 16 lAmb lAmb 21 46 07.9
comp=Z,3.1nm,0.8s
M20K Styx River 73.08 21 P **P 21 46 07.0 +1.7**
M20K lAmb lAmb 21 46 15.3
comp=Z,7.1nm,1.3s
J26L Joseph Creek 73.17 15 lAmb lAmb 21 46 10.5
comp=Z,3.2nm,0.8s
N19K Bonanza Creek 73.56 22 P **P 21 46 10.9 +2.8**
N19K lAmb lAmb 21 46 31.8
comp=Z,14nm,1.4s
DHY Denali Highway 73.56 18 P **P 21 46 11.3 +3.1**
DHY lAmb lAmb 21 46 12.8
comp=Z,5.2nm,0.8s
RIDG Independent Ri 73.56 16 P **P 21 46 10.8 +2.7**
K27K Chicken 73.89 15 P **P 21 46 12.8 +2.9**
K27K lAmb lAmb 21 46 21.7
comp=Z,7.6nm,1.4s
GHO Glory Hole Cre 74.29 19 P **P 21 46 14.2 +1.8**
GHO lAmb lAmb 21 46 17.3
comp=Z,11nm,1.0s
SML Sawmill 74.41 19 P **P 21 46 15.0 +2.0**
SCM Sheep Creek Mo 74.63 18 P **P 21 46 15.9 +1.5**
SCM Sheep Creek Mo 74.63 18 P **P 21 46 15.9 +1.5**
SCM pmax pmax
comp=Z,11nm,0.8s
PSA00 Pilbara Seismi 74.66 135 P **P 21 46 14.4 -0.5**
PSA00 lAmb lAmb 21 46 15.1
comp=Z,2.9nm,0.8s
M24K Tolsona, Glenn 74.68 18 P **P 21 46 15.8 +1.1**
L27K Beaver Creek, 74.81 15 P **P 21 46 17.7 +2.4**
BCAR Beaver Creek A 74.81 15 P **P 21 46 18.2 +2.8**
KNRA Kununurra 75.50 124 P **P 21 46 19.9 +0.1**
FID Port Fidalgo 75.78 19 P **P 21 46 23.8 +2.9**
KDAK Kodiak Island 76.60 23 P **P 21 46 28.1 +2.6**
KDAK Kodiak Island 76.60 23 P **P 21 46 28.2 +2.6**
KDAK pmax pmax
comp=Z,30nm,1.2s
OHAK Old Harbor 76.84 24 P **P 21 46 29.8 +2.9**
HYT Haines Junctio 77.71 15 P **P 21 46 35.1 +3.2**
HYT lAmb lAmb 21 46 43.7
comp=Z,4.8nm,1.0s
MORW Morawa 78.81 142 P **P 21 46 37.5 -0.7**
YKA Yellowknife Ar 78.87 3 P **P 21 46 37.5 -0.7**
comp=Z,3.6nm,0.9s,baz=349,slow=5.7,SNR=14
YKA LR LR 22 25 20.5
comp=Z,29nm,18.6s,baz=82,slow=39
comp=Z,3.6nm,0.9s
YKA Yellowknife Ar 78.87 3 *ce*P **P 21 46 38.1 -0.1**
YKA Yellowknife Ar 78.87 3 *ce*P **P 21 46 38.0 -0.1**
YKA pmax pmax
comp=Z,3.0nm,0.7s
P33M Teslin, Yukon 79.14 13 P **P 21 46 42.2 +2.4**
SCHQ Schefferville 80.43 338 P **P 21 46 46.3 -0.5**
comp=Z,3.1nm,0.9s,baz=58,slow=3.5,SNR=3.8
comp=Z,3.1nm,0.9s
DRLN Deer Lake 81.81 330 P **P 21 46 54.4 +0.2**
DRLN lAmb lAmb 21 46 56.2
comp=Z,10nm,1.2s
WB0 Warramunga Arr 82.13 123 P **P 21 46 55.6 -0.6**
WB0 lAmb lAmb 21 47 21.6
comp=Z,9.8nm,1.2s
WRA Warramunga Arr 82.22 123 P **P 21 46 55.3 -1.4**
comp=Z,3.8nm,0.7s,baz=323,slow=5.1,SNR=43
comp=Z,3.8nm,0.7s
WRA Warramunga Arr 82.22 123 *i*P **P 21 46 55.9 -0.8**
WRA pmax pmax
comp=Z,4.0nm,0.7s
WRAB Tennant Creek 82.22 123 *ce*P **P 21 46 56.8 +0.1**
WRAB pmax pmax
comp=Z,5.0nm,0.8s
WB2 Warramunga Arr 82.23 123 P **P 21 46 56.2 -0.5**
ASAR Alice Springs 84.62 126 P **P 21 47 08.1 -1.0**
comp=Z,1.7nm,0.7s,baz=314,slow=4.8,SNR=19
comp=Z,1.7nm,0.7s
ASAR Alice Springs 84.62 126 P **P 21 47 08.7 -0.3**
ASAR Alice Springs 84.62 126 P **P 21 47 08.7 -0.3**
TROLL Troll, Antarti 120.69 200 PKPdf **PKiKP 21 53 26.8 +0.5**
VNA2 Neumayer--Watz 123.00 203 PKPdf **PKiKP 21 53 31.7 +1.1**
VNA2 Neumayer--Watz 123.00 203 PP PP 21 55 11.1 +0.6
PLCA Paso Flores 151.68 254 PKPbc **PKPbc 21 54 29.0 -0.6**
comp=Z,2.9nm,0.9s,baz=347,slow=6.4,SNR=9.1

*THE **04** 21:35:12.5,39°32N×20°22E,h18km±1km,ML2.9/8,Error ellipse: s-maj=1.3km s-min=0.4km az=273.0*
*ATH **04** 21:35:12.1,39°29N×20°30E,h12km±2km,ML2.8/6,Error ellipse: s-maj=3.0km s-min=1.0km az=308.0*
*TIR **04** 21:35:12.1,39°36N×20°35E,h23km±1km,Md3.1,Ml2.9*
ISC 04 21:35:11.9±0.9,39°33N±0°02×20°28E±0°03,h20km±2km, n52,σ1§29/72,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.21**	**11**	P	P	**Pb**	**21 35 17.9**	**+0.3**
IGT	**Igoumenitsa**	**0.21**	**11**	P	P	**Pb**	**21 35 17.8**	**+0.1**
	baz=356							
IGT				S	S	**Sb**	**21 35 21.9**	**+0.2**
	baz=356							
IGT	**Igoumenitsa**	**0.21**	**11**	P	**Pb**	**21 35 17.6**	**0.0**	
IGT				S	**Sb**	**21 35 21.1**	**-0.6**	
IGT				AML	AML	21 35 23.6		
	comp=N,4581μm,0.2s							
IGT				AML	AML	21 35 24.2		
	comp=E,3796μm,0.2s							
KASA	**Kassiopi**	**0.49**	**327**	P	**Pb**	**21 35 22.4**	**+0.5**	
KEK	**Kerkira**	**0.53**	**316**	P	**Pb**	**21 35 22.8**	**+0.2**	
KEK				S	**Sb**	**21 35 30.7**	**+0.8**	
	comp=E,3μm,0.3s							
KEK	**Kerkira**	**0.53**	**316**	P	**Pb**	**21 35 22.9**	**+0.3**	
KEK				S	**Sb**	**21 35 31.1**	**+1.1**	
KEK				AML	AML	21 35 32.8		
	comp=E,7494μm,0.2s							
KEK				AML	AML	21 35 33.3		
	comp=N,3226μm,0.4s							
JAN	**Janina**	**0.55**	**53**	P	**Pb**	**21 35 21.9**	**-1.0**	
JAN				S	**Sb**	**21 35 30.0**	**-0.4**	
JAN				AML	AML	21 35 32.2		
	comp=E,3375μm,0.3s							
JAN				AML	AML	21 35 32.9		
	comp=N,4097μm,0.3s							
TSLK	**Tsoukalades, L**	**0.58**	**150**	P	**Pb**	**21 35 24.1**	**+0.6**	
TSLK				S	**Sn**	**21 35 33.0**	**-0.9**	
	comp=N,2μm,0.5s							
SRN	**Sarande**	**0.59**	**339**	P	**Pb**	**21 35 23.6**	**-0.1**	
SRN	**Sarande**	**0.59**	**339**	P	**Pb**	**21 35 23.5**	**-0.1**	
	baz=334							
SRN				S	**Sb**	**21 35 32.9**	**+1.3**	
	baz=334							
SRN				AMP				
	comp=N,1.2nm,0.2s,baz=334							
LKD2	**Lefkada island**	**0.61**	**151**	P	**Pb**	**21 35 24.4**	**+0.4**	
LKD2				S	**Sn**	**21 35 33.8**	**-0.9**	
	comp=N,1μm,0.3s							
LKD2	**Lefkada island**	**0.61**	**151**	P	**Pb**	**21 35 24.5**	**+0.4**	
	baz=156							
LKD2				S	**Sn**	**21 35 33.9**	**-0.9**	
	baz=156							
LKD2	**Lefkada island**	**0.61**	**151**	P	**Pb**	**21 35 23.7**	**-0.4**	
LKD2				AML	AML	21 35 37.1		
	comp=N,2318μm,0.3s							
LKD2				AML	AML	21 35 37.8		
	comp=E,2315μm,0.3s							
EVGI	**Lefkada island**	**0.77**	**157**	P	**Pb**	**21 35 26.7**	**+0.2**	
EVGI	**Lefkada island**	**0.77**	**157**	P	**Pb**	**21 35 26.5**	**0.0**	
LSK	**Leskovik**	**0.85**	**17**	P	**Pb**	**21 35 28.3**	**+0.2**	
LSK				S	**Sn**	**21 35 41.2**	**+0.4**	
	comp=E,900nm,0.5s							
LSK	**Leskovik**	**0.85**	**17**	P	**Pb**	**21 35 28.3**	**+0.2**	
	baz=13							
LSK				S	**Sn**	**21 35 40.1**	**-0.8**	
	baz=13							
LSK				AMP				
	comp=N,4.0nm,0.5s,baz=13							
FSK	**Fiskardo**	**0.90**	**166**	P	**Pn**	**21 35 29.0**	**-0.3**	
FSK				S	**Sn**	**21 35 42.3**	**+0.6**	
	comp=N,792nm,0.4s							
FSK	**Fiskardo**	**0.90**	**166**	P	**Pb**	**21 35 28.8**	**0.0**	
KEF4	**Livadi, Kephal**	**1.08**	**174**	P	**Pn**	**21 35 31.6**	**-0.2**	
KEF4				S	**Sn**	**21 35 46.4**	**+0.3**	
	comp=N,4μm,0.2s							
KEF4	**Livadi, Kephal**	**1.08**	**174**	P	**Pn**	**21 35 31.5**	**-0.3**	
PENT	**Pentalofos**	**1.09**	**37**	P	**Pb**	**21 35 32.3**	**+0.2**	
KEF3	**Kipouria, Keph**	**1.13**	**177**	P	**Pn**	**21 35 32.0**	**-0.5**	
KEF3	**Kipouria, Keph**	**1.13**	**177**	P	**Pn**	**21 35 31.2**	**-1.3**	
VLS	**Valsamata**	**1.18**	**168**	P	**Pn**	**21 35 32.8**	**-0.4**	
PVO	**Paravola**	**1.20**	**126**	P	**Pn**	**21 35 33.6**	**+0.1**	
PVO				S	**Sn**	**21 35 50.8**	**+1.5**	
	comp=N,465nm,0.5s							
PVO	**Paravola**	**1.20**	**126**	P	**Pn**	**21 35 33.6**	**+0.1**	
NEST	**Nestorio**	**1.23**	**28**	P	**Pb**	**21 35 35.2**	**+0.6**	
NEST	**Nestorio**	**1.23**	**28**	P	**Pb**	**21 35 35.2**	**+0.6**	
NEST				S	**Sn**	**21 35 52.7**	**+2.5**	
NEST				AML	AML	21 35 56.5		
	comp=E,711μm,0.5s							
NEST				AML	AML	21 35 57.0		
	comp=N,646μm,0.4s							
PSDA	**Pessada-Kefalo**	**1.24**	**169**	P	**Pn**	**21 35 34.0**	**0.0**	
PSDA	**Pessada-Kefalo**	**1.24**	**169**	P	**Pn**	**21 35 33.0**	**-0.9**	
EVR	**Evrytania**	**1.26**	**109**	P	**Pb**	**21 35 35.2**	**+0.2**	
EVR	**Evrytania**	**1.26**	**109**	P	**Pb**	**21 35 35.1**	**+0.2**	
EVR				AML	AML	21 35 54.2		
	comp=E,391μm,0.4s							
EVR				AML	AML	21 35 55.8		
	comp=N,303μm,0.3s							
VLO	**Vlora**	**1.29**	**332**	P	**Pb**	**21 35 37.2**	**+1.7**	
	baz=330							
VLO				S	**Sb**	**21 35 55.0**	**+3.5**	
	baz=330							
VLO				AMP				
	comp=N,1.9nm,0.2s,baz=330							
KBN	**Korca**	**1.35**	**17**	P	**Pb**	**21 35 36.9**	**+0.3**	
	baz=14							
KBN				S	**Sb**	**21 35 55.3**	**+1.9**	
	baz=14							
KBN				AMP				
	comp=N,0.6nm,0.4s,baz=14							
THL	**Klokotos Trika**	**1.36**	**80**	P	**Pb**	**21 35 36.6**	**-0.1**	
THL	**Klokotos Trika**	**1.36**	**80**	P	**Pb**	**21 35 36.5**	**-0.2**	
KZN	**Kozani**	**1.51**	**49**	P	**Pb**	**21 35 39.7**	**+0.5**	
AGG	**Agios Georgios**	**1.62**	**100**	P	**Pb**	**21 35 40.7**	**-0.4**	
AGG				S	**Sb**	**21 36 01.5**	**+0.3**	
	comp=N,340nm,0.5s							
FNA	**Florina**	**1.68**	**30**	P	**Pb**	**21 35 42.8**	**+0.7**	
	baz=28							
FNA				S	**Sb**	**21 36 05.2**	**+2.3**	
	baz=28							
TIR	**Tirane**	**2.04**	**351**	P	**Pb**	**21 35 48.3**	**0.0**	
	baz=350							
TIR				S	**Sb**	**21 36 15.5**	**+2.3**	
	baz=350							
TIR				AMP				
	comp=N,0.3nm,0.4s,baz=350							
DBRK	**Dubrovnik**	**3.71**	**335**	*e*Pn	**Pn**	**21 36 04.7**	**-3.3**	
STON	**Ston**	**4.04**	**332**	*e*Pn	**Pn**	**21 36 08.9**	**-3.6**	
LSTV	**Lastovo**	**4.29**	**324**	*e*Pn	**Pn**	**21 36 13.4**	**-2.5**	
MAKA	**Makarska**	**4.65**	**329**	*e*Pn	**Pn**	**21 36 18.9**	**-2.0**	
RICI	**Ricice**	**4.79**	**331**	*e*Pn	**Pn**	**21 36 20.4**	**-2.4**	
HVAR	**Hvar**	**4.81**	**324**	*i* Pn	**Pn**	**21 36 20.7**	**-2.4**	
KIJV	**Kijevo**	**5.50**	**329**	*e*Pn	**Pn**	**21 36 30.6**	**-2.0**	
MORI	**Morici**	**5.68**	**324**	*e*Pn	**Pn**	**21 36 33.7**	**-1.4**	
DUGI	**Dugi Otok**	**6.08**	**322**	*e*Pn	**Pn**	**21 36 38.8**	**-1.8**	
VIRC	**Vir**	**6.31**	**323**	*e*Pn	**Pn**	**21 36 42.3**	**-1.4**	
NVLJ	**Novalja**	**6.60**	**324**	*e*Pn	**Pn**	**21 36 46.3**	**-1.4**	

*IDC **04** 21:36:36.9±0.8,38°.63N×72°.53E,h0km,mb4.1/14, mbtmp4.1/18,ML4.1/3,MS3.2/3,Error ellipse: s-maj=17.3km s-min=17.1km az=65.0*
*NEIC **04** 21:36:45.8±2.3,38°.70N±0°.04×72°.35E±0°.05,h51km±8km, mb4.4/26,Error ellipse: s-maj=8.5km s-min=1.7km az=221.0*
ISC 04 21:36:42.5±0.5,38°.67N±0°.06×72°.35E±0°.06,h30km,n71, σ1§67/64,mb4.3/26,MS3.4/3,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**1.62**	**282**		Pn	**Pb**	**21 37 13.0**	**+1.1**
BTK	**Batken**	**1.82**	**320**		Pn	**Pn**	**21 37 13.1**	**+1.2**
CHGR	**Chuyangaron**	**2.50**	**271**		Pn	**Pb**	**21 37 25.7**	**-1.1**
AAK	**Ala-Archa**	**4.28**	**22**		Pn	**Pn**	**21 37 48.5**	**+2.7**
	15nm,0.3s,baz=210,slow=9.0,SNR=1.4							
AAK					Sn	**Sn**	**21 38 39.1**	**+4.2**
	baz=349,slow=20							
	71nm,0.5s							
AAK	**Ala-Archa**	**4.28**	**22**		Pn	**Pn**	**21 37 48.7**	**+2.9**
KK31	**Karatay Array**	**4.64**	**343**		Pn	**Pn**	**21 37 51.4**	**+0.8**
KKAR	**Karatay Array**	**4.64**	**343**		Pn	**Pn**	**21 37 52.0**	**+1.4**
KKAR	**Karatay Array**	**4.64**	**343**		Pn	**Pn**	**21 37 51.9**	**+1.4**
NIL	**Nilore**	**5.06**	**171**		Pn	Pn	21 38 01.5	+5.1
JMU	**Jammu**	**6.29**	**160**	*e*P		Pb	21 38 23.0	-8.2
JMU	**Jammu**	**6.29**	**160**	*e*S		**Sn**	**21 39 27.3**	**+3.2**
THN	**Thein Dam**	**6.80**	**155**	*e*S		**Sn**	**21 39 41.3**	**+4.7**
THN	**Thein Dam**	**6.80**	**155**	*e*P		Pn	21 38 28.9	+8.7
BHK	**Bhakra**	**7.97**	**154**	*e*S		**Sn**	**21 40 07.5**	**+2.1**
SMLA	**Simla**	**8.50**	**151**	*e*P		Pn	21 38 53.2	+10
DDI	**Dehra Dun**	**9.56**	**149**	*e*P		Pn	21 39 07.1	+8.9
GEYT	**Ailbeck**	**11.21**	**271**		Pn	**Pn**	**21 39 21.2**	**+0.5**
GYA0B	**KUIBICK ARRAY**	**11.21**	**271**		Pn	**Pn**	**21 39 20.1**	**-0.6**
KURBB	**Kurchatov Arra**	**12.73**	**18**		Pn	**Pn**	**21 39 37.7**	**-3.6**
	0.7nm,0.6s,baz=207,slow=11,SNR=1.8							
JHNI	**Jhansi**	**14.17**	**157**	*e*S		**Sn**	**21 42 33.1**	**-4.2**
AKTO	**Aktyubinsk**	**15.55**	**324**		Pn	**Pn**	**21 40 18.0**	**-1.4**
	1.2nm,0.3s,baz=123,slow=16,SNR=4.0							
	8.7nm,0.6s							
ZALV	**Zalesovo Beam**	**17.50**	**25**		Pn	**Pn**	**21 40 40.9**	**-3.1**
	1.1nm,0.3s,baz=212,slow=10,SNR=5.3							
	2.9nm,0.4s							
ARU	**Arti**	**19.99**	**337**	P		**P**	**21 41 11.2**	**-1.1**
	1.9nm,0.4s,baz=252,slow=9.6,SNR=2.5							
	1.9nm,0.4s							
GTA	**Gaotai**	**21.32**	**79**	*e*P		**P**	**21 41 25.9**	**-1.1**
GTA				pP		pP	21 41 31.2	-5.1
GTA				sP		sP	21 41 33.7	-7.0
GTA				pmax	pmax			
	comp=Z,9.0nm,1.0s							
HYBB	**Hyderabad (bro**	**21.86**	**164**	*e*P		**P**	**21 41 34.3**	**+1.5**
BELG	**Belogornoye**	**21.96**	**317**	P		**P**	**21 41 32.9**	**-0.6**
	comp=Z,21nm,0.9s,baz=251,slow=5.0,SNR=2.1							
	comp=Z,21nm,0.9s							
ONI	**Oni**	**22.23**	**289**		P	**P**	**21 41 38.9**	**+2.2**
ONI					lAmb	lAmb	21 41 43.6	
	comp=Z,23nm,1.1s							
SONM	**Songino Array**	**26.25**	**59**		P	**P**	**21 42 14.8**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=71,slow=41,SNR=3.3							
	comp=Z,2.7nm,1.0s							
SONM	**Songino Array**	**26.25**	**59**		P	**P**	**21 42 14.9**	**-0.1**
BRTR	**Keskin Array B**	**29.87**	**284**		P	**P**	**21 42 48.5**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=94,slow=8.3,SNR=2.0							
	comp=Z,0.8nm,0.8s							
FINES	**FINESS Array B**	**36.32**	**324**		P	**P**	**21 43 42.3**	**-0.9**
	comp=Z,3.7nm,0.4s,baz=115,slow=9.2,SNR=9.9							
	comp=Z,3.7nm,0.4s							
IDI	**Anoyia**	**37.74**	**280**	LR	LR		22 02 54.1	
	comp=Z,14nm,20.9s,baz=80,slow=42							
ARCES	**ARCESS Array B**	**39.57**	**336**		P	**P**	**21 44 09.4**	**-1.2**
	comp=Z,2.4nm,0.4s,baz=114,slow=8.9,SNR=13							
	comp=Z,2.4nm,0.4s							
GERES	**GERESS Array B**	**42.59**	**304**		P	**P**	**21 44 36.6**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=57,slow=7.2,SNR=2.5							
	comp=Z,0.5nm,0.6s							
NB2	**NORSAR Subarra**	**43.32**	**322**		P	**P**	**21 44 40.0**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=93,slow=8.6							
NOA	**NORSAR Array B**	**43.32**	**322**		P	**P**	**21 44 40.2**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=92,slow=7.9,SNR=5.6							
	comp=Z,1.1nm,0.6s							
TIXI	**Tiksi**	**43.36**	**23**		P	**P**	**21 44 41.9**	**+0.3**
TIXI					lAmb	lAmb	21 44 43.5	
	comp=Z,4.3nm,0.7s							
NAO01	**NORSAR Array S**	**43.47**	**321**		P	**P**	**21 44 43.8**	**+1.1**
KMBO	**Kilima Mbogo**	**51.09**	**228**		LR	LR	22 07 12.1	
	comp=Z,40nm,19.8s,baz=89,slow=36							
DAV	**Davao City (W)**	**57.24**	**109**		LR	LR	22 11 20.5	
	comp=Z,42nm,19.2s,baz=303,slow=36							
ESDC	**Sonseca Array**	**57.41**	**297**		P	**P**	**21 46 28.3**	**0.0**
	comp=Z,0.5nm,0.6s,baz=57,slow=7.3,SNR=2.9							
	comp=Z,0.5nm,0.6s							
SUMG	**Summit**	**59.36**	**341**		P	**P**	**21 46 41.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**66.84**	**269**		P	**P**	**21 47 31.2**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=54,slow=6.0,SNR=9.4							
	comp=Z,1.5nm,0.4s							
TOLK	**Toolik Lake Re**	**68.55**	**15**		P	**P**	**21 47 42.8**	**+1.0**

TOLK IAmb IAmb 21 47 45.4
comp=Z,5.4nm,0.8s
COLD Coldfoot 69.59 16 P P 21 47 48.6 +0.3
COLD IAmb IAmb 21 47 52.4
comp=Z,2.7nm,0.7s
IMAR Indian Mountai 69.78 18 P P 21 47 49.3 -0.1
AMKA Amchitka 70.01 40 P P 21 47 51.6 +0.6
H21K Melozitna Rive 70.28 18 P P 21 47 52.9 +0.4
BMAR Burnt Mountain 70.58 14 P P 21 47 54.3 0.0
H23K Yukon River 70.91 17 P P 21 47 57.2 +0.8
J20K Nowinta River 71.13 20 P P 21 47 59.0 +1.3
J20K IAmb IAmb 21 48 01.4
comp=Z,2.8nm,0.8s
H24K Noodor Dome 71.27 16 P P 21 47 59.6 +1.1
K20K Telida 71.81 20 P P 21 48 03.2 +1.4
K20K IAmb IAmb 21 48 37.6
comp=Z,4.6nm,1.2s
MDM Murphy Dome 71.94 17 P P 21 48 04.1 +1.5
MDM IAmb IAmb 21 48 04.3
comp=Z,6.4nm,1.4s
ILAR Eielson Array 72.40 17 P P 21 48 05.1 -0.2
comp=Z,1.0nm,0.9s,baz=324,slow=7.1,SNR=4.7
comp=Z,1.0nm,0.9s
ILAR Eielson Array 72.40 17 P P 21 48 06.3 +1.0
PPLA Purkeypile 72.69 20 P P 21 48 08.4 +1.2
J26L Joseph Creek 73.35 15 P P 21 48 11.9 +0.9
SKT Skwentna 73.61 20 P P 21 48 11.8 -0.8
SKT IAmb IAmb 21 48 25.9
comp=Z,7.3nm,1.2s
SCRK Sand Creek 73.72 16 P P 21 48 13.6 +0.3
K27K Chicken 74.07 15 P P 21 48 16.7 +1.5
K27K IAmb IAmb 21 49 00.3
comp=Z,4.1nm,1.3s
GHO Glory Hole Cre 74.47 19 P P 21 48 17.8 +0.1
GHO IAmb IAmb 21 48 46.0
comp=Z,7.5nm,1.1s
SML Sawmill 74.59 19 P P 21 48 19.9 +1.6
SML IAmb IAmb 21 48 22.3
comp=Z,6.3nm,0.8s
PSA00 Pilbara Seismi 74.64 135 P P 21 48 18.3 -0.7
PSA00 IAmb IAmb 21 48 37.8
comp=Z,9.0nm,1.5s
SCM Sheep Creek Mo 74.82 18 P P 21 48 20.4 +0.8
YKA Yellowknife Ar 79.03 3 P P 21 48 42.1 -1.1
comp=Z,1.2nm,0.6s,baz=351,slow=5.6,SNR=4.3
comp=Z,1.2nm,0.6s
WB0 Warramunga Arr 82.16 123 P P 21 49 00.5 -0.1
WRA Warramunga Arr 82.25 123 P P 21 48 59.2 -1.9
comp=Z,2.3nm,0.8s,baz=323,slow=5.1,SNR=9.7
comp=Z,2.3nm,0.8s
WB2 Warramunga Arr 82.26 123 P P 21 49 00.0 -1.1
ASAR Alice Springs 84.64 126 P P 21 49 11.4 -1.8
comp=Z,0.9nm,0.7s,baz=315,slow=5.0,SNR=5.8
comp=Z,0.9nm,0.7s
PLCA Paso Flores 151.52 254 PKPbc PKPbc 21 56 33.2 -0.2
comp=Z,1.9nm,0.9s,baz=63,slow=2.3,SNR=3.2

ISC 04 21:49:46.9±1.1, 45.06N±0.03×14.97E±0.04, h8km±12km, n12, σ0=56/18, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABC	**Rab**	**0.33**	**203**	Sg	**Sg**	**21 49 58.6**	**+0.7**
RIY	**Rijeka**	**0.43**	**308**	Sg	**Sg**	**21 50 01.7**	**+0.6**
GBRS	**Gornja Briga**	**0.49**	**347**	*i* Pg	**Pg**	**21 49 56.1**	**-0.3**
GBRS				*i* Sg	**Sg**	**21 50 03.4**	**+0.5**
BOJS	**Bojanci**	**0.49**	**24**	*i* Pg	**Pg**	**21 49 56.2**	**-0.3**
BOJS				*i* Sg	**Sg**	**21 50 02.9**	**0.0**
BOJS				IAML		21 50 03.2	
	comp=Z,2.3nm,0.1s						
NVLJ	**Novalja**	**0.50**	**188**	Sg	**Sb**	**21 50 04.8**	**-0.5**
PLIT	**Plitvice**	**0.50**	**111**	*e*Pg	**Pg**	**21 49 56.4**	**-0.3**
PLIT				Sg	**Sg**	**21 50 03.9**	**+0.8**
KNDS	**Knezji Dol**	**0.63**	**319**	*i* Pg	**Pg**	**21 49 58.7**	**-0.4**
KNDS				*e*Sg	**Sg**	**21 50 07.8**	**+0.5**
KNDS				IAML		21 50 09.1	
	comp=Z,1.3nm,0.1s						
OZLJ	**Ozalj**	**0.66**	**32**	Sg	**Sg**	**21 50 08.2**	**-0.1**
VISS	**Visnje**	**0.75**	**353**	*e*Pg	**Pg**	**21 50 01.5**	**0.0**
VISS				*i* Sg	**Sg**	**21 50 11.5**	**+0.3**
VISS				IAML		21 50 13.7	
	comp=Z,0.7nm,0.1s						
VIRC	**Vir**	**0.77**	**175**	Sg	**Sb**	**21 50 13.4**	**+0.3**
CEY	**Cerknica**	**0.78**	**331**	*e*Sg	**Sb**	**21 50 13.0**	**-0.6**
CEY				IAML		21 50 14.9	
	comp=Z,0.8nm,0.1s						
DUGI	**Dugi Otok**	**1.07**	**176**	*e*Pg	**Pg**	**21 50 06.5**	**-1.0**
DUGI				Sg	**Sn**	**21 50 23.8**	**+0.6**

*SOME **04** 21:54:55.1,39°.18N×71°.77E, h0km*
*IDC **04** 21:54:55.3±0.7,38°.66N×72°.53E, h0km, mb4.0/18, mbtmp4.1/23, ML3.8/5, MS3.0/9, Error ellipse: s-maj=15.6km s-min=14.0km az=38.0*
*MOS **04** 21:54:57.5±1.2,38°.80N×72°.61E, h25km, mb4.2/10, Error ellipse: s-maj=6.7km s-min=4.2km az=85.5*
*BJI **04** 21:54:57.2±0.0,38°.77N×72°.53E, h19km, mb4.4/15, mB4.6/9, ML3.8/4, Ms3.7/5, Ms7 3.3/5*
*NEIC **04** 21:54:59.9±2.3,38°.74N±0°.04×72°.73E±0°.05, h24km±6km, mb4.4/34, Error ellipse: s-maj=6.7km s-min=4.9km az=215.0*
*NNC **04** 21:55:02.5±2.3,39°.09N×72°.39E, h0km, mb4.7, mpv4.4, Error ellipse: s-maj=18.8km s-min=11.9km az=9.0*

ISC 04 21:55:00.7±0.3, 38.77N±0.02×72.52E±0.02, h31km, n232, σ2=32/232, mb4.2/42, MS2.9/10, 20C-11D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**1.73**	**278**	Pn	**Pn**	**21 55 28.4**	**-0.4**
GAR					**Sb**	**21 55 58.6**	**+5.2**
BTK	**Batken**	**1.84**	**315**		**Pn**	**21 55 29.0**	**-1.3**
BTK					**Sb**	**21 55 59.7**	**+3.3**
BTK	**Batken**	**1.84**	**315**	PN	**Pn**	**21 55 29.0**	**-1.3**
BTK						21 55 59.7	
CHGR	**Chuyangaron**	**2.63**	**269**		**Pn**	**21 55 43.5**	**+2.4**
CHGR				Sn	**Sb**	**21 56 19.8**	**+0.7**
CHGR	**Chuyangaron**	**2.63**	**269**	PN	**Pn**	**21 55 43.5**	**+2.4**
KSH	**Kashi**	**2.79**	**73**	Pg	**Pn**	**21 55 39.8**	**-3.5**
KSH				Sg	Sn	21 56 02.4	-14
KSH				smax	smax		
	comp=N,870nm,0.7s						
KSH				smax	smax		
	comp=E,630nm,0.7s						
AML	**Almayashu**	**3.47**	**15**	P	**Pn**	**21 55 54.6**	**+1.6**
	SNR=132						
TAS	**Tashkent**	**3.55**	**317**	Pn	**Pn**	**21 55 56.1**	**+2.4**
TAS	**Tashkent**	**3.55**	**317**	PN	**Pn**	**21 55 56.1**	**+2.4**
UCH	**Uchtor**	**3.77**	**23**	P	**Pn**	**21 55 58.9**	**+1.7**
	SNR=38						
IUG	**Iuzhnay**	**3.87**	**331**	*e*PN	**Pn**	**21 55 59.0**	**+0.9**
IUG				*e*		21 56 49.3	
IUG	**Iuzhnay**	**3.87**	**331**	*e*P	**Pn**	**21 55 56.0**	**-2.1**
	195nm,0.5s						
IUG				*e*S	**Sn**	**21 56 39.5**	**-3.1**
	143nm,0.7s						
IUG	**Iuzhnay**	**3.87**	**331**	*e*Pn	**Pn**	**21 55 59.1**	**+0.9**
	baz=332						
IUG				*e*Pb	Pb	21 56 03.9	-4.3
	baz=332						
IUG				*e*Sb	**Sb**	**21 56 49.3**	**-5.4**
	baz=332						
IUG	**Iuzhnay**	**3.87**	**331**	Pg	**Pb**	**21 56 06.8**	**-1.5**
	3μm,0.8s						
IUG				Lg	Lg	21 56 47.7	
	572nm,0.5s						
EKS2	**Erkin-Say**	**4.00**	**13**	P	**Pn**	**21 56 03.1**	**+3.1**
	SNR=11						
MRKS	**Merke**	**4.00**	**7**	*e*P	Pn	21 56 03.6	+3.6
	38nm,0.5s						
MRKS				*e*S	**Sb**	**21 56 53.2**	**-5.5**
	84nm,0.4s						
MRKS	**Merke**	**4.00**	**7**	Pg	**Pb**	**21 56 09.5**	**-1.1**
	38nm,0.5s						
MRKS				Lg	Lg	21 56 53.2	
	84nm,0.4s						
AAK	**Ala-Archa**	**4.14**	**21**	Pn	Pn	21 56 05.2	+3.2
	8.9nm,0.3s,baz=197,slow=10,SNR=41						
AAK				Sn	**Sb**	**21 56 55.0**	**-7.7**
	6.1nm,0.3s,baz=133,slow=20,SNR=9.6						
AAK				LR	LR	21 57 51.8	
	comp=Z,127nm,18.1s,baz=235,slow=42						
	50nm,0.5s						
AAK	**Ala-Archa**	**4.14**	**21**	P	**Pn**	**21 56 05.0**	**+3.0**
	SNR=39						
AAK	**Ala-Archa**	**4.14**	**21**	Pn	**Pn**	**21 56 01.5**	**-0.5**
AAK	**Ala-Archa**	**4.14**	**21**	*i* PN	**Pn**	**21 55 59.6**	**-2.4**
DZA	**Taraz**	**4.21**	**348**	*e*PN	**Pn**	**21 56 02.8**	**0.0**
DZA	**Taraz**	**4.21**	**348**	*e*Pn	**Pn**	**21 56 02.9**	**0.0**
	baz=350						
DZA				*e*Pb	Pb	21 56 08.5	-5.6
	baz=350						
KBK	**Karagaybulak**	**4.30**	**25**	P	Pb	21 56 09.6	-6.0
	SNR=22						
ULHL	**Ulahol**	**4.48**	**38**	P	Pn	21 56 10.9	+4.2
	SNR=12						
CHMS	**Chumysh**	**4.55**	**21**	P	**Pn**	**21 56 09.8**	**+2.4**
	SNR=46						
CHMS	**Chumysh**	**4.55**	**21**	PN	**Pn**	**21 56 08.9**	**+1.5**
CHMS	**Chumysh**	**4.55**	**21**	⇓Pn	**Pn**	**21 56 08.9**	**+1.5**
	50nm,0.6s						
CHMS				⇓Lg	Lg	21 57 20.0	
	117nm,1.1s						
KK31	**Karatay Array**	**4.59**	**341**		**Pn**	**21 56 09.5**	**+1.6**
KK31	**Karatay Array**	**4.59**	**341**	PN	**Pn**	**21 56 09.5**	**+1.6**
KK31	**Karatay Array**	**4.59**	**341**	⇑Pn	**Pn**	**21 56 09.3**	**+1.4**
	90nm,0.7s,baz=150,slow=13,SNR=616						
KK31				⇑Sn	**Sn**	**21 57 03.0**	**+2.8**
	27nm,0.3s,baz=142,slow=23,SNR=3.4						
KK31				⇑Lg	Lg	21 57 21.2	
	74nm,0.6s						
KKAR	**Karatay Array**	**4.59**	**341**	Pn	**Pn**	**21 56 09.2**	**+1.3**
KKAR	**Karatay Array**	**4.59**	**341**		**Pn**	**21 56 09.5**	**+1.6**
KKAR	**Karatay Array**	**4.59**	**341**	PN	**Pn**	**21 56 09.5**	**+1.6**
USP	**Ospenovka**	**4.73**	**18**	P	Pb	21 56 14.9	-8.1
	SNR=36						
TKM2	**Tokmak 2**	**4.76**	**28**	P	**Pn**	**21 56 12.8**	**+2.4**
	SNR=26						
TKM2	**Tokmak 2**	**4.76**	**28**	PN	**Pn**	**21 56 12.6**	**+2.1**
TKM2	**Tokmak 2**	**4.76**	**28**	⇑Pn	**Pn**	**21 56 12.6**	**+2.1**
	18nm,0.5s						
TKM2				⇑Pg	**Pb**	**21 56 24.3**	**+0.9**
	29nm,0.6s						
TKM2				⇑Lg	Lg	21 57 28.7	
	73nm,0.8s						
SGDS	**Sogindy**	**4.94**	**18**	*e*PN	**Pn**	**21 56 13.2**	**+0.4**
SGDS				*e*		21 56 27.5	
SGDS	**Sogindy**	**4.94**	**18**	*e*P	**Pb**	**21 56 23.4**	**-3.1**
	33nm,0.7s						
SGDS				*e*S	**Sb**	**21 57 26.9**	**+1.4**
	68nm,1.1s						
SGDS	**Sogindy**	**4.94**	**18**	*e*Pn	**Pn**	**21 56 13.3**	**+0.4**
	baz=20						
SGDS				*e*Pg	**Pb**	**21 56 27.5**	**+1.0**
	baz=20						
SGDS				*e*Sn	**Sn**	**21 57 05.3**	**-3.7**
	baz=20						
SGDS				*e*Lg	Lg	21 57 33.1	
	baz=20						
SGDS	**Sogindy**	**4.94**	**18**	Pg	**Pb**	**21 56 29.0**	**+2.5**
	33nm,0.7s						
SGDS				Lg	Lg	21 57 26.9	
	68nm,1.1s						
KST	**Kastek**	**5.00**	**30**	*e*P	**Pb**	**21 56 26.6**	**-1.0**
	33nm,0.5s						
KST				*e*S	**Sb**	**21 57 31.9**	**+4.6**
	117nm,0.8s						
KST	**Kastek**	**5.00**	**30**	Pg	Pb	21 56 32.3	+4.8
	33nm,0.5s						
KST				Lg	Lg	21 57 31.9	
	117nm,0.8s						
KBL	**Kabul**	**5.06**	**215**	Pn	Pn	21 56 18.9	+4.2
KBL	**Kabul**	**5.06**	**215**	PN	Pn	21 56 18.9	+4.2
CHCP	**Chirah Chowk**	**5.14**	**173**	P	Pn	21 56 19.9	+4.3
NIL	**Nilore**	**5.14**	**173**		**Pn**	**21 56 16.9**	**+1.3**
NIL	**Nilore**	**5.14**	**173**	PN	**Pn**	**21 56 16.9**	**+1.3**
KRBS	**Karabastau**	**5.46**	**25**	*e*P	**Pb**	**21 56 34.0**	**-1.5**
	17nm,0.5s						
KRBS				*e*S	**Sb**	**21 57 45.4**	**+4.9**
	41nm,0.4s						
KRBS	**Karabastau**	**5.46**	**25**	Pg	Pb	21 56 40.1	+4.7
	17nm,0.5s						
KRBS				Lg	Lg	21 57 45.4	
	41nm,0.4s						
AAA	**Alma-Ata**	**5.54**	**35**	*e*PN	**Pn**	**21 56 21.5**	**+0.4**
AAA				*e*		21 56 38.5	
AAA	**Alma-Ata**	**5.54**	**35**	*e*Pn	**Pn**	**21 56 21.6**	**+0.4**
	baz=38						
AAA				*e*Pg	**Pb**	**21 56 38.5**	**+1.8**
	baz=38						
MDOK	**Medeo**	**5.57**	**37**	*e*PN	**Pn**	**21 56 21.2**	**-0.3**
MDOK				*e*		21 56 41.0	
MDOK	**Medeo**	**5.57**	**37**	*e*Pn	**Pn**	**21 56 21.2**	**-0.3**
	baz=39						
MDOK				*e*Pg	**Pb**	**21 56 40.1**	**+2.9**
	baz=39						
MDOK	**Medeo**	**5.57**	**37**	⇓Pn	**Pn**	**21 56 23.1**	**+1.5**
	13nm,0.6s						
MDOK				⇓Pg	Pb	21 56 40.4	+3.2
	40nm,0.8s						
MDOK				⇓Lg	Lg	21 57 56.2	
	65nm,0.7s						
KNDC	**Almaty**	**5.57**	**36**	PN	**Pn**	**21 56 24.5**	**+3.0**
KNDC	**Almaty**	**5.57**	**36**	⇑Pn	**Pn**	**21 56 24.5**	**+3.0**
	26nm,0.5s						
KNDC				⇑Pg	Pb	21 56 41.3	+4.1
	122nm,0.9s						
KNDC				⇑Lg	Lg	21 57 56.5	
	387nm,0.8s						
KTBS	**Karatobe**	**5.85**	**31**	Pg	Pb	21 56 47.4	+5.5
	17nm,0.9s						
KTBS				Lg	Lg	21 57 57.6	
	55nm,0.6s						
KUU	**Kurty**	**5.87**	**28**	*e*PN	**Pn**	**21 56 26.1**	**+0.6**
KUU				*e*		21 56 45.4	
KUU	**Kurty**	**5.87**	**28**	*e*Pn	**Pn**	**21 56 26.1**	**+0.6**
	baz=30						
KUU				*e*Pg	Pb	21 56 45.4	+3.2
	baz=30						
KUU	**Kurty**	**5.87**	**28**	Pg	Pb	21 56 47.8	+5.5
	20nm,0.7s						
KUU				Lg	Lg	21 57 58.2	
	75nm,0.9s						
THW	**Thamme Wali**	**6.00**	**186**	P	Pn	21 56 31.8	+4.4
CHKK	**Chushkaly**	**6.09**	**32**	*e*PN	**Pn**	**21 56 28.2**	**-0.3**
CHKK				*e*		21 56 49.0	
CHKK	**Chushkaly**	**6.09**	**32**	*e*Pn	**Pn**	**21 56 28.3**	**-0.3**
	baz=34						
CHKK				*e*Pg	**Pb**	**21 56 49.0**	**+3.0**
	baz=34						
CHKK	**Chushkaly**	**6.09**	**32**	Pg	Pb	21 56 52.3	+6.3
	14nm,0.6s						
CHKK				Lg	Lg	21 58 05.7	
	42nm,0.8s						
SATY	**Saty**	**6.18**	**44**	*e*PN	**Pn**	**21 56 29.5**	**-0.4**
SATY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SATY	**Saty**	**6.18**	**44**	*e*Pn	**Pn**	**21 56 29.5**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=46						
JMU	**Jammu**	**6.34**	**162**	*e*P	**Pn**	**21 56 33.7**	**+1.6**
JMU				*e*P	Pb	21 57 37.4	+47
JMU				*e*S	**Sn**	**21 57 39.5**	**-4.0**
BTLS	**Baital**	**6.37**	**10**	*e*PN	Pn	21 56 27.6	-4.7
BTLS				*e*		21 56 52.2	
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BTLS	**Baital**	**6.37**	**10**	*e*Pn	Pn	21 56 27.7	-4.7
	comp=Z,3.3nm,0.8s,baz=11						
BTLS				*e*Pg	**Pb**	**21 56 52.2**	**+1.5**
	baz=11						
UZB	**Uzunbulak**	**6.58**	**46**	*e*PN	**Pn**	**21 56 34.6**	**-0.8**
UZB	**Uzunbulak**	**6.58**	**46**	*e*Pn	**Pn**	**21 56 34.7**	**-0.8**
	baz=48						
UZB				*e*Pg	Pb	21 57 02.3	+7.8
	baz=48						
THN	**Thein Dam**	**6.84**	**157**	*e*P	**Pn**	**21 56 41.2**	**+2.3**
SHLS	**Shalkode**	**6.84**	**48**	*e*PN	**Pn**	**21 56 42.2**	**+3.3**
SHLS	**Shalkode**	**6.84**	**48**	*e*Pn	**Pn**	**21 56 42.3**	**+3.3**
	baz=51						
SHLS				*e*Pg	Pb	21 57 10.4	+12
	baz=51						
SHLS				*e*Lg	Lg	21 58 47.1	
	baz=51						
PDGK	**Podgornoye**	**6.96**	**47**	PN	**Pn**	**21 56 41.4**	**+0.7**
PDGK	**Podgornoye**	**6.96**	**47**	⇓Pn	**Pn**	**21 56 41.0**	**+0.4**
	comp=Z,10nm,0.8s						
PDGK				⇑Pg	Pb	21 57 06.2	+5.2
	comp=Z,20nm,0.7s						
PDGK				⇓Lg	Lg	21 58 37.9	
	comp=Z,44nm,0.9s						
TDK	**Taldyqorghan**	**7.62**	**33**	*e*P	**Pn**	**21 56 49.2**	**-0.3**
TDK	**Taldyqorghan**	**7.62**	**33**	*e*Pn	**Pn**	**21 56 49.2**	**-0.3**
	baz=35						
BHK	**Bhakra**	**8.00**	**155**	*e*S	**Sn**	**21 58 19.4**	**-4.9**
SMLA	**Simla**	**8.53**	**152**	*e*P	**Pn**	**21 57 03.2**	**+1.2**
SMLA				*e*S	**Sn**	**21 58 34.3**	**-2.8**
SMLA				IAML		21 58 38.7	
	comp=N,70nm,0.6s						
SMLA				IAML		21 58 39.3	
	comp=E,59nm,0.5s						
HRA	**Herat**	**9.35**	**245**	Pn	**Pn**	**21 57 15.4**	**+1.9**
OTUK	**Ortayu**	**9.47**	**359**	P	**Pn**	**21 57 15.7**	**+0.8**
OTUK	**Ortayu**	**9.47**	**359**	⇑Pn	**Pn**	**21 57 15.7**	**+0.8**
	comp=E,6.6nm,0.7s						
MAKZ	**Makanchi**	**10.61**	**38**	Pn	**Pn**	**21 57 29.8**	**-0.8**
MAKZ	**Makanchi**	**10.61**	**38**	P	**Pn**	**21 57 29.8**	**-0.8**
PTH	**Pithoragarh**	**11.19**	**143**	*ex*	x	21 57 36.4	
PTH				*i* x	x	21 57 58.8	
BRZS	**Berezniki**	**11.21**	**1**	*e*P	**Pn**	**21 57 36.5**	**-2.2**
BRZS				*e*		21 59 39.0	
BRZS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRZS	**Berezniki**	**11.21**	**1**	*e*Pn	**Pn**	**21 57 36.6**	**-2.2**
	comp=Z,2.9nm,0.9s,baz=1.3						
BRZS				*e*Sn	**Sn**	**21 59 39.0**	**-3.8**
	baz=1.3						
LGTI	**Lohaghat**	**11.28**	**143**	*ex*	x	21 57 35.3	
GEYT	**Alibeck**	**11.34**	**270**	Pn	**Pn**	**21 57 38.4**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=91,slow=12,SNR=10.0						
GEYT				Sn	**Sn**	**21 59 42.8**	**-3.5**
	comp=Z,1.4nm,0.3s,baz=110,slow=16,SNR=4.3						
	comp=Z,6.0nm,0.6s						
GEYT	**Alibeck**	**11.34**	**270**	Pn	**Pn**	**21 57 41.2**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**11.34**	**270**	Pn	**Pn**	**21 57 41.9**	**+1.3**
AJM	**Ajmer**	**12.39**	**171**	*e*P	**Pn**	**21 57 58.0**	**+3.0**
WMQ	**Urumqi**	**12.47**	**61**	*e*P	**Pn**	**21 57 58.0**	**+1.9**
WMQ				LR	LR		
	comp=Z,260nm,10.5s						
WMQ				LR	LR		
	comp=Z,85nm,17.5s						
KURBB	**Kurchatov Arra**	**12.59**	**18**	Pn	**Pn**	**21 57 55.1**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=211,slow=13,SNR=9.5						
	comp=Z,0.9nm,0.8s						
KURK	**Kurchatov**	**12.70**	**18**	Pn	**Pn**	**21 57 57.7**	**-1.3**
KURK	**Kurchatov**	**12.70**	**18**	*i* P	**Pn**	**21 57 58.8**	**-0.2**
KURK	**Kurchatov**	**12.70**	**18**	⇓Pn	**Pn**	**21 57 57.2**	**-1.8**
	comp=Z,5.0nm,1.4s						
SEM	**Semipalatinsk**	**12.86**	**23**	*e*P	**Pn**	**21 58 03.0**	**+1.5**
SEM	**Semipalatinsk**	**12.86**	**23**	*e*Pn	**Pn**	**21 58 03.1**	**+1.5**
	baz=24						
AB31	**Akbulak array**	**13.83**	**323**	P	**Pn**	**21 58 11.3**	**-3.1**
AB31	**Akbulak array**	**13.83**	**323**	Pn	**Pn**	**21 58 11.3**	**-3.1**
	comp=Z,11nm,0.6s,baz=130,slow=13,SNR=190						
AB31				⇑Sn	**Sn**	**22 00 42.8**	**-3.9**
	comp=Z,4.4nm,0.6s,baz=135,slow=23,SNR=13						
ABKAR	**Akbulak array**	**13.83**	**323**	Pn	**Pn**	**21 58 12.2**	**-2.3**
ABKAR	**Akbulak array**	**13.83**	**323**	Pn	**Pn**	**21 58 11.7**	**-2.7**
DANN	**Dangsing**	**13.98**	**135**	*e*P	Pn	21 58 12.2	-4.8
	comp=Z,9.2nm,0.4s						
BVA0	**Borovoye Array**	**14.33**	**355**	P	**Pn**	**21 58 20.8**	**-0.5**
BVA0	**Borovoye Array**	**14.33**	**355**	Pn	**Pn**	**21 58 20.8**	**-0.5**
	comp=Z,0.1nm,0.7s,baz=156,slow=12,SNR=46						
BRVK	**Borovoye**	**14.37**	**355**		**Pn**	**21 58 19.3**	**-2.6**
BRVK	**Borovoye**	**14.37**	**355**	*e*P	**Pn**	**21 58 19.1**	**-2.8**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GKN	**Gorkha**	**14.74**	**133**	*e*P	Pn	21 58 20.8	-6.4
	comp=Z,13nm,0.4s						
KKN	**Kakani**	**15.27**	**132**	*e*P	**Pn**	**21 58 28.1**	**-6.2**
	comp=Z,19nm,1.0s						
DMN	**Daman**	**15.31**	**133**	*e*P	**Pn**	**21 58 29.0**	**-5.8**
PKIN	**Phulchoki**	**15.50**	**132**	*e*P	**Pn**	**21 58 30.6**	**-6.7**
PKI	**Pulchoki**	**15.51**	**132**	*e*P	**Pn**	**21 58 31.2**	**-6.3**
	comp=Z,13nm,0.6s						
AKTO	**Aktyubinsk**	**15.54**	**323**	Pn	**Pn**	**21 58 35.7**	**-1.7**
	comp=Z,1.1nm,0.3s,baz=126,slow=16,SNR=16						
AKTO				Sn	**Sn**	**22 01 23.8**	**-4.8**
	comp=Z,0.4nm,0.3s,baz=166,slow=16,SNR=5.0						
	comp=Z,2.2nm,0.4s						
AKTO	**Aktyubinsk**	**15.54**	**323**	⇑Pn	**P**	**21 58 39.0**	**-2.5**
	comp=Z,21nm,0.7s						
AKTO				⇑Sn	**Sn**	**22 01 27.2**	**-1.4**
	comp=Z,10nm,1.2s						
JIRN	**Jiri**	**15.91**	**130**	*e*P	Pn	21 58 35.6	-7.1
	comp=Z,5.2nm,0.4s						
ZAA0	**Zalesovo Array**	**17.35**	**25**		**Pn**	**21 58 56.7**	**-3.7**
ZALV	**Zalesovo Beam**	**17.35**	**25**	P	**Pn**	**21 58 59.2**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=222,slow=11,SNR=20						
	comp=Z,3.7nm,0.4s						
ZALV	**Zalesovo Beam**	**17.35**	**25**		**Pn**	**21 58 56.9**	**-3.4**
LSA	**Lhasa**	**17.84**	**115**		**Pn**	**21 59 03.9**	**-3.1**
LSA	**Lhasa**	**17.84**	**115**	P	**Pn**	**21 59 03.9**	**-3.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKL	**Akola**	**18.42**	**167**	*ex*	x	21 57 46.3	
SVE	**Sverdlovsk**	**19.70**	**340**	*e*P	**Pn**	**21 59 28.0**	**-0.8**
ARU	**Arti**	**19.95**	**337**	P	**Pn**	**21 59 30.1**	**-1.7**
	comp=Z,2.7nm,0.5s,baz=132,slow=18,SNR=2.1						
	comp=Z,2.7nm,0.5s						
ARU	**Arti**	**19.95**	**337**	P	**Pn**	**21 59 31.8**	**+0.1**
ARU				IAmb	IAmb	21 59 37.9	
	comp=Z,10nm,0.8s						
ARU	**Arti**	**19.95**	**337**	*d i*P	**P**	**21 59 26.6**	**-3.3**
ARU				S	**S**	**22 03 07.8**	**-4.7**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.6s						
GROC	**Groznyy**	**20.61**	**291**	*e*P	Pn	21 59 38.4	-1.3
GROC						21 59 57.6	
GROC				pmax	pmax		
	comp=Z,18nm,0.8s						
GTA	**Gaotai**	**21.17**	**80**	⇓P	**P**	**21 59 44.5**	**+1.0**
GTA				pP	pP	21 59 48.4	-4.8
GTA				sP	sP	21 59 51.2	-6.6
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,60nm,5.2s						
GTA				LR	LR		
	comp=Z,70nm,12.4s						
GTA				LR	LR		
	comp=Z,48nm,13.1s						
GTA				LR	LR		
	comp=Z,57nm,14.9s						
GNI	**

comp=Z,11nm,14.0s
ZAK Zakamensk 24.61 52 *e*P **P 22 00 17.4 -0.8**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
KIRV Kirov 24.79 331 P **P 22 00 19.6 +0.1**
comp=Z,9.9nm,0.7s,baz=183,slow=2.9,SNR=5.8
comp=Z,9.9nm,0.7s
KIRV Kirov 24.79 331*ce*P **P 22 00 18.9 -0.6**
LZH Lanzhou 24.96 86 *e*P **P 22 00 25.8 +4.3**
LZH pP pP 22 00 31.9 0.0
LZH pmax pmax
comp=Z,8.0nm,1.1s
MARD Mardin 24.98 277 P **P 22 00 23.6 +1.9**
MARD IAmb IAmb 22 00 37.9
comp=Z,5.8nm,0.5s
SONM Songino Array 26.09 59 P **P 22 00 32.9 +1.2**
comp=Z,1.6nm,1.2s,baz=251,slow=9.1,SNR=7.8
SONM LR LR 22 11 55.7
comp=Z,73nm,18.2s,baz=233,slow=39
comp=Z,1.6nm,1.2s
SONM Songino Array 26.09 59 P **P 22 00 28.8 -2.9**
VORR Voronezh 26.52 310 *e*P **P 22 00 34.1 -1.2**
ULN Ulaanbaatar 26.53 59 P **P 22 00 33.7 -1.9**
ULN Ulaanbaatar 26.53 59 *i*P **P 22 00 36.0 +0.3**
ULN pmax pmax
comp=Z,2.0nm,0.7s
PZH PanZhiHua 27.36 108 P **P 22 00 44.0 +0.7**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,3.7s
RAYN Ar Rayn 27.54 244 P **P 22 00 45.7 +0.9**
RAYN IAmb IAmb 22 00 47.2
comp=Z,4.8nm,0.9s
RAYN Ar Rayn 27.54 244 P **P 22 00 45.7 +0.9**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
OBN Obninsk 29.07 316 *i*P **P 22 00 55.9 -2.1**
OBN pmax pmax
comp=Z,7.0nm,1.3s
ILGA Ilgaz 29.69 287 P **P 22 01 04.8 +0.8**
HHC Hu-ho-hao-te 29.90 73 *e*P **P 22 01 03.6 -2.1**
HHC pmax pmax
comp=Z,34nm,0.8s
HHC pmax pmax
comp=Z,98nm,5.0s
BR131 Keskin Array S 29.97 284 P **P 22 01 03.8 -2.6**
BR131 IAmb IAmb 22 01 08.4
comp=Z,4.4nm,1.1s
BR131 Keskin Array S 29.97 284 P **P 22 01 03.8 -2.6**
BR131 pmax pmax
comp=Z,4.0nm,1.2s
BRTR Keskin Array B 29.97 284 P **P 22 01 06.8 +0.4**
BRTR Keskin Array B 29.97 284 P **P 22 01 06.8 +0.4**
CMAR Chiang Mai Arr 30.60 124 P **P 22 01 09.2 -2.8**
CMAR Chiang Mai Arr 30.60 124 P **P 22 01 09.2 -2.8**
EIL Elat 32.18 265 LR LR 22 16 09.5
comp=Z,43nm,18.2s,baz=92,slow=40
PALK Pallekele 32.22 165 P **P 22 01 23.1 -3.1**
comp=Z,12nm,0.9s,baz=176,slow=2.9,SNR=3.8
comp=Z,12nm,0.9s
AKASG Malin Array Be 32.53 306 P **P 22 01 27.3 -1.3**
comp=Z,0.3nm,0.4s,baz=78,slow=7.8,SNR=5.7
AKASG LR LR 22 17 30.5
comp=Z,16nm,18.2s,baz=110,slow=42
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 32.53 306*ce*P **P 22 01 30.2 +1.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 32.53 306*ce*P **P 22 01 31.6 +3.0**
MLR Muntele Rosu 34.79 296 P **P 22 01 49.8 +1.3**
MLR IAmb IAmb 22 02 02.7
comp=Z,5.7nm,1.0s
MLR Muntele Rosu 34.79 296 P **P 22 01 49.8 +1.3**
MLR pmax pmax
comp=Z,6.0nm,1.0s
IIGN Ignalina 34.88 314 *e*P **P 22 01 49.3 +0.3**
BURAR Bucovina Array 35.12 300 P **P 22 01 52.1 +0.7**
BURAR Bucovina Array 35.12 300 P **P 22 01 52.3 +1.0**
BURAR pmax pmax
comp=Z,2.0nm,1.0s
BUR08 Bucovina Ar. S 35.13 300 P **P 22 01 52.0 +0.6**
BUR08 IAmb IAmb 22 01 56.2
comp=Z,5.2nm,1.4s
VOIR 35.42 296 ⇓P P 22 02 10.0 +16
VOIR ⇑S S 22 02 11.7 -315
PABE Paberze 36.17 314 P **P 22 02 00.4 +0.3**
PABE Paberze 36.17 314 *e*P **P 22 02 00.4 +0.3**
FIA1 FINESS Array S 36.31 324 P **P 22 02 02.9 +1.7**
FIA0 FINESS Array S 36.31 324 P **P 22 02 01.1 -0.1**
FIA0 FINESS Array S 36.31 324 P **P 22 02 01.1 -0.1**
FINES FINESS Array B 36.31 324 P **P 22 02 00.7 -0.5**
comp=Z,4.0nm,0.6s,baz=109,slow=9.0,SNR=19
comp=Z,4.0nm,0.6s
FINES FINESS Array B 36.31 324 P **P 22 02 01.4 +0.2**
KWP Kalwaria Pacla 36.70 304 P **P 22 02 06.0 +1.3**
KWP Kalwaria Pacla 36.70 304 P **P 22 02 06.0 +1.3**
KWP pmax pmax
comp=Z,83nm,1.2s
MTSE Matsula 36.75 319 *e*P **P 22 02 05.2 +0.3**
KEV Kevo 39.16 337 P **P 22 02 26.6 +1.4**
KEV IAmb IAmb 22 03 06.8
comp=Z,12nm,1.4s
KEV Kevo 39.16 337 P **P 22 02 26.6 +1.4**
KEV pmax pmax
comp=Z,12nm,1.4s
ARCES ARCESS Array B 39.53 336 P **P 22 02 28.1 -0.2**
comp=Z,3.3nm,0.5s,baz=111,slow=7.7,SNR=31
comp=Z,3.3nm,0.5s
ARCES ARCESS Array B 39.53 336 P **P 22 02 28.4 +0.1**
ARCES IAmb IAmb 22 02 31.5
comp=Z,16nm,1.5s
ARCES ARCESS Array B 39.53 336 P **P 22 02 28.4 +0.1**
ARCES pmax pmax
comp=Z,16nm,1.5s
VRAC Vranov 40.70 304 LR LR 22 20 44.9
comp=Z,15nm,21.0s,baz=68,slow=38
DPC Dobruska-Polom 40.76 305 *e*P **P 22 02 42.7 +4.0**
DPC Dobruska-Polom 40.76 305 *e*P **P 22 02 42.7 +4.0**
BRG Berggiesshubel 42.21 306 *e*P **P 22 02 54.1 +3.6**
BRG Amp 22 02 57.9
comp=Z,2.4nm,0.7s
BRG Berggiesshubel 42.21 306 *e*P **P 22 02 54.1 +3.6**
BRG pmax pmax
comp=Z,2.0nm,0.7s
CKRC Cesky Krumlov 42.25 303 *e*P P 22 02 55.7 +4.7
GERES GERESS Array B 42.64 303 P **P 22 02 54.1 -0.2**
comp=Z,0.7nm,0.7s,baz=64,slow=9.1,SNR=7.1
comp=Z,0.7nm,0.7s
GERES GERESS Array B 42.64 303 P **P 22 02 55.0 +0.8**
KHC Kasperske Hory 42.68 304 P **P 22 02 55.4 +0.9**
KHC Kasperske Hory 42.68 304 *e*P **P 22 02 55.1 +0.6**
KHC Kasperske Hory 42.68 304 *e*P **P 22 02 55.1 +0.6**
CLL Collm 42.74 307 *e*P **P 22 02 54.0 -0.9**
CLL Collm 42.74 307 *e*P **P 22 02 56.0 +1.1**
CLL *e*PP **PP 22 04 34.0 -0.1**
CLL *e*PcP **PcP 22 04 45.0 -1.0**
KSRS Korea Array 43.04 74 LR LR 22 23 29.8
comp=Z,14nm,19.2s,baz=180,slow=40
CUC Castrocucco 43.20 290 P **P 22 02 60.0 +1.1**
NC303 NORSAR Array S 43.26 322 P **P 22 02 58.6 -0.3**
NB2 NORSAR Subarra 43.32 322 P **P 22 02 58.5 -1.0**
comp=Z,1.1nm,0.6s,baz=92,slow=8.6
NOA NORSAR Array B 43.32 322 P **P 22 02 58.8 -0.7**
comp=Z,1.6nm,0.7s,baz=92,slow=8.0,SNR=6.6
comp=Z,1.6nm,0.7s
DAVOX Davos/Dischmat 45.58 301 LR LR 22 24 07.2
comp=Z,24nm,19.0s,baz=264,slow=38
ESDC Sonseca Array 57.48 297 P **P 22 04 47.1 +0.3**
comp=Z,0.8nm,0.8s,baz=54,slow=7.2,SNR=6.8
comp=Z,0.8nm,0.8s
TORD Torodi Ar. Bea 66.98 269 P **P 22 05 50.1 -0.6**
comp=Z,1.9nm,0.6s,baz=49,slow=5.6,SNR=29
comp=Z,1.9nm,0.6s
TOLK Toolik Lake Re 68.42 15 P **P 22 06 01.6 +2.5**
IMAR Indian Mountai 69.64 18 P **P 22 06 08.4 +1.7**
AMKA Amchitka 69.85 40 P **P 22 06 09.6 +1.5**
BMAR Burnt Mountain 70.45 14 P **P 22 06 13.2 +1.6**
J20K Nowinta River 70.99 20 P **P 22 06 15.3 +0.4**
J20K IAmb IAmb 22 06 18.2
comp=Z,3.9nm,0.9s
H24K Noodor Dome 71.14 16 P **P 22 06 17.4 +1.6**
H24K IAmb IAmb 22 06 37.8
comp=Z,5.0nm,1.4s
MLY Manley 71.15 18 P **P 22 06 15.5 -0.5**

K20K Telida 71.67 20 P **P 22 06 21.5 +2.5**
K20K IAmb IAmb 22 06 58.0
comp=Z,4.8nm,1.2s
MDM Murphy Dome 71.80 17 P **P 22 06 21.7 +1.9**
MDM IAmb IAmb 22 06 22.0
comp=Z,4.8nm,1.4s
CCB Clear Creek Bu 72.16 17 P **P 22 06 23.6 +1.6**
CCB IAmb IAmb 22 06 31.2
comp=Z,3.0nm,1.2s
ILAR Eielson Array 72.27 17 P **P 22 06 24.2 +1.7**
comp=Z,0.6nm,0.7s,baz=351,slow=5.4,SNR=4.6
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 78.92 3 P **P 22 07 00.1 -0.5**
comp=Z,0.9nm,0.6s,baz=350,slow=6.1,SNR=7.2
comp=Z,0.9nm,0.6s
YKA Yellowknife Ar 78.92 3*ce*P **P 22 07 03.2 +2.5**
YKA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 82.19 123 P **P 22 07 17.7 -1.1**
comp=Z,1.5nm,0.7s,baz=326,slow=4.8,SNR=12
comp=Z,1.5nm,0.7s
ASAR Alice Springs 84.59 126 P **P 22 07 30.6 -0.6**
comp=Z,0.9nm,0.7s,baz=302,slow=5.7,SNR=5.6
comp=Z,0.9nm,0.7s
PLCA Paso Flores 151.67 254 PKPbc **PKiKP 22 14 52.1 -0.1**
comp=Z,1.9nm,1.0s,baz=322,slow=4.5,SNR=4.8

*KRNET **04** 22:00:13.5±0.1,41.35N×71.87E,h19km,mb2.7*
*ISU **04** 22:00:14,41.33N×71.97E,h13km*
*NNC **04** 22:00:22.7±4.2,41.47N×71.72E,h13km±31km,mb4.2,*
mpv3.5,Error ellipse: s-maj=49.2km s-min=14.8km
az=174.0
*SOME **04** 22:00:25.1,41.72N×71.70E,h5km*
ISC 04 22:00:16.3±1.1,41.23N±0.02×71.83E±0.03,h5km±10km,
n26,σ2s21/43,10C,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NAM	**Namangan**	**0.27**	**209**	P		P	**Pg**	**22 00 22.9**	**+1.4**
NAM				S		S	**Sb**	**22 00 29.5**	**+0.9**
ARK	**Arkit**	**0.58**	**10**	⇑*i*P		Pg	**Sg**	22 00 22.4	-5.0
ARK	baz=10.0			⇑*i*S			**Sg**	**22 00 29.1**	**-5.8**
TRKS	**Terek-Say**	**0.60**	**300**	⇑*i*P		Pg		22 00 24.0	-3.8
TRKS	baz=83			⇑*i*S			**Sg**	**22 00 31.5**	**-4.2**
ANR	**Andizhan**	**0.62**	**140**	P			**Pg**	**22 00 28.7**	**+0.5**
ANR				S			**Sb**	**22 00 38.3**	**-0.3**
TSTA	**Tashata**	**0.81**	**143**	S			**Sn**	**22 00 46.2**	**-0.7**
FRG	**Fergana**	**0.85**	**182**	P			**Pg**	**22 00 31.9**	**-0.8**
FRG				S			**Sb**	**22 00 45.6**	**+0.2**
MINT	**Mingtut**	**1.00**	**221**	S			**Sn**	**22 00 54.5**	**+3.0**
OHH	**Osh**	**1.01**	**134**	⇑*i*P			**Pg**	**22 00 33.8**	**-1.8**
OHH	baz=39			⇑*i*S			**Sg**	**22 00 48.1**	**-0.6**
BTK	**Batken**	**1.40**	**214**	⇑*e*P			**Pn**	**22 00 41.5**	**-1.1**
BTK	baz=12			⇑*i*S			**Sn**	**22 01 01.5**	**0.0**
CHMG	**Chimgan**	**1.41**	**284**	S			**Sn**	**22 00 59.9**	**-1.8**
CHRV	**Charvak**	**1.47**	**287**	P			**Pn**	**22 00 43.2**	**-0.3**
CHRV				S			**Sn**	**22 01 04.2**	**+1.0**
IUG	**Iuzhnay**	**1.63**	**305**	*e*P			**Pb**	**22 00 48.8**	**+1.9**
IUG	173nm,0.2s			*e*S			**Sn**	**22 01 06.0**	**-1.2**
IUG	132nm,0.3s **Iuzhnay**	**1.63**	**305**	P			**Pb**	**22 00 48.8**	**+1.9**
IUG	173nm,0.2s			S			**Sn**	**22 01 06.0**	**-1.2**
YBZ	132nm,0.3s **Yangibazar**	**1.69**	**273**	S			**Sn**	**22 01 11.2**	**+2.5**
DZA	**Taraz**	**1.70**	**348**	*e*P			**Pb**	**22 00 49.6**	**+1.5**
DZA	50nm,0.2s			*e*S			**Sn**	**22 01 07.1**	**-1.7**
DZA	292nm,0.3s **Taraz**	**1.70**	**348**	P			**Pb**	**22 00 49.6**	**+1.5**
DZA	50nm,0.2s			S			**Sn**	**22 01 07.1**	**-1.7**
MRKS	292nm,0.3s **Merke**	**1.84**	**34**	*e*P			**Pg**	**22 00 53.7**	**+2.3**
MRKS	15nm,0.3s			*e*S			**Sg**	**22 01 14.9**	**-0.4**
MRKS	37nm,0.3s **Merke**	**1.84**	**34**	P			**Pg**	**22 00 53.7**	**+2.3**
MRKS	15nm,0.3s			S			**Sg**	**22 01 14.9**	**-0.4**
ARLS	37nm,0.3s **Aral**	**1.97**	**71**	⇑*e*P			**Pn**	**22 00 48.0**	**-2.5**
ARLS	baz=74			⇑*i*S			**Sn**	**22 01 13.3**	**-2.4**
KK31	**Karatay Array**	**2.11**	**333**	Pn			**Pn**	**22 00 51.0**	**-1.3**
KK31	15nm,0.6s,baz=142,slow=11,SNR=87			Sn			**Sn**	**22 01 18.0**	**-1.0**
SGDS	18nm,0.4s,baz=145,slow=30,SNR=7.7 **Sogindy**	**3.04**	**42**	*e*P			**Pg**	**22 01 15.3**	**+0.8**
SGDS	1.5nm,0.4s			*e*S			**Sg**	**22 01 52.0**	**-1.9**
SGDS	4.1nm,0.3s **Sogindy**	**3.04**	**42**	Pg			**Pg**	**22 01 15.3**	**+0.8**
SGDS	1.5nm,0.4s			Lg		Lg		22 01 52.0	
KST	4.1nm,0.3s **Kastek**	**3.57**	**58**	*e*P			**Pg**	**22 01 29.1**	**+4.6**
KST	2.6nm,0.6s			*e*S			**Sg**	**22 02 14.4**	**+3.6**
KST	5.3nm,0.5s **Kastek**	**3.57**	**58**	Pg			**Pg**	**22 01 29.1**	**+4.6**
KST	2.6nm,0.6s			Lg		Lg		22 02 14.4	
KRBS	5.3nm,0.5s **Karabastau**	**3.76**	**48**	*e*P			**Pg**	**22 01 29.2**	**+0.9**
KRBS	1.3nm,0.5s			*e*S			**Sg**	**22 02 15.1**	**-2.0**
KRBS	4.0nm,0.5s **Karabastau**	**3.76**	**48**	Pg			**Pg**	**22 01 29.2**	**+0.9**
KRBS	1.3nm,0.5s			Lg		Lg		22 02 15.1	
	4.0nm,0.5s								

*JMA **04** 22:19:40.4±0.2,25.1°N×122.2E±0.5,h118km±2km,*
MV2.5/10,TAIWAN REGION
*TAP **04** 22:19:40.5,24.85N×122.17E,h120km,ML3.5,B*
ISC 04 22:19:41.8±1.6,24.78N±0.04×122.22E±0.03,h113km±8km,
n89,σ0s73/166,25C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.31**	**317**	⇑*i*P			**Pn**	**22 19 57.5**	**-0.4**
TWB1	baz=316			*e*S			**Sn**	**22 20 09.5**	**-0.5**
NTC	baz=316 **Toucheng**	**0.36**	**282**	⇑*i*P			**Pn**	**22 19 57.6**	**-0.5**
NTC	baz=271			*e*S			**Sn**	**22 20 10.6**	**+0.2**
TWC	baz=271 **Suao**	**0.38**	**244**	⇑*i*P			**Pn**	**22 19 57.9**	**-0.3**
TWC	baz=230			*i*S			**Sn**	**22 20 10.3**	**-0.2**
TIPB	baz=230 **Shuangxi**	**0.41**	**298**	⇑*i*P			**Pn**	**22 19 58.0**	**-0.4**
TIPB	baz=292			*e*S			**Sn**	**22 20 10.2**	**-0.7**
ILA	baz=292 **Ilan**	**0.43**	**268**	*e*P			**Pn**	**22 19 58.5**	**0.0**
ILA	baz=257			*e*S			**Sn**	**22 20 11.2**	**+0.2**
SXI1	baz=257 **Grass Mountain**	**0.45**	**315**	⇑*i*P			**Pn**	**22 19 58.0**	**-0.6**
SXI1	baz=313			*e*S			**Sn**	**22 20 12.1**	**+0.7**
NDS	baz=313 **Dongshan**	**0.48**	**253**	⇑*e*P			**Pn**	**22 19 57.8**	**-1.0**
NDS	baz=243			*e*S			**Sn**	**22 20 11.9**	**+0.3**
NWF	baz=243 **Wu-fen Shan**	**0.49**	**306**	⇑*i*P			**Pn**	**22 19 58.5**	**-0.4**
NWF	baz=302			*e*S			**Sn**	**22 20 11.4**	**-0.5**
WFSB	baz=302 **Wu-fen Shan**	**0.49**	**306**	⇑P			**Pn**	**22 19 58.5**	**-0.4**
WFSB	baz=302			*e*S			**Sn**	**22 20 11.4**	**-0.3**
TWE	**Neicheng**	**0.51**	**264**	*e*P			**Pn**	**22 19 58.6**	**-0.3**
TWE	baz=254			*e*S			**Sn**	**22 20 13.6**	**+1.7**
EWUT	baz=254 **Wuta**	**0.52**	**231**	⇑*e*P			**Pn**	**22 19 58.2**	**-0.8**
EWUT	baz=221			*e*S			**Sn**	**22 20 11.7**	**-0.3**
TNOU	baz=221 **National Taiwa**	**0.55**	**312**	*e*P			**Pn**	**22 19 58.7**	**-0.6**
TNOU	baz=310			*e*S			**Sn**	**22 20 14.7**	**+2.3**
ENA	baz=310 **Nanau**	**0.56**	**232**	*e*P			**Pn**	**22 19 59.5**	**+0.2**
ENA	baz=222			*e*S			**Sn**	**22 20 13.7**	**+1.2**
FUSB	baz=222 **Fushanzhiwuyua**	**0.58**	**268**	⇑*i*P			**Pn**	**22 19 59.1**	**-0.4**
FUSB	baz=261			*e*S			**Sn**	**22 20 13.4**	**+0.6**
ENTT	baz=261 **Nioudou**	**0.61**	**257**	⇑P			**Pn**	**22 19 58.8**	**-0.9**
ENTT	baz=249			*e*S			**Sn**	**22 20 13.5**	**+0.3**
TWA	baz=249 **Mucha**	**0.61**	**289**	⇑*i*P			**Pn**	**22 19 59.0**	**-0.7**
TWA	baz=284			*e*S			**Sn**	**22 20 12.2**	**-1.0**
EHP	baz=284 **Heping Village**	**0.64**	**223**	*e*P			**Pn**	**22 20 00.2**	**+0.3**
NHY	baz=215 **Taipei**	**0.65**	**294**	*e*P			**Pn**	**22 19 59.5**	**-0.5**
NHY	baz=289			*e*S			**Sn**	**22 20 15.2**	**+1.6**
NWLT	baz=289 **Wulai**	**0.65**	**270**	⇑*e*P			**Pn**	**22 19 59.5**	**-0.6**
NWLT	baz=263			*e*S			**Sn**	**22 20 13.8**	**+0.1**
NHDH	baz=263 **Xindian Distri**	**0.66**	**286**	⇑*e*P			**Pn**	**22 19 59.4**	**-0.6**
NHDH	baz=281			*e*S			**Sn**	**22 20 14.6**	**+0.8**
NDT	baz=281 **Datong Townshi**	**0.67**	**255**	⇑*e*P			**Pn**	**22 19 59.3**	**-0.8**
NDT	baz=248			*e*S			**Sn**	**22 20 13.7**	**-0.2**
LATG	baz=248 **Datong**	**0.68**	**249**	⇑P			**Pn**	**22 20 00.6**	**+0.3**
LATG	baz=242			*e*S			**Sn**	**22 20 15.7**	**+1.4**
YM01	baz=242 **YM01**	**0.70**	**302**	⇑*i*P			**Pn**	**22 19 59.6**	**-0.8**
YM01	baz=299			*e*S			**Sn**	**22 20 15.4**	**+1.0**
YM08	baz=299 **YM08**	**0.70**	**306**	*e*P			**Pn**	**22 19 59.6**	**-0.9**
YM08	baz=303			*e*S			**Sn**	**22 20 15.8**	**+1.3**
JYNG	baz=303 **Yonaqunijimaku**	**0.73**	**116**	P			**Pn**	**22 20 00.6**	**-0.1**
JYNG				*e*S			**Sn**	**22 20 15.4**	**+0.5**
TWY	**Chenhua**	**0.75**	**311**	*e*P			**Pn**	**22 20 00.2**	**-0.6**
TWY	baz=310			*e*S			**Sn**	**22 20 16.3**	**+1.1**
ANP	baz=310 **Anpu**	**0.76**	**303**	*e*P			**Pn**	**22 20 00.1**	**-0.8**
ANP	baz=300			*e*S			**Sn**	**22 20 17.2**	**+1.7**
YHNB	baz=300 **Yeheng**	**0.78**	**262**	⇑*e*P			**Pn**	**22 20 00.8**	**-0.3**
YHNB	baz=256			*e*S			**Sn**	**22 20 15.3**	**-0.4**
YOJ	**Yonaguni jima**	**0.79**	**113**	*i*P			**Pn**	**22 20 00.9**	**-0.1**
YOJ	baz=116			*e*S			**Sn**	**22 20 16.2**	**+0.5**
YOJ	baz=116 **Yonaguni jima**	**0.79**	**113**	P			**Pn**	**22 20 00.8**	**-0.3**
YOJ				S			**Sn**	**22 20 16.2**	**+0.5**
NSK	**Sanguang**	**0.79**	**263**	⇑P			**Pn**	**22 19 59.9**	**-1.3**
NSK	baz=257			*e*S			**Sn**	**22 20 14.6**	**-1.4**
TWS1	baz=257 **Kuangyinshan**	**0.80**	**294**	*e*P			**Pn**	**22 20 00.6**	**-0.6**
TWS1	baz=291			*e*S			**Sn**	**22 20 17.1**	**+1.3**
NTST	baz=291 **Danshui**	**0.80**	**299**	*e*P			**Pn**	**22 20 00.5**	**-0.7**
ETL	baz=296 **Fush Village**	**0.82**	**222**	*e*P			**Pn**	**22 20 01.4**	**-0.1**
ETL	baz=216			*e*S			**Sn**	**22 20 17.1**	**+0.7**
NACB	baz=216 **Ninganchiao**	**0.83**	**224**	*e*P			**Pn**	**22 20 01.2**	**-0.3**
NACB	baz=218			*e*S			**Sn**	**22 20 16.6**	**+0.2**
NNSB	baz=218 **Datong**	**0.84**	**246**	*e*P			**Pn**	**22 20 02.0**	**+0.2**
NNSB	baz=240			*e*S			**Sn**	**22 20 17.5**	**+0.7**
NNSH	baz=240 **Datong**	**0.84**	**246**	*e*P			**Pn**	**22 20 01.9**	**+0.2**
NNSH	baz=240			*e*S			**Sn**	**22 20 17.4**	**+0.6**
NNS	**Nan Shan**	**0.84**	**247**	*e*P			**Pn**	**22 20 01.1**	**-0.7**
NNS	baz=240			*e*S			**Sn**	**22 20 16.4**	**-0.5**
PCYT	baz=240 **Pengchaiyu**	**0.86**	**351**	*e*P			**Pn**	**22 20 01.3**	**-0.5**
NTY	baz=354 **Taoyuan**	**0.87**	**285**	*e*P			**Pn**	**22 20 01.7**	**-0.2**
ETLH	baz=281 **Xiulin Townshi**	**0.88**	**230**	⇑*e*P			**Pn**	**22 20 01.9**	**-0.2**
ETLH	baz=224			*e*S			**Sn**	**22 20 17.5**	**0.0**
TWD	baz=224 **Chiawan**	**0.90**	**219**	*e*P			**Pn**	**22 20 02.1**	**0.0**
TWD	baz=214			*e*S			**Sn**	**22 20 17.8**	**+0.2**
NCU	baz=214 **National Centr**	**0.96**	**282**	P			**Pn**	**22 20 02.6**	**-0.1**
NCU	baz=278			*e*S			**Sn**	**22 20 19.2**	**+0.6**
NCUH	baz=278 **Zhongli**	**0.96**	**282**	*e*P			**Pn**	**22 20 02.5**	**-0.3**
NCUH	baz=278			*e*S			**Sn**	**22 20 19.2**	**+0.6**
HWA	baz=278 **Hwalien**	**0.97**	**215**	*e*P			**Pn**	**22 20 03.4**	**+0.5**
NFF	baz=210 **Wufeng Townshi**	**1.01**	**262**	⇑*e*P			**Pn**	**22 20 01.9**	**-1.5**
NFF	baz=257			*e*S			**Sn**	**22 20 18.1**	**-1.6**
FUSS	baz=257 **Fushou**	**1.03**	**240**	⇑*e*P			**Pn**	**22 20 04.2**	**+0.4**
FUSS	baz=235			*e*S			**Sn**	**22 20 20.8**	**+0.4**
ETM	baz=235 **Tongmen**	**1.05**	**220**	*e*P			**Pn**	**22 20 03.2**	**-0.4**
ETM	baz=215			*e*S			**Sn**	**22 20 20.0**	**-0.2**
TEYL	baz=215 **Yanliau Villag**	**1.07**	**212**	*e*P			**Pn**	**22 20 03.9**	**0.0**
TEYL	baz=209			*e*S			**Sn**	**22 20 21.5**	**+0.9**
WHF	baz=209 **Hehuan Shan**	**1.07**	**234**	*e*P			**Pn**	**22 20 04.6**	**+0.2**
WHF	baz=229			*e*S			**Sn**	**22 20 21.1**	**-0.4**
TWT	baz=229 **Tachien**	**1.09**	**241**	*e*P			**Pn**	**22 20 05.1**	**+0.8**
TWT	baz=237			*e*S			**Sn**	**22 20 22.0**	**+0.7**
NHW	baz=237 **Xinwu Township**	**1.09**	**282**	*e*P			**Pn**	**22 20 03.9**	**-0.2**
NHW	baz=279			*e*S			**Sn**	**22 20 21.5**	**+0.5**
HSN1	baz=279 **Hsinchu**	**1.09**	**270**	*e*P			**Pn**	**22 20 03.5**	**-0.6**
HSN1	baz=266			*e*S			**Sn**	**22 20 21.1**	**+0.1**
TDCB	baz=266 **Techi**	**1.10**	**242**	⇑*e*P			**Pn**	**22 20 04.9**	**+0.5**
TDCB	baz=237			*e*S			**Sn**	**22 20 22.0**	**+0.6**
	baz=237								

LIOB	**Emei**	**1.10**	**263**	⇑P	**Pn**	**22 20 04.0**	**-0.3**
	baz=259						
LIOB				*e*S	**Sn**	**22 20 20.9**	**-0.4**
	baz=259						
NSTT	**Nanjuang**	**1.12**	**263**	⇑*e*P	**Pn**	**22 20 04.0**	**-0.4**
	baz=258						
NSTT				*e*S	**Sn**	**22 20 20.9**	**-0.7**
	baz=258						
SBCB	**Hsinchu**	**1.12**	**271**	*e*P	**Pn**	**22 20 04.2**	**-0.2**
	baz=267						
SBCB				*e*S	**Sn**	**22 20 22.0**	**+0.3**
	baz=267						
HSN	**Hsinchu**	**1.14**	**271**	*e*P	**Pn**	**22 20 04.1**	**-0.5**
	baz=269						
HSN				*e*S	**Sn**	**22 20 21.5**	**-0.4**
	baz=269						
CHGB	**Renai**	**1.19**	**233**	*e*P	**Pn**	**22 20 05.9**	**+0.4**
	baz=229						
CHGB				*e*S	**Sn**	**22 20 23.8**	**+0.4**
	baz=229						
ESL	**Shilin**	**1.20**	**217**	*e*P	**Pn**	**22 20 04.4**	**-0.9**
	baz=213						
ESL				*e*S	**Sn**	**22 20 22.0**	**-1.1**
	baz=213						
TEGC	**Jichi Village**	**1.23**	**210**	*e*P	**Pn**	**22 20 05.3**	**-0.3**
	baz=207						
TEGC				*e*S	**Sn**	**22 20 24.9**	**+1.2**
	baz=207						
OWD	**Renai**	**1.26**	**230**	*e*P	**Pn**	**22 20 06.2**	**+0.1**
	baz=225						
OWD				*e*S	**Sn**	**22 20 24.6**	**+0.1**
	baz=225						
WHP	**Taichung City**	**1.26**	**247**	*e*P	**Pn**	**22 20 06.5**	**+0.4**
	baz=243						
WHP				*e*S	**Sn**	**22 20 25.0**	**+0.4**
	baz=243						
WUSB	**Renai**	**1.27**	**232**	*e*P	**Pn**	**22 20 06.8**	**+0.6**
	baz=228						
WUSB				*e*S	**Sn**	**22 20 26.0**	**+1.2**
	baz=228						
EGFH	**Guangfu**	**1.32**	**213**	*e*P	**Pn**	**22 20 06.2**	**-0.5**
	baz=210						
EGFH				*e*S	**Sn**	**22 20 24.9**	**-0.7**
	baz=210						
NMLH	**Miaoli**	**1.32**	**260**	*e*P	**Pn**	**22 20 06.4**	**-0.3**
	baz=256						
NMLH				*e*S	**Sn**	**22 20 25.0**	**-0.6**
	baz=256						
NSY	**Sanyi**	**1.38**	**255**	*e*P	**Pn**	**22 20 07.4**	**0.0**
	baz=251						
NSY				*e*S	**Sn**	**22 20 27.1**	**+0.4**
	baz=251						
WPL	**Puli Township**	**1.38**	**237**	*e*P	**Pn**	**22 20 08.1**	**+0.7**
	baz=233						
TWQ1	**Liyutan**	**1.39**	**252**	*e*P	**Pn**	**22 20 07.3**	**-0.2**
	baz=249						
TWQ1				*e*S	**Sn**	**22 20 26.7**	**-0.2**
	baz=249						
WCS	**Beigang Elemen**	**1.39**	**239**	*e*P	**Pn**	**22 20 06.7**	**-0.8**
	baz=235						
WCS				*e*S	**Sn**	**22 20 26.8**	**-0.2**
	baz=235						
VWDT	**VWDT**	**1.42**	**224**	*e*P	**Pn**	**22 20 08.3**	**+0.5**
	baz=221						
VWDT				*e*S	**Sn**	**22 20 27.7**	**+0.2**
	baz=221						
IRIF	**Iriomote-Funau**	**1.44**	**107**	P	**Pn**	**22 20 07.3**	**-0.7**
IRIF				S	**Sn**	**22 20 27.8**	**-0.2**
SMLT	**Sun Moon Lake**	**1.50**	**234**	*e*P	**Pn**	**22 20 09.5**	**+0.7**
	baz=230						
SMLT				*e*S	**Sn**	**22 20 30.9**	**+1.5**
	baz=230						
EHY	**Hungye**	**1.51**	**213**	*e*P	**Pn**	**22 20 08.5**	**-0.4**
	baz=210						
EHY				*e*S	**Sn**	**22 20 28.4**	**-1.1**
	baz=210						
TYC	**Yuchr**	**1.52**	**235**	*e*P	**Pn**	**22 20 09.5**	**+0.5**
	baz=232						
TYC				*e*S	**Sn**	**22 20 30.6**	**+1.0**
	baz=232						
SSLB	**Suanglung**	**1.52**	**230**	*e*P	**Pn**	**22 20 09.7**	**+0.6**
	baz=226						
SSLB				*e*S	**Sn**	**22 20 30.9**	**+1.2**
	baz=226						
WWF	**Wufeng**	**1.57**	**243**	*e*P	**Pn**	**22 20 09.1**	**-0.5**
	baz=239						
HATJ	**Hateruma jima**	**1.61**	**116**	P	**Pn**	**22 20 10.0**	**-0.1**
HATJ				S	**Sn**	**22 20 32.6**	**+1.0**
YULB	**Yu-li**	**1.62**	**212**	*e*P	**Pn**	**22 20 09.1**	**-1.1**
	baz=209						
YULB				*e*S	**Sn**	**22 20 30.7**	**-1.0**
	baz=209						
TWF1	**Yuli**	**1.65**	**211**	*e*P	**Pn**	**22 20 08.8**	**-1.8**
	baz=208						
JKRS	**Kuro-shima**	**1.71**	**108**	P	**Pn**	**22 20 11.1**	**-0.2**
JKRS				S	**Sn**	**22 20 34.5**	**+0.7**
JIJ	**Ishigaki jima**	**1.80**	**103**	P	**Pn**	**22 20 11.8**	**-0.5**
JIJ				S	**Sn**	**22 20 35.5**	**-0.2**
ALS	**Alishan**	**1.81**	**226**	*e*P	**Pn**	**22 20 13.2**	**+0.5**
	baz=223						
ALS				*e*S	**Sn**	**22 20 38.6**	**+2.2**
	baz=223						
ELDTW	**Lidau**	**1.93**	**215**	*e*P	**Pn**	**22 20 14.4**	**+0.3**
	baz=212						
CHN4	**Tsaushan**	**2.06**	**227**	*e*P	**Pn**	**22 20 14.9**	**-0.7**
	baz=224						
TWK	**Hsinying**	**2.19**	**227**	*e*P	**Pn**	**22 20 17.0**	**-0.3**
	baz=224						
LDUT	**Ludao**	**2.21**	**198**	*e*P	**Pn**	**22 20 16.6**	**-0.9**
	baz=196						
CHN1	**Nanshi**	**2.22**	**225**	*e*P	**Pn**	**22 20 17.6**	**-0.1**
	baz=222						
CHN1				*e*S	**Sn**	**22 20 45.6**	**+0.4**
	baz=222						
JTJ	**Tarama**	**2.26**	**93**	P	**Pn**	**22 20 18.1**	**-0.1**
JTJ				S	**Sn**	**22 20 46.4**	**+0.4**

*IDC **04** 22:27:34.0±0.8,55.°68S×26.°55W,h0km,mb4.1/6, mbtmp4.1/6,MS3.1/5,Error ellipse: s-maj=29.8km s-min=22.6km az=70.0*
*NEIC **04** 22:27:36.2±1.0,55.°76S±0.°03×26.°8W±0.°2,h10km±1km, mb4.6/34,Error ellipse: s-maj=18.4km s-min=4.2km az=85.0*

ISC 04 22:27:35.6±0.7,55.°75S±0.°09×26.°8W±0.°1,h10km,n49, σ1§04/43,mb4.6/19,MS2.9/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.78**	**281**	Pn	**Pn**	**22 29 01.6**	**+0.3**
ORCD	**Orcadas**	**10.69**	**235**	Pn	**Pn**	**22 30 08.4**	**-0.1**
EFI	**East Falkland**	**18.87**	**269**	P	**P**	**22 31 55.6**	**-0.1**
EFI				IAmb	IAmb	22 32 20.7	
	comp=Z,57nm,1.4s						
SNAA	**Sanae**	**18.92**	**157**	P	**P**	**22 31 56.2**	**0.0**
PMSA	**Palmer Station**	**20.27**	**229**	P	Pn	22 32 13.8	+1.0
	comp=Z,4.3nm,0.5s,baz=30,slow=7.2,SNR=9.5						
PMSA				LR	LR	22 39 09.3	
	comp=Z,46nm,18.1s,baz=58,slow=34						
	comp=Z,4.3nm,0.5s						
PMSA	**Palmer Station**	**20.27**	**229**		Pn	22 32 13.2	+0.4
SMAI	**San Martin Ant**	**22.14**	**220**	P	**P**	**22 32 35.1**	**+4.0**
BELA	**Belgrano 2**	**22.39**	**184**	P	**P**	**22 32 31.6**	**-2.1**
PLCA	**Paso Flores**	**32.18**	**279**	LR	LR	22 46 29.7	
	comp=Z,9.8nm,20.2s,baz=159,slow=35						
ITAB	**Concordia**	**33.87**	**317**	P	**P**	**22 34 18.4**	**+0.2**
QSPA	**South Pole Qui**	**34.50**	**180**	P	**P**	**22 34 23.1**	**-0.5**
CPUP	**Villa Florida**	**36.79**	**310**	P	**P**	**22 34 43.2**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=160,slow=15,SNR=3.0						
	comp=Z,1.0nm,0.3s						
MT09	**Talagante**	**37.44**	**287**	P	**P**	**22 34 46.9**	**-2.1**
MT09				IAmb	IAmb	22 34 50.1	
	comp=Z,22nm,1.4s						
MT02	**Curacav**	**37.92**	**288**	P	**P**	**22 34 51.4**	**-1.5**
CO02	**Combarbal**	**39.43**	**290**	P	**P**	**22 35 04.8**	**-1.0**
CO02				IAmb	IAmb	22 35 17.6	
	comp=Z,28nm,1.2s						
CO01	**Juntas del Tor**	**39.92**	**292**	P	**P**	**22 35 10.2**	**+0.2**
MAW	**Mawson**	**40.25**	**144**	P	**P**	**22 35 11.9**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=236,slow=7.3,SNR=1.8						
	comp=Z,0.8nm,0.6s						
MAW	**Mawson**	**40.25**	**144**	P	**P**	**22 35 12.2**	**+0.3**
SUR	**Sutherland**	**40.34**	**75**	LR	LR	22 48 21.1	
	comp=Z,44nm,20.5s,baz=154,slow=31						
LCO	**Las Campanas**	**41.01**	**292**	P	**P**	**22 35 18.2**	**-0.8**
LCO				IAmb	IAmb	22 35 51.4	
	comp=Z,25nm,1.4s						
AC04	**Llanos de Chal**	**41.85**	**292**	P	**P**	**22 35 25.3**	**-0.3**
AC02	**Maricunga**	**41.96**	**296**		**P**	**22 35 27.6**	**+0.5**
AC02				IAmb	IAmb	22 35 28.7	
	comp=Z,6.3nm,0.9s						
AC01	**Pan de Azucar**	**43.27**	**295**	P	**P**	**22 35 36.6**	**-0.6**
AC01				IAmb	IAmb	22 35 59.3	
	comp=Z,24nm,1.3s						
GO02	**Mina Guanaco**	**43.57**	**297**	P	**P**	**22 35 40.2**	**+0.2**
GO02				IAmb	IAmb	22 35 40.6	
	comp=Z,8.3nm,0.6s						
LVC	**Limon Verde**	**45.36**	**299**	P	**P**	**22 35 54.2**	**-0.1**
LVC				IAmb	IAmb	22 35 56.7	
	comp=Z,5.5nm,0.7s						
PB04	**IPOC Station P**	**46.20**	**298**	P	**P**	**22 36 00.8**	**0.0**
PB09	**IPOC Station P**	**46.21**	**300**	P	**P**	**22 36 01.3**	**+0.5**
PB09				IAmb	IAmb	22 36 02.5	
	comp=Z,14nm,1.3s						
PB07	**IPOC Station P**	**46.58**	**299**	P	**P**	**22 36 04.0**	**+0.2**
VNDA	**Vanda**	**46.88**	**183**	P	**P**	**22 36 05.0**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=191,slow=6.8,SNR=18						
	comp=Z,1.7nm,0.5s						
VNDA	**Vanda**	**46.88**	**183**	P	**P**	**22 36 05.8**	**+0.5**
VNDA				IAmb	IAmb	22 36 06.7	
	comp=Z,6.4nm,1.4s						
PB02	**IPOC Station P**	**46.93**	**299**	P	**P**	**22 36 06.3**	**-0.2**
PB01	**IPOC Station P**	**46.96**	**300**	P	**P**	**22 36 06.8**	**+0.1**
PB01				IAmb	IAmb	22 36 07.6	
	comp=Z,5.6nm,0.6s						
PTLB	**Pontes e Lacer**	**47.25**	**315**	P	**P**	**22 36 08.3**	**-0.5**
PTLB				IAmb	IAmb	22 36 09.5	
	comp=Z,4.7nm,1.0s						
SIV	**San Ignacio**	**47.54**	**313**	LR	LR	22 57 44.6	
	comp=Z,13nm,18.9s,baz=116,slow=38						
GO01	**Chusmiza**	**47.99**	**301**	P	**P**	**22 36 15.2**	**+0.1**
GO01				IAmb	IAmb	22 36 48.1	
	comp=Z,11nm,1.2s						
PB16	**IPOC Station P**	**49.28**	**302**	P	**P**	**22 36 25.4**	**+0.2**
LPAZ	**La Paz**	**50.40**	**305**	P	**P**	**22 36 34.0**	**+0.2**
	comp=Z,3.6nm,0.5s,baz=122,slow=6.0,SNR=20						
	comp=Z,3.6nm,0.5s						
LPAZ	**La Paz**	**50.40**	**305**		**P**	**22 36 33.9**	**+0.2**
LPAZ				IAmb	IAmb	22 36 34.4	
	comp=Z,3.8nm,0.6s						
SAML	**Samuel**	**54.76**	**314**	P	**P**	**22 37 05.1**	**-0.2**
SAML				IAmb	IAmb	22 37 05.7	
	comp=Z,2.9nm,0.8s						
BOAV	**Boa Vista**	**64.19**	**322**	P	**P**	**22 38 09.5**	**-0.9**
BOAV				IAmb	IAmb	22 38 10.3	
	comp=Z,5.5nm,1.2s						
TOA0	**Torodi Ar. Sit**	**72.68**	**29**		**P**	**22 39 06.0**	**+2.6**
TOA0				IAmb	IAmb	22 39 20.6	
	comp=Z,7.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.68**	**29**	P	**P**	**22 39 03.2**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=196,slow=6.7,SNR=7.5						
	comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.68**	**29**	P	**P**	**22 39 05.2**	**+1.8**
BAUV	**El Baul**	**73.00**	**317**	P	**P**	**22 39 05.5**	**+0.1**
SDV	**Santo Domingo**	**73.97**	**315**	LR	LR	23 14 37.7	
	comp=Z,24nm,18.8s,baz=298,slow=38						
AUA1	**Aruba**	**77.01**	**317**	P	**P**	**22 39 28.7**	**+0.2**
AUA1				IAmb	IAmb	22 39 50.5	
	comp=Z,511nm,1.2s						
YKA	**Yellowknife Ar**	**136.11**	**318**	PKP	**PKPdf**	**22 46 55.8**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=111,slow=1.5,SNR=2.9						
ILAR	**Eielson Array**	**150.09**	**312**	PKPbc	**PKPbc**	**22 47 24.1**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=133,slow=1.3,SNR=14						
SONM	**Songino Array**	**150.47**	**86**	PKPbc	**PKPbc**	**22 47 26.0**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=222,slow=3.0,SNR=7.9						

*KRNET **04** 22:50:55.1±0.1,41.°39N×73.°17E,h9km,mb2.3*
*SOME **04** 22:50:58.4,41.°33N×73.°32E,h10km*
*NNC **04** 22:50:58.1±2.2,41.°32N×73.°20E,h0km,mb3.3,mpv3.0, Error ellipse: s-maj=18.2km s-min=7.7km az=173.0*
*ISU **04** 22:50:59,41.°43N×72.°78E,h30km*

ISC 04 22:50:54.4±1.3,41.°19N±0.°04×73.°39E±0.°03,h2km±12km, n25,σ1§24/42,14C-1D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANR	**Andizhan**	**0.90**	**241**	P	**Pn**	**22 51 17.1**	**+3.1**
ANR				S	**Sn**	**22 51 27.8**	**+0.2**
ARLS	**Aral**	**0.97**	**46**	⇑*i*P	**Pb**	**22 51 14.1**	**+0.1**
	baz=62						
ARLS				⇑*i*S	**Sb**	**22 51 28.1**	**+0.8**
	baz=62						
UCH	**Uchtor**	**1.33**	**39**	⇑*i*P	**Pg**	**22 51 20.1**	**+0.2**
	baz=50						
UCH				⇑*i*S	**Sb**	**22 51 38.5**	**+0.4**
	baz=50						
FRG	**Fergana**	**1.47**	**237**	P	**Pn**	**22 51 22.0**	**+0.1**
FRG				S	**Sg**	**22 51 40.8**	**-0.8**
EKS2	**Erkin-Say**	**1.50**	**11**	⇑*i*P	**Pn**	**22 51 21.0**	**-1.4**
	baz=19						
EKS2				⇑*i*S	**Sg**	**22 51 39.7**	**-2.7**
	baz=19						
MRKS	**Merke**	**1.56**	**356**	*e*P	**Pg**	**22 51 26.1**	**+1.8**
	1.5nm,0.1s						
MRKS				*e*S	**Sg**	**22 51 45.7**	**+1.3**
	11nm,0.4s						
MRKS	**Merke**	**1.56**	**356**	P	**Pg**	**22 51 26.0**	**+1.8**
	1.5nm,0.1s						
MRKS				S	**Sg**	**22 51 45.7**	**+1.3**
	11nm,0.4s						
CHDK	**Chadak**	**2.01**	**265**	S	**Sn**	**22 51 53.7**	**-1.4**
CHMS	**Chumysh**	**2.07**	**29**	⇑Sn	**Sg**	**22 52 01.2**	**+0.4**
	2.7nm,0.5s						
BTK	**Batken**	**2.26**	**241**	⇑*e*P	**Pb**	**22 51 35.3**	**-0.7**
	baz=34						
BTK				⇑*i*S	**Sb**	**22 52 05.0**	**+0.5**
	baz=34						
TKM2	**Tokmak 2**	**2.38**	**43**	⇑Pn	**Pg**	**22 51 39.7**	**-0.3**
	2.2nm,0.4s						
TKM2				⇑Sn	**Sg**	**22 52 11.7**	**+0.8**
	8.1nm,0.6s						
TKM2	**Tokmak 2**	**2.38**	**43**	⇑*i*P	**Pb**	**22 51 37.4**	**-0.7**
	baz=49						
TKM2				⇑*i*S	**Sb**	**22 52 08.4**	**+0.3**
	baz=49						
SGDS	**Sogindy**	**2.44**	**22**	*e*P	**Pb**	**22 51 40.0**	**+1.0**
	2.2nm,0.4s						
SGDS				*e*S	**Sb**	**22 52 10.1**	**+0.5**
	5.5nm,0.4s						
SGDS	**Sogindy**	**2.44**	**22**	Pg	**Pb**	**22 51 40.0**	**+1.0**
	2.2nm,0.4s						
SGDS				Lg	Lg	22 52 10.1	
	5.5nm,0.4s						
IUG	**Iuzhnay**	**2.69**	**292**	*e*P	**Pg**	**22 51 45.5**	**-0.4**
	42nm,0.3s						
IUG				*e*S	**Sg**	**22 52 19.3**	**-1.5**
	12nm,0.5s						
IUG	**Iuzhnay**	**2.69**	**292**	Pg	**Pg**	**22 51 45.5**	**-0.4**
	42nm,0.3s						
IUG				Lg	Lg	22 52 19.3	
	12nm,0.5s						
KK31	**Karatay Array**	**2.87**	**313**	⇑Pn	**Pn**	**22 51 40.8**	**-0.4**
	0.4nm,0.3s,baz=121,slow=17,SNR=7.6						
KK31				⇓Sn	**Sn**	**22 52 15.8**	**-0.5**
	2.9nm,0.5s,baz=127,slow=28,SNR=12						
MTBS	**Maitube**	**2.97**	**48**	*e*P	**Pg**	**22 51 52.7**	**+1.4**
	1.5nm,0.1s						
MTBS				*e*S	**Sg**	**22 52 31.4**	**+1.5**
	5.2nm,0.2s						
MTBS	**Maitube**	**2.97**	**48**	Pg	**Pg**	**22 51 52.7**	**+1.4**
	1.5nm,0.1s						
MTBS				Lg	Lg	22 52 31.4	
	5.2nm,0.2s						
KUU	**Kurty**	**3.47**	**38**	*e*P	**Pg**	**22 51 59.9**	**-0.9**
	1.2nm,0.3s						
KUU				*e*S	**Sg**	**22 52 43.5**	**-2.2**
	2.7nm,0.3s						
KUU	**Kurty**	**3.47**	**38**	Pg	**Pg**	**22 51 59.9**	**-0.9**
	1.2nm,0.3s						
KUU				Lg	Lg	22 52 43.5	
	2.7nm,0.3s						
KTBS	**Karatobe**	**3.50**	**43**	*e*P	**Pg**	**22 52 00.6**	**-0.9**
	0.5nm,0.4s						
KTBS				*e*S	**Sg**	**22 52 45.1**	**-1.7**
	6.8nm,0.5s						
KTBS	**Karatobe**	**3.50**	**43**	Pg	**Pg**	**22 52 00.6**	**-0.9**
	0.5nm,0.4s						
KTBS				Lg	Lg	22 52 45.1	
	6.8nm,0.5s						
CHKK	**Chushkaly**	**3.76**	**44**	*e*P	**Pg**	**22 52 06.2**	**-0.3**
	0.5nm,0.1s						
CHKK				*e*S	**Sg**	**22 52 54.4**	**-0.8**
	2.7nm,0.3s						
CHKK	**Chushkaly**	**3.76**	**44**	Pg	**Pg**	**22 52 06.2**	**-0.3**
	0.5nm,0.1s						
CHKK				Lg	Lg	22 52 54.3	
	2.7nm,0.3s						

NOU 04 23:08:20.0,15.°94S×167.°64E,h0km,MLv4.6/4,Vanuatu Islands,Vanuatu Islands

*SOME **04** 23:42:08.1,38.°60N×72.°87E,h10km*
*MOS **04** 23:42:12.1±1.3,38.°94N×72.°51E,h32km,mb4.9/53,Error ellipse: s-maj=4.4km s-min=3.1km az=105.0*
*NNC **04** 23:42:12.8±1.2,38.°93N×72.°27E,h0km,mb5.3,mpv5.0, Error ellipse: s-maj=10.3km s-min=6.7km az=169.0*
*BJI **04** 23:42:17.9±0.0,38.°95N×72.°99E,h30km,mb4.5/34, mB4.5/18,ML4.1/6,Ms4.1/22,Ms7 3.8/19*
*NEIC **04** 23:42:17.2±1.7,38.°88N±0.°05×72.°37E±0.°07,h38km±3km, mb4.7/153,Error ellipse: s-maj=8.8km s-min=7.2km az=126.0*
*IDC **04** 23:42:19.4±2.5,38.°91N×72.°54E,h73km±22km,mb4.1/29, mbtmp4.4/34,MS3.5/44,Error ellipse: s-maj=14.0km s-min=9.6km az=2.0*

ISC 04 23:42:15.3±0.2,38.°89N±0.°02×72.°42E±0.°02,h31km,n574, σ1§66/507,mb4.6/178,MS3.5/46,67C-17D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**1.65**	**274**	Pn	**Pn**	**23 42 41.8**	**-0.5**
BTK	**Batken**	**1.70**	**314**		**Pn**	**23 42 42.3**	**-0.7**
BTK	**Batken**	**1.70**	**314**	PN	**Pn**	**23 42 42.3**	**-0.7**
CHGR	**Chuyangaron**	**2.56**	**266**		**Pb**	**23 42 56.8**	**-3.9**
CHGR	**Chuyangaron**	**2.56**	**266**	PN	**Pb**	**23 42 56.8**	**-3.9**
KSH	**Kashi**	**2.83**	**76**	Pn	Pn	23 42 53.4	-5.1
KSH				Sn	**Sn**	**23 43 24.1**	**-7.5**
KSH				smax	smax		
	comp=N,2μm,0.8s						
KSH				smax	smax		
	comp=E,2μm,0.7s						
AML	**Almayashu**	**3.38**	**16**	P	Pb	23 43 08.8	-5.9
	SNR=285						
TAS	**Tashkent**	**3.41**	**316**	Pn	**Pn**	**23 43 08.4**	**+2.0**
TAS	**Tashkent**	**3.41**	**316**	PN	**Pn**	**23 43 08.4**	**+2.0**
UCH	**Uchtor**	**3.69**	**25**	P	Pb	23 43 13.5	-6.6
	SNR=31						
IUG	**Iuzhnay**	**3.73**	**331**	*e*PN	**Pn**	**23 43 13.5**	**+2.7**
IUG				*e*		23 43 20.5	
IUG	**Iuzhnay**	**3.73**	**331**	*e*P	Pb	23 43 25.9	+5.4
	17μm,0.7s						
IUG				*e*S	Sb	23 44 21.9	+17
	2μm,0.8s						
IUG	**Iuzhnay**	**3.73**	**331**	*e*Pn	**Pn**	**23 43 13.6**	**+2.7**
	baz=332						
IUG				*e*Pb	**Pb**	**23 43 17.1**	**-3.4**
	baz=332						
IUG				*e*Pg		23 43 20.6	
	baz=332						
IUG	**Iuzhnay**	**3.73**	**331**	Pg	**Pb**	**23 43 16.5**	**-4.0**
	9μm,0.9s						
IUG				Lg	Lg	23 44 00.4	
	1μm,0.7s						
MRKS	**Merke**	**3.90**	**9**	*e*P	Pb	23 43 28.6	+5.3
	80nm,0.3s						
MRKS				*e*S	Sb	23 44 26.5	+16
	219nm,0.5s						
MRKS	**Merke**	**3.90**	**9**	Pg	**Pb**	**23 43 23.5**	**+0.1**
	63nm,0.4s						
MRKS				Lg	Lg	23 44 13.0	
	372nm,0.8s						
EKS2	**Erkin-Say**	**3.90**	**15**	P	Pb	23 43 16.8	-6.7
	SNR=23						
AAK	**Ala-Archa**	**4.06**	**22**	P	Pb	23 43 18.4	-7.8
	128nm,0.5s,baz=202,slow=10,SNR=60						
AAK				S	**Sb**	**23 44 10.1**	**-4.7**
	365nm,1.0s,baz=58,slow=14,SNR=11						
AAK	**Ala-Archa**	**4.06**	**22**	P	Pb	23 43 19.1	-7.1
	SNR=97						
AAK	**Ala-Archa**	**4.06**	**22**	Pn	**Pn**	**23 43 16.9**	**+1.5**
AAK	**Ala-Archa**	**4.06**	**22**	*e*PN	Pn	23 43 18.0	+2.6
AAK				pmax	pmax		
	comp=Z,247nm,1.3s						
DZA	**Taraz**	**4.08**	**349**	*e*PN	**Pn**	**23 43 16.7**	**+1.1**
DZA	**Taraz**	**4.08**	**349**	*e*P	**Pb**	**23 43 27.1**	**+0.6**
	comp=Z,519nm,0.5s						
DZA				*e*S	Sb	23 44 23.9	+8.6
	comp=Z,1μm,1.0s						
DZA	**Taraz**	**4.08**	**349**	*e*Pn	**Pn**	**23 43 16.8**	**+1.1**
	baz=349						
DZA	**Taraz**	**4.08**	**349**	Pg	**Pb**	**23 43 21.8**	**-4.7**
	comp=Z,3μm,0.6s						
DZA				Lg	Lg	23 44 09.3	
	comp=Z,2μm,0.7s						
KBK	**Karagaybulak**	**4.22**	**26**	P	Pb	23 43 21.1	-7.9
	SNR=10						
ULHL	**Ulahol**	**4.43**	**40**	P	Pn	23 43 23.6	+2.9
	SNR=16						
KK31	**Karatay Array**	**4.45**	**342**	Pn	**Pn**	**23 43 22.9**	**+2.3**
KK31	**Karatay Array**	**4.45**	**342**	PN	**Pn**	**23 43 22.9**	**+2.3**
KK31	**Karatay Array**	**4.45**	**342**	⇓Pn	**Pn**	**23 43 22.9**	**+2.3**
	comp=Z,400nm,0.5s						
KK31				⇑Sn	**Sn**	**23 44 14.0**	**+2.7**
	comp=Z,1μm,1.1s						
KK31				⇓Lg	Lg	23 44 32.3	
	comp=Z,150nm,0.5s						
KKAR	**Karatay Array**	**4.45**	**342**		**Pn**	**23 43 22.9**	**+2.3**
KKAR	**Karatay Array**	**4.45**	**342**	Pn	**Pn**	**23 43 22.8**	**+2.1**
KKAR	**Karatay Array**	**4.45**	**342**	PN	**Pn**	**23 43 22.9**	**+2.3**
CHMS	**Chumysh**	**4.46**	**23**	P	Pn	23 43 24.2	+3.3
	SNR=139						
CHMS	**Chumysh**	**4.46**	**23**	*i* PN	**Pn**	**23 43 22.6**	**+1.7**
CHMS				pmax	pmax		
	comp=Z,183nm,0.6s						
CHMS	**Chumysh**	**4.46**	**23**	⇓Pn	**Pn**	**23 43 22.6**	**+1.7**
	comp=Z,183nm,0.7s						
CHMS				⇓Sn	Sb	23 44 17.5	-8.8
	comp=Z,190nm,0.8s						
USP	**Ospenovka**	**4.64**	**19**	P	Pn	23 43 26.7	+3.3
	SNR=20						
TKM2	**Tokmak 2**	**4.69**	**30**	P	Pn	23 43 27.1	+2.9
	SNR=99						
TKM2	**Tokmak 2**	**4.69**	**30**	*i* PN	Pn	23 43 26.5	+2.4
TKM2				pmax	pmax		
	comp=Z,128nm,0.6s						
TKM2	**Tokmak 2**	**4.69**	**30**	⇓Pn	Pn	23 43 26.6	+2.4
	comp=Z,66nm,0.7s						
TKM2				⇓Pg	Pb	23 43 40.0	+3.1
	comp=Z,128n

KRBS eS Sb 23 45 02.5 +10
comp=Z,64nm,0.5s
KRBS Karabastau 5.39 26 Pg **Pb 23 43 50.3 +1.5**
comp=Z,44nm,0.7s
KRBS Lg Lg 23 44 58.7
comp=Z,64nm,0.5s
AAA Alma-Ata 5.49 37 ePN **Pn 23 43 36.8 +1.8**
AAA e 23 43 53.7
AAA e 23 44 34.6
AAA Alma-Ata 5.49 37 ePn **Pn 23 43 36.9 +1.8**
baz=38
AAA ePg Pb 23 43 53.8 +3.3
baz=38
AAA eSn **Sn 23 44 34.7 -2.4**
baz=38
MDOK Medeo 5.52 38 ePN **Pn 23 43 35.8 +0.4**
MDOK e 23 43 54.1
MDOK Medeo 5.52 38 eP **Pb 23 43 49.7 -1.3**
comp=Z,87nm,1.1s
MDOK eS Sb 23 45 03.0 +6.3
comp=Z,144nm,1.1s
MDOK Medeo 5.52 38 ePn **Pn 23 43 35.8 +0.4**
baz=39
MDOK ePg Pb 23 43 54.1 +3.2
baz=39
MDOK eLg Lg 23 45 08.5
baz=39
MDOK Medeo 5.52 38 ⇓Pn **Pn 23 43 36.3 +0.8**
comp=Z,63nm,0.6s
MDOK ⇑Pg Pb 23 43 53.0 +2.0
comp=Z,189nm,1.2s
MDOK Pg 23 43 53.2
comp=Z,87nm,1.1s
MDOK Lg Lg 23 45 03.0
comp=Z,144nm,1.1s
MDOK ⇑Lg Lg 23 45 08.6
comp=Z,184nm,0.8s
KNDC Almaty 5.52 37 PN **Pn 23 43 36.7 +1.3**
KNDC Almaty 5.52 37 ⇓Pn **Pn 23 43 36.8 +1.3**
comp=Z,156nm,0.7s
KNDC ⇑Pg Pb 23 43 53.4 +2.5
comp=Z,226nm,0.6s
KNDC ⇑Lg Lg 23 45 10.7
comp=Z,864nm,0.9s
KTBS Karatobe 5.78 32 eP **Pb 23 43 56.4 +0.9**
comp=Z,38nm,0.3s
KTBS eS Sb 23 45 14.9 +11
comp=Z,73nm,0.5s
KTBS Karatobe 5.78 32 Pg Pb 23 43 59.7 +4.3
comp=Z,38nm,0.3s
KTBS Lg Lg 23 45 14.9
comp=Z,73nm,0.5s
KUU Kurty 5.80 29 ePN **Pn 23 43 40.8 +1.6**
KUU Kurty 5.80 29 eP **Pb 23 43 54.0 -1.6**
comp=Z,60nm,0.7s
KUU eS Sb 23 45 10.8 +6.2
comp=Z,107nm,1.0s
KUU Kurty 5.80 29 ePn **Pn 23 43 40.8 +1.6**
baz=30
KUU Kurty 5.80 29 Pg **Pb 23 43 57.7 +2.0**
comp=Z,60nm,0.7s
KUU Lg Lg 23 45 10.8
comp=Z,107nm,1.0s
CHKK Chushkaly 6.03 33 ePN **Pn 23 43 43.6 +1.2**
CHKK Chushkaly 6.03 33 eP **Pb 23 43 56.7 -2.9**
comp=Z,35nm,0.9s
CHKK eS **Sb 23 45 15.4 +4.1**
comp=Z,71nm,0.7s
CHKK Chushkaly 6.03 33 ePn **Pn 23 43 43.6 +1.2**
baz=34
CHKK eLg Lg 23 45 25.1
baz=34
CHKK Chushkaly 6.03 33 Pg Pb 23 44 02.4 +2.8
comp=Z,34nm,0.6s
CHKK Lg Lg 23 45 18.9
comp=Z,71nm,0.7s
THW Thamme Wali 6.11 185 P **Pn 23 43 44.3 +0.7**
SATY Saty 6.15 46 ePN **Pn 23 43 45.2 +1.1**
SATY e 23 44 05.2
SATY pmax pmax
comp=Z,5.0nm,0.6s
SATY Saty 6.15 46 ePn **Pn 23 43 45.2 +1.1**
comp=Z,5.0nm,0.6s,baz=46
SATY ePg Pb 23 44 05.3 +3.5
baz=46
BTLS Baital 6.26 11 ePN **Pn 23 43 45.8 +0.3**
BTLS e 23 44 07.2
BTLS pmax pmax
comp=Z,9.0nm,0.8s
BTLS Baital 6.26 11 ePn **Pn 23 43 45.9 +0.4**
comp=Z,8.9nm,0.8s,baz=11
BTLS ePg Pb 23 44 07.3 +3.7
baz=11
KURS Kuram 6.31 42 eP Pb 23 44 06.5 +2.0
comp=Z,78nm,0.8s
KURS eS Sb 23 45 31.9 +12
comp=Z,118nm,1.5s
KURS Kuram 6.31 42 Pg Pb 23 44 11.1 +6.6
comp=Z,65nm,0.8s
KURS Lg Lg 23 45 34.9
comp=Z,118nm,1.5s
JMU Jammu 6.48 161 eP **Pn 23 43 47.9 -0.8**
JMU eS **Sn 23 45 03.2 +1.7**
UZB Uzynbulak 6.55 47 ePN **Pn 23 43 51.6 +1.9**
UZB e 23 44 12.4
UZB Uzynbulak 6.55 47 ePn **Pn 23 43 51.6 +1.9**
baz=48
UZB ePg Pb 23 44 12.4 +3.8
baz=48
SHLS Shalkode 6.82 49 ePN Pn 23 43 56.5 +3.2
SHLS e 23 44 21.7
SHLS pmax pmax
comp=Z,10.0nm,0.9s
SHLS Shalkode 6.82 49 ePn Pn 23 43 56.5 +3.2
comp=Z,10nm,0.9s,baz=51
SHLS ePg Pb 23 44 21.8 +8.7
baz=51
SHLS eLg Lg 23 45 58.3
baz=51
PDGK Podgornoye 6.94 48 *i* PN **Pn 23 43 54.5 -0.4**
PDGK pmax pmax
comp=Z,105nm,0.8s
PDGK Podgornoye 6.94 48 ⇑Pn **Pn 23 43 54.5 -0.4**
comp=Z,23nm,0.6s
PDGK ⇑Pg Pb 23 44 18.1 +3.0
comp=Z,104nm,0.8s
PDGK ⇑Lg Lg 23 45 53.6
comp=Z,221nm,1.1s
THN Thein Dam 6.98 156 eP **Pn 23 43 54.2 -1.2**
TDK Taldyqorghan 7.56 34 eP **Pn 23 44 00.2 -3.1**
TDK Taldyqorghan 7.56 34 ePn **Pn 23 44 00.3 -3.1**
baz=35
TDK eLg Lg 23 46 11.0
baz=35
BHK Bhakra 8.14 155 eP **Pn 23 44 10.2 -1.3**
BHK eS **Sn 23 45 40.1 -2.3**
SMLA Simla 8.67 152 eP **Pn 23 44 15.6 -3.0**
SMLA eS **Sn 23 45 49.7 -5.5**
SMLA IAML 23 46 04.2
comp=N,110nm,1.2s
SMLA IAML 23 46 04.3
comp=E,118nm,0.4s
HRA Herat 9.33 244 Pn **Pn 23 44 28.9 +1.0**
OTUK Ortayu 9.35 360 *i* P **Pn 23 44 27.1 -0.8**
OTUK pmax pmax
comp=Z,21nm,0.6s
OTUK Ortayu 9.35 360 ⇑Pn **Pn 23 44 28.0 +0.2**
comp=Z,21nm,0.7s
OTUK ⇑Lg Lg 23 47 06.5
comp=Z,139nm,1.1s
MAKZ Makanchi 10.56 38 Pn Pn 23 44 47.7 +3.1
MAKZ Makanchi 10.56 38 P Pn 23 44 47.7 +3.1
MAKZ Makanchi 10.56 38 ⇓Pn Pn 23 44 46.7 +2.2
comp=Z,88nm,0.9s
MKAR Makanchi Array 10.71 39 P Pn 23 44 48.7 +2.2
comp=Z,20nm,0.8s,baz=219,slow=13,SNR=44
MKAR Makanchi Array 10.71 39 Pn **Pn 23 44 48.0 +1.5**
MKAR Makanchi Array 10.71 39 *i* P Pn 23 44 49.7 +3.2
MKAR pmax pmax
comp=Z,18nm,0.8s
MK05 Makanchi Array 10.71 39 ⇑Pn **Pn 23 44 47.8 +1.3**
comp=Z,27nm,0.9s
BRZS Berezniki 11.09 1 eP **Pn 23 44 49.9 -1.8**
BRZS pmax pmax
comp=Z,4.0nm,0.8s
BRZS Berezniki 11.09 1 ePn **Pn 23 44 49.9 -1.8**
comp=Z,3.9nm,0.8s,baz=1.1

GEYT Alibeck 11.27 270 P **Pn 23 44 52.3 -1.9**
comp=Z,13nm,0.4s,baz=94,slow=13,SNR=30
GEYT S **Sn 23 46 58.5 -0.5**
comp=Z,38nm,0.8s,baz=109,slow=22,SNR=5.3
GEYT LR LR 23 50 13.4
comp=Z,302nm,19.0s,baz=121,slow=42
GEYT Alibeck 11.27 270 Pn **Pn 23 44 52.1 -2.1**
GYA0 ALIBECK ARRAY 11.27 270 P **Pn 23 44 52.6 -1.6**
GYA0B ALIBECK ARRAY 11.27 270 **Pn 23 44 52.5 -1.8**
GYA0B ALIBECK ARRAY 11.27 270 ⇑Pn **Pn 23 44 52.6 -1.6**
GYA0B ⇓Sn **Sn 23 47 00.8 +1.8**
PTH Pithoragarh 11.33 143 eP Pn 23 44 50.4 -4.8
ZSN Zaisan 12.46 43 eP **Pn 23 45 09.9 -0.6**
ZSN pmax pmax
comp=Z,4.0nm,1.4s
ZSN Zaisan 12.46 43 ePn **Pn 23 45 10.0 -0.6**
comp=Z,4.4nm,1.4s,baz=43
ZSN eLg Lg 23 48 47.9
baz=43
ZSN eLg Lg 23 48 48.2
baz=43
WMQ Urumqi 12.48 62 eP **Pn 23 45 11.6 +0.8**
WMQ pP P 23 45 22.6 +0.3
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ LR LR
comp=Z,360nm,16.5s
WMQ LR LR
comp=Z,360nm,12.5s
KURBB Kurchatov Arra 12.50 18 P **Pn 23 45 10.6 -0.3**
comp=Z,2.9nm,0.6s,baz=207,slow=11,SNR=22
KURBB S **Sn 23 47 31.8 +2.9**
comp=Z,1.8nm,0.7s,baz=208,slow=30,SNR=2.2
KURBB LR LR 23 50 09.2
comp=Z,206nm,18.7s,baz=187,slow=38
KURBB Kurchatov Arra 12.50 18 P **Pn 23 45 09.9 -1.0**
KURBB Kurchatov Arra 12.50 18 ⇑Pn **Pn 23 45 09.9 -1.0**
comp=Z,9.7nm,0.7s
AJM Ajmer 12.52 171 eP **Pn 23 45 07.9 -3.5**
KURK Kurchatov 12.61 18 Pn **Pn 23 45 12.5 +0.1**
KURK Kurchatov 12.61 18 *i* P **Pn 23 45 12.0 -0.4**
SEM Semipalatinsk 12.78 23 eP **Pn 23 45 14.5 -0.4**
SEM pmax pmax
comp=Z,3.0nm,1.0s
SEM Semipalatinsk 12.78 23 ePn **Pn 23 45 14.6 -0.4**
comp=Z,3.4nm,1.0s,baz=24
AB31 Akbulak array 13.68 323 *i* P **Pn 23 45 24.9 -2.2**
AB31 pmax pmax
comp=Z,16nm,0.4s
AB31 Akbulak array 13.68 323 ⇓Pn **Pn 23 45 24.9 -2.2**
comp=Z,16nm,0.5s,baz=136,slow=12,SNR=611
AB31 ⇓Sn **Sn 23 47 59.3 +1.4**
comp=Z,13nm,0.6s,baz=136,slow=23,SNR=9.2
ABKAR Akbulak array 13.68 323 **Pn 23 45 25.0 -2.1**
ABKAR Akbulak array 13.68 323 **Pn 23 45 25.0 -2.1**
DANN Dangsing 14.12 135 eP Pn 23 45 25.6 -7.9
DANN eS Sn 23 47 55.4 -14
BVA0 Borovoye Array 14.20 355 P **Pn 23 45 33.2 -1.0**
BVA0 Borovoye Array 14.20 355 Pn **Pn 23 45 33.2 -1.0**
comp=Z,21nm,0.8s,baz=156,slow=12,SNR=61
BVAR Borovoye Array 14.20 355 LR LR 23 51 15.7
comp=Z,144nm,19.5s,baz=58,slow=38
BRVK Borovoye 14.24 355 Pn **Pn 23 45 34.6 -0.1**
BRVK Borovoye 14.24 355 *ce* P **Pn 23 45 34.2 -0.5**
BRVK pmax pmax
comp=Z,14nm,0.8s
JHNI Jhansi 14.35 157 eP Pn 23 45 30.6 -5.8
GKN Gorkha 14.88 133 eP Pn 23 45 34.7 -9.0
AKTO Aktyubinsk 15.40 323 P **Pn 23 45 50.5 +0.2**
comp=Z,11nm,0.7s,baz=129,slow=14,SNR=30
AKTO S **Sn 23 48 36.6 -3.1**
comp=Z,12nm,0.7s,baz=215,slow=19,SNR=4.1
AKTO LR LR 23 52 29.8
comp=Z,121nm,21.9s,baz=142,slow=40
AKTO Aktyubinsk 15.40 323 *i* P **Pn 23 45 49.1 -1.1**
AKTO pmax pmax
comp=Z,167nm,0.8s
AKTO Aktyubinsk 15.40 323 ⇓Pn **Pn 23 45 49.1 -1.1**
comp=Z,167nm,0.8s
AKTO ⇑Sn **Sn 23 48 40.5 +0.8**
comp=Z,40nm,1.0s
DMN Daman 15.45 133 eP Pn 23 45 42.5 -8.8
DMN eS Sn 23 48 25.9 -16
PKIN Phulchoki 15.64 132 eP Pn 23 45 44.9 -8.9
comp=Z,47nm,0.8s
PKI Pulchoki 15.65 132 eP Pn 23 45 45.0 -9.0
comp=Z,26nm,0.8s
JIRN Jiri 16.04 130 eP Pn 23 45 50.8 -8.2
comp=Z,27nm,0.5s
RAMN Ramite 16.81 131 eP Pn 23 46 00.4 -8.3
JBP Jabalpur 16.95 155 ⇓eP **Pn 23 46 06.8 -3.4**
JBP IAmb IAmb 23 46 15.9
comp=Z,16nm,0.6s
JBP eS **Sn 23 49 13.0 -4.6**
ZAA0 Zalesovo Array 17.27 25 P **Pn 23 46 14.2 -1.1**
ZAA0 IAmb IAmb 23 46 20.4
comp=Z,58nm,1.4s
ZALV Zalesovo Beam 17.27 25 P **P 23 46 14.2 -1.0**
comp=Z,15nm,0.6s,baz=216,slow=11,SNR=29
ZALV LR LR 23 53 10.1
comp=Z,100nm,19.7s,baz=226,slow=38
ZALV Zalesovo Beam 17.27 25 **P 23 46 13.5 -1.8**
GOMU GeErMu 17.95 92 P **P 23 46 21.6 -1.7**
GOMU pP pP 23 46 26.4 -6.5
GOMU sP sP 23 46 29.4 -8.1
GOMU pmax pmax
comp=Z,4.0nm,0.6s
GOMU pmax pmax
comp=Z,37nm,4.5s
LSA Lhasa 17.96 115 P **P 23 46 24.3 +0.8**
LSA Lhasa 17.96 115 P **P 23 46 23.3 -0.2**
LSA pmax pmax
comp=Z,8.0nm,1.0s
LSA Lhasa 17.96 115 P **P 23 46 24.3 +0.8**
LSA pmax pmax
comp=Z,17nm,0.8s
MAK Makhachkala 19.24 290 eP **P 23 46 34.3 -2.6**
MAK eS **Sn 23 50 08.6 -4.1**
MAK pmax pmax
comp=Z,79nm,1.1s
MAK MLR MLR
comp=Z,217nm,17.0s
UOSS Minazif 19.52 229 P **P 23 46 38.7 -1.5**
WSAR Wadi Sarin 19.53 221 P **Pn 23 46 41.1 -0.7**
comp=Z,9.4nm,0.7s,baz=57,slow=12,SNR=11
SVE Sverdlovsk 19.56 340 eP **Pn 23 46 39.4 -2.3**
SVE eS **S 23 50 14.1 -5.1**
SVE pmax pmax
comp=Z,26nm,1.0s
SVE MLR MLR
comp=Z,196nm,10.0s
ARU Arti 19.80 337 P **Pn 23 46 42.5 -2.2**
comp=Z,14nm,0.5s,baz=155,slow=8.0,SNR=22
ARU LR LR 23 55 42.7
comp=Z,27nm,20.6s,baz=137,slow=40
ARU Arti 19.80 337 P **Pn 23 46 42.8 -1.9**
ARU IAmb IAmb 23 46 51.3
comp=Z,59nm,1.3s
ARU Arti 19.80 337 *c* *i* P **Pn 23 46 43.1 -1.6**
ARU S **Sn 23 50 24.8 -1.4**
ARU pmax pmax
comp=Z,13nm,0.6s
GROC Groznyy 20.50 291 eP Pn 23 46 52.0 -1.0
GROC *e**PP pP 23 47 00.8 +0.6
GROC *e* 23 47 10.2
GROC eS Sn 23 50 42.7 -0.4
GROC pmax pmax
comp=Z,65nm,1.0s
GTA Gaotai 21.22 80 ⇓P **P 23 46 58.4 -0.3**
GTA pP sP 23 47 09.1 -3.7
GTA sP pP 23 47 13.3 +5.0
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,87nm,4.8s
GTA LR LR
comp=Z,240nm,14.5s
GTA LR LR
comp=Z,200nm,16.4s
GTA LR LR
comp=Z,220nm,14.2s
GNI Garni 21.36 282 P **P 23 47 02.7 +2.5**
comp=Z,28nm,0.9s,baz=59,slow=10,SNR=6.8
GNI LR LR 23 56 53.6
comp=Z,123nm,19.0s,baz=102,slow=41
comp=Z,28nm,0.9s
GNI Garni 21.36 282 P **P 23 47 01.7 +1.5**
GNI Garni 21.36 282 *i* P **P 23 47 05.3 +5.1**
BELG Belogornoye 21.83 316 P **P 23 47 06.3 +1.4**
comp=Z,79nm,0.8s,baz=117,slow=3.0,SNR=14
BELG LR LR 23 56 06.4
comp=Z,98nm,19.3s,baz=126,slow=38
comp=Z,79nm,0.8s
BELG Belogornoye 21.83 316 *i* P **P 23 47 02.9 -2.0**
BELG pmax pmax
comp=Z,15nm,0.9s
ZEI Tsey 21.88 289 eP **P 23 47 08.7 +3.0**
ZEI pmax pmax
comp=Z,15nm,0.8s
HYBB Hyderabad (bro 22.06 164 eP **P 23 47 07.4 -0.3**
HYBB eS **S 23 51 11.6 +2.3**
HYB Hyderabad 22.06 164 eP **P 23 47 07.0 -0.6**
NCK Nalchik 22.12 291 *i* P **P 23 47 08.4 +0.3**
ONI Oni 22.21 289 P **P 23 47 10.2 +1.1**
ONI Oni 22.21 289 P **P 23 47 10.3 +1.1**
ONI pmax pmax
comp=Z,90nm,1.0s
KARS Kars 22.58 284 P **P 23 47 15.3 +2.1**
KARS Kars 22.58 284 P **P 23 47 15.3 +2.1**
KARS pmax pmax
comp=Z,167nm,1.1s
GOF Gofitskoye 22.62 295 ⇑eP **P 23 47 15.1 +1.7**
GOF pmax pmax
comp=Z,65nm,0.9s
KBZ Khabaz 22.63 292 P **P 23 47 15.3 +1.8**
comp=Z,9.0nm,0.8s,baz=121,slow=8.2,SNR=20
KBZ LR LR 23 58 10.0
comp=Z,155nm,18.1s,baz=87,slow=42
comp=Z,9.0nm,0.8s
KBZ Khabaz 22.63 292 *i* P **P 23 47 12.4 -1.2**
KBZ pmax pmax
comp=Z,11nm,0.8s
KVAR Kislovodsk Arr 22.79 292 P **P 23 47 16.8 +1.4**
comp=Z,3.1nm,0.7s,baz=81,slow=13,SNR=3.8
comp=Z,3.1nm,0.7s
KIV Kislovodsk 22.80 292 ⇑P **P 23 47 17.4 +2.0**
KIV Kislovodsk 22.80 292 P **P 23 47 15.7 +0.3**
KIV IAmb IAmb 23 47 39.8
comp=Z,23nm,0.7s
KIV Kislovodsk 22.80 292 eP **P 23 47 15.2 -0.2**
KIV eS **S 23 51 22.2 -0.3**
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,73nm,14.0s
GEVA Gevas 22.91 278 P **P 23 47 18.6 +1.8**
GEVA IAmb IAmb 23 47 54.2
comp=Z,15nm,0.9s
BCA Borcka 23.61 286 ⇑P **P 23 47 27.6 +4.0**
MOY Mondy 23.64 48 eP **P 23 47 25.6 +1.8**
MOY pmax pmax
comp=Z,20nm,1.4s
GURO Guroymak-BITLI 23.66 279 P **P 23 47 25.1 +0.9**
ZAK Zakamensk 24.60 52 eP **P 23 47 32.3 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.0s
KOPT Kop Dagi 24.61 283 P **P 23 47 33.9 +0.8**
KOPT IAmb IAmb 23 48 13.1
comp=Z,16nm,1.1s
KIRV Kirov 24.64 331 P **P 23 47 32.6 -0.2**
comp=Z,65nm,0.6s,baz=125,slow=8.3,SNR=16
KIRV Kirov 24.64 331 *ce* P **P 23 47 32.5 -0.3**
VRH Novokhopyorsk 24.74 310 eP **P 23 47 33.9 +0.1**
VRH pmax pmax
comp=Z,10.0nm,0.7s
MARD Mardin 24.89 276 P **P 23 47 36.4 +0.9**
MARD IAmb IAmb 23 47 51.3
comp=Z,16nm,1.0s
SOC Sochi 24.94 291 eP **P 23 47 35.6 -0.1**
SOC e 23 48 07.4
SOC eS **S 23 51 58.4 +1.3**
SOC eSSS SSS 23 53 05.8
SOC pmax pmax
comp=Z,15nm,0.8s
SOC MLR MLR
comp=Z,95nm,19.0s
LZH Lanzhou 25.03 87 eP P 23 47 24.4 -12
LZH pP pP 23 47 38.7 -8.5
LZH sP sP 23 47 45.7 -5.9
LZH eS **S 23 52 02.7 +3.7**
LZH sS sS 23 52 12.4 -3.8
LZH pmax pmax
comp=Z,20nm,1.4s
LZH LR LR
comp=N,210nm,14.5s
LZH LR LR
comp=E,250nm,15.4s
LZH LR LR
comp=Z,310nm,18.6s
SONM Songino Array 26.09 59 P **P 23 47 45.5 -0.7**
comp=Z,3.5nm,0.9s,baz=262,slow=10,SNR=15
SONM LR LR 23 59 08.7
comp=Z,274nm,20.5s,baz=258,slow=39
comp=Z,3.5nm,0.9s
SONM Songino Array 26.09 59 P **P 23 47 47.8 +1.5**
SONM Songino Array 26.09 59 P **P 23 47 47.8 +1.5**
SONM pmax pmax
comp=Z,7.0nm,1.2s
VORR Voronezh 26.38 310 eP **P 23 47 49.9 +1.2**
VORR pmax pmax
comp=Z,16nm,1.9s
ULN Ulaanbaatar 26.53 59 eP **P 23 47 51.1 +0.7**
ULN Ulaanbaatar 26.53 59 *ce* P **P 23 47 51.0 +0.7**
ULN pmax pmax
comp=Z,6.0nm,0.8s
ANN Anapa 26.58 294 eP **P 23 47 53.0 +2.5**
ANN eS **S 23 52 20.5 -2.6**
ANN pmax pmax
comp=Z,45nm,0.9s
ANN MLR MLR
comp=Z,148nm,19.0s
LPSR Galich'ya Gora 26.81 312 eP **P 23 47 53.6 +1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
PZH PanZhiHua 27.47 108 P **P 23 48 02.5 +3.6**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,90nm,3.8s
RAYN Ar Rayn 27.52 244 P **P 23 47 59.7 +0.4**
RAYN IAmb IAmb 23 48 03.8
comp=Z,11nm,0.8s
RAYN Ar Rayn 27.52 244 P **P 23 47 59.7 +0.4**
RAYN pmax pmax
comp=Z,11nm,0.9s
TOKA Tokat 27.61 284 P **P 23 48 01.1 +1.1**
PRGR Permogore 28.11 333 eP **P 23 48 03.3 -0.7**
PRGR pmax pmax
comp=Z,42nm,0.8s
BNN Bunyan 28.36 282 P **P 23 48 08.1 +1.4**
BNN IAmb IAmb 23 48 36.2
comp=Z,9.7nm,0.9s
MOS Moscow 28.58 318 eP **P 23 48 08.2 -0.1**
MOS eS **S 23 52 56.5 +2.1**
BTO Baotou 28.82 75 eP **P 23 48 11.9 +1.1**
BTO S **S 23 52 58.7 0.0**
BTO LR LR
comp=Z,700nm,15.2s
BTO LR LR
comp=Z,630nm,12.3s
OBN Obninsk 28.93 316 P **P 23 48 11.6 +0.2**
comp=Z,6.0nm,0.5s,baz=131,slow=9.3,SNR=4.4
OBN LR LR 00 01 01.2
comp=Z,20nm,18.1s,baz=155,slow=39
comp=Z,6.0nm,0.5s
OBN Obninsk 28.93 316 P **P 23 48 12.1 +0.7**
OBN Obninsk 28.93 316 *i* P **P 23 48 11.4 0.0**
OBN *e* 23 48 18.5
OBN *i* 23 49 04.2
OBN *i* S **S 23 53 02.1 +2.3**
OBN pmax pmax
comp=Z,31nm,0.7s
OBN MLR MLR
comp=Z,57nm,17.0s
SIM Simferopol' 28.94 295 eP **P 23 48 11.6 -0.1**
SIM *e* 23 49 07.6
SIM eS **S 23 52 54.9 -5.4**
SIM pmax pmax
comp=Z,38nm,1.2s
SIM pmax pmax

comp=Z,7.0nm,14.0s
ILGA Ilgaz 29.58 287 P **P** **23 48 17.7 0.0**
ILGA IAmb IAmb 23 48 32.1
comp=Z,26nm,1.1s
XAN Xi'an 29.62 88 P P 23 48 20.3 +2.4
XAN pP pP 23 48 27.7 -0.7
XAN pmax pmax
comp=Z,8.0nm,0.8s
BR131 Keskin Array S 29.86 284 P **P** **23 48 21.2 +1.1**
BR131 IAmb IAmb 23 48 25.0
comp=Z,11nm,1.1s
BR131 Keskin Array S 29.86 284 *i* P **P** **23 48 21.4 +1.3**
BRTR Keskin Array B 29.86 284 P **P** **23 48 21.4 +1.3**
comp=Z,2.1nm,0.8s,baz=82,slow=8.4,SNR=11
BRTR LR LR 00 01 56.9
comp=Z,69nm,21.4s,baz=127,slow=39
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 29.86 284 P **P** **23 48 20.3 +0.2**
HHC Hu-ho-hao-te 29.94 74 *eP* P 23 48 23.0 +2.3
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,88nm,5.2s
HHC LR LR
comp=Z,250nm,16.6s
HHC LR LR
comp=Z,290nm,17.1s
HHC LR LR
comp=Z,310nm,18.5s
KLMR Klimovskoe 30.00 328 *eP* **P** **23 48 18.4 -2.5**
KLMR *e* 23 49 13.6
KLMR pmax pmax
comp=Z,7.0nm,0.7s
KLMR Klimovskoe 30.00 328 *eP* **P** **23 48 18.4 -2.5**
KLMR AMP 23 48 23.8
comp=Z,7.0nm,0.7s
KLMR *e*PP **PnPn** **23 49 13.7 -4.3**
MMAI Mount Meron Ar 30.39 270 LR LR 00 03 23.2
comp=Z,70nm,19.1s,baz=206,slow=42
BR231 Keskin MP Arra 30.49 285 P **P** **23 48 26.7 +1.1**
BR231 IAmb IAmb 23 48 31.9
comp=Z,7.2nm,0.8s
CMAR Chiang Mai Arr 30.73 124 P **P** **23 48 27.1 -0.7**
comp=Z,0.7nm,0.3s,baz=319,slow=9.5,SNR=1.3
comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 30.73 124 P **P** **23 48 29.0 +1.2**
CMAR Chiang Mai Arr 30.73 124 P **P** **23 48 29.0 +1.2**
ENH Enshi 31.53 94 P **P** **23 48 35.2 +0.4**
ENH IAmb IAmb 23 48 42.6
comp=Z,6.3nm,0.7s
NRIK Noril'sk 31.57 10 P **P** **23 48 33.9 -0.7**
comp=Z,8.7nm,1.0s,baz=192,slow=8.5,SNR=6.3
comp=Z,8.7nm,1.0s
NRIK Noril'sk 31.57 10 P **P** **23 48 34.9 +0.2**
NRIK IAmb IAmb 23 48 37.9
comp=Z,12nm,1.1s
NRIK Noril'sk 31.57 10 *i* P **P** **23 48 34.9 +0.2**
NRIK pmax pmax
comp=Z,11nm,1.0s
EIL Elat 32.11 265 LR LR 00 03 36.6
comp=Z,125nm,21.9s,baz=76,slow=40
BORA Eskisehir 32.24 285 P **P** **23 48 41.0 +0.1**
BORA IAmb IAmb 23 48 54.0
comp=Z,10nm,1.2s
PALK Pallekele 32.36 165 LR LR 00 01 55.6
comp=Z,76nm,20.7s,baz=105,slow=36
AKASG Malin Array Be 32.40 306 P **P** **23 48 43.1 +1.1**
comp=Z,1.3nm,0.5s,baz=77,slow=8.1,SNR=17
AKASG LR LR 00 03 47.1
comp=Z,62nm,19.2s,baz=80,slow=40
comp=Z,1.3nm,0.5s
AKASG Malin Array Be 32.40 306 P **P** **23 48 42.6 +0.5**
AKASG Malin Array Be 32.40 306*ce*P **P** **23 48 43.2 +1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 32.40 306 P **P** **23 48 42.4 +0.4**
AKBB IAmb IAmb 23 48 45.6
comp=Z,10nm,0.8s
AKBB Malin Array Si 32.40 306*ce*P **P** **23 48 43.3 +1.2**
BOD Bodaibo 32.79 41 *eP* **P** **23 48 44.5 -1.0**
BOD pmax pmax
comp=Z,21nm,1.0s
XLT XiLinHaoTe 32.84 67 *eP* **P** **23 48 47.1 +0.9**
XLT pP pP 23 48 53.7 -2.8
XLT sP sP 23 48 58.2 -2.8
XLT S **S** **23 54 03.5 +2.0**
XLT sS sS 23 54 14.0 -4.9
XLT pmax pmax
comp=Z,100nm,4.6s
XLT LR LR
comp=Z,20nm,16.0s
XLT LR LR
comp=Z,190nm,10.5s
XLT LR LR
comp=Z,190nm,11.4s
SORM Soroca 32.87 301 ⇑P **P** **23 48 45.6 -0.6**
SORM Soroca 32.87 301 ⇑P **P** **23 48 45.6 -0.6**
TPGR Topolog 32.98 295 ⇑P P 23 48 52.5 +5.1
CFR Carcaliu 33.16 295 ⇑P P 23 48 52.5 +3.7
CFR Carcaliu 33.16 295 P **P** **23 48 50.4 +1.6**
CFR pmax pmax
comp=Z,9.0nm,1.3s
MNK Minsk 33.66 312*ce*P **P** **23 48 55.4 +2.4**
VRI Vrincioaia 34.09 297 ⇑P **P** **23 48 58.3 +1.4**
VRI Vrincioaia 34.09 297 ⇑P **P** **23 48 58.3 +1.4**
TESR Tescani 34.09 298 ⇑P **P** **23 48 57.9 +0.9**
PLOR Plostina 34.14 297 ⇑P **P** **23 48 58.7 +1.3**
PLOR Plostina 34.14 297 ⇑P **P** **23 48 58.7 +1.3**
NACGM Naroch 34.35 313⇑*eP* **P** **23 48 59.7 +0.7**
baz=99
BIZ Bicaz 34.44 299 ⇑P **P** **23 48 58.3 -1.6**
COVR Voineasa-Covas 34.45 297 ⇑P **P** **23 49 01.8 +1.7**
MLR Muntele Rosu 34.67 296 ⇑P **P** **23 49 04.4 +2.3**
MLR Muntele Rosu 34.67 296 LR LR 00 07 21.7
comp=Z,65nm,18.1s,baz=64,slow=43
MLR Muntele Rosu 34.67 296 P **P** **23 49 03.5 +1.4**
MLR IAmb IAmb 23 49 09.1
comp=Z,17nm,1.1s
MLR Muntele Rosu 34.67 296 P **P** **23 49 03.5 +1.4**
MLR pmax pmax
comp=Z,17nm,1.1s
IIGN Ignalina 34.73 314 *eP* **P** **23 49 04.1 +1.7**
ISAL Salakas 34.82 314 *eP* **P** **23 49 04.8 +1.7**
BURAR Bucovina Array 35.00 300 ⇑P **P** **23 49 04.3 -0.6**
BURAR Bucovina Array 35.00 300 P **P** **23 49 05.5 +0.6**
BURAR Bucovina Array 35.00 300 ⇑P **P** **23 49 04.3 -0.6**
DOPR Dopca 35.01 297 ⇑P P 23 49 08.3 +3.5
BUR08 Bucovina Ar. S 35.01 300 P **P** **23 49 05.3 +0.3**
BUR08 IAmb IAmb 23 49 09.7
comp=Z,7.5nm,1.2s
VSU Vasula 35.06 319 *eP* **P** **23 49 07.2 +2.1**
VOIR 35.30 296 ⇑P **P** **23 49 08.1 +0.7**
VOIR 35.30 296 ⇑P **P** **23 49 08.1 +0.7**
ARR Arges 35.60 296 ⇑P **P** **23 49 11.2 +1.2**
ARCR ARCALIA 35.62 299 ⇑P **P** **23 49 12.2 +2.1**
LVZ Lovozero 35.68 337 P **P** **23 49 10.4 -0.1**
LVZ IAmb IAmb 23 49 15.0
comp=Z,21nm,1.3s
LVZ Lovozero 35.68 337*ce*P **P** **23 49 10.0 -0.4**
LVZ pmax pmax
comp=Z,14nm,1.0s
LVV L'vov 35.70 304 *eP* **P** **23 49 11.4 +0.6**
LVV *e*S **S** **23 54 42.5 -2.9**
KARP Karpathos 35.92 279 P **P** **23 49 12.4 -0.4**
PABE Paberze 36.03 314 P **P** **23 49 13.7 +0.2**
PABE Paberze 36.03 314 *eP* **P** **23 49 13.8 +0.4**
VSVD Vaisvydziai 36.11 314 *eP* **P** **23 49 15.3 +1.2**
FIA1 FINESS Array S 36.17 324 P **P** **23 49 14.9 +0.3**
FINES FINESS Array B 36.17 324 P **P** **23 49 14.3 -0.3**
comp=Z,17nm,0.5s,baz=111,slow=8.6,SNR=109
FINES LR LR 00 05 21.9
comp=Z,85nm,19.9s,baz=104,slow=38
comp=Z,17nm,0.5s
FINES FINESS Array B 36.17 324 *i* P **P** **23 49 14.6 0.0**
FINES pmax pmax
comp=Z,17nm,0.4s
KWP Kalwaria Pacla 36.56 304 *eP* P 23 49 21.9 +3.7
KWP Kalwaria Pacla 36.56 304 P **P** **23 49 20.9 +2.7**
MTSE Matsula 36.61 319 *eP* **P** **23 49 20.2 +1.8**
MEF Metsahovi 36.64 322 *eP* **P** **23 49 19.6 +0.9**
DEV Deva 36.74 297 P P 23 49 25.4 +5.7
DRGR 36.77 299 ⇑P P **23 49 21.4 +1.4**
DRGR 36.77 299 ⇑P **P** **23 49 21.4 +1.4**
KOLS Kolonicke sedl 36.88 302 *eP* **P** **23 49 23.3 +2.4**
KOLS pmax pmax
comp=Z,10.0nm,1.1s
KOLS Kolonicke sedl 36.88 302 *eP* **P** **23 49 23.3 +2.4**
UZH Uzhgorod 36.89 302 *eP* **P** **23 49 22.0 +1.1**
UZH *e* 23 49 24.8
UZH *e* 23 49 29.2
GZR Gura Zlata 36.89 297 ⇑P **P** **23 49 22.2 +1.1**
VTS Vitosha 37.03 292 ⇑P **P** **23 49 24.1 +1.8**
VTS Vitosha 37.03 292 P **P** **23 49 23.2 +0.9**
VTS Vitosha 37.03 292 ⇑P **P** **23 49 24.1 +1.8**
SLIT Slitere, Latvi 37.23 317 *eP* **P** **23 49 25.0 +1.4**
PBUR Paburge 37.23 314 *eP* **P** **23 49 25.2 +1.5**
BLKB Belogradchik 37.24 294 ⇑P **P** **23 49 25.5 +1.4**
CRVS Cervenica-Dubn 37.42 302 *eP* P 23 49 29.7 +4.2
CRVS Cervenica-Dubn 37.42 302 *eP* P 23 49 29.7 +4.2
SIRR Siria 37.55 298 ⇑P P 23 49 31.9 +5.3
BZS Buzias 37.67 297 ⇑P **P** **23 49 28.9 +1.3**
BZS Buzias 37.67 297 ⇑P **P** **23 49 28.9 +1.3**
IDI Anoyia 37.75 280 LR LR 00 09 32.8
comp=Z,19nm,18.4s,baz=76,slow=43
ATD Arta Tunnel 37.87 232 LR LR 00 06 07.1
comp=Z,52nm,19.7s,baz=18,slow=38
BOVS Bovan 37.93 294 ⇑P **P** **23 49 30.6 +0.8**
RAF Rauma 38.09 322 *eP* **P** **23 49 32.5 +1.6**
NJ2 Nanjing 38.10 86 *eP* P 23 49 34.2 +2.9
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NIE Niedzica 38.14 303 *eP* **P** **23 49 33.3 +1.7**
NIE Niedzica 38.14 303 P **P** **23 49 33.2 +1.6**
OJC Ojcow 38.41 305 *eP* **P** **23 49 33.9 +0.1**
OJC Ojcow 38.41 305 IAmb IAmb 23 49 36.9
comp=Z,13nm,0.9s
OJC Ojcow 38.41 305 P **P** **23 49 35.7 +1.9**
PSZ Piszkesteto 38.55 301 P **P** **23 49 37.1 +2.0**
PSZ Piszkesteto 38.55 301 P **P** **23 49 37.1 +2.0**
PSZ pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 38.71 303 *eP* P 23 49 40.3 +4.0
LANS pmax pmax
comp=Z,2.0nm,0.7s
LANS Liptovska Anna 38.71 303 *eP* P 23 49 40.3 +4.0
FRGS Fruska Gora 39.00 297 ⇑P **P** **23 49 39.6 +0.8**
KEV Kevo 39.02 337 P **P** **23 49 39.1 +0.5**
KEV IAmb IAmb 23 49 41.9
comp=Z,13nm,1.1s
KEV Kevo 39.02 337 P **P** **23 49 39.1 +0.5**
KEV pmax pmax
comp=Z,13nm,1.1s
DIVS Divibare 39.06 295 P **P** **23 49 40.1 +0.6**
ARA0 ARCESS Array S 39.39 336 *eP* **P** **23 49 41.7 0.0**
ARCES ARCESS Array B 39.39 336 P **P** **23 49 41.8 0.0**
comp=Z,12nm,0.5s,baz=110,slow=8.4,SNR=127
ARCES LR LR 00 07 00.6
comp=Z,83nm,20.9s,baz=126,slow=38
comp=Z,12nm,0.5s
ARCES ARCESS Array B 39.39 336 IAmb IAmb 23 49 45.6
comp=Z,16nm,0.9s
SRO2 Moca 39.57 301 *eP* **P** **23 49 45.8 +2.3**
SRO2 pmax pmax
comp=Z,15nm,1.3s
SRO2 Moca 39.57 301 *eP* **P** **23 49 45.8 +2.3**
SRO Srobarova 39.62 301 *eP* **P** **23 49 46.0 +2.1**
SRO pmax pmax
comp=Z,24nm,1.7s
SRO Srobarova 39.62 301 *eP* **P** **23 49 46.0 +2.1**
MORH Mrgy, Hungar 39.63 299 ⇑P **P** **23 49 45.2 +1.2**
MORH Mrgy, Hungar 39.63 299 P **P** **23 49 44.3 +0.4**
CSKK Cskako 39.72 300 P P 23 49 49.3 +4.6
GKP Gorka Klasztor 39.86 310 *eP* **P** **23 49 47.4 +1.6**
GKP Gorka Klasztor 39.86 310 P **P** **23 49 46.8 +1.0**
GKP Gorka Klasztor 39.86 310 *eP* **P** **23 49 46.8 +1.0**
MORC Moravsky Berou 39.90 304 ⇑P **P** **23 49 47.1 +0.8**
MORC Moravsky Berou 39.90 304 P **P** **23 49 46.3 +0.1**
MORC Moravsky Berou 39.90 304 ⇑P **P** **23 49 47.1 +0.8**
MORC Moravsky Berou 39.90 304 *eP* **P** **23 49 47.1 +0.8**
JAVC Velka Javorina 39.91 303 *eP* **P** **23 49 48.4 +2.0**
PDG Podgorica 39.94 293 P P **23 49 45.9 -0.7**
KOVH Kovagotottos 40.02 298 P **P** **23 49 48.7 +1.4**
MPLH Magyarpolny 40.23 300 P **P** **23 49 50.9 +1.9**
MODS Modra-Piesok 40.23 302 *eP* P 23 49 52.5 +3.5
MODS Modra-Piesok 40.23 302 *eP* P 23 49 52.5 +3.5
KEK Kerkira 40.24 288 P **P** **23 49 49.8 +0.6**
KEK IAmb IAmb 23 50 24.5
comp=Z,9.9nm,1.0s
HAMF Hammerfest 40.43 337 *eP* **P** **23 49 50.7 +0.3**
HAMF IAmb IAmb 23 49 53.5
comp=Z,19nm,0.6s
VRAC Vranov 40.57 304 ⇑P **P** **23 49 50.3 -1.5**
VRAC Vranov 40.57 304 LR LR 00 07 57.2
comp=Z,78nm,21.6s,baz=82,slow=38
VRAC Vranov 40.57 304 ⇑P **P** **23 49 50.3 -1.5**
VRAC Vranov 40.57 304 *eP* **P** **23 49 51.9 +0.1**
KSP Ksiaz 40.59 306 P **P** **23 49 54.9 +2.9**
DPC Dobruska-Polom 40.62 305 *eP* **P** **23 49 53.5 +1.2**
DPC *e* 23 49 55.3
DPC Dobruska-Polom 40.62 305 *eP* **P** **23 49 53.5 +1.2**
DPC *ex* x 23 49 55.3
OSTC Ostas 40.67 306 *eP* **P** **23 49 54.5 +1.9**
KRUC Moravsky 40.73 303 *eP* **P** **23 49 53.6 +0.5**
CHVC Chvalec 40.77 306 *eP* **P** **23 49 54.5 +1.1**
UPC Upice 40.81 306 *eP* P 23 49 56.8 +3.1
UPC Upice 40.81 306 *eP* P 23 49 56.8 +3.1
RONA Rosalia, Austr 40.98 301 *eP* **P** **23 49 54.8 -0.5**
comp=Z,11nm,1.0s
JETT Jettan, Norway 41.04 335 *eP* **P** **23 49 57.2 +1.8**
JETT IAmb IAmb 23 50 00.3
comp=Z,22nm,0.4s
BSD Bornholm Skovb 41.18 313 *eP* **P** **23 49 58.0 +1.4**
CONA Conrad Observa 41.24 302 *eP* **P** **23 49 58.6 +1.2**
comp=Z,16nm,1.0s
YAK Yakutsk 41.37 37 LR LR 00 07 27.6
comp=Z,81nm,18.8s,baz=260,slow=36
YAK Yakutsk 41.37 37 P **P** **23 49 58.1 0.0**
YAK Yakutsk 41.37 37*ce*P **P** **23 49 58.6 +0.4**
YAK pmax pmax
comp=Z,18nm,0.6s
TRO Tromso 41.56 335 *eP* **P** **23 50 01.7 +2.1**
TRO IAmb IAmb 23 50 06.7
comp=Z,7.8nm,0.7s
ARSA Arzberg 41.57 301 *eP* **P** **23 50 01.1 +1.1**
comp=Z,6.8nm,1.0s
PRU Pruhonice 41.80 305 *eP* **P** **23 50 03.0 +1.1**
PRU *e* 23 50 05.4
PRU Pruhonice 41.80 305 *eP* **P** **23 50 03.0 +1.1**
PRU *ex* x 23 50 05.4
HFS Hagfors 41.92 320 LR LR 00 07 40.8
comp=Z,70nm,21.8s,baz=88,slow=36
SOKA Soboth 42.01 300 *eP* **P** **23 50 04.7 +1.0**
comp=Z,14nm,1.2s
BRG Berggiesshubel 42.07 306 *eP* **P** **23 50 04.8 +0.6**
BRG Amp 23 50 09.7
comp=Z,10nm,0.9s
BRG Berggiesshubel 42.07 306 *eP* **P** **23 50 04.7 +0.6**
BRG pmax pmax
comp=Z,10.0nm,0.9s
CKRC Cesky Krumlov 42.12 303 *eP* **P** **23 50 07.0 +2.5**
CKRC *ex* x 23 50 08.8
RGN Rugen 42.12 312 P **P** **23 50 05.2 +0.8**
FAUS Fauske 42.23 331 *eP* **P** **23 50 07.3 +2.2**
FAUS IAmb IAmb 23 50 10.0
comp=Z,5.8nm,0.8s
MOA Molln 42.31 302 *eP* **P** **23 50 08.6 +2.6**
comp=Z,7.8nm,1.1s
MOR8 Moi Rana 42.31 329 *eP* P **23 50 06.9 +1.0**
OBKA Obir 42.37 300 *eP* **P** **23 50 08.3 +1.6**
comp=Z,8.9nm,1.2s
STEI Steigen 42.37 332 *eP* **P** **23 50 08.4 +2.2**
STEI IAmb IAmb 23 50 14.4
comp=Z,13nm,1.0s
GEC2 GERESS Array S 42.51 303 P **P** **23 50 08.2 +0.4**
GERES GERESS Array B 42.51 303 P **P** **23 50 08.0 +0.2**
comp=Z,3.6nm,0.8s,baz=64,slow=9.1,SNR=23
GERES PP **PP** **23 51 46.2 -0.3**
comp=Z,0.5nm,0.6s,baz=68,slow=11,SNR=2.3
comp=Z,3.6nm,0.8s
GERES GERESS Array B 42.51 303 P **P** **23 50 09.1 +1.3**
GERES GERESS Array B 42.51 303 P **P** **23 50 09.1 +1.3**
KHC Kasperske Hory 42.55 304 P **P** **23 50 08.3 +0.3**
KHC IAmb IAmb 23 50 12.4
comp=Z,11nm,0.9s
KHC Kasperske Hory 42.55 304 *eP* **P** **23 50 08.7 +0.7**
KHC *e* 23 50 11.1
KHC Kasperske Hory 42.55 304 *eP* **P** **23 50 08.7 +0.7**
KHC *ex* x 23 50 11.1
CLL Collm 42.61 307 P **P** **23 50 08.3 -0.1**
CLL IAmb IAmb 23 50 12.1
comp=Z,10nm,1.0s
CLL Collm 42.61 307 *i* P **P** **23 50 08.6 +0.2**
CLL pmax pmax
comp=Z,9.0nm,0.8s
CLL Collm 42.61 307 *i* P **P** **23 50 08.6 +0.2**
comp=Z,6.0nm,1.0s
CLL *i* Pmax 23 50 10.9
comp=Z,9.0nm,0.8s
CLL *e*pP **pP** **23 50 19.0 0.0**
CLL *e*PP **PP** **23 51 48.0 +0.7**
CLL *ex* x 23 51 51.0
CLL *e*PcP **PcP** **23 52 01.0 +0.8**
CLL *e*PPP PPP 23 52 22.0
SGRT San Giovanni R 42.64 293 P **P** **23 50 09.4 +0.5**
BIOA Bad Ischl, Aus 42.75 302 *eP* **P** **23 50 12.4 +2.7**
comp=Z,8.4nm,0.9s
KLR Kul'dur 42.85 56 P **P** **23 50 10.6 +0.2**
comp=Z,1.4nm,0.5s,baz=293,slow=10,SNR=5.1
KLR LR LR 00 10 27.8
comp=Z,60nm,19.7s,baz=358,slow=40
comp=Z,1.4nm,0.5s
KLR Kul'dur 42.85 56*ce*P **P** **23 50 11.6 +1.2**
KLR pmax pmax
comp=Z,2.0nm,0.6s
KONS Konsvik 42.90 330 *eP* **P** **23 50 12.6 +2.1**
KONS IAmb IAmb 23 50 16.0
comp=Z,7.7nm,0.8s
NC405 NORSAR Array S 42.94 322 P **P** **23 50 11.7 +0.6**
NC602 NORSAR Array S 43.01 321 P **P** **23 50 12.6 +1.1**
NORES NORESS Array B 43.01 321 P **P** **23 50 13.1 +1.5**
LOF Lofoten 43.04 332 *eP* **P** **23 50 13.1 +1.5**
LOF IAmb IAmb 23 50 26.9
comp=Z,9.9nm,0.9s
PRED Cave del Predi 43.05 300 P **P** **23 50 12.5 +0.3**
KSAR Wonju Array Be 43.05 74 P **P** **23 50 12.4 +0.3**
KSAR Wonju Array Be 43.05 74 P **P** **23 50 12.5 +0.3**
KBA Koelnbreinsper 43.07 301 *eP* **P** **23 50 13.1 +0.6**
comp=Z,12nm,1.4s
KSRS Korea Array 43.08 74 P **P** **23 50 11.1 -1.3**
comp=Z,0.5nm,0.3s,baz=288,slow=5.0,SNR=5.3
KSRS LR LR 00 10 19.3
comp=Z,90nm,20.1s,baz=275,slow=39
comp=Z,0.5nm,0.3s
CUC Castrocucco 43.09 290 P **P** **23 50 13.6 +1.0**
CUC IAmb IAmb 23 50 17.6
comp=Z,9.3nm,0.8s
NSS Namsos 43.09 327 *eP* **P** **23 50 13.9 +1.8**
NSS IAmb IAmb 23 50 17.9
comp=Z,16nm,1.4s
SABO M.te Sabotino 43.12 299 P **P** **23 50 12.9 +0.2**
SABO IAmb IAmb 23 50 17.8
comp=Z,28nm,1.1s
TIXI Tiksi 43.13 23 LR LR 00 07 56.9
comp=Z,40nm,19.9s,baz=190,slow=36
TIXI Tiksi 43.13 23 P **P** **23 50 13.0 +0.6**
TIXI IAmb IAmb 23 50 14.1
comp=Z,16nm,0.7s
TIXI Tiksi 43.13 23*ce*P **P** **23 50 13.3 +0.9**
TIXI pmax pmax
comp=Z,19nm,0.8s
NB201 NORSAR Array S 43.14 321 P **P** **23 50 13.0 +0.3**
NB201 IAmb IAmb 23 50 27.5
comp=Z,26nm,1.3s
NB2 NORSAR Subarra 43.18 321 P **P** **23 50 12.5 -0.5**
comp=Z,6.7nm,0.6s,baz=93,slow=8.6
NB2 NORSAR Subarra 43.18 321 P **P** **23 50 12.5 -0.5**
baz=93,slow=8.6
NOA NORSAR Array B 43.18 321 P **P** **23 50 12.2 -0.8**
comp=Z,9.5nm,0.7s,baz=92,slow=7.9,SNR=40
NOA LR LR 00 08 19.0
comp=Z,58nm,19.0s,baz=95,slow=36
comp=Z,9.5nm,0.7s
NAO01 NORSAR Array S 43.34 321 P **P** **23 50 14.6 +0.4**
NAO01 IAmb IAmb 23 50 26.3
comp=Z,33nm,1.2s
BJO1 Bjornoya 43.34 342 *eP* **P** **23 50 16.1 +2.1**
BJO1 IAmb IAmb 23 50 17.8
comp=Z,146nm,1.4s
NBO00 NORSAR Array S 43.39 321 P **P** **23 50 16.0 +1.3**
NBO00 IAmb IAmb 23 50 43.5
comp=Z,30nm,1.4s
NC204 NORSAR Array S 43.41 322 P **P** **23 50 15.2 +0.3**
CLUD Cludinico 43.51 300 P **P** **23 50 15.8 0.0**
CEL Celeste 43.58 288 P **P** **23 50 14.2 -2.3**
CEL IAmb IAmb 23 50 27.8
comp=Z,10nm,1.0s
STAL STALIGIAL 43.66 300 P **P** **23 50 18.7 +1.6**
ABTA Abfaltersbach 43.69 301 *eP* **P** **23 50 20.2 +2.9**
comp=Z,3.4nm,0.8s
CIMO Cimolais 43.84 300 IAmb IAmb 23 50 26.1
comp=Z,7.4nm,1.1s
KONO Kongsberg 43.97 319 *eP* **P** **23 50 20.5 +1.2**
GRA1 Grafenberg Arr 43.97 305 P **P** **23 50 20.4 +0.9**
GRA1 IAmb IAmb 23 50 24.4
comp=Z,17nm,1.0s
GRF Grafenberg Arr 43.97 305 P **P** **23 50 20.4 +0.9**
GRF pmax pmax
comp=Z,17nm,1.0s
GRFO Grafenberg 43.97 305 P **P** **23 50 20.9 +1.4**
GRFO IAmb IAmb 23 50 24.4
comp=Z,15nm,1.0s
GRFO Grafenberg 43.97 305 P **P** **23 50 20.9 +1.4**
GRFO pmax pmax
comp=Z,15nm,1.0s
WTTA Wattenberg 44.17 301 *eP* **P** **23 50 24.1 +2.8**
comp=Z,5.4nm,0.7s
WATA Walderalm 44.19 302 *eP* **P** **23 50 24.0 +2.6**
comp=Z,6.1nm,0.9s
NRCA Norcia 44.22 295 P **P** **23 50 22.2 +0.5**
DOMB Dombas 44.24 323 *eP* **P** **23 50 23.1 +1.6**
SQTA Sankt Quirin 44.46 301 *eP* **P** **23 50 26.0 +2.5**
comp=Z,4.4nm,0.7s
MOTA Moosalm 44.51 302 *eP* **P** **23 50 23.9 -0.1**
comp=Z,8.4nm,0.9s
MURB Monte Urbino 44.52 296 P **P** **23 50 23.6 -0.4**
MURB IAmb IAmb 23 50 33.6
comp=Z,27nm,1.3s
TEOL Teolo 44.58 299 P **P** **23 50 24.9 +0.5**
TEOL IAmb IAmb 23 50 35.3
comp=Z,14nm,1.0s
HOMB Homborsund 44.59 317 *eP* **P** **23 50 27.1 +2.9**
RETA Reutte 44.70 302 *eP* **P** **23 50 27.2 +1.8**
comp=Z,2.8nm,1.1s
FETA Feichten 44.83 301 *eP* **P** **23 50 26.9 +0.4**
comp=Z,4.5nm,1.0s
DAVA Damuels 45.33 302 *eP* **P** **23 50 30.9 +0.3**
comp=Z,14nm,1.1s
OSSC Osservatorio P 45.35 296 P **P** **23 50 31.0 +0.5**
OSSC IAmb IAmb 23 50 49.8
comp=Z,7.0nm,1.0s
SPB2 Spitsbergen Ar 45.43 346 P **P** **23 50 31.9 +1.2**
SPA0 Spitsbergen Ar 45.43 346 *eP* P 23 50 33.7 +2.9
SPITS Spitsbergen Ar 45.43 346 P **P** **23 50 31.9 +1.1**
SPITS pmax pmax
comp=Z,35nm,1.4s
DAVOX Davos/Dischmat 45.45 301 LR LR 00 11 41.4
comp=Z,48nm,19.1s,baz=84,slow=39
CASP Castiglione de 45.82 296 P **P** **23 50 35.6 +1.3**
BFO Black Forest 46.11 304 P P 23 50 39.9 +3.4
BFO IAmb IAmb 23 50 49.6
comp=Z,7.4nm,1.2s
BFO Black Forest 46.11 304 P P 23 50 39.9 +3.4
BFO pmax pmax
comp=Z,7.0nm,1.2s
KBS Kingsbay 46.54 347 P **P** **23 50 39.7 +0.3**
KBS Kingsbay 46.54 347 P **P** **23 50 39.7 +0.3**
KBS pmax pmax
comp=Z,33nm,1.1s
KBS Kingsbay 46.54 347 *eP* **P** **23 50 41.2 +1.8**
KBS IAmb IAmb 23 50 43.3
comp=Z,33nm,1.1s
CDF Champ du Feu 46.78 304 *eP* **P** **23 50 44.4 +2.6**
CDF pmax pmax
comp=Z,5.0nm,1.0s
HINF Hinteralfeld 47.20 303 *eP* **P** **23 50 47.5 +2.5**
HINF pmax pmax
comp=Z,5.0nm,0.9s
WLF Walferdange 47.20 306 P **P** **23 50 45.7 +0.7**
WLF IAmb IAmb 23 50 49.5
comp=Z,12nm,0.9s
WLF Walferdange 47.20 306 P **P** **23 50 45.7 +0.7**
WLF pmax pmax

comp=Z,12nm,0.9s
WLF Walferdange 47.20 306 *d*P P 23 50 48.1 +3.1
comp=Z,8.2nm,0.9s
SENIN Lac Senin/Sane 47.28 301 IAmb IAmb 23 50 52.9
comp=Z,7.5nm,0.9s
HAU Haudompre 47.48 304 *e*P **P** **23 50 49.8 +2.6**
HAU pmax pmax
comp=Z,8.0nm,1.0s
JOW Kunigami 47.77 87 LR LR 00 13 43.9
comp=Z,44nm,18.8s,baz=308,slow=40
JOW Kunigami 47.77 87 P **P** **23 50 50.7 +1.0**
LPG La Plagne 47.88 300 *e*P P 23 50 54.5 +3.8
LPG pmax pmax
comp=Z,6.0nm,0.7s
LPL La Plagne 47.89 300 *e*P **P** **23 50 51.9 +1.2**
LPL pmax pmax
comp=Z,14nm,1.0s
GIVF Givet 47.94 307 *e*P P 23 50 53.9 +3.2
GIVF pmax pmax
comp=Z,10.0nm,1.0s
CABF La Chapelle 48.02 302 *e*P **P** **23 50 53.8 +2.3**
CABF pmax pmax
comp=Z,11nm,1.0s
BNI Bardonecchia 48.06 300 P **P** **23 50 52.2 +0.3**
BNI IAmb IAmb 23 50 56.3
comp=Z,11nm,1.2s
BNI Bardonecchia 48.06 300 P **P** **23 50 52.6 +0.7**
BNI pmax pmax
comp=Z,11nm,1.2s
MBDF Montbardon 48.09 299 *e*P P 23 50 55.8 +3.6
MBDF pmax pmax
comp=Z,6.0nm,0.8s
BAIF Baives 48.33 307 *e*P **P** **23 50 56.7 +2.9**
BAIF pmax pmax
comp=Z,19nm,1.2s
LODK Lodwar 48.80 233 P **P** **23 50 57.5 -0.3**
JMN Monobe 48.98 76 P **P** **23 51 00.6 +1.5**
LOR Lormes 49.30 303 *e*P P 23 51 04.5 +3.3
LOR pmax pmax
comp=Z,36nm,2.0s
KEST Kesra 49.38 287 P **P** **23 51 02.6 +0.5**
comp=Z,2.9nm,0.8s,baz=93,slow=6.8,SNR=5.1
comp=Z,2.9nm,0.8s
KEST Kesra 49.38 287 P **P** **23 51 02.2 +0.2**
KEST IAmb IAmb 23 51 11.5
comp=Z,5.8nm,1.1s
VIVF Saint-Julien-l 49.48 300 *e*P **P** **23 51 02.9 +0.2**
VIVF pmax pmax
comp=Z,4.0nm,0.6s
SMF Signal de Mont 49.49 302 *e*P **P** **23 51 01.8 -0.9**
SMF pmax pmax
comp=Z,6.0nm,0.9s
SSF Saint Saulge 49.59 303 *e*P **P** **23 51 05.6 +2.2**
SSF pmax pmax
comp=Z,22nm,1.6s
CLF Chambon-Foret 50.11 305 P **P** **23 51 08.9 +1.5**
BGF Bois d'Agland 50.17 303 *e*P **P** **23 51 10.2 +2.3**
BGF pmax pmax
comp=Z,7.0nm,0.8s
INU Inuyama 50.67 73 P **P** **23 51 13.0 +1.2**
INU IAmb IAmb 23 51 14.5
comp=Z,6.1nm,0.8s
JGF Kuroka 50.82 72 P **P** **23 51 13.5 +0.6**
JGF IAmb IAmb 23 51 14.9
comp=Z,13nm,1.4s
JMIC Jan Mayen 50.87 335 LR LR 00 12 51.8
comp=Z,24nm,18.1s,baz=114,slow=36
MAJO Matsushiro 51.06 71 P **P** **23 51 14.7 -0.1**
MAJO IAmb IAmb 23 51 16.9
comp=Z,7.3nm,1.1s
MAJO Matsushiro 51.06 71 P **P** **23 51 14.7 -0.1**
MAJO pmax pmax
comp=Z,7.0nm,1.1s
MJAR Matsushiro Arr 51.06 71 P **P** **23 51 14.9 +0.2**
comp=Z,4.2nm,0.8s,baz=291,slow=6.9,SNR=8.7
MJAR LR LR 00 14 46.8
comp=Z,40nm,18.6s,baz=298,slow=38
comp=Z,4.2nm,0.8s
MJAR Matsushiro Arr 51.06 71 P **P** **23 51 15.0 +0.2**
CAF Calviac 51.21 301 *e*P **P** **23 51 18.7 +2.9**
CAF pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 51.27 228 P **P** **23 51 18.0 +1.2**
comp=Z,1.0nm,0.7s,baz=66,slow=11,SNR=3.6
KMBO LR LR 00 15 24.8
comp=Z,28nm,18.2s,baz=46,slow=39
comp=Z,1.0nm,0.7s
RJF Les Rejaudoux 51.45 301 *e*P P 23 51 21.3 +3.8
RJF pmax pmax
comp=Z,7.0nm,0.8s
LDF La Druitiere 51.46 306 *e*P **P** **23 51 18.9 +1.4**
LDF pmax pmax
comp=Z,5.0nm,0.6s
SEY Seymchan 51.81 35 *ce*P **P** **23 51 19.2 -0.7**
SEY pmax pmax
comp=Z,6.0nm,1.7s
KIBK Kibwezi 51.82 226 P **P** **23 51 20.4 -0.3**
KIBK IAmb IAmb 23 51 49.8
comp=Z,5.9nm,1.1s
DAG Danmarks Havn 52.76 343 *i* P **P** **23 51 26.0 -0.8**
QUIF Quistinic 53.60 306 *e*P **P** **23 51 35.5 +2.1**
QUIF pmax pmax
comp=Z,78nm,1.8s
JHJ Hachijo jima 2 53.69 74 LR LR 00 16 25.5
comp=Z,52nm,18.8s,baz=342,slow=38
ETSF Etsaut 53.70 299 *e*P **P** **23 51 37.1 +2.8**
ETSF pmax pmax
comp=Z,12nm,1.1s
SJPF Ste Jean 54.07 300 *e*P P 23 51 41.6 +4.6
SJPF pmax pmax
comp=Z,22nm,1.4s
MBAR Mbarara 54.81 234 LR LR 00 16 50.9
comp=Z,68nm,18.3s,baz=26,slow=38
ESDC Sonseca Array 57.36 297 P **P** **23 52 00.3 -0.3**
comp=Z,3.4nm,0.8s,baz=51,slow=7.1,SNR=18
ESDC LR LR 00 20 24.2
comp=Z,21nm,18.6s,baz=60,slow=40
comp=Z,3.4nm,0.8s
PETK Petropavlovsk- 57.48 45 P **P** **23 51 59.6 -1.6**
comp=Z,2.2nm,0.7s,baz=262,slow=10.0,SNR=2.8
PETK LR LR 00 17 12.1
comp=Z,59nm,18.7s,baz=305,slow=36
comp=Z,2.2nm,0.7s
TAM Tamanrasset 58.44 275 P **P** **23 52 06.8 -1.8**
TAM Tamanrasset 58.44 275 P **P** **23 52 06.8 -1.8**
TAM pmax pmax
comp=Z,2.0nm,0.9s
SUMG Summit 59.17 341 *i* P **P** **23 52 13.0 -0.2**
COI Coimbra 60.18 299 P **P** **23 52 21.7 +1.6**
COI Coimbra 60.18 299 P **P** **23 52 21.7 +1.6**
COI pmax pmax
comp=Z,26nm,1.3s
TOA0 Torodi Ar. Sit 66.91 268 P **P** **23 53 04.0 -0.9**
TOA0 IAmb IAmb 23 53 07.3
comp=Z,8.2nm,0.8s
TORD Torodi Ar. Bea 66.91 268 P **P** **23 53 03.8 -1.0**
comp=Z,5.9nm,0.7s,baz=51,slow=5.6,SNR=24
comp=Z,5.9nm,0.7s
TORD Torodi Ar. Bea 66.91 268 P **P** **23 53 04.0 -0.9**
TORD IAmb IAmb 23 53 06.8
comp=Z,5.7nm,0.8s
LSZ Lusaka 67.92 227 LR LR 00 27 07.1
comp=Z,41nm,19.0s,baz=150,slow=40
TOLK Toolik Lake Re 68.32 15 P **P** **23 53 14.5 +1.4**
A36M Sachs Harbour 68.72 6 P **P** **23 53 15.8 +0.4**
COLD Coldfoot 69.36 16 P **P** **23 53 20.6 +1.0**
COLD IAmb IAmb 23 53 22.3
comp=Z,7.5nm,0.8s
IMAR Indian Mountai 69.55 18 P **P** **23 53 21.2 +0.5**
H21K Melozitna Rive 70.05 18 P **P** **23 53 23.4 -0.3**
H21K IAmb IAmb 23 53 25.9
comp=Z,5.4nm,1.1s
H23K Yukon River 70.68 17 P **P** **23 53 28.8 +1.1**
H23K IAmb IAmb 23 53 30.4
comp=Z,5.7nm,0.8s
J20K Nowinta River 70.90 20 IAmb IAmb 23 53 31.3
comp=Z,6.9nm,0.8s
H24K Noodor Dome 71.04 16 P **P** **23 53 31.4 +1.5**
MLY Manley 71.06 18 P **P** **23 53 30.8 +0.8**
I23K Minto, Yukon-K 71.29 17 P **P** **23 53 32.3 +1.0**
I23K IAmb IAmb 23 53 35.8
comp=Z,9.1nm,1.1s
INK Inuvik 71.36 10 P **P** **23 53 32.3 +0.6**
INK IAmb IAmb 23 53 34.3
comp=Z,13nm,1.1s
INK Inuvik 71.36 10 P **P** **23 53 32.3 +0.6**
INK pmax pmax
comp=Z,13nm,1.2s
C36M Paulatuk 71.39 6 P **P** **23 53 32.3 +0.5**
K20K Telida 71.58 20 P **P** **23 53 34.2 +1.1**
K20K IAmb IAmb 23 53 35.6
comp=Z,5.0nm,0.8s
MDM Murphy Dome 71.71 17 IAmb IAmb 23 53 36.0
comp=Z,15nm,1.4s
BPAW Bear Paw Mtn. 71.77 19 IAmb IAmb 23 54 13.3
comp=Z,4.8nm,0.6s
PRP Porcupine Dome 71.82 16 P **P** **23 53 37.0 +2.3**
NEA2 Nenana 71.82 18 P **P** **23 53 35.3 +0.7**
NEA2 IAmb IAmb 23 53 36.4
comp=Z,6.4nm,0.8s
TCOL CIGO, UAF Yank 71.86 17 P **P** **23 53 35.8 +1.0**
COLA College 71.86 17 P **P** **23 53 36.6 +1.9**
COLA College 71.86 17 P **P** **23 53 36.6 +1.9**
COLA pmax pmax
comp=Z,11nm,0.7s
CAST Castle Rocks 72.06 19 IAmb IAmb 23 53 38.1
comp=Z,7.2nm,1.0s
CCB Clear Creek Bu 72.07 17 P **P** **23 53 37.0 +1.0**
CCB IAmb IAmb 23 53 37.7
comp=Z,7.7nm,1.5s
BWN Browne 72.08 18 P **P** **23 53 37.2 +1.1**
IL31 72.17 17 P **P** **23 53 37.3 +0.8**
ILAR Eielson Array 72.17 17 P **P** **23 53 35.6 -1.1**
comp=Z,3.3nm,0.8s,baz=310,slow=5.0,SNR=25
ILAR LR LR 00 30 17.0
comp=Z,26nm,19.6s,baz=268,slow=40
comp=Z,3.3nm,0.8s
KTH Kantishna Hill 72.24 19 P **P** **23 53 37.8 +0.6**
KTH IAmb IAmb 23 53 39.4
comp=Z,12nm,1.0s
HDA Harding Lake 72.47 17 P **P** **23 53 39.2 +0.8**
J25K Salcha River, 72.64 16 IAmb IAmb 23 53 41.0
comp=Z,5.2nm,1.0s
I29M Ogilvie Camp, 73.35 13 IAmb IAmb 23 53 45.5
comp=Z,5.6nm,1.1s
DHY Denali Highway 73.51 18 P **P** **23 53 45.8 +1.0**
DHY IAmb IAmb 23 53 48.7
comp=Z,4.3nm,0.7s
PAX Paxson 74.05 17 IAmb IAmb 23 53 49.1
comp=Z,4.4nm,0.8s
SML Sawmill 74.36 19 P **P** **23 53 49.0 -0.7**
SML Sawmill 74.36 19 P **P** **23 53 49.0 -0.7**
SML pmax pmax
comp=Z,15nm,0.8s
L26K Log Cabin Wild 74.47 16 P **P** **23 53 52.2 +2.0**
L27K Beaver Creek, 74.76 15 P **P** **23 53 52.8 +0.9**
PSA00 Pilbara Seismi 74.76 135 P **P** **23 53 54.3 +1.9**
KLU Klutina 75.22 18 P **P** **23 53 55.0 +0.3**
HOM Homer 75.28 21 P **P** **23 53 54.5 -0.5**
M27K Edge Creek, AK 75.38 16 IAmb IAmb 23 53 59.0
comp=Z,6.3nm,1.2s
GLI Glacier Island 75.47 19 P **P** **23 53 57.2 +1.2**
LOGN Logan Glacier 76.94 16 P **P** **23 54 06.0 +1.4**
LOGN IAmb IAmb 23 54 12.7
comp=Z,5.1nm,0.9s
M31M Drury Creek, Y 76.95 13 P **P** **23 54 05.3 +0.9**
M31M IAmb IAmb 23 54 06.9
comp=Z,5.3nm,1.0s
FARO Faro, Yukon 77.09 12 P **P** **23 54 06.5 +1.3**
LBTB Lobatse 77.20 223 LR LR 00 30 31.1
comp=Z,22nm,19.2s,baz=17,slow=37
TSUM Tsumeb 77.28 232 LR LR 00 30 08.0
comp=Z,31nm,18.2s,baz=325,slow=37
TSUM Tsumeb 77.28 232 P **P** **23 54 06.4 -0.5**
TSUM IAmb IAmb 23 54 19.5
comp=Z,9.6nm,1.2s
HYT Haines Junctio 77.66 14 P **P** **23 54 09.7 +1.1**
HYT IAmb IAmb 23 54 11.4
comp=Z,4.4nm,0.9s
P29M Windy Craggy 78.71 15 P **P** **23 54 15.8 +1.5**
P29M IAmb IAmb 23 54 25.0
comp=Z,10nm,1.4s
YKA Yellowknife Ar 78.80 3 P **P** **23 54 13.9 -0.7**
comp=Z,4.8nm,0.8s,baz=349,slow=5.6,SNR=24
YKA LR LR 00 32 19.8
comp=Z,26nm,18.6s,baz=337,slow=38
comp=Z,4.8nm,0.8s
YKA Yellowknife Ar 78.80 3 P **P** **23 54 14.3 -0.4**
YKA Yellowknife Ar 78.80 3 *ce*P **P** **23 54 14.1 -0.5**
YKA pmax pmax
comp=Z,5.0nm,0.8s
P33M Teslin, Yukon 79.09 13 P **P** **23 54 15.9 -0.5**
SKAG Skagway 79.34 14 P **P** **23 54 18.1 +0.5**
SKAG IAmb IAmb 23 54 41.3
comp=Z,4.4nm,0.6s
BOSA Boshof 80.30 221 P **P** **23 54 24.1 +0.8**
comp=Z,2.9nm,0.9s,baz=37,slow=1.2,SNR=3.7
comp=Z,2.9nm,0.9s
SCHQ Schefferville 80.33 337 P **P** **23 54 22.5 -0.7**
comp=Z,2.1nm,0.8s,baz=35,slow=8.8,SNR=3.1
SCHQ LR LR 00 28 42.5
comp=Z,27nm,21.6s,baz=132,slow=35
comp=Z,2.1nm,0.8s
DLBC Dease Lake 81.23 12 P **P** **23 54 29.2 +1.3**
DLBC IAmb IAmb 23 54 30.7
comp=Z,9.7nm,1.4s
WRA Warramunga Arr 82.32 123 P **P** **23 54 31.6 -2.6**
comp=Z,2.6nm,0.8s,baz=326,slow=4.8,SNR=11
comp=Z,2.6nm,0.8s
WB2 Warramunga Arr 82.33 123 P **P** **23 54 34.5 +0.4**
WB2 IAmb IAmb 23 54 38.2
comp=Z,12nm,1.0s
ASAR Alice Springs 84.72 126 P **P** **23 54 43.9 -2.5**
comp=Z,1.6nm,0.8s,baz=324,slow=5.1,SNR=13
comp=Z,1.6nm,0.8s
ASAR Alice Springs 84.72 126 P **P** **23 54 45.4 -1.0**
ASAR Alice Springs 84.72 126 P **P** **23 54 45.4 -1.0**
VLDQ Val d'Or 89.32 340 P **P** **23 55 09.0 +0.6**
VLDQ IAmb IAmb 23 55 11.5
comp=Z,5.1nm,0.8s
NEW Newport 92.81 6 P **P** **23 55 24.1 -0.6**
comp=Z,2.2nm,0.7s,baz=352,slow=7.1,SNR=4.5
comp=Z,2.2nm,0.7s
SADO Sadowa 92.86 340 LR LR 00 37 33.5
comp=Z,25nm,18.2s,baz=4.5,slow=36
N53A Lisbon 97.00 340 P Pdif 23 55 43.1 -1.0
O49A Covington 98.47 342 P Pdif 23 55 51.7 +1.1
P48A Milroy 99.42 343 **Pdif** **23 55 55.8 +1.0**
VNDA Vanda 127.49 164 PKP **PKiKP** **00 01 14.9 -1.3**
comp=Z,1.1nm,0.9s,baz=262,slow=4.6,SNR=5.9
VNDA Vanda 127.49 164 PKIKP **PKiKP** **00 01 15.0 -1.3**

*IDC **04** 23:47:09.4±2.7, 44˚.50N×138˚.23E, h291^{km}±26^{km}, mb3.0/9, mbtmp3.6/11, Error ellipse: s-maj=33.6km s-min=17.0km az=64.0*
*JMA **04** 23:47:12.2±0.5, 44˚.3N×13˚.9E±˚, h286^{km}, MV2.9/20, EASTERN SEA OF JAPAN*
ISC 04 23:47:08.3±0.8, 44˚.44N±0˚.08×138˚.56E±0˚.07, h287^{km}, n22, σ1^{s}88/24, mb3.4/9, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JSH	**Shimam**	**2.10**	**149**	*e*P		**Pn**	**23 47 56.7**	**+2.0**
JOSM	**Okushiri--Mats**	**2.45**	**164**	*e*P		**Pn**	**23 48 00.2**	**+2.4**
JSE	**Soyaes**	**2.91**	**78**	*e*P		**Pn**	**23 48 04.6**	**+2.4**
JKK2	**Kamakawa 2**	**3.06**	**99**	*e*P		**Pn**	**23 48 05.9**	**+2.1**
JNBK	**Urakawa-nobuka**	**3.74**	**124**	*e*P		**Pn**	**23 48 13.7**	**+2.8**
JTKR	**Abashiri--Toko**	**3.87**	**95**	*e*P		**Pn**	**23 48 14.1**	**+1.8**
JAR	**Ashorobuto**	**3.93**	**105**	*e*P		**Pn**	**23 48 14.9**	**+1.9**
JCH	**Churui**	**3.94**	**116**	*e*P		**Pn**	**23 48 13.8**	**+0.7**
JANG	**Nango**	**4.62**	**151**	*e*P		**Pn**	**23 48 21.8**	**+1.0**
JANG					*e*S	**S**	**23 49 16.4**	**-2.6**
USRK	**Ussuriysk Ar.**	**4.72**	**269**	P		**Pn**	**23 48 21.2**	**-0.8**
	2.2nm,0.6s,baz=82,slow=14,SNR=2.0							
NEM2	**Nemuro 2**	**5.30**	**99**	*e*P		**Pn**	**23 48 28.6**	**-0.1**
NEM2					*e*S	**S**	**23 49 29.6**	**-3.8**
JMK	**Ichinoseki**	**5.83**	**159**	*e*P		**Pn**	**23 48 36.0**	**+0.8**
MJAR	**Matsushiro Arr**	**7.90**	**182**	P		**Pn**	**23 49 02.2**	**+1.7**
	1.0nm,0.3s,baz=9.1,slow=12,SNR=1.8							
ZALV	**Zalesovo Beam**	**35.59**	**305**	P		**P**	**23 53 37.0**	**-1.6**
	0.6nm,0.5s,baz=78,slow=9.1,SNR=2.0							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**38.72**	**294**	P		**P**	**23 54 03.7**	**-1.2**
	0.2nm,0.5s,baz=60,slow=6.6,SNR=1.5							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**40.02**	**301**	P		**P**	**23 54 14.0**	**-1.5**
	0.8nm,0.4s,baz=75,slow=9.1,SNR=6.0							
	0.8nm,0.4s							
ARCES	**ARCESS Array B**	**56.32**	**337**	P		**P**	**23 56 17.9**	**-1.2**
	0.5nm,0.7s,baz=42,slow=9.8,SNR=4.8							
	0.5nm,0.7s							
FINES	**FINESS Array B**	**61.29**	**330**	P		**P**	**23 56 52.8**	**-0.4**
	0.5nm,0.4s,baz=39,slow=9.0,SNR=6.9							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**64.19**	**184**	P		**P**	**23 57 13.5**	**+0.8**
	0.3nm,0.5s,baz=5.5,slow=6.4,SNR=1.6							
	0.3nm,0.5s							
HFS	**Hagfors**	**66.48**	**333**	P		**P**	**23 57 27.4**	**+0.6**
	2.6nm,0.9s,baz=40,slow=5.8,SNR=8.8							
	2.6nm,0.9s							
ASAR	**Alice Springs**	**67.91**	**185**	P		**P**	**23 57 37.4**	**+1.2**
	0.3nm,0.5s,baz=14,slow=5.7,SNR=2.8							
	0.3nm,0.5s							
PDAR	**Pinedale Array**	**74.01**	**45**	P		**P**	**23 58 14.3**	**+1.4**
	0.3nm,0.4s,baz=336,slow=2.0,SNR=2.8							
	0.3nm,0.4s							

*MAN **05** 00:02:11, 5˚.81N×126˚.49E, h63^{km}, Ms3.4*
*DJA **05** 00:02:12.4±1.0, 6˚.N±5˚×12˚.6E±1˚.3, h10^{km}, M4.8/6, mb5.0/3, mB5.0/3, MLv4.7/6, Mw(mB)4.3/3*
*IDC **05** 00:02:13.2±1.3, 5˚.95N×126˚.39E, h97^{km}±10^{km}, mb3.8/16, mbtmp4.2/18, MS2.7/2, Error ellipse: s-maj=31.5km s-min=10.1km az=73.0*
*NEIC **05** 00:02:14.7±2.3, 6˚.03N±0˚.07×126˚.5E±0˚.1, h96^{km}±7^{km}, mb4.4/42, Error ellipse: s-maj=16.8km s-min=9.4km az=69.0*
ISC 05 00:02:13.5±0.9, 5˚.94N±0˚.04×126˚.47E±0˚.07, h93^{km}±8^{km}, n104, σ1^{s}57/107, mb4.3/40, 4C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.43**	**322**	P		**Pn**	**00 02 37.6**	**-0.9**
	245nm,0.3s,baz=240,slow=2.8,SNR=7.7							
DAV				S		**Sn**	**00 02 56.4**	**-1.0**
	658nm,0.3s,baz=254,slow=10,SNR=9.6							
DAV				LR	LR		00 03 24.4	
	comp=Z,240nm,20.1s,baz=166,slow=52							
DAV	**Davao City (W)**	**1.43**	**322**			**Pn**	**00 02 38.3**	**-0.2**
GSPH	**General Santos**	**1.52**	**276**	⇓*i*P		**Pn**	**00 02 36.1**	**-3.6**
GSPH				*i* S		**Sn**	**00 02 54.7**	**-4.9**
KCP	**Kidapawan**	**1.73**	**308**	⇓*i*P		**Pn**	**00 02 40.9**	**-1.5**
KCP				*i* S		**Sn**	**00 03 02.3**	**-2.1**
BIPH	**Bislig**	**2.23**	**357**	⇑*e*P		**Pn**	**00 02 46.5**	**-2.4**
BIPH				*e*S		**Sn**	**00 03 14.1**	**-1.8**
BUKP	**Musuan**	**2.38**	**324**	⇑*i*P		**Pn**	**00 02 50.9**	**0.0**
BUKP				*i* S		**Sn**	**00 03 23.9**	**+4.4**
SGSI	**Sangihe**	**2.43**	**203**	P		**Pn**	**00 02 50.6**	**-0.8**
CTBH	**Cotabato--PC H**	**2.55**	**300**	⇓*i*P		**Pn**	**00 02 53.0**	**0.0**
CTBH				*i* S		**Sn**	**00 03 27.5**	**+4.1**
SCPH	**Surigao**	**3.94**	**346**	⇑*e*P		**Pn**	**00 03 12.7**	**+1.0**
SCPH				*e*S		**Sn**	**00 03 57.5**	**+0.6**
DCPH	**Dipolog City**	**4.05**	**311**	⇓*e*P		**Pn**	**00 03 09.7**	**-3.6**
TBP	**Tagbilaran**	**4.53**	**325**	*e*P		**Pn**	**00 03 18.6**	**-1.2**
TBP				*i* S		**Sn**	**00 04 11.7**	**+0.3**
LLP	**Lapu-Lapu**	**5.00**	**331**	⇓*e*P		**Pn**	**00 03 26.4**	**+0.2**
LLP				*e*S		**Sn**	**00 04 26.1**	**+3.3**
TNTI	**Ternate**	**5.21**	**170**	Pn		**Pn**	**00 03 30.4**	**+1.4**
RCP	**Roxas**	**6.69**	**327**	⇑*e*P		**Pn**	**00 03 50.2**	**+1.1**
MRSI	**Marisa**	**7.06**	**220**	P		**Pn**	**00 03 54.9**	**+0.7**
	0.6nm1μm129nm,0.6s							
TOLI2	**Tolitoli**	**7.43**	**230**			**Pn**	**00 03 57.6**	**-1.7**
LUWI	**Luwuk**	**7.86**	**208**	Pn		**Pn**	**00 04 08.4**	**+3.4**
LUWI	**Luwuk**	**7.86**	**208**	P		Pn	00 04 13.0	+7.9
MYLDM	**Lahad Datu**	**7.97**	**265**	Pn		**Pn**	**00 04 08.6**	**+2.0**
APSI	**Ampana**	**8.33**	**215**	P		**Pn**	**00 04 14.4**	**+2.8**
LQP	**Lukban**	**9.46**	**330**	⇓*e*P		**Pn**	**00 04 27.4**	**+0.4**
TTSI	**Tana Toraja**	**11.12**	**217**	P		**Pn**	**00 04 52.7**	**+3.1**
KAPI	**Kappang**	**12.78**	**212**	P		**Pn**	**00 05 09.8**	**-2.0**
	18nm,1.0s,baz=40,slow=7.9,SNR=4.9							
KAPI				LR	LR		00 09 17.1	
	comp=Z,48nm,21.1s,baz=70,slow=33							
SBUM	**Sibu**	**14.62**	**257**	P		**P**	**00 05 41.7**	**+2.0**
BATI	**Baumata**	**16.28**	**190**	P		**Pn**	**00 05 55.5**	**-1.3**
	16nm,0.5s,baz=66,slow=18,SNR=1.5							
MTN	**Manton Dam**	**19.23**	**166**	P		**Pn**	**00 06 34.1**	**+1.8**
SMRI	**Semarang**	**20.55**	**231**	P		Pn	00 06 46.5	-1.3
KNRA	**Kununurra**	**21.60**	**174**	P		**P**	**00 06 56.8**	**+0.9**
KNRA				IAmb	IAmb		00 07 19.7	
	comp=Z,25nm,0.8s							
FITZ	**Fitzroy Crossi**	**23.90**	**182**	P		**P**	**00 07 18.8**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=17,slow=7.7,SNR=6.2							
	comp=Z,1.4nm,0.5s							
FITZ	**Fitzroy Crossi**	**23.90**	**182**	P		**P**	**00 07 19.9**	**+1.2**
FITZ				IAmb	IAmb		00 07 49.6	
	comp=Z,18nm,1.4s							
KULM	**Kulim**	**25.70**	**270**	P		**P**	**00 07 36.9**	**+1.7**
COEN	**Coen**	**25.80**	**140**	P		**P**	**00 07 35.7**	**-0.4**
COEN				IAmb	IAmb		00 08 07.2	
	comp=Z,28nm,1.4s							
WB0	**Warramunga Arr**	**26.71**	**163**	P		**P**	**00 07 46.2**	**+2.0**
WB0				IAmb	IAmb		00 08 09.2	
	comp=Z,14nm,1.2s							
WRA	**Warramunga Arr**	**26.86**	**163**	P		**P**	**00 07 45.2**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=342,slow=10,SNR=5.7							
	comp=Z,0.8nm,0.4s							
WB2	**Warramunga Arr**	**26.86**	**163**	P		**P**	**00 07 47.9**	**+2.3**
WR0	**Warramunga Arr**	**26.93**	**163**	P		**P**	**00 07 48.0**	**+1.8**
WR0				IAmb	IAmb		00 08 20.1	
	comp=Z,16nm,1.4s							
MBWA	**Marble Bar**	**27.73**	**194**	P		**P**	**00 07 53.2**	**-0.1**
MBWA				IAmb	IAmb		00 08 28.7	
	comp=Z,21nm,1.3s							
PSA00	**Pilbara Seismi**	**28.10**	**193**	P		**P**	**00 07 56.3**	**-0.3**
PSA00				IAmb	IAmb		00 08 24.4	
	comp=Z,17nm,1.2s							
JMN	**Monobe**	**28.49**	**13**	P		**P**	**00 08 00.6**	**+0.5**
JMN				IAmb	IAmb		00 08 36.0	
	comp=Z,13nm,1.1s							
CMAR	**Chiang Mai Arr**	**29.58**	**297**	P		**P**	**00 08 08.7**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=104,slow=7.5,SNR=6.7							
CMAR				LR	LR		00 19 52.2	
	comp=Z,11nm,20.4s,baz=150,slow=36							
	comp=Z,1.1nm,0.7s							
KMI	**Kunming**	**29.67**	**313**	⇓P		**P**	**00 08 11.0**	**+0.2**
KMI				pmax	pmax			
	comp=Z,7.0nm,0.7s							
AS31	**Alice Springs**	**30.31**	**166**	P		**P**	**00 08 17.4**	**+1.2**
ASAR	**Alice Springs**	**30.31**	**166**	P		**P**	**00 08 15.4**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=346,slow=7.3,SNR=12							
ASAR				PcP		**PcP**	**00 11 14.7**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=356,slow=3.2,SNR=4.4							
	comp=Z,0.8nm,0.4s							
ASAR	**Alice Springs**	**30.31**	**166**	P		**P**	**00 08 18.4**	**+2.2**
PZH	**PanZhiHua**	**31.21**	**314**	P		**P**	**00 08 26.1**	**+1.8**
PZH				pmax	pmax			
	comp=Z,20nm,0.9s							
PZH				pmax	pmax			
	comp=Z,80nm,5.1s							
LZH	**Lanzhou**	**36.49**	**328**	*e*P		P	00 09 05.1	-4.8
LZH				pP	pP		00 09 20.7	-11
LZH				pmax	pmax			
	comp=Z,16nm,1.3s							
FORT	**Forrest**	**36.54**	**178**	P		**P**	**00 09 11.1**	**+0.9**
HHC	**Hu-ho-hao-te**	**37.23**	**341**	*e*P		**P**	**00 09 17.5**	**+1.4**
HHC				pmax	pmax			
	comp=Z,23nm,0.6s							
HHC				pmax	pmax			
	comp=Z,120nm,9.3s							
USRK	**Ussuriysk Ar.**	**38.41**	**6**	P		**P**	**00 09 25.2**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=191,slow=5.9,SNR=3.1							
	comp=Z,1.7nm,0.5s							
BBOO	**Buckleboo**	**39.60**	**167**	P		**P**	**00 09 35.8**	**0.0**
NWAO	**Narrogin (SRO)**	**39.64**	**192**	P		**P**	**00 09 36.2**	**0.0**
STKA	**Stephens Creek**	**40.28**	**160**	P		**P**	**00 09 40.9**	**-0.6**
	comp=Z,5.8nm,0.7s,baz=334,slow=8.7,SNR=13							
	comp=Z,5.8nm,0.7s							
STKA	**Stephens Creek**	**40.28**	**160**	P		**P**	**00 09 42.7**	**+1.2**
H11S3	**WAKE ISLAND Hy**	**41.13**	**69**	T		T	00 53 53.8	
	baz=258,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hy**	**41.15**	**69**	T		T	00 53 57.9	
	baz=258,slow=75,SNR=15							
H11S2	**WAKE ISLAND Hy**	**41.15**	**69**	T		T	00 53 56.1	
	baz=258,slow=75,SNR=36							
H11N1	**WAKE ISLAND Hy**	**41.59**	**67**	T		T	00 54 47.4	
	baz=255,slow=75,SNR=5.9							
H11N2	**WAKE ISLAND Hy**	**41.60**	**67**	T		T	00 54 45.6	
	baz=255,slow=75,SNR=4.3							
H11N3	**WAKE ISLAND Hy**	**41.61**	**67**	T		T	00 54 47.2	
	baz=255,slow=75,SNR=5.2							
ARMA	**Armidale**	**43.45**	**148**	P		**P**	**00 10 09.0**	**+1.4**
SONM	**Songino Array**	**45.13**	**341**	P		**P**	**00 10 19.0**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=141,slow=9.3,SNR=2.2							
SONM				PcP		**PcP**	**00 11 58.0**	**-1

	comp=Z,0.6nm,0.6s							
TOO	**Toolangi**		**46.78**	**159**	P	**P**	**00 10 36.2**	**+2.5**
TOO					IAmb	IAmb	00 11 06.8	
	comp=Z,12nm,1.4s							
WMQ	**Urumqi**		**50.78**	**324**	*e*P	**P**	**00 11 06.5**	**+2.2**
MKAR	**Makanchi Array**		**55.61**	**325**	P	**P**	**00 11 38.1**	**-1.5**
	comp=Z,1.6nm,0.4s,baz=118,slow=7.7,SNR=19							
MKAR					PcP	**PcP**	**00 12 37.4**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=120,slow=5.5,SNR=5.1							
	comp=Z,1.6nm,0.4s							
MKAR	**Makanchi Array**		**55.61**	**325**	P	**P**	**00 11 39.4**	**-0.2**
ZAA0	**Zalesovo Array**		**58.52**	**333**	P	**P**	**00 12 00.1**	**+0.2**
ZAA0					IAmb	IAmb	00 12 01.0	
	comp=Z,2.3nm,0.8s							
ZALV	**Zalesovo Beam**		**58.52**	**333**	P	**P**	**00 11 58.8**	**-1.2**
	comp=Z,1.4nm,0.4s,baz=117,slow=5.0,SNR=8.9							
	comp=Z,1.4nm,0.4s							
ZALV	**Zalesovo Beam**		**58.52**	**333**	P	**P**	**00 12 00.2**	**+0.3**
KURK	**Kurchatov**		**59.75**	**327**	P	**P**	**00 12 07.4**	**-1.1**
KURK					IAmb	IAmb	00 12 10.7	
	comp=Z,4.8nm,1.0s							
GAR	**Garm**		**60.25**	**312**	P	**P**	**00 12 11.2**	**-1.1**
KKAR	**Karatay Array**		**61.45**	**316**	P	**P**	**00 12 19.4**	**-0.9**
AMKA	**Amchitka**		**62.82**	**34**	P	**P**	**00 12 27.3**	**-1.9**
BRVK	**Borovoye**		**65.41**	**327**	P	**P**	**00 12 46.4**	**+0.3**
BRVK					IAmb	IAmb	00 12 48.3	
	comp=Z,2.9nm,0.7s							
NRIK	**Noril'sk**		**68.23**	**346**	P	**P**	**00 13 03.4**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=162,slow=9.6,SNR=5.1							
	comp=Z,2.9nm,0.7s							
NRIK	**Noril'sk**		**68.23**	**346**	P	**P**	**00 13 04.0**	**+0.3**
NRIK					IAmb	IAmb	00 13 04.4	
	comp=Z,3.5nm,0.8s							
CLES	**Cleveland East**		**69.53**	**35**	P	**P**	**00 13 11.2**	**-0.8**
CLES					IAmb	IAmb	00 13 41.9	
	comp=Z,244nm,1.3s							
ABKAR	**Akbulak array**		**70.29**	**320**	P	**P**	**00 13 15.3**	**-1.5**
ARU	**Arti**		**72.94**	**327**	P	**P**	**00 13 33.3**	**+0.7**
K20K	**Telida**		**79.99**	**27**	P	**P**	**00 14 13.4**	**+1.1**
J20K	**Nowinta River**		**80.06**	**26**	P	**P**	**00 14 13.6**	**+1.0**
J20K					IAmb	IAmb	00 14 35.9	
	comp=Z,6.7nm,1.4s							
IMAR	**Indian Mountai**		**80.44**	**24**	P	**P**	**00 14 15.1**	**+0.5**
H21K	**Melozitna Rive**		**80.79**	**24**	P	**P**	**00 14 16.9**	**+0.3**
PPLA	**Purkeypile**		**80.80**	**27**	P	**P**	**00 14 16.2**	**-0.6**
PPLA					IAmb	IAmb	00 15 00.1	
	comp=Z,19nm,1.5s							
BPAW	**Bear Paw Mtn.**		**81.43**	**26**	P	**P**	**00 14 20.4**	**+0.4**
BPAW					IAmb	IAmb	00 14 20.8	
	comp=Z,4.3nm,0.9s							
MLY	**Manley**		**81.60**	**25**	P	**P**	**00 14 21.2**	**+0.4**
H23K	**Yukon River**		**82.15**	**24**	P	**P**	**00 14 24.5**	**+0.8**
TOLK	**Toolik Lake Re**		**82.30**	**22**	P	**P**	**00 14 25.5**	**+1.0**
TOLK					IAmb	IAmb	00 14 26.4	
	comp=Z,3.3nm,0.7s							
PWL	**Port Wells**		**82.51**	**29**	P	**P**	**00 14 25.2**	**-0.4**
WRH	**Wood River Hil**		**82.71**	**26**	P	**P**	**00 14 25.8**	**-0.9**
WRH					IAmb	IAmb	00 14 42.3	
	comp=Z,7.5nm,1.5s							
H24K	**Noodor Dome**		**82.84**	**24**	P	**P**	**00 14 28.0**	**+0.6**
H24K					IAmb	IAmb	00 14 29.3	
	comp=Z,3.4nm,0.8s							
ILAR	**Eielson Array**		**83.23**	**26**	P	**P**	**00 14 28.6**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=249,slow=5.4,SNR=8.1							
	comp=Z,1.2nm,0.8s							
J25K	**Salcha River,**		**83.89**	**26**	P	**P**	**00 14 31.9**	**-0.8**
J25K					IAmb	IAmb	00 14 32.2	
	comp=Z,4.0nm,1.1s							
RIDG	**Independent Ri**		**84.13**	**27**	P	**P**	**00 14 34.0**	**0.0**
RIDG					IAmb	IAmb	00 14 34.9	
	comp=Z,3.4nm,0.9s							
BMAR	**Burnt Mountain**		**84.15**	**23**	P	**P**	**00 14 35.0**	**+1.0**
J26L	**Joseph Creek**		**84.67**	**26**	P	**P**	**00 14 36.5**	**-0.3**
I26K	**Coal Creek Min**		**84.81**	**25**	P	**P**	**00 14 37.4**	**+0.1**
VRDI	**Verde Repeater**		**84.88**	**29**	P	**P**	**00 14 38.3**	**+0.3**
VRDI					IAmb	IAmb	00 15 19.0	
	comp=Z,9.7nm,1.5s							
VNDA	**Vanda**		**85.64**	**173**	P	**P**	**00 14 41.0**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=318,slow=8.4,SNR=4.5							
	comp=Z,0.8nm,0.8s							
ARCES	**ARCESS Array B**		**88.30**	**340**	P	**P**	**00 14 53.2**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=83,slow=6.0,SNR=30							
	comp=Z,1.2nm,0.5s							
BRTR	**Keskin Array B**		**88.42**	**310**	P	**P**	**00 14 54.5**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=114,slow=6.9,SNR=6.2							
	comp=Z,0.7nm,0.8s							
FINES	**FINESS Array B**		**89.77**	**332**	P	**P**	**00 15 00.6**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=72,slow=4.5,SNR=12							
	comp=Z,1.9nm,0.7s							
AKASG	**Malin Array Be**		**90.02**	**321**	P	**P**	**00 15 02.0**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=72,slow=3.0,SNR=1.1							
	comp=Z,0.2nm,0.3s							
TXAR	**Lajitas Array**		**120.44**	**51**	PKP	**PKPdf**	**00 20 53.3**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=264,slow=1.8,SNR=1.9							
TORD	**Torodi Ar. Bea**		**121.96**	**289**	PKP	**PKPdf**	**00 20 57.2**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=64,slow=2.2,SNR=7.5							

*IDC **05** 00:24:57.8±2.0,29.46S×61.19E,h0km,mb3.6/4, mbtmp3.7/5,ML3.9/1,MS3.2/6,Error ellipse: s-maj=79.3km s-min=35.0km az=24.0*

ISC 05 00:25:00.2±1.7,29.4S±0.5×61.1E±0.3,h14km,n18, σ1°26/6,mb3.7/4,MS3.3/6,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.66**	**307**	Pn	**Pn**	**00 28 52.1**	**-1.5**
	baz=138,slow=19,SNR=1.4						
OPO				Sn	Sn	00 31 43.2	-15
	baz=162,slow=9.9,SNR=1.7						
	0.7nm,0.3s						
H08S1	**Diego Carcia H**	**24.11**	**28**	T	T	00 54 59.3	
	baz=204,slow=76,SNR=3.3						
H08S2	**Diego Garcia H**	**24.12**	**29**	T	T	00 54 58.3	
	baz=204,slow=76,SNR=3.9						
H08S3	**Diego Garcia H**	**24.13**	**28**	T	T	00 54 59.5	
	baz=204,slow=76,SNR=4.9						
LSZ	**Lusaka**	**33.42**	**288**	LR	LR	00 45 20.5	
	comp=Z,18nm,18.3s,baz=152,slow=36						
KMBO	**Kilima Mbogo**	**36.15**	**317**	LR	LR	00 43 47.3	
	comp=Z,31nm,21.6s,baz=70,slow=31						
MBAR	**Mbarara**	**40.72**	**309**	LR	LR	00 47 54.8	
	comp=Z,34nm,18.5s,baz=110,slow=34						
H01W2	**Cape Leeuwin H**	**44.79**	**111**	T	T	01 20 53.6	
	baz=261,slow=75,SNR=5.7						
H01W3	**Cape Leeuwin H**	**44.79**	**111**	T	T	01 20 53.5	
	baz=261,slow=75,SNR=4.0						
H01W1	**Cape Leeuwin H**	**44.80**	**111**	T	T	01 20 54.9	
	baz=261,slow=75,SNR=8.1						
EIL	**Elat**	**63.81**	**335**	LR	LR	01 00 06.1	
	comp=Z,23nm,19.0s,baz=71,slow=33						
VNDA	**Vanda**	**63.83**	**166**	LR	LR	01 01 47.8	
	comp=Z,29nm,18.2s,baz=252,slow=35						
ASAR	**Alice Springs**	**64.41**	**104**	P	**P**	**00 35 35.5**	**-0.9**
	0.3nm,0.7s,baz=260,slow=5.5,SNR=2.1						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.22**	**298**	P	**P**	**00 36 20.2**	**+1.0**
	0.5nm,0.7s,baz=120,slow=4.6,SNR=2.4						
	0.5nm,0.7s						
KBZ	**Khabaz**	**74.65**	**346**	LR	LR	01 07 34.1	
	comp=Z,22nm,21.4s,baz=158,slow=34						
MKAR	**Makanchi Array**	**78.19**	**15**	P	**P**	**00 36 59.7**	**+0.7**
	0.5nm,0.7s,baz=190,slow=5.6,SNR=4.0						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**85.48**	**14**	P	**P**	**00 37 37.1**	**0.0**
	0.7nm,0.7s,baz=204,slow=3.3,SNR=3.8						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**146.76**	**356**	PKPbc	**PKPdf**	**00 44 39.9**	**+0.6**
	0.4nm,0.7s,baz=351,slow=3.9,SNR=4.1						

*IDC **05** 01:03:43.7±0.7,18.55S×168.28E,h0km,mb4.2/12, mbtmp4.3/13,ML4.1/1,MS3.7/27,Error ellipse: s-maj=25.9km s-min=17.4km az=94.0*

*NEIC **05** 01:03:46.4±2.2,18.57S±0.10×168.05E±0.07,h10km±1km, mb4.5/12,Error ellipse: s-maj=18.8km s-min=6.1km az=33.0*

*NOU **05** 01:03:48.2,18.59S×168.24E,h30km,MLv5.1/12, Vanuatu Islands*

ISC 05 01:03:48.8±0.5,18.61S±0.05×168.12E±0.09,h29km,n97, σ1°84/76,mb4.5/20,MS3.7/26,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.86**	**20**	P	**Pn**	**01 04 03.9**	**-1.1**
DVP	**Devils Point**	**0.88**	**4**	P	**Pn**	**01 04 04.4**	**-0.8**
YATNC	**Mamie plateau,**	**3.62**	**198**	P	**Pn**	**01 04 42.2**	**-0.7**
DZM	**Mont Dzumac**	**3.79**	**204**	Pn	**Pn**	**01 04 45.0**	**-0.3**
	15nm,0.3s,baz=8.2,slow=1.0,SNR=142						
DZM				Sn	**Sn**	**01 05 27.0**	**-1.9**
	84nm,0.3s,baz=311,slow=22,SNR=16						
DZM				LR	LR	01 06 12.2	
	comp=Z,1μm,18.3s,baz=3.5,slow=38						
	49nm,0.3s						
DZM	**Mont Dzumac**	**3.79**	**204**	*e*Pn	**Pn**	**01 04 45.0**	**-0.3**
	86nm,0.7s						
DZM				*e*Sn	**Sn**	**01 05 25.9**	**-3.0**
	560nm,0.8s						
DZM	**Mont Dzumac**	**3.79**	**204**		**Pn**	**01 04 45.4**	**+0.1**
NOUC	**Port Laguerre**	**3.87**	**206**	P	**Pn**	**01 04 46.8**	**+0.5**
OUENC	**Ouen Island, N**	**3.98**	**197**		**Pn**	**01 04 48.1**	**+0.3**
OUENC	**Ouen Island, N**	**3.98**	**197**	P	**Pn**	**01 04 48.3**	**+0.5**
ONTNC	**Ouen Toro**	**4.00**	**203**		**Pn**	**01 04 47.4**	**-0.7**
ONTNC	**Ouen Toro**	**4.00**	**203**	P	**Pn**	**01 04 48.2**	**+0.1**
PINNC	**Pines Island,**	**4.03**	**189**		**Pn**	**01 04 48.0**	**-0.6**
PINNC	**Pines Island,**	**4.03**	**189**	P	**Pn**	**01 04 48.3**	**-0.3**
KOUNC	**Koumac, New Ca**	**4.10**	**241**		**Pn**	**01 04 48.8**	**-0.7**
KOUNC	**Koumac, New Ca**	**4.10**	**241**	P	**Pn**	**01 04 50.1**	**+0.6**
MSVF	**Nonsavu**	**9.48**	**86**	Pn	Pn	01 06 09.0	+5.5
	0.7nm,0.3s,baz=222,slow=9.2,SNR=9.0						
MSVF				LR	LR	01 09 12.3	
	comp=Z,766nm,18.3s,baz=259,slow=35						
MSVF	**Nonsavu**	**9.48**	**86**	Pn	Pn	01 06 08.7	+5.1
HNR	**Honiara**	**12.08**	**318**	LR	LR	01 10 28.8	
	comp=Z,288nm,20.6s,baz=136,slow=33						
URZ	**Urewera**	**21.09**	**160**	P	**P**	**01 08 33.0**	**+2.2**
	16nm,0.8s,baz=316,slow=2.2,SNR=11						
URZ				LR	LR	01 16 01.7	
	comp=Z,400nm,18.7s,baz=31,slow=35						
URZ	**Urewera**	**21.09**	**160**	P	**P**	**01 08 32.3**	**+1.4**
URZ				IAmb	IAmb	01 08 36.0	
	comp=Z,19nm,0.7s						
DREZ	**Durham Road**	**21.18**	**167**	P	**P**	**01 08 37.1**	**+5.3**
OTVZ	**Oturere**	**21.50**	**164**	P	**P**	**01 08 39.7**	**+4.2**
FWVZ	**Far West T-bar**	**21.56**	**164**	P	**P**	**01 08 35.4**	**-0.8**
MTVZ	**Mangateitei**	**21.66**	**164**	P	**P**	**01 08 30.6**	**-6.5**
BHHZ	**Black Hill Sta**	**21.92**	**163**	P	**P**	**01 08 43.0**	**+3.2**
KWHZ	**Kaweka Forest**	**21.96**	**163**	P	**P**	**01 08 42.9**	**+2.7**
PMG	**Port Moresby**	**22.27**	**291**	LR	LR	01 16 51.4	
	comp=Z,177nm,18.1s,baz=137,slow=35						
PNHZ	**Pukenui**	**22.35**	**163**	P	**P**	**01 08 46.9**	**+2.5**
TSZ	**Takapari Road**	**22.42**	**164**	P	**P**	**01 08 47.5**	**+2.3**
DVHZ	**Dannevirke**	**22.70**	**164**	P	**P**	**01 08 49.7**	**+1.5**
PRHZ	**Porangahau**	**22.80**	**163**	P	**P**	**01 08 50.5**	**+1.4**
MRZ	**Mangatainoka R**	**22.89**	**165**	P	**P**	**01 08 50.7**	**+0.6**
BFZ	**Birch Farm**	**23.08**	**164**	P	**P**	**01 08 53.0**	**+0.9**
HOWZ	**Holdsworth Sta**	**23.11**	**166**	P	**P**	**01 08 54.2**	**+1.9**
CAW	**Cannon Point**	**23.20**	**167**	P	**P**	**01 08 47.5**	**-5.8**
MTW	**Mount Morrison**	**23.35**	**166**	P	**P**	**01 08 55.9**	**+1.1**
RPZ	**Rata Peaks**	**25.15**	**175**	P	**P**	**01 09 10.9**	**-0.5**
	comp=Z,15nm,0.8s,baz=352,slow=7.1,SNR=4.2						
RPZ				LR	LR	01 18 09.1	
	comp=Z,202nm,18.5s,baz=5.0,slow=34						
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**27.30**	**236**	P	**P**	**01 09 32.6**	**+1.6**
	comp=Z,2.0nm,0.5s,baz=82,slow=10.0,SNR=10						
STKA				LR	LR	01 19 21.4	
	comp=Z,71nm,18.8s,baz=34,slow=34						
	comp=Z,2.0nm,0.5s						
STKA	**Stephens Creek**	**27.30**	**236**	P	**P**	**01 09 30.9**	**0.0**
TOO	**Toolangi**	**27.36**	**222**	P	**P**	**01 09 30.7**	**-0.8**
TOO				IAmb	IAmb	01 09 32.7	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**31.88**	**262**	P	**P**	**01 10 11.4**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=82,slow=6.1,SNR=5.8						
WRA				LR	LR	01 22 22.0	
	comp=Z,120nm,18.7s,baz=326,slow=35						
	comp=Z,0.9nm,0.8s						
AS31	**Alice Springs**	**32.26**	**255**	P	**P**	**01 10 13.3**	**-1.8**
ASAR	**Alice Springs**	**32.26**	**255**	P	**P**	**01 10 15.4**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=85,slow=8.5,SNR=24						
ASAR				LR	LR	01 22 54.0	
	comp=Z,143nm,19.8s,baz=121,slow=36						
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**32.26**	**255**	P	**P**	**01 10 11.7**	**-3.4**
GUMO	**Guam**	**39.35**	**323**	LR	LR	01 27 09.5	
	comp=Z,75nm,19.0s,baz=166,slow=36						
PPT2	**Papeete2**	**40.16**	**95**	*e*LR	LR	01 22 30.6	
	comp=Z,172nm,26.8s						
PPT2				*e*LR	LR	01 22 31.0	
	comp=Z,216nm,25.8s						
FITZ	**Fitzroy Crossi**	**40.25**	**264**	LR	LR	01 27 31.1	
	comp=Z,163nm,19.1s,baz=87,slow=35						
DAV	**Davao City (W)**	**49.10**	**297**	LR	LR	01 34 34.2	
	comp=Z,27nm,18.6s,baz=162,slow=38						
TAOE	**Nuku Hiva Isla**	**51.03**	**86**	*e*LR	LR	01 27 32.9	
	comp=Z,193nm,25.1s						
VNDA	**Vanda**	**59.03**	**182**	P	**P**	**01 13 45.3**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=358,slow=8.1,SNR=6.2						
VNDA				LR	LR	01 35 02.4	
	comp=Z,48nm,22.0s,baz=7.0,slow=32						
	comp=Z,1.2nm,0.6s						
SBA	**Scott Base**	**59.28**	**180**	P	**P**	**01 13 48.5**	**+1.2**
SBA				IAmb	IAmb	01 13 49.7	
	comp=Z,4.3nm,0.8s						
MJAR	**Matsushiro Arr**	**61.70**	**333**	P	**P**	**01 14 03.5**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=167,slow=6.4,SNR=5.5						
	comp=Z,0.8nm,0.3s						
USRK	**Ussuriysk Ar.**	**70.70**	**333**	P	**P**	**01 15 02.4**	**+0.6**
	comp=Z,4.0nm,0.8s,baz=164,slow=5.8,SNR=5.3						
	comp=Z,4.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**70.70**	**333**	P	**P**	**01 15 02.2**	**+0.4**
PSI	**Prapat**	**71.27**	**280**	LR	LR	01 49 51.8	
	comp=Z,66nm,18.4s,baz=176,slow=39						
QSPA	**South Pole Qui**	**71.44**	**180**	P	**P**	**01 15 06.7**	**+0.4**
	comp=Z,11nm,0.9s,baz=14,slow=1.9,SNR=27						
QSPA				LR	LR	01 45 12.8	
	comp=Z,56nm,18.2s,baz=51,slow=35						
	comp=Z,11nm,0.9s						
QSPA	**South Pole Qui**	**71.44**	**180**	P	**P**	**01 15 06.0**	**-0.3**
PETK	**Petropavlovsk-**	**71.98**	**353**	LR	LR	01 42 24.0	
	comp=Z,36nm,19.7s,baz=144,slow=32						
RPN	**Rapa Nui**	**75.32**	**114**	LR	LR	01 41 32.4	
	comp=Z,34nm,20.3s,baz=275,slow=30						
XAN	**Xi'an**	**76.91**	**313**	P	P	01 15 43.6	+5.0
XAN				pP	PcP	01 15 49.6	0.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**77.28**	**295**	LR	LR	01 49 47.4	
	comp=Z,23nm,19.1s,baz=225,slow=36						
CMAR	**Chiang Mai Arr**	**77.28**	**295**	P	**P**	**01 15 42.2**	**+1.3**
PZH	**PanZhiHua**	**78.47**	**303**	P	**P**	**01 15 50.1**	**+2.5**
PZH				pmax	pmax		
	comp=Z,20nm,0.6s						
PZH				pmax	pmax		
	comp=Z,110nm,4.4s						
MAW	**Mawson**	**78.61**	**202**	LR	LR	01 46 25.9	
	comp=Z,44nm,20.5s,baz=50,slow=32						
HHC	**Hu-ho-hao-te**	**79.06**	**320**	*e*P	**P**	**01 15 53.3**	**+2.9**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,65nm,7.1s						
MA2	**Magadan**	**79.18**	**351**	LR	LR	01 46 05.7	
	comp=Z,47nm,21.9s,baz=140,slow=32						
BELA	**Belgrano 2**	**82.81**	**175**	P	**P**	**01 16 09.0**	**-0.8**
SMAI	**San Martin Ant**	**84.75**	**162**	P	**P**	**01 16 20.4**	**+0.5**
ULN	**Ulaanbaatar**	**85.73**	**324**	P	**P**	**01 16 26.6**	**+1.4**
ULN				IAmb	IAmb	01 16 35.3	
	comp=Z,2.5nm,0.9s						
YAK	**Yakutsk**	**85.96**	**343**	LR	LR	01 49 52.4	
	comp=Z,56nm,21.9s,baz=98,slow=32						
SONM	**Songino Array**	**86.08**	**324**	P	**P**	**01 16 27.4**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=135,slow=5.3,SNR=5.8						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**86.08**	**324**	P	**P**	**01 16 27.1**	**+0.1**
SONM				IAmb	IAmb	01 16 36.4	
	comp=Z,2.2nm,1.0s						
TROLL	**Troll, Antarti**	**89.08**	**184**	P	**P**	**01 16 40.8**	**-0.3**
NVAR	**Mina Array Bea**	**89.19**	**49**	P	**P**	**01 16 41.5**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=228,slow=7.5,SNR=3.6						
	comp=Z,0.3nm,0.6s						
BBB	**Bella Bella**	**89.53**	**34**	LR	LR	01 52 18.0	
	comp=Z,17nm,18.1s,baz=176,slow=33						
SNAA	**Sanae**	**89.74**	**183**	P	**P**	**01 16 43.5**	**-0.6**
SNAA	**Sanae**	**89.74**	**183**	PP	PP	01 20 14.3	-1.3
SNAA	**Sanae**	**89.74**	**183**	P	**P**	**01 16 43.5**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=205,slow=6.7,SNR=29						
SNAA				LR	LR	01 53 45.8	
	comp=Z,40nm,21.8s,baz=191,slow=33						
	comp=Z,1.5nm,0.4s						
SNAA	**Sanae**	**89.74**	**183**	P	**P**	**01 16 43.5**	**-0.6**
ILAR	**Eielson Array**	**89.95**	**18**	P	**P**	**01 16 43.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=236,slow=5.1,SNR=4.7						
ILAR				LR	LR	01 52 21.3	
	comp=Z,38nm,19.6s,baz=258,slow=32						
	comp=Z,0.3nm,0.6s						
VNA3	**Neumayer Olymp**	**90.37**	**181**	P	**P**	**01 16 46.5**	**-0.4**
VNA2	**Neumayer--Watz**	**90.65**	**181**	P	**P**	**01 16 48.1**	**-0.1**
	baz=181,slow=4.2						
VNA2	**Neumayer--Watz**	**90.65**	**181**	PKiKP	**PKiKP**	**01 21 44.1**	**+1.8**
VNA2	**Neumayer--Watz**	**90.65**	**181**	PP	PP	01 20 21.3	-1.4
G08A	**Pilot Rock**	**91.61**	**42**	P	**P**	**01 16 54.8**	**+1.6**
G08A				IAmb	IAmb	01 17 01.8	
	comp=Z,3.4nm,1.1s						
ELK	**Elko**	**92.28**	**48**	LR	LR	01 50 18.0	
	comp=Z,27nm,19.3s,baz=250,slow=30						
TIXI	**Tiksi**	**93.91**	**348**	LR	LR	01 56 59.5	
	comp=Z,34nm,20.0s,baz=260,slow=34						
WMQ	**Urumqi**	**96.01**	**314**	*e*P	**P**	**01 17 14.7**	**+1.3**
INK	**Inuvik**	**96.28**	**19**	LR	LR	01 55 09.0	
	comp=Z,20nm,19.2s,baz=296,slow=32						
ABKAR	**Akbulak array**	**115.69**	**316**	PKPdf	**PKPdf**	**01 22 26.1**	**-2.1**
ARCES	**ARCESS Array B**	**124.19**	**345**	PKP	**PKPdf**	**01 22 42.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=82,slow=2.7,SNR=14						
FINES	**FINESS Array B**	**129.60**	**337**	PKP	**PKPdf**	**01 22 54.2**	**-0.3**
	comp=Z,2.3nm,1.0s,baz=125,slow=3.0,SNR=4.3						
GERES	**GERESS Array B**	**143.44**	**331**	PKP	**PKPdf**	**01 23 19.7**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=52,slow=2.4,SNR=4.0						
KBA	**Koelnbreinsper**	**144.87**	**330**	*e*P	**PKiKP**	**01 23 26.7**	**-0.4**
	comp=Z,1.2nm,0.6s						
ABTA	**Abfaltersbach**	**145.51**	**330**	*e*P	**PKPab**	**01 23 24.6**	**0.0**
	comp=Z,3.1nm,0.7s						
FETA	**Feichten**	**146.13**	**332**	*e*P	**PKPab**	**01 23 27.5**	**+0.5**
	comp=Z,1.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**165.86**	**249**	PKP	**PKPdf**	**01 23 50.2**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=114,slow=2.2,SNR=3.7						

KRSC 05 01:04:31.4±1.2,48.63N×156.33E,h31km±21km,ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.06**	**356**	*e*P	Pn	01 05 05.2	+1.4
PAU	**Pauzhetka**	**2.86**	**6**	*e*S	Sn	01 05 51.9	+3.8
KDTR	**Khodutka, Kamc**	**3.38**	**19**	*e*P	Pn	01 05 25.9	+4.0
MTVR	**Mutnovka**	**4.04**	**16**	*e*P	Pn	01 05 35.8	+4.7
MTVR				*e*S	Sn	01 06 23.1	+5.8
RUS	**Russkaya**	**4.05**	**19**	*e*P	Pn	01 05 35.0	+3.8
RUS				*e*S	Sn	01 06 21.8	+4.2
GRL	**Gorelyy**	**4.08**	**15**	*e*P	Pn	01 05 36.4	+4.7
KOK	**Koryaka**	**4.89**	**16**	*e*P	Pn	01 05 48.4	+5.6
SDLR	**Sedlovina**	**4.93**	**18**	*e*P	Pn	01 05 47.7	+4.4
SPN	**Mys Shipunski**	**5.05**	**26**	*e*P	Pn	01 05 49.7	+4.8
GNL	**Ganaly**	**5.17**	**11**	*e*P	Pn	01 05 51.1	+4.4

IDC 05 01:11:04.5±51.0,17.80S×176.64W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=942.8km s-min=171.8km az=80.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.16**	**241**	P	P	01 18 42.9	+0.4
	1.3nm,0.5s,baz=90,slow=11,SNR=4.7						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**46.31**	**259**	P	P	01 19 32.1	-0.4
	0.8nm,0.6s,baz=95,slow=8.0,SNR=5.2						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**46.44**	**254**	P	P	01 19 33.2	-0.3
	3.5nm,0.4s,baz=90,slow=8.4,SNR=54						
	3.5nm,0.4s						

*INET **05** 01:24:58.0±0.5,12.52N×87.75W,h23km±4km,MW3.2*
*SNET **05** 01:24:59.4±1.1,12.

*IDC **05** 02:19:17.9±0.7, 41°.74S×84°.36W, h0km, mb4.1/10, mbtmp4.1/10, MS3.4/18, Error ellipse: s-maj=28.6km s-min=19.5km az=100.0*
*NEIC **05** 02:19:19.4±1.7, 41°.87S±0°.10×84°.3W±0°.1, h10km±1km, mb4.4/18, Error ellipse: s-maj=23.1km s-min=6.2km az=225.0*
ISC 05 02:19:19.6±0.7, 41°.7S±0°.1×84°.4W±0°.1, h10km, n57, σ1§10/40, mb4.3/16, MS3.4/17, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**8.91**	**31**	T	T	02 30 41.8	
	SNR=732						
H03S1	**Juan Fernandez**	**8.91**	**31**	T	T	02 30 48.7	
	SNR=1020						
H03S3	**Juan Fernandez**	**8.93**	**31**	T	T	02 30 42.5	
	SNR=843						
H03N3	**Juan Fernandez**	**9.25**	**29**	Pn	**Pn**	**02 21 30.1**	**-2.7**
	baz=148,slow=74						
H03N3				T	T	02 31 08.5	
	baz=187,slow=16,SNR=53						
H03N2	**Juan Fernandez**	**9.26**	**29**	Pn	**Pn**	**02 21 30.0**	**-2.9**
	baz=359,slow=74						
H03N2				T	T	02 31 06.4	
	baz=187,slow=16,SNR=288						
H03N1	**Juan Fernandez**	**9.27**	**29**	T	T	02 31 10.0	
	baz=187,slow=16,SNR=38						
PLCA	**Paso Flores**	**10.44**	**89**	LR	LR	02 25 13.2	
	comp=Z,207nm,18.9s,baz=258,slow=34						
ML02	**Panimavida**	**11.69**	**64**	Pn	**Pn**	**02 22 06.0**	**-0.4**
PEL	**Peldehue**	**13.78**	**56**	Pn	**Pn**	**02 22 33.1**	**-1.9**
CO03	**El Pedregal**	**15.41**	**50**	Pn	**Pn**	**02 22 58.0**	**+0.9**
CO03				IAmb	IAmb	02 23 04.3	
	comp=Z,16nm,0.9s						
ZON	**Zonda**	**16.11**	**56**	Pn	**Pn**	**02 23 06.0**	**-0.2**
TRQA	**Tornquist**	**17.54**	**86**		**Pn**	**02 23 24.3**	**+0.1**
AC02	**Maricunga**	**19.37**	**45**	P	**P**	**02 23 47.6**	**+1.6**
GO02	**Mina Guanaco**	**20.50**	**41**	P	**P**	**02 23 59.1**	**+1.0**
GO02				IAmb	IAmb	02 24 03.6	
	comp=Z,30nm,1.5s						
PB15	**IPOC Station P**	**22.21**	**39**	P	**P**	**02 24 17.7**	**+1.3**
LVC	**Limon Verde**	**22.99**	**39**	P	**P**	**02 24 26.2**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=198,slow=13,SNR=3.5						
LVC				LR	LR	02 31 13.3	
	comp=Z,82nm,19.3s,baz=211,slow=31						
	comp=Z,1.7nm,0.5s						
LVC	**Limon Verde**	**22.99**	**39**	P	**P**	**02 24 25.7**	**+0.8**
LVC				IAmb	IAmb	02 24 32.8	
	comp=Z,14nm,1.1s						
RPN	**Rapa Nui**	**25.09**	**297**	LR	LR	02 32 11.6	
	comp=Z,36nm,18.2s,baz=128,slow=31						
ITQB	**Itaqui**	**25.39**	**71**	P	**P**	**02 24 48.3**	**+1.2**
PMSA	**Palmer Station**	**25.91**	**160**	LR	LR	02 32 33.3	
	comp=Z,33nm,21.9s,baz=20,slow=31						
CPUP	**Villa Florida**	**26.98**	**64**	P	**P**	**02 25 01.6**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=244,slow=11,SNR=8.0						
CPUP				LR	LR	02 35 12.1	
	comp=Z,94nm,19.3s,baz=228,slow=35						
	comp=Z,4.1nm,0.7s						
LPAZ	**La Paz**	**28.89**	**34**	P	**P**	**02 25 20.8**	**+1.5**
	comp=Z,1.4nm,0.7s,baz=179,slow=8.7,SNR=7.9						
	comp=Z,1.4nm,0.7s						
NNA	**Nana**	**30.28**	**15**	LR	LR	02 34 23.7	
	comp=Z,86nm,21.8s,baz=205,slow=30						
SIV	**San Ignacio**	**32.51**	**45**	P	**P**	**02 25 50.0**	**-0.6**
	comp=Z,1.2nm,0.2s,baz=229,slow=9.7,SNR=5.1						
SIV				LR	LR	02 38 17.2	
	comp=Z,81nm,20.8s,baz=278,slow=35						
	comp=Z,1.2nm,0.2s						
ATAH	**Atahualpa**	**34.78**	**10**	LR	LR	02 36 53.0	
	comp=Z,54nm,21.5s,baz=208,slow=30						
ETMB	**Extrema**	**35.51**	**32**	P	**P**	**02 26 16.6**	**0.0**
ETMB				IAmb	IAmb	02 26 17.8	
	comp=Z,3.9nm,0.9s						
ROSC	**El Rosal**	**47.17**	**14**	LR	LR	02 44 45.3	
	comp=Z,105nm,19.7s,baz=57,slow=32						
SNAA	**Sanae**	**48.46**	**155**	P	**P**	**02 28 01.6**	**-0.2**
	comp=Z,4.8nm,1.1s,baz=283,slow=5.1,SNR=6.3						
	comp=Z,4.8nm,1.1s						
SNAA	**Sanae**	**48.46**	**155**	P	**P**	**02 28 00.6**	**-1.2**
SNAA				IAmb	IAmb	02 28 02.6	
	comp=Z,5.5nm,1.1s						
QSPA	**South Pole Qui**	**48.58**	**180**	P	**P**	**02 28 03.1**	**+0.2**
	comp=Z,2.3nm,1.0s,baz=140,slow=1.7,SNR=5.4						
QSPA				PcP	**PcP**	**02 29 27.8**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=159,slow=1.7,SNR=4.1						
QSPA				LR	LR	02 46 27.6	
	comp=Z,51nm,18.5s,baz=150,slow=34						
	comp=Z,2.3nm,1.0s						
VNDA	**Vanda**	**54.51**	**194**	LR	LR	02 48 04.2	
	comp=Z,48nm,19.7s,baz=140,slow=32						
MDP	**Montagnes des**	**54.80**	**40**	LR	LR	02 50 24.1	
	comp=Z,44nm,20.6s,baz=194,slow=34						
RCBR	**Riachuelo**	**55.85**	**64**	LR	LR	02 52 29.8	
	comp=Z,62nm,20.3s,baz=322,slow=36						
PPT	**Papeete**	**60.12**	**273**	LR	LR	02 48 49.6	
	comp=Z,62nm,19.6s,baz=165,slow=30						
SJG	**San Juan**	**61.81**	**20**	LR	LR	02 53 27.0	
	comp=Z,13nm,21.7s,baz=220,slow=33						
MAW	**Mawson**	**68.27**	**167**	LR	LR	02 59 14.3	
	comp=Z,19nm,18.3s,baz=278,slow=35						
RPZ	**Rata Peaks**	**71.39**	**228**	LR	LR	02 55 44.8	
	comp=Z,77nm,18.7s,baz=318,slow=31						
TXAR	**Lajitas Array**	**72.86**	**342**	P	**P**	**02 30 49.2**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=166,slow=9.5,SNR=10						
	comp=Z,0.7nm,0.8s						
TX31	**Lajitas Ar. Si**	**72.86**	**342**	P	**P**	**02 30 48.3**	**-0.3**
TX31				IAmb	IAmb	02 30 52.8	
	comp=Z,6.1nm,1.4s						
TX32	**Lajitas Array**	**72.86**	**342**	P	**P**	**02 30 48.8**	**+0.2**
MIAR	**Mount Ida**	**76.31**	**352**	P	**P**	**02 31 09.5**	**+1.1**
MIAR				IAmb	IAmb	02 31 19.0	
	comp=Z,7.6nm,1.3s						
TKL	**Tuckaleechee C**	**76.95**	**0**	LR	LR	03 01 33.7	
	comp=Z,21nm,20.1s,baz=204,slow=33						
ANMO	**Albuquerque**	**78.89**	**342**	P	**P**	**02 31 22.7**	**-0.4**
ANMO				IAmb	IAmb	02 31 25.1	
	comp=Z,4.1nm,1.2s						
PV13	**Radium Mtn., P**	**82.52**	**341**	P	**P**	**02 31 43.4**	**+1.0**
PV13				IAmb	IAmb	02 31 44.8	
	comp=Z,3.8nm,1.1s						
PRN	**Pahroc Range**	**83.54**	**336**	P	**P**	**02 31 48.6**	**+1.0**
PRN				IAmb	IAmb	02 31 50.7	
	comp=Z,3.7nm,1.0s						
BOSA	**Boshof**	**84.58**	**124**	P	**P**	**02 31 52.7**	**-0.7**
	comp=Z,5.7nm,1.1s,baz=270,slow=10,SNR=3.1						
	comp=Z,5.7nm,1.1s						
NVAR	**Mina Array Bea**	**85.51**	**334**	P	**P**	**02 31 59.2**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=175,slow=6.2,SNR=5.9						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**85.51**	**334**	P	**P**	**02 31 58.6**	**+0.9**
PDAR	**Pinedale Array**	**87.06**	**342**	P	**P**	**02 32 05.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=161,slow=6.3,SNR=3.6						
	comp=Z,0.2nm,0.5s						
RSSD	**Black Hills**	**87.21**	**346**	P	**P**	**02 32 05.7**	**-0.2**
HLID	**Hailey**	**89.04**	**339**	P	**P**	**02 32 15.7**	**+1.1**
GERES	**GERESS Array B**	**124.50**	**53**	PKP	**PKPdf**	**02 38 17.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=186,slow=2.5,SNR=3.8						
ARCES	**ARCESS Array B**	**135.19**	**28**	PKP	**PKPdf**	**02 38 39.9**	**+0.8**
	comp=Z,1.9nm,1.1s,baz=232,slow=1.0,SNR=4.1						
SEY	**Seymchan**	**140.98**	**323**	PKP	**PKPdf**	**02 38 48.2**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=81,slow=7.9,SNR=4.0						
MJAR	**Matsushiro Arr**	**146.83**	**275**	PKPbc	**PKPdf**	**02 38 59.7**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=150,slow=2.7,SNR=4.6						
ARU	**Arti**	**151.97**	**45**	PKPbc	**PKPbc**	**02 39 13.5**	**-0.5**
	comp=Z,3.2nm,0.5s,baz=328,slow=7.8,SNR=5.8						
AKTO	**Aktyubinsk**	**152.69**	**58**	PKPbc	**PKPbc**	**02 39 15.0**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=256,slow=3.1,SNR=7.0						

*KRNET **05** 03:06:58.3±0.1, 42°.89N×72°.81E, h26km, mb3.1*
*SOME **05** 03:06:58.6, 42°.90N×72°.93E, h5km*
*KNET **05** 03:06:59.3±0.5, 42°.91N×72°.88E, h20km±7km, ml2.2, Error ellipse: s-maj=4.9km s-min=2.7km az=89.0*
*NNC **05** 03:07:00.1±1.3, 43°.19N×72°.89E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=10.4km s-min=8.4km az=175.0*
ISC 05 03:06:57.6±1.1, 43°.03N±0°.03×72°.84E±0°.02, h7km±10km, n49, σ1§37/83, 30C-13D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**0.40**	**135**	P	**Pn**	**03 07 13.0**	**+3.2**
	64nm,0.1s						
MRKS				S	**Sb**	**03 07 18.1**	**+4.7**
	354nm,0.1s						
EKS2	**Erkin-Say**	**0.78**	**118**	⇑P	**Pb**	**03 07 13.2**	**-0.4**
	21nm,0.1s,SNR=16						
EKS2				⇓S	**Sb**	**03 07 24.1**	**-0.3**
	40nm,0.2s						
EKS2	**Erkin-Say**	**0.78**	**118**	⇓*e*P	**Pg**	**03 07 12.7**	**+0.1**
	baz=7.0						
EKS2				⇓*i*S	**Sg**	**03 07 22.9**	**+0.1**
	baz=7.0						
AML	**Almayashu**	**1.10**	**144**	⇑P	**Pg**	**03 07 17.9**	**-0.8**
	4.7nm,0.1s,SNR=28						
AML				⇑S	**Sg**	**03 07 31.7**	**-1.2**
	32nm,0.2s						
USP	**Ospenovka**	**1.24**	**78**	⇑P	**Pg**	**03 07 22.0**	**+0.6**
	54nm,0.1s,SNR=133						
USP	**Ospenovka**	**1.24**	**78**	⇓*i*P	**Pg**	**03 07 22.0**	**+0.6**
	baz=72						
USP				⇓*i*S	**Sn**	**03 07 39.1**	**+0.8**
	baz=72						
AAK	**Ala-Archa**	**1.28**	**107**	⇑P	**Pg**	**03 07 22.6**	**+0.5**
	35nm,0.1s,SNR=26						
AAK				⇑S	**Sn**	**03 07 39.6**	**+0.2**
	27nm,0.2s						
AAK	**Ala-Archa**	**1.28**	**107**	⇑*i*P	**Pn**	**03 07 21.5**	**-0.5**
	baz=1.0						
AAK				⇑*e*S	**Sb**	**03 07 38.2**	**-0.6**
	baz=1.0						
SGDS	**Sogindy**	**1.38**	**72**	*e*P	**Pg**	**03 07 24.7**	**+0.7**
	16nm,0.1s						
SGDS				*e*S	**Sg**	**03 07 43.5**	**+1.6**
	44nm,0.2s						
SGDS	**Sogindy**	**1.38**	**72**	P	**Pg**	**03 07 24.7**	**+0.7**
	16nm,0.1s						
SGDS				S	**Sb**	**03 07 38.6**	**-2.8**
	9.5nm,0.1s						
CHMS	**Chumysh**	**1.41**	**91**	⇑P	**Pg**	**03 07 24.5**	**-0.1**
	13nm,0.1s,SNR=7.1						
CHMS				⇑S	**Sg**	**03 07 43.4**	**+0.6**
	31nm,0.1s						
CHMS	**Chumysh**	**1.41**	**91**	⇑P	**Pg**	**03 07 24.4**	**-0.1**
	7.3nm,0.3s						
CHMS				⇑S	**Sg**	**03 07 43.8**	**+1.1**
	11nm,0.5s						
CHMS	**Chumysh**	**1.41**	**91**	⇓*i*P	**Pg**	**03 07 24.4**	**-0.1**
	baz=85						
CHMS				⇓*i*S	**Sg**	**03 07 43.2**	**+0.5**
	baz=85						
UCH	**Uchtor**	**1.48**	**122**	⇑P	**Pb**	**03 07 25.2**	**-0.3**
	3.4nm,0.1s,SNR=7.9						
UCH				⇑S	**Sg**	**03 07 44.9**	**-0.1**
	20nm,0.3s						
UCH	**Uchtor**	**1.48**	**122**	⇑*i*P	**Pn**	**03 07 24.2**	**-0.7**
	baz=17						
UCH				⇑*e*S	**Sn**	**03 07 42.8**	**-1.8**
	baz=17						
KBK	**Karagaybulak**	**1.60**	**103**	⇑P	**Pg**	**03 07 27.8**	**-0.3**
	16nm,0.1s,SNR=32						
KBK				⇓S	**Sg**	**03 07 49.6**	**+0.7**
	34nm,0.1s						
KBK	**Karagaybulak**	**1.60**	**103**	⇓*e*P	**Pb**	**03 07 27.1**	**-0.4**
	baz=98						
KBK				⇓*i*S	**Sb**	**03 07 47.7**	**-0.2**
	baz=98						
KK31	**Karatay Array**	**1.71**	**273**	⇑Pn	**Pb**	**03 07 28.9**	**-0.3**
	5.0nm,0.3s,baz=98,slow=15,SNR=79						
KK31				⇑Sn	**Sg**	**03 07 52.3**	**0.0**
	30nm,0.5s,baz=94,slow=25,SNR=4.3						
KKAR	**Karatay Array**	**1.71**	**273**	⇑*i*P	**Pb**	**03 07 28.6**	**-0.6**
	baz=78						
KKAR				⇑*i*S	**Sb**	**03 07 50.3**	**-0.5**
	baz=78						
TKM2	**Tokmak 2**	**2.03**	**92**	⇓P	**Pb**	**03 07 35.1**	**+0.2**
	10nm,0.1s,SNR=20						
TKM2				⇓S	**Sg**	**03 08 02.8**	**+0.1**
	37nm,0.1s						
TKM2	**Tokmak 2**	**2.03**	**92**	⇑Pn	**Pb**	**03 07 34.8**	**0.0**
	8.1nm,0.5s						
TKM2				⇑Sn	**Sg**	**03 08 02.4**	**-0.3**
	26nm,0.4s						
TKM2	**Tokmak 2**	**2.03**	**92**	⇑*i*P	**Pn**	**03 07 33.3**	**+1.0**
	baz=88						
TKM2				⇑*i*S	**Sb**	**03 07 59.0**	**-1.3**
	baz=88						
KRBS	**Karabastau**	**2.17**	**71**	*e*P	**Pg**	**03 07 38.6**	**-0.6**
	8.0nm,0.2s						
KRBS				*e*S	**Sg**	**03 08 06.5**	**-0.9**
	34nm,0.3s						
KRBS	**Karabastau**	**2.17**	**71**	Pg	**Pg**	**03 07 40.0**	**+0.7**
	8.0nm,0.2s						
KRBS				Lg	Lg	03 08 06.7	
	34nm,0.3s						
BTLS	**Baital**	**2.19**	**23**	*e*P	**Pg**	**03 07 39.5**	**-0.1**
	1.5nm,0.2s						
BTLS				*e*S	**Sg**	**03 08 08.3**	**+0.3**
	15nm,0.1s						
BTLS	**Baital**	**2.19**	**23**	Pg	**Pg**	**03 07 41.3**	**+1.7**
	4.1nm,0.2s						
BTLS				Lg	Lg	03 08 08.0	
	15nm,0.1s						
IUG	**Iuzhnay**	**2.25**	**248**	*e*P	**Pb**	**03 07 39.0**	**+0.4**
	5.5nm,0.4s						
IUG				*e*S	**Sg**	**03 08 08.9**	**-0.9**
	50nm,0.4s						
KST	**Kastek**	**2.29**	**89**	*e*P	**Pb**	**03 07 40.2**	**+1.0**
	8.8nm,0.3s						
KST				*e*S	**Sg**	**03 08 10.7**	**-0.6**
	22nm,0.4s						
KST	**Kastek**	**2.29**	**89**	Pg	**Pg**	**03 07 43.2**	**+1.7**
	12nm,0.3s						
KST				Lg	Lg	03 08 10.6	
	22nm,0.4s						
BOOM	**Boomskoye usch**	**2.35**	**102**	⇑*i*P	**Pn**	**03 07 37.4**	**+0.7**
	baz=99						
BOOM				⇑*e*S	**Sn**	**03 08 05.7**	**-0.1**
	baz=99						
ULHL	**Ulahol**	**2.63**	**106**	⇑*e*P	**Pn**	**03 07 41.1**	**+0.5**
	baz=3.0						
ULHL				⇑*e*S	**Sn**	**03 08 12.4**	**-0.5**
	baz=3.0						
MTBS	**Maitube**	**2.63**	**87**	*e*P	**Pg**	**03 07 46.7**	**-1.3**
	3.6nm,0.2s						
MTBS				*e*S	**Sg**	**03 08 21.6**	**-0.6**
	9.3nm,0.2s						
MTBS	**Maitube**	**2.63**	**87**	Pg	**Pg**	**03 07 49.7**	**+1.7**
	8.8nm,0.3s						
MTBS				Lg	Lg	03 08 21.6	
	9.3nm,0.2s						
KUU	**Kurty**	**2.69**	**70**	*e*P	**Pb**	**03 07 47.1**	**+1.0**
	2.9nm,0.2s						
KUU				*e*S	**Sg**	**03 08 22.1**	**-1.9**
	14nm,0.2s						
KUU	**Kurty**	**2.69**	**70**	Pg	**Pg**	**03 07 49.7**	**+0.5**
	3.6nm,0.2s						
KUU				Lg	Lg	03 08 22.6	
	14nm,0.2s						
KTBS	**Karatobe**	**2.89**	**75**	*e*P	**Pb**	**03 07 50.8**	**+1.4**
	2.5nm,0.4s						
KTBS				*e*S	**Sg**	**03 08 27.7**	**-2.6**
	34nm,0.4s						
KTBS	**Karatobe**	**2.89**	**75**	Pg	**Pg**	**03 07 53.0**	**+0.1**
	2.2nm,0.2s						
KTBS				Lg	Lg	03 08 29.2	
	34nm,0.4s						
MDOK	**Medeo**	**3.09**	**86**	*e*P	**Pb**	**03 07 54.0**	**+1.2**
	2.3nm,0.3s						
MDOK				*e*S	**Sg**	**03 08 34.3**	**-2.5**
	10nm,0.5s						
MDOK	**Medeo**	**3.09**	**86**	Pg	**Pg**	**03 07 57.8**	**+1.1**
	3.8nm,0.2s						
MDOK				⇓Lg	Lg	03 08 34.7	
	7.9nm,0.5s						
MDOK				Lg	Lg	03 08 35.7	
	10nm,0.5s						
CHKK	**Chushkaly**	**3.13**	**73**	*e*P	**Pg**	**03 07 55.7**	**-1.9**
	1.6nm,0.2s						
CHKK				*e*S	**Sg**	**03 08 36.7**	**-1.5**
	10nm,0.2s						
CHKK	**Chushkaly**	**3.13**	**73**	Pg	**Pg**	**03 07 58.7**	**+1.1**
	2.3nm,0.2s						
CHKK				Lg	Lg	03 08 36.7	
	10nm,0.2s						
ARXS	**Arharly**	**3.81**	**70**	*e*P	**Pg**	**03 08 08.0**	**-2.6**
	1.4nm,0.5s						
ARXS				*e*S	**Sg**	**03 08 57.7**	**-2.2**
	12nm,0.4s						
ARXS	**Arharly**	**3.81**	**70**	Pg	**Pg**	**03 08 10.9**	**+0.4**
	2.8nm,0.6s						
ARXS				Lg	Lg	03 08 57.7	
	12nm,0.4s						
SATY	**Saty**	**4.08**	**88**	*e*P	**Pg**	**03 08 14.9**	**-0.8**
	2.6nm,0.2s						
SATY				*e*S	**Sg**	**03 09 10.1**	**+1.4**
	6.3nm,0.1s						
SATY	**Saty**	**4.08**	**88**	Pg	**Pg**	**03 08 18.0**	**+2.3**
	2.5nm,0.3s						
SATY				Lg	Lg	03 09 10.0	
	6.3nm,0.1s						
UZB	**Uzynbulak**	**4.53**	**86**	*e*P	**Pg**	**03 08 20.9**	**-3.4**
	1.7nm,0.4s						
UZB				*e*S	**Sg**	**03 09 19.6**	**-3.5**
	3.4nm,0.4s						
UZB	**Uzynbulak**	**4.53**	**86**	Pg	**Pg**	**03 08 23.0**	**-1.3**
	1.7nm,0.4s						
UZB				Lg	Lg	03 09 19.7	
	3.4nm,0.4s						
PDGK	**Podgornoye**	**4.88**	**84**	Pg	**Pg**	**03 08 30.8**	**-0.1**
	0.7nm,0.4s						
PDGK				Lg	Lg	03 09 31.9	
	1.7nm,0.4s						
PDGK	**Podgornoye**	**4.88**	**84**	⇑Lg	Lg	03 09 30.8	
	6.3nm,0.9s						

*IDC **05** 03:09:31.9±2.7, 22°.22S×179°.66W, h589km±22km, mb3.2/8, mbtmp4.1/9, Error ellipse: s-maj=48.7km s-min=17.4km az=144.0*
ISC 05 03:09:32.1±1.1, 22°.2S±0°.2×179°.6W±0°.1, h592km, n13, σ1§31/14, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.95**	**333**	P	**P**	**03 11 03.0**	**-1.4**
	11nm,0.4s,baz=241,slow=20,SNR=33						
MSVF				S	**S**	**03 12 20.1**	**+0.7**
	5.4nm,0.9s,baz=100,slow=23,SNR=1.7						
DZM	**Mont Dzumac**	**12.97**	**268**	P	**P**	**03 12 23.4**	**+2.5**
	4.3nm,0.5s,baz=263,slow=24,SNR=6.2						
STKA	**Stephens Creek**	**35.77**	**246**	P	**P**	**03 15 42.6**	**-0.3**
	1.2nm,0.4s,baz=82,slow=11,SNR=4.6						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**42.74**	**259**	P	**P**	**03 16 37.8**	**-1.1**
	5.2nm,0.8s,baz=87,slow=8.6,SNR=16						
ASAR				PcP	**PcP**	**03 18 15.9**	**-0.7**
	0.5nm,0.5s,baz=114,slow=3.9,SNR=4.9						
	5.2nm,0.8s						
WRA	**Warramunga Arr**	**42.96**	**264**	P	**P**	**03 16 38.9**	**-1.7**
	3.7nm,0.8s,baz=96,slow=7.9,SNR=13						
	3.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.39**	**264**	P	**P**	**03 17 43.1**	**-0.5**
	3.3nm,0.6s,baz=60,slow=7.2,SNR=11						
	3.3nm,0.6s						
MJAR	**Matsushiro Arr**	**70.71**	**325**	P	**P**	**03 19 49.0**	**-0.5**
	1.2nm,0.7s,baz=161,slow=5.8,SNR=4.2						
	1.2nm,0.7s						
NVAR	**Mina Array Bea**	**83.23**	**44**	P	**P**	**03 20 58.2**	**+0.5**
	0.3nm,0.7s,baz=199,slow=3.1,SNR=3.6						
	0.3nm,0.7s						
TXAR	**Lajitas Array**	**89.17**	**58**	P	**P**	**03 21 27.2**	**+1.1**
	0.4nm,0.9s,baz=213,slow=9.0,SNR=4.6						
	0.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.31**	**290**	P	**P**	**03 21 28.1**	**+1.3**
	0.9nm,0.3s,baz=127,slow=2.8,SNR=11						
	0.9nm,0.3s						
ARCES	**ARCESS Array B**	**130.28**	**349**	PKP	**PKPdf**	**03 27 34.2**	**-1.1**
	0.4nm,0.5s,baz=50,slow=1.9,SNR=8.0						
AKASG	**Malin Array Be**	**143.72**	**329**	PKP	PKPbc	03 27 58.1	-1.4
	1.2nm,0.3s,baz=43,slow=4.6,SNR=13						
BRTR	**Keskin Array B**	**146.82**	**309**	PKPbc	**PKPbc**	**03 28 08.4**	**-0.7**
	1.1nm,0.6s,baz=127,slow=4.2,SNR=7.3						

*NOU **05** 03:13:17.9, 41°.03S×172°.58E, h304km, MLv3.5/4, South Island, New Zealand*
*WEL **05** 03:13:34.7, 42°.3±3°.×17°.2E±°, h6km±3km, M3.0/24, ML3.2/12, MLv3.0/24, Error ellipse: s-maj=0.0km s-min=0.0km az=90.9*
ISC 05 03:13:35.9±0.9, 41°.81S±0°.03×171°.88E±0°.04, h17km±6km, n30, σ0§64/38, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSZ	**Denniston Nort**	**0.09**	**319**	P	**Pg**	**03 13 39.4**	**+0.1**
DSZ				S	**Sg**	**03 13 41.7**	**0.0**
THZ	**Tophouse**	**0.77**	**87**	P	**Pb**	**03 13 50.0**	**-0.8**
THZ				S	**Sb**	**03 14 00.3**	**-0.7**
MRNZ	**Matariki Terra**	**0.78**	**58**	P	**Pb**	**03 13 50.7**	**-0.2**
MRNZ				S	**Sb**	**03 14 01.3**	**+0.2**
INZ	**Inchbonnie**	**0.97**	**199**	P	**Pb**	**03 13 53.9**	**-0.3**
INZ				S	**Sb**	**03 14 06.8**	**+0.1**
LTZ	**Lake Taylor**	**1.01**	**164**	P	**Pb**	**03 13 54.7**	**-0.2**
QRZ	**Quartz Range**	**1.10**	**27**	P	**Pb**	**03 13 56.3**	**-0.1**
QRZ				S	**Sn**	**03 14 11.1**	**-0.2**
QRZ	**Quartz Range**	**1.10**	**27**	P	**Pn**	**03 13 56.7**	**+0.2**
TKNZ	**Takaka Hill**	**1.12**	**47**	P	**Pn**	**03 13 56.8**	**0.0**
TKNZ				S	**Sn**	**03 14 12.4**	**+0.5**
NNZ	**Nelson**	**1.27**	**63**	P	**Pn**	**03 13 58.9**	**+0.1**
KHZ	**Kahutara**	**1.37**	**117**	P	**Pb**	**03 14 01.7**	**+0.6**
KHZ				S	**Sg**	**03 14 20.2**	**-0.1**
KHZ	**Kahutara**	**1.37**	**117**	P	**Pb**	**03 14 01.8**	**+0.7**
GVZ	**Greta Valley S**	**1.44**	**144**	P	**Pb**	**03 14 02.5**	**+0.3**
BSWZ	**Blackbirch Sta**	**1.50**	**87**	P	**Pb**	**03 14 03.5**	**+0.4**
BSWZ				S	**Sg**	**03 14 24.1**	**-0.1**
OXZ	**Oxford**	**1.52**	**176**	P	**Pn**	**03 14 02.6**	**+0.4**
WVZ	**Waitaha Valley**	**1.52**	**213**	P	**Pb**	**03 14 03.5**	**0.0**
TUWZ	**Tuamarina**	**1.59**	**77**	P	**Pb**	**03 14 04.4**	**-0.4**
DUWZ	**D'Urville Isla**	**1.84**	**57**	P	**Pn**	**03 14 08.0**	**+1.4**
GCSZ	**Gaunt Creek Bo**	**1.89**	**217**	P	**Pn**	**03 14 07.3**	**-0.1**
TCW	**Tory Channel**	**1.90**	**72**	P	**Pb**	**03 14 09.8**	**-0.2**
**

JNB Noboribetsu 1.10 147 ⇓P **Pn 03 31 15.3 -0.2**
JHR Hokuryu 1.15 72 ⇓*e*P **Pn 03 31 16.5 +0.7**
JHR ⇓*e*S **Sn 03 31 40.1 +0.7**
JOSM Okushiri--Mats 1.42 203 ⇓P **Pn 03 31 18.1 +0.1**
JOSM ⇓*e*S **Sn 03 31 42.8 -0.5**
JOSM Okushiri--Mats 1.42 203 A A 03 31 18.1
comp=E,8.0nm,2.2s,comp=E,7.0nm,3.6s
JAB Ashibetsu 1.46 85 A A 03 31 18.7
comp=E,6.0nm,2.8s,comp=E,5.0nm,3.6s
JSS Shosan 1.55 49 *e*P **Pn 03 31 20.3 +1.1**
JOMM Oshimamatsumae 1.87 185 ⇓P **Pn 03 31 22.4 +0.1**
JOMM ⇓*e*S **Sn 03 31 50.1 -0.9**
JOMM Oshimamatsumae 1.87 185 A A 03 31 22.4
comp=E,4.0nm,2.2s,comp=E,3.0nm,1.1s
JKK2 Kamakawa 2 1.90 74 ⇓P **Pn 03 31 23.1 +0.6**
JKK2 ⇓*e*S **Sn 03 31 51.4 0.0**
JSHD Hidakashinhida 1.92 120 A A 03 31 22.9
comp=E,5.0nm,3.3s,comp=E,6.0nm,2.6s
JOT Ohata 2.10 163 ⇓*e*P **Pn 03 31 23.8 -0.9**
JRBN Rebuntou 2.12 16 ⇓*e*P **Pn 03 31 25.3 +0.6**
JRBN ⇓*e*S **Sn 03 31 55.1 -0.5**
JNBK Urakawa-nobuka 2.17 120 ⇓*e*P **Pn 03 31 24.6 -0.8**
JNBK Urakawa-nobuka 2.17 120 A A 03 31 24.6
comp=E,6.0nm,0.4s,comp=E,9.0nm,1.0s
JWK2 Keihoku 2.27 31 *e*P **Pn 03 31 27.7 +1.4**
JSE Soyaes 2.31 47 *e*P **Pn 03 31 27.9 +1.1**
JSE *e*S **Sn 03 32 00.2 +1.0**
JCH Churui 2.43 108 ⇓*e*P **Pn 03 31 26.6 -1.7**
JCH ⇓*e*S **Sn 03 31 58.1 -3.5**
ERM Erimo 2.57 121 Pn **Pn 03 31 29.0 -0.8**
ERM Erimo 2.57 121 *ce*PN **Pn 03 31 29.8 +0.1**
ERM pmax pmax
comp=Z,966nm,1.3s
JAR Ashorobuto 2.59 91 ⇓P **Pn 03 31 30.0 0.0**
JAR ⇓*e*S **Sn 03 32 03.9 -0.9**
JAR Ashorobuto 2.59 91 A A 03 31 30.0
comp=Z,10.0nm,2.1s,comp=Z,13nm,0.8s
JTM Tenmabayashi 2.68 169 Pn **Pn 03 31 29.7 -1.4**
JOB Onbets 2.69 99 A A 03 31 31.5
comp=Z,6.0nm,0.9s,comp=Z,4.0nm,0.6s
JTKR Abashiri--Toko 2.74 77 *e*P **Pn 03 31 32.0 +0.4**
JTKR *e*S **Sn 03 32 07.3 -0.5**
TEY Ternei 3.08 304 ⇑*e*PN **Pn 03 31 35.9 +0.3**
TEY *e* 03 32 14.7
TEY pmax pmax
comp=Z,290nm,0.6s
TEY pmax pmax
comp=N,130nm,0.6s
TEY pmax pmax
comp=E,160nm,0.6s
TEY pmax pmax
comp=E,400nm,2.1s
TEY pmax pmax
comp=Z,300nm,2.1s
TEY pmax pmax
comp=N,600nm,2.3s
TEY Ternei 3.08 304 *i*P **Pn 03 31 35.9 +0.3**
TEY AMB AMB 03 31 36.4
comp=N,180nm,0.6s
TEY *e*S **Sn 03 32 15.4 +0.4**
TEY A A 03 32 15.5
comp=N,1µm,2.4s
TEY A A 03 32 15.5
comp=N,660nm,2.4s
JNSB Nemuroshibetsu 3.50 82 A A 03 31 41.4
comp=N,6.0nm,3.4s,comp=N,7.0nm,2.3s
RUSJ Misakicho 3.71 77 *e*PN **Pn 03 31 44.1 +0.8**
YSS Yuzh-Sakhalins 3.99 26 Pn **Pn 03 31 46.8 +0.1**
YSS Yuzh-Sakhalins 3.99 26 *ai*PN **Pn 03 31 47.4 +0.7**
YSS *e*S **Sn 03 32 34.3 -0.7**
YSS pmax pmax
comp=Z,120nm,0.8s
YSS smax smax
comp=N,550nm,0.8s
YSS smax smax
comp=E,250nm,0.8s
YSS smax smax
comp=E,800nm,3.3s
YSS Yuzh-Sakhalins 3.99 26 *i*P **Pn 03 31 47.2 +0.5**
YSS AMB AMB 03 31 48.7
comp=E,120nm,0.8s
YSS *e*S **Sn 03 32 34.3 -0.7**
YSS A A 03 32 35.8
comp=E,550nm,0.8s
YSS A A 03 32 35.8
comp=E,250nm,0.8s
YSS A A 03 32 36.0
comp=E,800nm,3.3s
NMR Nemuro--Hokkai 4.01 88 *e*PN **Pn 03 31 45.4 -1.7**
NMR *e*S **Sn 03 32 30.9 -4.7**
NMR Nemuro--Hokkai 4.01 88 *e*P **Pn 03 31 45.4 -1.7**
YUK Yuzh-Kuril'sk 4.14 79 *ci*PN **Pn 03 31 48.9 +0.2**
YUK *i*S **Sn 03 32 37.8 -0.6**
YUK pmax pmax
comp=N,64nm,0.3s
YUK pmax pmax
comp=Z,407nm,0.3s
YUK pmax pmax
comp=E,113nm,0.4s
YUK smax smax
comp=N,639nm,0.3s
YUK smax smax
comp=E,255nm,0.3s
YUK Yuzh-Kuril'sk 4.14 79 *i*P **Pn 03 31 48.9 +0.2**
YUK AMB AMB 03 31 49.4
comp=E,410nm,0.3s
YUK *i*S **Sn 03 32 37.8 -0.6**
YUK A A 03 32 44.2
comp=E,640nm,0.3s
YUK A A 03 32 44.2
comp=E,260nm,0.3s
SHO Shikotan 4.82 82 ⇑*i*PN **Pn 03 31 55.2 -2.1**
SHO *i*S **Sn 03 32 48.0 -6.0**
SHO pmax pmax
comp=E,89nm,0.2s
SHO pmax pmax
comp=Z,240nm,0.2s
SHO pmax pmax
comp=N,55nm,0.1s
SHO smax smax
comp=N,651nm,0.3s
SHO smax smax
comp=E,900nm,0.4s
SHO Shikotan 4.82 82 *i*P **Pn 03 31 56.2 -1.1**
SHO AMB AMB 03 31 58.2
comp=E,240nm,0.2s
SHO *i*S **Sn 03 32 48.3 -5.7**
SHO A A 03 32 53.6
comp=E,650nm,0.3s
JMM Marumori 5.54 175 Pn **Pn 03 32 04.2 -2.4**
JSD Sado 5.55 196 Pn **Pn 03 32 05.9 -0.9**
KUR Kuril'sk 5.79 69 *e*PN **Pn 03 32 09.6 -0.1**
KUR S **Sn 03 33 19.0 +2.7**
KUR pmax pmax
comp=E,66nm,0.4s
KUR pmax pmax
comp=Z,325nm,0.4s
KUR pmax pmax
comp=N,110nm,0.3s
KUR smax smax
comp=N,123nm,0.2s
KUR smax smax
comp=E,60nm,0.4s
KUR Kuril'sk 5.79 69 *e*P **Pn 03 32 10.0 +0.3**
KUR AMB AMB 03 32 13.1
comp=E,70nm,0.4s
KUR AMB AMB 03 32 13.1
comp=E,330nm,0.4s
KUR *e*S **Sn 03 33 16.1 -0.2**
KUR A A 03 33 24.6
comp=E,120nm,0.3s
KUR A A 03 33 24.6
comp=E,60nm,0.3s
USA0B Ussuriysk Arra 6.01 281 **Pn 03 32 13.9 +1.2**
USA0B Ussuriysk Arra 6.01 281 PN **Pn 03 32 13.9 +1.2**
USRK Ussuriysk Ar. 6.01 281 P **Pn 03 32 11.8 -0.8**
comp=E,12nm,0.8s,baz=84,slow=14,SNR=20
USRK Ussuriysk Ar. 6.01 281 **Pn 03 32 12.6 0.0**
USRK Ussuriysk Ar. 6.01 281 PN **Pn 03 32 12.6 0.0**
MSHR Mys Shultsa 6.70 266 *i*PN **Pn 03 32 22.0 +0.5**
MAJO Matsushiro 7.01 193 Pn **Pn 03 32 24.3 -1.5**
MAJO Matsushiro 7.01 193 *i*PN **Pn 03 32 24.9 -0.9**
MJAR Matsushiro Arr 7.01 193 P **Pn 03 32 23.4 -2.4**
comp=E,60nm,0.6s,baz=7.2,slow=13,SNR=91
TYV Tymovskoe 7.66 12 *e*PN **Pn 03 32 35.6 +1.7**
TYV *e*S **Sn 03 34 03.5 +3.2**
TYV pmax pmax
comp=Z,100nm,0.7s
TYV pmax pmax
comp=Z,75nm,0.7s
TYV smax smax
comp=N,5.0nm,0.6s
TYV smax smax
comp=E,6.0nm,0.6s
TYV Tymovskoe 7.66 12 *e*P **Pn 03 32 35.6 +1.7**
TYV AMB AMB 03 32 37.2
comp=E,80nm,0.7s
GRNR Gornyy 7.82 342 ⇓*i*PN **Pn 03 32 36.8 +0.7**
GRNR *e*S **Sn 03 34 05.6 +1.4**
GRNR pmax pmax
comp=E,50nm,0.6s
GRNR pmax pmax
comp=N,70nm,0.8s
GRNR pmax pmax
comp=Z,80nm,0.7s
GRNR smax smax
comp=N,3.0nm,0.5s
GRNR Gornyy 7.82 342 *e*P **Pn 03 32 36.8 +0.7**
GRNR AMB AMB 03 32 37.2
comp=N,80nm,0.7s
JGF Kuroka 8.09 197 Pn **Pn 03 32 38.0 -1.8**
KLR Kul'dur 8.27 318 P **Pn 03 32 41.4 -0.5**
comp=N,75nm,1.0s,baz=128,slow=14,SNR=97
INU Inuyama 8.41 198 Pn **Pn 03 32 42.1 -1.8**
BNX BinXian 9.45 289 ⇑P **Pn 03 32 58.0 +0.7**
BNX sP 03 33 48.7
BNX S **Sn 03 34 43.5 +0.6**
BNX pmax pmax
comp=N,25nm,1.1s
BNX pmax pmax
comp=N,65nm,4.6s
BNX LR LR
comp=N,260nm,5.9s
BNX LR LR
comp=N,120nm,4.8s
BNX LR LR
comp=N,100nm,6.8s
SEHB SEOHWA 10.41 245 **Pn 03 33 09.9 0.0**
CN2 Changchun 10.73 277 *e*P **Pn 03 33 14.5 +0.6**
CN2 S **Sn 03 35 11.9 -1.5**
CN2 pmax pmax
comp=N,10.0nm,1.0s
JMN Monobe 10.85 209 **Pn 03 33 13.7 -2.0**
KSRS Korea Array 11.09 242 P **Pn 03 33 19.4 +0.8**
comp=N,4.6nm,0.8s,baz=57,slow=12,SNR=24
KSAR Wonju Array Be 11.12 242 Pn **Pn 03 33 19.0 0.0**
KSAR Wonju Array Be 11.12 242 PN **Pn 03 33 19.0 0.0**
ZEA Zeya 13.43 325 *e*PN **Pn 03 33 47.2 -0.8**
ZEA pmax pmax
comp=N,50nm,0.8s
ZEA pmax pmax
comp=E,50nm,0.8s
ZEA pmax pmax
comp=Z,80nm,0.9s
ZEA Zeya 13.43 325 *e*P **Pn 03 33 47.2 -0.8**
ZEA AMB AMB 03 33 48.1
comp=Z,80nm,0.9s
KROS Kirovskiy 14.04 327 *e*P **Pn 03 33 52.8 -2.9**
PEA0B Petropavlovsk- 15.13 44 *ce*P **P 03 34 09.6 0.0**
PETK Petropavlovsk- 15.13 44 P **P 03 34 09.0 -0.6**
comp=Z,13nm,0.8s,baz=219,slow=12,SNR=17
PETK Petropavlovsk- 15.13 44 **Pn 03 34 08.7 -0.3**
PETK Petropavlovsk- 15.13 44 P **Pn 03 34 08.7 -0.3**
HIA Hailar 15.30 300 **Pn 03 34 10.8 -0.4**
HIA Hailar 15.30 300 P **Pn 03 34 10.8 -0.4**
HIA pmax pmax
comp=Z,36nm,0.6s
JCJ Chichijima 16.34 174 P **P 03 34 22.4 -0.8**
comp=Z,46nm,0.4s,baz=120,slow=23,SNR=5.6
MA2 Magadan 17.45 18 P **P 03 34 31.9 -3.1**
comp=Z,7.6nm,0.4s,baz=189,slow=13,SNR=6.7
MA2 Magadan 17.45 18 **P 03 34 34.2 -0.9**
MA2 IAmb IAmb 03 34 37.6
comp=Z,27nm,1.1s
MA2 Magadan 17.45 18 *ce*P **P 03 34 34.7 -0.3**
MA2 pmax pmax
comp=Z,31nm,1.1s
MA2 Magadan 17.45 18 *e*P **P 03 34 34.7 -0.3**
XLT XiLinHaoTe 17.47 280 *e*P **P 03 34 35.2 -0.4**
XLT pmax pmax
comp=Z,13nm,0.9s
YAK Yakutsk 19.68 345 P **P 03 34 56.9 -2.3**
comp=Z,28nm,0.4s,baz=354,slow=4.8,SNR=14
YAK Yakutsk 19.68 345 P **P 03 34 57.2 -2.0**
YAK Yakutsk 19.68 345 *di*P **P 03 34 56.8 -2.3**
YAK *e*S **S 03 38 25.1 -4.9**
YAK pmax pmax
comp=Z,111nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=N,37nm,1.0s
YAK smax smax
comp=E,46nm,1.4s
YAK smax smax
comp=N,26nm,1.2s
NJ2 Nanjing 20.28 243 *e*P **P 03 35 05.5 -0.4**
NJ2 pmax pmax
comp=N,16nm,0.7s
SEY Seymchan 20.82 16 P **P 03 35 09.4 -1.9**
comp=N,17nm,0.7s,baz=207,slow=8.2,SNR=52
comp=N,17nm,0.7s
SEY Seymchan 20.82 16 *ce*P **P 03 35 09.6 -1.7**
SEY pmax pmax
comp=Z,24nm,0.9s
SEY Seymchan 20.82 16 *e*P **P 03 35 09.6 -1.7**
HHC Hu-ho-hao-te 21.36 273 *e*P **P 03 35 17.5 +0.1**
HHC pmax pmax
comp=Z,15nm,0.9s
HHC pmax pmax
comp=Z,180nm,7.2s
BOD Bodaibo 21.84 321 *e*P **P 03 35 18.9 -3.0**
BOD pmax pmax
comp=Z,18nm,1.5s
ULN Ulaanbaatar 23.51 293 P **P 03 35 36.8 -0.8**
ULN IAmb IAmb 03 35 39.2
comp=Z,7.4nm,0.7s
ULN Ulaanbaatar 23.51 293 *ce*P **P 03 35 37.4 -0.2**
ULN pmax pmax
comp=Z,7.0nm,0.6s
ULN Ulaanbaatar 23.51 293 *e*P **P 03 35 37.4 -0.2**
SONM Songino Array 23.95 293 P **P 03 35 41.0 -0.6**
comp=Z,5.3nm,0.5s,baz=75,slow=9.6,SNR=33
SONM ScP **ScP 03 42 37.8 +0.1**
comp=Z,1.6nm,0.9s,baz=64,slow=3.4,SNR=6.4
comp=Z,5.3nm,0.5s
SONM Songino Array 23.95 293 P **P 03 35 41.3 -0.3**
SONM IAmb IAmb 03 35 43.4
comp=Z,20nm,1.5s
SONM Songino Array 23.95 293 P **P 03 35 41.3 -0.3**
SONM pmax pmax
comp=Z,20nm,1.5s
WHN Wuhan 24.21 247 ⇓P **P 03 35 47.6 +3.7**
ZAK Zakamensk 25.99 299 *e*P **P 03 35 59.1 -0.8**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
ZAK Zakamensk 25.99 299 *e*P **P 03 35 59.1 -0.8**
AMKA Amchitka 27.37 59 P **P 03 36 11.7 -0.4**
MOY Mondy 27.47 301 *i*P **P 03 36 14.4 +1.3**
MOY pmax pmax
comp=Z,30nm,1.6s
LZH Lanzhou 28.74 268 *e*P **P 03 36 25.8 +1.2**
LZH pP pP 03 37 01.8 -1.7
LZH sP sP 03 37 27.1 +1.2
LZH pmax pmax
comp=Z,15nm,1.3s
GTA Gaotai 30.36 276 *e*P **P 03 36 39.7 +0.9**
GTA pmax pmax
comp=Z,8.0nm,0.9s
GOMU GeErMu 35.27 274 P **P 03 37 22.5 +0.8**
GOMU pmax pmax
comp=Z,3.0nm,0.6s
GOMU pmax pmax
comp=Z,48nm,4.8s
PZH PanZhiHua 35.39 254 P **P 03 37 23.1 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,5.7s
NRIK Noril'sk 37.16 332 P **P 03 37 35.4 -1.4**
comp=Z,6.9nm,0.5s,baz=115,slow=11,SNR=5.6
comp=Z,6.9nm,0.5s
NRIK Noril'sk 37.16 332 *i*P **P 03 37 35.2 -1.7**
NRIK pmax pmax
comp=Z,5.0nm,0.6s
ZAA0 Zalesovo Array 37.17 306 P **P 03 37 37.0 -0.1**
ZALV Zalesovo Beam 37.17 306 P **P 03 37 37.5 +0.3**
comp=Z,23nm,0.5s,baz=86,slow=8.7,SNR=76
ZALV PcP **PcP 03 39 53.1 +0.4**
comp=Z,3.4nm,0.6s,baz=86,slow=2.4,SNR=5.6
ZALV ScP **ScP 03 43 21.3 +0.5**
comp=Z,6.3nm,0.7s,baz=92,slow=3.1,SNR=20
ZALV LR LR 03 53 38.5
comp=Z,14nm,20.3s,baz=14,slow=37
comp=Z,23nm,0.5s
WMQ Urumqi 37.50 289 *e*P **P 03 37 40.8 +0.7**
S12K Black Hills 38.31 51 P **P 03 37 46.0 -0.6**
baz=276
ZSN Zaisan 38.37 296 *e*P **P 03 37 48.1 +0.8**
ZSN *e*S **S 03 43 28.6 +1.7**
ZSN Zaisan 38.37 296 *e*P **P 03 37 48.1 +0.8**
baz=296
ZSN *e*S **S 03 43 28.7 +1.7**
baz=296
N16K Nishlik Lake 39.68 43 P **P 03 37 58.7 +0.8**
baz=273
CHNA Chernabura Isl 39.83 52 P **P 03 37 59.4 +0.2**
baz=279
O16K Kokwok River B 40.07 44 P **P 03 38 01.8 +0.6**
baz=274
P16K Nushagak River 40.17 45 P **P 03 38 03.0 +1.1**
baz=275
MKAR Makanchi Array 40.24 296 P **P 03 38 03.0 +0.2**
comp=Z,10nm,0.8s,baz=82,slow=9.4,SNR=61
MKAR ScP **ScP 03 43 33.3 +0.5**
comp=Z,4.0nm,0.8s,baz=62,slow=4.3,SNR=19
comp=Z,10nm,0.8s
MKAR Makanchi Array 40.24 296 *i*P **P 03 38 03.0 +0.2**
MKAR pmax pmax
comp=Z,10.0nm,0.8s
MKAR Makanchi Array 40.24 296 *e*P **P 03 38 03.0 +0.2**
MAKZ Makanchi 40.44 296 P **P 03 38 04.1 -0.3**
MAKZ IAmb IAmb 03 38 06.1
comp=Z,12nm,0.8s
MAKZ Makanchi 40.44 296 P **P 03 38 04.1 -0.3**
MAKZ pmax pmax
comp=Z,12nm,0.8s
GCSA Galena City Sc 40.46 36 P **P 03 38 05.4 +1.1**
baz=270
R16K Pilot Point 40.55 47 P **P 03 38 05.7 +0.6**
baz=277
O17K Koliganek Bris 40.56 44 P **P 03 38 06.0 +0.9**
baz=275
SEM Semipalatinsk 40.58 302 *e*P **P 03 38 05.0 -0.7**
SEM pmax pmax
comp=Z,9.0nm,0.4s
SEM Semipalatinsk 40.58 302 *e*P **P 03 38 05.0 -0.7**
comp=Z,8.7nm,0.4s,baz=302
TTA Tatalina 40.88 39 P **P 03 38 08.8 +1.0**
baz=272
Q16K King Salmon 40.90 45 P **P 03 38 09.0 +1.1**
baz=277
P17K Kvichak River 40.95 45 P **P 03 38 09.5 +1.1**
baz=276
N18K Kilae Creek 41.08 42 P **P 03 38 10.7 +1.2**
baz=275
R17K Ugashik Creek 41.17 47 P **P 03 38 10.3 +0.1**
baz=278
O18K Koktuh Hills 41.50 43 P **P 03 38 13.7 +0.9**
baz=276
KURK Kurchatov 41.51 302 P **P 03 38 13.1 +0.1**
KURK Kurchatov 41.51 302 *ce*P **P 03 38 13.3 +0.3**
KURK pmax pmax
comp=Z,65nm,1.0s
KURK Kurchatov 41.51 302 *e*P **P 03 38 13.3 +0.3**
KURBB Kurchatov Arra 41.59 302 P **P 03 38 14.0 +0.4**
comp=Z,55nm,0.7s,baz=76,slow=8.7,SNR=199
KURBB ScP **ScP 03 43 38.1 +0.1**
comp=Z,1.8nm,0.6s,baz=84,slow=3.6,SNR=13
KURBB S **S 03 44 10.3 -4.2**
comp=Z,0.2nm,0.3s,baz=80,slow=16,SNR=4.8
comp=Z,55nm,0.7s
J20K Nowinta River 41.66 37 P **P 03 38 13.7 -0.3**
J20K Nowinta River 41.66 37 P **P 03 38 14.8 +0.7**
baz=273
N19K Bonanza Creek 41.75 42 P **P 03 38 15.2 +0.2**
baz=276
Q18K Katmai Hardscr 41.76 45 P **P 03 38 15.2 +0.2**
baz=278
IMAR Indian Mountai 41.77 34 P **P 03 38 14.4 -0.5**
G21K Allakaket 41.87 33 P **P 03 38 15.8 +0.1**
baz=270,SNR=10
F21K Alatna River 41.87 32 P **P 03 38 16.2 +0.4**
baz=270,SNR=8.3
H21K Melozitna Rive 42.17 35 P **P 03 38 18.3 +0.2**
baz=272
M20K Styx River 42.29 40 P **P 03 38 19.6 +0.3**
baz=276
F22K John River 42.38 32 P **P 03 38 20.1 +0.3**
baz=271
Q19K Cape Douglas, 42.42 45 P **P 03 38 20.2 -0.1**
baz=279
CAST Castle Rocks 42.62 38 P **P 03 38 21.7 -0.2**
baz=275
CMAR Chiang Mai Arr 42.66 248 P **P 03 38 24.3 +1.6**
comp=Z,1.1nm,0.3s,baz=36,slow=7.9,SNR=5.3
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 42.66 248 *i*P **P 03 38 25.2 +2.5**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
H22K Ishtalitna Cre 42.75 34 P **P 03 38 22.9 0.0**
baz=273
O20K Slope Mountain 42.76 43 P **P 03 38 22.5 -0.6**
baz=278
OHAK Old Harbor 42.90 47 P **P 03 38 24.0 0.0**
baz=281
D23K Nanushuk River 42.92 30 P **P 03 38 24.3 +0.1**
baz=270,SNR=5.1
C23K Itkillik River 42.95 28 P **P 03 38 24.3 0.0**
baz=270
SKT Skwentna 43.03 40 P **P 03 38 25.3 +0.1**
baz=277
BPAW Bear Paw Mtn. 43.05 37 P **P 03 38 25.2 0.0**
baz=275
MLY Manley 43.07 35 P **P 03 38 25.7 +0.2**
baz=275
Q20K Shuyak Island 43.11 45 P **P 03 38 25.9 +0.1**
baz=280
COLD Coldfoot 43.15 32 P **P 03 38 26.1 +0.1**
baz=273,SNR=5.7
KDAK Kodiak Island 43.16 46 P **P 03 38 26.6 +0.4**
baz=281
G23K Bananza Creek 43.25 33 P **P 03 38 27.2 +0.3**
baz=273,SNR=9.3
HOM Homer 43.31 43 P **P 03 38 27.3 -0.1**
baz=280
TOLK Toolik Lake Re 43.33 30 P **P 03 38 27.7 +0.2**
baz=272
SHLS Shalkode 43.35 292 *e*P **P 03 38 25.2 -2.9**
SHLS Shalkode 43.35 292 *e*P **P 03 38 25.2 -2.9**
baz=291
H23K Yukon River 43.50 34 P **P 03 38 29.2 +0.3**
baz=275,SNR=6.0
CUT Chulitna 43.56 39 P **P 03 38 29.4 +0.1**
baz=278
D24K Happy Valley 43.59 29 P **P 03 38 29.9 +0.4**
baz=272
UZB Uzynbulak 43.66 292 *e*P **P 03 38 29.5 -1.0**
UZB Uzynbulak 43.66 292 *e*P **P 03 38 29.6 -1.0**
baz=292
BRSE Bradley Lake S 43.75 43 P **P 03 38 31.0 +0.1**
baz=280
E24K Your Creek 43.76 31 P **P 03 38 31.1 +0.2**
baz=273
NEA2 Nenana 43.83 36 P **P 03 38 31.7 +0.3**
baz=276
MCK McKinley 43.99 37 P **P 03 38 31.9 -0.9**
baz=278
F24K Squaw Lake 44.02 32 P **P 03 38 33.2 +0.1**
baz=274,SNR=13
SATY Saty 44.10 292 *e*P **P 03 38 34.0 -0.1**
SATY Saty 44.10 292 *e*P **P 03 38 34.1 -0.1**
baz=292
H24K Noodor Dome 44.19 34 P **P 03 38 34.0 -0.3**
H24K Noodor Dome 44.19 34 P **P 03 38 34.6 +0.3**
baz=276
G24K Hadweenzic Riv 44.26 33 P **P 03 38 35.3 +0.4**
baz=276,SNR=5.1
GHO Glory Hole Cre 44.28 40 IAmb IAmb 03 38 54.7

comp=Z,21nm,1.4s
COLA College 44.31 36 *i* P **P** **03 38 35.7 +0.5**
COLA pmax pmax
comp=Z,6.0nm,0.9s
SEW Seward 44.32 42 P **P** **03 38 35.9 +0.5**
baz=281
D25K Kavik River 44.45 29 P **P** **03 38 36.2 -0.2**
baz=274
SML Sawmill 44.55 40 P **P** **03 38 37.6 +0.3**
baz=280
KNK Knik Glacier 44.56 40 P **P** **03 38 38.0 +0.7**
baz=280
PWL Port Wells 44.73 41 P **P** **03 38 39.2 +0.6**
baz=281
IL31 44.73 36 P **P** **03 38 38.3 -0.2**
ILAR Eielson Array 44.73 36 P **P** **03 38 38.4 -0.2**
comp=Z,3.0nm,0.8s,baz=281,slow=7.9,SNR=27
comp=Z,3.0nm,0.8s
CHKK Chushkaly 44.76 293 *e*P **P** **03 38 38.8 -0.3**
CHKK Chushkaly 44.76 293 *e*P **P** **03 38 38.9 -0.3**
baz=293
HDA Harding Lake 44.76 36 P **P** **03 38 39.3 +0.5**
baz=278
DHY Denali Highway 44.78 38 P **P** **03 38 39.8 +0.6**
baz=280
G25K Bearman Lake 44.79 33 P **P** **03 38 39.8 +0.8**
baz=277
E25K Arctic Village 44.85 31 P **P** **03 38 40.0 +0.5**
baz=276
F25K Christian Rive 44.88 32 P **P** **03 38 40.6 +0.8**
baz=276,SNR=5.8
H25K Birch Creek 44.97 33 P **P** **03 38 40.6 +0.2**
baz=278
MDOK Medeo 44.98 293 *e*P **P** **03 38 41.3 +0.2**
MDOK Medeo 44.98 293 *e*P **P** **03 38 41.3 +0.2**
baz=292
AAA Alma-Ata 45.05 293 *e*P **P** **03 38 41.1 -0.4**
AAA pmax pmax
comp=Z,18nm,0.5s
AAA Alma-Ata 45.05 293 *e*P **P** **03 38 41.1 -0.4**
comp=Z,18nm,0.5s,baz=293
AAA Alma-Ata 45.05 293 *e*P **P** **03 38 41.1 -0.4**
FYU Fort Yukon 45.16 33 IAmb IAmb 03 38 43.9
comp=Z,9.9nm,0.8s
KUU Kurty 45.17 294 *e*P **P** **03 38 41.9 -0.5**
KUU pmax pmax
comp=Z,14nm,0.7s
KUU Kurty 45.17 294 *e*P **P** **03 38 41.9 -0.5**
comp=Z,14nm,0.7s,baz=294
PRP Porcupine Dome 45.19 34 IAmb IAmb 03 38 44.7
comp=Z,10nm,1.2s
PRP Porcupine Dome 45.19 34 P **P** **03 38 42.8 +0.4**
baz=279
C27K Jago River 45.36 29 P **P** **03 38 44.2 +0.7**
baz=276
K24K Donnelly Dome 45.36 37 P **P** **03 38 44.2 +0.6**
baz=280
BRZS Berezniki 45.37 303 *e*P **P** **03 38 43.8 0.0**
BRZS *e*S **S** **03 45 10.4 +1.0**
BRZS pmax pmax
comp=Z,10.0nm,0.4s
BRZS Berezniki 45.37 303 *e*P **P** **03 38 43.9 0.0**
comp=Z,9.7nm,0.4s,baz=303
BRZS *e*S **S** **03 45 10.5 +1.0**
baz=303
F26K Sheenjek River 45.43 31 P **P** **03 38 45.1 +1.0**
baz=278,SNR=11
M24K Tolsona, Glenn 45.50 39 P **P** **03 38 45.5 +0.7**
baz=281
PAX Paxson 45.65 38 P **P** **03 38 46.7 +0.8**
baz=281
G26K Porcupine Rive 45.68 32 P **P** **03 38 46.9 +1.0**
baz=279,SNR=5.4
KLU Klutina 45.74 40 P **P** **03 38 47.3 +0.6**
baz=282
RIDG Independent Ri 45.78 37 P **P** **03 38 47.5 +0.5**
baz=281
BVA0 Borovoye Array 45.78 308 *i* P **P** **03 38 47.6 +0.6**
BRVK Borovoye 45.83 308 P **P** **03 38 47.8 +0.4**
BRVK Borovoye 45.83 308 *ce*P **P** **03 38 48.2 +0.8**
BRVK pmax pmax
comp=Z,45nm,1.1s
BRVK Borovoye 45.83 308 *e*P **P** **03 38 48.2 +0.8**
HARP HAARP 45.91 39 P **P** **03 38 48.7 +0.8**
baz=282
EYAK Cordova Ski Ar 46.03 41 P **P** **03 38 49.5 +0.7**
baz=283
TKM2 Tokmak 2 46.05 293 P **P** **03 38 50.4 +0.8**
SCRK Sand Creek 46.11 36 IAmb IAmb 03 38 52.5
comp=Z,5.3nm,0.5s
SCRK Sand Creek 46.11 36 P **P** **03 38 49.8 +0.2**
baz=281,SNR=9.4
OTUK Ortayu 46.16 301 P **P** **03 38 50.4 +0.3**
J26L Joseph Creek 46.19 36 P **P** **03 38 50.7 +0.5**
baz=281
I26K Coal Creek Min 46.21 34 P **P** **03 38 50.8 +0.7**
baz=281
BTLS Baital 46.25 296 *e*P **P** **03 38 50.3 -0.4**
BTLS Baital 46.25 296 *e*P **P** **03 38 50.4 -0.4**
baz=296
E27K Coleen River 46.31 30 P **P** **03 38 51.9 +0.9**
baz=279
N25K Chitina, Valde 46.34 40 P **P** **03 38 52.2 +0.9**
baz=283
BMRM Bremner River 46.48 41 P **P** **03 38 53.2 +0.8**
baz=284
SGDS Sogindy 46.49 294 *e*P **P** **03 38 52.8 +0.1**
SGDS Sogindy 46.49 294 *e*P **P** **03 38 52.9 +0.1**
baz=294
G27K Doyon Strip 46.53 32 P **P** **03 38 53.6 +0.9**
baz=281
L26K Log Cabin Wild 46.59 38 P **P** **03 38 54.3 +1.1**
baz=283
H27K Steamboat Moun 46.69 33 P **P** **03 38 54.9 +1.0**
baz=281
I27K Kandik River 46.78 34 P **P** **03 38 55.3 +0.6**
baz=282
M26K Nabesna, AK 46.89 38 P **P** **03 38 56.6 +1.0**
baz=284
AAK Ala-Archa 46.91 293 P **P** **03 38 55.2 -0.9**
AAK IAmb IAmb 03 38 57.4
comp=Z,8.9nm,0.6s
AAK Ala-Archa 46.91 293 *ce*P **P** **03 38 56.8 +0.6**
AAK pmax pmax
comp=Z,6.0nm,0.6s
AAK Ala-Archa 46.91 293 *e*P **P** **03 38 56.8 +0.6**
K27K Chicken 46.92 36 P **P** **03 38 56.7 +0.9**
baz=283
VRDI Verde Repeater 46.96 40 IAmb IAmb 03 38 58.2
comp=Z,6.6nm,0.6s
MCARA McCarthy VSAT 47.12 40 IAmb IAmb 03 38 59.7
comp=Z,11nm,0.6s
MCARA McCarthy VSAT 47.12 40 P **P** **03 38 58.3 +1.0**
baz=284
KSH Kashi 47.25 288 P **P** **03 39 03.1 +4.4**
KSH pmax pmax
comp=Z,7.0nm,0.8s
CRQE Cirque 47.25 41 P **P** **03 38 59.2 +0.7**
baz=285
L27K Beaver Creek, 47.26 37 P **P** **03 38 59.4 +1.1**
baz=284
M27K Edge Creek, AK 47.41 38 P **P** **03 39 00.8 +1.2**
baz=284,SNR=6.4
ISLE Juniper Island 47.65 41 P **P** **03 39 01.4 -0.2**
ISLE IAmb IAmb 03 39 03.2
comp=Z,16nm,1.0s
BARN Barnard Glacie 47.85 40 IAmb IAmb 03 39 05.1
comp=Z,12nm,0.6s
MESA MESA 47.95 41 P **P** **03 39 04.6 +0.7**
baz=286
CTG Chitna Glacier 48.02 40 P **P** **03 39 05.4 +1.0**
baz=286
DAWY Dawson 48.06 36 P **P** **03 39 05.8 +1.3**
baz=285
YUK3 Moose Creek 48.20 39 P **P** **03 39 06.5 +0.6**
baz=286
O28M Mount Upton 48.62 40 P **P** **03 39 09.6 +0.5**
baz=287
PCA Pinnacle 48.79 41 P **P** **03 39 10.1 -0.1**
PCA IAmb IAmb 03 39 54.2
comp=Z,19nm,1.1s
M29M Somme Creek 48.91 38 P **P** **03 39 12.0 +0.8**
baz=287
DZA Taraz 48.91 295 *e*P **P** **03 39 11.7 +0.4**
DZA Taraz 48.91 295 *e*P **P** **03 39 11.8 +0.4**
baz=294
INK Inuvik 49.22 29 P **P** **03 39 13.8 +0.7**
comp=Z,14nm,0.4s,baz=284,slow=6.1,SNR=89
comp=Z,14nm,0.4s
INK Inuvik 49.22 29 P **P** **03 39 14.1 +1.0**
baz=286,SNR=18
KK31 Karatay Array 49.36 295 IAmb IAmb 03 39 15.8
comp=Z,10.0nm,0.7s
KK31 Karatay Array 49.36 295 *i* P **P** **03 39 14.7 0.0**
KKAR Karatay Array 49.36 295 P **P** **03 39 14.4 -0.3**
KKAR Karatay Array 49.36 295 P **P** **03 39 14.4 -0.3**
YUK6 Outpost Mounta 49.42 39 P **P** **03 39 16.1 +1.0**
baz=288
O29M Mount Kennedy 49.52 40 P **P** **03 39 17.3 +1.5**
baz=289
M30M Minto, Yukon 49.61 37 P **P** **03 39 17.9 +1.5**
baz=288,SNR=5.2
N30M Aishikik Lake 49.84 39 P **P** **03 39 19.6 +1.5**
baz=289
HYT Haines Junctio 49.85 39 P **P** **03 39 19.9 +1.6**
baz=289,SNR=21
SVE Sverdlovsk 49.89 315 *e*P **P** **03 39 18.4 0.0**
SVE pmax pmax
comp=Z,48nm,0.9s
P29M Windy Craggy 50.14 41 P **P** **03 39 21.1 +0.7**
P29M Windy Craggy 50.14 41 P **P** **03 39 22.1 +1.8**
baz=290,SNR=11
P30M Million Dollar 50.34 40 P **P** **03 39 23.6 +1.7**
baz=290
N31M Braeburn, Yuko 50.42 38 IAmb IAmb 03 39 25.3
comp=Z,9.9nm,0.8s
N31M Braeburn, Yuko 50.42 38 P **P** **03 39 24.1 +1.7**
baz=290,SNR=8.0
O30N Mendenhall 50.52 39 P **P** **03 39 24.6 +1.4**
baz=290
A36M Sachs Harbour 50.75 24 P **P** **03 39 26.1 +1.4**
baz=290
M31M Drury Creek, Y 50.79 37 P **P** **03 39 26.5 +1.3**
baz=290
PLBC Pleasant Camp 50.86 41 P **P** **03 39 27.0 +1.3**
baz=291
ARU Arti 51.10 315 LR LR 04 03 39.2
comp=Z,21nm,18.1s,baz=126,slow=39
ARU Arti 51.10 315 P **P** **03 39 27.1 -0.4**
ARU Arti 51.10 315 *d* iP **P** **03 39 27.8 +0.3**
ARU *PP **pwP** **03 40 13.2 0.0**
ARU 03 41 24.4
ARU S **S** **03 46 31.7 +2.1**
ARU SS **SS** **03 50 06.5 -0.2**
ARU pmax pmax
comp=Z,18nm,0.7s
ARU Arti 51.10 315 *e*P **P** **03 39 27.8 +0.3**
GAR Garm 51.37 290 IAmb IAmb 03 39 31.6
comp=Z,15nm,0.9s
C36M Paulatuk 52.10 27 P **P** **03 39 35.7 +1.0**
baz=293,SNR=8.2
P33M Teslin, Yukon 52.24 39 IAmb IAmb 03 39 38.6
comp=Z,5.7nm,0.8s
P33M Teslin, Yukon 52.24 39 P **P** **03 39 37.2 +1.3**
baz=293,SNR=8.7
AB31 Akbulak array 53.29 306 *e*P **P** **03 39 44.4 +0.7**
ABKAR Akbulak array 53.29 306 P **P** **03 39 43.7 0.0**
R33M Jennings River 53.42 40 P **P** **03 39 46.1 +1.4**
baz=295
AKTO Aktyubinsk 53.88 308 P **P** **03 39 48.1 +0.1**
KBS Kingsbay 54.24 349 *ce*P **P** **03 39 51.9 +1.7**
KBS pmax pmax
comp=Z,26nm,1.3s
KBS Kingsbay 54.24 349 *e*P **P** **03 39 50.5 +0.3**
KBS IAmb IAmb 03 39 54.3
comp=Z,15nm,0.8s
DLBC Dease Lake 54.28 40 P **P** **03 39 52.4 +1.6**
baz=296
KBL Kabul 54.51 286 P **P** **03 39 52.0 -1.1**
KBL IAmb IAmb 03 39 53.1
comp=Z,4.8nm,0.7s
KBL Kabul 54.51 286 P **P** **03 39 52.0 -1.1**
KBL pmax pmax
comp=Z,5.0nm,0.7s
KIRV Kirov 54.70 320 *ce*P **P** **03 39 54.0 +0.3**
T35M Bob Quinn 54.82 42 P **P** **03 39 56.4 +1.7**
baz=297
PRGR Permogore 55.00 324 *e*P **P** **03 39 54.7 -1.1**
PRGR pmax pmax
comp=Z,42nm,0.8s
HSPB Hornsund (broa 55.05 347 *e*P **P** **03 39 56.8 +0.8**
LVZ Lovozero 55.97 334 P **P** **03 40 02.0 -0.8**
LVZ Lovozero 55.97 334 *ce*P **P** **03 40 02.6 -0.1**
LVZ pmax pmax
comp=Z,28nm,2.5s
BJO1 Bjornoya 56.10 344 *e*P **P** **03 40 03.3 -0.1**
RES Resolute Bay 56.69 15 P **P** **03 40 08.1 +0.4**
comp=Z,24nm,0.8s,baz=290,slow=13,SNR=4.3
comp=Z,24nm,0.8s
KEV Kevo 57.20 338 P **P** **03 40 09.9 -1.4**
KEV Kevo 57.20 338 P **P** **03 40 09.9 -1.4**
KEV pmax pmax
comp=Z,18nm,0.7s
HAMF Hammerfest 57.53 339 *e*P **P** **03 40 13.2 -0.4**
HAMF IAmb IAmb 03 40 13.9
comp=Z,8.7nm,0.6s
ARA0 ARCESS Array S 57.75 338 *e*P **P** **03 40 15.1 -0.1**
ARCES ARCESS Array B 57.75 338 P **P** **03 40 15.0 -0.2**
comp=Z,2.6nm,0.6s,baz=47,slow=8.3,SNR=43
comp=Z,2.6nm,0.6s
ARCES ARCESS Array B 57.75 338 P **P** **03 40 14.6 -0.5**
ARCES IAmb IAmb 03 40 16.0
comp=Z,11nm,1.4s
ARCES ARCESS Array B 57.75 338 P **P** **03 40 15.0 -0.2**
SGF Sodankyl 58.77 336 P **P** **03 40 22.2 0.0**
SGF pmax pmax
comp=Z,11nm,1.9s
MSF Maaselka 58.93 333 P **P** **03 40 23.4 +0.1**
MSF pmax pmax
comp=Z,13nm,0.6s
JETT Jettan, Norway 59.10 339 *e*P **P** **03 40 24.5 0.0**
JETT IAmb IAmb 03 40 25.3
comp=Z,18nm,0.9s
DAG Danmarks Havn 59.37 354 P **P** **03 40 25.7 -0.5**
DAG pmax pmax
comp=Z,28nm,1.0s
DAG Danmarks Havn 59.37 354 *i* P **P** **03 40 25.4 -0.8**
DAG IAmb IAmb 03 40 26.9
comp=Z,20nm,0.8s
TRO Tromso 59.42 340 *e*P **P** **03 40 26.5 -0.2**
TRO IAmb IAmb 03 40 27.2
comp=Z,14nm,0.7s
GEYT Alibeck 60.12 295 P **P** **03 40 32.1 +0.1**
comp=Z,4.7nm,0.7s,baz=59,slow=7.1,SNR=5.3
comp=Z,4.7nm,0.7s
GEYT Alibeck 60.12 295 P **P** **03 40 31.5 -0.5**
GEYT IAmb IAmb 03 40 40.3
comp=Z,8.1nm,0.7s
OUL Oulu 60.47 334 P **P** **03 40 31.3 -2.5**
OUL pmax pmax
comp=Z,24nm,0.6s
STEI Steigen 61.58 339 *e*P **P** **03 40 41.1 -0.2**
STEI IAmb IAmb 03 40 41.5
comp=Z,19nm,1.4s
MOS Moscow 61.66 321 *e*P **P** **03 40 42.1 +0.1**
DBG Daneborg 61.85 354 *i* P **P** **03 40 43.2 +0.2**
DBG IAmb IAmb 03 40 47.3
comp=Z,12nm,1.2s
LOF Lofoten 61.86 340 *e*P **P** **03 40 42.6 -0.5**
FAUS Fauske 61.98 339 *e*P **P** **03 40 43.9 0.0**
FAUS IAmb IAmb 03 40 44.4
comp=Z,15nm,0.5s
VRH Novokhopyorsk 62.33 315 *e*P **P** **03 40 45.8 -0.7**
VRH pmax pmax
comp=Z,10.0nm,0.6s
LLLB Lillooet 62.37 45 IAmb IAmb 03 40 48.8
comp=Z,3.7nm,0.7s
OBN Obninsk 62.52 321 *e*P **P** **03 40 48.0 +0.3**
OBN *e* 03 43 07.2
OBN pmax pmax
comp=Z,29nm,1.2s
OBN Obninsk 62.52 321 *e*P **P** **03 40 48.0 +0.3**
FIA1 FINESS Array S 62.80 330 P **P** **03 40 48.7 -0.7**
FINES FINESS Array B 62.80 330 P **P** **03 40 49.4 -0.1**
comp=Z,29nm,0.5s,baz=60,slow=7.0,SNR=357
comp=Z,29nm,0.5s
LPSR Galich'ya Gora 62.91 318 *e*P **P** **03 40 50.1 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MOR8 Moi Rana 63.10 338 *e*P **P** **03 40 50.0 -1.4**
KONS Konsvik 63.21 339 *e*P **P** **03 40 51.9 -0.2**
KONS IAmb IAmb 03 40 54.4
comp=Z,19nm,1.3s
WRA Warramunga Arr 63.25 186 P **P** **03 40 52.4 -0.5**
comp=Z,1.2nm,0.6s,baz=6.5,slow=6.7,SNR=14
comp=Z,1.2nm,0.6s
VORR Voronezh 63.33 317 *e*P **P** **03 40 56.5 +3.4**
STOK Stokkvaagen 63.36 339 *e*P **P** **03 40 53.4 +0.4**
MEF Metsahovi 64.24 330 *e*P **P** **03 40 58.9 +0.1**
SUMG Summit 64.33 360 P **P** **03 41 00.3 +0.5**
SUMG Summit 64.33 360 P **P** **03 41 00.3 +0.5**
SUMG pmax pmax
comp=Z,14nm,0.6s
SUMG Summit 64.33 360 *i* P **P** **03 41 00.0 +0.2**
SUMG IAmb IAmb 03 41 01.8
comp=Z,14nm,0.6s
VSU Vasula 64.55 328 *i* P **P** **03 41 01.1 +0.2**
VSU pmax pmax
comp=Z,68nm,0.7s
VSU Vasula 64.55 328 *e*P **P** **03 41 01.3 +0.4**
RAF Rauma 64.61 332 *e*P **P** **03 41 01.8 +0.5**
F04A Amboy 64.84 50 P **P** **03 41 03.4 +0.4**
NSS Namsos 65.03 338 *e*P **P** **03 41 03.2 -0.7**
B08A Colville Reser 65.05 46 P **P** **03 41 03.4 -1.0**
GOF Gofitskoye 65.27 309⇑ *e*P **P** **03 41 06.6 +0.8**
MTSE Matsula 65.50 329 *e*P **P** **03 41 07.6 +0.7**
H04D Lebanon 65.52 51 P **P** **03 41 09.4 +2.0**
baz=307
I03D Drain, OR 65.67 52 P **P** **03 41 10.1 +1.8**
baz=307
G05D Wamic, OR 65.88 50 P **P** **03 41 11.1 +1.3**
baz=308
C09A Chrisman Ranch 65.95 46 P **P** **03 41 09.7 -0.4**
C09A IAmb IAmb 03 41 11.8
comp=Z,17nm,1.5s
D08A Wollman Farm, 66.07 47 P **P** **03 41 10.8 -0.1**
D08A IAmb IAmb 03 41 12.5
comp=Z,12nm,1.5s
KIV Kislovodsk 66.14 308 ⇑P **P** **03 41 11.9 +0.4**
KIV Kislovodsk 66.14 308 P **P** **03 41 11.9 +0.4**
KIV Kislovodsk 66.14 308 *e*P **P** **03 41 13.1 +1.6**
KIV pmax pmax
comp=Z,43nm,1.0s
KIV MLR MLR
comp=Z,12nm,17.0s
KIV Kislovodsk 66.14 308 *e*P **P** **03 41 13.1 +1.6**
I04A Tendick Farm, 66.15 52 P **P** **03 41 12.7 +1.2**
baz=308
ZEI Tsey 66.16 307 *e*P **P** **03 41 11.0 -0.8**
ZEI pmax pmax
comp=Z,13nm,0.9s
KBZ Khabaz 66.16 308 P **P** **03 41 12.9 +1.4**
comp=Z,12nm,0.8s,baz=56,slow=4.1,SNR=32
comp=Z,12nm,0.8s
KBZ Khabaz 66.16 308⇑ *i* P **P** **03 41 12.7 +1.2**
KBZ pmax pmax
comp=Z,13nm,0.9s
KBZ Khabaz 66.16 308 *e*P **P** **03 41 12.7 +1.2**
NEW Newport 66.26 45 P **P** **03 41 13.1 +0.9**
comp=Z,2.8nm,0.7s,baz=277,slow=6.0,SNR=8.3
comp=Z,2.8nm,0.7s
NEW Newport 66.26 45 P **P** **03 41 13.1 +0.9**
baz=309
I05D Terrebonne, OR 66.42 51 P **P** **03 41 14.2 +1.0**
baz=308
TBLU Trondheim 66.51 338 *e*P **P** **03 41 11.2 -2.1**
TBLU IAmb IAmb 03 41 11.7
comp=Z,12nm,0.8s
ONI Oni 66.54 307 P **P** **03 41 13.3 -0.7**
ONI IAmb IAmb 03 41 16.3
comp=Z,6.5nm,0.7s
ONI Oni 66.54 307 P **P** **03 41 13.4 -0.7**
ONI pmax pmax
comp=Z,7.0nm,0.7s
J04D Umpqua Nationa 66.66 52 P **P** **03 41 16.1 +1.1**
baz=308
MNK Minsk 66.77 324 *i* P **P** **03 41 15.8 +0.6**
MNK *i* *PP **pP** **03 42 02.4 +1.8**
MNK *i* *SP **sP** **03 42 20.1 -1.6**
MNK *i* S **S** **03 49 52.1 +1.1**
MNK *i* SS **SS** **03 54 09.0 -2.8**
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK pmax pmax
comp=Z,22nm,0.9s
MNK MLR MLR
comp=E,11nm,17.0s
MNK MLR MLR
comp=Z,38nm,17.0s
MNK Minsk 66.77 324 *i* P **P** **03 41 15.8 +0.6**
comp=E,1.0nm,0.9s,baz=47
MNK *i* P **P** **03 41 15.8 +0.6**
MNK *i* P **P** **03 41 15.8 +0.6**
comp=Z,22nm,0.9s
MNK *i* pP **pP** **03 42 02.5 +1.8**
MNK *i* sP **sP** **03 42 20.2 -1.6**
MNK *i* S **S** **03 49 52.1 +1.1**
MNK *i* sS **sS** **03 51 14.2 +2.8**
MNK *i* SS **SS** **03 54 09.0 -2.8**
MNK *i* SSS SSS 03 57 55.5
MNK *i* LR LR 04 09 44.7
MNK *i* LRM MLR 04 12 33.3
comp=E,11nm,16.6s
MNK *i* LRM MLR 04 14 05.2
comp=Z,38nm,16.6s
E09A Wood Farm, Sta 66.82 47 P **P** **03 41 15.5 -0.2**
E09A IAmb IAmb 03 41 17.6
comp=Z,8.1nm,0.9s
SLIT Slitere, Latvi 66.83 329 *e*P **P** **03 41 14.9 -0.6**
IIGN Ignalina 66.88 325 *e*P **P** **03 41 16.8 +0.9**
NACGM Naroch 66.96 325‖ *e*P **P** **03 41 17.1 +0.7**
baz=46
ASAR Alice Springs 66.98 186 P **P** **03 41 17.4 +0.6**
comp=Z,2.3nm,0.9s,baz=3.3,slow=5.2,SNR=15
comp=Z,2.3nm,0.9s
PINE Pine Mountain 66.98 51 P **P** **03 41 17.1 0.0**
J05D Fort Rock, OR 67.13 52 P **P** **03 41 19.0 +1.1**
baz=309
L04D Klamath Falls 67.18 53 P **P** **03 41 19.4 +1.2**
baz=308
YBH Yreka Blue Hor 67.24 54 P **P** **03 41 20.0 +1.5**
comp=Z,3.1nm,0.7s,baz=27,slow=3.7,SNR=8.4
comp=Z,3.1nm,0.7s
GNI Garni 67.28 304 *ce*P **P** **03 41 21.2 +2.3**
GNI pmax pmax
comp=Z,6.0nm,0.6s
K05A Summer Lake 67.68 52 IAmb IAmb 03 41 23.8
comp=Z,12nm,0.9s
PABE Paberze 67.69 327 *e*P **P** **03 41 21.3 +0.3**
NC303 NORSAR Array S 67.80 336 *e*P **P** **03 41 21.7 +0.2**
NC303 IAmb IAmb 03 41 22.9
comp=Z,11nm,0.6s
DOMB Dombas 67.81 337 *e*P **P** **03 41 21.5 -0.2**
DOMB IAmb IAmb 03 41 22.2
comp=Z,11nm,0.6s
ICESG Greenland Ices 67.84 360 *i* P **P** **03 41 22.3 +0.2**
ICESG IAmb IAmb 03 41 24.3
comp=Z,16nm,0.8s
NB2 NORSAR Subarra 67.99 336 P **P** **03 41 22.5 -0.3**
comp=Z,7.0nm,0.5s,baz=36,slow=6.5
NB2 NORSAR Subarra 67.99 336 P **P** **03 41 22.5 -0.3**
baz=36,slow=6.5
NOA NORSAR Array B 67.99 336 P **P** **03 41 22.7 -0.1**
comp=Z,11nm,0.7s,baz=37,slow=6.3,SNR=64
comp=Z,11nm,0.7s
SOC Sochi 68.06 310 *e*P **P** **03 41 21.5 -2.0**
SOC *e* 03 43 55.0
SOC *e*PPP PPP 03 45 33.9
SOC *e*S **S** **03 50 04.5 -2.2**
SOC *e*SS **SS** **03 54 32.2 0.0**
JTMT Jette 68.06 45 P **P** **03 41 24.2 +0.6**
JTMT IAmb IAmb 03 41 25.6
comp=Z,11nm,1.1s
NORES NORESS Array B 68.14 336 P **P** **03 41 23.2 -0.5**
AKN Aaknes 68.27 338 *e*P **P** **03 41 24.9 +0.4**
BCA Borcka 68.32 307‖ P **P** **03 41 24.9 -0.3**
BMO Blue Mountains 68.33 48 IAmb IAmb 03 41 27.2
comp=Z,6.0nm,1.1s
MOD Modoc Plateau 68.54 52 IAmb IAmb 03 41 28.1
comp=Z,4.0nm,0.7s
ANN Anapa 68.54 312 *e*P P 03 41 21.1 -5.3
ANN *e**PP pP 03 42 08.4 -3.5
ANN *e* 03 43 58.6
ANN *e*S S 03 50 03.4 -8.9
ANN pmax pmax
comp=Z,29nm,0.8s
J08A Circle Bar Ran 68.65 50 IAmb IAmb 03 41 29.6
comp=Z,6.9nm,1.0s

AKASG **Malin Array Be** 68.76 320 P **P** 03 41 27.6 -0.1
comp=Z,8.4nm,0.6s,baz=44,slow=6.5,SNR=40
comp=Z,8.4nm,0.6s
MSO **Missoula** 68.83 45 IAmb IAmb 03 41 29.9
comp=Z,6.3nm,1.1s
MSO **Missoula** 68.83 45 P **P** 03 41 29.0 +0.7
baz=311
OSL **Oslo** 69.02 335 *e*P **P** 03 41 29.8 +0.7
SKAR **Skarslia** 69.13 337 *e*P **P** 03 41 30.1 +0.3
WVOR **Wild Horse Val** 69.15 51 P **P** 03 41 31.2 +0.8
WVOR IAmb IAmb 03 41 32.4
comp=Z,11nm,1.4s
WVOR **Wild Horse Val** 69.15 51 P **P** 03 41 31.2 +0.8
WVOR pmax pmax
comp=Z,11nm,1.4s
HYA **Hoyanger** 69.32 338 *e*P **P** 03 41 31.2 +0.2
HYA IAmb IAmb 03 41 31.8
comp=Z,19nm,1.0s
KONO **Kongsberg** 69.59 336 *e*P **P** 03 41 32.6 0.0
SUE **Sulen** 69.80 339 *e*P **P** 03 41 34.3 +0.5
BEKR **Beckworth** 69.80 54 IAmb IAmb 03 41 36.2
comp=Z,5.6nm,0.7s
HRY **Holter Researc** 69.99 44 P **P** 03 41 36.1 +0.6
MSVF **Nonsavu** 70.03 142 P **P** 03 41 38.8 +2.9
comp=Z,8.6nm,1.0s,baz=304,slow=7.9,SNR=4.2
comp=Z,8.6nm,1.0s
EGMT **Eagleton** 70.13 42 P **P** 03 41 37.0 +0.7
baz=313,SNR=5.4
ASK **Askoy** 70.16 338 *e*P **P** 03 41 36.2 +0.2
BLEU **Blekinge** 70.20 331 *i*P **P** 03 41 35.3 -1.1
BORU **Boras** 70.20 333 *i*P **P** 03 41 35.3 -1.1
BER **Bergen** 70.21 338 *e*P **P** 03 41 36.5 +0.1
ODD1 **Odda** 70.24 337 *e*P **P** 03 41 37.1 +0.5
ODD1 IAmb IAmb 03 41 38.8
comp=Z,27nm,1.3s
LRM **Limekiln Ridge** 70.28 45 P **P** 03 41 38.1 +0.7
DY2G **Dye2** 70.35 3 *i*P **P** 03 41 36.6 -0.8
DY2G IAmb IAmb 03 41 39.7
comp=Z,19nm,0.7s
PAHR **Pah Rah Range** 70.48 54 P **P** 03 41 39.3 +0.7
PAHR IAmb IAmb 03 41 40.4
comp=Z,8.4nm,0.8s
BLS5 **Blasjo** 70.70 337 *e*P **P** 03 41 40.0 +0.6
FABU **Falkenberg** 70.72 333 *i*P **P** 03 41 38.6 -1.0
DEL **Delary** 70.75 332 *i*P **P** 03 41 39.0 -0.7
HLID **Hailey** 70.75 48 P **P** 03 41 41.0 +0.8
baz=312
PNTR **Pine Nut** 70.75 54 IAmb IAmb 03 41 42.4
comp=Z,8.4nm,0.9s
BOZ **Bozeman (W)** 70.85 45 P **P** 03 41 41.4 +0.7
baz=313,SNR=13
SORM **Soroca** 70.95 319 ⇑P **P** 03 41 40.6 -0.5
SORM **Soroca** 70.95 319 P **P** 03 41 40.5 -0.5
YERR **Yerington** 71.03 54 P **P** 03 41 42.4 +0.3
HOMB **Homborsund** 71.05 335 *e*P **P** 03 41 41.8 +0.3
KMY **Karmoy** 71.22 337 *e*P **P** 03 41 43.4 +1.0
KMY IAmb IAmb 03 41 43.7
comp=Z,22nm,0.9s
BJUU **Bjuv** 71.35 332 *i*P **P** 03 41 43.3 0.0
BSD **Bornholm Skovb** 71.44 330 *e*P **P** 03 41 43.9 0.0
BSD **Bornholm Skovb** 71.44 330 *i*P **P** 03 41 43.0 -0.9
MARD **Mardin** 71.47 304 P **P** 03 41 45.2 +0.7
MARD IAmb IAmb 03 41 46.4
comp=Z,9.2nm,0.6s
KVN **Kaiserville** 71.66 53 P **P** 03 41 46.1 +0.3
KVN **Kaiserville** 71.66 53 P **P** 03 41 46.1 +0.3
KVN pmax pmax
comp=Z,17nm,0.7s
BEL **Belsk** 71.66 325 *e*P **P** 03 41 46.2 +0.9
NVAR **Mina Array Bea** 71.95 54 P **P** 03 41 48.7 +1.2
comp=Z,7.0nm,0.7s,baz=294,slow=5.6,SNR=80
comp=Z,7.0nm,0.7s
NVAR **Mina Array Bea** 71.95 54 P **P** 03 41 48.4 +0.8
GKP **Gorka Klasztor** 72.00 328 *e*P **P** 03 41 47.6 +0.4
GKP **Gorka Klasztor** 72.00 328 *e*P **P** 03 41 47.9 +0.7
H17A **Grant Village** 72.22 45 P **P** 03 41 50.7 +1.7
baz=314
RLMT **Red Lodge** 72.39 44 IAmb IAmb 03 41 51.9
comp=Z,32nm,0.6s
RLMT **Red Lodge** 72.39 44 P **P** 03 41 50.7 +0.7
baz=314
KWP **Kalwaria Pacla** 72.47 323 *e*P **P** 03 41 51.1 +0.9
KWP **Kalwaria Pacla** 72.47 323 P **P** 03 41 50.5 +0.3
KWP **Kalwaria Pacla** 72.47 323 P **P** 03 41 50.5 +0.3
KWP pmax pmax
comp=Z,114nm,0.6s
MOOW **Moose Ponds** 72.58 46 P **P** 03 41 50.5 -0.7
BUR08 **Bucovina Ar. S** 72.79 320 P **P** 03 41 51.8 -0.4
BUR08 IAmb IAmb 03 41 53.7
comp=Z,6.5nm,0.7s
BURAR **Bucovina Array** 72.81 320 ⇓P **P** 03 41 52.1 -0.2
BURAR **Bucovina Array** 72.81 320 IAmb IAmb 03 41 54.0
comp=Z,7.3nm,0.8s
BURAR **Bucovina Array** 72.81 320 P **P** 03 41 52.1 -0.2
BIZ **Bicaz** 72.87 319 ⇑P **P** 03 41 53.3 +0.8
TESR **Tescani** 72.92 319 ⇑P **P** 03 41 53.6 +0.8
CFR **Carcaliu** 73.14 317 ⇓P **P** 03 41 53.7 -0.4
CFR **Carcaliu** 73.14 317 P **P** 03 41 53.6 -0.4
KOLS **Kolonicke sedl** 73.18 323 *e*P **P** 03 41 55.2 +0.9
KOLS pmax pmax
comp=Z,6.0nm,0.6s
KOLS **Kolonicke sedl** 73.18 323 *e*P **P** 03 41 55.2 +0.9
VES **Vestal, Richgr** 73.19 57 P **P** 03 41 55.2 +0.6
baz=312
TPGR **Topolog** 73.22 316 ⇑P **P** 03 41 54.0 -0.7
OJC **Ojcow** 73.29 325 *e*P **P** 03 41 55.0 0.0
OJC **Ojcow** 73.29 325 P **P** 03 41 54.2 -0.7
OJC IAmb IAmb 03 41 56.0
comp=Z,12nm,0.8s
OJC **Ojcow** 73.29 325 P **P** 03 41 54.2 -0.7
OJC pmax pmax
comp=Z,12nm,0.8s
CWC **Cottonwood Cre** 73.40 55 P **P** 03 41 56.7 +0.6
baz=312
GRAC **Grapevine Rang** 73.46 55 P **P** 03 41 57.2 +1.0
baz=312,SNR=6.9
CRVS **Cervenica-Dubn** 73.56 323 *e*P **P** 03 41 57.6 +1.0
CRVS pmax pmax
comp=Z,12nm,1.3s
CRVS **Cervenica-Dubn** 73.56 323 *e*P **P** 03 41 57.6 +1.0
R11A **Troy Canyon, C** 73.59 53 P **P** 03 41 57.8 +0.6
baz=313,SNR=10.0
HWUT **Hardware Ranch** 73.62 48 P **P** 03 41 56.9 -0.4
HWUT IAmb IAmb 03 41 59.4
comp=Z,4.6nm,0.9s
OZUR 73.63 319 ⇑P **P** 03 41 57.4 +0.3
NIE **Niedzica** 73.68 324 *e*P **P** 03 41 58.4 +1.1
BW06 **Boulder Array** 73.88 46 P **P** 03 41 59.2 +0.3
baz=315,SNR=15
PD31 **Pinedale Array** 73.88 46 P **P** 03 41 58.9 +0.1
PD31 IAmb IAmb 03 41 59.8
comp=Z,5.8nm,0.5s
PDAR **Pinedale Array** 73.88 46 P **P** 03 41 59.4 +0.6
comp=Z,6.0nm,0.6s,baz=308,slow=2.1,SNR=50
comp=Z,6.0nm,0.6s
DUG **Dugway, Tooele** 73.91 50 P **P** 03 41 59.8 +0.9
baz=314,SNR=6.1
DOPR **Dopca** 73.92 319 ⇑P **P** 03 41 59.3 +0.6
BRTR **Keskin Array B** 74.02 310 P **P** 03 41 59.7 +0.2
comp=Z,1.9nm,0.8s,baz=81,slow=4.0,SNR=10
BRTR PP **PP** 03 44 43.9 -3.1
comp=Z,1.0nm,0.7s,baz=82,slow=8.9,SNR=3.6
comp=Z,1.9nm,0.8s
BRTR **Keskin Array B** 74.02 310 *i*P **P** 03 42 00.0 +0.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
SCZ2 **Santa Cruz Isl** 74.08 58 P **P** 03 42 01.0 +1.2
baz=312
FURC **Furnace Creek,** 74.11 55 P **P** 03 42 00.9 +1.0
baz=312,SNR=11
TPNV **Topopah Spring** 74.15 54 P **P** 03 42 01.2 +0.8
baz=313
LANS **Liptovska Anna** 74.24 324 *e*P **P** 03 42 02.1 +1.6
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS **Liptovska Anna** 74.24 324 *e*P **P** 03 42 02.1 +1.6
KSP **Ksiaz** 74.25 327 *e*P **P** 03 42 01.3 +0.8
LRMC **Laurel Mtn Rad** 74.28 56 P **P** 03 42 01.7 +0.6
baz=312
PSUT **Pine Spring** 74.46 52 P **P** 03 42 02.0 -0.2
PSUT IAmb IAmb 03 42 03.6
comp=Z,3.9nm,0.7s
VOIR 74.47 319 ⇑P **P** 03 42 02.3 +0.3
VOIR 74.47 319 P **P** 03 42 02.2 +0.3
EDW2 **Edwards Air Fo** 74.50 57 P **P** 03 42 03.1 +0.8
baz=312
OSTC **Ostas** 74.50 327 *e*P **P** 03 42 02.4 +0.4
OSTC *ex* x 03 42 05.8
CHVC **Chvalec** 74.54 327 *e*P **P** 03 42 03.3 +1.1
MORC **Moravsky Berou** 74.57 326 ⇓P **P** 03 42 03.0 +0.6
MORC **Moravsky Berou** 74.57 326 P **P** 03 42 02.4 0.0
MORC IAmb IAmb 03 42 04.3
comp=Z,8.0nm,0.8s
MORC **Moravsky Berou** 74.57 326 P **P** 03 42 02.4 0.0
MORC pmax pmax
comp=Z,8.0nm,0.8s
MORC **Moravsky Berou** 74.57 326 *e*P **P** 03 42 03.2 +0.8
DRGR 74.57 321 ⇑P **P** 03 42 03.4 +0.8
DRGR 74.57 321 P **P** 03 42 03.3 +0.8
DPC **Dobruska-Polom** 74.62 327 *e*P **P** 03 42 03.9 +1.2
DPC **Dobruska-Polom** 74.62 327 *e*P **P** 03 42 03.9 +1.2
UPC **Upice** 74.62 327 *e*P **P** 03 42 03.6 +0.9
UPC **Upice** 74.62 327 *e*P **P** 03 42 03.6 +0.9
KRLC **Kraliky** 74.65 326 *e*P **P** 03 42 03.7 +0.8
KRLC **Kraliky** 74.65 326 *e*P **P** 03 42 03.7 +0.8
ARR **Arges** 74.72 319 ⇑P **P** 03 42 04.4 +1.0
STKA **Stephens Creek** 74.92 179 P **P** 03 42 05.8 +1.5
comp=Z,0.5nm,0.3s,baz=329,slow=7.7,SNR=4.1
comp=Z,0.5nm,0.3s
GSC **Goldstone, Bar** 74.93 56 P **P** 03 42 05.4 +0.6
baz=313
PSZ **Piszkesteto** 74.99 323 ⇓P **P** 03 42 05.0 +0.1
PSZ **Piszkesteto** 74.99 323 P **P** 03 42 05.0 +0.1
BFSC **Mount Baldy Ra** 75.13 57 P **P** 03 42 06.7 +0.7
baz=313
BRG **Berggiesshubel** 75.15 328 *e*(P) **P** 03 42 06.4 +0.8
BRG Amp 03 42 07.2
comp=Z,4.1nm,0.8s
BRG **Berggiesshubel** 75.15 328 *e*P **P** 03 42 06.4 +0.8
BRG pmax pmax
comp=Z,4.0nm,0.8s
CLL **Collm** 75.16 329 IAmb IAmb 03 42 06.8
comp=Z,10.0nm,0.8s
CLL **Collm** 75.16 329 ⇓*i*P **P** 03 42 05.8 +0.1
CLL pmax pmax
comp=Z,10.0nm,0.6s
CLL **Collm** 75.16 329 ⇓*i*P **P** 03 42 05.8 +0.1
comp=Z,10.0nm,0.8s
CLL *i* P(2) 03 42 08.3
comp=Z,10.0nm,0.6s
PVCC **Panska Ves** 75.18 328 *e*P **P** 03 42 06.8 +1.0
PVCC **Panska Ves** 75.18 328 *e*P **P** 03 42 06.8 +1.0
JAVC **Velka Javorina** 75.22 325 *e*P **P** 03 42 08.0 +1.8
VRAC **Vranov** 75.32 326 *e*P **P** 03 42 07.6 +0.9
TUQ **Turquoise Moun** 75.37 55 P **P** 03 42 08.1 +0.7
baz=313
IVI **Ivigtut** 75.53 4 *i*P **P** 03 42 10.2 +2.6
HEC **Hector,Ludlow** 75.54 56 P **P** 03 42 09.1 +0.8
baz=313
SMOL **Smolenice** 75.59 325 *e*P **P** 03 42 09.7 +1.5
KRUC **Moravsky** 75.60 326 *e*P **P** 03 42 09.2 +1.0
PRU **Pruhonice** 75.62 327 *e*P **P** 03 42 09.2 +0.9
PRU **Pruhonice** 75.62 327 *e*P **P** 03 42 09.2 +0.9
RSSD **Black Hills** 75.71 42 P **P** 03 42 09.5 +0.2
baz=317
TREC **Trest** 75.78 326 *e*P **P** 03 42 10.4 +1.1
TREC **Trest** 75.78 326 *e*P **P** 03 42 10.4 +1.1
MURC **Murrieta** 75.85 57 P **P** 03 42 10.4 +0.4
baz=313
BZS **Buzias** 75.95 321 ⇑P **P** 03 42 10.1 -0.2
BZS **Buzias** 75.95 321 P **P** 03 42 10.1 -0.2
GMRC **Granite Mounta** 75.97 55 P **P** 03 42 11.2 +0.5
baz=313,SNR=8.0
PFO **Pinyon Flats O** 76.29 57 P **P** 03 42 13.0 +0.4
baz=313
TPFO **Pinon Flats** 76.30 57 P **P** 03 42 13.0 +0.4
baz=313
BELC **Belle Mtn. Jos** 76.30 56 P **P** 03 42 13.1 +0.5
baz=313
O20A **White River Ci** 76.45 47 P **P** 03 42 13.6 +0.1
baz=316
CKRC **Cesky Krumlov** 76.64 327 *e*P **P** 03 42 14.9 +0.8
CKRC *ex* x 03 42 20.2
KHC **Kasperske Hory** 76.68 327 *e*P **P** 03 42 15.1 +0.7
KHC *e* 03 42 20.5
KHC **Kasperske Hory** 76.68 327 *e*P **P** 03 42 15.1 +0.7
KHC *ex* x 03 42 20.5
RONA **Rosalia, Austr** 76.70 325 *i*P **P** 03 42 16.0 +1.4
comp=Z,6.7nm,0.7s,SNR=6.3
CONA **Conrad Observa** 76.71 325 *e*P **P** 03 42 15.8 +1.2
comp=Z,4.9nm,0.9s
IRM **Iron Mountain** 76.71 56 P **P** 03 42 15.6 +0.8
baz=314,SNR=6.8
MONP2 **Monument Peak** 76.80 57 P **P** 03 42 16.0 +0.4
baz=313
EKA **Eskdalemuir Ar** 76.85 340 P **P** 03 42 15.3 +0.2
GERES **GERESS Array B** 76.86 327 P **P** 03 42 15.9 +0.4
comp=Z,0.6nm,0.3s,baz=35,slow=4.9,SNR=13
comp=Z,0.6nm,0.3s
BC3 **Big Chuckawall** 76.87 56 P **P** 03 42 15.9 +0.1
baz=314
N23A **Red Feather La** 77.11 45 P **P** 03 42 17.3 0.0
baz=317
GRFO **Grafenberg** 77.14 329 P **P** 03 42 16.6 -0.3
GRFO IAmb IAmb 03 42 18.8
comp=Z,11nm,0.9s
GRFO **Grafenberg** 77.14 329 P **P** 03 42 16.6 -0.3
GRFO pmax pmax
comp=Z,11nm,0.9s
SWSC **Sam W. Stewart** 77.15 57 P **P** 03 42 18.0 +0.8
baz=314
IKP **In-Ko-Pah, Jac** 77.16 57 P **P** 03 42 18.0 +0.6
baz=314
PDMCI **Parker Dam,Lak** 77.21 55 P **P** 03 42 18.2 +0.7
baz=314
VTS **Vitosha** 77.43 318 ⇓P **P** 03 42 19.8 +1.0
VTS **Vitosha** 77.43 318 P **P** 03 42 19.8 +1.0
RAYN **Ar Rayn** 77.49 290 P **P** 03 42 18.7 -0.6
GLA **Glamis** 77.67 56 P **P** 03 42 20.7 +0.5
baz=314
BIOA **Bad Ischl, Aus** 77.81 326 *e*P **P** 03 42 21.9 +1.2
comp=Z,2.9nm,0.7s
SUSD **Miller** 77.87 39 P **P** 03 42 21.4 +0.3
baz=320
WUAZ **Wupatki** 77.99 52 P **P** 03 42 22.4 +0.4
baz=315
GROS **Grobnik** 78.02 324 *i*P **P** 03 42 22.3 +0.4
PERS **Pernice** 78.04 325 *i*P **P** 03 42 22.6 +0.6
SOKA **Soboth** 78.04 325 *i*P **P** 03 42 22.5 +0.5
comp=Z,4.1nm,0.9s,SNR=5.1
ISCO **Idaho Springs** 78.08 46 P **P** 03 42 23.0 +0.3
baz=317
OBKA **Obir** 78.38 325 *e*P **P** 03 42 24.8 +0.9
comp=Z,2.8nm,0.6s,SNR=4.4
MVCO **Mesa Verde** 78.41 49 P **P** 03 42 25.2 +0.8
baz=316
KBA **Koelnbreinsper** 78.42 326 *i*P **P** 03 42 25.4 +1.2
comp=Z,4.7nm,1.0s
CRES **Cresnjev** 78.54 324 *e*P **P** 03 42 24.9 +0.2
MYKA **Terra Mystica** 78.66 326 *e*P **P** 03 42 25.8 +0.4
comp=Z,2.0nm,0.5s
S22A **4UR Ranch, Cre** 78.93 48 P **P** 03 42 27.7 +0.3
baz=317,SNR=5.6
WTTA **Wattenberg** 78.95 327 *e*P **P** 03 42 27.6 +0.5
comp=Z,5.0nm,0.8s
ABTA **Abfaltersbach** 79.02 326 *e*P **P** 03 42 27.4 -0.1
comp=Z,4.7nm,1.6s
GIVF **Givet** 79.08 333 *e*P **P** 03 42 28.8 +1.3
GIVF pmax pmax
comp=Z,5.0nm,0.8s
MOTA **Moosalm** 79.10 327 *e*P **P** 03 42 28.8 +0.9
comp=Z,14nm,1.2s
RETA **Reutte** 79.11 328 *i*P **P** 03 42 28.3 +0.4
comp=Z,6.8nm,0.9s,SNR=5.3
SQTA **Sankt Quirin** 79.16 327 *e*P **P** 03 42 29.5 +1.3
comp=Z,4.2nm,0.7s
SCHQ **Schefferville** 79.47 16 P **P** 03 42 30.0 +0.4
comp=Z,1.9nm,0.7s,baz=281,slow=3.9,SNR=3.7
comp=Z,1.9nm,0.7s
ECSD **EROS Data Cent** 79.48 38 P **P** 03 42 30.0 +0.1
baz=322
PDG **Podgorica** 79.48 320 ⇑P **P** 03 42 30.0 +0.1
FETA **Feichten** 79.51 328 *e*P **P** 03 42 30.5 +0.4
comp=Z,6.9nm,1.4s
DAVA **Damuels** 79.62 328 *e*P **P** 03 42 31.5 +0.7
comp=Z,4.4nm,0.5s
214A **Organ Pipe Nat** 79.65 56 P **P** 03 42 31.8 +0.8
baz=315
SDCO **Great Sand Dun** 79.65 47 P **P** 03 42 31.2 0.0
baz=318
CDF **Champ du Feu** 79.65 330 *e*P **P** 03 42 33.3 +2.5
CDF pmax pmax
comp=Z,6.0nm,1.1s
KSCO **Kaye Shedlock'** 80.21 45 P **P** 03 42 34.4 +0.3
baz=319
TUC **Tucson** 80.61 54 P **P** 03 42 36.8 +0.6
TUC **Tucson** 80.61 54 P **P** 03 42 36.8 +0.6
TUC pmax pmax
comp=Z,3.0nm,1.1s
TUC **Tucson** 80.61 54 P **P** 03 42 36.7 +0.5
baz=316
T25A **Trinidad** 80.68 47 P **P** 03 42 36.9 +0.3
baz=318
ANMO **Albuquerque** 81.18 50 P **P** 03 42 39.8 +0.5
baz=318
BNM **Barren Site** 81.67 50 P **P** 03 42 41.8 -0.1
LOR **Lormes** 81.84 332 *e*P **P** 03 42 41.7 -0.6
LOR pmax pmax
comp=Z,6.0nm,0.9s
NRCA **Norcia** 81.94 324 P **P** 03 42 42.8 -0.2
NRCA IAmb IAmb 03 42 44.6
comp=Z,12nm,0.9s
LDF **La Druitiere** 81.99 335 *e*P **P** 03 42 43.5 +0.5
LDF pmax pmax
comp=Z,59nm,1.8s
SSF **Saint Saulge** 82.14 332 *e*P **P** 03 42 43.2 -0.6
SSF pmax pmax
comp=Z,5.0nm,0.9s
121A **Cookes Peak, D** 82.20 52 P **P** 03 42 45.3 +0.7
baz=317
LPL **La Plagne** 82.30 329 *e*P **P** 03 42 44.8 -0.2
LPL pmax pmax
comp=Z,2.0nm,0.5s
LPG **La Plagne** 82.30 329 *e*P **P** 03 42 45.9 +0.8
LPG pmax pmax
comp=Z,4.0nm,0.7s
SMF **Signal de Mont** 82.38 331 *e*P **P** 03 42 45.6 +0.5
SMF pmax pmax
comp=Z,18nm,1.3s
GRR **Gorron** 82.40 335 *e*P **P** 03 42 45.5 +0.4
GRR pmax pmax
comp=Z,30nm,1.5s
AVF **Avril sur Loir** 82.42 332 *e*P **P** 03 42 45.0 -0.3
AVF pmax pmax
comp=Z,7.0nm,1.0s
SCIA **State Center** 82.45 37 P **P** 03 42 46.3 +0.7
baz=324
MBDF **Montbardon** 82.95 329 *e*P **P** 03 42 50.1 +1.8
MBDF pmax pmax
comp=Z,5.0nm,0.8s
ORIF **Oris-en-Rattie** 83.12 329 *e*P **P** 03 42 48.1 -1.0
ORIF pmax pmax
comp=Z,12nm,1.5s
ROSF **Rostrenen** 83.17 336 *e*P **P** 03 42 49.9 +0.8
ROSF pmax pmax
comp=Z,33nm,1.3s
VIVF **Saint-Julien-l** 83.62 330 *e*P **P** 03 42 52.6 +1.1
VIVF pmax pmax
comp=Z,19nm,1.6s
AMTX **Amarillo** 83.83 47 P **P** 03 42 53.5 +0.6
baz=320
MSTX **Muleshoe** 83.94 48 P **P** 03 42 54.2 +0.7
baz=319
LMR **La Mourre** 84.23 328 *e*P **P** 03 42 54.3 -0.3
LMR pmax pmax
comp=Z,10.0nm,1.0s
GDL2 **Guadalupe Moun** 84.39 50 P **P** 03 42 56.3 +0.5
CAF **Calviac** 84.49 332 *e*P **P** 03 42 57.1 +1.2
CAF pmax pmax
comp=Z,5.0nm,0.8s
HDIL **Hopedale** 85.25 36 P **P** 03 43 00.2 +0.5
baz=326
WMOK **Wichita Mounta** 85.46 45 P **P** 03 43 00.5 -0.4
baz=321
CCM **Cathedral Cave** 86.46 38 P **P** 03 43 05.5 -0.3
baz=325
EPF **Esparros** 86.75 332 *e*P **P** 03 43 06.7 -0.4
EPF pmax pmax
comp=Z,22nm,1.7s
TXAR **Lajitas Array** 86.93 52 P **P** 03 43 08.6 +0.3
comp=Z,0.7nm,0.6s,baz=292,slow=2.9,SNR=15
comp=Z,0.7nm,0.6s
ETSF **Etsaut** 87.17 332 *e*P **P** 03 43 10.0 +0.8
ETSF pmax pmax
comp=Z,14nm,1.4s
P49A **Miami Univ. Ec** 88.00 33 P **P** 03 43 13.0 -0.1
baz=329
ACSO **Alum Creek Sta** 88.07 32 P **P** 03 43 13.3 -0.1
baz=330
MIAR **Mount Ida** 88.22 42 P **P** 03 43 14.3 +0.1
baz=324
O53A **New Philadelph** 88.72 30 P **P** 03 43 16.7 +0.2
baz=331
P52A **Corning** 88.92 31 P **P** 03 43 17.9 +0.5
baz=331
WVT **Waverly** 89.58 37 P **P** 03 43 21.3 +0.8
baz=327
ESDC **Sonseca Array** 91.20 333 P **P** 03 43 28.4 +0.4
comp=Z,0.4nm,0.6s,baz=13,slow=4.4,SNR=4.8
comp=Z,0.4nm,0.6s
TORD **Torodi Ar. Bea** 112.17 316 PP **PP** 03 49 39.7 -4.8
comp=Z,1.7nm,0.9s,baz=12,slow=7.2,SNR=5.6
LPAZ **La Paz** 143.79 51 PKhKP PKPpre 03 49 55.3
comp=Z,0.9nm,0.6s,baz=316,slow=1.1,SNR=3.8
TROLL **Troll, Antarti** 144.90 201 PKPdf **PKPdf** 03 49 58.0 +0.3
VILB **Vilhena** 144.93 36 **PKPdf** 03 49 59.1 -0.2
BELA **Belgrano 2** 145.34 182 **PKPdf** 03 49 57.8 -0.3
GO01 **Chusmiza** 145.84 56 PKPbc **PKPbc** 03 50 02.2 0.0
SNAA **Sanae** 146.48 200 PKPbc **PKPbc** 03 50 01.9 -0.2
SNAA **Sanae** 146.48 200 PKPdf **PKPdf** 03 49 59.6 -0.7
VNA2 **Neumayer--Watz** 148.09 199 PKPbc **PKPbc** 03 50 06.5 +0.1
VNA2 **Neumayer--Watz** 148.09 199 PKPdf **PKPdf** 03 50 02.1 -0.8
baz=114,slow=1.1
VNA3 **Neumayer Olymp** 148.40 198 PKPbc **PKPbc** 03 50 06.4 -0.8
VNA1 **Neumayer--Stat** 148.49 199 PKPbc **PKPbc** 03 50 06.7 -0.6
PLCA **Paso Flores** 157.06 94 PKPab **PKPab** 03 50 50.0 +1.3
comp=Z,1.7nm,0.6s,baz=266,slow=4.1,SNR=8.2

*NEIC **05** 03:36:02.4±1.5,21.°90S±0.°06×68.°48W±0.°10,h116^{km}±8^{km}, Error ellipse: s-maj=13.0km s-min=8.2km az=80.0*
*IDC **05** 03:36:02.2±0.7,21.°93S×68.°36W,h108^{km}±8^{km},mb3.5/7, mbtmp3.9/11,Error ellipse: s-maj=19.6km s-min=17.6km az=128.0*
*GUC **05** 03:36:03.0±0.9,21.°92S×68.°49W,h111^{km}±6^{km},ML4.1*
ISC 05 03:36:02.1±0.7,21.°89S±0.°04×68.°50W±0.°06,h115^{km}±6^{km}, n72,σ1s16/75,mb4.2/11,6C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.70	278			Pn	03 36 22.0	+0.9
PB09	**IPOC Station P**	0.70	278	⇑*i*P		Pn	03 36 22.1	+0.9
PB09				*e*S		Sn	03 36 36.3	+0.9
LVC	**Limon Verde**	0.81	208	P		Pn	03 36 22.7	+0.4
	835nm,0.3s,baz=16,slow=9.0,SNR=2638							
LVC				S		Sn	03 36 37.7	+0.1
	857nm,0.4s,baz=220,slow=20,SNR=74							
LVC				LR		LR	03 36 55.3	
	comp=Z,180nm,20.5s,baz=350,slow=62							
LVC	**Limon Verde**	0.81	208			Pn	03 36 22.6	+0.3
LVC	**Limon Verde**	0.81	208	⇓*e*P		Pn	03 36 22.2	-0.1
LVC				*e*S		Sn	03 36 37.1	-0.4
AF01	**San Pedro de A**	1.09	165			Pn	03 36 26.1	+1.0
PB01	**IPOC Station P**	1.25	312			Pn	03 36 26.9	+0.5
PB01	**IPOC Station P**	1.25	312	⇑*i*P		Pn	03 36 27.0	+0.5
PB01				*e*S		Sn	03 36 45.4	+0.4
PB01				IAML			03 36 47.6	
	comp=E,3μm,0.1s							
PB06	**IPOC Station P**	1.28	231			Pn	03 36 27.2	+0.3
PB06	**IPOC Station P**	1.28	231	⇑*i*P		Pn	03 36 27.4	+0.5
PB06				*e*S		Sn	03 36 45.8	+0.1
PB06				IAML			03 36 47.1	
	comp=N,4μm,0.5s							
PB07	**IPOC Station P**	1.30	277			Pn	03 36 27.6	+0.4
PB07	**IPOC Station P**	1.30	277	⇑*i*P		Pn	03 36 27.5	+0.3
PB07				*e*S		Sn	03 36 46.4	+0.3
PB07				IAML			03 36 50.7	
	comp=N,3μm,0.4s							
PB02	**IPOC Station P**	1.42	293			Pn	03 36 28.6	+0.2
PB02	**IPOC Station P**	1.42	293	⇑*i*P		Pn	03 36 28.7	+0.2
PB02				*e*S		Sn	03 36 48.3	-0.1
PB02				IAML			03 36 50.8	
	comp=E,4μm,0.2s							
PB15	**IPOC Station P**	1.59	214			Pn	03 36 31.1	+0.6
PB15	**IPOC Station P**	1.59	214	*e*P		Pn	03 36 30.9	+0.4

PB15					*e*S		**Sn**	03 36 52.9	+0.9
PB04	**IPOC Station P**	**1.59**	**254**	⇑	*i*P		**Pn**	03 36 30.6	0.0
PB04	**IPOC Station P**	**1.59**	**254**				**Pn**	03 36 30.5	0.0
PB04					*e*S		**Sn**	03 36 52.0	-0.2
PB04					IAML			03 36 55.3	
	comp=N,2µm,0.2s								
PATCX	**Punta Patache**	**1.88**	**304**				**Pn**	03 36 34.0	+0.1
PATCX	**Punta Patache**	**1.88**	**304**	*i*	P		**Pn**	03 36 34.0	+0.1
PATCX					*e*S		**Sn**	03 36 57.6	-0.5
PATCX					IAML			03 37 05.6	
	comp=E,2µm,0.3s								
TA01	**Diego Aracena**	**2.05**	**310**				**Pn**	03 36 36.0	-0.1
TA01	**Diego Aracena**	**2.05**	**310**	*e*	P		**Pn**	03 36 35.8	-0.2
TA01					*e*S		**Sn**	03 37 01.4	-0.5
TA02	**Huaiquique**	**2.22**	**316**				**Pn**	03 36 38.0	-0.1
TA02	**Huaiquique**	**2.22**	**316**	*e*	P		**Pn**	03 36 37.8	-0.4
GO01	**Chusmiza**	**2.31**	**343**				**Pn**	03 36 41.1	+1.4
GO01	**Chusmiza**	**2.31**	**343**	*e*	P		**Pn**	03 36 41.1	+1.4
GO01					*e*S		**Sn**	03 37 09.8	+1.4
GO01					IAML			03 37 20.2	
	comp=E,2µm,0.1s								
PB14	**IPOC Station P**	**3.24**	**212**				**Pn**	03 36 52.3	+0.6
GO02	**Mina Guanaco**	**3.41**	**197**		Pn		**Pn**	03 36 53.5	-0.5
GO02	**Mina Guanaco**	**3.41**	**197**	*e*	P		**Pn**	03 36 53.4	-0.5
PB16	**IPOC Station P**	**3.67**	**345**		Pn		**Pn**	03 36 59.2	+1.6
PB16	**IPOC Station P**	**3.67**	**345**	*e*	P		**Pn**	03 36 59.0	+1.3
PB12	**IPOC Station P**	**3.69**	**332**		Pn		**Pn**	03 36 56.4	-1.1
PB12	**IPOC Station P**	**3.69**	**332**	*e*	P		**Pn**	03 36 55.9	-1.6
SLA	**San Lorenzo**	**3.94**	**136**	*e*	P		**Pn**	03 37 03.5	+2.6
AC01	**Pan de Azucar**	**4.65**	**204**		Pn		**Pn**	03 37 08.7	-1.6
AC02	**Maricunga**	**4.95**	**187**		Pn		**Pn**	03 37 14.8	-0.1
LPAZ	**La Paz**	**5.59**	**4**		P		**Pn**	03 37 25.9	+2.4
	comp=E,2.7nm,0.3s,baz=109,slow=3.1,SNR=35								
LPAZ	**La Paz**	**5.59**	**4**		Pn		**Pn**	03 37 24.7	+1.2
AC04	**Llanos de Chal**	**6.71**	**200**		Pn		**Pn**	03 37 33.6	-4.4
SIV	**San Ignacio**	**9.15**	**51**		P		**Pn**	03 38 08.9	-2.4
	comp=E,16nm,0.5s,baz=231,slow=11,SNR=92								
PTLB	**Pontes e Lacer**	**10.94**	**56**		Pn		**Pn**	03 38 33.3	-2.1
CPUP	**Villa Florida**	**11.11**	**116**		P		**Pn**	03 38 37.9	+0.2
	comp=E,1.5nm,0.6s,baz=312,slow=14,SNR=4.1								
VILB	**Vilhena**	**11.90**	**43**		Pn		**Pn**	03 38 46.4	-1.8
TRCB	**Terra Rica**	**14.71**	**96**				**Pn**	03 39 25.9	+1.4
H03N1	**Juan Fernandez**	**14.74**	**216**		T		T	03 54 30.9	
	baz=35,slow=72,SNR=3.7								
H03N2	**Juan Fernandez**	**14.75**	**217**		T		T	03 54 31.7	
	baz=35,slow=72,SNR=2.9								
H03N3	**Juan Fernandez**	**14.75**	**216**		T		T	03 54 26.6	
	baz=35,slow=72,SNR=3.4								
PLCA	**Paso Flores**	**18.86**	**185**		P		**P**	03 40 13.4	+0.1
	comp=E,0.7nm,0.4s,baz=333,slow=10.0,SNR=9.0								
MACA	**Manacapuru-AM**	**20.11**	**23**		P		**P**	03 40 25.9	-1.1
MACA					IAmb		IAmb	03 40 29.3	
	comp=Z,29nm,0.6s								
BDFB	**Brasilia**	**20.36**	**76**		P		**P**	03 40 28.5	-1.3
	comp=Z,2.2nm,0.5s,baz=228,slow=12,SNR=2.7								
	comp=Z,2.2nm,0.5s								
BOSC	**San Juan Bosco**	**21.01**	**331**		P		**P**	03 40 35.9	-1.0
BOSC					IAmb		IAmb	03 40 40.7	
	comp=Z,9.3nm,0.5s								
SLOR	**San Lorenzo -**	**23.18**	**334**		P		**P**	03 40 59.4	-0.1
BOAV	**Boa Vista**	**25.37**	**19**		P		**P**	03 41 18.7	-0.1
BOAV					IAmb		IAmb	03 41 21.0	
	comp=Z,3.5nm,0.8s								
TXAR	**Lajitas Array**	**61.17**	**325**		P		**P**	03 46 05.7	+0.9
	comp=Z,0.1nm,0.6s,baz=165,slow=7.5,SNR=1.6								
	comp=Z,0.1nm,0.6s								
WUAZ	**Wupatki**	**70.08**	**324**		P		**P**	03 47 02.1	+0.1
WUAZ					IAmb		IAmb	03 47 05.6	
	comp=Z,4.8nm,0.9s								
CCUT	**Cedar City**	**72.65**	**324**		P		**P**	03 47 19.5	+1.9
CCUT					IAmb		IAmb	03 47 21.5	
	comp=Z,3.9nm,0.8s								
PSUT	**Pine Spring**	**73.63**	**324**		P		**P**	03 47 23.7	+0.3
PDAR	**Pinedale Array**	**74.64**	**330**		P		**P**	03 47 30.4	+1.3
	comp=Z,0.1nm,0.3s,baz=135,slow=7.0,SNR=3.6								
	comp=Z,0.1nm,0.3s								
NVAR	**Mina Array Bea**	**76.04**	**322**		P		**P**	03 47 39.2	+2.0
	comp=Z,0.7nm,0.8s,baz=157,slow=7.7,SNR=5.8								
	comp=Z,0.7nm,0.8s								
TOA0	**Torodi Ar. Sit**	**77.12**	**70**		P		**P**	03 47 43.0	-0.6
TOA0					IAmb		IAmb	03 48 12.5	
	comp=Z,8.4nm,1.4s								
TORD	**Torodi Ar. Bea**	**77.12**	**70**		P		**P**	03 47 43.5	0.0
	comp=Z,2.5nm,0.6s,baz=260,slow=5.6,SNR=34								
	comp=Z,2.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**77.12**	**70**		P		**P**	03 47 42.7	-0.8
TORD					IAmb		IAmb	03 47 46.0	
	comp=Z,3.0nm,0.8s								
HLID	**Hailey**	**77.58**	**328**		P		**P**	03 47 47.5	+1.8
HLID					IAmb		IAmb	03 47 49.1	
	comp=Z,2.4nm,0.7s								
MAW	**Mawson**	**83.84**	**163**		P		**P**	03 48 20.0	+1.4
	comp=Z,0.9nm,0.5s,baz=206,slow=4.1,SNR=2.1								
	comp=Z,0.9nm,0.5s								
YKA	**Yellowknife Ar**	**91.68**	**340**		P		**P**	03 48 56.8	+0.8
	comp=Z,1.1nm,0.6s,baz=131,slow=4.4,SNR=8.4								
	comp=Z,1.1nm,0.6s								
H11S2	**WAKE ISLAND Hyl**	**28.31**	**277**		T		T	06 15 06.0	
	baz=103,slow=74,SNR=30								
H11S1	**WAKE ISLAND Hyl**	**28.32**	**277**		T		T	06 15 10.0	
	baz=103,slow=74,SNR=16								
H11S3	**WAKE ISLAND Hyl**	**28.32**	**277**		T		T	06 14 42.7	
	baz=103,slow=74,SNR=17								
H11N3	**WAKE ISLAND Hyl**	**28.40**	**278**		T		T	06 14 47.8	
	baz=103,slow=74,SNR=5.7								
H11N2	**WAKE ISLAND Hyl**	**28.41**	**278**		T		T	06 14 48.8	
	baz=103,slow=74,SNR=8.3								
H11N1	**WAKE ISLAND Hyl**	**28.41**	**278**		T		T	06 14 45.3	
	baz=103,slow=74,SNR=4.9								
ZALV	**Zalesovo Beam**	**142.14**	**26**		PKP		**PKPdf**	03 55 21.5	+0.9
	comp=Z,0.9nm,0.5s,baz=323,slow=2.2,SNR=3.9								

*IDC **05** 03:44:24.3±0.7,7.7°62S×127.6°1E,h0km,mb4.3/10, mbtmp4.4/12, ML4.4/2, MS3.2/5, Error ellipse: s-maj=41.3km s-min=15.4km az=74.0*
*DJA **05** 03:44:29.4±0.3,8.3°S×3.2°×12.8°E×,h150km±17km, M4.4/14, mb4.4/8, mB4.9/3, MLv4.4/14, Mw(mB)4.2/3*
*NEIC **05** 03:44:35.2±1.4,8.1°S±0.1°×127.6°E±0.1°,h112km±10km, mb4.5/15, Error ellipse: s-maj=18.8km s-min=12.9km az=214.0*

ISC 05 03:44:29.0±0.4,**7.70°S**±0.04°×**127.84°E**±0.06,**h35**km,**n92,** σ1§**99**/94,**mb4.7**/25,**MS3.3**/3,**2C-2D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**3.44**	**95**	P		**Pn**	**03 45 23.8**	**+3.7**
BNDI	**Bandanaira**	**3.76**	**33**	P		**Pn**	**03 45 24.5**	**-0.1**
AAI	**Ambon**	**4.00**	**5**	P		**Pn**	**03 45 27.3**	**-0.5**
SOEI	**Soe**	**4.08**	**240**	Pn		**Pn**	**03 45 30.8**	**+1.6**
SOEI	**Soe**	**4.08**	**240**	P		**Pn**	**03 45 31.0**	**+1.9**
SOEI	**Soe**	**4.08**	**240**	P		**Pn**	**03 45 29.2**	**+0.1**
MSAI	**Masohi**	**4.45**	**14**	P		**Pn**	**03 45 34.1**	**0.0**
NLAI	**Namlea**	**4.49**	**350**	P		**Pn**	**03 45 33.5**	**-1.1**
BATI	**Baumata**	**4.82**	**239**	Pn		**Pn**	**03 45 40.9**	**+1.7**
	36nm,0.3s,baz=143,slow=2.4,SNR=12							
BATI						Sn	**Sn**	**03 46 37.2**	**+3.3**
	21nm,0.3s,baz=8.1,slow=19,SNR=6.0							
BATI	**Baumata**	**4.82**	**239**	P		**Pn**	**03 45 41.3**	**+2.1**
MMRI	**Maumere**	**5.63**	**260**	Pn		**Pn**	**03 45 52.7**	**+2.4**
BBSI	**Bau Bau**	**5.68**	**292**	P		**Pn**	**03 45 50.7**	**-0.3**
	0.0nm8.9nm,0.7s							
SANI	**Sanana**	**5.91**	**342**	P		**Pn**	**03 45 52.2**	**-1.9**
	0.1nm27nm,0.7s							
MTN	**Manton Dam**	**6.05**	**148**	Pn		**Pn**	**03 45 59.7**	**+3.6**
EDFI	**Ende, Flores**	**6.18**	**260**	P		**Pn**	**03 45 58.8**	**+0.9**
	0.1nm27nm,0.9s							
FAKI	**Fak Fak**	**6.46**	**43**	P		**Pn**	**03 46 01.9**	**+0.2**
	0.3nm75nm,1.5s							
KDU	**Kakadu**	**6.74**	**138**	P		**Pn**	**03 46 08.4**	**+2.9**
KNRA	**Kununurra**	**7.98**	**174**	Pn		**Pn**	**03 46 22.7**	**+0.1**
KNRA	**Kununurra**	**7.98**	**174**	P		**Pn**	**03 46 24.3**	**+1.7**
BKSI	**Bulukumba**	**8.03**	**287**	P		**Pn**	**03 46 21.7**	**-1.5**
	0.1nm572nm27nm,1.0s							
PLAI	**Plampang**	**10.03**	**263**	P		**Pn**	**03 46 50.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**10.56**	**192**	Pn		**Pn**	**03 46 56.5**	**-1.5**
	2.3nm,0.3s,baz=4.9,slow=8.2,SNR=43							
FITZ						Sn	**Sn**	**03 48 54.1**	**-0.9**
	4.4nm,0.3s,baz=124,slow=20,SNR=6.1							
FITZ						LR	LR	03 51 28.4	
	comp=Z,118nm,19.3s,baz=8.0,slow=40 10.0nm,0.5s								
FITZ	**Fitzroy Crossi**	**10.56**	**192**	Pn		**Pn**	**03 46 57.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**10.56**	**192**	P		**Pn**	**03 46 56.8**	**-1.2**

WB0	**Warramunga Arr**	**13.58**	**153**			Pn	**Pn**	**03 47 38.4**	**-0.8**
WRAB	**Tennant Creek**	**13.70**	**153**				**Pn**	**03 47 39.9**	**-1.1**
WRAB	**Tennant Creek**	**13.70**	**153**		P		**Pn**	**03 47 39.9**	**-1.1**
WRA	**Warramunga Arr**	**13.71**	**153**		Pn		**Pn**	**03 47 39.1**	**-1.9**
	2.7nm,0.3s,baz=320,slow=14,SNR=66								
WRA						Sn	**Sn**	**03 50 05.1**	**-7.0**
	2.7nm,0.3s,baz=332,slow=22,SNR=9.3								
WRA						LR	LR	03 53 10.9	
	comp=Z,96nm,20.4s,baz=229,slow=38								
WRA	**Warramunga Arr**	**13.71**	**153**				**Pn**	**03 47 38.5**	**-2.5**
WB2	**Warramunga Arr**	**13.71**	**153**		Pn		**Pn**	**03 47 38.8**	**-2.2**
WR0	**Warramunga Arr**	**13.81**	**153**				**Pn**	**03 47 41.3**	**-1.2**
MBWA	**Marble Bar**	**15.51**	**210**		P		**Pn**	**03 48 04.2**	**-1.0**
PSA00	**Pilbara Seismi**	**15.81**	**208**		Pn		**Pn**	**03 48 05.3**	**-3.8**
PSA00	**Pilbara Seismi**	**15.81**	**208**		P		**Pn**	**03 48 07.2**	**-1.9**
COEN	**Coen**	**16.29**	**114**		P		**P**	**03 48 16.8**	**-1.1**
AS31	**Alice Springs**	**16.91**	**161**				**Pn**	**03 48 20.0**	**-3.1**
ASAR	**Alice Springs**	**16.91**	**161**		P		**Pn**	**03 48 22.9**	**-0.3**
	1.6nm,0.3s,baz=328,slow=9.4,SNR=54								
ASAR						S	**Sn**	**03 51 24.7**	**-5.4**
	2.7nm,0.7s,baz=335,slow=22,SNR=4.2								
ASAR						LR	LR	03 55 30.0	
	comp=Z,90nm,21.8s,baz=338,slow=39 6.1nm,0.6s								
ASAR	**Alice Springs**	**16.91**	**161**				**Pn**	**03 48 21.6**	**-1.5**
QIS	**Mount Isa**	**17.12**	**140**		P		**Pn**	**03 48 25.7**	**0.0**
WRKA	**Warakurna**	**17.25**	**179**		P		**Pn**	**03 48 26.0**	**-1.3**
SBUM	**Sibu**	**18.56**	**302**		P		**Pn**	**03 48 43.6**	**+0.1**
SBUM						IAmb	IAmb	03 48 49.9	
	comp=Z,13nm,0.8s								
KSM	**Kuching**	**19.72**	**297**		P		**P**	**03 48 56.0**	**+0.2**
KSM						IAmb	IAmb	03 48 57.4	
	comp=Z,22nm,1.1s								
GIRL	**Giralia**	**19.81**	**220**		P		**Pn**	**03 48 58.8**	**+0.4**
MEEK	**Meekatharra**	**20.78**	**204**		P		**P**	**03 49 08.5**	**+1.3**
OOD	**Oodnadatta**	**21.33**	**161**		P		**P**	**03 49 16.0**	**+3.0**
FORT	**Forrest**	**22.97**	**180**		P		**P**	**03 49 25.9**	**-4.6**
FORT						IAmb	IAmb	03 49 39.6	
	comp=Z,52nm,0.8s								
FORT	**Forrest**	**22.97**	**180**		P		**P**	**03 49 32.5**	**+2.0**
MULG	**Mulgathing**	**23.21**	**166**		P		**P**	**03 49 35.5**	**+2.5**
MORW	**Morawa**	**23.99**	**206**		P		**P**	**03 49 41.2**	**+0.7**
QLP	**Quilpie**	**24.40**	**142**		P		**P**	**03 49 47.5**	**+3.2**
LCRK	**Leigh Creek**	**24.63**	**158**		P		**P**	**03 49 48.4**	**+2.0**
BLDU	**Ballidu**	**25.07**	**203**		P		**P**	**03 49 53.0**	**+2.7**
BBOO	**Buckleboo**	**26.13**	**164**		P		**P**	**03 50 02.4**	**+2.5**
STKA	**Stephens Creek**	**27.26**	**154**		P		**P**	**03 50 13.3**	**+3.2**
	comp=Z,2.5nm,0.7s,baz=328,slow=8.5,SNR=6.7								
STKA						LR	LR	04 01 57.2	
	comp=Z,85nm,19.2s,baz=37,slow=38 comp=Z,2.5nm,0.7s								
HTT	**Hallett**	**27.59**	**160**		P		**P**	**03 50 15.7**	**+2.6**
CMSA	**Cobar Meteorol**	**28.98**	**147**		P		**P**	**03 50 28.7**	**+3.2**
PSI	**Prapat**	**30.68**	**289**		LR		LR	04 02 20.5	
	comp=Z,45nm,20.4s,baz=218,slow=35								
SRIT	**Nakonsritamara**	**32.47**	**299**		P		**P**	**03 50 54.6**	**-1.8**
CMAR	**Chiang Mai Arr**	**38.58**	**313**		P		**P**	**03 51 48.9**	**0.0**
	comp=Z,4.2nm,0.6s,baz=142,slow=6.9,SNR=16 comp=Z,4.2nm,0.6s								
CMAR	**Chiang Mai Arr**	**38.58**	**313**		P		**P**	**03 51 48.6**	**-0.3**
CHTO	**Chiang Mai**	**38.81**	**313**		P		**P**	**03 51 50.0**	**-0.8**
CHTO						IAmb	IAmb	03 51 53.5	
	comp=Z,7.6nm,0.9s								
NJ2	**Nanjing**	**40.45**	**348**	*e*	P		**P**	**03 52 05.3**	**+1.1**
NJ2						pmax	pmax		
	comp=Z,16nm,0.9s								
KMI	**Kunming**	**40.77**	**324**	⇑	P		**P**	**03 52 09.1**	**+1.8**
KMI						pmax	pmax		
	comp=Z,11nm,0.8s								
PZH	**PanZhiHua**	**42.40**	**324**		P		**P**	**03 52 23.8**	**+3.3**
PZH						pmax	pmax		
	comp=Z,10.0nm,0.7s								
PZH						pmax	pmax		
	comp=Z,80nm,4.5s								
KSAR	**Wonju Array Be**	**44.90**	**0**		P		**P**	**03 52 41.1**	**+0.8**
KSRS	**Korea Array**	**44.91**	**0**		P		**P**	**03 52 40.8**	**+0.4**
	comp=Z,4.7nm,0.7s,baz=177,slow=11,SNR=23 comp=Z,4.7nm,0.7s								
INCN	**Inchon**	**44.96**	**359**		P		**P**	**03 52 43.0**	**+2.2**
XAN	**Xi'an**	**45.22**	**338**		P		**P**	**03 52 42.5**	**-0.5**
XAN					pP		pP	03 52 51.4	-0.9
XAN					pmax		pmax		
	comp=Z,13nm,0.8s								
XAN					LR		LR		
	comp=N,170nm,14.0s								
XAN					LR		LR		
	comp=E,89nm,7.7s								
XAN					LR		LR		
	comp=Z,140nm,15.0s								
SEHB	**SEOHWA**	**45.73**	**0**		P		**P**	**03 52 47.8**	**+0.9**
SEHB						IAmb	IAmb	03 52 49.1	
	comp=Z,16nm,1.0s								
HNS	**HongShan**	**46.51**	**346**	⇓	P		**P**	**03 52 53.3**	**+0.3**
HNS						pmax	pmax		
	comp=Z,19nm,0.9s								
LZH	**Lanzhou**	**49.05**	**334**	⇑	P		**P**	**03 53 14.2**	**+1.2**
LZH						pmax	pmax		
	comp=Z,17nm,1.3s								
HHC	**Hu-ho-hao-te**	**50.58**	**344**	*e*	P		P	03 53 29.2	+4.8
HHC						pmax	pmax		
	comp=Z,11nm,0.8s								
HHC						pmax	pmax		
	comp=Z,110nm,7.5s								
USRK	**Ussuriysk Ar.**	**51.79**	**4**		P		**P**	**03 53 33.1**	**-0.2**
	comp=Z,4.7nm,0.6s,baz=198,slow=1.2,SNR=6.5 comp=Z,4.7nm,0.6s								
XLT	**XiLinHaoTe**	**52.45**	**349**	*e*	P		**P**	**03 53 38.7**	**+0.4**
XLT						pmax	pmax		
	comp=Z,24nm,0.8s								
GTA	**Gaotai**	**53.58**	**333**	⇓	P		**P**	**03 53 47.2**	**+0.3**
GTA						pmax	pmax		
	comp=Z,21nm,0.9s								
ULN	**Ulaanbaatar**	**58.29**	**344**		P		**P**	**03 54 20.1**	**-0.4**
SONM	**Songino Array**	**58.45**	**343**		P		**P**	**03 54 21.6**	**+0.1**
	comp=Z,8.9nm,1.0s,baz=164,slow=7.7,SNR=32 comp=Z,8.9nm,1.0s								
SONM	**Songino Array**	**58.45**	**343**		P		**P**	**03 54 21.4**	**-0.1**
SONM						IAmb	IAmb	03 54 23.0	
	comp=Z,11nm,1.0s								
WMQ	**Urumqi**	**62.83**	**328**	*e*	P		**P**	**03 54 52.8**	**+1.4**
MKAR	**Makanchi Array**	**67.66**	**328**		P		**P**	**03 55 21.8**	**-0.8**
	comp=Z,5.6nm,0.7s,baz=129,slow=7.8,SNR=46 comp=Z,5.6nm,0.7s								
MKAR	**Makanchi Array**	**67.66**	**328**		P		**P**	**03 55 21.3**	**-1.3**
KBL	**Kabul**	**69.59**	**311**		P		**P**	**03 55 33.8**	**-1.4**
KBL						IAmb	IAmb	03 55 36.6	
	comp=Z,3.9nm,0.7s								
AAK	**Ala-Archa**	**69.71**	**321**		P		**P**	**03 55 34.7**	**-0.9**
AAK						IAmb	IAmb	03 55 36.8	
	comp=Z,7.5nm,1.5s								
ZALV	**Zalesovo Beam**	**71.28**	**335**		P		**P**	**03 55 43.8**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=97,slow=3.6,SNR=6.1 comp=Z,1.7nm,0.6s								
ZALV	**Zalesovo Beam**	**71.28**	**335**		P		**P**	**03 55 44.0**	**-0.8**
KURBB	**Kurchatov Arra**	**72.00**	**329**		P		**P**	**03 55 48.1**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=132,slow=5.1,SNR=18 comp=Z,1.7nm,0.5s								
KURK	**Kurchatov**	**72.01**	**330**				**P**	**03 55 47.4**	**-1.8**
KURK						IAmb	IAmb	03 55 50.1	
	comp=Z,5.2nm,1.0s								
VNDA	**Vanda**	**72.03**	**173**		P		**P**	**03 55 51.1**	**+2.2**
	comp=Z,0.3nm,0.5s,baz=318,slow=9.7,SNR=5.2 comp=Z,0.3nm,0.5s								
SEY	**Seymchan**	**72.89**	**11**		P		**P**	**03 55 54.5**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=239,slow=5.2,SNR=5.8 comp=Z,1.3nm,0.7s								
BRVK	**Borovoye**	**77.59**	**329**		P		**P**	**03 56 19.9**	**-1.6**
TORD	**Torodi Ar. Bea**	**126.84**	**281**		PKP		**PKPdf**	**04 03 28.6**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=34,slow=2.3,SNR=3.8								
LPAZ	**La Paz**	**151.40**	**146**		PKPbc		**PKiKP**	**04 04 21.8**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=175,slow=2.6,SNR=6.8								

*IDC **05** 04:27:35.4±1.2,17.6°65S×167.2°7E,h0km,mb4.1/6, mbtmp4.2/7, ML4.7/1, MS3.2/15, Error ellipse: s-maj=44.5km s-min=22.8km az=137.0*
*NOU **05** 04:27:35.5, 17.6°58S×167.2°5E,h6km,MLv4.5/14, Vanuatu Islands*
*NEIC **05** 04:27:37.6±0.8, 17.8°S±0.1°×167.2°7E±0.10,h10km±1km, mb4.5/10, Error ellipse: s-maj=20.5km s-min=15.4km az=11.0*

ISC 05 04:27:37.7±0.6,**17.68S**±0.08×**167.32E**±0.07,**h19**km,**n50,** σ0§**96**/39,**mb4.3**/10,**MS3.3**/14,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**0.83**	**93**	P		**Pb**	**04 27 53.4**	**0.0**
RTV	**Rentapao**	**1.06**	**96**	P		**Pn**	**04 27 56.9**	**-0.6**
MARNC	**Mare, Loyalty**	**3.84**	**170**			**Pn**	**04 28 36.1**	**+0.4**
MARNC	**Mare, Loyalty**	**3.84**	**170**	P		**Pn**	**04 28 36.6**	**+0.9**
KOUNC	**Koumac, New Ca**	**4.04**	**225**			**Pn**	**04 28 38.6**	**0.0**
KOUNC	**Koumac, New Ca**	**4.04**	**225**	P		**Pn**	**04 28 38.2**	**-0.4**
YATNC	**Mamie plateau,**	**4.37**	**185**	P		**Pn**	**04 28 42.3**	**-0.8**
DZM	**Mont Dzumac**	**4.44**	**191**	Pn		**Pn**	**04 28 44.1**	**-0.1**
	34nm,0.3s,baz=310,slow=12,SNR=276							
DZM						Sn	**Sn**	**04 29 34.1**	**-1.3**
	17nm,0.3s,baz=141,slow=23,SNR=7.3							
DZM						LR	LR	04 30 20.7	
	comp=Z,260nm,18.8s,baz=19,slow=37 69nm,0.3s								
DZM	**Mont Dzumac**	**4.44**	**191**	*e*	Pn		**Pn**	**04 28 43.9**	**-0.2**
	93nm,0.8s								
DZM				*e*	Sn		**Sn**	**04 29 35.2**	**-0.2**
	105nm,1.0s								
DZM	**Mont Dzumac**	**4.44**	**191**				**Pn**	**04 28 43.7**	**-0.5**
DZM	**Mont Dzumac**	**4.44**	**191**	P			**Pn**	**04 28 44.9**	**+0.8**
NOUC	**Port Laguerre**	**4.50**	**192**	P			**Pn**	**04 28 45.6**	**+0.8**
ONTNC	**Ouen Toro**	**4.67**	**190**				**Pn**	**04 28 46.8**	**-0.4**
ONTNC	**Ouen Toro**	**4.67**	**190**	P			**Pn**	**04 28 48.3**	**+1.1**
OUENC	**Ouen Island, N**	**4.73**	**185**				**Pn**	**04 28 48.0**	**-0.1**
OUENC	**Ouen Island, N**	**4.73**	**185**	P			**Pn**	**04 28 49.2**	**+1.2**
PINNC	**Pines Island,**	**4.91**	**179**				**Pn**	**04 28 50.4**	**0.0**
MSVF	**Nonsavu**	**10.23**	**92**	LR		LR	04 33 21.9	
	comp=Z,296nm,19.8s,baz=352,slow=34							
HNR	**Honiara**	**10.89**	**318**	LR		LR	04 33 43.3	
	comp=Z,82nm,19.1s,baz=145,slow=34							
AFI	**Afiamalu**	**20.46**	**82**	LR		LR	04 37 36.6	
	comp=Z,44nm,21.0s,baz=65,slow=29							
PMG	**Port Moresby**	**21.24**	**290**	LR		LR	04 39 36.6	
	comp=Z,73nm,19.2s,baz=156,slow=34							
URZ	**Urewera**	**22.22**	**159**	LR		LR	04 39 29.4	
	comp=Z,31nm,19.7s,baz=30,slow=32							
RPZ	**Rata Peaks**	**26.14**	**174**	LR		LR	04 41 28.5	
	comp=Z,49nm,18.1s,baz=250,slow=32							
STKA	**Stephens Creek**	**27.21**	**234**	P		**P**	**04 33 21.9**	**+1.5**
	8.5nm,0.8s,baz=62,slow=9.0,SNR=17							
STKA						LR	LR	04 43 49.8	
	comp=Z,27nm,18.7s,baz=50,slow=36 8.5nm,0.8s							
STKA	**Stephens Creek**	**27.21**	**234**	P		**P**	**04 33 19.9**	**-0.5**
RAR	**Rarotonga**	**31.20**	**102**	LR		LR	04 46 17.9	
	comp=Z,31nm,19.3s,baz=275,slow=36							
WB2	**Warramunga Arr**	**31.26**	**261**	P		**P**	**04 33 56.7**	**+0.1**
WB2						IAmb	IAmb	04 33 59.3	
	comp=Z,15nm,1.4s								
WRA	**Warramunga Arr**	**31.27**	**261**	P		**P**	**04 33 55.8**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=93,slow=8.8,SNR=7.8								
WRA						LR	LR	04 44 58.2	
	comp=Z,84nm,20.0s,baz=90,

baz=335
MORC eSg Sb 04 30 15.0 +0.4
comp=Z,64nm,0.7s,baz=335
MORC Moravsky Berou 1.99 153 ePN Pn 04 29 47.6 +0.4
MORC eSG Sb 04 30 15.0 +0.4
MORC Moravsky Berou 1.99 153 ePn Pn 04 29 47.4 +0.2
OKC Ostrava-Krasne 2.14 142 ePG Pb 04 29 52.2 +0.3
OKC eSG Sg 04 30 20.8 -0.2
comp=Z,105nm,1.0s
OKC Ostrava-Krasne 2.14 142 ePn Pn 04 29 50.4 +1.1
VRAC Vranov 2.26 172 Pn Pn 04 29 51.7 +0.8
comp=Z,2.7nm,0.3s,baz=345,slow=16,SNR=7.5
VRAC Lg Lg 04 30 23.4
comp=Z,5.5nm,0.3s,baz=74,slow=15,SNR=11
comp=Z,5.7nm,0.3s
VRAC Vranov 2.26 172 ePn Pn 04 29 51.6 +0.6
baz=354
VRAC eSg Sb 04 30 23.9 +1.4
comp=Z,50nm,0.8s,baz=354
VRAC Vranov 2.26 172 ePN Pn 04 29 51.6 +0.6
VRAC eSG Sb 04 30 23.9 +1.4
VRAC Vranov 2.26 172 ePn Pn 04 29 52.2 +1.2
TREC Trest 2.29 191 ePn Pn 04 29 52.7 +1.3
TREC ePG Pb 04 29 55.4 +0.8
TREC eSG Sb 04 30 25.2 +1.8
comp=Z,36nm,0.7s
TREC Trest 2.29 191 ePn Pn 04 29 52.0 +0.6
ABG1 Leinawald 2.31 257 ePg Pg 04 29 57.4 +0.8
KRUC Moravsky 2.49 176 ePn Pn 04 29 54.8 +0.7
baz=357
KRUC eSg Sb 04 30 30.9 +1.7
comp=Z,37nm,0.8s,baz=357
KRUC Moravsky 2.49 176 ePN Pn 04 29 54.9 +0.8
KRUC eSG Sb 04 30 30.9 +1.7
TANN Tannenbergstha 2.58 245 ePn Pn 04 29 55.9 +0.5
MULD Muldenberg 2.62 246 ePn Pn 04 29 56.3 +0.5
OJC Ojcow 2.67 118 ePg Pg 04 30 03.7 +0.2
OJC eSg Sg 04 30 38.5 +0.3
OJC Ojcow 2.67 118 ePg Pg 04 30 03.9 +0.3
NKC Novy Kostel 2.68 242 ePN Pn 04 29 57.5 +0.8
NKC ePG Pb 04 30 02.1 +1.0
NKC eSG Sg 04 30 39.4 +1.1
comp=Z,51nm,0.5s
NKC Novy Kostel 2.68 242 ePn Pn 04 29 57.6 +0.8
WERN Wernitzgruen 2.69 244 ePn Pn 04 29 58.0 +1.1
PLN Plauen 2.73 249 ePn Pn 04 29 57.7 +0.4
PLN eSg Sg 04 30 39.2 -0.6
ROHR Rohrbach 2.75 243 ePn Pn 04 29 58.1 +0.4
NEUB Neuenburg 2.75 265 ePn Pn 04 29 58.2 +0.5
TRIB Obertriebel 2.80 246 ePn Pn 04 29 58.6 +0.3
TAUT Tautenburg 2.83 260 ePn Pn 04 29 59.2 +0.4
TAUT ePg Pg 04 30 06.6 0.0
JAVC Velka Javorina 2.87 159 ePN Pn 04 29 59.6 +0.3
WIMM Wimmelburg 2.89 271 ePn Pn 04 30 01.3 +1.8
KHC Kasperske Hory 2.92 215 ePn Pn 04 30 00.4 +0.4
KHC ePG Pb 04 30 06.1 +0.8
KHC eSN Sn 04 30 36.0 +0.2
KHC eSG Sg 04 30 45.9 -0.2
comp=Z,17nm,0.5s
KHC Kasperske Hory 2.92 215 ePn Pn 04 30 00.1 +0.1
CKRC Cesky Krumlov 2.97 204 ePN Pn 04 30 01.6 +0.9
CKRC ePG Pb 04 30 06.5 +0.4
CKRC eSG Sg 04 30 46.7 -1.0
CKRC Cesky Krumlov 2.97 204 ePn Pn 04 30 01.9 +1.1
MOX Moxa 2.99 254 ePg Pg 04 30 09.4 -0.1
MOX eSg Sg 04 30 49.3 +1.0
HWTS Hohenwarte Tal 3.09 254 ePg Pg 04 30 11.8 +0.2
GEC2 GERESS Array S 3.12 211 ePn Pn 04 30 04.1 +1.3
GERES GERESS Array B 3.12 211 Pn Pn 04 30 03.0 +0.2
comp=Z,1.7nm,0.3s,baz=32,slow=12,SNR=45
GERES Pg Pb 04 30 09.5 +0.8
comp=Z,2.7nm,0.3s,baz=31,slow=14,SNR=25
GERES Lg Lg 04 30 51.3
comp=Z,4.0nm,0.3s,baz=28,slow=29,SNR=4.3
comp=Z,3.5nm,0.4s
WET Wettzell 3.18 222 ePn Pn 04 30 04.3 +0.6
LANS Liptovska Anna 3.21 137 ePG Pg 04 30 14.6 +0.7
LANS eSG Sg 04 30 56.2 +0.7
MODS Modra-Piesok 3.26 166 ePG Pg 04 30 15.0 +0.2
MODS eSG Sg 04 30 55.1 -2.0
CHRS Christianenhau 3.32 273 ePn Pn 04 30 06.3 +0.9
NIE Niedzica 3.41 127 eP Pg 04 30 17.1 -0.6
NIE eS Sg 04 31 02.4 +0.6
CONA Conrad Observa 3.63 183 *i* Pn Pn 04 30 11.2 +1.4
comp=Z,1.1nm,0.2s,SNR=5.9
CONA eSg Sg 04 31 07.9 -0.9
comp=Z,24nm,0.5s
RONA Rosalia, Austr 3.85 178 eSg Sg 04 31 13.5 -2.6
comp=Z,8.8nm,0.4s
MOA Molln 3.90 199 Pn Pn 04 30 14.3 +0.9
comp=Z,5.4nm,0.3s,SNR=13
MOA eSg Sg 04 31 14.9 -2.5
comp=Z,10nm,0.5s
BIOA Bad Ischl, Aus 4.19 204 eSg Sg 04 31 25.1 -1.6
comp=Z,34nm,0.6s
ARSA Arzberg 4.32 186 *i* Pn Pn 04 30 21.8 +2.6
comp=Z,1.3nm,0.3s
ARSA eSg Sg 04 31 27.7 -3.4
comp=Z,19nm,0.7s
KOLS Kolonicke sedl 4.73 121 ePN Pn 04 30 25.4 +0.5
KOLS ePG Pg 04 30 44.0 +1.1
KBA Koelnbreinsper 4.83 203 Pn Pn 04 30 27.4 +1.0
comp=Z,4.1nm,0.5s,SNR=9.2
KBA eSg Sb 04 31 40.3 +3.7
comp=Z,13nm,0.8s
SOKA Soboth 4.93 189 eSg Sg 04 31 52.5 +2.0
comp=Z,2.1nm,0.4s
OBKA Obir 5.15 192 eSg Sb 04 31 48.4 +2.7
comp=Z,8.5nm,0.7s
WATA Walderalm 5.16 217 ePn Pn 04 30 32.7 +1.8
comp=Z,2.3nm,0.3s
MYKA Terra Mystica 5.19 199 eSg Sg 04 31 57.6 -1.2
comp=Z,3.6nm,0.4s
WTTA Wattenberg 5.20 216 ePn Pn 04 30 33.4 +1.9
comp=Z,1.0nm,0.2s
WTTA eSg Sg 04 31 56.8 -2.3
comp=Z,4.3nm,0.5s
MOTA Moosalm 5.33 220 ePn Pn 04 30 32.6 -0.7
comp=Z,0.7nm,0.2s
ABTA Abfaltersbach 5.36 208 eSg Sg 04 32 03.0 -1.4
comp=Z,8.3nm,0.7s
FETA Feichten 5.75 220 eSg Sg 04 32 17.3 +0.5
comp=Z,3.4nm,0.7s
AKASG Malin Array B 8.28 91 Pn Pn 04 31 14.4 +0.9
comp=Z,0.7nm,0.3s,baz=279,slow=12,SNR=4.3
comp=Z,0.4nm,0.5s
FINES FINESS Array B 11.32 25 Pn Pn 04 31 54.3 -0.9
comp=Z,0.1nm,0.3s,baz=219,slow=13,SNR=1.2
comp=Z,1.9nm,0.9s
EKA Eskdalemuir Ar 12.10 296 Pn Pn 04 32 02.8 -3.1
baz=108,slow=14
ARCES ARCESS Array B 18.58 10 Pn P 04 33 27.6 -3.0
comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=7.7
comp=Z,0.5nm,0.7s

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*SOME **05** 04:34:01.7, 39˚.48N×73˚.68E, h5km, MS3.9*
*IDC **05** 04:34:01.6±0.7, 39˚.29N×73˚.63E, h0km, mb4.2/20, mbtmp4.2/26, ML3.7/6, MS3.1/18, Error ellipse: s-maj=14.6km s-min=10.8km az=155.0*
*KRNET **05** 04:34:02.5±0.1, 39˚.42N×73˚.63E, mb4.7*
*NEIC **05** 04:34:05.9±2.9, 39˚.46N±0˚.06×73˚.53E±0˚.08, h10km±1km, mb4.4/23, Error ellipse: s-maj=11.0km s-min=9.3km az=138.0*
*NNC **05** 04:34:07.0±1.3, 39˚.62N×73˚.64E, h0km, mb4.8, mpv4.6, Error ellipse: s-maj=11.2km s-min=6.3km az=169.0*
*MOS **05** 04:34:07.3±1.0, 39˚.50N×73˚.59E, h26km, mb4.5/12, Error ellipse: s-maj=5.9km s-min=3.5km az=84.0*

ISC 05 04:34:05.2±0.6, 39˚.49N±0˚.03×73˚.59E±0˚.02, h15km±3km, n277,σ2ŝ24/330, mb4.3/43, MS3.2/16, 43C-40D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**			**1.20 329**	⇓*e*P	**Pn**		**04 34 26.6**	**-1.0**
OHH					*e*S	**Sg**		**04 34 44.4**	**+0.3**
OHH	**Osh**			**1.20 329**	⇓*e*P	**Pn**		**04 34 26.6**	**-1.0**
	baz=30								
OHH					⇓*e*S	**Sg**		**04 34 44.4**	**+0.3**
	baz=30								
DRK	**Karamyk**			**1.39 270**		**Pn**		**04 34 30.3**	**0.0**
ARLS	**Aral**			**2.43 13**	⇓*e*PN	**Pn**		**04 34 46.4**	**+1.8**
ARLS					*e*S	**Sb**		**04 35 18.2**	**-0.5**
	baz=12								
ARLS					⇓*e*S	**Sb**		**04 35 18.2**	**-0.5**
	baz=12								
GAR	**Garm**			**2.59 260**	Pn	**Pb**		**04 34 49.2**	**-2.1**
GAR	**Garm**			**2.59 260**	*e*PN	**Pn**		**04 34 48.1**	**+1.4**
GAR					*e*S	**Sb**		**04 35 21.2**	**-1.8**
GAR	**Garm**			**2.59 260**	⇑*e*P	**Pn**		**04 34 48.1**	**+1.4**
	baz=62								
GAR					⇑*e*S	**Sb**		**04 35 21.2**	**-1.8**
	baz=62								
AML	**Almayashu**			**2.64 2**	P	**Pn**		**04 34 49.9**	**+2.3**
	SNR=283								
AML	**Almayashu**			**2.64 2**	*e*PN	**Pn**		**04 34 49.5**	**+1.9**
AML					*e*S	**Sb**		**04 35 24.1**	**-0.7**
NRN	**Naryn**			**2.67 43**	*e*PN	**Pn**		**04 34 48.9**	**+0.9**
NRN					*e*S	**Sn**		**04 35 23.1**	**+2.8**
UCH	**Uchtor**			**2.82 14**	P	**Pb**		**04 34 53.0**	**-2.6**
	SNR=196								
UCH	**Uchtor**			**2.82 14**	⇓*e*PN	**Pn**		**04 34 51.9**	**+1.7**
UCH					*e*S	**Sb**		**04 35 28.3**	**-1.8**
UCH	**Uchtor**			**2.82 14**	⇓*e*P	**Pn**		**04 34 51.9**	**+1.7**
	baz=13								
UCH					⇓*e*S	**Sb**		**04 35 28.3**	**-1.8**
	baz=13								
EKS2	**Erkin-Say**			**3.17 2**	P	**Pn**		**04 34 57.9**	**+3.2**
	SNR=39								
EKS2	**Erkin-Say**			**3.17 2**	*e*PN	**Pn**		**04 34 56.6**	**+1.9**
EKS2					*e*S	**Sb**		**04 35 36.3**	**-3.6**
EKS2	**Erkin-Say**			**3.17 2**	⇑*e*P	**Pn**		**04 34 56.6**	**+1.9**
	baz=2.0								
EKS2					⇑*e*S	**Sb**		**04 35 36.3**	**-3.6**
	baz=2.0								
AAK	**Ala-Archa**			**3.22 12**	Pn	**Pn**		**04 34 58.5**	**+3.2**
	36nm,0.3s,baz=132,slow=10,SNR=72								
AAK					Sn	**Sb**		**04 35 42.3**	**+1.1**
	35nm,0.3s,baz=294,slow=23,SNR=8.3								
	84nm,0.4s								
AAK	**Ala-Archa**			**3.22 12**	P	**Pn**		**04 34 58.6**	**+3.2**
	SNR=67								
AAK	**Ala-Archa**			**3.22 12**	Pn	**Pn**		**04 34 58.3**	**+3.0**
AAK	**Ala-Archa**			**3.22 12**	*ce*PN	**Pn**		**04 34 58.5**	**+3.2**
AAK					pmax	pmax			
	comp=Z,47nm,0.6s								
AAK	**Ala-Archa**			**3.22 12**	⇑*e*P	**Pn**		**04 34 57.5**	**+2.1**
	baz=11								
AAK					⇑*e*S	**Sn**		**04 35 37.4**	**+3.9**
	baz=11								
MRKS	**Merke**			**3.26 355**	*e*P	**Pb**		**04 35 02.4**	**-0.5**
	comp=Z,126nm,0.4s								
MRKS					*e*S	**Sg**		**04 35 46.9**	**-3.1**
	comp=Z,622nm,0.6s								
MRKS	**Merke**			**3.26 355**	Pg	**Pg**		**04 35 06.1**	**-1.6**
	comp=Z,126nm,0.4s								
MRKS					Lg	Lg		04 35 50.7	
	comp=Z,622nm,0.6s								
KBK	**Karagaybulak**			**3.33 18**	P	**Pb**		**04 35 01.0**	**-2.9**
	SNR=26								
KBK	**Karagaybulak**			**3.33 18**	⇓*e*PN	**Pn**		**04 34 58.8**	**+1.9**
KBK					*e*S	**Sn**		**04 35 39.9**	**+3.7**
KBK	**Karagaybulak**			**3.33 18**	⇓*e*P	**Pn**		**04 34 58.8**	**+1.9**
	baz=17								
KBK					⇓*e*S	**Sn**		**04 35 39.9**	**+3.7**
	baz=17								
ULHL	**Ulahol**			**3.41 35**	P	**Pn**		**04 35 00.3**	**+2.3**
	SNR=25								
ULHL	**Ulahol**			**3.41 35**	⇓*e*PN	**Pn**		**04 34 59.7**	**+1.7**
ULHL					*e*S	**Sn**		**04 35 41.5**	**+3.2**
ULHL	**Ulahol**			**3.41 35**	⇓*e*P	**Pn**		**04 34 59.7**	**+1.7**
	baz=34								
ULHL					⇓*e*S	**Sn**		**04 35 41.5**	**+3.2**
	baz=34								
BOOM	**Boomskoye usch**			**3.48 30**	*e*PN	**Pn**		**04 35 00.8**	**+1.8**
BOOM					*e*S	**Sn**		**04 35 43.5**	**+3.4**
BOOM	**Boomskoye usch**			**3.48 30**	⇑*e*P	**Pn**		**04 35 00.8**	**+1.8**
	baz=29								
BOOM					⇑*e*S	**Sn**		**04 35 43.5**	**+3.4**
	baz=29								
CHGR	**Chuyangaron**			**3.55 258**		**Pn**		**04 35 01.5**	**+1.7**
CHGR	**Chuyangaron**			**3.55 258**	PN	**Pn**		**04 35 01.5**	**+1.7**
CHGR	**Chuyangaron**			**3.55 258**	⇓*e*P	**Pn**		**04 35 01.2**	**+1.4**
	baz=59								
CHGR					⇓*e*S	**Sn**		**04 35 44.1**	**+2.5**
	baz=59								
CHMS	**Chumysh**			**3.61 14**	P	**Pn**		**04 35 04.4**	**+3.8**
	SNR=12								
CHMS	**Chumysh**			**3.61 14**	⇑Pn	**Pn**		**04 35 03.5**	**+2.8**
	comp=Z,36nm,0.5s								
CHMS					⇑Pg	**Pb**		**04 35 10.9**	**+2.1**
	comp=Z,63nm,0.6s								
CHMS					⇓Lg	Lg		04 35 58.0	
	comp=Z,277nm,0.7s								
CHMS	**Chumysh**			**3.61 14**	⇓*e*P	**Pn**		**04 35 02.8**	**+2.1**
	baz=13								
CHMS					⇓*e*S	**Sn**		**04 35 46.7**	**+3.6**
	baz=13								
TKM2	**Tokmak 2**			**3.75 23**	P	**Pn**		**04 35 06.2**	**+3.6**
	SNR=15								
TKM2	**Tokmak 2**			**3.75 23**	PN	**Pn**		**04 35 05.3**	**+2.7**
TKM2	**Tokmak 2**			**3.75 23**	⇓Pn	**Pn**		**04 35 05.4**	**+2.7**
	comp=Z,30nm,0.6s								
TKM2					⇓Pg	**Pg**		**04 35 14.8**	**-2.2**
	comp=Z,69nm,0.5s								
TKM2					⇓Lg	Lg		04 36 01.8	
	comp=Z,206nm,0.7s								
TKM2	**Tokmak 2**			**3.75 23**	⇓*i*P	**Pn**		**04 35 04.7**	**+2.0**
	baz=22								
TKM2					⇓*e*S	**Sn**		**04 35 50.0**	**+3.3**
	baz=22								
TAS	**Tashkent**			**3.76 301**		**Pn**		**04 35 05.0**	**+2.4**
TAS	**Tashkent**			**3.76 301**	PN	**Pn**		**04 35 05.0**	**+2.4**
TAS	**Tashkent**			**3.76 301**	⇑*e*P	**Pn**		**04 35 04.7**	**+2.1**
	baz=1.0								
TAS					⇑*e*S	**Sn**		**04 35 50.0**	**+3.4**
	baz=1.0								
IUG	**luzhnay**			**3.79 316**	*e*PN	**Pn**		**04 35 04.8**	**+1.7**
IUG	**luzhnay**			**3.79 316**	*e*P	**Pb**		**04 35 13.5**	**+1.7**
	comp=Z,3μm,0.5s								
IUG					*e*S	**Sg**		**04 36 05.5**	**-1.3**
	comp=Z,544nm,0.7s								
IUG	**luzhnay**			**3.79 316**	*e*P	**Pn**		**04 35 04.9**	**+1.7**
	baz=315								
IUG	**luzhnay**			**3.79 316**	Pg	**Pb**		**04 35 13.5**	**+1.7**
	comp=Z,3μm,0.5s								
IUG					Lg	Lg		04 36 02.3	
	comp=Z,544nm,0.7s								
DZA	**Taraz**			**3.80 334**	*e*PN	**Pn**		**04 35 05.4**	**+2.2**
DZA	**Taraz**			**3.80 334**	*e*P	**Pb**		**04 35 14.6**	**+2.6**
	comp=Z,168nm,0.1s								
DZA					*e*S	**Sg**		**04 36 06.7**	**-0.5**
	comp=Z,514nm,0.4s								
DZA	**Taraz**			**3.80 334**	*e*P	**Pn**		**04 35 05.5**	**+2.2**
	baz=334								
DZA	**Taraz**			**3.80 334**	Pg	**Pg**		**04 35 15.2**	**-2.8**
	comp=Z,168nm,0.1s								
DZA					Lg	Lg		04 36 05.2	
	comp=Z,514nm,0.4s								
USP	**Ospenovka**			**3.84 10**	P	**Pn**		**04 35 07.7**	**+3.9**
	SNR=41								
USP	**Ospenovka**			**3.84 10**	⇓*e*PN	**Pn**		**04 35 05.8**	**+2.1**
USP					*e*S	**Sn**		**04 35 52.0**	**+3.4**
USP	**Ospenovka**			**3.84 10**	⇓*e*P	**Pn**		**04 35 05.8**	**+2.1**
	baz=9.0								
USP					⇓*e*S	**Sn**		**04 35 52.0**	**+3.4**
	baz=9.0								
KST	**Kastek**			**3.98 26**	*e*P	**Pb**		**04 35 14.9**	**-0.1**
	comp=Z,27nm,0.6s								
KST					*e*S	**Sb**		**04 36 07.8**	**+4.9**
	comp=Z,232nm,0.6s								
SGDS	**Sogindy**			**4.04 11**	*e*PN	**Pn**		**04 35 08.1**	**+1.6**
SGDS	**Sogindy**			**4.04 11**	*e*P	**Pb**		**04 35 16.4**	**+0.4**
	comp=Z,58nm,0.8s								
SGDS					*e*S	**Sg**		**04 36 10.8**	**-3.9**
	comp=Z,143nm,0.9s								
SGDS	**Sogindy**			**4.04 11**	*e*P	**Pn**		**04 35 08.2**	**+1.6**
	baz=11								
SGDS	**Sogindy**			**4.04 11**	Pg	**Pb**		**04 35 18.4**	**+2.4**
	comp=Z,58nm,0.8s								
SGDS					Lg	Lg		04 36 10.7	
	comp=Z,143nm,0.9s								
CHM	**Chimkent**			**4.14 314**	PN	**Pn**		**04 35 03.4**	**-4.4**
MTBS	**Maitube**			**4.22 30**	*e*P	**Pb**		**04 35 18.5**	**-0.6**
	comp=Z,60nm,0.7s								
MTBS					*e*S	**Sb**		**04 36 13.6**	**+3.6**
	comp=Z,96nm,0.4s								
MTBS	**Maitube**			**4.22 30**	Pg	**Pb**		**04 35 19.5**	**+0.4**
	comp=Z,60nm,0.7s								
MTBS					Lg	Lg		04 36 12.6	
	comp=Z,96nm,0.4s								
KK31	**Karatay Array**			**4.29 328**	Pn	**Pn**		**04 35 12.8**	**+2.8**
KK31	**Karatay Array**			**4.29 328**	PN	**Pn**		**04 35 12.8**	**+2.8**
KK31	**Karatay Array**			**4.29 328**	⇑Pn	**Pn**		**04 35 12.6**	**+2.6**
	comp=Z,7.9nm,0.3s,baz=131,slow=11,SNR=126								
KK31					⇑Pg	**Pb**		**04 35 21.4**	**+1.1**
	comp=Z,17nm,0.3s,baz=143,slow=16,SNR=10								
KK31					⇑Lg	Lg		04 36 22.2	
	comp=Z,182nm,0.7s								
KKAR	**Karatay Array**			**4.29 328**	Pn	**Pn**		**04 35 12.3**	**+2.3**
KKAR	**Karatay Array**			**4.29 328**		**Pn**		**04 35 12.6**	**+2.6**
KKAR	**Karatay Array**			**4.29 328**	PN	**Pn**		**04 35 12.3**	**+2.3**
KKAR	**Karatay Array**			**4.29 328**	⇓*e*P	**Pn**		**04 35 12.1**	**+2.1**
	baz=28								
KKAR					⇓*e*S	**Sn**		**04 36 03.2**	**+3.4**
	baz=28								
AAA	**Alma-Ata**			**4.48 33**	*e*PN	**Pn**		**04 35 13.7**	**+1.1**
AAA	**Alma-Ata**			**4.48 33**	*e*P	**Pb**		**04 35 24.5**	**+0.9**
	comp=Z,105nm,0.3s								
AAA					*e*S	**Sg**		**04 36 24.0**	**-5.0**
	comp=Z,154nm,0.4s								
AAA	**Alma-Ata**			**4.48 33**	*e*P	**Pn**		**04 35 13.8**	**+1.1**
	baz=34								
AAA	**Alma-Ata**			**4.48 33**	Pg	**Pb**		**04 35 26.1**	**+2.6**
	comp=Z,105nm,0.3s								
AAA					Lg	Lg		04 36 24.0	
	comp=Z,154nm,0.4s								
KRBS	**Karabastau**			**4.48 20**	*e*P	**Pb**		**04 35 25.1**	**+1.5**
	comp=Z,40nm,0.4s								
KRBS					*e*S	**Sg**		**04 36 25.5**	**-3.6**
	comp=Z,152nm,0.6s								
KRBS	**Karabastau**			**4.48 20**	Pg	**Pb**		**04 35 26.6**	**+3.0**
	comp=Z,40nm,0.4s								
KRBS					Lg	Lg		04 36 24.8	
	comp=Z,152nm,0.6s								
MDOK	**Medeo**			**4.50 34**	PN	**Pn**		**04 35 16.0**	**+3.1**
MDOK	**Medeo**			**4.50 34**	*e*P	**Pb**		**04 35 25.8**	**+1.8**
	comp=Z,68nm,0.5s								
MDOK					*e*S	**Sg**		**04 36 25.6**	**-4.0**
	comp=Z,196nm,0.8s								
MDOK	**Medeo**			**4.50 34**	*e*P	**Pn**		**04 35 15.4**	**+2.5**
	baz=35								
MDOK	**Medeo**			**4.50 34**	⇑Pn	**Pn**		**04 35 16.0**	**+3.1**
	comp=Z,9.3nm,0.5s								
MDOK					⇓Pg	**Pb**		**04 35 24.3**	**+0.3**
	comp=Z,67nm,0.6s								
MDOK					Pg	Pg		04 35 25.9	-5.4
	comp=Z,68nm,0.5s								
MDOK					Lg	Lg		04 36 23.5	
	comp=Z,196nm,0.8s								
MDOK					⇑Lg	Lg		04 36 26.1	
	comp=Z,284nm,0.8s								
KNDC	**Almaty**			**4.51 33**	PN	**Pb**		**04 35 26.0**	**+2.0**
KNDC	**Almaty**			**4.51 33**	⇑Pg	**Pb**		**04 35 26.0**	**+2.0**
	comp=Z,135nm,0.5s								
KNDC					⇓Lg	Lg		04 36 26.4	
	comp=Z,921nm,0.8s								
PRZ	**Przheval'sk**			**4.71 49**	⇓*e*PN	**Pn**		**04 35 17.8**	**+1.9**
PRZ					*e*S	**Sn**		**04 36 11.7**	**+1.3**
PRZ	**Przheval'sk**			**4.71 49**	⇓*e*P	**Pn**		**04 35 17.8**	**+1.9**
	baz=48								
PRZ					⇓*e*S	**Sn**		**04 36 11.7**	**+1.3**
	baz=48								
KTBS	**Karatobe**			**4.81 28**	*e*P	**Pb**		**04 35 30.1**	**+0.9**
	comp=Z,24nm,0.7s								
KTBS					*e*S	**Sg**		**04 36 34.2**	**-5.5**
	comp=Z,138nm,0.4s								
KTBS	**Karatobe**			**4.81 28**	Pg	**Pb**		**04 35 32.1**	**+2.9**
	comp=Z,37nm,0.6s								
KTBS					Lg	Lg		04 36 34.2	
	comp=Z,138nm,0.4s								
KUU	**Kurty**			**4.86 24**	*e*PN	**Pn**		**04 35 19.4**	**+1.7**
KUU	**Kurty**			**4.86 24**	*e*P	**Pb**		**04 35 30.9**	**+1.0**
	comp=Z,27nm,0.4s								
KUU					*e*S	**Sg**		**04 36 35.1**	**-6.0**
	comp=Z,119nm,0.8s								
KUU	**Kurty**			**4.86 24**	*e*P	**Pn**		**04 35 19.4**	**+1.7**
	baz=25								
KUU	**Kurty**			**4.86 24**	Pg	**Pb**		**04 35 32.6**	**+2.7**
	comp=Z,27nm,0.4s								
KUU					Lg	Lg		04 36 35.1	
	comp=Z,119nm,0.8s								
CHKK	**Chushkaly**			**5.05 29**	*e*PN	**Pn**		**04 35 22.7**	**+2.4**
CHKK	**Chushkaly**			**5.05 29**	*e*P	**Pb**		**04 35 35.3**	**+2.1**
	comp=Z,45nm,0.4s								
CHKK					*e*S	**Sg**		**04 36 41.9**	**-5.3**
	comp=Z,139nm,0.8s								
CHKK	**Chushkaly**			**5.05 29**	*e*P	**Pn**		**04 35 22.7**	**+2.4**
	baz=30								
CHKK	**Chushkaly**			**5.05 29**	Pg	**Pb**		**04 35 36.6**	**+3.4**
	comp=Z,45nm,0.4s								
CHKK					Lg	Lg		04 36 41.9	
	comp=Z,139nm,0.8s								
SATY	**Saty**			**5.09 44**	*e*PN	**Pn**		**04 35 22.3**	**+1.3**
SATY					pmax	pmax			
	comp=Z,5.0nm,0.6s								
SATY	**Saty**			**5.09 44**	*e*P	**Pb**		**04 35 35.6**	**+1.7**
	comp=Z,77nm,0.8s								
SATY					*e*S	**Sg**		**04 36 43.0**	**-5.4**
	comp=Z,120nm,1.1s								
SATY	**Saty**			**5.09 44**	*e*P	**Pn**		**04 35 22.4**	**+1.3**
	comp=Z,4.6nm,0.6s,baz=45								
SATY	**Saty**			**5.09 44**	Pg	**Pb**		**04 35 36.1**	**+2.2**
	comp=Z,77nm,0.8s								
SATY					Lg	Lg		04 36 41.1	
	comp=Z,120nm,1.1s								
KURS	**Kuram**			**5.27 39**	*e*P	**Pb**		**04 35 40.4**	**+3.4**
	comp=Z,58nm,0.8s								
KURS					*e*S	**Sg**		**04 36 50.9**	**-3.4**
	comp=Z,76nm,1.4s								
KURS	**Kuram**			**5.27 39**	Pg	**Pg**		**04 35 41.8**	**-4.2**
	comp=Z,58nm,0.8s								
KURS					Lg	Lg		04 36 50.9	
	comp=Z,76nm,1.4s								
UZB	**Uzynbulak**			**5.48 46**	*e*PN	**Pn**		**04 35 27.5**	**+1.0**
UZB					pmax	pmax			
	comp=Z,2.0nm,0.3s								
UZB	**Uzynbulak**			**5.48 46**	*e*P	**Pb**		**04 35 43.3**	**+2.5**
	comp=Z,26nm,0.7s								
UZB					*e*S	**Sg**		**04 36 56.0**	**-5.1**
	comp=Z,80nm,1.2s								
UZB	**Uzynbulak**			**5.48 46**	*e*P	**Pn**		**04 35 27.5**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=47								
UZB	**Uzynbulak**			**5.48 46**	Pg	**Pb**		**04 35 44.7**	**+4.0**
	comp=Z,26nm,0.7s								
UZB					Lg	Lg		04 36 56.0	
	comp=Z,80nm,1.2s								

PDGK Podgornoye 5.86 47 Pn **Pn** 04 35 30.3 -1.3
PDGK Pg **Pb** 04 35 50.5 +3.4
PDGK Lg Lg 04 37 05.8
KBL Kabul 6.13 218 Pn **Pn** 04 35 37.4 +2.0
KBL Kabul 6.13 218 PN **Pn** 04 35 37.4 +2.0
TDK Taldyqorghan 6.56 31 *i* PN **Pn** 04 35 45.0 +3.8
TDK Taldyqorghan 6.56 31 *e*P Pg 04 36 05.4 -5.4
comp=Z,52nm,0.2s
TDK *e*S **Sg** 04 37 33.6 -2.2
comp=Z,213nm,1.0s
TDK Taldyqorghan 6.56 31 *i* P **Pn** 04 35 45.0 +3.8
baz=32
TDK Taldyqorghan 6.56 31 Pg **Pg** 04 36 06.6 -4.2
comp=Z,52nm,0.2s
TDK Lg Lg 04 37 33.6
comp=Z,213nm,1.0s
DJR Jarkent 6.69 42 *e*P Pb 04 36 06.1 +4.8
comp=Z,20nm,0.5s
DJR *e*S **Sg** 04 37 36.0 -3.8
comp=Z,50nm,1.0s
DJR Jarkent 6.69 42 Pg Pg 04 36 08.2 -5.0
comp=Z,20nm,0.5s
DJR Lg Lg 04 37 36.0
comp=Z,50nm,1.0s
JMU Jammu 6.84 171 *e*P **Pn** 04 35 46.7 +1.7
JMU *e*S **Sn** 04 37 00.8 -1.8
THW Thamme Wali 6.85 193 P **Pn** 04 35 47.3 +2.2
THN Thein Dam 7.25 166 *e*P **Pn** 04 35 52.3 +1.8
THN *ex* **Sn** 04 37 13.7 +1.1
BHK Bhakra 8.38 163 *e*P **Pn** 04 36 07.7 +1.6
BHK *e*S **Sn** 04 37 38.7 -1.7
OTUK Ortayu 8.80 355 P **Pn** 04 36 12.9 +1.1
OTUK Ortayu 8.80 355 ⇑Pn **Pn** 04 36 13.0 +1.1
comp=Z,14nm,0.8s
OTUK ⇓Lg Lg 04 38 42.7
comp=Z,81nm,0.9s
SMLA Simla 8.84 160 *e*P **Pn** 04 36 11.8 -0.6
SMLA *e*S **Sn** 04 37 46.3 -5.4
SMLA IAML 04 37 58.0
comp=E,97nm,0.2s
SMLA IAML 04 38 03.8
comp=N,149nm,0.8s
MK09 Makanchi Array 9.66 38 Pn **Pn** 04 36 23.1 -0.5
MK09 Pg 04 37 03.5
MK09 Lg Lg 04 39 00.3
MKAR Makanchi Array 9.68 38 Pn **Pn** 04 36 26.0 +2.1
comp=N,0.2nm,0.3s,baz=223,slow=12,SNR=15
MKAR Lg Lg 04 39 12.1
comp=N,0.3nm,0.3s,baz=222,slow=30,SNR=3.5
comp=N,1.3nm,0.7s
MKAR Makanchi Array 9.68 38 **Pn** 04 36 27.1 +3.3
MKAR Makanchi Array 9.68 38 P **Pn** 04 36 27.2 +3.3
HRA Herat 10.41 244 Pn **Pn** 04 36 35.4 +1.3
BRZS Berezniki 10.51 357 *e*P **Pn** 04 36 36.0 +0.8
BRZS Berezniki 10.51 357 *e*P **Pn** 04 36 36.0 +0.8
baz=357
NDI New Delhi 11.19 163 *e*P **Pn** 04 36 45.0 +0.4
NDI *e*S **Sn** 04 38 49.0 -0.4
WMQ Urumqi 11.40 63 *e*P **Pn** 04 36 52.3 +4.8
WMQ LR LR
comp=Z,36nm,18.7s
KURBB Kurchatov Arra 11.66 16 Pn **Pn** 04 36 52.0 +1.0
comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=7.8
KURBB Lg Lg 04 40 10.4
comp=Z,0.1nm,0.3s,baz=206,slow=28,SNR=14
KURBB Kurchatov Arra 11.66 16 ⇓Pn **Pn** 04 36 52.0 +1.0
comp=Z,2.4nm,0.7s
KURBB ⇑Lg Lg 04 40 08.6
comp=Z,58nm,0.8s
KURK Kurchatov 11.77 16 *i* P **Pn** 04 36 53.9 +1.5
SEM Semipalatinsk 11.89 21 *e*P **Pn** 04 36 54.7 +0.5
SEM Semipalatinsk 11.89 21 *e*P **Pn** 04 36 54.7 +0.5
baz=21
GEYT Alibeck 12.19 268 Pn **Pn** 04 36 58.5 +0.2
comp=Z,1.6nm,0.3s,baz=67,slow=26,SNR=6.9
GEYT LR LR 04 41 43.1
comp=Z,51nm,20.2s,baz=42,slow=38
comp=Z,6.2nm,0.5s
GEYT Alibeck 12.19 268 Pn **Pn** 04 36 59.0 +0.7
GYA0 ALIBECK ARRAY 12.19 268 P **Pn** 04 36 58.4 +0.1
GYA0B ALIBECK ARRAY 12.19 268 Pn **Pn** 04 36 58.4 +0.1
BVA0 Borovoye Array 13.72 352 P **Pn** 04 37 18.0 -1.0
BVA0 Borovoye Array 13.72 352 P **Pn** 04 37 18.0 -1.0
comp=Z,0.5nm,0.6s,baz=159,slow=13,SNR=30
BVAR Borovoye Array 13.72 352 LR LR 04 42 57.5
comp=Z,22nm,20.0s,baz=40,slow=38
BRVK Borovoye 13.76 352 Pn **Pn** 04 37 18.8 -0.8
BRVK Borovoye 13.76 352 *ce*P **Pn** 04 37 18.9 -0.7
BRVK pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 13.76 352 ⇑P **Pn** 04 37 18.3 -1.3
comp=Z,16nm,0.6s
AB31 Akbulak array 13.78 320 P **Pn** 04 37 18.5 -1.4
AB31 Akbulak array 13.78 320 ⇑P **Pn** 04 37 18.6 -1.4
comp=Z,12nm,0.8s,baz=130,slow=14,SNR=95
ABKAR Akbulak array 13.78 320 Pn **Pn** 04 37 18.6 -1.4
AKTO Aktyubinsk 15.50 320 Pn **Pn** 04 37 42.4 -0.7
comp=Z,0.7nm,0.3s,baz=140,slow=14,SNR=18
AKTO LR LR 04 44 15.5
comp=Z,105nm,21.0s,baz=144,slow=39
comp=Z,4.7nm,0.5s
AKTO Aktyubinsk 15.50 320 ⇑P **Pn** 04 37 42.6 -0.5
comp=Z,24nm,0.8s
ZAA0 Zalesovo Array 16.35 24 **Pn** 04 37 55.2 +1.2
ZALV Zalesovo Beam 16.35 24 Pn **Pn** 04 37 54.6 +0.6
comp=Z,0.9nm,0.3s,baz=198,slow=14,SNR=9.8
comp=Z,2.1nm,0.4s
ZALV Zalesovo Beam 16.35 24 **Pn** 04 37 54.7 +0.7
GOMU GeErMu 17.08 94 P **Pn** 04 38 04.1 +0.3
GOMU pP P 04 38 06.6 +1.1
GOMU sP pP 04 38 09.7 -1.2
GOMU pmax pmax
comp=Z,4.0nm,0.5s
GOMU pmax pmax
comp=Z,51nm,4.1s
ARU Arti 19.64 335 P **P** 04 38 33.7 +0.7
comp=Z,16nm,0.7s,baz=149,slow=4.3,SNR=17
ARU LR LR 04 46 43.5
comp=Z,57nm,19.4s,baz=124,slow=38
ARU Arti 19.64 335 P **P** 04 38 33.0 0.0
ARU IAmb IAmb 04 38 36.7
comp=Z,17nm,0.7s
ARU Arti 19.64 335 *d i*P **P** 04 38 33.7 +0.7
ARU S **Sn** 04 42 15.2 +0.7
ARU pmax pmax
comp=Z,17nm,0.7s
MAK Makhachkala 19.90 288 *e*P **P** 04 38 34.8 -1.2
MAK *e*S **S** 04 42 16.8 -2.6
MAK pmax pmax
comp=Z,128nm,1.5s
MAK MLR MLR
comp=Z,89nm,10.0s
GTA Gaotai 20.23 82 *e*P **P** 04 38 40.5 +0.6
GTA pP pP 04 38 44.7 -0.4
GTA sP sP 04 38 48.4 +0.9
GTA pmax pmax
comp=Z,13nm,1.0s
GTA pmax pmax
comp=Z,38nm,6.8s
GTA LR LR
comp=N,70nm,14.3s
GTA LR LR
comp=E,100nm,13.9s
GTA LR LR
comp=Z,100nm,11.6s
GROC Groznyy 21.15 289 *e*P **P** 04 38 50.6 +1.0
BELG Belogornoye 22.05 314 P **P** 04 38 58.7 -0.4
comp=Z,17nm,0.7s,baz=281,slow=2.6,SNR=13
BELG LR LR 04 49 25.3
comp=Z,21nm,21.8s,baz=202,slow=42
comp=Z,17nm,0.7s
GNI Garni 22.13 281 P **P** 04 39 01.6 +1.2
GNI IAmb IAmb 04 39 13.2
comp=Z,19nm,0.8s
GNI Garni 22.13 281 *ce*P **P** 04 39 01.8 +1.5
GNI pmax pmax
comp=Z,43nm,1.7s
HYBB Hyderabad (bro 22.41 167 *e*P **P** 04 39 04.4 +1.1
HYBB *es*P **sP** 04 39 10.3 -0.9
HYBB *e*S **S** 04 43 11.4 +2.3
ZEI Tsey 22.55 288 *e*P **P** 04 39 06.2 +1.4
ZEI pmax pmax
comp=Z,7.0nm,0.7s
KBZ Khabaz 23.27 290 P **P** 04 39 10.6 -1.4
comp=Z,0.9nm,0.4s,baz=124,slow=7.3,SNR=5.5
KBZ LR LR 04 48 56.5
comp=Z,36nm,18.5s,baz=150,slow=38
comp=Z,0.9nm,0.4s
KBZ Khabaz 23.27 290 *i* P **P** 04 39 11.0 -1.0
KBZ pmax pmax
comp=Z,6.0nm,0.8s
KARS Kars 23.33 283 P **P** 04 39 13.6 +0.7
KARS Kars 23.33 283 P **P** 04 39 13.6 +0.7
KARS pmax pmax
comp=Z,56nm,0.8s
KIV Kislovodsk 23.42 291 P **P** 04 39 13.6 0.0
KIV IAmb IAmb 04 39 31.2
comp=Z,10nm,0.7s
KIV Kislovodsk 23.42 291 *e*P **P** 04 39 14.4 +0.7
KIV *e*S **S** 04 43 25.7 -0.7
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,24nm,14.0s
ZAK Zakamensk 23.52 53 *e*P **P** 04 39 14.6 0.0
ZAK pmax pmax
comp=Z,3.0nm,1.5s
BCA Borcka 24.33 285 ⇑P **P** 04 39 23.7 +1.4
KIRV Kirov 24.59 329 *ce*P **P** 04 39 25.1 +0.7
SONM Songino Array 25.00 60 P **P** 04 39 28.5 0.0
comp=Z,4.3nm,0.9s,baz=262,slow=9.9,SNR=17
SONM LR LR 04 49 27.7
comp=Z,61nm,20.0s,baz=302,slow=37
comp=Z,4.3nm,0.9s
SONM Songino Array 25.00 60 P **P** 04 39 29.0 +0.5
SONM Songino Array 25.00 60 P **P** 04 39 29.0 +0.5
SONM pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 25.45 60 P **P** 04 39 33.1 +0.5
ULN IAmb IAmb 04 39 35.0
comp=Z,3.7nm,0.8s
ULN Ulaanbaatar 25.45 60 *i* P **P** 04 39 32.7 +0.2
ULN pmax pmax
comp=Z,4.0nm,0.7s
MARD Mardin 25.73 276 P **P** 04 39 37.4 +2.2
VORR Voronezh 26.71 309 *e*P **P** 04 39 40.7 -3.0
PZH PanZhiHua 26.81 110 P **P** 04 39 46.6 +1.6
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,5.3s
ANN Anapa 27.18 293 *e*P **P** 04 39 44.8 -3.1
ANN *e**PP **sP** 04 39 56.8 +0.9
ANN *e* 04 40 29.9
ANN *e*S **S** 04 44 19.5 -6.5
ANN pmax pmax
comp=Z,26nm,0.9s
PRGR Permogore 28.01 332 *e*P **P** 04 39 54.1 -1.1
KMI Kunming 28.35 112 ⇓P **P** 04 40 01.2 +2.3
KMI pP sP 04 40 16.8 +10
KMI pmax pmax
comp=Z,9.0nm,0.5s
HHC Hu-ho-hao-te 28.90 75 *e*P **P** 04 40 06.0 +2.4
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,41nm,7.1s
KLMR Klimovskoe 29.99 327 *e*P **P** 04 40 11.0 -1.8
KLMR pmax pmax
comp=Z,7.0nm,1.2s
KLMR Klimovskoe 29.99 327 *e*P **P** 04 40 11.0 -1.8
KLMR AMP 04 40 22.4
comp=Z,7.0nm,1.2s
BR131 Keskin Array S 30.61 283 P **P** 04 40 18.5 -0.2
BR131 IAmb IAmb 04 40 20.4
comp=Z,4.9nm,0.8s
BR131 Keskin Array S 30.61 283 *i* P **P** 04 40 19.6 +0.9
BRTR Keskin Array B 30.61 283 P **P** 04 40 19.3 +0.6
comp=Z,2.6nm,0.7s,baz=88,slow=7.4,SNR=15
comp=Z,2.6nm,0.7s
BRTR Keskin Array B 30.61 283 P **P** 04 40 18.8 +0.1
BRTR Keskin Array B 30.61 283 *ce*P **P** 04 40 19.7 +1.0
BRTR pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 32.80 305 P **P** 04 40 37.5 -0.1
comp=Z,1.4nm,0.4s,baz=79,slow=7.3,SNR=13
AKASG LR LR 04 56 25.1
comp=Z,47nm,20.0s,baz=68,slow=41
comp=Z,1.4nm,0.4s
AKASG Malin Array Be 32.80 305 *ce*P **P** 04 40 37.7 +0.1
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB Malin Array Si 32.80 305 *ce*P **P** 04 40 37.3 -0.3
EIL Elat 33.07 265 LR LR 04 56 45.8
comp=Z,48nm,19.1s,baz=83,slow=41
VRI Vrincioaia 34.63 296 ⇑P **P** 04 40 55.5 +1.7
VRI Vrincioaia 34.63 296 P **P** 04 40 55.4 +1.7
PLOR Plostina 34.69 296 ⇑P **P** 04 40 56.0 +1.7
PLOR Plostina 34.69 296 P **P** 04 40 55.9 +1.7
BIZ Bicaz 34.95 298 ⇓P **P** 04 40 57.1 +0.7
COVR Voineasa-Covas 35.00 296 ⇑P **P** 04 40 58.6 +1.7
MLR Muntele Rosu 35.22 296 ⇓P **P** 04 41 00.0 +1.1
MLR Muntele Rosu 35.22 296 P **P** 04 41 00.9 +2.0
comp=Z,5.3nm,0.7s,baz=188,slow=4.8,SNR=11
MLR Muntele Rosu 35.22 296 P **P** 04 41 00.2 +1.3
MLR IAmb IAmb 04 41 04.6
comp=Z,6.9nm,0.7s
MLR Muntele Rosu 35.22 296 P **P** 04 41 00.2 +1.3
MLR pmax pmax
comp=Z,7.0nm,0.7s
BURAR Bucovina Array 35.49 299 ⇑P **P** 04 41 02.3 +1.0
BURAR Bucovina Array 35.49 299 P **P** 04 41 02.2 +1.0
VOIR 35.85 296 ⇑P **P** 04 41 04.8 +0.4
VOIR 35.85 296 P **P** 04 41 04.7 +0.4
MTUR Matau 35.87 295 ⇑P **P** 04 41 06.0 +1.5
ARR Arges 36.15 296 ⇑P **P** 04 41 06.9 0.0
FINES FINESS Array B 36.23 323 P **P** 04 41 07.7 +0.5
comp=Z,4.4nm,0.4s,baz=113,slow=9.7,SNR=50
FINES LR LR 04 56 43.8
comp=Z,32nm,19.5s,baz=102,slow=37
comp=Z,4.4nm,0.4s
FINES FINESS Array B 36.23 323 *ce*P **P** 04 41 07.6 +0.4
FINES pmax pmax
comp=Z,4.0nm,0.4s
NJ2 Nanjing 37.15 87 *e*P **P** 04 41 16.9 +1.5
NJ2 pmax pmax
comp=Z,13nm,0.5s
MDVR Moldovita 38.29 295 ⇑P **P** 04 41 25.8 +0.8
BOVS Bovan 38.52 293 ⇑P **P** 04 41 27.8 +0.9
ARA0 ARCESS Array S 39.22 336 *e*P **P** 04 41 32.9 +0.5
ARCES ARCESS Array B 39.22 336 P **P** 04 41 32.9 +0.4
comp=Z,1.9nm,0.4s,baz=110,slow=8.5,SNR=48
comp=Z,1.9nm,0.4s
ARCES ARCESS Array B 39.22 336 P **P** 04 41 32.8 +0.4
ARCES IAmb IAmb 04 41 33.8
comp=Z,10nm,1.2s
DIVS Divibare 39.64 295 IAmb IAmb 04 41 38.0
comp=Z,4.3nm,0.8s
HAMF Hammerfest 40.24 337 *e*P **P** 04 41 41.5 +0.6
HAMF IAmb IAmb 04 41 42.1
comp=Z,10nm,0.7s
PDG Podgorica 40.55 292 ⇑P **P** 04 41 43.7 -0.1
PDG Podgorica 40.55 292 P **P** 04 41 43.6 -0.2
PDG IAmb IAmb 04 41 48.9
comp=Z,7.7nm,1.1s
JETT Jettan, Norway 40.89 335 *e*P **P** 04 41 46.5 +0.2
JETT IAmb IAmb 04 41 47.9
comp=Z,6.3nm,0.7s
VRAC Vranov 41.00 303 LR LR 05 01 20.2
comp=Z,21nm,18.6s,baz=54,slow=40
TRO Tromso 41.41 334 *e*P **P** 04 41 50.8 +0.3
KSRS Korea Array 42.05 75 LR LR 05 02 12.9
comp=Z,26nm,18.6s,baz=295,slow=40
HFS Hagfors 42.05 320 P **P** 04 41 55.6 -0.2
comp=Z,9.9nm,0.5s,baz=98,slow=11,SNR=46
HFS LR LR 05 00 26.3
comp=Z,44nm,19.0s,baz=62,slow=38
comp=Z,9.9nm,0.5s
FAUS Fauske 42.15 331 *e*P **P** 04 41 57.0 +0.4
GEC2 GERESS Array S 42.95 303 P **P** 04 42 03.5 0.0
GERES GERESS Array B 42.95 303 P **P** 04 42 04.1 +0.7
comp=Z,1.9nm,0.6s,baz=62,slow=9.0,SNR=18
comp=Z,1.9nm,0.6s
GERES GERESS Array B 42.95 303 P **P** 04 42 03.8 +0.3
KHC Kasperske Hory 42.98 303 P **P** 04 42 03.4 -0.2
KHC Kasperske Hory 42.98 303 P **P** 04 42 03.4 -0.2
KHC pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 42.98 307 *e*P **P** 04 42 04.0 +0.5
CLL *e**PP **sP** 04 42 15.0 +3.3
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 42.98 307 *e*P **P** 04 42 04.0 +0.5
comp=Z,5.0nm,0.9s
CLL LmV 05 01 00.0
comp=Z,100nm,18.6s
NC303 NORSAR Array S 43.21 321 *e*P **P** 04 42 05.7 +0.3
NC303 IAmb IAmb 04 42 05.9
comp=Z,16nm,0.7s
NB2 NORSAR Subarra 43.29 321 P **P** 04 42 05.7 -0.3
comp=Z,3.5nm,0.6s,baz=91,slow=8.6
NB2 NORSAR Subarra 43.29 321 P **P** 04 42 05.7 -0.3
baz=91,slow=8.6
NOA NORSAR Array B 43.29 321 P **P** 04 42 05.4 -0.6
comp=Z,5.1nm,0.7s,baz=91,slow=7.9,SNR=29
NOA LR LR 05 01 04.6
comp=Z,39nm,19.1s,baz=85,slow=37
comp=Z,5.1nm,0.7s
NC204 NORSAR Array S 43.51 321 P **P** 04 42 07.3 -0.5
NC204 IAmb IAmb 04 42 10.9
comp=Z,17nm,1.4s
CUC Castrocucco 43.74 290 P **P** 04 42 10.6 +0.6
CUC IAmb IAmb 04 42 11.9
comp=Z,6.2nm,0.7s
KONO Kongsberg 44.11 319 *e*P **P** 04 42 12.3 -0.2
DOMB Dombas 44.32 322 *e*P **P** 04 42 14.3 0.0
SKAR Skarslia 44.72 321 *e*P **P** 04 42 17.6 +0.2
NRCA Norcia 44.80 295 IAmb IAmb 04 42 26.2
comp=Z,9.9nm,1.3s
DAVOX Davos/Dischmat 45.92 301 P **P** 04 42 26.9 -0.5
comp=Z,5.8nm,0.5s,baz=124,slow=4.5,SNR=12
DAVOX LR LR 05 03 57.4
comp=Z,32nm,18.9s,baz=80,slow=39
comp=Z,5.8nm,0.5s
MJAR Matsushiro Arr 50.01 72 P **P** 04 42 58.8 -0.2
comp=Z,2.1nm,0.8s,baz=295,slow=9.1,SNR=4.6
comp=Z,2.1nm,0.8s
KEST Kesra 50.07 287 P **P** 04 42 59.9 +0.4
comp=Z,2.6nm,0.8s,baz=191,slow=21,SNR=3.6
comp=Z,2.6nm,0.8s
MA2 Magadan 50.76 40 LR LR 05 06 45.1
comp=Z,24nm,20.1s,baz=124,slow=39
EKA Eskdalemuir Ar 51.60 315 P **P** 04 43 10.4 -0.3
comp=Z,2.4nm,0.6s,baz=88,slow=9.0,SNR=14
comp=Z,2.4nm,0.6s
MBAR Mbarara 55.90 235 LR LR 05 10 01.7
comp=Z,39nm,19.8s,baz=46,slow=39
BORG Borgarnes 57.06 329 LR LR 05 08 03.1
comp=Z,23nm,18.6s,baz=333,slow=36
ESDC Sonseca Array 57.89 297 P **P** 04 43 56.0 -0.5
comp=Z,1.3nm,0.6s,baz=57,slow=7.0,SNR=13
comp=Z,1.3nm,0.6s
TORD Torodi Ar. Bea 67.83 269 P **P** 04 45 01.2 -1.8
comp=Z,1.1nm,0.6s,baz=48,slow=5.1,SNR=18
comp=Z,1.1nm,0.6s
TORD Torodi Ar. Bea 67.83 269 P **P** 04 45 03.3 +0.4
TORD IAmb IAmb 04 45 09.5
comp=Z,1.8nm,0.8s
ILAR Eielson Array 71.34 17 P **P** 04 45 22.5 -1.4
comp=Z,1.1nm,0.8s,baz=318,slow=5.2,SNR=7.1
comp=Z,1.1nm,0.8s
YKA Yellowknife Ar 78.15 4 P **P** 04 46 02.6 -0.7
comp=Z,1.4nm,0.8s,baz=349,slow=5.7,SNR=11
comp=Z,1.4nm,0.8s
WRA Warramunga Arr 81.90 124 P **P** 04 46 22.3 -1.8
comp=Z,0.8nm,0.5s,baz=325,slow=5.0,SNR=14
comp=Z,0.8nm,0.5s
ASAR Alice Springs 84.34 127 P **P** 04 46 34.6 -2.2
comp=Z,0.4nm,0.6s,baz=301,slow=4.8,SNR=2.3
comp=Z,0.4nm,0.6s

NOU ***05*** *04:39:32.9, 40˚.15S×174˚.82E, h118km, MLv3.6/8, Cook Strait, New Zealand*
WEL ***05*** *04:39:36.3±0.4, 40˚.3±3˚×17˚.5E±˚, h37±9km, M3.3/18, ML3.6/22, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=94.5*
ISC 05 04:39:35.0±1.3, 40˚.15S±0˚.02×174˚.75E±0˚.03, h25km±14km, n97, σ1s25/107, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WAZ	**Wanganui**	**0.43**	**25**	P	**Pn**	**04 39 47.5**	**+1.8**
OHWZ	**Ohakea**	**0.44**	**98**	P	**Pn**	**04 39 47.4**	**+1.7**
KIW	**Kapiti Island**	**0.72**	**170**	P	**Pn**	**04 39 50.6**	**+0.9**
KIW				S	**Sn**	**04 40 00.8**	**+0.8**
LREZ	**Lake Rotokare**	**0.74**	**339**	P	**Pn**	**04 39 50.8**	**+1.8**
LREZ				S	**Sn**	**04 40 03.1**	**+2.8**
OGWZ	**Otaki Gorge**	**0.74**	**154**	P	**Pn**	**04 39 50.6**	**+0.7**
OGWZ				S	**Sn**	**04 40 02.3**	**+1.9**
MRZ	**Mangatainoka R**	**0.81**	**129**	P	**Pn**	**04 39 51.2**	**+0.3**
POWZ	**Post Office Ro**	**0.81**	**108**	P	**Pn**	**04 39 51.5**	**+0.6**
POWZ				S	**Sn**	**04 40 04.1**	**+1.8**
DUWZ	**D'Urville Isla**	**0.91**	**224**	P	**Pb**	**04 39 52.8**	**+0.7**
DUWZ				S	**Sn**	**04 40 06.1**	**+1.5**
TSZ	**Takapari Road**	**0.93**	**85**	P	**Pb**	**04 39 52.9**	**+0.3**
MTVZ	**Mangateitei**	**0.94**	**36**	P	**Pb**	**04 39 53.1**	**+0.3**
HOWZ	**Holdsworth Sta**	**0.95**	**142**	P	**Pb**	**04 39 53.4**	**+0.6**
HOWZ				S	**Sn**	**04 40 08.6**	**+3.1**
PKVZ	**Pokaka**	**0.97**	**28**	P	**Pn**	**04 39 53.1**	**-0.1**
PKVZ				S	**Sn**	**04 40 06.3**	**+0.1**
CAW	**Cannon Point**	**0.99**	**166**	P	**Pb**	**04 39 54.0**	**+0.6**
CAW				S	**Sn**	**04 40 08.4**	**+1.9**
NMEZ	**Namu Road**	**1.00**	**317**	P	**Pb**	**04 39 54.2**	**+0.6**
NEZ	**North Egmont**	**1.01**	**330**	P	**Pb**	**04 39 54.5**	**+0.5**
VRZ	**Vera Road**	**1.02**	**0**	P	**Pb**	**04 39 54.0**	**0.0**
KHEZ	**Kahui Hut**	**1.02**	**326**	P	**Pb**	**04 39 54.6**	**+0.5**
KHEZ				S	**Sn**	**04 40 08.4**	**+0.9**
DREZ	**Durham Road**	**1.05**	**336**	P	**Pb**	**04 39 55.1**	**+0.6**
TRVZ	**Turoa**	**1.05**	**36**	P	**Pn**	**04 39 54.3**	**-0.1**
TRVZ				S	**Sb**	**04 40 08.2**	**+0.1**
WNVZ	**Wahianoa**	**1.05**	**39**	P	**Pn**	**04 39 54.3**	**-0.1**
MOVZ	**Moawhango**	**1.07**	**46**	P	**Pn**	**04 39 54.4**	**-0.1**
DRZ	**Dome Shelter**	**1.07**	**36**	P	**Pb**	**04 39 55.9**	**+0.8**
WHVZ	**Whangaehu Hut**	**1.08**	**37**	P	**Pb**	**04 39 55.1**	**-0.1**
FWVZ	**Far West T-bar**	**1.09**	**35**	P	**Pn**	**04 39 54.9**	**0.0**
DVHZ	**Dannevirke**	**1.09**	**98**	P	**Pn**	**04 39 54.5**	**-0.3**
NBEZ	**Newall Road No**	**1.11**	**322**	P	**Pb**	**04 39 55.5**	**-0.1**
TCW	**Tory Channel**	**1.12**	**199**	P	**Pb**	**04 39 55.7**	**0.0**
PKE	**Pukeiti**	**1.12**	**328**	P	**Pb**	**04 39 55.8**	**+0.1**
TUVZ	**Tukino**	**1.12**	**39**	P	**Pn**	**04 39 55.6**	**+0.3**
WEL	**Wellington**	**1.13**	**179**	P	**Pn**	**04 39 55.6**	**+0.3**
PNHZ	**Pukenui**	**1.14**	**79**	P	**Pn**	**04 39 55.1**	**-0.3**
MTW	**Mount Morrison**	**1.16**	**151**	P	**Pn**	**04 39 56.0**	**+0.3**
SNZO	**South Karori**	**1.16**	**182**	P	**Pb**	**04 39 56.2**	**-0.2**
NGZ	**Ngauruhoe**	**1.17**	**34**	P	**Pb**	**04 39 57.0**	**+0.3**
SNVZ	**South Ngauruho**	**1.18**	**36**	P	**Pb**	**04 39 56.7**	**-0.2**
TWVZ	**Taurewa**	**1.20**	**26**	P	**Pn**	**04 39 55.9**	**-0.4**
BHHZ	**Black Hill Sta**	**1.21**	**57**	P	**Pn**	**04 39 56.3**	**-0.1**
OTVZ	**Oturere**	**1.21**	**36**	P	**Pn**	**04 39 56.8**	**+0.2**
NNVZ	**North Ngauruho**	**1.22**	**34**	P	**Pn**	**04 39 56.8**	**+0.2**
WTVZ	**West Tongariro**	**1.22**	**32**	P	**Pn**	**04 39 56.7**	**+0.1**
ETVZ	**East Tongariro**	**1.25**	**37**	P	**Pn**	**04 39 57.5**	**+0.4**
KRVZ	**Karewarewa**	**1.26**	**33**	P	**Pn**	**04 39 57.7**	**+0.5**
BFZ	**Birch Farm**	**1.26**	**115**	P	**Pn**	**04 39 56.3**	**-0.7**
BFZ	**Birch Farm**	**1.26**	**115**	P	**Pn**	**04 39 57.0**	**-0.1**
TMVZ	**Te Maari**	**1.27**	**36**	P	**Pn**	**04 39 57.8**	**+0.5**
NTVZ	**North Tongarir**	**1.27**	**35**	P	**Pn**	**04 39 57.4**	**+0.1**
TMWZ	**Te Maipa**	**1.29**	**138**	P	**Pb**	**04 39 59.2**	**+0.5**
WPHZ	**Waipukurau**	**1.30**	**87**	P	**Pb**	**04 39 59.2**	**+0.4**
MSWZ	**Moikau Station**	**1.32**	**163**	P	**Pn**	**04 39 57.7**	**-0.2**
PAWZ	**Paruwai Farm**	**1.33**	**158**	P	**Pn**	**04 39 57.8**	**-0.3**
KATZ	**Kakaramea**	**1.38**	**32**	P	**Pb**	**04 40 00.1**	**-0.2**
TUWZ	**Tuamarina**	**1.42**	**205**	P	**Pn**	**04 39 59.2**	**0.0**
TRWZ	**Traveller**	**1.44**	**151**	P	**Pn**	**04 40 00.3**	**+0.8**
RITZ	**Rihia Road**	**1.45**	**37**	P	**Pb**	**04 40 00.6**	**-0.7**
PLWZ	**Palliser**	**1.47**	**165**	P	**Pn**	**04 39 59.4**	**-0.6**
KWHZ	**Kaweka Forest**	**1.48**	**61**	P	**Pn**	**04 40 00.3**	**+0.2**
NNZ	**Nelson**	**1.49**	**224**	P	**Pn**	**04 40 00.4**	**+0.2**
PXZ	**Pawanui**	**1.62**	**86**	S	**Sn**	**04 40 21.2**	**-1.0**
TKNZ	**Takaka Hill**	**1.62**	**236**	P	**Pn**	**04 40 02.1**	**0.0**
HIZ	**Hauiti**	**1.64**	**3**	P	**Pn**	**04 40 02.3**	**0.0**
HIZ	**Hauiti**	**1.64**	**3**	P	**Pn**	**04 40 02.2**	**0.0**
MCHZ	**McNeill Hill**	**1.66**	**65**	P	**Pn**	**04 40 02.5**	**0.0**
BKZ	**Black Stump Fm**	**1.67**	**54**	P	**Pn**	**04 40 02.2**	**-0.5**
BKZ	**Black Stump Fm**	**1.67**	**54**	P	**Pn**	**04 40 02.2**	**-0.5**
KAHZ	**Kahuranaki**	**1.67**	**78**	P	**Pn**	**04 40 01.7**	**-1.1**
BSWZ	**Blackbirch Sta**	**1.70**	**203**	P	**Pn**	**04 40 03.0**	**-0.1**
QRZ	**Quartz Range**	**1.82**	**248**	P	**Pn**	**04 40 04.3**	**-0.5**
QRZ	**Quartz Range**	**1.82**	**248**	P	**Pn**	**04 40 04.3**	**-0.5**
MRHZ	**Matea Rd**	**1.84**	**45**	P	**Pn**	**04 40 04.3**	**-0.8**
NMHZ	**Naumai**	**1.90**	**57**	P	**Pn**	**04 40 05.3**	**-0.7**
MRNZ	**Matariki Terra**	**1.96**	**230**	P	**Pn**	**04 40 06.8**	**+0.1**

THZ	Tophouse	2.13	220	P		Pn	04 40 09.3	+0.2
RAHZ	Arahi	2.19	56	P		Pn	04 40 08.4	-1.4
MUGZ	Murupara	2.29	44	P		Pn	04 40 09.7	-1.5
KHZ	Kahutara	2.44	202	P		Pn	04 40 12.4	-0.9
KHZ	Kahutara	2.44	202	P		Pn	04 40 12.4	-0.9
URZ	Urewera	2.63	45	P		Pn	04 40 13.6	-2.3
URZ	Urewera	2.63	45	P		Pn	04 40 13.2	-2.7
RAGZ	Rawiri	2.65	52	P		Pn	04 40 15.8	-0.4
DSZ	Denniston Nort	2.74	234	P		Pn	04 40 16.5	-1.0
MWZ	Matawai	2.82	51	P		Pn	04 40 16.1	-2.4
MKAZ	Moumakai	3.06	6	P		Pn	04 40 21.3	-0.5
AWAZ	Awhitu Peninsu	3.08	358	P		Pn	04 40 22.2	+0.1
GVZ	Greta Valley S	3.10	204	P		Pn	04 40 20.5	-1.8
RUGZ	Raukumara Rang	3.15	47	P		Pn	04 40 20.2	-3.1
TWGZ	Tauwhareparae	3.19	53	P		Pn	04 40 21.5	-2.1
LTZ	Lake Taylor	3.22	215	P		Pn	04 40 22.4	-1.7
HAZ	Te Kaha	3.36	46	P		Pn	04 40 24.3	-1.6
INZ	Inchbonnie	3.58	223	P		Pn	04 40 28.1	-0.8
WMGZ	Waiomatatini S	3.68	52	P		Pn	04 40 27.2	-3.1
OXZ	Oxford	3.77	212	P		Pn	04 40 28.7	-2.8
OKCZ	Okains Bay	3.79	199	P		Pn	04 40 29.4	-2.5
MQZ	McQueen's Vall	3.88	203	P		Pn	04 40 30.0	-3.1
WCZ	Waipu Caves	4.22	356	P		Pn	04 40 37.0	-0.7
TMZ	Timaru	5.06	212	P		Pn	04 40 46.1	-3.2
ODZ	Otahua Downs	5.75	210	P		Pn	04 40 55.5	-3.2
ODZ	Otahua Downs	5.75	210	P		Pn	04 40 56.3	-2.5

ROM 05 04:40:33.5±0.1, 42°.787N±0°.003×12°.862E±0°.006, h10km, ML0.8/2, Error ellipse: s-maj=0.5km s-min=0.3km az=92.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.19	76	P	Pg	04 40 38.2	+0.6
NRCA				S	Sg	04 40 41.5	+1.1
CESI	CESI - Serrava	0.22	8	P	Pb	04 40 38.9	-0.7
CESI				S	Sg	04 40 42.6	+1.4
CESI				AML	AML		
	comp=E,35μm,0.5s						
CESI				AML	AML		
	comp=N,43μm,0.2s						
CESI				AML	AML		
	comp=E,35μm,0.5s						
CESI				AML	AML		
	comp=N,43μm,0.2s						
FEMA	Monte Fema	0.22	38	P	Pb	04 40 39.0	-0.7
FEMA				S	Sg	04 40 42.8	+1.4
LNSS	Leonessa	0.23	144	P	Pg	04 40 38.8	+0.6
LNSS				S	Sg	04 40 42.9	+1.5
CESX	Cesi	0.27	230	P	Pg	04 40 39.2	+0.2
CESX				S	Sb	04 40 44.4	-0.7
ASSB	Assisi San Ben	0.29	330	P	Pg	04 40 39.9	+0.4
ASSB				S	Sg	04 40 44.6	+1.1
FDMO	Fiordimonte	0.30	34	P	Pb	04 40 40.2	-0.7
FDMO				S	Sb	04 40 44.9	-1.0
FDMO				AML	AML		
	comp=E,18μm,0.9s						
FDMO				AML	AML		
	comp=E,18μm,0.9s						
FDMO				AML	AML		
	comp=N,19μm,0.1s						
SRES	S.Oreste - Sor	0.61	205	AML	AML		
	comp=N,76μm,0.1s						
SRES				AML	AML		
	comp=E,91μm,0.1s						
SRES				AML	AML		
	comp=N,64μm,0.1s						
SRES				AML	AML		
	comp=E,97μm,0.1s						

*IDC **05** 04:43:05.3±0.5, 5°.52N×74°.24W, h102km±5km, mb3.3/8, mbtmp3.7/9, Error ellipse: s-maj=17.1km s-min=11.8km az=117.0*

*RSNC **05** 04:43:06.9±1.6, 5°.61N×74°.34W, h88km±6km, ML3.8, Mw3.9, Fault plane solution: NP1:ϕs97.00000°, δ52.00000°, λ98.00000°.*

ISC 05 04:43:05.4±0.7, 5°.59N±0°.03×74°.34W±0°.03, h95km±5km, n49, σ1s59/85, mb3.5/8, 8C-12D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.27	77	⇑iP	Pn	04 43 19.3	0.0
SPBC				eS	Sn	04 43 29.0	-0.7
SPBC				i		04 43 31.2	
	comp=Z,5μm,0.2s						
NORC	Norcasia	0.53	267	⇑eP	Pn	04 43 20.7	-0.2
NORC				eS	Sn	04 43 32.1	-0.4
NORC				i		04 43 33.1	
	comp=Z,5μm,0.1s						
ROSC	El Rosal	0.75	179	P	Pn	04 43 24.4	+1.1
	comp=Z,714nm,0.3s,baz=170,slow=23,SNR=1202						
ROSC				S	Sn	04 43 37.7	+1.2
	comp=Z,3μm,0.3s,baz=233,slow=22,SNR=53						
ROSC	El Rosal	0.75	179	⇑eP	Pn	04 43 24.3	+1.1
ROSC				eS	Sn	04 43 37.7	+1.2
ROSC				i		04 43 39.6	
	comp=Z,3μm,0.3s						
GUY2C	Guyana, Caldas	1.09	250	⇑eP	Pn	04 43 27.1	+0.2
GUY2C				eS	Sn	04 43 44.1	+1.1
GUY2C				i		04 43 47.3	
	comp=Z,880nm,0.6s						
RUSC	La Rusia	1.28	77	eP	Pn	04 43 29.8	+0.7
RUSC				eS	Sn	04 43 48.7	+1.7
HELC	Santa Helena	1.33	297	⇑iP	Pn	04 43 29.6	0.0
HELC				eS	Sn	04 43 48.2	+0.4
HELC				i		04 43 52.5	
	comp=Z,1μm,0.5s						
BARC	Barichara	1.52	49	⇓eP	Pn	04 43 32.8	+1.0
BARC				eS	Sn	04 43 53.2	+1.4
BARC				i		04 43 59.7	
	comp=Z,880nm,0.4s						
ANIL	Santa Ana	1.52	224	⇓iP	Pn	04 43 32.5	+0.6
ANIL				eS	Sn	04 43 53.3	+1.2
ANIL				i		04 43 57.6	
	comp=Z,2μm,0.4s						
BRRC	Barranca, Sant	1.63	22	⇓eP	Pn	04 43 33.1	+0.2
BRRC				eS	Sn	04 43 54.5	+0.5
BRRC				i		04 43 59.9	
	comp=Z,1μm,0.2s						
CBOC	Ciudad Bolivar	1.69	279	eP	Pn	04 43 35.2	+1.3
CBOC				eS	Sn	04 43 56.7	+1.1
CBOC				i		04 44 04.0	
	comp=Z,315nm,0.5s						
PRAC	Prado	1.94	196	⇓iP	Pn	04 43 37.2	+0.1
PRAC				eS	Sn	04 44 02.3	+1.0
PRAC				i		04 44 06.9	
	comp=Z,402nm,0.3s						
ZARC	Zaragoza, Cauc	1.96	345	⇓eP	Pn	04 43 36.8	-0.5
ZARC				eS	Sn	04 44 02.0	+0.5
ZARC				i		04 44 05.2	
	comp=Z,1μm,0.4s						
PLMC	San Jos del P	2.06	251	eP	Pn	04 43 39.9	+1.3
DBBC	Dabeiba	2.34	307	⇓eP	Pn	04 43 43.1	+0.8
DBBC				eS	Sn	04 44 11.3	+0.8
DBBC				i		04 44 31.5	
	comp=Z,204nm,0.7s						
PAMC	Pamplona, Colo	2.38	43	eP	Pn	04 43 44.3	+1.1
PAMC				eS	Sn	04 44 13.2	+1.2
PAMC				i		04 44 22.6	
	comp=Z,314nm,0.2s						
UREC	San Jos de Ur	2.45	331	⇓iP	Pn	04 43 42.7	-1.1
UREC				eS	Sn	04 44 13.7	+0.6
UREC				i		04 44 18.8	
	comp=Z,614nm,0.3s						
YOTC	Yotoco, Valle	2.56	231	eP	Pn	04 43 45.4	+0.1
PTGC	Puerto Gaitan,	2.59	122	⇓eP	Pn	04 43 45.8	+0.2
PTGC				eS	Sn	04 44 16.8	+0.3
PTGC				i		04 44 21.6	
	comp=Z,424nm,0.4s						
TAMC	Tame, Arauca	2.67	72	eP	Pn	04 43 47.8	+1.2
TAMC				eS	Sn	04 44 20.2	+2.0
TAMC				i		04 44 26.3	
	comp=Z,182nm,0.3s						
BETC	Betania	3.10	201	eP	Pn	04 43 52.0	-0.4
BETC				eS	Sn	04 44 30.2	+1.6
BETC				i		04 44 46.6	
	comp=Z,150nm,0.6s						
MACC	Macarena, Meta	3.46	172	⇓eP	Pn	04 43 56.3	-1.0
MACC				eS	Sn	04 44 35.8	-1.5
MACC				i		04 44 40.1	
	comp=Z,151nm,0.4s						

GUVC	San Jose del G	3.48	151	⇑eP		Pn	04 43 57.2	-0.2
GUVC				eS		Sn	04 44 35.8	-1.9
GUVC				i			04 44 39.6	
	comp=Z,224nm,0.2s							
GARC	Garzon, Huila	3.58	199	⇑eP		Pn	04 43 58.4	-0.6
GARC				eS		Sn	04 44 41.1	+0.6
LCBC	Los crdobas,	3.82	328	⇑iP		Pn	04 44 01.4	-0.7
LCBC				eS		Sn	04 44 46.8	+0.8
LCBC				i			04 44 50.4	
	comp=Z,100nm,0.4s							
POPC	Popayan, Colom	3.83	218	⇓eP		Pn	04 44 03.4	+1.0
LL1C	La Loma 1 Cana	4.00	11	eP		Pn	04 44 05.9	+1.4
LL1C				eS		Sn	04 44 51.8	+1.4
FLOC	Florencia	4.19	198	⇓eP		Pn	04 44 06.7	-0.5
FLOC				eS		Sn	04 44 56.8	+1.6
FLOC				i			04 44 59.7	
	comp=Z,40nm,0.3s							
ARGC	Ariguani, Magd	4.24	1	eP		Pn	04 44 09.2	+1.4
ARGC				eS		Sn	04 44 57.4	+1.2
ARGC				i			04 45 08.8	
	comp=Z,123nm,0.4s							
LL6C	La Loma 6 Bece	4.25	14	eP		Pn	04 44 08.2	+0.3
LL6C				eS		Sn	04 45 02.6	+6.2
LL6C				i			04 45 12.2	
	comp=Z,146nm,0.8s							
SJCC	San Jacinto, C	4.36	349	⇓iP		Pn	04 44 07.5	-1.9
SJCC				eS		Sn	04 44 57.5	-1.6
SJCC				i			04 45 15.8	
	comp=Z,225nm,0.5s							
SOCV	Socops	4.37	52	eP		Pn	04 44 10.1	+0.5
SOCV				eS		Sn	04 44 58.2	-1.1
BBAC	Balboa, Cauca	4.58	219	eP		Pn	04 44 13.5	+0.8
BBAC				eS		Sn	04 45 11.8	+6.9
SDV	Santo Domingo	4.92	48	P		Pn	04 44 18.5	+1.3
	comp=Z,26nm,0.3s,baz=13,slow=13,SNR=11							
SDV				S		Sn	04 45 12.5	-0.5
	comp=Z,144nm,0.4s,baz=300,slow=20,SNR=17							
PTLC	Puerto Leguiza	5.41	185	eP		Pn	04 44 27.7	+4.1
PTLC				eS		Sn	04 45 33.9	+9.3
PTLC				i			04 45 57.6	
	comp=Z,39nm,0.5s							
SMRC	Santa Marta, M	5.54	1	eP		Pn	04 44 25.2	-0.2
SMRC				eS		Sn	04 45 38.8	+11
SMRC				i			04 45 44.8	
	comp=Z,74nm,0.5s							
CRJC	Cerrejon, Guaj	5.58	15	eP		Pn	04 44 25.7	-0.4
CRJC				eS		Sn	04 45 32.1	+3.1
CRJC				i			04 45 43.4	
	comp=Z,142nm,0.2s							
DABV	Dabajuro	6.44	34	eP		Pn	04 44 38.7	+1.1
DABV				eS		Sn	04 45 51.2	+1.5
URIC	Uribia, Colomb	6.50	21	eP		Pn	04 44 38.1	-0.4
URIC				eS		Sn	04 45 52.2	+1.1
URIC				i			04 46 01.9	
	comp=Z,32nm,0.3s							
LPAZ	La Paz	22.59	164	P		P	04 47 56.9	-1.9
	comp=Z,1.4nm,0.6s,baz=326,slow=8.2,SNR=5.7							
	comp=Z,1.4nm,0.6s							
SIV	San Ignacio	25.15	149	P		P	04 48 20.8	-1.1
	comp=Z,1.4nm,0.6s,baz=319,slow=9.8,SNR=10							
	comp=Z,1.4nm,0.6s							
TXAR	Lajitas Array	36.40	314	P		P	04 50 01.4	+0.4
	comp=Z,0.1nm,0.4s,baz=136,slow=8.7,SNR=6.6							
	comp=Z,0.1nm,0.4s							
PDAR	Pinedale Array	48.38	325	P		P	04 51 38.1	+0.1
	comp=Z,0.2nm,0.3s,baz=110,slow=7.8,SNR=3.2							
	comp=Z,0.2nm,0.3s							
NVAR	Mina Array Bea	51.50	316	P		P	04 52 02.7	+1.0
	comp=Z,0.2nm,0.4s,baz=121,slow=7.8,SNR=2.2							
	comp=Z,0.2nm,0.4s							
YKA	Yellowknife Ar	64.00	340	P		P	04 53 27.5	-1.0
	comp=Z,1.0nm,0.3s,baz=118,slow=8.5,SNR=44							
YKA				pP		pP	04 53 50.8	-1.6
	comp=Z,0.6nm,0.5s,baz=131,slow=6.4,SNR=5.4							
	comp=Z,1.0nm,0.3s							
TORD	Torodi Ar. Bea	75.17	78	P		P	04 54 36.2	-2.0
	comp=Z,0.3nm,0.5s,baz=280,slow=5.7,SNR=6.8							
	comp=Z,0.3nm,0.5s							
GERES	GERESS Array B	84.54	42	P		P	04 55 28.2	0.0
	comp=Z,0.6nm,0.7s,baz=268,slow=7.6,SNR=3.5							
	comp=Z,0.6nm,0.7s							
ASAR	Alice Springs	147.41	234	PKPbc		PKPdf	05 02 37.5	+0.9
	comp=Z,3.3nm,0.4s,baz=115,slow=3.7,SNR=52							
ASAR				pPKPbc		pPKPdf	05 03 03.5	+0.3
	comp=Z,1.2nm,0.9s,baz=114,slow=3.0,SNR=3.3							
WRA	Warramunga Arr	148.69	240	PKPbc		PKPdf	05 02 41.1	+2.4
	comp=Z,3.1nm,0.5s,baz=108,slow=2.8,SNR=61							

*IDC **05** 04:58:31.2±1.1, 15°.21S×173°.35W, h0km, mb3.9/4, mbtmp3.9/4, MS3.0/1, Error ellipse: s-maj=44.8km s-min=26.0km az=141.0*

*NOU **05** 04:58:50.9, 14°.08S×172°.08W, h88km, MLv3.6/5, Samoa Islands*

ISC 05 04:58:33.9±1.0, 14°.9S±0°.3×173°.3W±0°.2, h30km, n11, σ0s75/8, mb4.0/4, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.72	57	Pn	Pb	04 59 05.6	+0.7
	100nm,0.3s,baz=247,slow=15,SNR=80						
AFI				LR	LR	04 59 24.0	
	comp=Z,75nm,20.6s,baz=118,slow=26						
AFI				Sn	Sb	04 59 25.0	-1.1
	197nm,0.3s,baz=41,slow=22,SNR=9.7						
AFI	Afiamalu	1.72	57	P	Pb	04 59 05.8	+0.9
MSVF	Nonsavu	8.82	250	LR	LR	05 03 42.3	
	comp=Z,94nm,18.7s,baz=95,slow=36						
H11S2	WAKE ISLAND Hy	38.58	329	T	T	05 46 43.9	
	baz=146,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	38.59	329	T	T	05 46 46.8	
	baz=146,slow=76,SNR=6.0						
H11S1	WAKE ISLAND Hy	38.60	329	T	T	05 46 46.5	
	baz=146,slow=76,SNR=13						
WRA	Warramunga Arr	50.10	256	P	P	05 07 26.6	0.0
	0.4nm,0.7s,baz=90,slow=6.6,SNR=2.1						
	0.4nm,0.7s						
ASAR	Alice Springs	50.41	251	P	P	05 07 29.1	+0.1
	1.3nm,0.8s,baz=86,slow=9.0,SNR=9.9						
	1.3nm,0.8s						
VNDA	Vanda	63.92	186	P	P	05 09 03.4	-0.2
	0.9nm,0.8s,baz=6.8,slow=7.8,SNR=6.8						
	0.9nm,0.8s						
MAW	Mawson	88.34	199	P	P	05 11 22.5	+0.1
	1.7nm,0.6s,baz=123,slow=5.5,SNR=7.6						
	1.7nm,0.6s						
BRTR	Keskin Array B	145.83	322	PKPbc	PKiKP	05 18 13.8	-0.4
	1.0nm,0.8s,baz=47,slow=2.6,SNR=4.6						

WEL 05 05:00:53.0±1.0, 34°S±15'×18°0W±2'0, h238km±23km, M3.9/11, mB4.5/3, ML4.3/17, MLv3.9/11, Mw(mB)3.7/3, Error ellipse: s-maj=0.0km s-min=0.0km az=120.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.69	202	P	Pn	05 01 51.9	-0.6
MXZ				S	S	05 02 39.4	-0.2
WMGZ	Waiomatatini S	3.90	199	P	Pn	05 01 56.7	+1.7
HAZ	Te Kaha	4.04	206	P	Pn	05 01 56.2	-0.4
HAZ				S	S	05 02 49.9	+2.8
PKGZ	Pakihiroa	4.06	202	P	Pn	05 01 58.6	+1.7
PKGZ				S	S	05 02 47.6	0.0
WIZ	White Island	4.09	214	P	Pn	05 01 56.9	-0.4
PUZ	Puketiti	4.18	200	P	Pn	05 01 56.7	-1.6
PUZ				S	S	05 02 50.3	+0.2
RUGZ	Raukumara Rang	4.27	206	P	Pn	05 01 58.5	-1.0
RUGZ				S	S	05 02 51.9	-0.3
TWGZ	Tauwhareparae	4.36	202	P	Pn	05 02 01.5	+1.0
TWGZ				S	S	05 02 55.5	+1.5
KUZ	Kuaotunu	4.38	232	P	Pn	05 02 00.3	-0.4
CNGZ	Carnagh Statio	4.58	198	P	Pn	05 02 02.2	-0.9
TKGZ	Te Karaka	4.64	202	P	Pn	05 02 05.0	+1.2
MWZ	Matawai	4.65	205	P	Pn	05 02 02.9	-1.1
MWZ				S	S	05 03 00.1	-0.3
MARZ	Manawahe	4.70	214	P	Pn	05 02 06.8	+2.1
URZ	Urewera	4.74	209	P	Pn	05 02 05.0	0.0
URZ				S	S	05 03 00.8	-1.6
RAGZ	Rawiri	4.83	205	P	Pn	05 02 05.2	-1.1
RAGZ				S	S	05 03 06.2	+1.6
RIGZ	Rimuhau	4.91	201	P	Pn	05 02 05.9	-1.3
RIGZ				S	S	05 03 06.2	0.0
MUGZ	Murupara	5.07	210	P	Pn	05 02 07.4	-1.7
SNGZ	Shannon Statio	5.11	204	P	Pn	05 02 10.7	+0.9
SNGZ				S	S	05 03 10.9	0.0
RAHZ	Arahi	5.32	206	P	Pn	05 02 13.2	+0.9
RAHZ				S	S	05 03 15.9	+0.4
MTHZ	Maungataniwha	5.36	208	P	Pn	05 02 13.2	+0.5
MTHZ				S	S	05 03 16.2	-0.2
NMHZ	Naumai	5.58	207	P	Pn	05 02 13.0	-2.7
NMHZ				S	S	05 03 22.3	+0.7
BKZ	Black Stump Fm	5.76	209	P	Pn	05 02 18.1	+0.2
NTVZ	North Tongariro	6.06	214	P	Pn	05 02 22.4	+0.7
ETVZ	East Tongariro	6.08	214	P	Pn	05 02 22.6	+0.8
OTVZ	Oturere	6.12	214	P	Pn	05 02 22.2	-0.2
KAHZ	Kahuranaki	6.18	203	P	Pn	05 02 23.5	+0.5
WNVZ	Wahianoa	6.28	213	P	Pn	05 02 24.6	+0.2

*BJI **05** 05:39:37.0±0.0, 26°.11N×128°.52E, h6km, mb4.5/39, mB4.5/18, Ms4.2/26, Ms7 4.1/27*

*IDC **05** 05:39:38.3±0.8, 26°.02N×128°.45E, h0km, mb4.1/15, mbtmp4.1/17, ML3.1/2, MS3.5/20, Error ellipse: s-maj=27.8km s-min=16.6km az=77.0*

*NEIC **05** 05:39:39.3±1.6, 25°.96N±0°.05×128°.56E±0°.06, h10km±1km, mb4.5/25, Error ellipse: s-maj=10.4km s-min=8.2km az=229.0*

*MOS **05** 05:39:40.1±1.0, 25°.98N×128°.40E, h23km, mb4.6/22, Error ellipse: s-maj=12.7km s-min=6.8km az=103.9*

*JMA **05** 05:39:42.0±0.3, 26°N±1°×12°9E±°, h38km, MV3.9/18, NEAR OKINAWAJIMA ISLAND*

*NIED **05** 05:39:42.0, 26°.12N×128°.58E, h38km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.86; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-2.13; $M_{r\theta}$0.40; $M_{\theta\phi}$-2.21; $M_{r\phi}$0.37; Fault plane solution: $M_0$3.35000×10^{15} NP1: ϕs213.00000°, δ40.00000°, λ86.00000°. NP2:ϕs39.00000°, δ50.00000°, λ94.00000°.*

ISC 05 05:39:39.4±1.4, 26°.02N±0°.04×128°.63E±0°.04, h10km±7km, n137, σ1s41/136, mb4.5/46, MS3.6/28, 10C-4D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.73	312	P	Pg	04 39 54.2	+0.6
JNTH				eS	Sg	05 40 03.7	+0.5
JJT3	Tamagusuku3	0.77	279	i P	Pb	05 39 55.6	+0.7
JJT3				eS	Sb	05 40 06.4	+1.0
JOW	Kunigami	0.86	339		Pg	05 39 56.7	+0.6
JOW	Kunigami	0.86	339	i P	Pg	05 39 56.6	+0.4
JOW				eS	Sg	05 40 06.0	-1.4
JYRO	Yoronjima	1.01	351	i P	Pb	05 39 58.6	-0.5
JYRO				S	Sb	05 40 11.3	-1.0
JIH	Iheya	1.17	330	P	Pb	05 40 01.6	-0.2
JOKE	Okinoerabujima	1.33	358	i P	Pn	05 40 03.5	-0.6
JOKE				eS	Sb	05 40 19.1	-2.6
JAGN	Aguni-jima	1.37	295	i P	Pn	05 40 04.2	-0.4
JAGN				eS	Sb	05 40 19.7	-3.0
JKE	Kume jima 2	1.68	281	i P	Pn	05 40 08.0	-1.0
JKE				eS	Sn	05 40 28.5	-2.1
JTK	Tokunoshima	1.78	9	i P	Pn	05 40 09.7	-0.6
JTK				eS	Sn	05 40 29.9	-3.1
JAAN	Amaminishikomi	2.26	12	P	Pn	05 40 16.5	-0.5
JMZ	Minamidaito 2	2.34	94		Pn	05 40 16.7	-1.3
JMZ	Minamidaito 2	2.34	94	P	Pn	05 40 16.9	-1.2
JMZ				S	Sn	05 40 42.9	-4.0
JKDJ	Kitadaitoujima	2.40	91	P	Pn	05 40 17.9	-1.0
JKDJ				S	Sn	05 40 45.4	-3.0
JAM	Amami Oshima	2.53	20	P	Pn	05 40 19.8	-0.9
JAM				eS	Sn	05 40 49.7	-1.9
JZK	Kikaishima	2.58	27	P	Pn	05 40 21.1	-0.2
JZK				eS	Sn	05 40 50.6	-2.1
JTAJ	Takarajima	3.16	9	P	Pn	05 40 28.6	-0.6
JTAJ				eS	Sn	05 41 04.8	-2.2
YOJ	Yonaguni jima	5.32	254	Pn	Pn	05 40 56.7	-2.3
YOJ	Yonaguni jima	5.32	254	P	Pn	05 40 56.7	-2.3
JSU	Suzuyama	5.69	16	Pn	Pn	05 41 03.9	-0.3
NACB	Ninganchiao	6.64	255	Pn	Pn	05 41 14.6	-2.5
YHNB	Yeheng	6.70	260		Pn	05 41 17.6	-0.5
YULB	Yu-li	7.16	250	Pn	Pn	05 41 20.9	-3.4
SSLB	Suanglung	7.32	254		Pn	05 41 23.8	-2.6
JNU	Nakatsue	7.34	15	Pn	Pn	05 41 27.5	+0.7
TPUB	Ta-pu	7.76	251		Pn	05 41 30.6	-2.0
SSE	Sheshan	8.27	309	P	Pn	05 41 35.9	-3.5
SSE				S	Sn	05 43 09.5	-3.4
SSE				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,41nm,3.2s						
SSE				LR	LR		
	comp=N,290nm,10.9s						
SSE				LR	LR		
	comp=E,430nm,11.3s						
JMN	Monobe	8.93	29	Pn	Pn	05 41 49.1	+0.5
JHS	Saijyo	9.74	22	Pn	Pn	05 42 00.5	+0.8
NJ2	Nanjing	10.45	307	eP	Pn	05 42 07.1	-2.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=N,800nm,11.1s						
NJ2				LR	LR		
	comp=E,980nm,11.9s						
NJ2				LR	LR		
	comp=Z,1μm,11.3s						
KSRS	Korea Array	11.41	357	Pn	Pn	05 42 23.3	+0.8
	0.2nm,0.3s,baz=174,slow=13,SNR=6.3						
KSRS				LR	LR	05 47 05.8	
	comp=Z,216nm,18.1s,baz=180,slow=39						
	0.9nm,0.5s						
WHN	Wuhan	13.36	293	⇑P	P	05 42 57.2	-1.7
WHN				S	S	05 45 29.8	-12
WHN				LR	LR		
	comp=N,640nm,14.6s						
WHN				LR	LR		
	comp=E,1μm,13.5s						
WHN				LR	LR		
	comp=Z,1μm,13.3s						
HNS	HongShan	16.38	317	⇓P	P	05 43 33.4	+1.1
HNS				eS	Sn	05 46 36.2	+5.0
HNS				pmax	pmax		
	comp=Z,18nm,0.8s						
HNS				LR	LR		
	comp=N,520nm,12.1s						
HNS				LR	LR		
	comp=E,550nm,12.1s						
HNS				LR	LR		
	comp=Z,810nm,12.6s						
MSHR	Mys Shultsa	16.64	7	i P	P	05 43 35.3	+0.1
BJT	Baijiatuao	17.41	326	P	Pn	05 43 41.9	-0.5
BJT	Baijiatuao	17.41	326	P	Pn	05 43 41.9	-0.5
BJT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USRK	Ussuriysk Ar.	18.34	8	P	P	05 43 55.1	+1.2
	comp=Z,0.3nm,0.3s,baz=188,slow=9.7,SNR=7.4						
	comp=Z,2.8nm,0.6s						

comp=E,250nm,13.1s
XLT LR LR
comp=Z,320nm,11.6s
KLR Kul'dur 23.29 5 *ce* P **P 05 44 47.0 -0.3**
KLR pmax pmax
comp=Z,3.0nm,1.0s
KMI Kunming 23.36 273 ⇓P **P 05 44 48.7 +0.2**
KMI sP sP 05 44 52.3 +0.7
KMI pmax pmax
comp=Z,12nm,0.7s
KMI LR LR
comp=Z,190nm,12.6s
KMI LR LR
comp=Z,230nm,9.3s
KMI LR LR
comp=Z,210nm,8.6s
LZH Lanzhou 23.43 301 *e* P **P 05 44 48.4 -0.6**
LZH pP sP 05 44 53.7 +1.6
LZH pmax pmax
comp=Z,19nm,1.1s
LZH LR LR
comp=Z,290nm,11.3s
LZH LR LR
comp=Z,300nm,11.0s
LZH LR LR
comp=Z,320nm,14.8s
YSS Yuzh-Sakhalins 23.70 25 P **P 05 44 52.2 +0.8**
YSS Yuzh-Sakhalins 23.70 25 *e* P **P 05 44 53.5 +2.1**
YSS *e* 05 45 04.9
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,200nm,14.0s
PZH PanZhiHua 24.10 277 P **P 05 44 53.3 -2.3**
PZH S **S 05 49 13.3 -0.1**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.1s
PZH LR LR
comp=Z,510nm,15.5s
PZH LR LR
comp=Z,650nm,14.6s
PZH LR LR
comp=Z,710nm,14.5s
TYV Tymovskoe 27.03 20 *e* P P 05 45 32.8 +11
TYV pmax pmax
comp=Z,100nm,2.6s
TYV pmax pmax
comp=Z,13nm,1.1s
GTA Gaotai 27.54 306 *e* P **P 05 45 24.7 -1.9**
GTA pP pP 05 45 29.4 +0.8
GTA sP pwP 05 45 32.1 -0.8
GTA pmax pmax
comp=Z,14nm,0.8s
GTA pmax pmax
comp=Z,430nm,3.8s
GTA LR LR
comp=Z,200nm,12.7s
GTA LR LR
comp=Z,200nm,14.7s
GTA LR LR
comp=Z,260nm,12.3s
ULN Ulaanbaatar 27.62 328 P **P 05 45 27.1 -0.1**
ULN lAmb lAmb 05 45 29.6
comp=Z,6.6nm,0.8s
ULN Ulaanbaatar 27.62 328 *ce* P **P 05 45 28.2 +0.9**
ULN pmax pmax
comp=Z,5.0nm,0.6s
SONM Songino Array 27.92 327 P **P 05 45 31.2 +1.3**
comp=Z,4.4nm,0.8s,baz=137,slow=10,SNR=18
SONM LR LR 05 57 49.5
comp=Z,73nm,19.9s,baz=189,slow=39
comp=Z,4.4nm,0.8s
SONM Songino Array 27.92 327 P **P 05 45 28.6 -1.3**
CMAR Chiang Mai Arr 28.44 261 P **P 05 45 36.8 +2.1**
comp=Z,0.8nm,0.3s,baz=52,slow=7.4,SNR=6.5
PETK Petropavlovsk- 34.69 31 LR LR 06 03 42.5
comp=Z,18nm,18.3s,baz=253,slow=42
YAK Yakutsk 36.01 1 *i* P **P 05 46 41.4 +1.0**
YAK pmax pmax
comp=Z,9.0nm,0.8s
MA2 Magadan 36.89 19 LR LR 06 03 05.2
comp=Z,39nm,18.8s,baz=176,slow=38
MA2 Magadan 36.89 19 *i* P **P 05 46 49.5 +1.5**
MA2 pmax pmax
comp=Z,4.0nm,0.5s
WMQ Urumqi 37.52 309 *e* P P 05 46 50.1 -3.6
WMQ pP sP 05 46 58.6 +2.0
WMQ pmax pmax
comp=Z,31nm,0.7s
WMQ LR LR
comp=Z,64nm,15.5s
PMG Port Moresby 39.56 151 LR LR 06 01 33.5
comp=Z,34nm,20.8s,baz=167,slow=33
SEY Seymchan 40.11 17 P **P 05 47 16.1 +1.1**
comp=Z,2.4nm,0.6s,baz=227,slow=7.2,SNR=9.0
comp=Z,2.4nm,0.6s
SEY Seymchan 40.11 17 *ce* P **P 05 47 17.7 +2.6**
SEY pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 41.94 312 P **P 05 47 29.4 -0.9**
comp=Z,1.8nm,0.6s,baz=100,slow=10,SNR=21
comp=Z,1.8nm,0.6s
MKAR Makanchi Array 41.94 312 P **P 05 47 29.2 -1.2**
MAKZ Makanchi 42.15 312 P **P 05 47 30.9 -1.2**
MAKZ Makanchi 42.15 312 P **P 05 47 31.0 -1.2**
MAKZ pmax pmax
comp=Z,8.0nm,1.3s
ZALV Zalesovo Beam 42.63 323 LR LR 06 06 38.7
comp=Z,51nm,20.1s,baz=122,slow=38
KURK Kurchatov 45.21 317 P **P 05 47 55.4 -1.3**
KURK lAmb lAmb 05 48 06.0
comp=Z,3.5nm,0.8s
KURK Kurchatov 45.21 317 *ce* P **P 05 47 55.3 -1.4**
KURK pmax pmax
comp=Z,9.0nm,2.5s
KURBB Kurchatov Arra 45.25 317 P **P 05 47 55.7 -1.2**
comp=Z,1.5nm,0.5s,baz=103,slow=9.1,SNR=14
comp=Z,1.5nm,0.5s
WB0 Warramunga Arr 45.86 172 P **P 05 48 02.1 0.0**
WB0 lAmb lAmb 05 48 07.9
comp=Z,9.3nm,1.1s
WRA Warramunga Arr 46.03 173 P **P 05 48 04.0 +0.6**
comp=Z,1.5nm,0.6s,baz=353,slow=8.4,SNR=19
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 46.03 173 P **P 05 48 03.5 +0.1**
WRA Warramunga Arr 46.03 173 *i* P **P 05 48 03.2 -0.2**
WRA pmax pmax
comp=Z,2.0nm,0.6s
BILL Bilibino 47.75 18 *e* P **P 05 48 18.2 +1.8**
BILL *e* 05 49 50.1
BILL pmax pmax
comp=Z,4.0nm,1.0s
PALK Pallekele 49.23 256 LR LR 06 11 30.8
comp=Z,49nm,18.4s,baz=153,slow=39
ASAR Alice Springs 49.66 174 P **P 05 48 32.3 +0.7**
comp=Z,0.7nm,0.6s,baz=7.7,slow=13,SNR=11
comp=Z,0.7nm,0.6s
KK31 Karatay Array 49.82 306 P **P 05 48 32.5 -0.2**
KK31 lAmb lAmb 05 48 42.2
comp=Z,5.7nm,1.4s
KK31 Karatay Array 49.82 306 P **P 05 48 32.5 -0.2**
KK31 pmax pmax
comp=Z,6.0nm,1.4s
KKAR Karatay Array 49.82 306 P **P 05 48 31.9 -0.8**
KKAR Karatay Array 49.82 306 P **P 05 48 31.9 -0.8**
BVAR Borovoye Array 50.67 318 LR LR 06 11 18.2
comp=Z,39nm,20.9s,baz=335,slow=38
BRVK Borovoye 50.73 318 P **P 05 48 38.7 -0.7**
BRVK lAmb lAmb 05 48 39.9
comp=Z,4.4nm,0.9s
BRVK Borovoye 50.73 318 *ce* P **P 05 48 39.3 -0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.9s
KBL Kabul 51.52 295 P **P 05 48 45.2 -0.6**
KBL lAmb lAmb 05 48 56.6
comp=Z,7.7nm,0.8s
KBL Kabul 51.52 295 P **P 05 48 45.2 -0.6**
KBL pmax pmax
comp=Z,8.0nm,0.8s
ABKAR Akbulak array 57.05 313 P **P 05 49 25.0 -0.6**
ABKAR lAmb lAmb 05 49 26.6
comp=Z,4.7nm,0.7s
ARU Arti 57.77 322 LR LR 06 16 12.1
comp=Z,56nm,21.0s,baz=101,slow=38

ARU Arti 57.77 322 P **P 05 49 30.1 -0.6**
ARU lAmb lAmb 05 49 30.9
comp=Z,5.5nm,1.1s
ARU Arti 57.77 322 *d i* P **P 05 49 30.0 -0.6**
ARU 05 51 33.8
ARU S **S 05 57 30.7 +1.1**
ARU SS **SS 06 01 16.6 -3.2**
ARU pmax pmax
comp=Z,5.0nm,1.1s
ARU MLR MLR
comp=Z,119nm,16.0s
AKTO Aktyubinsk 58.23 315 LR LR 06 14 59.7
comp=Z,13nm,21.5s,baz=77,slow=36
GEYT Alibeck 59.70 300 LR LR 06 18 12.3
comp=Z,36nm,19.6s,baz=102,slow=39
K20K Telida 61.40 30 P **P 05 49 56.6 +1.0**
K20K lAmb lAmb 05 50 04.6
comp=Z,3.0nm,0.8s
IMAR Indian Mountai 61.50 27 P **P 05 49 57.1 +0.9**
BPAW Bear Paw Mtn. 62.74 29 P **P 05 50 05.5 +1.0**
BPAW lAmb lAmb 05 50 12.6
comp=Z,3.0nm,0.9s
H23K Yukon River 63.24 27 P **P 05 50 08.8 +1.0**
H23K lAmb lAmb 05 50 16.2
comp=Z,3.7nm,0.7s
RND Reindeer 63.74 30 P **P 05 50 11.8 +0.5**
RND Reindeer 63.74 30 P **P 05 50 11.8 +0.5**
RND pmax pmax
comp=Z,7.0nm,1.0s
MDM Murphy Dome 63.86 28 P **P 05 50 12.8 +0.9**
ILAR Eielson Array 64.45 28 P **P 05 50 16.5 +0.7**
comp=Z,0.3nm,0.8s,baz=264,slow=8.1,SNR=4.8
comp=Z,0.3nm,0.8s
BELG Belogornoye 64.47 318 LR LR 06 19 28.8
comp=Z,34nm,18.9s,baz=153,slow=37
BMAR Burnt Mountain 65.04 25 P **P 05 50 21.4 +1.7**
SCRK Sand Creek 65.81 29 P **P 05 50 25.0 +0.1**
J26L Joseph Creek 65.90 28 P **P 05 50 25.6 +0.2**
J26L lAmb lAmb 05 50 26.2
comp=Z,2.5nm,0.8s
SPITS Spitsbergen Ar 69.10 348 P **P 05 50 45.1 -0.2**
SPITS pmax pmax
comp=Z,35nm,1.5s
KBZ Khabaz 69.57 310 P **P 05 50 49.0 +0.3**
comp=Z,1.5nm,0.6s,baz=82,slow=4.3,SNR=4.6
comp=Z,1.5nm,0.6s
KBZ Khabaz 69.57 310 *ce* P **P 05 50 49.0 +0.3**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
KIV Kislovodsk 69.65 310 *e* P **P 05 50 50.2 +0.9**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,21nm,17.0s
KEV Kevo 69.76 339 P **P 05 50 49.0 -0.4**
KEV Kevo 69.76 339 P **P 05 50 49.0 -0.4**
KEV pmax pmax
comp=Z,13nm,1.3s
OBN Obninsk 70.21 322 *e* P **P 05 50 53.8 +1.4**
OBN *e* 05 51 14.2
OBN *e* 05 53 28.4
OBN *e* PPP PPP 05 55 09.5
OBN pmax pmax
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 70.33 339 P **P 05 50 52.6 -0.3**
comp=Z,2.1nm,0.9s,baz=74,slow=6.7,SNR=3.9
ARCES LR LR 06 25 49.1
comp=Z,16nm,19.7s,baz=69,slow=39
comp=Z,2.1nm,0.9s
FINES FINESS Array B 73.22 331 P **P 05 51 10.1 -0.3**
comp=Z,2.3nm,0.7s,baz=77,slow=4.1,SNR=12
FINES LR LR 06 26 58.7
comp=Z,44nm,18.5s,baz=75,slow=39
comp=Z,2.3nm,0.7s
FINES FINESS Array B 73.22 331 P **P 05 51 09.4 -1.0**
NACGM Naroch 75.55 324 ⇓ *e* P **P 05 51 22.9 -1.2**
baz=65
AKASG Malin Array Be 75.92 320 P **P 05 51 25.8 -0.5**
comp=Z,3.0nm,0.6s,baz=54,slow=5.6,SNR=13
AKASG LR LR 06 27 34.1
comp=Z,60nm,18.7s,baz=30,slow=38
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 75.92 320 *ce* P **P 05 51 26.0 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 75.92 320 *ce* P **P 05 51 26.2 -0.1**
BR131 Keskin Array S 77.44 308 P **P 05 51 34.5 -0.8**
BR131 Keskin Array S 77.44 308 P **P 05 51 34.5 -0.8**
BR131 pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 77.44 308 P **P 05 51 35.1 -0.2**
comp=Z,3.2nm,0.9s,baz=98,slow=5.1,SNR=14
comp=Z,3.2nm,0.9s
BRTR Keskin Array B 77.44 308 P **P 05 51 34.7 -0.7**
BRTR Keskin Array B 77.44 308 *ce* P **P 05 51 35.7 +0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 78.56 25 P **P 05 51 41.2 +0.3**
comp=Z,0.8nm,0.7s,baz=318,slow=4.4,SNR=6.6
comp=Z,0.8nm,0.7s
BUR08 Bucovina Ar. S 79.62 318 P **P 05 51 45.6 -1.6**
BUR08 lAmb lAmb 05 51 50.5
comp=Z,4.7nm,1.1s
BURAR Bucovina Array 79.62 318 P **P 05 51 46.7 -0.5**
BURAR Bucovina Array 79.62 318 P **P 05 51 47.8 +0.6**
BURAR pmax pmax
comp=Z,2.0nm,0.7s
NB2 NORSAR Subarra 79.65 334 P **P 05 51 46.5 -0.5**
comp=Z,1.0nm,0.6s,baz=52,slow=5.6
NOA NORSAR Array B 79.65 334 P **P 05 51 46.2 -0.8**
comp=Z,1.8nm,0.7s,baz=51,slow=5.7,SNR=6.6
NOA LR LR 06 32 11.8
comp=Z,33nm,19.6s,baz=75,slow=40
comp=Z,1.8nm,0.7s
MLR Muntele Rosu 80.14 316 LR LR 06 30 54.6
comp=Z,54nm,18.3s,baz=359,slow=38
EIL Elat 80.52 298 LR LR 06 31 33.5
comp=Z,35nm,18.1s,baz=88,slow=39
SUMG Summit 81.26 356 *i* P **P 05 52 00.0 +4.1**
VRAC Vranov 83.74 322 LR LR 06 32 33.8
comp=Z,83nm,18.7s,baz=51,slow=38
CLL Collm 84.52 325 *e* P **P 05 52 14.0 +1.3**
CLL Collm 84.52 325 *e* P **P 05 52 14.0 +1.3**
CLL LmH 06 26 00.0
comp=N,100nm,21.6s
CLL LmH 06 26 00.0
comp=E,100nm,21.9s
GERES GERESS Array B 85.58 323 P **P 05 52 18.9 +0.7**
comp=E,0.9nm,0.8s,baz=47,slow=9.7,SNR=5.3
comp=E,0.9nm,0.8s
PPT Papeete 90.48 109 LR LR 06 24 29.2
comp=E,20nm,19.7s,baz=294,slow=30

AZER ***05*** *05:40:18.7±1.0, 37.°07N×42.°91E, h6km, Error ellipse: s-maj=16.4km s-min=7.5km az=108.0*
DDA ***05*** *05:40:22.8±0.0, 38.°24N×42.°81E, h6km±3km, MW3.6*
ISK ***05*** *05:40:22.4, 38.°26N×42.°81E, h5km, ML3.3/12*
NSSP ***05*** *05:40:27.0, 38.°40N×42.°75E, h10km, Ms3.1*

ISC 05 05:40:23.2±1.0, 38.°25N±0.°02×42.°82E±0.°02, h7km±8km, n58, σ2s02/82, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKDM	**Akdamar-Van**	**0.14**	**58**	PG	**Pg**	**05 40 26.5**	**+0.1**
AKDM				SG	**Sg**	**05 40 28.6**	**+0.1**
GEVA	**Gevas**	**0.19**	**72**	P	**Pg**	**05 40 27.3**	**+0.1**
GEVA				S	**Sg**	**05 40 30.3**	**+0.3**
TVAN	**Van**	**0.53**	**59**	P	**Pg**	**05 40 32.8**	**-0.8**
ADCV	**BITLIS_Adilcev**	**0.56**	**352**	P	**Pg**	**05 40 34.2**	**+0.1**
ADCV				S	**Sb**	**05 40 42.6**	**-1.1**
VANB	**Van**	**0.56**	**52**	PG	**Pg**	**05 40 32.7**	**-1.4**
BLIS	**Bitlis-Merkez**	**0.58**	**286**	P	**Pb**	**05 40 34.6**	**-1.2**
BLIS				S	**Sg**	**05 40 42.0**	**-0.1**
GURO	**Guroymak-BITLI**	**0.69**	**296**	PG	**Pg**	**05 40 36.3**	**-0.2**
GURO				SG	**Sg**	**05 40 45.2**	**-0.3**
ERCV	**ERCIS-VAN**	**0.87**	**28**	PG	**Pg**	**05 40 38.5**	**-1.4**
MLAZ	**Malazgirt-MUS**	**0.91**	**346**	PG	**Pg**	**05 40 40.3**	**-0.5**
MLAZ				SG	**Sb**	**05 40 52.9**	**-1.0**
HAKT	**HAKKARI**	**0.98**	**134**	P	**Pg**	**05 40 41.9**	**-0.2**
OZAP	**Van, Ozalp-Mer**	**1.00**	**66**	P	**Pg**	**05 40 42.5**	**0.0**
MUSM	**Mu-Merkez**	**1.13**	**295**	P	**Pg**	**05 40 44.4**	**-0.6**
MUSM				S	**Sg**	**05 40 58.6**	**-1.1**
EKAR	**Karacoban**	**1.17**	**330**	P	**Pg**	**05 40 44.8**	**-0.8**
CUKT	**Cukurca**	**1.18**	**148**	PN	**Pg**	**05 40 45.0**	**-0.9**
CUKT	**Cukurca**	**1.18**	**148**	P	**Pg**	**05 40 44.9**	**-1.0**
CLDR	**Caldiran**	**1.23**	**44**	PN	**Pg**	**05 40 44.6**	**-2.3**
CLDR				SN	**Sn**	**05 41 04.0**	**-0.1**
CLDR	**Caldiran**	**1.23**	**44**	P	**Pg**	**05 40 44.0**	**-2.9**
CLDR				S	**Sg**	**05 40 58.6**	**-4.3**
BTMN	**Batman**	**1.28**	**254**	P	**Pb**	**05 40 48.5**	**+0.9**
BTMN				S	**Sn**	**05 41 06.7**	**+1.8**
SVAN	**Silvan-Diyarba**	**1.28**	**266**	PN	**Pg**	**05 40 47.4**	**-0.5**
SVAN				SN	**Sn**	**05 41 05.2**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.28**	**266**	P	**Pg**	**05 40 48.0**	**+0.2**
SVAN				S	**Sn**	**05 41 05.9**	**+0.8**
AGRB	**Hanur-Agry**	**1.33**	**6**	PN	**Pn**	**05 40 47.9**	**-0.4**
VRTB	**Varto-Mus**	**1.40**	**311**	PN	**Pn**	**05 40 48.9**	**-0.4**
VRTB	**Varto-Mus**	**1.40**	**311**	P	**Pg**	**05 40 51.8**	**+1.7**
MIDY	**Mardin/Midyat-**	**1.41**	**234**	P	**Pg**	**05 40 50.3**	**0.0**
MIDY				S	**Sg**	**05 41 11.0**	**+2.5**
SLHN	**Bingol, Solhan**	**1.58**	**297**	P	**Pg**	**05 40 52.8**	**-0.6**
SLHN				S	**Sg**	**05 41 15.2**	**+1.3**
EATA	**Eleskirt**	**1.63**	**351**	P	**Pb**	**05 40 52.8**	**-0.9**
EATA				S	**Sg**	**05 41 15.1**	**-0.5**
BNGB	**Bingl**	**1.83**	**294**	PN	**Pn**	**05 40 55.5**	**+0.3**
MARD	**Mardin**	**1.87**	**241**	P	**Pb**	**05 40 57.0**	**-0.8**
IGDI	**IGDIR**	**1.89**	**31**	P	**Pb**	**05 40 57.5**	**-0.5**
KOPR	**Koprukoy-ERZUR**	**1.89**	**337**	PN	**Pn**	**05 40 55.9**	**-0.2**
HANI	**Diyarbakir_Han**	**1.91**	**276**	P	**Pn**	**05 40 56.2**	**0.0**
HANI				S	**Sg**	**05 41 24.3**	**-0.4**
HOMI	**Horasan**	**1.93**	**339**	P	**Pb**	**05 40 57.3**	**-1.5**
VNNZ	**Vanand**	**2.00**	**22**	*eP*	**Pg**	**05 41 01.5**	**-0.2**
VNNZ				*eS*	**Sg**	**05 41 31.1**	**+3.4**
MAZI	**Mazidag**	**2.04**	**248**	PN	**Pn**	**05 40 58.4**	**+0.3**
TASB	**TASBURUN-IGDIR**	**2.05**	**32**	PN	**Pn**	**05 40 58.4**	**+0.3**
YEDI	**Yedisu-Bingol**	**2.14**	**304**	PN	**Pn**	**05 40 59.7**	**+0.3**
HYR	**Heyderabad** SNR=8.6	**2.15**	**47**	P	**Pg**	**05 41 08.0**	**+3.4**
NAX	**Nakhchivan** SNR=6.3	**2.28**	**65**	P	**Pg**	**05 41 06.1**	**-0.9**
NAX				S	**Sg**	**05 41 42.2**	**+5.6**
SENK	**Senkaya-Erzuru**	**2.33**	**351**	PN	**Pn**	**05 41 02.2**	**0.0**
KARS	**Kars**	**2.38**	**5**	PN	**Pn**	**05 41 02.8**	**0.0**
GNI	**Garni**	**2.41**	**38**	*eP*	**Pg**	**05 41 07.9**	**-1.5**
GNI				*eS*	**Sg**	**05 41 43.4**	**+2.7**
GNI	**Garni**	**2.41**	**38**	PN	**Pn**	**05 41 03.6**	**+0.4**
SBZ	**Shahbuz** SNR=11	**2.42**	**61**	P	**Pg**	**05 41 08.4**	**-1.2**
SBZ				S	**Sg**	**05 41 48.1**	**+7.2**
KOPT	**Kop Dagi**	**2.53**	**315**	P	**Pb**	**05 41 09.8**	**+0.7**
ORD	**Ordubad** SNR=23	**2.57**	**74**	P	**Pb**	**05 41 07.4**	**-2.3**
ORD				S	**Sg**	**05 41 47.3**	**+1.4**
ERZN	**Erzincan**	**2.76**	**300**	PN	**Pn**	**05 41 08.5**	**+0.5**
DDEM	**Demirkent**	**2.76**	**343**	P	**Pn**	**05 41 09.7**	**+1.7**
PTK	**Pertek**	**2.77**	**284**	PN	**Pn**	**05 41 08.4**	**+0.3**
DBAD	**Bademkaya**	**2.90**	**343**	P	**Pn**	**05 41 11.6**	**+1.8**
ELZG	**Elazig**	**3.03**	**276**	P	**Pn**	**05 41 12.9**	**+1.2**
CHOM	**Cayeli-Rize**	**3.26**	**331**	PN	**Pn**	**05 41 15.4**	**+0.7**
URFA	**Urfa**	**3.27**	**257**	PN	**Pn**	**05 41 15.6**	**+0.7**
BCA	**Borcka**	**3.32**	**344**	PN	**Pn**	**05 41 16.3**	**+0.7**
GDB	**GEDABAY** SNR=10	**3.35**	**42**	P	**Pg**	**05 41 25.3**	**-2.1**
GDB				S	**Sg**	**05 42 16.0**	**+5.1**
QZX	**Qazax, Azerbai**	**3.42**	**34**	P	**Pb**	**05 41 25.2**	**+1.1**
QZX				S	**Sg**	**05 42 19.8**	**+6.6**
GANJ	**Ganja**	**3.61**	**47**	P	**Pb**	**05 41 26.6**	**-0.8**
YRD	**Yardimli** SNR=14	**4.30**	**79**	P	**Pn**	**05 41 31.3**	**+2.2**
YRD				S	**Sb**	**05 42 25.5**	**-5.8**
LRK	**Lerik** SNR=6.3	**4.35**	**83**	P	**Pn**	**05 41 29.1**	**-0.7**

IDC 05 05:59:09.8±3.5, 54.°48N×86.°76E, h0km, mbtmp3.3/2, ML2.9/2, Error ellipse: s-maj=32.1km s-min=20.1km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=66,slow=313,SNR=1.1	**1.26**	**246**	*i*		06 06 46.3	
ZALV	**Zalesovo Beam** 2.0nm,0.3s,baz=58,slow=16,SNR=8.1	**1.26**	**246**	Pg	**Pg**	05 59 32.4	-1.4
ZALV				Lg	**Lg**	05 59 50.5	
KURBB	**Kurchatov Arra** 1.7nm,0.3s,baz=62,slow=26,SNR=5.3	**6.33**	**236**	Pn	**Pn**	06 00 45.4	+1.1
	0.2nm,0.3s,baz=52,slow=14,SNR=10						
	2.3nm,0.5s						
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=18,slow=12,SNR=4.0	**8.20**	**202**	Pn	**Pn**	06 01 10.7	+0.7
	0.4nm,0.3s						

IDC 05 06:15:02.0±2.5, 54.°13N×86.°47E, h0km, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=20.5km s-min=13.2km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=80,slow=316,SNR=1.2	**0.99**	**260**	*i*		06 20 20.7	
ZALV	**Zalesovo Beam** 1.8nm,0.3s,baz=80,slow=17,SNR=14	**0.99**	**260**	Pg	**Pg**	06 15 19.4	-1.5
ZALV				Lg	**Lg**	06 15 34.9	
	4.2nm,0.3s,baz=78,slow=28,SNR=15						
ZALV				Rg	**Rg**	06 15 39.1	
KURBB	**Kurchatov Arra** 7.8nm,0.5s,baz=79,slow=30,SNR=7.7	**6.00**	**237**	Pn	**Pn**	06 16 33.0	+1.1
	0.2nm,0.3s,baz=54,slow=13,SNR=15						
KURBB				Lg	**Lg**	06 18 14.6	
	baz=56,slow=35,SNR=4.3						
	1.6nm,0.5s						
MKAR	**Makanchi Array** 0.6nm,0.3s,baz=25,slow=14,SNR=8.8	**7.81**	**202**	Pn	**Pn**	06 16 57.7	+0.9
MKAR				Lg	**Lg**	06 19 09.4	
	baz=25,slow=27						
	0.7nm,0.3s						

DJA ***05*** *06:26:45.8±0.4, 8.°S±3.°×12.°0E±.°, h157km±5km, M3.8/12, mb4.0/1, MLv3.6/12*
IDC ***05*** *06:26:47.1±2.0, 8.°10S×120.°02E, h195km±15km, mb3.1/3, mbtmp3.7/7, Error ellipse: s-maj=51.4km s-min=10.4km az=52.0*

ISC 05 06:26:44.5±0.8, 8.°35S±0.°05×119.°66E±0.°04, h173km±8km, n18, σ1s36/28, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.31**	**192**	P	**Pn**	**06 27 14.6**	**+0.4**
WBSI				S	**Sn**	**06 27 37.0**	**-0.2**
PLAI	**Plampang**	**1.93**	**256**	P	**Pn**	**06 27 21.1**	**+0.8**
PLAI				S	**Sn**	**06 27 47.4**	**-0.6**
EDFI	**Ende, Flores**	**2.04**	**101**	P	**Pn**	**06 27 22.3**	**+0.6**
EDFI				S	**Sn**	**06 27 49.7**	**-0.7**
BASI	**Baing, Sumba**	**2.06**	**154**	P	**Pn**	**06 27 22.6**	**+0.8**
BASI				S	**Sn**	**06 27 50.7**	**-0.1**
MMRI	**Maumere**	**2.56**	**97**	P	**Pn**	**06 27 28.3**	**+0.8**
MMRI				S	**Sn**	**06 28 01.3**	**+0.4**
TWSI	**Taliwang, Sumb**	**2.78**	**262**	P	**Pn**	**06 27 30.7**	**+0.6**
TWSI				S	**Sn**	**06 28 05.4**	**-0.2**
BKSI	**Bulukumba**	**3.04**	**9**	P	**Pn**	**06 27 33.5**	**+0.1**
BKSI				S	**Sn**	**06 28 11.5**	**0.0**
KAPI	**Kappang** 15nm,0.4s,baz=188,slow=10,SNR=5.9	**3.31**	**2**	P	**Pn**	**06 27 36.1**	**-0.6**
BBSI	**Bau Bau**	**4.05**	**46**	P	**Pn**	**06 27 46.7**	**+0.6**
BATI	**Baumata** 25nm,0.3s,baz=272,slow=12,SNR=2.6	**4.36**	**115**	P	**Pn**	**06 27 51.6**	**+1.5**
BATI				S	**Sn**	**06 28 41.5**	**+0.2**
	78nm,0.4s,baz=356,slow=22,SNR=6.0						
BATI	**Baumata**	**4.36**	**115**	P	**Pn**	**06 27 51.0**	**+1.0**
SRBI	**Singaraja**	**4.41**	**273**	P	**Pn**	**06 27 51.4**	**+0.7**
JAGI	**Jajag, Banyuwa**	**5.46**	**268**	P	**Pn**	**06 28 04.9**	**+0.6**
FITZ	**Fitzroy Crossi** 1.8nm,0.5s,baz=328,slow=12,SNR=23	**11.30**	**150**	P	**Pn**	**06 29 22.8**	**+1.7**
FITZ				S	**Sn**	**06 31 22.0**	**-4.5**
	3.3nm,0.4s,baz=212,slow=8.6,SNR=7.3						
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=306,slow=11,SNR=10	**18.29**	**131**	P	**P**	**06 30 46.4**	**+1.0**
WRA				S	**S**	**06 34 03.0**	**-2.6**
	0.7nm,0.4s,baz=309,slow=24,SNR=10						
ASAR	**Alice Springs** 0.5nm,0.4s,baz=317,slow=9.5,SNR=10.0	**20.45**	**140**	P	**P**	**06 31 10.7**	**+2.0**
	0.5nm,0.4s						
SONM	**Songino Array** 0.3nm,0.4s,baz=164,slow=5.7,SNR=2.1	**57.16**	**349**	P	**P**	**06 36 13.3**	**+0.1**
	0.3nm,0.4s						

MKAR	**Makanchi Array**	**64.18**	**332**	P		**P**	**06 37 00.1**	**-0.5**
	0.6nm,0.5s,baz=147,slow=8.0,SNR=7.5 0.6nm,0.5s							

*NNC **05** 06:37:22.0±7.4, 54.°07N×86.°60E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=54.9km s-min=41.8km az=65.0, Suspected Mining explosion.*

IDC 05 06:37:24.7±2.7, 53.°95N×86.°62E, h0km, mbtmp2.9/2, ML2.5/2, 5C-6D, Error ellipse: s-maj=23.0km s-min=14.2km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**271**	*i*		06 42 50.0	
	0.1nm,1.2s,baz=90,slow=312,SNR=0.9						
ZAA0	**Zalesovo Array**	**1.06**	**271**	⇓P	Pg	06 37 40.1	-5.0
	0.2nm,0.4s						
ZAA0				⇓S	Sb	06 38 00.4	-0.1
	3.2nm,0.8s						
ZALV	**Zalesovo Beam**	**1.06**	**271**	Pg	Pg	06 37 44.1	-1.0
	0.8nm,0.3s,baz=87,slow=13,SNR=8.6						
ZALV				Lg	Lg	06 38 00.2	
	2.1nm,0.3s,baz=87,slow=32,SNR=11						
ZALV				Rg	Rg	06 38 05.0	
	4.7nm,0.5s,baz=88,slow=28,SNR=6.1						
KURK	**Kurchatov**	**5.87**	**240**	⇑Pn	Pn	06 38 54.1	+1.2
	1.5nm,0.7s						
KURK				⇑Sn	Sn	06 40 00.7	-0.2
	0.5nm,0.7s						
KURK				⇑Lg	Lg	06 40 29.0	
	2.6nm,0.9s						
KURBB	**Kurchatov Arra**	**5.97**	**239**	Pn	Pn	06 38 55.2	+0.9
	0.1nm,0.3s,baz=56,slow=14,SNR=13						
KURBB				Lg	Lg	06 40 33.8	
	baz=60,slow=28,SNR=5.9 0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**5.97**	**239**	⇓Pn	Pn	06 38 56.3	+2.0
	1.1nm,0.3s						
KURBB				⇑Sn	Sn	06 40 05.1	+1.7
	1.7nm,0.6s						
KURBB				⇓Lg	Lg	06 40 35.0	
	4.6nm,0.7s						
MK31	**Makanchi Array**	**7.67**	**203**	⇓Pn	Pn	06 39 19.0	+1.3
	baz=296,slow=75,SNR=9.6						
MK31				⇓Sn	Sn	06 40 42.5	-2.8
	0.3nm,0.5s						
MK31				⇑Lg	Lg	06 41 22.8	
	0.3nm,0.5s,baz=22,slow=30,SNR=3.9						
MKAR	**Makanchi Array**	**7.67**	**203**	Pn	Pn	06 39 18.7	+1.0
	0.1nm,0.3s,baz=26,slow=14,SNR=6.4						
MKAR				Lg	Lg	06 41 27.4	
	baz=23,slow=27,SNR=7.9 0.2nm,0.3s						

IDC 05 06:54:51.0±2.1, 25.°86S×69.°27E, h0km, mb3.6/4, mbtmp3.6/4, MS3.3/5, Error ellipse: s-maj=63.7km s-min=38.8km az=77.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.36**	**10**	T	T	07 17 59.9	
	baz=190,slow=76,SNR=67						
H08S2	**Diego Garcia H**	**18.37**	**10**	T	T	07 18 00.4	
	baz=190,slow=76,SNR=57						
H08S3	**Diego Garcia H**	**18.38**	**10**	T	T	07 18 01.1	
	baz=190,slow=76,SNR=106						
H01W2	**Cape Leeuwin H**	**39.47**	**114**	T	T	07 44 36.5	
	baz=270,slow=75,SNR=4.7						
H01W3	**Cape Leeuwin H**	**39.47**	**114**	T	T	07 44 44.7	
	baz=270,slow=75,SNR=3.8						
H01W1	**Cape Leeuwin H**	**39.48**	**114**	T	T	07 44 36.7	
	baz=270,slow=75,SNR=5.5						
PSI	**Prapat**	**40.44**	**50**	LR	LR	07 15 39.7	
	comp=Z,65nm,18.6s,baz=292,slow=31						
MAW	**Mawson**	**41.95**	**184**	LR	LR	07 16 27.2	
	comp=Z,27nm,18.5s,baz=1.5,slow=31						
MBAR	**Mbarara**	**44.82**	**298**	LR	LR	07 19 28.6	
	comp=Z,26nm,18.1s,baz=100,slow=33						
ASAR	**Alice Springs**	**58.19**	**103**	P	P	07 04 46.9	-0.4
	0.6nm,0.7s,baz=254,slow=6.7,SNR=7.4 0.6nm,0.7s						
WRA	**Warramunga Arr**	**59.71**	**99**	P	P	07 04 58.3	+0.5
	0.4nm,0.8s,baz=260,slow=6.9,SNR=1.9 0.4nm,0.8s						
EIL	**Elat**	**64.28**	**327**	LR	LR	07 28 32.0	
	comp=Z,22nm,21.8s,baz=86,slow=31						
VNDA	**Vanda**	**65.51**	**166**	P	P	07 05 35.5	-0.1
	0.5nm,0.8s,baz=257,slow=9.1,SNR=3.7 0.5nm,0.8s						
BRTR	**Keskin Array B**	**73.22**	**332**	LR	LR	07 37 40.6	
	comp=Z,20nm,19.6s,baz=182,slow=35						
MKAR	**Makanchi Array**	**73.26**	**9**	P	P	07 06 23.9	+0.1
	0.5nm,0.8s,baz=210,slow=7.0,SNR=4.2 0.5nm,0.8s						

*NORS **05** 07:34:28.9±0.0, 42.°64N×45.°67E, h26km, MPVA4.2*
*MOS **05** 07:34:28.2±0.0, 42.°74N×45.°63E, h33km, MPVA4.0*
*DRS **05** 07:34:31.3±0.0, 42.°80N×45.°51E, h22km*

ISC 05 07:34:30.4±1.0, 42.°76N±0.°03×45.°61E±0.°02, h32km±12km, n29, σ1§14/51, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.43**	**62**	*i* Pg	**Pn**	**07 34 39.1**	**-1.3**
DVE				*e*Sg	**Sn**	**07 34 46.1**	**-1.1**
GROC	**Groznyy**	**0.47**	**17**	*i* Pg	**Pn**	**07 34 40.3**	**-0.6**
GROC				*e*Sg	**Sn**	**07 34 48.8**	**+0.7**
KMGR	**Komgaron**	**0.63**	**299**	*i* Pg	**Pn**	**07 34 43.2**	**+0.1**
KMGR				*e*Sg	**Sn**	**07 34 53.5**	**+1.4**
PNSH	**Pansheti**	**0.74**	**261**	P	**Pn**	**07 34 44.0**	**-0.9**
PNSH				S	**Sn**	**07 34 54.9**	**-0.4**
VLKR	**Vladikavkaz**	**0.75**	**293**	*e*Pg	**Pn**	**07 34 44.7**	**-0.1**
VLKR				*e*Sg	**Sn**	**07 34 56.4**	**+1.4**
DLMR	**Dylym**	**0.81**	**67**	*i* Pg	**Pn**	**07 34 44.9**	**-0.7**
DLMR				*e*Sg	**Sn**	**07 34 56.5**	**-0.1**
XNZR	**Khunzakh**	**0.83**	**105**	*e*Pg	**Pn**	**07 34 45.9**	**-0.2**
XNZR				*e*Sg	**Sn**	**07 34 57.2**	**-0.2**
UNCR	**Uncukul**	**0.87**	**92**	*i* Pg	**Pn**	**07 34 46.2**	**-0.3**
UNCR				*e*Sg	**Sn**	**07 34 58.6**	**+0.5**
GUDG	**Gudauri**	**0.89**	**251**	P	**Pn**	**07 34 48.2**	**+1.4**
GUDG				S	**Sn**	**07 35 01.6**	**+2.8**
DBC	**Dubki**	**0.93**	**73**	*i* Pg	**Pb**	**07 34 46.9**	**-1.2**
DBC				*e*Sg	**Sn**	**07 35 00.3**	**+0.6**
KRNR	**Karanay**	**0.95**	**85**	*e*Pg	**Pb**	**07 34 47.5**	**-1.0**
KRNR				*e*Sg	**Sn**	**07 35 00.6**	**+0.4**
LACR	**Lac**	**0.97**	**275**	*i* Pg	**Pb**	**07 34 47.7**	**-1.1**
LACR				*e*Sg	**Sn**	**07 35 00.6**	**-0.1**
BTKR	**Batakoyurt**	**1.00**	**308**	*e*Pg	**Pb**	**07 34 49.1**	**-0.1**
BTKR				*e*Sg	**Sn**	**07 35 03.4**	**+2.1**
ARKR	**Arakani**	**1.03**	**98**	*i* Pg	**Pb**	**07 34 48.8**	**-0.9**
ARKR				*e*Sg	**Sn**	**07 35 03.1**	**+1.1**
LGD	**Lagodekhi**	**1.03**	**153**	P	**Pn**	**07 34 49.4**	**-0.3**
LGD				S	**Sn**	**07 35 03.2**	**+1.2**
ARNR	**Ardon**	**1.06**	**294**	*e*Pg	**Pn**	**07 34 47.6**	**-1.5**
ARNR				*e*Sg	**Sb**	**07 35 03.9**	**0.0**
BUJR	**Buynaksk**	**1.10**	**86**	*e*Pg	**Pb**	**07 34 52.4**	**+1.5**
BUJR				*e*Sg	**Sb**	**07 35 06.4**	**+1.4**
TRKR	**Terskaya**	**1.16**	**327**	*e*Pg	**Pb**	**07 34 51.3**	**-0.6**
TRKR				*e*Sg	**Sb**	**07 35 08.1**	**+1.4**
ZEI	**Tsey**	**1.26**	**272**	*e*Pg	**Pb**	**07 34 53.1**	**-0.6**
ZEI				*e*Sg	**Sb**	**07 35 08.1**	**-1.6**
KMKR	**Kumukh**	**1.26**	**119**	*e*Pg	**Pb**	**07 34 53.2**	**-0.6**
KMKR				*e*Sg	**Sb**	**07 35 10.5**	**+0.7**
STDR	**Stavd-Durt**	**1.29**	**299**	*e*Pg	**Pb**	**07 34 53.9**	**-0.2**
STDR				*e*Sg	**Sb**	**07 35 10.9**	**+0.6**
DGRG	**David-gareji**	**1.32**	**188**	P	**Pb**	**07 34 54.9**	**+0.3**
DDFL	**Dedoflistskaro**	**1.36**	**164**	P	Pb	07 34 59.3	+4.0
PRTR	**Priterechnaya**	**1.39**	**316**	*e*Pg	**Pb**	**07 34 55.1**	**-0.7**
PRTR				*e*Sg	**Sb**	**07 35 15.0**	**+1.8**
ONI	**Oni**	**1.60**	**265**	*e*Pg	**Pb**	**07 34 58.1**	**-1.3**
ONI				*e*Sg	**Sb**	**07 35 19.7**	**+0.4**
TRLG	**Trialeti**	**1.66**	**223**	P	**Pb**	**07 35 00.4**	**+0.1**
DMNI	**Dmanisi**	**1.78**	**217**	P	**Pb**	**07 35 00.5**	**-1.9**
KBZ	**Khabaz**	**2.21**	**297**	*e*Pg	**Pn**	**07 35 04.3**	**-0.5**
ABS	**Abastumani**	**2.31**	**245**	P	**Pb**	**07 35 08.7**	**-2.7**

*GCG **05** 08:01:38.6±0.3, 14.°62N×92.°03W, h59km±9km, MD3.9*
*SNET **05** 08:01:39.0±1.2, 14.°50N×91.°92W, h58km±6km, ML3.3*

ISC 05 08:01:36.9±4.2, 14.°4N±0.°1×92.°1W±0.°2, h59km±15km, n11, σ1§08/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.42**	**77**	*e*P	**Pn**	**08 01 47.7**	**-0.4**
RTAL				*e*S	**Sn**	**08 01 56.0**	**-0.1**
STG3	**Santiaguito 3,**	**0.60**	**62**	*e*P	**Pn**	**08 01 50.6**	**+0.4**
HUEH	**Huehuetenango**	**1.07**	**34**	*e*P	**Pn**	**08 01 56.3**	**+0.2**
HUEH				*e*S	**Sn**	**08 02 10.7**	**+0.4**
FUG	**Fuego 3**	**1.24**	**89**	*e*P	**Pn**	**08 01 59.3**	**+1.0**
FUG				*e*S	**Sn**	**08 02 15.4**	**+1.2**
NUBE	**Las Nubes**	**2.33**	**103**	*e*P	**Pn**	**08 02 13.4**	**+0.4**
NUBE				*e*S	**Sn**	**08 02 38.2**	**-2.3**
NUBE				IAML		08 02 50.6	
	comp=Z,57nm,0.3s						
CEVE	**Cerro Verde**	**2.49**	**104**	*e*P	**Pn**	**08 02 16.2**	**+0.9**
CEVE				IAML		08 02 54.1	
	comp=Z,348nm,0.4s						
MTO3	**Montecristo**	**2.67**	**90**	*e*P	**Pn**	**08 02 18.2**	**+0.4**
JAYA	**Jayaque - finc**	**2.70**	**106**	*e*P	**Pn**	**08 02 18.3**	**+0.2**
JAYA				*e*S	**Sn**	**08 02 48.2**	**-1.6**
JAYA				IAML		08 02 58.4	
	comp=Z,203nm,0.2s						
SJTE	**Alcalda de S**	**3.13**	**105**	*e*P	**Pn**	**08 02 24.5**	**+0.7**
PETF	**Flores**	**3.29**	**41**	*e*P	**Pn**	**08 02 25.5**	**-0.5**
COEB	**Comit de Eme**	**3.60**	**104**	*e*P	**Pn**	**08 02 31.3**	**+0.9**

*SOME **05** 08:08:45.0, 39.°53N×73.°00E, h5km*
*NNC **05** 08:08:49.6±6.9, 39.°51N×73.°13E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=55.2km s-min=27.3km az=175.0*
*KRNET **05** 08:08:49.8±0.1, 39.°43N×73.°29E, mb3.6*
*ISU **05** 08:08:51, 39.°58N×73.°43E, h10km*

ISC 05 08:08:51.0±1.5, 39.°52N±0.°05×73.°29E±0.°03, h3km±11km, n32, σ1§86/53, 15C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.08**	**339**	⇑*e*P	**Pg**	**08 09 11.8**	**+0.1**
	baz=41						
OHH				⇑*e*S	**Sn**	**08 09 28.0**	**-0.6**
	baz=41						
OHH	**Osh**	**1.08**	**339**	P	**Pg**	**08 09 11.4**	**-0.3**
OHH				S	**Sn**	**08 09 27.4**	**-1.2**
DRK	**Karamyk**	**1.15**	**269**	⇓*e*P	**Pg**	**08 09 11.8**	**-1.3**
	baz=73						
DRK				⇓*e*S	**Sb**	**08 09 28.0**	**-1.2**
	baz=73						
TSTA	**Tashata**	**1.23**	**330**	S	**Sn**	**08 09 32.4**	**+0.1**
ANR	**Andizhan**	**1.43**	**330**	S	**Sg**	**08 09 41.0**	**+4.2**
FRG	**Fergana**	**1.44**	**307**	P	**Pb**	**08 09 18.1**	**-0.4**
FRG				S	**Sg**	**08 09 38.5**	**+1.3**
NAM	**Namangan**	**1.93**	**320**	S	**Sg**	**08 09 54.7**	**+1.7**
MINT	**Mingtut**	**2.01**	**299**	S	**Sg**	**08 09 57.9**	**+2.2**
GAR	**Garm**	**2.36**	**258**	⇓*e*P	**Pn**	**08 09 31.4**	**+0.6**
	baz=60						
GAR				⇓*e*S	**Sb**	**08 10 02.1**	**-1.8**
	baz=60						
CHDK	**Chadak**	**2.42**	**308**	S	**Sg**	**08 10 10.2**	**+1.3**
ARLS	**Aral**	**2.47**	**18**	⇓*e*P	**Pb**	**08 09 34.2**	**-2.0**
	baz=18						
ARLS				⇓*e*S	**Sb**	**08 10 06.9**	**-0.2**
	baz=18						
TRKS	**Terek-Say**	**2.59**	**322**	⇑*e*P	**Pn**	**08 09 35.0**	**+1.0**
	baz=22						
TRKS				⇑*i*S	**Sb**	**08 10 08.1**	**-2.4**
	baz=22						
UCH	**Uchtor**	**2.86**	**19**	⇑*i*P	**Pn**	**08 09 40.0**	**+2.0**
	baz=18						
UCH				⇑*i*S	**Sb**	**08 10 16.6**	**-2.0**
	baz=18						
EKS2	**Erkin-Say**	**3.16**	**7**	⇓*i*P	**Pn**	**08 09 44.1**	**+2.3**
	baz=6.0						
EKS2				⇓*e*S	**Sb**	**08 10 23.5**	**-3.4**
	baz=6.0						
AAK	**Ala-Archa**	**3.25**	**16**	⇑*i*P	**Pn**	**08 09 45.2**	**+2.2**
	baz=15						
AAK				⇑*i*S	**Sb**	**08 10 25.7**	**-3.7**
	baz=15						
CHGR	**Chuyangaron**	**3.33**	**256**	⇓*e*P	**Pn**	**08 09 44.8**	**+0.8**
	baz=58						
CHGR				⇓*e*S	**Sn**	**08 10 25.1**	**+1.0**
	baz=58						
KBK	**Karagaybulak**	**3.38**	**21**	⇑*i*P	**Pn**	**08 09 46.8**	**+2.0**
	baz=21						
KBK				⇑*e*S	**Sn**	**08 10 28.7**	**+3.2**
	baz=21						
IUG	**Iuzhnay**	**3.60**	**318**	*e*P	**Pn**	**08 09 48.9**	**+1.0**
	66nm,0.3s						
IUG				*e*S	**Sb**	**08 10 37.7**	**-1.9**
	50nm,0.4s						
IUG	**Iuzhnay**	**3.60**	**318**	Pg	**Pn**	**08 09 48.9**	**+1.0**
	66nm,0.3s						
IUG				Lg	Lg	08 10 37.7	
	50nm,0.4s						
TKM2	**Tokmak 2**	**3.82**	**26**	⇑Pn	**Pn**	**08 09 54.1**	**+3.1**
	0.6nm,0.3s						
TKM2				⇑Pg	**Pg**	**08 10 04.8**	**+0.5**
	4.7nm,0.7s						
TKM2				⇑Lg	Lg	08 10 51.9	
	13nm,0.7s						
SGDS	**Sogindy**	**4.06**	**14**	*e*P	**Pb**	**08 10 01.5**	**-1.7**
	1.6nm,0.5s						
SGDS				*e*S	**Sg**	**08 10 59.6**	**-1.7**
	5.8nm,0.5s						
SGDS	**Sogindy**	**4.06**	**14**	Pg	**Pb**	**08 10 01.5**	**-1.7**
SGDS				Lg	Lg	08 11 00.3	
KST	**Kastek**	**4.06**	**29**	*e*P	**Pb**	**08 10 02.7**	**-0.5**
	2.3nm,0.2s						
KST				*e*S	**Sg**	**08 11 01.9**	**+0.5**
	14nm,1.2s						
KST	**Kastek**	**4.06**	**29**	Pg	**Pb**	**08 10 02.7**	**-0.5**
	2.3nm,0.2s						
KST				Lg	Lg	08 11 02.5	
	14nm,1.2s						
KK31	**Karatay Array**	**4.15**	**331**	Pn	Pn	08 09 59.3	+4.1
	0.4nm,0.2s,baz=137,slow=12,SNR=6.6						
KK31				⇓Pg	**Pg**	**08 10 09.9**	**-0.5**
	0.6nm,0.2s,baz=146,slow=16,SNR=7.5						
KK31				⇓Sn	**Sb**	**08 10 50.6**	**-4.6**
	2.6nm,0.3s,baz=149,slow=24,SNR=5.0						
KK31				⇓Lg	Lg	08 11 03.9	
	4.7nm,0.3s,baz=164,slow=25,SNR=3.6						
KKAR	**Karatay Array**	**4.15**	**331**	⇑*e*P	**Pn**	**08 09 57.6**	**+2.3**
	baz=31						
KKAR				⇑*e*S	**Sn**	**08 10 46.8**	**+2.5**
	baz=31						
MTBS	**Maitube**	**4.32**	**32**	*e*P	**Pb**	**08 10 07.3**	**-0.3**
	3.2nm,0.2s						
MTBS				*e*S	**Sg**	**08 11 09.6**	**0.0**
	16nm,0.5s						
MTBS	**Maitube**	**4.32**	**32**	Pg	**Pb**	**08 10 07.3**	**-0.3**
	3.2nm,0.2s						
MTBS				Lg	Lg	08 11 09.6	
	16nm,0.5s						
MDOK	**Medeo**	**4.61**	**37**	*e*P	**Pb**	**08 10 12.0**	**-0.7**
	0.8nm,0.2s						
MDOK				*e*S	**Sg**	**08 11 18.0**	**-1.2**
	9.0nm,0.6s						
MDOK	**Medeo**	**4.61**	**37**	Pg	**Pb**	**08 10 12.0**	**-0.7**
	0.8nm,0.2s						
MDOK				Lg	Lg	08 11 18.8	
	9.0nm,0.6s						
KUU	**Kurty**	**4.93**	**27**	*e*P	**Pb**	**08 10 18.2**	**+0.1**
	2.1nm,0.1s						
KUU				*e*S	**Sg**	**08 11 28.8**	**-0.7**
	16nm,0.7s						
KUU	**Kurty**	**4.93**	**27**	Pg	**Pb**	**08 10 18.2**	**+0.1**

IDC 05 08:11:33.1±2.5, 54.°07N×86.°49E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=20.2km s-min=12.7km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**263**	*i*		08 16 57.6	
	baz=82,slow=314,SNR=5.1						
ZALV	**Zalesovo Beam**	**0.99**	**263**	Pg	Pg	08 11 50.5	-1.6
	0.8nm,0.3s,baz=84,slow=18,SNR=7.3						
ZALV				Lg	Lg	08 12 06.3	
	2.7nm,0.3s,baz=82,slow=31,SNR=12						
ZALV				Rg	Rg	08 12 11.6	
	3.5nm,0.4s,baz=82,slow=25,SNR=6.8						
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	08 13 03.8	+1.1
	0.1nm,0.3s,baz=56,slow=14,SNR=11						
KURBB				Lg	Lg	08 14 44.8	
	baz=60,slow=30,SNR=5.0 2.2nm,0.6s						
MKAR	**Makanchi Array**	**7.76**	**202**	Pn	Pn	08 13 28.2	+0.8
	0.2nm,0.3s,baz=20,slow=12,SNR=6.5						
MKAR				Lg	Lg	08 15 38.5	
	baz=18,slow=29,SNR=4.0 0.4nm,0.4s						

*IDC **05** 08:13:50.2±2.7, 16.°31N×145.°62E, h523km±21km, mb2.9/4, mbtmp3.9/5, Error ellipse: s-maj=121.5km s-min=27.5km az=122.0*
*NEIC **05** 08:13:51.4±1.8, 16.°18N±0.°09×145.°3E±0.°2, h515km±12km, mb3.8/9, Error ellipse: s-maj=32.3km s-min=10.5km az=73.0*

ISC 05 08:13:48.9±0.8, 16.°2N±0.°1×145.°7E±0.°2, h500km, n16, σ1§85/18, mb3.7/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.75**	**197**	P	**P**	**08 15 02.0**	**+3.7**
	116nm,1.0s,baz=52,slow=21,SNR=1.6						
GUMO				S	**S**	**08 15 57.0**	**+2.4**
	33nm,0.2s,baz=160,slow=21,SNR=7.2						
GUMO	**Guam**	**2.75**	**197**	P	**P**	**08 14 59.8**	**+1.4**
JOW	**Kunigami**	**19.29**	**306**	P	**P**	**08 17 40.6**	**-0.6**
MAJO	**Matsushiro**	**21.28**	**343**	P	**P**	**08 18 01.3**	**+2.2**
MAJO				IAmb	IAmb	08 18 41.0	
	comp=Z,4.7nm,1.1s						
WB2	**Warramunga Arr**	**37.64**	**198**	P	**P**	**08 20 20.7**	**-0.1**
WB2				IAmb	IAmb	08 20 23.8	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**37.64**	**198**	P	**P**	**08 20 21.0**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=17,slow=8.1,SNR=26						
WRA				PcP	**PcP**	**08 22 24.5**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=27,slow=4.4,SNR=5.4 comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**37.64**	**198**	P	**P**	**08 20 20.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**39.41**	**211**	P	**P**	**08 20 35.2**	**0.0**
	comp=Z,0.8nm,0.3s,baz=31,slow=7.9,SNR=6.1 comp=Z,0.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**39.41**	**211**	P	**P**	**08 20 34.8**	**-0.4**
FITZ				IAmb	IAmb	08 21 02.1	
	comp=Z,3.6nm,1.0s						
AS31	**Alice Springs**	**41.29**	**196**	P	**P**	**08 20 50.3**	**0.0**
ASAR	**Alice Springs**	**41.30**	**196**	P	**P**	**08 20 50.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=17,slow=7.2,SNR=20 comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**41.30**	**196**	P	**P**	**08 20 50.3**	**-0.1**
INK	**Inuvik**	**71.63**	**23**	P	**P**	**08 24 21.1**	**+2.1**
INK				IAmb	IAmb	08 24 35.9	
	comp=Z,2.9nm,0.9s						
ABKAR	**Akbulak array**	**75.12**	**317**	P	**P**	**08 24 37.2**	**-2.1**
ABKAR				IAmb	IAmb	08 24 48.9	
	comp=Z,1.1nm,1.1s						
NVAR	**Mina Array Bea**	**84.67**	**52**	P	**P**	**08 25 29.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=279,slow=4.8,SNR=3.6 comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**94.05**	**177**	P	**P**	**08 26 08.8**	**-3.8**

*IDC **05** 08:14:10.5±3.3, 12.°83N×88.°60W, h0km, mb3.9/8, mbtmp3.9/8, MS3.0/3, Error ellipse: s-maj=64.9km s-min=57.3km az=157.0*
*SNET **05** 08:14:18.5±1.2, 12.°82N×88.°81W, h47km, ML4.5*
*INET **05** 08:14:19.9±1.2, 12.°89N×88.°77W, h46km±18km, MW4.7*
*UCR **05** 08:14:19.7±1.2, 12.°89N×88.°81W, h33km±4km, MW3.9, mb4.3(NEIC)*
*NEIC **05** 08:14:21.1±1.6, 13.°02N±0.°08×88.°60W±0.°07, h67km±8km, mb4.3/15, Md4.5(SNET), Error ellipse: s-maj=13.6km s-min=6.7km az=220.0*
*GCG **05** 08:14:25.5±0.7, 13.°42N×89.°09W, h0km±32km, MD4.2*

ISC 05 08:14:19.9±0.8, 12.°94N±0.°05×88.°75W±0.°04, h63km±7km, n175, σ0§89/207, mb4.1/13, 2C-7D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**0.59**	**21**	⇓*e*P	**Pn**	**08 14 32.9**	**-0.4**
COEB				*e*S	**Sn**	**08 14 43.2**	**+0.2**
COEB	**Comit de Eme**	**0.59**	**21**	⇓*e*P	**Pn**	**08 14 32.9**	**-0.4**
COEB				*e*S	**Sn**	**08 14 43.2**	**+0.2**
LCY	**Lacayo**	**0.65**	**43**	*e*P	**Pn**	**08 14 33.4**	**-0.6**
LCY				*e*S	**Sn**	**08 14 44.4**	**+0.2**
LCY	**Lacayo**	**0.65**	**43**	*e*P	**Pn**	**08 14 33.4**	**-0.6**
LCY				*e*S	**Sn**	**08 14 44.4**	**+0.2**
PACA	**Pacayal**	**0.67**	**38**	*e*P	**Pn**	**08 14 34.1**	**-0.1**
PACA				*e*S	**Sn**	**08 14 45.4**	**+0.9**
PACA	**Pacayal**	**0.67**	**38**	*e*P	**Pn**	**08 14 34.1**	**-0.1**
PACA				*e*S	**Sn**	**08 14 45.4**	**+0.9**
PACA	**Pacayal**	**0.67**	**38**	*e*P	**Pn**	**08 14 34.2**	**0.0**
PACA				*e*S	**Sn**	**08 14 45.8**	**+1.2**
VSM	**San Miguel**	**0.67**	**44**	*e*P	**Pn**	**08 14 33.6**	**-0.7**
VSM	**San Miguel**	**0.67**	**44**	*e*P	**Pn**	**08 14 33.6**	**-0.7**
SNVI	**San Vicente**	**0.68**	**353**	*e*P	**Pn**	**08 14 33.8**	**-0.4**
SNVI				*e*S	**Sn**	**08 14 45.1**	**+0.4**
SNVI	**San Vicente**	**0.68**	**353**	*e*P	**Pn**	**08 14 33.8**	**-0.4**
SNVI				*e*S	**Sn**	**08 14 45.1**	**+0.4**
COEG	**Centro de Oper**	**0.69**	**349**	*e*P	**Pn**	**08 14 33.8**	**-0.6**
COEG				*e*S	**Sn**	**08 14 44.6**	**-0.2**
COEG	**Centro de Oper**	**0.69**	**349**	*e*P	**Pn**	**08 14 33.8**	**-0.6**
COEG				*e*S	**Sn**	**08 14 44.6**	**-0.2**
UESV	**Universidad de**	**0.69**	**357**	*e*P	**Pn**	**08 14 34.1**	**-0.2**
UESV				*e*S	**Sn**	**08 14 44.8**	**-0.1**
UESV	**Universidad de**	**0.69**	**357**	*e*P	**Pn**	**08 14 34.1**	**-0.2**
UESV				*e*S	**Sn**	**08 14 44.8**	**-0.1**
PQSS	**Presa 15 de Se**	**0.70**	**15**	⇑*e*P	**Pn**	**08 14 34.5**	**0.0**
PQSS				*e*S	**Sn**	**08 14 45.4**	**+0.3**
PQSS	**Presa 15 de Se**	**0.70**	**15**	⇑*e*P	**Pn**	**08 14 34.5**	**0.0**
PQSS				*e*S	**Sn**	**08 14 45

CNCH	**Conchagua**	**0.95**	**69**	‖ *e*	P	**Pn**	**08 14 37.2**	**-0.5**
CNCH	**Conchagua**	**0.95**	**69**	‖ *e*	P	**Pn**	**08 14 37.2**	**-0.5**
CNCH				*eS*		**Sn**	**08 14 51.2**	**+0.5**
JAYA	**Jayaque - finc**	**0.98**	**316**	*eP*		**Pn**	**08 14 37.0**	**-1.0**
JAYA				*eS*		**Sn**	**08 14 50.6**	**-0.9**
JAYA	**Jayaque - finc**	**0.98**	**316**	*eP*		**Pn**	**08 14 37.0**	**-1.0**
JAYA				*eS*		**Sn**	**08 14 50.6**	**-0.9**
P5NO	**Presa 5 de nov**	**1.04**	**359**	*eP*		**Pn**	**08 14 38.7**	**0.0**
CEDA	**San Andres**	**1.06**	**324**	*eP*		**Pn**	**08 14 38.4**	**-0.6**
CEDA	**San Andres**	**1.06**	**324**	*eP*		**Pn**	**08 14 38.4**	**-0.6**
CSGN	**Cosiguina Volc**	**1.16**	**88**	*eP*		**Pn**	**08 14 39.6**	**-0.7**
CEVE	**Cerro Verde**	**1.23**	**316**	‖ *eP*		**Pn**	**08 14 41.0**	**-0.3**
CEVE	**Cerro Verde**	**1.23**	**316**	‖ *eP*		**Pn**	**08 14 41.0**	**-0.3**
LLGN	**La Laguna**	**1.23**	**351**	*eP*		**Pn**	**08 14 41.1**	**-0.2**
LLGN	**La Laguna**	**1.23**	**351**	*eP*		**Pn**	**08 14 41.1**	**-0.2**
SBLS	**San Blas**	**1.23**	**317**	*eP*		**Pn**	**08 14 41.1**	**-0.3**
SBLS	**San Blas**	**1.23**	**317**	*eP*		**Pn**	**08 14 41.1**	**-0.3**
SNJE	**San Jose**	**1.24**	**318**	*eP*		**Pn**	**08 14 41.2**	**-0.3**
SNJE	**San Jose**	**1.24**	**318**	*eP*		**Pn**	**08 14 41.2**	**-0.3**
UNIC	**Universidad Ca**	**1.30**	**323**	*eP*		**Pn**	**08 14 41.8**	**-0.3**
UNIC	**Universidad Ca**	**1.30**	**323**	*eP*		**Pn**	**08 14 41.8**	**-0.3**
NUBE	**Las Nubes**	**1.39**	**314**	*eP*		**Pn**	**08 14 42.9**	**-0.5**
NUBE	**Las Nubes**	**1.39**	**314**	*eP*		**Pn**	**08 14 42.9**	**-0.5**
LOAL	**Lomas de Alarc**	**1.46**	**316**	*eP*		**Pn**	**08 14 44.2**	**0.0**
LOAL	**Lomas de Alarc**	**1.46**	**316**	*eP*		**Pn**	**08 14 44.2**	**0.0**
MTO3	**Montecristo**	**1.57**	**338**			**Pn**	**08 14 46.0**	**+0.2**
MTO3	**Montecristo**	**1.57**	**338**	*eP*		**Pn**	**08 14 46.1**	**+0.2**
MTO3	**Montecristo**	**1.57**	**338**	*eP*		**Pn**	**08 14 46.1**	**+0.2**
MTO3	**Montecristo**	**1.57**	**338**	‖ *iP*		**Pn**	**08 14 46.0**	**+0.2**
MTO3				*eS*		**Sn**	**08 15 06.2**	**+0.8**
CRIN	**San Cristobal**	**1.67**	**98**			**Pn**	**08 14 47.1**	**0.0**
CRIN	**San Cristobal**	**1.67**	**98**	*eP*		**Pn**	**08 14 46.9**	**-0.2**
ESQI	**Esquipulas**	**1.71**	**340**			**Pn**	**08 14 48.4**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.81**	**52**			**Pn**	**08 14 49.8**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.81**	**52**	*eP*		**Pn**	**08 14 49.7**	**+0.6**
TEL3	**Telica 3**	**1.89**	**101**	*eP*		**Pn**	**08 14 49.5**	**-0.6**
TELN	**Telica**	**1.90**	**100**	*eP*		**Pn**	**08 14 50.0**	**-0.2**
CNGN	**Cerro Negro**	**2.05**	**102**			**Pn**	**08 14 51.6**	**-0.6**
CNGN	**Cerro Negro**	**2.05**	**102**	*eP*		**Pn**	**08 14 51.3**	**-0.9**
MOMN	**Momotombo**	**2.22**	**104**	*eP*		**Pn**	**08 14 53.6**	**-0.9**
COPN	**Copaltepe**	**2.24**	**109**	*eP*		**Pn**	**08 14 53.3**	**-1.4**
NBG	**Las Nubes**	**2.26**	**317**	*eP*		**Pn**	**08 14 57.0**	**+1.7**
PCG	**Pacaya**	**2.31**	**309**	*eP*		**Pn**	**08 14 58.2**	**+2.3**
MRL	**Marmol**	**2.31**	**337**	*eP*		**Pn**	**08 14 57.9**	**+1.9**
BRAN	**Las Pilas**	**2.35**	**95**	*eP*		**Pn**	**08 14 57.4**	**+1.2**
FUG	**Fuego 3**	**2.53**	**307**	*eP*		**Pn**	**08 15 00.1**	**+1.3**
MGAN	**Managua**	**2.57**	**108**	*eP*		**Pn**	**08 14 58.2**	**-1.0**
MGAN				*eP*			08 14 58.6	
RCON	**San Juan de Ri**	**2.58**	**78**	*eP*		**Pn**	**08 14 59.7**	**+0.2**
HUEN		**2.58**	**103**	*eP*		**Pn**	**08 14 58.6**	**-0.9**
BOAB	**BOACO BROADBAN**	**3.05**	**99**			**Pn**	**08 15 03.9**	**-1.9**
STG3	**Santiaguito 3,**	**3.26**	**303**	*eP*		**Pn**	**08 15 11.0**	**+2.2**
STG3				*eS*		**Sn**	**08 15 47.0**	**+0.5**
RTAL	**Retalhuleu**	**3.27**	**299**			**Pn**	**08 15 11.0**	**+2.2**
HUEH	**Huehuetenango**	**3.57**	**312**			**Pn**	**08 15 14.5**	**+1.4**
ACON	**Acoyapa**	**3.62**	**105**			**Pn**	**08 15 11.9**	**-1.8**
HZTE	**Horizontes, Gu**	**3.80**	**125**			**Pn**	**08 15 15.9**	**-0.1**
HZTE	**Horizontes, Gu**	**3.80**	**125**	*eP*		**Pn**	**08 15 16.9**	**+0.8**
HZTE	**Horizontes, Gu**	**3.80**	**125**	*eP*		**Pn**	**08 15 16.8**	**+0.8**
BUEV	**Buena Vista**	**3.90**	**123**	*eP*		**Pn**	**08 15 18.5**	**+1.0**
GPS2	**Hotel Rincn d**	**3.97**	**123**	*eP*		**Pn**	**08 15 18.0**	**-0.5**
GUAB	**Guayabo de Bag**	**4.10**	**122**	*eP*		**Pn**	**08 15 20.6**	**+0.4**
PETF	**Flores**	**4.10**	**345**			**Pn**	**08 15 21.6**	**+1.4**
PETF	**Flores**	**4.10**	**345**	*eP*		**Pn**	**08 15 22.5**	**+2.3**
ORTG	**Ortega, Santa**	**4.12**	**128**			**Pn**	**08 15 20.8**	**+0.3**
ORTG	**Ortega, Santa**	**4.12**	**128**	*eP*		**Pn**	**08 15 20.6**	**+0.1**
ORTG	**Ortega, Santa**	**4.12**	**128**	*eP*		**Pn**	**08 15 20.8**	**+0.3**
SAJU	**San Jacinillo,**	**4.12**	**133**	*eP*		**Pn**	**08 15 20.3**	**-0.2**
HORNC	**Hornillas**	**4.14**	**122**	*eP*		**Pn**	**08 15 20.9**	**+0.1**
COLC	**Colonia**	**4.14**	**123**	*eP*		**Pn**	**08 15 22.3**	**+1.5**
CUI	**Cuipilapa**	**4.18**	**122**	*eP*		**Pn**	**08 15 21.3**	**0.0**
PLVR	**Palo Verde**	**4.21**	**127**	*eP*		**Pn**	**08 15 21.3**	**-0.5**
NICO	**Nicoya**	**4.27**	**130**	*eP*		**Pn**	**08 15 22.5**	**0.0**
DUNO	**Dulce Nombre,**	**4.27**	**131**			**Pn**	**08 15 22.8**	**+0.2**
DUNO	**Dulce Nombre,**	**4.27**	**131**	*eP*		**Pn**	**08 15 22.7**	**+0.2**
DUNO	**Dulce Nombre,**	**4.27**	**131**	*eP*		**Pn**	**08 15 22.6**	**0.0**
PTEN	**Parque Tenorio**	**4.29**	**121**	*eP*		**Pn**	**08 15 22.9**	**0.0**
ACAL	**Aguas Claras**	**4.30**	**122**	*eP*		**Pn**	**08 15 22.3**	**-0.7**
ESPN	**Las Esperanzas**	**4.41**	**99**			**Pn**	**08 15 24.2**	**-0.1**
JTS	**Las Juntas de**	**4.56**	**125**			**Pn**	**08 15 26.9**	**+0.5**
JTS	**Las Juntas de**	**4.56**	**125**	*eP*		**Pn**	**08 15 26.6**	**+0.2**
CEDE	**Laguna Cedeo**	**4.65**	**121**	*eP*		**Pn**	**08 15 28.4**	**+0.6**
ARE1	**Arenal 1**	**4.65**	**122**	*eP*		**Pn**	**08 15 28.9**	**+1.1**
CCIG	**Comitan**	**4.67**	**316**			**Pn**	**08 15 31.4**	**+3.3**
LAFE	**Finca La Fe, P**	**4.88**	**129**	*eP*		**Pn**	**08 15 31.1**	**+0.2**
JACO	**JACO, Garabito**	**5.17**	**129**			**Pn**	**08 15 35.3**	**+0.6**
JACO	**JACO, Garabito**	**5.17**	**129**	*eP*		**Pn**	**08 15 36.0**	**+1.3**
HDC3	**Heredia 3**	**5.40**	**122**	*eP*		**Pn**	**08 15 38.6**	**+0.5**
LCR2	**La Lucha 2**	**5.63**	**124**	*eP*		**Pn**	**08 15 43.1**	**+1.7**
RIMA	**Rio Macho**	**5.74**	**123**			**Pn**	**08 15 43.2**	**+0.5**
RIMA	**Rio Macho**	**5.74**	**123**	*eP*		**Pn**	**08 15 43.2**	**+0.5**
CDM	**Cerro de Muert**	**5.94**	**124**	*eP*		**Pn**	**08 15 47.3**	**+1.6**
CDM	**Cerro de Muert**	**5.94**	**124**	*eP*		**Pn**	**08 15 47.5**	**+1.8**
PEZE	**Perez Zeledon,**	**6.10**	**125**			**Pn**	**08 15 49.1**	**+1.5**
PEZE	**Perez Zeledon,**	**6.10**	**125**	*eP*		**Pn**	**08 15 49.1**	**+1.5**
PEZE	**Perez Zeledon,**	**6.10**	**125**	*eP*		**Pn**	**08 15 49.2**	**+1.5**
SRBA	**San Rafael, Bu**	**6.45**	**124**			**Pn**	**08 15 53.5**	**+1.1**
SRBA	**San Rafael, Bu**	**6.45**	**124**	*eP*		**Pn**	**08 15 53.4**	**+1.1**
DRK0	**Durika**	**6.52**	**124**			**Pn**	**08 15 55.9**	**+2.4**
DRK0	**Durika**	**6.52**	**124**	*eP*		**Pn**	**08 15 55.5**	**+2.0**
EDPN	**Palmar Norte**	**6.53**	**127**	*eP*		**Pn**	**08 15 54.8**	**+1.4**
POTG	**Potrero Grande**	**6.74**	**124**	*eP*		**Pn**	**08 15 58.5**	**+2.0**
CDITO	**Canoas**	**7.22**	**126**			**Pn**	**08 16 03.8**	**+0.9**
BRU2	**Volcan**	**7.24**	**124**			**Pn**	**08 16 04.3**	**+1.0**
BCIP	**Isla Barro Col**	**9.52**	**112**		Pn	**Pn**	**08 16 34.6**	**+0.3**
TLIG	**Tlapa**	**10.53**	**297**		Pn	**Pn**	**08 16 50.4**	**+2.1**
PORT	**Chimborazo Vol**	**17.40**	**145**		P	**P**	**08 18 20.7**	**+1.0**
PORT					IAmb	IAmb	08 18 24.1	
	comp=Z,17nm,1.4s							
152A	**Waverly Hall**	**19.98**	**10**		P	**P**	**08 18 44.8**	**-2.5**
152A					IAmb	IAmb	08 19 06.8	
	comp=Z,15nm,1.4s							
BAUV	**El Baul**	**20.71**	**99**		P	**P**	**08 18 52.6**	**-2.7**
TXAR	**Lajitas Array**	**21.40**	**322**		P	**P**	**08 19 03.1**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=142,slow=11,SNR=14							
	comp=Z,1.6nm,0.6s							
TX31	**Lajitas Ar. Si**	**21.40**	**322**		P	**P**	**08 19 03.8**	**+1.0**
TX31					IAmb	IAmb	08 19 06.6	
	comp=Z,6.7nm,0.7s							
TX32	**Lajitas Array**	**21.40**	**322**		P	**P**	**08 19 03.3**	**+0.6**
TKL	**Tuckaleechee C**	**23.06**	**10**		P	**P**	**08 19 20.2**	**0.0**
	comp=Z,4.7nm,0.9s,baz=208,slow=13,SNR=5.7							
TKL					LR	LR	08 28 46.8	
	comp=Z,24nm,21.0s,baz=192,slow=38							
	comp=Z,4.7nm,0.9s							
FNO	**Franklin**	**23.56**	**342**		P	**P**	**08 19 24.6**	**-0.3**
FNO					IAmb	IAmb	08 19 25.6	
	comp=Z,23nm,1.3s							
CCM	**Cathedral Cave**	**25.11**	**355**		P	**P**	**08 19 38.1**	**-0.8**
CCM					IAmb	IAmb	08 19 39.3	
	comp=Z,5.9nm,0.8s							
S22A	**4UR Ranch, Cre**	**29.50**	**330**		P	**P**	**08 20 18.2**	**-0.4**
ETMB	**Extrema**	**31.81**	**134**		P	**P**	**08 20 38.0**	**-0.8**
ETMB					IAmb	IAmb	08 20 40.7	
	comp=Z,9.7nm,1.5s							
SADO	**Sadowa**	**32.77**	**13**		LR	LR	08 33 20.8	
	comp=Z,29nm,18.8s,baz=220,slow=35							
PDAR	**Pinedale Array**	**34.75**	**333**		P	**P**	**08 21 04.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=125,slow=7.8,SNR=5.1							
	comp=Z,0.3nm,0.4s							
REDW	**Red Top Meadow**	**35.81**	**332**		P	**P**	**08 21 13.7**	**+0.1**
REDW					IAmb	IAmb	08 21 30.5	
	comp=Z,4.7nm,0.9s							
SNOW	**Snow King Moun**	**35.84**	**332**		P	**P**	**08 21 15.2**	**+1.3**
ELK	**Elko**	**36.13**	**325**		LR	LR	08 36 31.9	
	comp=Z,25nm,18.4s,baz=146,slow=37							
NVAR	**Mina Array Bea**	**36.51**	**319**		P	**P**	**08 21 19.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=119,slow=7.3,SNR=6.7							
NVAR					PcP	**PcP**	**08 23 43.4**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=132,slow=4.1,SNR=7.1							
	comp=Z,0.6nm,0.7s							
DGMT	**Dagmar**	**37.68**	**343**		P	**P**	**08 21 28.9**	**-0.2**
EGMT	**Eagleton**	**39.12**	**338**		P	**P**	**08 21 41.3**	**0.0**
YKA	**Yellowknife Ar**	**52.81**	**345**		P	**P**	**08 23 27.4**	**-1.3**
	comp=Z,4.6nm,0.8s,baz=140,slow=8.3,SNR=46							
	comp=Z,4.6nm,0.8s							
DLBC	**Dease Lake**	**54.93**	**335**		P	**P**	**08 23 45.0**	**+0.7**
	comp=Z,3.4nm,0.9s,baz=136,slow=8.7,SNR=7.6							
	comp=Z,3.4nm,0.9s							
DLBC	**Dease Lake**	**54.93**	**335**		P	**P**	**08 23 44.4**	**+0.1**
DLBC					IAmb	IAmb	08 23 45.6	
	comp=Z,2.7nm,0.8s							

INK	**Inuvik**	**62.37**	**343**		P	**P**	**08 24 34.9**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=121,slow=5.8,SNR=4.7							
	comp=Z,2.3nm,0.7s							
INK	**Inuvik**	**62.37**	**343**		PcP	**P**	**08 24 34.8**	**-0.8**
ILAR	**Eielson Array**	**65.06**	**336**		P	**P**	**08 24 52.0**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=113,slow=5.3,SNR=6.3							
	comp=Z,0.8nm,0.8s							

INET 05 08:18:14.5±0.7, 12°75'N×87°02'W, h6km±6km, MW2.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.06**	**213**	*eP*		Pg	Pg	08 18 16.3	+0.2
CRIN				*eS*		Sg		08 18 18.9	+1.6
TELN	**Telica**	**0.23**	**128**	*eP*		Pg		08 18 20.5	+1.4
TEL3	**Telica 3**	**0.24**	**136**	*eP*		Pg		08 18 20.3	+1.0
CNGN	**Cerro Negro**	**0.40**	**128**	*eP*		Pg		08 18 21.9	-0.3
COPN	**Copaltepe**	**0.70**	**143**	*eP*		Pg		08 18 27.9	-0.1
RCON	**San Juan de Ri**	**1.11**	**49**	*eP*		Pg		08 18 35.5	-0.5

SNET 05 08:18:37.9±1.0, 12°89N×88°79W, h34km±10km, ML2.4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**0.65**	**23**	*eP*		Pb		08 18 51.1	0.0
COEB				*eS*		Sb		08 19 01.2	+1.0
COEG	**Centro de Oper**	**0.73**	**353**	*eP*		Pn		08 18 51.8	0.0
COEG				*eS*		Sb		08 19 02.3	+0.1
PACA	**Pacayal**	**0.73**	**38**	*eP*		Pb		08 18 52.4	0.0
PACA				*eS*		Sb		08 19 02.9	+0.7
PACA				IAML				08 19 11.1	
	comp=Z,833nm,0.2s								
UESV	**Universidad de**	**0.74**	**0**	*eP*		Pn		08 18 52.1	+0.2
UESV				*eS*		Sb		08 19 03.5	+1.1
SJTE	**Alcalda de S**	**0.75**	**344**	*eP*		Pn		08 18 51.8	-0.3
SJTE				*eS*		Sb		08 19 02.8	+0.2
SJTE				IAML				08 19 04.9	
	comp=Z,72nm,0.2s								
PQSS	**Presa 15 de Se**	**0.76**	**17**	*eP*		Pb		08 18 52.5	-0.3
PQSS				*eS*		Sb		08 19 03.4	+0.4
PQSS				IAML				08 19 05.2	
	comp=Z,99nm,0.2s								
SCLA	**Alcaldia de Sa**	**0.81**	**4**	*eP*		Pb		08 18 53.3	-0.4
SCLA				*eS*		Sb		08 19 05.6	+1.3
PAVA	**Las Pavas**	**0.83**	**350**	*eP*		Pn		08 18 53.4	+0.1
PAVA				*eS*		Sb		08 19 05.0	+0.1
PAVA				IAML				08 19 07.2	
	comp=Z,84nm,0.2s								
LCND	**La Caada**	**0.97**	**65**	*eP*		Pn		08 18 55.2	+0.1
LCND				*eS*		Sn		08 19 07.6	0.0
LCND				IAML				08 19 11.8	
	comp=Z,73nm,0.3s								
JAYA	**Jayaque - finc**	**0.99**	**320**	*eP*		Pn		08 18 55.2	-0.3
JAYA				*eS*		Sb		08 19 09.1	-0.5
JAYA				IAML				08 19 16.4	
	comp=Z,99nm,0.2s								
CNCH	**Conchagua**	**1.01**	**68**	*eP*		Pn		08 18 55.4	-0.3
CNCH				*eS*		Sb		08 19 10.5	+0.4
NUBE	**Las Nubes**	**1.39**	**316**	*eP*		Pn		08 19 00.9	-0.1
NUBE				*eS*		Sn		08 19 18.4	+0.1

IDC 05 08:59:54.7±2.5, 54°17N×86°32E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=20.0km s-min=11.1km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**256**	*i*				09 04 50.0	
	baz=74,slow=314,SNR=3.6								
ZALV	**Zalesovo Beam**	**0.92**	**256**			Pg	Pg	09 00 11.0	-1.2
	1.3nm,0.3s,baz=73,slow=16,SNR=12								
ZALV						Lg	Lg	09 00 25.6	
	7.8nm,0.3s,baz=77,slow=30,SNR=31								
ZALV						Rg	Rg	09 00 30.8	
	42nm,1.0s,baz=77,slow=32,SNR=23								
KURBB	**Kurchatov Arra**	**5.95**	**236**			Pn	Pn	09 01 24.8	+0.8
	0.1nm,0.3s,baz=54,slow=14,SNR=15								
	1.2nm,0.4s								
MKAR	**Makanchi Array**	**7.82**	**201**			Pn	Pn	09 01 50.6	+0.8
	0.2nm,0.3s,baz=26,slow=14,SNR=5.9								
MKAR						Sn	Sn	09 03 18.9	-0.1
	0.1nm,0.3s,baz=29,slow=24,SNR=5.1								
MKAR						Lg	Lg	09 04 02.2	
	0.1nm,0.3s,baz=28,slow=31,SNR=10								
	0.3nm,0.3s								

*IDC **05** 09:23:00.4±1.9, 9°64N×121°84E, h0km, mb3.6/4, mbtmp3.6/4, MS3.1/6, Error ellipse: s-maj=229.4km s-min=22.7km az=63.0*
*MAN **05** 09:23:01, 9°86N×121°91E, h9km, Ms2.6*
ISC 05 09:23:01.9±1.2, 9°87N±0°06×121°89E±0°09, h10km, n17, σ1§17/15, mb3.7/4, MS3.0/3, 4C-4D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.88**	**4**	‖ *eP*		**Pg**		**09 23 18.8**	**0.0**
SNPH	**Sibulan**	**1.43**	**111**	‖ *iP*		**Pn**		**09 23 26.2**	**-1.7**
SNPH				*i S*		**Sn**		**09 23 46.2**	**-0.5**
RCP	**Roxas**	**1.88**	**26**	‖ *eP*		**Pn**		**09 23 33.7**	**-0.5**
RCP				*eS*		**Sn**		**09 23 57.0**	**-1.0**
DCPH	**Dipolog City**	**1.93**	**131**	‖ *eP*		**Pn**		**09 23 33.7**	**-1.1**
TBP	**Tagbilaran**	**1.95**	**95**	‖ *eP*		**Pn**		**09 23 34.3**	**-0.8**
TBP				*i S*		**Sn**		**09 23 57.9**	**-1.8**
LLP	**Lapu-Lapu**	**2.09**	**77**	‖ *eP*		**Pn**		**09 23 37.4**	**+0.3**
LLP				*eS*		**Sn**		**09 24 04.2**	**+1.0**
MSLP	**Maasin**	**2.94**	**85**	‖ *iP*		**Pn**		**09 23 48.9**	**+0.2**
KCP	**Kidapawan**	**4.25**	**132**	‖ *eP*		**Pg**		**09 24 24.9**	**+1.5**
DAV	**Davao City (W)**	**4.59**	**127**	LR		LR		09 26 08.9	
	comp=Z,294nm,18.2s,baz=210,slow=42								
SIJI	**Sorong**	**14.17**	**138**	LR		LR		09 31 46.9	
	comp=Z,44nm,20.9s,baz=322,slow=38								
JOW	**Kunigami**	**17.92**	**19**	LR		LR		09 35 33.1	
	comp=Z,24nm,18.2s,baz=152,slow=42								
CMAR	**Chiang Mai Arr**	**23.81**	**294**	LR		LR		09 37 58.2	
	comp=Z,36nm,18.2s,baz=105,slow=38								
WRA	**Warramunga Arr**	**32.06**	**158**	P		P		09 29 26.5	-2.7
	0.7nm,0.6s,baz=333,slow=10,SNR=6.3								
WRA						LR	LR	09 43 38.4	
	comp=Z,34nm,21.3s,baz=292,slow=39								
	0.7nm,0.6s								
ASAR	**Alice Springs**	**35.34**	**161**	P		**P**		**09 29 56.8**	**-0.9**
	0.6nm,0.7s,baz=349,slow=7.8,SNR=10								
	0.4nm,0.7s								
MKAR	**Makanchi Array**	**49.81**	**325**	P		**P**		**09 31 56.2**	**+1.2**
	0.4nm,0.7s,baz=123,slow=10,SNR=3.1								
	0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**54.02**	**327**	P		**P**		**09 32 27.4**	**+1.1**
	0.3nm,0.3s,baz=133,slow=6.3,SNR=4.5								
	0.3nm,0.3s								
MSVF	**Nonsavu**	**61.87**	**116**	LR		LR		09 59 29.9	
	comp=Z,43nm,19.3s,baz=252,slow=35								

*IDC **05** 09:25:17.4±2.7, 10°45N×123°45E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=243.6km s-min=29.9km az=63.0*
*MAN **05** 09:25:20, 9°89N×122°00E, h9km, Ms2.4*
ISC 05 09:25:22.8±2.5, 9°96N±0°07×122°1E±0°1, h29km±20km, n9, σ1§43/14, mb3.5/3, 3C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.80**	**351**	‖ *eP*		**Pn**		**09 25 38.0**	**-0.1**
SNPH	**Sibulan**	**1.30**	**118**	‖ *iP*		**Pn**		**09 25 44.6**	**-0.4**
SNPH				*i S*		**Sb**		**09 26 04.8**	**+1.8**
RCP	**Roxas**	**1.72**	**22**	‖ *eP*		**Pb**		**09 25 53.0**	**-0.9**
RCP				*eS*		**Sb**		**09 26 15.3**	**+0.2**
TBP	**Tagbilaran**	**1.78**	**98**	*eP*		**Pn**		**09 25 51.2**	**-0.4**
TBP				*i S*		**Sb**		**09 26 16.8**	**+0.1**
DCPH	**Dipolog City**	**1.86**	**137**	‖ *eP*		**Pn**		**09 25 52.2**	**-0.5**
DCPH				*eS*		**Sb**		**09 26 20.6**	**+1.6**
LLP	**Lapu-Lapu**	**1.90**	**79**	*eP*		**Pb**		**09 25 55.6**	**-1.2**
LLP				*eS*		**Sb**		**09 26 22.5**	**+2.4**
WRA	**Warramunga Arr**	**32.07**	**158**	P		**P**		**09 31 46.2**	**-1.3**
	0.3nm,0.5s,baz=341,slow=9.4,SNR=5.0								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**35.36**	**161**	P		**P**		**09 32 15.2**	**-0.8**
	0.3nm,0.5s,baz=341,slow=7.4,SNR=4.6								
	0.3nm,0.5s								

MKAR	**Makanchi Array**	**49.84**	**325**		P	**P**	**09 34 15.2**	**+1.8**
	0.4nm,0.8s,baz=134,slow=8.3,SNR=2.9							
	0.4nm,0.8s							

IDC 05 09:31:21.6±3.0, 53°71N×86°87E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=27.1km s-min=15.8km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**282**	*i*				09 39 10.0	
	baz=99,slow=313,SNR=2.5								
ZALV	**Zalesovo Beam**	**1.24**	**282**			Pg	Pg	09 31 43.9	-1.4
	1.2nm,0.3s,baz=102,slow=16,SNR=7.6								
ZALV						Lg	Lg	09 32 01.9	
	1.4nm,0.3s,baz=105,slow=31,SNR=8.3								
KURBB	**Kurchatov Arra**	**5.99**	**242**			Pn	Pn	09 32 52.7	+1.3
	0.1nm,0.3s,baz=59,slow=14,SNR=4.1								
	0.4nm,0.3s								
MKAR	**Makanchi Array**	**7.51**	**205**			Pn	Pn	09 33 13.4	+1.1
	0.1nm,0.3s,baz=26,slow=14,SNR=2.9								
	0.3nm,0.4s								

IDC 05 09:39:33.5±3.2, 54°50N×86°75E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=29.3km s-min=17.5km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**245**	*i*				09 46 10.0	
	baz=64,slow=311,SNR=1.8								
ZALV	**Zalesovo Beam**	**1.26**	**245**			Pg	Pg	09 39 55.7	-2.0
	1.9nm,0.3s,baz=60,slow=16,SNR=11								
ZALV						Lg	Lg	09 40 14.5	
	1.7nm,0.3s,baz=60,slow=26,SNR=5.1								
KURBB	**Kurchatov Arra**	**6.34**	**236**			Pn	Pn	09 41 10.1	+2.0
	0.1nm,0.3s,baz=53,slow=14,SNR=5.9								
	0.7nm,0.3s								
MKAR	**Makanchi Array**	**8.22**	**202**			Pn	Pn	09 41 34.5	+0.6
	0.3nm,0.3s,baz=24,slow=13,SNR=10								
MKAR						Lg	Lg	09 43 53.0	
	0.1nm,0.3s,baz=20,slow=31,SNR=5.0								
	0.3nm,0.3s								

*IDC **05** 09:40:51.3±0.5, 5°98S×100°34E, h0km, mb4.7/30, mbtmp4.7/31, ML5

BNSI Bone 19.72 86 P Pn 09 45 23.1 -1.0
comp=Z,38nm,1.0s
KKM Kota Kinabalu 19.87 53 P P 09 45 21.8 -2.4
MPSI Mapaga 20.50 73 P P 09 45 30.9 0.0
comp=Z,50nm,1.2s
MYLDM Lahad Datu 21.27 59 P P 09 45 38.0 -1.2
MYLDM IAmb IAmb 09 45 46.3
comp=Z,111nm,1.8s
EDFI Ende, Flores 21.31 98 P P 09 45 40.4 +0.7
comp=Z,397nmcomp=Z,29nm,0.6s
TOLI2 Tolitoli 21.59 71 P P 09 45 40.8 -1.8
TOLI2 IAmb IAmb 09 45 45.8
comp=Z,44nm,0.8s
MMRI Maumere 21.84 98 P P 09 45 43.9 -1.4
MMRI Maumere 21.84 98 P P 09 45 44.0 -1.3
comp=Z,3µmcomp=Z,211nm,0.6s
MRSI Marisa 22.49 74 P P 09 45 52.3 0.0
comp=Z,73nm,0.8s
BATI Baumata 23.42 102 P P 09 46 02.6 +0.8
comp=Z,83nm,0.7s,baz=221,slow=3.3,SNR=8.7
comp=Z,83nm,0.7s
BATI Baumata 23.42 102 P P 09 46 02.6 +0.8
comp=Z,2µmcomp=Z,106nm,0.6s
PALK Pallekele 23.68 304 LR LR 09 53 27.9
comp=Z,362nm,20.2s,baz=229,slow=32
PALK Pallekele 23.68 304 *i* P P 09 46 06.3 +2.0
PALK pmax pmax
comp=Z,20nm,0.9s
SOEI Soe 23.95 100 P P 09 46 05.9 -1.1
SOEI Soe 23.95 100 P P 09 46 08.1 +1.1
comp=Z,2µmcomp=Z,183nm,0.7s
PSA00 Pilbara Seismi 24.35 131 P P 09 46 08.7 -1.8
PSA00 IAmb IAmb 09 46 16.5
comp=Z,50nm,1.5s
CMAR Chiang Mai Arr 24.41 357 P P 09 46 11.6 +0.6
comp=Z,8.6nm,0.9s,baz=184,slow=9.0,SNR=8.2
CMAR PcP PcP 09 49 51.2 +1.4
comp=Z,1.7nm,0.5s,baz=213,slow=3.6,SNR=6.5
CMAR LR LR 09 55 44.9
comp=Z,178nm,21.4s,baz=170,slow=37
comp=Z,8.6nm,0.9s
CMAR Chiang Mai Arr 24.41 357 P P 09 46 11.6 +0.6
CMAR 09 49 51.2
CHTO Chiang Mai 24.76 357 P P 09 46 11.9 -2.3
CHTO Chiang Mai 24.76 357 P P 09 46 11.9 -2.3
CHTO pmax pmax
comp=Z,28nm,1.9s
QIZ Qiongzhong 26.63 20 P P 09 46 32.5 +1.4
QIZ S S 09 51 07.0 +3.1
QIZ LR LR
comp=Z,210nm,19.9s
QIZ LR LR
comp=Z,280nm,14.8s
QIZ LR LR
comp=Z,250nm,14.7s
FITZ Fitzroy Crossi 27.41 118 P P 09 46 39.9 +1.8
comp=Z,11nm,0.9s,baz=273,slow=2.8,SNR=11
FITZ LR LR 09 56 17.1
comp=Z,148nm,21.8s,baz=302,slow=34
comp=Z,11nm,0.9s
FITZ Fitzroy Crossi 27.41 118 P P 09 46 37.1 -1.0
H08S2 Diego Garcia H 27.72 265 T T 10 15 42.5
baz=89,slow=74,SNR=3.3
H08S3 Diego Garcia H 27.73 265 T T 10 15 36.6
baz=216,slow=74,SNR=4.2
DAV Davao City (W) 28.34 63 LR LR 09 59 27.6
comp=Z,130nm,20.2s,baz=168,slow=39
KMI Kunming 31.09 4 ⇓P P 09 47 12.8 +1.8
KMI pmax pmax
comp=Z,15nm,1.5s
KMI LR LR
comp=Z,240nm,17.6s
KMI LR LR
comp=Z,160nm,13.6s
KMI LR LR
comp=Z,240nm,21.1s
SIJI Sorong 31.26 82 LR LR 10 02 32.1
comp=Z,114nm,20.2s,baz=40,slow=42
H01W3 Cape Leeuwin H 31.37 158 T T 10 20 08.7
baz=336,slow=76,SNR=3.8
H01W2 Cape Leeuwin H 31.38 158 T T 10 20 09.7
baz=336,slow=76,SNR=5.4
H01W1 Cape Leeuwin H 31.38 158 T T 10 20 04.9
baz=336,slow=76,SNR=6.5
HYBB Hyderabad (bro 31.77 318 *eP* P 09 47 16.0 -0.8
HYBB eS S 09 52 27.3 +2.5
PZH PanZhiHua 32.40 2 P P 09 47 26.6 +4.2
PZH S S 09 52 36.1 +1.4
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,6.1s
PZH LR LR
comp=Z,370nm,19.5s
PZH LR LR
comp=Z,590nm,18.6s
PZH LR LR
comp=Z,450nm,17.6s
GYA Guiyang 32.90 10 ⇑P P 09 47 31.8 +5.0
GYA S S 09 52 44.9 +2.4
GYA LR LR
comp=Z,350nm,21.7s
WB0 Warramunga Arr 35.75 116 P P 09 47 51.2 -0.3
WB0 IAmb IAmb 09 47 56.4
comp=Z,19nm,0.9s
WRA Warramunga Arr 35.76 116 P P 09 47 52.3 +0.7
comp=Z,10nm,0.8s,baz=284,slow=12,SNR=53
comp=Z,10nm,0.8s
WRA Warramunga Arr 35.76 116 P P 09 47 50.6 -1.0
WRA Warramunga Arr 35.76 116 P P 09 47 52.3 +0.7
WRAB Tennant Creek 35.77 116 P P 09 47 51.2 -0.5
WRAB IAmb IAmb 09 47 56.6
comp=Z,20nm,0.8s
WRAB Tennant Creek 35.77 116 P P 09 47 51.2 -0.5
WRAB pmax pmax
comp=Z,20nm,0.8s
WB2 Warramunga Arr 35.77 116 P P 09 47 49.5 -2.2
WB2 IAmb IAmb 09 47 56.6
comp=Z,17nm,0.8s
WR0 Warramunga Arr 35.94 116 P P 09 47 53.7 +0.5
WR0 IAmb IAmb 09 47 58.3
comp=Z,27nm,1.2s
LSA Lhasa 36.65 346 P P 09 48 00.5 +1.0
LSA Lhasa 36.65 346 P P 09 48 00.8 +1.3
LSA pmax pmax
comp=Z,20nm,1.3s
LSA Lhasa 36.65 346 P P 09 48 00.5 +1.0
LSA pmax pmax
comp=Z,23nm,1.2s
ASAR Alice Springs 36.68 122 P P 09 47 60.0 +0.5
comp=Z,2.5nm,0.6s,baz=300,slow=8.0,SNR=42
ASAR LR LR 10 04 59.4
comp=Z,120nm,18.3s,baz=302,slow=39
comp=Z,2.5nm,0.6s
ASAR Alice Springs 36.68 122 P P 09 47 58.3 -1.2
ASAR Alice Springs 36.68 122 P P 09 48 00.0 +0.5
AS31 Alice Springs 36.68 122 P P 09 48 00.1 +0.6
CD2 Chengdu 36.91 5 P P 09 48 01.9 +0.7
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 LR LR
comp=Z,160nm,14.5s
CD2 LR LR
comp=Z,340nm,12.5s
CD2 LR LR
comp=Z,180nm,19.6s
ENH Enshi 37.17 13 P P 09 48 03.0 -0.4
WHN Wuhan 38.79 19 ⇑P P 09 48 18.4 +1.4
XAN Xi'an 40.70 11 P P 09 48 33.0 0.0
XAN pP pP 09 48 41.4 -0.3
XAN SS SS 09 57 32.3 -10
XAN pmax pmax
comp=Z,12nm,0.9s
XAN LR LR
comp=Z,140nm,22.1s
XAN LR LR
comp=Z,410nm,22.7s
XAN LR LR
comp=Z,410nm,14.1s
NJ2 Nanjing 41.80 24 *eP* P 09 48 43.4 +1.4
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
LYN LuoYang 41.98 15 ⇓P P 09 48 43.9 +0.5
LYN pP sP 09 48 54.7 -1.0
LYN sP pwP 09 49 00.2 +1.3
LYN S S 09 55 06.7 +6.8
LYN sS sS 09 55 19.1 +4.7
LYN pmax pmax
comp=Z,10.0nm,1.2s
LYN pmax pmax
comp=Z,90nm,7.3s
LYN LR LR
comp=Z,160nm,19.4s
LYN LR LR
comp=Z,280nm,22.2s
LYN LR LR
comp=Z,180nm,16.4s
LZH Lanzhou 42.06 4 ⇑P P 09 48 45.8 +1.6
LZH pP pwP 09 48 58.4 -1.3
LZH sP sP 09 49 04.5 +8.0
LZH pmax pmax
comp=Z,28nm,1.3s
LZH LR LR
comp=Z,240nm,14.4s
LZH LR LR
comp=Z,320nm,14.1s
LZH LR LR
comp=Z,300nm,16.9s
JOW Kunigami 42.42 38 LR LR 10 06 45.5
comp=Z,40nm,20.5s,baz=87,slow=37
GTA Gaotai 45.25 359 *eP* P 09 49 10.6 +0.8
GTA pmax pmax
comp=Z,7.0nm,1.1s
HNS HongShan 45.27 16 *eP* P 09 49 11.0 +1.2
HNS *eS* S 09 55 52.3 +4.5
HNS LR LR
comp=Z,350nm,21.2s
HNS LR LR
comp=Z,310nm,17.7s
STKA Stephens Creek 46.25 129 P P 09 49 18.9 +1.1
comp=Z,3.2nm,0.6s,baz=304,slow=8.0,SNR=7.6
STKA LR LR 10 08 00.5
comp=Z,198nm,21.9s,baz=284,slow=35
comp=Z,3.2nm,0.6s
STKA Stephens Creek 46.25 129 P P 09 49 18.7 +0.9
STKA Stephens Creek 46.25 129 *eP* P 09 49 18.2 +0.4
PMG Port Moresby 46.46 97 LR LR 10 10 23.2
comp=Z,56nm,21.8s,baz=214,slow=38
NIL Nilore 47.12 329 P P 09 49 23.6 -0.9
NIL IAmb IAmb 09 49 25.1
comp=Z,19nm,0.9s
NIL Nilore 47.12 329 P P 09 49 23.6 -0.9
NIL pmax pmax
comp=Z,19nm,0.9s
BTO Baotou 47.28 10 *eP* P 09 49 27.9 +2.1
BTO S S 09 56 21.1 +4.2
BTO LR LR
comp=Z,910nm,16.9s
BTO LR LR
comp=Z,950nm,16.2s
HHC Hu-ho-hao-te 47.80 11 *eP* P 09 49 33.7 +3.9
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.3s
HHC LR LR
comp=Z,280nm,10.3s
HHC LR LR
comp=Z,250nm,8.9s
HHC LR LR
comp=Z,260nm,14.3s
KSCHJ Chungju 49.91 29 P P 09 49 43.7 -2.2
KSCHJ IAmb IAmb 09 51 26.4
comp=Z,36nm,1.8s
WSAR Wadi Sarin 50.10 307 LR LR 10 08 33.3
comp=Z,266nm,19.3s,baz=144,slow=33
KSAR Wonju Array Be 50.32 29 P P 09 49 48.7 -0.3
KSAR Wonju Array Be 50.32 29 P P 09 49 48.7 -0.3
KSRS Korea Array 50.35 29 P P 09 49 49.8 +0.6
comp=Z,3.8nm,1.1s,baz=218,slow=7.8,SNR=9.8
KSRS PcP PcP 09 51 08.5 +1.0
comp=Z,0.7nm,0.9s,baz=216,slow=4.0,SNR=4.0
KSRS LR LR 10 12 40.5
comp=Z,19nm,18.4s,baz=220,slow=38
comp=Z,3.8nm,1.1s
KSRS Korea Array 50.35 29 P P 09 49 49.8 +0.6
KSRS 09 51 08.5
KSH Kashi 50.65 336 P P 09 49 51.0 -0.6
KSH pP pP 09 50 01.9 +1.4
KSH pmax pmax
comp=Z,14nm,0.8s
WMQ Urumqi 50.96 348 ⇑P P 09 49 55.8 +2.0
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ pmax pmax
comp=Z,120nm,4.9s
WMQ LR LR
comp=Z,92nm,21.5s
XLT XiLinHaoTe 51.72 14 *eP* P 09 50 00.6 +1.1
XLT pP sP 09 50 10.9 -1.1
XLT sP pwP 09 50 14.4 -0.7
XLT pmax pmax
comp=Z,9.0nm,0.8s
XLT pmax pmax
comp=Z,44nm,4.1s
XLT LR LR
comp=Z,17nm,17.4s
XLT LR LR
comp=Z,100nm,15.6s
XLT LR LR
comp=Z,140nm,15.3s
DRK Karamyk 52.45 332 P P 09 50 05.6 +0.3
SHLS Shalkode 52.54 341 *eP* P 09 50 04.0 -1.6
SHLS Shalkode 52.54 341 *eP* P 09 50 04.1 -1.6
baz=341
UZB Uzynbulak 52.67 340 *eP* P 09 50 06.3 -0.4
UZB Uzynbulak 52.67 340 *eP* P 09 50 06.3 -0.4
baz=340
GAR Garm 52.78 331 P P 09 50 06.8 -0.7
SATY Saty 52.80 340 *eP* P 09 50 07.4 -0.2
SATY Saty 52.80 340 *eP* P 09 50 07.5 -0.2
baz=340
CHGR Chuyangaron 53.09 330 P P 09 50 08.7 -1.1
CHGR Chuyangaron 53.09 330 P P 09 50 08.7 -1.1
CHGR pmax pmax
comp=Z,25nm,0.6s
MDOK Medeo 53.37 339 *eP* P 09 50 11.6 -0.3
MDOK Medeo 53.37 339 *eP* P 09 50 11.6 -0.3
baz=339
AAA Alma-Ata 53.46 339 *eP* P 09 50 12.3 -0.1
AAA Alma-Ata 53.46 339 *eP* P 09 50 12.3 -0.1
baz=338
AAK Ala-Archa 53.88 337 P P 09 50 16.3 +0.7
comp=Z,2.8nm,0.5s,baz=150,slow=6.7,SNR=5.3
AAK PcP PcP 09 51 22.6 +1.7
comp=Z,4.1nm,0.3s,baz=188,slow=3.8,SNR=4.8
AAK LR LR 10 14 54.5
comp=Z,74nm,20.7s,baz=155,slow=38
comp=Z,2.8nm,0.5s
AAK Ala-Archa 53.88 337 P P 09 50 16.0 +0.3
AAK Ala-Archa 53.88 337 *ceP* P 09 50 15.5 -0.1
AAK pmax pmax
comp=Z,13nm,2.5s
SONM Songino Array 53.93 5 P P 09 50 17.2 +1.3
comp=Z,18nm,0.8s,baz=189,slow=8.9,SNR=40
comp=Z,18nm,0.8s
SONM Songino Array 53.93 5 P P 09 50 17.1 +1.3
SONM IAmb IAmb 09 50 18.4
comp=Z,20nm,0.9s
SONM Songino Array 53.93 5 P P 09 50 17.2 +1.3
HRA Herat 53.99 321 P P 09 50 16.7 +0.1
CHKK Chushkaly 53.99 339 *eP* P 09 50 15.3 -0.9
CHKK Chushkaly 53.99 339 *eP* P 09 50 15.3 -0.9
baz=339
ULN Ulaanbaatar 54.02 6 P P 09 50 17.7 +1.1
ULN IAmb IAmb 09 50 18.9
comp=Z,18nm,0.9s
ULN Ulaanbaatar 54.02 6 *ceP* P 09 50 17.3 +0.8
ULN pmax pmax
comp=Z,22nm,1.0s
KUU Kurty 54.26 339 *eP* P 09 50 16.7 -1.4
KUU pmax pmax
comp=Z,26nm,1.1s
KUU Kurty 54.26 339 *eP* P 09 50 16.8 -1.4
comp=Z,26nm,1.1s,baz=338
SGDS Sogindy 54.52 337 *eP* P 09 50 19.1 -1.0
SGDS Sogindy 54.52 337 *eP* P 09 50 19.1 -1.0
baz=337
TDK Taldyqorghan 54.52 341 *eP* P 09 50 19.1 -1.0
TDK Taldyqorghan 54.52 341 *eP* P 09 50 19.1 -1.0
baz=341
CN2 Changchun 54.56 22 *eP* P 09 50 20.6 +0.2
CN2 pmax pmax
comp=Z,10.0nm,0.7s
ZSN Zaisan 55.02 347 *eP* P 09 50 23.9 +0.3
ZSN pmax pmax
comp=Z,10.0nm,0.8s
ZSN Zaisan 55.02 347 *eP* P 09 50 24.0 +0.3
comp=Z,10nm,0.8s,baz=347
MKAR Makanchi Array 55.02 345 P P 09 50 23.7 0.0
comp=Z,9.0nm,0.8s,baz=150,slow=8.1,SNR=47
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 55.02 345 P P 09 50 23.6 -0.1
MKAR Makanchi Array 55.02 345 *i* P P 09 50 23.7 0.0
MKAR pmax pmax
comp=Z,9.0nm,0.8s
MAKZ Makanchi 55.12 345 P P 09 50 23.7 -0.6
MAKZ Makanchi 55.12 345 P P 09 50 23.7 -0.6
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MAJO Matsushiro 55.23 37 *i* P P 09 50 23.9 -1.5
MAJO pmax pmax
comp=Z,5.0nm,1.1s
MJAR Matsushiro Arr 55.23 37 P P 09 50 29.9 +4.5
comp=Z,1.3nm,0.6s,baz=200,slow=7.2,SNR=5.1
IUG Iuzhnay 55.38 333 *eP* P 09 50 26.2 -0.2
IUG Iuzhnay 55.38 333 *eP* P 09 50 26.3 -0.2
baz=333
DZA Taraz 55.40 334 *eP* P 09 50 25.2 -1.3
DZA Taraz 55.40 334 *eP* P 09 50 25.3 -1.3
baz=334
KK31 Karatay Array 55.93 334 P P 09 50 30.0 -0.3
KK31 Karatay Array 55.93 334 P P 09 50 30.0 -0.3
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 55.93 334 P P 09 50 28.9 -1.4
KKAR Karatay Array 55.93 334 P P 09 50 28.9 -1.4
BTLS Baital 56.09 338 *eP* P 09 50 30.2 -1.1
BTLS Baital 56.09 338 *eP* P 09 50 30.2 -1.1
baz=338
KNGR Kungurtug, Tuv 56.49 358 *i* P P 09 50 33.6 -0.7
KNGR pmax pmax
comp=Z,14nm,1.0s
VLA Vladivostok 56.68 27 *i* P P 09 50 35.9 +0.3
VLA pmax pmax
comp=Z,17nm,0.8s
BNX BinXian 56.95 22 ⇑P P 09 50 38.3 +0.9
BNX pmax pmax
comp=Z,12nm,1.0s
BNX pmax pmax
comp=Z,83nm,5.6s
USA0B Ussuriysk Arra 57.58 27 P P 09 50 40.8 -1.1
USA0B Ussuriysk Arra 57.58 27 P P 09 50 40.8 -1.1
USA0B pmax pmax
comp=Z,8.0nm,1.5s
USRK Ussuriysk Ar. 57.58 27 P P 09 50 41.7 -0.2
comp=Z,1.8nm,0.7s,baz=220,slow=5.7,SNR=5.5
USRK LR LR 10 15 35.9
comp=Z,76nm,19.1s,baz=168,slow=36
comp=Z,1.8nm,0.7s
USRK Ussuriysk Ar. 57.58 27 P P 09 50 40.3 -1.6
USRK Ussuriysk Ar. 57.58 27 P P 09 50 41.7 -0.2
GEYT Alibeck 58.81 322 P P 09 50 51.1 +0.4
comp=Z,4.2nm,0.8s,baz=203,slow=18,SNR=3.2
GEYT LR LR 10 17 21.4
comp=Z,94nm,19.3s,baz=148,slow=37
comp=Z,4.2nm,0.8s
GEYT Alibeck 58.81 322 P P 09 50 50.8 +0.1
GYA0B ALIBECK ARRAY 58.81 322 P P 09 50 51.1 +0.3
GYA0B IAmb IAmb 09 50 52.5
comp=Z,21nm,1.3s
SEM Semipalatinsk 58.88 345 *eP* P 09 50 50.2 -1.0
SEM Semipalatinsk 58.88 345 *eP* P 09 50 50.2 -1.0
baz=345
KURBB Kurchatov Arra 59.53 344 P P 09 50 55.3 -0.1
comp=Z,7.3nm,0.9s,baz=162,slow=6.5,SNR=31
comp=Z,7.3nm,0.9s
KURK Kurchatov 59.59 344 P P 09 50 55.6 -0.2
KURK IAmb IAmb 09 50 56.8
comp=Z,14nm,0.9s
KURK Kurchatov 59.59 344 *ceP* P 09 50 56.0 +0.2
KURK pmax pmax
comp=Z,16nm,1.0s
ATD Arta Tunnel 59.83 287 LR LR 10 11 53.9
comp=Z,42nm,21.4s,baz=282,slow=31
BRZS Berezniki 60.77 340 *eP* P 09 51 02.7 -1.2
BRZS pmax pmax
comp=Z,9.0nm,1.6s
BRZS Berezniki 60.77 340 *eP* P 09 51 02.7 -1.2
comp=Z,8.7nm,1.6s,baz=340
BRZS *i* S S 09 59 17.3 -1.3
baz=340
RAYN Ar Rayn 61.08 301 P P 09 51 05.3 -1.3
RAYN IAmb IAmb 09 51 08.7
comp=Z,21nm,1.6s
RAYN Ar Rayn 61.08 301 P P 09 51 05.3 -1.3
RAYN pmax pmax
comp=Z,21nm,1.6s
ZAA0 Zalesovo Array 61.21 350 P P 09 51 06.6 -0.1
ZALV Zalesovo Beam 61.21 350 P P 09 51 06.8 +0.1
comp=Z,18nm,0.7s,baz=186,slow=4.3,SNR=23
ZALV LR LR 10 19 39.5
comp=Z,33nm,21.9s,baz=130,slow=38
comp=Z,18nm,0.7s
ZALV Zalesovo Beam 61.21 350 P P 09 51 06.1 -0.7
ZALV Zalesovo Beam 61.21 350 *i* P P 09 51 07.0 +0.2
ZALV pmax pmax
comp=Z,18nm,0.7s
KMBO Kilima Mbogo 63.15 272 P P 09 51 22.5 +1.6
comp=Z,1.0nm,0.4s,baz=211,slow=20,SNR=3.1
KMBO LR LR 10 15 00.0
comp=Z,64nm,18.6s,baz=90,slow=32
comp=Z,1.0nm,0.4s
KMBO Kilima Mbogo 63.15 272 *i* P P 09 51 21.8 +0.9
KMBO pmax pmax
comp=Z,1.0nm,0.4s
ZEA Zeya 63.74 17 *eP* P 09 51 24.9 +1.2
BVAR Borovoye Array 64.11 340 LR LR 10 22 36.4
comp=Z,30nm,19.8s,baz=26,slow=39
BRVK Borovoye 64.17 340 P P 09 51 25.7 -0.8
BRVK IAmb IAmb 09 51 27.1
comp=Z,9.0nm,1.1s
BRVK Borovoye 64.17 340 *ceP* P 09 51 25.3 -1.3
BRVK pmax pmax
comp=Z,14nm,1.7s
BOD Bodaibo 64.62 8 *eP* P 09 51 30.0 +0.6
BOD pmax pmax
comp=Z,20nm,0.3s
YSS Yuzh-Sakhalins 64.74 31 *eP* P 09 51 30.8 +0.4
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,200nm,15.0s
ABKAR Akbulak array 65.37 332 P P 09 51 34.5 0.0
ABKAR Akbulak array 65.37 332 P P 09 51 34.1 -0.4
DZM Mont Dzumac 65.59 111 LR LR 10 23 58.6
comp=Z,71nm,18.0s,baz=292,slow=39
MAW Mawson 66.47 195 LR LR 10 15 47.2
comp=Z,81nm,18.2s,baz=31,slow=32
AKTO Aktyubinsk 67.09 332 P P 09 51 45.4 -0.1
comp=Z,5.7nm,1.1s,baz=132,slow=6.5,SNR=13
comp=Z,5.7nm,1.1s
AKTO Aktyubinsk 67.09 332 P P 09 51 45.4 -0.1
GNI Garni 68.72 317 LR LR 10 24 42.7
comp=Z,21nm,18.1s,baz=136,slow=38
GNI Garni 68.72 317 *i* P P 09 51 56.4 +0.2
GNI pmax pmax
comp=Z,6.0nm,0.5s
MBAR Mbarara 69.68 272 LR LR 10 19 07.7
comp=Z,89nm,18.3s,baz=104,slow=33
GURO Guroymak-BITLI 69.87 315 P P 09 52 04.8 +1.5
GURO IAmb IAmb 09 52 05.6
comp=Z,8.6nm,0.9s
MARD Mardin 70.25 313 P P 09 52 06.9 +1.3
ZEI Tsey 70.53 319 *eP* P 09 52 06.4 -0.9
ZEI pmax pmax
comp=Z,7.0nm,0.4s
ONI Oni 70.73 319 P P 09 52 08.7 +0.3
ONI IAmb IAmb 09 52 18.2
comp=Z,17nm,1.4s
ONI Oni 70.73 319 P P 09 52 08.7 +0.3
ONI pmax pmax
comp=Z,17nm,1.4s
NCK Nalchik 71.06 320 *i* P P 09 52 10.9 +0.6
NCK pmax pmax
comp=Z,11nm,0.7s
ARU Arti 71.06 337 P P 09 52 10.0 0.0

comp=Z,2.5nm,0.4s,baz=170,slow=5.7,SNR=12
comp=Z,2.5nm,0.4s
ARU Arti 71.06 337 P **P** 09 52 10.0 0.0
ARU IAmb IAmb 09 52 11.2
comp=Z,15nm,1.1s
ARU Arti 71.06 337*d i* P **P** 09 52 09.9 -0.1
ARU 09 54 45.9
ARU S **S** **10 01 24.9 +1.1**
ARU SS **SS** **10 05 55.1 -2.6**
ARU pmax pmax
comp=Z,22nm,1.5s
LSZ Lusaka 71.27 256 LR LR 10 21 03.2
comp=Z,57nm,18.5s,baz=162,slow=34
YAK Yakutsk 71.56 14 LR LR 10 27 49.5
comp=Z,115nm,18.2s,baz=260,slow=39
YAK Yakutsk 71.56 14 *eP* **P** **09 52 11.6 -1.3**
YAK pmax pmax
comp=Z,25nm,1.0s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.3s
KOPT Kop Dagi 71.57 316 P **P** **09 52 14.4 +0.6**
KBZ Khabaz 71.62 320 P **P** **09 52 14.4 +0.8**
comp=E,9.8nm,0.9s,baz=124,slow=5.7,SNR=21
KBZ LR LR 10 27 21.9
comp=E,23nm,18.2s,baz=129,slow=39
comp=E,9.8nm,0.9s
KBZ Khabaz 71.62 320*ce* P **P** **09 52 13.7 +0.1**
KBZ pmax pmax
comp=Z,17nm,1.1s
PYA1 Pyatigorsk 71.65 320 *i* P **P** **09 52 13.8 -0.1**
KIV Kislovodsk 71.86 320 P **P** **09 52 15.9 +0.7**
KIV IAmb IAmb 09 52 17.5
comp=Z,13nm,1.0s
KIV Kislovodsk 71.86 320 *eP* **P** **09 52 15.4 +0.2**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,28nm,18.0s
RPZ Rata Peaks 71.89 134 LR LR 10 23 47.6
comp=Z,64nm,19.1s,baz=282,slow=36
EIL Elat 72.04 304 LR LR 10 21 32.2
comp=Z,100nm,20.9s,baz=89,slow=34
GHAJ Ghor Haditha 72.05 305 P **P** **09 52 16.2 -0.3**
GHAJ IAmb IAmb 09 52 19.3
comp=Z,19nm,0.9s
MMAI Mount Meron Ar 72.74 307 LR LR 10 22 39.9
comp=Z,108nm,21.0s,baz=241,slow=34
BELG Belogornoye 73.38 329 P **P** **09 52 24.4 +0.5**
comp=Z,29nm,0.9s,baz=321,slow=0.9,SNR=12
BELG LR LR 10 28 41.8
comp=Z,44nm,18.3s,baz=156,slow=39
comp=Z,29nm,0.9s
BELG Belogornoye 73.38 329 *i* P **P** **09 52 23.5 -0.4**
BELG pmax pmax
comp=Z,12nm,1.3s
SOC Sochi 73.62 319 *eP* **P** **09 52 21.8 -3.7**
SOC *e* 09 55 08.8
SOC *e*PPP PPP 09 56 53.5
SOC *e*S **S** **10 01 48.2 -5.3**
SOC *e*SS **SS** **10 06 41.2 +3.9**
SOC pmax pmax
comp=Z,14nm,0.6s
LBTB Lobatse 73.67 246 LR LR 10 18 29.4
comp=Z,68nm,20.1s,baz=91,slow=31
BOSA Boshof 74.06 242 P **P** **09 52 30.4 +1.8**
comp=Z,4.5nm,0.8s,baz=123,slow=7.3,SNR=5.2
BOSA LR LR 10 22 24.7
comp=Z,58nm,18.8s,baz=56,slow=34
comp=Z,4.5nm,0.8s
BOSA Boshof 74.06 242 P **P** **09 52 30.4 +1.8**
CSS Mathiatis 75.00 308 P **P** **09 52 35.3 +1.4**
ANN Anapa 75.62 319 *eP* **P** **09 52 33.0 -4.1**
ANN *e**PP **pP** **09 52 43.6 -2.7**
ANN *e* 09 52 47.7
ANN *e* 09 55 24.2
ANN *e*S **S** **10 02 09.4 -6.4**
ANN pmax pmax
comp=Z,36nm,1.4s
NRIK Noril'sk 75.76 355 P **P** **09 52 37.7 +0.4**
comp=Z,7.5nm,0.8s,baz=196,slow=7.4,SNR=6.1
NRIK LR LR 10 30 27.8
comp=Z,64nm,18.6s,baz=154,slow=39
comp=Z,7.5nm,0.8s
NRIK Noril'sk 75.76 355 P **P** **09 52 37.9 +0.5**
NRIK IAmb IAmb 09 52 38.5
comp=Z,14nm,1.0s
NRIK Noril'sk 75.76 355*ce* P **P** **09 52 36.2 -1.2**
NRIK pmax pmax
comp=Z,16nm,1.0s
URZ Urewera 75.86 128 LR LR 10 25 11.9
comp=Z,137nm,20.3s,baz=212,slow=35
VRH Novokhopyorsk 75.88 326 *eP* **P** **09 52 37.7 -0.7**
VRH pmax pmax
comp=Z,30nm,1.2s
PETK Petropavlovsk- 76.12 32 LR LR 10 28 13.0
comp=Z,30nm,19.4s,baz=247,slow=37
KIRV Kirov 76.19 335 P **P** **09 52 40.9 +0.9**
comp=Z,8.1nm,0.4s,baz=154,slow=1.9,SNR=8.3
comp=Z,8.1nm,0.4s
KIRV Kirov 76.19 335*ce* P **P** **09 52 39.7 -0.3**
BR131 Keskin Array S 76.34 313 P **P** **09 52 41.4 -0.2**
BR131 IAmb IAmb 09 52 42.5
comp=Z,8.9nm,0.8s
BR131 Keskin Array S 76.34 313 *i* P **P** **09 52 40.4 -1.1**
BRTR Keskin Array B 76.34 313 P **P** **09 52 41.2 -0.3**
comp=Z,5.4nm,0.9s,baz=136,slow=6.5,SNR=25
BRTR LR LR 10 26 36.1
comp=Z,94nm,20.6s,baz=132,slow=36
comp=Z,5.4nm,0.9s
BRTR Keskin Array B 76.34 313 *i* P **P** **09 52 41.5 0.0**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
MA2 Magadan 76.57 24 LR LR 10 32 02.9
comp=Z,24nm,19.4s,baz=218,slow=40
MA2 Magadan 76.57 24 P **P** **09 52 42.0 -0.2**
MA2 IAmb IAmb 09 52 44.2
comp=Z,20nm,1.2s
MA2 Magadan 76.57 24*ce* P **P** **09 52 42.3 +0.1**
MA2 pmax pmax
comp=Z,40nm,2.5s
ILGA Ilgaz 76.74 314 P **P** **09 52 43.7 -0.1**
SUR Sutherland 77.97 238 LR LR 10 24 19.9
comp=Z,52nm,19.5s,baz=132,slow=33
LPSR Galich'ya Gora 78.07 327 *eP* **P** **09 52 49.8 -0.9**
LPSR pmax pmax
comp=Z,9.0nm,1.0s
VNDA Vanda 78.13 169 P **P** **09 52 52.0 +1.3**
comp=Z,1.1nm,0.7s,baz=289,slow=7.0,SNR=8.5
VNDA LR LR 10 21 53.2
comp=Z,35nm,20.7s,baz=313,slow=32
comp=Z,1.1nm,0.7s
VNDA Vanda 78.13 169 P **P** **09 52 51.8 +1.2**
VNDA Vanda 78.13 169 P **P** **09 52 52.0 +1.3**
ELL Elmali 78.19 309 P **P** **09 52 51.4 -0.6**
ELL Elmali 78.19 309 P **P** **09 52 51.4 -0.6**
ELL pmax pmax
comp=Z,38nm,0.9s
MDUB Mudurnu 78.35 313 P **P** **09 52 52.1 -0.7**
BORA Eskisehir 78.71 313 P **P** **09 52 53.4 -1.3**
BORA IAmb IAmb 09 54 25.6
comp=Z,9.9nm,0.8s
SEY Seymchan 79.24 22*ce* P **P** **09 52 55.5 -1.5**
SEY pmax pmax
comp=Z,7.0nm,0.9s
PRGR Permogore 79.52 337 *eP* **P** **09 52 57.8 -0.7**
TIXI Tiksi 79.79 9 LR LR 10 34 01.2
comp=Z,136nm,18.0s,baz=182,slow=40
MOS Moscow 80.15 329 *eP* **P** **09 53 01.8 -0.3**
MOS pmax pmax
comp=Z,37nm,0.7s
OBN Obninsk 80.42 328 P **P** **09 53 04.6 +1.1**
comp=Z,3.8nm,0.4s,baz=94,slow=12,SNR=6.9
comp=Z,3.8nm,0.4s
OBN Obninsk 80.42 328 *eP* **P** **09 53 03.3 -0.2**
OBN *e* 09 56 07.9
OBN pmax pmax
comp=Z,43nm,1.7s
TSUM Tsumeb 81.24 252 LR LR 10 25 26.4
comp=Z,73nm,19.0s,baz=150,slow=33
TIRR Tirgusor 81.53 316 ⇓P **P** **09 53 10.2 +0.5**
TIRR Tirgusor 81.53 316 P **P** **09 53 10.1 +0.5**
KLMR Klimovskoe 81.63 334 *eP* **P** **09 53 08.6 -1.2**
KLMR pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 81.63 334 *eP* **P** **09 53 08.6 -1.2**
KLMR AMP 09 53 12.3
comp=Z,21nm,1.2s
IDI Anoyia 81.74 307 LR LR 10 31 46.1
comp=Z,24nm,19.6s,baz=44,slow=37
CFR Carcaliu 81.93 317 ⇓P **P** **09 53 12.6 +0.9**
CFR Carcaliu 81.93 317 P **P** **09 53 12.6 +0.9**
SORM Soroca 82.66 320 ⇑P **P** **09 53 15.7 +0.1**
SORM Soroca 82.66 320 P **P** **09 53 15.6 +0.1**
AK05 Malin Array Si 82.90 323 P **P** **09 53 16.8 +0.1**
AK05 IAmb IAmb 09 53 17.7
comp=Z,11nm,0.9s
AKASG Malin Array Be 82.91 323 P **P** **09 53 16.5 -0.3**
comp=Z,4.5nm,0.8s,baz=85,slow=5.4,SNR=21
AKASG LR LR 10 34 30.7
comp=Z,24nm,18.6s,baz=55,slow=39
comp=Z,4.5nm,0.8s
AKASG Malin Array Be 82.91 323 *i* P **P** **09 53 16.6 -0.2**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 82.91 323 P **P** **09 53 16.6 -0.2**
AKBB IAmb IAmb 09 53 17.6
comp=Z,7.7nm,0.8s
AKBB Malin Array Si 82.91 323*ce* P **P** **09 53 15.6 -1.2**
VRI Vrincioaia 83.07 318 ⇓P **P** **09 53 19.2 +1.4**
VRI Vrincioaia 83.07 318 P **P** **09 53 19.2 +1.4**
PLOR Plostina 83.12 317 ⇓P **P** **09 53 19.4 +1.3**
PLOR Plostina 83.12 317 P **P** **09 53 19.3 +1.3**
MLR Muntele Rosu 83.50 317 ⇑P **P** **09 53 21.6 +1.5**
MLR Muntele Rosu 83.50 317 P **P** **09 53 19.5 -0.6**
MLR Muntele Rosu 83.50 317 P **P** **09 53 19.5 -0.6**
MLR pmax pmax
comp=Z,28nm,1.0s
BIZ Bicaz 83.78 318 ⇑P **P** **09 53 22.9 +1.5**
QSPA South Pole Qui 83.92 180 LR LR 10 25 08.3
comp=Z,60nm,21.5s,baz=304,slow=32
DOPR Dopca 84.00 317 ⇑P **P** **09 53 24.4 +1.9**
ARR Arges 84.36 317 ⇑P **P** **09 53 25.5 +1.0**
BURAR Bucovina Array 84.54 319 ⇓P **P** **09 53 27.3 +2.0**
BURAR Bucovina Array 84.54 319 P **P** **09 53 26.4 +1.1**
BURAR IAmb IAmb 09 53 28.4
comp=Z,13nm,0.8s
BURAR Bucovina Array 84.54 319 P **P** **09 53 27.3 +2.0**
BUR08 Bucovina Ar. S 84.56 319 P **P** **09 53 26.6 +1.1**
BUR08 IAmb IAmb 09 53 28.3
comp=Z,13nm,0.8s
VTS Vitosha 84.69 314 ⇑P **P** **09 53 27.1 +0.8**
VTS Vitosha 84.69 314 P **P** **09 53 26.5 +0.3**
VTS IAmb IAmb 09 53 27.9
comp=Z,7.6nm,0.8s
VTS Vitosha 84.69 314 P **P** **09 53 26.5 +0.3**
VTS pmax pmax
comp=Z,8.0nm,0.8s
MNK Minsk 84.88 326 *i* P **P** **09 53 26.0 -0.7**
MNK *i* 09 56 42.4
MNK *i* PPP PPP 09 58 35.4
MNK *i* S **S** **10 03 46.7 -5.9**
MNK pmax pmax
comp=E,2.0nm,0.7s
MNK pmax pmax
comp=Z,16nm,0.7s
MNK MLR MLR
comp=E,28nm,20.0s
MNK MLR MLR
comp=Z,75nm,20.0s
MNK Minsk 84.88 326 *i* P **P** **09 53 26.0 -0.7**
comp=E,2.0nm,0.7s
MNK *i* P **P** **09 53 26.0 -0.7**
MNK *i* P **P** **09 53 26.0 -0.7**
comp=Z,16nm,0.7s,baz=107
MNK *i* PP **PP** **09 56 42.5 -1.1**
MNK *i* PPP PPP 09 58 35.4
MNK *i* S **S** **10 03 46.8 -5.9**
MNK *i* SS SS 10 09 36.6 +11
MNK *i* SSS SSS 10 13 31.4
MNK *i* LQ LQ 10 22 37.4
MNK *i* LR LR 10 26 49.2
MNK *i* LRM MLR 10 32 49.2
comp=E,28nm,20.3s
MNK *i* LRM MLR 10 32 49.2
comp=Z,75nm,20.3s
NACGM Naroch 85.61 326*ce* P **P** **09 53 29.6 -0.8**
baz=107
DRGR 86.00 318 ⇑P **P** **09 53 33.6 +0.9**
DRGR 86.00 318 P **P** **09 53 33.5 +0.9**
BOVS Bovan 86.00 314 ⇑P **P** **09 53 32.7 +0.1**
BZS Buzias 86.48 316 ⇑P **P** **09 53 36.0 +1.1**
BZS Buzias 86.48 316 P **P** **09 53 36.0 +1.1**
TROLL Troll, Antarti 86.70 198 P **P** **09 53 38.6 +2.9**
KOLS Kolonicke sedl 86.77 320 *eP* **P** **09 53 38.4 +2.1**
KOLS pmax pmax
comp=Z,22nm,0.9s
KOLS Kolonicke sedl 86.77 320 *eP* **P** **09 53 38.4 +2.1**
BILL Bilibino 86.82 20 *eP* **P** **09 53 35.0 -1.1**
BILL *e* 09 56 59.4
BILL pmax pmax
comp=Z,5.0nm,1.1s
DIVS Divibare 87.31 315 P **P** **09 53 38.7 -0.4**
DIVS IAmb IAmb 09 53 41.3
comp=Z,12nm,1.3s
PDG Podgorica 87.53 313 P **P** **09 53 39.3 -0.7**
PDG IAmb IAmb 09 53 41.6
comp=Z,8.6nm,0.9s
FIA1 FINESS Array S 87.86 332 P **P** **09 53 40.9 -0.3**
FIA1 IAmb IAmb 09 53 42.5
comp=Z,8.6nm,0.8s
FINES FINESS Array B 87.86 332 P **P** **09 53 42.1 +0.9**
comp=Z,5.6nm,0.7s,baz=100,slow=5.8,SNR=26
comp=Z,5.6nm,0.7s
FINES FINESS Array B 87.86 332 P **P** **09 53 41.8 +0.6**
FINES FINESS Array B 87.86 332 *i* P **P** **09 53 42.0 +0.8**
FINES pmax pmax
comp=Z,4.0nm,0.5s
PSZ Piszkesteto 88.11 318 P **P** **09 53 41.4 -1.4**
PSZ IAmb IAmb 09 53 44.3
comp=Z,5.7nm,0.9s
PSZ Piszkesteto 88.11 318 P **P** **09 53 41.4 -1.4**
PSZ pmax pmax
comp=Z,6.0nm,0.9s
SNAA Sanae 88.41 198 *i* P **P** **09 53 44.7 +0.9**
SNAA pmax pmax
comp=Z,2.0nm,1.1s
OJC Ojcow 88.61 321 P **P** **09 53 43.7 -1.4**
OJC Ojcow 88.61 321 P **P** **09 53 43.7 -1.4**
OJC pmax pmax
comp=Z,7.0nm,1.1s
MORH Mrgy, Hungar 88.63 317 ⇑P **P** **09 53 46.6 +1.3**
MORH Mrgy, Hungar 88.63 317 P **P** **09 53 45.8 +0.6**
TIP Timpagrande 88.86 309 ⇑P **P** **09 53 47.5 +0.9**
TIP Timpagrande 88.86 309 P **P** **09 53 45.7 -0.8**
TIP IAmb IAmb 09 53 49.4
comp=Z,13nm,1.2s
KOVH Kovagotottos 88.98 316 P **P** **09 53 46.8 -0.1**
CEL Celeste 89.39 308 P **P** **09 53 48.8 -0.3**
CUC Castrocucco 89.70 310 P **P** **09 53 49.4 -1.1**
CUC IAmb IAmb 09 53 51.9
comp=Z,7.4nm,0.9s
MODS Modra-Piesok 89.91 319 *eP* **P** **09 53 53.0 +1.8**
MODS pmax pmax
comp=Z,27nm,1.2s
MODS Modra-Piesok 89.91 319 *eP* **P** **09 53 53.0 +1.8**
MORC Moravsky Berou 89.97 320 ⇑P **P** **09 53 53.2 +1.7**
MORC Moravsky Berou 89.97 320 P **P** **09 53 51.5 0.0**
MORC Moravsky Berou 89.97 320 P **P** **09 53 51.5 0.0**
MORC pmax pmax
comp=Z,4.0nm,0.9s
ZST Bratislava 90.00 318 *eP* **P** **09 53 52.9 +1.3**
ZST Bratislava 90.00 318 *eP* **P** **09 53 52.9 +1.3**
ARCES ARCESS Array B 90.40 340 P **P** **09 53 54.0 +1.1**
comp=Z,6.8nm,0.8s,baz=98,slow=5.0,SNR=25
ARCES LR LR 10 38 29.2
comp=Z,49nm,20.8s,baz=112,slow=38
comp=Z,6.8nm,0.8s
ARCES ARCESS Array B 90.40 340 P **P** **09 53 53.4 +0.4**
ARCES IAmb IAmb 09 53 55.1
comp=Z,8.6nm,0.9s
ARCES ARCESS Array B 90.40 340 P **P** **09 53 54.1 +1.1**
VNA1 Neumayer--Stat 90.40 198 P **P** **09 53 56.7 +3.6**
VRAC Vranov 90.50 319 LR LR 10 35 50.9
comp=Z,17nm,21.8s,baz=75,slow=36
GEC2 GERESS Array S 92.33 319 P **P** **09 54 01.9 -0.7**
GERES GERESS Array B 92.33 319 P **P** **09 54 03.2 +0.7**
comp=Z,1.0nm,0.7s,baz=103,slow=5.9,SNR=10
comp=Z,1.0nm,0.7s
GERES GERESS Array B 92.33 319 P **P** **09 54 02.6 0.0**
GERES GERESS Array B 92.33 319 P **P** **09 54 03.2 +0.7**
CLUD Cludinico 92.62 316 P **P** **09 54 03.1 -0.7**
HFS Hagfors 93.56 330 LR LR 10 39 32.7
comp=Z,42nm,18.8s,baz=88,slow=38
KEST Kesra 94.33 305 P **P** **09 54 14.4 +2.4**
comp=Z,5.1nm,0.9s,baz=302,slow=1.4,SNR=5.4
comp=Z,5.1nm,0.9s
SPITS Spitsbergen Ar 94.66 348 LR LR 10 42 44.9
comp=Z,44nm,19.6s,baz=63,slow=39
DAVOX Davos/Dischmat 94.71 316 LR LR 10 38 27.0
comp=Z,19nm,21.9s,baz=83,slow=36
NOA NORSAR Array B 94.85 331 LR LR 10 39 55.7
comp=Z,36nm,20.2s,baz=95,slow=37
NVAR Mina Array Bea 132.44 42 PKP **PKiKP** **10 00 08.4 +0.2**
comp=Z,1.2nm,0.8s,baz=263,slow=2.2,SNR=8.0
BDFB Brasilia 141.98 235 PKP **PKPdf** **10 00 26.6 +1.5**
comp=Z,1.8nm,0.5s,baz=117,slow=2.6,SNR=4.2
BDFB Brasilia 141.98 235 PKIKP **PKPdf** **10 00 26.6 +1.5**
P38A Dawn 144.32 19 PKPdf PKPbc 10 00 26.6 -0.1
P38A Dawn 144.32 19 P PKPbc 10 00 27.0 +0.2
baz=336,SNR=9.1
M57A Sunshine Farm, 144.81 357 P **PKPdf** **10 00 28.8 -0.5**
baz=4.4
M57A P **PKPdf** **10 00 28.8 -0.5**
baz=4.4
ODNJ Ogdensburg 144.84 353 P **PKPdf** **10 00 28.7 -0.6**
baz=8.7
P40A Paris 144.85 17 P PKPbc 10 00 28.7 +0.2
baz=338,SNR=6.4
N47A Urbana 144.91 8 P **PKPab** **10 00 28.3 -0.2**
baz=350,SNR=5.1
N47A P **PKPab** **10 00 28.3 -0.2**
baz=350,SNR=5.1
MSTX Muleshoe 144.92 35 PKPdf **PKPdf** **10 00 29.6 -0.3**
MSTX Muleshoe 144.92 35 P **PKPdf** **10 00 29.4 -0.4**
baz=317
U32A Winter Ranch, 145.00 28 P **PKPdf** **10 00 29.6 -0.2**
baz=325
ELIS Ellis County 145.05 29 **PKPab** **10 00 27.7 -1.6**
PSDB Penn State Uni 145.08 359 P **PKPdf** **10 00 29.4 -0.4**
baz=1.6
SFIN Lafayette 145.19 10 P **PKPdf** **10 00 29.9 0.0**
baz=347,SNR=7.5
N51A Ashland 145.21 4 P **PKPbc** **10 00 29.2 -0.3**
baz=355
N51A P **PKPbc** **10 00 29.2 -0.3**
baz=355
N58A Sunbury 145.28 356 P **PKPdf** **10 00 30.2 +0.1**
baz=5.1,SNR=7.7
N58A P **PKPdf** **10 00 30.2 +0.1**
baz=5.1,SNR=7.7
N53A Lisbon 145.39 2 P **PKPdf** **10 00 30.4 +0.1**
baz=358,SNR=8.0
N53A P **PKPdf** **10 00 30.4 +0.1**
baz=358,SNR=8.0
P43A Skaggs, Pawnee 145.40 14 P **PKPdf** **10 00 30.5 +0.1**
baz=343,SNR=9.0
SSPA Standing Stone 145.54 358 **PKPab** **10 00 31.0 +0.1**
SSPA Standing Stone 145.54 358 P **PKPab** **10 00 31.2 +0.3**
baz=3.1,SNR=8.7
PANJ Princeton 145.55 353 P **PKPab** **10 00 30.7 -0.2**
baz=8.7,SNR=5.1
O48B Farmland 145.60 7 P **PKPdf** **10 00 30.6 -0.1**
baz=350
T35A Sooner Cattle 145.63 24 **PKPab** **10 00 31.6 +0.2**
T35B Sooner Cattle 145.63 24 P **PKPab** **10 00 31.6 +0.2**
baz=330,SNR=7.3
UPAO U. Pittsburgh 145.73 1 P **PKPab** **10 00 31.5 -0.1**
baz=359
O49A Covington 145.76 6 PKPdf **PKPdf** **10 00 30.6 -0.3**
TUPA Temple Univers 145.81 354 P **PKPab** **10 00 32.1 +0.3**
baz=7.9
ACSO Alum Creek Sta 145.85 5 P **PKPab** **10 00 32.1 0.0**
baz=354,SNR=6.2
P46A Rosedale 145.91 10 P **PKPab** **10 00 32.1 -0.1**
baz=347,SNR=6.2
R40A Maddies Statio 145.93 18 P **PKPbc** **10 00 31.7 -0.2**
baz=337,SNR=13
O54A Avella 146.03 1 P **PKPab** **10 00 32.9 +0.2**
baz=359,SNR=5.2
O54A P **PKPab** **10 00 32.9 +0.2**
baz=359,SNR=5.2
S39A Bolivar 146.14 20 P **PKPbc** **10 00 32.3 -0.3**
baz=335,SNR=13
Q44A Meyer Farm, Va 146.22 13 P **PKPab** **10 00 33.1 -0.4**
baz=343
P48A Milroy 146.34 8 PKPdf **PKPdf** **10 00 30.5 -1.5**
P48A Milroy 146.34 8 P **PKPdf** **10 00 30.7 -1.3**
baz=350
P48A P **PKPdf** **10 00 30.7 -1.3**
baz=350
WMOK Wichita Mounta 146.43 29 P **PKPab** **10 00 34.0 -0.5**
baz=324,SNR=5.9
CCM Cathedral Cave 146.45 17 **PKPbc** **10 00 33.3 -0.2**
CCM Cathedral Cave 146.45 17 PKP2 **PKPbc** **10 00 33.3 -0.2**
CCM Cathedral Cave 146.45 17 P **PKPbc** **10 00 33.3 -0.2**
baz=339,SNR=11
OLIL Olney 146.59 12 P **PKPbc** **10 00 34.0 +0.1**
baz=345
P53A Whipple 146.69 2 P **PKPbc** **10 00 34.0 -0.1**
baz=357
P53A P **PKPbc** **10 00 34.0 -0.1**
baz=357
P57A Homestead Farm 146.70 358 PKPbc **PKPbc** **10 00 34.4 +0.2**
P57A Homestead Farm 146.70 358 P **PKPbc** **10 00 34.4 +0.2**
baz=3.0
P57A P **PKPbc** **10 00 34.4 +0.2**
baz=3.0
U38A Gravette 146.88 22 PKPbc **PKPbc** **10 00 34.2 -0.5**
U38A Gravette 146.88 22 P **PKPbc** **10 00 34.3 -0.5**
baz=333
Q52A Bidwell 147.16 4 PKPbc **PKPbc** **10 00 35.6 +0.1**
Q52A Bidwell 147.16 4 P **PKPbc** **10 00 34.7 -0.8**
baz=355
Q52A P **PKPbc** **10 00 34.7 -0.8**
baz=355
HHAR Hobbs 147.19 22 **PKPbc** **10 00 35.6 -0.1**
HHAR Hobbs 147.19 22 P **PKPbc** **10 00 35.5 -0.2**
baz=333
S44A Carbondale 147.32 14 P **PKPbc** **10 00 36.3 +0.3**
baz=342,SNR=5.2
TX31 Lajitas Ar. Si 147.59 42 P **PKPdf** **10 00 35.7 +1.2**
baz=311,SNR=13
TXAR Lajitas Array 147.59 42 PKP **PKPdf** **10 00 35.4 +0.9**
comp=Z,5.1nm,0.8s,baz=285,slow=1.0,SNR=21
TXAR PKPbc **PKPab** **10 00 38.3 -1.0**
comp=Z,5.1nm,0.8s,baz=284,slow=0.7,SNR=29
TXAR Lajitas Array 147.59 42 PKPbc **PKPbc** **10 00 36.5 -0.6**
TXAR Lajitas Array 147.59 42 PKP2 **PKPdf** **10 00 35.4 +0.9**
R50A Paris 147.65 7 **PKPbc** **10 00 36.4 -0.5**
ABTX Abilene, Hawle 147.66 33 PKPbc **PKPbc** **10 00 37.7 +0.6**
ABTX Abilene, Hawle 147.66 33 P **PKPbc** **10 00 36.4 -0.7**
baz=321
R53A Hurricane 147.81 3 P **PKPbc** **10 00 37.2 -0.1**
baz=356
R53A P **PKPbc** **10 00 37.2 -0.1**
baz=356
PBMO Poplar Bluff 147.87 16 P **PKPbc** **10 00 36.6 -0.9**
baz=340,SNR=8.9
S51A Beattyville 148.37 6 P **PKPbc** **10 00 38.4 -0.5**
baz=353
S51A P **PKPbc** **10 00 38.4 -0.5**
baz=353
S57A Dark Hollow, R 148.44 359 P **PKPbc** **10 00 39.7 +0.7**
baz=1.4
S57A P **PKPbc** **10 00 39.7 +0.7**
baz=1.4
T47A Sharon Grove 148.47 11 P **PKPbc** **10 00 38.4 -0.7**
baz=346,SNR=5.1
MIAR Mount Ida 148.86 23 PKPbc **PKPbc** **10 00 40.1 -0.1**
MIAR Mount Ida 148.86 23 PKP2 **PKPbc** **10 00 40.1 -0.1**
MIAR Mount Ida 148.86 23 P **PKPbc** **10 00 40.5 +0.3**
baz=333
WVT Waverly 149.15 13 **PKPbc** **10 00 40.8 -0.1**
WVT Waverly 149.15 13 PKP2 **PKPbc** **10 00 40.8 -0.1**
WVT Waverly 149.15 13 P **PKPbc** **10 00 40.5 -0.3**
baz=344,SNR=22
U49A Red Boiling Sp 149.18 10 P **PKPbc** **10 00 40.5 -0.4**
baz=348,SNR=5.1
T59A Double "B" Far 149.18 357 **PKPbc** **10 00 41.2 +0.4**
T59A Double "B" Far 149.18 357 P **PKPbc** **10 00 41.0 +0.1**
baz=4.1
T59A P **PKPbc** **10 00 41.0 +0.1**
baz=4.1
JCT Junction City 149.19 36 PKPbc **PKiKP** **10 00 41.8 -0.6**
JCT Junction City 149.19 36 PKP2 **PKiKP** **10 00 41.8 -0.6**

JCT	**Junction City**	**149.19**	**36**	P		**PKiKP**	**10 00 42.2**	**-0.2**
	baz=318							
T57A	**Hurt**	**149.21**	**359**			**PKPbc**	**10 00 40.9**	**-0.1**
T57A	**Hurt**	**149.21**	**359**	P		**PKPbc**	**10 00 41.0**	**0.0**
	baz=0.8							
T57A				P		**PKPbc**	**10 00 41.0**	**0.0**
	baz=0.8							
TZTN	**Tazewell**	**149.45**	**6**			**PKPbc**	**10 00 42.0**	**+0.3**
TZTN	**Tazewell**	**149.45**	**6**	P		**PKPbc**	**10 00 41.9**	**+0.3**
	baz=352,SNR=5.8							
CLTN	**Cedars of Leba**	**149.49**	**11**			**PKPbc**	**10 00 41.5**	**-0.2**
V48A	**Smith Brothers**	**149.74**	**12**	P		**PKPbc**	**10 00 41.9**	**-0.4**
	baz=346,SNR=5.4							
WLAR	**White Oak Lake**	**149.80**	**23**			**PKiKP**	**10 00 43.5**	**-0.1**
V51A	**Loudon**	**150.09**	**8**	P		**PKPbc**	**10 00 41.9**	**-1.3**
	baz=351,SNR=5.8							
V52A	**Sevierville**	**150.14**	**6**	P		**PKPbc**	**10 00 43.3**	**0.0**
	baz=352,SNR=8.6							
TKL	**Tuckaleechee C**	**150.30**	**7**	P		**PKPbc**	**10 00 43.7**	**0.0**
	baz=352,SNR=10							
V53A	**Saluda**	**150.39**	**5**	P		**PKiKP**	**10 00 44.3**	**-0.5**
	baz=354,SNR=9.8							
V53A				P		**PKiKP**	**10 00 44.3**	**-0.5**
	baz=354,SNR=9.8							
CPCT	**Cooper Cave**	**150.41**	**8**			**PKiKP**	**10 00 44.4**	**-0.3**
PTLB	**Pontes e Lacer**	**150.52**	**223**	PKPbc		**PKPbc**	**10 00 44.9**	**+0.2**
W52A	**Murphy**	**150.84**	**7**	P		**PKiKP**	**10 00 45.4**	**-0.3**
	baz=351,SNR=6.1							
Y45A	**Yeager Farm, C**	**150.85**	**17**			**PKiKP**	**10 00 45.3**	**-0.3**
X48A	**Hartselle**	**150.93**	**13**			**PKPbc**	**10 00 44.0**	**-1.2**
X48A	**Hartselle**	**150.93**	**13**	P		**PKPbc**	**10 00 43.8**	**-1.4**
	baz=345							
833A	**Chaparral WMA,**	**151.00**	**38**			**PKPbc**	**10 00 44.9**	**-0.7**
833A	**Chaparral WMA,**	**151.00**	**38**	P		**PKiKP**	**10 00 46.6**	**+0.4**
	baz=316							
KMSC	**Kings Mountain**	**151.02**	**3**	P		**PKPbc**	**10 00 45.0**	**-0.4**
	baz=357							
CASEE	**Lake Jocassee**	**151.05**	**6**	P		**PKiKP**	**10 00 46.0**	**-0.1**
	baz=353,SNR=6.1							
W57A	**Gilead**	**151.05**	**1**			**PKiKP**	**10 00 45.9**	**-0.1**
PAULI	**Pauline**	**151.31**	**4**	P		**PKPbc**	**10 00 46.2**	**+0.1**
	baz=356,SNR=5.2							
BIRD	**Birdtown, Kers**	**151.55**	**1**			**PKiKP**	**10 00 46.8**	**-0.2**
BIRD	**Birdtown, Kers**	**151.55**	**1**	P		**PKiKP**	**10 00 46.9**	**-0.2**
	baz=358							
Y49A	**Blount Mountai**	**151.64**	**12**	P		**PKPbc**	**10 00 46.9**	**-0.1**
	baz=346							
HKT	**Hockley**	**151.76**	**31**			**PKPbc**	**10 00 47.0**	**-0.2**
HKT	**Hockley**	**151.76**	**31**	PKIKP		**PKPbc**	**10 00 47.0**	**-0.2**
HODGE	**Hodges**	**151.87**	**5**	P		**PKiKP**	**10 00 48.0**	**+0.3**
	baz=355,SNR=5.4							
JSC	**Jenkinsville**	**151.88**	**3**	P		**PKiKP**	**10 00 47.9**	**+0.1**
	baz=357							
Y52A	**Lilburn**	**152.03**	**8**	P		**PKiKP**	**10 00 48.5**	**+0.3**
	baz=351							
Y52A				P		**PKiKP**	**10 00 48.5**	**+0.3**
	baz=351							
VILB	**Vilhena**	**152.99**	**226**	PKPdf		**PKPdf**	**10 00 40.7**	**-2.5**
VILB						**PKPbc**	**10 00 50.6**	**+0.1**
LPAZ	**La Paz**	**155.04**	**207**	PKP		**PKPdf**	**10 00 48.9**	**+2.1**
	comp=Z,1.0nm,0.8s,baz=54,slow=4.2,SNR=4.4							
LPAZ				PKPbc		**pPKPdf**	**10 00 57.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=17,slow=15,SNR=4.4							
LPAZ	**La Paz**	**155.04**	**207**	PKIKP		**PKPdf**	**10 00 48.9**	**+2.1**
ETMB	**Extrema**	**159.32**	**220**	PKPdf		**PKPdf**	**10 00 49.5**	**-1.9**
ETMB				PKPab		**PKPab**	**10 01 28.1**	**-0.7**

IDC 05 09:44:48.4±3.2, 53°.58N×87°.95E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=31.1km s-min=18.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.89**	**282**	*i*		09 56 30.0	
	0.2nm,1.0s,baz=97,slow=310,SNR=12						
ZALV	**Zalesovo Beam**	**1.89**	**282**	Pn	Pn	09 45 21.5	-0.5
	2.1nm,0.3s,baz=99,slow=18,SNR=18						
ZALV				Lg	Lg	09 45 48.5	
	2.7nm,0.3s,baz=101,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**6.52**	**247**	Pn	Pn	09 46 26.2	+0.8
	0.1nm,0.3s,baz=64,slow=15,SNR=10.0						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**7.71**	**210**	Pn	Pn	09 46 42.9	+1.1
	0.1nm,0.3s,baz=30,slow=13,SNR=4.5						
MKAR				Lg	Lg	09 48 50.5	
	0.1nm,0.3s,baz=22,slow=28,SNR=2.9						
	0.2nm,0.4s						

*IDC **05** 10:43:34.2±0.5, 29°.17S×61°.27E, h0km, mb4.3/14, mbtmp4.3/15, ML4.7/1, MS3.8/55, Error ellipse: s-maj=20.5km s-min=15.8km az=58.0*

*NEIC **05** 10:43:35.4±2.3, 29°.12S±0°.07×61°.22E±0°.1, h10km±1km, mb4.7/40, Error ellipse: s-maj=16.4km s-min=10.9km az=237.0*

*GCMT **05** 10:43:37.4±0.3, 29°.16S±0°.02×60°.89E±0°.04, h18km±1km, MW4.8/75, Moment Tensor Solution. s21,c24; s75,c92; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.00±.16; Mθθ 1.96±.11; Mϕϕ 0.04±.10; Mrθ 0.51±.21; Mϕθ 0.72±.07; Mϕr 0.45±.30; Best double couple: M◎2.20900×10^16^ NP1:ϕs 244.00000°, δ54.00000°, λ -99.00000°. NP2: ϕs 79.00000°, δ37.00000°, λ -78.00000°. Principal axes: T 2.2920, Plg8.0000°, Azm341.0000°; N -0.1590, Plg7.0000°, Azm250.0000°; P -2.1250, Plg79.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 10:43:35.1±0.4, 29°.12S±0°.07×61°.22E±0°.09, h10km, n116, σ1§14/68, mb4.7/31, MS3.8/54, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.34**	**327**	Pn	**Pn**	**10 45 47.0**	**-3.0**
ROCAM	**Rodrigues Isla**	**9.52**	**12**	Pn	**Pn**	**10 45 50.6**	**-1.7**
FOMA	**Nahampoana Res**	**13.34**	**285**	Pn	**Pn**	**10 46 41.2**	**-3.3**
VOI	**Vohitsoka**	**14.86**	**296**	Pn	**Pn**	**10 47 04.4**	**-1.1**
ABPO	**Ambohimpanom**	**16.24**	**305**	Pn	**Pn**	**10 47 22.7**	**-0.9**
OPO	**Ambohidratompo**	**16.56**	**306**	Pn	**Pn**	**10 47 27.1**	**-0.6**
	0.3nm,0.3s,baz=116,slow=11,SNR=14						
OPO				LR	LR	10 52 22.9	
	comp=Z,245nm,19.3s,baz=30,slow=32						
	6.8nm,0.4s						
CRZF	**Crozet Islands**	**18.78**	**200**	P	**P**	**10 47 53.2**	**-1.2**
CRZF				IAmb	IAmb	10 47 55.2	
	comp=Z,60nm,1.1s						
H08S1	**Diego Carcia H**	**23.85**	**29**	T	T	11 13 49.6	
	baz=203,slow=76,SNR=31						
H08S2	**Diego Garcia H**	**23.85**	**29**	T	T	11 13 50.3	
	baz=203,slow=76,SNR=18						
H08S3	**Diego Garcia H**	**23.87**	**29**	T	T	11 13 51.2	
	baz=203,slow=76,SNR=50						
BOSA	**Boshof**	**31.42**	**262**	LR	LR	11 00 59.6	
	comp=Z,145nm,18.2s,baz=104,slow=33						
LBTB	**Lobatse**	**31.90**	**269**	LR	LR	11 01 23.4	
	comp=Z,72nm,18.5s,baz=110,slow=34						
LSZ	**Lusaka**	**33.41**	**287**	LR	LR	11 03 47.6	
	comp=Z,66nm,18.0s,baz=153,slow=36						
LSZ	**Lusaka**	**33.41**	**287**	P	**P**	**10 50 14.4**	**+0.2**
LSZ				IAmb	IAmb	10 50 16.7	
	comp=Z,11nm,1.1s						
SUR	**Sutherland**	**34.73**	**254**	LR	LR	11 02 04.3	
	comp=Z,133nm,18.2s,baz=115,slow=32						
KMBO	**Kilima Mbogo**	**36.01**	**316**	LR	LR	11 02 42.0	
	comp=Z,255nm,19.3s,baz=96,slow=32						
MAW	**Mawson**	**38.53**	**179**	P	**P**	**10 50 57.7**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=347,slow=9.9,SNR=6.9						
MAW				LR	LR	11 03 38.1	
	comp=Z,206nm,18.7s,baz=356,slow=31						
	comp=Z,2.5nm,0.7s						
MAW	**Mawson**	**38.53**	**179**	P	**P**	**10 50 57.6**	**+0.2**
MBAR	**Mbarara**	**40.61**	**309**	LR	LR	11 06 30.2	
	comp=Z,171nm,20.1s,baz=122,slow=34						
PALK	**Palikekele**	**40.76**	**30**	LR	LR	11 04 13.6	
	comp=Z,108nm,18.2s,baz=310,slow=30						
TSUM	**Tsumeb**	**40.82**	**274**	LR	LR	11 07 51.2	
	comp=Z,65nm,19.1s,baz=208,slow=36						
ATD	**Arta Tunnel**	**44.13**	**334**	LR	LR	11 07 05.9	
	comp=Z,243nm,21.0s,baz=160,slow=32						
H01W2	**Cape Leeuwin H**	**44.82**	**112**	T	T	11 39 26.8	
	baz=261,slow=74,SNR=21						
H01W3	**Cape Leeuwin H**	**44.82**	**111**	T	T	11 39 30.2	
	baz=261,slow=74,SNR=11						
H01W1	**Cape Leeuwin H**	**44.84**	**112**	T	T	11 39 28.1	
	baz=261,slow=74,SNR=24						
LEM	**Lembang**	**48.98**	**72**	LR	LR	11 09 12.0	
	comp=Z,44nm,18.3s,baz=166,slow=31						
WSAR	**Wadi Sarin**	**52.11**	**357**	LR	LR	11 09 18.0	
	comp=Z,78nm,21.2s,baz=189,slow=30						
PSA00	**Pilbara Seismi**	**53.06**	**96**	P	**P**	**10 52 52.4**	**-0.5**
RAYN	**Ar Rayn**	**54.48**	**342**	P	**P**	**10 53 03.4**	**+0.4**
RAYN				IAmb	IAmb	10 53 14.2	
	comp=Z,6.3nm,1.1s						
SNAA	**Sanae**	**54.53**	**200**	P	**P**	**10 53 02.5**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=106,slow=9.4,SNR=8.4						
SNAA				LR	LR	11 12 15.0	
	comp=Z,91nm,19.5s,baz=42,slow=32						
	comp=Z,1.7nm,0.8s						
SNAA	**Sanae**	**54.53**	**200**	P	**P**	**10 53 02.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**59.42**	**95**	P	**P**	**10 53 36.4**	**-1.9**
FITZ				IAmb	IAmb	10 53 37.7	
	comp=Z,6.7nm,1.2s						
CM31	**Chiang Mai Arr**	**59.70**	**42**	P	**P**	**10 53 39.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**59.70**	**42**	P	**P**	**10 53 41.4**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=228,slow=7.8,SNR=13						
CMAR				LR	LR	11 16 13.5	
	comp=Z,39nm,19.6s,baz=225,slow=33						
	comp=Z,1.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**59.70**	**42**	P	**P**	**10 53 38.2**	**-1.9**
QSPA	**South Pole Qui**	**61.04**	**180**	LR	LR	11 16 38.6	
	comp=Z,151nm,21.1s,baz=265,slow=32						
QSPA	**South Pole Qui**	**61.04**	**180**	P	**P**	**10 53 48.9**	**0.0**
QSPA				IAmb	IAmb	10 54 07.9	
	comp=Z,7.8nm,1.1s						
BBOO	**Buckleboo**	**63.02**	**114**	P	**P**	**10 54 01.8**	**-0.7**
EIL	**Elat**	**63.61**	**335**	LR	LR	11 18 21.2	
	comp=Z,125nm,19.3s,baz=93,slow=33						
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**10 54 09.0**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=256,slow=6.5,SNR=11						
VNDA				LR	LR	11 20 14.9	
	comp=Z,196nm,18.4s,baz=247,slow=34						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**10 54 09.1**	**+0.3**
ASAR	**Alice Springs**	**64.41**	**104**	P	**P**	**10 54 11.9**	**0.0**
	comp=Z,3.6nm,0.7s,baz=244,slow=6.2,SNR=48						
ASAR				LR	LR	11 18 25.2	
	comp=Z,44nm,19.7s,baz=256,slow=32						
	comp=Z,3.6nm,0.7s						
AS31	**Alice Springs**	**64.41**	**104**	P	**P**	**10 54 12.2**	**+0.3**
SBA	**Scott Base**	**64.95**	**167**	P	**P**	**10 54 15.8**	**+1.3**
SBA				IAmb	IAmb	10 54 36.4	
	comp=Z,4.9nm,1.0s						
LSA	**Lhasa**	**65.09**	**29**	P	**P**	**10 54 18.4**	**+1.9**
WRA	**Warramunga Arr**	**66.23**	**100**	P	**P**	**10 54 24.0**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=246,slow=5.9,SNR=30						
WRA				LR	LR	11 19 54.5	
	comp=Z,65nm,18.3s,baz=71,slow=33						
	comp=Z,3.5nm,0.9s						
WB2	**Warramunga Arr**	**66.24**	**100**	P	**P**	**10 54 24.1**	**+0.3**
WB2				IAmb	IAmb	10 54 29.7	
	comp=Z,7.1nm,1.0s						
WRAB	**Tennant Creek**	**66.24**	**100**	P	**P**	**10 54 24.7**	**+1.0**
WB0	**Warramunga Arr**	**66.34**	**100**	P	**P**	**10 54 25.1**	**+0.6**
WB0				IAmb	IAmb	10 54 25.6	
	comp=Z,7.0nm,1.2s						
WR0	**Warramunga Arr**	**66.39**	**100**	P	**P**	**10 54 24.4**	**-0.3**
WR0				IAmb	IAmb	10 54 38.8	
	comp=Z,6.8nm,1.0s						
MMAI	**Mount Meron Ar**	**66.46**	**336**	LR	LR	11 19 57.9	
	comp=Z,93nm,20.2s,baz=330,slow=33						
STKA	**Stephens Creek**	**67.74**	**115**	P	**P**	**10 54 33.5**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=218,slow=6.7,SNR=4.8						
STKA				LR	LR	11 20 46.9	
	comp=Z,44nm,18.6s,baz=210,slow=33						
	comp=Z,1.9nm,0.7s						
CHGR	**Chuyangaron**	**67.83**	**7**	P	**P**	**10 54 32.9**	**-0.6**
GAR	**Garm**	**68.29**	**8**	P	**P**	**10 54 35.1**	**-1.3**
GAR				IAmb	IAmb	10 54 58.0	
	comp=Z,5.2nm,0.8s						
GNI	**Garni**	**70.59**	**347**	LR	LR	11 23 58.4	
	comp=Z,121nm,19.8s,baz=174,slow=34						
TOA0	**Torodi Ar. Sit**	**71.16**	**297**	P	**P**	**10 54 55.0**	**+0.6**
TOA0				IAmb	IAmb	10 54 57.3	
	comp=Z,5.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**71.16**	**297**	P	**P**	**10 54 54.8**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=114,slow=5.6,SNR=13						
	comp=Z,4.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.16**	**297**	P	**P**	**10 54 55.0**	**+0.6**
KK31	**Karatay Array**	**72.37**	**7**	P	**P**	**10 55 02.3**	**+1.2**
KK31				IAmb	IAmb	10 55 03.3	
	comp=Z,6.5nm,1.1s						
KKAR	**Karatay Array**	**72.37**	**7**	P	**P**	**10 55 02.2**	**+1.1**
AAK	**Ala-Archa**	**72.44**	**10**	LR	LR	11 23 58.5	
	comp=Z,49nm,21.3s,baz=222,slow=33						
AAK	**Ala-Archa**	**72.44**	**10**	P	**P**	**10 55 02.3**	**+0.6**
AAK				IAmb	IAmb	10 55 04.3	
	comp=Z,4.4nm,0.9s						
DBIC	**Dimbokro**	**72.74**	**288**	P	**P**	**10 55 06.8**	**+2.8**
	comp=Z,9.6nm,1.0s,baz=107,slow=2.6,SNR=3.9						
DBIC				LR	LR	11 24 35.1	
	comp=Z,38nm,21.4s,baz=140,slow=34						
	comp=Z,9.6nm,1.0s						
BRTR	**Keskin Array B**	**73.14**	**338**	P	**P**	**10 55 08.0**	**+2.1**
	comp=Z,1.3nm,0.9s,baz=170,slow=7.5,SNR=7.4						
BRTR				LR	LR	11 24 01.0	
	comp=Z,60nm,21.5s,baz=133,slow=33						
	comp=Z,1.3nm,0.9s						
BRTR	**Keskin Array B**	**73.14**	**338**	P	**P**	**10 55 06.4**	**+0.5**
BR131	**Keskin Array S**	**73.14**	**338**	P	**P**	**10 55 05.3**	**-0.6**
BR131				IAmb	IAmb	10 55 09.3	
	comp=Z,8.3nm,1.4s						
KBZ	**Khabaz**	**74.41**	**346**	LR	LR	11 25 57.7	
	comp=Z,150nm,21.8s,baz=173,slow=34						
ENH	**Enshi**	**74.87**	**42**	P	**P**	**10 55 15.4**	**-0.7**
ENH				IAmb	IAmb	10 55 31.8	
	comp=Z,13nm,1.1s						
PMSA	**Palmer Station**	**77.24**	**201**	LR	LR	11 21 48.3	
	comp=Z,34nm,21.9s,baz=42,slow=30						
MAKZ	**Makanchi**	**77.86**	**14**	P	**P**	**10 55 33.5**	**+0.8**
MKAR	**Makanchi Array**	**77.92**	**15**	P	**P**	**10 55 33.5**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=184,slow=4.9,SNR=22						
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**77.92**	**15**	P	**P**	**10 55 33.3**	**+0.2**
ABKAR	**Akbulak array**	**78.03**	**359**	P	**P**	**10 55 34.3**	**+0.8**
ABKAR				IAmb	IAmb	10 55 35.0	
	comp=Z,5.1nm,0.9s						
AKTO	**Aktyubinsk**	**79.25**	**358**	LR	LR	11 28 02.2	
	comp=Z,47nm,21.0s,baz=175,slow=34						
VAE	**Valguarnera**	**79.44**	**324**	LR	LR	11 31 18.4	
	comp=Z,45nm,19.5s,baz=146,slow=36						
MLR	**Muntele Rosu**	**80.88**	**336**	LR	LR	11 31 51.6	
	comp=Z,48nm,18.5s,baz=167,slow=36						
KEST	**Kesra**	**80.90**	**320**	LR	LR	11 33 21.1	
	comp=Z,120nm,18.1s,baz=271,slow=37						
KURK	**Kurchatov**	**80.96**	**11**	P	**P**	**10 55 50.8**	**+1.4**
KURK				IAmb	IAmb	10 55 51.3	
	comp=Z,8.1nm,1.1s						
BELG	**Belogornoye**	**82.03**	**352**	LR	LR	11 35 18.2	
	comp=Z,35nm,18.1s,baz=136,slow=38						
BVAR	**Borovoye Array**	**82.18**	**6**	LR	LR	11 30 05.6	
	comp=Z,57nm,20.6s,baz=78,slow=34						
BRVK	**Borovoye**	**82.21**	**6**	P	**P**	**10 55 55.9**	**-0.1**
BURAR	**Bucovina Array**	**82.96**	**336**	P	**P**	**10 55 59.5**	**-0.7**
RPZ	**Rata Peaks**	**83.22**	**137**	LR	LR	11 25 18.3	
	comp=Z,159nm,19.0s,baz=266,slow=30						
AKASG	**Malin Array Be**	**84.36**	**340**	P	**P**	**10 56 07.1**	**0.0**
	comp=Z,0.5nm,0.4s,baz=147,slow=4.0,SNR=7.2						
AKASG				LR	LR	11 33 57.1	
	comp=Z,31nm,19.0s,baz=96,slow=36						
	comp=Z,0.5nm,0.4s						
AKBB	**Malin Array Si**	**84.36**	**340**	P	**P**	**10 56 07.2**	**+0.1**
ZAA0	**Zalesovo Array**	**85.21**	**14**	P	**P**	**10 56 11.8**	**+0.4**
ZAA0				IAmb	IAmb	10 56 22.7	
	comp=Z,6.7nm,1.1s						
ZALV	**Zalesovo Beam**	**85.21**	**14**	P	**P**	**10 56 12.1**	**+0.7**
	comp=Z,5.7nm,1.0s,baz=219,slow=3.8,SNR=11						
ZALV				LR	LR	11 30 55.6	
	comp=Z,37nm,18.2s,baz=228,slow=33						
	comp=Z,5.7nm,1.0s						
ZALV	**Zalesovo Beam**	**85.21**	**14**	P	**P**	**10 56 11.8**	**+0.4**
ARU	**Arti**	**85.23**	**359**	LR	LR	11 33 39.3	
	comp=Z,28nm,18.7s,baz=182,slow=35						
ARU	**Arti**	**85.23**	**359**	P	**P**	**10 56 12.6**	**+1.2**
OBN	**Obninsk**	**86.52**	**346**	LR	LR	11 34 58.0	
	comp=Z,13nm,19.1s,baz=178,slow=36						
SONM	**Songino Array**	**86.68**	**29**	LR	LR	11 32 54.4	
	comp=Z,66nm,20.6s,baz=60,slow=34						
SONM	**Songino Array**	**86.68**	**29**	P	**P**	**10 56 18.5**	**-0.5**
ULN	**Ulaanbaatar**	**86.98**	**29**	P	**P**	**10 56 19.3**	**-1.2**
ULN				IAmb	IAmb	10 56 31.7	
	comp=Z,5.5nm,1.1s						
VRAC	**Vranov**	**87.61**	**333**	LR	LR	11 35 57.1	
	comp=Z,20nm,19.0s,baz=152,slow=36						
MDT	**Midelt**	**87.67**	**310**	LR	LR	11 35 31.5	
	comp=Z,79nm,18.9s,baz=154,slow=36						
KIRV	**Kirov**	**87.92**	**354**	LR	LR	11 35 40.3	
	comp=Z,43nm,18.7s,baz=171,slow=36						
DAVOX	**Davos/Dischmat**	**88.62**	**328**	LR	LR	11 36 33.9	
	comp=Z,20nm,19.9s,baz=86,slow=36						
URZ	**Urewera**	**90.14**	**135**	LR	LR	11 30 10.4	
	comp=Z,100nm,19.4s,baz=212,slow=31						
JNU	**Nakatsue**	**90.46**	**52**	LR	LR	11 38 08.0	
	comp=Z,99nm,18.2s,baz=48,slow=36						
KSRS	**Korea Array**	**91.02**	**47**	LR	LR	11 37 23.2	
	comp=Z,14nm,18.0s,baz=105,slow=36						
KLMR	**Klimovskoe**	**91.38**	**350**	*eP*	**P**	**10 56 39.9**	**-0.8**
KLMR				AMP		10 56 44.9	
	comp=Z,10.0nm,1.0s						
ESDC	**Sonseca Array**	**91.39**	**316**	P	**P**	**10 56 43.2**	**+1.9**
	comp=Z,3.2nm,1.2s,baz=122,slow=3.7,SNR=9.2						
ESDC				LR	LR	11 36 15.9	
	comp=Z,46nm,21.9s,baz=137,slow=35						
	comp=Z,3.2nm,1.2s						
ESDC	**Sonseca Array**	**91.39**	**316**	P	**P**	**10 56 40.8**	**-0.6**
ESDC				IAmb	IAmb	10 56 46.9	
	comp=Z,5.9nm,1.3s						
PINNC	**Pines Island,**	**92.35**	**117**	P	**P**	**10 56 44.2**	**-2.1**
RCBR	**Riachuelo**	**93.38**	**261**	LR	LR	11 32 09.9	
	comp=Z,44nm,19.6s,baz=313,slow=31						
FINES	**FINESS Array B**	**94.63**	**344**	LR	LR	11 39 50.2	
	comp=Z,32nm,20.3s,baz=65,slow=36						
HFS	**Hagfors**	**97.08**	**338**	LR	LR	11 40 45.3	
	comp=Z,27nm,19.8s,baz=163,slow=35						
PLCA	**Paso Flores**	**97.37**	**215**	LR	LR	11 32 03.7	
	comp=Z,23nm,20.8s,baz=156,slow=30						
MJAR	**Matsushiro Arr**	**97.38**	**52**	LR	LR	11 40 48.2	
	comp=Z,13nm,19.8s,baz=180,slow=35						
NOA	**NORSAR Array B**	**98.58**	**338**	LR	LR	11 41 51.1	
	comp=Z,28nm,19.4s,baz=135,slow=35						
CPUP	**Villa Florida**	**99.30**	**233**	LR	LR	11 34 57.8	
	comp=Z,14nm,19.9s,baz=184,slow=31						
YKA	**Yellowknife Ar**	**146.50**	**356**	PKPbc	**PKPdf**	**11 03 15.5**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=353,slow=3.4,SNR=22						
PDAR	**Pinedale Array**	**164.48**	**334**	PKP	**PKPdf**	**11 03 39.1**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=153,slow=1.7,SNR=8.5						
TXAR	**Lajitas Array**	**166.79**	**275**	PKP	**PKPdf**	**11 03 42.6**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=127,slow=2.9,SNR=11						
NVAR	**Mina Array Bea**	**170.70**	**358**	PKP	**PKPdf**	**11 03 45.0**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=266,slow=1.4,SNR=4.2						

*IDC **05** 11:08:54.0±2.1, 40°.45S×174°.54E, h70km±22km, mb3.3/2, mbtmp3.6/4, Error ellipse: s-maj=33.8km s-min=16.3km az=139.0*

*NOU **05** 11:08:53.8, 40°.49S×174°.46E, h90km, MLv4.5/10, Cook Strait, New Zealand*

*WEL **05** 11:08:55.0, 40°.5S±3°×17°.5E±°, h45km±9km, M4.3/147, ML4.5/48, MLv4.3/147, Error ellipse: s-maj=0.0km s-min=0.0km az=64.0*

*NEIC **05** 11:08:54.2±1.9, 40°.44S±0°.04×174°.50E±0°.06, h59km±3km, mb4.4/7, Error ellipse: s-maj=6.9km s-min=6.1km az=138.0*

ISC 05 11:08:54.8±0.8, 40°.49S±0°.03×174°.49E±0°.03, h71km±7km, n197, σ1§32/218, mb4.4/7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIW	**Kapiti Island**	**0.49**	**139**	P	**Pn**	**11 09 06.8**	**-0.9**
DUWZ	**D'Urville Isla**	**0.53**	**234**	P	**Pn**	**11 09 06.9**	**-1.2**
OGWZ	**Otaki Gorge**	**0.61**	**123**	P	**Pn**	**11 09 08.2**	**-0.7**
OHWZ	**Ohakea**	**0.69**	**66**	P	**Pn**	**11 09 09.3**	**-0.3**
TCW	**Tory Channel**	**0.74**	**193**	P	**Pn**	**11 09 09.7**	**-0.5**
TCW				S	**Sn**	**11 09 20.7**	**-0.9**
CAW	**Cannon Point**	**0.76**	**145**	P	**Pn**	**11 09 09.9**	**-0.6**
CAW				S	**Sn**	**11 09 22.2**	**+0.2**
WEL	**Wellington**	**0.82**	**165**	P	**Pn**	**11 09 11.0**	**-0.2**
WEL				S	**Sn**	**11 09 24.6**	**+1.3**
WAZ	**Wanganui**	**0.82**	**28**	P	**Pn**	**11 09 10.9**	**-0.4**
SNZO	**South Karori**	**0.84**	**169**		**Pn**	**11 09 11.2**	**-0.2**
SNZO				Sn	**Sn**	**11 09 23.2**	**-0.4**
SNZO	**South Karori**	**0.84**	**169**	P	**Pn**	**11 09 11.6**	**+0.2**
MRZ	**Mangatainoka R**	**0.85**	**102**	P	**Pn**	**11 09 10.7**	**-0.8**
MRZ				S	**Sn**	**11 09 23.8**	**0.0**
HOWZ	**Holdsworth Sta**	**0.88**	**118**	P	**Pn**	**11 09 10.9**	**-1.0**
HOWZ				S	**Sn**	**11 09 23.6**	**-1.0**
POWZ	**Post Office Ro**	**0.98**	**85**	P	**Pn**	**11 09 12.4**	**-0.7**
POWZ				S	**Sn**	**11 09 28.4**	**+1.7**
MTW	**Mount Morrison**	**1.02**	**

RATZ	Rangitukua	1.90	32	P		Pn	11 09 25.7	+0.6
KAHZ	Kahuranaki	1.96	70	P		Pn	11 09 24.8	-1.1
MCHZ	McNeill Hill	1.99	59	P		Pn	11 09 25.5	-0.8
HIZ	Hauiti	1.99	8			Pn	11 09 25.9	-0.5
HIZ	Hauiti	1.99	8	P		Pn	11 09 26.1	-0.3
HIZ	Hauiti	1.99	8	P		Pn	11 09 26.5	+0.1
HATZ	Hinemaiaia	2.02	38	P		Pn	11 09 27.4	+0.6
WATZ	Wairara	2.02	29	P		Pn	11 09 27.2	+0.4
BKZ	Black Stump Fm	2.03	50	Pn		Pn	11 09 25.9	-1.1
BKZ	Black Stump Fm	2.03	50	P		Pn	11 09 25.8	-1.1
BKZ	Black Stump Fm	2.03	50	P		Pn	11 09 26.3	-0.7
KHZ	Kahutara	2.05	200	Pn		Pn	11 09 27.1	-0.1
KHZ	Kahutara	2.05	200	P		Pn	11 09 27.1	-0.1
KHZ	Kahutara	2.05	200	P		Pn	11 09 27.3	+0.1
WHTZ	Whakaora	2.14	32	P		Pn	11 09 30.2	+1.7
MRHZ	Matea Rd	2.22	43	P		Pn	11 09 28.2	-1.3
KUTZ	Kaahu Road	2.25	28	P		Pn	11 09 30.4	+0.5
NMHZ	Naumai	2.26	53	P		Pn	11 09 29.0	-1.1
ARHZ	Aropaoanui	2.28	58	P		Pn	11 09 33.7	+3.4
TLZ	Tolley Road	2.30	21	P		Pn	11 09 30.4	-0.3
WPRZ	Whakapapatarin	2.35	34	P		Pn	11 09 30.6	-0.7
DSZ	Denniston Nort	2.39	237	P		Pn	11 09 31.5	-0.2
ALRZ	Allen Road	2.40	37	P		Pn	11 09 30.8	-1.1
PRRZ	Plateau Road	2.47	37	P		Pn	11 09 31.7	-1.2
GRRZ	Galatos Road	2.48	31	P		Pn	11 09 34.6	+1.6
HRRZ	Handcock Road	2.51	34	P		Pn	11 09 34.6	+1.1
WHHZ	Waihua	2.54	57	P		Pn	11 09 32.8	-1.0
RAHZ	Arahi	2.54	53	P		Pn	11 09 32.0	-1.8
HSRZ	Hossack Road	2.56	33	P		Pn	11 09 35.4	+1.2
RRRZ	Republican Roa	2.66	37	P		Pn	11 09 34.9	-0.5
HLRZ	Highlands Stat	2.66	33	P		Pn	11 09 40.0	+4.6
UTU	Utuhina	2.66	30	P		Pn	11 09 37.6	+2.1
MUGZ	Murupara	2.67	42	P		Pn	11 09 33.6	-2.1
GVZ	Greta Valley S	2.71	203	P		Pn	11 09 35.2	-0.8
NGRZ	Ngongotaha	2.72	29	P		Pn	11 09 37.3	+1.0
TARZ	Mount Tarawera	2.74	35	P		Pn	11 09 36.4	-0.2
SNGZ	Shannon Statio	2.78	53	P		Pn	11 09 35.3	-1.8
OMRZ	Omania	2.79	32	P		Pn	11 09 38.5	+1.2
MKRZ	Makatiti	2.80	34	P		Pn	11 09 39.3	+1.9
KARZ	Kaharoa	2.82	29	P		Pn	11 09 37.9	+0.3
LTZ	Lake Taylor	2.83	215	Pn		Pn	11 09 37.1	-0.7
LTZ	Lake Taylor	2.83	215	P		Pn	11 09 36.9	-0.9
KNZ	Kokohu	2.86	60	P		Pn	11 09 35.4	-2.7
TOZ	Tahuroa Road	2.86	16	P		Pn	11 09 37.9	-0.3
KMRZ	Kaimai	2.87	24	P		Pn	11 09 39.3	+1.0
EDRZ	Edgecumbe	2.95	37	P		Pn	11 09 40.0	+0.6
URZ	Urewera	3.01	43	P		Pn	11 09 37.6	-2.6
	28nm,0.4s,baz=228,slow=7.0,SNR=44							
URZ				S		Sn	11 10 13.8	-1.4
	66nm,0.3s,baz=351,slow=19,SNR=6.4							
URZ	Urewera	3.01	43	P		Pn	11 09 37.6	-2.6
URZ	Urewera	3.01	43	P		Pn	11 09 38.3	-1.9
RAGZ	Rawiri	3.01	50	P		Pn	11 09 39.7	-0.6
AMCZ	Amberley	3.02	206	P		Pn	11 09 39.9	-0.3
MARZ	Manawahe	3.02	35	P		Pn	11 09 39.2	-1.1
TGRZ	Tauranga	3.08	27	P		Pn	11 09 40.8	-0.3
RIGZ	Rimuhau	3.09	56	P		Pn	11 09 38.8	-2.5
MWZ	Matawai	3.19	49	P		Pn	11 09 39.9	-2.7
INZ	Inchbonnie	3.19	225	P		Pn	11 09 42.1	-0.6
WHRZ	Whale Island	3.26	37	P		Pn	11 09 47.0	+3.3
TKGZ	Te Karaka	3.31	53	P		Pn	11 09 41.5	-2.7
OXZ	Oxford	3.37	212			Pn	11 09 43.3	-1.8
OXZ	Oxford	3.37	212	P		Pn	11 09 43.2	-2.1
OKCZ	Okains Bay	3.40	198	P		Pn	11 09 43.7	-1.8
MKAZ	Moumakai	3.42	9	P		Pn	11 09 45.4	-0.3
AWAZ	Awhitu Peninsu	3.42	2	P		Pn	11 09 45.2	-0.5
MQZ	McQueen's Vall	3.49	202	Pn		Pn	11 09 44.1	-2.6
CNGZ	Carnagh Statio	3.50	56	P		Pn	11 09 44.0	-2.9
ETAZ	East Tamaki Re	3.55	6	P		Pn	11 09 47.2	-0.3
WTAZ	Waiatarua	3.55	1	P		Pn	11 09 47.4	-0.2
TWGZ	Tauwhareparae	3.56	51	P		Pn	11 09 45.2	-2.4
AKCZ	Akaroa Harbour	3.58	199	P		Pn	11 09 46.4	-1.5
EPAZ	Eden Park BICE	3.61	3	P		Pn	11 09 48.5	+0.2
HBAZ	Herne Bay Bore	3.64	3	P		Pn	11 09 48.6	-0.1
RACZ	Rakaia	3.68	208	P		Pn	11 09 47.1	-2.1
RVAZ	Riverhead Bore	3.71	1	P		Pn	11 09 49.0	-0.7
MBAZ	Motutapu North	3.73	5	P		Pn	11 09 49.7	-0.2
WVZ	Waitaha Valley	3.81	226	P		Pn	11 09 50.4	-0.7
KUZ	Kuaotunu	3.86	15	P		Pn	11 09 50.9	-0.9
ABAZ	Army Bay	3.89	4	P		Pn	11 09 52.1	-0.1
WACZ	Wakanui South	3.97	209	P		Pn	11 09 51.4	-1.9
RPZ	Rata Peaks	4.11	217	P		Pn	11 09 54.8	-0.5
	9.8nm,0.4s,baz=224,slow=3.8,SNR=18							
RPZ				S		Sn	11 10 38.7	-3.4
	62nm,0.5s,baz=294,slow=23,SNR=12							
RPZ	Rata Peaks	4.11	217	Pn		Pn	11 09 54.9	-0.3
RPZ	Rata Peaks	4.11	217	P		Pn	11 09 54.7	-0.5
RPZ	Rata Peaks	4.11	217	P		Pn	11 09 54.7	-0.5
MXZ	Matakaoa Point	4.17	47	Pn		Pn	11 09 53.2	-2.7
MXZ	Matakaoa Point	4.17	47	P		Pn	11 09 53.2	-2.7
GCSZ	Gaunt Creek Bo	4.20	226	P		Pn	11 09 56.8	+0.4
ARCZ	Arundel	4.24	214	P		Pn	11 09 56.1	-0.9
GRZ	Great Barrier	4.30	10	P		Pn	11 09 57.1	-0.7
WCZ	Waipu Caves	4.54	359	P		Pn	11 10 00.7	-0.4
FOZ	Fox Glacier	4.62	227	Pn		Pn	11 10 00.4	-1.2
FOZ	Fox Glacier	4.62	227	P		Pn	11 10 01.2	-0.9
TMZ	Timaru	4.67	212	P		Pn	11 10 00.9	-1.9
LBZ	Lake Benmore	5.03	218	Pn		Pn	11 10 06.3	-1.4
LBZ	Lake Benmore	5.03	218	P		Pn	11 10 06.7	-1.1
OUZ	Omahuta	5.31	352	Pn		Pn	11 10 11.1	-0.4
OUZ	Omahuta	5.31	352	P		Pn	11 10 11.3	-0.2
OUZ	Omahuta	5.31	352	P		Pn	11 10 11.4	-0.2
ODZ	Otahua Downs	5.36	211	Pn		Pn	11 10 10.0	-2.2
ODZ	Otahua Downs	5.36	211	P		Pn	11 10 10.2	-2.0
ODZ	Otahua Downs	5.36	211	P		Pn	11 10 10.2	-2.0
WKZ	Wanaka	5.92	221	Pn		Pn	11 10 18.9	-1.1
WKZ	Wanaka	5.92	221	P		Pn	11 10 22.4	+2.5
EAZ	Earnscleugh	6.08	217	P		Pn	11 10 20.1	-2.0
MSZ	Milford Sound	6.40	227	P		Pn	11 10 27.9	+1.5
MLZ	Mavora Lakes	6.75	222	Pn		Pn	11 10 29.9	-1.4
MLZ	Mavora Lakes	6.75	222	P		Pn	11 10 34.7	+3.4
WHZ	Wether Hill Ro	7.21	219	Pn		Pn	11 10 38.1	+0.6
WHZ	Wether Hill Ro	7.21	219	P		Pn	11 10 39.5	+1.6
DCZ	Deep Cove	7.32	225	Pn		Pn	11 10 39.8	+0.8
DCZ	Deep Cove	7.32	225	P		Pn	11 10 40.2	+1.2
CTZ	Chatham Island	7.37	119	P		Pn	11 10 37.9	-1.6
MSVF	Nonsavu	22.88	9	P		P	11 13 50.7	-1.9
MSVF				IAmb		IAmb	11 14 10.3	
	comp=Z,16nm,1.3s							
ASAR	Alice Springs	37.89	284	P		P	11 16 04.7	-0.5
	comp=Z,0.3nm,0.5s,baz=124,slow=6.4,SNR=13							
	comp=Z,0.3nm,0.5s							
WB2	Warramunga Arr	39.84	289	P		P	11 16 21.2	-0.3
WRA	Warramunga Arr	39.85	289	P		P	11 16 20.9	-0.6
	comp=Z,0.5nm,0.5s,baz=125,slow=8.3,SNR=19							
	comp=Z,0.5nm,0.5s							
WRA	Warramunga Arr	39.85	289	P		P	11 16 21.4	-0.2
WB0	Warramunga Arr	39.92	289	P		P	11 16 21.8	-0.4
WB0				IAmb		IAmb	11 17 01.1	
	comp=Z,7.9nm,1.3s							
QSPA	South Pole Qui	49.64	180	P		P	11 17 40.8	+1.9
QSPA				IAmb		IAmb	11 17 42.2	
	comp=Z,5.4nm,1.4s							
BELA	Belgrano 2	60.58	173	P		P	11 18 58.5	+1.1
BELA				IAmb		IAmb	11 19 18.1	
	comp=Z,4.2nm,1.4s							
SNAA	Sanae	68.13	181	P		P	11 19 47.8	+1.0
SNAA				IAmb		IAmb	11 19 56.7	
	comp=Z,8.2nm,1.5s							
ARCES	ARCESS Array B	146.65	341	PKPbc		PKPdf	11 28 24.6	-0.9
	comp=Z,0.5nm,0.6s,baz=33,slow=2.9,SNR=5.3							
TORD	Torodi Ar. Bea	152.04	195	PKPbc		PKPbc	11 28 41.7	-0.7
	comp=Z,0.4nm,0.8s,baz=137,slow=3.2,SNR=1.5							
TORD				PKPab		PKPab	11 28 51.5	-0.4
	comp=Z,0.4nm,0.6s,baz=185,slow=4.6,SNR=4.1							

JMA ***05*** *11:20:44.8±0.2,25°N±2°×122°5E±0°6,h114km±2km, MV2.8/13,NW OFF ISHIGAKIJIMA IS*
TAP ***05*** *11:20:44.5,24°74N×122°51E,h118km,ML3.9,D*
ISC 05 11:20:45.7±1.4,24°69N±0°04×122°51E±0°02,h109km±8km, n91,σ0°73/168,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	Yonagunijimaku	0.46	121	P		Pn	11 21 02.3	+0.2
JYNG				eS		Sn	11 21 15.3	+0.9
YOJ	Yonaguni jima	0.51	116	eP		Pn	11 21 02.6	+0.2
	baz=128							
YOJ				eS		Sn	11 21 15.8	+0.8
	baz=128							
YOJ	Yonaguni jima	0.51	116	P		Pn	11 21 02.6	+0.2
YOJ				S		Sn	11 21 15.8	+0.8
EGS		0.55	287	P		Pn	11 21 02.9	+0.2
	baz=274							
EGS				eS		Sn	11 21 16.8	+1.4
	baz=274							
TWB1	Santiao Chiao	0.57	304	eP		Pn	11 21 02.9	+0.1
	baz=291							
TWB1				eS		Sn	11 21 15.9	+0.2
	baz=291							
TWC	Suao	0.61	263	eP		Pn	11 21 03.0	-0.1
	baz=255							
TWC				S		Sn	11 21 15.9	-0.3
	baz=255							
NTC	Toucheng	0.64	285	P		Pn	11 21 03.1	-0.3
	baz=276							
NTC				eS		Sn	11 21 16.0	-0.6
	baz=276							
TIPB	Shuangxi	0.68	294	eP		Pn	11 21 03.8	0.0
	baz=286							
TIPB				eS		Sn	11 21 17.3	-0.1
	baz=286							
ILA	Ilan	0.70	276	P		Pn	11 21 04.1	+0.2
	baz=268							
ILA				S		Sn	11 21 18.2	+0.7
	baz=268							
SXI1	Grass Mountain	0.70	305	eP		Pn	11 21 03.9	-0.1
	baz=297							
SXI1				eS		Sn	11 21 17.6	-0.1
	baz=297							
EWUT	Wuta	0.71	250	eP		Pn	11 21 03.3	-0.6
	baz=246							
EWUT				eS		Sn	11 21 17.1	-0.6
	baz=246							
NDS	Dongshan	0.72	266	eP		Pn	11 21 03.2	-0.9
	baz=261							
NDS				S		Sn	11 21 17.2	-0.8
	baz=261							
ENA	Nanau	0.75	250	*i* P		Pn	11 21 04.5	+0.2
	baz=243							
ENA				eS		Sn	11 21 19.4	+1.1
	baz=243							
NWF	Wu-fen Shan	0.76	300	*i* P		Pn	11 21 04.3	-0.2
	baz=288							
NWF				S		Sn	11 21 18.9	+0.2
	baz=288							
TWE	Neicheng	0.77	272	P		Pn	11 21 04.4	-0.1
	baz=272							
TWE				eS		Sn	11 21 18.7	+0.1
	baz=272							
FUSB	Fushanzhiwuyua	0.84	275	eP		Pn	11 21 05.1	-0.1
	baz=276							
FUSB				S		Sn	11 21 19.2	-0.7
	baz=276							
ENTT	Nioudou	0.86	267	P		Pn	11 21 04.8	-0.6
	baz=266							
ENTT				eS		Sn	11 21 19.6	-0.5
	baz=266							
TWA	Mucha	0.89	289	eP		Pn	11 21 05.4	-0.3
	baz=278							
TWA				eS		Sn	11 21 20.1	-0.6
	baz=278							
LATG	Datong	0.91	260	eP		Pn	11 21 06.2	+0.3
	baz=252							
LATG				eS		Sn	11 21 21.2	0.0
	baz=252							
NDT	Datong Townshi	0.91	265	P		Pn	11 21 05.0	-0.9
	baz=263							
NDT				eS		Sn	11 21 21.8	+0.7
	baz=263							
NWLT	Wulai	0.92	276	eP		Pn	11 21 05.7	-0.3
	baz=276							
NWLT				eS		Sn	11 21 20.5	-0.7
	baz=276							
NHDH	Xindian Distri	0.94	287	P		Pn	11 21 05.2	-0.8
	baz=284							
NHDH				eS		Sn	11 21 20.9	-0.6
	baz=284							
ETL	Fush Village	0.96	237	eP		Pn	11 21 06.2	-0.3
	baz=234							
ETL				eS		Sn	11 21 21.3	-0.8
	baz=234							
YM01	YM01	0.97	298	P		Pn	11 21 06.3	-0.1
	baz=288							
YM01				eS		Sn	11 21 21.8	-0.4
	baz=288							
TAP	Taipei	0.98	291	eP		Pn	11 21 06.8	+0.4
	baz=281							
TAP				eS		Sn	11 21 21.6	-0.6
	baz=281							
NACB	Ninganchiao	0.98	239	P		Pn	11 21 06.1	-0.5
	baz=232							
NACB				eS		Sn	11 21 21.9	-0.3
	baz=232							
TWY	Chenhua	1.01	305	S		Sn	11 21 23.3	+0.5
	baz=296							
PCYT	Pengchaiyu	1.02	337	P		Pn	11 21 06.9	0.0
	baz=328							
PCYT				eS		Sn	11 21 24.0	+1.1
	baz=328							
ANP	Anpu	1.02	299	eP		Pn	11 21 06.8	-0.3
	baz=288							
ANP				eS		Sn	11 21 22.0	-1.3
	baz=288							
TWD	Chiawan	1.03	234	P		Pn	11 21 07.0	-0.1
	baz=229							
TWD				eS		Sn	11 21 23.4	+0.2
	baz=229							
YHNB	Yeheng	1.03	269	eP		Pn	11 21 07.4	+0.2
	baz=271							
YHNB				eS		Sn	11 21 23.4	0.0
	baz=271							
NSK	Sanguang	1.05	269	P		Pn	11 21 06.3	-1.0
	baz=271							
NSK				eS		Sn	11 21 22.7	-1.0
	baz=271							
ETLH	Xiulin Townshi	1.05	243	P		Pn	11 21 07.2	-0.2
	baz=236							
ETLH				eS		Sn	11 21 23.9	+0.1
	baz=236							
NNSB	Datong	1.06	256	*i* P		Pn	11 21 07.6	+0.1
	baz=249							
NNSB				S		Sn	11 21 23.9	0.0
	baz=249							
NNS	Nan Shan	1.06	257	P		Pn	11 21 06.9	-0.7
	baz=249							
NNS				eS		Sn	11 21 23.4	-0.7
	baz=249							
NTST	Danshui	1.07	296	eP		Pn	11 21 06.9	-0.6
	baz=287							
NTST				eS		Sn	11 21 23.6	-0.4
	baz=287							
TWS1	Kuangyinshan	1.07	293	eP		Pn	11 21 07.3	-0.1
	baz=283							
TWS1				S		Sn	11 21 23.8	-0.2
	baz=283							
HWA	Hwalien	1.09	229	P		Pn	11 21 07.4	-0.3
	baz=220							
HWA				eS		Sn	11 21 25.6	+1.3
	baz=220							
IRIF	Iriomote-Funau	1.17	107	P		Pn	11 21 08.5	0.0
IRIF				S		Sn	11 21 25.4	-0.5
NCU	National Centr	1.23	283	eP		Pn	11 21 09.2	0.0
	baz=286							
NCU				S		Sn	11 21 27.6	+0.5
	baz=286							
FUSS	Fushou	1.23	249	eP		Pn	11 21 09.9	+0.4
	baz=241							
FUSS				eS		Sn	11 21 27.5	-0.1
	baz=241							
NCUH	Zhongli	1.23	283	eP		Pn	11 21 09.0	-0.3
	baz=286							
NCUH				eS		Sn	11 21 27.4	+0.2
	baz=286							
WHF	Hehuan Shan	1.26	245	eP		Pn	11 21 10.1	+0.1
	baz=242							
WHF				eS		Sn	11 21 28.3	-0.1
	baz=242							
NFF	Wufeng Townshi	1.27	268	eP		Pn	11 21 09.0	-0.8
	baz=268							
NFF				eS		Sn	11 21 26.8	-1.2
	baz=268							
TWT	Tachien	1.29	251	eP		Pn	11 21 11.0	+0.9
	baz=242							
TWT				eS		Sn	11 21 30.2	+1.6
	baz=242							
TDCB	Techi	1.31	251	eP		Pn	11 21 11.0	+0.7
	baz=243							
TDCB				eS		Sn	11 21 29.1	+0.3
	baz=243							
ESL	Shilin	1.31	229	eP		Pn	11 21 09.6	-0.7
	baz=234							
ESL				eS		Sn	11 21 27.6	-1.2
	baz=234							
HATJ	Hateruma jima	1.34	118	P		Pn	11 21 10.8	+0.3
HATJ				S		Sn	11 21 29.6	+0.3
LIOB	Emei	1.36	268	eP		Pn	11 21 10.8	+0.1
	baz=266							
LIOB				eS		Sn	11 21 29.7	-0.1
	baz=266							
CHGB	Renai	1.37	243	eP		Pn	11 21 11.6	+0.5
	baz=241							
CHGB				eS		Sn	11 21 30.5	+0.2
	baz=241							
NSTT	Nanjuang	1.37	268	eP		Pn	11 21 10.7	-0.2
	baz=265							
NSTT				eS		Sn	11 21 30.2	+0.2
	baz=265							
SBCB	Hsinchu	1.39	275	eP		Pn	11 21 11.3	+0.3
	baz=272							
SBCB				eS		Sn	11 21 30.2	-0.2
	baz=272							
HSN	Hsinchu	1.40	275	eP		Pn	11 21 10.9	-0.3
	baz=265							
HSN				eS		Sn	11 21 30.0	-0.6
	baz=265							
EGFH	Guangfu	1.42	224	eP		Pn	11 21 11.2	-0.3
	baz=218							
EGFH				eS		Sn	11 21 30.8	-0.2
	baz=218							
OWD	Renai	1.42	239	P		Pn	11 21 11.7	+0.1
	baz=234							
OWD				eS		Sn	11 21 30.5	-0.7
	baz=234							
JKRS	Kuro-shima	1.44	108	S		Sn	11 21 31.8	+0.4
WUSB	Renai	1.45	242	P		Pn	11 21 12.2	+0.3
	baz=240							
WUSB				eS		Sn	11 21 32.1	+0.3
	baz=240							
WHP	Taichung City	1.48	254	P		Pn	11 21 12.9	+0.7
	baz=252							
WHP				eS		Sn	11 21 33.2	+0.7
	baz=252							
JIJ	Ishigaki jima	1.52	102	P		Pn	11 21 12.5	-0.1
JIJ				S		Sn	11 21 32.3	-0.9
HGSD	Ruisui	1.55	220	P		Pn	11 21 12.4	-0.6
	baz=215							
HGSD				eS		Sn	11 21 34.8	+1.0
	baz=215							
VWDT	VWDT	1.56	234	P		Pn	11 21 13.3	+0.2
	baz=228							
VWDT				eS		Sn	11 21 34.2	+0.2
	baz=228							
NMLH	Miaoli	1.57	265	eP		Pn	11 21 13.0	-0.3
	baz=262							
NMLH				eS		Sn	11 21 34.0	-0.2
	baz=262							
WCS	Beigang Elemen	1.59	247	eP		Pn	11 21 13.1	-0.3
	baz=241							
WCS				eS		Sn	11 21 34.7	+0.1
	baz=241							
EHY	Hungye	1.60	223	P		Pn	11 21 12.6	-1.0
	baz=216							
EHY				eS		Sn	11 21 33.5	-1.4
	baz=216							
NSY	Sanyi	1.61	261	eP		Pn	11 21 13.9	+0.1
	baz=258							
NSY				eS		Sn	11 21 35.6	+0.4
	baz=258							
SSLB	Suanglung	1.68	238	eP		Pn	11 21 15.3	+0.6
	baz=234							
SSLB				eS		Sn	11 21 38.7	+2.0
	baz=234							
TYC	Yuchr	1.70	243	eP		Pn	11 21 15.6	+0.8
	baz=244							
TYC				eS		Sn	11 21 38.7	+1.7
	baz=244							
YULB	Yu-li	1.70	221	eP		Pn	11 21 13.6	-1.3
	baz=227							
YULB				eS		Sn	11 21 35.6	-1.5
	baz=227							
EYUL	Yuli	1.72	219	eP		Pn	11 21 15.1	-0.1
	baz=226							
WDJ	Dajia District	1.74	259	eP		Pn	11 21 15.8	+0.5
	baz=264							
WHYT	Xinyi Township	1.81	237	eP		Pn	11 21 18.2	+1.9
	baz=231							
WHYT				eS		Sn	11 21 41.3	+1.8
	baz=231							
WJS	Zhushan	1.84	242	eP		Pn	11 21 17.1	+0.5
	baz=250							
WJS				eS		Sn	11 21 42.6	+2.4
	baz=250							
WNT	Mingjian	1.85	244	eP		Pn	11 21 18.5	+1.8
	baz=243							
WNT				eS		Sn	11 21 42.8	+2.4
	baz=243							
FULB	Fuli	1.85	217	eP		Pn	11 21 16.6	-0.2
	baz=212							
FULB				eS		Sn	11 21 39.9	-0.7
	baz=212							
YUS	Yu-Shan	1.86	230	eP		Pn	11 21 17.9	+0.6
	baz=223							
YUS				eS		Sn	11 21 41.6	+0.2
	baz=223							
WCHH	Zhanghua	1.88	252	eP		Pn	11 21 16.8	-0.3
	baz=249							
ALS	Alishan	1.95	233	eP		Pn	11 21 19.2	+0.9
	baz=227							
ALS				eS		Sn	11 21 44.9	+1.8
	baz=227							
JTJ	Tarama	2.00	91	P		Pn	11 21 18.8	+0.3
JTJ				S		Sn	11 21 43.1	-0.5
CHN5	Tsauling	2.00	237	eP		Pn	11 21 18.4	-0.2
	baz=245							
CHN5				eS		Sn	11 21 44.6	+0.8
	baz=245							
ELDTW	Lidau	2.02	223	eP		Pn	11 21 18.6	-0.4
	baz=220							
ELDTW				eS		Sn	11 21 44.0	-0.5
	baz=220							
EDH	Donghe	2.04	213	eP		Pn	11 21 19.1	0.0
	baz=209							
EDH				eS		Sn	11 21 44.0	-0.5
	baz=209							
WDLH	Douliu	2.06	241	eP		Pn	11 21 19.9	+0.6
	baz=248							
WRL	Guolierlin Hig	2.10	248	eP		Pn	11 21 18.3	-1.5
	baz=251							
LONT	Longtian	2.18	216	eP		Pn	11 21 20.1	-0.8
	baz=215							
STYH	Taoyuan	2.19	227	eP		Pn	11 21 20.9	-0.2
	baz=219							
CHN4	Tsaushan	2.20	233	eP		Pn	11 21 21.1	-0.1
	baz=232							
TPUB	Ta-pu	2.21	232	eP		Pn	11 21 20.7	-0.6
	baz=230							
LDUT	Ludao	2.22	206	eP		Pn	11 21 20

30nm,0.3s
SHO *i* S **Sg** **11 36 46.5 +0.1**
SHO A A 11 36 50.0
250nm,0.2s
SHO A A 11 36 50.0
60nm,0.2s
YUK **Yuzh-Kuril'sk** **1.85 268** *i* P **Pn** **11 36 40.8 -0.3**
YUK AMB AMB 11 36 41.2
100nm,0.2s
YUK *i* S **Sn** **11 37 03.9 -1.1**
YUK A A 11 37 10.2
240nm,0.3s
YUK A A 11 37 10.2
290nm,0.3s
NEM2 **Nemuro 2** **2.09 249** *e*P **Pn** **11 36 44.2 -0.2**
NEM2 *e*S **Sn** **11 37 10.0 -1.0**
NMR **Nemuro--Hokkai** **2.10 250** *i* P **Pn** **11 36 44.2 -0.3**
NMR *i* S **Sn** **11 37 10.0 -1.1**
JRA **Rausu** **2.39 266** *e*P **Pn** **11 36 49.7 +1.2**
JRA *e*S **Sn** **11 37 19.4 +1.1**
JNSB **Nemuroshibetsu** **2.50 263** *e*P **Pn** **11 36 51.5 +1.5**
JKHN **Kushirohamanak** **2.59 247** *e*P **Pn** **11 36 51.0 -0.3**
JNK **Nakash** **2.74 260** *e*P **Pn** **11 36 53.8 +0.4**
JNK *e*S **Sn** **11 37 26.3 -0.6**
JAK **Akkeshi** **2.94 248** *e*P **Pn** **11 36 56.1 0.0**
JAK *e*S **Sn** **11 37 31.3 -0.6**
JAR **Ashorobuto** **3.48 258** *e*P **Pn** **11 37 05.0 +1.5**
JCH **Churui** **3.99 249** *e*P **Pn** **11 37 11.9 +1.4**
JNBK **Urakawa-nobuka** **4.54 248** *e*P **Pn** **11 37 19.4 +1.3**

IDC 05 12:03:23.3±4.5, 13°48S×165°90E, h0km, mb3.7/3, mbtmp3.7/3, MS3.1/1, Error ellipse: s-maj=224.5km s-min=33.0km az=141.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**12.44**	**111**	LR	LR	12 10 08.5	
	comp=Z,78nm,18.8s,baz=198,slow=33						
WRA	**Warramunga Arr**	**30.87**	**254**	P	P	12 09 41.9	+0.2
	0.8nm,0.8s,baz=85,slow=9.3,SNR=3.8						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**31.91**	**247**	P	P	12 09 50.7	-0.2
	0.3nm,0.7s,baz=73,slow=9.6,SNR=8.2						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**85.76**	**18**	P	P	12 16 04.0	0.0
	0.7nm,0.6s,baz=236,slow=5.3,SNR=9.1						
	0.7nm,0.6s						

*NEIC **05** 12:04:13.7±2.2, 29°.26S±0°.06×61°.0E±0°.1, h10km±1km, mb4.6/9, Error ellipse: s-maj=16.8km s-min=9.6km az=113.0*
*IDC **05** 12:04:14.2±1.5, 29°.39S×61°.13E, h0km, mb3.9/6, mbtmp3.9/6, MS3.3/7, Error ellipse: s-maj=58.1km s-min=28.4km az=29.0*
ISC 05 12:04:14.8±0.6, 29°39S±0°.10×61°02E±0°.10, h14km, n34, σ1s45/20, mb4.1/10, MS3.2/7, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.48**	**329**	Pn	Pn	12 06 27.7	-3.3
ROCAM	**Rodrigues Isla**	**9.82**	**13**	Pn	**Pn**	**12 06 32.5**	**-3.1**
FOMA	**Nahampoana Res**	**13.24**	**286**	Pn	**Pn**	**12 07 22.0**	**-0.5**
VOI	**Vohitsoka**	**14.82**	**297**	Pn	**Pn**	**12 07 43.8**	**-0.4**
AIS	**Amsterdam Isla**	**16.13**	**126**	Pn	**Pn**	**12 07 59.4**	**-1.7**
CRZF	**Crozet Islands**	**18.46**	**200**	P	**P**	**12 08 29.4**	**-0.6**
CRZF				IAmb	IAmb	12 08 48.9	
	comp=Z,50nm,1.0s						
H08S1	**Diego Carcia H**	**24.16**	**29**	T	T	12 34 12.7	
	baz=203,slow=76,SNR=13						
H08S2	**Diego Garcia H**	**24.17**	**29**	T	T	12 34 13.3	
	baz=203,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**24.18**	**29**	T	T	12 34 14.2	
	baz=203,slow=76,SNR=19						
POGA	**Pongola**	**25.84**	**267**	P	**P**	**12 09 44.9**	**-1.0**
POGA				IAmb	IAmb	12 10 12.6	
	comp=Z,8.7nm,1.0s						
SOE	**Somerset East**	**30.47**	**255**	P	**P**	**12 10 26.5**	**-0.8**
SOE				IAmb	IAmb	12 11 04.6	
	comp=Z,19nm,1.1s						
BOSA	**Boshof**	**31.21**	**263**	LR	LR	12 21 21.6	
	comp=Z,49nm,19.2s,baz=70,slow=33						
LBTB	**Lobatse**	**31.73**	**269**	LR	LR	12 20 36.7	
	comp=Z,31nm,20.4s,baz=109,slow=31						
SUR	**Sutherland**	**34.50**	**255**	LR	LR	12 23 21.4	
	comp=Z,43nm,18.1s,baz=144,slow=33						
KMBO	**Kilima Mbogo**	**36.09**	**317**	LR	LR	12 23 04.7	
	comp=Z,52nm,19.7s,baz=98,slow=31						
MAW	**Mawson**	**38.26**	**179**	LR	LR	12 24 18.1	
	comp=Z,42nm,19.7s,baz=358,slow=32						
MBAR	**Mbarara**	**40.65**	**309**	LR	LR	12 27 19.7	
	comp=Z,39nm,18.7s,baz=137,slow=34						
TSUM	**Tsumeb**	**40.67**	**274**	LR	LR	12 27 46.9	
	comp=Z,35nm,18.2s,baz=330,slow=35						
H01W2	**Cape Leeuwin H**	**44.88**	**111**	T	T	13 00 07.8	
	baz=262,slow=74,SNR=6.8						
H01W3	**Cape Leeuwin H**	**44.88**	**111**	T	T	13 00 08.7	
	baz=262,slow=74,SNR=4.1						
H01W1	**Cape Leeuwin H**	**44.90**	**111**	T	T	13 00 09.1	
	baz=262,slow=74,SNR=10						
SNAA	**Sanae**	**54.21**	**200**	P	**P**	**12 13 38.5**	**-1.1**
SNAA				IAmb	IAmb	12 13 39.6	
	comp=Z,7.9nm,1.5s						
CMAR	**Chiang Mai Arr**	**60.01**	**42**	P	**P**	**12 14 23.0**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=233,slow=8.9,SNR=2.2						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**60.77**	**180**	P	**P**	**12 14 25.9**	**-0.1**
QSPA				IAmb	IAmb	12 14 48.0	
	comp=Z,6.1nm,1.3s						
VNDA	**Vanda**	**63.84**	**166**	P	**P**	**12 14 47.1**	**+0.8**
ASAR	**Alice Springs**	**64.51**	**104**	P	**P**	**12 14 52.6**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=244,slow=6.5,SNR=12						
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**64.51**	**104**	P	**P**	**12 14 51.5**	**-0.1**
AS31	**Alice Springs**	**64.51**	**104**	P	**P**	**12 14 50.8**	**-0.8**
WRA	**Warramunga Arr**	**66.35**	**100**	P	**P**	**12 15 04.6**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=246,slow=5.8,SNR=6.2						
	comp=Z,1.0nm,0.8s						
WR0	**Warramunga Arr**	**66.51**	**100**	P	**P**	**12 15 03.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**71.13**	**298**	P	**P**	**12 15 35.6**	**+2.3**
	comp=Z,1.1nm,0.9s,baz=109,slow=5.3,SNR=4.7						
	comp=Z,1.1nm,0.9s						
MKAR	**Makanchi Array**	**78.22**	**15**	P	**P**	**12 16 14.5**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=204,slow=2.7,SNR=4.6						
	comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**85.51**	**14**	P	**P**	**12 16 53.9**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=242,slow=3.2,SNR=3.8						
	comp=Z,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**146.76**	**356**	PKPbc	**PKPbc**	**12 23 56.8**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=10,slow=3.8,SNR=3.1						

*NOU **05** 12:10:06.4, 38°.40S×175°.64E, h214km, mb4.0/9, North Island, New Zealand*
*WEL **05** 12:10:11.8±0.8, 38°S±6°×17°.6E±°, h162km±7km, M2.4/9, ML2.4/6, MLv2.4/9, Error ellipse: s-maj=0.0km s-min=0.0km az=101.8*
ISC 05 12:10:06.3±1.9, 38°.52S±0°.06×175°.65E±0°.06, h206km±10km, n67, σ1s63/74, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWVZ	**Taurewa**	**0.57**	**196**	P	**Pn**	**12 10 35.9**	**+1.4**
HIZ	**Hauiti**	**0.62**	**270**	P	**Pn**	**12 10 36.1**	**+1.5**
HIZ	**Hauiti**	**0.62**	**270**	P	**Pn**	**12 10 36.2**	**+1.6**
OTVZ	**Oturere**	**0.64**	**179**	P	**Pn**	**12 10 36.5**	**+1.6**
OTVZ				S	**S**	**12 10 56.3**	**-1.0**
SNVZ	**South Ngauruho**	**0.67**	**180**	P	**Pn**	**12 10 37.0**	**+2.0**
SNVZ				S	**S**	**12 10 56.3**	**-1.3**
MRHZ	**Matea Rd**	**0.68**	**118**	P	**Pn**	**12 10 36.0**	**+1.1**
MRHZ				S	**S**	**12 10 54.4**	**-2.8**
TUVZ	**Tukino**	**0.75**	**180**	P	**Pn**	**12 10 37.2**	**+1.8**
TUVZ				S	**S**	**12 10 56.5**	**-1.6**
WHVZ	**Whangaehu Hut**	**0.76**	**183**	P	**Pn**	**12 10 37.4**	**+1.8**
TOZ	**Tahuroa Road**	**0.80**	**352**	P	**Pn**	**12 10 36.8**	**+1.3**
WNVZ	**Wahianoa**	**0.81**	**183**	P	**Pn**	**12 10 37.4**	**+1.7**
WNVZ				S	**S**	**12 10 57.3**	**-1.4**
MOVZ	**Moawhango**	**0.89**	**175**	P	**Pn**	**12 10 37.6**	**+1.5**
MOVZ				S	**S**	**12 10 56.8**	**-2.5**
VRZ	**Vera Road**	**0.92**	**229**	P	**Pn**	**12 10 38.1**	**+1.9**
BKZ	**Black Stump Fm**	**0.92**	**135**	P	**Pn**	**12 10 37.8**	**+1.5**
BKZ				S	**S**	**12 10 57.3**	**-2.2**
BKZ	**Black Stump Fm**	**0.92**	**135**	P	**Pn**	**12 10 37.8**	**+1.5**
BHHZ	**Black Hill Sta**	**1.02**	**162**	P	**Pn**	**12 10 38.5**	**+1.6**
KWHZ	**Kaweka Forest**	**1.09**	**146**	P	**Pn**	**12 10 39.4**	**+2.0**
URZ	**Urewera**	**1.18**	**78**	P	**Pn**	**12 10 38.9**	**+1.0**
URZ	**Urewera**	**1.18**	**78**	P	**Pn**	**12 10 38.9**	**+1.0**
MCHZ	**McNeill Hill**	**1.23**	**139**	P	**Pn**	**12 10 41.0**	**+2.7**
WAZ	**Wanganui**	**1.34**	**202**	P	**Pn**	**12 10 41.3**	**+2.2**
NEZ	**North Egmont**	**1.42**	**238**	P	**Pn**	**12 10 42.5**	**+2.5**
MKAZ	**Moumakai**	**1.46**	**345**	P	**Pn**	**12 10 41.7**	**+1.5**
MWZ	**Matawai**	**1.49**	**83**	P	**Pn**	**12 10 41.9**	**+1.4**
TSZ	**Takapari Road**	**1.56**	**171**	P	**Pn**	**12 10 43.1**	**+2.1**
WPHZ	**Waipukurau**	**1.66**	**159**	P	**Pn**	**12 10 44.1**	**+2.2**
ETAZ	**East Tamaki Re**	**1.66**	**340**	P	**Pn**	**12 10 43.1**	**+1.1**
RIGZ	**Rimuhau**	**1.67**	**97**	P	**Pn**	**12 10 44.0**	**+1.9**
RUGZ	**Raukumara Rang**	**1.69**	**72**	P	**Pn**	**12 10 42.8**	**+0.4**
OHWZ	**Ohakea**	**1.70**	**189**	P	**Pn**	**12 10 44.9**	**+2.6**
TKGZ	**Te Karaka**	**1.73**	**88**	P	**Pn**	**12 10 45.2**	**+2.6**
HAZ	**Te Kaha**	**1.85**	**66**	P	**Pn**	**12 10 44.4**	**+0.6**
PRHZ	**Porangahau**	**1.91**	**157**	P	**Pn**	**12 10 46.8**	**+2.5**
RVAZ	**Riverhead Bore**	**1.94**	**334**	P	**Pn**	**12 10 46.7**	**+2.0**
MRZ	**Mangatainoka R**	**2.14**	**181**	P	**Pn**	**12 10 48.4**	**+1.7**
BFZ	**Birch Farm**	**2.21**	**168**	P	**Pn**	**12 10 48.4**	**+1.0**
BFZ	**Birch Farm**	**2.21**	**168**	P	**Pn**	**12 10 49.6**	**+2.2**
OGWZ	**Otaki Gorge**	**2.32**	**189**	P	**Pn**	**12 10 50.4**	**+1.8**
HOWZ	**Holdsworth Sta**	**2.38**	**182**	P	**Pn**	**12 10 50.7**	**+1.5**
KIW	**Kapiti Island**	**2.41**	**193**	P	**Pn**	**12 10 51.0**	**+1.4**
CAW	**Cannon Point**	**2.62**	**190**	P	**Pn**	**12 10 53.5**	**+1.6**
DUWZ	**D'Urville Isla**	**2.64**	**210**	P	**Pn**	**12 10 53.5**	**+1.4**
WEL	**Wellington**	**2.84**	**193**	P	**Pn**	**12 10 56.0**	**+1.6**
SNZO	**South Karori**	**2.88**	**194**	P	**Pn**	**12 10 56.3**	**+1.5**
TCW	**Tory Channel**	**2.89**	**201**	P	**Pn**	**12 10 56.4**	**+1.5**
MSWZ	**Moikau Station**	**2.91**	**186**	P	**Pn**	**12 10 56.4**	**+1.3**
TUWZ	**Tuamarina**	**3.19**	**204**	P	**Pn**	**12 10 59.5**	**+1.1**
NNZ	**Nelson**	**3.21**	**212**	P	**Pn**	**12 10 59.6**	**+0.9**
QRZ	**Quartz Range**	**3.33**	**225**	P	**Pn**	**12 11 00.5**	**+0.4**
QRZ	**Quartz Range**	**3.33**	**225**	P	**Pn**	**12 11 02.1**	**+2.0**
BSWZ	**Blackbirch Sta**	**3.47**	**202**	P	**Pn**	**12 11 03.2**	**+1.4**
MRNZ	**Matariki Terra**	**3.63**	**217**	P	**Pn**	**12 11 04.4**	**+0.7**
THZ	**Tophouse**	**3.86**	**212**	P	**Pn**	**12 11 07.2**	**+0.6**
KHZ	**Kahutara**	**4.21**	**202**	P	**Pn**	**12 11 12.3**	**+1.5**
KHZ	**Kahutara**	**4.21**	**202**	P	**Pn**	**12 11 12.5**	**+1.7**
GVZ	**Greta Valley S**	**4.87**	**203**	P	**Pn**	**12 11 19.9**	**+0.9**
LTZ	**Lake Taylor**	**4.97**	**210**	P	**Pn**	**12 11 21.3**	**+0.8**
INZ	**Inchbonnie**	**5.28**	**216**	P	**Pn**	**12 11 25.7**	**+1.4**
OXZ	**Oxford**	**5.53**	**208**	P	**Pn**	**12 11 27.5**	**+0.1**
OKCZ	**Okains Bay**	**5.55**	**200**	P	**Pn**	**12 11 28.4**	**+0.6**
MQZ	**McQueen's Vall**	**5.65**	**203**	P	**Pn**	**12 11 28.8**	**-0.3**
RACZ	**Rakaia**	**5.84**	**206**	P	**Pn**	**12 11 31.5**	**0.0**
RPZ	**Rata Peaks**	**6.24**	**212**	P	**Pn**	**12 11 37.6**	**+0.9**
RPZ	**Rata Peaks**	**6.24**	**212**	P	**Pn**	**12 11 38.2**	**+1.5**
ARCZ	**Arundel**	**6.38**	**210**	P	**Pn**	**12 11 39.3**	**+0.8**
TMZ	**Timaru**	**6.82**	**209**	P	**Pn**	**12 11 44.5**	**+0.4**
ODZ	**Otahua Downs**	**7.51**	**208**	P	**Pn**	**12 11 54.3**	**+1.3**
ODZ	**Otahua Downs**	**7.51**	**208**	P	**Pn**	**12 11 54.4**	**+1.3**

*GCG **05** 12:17:20.2±0.3, 13°.19N×90°.43W, h11km±11km, MD3.4*
*SNET **05** 12:17:20.2±0.8, 13°.17N×90°.27W, h28km±3km, ML3.2*
ISC 05 12:17:19.4±2.6, 13°1N±0°.1×90°28W±0°.06, h24km±16km, n18, σ0s51/27, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.92**	**32**	*e*P	**Pn**	**12 17 36.5**	**-0.5**
NUBE				*e*S	**Sn**	**12 17 48.5**	**-1.1**
CEVE	**Cerro Verde**	**0.96**	**42**	*e*P	**Pb**	**12 17 37.5**	**0.0**
CEVE				*e*S	**Sn**	**12 17 51.2**	**+0.7**
CEVE				IAML		12 17 53.0	
	comp=Z,629nm,0.4s						
SBLS	**San Blas**	**0.97**	**42**	*e*P	**Pn**	**12 17 37.5**	**-0.2**
SBLS				*e*S	**Sn**	**12 17 51.3**	**+0.6**
JAYA	**Jayaque - finc**	**0.97**	**56**	*e*P	**Pn**	**12 17 37.4**	**-0.3**
JAYA				*e*S	**Sn**	**12 17 50.6**	**-0.3**
JAYA				IAML		12 17 52.9	
	comp=Z,567nm,0.2s						
SNJE	**San Jose**	**1.00**	**41**	*e*P	**Pn**	**12 17 37.8**	**-0.3**
LOAL	**Lomas de Alarc**	**1.00**	**29**	*e*P	**Pn**	**12 17 37.9**	**-0.1**
LOAL				*e*S	**Sb**	**12 17 51.3**	**+0.3**
UNIC	**Universidad Ca**	**1.12**	**40**	*e*P	**Pn**	**12 17 39.6**	**0.0**
UNIC				*e*S	**Sb**	**12 17 54.4**	**0.0**
SNET	**Serv Nac Est T**	**1.17**	**61**	*e*P	**Pn**	**12 17 40.4**	**+0.1**
LFRS	**El Faro**	**1.29**	**67**	*e*P	**Pn**	**12 17 41.8**	**-0.2**
LFRS				IAML		12 18 02.8	
	comp=Z,764nm,0.2s						
SJTE	**Alcalda de S**	**1.34**	**68**	*e*P	**Pn**	**12 17 42.2**	**-0.4**
SJTE				*e*S	**Sn**	**12 17 59.8**	**0.0**
FUG	**Fuego 3**	**1.43**	**338**	*e*P	**Pn**	**12 17 43.9**	**-0.1**
FUG				*e*S	**Sb**	**12 18 02.4**	**-1.0**
PAVA	**Las Pavas**	**1.44**	**65**	*e*P	**Pn**	**12 17 44.6**	**+0.5**
COEG	**Centro de Oper**	**1.46**	**70**	*e*P	**Pn**	**12 17 44.5**	**+0.2**
COEG				IAML		12 17 46.0	
	comp=Z,250nm,0.3s						
NBG	**Las Nubes**	**1.47**	**358**	*e*S	**Sb**	**12 18 05.4**	**+0.9**
MTO3	**Montecristo**	**1.56**	**35**	*e*P	**Pn**	**12 17 46.2**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.62**	**69**	*e*P	**Pn**	**12 17 47.2**	**+0.7**
SCLA				*e*S	**Sb**	**12 18 08.2**	**-0.5**
STG3	**Santiaguito 3,**	**2.02**	**322**	*e*P	**Pn**	**12 17 52.4**	**+0.3**
CNCH	**Conchagua**	**2.39**	**86**	*e*P	**Pn**	**12 17 57.1**	**-0.1**

*BJI **05** 12:34:09.5±0.0, 24°.26S×82°.09E, h10km, mb5.4/84, mB5.7/72, Ms5.3/92, Ms7 5.1/85*
*IDC **05** 12:34:12.9±0.3, 23°.93S×82°.51E, h0km, mb5.5/45, mbtmp5.5/45, MS4.6/69, Error ellipse: s-maj=11.6km s-min=9.5km az=39.0*
*MOS **05** 12:34:13.3±0.9, 23°.85S×82°.57E, h11km, mb5.8/115, MS4.8/22, Error ellipse: s-maj=7.2km s-min=4.2km az=106.6*
*NEIC **05** 12:34:15.5, 23°.93S×82°.44E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.56; $M_{\theta\theta}$-1.90; $M_{\phi\phi}$0.34; $M_{r\theta}$-1.10; $M_{\theta\phi}$0.22; $M_{\phi r}$-0.23; Fault plane solution: M_o2.10000×10^{17} NP1:φs264.77000°, δ61.79000°, λ78.03000°. NP2:φs108.92000°, δ30.45000°, λ111.13000°. Principal axes: T 1.9324, Plg71.0000°, Azm148.0000°; N 0.2974, Plg11.0000°, Azm270.0000°; P -2.2298, Plg16.0000°, Azm4.0000°;*
*NEIC **05** 12:34:15.4±1.8, 23°.92S±0°.08×82°.43E±0°.09, h10km±1km, mb5.7/217, Ms_20 5.1/233, Mwb5.5/36, Mww5.5 Error ellipse: s-maj=14.4km s-min=13.4km az=135.0*
*GCMT **05** 12:34:17.4±0.1, 23°.87S×82°.62E, h12km, MW5.5/155, Moment Tensor Solution. s120,c198; s155,c313; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}2.05±.02; $M_{\theta\theta}$-2.11±.02; $M_{\phi\phi}$0.05±.02; $M_{r\theta}$-0.26±.05; $M_{\theta\phi}$0.16±.02; $M_{\phi r}$0.00±.06; Best double couple: M_o2.10200×10^{17} NP1:φs274.00000°, δ49.00000°, λ89.00000°. NP2:φs95.00000°, δ41.00000°, λ91.00000°. Principal axes: T 2.0660, Plg86.0000°, Azm177.0000°; N 0.0670, Plg0.0000°, Azm274.0000°; P -2.1380, Plg4.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 12:34:19, 23°.95S×82°.54E, h16km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.90; $M_{\theta\theta}$-2.29; $M_{\phi\phi}$0.40; $M_{r\theta}$-0.10; $M_{\theta\phi}$0.24; $M_{\phi r}$0.32; Fault plane solution: M_o2.16000×10^{17} NP1:φs84.00000°, δ44.00000°, λ74.00000°. NP2:φs286.00000°, δ48.00000°, λ105.00000°. Principal axes: T 1.9641, Plg78.0000°, Azm267.0000°; N 0.3527, Plg11.0000°, Azm96.0000°; P -2.3168, Plg2.0000°, Azm5.0000°;*
ISC 05 12:34:15.0±0.4, 24°02S±0°.04×82°42E±0°.04, h14km±2km, h14km:pP-P, n1895, σ1s12/2028, mb5.6/365, MS5.1/234, 134C-31D, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**14.35**	**196**	Pn	**Pn**	**12 37 37.2**	**-0.6**
COCO	**West Island**	**18.04**	**52**		**Pn**	**12 38 24.0**	**-1.3**
COCO				IAmb	IAmb	12 38 29.6	
	comp=Z,859nm,1.6s						
COCO	**West Island**	**18.04**	**52**	P	**Pn**	**12 38 24.0**	**-1.3**
COCO				pmax	pmax		
	comp=Z,859nm,1.6s						
H08S2	**Diego Garcia H**	**18.86**	**328**	T	T	12 57 54.8	
	baz=151,slow=74,SNR=510						
H08S1	**Diego Carcia H**	**18.86**	**328**	T	T	12 57 56.2	
	baz=151,slow=74,SNR=524						
H08S3	**Diego Garcia H**	**18.88**	**328**	T	T	12 57 52.5	
	baz=151,slow=74,SNR=6469						
DGAR	**Diego Garcia**	**19.08**	**328**	P	**P**	**12 38 34.2**	**-3.1**
DGAR				IAmb	IAmb	12 38 46.6	
	comp=Z,382nm,1.0s						
DGAR	**Diego Garcia**	**19.08**	**328**	*i* P	**Pn**	**12 38 39.4**	**+1.3**
DGAR				pmax	pmax		
	comp=Z,443nm,1.1s						
RER	**Riviere de l'E**	**24.78**	**271**	P	**P**	**12 39 37.3**	**+0.6**
RER				IAmb	IAmb	12 39 40.9	
	comp=Z,151nm,1.0s						
RER	**Riviere de l'E**	**24.78**	**271**	P	**P**	**12 39 39.4**	**+2.7**
KAAM	**Kaadhehdhoo**	**26.02**	**338**	P	**P**	**12 39 49.3**	**+1.5**
PPSI	**Pulau Pagai**	**27.12**	**41**	P	**P**	**12 40 01.2**	**+3.5**
	comp=Z,6μmcomp=Z,136nm,1.3s						
SISI	**Saibi**	**27.74**	**38**	P	**P**	**12 40 06.1**	**+2.8**
	comp=Z,61nm,1.2s						
MNAI	**Manna**	**27.81**	**49**	P	**P**	**12 40 06.1**	**+2.1**
	comp=Z,155nm,1.0s						
KSI	**Kapahiang**	**28.09**	**47**	P	**P**	**12 40 08.8**	**+2.3**
	comp=Z,82nm,0.8s						
KASI	**Kota Agung**	**28.09**	**53**	P	**P**	**12 40 07.4**	**+0.9**
	comp=Z,2μmcomp=Z,75nm,1.0s						
LWLI	**Liwa**	**28.12**	**51**	P	**P**	**12 40 08.5**	**+1.6**
	comp=Z,96nm,1.2s						
KRJI	**Kerinci**	**28.54**	**43**	P	**P**	**12 40 13.4**	**+2.8**
	comp=Z,230nm,1.0s						
BLSI	**Bandar Lampung**	**28.74**	**53**	P	**P**	**12 40 13.9**	**+1.6**
	comp=Z,109nm,0.4s						
KLI	**Kotabumi**	**28.80**	**52**	P	**P**	**12 40 14.9**	**+2.1**
	comp=Z,229nm,0.4s						
SBJI	**Serang**	**28.91**	**56**	P	**P**	**12 40 15.6**	**+1.9**
	comp=Z,6μmcomp=Z,119nm,0.5s						
CNJI	**Cibinong**	**28.93**	**59**	P	**P**	**12 40 14.8**	**+0.8**
	comp=Z,115nm,1.1s						
DBJI	**Dramaga**	**29.10**	**57**	P	**P**	**12 40 17.6**	**+2.1**
	comp=Z,15μmcomp=Z,64nm,1.7s						
GSI	**Gunungsitoli**	**29.16**	**32**	P	**P**	**12 40 14.1**	**-1.9**
GSI				IAmb	IAmb	12 41 02.5	
	comp=Z,194nm,1.6s						
GSI				IAMs_20	IAMs_20	12 48 50.9	
	comp=Z,6μm,21.0s						
GSI	**Gunungsitoli**	**29.16**	**32**	P	**P**	**12 40 18.6**	**+2.6**
	comp=Z,91nm,1.7s						
GSI	**Gunungsitoli**	**29.16**	**32**	P	**P**	**12 40 18.3**	**+2.3**
GIRL	**Giralia**	**29.21**	**94**	P	**P**	**12 40 17.2**	**+0.7**
	baz=29,SNR=10						
GIRL	**Giralia**	**29.21**	**94**	P	**P**	**12 40 17.1**	**+0.7**
GIRL	**Giralia**	**29.21**	**94**	P	**P**	**12 40 17.6**	**+1.2**
CBJI	**Citeko**	**29.26**	**57**	P	**P**	**12 40 17.9**	**+1.0**
	comp=Z,13μmcomp=Z,142nm,0.9s						
TNG	**Tangerang**	**29.26**	**57**	P	**P**	**12 40 20.6**	**+3.7**
	comp=Z,297nm,0.4s						
H01W3	**Cape Leeuwin H**	**29.55**	**119**	T	T	13 11 07.0	
	baz=284,slow=74,SNR=24						
H01W2	**Cape Leeuwin H**	**29.55**	**119**	T	T	13 11 07.3	
	baz=284,slow=74,SNR=41						
H01W1	**Cape Leeuwin H**	**29.57**	**119**	T	T	13 11 08.2	
	baz=284,slow=74,SNR=51						
LEM	**Lembang**	**29.61**	**59**	P	**P**	**12 40 21.8**	**+1.6**
	comp=Z,47nm,0.8s,baz=177,slow=5.5,SNR=14						
LEM				PcP	**PcP**	**12 43 25.9**	**+1.0**
	comp=Z,91nm,0.9s,baz=45,slow=1.4,SNR=7.2						
LEM				LR	LR	12 49 52.8	
	comp=Z,671nm,19.7s,baz=220,slow=32						
LEM	**Lembang**	**29.61**	**59**	P	**P**	**12 40 22.8**	**+2.6**
	comp=Z,49nm,0.9s						
SBSI	**Sibolga**	**30.03**	**34**	P	**P**	**12 40 27.5**	**+3.8**
	comp=Z,48nm,0.9s						
PMBI	**Palembang**	**30.09**	**49**	P	**P**	**12 40 26.7**	**+2.4**
	comp=Z,264nm,0.5s						
BKNI	**Bangkinang**	**30.20**	**39**	IAMs_20	IAMs_20	12 50 02.6	
	comp=Z,4μm,21.0s						
BKNI	**Bangkinang**	**30.20**	**39**	P	**P**	**12 40 28.7**	**+3.5**
	comp=Z,158nm,0.9s						
BKNI	**Bangkinang**	**30.20**	**39**	P	**P**	**12 40 27.6**	**+2.4**
JMBI	**JAMBI**	**30.28**	**46**	P	**P**	**12 40 28.4**	**+2.5**
JCJI	**Jatiwangi**	**30.32**	**59**	P	**P**	**12 40 25.9**	**-0.4**
	comp=Z,5μmcomp=Z,194nm,0.4s						
MUN	**Mundaring**	**30.77**	**113**	P	**P**	**12 40 30.8**	**+0.7**
	baz=31,SNR=7.0						
MUN	**Mundaring**	**30.77**	**113**	P	**P**	**12 40 30.9**	**+0.7**
RPSI	**Rantau Prapat**	**31.03**	**33**	P	**P**	**12 40 31.1**	**-1.4**
RPSI				PcP	**PcP**	**12 43 28.1**	**-0.3**
RPSI				IAMs_20	IAMs_20	12 50 25.4	
	comp=Z,4μm,20.0s						
RPSI	**Rantau Prapat**	**31.03**	**33**	P	**P**	**12 40 34.9**	**+2.4**
BLDU	**Ballidu**	**31.08**	**110**	P	**P**	**12 40 33.1**	**+0.2**
	baz=31,SN

comp=Z,108nm,1.1s
ABPO Ambohimpanom 33.06 272 P **P** **12 40 49.9 -0.7**
ABPO Ambohimpanom 33.06 272 P **P** **12 40 50.4 -0.2**
ABPO pmax pmax
comp=Z,34nm,1.2s
OPO Ambohidratompo 33.22 273 LR LR 12 50 23.1
comp=Z,188nm,20.5s,baz=67,slow=29
GMJI Gumukmas 33.54 67 P **P** **12 40 54.1 -0.5**
comp=Z,42nm,1.4s
IPM Ipoh 33.63 35 P **P** **12 40 54.7 -0.7**
IPM IAmb IAmb 12 41 02.0
comp=Z,232nm,1.9s
IPM **PcP** **12 43 35.4 -0.2**
IPM Ipoh 33.63 35 P **P** **12 40 57.0 +1.7**
BLJI Banyuglugur 33.95 67 P **P** **12 40 59.3 +1.1**
comp=Z,2µmcomp=Z,47nm,0.9s
JAGI Jajag, Banyuwa 34.04 68 P **P** **12 40 58.0 -1.1**
JAGI IAmb IAmb 12 41 01.6
comp=Z,69nm,0.9s
JAGI Jajag, Banyuwa 34.04 68 P **P** **12 40 59.9 +0.9**
comp=Z,95nm,1.0s
JAGI Jajag, Banyuwa 34.04 68 P **P** **12 40 58.6 -0.4**
KULM Kulim 34.12 34 P **P** **12 40 58.4 -1.2**
KULM IAmb IAmb 12 41 02.8
comp=Z,140nm,1.1s
KULM IAMs_20 IAMs_20 12 51 50.5
comp=Z,3µm,21.0s
ABJI Asem Bagus 34.46 67 P **P** **12 41 04.9 +2.3**
comp=Z,101nm,0.9s
MBWA Marble Bar 34.50 93 P **P** **12 41 02.5 -0.4**
MBWA IAmb IAmb 12 41 04.5
comp=Z,119nm,1.1s
MBWA Marble Bar 34.50 93 P **P** **12 41 03.2 +0.2**
MBWA Marble Bar 34.50 93 P **P** **12 41 03.1 +0.2**
PSA00 Pilbara Seismi 34.52 94 P **P** **12 41 02.4 -0.7**
PSA00 IAmb IAmb 12 41 04.6
comp=Z,162nm,1.6s
PSA00 Pilbara Seismi 34.52 94 P **P** **12 41 03.3 +0.2**
KMMI Kalianget 34.63 66 P **P** **12 41 04.5 +0.4**
comp=Z,116nm,1.0s
IGBI Denpasar 34.72 70 P **P** **12 41 05.3 +0.5**
comp=Z,135nm,1.0s
PCHI Peechi 34.84 350 *e*P **P** **12 41 06.8 +1.0**
PCHI *e*S **S** **12 46 43.8 +7.3**
SRBI Singaraja 35.14 69 P **P** **12 41 09.5 +1.0**
comp=Z,2µmcomp=Z,144nm,1.1s
PBKI Pangkalan Bun 35.32 58 P **P** **12 41 11.2 +1.2**
comp=Z,2µmcomp=Z,214nm,1.1s
SRIT Nakonsritamara 36.50 29 P **P** **12 41 20.8 +0.8**
SRIT PcP **PcP** **12 43 44.1 +0.3**
STKI Sintang 36.97 54 P **P** **12 41 26.3 +2.1**
PLAI Plampang 36.98 72 P **P** **12 41 24.1 -0.2**
comp=Z,2µmcomp=Z,125nm,1.2s
PLAI Plampang 36.98 72 P **P** **12 41 24.1 -0.2**
KSM Kuching 37.09 51 P **P** **12 41 25.0 -0.1**
KSM Kuching 37.09 51 P **P** **12 41 26.0 +0.8**
BBKI Banjar Baru 37.36 62 P **P** **12 41 27.9 +0.4**
comp=Z,76nm,1.0s
WBSI Waikabubak, Su 38.02 74 P **P** **12 41 33.5 +0.3**
comp=Z,2µmcomp=Z,142nm,1.3s
MTKI Muara Teweh, K 38.92 59 P **P** **12 41 42.6 +1.9**
comp=Z,4µmcomp=Z,132nm,1.0s
SBUM Sibu 39.14 52 P **P** **12 41 43.2 +0.8**
SBUM **PcP** **12 43 51.9 -0.2**
BKB Balikpapan 40.31 61 P **P** **12 41 54.2 +1.9**
BKB IAmb IAmb 12 41 55.7
comp=Z,182nm,1.0s
BKB Balikpapan 40.31 61 P **P** **12 41 55.0 +2.8**
comp=Z,3µmcomp=Z,122nm,0.8s
BKB Balikpapan 40.31 61 P **P** **12 41 54.0 +1.8**
EDFI Ende, Flores 40.45 75 P **P** **12 41 54.4 +0.9**
comp=Z,930nmcomp=Z,77nm,1.1s
KAPI Kappang 40.58 68 P **P** **12 41 53.8 -0.6**
comp=Z,52nm,0.9s,baz=228,slow=13,SNR=22
KAPI LR LR 12 57 58.1
comp=Z,202nm,19.1s,baz=216,slow=35
comp=Z,52nm,0.9s
KAPI Kappang 40.58 68 P **P** **12 41 54.2 -0.2**
KAPI Kappang 40.58 68 P **P** **12 41 54.2 -0.2**
KAPI pmax pmax
comp=Z,72nm,1.0s
KAPI Kappang 40.58 68 P **P** **12 41 54.2 -0.2**
KAPI P **P** **12 41 54.2 -0.2**
KAPI Kappang 40.58 68 P **P** **12 41 54.4 0.0**
BSSI Bau Bau, Buton 40.64 70 P **P** **12 41 54.7 -0.2**
comp=Z,78nm,1.0s
FITZ Fitzroy Crossi 40.64 90 P **P** **12 41 54.8 -0.2**
comp=Z,49nm,0.8s,baz=241,slow=7.2,SNR=52
FITZ PcP **PcP** **12 43 57.9 +1.0**
comp=Z,26nm,0.9s,baz=182,slow=2.5,SNR=4.7
FITZ LR LR 12 58 48.8
comp=Z,376nm,18.9s,baz=270,slow=36
comp=Z,49nm,0.8s
FITZ Fitzroy Crossi 40.64 90 P **P** **12 41 54.9 -0.1**
baz=41,SNR=31
FITZ Fitzroy Crossi 40.64 90 P **P** **12 41 55.1 +0.1**
FITZ Fitzroy Crossi 40.64 90 P **P** **12 41 55.0 +0.1**
BKSI Bulukumba 40.73 69 P **P** **12 41 55.7 0.0**
comp=Z,1µmcomp=Z,67nm,1.1s
FORT Forrest 40.85 110 P **P** **12 41 57.4 +0.8**
baz=41,SNR=34
FORT Forrest 40.85 110 P **P** **12 41 56.5 -0.1**
FORT IAmb IAmb 12 41 59.6
comp=Z,298nm,1.1s
FORT Forrest 40.85 110 P **P** **12 41 57.4 +0.8**
MMRI Maumere 40.98 75 P **P** **12 41 58.2 +0.4**
MMRI Maumere 40.98 75 P **P** **12 41 59.2 +1.4**
comp=Z,8µmcomp=Z,780nm,0.9s
MMRI Maumere 40.98 75 P **P** **12 41 58.4 +0.6**
SMKI Samarinda 41.05 60 P **P** **12 42 00.1 +1.8**
comp=Z,136nm,0.7s
SPSI Sidrap Palu 41.15 67 P **P** **12 41 59.2 +0.1**
comp=Z,1µmcomp=Z,84nm,1.0s
HYBB Hyderabad (bro 41.35 354 *e*P **P** **12 42 00.7 -0.1**
HYBB *e*PP **PP** **12 43 35.2 -1.3**
HYBB *e*PcP **PcP** **12 43 59.2 +0.1**
HYBB *e*ScP **ScP** **12 47 49.0 +0.2**
HYBB *e*S **S** **12 48 15.2 +0.1**
HYBB IVMs_BB IVMs_BB 12 56 07.8
comp=Z,510nm,4.5s
BATI Baumata 41.57 78 P **P** **12 42 03.7 +1.0**
comp=Z,103nm,0.7s,baz=153,slow=3.8,SNR=9.5
BATI LR LR 12 56 54.9
comp=Z,288nm,20.8s,baz=58,slow=33
comp=Z,103nm,0.7s
BATI Baumata 41.57 78 P **P** **12 42 04.8 +2.1**
comp=Z,1µmcomp=Z,81nm,1.1s
WRKA Warakurna 41.59 101 P **P** **12 42 02.6 -0.2**
baz=42,SNR=97
WRKA Warakurna 41.59 101 P **P** **12 42 03.0 +0.2**
TTSI Tana Toraja 41.68 66 P **P** **12 42 04.5 +1.0**
comp=Z,2µmcomp=Z,86nm,1.0s
KAD Karad 41.85 348 *e*P **P** **12 42 05.2 +0.3**
BBSI Bau Bau 42.76 71 P **P** **12 42 13.6 +1.3**
comp=Z,13nm,0.9s
POO Poona 43.11 348 *e*P **P** **12 42 15.9 +0.9**
MPSI Mapaga 43.67 62 P **P** **12 42 20.8 +1.1**
comp=Z,1µmcomp=Z,83nm,1.2s
KNRA Kununurra 44.21 88 P **P** **12 42 23.8 -0.2**
baz=44,SNR=39
KNRA Kununurra 44.21 88 P **P** **12 42 24.0 0.0**
KNRA IAmb IAmb 12 42 25.3
comp=Z,197nm,1.1s
KNRA Kununurra 44.21 88 P **P** **12 42 24.0 0.0**
APSI Ampana 44.38 65 P **P** **12 42 26.0 +0.6**
comp=Z,827nmcomp=Z,48nm,1.1s
KKM Kota Kinabalu 44.48 52 P **P** **12 42 26.0 -0.3**
KKM Kota Kinabalu 44.48 52 P **P** **12 42 26.1 -0.2**
AKL Akola 44.76 353 *e*P **P** **12 42 29.0 +0.8**
TOLI2 Tolitoli 44.84 62 P **P** **12 42 28.3 -0.7**
TOLI2 IAmb IAmb 12 42 29.9
comp=Z,113nm,1.0s
TOLI2 Tolitoli 44.84 62 P **P** **12 42 28.9 -0.1**
UBPT Khong Chiam 45.08 32 P **P** **12 42 31.4 +0.6**
UBPT IAmb IAmb 12 42 33.0
comp=Z,89nm,0.9s
CM31 Chiang Mai Arr 45.19 22 P **P** **12 42 32.5 +0.8**
CM31 IAmb IAmb 12 42 35.7
comp=Z,96nm,1.4s
CM31 PcP **PcP** **12 44 11.2 -0.7**
CM31 Chiang Mai Arr 45.19 22 P **P** **12 42 32.5 +0.8**
SNR=16
CM31 P **P** **12 42 32.5 +0.8**
SNR=16
CMAR Chiang Mai Arr 45.19 22 P **P** **12 42 32.3 +0.7**
comp=Z,23nm,0.9s,baz=207,slow=7.9,SNR=76
CMAR PcP **PcP** **12 44 11.5 -0.4**
comp=Z,10nm,0.8s,baz=221,slow=4.2,SNR=11
CMAR LR LR 13 01 10.6
comp=Z,542nm,18.3s,baz=205,slow=36
comp=Z,23nm,0.9s
CMAR Chiang Mai Arr 45.19 22 P **P** **12 42 32.0 +0.3**
CMAR PcP **PcP** **12 44 12.1 +0.2**
CMAR Chiang Mai Arr 45.19 22 *i*P **P** **12 42 32.5 +0.8**
CMAR pmax pmax
comp=Z,22nm,0.9s
LUWI Luwuk 45.24 66 P **P** **12 42 31.3 -1.0**
LUWI IAmb IAmb 12 42 49.5
comp=Z,80nm,0.9s
LUWI Luwuk 45.24 66 P **P** **12 42 33.3 +1.0**
comp=Z,2µmcomp=Z,88nm,1.2s
LUWI Luwuk 45.24 66 P **P** **12 42 32.7 +0.4**
MAW Mawson 45.25 190 P **P** **12 42 32.8 +1.2**
comp=Z,26nm,1.1s,baz=25,slow=11,SNR=20
MAW LR LR 12 57 15.4
comp=Z,2µm,21.4s,baz=16,slow=30
comp=Z,26nm,1.1s
MAW Mawson 45.25 190 P **P** **12 42 33.0 +1.4**
baz=45,SNR=21
MAW Mawson 45.25 190 P **P** **12 42 33.0 +1.4**
MAW Mawson 45.25 190 P **P** **12 42 33.0 +1.4**
MAW pmax pmax
comp=Z,16nm,1.4s
MRSI Marisa 45.41 63 P **P** **12 42 32.1 -1.5**
comp=Z,988nmcomp=Z,31nm,1.0s
CHTO Chiang Mai 45.52 22 P **P** **12 42 34.5 +0.2**
CHTO IAmb IAmb 12 42 38.2
comp=Z,116nm,1.4s
CHTO PcP **PcP** **12 44 13.4 +0.4**
CHTO Chiang Mai 45.52 22 P **P** **12 42 34.5 +0.2**
CHTO pmax pmax
comp=Z,116nm,1.4s
CHTO Chiang Mai 45.52 22 P **P** **12 42 35.0 +0.6**
CHTO Chiang Mai 45.52 22 P **P** **12 42 34.9 +0.6**
JHSG JHARSUGUGA 45.52 2 *e*P **P** **12 42 35.9 +1.6**
POGA Pongola 45.58 255 P **P** **12 42 35.8 +0.9**
POGA IAmb IAmb 12 42 38.9
comp=Z,287nm,1.9s
POGA Pongola 45.58 255⇑ *i*P **P** **12 42 36.2 +1.4**
POGA IAmb IAmb 12 42 36.6
comp=Z,40nm,0.8s
MYLDM Lahad Datu 45.59 55 P **P** **12 42 36.6 +1.7**
MYLDM IAmb IAmb 12 42 38.1
comp=Z,140nm,1.2s
BLSP Bilaspur 45.87 360 *e*P **P** **12 42 38.1 +1.1**
MULG Mulgathing 46.05 110 P **P** **12 42 37.9 -0.7**
MOPA Mopani 46.48 260⇑ *i*P **P** **12 42 42.8 +0.7**
MOPA IAmb IAmb 12 42 44.3
comp=Z,34nm,0.8s
ASAR Alice Springs 46.87 101 P **P** **12 42 44.5 -0.6**
comp=Z,162nm,0.8s,baz=264,slow=7.3,SNR=1536
ASAR PcP **PcP** **12 44 17.5 -0.5**
comp=Z,17nm,0.6s,baz=279,slow=2.6,SNR=8.5
ASAR PKiKP **PKiKP** **12 51 10.7 -1.5**
comp=Z,0.5nm,0.8s,baz=268,slow=0.8,SNR=3.0
ASAR LR LR 13 00 56.8
comp=Z,630nm,18.1s,baz=263,slow=34
comp=Z,162nm,0.8s
AS31 Alice Springs 46.87 101 P **P** **12 42 44.3 -0.8**
AS31 IAmb IAmb 12 42 46.6
comp=Z,62nm,0.9s
JBP Jabalpur 46.96 357 *e*P **P** **12 42 45.6 +0.1**
JBP *e*S **S** **12 49 30.7 -5.8**
NWCL Newcastle 47.12 254⇑ *i*P **P** **12 42 47.7 +0.6**
NWCL IAmb IAmb 12 42 48.6
comp=Z,49nm,0.8s
KMSI Cibinong 47.14 65 P **P** **12 42 49.4 +2.2**
comp=Z,2µmcomp=Z,103nm,1.3s
BHPL Bhopal 47.23 354 *e*P **P** **12 42 47.0 -0.7**
BHPL IAmb IAmb 12 42 48.3
comp=Z,30nm,0.4s
CRLN Carolina, Mapu 47.27 256 *e*P **P** **12 42 49.5 +1.1**
CRLN IAmb IAmb 12 42 52.7
comp=Z,52nm,1.0s
KSTD Kokstad 47.29 250 *e*P **P** **12 42 49.8 +1.3**
KSTD IAmb IAmb 12 42 53.3
comp=Z,85nm,1.2s
MTN Manton Dam 47.32 85 P **P** **12 42 48.2 -0.5**
baz=47,SNR=31
MTN Manton Dam 47.32 85 P **P** **12 42 48.8 +0.1**
MTN Manton Dam 47.32 85 P **P** **12 42 48.7 +0.1**
SANI Sanana 47.42 69 P **P** **12 42 49.3 -0.2**
comp=Z,920nmcomp=Z,92nm,1.2s
SANI Sanana 47.42 69 P **P** **12 42 49.2 -0.2**
BBOO Buckleboo 47.56 113 P **P** **12 42 50.3 0.0**
baz=48,SNR=85
BBOO Buckleboo 47.56 113 P **P** **12 42 50.4 0.0**
BBOO Buckleboo 47.56 113 P **P** **12 42 50.3 0.0**
BOK Bokaro 47.65 4 *e*P **P** **12 42 52.0 +1.1**
BOK IAmb IAmb 12 42 53.5
comp=Z,189nm,1.9s
OOD Oodnadatta 47.76 106 P **P** **12 42 50.9 -1.0**
NLAI Namlea 47.78 71 P **P** **12 42 52.9 +0.7**
comp=Z,576µmcomp=Z,44nm,0.8s
KIBK Kibwezi 47.97 290 P **P** **12 42 54.8 +0.9**
KIBK Kibwezi 47.97 290 P **P** **12 42 55.7 +1.9**
SNR=10
WRA Warramunga Arr 48.10 96 P **P** **12 42 54.2 -0.5**
comp=Z,208nm,0.8s,baz=261,slow=7.8,SNR=1265
WRA LR LR 13 02 27.0
comp=Z,445nm,18.2s,baz=342,slow=35
comp=Z,208nm,0.8s
WRA Warramunga Arr 48.10 96 P **P** **12 42 53.8 -0.9**
WB2 Warramunga Arr 48.11 96 P **P** **12 42 54.3 -0.4**
baz=48
WB2 Warramunga Arr 48.11 96 P **P** **12 42 54.3 -0.4**
WRAB Tennant Creek 48.11 96 P **P** **12 42 54.5 -0.3**
WRAB Tennant Creek 48.11 96 P **P** **12 42 54.5 -0.3**
WRAB pmax pmax
comp=Z,304nm,0.9s
WRAB Tennant Creek 48.11 96 P **P** **12 42 54.8 0.0**
MUSN Musina, Limpop 48.13 261⇑ *i*P **P** **12 42 56.0 +1.1**
MUSN IAmb IAmb 12 42 57.0
comp=Z,35nm,0.8s
WB0 Warramunga Arr 48.19 96 P **P** **12 42 54.8 -0.7**
WR0 Warramunga Arr 48.28 96 P **P** **12 42 55.8 -0.3**
KDU Kakadu 48.60 86 P **P** **12 42 58.3 -0.2**
baz=48,SNR=20
KDU Kakadu 48.60 86 P **P** **12 42 58.4 -0.1**
WHYH Whyalla 48.81 114 P **P** **12 43 00.1 +0.1**
SLR Silverton 48.86 256⇑ *i*P **P** **12 43 01.2 +0.6**
SLR IAmb IAmb 12 43 04.8
comp=Z,132nm,1.1s
SNKL Senekal, Frees 48.90 253⇑ *i*P **P** **12 43 00.7 -0.3**
SNKL IAmb IAmb 12 43 02.9
comp=Z,110nm,0.8s
ALBI Allahabad 49.04 359 *e*P **P** **12 43 02.7 +1.1**
KMBO Kilima Mbogo 49.27 291 P **P** **12 43 05.8 +1.8**
comp=Z,20nm,0.8s,baz=93,slow=8.5,SNR=39
KMBO LR LR 12 58 32.3
comp=Z,294nm,22.0s,baz=98,slow=30
comp=Z,20nm,0.8s
KMBO Kilima Mbogo 49.27 291 P **P** **12 43 05.2 +1.2**
KMBO IAmb IAmb 12 43 08.9
comp=Z,77nm,1.4s
KMBO Kilima Mbogo 49.27 291 *i*P **P** **12 43 05.8 +1.8**
KMBO pmax pmax
comp=Z,21nm,0.8s
KMBO Kilima Mbogo 49.27 291 P **P** **12 43 05.8 +1.8**
KMBO Kilima Mbogo 49.27 291 *i*P **P** **12 43 05.3 +1.2**
SNR=17
MSAI Masohi 49.32 73 P **P** **12 43 05.0 +0.9**
comp=Z,1µmcomp=Z,12nm,0.7s
JHNI Jhansi 49.33 355 *e*P **P** **12 43 04.5 +0.6**
SAUI Saumlaki 49.35 80 P **P** **12 43 05.3 +1.0**
comp=Z,16µmcomp=Z,453nm,1.0s
DMTO DMTO 49.39 325 P **P** **12 43 05.7 +1.2**
LBMI Labuha 49.45 69 P **P** **12 43 06.5 +1.4**
TWOA Tennyson Woods 49.52 116 P **P** **12 43 05.7 +0.3**
GHSS Government Hou 49.54 116 P **P** **12 43 06.3 +0.8**
LCRK Leigh Creek 49.61 110 P **P** **12 43 06.2 +0.1**
RBK Rabkut 49.61 324 P **P** **12 43 07.6 +1.4**
LEPH Lephalale, Lim 49.65 258⇑ *i*P **P** **12 43 06.6 -0.1**
LEPH IAmb IAmb 12 43 10.9
comp=Z,151nm,1.0s
BLWY Bulawayo 49.77 263⇑ *i*P **P** **12 43 08.1 +0.4**
BLWY IAmb IAmb 12 43 11.7
comp=Z,274nm,1.1s
MATP Matopo 49.80 263⇑ *i*P **P** **12 43 08.4 +0.6**
MATP IAmb IAmb 12 43 11.7
comp=Z,404nm,1.5s
HTT Hallett 49.91 114 P **P** **12 43 08.5 +0.1**
baz=50,SNR=44
HTT Hallett 49.91 114 P **P** **12 43 08.6 +0.1**
DQM DQM 49.96 329 P **P** **12 43 09.7 +0.9**
DQM P **P** **12 43 09.7 +0.9**
ABTO Aybut 49.99 323 P **P** **12 43 09.9 +0.8**
KSR Koster 50.06 256 *e*P **P** **12 43 11.0 +1.1**
KSR IAmb IAmb 12 43 11.6
comp=Z,39nm,0.8s
SHL Shillong 50.13 11 *e*P **P** **12 43 10.4 +0.2**
SHL IAmb IAmb 12 43 13.3
comp=Z,112nm,1.1s
WHFO Wadi Hawf 50.19 324 P **P** **12 43 11.4 +0.8**
WHFO P **P** **12 43 11.4 +0.8**
SOE Somerset East 50.27 247 P **P** **12 43 11.4 +0.2**
SOE IAmb IAmb 12 43 14.7
comp=Z,83nm,0.9s
SOE Somerset East 50.27 247 *e*P **P** **12 43 12.6 +1.3**
SOE IAmb IAmb 12 43 13.6
comp=Z,60nm,0.8s
DHUB DHUBRI 50.28 9 *e*P **P** **12 43 10.9 -0.2**
DHUB IAmb IAmb 12 43 13.2
comp=Z,185nm,1.2s
QIZ Qiongzhong 50.45 34 P **P** **12 43 13.2 +0.7**
QIZ IAmb IAmb 12 43 15.4
comp=Z,85nm,1.3s
QIZ Qiongzhong 50.45 34 P **P** **12 43 14.0 +1.5**
QIZ PP **PP** **12 45 09.2 +0.8**
QIZ S **S** **12 50 29.4 +3.4**
QIZ pmax pmax
comp=Z,42nm,0.8s
QIZ pmax pmax
comp=Z,540nm,4.1s
QIZ LR LR
comp=Z,910nm,18.6s
QIZ LR LR
comp=Z,570nm,15.2s
QIZ LR LR
comp=Z,1µm,37.8s
HVD Gariep Dam 50.56 249⇑ *i*P **P** **12 43 14.4 +0.9**
HVD IAmb IAmb 12 43 15.8
comp=Z,52nm,0.9s
MHTO MHTO 50.67 330 P **P** **12 43 14.4 +0.3**
SNR=5.3
GUWA GUWAHATI 50.71 11 *e*P **P** **12 43 14.5 +0.1**
AJM Ajmer 50.76 351 *e*P **P** **12 43 14.5 -0.2**
ODAN Odare 50.80 6 *e*P **P** **12 43 15.9 +0.6**
RAMN Ramite 50.83 5 *e*P **P** **12 43 15.8 +0.3**
comp=Z,413nm,1.1s
KROM Kromhout 50.93 245 *e*P **P** **12 43 17.1 +1.0**
KROM IAmb IAmb 12 43 20.6
comp=Z,88nm,1.0s
ROSN Rosenhof 51.00 245 *e*P **P** **12 43 17.4 +0.8**
ROSN IAmb IAmb 12 43 20.0
comp=Z,851nm,2.3s
BOSA Boshof 51.04 252 P **P** **12 43 17.9 +0.7**
comp=Z,105nm,0.7s,baz=102,slow=6.9,SNR=193
BOSA LR LR 12 59 53.2
comp=Z,588nm,21.4s,baz=103,slow=30
comp=Z,105nm,0.7s
BOSA Boshof 51.04 252 P **P** **12 43 17.3 +0.1**
BOSA IAmb IAmb 12 43 18.8
comp=Z,109nm,0.7s
BOSA Boshof 51.04 252⇑ *i*P **P** **12 43 17.8 +0.7**
VLK Valmikinagar 51.05 2 *e*P **P** **12 43 19.1 +2.3**
JLN Jalan Bani Buh 51.05 332 P **P** **12 43 16.6 -0.4**
JLN P **P** **12 43 16.6 -0.4**
SWZ Schweizer 51.21 254 *e*P **P** **12 43 18.4 -0.1**
SWZ IAmb IAmb 12 43 19.3
comp=Z,58nm,0.8s
GRAF Camdeboo Natio 51.22 247⇑ *i*P **P** **12 43 19.9 +1.5**
GRAF IAmb IAmb 12 43 22.6
comp=Z,50nm,0.8s
TEZP TEZPUR 51.33 12 *e*P **P** **12 43 18.8 -0.2**
TEZP IAmb IAmb 12 43 20.8
comp=Z,55nm,1.0s
PKI Pulchoki 51.37 3 *e*P **P** **12 43 19.1 -0.6**
comp=Z,145nm,1.0s
PKIN Phulchoki 51.37 3 *e*P **P** **12 43 19.3 -0.3**
comp=Z,105nm,0.8s
LBTB Lobatse 51.38 256 LR LR 13 01 53.4
comp=Z,430nm,18.0s,baz=107,slow=32
LBTB Lobatse 51.38 256 P **P** **12 43 19.5 -0.2**
LBTB IAmb IAmb 12 43 24.1
comp=Z,80nm,1.1s
LBTB Lobatse 51.38 256 P **P** **12 43 19.5 -0.2**
LBTB pmax pmax
comp=Z,80nm,1.1s
LBTB Lobatse 51.38 256⇑ *i*P **P** **12 43 19.8 0.0**
LBTB IAmb IAmb 12 43 23.9
comp=Z,81nm,1.1s
GTK Tadong 51.38 7 *e*P **P** **12 43 20.2 +0.7**
GTK IAmb IAmb 12 43 21.9
comp=Z,92nm,0.8s
DMN Daman 51.39 3 *e*P **P** **12 43 19.6 -0.1**
comp=Z,167nm,0.9s
MOKO MOKOCHONG 51.39 14 *e*P **P** **12 43 20.0 +0.4**
MOKO IAmb IAmb 12 43 21.8
comp=Z,251nm,1.0s
JIRN Jiri 51.50 4 *e*P **P** **12 43 20.9 +0.2**
comp=Z,179nm,0.9s
LSZ Lusaka 51.55 269 LR LR 13 02 26.9
comp=Z,318nm,18.2s,baz=144,slow=33
LSZ Lusaka 51.55 269 P **P** **12 43 21.2 0.0**
LSZ Lusaka 51.55 269 P **P** **12 43 21.2 0.0**
LSZ pmax pmax
comp=Z,47nm,0.9s
KKN Kakani 51.58 3 *e*P **P** **12 43 21.4 +0.3**
WBK Wadi Bani Khal 51.65 332 P **P** **12 43 22.0 +0.5**
WBK P **P** **12 43 22.0 +0.5**
GUN Gumba 51.73 4 *e*P **P** **12 43 22.8 +0.4**
comp=Z,303nm,0.7s
JORH JORHAT 51.74 14 *e*P **P** **12 43 22.8 +0.7**
GKN Gorkha 51.76 2 *e*P **P** **12 43 22.4 0.0**
comp=Z,285nm,0.9s
JMDO Jabal Madar 51.81 331 P **P** **12 43 23.0 +0.3**
JMDO P **P** **12 43 23.0 +0.3**
BFON Badsfontein, M 51.95 248⇑ *i*P **P** **12 43 25.0 +1.1**
BFON IAmb IAmb 12 43 26.0
comp=Z,45nm,0.7s
ROOI Rooidraai Farm 51.98 247⇑ *i*P **P** **12 43 25.1 +1.0**
ROOI IAmb IAmb 12 43 27.0
comp=Z,759nm,2.3s
ITAN ITANAGAR 52.02 13 *e*P **P** **12 43 25.2 +1.1**
ARPS Mount Arapiles 52.06 119 P **P** **12 43 24.6 +0.1**
baz=52,SNR=23
ARPS Mount Arapiles 52.06 119 P **P** **12 43 24.7 +0.1**
DANN Dangsing 52.08 1 *e*P **P** **12 43 25.1 +0.2**
comp=Z,485nm,0.8s
INKA Innaminka 52.19 107 P **P** **12 43 26.1 +0.5**
STKA Stephens Creek 52.31 113 P **P** **12 43 26.4 -0.1**
comp=Z,49nm,0.8s,baz=285,slow=5.1,SNR=106
STKA PcP **PcP** **12 44 37.0 -0.7**
comp=Z,17nm,0.7s,baz=351,slow=2.8,SNR=5.2
STKA LR LR 13 02 08.4
comp=Z,350nm,20.8s,baz=249,slow=32
comp=Z,49nm,0.8s
STKA Stephens Creek 52.31 113 P **P** **12 43 26.4 -0.1**
baz=52,SNR=63
STKA Stephens Creek 52.31 113 P **P** **12 43 26.0 -0.5**
STKA Stephens Creek 52.31 113 P **P** **12 43 26.0 -0.5**
STKA pmax pmax
comp=Z,20nm,1.0s
STKA Stephens Creek 52.31 113 P **P** **12 43 26.3 -0.1**
WSAR Wadi Sarin 52.35 332 LR LR 13 00 31.0
comp=Z,1µm,21.2s,baz=157,slow=30
WSAR Wadi Sarin 52.35 332 P **P** **12 43 26.9 +0.3**
ATD Arta Tunnel 52.38 308 LR LR 13 00 36.7
comp=Z,1µm,21.4s,baz=130,slow=30
ATD Arta Tunnel 52.38 308 P **P** **12 43 27.4 +0.2**
ATD IAmb IAmb 12 43 31.2
comp=Z,153nm,0.9s
ATD Arta Tunnel 52.38 308 P **P** **12 43 29.4 +2.2**
SNR=9.2
ZIRO ZIRO 52.41 13 *e*P **P** **12 43 27.5 +0.2**
ZIRO IAmb IAmb 12 43 29.2
comp=Z,236nm,0.2s
FAKI Fak Fak 52.44 74 P **P** **12 43 27.6 0.0**
FAKI Fak Fak 52.44 74 P **P** **12 43 28.1 +0.5**
SMDO Samad 52.44 331 P **P** **12 43 27.7 +0.2**
SMDO P **P** **12 43 27.7 +0.2**
BSY Bisya 52.55 330 P **P** **12 43 30.0 +1.8**
SNR=7.7
BSY P **P** **12 43 30.0 +1.8**
SNR=7.7

SIJI Sorong 52.57 71 P **P** **12 43 29.6 +1.0**
comp=Z,134nm,1.0s,baz=330,slow=4.5,SNR=20
SIJI LR LR 13 07 05.5
comp=Z,57nm,19.1s,baz=238,slow=38
comp=Z,134nm,1.0s
KMI Kunming 52.66 23 ⇑P **P** **12 43 30.0 +0.7**
KMI pP sP 12 43 32.8 -0.6
KMI PcP **PcP** **12 44 39.5 +0.4**
KMI S **S** **12 50 54.5 -2.3**
KMI pmax pmax
comp=Z,56nm,1.6s
KMI pmax pmax
comp=Z,790nm,3.8s
KMI LR LR
comp=Z,1μm,20.0s
KMI LR LR
comp=Z,910nm,19.1s
KMI LR LR
comp=Z,1μm,23.4s
QIS Mount Isa 52.72 98 P **P** **12 43 29.1 -0.6**
baz=53,SNR=120
QIS Mount Isa 52.72 98 P **P** **12 43 29.3 -0.4**
BIDO Bidbid 52.81 332 P **P** **12 43 30.9 +0.8**
SNR=5.6
BIDO P **P** **12 43 30.9 +0.8**
SNR=5.6
PKA Prieska 53.04 250 *e*P **P** **12 43 32.8 +0.8**
PKA IAmb IAmb 12 43 34.0
comp=Z,38nm,0.8s
GRAN Grantham 53.17 247 ⇑*i*P **P** **12 43 34.2 +1.4**
GRAN IAmb IAmb 12 43 37.9
comp=Z,37nm,1.0s
LGTI Lohaghat 53.20 358 *e*P **P** **12 43 32.6 -0.2**
HOQ Hoqain 53.23 331 P **P** **12 43 35.0 +1.8**
SNR=10
HOQ P **P** **12 43 35.0 +1.8**
SNR=10
LODK Lodwar 53.28 294 P **P** **12 43 34.4 +0.4**
LODK Lodwar 53.28 294 P **P** **12 43 36.2 +2.3**
SNR=22
PTH Pithoragarh 53.30 358 *e*P **P** **12 43 34.3 +0.5**
ARQ Araqi 53.37 330 P **P** **12 43 34.8 +0.6**
SNR=5.3
ARQ P **P** **12 43 34.8 +0.6**
SNR=5.3
PZH PanZhiHua 53.58 22 P **P** **12 43 35.4 -0.5**
PZH pP **sP** **12 43 40.7 +0.6**
PZH sP **pwP** **12 43 44.9 +0.4**
PZH S **S** **12 51 09.4 +0.4**
PZH SS **SKiKP** **12 54 53.4 +2.0**
PZH pmax pmax
comp=Z,40nm,1.2s
PZH pmax pmax
comp=Z,500nm,3.5s
PZH LR LR
comp=Z,4μm,26.5s
PZH LR LR
comp=Z,2μm,26.0s
PZH LR LR
comp=Z,2μm,27.0s
BRAT Ballarat 53.68 120 P **P** **12 43 37.5 +1.1**
GEXS Deakin Univers 53.92 121 P **P** **12 43 39.0 +0.8**
SOHO SOHO 54.05 330 P **P** **12 43 39.3 +0.1**
SOHO P **P** **12 43 39.3 +0.1**
SOHO SOHO 54.05 330 *i* P **P** **12 43 38.7 -0.5**
SNR=14
LSA Lhasa 54.06 9 P **P** **12 43 39.6 -0.1**
LSA IAmb IAmb 12 43 42.4
comp=Z,117nm,1.3s
LSA Lhasa 54.06 9 P **P** **12 43 40.5 +0.8**
LSA pP **pwP** **12 43 47.0 -1.4**
LSA S **S** **12 51 09.0 -7.1**
LSA pmax pmax
comp=Z,36nm,0.6s
LSA pmax pmax
comp=Z,440nm,2.9s
LSA LR LR
comp=Z,700nm,19.2s
LSA LR LR
comp=Z,610nm,16.4s
LSA LR LR
comp=Z,710nm,17.1s
LSA Lhasa 54.06 9 P **P** **12 43 39.7 -0.1**
LSA pmax pmax
comp=Z,117nm,1.3s
LSA MLR MLR
comp=Z,1μm,19.0s
DDI Dehra Dun 54.19 355 *e*P **P** **12 43 40.3 +0.2**
DDI IAmb IAmb 12 43 42.0
comp=Z,543nm,1.5s
SUR Sutherland 54.30 246 LR LR 13 01 28.2
comp=Z,898nm,21.5s,baz=111,slow=30
SUR Sutherland 54.30 246 P **P** **12 43 42.8 +1.5**
SUR Sutherland 54.30 246 P **P** **12 43 43.0 +1.7**
SUR P **P** **12 43 43.0 +1.7**
ALNE Al Ain 54.34 330 P **P** **12 43 42.9 +1.6**
SNR=14
ALNE P **P** **12 43 42.9 +1.6**
SNR=14
ALNE Al Ain 54.34 330 *i* P **P** **12 43 41.2 -0.1**
SNR=11
MATJ Matjiesfontein 54.37 245 ⇑*i*P **P** **12 43 43.2 +1.4**
MATJ IAmb IAmb 12 43 44.9
comp=Z,148nm,0.8s
MZR Muzera 54.54 327 P **P** **12 43 43.3 +0.4**
MZR P **P** **12 43 43.3 +0.4**
MZR P **pP** **12 43 44.1 -1.7**
SNR=9.2
MZR P **pP** **12 43 44.1 -1.7**
SNR=9.2
MZR Muzera 54.54 327 *i* P **P** **12 43 42.8 -0.1**
SNR=50
UPI Upington 54.56 251 ⇑*i*P **P** **12 43 43.8 +0.7**
UPI IAmb IAmb 12 43 44.9
comp=Z,29nm,0.9s
ASHO Ashiyiah 54.74 330 P **P** **12 43 43.9 -0.4**
ASHO P **P** **12 43 43.9 -0.4**
ASHO Ashiyiah 54.74 330 *i* P **P** **12 43 43.5 -0.8**
SNR=6.3
KEIM Keimoes 54.74 251 *e*P **P** **12 43 45.8 +1.3**
KEIM IAmb IAmb 12 43 47.3
comp=Z,132nm,0.8s
HATD Hatta, Dubai 54.83 331 P **P** **12 43 44.7 -0.2**
SNR=7.5
HATD P **P** **12 43 44.7 -0.2**
SNR=7.5
HATD Hatta, Dubai 54.83 331 *i* P **P** **12 43 44.5 -0.4**
SNR=13
UOSS Minazif 54.90 331 P **P** **12 43 44.5 -0.8**
UOSS Minazif 54.90 331 P **P** **12 43 44.8 -0.6**
UOSS P **P** **12 43 44.8 -0.6**
UOSS Minazif 54.90 331 *i* P **P** **12 43 44.1 -1.3**
SNR=9.1
TOO Toolangi 54.91 120 P **P** **12 43 46.5 +1.0**
baz=55,SNR=24
TOO Toolangi 54.91 120 P **P** **12 43 46.1 +0.6**
TOO IAmb IAmb 12 43 48.2
comp=Z,102nm,1.2s
TOO Toolangi 54.91 120 P **P** **12 43 46.1 +0.6**
TOO pmax pmax
comp=Z,102nm,1.2s
TOO Toolangi 54.91 120 P **P** **12 43 46.5 +1.0**
MZWR Madinat Zayed 54.98 328 P **P** **12 43 46.4 +0.5**
MZWR P **P** **12 43 46.4 +0.5**
JASK Jask - Hormozg 54.99 333 P **P** **12 43 47.5 +1.5**
ASUD Al Ashush, Dub 55.03 330 P **P** **12 43 46.5 +0.3**
ASUD Al Ashush, Dub 55.03 330 *i* P **P** **12 43 45.8 -0.5**
SNR=10
SMLA Simla 55.06 355 *e*P **P** **12 43 46.1 -0.3**
SMLA IAmb IAmb 12 43 47.8
SMLA IAmb IAmb 12 43 51.4
comp=Z,71nm,1.1s
MDH Madha 55.17 331 P **P** **12 43 46.0 -1.2**
MDH Madha 55.17 331 P **P** **12 43 45.9 -1.4**
MBAR Mbarara 55.17 287 LR LR 13 03 50.3
comp=Z,278nm,18.4s,baz=76,slow=32
MBAR Mbarara 55.17 287 *i* P **P** **12 43 49.2 +1.4**
MBAR pmax pmax
comp=Z,52nm,1.1s
MBAR Mbarara 55.17 287 P **P** **12 43 49.1 +1.4**
NAZ Nazwa, Dubai 55.18 330 P **P** **12 43 47.2 -0.2**
NAZ P **P** **12 43 47.2 -0.2**
NAZ Nazwa, Dubai 55.18 330 *i* P **P** **12 43 47.0 -0.4**
SNR=6.6
MSFE Esma-Masafi 55.28 331 *i* P **P** **12 43 47.4 -0.8**
SNR=21
MASF Masafi 55.29 331 P **P** **12 43 47.9 -0.3**
SNR=6.3
MASF P **P** **12 43 47.9 -0.3**
SNR=6.3
AUGR Augrabies 55.31 251 *e*P **P** **12 43 49.5 +0.9**
AUGR IAmb IAmb 12 43 50.5
comp=Z,92nm,0.8s
CVNA Calvinia 55.31 247 ⇑*i*P **P** **12 43 49.6 +1.0**
CVNA IAmb IAmb 12 43 50.6
comp=Z,95nm,0.7s
GYA Guiyang 55.38 27 ⇓*i*P **P** **12 43 48.3 -0.7**
GYA pP pwP 12 43 55.2 -2.3
GYA S **S** **12 51 32.8 -0.5**
GYA SS **SS** **12 55 22.4 +4.1**
GYA pmax pmax
comp=Z,44nm,1.0s
GYA pmax pmax
comp=Z,1μm,3.6s
GYA LR LR
comp=Z,840nm,20.8s
GYA LR LR
comp=Z,760nm,19.2s
GYA LR LR
comp=Z,2μm,19.9s
CER Ceres 55.43 245 *e*P **P** **12 43 48.6 -0.7**
CER IAmb IAmb 12 43 50.7
comp=Z,693nm,2.5s
QLP Quilpie 55.46 107 P **P** **12 43 49.7 +0.1**
baz=55,SNR=38
QLP Quilpie 55.46 107 P **P** **12 43 49.8 +0.2**
GZH Guangzhou 55.63 35 P P 12 43 56.3 +5.7
GZH S S 12 51 49.2 +13
GZH pmax pmax
comp=Z,860nm,3.5s
GZH LR LR
comp=Z,1μm,24.2s
GZH LR LR
comp=Z,820nm,18.3s
GHWR Ruwais 55.65 327 P **P** **12 43 51.3 +0.5**
GHWR P **P** **12 43 51.3 +0.5**
BANOM Banah 55.71 331 P **P** **12 43 51.2 0.0**
SNR=6.0
BANOM Banah 55.71 331 *i* P **P** **12 43 50.6 -0.6**
SNR=12
CMSA Cobar Meteorol 55.82 113 P **P** **12 43 52.2 +0.2**
baz=56,SNR=70
CMSA Cobar Meteorol 55.82 113 P **P** **12 43 52.4 +0.3**
SHME Shamm 55.89 331 P **P** **12 43 52.3 -0.1**
SHME Shamm 55.89 331 *i* P **P** **12 43 51.6 -0.8**
SNR=17
MOO Moorlands 55.90 126 P **P** **12 43 52.7 +0.3**
baz=56,SNR=3.2
GULI GuiLin 55.99 31 ⇓P **P** **12 43 55.7 +2.5**
GULI S **S** **12 51 33.3 -7.9**
GULI pmax pmax
comp=Z,20nm,1.5s
GULI LR LR
comp=Z,410nm,23.8s
GULI LR LR
comp=Z,580nm,19.5s
GULI LR LR
comp=Z,1μm,20.6s
SLWR Sila 56.33 326 P **P** **12 43 56.5 +0.8**
SLWR P **P** **12 43 56.5 +0.8**
JRN Qarnain Island 56.48 327 P **P** **12 43 56.8 +0.2**
JRN P **P** **12 43 56.8 +0.2**
SMRA Abu-Samra 57.34 326 P **P** **12 44 03.0 +0.2**
MTSU Mount Surprise 57.67 97 P **P** **12 44 05.7 +0.3**
baz=58,SNR=19
MTSU Mount Surprise 57.67 97 P **P** **12 44 05.6 +0.2**
COEN Coen 57.94 92 P **P** **12 44 07.2 -0.2**
SNR=58,SNR=9.7
COEN Coen 57.94 92 P **P** **12 44 07.4 +0.1**
COEN Coen 57.94 92 P **P** **12 44 07.2 -0.2**
CAN Canberra 57.98 118 P **P** **12 44 08.2 +0.8**
CAN IAmb IAmb 12 44 09.9
comp=Z,165nm,1.6s
CAN Canberra 57.98 118 P **P** **12 44 08.2 +0.8**
CAN pmax pmax
comp=Z,165nm,1.6s
CAN Canberra 57.98 118 P **P** **12 44 08.3 +0.8**
NIL Nilore 58.01 351 P **P** **12 44 06.9 -0.5**
NIL IAmb IAmb 12 44 08.8
comp=Z,103nm,1.2s
NIL Nilore 58.01 351 P **P** **12 44 06.9 -0.5**
NIL pmax pmax
comp=Z,103nm,1.3s
SHMA Al-Shehemyia 58.18 326 P **P** **12 44 08.8 +0.2**
CNB Canberra Magne 58.28 118 P **P** **12 44 10.1 +0.5**
baz=58,SNR=5.5
CNB Canberra Magne 58.28 118 P **P** **12 44 10.3 +0.8**
CD2 Chengdu 58.32 22 P **P** **12 44 08.8 -0.8**
CD2 S **S** **12 52 10.9 -0.9**
CD2 pmax pmax
comp=Z,110nm,1.1s
CD2 pmax pmax
comp=Z,480nm,5.0s
CD2 LR LR
comp=Z,640nm,17.9s
CD2 LR LR
comp=Z,1μm,17.2s
CD2 LR LR
comp=Z,880nm,22.5s
CTA Charters Tower 58.85 100 P **P** **12 44 13.7 0.0**
CTAO Charters Tower 58.85 100 P **P** **12 44 13.9 +0.2**
CTAO IAmb IAmb 12 44 15.3
comp=Z,90nm,1.1s
CTAO Charters Tower 58.85 100 P **P** **12 44 13.9 +0.2**
CTAO pmax pmax
comp=Z,90nm,1.1s
CTAO MLR MLR
comp=Z,600nm,19.0s
CTAO Charters Tower 58.85 100 P **P** **12 44 13.7 0.0**
RAYN Ar Rayn 59.31 320 P **P** **12 44 17.0 +0.3**
RAYN IAmb IAmb 12 44 18.4
comp=Z,79nm,0.8s
RAYN Ar Rayn 59.31 320 IAMs_20 IAMs_20 13 04 43.7
comp=Z,2μm,22.0s
RAYN Ar Rayn 59.31 320 P **P** **12 44 17.0 +0.3**
RAYN pmax pmax
comp=Z,79nm,0.8s
RAYN Ar Rayn 59.31 320 P **P** **12 44 17.3 +0.6**
RMQ Roma 59.44 108 P **P** **12 44 17.8 +0.1**
baz=59,SNR=6.8
RMQ Roma 59.44 108 P **P** **12 44 17.7 +0.1**
KNMB Chin-men Tao 59.48 38 IAMs_20 IAMs_20 13 06 27.6
comp=Z,1μm,22.0s
KBL Kabul 59.60 347 P **P** **12 44 18.8 +0.1**
KBL IAmb IAmb 12 44 20.7
comp=Z,78nm,1.1s
KBL Kabul 59.60 347 P **P** **12 44 18.8 +0.1**
KBL pmax pmax
comp=Z,78nm,1.1s
KBL Kabul 59.60 347 P **P** **12 44 19.2 +0.5**
SNR=32
KBL P **P** **12 44 19.2 +0.5**
SNR=32
GENI Genyem 59.62 78 P **P** **12 44 19.1 +0.1**
CNSH ChangSha 59.65 31 ⇑P **P** **12 44 19.1 +0.3**
CNSH S **S** **12 52 30.6 +1.6**
CNSH pmax pmax
comp=Z,17nm,0.7s
CNSH LR LR
comp=Z,320nm,16.5s
CNSH LR LR
comp=Z,1μm,19.6s
CNSH LR LR
comp=Z,510nm,22.2s
ENH Enshi 59.90 27 P **P** **12 44 20.1 -0.6**
TPUB Ta-pu 59.90 41 P **P** **12 44 20.0 -0.8**
TPUB IAmb IAmb 12 44 39.4
comp=Z,53nm,1.0s
TPUB Ta-pu 59.90 41 P **P** **12 44 21.6 +0.8**
QZH Quanzhou 59.97 38 ⇑*i*P **P** **12 44 22.1 +1.0**
QZH S **S** **12 52 33.2 -0.1**
QZH pmax pmax
comp=Z,51nm,0.8s
QZH pmax pmax
comp=Z,300nm,5.2s
QZH LR LR
comp=Z,760nm,14.7s
QZH LR LR
comp=Z,710nm,18.5s
QZH LR LR
comp=Z,1μm,22.3s
TSUM Tsumeb 60.02 261 LR LR 13 06 41.1
comp=Z,335nm,20.3s,baz=144,slow=32
TSUM Tsumeb 60.02 261 P **P** **12 44 22.6 +0.8**
TSUM IAmb IAmb 12 44 25.0
comp=Z,44nm,0.9s
TSUM Tsumeb 60.02 261 ⇑*i*P **P** **12 44 23.1 +1.2**
TSUM IAmb IAmb 12 44 25.3
comp=Z,455nm,2.4s
YULB Yu-li 60.38 42 P **P** **12 44 23.9 -0.1**
SSLB Suanglung 60.47 41 P **P** **12 44 24.0 -0.6**
SSLB Suanglung 60.47 41 P **P** **12 44 25.8 +1.2**
NTLH Newcastle Hard 60.60 115 P **P** **12 44 25.9 +0.4**
GOMU GeErMu 61.02 11 P **P** **12 44 29.4 +0.8**
GOMU pP pwP 12 44 34.8 -2.4
GOMU sP sP 12 44 36.7 +3.9
GOMU S **S** **12 52 49.5 +2.4**
GOMU pmax pmax
comp=Z,10.0nm,0.8s
GOMU pmax pmax
comp=Z,130nm,4.7s
GOMU LR LR
comp=Z,720nm,17.1s
GOMU LR LR
comp=Z,340nm,17.5s
GOMU LR LR
comp=Z,600nm,17.1s
ARMA Armidale 61.03 113 P **P** **12 44 29.3 +0.7**
baz=61,SNR=29
ARMA Armidale 61.03 113 P **P** **12 44 29.4 +0.7**
ARMA Armidale 61.03 113 P **P** **12 44 29.4 +0.7**
NACB Ninganchiao 61.14 41 P **P** **12 44 27.7 -1.4**
NACB IAmb IAmb 12 44 31.7
comp=Z,92nm,0.9s
NVL N'lazarevskaya 61.15 201 ⇓*i*P **P** **12 44 29.7 +1.1**
NVL pmax pmax
comp=Z,39nm,0.7s
HRA Herat 61.16 341 P **P** **12 44 28.8 -0.6**
YHNB Yeheng 61.38 41 P **P** **12 44 29.3 -1.5**
YHNB IAmb IAmb 12 44 42.1
comp=Z,48nm,1.1s
YHNB Yeheng 61.38 41 P **P** **12 44 32.2 +1.3**
TATO Taipei 61.68 41 P **P** **12 44 31.8 -1.0**
TATO Taipei 61.68 41 P **P** **12 44 33.9 +1.2**
EIDS Eidsvold 61.74 107 P **P** **12 44 33.4 0.0**
baz=62,SNR=11
EIDS Eidsvold 61.74 107 P **P** **12 44 32.9 -0.5**
EIDS IAmb IAmb 12 44 34.8
comp=Z,46nm,0.9s
EIDS Eidsvold 61.74 107 P **P** **12 44 33.5 +0.1**
RK1H Rockhampton Ha 61.74 105 P **P** **12 44 34.1 +0.7**
WHN Wuhan 62.30 31 ⇓P **P** **12 44 37.8 +1.0**
WHN S **S** **12 53 03.6 +0.9**
WHN pmax pmax
comp=Z,1μm,3.6s
WHN LR LR
comp=Z,660nm,12.8s
WHN LR LR
comp=Z,2μm,16.5s
WHN LR LR
comp=Z,2μm,18.7s
XAN Xi'an 62.99 25 P **P** **12 44 40.9 -0.6**
XAN S **S** **12 53 10.5 -1.0**
XAN pmax pmax
comp=Z,24nm,0.8s
XAN pmax pmax
comp=Z,860nm,3.6s
XAN LR LR
comp=Z,1μm,19.9s
XAN LR LR
comp=Z,540nm,18.0s
XAN LR LR
comp=Z,1μm,19.8s
LZH Lanzhou 63.12 19 *e*P **P** **12 44 42.5 +0.1**
LZH pP sP 12 44 47.7 +1.1
LZH S **S** **12 53 12.1 -1.1**
LZH pmax pmax
comp=Z,120nm,1.3s
LZH pmax pmax
comp=Z,980nm,6.0s
LZH LR LR
comp=Z,2μm,15.2s
LZH LR LR
comp=Z,730nm,15.5s
LZH LR LR
comp=Z,3μm,18.0s
PMG Port Moresby 63.20 89 P **P** **12 44 43.0 -0.3**
comp=Z,36nm,0.8s,baz=214,slow=5.8,SNR=6.4
PMG LR LR 13 11 39.1
comp=Z,324nm,19.5s,baz=261,slow=36
comp=Z,36nm,0.8s
PMG Port Moresby 63.20 89 P **P** **12 44 43.0 -0.3**
KSH Kashi 63.49 354 P **P** **12 44 42.6 -2.1**
KSH pP pP 12 44 45.8 -2.0
KSH S **S** **12 53 10.9 -6.7**
KSH pmax pmax
comp=Z,64nm,0.9s
KSH pmax pmax
comp=Z,590nm,4.9s
KSH LR LR
comp=Z,2μm,19.7s
KSH LR LR
comp=Z,670nm,13.3s
KSH LR LR
comp=Z,2μm,19.0s
CHGR Chuyangaron 63.57 348 P **P** **12 44 44.5 -0.8**
CHGR IAmb IAmb 12 44 46.0
comp=Z,61nm,1.0s
CHGR Chuyangaron 63.57 348 P **P** **12 44 44.5 -0.8**
CHGR pmax pmax
comp=Z,61nm,1.0s
GAR Garm 63.70 349 P **P** **12 44 45.1 -1.0**
GAR IAmb IAmb 12 44 46.5
comp=Z,87nm,1.0s
DRK Karamyk 63.94 351 P **P** **12 44 47.1 -0.8**
DRK IAmb IAmb 12 44 49.2
comp=Z,28nm,0.7s
TROLL Troll, Antarti 64.24 200 PKiKP **PKiKP** **12 51 31.1 +0.1**
TROLL Troll, Antarti 64.24 200 P **P** **12 44 50.7 +1.3**
VNDA Vanda 64.44 166 P **P** **12 44 50.7 +0.3**
comp=Z,16nm,0.8s,baz=279,slow=6.7,SNR=96
VNDA LR LR 13 08 23.6
comp=Z,1μm,21.8s,baz=270,slow=32
VNDA PKPPKP **P'P'df** **13 13 38.9 -5.7**
comp=Z,1.8nm,0.9s,baz=113,slow=1.4,SNR=4.6
comp=Z,16nm,0.8s
VNDA Vanda 64.44 166 P **P** **12 44 50.7 +0.3**
VNDA Vanda 64.44 166 P **P** **12 44 50.7 +0.3**
VNDA pmax pmax
comp=Z,35nm,1.1s
LYN LuoYang 64.86 27 ⇓*i*P **P** **12 44 53.4 -0.3**
LYN pP sP 12 44 58.3 +0.4
LYN sP pwP 12 45 01.3 -1.0
LYN S **S** **12 53 37.2 +2.7**
LYN pmax pmax
comp=Z,70nm,1.6s
LYN pmax pmax
comp=Z,900nm,3.5s
LYN LR LR
comp=Z,740nm,16.0s
LYN LR LR
comp=Z,470nm,19.4s
LYN LR LR
comp=Z,680nm,18.5s
GTA Gaotai 65.16 15 ⇑P **P** **12 44 55.3 -0.4**
GTA pP sP 12 45 00.4 +0.5
GTA sP pwP 12 45 04.0 -0.3
GTA S **S** **12 53 36.3 -2.0**
GTA SS **SS** **12 57 56.2 +4.8**
GTA pmax pmax
comp=Z,18nm,0.9s
GTA pmax pmax
comp=Z,610nm,4.4s
GTA LR LR
comp=Z,760nm,22.7s
GTA LR LR
comp=Z,400nm,21.5s
GTA LR LR
comp=Z,1μm,24.7s
SBA Scott Base 65.50 167 P **P** **12 44 58.3 +1.0**
SBA IAmb IAmb 12 45 33.3
comp=Z,73nm,1.6s
SBA Scott Base 65.50 167 P **P** **12 44 58.3 +1.0**
SBA pmax pmax
comp=Z,73nm,1.6s
GEYT Alibeck 65.71 339 P **P** **12 44 59.1 -0.1**
comp=Z,30nm,0.8s,baz=185,slow=10,SNR=28

GEYT LR LR 13 12 30.6
comp=Z,420nm,18.8s,baz=160,slow=35
comp=Z,30nm,0.8s
GEYT Alibeck 65.71 339 P P 12 44 59.2 0.0
GEYT IAmb IAmb 12 45 06.3
comp=Z,46nm,0.9s
GYA0B ALIBECK ARRAY 65.71 339 P P 12 44 59.5 +0.3
GYA0B IAmb IAmb 12 45 06.2
comp=Z,43nm,1.1s
NJ2 Nanjing 65.73 34 ⇑P P 12 44 58.7 -0.7
NJ2 S S **12 53 48.1 +2.8**
NJ2 sS sS 12 54 00.4 +10
NJ2 pmax pmax
comp=Z,40nm,0.8s
NJ2 pmax pmax
comp=Z,640nm,4.3s
NJ2 LR LR
comp=Z,440nm,16.2s
NJ2 LR LR
comp=Z,540nm,13.6s
NJ2 LR LR
comp=Z,1μm,16.7s
SNAA Sanae 65.93 200 P P 12 45 00.9 +0.6
SNAA Sanae 65.93 200 LR LR 13 10 20.1
comp=Z,510nm,18.5s,baz=84,slow=33
SNAA Sanae 65.93 200 P P 12 45 01.0 +0.6
SNAA IAmb IAmb 12 45 04.2
comp=Z,45nm,0.9s
SNAA Sanae 65.93 200*ce*P P **12 45 00.6 +0.3**
SNAA pmax pmax
comp=Z,147nm,2.5s
SNAA Sanae 65.93 200⇑*i*P P **12 45 00.0 -0.3**
QSPA South Pole Qui 66.09 180 P P 12 45 01.7 +0.2
comp=Z,37nm,0.7s,baz=280,slow=1.1,SNR=201
QSPA LR LR 13 11 20.7
comp=Z,3μm,18.2s,baz=305,slow=34
comp=Z,37nm,0.7s
QSPA South Pole Qui 66.09 180 P P 12 45 02.1 +0.6
ULHL Ulahol 66.17 355 P P 12 45 02.9 +0.6
SNR=42
SSE Sheshan 66.19 36 P P 12 45 03.8 +1.4
SSE pP **sP 12 45 07.6 +1.0**
SSE S S **12 53 53.2 +2.2**
SSE pmax pmax
comp=Z,47nm,1.0s
SSE pmax pmax
comp=Z,180nm,4.4s
SSE LR LR
comp=Z,580nm,20.3s
AML Almayashu 66.31 353 P P 12 45 03.4 0.0
SNR=70
UCH Uchtor 66.31 354 P P 12 45 03.4 -0.1
SNR=34
MANU Manus Island 66.34 81 P P 12 45 03.0 -0.7
KBK Karagaybulak 66.70 354 P P 12 45 05.9 +0.3
SNR=36
AAK Ala-Archa 66.72 354 P P 12 45 05.6 -0.1
comp=Z,30nm,0.7s,baz=165,slow=5.0,SNR=42
AAK LR LR 13 13 12.9
comp=Z,2μm,18.0s,baz=172,slow=35
comp=Z,30nm,0.7s
AAK Ala-Archa 66.72 354 P P 12 45 05.5 -0.1
SNR=19
AAK Ala-Archa 66.72 354 P P 12 45 05.6 -0.1
AAK IAmb IAmb 12 45 07.6
comp=Z,38nm,0.9s
AAK Ala-Archa 66.72 354*ce*P P **12 45 05.8 +0.1**
AAK pmax pmax
comp=Z,108nm,2.5s
AAK Ala-Archa 66.72 354 P P 12 45 05.7 -0.1
AAK P P **12 45 05.7 -0.1**
AAK Ala-Archa 66.72 354 *i* P **P 12 45 05.6 -0.1**
SNR=21
IUG luzhnay 66.82 350*c i*P P **12 45 06.2 -0.1**
IUG *e*S **S 12 53 58.0 -0.4**
IUG luzhnay 66.82 350⇑*i*P P **12 45 06.2 -0.1**
baz=350
IUG *e*S **S 12 53 58.0 -0.4**
baz=350
EKS2 Erkin-Say 66.82 353 P P 12 45 06.6 +0.3
SNR=48
SATY Saty 66.84 357*c i*P P **12 45 06.2 -0.2**
SATY *i* S **S 12 53 58.5 -0.2**
SATY pmax pmax
comp=Z,58nm,1.1s
SATY Saty 66.84 357⇑*i*P P **12 45 06.3 -0.2**
comp=Z,58nm,1.1s,baz=357
SATY *i* S **S 12 53 58.6 -0.2**
baz=357
SHLS Shalkode 66.89 358*c i*P P **12 45 06.6 -0.2**
SHLS *e*S **S 12 53 59.1 -0.2**
SHLS pmax pmax
comp=Z,42nm,1.3s
SHLS Shalkode 66.89 358⇑*i*P P **12 45 06.6 -0.2**
comp=Z,42nm,1.3s,baz=358
SHLS *e*S **S 12 53 59.1 -0.2**
baz=358
TKM2 Tokmak 2 66.90 355 P P 12 45 06.4 -0.5
SNR=118
TKM2 Tokmak 2 66.90 355 *i* P **P 12 45 06.1 -0.8**
TKM2 pmax pmax
comp=Z,118nm,0.9s
UZB Uzynbulak 66.90 357*e*P P **12 45 06.6 -0.2**
UZB Uzynbulak 66.90 357*e*P P **12 45 06.7 -0.2**
baz=357
MDOK Medeo 67.03 356 *i* P **P 12 45 07.2 -0.4**
MDOK *i* S **S 12 54 00.5 -0.5**
MDOK Medeo 67.03 356 *i* P **P 12 45 07.3 -0.4**
baz=356
MDOK *i* S **S 12 54 00.6 -0.5**
baz=356
CHMS Chumysh 67.05 354 P P 12 45 07.2 -0.5
SNR=9.0
PDGK Podgornoye 67.06 358 P P 12 45 07.5 -0.4
AAA Alma-Ata 67.08 356*e*P P **12 45 07.8 -0.1**
AAA Alma-Ata 67.08 356*e*P P **12 45 07.9 0.0**
baz=356
JOW Kunigami 67.21 44 P P 12 45 08.8 -0.1
JOW Kunigami 67.21 44 P P 12 45 09.9 +0.9
USP Ospenovka 67.34 354 P P 12 45 09.5 0.0
SNR=12
DZA Taraz 67.35 351*e*P P **12 45 08.9 -0.7**
DZA pmax pmax
comp=Z,36nm,0.7s
DZA Taraz 67.35 351*e*P P **12 45 09.0 -0.7**
comp=Z,36nm,0.7s,baz=351
VNA2 Neumayer--Watz 67.47 201 P P 12 45 11.2 +1.1
SGDS Sogindy 67.52 354*c i*P P **12 45 10.1 -0.5**
SGDS pmax pmax
comp=Z,59nm,1.0s
SGDS Sogindy 67.52 354⇑*i*P P **12 45 10.2 -0.4**
comp=Z,59nm,1.0s,baz=354
TIY Taiyuan 67.58 25 ⇓P P 12 45 12.1 +0.9
TIY S S **12 54 02.0 -5.6**
TIY pmax pmax
comp=Z,32nm,0.8s
TIY LR LR
comp=Z,1μm,16.5s
TIY LR LR
comp=Z,580nm,18.5s
TIY LR LR
comp=Z,960nm,16.5s
WMQ Urumqi 67.67 4*e*P P **12 45 12.3 +0.7**
WMQ sP pwP 12 45 21.6 +1.3
WMQ PP **PP 12 47 42.9 +1.6**
WMQ S S **12 54 09.1 +0.5**
WMQ pmax pmax
comp=Z,68nm,1.1s
WMQ pmax pmax
comp=Z,830nm,3.9s
WMQ LR LR
comp=Z,2μm,22.9s
WMQ LR LR
comp=Z,790nm,20.5s
WMQ LR LR
comp=Z,2μm,21.7s
KK31 Karatay Array 67.68 351 P P **12 45 11.4 -0.2**
KK31 IAmb IAmb 12 45 13.4
comp=Z,93nm,0.9s
KK31 Karatay Array 67.68 351 *i* P **P 12 45 11.2 -0.4**
KKAR Karatay Array 67.68 351 P P **12 45 11.3 -0.3**
KKAR Karatay Array 67.68 351 P P **12 45 11.3 -0.3**
CHKK Chushkaly 67.72 356⇓*e*P P **12 45 10.6 -1.2**
CHKK Chushkaly 67.72 356⇓*e*P P **12 45 10.7 -1.2**
baz=356
VNA1 Neumayer--Stat 67.80 201 P P 12 45 13.6 +1.5

KUU Kurty 67.80 355*c i*P P **12 45 11.5 -0.9**
KUU pmax pmax
comp=Z,160nm,1.2s
KUU Kurty 67.80 355⇑*i*P P **12 45 11.5 -0.9**
comp=Z,160nm,1.2s,baz=355
ARXS Arharly 68.02 356*e*P P **12 45 12.9 -0.9**
VNA3 Neumayer Olymp 68.15 200 PKiKP **PKiKP 12 51 37.1 +1.0**
VNA3 Neumayer Olymp 68.15 200 P P **12 45 15.4 +1.0**
HNS HongShan 68.23 27 ⇑P P **12 45 15.6 +0.5**
HNS S S **12 54 16.9 +1.7**
HNS SS SS **12 58 37.7 -1.2**
HNS pmax pmax
comp=Z,73nm,1.0s
HNS pmax pmax
comp=Z,760nm,3.7s
HNS LR LR
comp=Z,670nm,17.7s
HNS LR LR
comp=Z,220nm,16.2s
HNS LR LR
comp=Z,750nm,17.3s
TIA Tai'an 68.29 30 ⇑P P **12 45 14.6 -1.0**
TIA S S **12 54 17.7 +1.6**
TIA pmax pmax
comp=Z,40nm,1.3s
TIA LR LR
comp=Z,500nm,19.6s
TIA LR LR
comp=Z,290nm,19.4s
TIA LR LR
comp=Z,790nm,24.3s
TDK Taldyqorghan 68.78 357*c i*P P **12 45 17.7 -0.8**
TDK pmax pmax
comp=Z,33nm,0.7s
TDK Taldyqorghan 68.78 357⇑*i*P P **12 45 17.7 -0.8**
comp=Z,33nm,0.7s,baz=357
BTLS Baital 69.15 354*c i*P P **12 45 20.0 -0.7**
BTLS pmax pmax
comp=Z,44nm,1.2s
BTLS Baital 69.15 354⇑*i*P P **12 45 20.1 -0.7**
comp=Z,44nm,1.2s,baz=354
BTO Baotou 69.23 22*e*P P **12 45 22.1 +0.6**
BTO S S **12 54 30.1 +2.8**
BTO LR LR
comp=Z,2μm,22.6s
BTO LR LR
comp=Z,2μm,17.7s
KRVT Keravat (AS076 69.64 86 LR LR 13 17 52.9
comp=Z,108nm,18.3s,baz=34,slow=38
DCZ Deep Cove 69.72 132 P P **12 45 25.2 +0.7**
DCZ IAmb IAmb 12 45 26.7
comp=Z,54nm,1.0s
HHC Hu-ho-hao-te 69.99 23*e*P P **12 45 29.2 +3.0**
HHC PP **PP 12 48 06.6 +5.2**
HHC S S **12 54 38.1 +1.9**
HHC SS SS **12 59 10.6 +4.4**
HHC pmax pmax
comp=Z,86nm,1.3s
HHC pmax pmax
comp=Z,420nm,5.9s
HHC LR LR
comp=Z,1μm,19.5s
HHC LR LR
comp=Z,520nm,17.7s
HHC LR LR
comp=Z,1μm,18.3s
WHZ Wether Hill Ro 70.16 132 P P **12 45 27.1 -0.1**
WHZ IAmb IAmb 12 45 29.1
comp=Z,57nm,1.1s
EIL Elat 70.20 317 LR LR 13 11 43.0
comp=Z,846nm,21.7s,baz=104,slow=32
MK31 Makanchi Array 70.47 360 P P **12 45 27.7 -1.2**
MK31 IAmb IAmb 12 45 29.9
comp=Z,46nm,1.1s
MK31 Makanchi Array 70.47 360 *i* P **P 12 45 27.6 -1.3**
MK31 pmax pmax
comp=Z,55nm,1.0s
MKAR Makanchi Array 70.47 360 P P **12 45 27.7 -1.2**
comp=Z,38nm,0.8s,baz=174,slow=6.4,SNR=233
MKAR PKPPKP **P'P'df 13 13 27.8 +4.5**
comp=Z,0.8nm,1.0s,baz=320,slow=3.2,SNR=5.8
comp=Z,38nm,0.8s
MKAR Makanchi Array 70.47 360 *i* P **P 12 45 28.0 -0.9**
MKAR pmax pmax
comp=Z,38nm,0.8s
MAKZ Makanchi 70.49 360 P P **12 45 28.0 -1.0**
MAKZ IAmb IAmb 12 45 30.0
comp=Z,74nm,0.9s
MAKZ IAMs_20 IAMs_20 13 18 39.5
comp=Z,797nm,18.0s
MAKZ Makanchi 70.49 360 P P **12 45 28.0 -1.0**
MAKZ pmax pmax
comp=Z,73nm,0.9s
MAKZ MLR MLR
comp=Z,800nm,18.0s
ASF Jabal al Asfar 70.80 320 P P **12 45 32.0 +0.7**
comp=Z,49nm,0.9s,baz=140,slow=3.5,SNR=62
ASF LR LR 13 13 00.5
comp=Z,410nm,21.9s,baz=118,slow=33
comp=Z,49nm,0.9s
ASF Jabal al Asfar 70.80 320 P P **12 45 32.0 +0.7**
GHAJ Ghor Haditha 70.97 319 P P **12 45 32.6 +0.4**
GHAJ IAMs_20 IAMs_20 13 12 34.7
comp=Z,844nm,19.0s
BJT Baijiatuau 71.05 27 P P **12 45 32.5 0.0**
BJT Baijiatuau 71.05 27 P P **12 45 32.5 0.0**
BJT pmax pmax
comp=Z,22nm,0.7s
CUKT Cukurca 71.06 328 P P **12 45 32.2 -0.6**
BJI Beijing 71.07 27 P P **12 45 32.6 0.0**
BJI S S **12 54 48.9 +0.3**
BJI pmax pmax
comp=Z,13nm,0.6s
BJI pmax pmax
comp=Z,700nm,3.6s
BJI LR LR
comp=Z,86nm,20.7s
BJI LR LR
comp=Z,490nm,18.9s
BJI LR LR
comp=Z,670nm,24.9s
ZSN Zaisan 71.17 2*c i*P P **12 45 32.9 -0.2**
ZSN pmax pmax
comp=Z,41nm,1.0s
ZSN Zaisan 71.17 2⇑*i*P P **12 45 33.0 -0.2**
comp=Z,41nm,1.0s,baz=1.6
GUMO Guam 71.53 65 LR LR 13 11 49.9
comp=Z,55nm,21.3s,baz=274,slow=32
JSU Suzuyama 71.83 42 P P **12 45 36.6 -0.9**
LBZ Lake Benmore 72.08 131 P P **12 45 39.6 +0.6**
BELA Belgrano 2 72.08 191 P P **12 45 38.1 -0.3**
GEVA Gevas 72.16 328 P P **12 45 39.7 +0.2**
GEVA IAmb IAmb 12 45 49.5
comp=Z,48nm,1.0s
AKDM Akdamar-Van 72.21 328 P P **12 45 41.3 +1.5**
VANB Van 72.23 329 P P **12 45 41.7 +1.9**
MMAI Mount Meron Ar 72.28 320 P P **12 45 41.5 +1.3**
comp=Z,46nm,0.9s,baz=114,slow=8.4,SNR=36
MMAI LR LR 13 13 45.6
comp=Z,696nm,20.1s,baz=292,slow=33
comp=Z,46nm,0.9s
CLDR Caldiran 72.42 329 P P **12 45 40.5 -0.6**
OTUK Ortayu 72.49 353 P P **12 45 40.1 -1.0**
MARD Mardin 72.51 326 P P **12 45 42.3 +0.8**
MARD IAmb IAmb 12 45 44.8
comp=Z,76nm,0.9s
DL2 Dalian 72.56 31 P P **12 45 41.6 0.0**
DL2 S S **12 55 07.4 +1.6**
DL2 pmax pmax
comp=Z,72nm,1.3s
DL2 pmax pmax
comp=Z,720nm,5.5s
DL2 LR LR
comp=Z,380nm,19.0s
DL2 LR LR
comp=Z,340nm,22.0s
DL2 LR LR
comp=Z,480nm,24.5s
MAZI Mazidag 72.79 326 P P **12 45 44.6 +1.4**
GURO Guroymak-BITLI 72.85 328 P P **12 45 45.3 +1.8**
GURO Guroymak-BITLI 72.85 328 P P **12 45 43.9 +0.4**
GURO IAmb IAmb 12 45 46.8
comp=Z,43nm,0.8s
NAWB Namwon 72.85 37 P P **12 45 44.2 +0.7**
GNI Garni 72.85 331 P P **12 45 44.3 +0.7**
comp=Z,28nm,0.8s,baz=64,slow=0.2,SNR=14

GNI LR LR 13 14 55.5
comp=Z,465nm,22.0s,baz=145,slow=34
comp=Z,28nm,0.8s
GNI Garni 72.85 331 P P **12 45 43.5 -0.1**
GNI Garni 72.85 331*ce*P P **12 45 42.7 -0.9**
GNI pmax pmax
comp=Z,177nm,2.5s
GNI Garni 72.85 331 P P **12 45 44.2 +0.7**
GNI Garni 72.85 331 P P **12 45 44.2 +0.6**
RPZ Rata Peaks 72.87 131 P P **12 45 44.3 +0.6**
comp=Z,14nm,0.8s,baz=56,slow=6.5,SNR=4.0
RPZ LR LR 13 09 14.0
comp=Z,408nm,20.6s,baz=256,slow=29
comp=Z,14nm,0.8s
SVAN Silvan-Diyarba 72.94 327 P P **12 45 45.7 +1.7**
AGRB Hanur-Agry 73.20 329 P P **12 45 46.3 +0.6**
JNU Nakatsue 73.21 41 LR LR 13 19 01.8
comp=Z,308nm,18.0s,baz=244,slow=37
JNU Nakatsue 73.21 41 P P **12 45 45.2 -0.5**
JNU Nakatsue 73.21 41 P P **12 45 45.4 -0.3**
JTU Tsushima 73.33 39 P P **12 45 47.2 +0.9**
JTU IAmb IAmb 12 45 48.5
comp=Z,98nm,1.1s
TJN Taejon 73.54 36 P P **12 45 47.3 -0.2**
TJN Taejon 73.54 36*ce*P P **12 45 47.0 -0.5**
TJN Taejon 73.54 36 P P **12 45 48.0 +0.5**
VRTB Varto-Mus 73.60 328 P P **12 45 48.9 +0.9**
URFA Urfa 73.61 325 P P **12 45 44.4 -3.6**
OXZ Oxford 73.67 130 P P **12 45 49.2 +0.8**
OXZ IAmb IAmb 12 45 58.2
comp=Z,131nm,1.6s
KSBUS Busan 73.69 38 P P **12 45 48.8 +0.5**
KSBUS IAmb IAmb 12 45 51.0
comp=Z,86nm,0.9s
BNGB Bingl 73.85 327 P P **12 45 50.9 +1.5**
HJU Haeju 73.92 34 P P **12 45 49.5 -0.1**
HJU pP **PcP 12 46 02.4 -2.6**
HJU S S **12 55 21.6 +0.3**
HJU AmB
comp=Z,2μm,3.2s
HJU AMS AMS
comp=N,376nm,6.9s
HJU AMS AMS
comp=E,686nm,12.5s
HJU AMS AMS
comp=Z,162nm,3.0s
INCN Inchon 73.97 35 P P **12 45 49.5 -0.5**
INCN IAmb IAmb 12 45 51.6
comp=Z,102nm,1.1s
INCN Inchon 73.97 35 IAMs_20 IAMs_20 13 15 43.8
comp=Z,1μm,22.0s
INCN Inchon 73.97 35 P P **12 45 49.5 -0.5**
INCN pmax pmax
comp=Z,102nm,1.1s
INCN Inchon 73.97 35 P P **12 45 50.8 +0.7**
INCN P P **12 45 50.8 +0.7**
INCN Inchon 73.97 35 P P **12 45 50.3 +0.3**
MAK Makhachkala 74.00 334*e*P P **12 45 46.5 -3.5**
MAK *e*S **SKiKP 12 55 16.4 -1.9**
MAK *e*SSS SSS 13 03 20.2
MAK pmax pmax
comp=Z,167nm,1.5s
MAK MLR MLR
comp=Z,320nm,17.0s
YAYL Yayladag 74.04 322 P P **12 45 51.7 +1.1**
KOPR Koprukoy-ERZUR 74.06 329 P P **12 45 51.5 +0.8**
SEM Semipalatinsk 74.12 359*e*P P **12 45 49.7 -1.1**
SEM pmax pmax
comp=Z,59nm,1.2s
SEM Semipalatinsk 74.12 359*e*P P **12 45 49.7 -1.1**
comp=Z,59nm,1.2s,baz=358
BRZS Berezniki 74.17 353*c i*P P **12 45 50.2 -0.7**
BRZS Berezniki 74.17 353⇑*i*P P **12 45 50.3 -0.7**
baz=353
KSCHJ Chungju 74.23 37 P P **12 45 52.0 +0.4**
KSCHJ IAmb IAmb 12 45 53.9
comp=Z,107nm,1.1s
TAHT Tahtakopru-Hat 74.25 323 P P **12 45 53.2 +1.5**
SENK Senkaya-Erzuru 74.28 329 P P **12 45 53.2 +1.2**
XLT XiLinHaoTe 74.30 25⇑*i*P P **12 45 52.9 +1.0**
XLT pP sP 12 45 57.2 +1.0
XLT sP pwP 12 46 00.1 -0.5
XLT S S **12 55 27.7 +2.1**
XLT sS sS 12 55 35.0 +4.3
XLT ScS **SKKSac 12 56 01.6 +2.1**
XLT SS **SS 13 00 18.4 +6.2**
XLT pmax pmax
comp=Z,33nm,2.2s
XLT pmax pmax
comp=Z,940nm,3.5s
XLT LR LR
comp=Z,79nm,21.8s
XLT LR LR
comp=Z,300nm,21.1s
XLT LR LR
comp=Z,1μm,22.0s
KURBB Kurchatov Arra 74.39 357 P P **12 45 51.1 -1.0**
comp=Z,43nm,0.9s,baz=185,slow=6.1,SNR=235
KURBB LR LR 13 17 14.3
comp=Z,1μm,21.6s,baz=156,slow=35
comp=Z,43nm,0.9s
PTK Pertek 74.42 326 P P **12 45 54.3 +1.4**
KURK Kurchatov 74.48 357 P P **12 45 51.8 -0.8**
KURK IAmb IAmb 12 45 53.8
comp=Z,96nm,1.2s
KURK Kurchatov 74.48 357 IAMs_20 IAMs_20 13 16 42.0
comp=Z,1μm,22.0s
KURK Kurchatov 74.48 357 *i* P **P 12 45 51.3 -1.3**
KURK pmax pmax
comp=Z,88nm,1.2s
KURK Kurchatov 74.48 357 P P **12 45 52.3 -0.3**
KURK P P **12 45 52.3 -0.3**
KSAR Wonju Array Be 74.60 36 P P **12 45 53.9 +0.2**
KSAR Wonju Array Be 74.60 36 P P **12 45 53.9 +0.2**
KSRS Korea Array 74.63 36 P P **12 45 53.9 +0.1**
comp=Z,46nm,0.9s,baz=230,slow=5.0,SNR=181
KSRS PKPPKP **P'P'df 13 13 20.8 +2.6**
comp=Z,0.8nm,0.8s,baz=16,slow=2.5,SNR=5.2
KSRS LR LR 13 16 00.4
comp=Z,486nm,21.9s,baz=215,slow=34
comp=Z,46nm,0.9s
KS19 Wonju Array Si 74.64 36 P P **12 45 53.6 -0.3**
KS19 IAmb IAmb 12 45 56.2
comp=Z,101nm,1.1s
KMRS Kahramanmaras 74.68 324 P P **12 45 54.8 +0.6**
PYAG Pyongyang 74.69 34 P P **12 45 54.6 +0.4**
SONM Songino Array 74.70 16 P P **12 45 54.0 -0.2**
comp=Z,15nm,0.8s,baz=196,slow=5.7,SNR=35
SONM LR LR 13 18 03.4
comp=Z,2μm,21.7s,baz=198,slow=35
comp=Z,15nm,0.8s
SONM Songino Array 74.70 16 P P **12 45 53.9 -0.2**
KOPT Kop Dagi 74.73 328 P P **12 45 54.8 +0.1**
KOPT IAmb IAmb 12 46 04.5
comp=Z,63nm,0.9s
CSS Mathiatis 74.87 320 P P **12 45 55.9 +0.6**
CSS IAmb IAmb 12 45 56.9
comp=Z,51nm,0.9s
SUJ Sinuiju 74.87 32 P P **12 45 54.4 -0.8**
SUJ pP **PcP 12 46 07.7 -1.4**
SUJ S S **12 55 31.5 -0.3**
SUJ AmB
comp=Z,2μm,3.8s
SUJ AMS AMS
comp=N,153nm,5.0s
SUJ AMS AMS
comp=E,130nm,4.2s
SUJ AMS AMS
comp=Z,131nm,4.3s
HNR Honiara 74.88 94 LR LR 13 20 06.8
comp=Z,164nm,18.1s,baz=208,slow=37
HNR Honiara 74.88 94 P P **12 45 55.4 -0.5**
HNR Honiara 74.88 94 P P **12 45 55.4 -0.5**
HNR pmax pmax
comp=Z,406nm,1.7s
ULN Ulaanbaatar 74.90 17 P P **12 45 55.1 -0.4**
ULN IAmb IAmb 12 45 57.1
comp=Z,100nm,1.6s
ULN Ulaanbaatar 74.90 17*ce*P P **12 45 54.1 -1.3**
ULN pmax pmax
comp=Z,104nm,2.5s
ULN Ulaanbaatar 74.90 17 P P **12 45 55.0 -0.4**
ULN P P **12 45 55.0 -0.4**
CEYT Ceyhan 74.95 323 P P **12 45 56.9 +1.2**
LFK Lefkose 74.97 320 P P **12 45 57.8 +1.8**

DARE Darende-Malaty 75.16 325 P **P** **12 45 58.8 +1.8**
LEF Lefka 75.24 320 P **P** **12 45 58.2 +0.8**
KOZT Kozan 75.25 323 P **P** **12 45 58.4 +1.0**
BCA Borcka 75.31 329 ⇓P **P** **12 45 57.4 -0.3**
ZEI Tsey 75.36 332 *e*P **P** **12 45 59.6 +1.4**
ZEI pmax pmax
comp=Z,27nm,0.8s
ONI Oni 75.40 331 P **P** **12 45 58.4 +0.1**
ONI Oni 75.40 331 P **P** **12 45 58.4 +0.1**
ONI pmax pmax
comp=Z,43nm,1.0s
SEHB SEOHWA 75.41 36 P **P** **12 45 58.9 +0.5**
SEHB IAmb IAmb 12 46 00.9
comp=Z,100nm,1.2s
CHOM Cayeli-Rize 75.44 329 P **P** **12 45 58.6 +0.1**
JMN Monobe 75.45 42 P **P** **12 45 58.7 0.0**
JMN IAmb IAmb 12 46 00.9
comp=Z,124nm,1.0s
KIZK Mersin 75.47 322 P **P** **12 45 59.4 +0.7**
KNGR Kungurtug, Tuv 75.48 10 *i*P **P** **12 45 59.1 +0.5**
KNGR pmax pmax
comp=Z,21nm,1.1s
KARA Karaisali 75.51 323 P **P** **12 45 59.8 +0.8**
MERS Mersin 75.53 322 P **P** **12 45 58.5 -0.6**
IKL Isikli 75.56 321 P **P** **12 46 00.0 +0.8**
AKKU Akkuyu-Mersin 75.58 321 P **P** **12 45 59.8 +0.4**
TUWZ Tuamarina 75.61 129 P **P** **12 45 58.9 -0.8**
AB31 Akbulak array 75.65 345 *i*P **P** **12 45 58.7 -0.7**
ABKAR Akbulak array 75.65 345 P **P** **12 45 59.2 -0.2**
ABKAR IAmb IAmb 12 46 00.9
comp=Z,63nm,1.0s
KEBE Keben-Mersin 75.69 321 P **P** **12 46 01.5 +1.4**
TEKE Tekeli-Mersin 75.82 321 P **P** **12 46 01.4 +0.7**
KTUT Trabzon 75.84 328 ⇓P **P** **12 46 02.1 +1.4**
KTUT Trabzon 75.84 328 P **P** **12 46 01.4 +0.7**
TEVE Tevekalti-Mers 75.84 321 P **P** **12 46 01.9 +1.0**
JHS Saijyo 75.85 41 P **P** **12 46 01.0 0.0**
JHS IAmb IAmb 12 46 02.8
comp=Z,96nm,0.9s
BERE Bereket-Mersin 75.90 321 P **P** **12 46 02.4 +1.0**
NCK Nalchik 76.06 332 *i*P **P** **12 46 03.0 +1.0**
NCK pmax pmax
comp=Z,100nm,0.9s
DZM Mont Dzumac 76.14 108 P **P** **12 46 03.8 +0.7**
comp=Z,16nm,0.9s,baz=127,slow=20,SNR=5.4
DZM LR LR 13 16 58.2
comp=Z,345nm,20.0s,baz=224,slow=34
comp=Z,16nm,0.9s
DZM Mont Dzumac 76.14 108 *e*LR LR 13 09 31.5
comp=Z,383nm,20.9s
BNN Bunyan 76.23 324 P **P** **12 46 03.4 +0.2**
BNN Bunyan 76.23 324 P **P** **12 46 03.4 +0.2**
HHU Hamhung 76.26 34 P **P** **12 46 03.4 +0.3**
HHU pP **PcP** **12 46 16.5 +1.4**
HHU S **S** **12 55 48.9 +1.7**
HHU AmB
comp=Z,348nm,1.4s
HHU AMS AMS
comp=N,130nm,7.5s
HHU AMS AMS
comp=E,89nm,5.1s
HHU AMS AMS
comp=Z,15nm,0.9s
ZAK Zakamensk 76.34 14 *e*P **P** **12 46 02.3 -1.2**
ZAK pmax pmax
comp=Z,22nm,1.1s
GAZI Gazipasa 76.35 320 P **P** **12 46 04.2 +0.4**
OUENC Ouen Island, N 76.36 109 P **P** **12 46 05.6 +1.3**
OUENC IAmb IAmb 12 46 06.6
comp=Z,67nm,1.0s
OUENC Ouen Island, N 76.36 109 P **P** **12 46 04.9 +0.6**
SVSK Karacayir 76.41 326 P **P** **12 46 05.6 +1.6**
YATNC Mamie plateau, 76.53 108 P **P** **12 46 05.8 +0.5**
KBZ Khabaz 76.55 332 P **P** **12 46 05.5 +0.8**
comp=Z,47nm,0.9s,baz=167,slow=5.9,SNR=78
KBZ LR LR 13 18 07.2
comp=Z,313nm,20.9s,baz=141,slow=34
comp=Z,47nm,0.9s
KBZ Khabaz 76.55 332*ce*P **P** **12 46 05.0 +0.3**
KBZ pmax pmax
comp=Z,72nm,1.0s
YESY Yesilyurt 76.61 322 P **P** **12 46 06.3 +0.9**
PYA1 Pyatigorsk 76.73 332 *i*P **P** **12 46 06.2 +0.4**
PYA1 pmax pmax
comp=Z,5.0nm,0.8s
KVAR Kislovodsk Arr 76.82 332 LR LR 13 18 43.9
comp=Z,296nm,20.3s,baz=60,slow=35
KIV Kislovodsk 76.83 332 ⇑P **P** **12 46 06.7 +0.3**
KIV Kislovodsk 76.83 332 P **P** **12 46 07.0 +0.6**
KIV IAmb IAmb 12 46 08.9
comp=Z,105nm,1.1s
KIV Kislovodsk 76.83 332 *e*P **P** **12 46 06.4 0.0**
KIV *e*S **S** **12 55 54.1 +0.6**
KIV *e*SS **SS** **13 00 51.0 +0.5**
KIV pmax pmax
comp=Z,136nm,3.8s
KIV pmax pmax
comp=Z,89nm,1.1s
KIV MLR MLR
comp=Z,238nm,18.0s
KIV Kislovodsk 76.83 332 P **P** **12 46 06.7 +0.3**
KIV Kislovodsk 76.83 332 *i*P **P** **12 46 06.7 +0.3**
SNR=9.7
JCJ Chichijima 76.87 52 LR LR 13 16 45.6
comp=Z,127nm,21.7s,baz=103,slow=33
TOKT Tokat 76.94 326 P **P** **12 46 07.2 +0.1**
MRZ Mangatainoka R 77.03 129 P **P** **12 46 07.4 -0.3**
SULT Sultanhani-AKS 77.04 322 P **P** **12 46 08.5 +0.8**
YOZ Yozgat 77.09 325 P **P** **12 46 09.1 +1.1**
MOY Mondy 77.10 12 *e*P **P** **12 46 07.9 +0.1**
MOY pmax pmax
comp=Z,72nm,3.5s
AKTO Aktyubinsk 77.21 344 P **P** **12 46 07.7 -0.5**
comp=Z,34nm,0.7s,baz=142,slow=6.5,SNR=84
AKTO LR LR 13 19 07.9
comp=Z,871nm,20.7s,baz=147,slow=35
comp=Z,34nm,0.7s
HIZ Hauiti 77.26 127 P **P** **12 46 09.5 +0.4**
BVA0 Borovoye Array 77.43 353 *i*P **P** **12 46 07.9 -1.5**
BVAR Borovoye Array 77.43 353 LR LR 13 18 19.5
comp=Z,781nm,21.6s,baz=50,slow=34
BRVK Borovoye 77.47 353 P **P** **12 46 09.1 -0.6**
BRVK Borovoye 77.47 353 IAMs_20 IAMs_20 13 18 06.3
comp=Z,1μm,20.0s
BRVK Borovoye 77.47 353*ce*P **P** **12 46 07.6 -2.1**
BRVK pmax pmax
comp=Z,47nm,1.0s
BRVK Borovoye 77.47 353 P **P** **12 46 08.8 -0.9**
BRVK P **P** **12 46 08.8 -0.9**
KONT Konya--Tatoy 77.51 322 P **P** **12 46 11.9 +1.6**
WNVZ Wahianoa 77.52 128 P **P** **12 46 10.2 -0.6**
WHVZ Whangaehu Hut 77.53 127 P **P** **12 46 10.6 -0.3**
SERE Sereflikochisa 77.54 323 P **P** **12 46 11.4 +0.9**
DVHZ Dannevirke 77.58 129 P **P** **12 46 11.1 +0.2**
SNVZ South Ngauruho 77.60 127 P **P** **12 46 10.7 -0.5**
MOVZ Moawhango 77.60 128 P **P** **12 46 11.4 +0.4**
OTVZ Oturere 77.62 127 P **P** **12 46 10.9 -0.4**
CHBY Cihanbeyli 77.66 322 P **P** **12 46 11.8 +0.6**
ZAA0 Zalesovo Array 77.67 1 P **P** **12 46 09.6 -1.2**
ZAA0 IAmb IAmb 12 46 11.3
comp=Z,95nm,0.9s
ZALV Zalesovo Beam 77.67 1 P **P** **12 46 09.1 -1.6**
comp=Z,95nm,0.8s,baz=192,slow=4.5,SNR=327
ZALV PKKPbc **PKKPbc** **13 05 13.1 -3.6**
comp=Z,1.4nm,0.6s,baz=264,slow=2.7,SNR=6.6
ZALV LR LR 13 19 28.2
comp=Z,713nm,21.2s,baz=188,slow=35
comp=Z,95nm,0.8s
ZALV Zalesovo Beam 77.67 1 *i*P **P** **12 46 09.6 -1.1**
ZALV pmax pmax
comp=Z,96nm,0.8s
LADK Ladik-KONYA 77.68 322 P **P** **12 46 11.5 +0.1**
ANWZ Angora Road 77.74 129 P **P** **12 46 12.0 +0.3**
KAMT Kaman 77.76 323 P **P** **12 46 11.8 +0.1**
KVT Kavak 77.76 326 P **P** **12 46 11.8 +0.2**
BHHZ Black Hill Sta 77.80 128 P **P** **12 46 11.4 -0.7**
CORM Corum 77.84 325 P **P** **12 46 12.4 +0.2**
SOC Sochi 77.86 330*c* *i*P **P** **12 46 10.8 -1.3**
SOC *e* 12 49 10.4
SOC *e*PPP PPP 12 50 51.9
SOC *e*S **S** **12 56 04.0 -0.6**
SOC *e*SS **SS** **13 01 04.0 -1.9**
SOC *e*SSS SSS 13 04 27.0
SOC pmax pmax
comp=Z,46nm,0.9s
SOC MLR MLR
comp=Z,373nm,20.0s
AKAS Kas 77.96 319 P **P** **12 46 11.8 -1.2**
AKAS Kas 77.96 319 P **P** **12 46 12.9 -0.1**
AKAS IAmb IAmb 12 46 14.0
comp=Z,54nm,0.9s
SUTC Sutluce-Ispart 77.97 321 P **P** **12 46 12.9 -0.1**
MKAZ Moumakai 77.98 125 P **P** **12 46 14.5 +1.4**
TOZ Tahuroa Road 78.01 126 P **P** **12 46 14.5 +1.2**
KORT Korkueli 78.03 320 P **P** **12 46 14.4 +1.1**
BR131 Keskin Array S 78.05 324 P **P** **12 46 13.3 -0.1**
BR131 IAmb IAmb 12 46 14.7
comp=Z,85nm,0.8s
BR131 Keskin Array S 78.05 324 *i*P **P** **12 46 13.9 +0.5**
BR131 Keskin Array S 78.05 324 P **P** **12 46 13.4 0.0**
SNR=39
BR131 P **P** **12 46 13.4 0.0**
SNR=39
BRTR Keskin Array B 78.05 324 P **P** **12 46 13.3 -0.1**
comp=Z,53nm,0.8s,baz=147,slow=6.5,SNR=204
BRTR LR LR 13 19 22.5
comp=Z,504nm,19.3s,baz=136,slow=35
comp=Z,53nm,0.8s
BRTR Keskin Array B 78.05 324 P **P** **12 46 13.4 0.0**
BRTR Keskin Array B 78.05 324 *i*P **P** **12 46 13.8 +0.4**
BRTR pmax pmax
comp=Z,55nm,0.8s
ELL Elmali 78.12 319 P **P** **12 46 15.1 +1.3**
ELL Elmali 78.12 319 P **P** **12 46 14.6 +0.8**
ELL Elmali 78.12 319 P **P** **12 46 14.6 +0.8**
ELL pmax pmax
comp=Z,212nm,0.8s
AFSR Afar-Bala (An 78.16 323 P **P** **12 46 13.7 -0.3**
CN2 Changchun 78.18 30 *e*P **P** **12 46 13.2 -0.6**
CN2 PP **PP** **12 49 12.3 +1.4**
CN2 SS SS 13 01 19.3 +8.6
CN2 pmax pmax
comp=Z,20nm,1.6s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,300nm,17.0s
BKZ Black Stump Fm 78.22 128 P **P** **12 46 11.8 -2.7**
IRK Irkutsk 78.30 14 *e*P **P** **12 46 14.0 -0.3**
IRK pmax pmax
comp=Z,160nm,2.5s
KIZT Kizilcal 78.43 322 P **P** **12 46 15.8 +0.3**
INU Inuyama 78.46 43 P **P** **12 46 14.8 -0.8**
INU IAmb IAmb 12 46 17.4
comp=Z,66nm,1.0s
INU Inuyama 78.46 43 P **P** **12 46 15.6 0.0**
KUZ Kuaotunu 78.53 125 P **P** **12 46 16.6 +0.4**
FETY Fethiye 78.54 319 P **P** **12 46 14.9 -1.1**
TGRZ Tauranga 78.58 126 P **P** **12 46 17.3 +0.9**
DIKM Dikmen 78.58 326 ⇑P **P** **12 46 15.8 -0.3**
DIKM Dikmen 78.58 326 P **P** **12 46 16.2 +0.1**
ANTO Ankara 78.61 323 ⇓P **P** **12 46 17.0 +0.6**
ANTO Ankara 78.61 323 P **P** **12 46 17.1 +0.6**
ANTO IAmb IAmb 12 46 18.3
comp=Z,69nm,0.8s
ANTO Ankara 78.61 323 P **P** **12 46 17.1 +0.6**
ANTO pmax pmax
comp=Z,69nm,0.8s
ANTO Ankara 78.61 323 P **P** **12 46 16.7 +0.3**
ANTO P **P** **12 46 16.7 +0.3**
LOD Lodumlu 78.64 323 P **P** **12 46 16.6 0.0**
JHJ Hachijo jima 2 78.83 46 LR LR 13 20 59.1
comp=Z,75nm,19.4s,baz=272,slow=36
JGF Kuroka 78.84 43 P **P** **12 46 17.2 -0.5**
JGF IAmb IAmb 12 46 19.1
comp=Z,86nm,1.0s
ARG Arkhangelos 78.84 318 P **P** **12 46 18.9 +1.2**
ARG IAmb IAmb 12 46 19.8
comp=Z,103nm,0.8s
ARG Arkhangelos 78.84 318 P **P** **12 46 18.9 +1.2**
ARG pmax pmax
comp=Z,103nm,0.8s
DALY Dalyan (Mula) 78.92 319 P **P** **12 46 19.1 +1.1**
ILGA Ilgaz 78.95 325 P **P** **12 46 19.2 +0.7**
ILGA IAmb IAmb 12 46 20.1
comp=Z,70nm,0.8s
SHUT Suhut-Afyon 78.96 321 P **P** **12 46 19.1 +0.7**
APMY Acipayam-Deniz 78.96 320 P **P** **12 46 18.8 +0.4**
URZ Urewera 79.00 127 P **P** **12 46 17.4 -1.4**
comp=Z,32nm,1.2s,baz=249,slow=5.0,SNR=6.6
URZ LR LR 13 12 50.3
comp=Z,256nm,21.9s,baz=215,slow=29
comp=Z,32nm,1.2s
URZ Urewera 79.00 127 P **P** **12 46 17.9 -0.9**
KARP Karpathos 79.01 317 P **P** **12 46 19.4 +0.8**
SVRH Sivrihisar-ESK 79.02 322 P **P** **12 46 18.6 -0.1**
TURN Turunc 79.14 318 P **P** **12 46 19.7 +0.4**
CIFT Cifteler, Eski 79.22 322 P **P** **12 46 20.4 +0.6**
MWZ Matawai 79.28 127 P **P** **12 46 19.2 -1.1**
RIGZ Rimuhau 79.31 128 P **P** **12 46 20.2 -0.3**
YER Yerkesik 79.35 319 P **P** **12 46 20.5 0.0**
BZK Bozkurt 79.45 325 ⇑P **P** **12 46 21.0 +0.2**
BZK Bozkurt 79.45 325 P **P** **12 46 20.3 -0.5**
BZK Bozkurt 79.45 325 P **P** **12 46 20.6 -0.3**
DAT Datca 79.51 318 P **P** **12 46 22.1 +0.6**
RUGZ Raukumara Rang 79.53 127 P **P** **12 46 20.3 -1.5**
HAZ Te Kaha 79.69 127 P **P** **12 46 21.2 -1.3**
ANN Anapa 79.85 329 *e*P **P** **12 46 21.8 -1.1**
ANN *e**PP **pP** **12 46 25.5 -0.6**
ANN *e* 12 49 24.0
ANN *e*S **S** **12 56 25.0 -0.7**
ANN pmax pmax
comp=Z,265nm,1.0s
PKGZ Pakihiroa 79.85 127 P P 12 46 18.8 -4.6
BODT Bodrum 79.89 318 P **P** **12 46 23.3 -0.1**
MDUB Mudurnu 79.91 323 P **P** **12 46 23.1 -0.4**
MDUB Mudurnu 79.91 323 P **P** **12 46 23.3 -0.2**
PUZ Puketiti 79.91 127 P **P** **12 46 22.6 -1.2**
BORA Eskisehir 79.92 322 P **P** **12 46 24.5 +0.9**
SRCK Saricakaya, Es 79.93 322 P **P** **12 46 24.2 +0.7**
MAJO Matsushiro 79.97 43 P **P** **12 46 23.4 -0.4**
MAJO IAmb IAmb 12 46 26.3
comp=Z,89nm,0.9s
MAJO Matsushiro 79.97 43 *i*P **P** **12 46 23.7 -0.2**
MAJO pmax pmax
comp=Z,105nm,1.0s
MAJO Matsushiro 79.97 43 P **P** **12 46 23.9 0.0**
MJAR Matsushiro Arr 79.97 43 P **P** **12 46 22.1 -1.7**
comp=Z,46nm,1.0s,baz=215,slow=5.8,SNR=71
MJAR LR LR 13 23 20.9
comp=Z,162nm,18.1s,baz=234,slow=37
comp=Z,46nm,1.0s
KURC Kurucasile-Bar 80.03 325 P **P** **12 46 21.5 -2.5**
KULA Kula-Manisa 80.03 320 P **P** **12 46 25.4 +1.2**
MSHR Mys Shultsa 80.06 34*ce*P **P** **12 46 24.0 -0.1**
MSHR pmax pmax
comp=Z,109nm,1.3s
AYDB Zeytinkoy-Aydi 80.11 319 P **P** **12 46 26.1 +1.4**
WMGZ Waiomatatini S 80.12 127 P **P** **12 46 24.8 0.0**
MXZ Matakaoa Point 80.14 127 P **P** **12 46 25.3 +0.3**
MXZ IAmb IAmb 12 48 29.1
comp=Z,213nm,1.5s
MXZ Matakaoa Point 80.14 127 P **P** **12 46 25.1 +0.2**
HIA Hailar 80.18 24 P **P** **12 46 24.7 0.0**
HIA Hailar 80.18 24 IAMs_20 IAMs_20 13 21 41.1
comp=Z,1μm,21.0s
HIA Hailar 80.18 24 *i*P **P** **12 46 24.1 -0.6**
HIA pmax pmax
comp=Z,76nm,1.2s
TVSB Tavsanli 80.19 321 P **P** **12 46 23.6 -1.5**
GULT Gulveren 80.26 322 P **P** **12 46 25.7 +0.3**
IDI Anoyia 80.28 316 ⇑P **P** **12 46 26.4 +0.7**
IDI Anoyia 80.28 316 P **P** **12 46 25.1 -0.5**
IDI IAmb IAmb 12 46 27.3
comp=Z,59nm,0.7s
GCAM G?zelcaml? 80.35 319 P **P** **12 46 27.3 +1.5**
KDZE Karadeniz Ereo 80.36 324 ⇓P **P** **12 46 25.9 +0.1**
CIT Chita 80.47 19 *e*P **P** **12 46 26.4 +0.2**
CIT pmax pmax
comp=Z,299nm,2.7s
BNX BinXian 80.56 30 ⇑P **P** **12 46 25.6 -1.2**
BNX pP **sP** **12 46 31.8 +0.8**
BNX sP **PcP** **12 46 34.4 +0.8**
BNX S **S** **12 56 32.5 -0.6**
BNX pmax pmax
comp=Z,49nm,0.9s
BNX pmax pmax
comp=Z,490nm,3.6s
BNX LR LR
comp=Z,260nm,23.3s
BNX LR LR
comp=Z,350nm,19.1s
BNX LR LR
comp=Z,370nm,15.2s
ADVT Abdulvahap 80.69 322 P **P** **12 46 28.4 +0.8**
MDJ Mudanjiang 80.75 32 P **P** **12 46 26.7 -1.2**
MDJ IAmb IAmb 12 46 29.1
comp=Z,68nm,0.9s
MDJ IAMs_20 IAMs_20 13 22 08.6
comp=Z,886nm,20.0s
VLA Vladivostok 80.82 34 *i*P **P** **12 46 28.7 +0.5**
VLA pmax pmax
comp=Z,203nm,1.1s
BLCB Balcova 80.91 319 P **P** **12 46 30.5 +1.7**
JSD Sado 80.96 41 P **P** **12 46 28.9 -0.2**
APE Apeiranthos 80.99 317 ⇑P **P** **12 46 29.8 +0.5**
APE Apeiranthos 80.99 317 P **P** **12 46 29.8 +0.5**
JYT Yasato 81.02 44 P **P** **12 46 29.2 -0.3**
URLA Izmir 81.16 319 P **P** **12 46 30.7 +0.5**
BALB Balikesir 81.23 320 P **P** **12 46 31.3 +0.8**
BALB Balikesir 81.23 320 P **P** **12 46 31.9 +1.4**
BALB IAmb IAmb 12 46 32.6
comp=Z,52nm,0.8s
ARMT Armutlu 81.28 322 P **P** **12 46 31.5 +0.7**
KCTX Karacabey (Bur 81.37 321 P **P** **12 46 30.9 -0.4**
KAVV Kandilli-Istan 81.50 322 P **P** **12 46 31.3 -0.6**
ISK Istanbul-Kandi 81.50 322 P **P** **12 46 32.3 +0.4**
SIM Simferopol' 81.55 328 *e*P P **12 46 27.9 -4.2**
SIM *e* 12 46 33.6
SIM *e*PS **SKSac** **12 56 47.0 -4.3**
SIM *e*PPS PPS 12 57 45.0
SIM SPP SPP 12 57 45.0
SIM pmax pmax
comp=Z,12nm,0.6s
USA0B Ussuriysk Arra 81.64 34 P **P** **12 46 31.7 -0.8**
USA0B Ussuriysk Arra 81.64 34 P **P** **12 46 31.7 -0.8**
USA0B pmax pmax
comp=Z,18nm,1.1s
USRK Ussuriysk Ar. 81.64 34 P **P** **12 46 31.8 -0.7**
comp=Z,113nm,1.1s,baz=253,slow=5.0,SNR=69
comp=Z,113nm,1.1s
USRK Ussuriysk Ar. 81.64 34 P **P** **12 46 31.6 -0.9**
BELG Belogornoye 81.93 339 P **P** **12 46 33.5 -0.4**
comp=Z,116nm,0.9s,baz=269,slow=2.0,SNR=15
BELG LR LR 13 23 09.2
comp=Z,500nm,21.6s,baz=139,slow=36
comp=Z,116nm,0.9s
BELG Belogornoye 81.93 339 *i*P **P** **12 46 32.9 -1.0**
BELG pmax pmax
comp=Z,22nm,0.9s
EZN Ezine 82.26 320 P **P** **12 46 36.5 +0.6**
JMM Marumori 82.41 43 P **P** **12 46 35.9 -0.8**
GELI Tayfur-Gelibol 82.54 320 P **P** **12 46 38.6 +1.2**
ARU Arti 82.64 347 P **P** **12 46 37.2 -0.3**
comp=Z,22nm,0.5s,baz=164,slow=3.2,SNR=34
ARU LR LR 13 22 12.5
comp=Z,2μm,21.4s,baz=146,slow=35
comp=Z,22nm,0.5s
ARU Arti 82.64 347 P **P** **12 46 37.0 -0.5**
ARU IAmb IAmb 12 46 39.4
comp=Z,60nm,1.1s
ARU Arti 82.64 347*c* *i*P **P** **12 46 37.4 -0.1**
ARU 12 49 41.8
ARU S **S** **12 56 54.5 +0.3**
ARU SS **SS** **13 02 16.8 -0.1**
ARU pmax pmax
comp=Z,59nm,1.0s
ERIK Erikli-Kesan 82.70 321 P **P** **12 46 37.9 -0.3**
GADA Gvkgeada 82.75 320 P **P** **12 46 38.5 0.0**
ENEZ Enez 82.95 320 P **P** **12 46 39.4 -0.1**
VRH Novokhopyorsk 83.02 336 *e*P **P** **12 46 39.6 0.0**
VRH pmax pmax
comp=Z,130nm,1.0s
ALN Alexandroupoli 83.11 321 P **P** **12 46 39.8 -0.5**
ALN IAmb IAmb 12 46 43.0
comp=Z,76nm,0.9s
ALN Alexandroupoli 83.11 321 P **P** **12 46 39.8 -0.5**
ALN pmax pmax
comp=Z,76nm,0.9s
EDRB Edirne 83.33 322 P **P** **12 46 41.4 0.0**
ITM Ithomi 83.33 316 P **P** **12 46 41.2 -0.4**
RDO Rodhopi 83.57 320 P **P** **12 46 42.3 -0.4**
RDO IAmb IAmb 12 46 45.2
comp=Z,56nm,1.3s
JMB Yambol 83.82 322 P **P** **12 46 41.0 -2.9**
PRD Provadia 83.84 323 P **P** **12 46 43.0 -1.0**
KDZ Kurdzhali 83.96 321 P **P** **12 46 42.0 -2.7**
JURR Jurilovca 84.09 325 ⇓P **P** **12 46 46.1 +0.9**
TIRR Tirgusor 84.13 324 ⇑P **P** **12 46 46.0 +0.6**
TIRR Tirgusor 84.13 324 ⇑P **P** **12 46 46.0 +0.6**
TIRR Tirgusor 84.13 324 P **P** **12 46 45.1 -0.3**
TIRR Tirgusor 84.13 324 P **P** **12 46 45.1 -0.3**
TIRR pmax pmax
comp=Z,144nm,1.1s
AGG Agios Georgios 84.18 317 P **P** **12 46 45.2 -0.8**
AGG IAmb IAmb 12 46 47.5
comp=Z,71nm,0.8s
AGG Agios Georgios 84.18 317 P **P** **12 46 45.2 -0.8**
AGG pmax pmax
comp=Z,71nm,0.8s
ICOR Ion Corvin 84.23 324 ⇑P **P** **12 46 46.6 +0.6**
VORR Voronezh 84.36 335 ⇓*i*P **P** **12 46 46.8 +0.4**
VORR pmax pmax
comp=Z,121nm,1.9s
TLBR Topalu 84.38 324 ⇓P **P** **12 46 47.8 +1.1**
JTM Tenmabayashi 84.38 41 P **P** **12 46 46.5 -0.3**
JTM IAmb IAmb 12 46 48.2
comp=Z,66nm,0.8s
RZN Rozhen 84.39 320 P **P** **12 46 47.0 -0.1**
TPGR Topolog 84.39 325 ⇑P **P** **12 46 46.0 -0.8**
HARR Harsova 84.54 324 ⇓P **P** **12 46 48.5 +0.9**
HARR Harsova 84.54 324 P **P** **12 46 48.4 +0.9**
RAZG Razgrad 84.57 323 ⇑P **P** **12 46 47.7 -0.1**
TEY Ternei 84.60 35⇑*e*P **P** **12 46 47.3 -0.5**
TEY pmax pmax
comp=Z,100nm,2.8s
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=Z,10.0nm,1.0s
SZH Strazhica 84.70 322 P **P** **12 46 48.0 -0.4**
CFR Carcaliu 84.75 325 ⇑P **P** **12 46 49.2 +0.6**
CFR Carcaliu 84.75 325 P **P** **12 46 49.2 +0.6**
MMB Musomiste 84.91 320 P **P** **12 46 49.0 -0.6**
KLR Kul'dur 85.12 30 P **P** **12 46 48.9 -1.5**
comp=Z,18nm,0.9s,baz=261,slow=6.7,SNR=5.8
KLR LR LR 13 24 50.1
comp=Z,353nm,20.2s,baz=194,slow=36
comp=Z,18nm,0.9s
KLR Kul'dur 85.12 30*c* *i*P **P** **12 46 48.8 -1.6**
KLR pmax pmax
comp=Z,33nm,1.0s
LPSR Galich'ya Gora 85.19 335 *e*P **P** **12 46 50.3 -0.3**
LPSR pmax pmax
comp=Z,80nm,1.1s
SGRR Singureni 85.29 323 ⇑P **P** **12 46 52.7 +1.4**
ORCD Orcadas 85.35 203 P **P** **12 46 51.6 +0.1**
ORCD IAmb IAmb 12 47 00.1
comp=Z,76nm,1.4s
SMAI San Martin Ant 85.41 191 P **P** **12 46 52.3 +0.6**
SMAI IAmb IAmb 12 46 54.6
comp=Z,57nm,0.9s
VAY Valandovo 85.43 319 *i*P **P** **12 46 52.3 +0.2**
SULR 85.43 324 ⇑P **P** **12 46 53.4 +1.4**
KKB Krupnik 85.46 320 P **P** **12 46 51.0 -1.3**
GRER 85.50 324 ⇑P **P** **12 46 54.9 +2.5**
ISR Istrita 85.56 324 ⇓P **P** **12 46 54.7 +1.9**
ISR Istrita 85.56 324 P **P** **12 46 54.6 +1.9**
MILM Milestii Mici 85.57 326⇑*i*P **P** **12 46 52.4 -0.3**
comp=Z,750nm,3.3s
MILM *e*SKS **SKSac** **12 57 17.0 -0.5**
MILM *e*S **S** **12 57 21.0 -3.0**
MILM *e*L L 13 15 14.0
MILM LQM 13 27 07.0
comp=Z,1μm,62.0s
MILM LRM MLR 13 30 44.0

comp=Z,400nm,20.0s
MILM Milestii Mici 85.57 326 ⇓P **P 12 46 53.1 +0.4**
MILM Milestii Mici 85.57 326*c i*P **P 12 46 52.4 -0.3**
MILM *e* 12 57 17.0
MILM *e*S **S 12 57 21.0 -3.0**
MILM pmax pmax
comp=Z,750nm,3.3s
MILM pmax pmax
comp=N,130nm,3.0s
MILM pmax pmax
comp=E,250nm,2.9s
KIS Kishinev 85.62 326⇑*i*P **P 12 46 52.7 -0.2**
comp=E,300nm,3.8s
KIS Kishinev 85.62 326*c i*P **P 12 46 52.7 -0.2**
KIS pmax pmax
comp=Z,300nm,3.8s
BOD Bodaibo 85.70 16 *e*P **P 12 46 52.7 -0.3**
BOD pmax pmax
comp=Z,74nm,1.5s
ODBI Odobesti 85.71 325 ⇑P **P 12 46 55.4 +2.0**
GHRR 85.72 325 ⇓P **P 12 46 55.1 +1.6**
SECR 85.77 324 ⇑P **P 12 46 55.0 +1.3**
VTS Vitosha 85.83 321 ⇑P **P 12 46 54.8 +0.4**
VTS Vitosha 85.83 321 P **P 12 46 54.7 +0.4**
VTS IAmb IAmb 12 46 56.8
comp=Z,58nm,1.2s
VTS Vitosha 85.83 321 P **P 12 46 54.7 +0.4**
VTS pmax pmax
comp=Z,58nm,1.2s
VTS Vitosha 85.83 321 P **P 12 46 53.0 -1.3**
JEW Eniwo 85.87 39 P **P 12 46 54.3 0.0**
NEHR Nehoiu 85.90 324 ⇑P **P 12 46 55.5 +1.1**
VRI Vrincioaia 85.95 325 ⇑P **P 12 46 55.8 +1.2**
VRI Vrincioaia 85.95 325 P **P 12 46 55.8 +1.2**
PLOR Plostina 85.98 325 ⇑P **P 12 46 56.0 +1.2**
PLOR Plostina 85.98 325 P **P 12 46 56.0 +1.2**
VLAD Vladila 86.02 322 ⇓P **P 12 46 56.4 +1.4**
HUMR Humele 86.03 323 ⇑P **P 12 46 56.2 +1.2**
KBN Korca 86.09 318 P **P 12 46 56.5 +1.0**
KBN Korca 86.09 318 P **P 12 46 56.5 +1.0**
KBN pmax pmax
comp=Z,138nm,0.8s
MLR Muntele Rosu 86.12 324 ⇓P **P 12 46 56.6 +0.9**
MLR Muntele Rosu 86.12 324 P **P 12 46 56.2 +0.6**
comp=Z,70nm,0.8s,baz=170,slow=4.4,SNR=87
comp=Z,70nm,0.8s
MLR Muntele Rosu 86.12 324 P **P 12 46 56.1 +0.5**
KEK Kerkira 86.17 317 P **P 12 46 56.5 +0.7**
COVR Voineasa-Covas 86.22 324 ⇑P **P 12 46 56.2 +0.3**
STFAR Stefanesti-Arg 86.26 323 ⇑P **P 12 46 57.4 +1.2**
ERM Erimo 86.37 41 P **P 12 46 57.2 +0.5**
ERM Erimo 86.37 41*ce*P **P 12 46 56.2 -0.6**
ERM pmax pmax
comp=Z,109nm,1.0s
ERM Erimo 86.37 41 P **P 12 46 57.2 +0.5**
TESR Tescani 86.41 325 ⇑P **P 12 46 57.3 +0.5**
MTUR Matau 86.43 323 ⇑P **P 12 46 56.9 -0.3**
SKO Skopje 86.50 319 *i* P **P 12 46 57.3 -0.1**
VOIR 86.57 324 ⇑P **P 12 46 57.9 +0.1**
VOIR 86.57 324 P **P 12 46 57.9 +0.1**
ZEA Zeya 86.58 25*ce*P **P 12 46 56.6 -0.9**
ZEA *e* 12 50 22.4
ZEA *e* 12 57 18.6
ZEA *e*S **S 12 57 33.9 +0.3**
ZEA *e* 12 58 37.5
ZEA pmax pmax
comp=Z,200nm,5.5s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA pmax pmax
comp=E,100nm,3.1s
ZEA pmax pmax
comp=N,100nm,4.7s
ZEA pmax pmax
comp=Z,100nm,5.1s
ZEA smax smax
comp=E,100nm,9.2s
ZEA MLR MLR
comp=Z,300nm,15.0s
OZUR 86.60 324 ⇑P **P 12 46 58.0 +0.2**
SORM Soroca 86.62 327 ⇑P **P 12 46 56.9 -1.0**
SORM Soroca 86.62 327 P **P 12 46 56.8 -1.0**
DOPR Dopca 86.73 324 ⇑P **P 12 46 59.0 +0.5**
KIRV Kirov 86.74 343 P **P 12 46 57.6 -0.5**
comp=Z,60nm,0.7s,baz=312,slow=1.6,SNR=24
KIRV LR LR 13 24 37.2
comp=Z,630nm,21.7s,baz=143,slow=35
comp=Z,60nm,0.7s
KIRV Kirov 86.74 343*ce*P **P 12 46 57.7 -0.4**
ARR Arges 86.76 323 ⇓P **P 12 46 59.1 +0.4**
BLKB Belogradchik 86.77 321 ⇑P **P 12 46 59.3 +0.6**
TOA0 Torodi Ar. Sit 87.02 286 P **P 12 47 00.1 -0.4**
TOA0 Torodi Ar. Sit 87.02 286 P **P 12 47 01.3 +0.8**
SNR=9.1
TOA0 P **P 12 47 01.3 +0.8**
SNR=9.1
TORD Torodi Ar. Bea 87.02 286 P **P 12 47 00.9 +0.4**
comp=Z,27nm,0.9s,baz=113,slow=4.8,SNR=104
comp=Z,27nm,0.9s
TORD Torodi Ar. Bea 87.02 286 P **P 12 47 00.3 -0.3**
TIR Tirane 87.08 318 ⇑P **P 12 47 01.5 +1.3**
TIR Tirane 87.08 318 P **P 12 47 01.0 +0.7**
TIR Tirane 87.08 318 P **P 12 47 01.0 +0.7**
TIR pmax pmax
comp=Z,168nm,0.8s
SCTE Santa Cesarea 87.21 316 P **P 12 47 01.0 0.0**
LOT Lotru 87.28 323 ⇑P **P 12 47 02.0 +0.7**
BOVS Bovan 87.34 321 ⇓P **P 12 47 01.6 +0.1**
DJES Djerdap 87.50 322 ⇑P **P 12 47 03.1 +0.9**
HERR Herculane 87.69 322 ⇑P **P 12 47 03.9 +0.8**
PMSA Palmer Station 87.77 194 LR LR 13 24 56.7
comp=Z,647nm,20.0s,baz=156,slow=35
PMSA Palmer Station 87.77 194 IAMs_20 IAMs_20 13 24 45.6
comp=Z,781nm,20.0s
GZR Gura Zlata 87.80 323 ⇓P **P 12 47 04.9 +1.2**
TIP Timpagrande 87.81 315 ⇑P **P 12 47 05.0 +1.1**
TIP Timpagrande 87.81 315 P **P 12 47 04.1 +0.2**
TIP IAmb IAmb 12 47 06.9
comp=Z,125nm,1.8s
CEL Celeste 87.87 314 P **P 12 47 04.8 +0.6**
CEL IAmb IAmb 12 47 07.4
comp=Z,50nm,0.9s
BURAR Bucovina Array 87.88 325 ⇑P **P 12 47 05.2 +1.1**
BURAR Bucovina Array 87.88 325 P **P 12 47 04.8 +0.8**
BURAR Bucovina Array 87.88 325 P **P 12 47 05.1 +1.1**
MSVF Nonsavu 87.88 108 LR LR 13 25 30.9
comp=Z,256nm,18.2s,baz=245,slow=35
MSVF Nonsavu 87.88 108 P **P 12 47 04.7 -0.1**
MSVF Nonsavu 87.88 108 P **P 12 47 04.7 -0.1**
MSVF pmax pmax
comp=Z,19nm,1.0s
MSVF Nonsavu 87.88 108 P **P 12 47 05.1 +0.3**
AK05 Malin Array Si 87.89 329 P **P 12 47 04.0 +0.1**
BUR08 Bucovina Ar. S 87.90 325 P **P 12 47 04.9 +0.7**
AKASG Malin Array Be 87.94 329 P **P 12 47 03.9 -0.2**
comp=Z,47nm,0.8s,baz=120,slow=4.2,SNR=118
comp=Z,47nm,0.8s
AKASG Malin Array Be 87.94 329 P **P 12 47 03.9 -0.2**
AKASG Malin Array Be 87.94 329 *i* P **P 12 47 04.4 +0.3**
AKASG pmax pmax
comp=Z,50nm,0.8s
AKBB Malin Array Si 87.94 329 P **P 12 47 04.3 +0.2**
AKBB Malin Array Si 87.94 329*ce*P **P 12 47 03.8 -0.3**
AKBB pmax pmax
comp=Z,109nm,1.1s
TAM Tamanrasset 87.97 296 P **P 12 47 01.7 -3.5**
TAM Tamanrasset 87.97 296 P **P 12 47 01.7 -3.5**
TAM pmax pmax
comp=Z,9.0nm,1.0s
DRME Dracevica, Mon 87.98 318⇑*i*P **P 12 47 05.3 +0.7**
ARCR ARCALIA 87.99 325 ⇓P **P 12 47 06.0 +1.5**
OBN Obninsk 88.01 336 P **P 12 47 04.3 -0.1**
comp=Z,7.5nm,0.5s,baz=320,slow=5.3,SNR=12
OBN LR LR 13 26 17.5
comp=Z,91nm,21.7s,baz=144,slow=36
comp=Z,7.5nm,0.5s
OBN Obninsk 88.01 336 P **P 12 47 04.6 +0.2**
OBN IAMs_20 IAMs_20 13 27 29.8
comp=Z,819nm,21.0s
OBN Obninsk 88.01 336*ce*P **P 12 47 04.2 -0.1**
OBN *e* 12 50 32.2
OBN *e*PPP PPP 12 52 29.4
OBN *e*S **SKSac 12 57 34.3 +2.2**
OBN *e*SS **SS 13 03 38.8 +2.8**
OBN *e*SSS SSS 13 07 07.6
OBN pmax pmax
comp=Z,208nm,2.5s
OBN MLR MLR
comp=Z,1μm,24.0s
MDVR Moldovita 88.02 322 ⇓P **P 12 47 05.8 +1.0**
DEV Deva 88.03 323⇑P **P 12 47 05.1 +0.3**
DEV Deva 88.03 323 P **P 12 47 05.0 +0.3**
PDG Podgorica 88.08 319⇑P **P 12 47 05.9 +0.9**
PDG Podgorica 88.08 319 P **P 12 47 05.1 +0.1**
PDG Podgorica 88.08 319⇑*i*P **P 12 47 05.9 +0.9**
MOS Moscow 88.10 337 *e*P **P 12 47 03.0 -1.7**
MOS pmax pmax
comp=Z,68nm,0.9s
SJES Sjenica 88.13 320⇑*i*P **P 12 47 06.3 +0.9**
CJR Cluj-Napoca 88.16 324⇑P **P 12 47 06.5 +1.1**
CJR Cluj-Napoca 88.16 324 P **P 12 47 06.5 +1.1**
RAFF Raffo Rosso 88.34 312 P **P 12 47 06.1 -0.3**
RAFF IAmb IAmb 12 47 11.8
comp=Z,85nm,1.2s
GRNR Gornyy 88.36 31⇑*i*P **P 12 47 06.0 -0.2**
GRNR *e*S **S 12 57 54.9 +4.0**
GRNR pmax pmax
comp=N,4.0nm,0.6s
GRNR pmax pmax
comp=Z,30nm,0.8s
GRNR smax smax
comp=N,1.0nm,0.8s
VAE Valguarnera 88.44 312 LR LR 13 21 18.1
comp=N,88nm,19.9s,baz=148,slow=32
HCY Herceg Novi 88.55 318⇑*i*P **P 12 47 08.1 +0.8**
BZS Buzias 88.58 322 ⇓P **P 12 47 07.7 +0.3**
BZS Buzias 88.58 322 P **P 12 47 07.6 +0.3**
DIVS Divibare 88.61 320 P **P 12 47 08.1 +0.5**
DIVS IAmb IAmb 12 47 10.5
comp=Z,67nm,1.2s
DIVS Divibare 88.61 320⇑*i*P **P 12 47 08.3 +0.7**
MATE Matera 88.65 316 ⇓P **P 12 47 08.6 +0.9**
DRGR 88.69 324 ⇓P **P 12 47 09.0 +1.0**
DRGR 88.69 324 P **P 12 47 08.9 +1.0**
RUDO Rudo 88.69 320⇑*i*P **P 12 47 08.5 +0.6**
UPM Unac-Piva 88.73 319⇑*i*P **P 12 47 08.8 +0.4**
BRY Bratogost 88.78 319⇑*i*P **P 12 47 09.2 +0.7**
TREB Trebinje 88.79 318 *e*P P 12 47 04.2 -4.2
BBLS Lazići 88.82 320⇑*i*P **P 12 47 09.5 +0.9**
CUC Castrocucco 88.86 315 P **P 12 47 08.4 -0.5**
SIRR Siria 88.95 323⇑P **P 12 47 10.0 +0.9**
YSS Yuzh-Sakhalins 89.13 37 P **P 12 47 08.6 -1.2**
YSS IAmb IAmb 12 47 10.6
comp=Z,64nm,1.0s
YSS Yuzh-Sakhalins 89.13 37 *e*P **P 12 47 08.1 -1.7**
YSS *e*S **S 12 57 53.6 -4.6**
YSS *e*PS **PnS 12 58 59.9 -3.9**
YSS pmax pmax
comp=Z,400nm,3.3s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,300nm,14.0s
YSS Yuzh-Sakhalins 89.13 37 P **P 12 47 10.8 +1.0**
STON Ston 89.27 318⇑*i*P **P 12 47 09.7 -0.9**
CLTB Caltabellotta 89.30 312 P **P 12 47 10.0 -1.1**
CLTB IAmb IAmb 12 47 13.2
comp=Z,27nm,0.7s
FRGS Fruska Gora 89.33 321⇑P **P 12 47 12.1 +1.1**
FRGS Fruska Gora 89.33 321⇑*i*P **P 12 47 11.3 +0.4**
SGRT San Giovanni R 89.86 317 P **P 12 47 13.0 -0.6**
LVV L'vov 89.88 327 *e*P **P 12 47 14.0 +0.7**
KIC Kosan Boka 89.97 277⇑*i*P **P 12 47 15.3 +0.6**
comp=Z,13nm,0.6s
UZH Uzhgorod 90.04 325 *e*P **P 12 47 13.6 -0.5**
UZH *e* 12 47 18.2
LIC Lamto 90.18 277⇑*i*P **P 12 47 16.2 +0.6**
comp=Z,29nm,0.9s
DBIC Dimbokro 90.20 277 P **P 12 47 16.5 +0.8**
comp=Z,7.0nm,0.7s,baz=122,slow=6.4,SNR=7.7
DBIC LR LR 13 25 28.1
comp=Z,369nm,18.3s,baz=109,slow=34
comp=Z,7.0nm,0.7s
DBIC Dimbokro 90.20 277 P **P 12 47 15.7 0.0**
DBIC IAmb IAmb 12 47 20.4
comp=Z,100nm,1.8s
DBIC Dimbokro 90.20 277⇑*i*P **P 12 47 16.2 +0.5**
PAOL Paolisi 90.22 316 P **P 12 47 14.8 -0.4**
KOLS Kolonicke sedl 90.23 325 *e*P **P 12 47 16.6 +1.6**
KOLS pmax pmax
comp=Z,20nm,0.8s
KOLS Kolonicke sedl 90.23 325 *e*P **P 12 47 16.6 +1.6**
PRGR Permogore 90.34 343 *e*P **P 12 47 13.5 -1.6**
TIC Toumodi 90.34 277⇑*i*P **P 12 47 17.3 +0.9**
comp=Z,15nm,0.6s
KWP Kalwaria Pacla 90.44 326 *e*P **P 12 47 16.7 +0.8**
KWP Kalwaria Pacla 90.44 326 P **P 12 47 16.6 +0.7**
KWP Kalwaria Pacla 90.44 326 P **P 12 47 16.6 +0.7**
KWP pmax pmax
comp=Z,867nm,0.9s
MGRS Mrkonjic Grad 90.51 319 *e*P P 12 47 03.6 -13
MORH Mrgy, Hungar 90.61 321 ⇓P **P 12 47 17.7 +0.9**
MORH Mrgy, Hungar 90.61 321⇑*i*P **P 12 47 17.0 +0.2**
BLY Banja Luka 90.63 320⇑*i*P **P 12 47 17.3 +0.3**
CRVS Cervenica-Dubn 90.64 325 *e*P **P 12 47 17.9 +1.0**
CRVS pmax pmax
comp=Z,50nm,1.1s
CRVS Cervenica-Dubn 90.64 325 *e*P **P 12 47 17.9 +1.0**
PSZ Piszkesteto 90.90 323⇑P **P 12 47 18.3 +0.1**
PSZ Piszkesteto 90.90 323 P **P 12 47 18.3 +0.1**
PSZ Piszkesteto 90.90 323 P **P 12 47 18.3 +0.1**
PSZ pmax pmax
comp=Z,14nm,1.0s
PSZ MLR MLR
comp=Z,400nm,21.0s
KEST Kesra 91.07 309 P **P 12 47 21.2 +1.9**
comp=Z,47nm,0.9s,baz=230,slow=0.3,SNR=57
KEST LR LR 13 24 56.9
comp=Z,298nm,20.9s,baz=348,slow=33
comp=Z,47nm,0.9s
KEST Kesra 91.07 309 P **P 12 47 20.7 +1.3**
KEST IAmb IAmb 12 47 25.2
comp=Z,71nm,1.1s
KEST Kesra 91.07 309 P **P 12 47 21.1 +1.7**
SNR=20
KEST P **P 12 47 21.1 +1.7**
SNR=20
MNK Minsk 91.11 332 *i* P **P 12 47 19.0 +0.1**
MNK *i* 12 50 54.7
MNK *i* PPP PPP 12 52 52.7
MNK *i* S **SKSac 12 57 51.1 +0.8**
MNK *i* PS **PS 12 59 26.4 +0.1**
MNK *i* SS **SS 13 04 14.9 -6.1**
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,25nm,0.9s
MNK MLR MLR
comp=E,57nm,18.0s
MNK MLR MLR
comp=Z,413nm,18.0s
MNK Minsk 91.11 332 *i* P **P 12 47 19.0 +0.1**
comp=E,2.0nm,0.9s
MNK *i* P **P 12 47 19.0 +0.1**
MNK *i* P **P 12 47 19.0 +0.1**
comp=Z,25nm,0.9s,baz=132
MNK *i* PP **PP 12 50 54.7 -1.3**
MNK *i* PPP PPP 12 52 52.8
MNK *i* SKS **SKiKP 12 55 49.9 +3.9**
MNK *i* S **SKSac 12 57 51.2 +0.8**
MNK *i* PS **PS 12 59 26.4 +0.1**
MNK *i* SS **SS 13 04 14.9 -6.1**
MNK *i* SSS SSS 13 08 19.8
MNK *i* LQ LQ 13 18 26.6
MNK *i* LR LR 13 22 46.4
MNK *i* LRM MLR 13 29 10.1
comp=E,57nm,18.1s
MNK *i* LRM MLR 13 29 10.1
MNK *i* LRM MLR 13 29 10.1
comp=Z,413nm,18.1s
KLMR Klimovskoe 91.43 341 *e*P **P 12 47 19.5 -0.7**
KLMR *e* 12 50 59.9
KLMR pmax pmax
comp=Z,82nm,1.0s
KLMR Klimovskoe 91.43 341 *e*P **P 12 47 19.5 -0.7**
KLMR AMP 12 47 21.7
comp=Z,82nm,1.0s
KLMR *e*PP **PP 12 51 00.0 +1.6**
TYV Tymovskoe 91.45 33 *e*P **P 12 47 22.0 +1.4**
TYV pmax pmax
comp=Z,23nm,1.8s
TYV pmax pmax
comp=Z,400nm,3.6s
NIE Niedzica 91.56 325 *e*P **P 12 47 21.9 +0.7**
AQU L'Aquila 91.66 316 P **P 12 47 22.7 +0.8**
AQU L'Aquila 91.66 316 P **P 12 47 22.7 +0.8**
AQU pmax pmax
comp=Z,22nm,0.9s
BEHE Becsehely 91.83 321⇑*i*P **P 12 47 23.1 +0.6**
LANS Liptovska Anna 91.85 324 *e*P **P 12 47 24.2 +1.6**
LANS pmax pmax
comp=Z,6.0nm,0.9s
LANS Liptovska Anna 91.85 324 *e*P **P 12 47 24.2 +1.6**
NACGM Naroch 91.85 332⇓*e*P **P 12 47 22.9 +0.6**
baz=130
NRCA Norcia 92.09 316 P **P 12 47 23.3 -0.6**
KOGS Kog 92.12 321 *i* P **P 12 47 24.4 +0.6**
OJC Ojcow 92.30 325 *e*P **P 12 47 24.3 -0.2**
OJC Ojcow 92.30 325 P **P 12 47 24.2 -0.4**
OJC Ojcow 92.30 325 P **P 12 47 24.2 -0.4**
OJC pmax pmax
comp=Z,8.0nm,0.8s
SMOL Smolenice 92.59 323 *e*P **P 12 47 26.6 +0.6**
SMOL pmax pmax
comp=Z,10.0nm,1.2s
VISS Visnje 92.59 320 *e*P **P 12 47 26.1 +0.1**
ZST Bratislava 92.60 323 *e*P **P 12 47 26.6 +0.6**
ZST pmax pmax
comp=Z,59nm,1.2s
ZST Bratislava 92.60 323 *e*P **P 12 47 26.6 +0.6**
MODS Modra-Piesok 92.60 323 *e*P **P 12 47 26.6 +0.6**
MODS pmax pmax
comp=Z,57nm,1.1s
MODS Modra-Piesok 92.60 323 *e*P **P 12 47 26.6 +0.6**
KOWA Kowa 92.62 285 P **P 12 47 27.1 +0.2**
JAVC Velka Javorina 92.65 323 *e*P **P 12 47 26.7 +0.4**
RONA Rosalia, Austr 92.78 322 *i* P **P 12 47 27.4 +0.5**
comp=Z,37nm,0.8s,SNR=22
PERS Pernice 92.88 320 *i* P **P 12 47 27.7 +0.3**
OKC Ostrava-Krasne 92.95 324 *e*P **P 12 47 27.5 -0.1**
OKC MLR MLR
comp=Z,300nm,22.2s
OKC Ostrava-Krasne 92.95 324 *e*P **P 12 47 27.5 -0.1**
OKC AMS AMS 13 26 50.0
comp=Z,300nm,22.2s
SOKA Soboth 92.95 320 *i* P **P 12 47 28.2 +0.4**
comp=Z,10.0nm,1.0s
ARSA Arzberg 92.97 321 *i* P **P 12 47 28.6 +0.8**
comp=Z,42nm,0.8s,SNR=22
CONA Conrad Observa 93.15 322 *i* P **P 12 47 28.6 0.0**
comp=Z,10nm,0.9s,SNR=6.7
NRIK Noril'sk 93.16 2 P **P 12 47 26.8 -1.3**
comp=Z,49nm,0.8s,baz=157,slow=3.5,SNR=54
NRIK PP **PP 12 51 12.8 +0.9**
comp=Z,11nm,1.1s,baz=188,slow=5.6,SNR=4.1
NRIK LR LR 13 31 53.6
comp=Z,888nm,18.4s,baz=186,slow=37
comp=Z,49nm,0.8s
NRIK Noril'sk 93.16 2 P **P 12 47 27.2 -0.8**
NRIK Noril'sk 93.16 2*ce*P **P 12 47 26.5 -1.6**
MORC Moravsky Berou 93.24 324 ⇓P **P 12 47 29.6 +0.6**
MORC Moravsky Berou 93.24 324 P **P 12 47 28.5 -0.5**
MORC Moravsky Berou 93.24 324 P **P 12 47 28.5 -0.5**
MORC pmax pmax
comp=Z,11nm,1.0s
MORC Moravsky Berou 93.24 324 *e*P **P 12 47 29.1 +0.1**
KRUC Moravsky 93.47 323 *e*P **P 12 47 29.6 -0.4**
VRAC Vranov 93.49 323 LR LR 13 29 23.8
comp=Z,262nm,19.1s,baz=112,slow=35
VRAC Vranov 93.49 323 *e*P **P 12 47 30.6 +0.5**
YAK Yakutsk 93.69 20 LR LR 13 30 54.0
comp=Z,573nm,21.0s,baz=266,slow=36
YAK Yakutsk 93.69 20 P **P 12 47 30.1 -0.5**
YAK IAMs_20 IAMs_20 13 30 21.2
comp=Z,645nm,22.0s
YAK Yakutsk 93.69 20 *e*P **P 12 47 30.2 -0.5**
YAK *e* 12 47 33.1
YAK *e* 12 58 25.2
YAK pmax pmax
comp=Z,52nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK MLR MLR
comp=Z,543nm,20.0s
YAK MLR MLR
comp=E,354nm,18.0s
MYKA Terra Mystica 93.74 320 *i* P **P 12 47 31.7 +0.3**
comp=E,16nm,1.1s
KRLC Kraliky 93.81 324 AMS AMS 13 27 30.0
comp=E,200nm,17.9s
MOA Molln 94.01 321 *i* P **P 12 47 32.2 -0.3**
comp=E,14nm,1.3s
TREC Trest 94.09 323 AMS AMS 13 30 30.0
comp=E,400nm,21.2s
CLUD Cludinico 94.10 320 P **P 12 47 33.4 +0.4**
CLUD IAmb IAmb 12 47 35.1
comp=Z,26nm,0.9s
STAL STALIGIAL 94.10 319 P **P 12 47 32.8 -0.2**
STAL IAmb IAmb 12 47 47.4
comp=Z,19nm,0.6s
KBA Koelnbreinsper 94.14 320 *i* P **P 12 47 33.0 -0.4**
comp=Z,7.7nm,0.8s
ZCCA Zocca 94.20 317 P **P 12 47 33.8 +0.3**
ZCCA IAmb IAmb 12 47 36.1
comp=Z,34nm,0.8s
VSU Vasula 94.21 334 *i* P **P 12 47 32.0 -1.1**
VSU pmax pmax
comp=Z,38nm,0.9s
DPC Dobruska-Polom 94.21 324 *e*P **P 12 47 33.3 -0.1**
DPC MLR MLR
comp=Z,300nm,22.3s
DPC Dobruska-Polom 94.21 324 *e*P **P 12 47 33.3 -0.1**
DPC AMS AMS 13 27 40.0
comp=Z,300nm,22.3s
TEOL Teolo 94.27 318 P **P 12 47 33.8 0.0**
CIMO Cimolais 94.28 319 P **P 12 47 34.4 +0.5**
CIMO IAmb IAmb 12 47 38.9
comp=Z,9.2nm,1.0s
BIOA Bad Ischl, Aus 94.29 321 *e*P **P 12 47 33.5 -0.3**
comp=Z,11nm,1.0s
OSTC Ostas 94.38 324 *e*P **P 12 47 35.2 +1.0**
OSTC AMS AMS 13 28 00.0
comp=Z,400nm,21.6s
UPC Upice 94.46 324 *e*P **P 12 47 35.9 +1.4**
UPC MLR MLR
comp=Z,400nm,24.5s
UPC Upice 94.46 324 *e*P **P 12 47 35.9 +1.4**
UPC AMS AMS 13 27 50.0
comp=Z,400nm,24.5s
ABTA Abfaltersbach 94.46 320 *e*P **P 12 47 35.1 +0.3**
comp=Z,11nm,0.9s,SNR=6.2
CHVC Chvalec 94.48 324 *e*P **P 12 47 35.9 +1.2**
CHVC AMS AMS 13 29 50.0
KSP Ksiaz 94.49 324 *e*P **P 12 47 35.5 +0.8**
CKRC Cesky Krumlov 94.50 322 *e*P **P 12 47 36.0 +1.2**
PGF Pioggiola 94.58 315 *e*P **P 12 47 35.9 +0.5**
PGF pmax pmax
comp=Z,172nm,2.0s
CTI Castel Tesino 94.63 319 P **P 12 47 35.5 0.0**
CTI Castel Tesino 94.63 319 P **P 12 47 35.5 0.0**
CTI pmax pmax
comp=Z,16nm,0.9s
GEC2 GERESS Array S 94.85 322 P **P 12 47 35.7 -0.8**
GERES GERESS Array B 94.85 322 P **P 12 47 35.7 -0.8**
comp=Z,2.9nm,0.9s,baz=145,slow=4.9,SNR=17
GERES LR LR 13 28 02.0
comp=Z,199nm,21.9s,baz=96,slow=34
comp=Z,2.9nm,0.9s
GERES GERESS Array B 94.85 322 P **P 12 47 35.3 -1.2**
PRU Pruhonice 94.98 323 AMS AMS 13 30 10.0
comp=Z,300nm,21.3s
KHC Kasperske Hory 95.07 322 P **P 12 47 36.7 -0.7**
KHC Kasperske Hory 95.07 322 *e*P **P 12 47 37.0 -0.4**
KHC MLR MLR
comp=Z,400nm,25.4s
KHC Kasperske Hory 95.07 322 *e*P **P 12 47 37.0 -0.4**
KHC AMS AMS 13 31 10.0
comp=Z,400nm,25.4s
WTTA Wattenberg 95.24 320 *i* P **P 12 47 38.2 -0.2**
comp=Z,11nm,0.9s
PVCC Panska Ves 95.25 324 AMS AMS 13 30 00.0

comp=Z,400nm,23.4s
WATA Walderalm 95.31 320 *i* P **P** 12 47 38.1 -0.5
comp=Z,10nm,1.1s
SQTA Sankt Quirin 95.47 320 *i* P **P** 12 47 39.4 0.0
comp=Z,14nm,0.8s
MOTA Moosalm 95.60 320 *i* P **P** 12 47 39.8 -0.2
comp=Z,12nm,1.0s
FETA Feichten 95.66 319 *i* P **P** 12 47 40.7 +0.4
comp=Z,8.7nm,0.9s
BRG Berggiesshubel 95.77 324 *eP* **P** 12 47 41.3 +0.8
BRG Amp 12 47 43.6
comp=Z,4.9nm,0.9s
BRG Berggiesshubel 95.77 324 Amp 13 30 44.0
comp=E,0.2nm,20.8s
BRG Berggiesshubel 95.77 324 *eP* **P** 12 47 41.3 +0.8
BRG *e* 12 58 18.0
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=N,139nm,17.2s
BRG MLR MLR
comp=Z,408nm,21.4s
BRG MLR MLR
comp=E,223nm,20.8s
BRG Berggiesshubel 95.77 324 *ex* **SKSac** 12 58 18.0 +1.8
BRG Berggiesshubel 95.77 324 Amp 13 30 38.0
comp=N,0.1nm,17.2s
BRG Berggiesshubel 95.77 324 Amp 13 30 40.0
comp=Z,0.4nm,21.4s
RETA Reutte 95.87 320 *i* P **P** 12 47 41.2 0.0
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 96.05 319 LR LR 13 28 00.0
comp=Z,174nm,21.9s,baz=86,slow=34
NKC Novy Kostel 96.27 323 AMS AMS 13 29 00.0
comp=Z,300nm,21.6s
DAVA Damuels 96.30 319 *i* P **P** 12 47 43.3 +0.1
comp=Z,11nm,1.0s
FIA1 FINESS Array S 96.40 336 P **P** 12 47 42.0 -1.1
FINES FINESS Array B 96.40 336 P **P** 12 47 41.7 -1.4
comp=Z,5.2nm,1.0s,baz=120,slow=6.8,SNR=10
FINES LR LR 13 31 38.5
comp=Z,472nm,21.9s,baz=118,slow=36
comp=Z,5.2nm,1.0s
FINES FINESS Array B 96.40 336 P **P** 12 47 42.5 -0.5
FINES FINESS Array B 96.40 336 *i* P **P** 12 47 42.4 -0.7
FINES pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 96.50 324 P **P** 12 47 44.0 +0.2
CLL Collm 96.50 324 *eP* **P** 12 47 44.0 +0.2
CLL pmax pmax
comp=Z,10.0nm,1.1s
CLL Collm 96.50 324 *eP* **P** 12 47 44.0 +0.2
comp=Z,10.0nm,1.1s
CLL *e*PP **PP** 12 51 40.0 +1.7
CLL *e*SKSac **SKSac** 12 58 24.0 +4.0
CLL *e*S **ScS** 12 59 06.0 +1.6
CLL *e*PS **PS** 13 00 25.0 -1.1
CLL *e*PPS PPS 13 01 09.0
CLL *e*SS **SS** 13 05 46.0 +7.7
CLL *e*SSS SSS 13 09 18.0
CLL *e*SSSS 13 12 36.0
MBDF Montbardon 97.02 316 *eP* **P** 12 47 47.5 +0.9
MBDF pmax pmax
comp=Z,17nm,0.9s
EFI East Falkland 97.04 204 *ceP* **P** 12 47 43.3 -3.2
EFI pmax pmax
comp=Z,47nm,1.7s
LPG La Plagne 97.38 317 *eP* **P** 12 47 47.9 -0.4
LPG pmax pmax
comp=Z,12nm,1.0s
LPL La Plagne 97.40 317 *eP* **P** 12 47 48.0 -0.3
LPL pmax pmax
comp=Z,41nm,1.7s
SENIN Lac Senin/Sane 97.43 318 P **P** 12 47 48.7 +0.3
SENIN IAmb IAmb 12 47 50.5
comp=Z,20nm,0.8s
USHA Ushuaia 97.58 197 LR LR 13 28 12.5
comp=Z,279nm,21.9s,baz=161,slow=33
ORIF Oris-en-Rattie 97.68 316 *eP* Pdif 12 47 50.7 +1.2
ORIF pmax pmax
comp=Z,12nm,0.8s
BFO Black Forest 97.71 320 P **P** 12 47 48.7 -0.7
BFO Black Forest 97.71 320 P **P** 12 47 48.7 -0.7
BFO pmax pmax
comp=Z,7.0nm,1.0s
LVZ Lovozero 98.17 344 IAMs_20 IAMs_20 13 32 10.7
comp=Z,618nm,20.0s
APA Apatity 98.25 343 *i* P **P** 12 47 50.3 -1.0
APA *i* S **S** 12 59 15.0 -3.2
APA *i* SS **SS** 13 06 01.0 -1.2
APA pmax pmax
comp=Z,4.0nm,0.9s
CABF La Chapelle 98.29 317 *eP* Pdif 12 47 53.3 +1.1
CABF pmax pmax
comp=Z,13nm,1.2s
AFI Afiamalu 98.34 109 LR LR 13 30 06.1
comp=Z,39nm,19.4s,baz=134,slow=34
ECH Echery 98.36 319 P **P** 12 47 51.1 -1.2
ECH Echery 98.36 319 P **P** 12 47 51.1 -1.2
ECH pmax pmax
comp=Z,7.0nm,1.0s
ECH MLR MLR
comp=Z,200nm,20.0s
HINF Hinteralfeld 98.36 319 *eP* **P** 12 47 51.8 -0.6
HINF pmax pmax
comp=Z,5.0nm,0.9s
CDF Champ du Feu 98.37 319 *eP* **P** 12 47 52.0 -0.5
CDF pmax pmax
comp=Z,4.0nm,0.8s
VIVF Saint-Julien-l 98.42 315 *eP* Pdif 12 47 53.8 +1.1
VIVF pmax pmax
comp=Z,50nm,1.7s
SKR Severo-Kuril's 98.56 38 *eP* P 12 47 45.5 -7.6
SKR pmax pmax
comp=Z,100nm,3.2s
HAU Haudompre 98.75 319 *eP* **P** 12 47 53.7 -0.4
HAU pmax pmax
comp=Z,6.0nm,0.8s
MTLF Montolieu 99.40 313 *eP* **Pdif** 12 47 57.7 +0.6
MTLF pmax pmax
comp=Z,9.0nm,0.8s
SMF Signal de Mont 99.71 317 *eP* **Pdif** 12 47 58.2 -0.2
SMF pmax pmax
comp=Z,6.0nm,0.8s
LOR Lormes 99.95 317 *eP* **Pdif** 12 47 59.7 +0.2
LOR pmax pmax
comp=Z,2.0nm,0.5s
AVF Avril sur Loir 100.07 317 *eP* **Pdif** 12 47 59.9 -0.1
AVF pmax pmax
comp=Z,6.0nm,1.0s
SSF Saint Saulge 100.09 317 *eP* **Pdif** 12 48 00.3 +0.3
SSF pmax pmax
comp=Z,11nm,0.8s
CAF Calviac 100.14 315 *eP* **Pdif** 12 48 00.2 -0.2
CAF pmax pmax
comp=Z,5.0nm,0.9s
MA2 Magadan 100.17 29 P **Pdif** 12 47 58.5 -1.6
comp=Z,17nm,0.8s,baz=164,slow=6.2,SNR=8.6
MA2 Magadan 100.17 29 IAMs_20 IAMs_20 13 35 10.1
comp=Z,660nm,20.0s
MA2 Magadan 100.17 29 *i* P **Pdif** 12 47 56.0 -4.1
MA2 pmax pmax
comp=Z,26nm,0.9s
MA2 Magadan 100.17 29 P **Pdif** 12 47 59.8 -0.3
BGF Bois d'Agland 100.30 316 *eP* **Pdif** 12 48 01.6 +0.6
BGF pmax pmax
comp=Z,8.0nm,0.9s
PETK Petropavlovsk- 100.53 36 P **Pdif** 12 47 59.8 -2.1
comp=Z,3.5nm,0.9s,baz=248,slow=1.6,SNR=4.5
GIVF Givet 100.55 320 *eP* **Pdif** 12 48 02.5 +0.5
GIVF pmax pmax
comp=Z,7.0nm,0.8s
TIXI Tiksi 100.62 14 P **Pdif** 12 48 00.1 -1.7
comp=Z,5.8nm,0.8s,baz=269,slow=24,SNR=6.1
TIXI Tiksi 100.62 14 IAMs_20 IAMs_20 13 35 02.9
comp=Z,714nm,20.0s
TIXI Tiksi 100.62 14 *i* P **Pdif** 12 47 59.5 -2.3
TIXI pmax pmax
comp=Z,10.0nm,1.0s
RJF Les Rejaudoux 100.64 315 *eP* **Pdif** 12 48 03.2 +0.6
RJF pmax pmax
comp=Z,14nm,1.2s
LFF La Frestale 101.01 314 *eP* **Pdif** 12 48 04.9 +0.7
LFF pmax pmax
comp=Z,12nm,1.0s
ETSF Etsaut 101.09 312 *eP* **Pdif** 12 48 06.4 +1.7
ETSF pmax pmax
comp=Z,6.0nm,0.9s
SJPF Ste Jean 101.62 312 *eP* **Pdif** 12 48 08.1 +1.1
SJPF pmax pmax
comp=Z,12nm,1.0s
ARCES ARCESS Array B 101.73 342 P **Pdif** 12 48 06.7 -0.1
comp=Z,5.6nm,0.8s,baz=123,slow=4.5,SNR=20
NOA NORSAR Array B 102.13 332 PP **PP** 12 52 16.8 -4.3
comp=Z,1.0nm,0.8s,baz=121,slow=8.0,SNR=4.3
MFF Saint Martin d 102.21 316 *eP* **Pdif** 12 48 09.9 +0.4
MFF pmax pmax
comp=Z,9.0nm,0.9s
ESDC Sonseca Array 102.29 308 P **Pdif** 12 48 11.1 +1.0
comp=Z,1.8nm,0.8s,baz=101,slow=3.4,SNR=15
SEY Seymchan 102.50 26 PKiKP **PKiKP** 12 52 31.3 -0.3
comp=Z,4.5nm,0.9s,baz=247,slow=1.0,SNR=8.0
SGMF Saint Gilles 104.33 317 *eP* **Pdif** 12 48 20.9 +2.0
SGMF pmax pmax
comp=Z,59nm,1.8s
BILL Bilibino 109.76 23 IAMs_20 IAMs_20 13 43 54.1
comp=Z,559nm,18.0s
PPT2 Papeete2 114.55 124 *e*SS SS 13 09 47.4 +2.5
comp=Z,120nm,25.0s
PPT2 Papeete2 114.55 124 *e*LR LR 13 27 19.7
comp=Z,200nm,25.8s
PPT2 *e*LR LR 13 27 19.9
comp=Z,289nm,24.5s
CPUP Villa Florida 116.60 220 PKP **PKPdf** 12 52 59.1 -0.2
comp=Z,1.4nm,0.4s,baz=41,slow=4.8,SNR=5.2
BDFB Brasilia 117.58 236 PKP **PKPdf** 12 53 01.7 +0.1
comp=Z,2.7nm,0.5s,baz=112,slow=3.2,SNR=6.0
GAMB Gambell 118.28 29 IAMs_20 IAMs_20 13 50 08.6
comp=Z,531nm,19.0s
SPIA Saint Paul Isl 119.19 37 P **PKPdf** 12 53 01.6 -1.6
baz=271
NIKH Nikolski High 119.99 41 PKPdf **PKPdf** 12 53 03.4 -1.5
NIKH Nikolski High 119.99 41 P **PKPdf** 12 53 03.5 -1.3
comp=Z,559nm,9.0
ANM Nome 120.95 28 PKPdf **PKPdf** 12 53 06.8 +0.4
ANM IAMs_20 IAMs_20 13 49 38.1
comp=Z,593nm,20.0s
ANM Nome 120.95 28 PKIKP **PKPdf** 12 53 06.8 +0.4
ANM Nome 120.95 28 P **PKPdf** 12 53 06.1 -0.3
baz=279
UNV Unalaska Valle 121.39 40 PKPdf **PKPdf** 12 53 06.7 -0.8
UNV Unalaska Valle 121.39 40 P **PKPdf** 12 53 06.1 -1.5
baz=272
SUMG Summit 121.82 342 PKPdf **PKPdf** 12 53 07.0 -1.4
SUMG IAMs_20 IAMs_20 13 45 42.0
comp=Z,554nm,22.0s
SUMG Summit 121.82 342 PKIKP **PKPdf** 12 53 07.0 -1.4
SUMG MLR MLR
comp=Z,600nm,22.0s
A21K Barrow 122.32 19 P **PKPdf** 12 53 08.5 -0.3
baz=292
AC02 Maricunga 122.46 210 PKPdf **PKPdf** 12 53 11.9 +0.7
S12K Black Hills 123.82 38 P **PKPdf** 12 53 11.9 -0.3
baz=277
ANGG Ammassalik, Gr 123.94 334 **PKPdf** 12 53 11.7 -0.4
GO02 Mina Guanaco 124.10 211 PKPdf **PKPdf** 12 53 14.1 -0.1
GCSA Galena City Sc 124.46 27 P **PKPdf** 12 53 13.0 -0.1
baz=288
N16K Nishlik Lake 124.74 32 P **PKPdf** 12 53 14.3 +0.4
baz=283,SNR=12
SDPT Sand Point 124.76 38 PKPdf **PKPdf** 12 53 13.7 -0.2
SDPT Sand Point 124.76 38 P **PKPdf** 12 53 13.4 -0.5
baz=278
C23K Itkillik River 124.77 20 P **PKPdf** 12 53 13.8 +0.2
baz=297,SNR=20
F21K Alatna River 124.92 23 P **PKPdf** 12 53 13.8 -0.2
baz=293,SNR=95
S14K Fog Glacier 125.14 37 P **PKPdf** 12 53 14.9 +0.1
baz=279
D23K Nanushuk River 125.14 21 P **PKPdf** 12 53 14.9 +0.6
baz=297,SNR=41
G21K Allakaket 125.18 24 P **PKPdf** 12 53 13.7 -0.7
baz=292
F22K John River 125.27 23 P **PKPdf** 12 53 15.1 +0.5
baz=294,SNR=91
O16K Kokwok River B 125.27 33 P **PKPdf** 12 53 15.1 +0.3
baz=283,SNR=29
IMAR Indian Mountai 125.28 25 PKPdf **PKPdf** 12 53 14.8 +0.1
CHNA Chernabura Isl 125.34 39 P **PKPdf** 12 53 15.1 0.0
baz=278
CNBA Chernabura Isl 125.34 39 IAMs_20 IAMs_20 13 47 44.1
comp=Z,329nm,20.0s
TTA Tatalina 125.37 29 P **PKPdf** 12 53 15.1 +0.1
baz=287,SNR=13
C24K Franklin Bluff 125.41 19 P **PKPdf** 12 53 15.0 +0.2
baz=299
P16K Nushagak River 125.44 34 P **PKPdf** 12 53 15.3 +0.2
baz=283,SNR=9.1
D24K Happy Valley 125.65 20 P **PKPdf** 12 53 15.4 +0.1
baz=299
TOLK Toolik Lake Re 125.65 21 PKPdf **PKPdf** 12 53 16.1 +0.7
TOLK Toolik Lake Re 125.65 21 P **PKPdf** 12 53 16.0 +0.6
baz=298,SNR=56
PB15 PFO Station P 125.70 212 **PKPdf** 12 53 18.1 +1.0
O17K Koliganek Bris 125.72 32 P **PKPdf** 12 53 15.8 +0.2
baz=284,SNR=16
G22K Bettles 125.75 23 P **PKPdf** 12 53 15.0 -0.5
baz=294
CHGN Chignik 125.76 37 P **PKPdf** 12 53 15.1 -0.7
baz=280
H21K Melozitna Rive 125.77 25 PKPdf **PKPdf** 12 53 15.7 +0.1
H21K IAMs_20 IAMs_20 13 51 56.2
comp=Z,530nm,22.0s
H21K Melozitna Rive 125.77 25 P **PKPdf** 12 53 15.8 +0.1
baz=292,SNR=32
J20K Nowinta River 125.77 27 IAMs_20 IAMs_20 13 55 08.4
comp=Z,483nm,20.0s
J20K Nowinta River 125.77 27 P **PKPdf** 12 53 15.8 +0.2
baz=290,SNR=43
LVC Limon Verde 125.92 213 PKP **PKPdf** 12 53 19.0 +1.2
comp=Z,19nm,0.7s,baz=272,slow=0.9,SNR=26
LVC Limon Verde 125.92 213 PKIKP **PKPdf** 12 53 19.0 +1.2
R16K Pilot Point 125.97 35 P **PKPdf** 12 53 16.2 0.0
baz=282
N18K Kilae Creek 126.07 31 IAMs_20 IAMs_20 13 54 14.7
comp=Z,327nm,20.0s
N18K Kilae Creek 126.07 31 P **PKPdf** 12 53 16.6 +0.2
baz=286,SNR=15
K20K Telida 126.08 28 PKPdf **PKPdf** 12 53 16.3 0.0
K20K IAMs_20 IAMs_20 13 54 58.6
comp=Z,508nm,20.0s
K20K Telida 126.08 28 P **PKPdf** 12 53 16.2 0.0
baz=289,SNR=29
COLD Coldfoot 126.08 23 P **PKPdf** 12 53 16.5 +0.3
baz=296,SNR=59
L19K White Mountain 126.11 29 IAMs_20 IAMs_20 13 52 43.6
comp=Z,474nm,20.0s
L19K White Mountain 126.11 29 P **PKPdf** 12 53 16.5 +0.1
baz=288,SNR=29
P17K Kvichak River 126.18 33 P **PKPdf** 12 53 16.2 -0.3
baz=284
Q16K King Salmon 126.20 34 P **PKPdf** 12 53 15.4 -1.1
baz=284
H22K Ishtalitna Cre 126.22 24 P **PKPdf** 12 53 16.5 0.0
baz=294,SNR=36
I21K Tanana 126.27 25 IAMs_20 IAMs_20 13 52 12.5
comp=Z,506nm,21.0s
I21K Tanana 126.27 25 P **PKPdf** 12 53 16.4 -0.1
baz=293,SNR=14
E24K Your Creek 126.27 21 P **PKPdf** 12 53 16.4 -0.2
baz=298,SNR=16
D25K Kavik River 126.32 19 P **PKPdf** 12 53 16.1 -0.6
baz=301,SNR=24
G23K Bananza Creek 126.37 23 P **PKPdf** 12 53 17.1 +0.3
baz=296,SNR=35
M19K Big River Lodg 126.40 29 IAMs_20 IAMs_20 13 53 05.4
comp=Z,474nm,20.0s
M19K Big River Lodg 126.40 29 P **PKPdf** 12 53 16.8 -0.2
baz=288
C26K Camden Bay 126.43 18 P **PKPdf** 12 53 17.4 +0.7
baz=303
L20K Farewell, AK 126.45 29 P **PKPdf** 12 53 17.0 -0.1
baz=289,SNR=28
R17K Ugashik Creek 126.58 35 P **PKPdf** 12 53 16.8 -0.5
baz=283
SIV San Ignacio 126.59 225 PKP **PKPdf** 12 53 18.3 -0.5
comp=Z,16nm,0.7s,baz=112,slow=2.9,SNR=60
O18K Koktuh Hills 126.62 32 **PKPdf** 12 53 17.3 -0.1
O18K IAMs_20 IAMs_20 13 53 16.4
comp=Z,392nm,19.0s
O18K Koktuh Hills 126.62 32 P **PKPdf** 12 53 17.1 -0.4
baz=286,SNR=12
CHUM Lake Minchumin 126.62 27 P **PKPdf** 12 53 17.5 +0.3
baz=292
N19K Bonanza Creek 126.69 31 P **PKPdf** 12 53 17.1 -0.6
baz=287,SNR=7.8
P18K Big Mountain, 126.73 33 PKPdf **PKPdf** 12 53 17.0 -0.7
P18K IAMs_20 IAMs_20 13 53 14.4
comp=Z,404nm,21.0s
P18K Big Mountain, 126.73 33 P **PKPdf** 12 53 16.4 -1.3
baz=286,SNR=5.1
F24K Squaw Lake 126.74 22 P **PKPdf** 12 53 18.0 +0.5
baz=299,SNR=56
PB09 IPOC Station P 126.77 213 **PKPdf** 12 53 20.2 +1.1
MLY Manley 126.81 25 P **PKPdf** 12 53 17.2 -0.5
baz=294,SNR=84
CAST Castle Rocks 126.89 27 IAMs_20 IAMs_20 13 54 21.2
comp=Z,564nm,21.0s
CAST Castle Rocks 126.89 27 P **PKPdf** 12 53 17.1 -0.8
baz=292,SNR=25
H23K Yukon River 126.93 24 **PKPdf** 12 53 17.7 -0.2
H23K IAMs_20 IAMs_20 13 54 33.9
comp=Z,573nm,20.0s
H23K Yukon River 126.93 24 P **PKPdf** 12 53 17.8 -0.1
baz=296,SNR=34
C27K Jago River 126.94 18 P **PKPdf** 12 53 18.1 +0.3
baz=304,SNR=27
O19K Port Alsworth 126.95 32 PKPdf **PKPdf** 12 53 17.4 -0.6
O19K IAMs_20 IAMs_20 13 54 09.1
comp=Z,326nm,19.0s
O19K Port Alsworth 126.95 32 P **PKPdf** 12 53 17.2 -0.8
baz=287,SNR=8.1
M20K Styx River 126.97 29 PKPdf **PKPdf** 12 53 17.8 -0.3
M20K IAMs_20 IAMs_20 13 53 30.5
comp=Z,538nm,22.0s
M20K Styx River 126.97 29 P **PKPdf** 12 53 17.2 -0.9
baz=289,SNR=7.5
PPLA Purkeypile 127.04 28 P **PKPdf** 12 53 17.3 -1.0
baz=291,SNR=9.6
Q18K Katmai Hardscr 127.04 34 P **PKPdf** 12 53 16.9 -1.5
baz=285
ILULI Ilulissat 127.08 341 IAMs_20 IAMs_20 13 54 29.8
comp=Z,419nm,20.0s
BPAW Bear Paw Mtn. 127.08 26 PKPdf **PKPdf** 12 53 18.3 +0.1
BPAW Bear Paw Mtn. 127.08 26 P **PKPdf** 12 53 17.8 -0.4
baz=293,SNR=29
TAOE Nuku Hiva Isla 127.13 123 *e*LR LR 13 33 10.6
comp=Z,252nm,28.0s
E25K Arctic Village 127.20 20 P **PKPdf** 12 53 18.3 -0.1
baz=302,SNR=23
G24K Hadweenzic Riv 127.27 22 P **PKPdf** 12 53 18.8 +0.3
baz=298,SNR=53
I23K Minto, Yukon-K 127.29 25 **PKPdf** 12 53 18.6 +0.1
I23K IAMs_20 IAMs_20 13 53 29.5
comp=Z,469nm,21.0s
I23K Minto, Yukon-K 127.29 25 P **PKPdf** 12 53 18.3 -0.2
baz=296
KTH Kantishna Hill 127.32 27 PKPdf **PKPdf** 12 53 18.5 -0.3
F25K Christian Rive 127.45 21 P **PKPdf** 12 53 19.0 +0.1
baz=301,SNR=48
PB02 IPOC Station P 127.50 213 **PKPdf** 12 53 20.6 +0.1
H24K Noodor Dome 127.54 24 IAMs_20 IAMs_20 13 55 28.9
comp=Z,462nm,19.0s
H24K Noodor Dome 127.54 24 P **PKPdf** 12 53 18.7 -0.4
baz=298,SNR=46
ILSW Iliamna Southw 127.58 32 **PKPdf** 12 53 18.7 -0.7
SPCR Spurr Chakacha 127.62 30 P **PKPdf** 12 53 18.7 -0.7
baz=290
TRF Thorofare Moun 127.62 27 IAMs_20 IAMs_20 13 55 08.5
comp=Z,414nm,20.0s
TRF Thorofare Moun 127.62 27 P **PKPdf** 12 53 18.7 -0.8
baz=293,SNR=10
NEA2 Nenana 127.64 25 IAMs_20 IAMs_20 13 53 33.9
comp=Z,591nm,22.0s
NEA2 Nenana 127.64 25 P **PKPdf** 12 53 18.4 -0.9
baz=295,SNR=5.1
Q19K Cape Douglas, 127.64 33 PKPdf **PKPdf** 12 53 19.2 -0.2
Q19K Cape Douglas, 127.64 33 P **PKPdf** 12 53 18.8 -0.7
baz=287,SNR=5.5
SKT Skwentna 127.65 29 IAMs_20 IAMs_20 13 56 47.1
comp=Z,414nm,19.0s
BWN Browne 127.67 26 **PKPdf** 12 53 19.1 -0.1
G25K Bearman Lake 127.72 22 P **PKPdf** 12 53 19.7 +0.4
baz=300,SNR=18
O20K Slope Mountain 127.79 31 P **PKPdf** 12 53 18.6 -1.2
baz=288
MDM Murphy Dome 127.81 25 **PKPdf** 12 53 18.1 -1.4
MDM IAMs_20 IAMs_20 13 54 53.1
comp=Z,397nm,20.0s
F26K Sheenjek River 127.88 21 P **PKPdf** 12 53 19.3 -0.4
baz=303,SNR=23
BMAR Burnt Mountain 127.89 21 PKPdf **PKPdf** 12 53 19.4 -0.3
TCOL CIGO, UAF Yank 127.98 25 IAMs_20 IAMs_20 13 54 57.9
comp=Z,413nm,20.0s
TCOL CIGO, UAF Yank 127.98 25 P **PKPdf** 12 53 18.4 -1.5
baz=297,SNR=15
COLA College 127.99 25 **PKPdf** 12 53 18.2 -1.6
COLA College 127.99 25 IAMs_20 IAMs_20 13 54 57.9
comp=Z,397nm,20.0s
COLA College 127.99 25 *i* PKIKP **PKPdf** 12 53 18.6 -1.2
COLA College 127.99 25 P **PKPdf** 12 53 18.2 -1.6
baz=297
SII Sitkinak Islan 128.00 36 P **PKPdf** 12 53 19.0 -1.2
baz=284
POKR Poker Plat Res 128.03 24 **PKPdf** 12 53 18.9 -1.1
POKR IAMs_20 IAMs_20 13 51 50.2
comp=Z,568nm,22.0s
POKR Poker Plat Res 128.03 24 P **PKPdf** 12 53 18.7 -1.3
baz=298
CUT Chulitna 128.04 28 IAMs_20 IAMs_20 13 55 22.7
comp=Z,561nm,21.0s
CUT Chulitna 128.04 28 P **PKPdf** 12 53 19.0 -1.0
baz=293,SNR=6.0
MCK McKinley 128.06 26 P **PKPdf** 12 53 18.8 -1.3
baz=295
H25K Birch Creek 128.07 23 P **PKPdf** 12 53 19.5 -0.4
baz=300
WRH Wood River Hil 128.08 25 **PKPdf** 12 53 18.7 -1.4
WRH IAMs_20 IAMs_20 13 53 45.3
comp=Z,371nm,20.0s
CCB Clear Creek Bu 128.11 25 IAMs_20 IAMs_20 13 56 11.2
comp=Z,349nm,21.0s
FYU Fort Yukon 128.12 22 IAMs_20 IAMs_20 13 52 11.2
comp=Z,461nm,20.0s
SFJD Kangerlussuaq 128.13 339 IAMs_20 IAMs_20 13 52 26.9
comp=Z,386nm,22.0s
CAPN Captain Cook N 128.25 30 P **PKPdf** 12 53 20.3 -0.2
baz=290
OHAK Old Harbor 128.30 35 P **PKPdf** 12 53 20.4 -0.3
baz=286
M22K Willow 128.36 29 **PKPdf** 12 53 20.7 +0.1
M22K IAMs_20 IAMs_20 13 55 31.0
comp=Z,428nm,20.0s
M22K Willow 128.36 29 P **PKPdf** 12 53 20.2 -0.4
baz=292,SNR=7.0
Q20K Shuyak Island 128.36 33 P **PKPdf** 12 53 20.3 -0.5
baz=288
HOM Homer 128.40 32 P **PKPdf** 12 53 20.3 -0.5
baz=289
E27K Coleen River 128.40 19 P **PKPdf** 12 53 20.6 -0.1
baz=306,SNR=30
IL31 128.40 24 **PKPdf** 12 53 19.5 -1.1
ILAR Eielson Array 128.40 24 PKP **PKPdf** 12 53 18.6 -2.1
comp=Z,14nm,0.8s,baz=292,slow=3.1,SNR=43
G26K Porcupine Rive 128.40 21 P **PKPdf** 12 53 20.7 +0.1
baz=303,SNR=41
KDAK Kodiak Island 128.51 34 **PKPdf** 12 53 21.3 +0.3
KDAK Kodiak Island 128.51 34 PKIKP **PKPdf** 12 53 21.3 +0.3
KDAK Kodiak Island 128.51 34 P **PKPdf** 12 53 20.5 -0.6
baz=287
PRP Porcupine Dome 128.55 23 IAMs_20 IAMs_20 13 54 04.6
comp=Z,605nm,22.0s
PRP Porcupine Dome 128.55 23 P **PKPdf** 12 53 20.7 -0.5
baz=300
HDA Harding Lake 128.55 25 IAMs_20 IAMs_20 13 51 46.8
comp=Z,483nm,22.0s
HDA Harding Lake 128.55 25 P **PKPdf** 12 53 19.8 -1.2
baz=298,SNR=9.2
WAT1 Susitna Watana 128.60 27 P **PKPdf** 12 53 20.4 -0.7
baz=295
BRLK Bradley Lake 128.72 31 PKPdf **PKPdf** 12 53 21.4 -0.1
NRS Narsarsuaq 128.75 331 IAMs_20 IAMs_20 13 57 01.1
comp=Z,359nm,21.0s
RC01 Rabbit Creek A 128.78 29 IAMs_20 IAMs_20 13 55 11.2
comp=Z,527nm,21.0s
RC01 Rabbit Creek A 128.78 29 P **PKPdf** 12 53 21.1 -0.4
baz=292,SNR=17
BRSE Bradley Lake S 128.80 31 P **PKPdf** 12 53 21.0 -0.6
baz=290,SNR=6.0
PMR Palmer 128.85 29 **PKPdf** 12 53 21.0 -0.5

PMR	Palmer	128.85	29	PKIKP	PKPdf	12 53 21.0	-0.5	
PMR	Palmer	128.85	29	P	PKPdf	12 53 21.1	-0.5	
	baz=293,SNR=17							
GHO	Glory Hole Cre	128.87	28	IAMs_20	IAMs_20	13 55 51.7		
	comp=Z,502nm,20.0s							
DHY	Denali Highway	128.98	27	P	PKPdf	12 53 21.1	-0.9	
	baz=296,SNR=7.6							
O22K	Cooper Landing	129.01	30	IAMs_20	IAMs_20	13 57 00.5		
	comp=Z,537nm,21.0s							
O22K	Cooper Landing	129.01	30	P	PKPdf	12 53 21.6	-0.4	
	baz=292							
WAT6	Susitna Watana	129.04	27	P	PKPdf	12 53 21.0	-1.1	
	baz=295,SNR=7.7							
J25K	Salcha River,	129.05	24		PKPdf	12 53 21.8	-0.2	
J25K				IAMs_20	IAMs_20	13 55 50.0		
	comp=Z,374nm,19.0s							
J25K	Salcha River,	129.05	24	P	PKPdf	12 53 21.4	-0.7	
	baz=299,SNR=30							
SML	Sawmill	129.12	28	IAMs_20	IAMs_20	13 57 20.1		
	comp=Z,397nm,20.0s							
SML	Sawmill	129.12	28	P	PKPdf	12 53 21.6	-0.6	
	baz=294,SNR=10							
G27K	Doyon Strip	129.18	21	P	PKPdf	12 53 22.0	-0.2	
	baz=305,SNR=29							
KNK	Knik Glacier	129.22	29	P	PKPdf	12 53 22.3	-0.1	
	baz=294,SNR=7.6							
SEW	Seward	129.28	31	P	PKPdf	12 53 22.0	-0.5	
	baz=292,SNR=13							
K24K	Donnelly Dome	129.28	25	P	PKPdf	12 53 21.9	-0.6	
	baz=298,SNR=11							
PWL	Port Wells	129.50	29	P	PKPdf	12 53 22.3	-0.6	
	baz=294,SNR=11							
I26K	Coal Creek Min	129.50	23	P	PKPdf	12 53 22.2	-0.5	
	baz=302,SNR=13							
A36M	Sachs Harbour	129.54	11	IAMs_20	IAMs_20	13 50 03.1		
	comp=Z,462nm,22.0s							
A36M	Sachs Harbour	129.54	11	P	PKPdf	12 53 22.2	-0.4	
	baz=327							
SCM	Sheep Creek Mo	129.54	28		PKPdf	12 53 22.4	-0.6	
SCM				IAMs_20	IAMs_20	13 54 36.2		
	comp=Z,426nm,22.0s							
SCM	Sheep Creek Mo	129.54	28	PKIKP	PKPdf	12 53 22.5	-0.6	
SCM	Sheep Creek Mo	129.54	28	P	PKPdf	12 53 22.8	-0.3	
	baz=295,SNR=13							
H27K	Steamboat Moun	129.56	21	P	PKPdf	12 53 22.7	-0.2	
	baz=305							
RIDG	Independent Ri	129.68	25	IAMs_20	IAMs_20	13 52 41.7		
	comp=Z,518nm,22.0s							
RIDG	Independent Ri	129.68	25	P	PKPdf	12 53 22.5	-0.7	
	baz=299,SNR=7.5							
J26L	Joseph Creek	129.78	24	IAMs_20	IAMs_20	13 56 40.3		
	comp=Z,337nm,20.0s							
J26L	Joseph Creek	129.78	24	P	PKPdf	12 53 23.4	-0.1	
	baz=301,SNR=14							
PAX	Paxson	129.80	26		PKPdf	12 53 22.9	-0.5	
PAX	Paxson	129.80	26	PKIKP	PKPdf	12 53 23.0	-0.5	
PAX	Paxson	129.80	26	P	PKPdf	12 53 23.3	-0.2	
	baz=298,SNR=11							
I27K	Kandik River	129.88	22	P	PKPdf	12 53 23.1	-0.5	
	baz=304							
SCRK	Sand Creek	129.89	25	IAMs_20	IAMs_20	13 54 01.2		
	comp=Z,435nm,20.0s							
SCRK	Sand Creek	129.89	25	P	PKPdf	12 53 23.7	0.0	
	baz=300,SNR=14							
M24K	Tolsona, Glenn	129.91	27	P	PKPdf	12 53 23.6	-0.1	
	baz=297							
GLI	Glacier Island	130.04	29	IAMs_20	IAMs_20	13 56 42.7		
	comp=Z,507nm,21.0s							
GLI	Glacier Island	130.04	29	P	PKPdf	12 53 23.8	-0.1	
	baz=295							
HARP	HAARP	130.20	27	P	PKPdf	12 53 23.3	-0.9	
	baz=298							
P23K	Montague Islan	130.27	30	P	PKPdf	12 53 23.8	-0.5	
	baz=294							
KLU	Klutina	130.29	28		PKPdf	12 53 24.8	+0.4	
KLU				IAMs_20	IAMs_20	13 55 07.1		
	comp=Z,390nm,22.0s							
KLU	Klutina	130.29	28	P	PKPdf	12 53 24.2	-0.2	
	baz=296,SNR=16							
K27K	Chicken	130.58	24	P	PKPdf	12 53 24.8	0.0	
	baz=302,SNR=24							
INK	Inuvik	130.61	17	PKP	PKPdf	12 53 24.0	-0.7	
	comp=Z,18nm,0.6s,baz=0.9,slow=4.4,SNR=51							
INK	Inuvik	130.61	17	P	PKPdf	12 53 24.1	-0.7	
	baz=315,SNR=22							
L26K	Log Cabin Wild	130.62	25	IAMs_20	IAMs_20	13 53 33.6		
	comp=Z,531nm,21.0s							
L26K	Log Cabin Wild	130.62	25	P	PKPdf	12 53 25.0	0.0	
	baz=300,SNR=15							
LPAZ	La Paz	130.69	219	PKP	PKPdf	12 53 27.8	+0.5	
	comp=Z,15nm,1.0s,baz=128,slow=3.3,SNR=26							
LPAZ	La Paz	130.69	219	PKPdf	PKPdf	12 53 26.9	-0.4	
EYAK	Cordova Ski Ar	130.78	29	P	PKPdf	12 53 24.7	-0.6	
	baz=296							
N25K	Chitina, Valde	130.80	28	PKPdf	PKPdf	12 53 25.9	+0.4	
N25K	Chitina, Valde	130.80	28	P	PKPdf	12 53 25.7	+0.2	
	baz=298,SNR=15							
M26K	Nabesna, AK	131.08	26	P	PKPdf	12 53 25.7	-0.2	
	baz=300,SNR=5.9							
BMRM	Bremner River	131.10	28	IAMs_20	IAMs_20	13 58 24.5		
	comp=Z,346nm,20.0s							
BMRM	Bremner River	131.10	28	P	PKPdf	12 53 25.7	-0.2	
	baz=298							
I29M	Ogilvie Camp,	131.14	21		PKPdf	12 53 25.6	-0.3	
I29M				IAMs_20	IAMs_20	13 54 26.1		
	comp=Z,383nm,20.0s							
I29M	Ogilvie Camp,	131.14	21	P	PKPdf	12 53 25.3	-0.6	
	baz=308							
L27K	Beaver Creek,	131.19	25	PKPdf	PKPdf	12 53 26.4	+0.3	
L27K				IAMs_20	IAMs_20	13 57 26.8		
	comp=Z,398nm,20.0s							
L27K	Beaver Creek,	131.19	25	P	PKPdf	12 53 26.2	+0.1	
	baz=302,SNR=6.1							
GLB	Gilahina Butte	131.22	27	PKPdf	PKPdf	12 53 26.6	+0.4	
GLB				IAMs_20	IAMs_20	13 55 16.5		
	comp=Z,390nm,22.0s							
VRDI	Verde Repeater	131.47	28		PKPdf	12 53 27.5	+0.6	
DAWY	Dawson	131.54	23	P	PKPdf	12 53 26.4	-0.3	
	baz=306,SNR=22							
M27K	Edge Creek, AK	131.55	26	IAMs_20	IAMs_20	13 56 26.1		
	comp=Z,364nm,21.0s							
M27K	Edge Creek, AK	131.55	26	P	PKPdf	12 53 26.7	-0.2	
	baz=302,SNR=7.8							
MCARA	McCarthy YSAT	131.57	27	IAMs_20	IAMs_20	13 55 17.0		
	comp=Z,484nm,21.0s							
MCARA	McCarthy YSAT	131.57	27	P	PKPdf	12 53 26.8	-0.1	
	baz=300							
KAIM	Kayak Island	131.66	29	IAMs_20	IAMs_20	13 40 52.3		
	comp=Z,420nm,22.0s							
KAIM	Kayak Island	131.66	29	P	PKPdf	12 53 27.0	+0.1	
	baz=297							
J29M	Klondike Camp	131.73	22	P	PKPdf	12 53 27.1	0.0	
	baz=307							
BERG	Berg Lake	131.76	29		PKPdf	12 53 27.9	+0.7	
CRQM	Cirque	131.83	28	IAMs_20	IAMs_20	13 59 03.4		
	comp=Z,439nm,19.0s							
CRQE	Cirque	131.85	28	P	PKPdf	12 53 27.9	+0.4	
	baz=299,SNR=6.6							
BVCY	Beaver Creek	131.92	25	P	PKPdf	12 53 27.8	+0.3	
	baz=303,SNR=16							
TGL	Tana Glacier	131.96	28	IAMs_20	IAMs_20	13 59 35.4		
	comp=Z,371nm,20.0s							
C36M	Paulatuk	131.97	12	PKPdf	PKPdf	12 53 27.2	-0.1	
C36M				IAMs_20	IAMs_20	13 55 31.5		
	comp=Z,353nm,20.0s							
C36M	Paulatuk	131.97	12	P	PKPdf	12 53 26.9	-0.4	
	baz=327							
BGLC	Bering Glacier	132.07	29	P	PKPdf	12 53 28.6	+0.9	
	baz=298							
WAX	Waxell Ridge	132.10	28	IAMs_20	IAMs_20	13 59 12.1		
	comp=Z,512nm,20.0s							
ISLE	Juniper Island	132.25	28	IAMs_20	IAMs_20	13 56 27.9		
	comp=Z,473nm,22.0s							
BARN	Barnard Glacie	132.31	27	IAMs_20	IAMs_20	13 56 08.3		
	comp=Z,494nm,22.0s							
YUK3	Moose Creek	132.42	26	P	PKPdf	12 53 28.1	-0.6	
	baz=303,SNR=5.7							
GRNC	Granite Creek	132.44	28	IAMs_20	IAMs_20	13 57 24.7		
	comp=Z,466nm,20.0s							
CTG	Chitna Glacier	132.49	27	P	PKPdf	12 53 28.6	-0.1	
	baz=301							
MESA	MESA	132.63	28		PKPdf	12 53 29.8	+0.7	
MESA	MESA	132.63	28	P	PKPdf	12 53 29.3	+0.2	
	baz=300							
LOGN	Logan Glacier	132.70	27	IAMs_20	IAMs_20	13 56 31.8		
	comp=Z,410nm,21.0s							
M29M	Somme Creek	132.83	25	P	PKPdf	12 53 29.1	-0.2	
	baz=305							
TABL	Table Mountain	132.84	28	IAMs_20	IAMs_20	13 57 37.6		
	comp=Z,492nm,21.0s							
MDP	Montagnes des	132.89	254	PKP	PKPdf	12 53 31.7	+0.9	
	comp=Z,8.6nm,0.9s,baz=131,slow=6.0,SNR=5.5							
O28M	Mount Upton	133.07	27	P	PKPdf	12 53 30.0	0.0	
	baz=302,SNR=28							
SAML	Samuel	133.08	230		PKPdf	12 53 30.7	-0.4	
SAML	Samuel	133.08	230	PKIKP	PKPdf	12 53 30.7	-0.4	
M30M	Minto, Yukon	133.37	24	IAMs_20	IAMs_20	13 54 40.2		
	comp=Z,559nm,21.0s							
M30M	Minto, Yukon	133.37	24	P	PKPdf	12 53 29.9	-0.3	
	baz=307,SNR=26							
YUK4	Talbot Arm	133.39	26	P	PKPdf	12 53 30.4	-0.1	
	baz=304,SNR=9.2							
PINM	Pinnacle	133.40	28	P	PKPdf	12 53 30.5	+0.1	
	baz=302,SNR=15							
YUK6	Outpost Mounta	133.73	26	P	PKPdf	12 53 30.9	-0.3	
	baz=304,SNR=6.4							
BCPM	Bancas Point	133.74	28	IAMs_20	IAMs_20	13 57 53.3		
	comp=Z,429nm,20.0s							
N30M	Aishikik Lake	133.93	25	P	PKPdf	12 53 31.7	+0.4	
	baz=306,SNR=13							
PNL	Peninsula	133.99	28	P	PKPdf	12 53 31.5	+0.1	
	baz=302							
O29M	Mount Kennedy	134.00	27	P	PKPdf	12 53 31.3	-0.3	
	baz=304							
HYT	Haines Junctio	134.14	26	PKPdf	PKPdf	12 53 31.8	0.0	
HYT	Haines Junctio	134.14	26	P	PKPdf	12 53 31.5	-0.3	
	baz=305,SNR=13							
N31M	Braeburn, Yuko	134.42	25	IAMs_20	IAMs_20	13 55 49.9		
	comp=Z,399nm,22.0s							
N31M	Braeburn, Yuko	134.42	25	P	PKPdf	12 53 31.8	-0.4	
	baz=308,SNR=15							
M31M	Drury Creek, Y	134.48	23	IAMs_20	IAMs_20	13 56 49.5		
	comp=Z,461nm,20.0s							
M31M	Drury Creek, Y	134.48	23	P	PKPdf	12 53 31.7	-0.6	
	baz=310,SNR=11							
P29M	Windy Craggy	134.72	27	P	PKPdf	12 53 32.5	-0.3	
	baz=304,SNR=5.1							
O30N	Mendenhall	134.73	25	P	PKPdf	12 53 32.9	0.0	
	baz=307,SNR=14							
P30M	Million Dollar	134.77	27	P	PKPdf	12 53 33.0	+0.1	
	baz=305							
WHY	Whitehorse	135.27	25	P	PKPdf	12 53 33.5	-0.4	
	baz=308							
PLBC	Pleasant Camp	135.40	27	P	PKPdf	12 53 33.7	-0.3	
	baz=305							
N32M	Quiet Lake	135.64	24	P	PKPdf	12 53 33.9	-0.6	
	baz=311							
SKAG	Skagway	135.82	27		PKPdf	12 53 35.0	+0.2	
SKAG	Skagway	135.82	27	P	PKPdf	12 53 34.3	-0.5	
	baz=307							
P33M	Teslin, Yukon	136.35	25	IAMs_20	IAMs_20	13 57 55.0		
	comp=Z,426nm,21.0s							
P33M	Teslin, Yukon	136.35	25	P	PKPdf	12 53 35.7	-0.2	
	baz=310,SNR=8.3							
P32M	Atlin	136.40	26	P	PKPdf	12 53 36.0	+0.1	
	baz=309,SNR=11							
JIS	Juneau Island	136.93	28	IAMs_20	IAMs_20	13 58 08.5		
	comp=Z,448nm,20.0s							
SIT	Sitka	137.22	30	P	PKPdf	12 53 37.1	-0.3	
	baz=305							
R33M	Jennings River	137.59	25	P	PKPdf	12 53 37.8	-0.5	
	baz=312							
DLBC	Deasey Lake	138.60	25	P	PKPdf	12 53 39.0	-1.1	
	baz=312,SNR=9.9							
WRAK	Wrangell Islan	138.93	29		PKPdf	12 53 41.0	+0.4	
WRAK	Wrangell Islan	138.93	29	IAMs_20	IAMs_20	14 03 34.6		
	comp=Z,339nm,20.0s							
WRAK	Wrangell Islan	138.93	29	P	PKPdf	12 53 39.8	-0.9	
	baz=308							
CRAG	Craig	139.15	30	P	PKPdf	12 53 40.0	-1.0	
	baz=306							
T35M	Bob Quinn	139.47	27	P	PKPdf	12 53 41.2	-0.5	
	baz=311,SNR=5.8							
YKA	Yellowknife Ar	139.85	12	PKhKP	PKPpre	12 53 31.8		
	comp=Z,2.7nm,0.6s,baz=332,slow=3.7,SNR=22							
YKA				PP	PP	12 56 37.4	-0.6	
	comp=Z,2.8nm,1.0s,baz=344,slow=6.4,SNR=4.0							
SCHQ	Schefferville	141.70	331	PKhKP	PKPpre	12 53 39.0		
	comp=Z,5.0nm,0.6s,baz=29,slow=3.5,SNR=11							
ATAH	Atahualpa	143.82	214	PKP	PKPbc	12 53 51.0	+2.1	
	comp=Z,18nm,0.8s,baz=138,slow=2.5,SNR=18							
GRGR	Grayville	143.97	257	PKPdf	PKPbc	12 53 50.0	+1.3	
FDF	Fort de France	144.50	262		PKPbc	12 53 51.6	+1.1	
FDF	Fort de France	144.50	262	PKIKP	PKPbc	12 53 51.6	+1.1	
GDSD	La Dsirade Is	144.96	264		PKPab	12 53 51.6	-0.3	
FCC	Fort Churchill	145.19	357		PKPbc	12 53 50.6	-0.7	
FCC	Fort Churchill	145.19	357	PKIKP	PKPbc	12 53 50.6	-0.7	
ANWB	Willy Bob	146.03	266	eP	PKPdf	12 53 52.0	-2.4	
MCRA	Macar, Loja	146.97	214		PKPdf	12 53 57.7	+1.5	
SEUS	St. Eustatius	147.06	265	IAMs_20	IAMs_20	13 42 39.1		
	comp=Z,315nm,21.0s							
SMRT	St. Maarten	147.31	266	IAMs_20	IAMs_20	14 02 18.6		
	comp=Z,360nm,22.0s							
GGN	Saint George	147.38	318		PKPbc	12 53 58.7	+0.4	
PTLC	Puerto Leguiza	147.60	226	eP	PKPdf	12 53 58.4	+1.2	
E63A	Oxbow	147.64	321	P	PKPdf	12 53 55.4	-0.9	
	baz=56,SNR=5.4							
E63A				P	PKPdf	12 53 55.4	-0.9	
	baz=56,SNR=5.4							
F64A	Sherman	147.90	320	P	PKPdf	12 53 57.3	+0.6	
	baz=57,SNR=12							
F64A				P	PKPdf	12 53 57.3	+0.6	
	baz=57,SNR=12							
EMMW	East Machias	147.97	318		PKPbc	12 53 60.0	+0.1	
LMQ	La Malbaie	148.04	324		PKPbc	12 54 00.3	+0.2	
E62A	Clayton Lake	148.15	322	P	PKPdf	12 53 56.9	-0.3	
	baz=54							
E62A				P	PKPdf	12 53 56.9	-0.3	
	baz=54							
MACC	Macarena, Meta	148.39	230	eP	PKPdf	12 53 58.4	-0.2	
F63A	Nahmakanta, Br	148.43	320	P	PKPdf	12 53 58.0	+0.4	
	baz=56,SNR=6.3							
F63A				P	PKPdf	12 53 58.0	+0.4	
	baz=56,SNR=6.3							
PTGC	Puerto Gaitan,	148.54	235	eP	PKPdf	12 53 57.0	-1.8	
PKME	Peaks-Kenny Pk	148.78	320	IAMs_20	IAMs_20	14 09 33.2		
	comp=Z,12nm,19.0s							
PKME	Peaks-Kenny Pk	148.78	320	P	PKPdf	12 53 58.3	+0.1	
	baz=56,SNR=7.4							
PKME	Peaks-Kenny Pk	148.78	320	P	PKPdf	12 53 57.2	-1.0	
	baz=56,SNR=7.4							
CHSH	Refugio Sur-Vo	148.80	218		PKPdf	12 54 01.8	+1.8	
FLOC	Florencia	149.22	227	eP	PKPdf	12 54 00.1	+0.2	
WVL	Waterville	149.38	319	P	PKPdf	12 53 59.4	+0.3	
	baz=57,SNR=8.1							
GARC	Garzon, Huila	149.55	228	eP	PKPdf	12 54 01.4	+0.7	
VILC	Vilcencio,	149.64	233	eP	PKPdf	12 53 59.0	-1.8	
TAMC	Tame, Arauca	149.69	239	eP	PKPdf	12 54 01.0	+0.4	
BETC	Betania	149.88	229	eP	PKPbc	12 54 06.6	+0.8	
F04D	Rainier, OR	149.93	37	P	PKPdf	12 53 60.0	0.0	
	baz=309,SNR=7.0							
BBSR	BB Station	149.94	293	P	PKPdf	12 53 59.4	-1.0	
	baz=82							
OTAV	Otavalo	149.95	221	eP	PKPdf	12 54 02.7	+1.0	
CUSE	Cuicocha Este	149.98	221	eP	PKPbc	12 54 07.3	+0.7	
SOCV	Socops	150.03	243	eP	PKPdf	12 54 01.5	+0.4	
GCUF	Volcan Galeras	150.05	224	eP	PKPdf	12 54 03.5	+1.7	
SJG	San Juan	150.13	265	PKPbc	PKPbc	12 54 05.7	-0.5	
	comp=Z,16nm,0.5s,baz=34,slow=7.2,SNR=5.6							
SJG	San Juan	150.13	265		PKPbc	12 54 06.0	-0.1	
PAC1	Pacto, Paraso	150.18	220	eP	PKPdf	12 54 02.5	+0.9	
SDV	Santo Domingo	150.18	244	PKP	PKPdf	12 54 01.3	-0.3	
	comp=Z,12nm,0.6s,baz=3.5,slow=4.1,SNR=5.9							
SDV				PKPbc	sPKPdf	12 54 06.5	+0.7	
	comp=Z,13nm,0.6s,baz=135,slow=4.7,SNR=3.1							
SDV	Santo Domingo	150.18	244	PKPdf	PKPdf	12 53 60.0	-1.6	
SDV					sPKPdf	12 54 06.4	+0.6	
SDV				PKPab	PKPab	12 54 13.1	+0.4	
I63A	Otisfield	150.22	319	P	PKPdf	12 54 02.2	+1.7	
	baz=56,SNR=10							
I63A				P	PKPdf	12 54 02.2	+1.7	
	baz=56,SNR=10							
PRAC	Prado	150.22	231	eP	PKPdf	12 54 01.3	-0.2	
B08A	Colville Reser	150.23	30	PKPbc	PKPbc	12 54 04.9	-0.7	
FLF1	Flavio Alfaro-	150.28	218	eP	PKPbc	12 54 07.5	+0.7	
G03D	McMinnville, O	150.32	38	P	PKPdf	12 54 00.2	-0.5	
	baz=307							
RUSC	La Rusia	150.35	236	eP	PKPdf	12 54 02.2	-0.1	
ROSC	El Rosal	150.59	233	PKP	PKPdf	12 54 03.5	+1.0	
	comp=Z,18nm,0.6s,baz=223,slow=6.8,SNR=8.7							
ROSC				PKPbc	PKPbc	12 54 08.7	+0.8	
	comp=Z,88nm,0.6s,baz=151,slow=5.6,SNR=22							
BBAC	Balboa, Cauca	150.59	225	eP	PKPdf	12 54 02.3	0.0	
POPC	Popayan, Colom	150.60	227	eP	PKPdf	12 54 02.6	+0.2	
I02E	Swisshome, OR	150.62	41	P	PKPdf	12 54 00.7	-0.4	
	baz=305							
COR	Corvallis	150.67	39	PKPdf	PKPdf	12 54 00.1	-1.1	
COR					PKPbc	12 54 06.9	+0.3	
COR				PKPab	PKPab	12 54 13.2	-0.4	
COR	Corvallis	150.67	39	PKIKP	PKPdf	12 54 00.1	-1.1	
COR						12 54 06.9		
I62A	Tamworth	150.77	319	P	PKPbc	12 54 06.8	-0.1	
	baz=56,SNR=9.2							
I62A				P	PKPbc	12 54 06.8	-0.1	
	baz=56,SNR=9.2							
BARC	Barichara	150.87	237	eP	PKPdf	12 54 01.5	-1.3	
LBNH	Lisbon	150.91	320	P	PKPbc	12 54 07.6	+0.3	
	baz=54,SNR=12							
LBNH	Lisbon	150.91	320	P	PKPdf	12 54 01.2	-0.4	
	baz=54,SNR=12							
UNH	University of	150.91	317	P	PKPbc	12 54 07.7	+0.4	
	baz=58							
SPBC	San Pablo de B	150.94	235	eP	PKPdf	12 54 01.3	-1.4	
H04D	Lebanon	151.03	39	P	PKPdf	12 54 01.7	-0.1	
	baz=307,SNR=25							
BUCK	Buck Mountain	151.08	40	PKPdf	PKPdf	12 54 00.2	-1.8	
BUCK					PKPbc	12 54 08.5	+0.7	
BUCK				PKPab	PKPab	12 54 15.8	+0.4	
J01E	Myrtle Point	151.10	42	P	PKPdf	12 54 01.4	-0.5	
	baz=303,SNR=11							
ANIL	Santa Ana	151.13	231	eP	PKPdf	12 54 03.9	+0.6	
I03D	Drain, OR	151.15	41	P	PKPdf	12 54 00.8	-1.2	
	baz=305,SNR=37							
DABV	Dabajuro	151.26	248	eP	PKPdf	12 53 59.4	-3.6	
NEW	Newport	151.27	28	IAMs_20	IAMs_20	14 08 47.9		
	comp=Z,407nm,20.0s							
NEW	Newport	151.27	28	P	PKPdf	12 54 01.7	-0.4	
	baz=321							
VT1	Waterbury	151.34	321	IAMs_20	IAMs_20	14 08 25.7		
	comp=Z,322nm,18.0s							
VT1	Waterbury	151.34	321	P	PKPbc	12 54 08.4	+0.1	
	baz=53							
D08A	Wollman Farm,	151.36	31	PKPdf	PKPdf	12 54 01.3	-0.9	
D08A					PKPbc	12 54 08.7	+0.4	
D08A				PKPab	PKPab	12 54 16.8	+0.4	
G05D	Wamic, OR	151.38	36	P	PKPdf	12 54 02.5	+0.1	
	baz=310,SNR=20							
HNH	Hanover	151.43	320	IAMs_20	IAMs_20	14 04 55.3		
	comp=Z,360nm,18.0s							
YOTC	Yotoco, Valle	151.43	229	eP	PKPdf	12 54 02.6	-0.9	
NORC	Norcasia	151.48	234	eP	PKPdf	12 54 02.8	-0.7	
FRNY	Flat Rock	151.50	323	P	PKPbc	12 54 08.2	-0.4	
	baz=51							
K02D	Willamette Mer	151.51	43	P	PKPdf	12 54 02.1	-0.6	
	baz=303,SNR=38							
WES	Weston	151.57	316	IAMs_20	IAMs_20	14 09 13.4		
	comp=Z,392nm,21.0s							
BRRC	Barranca, Sant	151.60	238	eP	PKPdf	12 54 03.6	0.0	
GUY2C	Guyana, Caldas	151.61	232	eP	PKPdf	12 54 03.9	-0.3	
I04A	Tendick Farm,	151.65	40	P	PKPdf	12 54 02.0	-0.8	
	baz=306,SNR=52							
HRV	Adam Dziewonsk	151.66	317	PKPdf	PKPdf	12 54 02.1	-0.7	
HRV					PKPbc	12 54 09.1	0.0	
HRV	Adam Dziewonsk	151.66	317	PKIKP	PKPdf	12 54 02.1	-0.7	
HRV						12 54 09.1		
HRV	Adam Dziewonsk	151.66	317	P	PKPbc	12 54 09.3	+0.2	
	baz=58							
HRV	Adam Dziewonsk	151.66	317	P	PKPdf	12 54 02.2	-0.5	
	baz=58							
F07A	Phinny Hill Vi	151.68	34		PKPdf	12 54 01.2	-1.5	
F07A					PKPbc	12 54 09.7	+0.7	
F07A				PKPab	PKPab	12 54 16.2	-1.5	
MCVT	Middlebury Col	151.70	321	P	PKPbc	12 54 09.3	+0.1	
	baz=53							
J61A	Chester	151.80	319	P	PKPbc	12 54 09.9	+0.6	
	baz=55,SNR=16							
J61A				P	PKPbc	12 54 09.9	+0.6	
	baz=55,SNR=16							
PTBC	PUERTO BERRIO	151.81	236	eP	PKPdf	12 54 02.9	-1.1	
KSXB	Camp Six Broad	151.83	45		PKPbc	12 54 10.1	+0.4	
L02F	Cave Junction	151.88	44	P	PKPdf	12 54 02.7	-0.5	
	baz=302,SNR=38							
I05D	Terrebonne, OR	151.94	38	P	PKPdf	12 54 02.6	-0.6	
	baz=309,SNR=27							
K62A	Royalston	151.99	318	P	PKPbc	12 54 09.8	-0.1	
	baz=56,SNR=6.6							
K62A				P	PKPbc	12 54 09.8	-0.1	
	baz=56,SNR=6.6

comp=Z,334nm,21.0s
DGMT Dagmar 155.04 10 P 12 54 16.5
baz=346
DGMT Dagmar 155.04 10 P **PKPdf** 12 54 06.9 -0.6
baz=346,SNR=5.4
E46A Sault Ste Mari 155.27 338 PKPdf **PKPdf** 12 54 06.3 -1.5
E46A pPKPbc 12 54 16.3 -3.7
E46A PKPab **PKPab** 12 54 31.9 -0.9
E46A Sault Ste Mari 155.27 338 P PKPdf 12 54 16.2 +8.4
baz=30
L56A Greenwood 155.45 322 P **PKPdf** 12 54 08.0 -0.3
baz=49
L56A P **PKPdf** 12 54 08.0 -0.3
baz=49
B35A Bob, Littlefor 155.51 354 P **PKPdf** 12 54 07.9 -0.3
baz=8.5
EYMN Ely 155.63 350 P **PKPdf** 12 54 07.7 -0.6
baz=14
BOZ Bozeman (W) 155.64 24 P **PKPdf** 12 54 08.4 -0.2
baz=328
AGMN Agassiz Nation 155.73 357 P **PKPdf** 12 54 07.1 -1.4
baz=3.8
EMB Emerald Bay 155.77 47 **PKPdf** 12 54 08.3 -0.8
EMB PKPab **PKPab** 12 54 35.4 -0.2
N58A Sunbury 155.78 319 P **PKPdf** 12 54 08.8 +0.1
baz=52
N58A P **PKPdf** 12 54 08.8 +0.1
baz=52
HLID Hailey 156.09 31 P **PKPdf** 12 54 09.3 0.0
baz=319,SNR=26
E43A Lone Tree Farm 156.12 342 P **PKPdf** 12 54 09.9 +0.9
baz=24
PAGS Pennsylvania G 156.15 318 **PKPdf** 12 54 09.1 -0.1
PAGS **PKPab** 12 54 37.5 +0.7
MDND Maddock 156.16 3 P **PKPdf** 12 54 09.5 +0.5
baz=355
MDND Maddock 156.16 3 P **PKPdf** 12 54 07.9 -1.2
baz=355
GCMT Greycliff 156.17 21 **PKPdf** 12 54 08.6 -0.7
GCMT PKPab **PKPab** 12 54 36.6 -0.3
LAO LASA Array 156.33 15 P **PKPdf** 12 54 10.1 +0.7
baz=340,SNR=9.1
LAO LASA Array 156.33 15 P **PKPdf** 12 54 09.3 0.0
baz=340,SNR=9.1
M55A Ridgway 156.56 322 PKPdf **PKPdf** 12 54 07.8 -2.0
M55A **PKPab** 12 54 37.2 -1.5
SSPA Standing Stone 156.60 320 PKPdf **PKPdf** 12 54 07.1 -2.7
SSPA PKPab **PKPab** 12 54 38.5 -0.3
SSPA Standing Stone 156.60 320 IAMs_20 IAMs_20 14 19 51.1
comp=Z,376nm,20.0s
SSPA Standing Stone 156.60 320 P **PKPdf** 12 54 09.5 -0.3
baz=51
GLMI Grayling 156.71 336 P **PKPdf** 12 54 09.1 -0.8
baz=31
BMN Battle Mountai 156.76 41 **PKPdf** 12 54 08.9 -1.3
BMN PKPab **PKPab** 12 54 39.4 -0.3
BMN Battle Mountai 156.76 41 PKIKP **PKPdf** 12 54 08.9 -1.3
ERPA Erie 156.78 325 IAMs_20 IAMs_20 14 16 00.9
comp=Z,388nm,21.0s
ERPA Erie 156.78 325 P **PKPdf** 12 54 09.1 -0.9
baz=44
RLMT Red Lodge 156.90 21 P **PKPdf** 12 54 10.5 +0.2
baz=332
COWI Conover 156.94 345 **PKPdf** 12 54 08.8 -1.4
COWI PKPab **PKPab** 12 54 39.0 -1.0
COWI Conover 156.94 345 P **PKPdf** 12 54 10.0 -0.1
baz=20
H17A Grant Village 157.06 24 P **PKPdf** 12 54 11.3 +0.7
baz=328
NVAR Mina Array Bea 157.25 46 PKP **PKPdf** 12 54 11.1 +0.1
comp=Z,6.7nm,0.8s,baz=254,slow=1.6,SNR=59
NVAR PKPab **PKPab** 12 54 42.0 0.0
comp=Z,42nm,0.8s,baz=276,slow=4.8,SNR=44
FLWY Flagg Ranch 157.28 25 IAMs_20 IAMs_20 14 11 42.5
comp=Z,336nm,19.0s
MLAC Mammoth, Mammot 157.32 48 P **PKPdf** 12 54 11.5 +0.3
baz=301
IMW Indian Meadow 157.34 26 IAMs_20 IAMs_20 14 08 02.3
comp=Z,296nm,22.0s
E28A Huff 157.35 6 **PKPdf** 12 54 10.2 -0.5
E28A **PKPab** 12 54 40.7 -1.1
E28A Huff 157.35 6 P **PKPdf** 12 54 10.4 -0.2
baz=353
FXWY Fox Creek 157.52 26 **PKPdf** 12 54 10.3 -0.9
FXWY PKPab **PKPab** 12 54 42.0 -0.9
BCIP Isla Barro Col 157.52 232 IAMs_20 IAMs_20 14 03 14.7
comp=Z,369nm,19.0s
MOOW Moose Ponds 157.54 26 PKPdf **PKPdf** 12 54 10.3 -0.9
MOOW PKPab **PKPab** 12 54 42.7 -0.3
MOOW IAMs_20 IAMs_20 14 11 22.5
comp=Z,401nm,20.0s
SMMC Simmler 157.55 55 P **PKPdf** 12 54 11.8 +0.5
baz=294
VOG Valley Oaks Go 157.57 52 P **PKPdf** 12 54 10.3 -0.8
baz=297
M53A WI Miller and 157.62 325 IAMs_20 IAMs_20 14 13 31.2
comp=Z,400nm,21.0s
M53A WI Miller and 157.62 325 P **PKPdf** 12 54 09.8 -1.3
baz=44
LOHW Long Hollow 157.71 26 **PKPab** 12 54 43.9 +0.2
LOHW IAMs_20 IAMs_20 14 08 31.0
comp=Z,434nm,22.0s
CBN Corbin Frederi 157.72 314 P **PKPdf** 12 54 10.8 -0.5
baz=56
REDW Red Top Meadow 157.82 26 IAMs_20 IAMs_20 14 16 16.0
comp=Z,351nm,19.0s
PKM Mcpherson Peak 157.86 56 P **PKPdf** 12 54 12.3 +0.4
baz=294
F36A Milaca 157.96 352 P **PKPdf** 12 54 10.6 -0.8
baz=9.8,SNR=7.5
G40A Rib Lake 157.97 346 P **PKPab** 12 54 43.9 -0.5
baz=18,SNR=10.0
VES Vestal, Richgr 158.00 53 P **PKPdf** 12 54 10.1 -1.6
baz=297
TIN Tinemaha, Big 158.03 49 P **PKPdf** 12 54 12.1 +0.3
baz=301
SBC Santa Barbara 158.11 57 P **PKPdf** 12 54 11.0 -0.9
baz=293
TPH Tonopah 158.16 45 PKPdf **PKPdf** 12 54 11.4 -0.8
TPH **PKPab** 12 54 44.3 -1.6
TPH Tonopah 158.16 45 PKIKP **PKPdf** 12 54 11.4 -0.8
TPH 12 54 44.3
R58B Mineral 158.19 314 P **PKPdf** 12 54 11.9 0.0
baz=56
R58B P **PKPdf** 12 54 11.9 0.0
baz=56
R58B P **PKPab** 12 54 46.1 +0.4
baz=56,SNR=14
R58B P **PKPab** 12 54 46.1 +0.4
baz=56,SNR=14
F33A 5 Mile Ranch, 158.20 358 P **PKPdf** 12 54 11.6 0.0
baz=3.1
O54A Avella 158.33 322 **PKPdf** 12 54 11.8 -0.3
O54A PKPab **PKPab** 12 54 46.6 +0.3
O54A Avella 158.33 322 P **PKPdf** 12 54 12.2 +0.2
baz=47
O54A P **PKPdf** 12 54 12.2 +0.2
baz=47
MCWV Mont Chateau 158.38 320 P **PKPdf** 12 54 11.3 -0.8
baz=49
AAM Ann Arbor 158.41 331 P **PKPdf** 12 54 10.7 -1.3
baz=36
CWC Cottonwood Cre 158.44 50 P **PKPdf** 12 54 12.1 -0.4
baz=300
SPMN Marine on St. 158.49 351 P **PKPdf** 12 54 10.6 -1.4
baz=12
ARVC Arvin 158.50 54 P **PKPdf** 12 54 12.5 +0.1
baz=296
T59A Double "B" Far 158.50 312 P **PKPab** 12 54 47.8 +0.6
baz=58,SNR=6.2
T59A P **PKPab** 12 54 47.8 +0.6
baz=58,SNR=6.2
ISA Isabella, Lake 158.52 52 P **PKPdf** 12 54 12.4 -0.1
baz=297
GRAC Grapevine Rang 158.65 48 P **PKPdf** 12 54 13.1 +0.6
baz=302
SNCC San Nicolas Is 158.69 60 P **PKPdf** 12 54 10.2 -2.5
baz=290
BGU Big Grassy Mou 158.74 34 **PKPdf** 12 54 10.5 -2.2
BGU PKPab **PKPab** 12 54 47.4 -0.8
O53A New Philadelph 158.75 323 P **PKPdf** 12 54 10.6 -1.9
baz=45
BW06 Boulder Array 158.83 25 IAMs_20 IAMs_20 14 09 57.7
comp=Z,401nm,22.0s
BW06 Boulder Array 158.83 25 P **PKPdf** 12 54 11.7 -1.1
baz=328,SNR=14
PDAR Pinedale Array 158.83 25 PKP **PKPdf** 12 54 11.4 -1.4
comp=Z,2.8nm,0.9s,baz=72,slow=0.5,SNR=18
PDAR PKPab **PKPab** 12 54 47.4 -1.3
comp=Z,11nm,0.6s,baz=331,slow=1.2,SNR=18
HWUT Hardware Ranch 158.93 30 IAMs_20 IAMs_20 14 15 40.9
comp=Z,392nm,20.0s
S57A Dark Hollow, R 159.00 315 **PKPdf** 12 54 12.0 -0.9
S57A **PKPab** 12 54 47.7 -1.6
S57A Dark Hollow, R 159.00 315 P **PKPdf** 12 54 12.8 0.0
baz=54
S57A P **PKPdf** 12 54 12.8 0.0
baz=54
MPMC Manual Prospec 159.04 50 P **PKPdf** 12 54 13.8 +0.6
baz=300,SNR=9.4
R11A Troy Canyon, C 159.04 43 P **PKPdf** 12 54 12.9 -0.3
baz=308,SNR=54
O52A Adamsville 159.18 324 **PKPdf** 12 54 11.1 -1.9
O52A **PKPab** 12 54 48.5 -1.5
LRMC Laurel Mtn Rad 159.18 52 P **PKPdf** 12 54 13.6 +0.2
baz=298
EDW2 Edwards Air Fo 159.22 54 P **PKPdf** 12 54 13.6 +0.3
baz=296,SNR=6.7
DECC Green Verdugo 159.23 56 P **PKPdf** 12 54 13.4 +0.1
baz=294
RSSD Black Hills 159.26 13 PKPdf **PKPdf** 12 54 11.7 -1.6
RSSD PKPab **PKPab** 12 54 49.6 -0.8
RSSD Black Hills 159.26 13 PKIKP **PKPdf** 12 54 11.7 -1.6
RSSD 12 54 49.6
RSSD Black Hills 159.26 13 P **PKPdf** 12 54 12.6 -0.7
baz=343,SNR=18
RSSD Black Hills 159.26 13 P **PKPdf** 12 54 11.9 -1.4
baz=343
FURC Furnace Creek, 159.27 49 P **PKPdf** 12 54 13.8 +0.6
baz=302
I40A Norwalk 159.37 346 P **PKPab** 12 54 49.7 -0.8
baz=18,SNR=6.7
P53A Whipple 159.38 322 **PKPdf** 12 54 12.4 -0.8
P53A **PKPab** 12 54 49.5 -1.3
P53A Whipple 159.38 322 P **PKPdf** 12 54 13.5 +0.2
baz=46
P53A P **PKPdf** 12 54 13.5 +0.2
baz=46
DUG Dugway, Tooele 159.39 35 **PKPdf** 12 54 11.9 -1.6
DUG PKPab **PKPab** 12 54 50.0 -1.0
DUG IAMs_20 IAMs_20 14 12 49.5
comp=Z,309nm,20.0s
DUG Dugway, Tooele 159.39 35 PKIKP **PKPdf** 12 54 11.9 -1.6
DUG 12 54 50.0
DUG Dugway, Tooele 159.39 35 P **PKPdf** 12 54 13.5 +0.1
baz=317
Q54A Coxs Mills 159.40 320 P **PKPdf** 12 54 13.2 -0.1
baz=48
Q54A P **PKPdf** 12 54 13.2 -0.1
baz=48
R55A Marlinton 159.42 318 P **PKPab** 12 54 51.0 -0.2
baz=51,SNR=5.8
R55A P **PKPab** 12 54 51.0 -0.2
baz=51,SNR=5.8
TPNV Topopah Spring 159.43 47 P **PKPdf** 12 54 13.9 +0.3
baz=304,SNR=7.8
CIS Catalina Islan 159.50 58 P **PKPdf** 12 54 11.9 -1.7
baz=292
SCI2 San Clemente I 159.55 59 P **PKPdf** 12 54 11.7 -1.9
baz=291
SUSD Miller 159.59 3 P **PKPdf** 12 54 13.3 0.0
baz=356
SUSD Miller 159.59 3 P **PKPdf** 12 54 12.2 -1.1
baz=356
CNNC Cliffs of the 159.59 308 P **PKPdf** 12 54 12.9 -0.7
baz=62
T57A Hurt 159.63 314 P **PKPdf** 12 54 13.6 0.0
baz=55
T57A P **PKPdf** 12 54 13.6 0.0
baz=55
P52A Corning 159.68 324 **PKPdf** 12 54 12.5 -1.1
P52A **PKPab** 12 54 51.5 -0.6
P52A IAMs_20 IAMs_20 14 12 49.0
comp=Z,373nm,21.0s
P52A Corning 159.68 324 P **PKPdf** 12 54 12.2 -1.4
baz=44
ACSO Alum Creek Sta 159.69 326 P **PKPdf** 12 54 12.6 -1.0
baz=41
N49A Columbus Grove 159.75 330 **PKPdf** 12 54 11.4 -2.3
N49A **PKPab** 12 54 52.1 -0.2
N49A Columbus Grove 159.75 330 P **PKPdf** 12 54 13.2 -0.4
baz=38,SNR=7.9
N49A P **PKPdf** 12 54 13.2 -0.4
baz=38,SNR=7.9
BFSC Mount Baldy Ra 159.75 55 P **PKPdf** 12 54 13.1 -0.9
baz=295
I37B Waseca 159.76 351 P **PKPdf** 12 54 13.2 -0.3
baz=11
GSC Goldstone, Bar 159.90 52 P **PKPdf** 12 54 14.5 +0.4
baz=299,SNR=8.1
RRX Edison Barstow 159.96 53 P **PKPdf** 12 54 13.9 -0.2
baz=298
SHOC Shoshone, Teco 159.97 49 P **PKPdf** 12 54 13.8 -0.3
baz=301
K22A Casper 159.99 20 P **PKPdf** 12 54 12.5 -1.6
baz=336
L44A Lake County Fo 160.19 338 P **PKPdf** 12 54 12.8 -1.2
baz=27
JFWS Jewell Farm 160.20 344 P **PKPab** 12 54 53.3 -0.9
baz=20,SNR=6.9
JFWS Jewell Farm 160.20 344 P **PKPdf** 12 54 12.3 -1.8
baz=20
Q52A Bidwell 160.23 323 PKPdf **PKPdf** 12 54 13.3 -1.0
Q52A **PKPab** 12 54 55.0 +0.5
Q52A Bidwell 160.23 323 P **PKPdf** 12 54 14.1 -0.1
baz=45
Q52A P **PKPdf** 12 54 14.1 -0.1
baz=45
BLA Blacksburg 160.27 316 P **PKPdf** 12 54 13.7 -0.7
baz=53
BBRC Big Bear Solar 160.29 54 P **PKPdf** 12 54 14.9 +0.2
baz=296
ECSD EROS Data Cent 160.31 358 P **PKPdf** 12 54 13.5 -0.7
baz=2.6
ECSD EROS Data Cent 160.31 358 P **PKPdf** 12 54 13.3 -0.9
baz=2.6,SNR=22
MURC Murrieta 160.36 56 P **PKPdf** 12 54 14.8 +0.2
baz=294
O49A Covington 160.40 328 PKPdf **PKPdf** 12 54 13.4 -0.9
O49A PKPab **PKPab** 12 54 53.5 -1.7
O49A Covington 160.40 328 P **PKPdf** 12 54 13.7 -0.7
baz=38,SNR=7.4
O49A P **PKPdf** 12 54 13.7 -0.7
baz=38,SNR=7.4
TUQ Turquoise Moun 160.46 50 P **PKPdf** 12 54 15.2 +0.4
baz=301,SNR=5.1
HEC Hector,Ludlow 160.46 52 P **PKPdf** 12 54 15.1 +0.4
baz=299,SNR=10
R53A Hurricane 160.49 321 P **PKPab** 12 54 56.5 +0.8
baz=47
R53A P **PKPab** 12 54 56.5 +0.8
baz=47
RDMU Red Mountain 160.66 29 **PKPdf** 12 54 12.5 -2.5
RDMU PKPab **PKPab** 12 54 56.2 -0.4
109C Camp Elliot, M 160.71 58 P **PKPdf** 12 54 14.9 -0.1
baz=293
O48B Farmland 160.72 330 P **PKPab** 12 54 55.4 -1.3
baz=36
O48B Farmland 160.72 330 P **PKPdf** 12 54 13.3 -1.4
baz=36
U56A King 160.75 314 P **PKPab** 12 54 57.9 +1.0
baz=55,SNR=5.9
U56A P **PKPab** 12 54 57.9 +1.0
baz=55,SNR=5.9
Q51A Peebles 160.77 324 P **PKPdf** 12 54 13.4 -1.5
baz=43
Q51A P **PKPdf** 12 54 13.4 -1.5
baz=43
L42A Oliver, Polo 160.89 342 P **PKPdf** 12 54 14.9 +0.1
baz=22
PFO Pinyon Flats O 160.92 56 PKPdf **PKPdf** 12 54 14.4 -0.9
PFO PKPab **PKPab** 12 54 56.0 -1.9
PFO Pinyon Flats O 160.92 56 PKIKP **PKPdf** 12 54 14.4 -0.9
PFO 12 54 56.0
PFO Pinyon Flats O 160.92 56 P **PKPdf** 12 54 15.4 +0.1
baz=295,SNR=6.1
TPFO Pinon Flats 160.92 56 P **PKPdf** 12 54 15.2 -0.1
baz=295,SNR=7.9
MVU Marysvale 160.93 37 **PKPdf** 12 54 14.4 -0.9
MVU PKPab **PKPab** 12 54 57.8 -0.2
PMD Palm Desert 160.96 56 PKPdf **PKPdf** 12 54 13.2 -2.0
PMD PKPab **PKPab** 12 54 57.6 -0.4
GMRC Granite Mounta 160.97 52 P **PKPdf** 12 54 15.7 +0.3
baz=300,SNR=17
K38A Parkersburg 161.00 349 P **PKPdf** 12 54 14.0 -0.9
baz=14,SNR=5.2
P49A Miami Univ. Ec 161.09 328 P **PKPdf** 12 54 13.5 -1.6
baz=39
BELC Belle Mtn. Jos 161.09 54 P **PKPdf** 12 54 15.5 0.0
baz=297,SNR=17
MONP2 Monument Peak 161.24 58 P **PKPdf** 12 54 16.6 +0.8
baz=294,SNR=7.8
LCMT Little Creek M 161.33 42 **PKPdf** 12 54 15.6 -0.1
LCMT PKPab **PKPab** 12 54 57.5 -2.1
SFIN Lafayette 161.45 334 P **PKPdf** 12 54 14.7 -0.8
baz=31
P48A Milroy 161.48 329 P **PKPab** 12 54 58.9 -1.0
baz=37,SNR=5.9
P48A P **PKPab** 12 54 58.9 -1.0
baz=37,SNR=5.9
IKP In-Ko-Pah, Jac 161.58 58 P **PKPdf** 12 54 16.2 +0.2
baz=293
U54A Nelsons Funny 161.58 316 P **PKPab** 12 55 01.1 +0.5
baz=52,SNR=10.0
U54A P **PKPab** 12 55 01.1 +0.5
baz=52,SNR=10.0
V55A Taylorsville 161.58 314 P **PKPdf** 12 54 15.6 -0.2
baz=54,SNR=5.4
V55A P **PKPdf** 12 54 15.6 -0.2
baz=54,SNR=5.4
O20A White River Ci 161.59 27 P **PKPdf** 12 54 15.6 -0.3
baz=328,SNR=8.4
IRM Iron Mountain 161.64 53 P **PKPdf** 12 54 16.3 +0.3
baz=299,SNR=10
BC3 Big Chuckawall 161.65 54 P **PKPdf** 12 54 16.5 +0.5
baz=297,SNR=6.6
SWSC Sam W. Stewart 161.70 57 P **PKPdf** 12 54 16.4 +0.4
baz=295
BIRD Birdtown, Kers 161.73 309 P **PKPdf** 12 54 15.7 -0.2
baz=59,SNR=5.5
N23A Red Feather La 161.76 21 P **PKPdf** 12 54 15.1 -1.1
baz=335,SNR=9.3
SCIA State Center 161.79 350 P **PKPdf** 12 54 14.9 -0.9
baz=13
JTS Las Juntas de 161.81 224 PKPdf **PKPdf** 12 54 14.7 -2.0
JTS **PKPab** 12 55 01.3 -0.7
JTS Las Juntas de 161.81 224 PKIKP **PKPdf** 12 54 14.7 -2.0
JTS 12 55 01.3
S51A Beattyville 161.90 322 PKPdf **PKPdf** 12 54 14.9 -1.2
S51A **PKPab** 12 55 01.1 -0.8
S51A Beattyville 161.90 322 P **PKPdf** 12 54 15.5 -0.6
baz=45,SNR=6.5
S51A P **PKPdf** 12 54 15.5 -0.6
baz=45,SNR=6.5
KMSC Kings Mountain 162.07 312 **PKPdf** 12 54 14.7 -1.6
KMSC PKPab **PKPab** 12 55 01.9 -0.8
KMSC Kings Mountain 162.07 312 P **PKPdf** 12 54 16.4 +0.1
baz=56,SNR=5.4
KMSC Kings Mountain 162.07 312 P **PKPdf** 12 54 15.4 -0.9
baz=56
L34A Svendsen Farm, 162.07 357 PKPdf **PKPdf** 12 54 14.8 -1.3
L34A PKPab **PKPab** 12 55 00.5 -1.9
L34A Svendsen Farm, 162.07 357 P **PKPab** 12 55 01.0 -1.3
baz=3.5,SNR=8.2
HDIL Hopedale 162.10 339 P **PKPdf** 12 54 15.0 -1.1
baz=25
P46A Rosedale 162.14 333 P **PKPdf** 12 54 16.3 0.0
baz=32
NHSC New Hope 162.25 305 P **PKPdf** 12 54 15.9 -0.6
baz=64
BLYC Blythe 162.29 53 PKPdf **PKPdf** 12 54 16.4 -0.2
BLYC PKPab **PKPab** 12 55 02.5 -1.3
PDMCI Parker Dam,Lak 162.29 51 P **PKPdf** 12 54 16.3 -0.3
baz=301
GLA Glamis 162.39 55 P **PKPdf** 12 54 17.3 +0.5
baz=297,SNR=12
JSC Jenkinsville 162.48 309 P **PKPdf** 12 54 16.9 +0.2
baz=58,SNR=5.1
PAULI Pauline 162.57 312 P **PKPdf** 12 54 17.0 +0.2
baz=56,SNR=7.5
TZTN Tazewell 162.63 319 P **PKPdf** 12 54 16.6 -0.3
baz=48,SNR=6.0
TZTN Tazewell 162.63 319 P **PKPdf** 12 54 15.8 -1.0
baz=48,SNR=8.4
BGNE Belgrade 162.65 1 P **PKPdf** 12 54 15.6 -1.2
baz=358
OGNE Ogallala 162.71 11 P **PKPab** 12 55 03.9 -1.5
baz=346,SNR=11
OGNE Ogallala 162.71 11 P **PKPdf** 12 54 15.6 -1.3
baz=346
V53A Saluda 162.73 316 P **PKPdf** 12 54 16.7 -0.4
baz=51,SNR=6.7
V53A P **PKPdf** 12 54 16.7 -0.4
baz=51,SNR=6.7
ISCO Idaho Springs 162.86 21 **PKPdf** 12 54 16.2 -1.2
ISCO PKPab **PKPab** 12 55 05.6 -0.8
ISCO Idaho Springs 162.86 21 PKIKP **PKPdf** 12 54 16.2 -1.2
ISCO 12 55 05.6
ISCO Idaho Springs 162.86 21 P **PKPdf** 12 54 16.9 -0.5
baz=334,SNR=5.9
ISCO Idaho Springs 162.86 21 P **PKPdf** 12 54 16.6 -0.8
baz=334,SNR=9.7
N38A Joes South For 162.88 349 PKPdf **PKPdf** 12 54 15.8 -1.2
N38A **PKPab** 12 55 04.8 -1.1
N38A Joes South For 162.88 349 P **PKPab** 12 55 05.1 -0.8
baz=14,SNR=8.3
T50A Nancy 163.04 323 P **PKPdf** 12 54 16.8 -0.5
baz=43
T50A P **PKPdf** 12 54 16.8 -0.5
baz=43
V52A Sevierville 163.12 317 **PKPab** 12 55 08.1 +0.8
V52A Sevierville 163.12 317 P **PKPdf** 12 54 17.6 +0.3
baz=49,SNR=11
HAW Hawthorne Fire 163.20 307 P **PKPdf** 12 54 17.3 -0.2
baz=60,SNR=7.3
ACON Acoyapa 163.20 227 eP **PKPdf** 12 54 18.4 +0.4
HODGE Hodges 163.20 311 P **PKPab** 12 55 08.7 +0.9
baz=56,SNR=6.9
CASEE Lake Jocassee 163.22 314 P **PKPdf** 12 54 17.4 -0.1
baz=53,SNR=6.9
OLIL Olney 163.26 333 P **PKPab** 12 55 07.3 -0.4
baz=31,SNR=9.5
TKL Tuckaleechee C 163.35 317 **PKPab** 12 55 09.0 +0.7
TKL Tuckaleechee C 163.35 317 P **PKPdf** 12 54 18.0 +0.4
baz=49,SNR=15
WUAZ Wupatki 163.44 43 P **PKPdf** 12 54 18.2 +0.3
baz=310,SNR=19
V51A Loudon 163.60 319 P **PKPdf** 12 54 17.8 0.0
baz=48,SNR=8.9
Q24A Divide 163.77 22 **PKPdf** 12 54 16.7 -1.6
Q24A PKPab **PKPab** 12 55 08.8 -1.5
Q24A Divide 163.77 22 P **PKPdf** 12 54 17.5 -0.8
baz=335,SNR=13
P40A Paris 163.84 344 P **PKPdf** 12 54 17.7 -0.2
baz=18,SNR=12
MVCO Mesa Verde 163.85 33 P **PKPdf** 12 54 18.4 +0.1
baz=322,SNR=18
U49A Red Boiling Sp 163.92 323 P **PKPdf** 12 54 17.7 -0.4
baz=42,SNR=7.3
CPCT Cooper Cave 163.94 318 PKPdf **PKPdf** 12 54 18.1 0.0
CPCT PKPab **PKPab** 12 55 10.4 -0.5
P38A Dawn 164.06 349 P **PKPdf** 12 54 18.3 +0.2
baz=13,SNR=10
S22A 4UR Ranch, Cre 164.19 28 **PKPdf** 12 54 17.1 -1.6
S22A PKPab **PKPab** 12 55 10.8 -1.4
S22A 4UR Ranch, Cre 164.19 28 P **PKPdf** 12 54 18.4 -0.2
baz=328,SNR=21
214A Organ Pipe Nat 164.40 56 **PKPdf** 12 54 17.6 -1.1
214A PKPab **PKPab** 12 55 12.7 -0.5
214A Organ Pipe Nat 164.40 56 P **PKPdf** 12 54 19.1 +0.4
baz=297,SNR=12
KSCO Kaye Shedlock' 164.45 15 P **PKPdf** 12 54 18.0 -0.7
baz=343
GOGA Godfrey 164.49 310 **PKPab** 12 55 14.0 +0.6
GOGA Godfrey 164.49 310 P **PKPdf** 12 54 18.7 0.0
baz=56
GOGA Godfrey 164.49 310 P **PKPdf** 12 54 18.4 -0.2
baz=56
CLTN Cedars of Leba 164.54 324 **PKPdf** 12 54 17.0 -1.6
CLTN PKPab **PKPab** 12 55 12.2 -1.3
SIUC Southern Illin 164.59 334 **PKPab** 12 55 13.2 -0.4
W50A Signal Mountai 164.59 319 P **PKPdf** 12 54 19.0 +0.2
baz=47
S44A Carbondale 164.62 334 **PKPab** 12 55 13.7 0.0
S44A Carbondale 164.62 334 P **PKPdf** 12 54 18.9 +0.3
baz=30,SNR=6.0
Y52A Lilburn 164.64 313 P **PKPdf** 12 54 19.3 +0.5
baz=54,SNR=5.9
Y52A P **PKPdf** 12 54 19.3 +0.5
baz=54,SNR=5.9

W18A	**Petrified Fore** baz=313	164.71	41	P		**PKPdf**	12 54 18.6	-0.5
SDCO	**Great Sand Dun** baz=332,SNR=6.1	164.73	25	P		**PKPdf**	12 54 19.3	+0.1
SDCO	**Great Sand Dun** baz=332,SNR=21	164.73	25	P		**PKPdf**	12 54 19.0	-0.1
X51A	**Calhoun** baz=50,SNR=5.8	164.73	316	P		**PKPab**	12 55 15.3	+0.9
X51A	baz=50,SNR=5.8			P		**PKPab**	12 55 15.3	+0.9
FVM	**French Village** baz=26,SNR=5.2	164.79	338	P		**PKPdf**	12 54 18.8	0.0
DWPF	**Disney Wildern** baz=78	164.93	289	P		**PKPdf**	12 54 18.7	-0.4
KSU1	**Kansas State U** baz=3.3	164.94	357	P		**PKPdf**	12 54 18.4	-0.5
CCM	**Cathedral Cave**	165.00	340			**PKPdf**	12 54 17.4	-1.5
CCM				PKPab		**PKPab**	12 55 14.2	-1.1
CCM	**Cathedral Cave**	165.00	340	PKIKP		**PKPdf**	12 54 17.4	-1.5
CCM							12 55 14.2	
CCM	**Cathedral Cave** baz=23,SNR=9.1	165.00	340	P		**PKPdf**	12 54 18.4	-0.6
CCM	**Cathedral Cave** baz=23	165.00	340	P		**PKPdf**	12 54 18.1	-0.8
R40A	**Maddies Statio** baz=19	165.07	344	P		**PKPdf**	12 54 18.8	-0.2
CBKS	**Cedar Bluff**	165.13	7			**PKPab**	12 55 15.3	-0.7
CBKS	**Cedar Bluff** baz=352,SNR=6.5	165.13	7	P		**PKPdf**	12 54 19.2	+0.1
CBKS	**Cedar Bluff** baz=352	165.13	7	P		**PKPdf**	12 54 18.6	-0.5
WVT	**Waverly**	165.28	327			**PKPdf**	12 54 17.3	-2.0
WVT				PKPab		**PKPab**	12 55 16.5	-0.2
WVT	**Waverly**	165.28	327	PKIKP		**PKPdf**	12 54 17.3	-2.0
WVT							12 55 16.5	
WVT	**Waverly** baz=37	165.28	327	P		**PKPdf**	12 54 18.7	-0.6
WVT	**Waverly** baz=37	165.28	327	P		**PKPdf**	12 54 18.2	-1.1
TIGA	**Tifton** baz=62	165.58	304	P		**PKPdf**	12 54 19.6	0.0
R32A	**Long Quarter,** baz=356,SNR=5.7	165.60	4	P		**PKPdf**	12 54 19.4	-0.2
T25A	**Trinidad**	165.66	23			**PKPab**	12 55 17.8	-0.8
T25A	**Trinidad** baz=334	165.66	23	P		**PKPdf**	12 54 20.0	+0.1
TUC	**Tucson**	165.73	52	PKPdf		**PKPdf**	12 54 18.6	-1.3
TUC				PKPab		**PKPab**	12 55 17.0	-2.0
TUC	**Tucson**	165.73	52	PKIKP		**PKPdf**	12 54 18.6	-1.3
TUC							12 55 17.0	
TUC	**Tucson** baz=302	165.73	52	P		**PKPdf**	12 54 20.2	+0.3
152A	**Waverly Hall** baz=56,SNR=6.3	165.78	310	P		**PKPdf**	12 54 20.1	+0.3
PBMO	**Poplar Bluff** baz=28,SNR=6.9	165.87	336	P		**PKPdf**	12 54 19.8	0.0
S39A	**Bolivar**	165.89	346			**PKPdf**	12 54 17.8	-2.0
S39A				PKPab		**PKPab**	12 55 17.8	-1.5
S39A	**Bolivar** baz=16,SNR=9.2	165.89	346	P		**PKPdf**	12 54 19.4	-0.3
X48A	**Hartselle** baz=44	166.13	321	P		**PKPdf**	12 54 19.8	-0.2
Y49A	**Blount Mountai**	166.16	318			**PKPdf**	12 54 18.7	-1.4
Y49A				PKPab		**PKPab**	12 55 19.4	-1.3
Y49A	**Blount Mountai** baz=47	166.16	318	P		**PKPdf**	12 54 20.0	-0.1
ANMO	**Albuquerque**	166.65	33			**PKPdf**	12 54 20.3	-0.4
ANMO				PKPab		**PKPab**	12 55 22.1	-1.0
ANMO	**Albuquerque**	166.65	33	PKIKP		**PKPdf**	12 54 20.3	-0.4
ANMO							12 55 22.1	
ANMO	**Albuquerque** baz=323,SNR=14	166.65	33	P		**PKPdf**	12 54 20.8	+0.1
ANMO	**Albuquerque** baz=323	166.65	33	P		**PKPdf**	12 54 21.0	+0.3
HSIG		167.03	65			**PKPab**	12 55 24.2	-0.7
LRAL	**Lakeview Retre**	167.08	316			**PKPdf**	12 54 19.8	-1.0
LRAL				PKPab		**PKPab**	12 55 24.5	-0.3
LRAL	**Lakeview Retre** baz=48,SNR=8.1	167.08	316	P		**PKPdf**	12 54 21.1	+0.3
LRAL	**Lakeview Retre** baz=48	167.08	316	P		**PKPdf**	12 54 20.9	+0.1
Y22D	**IRIS PASSCAL I** baz=319	167.08	37	P		**PKPdf**	12 54 21.5	+0.5
T35B	**Sooner Cattle** baz=4.3,SNR=13	167.11	356	P		**PKPdf**	12 54 20.4	-0.3
Y22A	**Socorro** baz=318	167.15	38	P		**PKPdf**	12 54 21.3	+0.2
BNM	**Barren Site**	167.18	36	PKPdf		**PKPdf**	12 54 21.3	+0.2
BNM				PKPab		**PKPab**	12 55 24.6	-0.8
FCAR	**Ozark Folk Cen**	167.26	340			**PKPab**	12 55 25.0	-0.4
U38A	**Gravette**	167.31	348			**PKPdf**	12 54 19.9	-0.9
U38A				PKPab		**PKPab**	12 55 23.7	-1.9
U38A	**Gravette** baz=13,SNR=5.8	167.31	348	P		**PKPdf**	12 54 20.7	-0.1
OXF	**Oxford** baz=36	167.35	328	P		**PKPdf**	12 54 21.0	+0.1
OXF	**Oxford** baz=36,SNR=14	167.35	328	P		**PKPdf**	12 54 20.5	-0.4
HHAR	**Hobbs** baz=15	167.38	346	P		**PKPdf**	12 54 20.1	-0.8
121A	**Cookes Peak, D** baz=311	167.64	44	P		**PKPdf**	12 54 22.3	+0.8
121A	**Cookes Peak, D** baz=311,SNR=17	167.64	44	P		**PKPdf**	12 54 21.6	+0.1
RLO	**Rose Lookout**	167.69	350			**PKPab**	12 55 26.7	-0.6
TUL1	**Leonard**	168.04	353			**PKPdf**	12 54 20.4	-0.9
TUL1				PKPab		**PKPab**	12 55 27.6	-1.2
TUL1	**Leonard** baz=7.8	168.04	353	P		**PKPdf**	12 54 20.3	-1.1
BRAL	**Brewton** baz=55	168.26	310	P		**PKPdf**	12 54 21.2	-0.4
AMTX	**Amarillo**	168.60	17			**PKPdf**	12 54 20.1	-1.8
AMTX				PKPab		**PKPab**	12 55 30.3	-1.1
AMTX	**Amarillo** baz=341	168.60	17	P		**PKPdf**	12 54 22.1	+0.2
AMTX	**Amarillo** baz=341	168.60	17	P		**PKPdf**	12 54 21.6	-0.3
MIAR	**Mount Ida** baz=19	168.94	343	P		**PKPdf**	12 54 22.4	+0.4
MIAR	**Mount Ida** baz=19	168.94	343	P		**PKPdf**	12 54 22.1	+0.1
MSTX	**Muleshoe**	169.09	23			**PKPab**	12 55 32.9	-0.8
MSTX	**Muleshoe** baz=334	169.09	23	P		**PKPdf**	12 54 21.6	-0.7
WMOK	**Wichita Mounta**	169.26	5			**PKPdf**	12 54 21.0	-1.3
WMOK						**PKPab**	12 55 33.2	-1.1
WMOK	**Wichita Mounta**	169.26	5	PKIKP		**PKPdf**	12 54 21.0	-1.3
WMOK							12 55 33.2	
WMOK	**Wichita Mounta** baz=354,SNR=7.3	169.26	5	P		**PKPdf**	12 54 22.0	-0.2
WMOK	**Wichita Mounta** baz=354	169.26	5	P		**PKPdf**	12 54 22.1	-0.2
X37A	**Clayton**	169.29	350			**PKPab**	12 55 33.8	-0.6
X37A	**Clayton** baz=11	169.29	350	P		**PKPdf**	12 54 22.3	+0.1
VBMS	**Vicksburg** baz=39	169.73	324	P		**PKPdf**	12 54 22.7	+0.2
Z41A	**Richland Creek** baz=25	169.88	337	P		**PKPdf**	12 54 22.1	-0.5
GDL2	**Guadalupe Moun**	169.88	35			**PKPdf**	12 54 20.5	-2.3
GDL2						**PKPab**	12 55 35.0	-2.3
ABTX	**Abilene, Hawle**	171.23	12	PKPdf		**PKPdf**	12 54 22.5	-0.9
ABTX				PKPab		**PKPab**	12 55 41.7	-1.3
ABTX	**Abilene, Hawle** baz=348	171.23	12	P		**PKPdf**	12 54 23.3	-0.1
ABTX	**Abilene, Hawle** baz=348	171.23	12	P		**PKPdf**	12 54 23.1	-0.3
NATX	**Nacogdoches** baz=19	171.87	342	P		**PKPdf**	12 54 23.8	+0.1
WHTX	**Lake Whitney,** baz=0.7	172.05	359	P		**PKPdf**	12 54 24.0	+0.2
WHTX	**Lake Whitney,** baz=0.7,SNR=9.0	172.05	359	P		**PKPdf**	12 54 23.4	-0.4
TX31	**Lajitas Ar. Si** baz=313	172.40	44	P		**PKPdf**	12 54 24.5	+0.3
TXAR	**Lajitas Array** comp=Z,13nm,0.9s,baz=223,slow=0.7,SNR=104	172.40	44	PKP		**PKPdf**	12 54 23.9	-0.3
TXAR				PKPab		**PKPab**	12 55 47.9	-0.7
	comp=Z,14nm,0.9s,baz=285,slow=3.4,SNR=13							
TXAR				PP		**PP**	12 59 35.1	-4.5
TXAR	**Lajitas Array**	172.40	44			**PKPdf**	12 54 22.9	-1.2
TXAR				PKPab		**PKPab**	12 55 47.5	-1.1
435B	**Jarrell** baz=360	173.26	0	P		**PKPdf**	12 54 24.3	-0.1
JCT	**Junction City**	173.26	17			**PKPdf**	12 54 24.1	-0.3
JCT				PKPab		**PKPab**	12 55 50.8	-1.3
JCT	**Junction City**	173.26	17	PKIKP		**PKPdf**	12 54 24.1	-0.3
JCT							12 55 50.8	
JCT	**Junction City** baz=343	173.26	17	P		**PKPdf**	12 54 24.7	+0.2
JCT	**Junction City** baz=343	173.26	17	P		**PKPdf**	12 54 24.2	-0.3
833A	**Chaparral WMA,** baz=339	175.41	20	P		**PKPdf**	12 54 25.5	+0.3
833A	**Chaparral WMA,** baz=339	175.41	20	P		**PKPdf**	12 54 25.4	+0.3

*IDC **05** 12:43:51.2±0.8,24°.03S×82°.43E, h0km, mb4.1/9, mbtmp4.1/9, Error ellipse: s-maj=26.0km s-min=21.6km az=27.0*

*NEIC **05** 12:43:52.4±1.5,24°.19S±0°.07×82°.2E±0°.2, h10km±1km, mb4.6/13, Error ellipse: s-maj=26.9km s-min=10.5km az=281.0*

ISC 05 12:43:52.3±0.6,24°.1S±0°.1×82°.4E±0°.1, h10km, n32, σ0s91/28, mb4.4/15, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
AIS	**Amsterdam Isla**	14.23	196	Pn		**Pn**	**12 47 12.5**	**-1.4**
H08S2	**Diego Garcia H** baz=152,slow=74,SNR=24	18.94	328	T		T	13 07 27.3	
H08S1	**Diego Carcia H** baz=152,slow=74,SNR=20	18.95	328	T		T	13 07 32.2	
H08S3	**Diego Garcia H** baz=152,slow=74,SNR=24	18.96	328	T		T	13 07 27.8	
H01W1	**Cape Leeuwin H** SNR=4.7	29.54	119	T		T	13 20 55.5	
NWAO	**Narrogin (SRO)**	31.73	114	P		**P**	**12 50 16.0**	**-0.5**
NWAO				IAmb		IAmb	12 50 58.0	
	comp=Z,10nm,1.0s							
KKM	**Kota Kinabalu**	44.58	52	P		**P**	**12 52 04.7**	**-0.3**
ASAR	**Alice Springs** comp=Z,3.3nm,0.8s,baz=266,slow=7.3,SNR=26 comp=Z,3.3nm,0.8s	46.88	100	P		**P**	**12 52 23.1**	**0.0**
ASAR	**Alice Springs**	46.88	100	P		**P**	**12 52 21.7**	**-1.4**
AS31	**Alice Springs**	46.88	100	P		**P**	**12 52 23.0**	**-0.1**
BBOO	**Buckleboo**	47.54	113	P		**P**	**12 52 29.4**	**+1.3**
WRA	**Warramunga Arr** comp=Z,3.8nm,0.8s,baz=261,slow=8.0,SNR=22 comp=Z,3.8nm,0.8s	48.12	96	P		**P**	**12 52 33.1**	**+0.4**
WRA	**Warramunga Arr**	48.12	96	P		**P**	**12 52 33.5**	**+0.7**
WB2	**Warramunga Arr**	48.13	96	P		**P**	**12 52 33.4**	**+0.6**
WB2				IAmb		IAmb	12 53 09.0	
	comp=Z,11nm,1.4s							
WRAB	**Tennant Creek**	48.13	96	P		**P**	**12 52 33.6**	**+0.7**
WB0	**Warramunga Arr**	48.22	95	P		**P**	**12 52 34.0**	**+0.5**
WB0				IAmb		IAmb	12 52 34.4	
	comp=Z,6.1nm,0.9s							
WR0	**Warramunga Arr**	48.30	96	P		**P**	**12 52 34.0**	**-0.2**
WR0				IAmb		IAmb	12 52 35.1	
	comp=Z,5.7nm,0.8s							
BOSA	**Boshof** comp=Z,2.7nm,0.6s,baz=101,slow=8.3,SNR=7.9 comp=Z,2.7nm,0.6s	50.97	252	P		**P**	**12 52 55.9**	**+1.3**
STKA	**Stephens Creek** comp=Z,1.4nm,0.6s,baz=270,slow=6.1,SNR=3.3 comp=Z,1.4nm,0.6s	52.30	113	P		**P**	**12 53 04.5**	**+0.2**
QSPA	**South Pole Qui** comp=Z,2.2nm,0.8s,baz=290,slow=3.8,SNR=7.9 comp=Z,2.2nm,0.8s	65.98	180	P		**P**	**12 54 39.8**	**+1.1**
KK31	**Karatay Array**	67.79	351	P		**P**	**12 54 50.2**	**0.0**
KK31				IAmb		IAmb	12 54 52.3	
	comp=Z,1.9nm,0.9s							
KKAR	**Karatay Array**	67.79	351	P		**P**	**12 54 50.2**	**0.0**
MK31	**Makanchi Array**	70.59	360	P		**P**	**12 55 08.0**	**+0.4**
MKAR	**Makanchi Array**	70.59	360	P		**P**	**12 55 06.5**	**-1.0**
KURBB	**Kurchatov Arra** comp=Z,1.2nm,0.9s,baz=196,slow=5.5,SNR=5.9 comp=Z,1.2nm,0.9s	74.50	357	P		**P**	**12 55 31.6**	**+0.9**
KSRS	**Korea Array** comp=Z,0.6nm,0.8s,baz=224,slow=5.2,SNR=4.2 comp=Z,0.6nm,0.8s	74.75	36	P		**P**	**12 55 33.0**	**+0.6**
ABKAR	**Akbulak array**	75.75	345	P		**P**	**12 55 37.4**	**-0.5**
ZAA0	**Zalesovo Array**	77.78	1	P		**P**	**12 55 47.8**	**-1.6**
ZAA0				IAmb		IAmb	12 56 13.2	
	comp=Z,3.9nm,1.2s							
ZALV	**Zalesovo Beam** comp=Z,1.4nm,0.7s,baz=193,slow=6.1,SNR=4.8 comp=Z,1.4nm,0.7s	77.78	1	P		**P**	**12 55 47.9**	**-1.5**
ZALV	**Zalesovo Beam**	77.78	1	P		**P**	**12 55 47.7**	**-1.6**
BR131	**Keskin Array S**	78.12	324	P		**P**	**12 55 51.3**	**-0.4**
BR131				IAmb		IAmb	12 55 52.6	
	comp=Z,2.2nm,0.6s							
BRTR	**Keskin Array B** comp=Z,1.2nm,0.7s,baz=116,slow=5.6,SNR=5.7 comp=Z,1.2nm,0.7s	78.12	324	P		**P**	**12 55 51.7**	**-0.1**

ROM 05 12:55:54.0±0.1,44°.060N±0°.005×11°.509E±0°.006, h10km, ML1.3/1, 1C, Error ellipse: s-maj=0.6km s-min=0.4km az=141.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
BRIS	**BRISIGHELLA**	0.09	1	P		Pg	12 56 00.0	+3.6
BRIS				S		Sg	12 56 04.3	+6.1
SEI	**Scarperia**	0.11	267	↑P		Pg	12 55 57.2	+0.4
SEI				S		Sg	12 55 59.2	+0.6
SEI				AML		AML		
	comp=E,157μm,0.5s							
SEI				AML		AML		
	comp=N,276μm,0.3s							
LMD	**Lutirano**	0.14	83	P		Pg	12 55 57.5	+0.3
LMD				S		Sg	12 56 00.1	+0.6
RUFI	**Rufina**	0.22	180	P		Pg	12 55 59.4	+0.9
RUFI				S		Sg	12 56 03.4	+1.8
FNVD	**Fontana Vidola**	0.30	291	P		Pg	12 56 00.7	+0.7
FNVD				S		Sb	12 56 05.9	-0.7
MTCR	**Monte La Croce**	0.37	265	P		Pg	12 56 01.9	+0.5
MTCR				S		Sg	12 56 07.1	+0.9
ZCCA	**Zocca**	0.48	307	P		Pg	12 56 03.8	+0.4
FIU	**Minerbio Fiu**	0.58	359	P		Pg	12 56 05.7	+0.4

*MAN **05** 13:12:00, 13°.25N×123°.83E, h2km, Ms3.5*

*IDC **05** 13:12:00.1±1.3, 13°.05N×124°.06E, h0km, mb3.5/5, mbtmp3.5/5, MS3.3/1, Error ellipse: s-maj=46.0km s-min=22.8km az=67.0*

ISC 05 13:12:01.4±1.9, 13°.18N±0°.06×123°.92E±0°.09, h12km±13km, n21, σ1s68/19, mb3.5/5, 3C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MMPH	**Masbate**	0.87	199	↓eP		**Pg**	**13 12 17.1**	**-1.1**
MMPH				*i* S		**Sb**	**13 12 29.6**	**-0.5**
GQP	**Guinayangan**	1.60	297	↓eP		**Pn**	**13 12 27.3**	**-2.3**
GQP				eS		**Sn**	**13 12 48.5**	**-1.8**
JCNP	**Jose Panganiba**	1.62	313	↓*i*P		**Pn**	**13 12 28.1**	**-1.8**
RCP	**Roxas**	1.98	216	↑eP		**Pn**	**13 12 34.9**	**+0.1**
RCP				eS		**Sb**	**13 13 01.4**	**-0.6**
LQP	**Lukban**	2.49	292	↑eP		**Pn**	**13 12 41.9**	**-0.2**
LQP				eS		**Sb**	**13 13 17.8**	**+0.8**
LLP	**Lapu-Lapu**	2.85	179	eP		**Pb**	**13 12 53.1**	**+0.9**
LLP				eS		**Sg**	**13 13 35.8**	**+2.8**
MSLP	**Maasin**	3.17	163	↓*i*P		**Pg**	**13 13 00.8**	**-1.4**
TBP	**Tagbilaran**	3.47	181	eP		Pn	13 12 46.0	-9.3
TBP				*i* S		**Sb**	**13 13 42.6**	**-2.5**
PCPH	**Palayan**	3.62	311	↑eP		**Pn**	**13 12 56.7**	**-0.6**
DAV	**Davao City (W)** comp=Z,280nm,19.4s,baz=2.5,slow=47	6.29	165	LR		LR	13 16 45.5	
KSRS	**Korea Array** 0.2nm,0.3s,baz=185,slow=13,SNR=4.9 0.2nm,0.3s	24.43	8	P		**P**	**13 17 21.8**	**+1.8**
CMAR	**Chiang Mai Arr** 0.9nm,0.7s,baz=94,slow=7.9,SNR=7.2 0.9nm,0.7s	24.58	286	P		**P**	**13 17 23.9**	**+2.2**
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=344,slow=9.1,SNR=1.7 0.4nm,0.6s	34.48	163	P		**P**	**13 18 48.4**	**-1.1**
ASAR	**Alice Springs** 0.8nm,0.8s,baz=336,slow=6.4,SNR=4.5 0.8nm,0.8s	37.90	165	P		**P**	**13 19 17.8**	**-1.0**
H11S3	**WAKE ISLAND Hy 41.41** baz=269,slow=75,SNR=13	75		T		T	14 03 48.1	
H11S1	**WAKE ISLAND Hy 41.42** baz=269,slow=75,SNR=9.3	77		T		T	14 03 48.4	
H11S2	**WAKE ISLAND Hy 41.43** baz=269,slow=75,SNR=11	77		T		T	14 03 43.6	
H11N1	**WAKE ISLAND Hy 41.64** baz=267,slow=74,SNR=26	75		T		T	14 03 57.9	
H11N2	**WAKE ISLAND Hy 41.64** baz=267,slow=74,SNR=19	75		T		T	14 04 03.7	
H11N3	**WAKE ISLAND Hy 41.66** baz=267,slow=74,SNR=24	75		T		T	14 03 59.2	
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=116,slow=5.6,SNR=3.8 0.4nm,0.7s	48.33	322	P		**P**	**13 20 44.0**	**+1.1**

*ISK **05** 13:16:07.2, 34°.05N×33°.16E, h12km, ML3.0/12*

*NIC **05** 13:16:10.7±0.0, 34°.32N×33°.33E, h2km, Ml2.8/6*

*GII **05** 13:16:11.2±0.5, 34°.47N×33°.24E, h40km, Mm2.5/11*

*DDA **05** 13:16:11.4±0.0, 34°.39N×33°.67E, h28km±4km, ML2.3*

ISC 05 13:16:07.4±1.1, 34°.09N±0°.02×33°.37E±0°.03, h6km±10km, n56, σ1s57/83, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ASGA	**Asgata**	0.71	352	P		**Pg**	**13 16 20.9**	**-0.1**
ASGA				S		**Sg**	**13 16 27.9**	**-2.3**
ASGA				AML		AML	13 16 30.2	
	3.1nm,0.4s							
ASGA				AML		AML	13 16 30.2	
	3.1nm,0.4s							
ASGA				AML		AML	13 16 32.8	
	3.2nm,0.3s							
ASGA				AML		AML	13 16 32.8	
	3.2nm,0.3s							
SZAC	**Souni**	0.78	329	P		**Pg**	**13 16 23.0**	**+0.6**
SZAC				S		**Sg**	**13 16 31.9**	**-0.6**
SZAC				AML		AML	13 16 33.6	
	6.1nm,0.2s							
SZAC				AML		AML	13 16 33.6	
	6.1nm,0.2s							
SZAC				AML		AML	13 16 34.4	
	3.2nm,0.2s							
SZAC				AML		AML	13 16 34.4	
	3.2nm,0.2s							
CSS	**Mathiatis**	0.88	358	PG		**Pb**	**13 16 25.2**	**+0.2**
CSS				SG		**Sn**	**13 16 38.9**	**-0.5**
CSS	**Mathiatis**	0.88	358	P		**Pg**	**13 16 23.8**	**-0.4**
CSS				S		**Sg**	**13 16 34.4**	**-1.2**
CSS				AML		AML	13 16 39.8	
	0.4nm,0.3s							
CSS				AML		AML	13 16 39.8	
	0.4nm,0.3s							
CSS				AML		AML	13 16 39.9	
	0.4nm,0.5s							
CSS				AML		AML	13 16 39.9	
	0.4nm,0.5s							
CSS	**Mathiatis**	0.88	358	Pg		**Pg**	**13 16 23.5**	**-0.7**
AKIN	**Akıncılar- Kıb**	0.93	5	PG		**Pn**	**13 16 26.9**	**-0.2**
AKIN				SG		**Sn**	**13 16 40.9**	**+0.1**
MVOU	**Mavrovouni**	0.95	13	P		**Pg**	**13 16 25.6**	**-0.1**
MVOU				S		**Sg**	**13 16 37.4**	**-0.7**
MVOU				AML		AML	13 16 44.0	
	0.7nm,0.5s							
MVOU				AML		AML	13 16 44.0	
	0.7nm,0.5s							
MVOU				AML		AML	13 16 50.4	
	0.6nm,0.7s							
MVOU				AML		AML	13 16 50.4	
	0.6nm,0.7s							
NATA	**Nata**	0.96	317	P		**Pg**	**13 16 26.2**	**+0.5**
NATA				AML		AML	13 16 45.3	
	1.5nm,0.4s							
NATA				AML		AML	13 16 53.1	
	2.8nm,0.4s							
PARAL	**Paralimni**	1.06	31	P		**Pn**	**13 16 29.2**	**+0.4**
LEF	**Lefka**	1.10	339	PN		**Pg**	**13 16 28.6**	**0.0**
LEF				SN		**Sb**	**13 16 44.1**	**+0.5**
LEF	**Lefka**	1.10	339	P		**Pn**	**13 16 30.4**	**+0.9**
LEF				S		**Sb**	**13 16 44.8**	**+1.2**
LFK	**Lefkose**	1.20	6	PN		**Pn**	**13 16 31.4**	**+0.6**
LFK				SN		**Sn**	**13 16 48.9**	**+1.4**
ALFC	**Alefka**	1.24	330	P		**Pg**	**13 16 30.6**	**-0.6**
ALFC				S		**Sg**	**13 16 46.4**	**-0.9**
ALFC				AML		AML	13 16 48.2	
	3.3nm,0.3s							
ALFC				AML		AML	13 16 48.2	
	3.3nm,0.3s							
ALFC				AML		AML	13 16 48.4	
	3.4nm,0.5s							
ALFC				AML		AML	13 16 48.4	
	3.4nm,0.5s							
AKDN	**Akdeniz- Kıbrı**	1.25	345	PN		**Pg**	**13 16 31.2**	**-0.2**
AKMS	**Akamas**	1.26	318	P		**Pb**	**13 16 31.9**	**+0.3**
AKMS				S		**Sg**	**13 16 48.5**	**+0.6**
OSC2	**CSNet OBS 4**	1.36	223	P		Pb	13 16 38.2	+4.9
OSC2				S		Sn	13 17 00.8	+9.5
EREN	**Erenkoy**	1.59	24	PN		**Pb**	**13 16 37.2**	**+0.1**
HNTI	**Hanita**	1.81	123	Pn		**Pg**	**13 16 44.3**	**+2.2**
HNTI				Sn		**Sg**	**13 17 09.4**	**+3.9**
OSC1	**CSNet OBS 1**	1.84	252	P		**Pg**	**13 16 44.0**	**+1.4**
OSC1				S		**Sg**	**13 17 10.1**	**+3.7**
OFRI	**`Ofer**	1.99	137	Pn		**Pg**	**13 16 47.9**	**+2.4**
MMA0	**Mount Meron ar**	2.01	122	Sn		**Sg**	**13 17 15.2**	**+3.3**
BLGI	**Bet Lehem HaGe**	2.04	131	Sn		**Sg**	**13 17 15.5**	**+2.7**
TEKE	**Tekeli-Mersin**	2.06	354	PN		**Pn**	**13 16 43.2**	**+0.6**
AKKU	**Akkuyu-Mersin**	2.07	4	PN		**Pn**	**13 16 43.4**	**+0.6**
AKKU				SN		**Sn**	**13 17 09.8**	**+0.9**
TISA	**Tisan-Mersin**	2.09	7	PN		**Pn**	**13 16 43.8**	**+0.9**
GULN	**MERSIN_Gulnar**	2.10	4	P		**Pn**	**13 16 44.0**	**+0.9**
GULN				S		**Sn**	**13 17 07.4**	**-2.2**
GEM	**Giv'at Ha'Em**	2.10	114	Pn		**Pg**	**13 16 48.3**	**+0.6**
GEM				Sn		**Sg**	**13 17 15.5**	**+0.5**
YESI	**Yesilovacik-Me**	2.12	6	PN		**Pn**	**13 16 44.3**	**+0.9**
KARG	**Kargicak-Mersi**	2.13	7	PN		**Pn**	**13 16 44.5**	**+0.9**
NATI	**Neve Ativ**	2.14	112	Pn		**Pg**	**13 16 48.5**	**+0.1**
NATI				Sn		**Sg**	**13 17 16.2**	**+0.1**
IKL	**Isikli**	2.16	7	PN		**Pn**	**13 16 44.9**	**+0.9**
BERE	**Bereket-Mersin**	2.26	357	PN		**Pn**	**13 16 45.9**	**+0.4**
GAZI	**Gazipasa**	2.31	338	PN		**Pn**	**13 16 45.8**	**-0.3**
GAZI	**

*NEIC **05** 13:17:02.1±1.2,2.96N±0.10×128.4E±0.2,h222km±8km, mb4.4/17, Error ellipse: s-maj=28.0km s-min=14.4km az=86.0*
*IDC **05** 13:17:02.5±2.1,2.99N×128.72E,h235km±22km,mb3.3/8, mbtmp3.9/10, Error ellipse: s-maj=31.4km s-min=11.8km az=86.0*

ISC 05 13:16:59.3±0.7,3.04N±0.08×128.57E±0.09,h200km,n39, σ1§25/41,mb4.0/15,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.56**	**208**	Pn	**Pn**	**13 17 46.1**	**+2.2**
TNTI	**Ternate**	**2.56**	**208**	P	**Pn**	**13 17 46.1**	**+2.2**
SGSI	**Sangihe**	**3.10**	**282**	P	**Pn**	**13 17 51.5**	**+1.3**
SGSI				S	**Sn**	**13 18 30.0**	**+0.1**
LBMI	**Labuha**	**3.81**	**196**	P	**Pn**	**13 18 00.5**	**+1.7**
SIJI	**Sorong**	**4.73**	**145**	P	**Pn**	**13 18 14.0**	**+3.7**
	12nm,0.4s,baz=350,slow=18,SNR=6.5						
KMSI	**Cibinong**	**5.20**	**242**	P	**Pn**	**13 18 17.5**	**+1.2**
	1.4nm262nm,0.4s						
SANI	**Sanana**	**5.68**	**207**	P	**Pn**	**13 18 21.6**	**-0.9**
	0.9nm4µm180nm,0.6s						
MRSI	**Marisa**	**7.10**	**249**	P	**Pn**	**13 18 43.0**	**+2.1**
	0.2nm34nm,0.7s						
TOLI2	**Tolitoli**	**8.02**	**256**	Pn	**Pn**	**13 18 52.5**	**-0.3**
MPSI	**Mapaga**	**9.07**	**253**	P	**Pn**	**13 19 08.8**	**+2.2**
	11nm,0.8s						
TTSI	**Tana Toraja**	**10.63**	**235**	P	**Pn**	**13 19 27.4**	**+0.6**
	25nm,0.5s						
SPSI	**Sidrap Palu**	**11.22**	**232**	P	**Pn**	**13 19 36.1**	**+1.8**
KAPI	**Kappang**	**11.90**	**228**	P	**P**	**13 19 48.2**	**+0.2**
	8.5nm,0.4s,baz=46,slow=5.4,SNR=4.3						
MTN	**Manton Dam**	**15.99**	**171**	P	**P**	**13 20 32.0**	**-1.2**
MTN				IAmb	IAmb	13 21 11.1	
	comp=Z,29nm,1.4s						
KNRA	**Kununurra**	**18.60**	**179**	P	**P**	**13 21 02.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**21.20**	**188**	P	**P**	**13 21 28.2**	**-1.4**
	comp=Z,1.9nm,0.7s,baz=356,slow=5.6,SNR=9.3						
	comp=Z,1.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.20**	**188**	P	**P**	**13 21 27.6**	**-2.0**
FITZ				IAmb	IAmb	13 21 37.5	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**23.38**	**166**	P	**P**	**13 21 49.1**	**-1.2**
WB0				IAmb	IAmb	13 21 51.5	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**23.53**	**166**	P	**P**	**13 21 50.7**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=345,slow=10,SNR=20						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**23.53**	**166**	P	**P**	**13 21 50.1**	**-1.6**
WB2	**Warramunga Arr**	**23.54**	**166**	P	**P**	**13 21 51.6**	**-0.1**
WB2				IAmb	IAmb	13 22 10.9	
	comp=Z,17nm,1.5s						
WR0	**Warramunga Arr**	**23.60**	**166**	P	**P**	**13 21 52.4**	**+0.1**
WR0				IAmb	IAmb	13 21 53.9	
	comp=Z,22nm,1.5s						
AS31	**Alice Springs**	**27.05**	**169**	P	**P**	**13 22 23.6**	**+0.3**
ASAR	**Alice Springs**	**27.05**	**169**	P	**P**	**13 22 22.7**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=353,slow=7.1,SNR=42						
ASAR				PcP	**PcP**	**13 25 39.0**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=354,slow=1.8,SNR=6.9						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**27.05**	**169**	P	**P**	**13 22 23.4**	**0.0**
FORT	**Forrest**	**33.64**	**181**	P	**P**	**13 23 20.3**	**-0.8**
KSRS	**Korea Array**	**34.25**	**359**	P	**P**	**13 23 26.9**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=176,slow=10.0,SNR=4.8						
	comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**34.50**	**14**	P	**P**	**13 23 27.9**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=176,slow=10,SNR=11						
	comp=Z,1.4nm,0.5s						
BBOO	**Buckleboo**	**36.36**	**169**	P	**P**	**13 23 44.3**	**-0.1**
BBOO				IAmb	IAmb	13 24 21.5	
	comp=Z,14nm,1.3s						
JMM	**Marumori**	**36.42**	**16**	P	**P**	**13 23 45.6**	**+0.8**
JMM				IAmb	IAmb	13 24 21.9	
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**36.87**	**161**	P	**P**	**13 23 48.3**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=331,slow=8.1,SNR=12						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**36.87**	**161**	P	**P**	**13 23 48.7**	**0.0**
NWAO	**Narrogin (SRO)**	**37.35**	**196**	P	**P**	**13 23 52.1**	**-0.6**
NWAO				IAmb	IAmb	13 24 34.4	
	comp=Z,16nm,1.2s						
MKAR	**Makanchi Array**	**59.17**	**325**	P	**P**	**13 26 39.6**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=111,slow=7.6,SNR=2.3						
	comp=Z,0.2nm,0.5s						
LBZ	**Lake Benmore**	**60.10**	**147**	P	**P**	**13 26 46.0**	**+0.5**
BKZ	**Black Stump FM**	**60.85**	**139**	P	**P**	**13 26 50.4**	**-0.5**
VNDA	**Vanda**	**82.52**	**173**	P	**P**	**13 28 58.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=326,slow=7.3,SNR=6.2						
	comp=Z,0.3nm,0.4s						
VNDA	**Vanda**	**82.52**	**173**	P	**P**	**13 28 58.8**	**-0.4**
QSPA	**South Pole Qui**	**92.95**	**180**	P	**P**	**13 29 49.2**	**-0.4**
QSPA				IAmb	IAmb	13 30 13.8	
	comp=Z,7.7nm,1.4s						

*ATH **05** 13:37:31.4,41.74N×23.46E,h9km±4km,ML1.8/1, Error ellipse: s-maj=5.3km s-min=1.5km az=168.0*
*SKO **05** 13:37:31.5,41.78N×23.45E,h0km*
*THE **05** 13:37:32.1,41.69N×23.45E,h13km,ML1.8/5, Error ellipse: s-maj=1.6km s-min=0.6km az=177.0*

BEO 05 13:37:31.7±0.3,41.78N×23.39E,h0km,ML1.7/10, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	**0.56**	**141**	P	Pg	13 37 40.9	-1.5
NVR				S	Sg	13 37 47.7	-2.0
	135nm,0.1s						
NVR	**Nevrokopi**	**0.56**	**141**	P	Pg	13 37 40.9	-1.5
NVR				S	Sg	13 37 47.5	-2.2
NVR				AML	AML	13 37 48.3	
	comp=N,265µm,0.1s						
NVR				AML	AML	13 37 48.3	
	comp=E,270µm,0.1s						
SRS	**Serrai**	**0.68**	**167**	P	Pg	13 37 43.4	-1.4
SRS				S	Sg	13 37 52.4	-1.2
	comp=E,82nm,0.1s						
SRS	**Serrai**	**0.68**	**167**	*e*Pg	Pg	13 37 43.3	-1.5
SRS				*e*Sg	Sg	13 37 52.7	-0.9
SRS	**Serrai**	**0.68**	**167**	*i* Pg	Pg	13 37 43.5	-1.3
SRS				*i* Sg	Sg	13 37 52.8	-0.8
SRS	**Serrai**	**0.68**	**167**	P	Pg	13 37 43.5	-1.3
SRS				S	Sg	13 37 52.3	-1.3
KNT	**Kendrikon**	**0.72**	**211**	P	Pg	13 37 44.8	-0.7
KNT				S	Sg	13 37 54.5	-0.4
	comp=E,102nm,0.1s						
KNT	**Kendrikon**	**0.72**	**211**	*i* Pg	Pg	13 37 44.9	-0.6
KNT				*i* Sg	Sg	13 37 54.6	-0.3
KNT	**Kendrikon**	**0.72**	**211**	P	Pg	13 37 44.8	-0.7
KNT				S	Sg	13 37 54.4	-0.5
VAY	**Valandovo**	**0.77**	**233**	*e*Pg	Pg	13 37 46.7	+0.3
VAY				*e*Sg	Sg	13 37 56.0	-0.4
VAY	**Valandovo**	**0.77**	**233**	*i* Pg	Pg	13 37 46.5	+0.1
VAY				*i* Sg	Sg	13 37 56.9	+0.5
VAY				*e*Lg	Lg	13 37 57.9	
	comp=N,15nm,0.2s						
VTS	**Vitosha**	**0.84**	**352**	*e*Pg	Pg	13 37 46.6	-1.2
VTS				*e*Sg	Sg	13 37 57.4	-1.4
VTS	**Vitosha**	**0.84**	**352**	*i* Sg	Sg	13 37 57.7	-1.1
VTS				*i* Pg	Pg	13 37 46.6	-1.2
SOH	**Sokhos**	**0.96**	**182**	P	Pg	13 37 48.5	-1.6
SOH	**Sokhos**	**0.96**	**182**	*i* Pg	Pg	13 37 48.7	-1.5
SOH				*i* Sg	Sg	13 38 01.6	-1.0
SOH	**Sokhos**	**0.96**	**182**	P	Pg	13 37 48.5	-1.6
BOSS	**Bosilegrad**	**0.98**	**317**	*e*Pg	Pg	13 37 49.9	-0.6
BOSS				*e*Sg	Sg	13 38 02.9	-0.3
PLD	**Plovdiv**	**1.03**	**71**	*e*Pg	Pg	13 37 50.7	-0.8
PLD				*e*Sg	Sg	13 38 04.2	-0.6
KOKK	**Kokkinochori,**	**1.07**	**154**	P	Pg	13 37 50.2	-2.0
KOKK	**Kokkinochori,**	**1.07**	**154**	P	Pg	13 37 50.2	-1.9
GRG	**Griva**	**1.11**	**222**	P	Pg	13 37 52.2	-0.8
GRG				S	Sg	13 38 07.3	-0.1
	comp=N,38nm,0.4s						
GRG	**Griva**	**1.11**	**222**	*i* Pg	Pg	13 37 52.2	-0.8
GRG				*i* Sg	Sg	13 38 07.1	-0.3
GRG	**Griva**	**1.11**	**222**	P	Pg	13 37 52.1	-0.8
KAVA	**Kavala**	**1.16**	**133**	P	Pg	13 37 51.7	-2.1
KAVA				S	Sg	13 38 06.2	-2.6
	comp=N,68nm,0.4s						
KAVA	**Kavala**	**1.16**	**133**	P	Pg	13 37 52.0	-1.9
THE	**Thessaloniki**	**1.19**	**196**	P	Pg	13 37 53.2	-1.4
HORT	**Hortiatis**	**1.21**	**191**	P	Pg	13 37 53.6	-1.2
PRVS	**Prvonek**	**1.22**	**307**	*e*Pg	Pg	13 37 54.3	-0.7
PRVS				*e*Sg	Sg	13 38 10.4	-0.3
THAS	**Thassos island**	**1.55**	**139**	P	Pn	13 37 57.5	-3.0
BARS	**Barje**	**1.56**	**312**	*e*Pg	Pn	13 38 00.3	-0.4
BARS				*e*Sg	Sn	13 38 19.5	-2.1
ZAPS	**Zavoj**	**1.59**	**340**	*e*Pg	Pn	13 38 01.1	-0.1
ZAPS				*e*Sg	Sn	13 38 21.1	-1.3
RDO	**Rodhopi**	**1.74**	**111**	P	Pn	13 38 01.5	-1.6
BLKB	**Belogradchik**	**1.91**	**344**	*e*Pg	Pb	13 38 06.8	-0.7
BLKB				*e*Sg	Sg	13 38 32.9	-0.2

DJA 05 13:42:11.7±1.3,1°S±17°×131°E±2°0,h10km,M2.8/4, MLv2.8/4,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**0.24**	**153**	P	Pg	13 42 17.7	+1.1
SWI				S	Sg	13 42 22.0	+2.1
FAKI	**Fak Fak**	**2.51**	**154**	P	Pn	13 42 52.6	0.0

*IDC **05** 13:54:59.1±1.4,27.83S×178.41W,h244km±14km, mb3.1/4, mbtmp3.9/5, Error ellipse: s-maj=32.2km s-min=21.7km az=157.0*

ISC 05 13:54:59.2±0.9,27.9S±0.2×178.4W±0.2,h250km,n12, σ0§45/11,mb3.2/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.44**	**163**	P	**Pn**	**13 55 36.5**	**-0.5**
	716nm,0.3s,baz=348,slow=23,SNR=6.4						
MSVF	**Nonsavu**	**10.61**	**341**	P	**Pn**	**13 57 25.2**	**-0.3**
	24nm,0.7s,baz=159,slow=9.6,SNR=26						
ASAR	**Alice Springs**	**42.96**	**264**	P	**P**	**14 02 34.7**	**+0.7**
	0.2nm,0.4s,baz=100,slow=7.8,SNR=13						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.71**	**270**	P	**P**	**14 02 40.0**	**-0.1**
	0.3nm,0.7s,baz=103,slow=8.7,SNR=20						
	0.3nm,0.7s						
PETK	**Petropavlovsk-**	**83.28**	**346**	P	**P**	**14 06 57.3**	**-0.2**
	2.0nm,0.8s,baz=116,slow=10,SNR=6.0						
	2.0nm,0.8s						
NVAR	**Mina Array Bea**	**86.62**	**43**	P	**P**	**14 07 15.4**	**+0.7**
	0.6nm,0.7s,baz=218,slow=8.2,SNR=7.2						
	0.6nm,0.7s						
ARCES	**ARCESS Array B**	**136.05**	**348**	PKP	**PKPdf**	**14 13 49.9**	**+0.3**
	0.6nm,0.6s,baz=19,slow=3.1,SNR=5.3						
FINES	**FINESS Array B**	**142.65**	**341**	PKhKP	PKPpre	14 13 58.2	
	0.8nm,0.5s,baz=43,slow=3.6,SNR=6.4						
NB2	**NORSAR Subarra**	**146.21**	**352**	PKP	**PKPbc**	**14 14 09.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=13,slow=2.9						
NOA	**NORSAR Array B**	**146.21**	**352**	PKPbc	**PKPbc**	**14 14 09.2**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=15,slow=4.4,SNR=5.4						
AKASG	**Malin Array Be**	**149.06**	**325**	PKPbc	**PKPbc**	**14 14 17.4**	**0.0**
	comp=Z,1.7nm,0.6s,baz=44,slow=4.1,SNR=9.9						
BRTR	**Keskin Array B**	**151.02**	**302**	PKPbc	**PKiKP**	**14 14 23.0**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=144,slow=4.4,SNR=3.9						

*IDC **05** 13:58:51.1±0.6,29.17S×61.19E,h0km,mb4.1/12, mbtmp4.2/13,ML5.1/1,MS3.7/29, Error ellipse: s-maj=23.2km s-min=17.8km az=62.0*
*NEIC **05** 13:58:53.6±1.8,28.93S±0.09×61.0E±0.1,h14km±4km, mb4.7/20, Error ellipse: s-maj=18.8km s-min=8.5km az=56.0*

ISC 05 13:58:53.1±0.5,29.04S±0.09×61.04E±0.10,h10km,n70, σ1§16/43,mb4.5/19,MS3.8/28,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.20**	**327**		**Pn**	**14 01 04.0**	**-1.9**
FOMA	**Nahampoana Res**	**13.17**	**285**	Pn	**Pn**	**14 01 58.1**	**-2.2**
VOI	**Vohitsoka**	**14.69**	**296**		**Pn**	**14 02 20.6**	**-0.6**
ABPO	**Ambohimpanom**	**16.07**	**305**		**Pn**	**14 02 38.5**	**-1.0**
OPO	**Ambohidratompo**	**16.40**	**306**	Pn	**Pn**	**14 02 44.2**	**+0.7**
	0.6nm,0.3s,baz=132,slow=10,SNR=18						
OPO				LR	LR	14 07 40.2	
	comp=Z,151nm,19.5s,baz=17,slow=32						
	9.1nm,0.4s						
H08S1	**Diego Carcia H**	**23.86**	**29**	T	T	14 28 49.0	
	baz=204,slow=76,SNR=15						
H08S2	**Diego Garcia H**	**23.86**	**29**	T	T	14 28 49.9	
	baz=204,slow=76,SNR=15						
H08S3	**Diego Garcia H**	**23.88**	**29**	T	T	14 28 52.3	
	baz=204,slow=76,SNR=30						
BOSA	**Boshof**	**31.28**	**262**	LR	LR	14 16 07.8	
	comp=Z,144nm,18.2s,baz=105,slow=33						
LBTB	**Lobatse**	**31.75**	**269**	LR	LR	14 16 29.6	
	comp=Z,70nm,19.0s,baz=117,slow=33						
LSZ	**Lusaka**	**33.24**	**287**	LR	LR	14 17 43.7	
	comp=Z,52nm,18.7s,baz=141,slow=34						
LSZ	**Lusaka**	**33.24**	**287**	P	**P**	**14 05 31.0**	**+0.2**
LSZ				IAmb	IAmb	14 05 32.0	
	comp=Z,6.4nm,0.8s						
SUR	**Sutherland**	**34.61**	**254**	LR	LR	14 17 21.7	
	comp=Z,152nm,18.9s,baz=114,slow=32						
KMBO	**Kilima Mbogo**	**35.85**	**316**	LR	LR	14 17 39.5	
	comp=Z,179nm,20.3s,baz=94,slow=31						
MAW	**Mawson**	**38.60**	**179**	LR	LR	14 18 35.7	
	comp=Z,142nm,19.6s,baz=9.5,slow=31						
MAW	**Mawson**	**38.60**	**179**	P	**P**	**14 06 18.0**	**+2.0**
MBAR	**Mbarara**	**40.45**	**309**	LR	LR	14 21 37.2	
	comp=Z,103nm,20.7s,baz=78,slow=34						
TSUM	**Tsumeb**	**40.66**	**274**	LR	LR	14 21 56.5	
	comp=Z,47nm,18.4s,baz=354,slow=34						
ATD	**Arta Tunnel**	**44.00**	**334**	LR	LR	14 22 43.8	
	comp=Z,164nm,19.5s,baz=161,slow=32						
H01W2	**Cape Leeuwin H**	**44.98**	**112**	T	T	14 54 44.6	
	baz=261,slow=74,SNR=14						
H01W3	**Cape Leeuwin H**	**44.99**	**112**	T	T	14 54 46.4	
	baz=261,slow=74,SNR=8.1						
H01W1	**Cape Leeuwin H**	**45.00**	**112**	T	T	14 54 45.8	
	baz=261,slow=74,SNR=16						
GIRL	**Giralia**	**47.97**	**95**	P	**P**	**14 07 33.6**	**+1.3**
LEM	**Lembang**	**49.10**	**73**	LR	LR	14 25 24.6	
	comp=Z,50nm,18.2s,baz=182,slow=32						
WSAR	**Wadi Sarin**	**52.03**	**357**	LR	LR	14 24 25.2	
	comp=Z,62nm,22.0s,baz=186,slow=29						
SNAA	**Sanae**	**54.54**	**200**	P	**P**	**14 08 19.8**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=73,slow=11,SNR=3.0						
SNAA				LR	LR	14 28 08.6	
	comp=Z,43nm,19.2s,baz=26,slow=32						
	comp=Z,1.1nm,0.8s						
SNAA	**Sanae**	**54.54**	**200**	P	**P**	**14 08 21.9**	**+1.0**
SNAA				IAmb	IAmb	14 08 33.5	
	comp=Z,9.5nm,1.5s						
FORT	**Forrest**	**57.30**	**110**	P	**P**	**14 08 40.2**	**-1.1**
FITZ	**Fitzroy Crossi**	**59.58**	**95**	P	**P**	**14 08 56.4**	**-0.9**
FITZ				IAmb	IAmb	14 09 19.5	
	comp=Z,9.3nm,1.3s						
CMAR	**Chiang Mai Arr**	**59.74**	**42**	P	**P**	**14 08 58.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=229,slow=6.8,SNR=10.0						
CMAR				LR	LR	14 31 49.3	
	comp=Z,35nm,18.8s,baz=240,slow=33						
	comp=Z,1.6nm,0.7s						
QSPA	**South Pole Qui**	**61.11**	**180**	P	**P**	**14 09 05.7**	**-1.6**
	comp=Z,2.8nm,0.9s,baz=278,slow=2.1,SNR=8.2						
QSPA				LR	LR	14 32 53.0	
	comp=Z,81nm,19.8s,baz=270,slow=34						
	comp=Z,2.8nm,0.9s						
QSPA	**South Pole Qui**	**61.11**	**180**	P	**P**	**14 09 07.0**	**-0.3**
QSPA				IAmb	IAmb	14 09 09.4	
	comp=Z,9.7nm,1.3s						
BBOO	**Buckleboo**	**63.19**	**114**	P	**P**	**14 09 20.1**	**-1.5**
KNRA	**Kununurra**	**63.29**	**94**	P	**P**	**14 09 21.5**	**-1.0**
EIL	**Elat**	**63.48**	**335**	LR	LR	14 33 48.2	
	comp=Z,76nm,19.4s,baz=124,slow=33						
VNDA	**Vanda**	**64.17**	**166**	P	**P**	**14 09 27.0**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=289,slow=3.3,SNR=5.8						
VNDA				LR	LR	14 34 44.1	
	comp=Z,142nm,19.8s,baz=243,slow=34						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**64.17**	**166**	P	**P**	**14 09 28.0**	**+0.7**
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	**14 09 29.3**	**-1.6**
	comp=Z,2.5nm,0.7s,baz=243,slow=6.3,SNR=33						
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	**14 09 29.6**	**-1.3**
AS31	**Alice Springs**	**64.58**	**104**	P	**P**	**14 09 29.6**	**-1.4**
SBA	**Scott Base**	**65.05**	**167**	P	**P**	**14 09 33.6**	**+0.5**
SBA				IAmb	IAmb	14 09 53.1	
	comp=Z,3.4nm,0.9s						
WRA	**Warramunga Arr**	**66.39**	**100**	P	**P**	**14 09 41.0**	**-1.6**
	comp=Z,2.5nm,0.8s,baz=247,slow=5.8,SNR=22						
	comp=Z,2.5nm,0.8s						
WB2	**Warramunga Arr**	**66.40**	**100**	P	**P**	**14 09 41.8**	**-0.9**
WB2				IAmb	IAmb	14 09 45.4	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**66.51**	**100**	P	**P**	**14 09 42.1**	**-1.4**
WB0				IAmb	IAmb	14 09 59.0	
	comp=Z,9.1nm,1.3s						
WR0	**Warramunga Arr**	**66.56**	**101**	P	**P**	**14 09 42.6**	**-1.2**
WR0				IAmb	IAmb	14 09 45.4	
	comp=Z,5.3nm,1.0s						
GEYT	**Alibeck**	**66.68**	**357**	LR	LR	14 37 22.5	
	comp=Z,40nm,18.2s,baz=186,slow=35						
GNI	**Garni**	**70.49**	**347**	LR	LR	14 39 16.6	
	comp=Z,77nm,20.2s,baz=164,slow=34						
TORD	**Torodi Ar. Bea**	**70.99**	**298**	P	**P**	**14 10 11.8**	**+0.5**
	comp=Z,3.1nm,0.9s,baz=112,slow=5.7,SNR=11						
TORD				LR	LR	14 40 56.4	
	comp=Z,140nm,19.7s,baz=221,slow=36						
	comp=Z,3.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**70.99**	**298**	P	**P**	**14 10 11.2**	**-0.1**
TORD				IAmb	IAmb	14 10 44.5	
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	**72.32**	**7**	P	**P**	**14 10 19.4**	**+0.7**
KKAR	**Karatay Array**	**72.32**	**7**	P	**P**	**14 10 19.8**	**+1.1**
IDI	**Anoyia**	**72.50**	**330**	LR	LR	14 42 12.5	
	comp=Z,13nm,18.7s,baz=246,slow=36						
BRTR	**Keskin Array B**	**73.02**	**338**	P	**P**	**14 10 23.4**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=168,slow=7.6,SNR=5.5						
BRTR				LR	LR	14 39 29.1	
	comp=Z,33nm,21.7s,baz=160,slow=33						
	comp=Z,1.2nm,0.8s						
KBZ	**Khabaz**	**74.30**	**346**	LR	LR	14 41 15.4	
	comp=Z,90nm,22.0s,baz=147,slow=34						
MKAR	**Makanchi Array**	**77.89**	**15**	P	**P**	**14 10 51.0**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=204,slow=2.7,SNR=8.1						
	comp=Z,1.4nm,0.8s						
ABKAR	**Akbulak array**	**77.95**	**359**	P	**P**	**14 10 51.2**	**+0.2**
ABKAR	**Akbulak array**	**77.95**	**359**	P	**P**	**14 10 51.4**	**+0.4**
ABKAR				IAmb	IAmb	14 10 54.3	
	comp=Z,2.6nm,0.8s						
AKTO	**Aktyubinsk**	**79.17**	**358**	LR	LR	14 42 57.1	
	comp=Z,44nm,21.1s,baz=308,slow=33						
MLR	**Muntele Rosu**	**80.75**	**336**	LR	LR	14 47 17.6	
	comp=Z,38nm,18.0s,baz=272,slow=36						
KURK	**Kurchatov**	**80.92**	**11**	P	**P**	**14 11 07.2**	**+0.1**
KURK				IAmb	IAmb	14 11 38.7	
	comp=Z,6.7nm,1.5s						
AKASG	**Malin Array Be**	**84.24**	**340**	P	**P**	**14 11 24.7**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=144,slow=4.4,SNR=5.4						
	comp=Z,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**85.17**	**14**	P	**P**	**14 11 29.2**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=220,slow=3.9,SNR=6.3						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**85.17**	**14**	P	**P**	**14 11 28.7**	**-0.4**
MDT	**Midelt**	**87.50**	**310**	LR	LR	14 50 48.8	
	comp=Z,60nm,18.4s,baz=149,slow=36						
ESDC	**Sonseca Array**	**91.23**	**316**	P	**P**	**14 12 00.8**	**+2.2**
	comp=Z,1.4nm,0.9s,baz=115,slow=4.6,SNR=6.0						
ESDC				LR	LR	14 51 23.0	
	comp=Z,42nm,21.8s,baz=240,slow=34						
	comp=Z,1.4nm,0.9s						
RCBR	**Riachuelo**	**93.25**	**262**	LR	LR	14 46 05.8	
	comp=Z,52nm,20.8s,baz=140,slow=30						
NOA	**NORSAR Array B**	**98.45**	**338**	LR	LR	14 57 37.3	
	comp=Z,15nm,18.1s,baz=280,slow=36						
YKA	**Yellowknife Ar**	**146.42**	**356**	PKPbc	**PKPbc**	**14 18 33.2**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=351,slow=3.2,SNR=7.8						
PDAR	**Pinedale Array**	**164.34**	**334**	PKP	**PKPdf**	**14 18 54.7**	**-2.5**
	comp=Z,0.5nm,0.8s,baz=97,slow=4.6,SNR=5.3						
TXAR	**Lajitas Array**	**166.64**	**275**	PKP	**PKPdf**	**14 18 59.9**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=229,slow=1.4,SNR=4.7						

*IDC **05** 14:02:24.2±1.0,27.83S×176.79W,h0km,mb4.0/8, mbtmp4.0/8,MS3.5/9, Error ellipse: s-maj=31.3km s-min=21.1km az=126.0*
*NEIC **05** 14:02:40.6±2.0,28.62S±0.09×177.7W±0.2,h79km±8km, mb4.5/15, Error ellipse: s-maj=25.1km s-min=12.9km az=91.0*

ISC 05 14:02:28.6±0.8,28.2S±0.1×176.5W±0.1,h35km,n41, σ2§40/33,mb4.3/14,MS3.6/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.62**	**230**	Pn	**Pn**	**14 02 56.7**	**+1.9**
	107nm,0.3s,baz=45,slow=20,SNR=1.9						
RAO				LR	LR	14 03 02.0	
	comp=Z,170nm,18.8s,baz=64,slow=22						
RAO				Sn	**Sn**	**14 03 20.6**	**+6.1**
	353nm,0.3s,baz=149,slow=23,SNR=6.1						
RAO	**Raoul Island**	**1.62**	**230**		**Pn**	**14 02 55.9**	**+1.1**
**URZ

comp=Z,0.6nm,0.8s
NVAR **Mina Array Bea** 85.74 42 P P 14 15 05.5 +1.1
comp=Z,0.6nm,0.9s,baz=226,slow=7.4,SNR=3.3
comp=Z,0.6nm,0.9s
ARCES **ARCESS Array B** 136.73 349 PKP PKiKP 14 21 47.5 -0.7
comp=Z,0.6nm,0.7s,baz=29,slow=2.1,SNR=3.6
FINES **FINESS Array B** 143.53 342 PKiKP PKPpre 14 21 55.1
comp=Z,1.7nm,1.0s,baz=57,slow=7.0,SNR=4.6
NB2 **NORSAR Subarra** 146.78 353 PKP PKPbc 14 22 05.6 -0.8
comp=Z,1.1nm,0.8s,baz=13,slow=2.9
NOA **NORSAR Array B** 146.78 353 PKPbc PKPbc 14 22 05.7 -0.7
comp=Z,2.0nm,0.9s,baz=14,slow=4.5,SNR=6.6
AKASG **Malin Array Be** 150.30 326 PKPbc PKPbc 14 22 15.0 -0.8
comp=Z,0.3nm,0.3s,baz=43,slow=2.6,SNR=9.7

KRNET ***05*** *14:29:51.9±0.1, 39˚.46N×73˚.42E, mb3.1*
ISU ***05*** *14:29:52, 39˚.58N×73˚.32E, h0km*
SOME ***05*** *14:30:05.6, 39˚.95N×73˚.17E, h5km*

ISC 05 14:29:55.7±1.9, 39˚.56N±0˚.08×73˚.33E±0˚.05, h2km±12km, n16, σ1§88/32, 6C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
OHH	**Osh**	**1.05**	**337**	⇑*i*P		**Pb**	**14 30 14.1**	**-2.6**
	baz=35							
OHH				⇑*i*S		**Sb**	**14 30 30.6**	**-0.4**
	baz=35							
OHH	**Osh**	**1.05**	**337**	P		**Pb**	**14 30 13.6**	**-3.1**
OHH				S		**Sb**	**14 30 30.2**	**-0.8**
FRG	**Fergana**	**1.44**	**305**	P		**Pn**	**14 30 21.2**	**-1.7**
FRG				S		**Sn**	**14 30 40.8**	**-1.7**
MINT	**Mingtut**	**2.02**	**297**	P		**Pb**	**14 30 33.3**	**+0.1**
MINT				S		**Sb**	**14 31 00.7**	**+1.8**
GAR	**Garm**	**2.41**	**258**	⇑*i*P		**Pn**	**14 30 35.2**	**-1.1**
	baz=60							
GAR				⇑*i*S		**Sn**	**14 31 07.1**	**+0.7**
	baz=60							
ARLS	**Aral**	**2.42**	**18**	⇑*e*P		**Pn**	**14 30 35.7**	**-0.8**
	baz=16							
ARLS				⇑*i*S		**Sn**	**14 31 07.7**	**+0.9**
	baz=16							
TRKS	**Terek-Say**	**2.58**	**320**	⇓*i*P		**Pn**	**14 30 38.0**	**-0.7**
	baz=20							
TRKS				⇓*i*S		**Sn**	**14 31 11.2**	**+0.4**
	baz=20							
UCH	**Uchtor**	**2.81**	**18**	⇓*e*P		**Pn**	**14 30 41.3**	**-0.8**
	baz=16							
UCH				⇓*e*S		**Sn**	**14 31 17.5**	**+0.7**
	baz=16							
MRKS	**Merke**	**3.18**	**359**	*e*P		**Pg**	**14 30 58.5**	**+1.9**
	1.4nm,0.2s							
MRKS				*e*S		**Sb**	**14 31 36.5**	**+4.2**
	9.6nm,0.7s							
IUG	**Iuzhnay**	**3.60**	**317**	*e*P		**Pg**	**14 31 05.7**	**+1.1**
	136nm,0.4s							
IUG				*e*S		**Sb**	**14 31 49.4**	**+5.1**
	16nm,0.8s							
KST	**Kastek**	**4.00**	**29**	*e*P		**Pg**	**14 31 13.6**	**+1.2**
	1.9nm,0.4s							
KST				*e*S		**Sg**	**14 32 02.6**	**-1.7**
	7.0nm,0.8s							
MTBS	**Maitube**	**4.26**	**32**	*e*P		**Pg**	**14 31 19.3**	**+2.0**
	1.3nm,0.1s							
MTBS				*e*S		**Sg**	**14 32 12.4**	**-0.1**
	4.1nm,0.1s							
KRBS	**Karabastau**	**4.49**	**22**	*e*P		**Pg**	**14 31 23.2**	**+1.6**
	0.4nm,0.5s							
KRBS				*e*S		**Sg**	**14 32 18.9**	**-1.0**
	4.3nm,0.8s							
MDOK	**Medeo**	**4.56**	**37**	*e*P		**Pg**	**14 31 24.6**	**+1.6**
	2.0nm,0.4s							
MDOK				*e*S		**Sg**	**14 32 21.5**	**-0.5**
	5.2nm,0.5s							
KTBS	**Karatobe**	**4.85**	**30**	*e*P		**Pg**	**14 31 29.6**	**+1.1**
	1.1nm,0.5s							
KTBS				*e*S		**Sg**	**14 32 29.8**	**-1.6**
	4.8nm,0.4s							
KUU	**Kurty**	**4.88**	**26**	*e*P		**Pg**	**14 31 30.3**	**+1.1**
	0.9nm,0.1s							
KUU				*e*S		**Sg**	**14 32 31.3**	**-1.0**
	9.8nm,0.3s							

DJA 05 14:37:54.8±0.7, 6˚S±3˚×13˚1E±˚, h151km±8km, M3.9/7, mb3.8/2, MLv3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
BNDI	**Bandanaira**	**1.57**	**319**	P		Pn	14 38 21.2	-4.0
BNDI				S		Sn	14 38 50.9	+2.5
BNDI	**Bandanaira**	**1.57**	**319**	P		Pn	14 38 25.2	0.0
SAUI	**Saumlaki**	**2.29**	**171**	P		Pn	14 38 34.4	+1.0
FAKI	**Fak Fak**	**3.06**	**25**	P		Pn	14 38 42.7	-0.4
FAKI				S		Sn	14 39 20.8	+0.4
FAKI	**Fak Fak**	**3.06**	**25**	P		Pn	14 38 43.2	+0.1
SWI	**Sorong**	**4.83**	**4**	P		Pn	14 39 06.6	+0.6
SWI				S		Sn	14 40 02.8	+1.3

NOU ***05*** *14:37:58.9, 33˚.38S×177˚.84W, h240km, mb4.5/6, South of Kermadec Islands*
WEL ***05*** *14:38:42.8±0.9, 36˚S±9˚×17˚8E±1˚0, h204km±11km, M3.8/19, ML4.2/24, MLv3.8/19, Error ellipse: s-maj=0.0km s-min=0.0km az=60.3*

ISC 05 14:38:42.6±2.7, 35˚.5S±0˚.1×178˚.4E±0˚.1, h200km, n52, σ1§31/64, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MXZ	**Matakaoa Point**	**2.04**	**183**	P		**Pn**	**14 39 22.0**	**+0.5**
MXZ				S		**Sn**	**14 39 51.4**	**-0.5**
HAZ	**Te Kaha**	**2.29**	**193**	P		**Pn**	**14 39 24.6**	**+0.5**
HAZ				S		**Sn**	**14 39 57.3**	**+0.6**
WMGZ	**Waiomatatini S**	**2.29**	**181**	P		**Pn**	**14 39 25.3**	**+1.1**
PKGZ	**Pakihiroa**	**2.38**	**187**	P		**Pn**	**14 39 25.8**	**+0.6**
RUGZ	**Raukumara Rang**	**2.52**	**194**	P		**Pn**	**14 39 27.0**	**+0.2**
RUGZ				S		**Sn**	**14 40 02.1**	**+0.7**
KUZ	**Kuaotunu**	**2.52**	**240**	P		**Pn**	**14 39 27.0**	**+0.4**
PUZ	**Puketiti**	**2.55**	**183**	P		**Pn**	**14 39 27.2**	**+0.2**
PUZ				S		**Sn**	**14 40 01.5**	**-0.4**
TWGZ	**Tauwhareparae**	**2.68**	**188**	P		**Pn**	**14 39 29.7**	**+1.2**
TWGZ				S		**Sn**	**14 40 06.6**	**+2.1**
MARZ	**Manawahe**	**2.84**	**209**	P		**Pn**	**14 39 32.5**	**+2.1**
MWZ	**Matawai**	**2.90**	**194**	P		**Pn**	**14 39 31.6**	**+0.5**
MWZ				S		**Sn**	**14 40 09.7**	**+0.5**
URZ	**Urewera**	**2.94**	**201**	P		**Pn**	**14 39 31.8**	**+0.5**
URZ				S		**Sn**	**14 40 11.2**	**+1.5**
URZ	**Urewera**	**2.94**	**201**	P		**Pn**	**14 39 31.9**	**+0.5**
TKGZ	**Te Karaka**	**2.95**	**189**	P		**Pn**	**14 39 32.0**	**+0.4**
TKGZ				S		**Sn**	**14 40 11.3**	**+1.2**
CNGZ	**Carnagh Statio**	**2.96**	**184**	P		**Pn**	**14 39 32.4**	**+0.7**
RAGZ	**Rawiri**	**3.08**	**195**	P		**Pn**	**14 39 33.9**	**+0.7**
RAGZ				S		**Sn**	**14 40 14.3**	**+1.3**
RIGZ	**Rimuhau**	**3.23**	**190**	P		**Pn**	**14 39 34.9**	**0.0**
RIGZ				S		**Sn**	**14 40 16.8**	**+0.8**
MUGZ	**Murupara**	**3.24**	**204**	P		**Pn**	**14 39 35.8**	**+0.7**
MUGZ				S		**Sn**	**14 40 17.0**	**+0.7**
WCZ	**Waipu Caves**	**3.36**	**262**	P		**Pn**	**14 39 36.3**	**-0.2**
PRRZ	**Plateau Road**	**3.40**	**208**	P		**Pn**	**14 39 38.2**	**+1.3**
ALRZ	**Allen Road**	**3.47**	**208**	P		**Pn**	**14 39 38.8**	**+1.0**
KNZ	**Kokohu**	**3.55**	**190**	P		**Pn**	**14 39 38.6**	**-0.1**
KNZ				S		**Sn**	**14 40 23.3**	**+0.4**
RAHZ	**Arahi**	**3.56**	**197**	P		**Pn**	**14 39 39.2**	**+0.3**
WHHZ	**Waihua**	**3.68**	**195**	P		**Pn**	**14 39 40.9**	**+0.5**
MRHZ	**Matea Rd**	**3.68**	**205**	P		**Pn**	**14 39 41.0**	**+0.6**
NMHZ	**Naumai**	**3.80**	**200**	P		**Pn**	**14 39 42.4**	**+0.4**
ARHZ	**Aropaoanui**	**3.91**	**197**	P		**Pn**	**14 39 43.4**	**+0.2**
BKZ	**Black Stump Fm**	**3.96**	**203**	P		**Pn**	**14 39 43.9**	**+0.1**
BKZ	**Black Stump Fm**	**3.96**	**203**	P		**Pn**	**14 39 44.3**	**+0.5**
OUZ	**Omahuta**	**3.97**	**273**	P		**Pn**	**14 39 43.4**	**-0.6**
OUZ	**Omahuta**	**3.97**	**273**	P		**Pn**	**14 39 43.5**	**-0.5**
HIZ	**Hauiti**	**4.14**	**223**	P		**Pn**	**14 39 49.5**	**+3.4**
MCHZ	**McNeill Hill**	**4.16**	**199**	P		**Pn**	**14 39 46.9**	**+0.6**
KWHZ	**Kaweka Forest**	**4.21**	**202**	P		**Pn**	**14 39 47.1**	**+0.1**
OTVZ	**Oturere**	**4.26**	**211**	P		**Pn**	**14 39 48.1**	**+0.4**
SNVZ	**South Ngauruho**	**4.29**	**211**	P		**Pn**	**14 39 48.5**	**+0.4**
WNVZ	**Wahianoa**	**4.42**	**210**	P		**Pn**	**14 39 50.1**	**+0.3**
MOVZ	**Moawhango**	**4.43**	**208**	P		**Pn**	**14 39 49.5**	**-0.2**
PXZ	**Pawanui**	**4.67**	**195**	P		**Pn**	**14 39 51.5**	**-1.2**
TSZ	**Takapari Road**	**4.94**	**203**	P		**Pn**	**14 39 54.9**	**-1.3**
PRHZ	**Porangahau**	**4.95**	**196**	P		**Pn**	**14 39 55.2**	**-1.0**
DVHZ	**Dannevirke**	**5.10**	**200**	P		**Pn**	**14 39 56.2**	**-2.0**
BFZ	**Birch Farm**	**5.44**	**198**	P		**Pn**	**14 40 00.7**	**-1.8**
BFZ	**Birch Farm**	**5.44**	**198**	P		**Pn**	**14 39 59.9**	**-2.6**
MRZ	**Mangatainoka R**	**5.61**	**203**	P		**Pn**	**14 40 02.6**	**-2.1**
OGWZ	**Otaki Gorge**	**5.88**	**205**	P		**Pn**	**14 40 06.0**	**-2.2**
KIW	**Kapiti Island**	**6.01**	**207**	P		**Pn**	**14 40 07.6**	**-2.3**
CAW	**Cannon Point**	**6.18**	**204**	P		**Pn**	**14 40 09.4**	**-2.6**
TUWZ	**Tuamarina**	**6.88**	**210**	P		**Pn**	**14 40 18.4**	**-2.7**
BSWZ	**Blackbirch Sta**	**7.14**	**209**	P		**Pn**	**14 40 22.2**	**-2.4**
THZ	**Tophouse**	**7.59**	**213**	P		**Pn**	**14 40 28.5**	**-2.0**
KHZ	**Kahutara**	**7.87**	**208**	P		**Pn**	**14 40 34.4**	**+0.4**
LTZ	**Lake Taylor**	**8.69**	**212**	P		**Pn**	**14 40 41.9**	**-2.9**

JMA 05 14:45:50.8±0.3, 25˚N±1˚×12˚3E±˚, h26km±3km, MV2.7/10, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JYNG	**Yonagunijimaku**	**0.47**	**171**	P		Pb	14 46 00.2	-0.4
JYNG				*e*S		Sb	14 46 07.1	-0.1
YOJ	**Yonaguni jima**	**0.48**	**164**	P		Pb	14 46 00.4	-0.2
YOJ				*e*S		Sb	14 46 07.3	0.0
IRIF	**Iriomote-Funau**	**0.98**	**126**	P		Pn	14 46 08.5	-0.3
IRIF				*e*S		Sb	14 46 21.1	-0.6
HATJ	**Hateruma jima**	**1.21**	**135**	P		Pn	14 46 12.5	+0.4
HATJ				*e*S		Sn	14 46 26.5	-1.2
JKRS	**Kuro-shima**	**1.25**	**123**	*e*P		Pn	14 46 13.0	+0.5
JIJ	**Ishigaki jima**	**1.29**	**115**	P		Pn	14 46 13.3	+0.2
JTJ	**Tarama**	**1.69**	**99**	*e*S		Sn	14 46 39.8	+0.3

IDC 05 14:45:52.3±1.8, 5˚.81S×152˚.70E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=49.6km s-min=22.5km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KRVT	**Keravat (AS076**	**1.64**	**336**	P	Pn	Pn	14 46 21.8	-0.6
	138nm,0.3s,baz=246,slow=1.8,SNR=472							
KRVT					Sn	Sn	14 46 41.0	-3.2
	146nm,0.3s,baz=266,slow=22,SNR=6.1							
WRA	**Warramunga Arr**	**22.72**	**230**	P	P	P	14 50 55.3	-0.7
	0.6nm,1.0s,baz=58,slow=11,SNR=2.1							
	0.6nm,1.0s							
ASAR	**Alice Springs**	**25.35**	**224**	P	P	P	14 51 21.1	-0.2
	1.7nm,0.9s,baz=59,slow=9.2,SNR=14							
	1.7nm,0.9s							
FITZ	**Fitzroy Crossi**	**29.10**	**243**	P	P	P	14 51 55.8	+0.8
	1.3nm,0.6s,baz=66,slow=13,SNR=7.3							
	1.3nm,0.6s							
ILAR	**Eielson Array**	**83.12**	**22**	P	P	P	14 58 20.0	+0.2
	0.6nm,0.7s,baz=250,slow=5.4,SNR=8.8							
	0.6nm,0.7s							

TAP ***05*** *14:45:57.5, 24˚.53N×122˚.66E, h38km±1km, ML3.1, C*
IDC ***05*** *14:45:58.2±1.6, 24˚.74N×122˚.58E, h0km, mb3.6/3, mbtmp3.5/4, ML2.7/1, MS3.4/3, Error ellipse: s-maj=72.5km s-min=26.8km az=69.0*

ISC 05 14:45:58.1±1.2, 24˚.54N±0˚.04×122˚.54E±0˚.04, h11km±9km, n42, σ1§40/53, mb3.5/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
YOJ	**Yonaguni jima**	**0.43**	**101**	S		**Sg**	**14 46 12.0**	**-0.4**
	baz=96							
EGS		**0.63**	**299**	P		**Pg**	**14 46 11.5**	**+1.0**
	baz=296							
TWC	**Suao**	**0.64**	**276**	*e*P		**Pg**	**14 46 10.2**	**-0.3**
	baz=276							
TWB1	**Santiao Chiao**	**0.69**	**313**	*e*P		**Pg**	**14 46 11.8**	**+0.4**
	baz=319							
TWB1				*e*S		**Sg**	**14 46 21.7**	**+1.3**
	baz=319							
NTC	**Toucheng**	**0.72**	**296**	*e*P		**Pg**	**14 46 13.0**	**+0.9**
	baz=287							
ENA	**Nanau**	**0.74**	**261**	*e*P		**Pg**	**14 46 13.3**	**+0.9**
	baz=270							
NDS	**Dongshan**	**0.76**	**277**	*e*P		**Pg**	**14 46 11.4**	**-1.5**
	baz=277							
TIPB	**Shuangxi**	**0.78**	**303**	*e*P		**Pb**	**14 46 13.1**	**-0.6**
	baz=295							
TWE	**Neicheng**	**0.82**	**283**	*e*P		**Pb**	**14 46 13.9**	**-0.5**
	baz=283							
TWE				*e*S		**Sg**	**14 46 27.1**	**+2.4**
	baz=283							
SXI1	**Grass Mountain**	**0.82**	**312**	P		**Pb**	**14 46 14.3**	**-0.2**
	baz=318							
SXI1				*e*S		**Sb**	**14 46 25.6**	**0.0**
	baz=318							
WFSB	**Wu-fen Shan**	**0.87**	**307**	*e*P		**Pb**	**14 46 15.1**	**-0.2**
	baz=305							
WFSB				*e*S		**Sb**	**14 46 26.0**	**-1.0**
	baz=305							
ENTT	**Nioudou**	**0.90**	**276**	*e*P		**Pb**	**14 46 13.7**	**-2.0**
	baz=277							
ENTT				*e*S		**Sb**	**14 46 25.9**	**-1.8**
	baz=277							
FUSB	**Fushanzhiwuyua**	**0.90**	**284**	*e*P		**Pb**	**14 46 15.1**	**-0.6**
	baz=295							
FUSB				*e*S		**Sb**	**14 46 27.1**	**-0.7**
	baz=295							
LATG	**Datong**	**0.93**	**270**	*e*P		**Pb**	**14 46 15.1**	**-1.2**
	baz=278							
LATG				*e*S		**Sb**	**14 46 28.0**	**-0.7**
	baz=278							
NACB	**Ninganchiao**	**0.94**	**247**	*e*P		**Pb**	**14 46 16.1**	**-0.3**
	baz=256							
NACB				*e*S		**Sb**	**14 46 27.5**	**-1.5**
	baz=256							
NDT	**Datong Townshi**	**0.94**	**274**	*e*P		**Pb**	**14 46 16.0**	**-0.5**
	baz=274							
NWLT	**Wulai**	**0.98**	**284**	*e*P		**Pb**	**14 46 15.7**	**-1.5**
	baz=284							
NWLT				*e*S		**Sb**	**14 46 30.0**	**0.0**
	baz=284							
TWD	**Chiawan**	**0.98**	**242**	*e*P		**Pb**	**14 46 16.2**	**-1.0**
	baz=245							
TWD				*e*S		**Sb**	**14 46 28.9**	**-1.1**
	baz=245							
ETLH	**Xiulin Townshi**	**1.02**	**251**	*e*P		**Pb**	**14 46 17.6**	**-0.3**
	baz=253							
NNSB	**Datong**	**1.06**	**264**	*e*P		**Pb**	**14 46 17.6**	**-1.1**
	baz=272							
NNSH	**Datong**	**1.06**	**264**	*e*P		**Pb**	**14 46 17.8**	**-0.8**
	baz=272							
YHNB	**Yeheng**	**1.07**	**277**	*e*P		**Pb**	**14 46 16.1**	**-2.7**
	baz=286							
YHNB				*e*S		**Sb**	**14 46 30.3**	**-2.5**
	baz=286							
NNS	**Nan Shan**	**1.07**	**265**	*e*P		**Pb**	**14 46 18.0**	**-0.8**
	baz=272							
NSK	**Sanguang**	**1.09**	**277**	*e*P		**Pb**	**14 46 18.1**	**-1.0**
	baz=286							
ETM	**Tongmen**	**1.12**	**239**	P		**Pb**	**14 46 18.5**	**-1.0**
	baz=232							
ETM				S		**Sb**	**14 46 32.1**	**-2.0**
	baz=232							
PCYT	**Pengchaiyu**	**1.17**	**339**	*e*P		**Pb**	**14 46 17.7**	**-2.7**
	baz=324							
FUSS	**Fushou**	**1.22**	**256**	*e*P		**Pn**	**14 46 21.9**	**+0.5**
	baz=258							
WHF	**Hehuan Shan**	**1.23**	**252**	*e*P		**Pn**	**14 46 20.8**	**-0.9**
	baz=253							
ESL	**Shilin**	**1.25**	**235**	*e*P		**Pn**	**14 46 20.6**	**-1.0**
	baz=237							
ESL				S		**Sb**	**14 46 35.3**	**-2.5**
	baz=237							
TDCB	**Techi**	**1.30**	**257**	*e*P		**Pn**	**14 46 20.6**	**-1.7**
	baz=259							
CHGB	**Renai**	**1.34**	**249**	*e*P		**Pn**	**14 46 22.9**	**-0.1**
	baz=239							
OWD	**Renai**	**1.38**	**245**	*e*P		**Pn**	**14 46 22.6**	**-0.8**
	baz=236							
WUSB	**Renai**	**1.41**	**247**	*e*P		**Pn**	**14 46 24.1**	**+0.2**
	baz=239							
HGSD	**Ruisui**	**1.46**	**225**	*e*P		**Pn**	**14 46 24.2**	**-0.2**
	baz=227							
VWDT	**VWDT**	**1.50**	**239**	*e*P		**Pn**	**14 46 24.0**	**-1.0**
	baz=231							
EHY	**Hungye**	**1.52**	**228**	*e*P		**Pn**	**14 46 23.8**	**-1.5**
	baz=242							
KSRS	**Korea Array**	**13.67**	**18**	Pn		**Pn**	**14 49 10.6**	**-1.3**
	baz=186,slow=15,SNR=1.6							
KSRS				LR		LR	14 54 57.7	
	comp=Z,48nm,19.3s,baz=40,slow=40							
	0.3nm,0.7s							
MJAR	**Matsushiro Arr**	**18.00**	**45**	LR		LR	14 57 55.4	
	comp=Z,46nm,19.1s,baz=42,slow=40							
MKAR	**Makanchi Array**	**38.95**	**315**	P		**P**	**14 53 24.8**	**+0.5**
	0.5nm,0.8s,baz=113,slow=11,SNR=4.2							
	0.5nm,0.8s							
KRVT	**Keravat (AS076**	**40.56**	**131**	LR		LR	15 08 04.3	
	comp=Z,362nm,20.6s,baz=248,slow=33							
WRA	**Warramunga Arr**	**45.68**	**164**	P		**P**	**14 54 22.1**	**+2.9**
	1.6nm,0.8s,baz=348,slow=8.6,SNR=6.9							
	1.6nm,0.8s							
ASAR	**Alice Springs**	**49.17**	**166**	P		**P**	**14 54 49.7**	**+3.3**
	0.4nm,0.8s,baz=350,slow=7.6,SNR=3.1							
	0.4nm,0.8s							

MOS ***05*** *15:04:35.7±1.2, 6˚.62S×155˚.54E, h69km, mb5.1/24, Error ellipse: s-maj=9.2km s-min=7.3km az=100.8*
BJI ***05*** *15:04:36.8±0.0, 6˚.37S×155˚.67E, h73km, mb4.8/55, mB4.9/29, Ms4.5/8, Ms7 4.1/8*
IDC ***05*** *15:04:36.6±0.4, 6˚.71S×155˚.63E, h68km±3km, mb4.5/24, mbtmp4.8/25, MS3.7/43, Error ellipse: s-maj=13.0km s-min=9.5km az=86.0*
GCMT ***05*** *15:04:38.2±0.2, 6˚.83S±0˚.01×155˚.62E±0˚.01, h70km±1km, MW5.0/105, Moment Tensor Solution. s94,c115; s105,c159; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.15±.10; Mθθ-3.47±.10; Mϕϕ-0.67±.10; Mrθ-0.52±.09; Mθϕ2.81±.09; Mϕr0.93±.08; Best double couple: M₀4.81300×10¹⁶ NP1:φs310.00000°, δ51.00000°, λ102.00000°. NP2:φs112.00000°, δ40.00000°, λ76.00000°. Principal axes: T 4.3240, Plg79.0000°, Azm270.0000°; N 0.9840, Plg9.0000°, Azm123.0000°; P -5.3020, Plg6.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***05*** *15:04:38.2±1.3, 6˚.72S±0˚.08×155˚.68E±0˚.08, h78km±5km, mb5.1/60 Error ellipse: s-maj=13.5km s-min=9.4km az=222.0*
DJA ***05*** *15:04:39.2±0.5, 7˚S±3˚×15˚6E±˚, h118km±5km, M5.1/54, mb5.4/54, mB5.6/29, MLv5.4/2, Mw(mB)5.1/29, MwMwp5.0/1, Mwp5.3/1*

ISC 05 15:04:36.9±0.3, 6˚.70S±0˚.04×155˚.63E±0˚.04, h72km±2km, h72km:pP-P, n497, σ1§14/534, mb5.1/108, 11C-15D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
RABL	**Rabaul**	**4.26**	**306**	Pn		**Pn**	**15 05 43.1**	**+3.8**
RABL	**Rabaul**	**4.26**	**306**	P		Pn	15 05 44.8	+5.5
KRVT	**Keravat (AS076**	**4.30**	**303**	P		**Pn**	**15 05 42.5**	**+2.6**
	91nm,0.3s,baz=354,slow=0.7,SNR=16							
HNR	**Honiara**	**5.06**	**123**	P		**Pn**	**15 05 51.9**	**+1.5**
	411nm,0.9s,baz=234,slow=3.7,SNR=37							
HNR				S		**Sn**	**15 06 52.9**	**+5.4**
	1μm,0.9s,baz=322,slow=22,SNR=7.3							
HNR	**Honiara**	**5.06**	**123**	Pn		**Pn**	**15 05 51.5**	**+1.2**
HNR	**Honiara**	**5.06**	**123**	P		**Pn**	**15 05 53.9**	**+3.6**
PMG	**Port Moresby**	**8.81**	**252**	P		**Pn**	**15 06 44.3**	**+2.8**
	357nm,0.4s,baz=44,slow=9.0,SNR=78							
PMG				S		**Sn**	**15 08 25.7**	**+6.5**
	360nm,0.6s,baz=43,slow=22,SNR=9.0							
PMG				LR		LR	15 10 00.5	
	comp=Z,911nm,21.5s,baz=60,slow=37							
MANU	**Manus Island**	**9.45**	**299**			**Pn**	**15 06 51.5**	**+1.2**
PATS	**Pohnpei**	**13.71**	**11**	P		**Pn**	**15 07 49.0**	**+0.8**
	baz=14,SNR=9.5							
PATS	**Pohnpei**	**13.71**	**11**	Pn		**Pn**	**15 07 47.8**	**-0.4**
PATS	**Pohnpei**	**13.71**	**11**	P		**Pn**	**15 07 49.4**	**+1.2**
COEN	**Coen**	**14.21**	**239**	P		**Pn**	**15 07 57.0**	**+2.2**
	baz=14,SNR=24							
COEN	**Coen**	**14.21**	**239**	Pn		**Pn**	**15 07 57.2**	**+2.4**
COEN	**Coen**	**14.21**	**239**	P		**P**	**15 07 58.5**	**-1.5**
MTSU	**Mount Surprise**	**15.84**	**223**	P		**P**	**15 08 18.7**	**+0.6**
	baz=16,SNR=22							
MTSU	**Mount Surprise**	**15.84**	**223**	P		**P**	**15 08 20.2**	**+2.1**
CTA	**Charters Tower**	**16.12**	**213**	P		**P**	**15 08 21.4**	**+0.2**
CTA				pmax		pmax		
	comp=Z,56nm,0.8s							
CTA	**Charters Tower**	**16.12**	**213**	P		**P**	**15 08 23.8**	**+2.6**
CTAO	**Charters Tower**	**16.12**	**213**	P		**P**	**15 08 22.0**	**+0.8**
CTAO	**Charters Tower**	**16.12**	**213**	P		**P**	**15 08 22.0**	**+0.8**
CTAO				pmax		pmax		
	comp=Z,40nm,0.9s							
CTAO	**Charters Tower**	**16.12**	**213**	P		**P**	**15 08 23.9**	**+2.7**
RK1H	**Rockhampton Ha**	**17.31**	**196**	P		**P**	**15 08 37.8**	**+3.5**
SMPI	**Sarmi**	**17.50**	**285**	P		**P**	**15 08 37.9**	**+1.4**
	comp=Z,799nmcomp=Z,91nm,0.9s							
NOUC	**Port Laguerre**	**18.46**	**147**	P		**Pn**	**15 08 48.9**	**+1.1**
DZM	**Mont Dzumac**	**18.51**	**147**	P		**Pn**	**15 08 49.8**	**+1.2**
	comp=Z,54nm,0.9s,baz=316,slow=9.5,SNR=18							
DZM				LR		LR	15 14 47.4	
	comp=Z,407nm,21.2s,baz=345,slow=33							
DZM	**Mont Dzumac**	**18.51**	**147**	*e*P		**Pn**	**15 08 48.7**	**+0.1**
	comp=Z,122nm,0.9s							
DZM				*e*LR		LR	15 13 11.3	
	comp=Z,1μm,31.0s							
DZM	**Mont Dzumac**	**18.51**	**147**	P		**Pn**	**15 08 48.2**	**-0.4**
DZM	**Mont Dzumac**	**18.51**	**147**	P		**Pn**	**15 08 50.2**	**+1.6**
YATC	**Mamie plateau,**	**18.75**	**146**

comp=Z,21nm,0.9s
MTN Manton Dam 24.89 254 P **P** **15 09 54.0 +0.7**
baz=25,SNR=38
MTN Manton Dam 24.89 254 P **P** **15 09 54.0 +0.7**
MTN IAmb IAmb 15 09 55.3
comp=Z,148nm,0.9s
SIJI Sorong 24.98 282 P **P** **15 09 54.4 +0.3**
comp=Z,138nm,0.8s,baz=81,slow=7.4,SNR=27
comp=Z,138nm,0.8s
SWI Sorong 24.99 282 P **P** **15 09 54.7 +0.5**
SWI pmax pmax
comp=Z,259nm,0.9s
SWI Sorong 24.99 282 P **P** **15 09 54.0 -0.2**
comp=Z,2µmcomp=Z,260nm,0.9s
INKA Innaminka 25.24 212 P **P** **15 09 56.6 +0.3**
CMSA Cobar Meteorol 26.40 199 P **P** **15 10 07.0 +0.2**
baz=26,SNR=25
CMSA Cobar Meteorol 26.40 199 P **P** **15 10 07.0 +0.2**
AS31 Alice Springs 26.84 229 P **P** **15 10 11.0 +0.1**
ASAR Alice Springs 26.84 229 P **P** **15 10 10.9 +0.1**
comp=Z,44nm,0.7s,baz=62,slow=8.7,SNR=737
ASAR PcP **PcP** **15 13 31.7 -0.3**
comp=Z,5.2nm,0.8s,baz=65,slow=2.4,SNR=6.0
ASAR S **S** **15 14 41.1 -1.3**
comp=Z,1.6nm,1.0s,baz=58,slow=12,SNR=2.0
ASAR LR LR 15 20 06.3
comp=Z,354nm,21.4s,baz=62,slow=35
comp=Z,44nm,0.7s
ASAR Alice Springs 26.84 229 P **P** **15 10 10.7 -0.2**
H11S3 WAKE ISLAND Hy 27.31 23 T T 15 38 39.9
baz=203,slow=75,SNR=77
H11S2 WAKE ISLAND Hy 27.31 23 T T 15 38 41.5
baz=203,slow=75,SNR=70
H11S1 WAKE ISLAND Hy 27.33 23 T T 15 38 46.4
baz=203,slow=75,SNR=79
AAI Ambon 27.48 275 P **P** **15 10 16.3 -0.4**
AAI pmax pmax
comp=Z,74nm,0.8s
KNRA Kununurra 27.79 249 P **P** **15 10 19.7 +0.2**
baz=28,SNR=9.3
KNRA Kununurra 27.79 249 P **P** **15 10 19.3 -0.1**
KNRA IAmb IAmb 15 10 20.7
comp=Z,34nm,0.9s
KNRA Kununurra 27.79 249 P **P** **15 10 19.7 +0.2**
OOD Oodnadatta 28.24 220 P **P** **15 10 23.0 -0.3**
STKA Stephens Creek 28.27 206 P **P** **15 10 23.4 -0.1**
comp=Z,29nm,1.1s,baz=22,slow=10,SNR=19
STKA PcP **PcP** **15 13 34.6 -0.7**
comp=Z,10nm,0.8s,baz=20,slow=3.3,SNR=5.4
STKA LR LR 15 21 14.3
comp=Z,333nm,21.1s,baz=26,slow=35
comp=Z,29nm,1.1s
STKA Stephens Creek 28.27 206 P **P** **15 10 23.6 0.0**
baz=28,SNR=5.2
STKA Stephens Creek 28.27 206 P **P** **15 10 23.8 +0.3**
STKA PcP **PcP** **15 13 34.2 -1.1**
STKA Stephens Creek 28.27 206 ⇑*i*P **P** **15 10 23.2 -0.3**
H11N1 WAKE ISLAND Hy 28.49 23 T T 15 40 15.2
baz=204,slow=76,SNR=32
H11N3 WAKE ISLAND Hy 28.50 23 T T 15 40 08.9
baz=204,slow=76,SNR=81
H11N2 WAKE ISLAND Hy 28.51 23 T T 15 40 30.2
baz=204,slow=76,SNR=23
LBMI Labuha 28.70 281 P **P** **15 10 27.5 0.0**
comp=Z,2µmcomp=Z,147nm,0.8s
LCRK Leigh Creek 28.73 213 P **P** **15 10 27.4 -0.2**
CNB Canberra Magne 29.06 191 P **P** **15 10 31.6 +1.0**
baz=29,SNR=8.1
CNB Canberra Magne 29.06 191 P **P** **15 10 31.5 +1.0**
CAN Canberra 29.13 191 P **P** **15 10 31.4 +0.2**
CAN IAmb IAmb 15 10 33.6
comp=Z,26nm,1.1s
CAN Canberra 29.13 191 P **P** **15 10 31.4 +0.2**
CAN pmax pmax
comp=Z,26nm,1.1s
HTT Hallett 30.78 208 P **P** **15 10 46.0 +0.2**
baz=31,SNR=7.8
HTT Hallett 30.78 208 P **P** **15 10 46.1 +0.2**
MULG Mulgathing 31.00 218 P **P** **15 10 46.9 -0.8**
FITZ Fitzroy Crossi 31.35 246 P **P** **15 10 50.7 -0.2**
comp=Z,46nm,0.8s,baz=93,slow=8.8,SNR=9.6
FITZ LR LR 15 23 21.1
comp=Z,250nm,21.8s,baz=78,slow=36
comp=Z,46nm,0.8s
FITZ Fitzroy Crossi 31.35 246 P **P** **15 10 50.7 -0.2**
baz=31,SNR=37
FITZ Fitzroy Crossi 31.35 246 P **P** **15 10 50.7 -0.2**
FITZ IAmb IAmb 15 10 51.7
comp=Z,46nm,0.8s
FITZ Fitzroy Crossi 31.35 246 P **P** **15 10 50.7 -0.2**
BBOO Buckleboo 31.72 212 P **P** **15 10 53.7 -0.3**
baz=32,SNR=12
BBOO Buckleboo 31.72 212 P **P** **15 10 53.7 -0.3**
BBOO IAmb IAmb 15 10 54.7
comp=Z,52nm,1.1s
BBOO Buckleboo 31.72 212 P **P** **15 10 53.6 -0.4**
SGSI Sangihe 31.77 288 P **P** **15 10 53.4 -1.3**
comp=Z,2µmcomp=Z,178nm,1.0s
WRKA Warakurna 31.88 232 P **P** **15 10 55.1 -0.5**
baz=32,SNR=58
WRKA Warakurna 31.88 232 P **P** **15 10 54.8 -0.8**
TOO Toolangi 32.08 195 P **P** **15 10 57.9 +0.7**
baz=32,SNR=5.3
TOO Toolangi 32.08 195 P **P** **15 10 57.7 +0.5**
TOO PcP **PcP** **15 13 45.9 +0.7**
TOO Toolangi 32.08 195 P **P** **15 10 57.7 +0.5**
TOO 15 13 45.9
TOO pmax pmax
comp=Z,10.0nm,0.8s
TWOA Tennyson Woods 32.27 207 P **P** **15 10 59.4 +0.6**
KMSI Cibinong 32.40 282 P **P** **15 10 59.7 -0.5**
comp=Z,2µmcomp=Z,231nm,0.6s
ARPS Mount Arapiles 32.47 201 P **P** **15 11 01.1 +0.6**
baz=33,SNR=27
ARPS Mount Arapiles 32.47 201 P **P** **15 11 01.1 +0.6**
BBSI Bau Bau 32.89 270 P **P** **15 11 03.9 -0.6**
comp=Z,123nmcomp=Z,12nm,0.9s
DAV Davao City (W) 32.95 294 LR LR 15 24 24.8
comp=Z,51nm,18.2s,baz=105,slow=36
MMRI Maumere 33.14 264 P **P** **15 11 06.0 -0.7**
MMRI Maumere 33.14 264 P **P** **15 11 06.1 -0.6**
comp=Z,2µmcomp=Z,197nm,0.6s
MMRI Maumere 33.14 264 P **P** **15 11 06.8 +0.1**
EDFI Ende, Flores 33.69 264 P **P** **15 11 10.2 -1.4**
comp=Z,642nmcomp=Z,59nm,1.2s
MRSI Marisa 34.36 281 P **P** **15 11 15.8 -1.5**
comp=Z,37nm,0.9s
APSI Ampana 34.37 278 P **P** **15 11 18.3 +0.9**
comp=Z,714nmcomp=Z,89nm,1.0s
GLAD Gladstone 34.81 190 P **P** **15 11 22.0 +1.2**
BASI Baing, Sumba 34.83 262 P **P** **15 11 20.8 -0.6**
comp=Z,155nm,0.9s
BSSI Bau Bau, Buton 34.92 269 P **P** **15 11 21.9 -0.2**
comp=Z,1µmcomp=Z,145nm,1.0s
FORT Forrest 35.23 224 P **P** **15 11 24.6 0.0**
baz=35,SNR=53
FORT Forrest 35.23 224 P **P** **15 11 24.7 0.0**
FORT Forrest 35.23 224 P **P** **15 11 24.4 -0.2**
BKSI Bulukumba 35.33 270 P **P** **15 11 25.1 -0.6**
TOLI2 Tolitoli 35.63 281 P **P** **15 11 27.7 -0.6**
KAPI Kappang 35.72 271 LR LR 15 28 57.9
comp=Z,47nm,18.3s,baz=92,slow=41
KAPI Kappang 35.72 271 P **P** **15 11 29.3 +0.3**
KAPI Kappang 35.72 271 P **P** **15 11 29.3 +0.3**
KAPI pmax pmax
comp=Z,75nm,0.9s
SPSI Sidrap Palu 35.80 272 P **P** **15 11 29.3 -0.4**
comp=Z,36nm,1.0s
WBSI Waikabubak, Su 35.98 263 P **P** **15 11 30.5 -0.7**
comp=Z,91nm,0.9s
MPSI Mapaga 36.33 280 P **P** **15 11 33.5 -0.7**
comp=Z,1µmcomp=Z,134nm,0.9s
MOO Moorlands 36.37 191 P **P** **15 11 35.8 +1.6**
baz=36,SNR=3.6
MOO Moorlands 36.37 191 P **P** **15 11 35.3 +1.1**
TAU Tasmania Unive 36.80 190 P **P** **15 11 38.1 +0.3**
TAU IAmb IAmb 15 11 40.2
comp=Z,48nm,0.9s
TAU Tasmania Unive 36.80 190 P **P** **15 11 38.1 +0.3**
TAU pmax pmax
comp=Z,48nm,0.9s
TAU Tasmania Unive 36.80 190 P **P** **15 11 39.2 +1.4**
URZ Urewera 36.96 151 LR LR 15 24 39.2
comp=Z,156nm,19.6s,baz=26,slow=32
URZ Urewera 36.96 151 P **P** **15 11 41.0 +1.8**
BKZ Black Stump Fm 37.40 153 P **P** **15 11 42.7 -0.3**
BKZ IAmb IAmb 15 11 56.7
comp=Z,26nm,1.2s
PLAI Plampang 37.55 264 P **P** **15 11 43.4 -1.2**
comp=Z,1µmcomp=Z,165nm,0.8s
PLAI Plampang 37.55 264 P **P** **15 11 42.9 -1.7**
MBWA Marble Bar 37.57 244 P **P** **15 11 44.1 -0.6**
MBWA Marble Bar 37.57 244 P **P** **15 11 44.4 -0.3**
MBWA Marble Bar 37.57 244 P **P** **15 11 43.4 -1.3**
MBWA pP **pP** **15 12 00.9 -0.9**
MBWA sP **sP** **15 12 09.0 -1.0**
PSA00 Pilbara Seismi 37.59 243 P **P** **15 11 43.5 -1.3**
PSA00 IAmb IAmb 15 11 46.2
comp=Z,22nm,0.9s
PSA00 Pilbara Seismi 37.59 243 P **P** **15 11 44.5 -0.3**
SNZO South Karori 38.43 157 P **P** **15 11 49.5 -2.0**
TWSI Taliwang, Sumb 38.44 264 P **P** **15 11 51.7 -0.3**
comp=Z,32nm,1.2s
KHZ Kahutara 38.94 159 P **P** **15 11 55.7 -0.1**
RPZ Rata Peaks 39.28 162 P **P** **15 11 59.1 +0.4**
comp=Z,28nm,0.9s,baz=140,slow=1.0,SNR=7.6
RPZ LR LR 15 26 40.9
comp=Z,167nm,18.8s,baz=326,slow=34
comp=Z,28nm,0.9s
RPZ Rata Peaks 39.28 162 P **P** **15 11 59.2 +0.5**
MEEK Meekatharra 40.40 236 P **P** **15 12 08.1 -0.2**
baz=40,SNR=31
MEEK Meekatharra 40.40 236 P **P** **15 12 08.3 0.0**
KKM Kota Kinabalu 41.32 287 P **P** **15 12 15.7 -0.4**
KKM Kota Kinabalu 41.32 287 P **P** **15 12 15.2 -0.9**
JHJ Hachijo jima 2 42.37 340 LR LR 15 27 14.7
comp=Z,26nm,21.9s,baz=115,slow=32
JOW Kunigami 42.59 323 LR LR 15 29 39.1
comp=Z,48nm,18.4s,baz=46,slow=35
GIRL Giralia 42.88 244 P **P** **15 12 29.5 +0.9**
baz=43,SNR=4.5
GIRL Giralia 42.88 244 P **P** **15 12 28.9 +0.4**
GIRL Giralia 42.88 244 P **P** **15 12 29.2 +0.6**
KLBR Kellerberrin 43.16 230 P **P** **15 12 30.0 -0.7**
baz=43,SNR=70
KLBR Kellerberrin 43.16 230 P **P** **15 12 30.1 -0.6**
PWJI Pagerwojo 43.47 265 P **P** **15 12 31.7 -1.7**
comp=Z,32nm,0.5s
BLDU Ballidu 43.53 232 P **P** **15 12 33.4 -0.4**
baz=44,SNR=23
BLDU Ballidu 43.53 232 P **P** **15 12 33.3 -0.4**
PBKI Pangkalan Bun 43.98 273 P **P** **15 12 35.7 -1.8**
comp=Z,2µmcomp=Z,256nm,1.2s
NWAO Narrogin (SRO) 44.16 229 P **P** **15 12 37.4 -1.3**
NWAO IAmb IAmb 15 12 39.4
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 44.16 229 P **P** **15 12 37.4 -1.3**
NWAO pmax pmax
comp=Z,28nm,0.9s
NWAO Narrogin (SRO) 44.16 229 P **P** **15 12 38.1 -0.6**
SBUM Sibu 44.27 280 P **P** **15 12 37.6 -2.2**
SBUM IAmb IAmb 15 12 42.2
comp=Z,47nm,1.1s
MUN Mundaring 44.51 230 P **P** **15 12 41.3 -0.1**
baz=45,SNR=13
MUN Mundaring 44.51 230 P **P** **15 12 41.4 -0.1**
UGM Wanagama 44.74 266 P **P** **15 12 41.6 -2.0**
comp=Z,113nm,1.3s
YULB Yu-li 44.94 313 P **P** **15 12 45.2 +0.2**
YULB IAmb IAmb 15 13 04.6
comp=Z,12nm,0.7s
JYT Yasato 45.09 342 P **P** **15 12 46.5 +0.5**
JYT IAmb IAmb 15 12 49.1
comp=Z,44nm,0.9s
RKGY Rocky Gully 45.14 227 P **P** **15 12 47.5 +1.0**
baz=45,SNR=7.5
JMN Monobe 45.19 334 P **P** **15 12 46.7 -0.1**
TPUB Ta-pu 45.37 312 P **P** **15 12 48.6 +0.2**
TPUB IAmb IAmb 15 13 08.0
comp=Z,16nm,0.7s
JGF Kuroka 45.46 339 P **P** **15 12 49.6 +0.6**
KSM Kuching 45.96 279 P **P** **15 12 53.3 0.0**
KSM Kuching 45.96 279 P **P** **15 12 53.6 +0.4**
MJAR Matsushiro Arr 46.01 340 P **P** **15 12 52.9 -0.4**
comp=Z,7.2nm,0.8s,baz=155,slow=8.9,SNR=17
MJAR pP **pP** **15 13 11.2 -0.1**
comp=Z,5.4nm,0.8s,baz=156,slow=9.5,SNR=4.9
MJAR LR LR 15 31 16.2
comp=Z,50nm,20.9s,baz=164,slow=35
comp=Z,7.2nm,0.8s
MAJO Matsushiro 46.01 340 P **P** **15 12 53.0 -0.3**
MAJO IAmb IAmb 15 12 54.7
comp=Z,15nm,0.8s
MAJO Matsushiro 46.01 340 *i*P **P** **15 12 51.9 -1.4**
MAJO pmax pmax
comp=Z,15nm,0.8s
MAJO Matsushiro 46.01 340 P **P** **15 12 53.6 +0.3**
MAJO Matsushiro 46.01 340 P **P** **15 12 52.6 -0.7**
MAJO pP **pP** **15 13 11.2 -0.2**
MAJO sP **sP** **15 13 22.1 +2.4**
JNU Nakatsue 46.06 331 P **P** **15 12 53.7 -0.1**
JHS Saijyo 46.60 334 P **P** **15 12 58.3 +0.4**
JSD Sado 47.36 341 P **P** **15 13 04.4 +0.6**
JSD IAmb IAmb 15 13 07.0
comp=Z,14nm,0.7s
LEM Lembang 47.66 267 P **P** **15 13 06.6 -0.1**
LEM pmax pmax
comp=Z,71nm,0.8s
LEM Lembang 47.66 267 P **P** **15 13 04.9 -1.8**
comp=Z,45nm,0.8s
CNJI Cibinong 48.12 266 P **P** **15 13 08.7 -1.4**
comp=Z,2µmcomp=Z,192nm,0.9s
SKJI Sukabumi 48.70 267 P **P** **15 13 12.5 -2.1**
comp=Z,141nm,0.7s
PPBI Pangkal Pinang 49.53 273 P **P** **15 13 20.2 -0.7**
TJN Taejon 50.39 330*ce*P **P** **15 13 27.0 0.0**
KSRS Korea Array 50.98 332 P **P** **15 13 31.6 +0.2**
comp=Z,5.3nm,0.9s,baz=152,slow=8.7,SNR=28
KSRS pP **pP** **15 13 49.3 -0.4**
comp=Z,2.0nm,0.6s,baz=144,slow=6.9,SNR=4.1
KSRS PcP **PcP** **15 14 47.2 +0.5**
comp=Z,2.6nm,0.8s,baz=157,slow=4.0,SNR=7.1
KSRS LR LR 15 34 28.4
comp=Z,27nm,19.9s,baz=135,slow=35
comp=Z,5.3nm,0.9s
NJ2 Nanjing 52.09 320 *e*P **P** **15 13 40.5 +0.7**
NJ2 pmax pmax
comp=Z,12nm,0.7s
MYKOM Kota Tinggi 52.36 277 P **P** **15 13 42.2 0.0**
WHN Wuhan 54.17 315 ⇓P **P** **15 13 56.0 +0.9**
WHN pmax pmax
comp=Z,30nm,0.6s
GULI GuiLin 54.29 308 ⇓P **P** **15 13 58.9 +2.8**
PPT Papeete 54.48 107 LR LR 15 32 22.1
comp=Z,36nm,21.1s,baz=296,slow=31
PPT2 Papeete2 54.48 107 *e*S **S** **15 21 28.5 -3.2**
comp=Z,83nm,29.2s
PPT2 *e*LR LR 15 29 50.7
comp=Z,160nm,28.8s
YSS Yuzh-Sakhalins 54.63 349 *e*P **P** **15 13 58.6 +0.5**
YSS *e*S **S** **15 21 33.3 +0.8**
YSS *e*PS **PnS** **15 21 51.5 -1.1**
YSS pmax pmax
comp=Z,200nm,3.8s
YSS pmax pmax
comp=Z,30nm,1.0s
USRK Ussuriysk Ar. 54.98 339 P **P** **15 14 01.4 +0.7**
comp=Z,13nm,0.8s,baz=167,slow=7.4,SNR=20
USRK pP **pP** **15 14 19.1 -0.2**
comp=Z,19nm,0.9s,baz=156,slow=6.0,SNR=10
USRK LR LR 15 36 38.4
comp=Z,18nm,20.4s,baz=233,slow=35
comp=Z,13nm,0.8s
USRK Ussuriysk Ar. 54.98 339 P **P** **15 14 01.2 +0.5**
IPM Ipoh 55.62 280 P **P** **15 14 05.7 -0.3**
IPM Ipoh 55.62 280 P **P** **15 14 05.8 -0.2**
TIA Tai'an 55.91 323 ⇓P **P** **15 14 07.5 -0.1**
TIA pmax pmax
comp=Z,6.0nm,1.0s
KULM Kulim 56.15 281 P **P** **15 14 09.1 -0.7**
MDJ Mudanjiang 56.20 338 P **P** **15 14 10.1 +0.6**
MDJ pmax pmax
comp=Z,10.0nm,1.4s
MDJ pmax pmax
comp=Z,79nm,4.8s
CN2 Changchun 57.20 334 *e*P **P** **15 14 17.8 +1.2**
CN2 pP pP 15 14 36.7 +1.5
CN2 pmax pmax
comp=Z,10.0nm,0.6s
PSI Prapat 57.38 278 P **P** **15 14 16.9 -1.7**
PSI pmax pmax
comp=Z,127nm,0.6s
ENH Enshi 57.50 312 P **P** **15 14 18.6 -0.4**
ENH pP **pP** **15 14 37.2 -0.4**
BNX BinXian 57.98 337 ⇓P **P** **15 14 22.8 +0.8**
BNX pmax pmax
comp=Z,13nm,1.0s
BNX pmax pmax
comp=Z,120nm,5.4s
HNS HongShan 58.16 322 ⇓P **P** **15 14 24.3 +0.9**
TYV Tymovskoe 58.42 350 *e*P **P** **15 14 26.3 +1.3**
TYV *e*S **S** **15 22 26.7 +4.2**
TYV pmax pmax
comp=Z,19nm,1.3s
TYV pmax pmax
comp=Z,100nm,2.4s
TYV smax smax
comp=N,200nm,2.4s
TYV smax smax
comp=E,100nm,2.4s
GSI Gunungsitoli 58.48 276 P **P** **15 14 24.8 -1.3**
GSI Gunungsitoli 58.48 276 P **P** **15 14 24.9 -1.3**
KLR Kul'dur 59.48 342 *i*P **P** **15 14 32.1 -0.3**
KLR pmax pmax
comp=Z,13nm,1.4s
PET Petropavlovsk 59.55 2 *e*P **P** **15 14 34.1 +1.4**
PET *e**PP **pP** **15 14 54.0 +2.4**
PET *e*S **S** **15 22 38.0 +1.0**
PET *e*SS **SS** **15 26 33.1 -0.6**
PET pmax pmax
comp=Z,14nm,0.9s
GRNR Gornyy 59.60 346 ⇑*i*P **P** **15 14 34.4 +1.2**
GRNR pmax pmax
comp=Z,6.0nm,1.2s
PEA0B Petropavlovsk- 59.60 1 P **P** **15 14 34.4 +1.2**
PEA0B IAmb IAmb 15 14 50.3
comp=Z,29nm,1.1s
PEA0B Petropavlovsk- 59.60 1*ce*P **P** **15 14 33.2 0.0**
PETK Petropavlovsk- 59.60 1 P **P** **15 14 34.5 +1.3**
comp=Z,12nm,1.0s,baz=94,slow=9.1,SNR=8.4
PETK pP **pP** **15 14 53.3 +1.3**
comp=Z,64nm,1.2s,baz=134,slow=6.4,SNR=11
PETK LR LR 15 36 24.8
comp=Z,83nm,21.7s,baz=173,slow=32
comp=Z,12nm,1.0s
PETK Petropavlovsk- 59.60 1 P **P** **15 14 34.7 +1.5**
PETK Petropavlovsk- 59.60 1 P **P** **15 14 34.7 +1.5**
XAN Xi'an 59.93 316 P **P** **15 14 35.5 -0.4**
XAN pP pP 15 14 52.7 -1.8
XAN pmax pmax
comp=Z,14nm,0.9s
KMI Kunming 60.38 304 ⇑P **P** **15 14 42.6 +3.3**
KMI pP pP 15 14 59.2 +1.3
KMI LR LR
comp=Z,160nm,21.8s
KMI LR LR
comp=Z,180nm,27.9s
DRV Dumont d'Urvil 60.83 187 P **P** **15 14 40.4 -0.9**
DRV pP **pP** **15 14 58.7 -1.3**
CMAR Chiang Mai Arr 61.23 295 P **P** **15 14 45.4 +0.5**
comp=Z,10nm,0.8s,baz=116,slow=5.0,SNR=54
CMAR pP **pP** **15 15 02.9 -0.7**
comp=Z,7.3nm,0.8s,baz=113,slow=5.5,SNR=5.7
CMAR LR LR 15 39 00.6
comp=Z,21nm,21.6s,baz=125,slow=34
comp=Z,10nm,0.8s
CMAR Chiang Mai Arr 61.23 295 P **P** **15 14 45.1 +0.2**
CMAR Chiang Mai Arr 61.23 295*ce*P **P** **15 14 46.0 +1.1**
CMAR pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 61.34 296 P **P** **15 14 43.0 -2.7**
CHTO pmax pmax
comp=Z,11nm,0.9s
CHTO Chiang Mai 61.34 296 P **P** **15 14 45.3 -0.3**
CHTO pP **pP** **15 15 03.8 -0.6**
XLT XiLinHaoTe 61.73 328 ⇑*i*P **P** **15 14 48.5 +0.5**
XLT pP pP 15 15 08.2 +1.5
XLT sP sP 15 15 18.8 +4.0
XLT pmax pmax
comp=Z,19nm,1.0s
XLT pmax pmax
comp=Z,89nm,3.8s
PZH PanZhiHua 61.76 305 P **P** **15 14 49.7 +1.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,80nm,6.4s
CD2 Chengdu 62.10 310 P **P** **15 14 50.9 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 62.23 323 *e*P **P** **15 14 55.2 +3.8**
HHC pmax pmax
comp=Z,22nm,0.6s
HHC pmax pmax
comp=Z,87nm,7.3s
BTO Baotou 63.01 322 *e*P **P** **15 14 59.1 +2.6**
LZH Lanzhou 64.55 315 ⇓P **P** **15 15 08.0 +1.1**
LZH pP pP 15 15 28.5 +2.8
LZH sP sP 15 15 36.3 +2.6
LZH pmax pmax
comp=Z,23nm,1.3s
ZEA Zeya 64.79 342 *e*P **P** **15 15 09.1 +1.3**
ZEA *e* 15 15 27.8
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,0.9s
MA2 Magadan 66.18 357 pP **pP** **15 15 36.4 +0.7**
comp=Z,24nm,1.0s,baz=137,slow=6.0,SNR=7.5
MA2 LR LR 15 41 11.7
comp=Z,60nm,21.8s,baz=172,slow=33
CASY Casey 67.07 198 P **P** **15 15 21.2 -1.1**
CASY IAmb IAmb 15 15 40.7
comp=Z,23nm,1.0s
GTA Gaotai 68.96 317 *e*P **P** **15 15 35.2 +0.4**
GTA pP pP 15 15 53.9 -0.1
GTA sP sP 15 16 03.6 +1.7
GTA pmax pmax
comp=Z,5.0nm,1.2s
ULN Ulaanbaatar 69.09 327 P **P** **15 15 34.7 -0.8**
ULN IAmb IAmb 15 15 37.7
comp=Z,13nm,0.9s
ULN Ulaanbaatar 69.09 327*ce*P **P** **15 15 35.6 +0.1**
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 69.09 327 P **P** **15 15 36.0 +0.5**
ULN pP **pP** **15 15 54.1 -0.5**
SONM Songino Array 69.43 327 P **P** **15 15 38.4 +0.8**
comp=Z,14nm,0.9s,baz=132,slow=6.0,SNR=26
SONM pP **pP** **15 15 55.9 -0.8**
comp=Z,6.3nm,0.5s,baz=146,slow=5.4,SNR=7.5
SONM LR LR 15 46 28.0
comp=Z,30nm,19.8s,baz=94,slow=36
comp=Z,14nm,0.9s
SONM Songino Array 69.43 327 P **P** **15 15 37.9 +0.4**
SONM IAmb IAmb 15 15 39.5
comp=Z,14nm,0.9s
SONM PcP **pP** **15 15 56.5 -0.2**
SEY Seymchan 69.48 358 P **P** **15 15 37.9 +0.6**
comp=Z,2.8nm,1.0s,baz=211,slow=1.8,SNR=4.8
SEY pP **pP** **15 15 56.5 0.0**
comp=Z,5.5nm,0.8s,baz=178,slow=7.2,SNR=7.9
comp=Z,2.8nm,1.0s
SEY Seymchan 69.48 358*ce*P **P** **15 15 36.8 -0.5**
SEY pmax pmax
comp=Z,16nm,3.3s
CCD Concordia, Ant 70.79 188 P **P** **15 15 44.5 -1.2**
CCD pP **pP** **15 16 03.2 -1.6**
VNDA Vanda 70.86 179 P **P** **15 15 46.0 +0.4**
comp=Z,5.5nm,0.9s,baz=334,slow=7.0,SNR=35
VNDA pP **pP** **15 16 04.0 -0.6**
comp=Z,9.0nm,1.0s,baz=335,slow=6.4,SNR=10.0
VNDA LR LR 15 41 18.4
comp=Z,98nm,21.0s,baz=358,slow=31
comp=Z,5.5nm,0.9s
VNDA Vanda 70.86 179 P **P** **15 15 46.4 +0.8**
VNDA PcP **pP** **15 16 04.5 -0.2**
VNDA IAmb IAmb 15 16 04.8
comp=Z,17nm,1.1s
VNDA Vanda 70.86 179 P **P** **15 15 46.4 +0.8**
VNDA 15 16 04.5
VNDA Vanda 70.86 179 P **P** **15 15 44.6 -1.0**
VNDA pP **pP** **15 16 03.0 -1.7**
GOMU GeErMu 71.12 312 P **P** **15 15 49.1 +0.7**
GOMU pmax pmax
comp=Z,3.0nm,0.5s

GOMU pmax pmax
comp=Z,63nm,5.3s
S12K Black Hills 71.32 24 P **P** **15 15 49.5 +0.7**
baz=225
SBA Scott Base 71.35 178 P **P** **15 15 49.9 +1.3**
SBA IAmb IAmb 15 15 51.4
comp=Z,17nm,1.1s
SBA Scott Base 71.35 178 P **P** **15 15 49.9 +1.3**
SBA pmax pmax
comp=Z,17nm,1.1s
SBA Scott Base 71.35 178 P **P** **15 15 48.9 +0.3**
SBA pP **pP** **15 16 06.6 -1.1**
YAK Yakutsk 71.41 347 P **P** **15 15 49.9 +0.8**
comp=Z,6.6nm,0.7s,baz=112,slow=2.4,SNR=11
YAK pP **PcP** **15 16 08.2 0.0**
comp=Z,3.3nm,0.4s,baz=75,slow=2.3,SNR=3.2
YAK LR LR 15 47 19.5
comp=Z,24nm,19.3s,baz=126,slow=36
comp=Z,6.6nm,0.7s
YAK Yakutsk 71.41 347 *e*P **P** **15 15 51.1 +2.0**
YAK *e* 15 16 08.2
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.2s
SDPT Sand Point 71.72 25 P **P** **15 15 51.9 +0.8**
baz=226
BOD Bodaibo 72.58 338 *e*P **P** **15 15 56.5 +0.3**
BOD pmax pmax
comp=Z,12nm,1.9s
ZAK Zakamensk 72.58 328 *e*P **P** **15 15 56.3 -0.2**
ZAK pmax pmax
comp=Z,11nm,1.1s
CHIR Chirikof Islan 74.10 26 P **P** **15 16 06.1 +0.9**
baz=231
MOY Mondy 74.49 328 *e*P **P** **15 16 08.6 +0.9**
MOY pmax pmax
comp=Z,14nm,1.3s
BILL Bilibino 74.94 4 *de*P **P** **15 16 10.5 +0.7**
BILL *e* 15 16 25.3
BILL *e*PP **pP** **15 16 30.7 +1.3**
BILL *e*SP **sP** **15 16 39.7 +2.2**
BILL *e* 15 18 53.8
BILL pmax pmax
comp=Z,30nm,1.3s
BILL MLR MLR
comp=Z,47nm,20.0s
PALK Pallekele 76.01 279 P **P** **15 16 16.9 -0.3**
PALK IAmb IAmb 15 16 18.7
comp=Z,41nm,0.9s
PALK Pallekele 76.01 279 P **P** **15 16 16.9 -0.3**
PALK pmax pmax
comp=Z,41nm,0.9s
N18K Kilae Creek 77.11 22 P **P** **15 16 23.4 +1.1**
baz=230
M19K Big River Lodg 78.45 22 P **P** **15 16 30.8 +1.1**
baz=231,SNR=6.6
L19K White Mountain 78.45 21 P **P** **15 16 30.6 +0.9**
L19K IAmb IAmb 15 16 50.0
comp=Z,14nm,1.1s
L19K White Mountain 78.45 21 P **P** **15 16 30.7 +0.9**
baz=230,SNR=11
TTA Tatalina 78.53 20 P **P** **15 16 31.3 +1.0**
baz=229
M20K Styx River 78.90 22 P **P** **15 16 33.1 +0.7**
baz=232
L20K Farewell, AK 79.00 21 P **P** **15 16 33.9 +1.2**
baz=231
WMQ Urumqi 79.04 317 *e*P **P** **15 16 35.7 +2.2**
O22K Cooper Landing 79.40 24 P **P** **15 16 36.6 +1.6**
baz=235
K20K Telida 79.48 21 P **P** **15 16 37.8 +2.5**
baz=231
SKT Skwentna 79.56 22 P **P** **15 16 35.7 -0.2**
baz=234
HYBB Hyderabad (bro 79.77 289 *e*P **P** **15 16 38.8 +0.8**
HYBB *es*P **sP** **15 17 08.0 +2.8**
HYBB *e*S **S** **15 26 35.5 -0.2**
PPLA Purkeypile 79.87 22 P **P** **15 16 38.9 +1.3**
baz=233
J20K Nowinta River 79.97 20 P **P** **15 16 39.0 +1.0**
baz=231,SNR=5.6
TIXI Tiksi 80.16 352 pP **pP** **15 16 58.4 -0.1**
comp=Z,3.7nm,0.6s,baz=270,slow=24,SNR=2.8
TIXI LR LR 15 52 51.8
comp=Z,28nm,19.7s,baz=181,slow=36
TIXI Tiksi 80.16 352 *i* P **P** **15 16 38.8 0.0**
TIXI pmax pmax
comp=Z,8.0nm,1.5s
PWL Port Wells 80.18 24 P **P** **15 16 39.5 +0.3**
baz=237
CAST Castle Rocks 80.22 21 P **P** **15 16 39.6 +0.2**
baz=233
PMR Palmer 80.27 23 P **P** **15 16 39.9 +0.3**
baz=236
CHUM Lake Minchumin 80.42 21 P **P** **15 16 40.8 +0.4**
baz=232
SML Sawmill 80.71 24 P **P** **15 16 43.1 +1.0**
baz=236
TRF Thorofare Moun 80.89 22 P **P** **15 16 44.1 +1.0**
baz=234
SCM Sheep Creek Mo 81.12 24 P **P** **15 16 44.6 +0.4**
baz=237
WAT1 Susitna Watana 81.19 23 P **P** **15 16 45.1 +0.5**
baz=236
IMAR Indian Mountai 81.25 19 P **P** **15 16 45.2 +0.4**
H21K Melozitna Rive 81.35 19 P **P** **15 16 45.9 +0.5**
H21K Melozitna Rive 81.35 19 P **P** **15 16 46.0 +0.6**
baz=232
WAT6 Susitna Watana 81.36 23 P **P** **15 16 46.0 +0.3**
baz=237
KLU Klutina 81.51 24 P **P** **15 16 47.2 +0.8**
baz=239
MCK McKinley 81.55 22 P **P** **15 16 47.0 +0.5**
baz=236
MLY Manley 81.66 20 P **P** **15 16 48.1 +1.1**
baz=234
G21K Allakaket 81.66 18 P **P** **15 16 47.3 +0.3**
baz=231
M24K Tolsona, Glenn 81.73 24 P **P** **15 16 48.2 +0.8**
baz=238
DHY Denali Highway 81.77 23 P **P** **15 16 47.8 0.0**
baz=237
BMRM Bremner River 81.79 25 P **P** **15 16 48.0 +0.1**
baz=240
H22K Ishtalitna Cre 81.96 19 P **P** **15 16 49.2 +0.7**
baz=233,SNR=5.4
NEA2 Nenana 81.99 21 P **P** **15 16 47.7 -1.0**
baz=236
F21K Alatna River 82.11 18 P **P** **15 16 49.5 +0.1**
baz=231
N25K Chitina, Valde 82.11 25 P **P** **15 16 50.1 +0.5**
baz=240
GLB Gilahina Butte 82.36 25 P **P** **15 16 50.8 0.0**
PAX Paxson 82.46 23 P **P** **15 16 51.2 -0.2**
baz=239
H23K Yukon River 82.53 20 P **P** **15 16 51.6 0.0**
baz=235
COLA College 82.58 21 *i* P **P** **15 16 50.3 -1.4**
COLA pmax pmax
comp=Z,10.0nm,1.1s
HDA Harding Lake 82.65 22 P **P** **15 16 52.0 -0.2**
baz=238
MCARA McCarthy VSAT 82.66 25 P **P** **15 16 52.7 +0.4**
baz=241
F22K John River 82.69 18 P **P** **15 16 53.1 +0.8**
baz=232
POKR Poker Plat Res 82.86 21 P **P** **15 16 53.3 0.0**
baz=237
ILAR Eielson Array 82.87 21 P **P** **15 16 51.9 -1.4**
comp=Z,2.8nm,0.9s,baz=247,slow=4.1,SNR=18
ILAR pP **pP** **15 17 11.1 -2.0**
comp=Z,4.0nm,0.8s,baz=250,slow=4.8,SNR=8.8
ILAR LR LR 15 48 50.6
comp=Z,125nm,21.5s,baz=244,slow=32
comp=Z,2.8nm,0.9s
G23K Bananza Creek 82.89 19 P **P** **15 16 52.7 -0.7**
baz=234
RIDG Independent Ri 83.09 23 P **P** **15 16 54.6 +0.1**
baz=240
H24K Noodor Dome 83.10 20 P **P** **15 16 54.4 -0.2**
baz=236
COLD Coldfoot 83.13 19 P **P** **15 16 54.7 +0.1**
baz=234
M26K Nabesna, AK 83.16 24 P **P** **15 16 55.1 +0.2**
baz=241
E22K Anaktuvuk Pass 83.18 17 P **P** **15 16 56.0 +1.1**
baz=232
CTG Chitna Glacier 83.19 26 P **P** **15 16 55.3 0.0**
baz=243
QSPA South Pole Qui 83.27 180 P **P** **15 16 55.7 +0.1**
QSPA IAmb IAmb 15 16 56.9
comp=Z,41nm,1.1s
PINM Pinnacle 83.28 27 P **P** **15 16 55.4 -0.3**
baz=244
L26K Log Cabin Wild 83.32 24 P **P** **15 16 56.1 +0.4**
baz=241
J25K Salcha River, 83.34 22 P **P** **15 16 55.5 -0.4**
baz=239
PNL Peninsula 83.49 28 P **P** **15 16 56.0 -0.6**
baz=245
SCRK Sand Creek 83.54 23 P **P** **15 16 56.2 -0.8**
baz=240
MKAR Makanchi Array 83.60 319 P **P** **15 16 57.0 -0.5**
comp=Z,5.2nm,0.7s,baz=106,slow=5.2,SNR=33
comp=Z,5.2nm,0.7s
M27K Edge Creek, AK 83.60 25 P **P** **15 16 57.5 +0.2**
baz=242
O28M Mount Upton 83.61 26 P **P** **15 16 57.4 -0.2**
baz=244
G24K Hadweenzic Riv 83.72 20 P **P** **15 16 57.6 0.0**
baz=237
YUK3 Moose Creek 83.93 25 P **P** **15 16 59.0 -0.1**
baz=244
A21K Barrow 83.95 14 P **P** **15 16 59.0 +0.4**
baz=228
L27K Beaver Creek, 83.95 24 P **P** **15 16 59.3 +0.4**
baz=242
J26L Joseph Creek 83.96 22 P **P** **15 16 59.5 +0.5**
baz=241
D23K Nanushuk River 84.02 17 P **P** **15 16 59.5 +0.4**
baz=234
F24K Squaw Lake 84.03 19 P **P** **15 16 59.6 +0.3**
baz=236,SNR=6.8
H25K Birch Creek 84.04 20 P **P** **15 17 00.8 +1.6**
baz=238
BVCY Beaver Creek 84.05 25 P **P** **15 16 60.0 +0.5**
baz=243
O29M Mount Kennedy 84.13 27 P **P** **15 17 00.3 +0.3**
baz=246
TOLK Toolik Lake Re 84.15 18 P **P** **15 17 00.6 +0.7**
baz=235
E24K Your Creek 84.16 18 P **P** **15 16 59.9 0.0**
baz=236
G25K Bearman Lake 84.21 20 P **P** **15 17 00.7 +0.6**
baz=238
P29M Windy Craggy 84.24 28 P **P** **15 16 60.0 -0.5**
baz=246
ZALV Zalesovo Beam 84.29 326 P **P** **15 16 59.6 -1.1**
comp=Z,1.6nm,0.6s,baz=120,slow=5.8,SNR=6.7
ZALV pP **pP** **15 17 17.5 -3.1**
comp=Z,2.8nm,0.5s,baz=116,slow=5.3,SNR=6.8
ZALV LR LR 15 54 44.3
comp=Z,24nm,20.7s,baz=122,slow=36
comp=Z,1.6nm,0.6s
ZALV Zalesovo Beam 84.29 326 P **P** **15 17 00.2 -0.6**
K27K Chicken 84.30 23 P **P** **15 17 01.7 +1.0**
baz=242
YUK6 Outpost Mounta 84.49 27 P **P** **15 17 01.5 -0.5**
baz=246
I26K Coal Creek Min 84.51 22 P **P** **15 17 00.9 -0.8**
baz=241
YUK4 Talbot Arm 84.53 26 P **P** **15 17 01.9 -0.2**
baz=245
C23K Itkillik River 84.55 16 P **P** **15 17 02.2 +0.4**
baz=234
D24K Happy Valley 84.67 17 P **P** **15 17 03.1 +0.7**
baz=235
P30M Million Dollar 84.80 28 P **P** **15 17 01.8 -1.5**
baz=247
F25K Christian Rive 84.80 19 P **P** **15 17 04.2 +1.1**
baz=238,SNR=7.7
PLBC Pleasant Camp 84.82 28 P **P** **15 17 03.6 +0.3**
baz=248
HYT Haines Junctio 84.83 27 P **P** **15 17 03.7 +0.1**
baz=246,SNR=5.9
MAW Mawson 84.91 203 P **P** **15 17 04.1 +0.4**
comp=Z,16nm,0.9s,baz=96,slow=6.1,SNR=37
MAW pP **pP** **15 17 22.2 -1.0**
comp=Z,9.9nm,0.7s,baz=88,slow=7.3,SNR=7.4
MAW LR LR 15 51 00.7
comp=Z,25nm,20.4s,baz=80,slow=33
comp=Z,16nm,0.9s
MAW Mawson 84.91 203 P **P** **15 17 04.0 +0.3**
baz=85,SNR=11
MAW Mawson 84.91 203 P **P** **15 17 04.1 +0.4**
MAW Mawson 84.91 203 P **P** **15 17 04.1 +0.4**
MAW pmax pmax
comp=Z,8.0nm,1.2s
C24K Franklin Bluff 85.03 17 P **P** **15 17 04.6 +0.4**
baz=235
CRAG Craig 85.03 33 P **P** **15 17 04.5 0.0**
baz=251
BMAR Burnt Mountain 85.07 20 P **P** **15 17 05.5 +1.0**
M29M Somme Creek 85.07 25 P **P** **15 17 05.5 +0.8**
baz=245
G26K Porcupine Rive 85.09 20 P **P** **15 17 05.6 +1.1**
baz=240,SNR=13
E25K Arctic Village 85.10 19 P **P** **15 17 05.1 +0.5**
baz=238
I27K Kandik River 85.22 22 P **P** **15 17 05.3 0.0**
baz=242
N30M Aishikik Lake 85.27 26 P **P** **15 17 05.8 +0.2**
baz=247
SKAG Skagway 85.31 29 P **P** **15 17 05.7 -0.1**
baz=248
F26K Sheenjek River 85.34 19 P **P** **15 17 07.0 +1.1**
baz=240,SNR=10.0
DAWY Dawson 85.38 24 P **P** **15 17 07.1 +1.0**
baz=244
O30N Mendenhall 85.44 27 P **P** **15 17 07.4 +0.9**
baz=248
D25K Kavik River 85.49 18 P **P** **15 17 06.3 -0.2**
baz=238
H27K Steamboat Moun 85.54 21 P **P** **15 17 07.8 +0.9**
baz=242
G27K Doyon Strip 85.76 21 P **P** **15 17 08.7 +0.8**
baz=242,SNR=5.4
M30M Minto, Yukon 85.83 25 P **P** **15 17 08.8 +0.4**
baz=247,SNR=5.2
P32M Atlin 86.12 29 P **P** **15 17 10.0 +0.1**
baz=250
KSH Kashi 86.30 310 P **P** **15 17 13.3 +1.9**
KSH pmax pmax
comp=Z,5.0nm,0.7s
I29M Ogilvie Camp, 86.35 23 P **P** **15 17 11.3 +0.5**
baz=245,SNR=7.2
E27K Coleen River 86.43 19 P **P** **15 17 12.3 +1.1**
baz=242,SNR=5.1
C27K Jago River 86.45 18 P **P** **15 17 11.6 +0.3**
baz=240
P33M Teslin, Yukon 86.76 28 P **P** **15 17 12.4 -0.6**
baz=251
BBB Bella Bella 86.91 37 LR LR 15 48 36.0
comp=Z,113nm,21.8s,baz=264,slow=30
T35M Bob Quinn 87.03 32 P **P** **15 17 13.7 -0.7**
baz=253
R33M Jennings River 87.39 29 P **P** **15 17 15.6 -0.6**
baz=252
DLBC Dease Lake 87.57 30 LR LR 15 48 59.3
comp=Z,52nm,21.1s,baz=282,slow=30
DLBC Dease Lake 87.57 30 P **P** **15 17 16.8 -0.2**
baz=253
AAK Ala-Archa 88.01 313 LR LR 15 55 46.5
comp=Z,20nm,20.8s,baz=108,slow=35
AAK Ala-Archa 88.01 313 *ce*P **P** **15 17 19.4 -0.2**
AAK pmax pmax
comp=Z,5.0nm,1.7s
YBH Yreka Blue Hor 88.23 48 LR LR 15 51 58.8
comp=Z,59nm,19.1s,baz=280,slow=32
NRIK Noril'sk 88.67 341 P **P** **15 17 21.0 -0.9**
comp=Z,13nm,0.8s,baz=104,slow=3.8,SNR=14
NRIK pP **pP** **15 17 40.5 -1.2**
comp=Z,4.2nm,0.7s,baz=164,slow=4.4,SNR=3.0
NRIK LR LR 15 56 19.8
comp=Z,37nm,21.9s,baz=132,slow=35
comp=Z,13nm,0.8s
NRIK Noril'sk 88.67 341 *i* P **P** **15 17 20.7 -1.1**
NRIK pmax pmax
comp=Z,18nm,0.9s
INK Inuvik 89.22 21 P **P** **15 17 24.9 +0.5**
comp=Z,1.8nm,0.3s,baz=268,slow=4.1,SNR=8.4
INK pP **pP** **15 17 43.2 -1.2**
comp=Z,2.4nm,0.3s,baz=250,slow=6.5,SNR=2.5
INK LR LR 15 53 23.7
comp=Z,103nm,20.8s,baz=233,slow=33
comp=Z,1.8nm,0.3s
NVAR Mina Array Bea 91.05 52 P **P** **15 17 34.9 +0.9**
comp=Z,0.6nm,0.8s,baz=258,slow=7.4,SNR=6.2
NVAR pP **pP** **15 17 53.5 -0.3**
comp=Z,0.9nm,0.9s,baz=253,slow=4.0,SNR=3.3
NVAR LR LR 15 51 19.2
comp=Z,56nm,21.9s,baz=270,slow=31
comp=Z,0.6nm,0.8s
LRMC Laurel Mtn Rad 91.16 55 P **P** **15 17 35.2 +0.8**
baz=263
RPN Rapa Nui 91.44 117 LR LR 15 50 21.4
comp=Z,55nm,21.0s,baz=335,slow=30
GSC Goldstone, Bar 91.84 55 P **P** **15 17 37.9 +0.3**
baz=263
MONP2 Monument Peak 91.88 57 P **P** **15 17 38.2 +0.2**
baz=263
PFO Pinyon Flats O 91.93 57 LR LR 15 51 08.0
comp=Z,52nm,20.5s,baz=248,slow=30
PFO Pinyon Flats O 91.93 57 P **P** **15 17 37.9 -0.2**
baz=263
TPFO Pinon Flats 91.93 57 P **P** **15 17 37.7 -0.3**
baz=263
BELC Belle Mtn. Jos 92.36 56 P **P** **15 17 40.7 +0.7**
baz=264
BVAR Borovoye Array 92.44 323 LR LR 15 59 30.0
comp=Z,22nm,20.9s,baz=332,slow=36
TPNV Topopah Spring 92.48 53 P **P** **15 17 41.5 +0.9**
baz=264
BRVK Borovoye 92.51 323 *i* P **P** **15 17 37.2 -2.9**
BRVK pmax pmax
comp=Z,7.0nm,2.4s
GMRC Granite Mounta 92.72 55 P **P** **15 17 41.9 +0.2**
baz=264
BC3 Big Chuckawall 92.77 57 P **P** **15 17 41.9 0.0**
baz=264
IRM Iron Mountain 93.08 56 P **P** **15 17 44.4 +1.1**
baz=264
NEW Newport 93.12 42 LR LR 15 52 21.0
comp=Z,95nm,21.8s,baz=272,slow=31
R11A Troy Canyon, C 93.16 52 P **P** **15 17 44.3 +0.6**
baz=264
ELK Elko 93.67 50 LR LR 15 53 00.6
comp=Z,52nm,21.1s,baz=251,slow=31
BELA Belgrano 2 95.36 178 P **P** **15 17 52.2 -0.6**
BELA IAmb IAmb 15 17 55.4
comp=Z,5.4nm,0.8s
YKA Yellowknife Ar 95.78 28 P **P** **15 17 54.9 +0.1**
comp=Z,1.0nm,0.7s,baz=264,slow=5.2,SNR=5.2
YKA pP **pP** **15 18 13.9 -1.0**
comp=Z,3.2nm,0.9s,baz=268,slow=4.6,SNR=5.7
YKA LR LR 15 57 41.5
comp=Z,26nm,19.1s,baz=312,slow=33
comp=Z,1.0nm,0.7s
BW06 Boulder Array 98.04 48 P **P** **15 18 05.1 -0.8**
baz=268
PDAR Pinedale Array 98.04 48 P **P** **15 18 05.5 -0.4**
comp=Z,0.6nm,0.7s,baz=252,slow=3.0,SNR=7.2
PDAR pP **pP** **15 18 24.2 -1.6**
comp=Z,1.2nm,0.9s,baz=222,slow=2.0,SNR=5.1
PDAR LR LR 15 56 55.8
comp=Z,41nm,21.4s,baz=323,slow=32
comp=Z,0.6nm,0.7s
ARU Arti 99.45 326 LR LR 16 05 12.6
comp=Z,30nm,20.3s,baz=76,slow=37
ARCES ARCESS Array B 109.49 343 PKiKP **PKiKP** **15 22 58.4 -0.3**
comp=Z,0.9nm,0.5s,baz=90,slow=2.5,SNR=11
ARCES pPKiKP **pPKiKP** **15 23 17.5 -1.9**
comp=Z,1.0nm,0.6s,baz=72,slow=2.2,SNR=2.8
KIV Kislovodsk 111.09 315 *i* PKiKP **PKiKP** **15 22 59.0 -3.6**
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,23nm,21.0s
OBN Obninsk 111.84 327 *i* PKiKP **PKiKP** **15 23 04.7 +1.2**
OBN *e* 15 23 25.1
OBN *e* 15 23 42.7
OBN *e*PPP PPP 15 26 08.3
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,48nm,18.0s
FINES FINESS Array B 113.93 336 PKiKP **PKiKP** **15 23 06.5 -0.8**
comp=Z,1.7nm,0.7s,baz=80,slow=2.1,SNR=8.4
FINES pPKiKP **pPKiKP** **15 23 25.3 -2.6**
comp=Z,0.8nm,0.4s,baz=79,slow=3.3,SNR=3.1
MNK Minsk 116.67 329 *i* PKiKP **PKPdf** **15 23 10.9 -1.9**
MNK *i* 15 24 19.6
MNK *i* PPP PPP 15 26 49.0
MNK *i* PS **PS** **15 34 03.7 -1.2**
MNK *i* SS SS 15 40 16.6 -4.8
MNK MLR MLR
comp=Z,69nm,19.0s
MNK MLR MLR
comp=E,2.0nm,19.0s
MNK Minsk 116.67 329 *i* PKP **PKPdf** **15 23 10.9 -1.9**
baz=62
MNK *i* PKP **PKPdf** **15 23 10.9 -1.9**
MNK *i* PKP **PKPdf** **15 23 10.9 -1.9**
MNK *i* PP **PP** **15 24 19.7 -1.4**
MNK *i* PPP PPP 15 26 49.0
MNK *i* SKS SKSac 15 29 43.2 -15
MNK *i* PS **PS** **15 34 03.8 -1.2**
MNK *i* SS **SS** **15 40 16.6 -4.8**
MNK *i* SSS SSS 15 45 13.1
MNK *i* LQ LQ 15 57 29.5
MNK *i* LR LR 16 05 38.3
MNK *i* LRM MLR 16 11 45.7
comp=Z,69nm,18.7s
MNK *i* LRM MLR 16 11 54.8
comp=E,2.0nm,18.7s
AKASG Malin Array Be 117.67 325 PKP **PKPdf** **15 23 13.9 -0.9**
comp=E,4.2nm,0.8s,baz=60,slow=2.8,SNR=13
AKASG pPKP **pPKPdf** **15 23 32.8 -2.6**
comp=E,1.3nm,0.6s,baz=57,slow=2.8,SNR=3.5
AKBB Malin Array Si 117.67 325 *c* *i* PKiKP **PKPdf** **15 23 14.4 -0.4**
BRTR Keskin Array B 118.66 312 PKP **PKPdf** **15 23 16.3 -1.0**
comp=E,2.1nm,1.0s,baz=106,slow=1.8,SNR=7.3
NB2 NORSAR Subarra 119.63 341 PKPdf **PKPdf** **15 23 16.8 -1.6**
comp=Z,14nm,2.5s,baz=44,slow=1.9
NB2 NORSAR Subarra 119.63 341 PKPdf **PKPdf** **15 23 16.8 -1.6**
baz=44,slow=1.9
NOA NORSAR Array B 119.63 341 PKP **PKPdf** **15 23 17.3 -1.1**
comp=Z,1.9nm,0.8s,baz=42,slow=1.9,SNR=8.9
NOA pPKP **pPKPdf** **15 23 36.4 -2.6**
comp=Z,1.0nm,0.6s,baz=44,slow=1.9,SNR=6.1
KOLS Kolonicke sedl 122.47 325 *e*PKiKP **PKiKP** **15 23 24.9 +0.5**
KOLS Kolonicke sedl 122.47 325 *e*PKP **PKiKP** **15 23 24.8 +0.4**
CRVS Cervenica-Dubn 122.94 326 *e*PKiKP **PKiKP** **15 23 25.5 +0.2**
CRVS Cervenica-Dubn 122.94 326 *e*PKP **PKiKP** **15 23 25.5 +0.2**
LANS Liptovska Anna 123.91 327 *e*PKiKP **PKiKP** **15 23 27.9 +0.7**
LANS Liptovska Anna 123.91 327 *e*PKP **PKiKP** **15 23 27.9 +0.7**
MORC Moravsky Berou 124.57 328 *e*PKP **PKPdf** **15 23 28.2 0.0**
OSTC Ostas 124.78 330 *e*PKPDF **PKPdf** **15 23 28.6 0.0**
KRLC Kraliky 124.79 329 *e*PKiKP **PKPdf** **15 23 28.5 -0.1**
KRLC Kraliky 124.79 329 *e*PKPDF **PKPdf** **15 23 28.5 -0.1**
DPC Dobruska-Polom 124.85 329 *e*PKiKP **PKiKP** **15 23 29.2 +0.1**
DPC Dobruska-Polom 124.85 329 *e*PKPDF **PKiKP** **15 23 29.2 +0.1**
JAVC Velka Javorina 125.04 327 *e*PKP **PKiKP** **15 23 30.2 +0.7**
VRAC Vranov 125.35 328 *e*PKP **PKPdf** **15 23 29.4 -0.3**
MODS Modra-Piesok 125.54 327 *e*PKiKP **PKiKP** **15 23 30.9 +0.4**
MODS Modra-Piesok 125.54 327 *e*PKP **PKiKP** **15 23 30.9 +0.4**
KRUC Moravsky 125.60 328 *e*PKP **PKPdf** **15 23 30.1 -0.1**
BRG Berggiesshubel 125.69 331 *i* PKP **PKiKP** **15 23 30.6 -0.1**
BRG Amp 15 23 31.3
comp=Z,9.0nm,1.0s
BRG pPKP **pPKPdf** **15 23 49.4 -1.5**
BRG Amp 15 23 50.1
comp=Z,4.4nm,0.7s
BRG Berggiesshubel 125.69 331 *i* PKiKP **PKiKP** **15 23 30.5 -0.1**
BRG 15 23 49.3
BRG pmax pmax
comp=Z,9.0nm,1.0s
BRG pmax pmax
comp=Z,4.0nm,0.7s
ZST Bratislava 125.74 327 *e*PKiKP **PKiKP** **15 23 30.9 +0.1**
ZST Bratislava 125.74 327 *e*PKP **PKiKP** **15 23 30.9 +0.1**
CLL Collm 125.85 332 *i* PKiKP **PKPdf** **15 23 30.3 -0.3**
CLL *i* 15 23 49.0
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL Collm 125.85 332 *i* PKPdf **PKPdf** **15 23 30.3 -0.3**
comp=Z,10.0nm,0.9s
CLL *i* x x 15 23 49.0
CLL *i* pPKPdf **pPKPdf** **15 23 51.6 +0.4**
CLL *i* sPKPdf **sPKPdf** **15 23 59.3 +0.5**

CLL				*e*SKPdf	**SKiKP**	**15 27 02.0 +1.3**
CKRC	**Cesky Krumlov**	**126.83 329**		*e*PKPDF	**PKPdf**	**15 23 32.5 -0.1**
CKRC				*ex*	x	15 23 51.7
NKC	**Novy Kostel**	**126.83 331**		*e*PKIKP	**PKPdf**	**15 23 32.7 +0.2**
NKC	**Novy Kostel**	**126.83 331**		*e*PKPDF	**PKPdf**	**15 23 32.7 +0.2**
KHC	**Kasperske Hory**	**127.00 330**		*e*PKIKP	**PKPdf**	**15 23 32.8 -0.1**
KHC				*e*		15 23 51.4
KHC	**Kasperske Hory**	**127.00 330**		*e*PKPDF	**PKPdf**	**15 23 32.8 -0.1**
KHC				*ep*PKP	**pPKPdf**	**15 23 51.4 -2.2**
GERES	**GERESS Array B**	**127.12 329**		PKP	**PKPdf**	**15 23 33.2 0.0**
	comp=Z,4.4nm,0.8s,baz=90,slow=1.3,SNR=34					
GERES				pPKP	**pPKPdf**	**15 23 52.0 -1.9**
	comp=Z,2.1nm,0.7s,baz=78,slow=1.9,SNR=6.4					
BTNL	**Ternell**	**129.41 335**		*d*PKP	**PKPdf**	**15 23 37.1 -0.3**
MEM	**Membach**	**129.44 335**		*d*PKP	**PKPdf**	**15 23 37.5 +0.1**
BHOU	**Houvegnez**	**129.64 335**		*d*PKP	**PKPdf**	**15 23 36.6 -1.2**
BMRD	**Maredsous**	**130.19 336**		*d*PKP	**PKPdf**	**15 23 38.1 -0.8**
DOU	**Dourbes**	**130.42 336**		*d*PKP	**PKPdf**	**15 23 39.0 -0.3**
ESDC	**Sonseca Array**	**142.39 334**		PKhKP	PKPpre	15 23 58.1
	comp=Z,2.0nm,0.9s,baz=48,slow=2.4,SNR=13					
POLO	**Lamas de Olo**	**142.45 339**		*e*PKPdf	**PKPdf**	**15 24 01.8 -0.2**
PCBR	**Castelo Branco**	**143.68 338**		*e*PKPdf	PKPbc	15 24 02.5 +0.8
PMRV	**Marv??o**	**144.00 337**		*e*PKPdf	PKPbc	15 24 03.1 +0.4
PESTR	**Estremoz**	**144.57 337**		PKPdf	**PKPdf**	**15 24 05.2 -0.6**
PESTR	**Estremoz**	**144.57 337**		*e*PKPdf	**PKPdf**	**15 24 05.1 -0.6**
PMTG	**Montargil**	**144.63 338**		*e*PKPdf	PKPbc	15 24 05.0 +0.4
PBAR	**Barrancos**	**144.95 336**		*e*PKPdf	**PKPdf**	**15 24 06.1 -0.2**
EVO	**Evora**	**145.02 337**		*e*PKPdf	**PKPdf**	**15 24 06.6 +0.2**
PMAFR	**Mafra**	**145.12 339**		*e*PKPdf	**PKPdf**	**15 24 07.0 +0.4**
PBEJ	**Beja**	**145.41 337**		*e*PKPdf	**PKPab**	**15 24 08.2 +0.9**
PNCL	**Nicolau / Gran**	**145.59 338**		*e*PKPdf	**PKPab**	**15 24 08.8 +0.8**
MESJ	**Messejana**	**145.71 337**		*e*PKPdf	**PKPab**	**15 24 09.4 +1.0**
PCVE	**Castro Verde**	**145.81 337**		*e*PKPdf	**PKPab**	**15 24 09.6 +0.7**
PTEO	**Sao Teotonio**	**146.16 337**		*e*PKPdf	**PKPab**	**15 24 11.1 +1.0**
MORF	**Marmelete**	**146.34 337**		*e*PKPdf	**PKPab**	**15 24 11.3 +0.4**
BDFB	**Brasilia**	**147.73 134**		PKPbc	**PKPbc**	**15 24 13.6 -1.1**
	comp=Z,15nm,0.8s,baz=318,slow=0.4,SNR=17					
BDFB	**Brasilia**	**147.73 134**		PKPbc	**PKPbc**	**15 24 14.4 -0.3**
TORD	**Torodi Ar. Bea**	**153.55 286**		PKP	**PKPdf**	**15 24 19.7 -1.0**
	comp=Z,2.0nm,1.1s,baz=25,slow=2.4,SNR=5.9					
TORD				PKPbc	**PKPbc**	**15 24 27.4 -1.0**
	comp=Z,7.8nm,0.9s,baz=46,slow=1.5,SNR=24					
TORD				PKPab	**PKPab**	**15 24 40.4 -0.7**
	comp=Z,5.4nm,0.7s,baz=77,slow=4.3,SNR=11					
KIC	**Kosan Boka**	**160.49 270**	↓	*e*PKP2	**PKPab**	**15 25 10.9 -0.2**
	comp=Z,36nm,1.0s					
DBIC	**Dimbokro**	**160.62 271**		PKPab	**PKPab**	**15 25 11.6 0.0**
	comp=Z,19nm,1.0s,baz=109,slow=3.6,SNR=9.5					
LIC	**Lamto**	**160.77 270**	↓	*e*PKP2	**PKPab**	**15 25 12.0 -0.3**
	comp=Z,64nm,1.0s					
TIC	**Toumodi**	**160.78 271**	↓	*e*PKP2	**PKPab**	**15 25 12.1 -0.3**
	comp=Z,39nm,1.0s					

*SKHL **05** 15:09:28.1±0.0, 47.°30N×147.°10E, h457km±7km, mb4.6/6, msha5.0/3*
*IDC **05** 15:09:32.8±2.0, 47.°72N×146.°88E, h417km±23km, mb3.1/8, mbtmp3.9/12, Error ellipse: s-maj=18.0km s-min=12.6km az=131.0*
ISC 05 15:09:31.4±0.6, **47.°53N**±0.°08×**147.°0E**±0.°1, **h403**km, **n22,** σ1§**67**/**27**, **mb3.5/8**, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.36**	**166**	*eP*		**P**	**15 10 31.0**	**+1.0**
KUR				AMB		AMB	15 10 34.7	
	40nm,0.6s							
KUR				*eS*		**S**	**15 11 20.0**	**+2.6**
KUR				A		A	15 11 32.4	
	30nm,0.5s							
KUR				A		A	15 11 32.4	
	50nm,0.5s							
YSS	**Yuzh-Sakhalins**	**2.98**	**261**	*eP*		**P**	**15 10 37.2**	**+2.8**
YSS				AMB		AMB	15 10 38.3	
	50nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**3.59**	**194**	*eP*		**P**	**15 10 40.4**	**+0.7**
YUK				AMB		AMB	15 10 45.0	
	80nm,0.3s							
YUK				*eS*		**S**	**15 11 36.8**	**+1.5**
YUK				A		A	15 11 43.0	
	50nm,0.5s							
YUK				A		A	15 11 43.0	
	130nm,0.5s							
SHO	**Shikotan**	**3.66**	**182**	*eP*		**P**	**15 10 39.4**	**-0.9**
SHO				AMB		AMB	15 10 41.3	
	90nm,0.4s							
SHO				*eS*		**S**	**15 11 33.3**	**-3.2**
SHO				A		A	15 11 34.9	
	140nm,0.5s							
SHO				A		A	15 11 34.9	
	330nm,0.5s							
NMR	**Nemuro--Hokkai**	**4.26**	**193**	*eP*		**P**	**15 10 45.1**	**-0.8**
NMR				*eS*		**S**	**15 11 43.8**	**-2.9**
AKK	**Akkeshi**	**4.77**	**200**	*eP*		**P**	**15 10 50.3**	**-0.6**
AKK				*eS*		**S**	**15 11 53.1**	**-2.9**
SKR	**Severo-Kuril's**	**6.75**	**59**	*eP*		**P**	**15 11 12.7**	**+0.1**
SKR				AMB		AMB	15 11 15.3	
	60nm,0.6s							
PAU	**Pauzhetka**	**7.49**	**55**	*eP*		**P**	**15 11 20.0**	**-0.8**
PAU				AMB		AMB	15 12 21.9	
	80nm,0.7s							
PETK	**Petropavlovsk-**	**8.81**	**47**	P		**P**	**15 11 35.6**	**+0.1**
	5.8nm,1.0s,baz=222,slow=11,SNR=11							
USRK	**Ussuriysk Ar.**	**11.01**	**258**	P		**P**	**15 12 00.4**	**+0.4**
	4.9nm,0.5s,baz=70,slow=12,SNR=10							
MJAR	**Matsushiro Arr**	**12.78**	**214**	P		**P**	**15 12 21.8**	**+2.3**
	1.3nm,0.5s,baz=20,slow=10,SNR=2.9							
KSRS	**Korea Array**	**17.28**	**241**	P		**P**	**15 13 10.0**	**+2.0**
	3.8nm,0.7s,baz=43,slow=10,SNR=31							
ILAR	**Eielson Array**	**38.54**	**39**	P		**P**	**15 16 16.3**	**-0.4**
	0.7nm,0.6s,baz=274,slow=7.7,SNR=12							
	0.7nm,0.6s							
MKAR	**Makanchi Array**	**42.87**	**294**	P		**P**	**15 16 51.1**	**-0.7**
	0.8nm,0.5s,baz=69,slow=7.1,SNR=10							
	0.8nm,0.5s							
FINES	**FINESS Array B**	**61.49**	**332**	P		**P**	**15 19 05.0**	**-1.5**
	0.9nm,0.5s,baz=36,slow=7.7,SNR=12							
	0.9nm,0.5s							
NB2	**NORSAR Subarra**	**66.06**	**338**	P		**P**	**15 19 34.6**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**66.06**	**338**	P		**P**	**15 19 34.5**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=31,slow=6.7,SNR=9.6							
	comp=Z,0.5nm,0.5s							
PDAR	**Pinedale Array**	**67.56**	**51**	P		**P**	**15 19 46.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=10,slow=0.4,SNR=8.4							
	comp=Z,1.2nm,0.6s							
WRA	**Warramunga Arr**	**68.12**	**193**	P		**P**	**15 19 49.7**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=8.2,slow=6.3,SNR=5.8							
	comp=Z,0.7nm,0.5s							
ASAR	**Alice Springs**	**71.84**	**193**	P		**P**	**15 20 12.8**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=10,slow=5.4,SNR=9.0							
	comp=Z,0.2nm,0.5s							
TXAR	**Lajitas Array**	**80.63**	**57**	P		**P**	**15 21 01.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=296,slow=4.4,SNR=10							
	comp=Z,0.6nm,0.5s							
PLCA	**Paso Flores**	**152.38**	**90**	PKPbc		**PKPbc**	**15 28 40.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=310,slow=3.3,SNR=5.9							

IDC 05 15:20:51.8±5.9, **9.°04S**×**128.°40E**, **h0**km, **mb3.6/1, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=69.5km s-min=53.1km az=141.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.40**	**196**	Pn		Pn	15 23 09.9	+1.4
	0.2nm,0.3s,baz=15,slow=11,SNR=13							
FITZ				Sn		Sn	15 24 57.0	+2.0
	0.6nm,0.3s,baz=184,slow=15,SNR=8.8							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**12.27**	**153**	Pn		Pn	15 23 48.5	+0.5
	0.2nm,0.3s,baz=323,slow=12,SNR=18							
WRA				Sn		Sn	15 26 04.5	-1.1
	0.2nm,0.3s,baz=334,slow=22,SNR=4.8							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**15.47**	**161**	Pn		Pn	15 24 31.9	+0.4
	0.1nm,0.3s,baz=332,slow=10,SNR=15							
ASAR				Sn		Sn	15 27 24.8	+1.1
	0.1nm,0.3s,baz=334,slow=14,SNR=3.1							
	0.2nm,0.5s							
STKA	**Stephens Creek**	**25.82**	**154**	P		P	15 26 24.2	-0.7
	0.3nm,0.3s,baz=335,slow=17,SNR=3.2							
	0.3nm,0.3s							

IDC 05 15:21:52.1±24.0, **18.°36S**×**65.°13E**, **h0**km, **mb3.6/3, mbtmp3.6/3, MS3.4/11, Error ellipse: s-maj=800.5km s-min=43.1km az=59.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**12.82**	**35**	T		T	15 36 03.7	
	baz=210,slow=76,SNR=472							
H08S2	**Diego Garcia H**	**12.83**	**35**	T		T	15 36 05.5	
	baz=210,slow=76,SNR=277							
H08S3	**Diego Garcia H**	**12.84**	**35**	T		T	15 36 06.5	
	baz=210,slow=76,SNR=749							
OPO	**Ambohidratompo**	**17.02**	**266**	LR		LR	15 30 25.7	
	comp=Z,92nm,21.8s,baz=152,slow=30							
KMBO	**Kilima Mbogo**	**32.28**	**299**	LR		LR	15 38 52.3	
	comp=Z,74nm,18.7s,baz=91,slow=32							
LBTB	**Lobatse**	**37.23**	**253**	LR		LR	15 43 11.5	
	comp=Z,66nm,18.0s,baz=85,slow=34							
BOSA	**Boshof**	**37.82**	**247**	LR		LR	15 41 41.9	
	comp=Z,39nm,19.1s,baz=256,slow=32							
H01W2	**Cape Leeuwin H**	**46.34**	**121**	T		T	16 19 12.1	
	baz=280,slow=75,SNR=246							
H01W3	**Cape Leeuwin H**	**46.34**	**121**	T		T	16 19 10.8	
	baz=280,slow=75,SNR=166							
H01W1	**Cape Leeuwin H**	**46.35**	**121**	T		T	16 19 11.9	
	baz=280,slow=75,SNR=230							
KAPI	**Kappang**	**54.90**	**83**	LR		LR	15 50 31.0	
	comp=Z,21nm,21.5s,baz=258,slow=31							
FITZ	**Fitzroy Crossi**	**57.23**	**100**	LR		LR	15 53 03.4	
	comp=Z,37nm,20.4s,baz=237,slow=33							
ASAR	**Alice Springs**	**63.88**	**108**	P		P	15 32 27.2	+0.1
	0.4nm,0.6s,baz=269,slow=5.7,SNR=8.7							
ASAR				LR		LR	15 56 30.2	
	comp=Z,84nm,20.0s,baz=256,slow=32							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**64.96**	**104**	P		P	15 32 34.1	-0.1
	1.9nm,1.1s,baz=263,slow=6.1,SNR=5.5							
WRA				LR		LR	15 56 30.0	
	comp=Z,42nm,21.2s,baz=33,slow=32							
	1.9nm,1.1s							
MKAR	**Makanchi Array**	**66.67**	**13**	P		P	15 32 44.6	0.0
	0.3nm,0.7s,baz=184,slow=8.7,SNR=3.8							
	0.3nm,0.7s							
BELG	**Belogornoye**	**72.08**	**349**	LR		LR	16 04 06.2	
	comp=Z,31nm,21.1s,baz=167,slow=35							
HFS	**Hagfors**	**88.55**	**337**	LR		LR	16 14 57.1	
	comp=Z,24nm,19.9s,baz=38,slow=36							
NOA	**NORSAR Array B**	**90.07**	**337**	LR		LR	16 15 57.3	
	comp=Z,6.2nm,20.4s,baz=10.0,slow=36							

*PAS **05** 15:25:33.7±1.8, 31.°20N±0.°05×116.°13W±0.°04, h6km±2km, Error ellipse: s-maj=9.9km s-min=3.0km az=211.0*
*NEIC **05** 15:25:33.6±2.0, 31.°16N±0.°07×116.°10W±0.°08, h20km±6km, Error ellipse: s-maj=13.2km s-min=4.1km az=224.0*
*ECX **05** 15:25:34.9±0.5, 31.°27N×116.°05W, h10km±5km, MD3.3, ML3.6*
*ANF **05** 15:25:34.4±0.5, 31.°37N×115.°97W, h5km, ML3.4/15, Error ellipse: s-maj=4.3km s-min=3.4km az=90.0*
*MEX **05** 15:25:35.9±0.9, 31.°18N×116.°06W, h18km±16km, MD4.1*
ISC 05 15:25:34.0±1.3, **31.°22N**±0.°04×**116.°09W**±0.°03, **h17**km±9km, **n93,** σ0§**93**/**118**, **10C-6D, Baja California**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SVX	**San Vicente**	**0.17**	**308**	*eP*		**Pb**	**15 25 38.6**	**0.0**
SVX				*eS*		**Sg**	**15 25 41.5**	**+0.1**
SVX				IAML			15 25 41.8	
	comp=N,35μm,0.1s							
SVX				↓*e*			15 25 41.8	
SVX				IAML			15 25 41.8	
	comp=E,26μm,0.1s							
SVX				↑*e*			15 25 41.8	
SPIG	**San Pedro Mart**	**0.56**	**108**	*i*P		**Pb**	**15 25 44.9**	**-0.7**
SPIG				*eS*		**Sb**	**15 25 52.0**	**-1.5**
SPIG	**San Pedro Mart**	**0.56**	**108**	↑*i*P		**Pb**	**15 25 44.9**	**-0.7**
SPIG				*eS*		**Sb**	**15 25 52.1**	**-1.4**
CCX	**Cicese**	**0.81**	**323**			**Pb**	**15 25 49.4**	**-0.1**
CCX						**Sb**	**15 25 59.8**	**-0.4**
CCX	**Cicese**	**0.81**	**323**	*eP*		**Pb**	**15 25 49.0**	**-0.5**
CCX				*eS*		**Sb**	**15 25 59.8**	**-0.4**
CCX				IAML			15 26 02.0	
	comp=N,1μm,0.2s							
CCX				↑*e*			15 26 02.0	
CCX				↓*e*			15 26 02.9	
CCX				IAML			15 26 02.9	
	comp=E,2μm,0.3s							
ECBX	**El Chinero**	**0.93**	**74**	↑*i*P		**Pb**	**15 25 51.2**	**-0.4**
ECBX				*eS*		**Sb**	**15 26 03.0**	**-0.5**
ECBX				IAML			15 26 04.3	
	comp=E,3μm,0.7s							
ECBX				↑*e*			15 26 04.3	
ECBX				↑*e*			15 26 04.5	
ECBX				IAML			15 26 04.5	
	comp=N,3μm,0.2s							
SFX	**San Felipe**	**1.08**	**99**			**Sb**	**15 26 07.6**	**-0.4**
SFX	**San Felipe**	**1.08**	**99**			**Pn**	**15 25 53.9**	**-0.4**
SFX	**San Felipe**	**1.08**	**99**	*eP*		**Pn**	**15 25 53.7**	**-0.6**
SFX				*eS*		**Sb**	**15 26 07.7**	**-0.3**
SFX				↑*e*			15 26 09.3	
SFX				IAML			15 26 09.3	
	comp=N,3μm,0.5s							
SFX				↑*e*			15 26 09.8	
SFX				IAML			15 26 09.8	
	comp=E,2μm,0.2s							
CBX	**Cerro Bola**	**1.19**	**336**			**Pn**	**15 25 55.1**	**-0.8**
CBX						**Sb**	**15 26 10.3**	**-1.0**
CBX	**Cerro Bola**	**1.19**	**336**	↓*eP*		**Pn**	**15 25 55.1**	**-0.8**
CBX				*eS*		**Sb**	**15 26 11.0**	**-0.4**
CBX				IAML			15 26 12.1	
	comp=N,675nm,0.2s							
CBX				↓*e*			15 26 12.1	
CBX				↓*e*			15 26 16.9	
CBX				IAML			15 26 16.9	
	comp=E,501nm,0.2s							
TJIG	**Tijuana**	**1.31**	**338**	*eP*		**Pn**	**15 25 56.9**	**-0.6**
TJIG				*eS*		**Sn**	**15 26 12.7**	**-1.8**
TJIG	**Tijuana**	**1.31**	**338**	*eP*		**Pn**	**15 25 56.8**	**-0.6**
CPBX	**Cerro Prieto**	**1.37**	**29**			**Pn**	**15 25 59.3**	**+1.0**
CPBX	**Cerro Prieto**	**1.37**	**29**	*eP*		**Pn**	**15 25 57.2**	**-1.1**
RMX	**La Rumorosa**	**1.38**	**0**			**Sn**	**15 26 14.2**	**-2.2**
RMX	**La Rumorosa**	**1.38**	**0**			**Pn**	**15 25 57.6**	**-0.9**
RMX	**La Rumorosa**	**1.38**	**0**	*eP*		**Pn**	**15 25 57.7**	**-0.8**
RMX				*eS*		**Sn**	**15 26 14.4**	**-2.1**
RMX				IAML			15 26 16.9	
	comp=N,1μm,0.2s							
RMX				*e*			15 26 16.9	
RMX				↑*e*			15 26 22.1	
RMX				IAML			15 26 22.1	
	comp=E,1μm,0.6s							
GUVIX	**Guadalupe Vict**	**1.38**	**39**			**Sb**	**15 26 18.3**	**+1.6**
GUVIX	**Guadalupe Vict**	**1.38**	**39**			**Pn**	**15 25 58.4**	**-0.1**
TKX	**Tecate**	**1.41**	**342**			**Sn**	**15 26 16.0**	**-1.1**
TKX	**Tecate**	**1.41**	**342**			**Pn**	**15 25 58.5**	**-0.4**
TKX	**Tecate**	**1.41**	**342**	*eP*		**Pn**	**15 25 58.7**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**1.42**	**359**			**Pn**	**15 25 59.5**	**+0.4**
IKP						**Sn**	**15 26 16.7**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**1.42**	**359**	P		**Pn**	**15 25 59.5**	**+0.4**
	baz=181,SNR=297							
IKP				S		**Sn**	**15 26 16.8**	**-0.8**
	baz=181							
YUH	**Yuha Desert**	**1.43**	**6**			**Sn**	**15 26 16.8**	**-0.7**
YUH	**Yuha Desert**	**1.43**	**6**			**Pn**	**15 25 59.0**	**-0.2**
YUH2	**Yuha Desert**	**1.43**	**6**	*eP*		**Pn**	**15 25 59.0**	**-0.1**
YUH2				*eS*		**Sn**	**15 26 16.8**	**-0.7**
SGL	**Mount Signal**	**1.46**	**12**			**Sn**	**15 26 18.8**	**+0.6**
DUZA	**Dulzura**	**1.50**	**337**			**Pn**	**15 26 00.1**	**0.0**
DUZA						**Sn**	**15 26 18.4**	**-0.9**
UABX	**UABC, Campus M**	**1.51**	**21**			**Sb**	**15 26 22.1**	**+1.7**
TJX	**Tijuana**	**1.52**	**328**			**Pn**	**15 25 58.3**	**-2.1**
BAR	**Barrett**	**1.54**	**341**			**Pn**	**15 26 00.4**	**-0.2**
BAR	**Barrett**	**1.54**	**341**	↓*eP*		**Pn**	**15 26 00.5**	**-0.2**
BAR				*e*			15 26 21.4	
BAR				IAML			15 26 21.4	
	comp=E,724nm,0.2s							
BAR				IAML			15 26 22.6	
	comp=N,717nm,0.2s							
BAR				↑*e*			15 26 22.6	
OLP	**Otay Lakes Par**	**1.56**	**333**	*eP*		**Pn**	**15 26 00.8**	**0.0**
WESC	**Westside Schoo**	**1.56**	**11**			**Pb**	**15 26 02.5**	**+0.1**
WESC						**Sb**	**15 26 22.8**	**+0.9**
COK2	**Cook Ranch 2**	**1.65**	**11**			**Pn**	**15 26 02.3**	**+0.2**
COK2						**Sb**	**15 26 25.6**	**+1.1**
CRR	**Carrizo Plain**	**1.66**	**4**			**Pn**	**15 26 02.3**	**0.0**
DREC	**Desert Rsrch C**	**1.67**	**19**			**Sb**	**15 26 27.2**	**+2.2**
SDRC	**San Diego Road**	**1.67**	**335**			**Sn**	**15 26 24.0**	**+0.5**
SDRC	**San Diego Road**	**1.67**	**335**	*eP*		**Pn**	**15 26 02.7**	**+0.2**
MONP2	**Monument Peak**	**1.69**	**351**			**Pn**	**15 26 03.4**	**+0.5**
MONP2						**Sn**	**15 26 24.3**	**+0.1**
MONP2	**Monument Peak**	**1.69**	**351**	P		**Pn**	**15 26 03.4**	**+0.5**
	baz=172,SNR=112							
MONP2				S		**Sn**	**15 26 24.4**	**+0.2**
	baz=172							
MONP2	**Monument Peak**	**1.69**	**351**	*eP*		**Pn**	**15 26 03.4**	**+0.5**
SNR	**Schaffner Ranc**	**1.73**	**19**			**Sb**	**15 26 28.6**	**+2.0**
SWSC	**Sam W. Stewart**	**1.74**	**8**			**Pn**	**15 26 02.9**	**-0.5**
SWSC						**Sb**	**15 26 27.1**	**+0.2**
SWSC	**Sam W. Stewart**	**1.74**	**8**	P		**Pn**	**15 26 02.9**	**-0.5**
	baz=189,SNR=95							
SWSC				Sg		**Sb**	**15 26 27.4**	**+0.5**
	baz=189							
EML	**El Monte Cty P**	**1.78**	**339**			**Sn**	**15 26 26.4**	**+0.2**
EML	**El Monte Cty P**	**1.78**	**339**	*eP*		**Pn**	**15 26 04.2**	**+0.3**
109C	**Camp Elliot, M**	**1.87**	**333**			**Pn**	**15 26 04.4**	**-0.8**
109C	**Camp Elliot, M**	**1.87**	**333**	P		**Pn**	**15 26 06.4**	**+1.3**
	baz=154							
109C				S		**Sn**	**15 26 29.8**	**+1.4**
	baz=154							
CPE	**Camp Elliot**	**1.87**	**333**			**Pn**	**15 26 04.9**	**-0.2**
JUEM	**Julian Eagle M**	**1.90**	**347**			**Pn**	**15 26 06.2**	**+0.5**
SLH	**Sleepy Hollow**	**1.97**	**356**			**Pn**	**15 26 06.6**	**+0.1**
GLA	**Glamis**	**2.12**	**30**			**Pn**	**15 26 08.0**	**-0.6**
GLA	**Glamis**	**2.12**	**30**	P		**Pn**	**15 26 07.9**	**-0.7**
	baz=211,SNR=13							
GLA				Sg		**Sb**	**15 26 38.5**	**+0.6**
	baz=211							
SNDA	**J Saunders Pla**	**2.37**	**349**			**Pn**	**15 26 13.0**	**+0.9**
TPFO	**Pinon Flats**	**2.40**	**353**	Sb		**Sb**	**15 26 45.9**	**-0.2**
	baz=173							
PFO	**Pinyon Flats O**	**2.40**	**353**			**Pn**	**15 26 12.6**	**0.0**
PFO	**Pinyon Flats O**	**2.40**	**353**	P		**Pn**	**15 26 12.6**	**0.0**
	baz=173,SNR=29							
PFO				Sb		**Sb**	**15 26 46.0**	**-0.2**
	baz=173							
PMD	**Palm Desert**	**2.43**	**354**			**Pn**	**15 26 12.8**	**-0.1**
BC3	**Big Chuckawall**	**2.49**	**12**	P		**Pn**	**15 26 13.7**	**0.0**
	baz=193,SNR=13							
113A	**Mohawk Valley,**	**2.51**	**51**	Pn		**Pn**	**15 26 13.4**	**-0.5**
MURC	**Murrieta**	**2.55**	**339**	P		**Pn**	**15 26 15.5**	**+1.0**
	baz=159							
POB	**Polly Butte**	**2.56**	**344**			**Pn**	**15 26 15.5**	**+0.8**
ELS	**Elsinore Mount**	**2.67**	**335**	Pn		**Pn**	**15 26 16.6**	**+0.4**
BELC	**Belle Mtn. Jos**	**2.77**	**2**	P		**Pn**	**15 26 17.8**	**+0.1**
	baz=182,SNR=20							
BLAC	**Blackrock camp**	**2.85**	**355**			**Pn**	**15 26 19.2**	**+0.4**
214A	**Organ Pipe Nat**	**2.89**	**75**	Pn		**Pn**	**15 26 18.9**	**-0.4**
214A	**Organ Pipe Nat**	**2.89**	**75**	*i* P		**Pn**	**15 26 18.7**	**-0.6**
214A	**Organ Pipe Nat**	**2.89**	**75**	P		**Pn**	**15 26 18.9**	**-0.4**
	baz=256,SNR=16							
IRM	**Iron Mountain**	**3.03**	**15**	P		**Pn**	**15 26 21.4**	**+0.2**
	baz=196							
BAHB	**Baha de los**	**3.16**	**135**	*eP*		**Pb**	**15 26 31.9**	**+2.3**
BAHB				*eS*		**Sb**	**15 27 10.9**	**+3.2**
GMRC	**Granite Mounta**	**3.57**	**6**	P		**Pn**	**15 26 28.9**	**+0.2**
	baz=186,SNR=5.7							
Y14A	**Wickenburg**	**3.76**	**43**			**Pn**	**15 26 32.0**	**+0.8**
EDW2	**Edwards Air Fo**	**3.98**	**337**	P		**Pn**	**15 26 36.0**	**+1.8**
	baz=156							
W13A	**Hualapai Mount**	**4.29**	**25**	Pn		**Pn**	**15 26 39.2**	**+0.6**
TUC	**Tucson**	**4.65**	**75**	Pn		**Pn**	**15 26 43.3**	**-0.2**
TUC	**Tucson**	**4.65**	**75**	P		**Pn**	**15 26 43.2**	**-0.2**
	baz=258							
X16A	**Lo Mia Camp, P**	**5.05**	**50**			**Pn**	**15 26 49.7**	**+0.6**
SHPR	**Sheep Range**	**5.33**	**8**	Pn		**Pn**	**15 26 53.4**	**+0.6**
TPNV	**Topopah Spring**	**5.71**	**359**			**Pn**	**15 26 58.1**	**0.0**
WUAZ	**Wupatki**	**5.82**	**41**	Pn		**Pn**	**15 27 00.1**	**+0.5**
U15A	**North Rim**	**6.08**	**30**	Pn		**Pn**	**15 27 05.5**	**+2.2**
X18A	**Snowflake**	**6.13**	**56**	Pn		**Pn**	**15 27 04.5**	**+0

NRIK	**Noril'sk**	**61.61**	**340**	P		**P**	**15 41 19.4**	**+0.7**
	comp=Z,5.1nm,0.6s,baz=110,slow=6.5,SNR=8.0							
	comp=Z,5.1nm,0.6s							
NRIK	**Noril'sk**	**61.61**	**340**	P		**P**	**15 41 16.9**	**-1.8**
NRIK				IAmb		IAmb	15 41 20.1	
	comp=Z,6.1nm,0.7s							
ILAR	**Eielson Array**	**63.84**	**26**	P		**P**	**15 41 33.2**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=257,slow=4.7,SNR=12							
	comp=Z,1.9nm,0.8s							
SCRK	**Sand Creek**	**64.93**	**27**	P		**P**	**15 41 40.0**	**-0.7**
J26L	**Joseph Creek**	**65.19**	**27**	P		**P**	**15 41 41.5**	**-0.9**
J26L				IAmb		IAmb	15 41 44.2	
	comp=Z,5.0nm,1.3s							
BMAR	**Burnt Mountain**	**65.30**	**24**	P		**P**	**15 41 44.7**	**+1.8**
BRVK	**Borovoye**	**66.45**	**320**	P		**P**	**15 41 49.7**	**-0.7**
BRVK				IAmb		IAmb	15 41 53.0	
	comp=Z,3.6nm,0.6s							
KKAR	**Karatay Array**	**66.63**	**310**	P		**P**	**15 41 52.1**	**+0.3**
HYT	**Haines Junctio**	**67.63**	**31**	P		**P**	**15 41 58.2**	**+0.3**
ABKAR	**Akbulak array**	**73.23**	**317**	P		**P**	**15 42 32.0**	**+0.3**
ABKAR				IAmb		IAmb	15 42 33.3	
	comp=Z,2.2nm,0.5s							
YKA	**Yellowknife Ar**	**78.19**	**28**	P		**P**	**15 43 00.6**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=306,slow=3.3,SNR=5.6							
	comp=Z,1.1nm,0.5s							
ARCES	**ARCESS Array B**	**82.50**	**342**	P		**P**	**15 43 22.9**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=88,slow=8.9,SNR=8.1							
	comp=Z,1.4nm,0.9s							
NVAR	**Mina Array Bea**	**83.39**	**52**	P		**P**	**15 43 29.3**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=268,slow=5.3,SNR=14							
	comp=Z,1.7nm,0.6s							
FINES	**FINESS Array B**	**86.86**	**335**	P		**P**	**15 43 43.2**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=63,slow=4.2,SNR=20							
	comp=Z,1.1nm,0.4s							
PDAR	**Pinedale Array**	**88.07**	**45**	P		**P**	**15 43 50.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=216,slow=1.2,SNR=4.8							
	comp=Z,0.2nm,0.3s							
LPAZ	**La Paz**	**147.93**	**91**	PKPbc		**PKPab**	**15 50 47.3**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=270,slow=4.9,SNR=7.8							

IDC ***05*** *15:37:08.1±3.2,32.18N×139.95E,h0km,mb3.7/3, mbtmp3.6/4,ML2.6/1, Error ellipse: s-maj=138.8km s-min=24.7km az=73.0*

JMA ***05*** *15:37:11.2±0.2,32.7N±0.5×14.1E±.1,h50km,MV3.5/26,E OFF HACHIJOJIMA ISLAND*

ISC 05 15:37:10.3±2.4,32.65N±0.08×141.1E±0.1,h43km±24km, n17,σ0.91/22,mb3.5/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.11**	**261**	P	**Pn**	**15 37 29.9**	**+0.5**
JAOM				*e*S	**Sn**	**15 37 43.3**	**-0.3**
JHCJ	**Hachijojimakas**	**1.15**	**292**	P	**Pn**	**15 37 29.7**	**-0.2**
JHJ2	**Mitsune**	**1.15**	**294**	P	**Pn**	**15 37 29.8**	**0.0**
JMKN	**Mikurajimanish**	**1.75**	**316**	P	**Pn**	**15 37 38.2**	**0.0**
JMKN				S	**Sn**	**15 37 58.2**	**-0.9**
BSO1	**Boso 1**	**2.00**	**358**	*e*P	**Pn**	**15 37 41.5**	**+0.4**
BSO3	**Boso 3**	**2.20**	**348**	P	**Pn**	**15 37 44.5**	**+0.4**
BSO3				S	**Sn**	**15 38 09.6**	**-0.3**
JIM2	**Oshima 3**	**2.47**	**327**	P	**Pn**	**15 37 48.4**	**+0.3**
JIM2				*e*S	**Sn**	**15 38 15.7**	**-1.4**
JIZS	**Izushimoda**	**2.75**	**319**	P	**Pn**	**15 37 53.0**	**+1.1**
JIZS				S	**Sn**	**15 38 23.4**	**-0.5**
JOD2	**Odawara 2**	**3.08**	**328**	P	**Pn**	**15 37 56.9**	**+0.5**
JOD2				S	**Sn**	**15 38 30.1**	**-1.9**
TK04	**Tokai 4**	**3.18**	**304**	P	**Pn**	**15 37 59.2**	**+1.6**
TK04				S	**Sn**	**15 38 34.4**	**+0.2**
MJAR	**Matsushiro Arr**	**4.54**	**330**	Pn	**Pn**	**15 38 18.0**	**+1.5**
	0.3nm,0.3s,baz=173,slow=15,SNR=15						
MJAR				Sn	**Sn**	**15 39 08.7**	**+0.7**
	0.2nm,0.3s,baz=189,slow=17,SNR=4.7						
	2.9nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**26.43**	**113**	T	T	16 11 52.5	
	baz=305,slow=75,SNR=7.9						
H11N1	**WAKE ISLAND Hy**	**26.44**	**113**	T	T	16 11 50.2	
	baz=305,slow=75,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**26.45**	**113**	T	T	16 11 53.9	
	baz=305,slow=75,SNR=7.0						
MKAR	**Makanchi Array**	**46.32**	**306**	P	**P**	**15 45 32.0**	**+0.2**
	0.2nm,0.4s,baz=80,slow=9.7,SNR=4.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**52.69**	**188**	P	**P**	**15 46 20.0**	**-0.5**
	0.9nm,0.3s,baz=4.1,slow=7.5,SNR=53						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**56.41**	**188**	P	**P**	**15 46 47.1**	**-0.3**
	0.2nm,0.4s,baz=4.4,slow=7.1,SNR=18						
	0.2nm,0.4s						

NOU 05 15:44:51.9,14.92S×167.32E,h106km,MLv4.1/4, Vanuatu Islands,Vanuatu Islands

PAS ***05*** *15:45:52.9±2.8,34.54N±0.02×119.97W±0.01,h5km±4km, ML3.1/121,ML2.8/38(NEIC),Error ellipse: s-maj=2.7km s-min=1.6km az=186.0*

NEIC 05 15:45:53.0±2.4,34.56N±0.02×119.96W±0.01,h5km±1km, Error ellipse: s-maj=3.0km s-min=2.9km az=184.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYP	**Santa Ynez Pea**	**0.03**	**210**		Pg	15 45 55.6	+1.3
FIGC	**Figueroa Mtn.**	**0.17**	**352**		Pg	15 45 56.9	+0.4
FIGC					Sg	15 46 00.4	+1.5
NJQ	**Nojoqui County**	**0.18**	**263**		Pg	15 45 56.6	0.0
NJQ					Sg	15 45 60.0	+0.9
SBC	**Santa Barbara**	**0.23**	**119**		Pg	15 45 57.6	+0.1
SBC					Sg	15 46 01.6	+1.0
PKM	**Mcpherson Peak**	**0.35**	**20**		Pg	15 46 00.1	+0.2
PKM					Sg	15 46 05.9	+1.3
GATR	**Gnd/Air Tx Cnt**	**0.45**	**270**		Pg	15 46 01.8	+0.1
RYS	**Reyes Peak**	**0.51**	**80**		Pg	15 46 03.0	+0.2
BCW	**Bitter Crk WRg**	**0.59**	**49**		Pg	15 46 04.6	+0.2
BCW				Sg	Sb	15 46 14.0	-0.6
BCW				IAML		15 46 15.7	
	comp=N,754nm,0.5s						
BCH	**Branch Mountai**	**0.64**	**351**		Pg	15 46 05.2	-0.1
ABL	**Mount Abel**	**0.67**	**64**		Pg	15 46 06.4	+0.4
STCC	**Santa Clara**	**0.69**	**111**		Pb	15 46 07.0	-0.5
STCC					Sb	15 46 18.3	+1.1
CRGC	**Crocker Grade**	**0.71**	**16**		Pg	15 46 06.9	+0.2
YEG	**Yeguas Mountai**	**0.88**	**360**		Pg	15 46 09.7	-0.2
DPD	**Davis Peak**	**0.96**	**315**		Pg	15 46 10.6	-0.8
DCD	**Diablo Creek**	**0.98**	**312**		Pg	15 46 11.3	-0.5
VPDC	**Valencia Peak**	**1.01**	**313**		Pg	15 46 11.5	-1.0
TSCN	**Private Proper**	**1.04**	**342**		Pg	15 46 12.4	-0.5
ARVC	**Arvin**	**1.09**	**58**		Pg	15 46 13.6	-0.3
BTPC	**Burnt Peak**	**1.15**	**83**		Pg	15 46 13.7	-1.3
TRAM	**Private Proper**	**1.15**	**347**		Pg	15 46 14.1	-0.9
THIS	**South End of C**	**1.19**	**349**		Pg	15 46 14.7	-1.1
PAGB	**Antelope Grade**	**1.20**	**349**		Pg	15 46 14.9	-1.1
PAGB				Sg	Sg	15 46 30.6	-0.9
TEJ	**El Tejon**	**1.24**	**57**		Pg	15 46 14.8	-2.1
SNCC	**San Nicolas Is**	**1.35**	**164**	Pn	Pn	15 46 15.7	-2.9
SNCC	**San Nicolas Is**	**1.35**	**164**		Pn	15 46 15.8	-2.8
SNCC	**San Nicolas Is**	**1.35**	**164**	IAML		15 46 34.8	
	comp=E,216nm,0.3s						
SNCC				IAML		15 46 35.8	
	comp=N,201nm,0.3s						
CJV	**Casa Juvan**	**1.50**	**90**		Pn	15 46 18.9	-1.8
PASC	**Pasadena Art C**	**1.52**	**104**		Pn	15 46 18.4	-2.4
PASC				IAML		15 46 39.1	
	comp=N,149nm,0.8s						
MWC	**Mount Wilson**	**1.60**	**101**		Pn	15 46 20.2	-2.1
CHFC	**Chilao Flat St**	**1.61**	**97**		Pn	15 46 20.1	-2.2
ISA	**Isabella, Lake**	**1.64**	**47**		Pn	15 46 21.3	-1.3
ISA	**Isabella, Lake**	**1.64**	**47**		Pn	15 46 21.4	-1.2
ISA				IAML		15 46 45.6	
	comp=N,63nm,0.6s						
ISA				IAML		15 46 46.3	
	comp=E,70nm,0.3s						
JNH	**Juniper Hills**	**1.66**	**93**		Pn	15 46 21.1	-1.8
CCAC	**Calif City Air**	**1.70**	**69**		Pn	15 46 22.8	-0.6
CCAC				IAML		15 46 48.9	
	comp=E,134nm,0.7s						
CCAC				IAML		15 46 55.4	
	comp=N,146nm,1.1s						
WHFM	**Hanning Flat**	**1.74**	**49**		Pn	15 46 23.1	-0.9
XTL	**Crystal Lake,**	**1.75**	**98**		Pn	15 46 22.4	-1.8
PMPB	**Monarch Peak**	**1.79**	**338**		Pn	15 46 22.4	-2.3
PMPB				IAML		15 47 06.4	
	comp=N,134nm,1.2s						
SPG2	**Springville 2**	**1.91**	**30**		Pn	15 46 25.1	-1.2
HYS	**Haystack Butte**	**1.99**	**80**		Pn	15 46 25.6	-1.8
WLHM	**Little Horse**	**2.08**	**40**		Pn	15 46 28.6	-0.3
BBGB	**Big Mountain B**	**2.20**	**337**		Pn	15 46 28.1	-2.3
HELL	**Mitchell Peak,**	**2.25**	**19**		Pn	15 46 30.2	-0.9
ELS	**Elsinore Mount**	**2.29**	**113**		Pn	15 46 29.1	-2.4
GSC	**Goldstone, Bar**	**2.69**	**73**		Pn	15 46 35.6	-1.5
GSC				IAML		15 47 22.9	
	comp=N,40nm,0.7s						
QSM	**Queen of Sheba**	**2.89**	**60**		Pn	15 46 39.0	-0.8
QSM				IAML		15 47 29.1	
	comp=N,24nm,1.3s						
QSM				IAML		15 47 29.8	
	comp=E,38nm,0.8s						
PFO	**Pinyon Flats O**	**3.05**	**107**		Pn	15 46 40.3	-1.7
EML	**El Monte Cty P**	**3.08**	**122**		Pn	15 46 42.7	+0.4
PMD	**Palm Desert**	**3.10**	**106**	Pn	Pn	15 46 40.8	-1.9
PMD				IAML		15 47 36.4	
	comp=E,9.2nm,0.7s						
PMD				IAML		15 47 51.9	
	comp=N,9.6nm,1.1s						
MDPB	**Devils Postpil**	**3.15**	**13**		Pn	15 46 43.5	0.0
MDPB				IAML		15 47 34.4	
	comp=N,22nm,0.8s						
MDPB				IAML		15 47 37.5	
	comp=E,22nm,0.9s						
LCH	**Last Change Ra**	**3.27**	**34**	Pn	Pn	15 46 44.9	-0.1
TPNV	**Topopah Spring**	**3.85**	**51**		Pn	15 46 53.6	+0.6
TPNV				IAML		15 48 07.3	
	comp=E,9.4nm,0.8s						
TPNV				IAML		15 48 08.6	
	comp=E,12nm,1.1s						
W13A	**Hualapai Mount**	**5.02**	**82**	Pn	Pn	15 47 07.6	-1.7
W13A				IAML		15 48 40.0	
	comp=N,4.8nm,3.1s						
W13A				IAML		15 49 43.2	
	comp=E,5.7nm,0.1s						

ISU ***05*** *16:05:54,39.51N×73.66E,h0km*

SOME ***05*** *16:05:55.9,39.53N×73.75E,h5km*

KRNET ***05*** *16:05:56.2±0.1,39.49N×73.48E,mb3.8*

NNC ***05*** *16:05:57.9±3.1,39.65N×73.45E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=24.8km s-min=12.6km az=172.0*

IDC ***05*** *16:05:58.5±2.5,39.75N×73.17E,h0km,mb3.8/4, mbtmp3.6/8,ML2.6/4,Error ellipse: s-maj=45.5km s-min=16.5km az=140.0*

ISC 05 16:05:57.4±1.7,39.40N±0.05×73.47E±0.03,h7km±10km, n67,σ1.94/104,mb3.7/4,25C-15D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**335**	⇓*i*P	**Pn**	**16 06 18.4**	**-2.9**
	baz=33						
OHH				⇓*i*S	**Sb**	**16 06 34.8**	**-2.6**
	baz=33						
OHH	**Osh**	**1.24**	**335**	P	**Pn**	**16 06 18.3**	**-3.0**
OHH				S	**Sb**	**16 06 36.7**	**-0.7**
FRG	**Fergana**	**1.62**	**307**	P	**Pb**	**16 06 27.8**	**+0.1**
FRG				S	**Sb**	**16 06 50.3**	**+1.9**
BTK	**Batken**	**2.15**	**289**	P	**Pb**	**16 06 36.8**	**+0.1**
BTK				S	**Sg**	**16 07 08.1**	**+1.7**
MINT	**Mingtut**	**2.19**	**300**	P	**Pb**	**16 06 38.3**	**+0.9**
MINT				S	**Sg**	**16 07 09.3**	**+1.4**
GAR	**Garm**	**2.48**	**262**	⇑*e*P	**Pb**	**16 06 40.5**	**-2.0**
	baz=60						
GAR				⇑*i*S	**Sb**	**16 07 12.4**	**-0.9**
	baz=60						
ARLS	**Aral**	**2.54**	**15**	⇑*i*P	**Pn**	**16 06 39.6**	**+0.3**
	baz=15						
ARLS				⇑*i*S	**Sn**	**16 07 11.2**	**+0.6**
	baz=15						
CHDK	**Chadak**	**2.61**	**308**	P	**Pn**	**16 06 42.1**	**+2.0**
CHDK				S	**Sb**	**16 07 18.3**	**+1.5**
AML	**Almayashu**	**2.73**	**3**	P	**Pn**	**16 06 43.6**	**+1.5**
	SNR=51						
TRKS	**Terek-Say**	**2.77**	**321**	⇑*i*P	**Pn**	**16 06 42.2**	**-0.2**
	baz=19						
TRKS				⇑*i*S	**Sn**	**16 07 15.9**	**-0.3**
	baz=19						
UCH	**Uchtor**	**2.93**	**15**	P	**Pn**	**16 06 46.4**	**+1.5**
	SNR=42						
UCH	**Uchtor**	**2.93**	**15**	⇑*i*P	**Pn**	**16 06 45.2**	**+0.3**
	baz=16						
UCH				⇑*i*S	**Sn**	**16 07 21.0**	**+0.4**
	baz=16						
EKS2	**Erkin-Say**	**3.26**	**4**	P	**Pn**	**16 06 51.0**	**+1.8**
	SNR=12						
EKS2	**Erkin-Say**	**3.26**	**4**	⇑*i*P	**Pn**	**16 06 49.7**	**+0.5**
	baz=4.0						
EKS2				⇑*i*S	**Sn**	**16 07 28.6**	**+0.2**
	baz=4.0						
AAK	**Ala-Archa**	**3.32**	**13**	Pn	**Pn**	**16 06 51.7**	**+1.7**
	4.0nm,0.3s,baz=190,slow=7.3,SNR=13						
AAK				Lg	Lg	16 07 36.3	
	6.5nm,0.3s,baz=131,slow=24,SNR=12						
	8.7nm,0.3s						
AAK	**Ala-Archa**	**3.32**	**13**	P	**Pn**	**16 06 51.6**	**+1.6**
	SNR=8.3						
AAK	**Ala-Archa**	**3.32**	**13**	⇑*e*P	**Pn**	**16 06 50.5**	**+0.5**
	baz=13						
AAK				⇑*i*S	**Sn**	**16 07 30.1**	**+0.2**
	baz=13						
MRKS	**Merke**	**3.34**	**357**	*e*P	**Pb**	**16 06 56.1**	**-1.0**
	18nm,0.4s						
MRKS				*e*S	**Sb**	**16 07 40.3**	**+2.2**
	104nm,0.6s						
KBK	**Karagaybulak**	**3.44**	**18**	P	**Pn**	**16 06 53.0**	**+1.4**
	SNR=9.8						
KBK	**Karagaybulak**	**3.44**	**18**	⇑*i*P	**Pn**	**16 06 51.9**	**+0.3**
	baz=19						
KBK				⇑*i*S	**Sn**	**16 07 32.8**	**+0.1**
	baz=19						
CHGR	**Chuyangaron**	**3.44**	**259**	⇑*e*P	**Pn**	**16 06 53.7**	**+2.1**
	baz=58						
CHGR				⇑*e*S	**Sn**	**16 07 35.6**	**+3.0**
	baz=58						
FRU1	**Bishkek**	**3.52**	**14**	⇑*i*P	**Pn**	**16 06 53.2**	**+0.6**
	baz=14						
FRU1				⇑*i*S	**Sn**	**16 07 34.9**	**+0.4**
	baz=14						
ULHL	**Ulahol**	**3.53**	**36**	P	**Pn**	**16 06 53.9**	**+0.9**
	SNR=9.2						
ULHL	**Ulahol**	**3.53**	**36**	⇓*i*P	**Pn**	**16 06 53.7**	**+0.7**
	baz=36						
ULHL				⇓*e*S	**Sn**	**16 07 35.6**	**+0.5**
	baz=36						
BOOM	**Boomskoye usch**	**3.61**	**30**	⇓*e*P	**Pn**	**16 06 54.6**	**+0.7**
	baz=31						
BOOM				⇓*i*S	**Sn**	**16 07 37.1**	**+0.2**
	baz=31						
CHMS	**Chumysh**	**3.72**	**15**	P	**Pn**	**16 06 56.7**	**+1.4**
	SNR=5.6						
CHMS	**Chumysh**	**3.72**	**15**	⇑*i*P	**Pn**	**16 06 56.0**	**+0.6**
	baz=15						
CHMS				⇑*e*S	**Sn**	**16 07 39.5**	**0.0**
	baz=15						
IUG	**luzhnay**	**3.79**	**318**	*e*P	**Pg**	**16 07 09.0**	**-0.9**
	528nm,0.8s						
IUG				*e*S	**Sg**	**16 08 01.6**	**+2.6**
	127nm,0.8s						
IUG	**luzhnay**	**3.79**	**318**	Pg	**Pn**	**16 06 58.6**	**+2.2**
	120nm,0.5s						
IUG				Lg	Lg	16 07 46.1	
	62nm,0.8s						
TKM2	**Tokmak 2**	**3.86**	**24**	P	**Pn**	**16 06 58.5**	**+1.1**
	SNR=11						
TKM2	**Tokmak 2**	**3.86**	**24**	⇑Pn	**Pn**	**16 06 58.4**	**+0.9**
	5.4nm,0.5s						
TKM2				⇓Pg	**Pb**	**16 07 07.2**	**+1.1**
	8.7nm,0.6s						
TKM2				⇑Lg	Lg	16 07 53.4	
	11nm,0.5s						
TKM2	**Tokmak 2**	**3.86**	**24**	⇓*e*P	**Pn**	**16 06 58.0**	**+0.5**
	baz=24						
TKM2				⇓*e*S	**Sn**	**16 07 43.2**	**-0.1**
	baz=24						
USP	**Ospenovka**	**3.94**	**11**	⇓*e*P	**Pn**	**16 06 58.8**	**+0.4**
	baz=11						
USP				⇓*i*S	**Sn**	**16 07 44.5**	**-0.4**
	baz=11						
KST	**Kastek**	**4.09**	**27**	*e*P	**Pb**	**16 07 08.4**	**-1.5**
	4.5nm,0.7s						
KST				*e*S	**Sb**	**16 08 01.0**	**+1.3**
	62nm,0.7s						
KST	**Kastek**	**4.09**	**27**	Pg	**Pb**	**16 07 08.4**	**-1.5**
	4.5nm,0.7s						
KST				Lg	Lg	16 08 01.7	
	62nm,0.7s						
SGDS	**Sogindy**	**4.14**	**12**	*e*P	**Pb**	**16 07 09.7**	**-0.9**
	4.5nm,0.5s						
SGDS				*e*S	**Sb**	**16 08 03.1**	**+2.2**
	23nm,0.5s						
SGDS	**Sogindy**	**4.14**	**12**	Pg	**Pb**	**16 07 09.7**	**-0.9**
SGDS				Lg	Lg	16 08 04.0	
KK31	**Karatay Array**	**4.32**	**330**	⇑Pn	**Pn**	**16 07 05.4**	**+1.9**
	1.3nm,0.3s,baz=134,slow=13,SNR=7.1						
KK31				⇓Pg	**Pb**	**16 07 15.4**	**+1.7**
	6.8nm,0.6s,baz=145,slow=15,SNR=8.0						
KK31				⇓Sn	**Sn**	**16 07 56.6**	**+2.4**
	5.3nm,0.4s,baz=143,slow=24,SNR=4.0						
KK31				⇓Lg	Lg	16 08 10.9	
	13nm,0.5s,baz=149,slow=28,SNR=4.5						
KKAR	**Karatay Array**	**4.32**	**330**	⇑*i*P	**Pn**	**16 07 04.6**	**+1.0**
	baz=29						
KKAR				⇑*i*S	**Sn**	**16 07 54.4**	**+0.2**
	baz=29						
MTBS	**Maitube**	**4.34**	**30**	*e*P	**Pb**	**16 07 12.6**	**-1.5**
	3.0nm,0.2s						
MTBS				*e*S	**Sb**	**16 08 08.4**	**+1.7**
	15nm,0.3s						
MTBS	**Maitube**	**4.34**	**30**	Pg	**Pb**	**16 07 12.6**	**-1.5**
	3.0nm,0.2s						
MTBS				Lg	Lg	16 08 09.1	
	15nm,0.3s						
MDOK	**Medeo**	**4.62**	**35**	*e*P	**Pb**	**16 07 17.4**	**-1.5**
	2.8nm,0.4s						
MDOK				*e*S	**Sb**	**16 08 16.4**	**+1.5**
	23nm,0.8s						
MDOK	**Medeo**	**4.62**	**35**	Pg	**Pb**	**16 07 17.5**	**-1.5**
	2.8nm,0.4s						
MDOK				Lg	Lg	16 08 17.7	
	23nm,0.8s						
KUU	**Kurty**	**4.97**	**25**	*e*P	**Pb**	**16 07 23.8**	**-1.1**
	2.8nm,0.6s						
KUU				*e*S	**Sb**	**16 08 27.6**	**+2.7**
	35nm,0.6s						
KUU	**Kurty**	**4.97**	**25**	Pg	**Pb**	**16 07 23.8**	**-1.1**
	2.8nm,0.6s						
KUU				Lg	Lg	16 08 28.5	
	35nm,0.6s						
CHKK	**Chushkaly**	**5.17**	**30**	*e*P	**Pb**	**16 07 27.6**	**-0.6**
	1.7nm,0.1s						
CHKK				*e*S	**Sb**	**16 08 33.9**	**+3.4**
	24nm,0.8s						
CHKK	**Chushkaly**	**5.17**	**30**	Pg	**Pb**	**16 07 27.6**	**-0.6**
CHKK				Lg	Lg	16 08 34.4	
SATY	**Saty**	**5.21**	**44**	*e*P	**Pb**	**16 07 29.6**	**+0.5**
	5.2nm,0.6s						
SATY				*e*S	**Sb**	**16 08 37.5**	**+5.6**
	15nm,0.6s						
SATY	**Saty**	**5.21**	**44**	Pg	**Pb**	**16 07 29.5**	**+0.5**
	5.2nm,0.6s						
SATY				Lg	Lg	16 08 38.2	
	15nm,0.6s						
KURS	**Kuram**	**5.40**	**39**	*e*P	**Pb**	**16 07 33.5**	**+1.5**
	3.4nm,0.8s						
KURS				*e*S	**Sb**	**16 08 44.3**	**+7.2**
	12nm,1.2s						
KURS	**Kuram**	**5.40**	**39**	Pg	**Pb**	**16 07 33.5**	**+1.5**
KURS				Lg	Lg	16 08 45.4	
UZB	**Uzynbulak**	**5.61**	**46**	*e*P	**Pb**	**16 07 35.6**	**-0.2**
	0.9nm,0.1s						
UZB				*e*S	**Sb**	**16 08 47.7**	**+4.4**
	7.6nm,0.7s						
UZB	**Uzynbulak**	**5.61**	**46**	Pg	**Pb**	**16 07 35.6**	**-0.2**
	0.9nm,0.1s						
UZB				Lg	Lg	16 08 48.2	
	7.6nm,0.7s						
BTLS	**Baital**	**5.65**	**4**	*e*P	**Pb**	**16 07 37.0**	**+0.6**
	2.0nm,0.4s						
BTLS				*e*S	**Sb**	**16 08 49.8**	**+5.5**
	6.7nm,0.6s						
BTLS	**Baital**	**5.65**	**4**	Pg	**Pb**	**16 07 37.0**	**+0.6**
	2.0nm,0.4s						
BTLS				Lg	Lg	16 08 50.6	
	6.7nm,0.6s						
PDGK	**Podgornoye**	**5.99**	**47**	Pg	**Pb**	**16 07 41.4**	**-0.9**
	1.2nm,0.6s						
PDGK				Lg	Lg	16 08 58.5	
	6.4nm,1.1s						
TDK	**Taldyqorghan**	**6.69**	**32**	*e*P	**Pb**	**16 07 57.9**	**+3.9**
	17nm,0.2s						
TDK				*e*S	**Sg**	**16 09 26.3**	**-5.7**
	31nm,0.4s						
MKAR	**Makanchi Array**	**9.80**	**38**	Pn	**Pn**	**16 08 19.7**	**+0.9**
	baz=232,slow=12,SNR=4.6						
MKAR				Lg	Lg	16 11 01.1	
	0.1nm,0.3s,baz=229,slow=26,SNR=2.6						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**11.77**	**16**	Pn	**Pn**	**16 08 43.6**	**-2.1**
	baz=208,slow=12,SNR=3.4						
KURBB				Lg	Lg	16 12 01.5	
	baz=203,slow=30,SNR=4.9						
	0.2nm,0.5s						
AKTO	**Aktyubinsk**	**15.51**	**320**	⇓P	**P**	**16 09 38.6**	**-2.3**
	3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**16.47**	**24**	Pn	**Pn**	**16 09 49.0**	**+0.2**
	0.2nm,0.3s,baz=218,slow=11,SNR=11						
	2.1nm,0.6s						
ARU	**Arti**	**19.68**	**335**	P	**P**	**16 10 27.1**	**+0.2**
	1.9nm,0.3s,baz=241,slow=2.7,SNR=6.2						
BRTR	**Keskin Array B**	**30.54**	**284**	P	**P**	**16 12 11.5**	**-0.1**
	0.6nm,0.8s,baz=65,slow=11,SNR=2.8						
	0.6nm,0.8s						
FINES	**FINESS Array B**	**36.25**	**323**	P	**P**	**16 12 59.5**	**-1.4**
	0.9nm,0.4s,baz=112,slow=10.0,SNR=13						
	0.9nm,0.4s						
ARCES	**ARCESS Array B**	**39.26**	**336**	P	**P**	**16 13 24.7**	**-1.6**
	1.0nm,0.6s,baz=109,slow=8.7,SNR=6.5						
	1.0nm,0.6s						
NB2	**NORSAR Subarra**	**43.30**	**321**	P	**P**	**16 13 57.4**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**43

WRAB	**Tennant Creek**	**48.10**	**96**	P		**P**		**16 24 10.2**	**+0.5**
WR0	**Warramunga Arr**	**48.27**	**96**	P		**P**		**16 24 11.3**	**+0.2**
WR0				IAmb		IAmb		16 24 12.5	
	comp=Z,5.4nm,0.7s								
BOSA	**Boshof**	**51.04**	**252**	P		**P**		**16 24 33.9**	**+1.6**
	comp=Z,3.3nm,0.8s,baz=142,slow=5.8,SNR=5.9								
	comp=Z,3.3nm,0.8s								
BOSA	**Boshof**	**51.04**	**252**	P		**P**		**16 24 31.0**	**-1.3**
BOSA				IAmb		IAmb		16 25 14.3	
	comp=Z,15nm,1.4s								
STKA	**Stephens Creek**	**52.29**	**113**	P		**P**		**16 24 42.0**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=318,slow=8.6,SNR=4.9								
	comp=Z,1.8nm,0.8s								
STKA	**Stephens Creek**	**52.29**	**113**	P		**P**		**16 24 40.7**	**-0.7**
VNDA	**Vanda**	**64.40**	**166**	P		**P**		**16 26 03.4**	**-1.9**
VNDA				IAmb		IAmb		16 26 34.4	
	comp=Z,3.9nm,1.4s								
QSPA	**South Pole Qui**	**66.05**	**180**	P		**P**		**16 26 17.6**	**+1.3**
	comp=Z,2.8nm,1.0s,baz=295,slow=4.2,SNR=5.8								
	comp=Z,2.8nm,1.0s								
QSPA	**South Pole Qui**	**66.05**	**180**	P		**P**		**16 26 17.7**	**+1.3**
QSPA				IAmb		IAmb		16 26 21.3	
	comp=Z,2.6nm,0.9s								
KKAR	**Karatay Array**	**67.72**	**351**	P		**P**		**16 26 27.1**	**+0.1**
MKAR	**Makanchi Array**	**70.51**	**360**	P		**P**		**16 26 44.3**	**0.0**
	comp=Z,0.7nm,0.7s,baz=173,slow=6.0,SNR=7.2								
	comp=Z,0.7nm,0.7s								
MAKZ	**Makanchi**	**70.53**	**360**	P		**P**		**16 26 43.7**	**-0.7**
MAKZ				IAmb		IAmb		16 26 44.9	
	comp=Z,1.8nm,0.8s								
KSRS	**Korea Array**	**74.66**	**36**	P		**P**		**16 27 09.4**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=236,slow=5.0,SNR=5.0								
KSRS				LR		LR		16 57 47.3	
	comp=Z,7.8nm,20.1s,baz=175,slow=34								
	comp=Z,1.0nm,0.8s								
SONM	**Songino Array**	**74.73**	**16**	P		**P**		**16 27 10.4**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=197,slow=4.5,SNR=1.3								
	comp=Z,0.4nm,0.5s								
ABKAR	**Akbulak array**	**75.69**	**345**	P		**P**		**16 27 10.8**	**-4.0**
ZALV	**Zalesovo Beam**	**77.70**	**1**	P		**P**		**16 27 25.6**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=188,slow=5.7,SNR=8.1								
	comp=Z,2.1nm,0.7s								
ZALV	**Zalesovo Beam**	**77.70**	**1**	P		**P**		**16 27 24.6**	**-1.4**
BRTR	**Keskin Array B**	**78.09**	**324**	P		**P**		**16 27 29.7**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=123,slow=4.6,SNR=6.4								
	comp=Z,1.4nm,0.8s								
USRK	**Ussurisyk Ar.**	**81.67**	**34**	P		**P**		**16 27 48.1**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=245,slow=3.0,SNR=5.2								
	comp=Z,1.0nm,0.6s								
ARU	**Arti**	**82.68**	**347**	LR		LR		17 03 17.4	
	comp=Z,20nm,21.1s,baz=171,slow=35								
TORD	**Torodi Ar. Bea**	**87.03**	**286**	P		**P**		**16 28 17.1**	**+1.3**
	comp=Z,1.0nm,0.9s,baz=125,slow=7.2,SNR=4.3								
	comp=Z,1.0nm,0.9s								
AKASG	**Malin Array Be**	**87.97**	**329**	P		**P**		**16 28 20.1**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=122,slow=4.4,SNR=4.2								
	comp=Z,2.1nm,0.7s								
NVAR	**Mina Array Bea**	**157.28**	**46**	PKPab		**PKPab**		**16 35 57.5**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=287,slow=5.1,SNR=5.6								
TXAR	**Lajitas Array**	**172.43**	**45**	PKPab		**PKPab**		**16 37 03.6**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=255,slow=2.5,SNR=3.5								

TRN 05 16:21:13.2, 14°.89N×60°.42W, h44km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.46**	**255**	*e*P			Pn	16 21 25.1	+1.6
ILAM				*e*S			Sn	16 21 32.3	+1.4
MVM	**Montagne Vaucl**	**0.57**	**234**	*e*P			Pn	16 21 26.3	+1.3
MPOM	**Morne Pois Mar**	**0.61**	**224**	*e*P			Pn	16 21 26.9	+1.3
MPOM				*e*S			Sn	16 21 36.3	+1.8
LPMF	**Morne Lapointe**	**0.62**	**239**	*e*P			Pn	16 21 26.6	+1.0
ZAM	**Aeronautique**	**0.67**	**242**	*e*P			Pn	16 21 27.3	+1.0
TRMF	**Trois Ilets**	**0.71**	**240**	*e*P			Pn	16 21 27.9	+1.1
BAMF	**Morne Balai**	**0.71**	**264**	*e*P			Pn	16 21 28.4	+1.5
FDF	**Fort de France**	**0.72**	**258**	*e*P			Pn	16 21 28.5	+1.4
FDF				*e*S			Sn	16 21 39.2	+2.0
BIM	**Bigot**	**0.73**	**240**	*e*P			Pn	16 21 28.7	+1.5
BIM				*e*S			Sn	16 21 40.1	+2.8
DLPL	**La Plaine**	**0.91**	**299**	*e*P			Pn	16 21 30.1	+0.5
DLPL				*e*S			Sn	16 21 44.2	+2.6
SLBI	**Saint Lucia, B**	**1.02**	**212**	*e*P			Pn	16 21 32.2	+1.2
SLBI				*e*S			Sn	16 21 45.7	+1.5
MDN	**Morne-Daniel**	**1.03**	**294**	*e*P			Pn	16 21 33.4	+2.1
MDN				*e*S			Sn	16 21 47.1	+2.6
SLCP	**Castries, St.**	**1.04**	**212**	*e*S			Sn	16 21 45.9	+1.3
DSLB	**Salisbury**	**1.11**	**299**	*e*P			Pn	16 21 34.2	+1.9
DSLB				*e*S			Sn	16 21 49.4	+2.9
MDVC	**Dominica, Viel**	**1.20**	**307**	*e*P			Pn	16 21 33.7	+0.3
MDVC				*e*S			Sn	16 21 50.2	+1.7
SLB	**Belfond**	**1.22**	**210**	*e*P			Pn	16 21 35.0	+1.2
SLB				*e*S			Sn	16 21 51.5	+2.3
MDCT	**Cottage Hill,**	**1.24**	**306**	*e*P			Pn	16 21 35.3	+1.2
MCLT	**Moule a Chique**	**1.28**	**203**	*e*P			Pn	16 21 35.5	+0.9
MCLT				*e*S			Sn	16 21 52.5	+1.9
MAGL	**Barre de l'ile**	**1.34**	**322**	*e*P			Pn	16 21 36.2	+0.7
MAGL				*e*S			Sn	16 21 54.2	+2.0
TDBA	**Terre de Bas,**	**1.51**	**309**	*e*P			Pn	16 21 39.5	+1.7
TDBA				*e*S			Sn	16 21 58.1	+1.7
TBG	**Guadaloupe-3**	**1.52**	**309**	*e*P			Pn	16 21 39.3	+1.4
TBG				*e*S			Sn	16 21 57.7	+1.1
SSV	**Crater Summit**	**1.73**	**206**	*e*S			Sn	16 22 03.5	+1.8
SVB	**Belmont**	**1.80**	**207**	*e*P			Pn	16 21 43.6	+1.8
SVB				*e*S			Sn	16 22 04.9	+1.5
ABD	**La Joyeuse, An**	**1.88**	**327**	*e*P			Pn	16 21 44.8	+1.9
ABD				*e*S			Sn	16 22 06.3	+0.9
ANBD	**Bethesda, Anti**	**2.51**	**329**	*e*S			Sn	16 22 22.5	+1.7
GCMP	**Grenada, Carri**	**2.58**	**202**	*e*P			Pn	16 21 54.9	+2.4
GCMP				*e*S			Sn	16 22 23.1	+1.0

NIED ***05*** *16:57:10.3, 32°.36N×130°.60E, h6km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.06; $M_{\theta\theta}$1.14; $M_{\phi\phi}$-1.08; $M_{r\theta}$-0.64; $M_{r\phi}$1.71; $M_{\theta\phi}$0.72; Fault plane solution: M_{o}2.24000×10^{14} NP1: ϕ_s199.00000°, δ70.00000°, λ-169.00000°. NP2: ϕ_s105.00000°, δ79.00000°, λ-21.00000°.*

JMA 05 16:57:10.3±0.0, 32°.4N±0°.1×130°.6E±0°.1, h6km±1km, MV3.5/20, 3D, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JZO	**Okuchi**	**0.22**	**181**	P			Pg	16 57 14.9	+0.1
JZO				S			Sg	16 57 18.0	+0.3
JIU3	**Izumi3**	**0.26**	**44**	⇓*i*P			Pg	16 57 15.4	0.0
JIU3				⇓S			Sg	16 57 19.1	+0.3
JHD	**Hondo**	**0.41**	**285**	*i*P			Pg	16 57 18.5	+0.3
JHD				S			Sg	16 57 24.7	+1.1
JTA	**Tamana**	**0.60**	**354**	*i*P			Pg	16 57 22.1	+0.2
JTA				S			Sg	16 57 30.4	+0.6
JTZ	**Takazaki**	**0.62**	**138**	*i*P			Pg	16 57 22.9	+0.6
JTZ				S			Sg	16 57 31.2	+1.0
JSJ	**Shimokoshiki**	**1.02**	**228**	⇓P			Pg	16 57 28.8	-1.1

THE ***05*** *17:02:31.0, 41°.16N×23°.65E, h14km±1km, ML2.2/10, Error ellipse: s-maj=1.6km s-min=0.6km az=330.0*
BEO ***05*** *17:02:32.0±0.4, 41°.15N×23°.61E, h10km±2km, ML2.1/10*
SKO ***05*** *17:02:32.4, 41°.15N×23°.62E, h6km*
ATH 05 17:02:31.3, 41°.16N×23°.65E, h13km±1km, ML2.2/7, 3C, Error ellipse: s-maj=1.5km s-min=0.7km az=327.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SRS	**Serrai**	**0.06**	**226**	P			Pg	17 02 34.0	+0.1
SRS				S			Sg	17 02 35.8	0.0
	10μm,0.2s								
SRS	**Serrai**	**0.06**	**226**	*e*Pg			Pg	17 02 34.0	+0.1
SRS				*e*Sg			Sg	17 02 35.4	-0.4
SRS	**Serrai**	**0.06**	**226**	⇑*i*Pg			Pg	17 02 34.0	+0.1
SRS				*i* Sg			Sg	17 02 35.9	+0.1
SRS	**Serrai**	**0.06**	**226**	P			Pg	17 02 34.0	+0.1
SRS				S			Sg	17 02 35.9	+0.1
SRS				AML		AML		17 02 36.0	
	comp=N,26947μm,0.1s								
SRS				AML		AML		17 02 36.2	
	comp=E,11647μm,0.1s								
NVR	**Nevrokopi**	**0.25**	**40**	P			Pg	17 02 36.6	0.0
NVR				S			Sg	17 02 40.2	+0.1
	comp=E,1μm,0.2s								
NVR									

NVR	**Nevrokopi**	**0.25**	**40**	P			Pg	17 02 36.6	0.0
NVR				S			Sg	17 02 40.2	0.0
NVR				AML		AML		17 02 40.4	
	comp=N,2702μm,0.2s								
NVR				AML		AML		17 02 40.5	
	comp=E,2714μm,0.1s								
SOH	**Sokhos**	**0.41**	**214**	P			Pg	17 02 39.5	0.0
SOH				S			Sg	17 02 45.1	+0.2
	comp=E,310nm,0.4s								
SOH	**Sokhos**	**0.41**	**214**	⇑*i*Pg			Pg	17 02 39.5	0.0
SOH				*i* Sg			Sg	17 02 45.1	+0.2
SOH	**Sokhos**	**0.41**	**214**	P			Pg	17 02 39.5	0.0
SOH				S			Sg	17 02 45.0	0.0
SOH				AML		AML		17 02 46.7	
	comp=E,782μm,0.1s								
SOH				AML		AML		17 02 46.9	
	comp=N,758μm,0.3s								
KOKK	**Kokkinochori,**	**0.43**	**142**	P			Pg	17 02 39.9	0.0
KOKK				S			Sg	17 02 45.6	-0.1
	comp=N,372nm,0.2s								
KOKK	**Kokkinochori,**	**0.43**	**142**	P			Pg	17 02 40.0	+0.1
KOKK				S			Sg	17 02 45.6	0.0
KNT	**Kendrikon**	**0.57**	**270**	P			Pg	17 02 42.1	-0.4
KNT				S			Sg	17 02 49.3	-0.7
	comp=N,362nm,0.2s								
KNT	**Kendrikon**	**0.57**	**270**	⇑*i*Pg			Pg	17 02 42.2	-0.3
KNT				*i* Sg			Sg	17 02 49.9	-0.2
KNT	**Kendrikon**	**0.57**	**270**	P			Pg	17 02 42.1	-0.3
KNT				S			Sg	17 02 50.0	-0.1
KVLA	**Kavala**	**0.60**	**112**	P			Pg	17 02 42.8	-0.2
KVLA				S			Sg	17 02 50.6	-0.3
KAVA	**Kavala**	**0.67**	**104**	P			Pg	17 02 43.8	-0.6
KAVA				S			Sg	17 02 53.0	-0.2
	comp=N,50nm,0.2s								
KAVA	**Kavala**	**0.67**	**104**	P			Pg	17 02 43.8	-0.6
KAVA				S			Sg	17 02 53.0	-0.2
HORT	**Hortiatis**	**0.70**	**217**	P			Pg	17 02 44.6	-0.4
HORT				S			Sb	17 02 54.7	-0.4
	comp=N,188nm,0.3s								
HORT	**Hortiatis**	**0.70**	**217**	P			Pg	17 02 44.7	-0.3
THE	**Thessaloniki**	**0.74**	**225**	P			Pg	17 02 45.2	-0.5
THE				S			Sg	17 02 55.2	-0.2
	comp=N,160nm,0.3s								
THE	**Thessaloniki**	**0.74**	**225**	*i* Pg			Pg	17 02 45.4	-0.4
THE				*i* Sg			Sg	17 02 55.6	+0.2
THE	**Thessaloniki**	**0.74**	**225**	P			Pg	17 02 45.4	-0.3
THE				S			Sg	17 02 55.1	-0.4
THE				AML		AML		17 02 56.7	
	comp=N,350μm,0.2s								
THE				AML		AML		17 02 57.5	
	comp=E,280μm,0.2s								
VAY	**Valandovo**	**0.83**	**281**	*e*Pg			Pg	17 02 47.4	0.0
VAY				*e*Sg			Sb	17 02 58.7	-0.1
VAY	**Valandovo**	**0.83**	**281**	*i* Pg			Pg	17 02 47.5	0.0
VAY				*i* Sg			Sb	17 02 58.9	+0.1
VAY				*e*Lg			Lg	17 02 59.0	
	comp=N,49nm,0.7s								
GRG	**Griva**	**0.97**	**258**	*i* Pg			Pb	17 02 49.2	-0.8
GRG				*i* Sg			Sg	17 03 02.6	0.0
GRG	**Griva**	**0.97**	**258**	P			Pb	17 02 49.2	-0.8
THAS	**Thassos island**	**0.98**	**124**	P			Pb	17 02 50.1	-0.1
THAS				S			Sb	17 03 02.6	-0.4
	comp=N,162nm,0.3s								
THAS	**Thassos island**	**0.98**	**124**	P			Pb	17 02 49.9	-0.2
THAS				S			Sb	17 03 02.5	-0.5
THAS				AML		AML		17 03 04.4	
	comp=N,312μm,0.3s								
THAS				AML		AML		17 03 05.0	
	comp=E,344μm,0.3s								
PLD	**Plovdiv**	**1.23**	**40**	*e*Pg			Pg	17 02 54.8	-0.2
PLD				*e*Sg			Sg	17 03 12.4	+1.4
PLD	**Plovdiv**	**1.23**	**40**	*i* Pg			Pg	17 02 55.0	0.0
PAIG	**Paliouri**	**1.23**	**179**	P			Pn	17 02 54.0	-0.3
PAIG				S			Sb	17 03 10.2	-0.1
PAIG				AML		AML		17 03 12.1	
	comp=E,110μm,0.3s								
PAIG				AML		AML		17 03 16.2	
	comp=N,86μm,0.4s								
RDO	**Rodhopi**	**1.42**	**90**	P			Pn	17 02 56.5	-0.4
RDO				S			Sb	17 03 16.2	+0.4
	comp=N,88nm,0.4s								
RDO	**Rodhopi**	**1.42**	**90**	P			Pn	17 02 56.6	-0.2
RDO				S			Sb	17 03 16.1	+0.4
RDO				AML		AML		17 03 19.7	
	comp=E,169μm,0.5s								
RDO				AML		AML		17 03 20.6	
	comp=N,136μm,0.2s								
VTS	**Vitosha**	**1.49**	**348**	*e*Pg			Pb	17 02 59.3	+0.3
VTS				*e*Sg			Sb	17 03 18.2	+0.3
VTS	**Vitosha**	**1.49**	**348**	*i* Pg			Pn	17 02 58.4	+0.5
SMTH	**Samothraki Isl**	**1.58**	**115**	P			Pn	17 02 59.7	+0.6
BOSS	**Bosilegrad**	**1.60**	**327**	*e*Pg			Pb	17 03 01.2	+0.5
BOSS				*e*Sg			Sg	17 03 22.1	-0.6
PRVS	**Prvonek**	**1.79**	**319**	*e*Pn			Pn	17 03 02.2	+0.2
PRVS				*e*Sn			Sn	17 03 25.3	+0.7
BARS	**Barje**	**2.15**	**321**	*e*Pn			Pn	17 03 07.8	+0.9
BARS				*e*Sn			Sn	17 03 34.9	+1.5
ZAPS	**Zavoj**	**2.24**	**341**	*e*Pn			Pn	17 03 08.8	+0.6
ZAPS				*e*Sn			Sn	17 03 35.4	-0.4
BLKB	**Belogradchik**	**2.56**	**344**	*e*Pn			Pn	17 03 14.5	+1.8
BLKB				*e*Sn			Sn	17 03 45.9	+2.2
ZAGS	**Zajecar**	**2.85**	**339**	*e*Pn			Pn	17 03 16.2	-0.3

ATH ***05*** *17:11:16.9, 38°.08N×22°.30E, h10km±1km, ML3.1/27, Error ellipse: s-maj=1.2km s-min=0.4km az=249.0*
THE 05 17:11:16.8, 38°.06N×22°.29E, h6km, ML3.1/13, Error ellipse: s-maj=0.9km s-min=0.2km az=334.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KLV	**Kalavryta, Ach**	**0.11**	**263**	P			Pg	17 11 19.6	+0.4
KLV				S			Sg	17 11 20.8	0.0
	13μm,0.2s								
KLV	**Kalavryta, Ach**	**0.11**	**263**	P			Pg	17 11 19.5	+0.3
KLV				S			Sg	17 11 21.4	+0.6
KLV				AML		AML		17 11 22.1	
	comp=E,34048μm,0.2s								
KLV				AML		AML		17 11 23.2	
	comp=N,18454μm,0.3s								
ALIK	**Aliki, Aigiali**	**0.25**	**325**	P			Pg	17 11 21.7	+0.1
ALIK				S			Sg	17 11 25.6	+0.7
THAL	**Thalero**	**0.29**	**94**	P			Pg	17 11 22.9	+0.3
THAL				S			Sg	17 11 26.9	+0.4
	comp=N,26μm,0.2s								
THAL	**Thalero**	**0.29**	**94**	P			Pg	17 11 22.8	+0.2
THAL				S			Sg	17 11 26.9	+0.4
THAL				AML		AML		17 11 27.2	
	comp=N,58109μm,0.2s								
THAL				AML		AML		17 11 29.7	
	comp=E,34632μm,0.2s								
LAKA	**Lakka**	**0.31**	**307**	P			Pg	17 11 22.6	-0.2
LAKA				S			Sg	17 11 27.1	+0.3
	comp=E,12μm,0.3s								
LAKA	**Lakka**	**0.31**	**307**	P			Pg	17 11 22.6	-0.2
LAKA				S			Sg	17 11 27.2	+0.3
LAKA				AML		AML		17 11 27.5	
	comp=E,6679μm,0.4s								
LAKA				AML		AML		17 11 28.2	
	comp=N,5959μm,0.3s								
SERG	**Sergoula**	**0.40**	**333**	P			Pg	17 11 24.5	-0.1
SERG				S			Sg	17 11 30.4	+0.6
	comp=N,2μm,0.2s								
SERG	**Sergoula**	**0.40**	**333**	P			Pg	17 11 24.6	0.0
SERG				S			Sg	17 11 29.5	-0.3
SERG				AML		AML		17 11 31.5	
	comp=N,7358μm,0.2s								
SERG				AML		AML		17 11 32.7	
	comp=E,4751μm,0.3s								
DLFA	**Delphi**	**0.45**	**21**	P			Pg	17 11 25.6	+0.1
DLFA				S			Sg	17 11 31.0	-0.4
UPR	**University Cam**	**0.46**	**300**	P			Pg	17 11 25.7	+0.1
UPR				S			Sg	17 11 31.9	+0.3
DRO	**Drossia**	**0.47**	**257**	P			Pg	17 11 25.8	-0.1
DRO				S			Sg	17 11 32.3	+0.3
	comp=E,8μm,0.3s								
DRO	**Drossia**	**0.47**	**257**	P			Pg	17 11 25.7	-0.2
DRO				S			Sb	17 11 33.5	-1.2
DRO				AML		AML		17 11 38.4	
	comp=N,14491μm,0.3s								
DRO				AML		AML		17 11 39.4	
	comp=E,15591μm,0.4s								
EFP	**Efpalio**	**0.48**	**321**	P			Pg	17 11 25.5	-0.5

EFP				S			Sg	17 11 33.0	+0.8
	comp=E,1μm,0.2s								
EFP	**Efpalio**	**0.48**	**321**	P			Pg	17 11 25.9	-0.1
EFP				S			Sg	17 11 32.4	+0.2
EFP				AML		AML		17 11 35.8	
	comp=N,2532μm,0.2s								
EFP				AML		AML		17 11 36.0	
	comp=E,2110μm,0.2s								
ACOR	**Acrocorinthos**	**0.49**	**110**	P			Pg	17 11 26.1	0.0
ACOR				S			Sg	17 11 32.8	+0.2
ACOR				AML		AML		17 11 33.4	
	comp=N,1566μm,0.2s								
ACOR				AML		AML		17 11 39.0	
	comp=E,2026μm,0.5s								
LTK	**Loutraki**	**0.54**	**93**	P			Pg	17 11 27.2	+0.1
LTK				S			Sg	17 11 34.7	+0.6
	comp=E,2μm,0.3s								
LOUT	**Loutraki**	**0.55**	**97**	P			Pg	17 11 27.5	+0.2
LOUT				S			Sg	17 11 34.4	0.0
LOUT				AML		AML		17 11 41.2	
	comp=N,390μm,0.2s								
LOUT				AML		AML		17 11 42.0	
	comp=E,576μm,0.3s								
RLS	**Riolos of Patr**	**0.65**	**270**	P			Pg	17 11 28.6	-0.7
RLS				S			Sb	17 11 38.9	-1.0
	comp=E,1μm,0.3s								
RLS	**Riolos of Patr**	**0.65**	**270**	P			Pg	17 11 28.6	-0.7
RLS				S			Sg	17 11 37.9	+0.2
RLS				AML		AML		17 11 39.5	
	comp=E,2872μm,0.3s								
RLS				AML		AML		17 11 42.6	
	comp=N,2448μm,0.3s								
AXAR	**Agios Charalam**	**0.77**	**22**	P			Pg	17 11 30.5	-1.0
AXAR				S			Sg	17 11 41.1	-0.4
AXAR				AML		AML		17 11 43.8	
	comp=N,11876μm,0.3s								
AXAR				AML		AML		17 11 44.5	
	comp=E,16579μm,0.4s								
VIL2	**Platees**	**0.79**	**78**	P			Pb	17 11 32.7	-0.2
VIL2				S			Sb	17 11 43.1	-0.8
VIL2				AML		AML		17 11 46.5	
	comp=N,5007μm,0.6s								
VIL2				AML		AML		17 11 48.1	
	comp=E,5265μm,0.6s								
EPID	**Epidavros**	**0.79**	**124**	P			Pg	17 11 31.8	-0.2
EPID				S			Sg	17 11 43.0	+0.7
	comp=E,2μm,0.3s								
EPID	**Epidavros**	**0.79**	**124**	P			Pg	17 11 31.6	-0.4
EPID				S			Sg	17 11 43.1	+0.9
VILL	**Villia**	**0.81**	**82**	P			Pg	17 11 32.5	+0.1
VILL				S			Sg	17 11 43.3	+0.3
	comp=E,3μm,0.5s								
PVO	**Paravola**	**0.82**	**313**	P			Pg	17 11 32.4	-0.2
PVO	**Paravola**	**0.82**	**313**	P			Pg	17 11 32.3	-0.2
PVO				S			Sg	17 11 43.8	+0.6
ATAL	**Atalanti**	**0.86**	**42**	P			Pg	17 11 32.7	-0.5
ATAL				S			Sb	17 11 45.3	-0.6
	comp=E,2μm,0.5s								
ATAL	**Atalanti**	**0.86**	**42**	P			Pg	17 11 32.0	-1.2
ATAL				S			Sg	17 11 44.1	-0.2
ATAL				AML		AML		17 11 48.2	
	comp=N,3901μm,0.6s								
ATAL				AML		AML		17 11 48.5	
	comp=E,4415μm,0.5s								
ITM	**Ithomi**	**0.92**	**198**	P			Pg	17 11 34.0	-0.5
ITM				S			Sb	17 11 47.5	-0.3
	comp=E,1μm,0.2s								
ITM	**Ithomi**	**0.92**	**198**	P			Pg	17 11 34.0	-0.5
ITM				S			Sb	17 11 47.3	-0.5
ITM				AML		AML		17 11 50.0	
	comp=E,2508μm,0.3s								
ITM				AML		AML		17 11 51.0	
	comp=N,1716μm,0.3s								
EVR	**Evrytania**	**0.94**	**336**	P			Pg	17 11 34.3	-0.5
EVR				S			Sg	17 11 47.1	+0.2
EVR				AML		AML		17 11 51.1	
	comp=E,1795μm,0.5s								
EVR				AML		AML		17 11 52.1	
	comp=N,1503μm,0.7s								
KRND	**KRANIDI**	**0.96**	**134**	P			Pg	17 11 34.9	-0.3
KRND	**KRANIDI**	**0.96**	**134**	P			Pg	17 11 35.1	0.0
KRND				S			Sg	17 11 48.1	+0.5
KRND				AML		AML		17 11 53.7	
	comp=N,2725μm,0.5s								
KRND				AML		AML		17 11 53.7	
	comp=E,2345μm,0.3s								
MAKR	**Makrakomi, Fth**	**0.96**	**353**	P			Pg	17 11 34.5	-0.8
MAKR	**Makrakomi, Fth**	**0.96**	**353**	P			Pg	17 11 35.2	-0.1
MAKR				S			Sg	17 11 47.9	+0.1
MAKR				AML		AML		17 11 51.6	
	comp=N,7239μm,0.4s								
MAKR				AML		AML		17 11 57.6	
	comp=E,4140μm,0.6s								

THL					S	Sn	17 12 03.7	-1.0
THL					AML	AML	17 12 07.9	
	comp=N,468μm,0.6s							
THL					AML	AML	17 12 10.3	
	comp=E,654μm,0.6s							
KYMI	**Kymi, Euboea I**	**1.54**	**67**		P	Pn	17 11 43.9	-0.9
KYMI					S	Sn	17 12 04.8	-0.3
KYMI					AML	AML	17 12 12.5	
	comp=N,1545μm,0.5s							
KYMI					AML	AML	17 12 13.0	
	comp=E,1360μm,0.4s							
KEF3	**Kipouria, Keph**	**1.54**	**276**		P	Pn	17 11 44.1	-0.7
KEF3	**Kipouria, Keph**	**1.54**	**276**		P	Pn	17 11 44.3	-0.5

BUC 05 17:13:24.4±0.3, 45°36N×24°97E, h2km, ml0.2/2, 2C-8D, Error ellipse: s-maj=3.9km s-min=2.4km az=160.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOIR		**0.09**	**36**	⇓P	Pg	17 13 26.3	0.0
VOIR				⇓S	Sg	17 13 28.0	+0.5
VOIR		**0.09**	**36**	⇓P	Pg	17 13 26.3	0.0
VOIR				⇓S	Sg	17 13 28.0	+0.5
MTUR	**Matau**	**0.15**	**155**	⇑P	Pg	17 13 27.5	+0.2
MTUR	**Matau**	**0.15**	**155**	⇑P	Pg	17 13 27.5	+0.2
ARR	**Arges**	**0.24**	**271**	⇓P	Pg	17 13 28.3	-0.8
ARR				⇓S	Sg	17 13 33.1	+1.0
ARR	**Arges**	**0.24**	**271**	⇓P	Pg	17 13 28.3	-0.8
ARR				⇓S	Sg	17 13 33.1	+1.0

*SOME **05** 17:24:04.9, 40°.20N×77°.22E, h10km*
*KRNET **05** 17:24:04.7±0.1, 39°.99N×77°.38E, mb3.5*
*NNC **05** 17:24:07.3±0.9, 40°.24N×77°.35E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=6.5km s-min=5.1km az=170.0*

ISC 05 17:24:00.2±2.3, 40°04N±0°09×77°38E±0°04, h3km±17km, n52, σ1s34/74, 18C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.37**	**339**	P	**Pg**	**17 24 47.1**	**+1.6**
	SNR=37						
ULHL	**Ulahol**	**2.37**	**339**	⇑*e*P	**Pg**	**17 24 46.6**	**+1.0**
	baz=39						
ULHL				⇑*e*S	**Sg**	**17 25 17.1**	**+0.8**
	baz=39						
PRZ	**Przheval'sk**	**2.56**	**17**	⇓*e*P	**Pb**	**17 24 49.3**	**+2.4**
	baz=17						
PRZ				⇓*e*S	**Sg**	**17 25 22.2**	**-0.3**
	baz=17						
BOOM	**Boomskoye usch**	**2.68**	**337**	⇑*e*P	**Pb**	**17 24 50.9**	**+2.0**
	baz=37						
BOOM				⇑*i*S	**Sg**	**17 25 24.5**	**-1.8**
	baz=37						
ARLS	**Aral**	**2.95**	**309**	⇓*e*P	**Pb**	**17 24 54.2**	**+0.8**
	baz=10.0						
ARLS				⇓*e*S	**Sb**	**17 25 30.4**	**+0.5**
	baz=10.0						
UCH	**Uchtor**	**3.08**	**316**	P	**Pb**	**17 24 58.0**	**+2.1**
	SNR=11						
UCH	**Uchtor**	**3.08**	**316**	⇓*e*P	**Pb**	**17 24 56.5**	**+0.6**
	baz=17						
UCH				⇓*e*S	**Sb**	**17 25 34.1**	**+0.1**
	baz=17						
SATY	**Saty**	**3.11**	**14**	*e*P	**Pg**	**17 25 01.3**	**+1.4**
	30nm,0.8s						
SATY				*e*S	**Sg**	**17 25 41.5**	**+1.3**
	116nm,0.6s						
SATY	**Saty**	**3.11**	**14**	Pg	**Pg**	**17 25 01.3**	**+1.4**
	30nm,0.8s						
SATY				Lg	Lg	17 25 41.5	
	116nm,0.6s						
MDOK	**Medeo**	**3.13**	**356**	*e*P	**Pg**	**17 25 01.2**	**+0.9**
	40nm,0.4s						
MDOK				*e*S	**Sg**	**17 25 41.5**	**+0.7**
	193nm,0.6s						
MDOK	**Medeo**	**3.13**	**356**	⇑Pg	**Pg**	**17 25 00.9**	**+0.7**
	26nm,0.5s						
MDOK				Pg	**Pg**	**17 25 01.2**	**+0.9**
	40nm,0.4s						
MDOK				Lg	Lg	17 25 41.5	
	193nm,0.6s						
MDOK				⇓Lg	Lg	17 25 41.6	
	75nm,0.6s						
MTBS	**Maitube**	**3.17**	**347**	*e*P	**Pg**	**17 25 01.8**	**+0.9**
	16nm,0.5s						
MTBS				*e*S	**Sg**	**17 25 42.2**	**+0.2**
	64nm,0.4s						
MTBS	**Maitube**	**3.17**	**347**	Pg	**Pg**	**17 25 01.8**	**+0.9**
	16nm,0.5s						
MTBS				Lg	Lg	17 25 42.2	
	64nm,0.4s						
TKM2	**Tokmak 2**	**3.18**	**336**	P	**Pb**	**17 24 58.5**	**+1.1**
	SNR=18						
TKM2	**Tokmak 2**	**3.18**	**336**	⇓Pg	**Pg**	**17 25 01.8**	**+0.7**
	8.1nm,0.6s						
TKM2				⇓Lg	Lg	17 25 43.0	
	50nm,0.7s						
TKM2	**Tokmak 2**	**3.18**	**336**	⇑*e*P	**Pb**	**17 24 57.8**	**+0.4**
	baz=36						
TKM2				⇑*i*S	**Sb**	**17 25 36.4**	**-0.2**
	baz=36						
KST	**Kastek**	**3.19**	**341**	*e*P	**Pg**	**17 25 01.8**	**+0.5**
	12nm,0.8s						
KST				*e*S	**Sg**	**17 25 42.7**	**+0.2**
	74nm,0.7s						
KST	**Kastek**	**3.19**	**341**	Pg	**Pg**	**17 25 01.8**	**+0.5**
	12nm,0.8s						
KST				Lg	Lg	17 25 42.7	
	74nm,0.7s						
AAA	**Alma-Ata**	**3.19**	**354**	*e*P	**Pg**	**17 25 02.7**	**+1.4**
	75nm,0.3s						
AAA				*e*S	**Sg**	**17 25 43.8**	**+1.3**
	301nm,0.4s						
AAA	**Alma-Ata**	**3.19**	**354**	Pg	**Pg**	**17 25 02.7**	**+1.4**
	75nm,0.3s						
AAA				Lg	Lg	17 25 43.8	
	301nm,0.4s						
KNDC	**Almaty**	**3.19**	**355**	⇑Pg	**Pg**	**17 25 02.5**	**+1.1**
	66nm,0.7s						
KNDC				⇑Lg	Lg	17 25 43.2	
	498nm,0.6s						
KBK	**Karagaybulak**	**3.19**	**326**	P	**Pb**	**17 24 59.5**	**+1.9**
	SNR=13						
KBK	**Karagaybulak**	**3.19**	**326**	⇑*e*P	**Pb**	**17 24 57.8**	**+0.1**
	baz=26						
KBK				⇑*e*S	**Sb**	**17 25 36.7**	**-0.3**
	baz=26						
UZB	**Uzynbulak**	**3.34**	**21**	*e*P	**Pg**	**17 25 04.7**	**+0.5**
	3.3nm,0.3s						
UZB				*e*S	**Sg**	**17 25 47.4**	**-0.1**
	25nm,0.8s						
UZB	**Uzynbulak**	**3.34**	**21**	Pg	**Pg**	**17 25 04.7**	**+0.5**
	3.3nm,0.3s						
UZB				Lg	Lg	17 25 47.3	
	25nm,0.8s						
AAK	**Ala-Archa**	**3.39**	**321**	P	**Pb**	**17 25 02.2**	**+1.3**
	SNR=5.4						
AAK	**Ala-Archa**	**3.39**	**321**	⇑*i*P	**Pb**	**17 25 00.6**	**-0.3**
	baz=21						
AAK				⇑*e*S	**Sb**	**17 25 41.5**	**-1.1**
	baz=21						
AML	**Almayashu**	**3.48**	**308**	P	**Pb**	**17 25 03.6**	**+0.8**
	SNR=11						
KURS	**Kuram**	**3.50**	**9**	*e*P	**Pg**	**17 25 07.7**	**+0.5**
	14nm,0.6s						
KURS				*e*S	**Sg**	**17 25 53.0**	**+0.5**
	50nm,0.7s						
KURS	**Kuram**	**3.50**	**9**	Pg	**Pg**	**17 25 07.7**	**+0.5**
	14nm,0.6s						
KURS				Lg	Lg	17 25 53.0	
	50nm,0.7s						
CHMS	**Chumysh**	**3.56**	**327**	⇓Pg	**Pb**	**17 25 06.6**	**+2.9**
	10.0nm,0.7s						
CHMS				⇑Lg	Lg	17 25 53.5	
	29nm,0.6s						
PDGK	**Podgornoye**	**3.65**	**25**	Pg	**Pg**	**17 25 10.1**	**+0.1**
	6.6nm,0.4s						
PDGK				Lg	Lg	17 25 57.2	
	33nm,0.5s						
PDGK	**Podgornoye**	**3.65**	**25**	⇓Pn	**Pb**	**17 25 03.6**	**-1.7**
	3.7nm,0.5s						
PDGK				⇑Pg	**Pg**	**17 25 10.7**	**+0.6**
	7.4nm,0.4s						
PDGK				⇑Lg	Lg	17 25 56.7	
	52nm,0.6s						
CHKK	**Chushkaly**	**3.82**	**356**	*e*P	**Pg**	**17 25 13.0**	**-0.4**
	14nm,0.3s						
CHKK				*e*S	**Sg**	**17 26 01.8**	**-1.2**
	97nm,0.4s						
CHKK	**Chushkaly**	**3.82**	**356**	Pg	**Pg**	**17 25 13.0**	**-0.4**
	14nm,0.3s						
CHKK				Lg	Lg	17 26 01.8	
	97nm,0.4s						
USP	**Ospenovka**	**3.88**	**327**	P	**Pg**	**17 25 14.8**	**+0.2**
	SNR=9.4						
KUU	**Kurty**	**3.93**	**349**	*e*P	**Pg**	**17 25 14.5**	**-1.0**
	3.7nm,0.4s						
KUU				*e*S	**Sg**	**17 26 04.6**	**-1.8**
	90nm,0.7s						
KUU	**Kurty**	**3.93**	**349**	Pg	**Pg**	**17 25 14.5**	**-1.0**
	3.7nm,0.4s						
KUU				Lg	Lg	17 26 04.6	
	90nm,0.7s						
SGDS	**Sogindy**	**3.98**	**330**	*e*P	**Pg**	**17 25 16.3**	**-0.2**
	4.1nm,0.5s						
SGDS				*e*S	**Sg**	**17 26 07.1**	**-1.0**
	14nm,0.8s						
SGDS	**Sogindy**	**3.98**	**330**	Pg	**Pg**	**17 25 16.3**	**-0.2**
	4.1nm,0.5s						
SGDS				Lg	Lg	17 26 07.1	
	14nm,0.8s						
MRKS	**Merke**	**4.13**	**312**	*e*P	**Pg**	**17 25 18.9**	**-0.5**
	4.5nm,0.5s						
MRKS				*e*S	**Sg**	**17 26 12.4**	**-0.6**
	15nm,0.6s						
DJR	**Jarkent**	**4.65**	**22**	*e*P	**Pg**	**17 25 28.6**	**-0.6**
	1.6nm,0.2s						
DJR				*e*S	**Sg**	**17 26 28.2**	**-1.3**
	23nm,0.5s						
DJR	**Jarkent**	**4.65**	**22**	Pg	**Pg**	**17 25 28.6**	**-0.6**
	1.6nm,0.2s						
DJR				Lg	Lg	17 26 28.2	
	23nm,0.5s						
TDK	**Taldyqorghan**	**5.02**	**8**	*e*P	**Pg**	**17 25 34.0**	**-2.3**
	43nm,0.3s						
TDK				*e*S	**Sg**	**17 26 38.4**	**-2.9**
	96nm,0.4s						
TDK	**Taldyqorghan**	**5.02**	**8**	Pg	**Pg**	**17 25 34.0**	**-2.3**
TDK				Lg	Lg	17 26 38.4	
BTLS	**Baital**	**5.57**	**335**	*e*P	**Pg**	**17 25 44.6**	**-2.3**
	6.1nm,0.7s						
BTLS				*e*S	**Sg**	**17 26 55.6**	**-3.6**
	12nm,0.8s						
IUG	**Iuzhnay**	**5.94**	**293**	*e*P	**Pg**	**17 25 52.0**	**-2.0**
	62nm,0.7s						
IUG				*e*S	**Sg**	**17 27 09.2**	**-1.8**
	18nm,0.9s						
IUG	**Iuzhnay**	**5.94**	**293**	Pg	**Pg**	**17 25 54.2**	**+0.2**
IUG				Lg	Lg	17 27 11.7	
KK31	**Karatay Array**	**5.99**	**303**	⇓Pg	**Pg**	**17 25 57.8**	**+2.8**
	0.6nm,0.5s,baz=130,slow=16,SNR=5.3						
KK31				⇓Lg	Lg	17 27 11.9	
	1.2nm,0.4s,baz=125,slow=28,SNR=4.8						
MK31	**Makanchi Array**	**7.64**	**26**	⇑Lg	Lg	17 28 02.2	
KURBB	**Kurchatov Arra**	**10.62**	**4**	⇓Lg	Lg	17 29 37.5	
	5.9nm,0.7s						
KURK	**Kurchatov**	**10.71**	**4**	⇑Lg	Lg	17 29 38.3	
	5.5nm,1.1s						

*IDC **05** 17:40:31.0±0.5, 14°.68N×45°.08W, h0km, mb4.2/23, mbtmp4.3/24, ML4.6/1, MS4.1/1, Error ellipse: s-maj=21.3km s-min=11.7km az=136.0*
*NEIC **05** 17:40:32.1±1.9, 14°.6N±0°.1×45°.0W±0°.1, h10km±1km, mb4.8/89, Error ellipse: s-maj=18.6km s-min=15.1km az=142.0*
*GCMT **05** 17:40:36.1±0.3, 14°.78N±0°.03×45°.03W±0°.02, h12km, MW5.0/115, Moment Tensor Solution. s31,c33; s115,c152; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.17±.10; Mθθ0.34±.11; Mϕϕ2.83±.09; Mrθ0.77±.44; Mθϕ-0.18±.09; Mrϕ1.92±.35; Best double couple: Mo3.63500×10^16 NP1ϕs189.00000°, δ62.00000°, λ-79.00000°. NP2ϕs346.00000°, δ30.00000°, λ-110.00000°. Principal axes: T 3.3920, Plg16.0000°, Azm271.0000°; N 0.4890, Plg10.0000°, Azm4.0000°; P -3.8780, Plg71.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=80s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 17:40:32.0±0.4, 14°.60N±0°.08×45°.03W±0°.06, h12km, n167, σ0s90/161, mb4.8/78, 7D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**12.05**	**219**	Pn	**Pn**	**17 43 23.6**	**-0.2**
	3.8nm,0.3s,baz=30,slow=14,SNR=27						
MDP				LR	LR	17 47 13.5	
	comp=Z,885nm,20.5s,baz=66,slow=33						
	9.5nm,0.4s						
H05S1	**Guadeloupe/Mar**	**15.31**	**271**	T	T	17 59 51.7	
	SNR=27						
MPOM	**Morne Pois Mar**	**15.33**	**271**	Pn	**Pn**	**17 44 06.6**	**-1.7**
ILAM	**Ilet Lapin Mar**	**15.33**	**273**	Pn	**Pn**	**17 44 08.9**	**+0.5**
TOSP	**Speyside**	**15.46**	**260**	Pn	**Pn**	**17 44 09.2**	**-0.9**
TOSP				IAmb	IAmb	17 44 18.4	
	comp=Z,112nm,1.6s						
BIM	**Bigot**	**15.53**	**272**	Pn	**Pn**	**17 44 09.7**	**-1.4**
GDSD	**La Dsirade Is**	**15.55**	**278**	P	**P**	**17 44 13.9**	**-1.7**
SVB	**Belmont**	**15.80**	**267**	P	**Pn**	**17 44 13.3**	**-1.3**
SVB				IAmb	IAmb	17 44 19.3	
	comp=Z,77nm,0.9s						
BOAV	**Boa Vista**	**19.52**	**233**	P	**P**	**17 44 59.2**	**-0.3**
BOAV				IAmb	IAmb	17 45 12.7	
	comp=Z,21nm,1.3s						
PDPR	**Patillas Dam,**	**20.43**	**282**	P	**P**	**17 45 08.8**	**-0.6**
PDPR				IAmb	IAmb	17 45 14.0	
	comp=Z,46nm,1.2s						
SJG	**San Juan**	**20.56**	**283**	P	**P**	**17 45 09.5**	**-1.2**
	comp=Z,9.3nm,0.3s,baz=88,slow=8.6,SNR=4.0						
	comp=Z,9.3nm,0.3s						
SJG	**San Juan**	**20.56**	**283**	P	**P**	**17 45 09.6**	**-1.2**
SJG				IAmb	IAmb	17 45 15.8	
	comp=Z,52nm,1.1s						
BIRV	**Birongo**	**21.13**	**261**	P	**P**	**17 45 17.8**	**+0.7**
BIRV				IAmb	IAmb	17 45 22.7	
	comp=Z,51nm,1.2s						
BAUV	**El Baul**	**23.21**	**259**	P	**P**	**17 45 37.9**	**-1.3**
MACA	**Manacapuru-AM**	**23.50**	**223**	P	**P**	**17 45 41.5**	**-0.5**
MACA				IAmb	IAmb	17 45 44.1	
	comp=Z,15nm,0.8s						
SDV	**Santo Domingo**	**25.69**	**260**	P	**P**	**17 46 03.1**	**+0.6**
	comp=Z,4.4nm,0.3s,baz=62,slow=5.7,SNR=8.3						
	comp=Z,4.4nm,0.3s						
SDV	**Santo Domingo**	**25.69**	**260**	P	**P**	**17 46 01.5**	**-1.1**
SDV				IAmb	IAmb	17 46 05.5	
	comp=Z,16nm,1.0s						
GRTK	**Grand Turk**	**25.73**	**289**	P	**P**	**17 46 02.9**	**+0.4**
GTBY	**Guantanamo Bay**	**29.18**	**285**	P	**P**	**17 46 33.7**	**+0.1**
GTBY				IAmb	IAmb	17 47 04.4	
	comp=Z,30nm,1.1s						
SAML	**Samuel**	**29.52**	**219**	P	**P**	**17 46 35.9**	**-0.7**
BDFB	**Brasilia**	**30.19**	**186**	P	**P**	**17 46 43.8**	**+1.2**
	comp=Z,6.4nm,0.8s,baz=18,slow=13,SNR=4.7						
	comp=Z,6.4nm,0.8s						
BDFB	**Brasilia**	**30.19**	**186**	P	**P**	**17 46 42.4**	**-0.2**
BDFB				IAmb	IAmb	17 46 52.2	
	comp=Z,17nm,1.0s						
ETMB	**Extrema**	**32.09**	**222**	P	**P**	**17 46 59.6**	**+0.3**
ETMB				IAmb	IAmb	17 47 03.1	
	comp=Z,5.5nm,1.0s						
PTLB	**Pontes e Lacer**	**32.95**	**206**	P	**P**	**17 47 07.2**	**+0.4**
PTLB				IAmb	IAmb	17 47 23.3	
	comp=Z,19nm,1.7s						
SIV	**San Ignacio**	**34.28**	**208**	P	**P**	**17 47 19.8**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=66,slow=6.6,SNR=5.5						
	comp=Z,1.6nm,0.8s						
OTAV	**Otavalo**	**36.00**	**250**	P	**P**	**17 47 34.1**	**+0.3**
OTAV				IAmb	IAmb	17 47 41.6	
	comp=Z,35nm,1.6s						
SLOR	**San Lorenzo -**	**36.45**	**248**	P	**P**	**17 47 36.6**	**-1.1**
SLOR				IAmb	IAmb	17 47 47.2	
	comp=Z,31nm,1.4s						
WUPA	**West Chester U**	**36.77**	**319**	P	**P**	**17 47 39.4**	**-0.1**
PORT	**Chimborazo Vol**	**37.02**	**247**	P	**P**	**17 47 42.5**	**-0.2**
PORT				IAmb	IAmb	17 47 55.9	
	comp=Z,18nm,1.3s						
PQI	**Presque Isle**	**37.31**	**334**	P	**P**	**17 47 46.0**	**+1.9**
PQI				IAmb	IAmb	17 48 08.7	
	comp=Z,48nm,1.8s						
BOSC	**San Juan Bosco**	**37.56**	**245**	P	**P**	**17 47 44.9**	**-1.9**
H10N3	**ASCENSION HYDR**	**37.60**	**124**	T	T	18 27 46.9	
	baz=306,slow=75,SNR=74						
H10N2	**ASCENSION HYDR**	**37.60**	**124**	T	T	18 27 47.2	
	baz=306,slow=75,SNR=78						
H10N1	**ASCENSION HYDR**	**37.62**	**124**	T	T	18 27 48.4	
	baz=306,slow=75,SNR=72						
SRBA	**San Rafael, Bu**	**37.85**	**266**	P	**P**	**17 47 49.2**	**+0.1**
SRBA				IAmb	IAmb	17 47 56.7	
	comp=Z,22nm,1.5s						
H10S3	**ASCENSION HYDR**	**38.14**	**126**	T	T	18 28 13.3	
	baz=304,slow=74,SNR=112						
H10S2	**ASCENSION HYDR**	**38.16**	**126**	T	T	18 28 14.7	
	baz=276,slow=74,SNR=64						
RIMA	**Rio Macho**	**38.23**	**267**	P	**P**	**17 47 53.0**	**+0.5**
RIMA				IAmb	IAmb	17 47 57.7	
	comp=Z,32nm,1.3s						
LPAZ	**La Paz**	**38.24**	**217**	P	**P**	**17 47 53.8**	**+0.8**
	comp=Z,3.6nm,1.1s,baz=37,slow=10,SNR=8.6						
	comp=Z,3.6nm,1.1s						
LPAZ	**La Paz**	**38.24**	**217**	P	**P**	**17 47 53.5**	**+0.5**
BLA	**Blacksburg**	**38.65**	**312**	P	**P**	**17 47 57.0**	**+1.4**
BLA				IAmb	IAmb	17 47 57.9	
	comp=Z,23nm,1.4s						
ACON	**Acoyapa**	**39.12**	**271**	P	**P**	**17 48 00.3**	**+0.5**
ACON				IAmb	IAmb	17 48 20.2	
	comp=Z,46nm,1.8s						
ARNL	**Arenillas**	**39.12**	**245**	P	**P**	**17 47 59.2**	**-0.6**
ARNL				IAmb	IAmb	17 48 02.9	
	comp=Z,28nm,0.9s						
JTS	**Las Juntas de**	**39.18**	**268**	P	**P**	**17 48 01.5**	**+1.2**
JTS				IAmb	IAmb	17 48 15.7	
	comp=Z,35nm,1.8s						
553A	**Crawfordville**	**39.37**	**300**	P	**P**	**17 48 01.5**	**-0.2**
S54A	**Dingess, Beckl**	**39.55**	**313**	P	**P**	**17 48 04.0**	**+0.9**
MATN	**Matagalpa**	**39.72**	**273**	P	**P**	**17 48 07.0**	**+2.1**
CNGN	**Cerro Negro**	**40.52**	**272**	P	**P**	**17 48 11.5**	**0.0**
CNGN				IAmb	IAmb	17 48 14.9	
	comp=Z,44nm,1.3s						
W50A	**Signal Mountai**	**41.53**	**307**	P	**P**	**17 48 19.5**	**-0.1**
MTE	**Manteigas**	**41.55**	**44**	P	**P**	**17 48 18.7**	**-1.0**
MTE				IAmb	IAmb	17 48 28.5	
	comp=Z,16nm,1.0s						
FPAL	**Fort Paine**	**41.55**	**306**	P	**P**	**17 48 20.3**	**+0.6**
PLAL	**Pickwick Lake**	**43.62**	**306**	P	**P**	**17 48 36.9**	**+0.4**
ESDC	**Sonseca Array**	**43.73**	**47**	P	**P**	**17 48 37.5**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=244,slow=8.8,SNR=8.2						
	comp=Z,1.6nm,0.9s						
ESDC	**Sonseca Array**	**43.73**	**47**	P	**P**	**17 48 37.9**	**+0.6**
WVT	**Waverly**	**43.77**	**307**	P	**P**	**17 48 39.1**	**+1.5**
WVT				IAmb	IAmb	17 49 55.9	
	comp=Z,19nm,0.9s						
SIUC	**Southern Illin**	**45.32**	**309**	P	**P**	**17 48 51.0**	**+1.0**
SIUC				IAmb	IAmb	17 48 58.6	
	comp=Z,7.0nm,0.7s						
TOA0	**Torodi Ar. Sit**	**45.32**	**86**	P	**P**	**17 48 49.2**	**-1.2**
TOA0				IAmb	IAmb	17 48 57.9	
	comp=Z,23nm,1.3s						
TORD	**Torodi Ar. Bea**	**45.32**	**86**	P	**P**	**17 48 50.4**	**0.0**
	comp=Z,4.0nm,1.1s,baz=279,slow=6.5,SNR=9.7						
	comp=Z,4.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**45.32**	**86**	P	**P**	**17 48 49.6**	**-0.8**
TORD				IAmb	IAmb	17 48 57.8	
	comp=Z,21nm,1.4s						
S44A	**Carbondale**	**45.34**	**309**	P	**P**	**17 48 49.7**	**-0.5**
S44A				IAmb	IAmb	17 48 58.6	
	comp=Z,14nm,1.1s						
CGM3	**Cape Girardeau**	**45.53**	**308**	P	**P**	**17 48 51.6**	**-0.1**
CGM3				IAmb	IAmb	17 48 59.1	
	comp=Z,10nm,1.3s						
FVM	**French Village**	**46.31**	**309**	P	**P**	**17 48 58.3**	**+0.3**
TAM	**Tamanrasset**	**48.38**	**72**	P	**P**	**17 49 11.2**	**-3.2**
TAM				IAmb	IAmb	17 49 19.4	
	comp=Z,14nm,1.2s						
S39A	**Bolivar**	**48.43**	**308**	P	**P**	**17 49 13.7**	**-0.8**
S39A				IAmb	IAmb	17 49 23.6	
	comp=Z,13nm,1.5s						
KAN05	**Bluff City Nor**	**51.83**	**306**	P	**P**	**17 49 39.1**	**-1.2**
KAN05				IAmb	IAmb	17 50 09.5	
	comp=Z,17nm,1.1s						
EKA	**Eskdalemuir Ar**	**51.87**	**29**	P	**P**	**17 49 40.8**	**+0.6**
	comp=Z,4.4nm,1.1s,baz=215,slow=6.0,SNR=6.1						
	comp=Z,4.4nm,1.1s						
OK032	**Salt Plains WL**	**52.04**	**305**	P	**P**	**17 49 40.5**	**-1.3**
KEST	**Kesra**	**52.81**	**56**	P	**P**	**17 49 48.7**	**+1.1**
	comp=Z,4.4nm,1.0s,baz=184,slow=9.3,SNR=3.2						
	comp=Z,4.4nm,1.0s						
BMRD	**Maredsous**	**53.63**	**37**	*d*P	**P**	**17 49 55.2**	**+1.9**
RCHB	**Rochefort**	**53.85**	**38**	*d*P	**P**	**17 49 54.7**	**-0.1**
BCLA	**Clavier**	**53.99**	**37**	*d*P	**P**	**17 49 56.5**	**+0.6**
	comp=Z,6.4nm,0.9s						
BSTI	**Sart Tilman**	**54.21**	**37**	*d*P	**P**	**17 49 58.8**	**+1.2**
MEM	**Memban**	**54.48**	**37**	*d*P	**P**	**17 50 00.5**	**+1.0**
	comp=Z,9.4nm,0.9s						
MEM				*d*PcP	**PcP**	**17 51 02.4**	**-0.6**
BTNL	**Ternell**	**54.55**	**38**	*d*P	**P**	**17 50 01.7**	**+1.7**
	comp=Z,9.3nm,1.1s						
MSTX	**Muleshoe**	**55.34**	**301**	P	**P**	**17 50 05.3**	**-0.8**
MSTX				IAmb	IAmb	17 50 16.3	
	comp=Z,13nm,1.2s						
DAVOX	**Davos/Dischmat**	**55.64**	**43**	P	**P**	**17 50 09.7**	**+1.5**
	comp=Z,5.2nm,0.9s,baz=253,slow=9.2,SNR=5.5						
	comp=Z,5.2nm,0.9s						
DAVA	**Damuels**	**55.78**	**42**	*e*P	**P**	**17 50 10.4**	**+1.3**
	comp=Z,5.6nm,0.8s						
TXAR	**Lajitas Array**	**55.80**	**296**	P	**P**	**17 50 09.1**	**-0.5**
	comp=Z,0.8nm,1.0s,baz=128,slow=8.1,SNR=4.9						
	comp=Z,0.8nm,1.0s						
TXAR	**Lajitas Array**	**55.80**	**296**	P	**P**	**17 50 08.5**	**-1.0**
FETA	**Feichten**	**56.26**	**43**	*e*P	**P**	**17 50 13.3**	**+0.7**
	comp=Z,11nm,1.2s						
RETA	**Reute**	**56.41**	**42**	*e*P	**P**	**17 50 14.7**	**+1.1**
	comp=Z,4.4nm,0.9s						
MOTA	**Moosalm**	**56.60**	**43**	*e*P	**P**	**17 50 15.6**	**+0.6**
	comp=Z,23nm,1.7s						
CTI	**Castel Tesino**	**56.62**	**44**	P	**P**	**17 50 14.9**	**-0.3**
SQTA	**Sankt Quirin**	**56.63**	**43**	*i* P	**P**	**17 50 15.9**	**+0.7**
	comp=Z,18nm,1.5s						
WATA	**Walderalm**	**56.90**	**43**	*e*P	**P**	**17 50 16.8**	**-0.4**
	comp=Z,13nm,1.2s						
WTTA	**Wattenerg**	**56.92**	**43**	*e*P	**P**	**17 50 17.4**	**+0.1**
	comp=Z,12nm,1.3s						
CIMO	**Cimolais**	**57.22**	**44**	P	**P**	**17 50 19.1**	**-0.1**
CIMO				IAmb	IAm

comp=Z,16nm,1.7s
PLCA **Paso Flores** 59.93 202 P P 17 50 40.3 +2.1
comp=Z,4.4nm,1.0s,baz=41,slow=11,SNR=4.5
comp=Z,4.4nm,1.0s
PLCA **Paso Flores** 59.93 202 P P 17 50 39.0 +0.9
RONA **Rosalia, Austr** 60.10 43 *eP* P 17 50 40.3 +0.9
comp=Z,16nm,1.2s
KRUC **Moravsky** 60.44 42 *eP* P 17 50 42.0 +0.4
CHVC **Chvalec** 60.57 40 *eP* P 17 50 42.7 +0.2
PV13 **Radium Mtn., P** 60.58 306 P P 17 50 43.6 +0.6
VRAC **Vranov** 60.62 41 P P 17 50 43.7 +0.8
comp=Z,2.0nm,0.6s,baz=302,slow=3.4,SNR=5.2
comp=Z,2.0nm,0.6s
VRAC **Vranov** 60.62 41 *eP* P 17 50 43.4 +0.6
OSTC **Ostas** 60.66 40 *eP* P 17 50 44.1 +1.0
DPC **Dobruska-Polom** 60.68 40 *eP* P 17 50 43.3 0.0
KRLC **Kraliky** 60.91 41 *eP* P 17 50 46.1 +1.3
NC204 **NORSAR Array S** 61.17 27 P P 17 50 46.9 +0.6
NB2 **NORSAR Subarra** 61.27 27 P P 17 50 47.5 +0.4
comp=Z,40nm,1.7s,baz=247,slow=6.9
NB2 **NORSAR Subarra** 61.27 27 P P 17 50 47.5 +0.4
baz=247,slow=6.9
NOA **NORSAR Array B** 61.27 27 P P 17 50 47.7 +0.6
comp=Z,3.6nm,0.8s,baz=243,slow=6.8,SNR=13
comp=Z,3.6nm,0.8s
NC602 **NORSAR Array S** 61.30 28 P P 17 50 46.8 -0.4
MORC **Moravsky Berou** 61.33 41 P P 17 50 48.2 +0.5
MORC IAmb IAmb 17 50 56.3
comp=Z,8.4nm,1.3s
MORC **Moravsky Berou** 61.33 41 *eP* P 17 50 48.5 +0.8
PDG **Podgorica** 61.35 49 P P 17 50 47.5 -0.4
PDAR **Pinedale Array** 61.57 311 P P 17 50 51.2 +1.5
comp=Z,0.2nm,0.4s,baz=92,slow=11,SNR=2.6
comp=Z,0.2nm,0.4s
HFS **Hagfors** 62.07 29 P P 17 50 53.0 +0.6
comp=Z,7.0nm,0.7s,baz=236,slow=5.0,SNR=13
comp=Z,7.0nm,0.7s
DIVS **Divibare** 62.08 48 P P 17 50 52.2 -0.6
IMW **Indian Meadow** 62.69 312 P P 17 50 57.1 -0.1
U15A **North Rim** 63.26 304 P P 17 51 01.5 +0.3
BGU **Big Grassy Mou** 64.01 309 P P 17 51 06.8 +1.0
BGU IAmb IAmb 17 51 14.9
comp=Z,5.3nm,1.1s
SPR3 **Spring Creek 3** 64.94 306 P P 17 51 13.4 +1.2
SPR3 IAmb IAmb 17 51 16.0
comp=Z,3.0nm,1.0s
ELK **Elko** 65.67 308 P P 17 51 16.6 -0.3
RDO **Rodhopi** 65.95 51 P P 17 51 18.3 0.0
BURAR **Bucovina Array** 66.06 44 P P 17 51 19.4 +0.4
MLR **Muntele Rosu** 66.42 47 P P 17 51 21.1 -0.3
LCH **Last Change Ra** 67.56 305 P P 17 51 29.9 +1.1
LCH IAmb IAmb 17 51 48.2
comp=Z,3.6nm,0.7s
FINES **FINESS Array B** 68.27 29 P P 17 51 33.4 +0.8
comp=Z,2.3nm,0.7s,baz=279,slow=3.7,SNR=9.3
comp=Z,2.3nm,0.7s
FINES **FINESS Array B** 68.27 29 P P 17 51 32.2 -0.4
FIA1 **FINESS Array S** 68.27 29 P P 17 51 33.2 +0.7
AKASG **Malin Array Be** 68.88 41 P P 17 51 36.7 +0.1
comp=Z,1.1nm,0.6s,baz=273,slow=5.9,SNR=7.2
comp=Z,1.1nm,0.6s
ELL **Elmali** 69.43 56 P P 17 51 40.1 -0.5
ARCES **ARCESS Array B** 69.64 21 P P 17 51 41.7 +0.7
comp=Z,2.3nm,0.6s,baz=256,slow=4.9,SNR=18
comp=Z,2.3nm,0.6s
ARCES **ARCESS Array B** 69.64 21 P P 17 51 40.9 -0.2
BR131 **Keskin Array S** 72.17 53 P P 17 51 56.7 -0.5
BR131 IAmb IAmb 17 52 05.4
comp=Z,9.2nm,0.8s
BRTR **Keskin Array B** 72.17 53 P P 17 51 57.7 +0.5
comp=Z,4.2nm,0.7s,baz=257,slow=5.5,SNR=17
comp=Z,4.2nm,0.7s
BRTR **Keskin Array B** 72.17 53 P P 17 51 56.3 -0.8
KBZ **Khabaz** 78.58 48 P P 17 52 35.6 +1.9
comp=Z,2.9nm,0.9s,baz=297,slow=4.1,SNR=4.7
comp=Z,2.9nm,0.9s
BCAR **Beaver Creek A** 80.14 333 P P 17 52 41.6 -0.4
BMAR **Burnt Mountain** 80.27 337 P P 17 52 44.1 +1.6
IL31 81.89 335 P P 17 52 52.6 +1.5
IL31 IAmb IAmb 17 52 59.4
comp=Z,6.0nm,0.9s
ILAR **Eielson Array** 81.89 335 P P 17 52 51.1 -0.1
comp=Z,2.3nm,1.0s,baz=57,slow=4.9,SNR=13
comp=Z,2.3nm,1.0s
ILAR **Eielson Array** 81.89 335 P P 17 52 51.2 0.0
CCB **Clear Creek Bu** 82.30 335 P P 17 52 51.7 -1.7
CCB IAmb IAmb 17 53 01.4
comp=Z,6.5nm,1.0s
WRH **Wood River Hil** 82.47 335 P P 17 52 54.4 +0.1
WRH IAmb IAmb 17 53 02.4
comp=Z,6.9nm,1.1s
MLY **Manley** 83.36 336 P P 17 52 58.5 -0.4
BPAW **Bear Paw Mtn.** 83.79 335 P P 17 53 01.7 +0.6
BPAW IAmb IAmb 17 53 08.8
comp=Z,5.3nm,0.9s
IMAR **Indian Mountai** 84.18 337 P P 17 53 02.2 -0.8
ABKAR **Akbulak array** 88.55 39 P P 17 53 24.2 -0.6
ABKAR **Akbulak array** 88.55 39 P P 17 53 24.3 -0.5
ABKAR IAmb IAmb 17 53 34.4
comp=Z,16nm,1.7s
VNA1 **Neumayer--Stat** 88.72 168 P P 17 53 25.9 +0.9
VNA3 **Neumayer Olymp** 88.95 169 P P 17 53 26.5 +0.4
VNA3 **Neumayer Olymp** 88.95 169 pP pP 17 53 33.8 +4.8
VNA2 **Neumayer--Watz** 89.11 168 P P 17 53 27.1 +0.3
VNA2 **Neumayer--Watz** 89.11 168 pP pP 17 53 34.7 +4.9
SNAA **Sanae** 90.61 168 P P 17 53 33.7 -0.2
SNAA **Sanae** 90.61 168 pP pP 17 53 41.7 +4.8
PZH **PanZhiHua** 127.92 38 PKP **PKPdf** 17 59 38.8 +0.1

*IDC **05** 17:49:29.6±0.3, 14.61N×45.03W, h0km, mb4.8/46, mbtmp4.8/47, ML4.9/1, MS4.8/16, Error ellipse: s-maj=11.3km s-min=9.7km az=138.0*
*MOS **05** 17:49:29.5±0.8, 14.61N×45.04W, h12km, mb5.5/71, MS4.5/11, Error ellipse: s-maj=7.4km s-min=3.5km az=50.0*
*BJI **05** 17:49:30.0±0.0, 14.60N×45.20W, h10km, mB5.8/4, Ms5.2/9, Ms7 5.0/10*
*NEIC **05** 17:49:31.2±1.7, 14.61N±0.09×45.11W±0.09, h10km±1km, mb5.1/360, Mwc5.4(GCMT), Error ellipse: s-maj=15.2km s-min=13.4km az=148.0*
*GCMT **05** 17:49:34.2±0.1, 14.73N±0.01×44.93W, h12km, MW5.4/156, Moment Tensor Solution. s96,c145; s156,c319; Duration: 1ŝ2 Moment tensor: Scale 10^17 Nm; Mrr-1.49±.02; Mθθ-0.00±.02; Mϕϕ1.49±.01; Mrθ-0.10±.05; Mθϕ0.04±.01; Mϕr0.02±.04; Best double couple: Mo1.49400×10^17 NP1:ϕs178.00000°, δ45.00000°, λ-95.00000°. NP2:ϕs5.00000°, δ45.00000°, λ-85.00000°. Principal axes: T 1.4910, Plg0.0000°, Azm272.0000°; N 0.0020, Plg4.0000°, Azm182.0000°; P -1.4960, Plg86.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 17:49:34, 14.73N×44.92W, h12km, Moment Tensor Solution. Duration: 2ŝ4 Moment tensor: Scale 10^17Nm; Mrr-1.58; Mθθ-0.00; Mϕϕ1.59; Mrθ-0.27; Mθϕ0.05; Mϕr-0.06; Fault plane solution: Mo1.61000×10^17 NP1: ϕs173.00000°, δ44.00000°, λ-104.00000°. NP2: ϕs11.00000°, δ47.00000°, λ-77.00000°. Principal axes: T 1.5911, Plg1.0000°, Azm92.0000°; N 0.0383, Plg9.0000°, Azm182.0000°; P -1.6294, Plg80.0000°, Azm354.0000°;*
ISC 05 17:49:30.1±0.7, 14°53N±0.05×45°08W±0.05, h8km±3km, h8km:pP-P, n831, σ1ŝ47/765, mb5.1/322, MS4.7/37, 29C-43D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.96**	**219**			Pn	**Pn**	**17 52 22.6**	**+1.5**
	6.8nm,0.3s,baz=31,slow=15,SNR=34								
MDP				LR		LR	LR	17 56 13.0	
	comp=Z,5μm,20.2s,baz=52,slow=34								
	15nm,0.3s								
BBGH	**Gun Hill**	**14.13**	**266**	*eP*		**Pn**	**Pn**	**17 52 50.8**	**+0.1**
H05S1	**Guadeloupe/Mar**	**15.26**	**272**	Pn		Pn	**Pn**	**17 53 05.9**	**-0.1**
H05S1				T		T	T	18 08 46.9	
	SNR=59								
MPOM	**Morne Pois Mar**	**15.28**	**272**	Pn		**Pn**	**Pn**	**17 53 05.3**	**-1.1**
MPOM	**Morne Pois Mar**	**15.28**	**272**	*eP*		**P**	**P**	**17 53 09.4**	**-1.9**
ILAM	**Ilet Lapin Mar**	**15.29**	**273**	*eP*		**Pn**	**Pn**	**17 53 04.2**	**-2.3**
TOSP	**Speyside**	**15.40**	**260**	Pn		**Pn**	**Pn**	**17 53 07.0**	**-1.0**
TOSP	**Speyside**	**15.40**	**260**	*eP*		**Pn**	**Pn**	**17 53 07.4**	**-0.6**
MCLT	**Moule a Chique**	**15.41**	**269**	*eP*		**P**	**P**	**17 53 12.8**	**0.0**
SLBI	**Saint Lucia, B**	**15.41**	**270**	*eP*		**Pn**	**Pn**	**17 53 07.5**	**-0.6**
BIM	**Bigot**	**15.48**	**272**			**Pn**	**Pn**	**17 53 07.6**	**-1.5**
BIM	**Bigot**	**15.48**	**272**	*eP*		**Pn**	**Pn**	**17 53 11.1**	**+2.0**
FDF	**Fort de France**	**15.55**	**273**	P		**P**	**P**	**17 53 13.2**	**-1.2**
FDF				pmax		pmax	pmax		
	comp=Z,147nm,1.5s								
FDF	**Fort de France**	**15.55**	**273**	*eP*		**Pn**	**Pn**	**17 53 07.4**	**-2.6**
SVN	**Savane Anatole**	**15.57**	**273**	Pn		**Pn**	**Pn**	**17 53 06.5**	**-3.7**
DLPL	**La Plaine**	**15.64**	**275**	*eP*		**Pn**	**Pn**	**17 53 08.8**	**-2.4**
SVB	**Belmont**	**15.75**	**267**			**Pn**	**Pn**	**17 53 10.7**	**-1.8**
SVB				IAmb		IAmb	IAmb	17 53 19.9	
	comp=Z,162nm,0.9s								
SVB	**Belmont**	**15.75**	**267**	*eP*		**Pn**	**Pn**	**17 53 13.2**	**+0.7**
MDN	**Morne-Daniel**	**15.78**	**275**	*eP*		**Pn**	**Pn**	**17 53 06.8**	**-6.1**
MDVC	**Dominica, Viel**	**15.80**	**276**	*eP*		**P**	**P**	**17 53 16.0**	**-1.1**
DSLB	**Salisbury**	**15.81**	**275**	*eP*		**Pn**	**Pn**	**17 53 08.8**	**-4.6**
MDCT	**Cottage Hill,**	**15.86**	**276**	*eP*		**P**	**P**	**17 53 24.6**	**+6.9**
GCMP	**Grenada, Carri**	**16.02**	**265**	*eP*		**Pn**	**Pn**	**17 53 15.6**	**-0.5**
ANBD	**Bethesda, Anti**	**16.25**	**281**	*eP*		**Pn**	**Pn**	**17 53 18.5**	**-0.5**
GRGR	**Grenville**	**16.30**	**264**			**Pn**	**Pn**	**17 53 19.0**	**-0.7**
GRGR				IAmb		IAmb	IAmb	17 53 26.9	
	comp=Z,196nm,1.1s								
GRGR	**Grenville**	**16.30**	**264**	*eP*		**Pn**	**Pn**	**17 53 14.9**	**-4.7**
ANWB	**Willy Bob**	**16.35**	**283**	Pn		**Pn**	**Pn**	**17 53 19.6**	**-0.7**
ANWB	**Willy Bob**	**16.35**	**283**	*eP*		**Pn**	**Pn**	**17 53 18.7**	**-1.5**
ANWB	**Willy Bob**	**16.35**	**283**	*eP*		**Pn**	**Pn**	**17 53 18.5**	**-1.8**
TRN	**Trinidad (W)**	**16.39**	**258**	*eP*		**P**	**P**	**17 53 23.8**	**+0.2**
MBFL	**Flemmings, Mon**	**16.65**	**280**	*eP*		**P**	**P**	**17 53 28.8**	**+2.3**
SEUS	**St. Eustatius**	**17.46**	**282**	*eP*		**Pn**	**Pn**	**17 53 27.7**	**-6.5**
SMRT	**St. Maarten**	**17.62**	**284**	P		**Pn**	**Pn**	**17 53 35.0**	**-1.3**
SMRT				IAmb		IAmb	IAmb	17 53 39.2	
	comp=Z,332nm,1.9s								
SMRT	**St. Maarten**	**17.62**	**284**	*eP*		**Pn**	**Pn**	**17 53 35.0**	**-1.3**
CDVI	**St. Croix**	**19.18**	**282**	P		**P**	**P**	**17 53 50.7**	**-3.8**
CDVI				IAmb		IAmb	IAmb	17 54 03.1	
	comp=Z,163nm,1.3s								
CDVI	**St. Croix**	**19.18**	**282**	*eP*		**Pn**	**Pn**	**17 53 55.0**	**-0.3**
BOAV	**Boa Vista**	**19.43**	**233**			**P**	**P**	**17 53 57.2**	**0.0**
BOAV				IAmb		IAmb	IAmb	17 54 06.9	
	comp=Z,17nm,0.9s								
STVI	**Saint Thomas**	**19.43**	**284**	P		**P**	**P**	**17 53 55.6**	**-1.6**
STVI				IAmb		IAmb	IAmb	17 54 00.4	
	comp=Z,128nm,1.1s								
CUPR	**Culebra, Puert**	**19.74**	**284**	P		**P**	**P**	**17 53 58.8**	**-1.7**
CBYP	**Canovanas**	**20.27**	**283**	P		**P**	**P**	**17 54 02.5**	**-4.0**
CBYP				IAmb		IAmb	IAmb	17 54 11.5	
	comp=Z,243nm,1.6s								
PDPR	**Patillas Dam,**	**20.40**	**283**	P		**P**	**P**	**17 54 06.0**	**-1.7**
PDPR				IAmb		IAmb	IAmb	17 54 13.3	
	comp=Z,103nm,1.1s								
GCPR	**Guaynabo City**	**20.49**	**283**	P		**P**	**P**	**17 54 08.8**	**0.0**
SJG	**San Juan**	**20.53**	**283**	P		**P**	**P**	**17 54 10.1**	**+0.9**
	comp=Z,50nm,0.8s,baz=82,slow=5.7,SNR=13								
SJG				LR		LR	LR	18 01 33.7	
	comp=Z,3μm,21.0s,baz=102,slow=35								
	comp=Z,50nm,0.8s								
SJG	**San Juan**	**20.53**	**283**	P		**P**	**P**	**17 54 08.8**	**-0.3**
SACV	**Santiago Islan**	**20.77**	**86**	P		**P**	**P**	**17 54 13.1**	**+1.2**
SACV				IAmb		IAmb	IAmb	17 54 16.2	
	comp=Z,105nm,1.1s								
OBIP	**Obispado Ponce**	**20.95**	**283**	P		**P**	**P**	**17 54 13.3**	**-0.5**
BIRV	**Birongo**	**21.07**	**261**			**P**	**P**	**17 54 16.0**	**+0.9**
BIRV				IAmb		IAmb	IAmb	17 54 23.6	
	comp=Z,187nm,1.3s								
AOPR	**Arecibo Observ**	**21.13**	**283**	P		**P**	**P**	**17 54 15.2**	**-0.5**
AOPR				IAmb		IAmb	IAmb	17 54 24.5	
	comp=Z,108nm,1.1s								
MLPR	**Magueyes Islan**	**21.36**	**282**	P		**P**	**P**	**17 54 17.3**	**-0.8**
CRPR	**Cabo Rojo, PR**	**21.43**	**282**	P		**P**	**P**	**17 54 17.8**	**-1.1**
CRPR				IAmb		IAmb	IAmb	17 54 28.9	
	comp=Z,98nm,1.1s								
PRSN	**Puerto Rico Se**	**21.48**	**283**	P		**P**	**P**	**17 54 18.8**	**-0.6**
PRSN				IAmb		IAmb	IAmb	17 54 21.7	
	comp=Z,136nm,1.1s								
RCBR	**Riachuelo**	**22.18**	**155**	LR		LR	LR	18 01 04.3	
	comp=Z,2μm,18.5s,baz=126,slow=31								
BAUV	**El Baul**	**23.15**	**259**	P		**P**	**P**	**17 54 37.3**	**0.0**
BAUV	**El Baul**	**23.15**	**259**	*eP*		**P**	**P**	**17 54 41.4**	**+4.2**
MACA	**Manacapuru-AM**	**23.41**	**223**	P		**P**	**P**	**17 54 41.6**	**+1.8**
MACA				IAmb		IAmb	IAmb	17 54 46.0	
	comp=Z,158nm,1.6s								
DABV	**Dabajuro**	**25.18**	**265**	*eP*		**P**	**P**	**17 54 52.0**	**-4.3**
SDDR	**Presa de Saban**	**25.47**	**284**	P		**P**	**P**	**17 54 59.4**	**+0.3**
SDDR				IAmb		IAmb	IAmb	17 55 09.3	
	comp=Z,64nm,1.2s								
SDDR	**Presa de Saban**	**25.47**	**284**	*eP*		**P**	**P**	**17 55 01.4**	**+2.3**
SDV	**Santo Domingo**	**25.63**	**260**	P		**P**	**P**	**17 55 01.9**	**+1.2**
	comp=Z,10nm,0.6s,baz=94,slow=7.2,SNR=12								
	comp=Z,10nm,0.6s								
SDV	**Santo Domingo**	**25.63**	**260**	P		**P**	**P**	**17 55 01.1**	**+0.4**
SDV				IAmb		IAmb	IAmb	17 55 10.9	
	comp=Z,40nm,1.1s								
GRTK	**Grand Turk**	**25.71**	**289**	P		**P**	**P**	**17 55 01.1**	**0.0**
SOCV	**Socops**	**26.00**	**259**	*eP*		**P**	**P**	**17 55 04.6**	**+0.7**
URIC	**Uribia, Colomb**	**26.35**	**267**	*eP*		**P**	**P**	**17 55 07.5**	**+0.5**
CRJC	**Cerrejon, Guaj**	**27.33**	**266**	*eP*		**P**	**P**	**17 55 19.8**	**+3.8**
LL6C	**La Loma 6 Bece**	**27.96**	**263**	*eP*		**P**	**P**	**17 55 24.2**	**+2.7**
PTGC	**Puerto Gaitan,**	**28.56**	**252**	*eP*		**P**	**P**	**17 55 29.2**	**+2.3**
RUSC	**La Rusia**	**28.83**	**256**	*eP*		**P**	**P**	**17 55 32.8**	**+2.9**
SAML	**Samuel**	**29.43**	**219**	P		**P**	**P**	**17 55 35.4**	**+0.8**
SAML	**Samuel**	**29.43**	**219**	P		**P**	**P**	**17 55 35.4**	**+0.8**
SAML				pmax		pmax			
	comp=Z,37nm,1.7s								
SJCC	**San Jacinto, C**	**29.76**	**265**	*eP*		**P**	**P**	**17 55 38.1**	**+0.5**
SPBC	**San Pablo de B**	**29.84**	**256**	*eP*		**P**	**P**	**17 55 41.3**	**+2.9**
BDFB	**Brasilia**	**30.11**	**186**	P		**P**	**P**	**17 55 42.6**	**+1.9**
	comp=Z,34nm,1.0s,baz=12,slow=10,SNR=23								
BDFB				LR		LR	LR	18 07 04.2	
	comp=Z,2μm,20.8s,baz=346,slow=35								
	comp=Z,34nm,1.0s								
BDFB	**Brasilia**	**30.11**	**186**	P		**P**	**P**	**17 55 41.9**	**+1.2**
MACC	**Macarena, Meta**	**30.95**	**249**	*eP*		**P**	**P**	**17 55 47.9**	**-0.2**
VILB	**Vilhena**	**31.14**	**209**			**P**	**P**	**17 55 47.8**	**-1.9**
VILB				IAmb		IAmb	IAmb	17 56 57.4	
	comp=Z,30nm,1.3s								
GUY2C	**Guyana, Caldas**	**31.20**	**256**	*eP*		**P**	**P**	**17 55 51.7**	**+0.9**
PMOZ	**Porto Moniz, M**	**31.22**	**49**	eLQ		LQ	LQ	18 02 32.8	
PMOZ				eLR		LR	LR	18 03 31.1	
	comp=Z,1μm,22.0s								
PRAC	**Prado**	**31.28**	**253**	*eP*		**P**	**P**	**17 55 51.8**	**+0.8**
ETMB	**Extrema**	**32.00**	**222**	P		**P**	**P**	**17 55 57.9**	**+0.6**
ETMB				IAmb		IAmb	IAmb	17 56 01.6	
	comp=Z,38nm,1.5s								
PLMC	**San Jos del P**	**32.16**	**256**	*eP*		**P**	**P**	**17 55 56.5**	**-2.4**
FLOC	**Florencia**	**32.82**	**250**	*eP*		**P**	P	17 55 56.4	-8.2
PTLB	**Pontes e Lacer**	**32.87**	**206**	P		**P**	**P**	**17 56 06.3**	**+1.6**
PTLB				IAmb		IAmb	IAmb	17 56 10.2	
	comp=Z,37nm,1.6s								
POPC	**Popayan, Colom**	**33.38**	**252**	*eP*		**P**	**P**	**17 56 14.3**	**+4.6**
SIV	**San Ignacio**	**34.19**	**208**	LR		LR	LR	18 09 54.7	
	comp=Z,2μm,20.9s,baz=78,slow=36								
BCIP	**Isla Barro Col**	**34.40**	**265**	P		**P**	**P**	**17 56 18.2**	**-0.1**
BCIP	**Isla Barro Col**	**34.40**	**265**	P		**P**	**P**	**17 56 18.2**	**-0.1**
BCIP				pmax		pmax			
	comp=Z,85nm,1.5s								
GCUF	**Volcan Galeras**	**34.51**	**250**	*eP*		**P**	**P**	**17 56 22.2**	**+2.4**
FSCY	**Frank Sound, G**	**34.82**	**283**	P		**P**	**P**	**17 56 21.3**	**-0.6**
TULM	**Tulcn-Chalpat**	**35.12**	**250**	P		**P**	**P**	**17 56 23.0**	**-2.1**
CZSB	**Cruzeiro do Su**	**35.21**	**233**	P		**P**	**P**	**17 56 25.5**	**+0.2**
CZSB				IAmb		IAmb	IAmb	17 56 28.8	
	comp=Z,32nm,0.8s								
V61A	**Roper**	**35.27**	**313**	P		**P**	**P**	**17 56 25.4**	**-0.1**
EMMW	**East Machias**	**35.58**	**332**	P		**P**	**P**	**17 56 26.7**	**-1.4**
EMMW				IAmb		IAmb	IAmb	17 56 42.5	
	comp=Z,46nm,1.4s								
S61A	**Accomac**	**35.60**	**316**	P		**P**	**P**	**17 56 28.8**	**+0.4**
BRYW	**Bryant College**	**35.61**	**325**	P		**P**	**P**	**17 56 27.8**	**-0.7**
BRYW				IAmb		IAmb	IAmb	17 56 38.4	
	comp=Z,38nm,1.4s								
IMBA	**Imbabura, San**	**35.68**	**250**	P		**P**	**P**	**17 56 29.7**	**-0.1**
OTAV	**Otavalo**	**35.92**	**250**	P		**P**	**P**	**17 56 33.8**	**+1.8**
OTAV				IAmb		IAmb	IAmb	17 56 41.8	
	comp=Z,77nm,1.6s								
OTAV	**Otavalo**	**35.92**	**250**	P		**P**	**P**	**17 56 33.8**	**+1.8**
OTAV				pmax		pmax	pmax		
	comp=Z,77nm,1.7s								
OTAV	**Otavalo**	**35.92**	**250**	*eP*		**P**	**P**	**17 56 34.8**	**+2.9**
YLE	**Yale**	**36.01**	**323**	P		**P**	**P**	**17 56 32.8**	**+1.0**
YLE				IAmb		IAmb	IAmb	17 56 41.5	
	comp=Z,28nm,0.7s								
HRV	**Adam Dziewonsk**	**36.02**	**326**	P		**P**	**P**	**17 56 33.0**	**+1.1**
HRV				IAmb		IAmb	IAmb	17 56 57.7	
	comp=Z,60nm,1.9s								
HRV	**Adam Dziewonsk**	**36.02**	**326**	P		**P**	**P**	**17 56 33.0**	**+1.1**
HRV				pmax		pmax			
	comp=Z,60nm,1.9s								
WSPT	**Westport, CT**	**36.15**	**323**	P		**P**	**P**	**17 56 32.9**	**-0.1**
SLOR	**San Lorenzo -**	**36.38**	**248**	P		**P**	**P**	**17 56 38.6**	**+2.7**
SLOR				IAmb		IAmb	IAmb	17 56 46.4	
	comp=Z,29nm,1.0s								
U59A	**Littleton**	**36.40**	**313**	P		**P**	**P**	**17 56 35.0**	**-0.2**
U59A				IAmb		IAmb	IAmb	17 56 43.8	
	comp=Z,46nm,1.8s								
K62A	**Royalston**	**36.50**	**326**	P		**P**	**P**	**17 56 34.8**	**-1.2**
K62A				IAmb		IAmb	IAmb	17 56 46.9	
	comp=Z,36nm,1.6s								
WVL	**Waterville**	**36.50**	**330**	P		**P**	**P**	**17 56 36.9**	**+0.9**
T59A	**Double "B" Far**	**36.53**	**314**	P		**P**	**P**	**17 56 36.6**	**+0.3**
TRNY	**Table Rock, Ra**	**36.66**	**322**	P		**P**	**P**	**17 56 36.6**	**-0.8**
TRNY				IAmb		IAmb	IAmb	17 56 41.3	
	comp=Z,41nm,1.6s								
WUPA	**West Chester U**	**36.79**	**319**	P		**P**	**P**	**17 56 36.6**	**-1.9**
NHSC	**New Hope**	**36.82**	**306**	P		**P**	**P**	**17 56 36.7**	**-2.1**
I62A	**Tamworth**	**36.84**	**328**	P		**P**	**P**	**17 56 39.7**	**+0.8**
PKME	**Peaks-Kenny Pk**	**36.85**	**331**	P		**P**	**P**	**17 56 39.5**	**+0.6**
PKME				IAmb		IAmb	IAmb	17 56 48.9	
	comp=Z,95nm,2.0s								
ODNJ	**Ogdensburg**	**36.85**	**322**	P		**P**	**P**	**17 56 39.5**	**+0.4**
ODNJ				IAmb		IAmb	IAmb	17 56 51.3	
	comp=Z,47nm,1.9s								
F64A	**Sherman**	**36.87**	**333**				**P**	**17 56 39.5**	**+0.4**
LUPA	**Lehigh Univers**	**37.03**	**320**	P		**P**	**P**	**17 56 41.0**	**+0.4**
LUPA				IAmb		IAmb	IAmb	17 56 44.8	
	comp=Z,59nm,1.8s								
BATG	**Bathurst New B**	**37.04**	**336**	P		**P**	**P**	**17 56 41.6**	**+1.1**
CHSH	**Refugio Sur-Vo**	**37.05**	**247**	P		**P**	**P**	**17 56 42.6**	**+0.9**
CHSH				IAmb		IAmb	IAmb	17 56 52.8	
	comp=Z,23nm,1.0s								
F63A	**Nahmakanta, Br**	**37.09**	**332**	P		**P**	**P**	**17 56 41.1**	**+0.1**
V58A	**Windy Hill, Pi**	**37.10**	**311**	P		**P**	**P**	**17 56 41.5**	**+0.3**
V58A				IAmb		IAmb	IAmb	17 56 54.5	
	comp=Z,61nm,1.7s								
JSRW	**J. Sargeant Re**	**37.10**	**315**	P		**P**	**P**	**17 56 40.5**	**-0.7**
J61A	**Chester**	**37.13**	**326**	P		**P**	**P**	**17 56 41.5**	**+0.2**
HNH	**Hanover**	**37.23**	**327**	P		**P**	**P**	**17 56 42.9**	**+0.7**
HNH				IAmb		IAmb	IAmb	17 56 55.7	
	comp=Z,59nm,1.9s								
BRU2	**Volcan**	**37.24**	**265**	P		**P**	**P**	**17 56 42.4**	**-0.4**
BRU2				IAmb		IAmb	IAmb	17 56 53.6	
	comp=Z,58nm,1.1s								
R58B	**Mineral**	**37.24**	**315**	P		**P**	**P**	**17 56 41.9**	**-0.4**
R58B				IAmb		IAmb	IAmb	17 56 56.8	
	comp=Z,39nm,1.4s								
SDMD	**Soldier's Deli**	**37.30**	**318**	P		**P**	**P**	**17 56 42.3**	**-0.5**
MVL	**Millersville**	**37.30**	**319**	P		**P**	**P**	**17 56 41.7**	**-1.2**
MVL				IAmb		IAmb	IAmb	17 56 57.6	
	comp=Z,42nm,1.3s								
TRY	**Troy**	**37.34**	**324**	P		**P**	**P**	**17 56 44.1**	**+1.0**
TRY				IAmb		IAmb	IAmb	17 56 54.1	
	comp=Z,54nm,1.9s								
PQI	**Presque Isle**	**37.35**	**334**	P		**P**	**P**	**17 56 43.2**	**0.0**
G62A	**West of Eustis**	**37.40**	**330**	P		**P**	**P**	**17 56 42.5**	**-1.2**
CDITO	**Canoas**	**37.46**	**265**	P		**P**	**P**	**17 56 43.8**	**-0.8**
CDITO				IAmb		IAmb	IAmb	17 56 54.7	
	comp=Z,32nm,0.7s								
W57A	**Gilead**	**37.48**	**310**	P		**P**	**P**	**17 56 43.5**	**-0.9**
W57A				IAmb		IAmb	IAmb	17 56 58.8	
	comp=Z,59nm,1.8s								
BOSC	**San Juan Bosco**	**37.48**	**245**	P		**P**	**P**	**17 56 44.3**	**-0.6**
H10N3	**ASCENSION HYDR**	**37.60**	**124**	T		T	T	18 36 34.0	
	baz=306,slow=75,SNR=156								
H10N2	**ASCENSION HYDR**	**37.60**	**124**	T		T	T	18 36 34.2	
	baz=306,slow=75,SNR=118								
H10N1	**ASCENSION HYDR**	**37.62**	**124**	T		T	T	18 36 35.7	
	baz=306,slow=75,SNR=822								
BIRD	**Birdtown, Kers**	**37.62**	**309**	P		**P**	**P**	**17 56 45.9**	**+0.2**
BIRD				IAmb		IAmb	IAmb	17 57 00.1	
	comp=Z,88nm,1.9s								
PAGS	**Pennsylvania G**	**37.67**	**319**	P		**P**	**P**

V53A Saluda 39.79 309 P P 17 57 04.0 0.0
PNCL Nicolau / Gran 39.93 47 *e*P P 17 57 05.5 +0.5
comp=Z,33nm,2.2s
MESJ Messejana 40.03 48 *e*P P 17 57 06.1 +0.3
MESJ IAmb IAmb 17 57 08.1
comp=Z,32nm,1.0s
MESJ *e*S S 18 03 12.7 +0.7
MESJ Messejana 40.03 48 *e*P P 17 57 06.1 +0.3
MESJ *e*S S 18 03 12.6 +0.7
MESJ Messejana 40.03 48 *e*P P 17 57 07.4 +1.6
comp=Z,55nm,1.5s
PCVE Castro Verde 40.07 48 *e*P P 17 57 06.6 +0.4
comp=Z,118nm,1.4s
352A Blakely 40.11 302 P P 17 57 06.0 -0.6
PVAQ Vaqueiros 40.21 48 *e*P P 17 57 08.9 +1.6
comp=Z,28nm,1.5s
PVAQ Vaqueiros 40.21 48 *e*LR LR 18 07 45.9
comp=Z,1µm,20.0s
DBIC Dimbokro 40.25 97 LR LR 18 10 19.7
comp=Z,2µm,21.6s,baz=274,slow=31
152A Waverly Hall 40.28 304 P P 17 57 07.1 -0.9
PBEJ Beja 40.36 48 *e*P P 17 57 10.1 +1.5
comp=Z,33nm,1.5s
P53A Whipple 40.38 315 P P 17 57 06.9 -1.8
P53A IAmb IAmb 17 57 23.2
comp=Z,63nm,1.6s
W52A Murphy 40.43 308 P P 17 57 09.2 -0.1
EVO Evora 40.48 47 *e*P P 17 57 10.0 +0.5
comp=Z,73nm,1.4s
TKL Tuckaleechee C 40.52 308 P P 17 57 11.4 +1.4
comp=Z,3.6nm,0.9s,baz=95,slow=8.7,SNR=4.0
comp=Z,3.6nm,0.9s
TKL Tuckaleechee C 40.52 308 P P 17 57 08.0 -1.9
PMTG Montargil 40.56 46 *e*P P 17 57 11.3 +1.1
comp=Z,37nm,1.8s
O53A New Philadelph 40.62 316 P P 17 57 09.5 -1.2
baz=119
TZTN Tazewell 40.68 310 P P 17 57 08.9 -2.4
CRIN San Cristobal 40.79 273 *e*P P 17 57 16.6 +4.1
PCAS Casmilo, Conde 40.83 44 *e*P P 17 57 13.4 +1.0
comp=Z,49nm,1.4s
PESTR Estremoz 40.92 47 *e*P P 17 57 14.4 +1.2
comp=Z,19nm,1.6s
MDT Midelt 40.99 56 P P 17 57 14.6 +0.6
comp=Z,4.8nm,1.0s,baz=268,slow=9.7,SNR=6.6
MDT LR LR 18 10 32.9
comp=Z,1µm,21.3s,baz=287,slow=31
comp=Z,4.8nm,1.0s
PBAR Barrancos 41.02 48 *e*P P 17 57 15.1 +1.1
comp=Z,51nm,1.5s
NNA Nana 41.04 232 LR LR 18 13 49.9
comp=Z,2µm,21.2s,baz=24,slow=36
S51A Beattyville 41.14 311 P P 17 57 14.2 -0.8
PMRV Marv??o 41.30 46 *e*P P 17 57 17.4 +1.0
comp=Z,37nm,1.4s
PMRV Marv??o 41.30 46 *e*LR LR 18 08 18.2
comp=Z,1µm,20.0s
PCBR Castelo Branco 41.43 45 *e*P P 17 57 18.2 +0.9
comp=Z,74nm,1.4s
PVIS Viseu 41.55 44 *e*P P 17 57 19.3 +0.9
comp=Z,62nm,1.6s
MTE Manteigas 41.64 44 IAmb IAmb 17 57 21.0
comp=Z,44nm,1.0s
MTE Manteigas 41.64 44 *e*P P 17 57 20.1 +1.0
comp=Z,59nm,1.2s
MTE *e*S S 18 03 44.8 +8.8
MTE *e*LQ LQ 18 06 53.3
MTE *e*LR LR 18 08 43.6
comp=Z,2µm,20.0s
SADO Sadowa 41.72 323 LR LR 18 11 01.7
comp=Z,1µm,21.7s,baz=168,slow=31
T50A Nancy 41.81 310 P P 17 57 22.3 +1.7
PGAV Gavieira, Arco 41.90 42 *e*P P 17 57 22.0 +0.7
comp=Z,69nm,1.3s
PGAV *e*S S 18 03 47.4 +7.5
PGAV *e*LQ LQ 18 06 59.4
PGAV *e*LR LR 18 08 33.2
comp=Z,2µm,20.0s
POLO Lamas de Olo 41.92 43 *e*P P 17 57 22.4 +0.9
comp=Z,18nm,1.5s
SWET Sewanee 42.02 307 P P 17 57 20.8 -1.6
SWET IAmb IAmb 17 58 08.7
comp=Z,24nm,0.7s
ITAB Concordia 42.07 189 P P 17 57 23.7 +1.0
ITAB IAmb IAmb 17 57 33.3
comp=Z,52nm,1.3s
CPUP Villa Florida 42.32 196 P P 17 57 26.1 +1.4
comp=Z,1.8nm,0.5s,baz=6.4,slow=7.5,SNR=4.4
comp=Z,1.8nm,0.5s
CPUP Villa Florida 42.32 196 P P 17 57 24.7 0.0
MVO Moncorvo 42.34 44 *e*P P 17 57 25.8 +0.9
comp=Z,63nm,1.4s
MVO *e*LQ LQ 18 07 08.9
MVO *e*LR LR 18 08 39.7
comp=Z,2µm,20.0s
R49A Shelbyville 42.54 311 IAmb IAmb 17 57 41.1
comp=Z,54nm,1.6s
X48A Hartselle 42.66 305 IAmb IAmb 17 57 59.6
comp=Z,27nm,0.8s
PB01 IPOC Station P 42.71 215 P P 17 57 28.1 +0.1
P49A Miami Univ. Ec 42.71 313 P P 17 57 29.4 +1.6
baz=114
MTO3 Montecristo 42.83 276 P P 17 57 29.2 -0.1
PBRG Braganca 42.83 43 *e*P P 17 57 29.6 +0.8
comp=Z,32nm,1.7s
V48A Smith Brothers 42.88 307 IAmb IAmb 17 58 17.2
comp=Z,18nm,0.7s
P48A Milroy 43.18 313 IAmb IAmb 17 57 46.1
comp=Z,35nm,1.3s
O48B Farmland 43.32 314 P P 17 57 35.4 +2.6
baz=115
PAB San Pablo 43.49 47 P P 17 57 34.1 -0.1
PAB San Pablo 43.49 47 P P 17 57 34.1 -0.1
PAB pmax pmax
comp=Z,35nm,1.6s
PLAL Pickwick Lake 43.62 306 IAmb IAmb 17 57 49.9
comp=Z,30nm,1.2s
SCHQ Schefferville 43.64 342 P P 17 57 35.7 +0.6
comp=Z,10nm,1.0s,baz=142,slow=8.3,SNR=6.4
comp=Z,10nm,1.0s
SCHQ Schefferville 43.64 342 P P 17 57 34.8 -0.4
WVT Waverly 43.78 307 P P 17 57 36.7 +0.2
WVT IAmb IAmb 17 57 50.8
comp=Z,36nm,1.5s
WVT Waverly 43.78 307 P P 17 57 36.7 +0.2
WVT pmax pmax
comp=Z,36nm,1.5s
ESDC Sonseca Array 43.81 47 P P 17 57 37.0 +0.1
comp=Z,8.4nm,0.9s,baz=246,slow=8.2,SNR=35
comp=Z,8.4nm,0.9s
PB15 IPOC Station P 44.45 213 P P 17 57 42.9 +0.7
SFIN Lafayette 44.73 313 P P 17 57 47.1 +3.1
baz=113
ITQB Itaqui 45.33 194 P P 17 57 49.3 +0.4
SIUC Southern Illin 45.33 309 IAmb IAmb 17 58 00.6
comp=Z,34nm,1.1s
S44A Carbondale 45.35 309 IAmb IAmb 17 58 00.7
comp=Z,31nm,1.1s
TOA0 Torodi Ar. Sit 45.38 86 P P 17 57 49.8 +0.2
TOA0 IAmb IAmb 17 57 56.3
comp=Z,31nm,1.1s
TORD Torodi Ar. Bea 45.38 86 P P 17 57 48.8 -0.8
comp=Z,16nm,1.1s,baz=279,slow=4.8,SNR=31
comp=Z,16nm,1.1s
TORD Torodi Ar. Bea 45.38 86 P P 17 57 48.5 -1.1
TORD IAmb IAmb 17 57 57.0
comp=Z,53nm,1.4s
CGM3 Cape Girardeau 45.53 308 IAmb IAmb 17 58 01.7
comp=Z,22nm,1.1s
FVM French Village 46.32 309 IAmb IAmb 17 58 11.0
comp=Z,27nm,1.1s
CCM Cathedral Cave 46.96 309 P P 17 58 01.4 -0.3
CCM IAmb IAmb 17 58 14.5
comp=Z,43nm,1.6s
CCM Cathedral Cave 46.96 309 P P 17 58 01.5 -0.3
CCM pmax pmax
comp=Z,43nm,1.6s
WHAR Wooly Hollow 47.03 305 IAmb IAmb 17 58 16.2
comp=Z,36nm,1.3s
SJPF Ste Jean 47.07 44 *e*P P 17 58 03.4 +0.9
SJPF pmax pmax
comp=Z,62nm,1.0s
ETSF Etsaut 47.43 44 *e*P P 17 58 06.4 +0.9
ETSF pmax pmax
comp=Z,26nm,1.2s
MGMO Mountain Grove 47.49 307 IAmb IAmb 17 58 19.6
comp=Z,19nm,1.2s

R40A Maddies Statio 47.80 309 IAmb IAmb 17 58 19.0
comp=Z,16nm,1.1s
QUIF Quistinic 47.99 37 *e*P P 17 58 09.6 0.0
QUIF pmax pmax
comp=Z,60nm,1.3s
P40A Paris 48.00 310 IAmb IAmb 17 58 22.1
comp=Z,19nm,1.0s
EPF Esparros 48.09 45 *e*P P 17 58 11.4 +0.8
EPF pmax pmax
comp=Z,47nm,1.4s
S39A Bolivar 48.44 308 IAmb IAmb 17 58 24.9
comp=Z,20nm,1.2s
TAM Tamanrasset 48.45 72 P P 17 58 10.1 -3.6
TAM Tamanrasset 48.45 72 P P 17 58 10.1 -3.6
TAM pmax pmax
comp=Z,49nm,1.5s
SGMF Saint Gilles 48.52 37 *e*P P 17 58 14.0 +0.4
SGMF pmax pmax
comp=Z,86nm,1.3s
G40A Rib Lake 48.77 318 IAmb IAmb 17 58 19.5
comp=Z,25nm,1.4s
HKT Hockley 49.04 297 *d* P P 17 58 18.9 +1.0
HKT pmax pmax
comp=Z,45nm,3.3s
LFF La Frestale 49.09 42 *e*P P 17 58 18.4 +0.2
LFF pmax pmax
comp=Z,36nm,1.0s
P38A Dawn 49.12 310 IAmb IAmb 17 58 29.3
comp=Z,13nm,0.9s
MFF Saint Martin d 49.22 40 *e*P P 17 58 19.4 +0.4
MFF pmax pmax
comp=Z,78nm,1.2s
X37A Clayton 49.36 303 IAmb IAmb 17 58 25.0
comp=Z,62nm,1.9s
MTLF Montolieu 49.49 45 *e*P P 17 58 21.3 +0.1
MTLF pmax pmax
comp=Z,48nm,1.2s
GRR Gorron 49.58 38 *e*P P 17 58 21.8 0.0
GRR pmax pmax
comp=Z,67nm,1.4s
RJF Les Rejaudoux 49.74 42 *e*P P 17 58 22.9 -0.2
RJF pmax pmax
comp=Z,27nm,1.1s
CAF Calviac 49.96 43 *e*P P 17 58 25.0 +0.2
CAF pmax pmax
comp=Z,46nm,1.1s
FLN La Foliniere 49.97 37 *e*P P 17 58 24.8 0.0
FLN pmax pmax
comp=Z,37nm,1.2s
TCF Toulx Ste Croi 50.57 41 *e*P P 17 58 29.8 +0.4
TCF pmax pmax
comp=Z,61nm,1.1s
BGF Bois d'Agland 51.08 41 *e*P P 17 58 33.5 +0.3
BGF pmax pmax
comp=Z,48nm,1.0s
F36A Milaca 51.15 318 P P 17 58 32.7 -1.1
CLF Chambon-Foret 51.30 39 P P 17 58 35.3 +0.5
AVF Avril sur Loir 51.49 41 *e*P P 17 58 36.4 +0.1
AVF pmax pmax
comp=Z,44nm,1.2s
KAN13 South Haven SW 51.51 306 IAmb IAmb 17 58 49.1
comp=Z,24nm,1.2s
KS20 Mayfield South 51.61 306 IAmb IAmb 17 58 51.3
comp=Z,25nm,1.1s
VIVF Saint-Julien-l 51.67 44 *e*P P 17 58 38.6 +0.9
VIVF pmax pmax
comp=Z,50nm,1.4s
SSF Saint Saulge 51.69 41 *e*P P 17 58 37.7 -0.1
SSF pmax pmax
comp=Z,44nm,1.3s
KAN14 Manchester OK 51.88 306 IAmb IAmb 17 58 54.0
comp=Z,34nm,1.3s
DY2G Dye2 51.91 359 *i* P P 17 58 38.0 -1.4
DY2G IAmb IAmb 17 58 42.5
comp=Z,53nm,1.5s
ESK Eskdalemuir 51.92 29 P P 17 58 39.4 0.0
ESK Eskdalemuir 51.92 29 P P 17 58 39.4 0.0
ESK pmax pmax
comp=Z,54nm,1.3s
EKA Eskdalemuir Ar 51.95 29 P P 17 58 38.9 -0.7
comp=Z,16nm,1.1s,baz=224,slow=5.8,SNR=16
comp=Z,16nm,1.1s
LOR Lormes 51.99 41 *e*P P 17 58 39.9 -0.2
LOR pmax pmax
comp=Z,34nm,1.3s
833A Chaparral WMA, 52.00 295 IAmb IAmb 17 58 47.8
comp=Z,25nm,1.1s
833A Chaparral WMA, 52.00 295 P P 17 58 41.3 +0.9
baz=93
CSTR Hydro, Custer 52.22 304 IAmb IAmb 17 58 50.3
comp=Z,5.3nm,1.0s
ORIF Oris-en-Rattie 52.50 44 *e*P P 17 58 44.9 +0.9
ORIF pmax pmax
comp=Z,55nm,1.8s
ECSD EROS Data Cent 52.53 314 IAmb IAmb 17 58 57.3
comp=Z,29nm,1.7s
SFJD Kangerlussuaq 52.55 357 P P 17 58 44.3 +0.5
comp=Z,6.2nm,0.7s,baz=96,slow=9.5,SNR=4.3
comp=Z,6.2nm,0.7s
SFJD Kangerlussuaq 52.55 357 *i* P P 17 58 44.1 +0.3
SFJD IAmb IAmb 17 58 52.0
comp=Z,18nm,0.9s
ABTX Abilene, Hawle 52.59 300 P P 17 58 45.1 +0.4
baz=97
ELIS Ellis County 52.88 304 IAmb IAmb 17 58 58.1
comp=Z,41nm,1.4s
KEST Kesra 52.89 56 P P 17 58 47.6 +0.6
comp=Z,19nm,1.0s,baz=186,slow=4.5,SNR=13
comp=Z,19nm,1.0s
KEST Kesra 52.89 56 P P 17 58 46.6 -0.4
MBDF Montbardon 53.04 45 *e*P P 17 58 48.8 +0.7
MBDF pmax pmax
comp=Z,33nm,1.2s
BNI Bardonecchia 53.08 44 P P 17 58 48.7 +0.4
BNI IAmb IAmb 17 58 51.1
comp=Z,25nm,1.1s
BNI Bardonecchia 53.08 44 P P 17 58 48.7 +0.4
BNI pmax pmax
comp=Z,25nm,1.1s
CABF La Chapelle 53.19 42 *e*P P 17 58 49.3 +0.3
CABF pmax pmax
comp=Z,42nm,1.2s
LPL La Plagne 53.26 44 *e*P P 17 58 50.5 +0.8
LPL pmax pmax
comp=Z,17nm,1.2s
LPG La Plagne 53.27 44 *e*P P 17 58 50.8 +0.9
LPG pmax pmax
comp=Z,27nm,1.3s
BAIF Baives 53.29 38 *e*P P 17 58 49.3 -0.3
BAIF pmax pmax
comp=Z,61nm,1.1s
SNF Seneffe 53.52 37 *d*P P 17 58 51.3 +0.1
comp=Z,32nm,0.9s
SNF *dx* x 17 58 58.0
DOU Dourbes 53.54 38 *d*P P 17 58 51.1 -0.3
comp=Z,19nm,1.0s
DOU *dx* x 17 58 57.7
CBKS Cedar Bluff 53.61 308 IAmb IAmb 17 59 04.7
comp=Z,28nm,1.1s
GIVF Givet 53.67 38 *e*P P 17 58 53.2 +0.8
GIVF pmax pmax
comp=Z,39nm,1.0s
BMRD Maredsous 53.72 37 *d*P P 17 58 53.3 +0.6
comp=Z,13nm,1.1s
HAU Haudompre 53.83 41 *e*P P 17 58 53.1 -0.5
HAU pmax pmax
comp=Z,24nm,1.1s
SENIN Lac Senin/Sane 53.90 43 P P 17 58 54.6 +0.2
RCHB Rochefort 53.94 38 *d*P P 17 58 54.1 -0.2
comp=Z,16nm,0.9s
RCHB *dx* x 17 59 00.4
BCLA Clavier 54.08 37 *d*P P 17 58 54.8 -0.6
comp=Z,18nm,1.2s
BCLA *dx* x 17 59 01.7
HINF Hinteralfeld 54.09 41 *e*P P 17 58 55.0 -0.5
HINF pmax pmax
comp=Z,19nm,1.3s
BSTI Sart Tilman 54.30 37 *d*P P 17 58 57.0 +0.1
comp=Z,7.0nm,0.9s
BSTI *dx* x 17 59 03.7
WLF Walferdange 54.30 39 P P 17 58 57.4 +0.4
WLF Walferdange 54.30 39 *d*P P 17 58 57.4 +0.4
comp=Z,26nm,1.0s
WLF *dx* x 17 59 03.8
ECH Echery 54.41 41 IAmb IAmb 17 58 59.1
comp=Z,22nm,1.3s

ECH Echery 54.41 41 P P 17 58 58.3 +0.4
BHOU Houvegnez 54.47 38 *d*P P 17 58 58.3 +0.1
comp=Z,13nm,1.0s
BHOU *dx* x 17 59 05.4
AMTX Amarillo 54.54 303 IAmb IAmb 17 59 09.7
comp=Z,19nm,1.1s
CDF Champ du Feu 54.55 40 *e*P P 17 58 59.5 +0.5
CDF pmax pmax
comp=Z,46nm,1.6s
MEM Membach 54.57 37 *d*P P 17 58 59.2 +0.3
comp=Z,33nm,1.0s
MEM *dx* x 17 59 05.7
BTNL Ternell 54.63 38 *d*P P 17 58 59.7 +0.3
comp=Z,34nm,1.1s
BTNL *dx* x 17 59 06.2
ILULI Ilulissat 54.78 357 *i* P P 17 58 59.6 -0.5
SLE Schleitheim 55.11 41 P P 17 59 02.4 -0.6
BFO Black Forest 55.19 41 P P 17 59 03.1 -0.4
BFO IAmb IAmb 17 59 04.9
comp=Z,26nm,1.0s
BFO Black Forest 55.19 41 P P 17 59 03.1 -0.4
BFO pmax pmax
comp=Z,26nm,1.0s
MSTX Muleshoe 55.33 301 IAmb IAmb 17 59 17.3
comp=Z,41nm,1.3s
MSTX Muleshoe 55.33 301 P P 17 59 04.4 -0.5
baz=96
DAVOX Davos/Dischmat 55.72 43 P P 17 59 08.0 +0.4
comp=Z,21nm,1.0s,baz=269,slow=7.0,SNR=20
comp=Z,21nm,1.0s
DAVOX Davos/Dischmat 55.72 43 P P 17 59 08.0 +0.4
TXAR Lajitas Array 55.79 296 P P 17 59 10.3 +2.0
comp=Z,1.2nm,0.9s,baz=106,slow=9.2,SNR=8.5
TXAR PcP PcP 18 00 08.7 +1.3
comp=Z,1.4nm,0.9s,baz=93,slow=2.6,SNR=3.8
TX31 Lajitas Ar. Si 55.79 296 IAmb IAmb 17 59 21.2
comp=Z,54nm,1.7s
TX32 Lajitas Array 55.79 296 P P 17 59 08.3 +0.1
OSSC Osservatorio P 55.83 47 IAmb IAmb 17 59 16.3
comp=Z,36nm,1.1s
DAVA Damuels 55.87 42 *i* P P 17 59 09.0 +0.4
comp=Z,28nm,1.1s,SNR=9.5
STU Stuttgart 55.88 40 P P 17 59 09.8 +1.4
ML02 Panimavida 55.89 206 P P 17 59 09.5 +1.0
CLTB Caltabellotta 56.24 54 P P 17 59 11.3 0.0
FETA Feichten 56.35 43 *i* P P 17 59 11.5 -0.5
comp=Z,34nm,1.4s,SNR=15
RETA Reutte 56.50 42 *i* P P 17 59 12.9 -0.1
comp=Z,28nm,1.2s,SNR=9.6
MOTA Moosalm 56.68 43 *i* P P 17 59 13.9 -0.5
comp=Z,9nm,1.4s,SNR=13
SQTA Sankt Quirin 56.72 43 *i* P P 17 59 14.1 -0.5
comp=Z,56nm,1.3s,SNR=15
WATA Walderalm 56.99 43 *i* P P 17 59 16.4 -0.2
comp=Z,32nm,1.2s,SNR=7.6
T25A Trinidad 57.00 305 P P 17 59 16.6 -0.3
baz=97
WTTA Wattenberg 57.01 43 *i* P P 17 59 16.7 0.0
comp=Z,24nm,1.2s,SNR=7.6
NRCA Norcia 57.02 48 P P 17 59 16.0 -0.8
NRCA IAmb IAmb 17 59 24.3
comp=Z,29nm,1.2s
AQU L'Aquila 57.14 49 P P 17 59 17.6 0.0
CIMO Cimolais 57.31 44 IAmb IAmb 17 59 19.6
comp=Z,30nm,1.1s
ABTA Abfaltersbach 57.46 44 *i* P P 17 59 19.0 -0.8
comp=Z,45nm,1.3s,SNR=14
STAL STALIGIAL 57.48 44 IAmb IAmb 17 59 20.8
comp=Z,32nm,1.1s
PAOL Paolisi 57.78 51 P P 17 59 21.9 -0.2
PAOL IAmb IAmb 17 59 30.0
comp=Z,32nm,1.3s
RSSD Black Hills 57.82 313 P P 17 59 24.8 +2.2
KBA Koelnbreinsper 58.09 43 *i* P P 17 59 23.3 -1.1
comp=Z,41nm,1.2s,SNR=14
SUMG Summit 58.16 2 P P 17 59 24.3 -0.4
SUMG IAmb IAmb 17 59 34.4
comp=Z,16nm,1.1s
SUMG Summit 58.16 2 P P 17 59 24.3 -0.4
SUMG pmax pmax
comp=Z,16nm,1.1s
SUMG Summit 58.16 2 *i* P P 17 59 25.0 +0.3
MYKA Terra Mystica 58.19 44 *i* P P 17 59 24.5 -0.4
comp=Z,51nm,1.0s,SNR=14
ISCO Idaho Springs 58.27 308 IAmb IAmb 17 59 39.7
comp=Z,28nm,1.3s
ISCO Idaho Springs 58.27 308 P P 17 59 28.4 +2.5
NKC Novy Kostel 58.33 40 *e*P P 17 59 25.9 +0.1
NKC *e* 17 59 32.3
NKC *e*S S 18 07 27.6 -1.0
NKC MLR MLR
comp=Z,600nm,24.2s
NKC Novy Kostel 58.33 40 *e*P P 17 59 25.9 +0.1
NKC *ep*P pwP 17 59 32.3 +0.7
NKC *e*S S 18 07 27.6 -1.0
NKC AMS AMS 18 18 20.0
comp=Z,600nm,24.2s
GORS Gorjuse 58.36 44 *e*P P 17 59 26.4 +0.3
BIOA Bad Ischl, Aus 58.43 43 *i* P P 17 59 26.7 +0.1
comp=Z,31nm,1.2s,SNR=7.9
ANMO Albuquerque 58.45 302 P P 17 59 26.2 -0.9
ANMO IAmb IAmb 17 59 32.3
comp=Z,24nm,1.9s
ANMO Albuquerque 58.45 302 *ce*P P 17 59 27.8 +0.7
ANMO pmax pmax
comp=Z,10.0nm,1.7s
CUC Castrocucco 58.57 52 P P 17 59 26.3 -1.4
CUC IAmb IAmb 17 59 35.6
comp=Z,27nm,1.1s
MUD Monsted U'grnd 58.57 32 *i* P P 17 59 27.9 +0.6
MUD IAmb IAmb 17 59 30.2
comp=Z,98nm,1.2s
N23A Red Feather La 58.67 309 P P 17 59 28.0 -0.6
baz=98
KHC Kasperske Hory 58.75 41 IAmb IAmb 17 59 29.9
comp=Z,24nm,1.1s
KHC Kasperske Hory 58.75 41 *e*P P 17 59 27.9 -0.8
KHC *e* 17 59 35.1
KHC *e*S S 18 07 34.2 +0.1
KHC MLR MLR
comp=Z,400nm,18.9s
KHC Kasperske Hory 58.75 41 *e*P P 17 59 27.9 -0.8
KHC *ep*P pwP 17 59 35.1 +0.5
KHC *e*S S 18 07 34.2 +0.1
KHC AMS AMS 18 21 30.0
comp=Z,400nm,18.9s
GEC2 GERESS Array S 58.76 41 IAmb IAmb 17 59 29.7
comp=Z,25nm,1.4s
GERES GERESS Array B 58.76 41 P P 17 59 27.8 -1.1
comp=Z,3.6nm,0.9s,baz=224,slow=5.6,SNR=24
GERES LR LR 18 20 30.3
comp=Z,387nm,21.8s,baz=237,slow=32
comp=Z,3.6nm,0.9s
OBKA Obir 58.77 44 *i* P P 17 59 28.4 -0.7
comp=Z,27nm,0.9s,SNR=8.7
MOA Molln 58.88 43 *i* P P 17 59 28.6 -1.1
comp=Z,23nm,1.3s,SNR=6.4
CLL Collm 58.98 38 *i* P P 17 59 30.3 +0.1
CLL *e*S S 18 07 37.0 +0.2
CLL pmax pmax
comp=Z,38nm,1.1s
CLL Collm 58.98 38 *i* P P 17 59 30.3 +0.1
comp=Z,38nm,1.1s
CLL *e*PPP PPP 18 03 00.0
CLL *e*S S 18 07 37.0 +0.2
CLL *e*SS SS 18 11 36.0 +5.6
CLL *e*SSS SSS 18 14 12.0
S22A 4UR Ranch, Cre 58.98 305 IAmb IAmb 17 59 44.8
comp=Z,32nm,1.4s
S22A 4UR Ranch, Cre 58.98 305 P P 17 59 30.8 -0.1
baz=96
CKRC Cesky Krumlov 59.14 42 *e*P P 17 59 30.7 -0.7
CKRC *ex* x 17 59 37.1
CKRC *e*S S 18 07 34.6 -4.5
PERS Pernice 59.18 44 *e*P P 17 59 31.9 +0.1
GO06 Curarrehue 59.19 204 P P 17 59 32.1 +0.2
GCIS Gornji Cirnik 59.38 45 *i* P P 17 59 33.9 +0.8
BRG Berggiesshubel 59.43 39 *e*P P 17 59 33.9 +0.5
BRG Amp 17 59 37.1
comp=Z,11nm,1.1s
BRG Berggiesshubel 59.43 39 *e*P P 17 59 33.9 +0.5
BRG *e* 18 07 45.0
BRG pmax pmax
comp=Z,11nm,1.1s
BRG pmax pmax

comp=Z,546nm,21.8s
BRG MLR MLR
comp=E,323nm,16.8s
BRG MLR MLR
comp=N,170nm,16.6s
121A Cookes Peak, D 59.43 299 P P 17 59 33.4 -0.6
baz=92
PRU Pruhonice 59.57 40 *e*P P 17 59 34.7 +0.3
PRU *e* 17 59 40.9
PRU *e*S S 18 07 44.5 -0.1
PRU MLR MLR
comp=Z,400nm,19.6s
PRU Pruhonice 59.57 40 *e*P P 17 59 34.7 +0.3
PRU *ex* x 17 59 40.9
PRU *e*S S 18 07 44.5 -0.1
PRU AMS AMS 18 22 00.0
comp=Z,400nm,19.6s
ARSA Arzberg 59.58 43 *i* P P 17 59 33.9 -0.6
comp=Z,29nm,1.4s,SNR=12
PTJ Puntijarka 59.62 45 P P 17 59 36.3 +1.4
PVCC Panska Ves 59.72 40 *e*P P 17 59 35.9 +0.5
PVCC *e* 17 59 42.3
PVCC *e*S S 18 07 43.1 -3.5
PVCC MLR MLR
comp=Z,400nm,21.3s
PVCC Panska Ves 59.72 40 *e*P P 17 59 35.9 +0.5
PVCC *ep*P pwP 17 59 42.3 +1.1
PVCC *e*S S 18 07 43.1 -3.5
PVCC AMS AMS 18 19 40.0
comp=Z,400nm,21.3s
RUE Ruedersdorf 59.77 37 *e*P P 17 59 36.0 +0.3
PLCA Paso Flores 59.84 202 P P 17 59 37.7 +1.3
comp=Z,22nm,1.1s,baz=34,slow=9.8,SNR=11
comp=Z,22nm,1.1s
H09W1 TRISTAN DA CUN 59.90 150 T T 19 04 39.3
SNR=5.3
CONA Conrad Observa 59.95 43 *i* P P 17 59 36.1 -1.0
comp=Z,36nm,1.6s,SNR=16
COP Copenhagen 60.00 33 *i* P P 17 59 38.0 +0.8
TREC Trest 60.00 41 AMS AMS 18 23 00.0
comp=Z,600nm,20.0s
KONO Kongsberg 60.06 29 P P 17 59 37.8 +0.2
KONO Kongsberg 60.06 29 *ce*P P 17 59 37.6 0.0
KONO pmax pmax
comp=Z,104nm,2.5s
RONA Rosalia, Austr 60.19 43 *i* P P 17 59 38.0 -0.7
comp=Z,47nm,1.1s,SNR=23
SOP Sopron 60.36 43 P P 17 59 41.5 +1.7
SOP Sopron 60.36 43 P P 17 59 39.8 0.0
KRUC Moravsky 60.53 42 *e*P P 17 59 40.2 -0.8
PV13 Radium Mtn., P 60.58 306 P P 17 59 41.8 -0.1
PV13 IAmb IAmb 17 59 51.1
comp=Z,28nm,1.4s
UPC Upice 60.61 40 *e*P P 17 59 41.9 +0.4
UPC *e* 17 59 47.5
UPC *e*S S 18 08 02.8 +4.8
UPC MLR MLR
comp=Z,400nm,21.0s
UPC Upice 60.61 40 *e*P P 17 59 41.9 +0.4
UPC *ep*P pwP 17 59 47.5 +0.2
UPC *e*S S 18 08 02.8 +4.8
UPC AMS AMS 18 20 20.0
comp=Z,400nm,21.0s
CHVC Chvalec 60.66 40 *e*P P 17 59 41.8 -0.1
CHVC AMS AMS 18 20 20.0
comp=Z,100nm,25.2s
VRAC Vranov 60.71 41 ⇓P P 17 59 42.5 +0.3
VRAC Vranov 60.71 41 P P 17 59 42.1 -0.1
comp=Z,16nm,0.9s,baz=261,slow=7.7,SNR=22
comp=Z,16nm,0.9s
VRAC Vranov 60.71 41 *e*P P 17 59 41.8 -0.4
OSTC Ostas 60.75 40 *e*P P 17 59 42.3 -0.2
OSTC *ex* x 17 59 48.5
OSTC *e*S S 18 08 08.4 +8.6
OSTC AMS AMS 18 20 20.0
comp=Z,500nm,24.9s
DPC Dobruska-Polom 60.77 40 *e*P P 17 59 42.3 -0.3
DPC *e* 17 59 48.2
DPC *e*S S 18 08 04.2 +4.1
DPC MLR MLR
comp=Z,400nm,20.2s
DPC Dobruska-Polom 60.77 40 *e*P P 17 59 42.3 -0.3
DPC *ep*P pwP 17 59 48.2 -0.3
DPC *e*S S 18 08 04.2 +4.1
DPC AMS AMS 18 22 40.0
comp=Z,400nm,20.2s
ZST Bratislava 60.82 43 *e*P P 17 59 43.8 +0.9
ZST pmax pmax
comp=Z,105nm,1.2s
ZST Bratislava 60.82 43 *e*P P 17 59 43.8 +0.9
EGYH Egyhazaskeszo 60.82 44 P P 17 59 43.5 +0.5
KSP Ksiaz 60.86 40 *e*P P 17 59 42.5 -0.7
KSP Ksiaz 60.86 40 P P 17 59 44.0 +0.8
MPLH Magyarpolny 60.92 44 P P 17 59 43.6 0.0
MODS Modra-Piesok 60.97 42 *e*P P 17 59 44.3 +0.3
MODS pmax pmax
comp=Z,83nm,1.3s
MODS Modra-Piesok 60.97 42 *e*P P 17 59 44.3 +0.3
KRLC Kraliky 60.99 41 *e*P P 17 59 43.8 -0.4
KRLC *e* 17 59 50.8
KRLC *e*S S 18 08 11.2 +8.2
KRLC MLR MLR
comp=Z,400nm,15.7s
KRLC Kraliky 60.99 41 *e*P P 17 59 43.8 -0.4
KRLC *ep*P pwP 17 59 50.8 +0.8
KRLC *e*S S 18 08 11.2 +8.2
KRLC AMS AMS 18 24 10.0
comp=Z,400nm,15.7s
SMOL Smolenice 61.09 42 *e*P P 17 59 45.4 +0.6
KOVH Kovagotottos 61.11 45 P P 17 59 45.1 +0.1
BSD Bornholm Skovb 61.17 35 *e*P P 17 59 45.8 +0.6
BSD Bornholm Skovb 61.17 35 *i* P P 17 59 45.1 -0.1
BSD IAmb IAmb 17 59 46.6
comp=Z,38nm,1.2s
NC204 NORSAR Array S 61.26 27 P P 17 59 45.3 -0.5
JAVC Velka Javorina 61.31 42 *e*P P 17 59 46.9 +0.5
NB2 NORSAR Subarra 61.36 27 P P 17 59 46.4 -0.1
comp=Z,425nm,3.3s,baz=247,slow=6.9
NB2 NORSAR Subarra 61.36 27 P P 17 59 46.4 -0.1
NB2 NORSAR Subarra 61.36 27 P P 17 59 46.4 -0.1
baz=247,slow=6.9
NOA NORSAR Array B 61.36 27 P P 17 59 46.1 -0.4
comp=Z,25nm,1.1s,baz=243,slow=6.8,SNR=39
comp=Z,25nm,1.1s
RDMU Red Mountain 61.37 308 IAmb IAmb 17 59 60.0
comp=Z,20nm,1.3s
NORES NORESS Array B 61.39 28 P P 17 59 46.9 +0.3
NORES pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 61.41 41 ⇓P P 17 59 46.9 -0.2
MORC Moravsky Berou 61.41 41 IAmb IAmb 17 59 48.8
comp=Z,26nm,1.2s
MORC Moravsky Berou 61.41 41 P P 17 59 46.8 -0.2
MORC Moravsky Berou 61.41 41 *e*P P 17 59 47.1 +0.1
CSKK Cskako 61.43 44 P P 17 59 48.1 +0.9
PDG Podgorica 61.44 49 ⇓P P 17 59 48.1 +0.8
PDG Podgorica 61.44 49 P P 17 59 47.2 -0.1
MORH Mrgy, Hungar 61.51 45 ⇑P P 17 59 47.5 -0.2
MORH Mrgy, Hungar 61.51 45 P P 17 59 47.7 0.0
SRO Srobarova 61.55 43 *e*P P 17 59 48.5 +0.6
SRO pmax pmax
comp=Z,55nm,1.3s
SRO Srobarova 61.55 43 *e*P P 17 59 48.5 +0.6
BW06 Boulder Array 61.58 311 P P 17 59 47.2 -1.4
BW06 IAmb IAmb 18 00 00.8
comp=Z,15nm,1.4s
PDAR Pinedale Array 61.58 311 P P 17 59 48.4 -0.1
comp=Z,2.4nm,1.1s,baz=100,slow=8.1,SNR=7.3
comp=Z,2.4nm,1.1s
TIR Tirane 61.78 51 ⇓P P 17 59 51.5 +1.8
TIR Tirane 61.78 51 P P 17 59 51.4 +1.8
OKC Ostrava-Krasne 61.81 41 *e*P P 17 59 50.5 +0.9
OKC MLR MLR
comp=Z,400nm,17.0s
OKC Ostrava-Krasne 61.81 41 *e*P P 17 59 50.5 +0.9
OKC AMS AMS 18 24 20.0
comp=Z,400nm,17.0s
BUD Budapest 61.96 44 P P 17 59 52.0 +1.3
BUD Budapest 61.96 44 P P 17 59 51.6 +0.9
TUC Tucson 61.97 299 P P 17 59 51.9 +0.7
TUC IAmb IAmb 17 59 60.0
comp=Z,20nm,1.4s
TUC Tucson 61.97 299 P P 17 59 51.9 +0.7
TUC pmax pmax
comp=Z,20nm,1.5s
GKP Gorka Klasztor 62.00 37 *e*P P 17 59 50.8 0.0
HFS Hagfors 62.16 29 P P 17 59 51.6 -0.2
comp=Z,44nm,0.9s,baz=237,slow=5.1,SNR=52
comp=Z,44nm,0.9s
LOHW Long Hollow 62.43 312 IAmb IAmb 18 00 06.7
comp=Z,16nm,1.4s
LL02 Futaleuf 62.46 202 P P 17 59 53.6 -0.4
LL02 IAmb IAmb 17 59 56.5
comp=Z,17nm,1.1s
LANS Liptovska Anna 62.53 42 *e*P P 17 59 56.1 +1.5
LANS pmax pmax
comp=Z,5.0nm,1.0s
LANS Liptovska Anna 62.53 42 *e*P P 17 59 56.1 +1.5
REDW Red Top Meadow 62.59 311 IAmb IAmb 18 00 29.2
comp=Z,16nm,1.4s
PSZ Piszkesteto 62.61 43 ⇓P P 17 59 55.2 0.0
PSZ Piszkesteto 62.61 43 P P 17 59 55.1 0.0
PSZ Piszkesteto 62.61 43 P P 17 59 55.3 +0.2
TPAW Teton Pass 62.67 312 IAmb IAmb 18 00 07.6
comp=Z,18nm,1.2s
IMW Indian Meadow 62.71 312 IAmb IAmb 18 00 08.8
comp=Z,14nm,1.2s
FXWY Fox Creek 62.74 312 IAmb IAmb 18 00 08.9
comp=Z,15nm,1.5s
OJC Ojcow 62.93 41 *e*P P 17 59 56.5 -0.6
HWUT Hardware Ranch 62.96 309 IAmb IAmb 18 00 05.2
comp=Z,14nm,1.0s
NIE Niedzica 63.11 42 *e*P P 17 59 59.1 +0.6
NIE Niedzica 63.11 42 P P 18 00 00.3 +1.9
ITM Ithomi 63.12 56 P P 17 59 57.8 -0.9
MTPU Mount Pierson 63.23 305 IAmb IAmb 18 00 39.1
comp=Z,19nm,1.5s
U15A North Rim 63.26 304 IAmb IAmb 18 00 09.9
comp=Z,22nm,1.4s
BOVS Bovan 63.35 48 ⇑P P 17 59 59.9 -0.2
MDVR Moldovita 63.47 47 ⇓P P 18 00 00.6 -0.3
BZS Buzias 63.48 46 ⇑P P 18 00 01.4 +0.4
BZS Buzias 63.48 46 P P 18 00 01.3 +0.4
SIRR Siria 63.59 45 ⇑P P 18 00 02.1 +0.5
214A Organ Pipe Nat 63.69 299 IAmb IAmb 18 00 11.9
comp=Z,12nm,1.2s
214A Organ Pipe Nat 63.69 299 P P 18 00 03.7 +1.1
baz=89
DAG Danmarks Havn 63.75 7 *i* P P 18 00 02.3 +0.2
DAG IAmb IAmb 18 00 06.2
comp=Z,11nm,0.7s
CRVS Cervenica-Dubn 63.79 42 *e*P P 18 00 04.3 +1.4
CRVS pmax pmax
comp=Z,84nm,1.5s
CRVS Cervenica-Dubn 63.79 42 *e*P P 18 00 04.3 +1.4
HVU Hansel Valley 63.87 310 IAmb IAmb 18 00 47.4
comp=Z,22nm,1.9s
SZCU Shurtz Canyon 63.93 305 IAmb IAmb 18 00 13.3
comp=Z,16nm,1.4s
HERR Herculane 63.97 47 ⇑P P 18 00 04.5 +0.3
BGU Big Grassy Mou 64.01 309 IAmb IAmb 18 00 14.1
comp=Z,19nm,1.2s
DLMT Dillon 64.03 314 IAmb IAmb 18 00 17.9
comp=Z,26nm,1.5s
BLKB Belogradchik 64.05 48 ⇑P P 18 00 05.3 +0.5
CCUT Cedar City 64.14 305 IAmb IAmb 18 00 15.3
comp=Z,16nm,1.2s
KKB Krupnik 64.23 50 *i* P P 18 00 07.5 +1.6
GZR Gura Zlata 64.27 46 ⇓P P 18 00 06.8 +0.6
UZH Uzhgorod 64.30 43 *e*P P 18 00 06.6 +0.4
UZH *e* 18 00 12.6
UZH *e* 18 02 23.0
UZH *e*S S 18 08 41.6 -2.8
KOLS Kolonicke sedl 64.32 42 *e*P P 18 00 07.5 +1.1
KOLS pmax pmax
comp=Z,15nm,1.0s
KOLS Kolonicke sedl 64.32 42 *e*P P 18 00 07.5 +1.1
DRGR 64.37 45 ⇑P P 18 00 07.1 +0.3
DRGR 64.37 45 P P 18 00 07.1 +0.3
VTS Vitosha 64.39 50 ⇓P P 18 00 07.7 +0.6
VTS Vitosha 64.39 50 IAmb IAmb 18 00 09.3
comp=Z,23nm,1.2s
VTS Vitosha 64.39 50 *i* P P 18 00 08.3 +1.2
DEV Deva 64.41 46 ⇓P P 18 00 08.1 +1.1
DEV Deva 64.41 46 P P 18 00 08.0 +1.1
SRE Strehaia 64.51 47 ⇓P P 18 00 08.8 +1.1
SRE Strehaia 64.51 47 P P 18 00 08.8 +1.1
W13A Hualapai Mount 64.55 302 IAmb IAmb 18 00 18.2
comp=Z,20nm,1.7s
PSUT Pine Spring 64.56 306 IAmb IAmb 18 00 23.7
comp=Z,20nm,1.6s
TRSU Trosnyk 64.67 43 P P 18 00 09.1 +0.4
MMB Musomiste 64.69 51 *i* P P 18 00 10.3 +1.3
MPEP Malo Peshtene 64.80 49 *i* P P 18 00 15.8 +6.2
SPR3 Spring Creek 3 64.94 306 IAmb IAmb 18 00 20.9
comp=Z,8.8nm,1.0s
CJR Cluj-Napoca 64.97 45 ⇓P P 18 00 11.7 +1.0
CJR Cluj-Napoca 64.97 45 P P 18 00 11.7 +1.0
BMR Baia Mare 64.99 44 P P 18 00 11.0 +0.2
PGB Panagyurishte 65.07 50 *i* P P 18 00 13.1 +1.6
PBUR Paburge 65.25 35 *e*P P 18 00 13.0 +0.7
MORS Morshin 65.41 42 P P 18 00 14.5 +1.1
RZN Rozhen 65.44 51 *i* P P 18 00 15.1 +1.1
PRN Pahroc Range 65.49 305 IAmb IAmb 18 00 24.2
comp=Z,21nm,1.6s
IDI Anoyia 65.50 58 LR LR 18 26 59.8
comp=Z,595nm,21.8s,baz=277,slow=34
ARCR ARCALIA 65.52 45 ⇓P P 18 00 14.9 +0.7
LVV L'vov 65.57 42 *e*P P 18 00 15.5 +1.0
LVV *e*S S 18 09 03.7 +3.6
IRM Iron Mountain 65.60 301 P P 18 00 15.9 +0.9
baz=89
ELK Elko 65.68 308 P P 18 00 16.9 +1.2
VOIR 65.87 47 ⇑P P 18 00 16.6 0.0
VOIR 65.87 47 P P 18 00 16.6 0.0
R11A Troy Canyon, C 65.91 306 P P 18 00 17.4 +0.2
baz=90
SANT Santorini 65.95 56 ⇓P P 18 00 17.7 +0.5
GMRC Granite Mounta 66.01 302 P P 18 00 17.3 -0.5
baz=88
RES Resolute Bay 66.02 347 LR LR 18 25 09.3
comp=Z,558nm,21.8s,baz=123,slow=32
BUR01 Bucovina Ar. S 66.14 44 ⇑P P 18 00 18.7 +0.4
RAF Rauma 66.22 29 *e*P P 18 00 18.2 -0.2
PABE Paberze 66.30 35 *e*P P 18 00 20.2 +1.2
BELC Belle Mtn. Jos 66.31 301 P P 18 00 21.3 +1.5
baz=88
SZH Strazhica 66.40 49 *i* P P 18 00 21.1 +1.2
ALN Alexandroupoli 66.42 52 P P 18 00 20.3 +0.2
TPNV Topopah Spring 66.45 304 IAmb IAmb 18 00 36.0
comp=Z,23nm,1.6s
IKP In-Ko-Pah, Jac 66.46 300 P P 18 00 23.2 +2.6
baz=87
MLR Muntele Rosu 66.51 46 ⇑P P 18 00 21.2 +0.4
MLR Muntele Rosu 66.51 46 P P 18 00 20.7 -0.1
MLR Muntele Rosu 66.51 46 P P 18 00 20.7 -0.1
MLR pmax pmax
comp=Z,128nm,1.4s
EZN Ezine 66.62 53 P P 18 00 21.3 -0.1
COVR Voineasa-Covas 66.71 46 ⇑P P 18 00 22.8 +0.9
MTSE Matsula 66.76 32 *e*P P 18 00 21.7 -0.2
GWY Greenwater Val 66.80 303 IAmb IAmb 18 00 36.7
comp=Z,22nm,1.6s
EFI East Falkland 66.89 189 P P 18 00 22.1 -0.5
EFI East Falkland 66.89 189 *ce*P P 18 00 21.9 -0.8
EFI pmax pmax
comp=Z,52nm,1.3s
ISR Istrita 66.91 47 ⇓P P 18 00 24.0 +0.7
ISR Istrita 66.91 47 P P 18 00 23.9 +0.7
GSC Goldstone, Bar 66.93 302 P P 18 00 24.7 +1.1
baz=88
FURC Furnace Creek, 66.95 304 P P 18 00 25.1 +1.5
baz=89
QSM Queen of Sheba 66.97 303 P P 18 00 23.6 -0.1
QSM IAmb IAmb 18 00 33.3
comp=Z,16nm,1.1s
PLOR Plostina 67.02 46 ⇓P P 18 00 24.8 +0.8
PLOR Plostina 67.02 46 P P 18 00 24.7 +0.8
VRI Vrincioaia 67.07 46 ⇑P P 18 00 24.7 +0.4
VRI Vrincioaia 67.07 46 P P 18 00 24.6 +0.4
MEF Metsahovi 67.33 30 *e*P P 18 00 24.8 -0.7
KARP Karpathos 67.35 57 P P 18 00 25.2 -1.0
NEW Newport 67.36 316 IAmb IAmb 18 00 38.4
comp=Z,22nm,1.2s
NEW Newport 67.36 316 P P 18 00 27.0 +1.0
MPMC Manual Prospec 67.47 303 P P 18 00 28.3 +1.2
baz=88
BFSC Mount Baldy Ra 67.68 301 P P 18 00 31.0 +2.5
baz=87
YKA Yellowknife Ar 67.79 332 P P 18 00 27.9 -0.5
comp=Z,7.7nm,1.1s,baz=106,slow=6.6,SNR=6.4
comp=Z,7.7nm,1.1s
YKA Yellowknife Ar 67.79 332 *i* P P 18 00 29.7 +1.3
YKA pmax pmax
comp=Z,6.0nm,1.1s
NACGM Naroch 67.82 36⇑ *e*P P 18 00 29.6 +0.9
baz=264
HARR Harsova 67.88 47 ⇑P P 18 00 29.2 -0.1
HARR Harsova 67.88 47 P P 18 00 29.2 -0.1
EDW2 Edwards Air Fo 67.92 302 P P 18 00 31.2 +1.4
baz=87
CWC Cottonwood Cre 67.93 304 P P 18 00 30.5 +0.5
baz=88
CFR Carcaliu 68.04 47 ⇑P P 18 00 30.4 +0.1
CFR Carcaliu 68.04 47 P P 18 00 30.4 +0.1
NVAR Mina Array Bea 68.05 306 P P 18 00 31.7 +0.9
comp=Z,0.3nm,0.5s,baz=107,slow=5.4,SNR=2.1
NOR Nord 68.17 4 *i* P P 18 00 30.1 -0.4
NOR IAmb IAmb 18 00 32.5
comp=Z,57nm,1.5s
LHV Little Huntoon 68.21 306 IAmb IAmb 18 00 45.5
comp=Z,13nm,1.3s
TIRR Tirgusor 68.22 48 ⇑P P 18 00 31.0 -0.4
TIRR Tirgusor 68.22 48 ⇑P P 18 00 31.0 -0.4
TIRR Tirgusor 68.22 48 P P 18 00 31.0 -0.4
VSU Vasula 68.23 33 *i* P P 18 00 29.9 -1.3
VSU pmax pmax
comp=Z,67nm,1.0s
VSU Vasula 68.23 33 *e*P P 18 00 30.9 -0.3
TPGR Topolog 68.23 47 ⇑P P 18 00 30.5 -1.0
ISA Isabella, Lake 68.28 303 P P 18 00 33.2 +1.1
baz=87
SORM Soroca 68.28 44 ⇓P P 18 00 30.1 -1.6
SORM Soroca 68.28 44 P P 18 00 30.1 -1.6
FINES FINESS Array B 68.35 29 P P 18 00 31.6 -0.3
comp=Z,13nm,0.9s,baz=236,slow=2.1,SNR=27
comp=Z,13nm,0.9s
MNK Minsk 68.41 37 *i* P P 18 00 32.1 -0.3
MNK *i* 18 00 56.6
MNK *i* 18 03 02.6
MNK *i* PPP PPP 18 04 42.0
MNK *i* S S 18 09 34.0 -0.2
MNK pmax pmax
comp=Z,57nm,1.0s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK Minsk 68.41 37 *i* P P 18 00 32.1 -0.3
comp=E,2.0nm,0.9s
MNK *i* P P 18 00 32.1 -0.3
MNK *i* P P 18 00 32.1 -0.3
comp=Z,57nm,1.0s,baz=265
MNK *i* PcP PcP 18 00 56.6 -1.2
MNK *i* PP PP 18 03 02.7 -0.6
MNK *i* PPP PPP 18 04 42.1
MNK *i* S S 18 09 34.0 -0.2
MNK *i* SS SS 18 13 39.4 -18
MNK *i* LR LR 18 22 19.8
MNK *i* LRM MLR 18 28 13.9
comp=Z,589nm,18.6s
MNK *i* LRM MLR 18 28 19.2
MNK *i* LRM MLR 18 28 23.1
comp=E,78nm,18.6s
MILM Milestii Mici 68.55 45⇓ *i* P P 18 00 31.5 -2.0
comp=E,100nm,1.3s
MILM Milestii Mici 68.55 45 *e*PcP PcP 18 00 47.0 -12
MILM Milestii Mici 68.55 45 *e*PP PP 18 03 08.0 +3.4
MILM Milestii Mici 68.55 45 ⇓P P 18 00 33.4 -0.1
MILM Milestii Mici 68.55 45 *d* *i* P P 18 00 31.5 -2.0
MILM *e* 18 03 08.0
MILM *e*PPP PPP 18 04 45.0
MILM pmax pmax
comp=Z,200nm,2.6s
MILM pmax pmax
comp=E,70nm,1.9s
AKASG Malin Array Be 68.96 41 P P 18 00 35.2 -0.7
comp=E,13nm,1.0s,baz=273,slow=5.3,SNR=51
comp=E,13nm,1.0s
AKASG Malin Array Be 68.96 41 IAmb IAmb 18 00 36.3
comp=Z,15nm,1.3s
AKASG Malin Array Be 68.96 41 *i* P P 18 00 35.2 -0.7
AKASG pmax pmax
comp=Z,14nm,1.0s
AKBB Malin Array Si 68.96 41 IAmb IAmb 18 00 36.6
comp=Z,22nm,1.2s
AKBB Malin Array Si 68.96 41 *ce*P P 18 00 34.6 -1.4
AKBB pmax pmax
comp=Z,23nm,1.3s
LTY Liberty 69.72 315 IAmb IAmb 18 00 51.4
comp=Z,17nm,1.2s
ARCES ARCESS Array B 69.72 21 P P 18 00 40.4 +0.1
comp=Z,31nm,1.0s,baz=257,slow=4.9,SNR=48
comp=Z,31nm,1.0s
ARCES ARCESS Array B 69.72 21 P P 18 00 39.7 -0.6
KBS Kingsbay 69.73 10 P P 18 00 40.4 +0.2
KBS Kingsbay 69.73 10 *ce*P P 18 00 41.4 +1.2
KBS pmax pmax
comp=Z,53nm,1.3s
BORA Eskisehir 69.80 53 IAmb IAmb 18 00 48.7
comp=Z,21nm,0.9s
K05A Summer Lake 69.92 310 IAmb IAmb 18 00 52.5
comp=Z,32nm,1.3s
MG05 Puerto Natales 70.11 198 P P 18 00 43.6 +0.7
J05D Fort Rock, OR 70.15 311 P P 18 00 45.3 +1.6
baz=88
SPITS Spitsbergen Ar 70.16 11 P P 18 00 43.7 +0.8
comp=Z,25nm,1.1s,baz=172,slow=8.1,SNR=8.1
comp=Z,25nm,1.1s
SPB2 Spitsbergen Ar 70.17 11 P P 18 00 44.0 +1.0
G05D Wamic, OR 70.17 313 P P 18 00 45.7 +2.0
baz=89
TSUM Tsumeb 70.20 117 P P 18 00 45.1 +0.8
comp=Z,7.9nm,1.0s,baz=286,slow=1.7,SNR=7.1
comp=Z,7.9nm,1.0s
TSUM Tsumeb 70.20 117 P P 18 00 44.5 +0.3
TSUM IAmb IAmb 18 00 46.3
comp=Z,20nm,1.2s
KEV Kevo 70.28 21 P P 18 00 42.5 -1.3
KEV Kevo 70.28 21 P P 18 00 42.5 -1.3
KEV pmax pmax
comp=Z,55nm,1.1s
VALR Valaam 70.64 30 *i* P P 18 00 46.3 +0.3
VALR pmax pmax
comp=Z,40nm,1.1s
L04D Klamath Falls 70.98 310 P P 18 00 47.0 -1.7
baz=87
I04A Tendick Farm, 70.99 312 P P 18 00 49.1 +0.5
baz=88
ANTO Ankara 71.60 52 P P 18 00 52.1 -0.3
BR131 Keskin Array S 72.26 53 *i* P P 18 00 55.1 -1.4
BRTR Keskin Array B 72.26 53 P P 18 00 55.9 -0.6
comp=Z,16nm,0.9s,baz=255,slow=4.8,SNR=51
comp=Z,16nm,0.9s
BRTR Keskin Array B 72.26 53 P P 18 00 56.3 -0.2
BRTR Keskin Array B 72.26 53 P P 18 00 56.3 -0.2
SIM Simferopol' 72.28 47 *e*P P 18 00 56.0 -0.3
SIM *e* 18 03 38.6
SIM *e*PS pS 18 10 23.1 +1.6
SIM pmax pmax
comp=Z,35nm,1.1s
APA Apatity 72.28 23⇑ *i*P P 18 00 55.0 -0.9
APA *i* 18 01 01.5
APA *i* PPP PPP 18 05 24.0
APA *i* S S 18 10 22.0 +3.0
APA pmax pmax
comp=Z,16nm,1.0s
CSS Mathiatis 72.42 58 P P 18 00 58.0 +0.6
CSS IAmb IAmb 18 01 07.6
comp=Z,24nm,1.0s
LVZ Lovozero 72.78 23 P P 18 00 58.5 -0.4
LVZ Lovozero 72.78 23 *ce*P P 18 00 58.8 -0.1
LVZ pmax pmax
comp=Z,20nm,1.3s
OBN Obninsk 73.45 36 *de*P P 18 01 02.5 -0.5
OBN *e* 18 01 14.9
OBN *e*PPP PPP 18 05 30.6
OBN pmax pmax
comp=Z,53nm,1.3s
OBN MLR MLR
comp=Z,406nm,17.0s
MOS Moscow 74.03 36 *e*P P 18 01 06.5 +0.1
MOS pmax pmax
comp=Z,61nm,1.1s
MMAI Mount Meron Ar 74.35 59 P P 18 01 10.0 +1.1

comp=Z,29nm,1.1s,baz=316,slow=5.8,SNR=14
comp=Z,29nm,1.1s
EIL Elat 74.42 63 P **P 18 01 10.6 +1.3**
comp=Z,19nm,1.1s,baz=301,slow=4.0,SNR=16
comp=Z,19nm,1.1s
ANN Anapa 74.64 47 *e*P **P 18 01 07.0 -3.2**
ANN *e**PP **pP 18 01 10.1 -1.5**
ANN *e* 18 01 21.2
ANN *e* 18 03 54.0
ANN *e*S **S 18 10 42.9 -3.6**
ANN pmax pmax
comp=Z,37nm,1.0s
ANN MLR MLR
comp=N,153nm,17.0s
ANN MLR MLR
comp=Z,315nm,18.0s
KLMR Klimovskoe 74.81 30 *e*P **P 18 01 09.2 -1.6**
KLMR pmax pmax
comp=Z,68nm,1.1s
KLMR Klimovskoe 74.81 30 *e*P **P 18 01 09.3 -1.6**
KLMR AMP 18 01 12.1
comp=Z,68nm,1.1s
LPSR Galich'ya Gora 74.98 39 *e*P **P 18 01 11.7 -0.3**
LPSR pmax pmax
comp=Z,30nm,1.0s
ORCD Orcadas 75.01 180 P **P 18 01 09.5 -2.3**
DLBC Dease Lake 75.12 327 IAmb IAmb 18 01 16.5
comp=Z,24nm,1.5s
DLBC Dease Lake 75.12 327 P **P 18 01 13.7 +0.9**
baz=86
VORR Voronezh 75.22 40 ⇓ *i*P **P 18 01 14.5 +1.0**
VORR pmax pmax
comp=Z,49nm,1.5s
VSR Storozhevoye 75.24 40 *e*P **P 18 01 13.6 +0.1**
VSR pmax pmax
comp=Z,60nm,1.2s
R33M Jennings River 75.54 328 P **P 18 01 15.4 0.0**
baz=86
ASF Jabal al Asfar 75.72 60 P **P 18 01 18.1 +1.3**
comp=Z,9.7nm,1.1s,baz=252,slow=1.3,SNR=12
comp=Z,9.7nm,1.1s
INK Inuvik 76.05 337 P **P 18 01 18.4 +0.6**
comp=Z,2.0nm,0.4s,baz=86,slow=7.0,SNR=7.5
comp=Z,2.0nm,0.4s
INK Inuvik 76.05 337 P **P 18 01 17.2 -0.6**
INK IAmb IAmb 18 01 23.5
comp=Z,17nm,1.2s
INK Inuvik 76.05 337 P **P 18 01 18.2 +0.4**
baz=86
Q32M Nakina River 76.24 328 P **P 18 01 17.8 -1.6**
baz=85
P33M Teslin, Yukon 76.41 329 IAmb IAmb 18 01 29.2
comp=Z,15nm,1.2s
P33M Teslin, Yukon 76.41 329 P **P 18 01 19.8 -0.4**
baz=85
SOC Sochi 76.41 48 *e*P **P 18 01 20.5 +0.1**
SOC *e* 18 04 08.8
SOC *e*PPP PPP 18 05 55.2
SOC *e*S **S 18 11 08.5 +2.4**
SOC *e*SS **SS 18 15 56.5 -3.7**
SOC *e*SSS SSS 18 19 23.3
SOC pmax pmax
comp=Z,58nm,1.0s
SOC MLR MLR
comp=Z,61nm,18.0s
MBAR Mbarara 76.43 94 P **P 18 01 22.6 +1.3**
comp=Z,2.3nm,0.4s,baz=214,slow=2.4,SNR=8.8
comp=Z,2.3nm,0.4s
VRH Novokhopyorsk 76.84 40 *e*P **P 18 01 22.3 -0.3**
VRH pmax pmax
comp=Z,40nm,1.1s
P32M Atlin 76.92 329 P **P 18 01 21.9 -1.1**
baz=84
M31M Drury Creek, Y 76.96 331 P **P 18 01 23.7 +0.5**
baz=84
KOPT Kop Dagi 77.47 52 IAmb IAmb 18 01 32.5
comp=Z,21nm,1.0s
PRGR Permogore 77.69 29 *e*P **P 18 01 26.6 -0.6**
N31M Braeburn, Yuko 77.70 331 P **P 18 01 27.6 +0.2**
baz=82
SKAG Skagway 77.75 328 P **P 18 01 26.5 -1.1**
SKAG IAmb IAmb 18 01 37.8
comp=Z,16nm,1.0s
SKAG Skagway 77.75 328 P **P 18 01 27.6 0.0**
baz=82
O30N Mendenhall 77.95 330 P **P 18 01 28.7 -0.1**
baz=82
M30M Minto, Yukon 78.02 332 IAmb IAmb 18 01 37.8
comp=Z,23nm,1.9s
M30M Minto, Yukon 78.02 332 P **P 18 01 28.6 -0.6**
baz=82
MARD Mardin 78.10 54 IAmb IAmb 18 01 32.1
comp=Z,27nm,1.0s
LSZ Lusaka 78.24 109 P **P 18 01 32.3 +1.0**
comp=Z,12nm,1.2s,baz=283,slow=4.3,SNR=8.7
comp=Z,12nm,1.2s
N30M Aishikik Lake 78.33 331 P **P 18 01 29.5 -1.4**
baz=81
SUR Sutherland 78.36 128 LR LR 18 29 28.0
comp=Z,1µm,18.7s,baz=294,slow=31
P30M Million Dollar 78.47 329 P **P 18 01 31.1 -0.7**
baz=81
KIV Kislovodsk 78.48 47 P **P 18 01 32.1 -0.1**
KIV IAmb IAmb 18 01 34.9
comp=Z,28nm,1.1s
KIV Kislovodsk 78.48 47 *e*P **P 18 01 32.2 0.0**
KIV *e*S **S 18 11 28.9 0.0**
KIV *e*SS **SS 18 16 33.0 +1.3**
KIV pmax pmax
comp=Z,27nm,1.1s
L29M L29M 78.55 332 P **P 18 01 30.9 -1.1**
baz=81
HYT Haines Junctio 78.62 330 P **P 18 01 32.0 -0.7**
KBZ Khabaz 78.67 48 P **P 18 01 34.0 +1.0**
comp=Z,14nm,1.0s,baz=270,slow=3.9,SNR=19
comp=Z,14nm,1.0s
KBZ Khabaz 78.67 48 *ce*P **P 18 01 31.8 -1.2**
KBZ pmax pmax
comp=Z,19nm,1.0s
M29M Somme Creek 78.81 332 P **P 18 01 33.4 -0.2**
baz=80
GURO Guroymak-BITLI 78.88 53 IAmb IAmb 18 01 43.4
comp=Z,25nm,1.0s
DAWY Dawson 78.94 333 IAmb IAmb 18 01 37.0
comp=Z,18nm,1.4s
DAWY Dawson 78.94 333 P **P 18 01 33.1 -1.1**
baz=80
P29M Windy Craggy 78.94 329 P **P 18 01 35.2 +0.9**
baz=80
E27K Coleen River 79.04 338 P **P 18 01 33.4 -1.3**
baz=78
NCK Nalchik 79.21 48 *i* P **P 18 01 35.8 -0.3**
NCK pmax pmax
comp=Z,38nm,1.4s
O29M Mount Kennedy 79.24 330 P **P 18 01 36.8 +0.8**
baz=80
ONI Oni 79.26 49 IAmb IAmb 18 01 38.2
comp=Z,17nm,1.0s
ONI Oni 79.26 49 P **P 18 01 36.3 -0.1**
LBTB Lobatse 79.29 119 P **P 18 01 37.2 +0.3**
comp=Z,9.5nm,0.9s,baz=286,slow=6.2,SNR=9.9
comp=Z,9.5nm,0.9s
LBTB Lobatse 79.29 119 P **P 18 01 37.1 +0.3**
LBTB IAmb IAmb 18 01 38.4
comp=Z,21nm,1.1s
KARS Kars 79.32 51 P **P 18 01 37.8 +0.9**
G27K Doyon Strip 79.34 336 P **P 18 01 36.8 +0.5**
baz=78
H27K Steamboat Moun 79.41 336 P **P 18 01 37.2 +0.5**
baz=78
AKH Akhalkalaki 79.49 50 P **P 18 01 39.3 +1.4**
ZEI Tsey 79.55 48 *e*P **P 18 01 38.6 +0.4**
ZEI pmax pmax
comp=Z,17nm,1.1s
I27K Kandik River 79.57 335 P **P 18 01 36.8 -0.9**
baz=78
GEVA Gevas 79.71 53 IAmb IAmb 18 01 41.4
comp=Z,22nm,1.2s
O28M Mount Upton 79.93 330 P **P 18 01 39.3 -0.7**
baz=78
KIRV Kirov 80.06 32 P **P 18 01 39.9 -0.4**
comp=Z,23nm,1.0s,baz=240,slow=1.8,SNR=21
comp=Z,23nm,1.0s
F26K Sheenjek River 80.09 338 P **P 18 01 40.9 +0.5**
baz=76
PINM Pinnacle 80.10 330 P **P 18 01 42.5 +1.8**
baz=78

K27K Chicken 80.10 334 P **P 18 01 39.9 -0.6**
baz=77
G26K Porcupine Rive 80.13 337 P **P 18 01 40.1 -0.5**
baz=76
MATP Matopo 80.20 114 P **P 18 01 41.9 0.0**
comp=Z,16nm,0.9s,baz=288,slow=4.8,SNR=21
comp=Z,16nm,0.9s
L27K Beaver Creek, 80.21 333 P **P 18 01 40.7 -0.4**
baz=77
I26K Coal Creek Min 80.27 335 P **P 18 01 41.1 -0.3**
baz=77
BELG Belogornoye 80.27 38 P **P 18 01 41.2 -0.4**
comp=Z,37nm,1.1s,baz=56,slow=4.5,SNR=7.2
comp=Z,37nm,1.1s
BELG Belogornoye 80.27 38 *i* P **P 18 01 40.7 -0.9**
BELG pmax pmax
comp=Z,9.0nm,1.1s
LOGN Logan Glacier 80.31 330 IAmb IAmb 18 01 58.6
comp=Z,21nm,1.2s
BOSA Boshof 80.34 123 P **P 18 01 42.2 -0.4**
comp=Z,10nm,1.1s,baz=282,slow=3.1,SNR=6.5
comp=Z,10nm,1.1s
BOSA Boshof 80.34 123 P **P 18 01 42.4 -0.1**
BOSA IAmb IAmb 18 01 44.0
comp=Z,43nm,1.4s
BOSA Boshof 80.34 123 P **P 18 01 42.4 -0.1**
BOSA pmax pmax
comp=Z,43nm,1.4s
M27K Edge Creek, AK 80.39 332 P **P 18 01 40.9 -1.3**
baz=77
D25K Kavik River 80.47 339 P **P 18 01 40.3 -2.1**
baz=74
E25K Arctic Village 80.50 338 P **P 18 01 41.8 -0.8**
baz=75
J26L Joseph Creek 80.63 334 P **P 18 01 41.7 -1.7**
baz=76
GNI Garni 80.65 51 P **P 18 01 45.7 +1.6**
comp=Z,20nm,1.0s,baz=36,slow=22,SNR=6.3
comp=Z,20nm,1.0s
GNI Garni 80.65 51 P **P 18 01 44.7 +0.6**
GNI Garni 80.65 51 *ce*P **P 18 01 42.9 -1.3**
GNI pmax pmax
comp=Z,95nm,2.5s
F25K Christian Rive 80.67 338 P **P 18 01 43.2 -0.3**
baz=75
M26K Nabesna, AK 80.88 332 P **P 18 01 45.1 +0.3**
baz=76
SCRK Sand Creek 80.93 334 P **P 18 01 44.1 -1.0**
baz=76
H25K Birch Creek 81.09 336 P **P 18 01 46.2 +0.5**
baz=74
MCARA McCarthy VSAT 81.14 331 IAmb IAmb 18 01 55.4
comp=Z,28nm,1.1s
MCARA McCarthy VSAT 81.14 331 P **P 18 01 48.3 +2.2**
baz=76
PRP Porcupine Dome 81.17 335 IAmb IAmb 18 01 50.5
comp=Z,24nm,1.2s
PRP Porcupine Dome 81.17 335 P **P 18 01 46.1 -0.2**
baz=74
J25K Salcha River, 81.35 335 P **P 18 01 45.3 -2.0**
baz=74
RIDG Independent Ri 81.36 334 IAmb IAmb 18 01 55.9
comp=Z,15nm,1.1s
RIDG Independent Ri 81.36 334 P **P 18 01 46.6 -0.7**
baz=75
NAX Nakhchivan 81.42 52 P **P 18 01 51.7 +3.6**
F24K Squaw Lake 81.52 338 P **P 18 01 46.7 -1.4**
baz=73
E24K Your Creek 81.56 338 P **P 18 01 49.0 +0.7**
baz=72
G24K Hadweenzic Riv 81.61 337 P **P 18 01 49.2 +0.7**
baz=73
C23K Ikkillik River 81.73 340 P **P 18 01 50.3 +1.3**
baz=70
ZKTA Zakatala 81.75 49 P **P 18 01 53.4 +3.6**
TOLK Toolik Lake Re 81.77 339 IAmb IAmb 18 01 59.1
comp=Z,43nm,1.8s
TOLK Toolik Lake Re 81.77 339 P **P 18 01 49.3 -0.1**
baz=71
PAX Paxson 81.84 333 P **P 18 01 49.7 -0.2**
baz=74
HARP HAARP 81.86 332 P **P 18 01 49.2 -0.7**
baz=74
IL31 81.94 335 P **P 18 01 48.5 -1.7**
IL31 IAmb IAmb 18 01 53.9
comp=Z,18nm,1.1s
ILAR Eielson Array 81.94 335 P **P 18 01 49.7 -0.6**
comp=Z,9.6nm,1.0s,baz=77,slow=4.6,SNR=24
ILAR LR LR 18 35 41.0
comp=Z,224nm,21.3s,baz=69,slow=34
comp=Z,9.6nm,1.0s
H24K Noodor Dome 82.02 336 P **P 18 01 49.8 -0.9**
baz=72
D23K Nanushuk River 82.04 339 P **P 18 01 50.2 -0.5**
baz=70
HDA Harding Lake 82.07 335 IAmb IAmb 18 01 53.6
comp=Z,37nm,1.8s
HDA Harding Lake 82.07 335 P **P 18 01 51.9 +0.9**
baz=73
SEKA Sheki 82.27 50 P **P 18 01 56.5 +3.9**
MNGR Mingechevir, A 82.28 50 P **P 18 01 56.2 +3.7**
COLA College 82.30 335 *i* P **P 18 01 51.0 -1.1**
COLA pmax pmax
comp=Z,27nm,1.6s
CCB Clear Creek Bu 82.35 335 IAmb IAmb 18 02 00.6
comp=Z,18nm,1.2s
MDM Murphy Dome 82.43 335 IAmb IAmb 18 02 01.8
comp=Z,20nm,1.2s
KLU Klutina 82.45 332 P **P 18 01 54.4 +1.3**
baz=74
COLD Coldfoot 82.46 338 P **P 18 01 52.9 0.0**
baz=71
WRH Wood River Hil 82.52 335 IAmb IAmb 18 02 01.5
comp=Z,20nm,1.2s
G23K Bananza Creek 82.56 337 P **P 18 01 53.7 +0.1**
baz=71
DHY Denali Highway 82.64 333 P **P 18 01 50.3 -3.9**
baz=72
H23K Yukon River 82.67 336 P **P 18 01 53.7 -0.4**
baz=71
E22K Anaktuvuk Pass 82.72 339 P **P 18 01 54.3 -0.1**
baz=69
I23K Minto, Yukon-K 82.82 336 P **P 18 01 55.0 +0.2**
baz=71
KMBO Kilima Mbogo 82.86 93 P **P 18 01 58.9 +2.5**
comp=Z,1.2nm,0.5s,baz=240,slow=3.3,SNR=6.2
comp=Z,1.2nm,0.5s
KMBO Kilima Mbogo 82.86 93 P **P 18 01 57.2 +0.9**
KMBO IAmb IAmb 18 02 00.2
comp=Z,26nm,1.6s
NEA2 Nenana 82.88 335 IAmb IAmb 18 02 03.3
comp=Z,10nm,1.0s
NEA2 Nenana 82.88 335 P **P 18 01 54.8 -0.4**
baz=71
WAT6 Susitna Watana 82.95 333 P **P 18 01 55.5 -0.3**
baz=72
F22K John River 83.08 338 P **P 18 01 56.9 +0.7**
baz=69
RND Reindeer 83.18 334 IAmb IAmb 18 02 06.1
comp=Z,33nm,1.6s
M23K Glacier View 83.19 332 P **P 18 01 58.2 +1.4**
baz=72
H22K Ishtalitna Cre 83.36 337 P **P 18 01 58.6 +0.9**
baz=69
MLY Manley 83.41 336 P **P 18 01 57.8 -0.2**
baz=70
F21K Alatna River 83.65 338 P **P 18 01 57.8 -1.4**
baz=68
TRF Thorofare Moun 83.77 334 IAmb IAmb 18 02 08.4
comp=Z,20nm,1.1s
TRF Thorofare Moun 83.77 334 P **P 18 01 58.6 -1.4**
baz=70
BPAW Bear Paw Mtn. 83.84 335 IAmb IAmb 18 02 08.0
comp=Z,11nm,1.0s
BPAW Bear Paw Mtn. 83.84 335 P **P 18 01 59.2 -0.9**
baz=70
G21K Allakaket 83.93 338 P **P 18 02 00.7 +0.1**
baz=68
KIBK Kibwezi 83.93 94 P **P 18 02 01.3 -0.4**
KIBK IAmb IAmb 18 02 05.4
comp=Z,18nm,1.3s
SMAI San Martin Ant 83.96 188 P **P 18 01 59.8 -0.6**
SMAI IAmb IAmb 18 02 10.1
comp=Z,16nm,1.2s
H21K Melozitna Rive 83.99 337 P **P 18 02 00.8 -0.1**
baz=68
KTH Kantishna Hill 84.00 334 IAmb IAmb 18 02 09.3
comp=Z,18nm,1.1s

LKRN Lenkeran, Azer 84.02 52 P **P 18 02 05.1 +3.6**
CAST Castle Rocks 84.54 334 P **P 18 02 03.3 -0.5**
baz=68
PPLA Purkeypile 84.77 334 P **P 18 02 04.2 -0.9**
baz=68
SKT Skwentna 84.83 333 P **P 18 02 03.7 -1.5**
baz=69
K20K Telida 85.39 335 P **P 18 02 05.5 -2.5**
baz=67
ARU Arti 85.39 33 P **P 18 02 07.8 -0.3**
comp=Z,14nm,1.1s,baz=291,slow=3.5,SNR=21
comp=Z,14nm,1.1s
ARU Arti 85.39 33 P **P 18 02 08.4 +0.3**
ARU Arti 85.39 33 *d* iP **P 18 02 05.6 -2.5**
ARU S **SKSac 18 12 30.0 -3.6**
ARU SS **SS 18 18 07.1 -6.4**
ARU pmax pmax
comp=Z,32nm,1.4s
M20K Styx River 85.56 333 P **P 18 02 07.1 -1.9**
baz=67
L20K Farewell, AK 85.66 334 P **P 18 02 08.1 -1.3**
baz=67
M19K Big River Lodg 86.10 333 P **P 18 02 10.1 -1.5**
baz=66
L19K White Mountain 86.19 334 P **P 18 02 11.4 -0.6**
L19K IAmb IAmb 18 02 14.7
comp=Z,27nm,1.6s
L19K White Mountain 86.19 334 P **P 18 02 12.0 0.0**
baz=66
N19K Bonanza Creek 86.58 332 P **P 18 02 14.0 -0.1**
baz=66
AKTO Aktyubinsk 87.06 39 P **P 18 02 16.8 +0.3**
comp=Z,7.8nm,1.0s,baz=288,slow=5.0,SNR=28
comp=Z,7.8nm,1.0s
O18K Koktuh Hills 87.31 332 P **P 18 02 14.7 -2.9**
baz=66
P18K Big Mountain, 87.51 331 P **P 18 02 15.4 -3.1**
baz=66
N16K Nishlik Lake 88.64 333 P **P 18 02 24.5 +0.7**
baz=62
VNA1 Neumayer--Stat 88.66 168 P **P 18 02 24.6 +1.1**
VNA3 Neumayer Olymp 88.88 169 P **P 18 02 25.2 +0.6**
VNA2 Neumayer--Watz 89.05 168 P **P 18 02 25.2 -0.2**
VNA2 Neumayer--Watz 89.05 168 PP PP 18 05 58.1 +2.6
NRIK Noril'sk 89.99 15 P **P 18 02 31.2 +1.3**
comp=Z,3.5nm,0.7s,baz=338,slow=3.0,SNR=5.0
comp=Z,3.5nm,0.7s
NRIK Noril'sk 89.99 15 *i* P **P 18 02 29.2 -0.8**
NRIK pmax pmax
comp=Z,21nm,1.6s
SNAA Sanae 90.55 168 P **P 18 02 32.6 +0.2**
SNAA Sanae 90.55 168 LR LR 18 35 32.0
comp=Z,468nm,20.9s,baz=9.5,slow=30
SNAA Sanae 90.55 168 P **P 18 02 31.6 -0.9**
SNAA IAmb IAmb 18 02 34.1
comp=Z,15nm,1.0s
SNAA Sanae 90.55 168 *ce*P **P 18 02 31.5 -0.9**
SNAA pmax pmax
comp=Z,18nm,1.1s
BELA Belgrano 2 92.42 178 P **P 18 02 39.7 -1.3**
BELA IAmb IAmb 18 02 41.5
comp=Z,9.0nm,1.3s
BRVK Borovoye 92.96 33 P **P 18 02 42.7 -1.4**
BRVK IAmb IAmb 18 02 48.4
comp=Z,9.0nm,1.6s
BRVK Borovoye 92.96 33 *ce*P **P 18 02 43.8 -0.3**
BRVK pmax pmax
comp=Z,6.0nm,1.5s
TIXI Tiksi 93.93 2 *i* P **P 18 02 45.6 -2.6**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
BILL Bilibino 94.60 349 ⇓ *e*P **P 18 02 49.6 -1.7**
BILL *e* 18 06 38.7
BILL *e*PPP PPP 18 08 41.2
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,164nm,18.0s
TAOE Nuku Hiva Isla 97.05 263 *e*LR LR 18 34 27.8
comp=Z,538nm,33.0s
KURK Kurchatov 98.58 32 *i* P **P 18 03 08.5 -1.2**
KURK pmax pmax
comp=Z,11nm,3.8s
KURBB Kurchatov Arra 98.59 32 P Pdif 18 03 10.6 +0.8
comp=Z,1.2nm,1.1s,baz=301,slow=5.0,SNR=6.2
KURBB PP **PP 18 07 07.9 -1.9**
comp=Z,1.3nm,1.1s,baz=309,slow=8.4,SNR=4.6
comp=Z,1.2nm,1.1s
ZALV Zalesovo Beam 99.56 27 PP **PP 18 07 17.0 -0.1**
comp=Z,6.6nm,1.2s,baz=311,slow=5.7,SNR=8.4
KSH Kashi 103.21 43 P **P 18 07 45.6 +0.3**
KSH pmax pmax
comp=Z,4.0nm,0.7s
PPT2 Papeete2 107.82 256 *e*LR LR 18 39 27.5
comp=Z,2µm,32.5s
PPT2 *e*LR LR 18 39 27.6
comp=Z,875nm,34.2s
XLT XiLinHaoTe 119.36 16 *e*PKP **PKiKP 18 08 21.2 +0.5**
HHC Hu-ho-hao-te 120.80 20 *e*PKP **PKPdf 18 08 18.2 -5.3**
HHC LR LR
comp=Z,330nm,17.8s
HHC LR LR
comp=Z,260nm,16.0s
HHC LR LR
comp=Z,480nm,18.5s
PZH PanZhiHua 128.00 38 PKP **PKPdf 18 08 37.0 -0.8**
PZH PP **PP 18 10 39.5 0.0**
PZH AMB AMB
comp=Z,80nm,4.3s
PZH LR LR
comp=Z,400nm,24.5s
PZH LR LR
comp=Z,350nm,24.5s
PZH LR LR
comp=Z,400nm,23.5s
MAJO Matsushiro 129.11 357 **PKPdf 18 08 36.9 -2.6**
MAJO Matsushiro 129.11 357 PKIKP **PKPdf 18 08 36.9 -2.6**
MJAR Matsushiro Arr 129.11 357 PKP **PKPdf 18 08 38.8 -0.6**
comp=Z,4.1nm,1.0s,baz=23,slow=1.5,SNR=11
NJ2 Nanjing 131.19 18 *e*PKP **PKPdf 18 08 43.0 -0.5**
CMAR Chiang Mai Arr 131.72 48 PKP **PKPdf 18 08 45.0 +0.2**
comp=Z,0.6nm,0.3s,baz=296,slow=3.1,SNR=7.5
DZM Mont Dzumac 149.19 251 *e*LR LR 18 58 37.7
comp=Z,364nm,23.8s
SBUM Sibu 151.89 55 **PKPdf 18 09 17.6 -2.8**
ASAR Alice Springs 170.86 174 PKP **PKPdf 18 09 39.2 -0.7**
comp=Z,1.2nm,1.1s,baz=190,slow=0.5,SNR=4.9
ASAR PKPab **PKPab 18 10 57.4 -0.6**
comp=Z,3.4nm,1.1s,baz=181,slow=4.9,SNR=10
ASAR Alice Springs 170.86 174 PKPdf **PKPdf 18 09 37.5 -2.4**
ASAR **PKPab 18 10 55.7 -2.2**
WRA Warramunga Arr 174.59 174 PKPab **PKPab 18 11 14.1 -0.4**
comp=Z,1.0nm,1.0s,baz=188,slow=3.9,SNR=5.1
WRA Warramunga Arr 174.59 174 **PKPdf 18 09 39.2 -2.4**
WRA PKPab **PKPab 18 11 13.6 -0.9**
WRA Warramunga Arr 174.59 174 PKIKP **PKPdf 18 09 39.2 -2.4**
WRA 18 11 13.6

*IDC **05** 17:50:56.5±2.3, 14.˚76N×44.˚94W, h0km, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=156.4km s-min=30.9km az=105.0*
*NEIC **05** 17:50:57.3±1.5, 14.˚8N±0.˚1×45.˚03W±0.˚05, h10km±1km, mb4.8/18, Error ellipse: s-maj=21.5km s-min=8.7km az=358.0*
ISC 05 17:50:56.9±0.6, **14.˚7N**±0.˚1×**45.˚01W**±0.˚09, **h10**km, **n24**, σ1.9**96**/23, **mb4.8**/11, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	**Guadeloupe/Mar**	**15.32**	**271**	T	T	18 10 09.1	
TOSP	**Speyside**	**15.51**	**259**	Pn	**Pn**	**17 54 34.1**	**-1.7**
BIM	**Bigot**	**15.55**	**271**	Pn	**Pn**	**17 54 34.0**	**-2.4**
SVN	**Savane Anatole**	**15.63**	**272**	Pn	**Pn**	**17 54 37.0**	**-0.5**
TBG	**Guadaloupe-3**	**16.09**	**276**	*e*	**P**	**17 54 53.9**	**+7.2**
PDPR	**Patillas Dam,**	**20.42**	**282**	P	**P**	**17 55 33.8**	**-0.6**
GCPR	**Guaynabo City**	**20.51**	**283**	P	**P**	**17 55 35.9**	**+0.5**
GCPR				IAmb	IAmb	17 55 38.1	
	comp=Z,76nm,1.6s						
BDFB	**Brasilia**	**30.32**	**186**	P	**P**	**17 57 10.4**	**+1.5**
	comp=Z,12nm,0.9s,baz=8.7,slow=13,SNR=3.5						
	comp=Z,12nm,0.9s						
BDFB	**Brasilia**	**30.32**	**186**	P	**P**	**17 57 07.6**	**-1.4**
BDFB				IAmb	IAmb	17 57 15.1	
	comp=Z,14nm,0.9s						

CZSB	**Cruzeiro do Su**	**35.39**	**233**	P	**P**	**17 57 52.7**	**-0.4**
CZSB				IAmb	IAmb	17 58 14.8		
	comp=Z,18nm,0.4s							
WSPT	**Westport, CT**	**36.03**	**322**	P	**P**	**17 57 57.8**	**-0.6**
WSPT				IAmb	IAmb	17 58 01.6		
	comp=Z,17nm,1.0s							
V58A	**Windy Hill, Pi**	**37.02**	**311**	P	**P**	**17 58 06.1**	**-0.8**
V58A				IAmb	IAmb	17 58 14.2		
	comp=Z,32nm,1.6s							
W57A	**Gilead**	**37.40**	**309**	P	**P**	**17 58 08.3**	**-1.8**
W57A				IAmb	IAmb	17 58 21.2		
	comp=Z,27nm,1.4s							
RIMA	**Rio Macho**	**38.25**	**267**	P	**P**	**17 58 16.9**	**-1.0**
RIMA				IAmb	IAmb	17 58 30.9		
	comp=Z,38nm,1.5s							
PB18	**Visviri**	**40.17**	**218**	P	**P**	**17 58 35.1**	**+1.0**
TOA0	**Torodi Ar. Sit**	**45.30**	**86**	P	**P**	**17 59 14.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**45.30**	**86**	P	**P**	**17 59 15.2**	**-0.1**
TORD				IAmb	IAmb	17 59 16.0		
	comp=Z,26nm,1.9s							
TAM	**Tamanrasset**	**48.33**	**73**	P	**P**	**17 59 37.6**	**-1.6**
TAM				IAmb	IAmb	17 59 38.7		
	comp=Z,13nm,1.4s							
BNI	**Bardonecchia**	**52.88**	**44**	P	**P**	**18 00 12.8**	**-0.5**
CIMO	**Cimolais**	**57.11**	**44**	P	**P**	**18 00 43.7**	**0.0**
CIMO				IAmb	IAmb	18 00 51.1		
	comp=Z,14nm,1.3s							
CLL	**Collm**	**58.77**	**39**	P	**P**	**18 00 55.6**	**+0.5**
NOA	**NORSAR Array B**	**61.15**	**28**	P	**P**	**18 01 12.7**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=246,slow=6.9,SNR=4.1							
	comp=Z,1.6nm,0.9s							
ARCES	**ARCESS Array B**	**69.51**	**21**	P	**P**	**18 02 06.0**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=256,slow=4.9,SNR=4.8							
	comp=Z,3.2nm,1.0s							
BRTR	**Keskin Array B**	**72.08**	**53**	P	**P**	**18 02 22.5**	**+0.7**
	comp=Z,2.0nm,1.1s,baz=287,slow=3.4,SNR=1.4							
	comp=Z,2.0nm,1.1s							

*IDC **05** 17:51:57.7±1.3, 14°.63N×45°.08W, h0km, mb4.2/7, mbtmp4.2/7, Error ellipse: s-maj=44.8km s-min=28.6km az=106.0*

ISC 05 17:51:59.7±1.2, 14°.6N±0°.2×45°.1W±0°.3, h12km, n8, σ0s36/7, mb4.2/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H05S1	**Guadeloupe/Mar**	**15.28**	**271**	T	T	18 11 14.1	
BDFB	**Brasilia**	**30.21**	**186**	P	**P**	**17 58 10.6**	**+0.2**
	9.1nm,0.8s,baz=9.5,slow=6.1,SNR=4.8						
	9.1nm,0.8s						
ESDC	**Sonseca Array**	**43.73**	**47**	P	**P**	**18 00 05.5**	**+0.4**
	1.3nm,0.9s,baz=253,slow=8.5,SNR=2.8						
	1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**45.34**	**86**	P	**P**	**18 00 17.8**	**-0.5**
	3.5nm,1.3s,baz=257,slow=8.1,SNR=2.0						
	3.5nm,1.3s						
NOA	**NORSAR Array B**	**61.27**	**27**	P	**P**	**18 02 14.9**	**+0.2**
	1.6nm,0.9s,baz=246,slow=6.5,SNR=4.0						
	1.6nm,0.9s						
ARCES	**ARCESS Array B**	**69.63**	**21**	P	**P**	**18 03 08.7**	**0.0**
	2.4nm,0.8s,baz=258,slow=5.9,SNR=3.7						
	2.4nm,0.8s						
BRTR	**Keskin Array B**	**72.18**	**53**	P	**P**	**18 03 24.9**	**0.0**
	2.3nm,0.9s,baz=266,slow=4.1,SNR=3.7						
	2.3nm,0.9s						
ILAR	**Eielson Array**	**81.86**	**335**	P	**P**	**18 04 18.4**	**-0.3**
	2.0nm,0.9s,baz=81,slow=5.0,SNR=4.2						
	2.0nm,0.9s						

*TAP **05** 17:54:37.9, 24°.85N×122°.33E, h20km, ML3.0, C*
*JMA **05** 17:54:38.4±0.2, 25°.N±1°×122°.4E±0°.5, h46km±4km, MV2.0/7, TAIWAN REGION*

ISC 05 17:54:37.5±1.0, 24°.78N±0°.02×122°.35E±0°.02, h14km±8km, n65, σ0s65/120, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.38**	**279**	*i* P	**Pb**	**17 54 45.7**	**-0.3**
	baz=268						
EGS				S	**Sb**	**17 54 51.2**	**-0.7**
	baz=268						
TWB1	**Santiao Chiao**	**0.40**	**305**	⇑*i* P	**Pg**	**17 54 45.5**	**+0.1**
	baz=297						
TWB1				*i* S	**Sg**	**17 54 50.4**	**-0.5**
	baz=297						
NTC	**Toucheng**	**0.48**	**279**	P	**Pb**	**17 54 47.5**	**-0.2**
	baz=270						
NTC				*e*S	**Sb**	**17 54 55.0**	**+0.5**
	baz=270						
TWC	**Suao**	**0.48**	**249**	*i* P	**Pg**	**17 54 46.8**	**-0.3**
	baz=240						
TWC				*e*S	**Sb**	**17 54 54.3**	**-0.5**
	baz=240						
TIPB	**Shuangxi**	**0.51**	**292**	*i* P	**Pg**	**17 54 47.8**	**+0.3**
	baz=284						
TIPB				*e*S	**Sg**	**17 54 54.6**	**+0.2**
	baz=284						
SXI1	**Grass Mountain**	**0.53**	**306**	*i* P	**Pb**	**17 54 48.3**	**-0.3**
	baz=300						
SXI1				*e*S	**Sg**	**17 54 55.0**	**0.0**
	baz=300						
ILA	**Ilan**	**0.55**	**268**	*e*P	**Pb**	**17 54 48.9**	**+0.1**
	baz=260						
ILA				*e*S	**Sb**	**17 54 57.9**	**+1.4**
	baz=260						
NWF	**Wu-fen Shan**	**0.59**	**299**	*e*P	**Pb**	**17 54 50.0**	**+0.3**
	baz=294						
NWF				*e*S	**Sb**	**17 54 57.5**	**-0.3**
	baz=294						
WFSB	**Wu-fen Shan**	**0.59**	**299**	*e*P	**Pb**	**17 54 50.0**	**+0.4**
	baz=294						
WFSB				*e*S	**Sb**	**17 54 58.5**	**+0.7**
	baz=294						
NDS	**Dongshan**	**0.59**	**256**	*e*P	**Pg**	**17 54 48.0**	**-1.1**
	baz=248						
NDS				*e*S	**Sg**	**17 54 55.4**	**-1.6**
	baz=248						
EWUT	**Wuta**	**0.62**	**237**	*e*P	**Pg**	**17 54 48.6**	**-1.0**
	baz=231						
EWUT				*e*S	**Sg**	**17 54 56.6**	**-1.1**
	baz=231						
TWE	**Neicheng**	**0.62**	**264**	*e*P	**Pg**	**17 54 49.6**	**-0.1**
	baz=257						
TWE				*e*S	**Sb**	**17 54 58.8**	**+0.1**
	baz=257						
TNOU	**National Taiwa**	**0.64**	**305**	*e*P	**Pb**	**17 54 50.6**	**+0.2**
	baz=300						
TNOU				*e*S	**Sb**	**17 54 59.0**	**-0.2**
	baz=300						
JYNG	**Yonagunijimaku**	**0.64**	**121**	P	**Pb**	**17 54 50.6**	**+0.3**
JYNG				S	**Sb**	**17 55 00.1**	**+1.0**
ENA	**Nanau**	**0.66**	**237**	P	**Pg**	**17 54 50.2**	**-0.1**
	baz=231						
ENA				*e*S	**Sg**	**17 54 59.0**	**0.0**
	baz=231						
YOJ	**Yonaguni jima**	**0.68**	**118**	P	**Pb**	**17 54 51.4**	**+0.2**
	baz=122						
YOJ				S	**Sb**	**17 55 01.3**	**+0.8**
	baz=122						
YOJ	**Yonaguni jima**	**0.68**	**118**	P	**Pb**	**17 54 51.5**	**+0.3**
YOJ				S	**Sb**	**17 55 00.4**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.69**	**268**	*e*P	**Pg**	**17 54 51.2**	**+0.2**
	baz=262						
FUSB				*e*S	**Sb**	**17 55 00.7**	**-0.2**
	baz=262						
TWA	**Mucha**	**0.72**	**286**	*e*P	**Pb**	**17 54 52.5**	**+0.6**
	baz=280						
TWA				*e*S	**Sb**	**17 55 01.9**	**+0.3**
	baz=280						
ENTT	**Nioudou**	**0.72**	**259**	*e*P	**Pg**	**17 54 50.7**	**-0.9**
	baz=252						
ENTT				*e*S	**Sg**	**17 55 01.4**	**+0.3**
	baz=252						
NHDH	**Xindian Distri**	**0.77**	**284**	*e*P	**Pn**	**17 54 53.4**	**-0.6**
	baz=278						
NHDH				*e*S	**Sb**	**17 55 03.6**	**+0.6**
	baz=278						
NWLT	**Wulai**	**0.77**	**270**	*e*P	**Pg**	**17 54 52.6**	**+0.1**
	baz=264						
NWLT				*e*S	**Sb**	**17 55 03.2**	**+0.3**
	baz=264						
NDT	**Datong Townshi**	**0.78**	**257**	*e*P	**Pg**	**17 54 52.7**	**+0.1**
	baz=251						
NDT				*e*S	**Sb**	**17 55 03.7**	**+0.4**
	baz=251						
LATG	**Datong**	**0.79**	**252**	*e*P	**Pg**	**17 54 52.7**	**-0.1**
	baz=246						
LATG				*e*S	**Sb**	**17 55 03.7**	**+0.1**
	baz=246						
YM01	**YM01**	**0.79**	**297**	*e*P	**Pb**	**17 54 53.3**	**+0.3**
	baz=293						
YM01				*e*S	**Sb**	**17 55 04.2**	**+0.5**
	baz=293						
YM08	**YM08**	**0.80**	**301**	*e*P	**Pb**	**17 54 53.0**	**-0.1**
	baz=296						
YM08				*e*S	**Sg**	**17 55 03.4**	**0.0**
	baz=296						
TATO	**Taipei**	**0.80**	**284**	*e*P	**Pn**	**17 54 53.9**	**-0.5**
	baz=279						
TATO				*e*S	**Sb**	**17 55 04.3**	**+0.3**
	baz=279						
TWY	**Chenhua**	**0.84**	**306**	*e*P	**Pg**	**17 54 54.1**	**+0.4**
	baz=303						
TWY				*e*S	**Sb**	**17 55 05.6**	**+0.6**
	baz=303						
PCYT	**Pengchaiyu**	**0.88**	**344**	P	**Pb**	**17 54 53.9**	**-0.7**
	baz=344						
YHNB	**Yeheng**	**0.89**	**263**	*e*P	**Pb**	**17 54 54.8**	**0.0**
	baz=258						
YHNB				*e*S	**Sn**	**17 55 07.8**	**-0.6**
	baz=258						
TWS1	**Kuangyinshan**	**0.90**	**291**	*e*P	**Pn**	**17 54 55.7**	**0.0**
	baz=287						
TWS1				*e*S	**Sn**	**17 55 07.6**	**-0.9**
	baz=287						
ETL	**Fush Village**	**0.91**	**227**	*e*P	**Pb**	**17 54 55.0**	**0.0**
	baz=223						
ETL				*e*S	**Sb**	**17 55 07.1**	**+0.1**
	baz=223						
NSK	**Sanguang**	**0.91**	**263**	*e*P	**Pb**	**17 54 54.1**	**-0.9**
	baz=258						
NSK				*e*S	**Sb**	**17 55 06.7**	**-0.3**
	baz=258						
NACB	**Ninganchiao**	**0.92**	**229**	*e*P	**Pb**	**17 54 54.9**	**-0.3**
	baz=224						
NACB				*e*S	**Sb**	**17 55 07.1**	**0.0**
	baz=224						
NNSB	**Datong**	**0.95**	**248**	*e*P	**Pb**	**17 54 55.6**	**-0.1**
	baz=244						
NNSB				*e*S	**Sg**	**17 55 08.9**	**+0.7**
	baz=244						
NNSH	**Datong**	**0.95**	**248**	*e*P	**Pb**	**17 54 55.7**	**0.0**
	baz=244						
NNSH				*e*S	**Sg**	**17 55 08.8**	**+0.6**
	baz=244						
NNS	**Nan Shan**	**0.95**	**249**	*e*P	**Pb**	**17 54 55.1**	**-0.7**
	baz=244						
NNS				*e*S	**Sb**	**17 55 08.3**	**0.0**
	baz=244						
ETLH	**Xiulin Townshi**	**0.97**	**234**	*e*P	**Pb**	**17 54 56.0**	**-0.2**
	baz=230						
ETLH				*e*S	**Sb**	**17 55 08.7**	**-0.3**
	baz=230						
TWD	**Chiawan**	**0.98**	**225**	*e*P	**Pb**	**17 54 56.3**	**+0.1**
	baz=220						
TWD				*e*S	**Sn**	**17 55 10.0**	**-0.5**
	baz=220						
ETM	**Tongmen**	**1.13**	**224**	*e*P	**Pn**	**17 54 59.1**	**+0.2**
	baz=221						
ETM				*e*S	**Sn**	**17 55 14.1**	**-0.1**
	baz=221						
NFF	**Wufeng Townshi**	**1.13**	**263**	*e*P	**Pb**	**17 54 58.4**	**-0.5**
	baz=259						
FUSS	**Fushou**	**1.14**	**242**	*e*P	**Pn**	**17 54 59.4**	**+0.2**
	baz=238						
FUSS				*e*S	**Sg**	**17 55 14.6**	**+0.2**
	baz=238						
NJD	**Zhudong**	**1.15**	**268**	*e*P	**Pg**	**17 55 01.3**	**+1.7**
	baz=264						
WHF	**Hehuan Shan**	**1.17**	**237**	*e*P	**Pg**	**17 55 00.2**	**+0.1**
	baz=234						
WHF				*e*S	**Sg**	**17 55 15.4**	**-0.1**
	baz=234						
TWT	**Tachien**	**1.19**	**244**	*e*P	**Pg**	**17 55 00.9**	**+0.5**
	baz=240						
TWT				*e*S	**Sg**	**17 55 16.2**	**+0.2**
	baz=240						
TDCB	**Techi**	**1.21**	**244**	*e*P	**Pg**	**17 55 00.9**	**+0.1**
	baz=241						
LIOB	**Emei**	**1.22**	**264**	*e*P	**Pg**	**17 55 00.7**	**+0.3**
	baz=260						
LIOB				*e*S	**Sg**	**17 55 19.8**	**+2.9**
	baz=260						
NSTT	**Nanjuang**	**1.23**	**263**	*e*P	**Pb**	**17 55 00.7**	**+0.1**
	baz=259						
NSTT				*e*S	**Sg**	**17 55 17.4**	**0.0**
	baz=259						
ESL	**Shilin**	**1.27**	**221**	*e*P	**Pb**	**17 55 01.4**	**+0.2**
	baz=218						
ESL				*e*S	**Sg**	**17 55 19.9**	**+1.2**
	baz=218						
CHGB	**Renai**	**1.29**	**236**	*e*P	**Pg**	**17 55 02.2**	**-0.1**
	baz=233						
CHGB				*e*S	**Sn**	**17 55 18.6**	**+0.1**
	baz=233						
OWD	**Renai**	**1.35**	**233**	*e*P	**Pg**	**17 55 03.3**	**-0.2**
	baz=229						
OWD				*e*S	**Sg**	**17 55 22.5**	**+1.4**
	baz=229						
WUSB	**Renai**	**1.37**	**235**	*e*P	**Pb**	**17 55 03.5**	**+0.6**
	baz=232						
WUSB				*e*S	**Sg**	**17 55 21.3**	**-0.4**
	baz=232						
DPDB	**Guoxing**	**1.50**	**240**	*e*P	**Pg**	**17 55 06.6**	**+0.4**
	baz=237						
WCS	**Beigang Elemen**	**1.50**	**241**	*e*P	**Pb**	**17 55 05.5**	**+0.5**
	baz=238						
TWQ1	**Liyutan**	**1.50**	**254**	*e*P	**Pg**	**17 55 07.3**	**+1.0**
	baz=250						
TWQ1				*e*S	**Sg**	**17 55 27.0**	**+1.3**
	baz=250						
VWDT	**VWDT**	**1.50**	**227**	*e*P	**Pg**	**17 55 06.0**	**-0.4**
	baz=225						
SMLT	**Sun Moon Lake**	**1.60**	**236**	*e*P	**Pg**	**17 55 08.0**	**-0.2**
	baz=233						
SMLT				*e*S	**Sg**	**17 55 29.3**	**+0.3**
	baz=233						
JKRS	**Kuro-shima**	**1.61**	**109**	P	**Pn**	**17 55 04.8**	**-0.7**
SSLB	**Suanglung**	**1.61**	**232**	*e*P	**Pb**	**17 55 07.6**	**+0.5**
	baz=230						
SSLB				*e*S	**Sg**	**17 55 29.9**	**+0.5**
	baz=230						
TYC	**Yuchr**	**1.62**	**238**	*e*P	**Pg**	**17 55 08.4**	**-0.1**
	baz=235						
TYC				*e*S	**Sg**	**17 55 31.3**	**+1.7**
	baz=235						
JIJ	**Ishigaki jima**	**1.69**	**104**	P	**Pn**	**17 55 06.1**	**-0.5**
WJS	**Zhushan**	**1.76**	**237**	*e*P	**Pg**	**17 55 11.5**	**+0.2**
	baz=235						
YUS	**Yu-Shan**	**1.81**	**225**	*e*P	**Pb**	**17 55 10.2**	**-0.6**
	baz=223						
YUS				*e*S	**Sg**	**17 55 35.1**	**-0.9**
	baz=223						
ALS	**Alishan**	**1.90**	**228**	*e*P	**Pb**	**17 55 12.1**	**+0.1**
	baz=226						
ALS				*e*S	**Sb**	**17 55 37.2**	**+1.6**
	baz=226						
CHKT	**Chengkung**	**1.90**	**208**	*e*P	**Pn**	**17 55 09.2**	**-0.3**
	baz=206						
CHKT				*e*S	**Sn**	**17 55 32.3**	**-1.0**
	baz=206						

*IDC **05** 17:56:43.5±1.3, 12°.06N×45°.85E, h0km, mb3.9/8, mbtmp3.9/9, ML3.7/1, MS3.6/4, Error ellipse: s-maj=38.2km s-min=21.5km az=171.0*
*NEIC **05** 17:56:46.4±1.2, 12°.1N±0°.2×45°.7E±0°.1, h15km±7km, mb4.2/12, Error ellipse: s-maj=26.8km s-min=11.9km az=149.0*

ISC 05 17:56:45.7±0.9, 12°.1N±0°.2×45°.78E±0°.09, h13km, n34, σ1s22/33, mb4.0/12, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**2.93**	**258**	Pn	**Pn**	**17 57 30.8**	**-1.3**
	10nm,0.3s,baz=297,slow=11,SNR=18						
ATD				Sn	**Sn**	**17 58 06.8**	**-0.4**
	13nm,0.3s,baz=154,slow=11,SNR=4.4						
	34nm,0.5s						
ATD	**Arta Tunnel**	**2.93**	**258**		**Pn**	**17 57 30.3**	**-1.8**
ATD				Sn	**Sn**	**17 58 04.9**	**-2.4**
ATD	**Arta Tunnel**	**2.93**	**258**	*e*P	**Pn**	**17 57 31.4**	**-0.6**
ATD				*e*S	**Sn**	**17 58 04.9**	**-2.4**
AAE	**Adis Abeba**	**7.55**	**247**	*e*P	**Sg**	**18 00 52.5**	**+4.2**
FURI	**Furi**	**7.69**	**246**	*e*P	**Sg**	**18 00 52.0**	**-0.6**
KMBO	**Kilima Mbogo**	**15.66**	**213**	LR	LR	18 06 11.7	
	comp=Z,153nm,19.6s,baz=106,slow=36						
UOSS	**Minazif**	**16.11**	**36**	P	**P**	**18 00 34.9**	**-0.4**
UOSS				IAmb	IAmb	18 00 52.2	
	comp=Z,29nm,1.1s						
WSAR	**Wadi Sarin**	**16.47**	**46**	LR	LR	18 07 00.8	
	comp=Z,96nm,19.5s,baz=232,slow=38						
MMAI	**Mount Meron Ar**	**22.85**	**337**	LR	LR	18 11 02.9	
	comp=Z,194nm,21.4s,baz=46,slow=38						
GEYT	**Alibeck**	**27.95**	**21**	LR	LR	18 15 33.5	
	comp=Z,214nm,19.1s,baz=210,slow=40						
GEYT	**Alibeck**	**27.95**	**21**	P	**P**	**18 02 35.6**	**-0.4**
GEYT				IAmb	IAmb	18 03 02.4	
	comp=Z,4.8nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**27.95**	**21**	P	**P**	**18 02 35.8**	**-0.2**
KK31	**Karatay Array**	**37.55**	**30**	P	**P**	**18 04 00.9**	**+1.2**
KK31				IAmb	IAmb	18 04 06.4	
	comp=Z,2.5nm,1.1s						
KKAR	**Karatay Array**	**37.55**	**30**	P	**P**	**18 04 00.7**	**+1.0**
KKAR	**Karatay Array**	**37.55**	**30**	P	**P**	**18 04 00.9**	**+1.2**
KKAR				IAmb	IAmb	18 04 06.4	
	comp=Z,2.5nm,1.1s						
ABKAR	**Akbulak array**	**38.82**	**15**	P	**P**	**18 04 10.5**	**+0.3**
ABKAR				IAmb	IAmb	18 04 12.7	
	comp=Z,4.3nm,1.2s						
BURAR	**Bucovina Array**	**39.35**	**338**	P	**P**	**18 04 14.4**	**-0.4**
BUR08	**Bucovina Ar. S**	**39.38**	**338**	P	**P**	**18 04 14.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**42.99**	**276**	P	**P**	**18 04 46.5**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=88,slow=7.5,SNR=3.8						
	comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**45.23**	**330**	P	**P**	**18 05 02.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=150,slow=10,SNR=2.4						
	comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**45.23**	**330**	P	**P**	**18 05 02.1**	**-0.6**
MKAR	**Makanchi Array**	**46.23**	**34**	P	**P**	**18 05 09.7**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=222,slow=6.5,SNR=9.1						
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**46.23**	**34**	P	**P**	**18 05 09.5**	**-1.0**
KURBB	**Kurchatov Arra**	**46.77**	**28**	P	**P**	**18 05 14.8**	**+0.1**
	comp=Z,1.8nm,1.1s,baz=232,slow=8.1,SNR=5.0						
	comp=Z,1.8nm,1.1s						
FINES	**FINESS Array B**	**51.27**	**348**	P	**P**	**18 05 49.5**	**+0.5**
	comp=Z,3.6nm,1.0s,baz=167,slow=6.8,SNR=6.3						
	comp=Z,3.6nm,1.0s						
FINES	**FINESS Array B**	**51.27**	**348**	P	**P**	**18 05 48.6**	**-0.4**
FIA1	**FINESS Array S**	**51.27**	**348**	P	**P**	**18 05 48.6**	**-0.5**
FIA1				IAmb	IAmb	18 05 53.7	
	comp=Z,6.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**51.52**	**76**	P	**P**	**18 05 50.5**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=274,slow=8.2,SNR=8.7						
	comp=Z,1.5nm,0.7s						
ZALV	**Zalesovo Beam**	**51.87**	**28**	P	**P**	**18 05 53.6**	**0.0**
SONM	**Songino Array**	**61.47**	**42**	P	**P**	**18 07 03.6**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=224,slow=4.0,SNR=3.6						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**61.47**	**42**	P	**P**	**18 07 03.4**	**+1.2**
SONM				IAmb	IAmb	18 07 06.6	
	comp=Z,3.3nm,1.4s						
KS19	**Wonju Array Si**	**76.48**	**54**	P	**P**	**18 08 35.9**	**+0.2**
KSAR	**Wonju Array Be**	**76.50**	**54**	P	**P**	**18 08 35.7**	**0.0**
WRA	**Warramunga Arr**	**92.73**	**110**	P	**P**	**18 09 58.1**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=299,slow=3.2,SNR=4.7						
	comp=Z,0.7nm,0.9s						

*DJA **05** 17:58:08.3±0.4, 4°.N±4°×12°.8E±°, h73km±7km, M4.5/19, mB5.0/7, mb4.6/19, MLv4.6/16, Mw(mB)4.2/7*
*NEIC **05** 17:58:09.0±2.7, 3°.60N±0°.07×127°.84E±0°.09, h76km±7km, mb4.4/31, Error ellipse: s-maj=13.1km s-min=9.1km az=68.0*
*MAN **05** 17:58:10, 3°.48N×127°.56E, h49km, Ms3.8*
*IDC **05** 17:58:11.1±2.3, 3°.50N×127°.93E, h94km±22km, mb3.8/10, mbtmp4.2/13, Error ellipse: s-maj=36.8km s-min=11.6km az=75.0*

ISC 05 17:58:09.5±0.4, 3°.54N±0°.04×127°.87E±0°.06, h84km, n89, σ1s79/93, mb4.4/20, 5C-3D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.34**	**274**	P	**Pn**	**17 58 45.3**	**-0.8**
SGSI				S	**Sn**	**17 59 13.6**	**-0.5**
TNTI	**Ternate**	**2.80**	**190**		**Pn**	**17 58 54.0**	**+1.8**
TNTI	**Ternate**	**2.80**	**190**	P	**Pn**	**17 58 54.6**	**+2.3**
DDMP	**Don Marcelino,**	**3.33**	**320**	*e*S	**Sn**	**17 59 38.7**	**+0.7**
DDMP	**Don Marcelino,**	**3.33**	**320**	⇑*e*P	**Pn**	**17 58 58.3**	**-1.1**
GSPH	**General Santos**	**3.85**	**311**	⇓*i*P	**Pn**	**17 59 06.5**	**-0.2**
LBMI	**Labuha**	**4.17**	**185**	P	**Pn**	**17 59 11.8**	**+0.9**
DAV	**Davao City (W)**	**4.18**	**327**	P	**Pn**	**17 59 15.5**	**+4.5**
	167nm,0.5s,baz=16,slow=1.2,SNR=1.4						
DAV	**Davao City (W)**	**4.18**	**327**	Pn	**Pn**	**17 59 10.1**	**-0.9**
KCP	**Kidapawan**	**4.42**	**321**	⇑*e*P	**Pn**	**17 59 17.4**	**+3.1**
KCP				*i* S	**Sn**	**18 00 08.2**	**+3.7**
SKMP	**Bagumbayan, Su**	**4.44**	**312**	⇑*e*P	**Pn**	**17 59 15.1**	**+0.6**
SKMP				*e*S	**Sn**	**18 00 05.8**	**+0.8**
BIPH	**Bislig**	**4.85**	**342**	⇓*e*P	**Pn**	**17 59 22.7**	**+2.6**
BIPH				*i* S	**Sn**	**18 00 11.7**	**-3.3**
KMSI	**Cibinong**	**4.88**	**233**	P	**Pn**	**17 59 22.1**	**+1.6**
	1.6nm2μm136nm,0.7s						
CTBH	**Cotabato--PC H**	**5.13**	**316**	⇓*i*P	**Pn**	**17 59 27.9**	**+4.0**
SWI	**Sorong**	**5.54**	**142**	P	**Pn**	**17 59 30.2**	**+0.7**
	0.2nm52nm,0.9s						
SIJI	**Sorong**	**5.54**	**142**	P	**Pn**	**17 59 29.9**	**+0.3**
	16nm,0.4s,baz=306,slow=23,SNR=12						
SIJI				S	**Sn**	**18 00 28.9**	**-3.1**
	14nm,0.4s,baz=199,slow=21,SNR=9.3						
SANI	**Sanana**	**5.87**	**199**	P	**Pn**	**17 59 32.9**	**-1.1**
	0.2nm1μm41nm,0.5s						
PAGZ	**Pagadian**	**6.18**	**314**	⇑*e*P	**Pn**	**17 59 37.8**	**-0.4**
GLSP	**General Luna,**	**6.44**	**344**	⇑*e*P	**Pn**	**17 59 38.0**	**-3.7**
MRSI	**Marisa**	**6.66**	**243**	P	**Pn**	**17 59 47.0**	**+2.2**
	1.8nm5μm489nm,0.6s						
NLAI	**Namlea**	**6.78**	**187**	P	**Pn**	**17 59 48.3**	**+1.9**
	0.2nm58nm,0.9s						
LUWI	**Luwuk**	**6.83**	**228**	Pn	**Pn**	**17 59 49.7**	**+2.5**
LUWI	**Luwuk**	**6.83**	**228**	P	**Pn**	**17 59 50.1**	**+2.9**
	0.5nm984nm59nm,0.5s						
TOLI2	**Tolitoli**	**7.48**	**251**	Pn	**Pn**	**17 59 55.6**	**-0.4**
TOLI2					**Sn**	**18 01 14.5**	**-4.8**
APSI	**Ampana**	**7.63**	**235**	P	**Pn**	**17 59 59.7**	**+1.6**
	0.2nm612nm45nm,0.4s						
FAKI	**Fak Fak**	**7.77**	**146**		**Pn**	**18 00

WRAB	**Tennant Creek**	**24.18**	**165**	P	**P**	**18 03 17.2**	**-1.1**
WRAB				IAmb	IAmb	18 03 21.2	
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**24.19**	**165**	P	**P**	**18 03 18.0**	**-0.3**
	comp=Z,13nm,0.7s,baz=343,slow=10,SNR=74						
	comp=Z,13nm,0.7s						
WRA	**Warramunga Arr**	**24.19**	**165**	P	**P**	**18 03 16.7**	**-1.6**
WB2	**Warramunga Arr**	**24.19**	**165**	P	**P**	**18 03 17.2**	**-1.1**
WB2				IAmb	IAmb	18 03 21.2	
	comp=Z,18nm,0.8s						
WR0	**Warramunga Arr**	**24.26**	**165**	P	**P**	**18 03 18.7**	**-0.2**
WR0				IAmb	IAmb	18 03 21.4	
	comp=Z,12nm,0.8s						
UBPT	**Khong Chiam**	**24.95**	**299**	P	**P**	**18 03 25.1**	**-0.2**
MBWA	**Marble Bar**	**25.81**	**198**	P	**P**	**18 03 33.3**	**+0.2**
MBWA				IAmb	IAmb	18 03 59.3	
	comp=Z,18nm,1.4s						
PSA00	**Pilbara Seismi**	**26.17**	**197**	P	**P**	**18 03 36.6**	**+0.4**
PSA00				IAmb	IAmb	18 03 40.0	
	comp=Z,9.0nm,1.1s						
PSA00	**Pilbara Seismi**	**26.17**	**197**	P	**P**	**18 03 37.0**	**+0.8**
PSA00				IAmb	IAmb	18 03 39.9	
	comp=Z,4.1nm,1.1s						
AS31	**Alice Springs**	**27.68**	**168**	P	**P**	**18 03 49.5**	**-0.3**
ASAR	**Alice Springs**	**27.68**	**168**	P	**P**	**18 03 49.5**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=358,slow=8.1,SNR=42						
ASAR				PcP	**PcP**	**18 07 06.2**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=346,slow=2.5,SNR=6.1						
	comp=Z,1.4nm,0.5s						
ASAR	**Alice Springs**	**27.68**	**168**	P	**P**	**18 03 49.7**	**-0.1**
GIRL	**Giralia**	**29.24**	**206**	P	**P**	**18 04 05.8**	**+2.2**
KSRS	**Korea Array**	**33.75**	**0**	P	**P**	**18 04 43.8**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=177,slow=10.0,SNR=7.0						
	comp=Z,1.0nm,0.8s						
PZH	**PanZhiHua**	**33.87**	**315**	P	**P**	**18 04 45.5**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,4.8s						
FORT	**Forrest**	**34.13**	**180**	P	**P**	**18 04 46.4**	**-0.1**
BBOO	**Buckleboo**	**36.98**	**168**	P	**P**	**18 05 10.9**	**0.0**
STKA	**Stephens Creek**	**37.57**	**161**	P	**P**	**18 05 16.1**	**+0.2**
	comp=Z,7.8nm,0.6s,baz=340,slow=8.6,SNR=34						
	comp=Z,7.8nm,0.6s						
STKA	**Stephens Creek**	**37.57**	**161**	P	**P**	**18 05 15.6**	**-0.2**
STKA				IAmb	IAmb	18 05 18.6	
	comp=Z,1.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**39.94**	**341**	*e*P	**P**	**18 05 38.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,25nm,0.5s						
HHC				pmax	pmax		
	comp=Z,91nm,6.3s						
ARMA	**Armidale**	**40.70**	**148**	P	**P**	**18 05 42.6**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**40.77**	**66**	T	T	18 49 06.0	
	baz=253,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	**40.78**	**66**	T	T	18 48 55.7	
	baz=253,slow=74,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**40.78**	**66**	T	T	18 49 05.6	
	baz=253,slow=74,SNR=9.6						
CAN	**Canberra**	**43.45**	**155**	P	**P**	**18 06 06.8**	**+2.4**
TOO	**Toolangi**	**44.06**	**160**	P	**P**	**18 06 10.2**	**+1.0**
TOO				IAmb	IAmb	18 06 32.7	
	comp=Z,10nm,1.4s						
WMQ	**Urumqi**	**53.53**	**325**	*e*P	**P**	**18 07 23.8**	**+2.1**
PETK	**Petropavlovsk-**	**55.18**	**21**	P	**P**	**18 07 33.8**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=189,slow=3.8,SNR=4.7						
	comp=Z,2.3nm,0.8s						
MKAR	**Makanchi Array**	**58.36**	**325**	P	**P**	**18 07 56.8**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=117,slow=8.3,SNR=24						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**58.36**	**325**	P	**P**	**18 07 56.6**	**+0.5**
MAKZ	**Makanchi**	**58.55**	**325**	P	**P**	**18 07 58.3**	**+0.9**
NIL	**Nilore**	**58.94**	**307**	P	**P**	**18 08 00.7**	**+0.3**
LBZ	**Lake Benmore**	**60.90**	**146**	P	**P**	**18 08 13.5**	**0.0**
RPZ	**Rata Peaks**	**60.96**	**145**	P	**P**	**18 08 14.5**	**+0.5**
KURBB	**Kurchatov Array**	**62.51**	**327**	P	**P**	**18 08 24.9**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=123,slow=6.2,SNR=8.4						
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**62.51**	**327**	P	**P**	**18 08 24.9**	**+0.6**
KURK				IAmb	IAmb	18 08 51.3	
	comp=Z,8.0nm,1.4s						
KKAR	**Karatay Array**	**64.14**	**317**	P	**P**	**18 08 34.4**	**-0.9**
ABKAR	**Akbulak array**	**73.01**	**321**	P	**P**	**18 09 29.2**	**-1.1**
PPLA	**Purkeypile**	**82.28**	**27**	P	**P**	**18 10 19.4**	**-2.4**
VNDA	**Vanda**	**83.10**	**173**	P	**P**	**18 10 26.9**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=334,slow=4.4,SNR=10						
	comp=Z,1.2nm,0.8s						
VNDA	**Vanda**	**83.10**	**173**	P	**P**	**18 10 26.2**	**+0.7**
VNDA				IAmb	IAmb	18 10 47.1	
	comp=Z,5.0nm,1.5s						
ARCES	**ARCESS Array B**	**91.01**	**340**	P	**P**	**18 11 03.2**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=72,slow=6.7,SNR=3.9						
	comp=Z,1.1nm,0.7s						

*IDC **05** 18:11:34.4±1.6, 17.65S×167.27E, h0km, mb3.9/4, mbtmp3.9/5, ML4.4/1, MS3.3/2, Error ellipse: s-maj=46.7km s-min=27.0km az=119.0*
*NEIC **05** 18:11:35.7±1.4, 17.66S±0.09×167.36E±0.09, h10km±1km, mb4.4/12, Error ellipse: s-maj=17.7km s-min=9.9km az=44.0*

ISC 05 18:11:36.9±0.9, 17.73S±0.08×167.3E±0.1, h19km, n28, σ1s57/30, mb4.0/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MARNC	**Mare, Loyalty**	**3.79**	**170**			**Pn**	**18 12 34.8**	**+0.5**
MARNC				Sn		**Sn**	**18 13 14.8**	**-3.7**
KOUNC	**Koumac, New Ca**	**4.00**	**225**	Pn		**Pn**	**18 12 37.8**	**+0.6**
DZM	**Mont Dzumac**	**4.39**	**190**	Pn		**Pn**	**18 12 43.4**	**+0.8**
	18nm,0.3s,baz=24,slow=18,SNR=153							
DZM				Sn		**Sn**	**18 13 34.4**	**+1.1**
	13nm,0.3s,baz=132,slow=23,SNR=5.7							
	30nm,0.3s							
DZM	**Mont Dzumac**	**4.39**	**190**			**Pn**	**18 12 43.5**	**+0.8**
DZM				Sn		**Sn**	**18 13 32.8**	**-0.6**
ONTNC	**Ouen Toro**	**4.62**	**190**			**Pn**	**18 12 47.0**	**+1.2**
ONTNC				Sn		**Sn**	**18 13 37.9**	**-1.0**
OUENC	**Ouen Island, N**	**4.68**	**185**	Pn		**Pn**	**18 12 48.3**	**+1.8**
PINNC	**Pines Island,**	**4.86**	**178**	Pn		**Pn**	**18 12 50.1**	**+1.2**
MSVF	**Nonsavu**	**10.24**	**92**	LR		LR	18 16 50.8	
	comp=Z,44nm,18.4s,baz=283,slow=31							
HNR	**Honiara**	**10.91**	**318**	Pn		**Pn**	**18 14 10.3**	**-1.9**
ARMA	**Armidale**	**19.06**	**226**	P		**P**	**18 15 54.4**	**-3.9**
ARMA				IAmb		IAmb	18 16 00.4	
	comp=Z,30nm,1.4s							
BFZ	**Birch Farm**	**24.14**	**163**	P		**P**	**18 16 50.4**	**-1.3**
STKA	**Stephens Creek**	**27.16**	**234**	P		**P**	**18 17 21.3**	**+2.0**
	comp=Z,4.3nm,0.9s,baz=63,slow=8.8,SNR=8.2							
	comp=Z,4.3nm,0.9s							
STKA	**Stephens Creek**	**27.16**	**234**	P		**P**	**18 17 21.3**	**+2.0**
STKA				IAmb		IAmb	18 17 21.9	
	comp=Z,1.1nm,0.8s							
WRA	**Warramunga Arr**	**31.25**	**261**	P		**P**	**18 17 55.1**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=90,slow=9.7,SNR=2.3							
	comp=Z,0.5nm,0.8s							
WRA	**Warramunga Arr**	**31.25**	**261**	P		**P**	**18 17 58.1**	**+2.4**
AS31	**Alice Springs**	**31.74**	**254**	P		**P**	**18 17 59.9**	**-0.1**
ASAR	**Alice Springs**	**31.75**	**254**	P		**P**	**18 17 59.9**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=80,slow=8.2,SNR=32							
	comp=Z,0.9nm,0.7s							
ASAR	**Alice Springs**	**31.75**	**254**	P		**P**	**18 17 59.6**	**-0.5**
BBOO	**Buckleboo**	**31.85**	**236**	P		**P**	**18 18 01.8**	**+1.0**
KNRA	**Kununurra**	**36.93**	**267**	P		**P**	**18 18 45.1**	**+0.1**
KNRA				IAmb		IAmb	18 19 23.5	
	comp=Z,28nm,1.5s							
FITZ	**Fitzroy Crossi**	**39.58**	**263**	P		**P**	**18 19 09.4**	**+2.1**
FITZ				IAmb		IAmb	18 19 45.6	
	comp=Z,8.0nm,1.4s							
NWAO	**Narrogin (SRO)**	**47.29**	**241**	P		**P**	**18 20 09.1**	**-0.3**
CASY	**Casey**	**60.78**	**203**	P		**P**	**18 21 47.7**	**+0.4**
JNU	**Nakatsue**	**61.38**	**325**	LR		LR	18 45 45.4	
	comp=Z,75nm,18.2s,baz=336,slow=34							
QSPA	**South Pole Qui**	**72.31**	**180**	P		**P**	**18 23 02.2**	**+1.0**
QSPA				IAmb		IAmb	18 23 04.1	
	comp=Z,6.2nm,1.1s							
BELA	**Belgrano 2**	**83.74**	**175**	P		**P**	**18 24 04.9**	**+0.6**
BELA				IAmb		IAmb	18 24 06.1	
	comp=Z,4.8nm,1.1s							
ILAR	**Eielson Array**	**89.36**	**18**	P		**P**	**18 24 31.9**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=239,slow=6.2,SNR=4.2							
	comp=Z,0.5nm,0.9s							
ARCES	**ARCESS Array B**	**123.15**	**345**	PKP		**PKPdf**	**18 30 32.2**	**+0.5**
	comp=Z,1.7nm,1.0s,baz=30,slow=2.4,SNR=3.8							

IDC 05 18:28:21.9±3.4, 19.26N×145.97E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=155.8km s-min=27.3km az=85.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**40.59**	**197**	P		P	18 36 03.8	+0.3
	0.4nm,0.5s,baz=6.4,slow=9.2,SNR=10							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**44.26**	**196**	P		P	18 36 32.7	-0.7
	0.2nm,0.4s,baz=11,slow=6.6,SNR=6.7							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**58.26**	**314**	P		P	18 38 19.6	+1.3
	0.2nm,0.6s,baz=80,slow=9.7,SNR=2.3							
	0.2nm,0.6s							
FINES	**FINESS Array B**	**86.49**	**335**	P		P	18 41 05.4	-0.9
	0.4nm,0.3s,baz=50,slow=6.0,SNR=8.8							
	0.4nm,0.3s							

*IGIL **05** 18:30:40.6, 36.62N×9.66W, h16km, ML1.6*
*MDD **05** 18:30:41.0±1.2, 36.63N×9.61W, h21km±8km, mb_Lg2.1/4, Error ellipse: s-maj=10.8km s-min=9.3km az=66.0*
*INMG **05** 18:30:40.7±1.0, 36.61N×9.65W, h19km±3km, ML1.8, Error ellipse: s-maj=4.4km s-min=3.1km az=55.0*
*CNRM **05** 18:30:47.2, 36.66N×8.43W, h130km, ml3.2*

ISC 05 18:30:38.2±2.2, 36.56N±0.06×9.71W±0.09, h31km±13km, n30, σ1s34/52, 2C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PFVI	**Vila Bisbo**	**0.91**	**51**	*e*P		**Pb**	**18 30 56.1**	**+0.7**
PFVI				*e*S		**Sn**	**18 31 07.5**	**+0.6**
PFVI				A		A	18 31 07.9	
	13nm,0.6s							
MORF	**Marmelete**	**1.13**	**49**	*e*P		**Pb**	**18 30 59.1**	**0.0**
MORF				*e*S		**Sb**	**18 31 12.8**	**-0.7**
MORF				IAML			18 31 14.3	
	comp=N,19nm,0.1s							
MORF	**Marmelete**	**1.13**	**49**	*e*P		**Pb**	**18 30 59.1**	**0.0**
MORF				*e*S		**Sb**	**18 31 12.7**	**-0.7**
MORF				A		A	18 31 13.3	
	comp=N,13nm,0.1s							
PTEO	**Sao Teotonio**	**1.26**	**39**	*e*P		**Pn**	**18 31 01.1**	**+1.5**
PTEO				*e*S		**Sb**	**18 31 16.0**	**-1.1**
PTEO				A		A	18 31 17.3	
	comp=N,7.9nm,0.1s							
PBDV	**Barranco-do-Ve**	**1.58**	**64**	*e*Pn		**Pn**	**18 31 05.5**	**+1.4**
PBDV				*e*Sn		**Sn**	**18 31 23.9**	**+0.4**
PCVE	**Castro Verde**	**1.71**	**51**	*e*Pn		**Pn**	**18 31 07.4**	**+1.6**
PCVE				*e*Sn		**Sn**	**18 31 27.6**	**+0.9**
PCVE				A		A	18 31 28.2	
	comp=N,3.4nm,0.6s							
MESJ	**Messejana**	**1.74**	**43**	*e*P		**Pn**	**18 31 07.6**	**+1.3**
MESJ				*e*S		**Sn**	**18 31 27.3**	**-0.1**
MESJ				IAML			18 31 28.9	
	comp=N,3.9nm,0.1s							
MESJ	**Messejana**	**1.74**	**43**	*e*Pn		**Pn**	**18 31 07.6**	**+1.3**
MESJ				*e*Sn		**Sn**	**18 31 27.7**	**+0.2**
MESJ				A		A	18 31 30.9	
	comp=N,4.5nm,0.1s							
PVAQ	**Vaqueiros**	**1.80**	**62**	P		**Pn**	**18 31 08.6**	**+1.5**
PVAQ				S		**Sn**	**18 31 27.4**	**-1.6**
PVAQ	**Vaqueiros**	**1.80**	**62**	*e*Pn		**Pn**	**18 31 08.4**	**+1.3**
PVAQ				*e*Sn		**Sn**	**18 31 29.0**	**0.0**
PVAQ				A		A	18 31 38.6	
	comp=N,3.2nm,0.5s							
PNCL	**Nicolau / Gran**	**1.81**	**31**	*e*Pn		**Pn**	**18 31 08.4**	**+1.2**
PNCL				*e*Sn		**Sn**	**18 31 28.8**	**-0.3**
PNCL				A		A	18 31 32.9	
	comp=N,6.5nm,0.1s							
EGRO	**El Granado**	**2.03**	**61**	P		**Pn**	**18 31 11.2**	**+0.9**
EGRO				S		**Sn**	**18 31 35.0**	**+0.5**
EGRO				*i* Vmb_Lg			18 31 46.1	
PBEJ	**Beja**	**2.07**	**45**	*e*Sn		**Sn**	**18 31 35.6**	**0.0**
PBEJ				A		A	18 31 37.6	
	comp=N,2.8nm,0.4s							
PACT	**Alcochete**	**2.31**	**17**	*e*Sn		**Sn**	**18 31 41.9**	**+0.5**
EVO	**Evora**	**2.38**	**34**	*e*Pn		**Pn**	**18 31 16.2**	**+1.1**
EVO				*e*Sn		**Sn**	**18 31 42.6**	**-0.7**
EVO				A		A	18 31 43.8	
	comp=N,9.2nm,0.1s							
PMAFR	**Mafra**	**2.41**	**8**	*e*Pn		**Pn**	**18 31 16.8**	**+1.3**
PMAFR				*e*Sn		**Sn**	**18 31 43.8**	**-0.2**
PMAFR				A		A	18 31 45.4	
	comp=N,25nm,0.5s							
PBAR	**Barrancos**	**2.67**	**52**	*e*Pn		**Pn**	**18 31 20.1**	**+1.1**
PBAR				*e*Sn		**Sn**	**18 31 49.8**	**-0.5**
PBAR				A		A	18 31 54.8	
	comp=N,1.7nm,0.7s							
PMTG	**Montargil**	**2.76**	**25**	*e*Pn		**Pn**	**18 31 21.6**	**+1.3**
PMTG				*e*Sn		**Sn**	**18 31 51.7**	**-1.0**
PMTG				A		A	18 31 53.2	
	comp=N,2.9nm,0.3s							
PESTR	**Estremoz**	**2.85**	**36**	P		**Pn**	**18 31 25.6**	**+4.1**
PESTR				S		**Sn**	**18 31 54.1**	**-0.7**
PESTR	**Estremoz**	**2.85**	**36**	*e*Pn		**Pn**	**18 31 22.4**	**+0.9**
PESTR				*e*Sn		**Sn**	**18 31 54.2**	**-0.6**
PESTR				A		A	18 31 55.3	
	comp=N,2.2nm,0.4s							
EBAD	**Badajoz**	**3.06**	**44**	P		**Pn**	**18 31 25.3**	**+0.9**
EBAD				S		**Sn**	**18 31 58.8**	**-1.2**
EBAD				*i* Vmb_Lg			18 32 00.1	
ESPR	**Espera**	**3.11**	**83**	P		**Pn**	**18 31 26.5**	**+1.4**
ESPR				S		**Sn**	**18 32 00.1**	**-1.1**
ESPR				*i* Vmb_Lg			18 32 02.6	
PMRV	**Marv??o**	**3.40**	**32**	*e*Pn		**Pn**	**18 31 29.9**	**+0.8**
PMRV				*e*Sn		**Sn**	**18 32 06.7**	**-1.6**
PMRV				A		A	18 32 09.1	
	comp=N,2.5nm,0.2s							
ECAB	**El Cabril**	**3.74**	**65**	P		**Pn**	**18 31 34.5**	**+0.7**
ECAB				S		**Sn**	**18 32 14.0**	**-2.8**
ECAB				*i* Vmb_Lg			18 32 19.6	
PVIS	**Viseu**	**4.38**	**18**	*e*Sn		**Sn**	**18 32 31.3**	**-1.4**
POLO	**Lamas de Olo**	**5.03**	**17**	*e*Sn		**Sn**	**18 32 46.3**	**-2.4**
MVO	**Moncorvo**	**5.05**	**24**	*e*Sn		**Sn**	**18 32 46.5**	**-2.6**
MD31	**MD31**	**5.50**	**131**	P		**Pn**	**18 31 58.2**	**+0.2**
MD31				S		Sn	18 32 53.2	-7.0
PGAV	**Gavieira, Arco**	**5.51**	**11**	*e*Sn		**Sn**	**18 32 58.3**	**-2.2**
MDT	**Midelt**	**5.63**	**130**	P		**Pn**	**18 32 00.4**	**+0.6**
MDT				S		Sn	18 32 57.6	-5.8

IDC 05 18:46:00.6±1.7, 13.97N×145.12E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=54.4km s-min=31.6km az=91.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSRS	**Korea Array**	**27.95**	**330**	P		P	18 51 53.0	+0.2
	0.5nm,0.5s,baz=142,slow=9.3,SNR=4.7							
	0.5nm,0.5s							
WRA	**Warramunga Arr**	**35.33**	**198**	P		P	18 52 57.7	-0.1
	0.6nm,0.9s,baz=19,slow=9.3,SNR=2.7							
	0.6nm,0.9s							
MKAR	**Makanchi Array**	**61.38**	**316**	P		P	18 56 18.6	0.0
	0.3nm,0.3s,baz=92,slow=8.1,SNR=14							
	0.3nm,0.3s							
ILAR	**Eielson Array**	**68.12**	**25**	P		P	18 57 02.0	-0.1
	0.3nm,0.5s,baz=265,slow=8.6,SNR=4.4							
	0.3nm,0.5s							

IDC 05 19:08:25.2±2.5, 19.40N×38.89E, h0km, mb3.6/6, mbtmp3.6/6, MS3.3/2, Error ellipse: s-maj=60.3km s-min=26.7km az=153.0, Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WSAR	**Wadi Sarin**	**18.78**	**75**	LR		LR	19 21 12.3	
	comp=Z,78nm,20.4s,baz=262,slow=41							
BRTR	**Keskin Array B**	**20.75**	**349**	P		P	19 13 07.1	-0.6
	0.5nm,0.7s,baz=150,slow=12,SNR=2.9							
	0.5nm,0.7s							
GEYT	**Allbeck**	**24.92**	**38**	LR		LR	19 24 41.2	
	comp=Z,78nm,20.4s,baz=342,slow=39							
GERES	**GERESS Array B**	**35.69**	**331**	P		P	19 15 25.8	+0.5
	0.2nm,0.5s,baz=153,slow=8.8,SNR=3.7							
	0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**36.19**	**266**	P		P	19 15 29.6	-0.2
	2.4nm,1.0s,baz=71,slow=7.7,SNR=8.4							
	2.4nm,1.0s							
ARU	**Arti**	**39.79**	**17**	P		P	19 15 59.6	-0.2
	1.3nm,0.4s,baz=243,slow=2.3,SNR=4.2							
	1.3nm,0.4s							
MKAR	**Makanchi Array**	**44.67**	**42**	P		P	19 16 40.3	+0.5
	0.5nm,0.7s,baz=244,slow=6.3,SNR=6.3							
	0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**49.12**	**34**	P		P	19 17 13.6	-0.9
	0.7nm,0.5s,baz=248,slow=7.8,SNR=5.0							
	0.7nm,0.5s							

GII 05 19:09:36.8±0.5, 33.16N×35.60E, h15km, Mm1.1/5, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GEM	**Giv'at Ha'Em**	**0.08**	**48**	Pg		Pg	19 09 40.4	+0.5
GEM				Sg		Sg	19 09 42.4	+0.5
NATI	**Neve Ativ**	**0.16**	**49**	Pg		Pg	19 09 40.9	+0.1
NATI				Sg		Sb	19 09 44.2	-0.3
MMA0B	**Mount Meron ar**	**0.22**	**229**	Pg		Pb	19 09 42.5	0.0
MMA0B				Sg		Sb	19 09 46.1	-0.2
KSHT	**Keshet**	**0.25**	**134**	Pg		Pb	19 09 43.2	+0.1
KSHT				Sg		Sb	19 09 47.1	-0.2
HNTI	**Hanita**	**0.36**	**258**	Pg		Pb	19 09 44.6	-0.4
HNTI				Sg		Sb	19 09 50.1	-0.3
OFRI	**`Ofer**	**0.74**	**224**	Pg		Pg	19 09 50.9	-0.4
OFRI				Sg		Sb	19 10 01.6	+0.2
HMDT	**Nahal Hemdat**	**0.91**	**184**	Pg		Pb	19 09 54.1	-0.1
HMDT				Sg		Sg	19 10 06.8	+0.6

*NEIC **05** 19:34:03.9±2.1, 18.33S±0.04×69.48W±0.07, h144km±6km, mb4.3/18, ML4.3(GUC), Error ellipse: s-maj=10.2km s-min=4.5km az=114.0*
*SJA **05** 19:34:04.2±0.6, 18.39S×69.40W, h132km±4km, ML4.3, MW4.0*
*GUC **05** 19:34:05.0±0.8, 18.30S×69.30W, h126km±4km, ML4.3*
*IDC **05** 19:34:05.8±1.8, 18.42S×68.98W, h134km±13km, mb3.8/4, mbtmp4.3/8, MS2.5/1, Error ellipse: s-maj=28.5km s-min=12.3km az=114.0*

ISC 05 19:34:03.9±0.6, 18.34S±0.04×69.28W±0.06, h134km±6km, n111, σ2s38/143, mb4.1/4, 1C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB16	**IPOC Station P**	**0.21**	**270**	Pn		**Pn**	**19 34 22.6**	**-0.4**
PB16				Sn		**Sn**	**19 34 36.8**	**-0.5**
PB16	**IPOC Station P**	**0.21**	**270**	*e*P		**Pn**	**19 34 23.2**	**+0.2**
PB16				*i* S		**Sn**	**19 34 37.0**	**-0.3**
PB16	**IPOC Station P**	**0.21**	**270**	*e*P		**Pn**	**19 34 23.4**	**+0.4**
PB16				*e*S		**Sn**	**19 34 37.6**	**+0.4**
PB18	**Visviri**	**0.77**	**346**			**Pn**	**19 34 27.3**	**+1.5**
PB18				Sn		**Sn**	**19 34 43.8**	**+1.4**
AP01	**Chacalluta**	**1.01**	**268**			**Pn**	**19 34 26.7**	**-0.4**
AP01				Sn		**Sn**	**19 34 44.3**	**-0.5**
AP01	**Chacalluta**	**1.01**	**268**	*e*P		**Pn**	**19 34 27.0**	**-0.2**
AP01				*i* S		**Sn**	**19 34 44.2**	**-0.5**
AP01	**Chacalluta**	**1.01**	**268**	*e*P		**Pn**	**19 34 27.0**	**-0.2**
AP01				IAML			19 34 46.1	
	comp=Z,6μm,0.1s							
PB12	**IPOC Station P**	**1.03**	**254**			**Pn**	**19 34 26.3**	**-1.2**
PB12				Sn		**Sn**	**19 34 44.0**	**-1.4**
PB12	**IPOC Station P**	**1.03**	**254**	*e*P		**Pn**	**19 34 27.3**	**-0.2**
PB12				*i* S		**Sn**	**19 34 44.5**	**-1.0**
PB12				IAML			19 34 45.2	
	comp=N,5μm,0.2s							
PB12	**IPOC Station P**	**1.03**	**254**	*e*P		**Pn**	**19 34 27.0**	**-0.5**
PB12				*e*S		**Sn**	**19 34 44.3**	**-1.2**
PB12				IAML			19 34 45.5	
	comp=Z,3μm,0.2s							
GO01	**Chusmiza**	**1.33**	**176**			**Pn**	**19 34 32.1**	**+1.2**
GO01				Sn		**Sn**	**19 34 53.0**	**+1.5**
GO01	**Chusmiza**	**1.33**	**176**	*e*P		**Pn**	**19 34 32.1**	**+1.2**
GO01				*i* S		**Sn**	**19 34 53.0**	**+1.5**
GO01				IAML			19 34 54.0	
	comp=N,4μm,0.2s							
GO01	**Chusmiza**	**1.33**	**176**	*e*P		**Pn**	**19 34 32.0**	**+1.1**
TA02	**Huaiquique**	**2.08**	**202**			**Pn**	**19 34 39.3**	**+0.2**
TA02	**Huaiquique**	**2.08**	**202**	*i* S		**Sn**	**19 35 05.0**	**-1.1**
TA02				IAML			19 35 10.8	
	comp=N,2μm,0.1s							
LPAZ	**La Paz**	**2.31**	**29**	P		**Pn**	**19 34 44.1**	**+1.5**
	comp=N,450nm,0.3s,baz=200,slow=2.6,SNR=21.7							
LPAZ				LR		LR	19 35 30.8	
	comp=N,98nm,19.6s,baz=174,slow=37							
LPAZ	**La Paz**	**2.31**	**29**	Pn		**Pn**	**19 34 43.9**	**+1.4**
LPAZ	**La Paz**	**2.31**	**29**	*e*P		**Pn**	**19 34 44.0**	**+1.5**
TA01	**Diego Aracena**	**2.38**	**201**			**Pn**	**19 34 42.7**	**0.0**
TA01				Sn		**Sn**	**19 35 10.1**	**-2.4**
TA01	**Diego Aracena**	**2.38**	**201**	*e*P		**Pn**	**19 34 42.6**	**0.0**
TA01				*i* S		**Sn**	**19 35 11.3**	**-1.3**
TA01	**Di

PB15	**IPOC Station P**	**4.85**	**182**	*eP*	**Pn**	**19 35 16.0**	**+0.7**
PB15				*eS*	**Sn**	**19 36 08.9**	**-2.0**
PB10	**IPOC Station P**	**5.29**	**193**	Pn	**Pn**	**19 35 19.7**	**-1.2**
PB10	**IPOC Station P**	**5.29**	**193**	*eP*	**Pn**	**19 35 19.9**	**-1.0**
PB10				*eS*	**Sn**	**19 36 17.4**	**-3.6**
PB10				IAML		19 36 19.8	
	comp=Z,88nm,0.2s						
PB14	**IPOC Station P**	**6.35**	**189**	Pn	**Pn**	**19 35 33.4**	**-2.1**
GO02	**Mina Guanaco**	**6.80**	**182**	Pn	**Pn**	**19 35 40.1**	**-1.4**
AC01	**Pan de Azucar**	**7.87**	**189**	Pn	**Pn**	**19 35 52.9**	**-2.7**
SIV	**San Ignacio**	**8.19**	**75**	P	**Pn**	**19 35 58.4**	**-1.6**
	comp=Z,7.7nm,0.4s,baz=257,slow=12,SNR=22						
SIV				S	**Sn**	**19 37 26.4**	**-4.5**
	comp=Z,5.0nm,0.6s,baz=335,slow=23,SNR=8.8						
AC02	**Maricunga**	**8.46**	**179**	Pn	**Pn**	**19 36 03.1**	**-0.9**
ETMB	**Extrema**	**8.97**	**20**	Pn	**Pn**	**19 36 08.6**	**-2.0**
GO03	**Copiap**	**9.26**	**185**		**Pn**	**19 36 11.2**	**-3.1**
NNA	**Nana**	**9.65**	**310**	P	**Pn**	**19 36 18.5**	**-1.1**
	comp=Z,19nm,0.3s,baz=129,slow=9.7,SNR=6.9						
NNA	**Nana**	**9.65**	**310**	Pn	**Pn**	**19 36 16.9**	**-2.6**
AC04	**Llanos de Chal**	**9.96**	**189**	Pn	**Pn**	**19 36 19.4**	**-4.3**
PTLB	**Pontes e Lacer**	**10.13**	**75**	Pn	**Pn**	**19 36 27.9**	**+1.9**
VILB	**Vilhena**	**10.25**	**60**	Pn	**Pn**	**19 36 27.0**	**-0.7**
LCO	**Las Campanas**	**10.71**	**187**	Pn	**Pn**	**19 36 29.9**	**-4.0**
SAML	**Samuel**	**11.05**	**33**		**Pn**	**19 36 35.2**	**-3.1**
CO01	**Juntas del Tor**	**11.61**	**183**	Pn	**Pn**	**19 36 41.6**	**-4.3**
CO03	**El Pedregal**	**12.52**	**186**	Pn	**Pn**	**19 36 53.2**	**-4.2**
CPUP	**Villa Florida**	**13.62**	**128**	P	**Pn**	**19 37 11.3**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=310,slow=14,SNR=4.2						
CPUP	**Villa Florida**	**13.62**	**128**	Pn	**Pn**	**19 37 09.0**	**-2.6**
ROC1	**El Roble**	**14.66**	**186**	Pn	**Pn**	**19 37 21.1**	**-4.0**
MT02	**Curacav**	**14.96**	**186**		**Pn**	**19 37 26.5**	**-2.0**
MT09	**Talagante**	**15.45**	**185**	P	**Pn**	**19 37 35.4**	**+0.6**
MT09				IAmb	IAmb	19 37 40.5	
	comp=Z,19nm,0.9s						
LMEL	**Las Melosas**	**15.47**	**183**	P	**P**	**19 37 36.4**	**-0.2**
LMEL				IAmb	IAmb	19 37 41.8	
	comp=Z,16nm,0.9s						
MT01	**Popeta**	**15.57**	**186**	P	**Pn**	**19 37 35.5**	**-0.6**
BO01	**Tunca**	**16.07**	**185**	P	**Pn**	**19 37 40.0**	**-2.3**
BO01				IAmb	IAmb	19 37 47.6	
	comp=Z,9.1nm,0.8s						
TRCB	**Terra Rica**	**16.21**	**109**	P	**P**	**19 37 45.5**	**+0.8**
BO02	**Sierra Bellavi**	**16.45**	**184**	P	**P**	**19 37 47.6**	**+0.3**
BO02				IAmb	IAmb	19 37 56.8	
	comp=Z,8.1nm,0.8s						
H03N1	**Juan Fernandez**	**17.34**	**208**	P	**Pn**	**19 38 04.5**	**+7.0**
	baz=108,slow=14,SNR=7.9						
H03N1				T	T	19 55 53.8	
	baz=28,slow=73,SNR=13						
H03N2	**Juan Fernandez**	**17.35**	**208**	P	**Pn**	**19 38 04.7**	**+7.1**
	baz=108,slow=14,SNR=5.1						
H03N2				T	T	19 55 50.5	
	baz=28,slow=73,SNR=9.5						
H03N3	**Juan Fernandez**	**17.36**	**208**	P	**Pn**	**19 38 04.4**	**+6.7**
	baz=108,slow=14,SNR=10						
H03N3				T	T	19 55 59.4	
	baz=28,slow=73,SNR=11						
MCRA	**Macar, Loja**	**17.37**	**322**	P	**P**	**19 37 56.0**	**-1.6**
MCRA				IAmb	IAmb	19 38 00.4	
	comp=Z,8.8nm,0.6s						
BOSC	**San Juan Bosco**	**17.58**	**328**		**P**	**19 37 58.4**	**-1.7**
H03S3	**Juan Fernandez**	**17.67**	**207**	P	**Pn**	**19 38 08.2**	**+6.8**
	SNR=4.6						
H03S1	**Juan Fernandez**	**17.68**	**207**	P	**Pn**	**19 38 08.3**	**+6.8**
	SNR=4.3						
H03S2	**Juan Fernandez**	**17.68**	**207**	P	**Pn**	**19 38 08.3**	**+6.8**
	SNR=5.1						
ITAB	**Concordia**	**18.11**	**122**	P	**Pn**	**19 38 06.5**	**-0.5**
ITAB				IAmb	IAmb	19 38 09.3	
	comp=Z,12nm,0.6s						
PORT	**Chimborazo Vol**	**19.18**	**330**	P	**P**	**19 38 14.4**	**-3.6**
PORT				IAmb	IAmb	19 38 29.7	
	comp=Z,9.4nm,0.6s						
PLTB	**Pedras Altas**	**19.48**	**136**	P	**P**	**19 38 19.7**	**-0.8**
BDFB	**Brasilia**	**20.52**	**86**	P	**P**	**19 38 32.0**	**+0.1**
	comp=Z,4.1nm,0.5s,baz=271,slow=14,SNR=5.5						
	comp=Z,4.1nm,0.5s						
BDFB	**Brasilia**	**20.52**	**86**	P	**P**	**19 38 31.7**	**-0.1**
OTAV	**Otavalo**	**20.54**	**333**	P	**P**	**19 38 29.5**	**-3.0**
TRQA	**Tornquist**	**20.66**	**163**	P	**P**	**19 38 33.9**	**+0.8**
TRQA				IAmb	IAmb	19 38 35.9	
	comp=Z,8.2nm,0.8s						
GO06	**Curarrehue**	**21.26**	**185**	P	**P**	**19 38 41.1**	**+1.5**
GO06				IAmb	IAmb	19 38 43.7	
	comp=Z,7.1nm,0.8s						
BOAV	**Boa Vista**	**22.33**	**24**	P	**P**	**19 38 53.0**	**+2.1**
BOAV				IAmb	IAmb	19 39 24.4	
	comp=Z,5.7nm,1.1s						
PLCA	**Paso Flores**	**22.35**	**183**	P	**P**	**19 38 52.7**	**+1.8**
	comp=Z,4.6nm,0.9s,baz=7.4,slow=12,SNR=8.2						
	comp=Z,4.6nm,0.9s						
PLCA	**Paso Flores**	**22.35**	**183**	P	**P**	**19 38 52.7**	**+1.8**
PLCA				IAmb	IAmb	19 38 54.6	
	comp=Z,19nm,1.4s						
EFI	**East Falkland**	**34.43**	**168**	P	**P**	**19 40 40.1**	**+1.7**
VNA3	**Neumayer Olymp**	**63.17**	**162**	P	**P**	**19 44 20.0**	**+2.7**
VNA2	**Neumayer--Watz**	**63.74**	**161**	P	**P**	**19 44 23.7**	**+2.7**
	baz=329,slow=9.2						
VNA2	**Neumayer--Watz**	**63.74**	**161**	pP	pP	19 44 52.8	-1.9
VNA2	**Neumayer--Watz**	**63.74**	**161**	sP	sP	19 45 09.1	-0.8
SNAA	**Sanae**	**65.37**	**161**	P	**P**	**19 44 34.0**	**+2.3**
DBIC	**Dimbokro**	**68.21**	**75**	P	**P**	**19 44 50.7**	**+0.2**
	comp=Z,5.1nm,1.0s,baz=236,slow=9.0,SNR=2.3						
	comp=Z,5.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.65**	**71**	P	**P**	**19 45 40.7**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=250,slow=5.4,SNR=12						
	comp=Z,1.1nm,0.5s						
H11S2	**WAKE ISLAND Hyl**	**27.07**	**280**	T	T	22 12 29.9	
	baz=100,slow=74,SNR=5.4						
H11S1	**WAKE ISLAND Hyl**	**27.08**	**280**	T	T	22 12 33.0	
	baz=100,slow=74,SNR=5.3						
H11S3	**WAKE ISLAND Hyl**	**27.09**	**280**	T	T	22 12 33.8	
	baz=100,slow=74,SNR=6.9						
ASAR	**Alice Springs**	**132.51**	**209**	PKP	**PKiKP**	**19 53 04.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=131,slow=1.9,SNR=7.3						
WRA	**Warramunga Arr**	**135.46**	**213**	PKP	**PKiKP**	**19 53 11.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=132,slow=1.4,SNR=2.1						
PZH	**PanZhiHua**	**168.39**	**44**	PKP	**PKPdf**	**19 53 54.0**	**-1.5**

*SKHL **05** 19:34:51.0±0.1, 43.°30N×134.°70E, h409km±7km, mb4.4/7, msha4.4/4*
*IDC **05** 19:34:52.3±1.1, 43.°26N×134.°50E, h412km±12km, mb3.0/7, mbtmp3.9/12, Error ellipse: s-maj=21.4km s-min=13.0km az=127.0*
*JMA **05** 19:34:53.6±0.4, 43°N±2°×13°5E±°, h453km, MV3.6/35, NEAR VLADIVOSTOK*

ISC 05 19:34:51.0±0.6, **43°21N**±0°.06×**134°75E**±0°.05, **h400**km, **n43,** σ1§**86**/**51**, **mb3.3**/**6**, **2D**, **Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRTR	**Gornotajezhnoj**	**1.95**	**286**	*eP*	**Pn**	**19 35 48.5**	**+1.9**
GRTR				AMB	AMB	19 35 50.2	
	39nm,0.2s						
GRTR				*eS*	**S**	**19 36 32.8**	**+1.2**
GRTR				A	A	19 36 34.5	
	76nm,0.6s						
USRK	**Ussuriysk Ar.**	**2.23**	**297**	P	**Pn**	**19 35 49.9**	**+1.5**
	6.4nm,0.3s,baz=104,slow=5.0,SNR=54						
TEY	**Ternei**	**2.26**	**36**	*i*P	**Pn**	**19 35 51.2**	**+2.7**
TEY				AMB	AMB	19 35 51.4	
	55nm,0.3s						
TEY				*eS*	**S**	**19 36 37.5**	**+2.3**
TEY				A	A	19 36 37.9	
	33nm,0.7s						
JSH	**Shimam**	**3.93**	**96**	*eP*	**Pn**	**19 36 04.8**	**+2.4**
JSK	**Shakotan**	**4.18**	**86**	*eP*	**Pn**	**19 36 07.8**	**+3.0**
JIW	**Iwasaki**	**4.71**	**122**	*eP*	**Pn**	**19 36 12.9**	**+2.8**
JKB	**Kayabe**	**4.83**	**104**	*eP*	**Pn**	**19 36 13.2**	**+2.0**
JOT	**Ohata**	**5.02**	**109**	*eP*	**Pn**	**19 36 14.9**	**+1.7**
JOT				*eS*	**S**	**19 37 20.4**	**+0.4**
JHR	**Hokuryu**	**5.11**	**82**	*eP*	**Pn**	**19 36 16.9**	**+2.9**
JWK2	**Keihoku**	**5.55**	**65**	*eP*	**Pn**	**19 36 22.1**	**+3.4**
JSD	**Sado**	**5.82**	**151**	*eP*	**Pn**	**19 36 23.6**	**+1.9**
JRG	**Rokugo**	**5.84**	**129**	*eP*	**Pn**	**19 36 24.0**	**+2.0**
JCH	**Churui**	**6.35**	**92**	*eP*	**Pn**	**19 36 27.6**	**+0.2**
JCH				*eS*	**S**	**19 37 42.6**	**-3.5**
KLR	**Kul'dur**	**6.37**	**342**	P	**Pn**	**19 36 27.3**	**-0.2**
	30nm,0.4s,baz=177,slow=9.7,SNR=92						
KLR	**Kul'dur**	**6.37**	**342**	*eP*	**Pn**	**19 36 27.7**	**+0.2**
KLR				AMB	AMB	19 36 27.8	
	29nm,0.4s						
JMK	**Ichinoseki**	**6.48**	**129**	*eP*	**Pn**	**19 36 29.7**	**+0.8**
JMK				*eS*	**S**	**19 37 46.2**	**-2.5**
JTKR	**Abashiri--Toko**	**6.70**	**80**	P	**P**	**19 36 32.8**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.79**	**54**	*eP*	**P**	**19 36 34.3**	**+1.5**
JMM	**Marumori**	**7.05**	**137**	*eP*	**P**	**19 36 35.4**	**-0.5**
MJAR	**Matsushiro Arr**	**7.17**	**157**	P	**P**	**19 36 38.3**	**+1.0**
	4.4nm,0.5s,baz=342,slow=12,SNR=21						
AKK	**Akkeshi**	**7.39**	**88**	*eP*	**P**	**19 36 39.0**	**-0.5**
JKY	**Yasaka**	**7.58**	**178**	*eP*	**P**	**19 36 43.2**	**+1.4**
KSRS	**Korea Array**	**7.76**	**224**	P	**P**	**19 36 45.0**	**+1.3**
	8.1nm,0.5s,baz=40,slow=11,SNR=57						
KSRS				S	**S**	**19 38 17.3**	**+2.1**
	2.2nm,1.1s,baz=46,slow=24,SNR=6.3						
JRY	**Ryogami san**	**7.87**	**155**	P	**P**	**19 36 45.3**	**+0.3**
JWT	**Wachi**	**7.93**	**176**	*eP*	**P**	**19 36 47.2**	**+1.5**
NMR	**Nemuro--Hokkai**	**8.01**	**85**	*eP*	**P**	**19 36 46.2**	**-0.2**
NEM2	**Nemuro 2**	**8.02**	**85**	*eP*	**P**	**19 36 46.1**	**-0.4**
NEM2				*eS*	**S**	**19 38 15.6**	**-4.9**
JHS	**Saijyo**	**8.30**	**189**	*eP*	**P**	**19 36 52.1**	**+2.3**
SHO	**Shikotan**	**8.80**	**82**	*eP*	**P**	**19 36 54.9**	**-0.3**
BSO1	**Boso 1**	**9.82**	**148**	*eP*	**P**	**19 37 04.7**	**-1.4**
ZEA	**Zeya**	**11.64**	**337**	*i*P	**P**	**19 37 27.3**	**+0.8**
MA2	**Magadan**	**19.11**	**25**	P	**P**	**19 38 47.9**	**+1.2**
	8.1nm,0.6s,baz=198,slow=7.9,SNR=5.2						
SONM	**Songino Array**	**20.34**	**293**	P	**P**	**19 38 57.1**	**-1.5**
	1.6nm,0.5s,baz=91,slow=8.9,SNR=9.0						
	1.6nm,0.5s						
SEY	**Seymchan**	**22.27**	**21**	P	**P**	**19 39 17.0**	**+1.3**
	3.5nm,0.5s,baz=221,slow=10.0,SNR=24						
	3.5nm,0.5s						
ZALV	**Zalesovo Beam**	**34.06**	**306**	P	**P**	**19 40 58.2**	**-1.2**
	0.6nm,0.4s,baz=92,slow=6.8,SNR=3.6						
ZALV				ScP	**ScP**	**19 46 30.1**	**-2.1**
	0.7nm,0.7s,baz=100,slow=5.0,SNR=3.5						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**36.70**	**294**	P	**P**	**19 41 20.3**	**-1.5**
	0.6nm,0.5s,baz=68,slow=5.4,SNR=8.8						
	0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**38.97**	**242**	P	**P**	**19 41 39.9**	**-0.8**
	0.4nm,0.5s,baz=24,slow=7.9,SNR=7.1						
	0.4nm,0.5s						
PKI	**Pulchoki**	**42.52**	**265**	*eP*	**P**	**19 42 08.0**	**-1.7**
	5.1nm,0.2s						
PKIN	**Phulchoki**	**42.53**	**265**	*eP*	**P**	**19 42 09.0**	**-0.7**
	8.9nm,0.4s						
GKN	**Gorkha**	**42.84**	**266**	*eP*	**P**	**19 42 10.3**	**-1.7**
	15nm,0.4s						
DANN	**Dangsing**	**43.29**	**267**	*eP*	**P**	**19 42 14.8**	**-0.9**
	48nm,0.4s						
ARCES	**ARCESS Array B**	**56.37**	**336**	P	**P**	**19 43 51.1**	**-0.7**
	2.0nm,1.0s,baz=52,slow=8.3,SNR=5.6						
	2.0nm,1.0s						
FINES	**FINESS Array B**	**60.93**	**329**	P	**P**	**19 44 21.9**	**-1.0**
	0.5nm,0.5s,baz=46,slow=11,SNR=7.4						
	0.5nm,0.5s						

*AEIC **05** 19:58:22.5±1.9, 55.°60N×0.°04×159.°85W±0.°07, h71km±5km, Error ellipse: s-maj=6.8km s-min=4.1km az=138.0*

NEIC 05 19:58:22.1±1.3, **55.°57N**±0.°02×**159.°77W**±0.°07, **h80**km±7km, **ML3.1**/22, **ML2.8**/26(AEIC), **Error ellipse: s-maj=6.2km s-min=3.3km az=104.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.46**	**242**	Pn	Pn	19 58 35.5	0.0
SDPT					Sn	19 58 44.0	-1.5
VNSG	**Veniaminof 6**	**0.68**	**34**		Pn	19 58 37.6	-0.1
VNFG	**Fog Glacier, M**	**0.73**	**9**		Pn	19 58 38.6	+0.4
VNFG					Sn	19 58 50.4	+0.2
VNHG	**Veniaminof 1**	**0.74**	**27**		Pn	19 58 38.4	+0.1
CNBA	**Chernabura Isl**	**0.76**	**172**	Pn	Pn	19 58 38.7	+0.3
CNBA				Sn	Sn	19 58 50.6	+0.2
CHGN	**Chignik**	**1.06**	**45**		Pn	19 58 41.9	0.0
CHGN				Sn	Sn	19 58 56.3	-0.4
CHGN				IAML		19 58 57.7	
	comp=N,361nm,0.1s						
PS4A	**Pavlof South-4**	**1.21**	**260**		Pn	19 58 43.6	-0.1
PS4A					Sn	19 58 60.0	0.0
HAG	**Hague Volcano**	**1.24**	**259**		Pn	19 58 44.2	0.0
PN7A	**Pavlof North-7**	**1.28**	**265**		Sn	19 59 02.0	+0.4
S12K	**Black Hills**	**1.31**	**277**		Pn	19 58 45.0	0.0
S12K					Sn	19 59 02.1	-0.1
ANPB	**Aniakchak Plen**	**1.49**	**33**		Pn	19 58 47.8	+0.4
DT1	**Dutton Round H**	**1.51**	**253**		Pn	19 58 47.8	+0.3
R16K	**Pilot Point**	**2.34**	**30**		Pn	19 58 59.1	+0.6
CHIR	**Chirikof Islan**	**2.36**	**82**	Pn	Pn	19 58 59.6	+0.8
CHIR				IAML		19 59 39.7	
	comp=E,118nm,0.9s						
CHIR				IAML		19 59 41.8	
	comp=N,113nm,2.3s						
ISLZ	**Isanotski Laza**	**2.42**	**251**		Pn	19 59 00.1	+0.6
SSLS	**Shishaldin Sou**	**2.58**	**252**		Pn	19 59 02.9	+1.1
PLK1	**Peulik 1**	**2.84**	**37**		Pn	19 59 06.0	+0.8
SII	**Sitkinak Islan**	**3.28**	**70**	Pn	Pn	19 59 12.7	+1.4
P16K	**Nushagak River**	**3.60**	**15**		Pn	19 59 16.2	+0.6
AKUT	**Akutan**	**3.76**	**250**	Pn	Pn	19 59 17.2	-0.4
AKUT				IAML		20 00 49.9	
	comp=E,46nm,1.7s						
AKUT				IAML		20 01 29.7	
	comp=N,41nm,1.6s						
OHAK	**Old Harbor**	**3.96**	**63**		Pn	19 59 20.6	+0.1
OHAK				IAML		20 00 22.6	
	comp=N,24nm,1.6s						
OHAK				IAML		20 00 25.1	
	comp=E,20nm,2.7s						
UNV	**Unalaska Valle**	**4.27**	**249**	Pn	Pn	19 59 25.3	+0.6
KDAK	**Kodiak Island**	**4.54**	**58**	Pn	Pn	19 59 27.8	-0.6
KDAK				IAML		20 00 58.0	
	comp=E,22nm,2.3s						
KDAK				IAML		20 02 26.6	
	comp=E,21nm,2.9s						
P18K	**Big Mountain,**	**4.55**	**31**	Pn	Pn	19 59 28.9	+0.3
P18K				IAML		20 00 31.8	
	comp=N,8.1nm,2.8s						
Q19K	**Cape Douglas,**	**4.73**	**42**	Pn	Pn	19 59 30.9	0.0
O18K	**Koktuh Hills**	**4.95**	**28**	Pn	Pn	19 59 35.4	+1.5
O18K				IAML		20 00 24.3	
	comp=E,8.4nm,3.4s						
O18K				IAML		20 00 32.6	
	comp=N,7.7nm,2.1s						
NIKH	**Nikolski High**	**5.92**	**248**	Pn	Pn	19 59 46.7	-0.5
N19K	**Bonanza Creek**	**5.96**	**26**	Pn	Pn	19 59 46.5	-1.2
SVW2	**Sparrevohn**	**5.97**	**20**	Pn	Pn	19 59 45.7	-2.1
CNPM	**China Poot**	**6.07**	**46**	Pn	Pn	19 59 49.6	+0.5
L19K	**White Mountain**	**7.10**	**19**	Pn	Pn	20 00 02.8	-0.5
PWL	**Port Wells**	**8.03**	**44**	Pn	Pn	20 00 15.5	-0.4
SCM	**Sheep Creek Mo**	**9.01**	**41**	Pn	Pn	20 00 28.7	-0.6
KLU	**Klutina**	**9.35**	**45**	Pn	Pn	20 00 33.3	-0.6
VRDI	**Verde Repeater**	**10.25**	**50**	Pn	Pn	20 00 43.4	-2.9
MLY	**Manley**	**10.48**	**21**	Pn	Pn	20 00 46.9	-2.4

*MOS **05** 20:09:17.7±0.9, 50.°46N×157.°93E, h34km, mb4.3/7, Error ellipse: s-maj=11.8km s-min=3.7km az=78.5*
*KRSC **05** 20:09:18.9±1.5, 50.°69N×157.°97E, h45km±20km, ML5.2*
*IDC **05** 20:09:21.8±0.5, 50.°87N×157.°44E, h54km±4km, mb3.6/14, mbtmp3.9/17, MS3.1/16, Error ellipse: s-maj=17.5km s-min=10.7km az=145.0*
*NEIC **05** 20:09:25.6±2.7, 51.°13N±0.°09×157.°4E±0.°2, h89km±8km, mb4.3/42, Error ellipse: s-maj=15.5km s-min=12.4km az=124.0*

ISC 05 20:09:21.3±0.6, **50.°76N**±0.°06×**157.°63E**±0.°05, **h60**km±5km, **n173,** σ1§**45**/175, **mb4.3**/39, **MS3.1**/12, **1C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.88**	**324**	PN	**Pn**	**20 09 38.3**	**+0.6**
PAU				S	**Sn**	**20 09 51.4**	**+1.6**
PAU	**Pauzhetka**	**0.88**	**324**	*eP*	**Pn**	**20 09 38.3**	**+0.6**
PAU				*eS*	**Sn**	**20 09 51.4**	**+1.6**
SKR	**Severo-Kuril's**	**0.96**	**266**	*i*PN	**Pn**	**20 09 39.0**	**+0.2**
SKR				*eS*	**Sn**	**20 09 52.6**	**+0.8**
SKR				pmax	pmax		
	comp=Z,819nm,0.5s						
SKR				smax	smax		
	comp=N,12μm,0.5s						
SKR				smax	smax		
	comp=E,16μm,0.5s						
SKR	**Severo-Kuril's**	**0.96**	**266**	*eP*	**Pn**	**20 09 39.0**	**+0.2**
SKR				*eS*	**Sn**	**20 09 52.3**	**+0.5**
KDTR	**Khodutka, Kamc**	**1.09**	**15**	PN	**Pn**	**20 09 40.0**	**-0.4**
KDTR				S	**Sn**	**20 09 54.0**	**-0.6**
KDTR	**Khodutka, Kamc**	**1.09**	**15**	*eP*	**Pn**	**20 09 40.0**	**-0.4**
KDTR				*eS*	**Sn**	**20 09 54.0**	**-0.6**
MTVR	**Mutnovka**	**1.76**	**11**	PN	**Pn**	**20 09 49.9**	**+0.3**
MTVR				S	**Sn**	**20 10 11.5**	**+0.5**
MTVR	**Mutnovka**	**1.76**	**11**	*eP*	**Pn**	**20 09 49.9**	**+0.3**
MTVR				*eS*	**Sn**	**20 10 11.5**	**+0.5**
RUS	**Russkaya**	**1.76**	**18**	PN	**Pn**	**20 09 49.0**	**-0.5**
RUS	**Russkaya**	**1.76**	**18**	*eP*	**Pn**	**20 09 49.0**	**-0.5**
RUS				*eS*	**Sn**	**20 10 09.8**	**-1.0**
GRL	**Gorelyy**	**1.81**	**9**	PN	**Pn**	**20 09 51.1**	**+0.8**
GRL				S	**Sn**	**20 10 13.7**	**+1.4**
GRL	**Gorelyy**	**1.81**	**9**	*eP*	**Pn**	**20 09 51.1**	**+0.8**
GRL				*eS*	**Sn**	**20 10 13.7**	**+1.4**
APC	**Apacha**	**2.19**	**352**	PN	**Pn**	**20 09 56.7**	**+1.5**
APC	**Apacha**	**2.19**	**352**	*eP*	**Pn**	**20 09 56.7**	**+1.5**
PEA0B	**Petropavlovsk-**	**2.35**	**1**		**Pn**	**20 09 58.8**	**+1.2**
PEA0B	**Petropavlovsk-**	**2.35**	**1**	*d*PN	**Pn**	**20 09 58.7**	**+1.2**
PETK	**Petropavlovsk-**	**2.35**	**1**	P	**Pn**	**20 09 57.8**	**+0.3**
	comp=E,80nm,0.6s,baz=153,slow=16,SNR=127						
PETK				LR	LR	20 11 08.5	
	comp=E,238nm,22.0s,baz=161,slow=48						
PETK	**Petropavlovsk-**	**2.35**	**1**		**Pn**	**20 09 57.4**	**-0.2**
PET	**Petropavlovsk**	**2.35**	**15**		**Pn**	**20 09 58.0**	**+0.5**
PET				Sn	**Sn**	**20 10 26.4**	**+1.2**
PET	**Petropavlovsk**	**2.35**	**15**	*i*PN	**Pn**	**20 09 58.0**	**+0.5**
PET				*eS*	**Sn**	**20 10 26.0**	**+0.8**
PET				pmax	pmax		
	comp=Z,628nm,0.5s						
PET				smax	smax		
	comp=E,3μm,0.4s						
PET				smax	smax		
	comp=N,2μm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,8.0s						
PET	**Petropavlovsk**	**2.35**	**15**	*eP*	**Pn**	**20 09 58.1**	**+0.6**
PET				*eS*	**Sn**	**20 10 26.3**	**+1.1**
DALK	**Dalny**	**2.38**	**17**	PN	**Pn**	**20 09 58.5**	**+0.7**
DALK				S	**Sn**	**20 10 27.4**	**+1.6**
DALK	**Dalny**	**2.38**	**17**	*eP*	**Pn**	**20 09 58.5**	**+0.7**
DALK				*eS*	**Sn**	**20 10 27.4**	**+1.6**
UGLR	**Uglovaya**	**2.56**	**16**	PN	**Pn**	**20 10 01.6**	**+1.1**
UGLR	**Uglovaya**	**2.56**	**16**	*eP*	**Pn**	**20 10 01.6**	**+1.1**
AVH	**Avacha**	**2.60**	**15**	PN	**Pn**	**20 10 02.7**	**+1.7**
AVH	**Avacha**	**2.60**	**15**	*eP*	**Pn**	**20 10 02.7**	**+1.7**
SMAR	**Somma**	**2.61**	**16**	PN	**Pn**	**20 10 02.4**	**+1.2**
SMAR	**Somma**	**2.61**	**16**	*eP*	**Pn**	**20 10 02.4**	**+1.2**
KOK	**Koryaka**	**2.61**	**13**	PN	**Pn**	**20 10 03.1**	**+2.0**
KOK	**Koryaka**	**2.61**	**13**	*eP*	**Pn**	**20 10 03.1**	**+2.0**
NLC	**Nalytchevo**	**2.64**	**23**	PN	**Pn**	**20 10 00.7**	**-0.7**
NLC	**Nalytchevo**	**2.64**	**23**	*eP*	**Pn**	**20 10 00.7**	**-0.7**
SDLR	**Sedlovina**	**2.64**	**17**	PN	**Pn**	**20 10 02.1**	**+0.6**
SDLR	**Sedlovina**	**2.64**	**17**	*eP*	**Pn**	**20 10 02.1**	**+0.6**
KRER	**Koryakskii**	**2.64**	**15**	PN	**Pn**	**20 10 03.2**	**+1.6**
KRER	**Koryakskii**	**2.64**	**15**	*eP*	**Pn**	**20 10 03.2**	**+1.6**
KRX	**Arik**	**2.68**	**13**	PN	**Pn**	**20 10 03.7**	**+1.6**
KRX	**Arik**	**2.68**	**13**	*eP*	**Pn**	**20 10 03.7**	**+1.6**
SPN	**Mys Shipunski**	**2.77**	**31**	PN	**Pn**	**20 10 03.7**	**+0.5**
SPN				S	**Sn**	**20 10 35.6**	**+0.2**
SPN	**Mys Shipunski**	**2.77**	**31**	*eP*	**Pn**	**20 10 03.7**	**+0.5**
SPN				*eS*	**Sn**	**20 10 35.6**	**+0.2**
GNL	**Ganaly**	**2.94**	**4**	PN	**Pn**	**20 10 07.6**	**+1.9**
GNL	**Ganaly**	**2.94**	**4**	*eP*	**Pn**	**20 10 07.6**	**+1.9**
KII	**Karymskiy**	**3.46**	**18**	PN	**Pn**	**20 10 14.7**	**+1.9**
KII	**Karymskiy**	**3.46**	**18**	*eP*	**Pn**	**20 10 14.7**	**+1.9**
MKZ	**Mys Kozlova**	**4.55**	**32**	PN	**Pn**	**20 10 27.8**	**+0.3**
MKZ	**Mys Kozlova**	**4.55**	**32**	*eP*	**Pn**	**20 10 27.8**

ILAR Eielson Array 31.56 42 P **P** **20 15 37.2 -0.3**
comp=Z,1.0nm,0.9s,baz=261,slow=8.4,SNR=7.4
ILAR pP **pP** **20 15 52.5 +0.3**
comp=Z,0.9nm,0.8s,baz=239,slow=7.6,SNR=4.7
comp=Z,1.0nm,0.9s
H11N2 WAKE ISLAND Hy 31.82 163 T T 20 49 41.9
baz=349,slow=76,SNR=171
H11N3 WAKE ISLAND Hy 31.84 163 T T 20 49 25.0
baz=349,slow=76,SNR=144
H11N1 WAKE ISLAND Hy 31.84 163 T T 20 49 44.0
baz=349,slow=76,SNR=261
J25K Salcha River, 32.21 43 P **P** **20 15 42.8 -0.6**
BMAR Burnt Mountain 32.52 37 P **P** **20 15 43.6 -2.3**
ULN Ulaanbaatar 32.58 285 *i* P **P** **20 15 46.1 -0.8**
ULN pmax pmax
comp=Z,2.0nm,1.3s
N25K Chitina, Valde 32.82 48 P **P** **20 15 47.3 -1.4**
SCRK Sand Creek 32.85 44 P **P** **20 15 47.7 -1.3**
H11S1 WAKE ISLAND Hy 32.98 164 T T 20 50 51.8
baz=349,slow=76,SNR=351
H11S3 WAKE ISLAND Hy 32.99 164 T T 20 50 55.8
baz=349,slow=76,SNR=260
SONM Songino Array 32.99 285 LR LR 20 30 03.2
comp=Z,35nm,18.9s,baz=56,slow=38
H11S2 WAKE ISLAND Hy 33.00 164 T T 20 50 52.4
baz=349,slow=76,SNR=247
K27K Chicken 33.69 44 P **P** **20 15 54.4 -1.8**
K27K IAmb IAmb 20 16 18.7
comp=Z,3.1nm,0.8s
L27K Beaver Creek, 33.91 45 P **P** **20 15 58.7 +0.6**
L27K IAmb IAmb 20 16 21.6
comp=Z,6.2nm,0.9s
BCAR Beaver Creek A 33.93 45 P **P** **20 15 58.0 -0.3**
NJ2 Nanjing 34.07 252 *e*P **P** **20 15 57.1 -2.6**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
INK Inuvik 36.65 36 P **P** **20 16 22.9 +1.4**
comp=Z,1.6nm,0.3s,baz=285,slow=5.4,SNR=3.9
comp=Z,1.6nm,0.3s
WHN Wuhan 37.86 255 ⇓P **P** **20 16 32.4 +0.2**
P33M Teslin, Yukon 38.74 48 P **P** **20 16 37.6 -1.7**
P33M IAmb IAmb 20 17 03.4
comp=Z,3.3nm,1.1s
ZALV Zalesovo Beam 42.78 304 LR LR 20 35 39.8
comp=Z,17nm,19.9s,baz=77,slow=37
EUNU Eureka 44.58 13 P **P** **20 17 24.2 -2.5**
YKA Yellowknife Ar 45.92 40 P **P** **20 17 38.7 +1.1**
comp=Z,1.2nm,0.7s,baz=305,slow=8.7,SNR=3.8
comp=Z,1.2nm,0.7s
KURK Kurchatov 47.68 302 P **P** **20 17 49.8 -1.7**
KURK IAmb IAmb 20 17 51.5
comp=Z,3.5nm,1.1s
KURK Kurchatov 47.68 302 *i* P **P** **20 17 50.7 -0.7**
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURBB Kurchatov Arra 47.78 302 P **P** **20 17 51.1 -1.0**
comp=Z,1.3nm,0.5s,baz=60,slow=7.3,SNR=21
comp=Z,1.3nm,0.5s
MKAR Makanchi Array 47.80 296 P **P** **20 17 51.5 -1.0**
comp=Z,0.4nm,0.4s,baz=62,slow=6.6,SNR=15
comp=Z,0.4nm,0.4s
MKAR Makanchi Array 47.80 296 P **P** **20 17 51.6 -0.8**
PZH PanZhiHua 48.55 262 P **P** **20 17 56.7 -1.8**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
SPITS Spitsbergen Ar 49.18 350 P **P** **20 17 58.6 -4.0**
SPITS pmax pmax
comp=Z,19nm,1.4s
SPB2 Spitsbergen Ar 49.18 350 P **P** **20 17 58.6 -4.0**
BRVK Borovoye 50.68 309 *i* P **P** **20 18 17.7 +3.4**
BRVK pmax pmax
comp=Z,9.0nm,2.7s
B08A Colville Reser 51.18 58 P **P** **20 18 17.4 -0.7**
B08A IAmb IAmb 20 18 19.9
comp=Z,2.3nm,0.7s
NEW Newport 52.42 57 LR LR 20 41 42.1
comp=Z,34nm,18.1s,baz=308,slow=37
YBH Yreka Blue Hor 53.30 67 LR LR 20 38 48.9
comp=Z,14nm,20.1s,baz=271,slow=33
ARU Arti 54.08 317 LR LR 20 42 05.7
comp=Z,19nm,21.5s,baz=7.5,slow=36
MOD Modoc Plateau 54.59 65 P **P** **20 18 44.0 +0.4**
MOD IAmb IAmb 20 18 46.6
comp=Z,4.6nm,0.8s
AAK Ala-Archa 54.74 296 LR LR 20 41 43.9
comp=Z,23nm,18.6s,baz=94,slow=36
ARCES ARCESS Array B 55.02 341 LR LR 20 47 02.4
comp=Z,26nm,19.9s,baz=224,slow=41
WVOR Wild Horse Val 55.21 64 P **P** **20 18 48.9 +1.0**
WVOR IAmb IAmb 20 18 50.5
comp=Z,3.1nm,0.8s
WVOR Wild Horse Val 55.21 64 P **P** **20 18 48.9 +1.0**
WVOR pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 56.19 257 P **P** **20 18 57.2 +2.2**
comp=Z,0.9nm,0.3s,baz=26,slow=7.2,SNR=9.5
CMAR pP **pP** **20 19 10.0 -0.9**
comp=Z,3.2nm,0.7s,baz=33,slow=6.9,SNR=7.4
comp=Z,0.9nm,0.3s
BOZ Bozeman (W) 57.02 57 P **P** **20 19 01.8 +0.9**
BOZ IAmb IAmb 20 19 03.4
comp=Z,2.6nm,0.9s
BOZ Bozeman (W) 57.02 57 P **P** **20 19 01.8 +0.9**
BOZ pmax pmax
comp=Z,3.0nm,0.9s
FAKI Fak Fak 57.72 210 P **P** **20 19 08.3 +2.4**
NVAR Mina Array Bea 58.02 67 P **P** **20 19 10.2 +2.2**
comp=Z,0.7nm,0.7s,baz=298,slow=7.4,SNR=5.4
comp=Z,0.7nm,0.7s
ABKAR Akbulak array 58.14 310 P **P** **20 19 07.3 -1.1**
RLMT Red Lodge 58.59 56 P **P** **20 19 11.8 -0.1**
RLMT IAmb IAmb 20 19 15.1
comp=Z,4.9nm,1.1s
R11A Troy Canyon, C 59.65 65 P **P** **20 19 19.2 -0.1**
R11A IAmb IAmb 20 19 37.4
comp=Z,1.8nm,1.1s
DUG Dugway, Tooele 59.98 62 P **P** **20 19 23.2 +1.8**
DUG IAmb IAmb 20 19 25.0
comp=Z,2.8nm,0.9s
DUG Dugway, Tooele 59.98 62 P **P** **20 19 23.3 +1.8**
DUG pmax pmax
comp=Z,3.0nm,1.0s
BW06 Boulder Array 60.02 58 P **P** **20 19 23.3 +1.5**
BW06 IAmb IAmb 20 19 24.5
comp=Z,4.1nm,1.0s
PD31 Pinedale Array 60.02 58 P **P** **20 19 23.1 +1.2**
PD31 IAmb IAmb 20 19 24.5
comp=Z,3.2nm,0.9s
PDAR Pinedale Array 60.02 58 P **P** **20 19 23.6 +1.7**
comp=Z,2.7nm,0.9s,baz=311,slow=2.9,SNR=14
PDAR pP **pP** **20 19 38.8 +1.1**
comp=Z,1.3nm,0.8s,baz=307,slow=3.2,SNR=5.4
comp=Z,2.7nm,0.9s
PDAR Pinedale Array 60.02 58 P **P** **20 19 23.2 +1.3**
MVU Marysvale 61.48 63 P **P** **20 19 30.5 -1.3**
BELG Belogornoye 61.49 319 LR LR 20 47 02.3
comp=Z,24nm,19.4s,baz=146,slow=37
RDMU Red Mountain 61.52 60 P **P** **20 19 33.1 +1.1**
FINES FINESS Array B 61.64 336 P **P** **20 19 32.0 -0.2**
comp=Z,0.5nm,0.4s,baz=46,slow=8.2,SNR=7.2
comp=Z,0.5nm,0.4s
FINES FINESS Array B 61.64 336 P **P** **20 19 31.3 -0.9**
FINES FINESS Array B 61.64 336 *i* P **P** **20 19 32.2 0.0**
FINES pmax pmax
comp=Z,1.0nm,0.4s
SRU San Rafael Swe 62.01 62 P **P** **20 19 36.6 +1.3**
SRU IAmb IAmb 20 19 37.9
comp=Z,4.5nm,0.9s
SRU San Rafael Swe 62.01 62 P **P** **20 19 36.6 +1.3**
SRU pmax pmax
comp=Z,4.0nm,0.9s
PV13 Radium Mtn., P 63.62 61 P **P** **20 19 47.7 +1.6**
PV13 IAmb IAmb 20 19 48.6
comp=Z,4.5nm,0.8s
ISCO Idaho Springs 64.22 58 P **P** **20 19 51.1 +1.0**
ISCO IAmb IAmb 20 19 53.1
comp=Z,3.2nm,0.9s
ISCO Idaho Springs 64.22 58 P **P** **20 19 51.1 +1.0**
ISCO pmax pmax
comp=Z,3.0nm,0.9s
NOA NORSAR Array B 65.34 343 P **P** **20 19 56.0 -0.7**
comp=Z,0.1nm,0.4s,baz=17,slow=5.3,SNR=1.7
NOA LR LR 20 53 43.7
comp=Z,12nm,18.6s,baz=50,slow=41
comp=Z,0.1nm,0.4s

NOA NORSAR Array B 65.34 343 P **P** **20 19 56.0 -0.7**
TXAR Lajitas Array 72.99 65 P **P** **20 20 46.0 +1.5**
comp=Z,2.2nm,0.7s,baz=299,slow=4.7,SNR=30
TXAR pP **PcP** **20 21 01.4 +0.1**
comp=Z,2.1nm,0.8s,baz=303,slow=4.7,SNR=11
comp=Z,2.2nm,0.7s
WRA Warramunga Arr 73.33 203 P **P** **20 20 47.0 +0.6**
comp=Z,0.9nm,0.6s,baz=15,slow=6.1,SNR=5.2
WRA pP **PcP** **20 21 02.0 -0.4**
comp=Z,0.9nm,0.7s,baz=18,slow=6.2,SNR=4.2
comp=Z,0.9nm,0.6s
ASAR Alice Springs 77.01 202 P **P** **20 21 09.2 +1.7**
comp=Z,0.9nm,0.7s,baz=15,slow=5.6,SNR=12
ASAR pP **pP** **20 21 24.0 +0.1**
comp=Z,0.7nm,0.6s,baz=14,slow=5.4,SNR=5.5
comp=Z,0.9nm,0.7s
DAVOX Davos/Dischmat 78.93 338 LR LR 20 59 12.8
comp=Z,16nm,21.8s,baz=262,slow=38
H03N2 Juan Fernandez 135.75 89 T T 22 59 18.6
baz=314,slow=77,SNR=68
H03N1 Juan Fernandez 135.76 89 T T 22 59 16.3
baz=314,slow=77,SNR=66
H03N3 Juan Fernandez 135.76 89 T T 22 59 15.7
baz=314,slow=77,SNR=89
PLCA Paso Flores 145.48 92 PKPbc **PKPab** **20 28 53.2 +0.8**
comp=Z,3.5nm,0.9s,baz=306,slow=6.6,SNR=5.0
PLCA pPKPbc pPKPab 20 29 08.8 -0.7
comp=Z,1.8nm,0.8s,baz=295,slow=6.3,SNR=2.3

*ROM **05** 20:18:17.8±0.1,43.568N±0.005×13.758E±0.009,*
h6km,ML2.6/32,Error ellipse: s-maj=0.7km s-min=0.3km
az=232.0
ISC 05 20:18:19.2±0.9,**43.54N**±0.02×**13.72E**±0.02,**h8**km±6km,
n103,σ1s**00**/130,**2C-6D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
AOI	**Ancona**	**0.08**	**279**	P	**Pg**	**20 18 20.9**	**-0.5**
AOI				S	**Sg**	**20 18 22.6**	**-0.3**
AOI				AML	AML		
	comp=E,14100μm,0.2s						
AOI				AML	AML		
	comp=N,37100μm,0.6s						
PP3	**Marolino**	**0.18**	**206**	P	**Pg**	**20 18 22.8**	**-0.1**
PP3				S	**Sg**	**20 18 26.2**	**+0.9**
CIMA	**Civitanova Mar**	**0.23**	**188**	P	**Pg**	**20 18 24.4**	**+0.4**
CIMA				S	**Sg**	**20 18 28.8**	**+1.7**
CADA	**Capodarco di F**	**0.34**	**174**	P	**Pg**	**20 18 26.0**	**0.0**
CADA				S	**Sb**	**20 18 32.8**	**-0.5**
SENI	**Senigallia**	**0.39**	**296**	P	**Pg**	**20 18 27.2**	**+0.4**
SENI				S	**Sb**	**20 18 33.8**	**-0.8**
SENI				AML	AML		
	comp=E,8565μm,0.3s						
SENI				AML	AML		
	comp=N,6625μm,0.3s						
SENI				AML	AML		
	comp=E,1450μm,0.9s						
SENI				AML	AML		
	comp=N,1350μm,1.0s						
SENI				AML	AML		
	comp=E,1445μm,0.9s						
CING	**Cingoli**	**0.41**	**247**	⇓P	**Pg**	**20 18 26.9**	**-0.4**
CING				S	**Sb**	**20 18 34.4**	**-0.9**
CING				AML	AML		
	comp=E,873μm,0.1s						
CING				AML	AML		
	comp=N,1435μm,0.2s						
EL6	**Elcito**	**0.49**	**245**	⇓P	**Pg**	**20 18 28.3**	**-0.5**
COR1	**Corinaldo**	**0.53**	**281**	P	**Pg**	**20 18 29.8**	**+0.4**
COR1				S	**Sb**	**20 18 38.0**	**-0.6**
GUMA	**Gualdo di Mace**	**0.55**	**210**	P	**Pg**	**20 18 29.8**	**-0.1**
GUMA				S	**Sb**	**20 18 39.2**	**-0.1**
GUMA				AML	AML		
	comp=E,2015μm,0.4s						
GUMA				AML	AML		
	comp=E,2825μm,1.5s						
GUMA				AML	AML		
	comp=N,1985μm,0.5s						
GUMA				AML	AML		
	comp=N,1550μm,0.4s						
ARVD	**Arcevia**	**0.56**	**266**	P	**Pg**	**20 18 29.5**	**-0.6**
ARVD				S	**Sb**	**20 18 39.0**	**-0.7**
ARVD				AML	AML		
	comp=E,276μm,0.6s						
ARVD				AML	AML		
	comp=N,265μm,0.6s						
CSP1	**Cessapalombo**	**0.58**	**220**	P	**Pg**	**20 18 30.0**	**-0.5**
CSP1				S	**Sb**	**20 18 40.3**	**+0.1**
OFFI	**Offida**	**0.60**	**182**	P	**Pg**	**20 18 31.2**	**+0.4**
OFFI				AML	AML		
	comp=E,1135μm,0.6s						
OFFI				AML	AML		
	comp=N,1415μm,1.3s						
FDMO	**Fiordimonte**	**0.68**	**223**	P	**Pg**	**20 18 31.6**	**-0.8**
FDMO				S	**Sb**	**20 18 42.7**	**-0.3**
FDMO				AML	AML		
	comp=E,1320μm,0.9s						
FDMO				AML	AML		
	comp=N,523μm,0.2s						
FSSB	**Fossombrone**	**0.70**	**283**	P	**Pg**	**20 18 32.2**	**-0.5**
FSSB				S	**Sg**	**20 18 42.8**	**+1.0**
MPAG	**Monte Paganucc**	**0.70**	**278**	P	**Pg**	**20 18 32.1**	**-0.6**
MPAG				AML	AML		
	comp=E,288μm,0.5s						
MPAG				AML	AML		
	comp=E,289μm,0.5s						
MPAG				AML	AML		
	comp=N,345μm,1.4s						
MPAG				AML	AML		
	comp=N,346μm,1.4s						
FRON	**Frontone**	**0.72**	**269**	P	**Pg**	**20 18 32.4**	**-0.7**
FRON				AML	AML		
	comp=E,292μm,0.4s						
FRON				AML	AML		
	comp=N,380μm,0.8s						
FRON				AML	AML		
	comp=N,292μm,0.4s						
FOSV	**Fossato di Vic**	**0.74**	**251**	P	**Pg**	**20 18 32.4**	**-1.0**
FOSV				AML	AML		
	comp=E,348μm,0.6s						
FOSV				AML	AML		
	comp=E,349μm,0.6s						
FOSV				AML	AML		
	comp=N,268μm,0.4s						
TRTR	**Tortoreto Alta**	**0.74**	**169**	P	**Pg**	**20 18 33.7**	**+0.1**
TRTR				AML	AML		
	comp=N,1360μm,1.6s						
TRTR				AML	AML		
	comp=E,996μm,0.6s						
FEMA	**Monte Fema**	**0.75**	**220**	P	**Pg**	**20 18 33.8**	**+0.1**
FEMA				S	**Sb**	**20 18 45.4**	**+0.2**
CESI	**CESI - Serrava**	**0.80**	**228**	P	**Pg**	**20 18 33.7**	**-0.9**
CESI				S	**Sb**	**20 18 46.6**	**+0.2**
CESI				AML	AML		
	comp=N,1056μm,0.5s						
CESI				AML	AML		
	comp=N,1060μm,0.5s						
CESI				AML	AML		
	comp=E,668μm,1.4s						
CESI				AML	AML		
	comp=N,1060μm,0.5s						
NARO	**Abbazia di Nar**	**0.83**	**275**	P	**Pg**	**20 18 34.2**	**-0.9**
NARO				AML	AML		
	comp=E,209μm,1.3s						
NARO				AML	AML		
	comp=N,194μm,1.0s						
NRCA	**Norcia**	**0.83**	**212**	P	**Pg**	**20 18 34.4**	**-0.8**
NRCA				AML	AML		
	comp=N,900μm,0.5s						
NRCA				AML	AML		
	comp=E,1090μm,1.3s						
ATFO	**Monte Foce - G**	**0.85**	**259**	P	**Pg**	**20 18 35.2**	**-0.4**
ATFO				AML	AML		
	comp=E,436μm,0.4s						
ATFO				AML	AML		
	comp=N,368μm,1.1s						
ATFO				AML	AML		
	comp=E,435μm,0.4s						
ATFO				AML	AML		
	comp=N,368μm,1.1s						
PIEI	**Pieia**	**0.86**	**270**	P	**Pg**	**20 18 34.7**	**-1.0**
PIEI				S	**Sb**	**20 18 48.3**	**+0.1**
PIEI				AML	AML		
	comp=N,198μm,1.1s						
PIEI				AML	AML		
	comp=E,328μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.86**	**246**	P	**Pg**	**20 18 34.8**	**-0.9**
ATCC				AML	AML		
	comp=E,636μm,0.2s						
ATCC				AML	AML		
	comp=N,542μm,0.3s						
ASSB	**Assisi San Ben**	**0.92**	**238**	P	**Pg**	**20 18 35.9**	**-1.0**
ASSB				AML	AML		
	comp=N,517μm,1.6s						
ASSB				AML	AML		
	comp=E,585μm,0.3s						
TERO	**Teramo**	**0.92**	**185**	P	**Pg**	**20 18 36.1**	**-0.7**
TERO				AML	AML		
	comp=E,314μm,0.8s						
TERO				AML	AML		
	comp=E,313μm,0.8s						
TERO				AML	AML		
	comp=N,350μm,0.4s						
SMA1	**SAN MARTINO**	**0.95**	**197**	P	**Pg**	**20 18 36.3**	**-1.1**
SMA1				AML	AML		
	comp=E,554μm,0.3s						
SMA1				AML	AML		
	comp=N,888μm,0.3s						
ATPI	**Pietralunga -**	**0.96**	**265**	P	**Pg**	**20 18 36.8**	**-0.8**
ATPI				AML	AML		
	comp=E,294μm,0.7s						
ATPI				AML	AML		
	comp=N,408μm,1.3s						
ATPI				AML	AML		
	comp=N,409μm,1.3s						
ATVO	**AVT- Monte Val**	**0.96**	**261**	P	**Pg**	**20 18 37.0**	**-0.7**
ATVO				AML	AML		
	comp=E,234μm,0.7s						
ATVO				AML	AML		
	comp=N,226μm,0.3s						
RSM	**Repubblica di**	**1.00**	**294**	P	**Pn**	**20 18 40.3**	**+0.7**
CAMP	**Campotosto**	**1.03**	**193**	P	**Pg**	**20 18 38.3**	**-0.6**
CAMP				AML	AML		
	comp=N,290μm,0.9s						
CAMP				AML	AML		
	comp=E,232μm,1.5s						
CPGN	**Carpegna, Ital**	**1.05**	**285**	P	**Pg**	**20 18 38.9**	**-0.5**
ATTE	**AVT- Monte Tez**	**1.05**	**252**	P	**Pg**	**20 18 38.7**	**-0.7**
ATTE				AML	AML		
	comp=E,228μm,0.8s						
ATTE				AML	AML		
	comp=N,206μm,0.5s						
LNSS	**Leonessa**	**1.06**	**208**	P	**Pg**	**20 18 38.3**	**-1.2**
LNSS				AML	AML		
	comp=E,548μm,0.5s						
LNSS				AML	AML		
	comp=E,548μm,0.5s						
LNSS				AML	AML		
	comp=N,432μm,1.6s						
DUGI	**Dugi Otok**	**1.07**	**65**	*e*Pg	**Pg**	**20 18 39.6**	**-0.2**
DUGI				Sg	**Sn**	**20 18 56.3**	**+0.6**
PARC	**Parchiule**	**1.08**	**276**	P	**Pg**	**20 18 39.3**	**-0.6**
PARC				AML	AML		
	comp=N,186μm,0.5s						
PARC				AML	AML		
	comp=E,190μm,1.1s						
PARC				AML	AML		
	comp=N,186μm,0.5s						
GIGS	**Gran Sasso**	**1.09**	**186**	P	**Pg**	**20 18 39.0**	**-1.2**
GIGS				AML	AML		
	comp=N,88μm,1.2s						
GIGS				AML	AML		
	comp=E,66μm,1.6s						
RM33	**Pellescritta (**	**1.09**	**200**	P	**Pg**	**20 18 38.9**	**-1.3**
RM33				AML	AML		
	comp=N,310μm,0.6s						
RM33				AML	AML		
	comp=N,311μm,0.6s						
RM33				AML	AML		
	comp=E,344μm,0.5s						
VCEL	**Villa Celiera**	**1.15**	**175**	P	**Pb**	**20 18 41.5**	**+0.2**
VCEL				AML	AML		
	comp=E,336μm,0.5s						
VCEL				AML	AML		
	comp=N,291μm,0.5s						
ARRO	**Arrone**	**1.18**	**216**	P	**Pg**	**20 18 41.2**	**-0.8**
ARRO				AML	AML		
	comp=E,166μm,0.7s						
ARRO				AML	AML		
	comp=N,135μm,0.2s						
VIRC	**Vir**	**1.23**	**52**	*e*Pn	**Pg**	**20 18 41.7**	**-1.1**
CESX	**Cesi**	**1.25**	**222**	P	**Pg**	**20 18 42.2**	**-0.9**
CESX				AML	AML		
	comp=N,332μm,0.6s						
CESX				AML	AML		
	comp=E,249μm,0.6s						
CRE	**Caprese Michel**	**1.28**	**274**	P	**Pn**	**20 18 42.2**	**-1.4**
CRE				AML	AML		
	comp=N,140μm,1.3s						
CRE				AML	AML		
	comp=E,164μm,1.6s						
CAFI	**Castiglion Fio**	**1.29**	**261**	P	**Pn**	**20 18 43.4**	**-0.2**
CAFI				AML	AML		
	comp=E,140μm,0.7s						
CAFI				AML	AML		
	comp=N,172μm,0.6s						
T0110	**Collepietro**	**1.31**	**178**	P	**Pn**	**20 18 43.4**	**-0.6**
T0110				AML	AML		
	comp=E,226μm,0.4s						
T0110				AML	AML		
	comp=N,268μm,0.4s						
NVLJ	**Novalja**	**1.32**	**39**	*e*Pn	**Pn**	**20 18 43.7**	**-0.3**
MGAB	**Montegabbione**	**1.33**	**242**	P	**Pn**	**20 18 43.9**	**-0.2**
MGAB				AML	AML		
	comp=N,257μm,0.5s						
MGAB				AML	AML		
	comp=E,394μm,1.5s						
FIAM	**Fiamignano**	**1.34**	**199**	P	**Pn**	**20 18 42.9**	**-1.5**
BRJN	**Brijuni**	**1.37**	**1**	*e*Pn	**Pn**	**20 18 43.9**	**-0.8**
BRJN	**Brijuni**	**1.37**	**1**	P	**Pn**	**20 18 43.0**	**-1.6**
CAFR	**Castel Frentan**	**1.39**	**160**	P	**Pn**	**20 18 44.2**	**-0.8**
ZIRJ	**Zirje**	**1.41**	**85**	*e*Pn	**Pn**	**20 18 44.6**	**-0.6**
ZIRJ				Sg	**Sg**	**20 19 04.1**	**-0.3**
RABC	**Rab**	**1.44**	**32**	*e*Pn	**Pn**	**20 18 45.5**	**-0.1**
MORI	**Morici**	**1.48**	**77**	*e*Pg	**Pb**	**20 18 46.5**	**-0.5**
SACS	**San Casciano d**	**1.49**	**243**	⇓P	**Pb**	**20 18 47.3**	**+0.1**
SACS				AML	AML		
	comp=E,95μm,1.4s						
SACS				AML	AML		
	comp=N,108μm,0.7s						
LPEL	**Lama dei Pelig**	**1.53**	**167**	P	**Pn**	**20 18 46.2**	**-0.7**
LPEL				AML	AML		
	comp=N,97μm,0.2s						
LPEL				AML	AML		
	comp=E,144μm,0.9s						
SMRN	**Sveta Marina**	**1.53**	**12**	*e*Pn	**Pn**	**20 18 45.7**	**-1.2**
INTR	**Introdacqua**	**1.53**	**175**	P	**Pn**	**20 18 46.7**	**-0.3**
INTR				AML	AML		
	comp=E,99μm,0.8s						
INTR				AML	AML		
	comp=N,255μm,0.6s						
PTQR	**Pietraquaria**	**1.53**	**189**	P	**Pn**	**20 18 47.3**	**+0.3**
LMD	**Lutirano**	**1.55**	**291**	P	**Pn**	**20 18 47.6**	**+0.4**
VVLD	**Villa Vallelon**	**1.67**	**182**	P	**Pn**	**20 18 49.0**	**+0.1**
VVLD				AML	AML		
	comp=E,66μm,1.4s						
VVLD				AML	AML		
	comp=N,72μm,0.8s						
CERT	**Certeto**	**1.68**	**199**	P	**Pn**	**20 18 49.0**	**0.0**
CERT				AML	AML		
	comp=E,114μm,0.5s						
CERT				AML	AML		
	comp=N,84μm,0.5s						
BRIS	**BRISIGHELLA**	**1.71**	**292**	P	**Pn**	**20 18 47.1**	**-2.2**
FRES	**Fresagrandinar**	**1.71**	**155**	P	**Pn**	**20 18 48.9**	**-0.6**
UDBI	**Udbina**	**1.78**	**55**	*e*Pn	**Pn**	**20 18 50.8**	**+0.4**
RCAV	**Rocca di Cave**	**1.78**	**199**	P	**Pn**	**20 18 50.4**	**0.0**
PLIT	**Plitvice**	**1.92**	**45**	*e*Pn	**Pb**	**20 18 53.5**	**-1.1**
MA9	**Marino**	**1.93**	**204**	S	**Sg**	**20 19 21.0**	**-0.3**
MPPT	**Montemurlo**	**1.95**	**283**	S	**Sb**	**20 19 19.0**	**-0.5**
KIJV	**Kijevo**	**2.00**	**76**	*e*Pn	**Pn**	**20 18 54.2**	**+0.8**
HVAR	**Hvar**	**2.03**	**99**	*e*Pn	**Pn**	**20 18 52.8**	**-0.9**
APRC	**Apricena**	**2.23**	**142**	P	**Pn**	**20 18 56.2**	**-0.4**
SGRT	**San Giovanni R**	**2.33**	**139**	P	**Pn**	**20 18 57.0**	**-0.9**
TEOL	**Teolo**	**2.34**	**322**	P	**Pn**	**20 18 57.6**	**-0.4**
MAKA	**Makarska**	**2.42**	**95**	*e*Pn	**Pn**	**20 18 59.5**	**+0.4**
SABO	**M.te Sabotino**	**2.44**	**358**	P	**Pn**	**20 18 58.9**	**-0.6**
LSTV	**Lastovo**	**2.45**	**107**	*e*Pn	**Pn**	**20 18 58.0**	**-1.6**
RICI	**Ricice**	**2.49**	**90**	*e*Pn	**Pn**	**20 19 00.5**	**+0.5**
SBPO	**S.Benedetto Po**	**2.51**	**308**	⇑P	**Pb**	**20 19 03.9**	**-0.7**

LJU	**Ljubljana**	**2.57**	**13**	P	**Pn**	**20 19 00.0**	**-1.2**
LJU				AML	AML		
	comp=E,325μm,1.3s						
LJU				AML	AML		
	comp=N,394μm,1.5s						
MRB1	**Monte Rocchett**	**2.58**	**158**	P	**Pg**	**20 19 08.6**	**-0.2**
CGRP	**Cima Grappa**	**2.71**	**330**	⇓P	**Pn**	**20 19 03.9**	**+0.5**
CGRP				AML	AML		
	comp=E,54μm,1.1s						
CGRP				AML	AML		
	comp=N,49μm,1.3s						
ROVR	**Rover Verones**	**2.83**	**319**	⇓P	**Pn**	**20 19 05.0**	**+0.1**
ROVR				AML	AML		
	comp=E,14μm,1.0s						
ROVR				AML	AML		
	comp=N,23μm,0.4s						
CTI	**Castel Tesino**	**2.91**	**330**	P	**Pn**	**20 19 05.9**	**-0.1**
CTI				AML	AML		
	comp=E,42μm,0.9s						
CTI				AML	AML		
	comp=N,42μm,1.2s						
STON	**Ston**	**2.99**	**102**	*e*Pn	**Pn**	**20 19 05.7**	**-1.2**
OBKA	**Obir**	**3.03**	**11**	*i* Pn	**Pn**	**20 19 08.2**	**+0.6**
	comp=N,1.4nm,0.2s						
OBKA				Sg	**Sg**	**20 19 56.9**	**+0.3**
	comp=N,13nm,0.6s						
MYKA	**Terra Mystica**	**3.09**	**359**	*i* Pn	**Pn**	**20 19 09.0**	**+0.6**
	comp=N,1.6nm,0.3s						
MYKA				Sg	**Sg**	**20 20 01.5**	**+2.9**
	comp=N,6.2nm,0.4s						
GAGG	**Gaggia**	**3.21**	**323**	P	**Pg**	**20 19 20.5**	**-0.3**
SOKA	**Soboth**	**3.28**	**16**	*i* Pn	**Pn**	**20 19 10.5**	**-0.5**
	comp=N,0.3nm,0.2s						
SOKA				Sg	**Sg**	**20 20 04.7**	**+0.3**
	comp=N,4.6nm,0.6s						
ABTA	**Abfaltersbach**	**3.32**	**346**	*i* Pn	**Pn**	**20 19 12.6**	**+1.0**
	comp=N,0.7nm,0.1s						
KOSI	**Kohlern**	**3.36**	**331**	⇓P	**Pn**	**20 19 12.8**	**+0.6**
KBA	**Koelnbreinsper**	**3.55**	**356**	*i* Pn	**Pn**	**20 19 17.1**	**+2.2**
	comp=N,1.0nm,0.2s						
KBA				*e*Sn	**Sn**	**20 19 54.8**	**-2.3**
	comp=N,2.5nm,0.5s						
RNCA	**Ronca, Sant'Ol**	**3.56**	**287**	P	**Pb**	**20 19 20.5**	**-2.0**
RISI	**Rein**	**3.60**	**342**	⇑P	**Pn**	**20 19 17.0**	**+1.4**
RISI				AML	AML		
	comp=N,55μm,0.3s						
RISI				AML	AML		
	comp=E,37μm,0.5s						
WTTA	**Wattenberg**	**4.00**	**339**	*i* Pn	**Pn**	**20 19 22.9**	**+1.9**
	comp=E,0.8nm,0.2s						
WTTA				*i* Sn	**Sn**	**20 20 09.9**	**+1.6**
	comp=E,3.3nm,0.4s						
FETA	**Feichten**	**4.07**	**330**	*e*Pn	**Pn**	**20 19 23.5**	**+1.5**
	comp=E,1.6nm,0.4s						
FETA				*e*Sn	**Sn**	**20 20 10.4**	**+0.5**
	comp=E,0.6nm,0.3s						
SQTA	**Sankt Quirin**	**4.08**	**335**	*i* Pn	**Pn**	**20 19 23.9**	**+1.8**
	comp=E,2.2nm,0.2s						
SQTA				*i* Sn	**Sn**	**20 20 12.1**	**+1.9**
	comp=E,3.7nm,0.3s						
WATA	**Walderalm**	**4.09**	**339**	*i* Pn	**Pn**	**20 19 24.1**	**+2.0**
	comp=E,3.2nm,0.3s						
WATA				*i* Sn	**Sn**	**20 20 12.2**	**+1.9**
	comp=E,1.7nm,0.2s						
MOTA	**Moosalm**	**4.23**	**335**	*i* Pn	**Pn**	**20 19 24.6**	**+0.5**
	comp=E,1.7nm,0.3s						
MOTA				*e*Sn	**Sn**	**20 20 14.9**	**+1.1**
	comp=E,0.9nm,0.2s						
CET2	**Cetraro**	**4.34**	**156**	P	**Pn**	**20 19 28.9**	**+3.3**
DAVA	**Damuels**	**4.62**	**326**	*i* Pn	**Pn**	**20 19 31.7**	**+2.2**
	comp=E,2.0nm,0.3s						
CONA	**Conrad Observa**	**4.64**	**18**	*i* Pn	**Pn**	**20 19 30.4**	**+0.6**
	comp=E,0.9nm,0.4s						
CONA				*i* Sn	**Sn**	**20 20 23.9**	**+0.1**
	comp=E,1.8nm,0.5s						

*SOME **05** 21:16:02.5, 39˚.58N×73˚.35E, h0km*
*KRNET **05** 21:16:04.9±0.1, 39˚.44N×73˚.67E, mb3.4*
*NNC **05** 21:16:07.0±2.9, 39˚.64N×73˚.42E, h0km, mb3.8, mpv3.4,*
Error ellipse: s-maj=23.8km s-min=12.5km az=169.0
ISC 05 21:16:08.6±1.1, 39˚.66N±0˚.05×73˚.45E±0˚.03, h10km, n42,
σ2s 03/67, 16C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.00**	**330**	⇓*e*P	**Pn**	**21 16 29.1**	**+0.2**
	baz=28						
OHH				⇓*i*S	**Sn**	**21 16 46.9**	**+3.8**
	baz=28						
DRK	**Karamyk**	**1.29**	**263**	⇑*e*P	**Pn**	**21 16 32.3**	**-0.7**
	baz=72						
DRK				⇑*e*S	**Sn**	**21 16 52.2**	**+1.8**
	baz=72						
BTK	**Batken**	**2.07**	**282**	⇑*i*P	**Pb**	**21 16 45.9**	**-0.4**
	baz=87						
BTK				⇑*e*S	**Sg**	**21 17 15.8**	**+0.8**
	baz=87						
ARLS	**Aral**	**2.30**	**16**	⇓*e*P	**Pb**	**21 16 48.2**	**-2.1**
	baz=12						
ARLS				⇓*i*S	**Sb**	**21 17 20.0**	**+1.2**
	baz=12						
AML	**Almayashu**	**2.48**	**4**	P	**Pb**	**21 16 52.6**	**-0.8**
	SNR=61						
GAR	**Garm**	**2.52**	**256**	⇓*e*P	**Pn**	**21 16 50.7**	**+1.0**
	baz=62						
GAR				⇓*e*S	**Sb**	**21 17 24.2**	**-0.9**
	baz=62						
TRKS	**Terek-Say**	**2.57**	**317**	⇑*e*P	**Pb**	**21 16 52.6**	**-2.3**
	baz=18						
TRKS				⇑*i*S	**Sb**	**21 17 27.6**	**+1.1**
	baz=18						
UCH	**Uchtor**	**2.69**	**17**	P	**Pb**	**21 16 56.4**	**-0.8**
	SNR=31						
UCH	**Uchtor**	**2.69**	**17**	⇓*e*P	**Pn**	**21 16 53.9**	**+1.5**
	baz=13						
UCH				⇓*e*S	**Sb**	**21 17 29.9**	**-0.4**
	baz=13						
EKS2	**Erkin-Say**	**3.01**	**5**	P	**Pb**	**21 17 00.4**	**-2.0**
	SNR=14						
EKS2	**Erkin-Say**	**3.01**	**5**	⇑*e*P	**Pn**	**21 16 58.9**	**+2.4**
	baz=1.0						
EKS2				⇑*i*S	**Sb**	**21 17 38.1**	**-1.1**
	baz=1.0						
AAK	**Ala-Archa**	**3.08**	**14**	⇑*e*P	**Pn**	**21 16 59.3**	**+1.8**
	baz=11						
AAK				⇑*e*S	**Sb**	**21 17 38.9**	**-2.3**
	baz=11						
MRKS	**Merke**	**3.09**	**357**	*e*P	**Pb**	**21 17 04.0**	**+0.3**
	9.4nm,0.3s						
MRKS				*e*S	**Sg**	**21 17 48.3**	**+0.5**
	38nm,0.7s						
KBK	**Karagaybulak**	**3.20**	**20**	⇑*e*P	**Pn**	**21 17 00.9**	**+1.7**
	baz=16						
KBK				⇑*e*S	**Sb**	**21 17 41.5**	**-3.3**
	baz=16						
ULHL	**Ulahol**	**3.34**	**38**	P	**Pb**	**21 17 04.4**	**-3.6**
	SNR=12						
CHMS	**Chumysh**	**3.48**	**16**	P	**Pb**	**21 17 07.1**	**-3.2**
	SNR=5.8						
CHGR	**Chuyangaron**	**3.48**	**255**	⇑*e*P	**Pn**	**21 17 04.0**	**+1.0**
	baz=59						
CHGR				⇑*i*S	**Sn**	**21 17 47.1**	**+2.8**
	baz=59						
IUG	**luzhnay**	**3.59**	**315**	*e*P	**Pb**	**21 17 09.0**	**-3.3**
	181nm,0.4s						
IUG				*e*S	**Sb**	**21 17 57.3**	**+1.4**
	23nm,0.7s						
IUG	**luzhnay**	**3.59**	**315**	Pg	**Pb**	**21 17 09.0**	**-3.3**
	181nm,0.4s						
IUG				Lg	Lg	21 17 57.3	
	23nm,0.7s						
TKM2	**Tokmak 2**	**3.64**	**26**	⇓Pn	**Pn**	**21 17 08.3**	**+3.1**
	4.0nm,0.6s						
TKM2				⇑Lg	Lg	21 18 04.4	
	7.7nm,0.5s						
KST	**Kastek**	**3.87**	**28**	*e*P	**Pb**	**21 17 17.4**	**+0.3**
	1.4nm,0.3s						
KST				*e*S	**Sg**	**21 18 11.3**	**-1.7**
	15nm,0.9s						
KST	**Kastek**	**3.87**	**28**	Pg	**Pb**	**21 17 17.4**	**+0.3**
	1.4nm,0.3s						
KST				Lg	Lg	21 18 11.3	
	15nm,0.9s						
SGDS	**Sogindy**	**3.89**	**13**	*e*P	**Pb**	**21 17 19.0**	**+1.6**
	2.1nm,0.5s						
SGDS				*e*S	**Sg**	**21 18 14.3**	**+0.8**
	11nm,0.5s						
SGDS	**Sogindy**	**3.89**	**13**	Pg	**Pb**	**21 17 19.0**	**+1.6**
	2.1nm,0.5s						
SGDS				Lg	Lg	21 18 14.3	
	11nm,0.5s						
KK31	**Karatay Array**	**4.09**	**328**	⇑Pn	**Pn**	**21 17 15.0**	**+3.7**
	0.6nm,0.3s,baz=132,slow=13,SNR=13						
KK31				⇓Pg	**Pg**	**21 17 24.8**	**-2.2**
	1.0nm,0.3s,baz=138,slow=14,SNR=6.4						
KK31				Lg	Lg	21 18 21.6	
	5.7nm,0.5s,baz=155,slow=29,SNR=4.5						
MTBS	**Maitube**	**4.13**	**32**	*e*P	**Pb**	**21 17 22.6**	**+1.2**
	3.4nm,0.1s						
MTBS				*e*S	**Sg**	**21 18 20.5**	**-0.6**
	15nm,0.4s						
MTBS	**Maitube**	**4.13**	**32**	Pg	**Pb**	**21 17 22.6**	**+1.2**
MTBS				Lg	Lg	21 18 20.5	
KRBS	**Karabastau**	**4.36**	**22**	*e*P	**Pb**	**21 17 26.6**	**+1.2**
	1.2nm,0.7s						
KRBS				*e*S	**Sg**	**21 18 26.9**	**-1.8**
	11nm,0.7s						
MDOK	**Medeo**	**4.42**	**37**	*e*P	**Pb**	**21 17 27.1**	**+0.7**
	1.1nm,0.1s						
MDOK				*e*S	**Sg**	**21 18 28.4**	**-2.3**
	6.0nm,0.8s						
MDOK	**Medeo**	**4.42**	**37**	Pg	**Pb**	**21 17 27.1**	**+0.7**
	1.1nm,0.1s						
MDOK				Lg	Lg	21 18 28.4	
	6.0nm,0.8s						
KTBS	**Karatobe**	**4.72**	**30**	*e*P	**Pb**	**21 17 32.2**	**+0.8**
	2.3nm,0.5s						
KTBS				*e*S	**Sg**	**21 18 37.2**	**-2.8**
	11nm,0.4s						
KTBS	**Karatobe**	**4.72**	**30**	Pg	**Pb**	**21 17 32.2**	**+0.8**
	2.3nm,0.5s						
KTBS				Lg	Lg	21 18 37.2	
	11nm,0.4s						
KUU	**Kurty**	**4.75**	**26**	*e*P	**Pb**	**21 17 32.8**	**+0.8**
	1.0nm,0.1s						
KUU				*e*S	**Sg**	**21 18 38.0**	**-3.1**
	7.4nm,0.6s						
KUU	**Kurty**	**4.75**	**26**	Pg	**Pb**	**21 17 32.8**	**+0.8**
KUU				Lg	Lg	21 18 38.0	
CHKK	**Chushkaly**	**4.96**	**31**	*e*P	**Pb**	**21 17 36.4**	**+0.9**
	0.5nm,0.1s						
CHKK				*e*S	**Sg**	**21 18 44.0**	**-3.6**
	6.9nm,0.6s						
CHKK	**Chushkaly**	**4.96**	**31**	Pg	**Pb**	**21 17 36.4**	**+0.9**
CHKK				Lg	Lg	21 18 45.0	
SATY	**Saty**	**5.04**	**46**	*e*P	**Pb**	**21 17 37.4**	**+0.4**
	2.1nm,0.4s						
SATY				*e*S	**Sg**	**21 18 46.1**	**-4.4**
	6.6nm,0.5s						
SATY	**Saty**	**5.04**	**46**	Pg	**Pb**	**21 17 37.4**	**+0.4**
SATY				Lg	Lg	21 18 46.9	
BTLS	**Baital**	**5.40**	**4**	*e*P	**Pb**	**21 17 45.3**	**+2.4**
	1.2nm,0.2s						
BTLS				*e*S	**Sg**	**21 18 60.0**	**-1.8**
	4.9nm,0.6s						
BTLS	**Baital**	**5.40**	**4**	Pg	**Pb**	**21 17 45.3**	**+2.4**
BTLS				Lg	Lg	21 18 60.0	
UZB	**Uzynbulak**	**5.45**	**48**	*e*P	**Pb**	**21 17 46.7**	**+2.8**
	0.9nm,0.2s						
UZB				*e*S	**Sg**	**21 19 01.6**	**-1.9**
	5.7nm,0.6s						
UZB	**Uzynbulak**	**5.45**	**48**	Pg	**Pb**	**21 17 46.7**	**+2.8**
UZB				Lg	Lg	21 19 01.6	

*BER **05** 21:20:55.9±0.3, 69˚.24N×27˚.47E, h0km, ML0.3, Suspected explosion*
HEL 05 21:20:13.3±0.2, 67˚.61N×33˚.84E, h0km, ML1.6,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.43**	**46**	PG	Pg	21 20 20.6	-0.8
	baz=225						
LVZ				SG	Sg	21 20 27.1	+0.1
VRF	**Varrio**	**1.62**	**277**	PG	Pn	21 20 42.1	-1.0
VRF				MSG		21 21 01.8	
	comp=Z,2.6nm,0.2s						
VRF				SG	Sn	21 21 02.0	-2.7
OLKF	**Oulanka, Finla**	**2.17**	**236**	PG	Pb	21 20 52.1	-1.3
OLKF				SG	Sb	21 21 20.9	+0.1
KU6	**Riekki**	**2.23**	**226**	PG	Pb	21 20 53.2	-1.2
KU6				MSG		21 21 19.4	
	comp=Z,3.4nm,0.2s						
KU6				SG	Sb	21 21 22.3	-0.2
MSF	**Maaselka**	**2.55**	**230**	PG	Pb	21 20 58.6	-1.3
MSF				SG	Sb	21 21 32.8	+1.0
SGF	**Sodankyl**	**2.81**	**270**	PB	Pb	21 21 02.0	-2.3
SGF				SB	Sb	21 21 37.6	-1.7
RNF	**Rovaniemi**	**3.22**	**255**	PN	Pn	21 21 04.8	-0.2
	baz=69						
RNF				SG	Sb	21 21 49.8	-1.1
KEV	**Kevo**	**3.30**	**314**	*e*P	Pn	21 21 05.7	-0.4
KEV	**Kevo**	**3.30**	**314**	PN	Pn	21 21 05.9	-0.2
KEV				SN	Sn	21 21 44.2	-1.7
ARA0	**ARCESS Array S**	**3.62**	**306**	*e*P	Pn	21 21 09.4	-1.1
ARA0				IAML		21 22 05.3	
	comp=Z,1.4nm,0.5s						
ARA0	**ARCESS Array S**	**3.62**	**306**	PN	Pn	21 21 09.3	-1.2
	baz=120						
ARA0				SN	Sn	21 21 54.1	+0.2
HEF	**Hetta**	**3.91**	**287**	*e*P	Pb	21 21 23.7	+0.6
HEF	**Hetta**	**3.91**	**287**	PG	Pb	21 21 23.8	+0.7
HEF				SN	Sn	21 22 00.2	-0.9
PAJU	**Pajala**	**4.20**	**267**	SN	Sn	21 22 07.0	-1.1

*IDC **05** 21:25:05.3±2.8, 18˚.71N×145˚.58E, h200km±27km, mb3.1/6, mbtmp3.7/7, MS3.1/2, Error ellipse: s-maj=33.0km s-min=19.0km az=87.0*
ISC 05 21:25:05.2±1.0, 18.75N±0˚.09×145˚.6E±0˚.3, h200km, n9,
σ1s 21/9, mb3.4/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.17**	**188**	P	**Pn**	**21 26 23.4**	**+1.5**
	113nm,1.0s,baz=102,slow=6.0,SNR=2.2						
GUMO				S	**Sn**	**21 27 21.0**	**-1.5**
	24nm,0.3s,baz=234,slow=17,SNR=1.6						
JOW	**Kunigami**	**17.86**	**300**	LR	LR	21 35 07.0	
	comp=Z,35nm,21.1s,baz=245,slow=34						
WRA	**Warramunga Arr**	**40.00**	**197**	P	**P**	**21 32 20.2**	**-0.5**
	0.3nm,0.3s,baz=18,slow=8.6,SNR=9.7						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**43.67**	**196**	P	**P**	**21 32 50.2**	**-0.2**
	0.3nm,0.7s,baz=17,slow=6.8,SNR=2.2						
ASAR				LR	LR	21 51 37.4	
	comp=Z,37nm,18.1s,baz=92,slow=36						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**58.35**	**314**	P	**P**	**21 34 40.5**	**+1.0**
	0.3nm,0.5s,baz=83,slow=8.0,SNR=6.3						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**61.21**	**318**	P	**P**	**21 34 59.2**	**+0.4**
	0.4nm,0.5s,baz=93,slow=7.1,SNR=5.9						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**63.65**	**26**	P	**P**	**21 35 14.7**	**-0.1**
	1.1nm,0.8s,baz=261,slow=4.5,SNR=6.4						
	1.1nm,0.8s						
FINES	**FINESS Array B**	**86.80**	**335**	P	**P**	**21 37 25.1**	**-1.6**
	0.3nm,0.3s,baz=57,slow=5.1,SNR=9.7						
	0.3nm,0.3s						
LPAZ	**La Paz**	**147.78**	**91**	PKPbc	**PKPbc**	**21 44 28.7**	**+0.6**
	0.9nm,0.6s,baz=87,slow=1.5,SNR=4.7						

*IDC **05** 21:28:53.5±1.1, 19˚.88N×121˚.55E, h0km, mb3.6/7, mbtmp3.6/8, Error ellipse: s-maj=42.4km s-min=18.7km az=68.0*
*MAN **05** 21:28:58, 19˚.97N×121˚.37E, h26km, Ms3.2*
ISC 05 21:29:00.3±0.8, 20˚.05N±0˚.05×121˚.35E±0˚.09, h40km, n17,
σ1s 82/18, mb3.5/7, 5C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	**Basco**	**0.70**	**56**	⇑*e*P	**Pn**	**21 29 12.8**	**-1.0**
BBP				*e*S	**Sn**	**21 29 25.1**	**+1.7**
SGCP	**Gonzaga**	**1.91**	**160**	⇑*e*P	**Pn**	**21 29 29.8**	**-0.6**
SIPP	**Brgy, Tapao**	**2.28**	**202**	⇓*i*P	**Pn**	**21 29 37.0**	**+1.5**
SAMP	**Sagada Mountai**	**2.98**	**188**	⇑*e*P	**Pn**	**21 29 44.0**	**-1.2**
SAMP				*e*S	**Sn**	**21 30 19.9**	**+0.2**
PALP	**Palanan**	**3.14**	**161**	⇑*e*P	**Pn**	**21 29 50.0**	**+2.7**
PALP				*e*S	**Sn**	**21 30 27.0**	**+3.4**
SMPP	**San Manuel, Pa**	**3.93**	**189**	⇑*e*P	**Pn**	**21 29 57.2**	**-0.9**
SMPP				*e*S	**Sn**	**21 30 42.5**	**-0.5**
KSRS	**Korea Array**	**18.27**	**17**	P	**Pn**	**21 33 11.2**	**+0.5**
	0.4nm,0.4s,baz=202,slow=12,SNR=4.1						
CMAR	**Chiang Mai Arr**	**21.21**	**269**	P	**P**	**21 33 44.0**	**+1.2**
	0.4nm,0.3s,baz=72,slow=8.6,SNR=4.2						
	0.4nm,0.3s						
SONM	**Songino Array**	**30.26**	**340**	P	**P**	**21 35 08.3**	**+0.8**
	0.8nm,0.8s,baz=152,slow=7.4,SNR=4.0						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**41.48**	**319**	P	**P**	**21 36 44.1**	**+0.6**
	0.4nm,0.5s,baz=114,slow=10,SNR=5.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**41.73**	**161**	P	**P**	**21 36 42.1**	**-3.5**
	0.7nm,0.6s,baz=343,slow=9.0,SNR=7.4						
	0.7nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**42.72**	**82**	T	T	22 22 35.4	
	baz=278,slow=75,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**42.73**	**82**	T	T	22 22 36.6	
	baz=278,slow=75,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**42.74**	**82**	T	T	22 22 37.6	
	baz=278,slow=75,SNR=4.8						
ZALV	**Zalesovo Beam**	**43.83**	**329**	P	**P**	**21 37 02.9**	**+0.6**
	0.8nm,0.6s,baz=104,slow=7.9,SNR=4.7						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**45.14**	**164**	P	**P**	**21 37 10.7**	**-2.4**
	0.4nm,0.5s,baz=345,slow=7.5,SNR=8.3						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**75.09**	**330**	P	**P**	**21 40 37.6**	**-0.3**
	0.9nm,0.8s,baz=54,slow=9.7,SNR=3.8						
	0.9nm,0.8s						

*IDC **05** 21:41:42.4±1.0, 29˚.19S×61˚.10E, h0km, mb3.7/7, mbtmp3.7/8, ML4.5/1, MS3.2/9, Error ellipse: s-maj=40.2km s-min=25.1km az=49.0*
ISC 05 21:41:44.0±1.0, 29˚.2S±0˚.2×61˚.1E±0˚.2, h10km, n22,
σ0s 41/8, mb3.7/7, MS3.2/9, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.51**	**307**	Pn	**Pn**	**21 45 35.8**	**-0.1**
	0.2nm,0.3s,baz=131,slow=9.6,SNR=9.4						
OPO				Sn	Sn	21 48 25.4	-14
	0.1nm,0.3s,baz=251,slow=23,SNR=1.9						
	1.8nm,0.3s						
H08S1	**Diego Carcia H**	**23.97**	**29**	T	T	22 11 42.8	
	baz=204,slow=76,SNR=9.2						
H08S2	**Diego Garcia H**	**23.98**	**29**	T	T	22 11 42.7	
	baz=204,slow=76,SNR=5.1						
H08S3	**Diego Garcia H**	**23.99**	**29**	T	T	22 11 41.8	
	baz=204,slow=76,SNR=8.4						
LSZ	**Lusaka**	**33.31**	**287**	LR	LR	22 00 16.5	
	comp=Z,20nm,18.1s,baz=143,slow=33						
SUR	**Sutherland**	**34.59**	**254**	LR	LR	21 59 28.3	
	comp=Z,28nm,21.7s,baz=144,slow=31						
KMBO	**Kilima Mbogo**	**35.98**	**317**	LR	LR	22 00 39.9	
	comp=Z,46nm,18.8s,baz=100,slow=32						
MAW	**Mawson**	**38.46**	**179**	LR	LR	22 01 28.6	
	comp=Z,30nm,19.6s,baz=7.5,slow=31						
MBAR	**Mbarara**	**40.56**	**309**	LR	LR	22 04 37.3	
	comp=Z,21nm,21.4s,baz=96,slow=34						
H01W2	**Cape Leeuwin H**	**44.91**	**111**	T	T	22 37 38.1	
	baz=261,slow=74,SNR=5.6						
H01W3	**Cape Leeuwin H**	**44.91**	**111**	T	T	22 37 38.4	
	baz=261,slow=74,SNR=4.5						
H01W1	**Cape Leeuwin H**	**44.92**	**111**	T	T	22 37 53.3	
	baz=261,slow=74,SNR=6.4						
VNDA	**Vanda**	**64.02**	**166**	P	**P**	**21 52 17.5**	**+0.3**
	0.8nm,0.8s,baz=280,slow=5.8,SNR=5.6						
VNDA				LR	LR	22 17 05.2	
	comp=Z,30nm,20.8s,baz=258,slow=33						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**64.51**	**104**	P	**P**	**21 52 20.7**	**-0.7**
	0.4nm,0.7s,baz=243,slow=6.1,SNR=4.4						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**66.34**	**100**	P	**P**	**21 52 33.3**	**0.0**
	0.5nm,0.8s,baz=247,slow=6.1,SNR=5.4						
	0.5nm,0.8s						
GNI	**Garni**	**70.64**	**347**	LR	LR	22 21 47.4	
	comp=Z,14nm,20.3s,baz=155,slow=34						
TORD	**Torodi Ar. Bea**	**71.08**	**298**	P	**P**	**21 53 02.6**	**-0.2**
	0.5nm,0.8s,baz=142,slow=3.8,SNR=2.2						
	0.5nm,0.8s						
KBZ	**Khabaz**	**74.45**	**346**	LR	LR	22 26 31.5	
	comp=Z,14nm,20.1s,baz=354,slow=36						
MKAR	**Makanchi Array**	**78.03**	**15**	P	**P**	**21 53 42.8**	**+0.4**
	0.4nm,0.7s,baz=180,slow=6.9,SNR=4.4						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**80.95**	**11**	P	**P**	**21 53 58.5**	**+0.3**
	0.4nm,0.7s,baz=210,slow=7.0,SNR=5.2						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**85.31**	**14**	P	**P**	**21 54 20.9**	**+0.2**
	0.5nm,0.4s,baz=212,slow=5.1,SNR=2.8						
	0.5nm,0.4s						
GERES	**GERESS Array B**	**88.46**	**331**	LR	LR	22 30 52.5	
	comp=Z,16nm,20.3s,baz=320,slow=33						

*JMA **05** 22:00:41.2±0.1, 24˚.6N±0˚.4×122˚.1E±0˚.3, h41km, MV2.5/8, TAIWAN REGION*
*TAP **05** 22:00:41.4, 24˚.69N×122˚.08E, h10km, ML3.1, C*
ISC 05 22:00:40.5±1.0, 24˚.69N±0˚.02×122˚.14E±0˚.02, h8km±8km,
n94, σ0s 93/177, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.28**	**252**	⇑*i*P	**Pg**	**22 00 46.1**	**+0.2**
	baz=254						
TWC				*i* S	**Sg**	**22 00 49.0**	**-0.7**
	baz=254						
NTC	**Toucheng**	**0.32**	**300**	P	**Pb**	**22 00 47.7**	**-0.8**
	baz=306						
TWB1	**Santiao Chiao**	**0.34**	**336**	P	**Pb**	**22 00 48.3**	**-0.5**
	baz=339						
TWB1				S	**Sg**	**22 00 52.9**	**+1.1**
	baz=339						
ILA	**Ilan**	**0.36**	**281**	P	**Pb**	**22 00 48.2**	**-1.0**
	baz=285						
ILA				S	**Sb**	**22 00 53.6**	**-1.4**
	baz=285						
NDS	**Dongshan**	**0.39**	**261**	*e*P	**Pg**	**22 00 47.9**	**-0.2**
	baz=253						
NDS				*e*S	**Sg**	**22 00 52.9**	**-0.4**
	baz=253						
TIPB	**Shuangxi**	**0.40**	**314**	*e*P	**Pb**	**22 00 49.3**	**-0.5**
	baz=329						
TIP

TWA				S	Sb	22 01 00.2	-1.0
	baz=304						
NWLT	**Wulai**	**0.58**	**278**	*eP*	**Pb**	**22 00 52.2**	**-0.8**
	baz=280						
NWLT				*eS*	**Sg**	**22 00 59.4**	**0.0**
	baz=280						
NHDH	**Xindian Distri**	**0.62**	**296**	*eP*	**Pb**	**22 00 53.7**	**+0.2**
	baz=299						
NHDH				*eS*	**Sb**	**22 01 01.5**	**-0.9**
	baz=299						
TAP	**Taipei**	**0.67**	**301**	*eP*	**Pg**	**22 00 53.4**	**0.0**
	baz=295						
TAP				*eS*	**Sb**	**22 01 03.4**	**-0.5**
	baz=295						
YM01	**YM01**	**0.69**	**311**	*eP*	**Pb**	**22 00 55.1**	**+0.4**
	baz=308						
YM01				*eS*	**Sb**	**22 01 03.7**	**-0.7**
	baz=308						
YHNB	**Yeheng**	**0.70**	**268**	*eP*	**Pg**	**22 00 54.0**	**+0.1**
	baz=278						
YHNB				*eS*	**Sg**	**22 01 02.3**	**-0.7**
	baz=278						
ETL	**Fush Village**	**0.71**	**222**	*eP*	**Pg**	**22 00 53.9**	**-0.3**
	baz=225						
ETL				*eS*	**Sg**	**22 01 03.2**	**-0.2**
	baz=225						
NSK	**Sanguang**	**0.71**	**269**	*eP*	**Pg**	**22 00 53.6**	**-0.6**
	baz=279						
NSK				*eS*	**Sg**	**22 01 02.3**	**-1.1**
	baz=279						
NACB	**Ninganchiao**	**0.72**	**224**	P	**Pg**	**22 00 53.7**	**-0.6**
	baz=221						
NACB				*eS*	**Sg**	**22 01 02.6**	**-1.0**
	baz=221						
NNSB	**Datong**	**0.74**	**249**	*eP*	**Pg**	**22 00 54.5**	**-0.2**
	baz=248						
NNSB				*eS*	**Sg**	**22 01 03.6**	**-0.8**
	baz=248						
NNS	**Nan Shan**	**0.74**	**250**	*eP*	**Pg**	**22 00 54.3**	**-0.5**
	baz=249						
NNS				*eS*	**Sg**	**22 01 03.9**	**-0.6**
	baz=249						
ANP	**Anpu**	**0.75**	**311**	*eP*	**Pb**	**22 00 55.9**	**+0.1**
	baz=306						
TWY	**Chenhua**	**0.76**	**320**	*eP*	**Pb**	**22 00 56.5**	**+0.6**
	baz=317						
TWY				*eS*	**Sb**	**22 01 06.8**	**+0.4**
	baz=317						
ETLH	**Xiulin Townshi**	**0.77**	**231**	*eP*	**Pg**	**22 00 55.1**	**-0.3**
	baz=229						
ETLH				*eS*	**Sg**	**22 01 04.3**	**-1.0**
	baz=229						
TWS1	**Kuangyinshan**	**0.77**	**302**	*eP*	**Pb**	**22 00 56.9**	**+0.8**
	baz=297						
TWS1				*eS*	**Sb**	**22 01 06.9**	**+0.2**
	baz=297						
JYNG	**Yonagunijimaku**	**0.77**	**108**	P	**Pg**	**22 00 56.3**	**+0.9**
JYNG				S	**Sg**	**22 01 06.8**	**+1.4**
NTST	**Danshui**	**0.78**	**307**	*eP*	**Pn**	**22 00 57.5**	**-0.3**
	baz=302						
NTST				*eS*	**Sb**	**22 01 08.6**	**+1.5**
	baz=302						
TWD	**Chiawan**	**0.79**	**219**	*eP*	**Pg**	**22 00 55.1**	**-0.5**
	baz=222						
TWD				*eS*	**Sg**	**22 01 05.3**	**-0.5**
	baz=222						
YOJ	**Yonaguni jima**	**0.83**	**106**	*eP*	**Pg**	**22 00 56.8**	**+0.5**
	baz=104						
YOJ				*eS*	**Sg**	**22 01 08.5**	**+1.4**
	baz=104						
YOJ	**Yonaguni jima**	**0.83**	**106**	P	**Pg**	**22 00 56.8**	**+0.5**
YOJ				S	**Sg**	**22 01 08.2**	**+1.0**
HWA	**Hwalien**	**0.86**	**214**	*eP*	**Pb**	**22 00 58.3**	**+0.6**
	baz=218						
NCU	**National Centr**	**0.91**	**288**	*eP*	**Pn**	**22 00 59.6**	**+0.1**
	baz=297						
NCU				*eS*	**Sn**	**22 01 12.4**	**-0.4**
	baz=297						
NCUH	**Zhongli**	**0.91**	**288**	*eP*	**Pn**	**22 00 59.7**	**+0.2**
	baz=297						
NCUH				*eS*	**Sn**	**22 01 13.3**	**+0.5**
	baz=297						
FUSS	**Fushou**	**0.93**	**242**	*eP*	**Pg**	**22 00 58.3**	**-0.1**
	baz=241						
FUSS				*eS*	**Sg**	**22 01 10.4**	**0.0**
	baz=241						
NFF	**Wufeng Townshi**	**0.93**	**266**	*eP*	**Pb**	**22 00 58.8**	**-0.1**
	baz=267						
NFF				*eS*	**Sb**	**22 01 11.5**	**+0.1**
	baz=267						
PCYT	**Pengchaiyu**	**0.93**	**356**	*eP*	**Pb**	**22 00 59.0**	**+0.1**
	baz=13						
WHF	**Hehuan Shan**	**0.97**	**236**	*eP*	**Pg**	**22 00 58.8**	**-0.3**
	baz=234						
WHF				*eS*	**Sg**	**22 01 10.9**	**-0.8**
	baz=234						
TWT	**Tachien**	**0.98**	**244**	*eP*	**Pb**	**22 00 60.0**	**+0.1**
	baz=243						
TWT				*eS*	**Sg**	**22 01 12.2**	**+0.1**
	baz=243						
TDCB	**Techi**	**1.00**	**244**	*eP*	**Pg**	**22 00 59.6**	**0.0**
	baz=243						
TDCB				*eS*	**Sg**	**22 01 12.1**	**-0.5**
	baz=243						
LIOB	**Emei**	**1.02**	**268**	*eP*	**Pn**	**22 01 01.8**	**+0.6**
	baz=263						
LIOB				*eS*	**Sn**	**22 01 16.0**	**+0.3**
	baz=263						
NSTT	**Nanjuang**	**1.04**	**267**	*eP*	**Pn**	**22 01 01.8**	**+0.5**
	baz=262						
NSTT				*eS*	**Sn**	**22 01 15.9**	**-0.1**
	baz=262						
SBCB	**Hsinchu**	**1.05**	**276**	*eP*	**Pn**	**22 01 02.2**	**+0.7**
	baz=276						
SBCB				*eS*	**Sn**	**22 01 17.8**	**+1.4**
	baz=276						
HSN	**Hsinchu**	**1.07**	**276**	*eS*	**Sb**	**22 01 16.2**	**+0.9**
	baz=279						
CHGB	**Renai**	**1.08**	**235**	*eP*	**Pg**	**22 01 01.2**	**-0.1**
	baz=228						
CHGB				*eS*	**Sg**	**22 01 15.4**	**0.0**
	baz=228						
ESL	**Shilin**	**1.09**	**216**	*eP*	**Pg**	**22 01 00.7**	**-0.6**
	baz=222						
ESL				*eS*	**Sg**	**22 01 15.0**	**-0.5**
	baz=222						
OWD	**Renai**	**1.15**	**230**	*eP*	**Pg**	**22 01 01.8**	**-0.7**
	baz=229						
OWD				*eS*	**Sg**	**22 01 16.6**	**-0.8**
	baz=229						
WUSB	**Renai**	**1.17**	**233**	*eP*	**Pg**	**22 01 02.6**	**-0.3**
	baz=227						
WUSB				*eS*	**Sg**	**22 01 17.6**	**-0.4**
	baz=227						
EGFH	**Guangfu**	**1.21**	**213**	*eP*	**Pg**	**22 01 03.0**	**-0.7**
	baz=231						
EGFH				*eS*	**Sn**	**22 01 21.2**	**+0.9**
	baz=231						
NMLH	**Miaoli**	**1.24**	**263**	*eP*	**Pn**	**22 01 05.4**	**+1.4**
	baz=255						
NMLH				*eS*	**Sn**	**22 01 21.9**	**+0.9**
	baz=255						
NSY	**Sanyi**	**1.29**	**258**	*eS*	**Sn**	**22 01 23.9**	**+1.7**
	baz=250						
WCS	**Beigang Elemen**	**1.29**	**241**	*eP*	**Pg**	**22 01 04.2**	**-1.0**
	baz=241						
WCS				*eS*	**Sg**	**22 01 21.1**	**-0.8**
	baz=241						
TWQ1	**Liyutan**	**1.29**	**255**	*eP*	**Pn**	**22 01 06.5**	**+1.7**
	baz=255						
TWQ1				*eS*	**Sg**	**22 01 21.1**	**-0.9**
	baz=255						
VWDT	**VWDT**	**1.31**	**224**	*eP*	**Pg**	**22 01 05.0**	**-0.6**
	baz=231						
VWDT				*eS*	**Sb**	**22 01 22.9**	**+0.7**
	baz=231						
HGSD	**Ruisui**	**1.36**	**209**	*eP*	**Pg**	**22 01 05.9**	**-0.8**
	baz=189						
HGSD				*eS*	**Sn**	**22 01 26.7**	**+2.7**
	baz=189						
SMLT	**Sun Moon Lake**	**1.39**	**235**	*eP*	**Pb**	**22 01 06.9**	**+0.1**
	baz=234						
SMLT				*eS*	**Sn**	**22 01 26.5**	**+1.6**
	baz=234						
EHY	**Hungye**	**1.40**	**212**	*eP*	**Pn**	**22 01 05.8**	**-0.5**
	baz=208						
SSLB	**Suanglung**	**1.41**	**230**	*eP*	**Pn**	**22 01 06.8**	**+0.4**
	baz=239						
SSLB				*eS*	**Sn**	**22 01 25.9**	**+0.7**
	baz=239						
TYC	**Yuchr**	**1.41**	**236**	*eP*	**Pg**	**22 01 07.1**	**-0.4**
	baz=228						
TYC				*eS*	**Sg**	**22 01 24.4**	**-1.4**
	baz=228						
IRIF	**Iriomote-Funau**	**1.49**	**104**	*eP*	**Pn**	**22 01 05.9**	**-1.6**
IRIF				S	**Sn**	**22 01 24.4**	**-2.8**
YULB	**Yu-li**	**1.51**	**211**	*eP*	**Pn**	**22 01 07.3**	**-0.5**
	baz=219						
YULB				*eS*	**Sb**	**22 01 28.5**	**+0.5**
	baz=219						
EYUL	**Yuli**	**1.54**	**209**	*eP*	**Pn**	**22 01 08.0**	**-0.2**
	baz=205						
WHYT	**Xinyi Township**	**1.54**	**230**	*eP*	**Pg**	**22 01 09.7**	**-0.3**
	baz=237						
WHYT				*eS*	**Sg**	**22 01 29.7**	**-0.3**
	baz=237						
WNT	**Mingjian**	**1.56**	**239**	*eP*	**Pg**	**22 01 11.4**	**+1.1**
	baz=231						
WNT				*eS*	**Sg**	**22 01 32.7**	**+2.1**
	baz=231						
ALS	**Alishan**	**1.70**	**226**	*eP*	**Pb**	**22 01 12.2**	**+0.1**
	baz=233						
ALS				*eS*	**Sg**	**22 01 36.6**	**+1.6**
	baz=233						
JKRS	**Kuro-shima**	**1.76**	**105**	P	**Pn**	**22 01 10.7**	**-0.6**
JKRS				*eS*	**Sn**	**22 01 31.9**	**-2.0**
WDLH	**Douliu**	**1.77**	**236**	*eP*	**Pg**	**22 01 14.2**	**-0.3**
	baz=236						
WDLH				*eS*	**Sg**	**22 01 38.5**	**+1.1**
	baz=236						
WRL	**Guolierlin Hig**	**1.79**	**244**	*eP*	**Pb**	**22 01 13.3**	**-0.2**
	baz=244						
WRL				*eS*	**Sb**	**22 01 36.1**	**-0.1**
	baz=244						
ELDTW	**Lidau**	**1.82**	**215**	*eP*	**Pn**	**22 01 12.2**	**+0.1**
	baz=196						
ELDTW				*eS*	**Sb**	**22 01 37.4**	**+0.4**
	baz=196						
JIJ	**Ishigaki jima**	**1.85**	**100**	*eP*	**Pn**	**22 01 11.9**	**-0.6**
EDH	**Donghe**	**1.88**	**204**	*eP*	**Pn**	**22 01 11.9**	**-0.9**
	baz=186						
EDH				*eS*	**Sn**	**22 01 34.4**	**-2.3**
	baz=186						
CHN4	**Tsaushan**	**1.95**	**227**	*eP*	**Pb**	**22 01 15.7**	**-0.5**
	baz=239						
CHN4				*eS*	**Sg**	**22 01 42.9**	**-0.2**
	baz=239						
TPUB	**Ta-pu**	**1.96**	**225**	*eP*	**Pb**	**22 01 16.6**	**+0.2**
	baz=225						
TPUB				*eS*	**Sg**	**22 01 43.4**	**-0.1**
	baz=225						
STYH	**Taoyuan**	**1.96**	**220**	*eP*	**Pn**	**22 01 14.4**	**+0.3**
	baz=220						
STYH				*eS*	**Sb**	**22 01 41.7**	**+0.6**
	baz=220						
CHY	**Chiayi**	**1.97**	**233**	*eS*	**Sg**	**22 01 44.2**	**+0.4**
	baz=233						
WTP	**Ta-pu**	**2.01**	**224**	*eP*	**Pb**	**22 01 17.5**	**+0.2**
	baz=224						
WTP				*eS*	**Sg**	**22 01 44.5**	**-0.4**
	baz=224						
TWK	**Hsinying**	**2.07**	**227**	*eP*	**Pb**	**22 01 18.1**	**-0.3**
	baz=227						
TWK				*eS*	**Sg**	**22 01 46.1**	**-1.1**
	baz=227						
SNST	**Tainan City**	**2.10**	**226**	*eP*	**Pb**	**22 01 19.1**	**+0.3**
	baz=226						
SNST				*eS*	**Sb**	**22 01 46.1**	**+1.0**
	baz=226						
WSL	**Shuilin Townsh**	**2.10**	**237**	*eP*	**Pb**	**22 01 18.3**	**-0.5**
	baz=237						
WSL				*eS*	**Sg**	**22 01 46.6**	**-1.3**
	baz=237						
LDUT	**Ludao**	**2.10**	**197**	*eP*	**Pn**	**22 01 14.4**	**-1.6**
	baz=181						
LDUT				*eS*	**Sn**	**22 01 40.5**	**-1.8**
	baz=181						
SGST	**Jiashian**	**2.15**	**222**	*eP*	**Pn**	**22 01 18.2**	**+1.7**
	baz=221						
SGST				*eS*	**Sb**	**22 01 47.3**	**+0.9**
	baz=221						
ICHU	**Yijhu**	**2.16**	**232**	*eP*	**Pb**	**22 01 19.7**	**-0.1**
	baz=233						
ICHU				*eS*	**Sg**	**22 01 48.5**	**-1.4**
	baz=233						
SSD	**Sandimen**	**2.38**	**216**	*eP*	**Pn**	**22 01 21.3**	**+1.5**
	baz=215						
SSD				*eS*	**Sb**	**22 01 54.2**	**+1.1**
	baz=215						
MATB	**Ma-tsu**	**2.46**	**307**	*eP*	**Pn**	**22 01 20.8**	**0.0**
	baz=306						
MATB				*eS*	**Sn**	**22 01 48.5**	**-2.5**
	baz=306						
MASBT	**Mashibuluo**	**2.49**	**214**	*eP*	**Pn**	**22 01 23.0**	**+1.7**
	baz=195						
MASBT				*eS*	**Sn**	**22 01 54.1**	**+2.2**
	baz=195						
EAST	**Anshuo**	**2.59**	**208**	*eP*	**Pn**	**22 01 24.0**	**+1.3**
	baz=188						
PHUB	**P'eng-hu**	**2.62**	**244**	*eP*	**Pn**	**22 01 23.1**	**0.0**
	baz=244						
PHUB				*eS*	**Sn**	**22 01 55.2**	**0.0**
	baz=244						
WDGT	**Dungji**	**2.68**	**238**	*eP*	**Pn**	**22 01 25.6**	**+1.8**
	baz=238						
WDGT				*eS*	**Sn**	**22 01 57.7**	**+1.1**
	baz=238						
VCHM	**Qimei**	**2.89**	**240**	*eP*	**Pn**	**22 01 28.5**	**+1.7**
	baz=240						
VCHM				*eS*	**Sn**	**22 02 02.8**	**+1.1**
	baz=240						
AXDP	**Jialang**	**3.79**	**274**	*eP*	**Pn**	**22 01 39.7**	**+0.5**
	baz=271						
AXDP				*eS*	**Sn**	**22 02 21.5**	**-2.5**
	baz=271						

*REN **05** 22:08:26.6±1.1, 38°.26N±0°.01×118°.75W±0°.02, h9km±4km, ML2.7/9, ML2.5/59(NEIC), Error ellipse: s-maj=2.1km s-min=1.5km az=119.0*

NEIC 05 22:08:26.6±1.0, 38°.26N±0°.01×118°.76W±0°.02, h9km±4km, Error ellipse: s-maj=2.1km s-min=1.4km az=119.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVH1	**TV Hill, Hawth**	**0.20**	**358**		**Pg**	**22 08 30.9**	**0.0**
TVH1					Sg	22 08 34.1	+0.3
LHV	**Little Huntoon**	**0.20**	**93**		**Pg**	**22 08 30.8**	**+0.1**
LHV				Sg	Sg	22 08 33.5	0.0
LHV				IAML		22 08 35.5	
	comp=E,1μm,0.4s						
LHV				IAML		22 08 36.5	
	comp=N,1μm,0.6s						
HCK	**Huntoon Valley**	**0.23**	**145**		**Pg**	**22 08 31.5**	**+0.2**
NV08	**Mina Array Sit**	**0.37**	**68**		**Pg**	**22 08 33.9**	**-0.1**
NV09	**Mina Array Sit**	**0.37**	**62**		**Pg**	**22 08 33.9**	**-0.1**
ANTCA	**Antelope Range**	**0.38**	**156**		**Pg**	**22 08 34.2**	**+0.1**
NVAR	**Mina Array Bea**	**0.39**	**65**		**Pg**	**22 08 34.2**	**-0.2**
LUL	**Lundy Lake**	**0.40**	**238**		**Pg**	**22 08 34.6**	**+0.2**
MCCR	**Mono Craters**	**0.40**	**212**		**Pg**	**22 08 35.1**	**+0.5**
RYN	**Ryan**	**0.41**	**27**		**Pg**	**22 08 34.7**	**0.0**
RYN				Sg	Sg	22 08 40.7	+0.5
RYN				IAML		22 08 41.1	
	comp=E,401nm,0.4s						
RYN				IAML		22 08 41.1	
	comp=N,358nm,0.3s						
MGNR	**McGee Canyon**	**0.45**	**174**		**Pg**	**22 08 35.6**	**+0.1**
BONR	**Boundary Peak**	**0.47**	**130**		**Pg**	**22 08 36.0**	**+0.1**
NV11	**Mina Array Sit**	**0.50**	**70**		**Pg**	**22 08 36.2**	**-0.2**
NV11				Sg	Sg	22 08 43.0	-0.1
BENR	**Benton**	**0.56**	**165**		**Pg**	**22 08 37.4**	**-0.2**
BENR					Sg	22 08 45.9	+0.8
MCBM	**Casa Benchmark**	**0.63**	**190**		**Pg**	**22 08 38.9**	**+0.1**
MCBM					Sb	22 08 48.1	-0.8
ORC	**Owens River**	**0.63**	**173**		**Pg**	**22 08 38.8**	**-0.1**
MDYM	**Dry Creek**	**0.64**	**199**		**Pg**	**22 08 39.2**	**+0.2**
MDYM					Sg	22 08 48.2	+0.8
MDPB	**Devils Postpil**	**0.68**	**202**		**Pg**	**22 08 39.6**	**-0.2**
MDPB				Sg	Sg	22 08 48.6	-0.1
MDPB				IAML		22 08 49.2	
	comp=E,309nm,0.3s						
MDPB				IAML		22 08 49.5	
	comp=N,276nm,0.4s						
MLNR	**Milner Canyon**	**0.74**	**154**		**Pg**	**22 08 40.8**	**-0.2**
RCCR	**Rock Creek Can**	**0.78**	**178**		**Pg**	**22 08 41.5**	**-0.1**
YERR	**Yerington**	**0.81**	**332**		**Pg**	**22 08 42.2**	**-0.2**
YERR				Sg	Sg	22 08 53.4	+0.4
SCHCA	**Scheelite**	**0.90**	**177**		**Pg**	**22 08 44.3**	**+0.3**
KVN	**Kaiserville**	**0.94**	**33**		**Pg**	**22 08 44.2**	**-0.5**
KVN				Sn	**Sb**	**22 08 58.7**	**+0.8**
PNTR	**Pine Nut**	**1.06**	**322**		**Pg**	**22 08 46.6**	**-0.4**
PNTR				Sn	**Sb**	**22 09 01.1**	**-0.2**
PNTR				IAML		22 09 01.4	
	comp=N,158nm,0.5s						
PNTR				IAML		22 09 05.5	
	comp=E,170nm,0.4s						
DSP	**Deep Springs**	**1.09**	**145**		**Pg**	**22 08 47.1**	**-0.5**
TPH	**Tonopah**	**1.22**	**98**		**Pb**	**22 08 49.4**	**-0.6**
TPH				Sn	**Sb**	**22 09 05.6**	**-0.4**
VCNR	**Virginia City**	**1.25**	**326**		**Pn**	**22 08 49.7**	**-0.8**
VCNR				Sn	**Sg**	**22 09 06.8**	**0.0**
EMB	**Emerald Bay**	**1.27**	**304**		**Pn**	**22 08 50.1**	**-0.7**
EMB				IAML		22 09 12.3	
	comp=E,125nm,0.9s						
CMB	**Columbia Colle**	**1.30**	**260**		**Pn**	**22 08 50.7**	**-0.4**
CMB				IAML		22 09 11.5	
	comp=E,109nm,0.4s						
CMB				IAML		22 09 11.8	
	comp=N,110nm,0.5s						
LCH	**Last Change Ra**	**1.35**	**139**		**Pn**	**22 08 51.9**	**0.0**
LCH				IAML		22 09 13.6	
	comp=N,49nm,0.9s						
LCH				IAML		22 09 16.7	
	comp=E,54nm,0.5s						
Q09A	**Carvers**	**1.36**	**65**		**Pn**	**22 08 51.6**	**-0.4**
MPK	**Martis Peak**	**1.43**	**316**	Pn	**Pn**	**22 08 52.0**	**-1.1**
MPK				IAML		22 08 59.8	
	comp=E,67nm,1.0s						
MPK				IAML		22 09 25.9	
	comp=N,77nm,0.9s						
PAHR	**Pah Rah Range**	**1.52**	**341**		**Pn**	**22 08 54.2**	**0.0**
PAHR				IAML		22 09 18.1	
	comp=N,39nm,0.6s						
DONR	**Donner Summit**	**1.64**	**312**		**Pb**	**22 08 57.0**	**-0.1**
PEAR	**Peavine Mounta**	**1.64**	**325**		**Pg**	**22 08 57.7**	**-0.4**
GRAC	**Grapevine Rang**	**1.68**	**138**		**Pg**	**22 08 58.3**	**-0.5**
GRAC				IAML		22 09 23.8	
	comp=N,68nm,0.8s						
GRAC				IAML		22 09 25.3	
	comp=E,64nm,0.7s						
LOY	**Loyalton**	**1.81**	**321**		**Pb**	**22 09 00.3**	**+0.2**
SGV	**South Grapevin**	**1.87**	**133**		**Pn**	**22 08 59.3**	**+0.3**
WVA	**Winnemucca Val**	**1.87**	**334**		**Pb**	**22 09 01.1**	**0.0**
BEKR	**Beckworth**	**2.03**	**323**		**Pb**	**22 09 04.2**	**+0.4**
BEKR				IAML		22 09 33.6	
	comp=E,22nm,0.7s						
TPNV	**Topopah Spring**	**2.38**	**123**		**Pb**	**22 09 10.2**	**+0.4**
TPNV				IAML		22 09 51.5	
	comp=E,31nm,1.5s						
TPNV				IAML		22 09 56.8	
	comp=E,27nm,0.8s						
S11A	**Rachel**	**2.46**	**104**		**Pb**	**22 09 11.2**	**+0.1**
BMN	**Battle Mountai**	**2.47**	**28**		**Pn**	**22 09 06.9**	**-0.3**
BBGB	**Big Mountain B**	**2.48**	**228**		**Pg**	**22 09 12.8**	**-1.3**
R11A	**Troy Canyon, C**	**2.50**	**87**		**Pb**	**22 09 12.0**	**+0.3**
ORV	**Oroville**	**2.50**	**302**	Pn	**Pn**	**22 09 07.1**	**-0.4**
ORV				IAML		22 09 46.0	
	comp=N,20nm,0.8s						
SAO	**San Andreas Ge**	**2.61**	**236**	Pn	**Pn**	**22 09 08.4**	**-0.6**
PMPB	**Monarch Peak**	**2.62**	**219**	Pn	**Pn**	**22 09 07.8**	**-1.3**
GWY	**Greenwater Val**	**2.66**	**141**		**Pn**	**22 09 09.3**	**-0.5**
QSM	**Queen of Sheba**	**2.75**	**146**	Pn	**Pn**	**22 09 10.3**	**-0.5**
PRN	**Pahroc Range**	**3.06**	**105**	IAML		**22 10 10.0**	
	comp=N,15nm,0.6s						
PRN				IAML		22 10 14.3	
	comp=E,20nm,0.8s						
CCAC	**Calif City Air**	**3.16**	**169**	IAML		**22 10 13.1**	
	comp=E,13nm,0.9s						
CCAC				IAML		22 10 13.5	
	comp=N,17nm,1.4s						
SPR3	**Spring Creek 3**	**3.54**	**77**	IAML		**22 10 20.9**	
	comp=E,5.4nm,0.8s						
SPR3				IAML		22 10 20.9	
	comp=N,5.9nm,0.9s						
ELK	**Elko**	**3.68**	**47**	IAML		**22 10 26.9**	
	comp=N,5.4nm,0.3s						

*IDC **05** 22:12:42.5±1.2, 13°.09N×93°.51E, h0km, mb3.6/6, mbtmp3.6/7, ML4.3/1, MS2.9/2, Error ellipse: s-maj=34.4km s-min=22.5km az=51.0*

ISC 05 22:12:50.1±1.2, 13°.2N±0°.1×93°.6E±0°.1, h58km, n9, σ0°63/8, mb3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.32**	**44**	Pn	**Pn**	**22 14 33.6**	**-0.8**
	1.2nm,0.3s,baz=236,slow=15,SNR=51						
CMAR				Sn	**Sn**	**22 15 56.8**	**+0.7**
	0.3nm,0.3s,baz=235,slow=29,SNR=5.2						
	11nm,0.9s						
AAK	**Ala-Archa**	**33.70**	**334**	LR	LR	22 35 24.1	
	comp=Z,27nm,19.8s,baz=87,slow=40						
MKAR	**Makanchi Array**	**34.84**	**346**	P	**P**	**22 19 35.9**	**+0.3**
	0.4nm,0.7s,baz=170,slow=9.6,SNR=2.8						
	0.4nm,0.7s						
JOW	**Kunigami**	**35.13**	**62**	LR	LR	22 35 23.7	
	comp=Z,15nm,18.8s,baz=351,slow=39						
ZALV	**Zalesovo Beam**	**41.26**	**352**	P	**P**	**22 20 30.0**	**+0.5**
	1.0nm,0.5s,baz=174,slow=7.9,SNR=4.7						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**51.84**	**129**	P	**P**	**22 21 53.0**	**+0.1**
	0.4nm,0.8s,baz=309,slow=7.7,SNR=5.3						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**53.78**	**133**	P	**P**	**22 22 07.4**	**+0.3**
	0.3nm,0.6s,baz=301,slow=6.1,SNR=1.8						
	0.3nm,0.6s						
BRTR	**Keskin Array B**	**58.68**	**309**	P	**P**	**22 22 42.2**	**+0.2**
	0.6nm,0.6s,baz=116,slow=5.6,SNR=4.5						
	0.6nm,0.6s						
GERES	**GERESS Array B**	**73.58**	**317**	P	**P**	**22 24 16.8**	**-0.5**
	0.5nm,0.6s,baz=93,slow=7.1,SNR=4.9						
	0.5nm,0.6s						

*JMA **05** 22:24:50.2±0.2, 24°N±1°×122°.0E±0°.5, h37km, MV2.6/9, TAIWAN REGION*

*TAP **05** 22:24:51.9, 23°.75N×121°.99E, h31km, ML3.0, C*

ISC 05 22:24:51.3±1.0, 23°.74N±0°.02×122°.00E±0°.02, h30km±9km, n89, σ0°72/169, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.39**	**290**	*eP*	**Pb**	**22 25 00.6**	**+0.5**
	baz=294						
TEYL				*eS*	**Sn**	**22 25 07.2**	**-0.2**
	baz=294						
TEGC	**Jichi Village**	**0.42**	**267**	*eP*	**Pb**	**22 25 01.0**	**+0.5**
	baz=265						
TEGC				*eS*	**Sn**	**22 25 08.2**	**0.0**
	baz=265						
HWA	**Hwalien**	**0.44**	**304**	P	**Pb**	**22 25 01.0**	**+0.2**
	baz=297						
HWA				*eS*	**Sn**	**22 25 08.3**	**-0.2**
	baz=297						
TWD	**Chiawan**	**0.51**	**313**	*i* P	**Pb**	**22 25 01.7**	**-0.1**
	baz=305						
TWD				S	**Sb**	**22 25 08.9**	**-0.2**
	baz=305						
ETM	**Tongmen**	**0.52**	**296**	*eP*	**Pb**	**22 25 01.7**	**-0.4**
	baz=296						
ETM				*eS*	**Sb**	**22 25 09.7**	**+0.2**
	baz=296						
ESL	**Shilin**	**0.53**	**279**	P	**Pb**	**22 25 01.7**	**-0.5**
	baz=272						
ESL				S	**Sb**	**22 25 09.2**

HGSD	**Ruisui**	**0.58 246**	*eP*	**Pb**	**22 25 02.7**	**-0.4**
	baz=237					
HGSD			*eS*	**Sb**	**22 25 10.9**	**-0.3**
	baz=237					
EHY	**Hungye**	**0.67 250**	P	**Pb**	**22 25 04.3**	**-0.1**
	baz=248					
EHY			*eS*	**Sb**	**22 25 13.4**	**0.0**
	baz=248					
ETLH	**Xiulin Townshi**	**0.67 315**	P	**Pb**	**22 25 04.1**	**-0.5**
	baz=314					
ETLH			*eS*	**Sb**	**22 25 13.1**	**-0.6**
	baz=314					
ENA	**Nanau**	**0.73 341**	*eP*	**Pn**	**22 25 05.3**	**-0.3**
	baz=330					
ENA			*eS*	**Sb**	**22 25 15.4**	**+0.1**
	baz=330					
YULB	**Yu-li**	**0.73 242**	P	**Pn**	**22 25 05.2**	**-0.5**
	baz=241					
YULB			*eS*	**Sb**	**22 25 15.3**	**0.0**
	baz=241					
EWUT	**Wuta**	**0.74 344**	*eP*	**Pn**	**22 25 04.5**	**-1.2**
	baz=333					
EWUT			*eS*	**Sb**	**22 25 14.2**	**-1.2**
	baz=333					
EYUL	**Yuli**	**0.74 239**	P	**Pn**	**22 25 05.4**	**-0.3**
	baz=230					
EYUL			*eS*	**Sb**	**22 25 15.7**	**+0.2**
	baz=230					
OWD	**Renai**	**0.79 286**	P	**Pn**	**22 25 06.1**	**-0.4**
	baz=285					
OWD			*eS*	**Sb**	**22 25 16.5**	**-0.5**
	baz=285					
WHF	**Hehuan Shan**	**0.79 301**	*eP*	**Pn**	**22 25 06.1**	**-0.7**
	baz=294					
WHF			*eS*	**Sb**	**22 25 16.7**	**-0.6**
	baz=294					
VWDT	**VWDT**	**0.79 272**	P	**Pn**	**22 25 06.5**	**+0.1**
	baz=271					
VWDT			*eS*	**Sb**	**22 25 17.2**	**+0.2**
	baz=271					
CHGB	**Renai**	**0.82 293**	P	**Pn**	**22 25 06.8**	**-0.3**
	baz=293					
CHGB			*eS*	**Sb**	**22 25 18.1**	**-0.1**
	baz=293					
FULB	**Fuli**	**0.84 231**	*eP*	**Pn**	**22 25 06.4**	**-0.8**
	baz=220					
FULB			*eS*	**Sn**	**22 25 17.6**	**-0.9**
	baz=220					
WUSB	**Renai**	**0.85 288**	P	**Pn**	**22 25 07.3**	**0.0**
	baz=287					
WUSB			*eS*	**Sb**	**22 25 18.0**	**-0.8**
	baz=287					
FUSS	**Fushou**	**0.86 306**	P	**Pn**	**22 25 07.5**	**-0.1**
	baz=306					
FUSS			S	**Sb**	**22 25 18.6**	**-0.7**
	baz=306					
TWC	**Suao**	**0.88 351**	*eP*	**Pn**	**22 25 07.8**	**+0.1**
	baz=3.0					
TWC			*eS*	**Sn**	**22 25 19.4**	**-0.1**
	baz=3.0					
NNSB	**Datong**	**0.89 321**	*eP*	**Pn**	**22 25 07.9**	**0.0**
	baz=320					
NNSB			*eS*	**Sn**	**22 25 19.2**	**-0.8**
	baz=320					
LATG	**Datong**	**0.91 331**	*eP*	**Pn**	**22 25 08.1**	**-0.1**
	baz=331					
LATG			*eS*	**Sn**	**22 25 19.0**	**-1.3**
	baz=331					
NNS	**Nan Shan**	**0.91 321**	*eP*	**Pn**	**22 25 07.3**	**-0.8**
	baz=321					
NNS			*eS*	**Sn**	**22 25 18.9**	**-1.4**
	baz=321					
TWT	**Tachien**	**0.92 304**	*eP*	**Pn**	**22 25 08.7**	**+0.4**
	baz=303					
TWT			*eS*	**Sn**	**22 25 20.4**	**-0.1**
	baz=303					
TDCB	**Techi**	**0.93 304**	P	**Pn**	**22 25 08.6**	**+0.2**
	baz=303					
TDCB			*eS*	**Sn**	**22 25 19.7**	**-1.1**
	baz=303					
NDS	**Dongshan**	**0.93 344**	*eP*	**Pn**	**22 25 07.5**	**-0.9**
	baz=344					
NDS			*eS*	**Sn**	**22 25 19.6**	**-1.1**
	baz=344					
SSLB	**Suanglung**	**0.96 273**	*eP*	**Pn**	**22 25 08.8**	**-0.1**
	baz=272					
SSLB			*eS*	**Sn**	**22 25 20.6**	**-0.9**
	baz=272					
NDT	**Datong Townshi**	**0.97 333**	*eP*	**Pn**	**22 25 09.0**	**+0.1**
	baz=332					
NDT			*eS*	**Sn**	**22 25 20.9**	**-0.8**
	baz=332					
ENTT	**Nioudou**	**0.98 336**	*eP*	**Pn**	**22 25 08.5**	**-0.7**
	baz=336					
ENTT			*eS*	**Sn**	**22 25 21.1**	**-1.0**
	baz=336					
EDH	**Donghe**	**0.99 220**	*eP*	**Pn**	**22 25 08.2**	**-1.0**
	baz=220					
EDH			*eS*	**Sn**	**22 25 20.5**	**-1.8**
	baz=220					
YUS	**Yu-Shan**	**0.99 256**	*eP*	**Pn**	**22 25 09.6**	**-0.1**
	baz=255					
YUS			*eS*	**Sn**	**22 25 22.4**	**-0.6**
	baz=255					
SMLT	**Sun Moon Lake**	**1.02 279**	*eP*	**Pn**	**22 25 10.2**	**+0.5**
	baz=278					
SMLT			*eS*	**Sn**	**22 25 23.4**	**+0.3**
	baz=278					
WCS	**Beigang Elemen**	**1.05 288**	*eP*	**Pn**	**22 25 09.6**	**-0.4**
	baz=279					
WCS			*eS*	**Sn**	**22 25 23.1**	**-0.5**
	baz=279					
ELDTW	**Lidau**	**1.06 239**	*eP*	**Pn**	**22 25 09.5**	**-0.7**
	baz=227					
ELDTW			*eS*	**Sn**	**22 25 22.2**	**-1.8**
	baz=227					
TYC	**Yuchr**	**1.06 279**	*eP*	**Pn**	**22 25 10.5**	**+0.4**
	baz=279					
TYC			*eS*	**Sb**	**22 25 24.7**	**+0.1**
	baz=279					
FUSB	**Fushanzhiwuyua**	**1.09 340**	*eP*	**Pn**	**22 25 10.9**	**+0.3**
	baz=326					
FUSB			*eS*	**Sn**	**22 25 24.5**	**-0.2**
	baz=326					
YHNB	**Yeheng**	**1.09 328**	*eP*	**Pn**	**22 25 11.2**	**+0.5**
	baz=328					
YHNB			*eS*	**Sn**	**22 25 23.7**	**-1.1**
	baz=328					
NSK	**Sanguang**	**1.11 328**	*eP*	**Pn**	**22 25 10.0**	**-0.8**
	baz=328					
NSK			*eS*	**Sn**	**22 25 23.7**	**-1.4**
	baz=328					
EGS		**1.11 357**	*eP*	**Pb**	**22 25 11.7**	**-0.1**
	baz=8.0					
EGS			*eS*	**Sb**	**22 25 25.9**	**-0.1**
	baz=8.0					
WHP	**Taichung City**	**1.11 299**	*eP*	**Pb**	**22 25 12.0**	**+0.1**
	baz=308					
WHP			*eS*	**Sn**	**22 25 25.5**	**+0.3**
	baz=308					
JYNG	**Yonagunijimaku**	**1.12 50**	P	**Pn**	**22 25 11.3**	**+0.4**
JYNG			*eS*	**Sn**	**22 25 25.3**	**0.0**
ALS	**Alishan**	**1.12 259**	P	**Pn**	**22 25 12.1**	**+0.9**
	baz=258					
ALS			*eS*	**Sn**	**22 25 26.3**	**+0.5**
	baz=258					
NWLT	**Wulai**	**1.13 336**	*eP*	**Pn**	**22 25 11.9**	**+0.7**
	baz=336					
NWLT			*eS*	**Sn**	**22 25 25.6**	**-0.1**
	baz=336					
LONT	**Longtian**	**1.15 224**	*eS*	**Sn**	**22 25 24.7**	**-1.5**
	baz=216					
LDUT	**Ludao**	**1.17 205**	*eP*	**Pn**	**22 25 10.6**	**-1.0**
	baz=205					
LDUT			*eS*	**Sn**	**22 25 24.4**	**-2.0**
	baz=205					
YOJ	**Yonaguni jima**	**1.17 52**	*eP*	**Pn**	**22 25 11.9**	**+0.3**
	baz=52					
YOJ			*eS*	**Sn**	**22 25 26.6**	**0.0**
	baz=52					
YOJ	**Yonaguni jima**	**1.17 52**	P	**Pn**	**22 25 12.1**	**+0.4**
YOJ			*eS*	**Sn**	**22 25 26.8**	**+0.2**
NFF	**Wufeng Townshi**	**1.21 318**	*eP*	**Pn**	**22 25 12.8**	**+0.6**
	baz=317					
NFF			*eS*	**Sn**	**22 25 27.3**	**-0.2**
	baz=317					
WNT	**Mingjian**	**1.22 277**	*eP*	**Pb**	**22 25 13.9**	**+0.1**
	baz=276					
WNT			*eS*	**Sb**	**22 25 30.3**	**+1.2**
	baz=276					
CHN5	**Tsauling**	**1.22 264**	*eP*	**Pn**	**22 25 12.3**	**-0.1**
	baz=263					
CHN5			*eS*	**Sn**	**22 25 28.7**	**+0.7**
	baz=263					
TIPB	**Shuangxi**	**1.24 353**	*eP*	**Pn**	**22 25 13.8**	**+1.1**
	baz=3.0					
TIPB			*eS*	**Sn**	**22 25 29.2**	**+0.8**
	baz=3.0					
STYH	**Taoyuan**	**1.26 244**	*eP*	**Pn**	**22 25 12.2**	**-0.7**
	baz=233					
STYH			*eS*	**Sn**	**22 25 27.9**	**-0.9**
	baz=233					
NSTT	**Nanjuang**	**1.28 314**	*eP*	**Pb**	**22 25 14.7**	**0.0**
	baz=314					
NSTT			*eS*	**Sb**	**22 25 30.7**	**-0.2**
	baz=314					
LIOB	**Emei**	**1.28 315**	*eP*	**Pb**	**22 25 15.1**	**+0.3**
	baz=324					
LIOB			*eS*	**Sb**	**22 25 30.8**	**-0.1**
	baz=324					
TWQ1	**Liyutan**	**1.28 299**	*eP*	**Pb**	**22 25 15.1**	**+0.3**
	baz=298					
TWQ1			*eS*	**Sb**	**22 25 32.0**	**+1.1**
	baz=298					
TCU	**Taichung**	**1.28 289**	*eP*	**Pb**	**22 25 15.3**	**+0.5**
	baz=288					
TCU			*eS*	**Sb**	**22 25 32.3**	**+1.3**
	baz=288					
NSY	**Sanyi**	**1.32 301**	*eP*	**Pb**	**22 25 16.0**	**+0.4**
	baz=300					
NSY			*eS*	**Sb**	**22 25 33.2**	**+1.1**
	baz=300					
TPUB	**Ta-pu**	**1.33 251**	*eP*	**Pb**	**22 25 15.5**	**-0.2**
	baz=251					
TPUB			*eS*	**Sb**	**22 25 33.0**	**+0.6**
	baz=251					
WDLH	**Douliu**	**1.34 268**	*eP*	**Pb**	**22 25 15.8**	**0.0**
	baz=267					
WDLH			*eS*	**Sb**	**22 25 33.2**	**+0.5**
	baz=267					
CHN4	**Tsaushan**	**1.35 254**	*eP*	**Pn**	**22 25 15.0**	**+0.9**
	baz=253					
CHN4			*eS*	**Sb**	**22 25 33.5**	**+0.6**
	baz=253					
SXI1	**Grass Mountain**	**1.36 355**	*eP*	**Pn**	**22 25 15.3**	**+1.0**
	baz=10.0					
NMLH	**Miaoli**	**1.36 306**	*eS*	**Sb**	**22 25 34.5**	**+1.2**
	baz=305					
WTP	**Ta-pu**	**1.36 249**	*eP*	**Pn**	**22 25 15.6**	**+1.2**
	baz=249					
WTP			*eS*	**Sb**	**22 25 34.1**	**+0.7**
	baz=249					
WCHH	**Zhanghua**	**1.37 285**	*eP*	**Pb**	**22 25 16.6**	**+0.3**
	baz=284					
WCHH			*eS*	**Sb**	**22 25 34.5**	**+1.2**
	baz=284					
SGST	**Jiashian**	**1.46 244**	*eP*	**Pn**	**22 25 17.1**	**+1.5**
	baz=234					
SGST			*eS*	**Sb**	**22 25 35.4**	**-0.6**
	baz=234					
CHN1	**Nanshi**	**1.46 248**	*eP*	**Pb**	**22 25 17.6**	**-0.3**
	baz=248					
CHN1			*eS*	**Sb**	**22 25 37.0**	**+0.9**
	baz=248					
TWS1	**Kuangyinshan**	**1.46 339**	*eS*	**Sb**	**22 25 35.5**	**-0.6**
	baz=338					
TWK	**Hsinying**	**1.47 252**	*eP*	**Pb**	**22 25 17.6**	**-0.4**
	baz=251					
TWK			*eS*	**Sb**	**22 25 36.4**	**+0.1**
	baz=251					
CHY	**Chiayi**	**1.47 261**	*eS*	**Sb**	**22 25 36.4**	**+0.1**
	baz=260					
SNST	**Tainan City**	**1.48 250**	*eP*	**Pn**	**22 25 15.6**	**-0.2**
	baz=249					
SNST			*eS*	**Sb**	**22 25 36.6**	**+0.2**
	baz=249					
WRL	**Guolierlin Hig**	**1.50 277**	*eS*	**Sb**	**22 25 36.9**	**-0.3**
	baz=276					
SSD	**Sandimen**	**1.60 232**	*eP*	**Pn**	**22 25 19.1**	**+1.6**
	baz=223					
SSD			*eS*	**Sn**	**22 25 38.6**	**+1.4**
	baz=223					
ICHU	**Yijhu**	**1.62 257**	*eS*	**Sb**	**22 25 40.1**	**-0.6**
	baz=257					
WSL	**Shuilin Townsh**	**1.64 263**	*eP*	**Pn**	**22 25 19.6**	**+1.5**
	baz=262					
WSL			*eS*	**Sb**	**22 25 40.4**	**-0.8**
	baz=262					
HATJ	**Hateruma jima**	**1.68 79**	P	**Pn**	**22 25 18.8**	**+0.2**
HATJ			*eS*	**Sn**	**22 25 39.1**	**-0.1**
MASBT	**Mashibuluo**	**1.69 229**	*eP*	**Pn**	**22 25 19.5**	**+0.8**
	baz=222					
MASBT			*eS*	**Sn**	**22 25 39.0**	**-0.3**
	baz=222					
IRIF	**Iriomote-Funau**	**1.69 69**	P	**Pn**	**22 25 19.2**	**+0.4**
SCZT	**Fangliau**	**1.86 223**	*eP*	**Pn**	**22 25 23.4**	**+2.3**
	baz=214					
JKRS	**Kuro-shima**	**1.90 74**	P	**Pn**	**22 25 22.3**	**+0.6**
JKRS			*eS*	**Sn**	**22 25 45.5**	**+0.8**
JIJ	**Ishigaki jima**	**2.05 72**	P	**Pn**	**22 25 23.7**	**-0.1**
JIJ			S	**Sn**	**22 25 47.5**	**-0.9**
WDGT	**Dungji**	**2.20 258**	*eP*	**Pn**	**22 25 26.8**	**+0.9**
	baz=258					
WDGT			*eS*	**Sn**	**22 25 51.8**	**-0.3**
	baz=258					
PHUB	**P'eng-hu**	**2.24 265**	*eP*	**Pn**	**22 25 27.5**	**+1.1**
	baz=252					
PHUB			*eS*	**Sn**	**22 25 53.2**	**+0.2**
	baz=252					
VCHM	**Qimei**	**2.42 258**	*eP*	**Pn**	**22 25 29.6**	**+0.8**
	baz=258					
VCHM			*eS*	**Sn**	**22 25 57.7**	**+0.2**
	baz=258					
JTJ	**Tarama**	**2.62 69**	P	**Pn**	**22 25 32.1**	**+0.4**
JTJ			*eS*	**Sn**	**22 26 01.6**	**-0.9**
VWUC	**VWUC**	**2.64 299**	*eP*	**Pn**	**22 25 32.2**	**+0.3**
	baz=297					
VWUC			*eS*	**Sn**	**22 26 02.0**	**-0.9**
	baz=297					

*IDC **05** 22:48:13.2±1.0, 24.°56N×94.°70E, h0km, mb3.6/7, mbtmp3.6/7, MS3.1/2, Error ellipse: s-maj=47.0km s-min=20.0km az=67.0*

ISC 05 22:48:26.7±1.1, 24.°7N±0.°2×94.°8E±0.°3, h112km, n9, σ0.°79/7, mb3.5/7, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**24.21**	**339**	P	**P**	**22 53 32.7**	**-0.1**
	0.7nm,0.6s,baz=150,slow=9.3,SNR=8.3 0.7nm,0.6s						
SONM	**Songino Array**	**24.85**	**19**	P	**P**	**22 53 39.7**	**+1.0**
	0.3nm,0.6s,baz=203,slow=9.4,SNR=1.5 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**28.78**	**338**	P	**P**	**22 54 12.9**	**-0.8**
	0.2nm,0.4s,baz=146,slow=10,SNR=4.4 0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**30.15**	**348**	P	**P**	**22 54 25.3**	**-0.5**
	0.5nm,0.5s,baz=158,slow=8.2,SNR=3.0 0.5nm,0.5s						
GEYT	**Alibeck**	**33.79**	**302**	LR	LR	23 08 57.3	
	comp=Z,23nm,19.2s,baz=28,slow=37						
WRA	**Warramunga Arr**	**58.73**	**136**	P	**P**	**22 58 12.6**	**-0.4**
	0.2nm,0.4s,baz=323,slow=7.5,SNR=6.0 0.2nm,0.4s						
ASAR	**Alice Springs**	**61.23**	**139**	P	**P**	**22 58 29.8**	**-0.3**
	0.4nm,0.5s,baz=322,slow=6.5,SNR=6.6 0.4nm,0.5s						
KMBO	**Kilima Mbogo**	**61.34**	**254**	LR	LR	23 23 39.9	
	comp=Z,23nm,18.4s,baz=98,slow=35						
BOSA	**Boshof**	**85.34**	**236**	P	**P**	**23 00 52.2**	**+0.5**
	1.3nm,0.6s,baz=67,slow=7.7,SNR=4.1 1.3nm,0.6s						

IDC 05 23:19:55.7±1.7, 1.°46N×125.°54E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=174.2km s-min=22.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.95**	**158**	P	P	23 25 01.6	-0.2
	3.3nm,0.4s,baz=336,slow=11,SNR=37 3.3nm,0.4s						
ASAR	**Alice Springs**	**26.27**	**162**	P	P	23 25 33.0	+0.1
	0.4nm,0.3s,baz=348,slow=7.8,SNR=6.4 0.4nm,0.3s						
STKA	**Stephens Creek**	**36.48**	**157**	P	P	23 27 02.7	0.0
	1.1nm,0.6s,baz=353,slow=8.1,SNR=3.0 1.1nm,0.6s						
MKAR	**Makanchi Array**	**58.76**	**327**	P	P	23 29 55.6	-0.1
	0.5nm,0.4s,baz=121,slow=7.4,SNR=15 0.5nm,0.4s						

*IDC **05** 23:21:29.1±21.0, 18.°66N×145.°58E, h151km±201km, mb3.5/8, mbtmp3.9/8, MS3.2/1, Error ellipse: s-maj=38.1km s-min=31.4km az=97.0*
*NEIC **05** 23:21:32.1±2.7, 18.°73N±0.°07×145.°6E±0.°2, h168km±7km, mb4.3/41, Error ellipse: s-maj=22.7km s-min=9.5km az=82.0*

ISC 05 23:21:29.5±0.6, 18.°83N±0.°07×145.°6E±0.°2, h150km, n60, σ1.°63/60, mb4.3/28, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.25**	**188**	Pn	**Pn**	**23 22 50.3**	**+4.0**
GUMO				Sn	**Sn**	**23 23 48.0**	**+1.7**
JCJ	**Chichijima**	**8.80**	**340**	Pn	**Pn**	**23 23 32.9**	**-0.7**
COEN	**Coen**	**32.67**	**184**	P	**P**	**23 27 45.4**	**-2.1**
MTN	**Manton Dam**	**34.55**	**205**	P	**P**	**23 28 01.5**	**-2.3**
KNRA	**Kununurra**	**38.08**	**207**	P	**P**	**23 28 32.7**	**-1.0**
WB0	**Warramunga Arr**	**39.90**	**197**	P	**P**	**23 28 47.1**	**-1.8**
WB0				IAmb	IAmb	23 28 48.1	
	comp=Z,13nm,1.4s						
WR0	**Warramunga Arr**	**40.04**	**196**	P	**P**	**23 28 48.1**	**-2.0**
WR0				IAmb	IAmb	23 28 53.5	
	comp=Z,8.5nm,1.2s						
WB2	**Warramunga Arr**	**40.08**	**197**	P	**P**	**23 28 48.4**	**-1.9**
WB2				IAmb	IAmb	23 29 29.6	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**40.08**	**197**	P	**P**	**23 28 48.5**	**-1.9**
	comp=Z,1.7nm,0.4s,baz=20,slow=8.8,SNR=29 comp=Z,1.7nm,0.4s						
WRA	**Warramunga Arr**	**40.08**	**197**	P	**P**	**23 28 48.2**	**-2.2**
FITZ	**Fitzroy Crossi**	**41.60**	**209**	P	**P**	**23 29 01.2**	**-1.6**
	comp=Z,2.8nm,0.7s,baz=28,slow=12,SNR=2.5 comp=Z,2.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.60**	**209**	P	**P**	**23 29 01.2**	**-1.6**
FITZ				IAmb	IAmb	23 29 01.9	
	comp=Z,10nm,1.2s						
AS31	**Alice Springs**	**43.75**	**196**	P	**P**	**23 29 18.6**	**-1.5**
ASAR	**Alice Springs**	**43.75**	**196**	P	**P**	**23 29 18.2**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=12,slow=6.8,SNR=10 comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**43.75**	**196**	P	**P**	**23 29 18.7**	**-1.5**
NIKH	**Nikolski High**	**48.96**	**35**	P	**P**	**23 29 59.5**	**-1.0**
BBOO	**Buckleboo**	**52.15**	**190**	P	**P**	**23 30 24.1**	**-0.5**
BBOO				IAmb	IAmb	23 30 58.5	
	comp=Z,18nm,1.4s						
AFI	**Afiamalu**	**53.13**	**125**	LR	LR	23 46 55.6	
	comp=Z,24nm,20.6s,baz=41,slow=29						
CAN	**Canberra**	**53.95**	**177**	P	**P**	**23 30 36.2**	**-1.5**
MKAR	**Makanchi Array**	**58.30**	**314**	P	**P**	**23 31 09.8**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=79,slow=7.5,SNR=1.8 comp=Z,0.2nm,0.5s						
RSO	**Redoubt South**	**59.90**	**30**	P	**P**	**23 31 18.8**	**-0.8**
K20K	**Telida**	**60.16**	**27**	P	**P**	**23 31 23.6**	**+2.6**
K20K				IAmb	IAmb	23 31 31.2	
	comp=Z,7.4nm,1.5s						
J20K	**Nowinta River**	**60.39**	**26**	P	**P**	**23 31 25.4**	**+2.9**
J20K				IAmb	IAmb	23 32 06.3	
	comp=Z,4.0nm,1.2s						
CNPM	**China Poot**	**60.41**	**32**	P	**P**	**23 31 23.3**	**+0.5**
CAPN	**Captain Cook N**	**60.75**	**30**	P	**P**	**23 31 23.9**	**-1.1**
IMAR	**Indian Mountai**	**61.14**	**24**	P	**P**	**23 31 30.1**	**+2.5**
H21K	**Melozitna Rive**	**61.40**	**25**	P	**P**	**23 31 32.0**	**+2.5**
H21K				IAmb	IAmb	23 32 14.5	
	comp=Z,4.8nm,1.5s						
BPAW	**Bear Paw Mtn.**	**61.69**	**26**	P	**P**	**23 31 33.0**	**+1.6**
BPAW				IAmb	IAmb	23 31 34.0	
	comp=Z,2.3nm,0.6s						
TRF	**Thorofare Moun**	**61.81**	**27**	P	**P**	**23 31 33.0**	**+0.6**
TRF				IAmb	IAmb	23 31 39.2	
	comp=Z,12nm,1.4s						
GHO	**Glory Hole Cre**	**62.03**	**29**	P	**P**	**23 31 35.0**	**+1.2**
MLY	**Manley**	**62.05**	**26**	P	**P**	**23 31 35.2**	**+1.4**
MLY				IAmb	IAmb	23 31 36.2	
	comp=Z,5.3nm,1.4s						
PWL	**Port Wells**	**62.11**	**30**	P	**P**	**23 31 33.2**	**-1.1**
I23K	**Minto, Yukon-K**	**62.64**	**26**	P	**P**	**23 31 39.8**	**+2.2**
I23K				IAmb	IAmb	23 31 40.7	
	comp=Z,2.4nm,0.5s						
H23K	**Yukon River**	**62.74**	**25**	P	**P**	**23 31 38.9**	**+0.5**
H23K				IAmb	IAmb	23 31 43.4	
	comp=Z,3.3nm,1.2s						
SCM	**Sheep Creek Mo**	**62.78**	**29**	P	**P**	**23 31 38.2**	**-0.6**
H24K	**Noodor Dome**	**63.41**	**25**	P	**P**	**23 31 44.9**	**+2.1**
TOLK	**Toolik Lake Re**	**63.51**	**22**	P	**P**	**23 31 45.5**	**+2.1**
TOLK				IAmb	IAmb	23 31 57.2	
	comp=Z,7.6nm,1.3s						
IL31		**63.58**	**26**	P	**P**	**23 31 44.1**	**+0.4**
IL31				IAmb	IAmb	23 31 59.3	
	comp=Z,5.9nm,1.5s						
ILAR	**Eielson Array**	**63.58**	**26**	P	**P**	**23 31 43.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=252,slow=5.4,SNR=9.6 comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**63.58**	**26**	P	**P**	**23 31 44.1**	**+0.2**
PAX	**Paxson**	**63.84**	**28**	P	**P**	**23 31 46.9**	**+1.2**
PAX				IAmb	IAmb	23 32 03.7	
	comp=Z,2.9nm,1.1s						
N25K	**Chitina, Valde**	**64.02**	**30**	P	**P**	**23 31 49.2**	**+2.3**
N25K				IAmb	IAmb	23 32 04.1	
	comp=Z,8.1nm,1.2s						
J25K	**Salcha River,**	**64.18**	**27**	P	**P**	**23 31 48.5**	**+0.6**
RIDG	**Independent Ri**	**64.25**	**28**	P	**P**	**23 31 49.6**	**+1.3**
RIDG				IAmb	IAmb	23 32 11.7	
	comp=Z,7.6nm,1.4s						
SCRK	**Sand Creek**	**64.67**	**27**	P	**P**	**23 31 52.4**	**+1.2**
SCRK				IAmb	IAmb	23 31 53.3	
	comp=Z,5.8nm,1.4s						
J26L	**Joseph Creek**	**64.93**	**27**	P	**P**	**23 31 54.0**	**+1.3**
BMAR	**Burnt Mountain**	**65.04**	**24**	P	**P**	**23 31 56.2**	**+2.8**
M27K	**Edge Creek, AK**	**65.39**	**29**	P	**P**	**23 31 56.2**	**+0.4**
M27K				IAmb	IAmb	23 32 27.9	
	comp=Z,5.5nm,1.5s						
L27K	**Beaver Creek,**	**65.50**	**29**	P	**P**	**23 31 58.1**	**+1.7**
L27K				IAmb	IAmb	23 32 12.4	
	comp=Z,4.8nm,1.4s						
M30M	**Minto, Yukon**	**67.77**	**29**	P	**P**	**23 32 12.1**	**+1.3**
ABKAR	**Akbulak array**	**73.17**	**317**	P	**P**	**23 32 44.1**	**+0.4**
K05A	**Summer Lake**	**79.98**	**48**	P	**P**	**23 33 23.3**	**+0.9**
ARCES	**ARCESS Array B**	**82.34**	**342**	P	**P**	**23 33 35.2**	**+1.1**
	comp=Z,1.0nm,1.0s,baz=95,slow=10.0,SNR=1.1 comp=Z,1.0nm,1.0s						
KVN	**Kaiserville**	**83.10**	**51**	P	**P**	**23 33 39.2**	**+0.3**
NVAR	**Mina Array Bea**	**83.14**	**52**	P	**P**	**23 33 40.0**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=271,slow=6.4,SNR=12 comp=Z,1.4nm,0.6s						
LRM	**Limekiln Ridge**	**84.72**	**43**	P	**P**	**23 33 47.6**	**+0.5**
HRY	**Holter Researc**	**84.79**	**42**	P	**P**	**23 33 48.0**	**+0.8**
DLMT	**Dillon**	**84.79**	**44**	P	**P**	**23 33 47.9**	**+0.6**
MCMT	**McKenzie Canyo**	**84.82**	**44**	P	**P**	**23 33 47.5**	**0.0**
FINES	**FINESS Array B**	**86.72**	**335**	P	**P**	**23 33 54.7**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=58,slow=3.4,SNR=3.5 comp=Z,0.7nm,0.8s						

IDC 05 23:21:55.9±7.5, 2.°23N×125.°21E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=189.8km s-min=118.2km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.78**	**158**	P	P	23 27 09.8	-0.6
	0.5nm,0.4s,baz=337,slow=10,SNR=4.8 0.5nm,0.4s						
ASAR	**Alice Springs**	**27.09**	**162**	P	P	23 27 39.6	-1.0
	0.2nm,

σ1§32/6, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	3.09	172	Sn	Sn	23 29 58.3	-0.5
	11nm,0.3s,baz=298,slow=21,SNR=1.7						
MJAR	Matsushiro Arr	7.00	336	Pn	Pn	23 30 14.1	-1.5
	0.2nm,0.3s,baz=161,slow=10,SNR=6.3						
	1.2nm,0.4s						
MKAR	Makanchi Array	48.24	308	P	P	23 37 14.7	+0.7
	0.4nm,0.5s,baz=97,slow=10.0,SNR=5.0						
	0.4nm,0.5s						
WRA	Warramunga Arr	50.33	189	P	P	23 37 29.4	-0.6
	1.0nm,0.7s,baz=6.4,slow=7.7,SNR=6.9						
	1.0nm,0.7s						
ASAR	Alice Springs	54.05	189	P	P	23 37 57.9	+0.2
	0.4nm,0.8s,baz=6.7,slow=5.8,SNR=4.0						
	0.4nm,0.8s						
FINES	FINESS Array B	75.02	333	P	P	23 40 15.7	+1.3
	0.7nm,0.8s,baz=28,slow=6.5,SNR=4.0						
	0.7nm,0.8s						

NEIC ***06*** *00:17:32.3±1.9, 6.43S±0.06×130.1E±0.1, h144km±11km, mb4.4/3, Error ellipse: s-maj=14.7km s-min=8.4km az=101.0*

IDC ***06*** *00:17:32.4±2.2, 6.46S×130.08E, h162km±27km, mb3.2/1, mbtmp3.9/6, Error ellipse: s-maj=28.7km s-min=19.7km az=105.0*

ISC 06 00:17:31.3±0.7, 6.40S±0.05×130.10E±0.07, h146km, n20, σ1§16/25, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.98	143	Pn	Pn	00 18 06.5	+0.5
SAUI				Sn	Sn	00 18 33.2	+0.6
FAKI	Fak Fak	4.06	32	Pn	Pn	00 18 33.5	+1.1
FAKI				Sn	Sn	00 19 19.1	-0.8
SIJI	Sorong	5.61	12	P	Pn	00 18 55.4	+2.5
	5.1nm,0.4s,baz=229,slow=23,SNR=1.2						
SIJI				S	Sn	00 19 53.8	-2.9
	13nm,0.2s,baz=250,slow=23,SNR=12						
MTN	Manton Dam	6.49	171	Pn	Pn	00 19 03.8	-0.8
MTN				Sn	Sn	00 20 15.2	-2.4
SOEI	Soe	6.67	240	Pn	Pn	00 19 07.5	+0.4
BATI	Baumata	7.41	239	P	Pn	00 19 17.8	+0.8
	29nm,0.5s,baz=55,slow=1.5,SNR=3.8						
BATI				S	Sn	00 20 38.9	-0.8
	12nm,0.3s,baz=238,slow=17,SNR=1.6						
FITZ	Fitzroy Crossi	12.42	200	P	Pn	00 20 23.4	+0.1
	0.8nm,0.6s,baz=30,slow=10,SNR=7.1						
FITZ				S	Sn	00 22 30.1	-10
	0.8nm,0.3s,baz=284,slow=11,SNR=3.2						
FITZ	Fitzroy Crossi	12.42	200	Pn	Pn	00 20 23.2	-0.1
WB0	Warramunga Arr	13.93	163	P	P	00 20 46.3	+0.2
WRA	Warramunga Arr	14.08	163	P	Pn	00 20 43.3	-1.3
	1.2nm,0.4s,baz=345,slow=11,SNR=45						
WRA				S	Sn	00 23 10.7	-10
	0.5nm,0.3s,baz=345,slow=21,SNR=8.2						
WRA	Warramunga Arr	14.08	163		P	00 20 46.9	-0.8
WB2	Warramunga Arr	14.09	163		P	00 20 48.0	+0.2
WR0	Warramunga Arr	14.16	163	P	P	00 20 48.7	+0.1
COEN	Coen	14.90	121	P	P	00 20 57.9	+1.1
AS31	Alice Springs	17.56	168	P	Pn	00 21 27.5	+0.3
AS31				IAmb	IAmb	00 21 28.4	
	comp=Z,1.7nm,1.1s						
ASAR	Alice Springs	17.56	168	P	P	00 21 26.2	0.0
	comp=Z,1.9nm,0.4s,baz=346,slow=10.0,SNR=27						
ASAR	Alice Springs	17.56	168	P	Pn	00 21 27.2	0.0
GIRL	Giralia	22.25	222	P	P	00 22 16.7	+0.3
GIRL				IAmb	IAmb	00 22 16.7	
	comp=Z,40nm,1.1s						
MKAR	Makanchi Array	67.78	327	P	P	00 28 12.8	-0.6
	comp=Z,0.4nm,0.5s,baz=117,slow=8.4,SNR=4.7						
	comp=Z,0.4nm,0.5s						
MKAR	Makanchi Array	67.78	327	P	P	00 28 12.6	-0.8

NIED ***06*** *00:21:34.1, 32.36N×130.60E, h6km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.02; Mθθ0.68; Mϕϕ-0.70; Mrθ-0.82; Mθϕ1.37; Mϕr0.43; Fault plane solution: M₀1.78000×10¹⁴ NP1: ϕs195.00000°, δ60.00000°, λ-176.00000°. NP2: ϕs103.00000°, δ86.00000°, λ-30.00000°.*

JMA 06 00:21:34.1±0.0, 32.4N±0.1×130.6E±0.1, h6km±1km, MV3.5/20, 4D, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZO	Okuchi	0.22	180	P	Pg	00 21 38.6	+0.1
JZO				S	Sg	00 21 41.8	+0.3
JIU3	Izumi3	0.26	44	⇓ eP	Pg	00 21 39.2	0.0
JIU3				⇓S	Sg	00 21 43.3	+0.6
JHD	Hondo	0.41	285	eP	Pg	00 21 42.3	+0.3
JHD				S	Sg	00 21 48.1	+0.8
JTA	Tamana	0.60	355	S	Sg	00 21 54.1	+0.6
JTZ	Takazaki	0.62	138	P	Pg	00 21 46.7	+0.6
JTSN	Tsuno	0.78	99	⇓ iP	Pg	00 21 49.3	+0.3
JTSN				⇓S	Sg	00 21 59.2	+0.1

IDC ***06*** *01:11:07.9±0.5, 29.17S×61.09E, h0km, mb4.4/20, mbtmp4.4/21, ML4.8/1, MS3.7/48, Error ellipse: s-maj=15.8km s-min=13.8km az=50.0*

GCMT ***06*** *01:11:08.8±0.4, 29.27S±0.02×60.77E±0.05, h19km±1km, MW4.8/74, Moment Tensor Solution. s17, c17; s74, c99; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.79±.18; Mθθ2.25±.12; Mϕϕ-0.46±.11; Mrθ-0.06±.19; Mθϕ0.10±.07; Mϕr0.76±.29; Best double couple: M₀2.19400×10¹⁶ NP1:ϕs110.00000°, δ50.00000°, λ-123.00000°. NP2: ϕs245.00000°, δ50.00000°, λ-57.00000°. Principal axes: T 2.2540, Plg0.0000°, Azm178.0000°; N -0.1210, Plg24.0000°, Azm268.0000°; P -2.1350, Plg66.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***06*** *01:11:09.8±2.1, 29.12S±0.10×60.9E±0.1, h10km±1km, mb4.7/25 Error ellipse: s-maj=19.6km s-min=16.0km az=63.0*

ISC 06 01:11:09.3±0.4, 29.15S±0.08×61.01E±0.08, h10km, n124, σ1§06/89, **mb4.7**/47, **MS3.8**/51, **1C-1D, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.27	328	Pn	Pn	01 13 20.0	-3.2
FOMA	Nahampoana Res	13.17	285	Pn	Pn	01 14 14.2	-2.3
VOI	Vohitsoka	14.71	296	Pn	Pn	01 14 37.0	-0.6
ABPO	Ambohimpanom	16.11	306	Pn	Pn	01 14 54.4	-1.7
OPO	Ambohidratompo	16.44	307	Pn	Pn	01 15 00.4	0.0
	0.4nm,0.3s,baz=117,slow=13,SNR=20						
OPO				Sn	Sn	01 17 49.0	-14
	0.4nm,0.3s,baz=114,slow=20,SNR=5.9						
OPO				LR	LR	01 18 40.0	
	comp=Z,335nm,20.7s,baz=2.5,slow=27						
	9.7nm,0.6s						
H08S1	Diego Carcia H	23.96	29	T	T	01 41 07.5	
	baz=204,slow=76,SNR=20						
H08S2	Diego Garcia H	23.97	29	T	T	01 41 07.4	
	baz=204,slow=76,SNR=21						
H08S3	Diego Garcia H	23.98	29	T	T	01 41 07.3	
	baz=204,slow=76,SNR=39						
POGA	Pongola	25.85	267	P	P	01 16 39.5	-1.6
POGA				IAmb	IAmb	01 16 46.1	
	comp=Z,19nm,1.1s						
BOSA	Boshof	31.24	262	P	P	01 17 29.2	-0.2
	comp=Z,6.0nm,0.8s,baz=102,slow=9.3,SNR=9.9						
BOSA				LR	LR	01 28 32.5	
	comp=Z,194nm,18.1s,baz=108,slow=33						
	comp=Z,6.0nm,0.8s						
LBTB	Lobatse	31.72	269	P	P	01 17 34.5	+0.9
	comp=Z,2.6nm,0.9s,baz=119,slow=11,SNR=3.6						
LBTB				LR	LR	01 27 52.2	
	comp=Z,84nm,21.8s,baz=112,slow=32						
	comp=Z,2.6nm,0.9s						
LSZ	Lusaka	33.24	287	LR	LR	01 30 19.9	
	comp=Z,111nm,18.7s,baz=124,slow=35						
LSZ	Lusaka	33.24	287	P	P	01 17 47.7	+0.7
SUR	Sutherland	34.55	254	LR	LR	01 29 56.2	
	comp=Z,118nm,19.0s,baz=100,slow=33						
KMBO	Kilima Mbogo	35.91	317	LR	LR	01 29 57.3	
	comp=Z,200nm,20.7s,baz=96,slow=31						
MAW	Mawson	38.50	179	P	P	01 18 31.9	+0.6
	comp=Z,2.8nm,0.8s,baz=350,slow=10,SNR=6.4						
MAW				PcP	PcP	01 20 45.0	+1.0
	comp=Z,4.2nm,0.8s,baz=301,slow=7.7,SNR=7.8						
MAW				LR	LR	01 31 10.4	
	comp=Z,182nm,18.3s,baz=10.0,slow=31						
	comp=Z,2.8nm,0.8s						
MBAR	Mbarara	40.49	309	LR	LR	01 34 05.0	
	comp=Z,139nm,19.8s,baz=128,slow=34						
TSUM	Tsumeb	40.64	274	P	P	01 18 51.2	+1.2
	comp=Z,1.4nm,0.3s,baz=122,slow=8.8,SNR=5.5						
TSUM				LR	LR	01 34 20.8	
	comp=Z,134nm,19.3s,baz=144,slow=34						
	comp=Z,1.4nm,0.3s						
TSUM	Tsumeb	40.64	274	P	P	01 18 50.5	+0.5
TSUM				IAmb	IAmb	01 18 54.0	
	comp=Z,25nm,1.5s						
PALK	Pallekele	40.88	31	LR	LR	01 31 40.4	
	comp=Z,151nm,20.5s,baz=304,slow=30						
PCHI	Peechi	42.14	23	eP	P	01 18 54.6	-7.4
PCHI				eS	S	01 25 34.4	+13
ATD	Arta Tunnel	44.08	334	LR	LR	01 34 41.3	
	comp=Z,205nm,20.8s,baz=176,slow=32						
H01W2	Cape Leeuwin H	44.97	112	T	T	02 07 02.7	
	baz=261,slow=75,SNR=23						
H01W3	Cape Leeuwin H	44.98	111	T	T	02 07 06.1	
	baz=261,slow=75,SNR=17						
H01W1	Cape Leeuwin H	44.99	112	T	T	02 07 04.0	
	baz=261,slow=75,SNR=21						
CNJI	Cibinong	48.49	73	P	P	01 19 53.2	+0.6
	comp=Z,72nm,1.1s						
PWJI	Pagerwojo	52.07	77	P	P	01 20 20.5	+0.8
	comp=Z,36nm,1.4s						
WSAR	Wadi Sarin	52.14	357	LR	LR	01 37 15.0	
	comp=Z,41nm,18.2s,baz=182,slow=30						
SNAA	Sanae	54.43	200	P	P	01 20 36.2	-0.1
	comp=Z,3.8nm,1.0s,baz=55,slow=6.8,SNR=9.2						
SNAA				LR	LR	01 38 47.5	
	comp=Z,126nm,21.5s,baz=19,slow=30						
	comp=Z,3.8nm,1.0s						
SNAA	Sanae	54.43	200	P	P	01 20 35.3	-1.1
RAYN	Ar Rayn	54.45	342	P	P	01 20 36.5	-0.5
RAYN				IAmb	IAmb	01 20 38.6	
	comp=Z,6.9nm,0.9s						
CMAR	Chiang Mai Arr	59.84	42	P	P	01 21 15.7	+0.4
	comp=Z,4.0nm,0.4s,baz=231,slow=7.2,SNR=19						
CMAR				LR	LR	01 45 10.1	
	comp=Z,28nm,18.1s,baz=245,slow=34						
	comp=Z,4.0nm,0.4s						
CMAR	Chiang Mai Arr	59.84	42	P	P	01 21 15.1	-0.2
CHTO	Chiang Mai	60.12	42	P	P	01 21 16.7	-0.5
QSPA	South Pole Qui	61.01	180	P	P	01 21 22.6	-0.2
	comp=Z,7.2nm,1.0s,baz=262,slow=2.0,SNR=15						
QSPA				LR	LR	01 44 11.1	
	comp=Z,152nm,20.8s,baz=270,slow=32						
	comp=Z,7.2nm,1.0s						
QSPA	South Pole Qui	61.01	180	P	P	01 21 22.6	-0.2
EIL	Elat	63.56	335	LR	LR	01 45 56.4	
	comp=Z,89nm,19.7s,baz=98,slow=33						
KBL	Kabul	63.80	7	P	P	01 21 41.6	-0.2
KBL				IAmb	IAmb	01 21 43.5	
	comp=Z,6.4nm,1.2s						
VNDA	Vanda	64.08	166	P	P	01 21 43.2	+0.2
	comp=Z,4.9nm,0.9s,baz=266,slow=7.1,SNR=32						
VNDA				LR	LR	01 47 47.0	
	comp=Z,170nm,18.1s,baz=256,slow=34						
	comp=Z,4.9nm,0.9s						
VNDA	Vanda	64.08	166	P	P	01 21 42.8	-0.1
ASAR	Alice Springs	64.58	104	P	P	01 21 46.3	-0.9
	comp=Z,3.7nm,0.8s,baz=242,slow=6.3,SNR=30						
ASAR				LR	LR	01 46 29.5	
	comp=Z,51nm,19.5s,baz=198,slow=33						
	comp=Z,3.7nm,0.8s						
ASAR	Alice Springs	64.58	104	P	P	01 21 46.1	-1.1
SBA	Scott Base	64.96	167	P	P	01 21 48.7	0.0
WRA	Warramunga Arr	66.40	100	P	P	01 21 58.4	-0.6
	comp=Z,3.9nm,0.9s,baz=247,slow=5.8,SNR=14						
WRA				LR	LR	01 47 18.3	
	comp=Z,116nm,18.9s,baz=232,slow=33						
	comp=Z,3.9nm,0.9s						
PZH	PanZhiHua	67.74	39	P	P	01 22 09.8	+2.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,90nm,5.9s						
STKA	Stephens Creek	67.89	115	P	P	01 22 07.2	-1.0
	comp=Z,1.7nm,0.8s,baz=250,slow=12,SNR=3.5						
	comp=Z,1.7nm,0.8s						
GURO	Guroymak-BITLI	69.64	344	P	P	01 22 19.3	+0.4
GURO				IAmb	IAmb	01 22 21.5	
	comp=Z,6.4nm,1.2s						
KSH	Kashi	69.72	12	P	P	01 22 17.4	-2.0
KSH				PcP	PcP	01 22 38.7	-3.4
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSH				LR	LR		
	comp=Z,180nm,22.7s						
TOA0	Torodi Ar. Sit	71.01	298	P	P	01 22 28.4	+0.7
TORD	Torodi Ar. Bea	71.01	298	P	P	01 22 28.5	+0.8
	comp=Z,3.4nm,0.8s,baz=110,slow=5.8,SNR=15						
	comp=Z,3.4nm,0.8s						
TORD	Torodi Ar. Bea	71.01	298	P	P	01 22 27.3	-0.4
TORD				IAmb	IAmb	01 22 31.5	
	comp=Z,6.2nm,1.1s						
CD2	Chengdu	72.28	38	P	P	01 22 34.5	-0.6
GOMU	GeErMu	72.36	28	P	P	01 22 36.2	+0.4
GOMU				pP	sP	01 22 40.7	+2.4
GOMU				sP	pwP	01 22 41.4	-2.2
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,68nm,4.3s						
KK31	Karatay Array	72.43	7	P	P	01 22 35.5	-0.1
KKAR	Karatay Array	72.43	7	P	P	01 22 35.8	+0.2
AAK	Ala-Archa	72.50	10	LR	LR	01 51 34.5	
	comp=Z,50nm,22.0s,baz=196,slow=34						
DBIC	Dimbokro	72.58	288	P	P	01 22 37.0	-0.2
	comp=Z,6.7nm,0.9s,baz=152,slow=5.8,SNR=4.9						
DBIC				LR	LR	01 54 28.8	
	comp=Z,52nm,18.0s,baz=142,slow=36						
	comp=Z,6.7nm,0.9s						
IDI	Anoyia	72.58	330	LR	LR	01 53 15.7	
	comp=Z,17nm,19.5s,baz=91,slow=35						
BRTR	Keskin Array B	73.10	338	P	P	01 22 39.5	-0.3
	comp=Z,2.3nm,0.8s,baz=162,slow=8.4,SNR=17						
BRTR				LR	LR	01 52 07.1	
	comp=Z,39nm,19.9s,baz=140,slow=34						
	comp=Z,2.3nm,0.8s						
BRTR	Keskin Array B	73.10	338	P	P	01 22 39.4	-0.5
BR131	Keskin Array S	73.11	338	P	P	01 22 39.2	-0.7
BR131				IAmb	IAmb	01 22 40.8	
	comp=Z,4.6nm,0.8s						
ONI	Oni	73.19	347	P	P	01 22 40.2	0.0
KBZ	Khabaz	74.40	346	P	P	01 22 47.6	+0.5
	comp=Z,2.7nm,0.8s,baz=212,slow=1.0,SNR=5.0						
	comp=Z,2.7nm,0.8s						
KIV	Kislovodsk	74.66	346	P	P	01 22 48.8	0.0
KIV				IAmb	IAmb	01 22 54.5	
	comp=Z,6.0nm,1.0s						
LZH	Lanzhou	76.39	35	eP	P	01 22 59.6	+0.6
LZH				pP	pwP	01 23 08.3	+1.6
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ	Urumqi	76.62	20	⇑ iP	P	01 23 01.0	+0.9
WMQ				pP	sP	01 23 03.5	+0.9
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				LR	LR		
	comp=Z,97nm,23.3s						
PMSA	Palmer Station	77.14	201	LR	LR	01 48 41.1	
	comp=Z,60nm,20.8s,baz=108,slow=29						
GTA	Gaotai	77.19	30	⇓ P	P	01 23 04.5	+1.0
GTA				sP	pwP	01 23 12.3	+1.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,64nm,4.9s						
GTA				LR	LR		
	comp=N,63nm,16.4s						
GTA				LR	LR		
	comp=E,200nm,17.8s						
GTA				LR	LR		
	comp=Z,69nm,17.1s						
MKAR	Makanchi Array	78.00	15	P	P	01 23 08.1	+0.4
	comp=Z,1.1nm,0.8s,baz=168,slow=6.2,SNR=6.9						
	comp=Z,1.1nm,0.8s						
ABKAR	Akbulak array	78.06	359	P	P	01 23 07.4	-0.4
AKTO	Aktyubinsk	79.28	358	LR	LR	01 55 59.7	
	comp=Z,35nm,20.5s,baz=171,slow=34						
VAE	Valguarnera	79.36	324	LR	LR	01 58 53.2	
	comp=Z,73nm,18.5s,baz=142,slow=36						
KEST	Kesra	80.81	320	LR	LR	02 00 47.3	
	comp=Z,95nm,18.3s,baz=248,slow=37						
MLR	Muntele Rosu	80.84	336	LR	LR	01 59 26.6	
	comp=Z,33nm,18.0s,baz=148,slow=36						
MLR	Muntele Rosu	80.84	336	lAmb	lAmb	01 23 27.9	
	comp=Z,5.7nm,0.9s						
KURBB	Kurchatov Arra	80.92	11	LR	LR	01 56 53.7	
	comp=Z,34nm,20.6s,baz=189,slow=34						
KURK	Kurchatov	81.03	11	P	P	01 23 24.6	+0.7
KURK				lAmb	lAmb	01 23 28.1	
	comp=Z,5.8nm,1.1s						
NJ2	Nanjing	81.99	47	eP	P	01 23 27.6	-1.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BELG	Belogornoye	82.04	352	LR	LR	02 03 02.9	
	comp=Z,31nm,18.0s,baz=144,slow=38						
BVAR	Borovoye Array	82.23	6	LR	LR	01 57 40.7	
	comp=Z,55nm,20.9s,baz=76,slow=34						
BRVK	Borovoye	82.26	6	P	P	01 23 31.7	+1.3
RPZ	Rata Peaks	83.32	137	LR	LR	01 52 01.3	
	comp=Z,159nm,20.2s,baz=260,slow=30						
HHC	Hu-ho-hao-te	83.92	36	eP	P	01 23 41.2	+1.7
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,98nm,5.2s						
AKASG	Malin Array Be	84.33	340	P	P	01 23 41.3	+0.2
	comp=Z,1.4nm,0.6s,baz=159,slow=3.9,SNR=6.9						
	comp=Z,1.4nm,0.6s						
AKBB	Malin Array Si	84.33	340	lAmb	lAmb	01 23 43.9	
	comp=Z,4.0nm,0.8s						
ARU	Arti	85.26	359	LR	LR	02 00 26.8	
	comp=Z,32nm,19.1s,baz=164,slow=35						
ARU	Arti	85.26	359	P	P	01 23 45.7	0.0
ARU				lAmb	lAmb	01 23 56.1	
	comp=Z,5.5nm,1.1s						
ZAA0	Zalesovo Array	85.29	14	P	P	01 23 45.2	-0.7
ZAA0				lAmb	lAmb	01 23 58.1	
	comp=Z,7.1nm,1.2s						
ZALV	Zalesovo Beam	85.29	14	P	P	01 23 46.5	+0.6
	comp=Z,4.6nm,0.9s,baz=213,slow=4.4,SNR=12						
ZALV				LR	LR	01 58 12.2	
	comp=Z,49nm,21.3s,baz=200,slow=33						
	comp=Z,4.6nm,0.9s						
ZALV	Zalesovo Beam	85.29	14	P	P	01 23 46.3	+0.4
SONM	Songino Array	86.80	29	P	P	01 23 54.5	+0.7
	comp=Z,0.6nm,0.7s,baz=256,slow=4.3,SNR=4.2						
SONM				LR	LR	02 00 30.0	
	comp=Z,38nm,21.1s,baz=158,slow=34						
	comp=Z,0.6nm,0.7s						
SONM	Songino Array	86.80	29	P	P	01 23 54.2	+0.4
MDT	Midelt	87.55	310	LR	LR	02 02 57.2	
	comp=Z,83nm,19.1s,baz=126,slow=36						
VRAC	Vranov	87.56	333	LR	LR	02 03 52.0	
	comp=Z,14nm,18.9s,baz=157,slow=36						
MNK	Minsk	88.07	341	i P	P	01 23 59.7	+0.2
	comp=E,2.0nm,1.1s						
MNK				i P	P	01 23 59.7	+0.2
	comp=N,7.0nm,1.0s						
MNK				i P	P	01 23 59.7	+0.2
	comp=Z,8.0nm,0.8s,baz=332						
MNK				i PP	PP	01 27 26.6	-0.1
MNK				i PPP	PPP	01 29 22.0	
MNK				i S	S	01 34 28.1	-15
MNK				i PS	PS	01 35 47.5	+0.3
MNK				i SS	SS	01 40 34.6	+2.5
MNK				i SSS	SSS	01 44 08.7	
MNK				i LQ	LQ	01 57 51.0	
MNK				i LR	LR	02 02 30.3	
MNK				i LRM	MLR	02 03 54.3	
	comp=Z,45nm,19.5s						
MNK				i LRM	MLR	02 04 18.9	
	comp=N,18nm,16.1s						
MNK				i LRM	MLR	02 04 29.1	
	comp=E,8.0nm,19.5s						
WTTA	Wattenberg	88.10	329	i P	P	01 24 00.7	+0.6
	comp=E,7.3nm,1.4s						
FETA	Feichten	88.34	328	eP	P	01 24 02.2	+1.0
	comp=E,5.4nm,0.9s						
MOTA	Moosalm	88.41	329	eP	P	01 24 02.0	+0.5
	comp=E,5.4nm,1.0s						
XLT	XiLinHaoTe	88.44	36	eP	P	01 24 02.9	+1.2
XLT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XLT				pmax	pmax		
	comp=Z,54nm,4.0s						
DAVOX	Davos/Dischmat	88.55	328	LR	LR	02 05 54.3	
	comp=Z,12nm,18.7s,baz=92,slow=37						
RETA	Reutte	88.67	329	eP	P	01 24 02.3	-0.4
	comp=Z,3.7nm,1.0s						
DAVA	Damuels	88.92	328	eP	P	01 24 04.6	+0.6
	comp=Z,6.1nm,0.9s						
KSRS	Korea Array	91.17	47	LR	LR	02 05 50.7	
	comp=Z,13nm,18.1s,baz=225,slow=36						
ESDC	Sonseca Array	91.29	316	P	P	01 24 16.6	+1.6
	comp=Z,1.9nm,1.0s,baz=118,slow=3.8,SNR=8.5						
ESDC				LR	LR	02 06 07.7	
	comp=Z,33nm,18.6s,baz=124,slow=36						
	comp=Z,1.9nm,1.0s						
DZM	Mont Dzumac	92.00	117	LR	LR	02 02 47.1	
	comp=Z,72nm,18.5s,baz=198,slow=34						
HNR	Honiara	93.17	103	LR	LR	02 03 09.3	
	comp=Z,44nm,18.0s,baz=308,slow=34						
RCBR	Riachuelo	93.20	262	LR	LR	01 59 42.1	
	comp=Z,49nm,19.5s,baz=314,slow=31						
FINES	FINESS Array B	94.61	344	LR	LR	02 07 16.1	
	comp=Z,33nm,21.1s,baz=143,slow=36						
HFS	Hagfors	97.05	338	LR	LR	02 09 28.0	
	comp=Z,20nm,18.0s,baz=129,slow=36						
PLCA	Paso Flores	97.24	215	LR	LR	02 04 11.0	
	comp=Z,25nm,18.9s,baz=167,slow=33						
MJAR	Matsushiro Arr	97.54	52	LR	LR	02 03 55.2	
	comp=Z,12nm,19.8s,baz=211,slow=32						
NOA	NORSAR Array B	98.54	338	LR	LR	02 09 06.4	
	comp=Z,20nm,19.9s,baz=135,slow=35						
BOAB	BOACO BROADBAND	144.86	249	PKPdf	PKPbc	01 30 46.0	-0.4
R58B	Mineral	144.86	295	PKPdf	PKPdf	01 30 47.4	+0.7
MATN	Matagalpa	145.33	249	PKPbc	PKPbc	01 30 45.6	-2.4
HYT	Haines Junctio	145.98	16	PKPbc	PKPab	01 30 49.7	+0.4
T57A	Hurt	145.99	294	PKPbc	PKPab	01 30 49.1	-0.9
TGUH	Tegucigalpa,Un	147.04	250	PKPbc	PKPbc	01 30 52.4	-0.8
P52A	Corning	148.03	299	PKPbc	PKPbc	01 30 54.4	-0.8
V53A	Saluda	148.90	291	PKPbc	PKPbc	01 30 57.4	-0.2
V52A	Lilburn	149.94	288	PKPbc	PKiKP	01 31 00.9	-0.2
PDAR	Pinedale Array	164.43	333	PKP	PKPdf	01 31 13.2	-0.3

ISC 06 02:18:37.9±3.0, 38°.9N±0°.1×72°.26E±0°.08, h10km, n6, σ1°42/12, 4C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.64**	**333**	*eP*	**Pn**	**02 19 35.7**	**+1.3**
	71nm,0.3s						
IUG				*eS*	**Sb**	**02 20 26.5**	**-0.1**
	24nm,0.9s						
MRKS	**Merke**	**3.89**	**11**	*eP*	**Pb**	**02 19 46.8**	**+0.2**
	5.5nm,0.3s						
MRKS				*eS*	**Sg**	**02 20 44.8**	**+2.1**
	30nm,0.8s						
DZA	**Taraz**	**4.03**	**350**	*eP*	**Pb**	**02 19 48.1**	**-0.8**
	111nm,0.1s						
DZA				*eS*	**Sg**	**02 20 47.0**	**-0.1**
	296nm,0.3s						
KK31	**Karatay Array**	**4.38**	**343**	⇑P	**Pn**	**02 19 44.9**	**+0.4**
	1.4nm,0.3s,baz=164,slow=12,SNR=33						
KK31				S	**Sb**	**02 20 45.5**	**-2.2**
	4.3nm,0.3s,baz=176,slow=23,SNR=25						
CHMS	**Chumysh**	**4.49**	**24**	⇑P	**Pn**	**02 19 46.6**	**+0.7**
	3.2nm,0.5s						
CHMS				⇓S	**Sb**	**02 20 49.1**	**-1.8**
	3.6nm,0.6s						
TKM2	**Tokmak 2**	**4.72**	**31**	⇑P	**Pn**	**02 19 48.2**	**-1.2**
	0.9nm,0.4s						
TKM2				⇑S	**Sb**	**02 20 58.9**	**+1.0**
	2.8nm,0.9s						

*IDC **06** 02:28:57.9±3.2, 14°.61N×44°.17E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=76.1km s-min=30.1km az=157.0*
*SGS **06** 02:29:01.5, 15°.02N×44°.14E, h24km, MI3.3*

ISC 06 02:29:01.8±1.8, 15°.0N±0°.2×43°.8E±0°.1, h10km, n11, σ1°62/11, mb3.4/5, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**2.37**	**317**	S	**Sn**	**02 30 10.4**	**+0.4**
FRSS	**Farasan al Kab**	**2.37**	**317**	P	**Pn**	**02 29 38.6**	**-2.3**
AKWA	**Algayed**	**2.48**	**335**	P	**Pn**	**02 29 41.2**	**-1.2**
BESHS	**BESHS**	**2.52**	**338**	P	**Pn**	**02 29 42.1**	**-0.9**
MKHL	**Mahalah**	**2.58**	**335**	P	**Pn**	**02 29 42.7**	**-1.0**
KNGHS	**KNGHS**	**3.28**	**355**	P	**Pn**	**02 29 53.0**	**-0.5**
BRTR	**Keskin Array B**	**26.19**	**342**	P	**P**	**02 34 39.5**	**+2.7**
	0.7nm,0.8s,baz=146,slow=8.0,SNR=4.3 0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**40.85**	**273**	P	**P**	**02 36 44.9**	**+0.6**
	0.3nm,1.0s,baz=84,slow=9.2,SNR=2.4 0.3nm,1.0s						
GERES	**GERESS Array B**	**41.81**	**330**	P	**P**	**02 36 52.7**	**+1.0**
	0.3nm,0.6s,baz=126,slow=9.9,SNR=2.0 0.3nm,0.6s						
MKAR	**Makanchi Array**	**45.03**	**37**	P	**P**	**02 37 16.7**	**-1.0**
	0.9nm,1.0s,baz=235,slow=5.1,SNR=3.7 0.9nm,1.0s						
ZALV	**Zalesovo Beam**	**50.31**	**30**	P	**P**	**02 37 56.9**	**-1.7**
	1.6nm,0.5s,baz=235,slow=7.1,SNR=8.1 1.6nm,0.5s						

WEL 06 02:35:53.8, 42°.S±3°.×17°.2E±°, h7km±5km, M3.6/23, ML3.8/23, MLv3.6/23, Error ellipse: s-maj=0.0km s-min=0.0km az=107.4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSZ	**Denniston Nort**	**0.32**	**278**	P	**Pb**	02 36 02.1	+0.1
DSZ				S	Sb	02 36 06.8	-0.6
THZ	**Tophouse**	**0.51**	**87**	P	**Pb**	02 36 05.2	0.0
THZ				S	Sb	02 36 12.7	0.0
MRNZ	**Matariki Terra**	**0.56**	**45**	P	**Pb**	02 36 06.1	+0.2
MRNZ				S	Sb	02 36 14.3	+0.1
TKNZ	**Takaka Hill**	**0.94**	**36**	P	**Pb**	02 36 12.6	+0.1
TKNZ				S	Sb	02 36 25.9	+0.9
QRZ	**Quartz Range**	**0.99**	**13**	P	**Pb**	02 36 13.6	+0.2
LTZ	**Lake Taylor**	**0.99**	**178**	P	**Pn**	02 36 15.2	+0.9
LTZ				S	Sn	02 36 28.6	0.0
NNZ	**Nelson**	**1.04**	**57**	P	**Pb**	02 36 14.3	+0.2
INZ	**Inchbonnie**	**1.10**	**212**	P	**Pn**	02 36 16.7	+1.0
INZ				S	Sn	02 36 31.9	+0.7
KHZ	**Kahutara**	**1.16**	**123**	P	**Pn**	02 36 18.7	+2.3
KHZ				S	Sn	02 36 36.2	+3.6
BSWZ	**Blackbirch Sta**	**1.23**	**87**	P	**Pn**	02 36 18.9	+1.3
GVZ	**Greta Valley S**	**1.32**	**153**	P	**Pg**	02 36 21.2	+2.1
TUWZ	**Tuamarina**	**1.33**	**75**	P	**Pg**	02 36 19.7	+0.3
TUWZ				S	Sn	02 36 38.2	+1.2
AMCZ	**Amberley**	**1.42**	**167**	P	**Pg**	02 36 22.4	+1.4
CMWZ	**Cape Campbell**	**1.48**	**89**	P	**Pg**	02 36 25.1	+2.8
OXZ	**Oxford**	**1.54**	**185**	P	**Pg**	02 36 23.5	+0.1
DUWZ	**D'Urville Isla**	**1.61**	**53**	P	**Pb**	02 36 24.2	+0.2
TCW	**Tory Channel**	**1.64**	**70**	P	**Pg**	02 36 25.4	+0.1
WVZ	**Waitaha Valley**	**1.69**	**220**	P	**Pb**	02 36 25.2	-0.1
RACZ	**Rakaia**	**1.94**	**182**	P	**Pb**	02 36 28.7	-0.8
MQZ	**McQueen's Vall**	**1.94**	**171**	P	**Pb**	02 36 28.4	-1.1
WEL	**Wellington**	**1.97**	**76**	P	**Pb**	02 36 29.1	-1.0
OKCZ	**Okains Bay**	**2.03**	**163**	P	**Pb**	02 36 30.0	-1.0
GCSZ	**Gaunt Creek Bo**	**2.07**	**222**	P	**Pn**	02 36 30.4	+1.3
RPZ	**Rata Peaks**	**2.11**	**204**	P	**Pb**	02 36 31.8	-0.6
AKCZ	**Akaroa Harbour**	**2.14**	**167**	P	**Pb**	02 36 31.6	-1.4
WACZ	**Wakanui South**	**2.17**	**187**	P	**Pn**	02 36 31.8	+1.3
KIW	**Kapiti Island**	**2.22**	**66**	P	**Pb**	02 36 34.4	0.0
CAW	**Cannon Point**	**2.24**	**73**	P	**Pb**	02 36 34.0	-0.6
PLWZ	**Palliser**	**2.28**	**85**	P	**Pb**	02 36 33.8	-1.5
ARCZ	**Arundel**	**2.29**	**199**	P	**Pb**	02 36 33.9	-1.6
MSWZ	**Moikau Station**	**2.29**	**82**	P	**Pb**	02 36 34.0	-1.6
OGWZ	**Otaki Gorge**	**2.42**	**67**	P	**Pb**	02 36 37.1	-0.6
PAWZ	**Paruwai Farm**	**2.43**	**81**	P	**Pb**	02 36 35.5	+1.4
FOZ	**Fox Glacier**	**2.49**	**225**	P	**Pn**	02 36 35.9	+1.1
MTW	**Mount Morrison**	**2.54**	**77**	P	**Pn**	02 36 37.0	+1.6
HOWZ	**Holdsworth Sta**	**2.63**	**71**	P	**Pn**	02 36 37.4	+0.7
TMZ	**Timaru**	**2.74**	**199**	P	**Pn**	02 36 39.8	+1.4
MRZ	**Mangatainoka R**	**2.77**	**67**	P	**Pn**	02 36 41.0	+2.4
LREZ	**Lake Rotokare**	**2.85**	**36**	P	**Pg**	02 36 47.2	-1.3
LBZ	**Lake Benmore**	**3.00**	**209**	P	**Pn**	02 36 43.4	+1.6
POWZ	**Post Office Ro**	**3.02**	**64**	P	**Pg**	02 36 49.8	-1.8
VRZ	**Vera Road**	**3.29**	**37**	P	**Pn**	02 36 48.4	+2.6
JCZ	**Jackson Bay**	**3.41**	**227**	P	**Pn**	02 36 48.4	+0.9
ODZ	**Otahua Downs**	**3.45**	**199**	P	**Pn**	02 36 49.3	+1.3
PNHZ	**Pukenui**	**3.55**	**59**	P	**Pb**	02 36 57.8	+0.8
WNVZ	**Wahianoa**	**3.56**	**47**	P	**Pn**	02 36 53.3	+3.7
WHVZ	**Whangaehu Hut**	**3.58**	**47**	P	**Pb**	02 36 55.1	-2.6
MOVZ	**Moawhango**	**3.59**	**50**	P	**Pn**	02 36 53.0	+3.1
BHHZ	**Black Hill Sta**	**3.71**	**53**	P	**Pn**	02 36 55.1	+3.4
WKZ	**Wanaka**	**3.83**	**217**	P	**Pn**	02 36 54.8	+1.4
HIZ	**Hauiti**	**3.84**	**32**	P	**Pn**	02 36 54.8	+1.4
MLZ	**Mavora Lakes**	**4.66**	**218**	P	**Pn**	02 37 08.8	+3.4
TOZ	**Tahuroa Road**	**4.77**	**33**	P	**Pn**	02 37 07.5	+1.3
MKAZ	**Moumakai**	**5.20**	**27**	P	**Pn**	02 37 13.8	+1.8
SYZ	**Scrubby Hill**	**5.24**	**204**	P	**Pn**	02 37 13.1	+0.6
OUZ	**Omahuta**	**6.65**	**10**	P	**Pn**	02 37 35.1	+3.1

IDC 06 02:48:13.8±3.2, 4°.11S×130°.59E, h85km±39km, mb3.5/2, mbtmp3.9/6, Error ellipse: s-maj=77.5km s-min=19.1km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.29**	**12**	P	**Pn**	02 49 03.4	+0.1
	24nm,0.3s,baz=283,slow=23,SNR=27						
SIJI				S	Sn	02 49 33.8	-7.6
	22nm,0.2s,baz=259,slow=23,SNR=5.2						
FITZ	**Fitzroy Crossi**	**14.72**	**199**	P	**Pn**	02 51 37.9	+0.2
	6.2nm,1.2s,baz=32,slow=14,SNR=3.0						
FITZ				S	Sn	02 54 07.4	-13
	2.3nm,1.0s,baz=209,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**16.15**	**167**	P	**Pn**	02 51 54.5	-1.4
	1.1nm,0.4s,baz=348,slow=11,SNR=35						
WRA				S	Sn	02 54 39.0	-16
	0.3nm,0.3s,baz=351,slow=24,SNR=6.8						
ASAR	**Alice Springs**	**19.70**	**171**	P	**P**	02 52 36.9	+0.3
	2.5nm,0.4s,baz=351,slow=12,SNR=60						
STKA	**Stephens Creek**	**29.49**	**161**	P	**P**	02 54 10.2	+0.1
	0.6nm,0.4s,baz=336,slow=15,SNR=3.0 0.6nm,0.4s						
MKAR	**Makanchi Array**	**66.17**	**326**	P	**P**	02 58 52.4	-0.1
	0.4nm,0.5s,baz=117,slow=7.4,SNR=6.1 0.4nm,0.5s						

*IDC **06** 02:59:17.7±1.8, 4°.26S×142°.60E, h0km, mb3.7/5, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=67.5km s-min=24.2km az=108.0*

ISC 06 02:59:30.0±1.6, 4°.5S±0°.2×142°.5E±0°.4, h105km, n6, σ0°87/6, mb3.7/4, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.29**	**207**	P	**Pn**	**03 03 24.7**	**-0.3**
	0.4nm,0.3s,baz=24,slow=12,SNR=17 1.5nm,0.5s						
ASAR	**Alice Springs**	**20.78**	**203**	P	**P**	**03 04 03.8**	**+0.9**
	0.6nm,0.5s,baz=33,slow=12,SNR=9.2 0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.34**	**229**	P	**P**	**03 04 08.0**	**-0.8**
	2.0nm,0.6s,baz=26,slow=12,SNR=5.2 2.0nm,0.6s						
MKAR	**Makanchi Array**	**73.55**	**322**	P	**P**	**03 10 52.4**	**+0.7**
	0.4nm,0.3s,baz=97,slow=7.4,SNR=8.4 0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**75.42**	**329**	P	**P**	**03 11 02.2**	**0.0**
	0.7nm,0.4s,baz=137,slow=7.5,SNR=2.5 0.7nm,0.4s						
ILAR	**Eielson Array**	**85.91**	**24**	P	**P**	**03 11 57.5**	**-0.4**
	0.5nm,0.7s,baz=247,slow=4.8,SNR=4.5 0.5nm,0.7s						

*NEIC **06** 02:59:48.9±1.6, 20°.9S±0°.1×178°.6W±0°.1, h580km±7km, mb4.4/81, Error ellipse: s-maj=17.9km s-min=15.9km az=130.0*
*NOU **06** 02:59:49.3, 21°.1S×178°.30W, h590km, mb4.7/20, Fiji Islands Region*
*IDC **06** 02:59:50.2±1.2, 20°.97S×178°.64W, h594km±12km, mb3.7/18, mbtmp4.7/21, Error ellipse: s-maj=13.9km s-min=10.8km az=114.0*

ISC 06 02:59:48.3±0.3, 20°.92S±0°.06×178°.54W±0°.07, h579km, n227, σ1°20/227, mb4.4/65, 26C-25D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.69**	**354**	P	**P**	**03 01 08.0**	**+3.9**
TAVE	**Taveuni**	**4.39**	**343**	P	**P**	**03 01 19.3**	**+4.1**
MSVF	**Nonsavu**	**4.52**	**314**	P	**P**	**03 01 19.8**	**+3.5**
	68nm,0.5s,baz=155,slow=6.4,SNR=64						
MSVF	**Nonsavu**	**4.52**	**314**	P	**P**	**03 01 18.3**	**+2.0**
MSVF	**Nonsavu**	**4.52**	**314**	P	**P**	**03 01 19.7**	**+3.4**
DGTI	**Dogotuki**	**4.88**	**340**	P	**P**	**03 01 22.3**	**+3.2**
NIUE	**Niue**	**8.30**	**79**	P	**P**	**03 01 49.5**	**-0.4**
GLKZ	**Green Lake**	**8.32**	**176**	P	**P**	**03 01 51.3**	**+1.4**
GLKZ				S	**S**	**03 03 29.6**	**-0.2**
AFI	**Afiamalu**	**9.50**	**44**	P	**P**	**03 02 01.9**	**+0.1**
	33nm,0.4s,baz=294,slow=16,SNR=8.4						
AFI				S	**S**	**03 03 47.0**	**-4.4**
	82nm,0.8s,baz=79,slow=21,SNR=6.6						
AFI	**Afiamalu**	**9.50**	**44**	P	**P**	**03 02 00.3**	**-1.6**
AFI	**Afiamalu**	**9.50**	**44**	P	**P**	**03 02 02.3**	**+0.4**
MARNC	**Mare, Loyalty**	**12.54**	**265**	P	**P**	**03 02 32.9**	**+0.3**
DZM	**Mont Dzumac**	**14.03**	**263**	P	**P**	**03 02 47.8**	**-0.1**
	5.0nm,0.5s,baz=136,slow=21,SNR=10						
OUZ	**Omahuta**	**15.84**	**204**	P	**P**	**03 03 06.2**	**+1.3**
OUZ	**Omahuta**	**15.84**	**204**	P	**P**	**03 03 06.9**	**+2.0**
WCZ	**Waipu Caves**	**16.21**	**201**	P	**P**	**03 03 10.3**	**+1.9**
KUZ	**Kuaotunu**	**16.54**	**196**	P	**P**	**03 03 12.6**	**+1.2**
MBAZ	**Motutapu North**	**16.80**	**199**	P	**P**	**03 03 15.8**	**+2.0**
ETAZ	**East Tamaki Re**	**16.96**	**198**	P	**P**	**03 03 17.6**	**+2.4**
MKAZ	**Moumakai**	**17.03**	**197**	P	**P**	**03 03 17.5**	**+1.6**
WMGZ	**Waiomatatini S**	**17.05**	**188**	P	**P**	**03 03 15.0**	**-1.0**
WTAZ	**Waiatarua**	**17.05**	**199**	P	**P**	**03 03 18.2**	**+2.2**
HAZ	**Te Kaha**	**17.08**	**190**	P	**P**	**03 03 15.8**	**-0.4**
HAZ				S	**S**	**03 06 06.4**	**+0.9**
AWAZ	**Awhitu Peninsu**	**17.15**	**199**	P	**P**	**03 03 19.0**	**+2.1**
PKGZ	**Pakihiroa**	**17.16**	**189**	P	**P**	**03 03 14.5**	**-2.6**
RUGZ	**Raukumara Rang**	**17.30**	**190**	P	**P**	**03 03 17.2**	**-1.2**
PUZ	**Puketiti**	**17.32**	**189**	P	**P**	**03 03 19.2**	**+0.7**
TWGZ	**Tauwhareparae**	**17.46**	**189**	P	**P**	**03 03 20.2**	**+0.4**
URZ	**Urewera**	**17.68**	**191**	P	**P**	**03 03 20.4**	**-1.4**
	20nm,0.3s,baz=290,slow=2.4,SNR=44						
URZ	**Urewera**	**17.68**	**191**	P	**P**	**03 03 19.8**	**-2.0**
URZ				S	**S**	**03 06 11.2**	**-4.2**
URZ	**Urewera**	**17.68**	**191**	P	**P**	**03 03 20.6**	**-1.2**
TKGZ	**Te Karaka**	**17.74**	**189**	P	**P**	**03 03 22.2**	**0.0**
QRZ	**Quartz Range**	**21.25**	**199**	P	**P**	**03 03 54.6**	**+0.5**
KHZ	**Kahutara**	**22.45**	**196**	P	**P**	**03 04 04.2**	**-0.5**
OXZ	**Oxford**	**23.69**	**197**	P	**P**	**03 04 14.6**	**-1.2**
RPZ	**Rata Peaks**	**24.33**	**199**	P	**P**	**03 04 20.7**	**-0.8**
	6.2nm,0.5s,baz=39,slow=3.2,SNR=8.6 6.2nm,0.5s						
RMQ	**Roma**	**30.40**	**253**	P	**P**	**03 05 16.2**	**+1.5**
	19nm,0.8s						
QLP	**Quilpie**	**34.46**	**253**	P	**P**	**03 05 50.5**	**+1.5**
MTSU	**Mount Surprise**	**35.07**	**268**	P	**P**	**03 05 55.3**	**+1.1**
STKA	**Stephens Creek**	**37.16**	**245**	P	**P**	**03 06 11.8**	**+0.6**
	4.3nm,0.7s,baz=90,slow=10,SNR=9.7 4.3nm,0.7s						
STKA	**Stephens Creek**	**37.16**	**245**	P	**P**	**03 06 10.9**	**-0.3**
STKA	**Stephens Creek**	**37.16**	**245**	P	**P**	**03 06 12.3**	**+1.1**
INKA	**Innaminka**	**37.59**	**251**	P	**P**	**03 06 17.3**	**+2.5**
	22nm,0.9s						
LCRK	**Leigh Creek**	**39.91**	**247**	P	**P**	**03 06 34.1**	**+0.7**
BBOO	**Buckleboo**	**41.91**	**244**	P	**P**	**03 06 48.8**	**-0.5**
BBOO				IAmb	IAmb	03 06 49.5	
	comp=Z,7.0nm,0.8s						
OOD	**Oodnadatta**	**42.07**	**251**	P	**P**	**03 06 51.6**	**+1.0**
	comp=Z,28nm,0.9s						
WR0	**Warramunga Arr**	**43.86**	**263**	P	**P**	**03 07 04.1**	**-0.5**
WR0				IAmb	IAmb	03 07 06.0	
	comp=Z,14nm,0.9s						
AS31	**Alice Springs**	**43.94**	**257**	P	**P**	**03 07 04.5**	**-0.7**
AS31				IAmb	IAmb	03 07 06.2	
	comp=Z,13nm,1.1s						
ASAR	**Alice Springs**	**43.94**	**257**	P	**P**	**03 07 05.0**	**-0.1**
	comp=Z,24nm,0.7s,baz=88,slow=8.4,SNR=152						
ASAR				PcP	**PcP**	**03 08 38.1**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=101,slow=3.9,SNR=4.7						
ASAR				ScP	**ScP**	**03 11 35.9**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=104,slow=4.0,SNR=4.7						
ASAR				S	**S**	**03 12 51.9**	**-3.8**
	comp=Z,4.3nm,0.9s,baz=94,slow=16,SNR=16 comp=Z,24nm,0.7s						
ASAR	**Alice Springs**	**43.94**	**257**	P	**P**	**03 07 04.8**	**-0.4**
WB0	**Warramunga Arr**	**44.03**	**263**	P	**P**	**03 07 05.3**	**-0.6**
WB2	**Warramunga Arr**	**44.04**	**263**	P	**P**	**03 07 05.5**	**-0.4**
WRA	**Warramunga Arr**	**44.05**	**263**	P	**P**	**03 07 05.3**	**-0.8**
	comp=Z,8.3nm,0.3s,baz=96,slow=7.7,SNR=140						
WRA				S	**S**	**03 12 51.9**	**-5.4**
	comp=Z,1.9nm,0.8s,baz=95,slow=13,SNR=6.1 comp=Z,8.3nm,0.3s						
MTN	**Manton Dam**	**48.67**	**271**	P	**P**	**03 07 40.5**	**-0.5**
FORT	**Forrest**	**48.67**	**247**	P	**P**	**03 07 39.5**	**-1.2**
KNRA	**Kununurra**	**50.13**	**267**	P	**P**	**03 07 50.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**52.48**	**263**	P	**P**	**03 08 08.7**	**+0.1**
	comp=Z,5.8nm,0.6s,baz=110,slow=5.3,SNR=27 comp=Z,5.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.48**	**263**	P	**P**	**03 08 08.1**	**-0.5**
FITZ				IAmb	IAmb	03 08 09.5	
	comp=Z,28nm,1.4s						
SIJI	**Sorong**	**52.86**	**286**	P	**P**	**03 08 11.8**	**+0.4**
	comp=Z,70nm,0.8s,baz=78,slow=6.2,SNR=21 comp=Z,70nm,0.8s						
SOEI	**Soe**	**56.01**	**272**	P	**P**	**03 08 34.1**	**+0.5**
PSA00	**Pilbara Seismi**	**57.09**	**257**	P	**P**	**03 08 39.6**	**-1.1**
PSA00				IAmb	IAmb	03 08 40.9	
	comp=Z,18nm,0.8s						
MBWA	**Marble Bar**	**57.27**	**258**	P	**P**	**03 08 41.1**	**-0.9**
MBWA				IAmb	IAmb	03 08 42.1	
	comp=Z,18nm,0.7s						
SBA	**Scott Base**	**57.42**	**184**	P	**P**	**03 08 43.5**	**+1.5**
VNDA	**Vanda**	**57.45**	**185**	P	**P**	**03 08 43.9**	**+1.7**
	comp=Z,2.7nm,0.7s,baz=358,slow=6.7,SNR=33						
VNDA				ScP	**ScP**	**03 12 32.1**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=318,slow=4.9,SNR=8.3 comp=Z,2.7nm,0.7s						
VNDA	**Vanda**	**57.45**	**185**	P	**P**	**03 08 43.1**	**+0.9**
GIRL	**Giralia**	**61.96**	**255**	P	**P**	**03 09 11.9**	**-1.2**
QSPA	**South Pole Qui**	**69.15**	**180**	P	**P**	**03 09 57.5**	**+0.2**
QSPA				IAmb	IAmb	03 09 59.1	
	comp=Z,12nm,0.9s						
MJAR	**Matsushiro Arr**	**70.25**	**324**	P	**P**	**03 10 04.3**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=155,slow=7.2,SNR=10 comp=Z,3.1nm,0.6s						
MAJO	**Matsushiro**	**70.25**	**324**	P	**P**	**03 10 03.8**	**-0.4**
MAJO				IAmb	IAmb	03 10 05.1	
	comp=Z,7.2nm,0.8s						
JHS	**Saijyo**	**72.10**	**320**	P	**P**	**03 10 14.6**	**-0.4**
JHS				IAmb	IAmb	03 10 16.7	
	comp=Z,20nm,0.9s						
KIWB	**Kanaga Island**	**72.47**	**1**	P	**P**	**03 10 16.2**	**-0.4**
ADK	**Adak**	**72.51**	**1**	P	**P**	**03 10 15.9**	**-0.9**
KSM	**Kuching**	**72.97**	**278**	P	**P**	**03 10 20.2**	**-0.2**
NACB	**Ninganchiao**	**73.50**	**305**	P	**P**	**03 10 22.8**	**-0.4**
NACB				IAmb	IAmb	03 10 24.6	
	comp=Z,22nm,1.0s						
PETK	**Petropavlovsk-**	**76.55**	**346**	P	**P**	**03 10 39.8**	**+0.3**
	comp=Z,5.3nm,0.6s,baz=138,slow=7.0,SNR=11 comp=Z,5.3nm,0.6s						
PETK	**Petropavlovsk-**	**76.55**	**346**	P	**P**	**03 10 39.4**	**-0.1**
KSRS	**Korea Array**	**76.87**	**319**	P	**P**	**03 10 42.8**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=134,slow=6.2,SNR=10 comp=Z,1.6nm,0.6s						
KSAR	**Wonju Array Be**	**76.89**	**319**	P	**P**	**03 10 42.2**	**+0.5**
SMAI	**San Martin Ant**	**78.39**	**159**	P	**P**	**03 10 50.5**	**+1.2**
SMAI				IAmb	IAmb	03 10 52.1	
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Ar.**	**79.03**	**326**	P	**P**	**03 10 54.4**	**+1.4**
	comp=Z,9.4nm,0.8s,baz=126,slow=3.4,SNR=13 comp=Z,9.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**79.03**	**326**	P	**P**	**03 10 54.0**	**+0.9**
NJ2	**Nanjing**	**79.76**	**310**	*eP*	**P**	**03 10 57.6**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
MDJ	**Mudanjiang**	**80.58**	**325**	P	**P**	**03 11 00.5**	**-0.6**
MDJ				IAmb	IAmb	03 11 03.3	
	comp=Z,9.2nm,0.8s						
NVAR	**Mina Array Bea**	**81.67**	**44**	P	**P**	**03 11 08.9**	**+1.7**
	comp=Z,2.2nm,0.6s,baz=224,slow=8.3,SNR=17 comp=Z,2.2nm,0.6s						
NVAR	**Mina Array Bea**	**81.67**	**44**	P	**P**	**03 11 08.0**	**+0.8**
TPH	**Tonopah**	**82.17**	**44**	IAmb	IAmb	03 11 12.1	
	comp=Z,18nm,0.8s						
O19K	**Port Alsworth**	**83.20**	**12**	IAmb	IAmb	03 11 14.9	
	comp=Z,14nm,0.7s						
ILSW	**Iliamna Southw**	**83.24**	**13**	IAmb	IAmb	03 11 15.1	
	comp=Z,18nm,0.8s						
TUC	**Tucson**	**83.63**	**52**	P	**P**	**03 11 17.0**	**0.0**
RPSI	**Rantau Prapat**	**83.99**	**275**	P	**P**	**03 11 18.3**	**-0.8**
RPSI				IAmb	IAmb	03 11 19.5	
	comp=Z,9.2nm,0.9s						
U15A	**North Rim**	**84.61**	**48**	P	**P**	**03 11 22.9**	**+0.9**
U15A				IAmb	IAmb	03 11 24.8	
	comp=Z,4.5nm,0.7s						
L19K	**White Mountain**	**84.94**	**11**	P	**P**	**03 11 23.5**	**+0.9**
L19K				IAmb	IAmb	03 11 24.3	
	comp=Z,8.5nm,1.1s						
ENH	**Enshi**	**85.86**	**304**	P	**P**	**03 11 27.6**	**-0.2**
D08A	**Wollman Farm,**	**86.32**	**36**	IAmb	IAmb	03 11 31.6	
	comp=Z,4.8nm,0.8s						
CAST	**Castle Rocks**	**86.59**	**12**	IAmb	IAmb	03 11 30.3	
	comp=Z,6.6nm,0.8s						
F10A	**Beach Ranch, E**	**86.64**	**38**	IAmb	IAmb	03 11 33.1	
	comp=Z,11nm,0.9s						
SEY	**Seymchan**	**86.67**	**347**	P	**P**	**03 11 31.3**	**+0.5**
	comp=Z,4.4nm,0.6s,baz=146,slow=4.9,SNR=14 comp=Z,4.4nm,0.6s						
PLID	**Pearl Lake**	**86.85**	**39**	IAmb	IAmb	03 11 34.5	
	comp=Z,7.4nm,1.3s						
B08A	**Colville Reser**	**86.86**	**35**	IAmb	IAmb	03 11 33.8	
	comp=Z,6.4nm,0.8s						
HLID	**Hailey**	**86.97**	**41**	P	**P**	**03 11 33.4**	**+0.5**
TROLL	**Troll, Antarti**	**87.31**	**180**	P	**P**	**03 11 33.6**	**-0.4**
MCK	**McKinley**	**87.49**	**13**	IAmb	IAmb	03 11 36.0	
	comp=Z,9.0nm,1.0s						
TX31	**Lajitas Ar. Si**	**87.70**	**58**	IAmb	IAmb	03 11 39.6	
	comp=Z,7.6nm,0.9s						
TXAR	**Lajitas Array**	**87.70**	**58**	P	**P**	**03 11 38.7**	**+2.1**
	comp=Z,1.6nm,0.8s,baz=224,slow=5.2,SNR=19 comp=Z,1.6nm,0.8s						
VNA3	**Neumayer Olymp**	**87.75**	**176**	P	**P**	**03 11 35.9**	**-0.1**
M27K	**Edge Creek, AK**	**87.95**	**16**	IAmb	IAmb	03 11 39.0	
	comp=Z,12nm,1.1s						
XAN	**Xi'an**	**87.99**	**308**	P	**P**	**03 11 38.7**	**+1.0**
XAN				pP	pP	03 13 41.4	-0.8
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
ANMO	**Albuquerque**	**88.06**	**51**	P	**P**	**03 11 38.7**	**+0.5**
**

BR131	**Keskin Array S**	**146.75 312**			**PKPbc**	03 18 26.2	-0.2
BRTR	**Keskin Array B**	**146.75 312**	PKPbc		**PKPbc**	03 18 26.1	-0.4
	comp=Z,3.2nm,0.5s,baz=136,slow=4.9,SNR=24						
KWP	**Kalwaria Pacla**	**146.75 335**	*e*PKPbc		**PKPbc**	03 18 25.8	-0.1
BURAR	**Bucovina Array**	**147.18 330**	⇑P		**PKPbc**	03 18 27.8	+0.6
BIZ	**Bicaz**	**147.23 328**	⇓P		**PKPbc**	03 18 28.0	+0.7
ANTO	**Ankara**	**147.27 312**			**PKPbc**	03 18 26.8	-0.9
CFR	**Carcaliu**	**147.33 324**	⇑P		**PKPbc**	03 18 26.7	-0.8
OJC	**Ojcow**	**147.37 338**	*e*PKPbc		**PKPbc**	03 18 26.5	-1.0
TPGR	**Topolog**	**147.38 323**	⇑P		**PKPbc**	03 18 27.4	-0.3
KOLS	**Kolonicke sedl**	**147.47 334**	*e*PKP		**PKPbc**	03 18 28.6	+0.8
VRI	**Vrincioaia**	**147.64 326**	⇑P		**PKPbc**	03 18 28.3	-0.1
CRVS	**Cervenica-Dubn**	**147.82 335**	*e*PKP		**PKPbc**	03 18 29.3	+0.6
NIE	**Niedzica**	**147.85 337**	*e*PKPbc		**PKPbc**	03 18 29.3	+0.5
COVR	**Voineasa-Covas**	**147.93 327**	⇓P		**PKPbc**	03 18 28.8	-0.4
KSP	**Ksiaz**	**147.94 342**	*e*PKPbc		**PKPbc**	03 18 29.2	+0.2
NEHR	**Nehoiu**	**148.16 326**	⇑P		**PKPbc**	03 18 29.2	-0.5
OSTC	**Ostas**	**148.22 342**	⇑*e*PKP		**PKPbc**	03 18 29.8	+0.1
OSTC			*e*PKPAB		**PKPab**	03 18 36.3	+1.4
CHVC	**Chvalec**	**148.24 342**	⇑*e*PKP		**PKPbc**	03 18 29.7	0.0
DOPR	**Dopca**	**148.26 327**	⇑P		**PKiKP**	03 18 30.6	-0.5
MLR	**Muntele Rosu**	**148.30 326**	⇓P		**PKPbc**	03 18 29.9	-0.3
CLL	**Collm**	**148.35 346**			**PKPbc**	03 18 30.3	+0.4
CLL	**Collm**	**148.35 346**	⇓*i*PKPbc		**PKPbc**	03 18 29.6	-0.3
	comp=Z,16nm,1.1s						
CLL			⇑*i*PKPab		**PKPab**	03 18 35.4	0.0
	comp=Z,8.0nm,0.7s						
DPC	**Dobruska-Polom**	**148.37 342**	⇑*e*PKP		**PKPbc**	03 18 30.4	+0.3
DPC			*e*PKPAB		**PKPab**	03 18 36.4	+0.8
LANS	**Liptovska Anna**	**148.38 337**	*e*PKP		**PKiKP**	03 18 31.3	0.0
LANS			*e*			03 18 37.2	
KRLC	**Kraliky**	**148.48 341**	⇑*e*PKP		**PKPbc**	03 18 30.7	+0.3
KRLC			*e*PKPAB		**PKPab**	03 18 36.5	+0.5
MORC	**Moravsky Berou**	**148.50 340**			**PKPbc**	03 18 30.1	-0.3
MORC	**Moravsky Berou**	**148.50 340**	*e*PKP		**PKPbc**	03 18 30.5	+0.1
BRG	**Berggiesshubel**	**148.54 345**	*e*PKP		**PKPbc**	03 18 29.3	-1.1
BRG			Amp			03 18 32.3	
	comp=Z,5.2nm,0.7s						
BRG			*ex*	x		03 18 36.2	
BRG			Amp			03 18 38.3	
	comp=Z,5.7nm,0.9s						
CJR	**Cluj-Napoca**	**148.59 330**	⇑P		**PKPbc**	03 18 31.0	+0.2
PVCC	**Panska Ves**	**148.70 344**	⇑*e*PKP		**PKPbc**	03 18 31.3	+0.5
VOIR		**148.80 327**	⇑P		**PKPbc**	03 18 31.8	+0.4
BORA	**Eskisehir**	**148.87 314**			**PKPbc**	03 18 30.7	-1.0
DRGR		**148.94 331**	⇓P		**PKPbc**	03 18 31.6	0.0
ARR	**Arges**	**149.06 327**	⇑P		**PKiKP**	03 18 32.7	-0.1
PRU	**Pruhonice**	**149.20 343**	⇑*e*PKP		**PKPbc**	03 18 32.0	0.0
VRAC	**Vranov**	**149.21 341**	*e*PKP		**PKPbc**	03 18 32.0	-0.1
JAVC	**Velka Javorina**	**149.25 339**	*e*PKP		**PKiKP**	03 18 33.4	+0.3
KRUC	**Moravsky**	**149.49 340**	*e*PKP		**PKPbc**	03 18 32.6	-0.2
SIRR	**Siria**	**149.81 332**	⇑P		**PKPbc**	03 18 34.0	+0.3
GZR	**Gura Zlata**	**149.95 329**	⇑P		**PKPbc**	03 18 33.7	-0.4
MEM	**Membach**	**150.16 354**	*d*PKiKP		**PKPbc**	03 18 34.4	+0.1
BTNL	**Ternell**	**150.17 354**	*d*PKiKP		**PKPbc**	03 18 34.5	+0.1
BSTI	**Sart Tilman**	**150.22 355**	*d*PKiKP		**PKPbc**	03 18 34.4	-0.1
BSTI			*d*PKPab		**PKPab**	03 18 42.0	-1.1
KHC	**Kasperske Hory**	**150.24 344**	⇑*e*PKP		**PKPbc**	03 18 34.4	-0.2
KHC			*e*PKPAB		**PKPab**	03 18 43.8	+0.5
KHC			*ex*	x		03 20 10.6	
CKRC	**Cesky Krumlov**	**150.32 343**	⇑*e*PKP		**PKPbc**	03 18 35.0	+0.2
BZS	**Buzias**	**150.32 331**	⇑P		**PKPbc**	03 18 34.8	-0.1
BCLA	**Clavier**	**150.41 355**	*d*PKiKP		**PKPbc**	03 18 34.7	-0.2
BCLA			*d*PKPab		**PKPab**	03 18 43.4	-0.5
BHOU	**Houvegnez**	**150.41 354**	*d*PKPdf		**PKPdf**	03 18 30.3	+1.3
BHOU			*d*PKiKP		**PKiKP**	03 18 35.4	0.0
BHOU			*d*PKPab		**PKPab**	03 18 44.0	0.0
GEC2	**GERESS Array S**	**150.47 343**			**PKPbc**	03 18 34.6	-0.6
GERES	**GERESS Array B**	**150.47 343**	PKPbc		**PKPbc**	03 18 35.2	0.0
	comp=Z,3.8nm,0.8s,baz=40,slow=2.3,SNR=30						
HERR	**Herculane**	**150.50 329**	⇓P		**PKPbc**	03 18 34.9	-0.3
BMRD	**Maredsous**	**150.56 356**	*d*PKiKP		**PKPbc**	03 18 35.1	-0.1
BMRD			*d*PKPab		**PKPab**	03 18 44.5	-0.1
CONA	**Conrad Observa**	**150.66 340**	*i* P		**PKPbc**	03 18 35.8	+0.2
	comp=Z,5.7nm,0.6s						
CONA			*i* P		**PKPab**	03 18 46.0	+0.8
	comp=Z,4.3nm,1.0s						
RCHB	**Rochefort**	**150.67 355**	*d*PKiKP		**PKPbc**	03 18 35.5	0.0
RONA	**Rosalia, Austr**	**150.72 339**	*i* P		**PKPbc**	03 18 35.8	+0.1
	comp=Z,9.6nm,0.5s						
DOU	**Dourbes**	**150.78 356**	*d*PKiKP		**PKPbc**	03 18 36.0	+0.2
DOU			*d*PKP		**PKPab**	03 18 44.3	-1.2
MDVR	**Moldovita**	**150.91 330**	⇑P		**PKPbc**	03 18 36.0	-0.3
WLF	**Walferdange**	**151.08 354**	*d*PKiKP		**PKiKP**	03 18 37.0	+0.2
WLF			*d*PKPab		**PKPab**	03 18 48.5	+1.7
MOA	**Molln**	**151.21 342**	*i* P		**PKPbc**	03 18 36.5	-0.4
	comp=Z,2.0nm,0.5s						
BLKB	**Belogradchik**	**151.28 327**	⇑P		**PKPbc**	03 18 37.2	0.0
ARSA	**Arzberg**	**151.36 340**	*i* P		**PKPbc**	03 18 36.6	-0.6
	comp=Z,2.0nm,0.7s						
FRGS	**Fruska Gora**	**151.49 332**	⇑P		**PKPbc**	03 18 37.6	+0.1
BIOA	**Bad Ischl, Aus**	**151.54 343**	*i* P		**PKPbc**	03 18 36.9	-0.6
	comp=Z,2.3nm,0.4s						
VTS	**Vitosha**	**151.68 325**	⇓P		**PKPbc**	03 18 38.2	0.0
BOVS	**Bovan**	**151.76 328**	⇑P		**PKPbc**	03 18 37.1	-1.1
SOKA	**Soboth**	**152.03 340**	*i* P		**PKPbc**	03 18 38.0	-0.8
	comp=Z,4.6nm,1.0s						
DIVS	**Divibare**	**152.23 331**			**PKPbc**	03 18 38.5	-0.8
WATA	**Walderalm**	**152.40 345**	*i* P		**PKPbc**	03 18 39.1	-0.6
	comp=Z,2.2nm,0.5s						
WATA			*e*P		**PKPab**	03 18 52.3	-0.4
	comp=Z,13nm,1.5s						
RETA	**Reutte**	**152.45 346**	*i* P		**PKPbc**	03 18 39.3	-0.4
	comp=Z,5.4nm,1.3s						
WTTA	**Wattenberg**	**152.45 345**	*i* P		**PKPbc**	03 18 39.5	-0.3
	comp=Z,3.8nm,0.5s						
WTTA			*e*P		**PKPab**	03 18 53.3	+0.4
	comp=Z,4.6nm,0.7s						
MYKA	**Terra Mystica**	**152.50 342**	*i* P		**PKPbc**	03 18 38.8	-1.0
	comp=Z,2.8nm,0.4s						
MOTA	**Moosalm**	**152.50 346**	*i* P		**PKPbc**	03 18 39.4	-0.5
	comp=Z,4.2nm,0.8s						
MOTA			*e*P		**PKPab**	03 18 52.9	-0.2
	comp=Z,6.9nm,1.1s						
SQTA	**Sankt Quirin**	**152.60 345**	*i* P		**PKPbc**	03 18 39.6	-0.4
	comp=Z,8.8nm,1.1s						
ABTA	**Abfaltersbach**	**152.71 343**	*i* P		**PKPbc**	03 18 39.1	-1.1
	comp=Z,5.8nm,0.6s						
ABTA			*i* P		**PKPab**	03 18 53.5	-0.4
	comp=Z,5.1nm,0.8s						
DAVA	**Damuels**	**152.83 347**	*i* P		**PKPbc**	03 18 40.4	-0.2
	comp=Z,6.2nm,1.6s						
DAVA			*i* P		**PKPab**	03 18 54.7	+0.2
	comp=Z,2.9nm,0.7s						
FETA	**Feichten**	**152.90 346**	*i* P		**PKPbc**	03 18 40.4	-0.4
	comp=Z,3.5nm,0.9s						
ESDC	**Sonseca Array**	**160.74 13**	PKPab		**PKPab**	03 19 28.8	0.0
	comp=Z,1.3nm,1.1s,baz=348,slow=5.4,SNR=4.5						
TORD	**Torodi Ar. Bea**	**172.27 182**	PKP		**PKPdf**	03 18 51.2	-1.0
	comp=Z,0.7nm,0.8s,baz=86,slow=2.7,SNR=3.6						
TORD			PKPab		**PKPab**	03 20 20.1	0.0
	comp=Z,0.4nm,0.6s,baz=164,slow=4.9,SNR=2.7						

*KRNET **06** 03:15:39.1±0.1,39.25N×73.85E,mb3.2*
*ISU **06** 03:15:42,39.69N×73.74E,h5km*
*NNC **06** 03:15:47.5±3.0,39.73N×73.62E,h0km,mb3.5,mpv3.5,*
Error ellipse: s-maj=23.1km s-min=12.3km az=172.0
*SOME **06** 03:15:52.7,40.03N×73.40E,h20km*

ISC 06 03:15:41.5±1.8,39.52N±0.07×73.94E±0.04,h17km±11km, n33,σ2s03/54,13C-11D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.34**	**319**	⇑*i*P			**Pb**	**03 16 07.0**	**+0.7**
	baz=28								
OHH				⇑*i*S			**Sg**	**03 16 27.3**	**+2.3**
	baz=28								
TSTA	**Tashata**	**1.55**	**314**	S			**Sn**	**03 16 27.1**	**-1.0**
DRK	**Karamyk**	**1.66**	**269**	⇓*i*P			**Pn**	**03 16 08.9**	**-1.3**
	baz=79								
DRK				⇓*i*S			**Sn**	**03 16 30.3**	**-0.9**
	baz=79								
ANR	**Andizhan**	**1.73**	**316**	S			**Sg**	**03 16 35.9**	**-1.5**
FRG	**Fergana**	**1.87**	**298**	P			**Pn**	**03 16 13.8**	**+1.0**
FRG				S			**Sb**	**03 16 37.1**	**-1.3**
ARLS	**Aral**	**2.36**	**7**	⇑*i*P			**Pb**	**03 16 23.7**	**0.0**
	baz=8.0								
ARLS				⇑*i*S			**Sg**	**03 16 56.2**	**-1.3**
	baz=8.0								
BTK	**Batken**	**2.47**	**284**	⇑*i*P			**Pn**	**03 16 21.4**	**+0.3**
	baz=90								
BTK				⇑*i*S			**Sn**	**03 16 52.7**	**+1.8**
	baz=90								
BTK	**Batken**	**2.47**	**284**	P			**Pn**	**03 16 23.0**	**+1.9**
BTK				S			**Sb**	**03 16 55.6**	**-0.1**
MINT	**Mingtut**	**2.47**	**294**	S			**Sb**	**03 16 57.0**	**+1.3**
ARK	**Arkit**	**2.73**	**327**	⇑*i*P			**Pn**	**03 16 27.3**	**+2.5**
	baz=31								
ARK				⇑*i*S			**Sb**	**03 17 03.3**	**0.0**
	baz=31								
UCH	**Uchtor**	**2.74**	**9**	⇑*i*P			**Pb**	**03 16 29.4**	**-1.0**
	baz=9.0								
UCH				⇑*i*S			**Sg**	**03 17 06.3**	**-3.5**
	baz=9.0								
GAR	**Garm**	**2.86**	**261**	⇑*i*P			**Pn**	**03 16 25.4**	**-1.2**
	baz=66								
GAR				⇑*i*S			**Sn**	**03 16 59.4**	**-1.3**
	baz=66								
TRKS	**Terek-Say**	**2.94**	**314**	⇓*i*P			**Pn**	**03 16 28.9**	**+1.3**
	baz=18								
TRKS				⇓*i*S			**Sb**	**03 17 05.6**	**-3.6**
	baz=18								
MRKS	**Merke**	**3.27**	**351**	*e*P			**Pg**	**03 16 42.3**	**-1.9**
	3.0nm,0.5s								
MRKS				*e*S			**Sb**	**03 17 17.7**	**-1.1**
	52nm,0.8s								
MRKS	**Merke**	**3.27**	**351**	Pg			**Pg**	**03 16 45.6**	**+1.3**
	7.9nm,0.4s								
MRKS				Lg			Lg	03 17 23.6	
	53nm,0.6s								
BOOM	**Boomskoye usch**	**3.33**	**26**	⇓*i*P			**Pn**	**03 16 37.4**	**+4.3**
	baz=25								
BOOM				⇓*i*S			**Sb**	**03 17 19.5**	**-1.2**
	baz=25								
CHMS	**Chumysh**	**3.53**	**10**	⇓Pn			**Pn**	**03 16 34.1**	**-1.6**
	3.9nm,1.1s								
CHMS				⇓Lg			Lg	03 17 32.7	
	12nm,0.7s								
TKM2	**Tokmak 2**	**3.62**	**20**	⇑Pn			**Pb**	**03 16 44.0**	**-1.3**
	0.6nm,0.3s								
TKM2				⇓Lg			Lg	03 17 37.8	
	6.3nm,0.5s								
KST	**Kastek**	**3.84**	**23**	*e*P			**Pg**	**03 16 56.8**	**+1.7**
	2.5nm,0.5s								
KST				*e*S			**Sg**	**03 17 43.1**	**-1.7**
	17nm,0.9s								
KST	**Kastek**	**3.84**	**23**	Pg			**Pg**	**03 16 56.8**	**+1.7**
KST				Lg			Lg	03 17 43.1	
DZA	**Taraz**	**3.91**	**331**	*e*P			**Pb**	**03 16 50.6**	**+0.6**
	107nm,0.1s								
DZA				*e*S			**Sb**	**03 17 32.0**	**-5.0**
	229nm,0.2s								
DZA	**Taraz**	**3.91**	**331**	Pg			**Pb**	**03 16 50.6**	**+0.6**
	89nm,0.1s								
DZA				Lg			Lg	03 17 32.0	
	197nm,0.1s								
IUG	**Iuzhnay**	**3.96**	**313**	*e*P			**Pb**	**03 16 51.9**	**+0.9**
	155nm,0.8s								
IUG				*e*S			**Sb**	**03 17 34.6**	**-4.1**
	27nm,0.7s								
IUG	**Iuzhnay**	**3.96**	**313**	Pg			**Pb**	**03 16 51.9**	**+0.9**
	24nm,0.4s								
IUG				Lg			Lg	03 17 34.6	
	17nm,0.3s								
MTBS	**Maitube**	**4.07**	**27**	*e*P			**Pg**	**03 17 02.2**	**+2.8**
	2.6nm,0.2s								
MTBS				*e*S			**Sg**	**03 17 51.9**	**-0.2**
	14nm,0.3s								
MTBS	**Maitube**	**4.07**	**27**	Pg			**Pg**	**03 17 02.2**	**+2.8**
	2.6nm,0.2s								
MTBS				Lg			Lg	03 17 51.9	
	14nm,0.5s								
KK31	**Karatay Array**	**4.42**	**325**	⇓Pn			**Pn**	**03 16 50.1**	**+2.3**
	0.5nm,0.3s,baz=127,slow=12,SNR=28								
KK31				Pg			**Pb**	**03 16 59.8**	**+1.1**
	0.9nm,0.2s,baz=146,slow=15,SNR=9.0								
KK31				Sn			**Sn**	**03 17 43.1**	**+4.1**
	1.1nm,0.3s,baz=138,slow=24,SNR=4.7								
KK31				⇓Lg			Lg	03 17 59.2	
	1.5nm,0.3s								
KTBS	**Karatobe**	**4.67**	**25**	*e*P			**Pg**	**03 17 11.4**	**+0.5**
	2.6nm,0.5s								
KTBS				*e*S			**Sg**	**03 18 08.5**	**-2.8**
	18nm,0.3s								
KTBS	**Karatobe**	**4.67**	**25**	Pg			**Pg**	**03 17 11.4**	**+0.5**
	3.3nm,0.9s								
KTBS				Lg			Lg	03 18 08.5	
	18nm,0.4s								
KUU	**Kurty**	**4.73**	**22**	*e*P			**Pg**	**03 17 13.2**	**+1.2**
	3.6nm,0.1s								
KUU				*e*S			**Sg**	**03 18 11.0**	**-2.3**
	12nm,0.6s								
KUU	**Kurty**	**4.73**	**22**	Pg			**Pg**	**03 17 13.2**	**+1.2**
	3.6nm,0.1s								
KUU				Lg			Lg	03 18 11.0	
	12nm,0.6s								
CHKK	**Chushkaly**	**4.90**	**27**	*e*P			**Pg**	**03 17 16.3**	**+1.0**
	2.0nm,0.2s								
CHKK				*e*S			**Sg**	**03 18 16.9**	**-1.9**
	9.4nm,0.9s								
CHKK	**Chushkaly**	**4.90**	**27**	Pg			**Pg**	**03 17 16.3**	**+1.0**
	1.7nm,0.4s								
CHKK				Lg			Lg	03 18 16.9	
	9.4nm,0.4s								

*IDC **06** 03:25:14.7±1.8,31.51N×50.97E,h0km,mb3.8/5,*
mbtmp3.8/7,ML3.5/2,MS2.8/3,Error ellipse: s-maj=41.8km
s-min=29.9km az=64.0
*TEH **06** 03:25:15.5,31.58N×50.84E,h8km,ML3.5*
*DSN **06** 03:25:20.3±2.1,31.07N×50.84E,h10km,ML3.3/6,Error*
ellipse: s-maj=28.2km s-min=12.5km az=12.0

ISC 06 03:25:17.4±0.7,31.53N±0.03×50.83E±0.04,h19km,n66, σ2s15/66,mb3.7/5,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBRJ	**Brojen**	**0.53**	**44**	*e*Pg			**Pg**	**03 25 25.4**	**-2.7**
IBRJ				*e*				03 25 34.4	
	comp=Z,80μm,0.4s								
SHK1	**Shahrekord**	**0.80**	**3**	*e*Pg			**Pb**	**03 25 30.3**	**-2.5**
SHK1				*e*Sg			**Sb**	**03 25 41.0**	**-2.3**
SHK1				*e*				03 25 43.6	
	comp=Z,19μm,0.4s								
KLNJ	**Kolanjah**	**0.83**	**128**	*e*Pg			**Pb**	**03 25 31.7**	**-1.8**
KLNJ				*e*Sg			**Sg**	**03 25 45.2**	**+0.3**
KLNJ				*e*				03 25 51.7	
	comp=Z,50μm,0.6s								
ABEH	**Behbahan**	**1.05**	**208**	*e*Pg			**Pn**	**03 25 37.7**	**+0.5**
IPIR	**Pirpir**	**1.15**	**2**	*e*Pg			**Pb**	**03 25 37.3**	**-1.6**
AMIS	**Naft Sefid**	**1.33**	**276**	*e*Pg			**Pn**	**03 25 41.0**	**+0.1**
IGAR	**Gharneh**	**1.35**	**49**	*e*Pg			**Pn**	**03 25 40.7**	**-0.7**
IGAR				*e*				03 26 06.5	
	comp=Z,10μm,0.4s								
IRAM	**Ramesheh**	**1.35**	**78**	*e*Pg			**Pn**	**03 25 40.8**	**-0.7**
IRAM				*e*				03 26 09.7	
	comp=Z,9μm,0.5s								
IZEF	**Zefreh**	**1.86**	**43**	*e*Pn			**Pb**	**03 25 49.8**	**-1.2**
IZEF				*e*				03 26 22.9	
	comp=Z,3μm,0.5s								
AHWZ	**Ahwaz**	**1.88**	**265**	*e*Pn			**Pn**	**03 25 49.4**	**+0.9**
IKLH	**Kolahrood**	**1.89**	**19**	*e*Pn			**Pb**	**03 25 50.5**	**-1.0**
IKLH				*e*				03 26 20.8	
	comp=Z,7μm,0.4s								
KAZ1	**Kazerun**	**2.02**	**160**	*e*Pn			**Pb**	**03 25 53.4**	**-0.2**
NASN	**Na'in**	**2.10**	**52**	*e*Pn			**Pb**	**03 25 53.9**	**-1.2**
KHMZ	**Khomeyn**	**2.32**	**342**	*e*Pn			**Pb**	**03 25 57.9**	**-0.9**
SHI	**Shiraz**	**2.38**	**142**	*e*Pn			**Pb**	**03 25 57.8**	**-1.9**
ISAD	**Sadrabad**	**2.46**	**80**	*e*			**Sg**	**03 26 41.4**	**+4.7**
	comp=Z,3μm,0.8s								
KRSH	**Karshahi**	**2.67**	**24**	*e*Pn			**Pb**	**03 26 02.2**	**-2.5**
AHBU	**AHRAM**	**2.69**	**171**	*e*Pn			**Pn**	**03 26 02.3**	**+2.7**
GHVR	**GHOM**	**2.97**	**7**	*e*Pn			**Pb**	**03 26 07.8**	**-2.0**
ISFB	**Sefidab**	**3.05**	**22**	*e*Pn			**Pn**	**03 26 06.8**	**+2.0**
ASAO	**Ashtian**	**3.09**	**348**	*e*Pn			**Pb**	**03 26 08.7**	**-3.2**
IDOB	**Doab**	**3.18**	**316**	*e*Pn			**Pn**	**03 26 07.7**	**+1.1**
IKFM	**Kafar-mosalman**	**3.21**	**309**	*e*Pn			**Pn**	**03 26 08.6**	**+1.8**
IMEH	**Mehriz**	**3.23**	**91**	*e*Pn			**Pn**	**03 26 09.9**	**+2.5**
YZKH	**Yazd**	**3.31**	**74**	*e*Pn			**Pb**	**03 26 11.7**	**-3.9**
IQOM	**Qom**	**3.31**	**3**	*e*Pn			**Pn**	**03 26 10.5**	**+2.0**
IVRN	**Varamin**	**3.54**	**12**	*e*Pn			**Pn**	**03 26 13.5**	**+2.1**
HAGD	**Aghdareh**	**3.58**	**337**	*e*Pn			**Pn**	**03 26 13.0**	**+0.9**
IKOM	**Komasi**	**3.84**	**314**	*e*Pn			**Pn**	**03 26 17.4**	**+1.7**
IBZA	**Bozab**	**3.85**	**320**	*e*Pn			**Pn**	**03 26 16.6**	**+0.7**
IBAF	**Bafgh**	**4.04**	**88**	*e*Pn			**Pn**	**03 26 21.3**	**+2.9**
DAMV	**Damavand**	**4.20**	**13**	*e*Pn			**Pn**	**03 26 23.8**	**+3.1**
QABG	**Abgarm-Qazvin**	**4.30**	**346**	*e*Pn			**Pn**	**03 26 22.8**	**+0.8**
CHTH	**Charan**	**4.37**	**3**	*e*Pn			**Pn**	**03 26 26.4**	**+3.3**
IFIR	**Firoozkooh**	**4.40**	**21**	*e*Pn			**Pn**	**03 26 25.2**	**+1.7**
SNGE	**Sanandaj**	**4.60**	**322**	*e*Pn			**Pn**	**03 26 29.6**	**+3.5**
QALM	**Alamut, Qazvin**	**4.89**	**358**	*e*Pn			**Pn**	**03 26 31.7**	**+1.5**
KHGB	**Koh Gabri**	**4.98**	**102**	*e*Pn			**Pn**	**03 26 33.7**	**+2.3**
TPRV	**Parvadeh(Tabas**	**5.18**	**72**	*e*Pn			**Pn**	**03 26 36.5**	**+2.5**
KRBR	**Kerman**	**5.33**	**105**	*e*Pn			**Pn**	**03 26 38.9**	**+2.6**
TNSJ	**Nastanj**	**5.44**	**62**	*e*Pn			**Pn**	**03 26 40.2**	**+2.6**
TKDS	**Koohdasht(Taba**	**5.70**	**67**	*e*Pn			**Pn**	**03 26 43.2**	**+2.0**
TABS	**Tabas**	**5.71**	**67**	*e*Pn			**Pn**	**03 26 44.4**	**+3.1**
SHRO	**Shahrood**	**6.20**	**43**	*e*Pn			**Pn**	**03 26 51.5**	**+3.5**
BSRN	**Basiran**	**7.08**	**84**	*e*Pn			**Pn**	**03 27 03.1**	**+3.0**
BANOM	**Banah**	**7.36**	**138**	P			**Pn**	**03 27 03.4**	**-0.6**
MRVT	**Maraveh tapeh**	**7.49**	**34**	*e*Pn			**Pn**	**03 27 08.0**	**+2.2**
MDH	**Madha**	**7.85**	**141**	P			**Pn**	**03 27 09.3**	**-1.3**
ASUD	**Al Ashush, Dub**	**7.94**	**149**	P			**Pn**	**03 27 13.0**	**+1.2**
UOSS	**Minazif**	**8.09**	**143**	P			**Pn**	**03 27 12.3**	**-1.6**
HATD	**Hatta, Dubai**	**8.15**	**144**	P			**Pn**	**03 27 13.9**	**-0.8**
ASHO	**Ashiyiah**	**8.23**	**145**	P			**Pn**	**03 27 15.6**	**-0.3**
ASHO				S			**Sn**	**03 28 45.0**	**-3.4**
SHRT	**Shahrakht**	**8.26**	**73**	*e*Pn			**Pn**	**03 27 19.8**	**+3.6**
SOHO	**SOHO**	**8.93**	**144**	P			**Pn**	**03 27 22.9**	**-2.4**
RAYN	**Ar Rayn**	**9.27**	**212**	P			**Pn**	**03 27 28.9**	**-1.3**
GNI	**Garni**	**9.92**	**332**	LR			LR	03 31 46.4	
	comp=Z,37nm,18.4s,baz=146,slow=39								
WSAR	**Wadi Sarin**	**10.78**	**138**	Pn			**Pn**	**03 27 49.8**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=333,slow=15,SNR=5.7								
	comp=Z,3.2nm,0.5s								
EIL	**Elat**	**13.81**	**266**	LR			LR	03 35 02.7	
	comp=Z,39nm,18.9s,baz=81,slow=42								
BRTR	**Keskin Array B**	**16.18**	**305**	Pn			**P**	**03 29 08.7**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=124,slow=13,SNR=8.8								
	comp=Z,1.3nm,0.7s								
AAK	**Ala-Archa**	**21.82**	**53**	LR			LR	03 40 14.1	
	comp=Z,24nm,18.4s,baz=315,slow=41								
IDI	**Anoyia**	**21.96**	**287**	P			**P**	**03 30 12.6**	**+2.5**
	comp=Z,8.4nm,0.9s,baz=94,slow=15,SNR=2.3								
	comp=Z,8.4nm,0.9s								
AKASG	**Malin Array Be**	**24.98**	**326**	P			**P**	**03 30 40.3**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=133,slow=8.7,SNR=8.2								
	comp=Z,0.9nm,0.4s								
FINES	**FINESS Array B**	**34.01**	**339**	P			**P**	**03 32 00.6**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=150,slow=9.3,SNR=6.7								
	comp=Z,0.4nm,0.4s								
NB2	**NORSAR Subarra**	**39.22**	**331**	P			**P**	**03 32 44.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=123,slow=8.6							

SBA Scott Base 60.37 184 P P 03 53 59.1 +1.3
VNDA Vanda 60.39 185 P P 03 53 58.2 +0.2
comp=Z,0.6nm,0.6s,baz=346,slow=7.3,SNR=5.5
comp=Z,0.6nm,0.6s
VNDA Vanda 60.39 185 P P 03 53 57.4 -0.6
MJAR Matsushiro Arr 67.92 323 P P 03 54 46.0 -0.3
comp=Z,1.4nm,0.6s,baz=107,slow=12,SNR=5.6
comp=Z,1.4nm,0.6s
JHS Saijyo 69.90 319 P P 03 54 59.0 +0.7
JHS IAmb IAmb 03 54 59.4
comp=Z,5.2nm,0.7s
QSPA South Pole Qui 72.09 180 P P 03 55 09.9 -0.9
PETK Petropavlovsk- 73.72 345 P P 03 55 20.1 +0.2
comp=Z,3.2nm,0.6s,baz=123,slow=7.4,SNR=5.3
comp=Z,3.2nm,0.6s
PETK Petropavlovsk- 73.72 345 P P 03 55 19.4 -0.5
KSRS Korea Array 74.70 318 P P 03 55 27.1 +1.4
comp=Z,0.8nm,0.6s,baz=132,slow=6.5,SNR=4.0
comp=Z,0.8nm,0.6s
CCX Cicese 77.19 50 P P 03 55 39.4 -0.2
ISA Isabella, Lake 77.89 46 P P 03 55 43.7 +0.3
ISA IAmb IAmb 03 55 45.0
comp=Z,6.4nm,1.0s
CMB Columbia Colle 77.91 43 P P 03 55 44.1 +0.6
MDPB Devils Postpil 78.55 44 P P 03 55 47.8 +0.6
MDPB IAmb IAmb 03 55 48.6
comp=Z,4.1nm,0.8s
BEKR Beckworth 78.97 42 P P 03 55 49.5 +0.2
BEKR IAmb IAmb 03 55 50.1
comp=Z,4.1nm,0.6s
PNTR Pine Nut 79.02 43 P P 03 55 50.5 +1.0
NVAR Mina Array Bea 79.50 44 P P 03 55 52.6 +0.5
comp=Z,2.2nm,0.7s,baz=223,slow=8.5,SNR=14
comp=Z,2.2nm,0.7s
NVAR Mina Array Bea 79.50 44 P P 03 55 52.5 +0.4
NV11 Mina Array Sit 79.60 44 P P 03 55 52.8 +0.2
J04D Umpqua Nationa 79.85 38 P P 03 55 54.9 +1.1
TPNV Topopah Spring 80.09 46 P P 03 55 54.8 -0.4
MOD Modoc Plateau 80.16 40 P P 03 55 56.2 +0.8
MOD IAmb IAmb 03 55 56.7
comp=Z,4.9nm,0.7s
K05A Summer Lake 80.27 39 P P 03 55 56.3 +0.3
K05A IAmb IAmb 03 55 57.4
comp=Z,7.4nm,0.8s
PINE Pine Mountain 80.86 38 P P 03 55 59.5 +0.4
PINE IAmb IAmb 03 56 00.8
comp=Z,7.1nm,0.9s
PRN Pahroc Range 81.15 46 P P 03 56 00.9 +0.3
PRN IAmb IAmb 03 56 02.5
comp=Z,4.9nm,0.9s
WVOR Wild Horse Val 81.48 40 P P 03 56 01.6 -0.6
WVOR IAmb IAmb 03 56 03.7
comp=Z,7.2nm,1.1s
TUC Tucson 81.78 52 P P 03 56 04.9 +1.0
TUC IAmb IAmb 03 56 06.1
comp=Z,5.5nm,1.2s
I07A Izee 81.88 39 P P 03 56 03.9 -0.3
I07A IAmb IAmb 03 56 05.6
comp=Z,5.8nm,0.8s
J08A Circle Bar Ran 82.09 40 P P 03 56 05.2 0.0
J08A IAmb IAmb 03 56 06.7
comp=Z,9.4nm,1.1s
CCUT Cedar City 82.39 47 P P 03 56 07.5 +0.4
PSUT Pine Spring 82.53 46 IAmb IAmb 03 56 08.9
comp=Z,3.0nm,0.8s
U15A North Rim 82.59 48 IAmb IAmb 03 56 10.0
comp=Z,6.1nm,0.8s
ELK Elko 82.73 43 P P 03 56 08.7 0.0
G08A Pilot Rock 82.88 38 P P 03 56 09.2 0.0
PKCU Pink Cliffs 83.07 47 IAmb IAmb 03 56 12.9
comp=Z,5.1nm,1.0s
K20K Telida 83.27 11 IAmb IAmb 03 56 10.9
comp=Z,6.0nm,0.8s
MFID Camas Ranch 83.75 41 P P 03 56 13.5 -0.1
SEY Seymchan 83.81 347 P P 03 56 12.6 -0.6
comp=Z,3.4nm,0.6s,baz=141,slow=6.0,SNR=12
comp=Z,3.4nm,0.6s
D08A Wollman Farm, 83.90 36 IAmb IAmb 03 56 15.3
comp=Z,6.1nm,1.0s
F10A Beach Ranch, E 84.27 38 IAmb IAmb 03 56 16.8
comp=Z,6.3nm,0.9s
HLID Hailey 84.70 41 P P 03 56 17.6 -0.7
HLID IAmb IAmb 03 56 19.8
comp=Z,2.5nm,0.8s
M26K Nabesna, AK 84.85 16 IAmb IAmb 03 56 19.0
comp=Z,5.3nm,0.9s
SRU San Rafael Swe 85.09 46 IAmb IAmb 03 56 21.3
comp=Z,2.8nm,0.7s
M27K Edge Creek, AK 85.10 16 IAmb IAmb 03 56 21.2
comp=Z,6.6nm,1.1s
IMAR Indian Mountai 85.74 10 P P 03 56 20.6 -2.0
IL31 85.95 13 IAmb IAmb 03 56 23.2
comp=Z,4.2nm,1.0s
ILAR Eielson Array 85.95 13 P P 03 56 22.1 -1.4
comp=Z,1.5nm,0.4s,baz=219,slow=5.0,SNR=23
comp=Z,1.5nm,0.4s
TX32 Lajitas Array 86.07 58 IAmb IAmb 03 56 27.3
comp=Z,5.2nm,1.0s
TXAR Lajitas Array 86.07 58 P P 03 56 26.4 +1.4
comp=Z,3.1nm,0.8s,baz=222,slow=6.1,SNR=38
comp=Z,3.1nm,0.8s
J25K Salcha River, 86.14 14 IAmb IAmb 03 56 24.5
comp=Z,3.3nm,0.5s
ANMO Albuquerque 86.17 52 P P 03 56 25.6 +0.1
J26L Joseph Creek 86.47 14 IAmb IAmb 03 56 26.5
comp=Z,3.9nm,0.7s
TPAW Teton Pass 86.86 42 IAmb IAmb 03 56 29.2
comp=Z,5.9nm,1.2s
REDW Red Top Meadow 86.86 42 IAmb IAmb 03 56 30.6
comp=Z,4.9nm,1.1s
IMW Indian Meadow 87.06 42 IAmb IAmb 03 56 31.1
comp=Z,3.7nm,0.8s
HHC Hu-ho-hao-te 87.27 314 eP P 03 56 30.3 -0.2
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,95nm,4.8s
BW06 Boulder Array 87.43 43 IAmb IAmb 03 56 31.9
comp=Z,2.1nm,0.7s
PD31 Pinedale Array 87.43 43 IAmb IAmb 03 56 31.9
comp=Z,1.8nm,0.8s
PDAR Pinedale Array 87.43 43 P P 03 56 31.2 -0.1
comp=Z,1.7nm,0.6s,baz=217,slow=3.8,SNR=23
comp=Z,1.7nm,0.6s
PDAR Pinedale Array 87.43 43 P P 03 56 30.4 -0.9
COLD Coldfoot 87.47 11 IAmb IAmb 03 56 31.3
comp=Z,4.0nm,1.0s
PZH PanZhiHua 89.13 298 P P 03 56 40.5 +1.0
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,80nm,5.3s
INK Inuvik 91.95 15 P P 03 56 49.9 -1.5
comp=Z,1.9nm,0.7s,baz=166,slow=6.7,SNR=4.5
comp=Z,1.9nm,0.7s
KURBB Kurchatov Arra 111.88 318 PKiKP PKiKP 04 02 12.6 -1.5
comp=Z,0.4nm,0.6s,baz=106,slow=1.9,SNR=4.6
ARCES ARCESS Array B 126.36 350 PKP PKPdf 04 02 40.0 -1.4
comp=Z,0.7nm,0.6s,baz=24,slow=1.5,SNR=4.9
FINES FINESS Array B 133.22 344 PKhKP PKPpre 04 02 51.1
comp=Z,1.3nm,0.9s,baz=122,slow=2.1,SNR=3.4
BNN Bunyan 143.65 312 PKPbc 04 03 12.2 -1.4
BURAR Bucovina Array 144.63 332 PKPdf PKPbc 04 03 16.1 -0.2
BRTR Keskin Array B 144.78 315 PKP PKPdf 04 03 15.8 -0.6
comp=Z,0.9nm,0.5s,baz=119,slow=2.8,SNR=6.5
KOLS Kolonicke sedl 144.83 336 ePKP PKPab 04 03 16.9 -0.6
OSTC Ostas 145.42 343 ePKP PKPbc 04 03 18.2 -0.2
CHVC Chvalec 145.44 344 ePKP PKPbc 04 03 18.3 -0.2
CLL Collm 145.50 347 PKPdf 04 03 17.3 +0.2
CLL Collm 145.50 347 i PKPbc PKPbc 04 03 17.9 -0.6
comp=Z,11nm,0.8s
DPC Dobruska-Polom 145.58 343 ePKP PKPbc 04 03 18.7 -0.2
KRLC Kraliky 145.70 342 ePKP PKPbc 04 03 19.0 -0.2
BRG Berggiesshubel 145.70 346 ePKP PKPbc 04 03 18.7 -0.4
BRG Amp 04 03 21.1
comp=Z,5.5nm,0.8s
MORC Moravsky Berou 145.74 341 PKPbc PKPbc 04 03 19.5 +0.2
MORC Moravsky Berou 145.74 341 ePKP PKPbc 04 03 19.0 -0.4
PVCC Panska Ves 145.87 345 ePKP PKPbc 04 03 19.6 0.0
PRU Pruhonice 146.38 345 ePKP PKPbc 04 03 20.8 -0.3
KRUC Moravsky 146.72 342 ePKP PKPbc 04 03 21.3 -0.7
KHC Kasperske Hory 147.41 345 PKPbc PKPbc 04 03 23.1 -0.8
KHC Kasperske Hory 147.41 345 ePKP PKPbc 04 03 23.6 -0.3
KHC ex x 04 03 27.8
CKRC Cesky Krumlov 147.52 344 ePKP PKPbc 04 03 23.8 -0.3
GERES GERESS Array B 147.65 345 PKPbc PKPbc 04 03 24.0 -0.6
comp=Z,2.5nm,0.6s,baz=31,slow=3.2,SNR=25
CONA Conrad Observa 147.89 342 eP PKPbc 04 03 25.1 -0.1
comp=Z,6.5nm,1.2s
RONA Rosalia, Austr 147.97 341 i P PKPbc 04 03 25.1 -0.3
comp=Z,4.3nm,0.7s
KBA Koelnbreinsper 149.37 344 i P PKPbc 04 03 28.3 -0.7
comp=Z,8.7nm,1.1s
WATA Walderalm 149.56 346 i P PKPbc 04 03 29.1 -0.3
comp=Z,3.4nm,0.6s
WTTA Wattenberg 149.62 346 i P PKPbc 04 03 28.9 -0.7
comp=Z,4.8nm,0.6s
MOTA Moosalm 149.66 347 i P PKPbc 04 03 29.4 -0.2
comp=Z,5.0nm,0.8s
MYKA Terra Mystica 149.71 343 i P PKPbc 04 03 28.7 -1.0
comp=Z,2.8nm,0.5s
SQTA Sankt Quirin 149.75 347 i P PKPbc 04 03 29.7 -0.1
comp=Z,7.9nm,1.0s
ABTA Abfaltersbach 149.89 345 i P PKPbc 04 03 29.4 -0.7
comp=Z,7.5nm,0.7s
DAVA Damuels 149.96 349 i P PKiKP 04 03 30.5 -0.4
comp=Z,5.0nm,0.9s
FETA Feichten 150.04 347 i P PKiKP 04 03 30.6 -0.6
comp=Z,6.4nm,1.1s
DAVOX Davos/Dischmat 150.44 348 PKPbc PKPbc 04 03 31.3 -0.2
comp=Z,5.7nm,0.7s,baz=342,slow=2.2,SNR=11

PRE 06 04:15:02.0±2.1, 28°.05S×26°.76E, h2km, ML1.8, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	
SNKL	**Senekal, Frees**	**0.92**	**105**	*eP*		Pg	04 15 18.6	-1.1
SNKL				*eS*		Sg	04 15 30.0	-1.7
SNKL				IAML			04 15 41.4	
	comp=Z,16nm,0.3s							
SNKL	**Senekal, Frees**	**0.92**	**105**	*eP*		Pg	04 15 19.7	0.0
SNKL				*eS*		Sg	04 15 30.9	-0.8
SNKL				IAML			04 15 31.9	
	comp=Z,24nm,0.4s							
PRYS	**Parys**	**1.24**	**26**	*eP*		Pg	04 15 23.7	-2.0
PRYS				*eS*		Sg	04 15 40.0	-1.8
PRYS				IAML			04 15 43.9	
	comp=Z,44nm,0.4s							
PRYS	**Parys**	**1.24**	**26**	*eP*		Pg	04 15 25.7	0.0
PRYS				*eS*		Sb	04 15 42.3	-0.3
PRYS				IAML			04 15 43.9	
	comp=Z,36nm,0.4s							
BOSA	**Boshof**	**1.44**	**246**	*eP*		Pn	04 15 28.3	-1.0
BOSA				*eS*		Sg	04 15 47.1	-1.2
BOSA				IAML			04 15 53.0	
	comp=Z,12nm,0.3s							
BOSA	**Boshof**	**1.44**	**246**	*eP*		Pg	04 15 29.5	-0.1
BOSA				*eS*		Sn	04 15 48.7	-0.1
SWZ	**Schweizer**	**1.53**	**304**	*eP*		Pn	04 15 29.6	-0.9
SWZ				*eS*		Sn	04 15 49.3	-1.8
SWZ				IAML			04 15 53.4	
	comp=Z,19nm,0.2s							
SWZ	**Schweizer**	**1.53**	**304**	*eP*		Pb	04 15 31.3	+0.1
SWZ				*eS*		Sn	04 15 50.7	-0.3
SWZ				IAML			04 15 53.5	
	comp=Z,16nm,0.2s							
KSR	**Koster**	**2.19**	**3**	*eP*		Pn	04 15 37.8	-1.8
KSR				*eS*		Sn	04 16 05.0	-2.3
KSR				IAML			04 16 10.8	
	comp=Z,53nm,0.2s							
KSR	**Koster**	**2.19**	**3**	*eP*		Pb	04 15 41.4	-1.0
KSR				*eS*		Sn	04 16 07.6	+0.2
KSR				IAML			04 16 10.0	
	comp=Z,53nm,0.5s							
SLR	**Silverton**	**2.67**	**31**	*eS*		Sn	04 16 20.8	+1.5
SLR				IAML			04 16 31.8	
	comp=Z,9.0nm,0.5s							
HVD	**Gariep Dam**	**2.78**	**203**	*eP*		Pn	04 15 50.0	+2.3
HVD				*eS*		Sn	04 16 23.0	+1.1
HVD				IAML			04 16 39.3	
	comp=Z,3.3nm,0.4s							
LBTB	**Lobatse**	**3.19**	**341**	*eP*		Pn	04 15 53.6	+0.3
LBTB				*eS*		Sn	04 16 33.9	+1.8
LBTB				IAML			04 16 46.3	
	comp=Z,9.5nm,0.5s							
KSTD	**Kokstad**	**3.40**	**140**	*eP*		Pn	04 15 57.3	+1.1
KSTD				*eS*		Sn	04 16 37.1	0.0
KSTD				IAML			04 16 49.5	
	comp=Z,2.1nm,0.3s							
LEPH	**Lephalale, Lim**	**4.27**	**13**	*eP*		Pn	04 16 10.0	+1.8
LEPH				*eS*		Sn	04 16 57.2	-1.4
LEPH				IAML			04 17 25.0	
	comp=Z,2.2nm,0.5s							
UPI	**Upington**	**4.87**	**265**	*eP*		Pn	04 16 17.3	+0.9
UPI				*eS*		Sn	04 17 11.9	-1.5
UPI				IAML			04 17 35.9	
	comp=Z,1.2nm,0.3s							
ROOI	**Rooidraai Farm**	**5.23**	**211**	*eP*		Pn	04 16 20.6	-0.7
ROOI				*eS*		Sn	04 17 18.4	-3.9
ROOI				IAML			04 17 31.4	
	comp=Z,4.5nm,1.4s							

*BJI **06** 04:19:10.8±0.0, 4°.89N×132°.68E, h10km, mb4.7/73, mB5.2/64, Ms4.9/81, Ms7 4.6/74*
*IDC **06** 04:19:10.0±0.4, 4°.85N×132°.45E, h0km, mb4.7/29, mbtmp4.7/31, ML5.0/3, MS4.4/71, Error ellipse: s-maj=15.8km s-min=9.4km az=71.0*
*MOS **06** 04:19:10.9±1.3, 4°.82N×132°.43E, h12km, mb5.4/57, MS4.5/11, Error ellipse: s-maj=8.9km s-min=4.5km az=108.8*
*GCMT **06** 04:19:12.7±0.1, 5°.02N±0°.01×132°.40E±0°.01, h16km, MW5.3/160, Moment Tensor Solution. s121,c200; s160,c297; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr-0.03±.01; Mθθ 0.10±.01; Mϕϕ -0.07±.01; Mrθ 0.21±.04; Mθϕ 1.05±.01; Mϕr-0.17±.04; Best double couple: Mo1.08900×10^17 NP1:ϕs 272.00000°, δ81.00000°, λ-12.00000°. NP2:ϕs 3.00000°, δ79.00000°, λ-171.00000°. Principal axes: T 1.0720, Plg2.0000°, Azm318.0000°; N 0.0350, Plg76.0000°, Azm56.0000°; P -1.1060, Plg14.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **06** 04:19:12, 4°.71N×132°.60E, h10km, mb5.4*
*NEIC **06** 04:19:12.7±1.9, 4°.74N±0°.07×132°.45E±0°.07, h7km±3km, mb5.3/187, Error ellipse: s-maj=10.8km s-min=8.7km az=224.0*
*DJA **06** 04:19:13.7±1.1, 5°.N±3°×13°.2E±°, h14km±8km, M5.2/63, mB5.7/54, mb5.5/63, MLv5.7/10, Mw(mB)5.2/54, MwMwp5.0/18, Mwp5.3/18*

ISC 06 04:19:13.7±0.5, 4.75N±0°.03×132°.46E±0°.04, h18km±2km, h19km:pP-P, n768, σ2s 902/713, mb5.3/193, MS4.5/102, 19C-9D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	
SWI	**Sorong**	**5.70**	**192**	P		**Pn**	**04 20 38.5**	**+1.0**
SWI				pmax		pmax		
	comp=Z,979nm,0.6s							
SWI	**Sorong**	**5.70**	**192**	P		**Pn**	**04 20 38.0**	**+0.5**
	comp=Z,3.9nmcomp=Z,8μmcomp=Z,12μmcomp=Z,1μm,0.5s							
SIJI	**Sorong**	**5.70**	**192**	Pn		**Pn**	**04 20 38.5**	**+0.8**
	comp=Z,175nm,0.3s,baz=20,slow=12,SNR=168							
SIJI				Sn		**Sn**	**04 21 41.5**	**-1.2**
	baz=211,slow=19							
SIJI				LR		LR	04 22 31.6	
	comp=Z,5μm,21.0s,baz=331,slow=35							
TNTI	**Ternate**	**6.44**	**232**	Pn		**Pn**	**04 20 48.8**	**+1.0**
TNTI	**Ternate**	**6.44**	**232**	P		**Pn**	**04 20 48.1**	**+0.3**
	comp=Z,3.6nmcomp=Z,7μmcomp=Z,10μmcomp=Z,981nm,0.9s							
TNTI	**Ternate**	**6.44**	**232**	P		**Pn**	**04 20 50.0**	**+2.2**
BAKI	**Biak**	**6.93**	**148**	P		**Pn**	**04 20 56.0**	**+1.5**
	comp=Z,5μmcomp=Z,621nm,1.1s							
BIPH	**Bislig**	**6.96**	**300**	*eP*		Pn	04 20 45.0	-10
BIPH				*eS*		Sn	04 22 00.3	-13
SGSI	**Sangihe**	**7.00**	**262**	P		**Pn**	**04 20 54.5**	**-0.9**
	comp=Z,6.3nmcomp=Z,12μmcomp=Z,584nm,0.4s							
DAV	**Davao City (W)**	**7.23**	**289**	Pn		**Pn**	**04 20 56.2**	**-2.4**
	comp=Z,154nm,0.4s,baz=80,slow=15,SNR=0.9							
DAV				Sn		**Sn**	**04 22 17.2**	**-3.1**
	comp=Z,122nm,0.3s,baz=90,slow=20,SNR=2.0							
DAV				LR		LR	04 24 56.0	
	comp=Z,5μm,18.0s,baz=84,slow=48							
DAV	**Davao City (W)**	**7.23**	**289**	Pn		**Pn**	**04 20 59.8**	**+1.2**
DAV	**Davao City (W)**	**7.23**	**289**	P		**Pn**	**04 21 01.8**	**+3.2**
LBMI	**Labuha**	**7.29**	**223**	P		**Pn**	**04 20 58.8**	**-0.7**
	comp=Z,2.8nmcomp=Z,7μmcomp=Z,6μmcomp=Z,676nm,0.8s							
SRPI	**Serui, Papua**	**7.58**	**150**	P		**Pn**	**04 21 05.7**	**+2.3**
	comp=Z,1.1nmcomp=Z,6μmcomp=Z,5μmcomp=Z,357nm,0.9s							
GSPH	**General Santos**	**7.60**	**280**	*i P*		Pn	04 20 58.1	-5.6
GSPH				*i* S		**Sn**	**04 22 27.1**	**-2.5**
FAKI	**Fak Fak**	**7.62**	**182**	Pn		**Pn**	**04 21 04.0**	**+0.1**
FAKI	**Fak Fak**	**7.62**	**182**	P		**Pn**	**04 21 05.8**	**+1.9**
	comp=Z,0.9nmcomp=Z,2μmcomp=Z,3μmcomp=Z,322nm,1.0s							
FAKI	**Fak Fak**	**7.62**	**182**	P		**Pn**	**04 21 06.7**	**+2.8**
KCP	**Kidapawan**	**7.67**	**287**	*eP*		**Pn**	**04 21 00.2**	**-4.5**
KCP				*i* S		**Sn**	**04 22 29.1**	**-2.2**
CTBH	**Cotabato--PC H**	**8.54**	**287**	*eP*		**Pn**	**04 21 19.9**	**+3.4**
CGP	**Cagayan de Oro**	**8.55**	**296**	*eP*		**Pn**	**04 21 13.1**	**-3.6**
MSAI	**Masohi**	**8.78**	**204**	P		**Pn**	**04 21 23.3**	**+3.4**
	comp=Z,2μmcomp=Z,128nm,1.0s							
SMPI	**Sarmi**	**9.15**	**137**	P		**Pn**	**04 21 23.2**	**-1.7**
	comp=Z,6μmcomp=Z,3μmcomp=Z,289nm,1.1s							
SANI	**Sanana**	**9.35**	**224**	P		**Pn**	**04 21 26.5**	**-1.2**
	comp=Z,7μmcomp=Z,3μmcomp=Z,150nm,0.8s							
AAI	**Ambon**	**9.40**	**207**	P		**Pn**	**04 21 32.4**	**+4.0**
AAI				pmax		pmax		
	comp=Z,354nm,0.9s							
AAI	**Ambon**	**9.40**	**207**	P		**Pn**	**04 21 31.5**	**+3.1**
	comp=Z,3μmcomp=Z,355nm,0.9s							
KMSI	**Cibinong**	**9.43**	**244**	P		**Pn**	**04 21 29.8**	**+1.0**
	comp=Z,5μmcomp=Z,643nm,0.9s							
BNDI	**Bandanaira**	**9.55**	**196**	P		**Pn**	**04 21 33.8**	**+3.3**
	comp=Z,21μmcomp=Z,2μm,1.4s							
BNDI	**Bandanaira**	**9.55**	**196**	P		**Pn**	**04 21 34.9**	**+4.4**
NLAI	**Namlea**	**9.57**	**214**	P		**Pn**	**04 21 32.5**	**+1.8**
	comp=Z,4μmcomp=Z,310nm,1.2s							
GENI	**Genyem**	**10.60**	**133**	P		**Pn**	**04 21 46.0**	**+1.1**
	comp=Z,6μmcomp=Z,4μmcomp=Z,206nm,1.0s							
GENI	**Genyem**	**10.60**	**133**	P		**Pn**	**04 21 47.6**	**+2.7**
LUWI	**Luwuk**	**11.26**	**240**	Pn		**Pn**	**04 21 55.4**	**+1.5**
LUWI	**Luwuk**	**11.26**	**240**	P		**Pn**	**04 21 55.6**	**+1.7**
	comp=Z,566nm,1.0s							
LUWI	**Luwuk**	**11.26**	**240**	P		**Pn**	**04 21 56.6**	**+2.7**
MRSI	**Marisa**	**11.33**	**248**	P		**Pn**	**04 21 54.9**	**0.0**
	comp=Z,7μmcomp=Z,578nm,1.0s							
RCP	**Roxas**	**11.76**	**306**	*eP*		**Pn**	**04 21 59.7**	**-1.0**
APSI	**Ampana**	**12.18**	**243**	P		**Pn**	**04 22 06.8**	**+0.3**
	comp=Z,2μmcomp=Z,2μmcomp=Z,227nm,1.0s							
TOLI2	**Tolitoli**	**12.21**	**253**	Pn		**Pn**	**04 22 06.0**	**-0.9**
MPSI	**Mapaga**	**13.29**	**251**	P		**Pn**	**04 22 19.7**	**-2.0**
	comp=Z,3μmcomp=Z,1μmcomp=Z,76nm,1.0s							
MYLDM	**Lahad Datu**	**13.92**	**272**			**Pn**	**04 22 31.9**	**+1.7**
BBSI	**Bau Bau**	**14.18**	**224**	P		**Pn**	**04 22 34.7**	**+0.9**
	comp=Z,330nmcomp=Z,22nm,1.3s							
LQP	**Lukban**	**14.23**	**312**	*eP*		Pn	04 22 28.8	-5.9
TTSI	**Tana Toraja**	**14.82**	**239**	P		**Pn**	**04 22 40.2**	**-2.3**
	comp=Z,5μmcomp=Z,517nm,1.2s							
GUMO	**Guam**	**15.06**	**53**	LR		LR	04 27 48.3	
	comp=Z,1μm,20.2s,baz=238,slow=34							
SPSI	**Sidrap Palu**	**15.35**	**236**	P		**Pn**	**04 22 44.8**	**-4.9**
BKSI	**Bulukumba**	**15.87**	**231**	P		**Pn**	**04 22 55.4**	**-1.0**
	comp=Z,2μmcomp=Z,2μmcomp=Z,103nm,1.0s							
KAPI	**Kappang**	**15.97**	**233**	Pn		**Pn**	**04 22 58.0**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=38,slow=12,SNR=20							
KAPI				LR		LR	04 28 49.2	
	comp=Z,806nm,18.1s,baz=64,slow=36							
	comp=Z,54nm,1.2s							
KAPI	**Kappang**	**15.97**	**233**	Pn		**Pn**	**04 22 56.6**	**-1.2**
KAPI	**Kappang**	**15.97**	**233**	*d P*		**Pn**	**04 22 56.9**	**-0.8**
KAPI	**Kappang**	**15.97**	**233**	P		**P**	**04 23 00.6**	**-0.6**
SMKI	**Samarinda**	**16.09**	**252**	P		**P**	**04 23 01.1**	**-1.4**
BSSI	**Bau Bau, Buton**	**16.12**	**228**	P		**Pn**	**04 22 58.2**	**-1.4**
	comp=Z,2μmcomp=Z,2μmcomp=Z,85nm,1.1s							
KKM	**Kota Kinabalu**	**16.23**	**275**	Pn		**Pn**	**04 23 01.5**	**+0.4**
KKM	**Kota Kinabalu**	**16.23**	**275**	P		**P**	**04 23 03.2**	**-0.9**
MANU	**Manus Island**	**16.34**	**114**			**Pn**	**04 23 00.6**	**-1.9**
MANU				IAmb		IAmb	04 23 11.6	
	comp=Z,303nm,1.5s							
SOEI	**Soe**	**16.56**	**210**	Pn		**Pn**	**04 23 04.2**	**-1.1**
SOEI				IAmb		IAmb	04 23 29.3	
	comp=Z,238nm,1.0s							
SOEI	**Soe**	**16.56**	**210**	P		**P**	**04 23 09.6**	**+1.8**
SOEI	**Soe**	**16.56**	**210**	P		**P**	**04 23 07.9**	**+0.1**
BKB	**Balikpapan**	**16.66**	**249**	Pn		**Pn**	**04 23 03.7**	**-2.8**
BKB				IAmb		IAmb	04 23 12.3	
	comp=Z,228nm,1.1s							
BKB	**Balikpapan**	**16.66**	**249**	P		**P**	**04 23 09.3**	**+0.5**
	comp=Z,3μmcomp=Z,245nm,1.2s							
BKB	**Balikpapan**	**16.66**	**249**	P		**P**	**04 23 08.9**	**+0.1**
MMRI	**Maumere**	**16.75**	**218**	Pn		**Pn**	**04 23 06.7**	**-0.9**
MMRI				IAmb		IAmb	04 23 14.0	
	comp=Z,638nm,1.7s							
MMRI	**Maumere**	**16.75**	**218**	P		**P**	**04 23 10.3**	**+0.5**
	comp=Z,3μmcomp=Z,5μmcomp=Z,148nm,1.0s							
MMRI	**Maumere**	**16.75**	**218**	P		**P**	**04 23 11.2**	**+1.4**
APYP	**Conner**	**17.04**	**321**	*eP*		**Pn**	**04 23 08.2**	**-3.0**
EDFI	**Ende, Flores**	**17.18**	**219**	P		**P**	**04 23 14.9**	**+0.3**
	comp=Z,1μmcomp=Z,55nm,1.0s							
BATI	**Baumata**	**17.25**	**211**	P		**P**	**04 23 15.1**	**-0.3**
	comp=Z,5.1nm,0.3s,baz=191,slow=2.3,SNR=11							
BATI				LR		LR	04 29 26.3	
	comp=Z,3μm,21.9s,baz=70,slow=36							
BATI	**Baumata**	**17.25**	**211**	P		**P**	**04 23 15.3**	**0.0**
	comp=Z,2μmcomp=Z,186nm,1.1s							
KDU	**Kakadu**	**17.32**	**180**	P		**Pn**	**04 23 14.7**	**-0.1**
	baz=17,SNR=22							
KDU	**Kakadu**	**17.32**	**180**	P		**Pn**	**04 23 14.5**	**-0.2**
MTN	**Manton Dam**	**17.52**	**184**	P		**P**	**04 23 19.9**	**+1.6**
	baz=17,SNR=6.0							
MTN	**Manton Dam**	**17.52**	**184**	Pn		**Pn**	**04 23 16.1**	**-1.1**
MTN				IAmb		IAmb	04 23 23.1	
	comp=Z,196nm,1.1s							
MTN	**Manton Dam**	**17.52**	**184**	P		**P**	**04 23 18.3**	**0.0**
MTKI	**Muara Teweh, K**	**18.44**	**253**	P		**Pn**	**04 23 30.6**	**+2.0**
	comp=Z,73nm,1.1s							
BASI	**Baing, Sumba**	**19.00**	**219**	P		**P**	**04 23 34.2**	**-0.5**
	comp=Z,189nm,1.4s							
WBSI	**Waikabubak, Su**	**19.34**	**222**	P		**P**	**04 23 36.9**	**-1.5**
	comp=Z,3μmcomp=Z,177nm,0.9s							
BBKI	**Banjar Baru**	**19.40**	**245**	P		**Pn**	**04 23 39.7**	**-0.6**
	comp=Z,113nm,1.8s							
PLAI	**Plampang**	**19.91**	**227**	P		**Pn**	**04 23 46.0**	**-0.2**
	comp=Z,4μmcomp=Z,4μmcomp=Z,195nm,1.0s							
PLAI	**Plampang**	**19.91**	**227**	P		**Pn**	**04 23 46.7**	**+0.5**
PMG	**Port Moresby**	**20.30**	**134**	P		**P**	**04 23 49.7**	**+0.9**
	comp=Z,159nm,1.0s,baz=317,slow=8.9,SNR=14							
PMG				LR		LR	04 31 14.9	
	comp=Z,1μm,18.5s,baz=314,slow=36							
	comp=Z,159nm,1.0s							
SBUM	**Sibu**	**20.33**	**264**	P		**P**	**04 23

comp=Z,174nm,1.3s
JOW Kunigami 22.32 350 P **P** **04 24 12.0 +1.4**
KSM Kuching 22.36 262 P **P** **04 24 09.4 -1.6**
KSM IAmb IAmb 04 24 31.7
comp=Z,119nm,1.0s
KSM Kuching 22.36 262 P **P** **04 24 13.2 +2.1**
BWJI Bawean 22.40 242 P **P** **04 24 13.0 +1.5**
comp=Z,325nm,1.0s
JAGI Jajag, Banyuwa 22.49 234 P **P** **04 24 11.6 -0.9**
JAGI Jajag, Banyuwa 22.49 234 P **P** **04 24 13.5 +1.0**
comp=Z,3µmcomp=Z,273nm,1.1s
JAGI Jajag, Banyuwa 22.49 234 P **P** **04 24 12.9 +0.4**
YHNB Yeheng 22.50 333 IAmb IAmb 04 24 32.3
comp=Z,99nm,0.9s
YHNB Yeheng 22.50 333 P **P** **04 24 10.8 -1.7**
BLJI Banyuglugur 22.55 237 P **P** **04 24 15.8 +2.8**
comp=Z,3µmcomp=Z,252nm,1.0s
TATO Taipei 22.71 333 P **P** **04 24 14.2 -0.5**
TATO IAmb IAmb 04 24 24.0
comp=Z,86nm,0.9s
GMJI Gumukmas 22.96 236 P **P** **04 24 18.8 +1.4**
comp=Z,6µmcomp=Z,221nm,1.0s
FITZ Fitzroy Crossi 23.68 196 P **P** **04 24 24.3 -0.2**
comp=Z,79nm,1.1s,baz=22,slow=10,SNR=31
FITZ LR LR 04 35 36.2
comp=Z,454nm,19.0s,baz=18,slow=42
comp=Z,79nm,1.1s
FITZ Fitzroy Crossi 23.68 196 P **P** **04 24 24.3 -0.2**
baz=24,SNR=36
FITZ Fitzroy Crossi 23.68 196 P **P** **04 24 23.4 -1.1**
FITZ IAmb IAmb 04 24 42.4
comp=Z,132nm,1.1s
FITZ Fitzroy Crossi 23.68 196 P **P** **04 24 24.4 -0.1**
JCJ Chichijima 24.08 22 LR LR 04 31 53.3
comp=Z,631nm,19.3s,baz=114,slow=32
QZH Quanzhou 24.10 328⇑ *i*P **P** **04 24 25.6 -2.9**
QZH S **S** **04 28 41.8 -3.7**
QZH pmax pmax
comp=Z,990nm,5.5s
QZH LR LR
comp=Z,600nm,12.5s
QZH LR LR
comp=Z,340nm,9.1s
QZH LR LR
comp=Z,950nm,14.6s
NGJI Ngawi 24.17 240 P **P** **04 24 32.2 +3.0**
comp=Z,180nm,0.8s
PWJI Pagerwojo 24.20 238 P **P** **04 24 32.5 +3.0**
comp=Z,3µmcomp=Z,273nm,1.0s
WB0 Warramunga Arr 24.43 176 P **P** **04 24 31.0 -0.6**
WRAB Tennant Creek 24.59 176 P **P** **04 24 32.5 -0.6**
WRAB Tennant Creek 24.59 176 P **P** **04 24 32.5 -0.6**
WRAB pmax pmax
comp=Z,162nm,1.2s
WRA Warramunga Arr 24.60 176 P **P** **04 24 32.8 -0.4**
comp=Z,49nm,1.0s,baz=356,slow=9.8,SNR=62
WRA LR LR 04 34 19.8
comp=Z,605nm,20.5s,baz=24,slow=37
comp=Z,49nm,1.0s
WRA Warramunga Arr 24.60 176 *i* P **P** **04 24 32.4 -0.7**
WRA pmax pmax
comp=Z,50nm,1.0s
WB2 Warramunga Arr 24.60 176 P **P** **04 24 33.6 +0.4**
baz=24
PCJI Pacitan 24.82 239 P **P** **04 24 37.1 +1.9**
comp=Z,5µmcomp=Z,505nm,1.3s
SMRI Semarang 24.91 242 P **P** **04 24 37.0 +1.0**
comp=Z,5µmcomp=Z,202nm,1.1s
SMRI Semarang 24.91 242 P **P** **04 24 37.3 +1.3**
UGM Wanagama 25.24 240 P **P** **04 24 37.3 -1.7**
comp=Z,252nm,1.3s
UGM Wanagama 25.24 240 P **P** **04 24 41.0 +2.0**
YOGI Yogyakarta 25.39 241 P P 04 24 53.6 +13
MTSU Mount Surprise 25.57 153 P **P** **04 24 42.6 +0.8**
baz=26,SNR=24
MTSU Mount Surprise 25.57 153 P **P** **04 24 42.7 +0.8**
TPI Tanjungpandan 25.89 254 P **P** **04 24 46.3 +1.4**
comp=Z,704nmcomp=Z,76nm,1.2s
QIS Mount Isa 26.11 165 P **P** **04 24 47.1 +0.3**
baz=26,SNR=44
QIS Mount Isa 26.11 165 P **P** **04 24 47.1 +0.3**
QIZ Qiongzhong 26.24 305 IAmb IAmb 04 25 05.2
comp=Z,103nm,1.4s
QIZ Qiongzhong 26.24 305 P **P** **04 24 48.7 +0.6**
QIZ S **S** **04 29 22.5 +2.7**
QIZ pmax pmax
comp=Z,16nm,0.7s
QIZ pmax pmax
comp=Z,450nm,5.0s
QIZ LR LR
comp=Z,920nm,16.1s
QIZ LR LR
comp=Z,820nm,18.8s
QIZ LR LR
comp=Z,1µm,22.9s
PPBI Pangkal Pinang 27.18 256 P P 04 25 11.0 +14
LEM Lembang 27.34 245 P **P** **04 25 00.5 +2.4**
comp=Z,44nm,0.6s,baz=107,slow=6.5,SNR=4.7
LEM LR LR 04 36 30.9
comp=Z,769nm,18.1s,baz=104,slow=38
CBJI Citeko 27.87 247 P P 04 25 13.0 +10
CNJI Cibinong 27.97 245 P **P** **04 25 08.8 +5.1**
DBJI Dramaga 28.02 247 P P 04 25 14.3 +10
CTAO Charters Tower 28.16 152 P **P** **04 25 04.9 -0.3**
CTAO IAmb IAmb 04 25 20.0
comp=Z,53nm,1.3s
CTAO Charters Tower 28.16 152 P **P** **04 25 04.9 -0.3**
CTAO pmax pmax
comp=Z,53nm,1.3s
CTAO Charters Tower 28.16 152 P **P** **04 25 05.6 +0.4**
JNU Nakatsue 28.27 357 LR LR 04 36 40.4
comp=Z,793nm,18.6s,baz=159,slow=37
JNU Nakatsue 28.27 357 IAmb IAmb 04 25 13.6
comp=Z,89nm,1.2s
ASAR Alice Springs 28.27 177 P **P** **04 25 05.7 -0.6**
comp=Z,9.9nm,1.0s,baz=8.2,slow=8.7,SNR=48
ASAR PcP **PcP** **04 28 19.2 -0.3**
comp=Z,2.8nm,0.8s,baz=334,slow=2.3,SNR=3.0
ASAR LR LR 04 36 52.3
comp=Z,767nm,21.0s,baz=5.0,slow=37
comp=Z,9.9nm,1.0s
DSRI Dabo 28.34 260 P P 04 25 17.2 +10
SBJI Serang 28.42 248 P **P** **04 25 10.2 +2.5**
comp=Z,10µmcomp=Z,136nm,1.0s
JMN Monobe 28.87 2 P **P** **04 25 12.5 +1.1**
PSA00 Pilbara Seismi 28.93 205 P **P** **04 25 12.4 +0.3**
PSA00 Pilbara Seismi 28.93 205 P **P** **04 25 14.5 +2.4**
BLSI Bandar Lampung 28.98 250 P P 04 25 22.4 +10
JHJ Hachijo jima 2 29.04 13 LR LR 04 34 15.7
comp=Z,822nm,21.9s,baz=230,slow=31
KASI Kota Agung 29.73 250 P P 04 25 25.0 +5.7
WRKA Warakurna 29.88 188 P **P** **04 25 20.2 -0.3**
baz=30,SNR=8.2
WRKA Warakurna 29.88 188 P **P** **04 25 19.7 -0.8**
LWLI Liwa 29.98 251 P P 04 25 33.1 +11
NJ2 Nanjing 30.01 336 *e*P **P** **04 25 23.8 +2.3**
NJ2 pP **pwP** **04 25 28.8 -1.0**
NJ2 sP **sP** **04 25 31.2 +3.2**
NJ2 S **S** **04 30 20.7 +1.8**
NJ2 SS ScP 04 31 53.7 -12
NJ2 pmax pmax
comp=Z,17nm,0.8s
NJ2 pmax pmax
comp=Z,260nm,3.5s
NJ2 LR LR
comp=Z,2µm,19.7s
NJ2 LR LR
comp=Z,990nm,15.9s
NJ2 LR LR
comp=Z,2µm,19.1s
JHS Saijyo 30.11 1 P **P** **04 25 23.1 +0.7**
JHS IAmb IAmb 04 25 29.4
comp=Z,63nm,1.4s
INU Inuyama 30.74 7 P **P** **04 25 28.1 +0.1**
HNR Honiara 30.80 117 LR LR 04 35 52.9
comp=Z,774nm,21.1s,baz=293,slow=32
MNAI Manna 30.83 253 P P 04 25 39.4 +10
MNAI Manna 30.83 253 P **P** **04 25 30.5 +1.4**
IPM Ipoh 31.34 271 P **P** **04 25 34.3 +0.7**
IPM IAmb IAmb 04 25 46.9
comp=Z,45nm,1.1s
IPM Ipoh 31.34 271 P **P** **04 25 35.6 +2.1**
BKNI Bangkinang 31.69 263 P **P** **04 25 37.1 +0.5**
BKNI Bangkinang 31.69 263 P **P** **04 25 37.3 +0.7**
KULM Kulim 31.70 272 P **P** **04 25 37.1 +0.4**
TJN Taejon 31.83 352 P **P** **04 25 37.9 +0.4**
TJN Taejon 31.83 352 *ce*P **P** **04 25 36.4 -1.1**
TJN Taejon 31.83 352 P **P** **04 25 37.5 0.0**
MJAR Matsushiro Arr 32.08 9 P **P** **04 25 38.0 -1.8**
comp=Z,0.6nm,0.3s,baz=172,slow=9.8,SNR=2.3
comp=Z,0.6nm,0.3s
MAJO Matsushiro 32.08 9 P **P** **04 25 40.1 +0.3**
MAJO Matsushiro 32.08 9 *i* P **P** **04 25 38.9 -0.9**
MAJO pmax pmax
comp=Z,13nm,1.2s
MAJO Matsushiro 32.08 9 P **P** **04 25 38.4 -1.4**
KSCHJ Chungju 32.24 353 IAmb IAmb 04 25 51.0
comp=Z,61nm,1.8s
OOD Oodnadatta 32.50 175 P **P** **04 25 43.7 +0.2**
GYA Guiyang 32.78 314 ⇓P **P** **04 25 46.2 0.0**
GYA S **S** **04 30 57.9 -4.7**
GYA pmax pmax
comp=Z,360nm,5.8s
GYA LR LR
comp=Z,570nm,14.7s
GYA LR LR
comp=Z,710nm,17.8s
GYA LR LR
comp=Z,730nm,16.0s
KSRS Korea Array 32.82 353 P **P** **04 25 44.1 -2.1**
comp=Z,1.4nm,0.6s,baz=171,slow=8.7,SNR=8.5
KSRS PcP **PcP** **04 28 34.5 +3.5**
comp=Z,3.1nm,0.9s,baz=182,slow=2.6,SNR=7.6
KSRS LR LR 04 39 11.7
comp=Z,844nm,19.0s,baz=180,slow=37
comp=Z,1.4nm,0.6s
KS19 Wonju Array Si 32.87 353 P **P** **04 25 48.3 +1.6**
INCN Inchon 33.02 351 P **P** **04 25 49.2 +1.3**
INCN Inchon 33.02 351 P **P** **04 25 49.3 +1.3**
INCN pmax pmax
comp=Z,18nm,0.7s
RK1H Rockhampton Ha 33.04 149 P **P** **04 25 49.4 +1.1**
QLP Quilpie 33.16 160 P **P** **04 25 49.3 -0.1**
baz=33,SNR=19
QLP Quilpie 33.16 160 P **P** **04 25 49.0 -0.3**
INKA Innaminka 33.27 167 P **P** **04 25 50.9 +0.7**
PSI Prapat 33.52 268 P **P** **04 25 52.5 -0.4**
comp=Z,7.7nm,0.6s,baz=74,slow=6.8,SNR=5.3
PSI LR LR 04 41 38.5
comp=Z,291nm,20.1s,baz=84,slow=40
comp=Z,7.7nm,0.6s
PSI Prapat 33.52 268 P **P** **04 25 52.7 -0.1**
RPSI Rantau Prapat 33.53 268 IAmb IAmb 04 26 06.2
comp=Z,57nm,0.9s
JMM Marumori 33.83 12 P **P** **04 25 55.9 +0.9**
MEEK Meekatharra 33.96 203 P **P** **04 25 55.1 -1.2**
baz=34,SNR=6.4
MEEK Meekatharra 33.96 203 P **P** **04 25 55.1 -1.2**
RMQ Roma 34.83 154 P **P** **04 26 03.8 -0.1**
baz=35,SNR=4.8
RMQ Roma 34.83 154 P **P** **04 26 03.6 -0.2**
MULG Mulgathing 34.86 178 P **P** **04 26 04.1 +0.1**
LYN LuoYang 34.97 331 ⇓P **P** **04 26 07.0 +2.0**
LYN S **S** **04 31 41.8 +5.7**
LYN pmax pmax
comp=Z,10.0nm,2.0s
LYN pmax pmax
comp=Z,290nm,5.1s
LYN LR LR
comp=Z,470nm,13.7s
LYN LR LR
comp=Z,800nm,21.3s
KMI Kunming 34.99 308 ⇓P **P** **04 26 07.5 +1.9**
KMI pP pP 04 26 09.3 -0.7
KMI S **S** **04 31 40.0 +2.9**
KMI pmax pmax
comp=Z,13nm,0.9s
KMI pmax pmax
comp=Z,230nm,4.0s
KMI LR LR
comp=Z,520nm,24.9s
KMI LR LR
comp=Z,880nm,24.4s
KMI LR LR
comp=Z,2µm,26.9s
GSI Gunungsitoli 35.00 266 P **P** **04 26 04.7 -0.8**
DL2 Dalian 35.40 345 P **P** **04 26 10.5 +1.9**
DL2 S **S** **04 31 45.7 +3.2**
DL2 pmax pmax
comp=Z,17nm,0.8s
DL2 LR LR
comp=Z,1µm,22.0s
DL2 LR LR
comp=Z,2µm,19.0s
DL2 LR LR
comp=Z,2µm,18.7s
LCRK Leigh Creek 35.42 171 P **P** **04 26 09.3 +0.4**
CM31 Chiang Mai Arr 35.46 295 P **P** **04 26 08.9 -0.5**
CM31 IAmb IAmb 04 26 20.5
comp=Z,52nm,1.1s
CMAR Chiang Mai Arr 35.46 295 P **P** **04 26 09.1 -0.3**
comp=Z,9.4nm,0.7s,baz=124,slow=7.5,SNR=32
CMAR PcP **PcP** **04 28 42.9 +3.8**
comp=Z,1.9nm,0.3s,baz=105,slow=1.8,SNR=4.1
CMAR LR LR 04 40 55.3
comp=Z,347nm,19.3s,baz=115,slow=37
comp=Z,9.4nm,0.7s
CMAR Chiang Mai Arr 35.46 295 P **P** **04 26 09.8 +0.3**
CMAR Chiang Mai Arr 35.46 295 *i* P **P** **04 26 08.8 -0.6**
CMAR pmax pmax
comp=Z,10.0nm,0.7s
CHTO Chiang Mai 35.57 296 P **P** **04 26 10.2 -0.2**
CHTO IAmb IAmb 04 26 21.0
comp=Z,50nm,1.2s
CHTO Chiang Mai 35.57 296 P **P** **04 26 10.2 -0.2**
CHTO pmax pmax
comp=Z,50nm,1.2s
CHTO Chiang Mai 35.57 296 P **P** **04 26 09.3 -1.1**
FORT Forrest 35.58 187 P **P** **04 26 10.6 +0.4**
baz=36,SNR=17
FORT Forrest 35.58 187 P **P** **04 26 10.4 +0.2**
FORT Forrest 35.58 187 P **P** **04 26 10.4 +0.2**
H11S3 WAKE ISLAND Hy 36.10 65 T T 05 04 27.2
baz=252,slow=75,SNR=1662
H11S2 WAKE ISLAND Hy 36.12 65 T T 05 04 25.6
baz=252,slow=75,SNR=1571
H11S1 WAKE ISLAND Hy 36.12 65 T T 05 04 23.8
baz=252,slow=75,SNR=1868
HNS HongShan 36.33 336⇑ P **P** **04 26 18.3 +1.7**
HNS PP **PnPn** **04 27 34.0 -4.9**
HNS S **S** **04 31 51.0 -5.9**
HNS pmax pmax
comp=Z,96nm,1.2s
HNS LR LR
comp=Z,1µm,18.6s
HNS LR LR
comp=Z,1µm,17.2s
HNS LR LR
comp=Z,1µm,19.2s
XAN Xi'an 36.44 326 P **P** **04 26 15.5 -2.2**
XAN pP pP 04 26 19.6 -2.7
XAN PP **PP** **04 27 43.1 +2.4**
XAN S **S** **04 31 56.2 -2.5**
XAN SS **SnSn** **04 34 20.1 -7.4**
XAN pmax pmax
comp=Z,62nm,1.3s
XAN pmax pmax
comp=Z,390nm,5.3s
XAN LR LR
comp=Z,1µm,17.9s
XAN LR LR
comp=Z,660nm,18.1s
XAN LR LR
comp=Z,1µm,20.6s
PZH PanZhiHua 36.47 310 P **P** **04 26 20.6 +2.5**
PZH sP **pwP** **04 26 27.2 +0.2**
PZH PP **PP** **04 27 48.0 +6.8**
PZH S **S** **04 32 01.4 +1.9**
PZH pmax pmax
comp=Z,30nm,1.2s
PZH pmax pmax
comp=Z,280nm,6.2s
PZH LR LR
comp=Z,1µm,22.6s
PZH LR LR
comp=Z,3µm,22.0s
PZH LR LR
comp=Z,2µm,23.0s
H11N1 WAKE ISLAND Hy 36.68 63 T T 05 05 06.7
baz=250,slow=75,SNR=1630
H11N2 WAKE ISLAND Hy 36.69 63 T T 05 05 10.2
baz=250,slow=75,SNR=166
H11N3 WAKE ISLAND Hy 36.69 63 T T 05 05 08.0
baz=250,slow=75,SNR=1236
JTM Tenmabayashi 36.71 11 IAmb IAmb 04 26 33.9
comp=Z,66nm,1.2s
STKA Stephens Creek 37.44 167 P **P** **04 26 26.1 0.0**
comp=Z,19nm,0.9s,baz=344,slow=8.5,SNR=28
STKA LR LR 04 43 09.8
comp=Z,1µm,19.5s,baz=337,slow=38
comp=Z,19nm,0.9s
STKA Stephens Creek 37.44 167 P **P** **04 26 26.1 0.0**
baz=37,SNR=21
STKA Stephens Creek 37.44 167 P **P** **04 26 25.2 -1.0**
STKA Stephens Creek 37.44 167 *i* P **P** **04 26 25.6 -0.5**
STKA Stephens Creek 37.44 167 P **P** **04 26 26.1 0.0**
CD2 Chengdu 37.50 317 P **P** **04 26 28.3 +1.5**
CD2 PP **PP** **04 27 57.2 +4.7**
CD2 S **S** **04 32 18.4 +3.3**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,300nm,6.6s
CD2 LR LR
comp=Z,700nm,13.6s
CD2 LR LR
comp=Z,660nm,13.1s
CD2 LR LR
comp=Z,560nm,13.7s
BBOO Buckleboo 37.51 175 P **P** **04 26 26.8 +0.2**
baz=37,SNR=11
BBOO Buckleboo 37.51 175 P **P** **04 26 25.9 -0.7**
BBOO IAmb IAmb 04 26 27.6
comp=Z,92nm,1.1s
BBOO Buckleboo 37.51 175 P **P** **04 26 26.8 +0.2**
TIY Taiyuan 37.57 334 *e*P **P** 04 26 34.5 +7.3
TIY S **S** **04 32 18.6 +2.7**
TIY sS ScP 04 32 55.7 +24
TIY SS **SnSn** **04 34 51.1 -3.6**
TIY pmax pmax
comp=Z,24nm,0.5s
TIY pmax pmax
comp=Z,250nm,4.1s
TIY LR LR
comp=N,710nm,19.2s
TIY LR LR
comp=E,630nm,13.7s
TIY LR LR
comp=Z,810nm,20.6s
MSHR Mys Shultsa 37.69 358 *ce*P **P** **04 26 28.3 +0.2**
MSHR pmax pmax
comp=Z,32nm,1.0s
WHYH Whyalla 37.88 173 P **P** **04 26 30.1 +0.3**
BJT Baijiatuau 38.07 340 P **P** **04 26 31.8 +0.4**
BJT IAmb IAmb 04 26 39.2
comp=Z,45nm,1.0s
BJT Baijiatuau 38.07 340 P **P** **04 26 31.8 +0.4**
BJT pmax pmax
comp=Z,45nm,1.0s
CMSA Cobar Meteorol 38.22 162 P **P** **04 26 32.8 +0.1**
baz=38,SNR=32
CMSA Cobar Meteorol 38.22 162 P **P** **04 26 32.6 -0.1**
BLDU Ballidu 38.26 202 P **P** **04 26 32.5 -0.5**
baz=38,SNR=12
BLDU Ballidu 38.26 202 P **P** **04 26 32.9 -0.1**
HTT Hallett 38.46 171 P **P** **04 26 35.2 +0.5**
baz=38,SNR=9.7
HTT Hallett 38.46 171 P **P** **04 26 35.3 +0.5**
KLBR Kellerberrin 38.76 200 P **P** **04 26 36.7 -0.5**
baz=39,SNR=6.9
KLBR Kellerberrin 38.76 200 P **P** **04 26 37.0 -0.3**
USRK Ussuriysk Ar. 39.30 359 P **P** **04 26 39.7 -1.8**
comp=Z,4.6nm,0.8s,baz=182,slow=6.9,SNR=12
comp=Z,4.6nm,0.8s
CN2 Changchun 39.39 352 *e*P **P** **04 26 42.5 +0.2**
CN2 *e*S **S** **04 32 41.5 -1.5**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,7.0s
CN2 LR LR
comp=Z,600nm,20.0s
CN2 LR LR
comp=Z,700nm,20.0s
CN2 LR LR
comp=Z,300nm,21.0s
ARMA Armidale 39.48 154 P **P** **04 26 44.7 +1.2**
baz=39,SNR=3.8
ARMA Armidale 39.48 154 P **P** **04 26 43.6 +0.1**
ARMA Armidale 39.48 154 P **P** **04 26 43.3 -0.2**
MUN Mundaring 39.66 202 P **P** **04 26 46.5 +1.7**
MDJ Mudanjiang 39.79 357 P **P** **04 26 45.0 -0.7**
MDJ Mudanjiang 39.79 357 P **P** **04 26 44.1 -1.6**
MDJ ScP **ScP** **04 32 41.0 +1.0**
MDJ S **S** **04 32 46.1 -3.0**
MDJ pmax pmax
comp=Z,9.0nm,0.9s
MDJ pmax pmax
comp=Z,240nm,5.1s
MDJ LR LR
comp=Z,640nm,19.5s
MDJ LR LR
comp=Z,380nm,20.6s
MDJ LR LR
comp=Z,900nm,18.6s
TWOA Tennyson Woods 39.98 172 P **P** **04 26 48.6 +1.2**
NWAO Narrogin (SRO) 40.16 200 P **P** **04 26 49.3 +0.4**
NWAO IAmb IAmb 04 26 55.6
comp=Z,53nm,0.8s
NWAO Narrogin (SRO) 40.16 200 P **P** **04 26 49.3 +0.4**
NWAO pmax pmax
comp=Z,53nm,0.9s
NWAO Narrogin (SRO) 40.16 200 P **P** **04 26 49.6 +0.7**
TEY Ternei 40.29 5⇑ *e*P **P** **04 26 51.3 +1.5**
TEY *e* 04 35 48.3
TEY pmax pmax
comp=Z,10.0nm,1.5s
HHC Hu-ho-hao-te 40.55 335 *e*P **P** **04 26 54.2 +2.0**
HHC S **S** **04 33 07.6 +6.8**
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,260nm,5.3s
HHC LR LR
comp=Z,2µm,15.7s
HHC LR LR
comp=Z,750nm,14.4s
HHC LR LR
comp=Z,2µm,16.6s
LZH Lanzhou 40.81 324 *e*P **P** **04 26 55.2 +0.7**
LZH sP sP 04 27 01.9 +0.8
LZH PP **PP** **04 28 30.0 +1.2**
LZH S **S** **04 33 04.8 -0.2**
LZH sS sS 04 33 13.1 +0.6
LZH pmax pmax
comp=Z,90nm,1.3s
LZH pmax pmax
comp=Z,320nm,5.4s
LZH LR LR
comp=Z,590nm,13.4s
LZH LR LR
comp=Z,870nm,13.0s
LZH LR LR
comp=Z,1µm,15.2s
BTO Baotou 41.01 334 *e*P **P** **04 26 59.0 +3.0**
BTO S **S** **04 33 15.9 +8.3**
BTO LR LR
comp=Z,3µm,17.1s
BTO LR LR
comp=Z,3µm,21.0s
BNX BinXian 41.07 355⇑ P **P** **04 26 53.9 -2.4**
BNX pP **pP** **04 27 00.0 -0.9**
BNX sP **sP** **04 27 01.8 -1.0**
BNX PP **PP** **04 28 31.9 +0.7**
BNX S **S** **04 33 07.9 -0.3**
BNX sS **sS** **04 33 15.9 +0.1**
BNX pmax pmax
comp=Z,5.0nm,1.1s
BNX pmax pmax
comp=Z,230nm,5.1s
BNX LR LR
comp=Z,700nm,13.2s
BNX LR LR
comp=Z,280nm,12.6s
BNX LR LR
comp=Z,840nm,18.3s
XLT XiLinHaoTe 41.59 342 *e*P **P** **04 27 02.1 +1.4**
XLT pP sP 04 27 07.5 +0.3

XLT S **S** **04 33 20.9 +4.8**
XLT pmax pmax
comp=Z,11nm,1.3s
XLT pmax pmax
comp=Z,250nm,4.2s
XLT LR LR
comp=Z,2µm,16.8s
XLT LR LR
comp=Z,1µm,17.4s
ARPS Mount Arapiles 42.22 169 P **P** **04 27 06.6 +0.8**
baz=42,SNR=25
ARPS Mount Arapiles 42.22 169 P **P** **04 27 06.3 +0.5**
DZM Mont Dzumac 42.62 130 P **P** **04 27 08.4 -1.0**
comp=Z,18nm,1.0s,baz=283,slow=14,SNR=3.8
DZM LR LR 04 42 38.1
comp=Z,659nm,21.7s,baz=293,slow=33
comp=Z,18nm,1.0s
DZM Mont Dzumac 42.62 130 *e*S **S** **04 33 33.3 +1.4**
comp=Z,206nm,32.6s
DZM *e*LR LR 04 38 56.2
comp=Z,1µm,23.2s
CAN Canberra 42.78 160 P **P** **04 27 09.9 -0.5**
CAN IAmb IAmb 04 27 12.2
comp=Z,106nm,1.6s
CAN Canberra 42.78 160 P **P** **04 27 09.9 -0.5**
CAN pmax pmax
comp=Z,106nm,1.6s
CAN Canberra 42.78 160 P **P** **04 27 11.2 +0.8**
CNB Canberra Magne 42.90 160 P **P** **04 27 12.2 +0.8**
baz=43,SNR=7.5
CNB Canberra Magne 42.90 160 P **P** **04 27 12.2 +0.8**
YSS Yuzh-Sakhalins 42.98 10 P **P** **04 27 13.4 +1.6**
YSS Yuzh-Sakhalins 42.98 10 *e*P **P** **04 27 10.6 -1.2**
YSS *e**SP **pP** **04 27 16.8 +0.4**
YSS *e* 04 28 49.0
YSS *e*S **S** **04 33 31.3 -5.0**
YSS pmax pmax
comp=Z,200nm,1.9s
YSS pmax pmax
comp=Z,30nm,1.5s
YSS smax smax
comp=N,300nm,13.0s
YSS MLR MLR
comp=Z,500nm,15.0s
YSS MLR MLR
comp=N,300nm,14.0s
YSS Yuzh-Sakhalins 42.98 10 P **P** **04 27 11.4 -0.4**
BRAT Ballarat 43.41 167 P **P** **04 27 17.0 +1.6**
PINNC Pines Island, 43.69 130 P **P** **04 27 17.7 -0.2**
TOO Toolangi 43.81 165 P **P** **04 27 20.1 +1.3**
baz=44,SNR=16
TOO Toolangi 43.81 165 P **P** **04 27 19.1 +0.3**
TOO IAmb IAmb 04 27 20.9
comp=Z,61nm,1.2s
TOO Toolangi 43.81 165 P **P** **04 27 19.1 +0.3**
TOO pmax pmax
comp=Z,61nm,1.2s
TOO Toolangi 43.81 165 P **P** **04 27 19.9 +1.2**
GEXS Deakin Univers 44.12 167 P **P** **04 27 22.3 +1.2**
KLR Kul'dur 44.33 359 LR LR 04 44 10.1
comp=Z,432nm,19.2s,slow=34
GTA Gaotai 45.41 324 *e*P **P** **04 27 30.8 -0.8**
GTA pP pP 04 27 34.1 -2.2
GTA sP sP 04 27 37.6 -0.6
GTA PP **PcP** **04 29 14.1 +3.3**
GTA S **S** **04 34 11.8 -0.5**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,180nm,6.2s
GTA LR LR
comp=Z,320nm,20.4s
GTA LR LR
comp=Z,640nm,16.7s
GTA LR LR
comp=Z,690nm,21.4s
GRNR Gornyy 45.99 3 *e*P **P** **04 27 37.6 +1.8**
GRNR MLR MLR
comp=E,170nm,14.0s
GRNR MLR MLR
comp=Z,440nm,14.0s
GRNR MLR MLR
comp=N,320nm,16.0s
LSA Lhasa 46.23 307 P **P** **04 27 38.5 -0.1**
LSA IAmb IAmb 04 27 42.7
comp=Z,27nm,0.7s
LSA Lhasa 46.23 307 P **P** **04 27 36.3 -2.4**
LSA pmax pmax
comp=Z,10.0nm,0.7s
LSA Lhasa 46.23 307 P **P** **04 27 38.6 -0.1**
LSA pmax pmax
comp=Z,27nm,0.7s
GOMU GeErMu 46.64 317 P P 04 27 47.2 +5.5
GOMU pP pwP 04 27 52.4 +1.8
GOMU sP sP 04 27 55.6 +7.3
GOMU PcP **PcP** **04 29 13.3 -2.2**
GOMU PP **PP** **04 29 35.0 +3.5**
GOMU S **S** **04 34 27.1 -3.5**
GOMU SS **ScS** **04 37 45.0 +8.5**
GOMU pmax pmax
comp=Z,5.0nm,1.1s
GOMU pmax pmax
comp=Z,130nm,5.2s
GOMU LR LR
comp=Z,150nm,13.7s
GOMU LR LR
comp=Z,420nm,20.2s
GOMU LR LR
comp=Z,420nm,19.8s
TYV Tymovskoe 46.75 9 *e*P **P** **04 27 45.7 +3.9**
TYV *e*S S 04 34 41.1 +10
TYV pmax pmax
comp=Z,20nm,1.0s
TYV pmax pmax
comp=Z,100nm,3.1s
TYV smax smax
comp=N,300nm,5.0s
TYV smax smax
comp=E,300nm,5.0s
GLAD Gladstone 47.69 164 P **P** **04 27 50.4 +1.2**
ULN Ulaanbaatar 48.17 337 P **P** **04 27 52.0 -1.2**
ULN Ulaanbaatar 48.17 337*ce*P **P** **04 27 52.3 -0.8**
ULN pmax pmax
comp=Z,30nm,0.8s
SONM Songino Array 48.40 337 P **P** **04 27 53.8 -1.1**
comp=Z,18nm,0.9s,baz=146,slow=8.0,SNR=21
SONM LR LR 04 48 27.3
comp=Z,796nm,19.5s,baz=149,slow=36
comp=Z,18nm,0.9s
SONM Songino Array 48.40 337 P **P** **04 27 54.1 -0.8**
SONM IAmb IAmb 04 28 04.0
comp=Z,40nm,0.9s
SONM Songino Array 48.40 337 P **P** **04 27 54.1 -0.8**
SONM pmax pmax
comp=Z,40nm,0.9s
NKL Nikolayevsk 48.72 7 *e*P **P** **04 28 00.6 +3.6**
NKL *e*S **S** **04 35 02.9 +4.1**
NKL pmax pmax
comp=E,5.0nm,0.8s
NKL pmax pmax
comp=Z,34nm,0.9s
NKL smax smax
comp=E,5.0nm,2.9s
NKL smax smax
comp=N,173nm,1.6s
NKL MLR MLR
comp=N,557nm,17.0s
NKL MLR MLR
comp=E,16nm,15.0s
NKL MLR MLR
comp=Z,356nm,15.0s
RAMN Ramite 48.96 302 *e*P **P** **04 28 00.4 +0.7**
comp=Z,189nm,0.9s
ZEA Zeya 49.03 356 *e*P **P** **04 28 00.3 +0.9**
ZEA *e*S **S** **04 35 09.2 +6.1**
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA pmax pmax
comp=Z,100nm,3.6s
ZEA smax smax
comp=E,100nm,12.7s
ZEA smax smax
comp=N,100nm,13.1s
ZEA MLR MLR
comp=N,200nm,10.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
TAU Tasmania Unive 49.31 166 P **P** **04 28 01.6 -0.1**
TAU IAmb IAmb 04 28 03.5
comp=Z,53nm,1.2s
TAU Tasmania Unive 49.31 166 P **P** **04 28 01.6 -0.1**
TAU pmax pmax
comp=Z,53nm,1.2s
TAU Tasmania Unive 49.31 166 P **P** **04 28 02.4 +0.7**
JIRN Jiri 49.54 303 *e*P **P** **04 28 04.7 +0.5**
comp=Z,88nm,1.0s
CIT Chita 49.67 345 *e*P **P** **04 28 06.9 +2.5**
CIT *e* 04 29 25.8
CIT pmax pmax
comp=Z,101nm,1.9s
GUN Gumba 49.88 303 *e*P **P** **04 28 08.0 +1.2**
PKI Pulchoki 50.16 302 *e*P **P** **04 28 08.8 -0.2**
comp=Z,96nm,1.3s
PKIN Phulchoki 50.18 302 *e*P **P** **04 28 10.1 +1.1**
comp=Z,27nm,0.7s
MSVF Nonsavu 50.22 118 P **P** **04 28 10.3 +1.1**
comp=Z,19nm,0.9s,baz=273,slow=8.0,SNR=9.3
MSVF LR LR 04 46 49.6
comp=Z,909nm,20.0s,baz=310,slow=33
comp=Z,19nm,0.9s
MSVF Nonsavu 50.22 118 P **P** **04 28 09.8 +0.7**
MSVF IAmb IAmb 04 28 27.3
comp=Z,70nm,1.2s
MSVF Nonsavu 50.22 118 P **P** **04 28 09.5 +0.3**
DMN Daman 50.43 302 *e*P **P** **04 28 11.1 +0.2**
comp=Z,130nm,1.3s
GKN Gorkha 50.95 302 *e*P **P** **04 28 13.9 -0.8**
DGTI Dogotuki 51.21 115 P **P** **04 28 16.9 +0.3**
PALK Pallekele 51.52 275 LR LR 04 51 51.1
comp=Z,201nm,19.5s,baz=194,slow=38
ZAK Zakamensk 51.67 337 *e*P **P** **04 28 20.6 +1.0**
ZAK pmax pmax
comp=Z,15nm,1.8s
DANN Dangsing 51.79 303 *e*P **P** **04 28 21.0 -0.2**
comp=Z,156nm,0.8s
PEA0B Petropavlovsk- 52.48 19 *i*P **P** **04 28 24.4 -1.1**
PETK Petropavlovsk- 52.48 19 P **P** **04 28 23.6 -1.9**
comp=Z,4.2nm,0.8s,baz=204,slow=6.5,SNR=6.8
PETK LR LR 04 54 03.6
comp=Z,223nm,18.6s,baz=209,slow=40
comp=Z,4.2nm,0.8s
PETK Petropavlovsk- 52.48 19 P **P** **04 28 24.3 -1.2**
PETK Petropavlovsk- 52.48 19 P **P** **04 28 24.3 -1.2**
PET Petropavlovsk 52.72 20 *e*P P 04 28 34.2 +7.0
PET *e*S **S** **04 36 00.0 +5.7**
PET *e*SS **SS** **04 39 32.4 -0.6**
PET pmax pmax
comp=Z,20nm,1.3s
PET MLR MLR
comp=Z,500nm,17.0s
IRK Irkutsk 52.78 339 *e*P **P** **04 28 24.2 -3.5**
IRK pmax pmax
comp=Z,77nm,2.2s
MOY Mondy 53.58 336 *e*P **P** **04 28 33.2 -0.6**
MOY pmax pmax
comp=Z,46nm,1.5s
HYBB Hyderabad (bro 54.20 288 *e*P **P** **04 28 38.7 -0.1**
BOD Bodaibo 54.88 348 *e*P **P** **04 28 41.6 -1.3**
BOD pmax pmax
comp=Z,60nm,1.5s
WMQ Urumqi 55.33 322 P **P** **04 28 49.8 +3.2**
WMQ pP sP 04 28 53.5 +0.2
WMQ S **S** **04 36 30.3 +0.2**
WMQ pmax pmax
comp=Z,58nm,1.3s
WMQ pmax pmax
comp=Z,370nm,4.5s
WMQ LR LR
comp=Z,460nm,15.3s
WMQ LR LR
comp=Z,440nm,17.5s
WMQ LR LR
comp=Z,400nm,17.7s
MA2 Magadan 56.48 11 P **P** **04 28 53.0 -1.4**
comp=Z,5.6nm,0.6s,baz=198,slow=20,SNR=2.3
MA2 LR LR 04 53 15.1
comp=Z,248nm,20.1s,baz=200,slow=36
comp=Z,5.6nm,0.6s
MA2 Magadan 56.48 11 P **P** **04 28 54.2 -0.2**
MA2 IAmb IAmb 04 29 03.1
comp=Z,25nm,0.8s
MA2 Magadan 56.48 11 *i*P **P** **04 28 52.4 -2.0**
MA2 pmax pmax
comp=Z,39nm,1.0s
MA2 Magadan 56.48 11 P **P** **04 28 53.3 -1.1**
YAK Yakutsk 57.20 358 LR LR 04 52 14.6
comp=Z,217nm,20.0s,baz=131,slow=35
YAK Yakutsk 57.20 358 P **P** **04 28 59.3 -0.1**
YAK Yakutsk 57.20 358 *e*P **P** **04 29 01.1 +1.7**
YAK *e* 04 29 56.4
YAK *e* 04 31 08.6
YAK *e*PPP PPP 04 32 25.9
YAK *e*S **S** **04 36 54.4 +0.4**
YAK *e**SS sS 04 37 16.1 +14
YAK *e* 04 38 46.7
YAK *e*SS **SS** **04 40 47.4 +4.2**
YAK pmax pmax
comp=Z,60nm,1.1s
YAK pmax pmax
comp=N,18nm,0.9s
YAK pmax pmax
comp=E,13nm,1.4s
YAK pmax pmax
comp=Z,70nm,2.3s
YAK pmax pmax
comp=N,25nm,2.2s
YAK pmax pmax
comp=E,20nm,2.1s
YAK smax smax
comp=N,104nm,3.5s
YAK smax smax
comp=E,38nm,3.2s
AFI Afiamalu 58.34 109 LR LR 04 50 24.4
comp=E,339nm,19.7s,baz=292,slow=32
RAO Raoul Island 58.38 129 LR LR 04 50 42.0
comp=E,387nm,22.0s,baz=288,slow=32
DCZ Deep Cove 58.78 152 P **P** **04 29 10.2 -0.6**
ZSN Zaisan 58.90 324 *e*P **P** **04 29 11.0 -0.7**
ZSN Zaisan 58.90 324 *e*P **P** **04 29 11.1 -0.7**
baz=324
RPZ Rata Peaks 59.45 148 LR LR 04 53 48.9
comp=E,622nm,20.1s,baz=302,slow=35
LBZ Lake Benmore 59.47 149 P **P** **04 29 15.7 0.0**
URZ Urewera 59.50 140 LR LR 04 55 53.0
comp=E,460nm,18.1s,baz=348,slow=37
SEY Seymchan 59.89 10 P **P** **04 29 17.1 -1.1**
comp=E,8.0nm,1.0s,baz=198,slow=6.3,SNR=13
comp=E,8.0nm,1.0s
SEY Seymchan 59.89 10 *i*P **P** **04 29 17.5 -0.7**
SEY pmax pmax
comp=Z,45nm,0.9s
MK31 Makanchi Array 60.12 323 P **P** **04 29 19.3 -0.8**
MK31 Makanchi Array 60.12 323 *i*P **P** **04 29 18.2 -2.0**
MKAR Makanchi Array 60.12 323 P **P** **04 29 19.1 -1.1**
comp=Z,3.2nm,0.5s,baz=111,slow=7.2,SNR=49
MKAR LR LR 04 55 09.3
comp=Z,384nm,21.5s,baz=104,slow=36
comp=Z,3.2nm,0.5s
MKAR Makanchi Array 60.12 323 P **P** **04 29 19.6 -0.6**
MKAR Makanchi Array 60.12 323 *i*P **P** **04 29 18.7 -1.5**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MAKZ Makanchi 60.31 322 P **P** **04 29 20.5 -1.0**
MAKZ Makanchi 60.31 322 P **P** **04 29 20.5 -1.0**
MAKZ pmax pmax
comp=Z,88nm,1.7s
SHLS Shalkode 60.34 318 *e*P **P** **04 29 18.3 -3.5**
SHLS pmax pmax
comp=Z,8.0nm,1.0s
SHLS Shalkode 60.34 318 *e*P **P** **04 29 18.4 -3.5**
comp=Z,7.9nm,1.0s,baz=318
UZB Uzynbulak 60.63 318 *e*P **P** **04 29 21.9 -2.0**
UZB Uzynbulak 60.63 318 *e*P **P** **04 29 21.1 -2.8**
baz=318
KSH Kashi 61.47 313 P **P** **04 29 33.0 +3.4**
KSH sP pwP 04 29 39.2 +0.6
KSH pmax pmax
comp=Z,16nm,1.1s
KSH pmax pmax
comp=Z,180nm,5.9s
KSH LR LR
comp=Z,280nm,22.1s
KSH LR LR
comp=Z,680nm,22.3s
KSH LR LR
comp=Z,860nm,24.7s
TDK Taldyqorghan 61.77 319 *e*P **P** **04 29 30.5 -0.9**
TDK Taldyqorghan 61.77 319 *e*P **P** **04 29 30.6 -0.9**
baz=319
ARXS Arharly 61.84 318 *e*P **P** **04 29 31.8 -0.2**
NIL Nilore 61.91 306 P **P** **04 29 32.4 -0.2**
NIL Nilore 61.91 306 P **P** **04 29 32.4 -0.2**
NIL pmax pmax
comp=Z,58nm,1.2s
MDOK Medeo 61.97 317 *e*P **P** **04 29 31.5 -1.4**
MDOK Medeo 61.97 317 *e*P **P** **04 29 31.6 -1.4**
baz=317
CHKK Chushkaly 62.27 318 *e*P **P** **04 29 34.3 -0.5**
CHKK Chushkaly 62.27 318 *e*P **P** **04 29 34.4 -0.5**
baz=318
ZAA0 Zalesovo Array 62.41 330 P **P** **04 29 33.5 -2.0**
ZAA0 IAmb IAmb 04 29 44.8
comp=Z,33nm,0.9s
ZALV Zalesovo Beam 62.41 330 P **P** **04 29 33.4 -2.1**
comp=Z,16nm,0.9s,baz=106,slow=6.2,SNR=14
ZALV LR LR 04 58 40.1
comp=Z,224nm,18.3s,baz=124,slow=38
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 62.41 330 *i*P **P** **04 29 33.5 -2.0**
ZALV pmax pmax
comp=Z,16nm,0.9s
BOOM Boomskoye usch 62.49 316 P **P** **04 29 36.2 -0.3**
BOOM Boomskoye usch 62.49 316 P **P** **04 29 36.2 -0.3**
BOOM pmax pmax
comp=Z,7.0nm,0.9s
KUU Kurty 62.72 318 *e*P **P** **04 29 35.9 -1.9**
KUU pmax pmax
comp=Z,15nm,1.5s
KUU Kurty 62.72 318 *e*P **P** **04 29 35.1 -2.7**
comp=Z,15nm,1.5s,baz=318
SEM Semipalatinsk 63.01 325 *e*P **P** **04 29 38.3 -1.5**
SEM Semipalatinsk 63.01 325 *e*P **P** **04 29 38.4 -1.5**
baz=325
AAK Ala-Archa 63.54 316 LR LR 05 00 44.7
comp=Z,370nm,18.4s,baz=106,slow=39
AAK Ala-Archa 63.54 316 P **P** **04 29 43.2 -0.3**
AAK Ala-Archa 63.54 316 *i*P **P** **04 29 43.3 -0.2**
AAK pmax pmax
comp=Z,15nm,1.9s
SGDS Sogindy 63.72 317 *e*P **P** **04 29 43.0 -1.5**
SGDS Sogindy 63.72 317 *e*P **P** **04 29 43.1 -1.5**
baz=316
KURK Kurchatov 64.07 325 P **P** **04 29 45.3 -1.3**
KURK Kurchatov 64.07 325*ce*P **P** **04 29 44.2 -2.4**
KURK pmax pmax
comp=Z,86nm,1.7s
KURBB Kurchatov Arra 64.08 325 P **P** **04 29 45.2 -1.4**
comp=Z,22nm,1.0s,baz=121,slow=5.5,SNR=35
KURBB LR LR 04 58 13.1
comp=Z,193nm,21.6s,baz=99,slow=37
comp=Z,22nm,1.0s
BTLS Baital 64.66 318 *e*P **P** **04 29 50.0 -0.5**
BTLS Baital 64.66 318 *e*P **P** **04 29 50.1 -0.5**
baz=318
BTK Batken 65.42 312 IAmb IAmb 04 30 05.4
comp=Z,29nm,1.3s
KBL Kabul 65.51 306 P **P** **04 29 56.9 +0.3**
KBL IAmb IAmb 04 30 14.1
comp=Z,23nm,1.2s
KBL Kabul 65.51 306 P **P** **04 29 56.9 +0.3**
KBL pmax pmax
comp=Z,23nm,1.2s
KK31 Karatay Array 66.47 315 P **P** **04 30 02.2 -0.2**
KK31 Karatay Array 66.47 315 P **P** **04 30 02.2 -0.2**
KK31 pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 66.47 315 P **P** **04 30 02.1 -0.3**
KKAR Karatay Array 66.47 315 P **P** **04 30 02.1 -0.3**
IUG luzhnay 66.55 314 *e*P **P** **04 30 02.3 -0.7**
IUG luzhnay 66.55 314 *e*P **P** **04 30 02.4 -0.7**
baz=314
TIXI Tiksi 66.86 359 LR LR 04 57 30.4
comp=Z,380nm,21.6s,baz=180,slow=34
TIXI Tiksi 66.86 359 P **P** **04 30 05.3 +1.1**
TIXI IAmb IAmb 04 30 15.1
comp=Z,19nm,0.9s
TIXI Tiksi 66.86 359 *i*P **P** **04 30 04.8 +0.6**
TIXI pmax pmax
comp=Z,13nm,0.8s
BILL Bilibino 67.19 13⇑ *e*P **P** **04 30 08.3 +1.9**
BILL *e* 04 30 32.0
BILL *e* 04 32 37.1
BILL pmax pmax
comp=Z,17nm,0.9s
BILL MLR MLR
comp=Z,227nm,18.0s
BRZS Berezniki 67.26 323 *e*P **P** **04 30 06.5 -0.7**
BRZS pmax pmax
comp=Z,18nm,2.4s
BRZS Berezniki 67.26 323 *e*P **P** **04 30 06.6 -0.7**
comp=Z,18nm,2.4s,baz=323
NIKH Nikolski High 67.74 34 P **P** **04 30 10.4 +0.2**
baz=247
UNV Unalaska Valle 69.38 34 P **P** **04 30 18.3 -2.1**
baz=249
BVAR Borovoye Array 69.67 325 LR LR 05 04 33.6
comp=Z,171nm,18.1s,baz=347,slow=39
BRVK Borovoye 69.74 325 P **P** **04 30 21.1 -1.5**
BRVK Borovoye 69.74 325*ce*P **P** **04 30 20.0 -2.7**
BRVK pmax pmax
comp=Z,37nm,1.3s
NRIK Noril'sk 70.89 345 P **P** **04 30 29.9 +0.5**
comp=Z,6.9nm,0.8s,baz=140,slow=5.8,SNR=8.5
NRIK LR LR 05 01 55.8
comp=Z,585nm,21.3s,baz=138,slow=36
comp=Z,6.9nm,0.8s
NRIK Noril'sk 70.89 345 IAmb IAmb 04 30 37.2
comp=Z,19nm,0.9s
NRIK Noril'sk 70.89 345 *i*P **P** **04 30 30.5 +1.1**
NRIK pmax pmax
comp=Z,23nm,0.9s
HRA Herat 71.03 305 P **P** **04 30 31.1 -0.1**
RAR Rarotonga 71.19 114 LR LR 04 57 11.5
comp=Z,146nm,21.4s,baz=288,slow=32
GAMB Gambell 71.20 23 P **P** **04 30 28.7 -2.6**
baz=241
S12K Black Hills 72.43 33 P **P** **04 30 36.6 -2.3**
baz=252
SDPT Sand Point 73.18 33 P **P** **04 30 40.5 -2.8**
baz=254
WSAR Wadi Sarin 73.29 293 LR LR 05 03 45.2
comp=Z,88nm,21.9s,baz=116,slow=36
TNA Tin City 73.47 22 P **P** **04 30 42.6 -2.2**
baz=244
ANM Nome 74.03 23 P **P** **04 30 45.8 -2.4**
baz=246
GEYT Alibeck 74.75 308 P **P** **04 30 54.3 +1.3**
comp=Z,6.4nm,0.8s,baz=74,slow=13,SNR=6.4
GEYT LR LR 05 06 28.7
comp=Z,476nm,21.1s,baz=104,slow=38
GEYT Alibeck 74.75 308 IAmb IAmb 04 31 17.2
comp=Z,24nm,1.0s
GYA0B ALIBECK ARRAY 74.75 308 P **P** **04 30 52.7 -0.3**
GYA0B IAmb IAmb 04 31 17.2
comp=Z,31nm,1.1s
ABKAR Akbulak array 75.04 320 P **P** **04 30 52.8 -1.6**
R16K Pilot Point 75.33 32 P **P** **04 30 53.9 -1.9**
baz=255
N16K Nishlik Lake 75.51 28 P **P** **04 30 55.1 -1.8**
baz=254
O16K Kokwok River B 75.59 29 P **P** **04 30 55.8 -1.5**
baz=254
R17K Ugashik Creek 75.97 32 P **P** **04 30 60.0 +0.5**
baz=256
O17K Koliganek Bris 76.13 29 P **P** **04 30 57.8 -2.5**
baz=255
RDOG Red Dog Mine 76.31 20 P **P** **04 30 58.9 -2.4**
baz=248
P17K Kvichak River 76.31 30 P **P** **04 30 59.2 -2.1**
baz=256
AKTO Aktyubinsk 76.46 321 P **P** **04 31 01.0 -1.5**
comp=Z,7.3nm,1.0s,baz=89,slow=6.4,SNR=16
AKTO LR LR 05 05 22.3
comp=Z,223nm,20.3s,baz=115,slow=36
comp=Z,7.3nm,1.0s
Q18K Katmai Hardscr 76.91 31 P **P** **04 31 02.2 -2.8**
baz=257
N18K Kilae Creek 76.94 29 P **P** **04 31 05.1 +0.1**

N18K IAmb IAmb 04 31 15.5
comp=Z,17nm,0.8s
N18K Kilae Creek 76.94 29 P **P** **04 31 03.0 -2.0**
baz=256
P18K Big Mountain, 76.96 30 P **P** **04 31 03.6 -1.6**
baz=257
O18K Koktuh Hills 77.08 30 P **P** **04 31 04.9 -0.8**
baz=257
ARU Arti 77.18 327 LR LR 05 05 09.8
comp=Z,286nm,21.8s,baz=102,slow=36
ARU Arti 77.18 327 P **P** **04 31 05.0 -1.4**
ARU IAmb IAmb 04 31 15.8
comp=Z,34nm,1.0s
ARU Arti 77.18 327 *d i* P **P** **04 31 04.1 -2.3**
ARU 04 31 13.5
ARU 04 34 00.0
ARU S **S** **04 40 55.8 +0.9**
ARU SS **SS** **04 45 56.7 +4.1**
ARU pmax pmax
comp=Z,16nm,1.0s
ARU MLR MLR
comp=Z,314nm,20.0s
TTA Tatalina 77.43 26 IAmb IAmb 04 31 18.3
comp=Z,32nm,1.3s
TTA Tatalina 77.43 26 P **P** **04 31 06.7 -1.1**
baz=256,SNR=8.7
OHAK Old Harbor 77.52 32 P **P** **04 31 07.7 -0.5**
baz=259
GCSA Galena City Sc 77.53 24 P **P** **04 31 06.6 -1.6**
baz=254
O19K Port Alsworth 77.59 29 P **P** **04 31 06.6 -1.9**
baz=258
N19K Bonanza Creek 77.64 29 P **P** **04 31 07.5 -1.5**
baz=257,SNR=7.1
Q19K Cape Douglas, 77.66 31 P **P** **04 31 07.0 -2.1**
baz=259
L19K White Mountain 77.78 27 P **P** **04 31 10.3 +0.7**
L19K IAmb IAmb 04 31 20.4
comp=Z,33nm,1.1s
L19K White Mountain 77.78 27 P **P** **04 31 08.3 -1.4**
baz=257,SNR=8.7
M19K Big River Lodg 77.92 28 P **P** **04 31 07.9 -2.6**
baz=257
KDAK Kodiak Island 78.00 32 P **P** **04 31 10.8 -0.1**
KDAK Kodiak Island 78.00 32 P **P** **04 31 10.8 -0.1**
KDAK pmax pmax
comp=Z,57nm,0.9s
KDAK Kodiak Island 78.00 32 P **P** **04 31 08.6 -2.2**
baz=260
Q20K Shuyak Island 78.24 31 P **P** **04 31 10.6 -1.6**
baz=260
L20K Farewell, AK 78.28 27 P **P** **04 31 11.5 -1.0**
baz=258
K20K Telida 78.39 26 P **P** **04 31 12.9 -0.1**
baz=257,SNR=8.9
O20K Slope Mountain 78.39 30 P **P** **04 31 12.5 -0.7**
baz=259
M20K Styx River 78.50 28 IAmb IAmb 04 31 23.7
comp=Z,20nm,0.8s
M20K Styx River 78.50 28 P **P** **04 31 13.1 -0.7**
baz=258
J20K Nowinta River 78.54 25 IAmb IAmb 04 31 19.3
comp=Z,41nm,1.4s
J20K Nowinta River 78.54 25 P **P** **04 31 11.7 -2.1**
baz=257,SNR=9.7
HOM Homer 78.81 30 P **P** **04 31 16.2 +0.8**
baz=260
CNPM China Poot 78.99 30 P **P** **04 31 17.0 +0.6**
PPLA Purkeypile 79.13 27 IAmb IAmb 04 31 27.1
comp=Z,18nm,0.7s
PPLA Purkeypile 79.13 27 P **P** **04 31 16.5 -0.8**
baz=259
SKT Skwentna 79.27 28 IAmb IAmb 04 31 27.0
comp=Z,21nm,0.8s
SKT Skwentna 79.27 28 P **P** **04 31 15.6 -2.3**
baz=260
CHUM Lake Minchumin 79.27 26 P **P** **04 31 17.3 -0.5**
baz=259
BRSE Bradley Lake S 79.27 30 P **P** **04 31 15.6 -2.3**
baz=261
CAST Castle Rocks 79.28 26 IAmb IAmb 04 31 27.8
comp=Z,19nm,0.8s
CAST Castle Rocks 79.28 26 P **P** **04 31 17.8 -0.2**
baz=259,SNR=11
G21K Allakaket 79.33 23 P **P** **04 31 17.6 -0.5**
baz=257,SNR=8.7
H21K Melozitna Rive 79.42 24 IAmb IAmb 04 31 29.2
comp=Z,26nm,1.1s
H21K Melozitna Rive 79.42 24 P **P** **04 31 17.3 -1.3**
baz=258,SNR=11
F21K Alatna River 79.50 22 P **P** **04 31 16.9 -2.1**
baz=257,SNR=6.2
I21K Tanana 79.66 25 IAmb IAmb 04 31 30.6
comp=Z,40nm,1.1s
I21K Tanana 79.66 25 P **P** **04 31 19.0 -0.9**
baz=259
KTH Kantishna Hill 79.82 26 IAmb IAmb 04 31 31.1
comp=Z,30nm,1.2s
BPAW Bear Paw Mtn. 79.88 26 P **P** **04 31 18.2 -3.0**
baz=260,SNR=6.9
M22K Willow 79.89 28 P **P** **04 31 19.8 -1.4**
baz=261
CUT Chulitna 79.92 27 P **P** **04 31 22.3 +0.9**
baz=261
SEW Seward 79.97 30 IAmb IAmb 04 31 34.5
comp=Z,24nm,0.8s
SEW Seward 79.97 30 P **P** **04 31 22.5 +0.8**
baz=262
RC01 Rabbit Creek A 79.97 29 IAmb IAmb 04 31 30.5
comp=Z,31nm,0.8s
RC01 Rabbit Creek A 79.97 29 P **P** **04 31 20.6 -1.0**
baz=262
PPT Papeete 80.00 109 LR LR 05 01 13.5
comp=Z,124nm,20.4s,baz=291,slow=32
PPT2 Papeete2 80.00 109 *e*LR LR 04 56 16.0
comp=Z,416nm,25.0s
PPT2 *e*LR LR 04 56 16.1
comp=Z,299nm,27.2s
H22K Ishtalitna Cre 80.05 24 P **P** **04 31 21.1 -1.0**
baz=259,SNR=9.3
F22K John River 80.05 22 P **P** **04 31 20.3 -1.7**
baz=258
TRF Thorofare Moun 80.08 26 P **P** **04 31 23.2 +0.7**
TRF IAmb IAmb 04 31 31.7
comp=Z,35nm,1.0s
TRF Thorofare Moun 80.08 26 P **P** **04 31 20.4 -2.0**
baz=261
MLY Manley 80.15 25 P **P** **04 31 22.5 -0.2**
baz=260,SNR=13
E22K Anaktuvuk Pass 80.31 22 P **P** **04 31 23.3 -0.1**
baz=258
PMR Palmer 80.33 28 IAmb IAmb 04 31 32.0
comp=Z,34nm,0.8s
PMR Palmer 80.33 28 P **P** **04 31 21.0 -2.6**
baz=262,SNR=7.0
GHO Glory Hole Cre 80.45 28 IAmb IAmb 04 31 45.1
comp=Z,23nm,0.9s
BWN Browne 80.55 26 IAmb IAmb 04 31 35.3
comp=Z,39nm,0.9s
PWL Port Wells 80.61 29 P **P** **04 31 22.9 -2.3**
baz=263,SNR=6.1
KNK Knik Glacier 80.63 29 P **P** **04 31 20.5 -4.8**
baz=263,SNR=6.6
RND Reindeer 80.71 27 IAmb IAmb 04 31 34.8
comp=Z,30nm,0.9s
MCK McKinley 80.72 26 IAmb IAmb 04 31 35.0
comp=Z,43nm,0.8s
MCK McKinley 80.72 26 P **P** **04 31 23.0 -2.7**
baz=262
G23K Bananza Creek 80.73 23 P **P** **04 31 23.9 -1.8**
baz=260,SNR=16
SML Sawmill 80.74 28 P **P** **04 31 24.9 -1.0**
SML IAmb IAmb 04 31 35.6
comp=Z,51nm,1.0s
SML Sawmill 80.74 28 P **P** **04 31 23.1 -2.8**
baz=263
I23K Minto, Yukon-K 80.75 25 IAmb IAmb 04 31 30.8
comp=Z,77nm,1.6s
I23K Minto, Yukon-K 80.75 25 P **P** **04 31 24.4 -1.3**
baz=261,SNR=9.4
COLD Coldfoot 80.75 23 IAmb IAmb 04 31 36.6
comp=Z,27nm,0.8s
COLD Coldfoot 80.75 23 P **P** **04 31 23.6 -2.2**
baz=260,SNR=13
WAT1 Susitna Watana 80.77 27 P **P** **04 31 26.4 +0.4**
baz=262
H23K Yukon River 80.78 24 IAmb IAmb 04 31 36.5
comp=Z,28nm,1.1s
H23K Yukon River 80.78 24 P **P** **04 31 23.4 -2.6**
baz=261,SNR=11
NEA2 Nenana 80.79 25 P **P** **04 31 25.0 -1.0**
baz=262
D23K Nanushuk River 80.88 21 P **P** **04 31 24.7 -1.7**
baz=259,SNR=10
P23K Montague Islan 80.97 30 P **P** **04 31 25.2 -1.9**
baz=264
M23K Glacier View 81.02 28 P **P** **04 31 25.4 -1.9**
baz=263,SNR=6.2
C23K Itkillik River 81.07 20 P **P** **04 31 24.2 -3.2**
baz=259
WAT6 Susitna Watana 81.11 27 P P 04 31 22.2 -5.8
baz=263,SNR=16
SCM Sheep Creek Mo 81.21 28 P P 04 31 22.8 -5.7
baz=264,SNR=7.3
GLI Glacier Island 81.22 29 P **P** **04 31 25.3 -3.1**
baz=264,SNR=5.8
TOLK Toolik Lake Re 81.22 21 IAmb IAmb 04 31 39.2
comp=Z,66nm,1.3s
TOLK Toolik Lake Re 81.22 21 P **P** **04 31 26.1 -2.2**
baz=260
PMOR Pomariorio Ree 81.26 106 *e*T T 06 00 43.5
comp=Z,7.2nm,0.2s
DHY Denali Highway 81.33 27 IAmb IAmb 04 31 41.1
comp=Z,18nm,0.8s
DHY Denali Highway 81.33 27 P **P** **04 31 25.5 -3.7**
baz=263,SNR=7.6
CCB Clear Creek Bu 81.33 25 P **P** **04 31 28.1 -0.8**
CCB IAmb IAmb 04 31 38.6
comp=Z,47nm,1.6s
COLA College 81.34 25 *i* P **P** **04 31 27.7 -1.2**
COLA pmax pmax
comp=Z,12nm,1.6s
H24K Noodor Dome 81.46 24 IAmb IAmb 04 31 40.9
comp=Z,27nm,1.2s
H24K Noodor Dome 81.46 24 P **P** **04 31 27.0 -2.7**
baz=262,SNR=10
E24K Your Creek 81.53 22 P **P** **04 31 29.0 -1.0**
baz=262
POKR Poker Plat Res 81.55 25 P **P** **04 31 28.7 -1.4**
baz=263
D24K Happy Valley 81.57 21 P **P** **04 31 29.6 -0.5**
baz=261
HDA Harding Lake 81.67 26 P **P** **04 31 30.4 -0.3**
baz=264
F24K Squaw Lake 81.68 22 P **P** **04 31 29.8 -1.0**
baz=262,SNR=20
C24K Franklin Bluff 81.70 20 P **P** **04 31 27.4 -3.3**
baz=261
G24K Hadweenzic Riv 81.73 23 P **P** **04 31 29.2 -1.8**
baz=263,SNR=5.5
ILAR Eielson Array 81.74 25 P **P** **04 31 28.7 -2.4**
comp=Z,1.8nm,0.9s,baz=251,slow=5.8,SNR=8.5
ILAR LR LR 05 03 17.5
comp=Z,123nm,21.7s,baz=262,slow=32
comp=Z,1.8nm,0.9s
M24K Tolsona, Glenn 81.78 28 P **P** **04 31 30.6 -0.8**
baz=265
KLU Klutina 81.84 29 IAmb IAmb 04 31 41.5
comp=Z,29nm,0.9s
KLU Klutina 81.84 29 P **P** **04 31 29.4 -2.4**
baz=265,SNR=5.7
EYAK Cordova Ski Ar 81.85 30 P **P** **04 31 30.2 -1.5**
baz=265,SNR=5.1
K24K Donnelly Dome 82.12 26 P **P** **04 31 30.4 -2.7**
baz=265
PAX Paxson 82.19 27 IAmb IAmb 04 31 43.0
comp=Z,16nm,0.8s
PAX Paxson 82.19 27 P **P** **04 31 32.4 -1.2**
baz=265,SNR=10
G25K Bearman Lake 82.28 23 P **P** **04 31 31.7 -2.2**
baz=264
HARP HAARP 82.28 28 P **P** **04 31 31.7 -2.3**
baz=265,SNR=5.8
KIRV Kirov 82.35 328 LR LR 05 10 06.7
comp=Z,342nm,20.5s,baz=91,slow=37
KIRV Kirov 82.35 328 *i* P **P** **04 31 34.4 +0.1**
J25K Salcha River, 82.37 26 P **P** **04 31 32.1 -2.4**
baz=265
PRP Porcupine Dome 82.39 25 P **P** **04 31 31.4 -3.2**
baz=265
BMRM Bremner River 82.44 29 P **P** **04 31 34.2 -0.7**
BMRM Bremner River 82.44 29 P **P** **04 31 30.8 -4.1**
baz=266
D25K Kavik River 82.46 21 P **P** **04 31 32.2 -2.6**
baz=263
N25K Chitina, Valde 82.49 29 P **P** **04 31 33.9 -1.2**
baz=266
RIDG Independent Ri 82.53 26 IAmb IAmb 04 31 45.1
comp=Z,24nm,1.0s
RIDG Independent Ri 82.53 26 P **P** **04 31 33.8 -1.6**
baz=266,SNR=6.6
F25K Christian Rive 82.54 23 P **P** **04 31 34.3 -1.1**
baz=264,SNR=12
E25K Arctic Village 82.62 22 P **P** **04 31 35.2 -0.5**
baz=264,SNR=10
GLB Gilahina Butte 82.85 29 IAmb IAmb 04 31 47.2
comp=Z,26nm,1.0s
SCRK Sand Creek 82.93 26 P **P** **04 31 35.4 -2.1**
baz=266
VRDI Verde Repeater 83.01 29 IAmb IAmb 04 31 49.2
comp=Z,32nm,1.3s
BELG Belogornoye 83.11 322 LR LR 05 12 14.6
comp=Z,156nm,18.8s,baz=119,slow=38
BELG Belogornoye 83.11 322 *i* P **P** **04 31 37.7 -0.8**
BELG pmax pmax
comp=Z,19nm,1.0s
F26K Sheenjek River 83.12 22 P **P** **04 31 36.0 -2.3**
baz=266,SNR=12
J26L Joseph Creek 83.14 26 P **P** **04 31 36.2 -2.4**
baz=267
L26K Log Cabin Wild 83.16 27 IAmb IAmb 04 31 48.9
comp=Z,14nm,0.9s
L26K Log Cabin Wild 83.16 27 P P 04 31 33.3 -5.2
baz=267
CRQE Cirque 83.17 29 P **P** **04 31 36.2 -2.5**
baz=268
G26K Porcupine Rive 83.21 23 P **P** **04 31 36.1 -2.6**
baz=266,SNR=8.8
MCARA McCarthy VSAT 83.23 29 P **P** **04 31 35.3 -3.6**
baz=268
M26K Nabesna, AK 83.29 28 P **P** **04 31 37.7 -1.6**
baz=267
I26K Coal Creek Min 83.36 25 P **P** **04 31 37.2 -2.3**
baz=267
C27K Jago River 83.42 21 P **P** **04 31 38.0 -1.8**
baz=266
VNDA Vanda 83.76 174 P **P** **04 31 40.5 -0.9**
comp=Z,1.7nm,0.8s,baz=314,slow=6.9,SNR=12
VNDA LR LR 05 08 50.5
comp=Z,487nm,18.6s,baz=342,slow=36
comp=Z,1.7nm,0.8s
VNDA Vanda 83.76 174 P **P** **04 31 40.4 -0.9**
K27K Chicken 83.77 26 IAmb IAmb 04 31 53.8
comp=Z,34nm,1.1s
K27K Chicken 83.77 26 P **P** **04 31 41.0 -0.7**
baz=268
M27K Edge Creek, AK 83.81 28 IAmb IAmb 04 31 52.6
comp=Z,14nm,0.9s
M27K Edge Creek, AK 83.81 28 P **P** **04 31 39.5 -2.6**
baz=268
L27K Beaver Creek, 83.85 27 P **P** **04 31 40.1 -2.0**
baz=268,SNR=11
I27K Kandik River 84.02 25 P **P** **04 31 40.6 -2.4**
baz=268
CTG Chitna Glacier 84.03 29 P **P** **04 31 41.4 -1.8**
baz=269,SNR=5.5
G27K Doyon Strip 84.04 23 P **P** **04 31 39.9 -3.1**
baz=268,SNR=8.9
H27K Steamboat Moun 84.07 24 P **P** **04 31 41.3 -2.0**
baz=268
E27K Coleen River 84.11 22 P **P** **04 31 42.7 -0.7**
baz=268,SNR=11
BVCY Beaver Creek 84.28 28 P **P** **04 31 42.7 -1.6**
baz=269
PRGR Permogore 84.35 331 *e*P **P** **04 31 42.4 -2.2**
YUK3 Moose Creek 84.46 28 P **P** **04 31 44.0 -1.5**
baz=270,SNR=6.8
PINM Pinnacle 84.56 30 P **P** **04 31 42.5 -3.4**
baz=270
O28M Mount Upton 84.59 30 P **P** **04 31 42.2 -4.0**
baz=270
SBA Scott Base 84.60 173 P **P** **04 31 45.8 +0.3**
SBA IAmb IAmb 04 32 11.6
comp=Z,21nm,1.4s
SBA Scott Base 84.60 173 P **P** **04 31 45.8 +0.3**
SBA pmax pmax
comp=Z,21nm,1.4s
DAWY Dawson 84.95 26 P **P** **04 31 43.2 -4.5**
baz=270,SNR=30
PNL Peninsula 85.00 31 P **P** **04 31 44.2 -3.7**
baz=271
GNI Garni 85.23 310 LR LR 05 15 11.4
comp=Z,131nm,19.9s,baz=92,slow=40
GNI Garni 85.23 310 *i* P **P** **04 31 51.6 +1.8**
GNI pmax pmax
comp=Z,64nm,1.6s
YUK4 Talbot Arm 85.34 29 P **P** **04 31 47.4 -2.5**
baz=271,SNR=11
RAYN Ar Rayn 85.35 293 P **P** **04 31 50.7 +0.1**
RAYN IAmb IAmb 04 31 59.9
comp=Z,32nm,0.9s
RAYN Ar Rayn 85.35 293 P **P** **04 31 50.7 +0.1**
RAYN pmax pmax
comp=Z,32nm,0.9s
O29M Mount Kennedy 85.40 30 P **P** **04 31 46.7 -3.5**
baz=272
M29M Somme Creek 85.40 28 P P 04 31 45.0 -5.0
baz=271
I29M Ogilvie Camp, 85.40 25 P **P** **04 31 47.1 -2.8**
baz=271
YUK6 Outpost Mounta 85.48 29 P **P** **04 31 47.1 -3.6**
baz=272
ZEI Tsey 85.75 312 *e*P **P** **04 31 52.5 +0.1**
ZEI pmax pmax
comp=Z,29nm,0.9s
P29M Windy Craggy 85.84 31 P **P** **04 31 50.9 -1.3**
baz=272
HYT Haines Junctio 85.91 29 P **P** **04 31 50.8 -1.8**
baz=272,SNR=11
NCK Nalchik 85.95 313 *i* P **P** **04 31 54.8 +1.7**
NCK pmax pmax
comp=Z,14nm,1.0s
N30M Aishikik Lake 86.08 29 P **P** **04 31 50.4 -3.0**
baz=273,SNR=9.1
P30M Million Dollar 86.21 30 P **P** **04 31 53.5 -0.5**
baz=273
PYA1 Pyatigorsk 86.28 314 *i* P **P** **04 31 53.7 -1.0**
KBZ Khabaz 86.44 313 P **P** **04 31 53.0 -2.5**
comp=Z,1.4nm,0.6s,baz=105,slow=5.8,SNR=9.8
KBZ LR LR 05 14 58.3
comp=Z,108nm,19.6s,baz=71,slow=39
comp=Z,1.4nm,0.6s
KBZ Khabaz 86.44 313 *i* P **P** **04 31 55.8 +0.4**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
PLBC Pleasant Camp 86.55 31 P **P** **04 31 54.8 -0.9**
baz=273,SNR=8.8
KIV Kislovodsk 86.58 314 *e*P **P** **04 31 56.5 +0.2**
KIV *e* 04 35 18.8
KIV *e* 04 42 22.3
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,51nm,20.0s
O30N Mendenhall 86.60 29 P **P** **04 31 53.8 -2.2**
baz=274,SNR=7.5
N31M Braeburn, Yuko 86.71 29 IAmb IAmb 04 32 07.5
comp=Z,25nm,0.9s
N31M Braeburn, Yuko 86.71 29 P **P** **04 31 53.9 -2.5**
baz=274,SNR=10
MAW Mawson 86.72 201 LR LR 05 09 30.1
comp=Z,131nm,18.1s,baz=62,slow=35
MAW Mawson 86.72 201 P **P** **04 31 55.5 -0.7**
baz=86,SNR=5.6
MAW Mawson 86.72 201 P **P** **04 31 55.7 -0.5**
MAW Mawson 86.72 201 P **P** **04 31 55.7 -0.5**
MAW pmax pmax
comp=Z,5.0nm,1.0s
VRH Novokhopyorsk 86.80 321 *e*P **P** **04 31 58.2 +1.1**
VRH pmax pmax
comp=Z,20nm,0.7s
SKAG Skagway 87.07 31 IAmb IAmb 04 32 09.3
comp=Z,25nm,0.9s
SKAG Skagway 87.07 31 P **P** **04 31 58.8 +0.6**
baz=274
INK Inuvik 87.11 22 LR LR 05 07 39.6
comp=Z,119nm,21.9s,baz=296,slow=33
INK Inuvik 87.11 22 P **P** **04 31 57.9 -0.3**
baz=276
SIT Sitka 87.26 33 P **P** **04 31 58.6 -0.5**
baz=274
M31M Drury Creek, Y 87.31 28 P **P** **04 32 00.4 +1.1**
M31M IAmb IAmb 04 32 10.8
comp=Z,25nm,1.6s
M31M Drury Creek, Y 87.31 28 P **P** **04 31 57.2 -2.1**
baz=275
KLMR Klimovskoe 87.33 331 *e*P **P** **04 31 58.5 -0.9**
KLMR *e* 04 35 27.0
KLMR pmax pmax
comp=Z,30nm,1.1s
KLMR Klimovskoe 87.33 331 *e*P **P** **04 31 58.5 -0.9**
KLMR AMP 04 32 07.8
comp=Z,30nm,1.1s
KLMR *e*PP **PP** **04 35 27.1 +3.6**
KLMR LQ LQ 05 05 19.4
KLMR LQ LQ 05 05 19.4
KLMR LR LR 05 08 23.6
GURO Guroymak-BITLI 87.41 308 P **P** **04 32 00.0 -0.5**
GURO IAmb IAmb 04 32 18.2
comp=Z,16nm,0.9s
JIS Juneau Island 87.66 32 IAmb IAmb 04 32 11.2
comp=Z,18nm,0.7s
VOI Vohitsoka 87.74 248 P **P** **04 32 07.0 +4.7**
FARO Faro, Yukon 87.79 28 IAmb IAmb 04 32 12.6
comp=Z,16nm,0.9s
P32M Atlin 87.88 31 P **P** **04 32 02.4 +0.2**
baz=276
N32M Quiet Lake 88.03 29 P **P** **04 32 00.7 -2.2**
baz=276
TAOE Nuku Hiva Isla 88.15 99 *e*LR LR 05 00 03.0
comp=Z,480nm,25.3s
TAOE Nuku Hiva Isla 88.15 99 *e*T T 06 09 10.6
comp=Z,46nm,0.2s
P33M Teslin, Yukon 88.27 30 P **P** **04 32 03.4 -0.6**
baz=276
VORR Voronezh 88.33 322 P **P** **04 32 06.7 +2.3**
VORR pmax pmax
comp=Z,32nm,1.4s
VSR Storozhevoye 88.41 321 *e*P **P** **04 32 04.1 -0.7**
VSR pmax pmax
comp=Z,20nm,1.3s
LPSR Galich'ya Gora 88.42 322 *e*P **P** **04 32 05.0 +0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MARD Mardin 88.50 307 P **P** **04 32 06.0 +0.3**
MARD IAmb IAmb 04 32 29.3
comp=Z,10nm,0.8s
LVZ Lovozero 88.58 338 P **P** **04 32 06.0 +0.8**
LVZ IAmb IAmb 04 32 12.6
comp=Z,28nm,1.1s
LVZ Lovozero 88.58 338 P **P** **04 32 06.1 +0.8**
LVZ pmax pmax
comp=Z,28nm,1.1s
ATD Arta Tunnel 88.69 281 LR LR 05 14 33.0
comp=Z,38nm,18.4s,baz=150,slow=38
SOC Sochi 88.75 313 *e*P **P** **04 32 05.5 -1.1**
SOC *e* 04 35 31.1
SOC *e*S **SKSac** **04 42 34.7 -0.7**
SOC *e*SS **SS** **04 48 41.8 -2.9**
SOC *e*SSS SSS 04 52 17.7
SOC pmax pmax
comp=Z,10.0nm,0.7s
SOC MLR MLR
comp=Z,122nm,19.0s
MOS Moscow 88.84 326 *e*P **P** **04 32 11.1 +4.4**
MOS pmax pmax
comp=Z,47nm,1.4s
WRAK Wrangell Islan 88.95 34 P **P** **04 32 03.0 -4.3**
baz=277
R33M Jennings River 89.30 31 P **P** **04 32 07.4 -1.6**
baz=278
OBN Obninsk 89.52 325 P **P** **04 32 09.7 -0.2**
OBN IAmb IAmb 04 32 17.3
comp=Z,33nm,1.2s
OBN Obninsk 89.52 325 *i* *e*P **P** **04 32 10.0 +0.1**
OBN *e* 04 35 42.4
OBN *e*PPP PPP 04 37 39.6
OBN *e*SS SS 04 48 55.6 +0.5
OBN pmax pmax
comp=Z,36nm,1.3s
OBN MLR MLR
comp=Z,401nm,22.0s

DLBC	**Deese Lake**	**89.92**	**31**	LR	LR	05 06 22.4	
	comp=Z,175nm,21.7s,baz=288,slow=32						
ANN	**Anapa**	**90.26**	**315**	*e*P	**P**	**04 32 09.9**	**-3.7**
ANN				pmax	pmax		
	comp=Z,45nm,0.9s						
ANN				MLR	MLR		
	comp=Z,295nm,23.0s						
SPITS	**Spitsbergen Ar**	**90.57**	**349**	LR	LR	05 15 26.2	
	comp=Z,320nm,20.4s,baz=11,slow=37						
ARA0	**ARCESS Array S**	**91.45**	**340**	*e*P	P	04 32 25.4	+6.7
ARA0				IAmb	IAmb	04 32 25.5	
	comp=Z,28nm,1.1s						
ARCES	**ARCESS Array B**	**91.45**	**340**	P	**P**	**04 32 16.6**	**-2.0**
	comp=Z,4.1nm,0.7s,baz=79,slow=6.3,SNR=9.2						
ARCES				LR	LR	05 16 16.5	
	comp=Z,322nm,21.0s,baz=82,slow=38						
	comp=Z,4.1nm,0.7s						
ARCES	**ARCESS Array B**	**91.45**	**340**	P	**P**	**04 32 19.5**	**+0.8**
ARCES				IAmb	IAmb	04 32 25.8	
	comp=Z,26nm,1.1s						
ARCES	**ARCESS Array B**	**91.45**	**340**	P	**P**	**04 32 19.5**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,26nm,1.1s						
HAMF	**Hammerfest**	**91.69**	**342**	*e*P	**P**	**04 32 23.1**	**+3.5**
HAMF				IAmb	IAmb	04 32 26.1	
	comp=Z,28nm,1.1s						
BBB	**Bella Bella**	**92.05**	**37**	LR	LR	05 07 08.0	
	comp=Z,146nm,20.1s,baz=287,slow=31						
JETT	**Jettan, Norway**	**93.13**	**341**	*e*P	**P**	**04 32 29.1**	**+2.6**
JETT				IAmb	IAmb	04 32 33.2	
	comp=Z,21nm,0.9s						
MMAI	**Mount Meron Ar**	**93.35**	**303**	LR	LR	05 21 22.0	
	comp=Z,70nm,18.3s,baz=250,slow=40						
TRO	**Tromso**	**93.58**	**341**	*e*P	P	04 32 34.0	+5.6
FINES	**FINESS Array B**	**93.61**	**332**	P	**P**	**04 32 26.3**	**-2.4**
	comp=Z,1.4nm,0.8s,baz=66,slow=4.8,SNR=4.7						
FINES				LR	LR	05 19 00.1	
	comp=Z,318nm,18.0s,baz=67,slow=38						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**93.61**	**332**	P	**P**	**04 32 28.7**	**-0.1**
FINES	**FINESS Array B**	**93.61**	**332**	*i* P	**P**	**04 32 29.7**	**+0.9**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BR131	**Keskin Array S**	**93.76**	**310**	*i* P	**P**	**04 32 27.8**	**-2.4**
BRTR	**Keskin Array B**	**93.76**	**310**	P	**P**	**04 32 27.0**	**-3.2**
	comp=Z,0.9nm,0.9s,baz=20,slow=3.9,SNR=4.0						
BRTR				LR	LR	05 17 38.5	
	comp=Z,115nm,21.9s,baz=97,slow=38						
	comp=Z,0.9nm,0.9s						
BRTR	**Keskin Array B**	**93.76**	**310**	*i* P	**P**	**04 32 28.6**	**-1.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VSU	**Vasula**	**94.13**	**330**	*i* P	**P**	**04 32 31.2**	**0.0**
VSU				pmax	pmax		
	comp=Z,57nm,1.1s						
EIL	**Elat**	**94.18**	**300**	LR	LR	05 22 57.9	
	comp=Z,110nm,18.3s,baz=90,slow=41						
MNK	**Minsk**	**94.56**	**326**	*i* P	P	04 32 27.2	-6.1
MNK				*i*		04 36 15.0	
MNK				*i* S	**SKSac**	**04 43 02.3**	**-5.5**
MNK				*i* PS	PS	04 44 57.7	-5.2
MNK				*i* SS	**SS**	**04 50 04.6**	**-3.0**
MNK				*i* SSS	SSS	04 53 46.6	
MNK				pmax	pmax		
	comp=N,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,183nm,20.0s						
MNK				MLR	MLR		
	comp=N,19nm,19.0s						
MNK				MLR	MLR		
	comp=E,36nm,22.0s						
MNK	**Minsk**	**94.56**	**326**	*i* P	P	04 32 27.2	-6.1
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	04 32 27.2	-6.1
	comp=N,7.0nm,0.9s						
MNK				*i* P	P	04 32 27.2	-6.1
	comp=Z,6.0nm,0.7s,baz=75						
MNK				*i* PP	**PP**	**04 36 15.0**	**-5.9**
MNK				*i* PPP	PPP	04 38 16.4	
MNK				*i* S	**SKSac**	**04 43 02.3**	**-5.5**
MNK				*i* PS	**PS**	**04 44 57.7**	**-5.1**
MNK				*i* SS	**SS**	**04 50 04.7**	**-3.0**
MNK				*i* SSS	SSS	04 53 46.7	
MNK				*i* LQ	LQ	05 09 17.6	
MNK				*i* LR	LR	05 14 03.9	
MNK				*i* LRM	MLR	05 15 54.4	
	comp=Z,183nm,20.4s						
MNK				*i* LRM	MLR	05 16 11.6	
	comp=N,19nm,19.2s						
MNK				*i* LRM	MLR	05 16 12.9	
	comp=E,36nm,21.7s						
QSPA	**South Pole Qui**	**94.64**	**180**	LR	LR	05 15 36.0	
	comp=E,538nm,19.4s,baz=354,slow=36						
QSPA	**South Pole Qui**	**94.64**	**180**	P	**P**	**04 32 32.9**	**-0.6**
AKASG	**Malin Array Be**	**94.69**	**322**	P	**P**	**04 32 33.3**	**-0.6**
	comp=E,0.9nm,0.8s,baz=60,slow=4.6,SNR=5.7						
AKASG				LR	LR	05 18 59.8	
	comp=E,176nm,19.7s,baz=79,slow=38						
	comp=E,0.9nm,0.8s						
AKBB	**Malin Array Si**	**94.69**	**322**	P	**P**	**04 32 34.4**	**+0.5**
AKBB				IAmb	IAmb	04 33 00.1	
	comp=Z,20nm,1.8s						
AKBB	**Malin Array Si**	**94.69**	**322**	*ce*P	**P**	**04 32 32.1**	**-1.8**
NACGM	**Naroch**	**95.08**	**326**	PP	**PP**	**04 36 27.4**	**+2.5**
	baz=74						
KMBO	**Kilima Mbogo**	**95.28**	**269**	LR	LR	05 14 50.7	
	comp=Z,78nm,20.3s,baz=90,slow=35						
STEI	**Steigen**	**95.52**	**340**	*e*P	P	04 32 42.2	+4.9
STEI				IAmb	IAmb	04 32 43.5	
	comp=Z,15nm,1.1s						
RES	**Resolute Bay**	**95.75**	**11**	LR	LR	05 16 34.0	
	comp=Z,53nm,20.7s,baz=338,slow=36						
FAUS	**Fauske**	**95.75**	**340**	*e*P	P	04 32 44.2	+5.8
FAUS				IAmb	IAmb	04 32 45.1	
	comp=Z,19nm,0.9s						
YKA	**Yellowknife Ar**	**96.17**	**25**	LR	LR	05 12 57.4	
	comp=Z,122nm,20.3s,baz=290,slow=34						
LLLB	**Lillooet**	**96.20**	**38**	P	**P**	**04 32 41.2**	**+0.2**
LLLB				IAmb	IAmb	04 32 51.0	
	comp=Z,6.6nm,0.9s						
YBH	**Yreka Blue Hor**	**97.84**	**47**	LR	LR	05 13 12.8	
	comp=Z,96nm,18.4s,baz=281,slow=33						
LTY	**Liberty**	**97.86**	**41**	P	**P**	**04 32 46.0**	**-2.5**
LTY				IAmb	IAmb	04 32 58.8	
	comp=Z,7.2nm,1.0s						
BUR08	**Bucovina Ar. S**	**98.02**	**319**	P	Pdif	04 32 50.0	+0.7
MLR	**Muntele Rosu**	**98.10**	**317**	LR	LR	05 20 30.4	
	comp=Z,244nm,21.5s,baz=77,slow=38						
E08A	**Dider Farm, El**	**99.14**	**42**	P	**Pdif**	**04 32 53.3**	**-0.9**
E08A				IAmb	IAmb	04 33 13.5	
	comp=Z,9.3nm,1.2s						
UZH	**Uzhgorod**	**99.58**	**321**	*e*P	**Pdif**	**04 32 58.0**	**+1.9**
UZH				*e*		04 33 00.5	
UZH				*i*		04 33 05.0	
HFS	**Hagfors**	**99.72**	**334**	LR	LR	05 20 37.2	
	comp=Z,589nm,20.3s,baz=58,slow=37						
NEW	**Newport**	**99.85**	**39**	LR	LR	05 11 08.9	
	comp=Z,111nm,19.9s,baz=294,slow=31						
NB2	**NORSAR Subarra100.36**		**335**	P	**Pdif**	**04 32 55.9**	**-3.5**
	comp=Z,4.6nm,1.1s,baz=60,slow=4.4						
NB2	**NORSAR Subarra100.36**		**335**	P	**Pdif**	**04 32 55.9**	**-3.5**
	baz=60,slow=4.4						
NOA	**NORSAR Array B100.36**		**335**	P	**Pdif**	**04 32 59.1**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=59,slow=4.6,SNR=3.7						
NVAR	**Mina Array Bea**	**101.94**	**49**	P	**Pdif**	**04 33 08.4**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=264,slow=6.3,SNR=7.9						
HLID	**Hailey**	**103.18**	**43**	P	**Pdif**	**04 33 10.9**	**-1.6**
	baz=290						
BRG	**Berggiesshubel**	**103.76**	**325**	*e*P	**Pdif**	**04 33 21.6**	**+7.0**
BRG				Amp		04 33 25.0	
	comp=Z,4.9nm,1.2s						
BRG	**Berggiesshubel**	**103.76**	**325**	*e*P	**Pdif**	**04 33 21.6**	**+7.0**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
R11A	**Troy Canyon, C**	**104.01**	**49**	P	**Pdif**	**04 33 16.4**	**+0.1**
	baz=288						
CLL	**Collm**	**104.11**	**326**	*e*PP	**PKiKP**	**04 37 31.0**	**-2.3**
CLL				*e*SKSac	**SKSac**	**04 43 57.0**	**+1.5**
CLL				*e*(SP)		04 46 34.0	
CLL				*e*PPS	PPS	04 47 36.0	
CLL				*e*SS	**SS**	**04 52 18.0**	**-3.1**
CLL				LmH		05 16 00.0	
	comp=N,700nm,19.4s						
CLL				LmH		05 16 00.0	
	comp=E,400nm,19.1s						
CLL				LmV		05 24 00.0	
	comp=Z,500nm,19.7s						
JCT	**Junction City**	**119.02**	**51**	PKPdf	**PKPdf**	**04 38 00.9**	**-1.3**
JCT	**Junction City**	**119.02**	**51**	PKIKP	**PKPdf**	**04 38 00.9**	**-1.3**
L44A	**Lake County Fo**	**120.62**	**34**	P	**PKPdf**	**04 38 01.6**	**-3.3**
	baz=312						
CCM	**Cathedral Cave**	**121.22**	**40**	P	**PKPdf**	**04 38 01.9**	**-4.2**
	baz=306						
MIAR	**Mount Ida**	**121.64**	**44**	P	**PKPdf**	**04 38 03.6**	**-3.5**
	baz=303						
OXF	**Oxford**	**124.50**	**42**	P	**PKPdf**	**04 38 08.6**	**-3.9**
	baz=306						
WVT	**Waverly**	**124.55**	**39**	P	**PKPdf**	**04 38 07.8**	**-4.7**
	baz=309						
P52A	**Corning**	**125.54**	**33**	P	**PKPdf**	**04 38 10.1**	**-4.3**
	baz=316						
LRAL	**Lakeview Retre**	**127.00**	**42**	P	**PKPdf**	**04 38 14.5**	**-2.8**
	baz=308						
TORD	**Torodi Ar. Bea**	**127.98**	**291**	PKP	**PKPdf**	**04 38 17.9**	**-1.8**
	comp=Z,2.4nm,0.9s,baz=70,slow=1.9,SNR=9.1						
DBIC	**Dimbokro**	**135.91**	**285**	PKP	**PKPdf**	**04 38 35.3**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=150,slow=4.5,SNR=2.4						
PLCA	**Paso Flores**	**138.63**	**153**	PKP	**PKPdf**	**04 38 39.8**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=231,slow=6.5,SNR=3.3						
BO02	**Sierra Bellavi**	**143.16**	**147**	PKPdf	**PKPdf**	**04 38 48.5**	**+1.0**
MT02	**Curacav**	**144.10**	**145**	PKPdf	PKPbc	04 38 47.2	+0.2
AAGR	**Agrelo**	**145.51**	**147**	*i* P	**PKPab**	**04 38 52.1**	**+0.2**
ARCO	**CERRO ARCO**	**145.64**	**147**	*i* P	**PKPdf**	**04 38 51.8**	**-0.1**
ASAL	**Salagasta**	**145.88**	**147**	⇓*i*P	**PKPdf**	**04 38 52.1**	**-0.2**
CO03	**El Pedregal**	**146.11**	**143**	PKPbc	**PKPdf**	**04 38 53.0**	**+0.3**
RTLS	**Leoncito**	**146.22**	**145**	*i* P	**PKPbc**	**04 38 53.6**	**-0.5**
ZON	**Zonda**	**146.76**	**146**	PKPbc	**PKPbc**	**04 38 55.5**	**+0.1**
ZON	**Zonda**	**146.76**	**146**	PKP2	**PKPbc**	**04 38 55.5**	**+0.1**
SDDR	**Presa de Saban**	**146.79**	**44**	PKPbc	**PKPbc**	**04 38 55.5**	**-0.3**
SDDR	**Presa de Saban**	**146.79**	**44**	*e*P	**PKiKP**	**04 38 59.5**	**+1.0**
CO01	**Juntas del Tor**	**147.08**	**142**	PKPbc	**PKPbc**	**04 38 56.3**	**-0.4**
ACCO	**Cerro Coronel**	**147.25**	**144**	*i* P	**PKPbc**	**04 38 57.0**	**-0.2**
AROD	**Rodeo**	**147.32**	**143**	⇓*i*P	**PKPbc**	**04 38 57.6**	**+0.2**
LCO	**Las Campanas**	**147.37**	**140**	PKPbc	**PKPdf**	**04 38 56.1**	**+1.0**
LCO	**Las Campanas**	**147.37**	**140**	PKP2	**PKPdf**	**04 38 56.1**	**+1.0**
ACDV	**Cuesta del Vie**	**147.53**	**144**	*i* P	**PKPbc**	**04 38 57.5**	**-0.2**
ARNL	**Arenillas**	**147.53**	**89**	PKPbc	**PKPdf**	**04 38 56.5**	**+1.1**
MRA	**San Martin**	**147.64**	**150**	*i* P	**PKPdf**	**04 38 55.2**	**0.0**
AVFE	**Valle Fertil**	**148.12**	**146**	*i* P	**PKPbc**	**04 38 58.5**	**-0.7**
ACHE	**Chepes**	**148.16**	**148**	*i* P	**PKPdf**	**04 38 55.4**	**-0.8**
PORT	**Chimborazo Vol**	**148.64**	**85**	PKPbc	**PKPbc**	**04 39 01.5**	**-0.2**
OTAV	**Otavalo**	**148.72**	**82**		**PKPdf**	**04 38 59.3**	**+1.3**
OTAV	**Otavalo**	**148.72**	**82**	PKP2	**PKPdf**	**04 38 59.3**	**+1.3**
APLL	**PUNTA DE LOS L**	**148.83**	**147**	*i* P	**PKPbc**	**04 38 59.3**	**-1.7**
SJCC	**San Jacinto, C**	**148.85**	**62**	*e*P	**PKPbc**	**04 39 00.8**	**-0.8**
TCA	**Tanti**	**149.07**	**151**	⇑*i*P	**PKPbc**	**04 39 00.2**	**-1.5**
BOSC	**San Juan Bosco**	**149.08**	**88**	PKPbc	**PKPdf**	**04 38 59.8**	**+1.6**
VCA	**Vinchina**	**149.12**	**143**	*i* P	**PKPbc**	**04 39 01.9**	**0.0**
ACLC	**CERRO LA CRUZ**	**149.34**	**145**	*i* P	**PKPbc**	**04 39 01.7**	**-0.8**
UREC	**San Jos de Ur**	**149.43**	**66**	*e*P	**PKPab**	**04 39 06.2**	**-1.5**
CBOC	**Ciudad Bolivar**	**149.68**	**70**	*e*P	**PKPab**	**04 39 09.1**	**+0.1**
PLMC	**San Jos del P**	**149.73**	**72**	*e*P	**PKPbc**	**04 39 03.4**	**-0.4**
YOTC	**Yotoco, Valle**	**149.94**	**74**	*e*P	**PKPbc**	**04 39 02.1**	**-1.8**
POPC	**Popayan, Colom**	**150.00**	**77**	*e*P	**PKPbc**	**04 39 03.1**	**-1.6**
ZARC	**Zaragoza, Cauc**	**150.15**	**66**	*e*P	**PKPbc**	**04 39 03.8**	**-0.9**
GUY2C	**Guyana, Caldas**	**150.49**	**71**	*e*P	**PKPbc**	**04 39 05.4**	**-0.7**
ANIL	**Santa Ana**	**150.69**	**72**	*e*P	**PKPab**	**04 39 14.7**	**+1.4**
URIC	**Uribia, Colomb**	**150.69**	**56**	*e*P	**PKPbc**	**04 39 04.4**	**-1.5**
ICMP	**Isla Caja de M**	**150.73**	**39**	PKPbc	**PKPbc**	**04 39 03.8**	**-2.1**
PTBC	**PUERTO BERRIO**	**150.88**	**68**	*e*P	**PKPbc**	**04 39 06.0**	**-0.5**
FLOC	**Florencia**	**151.21**	**78**	*e*P	**PKiKP**	**04 39 11.1**	**+3.3**
PRAC	**Prado**	**151.41**	**73**	*e*P	**PKPbc**	**04 39 06.5**	**-1.2**
BARC	**Barichara**	**152.03**	**66**	*e*P	**PKPdf**	**04 39 05.7**	**+2.8**
PAMC	**Pamplona, Colo**	**152.17**	**65**	*e*P	**PKPab**	**04 39 15.3**	**-4.3**
PTLC	**Puerto Leguiza**	**152.34**	**81**	*e*P	**PKiKP**	**04 39 14.1**	**+4.0**
RUSC	**La Rusia**	**152.39**	**68**	*e*P	**PKPbc**	**04 39 07.4**	**-3.1**
PLTB	**Pedras Altas**	**152.53**	**169**		**PKPbc**	**04 39 07.3**	**-2.4**
SDV	**Santo Domingo**	**153.28**	**60**	PKPbc	**PKPbc**	**04 39 10.7**	**-1.4**
	comp=Z,9.0nm,0.6s,baz=354,slow=3.9,SNR=6.2						
CPUP	**Vila Florida**	**156.58**	**157**	PKPab	**PKPab**	**04 39 36.3**	**-0.9**
	comp=Z,4.3nm,0.9s,baz=327,slow=1.6,SNR=4.1						
LPAZ	**La Paz**	**156.76**	**121**	PKPab	**PKPab**	**04 39 37.6**	**-1.6**
	comp=Z,3.3nm,0.8s,baz=196,slow=5.9,SNR=7.8						
SIV	**San Ignacio**	**162.63**	**131**	PKP	**PKPdf**	**04 39 14.6**	**-1.2**
	comp=Z,1.3nm,1.0s,baz=236,slow=3.6,SNR=2.5						
SIV				PKPab	**PKPab**	**04 40 02.9**	**-1.1**
	comp=Z,5.3nm,1.3s,baz=241,slow=3.3,SNR=5.1						
SAML	**Samuel**	**163.92**	**106**		**PKPdf**	**04 39 15.0**	**-2.0**
SAML					**PKPab**	**04 40 08.6**	**-1.2**
SAML	**Samuel**	**163.92**	**106**	PKIKP	**PKPdf**	**04 39 15.0**	**-2.0**
SAML						04 40 08.6	

*AEIC **06** 04:41:03.9±0.8, 53°.80N±0°.06×163°.50W±0°.05, h10km±2km, Error ellipse: s-maj=8.1km s-min=4.7km az=172.0*
NEIC 06 04:41:03.6±0.7, 53.79N±0°.02×163.52W±0°.05, h10km±7km, ML3.2/8, MLh3.1/43(AEIC), Error ellipse: s-maj=4.9km s-min=1.3km az=58.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**0.86**	**352**		Pg	04 41 20.5	+0.2
WESE	**West Dahl East**	**0.93**	**318**		Pb	04 41 21.7	-0.2
ISLZ	**Isanotski Lazza**	**0.94**	**353**		Pg	04 41 21.6	-0.2
SSLS	**Shishaldin Sou**	**0.96**	**343**		Pg	04 41 22.2	+0.1
SSLS					Sn	04 41 36.4	-0.7
WESP	**Westdahl Peak**	**0.99**	**315**		Pg	04 41 22.8	0.0
WESP					Sn	04 41 37.3	-0.6
WESN	**West Dahl Nort**	**1.00**	**322**		Pb	04 41 23.0	0.0
SSBA	**Shishaldin**	**1.04**	**340**		Pg	04 41 23.2	-0.4
WECS	**Westdahl Cape**	**1.04**	**316**		Pg	04 41 23.5	-0.2
ISNN	**Isanotski Nort**	**1.05**	**352**		Pg	04 41 23.7	-0.1
ISNN					Sn	04 41 40.3	+1.1
SSLN	**Shishaldin Nor**	**1.06**	**345**		Pb	04 41 24.0	0.0
AKSA	**Akutan Strait**	**1.33**	**286**		Pn	04 41 27.6	-0.7
AKSA	**Akutan Strait**	**1.33**	**286**		Pn	04 41 27.7	-0.6
AKUT	**Akutan**	**1.37**	**285**		Pn	04 41 28.5	-0.3
AKUT	**Akutan**	**1.37**	**285**	IAML		04 41 52.3	
	comp=E,302nm,0.7s						
AKUT				IAML		04 41 52.5	
	comp=N,233nm,0.4s						
AKBBA	**Akutan Broad B**	**1.46**	**283**		Pn	04 41 29.5	-0.5
AKLV	**Akutan Long Va**	**1.48**	**285**		Pn	04 41 30.5	+0.1
AKMO	**Akutan Morgan**	**1.50**	**283**		Pn	04 41 30.5	-0.1
DT1	**Dutton Round H**	**1.50**	**28**		Pn	04 41 30.2	-0.5
AKGG	**Akutan Green G**	**1.51**	**287**		Pn	04 41 30.9	+0.1
AKRB	**Akutan Reef Bi**	**1.54**	**284**		Pn	04 41 31.3	+0.2
UNV	**Unalaska Vale**	**1.77**	**273**		Pn	04 41 34.5	+0.2
HAG	**Hague Volcano**	**1.79**	**31**		Pn	04 41 34.6	-0.1
PS4A	**Pavlof South-4**	**1.83**	**31**		Pn	04 41 35.6	+0.5
PN7A	**Pavlof North-7**	**1.87**	**28**		Pn	04 41 35.7	0.0
MNAT	**Makushin Natee**	**1.88**	**274**		Pn	04 41 35.7	-0.1
MTBL	**Makushin Table**	**1.88**	**277**		Pn	04 41 36.2	+0.3
MSW	**Makushin Switc**	**1.94**	**275**		Pn	04 41 36.4	-0.2
MGUD	**Makushin Gods**	**1.99**	**271**		Pn	04 41 37.2	-0.1
MAPS	**Pakushin South**	**2.03**	**272**		Pn	04 41 37.7	-0.1
S12K	**Black Hills**	**2.09**	**23**		Pn	04 41 38.7	0.0
SDPT	**Sand Point**	**2.36**	**47**		Pn	04 41 41.7	-0.7
SDPT					Sn	04 42 12.8	+1.4
CNBA	**Chernabura Isl**	**2.52**	**64**		Pn	04 41 43.8	-0.9
OKER	**Okmok East Rim**	**2.72**	**265**		Pn	04 41 47.6	+0.2
OKCE	**Okmok Cone E**	**2.79**	**264**		Pn	04 41 48.8	+0.4
NIKH	**Nikolski High**	**3.30**	**258**		Pn	04 41 55.7	+0.5
VNFG	**Fog Glacier, M**	**3.38**	**41**		Pn	04 41 56.6	+0.1
CHGN	**Chignik**	**3.87**	**47**	Pn	Pn	04 42 02.2	-0.8
CHGN				IAML		04 42 37.0	
	comp=E,58nm,0.1s						
CHGN				IAML		04 43 04.2	
	comp=N,60nm,0.9s						
SPIA	**Saint Paul Isl**	**5.11**	**314**		Pn	04 42 20.5	+0.4
P16K	**Nushagak River**	**6.08**	**28**		Pn	04 42 35.4	+1.9

NOU 06 04:44:59.4, 16°.21S×167°.56E, h13km, MLv4.6/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.62**	**158**	P	Pn	04 45 27.5	-0.2
RTV	**Rentapao**	**1.78**	**152**	P	Pn	04 45 29.5	-0.4
KOUNC	**Koumac, New Ca**	**5.32**	**215**	P	Pn	04 46 18.3	-0.3
YATNC	**Mamie plateau,**	**5.85**	**186**	P	Pn	04 46 24.5	-1.4
DZM	**Mont Dzumac**	**5.92**	**190**	P	Pn	04 46 25.3	-1.7
NOUC	**Port Laguerre**	**5.98**	**191**	P	Pn	04 46 27.9	+0.3
ONTNC	**Ouen Toro**	**6.16**	**190**	P	Pn	04 46 29.5	-0.6
OUENC	**Ouen Island, N**	**6.21**	**186**	P	Pn	04 46 30.5	-0.4

*ECX **06** 04:53:21.0±0.4, 32°.46N×115°.25W, h20km±2km, MD2.4, ML2.5*
*MEX **06** 04:53:21.9±0.5, 32°.66N×115°.11W, h12km±3km, MD3.7*
ISC 06 04:53:22.0±1.0, 32°.53N±0°.04×115°.28W±0°.04, h24km±6km, n19, σ0s55/28, 9C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.12**	**191**	*e*P	**Pb**	**04 53 26.0**	**-0.8**
CPBX				*e*S	**Sb**	**04 53 29.2**	**-0.7**
CPBX				IAML		04 53 30.4	
	comp=E,2μm,0.2s						
CPBX				⇑*e*		04 53 30.4	
CPBX				⇑*e*		04 53 30.6	
CPBX				IAML		04 53 30.6	
	comp=N,2μm,0.5s						
CTLX	**Tlaxcala, TLX**	**0.13**	**118**	⇑*e*P	**Pb**	**04 53 27.0**	**+0.2**
CTLX				*e*S	**Sb**	**04 53 30.9**	**+0.9**
CTLX				IAML		04 53 32.9	
	comp=N,2μm,0.2s						
MBIG	**Mexicali**	**0.14**	**152**	*i* P	**Pb**	**04 53 26.6**	**-0.4**
MBIG				*i* S	**Sb**	**04 53 30.7**	**+0.4**
DREC	**Desert Rsrch C**	**0.31**	**332**	*e*P	**Pn**	**04 53 30.0**	**-1.0**
DREC				*e*S	**Sn**	**04 53 36.3**	**-0.5**
EMSC	**East Mesa**	**0.32**	**50**	*e*P	**Pb**	**04 53 29.6**	**+0.2**
COA	**Coachella**	**0.35**	**22**	⇓*i*P	**Pb**	**04 53 30.3**	**+0.4**
SGL	**Mount Signal**	**0.39**	**287**	⇑*i*P	**Pb**	**04 53 30.6**	**+0.1**
WESC	**Westside Schoo**	**0.44**	**301**	⇑*i*P	**Pb**	**04 53 31.8**	**+0.5**
COK2	**Cook Ranch 2**	**0.49**	**310**	⇓*i*P	**Pb**	**04 53 32.6**	**+0.5**
YUH2	**Yuha Desert**	**0.56**	**282**	⇑*i*P	**Pb**	**04 53 33.2**	**0.0**
YUH2				*e*S	**Sb**	**04 53 41.7**	**+0.9**
SWSC	**Sam W. Stewart**	**0.60**	**313**	*e*P	**Pb**	**04 53 33.8**	**-0.1**
YMD	**Yuma Desert**	**0.62**	**88**	⇑*e*P	**Pb**	**04 53 33.6**	**-0.7**
RMX	**La Rumorosa**	**0.68**	**276**	⇑*i*P	**Pb**	**04 53 34.8**	**-0.5**
RMX				*e*S	**Sb**	**04 53 43.5**	**-0.9**
RMX				⇓*e*		04 53 44.5	
RMX				IAML		04 53 44.5	
	comp=N,226nm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.71**	**280**	⇑*i*P	**Pb**	**04 53 35.9**	**0.0**
ECBX	**El Chinero**	**1.07**	**170**	*e*P	**Pn**	**04 53 42.0**	**+0.4**
ECBX				*e*S	**Sb**	**04 53 55.7**	**+0.1**
TJIG	**Tijuana**	**1.18**	**266**	*e*P	**Pn**	**04 53 43.0**	**-0.1**
TJIG				*e*S	**Sn**	**04 53 58.9**	**+0.4**
BAR	**Barrett**	**1.19**	**277**	*e*P	**Pn**	**04 53 43.1**	**-0.1**
CBX	**Cerro Bola**	**1.19**	**260**	*e*P	**Pn**	**04 53 43.8**	**+0.5**
SPIG	**San Pedro Mart**	**1.49**	**186**	*e*P	**Pn**	**04 53 47.7**	**+0.1**
SPIG				*e*S	**Sn**	**04 54 06.7**	**+0.2**

*SOME **06** 05:05:10.2, 40°.60N×77°.35E, h10km*
*KRNET **06** 05:05:10.8±0.1, 40°.75N×77°.63E, mb2.7*
*NNC **06** 05:05:17.8±2.2, 40°.89N×77°.38E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=17.6km s-min=12.6km az=164.0*
ISC 06 05:05:15.0±2.3, 40.7N±0°.1×77.5E±0°.05, h13km±14km, n33, σ2s06/54, 7C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.87**	**329**	⇓*i*P	**Pn**	**05 05 44.8**	**-2.1**
	baz=26						
ULHL				⇓*i*S	**Sn**	**05 06 09.6**	**-0.9**
	baz=26						
PRZ	**Przheval'sk**	**1.94**	**19**	⇓*i*P	**Pn**	**05 05 45.2**	**-2.6**
	baz=18

CHKK					Lg	Lg	05 06 53.3		
	28nm,0.3s								
KUU	**Kurty**	**3.36**	**345**	*eP*		**Pb**	**05 06 11.9**	**-2.5**	
	2.4nm,0.3s								
KUU				*eS*		**Sb**	**05 06 56.1**	**+0.9**	
	7.8nm,1.2s								
ARXS	**Arharly**	**3.56**	**3**	*eP*		**Pb**	**05 06 15.4**	**-2.6**	
	6.1nm,1.0s								
ARXS				*eS*		**Sb**	**05 07 01.4**	**+0.3**	
	27nm,0.8s								
MRKS	**Merke**	**3.85**	**304**	*eP*		**Pb**	**05 06 21.2**	**-1.6**	
	2.2nm,0.5s								
MRKS				*eS*		**Sb**	**05 07 12.0**	**+2.7**	
	2.6nm,0.2s								
MRKS	**Merke**	**3.85**	**304**	Pg		**Pb**	**05 06 23.8**	**+1.0**	
	3.4nm,0.4s								
DJR	**Jarkent**	**4.03**	**24**	*eP*		**Pb**	**05 06 25.7**	**-0.2**	
	1.6nm,0.1s								
DJR				*eS*		**Sb**	**05 07 19.8**	**+5.1**	
	10nm,0.4s								
DJR	**Jarkent**	**4.03**	**24**	Pg		**Pb**	**05 06 25.7**	**-0.2**	
	1.6nm,0.1s								
DJR				Lg		Lg	05 07 19.8		
	10nm,0.4s								
BTLS	**Baital**	**5.08**	**331**	*eP*		**Pb**	**05 06 42.5**	**-1.2**	
	1.4nm,1.0s								
BTLS				*eS*		**Sb**	**05 07 48.7**	**+4.0**	
	4.2nm,2.6s								
BTLS	**Baital**	**5.08**	**331**	Lg		Lg	05 07 48.7		
	4.2nm,0.7s								

NEIC ***06*** *05:13:12.5±1.5,40.°61N±0.°03×125.°40W±0.°05,h10km±2km, Error ellipse: s-maj=6.2km s-min=5.5km az=258.0*
NCEDC ***06*** *05:13:14.9±1.9,40.°67N±0.°03×125.°34W±0.°08,h18km±7km, ML3.2/22,ML3.1/58(NEIC),Error ellipse: s-maj=9.2km s-min=2.4km az=65.0*
ANF ***06*** *05:13:19.2±1.8,41.°00N×125.°17W,h20km,ML3.1/8,Error ellipse: s-maj=18.5km s-min=15.3km az=19.0*

ISC 06 05:13:11.2±2.2,40.64N±0.04×125.46W±0.09,
h11km±13km,n86,σ1°55/86,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.87**	**101**				**Pn**	**05 13 29.5**	**+0.2**
KCTM							**Sb**	**05 13 40.8**	**+0.8**
FER	**Ferndale**	**0.91**	**94**				**Pg**	**05 13 27.4**	**-1.4**
KMPM	**Mount Pierce**	**1.04**	**102**				**Pb**	**05 13 31.8**	**+0.5**
KSMM	**Slide Mountain**	**1.08**	**114**				**Pg**	**05 13 31.9**	**-0.1**
JCC	**Jacoby Creek,**	**1.10**	**80**				**Pg**	**05 13 31.8**	**-0.6**
JCC					IAML			05 13 45.4	
	comp=N,457nm,0.5s								
KRPM	**Rodgers**	**1.21**	**64**				**Pb**	**05 13 33.4**	**-0.6**
KRPM	**Rodgers**	**1.21**	**64**		IAML			05 13 48.4	
	comp=N,437nm,0.6s								
KRPM					IAML			05 14 01.5	
	comp=E,269nm,1.1s								
KCRM	**Chalk Rock**	**1.27**	**99**				**Pn**	**05 13 35.1**	**+0.2**
KHMM	**Horse Mountain**	**1.33**	**79**				**Pn**	**05 13 35.5**	**-0.3**
KHMM	**Horse Mountain**	**1.33**	**79**		IAML			05 13 52.2	
	comp=N,382nm,0.5s								
KHMM					IAML			05 13 52.3	
	comp=E,462nm,0.5s								
KMRM	**Mail Ridge**	**1.40**	**107**				**Pn**	**05 13 37.3**	**+0.6**
KPPM	**Pickett Peak**	**1.63**	**100**				**Pn**	**05 13 40.4**	**+0.5**
KOMM	**Orleans Mounta**	**1.65**	**67**				**Pn**	**05 13 39.9**	**-0.2**
KSXB	**Camp Six Broad**	**1.68**	**45**				**Pn**	**05 13 40.3**	**-0.3**
KSXB	**Camp Six Broad**	**1.68**	**45**		IAML			05 14 03.5	
	comp=E,129nm,0.5s								
KHBM	**Hayfork Bally**	**1.70**	**89**				**Pn**	**05 13 40.9**	**-0.1**
KCPM	**Cahto Peak**	**1.73**	**123**				**Pn**	**05 13 41.6**	**+0.4**
KIPM	**Iron Peak**	**1.73**	**118**				**Pn**	**05 13 41.7**	**+0.4**
KBO	**Bosley Butte**	**1.82**	**30**				**Pn**	**05 13 42.8**	**+0.3**
KBO	**Bosley Butte**	**1.82**	**30**		IAML			05 14 03.3	
	comp=N,168nm,0.3s								
KBO					IAML			05 14 03.8	
	comp=E,247nm,0.3s								
KFPM	**Farley Peak**	**1.85**	**122**				**Pn**	**05 13 43.3**	**+0.4**
KBNM	**Bluenose Ridge**	**1.89**	**113**				**Pn**	**05 13 44.2**	**+0.8**
GTC	**Three Chop Rid**	**1.92**	**130**				**Pn**	**05 13 43.8**	**+0.1**
LBPM	**Beegum Peak**	**1.99**	**98**				**Pn**	**05 13 45.2**	**+0.3**
GNAM	**Navarro Ridge**	**2.01**	**135**				**Pn**	**05 13 45.1**	**0.0**
LGPM	**Granite Peak**	**2.02**	**81**				**Pn**	**05 13 45.1**	**-0.1**
KTRM	**Thompson Ridge**	**2.02**	**50**				**Pn**	**05 13 45.3**	**0.0**
L02F	**Cave Junction**	**2.05**	**43**	P			**Pn**	**05 13 45.8**	**+0.2**
	baz=223								
L02F				S			**Sn**	**05 14 08.4**	**-2.8**
	baz=223								
LBKM	**Bonanza King**	**2.16**	**77**				**Pn**	**05 13 47.3**	**0.0**
GHOM	**Hamilton Openi**	**2.17**	**137**				**Pn**	**05 13 47.8**	**+0.5**
GWRM	**Wonder Ranch**	**2.19**	**130**				**Pn**	**05 13 47.9**	**+0.3**
GROM	**Round Mountain**	**2.25**	**108**				**Pn**	**05 13 49.4**	**+0.9**
GVV	**Valley View**	**2.30**	**111**				**Pn**	**05 13 50.0**	**+0.8**
GASB	**Alder Springs**	**2.32**	**114**				**Pn**	**05 13 50.0**	**+0.6**
GGUM	**Gualala**	**2.34**	**139**				**Pn**	**05 13 48.8**	**-0.7**
YBH	**Yreka Blue Hor**	**2.34**	**61**				**Pn**	**05 13 50.1**	**+0.4**
LCSM	**College of the**	**2.44**	**71**				**Pn**	**05 13 53.5**	**+2.4**
K02D	**Willamette Mer**	**2.45**	**33**	P			**Pn**	**05 13 52.1**	**+0.9**
	baz=212,SNR=59								
K02D				S			**Sn**	**05 14 18.0**	**-3.2**
	baz=212								
GHLM	**Highland Sprin**	**2.47**	**130**				**Pn**	**05 13 51.7**	**+0.3**
HOPS	**Hopland Field**	**2.47**	**131**				**Pn**	**05 13 51.6**	**+0.3**
HOPS	**Hopland Field**	**2.47**	**131**		IAML			05 14 48.9	
	comp=N,54nm,2.2s								
GCK	**Clark Valley**	**2.56**	**114**				**Pn**	**05 13 54.4**	**+1.8**
GTSM	**Trough Springs**	**2.56**	**120**				**Pn**	**05 13 53.5**	**+0.7**
B04O	**Montague**	**2.58**	**62**				**Pn**	**05 13 53.8**	**+0.9**
LTCM	**Tuscan Springs**	**2.58**	**99**				**Pn**	**05 13 53.6**	**+0.7**
M03C	**McCloud**	**2.60**	**75**				**Pn**	**05 13 54.2**	**+0.9**
LMPM	**Military Pass**	**2.63**	**70**				**Pn**	**05 13 55.5**	**+1.8**
LHEM	**Herd Peak**	**2.64**	**67**				**Pn**	**05 13 55.2**	**+1.3**
GCVM	**Cloverdale**	**2.66**	**134**				**Pn**	**05 13 55.0**	**+1.1**
GSSM	**Skaggs Springs**	**2.70**	**135**				**Pn**	**05 13 55.2**	**+0.6**
HUMO	**Hull Mountain**	**2.72**	**43**				**Pn**	**05 13 56.1**	**+1.4**
FTR	**Fort Ross**	**2.76**	**139**				**Pn**	**05 13 56.3**	**+0.9**
J01E	**Myrtle Point**	**2.77**	**24**	P			**Pn**	**05 13 56.2**	**+0.8**
	baz=203,SNR=16								
J01E				S			**Sn**	**05 14 26.1**	**-2.7**
	baz=203								
L04D	**Klamath Falls**	**2.85**	**55**				**Pn**	**05 13 58.5**	**+1.9**
L04D					IAML			05 14 33.0	
	comp=E,73nm,0.7s								
L04D	**Klamath Falls**	**2.85**	**55**	P			**Pn**	**05 13 58.7**	**+2.0**
	baz=237,SNR=130								
L04D				Sb			**Sn**	**05 14 32.0**	**+1.0**
	baz=237								
LGMM	**Garner Mountai**	**2.90**	**70**				**Pn**	**05 14 00.4**	**+3.0**
LRDM	**Redding Peak**	**3.05**	**92**				**Pn**	**05 14 01.3**	**+1.9**
OSUM	**Sutter Buttes**	**3.09**	**115**				**Pn**	**05 14 00.5**	**+0.6**
OGOM	**Van Goodin Ran**	**3.11**	**107**				**Pn**	**05 14 00.4**	**+0.3**
ORV	**Oroville**	**3.22**	**108**				**Pn**	**05 14 02.0**	**+0.3**
ORV					IAML			05 14 40.8	
	comp=N,26nm,0.3s								
ORV					IAML			05 14 41.7	
	comp=E,27nm,0.3s								
K04D	**Chiloquin, OR**	**3.41**	**53**				**Pn**	**05 14 07.0**	**+2.6**
K04D	**Chiloquin, OR**	**3.41**	**53**	P			**Pn**	**05 14 06.8**	**+2.3**
	baz=235,SNR=8.1								
I03D	**Drain, OR**	**3.43**	**26**	P			**Pn**	**05 14 06.5**	**+2.0**
	baz=207,SNR=72								
J04D	**Umpqua Nationa**	**3.60**	**43**				**Pn**	**05 14 09.4**	**+2.3**
J04D	**Umpqua Nationa**	**3.60**	**43**	P			**Pn**	**05 14 09.9**	**+2.7**
	baz=224								
I02E	**Swisshome, OR**	**3.66**	**18**	Pn			**Pn**	**05 14 09.4**	**+1.7**
I02E					IAML			05 15 22.3	
	comp=N,45nm,1.9s								
I02E					IAML			05 15 59.3	
	comp=E,47nm,3.1s								
I02E	**Swisshome, OR**	**3.66**	**18**	S			**Sn**	**05 14 49.3**	**-1.6**
	baz=198								
I04A	**Tendick Farm,**	**3.88**	**35**	P			**Pn**	**05 14 12.9**	**+2.2**
	baz=216,SNR=25								
I04A				S			**Sn**	**05 14 55.3**	**-1.0**
	baz=216								
BEKR	**Beckworth**	**3.98**	**100**				**Pn**	**05 14 13.7**	**+1.4**
BEKR					IAML			05 15 03.0	
	comp=N,31nm,0.6s								
BEKR					IAML			05 15 03.9	
	comp=E,40nm,0.7s								
BUCK	**Buck Mountain**	**4.00**	**26**	Pn			**Pn**	**05 14 14.4**	**+2.0**
K05A	**Summer Lake**	**4.00**	**57**	Pn			**Pn**	**05 14 14.1**	**+1.5**
K05A					IAML			05 15 39.0	
	comp=N,17nm,3.9s								
K05A					IAML			05 16 32.5	
	comp=E,18nm,3.9s								
MOD	**Modoc Plateau**	**4.08**	**70**				**Pn**	**05 14 15.3**	**+1.6**
J05D	**Fort Rock, OR**	**4.11**	**49**	P			**Pn**	**05 14 16.3**	**+2.2**
	baz=231,SNR=16								
TNK	**Tinkers Knob**	**4.24**	**107**				**Pn**	**05 14 19.1**	**+3.1**
H04D	**Lebanon**	**4.37**	**26**				**Pn**	**05 14 20.1**	**+2.6**
H04D					IAML			05 16 57.7	
	comp=N,29nm,3.8s								
H04D	**Lebanon**	**4.37**	**26**	P			**Pn**	**05 14 19.9**	**+2.5**
	baz=207,SNR=6.7								
MPK	**Martis Peak**	**4.38**	**106**	Pn			**Pn**	**05 14 19.3**	**+1.4**
MPK					IAML			05 15 11.3	
	comp=N,25nm,0.8s								
PINE	**Pine Mountain**	**4.60**	**45**	Pn			**Pn**	**05 14 23.6**	**+2.7**
PINE					IAML			05 15 06.0	
	comp=N,16nm,4.2s								
PINE					IAML			05 16 23.9	
	comp=E,16nm,4.1s								
VCNR	**Virginia City**	**4.66**	**105**				**Pn**	**05 14 23.7**	**+2.0**
VCNR					IAML			05 15 22.1	
	comp=N,13nm,0.7s								
VCNR					IAML			05 15 22.4	
	comp=E,12nm,0.8s								
H04A	**Detroit Lake**	**4.71**	**30**	Pn			**Pn**	**05 14 24.1**	**+2.0**
H04A					IAML			05 15 33.1	
	comp=E,14nm,3.6s								
H04A					IAML			05 15 33.2	
	comp=N,18nm,3.0s								
CMB	**Columbia Colle**	**4.71**	**122**				**Pn**	**05 14 23.8**	**+1.6**
PAHR	**Pah Rah Range**	**4.75**	**99**				**Pn**	**05 14 23.7**	**+0.9**
PNTR	**Pine Nut**	**4.77**	**107**	Pn			**Pn**	**05 14 25.8**	**+2.6**
PNTR					IAML			05 15 35.0	
	comp=N,19nm,1.1s								
PNTR					IAML			05 15 40.5	
	comp=E,19nm,0.9s								
SCKWR	**San Luis Creek**	**4.86**	**134**				Pn	05 14 19.4	-4.8
J08A	**Circle Bar Ran**	**5.87**	**60**				**Pn**	**05 14 40.2**	**+2.0**
LHV	**Little Huntoon**	**5.89**	**112**				**Pn**	**05 14 41.3**	**+3.1**

DDA ***06*** *05:16:49.1±0.0,40.°78N×22.°45E,h5km±3km,MW4.1*
SKO ***06*** *05:16:59.2,40.°53N×23.°43E,h24km*
IDC ***06*** *05:16:60.0±0.9,40.°57N×23.°31E,h0km,mb4.0/15, mbtmp4.0/19,ML3.7/5,MS3.5/10,Error ellipse: s-maj=14.7km s-min=13.5km az=32.0*
SOF ***06*** *05:16:59.3,40.°56N×23.°39E,h6km,MD4.3*
MOS ***06*** *05:17:01.6±0.9,40.°66N×23.°40E,h18km,mb4.3/11,Error ellipse: s-maj=5.1km s-min=3.0km az=82.9*
ATH ***06*** *05:17:01.9,40.°64N×23.°35E,h14km±1km,ML4.0/10,Error ellipse: s-maj=1.9km s-min=0.7km az=322.0*
BEO ***06*** *05:17:01.8±0.5,40.°62N×23.°37E,h8km±2km,ML4.1/22*
PDG ***06*** *05:17:01.8±0.5,40.°66N×23.°36E,h14km,ML3.6/14,Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
ISK ***06*** *05:17:01.4,40.°64N×23.°35E,h14km,ML4.1/56*
THE ***06*** *05:17:02.1,40.°63N×23.°37E,h7km,ML3.8/9,Error ellipse: s-maj=0.8km s-min=0.3km az=357.0*
NEIC ***06*** *05:17:02.4±1.8,40.°65N±0.°05×23.°41E±0.°03,h10km±6km, mb4.2/12,ML4.0(ATH),Error ellipse: s-maj=7.6km s-min=3.1km az=172.0*
PRU ***06*** *05:17:10.7±0.0,41.°28N×23.°15E,h0km,M4.0*

ISC 06 05:17:02.2±0.7,40.64N±0.02×23.37E±0.01,h13km±4km,
n432,σ1°9.14/505,mb4.1/25,MS3.5/11,44C-20D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOH	**Sokhos**	**0.19**	**357**	P			**Pg**	**05 17 06.4**	**+0.1**
SOH				S			**Sg**	**05 17 09.0**	**-0.3**
	80µm,0.5s								
SOH	**Sokhos**	**0.19**	**357**	P			**Pg**	**05 17 06.5**	**+0.1**
SOH				S			**Sg**	**05 17 09.9**	**+0.6**
SOH	**Sokhos**	**0.19**	**357**	↑	*i*	Pg	**Pg**	**05 17 06.5**	**+0.1**
SOH					*i*	Sg	**Sg**	**05 17 09.9**	**+0.6**
SOH	**Sokhos**	**0.19**	**357**	P			**Pg**	**05 17 06.5**	**+0.1**
SOH				S			**Sg**	**05 17 09.2**	**-0.2**
SOH				AML		AML		05 17 10.3	
SOH				AML		AML		05 17 10.5	
HORT	**Hortiatis**	**0.21**	**259**	P			**Pg**	**05 17 06.5**	**-0.2**
HORT				S			**Sg**	**05 17 09.8**	**-0.1**
	31µm,0.4s								
HORT	**Hortiatis**	**0.21**	**259**	PG			**Pg**	**05 17 06.5**	**-0.2**
HORT				SG			**Sg**	**05 17 09.5**	**-0.4**
HORT	**Hortiatis**	**0.21**	**259**	P			**Pg**	**05 17 06.6**	**-0.2**
HORT				S			**Sg**	**05 17 09.1**	**-0.8**
THE	**Thessaloniki**	**0.30**	**269**	P			**Pg**	**05 17 07.9**	**-0.6**
THE				S			**Sg**	**05 17 12.8**	**+0.2**
	9µm,0.5s								
THE	**Thessaloniki**	**0.30**	**269**	*i*	P		**Pg**	**05 17 07.8**	**-0.6**
THE				*i*	S		**Sg**	**05 17 11.7**	**-0.9**
THE	**Thessaloniki**	**0.30**	**269**	↓	*i*	Pg	**Pg**	**05 17 07.8**	**-0.6**
THE					*i*	Sg	**Sg**	**05 17 11.7**	**-0.9**
THE	**Thessaloniki**	**0.30**	**269**	P			**Pg**	**05 17 07.8**	**-0.6**
THE				S			**Sg**	**05 17 11.5**	**-1.1**
THE				AML		AML		05 17 16.2	
	comp=N,20120µm,0.6s								
THE				AML		AML		05 17 16.9	
	comp=E,17802µm,0.4s								
SRS	**Serrai**	**0.51**	**20**	P			**Pg**	**05 17 11.5**	**-0.7**
SRS				S			**Sg**	**05 17 19.4**	**+0.4**
	comp=E,18µm,0.4s								
SRS	**Serrai**	**0.51**	**20**	P			**Pg**	**05 17 11.5**	**-0.7**
SRS				S			**Sg**	**05 17 19.4**	**+0.4**
SRS	**Serrai**	**0.51**	**20**	*e*	Pg		**Pg**	**05 17 11.4**	**-0.7**
SRS				*e*	Sg		**Sg**	**05 17 19.6**	**+0.6**
SRS	**Serrai**	**0.51**	**20**	*i*	Pg		**Pg**	**05 17 11.6**	**-0.6**
SRS				*i*	Sg		**Sg**	**05 17 19.6**	**+0.6**
SRS	**Serrai**	**0.51**	**20**	P			**Pg**	**05 17 11.5**	**-0.7**
SRS				S			**Sg**	**05 17 19.5**	**+0.4**
SRS				AML		AML		05 17 25.2	
	comp=E,30161µm,0.7s								
SRS				AML		AML		05 17 26.5	
	comp=N,36015µm,0.3s								
KOKK	**Kokkinochori,**	**0.52**	**69**	P			**Pg**	**05 17 12.0**	**-0.3**
KOKK				S			**Sb**	**05 17 19.8**	**-0.7**
	comp=N,8µm,0.3s								
KOKK	**Kokkinochori,**	**0.52**	**69**	P			**Pg**	**05 17 12.1**	**-0.1**
KOKK				S			**Sg**	**05 17 19.2**	**+0.1**
KNT	**Kendrikon**	**0.63**	**326**	P			**Pg**	**05 17 13.9**	**-0.6**
KNT				S			**Sg**	**05 17 22.9**	**0.0**
	comp=N,8µm,0.2s								
KNT	**Kendrikon**	**0.63**	**326**	PG			**Pg**	**05 17 13.9**	**-0.6**
KNT				SG			**Sg**	**05 17 23.0**	**0.0**
KNT	**Kendrikon**	**0.63**	**326**	P			**Pg**	**05 17 13.9**	**-0.6**
KNT				S			**Sg**	**05 17 22.9**	**0.0**
KNT	**Kendrikon**	**0.63**	**326**	*i*	Pg		**Pg**	**05 17 13.9**	**-0.6**
KNT				*i*	Sg		**Sg**	**05 17 22.8**	**0.0**
KNT	**Kendrikon**	**0.63**	**326**	P			**Pg**	**05 17 13.9**	**-0.6**
KNT				S			**Sg**	**05 17 22.3**	**-0.6**
PAIG	**Paliouri**	**0.75**	**161**	P			**Pg**	**05 17 15.8**	**-0.8**
PAIG				S			**Sg**	**05 17 26.5**	**0.0**
	comp=N,10µm,0.7s								
PAIG	**Paliouri**	**0.75**	**161**	P			**Pg**	**05 17 15.8**	**-0.8**
PAIG				S			**Sg**	**05 17 26.5**	**0.0**
PAIG	**Paliouri**	**0.75**	**161**	P			**Pg**	**05 17 15.9**	**-0.8**
PAIG				S			**Sg**	**05 17 26.2**	**-0.2**
PAIG				AML		AML		05 17 29.8	
	comp=E,19215µm,0.6s								
PAIG				AML		AML		05 17 31.4	
	comp=N,20870µm,0.9s								
GRG	**Griva**	**0.80**	**294**	P			**Pg**	**05 17 17.4**	**-0.3**
GRG				S			**Sg**	**05 17 28.3**	**+0.2**
	comp=N,6µm,0.5s								
GRG	**Griva**	**0.80**	**294**	PG			**Pg**	**05 17 17.3**	**-0.3**
GRG	**Griva**	**0.80**	**294**	*i*	P		**Pg**	**05 17 17.3**	**-0.3**
GRG				*i*	S		**Sg**	**05 17 28.3**	**+0.2**
GRG	**Griva**	**0.80**	**294**	*i*	Pg		**Pg**	**05 17 17.3**	**-0.3**
GRG				*i*	Sg		**Sg**	**05 17 28.4**	**+0.2**
GRG	**Griva**	**0.80**	**294**	P			**Pg**	**05 17 16.9**	**-0.7**
GRG				S			**Sg**	**05 17 28.4**	**+0.2**
GRG				AML		AML		05 17 32.7	
	comp=E,10723µm,0.3s								
GRG				AML		AML		05 17 33.0	
	comp=N,15567µm,0.6s								
NVR	**Nevrokopi**	**0.81**	**28**	P			**Pg**	**05 17 17.1**	**-0.7**
NVR				S			**Sb**	**05 17 29.4**	**+0.4**
	comp=N,16µm,0.3s								
NVR	**Nevrokopi**	**0.81**	**28**	P			**Pg**	**05 17 17.0**	**-0.7**
NVR				S			**Sg**	**05 17 28.0**	**-0.3**
NVR				AML		AML		05 17 30.1	
	comp=E,33387µm,0.3s								
NVR				AML		AML		05 17 31.1	
	comp=N,31733µm,0.2s								
KVLA	**Kavala**	**0.83**	**68**	P			**Pg**	**05 17 18.0**	**-0.3**
KVLA				S			**Sg**	**05 17 29.3**	**+0.2**
KVLA				AML		AML		05 17 31.8	
	comp=E,52624µm,0.6s								
KVLA				AML		AML		05 17 31.9	
VAY	**Valandovo**	**0.91**	**319**	*e*	P		**Pg**	**05 17 19.3**	**-0.5**
VAY				*e*	S		**Sg**	**05 17 31.0**	**-0.7**
VAY	**Valandovo**	**0.91**	**319**	*e*	Pg		**Pg**	**05 17 19.3**	**-0.5**
VAY				*e*	Sg		**Sg**	**05 17 31.0**	**-0.7**
VAY	**Valandovo**	**0.91**	**319**	*i*	Sg		**Sb**	**05 17 31.9**	**0.0**
VAY				*e*	Lg		Lg	05 17 32.2	
	comp=N,3µm,0.7s								
VAY	**Valandovo**	**0.91**	**319**	*i*	Pg		**Pg**	**05 17 19.8**	**0.0**
KAVA	**Kavala**	**0.94**	**67**	P			**Pb**	**05 17 20.0**	**-0.4**
KAVA				S			**Sg**	**05 17 32.6**	**-0.1**
MMB	**Musomiste**	**0.99**	**16**	P			**Pb**	**05 17 19.6**	**-1.7**
MMB	**Musomiste**	**0.99**	**16**	*i*	P		**Pb**	**05 17 19.8**	**-1.5**
THAS	**Thassos island**	**1.03**	**91**	P			**Pb**	**05 17 21.3**	**-0.6**
THAS				S			**Sb**	**05 17 35.1**	**-0.3**
THAS				AML		AML		05 17 37.2	
	comp=E,37807µm,0.3s								
THAS				AML		AML		05 17 38.2	
	comp=N,24916µm,0.3s								
LRSO	**Larissa Observ**	**1.22**	**218**	P			**Pn**	**05 17 24.9**	**0.0**
KKB	**Krupnik**	**1.25**	**350**	P			**Pn**	**05 17 24.5**	**-0.9**
KKB	**Krupnik**	**1.25**	**350**	*i*	P		**Pn**	**05 17 24.7**	**-0.7**
KZN	**Kozani**	**1.26**	**255**	P			**Pn**	**05 17 24.9**	**-0.7**
KZN	**Kozani**	**1.26**	**255**	P			**Pn**	**05 17 25.0**	**-0.7**
TYRN	**Tyrnavos**	**1.27**	**224**	P			**Pn**	**05 17 25.4**	**-0.2**
TYRN				S			**Sn**	**05 17 42.3**	**-0.2**
TYRN				AML		AML		05 17 44.4	
	comp=E,9201µm,0.5s								
TYRN				AML		AML		05 17 44.7	
	comp=N,15497µm,0.6s								
XOR	**Xorichti**	**1.27**	**186**	P			**Pn**	**05 17 25.6**	**-0.2**
XOR				S			**Sn**	**05 17 42.9**	**+0.1**
NEO	**Neokhori**	**1.33**	**185**	P			**Pn**	**05 17 26.3**	**-0.2**
NEO				S			**Sb**	**05 17 44.0**	**-0.1**
RZN	**Rozhen**	**1.46**	**44**	P			**Pb**	**05 17 29.0**	**-0.5**
RZN	**Rozhen**	**1.46**	**44**	*i*	P		**Pb**	**05 17 28.9**	**-0.5**
THL	**Klokotos Trika**	**1.49**	**225**	P			**Pn**	**05 17 28.5**	**-0.1**
AOS	**Alonnisos**	**1.52**	**165**	PN			**Pn**	**05 17 29.2**	**+0.2**
AOS				S			**Sb**	**05 17 49.3**	**0.0**
FNA	**Florina**	**1.52**	**276**	PN			**Pn**	**05 17 29.5**	**+0.3**
FNA				S			**Sn**	**05 17 48.1**	**-0.7**
FNA	**Florina**	**1.52**	**276**	Pn			**Pn**	**05 17 29.5**	**+0.3**
FNA	**Florina**	**1.52**	**276**	P			**Pn**	**05 17 29.5**	**+0.3**
FNA	**Florina**	**1.52**	**276**	*e*	Sg		Sn	05 17 29.5	-19
FNA	**Florina**	**1.52**	**276**	*e*	Pg		Pg	05 17 50.0	+19
LIA	**Limnos Island**	**1.57**	**117**	P			**Pn**	**05 17 29.5**	**-0.3**
LIA				S			**Sb**	**05 17 51.1**	**+0.1**
LIA				AML		AML		05 17 55.7	
	comp=E,5412µm,0.6s								
LIA				AML		AML		05 18 00.7	
	comp=N,5317µm,0.8s								
RDO	**Rodhopi**	**1.72**	**72**	PN			**Pn**	**05 17 31.3**	**-0.6**
RDO				SN			**Sn**	**05 17 54.3**	**+0.5**
RDO	**Rodhopi**	**1.72**	**72**				**Pn**	**05 17 31.3**	**-0.6**
RDO	**Rodhopi**	**1.72**	**72**	P			**Pn**	**05 17 31.4**	**-0.6**
PLD	**Plovdiv**	**1.78**	**34**	PN			**Pn**	**05 17 33.5**	**+0.8**
PLD	**Plovdiv**	**1.78**	**34**	P			**Pn**	**05 17 33.4**	**+0.8**
PLD	**Plovdiv**	**1.78**	**34**	*e*	Pn		**Pb**	**05 17 33.8**	**-0.9**
PLD				*e*	Sn		**Sb**	**05 17 56.4**	**-0.5**
PLD	**Plovdiv**	**1.78**	**34**	*i*	Pn		**Pg**	**05 17 35.9**	**-0.4**
PLD	**Plovdiv**	**1.78**	**34**	*i*	P		**Pn**	**05 17 33.6**	**+0.8**
AGG	**Agios Georgios**	**1.80**	**207**	PN			**Pn**	**05 17 31.9**	**-1.1**
AGG	**Agios Georgios**	**1.80**	**207**	Pn			**Pn**	**05 17 33.1**	**+0.2**
AGG	**Agios Georgios**	**1.80**	**207**	P			**Pn**	**05 17 33.1**	**+0.2**
AGG	**Agios Georgios**	**1.80**	**207**	P			**Pn**	**05 17 33.1**	**+0.2**
KDZ	**Kurdzhali**	**1.85**	**56**	PN			**Pn**	**05 17 32.6**	**-1.1**
KDZ	**Kurdzhali**	**1.85**	**56**	P			**Pn**	**05 17 32.7**	**-1.0**
KDZ	**Kurdzhali**	**1.85**	**56**

JMB	**Yambol**	**3.03**	**52**	PN	**Pn**	05 17 50.7	+0.9	**IDI**	**Anoyia**	**5.47**	**167**	⇑P	**Pn**	05 18 25.1	+1.6	MNK				MLR	MLR		
JMB	**Yambol**	**3.03**	**52**	P	**Pn**	05 17 50.7	+0.9	**IDI**	**Anoyia**	**5.47**	**167**	Pn	**Pn**	05 18 26.3	+2.8		comp=N,11nm,14.0s						
JMB	**Yambol**	**3.03**	**52**	*i* P	**Pb**	05 17 55.1	-0.9		comp=Z,4.7nm,0.3s,baz=351,slow=11,SNR=27							MNK				MLR	MLR		
CHOS	**Chios island**	**3.06**	**136**	PN	**Pn**	05 17 51.2	+0.8	**IDI**	**Anoyia**	**5.47**	**167**	PN	**Pn**	05 18 25.4	+1.9		comp=E,18nm,17.0s						
BUHA	**Balikesir, Bur**	**3.06**	**111**	P	**Pn**	05 17 51.1	+0.7	**BORA**	**Eskisehir**	**5.47**	**96**	PN	**Pn**	05 18 25.3	+1.7	MNK				MLR	MLR		
BUHA				S	**Sg**	05 18 37.7	-2.9	**BORA**	**Eskisehir**	**5.47**	**96**		**Pn**	05 18 23.6	0.0		comp=Z,205nm,18.0s						
BUHA				*i* AML	AML	05 18 43.0		**DOPR**	**Dopca**	**5.53**	**15**	⇑P	**Pn**	05 18 25.4	+1.2	**MNK**	**Minsk**	**14.20**	**11**	*i* P	Pn	05 20 14.9	-7.9
	comp=N,273nm,0.5s							**SRCK**	**Saricakaya, Es**	**5.58**	**94**	PN	**Pn**	05 18 25.7	+0.8		comp=E,3.0nm,0.9s						
BUHA				*i* AML	AML	05 18 51.0		**DALY**	**Dalyan (Mula)**	**5.62**	**131**	PN	**Pn**	05 18 27.3	+1.8	MNK				*i* P	Pn	05 20 14.9	-7.9
	comp=N,320nm,0.9s							**TPGR**	**Topolog**	**5.62**	**40**	⇑P	**Pn**	05 18 25.7	+0.2		comp=N,9.0nm,0.9s						
SELS	**Selova**	**3.08**	**328**	*e*Pn	**Pn**	05 17 50.2	-0.4	**SRKY**	**Kupres RS**	**5.73**	**309**	*e*Pn	Pn	05 18 11.2	-16	MNK				*i* P	Pn	05 20 14.9	-7.9
DKL	**Dikili**	**3.14**	**119**	PN	**Pn**	05 17 52.2	+0.8	**CFR**	**Carcaliu**	**5.73**	**36**	⇑P	**Pn**	05 18 27.2	+0.3		comp=Z,10.0nm,0.7s,baz=358						
PVY	**Plav**	**3.22**	**309**	⇑*i* Pn	**Pn**	05 17 53.0	+0.4	**CFR**	**Carcaliu**	**5.73**	**36**	P	**Pn**	05 18 27.3	+0.3	MNK				*i* PP	P	05 20 22.9	-7.4
PVY				*i* Sn	**Sn**	05 18 31.9	+1.1	CFR				pmax	pmax			MNK				*i* PPP	PPP	05 20 30.5	
MRMT	**Marmara Adasi**	**3.22**	**89**	PN	**Pn**	05 17 53.3	+0.8		comp=Z,77nm,0.9s							MNK				*i* S	Sn	05 22 49.5	-11
BOVS	**Bovan**	**3.24**	**338**	⇓P	**Pn**	05 17 52.2	-0.5	**OZUR**		**5.74**	**17**	⇑P	**Pn**	05 18 28.4	+1.4	MNK				*i* SS	**Sn**	**05 23 03.0**	**+2.8**
BOVS	**Bovan**	**3.24**	**338**	*e*Pn	**Pn**	05 17 52.2	-0.5	**PLOR**	**Plostina**	**5.74**	**24**	⇑P	**Pn**	05 18 29.1	+2.0	MNK				*i* SSS	SSS	05 23 15.5	
ZAGS	**Zajecar**	**3.28**	**346**	*e*Pn	**Pn**	05 17 53.1	-0.2	**PLOR**	**Plostina**	**5.74**	**24**	P	**Pn**	05 18 29.1	+2.0	MNK				*i* LQ	LQ	05 24 17.8	
ZAGS				*e*Sn	**Sn**	05 18 33.3	+1.0	**HVAR**	**Hvar**	**5.75**	**298**	*i* P	**Pn**	05 18 27.6	+0.4	MNK				*i* LR	LR	05 25 58.3	
ZEDA	**zmir-Bergama**	**3.31**	**119**	P	**Pn**	05 17 54.9	+1.2	**SIRR**	**Siria**	**5.76**	**348**	⇑P	**Pn**	05 18 27.5	+0.1	MNK				*i* LRM	MLR	05 26 15.6	
ZEDA				S	**Sg**	05 18 49.4	+1.0	**VRI**	**Vrincioaia**	**5.78**	**24**	⇑P	**Pn**	05 18 29.5	+1.9		comp=N,11nm,14.4s						
ZEDA				*i* AML	AML	05 18 58.0		**VRI**	**Vrincioaia**	**5.78**	**24**	PN	**Pn**	05 18 29.3	+1.7	MNK				*i* LRM	MLR	05 26 33.0	
	comp=N,96nm,0.9s							**VRI**	**Vrincioaia**	**5.78**	**24**	P	**Pn**	05 18 28.5	+0.9		comp=E,18nm,16.6s						
ULC	**Ulcinj**	**3.38**	**294**	⇑*i* Pn	**Pn**	05 17 55.6	+1.0	**CUC**	**Castrocucco**	**5.81**	**266**		**Pn**	05 18 29.8	+1.8	MNK				*i* LRM	MLR	05 27 02.7	
ULC				*i* Sn	**Sn**	05 18 36.1	+1.5	**GVD**	**Gavdhos**	**5.81**	**174**	PN	**Pn**	05 18 30.4	+2.3		comp=Z,205nm,18.1s						
URLA	**Izmir**	**3.38**	**131**	PN	**Pn**	05 17 54.2	-0.5	**MGRS**	**Mrkonjic Grad**	**5.98**	**311**	*e*Pn	**Pn**	05 18 30.3	-0.2	**KIV**	**Kislovodsk**	**14.68**	**71**	*e*P	**Pn**	**05 20 29.1**	**-0.5**
BALY	**Balya**	**3.38**	**104**	P	**Pn**	05 17 50.7	-4.0	**FETY**	**Fethiye**	**6.00**	**130**	PN	**Pn**	05 18 32.9	+2.2	KIV				pmax	pmax		
BALY				S	**Sg**	05 18 47.2	-3.5	**TLCR**		**6.06**	**40**	⇑P	**Pn**	05 18 32.7	+1.3		comp=Z,4.0nm,0.9s						
BAIL	**Bailesti**	**3.38**	**360**	⇓P	**Pn**	05 17 54.6	-0.1	**TLCR**		**6.06**	**40**	P	**Pn**	05 18 32.7	+1.3	**PABE**	**Paberze**	**14.88**	**1**	Pn	**Pn**	**05 20 33.5**	**+1.3**
IVA	**Berane**	**3.43**	**312**	⇑*i* Pn	**Pn**	05 17 55.8	+0.4	**SCTR**	**Scanteiesti**	**6.07**	**32**	⇑P	**Pn**	05 18 33.7	+2.1	**VORR**	**Voronezh**	**15.53**	**39**	*e*P	**P**	**05 20 46.2**	**+1.1**
IVA				*i* Sn	**Sn**	05 18 36.9	+1.0	**BLY**	**Banja Luka**	**6.13**	**314**	*e*Pn	**Pn**	05 18 33.9	+1.4	VORR				pmax	pmax		
EDC	**Edincik**	**3.44**	**93**	PN	**Pn**	05 17 56.9	+1.4	**KIJV**	**Kijevo**	**6.16**	**305**	*i* P	**Pn**	05 18 34.7	+1.8		comp=Z,140nm,0.4s						
DRME	**Dracevica, Mon**	**3.50**	**298**	*e*Pn	**Pn**	05 17 58.3	+1.9	**DRGR**		**6.17**	**356**	⇑P	**Pn**	05 18 32.5	-0.6	**OBN**	**Obninsk**	**16.93**	**27**	⇑*e*P	**Pn**	**05 20 55.5**	**-3.1**
DRME	**Dracevica, Mon**	**3.50**	**298**	⇓*i* Pn	**Pn**	05 17 57.2	+0.8	**DRGR**		**6.17**	**356**	P	**Pn**	05 18 33.9	+0.8	OBN				*e*S	**Sn**	**05 24 00.2**	**-6.3**
DRME				*i* Sn	**Sn**	05 18 39.0	+1.2	DRGR				pmax	pmax			OBN				pmax	pmax		
PDG	**Podgorica**	**3.57**	**302**	Pn	**Pn**	05 17 58.3	+1.1		comp=Z,11nm,0.8s								comp=Z,9.0nm,0.5s						
PDG	**Podgorica**	**3.57**	**302**	*e*Pn	**Pn**	05 17 59.0	+1.8	**VLDR**	**Vladesti**	**6.24**	**32**	⇑P	**Pn**	05 18 36.2	+2.2	OBN				MLR	MLR		
TTG	**Podgorica**	**3.57**	**302**	⇓*i* Pn	**Pn**	05 17 57.8	+0.6	**CEL**	**Celeste**	**6.25**	**250**		**Pn**	05 18 34.0	-0.2		comp=Z,165nm,10.0s						
TTG				*i* Sn	**Sn**	05 18 40.9	+1.6	**MORI**	**Morici**	**6.53**	**302**	*i* P	**Pn**	05 18 39.3	+1.3	**CART**	**Cartagena**	**19.14**	**269**	P	**P**	**05 21 24.7**	**-0.3**
BALB	**Balikesir**	**3.60**	**105**	PN	**Pn**	05 17 58.9	+1.2	**MORH**	**Mrgy, Hungar**	**6.55**	**330**	⇑P	**Pn**	05 18 38.0	-0.2	**BELG**	**Belogornoye**	**20.31**	**46**	LR	LR	05 29 47.7	
BALB	**Balikesir**	**3.60**	**105**		**Pn**	05 17 57.6	-0.1	**MORH**	**Mrgy, Hungar**	**6.55**	**330**	*e*Pn	**Pn**	05 18 38.0	-0.2		comp=Z,98nm,19.7s,baz=203,slow=38						
BLCB	**Balcova**	**3.62**	**127**	PN	**Pn**	05 17 59.5	+1.5	**MORH**	**Mrgy, Hungar**	**6.55**	**330**	P	**Pn**	05 18 38.1	-0.1	BELG	**Belogornoye**	**20.31**	**46**	*i* P	**P**	**05 21 37.8**	**+0.1**
ITM	**Ithomi**	**3.63**	**198**	PN	**Pn**	05 17 58.6	+0.5	MORH				S	**Sn**	05 19 51.9	-0.8		comp=Z,5.0nm,0.9s			pmax	pmax		
ITM	**Ithomi**	**3.63**	**198**		**Pn**	05 17 58.9	+1.7	**BIZ**	**Bicaz**	**6.61**	**17**	⇓P	**Pn**	05 18 40.6	+1.7	**HFS**	**Hagfors**	**20.43**	**346**	P	**P**	**05 21 39.2**	**+0.2**
KOME	**Kolasin**	**3.63**	**309**	⇑*i* Pn	**Pn**	05 17 58.5	+0.3	**KOVH**	**Kovagotottos**	**6.66**	**327**	P	**Pn**	05 18 40.2	+0.4		comp=Z,3.9nm,0.7s,baz=171,slow=10,SNR=9.4						
KOME				*i* Sn	**Sn**	05 18 42.4	+1.4	KOVH				S	**Sn**	05 19 55.4	-0.2		comp=Z,3.9nm,0.7s						
SJES	**Sjenica**	**3.64**	**317**	*e*Pn	**Pn**	05 17 59.3	+0.9	**PAOL**	**Paolisi**	**6.68**	**276**		**Pn**	05 18 41.0	+0.9	**HFS**	**Hagfors**	**20.43**	**346**	P	**P**	**05 21 39.2**	**+0.2**
SJES	**Sjenica**	**3.64**	**317**	*e*Pn	**Pn**	05 17 59.5	+1.1	**VASR**	**Vaslui**	**6.81**	**27**	⇓P	**Pn**	05 18 43.0	+1.3	**HFS**	**Hagfors**	**20.43**	**346**	P	**P**	**05 21 39.2**	**+0.2**
SLVT	**Silivri**	**3.72**	**79**	PN	**Pn**	05 17 59.9	+0.6	**DUGI**	**Dugi Otok**	**7.01**	**301**	*i* P	**Pn**	05 18 45.2	+0.7	**FINES**	**FINESS Array B**	**20.90**	**4**	P	**P**	**05 21 42.9**	**-1.1**
RAZG	**Razgrad**	**3.75**	**38**	⇑P	**Pn**	05 18 00.1	+0.4	**PLIT**	**Plitvice**	**7.10**	**309**	*i* P	**Pn**	05 18 47.9	+2.1		comp=Z,5.7nm,0.8s,baz=165,slow=9.5,SNR=18						
BUM	**Brajici-Budva**	**3.75**	**298**	⇓*i* Pn	**Pn**	05 18 00.7	+0.9	**BURAR**	**Bucovina Array**	**7.10**	**10**	⇑P	**Pn**	05 18 46.8	+0.9		comp=Z,5.7nm,0.8s						
BUM				*i* Sn	**Sn**	05 18 44.9	+1.0	**BURAR**	**Bucovina Array**	**7.10**	**10**		**Pn**	05 18 45.8	-0.1	**FINES**	**FINESS Array B**	**20.90**	**4**	P	**P**	**05 21 42.4**	**-1.6**
COPA	**Copaceanca**	**3.75**	**21**	⇑P	**Pn**	05 18 01.2	+1.4	**BURAR**	**Bucovina Array**	**7.10**	**10**	P	**Pn**	05 18 46.8	+0.9	**FINES**	**FINESS Array B**	**20.90**	**4**	*i* P	**P**	**05 21 42.5**	**-1.6**
SCTE	**Santa Cesarea**	**3.78**	**263**	Pn	**Pn**	05 18 00.8	+0.6	**BUR08**	**Bucovina Ar. S**	**7.13**	**10**		**Pn**	05 18 46.3	+0.1	FINES				pmax	pmax		
IVAS	**Ivanjica**	**3.79**	**322**	*e*Pn	**Pn**	05 18 00.2	-0.1	**VIRC**	**Vir**	**7.15**	**303**	*i* P	**Pn**	05 18 47.7	+1.3		comp=Z,6.0nm,0.8s						
GRUS	**Gruza**	**3.80**	**330**	*e*Pn	**Pn**	05 18 00.5	+0.1	**MILM**	**Milestii Mici**	**7.41**	**30**	*e*P	**Pn**	05 18 51.0	+1.0	**NC602**	**NORSAR Array S**	**21.41**	**344**	P	**P**	**05 21 48.2**	**-1.3**
CTYL	**Yalikoy Yolu**	**3.82**	**76**	PN	**Pn**	05 18 01.8	+1.2	MILM				*e*S	Sn	05 20 23.0	+9.0	**NORES**	**NORESS Array B**	**21.41**	**344**	P	**P**	**05 21 50.9**	**+1.4**
KCTX	**Karacabey (Bur**	**3.83**	**94**	PN	**Pn**	05 18 01.4	+0.6	MILM				*e*L	L	05 21 51.0		NORES				pmax	pmax		
CEME	**Cevo**	**3.84**	**301**	⇑*i* Pn	**Pn**	05 18 01.8	+0.7	MILM				LRM	MLR	05 21 53.0			comp=Z,1.0nm,0.5s						
CEME				*i* Sn	**Sn**	05 18 47.4	+1.2		comp=Z,600nm,10.0s							**NB2**	**NORSAR Subarra**	**21.75**	**344**	P	**P**	**05 21 52.0**	**-1.2**
NKY	**Niksic**	**3.93**	**305**	⇓*i* Pn	**Pn**	05 18 03.1	+0.8	**MILM**	**Milestii Mici**	**7.41**	**30**	*e*P	**Pn**	05 18 51.0	+1.0		comp=Z,9.0nm,0.7s,baz=153,slow=11						
NKY				*i* Sn	**Sn**	05 18 49.6	+1.2	MILM				*e*S	Sn	05 20 23.0	+9.0	**NOA**	**NORSAR Array**	**21.75**	**344**	P	**P**	**05 21 52.4**	**-0.9**
NKME	**Niksic**	**3.93**	**304**	⇑*i* Pn	**Pn**	05 18 02.8	+0.5	MILM				MLR	MLR				comp=Z,8.4nm,0.8s,baz=153,slow=10,SNR=33						
NKME				*i* Sn	**Sn**	05 18 49.2	+0.9		comp=Z,500nm,11.0s								comp=Z,8.4nm,0.8s						
CTKS	**Kestenelik-??a**	**3.94**	**80**	PN	**Pn**	05 18 03.6	+1.2	**BEHE**	**Becsehely**	**7.54**	**323**	*e*Pn	**Pn**	05 18 50.5	-1.3	**NOA**	**NORSAR Array B**	**21.75**	**344**	P	**P**	**05 21 52.4**	**-0.9**
APE	**Apeiranthos**	**3.94**	**154**	⇑P	**Pn**	05 18 02.6	+0.1	**PSZ**	**Piszkesteto**	**7.69**	**342**		**Pn**	05 18 54.9	+0.9	**NOA**	**NORSAR Array B**	**21.75**	**344**	P	**P**	**05 21 52.4**	**-0.9**
APE	**Apeiranthos**	**3.94**	**154**	PN	**Pn**	05 18 02.7	+0.2	**PSZ**	**Piszkesteto**	**7.69**	**342**	P	**Pn**	05 18 54.9	+0.9	**KLMR**	**Klimovskoe**	**22.55**	**21**	*e*P	**P**	**05 21 59.5**	**-2.3**
APE	**Apeiranthos**	**3.94**	**154**	*i* P	**Pn**	05 18 02.3	-0.2	**BR131**	**Keskin Array S**	**7.92**	**93**	Pn	**Pn**	05 18 56.4	-0.7	KLMR				pmax	pmax		
KUBS	**Kucevo**	**3.98**	**342**	*e*Pn	**Pn**	05 18 01.5	-1.4	**BR131**	**Keskin Array S**	**7.92**	**93**	*i* P	**Pn**	05 18 56.9	-0.3		comp=Z,14nm,1.4s						
PLE	**Pljevlja**	**4.00**	**314**	⇑*i* Pn	**Pn**	05 18 03.8	+0.4	**BRTR**	**Keskin Array B**	**7.92**	**93**	Pn	**Pn**	05 18 57.6	+0.5	**KLMR**	**Klimovskoe**	**22.55**	**21**	*e*P	**P**	**05 21 59.5**	**-2.3**
PLE				*i* Sn	**Sn**	05 18 51.6	+1.4		comp=Z,0.3nm,0.3s,baz=265,slow=13,SNR=4.5							KLMR				AMP		05 22 10.9	
GOMA	**Golmarmara-Man**	**4.01**	**117**	PN	**Pn**	05 18 05.1	+1.8		comp=Z,0.6nm,0.4s								comp=Z,14nm,1.4s						
SRE	**Strehaia**	**4.03**	**358**	⇑P	**Pn**	05 18 03.7	+0.2	**BRTR**	**Keskin Array B**	**7.92**	**93**	P	**Pn**	05 18 57.7	+0.5	**EKA**	**Eskdalemuir Ar**	**22.86**	**319**	P	**P**	**05 22 04.4**	**-0.6**
HUMR	**Humele**	**4.07**	**17**	⇑P	**Pn**	05 18 06.0	+1.8	**UZH**	**Uzhgorod**	**8.03**	**355**	*e*P	**Pn**	05 18 57.8	-0.7		comp=Z,6.2nm,0.9s,baz=113,slow=11,SNR=12						
DJES	**Djerdap**	**4.08**	**351**	⇑P	**Pn**	05 18 04.1	-0.1	UZH				*e*S	**Sn**	05 20 28.9	-0.2		comp=Z,6.2nm,0.9s						
HCY	**Herceg Novi**	**4.08**	**298**	*e*Pn	**Pn**	05 18 05.9	+1.6	**KMPD**	**K-Podol'skiy**	**8.23**	**15**	P	**Pn**	05 19 02.0	+0.8	**EKA**	**Eskdalemuir Ar**	**22.86**	**319**	P	**P**	**05 22 04.4**	**-0.6**
HCY	**Herceg Novi**	**4.08**	**298**	⇓*i* Pn	**Pn**	05 18 05.3	+1.0	**KOLS**	**Kolonicke sedl**	**8.33**	**355**	*e*P	**Pn**	05 19 02.6	-0.1	**EKA**	**Eskdalemuir Ar**	**22.86**	**319**	P	**P**	**05 22 04.4**	**-0.6**
HCY				*i* Sn	**Sn**	05 18 52.9	+1.0	**KOLS**	**Kolonicke sedl**	**8.33**	**355**	*e*PN	**Pn**	05 19 02.6	-0.1	**ESK**	**Eskdalemuir**	**22.87**	**319**	P	**P**	**05 22 05.4**	**+0.2**
ARMT	**Armutlu**	**4.18**	**89**	PN	**Pn**	05 18 07.4	+1.6	**CRVS**	**Cervenica-Dubn**	**8.38**	**351**	*e*P	**Pn**	05 19 06.4	+3.1	ESK				IAmb	IAmb	05 22 07.8	
TRUS	**Trudelj**	**4.20**	**330**	*e*Pn	**Pn**	05 18 05.8	-0.2	**CRVS**	**Cervenica-Dubn**	**8.38**	**351**	*e*PN	**Pn**	05 19 06.4	+3.1		comp=Z,6.1nm,0.8s						
UPM	**Unac-Piva**	**4.20**	**309**	*e*Pn	**Pn**	05 18 07.7	+1.6	**MORS**	**Morshin**	**8.51**	**2**	P	**Pn**	05 19 08.0	+3.0	**ESK**	**Eskdalemuir**	**22.87**	**319**	P	**P**	**05 22 05.4**	**+0.2**
UPM	**Unac-Piva**	**4.20**	**309**	⇑*i* Pn	**Pn**	05 18 06.6	+0.5	**SOKA**	**Soboth**	**8.54**	**318**	*i* Pn	**Pn**	05 19 06.4	+0.8	ESK				pmax	pmax		
UPM				*i* Sn	**Sn**	05 18 56.0	+0.8		comp=Z,1.6nm,0.3s,SNR=5.3								comp=Z,6.0nm,0.9s						
RUDO	**Rudo**	**4.21**	**316**	*e*Pn	**Pn**	05 18 06.1	0.0	**OBKA**	**Obir**	**8.68**	**315**	*e*Pn	**Pn**	05 19 09.4	+1.9	**KIRV**	**Kirov**	**24.39**	**34**	*ce*P	**P**	**05 22 19.4**	**-0.5**
BRY	**Bratogost**	**4.26**	**304**	*e*Pn	**Pn**	05 18 09.0	+2.1		comp=Z,1.5nm,0.2s							**PRGR**	**Permogore**	**25.00**	**25**	*e*P	**P**	**05 22 24.4**	**-1.0**
BRY	**Bratogost**	**4.26**	**304**	⇓*i* Pn	**Pn**	05 18 08.4	+1.5	**ARSA**	**Arzberg**	**8.70**	**322**	*i* Pn	**Pn**	05 19 08.8	+1.1	PRGR				pmax	pmax		
BRY				*i* Sn	**Sn**	05 18 57.4	+0.8		comp=Z,7.6nm,0.6s								comp=Z,43nm,1.0s						
DIVS	**Divibare**	**4.27**	**325**		**Pn**	05 18 06.5	-0.5	ARSA				*e*Sn	**Sn**	05 20 46.4	+0.8	**AKTO**	**Aktyubinsk**	**25.96**	**56**	P	**P**	**05 22 34.2**	**-0.1**
DIVS	**Divibare**	**4.27**	**325**	*e*Pn	**Pn**	05 18 07.1	+0.1		comp=Z,2.6nm,0.4s								comp=Z,1.7nm,0.8s,baz=266,slow=12,SNR=5.2						
DIVS	**Divibare**	**4.27**	**325**	*e*Pn	**Pn**	05 18 06.9	-0.1	**ZST**	**Bratislava**	**8.78**	**331**	*e*P	**Pn**	05 19 10.2	+1.4	AKTO				LR	LR	05 33 52.0	
TREB	**Trebinje**	**4.29**	**301**	*e*Pn	**Pn**	05 18 09.4	+2.2	**ZST**	**Bratislava**	**8.78**	**331**	*e*PN	**Pn**	05 19 10.2	+1.4		comp=Z,87nm,19.6s,baz=335,slow=39						
HERR	**Herculane**	**4.30**	**351**	⇑P	**Pn**	05 18 06.8	-0.5	**SIM**	**Simferopol'**	**9.00**	**58**	P	**Pn**	05 19 16.5	+4.7		comp=Z,1.7nm,0.8s						
MDVR	**Moldovita**	**4.32**	**344**	⇑P	**Pn**	05 18 07.4	-0.3	SIM				S	**Sn**	05 20 49.5	-3.5	**AKTO**	**Aktyubinsk**	**25.96**	**56**	P	**P**	**05 22 34.2**	**-0.1**
ISK	**Istanbul-Kandi**	**4.34**	**82**	PN	**Pn**	05 18 08.9	+1.1	SIM				pmax	pmax			**ABKAR**	**Akbulak array**	**27.06**	**59**	P	**P**	**05 22 43.9**	**-0.4**
ISK	**Istanbul-Kandi**	**4.34**	**82**	P	**Pn**	05 18 08.9	+1.1		comp=Z,12nm,0.8s							**ABKAR**	**Akbulak array**	**27.06**	**59**	P	**P**	**05 22 44.2**	**-0.1**
KAVV	**Kandilli-Istan**	**4.34**	**82**	PN	**Pn**	05 18 09.1	+1.2	SIM				smax	smax			ABKAR				IAmb	IAmb	05 23 08.9	
KLYT	**Kilyos**	**4.34**	**88**	PN	**Pn**	05 18 09.8	+1.9		comp=E,35µm,1.0s								comp=Z,1.8nm,0.8s						
BBLS	**Lazići**	**4.37**	**319**	*e*Pn	**Pn**	05 18 09.0	+0.7	**KWP**	**Kalwaria Pacla**	**9.01**	**357**		**Pn**	05 19 12.9	+1.0	**ARU**	**Arti**	**27.76**	**43**	*c i* P	**P**	**05 22 48.5**	**-1.9**
BBLS	**Lazići**	**4.37**	**319**	*e*Pn	**Pn**	05 18 08.9	+0.7	**KWP**	**Kalwaria Pacla**	**9.01**	**357**	P	**Pn**	05 19 12.9	+1.0	ARU						05 23 32.7	
DBRK	**Dubrovnik**	**4.41**	**299**	*i* P	**Pn**	05 18 09.3	+0.5	**NIE**	**Niedzica**	**9.04**	**347**	P	**Pn**	05 19 14.0	+1.5	ARU				S	**S**	**05 27 32.2**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**4.42**	**126**	PN	**Pn**	05 18 10.8	+1.7	NIE				pmax	pmax			ARU				pmax	pmax		
MANT	**Manisa**	**4.55**	**116**		**Pn**	05 18 12.4	+1.4		comp=Z,3.0nm,0.8s								comp=Z,7.0nm,1.5s						
YLV	**Yalova**	**4.57**	**89**	PN	**Pn**	05 18 12.7	+1.5	**CONA**	**Conrad Observa**	**9.06**	**326**	*e*Pn	**Pn**	05 19 13.9	+1.2	**ARCES**	**ARCESS Array B**	**28.98**	**2**	P	**P**	**05 23 00.6**	**-0.6**
SIMA	**Simav-Kutahya**	**4.59**	**108**	PN	**Pn**	05 18 12.7	+1.3		comp=Z,2.1nm,0.4s,SNR=5.8								comp=Z,1.7nm,0.8s,baz=183,slow=9.9,SNR=6.4						
KULA	**Kula-Manisa**	**4.61**	**116**	PN	**Pn**	05 18 13.1	+1.5	CONA				*i* Sn	**Sn**	05 20 57.2	+2.7		comp=Z,1.7nm,0.8s						
BODT	**Bodrum**	**4.71**	**138**	PN	**Pn**	05 18 13.3	+0.3		comp=Z,2.8nm,0.5s							**ARCES**	**ARCESS Array B**	**28.98**	**2**	P	**P**	**05 23 00.6**	**-0.6**
MTUR	**Matau**	**4.75**	**15**	⇓P	**Pn**	05 18 14.8	+1.1	**LVV**	**L'vov**	**9.20**	**3**	*e*P	Pn	05 19 26.4	+12	**TORD**	**Torodi Ar. Bea**	**33.33**	**221**	P	**P**	**05 23 40.1**	**+0.2**
GZR	**Gura Zlata**	**4.77**	**355**	⇓P	**Pn**	05 18 13.2	-0.7	LVV				MLR	MLR				comp=Z,1.0nm,0.8s,baz=34,slow=8.9,SNR=26						
GZR	**Gura Zlata**	**4.77**	**355**	P	**Pn**	05 18 13.2	-0.7		comp=Z,300nm,11.0s								comp=Z,1.0nm,0.4s						
SILT	**Sile**	**4.79**	**82**	PN	**Pn**	05 18 15.2	+1.2	**KBA**	**Koelnbreinsper**	**9.68**	**315**	P	**Pn**	05 19 25.5	+4.2	**BRVK**	**Borovoye**	**33.80**	**52**	P	**P**	**05 23 44.2**	**+0.5**
STON	**Ston**	**4.79**	**300**	*e*Pn	**Pn**	05 18 13.9	-0.1	KBA				pmax	pmax			BRVK				IAmb	IAmb	05 23 45.7	
STON	**Ston**	**4.79**	**300**	*i* P	**Pn**	05 18 13.9	-0.1		comp=Z,9.0nm,1.2s								comp=Z,4.1nm,0.8s						
LOT	**Lotru**	**4.82**	**3**	⇓P	**Pn**	05 18 14.4	-0.2	**KBA**	**Koelnbreinsper**	**9.68**	**315**	*i* Pn	**Pn**	05 19 23.5	+2.1	**BRVK**	**Borovoye**	**33.80**	**52**	*ce*P	**P**	**05 23 44.7**	**+1.0**
LOT	**Lotru**	**4.82**	**3**	PN	**Pn**	05 18 15.1	+0.5		comp=Z,2.4nm,0.3s							BRVK				pmax	pmax		
ARR	**Arges**	**4.82**	**11**	⇑P	**Pn**	05 18 14.8	+0.3	**MOA**	**Molln**	**9.72**	**321**	*i* Pn	**Pn**	05 19 23.4	+1.7		comp=Z,4.0nm,0.8s						
TVSB	**Tavsanli**	**4.83**	**102**	PN	**Pn**	05 18 15.9	+1.2		comp=Z,3.1nm,0.7s							**KK31**	**Karatay Array**	**34.84**	**70**	P	**P**	**05 23 53.4**	**+0.6**
TEKS	**Tekeris**	**4.83**	**325**	*e*Pn	**Pn**	05 18 13.8	-0.8	MOA				*e*Sn	**Sn**	05 21 08.3	-2.4	KK31				IAmb	IAmb	05 23 55.5	
TEKS	**Tekeris**	**4.83**	**325**	*e*Pn	**Pn**	05 18 13.9	-0.7		comp=Z,4.8nm,0.6s								comp=Z,2.3nm,0.9s						
ADVT	**Abdulvahap**	**4.86**	**90**	PN	**Pn**	05 18 16.8	+1.8	**ABTA**	**Abfaltersbach**	**9.95**	**311**	*e*Pn	**Pn**	05 19 26.1	+1.2	**KK31**	**Karatay Array**	**34.84**	**70**	P	**P**	**05 23 53.4**	**+0.6**
VOIR		**4.96**	**14**	⇑P	**Pn**	05 18 17.2	+0.8		comp=Z,2.8nm,0.6s							KK31				pmax	pmax		
VOIR		**4.96**	**14**	P	**Pn**	05 18 17.2	+0.8	**GERES**	**GERESS Array B**	**10.70**	**323**	Pn	**Pn**	05 19 35.5	+0.4		comp=Z,2.0nm,0.9s						
ISR	**Istrita**	**5.05**	**26**	P	**Pn**	05 18 19.5	+1.8		comp=Z,1.0nm,0.3s,baz=144,slow=13,SNR=6.0							**KK31**	**Karatay Array**	**34.84**	**70**	P	**P**	**05 23 53.7**	**+0.8**
ISR				pmax	pmax				comp=Z,0.5nm,0.5s							KKAR				IAmb	IAmb	05 23 55.4	
	comp=Z,167nm,0.7s							**GERES**	**GERESS Array B**	**10.70**	**323**	Pn	**Pn**	05 19 35.8	+0.7		comp=Z,2.3nm,0.9s						
MATE	**Matera**	**5.07**	**272**	⇓P	**Pn**	05 18 17.6	-0.2	**GERES**	**GERESS Array B**	**10.70**	**323**	P	**Pn**	05 19 35.8	+0.7	**KK31**	**Karatay Array**	**34.84**	**70**	P	**P**	**05 23 53.7**	**+0.8**
RODP	**Rodopos**	**5.08**	**176**	PN	**Pn**

comp=E,350nm,28.3s
TIXI Tiksi 56.57 21 LR LR 05 56 29.1
comp=E,40nm,18.6s,baz=258,slow=42
SONM Songino Array 57.21 53 P **P 05 26 49.4 +0.4**
comp=E,1.2nm,0.8s,baz=291,slow=9.4,SNR=7.2
comp=E,1.2nm,0.8s
SONM Songino Array 57.21 53 P **P 05 26 48.8 -0.3**
SONM IAmb IAmb 05 26 50.5
comp=Z,2.7nm,1.1s
SONM Songino Array 57.21 53 P **P 05 26 49.4 +0.4**
HHC Hu-ho-hao-te 63.84 58 *e*P **P 05 27 35.0 +0.6**
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,150nm,5.3s
PZH PanZhiHua 64.83 76 P **P 05 27 41.8 +0.7**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,90nm,5.7s
CMAR Chiang Mai Arr 67.41 85 P **P 05 27 57.1 -0.5**
comp=Z,0.8nm,0.3s,baz=304,slow=8.1,SNR=9.5
comp=Z,0.8nm,0.3s
CMAR Chiang Mai Arr 67.41 85 *i* P **P 05 27 57.2 -0.5**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SEY Seymchan 69.04 22 P **P 05 28 08.0 +0.9**
comp=Z,0.6nm,0.4s,baz=40,slow=15,SNR=4.5
comp=Z,0.6nm,0.4s
SEY Seymchan 69.04 22 P **P 05 28 08.0 +0.9**
MA2 Magadan 71.14 25 LR LR 06 04 32.5
comp=Z,25nm,18.1s,baz=290,slow=40
RCBR Riachuelo 71.25 245 LR LR 06 02 36.4
comp=Z,135nm,18.6s,baz=128,slow=38
KSRS Korea Array 76.08 53 P **P 05 28 49.2 -0.3**
comp=Z,1.6nm,0.8s,baz=310,slow=4.2,SNR=5.8
KSRS LR LR 06 03 00.0
comp=Z,14nm,18.7s,baz=300,slow=36
comp=Z,1.6nm,0.8s
KSRS Korea Array 76.08 53 P **P 05 28 49.2 -0.3**
PETK Petropavlovsk- 78.64 26 LR LR 06 07 42.2
comp=Z,30nm,18.2s,baz=40,slow=39
TXAR Lajitas Array 94.82 316 P **P 05 30 23.7 -0.4**
comp=Z,0.4nm,0.7s,baz=128,slow=3.5,SNR=5.1
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 94.82 316 P **P 05 30 23.7 -0.4**

*INET **06** 05:41:11.5±1.1, 12°.55N×87°.80W, h66km±13km, MW3.4*
*SNET **06** 05:41:12.5±0.7, 12°.54N×87°.87W, h60km±13km, ML3.3*
ISC 06 05:41:11.9±1.8, **12°.5N**±0°.1×**87°.84W**±0°.09, **h57**km±33km,
n13, σ0**°58**/20, **3D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.57**	**28**	*e*P	**Pn**	**05 41 23.9**	**-0.7**
CRIN	**San Cristobal**	**0.80**	**73**	*e*P	**Pn**	**05 41 27.4**	**+0.1**
CRIN				*e*S	**Sn**	**05 41 39.9**	**+1.3**
CNCH	**Conchagua**	**0.80**	**0**	*i* P	**Pn**	**05 41 27.0**	**-0.4**
CNCH				*e*S	**Sn**	**05 41 39.4**	**+0.6**
LCND	**La Caada**	**0.84**	**356**	*i* P	**Pn**	**05 41 27.4**	**-0.3**
LCND				*e*S	**Sn**	**05 41 39.6**	**+0.2**
LCND				IAML		05 41 41.3	
	comp=Z,1μm,0.3s						
PACA	**Pacayal**	**1.10**	**335**	*e*P	**Pn**	**05 41 31.3**	**0.0**
PACA				*e*S	**Sn**	**05 41 46.1**	**+0.4**
CNGN	**Cerro Negro**	**1.11**	**88**	*e*P	**Pn**	**05 41 30.5**	**-0.9**
CNGN				*e*S	**Sn**	**05 41 45.6**	**-0.2**
COPN	**Copaltepe**	**1.25**	**103**	*e*P	**Pn**	**05 41 32.4**	**-0.8**
APYN	**Apoyeque**	**1.47**	**99**	*e*P	**Pn**	**05 41 36.8**	**+0.6**
COEG	**Centro de Oper**	**1.53**	**319**	*e*P	**Pn**	**05 41 37.2**	**+0.2**
COEG				*e*S	**Sn**	**05 41 55.7**	**-0.3**
COEG				IAML		05 41 58.6	
	comp=Z,199nm,0.3s						
PAVA	**Las Pavas**	**1.64**	**319**	*e*P	**Pn**	**05 41 38.6**	**+0.1**
LFRS	**El Faro**	**1.66**	**314**	*e*P	**Pn**	**05 41 38.8**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.67**	**19**	*i* P	**Pn**	**05 41 38.9**	**-0.1**
P5NO	**Presa 5 de nov**	**1.76**	**329**	*e*P	**Pn**	**05 41 40.0**	**-0.1**
P5NO				*e*S	**Sn**	**05 42 00.7**	**-0.7**

*IDC **06** 05:49:42.5±2.1, 6°.25S×130°.30E, h148km±21km, mb3.9/4, mbtmp4.4/9, Error ellipse: s-maj=27.3km s-min=17.8km az=102.0*
*NEIC **06** 05:49:42.8±1.9, 6°.20S±0°.07×130°.3E±0°.1, h141km±11km, mb4.4/10, Error ellipse: s-maj=14.5km s-min=10.1km az=79.0*
ISC 06 05:49:41.3±0.6, **6°.19S**±0°.05×**130°.28E**±0°.06, **h124**km, **n41**,
σ1**°89**/44, **mb4.3**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.70**	**347**	P	Pn	05 50 18.4	+7.1
SAUI	**Saumlaki**	**2.05**	**150**		**Pn**	**05 50 15.9**	**+0.3**
SAUI				Sn	**Sn**	**05 50 44.9**	**+3.0**
FAKI	**Fak Fak**	**3.80**	**31**	Pn	**Pn**	**05 50 40.4**	**+2.1**
SIJI	**Sorong**	**5.38**	**11**	P	**Pn**	**05 51 01.6**	**+2.2**
	74nm,0.2s,baz=204,slow=23,SNR=42						
SIJI				S	**Sn**	**05 51 59.6**	**-0.7**
	120nm,0.2s,baz=223,slow=20,SNR=15						
SANI	**Sanana**	**5.93**	**314**	P	**Pn**	**05 51 11.5**	**+4.6**
MTN	**Manton Dam**	**6.67**	**173**	Pn	**Pn**	**05 51 18.5**	**+1.7**
MTN	**Manton Dam**	**6.67**	**173**	P	**Pn**	**05 51 18.8**	**+2.0**
KDU	**Kakadu**	**6.81**	**162**	P	**Pn**	**05 51 20.3**	**+1.6**
SOEI	**Soe**	**6.92**	**239**		**Pn**	**05 51 22.5**	**+2.1**
BATI	**Baumata**	**7.67**	**238**	P	**Pn**	**05 51 32.9**	**+2.6**
	34nm,0.3s,baz=126,slow=2.0,SNR=4.7						
BATI				S	**Sn**	**05 52 56.4**	**+0.7**
	40nm,0.4s,baz=351,slow=23,SNR=5.7						
MMRI	**Maumere**	**8.33**	**253**	Pn	**Pn**	**05 51 42.1**	**+2.8**
KNRA	**Kununurra**	**9.54**	**189**	Pn	**Pn**	**05 51 55.9**	**+0.3**
KNRA	**Kununurra**	**9.54**	**189**	P	**Pn**	**05 51 56.1**	**+0.5**
TOLI2	**Tolitoli**	**11.93**	**307**	Pn	**Pn**	**05 52 29.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**12.67**	**201**	P	**Pn**	**05 52 35.4**	**-1.8**
	5.2nm,0.3s,baz=30,slow=12,SNR=66						
FITZ				S	Sn	05 54 48.9	-8.0
	14nm,0.6s,baz=64,slow=20,SNR=8.9						
FITZ	**Fitzroy Crossi**	**12.67**	**201**	Pn	**Pn**	**05 52 37.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**12.67**	**201**	P	**Pn**	**05 52 36.0**	**-1.2**
WRA	**Warramunga Arr**	**14.23**	**164**	P	**Pn**	**05 52 55.3**	**-2.0**
	2.1nm,0.4s,baz=348,slow=13,SNR=36						
WRA				S	Sn	05 55 25.4	-9.2
	9.6nm,0.9s,baz=344,slow=24,SNR=12						
WRA	**Warramunga Arr**	**14.23**	**164**		**Pn**	**05 52 56.4**	**-0.9**
WB2	**Warramunga Arr**	**14.23**	**164**	Pn	**Pn**	**05 52 57.1**	**-0.2**
COEN	**Coen**	**14.86**	**122**		**P**	**05 53 06.2**	**-1.7**
COEN	**Coen**	**14.86**	**122**	P	**P**	**05 53 09.3**	**+1.4**
MYLDM	**Lahad Datu**	**16.30**	**314**		**Pn**	**05 53 22.2**	**-1.0**
MYLDM				IAmb	IAmb	05 53 27.8	
	comp=Z,28nm,1.3s						
QIS	**Mount Isa**	**16.91**	**149**	P	**Pn**	**05 53 31.4**	**+0.8**
AS31	**Alice Springs**	**17.72**	**169**	P	**Pn**	**05 53 40.4**	**0.0**
ASAR	**Alice Springs**	**17.72**	**169**	P	**Pn**	**05 53 40.2**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=334,slow=9.4,SNR=28						
ASAR				S	**S**	**05 56 50.6**	**-6.8**
	comp=Z,1.6nm,0.5s,baz=352,slow=27,SNR=7.4						
ASAR	**Alice Springs**	**17.72**	**169**	P	**Pn**	**05 53 40.8**	**+0.4**
MBWA	**Marble Bar**	**18.05**	**213**	P	**P**	**05 53 43.6**	**+0.5**
MBWA				IAmb	IAmb	05 53 59.5	
	comp=Z,22nm,1.4s						
PSA00	**Pilbara Seismi**	**18.32**	**212**	P	**P**	**05 53 46.5**	**+0.4**
PSA00				IAmb	IAmb	05 54 23.2	
	comp=Z,31nm,1.5s						
SBUM	**Sibu**	**19.97**	**295**	P	**P**	**05 54 04.1**	**+0.1**
SBUM				IAmb	IAmb	05 54 06.9	
	comp=Z,10nm,0.8s						
KOUNC	**Koumac, New Ca**	**35.93**	**117**	P	**P**	**05 56 31.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**39.43**	**309**	P	**P**	**05 56 58.9**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=135,slow=7.6,SNR=10.0						
	comp=Z,1.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.43**	**309**	P	**P**	**05 56 58.6**	**-0.9**
CHTO	**Chiang Mai**	**39.64**	**309**	P	**P**	**05 57 00.0**	**-1.2**
ULN	**Ulaanbaatar**	**57.58**	**342**	P	**P**	**05 59 17.7**	**-0.6**
ULN				IAmb	IAmb	05 59 18.5	
	comp=Z,3.7nm,0.7s						
SONM	**Songino Array**	**57.77**	**341**	P	**P**	**05 59 18.4**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=151,slow=9.2,SNR=2.8						
	comp=Z,1.3nm,0.6s						
MK31	**Makanchi Array**	**67.70**	**327**	P	**P**	**06 00 24.3**	**-1.0**
MK31				IAmb	IAmb	06 00 25.0	
	comp=Z,3.4nm,0.6s						
MKAR	**Makanchi Array**	**67.70**	**327**	P	**P**	**06 00 24.6**	**-0.7**
	comp=Z,5.4nm,0.4s,baz=113,slow=8.4,SNR=88						
	comp=Z,5.4nm,0.4s						
MKAR	**Makanchi Array**	**67.70**	**327**	P	**P**	**06 00 24.3**	**-1.0**
MAKZ	**Makanchi**	**67.88**	**326**	P	**P**	**06 00 25.6**	**-0.8**
ZALV	**Zalesovo Beam**	**70.98**	**334**	P	**P**	**06 00 43.5**	**-1.8**
	comp=Z,1.8nm,0.6s,baz=138,slow=7.2,SNR=5.2						
	comp=Z,1.8nm,0.6s						

*ATH **06** 06:00:01.6, 40°.65N×23°.37E, h13km±2km, ML2.1/7, Error ellipse: s-maj=2.4km s-min=0.8km az=298.0*
*ISK **06** 06:00:01.6, 40°.68N×23°.34E, h9km, ML2.2/10*
*THE **06** 06:00:01.7, 40°.64N×23°.36E, h12km±1km, ML2.0/8, Error ellipse: s-maj=1.8km s-min=0.4km az=304.0*
*SKO **06** 06:00:02.2, 40°.62N×23°.38E, h0km*
ISC 06 06:00:01.6±0.8, **40°.65N**±0°.02×**23°.37E**±0°.02, **h14**km±6km,
n38, σ0**°45**/67, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOH	**Sokhos**	**0.17**	**356**	P	**Pg**	**06 00 06.0**	**+0.2**
SOH				S	**Sg**	**06 00 08.9**	**+0.3**
	2μm,0.3s						
SOH	**Sokhos**	**0.17**	**356**	*i* Pg	**Pg**	**06 00 06.0**	**+0.2**
SOH				*i* Sg	**Sg**	**06 00 09.1**	**+0.5**
SOH	**Sokhos**	**0.17**	**356**	P	**Pg**	**06 00 06.0**	**+0.2**
SOH				S	**Sg**	**06 00 08.5**	**-0.1**
SOH				AML	AML	06 00 09.2	
	comp=N,8116μm,0.3s						
SOH				AML	AML	06 00 09.3	
	comp=E,8803μm,0.3s						
HORT	**Hortiatis**	**0.21**	**257**	P	**Pg**	**06 00 06.3**	**-0.1**
HORT				S	**Sg**	**06 00 09.1**	**-0.5**
	comp=E,720nm,0.1s						
HORT	**Hortiatis**	**0.21**	**257**	PG	**Pg**	**06 00 06.3**	**-0.1**
HORT				SG	**Sg**	**06 00 09.2**	**-0.4**
HORT	**Hortiatis**	**0.21**	**257**	P	**Pg**	**06 00 06.3**	**-0.1**
HORT				S	**Sg**	**06 00 09.0**	**-0.6**
HORT				AML	AML	06 00 09.3	
	comp=N,1779μm,0.1s						
HORT				AML	AML	06 00 09.7	
	comp=E,1349μm,0.1s						
THE	**Thessaloniki**	**0.31**	**267**	P	**Pg**	**06 00 07.6**	**-0.4**
THE				S	**Sg**	**06 00 12.6**	**+0.3**
	comp=E,245nm,0.1s						
THE	**Thessaloniki**	**0.31**	**267**	*i* Pg	**Pg**	**06 00 07.5**	**-0.4**
THE				*i* Sg	**Sg**	**06 00 11.6**	**-0.7**
THE	**Thessaloniki**	**0.31**	**267**	P	**Pg**	**06 00 07.6**	**-0.4**
THE				S	**Sg**	**06 00 11.4**	**-0.9**
THE				AML	AML	06 00 11.9	
	comp=E,481μm,0.1s						
THE				AML	AML	06 00 14.1	
	comp=N,526μm,0.1s						
SRS	**Serrai**	**0.50**	**20**	P	**Pg**	**06 00 10.9**	**-0.5**
SRS				S	**Sb**	**06 00 18.9**	**-0.5**
	comp=N,170nm,0.1s						
SRS	**Serrai**	**0.50**	**20**	*i* Pg	**Pg**	**06 00 11.1**	**-0.4**
SRS	**Serrai**	**0.50**	**20**	P	**Pg**	**06 00 11.0**	**-0.5**
SRS				S	**Sg**	**06 00 17.8**	**-0.3**
SRS				AML	AML	06 00 20.8	
	comp=E,351μm,0.1s						
SRS				AML	AML	06 00 22.8	
	comp=N,372μm,0.1s						
KOKK	**Kokkinochori,**	**0.51**	**70**	P	**Pg**	**06 00 11.5**	**0.0**
KOKK	**Kokkinochori,**	**0.51**	**70**	P	**Pg**	**06 00 11.6**	**0.0**
KOKK				S	**Sg**	**06 00 18.5**	**+0.1**
KNT	**Kendrikon**	**0.63**	**325**	P	**Pg**	**06 00 13.6**	**-0.3**
KNT				S	**Sb**	**06 00 22.9**	**-0.2**
	comp=N,192nm,0.0s						
KNT	**Kendrikon**	**0.63**	**325**	PG	**Pg**	**06 00 13.7**	**-0.2**
KNT				SG	**Sg**	**06 00 21.8**	**-0.4**
KNT	**Kendrikon**	**0.63**	**325**	*i* Pg	**Pg**	**06 00 13.6**	**-0.3**
KNT				*i* Sg	**Sg**	**06 00 22.1**	**-0.1**
KNT	**Kendrikon**	**0.63**	**325**	P	**Pg**	**06 00 13.6**	**-0.3**
KNT				S	**Sg**	**06 00 21.5**	**-0.7**
PAIG	**Paliouri**	**0.76**	**162**	P	**Pg**	**06 00 15.4**	**-0.8**
PAIG	**Paliouri**	**0.76**	**162**	P	**Pg**	**06 00 15.5**	**-0.8**
PAIG				S	**Sg**	**06 00 26.2**	**0.0**
PAIG				AML	AML	06 00 29.4	
	comp=E,227μm,0.4s						
PAIG				AML	AML	06 00 30.1	
	comp=N,383μm,0.5s						
NVR	**Nevrokopi**	**0.79**	**28**	P	**Pg**	**06 00 16.6**	**-0.4**
NVR				S	**Sb**	**06 00 28.4**	**+0.5**
	comp=N,98nm,0.3s						
NVR	**Nevrokopi**	**0.79**	**28**	P	**Pg**	**06 00 16.5**	**-0.5**
NVR				S	**Sg**	**06 00 27.6**	**+0.1**
NVR				AML	AML	06 00 29.8	
	comp=E,213μm,0.4s						
NVR				AML	AML	06 00 31.1	
	comp=N,205μm,0.2s						
GRG	**Griva**	**0.80**	**293**	PG	**Pg**	**06 00 17.1**	**0.0**
GRG				SG	**Sg**	**06 00 27.8**	**+0.2**
GRG	**Griva**	**0.80**	**293**	*i* Pg	**Pg**	**06 00 17.2**	**0.0**
GRG				*i* Sg	**Sb**	**06 00 28.8**	**+0.8**
KVLA	**Kavala**	**0.82**	**69**	P	**Pb**	**06 00 18.0**	**+0.3**
KVLA				S	**Sb**	**06 00 29.2**	**+0.6**
VAY	**Valandovo**	**0.91**	**318**	*i* Sg	**Sb**	**06 00 31.3**	**+0.3**
VAY				*i* Pg	**Pg**	**06 00 19.5**	**+0.4**
VAY				*e*Lg	Lg	06 00 31.7	
	comp=N,38nm,0.5s						
KAVA	**Kavala**	**0.94**	**68**	P	**Pb**	**06 00 19.5**	**-0.1**
KAVA				S	**Sn**	**06 00 33.6**	**+0.1**
	comp=N,62nm,0.1s						
KAVA	**Kavala**	**0.94**	**68**	P	**Pb**	**06 00 19.5**	**-0.1**
KAVA				S	**Sb**	**06 00 31.8**	**-0.1**
THAS	**Thassos island**	**1.03**	**92**	P	**Pg**	**06 00 21.4**	**0.0**
THAS				S	**Sn**	**06 00 35.7**	**-0.1**
	comp=N,102nm,0.2s						
THAS	**Thassos island**	**1.03**	**92**	P	**Pg**	**06 00 21.4**	**0.0**
THAS				S	**Sb**	**06 00 34.4**	**-0.1**
THAS				AML	AML	06 00 36.0	
	comp=N,308μm,0.3s						
THAS				AML	AML	06 00 36.4	
	comp=E,385μm,0.3s						
XOR	**Xorichti**	**1.29**	**186**	P	**Pn**	**06 00 25.4**	**+0.2**
XOR				S	**Sb**	**06 00 42.0**	**0.0**
FNA	**Florina**	**1.52**	**276**	PN	**Pn**	**06 00 28.9**	**+0.4**
AOS	**Alonnisos**	**1.53**	**165**	PN	**Pb**	**06 00 30.2**	**+0.5**
AOS				SN	**Sg**	**06 00 51.4**	**+0.7**
RDO	**Rodhopi**	**1.72**	**72**	PN	**Pb**	**06 00 32.6**	**-0.3**
PLD	**Plovdiv**	**1.77**	**34**	PN	**Pb**	**06 00 32.9**	**-0.9**
AGG	**Agios Georgios**	**1.81**	**207**	PN	**Pn**	**06 00 33.3**	**+0.9**
KDZ	**Kurdzhali**	**1.84**	**56**	PN	**Pn**	**06 00 33.3**	**+0.5**
ALN	**Alexandroupoli**	**2.05**	**82**	PN	**Pb**	**06 00 37.4**	**-1.1**

*IDC **06** 06:17:49.7±1.3, 12°.48N×143°.91E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=66.6km s-min=26.4km az=98.0*
ISC 06 06:17:54.8±1.0, **12°.5N**±0°.2×**143°.6E**±0°.3, **h27**km, **n6**,
σ1**°75**/6, **mb3.5**/6, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.45**	**196**	P	**P**	**06 24 31.6**	**-0.2**
	0.5nm,0.9s,baz=20,slow=9.8,SNR=2.5						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**37.13**	**195**	P	**P**	**06 25 03.1**	**-0.3**
	0.2nm,0.8s,baz=13,slow=12,SNR=1.7						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**61.43**	**317**	P	**P**	**06 28 10.1**	**+1.2**
	0.2nm,0.5s,baz=84,slow=8.0,SNR=2.3						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**70.13**	**25**	P	**P**	**06 29 02.9**	**-1.7**
	0.3nm,0.6s,baz=251,slow=5.5,SNR=4.6						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**88.61**	**51**	P	**P**	**06 30 48.0**	**+1.9**
	0.4nm,0.7s,baz=282,slow=4.5,SNR=3.8						
FINES	**FINESS Array B**	**91.64**	**335**	P	**P**	**06 30 58.3**	**-1.1**
	0.6nm,0.4s,baz=85,slow=4.7,SNR=12						
	0.6nm,0.4s						

*IDC **06** 06:27:12.3±1.3, 23°.91N×122°.14E, h0km, mb3.5/4, mbtmp3.6/5, ML3.7/1, MS3.4/2, Error ellipse: s-maj=73.6km s-min=23.8km az=69.0*
*JMA **06** 06:27:15.9±0.2.24°№1°×122°.6E±0°.5, h29km±3km, MV3.3/10, NW OFF ISHIGAKIJIMA IS*
*TAP **06** 06:27:15.4, 23°.99N×122°.66E, h25km, ML3.7, D*
ISC 06 06:27:14.9±1.1, **23°.93N**±0°.02×**122°.67E**±0°.02, **h25**km±10km,
n107, σ0**°96**/178, **mb3.3**/4, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.58**	**26**	P	**Pb**	**06 27 26.3**	**-0.2**
JYNG				*e*S	**Sb**	**06 27 33.5**	**-0.9**
YOJ	**Yonaguni jima**	**0.62**	**31**	*i* P	**Pb**	**06 27 27.0**	**-0.2**
	baz=40						
YOJ				S	**Sb**	**06 27 34.9**	**-0.5**
	baz=40						
YOJ	**Yonaguni jima**	**0.62**	**31**	P	**Pb**	**06 27 27.0**	**-0.2**
YOJ				S	**Sb**	**06 27 34.9**	**-0.5**
EWUT	**Wuta**	**0.96**	**303**	*e*P	**Pb**	**06 27 32.0**	**-0.9**
	baz=299						
EWUT				S	**Sn**	**06 27 45.9**	**+0.3**
	baz=299						
HWA	**Hwalien**	**0.97**	**273**	*e*P	**Pn**	**06 27 33.4**	**+0.5**
	baz=269						
ENA	**Nanau**	**0.98**	**301**	*i* P	**Pb**	**06 27 33.3**	**+0.1**
	baz=297						
ENA				*e*S	**Sn**	**06 27 47.0**	**+0.8**
	baz=297						
ETL	**Fush Village**	**0.98**	**284**	*e*P	**Pb**	**06 27 33.9**	**+0.6**
	baz=264						
ETL				S	**Sn**	**06 27 47.0**	**+0.8**
	baz=264						
TWD	**Chiawan**	**0.99**	**279**	*e*P	**Pn**	**06 27 33.0**	**-0.2**
	baz=275						
TWD				*e*S	**Sb**	**06 27 45.9**	**-0.2**
	baz=275						
TWC	**Suao**	**1.01**	**312**	*e*P	**Pb**	**06 27 33.6**	**-0.1**
	baz=310						
TWC				*e*S	**Sn**	**06 27 46.2**	**-0.6**
	baz=310						
NACB	**Ninganchiao**	**1.01**	**284**	P	**Pn**	**06 27 33.4**	**-0.1**
	baz=266						
NACB				S	**Sb**	**06 27 46.6**	**0.0**
	baz=266						
HATJ	**Hateruma jima**	**1.05**	**83**	P	**Pb**	**06 27 35.0**	**+0.5**
HATJ				S	**Sn**	**06 27 48.9**	**+1.1**
IRIF	**Iriomote-Funau**	**1.05**	**67**	P	**Pb**	**06 27 34.8**	**+0.4**
IRIF				S	**Sn**	**06 27 48.0**	**0.0**
ETM	**Tongmen**	**1.07**	**272**	P	**Pn**	**06 27 34.2**	**-0.2**
	baz=259						
ETM				S	**Sb**	**06 27 48.6**	**+0.1**
	baz=259						
NDS	**Dongshan**	**1.11**	**309**	*i* P	**Pb**	**06 27 35.2**	**-0.4**
	baz=306						
NDS				*e*S	**Sn**	**06 27 49.7**	**+0.2**
	baz=306						
ETLH	**Xiulin Townshi**	**1.12**	**285**	P	**Pn**	**06 27 35.3**	**+0.3**
	baz=282						
EGS		**1.13**	**324**	P	**Pn**	**06 27 35.1**	**-0.1**
	baz=331						
EGS				*e*S	**Sn**	**06 27 52.1**	**+2.2**
	baz=331						
ESL	**Shilin**	**1.13**	**264**	P	**Pn**	**06 27 34.8**	**-0.4**
	baz=261						
ESL				S	**Sn**	**06 27 50.0**	**0.0**
	baz=261						
EGFH	**Guangfu**	**1.16**	**257**	*e*P	**Pn**	**06 27 36.4**	**+0.8**
	baz=254						
EGFH				*e*S	**Sb**	**06 27 51.8**	**+0.7**
	baz=254						
ILA	**Ilan**	**1.18**	**315**	*e*P	**Pb**	**06 27 38.1**	**+1.4**
	baz=313						
ILA				*e*S	**Sb**	**06 27 53.0**	**+1.4**
	baz=313						
NTC	**Toucheng**	**1.20**	**321**	*e*P	**Pb**	**06 27 37.0**	**+0.1**
	baz=318						
NTC				S	**Sb**	**06 27 53.0**	**+1.0**
	baz=318						
LATG	**Datong**	**1.20**	**300**	P	**Pn**	**06 27 36.5**	**+0.3**
	baz=297						
LATG				S	**Sb**	**06 27 53.8**	**+1.5**
	baz=297						
TWE	**Neicheng**	**1.21**	**311**	*e*P	**Pb**	**06 27 37.2**	**+0.1**
	baz=309						
TWE				*e*S	**Sb**	**06 27 53.2**	**+1.0**
	baz=309						
HGSD	**Ruisui**	**1.22**	**249**	*i* P	**Pn**	**06 27 36.5**	**+0.2**
	baz=247						
HGSD				*e*S	**Sn**	**06 27 51.9**	**-0.1**
	baz=247						
ENTT	**Nioudou**	**1.23**	**305**	*e*P	**Pn**	**06 27 36.5**	**0.0**
	baz=288						
ENTT				S	**Sb**	**06 27 53.6**	**+0.7**
	baz=288						
TWB1	**Santiao Chiao**	**1.24**	**330**	*i* P	**Pn**	**06 27 36.8**	**+0.1**
	baz=328						
TWB1				*e*S	**Sb**	**06 27 52.9**	**-0.3**
	baz=328						
NDT	**Datong Townshi**	**1.25**	**303**	*e*P	**Pb**	**06 27 37.7**	**-0.1**
	baz=285						
NDT				S	**Sb**	**06 27 54.0**	**+0.5**
	baz=285						
JKRS	**Kuro-shima**	**1.27**	**76**	*i* P	**Pb**	**06 27 38.1**	**0.0**
JKRS				S	**Sb**	**06 27 54.2**	**+0.2**
NNSB	**Datong**	**1.27**	**293**	P	**Pn**	**06 27 37.7**	**+0.5**
	baz=277						
NNSB				S	**Sb**	**06 27 54.3**	**0.0**
	baz=277						
FUSB	**Fushanzhiwuyua**	**1.28**	**310**	P	**Pb**	**06 27 38.4**	**-0.1**
	baz=308						
FUSB				*e*S	**Sb**	**06 27 56.5**	**+1.9**
	baz=308						
NNS	**Nan Shan**	**1.28**	**294**	*e*P	**Pn**	**06 27 37.0**	**-0.4**
	baz=291						
TIPB	**Shuangxi**	**1.29**	**324**	P	**Pb**	**06 27 37.9**	**-0.6**
	baz=337						
TIPB				*e*S	**Sb**	**06 27 55.1**	**+0.4**
	baz=337						
WHF	**Hehuan Shan**	**1.30**	**280**	P	**Pn**	**06 27 38.1**	**+0.3**
	baz=264						
WHF				*e*S	**Sn**	**06 27 54.4**	**-0.2**
	baz=264						
EHY	**Hungye**	**1.30**	**251**	P	**Pn**	**06 27 37.8**	**+0.3**
	baz=249						
EHY				*e*S	**Sn**	**06 27 54.9**	**+0.8**
	baz=249						
FUSS	**Fushou**	**1.34**	**284**	P	**Pn**	**06 27 38.7**	**+0.4**
	baz=281						
FUSS				*e*S	**Sn**	**06 27 55.4**	**+0.1**
	baz=281						
NWLT	**Wulai**	**1.36**	**309**	P	**Pb**	**06 27 40.1**	**+0.4**
	baz=292						
NWLT				*e*S	**Sb**	**06 27 58.0**	**+1.4**
	baz=292						
OWD	**Renai**	**1.36**	**271**	*e*P	**Pn**	**06 27 39.0**	**+0.5**
	baz=269						
OWD				*e*S	**Sn**	**06 27 55.7**	**-0.1**
	baz=269						
YULB	**Yu-li**	**1.36**	**247**	*e*P	**Pn**	**06 27 38.9**	**+0.5**
	baz=245						
YULB				*e*S	**Sn**	**06 27 56.2**	**+0.6**

WUSB	**Renai**	**1.42 273**	*eP*	**Pn**	**06 27 39.9**	**+0.7**
	baz=270					
WUSB			*eS*	**Sb**	**06 27 58.6**	**+0.1**
	baz=270					
TWA	**Mucha**	**1.44 317**	*eP*	**Pb**	**06 27 40.6**	**-0.4**
	baz=332					
TWA			*eS*	**Sb**	**06 28 00.9**	**+1.9**
	baz=332					
FULB	**Fuli**	**1.45 240**	*eP*	**Pn**	**06 27 40.7**	**+1.1**
	baz=225					
FULB			*eS*	**Sn**	**06 27 58.4**	**+0.5**
	baz=225					
NHDH	**Xindian Distri**	**1.46 315**	*eP*	**Pb**	**06 27 42.3**	**+0.9**
	baz=330					
NHDH			*eS*	**Sb**	**06 28 00.6**	**+0.9**
	baz=330					
YM01	**YM01**	**1.57 321**	*eP*	**Pb**	**06 27 42.4**	**-0.9**
	baz=319					
EDH	**Donghe**	**1.57 233**	*eP*	**Pn**	**06 27 40.9**	**-0.3**
	baz=220					
EDH			*eS*	**Sn**	**06 27 59.5**	**-1.2**
	baz=220					
SSLB	**Suanglung**	**1.57 265**	*eP*	**Pn**	**06 27 41.9**	**+0.6**
	baz=263					
SSLB			*eS*	**Sn**	**06 28 01.4**	**+0.6**
	baz=263					
NFF	**Wufeng Townshi**	**1.58 297**	P	**Pn**	**06 27 42.1**	**+0.8**
	baz=283					
WCS	**Beigang Elemen**	**1.61 275**	*eP*	**Pn**	**06 27 42.3**	**+0.6**
	baz=273					
WHP	**Taichung City**	**1.61 283**	*eP*	**Pb**	**06 27 44.3**	**+0.3**
	baz=270					
SMLT	**Sun Moon Lake**	**1.62 269**	*eP*	**Pn**	**06 27 43.2**	**+1.2**
	baz=267					
TWY	**Chenhua**	**1.66 324**	*eP*	**Pb**	**06 27 44.1**	**-0.6**
	baz=323					
TYC	**Yuchr**	**1.66 270**	*eP*	**Pn**	**06 27 43.6**	**+1.3**
	baz=267					
LDUT	**Ludao**	**1.67 222**	P	**Pn**	**06 27 41.9**	**-0.6**
	baz=220					
LDUT			*eS*	**Sn**	**06 28 01.1**	**-1.9**
	baz=220					
LIOB	**Emei**	**1.67 296**	*eP*	**Pb**	**06 27 44.5**	**-0.4**
	baz=293					
LIOB			*eS*	**Sb**	**06 28 05.4**	**-0.2**
	baz=293					
NSTT	**Nanjuang**	**1.67 295**	*eP*	**Pb**	**06 27 44.3**	**-0.7**
	baz=293					
ELDTW	**Lidau**	**1.68 244**	*eP*	**Pn**	**06 27 42.0**	**-0.8**
	baz=242					
ELDTW			*eS*	**Sn**	**06 28 03.8**	**+0.1**
	baz=242					
NCUH	**Zhongli**	**1.70 308**	*eP*	**Pb**	**06 27 45.2**	**-0.4**
	baz=306					
LONT	**Longtian**	**1.74 234**	*eS*	**Sn**	**06 28 06.3**	**+1.4**
	baz=223					
ALS	**Alishan**	**1.75 257**	*eP*	**Pn**	**06 27 45.8**	**+1.8**
	baz=254					
ALS			*eS*	**Sn**	**06 28 07.0**	**+1.2**
	baz=254					
PCYT	**Pengchaiyu**	**1.78 342**	*eP*	**Pn**	**06 27 44.1**	**+0.1**
	baz=341					
NSY	**Sanyi**	**1.81 286**	*eP*	**Pb**	**06 27 46.7**	**-0.7**
	baz=284					
WNT	**Mingjian**	**1.81 269**	*eP*	**Pb**	**06 27 47.2**	**-0.2**
	baz=266					
WNT			*eS*	**Sb**	**06 28 10.0**	**+0.2**
	baz=266					
TCU	**Taichung**	**1.83 277**	*eP*	**Pb**	**06 27 46.9**	**-0.9**
	baz=275					
TCU			*eS*	**Sb**	**06 28 10.3**	**+0.1**
	baz=275					
STYH	**Taoyuan**	**1.89 247**	*eP*	**Pn**	**06 27 45.9**	**+0.3**
	baz=235					
WCHH	**Zhanghua**	**1.93 275**	*eP*	**Pb**	**06 27 48.7**	**-0.7**
	baz=273					
WCHH			*eS*	**Sb**	**06 28 13.4**	**+0.2**
	baz=273					
WDLH	**Douliu**	**1.96 263**	*eP*	**Pb**	**06 27 50.2**	**+0.3**
	baz=261					
WDLH			*eS*	**Sb**	**06 28 15.4**	**+1.4**
	baz=261					
TPUB	**Ta-pu**	**1.97 252**	*eP*	**Pb**	**06 27 49.4**	**-0.7**
	baz=239					
TPUB			*eS*	**Sb**	**06 28 14.1**	**-0.1**
	baz=239					
JTJ	**Tarama**	**1.99 69**	P	**Pn**	**06 27 48.6**	**+1.7**
JTJ			S	**Sn**	**06 28 12.1**	**+1.1**
WTP	**Ta-pu**	**2.00 251**	*eP*	**Pb**	**06 27 50.5**	**-0.1**
	baz=249					
WTP			*eS*	**Sb**	**06 28 15.8**	**+0.6**
	baz=249					
SGST	**Jiashian**	**2.09 247**	*eP*	**Pn**	**06 27 49.3**	**+0.9**
	baz=245					
SGST			*eS*	**Sb**	**06 28 17.9**	**+0.2**
	baz=245					
WRL	**Guolierlin Hig**	**2.09 270**	*eP*	**Pn**	**06 27 49.9**	**+1.5**
	baz=282					
WRL			*eS*	**Sn**	**06 28 15.9**	**+2.2**
	baz=282					
CHN1	**Nanshi**	**2.10 250**	P	**Pb**	**06 27 51.5**	**-0.7**
	baz=248					
CHN1			S	**Sb**	**06 28 18.7**	**+0.8**
	baz=248					
CHY	**Chiayi**	**2.10 259**	*eS*	**Sb**	**06 28 17.4**	**-0.5**
	baz=257					
WTK	**Tuku**	**2.10 264**	*eP*	**Pb**	**06 27 51.5**	**-0.8**
	baz=262					
WTK			*eS*	**Sb**	**06 28 17.5**	**-0.4**
	baz=262					
TWK	**Hsinying**	**2.10 252**	*eP*	**Pn**	**06 27 50.7**	**+2.1**
	baz=250					
TWK			*eS*	**Sb**	**06 28 17.8**	**-0.4**
	baz=250					
SNST	**Tainan City**	**2.11 251**	*eS*	**Sb**	**06 28 18.3**	**0.0**
	baz=249					
LAY	**Lan-yu**	**2.14 209**	*eP*	**Pn**	**06 27 48.7**	**-0.4**
	baz=208					
LAY			*eS*	**Sn**	**06 28 14.7**	**-0.2**
	baz=208					
ICHU	**Yijhu**	**2.26 256**	*eP*	**Pb**	**06 27 53.8**	**-1.2**
	baz=254					
ICHU			*eS*	**Sb**	**06 28 21.2**	**-1.4**
	baz=254					
WSL	**Shuilin Townsh**	**2.27 260**	*eS*	**Sn**	**06 28 21.2**	**+3.2**
	baz=258					
EAST	**Anshuo**	**2.27 228**	*eP*	**Pn**	**06 27 51.4**	**+0.5**
	baz=226					
TAWH	**Dawu Township**	**2.28 226**	*eS*	**Sn**	**06 28 16.8**	**-1.3**
	baz=235					
MASBT	**Mashibuluo**	**2.28 235**	*eP*	**Pn**	**06 27 52.2**	**+1.2**
	baz=226					
SLIU	**Shizi**	**2.42 226**	*eP*	**Pn**	**06 27 54.2**	**+1.3**
	baz=225					
SLIU			*eS*	**Sn**	**06 28 22.0**	**+0.3**
	baz=225					
SCZT	**Fangliau**	**2.44 231**	*eP*	**Pb**	**06 27 56.9**	**-1.2**
	baz=222					
TWKBT	**Hengchun**	**2.61 221**	*eP*	**Pn**	**06 27 57.6**	**+2.0**
	baz=220					
TWKBT			*eS*	**Sn**	**06 28 28.4**	**+1.9**
	baz=220					
TWK1	**Hengchun**	**2.62 221**	*eS*	**Sn**	**06 28 28.3**	**+1.7**
	baz=220					
WDGT	**Dungji**	**2.84 257**	*eP*	**Pn**	**06 28 00.2**	**+1.6**
	baz=255					
WDGT			*eS*	**Sn**	**06 28 33.7**	**+1.7**
	baz=255					
PHUB	**P'eng-hu**	**2.87 262**	*eP*	**Pn**	**06 28 00.3**	**+1.3**
	baz=260					
PHUB			*eS*	**Sn**	**06 28 34.0**	**+1.3**
	baz=260					
PNG	**Penghu**	**2.87 263**	*eP*	**Pn**	**06 28 00.3**	**+1.2**
	baz=261					
PNG			*eS*	**Sn**	**06 28 34.4**	**+1.5**
	baz=261					
VCHM	**Qimei**	**3.05 257**	*eP*	**Pn**	**06 28 03.6**	**+2.0**
	baz=255					
VCHM			*eS*	**Sn**	**06 28 38.5**	**+1.1**
	baz=255					
VWUC	**VWUC**	**3.12 291**	*eP*	**Pn**	**06 28 02.5**	**+0.1**
	baz=289					
XPSS	**Dashiqiu**	**3.73 324**	*eP*	**Pn**	**06 28 11.3**	**+0.3**
	baz=322					
KSRS	**Korea Array**	**14.21 17**	Pn	**P**	**06 30 38.7**	**-3.0**
	0.3nm,0.3s,baz=198,slow=12,SNR=12					
	1.9nm,0.6s					
JCJ	**Chichijima**	**17.90 76**	LR	LR	06 37 03.5	
	comp=Z,272nm,20.5s,baz=106,slow=32					
MKAR	**Makanchi Array**	**39.47 316**	P	**P**	**06 34 42.6**	**-0.5**
	0.4nm,0.6s,baz=102,slow=9.3,SNR=5.3					
	0.4nm,0.6s					
WRA	**Warramunga Arr**	**45.07 164**	P	**P**	**06 35 29.9**	**+0.9**
	0.2nm,0.6s,baz=346,slow=8.5,SNR=1.8					
	0.2nm,0.6s					
ASAR	**Alice Springs**	**48.55 166**	P	**P**	**06 35 59.3**	**+3.1**
	0.1nm,0.4s,baz=353,slow=14,SNR=5.1					
	0.1nm,0.4s					
FINES	**FINESS Array B**	**72.35 330**	P	**P**	**06 38 37.0**	**-1.3**
	2.0nm,0.9s,baz=82,slow=10,SNR=4.5					
	2.0nm,0.9s					
JMIC	**Jan Mayen**	**79.42 345**	LR	LR	07 18 04.3	
	comp=Z,8.8nm,19.7s,baz=258,slow=38					

REN ***06*** *07:00:17.2±1.0,38°.26N±0°.01×118°.75W±0°.02,h9km±6km, ML2.5/9,ML2.4/40(NEIC),Error ellipse: s-maj=2.3km s-min=2.0km az=109.0*

NEIC 06 07:00:17.5±1.0,38°.26N±0°.02×118°.74W±0°.01,h8km±7km, Error ellipse: s-maj=2.2km s-min=1.5km az=169.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LHV	**Little Huntoon**	**0.19**	**92**			Pg	07 00 21.5	+0.1
LHV						Sg	07 00 24.6	+0.7
LHV	**Little Huntoon**	**0.19**	**92**	IAML			07 00 26.1	
	comp=E,1µm,0.4s							
TVH1	**TV Hill, Hawth**	**0.20**	**355**			Pg	07 00 21.6	-0.1
TVH1						Sg	07 00 25.0	+0.3
HCK	**Huntoon Valley**	**0.22**	**147**			Pg	07 00 21.6	-0.2
NV08	**Mina Array Sit**	**0.36**	**66**			Pg	07 00 24.6	-0.1
NV09	**Mina Array Sit**	**0.37**	**61**			Pg	07 00 24.6	-0.1
NVAR	**Mina Array Bea**	**0.39**	**64**			Pg	07 00 24.9	-0.2
LUL	**Lundy Lake**	**0.40**	**239**			Pg	07 00 25.3	-0.2
RYN	**Ryan**	**0.41**	**25**			Pg	07 00 25.4	-0.1
RYN						Sg	07 00 31.7	+0.9
RYN	**Ryan**	**0.41**	**25**	IAML			07 00 31.8	
	comp=E,284nm,0.4s							
NV11	**Mina Array Sit**	**0.49**	**69**			Pg	07 00 26.9	-0.2
NV11						Sg	07 00 33.9	+0.3
NV11	**Mina Array Sit**	**0.49**	**69**	IAML			07 00 35.5	
	comp=N,64nm,0.4s							
BENR	**Benton**	**0.56**	**166**			Pg	07 00 27.9	-0.4
MCBM	**Casa Benchmark**	**0.63**	**191**			Pg	07 00 29.5	-0.2
ORC	**Owens River**	**0.63**	**174**			Pg	07 00 29.3	-0.4
MDYM	**Dry Creek**	**0.64**	**200**			Pg	07 00 29.7	-0.1
MDPB	**Devils Postpil**	**0.68**	**203**			Pg	07 00 30.2	-0.4
MDPB	**Devils Postpil**	**0.68**	**203**	IAML			07 00 39.7	
	comp=E,210nm,0.3s							
MDPB				IAML			07 00 40.0	
	comp=N,172nm,0.4s							
RCCR	**Rock Creek Can**	**0.77**	**179**			Pg	07 00 32.0	-0.4
YERR	**Yerington**	**0.82**	**332**			Pg	07 00 32.9	-0.5
YERR						Sg	07 00 44.6	+0.5
SCHCA	**Scheelite**	**0.90**	**177**			Pg	07 00 34.5	-0.3
KVN	**Kaiserville**	**0.94**	**32**			Pg	07 00 34.9	-0.6
KVN	**Kaiserville**	**0.94**	**32**	IAML			07 00 51.6	
	comp=E,120nm,0.3s							
PNTR	**Pine Nut**	**1.07**	**321**			Pg	07 00 37.3	-0.6
PNTR	**Pine Nut**	**1.07**	**321**	IAML			07 00 56.2	
	comp=E,119nm,0.4s							
PNTR				IAML			07 00 58.5	
	comp=N,93nm,0.7s							
DSP	**Deep Springs**	**1.08**	**145**			Pg	07 00 37.6	-0.6
TPH	**Tonopah**	**1.21**	**98**			Pg	07 00 40.0	-0.8
VCNR	**Virginia City**	**1.25**	**326**			Pn	07 00 40.7	-0.8
EMB	**Emerald Bay**	**1.28**	**304**			Pn	07 00 41.5	-0.4
EMB	**Emerald Bay**	**1.28**	**304**	IAML			07 01 03.0	
	comp=N,117nm,0.6s							
EMB				IAML			07 01 03.0	
	comp=E,89nm,0.8s							
CMB	**Columbia Colle**	**1.31**	**261**			Pn	07 00 41.5	-0.7
CMB	**Columbia Colle**	**1.31**	**261**	IAML			07 01 02.1	
	comp=E,81nm,0.4s							
CMB				IAML			07 01 02.5	
	comp=N,89nm,0.5s							
LCH	**Last Change Ra**	**1.34**	**139**			Pn	07 00 42.6	-0.1
Q09A	**Carvers**	**1.35**	**64**			Pn	07 00 43.0	+0.1
MPK	**Martis Peak**	**1.44**	**316**			Pn	07 00 43.7	-0.5
MPK	**Martis Peak**	**1.44**	**316**	IAML			07 01 06.4	
	comp=N,52nm,0.9s							
MPK				IAML			07 01 13.5	
	comp=E,35nm,0.8s							
PAHR	**Pah Rah Range**	**1.53**	**341**			Pn	07 00 45.0	-0.3
PAHR	**Pah Rah Range**	**1.53**	**341**	IAML			07 01 08.5	
	comp=E,31nm,0.7s							
VPK	**Verdi Peak**	**1.58**	**321**			Pn	07 00 46.5	+0.4
DONR	**Donner Summit**	**1.65**	**312**			Pn	07 00 47.4	+0.5
PEAR	**Peavine Mounta**	**1.65**	**325**			Pb	07 00 48.1	-0.1
KBF	**Kyburz Flat**	**1.69**	**318**			Pn	07 00 47.4	-0.2
SGV	**South Grapevin**	**1.86**	**133**			Pn	07 00 49.9	0.0
WVA	**Winnemucca Val**	**1.88**	**334**			Pb	07 00 51.7	-0.5
BEKR	**Beckworth**	**2.04**	**322**			Pn	07 00 53.1	+0.9
TPNV	**Topopah Spring**	**2.37**	**123**			Pn	07 00 57.0	+0.1
TPNV	**Topopah Spring**	**2.37**	**123**	IAML			07 01 42.1	
	comp=E,19nm,1.5s							
TPNV				IAML			07 01 47.4	
	comp=E,16nm,0.8s							
GWY	**Greenwater Val**	**2.65**	**141**			Pn	07 01 00.6	0.0
AMDNV	**Amargosa**	**2.67**	**132**			Pn	07 01 01.3	+0.6
PRN	**Pahroc Range**	**3.04**	**105**			Pn	07 01 06.6	+0.5

IDC ***06*** *07:03:12.1±1.2,4°.50S×153°.00E,h0km,mb4.2/7, mbtmp4.2/7,MS3.1/4,Error ellipse: s-maj=29.4km s-min=17.5km az=27.0*

NEIC ***06*** *07:03:16.1±2.4,4°.34S±0°.09×153°.01E±0°.06,h22km±7km, mb4.7/18,Error ellipse: s-maj=13.2km s-min=8.1km az=194.0*

ISC 06 07:03:19.0±0.6,4°.35S±0°.08×152°.95E±0°.07,h55km,n36, σ1§16/35,mb4.5/15,MS3.1/3,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.80**	**281**			**Pn**	**07 03 31.6**	**-2.6**
RABL					Sn	**Sn**	**07 03 43.8**	**-1.6**
KRVT	**Keravat (AS076**	**0.92**	**273**	Pn		**Pn**	**07 03 34.1**	**-1.7**
	521nm,0.3s,baz=301,slow=1.3,SNR=309							
KRVT					Sn	**Sn**	**07 03 48.0**	**-0.2**
	2µm,0.3s,baz=90,slow=20,SNR=16							
MANU	**Manus Island**	**6.03**	**292**	Pn		**Pn**	**07 04 46.3**	**+0.7**
HNR	**Honiara**	**8.59**	**126**	LR		LR	07 08 40.6	
	comp=Z,117nm,19.3s,baz=296,slow=39							
PATS	**Pohnpei**	**12.33**	**26**	Pn		**Pn**	**07 06 10.2**	**-1.7**
COEN	**Coen**	**13.57**	**225**	Pn		**Pn**	**07 06 29.1**	**+0.3**
KOUNC	**Koumac, New Ca**	**19.52**	**147**	P		**P**	**07 07 42.3**	**+0.3**
KOUNC				IAmb		IAmb	07 08 24.4	
	comp=Z,32nm,1.1s							
EIDS	**Eidsvold**	**20.98**	**185**	P		**P**	**07 07 57.7**	**0.0**
EIDS				IAmb		IAmb	07 08 24.6	
	comp=Z,19nm,1.3s							
DZM	**Mont Dzumac**	**21.94**	**145**	P		**P**	**07 08 06.8**	**-1.4**
	comp=Z,9.5nm,0.5s,baz=225,slow=8.6,SNR=16							
	comp=Z,9.5nm,0.5s							
MTN	**Manton Dam**	**23.14**	**247**	P		**P**	**07 08 20.9**	**0.0**
MTN				IAmb		IAmb	07 08 31.4	
	comp=Z,30nm,1.5s							
WRAB	**Tennant Creek**	**23.84**	**228**	P		**P**	**07 08 27.3**	**0.0**
WRAB				IAmb		IAmb	07 08 28.6	
	comp=Z,15nm,0.5s							
WRA	**Warramunga Arr**	**23.85**	**228**	P		**P**	**07 08 26.9**	**-0.6**
	comp=Z,12nm,0.6s,baz=54,slow=9.7,SNR=142							
WRA				LR		LR	07 17 47.5	
	comp=Z,52nm,19.1s,baz=115,slow=37							
	comp=Z,12nm,0.6s							
WRA	**Warramunga Arr**	**23.85**	**228**	P		**P**	**07 08 26.8**	**-0.6**
ARMA	**Armidale**	**25.96**	**183**	P		**P**	**07 08 46.1**	**-0.5**
ARMA				IAmb		IAmb	07 09 06.0	
	comp=Z,20nm,1.2s							
KNRA	**Kununurra**	**26.31**	**243**	P		**P**	**07 08 51.1**	**+1.4**
KNRA				IAmb		IAmb	07 08 57.7	
	comp=Z,19nm,1.1s							
AS31	**Alice Springs**	**26.58**	**222**	P		**P**	**07 08 51.5**	**-0.7**
ASAR	**Alice Springs**	**26.58**	**222**	P		**P**	**07 08 51.5**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=55,slow=8.8,SNR=18							
	comp=Z,1.9nm,0.4s							
STKA	**Stephens Creek**	**29.39**	**200**	P		**P**	**07 09 16.3**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=17,slow=17,SNR=3.1							
	comp=Z,0.7nm,0.4s							
FITZ	**Fitzroy Crossi**	**30.00**	**241**	P		**P**	**07 09 21.8**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=48,slow=6.5,SNR=9.9							
	comp=Z,1.4nm,0.3s							
FITZ	**Fitzroy Crossi**	**30.00**	**241**	P		**P**	**07 09 21.9**	**-0.9**
CAN	**Canberra**	**31.04**	**186**	P		**P**	**07 09 32.5**	**+0.8**
CAN				IAmb		IAmb	07 09 46.0	
	comp=Z,19nm,1.4s							
KAPI	**Kappang**	**33.09**	**268**	P		**P**	**07 09 50.1**	**+0.2**
KAPI				IAmb		IAmb	07 10 32.4	
	comp=Z,19nm,1.3s							
FORT	**Forrest**	**35.23**	**219**	P		**P**	**07 10 07.5**	**-0.8**
FORT				IAmb		IAmb	07 10 07.9	
	comp=Z,11nm,0.7s							
KKM	**Kota Kinabalu**	**38.11**	**285**	P		**P**	**07 10 34.6**	**+1.5**
TAU	**Tasmania Unive**	**38.72**	**187**	P		**P**	**07 10 38.9**	**+1.2**
TAU				IAmb		IAmb	07 11 04.0	
	comp=Z,30nm,1.3s							
NIUE	**Niue**	**39.07**	**115**	P		**P**	**07 10 40.9**	**-0.1**
JHJ	**Hachijo jima 2**	**39.30**	**342**	LR		LR	07 22 37.8	
	comp=Z,29nm,21.1s,baz=269,slow=30							
BKZ	**Black Stump Fm**	**40.71**	**152**	P		**P**	**07 10 53.7**	**-0.7**
TUWZ	**Tuamarina**	**41.43**	**156**	P		**P**	**07 11 00.4**	**+0.2**
VNDA	**Vanda**	**73.27**	**178**	P		**P**	**07 14 44.5**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=333,slow=7.1,SNR=5.0							
	comp=Z,0.8nm,0.9s							
VNDA	**Vanda**	**73.27**	**178**	P		**P**	**07 14 44.6**	**+0.6**
IMAR	**Indian Mountai**	**79.91**	**19**	P		**P**	**07 15 21.4**	**-0.3**
MKAR	**Makanchi Array**	**80.09**	**319**	P		**P**	**07 15 26.6**	**+3.6**
	comp=Z,0.3nm,0.6s,baz=100,slow=6.7,SNR=3.5							
	comp=Z,0.3nm,0.6s							
AAK	**Ala-Archa**	**84.47**	**313**	LR		LR	07 55 09.0	
	comp=Z,9.1nm,18.2s,baz=292,slow=37							
TORD	**Torodi Ar. Bea**	**150.31**	**289**	PKPbc		**PKPbc**	**07 23 04.5**	**-0.7**
	comp=Z,3.2nm,0.4s,baz=74,slow=2.5,SNR=38							
BDFB	**Brasilia**	**151.27**	**134**	PKPbc		**PKPbc**	**07 23 07.8**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=178,slow=1.1,SNR=6.8							

CNRM ***06*** *07:05:23.0,36°.55N×7°.16W,h30km,ml2.8*
IGIL ***06*** *07:05:26.8,36°.54N×7°.55W,h22km,ML1.1*
MDD ***06*** *07:05:27.4±0.8,36°.65N×7°.55W,h12km±3km,mb_Lg2.4/10, Error ellipse: s-maj=5.9km s-min=3.3km az=12.0*
INMG ***06*** *07:05:27.0±2.2,36°.56N×7°.58W,h17km±6km,ML1.5,Error ellipse: s-maj=5.1km s-min=4.6km az=11.0*
SFS ***06*** *07:05:27.0,36°.64N×7°.54W,h12km,ML2.4,GOLFO DE CADIZ*

ISC 06 07:05:26.7±1.8,36°.69N±0°.07×7°.54W±0°.03,h20km±4km, n28,σ0§94/48,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.64**	**331**	*eP*		**Pn**	**07 05 40.4**	**-0.3**
PBDV				*eS*		**Sn**	**07 05 51.0**	**+0.7**
PBDV				A		A	07 05 59.0	
	6.6nm,0.7s							
PVAQ	**Vaqueiros**	**0.73**	**349**	P		**Pg**	**07 05 41.1**	**0.0**
PVAQ				S		**Sn**	**07 05 53.0**	**+0.5**
PVAQ	**Vaqueiros**	**0.73**	**349**	*eP*		**Pn**	**07 05 42.2**	**+0.3**
PVAQ				*eS*		**Sn**	**07 05 53.7**	**+1.2**
PVAQ				A		A	07 05 56.7	
	7.6nm,0.3s							
EGRO	**El Granado**	**0.84**	**3**	Pg		**Pn**	**07 05 44.3**	**+0.8**
EGRO				Sg		**Sn**	**07 05 55.4**	**0.0**
EGRO				*i* Vmb_Lg			07 05 57.2	
PCVE	**Castro Verde**	**1.02**	**337**	*eP*		**Pg**	**07 05 46.3**	**-0.3**
PCVE				*eS*		**Sg**	**07 06 01.1**	**+1.0**
PCVE				A		A	07 06 08.5	
	7.0nm,0.3s							
MORF	**Marmelete**	**1.08**	**305**	*eP*		**Pn**	**07 05 47.0**	**+0.2**
MORF				A		A	07 06 08.0	
	8.5nm,0.2s							
PFVI	**Vila Bisbo**	**1.12**	**294**	*eP*		**Pn**	**07 05 47.4**	**+0.1**
PFVI				*eS*		**Sn**	**07 06 02.1**	**-0.1**
PFVI				A		A	07 06 17.9	
	11nm,0.8s							
MESJ	**Messejana**	**1.27**	**335**	*eP*		**Pn**	**07 05 49.5**	**+0.2**
MESJ				*eS*		**Sn**	**07 06 06.2**	**+0.3**
MESJ				IAML			07 06 07.1	
	comp=E,2.2nm,0.1s							
MESJ	**Messejana**	**1.27**	**335**	*eP*		**Pn**	**07 05 49.6**	**+0.2**
MESJ				*eS*		**Sn**	**07 06 06.5**	**+0.6**
MESJ				A		A	07 06 19.6	
	comp=E,4.2nm,0.2s							
PTEO	**Sao Teotonio**	**1.27**	**313**	*eP*		**Pn**	**07 05 48.8**	**-0.6**
PTEO				*eS*		**Sb**	**07 06 05.5**	**-0.5**
PTEO				A		A	07 06 13.0	
	comp=E,5.4nm,0.5s							
EMIN	**Mina Concepcio**	**1.28**	**33**	Pn		**Pb**	**07 05 50.7**	**+0.5**
EMIN				Sn		**Sg**	**07 06 07.8**	**-0.4**
EMIN				*i* Vmb_Lg			07 06 13.8	
ESPR	**Espera**	**1.36**	**82**	Pn		**Pn**	**07 05 50.8**	**+0.1**
ESPR				Sn		**Sb**	**07 06 09.7**	**+1.1**
ESPR				*i* Vmb_Lg			07 06 10.1	
PBAR	**Barrancos**	**1.54**	**15**	*e*Pn		**Pb**	**07 05 54.0**	**-0.5**
PBAR				*e*Sn		**Sg**	**07 06 15.3**	**-1.1**
PNCL	**Nicolau / Gran**	**1.62**	**331**	*e*Pn		**Pn**	**07 05 54.2**	**0.0**
PNCL				*e*Sn		**Sb**	**07 06 16.3**	**+0.2**
PNCL				A		A	07 06 24.6	
	comp=E,2.6nm,0.7s							
EVO	**Evora**	**1.88**	**349**	P		**Pn**	**07 05 58.1**	**+0.3**
EVO				S		**Sb**	**07 06 23.1**	**-0.3**
EVO	**Evora**	**1.88**	**349**	*e*Pn		**Pn**	**07 05 58.5**	**+0.8**
EVO				A		A	07 06 27.3	
	comp=E,4.2nm,0.3s							
EBAD	**Badajoz**	**2.11**	**11**	Sn		**Sn**	**07 06 27.6**	**+1.2**
EBAD				*i* Vmb_Lg			07 06 36.0	
PESTR	**Estremoz**	**2.17**	**359**	P		**Pn**	**07 05 58.9**	**-2.9**
PESTR				S		**Sn**	**07 06 28.0**	**-0.2**
PESTR	**Estremoz**	**2.17**	**359**	*e*Pn		**Pn**	**07 06 02.4**	**+0.6**
PESTR				*e*Sn		**Sb**	**07 06 30.2**	**-1.8**
ECAB	**El Cabril**	**2.19**	**50**	Pn		**Pn**	**07 06 02.9**	**+0.9**
ECAB				Sn		**Sn**	**07 06 27.6**	**-0.9**
ECAB				*i* Vmb_Lg			07 06 30.5	
PMTG	**Montargil**	**2.44**	**347**	*e*Pn		**Pn**	**07 06 06.0**	**+0.6**
PMTG				A		A	07 06 34.4	
	comp=E,2.2nm,0.7s							
PMRV	**Marv??o**	**2.74**	**2**	*e*Pn		**Pn**	**07 06 10.2**	**+0.6**
PMRV	

comp=N,3328µm,0.5s
STIA AML AML 07 54 19.2
comp=E,3853µm,0.6s
SIVA Sivas 1.32 305 P **Pb** **07 54 10.1 +0.2**
SIVA S **Sb** **07 54 26.3 -0.1**
comp=E,1µm,0.5s
SIVA Sivas 1.32 305 P **Pn** **07 54 09.2 +0.5**
KSTL Kastelli Herak 1.35 320 P **Pn** **07 54 06.5 -2.5**
IDI Anoyia 1.44 315 P **Pn** **07 54 10.5 +0.1**
IDI S **Sn** **07 54 28.5 0.0**
IDI Anoyia 1.44 315 P **Pn** **07 54 10.7 +0.3**
GVD Gavdhos 1.78 289 P **Pn** **07 54 15.3 +0.3**
GVD S **Sn** **07 54 37.2 +0.4**
comp=E,312nm,0.5s
GVD Gavdhos 1.78 289 P **Pn** **07 54 15.3 +0.3**
SLUM Salum 2.88 196 PN **Pn** **07 54 30.9 +0.9**
baz=201
SLUM SN **Sn** **07 55 02.9 -1.0**
baz=201
SWA2 5.05 187 PN **Pn** **07 55 01.2 +1.3**
baz=189
SWA2 SN **Sn** **07 55 53.9 -3.5**
baz=189
HMYD Mayadein 5.97 137 PN **Pn** **07 55 13.6 +1.1**
baz=136
HNAT Natroun 5.99 139 PN **Pn** **07 55 13.6 +0.7**
baz=138
HSAF As Saff 6.54 134 PN **Pn** **07 55 21.5 +1.2**
baz=132
GLL Jalalah 6.66 133 PN **Pn** **07 55 23.2 +1.2**
baz=132
NBNS Bani Suef 7.15 141 PN **Pn** **07 55 29.8 +1.0**
baz=139
HDK1 Dakhla 9.15 161 PN **Pn** **07 55 57.3 +1.1**
baz=161
GTR Jabal at Tayr 9.54 155 PN **Pn** **07 56 03.1 +1.6**
baz=155

*IDC **06** 07:58:53.1±2.1,23°.05S×179°.12E,h527km±24km,mb3.2/9,*
mbtmp4.2/11,Error ellipse: s-maj=20.0km s-min=15.9km
az=147.0
*NOU **06** 07:58:55.9,23°.14S×179°.44E,h585km,mb4.6/22,South*
of Fiji Islands
*NEIC **06** 07:58:55.9±2.0,23°.05S±0°.1×179°.2E±0°.1,h569km±10km,*
mb4.4/22,Error ellipse: s-maj=19.3km s-min=16.5km
az=136.0
ISC 06 07:58:54.7±0.5,23°.15S±0°.07×179°.24E±0°.08,h550km,n82,
σ1s72/85,mb4.4/23,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**5.22**	**21**	P	**P**	**08 00 29.5**	**+3.0**
MSVF	**Nonsavu**	**5.50**	**348**	P	**P**	**08 00 30.4**	**+1.3**
MSVF	**Nonsavu**	**5.50**	**348**	P	**P**	**08 00 30.6**	**+1.5**
TAVE	**Taveuni**	**6.46**	**7**	P	**P**	**08 00 40.7**	**+3.0**
GLKZ	**Green Lake**	**6.60**	**158**	P	**P**	**08 00 41.2**	**+2.4**
GLKZ				S	**S**	**08 02 03.1**	**-0.9**
MARNC	**Mare, Loyalty**	**10.51**	**277**	P	**P**	**08 01 18.4**	**+0.5**
NIUE	**Niue**	**10.89**	**70**	P	**P**	**08 01 23.5**	**+1.7**
PINNC	**Pines Island,**	**10.89**	**271**	P	**P**	**08 01 22.7**	**+1.0**
AFI	**Afiamalu**	**12.52**	**44**	P	**P**	**08 01 36.8**	**-2.0**
	9.3nm,0.3s,baz=214,slow=3.4,SNR=5.1						
AFI	**Afiamalu**	**12.52**	**44**	P	**P**	**08 01 36.5**	**-2.3**
AFI	**Afiamalu**	**12.52**	**44**	P	**P**	**08 01 37.4**	**-1.5**
OUZ	**Omahuta**	**13.00**	**201**	P	**P**	**08 01 47.0**	**+3.7**
OUZ	**Omahuta**	**13.00**	**201**	P	**P**	**08 01 47.0**	**+3.7**
OUZ	**Omahuta**	**13.00**	**201**	P	**P**	**08 01 45.6**	**+2.3**
KUZ	**Kuaotunu**	**13.89**	**192**	P	**P**	**08 01 54.8**	**+2.2**
ETAZ	**East Tamaki Re**	**14.25**	**194**	P	**P**	**08 01 59.1**	**+2.8**
WTAZ	**Waiatarua**	**14.32**	**195**	P	**P**	**08 02 00.4**	**+3.4**
MKAZ	**Moumakai**	**14.35**	**193**	P	**P**	**08 01 59.7**	**+2.4**
AWAZ	**Awhitu Peninsu**	**14.43**	**195**	P	**P**	**08 02 00.4**	**+2.3**
HAZ	**Te Kaha**	**14.61**	**185**	P	**P**	**08 01 59.4**	**-0.5**
WMGZ	**Waiomatatini S**	**14.64**	**183**	P	**P**	**08 02 00.5**	**+0.2**
PKGZ	**Pakihiroa**	**14.73**	**184**	P	**P**	**08 02 00.9**	**-0.4**
RUGZ	**Raukumara Rang**	**14.83**	**185**	P	**P**	**08 02 01.8**	**-0.6**
TOZ	**Tahuroa Road**	**14.89**	**192**	P	**P**	**08 02 04.8**	**+2.0**
PUZ	**Puketiti**	**14.90**	**183**	P	**P**	**08 02 02.4**	**-0.6**
TWGZ	**Tauwhareparae**	**15.02**	**184**	P	**P**	**08 02 02.9**	**-1.3**
URZ	**Urewera**	**15.17**	**186**	P	**P**	**08 02 03.5**	**-2.3**
	20nm,0.3s,baz=249,slow=2.4,SNR=28						
URZ				S	**S**	**08 04 36.8**	**-6.1**
	11nm,0.4s,baz=21,slow=23,SNR=20						
URZ	**Urewera**	**15.17**	**186**	P	**P**	**08 02 03.9**	**-1.9**
URZ	**Urewera**	**15.17**	**186**	P	**P**	**08 02 03.9**	**-1.9**
MWZ	**Matawai**	**15.21**	**185**	P	**P**	**08 02 04.4**	**-1.7**
CNGZ	**Carnagh Statio**	**15.31**	**183**	P	**P**	**08 02 08.4**	**+1.2**
MUGZ	**Murupara**	**15.43**	**187**	P	**P**	**08 02 07.5**	**-0.8**
PRRZ	**Plateau Road**	**15.49**	**188**	P	**P**	**08 02 09.0**	**-0.1**
BKZ	**Black Stump Fm**	**16.14**	**188**	P	**P**	**08 02 13.4**	**-2.0**
BFZ	**Birch Farm**	**17.66**	**188**	P	**P**	**08 02 28.1**	**-1.2**
BFZ	**Birch Farm**	**17.66**	**188**	P	**P**	**08 02 28.7**	**-0.6**
SNZO	**South Karori**	**18.51**	**191**	P	**P**	**08 02 37.5**	**+0.5**
QRZ	**Quartz Range**	**18.51**	**196**	P	**P**	**08 02 38.0**	**+0.9**
QRZ	**Quartz Range**	**18.51**	**196**	P	**P**	**08 02 38.3**	**+1.3**
THZ	**Tophouse**	**19.30**	**194**	P	**P**	**08 02 44.7**	**+0.4**
KHZ	**Kahutara**	**19.79**	**193**	P	**P**	**08 02 48.5**	**-0.2**
OXZ	**Oxford**	**20.99**	**195**	P	**P**	**08 02 58.7**	**-0.8**
RPZ	**Rata Peaks**	**21.60**	**196**	P	**P**	**08 03 04.5**	**-0.5**
	8.3nm,0.4s,baz=350,slow=2.9,SNR=13						
	8.3nm,0.4s						
RPZ	**Rata Peaks**	**21.60**	**196**	P	**P**	**08 03 05.2**	**+0.2**
FOZ	**Fox Glacier**	**21.77**	**199**	P	**P**	**08 03 06.6**	**0.0**
ODZ	**Otahua Downs**	**22.95**	**196**	P	**P**	**08 03 16.9**	**-0.1**
ARMA	**Armidale**	**25.65**	**248**	P	**P**	**08 03 42.0**	**+0.6**
ARMA				IAmb	IAmb	08 04 03.8	
	comp=Z,20nm,1.3s						
ARMA	**Armidale**	**25.65**	**248**	P	**P**	**08 03 42.5**	**+1.2**
MGCD	**Mangrove Creek**	**26.68**	**242**	P	**P**	**08 03 51.5**	**+1.3**
CNB	**Canberra Magne**	**28.64**	**238**	P	**P**	**08 04 08.8**	**+1.4**
CAN	**Canberra**	**28.93**	**238**	P	**P**	**08 04 10.2**	**+0.3**
CAN				IAmb	IAmb	08 04 11.6	
	comp=Z,11nm,0.8s						
CAN	**Canberra**	**28.93**	**238**	P	**P**	**08 04 11.1**	**+1.2**
CTAO	**Charters Tower**	**30.78**	**269**	P	**P**	**08 04 25.6**	**-0.5**
CTAO				IAmb	IAmb	08 04 41.0	
	comp=Z,18nm,1.3s						
CMSA	**Cobar Meteorol**	**30.86**	**247**	P	**P**	**08 04 26.8**	**+0.3**
QLP	**Quilpie**	**31.89**	**257**	P	**P**	**08 04 35.5**	**+0.1**
TOO	**Toolangi**	**32.28**	**236**	P	**P**	**08 04 39.0**	**+0.3**
TOO				IAmb	IAmb	08 04 39.5	
	comp=Z,6.2nm,0.6s						
TAU	**Tasmania Unive**	**32.95**	**226**	P	**P**	**08 04 44.7**	**+0.6**
TAU				IAmb	IAmb	08 04 45.2	
	comp=Z,7.5nm,0.7s						
STKA	**Stephens Creek**	**34.37**	**247**	P	**P**	**08 04 56.4**	**+0.1**
	comp=Z,3.7nm,0.4s,baz=93,slow=10,SNR=18						
	comp=Z,3.7nm,0.4s						
STKA	**Stephens Creek**	**34.37**	**247**	P	**P**	**08 04 56.0**	**-0.2**
AS31	**Alice Springs**	**41.47**	**260**	P	**P**	**08 05 53.0**	**-1.2**
ASAR	**Alice Springs**	**41.48**	**260**	P	**P**	**08 05 53.2**	**-1.0**
	comp=Z,3.8nm,0.7s,baz=93,slow=6.7,SNR=41						
ASAR				ScP	**ScP**	**08 10 37.0**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=104,slow=4.3,SNR=8.9						
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**41.48**	**260**	P	**P**	**08 05 52.5**	**-1.8**
WRA	**Warramunga Arr**	**41.77**	**266**	P	**P**	**08 05 55.0**	**-1.6**
	comp=Z,2.1nm,0.6s,baz=96,slow=8.3,SNR=32						
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**41.77**	**266**	P	**P**	**08 05 54.9**	**-1.6**
FORT	**Forrest**	**45.92**	**249**	P	**P**	**08 06 27.3**	**-1.2**
FORT				IAmb	IAmb	08 06 28.0	
	comp=Z,26nm,0.7s						
KNRA	**Kununurra**	**48.00**	**269**	P	**P**	**08 06 43.4**	**-1.0**
KNRA				IAmb	IAmb	08 07 23.4	
	comp=Z,30nm,1.5s						
VNDA	**Vanda**	**55.07**	**185**	P	**P**	**08 07 36.0**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=347,slow=8.5,SNR=6.1						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**55.07**	**185**	P	**P**	**08 07 35.8**	**+1.4**
SBA	**Scott Base**	**55.08**	**183**	P	**P**	**08 07 37.7**	**+3.2**
SBA				IAmb	IAmb	08 07 38.3	
	comp=Z,5.3nm,1.0s						
CASY	**Casey**	**60.48**	**206**	P	**P**	**08 08 10.7**	**-0.5**
CASY				IAmb	IAmb	08 08 29.9	
	comp=Z,38nm,1.2s						
KSRS	**Korea Array**	**77.23**	**320**	P	**P**	**08 09 52.0**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=147,slow=5.5,SNR=4.6						
	comp=Z,0.5nm,0.5s						
BELA	**Belgrano 2**	**77.26**	**173**	P	**P**	**08 09 52.3**	**+0.3**
NVAR	**Mina Array Bea**	**84.70**	**44**	P	**P**	**08 10 32.1**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=220,slow=10,SNR=3.8						
	comp=Z,0.3nm,0.5s						
SNAA Sanae 85.42 179				P	**P**	**08 10 33.2**	**-0.8**
SNAA				IAmb	IAmb	08 10 34.5	
	comp=Z,2.7nm,1.2s						
U15A North Rim 87.63 49				P	**P**	**08 10 46.6**	**+1.3**
U15A				IAmb	IAmb	08 10 47.4	
	comp=Z,2.6nm,0.8s						
HHC Hu-ho-hao-te 89.40 315				*e*P	**P**	**08 10 49.3**	**-3.9**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
PZH PanZhiHua 89.71 299				P	**P**	**08 10 53.7**	**-1.3**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.4s						
SRU San Rafael Swe 90.20 47				P	**P**	**08 10 55.8**	**-1.2**
SRU				IAmb	IAmb	08 10 58.6	
	comp=Z,2.0nm,0.7s						
TXAR Lajitas Array 90.63 58				P	**P**	**08 11 00.2**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=207,slow=7.3,SNR=8.5						
	comp=Z,0.7nm,0.9s						
PDAR Pinedale Array 92.64 44				P	**P**	**08 11 08.0**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=224,slow=4.1,SNR=3.4						
	comp=Z,0.4nm,0.8s						
ARCES ARCESS Array B 131.01 348				PKP	**PKPdf**	**08 17 02.9**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=72,slow=2.9,SNR=5.5						
FINES FINESS Array B 137.51 341				PKP	**PKPdf**	**08 17 16.1**	**+0.5**
	comp=Z,2.9nm,1.1s,baz=0.0,slow=0.3,SNR=3.4						

IDC 06 08:07:57.5±2.7,19°.02N×147°.37E,h0km,mb3.8/4,
mbtmp3.8/4,MS3.2/1,Error ellipse: s-maj=118.7km
s-min=25.8km az=84.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO Guam 5.91 204				Sn	Sn	08 10 38.6	+3.8
	16nm,0.3s,baz=160,slow=21,SNR=6.6						
WRA Warramunga Arr 40.77 199				P	P	08 15 40.6	0.0
	1.4nm,0.4s,baz=20,slow=8.7,SNR=48						
WRA				PcP	PcP	08 17 40.6	-1.4
	0.5nm,1.1s,baz=15,slow=3.5,SNR=4.6						
	1.4nm,0.4s						
ASAR Alice Springs 44.41 198				P	P	08 16 10.3	+0.2
	0.4nm,0.3s,baz=19,slow=9.9,SNR=16						
	0.4nm,0.3s						
RAO Raoul Island 58.53 144				LR	LR	08 41 43.7	
	comp=Z,19nm,18.1s,baz=329,slow=35						
MKAR Makanchi Array 59.38 314				P	P	08 18 01.7	-0.1
	0.2nm,0.5s,baz=107,slow=8.3,SNR=2.9						
	0.2nm,0.5s						
FINES FINESS Array B 87.25 336				P	P	08 20 46.1	+0.4
	1.8nm,1.0s,baz=72,slow=4.5,SNR=4.8						
	1.8nm,1.0s						

*SKO **06** 08:12:23.2,41°.32N×22°.62E,h15km*
*SOF **06** 08:12:23.8,40°.57N×23°.38E,h5km,MD3.2*
*ISK **06** 08:12:25.8,40°.68N×23°.38E,h14km,ML2.5/10*
*THE **06** 08:12:26.6,40°.65N×23°.38E,h7km±1km,ML2.3/7,Error*
ellipse: s-maj=1.2km s-min=0.4km az=335.0
*ATH **06** 08:12:26.5,40°.64N×23°.37E,h12km±2km,ML2.5/8,Error*
ellipse: s-maj=2.2km s-min=0.6km az=334.0
ISC 06 08:12:26.1±0.8,40°.65N±0°.02×23°.38E±0°.02,h15km±6km,
n55,σ0s47/85,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOH Sokhos 0.17 355				P	**Pb**	**08 12 30.8**	**-0.3**
SOH Sokhos 0.17 355				*i* Pg	**Pb**	**08 12 30.8**	**-0.2**
SOH				*i* Sg	**Sg**	**08 12 33.9**	**+0.5**
SOH Sokhos 0.17 355				P	**Pb**	**08 12 30.7**	**-0.3**
SOH				S	**Sg**	**08 12 33.5**	**+0.1**
SOH				AML	AML	08 12 34.1	
	comp=E,19669µm,0.3s						
SOH				AML	AML	08 12 34.2	
	comp=N,17038µm,0.2s						
HORT Hortiatis 0.22 257				P	**Pg**	**08 12 31.1**	**0.0**
HORT				S	**Sg**	**08 12 34.5**	**+0.1**
	comp=N,1µm,0.1s						
HORT Hortiatis 0.22 257				PG	**Pg**	**08 12 31.1**	**0.0**
HORT Hortiatis 0.22 257				P	**Pg**	**08 12 31.1**	**0.0**
HORT				S	**Sg**	**08 12 33.9**	**-0.5**
HORT				AML	AML	08 12 34.5	
	comp=E,4560µm,0.1s						
HORT				AML	AML	08 12 34.9	
	comp=N,5910µm,0.1s						
THE Thessaloniki 0.31 267				P	**Pg**	**08 12 32.3**	**-0.3**
THE				S	**Sb**	**08 12 37.5**	**-0.7**
	comp=N,412nm,0.1s						
THE Thessaloniki 0.31 267				*i* Pg	**Pg**	**08 12 32.4**	**-0.3**
THE				*i* Sg	**Sg**	**08 12 36.5**	**-0.6**
THE Thessaloniki 0.31 267				P	**Pg**	**08 12 32.3**	**-0.3**
THE				S	**Sg**	**08 12 36.5**	**-0.6**
THE				AML	AML	08 12 36.7	
	comp=N,1010µm,0.2s						
THE				AML	AML	08 12 36.8	
	comp=E,1398µm,0.2s						
SRS Serrai 0.50 19				P	**Pg**	**08 12 35.6**	**-0.4**
SRS Serrai 0.50 19				*i* Pg	**Pg**	**08 12 35.6**	**-0.4**
SRS				*i* Sg	**Sg**	**08 12 42.7**	**0.0**
SRS Serrai 0.50 19				P	**Pg**	**08 12 35.7**	**-0.4**
SRS				S	**Sg**	**08 12 42.6**	**-0.1**
KOKK Kokkinochori, 0.50 70				P	**Pb**	**08 12 36.3**	**-0.3**
KOKK				S	**Sb**	**08 12 44.2**	**+0.4**
KOKK Kokkinochori, 0.50 70				P	**Pb**	**08 12 36.4**	**-0.2**
KOKK				S	**Sb**	**08 12 43.5**	**-0.3**
KNT Kendrikon 0.63 325				P	**Pg**	**08 12 38.3**	**-0.1**
KNT Kendrikon 0.63 325				PG	**Pg**	**08 12 38.3**	**-0.1**
KNT				SG	**Sb**	**08 12 46.9**	**-0.5**
KNT Kendrikon 0.63 325				*i* Pg	**Pg**	**08 12 38.3**	**-0.1**
KNT				*i* Sg	**Sg**	**08 12 46.8**	**0.0**
KNT Kendrikon 0.63 325				P	**Pg**	**08 12 38.4**	**-0.1**
KNT				S	**Sg**	**08 12 46.6**	**-0.2**
PAIG Paliouri 0.76 162				P	**Pg**	**08 12 40.3**	**-0.5**
PAIG				S	**Sb**	**08 12 51.5**	**+0.5**
PAIG Paliouri 0.76 162				P	**Pg**	**08 12 40.3**	**-0.5**
PAIG				S	**Sb**	**08 12 50.9**	**-0.1**
NVR Nevrokopi 0.79 28				P	**Pg**	**08 12 41.2**	**-0.3**
NVR				S	**Sb**	**08 12 52.5**	**+0.4**
	comp=E,325nm,0.1s						
NVR Nevrokopi 0.79 28				P	**Pb**	**08 12 41.4**	**-0.2**
NVR				S	**Sb**	**08 12 52.3**	**+0.2**
NVR				AML	AML	08 12 53.2	
	comp=N,570µm,0.2s						
NVR				AML	AML	08 12 53.2	
	comp=E,811µm,0.3s						
GRG Griva 0.80 293				PG	**Pb**	**08 12 42.2**	**+0.5**
GRG				SG	**Sb**	**08 12 53.1**	**+0.7**
GRG Griva 0.80 293				*i* Pg	**Pn**	**08 12 42.4**	**-0.5**
GRG				*i* Sg	**Sn**	**08 12 53.8**	**-0.7**
GRG Griva 0.80 293				P	**Pb**	**08 12 42.0**	**+0.3**
GRG				S	**Sb**	**08 12 52.9**	**+0.6**
GRG				AML	AML	08 12 56.3	
	comp=E,542µm,0.3s						
GRG				AML	AML	08 12 56.3	
	comp=N,992µm,0.4s						
KVLA Kavala 0.82 69				P	**Pn**	**08 12 42.7**	**-0.4**
KVLA				S	**Sb**	**08 12 53.7**	**+0.8**
VAY Valandovo 0.91 318				*i* Sg	**Sb**	**08 12 55.9**	**+0.5**
VAY				*i* Pg	**Pn**	**08 12 44.1**	**-0.2**
VAY				*e*Lg	Lg	08 12 56.4	
	comp=N,106nm,0.6s						
KAVA Kavala 0.93 68				P	**Pb**	**08 12 44.2**	**+0.3**
KAVA				S	**Sn**	**08 12 57.6**	**-0.1**
	comp=N,560nm,0.3s						
KAVA Kavala 0.93 68				P	**Pb**	**08 12 44.2**	**+0.3**
KAVA				S	**Sn**	**08 12 57.2**	**-0.5**
MMB Musomiste 0.98 16				*i* P	**Pg**	**08 12 43.9**	**-1.1**
KTI Kastanea 0.99 256				P	**Pg**	**08 12 44.9**	**-0.4**
THAS Thassos island 1.02 92				P	**Pg**	**08 12 45.6**	**-0.3**
THAS				S	**Sn**	**08 13 00.7**	**+0.8**
	comp=N,230nm,0.2s						
THAS Thassos island 1.02 92				P	**Pg**	**08 12 45.5**	**-0.3**
THAS				S	**Sb**	**08 12 59.2**	**+0.5**
THAS				AML	AML	08 13 01.0	
	comp=N,562µm,0.3s						
THAS				AML	AML	08 13 01.3	
	comp=E,858µm,0.3s						
KKB Krupnik 1.24 350				*i* P	**Pb**	**08 12 49.3**	**+0.1**
KZN Kozani 1.27 255				P	**Pb**	**08 12 49.8**	**+0.1**
KZN Kozani 1.27 255				P	**Pn**	**08 12 49.6**	**+0.2**
KZN				S	**Sn**	**08 13 06.6**	**+0.4**
KZN				AML	AML	08 13 09.1	
	comp=N,212µm,0.7s						
KZN				AML	AML	08 13 11.0	
	comp=E,317µm,0.4s						
XOR Xorichti 1.29 186				P	**Pb**	**08 12 50.2**	**+0.1**
XOR Xorichti 1.29 186				P	**Pb**	**08 12 50.1**	**+0.1**
XOR				S	**Sb**	**08 13 06.7**	**+0.4**
XOR				AML	AML	08 13 08.2	
	comp=E,132µm,0.5s						
XOR				AML	AML	08 13 08.8	
	comp=N,315µm,0.6s						
NEO Neokhori 1.34 185				P	**Pg**	**08 12 51.4**	**-0.6**
RZN Rozhen 1.45 44				*i* P	**Pb**	**08 12 53.0**	**+0.1**
THL Klokotos Trika 1.50 224				P	**Pb**	**08 12 53.4**	**-0.2**
THL Klokotos Trika 1.50 224				P	**Pb**	**08 12 53.2**	**-0.4**
AOS Alonnisos 1.53 165				PN	**Pb**	**08 12 53.7**	**-0.3**
FNA Florina 1.53 276				PN	**Pn**	**08 12 53.4**	**+0.6**
RDO Rodhopi 1.71 72				P	**Pn**	**08 12 55.5**	**+0.2**
RDO				S	**Sb**	**08 13 19.3**	**+0.7**
	comp=N,62nm,0.2s						
RDO Rodhopi 1.71 72				PN	**Pn**	**08 12 55.9**	**+0.6**
PLD Plovdiv 1.77 34				PN	**Pn**	**08 12 56.6**	**+0.5**
AGG Agios Georgios 1.81 207				P	**Pn**	**08 12 57.4**	**+0.7**
AGG Agios Georgios 1.81 207				PN	**Pb**	**08 12 58.0**	**-0.9**
AGG Agios Georgios 1.81 207				P	**Pn**	**08 12 57.6**	**+0.8**
KDZ Kurdzhali 1.84 56				PN	**Pn**	**08 12 56.8**	**-0.3**
KDZ Kurdzhali 1.84 56				*i* P	**Pn**	**08 12 56.6**	**-0.5**
MAKR Makrakomi, Fth 1.89 211				P	**Pn**	**08 12 59.0**	**+1.2**
VTS Vitosha 1.97 357				*i* P	**Pn**	**08 13 00.0**	**+0.9**
ALN Alexandroupoli 2.04 82				PN	**Pn**	**08 13 00.1**	**+0.2**

*IDC **06** 08:12:44.0±1.1,12°.14N×45°.81E,h0km,mb3.9/7,*
mbtmp3.9/8,ML3.5/1,MS3.2/17,Error ellipse:
s-maj=42.2km s-min=22.6km az=165.0
ISC 06 08:12:45.9±1.0,12°.1N±0°.3×45°.8E±0°.1,h13km,n24,
σ0s64/8,mb3.9/7,MS3.2/15,Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**2.93**	**259**	Pn	**Pn**	**08 13 31.8**	**-0.5**
	7.0nm,0.3s,baz=98,slow=19,SNR=6.3						
	55nm,0.9s						
KMBO	**Kilima Mbogo**	**15.65**	**213**	LR	LR	08 21 35.6	
	comp=Z,42nm,21.7s,baz=102,slow=34						
MBAR	**Mbarara**	**19.57**	**231**	LR	LR	08 23 58.0	
	comp=Z,62nm,19.7s,baz=38,slow=34						
MMAI	**Mount Meron Ar**	**22.86**	**337**	LR	LR	08 26 22.5	
	comp=Z,65nm,20.0s,baz=326,slow=36						
GNI	**Garni**	**27.93**	**358**	LR	LR	08 31 12.0	
	comp=Z,56nm,18.6s,baz=156,slow=40						
GEYT	**Alibeck**	**27.96**	**21**	LR	LR	08 31 43.4	
	comp=Z,112nm,19.1s,baz=30,slow=41						
BRTR	**Keskin Array B**	**29.51**	**341**	LR	LR	08 31 14.9	
	comp=Z,67nm,19.8s,baz=146,slow=38						
MLR	**Muntele Rosu**	**37.30**	**337**	LR	LR	08 35 23.8	
	comp=Z,32nm,18.7s,baz=8.0,slow=36						
AKTO	**Aktyubinsk**	**39.50**	**12**	LR	LR	08 39 46.0	
	comp=Z,28nm,18.9s,baz=170,slow=41						
BELG	**Belogornoye**	**40.19**	**2**	LR	LR	08 40 35.4	
	comp=Z,26nm,18.6s,baz=185,slow=42						
TSUM	**Tsumeb**	**41.73**	**222**	LR	LR	08 36 40.0	
	comp=Z,31nm,19.6s,baz=326,slow=34						
LBTB	**Lobatse**	**41.84**	**208**	LR	LR	08 38 59.1	
	comp=Z,49nm,18.9s,baz=47,slow=38						
TORD	**Torodi Ar. Bea**	**42.99**	**276**	P	**P**	**08 20 46.0**	**+0.6**
	1.3nm,1.1s,baz=79,slow=7.5,SNR=4.8						
	1.3nm,1.1s						
BOSA	**Boshof**	**45.10**	**206**	LR	LR	08 39 12.2	
	comp=Z,50nm,20.7s,baz=10,slow=35						
BVAR	**Borovoye Array**	**45.30**	**21**	LR	LR	08 43 30.9	
	comp=Z,39nm,18.1s,baz=86,slow=41						
ARU	**Arti**	**45.30**	**10**	LR	LR	08 43 44.3	
	comp=Z,34nm,18.2s,baz=190,slow=41						
MKAR	**Makanchi Array**	**46.23**	**34**	P	**P**	**08 21 10.9**	**+0.1**
	1.0nm,0.8s,baz=224,slow=9.1,SNR=5.9						
	1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**51.52**	**76**	P	**P**	**08 21 51.2**	**-0.6**
	1.0nm,0.3s,baz=273,slow=9.2,SNR=6.2						
	1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**51.88**	**28**	P	**P**	**08 21 53.2**	**-0.7**
	0.5nm,0.4s,baz=223,slow=7.7,SNR=2.3						
ZALV				LR	LR	08 48 38.7	
	comp=Z,16nm,18.2s,baz=150,slow=42						
	0.5nm,0.4s						
HFS	**Hagfors**	**53.46**	**341**	LR	LR	08 46 18.9	
	comp=Z,23nm,19.8s,baz=166,slow=38						
ARCES	**ARCESS Array B**	**58.80**	**352**	LR	LR	08 48 48.2	
	comp=Z,16nm,18.4s,baz=92,slow=37						
SONM	**Songino Array**	**61.48**	**42**	P	**P**	**08 23 03.0**	**+0.5**
	0.5nm,0.6s,baz=257,slow=9.0,SNR=3.6						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**92.73**	**110**	P	**P**	**08 25 58.9**	**+0.4**
	0.7nm,0.7s,baz=293,slow=3.4,SNR=9.1						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**93.09**	**113**	P	**P**	**08 26 00.3**	**+0.1**
	0.5nm,0.7s,baz=297,slow=4.5,SNR=6.7						
	0.5nm,0.7s						

*ISK **06** 08:21:14.2,34°.24N×26°.30E,h22km,ML3.4/24*
*ATH **06** 08:21:15.6,34°.38N×26°.06E,h59km±8km,ML2.9/3,Error*
ellipse: s-maj=10.4km s-min=2.0km az=353.0
*THE **06** 08:21:21.8,34°.59N×26°.17E,h23km±9km,ML2.7/2,Error*
ellipse: s-maj=9.3km s-min=2.8km az=53.0
*GII **06** 08:21:21.0±1.1,34°.03

KORT	Korkueli	4.38	49	PN		Pn	08 22 20.9	+1.7
GAZI	Gazipasa	5.40	66	PN		Pn	08 22 34.8	+1.6
SEYD	Seydisehir-KON	5.58	54	PN		Pn	08 22 37.5	+1.8
LEF	Lefka	5.59	79	PN		Pn	08 22 37.5	+1.7
TVSB	Tavsanli	5.84	26	PN		Pn	08 22 41.1	+1.8
TEKE	Tekeli-Mersin	5.98	69	PN		Pn	08 22 43.1	+1.9
BERE	Bereket-Mersin	6.13	68	PN		Pn	08 22 45.3	+2.0
AKKU	Akkuyu-Mersin	6.33	70	PN		Pn	08 22 47.9	+2.0
IKL	Isikli	6.45	70	PN		Pn	08 22 49.8	+2.2
KEBE	Keben-Mersin	6.54	68	PN		Pn	08 22 50.7	+1.9
YTIR	Yattir	8.03	108	Pn		Pn	08 23 11.2	+1.8
YTIR				Sn		Sn	08 24 37.5	-1.8
HMDT	Nahal Hemdat	8.06	101	Pn		Pn	08 23 11.2	+1.5
HMDT				Sn		Sn	08 24 37.2	-2.6
DSI	Dead Sea	8.16	106	Pn		Pn	08 23 12.4	+1.3
PRNI	Paran	8.39	115	Pn		Pn	08 23 16.0	+1.7
ZFRI	Zfri	8.43	113	Pn		Pn	08 23 15.4	+0.7
HRFI	Mount Harif	8.58	117	Pn		Pn	08 23 17.8	+1.0
HRFI				Sn		Sn	08 24 49.8	-2.8
EIL	Elat	8.71	119	Pn		Pn	08 23 19.5	+0.9

*VIE **06** 08:51:48.9±0.6,49°.67N×18°.58E,h0km,mb2.3/3,ml2.6/2, Error ellipse: s-maj=5.1km s-min=3.8km az=162.0 30 km SE of Ostrava Suspected Mining induced.*
*PRU **06** 08:51:50.2±0.0,49°.83N×18°.50E,h0km,Mining Induced Event Darkov, E=7.7e+05*
*IPEC **06** 08:51:50.0±0.2,49°.86N×18°.57E,h0km,ML2.4/4, Error ellipse: s-maj=1.6km s-min=1.0km az=168.0*

ISC 06 08:51:49.6±0.8,49°.86N±0°.03×18°.51E±0°.02,h0km,n31, σ1§00/59,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.24**	**264**	*e*PG	**Pg**	**08 51 55.7**	**+1.6**
OKC				*e*SG	**Sg**	**08 51 58.8**	**+1.6**
	comp=Z,262nm,0.6s						
RAC	**Raciborz**	**0.30**	**317**	*e*PG	**Pb**	**08 51 57.5**	**-0.3**
RAC				*e*SG	**Sb**	**08 52 02.7**	**-0.7**
MORC	**Moravsky Berou**	**0.64**	**263**	*e*Pg	**Pg**	**08 52 02.4**	**+0.8**
	baz=82						
MORC				*e*Sg	**Sg**	**08 52 10.7**	**+0.8**
	85nm,0.5s,baz=82						
MORC	**Moravsky Berou**	**0.64**	**263**	*e*PG	**Pg**	**08 52 02.5**	**+0.8**
MORC				*e*SG	**Sg**	**08 52 10.7**	**+0.8**
OJC	**Ojcow**	**0.90**	**66**	*e*Pg	**Pg**	**08 52 06.5**	**-0.3**
OJC				*e*Sg	**Sg**	**08 52 17.6**	**-0.9**
LANS	**Liptovska Anna**	**0.95**	**139**	*e*PG	**Pb**	**08 52 08.7**	**-0.1**
LANS				*e*SG	**Sb**	**08 52 23.2**	**+1.3**
LANS				*e*LG	Lg	08 52 26.7	
KRLC	**Kraliky**	**1.14**	**281**	*e*PG	**Pg**	**08 52 11.1**	**-0.2**
KRLC				*e*SG	**Sb**	**08 52 27.4**	**-0.1**
	comp=Z,76nm,0.4s						
JAVC	**Velka Javorina**	**1.15**	**209**	*e*Pg	**Pb**	**08 52 12.4**	**+0.2**
	baz=30						
JAVC	**Velka Javorina**	**1.15**	**209**	*e*PG	**Pb**	**08 52 12.5**	**+0.2**
NIE	**Niedzica**	**1.24**	**110**	*e*Pg	**Pb**	**08 52 14.2**	**+0.2**
NIE				*e*Sg	**Sn**	**08 52 32.0**	**+0.3**
VRAC	**Vranov**	**1.37**	**247**	*e*Pg	**Pg**	**08 52 15.9**	**+0.2**
	baz=66						
VRAC				*e*Sg	**Sb**	**08 52 33.7**	**-0.3**
	48nm,0.5s,baz=66						
VRAC	**Vranov**	**1.37**	**247**	*e*PG	**Pg**	**08 52 15.9**	**+0.2**
VRAC				*e*SG	**Sb**	**08 52 33.8**	**-0.3**
DPC	**Dobruska-Polom**	**1.49**	**290**	*e*PG	**Pn**	**08 52 17.5**	**-0.2**
DPC				*e*SG	**Sn**	**08 52 38.4**	**+0.5**
	comp=Z,43nm,0.4s						
KRUC	**Moravsky**	**1.60**	**241**	*e*Pg	**Pn**	**08 52 19.3**	**+0.2**
	baz=60						
KRUC				*e*Sg	**Sg**	**08 52 40.8**	**0.0**
	24nm,0.5s,baz=60						
KRUC	**Moravsky**	**1.60**	**241**	*e*PG	**Pn**	**08 52 19.4**	**+0.3**
KRUC				*e*SG	**Sg**	**08 52 40.8**	**0.0**
OSTC	**Ostas**	**1.63**	**296**	*e*PG	**Pn**	**08 52 20.1**	**+0.6**
OSTC				*e*SG	**Sg**	**08 52 43.2**	**+1.3**
	comp=Z,46nm,0.7s						
MODS	**Modra-Piesok**	**1.70**	**209**	*e*PG	**Pn**	**08 52 20.8**	**+0.4**
MODS				*e*SG	**Sn**	**08 52 42.5**	**-0.4**
MODS				*e*LG	Lg	08 52 48.0	
KSP	**Ksiaz**	**1.73**	**305**	*e*Pg	**Pn**	**08 52 21.8**	**+0.9**
KSP				*e*Sg	**Sg**	**08 52 46.1**	**+1.1**
UPC	**Upice**	**1.73**	**293**	*e*PG	**Pb**	**08 52 22.3**	**+0.1**
UPC				*e*SG	**Sg**	**08 52 46.0**	**+0.8**
KECS	**Kecovo**	**1.89**	**136**	*e*SN	**Sb**	**08 52 49.1**	**0.0**
ZST	**Bratislava**	**1.91**	**210**	*e*PG	**Pn**	**08 52 23.7**	**+0.4**
ZST				*e*SG	**Sn**	**08 52 48.6**	**+0.6**
CRVS	**Cervenica-Dubn**	**2.15**	**115**	*e*PN	**Pg**	**08 52 30.6**	**-0.2**
PRU	**Pruhonice**	**2.57**	**274**	*e*PN	**Pn**	**08 52 31.3**	**-1.1**
PRU				*e*PG	**Pb**	**08 52 35.5**	**-1.0**
PRU				*e*SG	**Sb**	**08 53 09.9**	**+1.3**
	comp=Z,20nm,1.1s						
CONA	**Conrad Observa**	**2.61**	**223**	*e*Pn	**Pn**	**08 52 31.9**	**-1.1**
	2.6nm,0.3s						
CONA				*e*Sn	**Sn**	**08 53 00.9**	**-4.5**
	3.9nm,0.3s						
PVCC	**Panska Ves**	**2.62**	**286**	*e*SG	**Sg**	**08 53 13.1**	**-0.6**
	comp=Z,32nm,0.5s						
KOLS	**Kolonicke sedl**	**2.63**	**109**	*e*PG	**Pg**	**08 52 41.3**	**+1.4**
CKRC	**Cesky Krumlov**	**2.94**	**251**	*e*PG	**Pb**	**08 52 43.4**	**+0.6**
CKRC				*e*SG	**Sg**	**08 53 22.4**	**-1.6**
	comp=Z,11nm,0.5s						
BRG	**Berggiesshubel**	**3.10**	**291**	Pg	**Pb**	**08 52 46.8**	**+1.3**
BRG				Sg	**Sg**	**08 53 27.9**	**-1.0**
BRG				Amp		08 53 33.5	
	comp=Z,11nm,0.5s						
KHC	**Kasperske Hory**	**3.30**	**259**	*e*PN	**Pn**	**08 52 42.3**	**-0.2**
KHC				*e*PG	**Pb**	**08 52 49.7**	**+0.7**
KHC				*e*SG	**Sg**	**08 53 35.2**	**-0.3**
	comp=Z,14nm,0.5s						
MOA	**Molln**	**3.45**	**236**	*e*Pn	**Pn**	**08 52 44.0**	**-0.5**
	comp=Z,0.7nm,0.2s						
MOA				*i* Sn	**Sn**	**08 53 24.7**	**-1.5**
	comp=Z,2.4nm,0.3s						
CLL	**Collm**	**3.80**	**294**	*e*Pn	**Pn**	**08 52 50.0**	**+0.7**
CLL				*e*Pg	**Pg**	**08 53 01.0**	**-1.3**
CLL				*e*Sg	**Sg**	**08 53 51.0**	**-0.5**
	comp=Z,9.0nm,0.5s						

*MDD **06** 08:52:13.6±1.2,32°.22N×5°.64W,h3km,Mb4.1/5, M_mb3.5/5,Error ellipse: s-maj=9.5km s-min=7.2km az=141.0*
*CNRM **06** 08:52:15.4,32°.45N×5°.79W,h4km,ml2.9*
*INMG **06** 08:52:16.5±1.6,32°.41N×5°.69W,h5km±33km,ML2.3,Error ellipse: s-maj=32.0km s-min=6.5km az=154.0*

ISC 06 08:52:15.8±1.3,32°.43N±0°.04×5°.66W±0°.03,h16km±10km, n30,σ1§26/54,5C,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZD	**Col de Zad**	**0.80**	**40**	P	**Pn**	**08 52 32.2**	**-0.5**
CZD				S	**Sn**	**08 52 44.4**	**0.0**
MD31	**MD31**	**0.88**	**60**	P	**Pg**	**08 52 32.2**	**-0.7**
MD31				S	**Sn**	**08 52 46.6**	**+0.5**
MDT	**Midelt**	**0.97**	**66**	P	**Pb**	**08 52 33.7**	**-0.5**
MDT				S	**Sn**	**08 52 49.9**	**+1.6**
IFR	**Ifrane**	**1.18**	**22**	P	**Pg**	**08 52 40.0**	**+1.4**
IFR				S	**Sn**	**08 52 57.3**	**+3.7**
LCRM	**LCR**	**1.42**	**28**	P	**Pn**	**08 52 41.3**	**+0.1**
LCRM				S	**Sg**	**08 53 01.4**	**-0.5**
AVE	**Averroes**	**1.71**	**301**	P	**Pg**	**08 52 48.0**	**-0.7**
AVE				S	**Sg**	**08 53 12.5**	**+1.4**
AVE	**Averroes**	**1.71**	**301**	P	**Pg**	**08 52 48.2**	**-0.6**
AVE				S	**Sb**	**08 53 08.2**	**-0.1**
SRHM	**Skhour des Reh**	**1.90**	**272**	P	**Pb**	**08 52 49.3**	**-0.8**
SRHM				S	**Sb**	**08 53 13.5**	**0.0**
OUK	**Oukaimeden**	**2.24**	**238**	P	**Pn**	**08 52 52.6**	**0.0**
OUK				S	**Sn**	**08 53 20.6**	**+0.6**
TTIG	**Tnine Tigouga,**	**3.03**	**233**	P	**Pn**	**08 53 03.5**	**+0.3**
TTIG				S	**Sn**	**08 53 40.4**	**+1.2**
JBK	**JBK**	**3.21**	**53**	P	**Pn**	**08 53 06.4**	**+0.6**
FIGM	**Figuig**	**3.73**	**93**	P	**Pn**	**08 53 15.7**	**+2.8**
FIGM				S	**Sb**	**08 54 03.0**	**-3.6**
EMIJ	**Mijas**	**4.19**	**10**	Sn	**Sn**	**08 54 08.8**	**+1.0**
PBDV	**Barranco-do-Ve**	**5.16**	**339**	*e*P	**Pn**	**08 53 33.6**	**+1.2**
PBDV				*e*S	**Sn**	**08 54 31.7**	**+0.2**
PBDV				A	A	08 54 42.4	
	2.4nm,0.6s						
PVAQ	**Vaqueiros**	**5.25**	**342**	P	**Pn**	**08 53 34.2**	**+0.6**
PVAQ				S	**Sn**	**08 54 32.4**	**-1.3**
PVAQ	**Vaqueiros**	**5.25**	**342**	*e*P	**Pn**	**08 53 34.7**	**+1.1**
PVAQ				A	A	08 54 49.5	
	2.5nm,0.7s						
EGRO	**El Granado**	**5.31**	**344**	Pn	**Pn**	**08 53 34.4**	**-0.1**
EGRO				⇑*i*Vmb_V		08 53 43.7	
	161nm,SNR=1.7						
EGRO				Sn	**Sn**	**08 54 35.8**	**+0.4**
PFVI	**Vila Bisbo**	**5.37**	**332**	*e*S	**Sn**	**08 54 36.5**	**-0.3**
EMIN	**Mina Concepcio**	**5.39**	**351**	⇑*i*Vmb_V		08 53 35.4	
	128nm,SNR=1.8						
EMIN				Pn	**Pn**	**08 53 36.3**	**+0.8**
EMIN				Sn	**Sn**	**08 54 37.2**	**-0.1**
MORF	**Marmelete**	**5.46**	**334**	*e*S	**Sn**	**08 54 38.3**	**-0.6**
PCVE	**Castro Verde**	**5.55**	**340**	*e*P	**Pn**	**08 53 40.2**	**+2.5**
PCVE				*e*S	**Sn**	**08 54 40.7**	**-0.5**
PCVE				A	A	08 54 54.9	
	2.7nm,0.8s						
ECAB	**El Cabril**	**5.64**	**2**	Pn	**Pn**	**08 53 39.9**	**+0.9**
ECAB				⇑*i*Vmb_V		08 53 46.5	
	78nm,SNR=1.3						
ECAB				Sn	**Sn**	**08 54 42.7**	**-0.7**
MESJ	**Messejana**	**5.79**	**339**	*e*P	**Pn**	**08 53 42.9**	**+1.8**
MESJ				*e*S	**Sn**	**08 54 47.4**	**+0.2**
MESJ				A	A	08 55 08.7	
	2.5nm,0.6s						
EADA	**Adamuz**	**5.80**	**8**	Pn	**Pn**	**08 53 42.0**	**+0.8**
EADA				⇑*i*Vmb_V		08 53 42.8	
	71nm,SNR=1.4						
EADA				Sn	**Sn**	**08 54 47.1**	**-0.2**
PBAR	**Barrancos**	**5.85**	**349**	*e*P	**Pn**	**08 53 43.6**	**+1.8**
PBAR				*e*S	**Sn**	**08 54 47.1**	**-1.4**
PBAR				A	A	08 54 52.8	
	1.7nm,0.2s						
PNCL	**Nicolau / Gran**	**6.14**	**338**	*e*P	**Pn**	**08 53 47.1**	**+1.3**
PNCL				*e*S	**Sn**	**08 54 55.0**	**-0.7**
PNCL				A	A	08 55 00.5	
	1.7nm,0.6s						
EVO	**Evora**	**6.39**	**343**	*e*S	**Sn**	**08 55 01.1**	**-0.7**
EBAD	**Badajoz**	**6.41**	**350**	Pn	**Pn**	**08 53 50.4**	**+0.8**
EBAD				⇑*i*Vmb_V		08 53 58.3	
	136nm,SNR=1.7						
EBAD				Sn	**Sn**	**08 55 01.8**	**-0.6**
PESTR	**Estremoz**	**6.62**	**347**	*e*P	**Pn**	**08 53 53.0**	**+0.6**
PESTR				*e*S	**Sn**	**08 55 06.6**	**-0.9**
PESTR				A	A	08 55 32.0	
	2.0nm,0.6s						
PMRV	**Marv??o**	**7.13**	**349**	*e*P	**Pn**	**08 54 00.9**	**+1.5**
PMRV				*e*S	**Sn**	**08 55 18.5**	**-1.6**
PMRV				A	A	08 55 32.9	
	1.9nm,0.8s						

*AEIC **06** 08:53:42.7±1.2,61°.29N±0°.03×150°.40W±0°.05,h49km±4km, ML3.4/182,ML3.6/154(NEIC),Error ellipse: s-maj=3.7km s-min=3.6km az=145.0*
*ANF **06** 08:53:42.1±0.1,61°.26N×150°.42W,h45km±2km,ML3.8/80, Error ellipse: s-maj=1.1km s-min=0.9km az=178.0*
*NEIC **06** 08:53:42.1±1.5,61°.31N±0°.02×150°.42W±0°.05,h51km±5km, Error ellipse: s-maj=3.7km s-min=2.6km az=109.0*
*IDC **06** 08:53:43.2±5.3,61°.11N×148°.59W,h0km,mb3.4/3, mbtmp3.3/4,ML3.2/1, Error ellipse: s-maj=119.2km s-min=14.8km az=79.0*

ISC 06 08:53:41.8±1.0,61°.29N±0°.02×150°.41W±0°.02,h36km±1km, n299,σ0§85/307,mb3.2/3,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIS	**Fire Island**	**0.17**	**148**		**Pn**	**08 53 49.6**	**-1.5**
SUA	**Susitna One**	**0.24**	**317**		**Pn**	**08 53 50.4**	**+0.2**
SUA	**Susitna One**	**0.24**	**317**		**Sn**	**08 53 57.4**	**-0.2**
SUA	**Susitna One**	**0.24**	**317**	IAML		08 53 50.7	
	comp=E,820nm,0.2s						
SUA				IAML		08 53 51.0	
	comp=N,2µm,0.2s						
SUA	**Susitna One**	**0.24**	**317**	P	**Pn**	**08 53 50.4**	**+0.2**
	baz=136						
SUA				S	**Sn**	**08 53 57.1**	**-0.6**
	baz=136						
RC01	**Rabbit Creek A**	**0.38**	**121**		**Pn**	**08 53 51.8**	**+1.2**
RC01				IAML		08 54 00.4	
	comp=E,7µm,0.5s						
RC01				IAML		08 54 00.5	
	comp=N,4µm,0.2s						
RC01	**Rabbit Creek A**	**0.38**	**121**		**Sn**	**08 53 59.9**	**+2.6**
RC01	**Rabbit Creek A**	**0.38**	**121**	P	**Pn**	**08 53 51.8**	**+1.2**
	baz=303,SNR=88						
RC01				S	**Sn**	**08 53 59.6**	**+2.3**
	baz=303						
M22K	**Willow**	**0.48**	**17**		**Pn**	**08 53 52.4**	**+0.2**
M22K					**Sn**	**08 54 01.5**	**+2.1**
M22K	**Willow**	**0.48**	**17**	P	**Pn**	**08 53 52.6**	**+0.5**
	baz=196,SNR=733						
M22K				S	**Sn**	**08 54 01.5**	**+2.1**
	baz=196						
CAPN	**Captain Cook N**	**0.64**	**215**		**Pn**	**08 53 56.2**	**+1.9**
CAPN	**Captain Cook N**	**0.64**	**215**	IAML		08 54 10.7	
	comp=N,4µm,0.5s						
CAPN				IAML		08 54 12.0	
	comp=E,5µm,0.4s						
CAPN	**Captain Cook N**	**0.64**	**215**	P	**Pn**	**08 53 56.3**	**+1.9**
	baz=35,SNR=12						
PMR	**Palmer**	**0.69**	**63**		**Pn**	**08 53 54.6**	**-0.4**
PMR				IAML		08 54 05.9	
	comp=N,3µm,0.4s						
PMR				IAML		08 54 06.7	
	comp=E,2µm,0.2s						
PMR	**Palmer**	**0.69**	**63**		**Sn**	**08 54 05.2**	**+0.9**
PMR	**Palmer**	**0.69**	**63**	P	**Pn**	**08 53 55.0**	**0.0**
	baz=244,SNR=624						
PMR				S	**Sn**	**08 54 05.3**	**+0.9**
	baz=244						
STLK	**Strandline Lak**	**0.72**	**288**		**Pn**	**08 53 55.9**	**+0.4**
SPCG	**Spurr Capps Gl**	**0.78**	**271**		**Pn**	**08 53 56.6**	**+0.2**
SPCG					**Sn**	**08 54 08.2**	**+1.3**
SLKM	**Skilak Lake**	**0.79**	**173**		**Pn**	**08 53 56.5**	**+0.1**
SLKM					**Sn**	**08 54 09.2**	**+2.1**
SPU	**Mount Spurr**	**0.80**	**263**		**Pn**	**08 53 56.7**	**+0.1**
CRP	**Crater Peak**	**0.84**	**269**		**Pn**	**08 53 57.4**	**+0.1**
CRP					**Sn**	**08 54 09.8**	**+1.3**
GHO	**Glory Hole Cre**	**0.86**	**55**		**Pn**	**08 53 57.4**	**0.0**
GHO	**Glory Hole Cre**	**0.86**	**55**		**Sn**	**08 54 10.2**	**+1.3**
SPCR	**Spurr Chakacha**	**0.87**	**265**		**Pn**	**08 53 57.5**	**-0.2**
SPCR					**Sn**	**08 54 10.0**	**+0.8**
SPCR	**Spurr Chakacha**	**0.87**	**265**	P	**Pn**	**08 53 57.7**	**0.0**
	baz=83,SNR=103						
SPCR				S	**Sn**	**08 54 09.9**	**+0.7**
	baz=83						
O22K	**Cooper Landing**	**0.88**	**157**		**Pn**	**08 53 58.0**	**+0.5**
O22K	**Cooper Landing**	**0.88**	**157**		**Sn**	**08 54 11.1**	**+1.9**
O22K	**Cooper Landing**	**0.88**	**157**	P	**Pn**	**08 53 58.1**	**+0.5**
	baz=338,SNR=107						
CKL	**Chakachamna La**	**0.94**	**265**		**Pn**	**08 53 58.6**	**0.0**
KNK	**Knik Glacier**	**0.95**	**82**		**Pn**	**08 53 58.6**	**0.0**
KNK	**Knik Glacier**	**0.95**	**82**		**Sn**	**08 54 13.0**	**+2.0**
KNK	**Knik Glacier**	**0.95**	**82**	P	**Pn**	**08 53 59.1**	**+0.5**
	baz=263,SNR=175						
KNK				S	**Sn**	**08 54 12.9**	**+2.0**
	baz=263						
SPWE	**Spurr West**	**1.04**	**270**		**Pn**	**08 54 00.1**	**+0.2**
PWL	**Port Wells**	**1.10**	**112**		**Pn**	**08 54 01.0**	**+0.4**
PWL				IAML		08 54 19.0	
	comp=N,2µm,0.4s						
PWL	**Port Wells**	**1.10**	**112**		**Sn**	**08 54 16.3**	**+1.7**
PWL	**Port Wells**	**1.10**	**112**	P	**Pn**	**08 54 01.1**	**+0.4**
	baz=294,SNR=132						
PWL				S	**Sn**	**08 54 15.7**	**+1.1**
	baz=294						
CUT	**Chulitna**	**1.12**	**3**		**Pn**	**08 54 00.9**	**0.0**
CUT				IAML		08 54 17.4	
	comp=N,2µm,0.3s						
CUT	**Chulitna**	**1.12**	**3**	P	**Pn**	**08 54 01.0**	**0.0**
	baz=183,SNR=28						
CUT				S	**Sn**	**08 54 16.7**	**+1.6**
	baz=183						
SML	**Sawmill**	**1.12**	**62**		**Pn**	**08 54 01.0**	**0.0**
SML	**Sawmill**	**1.12**	**62**	P	**Pn**	**08 54 01.2**	**+0.2**
	baz=243,SNR=246						
SML				S	**Sn**	**08 54 16.6**	**+1.4**
	baz=243						
SEW	**Seward**	**1.28**	**158**	P	**Pn**	**08 54 02.8**	**-0.2**
	baz=339,SNR=52						
DFR	**Drift River**	**1.31**	**239**		**Pn**	**08 54 03.9**	**+0.3**
DFR					**Sn**	**08 54 21.1**	**+1.1**
RDJH	**Redoubt Jeurge**	**1.36**	**240**		**Pn**	**08 54 04.7**	**+0.4**
RDJH					**Sn**	**08 54 22.3**	**+1.1**
M23K	**Glacier View**	**1.38**	**67**		**Pn**	**08 54 05.0**	**+0.5**
M23K	**Glacier View**	**1.38**	**67**	P	**Pn**	**08 54 04.8**	**+0.3**
	baz=250,SNR=133						
RDSO	**Redoubt South**	**1.42**	**235**		**Pn**	**08 54 05.4**	**+0.3**
RSO	**Redoubt South**	**1.42**	**235**		**Pn**	**08 54 05.1**	**-0.1**
M20K	**Styx River**	**1.43**	**296**		**Pn**	**08 54 05.8**	**+0.6**
M20K				IAML		08 54 26.1	
	comp=N,768nm,0.7s						
M20K				IAML		08 54 26.2	
	comp=E,1µm,0.8s						
M20K	**Styx River**	**1.43**	**296**	P	**Pn**	**08 54 05.9**	**+0.6**
	baz=113,SNR=212						
M20K				S	**Sn**	**08 54 24.0**	**+1.1**
	baz=113						
NCT	**North Crescent**	**1.43**	**240**		**Pn**	**08 54 05.7**	**+0.4**
NCT					**Sn**	**08 54 24.1**	**+1.2**
RDWB	**Redoubt West**	**1.44**	**237**		**Pn**	**08 54 05.7**	**+0.3**
RED	**Redoubt Volcan**	**1.45**	**234**		**Pn**	**08 54 05.8**	**+0.3**
BRLK	**Bradley Lake**	**1.55**	**189**		**Pn**	**08 54 07.1**	**+0.2**
BRLK				IAML		08 54 30.5	
	comp=N,717nm,0.4s						
BRLK				IAML		08 54 31.1	
	comp=E,910nm,0.4s						
BRSE	**Bradley Lake S**	**1.56**	**186**		**Pn**	**08 54 07.2**	**+0.1**
BRSE	**Bradley Lake S**	**1.56**	**186**	P	**Pn**	**08 54 07.1**	**+0.1**
	baz=6.1,SNR=18						
SCM	**Sheep Creek Mo**	**1.57**	**68**		**Pn**	**08 54 07.1**	**-0.1**
SCM				IAML		08 54 29.2	
	comp=N,761nm,0.5s						
SCM				IAML		08 54 31.1	
	comp=E,685nm,0.6s						
SCM	**Sheep Creek Mo**	**1.57**	**68**	P	**Pn**	**08 54 07.5**	**+0.3**
	baz=251,SNR=97						
SCM				S	**Sn**	**08 54 27.1**	**+0.8**
	baz=251						
O20K	**Slope Mountain**	**1.63**	**223**		**Pn**	**08 54 08.9**	**+0.9**
O20K	**Slope Mountain**	**1.63**	**223**	P	**Pn**	**08 54 08.9**	**+0.9**
	baz=41,SNR=26						
GLI	**Glacier Island**	**1.66**	**103**		**Pn**	**08 54 08.1**	**-0.3**
GLI				IAML		08 54 36.1	
	comp=N,834nm,0.7s						
GLI	**Glacier Island**	**1.66**	**103**	P	**Pn**	**08 54 07.9**	**-0.5**
	baz=286,SNR=22						
GLI				S	**Sn**	**08 54 29.1**	**+0.7**
	baz=286						
WAT7	**Susitna Watana**	**1.71**	**25**		**Pn**	**08 54 09.8**	**+0.6**
HOM	**Homer**	**1.75**	**201**		**Pn**	**08 54 10.5**	**+1.0**
HOM	**Homer**	**1.75**	**201**	P	**Pn**	**08 54 10.4**	**+0.8**
	baz=20						
WAT1	**Susitna Watana**	**1.78**	**29**		**Pn**	**08 54 11.0**	**+1.0**
WAT1	**Susitna Watana**	**1.78**	**29**	P	**Pn**	**08 54 10.9**	**+1.0**
	baz=210						
WAT6	**Susitna Watana**	**1.81**	**43**		**Pn**	**08 54 11.1**	**+0.5**
WAT6	**Susitna Watana**	**1.81**	**43**	P	**Pn**	**08 54 11.1**	**+0.5**
	baz=225,SNR=63						
WAT6				S	**Sn**	**08 54 33.0**	**+0.7**
	baz=225						
IVE	**Iliamna Volcan**	**1.81**	**226**		**Pn**	**08 54 11.3**	**+0.8**
PPLA	**Purkeypile**	**1.82**	**333**	Pn	**Pn**	**08 54 11.2**	**+0.6**
PPLA	**Purkeypile**	**1.82**	**333**	P	**Pn**	**08 54 11.1**	**+0.5**
	baz=152,SNR=37						
CNPM	**China Poot**	**1.82**	**193**		**Pn**	**08 54 10.2**	**-0.4**
CNPM				IAML		08 54 37.0	
	comp=E,643nm,0.5s						
CNPM				IAML		08 54 37.5	
	comp=N,587nm,0.6s						
JPK	**Jack Peak**	**1.86**	**96**		**Pn**	**08 54 11.0**	**-0.2**
ILSW	**Iliamna Southw**	**1.88**	**227**		**Pn**	**08 54 12.4**	**+1.0**
ILSW				IAML		08 54 38.7	
	comp=E,400nm,0.8s						
ILSW				IAML		08 54 41.2	
	comp=N,299nm,0.8s						
P23K	**Montague Islan**	**1.97**	**130**		**Pn**	**08 54 11.8**	**-0.8**
P23K	**Montague Islan**	**1.97**	**130**	P	**Pn**	**08 54 11.8**	**-0.8**
	baz=313,SNR=8.3						
VMT	**TAPS TI Valdez**	**1.97**	**94**		**Pn**	**08 54 12.6**	**0.0**
FID	**Port Fidalgo**	**1.99**	**104**		**Pn**	**08 54 11.9**	**-1.0**
FID				IAML		08 54 45.9	
	comp=E,749nm,0.4s						
FID				IAML		08 54 46.0	
	comp=N,686nm,0.6s						
M19K	**Big River Lodg**	**2.00**	**290**		**Pn**	**08 54 13.3**	**+0.3**
M19K	**Big River Lodg**	**2.00**	**290**	IAML		08 54 53.2	
	comp=N,480nm,0.7s						
M19K	**Big River Lodg**	**2.00**	**290**	P	**Pn**	**08 54 13.4**	**+0.3**
	baz=106						
M19K				S	**Sn**	**08 54 38.1**	**+1.3**
	baz=106						
L20K	**Farewell, AK**	**2.03**	**307**		**Pn**	**08 54 13.8**	**+0.3**
L20K	**Farewell, AK**	**2.03**	**307**	P	**Pn**	**08 54 13.6**	**+0.2**
	baz=124,SNR=58						
L20K				S	**Sn**	**08 54 39.0**	**+1.5**
	baz=124						
N19K	**Bonanza Creek**	**2.04**	**258**		**Pn**	**08 54 13.8**	**+0.1**
N19K	**Bonanza Creek**	**2.04**	**258**	P	**Pn**	**08 54 14.1**	**+0.4**
	baz=75,SNR=22						
N19K				S	**Sn**	**08 54 38.6**	**+0.7**
	baz=75						
HIN	**Hinchinbrook I**	**2.11**	**113**		**Pn**	**08 54 14.8**	**+0.2**
HIN				IAML		08 54 49.2	
	comp=E,540nm,0.7s						
HIN				IAML		08 54 51.1	
	comp=N,593nm,0.7s						
OPT	**Oil Point**	**2.16**	**222**

comp=E,127nm,0.7s
K20K Telida 2.69 322 P Pn 08 54 22.7 +0.2
baz=139,SNR=76
K20K S Sn 08 54 54.0 +0.3
baz=139
HARP HAARP 2.73 64 Pn 08 54 23.9 +0.8
HARP HAARP 2.73 64 P Pn 08 54 23.8 +0.8
baz=248,SNR=30
N18K Kilae Creek 2.74 259 Pn 08 54 23.3 +0.1
N18K Kilae Creek 2.74 259 P Pn 08 54 23.3 +0.1
baz=75,SNR=23
CHUM Lake Minchumin 2.75 342 Pn 08 54 24.0 +0.7
CHUM Lake Minchumin 2.75 342 P Pn 08 54 23.8 +0.6
baz=160,SNR=18
Q23K Middleton Isla 2.75 131 Pn 08 54 22.4 -0.8
Q23K Middleton Isla 2.75 131 IAML 08 55 21.6
comp=N,175nm,1.8s
Q23K IAML 08 55 38.3
comp=E,206nm,1.5s
MID Middleton Isla 2.75 131 Pn 08 54 22.4 -0.9
MID Middleton Isla 2.75 131 IAML 08 55 21.6
comp=N,214nm,2.0s
MID IAML 08 55 24.6
comp=E,192nm,1.8s
O18K Koktuh Hills 2.77 241 Pn 08 54 23.6 -0.1
O18K Koktuh Hills 2.77 241 IAML 08 54 57.3
comp=N,128nm,0.6s
O18K Koktuh Hills 2.77 241 P Pn 08 54 23.8 +0.2
baz=57
N25K Chitina, Valde 2.81 81 Pn 08 54 23.2 -1.0
N25K IAML 08 55 06.1
comp=E,154nm,0.6s
N25K IAML 08 55 07.7
comp=N,233nm,0.4s
N25K Chitina, Valde 2.81 81 P Pn 08 54 23.9 -0.3
baz=266
BPAW Bear Paw Mtn. 2.83 355 Pn 08 54 24.9 +0.4
BPAW Bear Paw Mtn. 2.83 355 IAML 08 55 11.7
comp=N,120nm,0.6s
BPAW Bear Paw Mtn. 2.83 355 P Pn 08 54 24.8 +0.4
baz=174,SNR=19
BMRM Bremner River 2.83 94 P Pn 08 54 24.2 -0.3
baz=279,SNR=58
GOAT Goat Mountain 2.86 102 Pn 08 54 24.2 -0.8
PAX Paxson 2.87 52 Pn 08 54 26.3 +1.3
PAX Paxson 2.87 52 P Pn 08 54 26.3 +1.3
baz=236,SNR=61
SYI Shuyak Island 2.87 201 Pn 08 54 25.2 +0.3
Q20K Shuyak Island 2.87 201 P Pn 08 54 25.1 +0.2
baz=20
Q19K Cape Douglas, 2.87 216 Pn 08 54 25.9 +0.9
Q19K Cape Douglas, 2.87 216 P Pn 08 54 25.3 +0.3
baz=33,SNR=7.7
BWN Browne 2.92 8 Pn 08 54 26.9 +1.2
BWN IAML 08 55 16.1
comp=E,266nm,1.1s
BWN IAML 08 55 28.2
comp=N,267nm,0.5s
RAGM Ragged Mountai 2.95 105 Pn 08 54 25.1 -1.1
WACK Wrangell Chich 2.99 74 Pn 08 54 26.2 -0.5
WASW Wrangell South 3.05 75 Pn 08 54 26.9 -0.7
P18K Big Mountain, 3.06 234 P Pn 08 54 27.9 +0.3
baz=50
TT01 Tatalina 3.10 304 Pn 08 54 28.2 +0.2
TTA Tatalina 3.10 304 Pn 08 54 28.3 0.0
TTA Tatalina 3.10 304 P Pn 08 54 28.2 0.0
baz=120,SNR=22
HMT Hamilton 3.16 105 Pn 08 54 27.7 -1.3
GLB Gilahina Butte 3.18 84 Pn 08 54 29.2 -0.1
GLB IAML 08 55 20.1
comp=N,171nm,0.7s
GLB IAML 08 55 23.7
comp=E,86nm,0.5s
KAIM Kayak Island 3.26 112 Pn 08 54 30.2 -0.1
KAIM Kayak Island 3.26 112 IAML 08 55 27.0
comp=E,103nm,0.7s
KAIM IAML 08 56 01.9
comp=N,89nm,2.3s
K24K Donnelly Dome 3.31 38 Pn 08 54 33.2 +2.1
NICHA Nichawak Mount 3.33 106 Pn 08 54 29.8 -1.6
WRH Wood River Hil 3.37 17 Pn 08 54 32.2 +0.5
WRH Wood River Hil 3.37 17 IAML 08 55 29.8
comp=E,89nm,0.8s
WRH IAML 08 55 32.8
comp=N,88nm,0.8s
J20K Nowinta River 3.37 331 Pn 08 54 32.2 +0.4
J20K Nowinta River 3.37 331 IAML 08 55 11.8
comp=E,133nm,0.4s
J20K IAML 08 55 12.0
comp=N,188nm,0.6s
J20K Nowinta River 3.37 331 P Pn 08 54 32.2 +0.4
baz=148,SNR=47
NEA2 Nenana 3.37 10 Pn 08 54 32.9 +1.1
NEA2 Nenana 3.37 10 P Pn 08 54 32.5 +0.7
baz=191,SNR=9.0
BERG Berg Lake 3.41 102 Pn 08 54 32.9 +0.6
Q18K Katmai Hardscr 3.52 223 P Pn 08 54 34.3 +0.3
baz=39
RIDG Independent Ri 3.56 44 Pn 08 54 35.9 +1.4
RIDG Independent Ri 3.56 44 P Pn 08 54 35.7 +1.2
baz=229,SNR=24
CCB Clear Creek Bu 3.57 18 Pn 08 54 35.2 +0.7
CCB Clear Creek Bu 3.57 18 IAML 08 55 34.5
comp=E,88nm,0.9s
KHIT Khitrov Hills 3.60 100 Pn 08 54 36.0 +0.8
GRIN Grindle Hills 3.62 103 Pn 08 54 34.1 -1.2
O17K Koliganek Bris 3.64 248 Pn 08 54 35.6 +0.1
O17K Koliganek Bris 3.64 248 P Pn 08 54 35.6 +0.1
baz=62
P17K Kvichak River 3.67 238 Pn 08 54 36.6 +0.8
P17K Kvichak River 3.67 238 P Pn 08 54 36.6 +0.8
baz=52
M26K Nabesna, AK 3.69 69 Pn 08 54 36.9 +0.6
M26K IAML 08 55 38.5
comp=N,65nm,0.7s
M26K IAML 08 55 47.6
comp=E,73nm,0.6s
KDAK Kodiak Island 3.69 198 Pn 08 54 35.4 -0.8
KDAK Kodiak Island 3.69 198 IAML 08 55 35.3
comp=E,92nm,0.8s
KDAK IAML 08 55 36.0
comp=E,109nm,1.0s
KDAK Kodiak Island 3.69 198 P Pn 08 54 35.6 -0.6
baz=17
TGL Tana Glacier 3.73 95 Pn 08 54 37.0 +0.1
TGL Tana Glacier 3.73 95 IAML 08 55 41.1
comp=N,117nm,0.8s
L26K Log Cabin Wild 3.74 59 Pn 08 54 37.2 +0.3
L26K IAML 08 55 42.3
comp=E,122nm,0.5s
L26K IAML 08 55 43.1
comp=N,146nm,0.5s
L26K Log Cabin Wild 3.74 59 P Pn 08 54 37.4 +0.4
baz=245,SNR=20
MLY Manley 3.76 358 Pn 08 54 37.7 +0.5
MLY Manley 3.76 358 P Pn 08 54 37.9 +0.7
baz=177,SNR=23
TCOL CIGO, UAF Yank 3.78 17 Pn 08 54 36.9 -0.5
TCOL CIGO, UAF Yank 3.78 17 P Pn 08 54 38.4 +1.0
baz=199,SNR=13
DOT Dot Lake 3.78 48 Pn 08 54 37.3 -0.2
COLA College 3.78 17 Pn 08 54 38.3 +0.9
COLA College 3.78 17 P Pn 08 54 38.5 +1.1
baz=199
WAX Waxell Ridge 3.79 100 Pn 08 54 36.9 -0.8
MDM Murphy Dome 3.81 14 Pn 08 54 39.0 +1.1
MDM Murphy Dome 3.81 14 IAML 08 55 42.8
comp=E,71nm,0.8s
PTPK Patty Peak 3.84 88 Pn 08 54 39.0 +0.5
IL31 3.84 23 Pn 08 54 38.3 0.0
ILAR Eielson Array 3.84 23 Pn **Pn 08 54 39.6 +1.3**
comp=E,1.6nm,0.3s,baz=204,slow=15,SNR=34
ILAR Sn **Sn 08 55 23.9 +1.6**
comp=E,5.2nm,0.3s,baz=204,slow=20,SNR=3.6
comp=E,2.8nm,0.4s
ILAR Eielson Array 3.84 23 Pn 08 54 39.1 +0.8
I23K Minto, Yukon-K 3.90 7 Pn 08 54 39.5 +0.4
I23K Minto, Yukon-K 3.90 7 IAML 08 55 44.2
comp=N,54nm,0.7s
I23K Minto, Yukon-K 3.90 7 P Pn 08 54 40.2 +1.2
baz=187,SNR=14
BALM Baldy 3.92 90 Pn 08 54 39.7 +0.2
KIAG Kiagna River 3.93 92 Pn 08 54 39.5 -0.1
I21K Tanana 3.97 350 Pn 08 54 40.2 +0.2
I21K Tanana 3.97 350 IAML 08 55 40.1
comp=E,62nm,0.7s
I21K IAML 08 55 40.9
comp=N,55nm,0.7s
I21K Tanana 3.97 350 P Pn 08 54 40.7 +0.7
baz=169,SNR=7.5
BARK Barkley Ridge 3.98 99 Pn 08 54 39.9 -0.3
SCRK Sand Creek 4.01 45 Pn 08 54 41.0 +0.3
SCRK Sand Creek 4.01 45 IAML 08 55 43.8
comp=N,60nm,0.7s
SCRK IAML 08 55 46.3
comp=E,72nm,0.7s
SCRK Sand Creek 4.01 45 P Pn 08 54 40.9 +0.2
baz=230,SNR=8.3
J25K Salcha River, 4.05 32 P Pn 08 54 42.3 +1.0
baz=217
POKR Poker Plat Res 4.07 18 Pn 08 54 42.8 +1.4
POKR IAML 08 55 55.2
comp=N,43nm,0.7s
POKR IAML 08 55 57.2
comp=E,42nm,1.0s
POKR Poker Plat Res 4.07 18 P Pn 08 54 42.6 +1.2
baz=201
N16K Nishlik Lake 4.17 262 Pn 08 54 42.9 +0.1
N16K Nishlik Lake 4.17 262 P Pn 08 54 42.9 +0.1
baz=75,SNR=5.8
O16K Kokwok River B 4.17 249 Pn 08 54 43.5 +0.8
O16K Kokwok River B 4.17 249 P Pn 08 54 43.0 +0.2
baz=63
M27K Edge Creek, AK 4.19 71 Pn 08 54 44.3 +1.2
M27K Edge Creek, AK 4.19 71 P Pn 08 54 43.9 +0.8
baz=259
BARN Barnard Glacie 4.24 89 Pn 08 54 44.9 +0.9
BARN IAML 08 55 49.4
comp=N,47nm,0.7s
BARN IAML 08 55 55.4
comp=E,78nm,0.7s
OHAK Old Harbor 4.34 201 Pn 08 54 44.0 -1.1
OHAK Old Harbor 4.34 201 IAML 08 55 56.0
comp=E,57nm,0.9s
OHAK IAML 08 55 57.7
comp=N,47nm,1.1s
OHAK Old Harbor 4.34 201 P Pn 08 54 44.2 -0.9
baz=19
L27K Beaver Creek, 4.40 62 Pn 08 54 46.4 +0.4
L27K Beaver Creek, 4.40 62 P Pn 08 54 46.1 +0.2
baz=250
CTG Chitna Glacier 4.41 90 P Pn 08 54 46.4 +0.1
baz=278
P16K Nushagak River 4.41 242 Pn 08 54 47.1 +1.0
P16K Nushagak River 4.41 242 P Pn 08 54 46.9 +0.8
baz=56
CTGM Chitina Glacie 4.42 90 Pn 08 54 46.5 +0.2
CTGM IAML 08 56 02.8
comp=N,39nm,0.6s
BC03 4.42 62 Pn 08 54 46.5 +0.4
BCAR Beaver Creek A 4.42 62 Pn **Pn 08 54 45.8 -0.4**
J26L Joseph Creek 4.49 41 Pn 08 54 48.0 +0.7
J26L Joseph Creek 4.49 41 P Pn 08 54 47.8 +0.5
baz=227
H21K Melozitna Rive 4.51 347 Pn 08 54 48.2 +0.7
H21K Melozitna Rive 4.51 347 P Pn 08 54 48.4 +0.9
baz=165,SNR=22
H23K Yukon River 4.57 4 Pn 08 54 48.7 +0.4
H23K Yukon River 4.57 4 P Pn 08 54 49.2 +0.9
baz=185
YUK2 White River 4.61 80 Pn 08 54 49.5 +0.6
H22K Ishtalitna Cre 4.64 355 Pn 08 54 49.7 +0.4
H22K Ishtalitna Cre 4.64 355 P Pn 08 54 50.4 +1.2
baz=174,SNR=23
H24K Noodor Dome 4.70 13 Pn 08 54 51.3 +1.1
H24K IAML 08 56 16.5
comp=E,29nm,0.9s
H24K Noodor Dome 4.70 13 P Pn 08 54 51.8 +1.6
baz=195,SNR=10
K27K Chicken 4.72 51 Pn 08 54 50.5 +0.1
K27K Chicken 4.72 51 IAML 08 56 13.2
comp=E,25nm,0.7s
K27K Chicken 4.72 51 P Pn 08 54 51.6 +1.2
baz=238
PRP Porcupine Dome 4.78 25 P Pn 08 54 52.5 +1.2
baz=210,SNR=7.6
YUK3 Moose Creek 4.79 80 Pn 08 54 51.2 -0.3
YUK3 Moose Creek 4.79 80 P Pn 08 54 51.8 +0.3
baz=268,SNR=11
SAMH Samovar Hills 4.87 100 Pn 08 54 53.2 +0.6
IM03 4.94 344 Pn 08 54 53.9 +0.5
IMAR Indian Mountai 4.94 344 Pn Pn 08 53.8 +0.4
O28M Mount Upton 5.00 91 Pn 08 54 54.4 -0.1
O28M Mount Upton 5.00 91 P Pn 08 54 54.9 +0.5
baz=280,SNR=9.6
PCA Pinnacle 5.13 99 Pn 08 54 56.3 +0.2
PINM Pinnacle 5.13 99 P Pn 08 54 55.9 -0.2
baz=288
I26K Coal Creek Min 5.19 36 Pn 08 54 57.4 +0.6
I26K Coal Creek Min 5.19 36 IAML 08 56 28.2
comp=E,41nm,0.9s
I26K Coal Creek Min 5.19 36 P Pn 08 54 57.8 +1.0
baz=222
G21K Allakaket 5.42 347 Pn 08 55 00.1 +0.1
G21K Allakaket 5.42 347 P Pn 08 55 00.8 +0.9
baz=164,SNR=5.8
G23K Bananza Creek 5.45 2 P Pn 08 55 01.3 +0.9
baz=182
BCPM Bancas Point 5.47 99 Pn 08 55 00.0 -0.7
G24K Hadweenzic Riv 5.58 12 Pn 08 55 02.5 +0.3
G24K Hadweenzic Riv 5.58 12 P Pn 08 55 03.8 +1.6
baz=195
PNL Peninsula 5.68 102 Pn 08 55 03.2 -0.4
M29M Somme Creek 5.77 73 Pn 08 55 05.0 +0.1
M29M Somme Creek 5.77 73 P Pn 08 55 04.9 0.0
baz=264
DAWY Dawson 5.79 56 Pn 08 55 05.5 +0.4
DAWY Dawson 5.79 56 P Pn 08 55 05.1 0.0
baz=246
G25K Bearman Lake 5.81 17 P Pn 08 55 06.0 +0.7
baz=201
YUK6 Ouost Mounta 5.85 88 P Pn 08 55 06.4 +0.3
baz=279
I27K Kandik River 5.85 39 Pn 08 55 06.0 +0.1
O29M Mount Kennedy 5.88 94 Pn 08 55 06.2 -0.2
COLD Coldfoot 5.96 1 Pn 08 55 08.8 +1.5
COLD Coldfoot 5.96 1 P Pn 08 55 08.6 +1.2
baz=181
F21K Alatna River 6.10 349 Pn 08 55 10.1 +0.8
F21K Alatna River 6.10 349 P Pn 08 55 10.5 +1.1
baz=166,SNR=8.9
HYT Haines Junctio 6.29 89 P Pn 08 55 12.4 +0.5
baz=280
F22K John River 6.29 354 Pn 08 55 12.1 +0.3
F22K John River 6.29 354 P Pn 08 55 13.2 +1.3
baz=172
F24K Squaw Lake 6.35 9 P Pn 08 55 14.5 +1.8
baz=191
G26K Porcupine Rive 6.38 24 Pn 08 55 12.9 -0.1
G26K Porcupine Rive 6.38 24 P Pn 08 55 14.3 +1.2
baz=210
N30M Aishikik Lake 6.41 83 Pn 08 55 13.5 -0.1
N30M Aishikik Lake 6.41 83 P Pn 08 55 13.3 -0.3
baz=274
P29M Windy Craggy 6.49 99 Pn Pn 08 55 14.9 +0.3
P29M Windy Craggy 6.49 99 P Pn 08 55 14.8 +0.1
baz=290
BM03 Burnt Mountain 6.65 20 Pn 08 55 17.6 +0.9
F25K Christian Rive 6.65 16 P Pn 08 55 18.3 +1.4
baz=200
BM01 Burnt Mountain 6.69 20 Pn 08 55 18.1 +0.8
P30M Million Dollar 6.71 94 P Pn 08 55 18.0 +0.3
baz=286
G27K Doyon Strip 6.74 31 Pn 08 55 17.8 -0.2
G27K Doyon Strip 6.74 31 P Pn 08 55 19.2 +1.2
baz=219
E24K Your Creek 6.86 6 Pn 08 55 21.0 +1.2
E24K Your Creek 6.86 6 P Pn 08 55 21.3 +1.5
baz=188
F26K Sheenjek River 6.97 20 P Pn 08 55 22.4 +1.1
baz=206
O30N Mendenhall 6.98 88 Pn 08 55 21.0 -0.4
O30N Mendenhall 6.98 88 P Pn 08 55 21.9 +0.6
baz=280
TNA Tin City 8.93 306 Pn Pn 08 55 49.0 +1.0
TNA Tin City 8.93 306 P Pn 08 55 49.1 +1.1
baz=110
NVAR Mina Array Bea 30.31 124 P P 08 59 50.2 +0.5
comp=E,0.5nm,0.5s,baz=310,slow=8.5,SNR=5.6
comp=E,0.5nm,0.5s
PDAR Pinedale Array 30.52 108 P P 08 59 49.6 -1.9
comp=E,0.2nm,0.4s,baz=322,slow=4.1,SNR=3.8
comp=E,0.2nm,0.4s
TXAR Lajitas Array 44.30 114 P P 09 01 46.8 -1.2
comp=E,0.2nm,0.6s,baz=342,slow=6.6,SNR=4.4
comp=E,0.2nm,0.6s

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*BJI **06** 09:08:15.7±0.0,5.51N×125.59E, h83km, mb4.8/70, mB4.9/47, Ms4.6/57, Ms7 4.2/54*
*KLM **06** 09:08:21, 6.31N×125.58E, h74km, mb5.2*
*GCMT **06** 09:08:22.6±0.1, 6.12N±0.01×125.27E±0.01, h94km, MW5.3/147, Moment Tensor Solution. s123,c195; s147,c269; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr-0.64±.01; Mθθ 1.22±.01; Mϕϕ-0.58±.02; Mrθ 0.02±.01; Mθϕ-0.05±.01; Mϕr 0.38±.01; Best double couple: Mo1.10600×10^17 NP1:ϕs237.00000°, δ59.00000°, λ-143.00000°. NP2:ϕs126.00000°, δ59.00000°, λ-37.00000°. Principal axes: T 1.2220, Plg0.0000°, Azm2.0000°; N -0.2350, Plg43.0000°, Azm271.0000°; P -0.9900, Plg47.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MAN **06** 09:08:22, 6.18N×125.29E, h72km, Ms5.4*
*MOS **06** 09:08:23.1±1.2, 6.17N×125.23E, h93km, mb5.3/48, Error ellipse: s-maj=8.1km s-min=4.6km az=113.6*
*IDC **06** 09:08:23.5±0.6, 6.17N×125.24E, h101km±4km, mb4.5/30, mbtmp4.9/32, MS3.9/59, Error ellipse: s-maj=11.5km s-min=7.6km az=75.0*
*DJA **06** 09:08:23.1±0.3, 6.7N±2.2×12.5E±., h83km±3km, M5.3/79, mb5.5/79, mB5.7/61, MLv6.2/12, Mw(mB)5.3/61, MwMwp5.0/23, Mwp5.2/23*
*NEIC **06** 09:08:23.6±2.6, 6.11N±0.06×125.31E±0.07, h88km±4km, mb5.4/216, Mww5.4, Error ellipse: s-maj=10.4km s-min=8.0km az=97.0*
*NEIC **06** 09:08:27, 6.09N×125.32E, h120km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^17Nm; Mrr0.02; Mθθ1.33; Mϕϕ-1.35; Mrθ-0.05; Mϕθ0.29; Mϕr0.24; Fault plane solution: Mo1.40000×10^17 NP1: ϕs219.00000°, δ82.00000°, λ-173.00000°. NP2: ϕs128.00000°, δ84.00000°, λ-7.00000°. Principal axes: T 1.3654, Plg1.0000°, Azm174.0000°; N 0.0601, Plg80.0000°, Azm270.0000°; P -1.4255, Plg10.0000°, Azm84.0000°;*
ISC 06 09:08:23.2±0.2, 6.07N±0.02×125.28E±0.03, h96km±1km, h96km:pP-P, n1056, σ1956/1112, mb5.3/205, 33C-13D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSPH	**General Santos**	**0.32**	**273**	↑*i*P		**Pn**	**09 08 35.7**	**-1.9**
GSPH				*i* S		**Sn**	**09 08 46.3**	**-2.0**
KCP	**Kidapawan**	**0.95**	**349**	↑*i*P		**Pn**	**09 08 41.4**	**-1.5**
KCP				*i* S		**Sn**	**09 08 54.3**	**-3.2**
DAV	**Davao City (W)**	**1.04**	**17**	P		**Pn**	**09 08 43.5**	**-0.3**
	41μm,0.5s,baz=188,slow=1.2,SNR=892							
DAV				S		**Sn**	**09 08 59.2**	**0.0**
	37μm,0.5s,baz=333,slow=23,SNR=15							
DAV				LR		LR	09 09 13.2	
	comp=Z,20μm,18.7s,baz=359,slow=52							
DAV	**Davao City (W)**	**1.04**	**17**			**Pn**	**09 08 43.4**	**-0.3**
DAV				Sn		**Sn**	**09 08 60.0**	**+0.8**
DAV	**Davao City (W)**	**1.04**	**17**	P		**Pn**	**09 08 43.9**	**+0.2**
CTBH	**Cotabato--PC H**	**1.53**	**316**	↑*i*P		**Pn**	**09 08 48.6**	**-1.0**
CTBH				*i* S		**Sn**	**09 09 07.1**	**-2.6**
BUKP	**Musuan**	**1.81**	**353**	↑*i*P		**Pn**	**09 08 52.2**	**-1.0**
BIPH	**Bislig**	**2.36**	**27**	↑*e*P		**Pn**	**09 08 59.1**	**-1.2**
BIPH				*i* S		**Sn**	**09 09 26.2**	**-2.6**
SGSI	**Sangihe**	**2.38**	**174**	P		**Pn**	**09 09 00.3**	**-0.3**
SGSI				S		**Sn**	**09 09 29.8**	**+0.5**
CGP	**Cagayan de Oro**	**2.44**	**346**	‖*e*P		**Pn**	**09 09 00.7**	**-0.7**
CGP				*e*S		**Sn**	**09 09 35.1**	**+4.5**
PAGZ	**Pagadian**	**2.58**	**313**	↑*i*P		**Pn**	**09 09 02.9**	**-0.4**
DCPH	**Dipolog City**	**3.14**	**323**	↑*e*P		**Pn**	**09 09 10.4**	**-0.3**
ZCP	**Zamboanga City**	**3.29**	**285**	‖*i*P		**Pn**	**09 09 12.5**	**-0.3**
ZCP				*i* S		**Sn**	**09 09 51.4**	**+0.3**
SNPH	**Sibulan**	**3.83**	**328**	*e*P		**Pn**	**09 09 20.7**	**+0.6**
TBP	**Tagbilaran**	**3.86**	**339**	↑*i*P		**Pn**	**09 09 20.2**	**-0.3**
TBP				*i* S		**Sn**	**09 10 06.0**	**+1.2**
LLP	**Lapu-Lapu**	**4.41**	**343**	↑*i*P		**Pn**	**09 09 30.1**	**+2.2**
LLP				*e*S		**Sn**	**09 10 25.0**	**+6.8**
KMSI	**Cibinong**	**5.61**	**193**	P		**Pn**	**09 09 44.3**	**+0.1**
	27nm1μm71μm8μm,0.6s							
TNTI	**Ternate**	**5.66**	**158**	Pn		**Pn**	**09 09 44.1**	**-0.8**
TNTI	**Ternate**	**5.66**	**158**	P		**Pn**	**09 09 45.0**	**0.0**
	5.5nm5μm16μm1μm,0.9s							
TNTI				S		**Sn**	**09 10 46.9**	**-1.7**
	5.5nm5μm16μm1μm,0.9s							
TNTI	**Ternate**	**5.66**	**158**	P		**Pn**	**09 09 44.9**	**0.0**
JAP	**San Jose, Anti**	**5.70**	**325**	‖*e*P		**Pn**	**09 09 47.6**	**+2.3**
RCP	**Roxas**	**6.00**	**336**	‖*e*P		**Pn**	**09 09 50.1**	**+0.6**
MRSI	**Marisa**	**6.48**	**211**	P		**Pn**	**09 09 56.8**	**+0.8**
	36nm4μm61μm8μm,0.8s							
TOLI2	**Tolitoli**	**6.66**	**222**	Pn		**Pn**	**09 09 56.9**	**-1.6**
MYLDM	**Lahad Datu**	**6.80**	**263**	Pn		**Pn**	**09 10 01.8**	**+1.4**
LBMI	**Labuha**	**7.02**	**161**	P		**Pn**	**09 10 03.0**	**-0.5**
	8.3nm4μm12μm853nm,0.9s							
LUWI	**Luwuk**	**7.49**	**200**	Pn		**Pn**	**09 10 12.1**	**+2.3**
LUWI	**Luwuk**	**7.49**	**200**	P		**Pn**	**09 10 12.8**	**+3.0**
	36nm11μm79μm8μm,0.8s							
LUWI	**Luwuk**	**7.49**	**200**	P		**Pn**	**09 10 12.6**	**+2.8**
APSI	**Ampana**	**7.82**	**208**	P		**Pn**	**09 10 17.4**	**+3.1**
	11nm4μm27μm4μm,1.2s							
MPSI	**Mapaga**	**7.83**	**223**	P		**Pn**	**09 10 17.8**	**+3.5**
	2.1nm4μm285nm,0.8s							
SANI	**Sanana**	**8.10**	**175**	P		**Pn**	**09 10 15.8**	**-2.3**
	6μm16μm1μm,0.9s							
PGP	**Puerto Galera**	**8.52**	**330**	↑*e*P		**Pn**	**09 10 27.2**	**+3.3**
LQP	**Lukban**	**8.80**	**336**	‖*e*P		**Pn**	**09 10 30.3**	**+2.5**
SPMM	**Sapulut**	**8.88**	**262**	P		Pn	09 10 34.0	+5.3
KKM	**Kota Kinabalu**	**9.01**	**270**	Pn		**Pn**	**09 10 33.3**	**+2.7**
KKM	**Kota Kinabalu**	**9.01**	**270**	P		**Pn**	**09 10 34.4**	**+3.8**
SWI	**Sorong**	**9.12**	**139**	P		**Pn**	**09 10 32.5**	**+0.5**
SWI				pmax		pmax		
	comp=Z,255nm,0.8s							
SWI	**Sorong**	**9.12**	**139**	P		**Pn**	**09 10 33.1**	**+1.1**
	comp=Z,2μmcomp=Z,259nm,0.8s							
SIJI	**Sorong**	**9.13**	**139**	P		**Pn**	**09 10 32.2**	**+0.1**
	comp=Z,102nm,0.6s,baz=164,slow=22,SNR=13							
SIJI				S		**Sn**	**09 12 09.7**	**-3.4**
	comp=Z,79nm,0.5s,baz=157,slow=20,SNR=7.1							
SIJI				LR		LR	09 14 18.6	
	comp=Z,1μm,19.6s,baz=296,slow=38							
NLAI	**Namlea**	**9.43**	**169**	P		**Pn**	**09 10 33.6**	**-2.5**
	comp=Z,12μmcomp=Z,1μm,0.7s							
MSAI	**Maoshi**	**10.04**	**159**	P		**Pn**	**09 10 43.6**	**-0.9**
	comp=Z,79nm,0.6s							
AAI	**Ambon**	**10.12**	**163**	P		**Pn**	**09 10 43.5**	**-2.1**
	comp=Z,14μmcomp=Z,995nm,0.7s							
PCPH	**Palayan**	**10.29**	**337**	‖*e*P		**Pn**	**09 10 51.7**	**+3.9**
TTSI	**Tana Toraja**	**10.57**	**211**	P		**Pn**	**09 10 54.0**	**+2.3**
	comp=Z,4μmcomp=Z,5μmcomp=Z,474nm,0.7s							
BKB	**Balikpapan**	**11.09**	**229**			**Pn**	**09 11 02.0**	**+3.2**
BKB	**Balikpapan**	**11.09**	**229**	P		**Pn**	**09 11 00.0**	**+1.2**
	comp=Z,4μmcomp=Z,172nm,0.7s							
BKB	**Balikpapan**	**11.09**	**229**	P		**Pn**	**09 11 00.4**	**+1.6**
FAKI	**Fak Fak**	**11.32**	**142**	Pn		**Pn**	**09 11 02.0**	**+0.1**
FAKI	**Fak Fak**	**11.32**	**142**	P		**Pn**	**09 11 03.2**	**+1.2**
	comp=Z,3μmcomp=Z,3μmcomp=Z,269nm,1.1s							
FAKI	**Fak Fak**	**11.32**	**142**	P		**Pn**	**09 11 02.2**	**+0.2**
SPSI	**Sidrap Palu**	**11.38**	**209**	P		**Pn**	**09 11 03.8**	**+1.0**
	comp=Z,3μmcomp=Z,321nm,1.0s							
BNDI	**Bandanaira**	**11.49**	**156**	P		**Pn**	**09 11 03.6**	**-0.6**
	comp=Z,37μmcomp=Z,472nm,0.8s							
BNDI	**Bandanaira**	**11.49**	**156**	P		**Pn**	**09 11 04.5**	**+0.3**
BBSI	**Bau Bau**	**11.79**	**193**	P		**Pn**	**09 11 09.3**	**+1.0**
	comp=Z,478nmcomp=Z,56nm,0.9s							
KAPI	**Kappang**	**12.31**	**207**	P		**Pn**	**09 11 17.3**	**+2.1**
	comp=Z,344nm,0.8s,baz=6.9,slow=6.4,SNR=120							
KAPI				LR		LR	09 15 52.7	
	comp=Z,1μm,20.6s,baz=26,slow=36							
KAPI	**Kappang**	**12.31**	**207**	Pn		**Pn**	**09 11 17.1**	**+1.8**
KAPI	**Kappang**	**12.31**	**207**	*c* *i*P		**Pn**	**09 11 16.6**	**+1.4**
KAPI				pmax		pmax		
	comp=Z,432nm,1.0s							
KAPI	**Kappang**	**12.31**	**207**	P		**Pn**	**09 11 18.9**	**+3.7**
APYP	**Conner**	**12.36**	**342**	‖*e*P		**Pn**	**09 11 16.7**	**+0.9**
BKSI	**Bulukumba**	**12.43**	**205**	P		**Pn**	**09 11 17.9**	**+1.1**
	comp=Z,4μmcomp=Z,12μmcomp=Z,968nm,1.4s							
MTKI	**Muara Teweh, K**	**12.49**	**236**	P		**P**	**09 11 22.1**	**-3.3**
	comp=Z,17μmcomp=Z,103nm,0.5s							

BAKI **Biak** **13.00 123** P **Pn** **09 11 24.1 -0.2**
comp=Z,5µmcomp=Z,339nm,0.9s
BSSI **Bau Bau, Buton** **13.04 202** P **Pn** **09 11 26.3 +1.5**
comp=Z,2µmcomp=Z,4µmcomp=Z,160nm,0.6s
SRPI **Serui, Papua** **13.49 125** P **Pn** **09 11 30.3 -0.5**
comp=Z,414nm,0.8s
SBUM **Sibu** **13.51 255** **P** **09 11 34.6 -2.1**
SBUM **Sibu** **13.51 255** P **P** **09 11 35.0 -1.7**
BBKI **Banjar Baru** **14.08 228** P **Pn** **09 11 40.4 +2.0**
comp=Z,6µmcomp=Z,209nm,1.2s
MMRI **Maumere** **14.92 192** Pn **Pn** **09 11 47.2 -1.9**
EDFI **Ende, Flores** **15.15 194** P **P** **09 11 54.1 -1.0**
comp=Z,725nmcomp=Z,84nm,0.8s
SAUI **Saumlaki** **15.20 157** **Pn** **09 11 53.3 +0.5**
SAUI **Saumlaki** **15.20 157** P **Pn** **09 11 52.7 0.0**
comp=Z,1µm,0.7s
SAUI **Saumlaki** **15.20 157** P **Pn** **09 11 53.2 +0.5**
KSM **Kuching** **15.61 254** P **P** **09 12 00.3 +0.1**
KSM **Kuching** **15.61 254** P **P** **09 12 04.0 +3.8**
SMPI **Sarmi** **15.62 120** P **Pn** **09 11 57.1 -1.0**
comp=Z,1µmcomp=Z,98nm,0.9s
SOEI **Soe** **15.75 184** **Pn** **09 12 00.6 +0.8**
SOEI **Soe** **15.75 184** P **Pn** **09 12 00.6 +0.8**
comp=Z,3µmcomp=Z,6µmcomp=Z,359nm,0.8s
SOEI **Soe** **15.75 184** P **P** **09 12 02.6 +0.8**
BATI **Baumata** **16.25 186** P **P** **09 12 07.3 +0.1**
comp=Z,406nm,0.7s,baz=345,slow=1.8,SNR=17
BATI **Baumata** **16.25 186** P **P** **09 12 06.7 -0.5**
comp=Z,3µmcomp=Z,307nm,0.9s
PLAI **Plampang** **16.58 207** P **P** **09 12 11.8 +0.9**
comp=Z,5µmcomp=Z,478nm,1.0s
PLAI **Plampang** **16.58 207** P **P** **09 12 12.8 +1.9**
WBSI **Waikabubak, Su** **16.67 201** P **P** **09 12 11.7 -0.2**
comp=Z,3µmcomp=Z,190nm,0.9s
BASI **Baing, Sumba** **16.84 196** P **Pn** **09 12 13.4 +0.2**
comp=Z,2µmcomp=Z,3µmcomp=Z,198nm,1.1s
TWSI **Taliwang, Sumb** **16.92 210** P **P** **09 12 16.4 +1.7**
comp=Z,6µmcomp=Z,656nm,0.9s
GENI **Genyem** **17.18 120** P **P** **09 12 18.5 +1.0**
comp=Z,3µmcomp=Z,8µmcomp=Z,1µm,0.9s
KMMI **Kaliangat** **17.24 221** P **P** **09 12 20.0 +1.9**
comp=Z,3µmcomp=Z,225nm,1.1s
SRBI **Singaraja** **17.27 216** P **P** **09 12 20.9 +2.4**
comp=Z,4µmcomp=Z,334nm,1.4s
BWJI **Bawean** **17.29 227** P P 09 12 39.1 +20
YULB **Yu-li** **17.64 348** P **P** **09 12 21.2 -1.3**
TPUB **Ta-pu** **17.71 346** P **P** **09 12 22.2 -1.0**
TPUB **Ta-pu** **17.71 346** P **Pn** **09 12 24.1 +0.4**
DNP **Denpasar** **17.76 215** P **Pn** **09 12 28.9 +4.6**
DNP pmax pmax
comp=Z,898nm,1.1s
DNP **Denpasar** **17.76 215** P **Pn** **09 12 26.7 +2.4**
comp=Z,180µmcomp=Z,916nm,1.0s
IGBI **Denpasar** **17.91 214** P **Pn** **09 12 27.6 +1.4**
comp=Z,3µmcomp=Z,324nm,1.0s
SSLB **Suanglung** **18.10 347** P **P** **09 12 25.6 -2.0**
SSLB **Suanglung** **18.10 347** P **Pn** **09 12 28.8 +0.4**
JAGI **Jajag, Banyuwa** **18.21 218** P **Pn** **09 12 30.5 +0.6**
JAGI **Jajag, Banyuwa** **18.21 218** P **Pn** **09 12 31.5 +1.7**
comp=Z,3µmcomp=Z,2µmcomp=Z,172nm,1.1s
JAGI **Jajag, Banyuwa** **18.21 218** P **Pn** **09 12 33.4 +3.6**
NACB **Ninganchiao** **18.34 349** P **Pn** **09 12 30.8 -0.5**
YOJ **Yonaguni jima** **18.42 353** P **Pn** **09 12 32.1 -0.1**
YOJ **Yonaguni jima** **18.42 353** P **Pn** **09 12 32.1 -0.1**
YOJ **Yonaguni jima** **18.42 353** P **Pn** **09 12 33.6 +1.4**
GMJI **Gumukmas** **18.50 220** P **Pn** **09 12 34.7 +1.4**
comp=Z,109nm,1.0s
YHNB **Yeheng** **18.87 349** P **P** **09 12 35.9 -0.2**
YHNB **Yeheng** **18.87 349** P **Pn** **09 12 39.3 +1.6**
NGJI **Ngawi** **19.19 226** P **Pn** **09 12 44.4 +3.0**
comp=Z,5µmcomp=Z,190nm,1.4s
PWJI **Pagerwojo** **19.40 224** P **Pn** **09 12 45.6 +1.7**
comp=Z,108nm,1.2s
KNMB **Chin-men Tao** **19.45 341** P **P** **09 12 42.2 -0.1**
TPI **Tanjungpandan** **19.66 244** P **Pn** **09 12 46.2 -0.8**
comp=Z,538nmcomp=Z,47nm,1.0s
MTN **Manton Dam** **19.67 163** P **P** **09 12 45.4 +0.6**
baz=20,SNR=169
MTN **Manton Dam** **19.67 163** P **P** **09 12 45.3 +0.6**
MTN **Manton Dam** **19.67 163** P **Pn** **09 12 46.0 -1.1**
QIZ **Qiongzhong** **19.79 312** P **P** **09 12 46.2 +0.1**
QIZ **Qiongzhong** **19.79 312** P **Pn** **09 12 47.6 -0.9**
QIZ pP **pP** **09 13 04.8 +0.3**
QIZ sP **sP** **09 13 17.4 +0.9**
QIZ S **S** **09 16 27.0 +2.9**
QIZ sS **sS** **09 16 56.8 +2.4**
QIZ pmax pmax
comp=Z,23nm,0.9s
QIZ pmax pmax
comp=Z,85nm,6.1s
QIZ **Qiongzhong** **19.79 312** P **Pn** **09 12 48.9 +0.4**
QZH **Quanzhou** **19.83 342** ⇑*i*P **P** **09 12 47.4 +1.0**
QZH sP **sP** **09 13 20.9 +4.1**
QZH S **S** **09 16 24.6 0.0**
QZH pmax pmax
comp=Z,64nm,0.9s
QZH pmax pmax
comp=Z,510nm,4.8s
QZH LR LR
comp=Z,500nm,15.8s
KDU **Kakadu** **19.96 159** P **P** **09 12 48.6 +0.7**
baz=20,SNR=135
KDU **Kakadu** **19.96 159** P **P** **09 12 48.9 +1.0**
PCJI **Pacitan** **19.96 225** P **Pn** **09 12 53.8 +3.3**
comp=Z,160nm,1.6s
UGM **Wanagama** **20.23 227** P Pn 09 12 52.6 -1.1
UGM **Wanagama** **20.23 227** P Pn 09 12 54.5 +0.8
comp=Z,184nm,1.5s
GUMO **Guam** **20.69 67** P **P** **09 12 56.6 +0.9**
comp=Z,150nm,0.9s,baz=167,slow=14,SNR=6.2
GUMO LR LR 09 19 56.6
comp=Z,193nm,21.7s,baz=244,slow=34
comp=Z,150nm,0.9s
GUMO **Guam** **20.69 67** P **P** **09 12 56.9 +1.1**
GUMO **Guam** **20.69 67** P **P** **09 12 56.9 +1.1**
PPBI **Pangkal Pinang** **20.79 247** P **P** **09 12 58.1 +1.2**
comp=Z,26µmcomp=Z,85nm,0.5s
JOW **Kunigami** **20.84 8** LR LR 09 23 17.8
comp=Z,157nm,18.1s,baz=106,slow=43
JOW **Kunigami** **20.84 8** P **P** **09 12 58.1 +0.7**
JOW **Kunigami** **20.84 8** P Pn 09 12 59.2 -1.5
UBPT **Khong Chiam** **21.49 297** P **P** **09 13 05.7 +1.4**
DSRI **Dabo** **21.66 253** P **P** **09 13 11.0 +4.8**
comp=Z,47nm,0.9s
LEM **Lembang** **21.79 234** P **P** **09 13 09.2 +1.5**
comp=Z,44nm,0.7s,baz=110,slow=15,SNR=1.8
comp=Z,44nm,0.7s
LEM **Lembang** **21.79 234** P **P** **09 13 10.1 +2.4**
comp=Z,2µmcomp=Z,107nm,1.2s
KNRA **Kununurra** **21.88 171** P **P** **09 13 08.6 +0.1**
baz=22,SNR=282
KNRA **Kununurra** **21.88 171** P **P** **09 13 08.0 -0.5**
KNRA **Kununurra** **21.88 171** P **P** **09 13 09.0 +0.5**
CBJI **Citeko** **22.18 236** P **P** **09 13 14.6 +2.9**
comp=Z,220nm,0.7s
TNG **Tangerang** **22.22 237** P P 09 13 23.2 +11
DBJI **Dramaga** **22.34 236** P **P** **09 13 17.5 +4.1**
comp=Z,26µmcomp=Z,191nm,1.4s
SBJI **Serang** **22.62 238** P **P** **09 13 19.3 +3.0**
comp=Z,78µmcomp=Z,170nm,1.4s
JRMM **Jerantut** **22.81 266** P **P** **09 13 21.0 +2.7**
JMBI **JAMBI** **22.92 251** P **P** **09 13 22.7 +3.4**
JMBI pP **pP** **09 13 32.6 -4.6**
KLI **Kotabumi** **23.10 242** P **P** **09 13 23.4 +2.4**
KLI pmax pmax
comp=Z,322nm,1.0s
KLI **Kotabumi** **23.10 242** P **P** **09 13 22.6 +1.6**
comp=Z,6µmcomp=Z,319nm,1.0s
MANU **Manus Island** **23.49 109** P **P** **09 13 25.2 +0.5**
KASI **Kota Agung** **23.73 241** P **P** **09 13 29.0 +2.2**
comp=Z,1µmcomp=Z,128nm,1.1s
GULI **GuiLin** **23.86 325** ⇓P **P** **09 13 30.2 +2.4**
GULI S **S** **09 17 30.5 -6.5**
GULI LR LR
comp=Z,730nm,17.8s
GULI LR LR
comp=Z,890nm,17.1s
GULI LR LR
comp=Z,350nm,19.0s
LWLI **Liwa** **23.88 243** P **P** **09 13 31.2 +2.9**
comp=Z,178nm,0.9s
FITZ **Fitzroy Crossi** **24.02 179** P **P** **09 13 29.8 +0.5**
comp=Z,17nm,0.4s,baz=2.9,slow=8.1,SNR=93
FITZ S **S** **09 17 36.1 -3.5**
comp=Z,34nm,1.0s,baz=91,slow=20,SNR=5.7
comp=Z,17nm,0.4s
FITZ **Fitzroy Crossi** **24.02 179** P **P** **09 13 29.7 +0.5**
baz=24,SNR=68
FITZ **Fitzroy Crossi** **24.02 179** P **P** **09 13 29.9 +0.7**
FITZ **Fitzroy Crossi** **24.02 179** P **P** **09 13 30.0 +0.7**
IPM **Ipoh** **24.20 267** P **P** **09 13 32.6 +1.5**
IPM **Ipoh** **24.20 267** P **P** **09 13 33.0 +1.9**
IPM **Ipoh** **24.20 267** P **P** **09 13 33.2 +2.1**
KULM **Kulim** **24.52 269** P **P** **09 13 35.7 +1.8**
KULM **Kulim** **24.52 269** P **P** **09 13 36.0 +2.1**
MNAI **Manna** **24.58 246** P **P** **09 13 36.5 +2.0**
KSI **Kapahiang** **24.62 247** P **P** **09 13 40.1 +5.1**
comp=Z,200nm,1.0s
BKNI **Bangkinang** **24.85 258** P **P** **09 13 37.8 +0.8**
BKNI **Bangkinang** **24.85 258** P **P** **09 13 42.0 +5.0**
SSE **Sheshan** **25.19 352** P **P** **09 13 40.5 +0.7**
SSE S **S** **09 18 02.5 +4.3**
SSE pmax pmax
comp=Z,16nm,0.7s
SSE pmax pmax
comp=Z,20nm,3.5s
SSE LR LR
comp=Z,160nm,24.5s
SSE LR LR
comp=Z,160nm,25.5s
SRIT **Nakonsritamara** **25.58 277** P **P** **09 13 45.0 +1.3**
JCJ **Chichijima** **26.39 36** P **P** **09 13 49.3 -1.5**
comp=Z,151nm,0.5s,baz=249,slow=6.3,SNR=7.5
JCJ LR LR 09 23 16.4
comp=Z,170nm,21.9s,baz=112,slow=34
JCJ **Chichijima** **26.39 36** P **P** **09 13 49.6 -1.2**
PSI **Prapat** **26.47 264** P **P** **09 13 52.3 +0.5**
comp=Z,2.1nm,0.3s,baz=60,slow=13,SNR=3.6
PSI LR LR 09 27 45.4
comp=Z,178nm,18.7s,baz=98,slow=44
comp=Z,2.1nm,0.3s
PSI **Prapat** **26.47 264** P **P** **09 13 53.6 +1.8**
PSI pmax pmax
comp=Z,82nm,1.2s
PSI **Prapat** **26.47 264** P **P** **09 13 55.9 +4.1**
RPSI **Rantau Prapat** **26.48 264** P **P** **09 13 53.6 +1.9**
NJ2 **Nanjing** **26.54 348** *e*P **P** **09 13 55.8 +3.8**
NJ2 pP **pP** **09 14 11.4 -2.1**
NJ2 sP **sP** **09 14 22.4 -2.3**
NJ2 S **S** **09 18 26.4 +7.0**
NJ2 sS **sS** **09 18 53.9 -2.9**
NJ2 pmax pmax
comp=Z,19nm,0.5s
NJ2 pmax pmax
comp=Z,150nm,3.6s
COEN **Coen** **26.68 138** P **P** **09 13 53.5 0.0**
baz=27,SNR=37
COEN **Coen** **26.68 138** P **P** **09 13 53.1 -0.3**
COEN **Coen** **26.68 138** P **P** **09 13 53.5 0.0**
PMG **Port Moresby** **26.68 125** P **P** **09 13 53.7 +0.2**
comp=Z,122nm,0.8s,baz=358,slow=5.7,SNR=14
comp=Z,122nm,0.8s
GYA **Guiyang** **26.95 321** ⇑*i*P **P** **09 13 58.4 +2.4**
GYA pP pP 09 14 20.0 +2.6
GYA S **S** **09 18 28.3 +1.9**
GYA pmax pmax
comp=Z,19nm,1.0s
GYA pmax pmax
comp=Z,150nm,3.9s
SISI **Saibi** **27.16 255** P **P** **09 14 00.2 +2.4**
comp=Z,83nm,0.8s
WB0 **Warramunga Arr** **27.20 161** P **P** **09 13 57.0 -1.1**
WB0 IAmb IAmb 09 14 31.2
comp=Z,133nm,0.9s
WRAB **Tennant Creek** **27.34 161** P **P** **09 13 58.9 -0.5**
WRAB IAmb IAmb 09 14 32.2
comp=Z,97nm,0.8s
WRAB **Tennant Creek** **27.34 161** P **P** **09 13 58.9 -0.5**
WRAB pmax pmax
comp=Z,97nm,0.9s
WRA **Warramunga Arr** **27.34 161** P **P** **09 13 58.4 -1.0**
comp=Z,26nm,0.9s,baz=257,slow=7.8,SNR=246
WRA pP **pP** **09 14 21.9 +1.1**
comp=Z,92nm,0.9s,baz=342,slow=10,SNR=6.7
WRA S **S** **09 18 27.9 -4.5**
comp=Z,12nm,0.9s,baz=332,slow=16,SNR=8.5
WRA LR LR 09 26 09.0
comp=Z,226nm,18.8s,baz=7.5,slow=39
comp=Z,26nm,0.9s
WB2 **Warramunga Arr** **27.35 161** P **P** **09 13 59.0 -0.4**
WB2 IAmb IAmb 09 14 28.1
comp=Z,132nm,1.1s
JNU **Nakatsue** **27.42 10** P **P** **09 14 00.1 +0.1**
WR0 **Warramunga Arr** **27.43 161** P **P** **09 13 59.3 -0.8**
WR0 IAmb IAmb 09 14 28.8
comp=Z,110nm,1.0s
KCSI **Kotacane, Aceh** **27.52 266** P **P** **09 14 02.6 +1.5**
comp=Z,1µmcomp=Z,106nm,1.1s
MBWA **Marble Bar** **27.60 191** P **P** **09 14 02.2 +0.6**
MBWA **Marble Bar** **27.60 191** P **P** **09 14 03.0 +1.3**
PSA00 **Pilbara Seismi** **27.98 191** P **P** **09 14 06.3 +1.2**
GSI **Gunungsitoli** **28.04 261** P **P** **09 14 06.4 +0.7**
GSI IAmb IAmb 09 14 32.6
comp=Z,56nm,0.8s
GSI **Gunungsitoli** **28.04 261** P **P** **09 14 09.4 +3.7**
ENH **Enshi** **28.29 330** P **P** **09 14 08.3 +0.6**
ENH IAmb IAmb 09 14 42.2
comp=Z,150nm,1.8s
CMAR **Chiang Mai Arr** **28.47 298** P **P** **09 14 09.8 +0.2**
comp=Z,2.9nm,0.7s,baz=117,slow=8.2,SNR=10
CMAR ScP **ScP** **09 20 49.8 -2.4**
comp=Z,2.6nm,0.8s,baz=115,slow=1.4,SNR=8.4
CMAR LR LR 09 25 03.6
comp=Z,136nm,21.4s,baz=105,slow=35
comp=Z,2.9nm,0.7s
CMAR **Chiang Mai Arr** **28.47 298** P **P** **09 14 11.1 +1.6**
CMAR **Chiang Mai Arr** **28.47 298** *i*P **P** **09 14 11.1 +1.6**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CHTO **Chiang Mai** **28.61 299** P **P** **09 14 11.1 +0.4**
CHTO **Chiang Mai** **28.61 299** P **P** **09 14 11.1 +0.4**
CHTO pmax pmax
comp=Z,54nm,1.5s
CHTO **Chiang Mai** **28.61 299** P **P** **09 14 14.4 +3.7**
KRVT **Keravat (AS076** **28.63 110** P **P** **09 14 11.5 +0.5**
comp=Z,353nm,0.8s,baz=258,slow=2.9,SNR=35
KRVT LR LR 09 24 00.6
comp=Z,263nm,21.1s,baz=60,slow=33
JMN **Monobe** **28.66 15** IAmb IAmb 09 14 20.6
comp=Z,105nm,0.9s
KMI **Kunming** **28.72 314** ⇓P **P** **09 14 14.5 +2.6**
KMI pP pP 09 14 35.7 +2.3
KMI S **S** **09 18 57.7 +3.2**
KMI pmax pmax
comp=Z,18nm,1.4s
KMI pmax pmax
comp=Z,110nm,4.1s
KMI LR LR
comp=Z,140nm,11.0s
KMI LR LR
comp=Z,300nm,14.5s
KMI LR LR
comp=Z,400nm,20.1s
RABL **Rabaul** **28.72 110** P **P** **09 14 13.8 +2.0**
JHS **Saijyo** **29.68 13** P **P** **09 14 20.5 +0.4**
QIS **Mount Isa** **29.98 152** P **P** **09 14 23.0 +0.2**
baz=30,SNR=66
QIS **Mount Isa** **29.98 152** P **P** **09 14 23.6 +0.8**
JHJ **Hachijo jima 2** **30.11 25** LR LR 09 26 57.1
comp=Z,158nm,19.8s,baz=255,slow=37
TJN **Taejon** **30.23 3** *i*P **P** **09 14 23.8 -1.0**
TJN **Taejon** **30.23 3** P **P** **09 14 27.5 +2.7**
PZH **PanZhiHua** **30.27 315** P **P** **09 14 27.9 +2.4**
PZH pP **pP** **09 14 48.1 +1.0**
PZH S **S** **09 19 19.7 +1.1**
PZH sS **sS** **09 20 00.0 +3.9**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,110nm,4.5s
PZH LR LR
comp=Z,3µm,21.6s
PZH LR LR
comp=Z,2µm,21.6s
PZH LR LR
comp=Z,2µm,22.0s
MTSU **Mount Surprise** **30.52 142** P **P** **09 14 28.3 +0.7**
baz=31,SNR=32
MTSU **Mount Surprise** **30.52 142** P **P** **09 14 28.5 +0.9**
LYN **LuoYang** **30.72 339** *e*P **P** **09 14 30.9 +1.8**
LYN pP pP 09 14 52.6 +1.7
LYN PP **PnPn** **09 15 34.7 +1.6**
LYN S **S** **09 19 22.8 -2.3**
LYN sS sS 09 20 03.5 +0.8
LYN pmax pmax
comp=Z,70nm,12.1s
LYN LR LR
comp=Z,350nm,16.7s
LYN LR LR
comp=Z,650nm,33.8s
ASAR **Alice Springs** **30.73 164** P **P** **09 14 29.6 +0.1**
comp=Z,14nm,0.6s,baz=351,slow=8.9,SNR=180
ASAR PcP **PcP** **09 17 24.9 -0.2**
comp=Z,18nm,0.8s,baz=343,slow=1.9,SNR=9.3
ASAR S **S** **09 19 23.5 -2.2**
comp=Z,15nm,0.9s,baz=352,slow=21,SNR=8.2
ASAR LR LR 09 28 24.5
comp=Z,264nm,19.4s,baz=5.5,slow=39
comp=Z,14nm,0.6s
TIA **Tai'an** **30.92 347** P **P** **09 14 33.2 +2.3**
TIA sP **sP** **09 15 02.9 -0.9**
TIA PP **PnPn** **09 15 33.5 -2.2**
TIA S **S** **09 19 24.8 -3.4**
TIA pmax pmax
comp=Z,5.0nm,0.7s
TIA pmax pmax
comp=Z,39nm,3.5s
TIA LR LR
comp=Z,240nm,14.2s
TIA LR LR
comp=Z,160nm,14.9s
TIA LR LR
comp=Z,250nm,12.8s
WRKA **Warakurna** **31.06 175** P **P** **09 14 32.4 +0.1**
baz=31,SNR=20
WRKA **Warakurna** **31.06 175** P **P** **09 14 33.0 +0.7**
INU **Inuyama** **31.08 19** P **P** **09 14 31.9 -0.4**
INU IAmb IAmb 09 14 41.4
comp=Z,51nm,0.7s
INU **Inuyama** **31.08 19** P **P** **09 14 32.6 +0.3**
INU **Inuyama** **31.08 19** P **P** **09 14 31.6 -0.8**
INU pP **pP** **09 14 52.5 -1.4**
KSRS **Korea Array** **31.33 4** P **P** **09 14 34.5 +0.1**
comp=Z,7.1nm,0.9s,baz=181,slow=10,SNR=38
KSRS PcP **PcP** **09 17 26.4 -0.1**
comp=Z,9.1nm,0.9s,baz=183,slow=3.3,SNR=13
KSRS ScP **ScP** **09 20 59.8 -1.2**
comp=Z,4.8nm,0.9s,baz=186,slow=3.5,SNR=15
KSRS LR LR 09 29 46.0
comp=Z,74nm,19.1s,baz=185,slow=41
comp=Z,7.1nm,0.9s
KS19 **Wonju Array Si** **31.38 4** P **P** **09 14 34.7 -0.2**
KS19 IAmb IAmb 09 14 58.4
comp=Z,127nm,1.9s
JGF **Kuroka** **31.42 19** P **P** **09 14 35.6 +0.2**
XAN **Xi'an** **31.69 334** P **P** **09 14 37.5 -0.3**
XAN pP pP 09 14 58.8 -0.7
XAN S **S** **09 19 37.8 -2.7**
XAN sS sS 09 20 17.4 -0.6
XAN ScP **ScP** **09 20 57.5 -4.9**
XAN SS **SnSn** **09 21 40.8 +3.6**
XAN pmax pmax
comp=Z,21nm,0.9s
XAN LR LR
comp=Z,470nm,19.4s
XAN LR LR
comp=Z,300nm,20.2s
XAN LR LR
comp=Z,720nm,23.7s
XAN **Xi'an** **31.69 334** P **P** **09 14 37.4 -0.3**
XAN pP **pP** **09 14 57.6 -1.9**
CD2 **Chengdu** **31.91 323** ⇑P **P** **09 14 41.2 +1.4**
CD2 pP pP 09 15 02.6 +1.1
CD2 S **S** **09 19 44.7 +0.7**
CD2 sS sS 09 20 22.1 +0.5
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,160nm,5.8s
MAJO **Matsushiro** **32.56 20** P **P** **09 14 44.9 -0.4**
MAJO **Matsushiro** **32.56 20** *i* P **P** **09 14 43.2 -2.1**
MAJO pmax pmax
comp=Z,30nm,0.9s
MAJO **Matsushiro** **32.56 20** P **P** **09 14 46.7 +1.4**
MJAR **Matsushiro Arr** **32.56 20** P **P** **09 14 44.1 -1.2**
comp=Z,3.6nm,0.8s,baz=182,slow=9.9,SNR=14
MJAR PcP **PcP** **09 17 29.9 0.0**
comp=Z,9.0nm,0.8s,baz=157,slow=3.8,SNR=7.6
MJAR ScP **ScP** **09 21 04.4 -0.9**
comp=Z,7.8nm,1.2s,baz=204,slow=4.5,SNR=9.1
MJAR LR LR 09 25 42.0
comp=Z,194nm,20.4s,baz=216,slow=32
comp=Z,3.6nm,0.8s
HNS **HongShan** **32.64 344** ⇑P **P** **09 14 48.8 +2.8**
HNS PP **PnPn** **09 15 57.6 +0.2**
HNS S **S** **09 19 52.8 -2.2**
HNS sS **sS** **09 20 30.2 -2.5**
HNS pmax pmax
comp=Z,15nm,1.1s
HNS LR LR
comp=Z,280nm,24.4s
HNS LR LR
comp=Z,310nm,21.3s
HNS LR LR
comp=Z,550nm,24.9s
DL2 **Dalian** **32.85 355** P **P** **09 14 49.5 +1.7**
DL2 S **S** **09 19 59.0 +0.7**
DL2 pmax pmax
comp=Z,16nm,0.8s
DL2 LR LR
comp=Z,430nm,16.5s
DL2 LR LR
comp=Z,570nm,32.9s
MEEK **Meekatharra** **33.15 191** P **P** **09 14 50.4 -0.1**
baz=33,SNR=7.9
MEEK **Meekatharra** **33.15 191** P **P** **09 14 50.9 +0.3**
CTA **Charters Tower** **33.19 142** P **P** **09 14 52.2 +1.2**
CTAO **Charters Tower** **33.19 142** P **P** **09 14 51.5 +0.5**
CTAO IAmb IAmb 09 14 53.3
comp=Z,66nm,0.8s
CTAO **Charters Tower** **33.19 142** P **P** **09 14 51.5 +0.5**
CTAO pmax pmax
comp=Z,66nm,0.9s
CTAO **Charters Tower** **33.19 142** P **P** **09 14 52.2 +1.2**
JMM **Marumori** **34.66 22** P **P** **09 15 02.9 -0.5**
BJT **Baijiatuau** **34.78 348** P **P** **09 15 03.8 -0.7**
BJT **Baijiatuau** **34.78 348** P **P** **09 15 03.8 -0.7**
BJT pmax pmax
comp=Z,40nm,1.2s
OOD **Oodnadatta** **35.14 164** P **P** **09 15 08.1 +0.4**
SNY **Shenyang** **35.64 358** ⇑P **P** **09 15 11.5 -0.3**
SNY pmax pmax
comp=Z,17nm,1.1s
SNY pmax pmax
comp=Z,180nm,4.8s
SNY LR LR
comp=Z,400nm,19.1s
SNY LR LR
comp=Z,500nm,17.1s
SNY LR LR
comp=Z,720nm,36.5s
LZH **Lanzhou** **35.76 330** ⇓P **P** **09 15 14.6 +1.4**
LZH pP pP 09 15 36.1 +0.9
LZH sP sP 09 15 47.2 +0.9
LZH PP **PP** **09 16 37.8 +1.5**
LZH S **S** **09 20 44.4 +0.8**
LZH sS sS 09 21 24.6 +3.0
LZH pmax pmax
comp=Z,89nm,1.3s
LZH pmax pmax
comp=Z,450nm,5.2s
LZH LR LR
comp=Z,1µm,12.0s
LZH LR LR
comp=Z,830nm,12.4s
LZH LR LR
comp=Z,910nm,15.2s
FORT **Forrest** **36.74 176** P **P** **09 15 22.0 +0.7**
baz=37,SNR=25
FORT **Forrest** **36.74 176** P **P** **09 15 21.3 -0.1**
FORT IAmb IAmb 09 16 03.4
comp=Z,62nm,0.7s
FORT **Forrest** **36.74 176** P **P** **09 15 22.0 +0.7**
HHC **Hu-ho-hao-te** **36.74 343** *e*P **P** **09 15 23.2 +1.8**
HHC pP pP 09 15 46.1 +2.5

HHC PP PnPn 09 16 54.2 +6.2
HHC S S 09 21 05.6 +7.3
HHC sS sS 09 21 39.4 +3.1
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,210nm,5.4s
HHC LR LR
comp=Z,590nm,13.9s
HHC LR LR
comp=Z,380nm,13.8s
HHC LR LR
comp=Z,1μm,16.5s
INKA Innaminka 36.79 157 P P 09 15 22.8 +1.0
MULG Mulgathing 37.11 167 P P 09 15 25.4 +0.9
QLP Quilpie 37.30 151 P P 09 15 26.1 -0.1
baz=37,SNR=48
QLP Quilpie 37.30 151 P P 09 15 26.1 -0.1
JTM Tenmabayashi 37.35 20 lAmb lAmb 09 15 49.0
comp=Z,56nm,1.1s
BLDU Ballidu 37.39 192 P P 09 15 26.8 -0.1
baz=38,SNR=14
CN2 Changchun 37.58 0 *e*P P 09 15 31.5 +3.2
CN2 *e*S S 09 21 17.5 +6.8
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,10.0s
CN2 LR LR
comp=Z,200nm,10.0s
CN2 LR LR
comp=Z,100nm,11.0s
HNR Honiara 37.83 114 LR LR 09 29 43.1
comp=Z,115nm,20.5s,baz=302,slow=34
HNR Honiara 37.83 114 P P 09 15 29.7 -1.1
HNR Honiara 37.83 114 P P 09 15 29.7 -1.1
HNR pmax pmax
comp=Z,176nm,0.7s
HNR Honiara 37.83 114 P P 09 15 31.2 +0.4
KLBR Kellerberrin 38.13 190 P P 09 15 33.2 +0.1
baz=38,SNR=33
KLBR Kellerberrin 38.13 190 P P 09 15 33.7 +0.6
RK1H Rockhampton Ha 38.26 141 P P 09 15 35.3 +1.0
LCRK Leigh Creek 38.37 162 P P 09 15 36.1 +1.0
USRK Ussuriysk Ar. 38.43 8 P P 09 15 34.5 -0.9
comp=Z,7.3nm,0.7s,baz=183,slow=6.3,SNR=17
USRK LR LR 09 28 59.4
comp=Z,115nm,21.9s,baz=242,slow=32
comp=Z,7.3nm,0.7s
USRK Ussuriysk Ar. 38.43 8 P P 09 15 35.7 +0.2
USRK Ussuriysk Ar. 38.43 8 P P 09 15 35.7 +0.2
XLT XiLinHaoTe 38.53 349⇑ *i*P P 09 15 35.9 -0.6
XLT sP sP 09 16 11.9 +1.9
XLT pmax pmax
comp=Z,10.0nm,0.8s
XLT pmax pmax
comp=Z,74nm,4.1s
MDJ Mudanjiang 38.58 5 P P 09 15 37.0 +0.2
MDJ lAmb lAmb 09 15 48.7
comp=Z,33nm,0.8s
MDJ Mudanjiang 38.58 5 P P 09 15 37.1 +0.4
MDJ pP pP 09 15 57.5 -1.4
MDJ sP sP 09 16 09.4 -0.5
MDJ S S 09 21 31.8 +6.0
MDJ pmax pmax
comp=Z,31nm,1.0s
MDJ pmax pmax
comp=Z,190nm,3.7s
MDJ LR LR
comp=Z,280nm,5.3s
MDJ LR LR
comp=Z,340nm,9.8s
MDJ LR LR
comp=Z,610nm,24.4s
MDJ Mudanjiang 38.58 5 P P 09 15 38.1 +1.4
MUN Mundaring 38.81 192 P P 09 15 40.2 +1.4
baz=39,SNR=6.5
ERM Erimo 39.16 21 *i* P P 09 15 41.9 +0.3
ERM pmax pmax
comp=Z,39nm,1.0s
JEW Eniwo 39.31 19 P P 09 15 43.5 +0.6
NWAO Narrogin (SRO) 39.53 191 P P 09 15 45.3 +0.6
NWAO lAmb lAmb 09 16 18.7
comp=Z,51nm,0.9s
NWAO Narrogin (SRO) 39.53 191 P P 09 15 45.3 +0.6
NWAO pmax pmax
comp=Z,51nm,1.0s
BNX BinXian 39.56 2⇑ P P 09 15 44.5 -0.4
BNX pP pP 09 16 07.0 -0.1
BNX sP sP 09 16 16.3 -1.8
BNX S S 09 21 43.4 +2.9
BNX sS sS 09 22 23.3 +4.5
BNX pmax pmax
comp=Z,8.0nm,0.8s
BNX pmax pmax
comp=Z,80nm,4.0s
BNX LR LR
comp=Z,190nm,15.9s
BNX LR LR
comp=Z,250nm,13.9s
BNX LR LR
comp=Z,290nm,24.9s
RMQ Roma 39.57 146 P P 09 15 45.5 +0.3
baz=40,SNR=5.7
RMQ Roma 39.57 146 P P 09 15 45.8 +0.6
LSA Lhasa 39.82 310 P P 09 15 48.3 +0.4
LSA Lhasa 39.82 310 P P 09 15 49.6 +1.7
LSA pmax pmax
comp=Z,5.0nm,0.4s
LSA Lhasa 39.82 310 P P 09 15 48.3 +0.4
LSA pmax pmax
comp=Z,19nm,0.9s
BBOO Buckleboo 40.00 166 P P 09 15 49.5 +0.8
baz=40,SNR=226
BBOO Buckleboo 40.00 166 P P 09 15 49.6 +0.9
BBOO Buckleboo 40.00 166 P P 09 15 49.7 +0.9
TEY Ternei 40.05 12⇑ *e*P P 09 15 49.6 +0.7
TEY *e* 09 16 11.1
TEY pmax pmax
comp=N,10.0nm,1.2s
TEY pmax pmax
comp=Z,10.0nm,1.2s
TEY pmax pmax
comp=N,30nm,1.2s
TEY pmax pmax
comp=Z,40nm,1.4s
TEY pmax pmax
comp=N,100nm,1.6s
TEY pmax pmax
comp=Z,100nm,2.4s
EIDS Eidsvold 40.08 142 P P 09 15 49.2 -0.2
baz=40,SNR=12
EIDS Eidsvold 40.08 142 P P 09 15 49.5 +0.1
EIDS lAmb lAmb 09 15 50.3
comp=Z,58nm,0.9s
EIDS Eidsvold 40.08 142 P P 09 15 49.5 +0.1
GTA Gaotai 40.36 329⇓ P P 09 15 52.2 +0.4
GTA pP pP 09 16 13.8 -0.3
GTA sP sP 09 16 25.2 +0.1
GTA sS sS 09 22 34.4 +3.1
GTA SS SS 09 24 54.0 -1.4
GTA pmax pmax
comp=Z,11nm,0.9s
GTA pmax pmax
comp=Z,57nm,4.4s
GTA LR LR
comp=Z,460nm,19.3s
GTA LR LR
comp=Z,490nm,17.4s
GTA LR LR
comp=Z,590nm,16.4s
WHYH Whyalla 40.60 164 P P 09 15 54.8 +1.2
STKA Stephens Creek 40.82 159 P P 09 15 56.4 +0.9
comp=Z,152nm,0.8s,baz=335,slow=8.2,SNR=257
STKA PcP PcP 09 17 54.7 -0.1
comp=Z,37nm,0.7s,baz=322,slow=8.6,SNR=4.1
STKA S S 09 21 58.0 -1.6
comp=Z,15nm,0.9s,baz=190,slow=18,SNR=8.0
STKA LR LR 09 34 56.0
comp=Z,179nm,18.1s,baz=348,slow=39
STKA Stephens Creek 40.82 159 P P 09 15 56.4 +0.9
baz=41,SNR=232
STKA Stephens Creek 40.82 159 P P 09 15 56.6 +1.1
STKA lAmb lAmb 09 15 57.5
comp=Z,36nm,0.8s
STKA Stephens Creek 40.82 159 *d* iP P 09 15 55.8 +0.3
STKA Stephens Creek 40.82 159 P P 09 15 56.4 +0.9
GOMU GeErMu 40.96 321 P P 09 15 59.2 +2.1
GOMU PP PP 09 17 32.0 -1.4
GOMU PcP PcP 09 17 58.8 +3.1
GOMU S S 09 21 58.2 -4.2
GOMU pmax pmax
comp=Z,19nm,1.3s
GOMU LR LR
comp=Z,280nm,20.4s
GOMU LR LR
comp=Z,110nm,14.3s
GOMU LR LR
comp=Z,180nm,18.9s
RKGY Rocky Gully 41.21 190 P P 09 16 00.2 +1.5
baz=41,SNR=12
HTT Hallett 41.36 163 P P 09 16 01.1 +1.1
baz=42,SNR=52
HTT Hallett 41.36 163 P P 09 16 01.4 +1.4
CMSA Cobar Meteorol 42.17 154 P P 09 16 07.4 +0.9
baz=42,SNR=229
CMSA Cobar Meteorol 42.17 154 P P 09 16 07.6 +1.1
H11N1 WAKE ISLAND Hy 42.64 67 T T 10 02 32.5
baz=255,slow=75,SNR=6.1
H11N2 WAKE ISLAND Hy 42.65 67 T T 10 02 34.1
baz=255,slow=75,SNR=6.5
H11N3 WAKE ISLAND Hy 42.66 67 T T 10 02 21.3
baz=255,slow=75,SNR=18
TWOA Tennyson Woods 42.76 164 P P 09 16 12.8 +1.6
YSS Yuzh-Sakhalins 43.42 17 P P 09 16 16.6 +0.3
YSS Yuzh-Sakhalins 43.42 17 *e*P P 09 16 17.8 +1.4
YSS *e**SP **sP** 09 16 46.3 -3.4
YSS *e* 09 18 01.5
YSS *e*PPP PPP 09 18 32.5
YSS *e*S S 09 22 38.2 +0.7
YSS *e*SS SS 09 25 55.0 -0.1
YSS *e*SSS SSS 09 26 47.3
YSS pmax pmax
comp=Z,30nm,0.7s
YSS pmax pmax
comp=Z,200nm,3.4s
YSS smax smax
comp=N,200nm,16.0s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS Yuzh-Sakhalins 43.42 17 P P 09 16 19.0 +2.6
ARMA Armidale 44.20 147 P P 09 16 24.1 +1.1
baz=44,SNR=46
ARMA Armidale 44.20 147 P P 09 16 23.8 +0.7
ARMA Armidale 44.20 147 P P 09 16 24.4 +1.3
PALK Pallekele 44.27 274 LR LR 09 35 08.0
comp=Z,129nm,19.5s,baz=191,slow=36
ULN Ulaanbaatar 44.46 343 P P 09 16 24.3 -0.6
ULN Ulaanbaatar 44.46 343 *ce*P P 09 16 24.5 -0.4
ULN pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 44.46 343 P P 09 16 23.9 -1.0
SONM Songino Array 44.63 342 P P 09 16 25.4 -0.8
comp=Z,3.3nm,0.8s,baz=160,slow=8.8,SNR=17
SONM pP pP 09 16 50.5 +1.5
comp=Z,3.9nm,0.8s,baz=157,slow=7.8,SNR=4.3
SONM LR LR 09 35 51.0
comp=Z,214nm,21.9s,baz=155,slow=37
comp=Z,3.3nm,0.8s
SONM Songino Array 44.63 342 P P 09 16 25.3 -1.0
ARPS Mount Arapiles 45.35 161 P P 09 16 33.2 +1.3
baz=46,SNR=56
ARPS Mount Arapiles 45.35 161 P P 09 16 33.2 +1.3
GRNR Gornyy 45.52 10 *e*P P 09 16 29.0 -4.0
MGCD Mangrove Creek 46.12 150 P P 09 16 40.2 +2.1
baz=46,SNR=15
SYDH Sydney Hard Ro 46.38 150 P P 09 16 42.7 +2.7
BRAT Ballarat 46.76 160 P P 09 16 45.5 +2.6
CAN Canberra 46.84 153 P P 09 16 45.9 +2.2
CAN Canberra 46.84 153 P P 09 16 44.5 +0.8
HYB Hyderabad 46.99 288 *e*P P 09 16 46.0 +0.8
HYBB Hyderabad (bro 46.99 288 *e*P P 09 16 46.4 +1.2
HYBB *e*pP pP 09 17 06.7 -1.5
HYBB *e*PP PP 09 18 37.7 +1.0
HYBB *e*S S 09 23 32.8 +2.9
CNB Canberra Magne 47.00 153 P P 09 16 46.7 +1.8
baz=47,SNR=59
CNB Canberra Magne 47.00 153 P P 09 16 46.7 +1.8
TOO Toolangi 47.34 158 P P 09 16 49.6 +2.1
baz=48,SNR=100
TOO Toolangi 47.34 158 P P 09 16 49.6 +2.1
TOO lAmb lAmb 09 16 50.7
comp=Z,74nm,0.8s
TOO Toolangi 47.34 158 P P 09 16 49.6 +2.1
TOO pmax pmax
comp=Z,74nm,0.8s
TOO Toolangi 47.34 158 P P 09 16 49.7 +2.2
MLBS Spotswood, Mel 47.34 159 P P 09 16 49.7 +2.2
GEXS Deakin Univers 47.46 160 P P 09 16 50.6 +2.2
ZEA Zeya 47.55 2 *e*P P 09 16 48.6 -0.3
ZEA *e**SP **sP** 09 17 19.7 -2.9
ZEA *e*S S 09 23 40.2 +3.5
ZEA pmax pmax
comp=Z,10.0nm,0.6s
TARA Tarawa 47.76 94 P P 09 16 51.7 +0.6
TARA Tarawa 47.76 94 P P 09 16 52.6 +1.4
ZAK Zakamensk 47.85 341 *e*P P 09 16 56.4 +5.0
MILA Mila 48.36 154 P P 09 16 57.4 +1.9
baz=48,SNR=11
DZM Mont Dzumac 49.07 126 *e*P P 09 17 01.4 +0.2
DZM comp=Z,122nm,1.4s *e*S S 09 23 59.7 +0.5
DZM comp=Z,155nm,28.1s *e*LR LR 09 31 07.4
DZM comp=Z,379nm,27.0s
DZM Mont Dzumac 49.07 126 P P 09 17 01.2 +0.1
DZM lAmb lAmb 09 17 12.4
comp=Z,44nm,0.8s
DZM Mont Dzumac 49.07 126 P P 09 17 02.3 +1.1
YATNC Mamie plateau, 49.42 126 P P 09 17 05.2 +1.4
MOY Mondy 49.70 340 *e*P P 09 17 05.5 -0.1
MOY pmax pmax
comp=N,24nm,1.2s
WMQ Urumqi 49.99 325 *e*P P 09 17 10.8 +3.0
WMQ LR LR
comp=N,860nm,12.9s
WMQ LR LR
comp=N,600nm,21.3s
WMQ LR LR
comp=N,370nm,20.1s
GLAD Gladstone 51.26 158 P P 09 17 18.8 +1.5
CORO Coronation Par 51.36 159 P P 09 17 20.2 +2.3
MOO Moorlands 52.24 160 P P 09 17 26.5 +2.0
baz=52,SNR=6.6
MOO Moorlands 52.24 160 P P 09 17 26.6 +2.0
BOD Bodaibo 52.36 352 *e*P P 09 17 24.2 -1.0
BOD pmax pmax
comp=Z,28nm,1.2s
TAU Tasmania Unive 52.70 160 P P 09 17 28.4 +0.5
TAU lAmb lAmb 09 17 30.7
comp=Z,48nm,1.0s
TAU Tasmania Unive 52.70 160 P P 09 17 28.4 +0.5
TAU pmax pmax
comp=Z,49nm,1.0s
TAU Tasmania Unive 52.70 160 P P 09 17 29.7 +1.8
TAU Tasmania Unive 52.70 160 P P 09 17 28.9 +1.0
TAU sP sP 09 18 00.3 -1.3
ZSN Zaisan 53.77 327 *e*P P 09 17 34.0 -1.7
ZSN Zaisan 53.77 327 *e*P P 09 17 34.1 -1.7
baz=327
PEA0B Petropavlovsk- 53.85 24 P P 09 17 36.9 +0.6
PEA0B lAmb lAmb 09 17 38.5
comp=Z,40nm,1.0s
PEA0B Petropavlovsk- 53.85 24 *i* P P 09 17 36.2 0.0
PETK Petropavlovsk- 53.85 24 P P 09 17 35.9 -0.3
comp=Z,18nm,0.8s,baz=212,slow=7.7,SNR=18
PETK ScP ScP 09 22 28.1 -2.1
comp=Z,5.5nm,1.0s,baz=224,slow=6.0,SNR=3.9
PETK LR LR 09 37 17.2
comp=Z,66nm,22.0s,baz=209,slow=32
comp=Z,18nm,0.8s
PETK Petropavlovsk- 53.85 24 P P 09 17 36.3 +0.1
PETK Petropavlovsk- 53.85 24 P P 09 17 36.3 +0.1
PET Petropavlovsk 54.17 24 *e*P P 09 17 41.3 +2.8
PET *e*S S 09 25 08.7 +0.6
SHLS Shalkode 54.63 320 *e*P P 09 17 39.5 -2.7
SHLS pmax pmax
comp=Z,11nm,1.2s
SHLS Shalkode 54.63 320 *e*P P 09 17 39.6 -2.7
comp=Z,11nm,1.2s,baz=320
MK31 Makanchi Array 54.82 325 P P 09 17 43.1 -0.3
MK31 lAmb lAmb 09 18 08.3
comp=Z,84nm,1.6s
MK31 Makanchi Array 54.82 325 *d* iP P 09 17 42.9 -0.5
MKAR Makanchi Array 54.82 325 P P 09 17 43.1 -0.3
comp=Z,5.6nm,0.8s,baz=128,slow=8.1,SNR=54
MKAR LR LR 09 42 28.6
comp=Z,205nm,19.1s,baz=116,slow=37
MKAR PKPPKP P'P'df 09 47 44.6 -8.4
comp=Z,1.3nm,1.0s,baz=281,slow=3.1,SNR=6.6
comp=Z,5.6nm,0.8s
UZB Uzunbulak 54.91 320 *e*P P 09 17 43.3 -1.0
UZB Uzunbulak 54.91 320 *e*P P 09 17 43.3 -1.0
baz=320
MAKZ Makanchi 55.01 325 P P 09 17 44.4 -0.3
MAKZ Makanchi 55.01 325 P P 09 17 44.4 -0.3
MAKZ pmax pmax
comp=Z,109nm,1.5s
SATY Saty 55.27 319 *e*P P 09 17 45.5 -1.3
SATY pmax pmax
comp=Z,18nm,1.3s
SATY Saty 55.27 319 *e*P P 09 17 45.5 -1.3
comp=Z,18nm,1.3s,baz=319
NIL Nilore 55.36 307 P P 09 17 48.0 +0.4
NIL lAmb lAmb 09 18 21.2
comp=Z,59nm,0.9s
NIL Nilore 55.36 307 P P 09 17 48.0 +0.4
NIL pmax pmax
comp=Z,59nm,1.0s
NIL Nilore 55.36 307 P P 09 17 47.4 -0.2
NIL sP sP 09 18 19.7 -2.1
KSH Kashi 55.38 315 P P 09 17 49.9 +2.2
KSH pP pP 09 18 12.4 +1.1
KSH sP sP 09 18 23.7 +1.7
KSH pmax pmax
comp=Z,20nm,1.4s
KSH LR LR
comp=Z,280nm,20.6s
FUNA Funafuti 55.68 105 P P 09 17 51.8 +1.7
FUNA Funafuti 55.68 105 P P 09 17 51.5 +1.4
YAK Yakutsk 55.94 3 LR LR 09 42 30.7
comp=Z,68nm,20.8s,baz=190,slow=37
YAK Yakutsk 55.94 3 P P 09 17 49.7 -1.4
YAK Yakutsk 55.94 3 *e*P P 09 17 49.7 -1.4
YAK *e* 09 18 46.4
YAK *e* 09 19 54.7
YAK *e*PPP PPP 09 21 11.6
YAK *e*S S 09 25 31.3 -0.1
YAK *e* 09 27 31.1
YAK *e*SS SS 09 29 18.5 -0.2
YAK pmax pmax
comp=Z,75nm,0.8s
YAK pmax pmax
comp=N,24nm,1.0s
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=Z,25nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.3s
YAK pmax pmax
comp=E,11nm,1.1s
YAK smax smax
comp=N,36nm,2.1s
YAK smax smax
comp=E,19nm,2.2s
ARXS Arharly 56.18 320 *e*P P 09 17 52.4 -0.9
TDK Taldyqorghan 56.19 321 *e*P P 09 17 52.6 -0.7
TDK pmax pmax
comp=Z,9.0nm,0.6s
TDK Taldyqorghan 56.19 321 *e*P P 09 17 52.7 -0.7
comp=Z,8.7nm,0.6s,baz=321
MDOK Medeo 56.20 319 *e*P P 09 17 52.1 -1.4
MDOK Medeo 56.20 319 *e*P P 09 17 52.1 -1.4
baz=319
AAA Alma-Ata 56.30 319 *e*P P 09 17 53.5 -0.7
AAA Alma-Ata 56.30 319 *e*P P 09 17 53.5 -0.7
baz=319
ULHL Ulahol 56.33 318 P P 09 17 55.4 +0.8
SNR=6.6
CHKK Chushkaly 56.55 320 *e*P P 09 17 55.0 -0.8
CHKK Chushkaly 56.55 320 *e*P P 09 17 55.0 -0.8
baz=320
BOOM Boomskoye usch 56.63 318 lAmb lAmb 09 18 50.9
comp=Z,65nm,1.9s
MA2 Magadan 56.82 15 LR LR 09 41 54.7
comp=Z,31nm,21.6s,baz=202,slow=35
MA2 Magadan 56.82 15 P P 09 17 57.5 0.0
MA2 lAmb lAmb 09 18 53.4
comp=Z,37nm,0.9s
MA2 Magadan 56.82 15 *ce*P P 09 17 56.4 -1.0
MA2 pmax pmax
comp=Z,13nm,1.0s
MA2 Magadan 56.82 15 P P 09 17 58.6 +1.2
KUU Kurty 56.98 319 *e*P P 09 17 57.0 -1.9
KUU *e**PP **pP** 09 18 20.9 -1.6
KUU pmax pmax
comp=Z,33nm,1.2s
KUU Kurty 56.98 319 *e*P P 09 17 57.0 -1.9
comp=Z,33nm,1.2s,baz=319
KUU *e*pP pP 09 18 21.0 -1.6
baz=319
TKM2 Tokmak 2 57.05 318 P P 09 17 59.9 +0.2
SNR=8.6
MSVF Nonsavu 57.21 115 LR LR 09 41 46.1
comp=Z,79nm,19.9s,baz=283,slow=35
MSVF Nonsavu 57.21 115 P P 09 18 03.0 +2.0
MSVF Nonsavu 57.21 115 P P 09 18 03.0 +2.0
MSVF pmax pmax
comp=Z,63nm,0.9s
MSVF Nonsavu 57.21 115 P P 09 18 02.6 +1.6
MSVF Nonsavu 57.21 115 P P 09 18 01.7 +0.7
MSVF pP pP 09 18 23.2 -0.7
UCH Uchtor 57.48 317 P P 09 18 03.8 +0.7
SNR=17
AAK Ala-Archa 57.66 317 LR LR 09 45 04.2
comp=Z,188nm,18.8s,baz=108,slow=38
AAK Ala-Archa 57.66 317 *ce*P P 09 18 03.9 0.0
AAK pmax pmax
comp=Z,16nm,1.7s
ZAA0 Zalesovo Array 57.86 333 P P 09 18 03.2 -1.6
ZAA0 lAmb lAmb 09 18 29.9
comp=Z,30nm,1.2s
ZALV Zalesovo Beam 57.86 333 P P 09 18 02.4 -2.4
comp=Z,0.8nm,0.4s,baz=115,slow=6.7,SNR=8.6
ZALV pP pP 09 18 28.6 0.0
comp=Z,7.8nm,0.8s,baz=119,slow=5.8,SNR=9.3
ZALV LR LR 09 44 35.7
comp=Z,113nm,19.8s,baz=124,slow=38
ZALV PKPPKP P'P'df 09 47 55.0 +7.1
comp=Z,5.3nm,0.9s,baz=299,slow=3.1,SNR=11
comp=Z,0.8nm,0.4s
ZALV Zalesovo Beam 57.86 333 P P 09 18 03.2 -1.6
ZALV Zalesovo Beam 57.86 333 *i* P P 09 18 03.5 -1.3
ZALV pmax pmax
comp=Z,1.0nm,0.4s
SGDS Sogindy 57.91 318 *e*P P 09 18 03.7 -1.8
SGDS Sogindy 57.91 318 *e*P P 09 18 03.8 -1.8
baz=318
USP Ospenovka 57.92 318 P P 09 18 05.7 +0.1
SNR=10.0
SEM Semipalatinsk 57.96 328 *e*P P 09 18 03.1 -2.8
SEM Semipalatinsk 57.96 328 *e*P P 09 18 03.1 -2.8
baz=328
AML Almayashu 58.00 317 P P 09 18 07.6 +1.1
SNR=6.2
EKS2 Erkin-Say 58.16 317 P P 09 18 08.3 +1.0
SNR=8.1
DGTI Dogotuki 58.28 113 P P 09 18 09.8 +1.4
DRK Karamyk 58.36 313 lAmb lAmb 09 18 33.6
comp=Z,36nm,1.0s
TAVE Taveuni 58.73 114 P P 09 18 13.3 +1.8
BTLS Baital 58.96 320 *e*P P 09 18 11.6 -1.1
BTLS *e**PP **pP** 09 18 34.6 -1.8
BTLS pmax pmax
comp=Z,7.0nm,1.1s
BTLS Baital 58.96 320 *e*P P 09 18 11.6 -1.1
comp=Z,6.5nm,1.1s,baz=320
BTLS *e*pP pP 09 18 34.6 -1.8
baz=320
KBL Kabul 58.96 307 P P 09 18 12.9 -0.3
KBL Kabul 58.96 307 P P 09 18 12.9 -0.3
KBL pmax pmax
comp=Z,17nm,0.9s
KURK Kurchatov 59.00 327 P P 09 18 11.4 -1.4

KURK **Kurchatov** 59.00 327 *ce* P **P** 09 18 12.2 -0.6
KURK pmax pmax
comp=Z,25nm,1.3s
BTK **Batken** 59.27 313 IAmb IAmb 09 18 17.2
comp=Z,55nm,1.4s
DZA **Taraz** 59.91 317 *e* P **P** 09 18 18.5 -0.8
DZA **Taraz** 59.91 317 *e* P **P** 09 18 18.5 -0.8
baz=317
IUG **Iuzhnay** 60.54 315 *e* P **P** 09 18 22.5 -1.2
IUG **Iuzhnay** 60.54 315 *e* P **P** 09 18 22.5 -1.2
baz=315
KK31 **Karatay Array** 60.54 317 P P 09 18 23.2 -0.4
KK31 IAmb IAmb 09 18 48.7
comp=Z,30nm,1.1s
KK31 **Karatay Array** 60.54 317 P **P** 09 18 23.2 -0.4
KK31 pmax pmax
comp=Z,30nm,1.2s
KKAR **Karatay Array** 60.54 317 P **P** 09 18 22.7 -1.0
KKAR **Karatay Array** 60.54 317 P **P** 09 18 23.3 -0.3
KKAR IAmb IAmb 09 18 48.7
comp=Z,30nm,1.1s
KKAR **Karatay Array** 60.54 317 P **P** 09 18 23.3 -0.3
KKAR pmax pmax
comp=Z,30nm,1.2s
BRZS **Berezniki** 61.95 324 *e* P **P** 09 18 30.9 -2.1
BRZS **Berezniki** 61.95 324 *e* P **P** 09 18 31.0 -2.1
baz=324
AMKA **Amchitka** 63.39 35 P **P** 09 18 42.9 +0.4
DCZ **Deep Cove** 63.48 148 P **P** 09 18 43.5 +0.3
DCZ IAmb IAmb 09 18 45.1
comp=Z,62nm,0.9s
WHZ **Wether Hill Ro** 64.18 148 IAmb IAmb 09 18 48.6
comp=Z,32nm,0.9s
LBZ **Lake Benmore** 64.42 146 P **P** 09 18 50.2 +0.8
RPZ **Rata Peaks** 64.50 145 LR LR 09 47 45.7
comp=Z,101nm,19.1s,baz=290,slow=37
RPZ **Rata Peaks** 64.50 145 IAmb IAmb 09 18 53.3
comp=Z,66nm,0.8s
BVAR **Borovoye Array** 64.58 327 LR LR 09 48 14.8
comp=Z,88nm,21.2s,baz=360,slow=37
BRVK **Borovoye** 64.65 327 P **P** 09 18 49.9 -0.9
BRVK IAmb IAmb 09 19 16.0
comp=Z,43nm,1.1s
BRVK **Borovoye** 64.65 327 *ce* P **P** 09 18 49.8 -0.9
BRVK pmax pmax
comp=Z,17nm,1.3s
OXZ **Oxford** 64.83 144 IAmb IAmb 09 19 04.0
comp=Z,93nm,1.5s
RAO **Raoul Island** 64.87 126 LR LR 09 46 47.6
comp=Z,59nm,18.2s,baz=294,slow=36
TUWZ **Tuamarina** 64.87 141 P **P** 09 18 52.0 -0.3
ODZ **Otahua Downs** 65.09 146 P **P** 09 18 54.7 +1.1
URZ **Urewera** 65.23 137 LR LR 09 45 54.4
comp=Z,163nm,21.9s,baz=32,slow=34
BKZ **Black Stump Fm** 65.28 138 P **P** 09 18 56.0 +0.9
AFI **Afiamalu** 65.54 108 LR LR 09 42 44.8
comp=Z,88nm,21.1s,baz=302,slow=31
AFI **Afiamalu** 65.54 108 P **P** 09 18 57.5 +0.3
AFI IAmb IAmb 09 18 59.8
comp=Z,98nm,1.1s
AFI **Afiamalu** 65.54 108 P **P** 09 18 57.5 +0.3
AFI pmax pmax
comp=Z,98nm,1.2s
AFI **Afiamalu** 65.54 108 P **P** 09 18 59.5 +2.3
AFI **Afiamalu** 65.54 108 P **P** 09 18 58.4 +1.2
TIXI **Tiksi** 65.54 1 LR LR 09 47 34.6
comp=Z,177nm,21.5s,baz=181,slow=36
TIXI **Tiksi** 65.54 1 P **P** 09 18 55.3 -0.8
TIXI **Tiksi** 65.54 1 *ce* P **P** 09 18 56.2 +0.1
TIXI pmax pmax
comp=Z,49nm,1.7s
ADK **Adak** 65.88 35 P **P** 09 18 58.1 -0.5
ADK IAmb IAmb 09 18 59.4
comp=Z,44nm,0.9s
ADK **Adak** 65.88 35 P **P** 09 18 58.1 -0.5
ADK pmax pmax
comp=Z,44nm,1.0s
ADK **Adak** 65.88 35 P **P** 09 19 01.5 +2.9
WSAR **Wadi Sarin** 66.18 293 LR LR 09 51 26.1
comp=Z,34nm,19.3s,baz=102,slow=39
ATKA **Atka Island** 67.42 35 P **P** 09 19 08.3 -0.1
BILL **Bilibino** 67.69 15 *d i* P **P** 09 19 09.7 -0.1
BILL *e* *PP **PcP** 09 19 36.7 +0.6
BILL *e* 09 21 41.4
BILL *e* PPP PPP 09 23 23.0
BILL pmax pmax
comp=Z,10.0nm,1.0s
NRIK **Noril'sk** 67.83 346 P **P** 09 19 09.2 -1.4
comp=Z,3.6nm,0.7s,baz=145,slow=6.2,SNR=4.8
NRIK LR LR 09 49 46.0
comp=Z,138nm,19.5s,baz=144,slow=37
comp=Z,3.6nm,0.7s
NRIK **Noril'sk** 67.83 346 *ce* P **P** 09 19 09.4 -1.3
NRIK pmax pmax
comp=Z,6.0nm,1.0s
GEYT **Alibeck** 68.31 308 P **P** 09 19 13.8 -0.6
comp=Z,14nm,1.0s,baz=193,slow=4.6,SNR=13
GEYT pP **pP** 09 19 38.3 -0.5
comp=Z,14nm,1.0s,baz=98,slow=7.8,SNR=4.8
GEYT LR LR 09 53 16.6
comp=Z,81nm,20.9s,baz=78,slow=40
comp=Z,14nm,1.0s
GEYT **Alibeck** 68.31 308 P **P** 09 19 14.8 +0.4
GEYT IAmb IAmb 09 19 39.2
comp=Z,57nm,1.5s
GYAOB **ALIBECK ARRAY** 68.31 308 P **P** 09 19 14.9 +0.5
NIUE **Niue** 68.51 113 P **P** 09 19 18.3 +2.4
ABKAR **Akbulak array** 69.43 321 P **P** 09 19 20.2 -0.9
NIKH **Nikolski High** 70.76 36 IAmb IAmb 09 19 34.3
comp=Z,50nm,0.8s
NIKH **Nikolski High** 70.76 36 P **P** 09 19 28.9 -0.1
baz=254
AKTO **Aktyubinsk** 70.94 321 LR LR 09 53 31.2
comp=Z,132nm,18.5s,baz=106,slow=38
SPIA **Saint Paul Isl** 71.25 31 P **P** 09 19 32.2 +0.2
baz=251
ARU **Arti** 72.20 328 LR LR 09 53 50.6
comp=Z,128nm,20.8s,baz=113,slow=38
ARU **Arti** 72.20 328 *d i* P **P** 09 19 35.4 -2.2
ARU *PP **PcP** 09 19 57.7 +2.3
ARU 09 22 13.1
ARU S **S** 09 28 52.9 +0.3
ARU SS **SS** 09 33 24.7 -7.1
ARU pmax pmax
comp=Z,15nm,1.2s
UNV **Unalaska Valle** 72.35 35 IAmb IAmb 09 19 39.3
comp=Z,82nm,1.0s
UNV **Unalaska Valle** 72.35 35 P **P** 09 19 37.8 -0.8
baz=256
UNV **Unalaska Valle** 72.35 35 P **P** 09 19 39.7 +1.1
GAMB **Gambell** 72.87 24 P **P** 09 19 41.4 0.0
baz=248
TNA **Tin City** 75.02 23 P **P** 09 19 53.5 -0.4
baz=251
S12K **Black Hills** 75.27 34 P **P** 09 19 54.8 -0.9
baz=259
KIP **Kipapa** 75.46 70 P **P** 09 19 58.1 +0.7
KIP **Kipapa** 75.46 70 P **P** 09 19 58.1 +0.7
KIP pmax pmax
comp=Z,123nm,1.2s
ANM **Nome** 75.75 25 P **P** 09 19 57.7 -0.5
baz=254
SDPT **Sand Point** 76.09 34 P **P** 09 19 59.7 -0.6
baz=260
CHNA **Chernabura Isl** 76.51 35 P **P** 09 20 02.4 -0.3
baz=261
CHGN **Chignik** 77.39 34 IAmb IAmb 09 20 08.1
comp=Z,90nm,1.0s
CHGN **Chignik** 77.39 34 P **P** 09 20 07.3 -0.3
baz=262,SNR=5.8
KIRV **Kirov** 77.48 329 *ce* P **P** 09 20 07.0 -1.0
BELG **Belogornoye** 77.68 322 LR LR 09 57 41.6
comp=Z,65nm,19.9s,baz=129,slow=38
N16K **Nishlik Lake** 77.83 29 P **P** 09 20 10.2 +0.2
baz=261
MLH **Mauna Loa** 77.97 71 P **P** 09 20 14.3 +2.4
P16K **Nushagak River** 78.00 31 P **P** 09 20 10.7 -0.2
baz=262
O16K **Kokwok River B** 78.03 30 P **P** 09 20 11.1 0.0
baz=262,SNR=7.4
GROC **Groznyy** 78.20 313 *e* P **P** 09 20 12.4 0.0
GROC *e* 09 20 22.1
GROC *e* *PP **pP** 09 20 39.9 +2.5
GROC pmax pmax
comp=Z,17nm,0.4s
RAYN **Ar Rayn** 78.24 293 P **P** 09 20 12.4 -0.7
RAYN pmax pmax
comp=Z,20nm,1.1s
RAR **Rarotonga** 78.28 113 LR LR 09 53 29.8
comp=Z,34nm,18.3s,baz=286,slow=34
O17K **Koliganek Bris** 78.56 30 P **P** 09 20 14.3 +0.3
baz=262,SNR=6.2
R17K **Ugashik Creek** 78.66 32 P **P** 09 20 14.3 -0.3
baz=263
P17K **Kvichak River** 78.81 31 P **P** 09 20 15.8 +0.4
baz=263
GNI **Garni** 78.88 310 P **P** 09 20 16.5 +0.1
GNI IAmb IAmb 09 20 43.2
comp=Z,44nm,1.2s
GNI **Garni** 78.88 310 *ce* P **P** 09 20 16.2 -0.2
GNI pmax pmax
comp=Z,30nm,1.3s
CHIR **Chirikof Islan** 78.88 34 P **P** 09 20 16.1 +0.2
baz=264
N18K **Kilae Creek** 79.27 29 P **P** 09 20 18.5 +0.6
baz=263,SNR=7.5
GCSA **Galena City Sc** 79.36 25 P **P** 09 20 18.7 +0.5
baz=262
P18K **Big Mountain,** 79.45 31 P **P** 09 20 18.6 -0.3
baz=264
TTA **Tatalina** 79.49 27 P **P** 09 20 19.2 0.0
baz=263,SNR=12
Q18K **Katmai Hardscr** 79.49 32 P **P** 09 20 17.9 -1.4
baz=264
O18K **Koktuh Hills** 79.51 30 IAmb IAmb 09 20 21.2
comp=Z,67nm,0.9s
O18K **Koktuh Hills** 79.51 30 P **P** 09 20 19.7 +0.5
baz=264
ZEI **Tsey** 79.58 312 *e* P **P** 09 20 19.1 -1.1
ZEI pmax pmax
comp=Z,35nm,1.2s
SII **Sitkinak Islan** 79.75 34 P **P** 09 20 21.0 +0.4
baz=265
PRGR **Permogore** 79.77 331 *e* P **P** 09 20 17.0 -3.5
ONI **Oni** 79.90 312 P **P** 09 20 21.8 0.0
L19K **White Mountain** 79.93 28 IAmb IAmb 09 20 23.6
comp=Z,67nm,1.2s
L19K **White Mountain** 79.93 28 P **P** 09 20 22.1 +0.6
baz=264,SNR=21
N19K **Bonanza Creek** 79.97 29 IAmb IAmb 09 20 24.9
comp=Z,66nm,1.1s
N19K **Bonanza Creek** 79.97 29 P **P** 09 20 22.5 +0.7
baz=264,SNR=20
O19K **Port Alsworth** 79.99 30 IAmb IAmb 09 20 23.4
comp=Z,58nm,1.2s
O19K **Port Alsworth** 79.99 30 P **P** 09 20 21.9 +0.1
baz=265,SNR=5.7
M19K **Big River Lodg** 80.12 28 IAmb IAmb 09 20 24.8
comp=Z,46nm,1.2s
M19K **Big River Lodg** 80.12 28 P **P** 09 20 22.6 +0.1
baz=264
GEVA **Geas** 80.17 308 IAmb IAmb 09 20 24.6
comp=Z,48nm,1.1s
Q19K **Cape Douglas,** 80.22 31 P **P** 09 20 22.3 -0.8
baz=266
OHAK **Old Harbor** 80.29 33 IAmb IAmb 09 20 24.9
comp=Z,69nm,0.9s
OHAK **Old Harbor** 80.29 33 P **P** 09 20 23.6 +0.1
baz=266,SNR=7.7
KBZ **Khabaz** 80.33 313 P **P** 09 20 23.4 -0.5
comp=Z,8.3nm,1.0s,baz=65,slow=2.1,SNR=18
comp=Z,8.3nm,1.0s
KBZ **Khabaz** 80.33 313 *ce* P **P** 09 20 22.2 -1.7
KBZ pmax pmax
comp=Z,5.0nm,0.8s
K20K **Telida** 80.41 27 IAmb IAmb 09 20 26.4
comp=Z,74nm,1.2s
K20K **Telida** 80.41 27 P **P** 09 20 24.9 +0.9
baz=264,SNR=29
L20K **Farewell, AK** 80.41 28 P **P** 09 20 24.9 +0.8
baz=265,SNR=15
J20K **Nowinta River** 80.46 26 P **P** 09 20 25.0 +0.7
baz=264,SNR=46
KIV **Kislovodsk** 80.48 313 *e* P **P** 09 20 23.5 -1.4
KIV pmax pmax
comp=Z,12nm,1.0s
ILSW **Iliamna Southw** 80.56 30 IAmb IAmb 09 20 25.2
comp=Z,42nm,1.2s
KDAK **Kodiak Island** 80.70 33 P **P** 09 20 25.9 +0.2
KDAK IAmb IAmb 09 20 27.1
comp=Z,53nm,0.8s
KDAK **Kodiak Island** 80.70 33 P **P** 09 20 25.9 +0.2
KDAK pmax pmax
comp=Z,53nm,0.9s
KDAK **Kodiak Island** 80.70 33 P **P** 09 20 25.7 0.0
baz=267
M20K **Styx River** 80.71 28 IAmb IAmb 09 20 27.9
comp=Z,79nm,1.0s
M20K **Styx River** 80.71 28 P **P** 09 20 26.5 +0.7
baz=265,SNR=35
O20K **Slope Mountain** 80.83 30 P **P** 09 20 25.7 -0.6
baz=266,SNR=5.8
Q20K **Shuyak Island** 80.85 32 P **P** 09 20 26.4 0.0
baz=267
G21K **Allakaket** 80.96 24 P **P** 09 20 27.4 +0.5
baz=264
F21K **Alatna River** 81.04 23 P **P** 09 20 27.5 +0.1
baz=264,SNR=12
N20K **Mount Spurr** 81.11 29 P **P** 09 20 27.3 -0.5
baz=266
SPCR **Spurr Chakacha** 81.11 29 P **P** 09 20 27.6 -0.3
baz=266,SNR=5.3
H21K **Melozitna Rive** 81.17 25 IAmb IAmb 09 20 30.7
comp=Z,66nm,1.1s
H21K **Melozitna Rive** 81.17 25 P **P** 09 20 28.6 +0.6
baz=265,SNR=66
PPLA **Purkeypile** 81.22 27 IAmb IAmb 09 20 30.1
comp=Z,54nm,1.0s
PPLA **Purkeypile** 81.22 27 P **P** 09 20 28.5 0.0
baz=266,SNR=12
CHUM **Lake Minchumin** 81.24 26 P **P** 09 20 28.3 -0.1
baz=266
VRH **Novokhopyorsk** 81.26 321 *e* P **P** 09 20 24.6 -4.2
VRH pmax pmax
comp=Z,10.0nm,0.6s
HOM **Homer** 81.30 31 P **P** 09 20 28.8 0.0
baz=267
CAST **Castle Rocks** 81.31 27 P **P** 09 20 29.2 +0.4
baz=266,SNR=75
I21K **Tanana** 81.47 25 IAmb IAmb 09 20 32.3
comp=Z,73nm,0.8s
I21K **Tanana** 81.47 25 P **P** 09 20 30.1 +0.5
baz=266,SNR=18
CNPM **China Poot** 81.50 31 IAmb IAmb 09 20 30.6
comp=Z,71nm,1.0s
F22K **John River** 81.57 23 P **P** 09 20 30.9 +0.8
baz=265
CAPN **Captain Cook N** 81.59 30 P **P** 09 20 29.9 -0.4
baz=267
VOI **Vohitsoka** 81.64 247 P **P** 09 20 30.9 -0.6
VOI **Vohitsoka** 81.64 247 P **P** 09 20 31.3 -0.2
BRLK **Bradley Lake** 81.69 31 IAmb IAmb 09 20 35.0
comp=Z,65nm,0.9s
BRSE **Bradley Lake S** 81.76 31 P **P** 09 20 31.0 -0.2
baz=268,SNR=9.8
E22K **Anaktuvuk Pass** 81.76 22 P **P** 09 20 31.8 +0.7
baz=266
H22K **Ishtalitna Cre** 81.77 24 P **P** 09 20 32.4 +1.2
baz=266,SNR=58
G22K **Bettles** 81.79 23 P **P** 09 20 31.7 +0.5
baz=266
SUA **Susitna One** 81.82 29 IAmb IAmb 09 20 32.3
comp=Z,68nm,0.9s
SUA **Susitna One** 81.82 29 P **P** 09 20 30.9 -0.8
baz=268
BPAW **Bear Paw Mtn.** 81.84 26 P **P** 09 20 32.0 +0.5
baz=267,SNR=56
KTH **Kantishna Hill** 81.84 27 IAmb IAmb 09 20 33.7
comp=Z,84nm,1.2s
MLY **Manley** 81.99 25 IAmb IAmb 09 20 35.7
comp=Z,49nm,0.9s
MLY **Manley** 81.99 25 P **P** 09 20 32.7 +0.2
baz=267,SNR=51
CUT **Chulitna** 82.08 28 P **P** 09 20 32.1 -0.7
baz=268,SNR=9.3
TRF **Thorofare Moun** 82.12 27 P **P** 09 20 32.6 -0.6
baz=268,SNR=6.6
M22K **Willow** 82.13 29 P **P** 09 20 32.5 -0.6
baz=268,SNR=20
D23K **Nanushuk River** 82.23 21 P **P** 09 20 34.4 +0.9
baz=267,SNR=17
O22K **Cooper Landing** 82.29 30 P **P** 09 20 33.5 -0.4
baz=269
RC01 **Rabbit Creek A** 82.30 29 IAmb IAmb 09 20 35.6
comp=Z,52nm,0.9s
RC01 **Rabbit Creek A** 82.30 29 P **P** 09 20 33.8 -0.2
baz=268,SNR=10
C23K **Itkillik River** 82.31 20 P **P** 09 20 33.6 -0.2
baz=266,SNR=14
COLD **Coldfoot** 82.32 23 IAmb IAmb 09 20 37.4
comp=Z,28nm,0.8s
COLD **Coldfoot** 82.32 23 P **P** 09 20 34.7 +0.7
baz=267,SNR=35
G23K **Bananza Creek** 82.36 24 P **P** 09 20 35.5 +1.2
baz=268,SNR=19
SEW **Seward** 82.42 30 P **P** 09 20 34.2 -0.4
baz=269,SNR=12
H23K **Yukon River** 82.52 24 IAmb IAmb 09 20 38.3
comp=Z,62nm,0.9s
H23K **Yukon River** 82.52 24 P **P** 09 20 35.4 +0.3
baz=268,SNR=47
I23K **Minto, Yukon-K** 82.58 25 IAmb IAmb 09 20 38.2
comp=Z,90nm,0.9s
I23K **Minto, Yukon-K** 82.58 25 P **P** 09 20 36.1 +0.7
baz=268,SNR=68
PMR **Palmer** 82.60 29 IAmb IAmb 09 20 36.4
comp=Z,93nm,1.1s
PMR **Palmer** 82.60 29 P **P** 09 20 35.2 -0.4
baz=269,SNR=30
TOLK **Toolik Lake Re** 82.61 22 P **P** 09 20 36.4 +0.8
baz=268,SNR=9.1
SOC **Sochi** 82.64 313 *e* P **P** 09 20 32.4 -3.8
SOC *e* 09 23 43.3
SOC *e* PPP PPP 09 25 35.2
SOC *e* S **S** 09 30 42.3 -3.6
SOC *e* SS **SS** 09 36 05.3 -4.4
SOC *e* SSS SSS 09 39 36.4
SOC pmax pmax
comp=Z,10.0nm,0.6s
SOC MLR MLR
comp=Z,79nm,17.0s
KLMR **Klimovskoe** 82.67 331 *e* P **P** 09 20 33.0 -2.9
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR **Klimovskoe** 82.67 331 *e* P **P** 09 20 33.1 -2.9
KLMR AMP 09 20 34.6
comp=Z,18nm,1.3s
KLMR *e* pP **pP** 09 20 55.9 -5.3
KLMR *e* PKKPbc **PKKPdf** 09 38 56.2 +3.6
NEA2 **Nenana** 82.69 26 IAmb IAmb 09 20 38.2
comp=Z,74nm,1.2s
NEA2 **Nenana** 82.69 26 P **P** 09 20 35.6 -0.4
baz=269,SNR=31
MCK **McKinley** 82.73 27 P **P** 09 20 35.7 -0.6
baz=269,SNR=58
RND **Reindeer** 82.76 27 IAmb IAmb 09 20 37.2
comp=Z,101nm,1.1s
VORR **Voronezh** 82.84 321 *e* P **P** 09 20 36.2 -0.8
VORR pmax pmax
comp=Z,80nm,0.4s
VSR **Storozhevoye** 82.87 321 *e* P **P** 09 20 34.4 -2.8
VSR pmax pmax
comp=Z,10.0nm,0.8s
WAT1 **Susitna Watana** 82.89 27 P **P** 09 20 36.6 -0.5
baz=269
D24K **Happy Valley** 82.90 21 P **P** 09 20 37.5 +0.5
baz=268
KNK **Knik Glacier** 82.92 29 P **P** 09 20 37.2 0.0
baz=270,SNR=28
C24K **Franklin Bluff** 82.96 21 P **P** 09 20 37.8 +0.5
baz=268
PWL **Port Wells** 82.98 29 P **P** 09 20 37.4 -0.2
baz=270,SNR=35
SML **Sawmill** 82.98 29 P **P** 09 20 37.3 -0.3
baz=270,SNR=40
LPSR **Galich'ya Gora** 83.00 322 *e* P **P** 09 20 35.8 -2.0
LPSR pmax pmax
comp=Z,10.0nm,1.0s
E24K **Your Creek** 83.00 22 P **P** 09 20 38.4 +0.8
baz=269,SNR=18
MDM **Murphy Dome** 83.05 25 IAmb IAmb 09 20 39.3
comp=Z,58nm,1.0s
H24K **Noodor Dome** 83.21 24 P **P** 09 20 39.5 +0.8
baz=270,SNR=94
TCOL **CIGO, UAF Yank** 83.21 25 IAmb IAmb 09 20 40.5
comp=Z,53nm,0.9s
TCOL **CIGO, UAF Yank** 83.21 25 P **P** 09 20 38.3 -0.4
baz=270,SNR=17
COLA **College** 83.22 25 P **P** 09 20 38.1 -0.5
COLA IAmb IAmb 09 20 40.5
comp=Z,53nm,0.9s
COLA **College** 83.22 25 P **P** 09 20 38.1 -0.5
COLA pmax pmax
comp=Z,53nm,0.9s
COLA **College** 83.22 25 P **P** 09 20 38.2 -0.5
baz=270
F24K **Squaw Lake** 83.22 23 P **P** 09 20 39.8 +1.1
baz=269,SNR=25
CCB **Clear Creek Bu** 83.23 26 P **P** 09 20 38.2 -0.5
WAT6 **Susitna Watana** 83.26 28 P **P** 09 20 39.1 -0.1
baz=270,SNR=61
M23K **Glacier View** 83.27 29 P **P** 09 20 39.1 +0.1
baz=270,SNR=17
G24K **Hadweenzic Riv** 83.38 24 P **P** 09 20 40.5 +1.0
baz=270,SNR=58
POKR **Poker Plat Res** 83.39 25 IAmb IAmb 09 20 42.4
comp=Z,45nm,0.9s
POKR **Poker Plat Res** 83.39 25 P **P** 09 20 38.8 -0.9
baz=270,SNR=6.5
DHY **Denali Highway** 83.43 27 P **P** 09 20 39.8 -0.2
baz=270,SNR=23
P23K **Montague Islan** 83.44 30 P **P** 09 20 40.1 +0.2
baz=271,SNR=9.9
SCM **Sheep Creek Mo** 83.46 28 P **P** 09 20 40.4 +0.3
baz=271,SNR=25
GLI **Glacier Island** 83.58 29 P **P** 09 20 40.5 -0.2
baz=271,SNR=6.3
HDA **Harding Lake** 83.61 26 P **P** 09 20 40.0 -0.7
baz=271,SNR=76
IL31 83.63 26 IAmb IAmb 09 20 41.5
comp=Z,45nm,0.9s
ILAR **Eielson Array** 83.63 26 P **P** 09 20 39.4 -1.4
comp=Z,32nm,0.9s,baz=236,slow=4.4,SNR=172
ILAR PKKPbc **PKKPbc** 09 38 57.0 -3.6
comp=Z,1.2nm,0.9s,baz=101,slow=0.6,SNR=9.2
ILAR PKPPKP P'P'df 09 47 16.9 +13
comp=Z,0.5nm,1.0s,baz=108,slow=4.2,SNR=4.2
ILAR LR LR 09 58 53.6
comp=Z,28nm,20.2s,baz=278,slow=36
comp=Z,32nm,0.9s
MOS **Moscow** 83.70 325 *e* P **P** 09 20 38.7 -2.6
MOS *e* *PP **pP** 09 21 11.4 +4.9
MOS *e* 09 23 54.4
MOS *e* S **S** 09 30 48.3 -7.9
MOS pmax pmax
comp=Z,32nm,1.1s
D25K **Kavik River** 83.78 21 P **P** 09 20 41.7 +0.2
baz=271,SNR=25
FID **Port Fidalgo** 83.89 30 IAmb IAmb 09 20 43.6
comp=Z,69nm,0.9s
G25K **Bearman Lake** 83.92 24 P **P** 09 20 43.3 +1.0
baz=271,SNR=40
M24K **Tolsona, Glenn** 84.00 28 P **P** 09 20 43.5 +0.7
baz=272,SNR=23
H25K **Birch Creek** 84.05 24 P **P** 09 20 44.1 +1.2
baz=271
F25K **Christian Rive** 84.08 23 P **P** 09 20 44.1 +0.9
baz=271,SNR=47
E25K **Arctic Village** 84.09 22 P **P** 09 20 44.0 +0.8
baz=271,SNR=48
K24K **Donnelly Dome** 84.13 26 P **P** 09 20 43.1 -0.4
baz=272,SNR=66
KLU **Klutina** 84.14 29 IAmb IAmb 09 20 45.1
comp=Z,38nm,1.0s
KLU **Klutina** 84.14 29 P **P** 09 20 43.5 0.0
baz=272,SNR=14
PRP **Porcupine Dome** 84.19 25 P **P** 09 20 42.5 -1.3
baz=272,SNR=19
ANN **Anapa** 84.24 314 *e* P **P** 09 20 42.2 -2.1
ANN *e* S **S** 09 30 55.9 -6.0
ANN pmax pmax
comp=Z,54nm,0.9s
EYAK **Cordova Ski Ar** 84.25 30 IAmb IAmb 09 20 45.9
comp=Z,90nm,1.3s
EYAK **Cordova Ski Ar** 84.25 30 P **P** 09 20 44.5 +0.4
baz=272,SNR=9.9
C26K **Camden Bay** 84.28 20 P **P** 09 20 45.2 +1.2
baz=272
J25K **Salcha River,** 84.28 26 IAmb IAmb 09 20 45.9
comp=Z,39nm,0.9s

J25K	**Salcha River,**	**84.28**	**26**	P	**P**	**09 20 43.3**	**-1.0**		
	baz=272,SNR=50								
PAX	**Paxson**	**84.30**	**27**	IAmb	IAmb	09 20 45.9			
	comp=Z,76nm,1.1s								
PAX	**Paxson**	**84.30**	**27**	P	**P**	**09 20 44.2**	**-0.1**		
	baz=272,SNR=49								
OBN	**Obninsk**	**84.33**	**325**	LR	LR	10 01 38.3			
	comp=Z,21nm,19.5s,baz=108,slow=38								
OBN	**Obninsk**	**84.33**	**325**	*e*P	**P**	**09 20 43.1**	**-1.4**		
OBN				*e*		09 23 54.4			
OBN				pmax	pmax				
	comp=Z,36nm,1.7s								
HARP	**HAARP**	**84.47**	**28**	P	**P**	**09 20 45.3**	**+0.2**		
	baz=272,SNR=10								
RIDG	**Independent Ri**	**84.55**	**27**	P	**P**	**09 20 45.4**	**-0.2**		
	baz=273,SNR=66								
F26K	**Sheenjek River**	**84.65**	**23**	P	**P**	**09 20 47.0**	**+1.0**		
	baz=273,SNR=26								
C27K	**Jago River**	**84.71**	**21**	P	**P**	**09 20 47.3**	**+1.1**		
	baz=273,SNR=17								
N25K	**Chitina, Valde**	**84.77**	**29**	IAmb	IAmb	09 20 48.5			
	comp=Z,57nm,1.1s								
N25K	**Chitina, Valde**	**84.77**	**29**	P	**P**	**09 20 46.8**	**0.0**		
	baz=273,SNR=18								
RAGM	**Ragged Mountai**	**84.79**	**30**	IAmb	IAmb	09 20 48.7			
	comp=Z,92nm,1.2s								
BMRM	**Bremner River**	**84.80**	**29**	IAmb	IAmb	09 20 48.4			
	comp=Z,69nm,1.1s								
BMRM	**Bremner River**	**84.80**	**29**	P	**P**	**09 20 47.1**	**+0.2**		
	baz=273,SNR=15								
G26K	**Porcupine Rive**	**84.83**	**23**	P	**P**	**09 20 48.0**	**+1.1**		
	baz=273,SNR=58								
DOT	**Dot Lake**	**84.90**	**27**	IAmb	IAmb	09 20 48.5			
	comp=Z,51nm,1.1s								
SCRK	**Sand Creek**	**84.92**	**26**	IAmb	IAmb	09 20 52.8			
	comp=Z,28nm,0.9s								
SCRK	**Sand Creek**	**84.92**	**26**	P	**P**	**09 20 47.4**	**-0.1**		
	baz=273,SNR=47								
KAIM	**Kayak Island**	**84.95**	**30**	P	**P**	**09 20 48.5**	**+0.9**		
	baz=273,SNR=5.2								
HMT	**Hamilton**	**85.00**	**30**	IAmb	IAmb	09 20 49.6			
	comp=Z,59nm,1.0s								
J26L	**Joseph Creek**	**85.07**	**26**	IAmb	IAmb	09 20 49.4			
	comp=Z,53nm,0.9s								
J26L	**Joseph Creek**	**85.07**	**26**	P	**P**	**09 20 47.9**	**-0.3**		
	baz=274,SNR=70								
GLB	**Gilahina Butte**	**85.15**	**29**	IAmb	IAmb	09 20 50.2			
	comp=Z,51nm,1.1s								
I26K	**Coal Creek Min**	**85.19**	**25**	P	**P**	**09 20 48.7**	**0.0**		
	baz=274								
L26K	**Log Cabin Wild**	**85.26**	**27**	P	**P**	**09 20 49.4**	**+0.2**		
	baz=274,SNR=12								
BERG	**Berg Lake**	**85.28**	**30**	IAmb	IAmb	09 20 51.1			
	comp=Z,77nm,1.0s								
MAW	**Mawson**	**85.44**	**200**	P	**P**	**09 20 50.2**	**+0.4**		
MAW				LR	LR	09 58 06.2			
	comp=Z,17nm,1.0s,baz=60,slow=5.8,SNR=23								
	comp=Z,40nm,18.9s,baz=49,slow=35								
	comp=Z,17nm,1.0s								
MAW	**Mawson**	**85.44**	**200**	P	**P**	**09 20 50.0**	**+0.3**		
	baz=86,SNR=14								
MAW	**Mawson**	**85.44**	**200**	P	**P**	**09 20 49.8**	**+0.1**		
M26K	**Nabesna, AK**	**85.47**	**28**	P	**P**	**09 20 50.2**	**0.0**		
	baz=274,SNR=10.0								
CRQM	**Cirque**	**85.53**	**29**	IAmb	IAmb	09 21 24.8			
	comp=Z,35nm,1.0s								
MCARA	**McCarthy VSAT**	**85.53**	**29**	P	**P**	**09 20 51.1**	**+0.6**		
MCARA	**McCarthy VSAT**	**85.53**	**29**	P	**P**	**09 20 50.7**	**+0.2**		
	baz=274								
CRQE	**Cirque**	**85.55**	**29**	P	**P**	**09 20 50.6**	**-0.2**		
	baz=274,SNR=8.5								
E27K	**Coleen River**	**85.58**	**22**	P	**P**	**09 20 50.9**	**+0.3**		
	baz=275,SNR=18								
G27K	**Doyon Strip**	**85.68**	**23**	P	**P**	**09 20 52.0**	**+0.9**		
	baz=275,SNR=33								
TGL	**Tana Glacier**	**85.68**	**29**	IAmb	IAmb	09 20 53.0			
	comp=Z,43nm,1.0s								
WAX	**Waxell Ridge**	**85.69**	**30**	IAmb	IAmb	09 20 53.3			
	comp=Z,39nm,0.8s								
K27K	**Chicken**	**85.75**	**26**	IAmb	IAmb	09 20 54.7			
	comp=Z,64nm,1.0s								
K27K	**Chicken**	**85.75**	**26**	P	**P**	**09 20 52.6**	**+1.1**		
	baz=275								
H27K	**Steamboat Moun**	**85.78**	**24**	P	**P**	**09 20 52.5**	**+0.8**		
	baz=275								
I27K	**Kandik River**	**85.81**	**25**	P	**P**	**09 20 52.6**	**+0.8**		
	baz=275								
VNDA	**Vanda**	**85.92**	**173**	P	**P**	**09 20 52.0**	**0.0**		
	comp=Z,11nm,1.0s,baz=312,slow=5.7,SNR=40								
VNDA				LR	LR	09 59 02.3			
	comp=Z,78nm,19.9s,baz=336,slow=35								
	comp=Z,11nm,1.0s								
VNDA	**Vanda**	**85.92**	**173**	P	**P**	**09 20 52.0**	**0.0**		
VNDA	**Vanda**	**85.92**	**173**	P	**P**	**09 20 52.0**	**0.0**		
ISLE	**Juniper Island**	**85.93**	**30**	IAmb	IAmb	09 20 54.3			
	comp=Z,32nm,1.0s								
L27K	**Beaver Creek,**	**85.95**	**27**	IAmb	IAmb	09 20 54.5			
	comp=Z,53nm,1.6s								
L27K	**Beaver Creek,**	**85.95**	**27**	P	**P**	**09 20 52.9**	**+0.3**		
	baz=275,SNR=22								
M27K	**Edge Creek, AK**	**85.99**	**28**	P	**P**	**09 20 53.1**	**+0.2**		
	baz=275,SNR=10								
MESA	**MESA**	**86.16**	**30**	P	**P**	**09 20 53.6**	**-0.3**		
	baz=275								
GRNC	**Granite Creek**	**86.21**	**29**	IAmb	IAmb	09 21 28.7			
	comp=Z,33nm,1.1s								
BARN	**Barnard Glacie**	**86.22**	**29**	IAmb	IAmb	09 20 56.7			
	comp=Z,34nm,0.8s								
YAH	**Yahtse**	**86.25**	**30**	IAmb	IAmb	09 20 56.5			
	comp=Z,26nm,1.0s								
CTG	**Chitna Glacier**	**86.39**	**29**	P	**P**	**09 20 55.2**	**+0.4**		
	baz=276,SNR=22								
CTGM	**Chitina Glacie**	**86.39**	**29**	IAmb	IAmb	09 20 57.6			
	comp=Z,52nm,0.9s								
BVCY	**Beaver Creek**	**86.46**	**28**	P	**P**	**09 20 55.5**	**+0.4**		
	baz=276								
TABL	**Table Mountain**	**86.54**	**30**	IAmb	IAmb	09 20 58.5			
	comp=Z,29nm,0.8s								
MMAI	**Mount Meron Ar**	**86.63**	**303**	LR	LR	10 03 57.2			
	comp=Z,37nm,20.8s,baz=232,slow=38								
YUK3	**Moose Creek**	**86.72**	**28**	P	**P**	**09 20 56.3**	**-0.3**		
	baz=277								
SBA	**Scott Base**	**86.84**	**172**	P	**P**	**09 20 56.9**	**+0.4**		
SBA				IAmb	IAmb	09 20 59.0			
	comp=Z,48nm,1.6s								
SBA	**Scott Base**	**86.84**	**172**	P	**P**	**09 20 56.9**	**+0.4**		
SBA				pmax	pmax				
	comp=Z,48nm,1.6s								
DAWY	**Dawson**	**86.92**	**26**	P	**P**	**09 20 57.0**	**-0.3**		
DAWY	**Dawson**	**86.92**	**26**	P	**P**	**09 20 57.4**	**0.0**		
	baz=277,SNR=36								
O28M	**Mount Upton**	**86.97**	**29**	P	**P**	**09 20 56.7**	**-1.2**		
	baz=277,SNR=16								
PCA	**Pinnacle**	**87.01**	**30**	IAmb	IAmb	09 21 01.3			
	comp=Z,37nm,1.1s								
PINM	**Pinnacle**	**87.02**	**30**	P	**P**	**09 20 57.6**	**-0.3**		
	baz=277								
I29M	**Ogilvie Camp,**	**87.20**	**25**	IAmb	IAmb	09 21 00.1			
	comp=Z,38nm,0.9s								
I29M	**Ogilvie Camp,**	**87.20**	**25**	P	**P**	**09 20 58.6**	**0.0**		
	baz=278,SNR=35								
PPT	**Papeete**	**87.21**	**108**	LR	LR	09 54 31.4			
	comp=Z,52nm,20.6s,baz=306,slow=32								
PPT2	**Papeete2**	**87.21**	**108**	*e*LR	LR	09 48 47.4			
	comp=Z,421nm,33.5s								
PPT2				*e*LR	LR	09 48 47.4			
	comp=Z,242nm,37.0s								
BR131	**Keskin Array S**	**87.42**	**309**	P	**P**	**09 20 58.4**	**-2.0**		
BR131	**Keskin Array S**	**87.42**	**309**	P	**P**	**09 20 58.4**	**-2.0**		
BR131				pmax	pmax				
	comp=Z,10.0nm,1.0s								
BRTR	**Keskin Array B**	**87.42**	**309**	P	**P**	**09 20 57.8**	**-2.6**		
	comp=Z,5.1nm,0.9s,baz=115,slow=5.6,SNR=20								
	comp=Z,5.1nm,0.9s								
BRTR	**Keskin Array B**	**87.42**	**309**	P	**P**	**09 20 58.4**	**-2.0**		
BRTR	**Keskin Array B**	**87.42**	**309**	*i* P	**P**	**09 20 58.5**	**-2.0**		
BRTR				pmax	pmax				
	comp=Z,5.0nm,0.9s								
KIBK	**Kibwezi**	**87.49**	**267**	P	**P**	**09 21 00.7**	**-0.5**		
PNL	**Peninsula**	**87.50**	**30**	P	**P**	**09 21 00.0**	**-0.1**		
	baz=278								
M29M	**Somme Creek**	**87.56**	**28**	P	**P**	**09 21 00.9**	**+0.4**		
	baz=278								
YUK4	**Talbot Arm**	**87.63**	**29**	P	**P**	**09 21 01.1**	**+0.1**		
	baz=278,SNR=7.6								
ARA0	**ARCESS Array S**	**87.77**	**340**	*e*P	**P**	**09 21 01.3**	**+0.1**		
ARCES	**ARCESS Array B**	**87.77**	**340**	P	**P**	**09 20 58.9**	**-2.3**		
	comp=Z,7.8nm,1.0s,baz=76,slow=6.6,SNR=9.2								
ARCES				PKKPbc	**PKKPdf**	**09 38 47.1**	**+3.0**		
	comp=Z,0.5nm,0.4s,baz=252,slow=2.4,SNR=5.7								
ARCES				LR	LR	10 05 43.2			
	comp=Z,98nm,18.2s,baz=88,slow=39								
	comp=Z,7.8nm,1.0s								
ARCES	**ARCESS Array B**	**87.77**	**340**	P	**P**	**09 20 59.5**	**-1.7**		
ARCES	**ARCESS Array B**	**87.77**	**340**	P	**P**	**09 20 59.5**	**-1.7**		
ARCES				pmax	pmax				
	comp=Z,23nm,1.5s								
O29M	**Mount Kennedy**	**87.82**	**30**	P	**P**	**09 21 02.0**	**+0.2**		
	baz=278								
YUK6	**Outpost Mounta**	**87.83**	**29**	P	**P**	**09 21 01.9**	**0.0**		
	baz=278								
SPITS	**Spitsbergen Ar**	**87.92**	**349**	LR	LR	10 04 58.4			
	comp=Z,100nm,19.0s,baz=32,slow=39								
HAMF	**Hammerfest**	**88.14**	**341**	*e*P	**P**	**09 21 01.6**	**-1.3**		
KMBO	**Kilima Mbogo**	**88.15**	**269**	P	**P**	**09 21 04.1**	**-0.4**		
	comp=Z,8.2nm,1.1s,baz=52,slow=4.9,SNR=12								
KMBO				LR	LR	10 00 09.3			
	comp=Z,28nm,18.1s,baz=91,slow=35								
	comp=Z,8.2nm,1.1s								
KMBO	**Kilima Mbogo**	**88.15**	**269**	P	**P**	**09 21 03.9**	**-0.5**		
KMBO	**Kilima Mbogo**	**88.15**	**269**	*i* P	**P**	**09 21 02.6**	**-1.9**		
KMBO				pmax	pmax				
	comp=Z,8.0nm,1.0s								
HYT	**Haines Junctio**	**88.26**	**29**	P	**P**	**09 21 04.2**	**+0.3**		
HYT				IAmb	IAmb	09 21 05.6			
	comp=Z,21nm,0.9s								
HYT	**Haines Junctio**	**88.26**	**29**	P	**P**	**09 21 04.0**	**+0.1**		
	baz=279,SNR=23								
P29M	**Windy Craggy**	**88.34**	**30**	IAmb	IAmb	09 21 05.8			
	comp=Z,26nm,1.0s								
P29M	**Windy Craggy**	**88.34**	**30**	P	**P**	**09 21 04.1**	**0.0**		
	baz=279,SNR=10								
N30M	**Aishikik Lake**	**88.36**	**28**	P	**P**	**09 21 04.7**	**+0.5**		
	baz=280,SNR=26								
KBS	**Kingsbay**	**88.46**	**350**	*e*P	**P**	**09 21 04.7**	**+0.4**		
INK	**Inuvik**	**88.53**	**21**	P	**P**	**09 21 03.5**	**-1.3**		
	comp=Z,26nm,0.9s,baz=276,slow=5.6,SNR=31								
	comp=Z,26nm,0.9s								
INK	**Inuvik**	**88.53**	**21**	IAmb	IAmb	09 21 05.8			
	comp=Z,37nm,1.1s								
INK	**Inuvik**	**88.53**	**21**	P	**P**	**09 21 04.1**	**-0.7**		
	baz=283								
MAYO	**Mayo, Yukon**	**88.53**	**26**	P	**P**	**09 21 05.2**	**+0.2**		
MAYO				IAmb	IAmb	09 21 06.7			
	comp=Z,40nm,0.9s								
P30M	**Million Dollar**	**88.64**	**30**	P	**P**	**09 21 05.9**	**+0.3**		
	baz=280								
O30N	**Mendenhall**	**88.95**	**29**	P	**P**	**09 21 07.2**	**+0.2**		
	baz=280,SNR=8.4								
N31M	**Braeburn, Yuko**	**88.97**	**28**	IAmb	IAmb	09 21 09.1			
	comp=Z,39nm,0.9s								
N31M	**Braeburn, Yuko**	**88.97**	**28**	P	**P**	**09 21 07.7**	**+0.6**		
	baz=281,SNR=22								
PLBC	**Pleasant Camp**	**89.06**	**30**	P	**P**	**09 21 07.3**	**-0.1**		
	baz=280								
FINES	**FINESS Array B**	**89.10**	**332**	P	**P**	**09 21 05.3**	**-2.3**		
	comp=Z,7.5nm,0.9s,baz=82,slow=4.7,SNR=24								
FINES				LR	LR	10 05 04.7			
	comp=Z,149nm,18.7s,baz=74,slow=38								
	comp=Z,7.5nm,0.9s								
AKASG	**Malin Array Be**	**89.17**	**321**	P	**P**	**09 21 06.0**	**-2.2**		
	comp=Z,1.5nm,0.9s,baz=73,slow=3.4,SNR=6.5								
AKASG				LR	LR	10 05 13.3			
	comp=Z,67nm,18.6s,baz=71,slow=38								
	comp=Z,1.5nm,0.9s								
AKBB	**Malin Array Si**	**89.17**	**321**	*e*P	**P**	**09 21 07.0**	**-1.2**		
MNK	**Minsk**	**89.39**	**325**	*i* P	**P**	**09 21 09.1**	**0.0**		
MNK				*i*		09 24 40.9			
MNK				*i* PPP	PPP	09 26 37.7			
MNK				*i* S	**SKSac**	**09 31 30.2**	**-0.3**		
MNK				*i* SS	**SS**	**09 37 49.6**	**+1.7**		
MNK				*i* SSS	SSS	09 41 25.6			
MNK				pmax	pmax				
	comp=Z,21nm,0.8s								
MNK				pmax	pmax				
	comp=N,6.0nm,0.8s								
MNK				pmax	pmax				
	comp=E,2.0nm,0.6s								
MNK				MLR	MLR				
	comp=E,7.0nm,17.0s								
MNK				MLR	MLR				
	comp=N,18nm,16.0s								
MNK				MLR	MLR				
	comp=Z,99nm,22.0s								
MNK	**Minsk**	**89.39**	**325**	*i* P	**P**	**09 21 09.1**	**0.0**		
	comp=E,2.0nm,0.6s								
MNK				*i* P	**P**	**09 21 09.1**	**0.0**		
	comp=N,6.0nm,0.8s								
MNK				*i* P	**P**	**09 21 09.1**	**0.0**		
	comp=Z,21nm,0.8s,baz=81								
MNK				*i* pP	**pP**	**09 21 33.1**	**-1.5**		
MNK				*i* PP	**PP**	**09 24 40.9**	**-0.2**		
MNK				*i* PPP	PPP	09 26 37.8			
MNK				*i* S	**SKSac**	**09 31 30.3**	**-0.3**		
MNK				*i* sS	pS	09 32 13.6	**-10**		
MNK				*i* SS	**SS**	**09 37 49.6**	**+1.7**		
MNK				*i* SSS	SSS	09 41 25.6			
MNK				*i* LR	LR	10 01 43.4			
MNK				*i* LRM	MLR	10 02 27.7			
	comp=E,7.0nm,17.4s								
MNK				*i* LRM	MLR	10 02 38.0			
	comp=N,18nm,16.1s								
MNK				*i* LRM	MLR	10 02 43.9			
	comp=Z,99nm,21.9s								
M31M	**Drury Creek, Y**	**89.48**	**27**	P	**P**	**09 21 09.2**	**-0.2**		
	baz=282,SNR=10								
JETT	**Jettan, Norway**	**89.50**	**340**	*e*P	**P**	**09 21 07.4**	**-2.0**		
SKAG	**Skagway**	**89.58**	**30**	IAmb	IAmb	09 21 11.4			
	comp=Z,19nm,0.9s								
SKAG	**Skagway**	**89.58**	**30**	P	**P**	**09 21 10.1**	**+0.2**		
	baz=281,SNR=8.5								
TRO	**Tromso**	**89.98**	**340**	*e*P	**P**	**09 21 11.9**	**+0.4**		
A36M	**Sachs Harbour**	**90.19**	**17**	P	**P**	**09 21 12.1**	**-0.4**		
	baz=290								
N32M	**Quiet Lake**	**90.31**	**28**	P	**P**	**09 21 13.5**	**+0.1**		
	baz=283								
P32M	**Atlin**	**90.35**	**30**	P	**P**	**09 21 12.7**	**-0.9**		
	baz=282								
P33M	**Teslin, Yukon**	**90.66**	**29**	P	**P**	**09 21 14.9**	**-0.1**		
	baz=283,SNR=10								
CRAG	**Craig**	**91.58**	**34**	P	**P**	**09 21 18.7**	**-0.6**		
	baz=283								
R33M	**Jennings River**	**91.76**	**30**	P	**P**	**09 21 20.9**	**+0.7**		
	baz=285,SNR=11								
WRAK	**Wrangell Islan**	**91.78**	**33**	P	**P**	**09 21 20.1**	**-0.1**		
	baz=284,SNR=5.5								
STEI	**Steigen**	**91.80**	**339**	*e*P	**P**	**09 21 17.9**	**-2.2**		
FAUS	**Fauske**	**91.98**	**339**	*e*P	**P**	**09 21 21.0**	**+0.2**		
MLR	**Muntele Rosu**	**92.22**	**316**	LR	LR	10 08 00.5			
	comp=Z,121nm,20.8s,baz=60,slow=39								
DLBC	**Dease Lake**	**92.49**	**31**	P	**P**	**09 21 23.4**	**-0.2**		
	comp=Z,11nm,1.0s,baz=276,slow=5.3,SNR=17								
DLBC				LR	LR	10 05 05.3			
	comp=Z,24nm,19.3s,baz=312,slow=37								
	comp=Z,11nm,1.0s								
DLBC	**Dease Lake**	**92.49**	**31**	IAmb	IAmb	09 21 25.2			
	comp=Z,16nm,1.1s								
DLBC	**Dease Lake**	**92.49**	**31**	P	**P**	**09 21 23.6**	**+0.1**		
	baz=286,SNR=10								
EUNU	**Eureka**	**92.50**	**5**	IAmb	IAmb	09 21 24.2			
	comp=Z,39nm,1.8s								
T35M	**Bob Quinn**	**92.76**	**32**	P	**P**	**09 21 24.9**	**+0.1**		
	baz=285,SNR=5.3								
UZH	**Uzhgorod**	**93.99**	**320**	*e*P	**P**	**09 21 26.6**	**-4.0**		
MBAR	**Mbarara**	**94.57**	**270**	LR	LR	10 02 04.1			
	comp=Z,44nm,20.4s,baz=96,slow=34								
IDI	**Anoyia**	**94.95**	**306**	LR	LR	10 09 33.7			
	comp=Z,14nm,21.6s,baz=85,slow=39								
HFS	**Hagfors**	**95.29**	**332**	LR	LR	10 08 27.5			
	comp=Z,118nm,18.9s,baz=63,slow=38								
TAOE	**Nuku Hiva Isla**	**95.42**	**98**	*e*LR	LR	09 52 35.4			
	comp=Z,485nm,31.2s								
RES	**Resolute Bay**	**95.78**	**10**	LR	LR	10 09 09.7			
	comp=Z,19nm,19.0s,baz=17,slow=38								
QSPA	**South Pole Qui**	**95.96**	**180**	LR	LR	10 06 13.7			
	comp=Z,79nm,20.6s,baz=350,slow=36								
QSPA	**South Pole Qui**	**95.96**	**180**	P	**P**	**09 21 39.5**	**+0.2**		
QSPA				IAmb	IAmb	09 21 40.4			
	comp=Z,16nm,1.0s								
NB2	**NORSAR Subarra**	**96.06**	**333**	P	**P**	**09 21 36.2**	**-3.6**		
	comp=Z,4.5nm,1.1s,baz=67,slow=4.4								
NB2	**NORSAR Subarra**	**96.06**	**333**	P	**P**	**09 21 36.2**	**-3.6**		
	baz=67,slow=4.4								
NOA	**NORSAR Array B**	**96.06**	**333**	P	**P**	**09 21 36.9**	**-2.9**		
	comp=Z,2.1nm,0.9s,baz=66,slow=4.5,SNR=7.4								
NOA				LR	LR	10 09 03.9			
	comp=Z,151nm,18.8s,baz=75,slow=38								
	comp=Z,2.1nm,0.9s								
JMIC	**Jan Mayen**	**97.25**	**346**	LR	LR	10 09 56.6			
	comp=Z,49nm,20.4s,baz=70,slow=38								
YKA	**Yellowknife Ar**	**97.97**	**24**	P	**P**	**09 21 47.5**	**-0.8**		
	comp=Z,15nm,0.8s,baz=303,slow=5.0,SNR=18								
LSZ	**Lusaka**	**98.39**	**255**	LR	LR	10 05 04.3			
	comp=Z,48nm,20.9s,baz=174,slow=35								
BRG	**Berggiesshubel**	**98.51**	**323**	*e*P	**P**	**09 21 50.0**	**-1.0**		
BRG				Amp		09 21 54.5			
	comp=Z,3.1nm,1.0s								
BRG	**Berggiesshubel**	**98.51**	**323**	*e*P	**P**	**09 21 50.0**	**-1.0**		
BRG				pmax	pmax				
	comp=Z,3.0nm,1.0s								
CLL	**Collm**	**98.91**	**324**	*e*P	Pdif	09 21 55.0	+2.2		
CLL	**Collm**	**98.91**	**324**	*e*Pdif	Pdif	09 21 55.0	+2.2		
CLL				*e*SKSac	**SKSac**	**09 32 24.0**	**+1.7**		
CLL				*e*Sdif	**Sdif**	**09 33 18.0**	**+2.9**		
CLL				*e*SP	**SP**	**09 34 30.0**	**-11**		
CLL				*e*PPS	PPS	09 35 48.0			
CLL				*e*SS	**SS**	**09 40 00.0**	**-3.4**		
CLL				*ex*	x	09 45 12.0			
GERES	**GERESS Array B**	**99.36**	**321**	P	**Pdif**	**09 21 53.5**	**-1.6**		
	comp=Z,0.2nm,0.5s,baz=139,slow=4.7,SNR=4.3								
GERES				PKKPbc	**PKKPbc**	**09 38 19.4**	**-0.6**		
	comp=Z,0.3nm,0.2s,baz=232,slow=4.4,SNR=5.4								
	comp=Z,0.2nm,0.5s								
I04A	**Tendick Farm,**	**101.59**	**43**	P	**Pdif**	**09 22 05.1**	**+0.1**		
	baz=290								
J04D	**Umpqua Nationa**	**101.99**	**44**	P	**Pdif**	**09 22 07.1**	**+0.1**		
	baz=290								
NEW	**Newport**	**103.28**	**37**	P	**Pdif**	**09 22 11.9**	**-0.5**		
	baz=295								
SMMC	**Simmler**	**106.25**	**51**	P	**PKiKP**	**09 26 37.9**	**+0.8**		
	baz=290								
NVAR	**Mina Array Bea**	**106.41**	**47**	Pdiff	**Pdif**	**09 22 26.6**	**-0.2**		
	comp=Z,1.7nm,0.8s,baz=272,slow=5.6,SNR=9.4								
NVAR				PKKPbc	**PKKPbc**	**09 37 58.4**	**-0.7**		
	comp=Z,0.7nm,0.8s,baz=131,slow=4.8,SNR=5.3								
BOZ	**Bozeman (W)**	**107.84**	**38**	P	**PKiKP**	**09 26 40.5**	**+0.6**		
	baz=299								
MPMC	**Manual Prospec**	**107.89**	**49**	P	**PKiKP**	**09 26 40.5**	**+0.2**		
	baz=292								
FURC	**Furnace Creek,**	**108.21**	**49**	P	**PKiKP**	**09 26 41.4**	**+0.8**		
	baz=292								
R11A	**Troy Canyon, C**	**108.41**	**46**	P	**PKiKP**	**09 26 41.9**	**+0.7**		
	baz=294								
GMRC	**Granite Mounta**	**109.75**	**50**	P	**PKiKP**	**09 26 44.6**	**+0.8**		
	baz=293								
IRM	**Iron Mountain**	**110.39**	**50**	P	**PKiKP**	**09 26 44.8**	**-0.1**		
	baz=293								
LAO	**LASA Array**	**110.49**	**35**	P	**PKiKP**	**09 26 45.1**	**+0.4**		
	baz=304								
PDAR	**Pinedale Array**	**110.53**	**40**	PKiKP	**PKiKP**	**09 26 46.0**	**+0.9**		
	comp=Z,0.5nm,0.7s,baz=81,slow=2.0,SNR=4.7								
PDAR				PKKPbc	**PKKPbc**	**09 37 43.8**	**-2.5**		
	comp=Z,0.3nm,0.6s,baz=148,slow=3.3,SNR=5.0								
DGMT	**Dagmar**	**110.59**	**33**	P	**PKiKP**	**09 26 46.1**	**+1.2**		
	baz=306								
WUAZ	**Wupatki**	**112.66**	**48**	P	**PKiKP**	**09 26 48.9**	**-0.4**		
	baz=296								
O20A	**White River Ci**	**112.70**	**42**	P	**PKiKP**	**09 26 49.2**	**-0.1**		
	baz=300								
RSSD	**Black Hills**	**113.21**	**36**	P	**PKiKP**	**09 26 49.4**	**-0.8**		
	baz=305								
RSSD	**Black Hills**	**113.21**	**36**	P	**PKiKP**	**09 26 49.1**	**-1.1**		
	baz=305								
MDND	**Maddock**	**113.39**	**31**	P	**PKiKP**	**09 26 49.7**	**-0.5**		
	baz=310								
MDND	**Maddock**	**113.39**	**31**	P	**PKiKP**	**09 26 49.6**	**-0.6**		
	baz=310								
MVCO	**Mesa Verde**	**113.95**	**45**	P	**PKiKP**	**09 26 51.7**	**-0.1**		
	baz=299								
W18A	**Petrified Fore**	**114.04**	**47**	P	PKPdf	09 26 51.7	-0.3		
	baz=297								
TUC	**Tucson**	**114.47**	**51**	P	**PKiKP**	**09 26 52.9**	**+0.1**		
	baz=295								
ISCO	**Idaho Springs**	**114.60**	**41**	P	**PKiKP**	**09 26 52.6**	**-0.5**		
	baz=302						

I42A	Draeger Farm, baz=319	121.48	28	P		PKPdf	09 27 04.6	-1.1
E46A	Sault Ste Mari baz=325	121.54	24	P		PKPdf	09 27 05.3	-0.6
JFWS	Jewell Farm baz=317	121.56	30	P		PKPdf	09 27 04.8	-1.1
JFWS	Jewell Farm baz=317	121.56	30	P		PKPdf	09 27 04.9	-1.1
L40A	Anamosa baz=316	121.68	31	P		PKPdf	09 27 05.2	-1.0
WMOK	Wichita Mounta baz=306	121.94	42	P		PKPdf	09 27 06.1	-0.9
P38A	Dawn baz=313	122.13	35	P		PKPdf	09 27 06.3	-0.9
L42A	Oliver, Polo baz=318	122.52	30	P		PKPdf	09 27 06.8	-1.0
ABTX	Abilene, Hawle baz=304	122.54	45	P		PKPdf	09 27 07.7	-0.5
K43A	Burlington baz=319	122.65	29	P		PKPdf	09 27 06.9	-1.2
GLMI	Grayling baz=324	122.67	25	P		PKPdf	09 27 07.7	-0.4
N41A	Harden Midland baz=316	122.84	32	P		PKPdf	09 27 08.0	-0.5
P40A	Paris baz=314,SNR=11	123.03	34	P		PKPdf	09 27 08.4	-0.5
TUL1	Leonard baz=309	123.18	40	P		PKPdf	09 27 08.4	-0.9
L44A	Lake County Fo baz=320	123.25	29	P		PKPdf	09 27 08.8	-0.5
L44A	Lake County Fo baz=320	123.25	29	P		PKPdf	09 27 08.0	-1.2
S39A	Bolivar baz=312,SNR=35	123.55	36	P		PKPdf	09 27 09.2	-0.8
JCT	Junction City baz=302	123.59	47	P		PKPdf	09 27 10.3	0.0
JCT	Junction City baz=302,SNR=13	123.59	47	P		PKPdf	09 27 09.6	-0.7
U38A	Gravette baz=310,SNR=18	123.73	38	P		PKPdf	09 27 09.9	-0.5
R40A	Maddies Statio baz=313,SNR=24	123.75	35	P		PKPdf	09 27 09.9	-0.5
HDIL	Hopedale baz=317	123.77	31	P		PKPdf	09 27 09.3	-1.0
HDIL	Hopedale baz=317,SNR=8.0	123.77	31	P		PKPdf	09 27 09.0	-1.3
M44A	Midewin, Midew baz=319	123.79	30	P		PKPdf	09 27 09.3	-1.0
J47A	Sunmer baz=323	123.85	26	P		PKPdf	09 27 10.0	-0.4
J47A	baz=323			P		PKPdf	09 27 10.0	-0.4
HHAR	Hobbs baz=311	124.10	38	P		PKPdf	09 27 10.3	-0.8
X37A	Clayton	124.27	41			PKPdf	09 27 10.6	-0.8
X37A	Clayton baz=308,SNR=6.5	124.27	41	P		PKPdf	09 27 11.3	-0.2
P43A	Skaggs, Pawnee baz=317,SNR=6.5	124.32	32	P		PKPdf	09 27 11.2	-0.2
WHTX	Lake Whitney, baz=305	124.42	44	P		PKPdf	09 27 11.2	-0.6
O44A	Mansfield baz=318	124.50	31	P		PKPdf	09 27 11.5	-0.2
CCM	Cathedral Cave	124.50	35	PKPdf		PKPdf	09 27 11.0	-0.8
CCM	Cathedral Cave	124.50	35	PKIKP		PKPdf	09 27 11.0	-0.8
CCM	Cathedral Cave baz=314,SNR=15	124.50	35	P		PKPdf	09 27 11.4	-0.4
CCM	Cathedral Cave baz=314	124.50	35	P		PKPdf	09 27 10.9	-0.9
SADO	Sadowa comp=Z,21nm,0.8s,baz=302,slow=2.3,SNR=10	124.84	21	PKP		PKPdf	09 27 11.3	-0.9
FVM	French Village baz=315,SNR=12	125.01	34	P		PKPdf	09 27 12.4	-0.3
SFIN	Lafayette baz=320	125.02	30	P		PKPdf	09 27 12.3	-0.3
SFIN	Lafayette baz=320,SNR=5.1	125.02	30	P		PKPdf	09 27 12.1	-0.6
435B	Jarrell baz=304	125.02	46	P		PKPdf	09 27 12.2	-0.8
833A	Chaparral WMA, baz=302	125.03	49	P		PKiKP	09 27 13.3	-0.1
833A	Chaparral WMA, baz=302,SNR=12	125.03	49	P		PKPdf	09 27 13.0	0.0
L48A	N Adams baz=323	125.06	27	P		PKPdf	09 27 12.2	-0.5
L48A	baz=323			P		PKPdf	09 27 12.2	-0.5
AAM	Ann Arbor baz=324	125.12	26	P		PKPdf	09 27 12.6	-0.2
Q44A	Meyer Farm, Va baz=317,SNR=5.1	125.13	33	P		PKPdf	09 27 12.5	-0.4
N47A	Urbana baz=321	125.31	29	P		PKPdf	09 27 12.8	-0.4
N47A	baz=321			P		PKPdf	09 27 12.8	-0.4
MIAR	Mount Ida baz=310,SNR=16	125.45	39	P		PKPdf	09 27 13.7	0.0
MIAR	Mount Ida baz=310	125.45	39	P		PKPdf	09 27 12.8	-0.8
P46A	Rosedale baz=319,SNR=11	125.54	31	P		PKPdf	09 27 13.6	-0.1
OLIL	Olney baz=318,SNR=17	125.74	32	P		PKPdf	09 27 14.2	+0.1
PBMO	Poplar Bluff baz=314,SNR=10	125.86	35	P		PKPdf	09 27 13.8	-0.6
N49A	Columbus Grove baz=323,SNR=9.1	125.99	27	P		PKPdf	09 27 13.8	-0.8
N49A	baz=323,SNR=9.1			P		PKPdf	09 27 13.8	-0.8
O48B	Farmland baz=322,SNR=10.0	126.06	29	P		PKPdf	09 27 14.1	-0.6
O48B	Farmland baz=322,SNR=10.0	126.06	29	P		PKPdf	09 27 13.5	-1.2
BMNY	Brushton-Moira baz=335	126.30	17	P		PKPdf	09 27 14.5	-0.5
E63A	Oxbow baz=343,SNR=6.4	126.34	12	P		PKPdf	09 27 14.5	-0.6
E63A	baz=343,SNR=6.4			P		PKPdf	09 27 14.5	-0.6
LONY	Lake Ozonia baz=335,SNR=6.1	126.47	18	P		PKPdf	09 27 14.6	-0.8
NATX	Nacogdoches baz=308	126.48	43	P		PKPdf	09 27 15.4	-0.3
O49A	Covington baz=322,SNR=12	126.50	28	P		PKPdf	09 27 14.8	-0.7
O49A	baz=322,SNR=12			P		PKPdf	09 27 14.8	-0.7
P48A	Milroy baz=321,SNR=11	126.55	29	P		PKPdf	09 27 15.1	-0.5
P48A	baz=321,SNR=11			P		PKPdf	09 27 15.1	-0.5
FRNY	Flat Rock baz=336,SNR=6.0	126.57	17	P		PKPdf	09 27 14.9	-0.6
J55A	Hilton baz=331	126.62	21	P		PKPdf	09 27 15.3	-0.3
J55A	baz=331			P		PKPdf	09 27 15.3	-0.3
WCNY	West Carthage baz=334,SNR=8.8	126.72	19	P		PKPdf	09 27 15.4	-0.5
Z41A	Richland Creek baz=310	126.77	40	P		PKPdf	09 27 16.1	-0.1
ERPA	Erie baz=328	126.79	23	P		PKPdf	09 27 16.2	+0.2
P49A	Miami Univ. Ec baz=322,SNR=8.8	126.83	29	P		PKPdf	09 27 15.8	-0.5
P49A	Miami Univ. Ec baz=322,SNR=8.8	126.83	29	P		PKPdf	09 27 15.3	-0.9
F64A	Sherman baz=343	126.89	12	P		PKPdf	09 27 15.9	-0.2
F64A	baz=343			P		PKPdf	09 27 15.9	-0.2
ACSO	Alum Creek Sta baz=324,SNR=10.0	127.09	27	P		PKPdf	09 27 16.5	-0.2
ACSO	Alum Creek Sta baz=324,SNR=10.0	127.09	27	P		PKPdf	09 27 16.2	-0.4
M53A	Wt Miller and baz=327	127.09	24	P		PKPdf	09 27 15.8	-0.9
J57A	Williamstown baz=333,SNR=7.2	127.11	19	P		PKPdf	09 27 16.4	-0.2
J57A	baz=333,SNR=7.2			P		PKPdf	09 27 16.4	-0.2
NCB	Newcomb baz=335,SNR=8.7	127.17	18	P		PKPdf	09 27 16.5	-0.2
PKME	Peaks-Kenny Pk baz=342	127.25	13	P		PKPdf	09 27 17.1	+0.3
J58A	Remsen baz=334,SNR=14	127.39	19	P		PKPdf	09 27 17.0	-0.2
J58A				P		PKPdf	09 27 17.0	-0.2
J59A	Piesco baz=335,SNR=18	127.54	18	P		PKPdf	09 27 17.4	-0.1
J59A	baz=335,SNR=18			P		PKPdf	09 27 17.4	-0.1
K57A	Scipio Center baz=332,SNR=9.9	127.54	20	P		PKPdf	09 27 17.1	-0.3
MCVT	Middlebury Col baz=337,SNR=5.6	127.55	17	P		PKPdf	09 27 17.4	-0.1
N53A	Lisbon baz=327	127.55	25	P		PKPdf	09 27 17.6	+0.1
N53A	baz=327			P		PKPdf	09 27 17.6	+0.1
T47A	Sharon Grove baz=318,SNR=5.6	127.56	33	P		PKPdf	09 27 17.9	+0.2
LBNH	Lisbon baz=338	127.57	16	P		PKPdf	09 27 17.7	+0.3
LBNH	Lisbon baz=338	127.57	16	P		PKPdf	09 27 17.3	-0.1
R49A	Shelbyville baz=321,SNR=5.4	127.58	30	P		PKPdf	09 27 17.7	0.0
R49A	baz=321,SNR=5.4			P		PKPdf	09 27 17.7	0.0
P51A	Williamsport baz=324,SNR=11	127.66	28	P		PKPdf	09 27 17.3	-0.5
P51A	baz=324,SNR=11			P		PKPdf	09 27 17.3	-0.5
O52A	Adamsville baz=325,SNR=7.9	127.69	26	P		PKPdf	09 27 17.4	-0.4
O52A	baz=325,SNR=7.9			P		PKPdf	09 27 17.4	-0.4
L56A	Greenwood baz=331,SNR=9.3	127.70	21	P		PKPdf	09 27 17.6	-0.3
L56A	baz=331,SNR=9.3			P		PKPdf	09 27 17.6	-0.3
W45A	Hickory Valley baz=315,SNR=8.7	127.71	36	P		PKPdf	09 27 17.8	-0.1
WVT	Waverly	127.79	34	PKPdf		PKPdf	09 27 17.6	-0.5
WVT	Waverly	127.79	34	PKIKP		PKPdf	09 27 17.6	-0.5
WVT	Waverly baz=317,SNR=16	127.79	34	P		PKPdf	09 27 18.1	0.0
WVT	Waverly baz=317	127.79	34	P		PKPdf	09 27 17.4	-0.7
M55A	Ridgway baz=329,SNR=6.3	127.82	23	P		PKPdf	09 27 17.6	-0.4
M55A	baz=329,SNR=6.3			P		PKPdf	09 27 17.6	-0.4
WVL	Waterville baz=341,SNR=5.4	127.83	13	P		PKPdf	09 27 17.7	-0.3
O53A	New Philadelph baz=326,SNR=6.4	127.85	26	P		PKPdf	09 27 17.4	-0.7
Q51A	Peebles baz=323,SNR=7.6	127.89	28	P		PKPdf	09 27 17.9	-0.3
Q51A	baz=323,SNR=7.6			P		PKPdf	09 27 17.9	-0.3
P52A	Corning baz=325,SNR=13	127.95	27	P		PKPdf	09 27 17.3	-1.0
R50A	Paris baz=322,SNR=6.7	128.00	30	P		PKPdf	09 27 18.2	-0.3
R50A	baz=322,SNR=6.7			P		PKPdf	09 27 18.2	-0.3
OXF	Oxford baz=314,SNR=6.8	128.03	37	P		PKPdf	09 27 18.5	-0.1
OXF	Oxford baz=314,SNR=6.8	128.03	37	P		PKPdf	09 27 17.8	-0.8
I62A	Tamworth baz=339	128.07	15	P		PKPdf	09 27 18.4	-0.1
I62A	baz=339			P		PKPdf	09 27 18.4	-0.1
UPAO	U. Pittsburgh baz=327	128.16	24	P		PKPdf	09 27 19.0	+0.3
BINY	Binghamton baz=333,SNR=11	128.20	20	P		PKPdf	09 27 18.6	-0.1
BINY	Binghamton baz=333	128.20	20	P		PKPdf	09 27 18.8	0.0
O54A	Avella baz=327,SNR=10.0	128.26	25	P		PKPdf	09 27 18.9	0.0
O54A	baz=327,SNR=10.0			P		PKPdf	09 27 18.9	0.0
HCNY	Howe Caverns baz=335,SNR=7.4	128.27	18	P		PKPdf	09 27 18.5	-0.4
Y45A	Yeager Farm, C baz=314	128.39	37	P		PKiKP	09 27 19.7	-0.3
P53A	Whipple baz=325,SNR=14	128.40	26	P		PKPdf	09 27 19.2	0.0
P53A	baz=325,SNR=14			P		PKPdf	09 27 19.2	0.0
Q52A	Bidwell baz=324,SNR=13	128.44	27	P		PKPdf	09 27 19.0	-0.3
Q52A	baz=324,SNR=13			P		PKPdf	09 27 19.0	-0.3
L59A	Walton baz=334,SNR=6.0	128.52	19	P		PKPdf	09 27 18.9	-0.5
L59A	baz=334,SNR=6.0			P		PKPdf	09 27 18.9	-0.5
M57A	Sunshine Farm, baz=331,SNR=9.7	128.55	22	P		PKPdf	09 27 19.5	+0.1
M57A	baz=331,SNR=9.7			P		PKPdf	09 27 19.5	+0.1
U49A	Red Boiling Sp baz=319,SNR=15	128.62	32	P		PKPdf	09 27 19.5	-0.2
V48A	Smith Brothers baz=318	128.63	34	P		PKPdf	09 27 19.6	-0.1
T50A	Nancy baz=320	128.72	31	P		PKPdf	09 27 19.3	-0.6
T50A	baz=320			P		PKPdf	09 27 19.3	-0.6
KSPA	Keystone Colle baz=333,SNR=5.5	128.84	20	P		PKPdf	09 27 19.7	-0.3
S51A	Beattyville baz=322	128.86	29	P		PKPdf	09 27 20.0	-0.2
S51A	baz=322			P		PKPdf	09 27 20.0	-0.2
SSPA	Standing Stone	128.88	23	PKPdf		PKPdf	09 27 19.9	-0.2
SSPA	Standing Stone baz=330,SNR=12	128.88	23	P		PKPdf	09 27 19.9	-0.2
SSPA	Standing Stone baz=330	128.88	23	P		PKPdf	09 27 19.5	-0.6
VBMS	Vicksburg baz=312	128.90	40	P		PKPdf	09 27 20.0	-0.4
MCWV	Mont Chateau baz=327	128.93	25	P		PKPdf	09 27 19.9	-0.3
Q54A	Coxs Mills baz=326,SNR=8.1	129.06	26	P		PKPdf	09 27 20.4	-0.1
Q54A	baz=326,SNR=8.1			P		PKPdf	09 27 20.4	-0.1
R53A	Hurricane baz=324,SNR=6.7	129.09	28	P		PKPdf	09 27 20.5	0.0
R53A	baz=324,SNR=6.7			P		PKPdf	09 27 20.5	0.0
N58A	Sunbury baz=331,SNR=7.5	129.14	21	P		PKPdf	09 27 20.1	-0.4
N58A	baz=331,SNR=7.5			P		PKPdf	09 27 20.1	-0.4
HRV	Adam Dziewonsk baz=338	129.28	16	P		PKPdf	09 27 20.3	-0.4
X48A	Hartselle baz=317,SNR=5.1	129.44	35	P		PKPdf	09 27 21.4	0.0
ODNJ	Ogdensburg baz=334,SNR=5.5	129.66	20	P		PKPdf	09 27 21.4	-0.1
Z47A	Carrollton baz=315	129.74	37	P		PKPdf	09 27 22.1	+0.2
TZTN	Tazewell baz=322,SNR=5.1	129.74	30	P		PKPdf	09 27 21.2	-0.6
TZTN	Tazewell baz=322,SNR=5.1	129.74	30	P		PKPdf	09 27 21.4	-0.5
S54A	Dingess, Beckl baz=325,SNR=6.5	129.82	27	P		PKPdf	09 27 21.9	-0.1
S54A	baz=325,SNR=6.5			P		PKPdf	09 27 21.9	-0.1
P57A	Homestead Farm baz=329,SNR=7.3	129.82	23	P		PKPdf	09 27 21.9	+0.1
P57A	baz=329,SNR=7.3			P		PKPdf	09 27 21.9	+0.1
W50A	Signal Mountai baz=319,SNR=7.1	129.85	33	P		PKPdf	09 27 22.0	-0.1
V51A	Loudon baz=320,SNR=6.0	129.91	32	P		PKPdf	09 27 22.5	+0.4
PAL	Palisades baz=335	129.96	19	P		PKPdf	09 27 21.6	-0.5
R55A	Marlinton baz=326,SNR=5.7	129.96	26	P		PKPdf	09 27 22.7	+0.4
R55A	baz=326,SNR=5.7			P		PKPdf	09 27 22.7	+0.4
PANJ	Princeton baz=334,SNR=5.6	130.26	20	P		PKPdf	09 27 22.4	-0.2
V52A	Sevierville baz=321,SNR=8.7	130.27	31	P		PKPdf	09 27 22.5	-0.3
TKL	Tuckaleechee C baz=321,SNR=10.0	130.32	31	P		PKPdf	09 27 22.7	-0.3
LRAL	Lakeview Retre baz=316	130.49	36	P		PKPdf	09 27 23.0	-0.3
W52A	Murphy baz=320,SNR=8.9	130.67	32	P		PKPdf	09 27 23.7	0.0
BLA	Blacksburg baz=325,SNR=6.7	130.71	27	P		PKPdf	09 27 23.6	-0.1
BLA	Blacksburg baz=325	130.71	27	P		PKPdf	09 27 23.3	-0.4
V53A	Saluda baz=322,SNR=6.5	130.80	30	P		PKPdf	09 27 24.1	+0.2
V53A	baz=322,SNR=6.5			P		PKPdf	09 27 24.1	+0.2
CBN	Corbin Frederi baz=330	131.17	24	P		PKPdf	09 27 24.5	0.0
R58B	Mineral baz=329,SNR=5.4	131.18	24	P		PKiKP	09 27 25.1	-0.4
R58B	baz=329,SNR=5.4			P		PKiKP	09 27 25.1	-0.4
V55A	Taylorsville baz=324,SNR=6.2	131.44	29	P		PKPdf	09 27 24.8	-0.3
V55A	baz=324,SNR=6.2			P		PKPdf	09 27 24.8	-0.3
Y52A	Lilburn baz=320	131.54	33	P		PKPdf	09 27 25.8	+0.5
Y52A	baz=320			P		PKPdf	09 27 25.8	+0.5
250A	Grady baz=316	131.68	37	P		PKPdf	09 27 25.8	+0.2
BRAL	Brewton baz=315	131.78	38	P		PKPdf	09 27 25.4	-0.5
KMSC	Kings Mountain baz=323	131.95	30	P		PKPdf	09 27 25.9	-0.2
KMSC	Kings Mountain baz=323	131.95	30	P		PKPdf	09 27 26.1	0.0
PAULI	Pauline baz=323	131.97	30	P		PKPdf	09 27 25.8	-0.3
T59A	Double "B" Far baz=329	132.16	25	P		PKPdf	09 27 26.7	+0.3
T59A	baz=329			P		PKPdf	09 27 26.7	+0.3
GOGA	Godfrey baz=320	132.20	33	P		PKPdf	09 27 26.4	-0.2
TIGA	Tifton baz=319	133.62	35	P		PKPdf	09 27 29.5	+0.2
CMIG	Matias Romero comp=Z,4.4nm,0.9s,baz=66,slow=5.6,SNR=4.8	134.12	59	PKP		PKiKP	09 27 31.5	-0.4
NHSC	New Hope baz=324	134.15	30	P		PKPdf	09 27 30.3	+0.1
EFI	East Falkland	134.46	177			PKPdf	09 27 30.2	0.0
EFI	East Falkland	134.46	177	PKIKP		PKPdf	09 27 30.2	0.0
DWPF	Disney Wildern baz=319	137.35	36	P		PKPdf	09 27 36.7	+0.4
PLCA	Paso Flores comp=Z,11nm,0.8s,baz=266,slow=3.0,SNR=27	142.69	160	PKhKP		PKPpre	09 27 41.5	
PLCA				SKPbc		SKPbc	09 31 14.7	-0.6
	comp=Z,5.7nm,0.8s,baz=196,slow=4.2,SNR=8.2							
JTS	Las Juntas de	145.79	62	PKPdf		PKPdf	09 27 51.3	-0.5
JTS	Las Juntas de	145.79	62	PKP2		PKPdf	09 27 51.3	-0.5
COVE	Coope Vega, Sa	146.07	61			PKPbc	09 27 53.3	+0.1
ML02	Panimavida	146.70	155			PKPdf	09 27 53.0	+0.2
ML02				PKPbc		PKPab	09 27 55.4	-0.3
MTDJ	Mount Denham	147.00	43			PKPbc	09 27 56.1	+0.2
GO05	Huala	147.12	153			PKPbc	09 27 56.1	+0.4
TRQA	Tornquist	147.48	169	PKPdf		PKPdf	09 27 53.4	-0.6
TRQA				PKPbc		PKPbc	09 27 56.9	+0.3
TRQA	Tornquist	147.48	169	PKIKP		PKPdf	09 27 53.4	-0.6
TRQA							09 27 56.9	
SRBA	San Rafael, Bu	147.66	62			PKiKP	09 27 59.1	-0.8
BO02	Sierra Bellavi	147.80	155	PKPbc		PKPbc	09 27 58.6	+0.9
BO01	Tunca	148.01	154	PKPdf		PKPdf	09 27 54.3	-0.6
BO01				PKPbc		PKPbc	09 27 58.7	+0.5
LCO	Las Campanas	152.63	148			PKiKP	09 28 10.4	+0.4
OBIP	Obispado Ponce	153.32	26			PKPbc	09 28 11.1	-0.1
SJG	San Juan	153.46	25			PKPab	09 28 23.9	+0.1
PLTB	Pedras Altas	154.42	182	PKPdf		PKPdf	09 28 04.7	-0.1
PLTB						PKiKP	09 28 13.3	+0.1
PLTB				PKPab		PKPab	09 28 27.9	+0.4
ITQB	Itaqui	156.46	176	PKPab		PKPab	09 28 36.9	+0.6
CPUP	Villa Florida	159.70	173	PKP		PKPdf	09 28 11.4	-0.2
	comp=Z,7.0nm,0.9s,baz=292,slow=0.5,SNR=14							
CPUP				PKPab		PKPab	09 28 50.4	0.0
	comp=Z,12nm,0.9s,baz=176,slow=5.2,SNR=9.8							
LPAZ	La Paz	163.40	129	PKP		PKPdf	09 28 17.0	+0.5
	comp=Z,9.9nm,1.0s,baz=39,slow=1.9,SNR=27							
LPAZ				PKPab		PKPab	09 29 10.0	+2.2
	comp=Z,16nm,0.9s,baz=198,slow=2.5,SNR=18							
LPAZ	La Paz	163.40	129	PKIKP		PKPdf	09 28 17.0	+0.5
ETMB	Extrema	168.03	109			PKPdf	09 28 18.4	-1.2
ETMB				PKPab		PKPab	09 29 28.0	+0.3
BDFB	Brasilia	168.43	214	PKP		PKPdf	09 28 19.3	-0.6
	comp=Z,10nm,0.8s,baz=272,slow=0.5,SNR=13							
BDFB	Brasilia	168.43	214			PKPdf	09 28 19.1	-0.8
BOAV	Boa Vista	169.79	35			PKPdf	09 28 19.5	-1.3
BOAV				PKPab		PKPab	09 29 35.1	-0.1
MACA	Manacapuru-AM	173.40	64			PKPdf	09 28 20.9	-1.5
MACA				PKPab		PKPab	09 29 50.5	-0.9

IDC 06 10:00:38.9±19.0, 22°00S×68°59E, h0km, mb3.6/4, mbtmp3.6/4, MS3.3/4, Error ellipse: s-maj=667.7km s-min=35.4km az=53.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H baz=194,slow=76,SNR=46	14.75	15	T	T	T	10 18 47.5	
H08S2	Diego Garcia H baz=194,slow=76,SNR=62	14.76	15	T	T	T	10 18 52.0	
H08S3	Diego Garcia H baz=194,slow=76,SNR=61	14.77	15	T	T	T	10 18 53.2	
PALK	Pallekele comp=Z,76nm,18.9s,baz=320,slow=29	31.42	24	LR	LR	LR	10 15 55.2	
LBTB	Lobatse comp=Z,43nm,20.3s,baz=90,slow=32	39.42	257	LR	LR	LR	10 21 22.5	
BOSA	Boshof comp=Z,32nm,22.0s,baz=84,slow=32	39.56	251	LR	LR	LR	10 21 37.2	
TSUM	Tsumeb comp=Z,36nm,18.3s,baz=197,slow=33	47.65	264	LR	LR	LR	10 27 10.4	
ASAR	Alice Springs 0.5nm,0.7s,baz=262,slow=6.0,SNR=5.9 0.5nm,0.7s	59.73	105	P	P	P	10 10 45.9	-0.1
WRA	Warramunga Arr 0.8nm,0.9s,baz=257,slow=6.9,SNR=3.6 0.8nm,0.9s	61.00	101	P	P	P	10 10 54.6	0.0
MKAR	Makanchi Array 0.5nm,0.8s,baz=193,slow=6.1,SNR=4.0 0.5nm,0.8s	69.58	10	P	P	P	10 11 49.4	-0.2
KURBB	Kurchatov Arra 0.3nm,0.8s,baz=206,slow=6.8,SNR=4.4 0.3nm,0.8s	72.83	7	P	P	P	10 12 09.4	+0.2

*IDC **06** 10:03:08.6±12.0, 11°28S×166°13E, h241km±139km, mb3.0/3, mbtmp3.8/4, MS3.1/1, Error ellipse: s-maj=97.4km s-min=30.7km az=157.0*

ISC 06 10:03:09.4±1.5, 11°3S±0°1×166°2E±0°3, h250km, n10, σ1s15/10, mb3.3/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac 15nm,0.5s,baz=86,slow=5.3,SNR=27	10.69	179	P	P	Pn	10 05 37.0	+0.1
DZM	9.3nm,1.0s,baz=334,slow=22,SNR=1.5			S	S	S	10 07 35.9	-0.8
DZM	Mont Dzumac	10.69	179	P	P	Pn	10 05 37.3	+0.5
YATNC	Mamie plateau,	10.70	176	P	P	Pn	10 05 35.5	-1.3
NOUC	Port Laguerre	10.72	179	P	P	Pn	10 05 38.8	+1.7
ONTNC	Ouen Toro	10.93	179	P	P	Pn	10 05 41.4	+1.7
OUENC	Ouen Island, N	11.05	177	P	P	Pn	10 05 41.9	+0.7
PMG	Port Moresby comp=Z,52nm,18.7s,baz=100,slow=36	18.78	274	LR	LR	LR	10 14 13.8	
WRA	Warramunga Arr 1.1nm,0.8s,baz=81,slow=9.1,SNR=8.3 1.1nm,0.8s	31.77	250	P	P	P	10 09 10.5	-0.3
ASAR	Alice Springs 0.2nm,0.5s,baz=62,slow=10,SNR=6.6 0.2nm,0.5s	33.03	244	P	P	P	10 09 21.6	-0.2
ILAR	Eielson Array 0.3nm,0.6s,baz=235,slow=6.5,SNR=6.1 0.3nm,0.6s	83.65	18	P	P	P	10 15 09.6	-0.1

*SJA **06** 10:05:19.8±0.7, 31°78S×72°35W, h13km, ML4.2, MW4.2*
*IDC **06** 10:05:21.7±0.8, 31°74S×72°01W, h0km, mb4.2/7,*

mbtmp4.0/12,ML3.7/5,MS3.3/4,Error ellipse: s-maj=29.6km s-min=18.1km az=100.0
*NEIC **06** 10:05:22.5±1.1,31°.76S±0°.04×72°.26W±0°.09,h10km±1km, mb4.3/7,ML4.2(GUC),Error ellipse: s-maj=12.4km s-min=7.2km az=277.0*
*GUC **06** 10:05:23.2±1.0,31°.82S×72°.08W,h38km±4km,ML4.2*
ISC 06 10:05:24.7±1.8,**31°.76S**±0°.02×**72°.28W**±0°.05,**h25**km±13km, **n111,σ1°89**/151,**mb4.3**/10,**19C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA06	**Catapilco**	**1.16**	**134**			**Pn**	**10 05 43.1**	**-2.2**
VA06	**Catapilco**	**1.16**	**134**	⇑*eP*		**Pn**	**10 05 42.0**	**-3.3**
VA06				*i* S		**Sn**	**10 05 55.8**	**-4.5**
VA06				IAML			10 06 00.9	
	comp=N,13μm,0.4s							
CO06	**Fray Jorge**	**1.21**	**27**			**Pn**	**10 05 45.0**	**-1.0**
CO06	**Fray Jorge**	**1.21**	**27**	⇑*eP*		**Pn**	**10 05 45.0**	**-1.0**
CO06				*eS*		**Sb**	**10 06 02.4**	**+0.2**
CO02	**Combarbal**	**1.23**	**64**			**Pn**	**10 05 44.5**	**-1.8**
CO02	**Combarbal**	**1.23**	**64**	⇑*eP*		**Pn**	**10 05 44.1**	**-2.3**
CO02				*eS*		**Sn**	**10 05 59.7**	**-2.5**
CO02				IAML			10 06 02.7	
	comp=N,20μm,0.2s							
CO02	**Combarbal**	**1.23**	**64**	*eP*		**Pn**	**10 05 44.5**	**-1.8**
CO02				*eS*		**Sn**	**10 05 59.3**	**-2.9**
CO02				IAML			10 06 00.2	
	comp=Z,7μm,0.9s							
VA01	**Torpederas**	**1.37**	**157**			**Pn**	**10 05 47.0**	**-1.3**
VA01	**Torpederas**	**1.37**	**157**	⇑*eP*		**Pn**	**10 05 45.5**	**-2.7**
VA01				*eS*		**Sn**	**10 06 03.3**	**-2.3**
VA01	**Torpederas**	**1.37**	**157**	*eP*		**Pn**	**10 05 45.0**	**-3.2**
VA01				*eS*		**Sn**	**10 06 04.0**	**-1.6**
ROC1	**El Roble**	**1.62**	**139**			**Pn**	**10 05 50.7**	**-1.2**
ROC1	**El Roble**	**1.62**	**139**	*eP*		Pn	10 05 44.8	-7.1
ROC1				*eP*		**Pn**	**10 05 50.4**	**-1.5**
ROCH	**El Roble**	**1.62**	**139**	⇑*eP*		**Pn**	**10 05 50.4**	**-1.5**
ROCH				⇑*eP*		**Pn**	**10 05 50.4**	**-1.5**
ROCH				*eS*		**Sn**	**10 06 09.6**	**-2.5**
ROCH				*eS*		**Sn**	**10 06 10.6**	**-1.5**
ROCH				IAML			10 06 14.0	
	comp=N,7μm,0.2s							
ROCH				IAML			10 06 14.3	
	comp=N,5μm,0.3s							
CO03	**El Pedregal**	**1.64**	**57**			**Pn**	**10 05 51.3**	**-0.8**
CO03	**El Pedregal**	**1.64**	**57**	⇑*eP*		**Pn**	**10 05 50.9**	**-1.1**
CO03				*eS*		**Sn**	**10 06 10.7**	**-1.7**
CO03				IAML			10 06 12.5	
	comp=E,3μm,0.4s							
CO03	**El Pedregal**	**1.64**	**57**	*eP*		**Pn**	**10 05 51.1**	**-1.0**
CO03				*eS*		**Sn**	**10 06 12.0**	**-0.4**
CO03				IAML			10 06 12.6	
	comp=Z,2μm,0.3s							
VA03	**San Esteban**	**1.78**	**125**			**Pn**	**10 05 52.7**	**-1.3**
VA03	**San Esteban**	**1.78**	**125**	⇑*eP*		**Pn**	**10 05 52.5**	**-1.4**
VA03				*eS*		**Sn**	**10 06 13.4**	**-2.4**
VA03				IAML			10 06 18.6	
	comp=N,7μm,0.6s							
VA03	**San Esteban**	**1.78**	**125**	*eP*		**Pn**	**10 05 52.6**	**-1.3**
VA03				*eS*		**Sb**	**10 06 17.5**	**-1.1**
VA03				IAML			10 06 22.8	
	comp=Z,4μm,0.4s							
MT02	**Curacav**	**1.78**	**147**			**Pn**	**10 05 52.7**	**-1.2**
MT02	**Curacav**	**1.78**	**147**	⇑*eP*		**Pn**	**10 05 52.8**	**-1.2**
MT02				*eS*		**Sn**	**10 06 14.0**	**-1.8**
MT02				IAML			10 06 23.3	
	comp=N,2μm,0.4s							
MT02	**Curacav**	**1.78**	**147**	*eP*		**Pn**	**10 05 52.7**	**-1.2**
MT02				*eS*		**Sn**	**10 06 16.7**	**+0.9**
MT02				IAML			10 06 21.3	
	comp=Z,2μm,0.8s							
PEL	**Peldehue**	**1.93**	**136**			**Pn**	**10 05 55.0**	**-1.0**
PEL	**Peldehue**	**1.93**	**136**	⇑*eP*		**Pn**	**10 05 54.6**	**-1.5**
PEL				*eS*		**Sn**	**10 06 17.9**	**-1.7**
PEL				IAML			10 06 26.8	
	comp=E,4μm,0.5s							
PEL	**Peldehue**	**1.93**	**136**	*eP*		**Pn**	**10 05 55.0**	**-1.0**
VA05	**Santo Domingo**	**1.98**	**164**			**Pn**	**10 05 55.4**	**-1.1**
VA05	**Santo Domingo**	**1.98**	**164**	⇑*eP*		**Pn**	**10 05 55.3**	**-1.3**
VA05				*eS*		**Sn**	**10 06 19.2**	**-1.4**
VA05				IAML			10 06 31.9	
	comp=E,7μm,0.4s							
GO04	**Tololo Observa**	**2.03**	**39**			**Pn**	**10 05 57.1**	**-0.5**
GO04	**Tololo Observa**	**2.03**	**39**	⇑*eP*		**Pn**	**10 05 56.6**	**-0.9**
GO04				*eS*		**Sn**	**10 06 21.3**	**-0.9**
GO04	**Tololo Observa**	**2.03**	**39**	*eP*		**Pn**	**10 05 57.0**	**-0.5**
GO04				*eS*		**Sb**	**10 06 27.3**	**+1.4**
CO05	**La Serena**	**2.04**	**26**			**Pn**	**10 05 57.5**	**0.0**
CO05	**La Serena**	**2.04**	**26**	⇑*eP*		**Pn**	**10 05 56.9**	**-0.5**
CO05				*i* S		**Sn**	**10 06 21.8**	**-0.2**
CO05				IAML			10 06 32.9	
	comp=N,2μm,0.6s							
MT05	**Renca**	**2.09**	**142**	Pn		**Pn**	**10 05 57.0**	**-1.2**
MT05	**Renca**	**2.09**	**142**	⇑*eP*		**Pn**	**10 05 57.1**	**-1.0**
MT05				*eS*		**Sn**	**10 06 21.4**	**-2.0**
MT05				IAML			10 06 31.4	
	comp=E,4μm,0.3s							
MT05	**Renca**	**2.09**	**142**	*eP*		**Pn**	**10 05 57.0**	**-1.2**
MT05				*eS*		**Sb**	**10 06 26.0**	**-1.5**
MT05				IAML			10 06 30.7	
	comp=Z,2μm,0.3s							
MT01	**Popeta**	**2.27**	**158**			**Pn**	**10 06 00.1**	**-0.5**
MT01	**Popeta**	**2.27**	**158**	⇑*eP*		**Pn**	**10 05 59.1**	**-1.6**
MT01				*eS*		**Sn**	**10 06 27.3**	**-0.6**
MT01				IAML			10 06 40.5	
	comp=E,1μm,0.2s							
MT01	**Popeta**	**2.27**	**158**	*eP*		**Pn**	**10 05 59.8**	**-0.9**
MT01				*eP*		**Pn**	**10 06 00.0**	**-0.7**
MT01				*eS*		**Sn**	**10 06 30.4**	**+2.4**
MT01				IAML			10 06 39.6	
	comp=Z,741nm,0.4s							
MT03	**Universidad Ad**	**2.29**	**140**			**Pn**	**10 06 00.2**	**-0.8**
MT03	**Universidad Ad**	**2.29**	**140**	⇑*eP*		**Pn**	**10 06 00.2**	**-0.8**
MT03				*eS*		**Sn**	**10 06 27.1**	**-1.3**
MT03				IAML			10 06 32.8	
	comp=E,4μm,0.1s							
MT03	**Universidad Ad**	**2.29**	**140**	*eP*		**Pn**	**10 06 00.0**	**-1.0**
MT03				*eS*		**Sn**	**10 06 26.3**	**-2.1**
MT03				IAML			10 06 36.5	
	comp=Z,2μm,0.3s							
MT09	**Talagante**	**2.29**	**152**			**Pn**	**10 06 00.8**	**-0.2**
MT09	**Talagante**	**2.29**	**152**	⇑*eP*		**Pn**	**10 06 00.6**	**-0.4**
MT09				*eS*		**Sn**	**10 06 28.6**	**+0.1**
MT09				IAML			10 06 43.5	
	comp=N,2μm,0.8s							
FCH	**Farellones**	**2.30**	**133**	⇑*eP*		**Pn**	**10 05 59.4**	**-2.0**
FCH				*eS*		**Sn**	**10 06 27.6**	**-1.4**
FCH				IAML			10 06 33.8	
	comp=E,1μm,0.2s							
CO01	**Juntas del Tor**	**2.59**	**47**			**Pn**	**10 06 05.4**	**+0.2**
CO01	**Juntas del Tor**	**2.59**	**47**	⇑*eP*		**Pn**	**10 06 04.8**	**-0.3**
CO01				*eS*		**Sn**	**10 06 37.3**	**+1.4**
CO01	**Juntas del Tor**	**2.59**	**47**	*eP*		**Pn**	**10 06 05.2**	**0.0**
CO01				*eS*		**Sb**	**10 06 40.3**	**-1.7**
CO01				IAML			10 06 44.7	
	comp=Z,1μm,0.6s							
LMEL	**Las Melosas**	**2.72**	**141**			**Pn**	**10 06 06.8**	**-0.2**
BO01	**Tunca**	**2.81**	**159**	Pn		**Pn**	**10 06 07.6**	**-0.5**
BO01	**Tunca**	**2.81**	**159**	*eP*		**Pn**	**10 06 07.4**	**-0.7**
BO01				*eS*		**Sn**	**10 06 44.8**	**+3.6**
BO01				IAML			10 06 59.6	
	comp=Z,489nm,0.5s							
AROD	**Rodeo**	**2.89**	**57**	*eP*		**Pn**	**10 06 11.2**	**+1.8**
AROD				*eP*		**Pn**	**10 06 11.2**	**+1.8**
AROD				*eS*		**Sb**	**10 06 52.1**	**+1.4**
ACCO	**Cerro Coronel**	**2.99**	**68**	*eP*		**Pn**	**10 06 12.6**	**+1.7**
ACCO				*eS*		**Sn**	**10 06 48.3**	**+2.2**
ARCO	**CERRO ARCO**	**3.04**	**112**	*eP*		**Pn**	**10 06 08.3**	**-3.0**
ARCO				*eS*		**Sb**	**10 07 03.0**	**+8.1**
ARCO				IAML			10 07 04.6	
	comp=Z,657nm,0.6s							
ASAL	**Salagasta**	**3.04**	**107**	*eP*		**Pn**	**10 06 08.3**	**-3.0**
ASAL				*eP*		**Pn**	**10 06 13.6**	**+2.3**
ASAL				*eS*		**Sb**	**10 06 59.4**	**+4.5**
LCO	**Las Campanas**	**3.06**	**27**	Pn		**Pn**	**10 06 11.2**	**-0.5**
LCO	**Las Campanas**	**3.06**	**27**	*eP*		**Pn**	**10 06 11.2**	**-0.5**
ACDV	**Cuesta del Vie**	**3.14**	**61**	*eP*		Pn	10 05 59.5	-13
ACDV				*eP*		**Pn**	**10 06 14.8**	**+2.0**
ACDV				*eS*		**Sb**	**10 06 59.1**	**+1.1**
ACDV				IAML			10 07 00.2	
	comp=Z,524nm,1.1s							
AAGR	**Agrelo**	**3.21**	**115**	*eP*		**Pn**	**10 06 15.8**	**+2.2**
AAGR				*eP*		**Pn**	**10 06 15.8**	**+2.2**
AAGR				*eS*		**Sb**	**10 06 59.3**	**-0.5**
GO05	**Huala**	**3.26**	**175**			**Pn**	**10 06 13.4**	**-0.8**
GO05	**Huala**	**3.26**	**175**	*eP*		Pn	10 06 08.3	-5.9
GO05				*eP*		**Pn**	**10 06 13.0**	**-1.2**
GO05				*eS*		**Sn**	**10 06 54.3**	**+2.1**
BO02	**Sierra Bellavi**	**3.28**	**158**	*eP*		**Pn**	**10 06 14.5**	**-0.1**
BO02				*eS*		**Sn**	**10 06 55.8**	**+3.0**
BO02				*eS*		**Sn**	**10 06 59.3**	**+6.5**
BO02				IAML			10 07 12.3	
	comp=Z,684nm,0.5s							
RTLL	**Cerro Villicun**	**3.28**	**84**	*eP*		**Pn**	**10 06 14.8**	**+0.3**
RTLL				*eS*		**Sn**	**10 06 54.8**	**+2.0**
AC04	**Llanos de Chal**	**3.69**	**17**			**Pn**	**10 06 20.0**	**-0.2**
AC04	**Llanos de Chal**	**3.69**	**17**	*eP*		Pn	10 06 14.8	-5.4
AC04				*eP*		**Pn**	**10 06 19.2**	**-0.9**
AC04				*eS*		**Sb**	**10 07 15.8**	**+2.2**
AC04				IAML			10 07 31.6	
	comp=Z,238nm,0.8s							
ML02	**Panimavida**	**4.06**	**170**			**Pn**	**10 06 24.5**	**-0.7**
AVFE	**Valle Fertil**	**4.28**	**76**	*eP*		**Pn**	**10 06 28.9**	**+0.6**
AVFE				*eS*		**Sn**	**10 07 23.8**	**+6.3**
AVFE				IAML			10 07 29.7	
	comp=Z,389nm,0.6s							
RFA	**San Rafael**	**4.39**	**134**	*eP*		**Pn**	**10 06 30.3**	**+0.5**
RFA				*eS*		**Sb**	**10 07 33.8**	**+0.1**
RFA				IAML			10 07 43.1	
	comp=Z,171nm,0.7s							
VCA	**Vinchina**	**4.64**	**51**	*eP*		**Pn**	**10 06 31.3**	**-2.0**
VCA				IAML			10 07 50.8	
	comp=Z,789nm,0.6s							
BI05	**Punta Hualpn**	**5.04**	**188**	Pn		**Pn**	**10 06 37.6**	**-1.0**
ACLC	**CERRO LA CRUZ**	**5.15**	**65**	*eS*		**Sn**	**10 07 41.8**	**+2.7**
AC02	**Maricunga**	**5.62**	**30**	Pn		**Pn**	**10 06 46.6**	**-0.6**
AC01	**Pan de Azucar**	**5.78**	**15**	Pn		**Pn**	**10 06 45.7**	**-3.2**
VA04	**Juan Fernndez**	**5.83**	**249**	Pn		**Pn**	**10 06 49.8**	**+0.3**
H03N1	**Juan Fernandez**	**5.84**	**252**	T		T	10 13 40.6	
	baz=81,slow=72,SNR=463							
H03N3	**Juan Fernandez**	**5.85**	**251**	T		T	10 13 40.2	
	baz=81,slow=72,SNR=376							
H03N2	**Juan Fernandez**	**5.86**	**252**	T		T	10 13 36.7	
	baz=81,slow=72,SNR=490							
LR04	**Corral**	**8.16**	**186**	Pn		**Pn**	**10 07 20.5**	**-1.0**
PLCA	**Paso Flores**	**9.07**	**172**	Pn		**Pn**	**10 07 34.6**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=337,slow=12,SNR=18							
	comp=Z,0.9nm,0.3s							
PLCA	**Paso Flores**	**9.07**	**172**	Pn		**Pn**	**10 07 34.2**	**+0.2**
LVC	**Limon Verde**	**9.59**	**19**	Pn		**Pn**	**10 07 41.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=225,slow=14,SNR=1.8							
	comp=Z,0.9nm,0.3s							
TRQA	**Tornquist**	**10.54**	**129**			**Pn**	**10 07 52.5**	**-1.6**
CPUP	**Villa Florida**	**14.15**	**71**	Pn		**Pn**	**10 08 41.1**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=227,slow=17,SNR=1.4							
CPUP				LR		LR	10 13 58.8	
	comp=Z,64nm,20.8s,baz=228,slow=37							
	comp=Z,0.9nm,0.6s							
CPUP	**Villa Florida**	**14.15**	**71**	Pn		**Pn**	**10 08 42.3**	**-1.3**
LPAZ	**La Paz**	**15.86**	**15**	Pn		**Pn**	**10 09 06.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=201,slow=7.6,SNR=7.3							
	comp=Z,1.3nm,0.7s							
LPAZ	**La Paz**	**15.86**	**15**			**Pn**	**10 09 06.0**	**-0.9**
PLTB	**Pedras Altas**	**15.89**	**95**	Pn		**Pn**	**10 09 04.3**	**-2.4**
PLTB				IAmb		IAmb	10 09 10.6	
	comp=Z,10nm,1.1s							
SIV	**San Ignacio**	**18.72**	**36**	P		**P**	**10 09 39.9**	**-1.7**
	baz=227,slow=11,SNR=7.8							
SIV				LR		LR	10 16 44.5	
	comp=Z,59nm,20.2s,baz=92,slow=37							
	comp=Z,1.1nm,0.7s							
VILB	**Vilhena**	**21.76**	**33**	P		**P**	**10 10 14.0**	**-0.6**
VILB				IAmb		IAmb	10 10 19.8	
	comp=Z,8.7nm,0.7s							
ETMB	**Extrema**	**22.55**	**16**	P		**P**	**10 10 21.4**	**-1.6**
ETMB				IAmb		IAmb	10 10 25.1	
	comp=Z,8.0nm,1.0s							
CZSB	**Cruzeiro do Su**	**23.91**	**359**	P		**P**	**10 10 33.8**	**-2.8**
CZSB				IAmb		IAmb	10 10 43.3	
	comp=Z,15nm,1.3s							
BDFB	**Brasilia**	**27.31**	**60**	P		**P**	**10 11 06.7**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=204,slow=11,SNR=6.0							
	comp=Z,6.0nm,0.8s							
BDFB	**Brasilia**	**27.31**	**60**	P		**P**	**10 11 06.4**	**-1.3**
BDFB				IAmb		IAmb	10 11 07.1	
	comp=Z,9.0nm,1.0s							
RPN	**Rapa Nui**	**32.49**	**269**	LR		LR	10 21 15.7	
	comp=Z,81nm,19.0s,baz=200,slow=29							
RCBR	**Riachuelo**	**42.68**	**61**	LR		LR	10 33 07.8	
	comp=Z,56nm,18.8s,baz=300,slow=39							
VNA3	**Neumayer Olymp**	**51.51**	**158**	P		**P**	**10 14 28.4**	**+0.5**
VNA2	**Neumayer--Watz**	**52.16**	**158**	P		**P**	**10 14 33.6**	**+0.9**
	baz=284,slow=8.0							
SNAA	**Sanae**	**53.74**	**158**	P		**P**	**10 14 45.1**	**+0.8**
SNAA	**Sanae**	**53.74**	**158**	P		**P**	**10 14 45.2**	**+0.8**
	comp=Z,5.8nm,0.8s,baz=272,slow=7.9,SNR=25							
	comp=Z,5.8nm,0.8s							
TROLL	**Troll, Antarti**	**55.45**	**159**	P		**P**	**10 14 57.8**	**+1.0**
QSPA	**South Pole Qui**	**58.47**	**180**	P		**P**	**10 15 19.3**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=293,slow=23,SNR=8.2							
	comp=Z,2.7nm,0.8s							
QSPA	**South Pole Qui**	**58.47**	**180**	P		**P**	**10 15 18.9**	**+0.5**
TXAR	**Lajitas Array**	**67.68**	**331**	P		**P**	**10 16 21.8**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=149,slow=8.8,SNR=3.6							
	comp=Z,0.3nm,0.7s							
DBIC	**Dimbokro**	**74.67**	**72**	P		**P**	**10 17 02.5**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=223,slow=6.8,SNR=3.7							
	comp=Z,3.8nm,0.8s							
NVAR	**Mina Array Bea**	**81.93**	**325**	P		**P**	**10 17 44.4**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=169,slow=5.2,SNR=3.1							
	comp=Z,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**83.65**	**70**	P		**P**	**10 17 50.5**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=260,slow=4.7,SNR=16							
	comp=Z,3.1nm,0.8s							
WRA	**Warramunga Arr**	**122.61**	**210**	PKP		**PKiKP**	**10 24 19.2**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=152,slow=1.8,SNR=5.9							
H11S2	**WAKE ISLAND Hyl**	**25.56**	**271**	T		T	12 43 40.9	
	baz=118,slow=74,SNR=19							
H11S1	**WAKE ISLAND Hyl**	**25.58**	**271**	T		T	12 43 26.2	
	baz=118,slow=74,SNR=12							
H11S3	**WAKE ISLAND Hyl**	**25.58**	**271**	T		T	12 43 33.5	
	baz=118,slow=74,SNR=12							
ZALV	**Zalesovo Beam**	**152.41**	**30**	PKPbc		**PKiKP**	**10 25 18.6**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=297,slow=3.4,SNR=8.0							
PZH	**PanZhiHua**	**172.61**	**134**	PKP		**PKPdf**	**10 25 31.1**	**-0.9**

*IDC **06** 10:44:01.7±4.9,5°.28S×141°.49E,h44km±54km,mb3.8/8, mbtmp4.1/10,ML1.5/1,Error ellipse: s-maj=37.3km s-min=23.7km az=116.0*
*DJA **06** 10:44:04.3±1.5,5°.5S±8°×14°.2E±°,h10km,M4.9/4,mb5.3/1, MLv4.7/4*
ISC 06 10:44:00.4±0.7,**5°.53S**±0°.06×**141°.2E**±0°.1,**h35**km,**n13,** σ**2°45**/18,**mb4.0/7,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GENI	**Genyem**	**3.11**	**340**	P		**Pn**	**10 44 48.0**	**+1.1**
GENI				S		**Sn**	**10 45 22.9**	**0.0**
SMPI	**Sarmi**	**4.33**	**324**	P		**Pn**	**10 45 07.9**	**+4.1**
PMG	**Port Moresby**	**7.02**	**124**	P		**Pn**	**10 45 41.1**	**+0.4**
	0.5nm,0.3s,baz=287,slow=14,SNR=1.3							
	9.1nm,0.8s							
WRA	**Warramunga Arr**	**15.82**	**204**	P		**Pn**	**10 47 40.8**	**+0.1**
	5.8nm,0.8s,baz=23,slow=12,SNR=16							
WRA				S		**Sn**	**10 50 33.4**	**-1.7**
	1.1nm,0.5s,baz=36,slow=23,SNR=2.0							
ASAR	**Alice Springs**	**19.37**	**201**	P		**Pn**	**10 48 27.4**	**+2.8**
	2.0nm,0.7s,baz=24,slow=9.9,SNR=20							
ASAR				S		**S**	**10 52 00.8**	**+0.2**
	0.8nm,0.6s,baz=18,slow=27,SNR=3.1							
FITZ	**Fitzroy Crossi**	**19.71**	**229**	P		**Pn**	**10 48 30.0**	**+1.4**
	3.8nm,0.9s,baz=39,slow=11,SNR=6.3							
FITZ				S		**S**	**10 52 01.5**	**-5.9**
	3.1nm,0.7s,baz=281,slow=11,SNR=3.1							
	3.8nm,0.9s							
STKA	**Stephens Creek**	**26.21**	**179**	P		**P**	**10 49 35.7**	**+3.7**
	2.2nm,1.0s,baz=346,slow=12,SNR=2.6							
	2.2nm,1.0s							
KSRS	**Korea Array**	**44.53**	**345**	P		**P**	**10 52 08.2**	**-0.5**
	0.4nm,0.4s,baz=159,slow=8.4,SNR=3.0							
	0.4nm,0.4s							
PETK	**Petropavlovsk-**	**60.05**	**11**	P		**P**	**10 54 02.2**	**-1.5**
	11nm,1.3s,baz=177,slow=5.3,SNR=8.8							
	11nm,1.3s							
SONM	**Songino Array**	**61.34**	**334**	P		**P**	**10 54 11.7**	**-1.0**
	0.9nm,0.7s,baz=138,slow=6.9,SNR=5.5							
	0.9nm,0.7s							
MKAR	**Makanchi Array**	**73.55**	**322**	P		**P**	**10 55 30.6**	**+0.7**
	2.3nm,0.7s,baz=108,slow=7.8,SNR=23							
MKAR				pP		**pP**	**10 55 40.2**	**-0.6**
	2.9nm,0.8s,baz=116,slow=7.3,SNR=12							
	2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**75.63**	**329**	P		**P**	**10 55 41.1**	**-0.6**
	0.8nm,0.5s,baz=114,slow=9.9,SNR=3.9							
	0.8nm,0.5s							
ILAR	**Eielson Array**	**87.35**	**24**	P		**P**	**10 56 41.0**	**-2.4**
	2.8nm,0.8s,baz=250,slow=5.2,SNR=20							
	2.8nm,0.8s							

*GUC **06** 10:46:26.5±0.6,22°.11S×67°.57W,h198km±5km,ML3.9*
*SCB **06** 10:46:29.7±0.8,22°.06S×67°.41W,h147km±6km,ML3.5/1, MW3.0,Error ellipse: s-maj=6.5km s-min=5.3km az=0.0*
ISC 06 10:46:24.9±1.7,**22°.05S**±0°.05×**67°.41W**±0°.04, **h181**km±15km,**n23,** σ**1°50**/39,**9C-3D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**1.50**	**248**	⇑*eP*		**Pn**	**10 46 58.5**	**+1.2**
LVC				*eS*		**Sn**	**10 47 23.4**	**+1.0**
PB09	**IPOC Station P**	**1.72**	**278**	⇑*eP*		**Pn**	**10 47 00.7**	**+1.4**
PB09				*eS*		**Sn**	**10 47 27.0**	**+1.1**
YJA	**Yavi**	**1.76**	**94**	P		**Pn**	**10 47 00.7**	**+0.7**
MOCB	**Mochara**	**1.83**	**65**	P		**Pn**	**10 47 01.3**	**+0.6**
MOCB				S		**Sn**	**10 47 24.6**	**-3.8**
MOCB				IAML			10 47 32.3	
	267nm,0.4s							
PB06	**IPOC Station P**	**2.11**	**252**	⇑*eP*		**Pn**	**10 47 04.0**	**+0.6**
PB06				*eS*		**Sn**	**10 47 32.8**	**-0.4**
PB06				IAML			10 47 35.7	
	comp=E,473nm,0.1s							
PB06	**IPOC Station P**	**2.11**	**252**	P		**Pn**	**10 47 04.1**	**+0.7**
PB01	**IPOC Station P**	**2.18**	**297**	⇑*eP*		**Pn**	**10 47 04.8**	**+0.7**
PB01				*eS*		**Sn**	**10 47 34.1**	**-0.4**
PB07	**IPOC Station P**	**2.32**	**277**	⇑*eP*		**Pn**	**10 47 06.1**	**+0.2**
PB07				*eS*		**Sn**	**10 47 36.3**	**-1.2**
PB07				IAML			10 47 38.1	
	comp=N,302nm,0.1s							
PB02	**IPOC Station P**	**2.42**	**287**	⇑*eP*		**Pn**	**10 47 07.5**	**+0.5**
PB02				*eS*		**Sn**	**10 47 38.7**	**-0.8**
PB02				IAML			10 47 39.8	
	comp=E,421nm,0.2s							
PB02	**IPOC Station P**	**2.42**	**287**	P		**Pn**	**10 47 07.8**	**+0.9**
PB04	**IPOC Station P**	**2.56**	**263**	⇑*eP*		**Pn**	**10 47 08.7**	**+0.2**
PB04				*eS*		**Sn**	**10 47 40.5**	**-1.8**
PB04				IAML			10 47 42.9	
	comp=N,210nm,0.2s							
PB04	**IPOC Station P**	**2.56**	**263**	P		**Pn**	**10 47 09.5**	**+1.0**
PATCX	**Punta Patache**	**2.83**	**295**	⇓*eP*		**Pn**	**10 47 12.0**	**+0.3**
PATCX				*eS*		**Sn**	**10 47 46.7**	**-1.4**
PATCX				IAML			10 47 47.9	
	comp=N,275nm,0.2s							
GO01	**Chusmiza**	**2.90**	**324**	⇑*eP*		**Pn**	**10 47 14.0**	**+1.1**
GO01				*eS*		**Sn**	**10 47 52.2**	**+2.0**
GO01				IAML			10 47 55.5	
	comp=N,224nm,0.2s							
TA01	**Diego Aracena**	**2.98**	**299**	⇑*eP*		**Pn**	**10 47 13.1**	**-0.2**
TA01				*eS*		**Sn**	**10 47 49.4**	**-1.6**
TA01				IAML			10 47 50.6	
	comp=E,366nm,0.2s							
TA02	**Huaiquique**	**3.10**	**304**	*eP*		**Pn**	**10 47 15.3**	**+0.5**
TA02				*eS*		**Sn**	**10 47 52.2**	**-1.5**
TA02				IAML			10 47 55.4	
	comp=N,370nm,0.1s							
SLA	**San Lorenzo**	**3.18**	**147**	*i* P		**Pn**	**10 47 17.0**	**+1.0**
SLA				*i* S		**Sn**	**10 47 55.5**	**-0.4**
PB14	**IPOC Station P**	**3.76**	**226**	*eP*

BNDI Bandanaira 2.44 14 P Pn 10 56 41.8 +1.0
BNDI Bandanaira 2.44 14 P Pn 10 56 41.9 +1.1
AAI Ambon 3.39 341 P Pn 10 56 53.4 +1.5
AAI Ambon 3.39 341 P Pn 10 56 52.8 +0.9
MSAI Masohi 3.56 354 P Pn 10 56 55.4 +1.5
MSAI S S 10 57 41.4 +3.8
NLAI Namlea 4.27 329 P Pn 10 57 04.7 +2.0
FAKI Fak Fak 4.92 36 Pn Pn 10 57 08.3 -2.6
FAKI Fak Fak 4.92 36 P Pn 10 57 08.3 -2.6
18nm12µm71µm4µm,0.6s
FAKI S S 10 58 02.4 -5.9
18nm12µm71µm4µm,0.6s
FAKI Fak Fak 4.92 36 P Pn 10 57 08.8 -2.1
SOEI Soe 5.75 240 Pn Pn 10 57 21.2 -0.5
SOEI Soe 5.75 240 P Pn 10 57 21.2 -0.5
56nm15µm136µm19µm,0.8s
SOEI Soe 5.75 240 P Pn 10 57 21.5 -0.2
SANI Sanana 5.86 325 P Pn 10 57 24.4 +1.3
2.7nm8µm10µm624nm,1.8s
SANI Sanana 5.86 325 P Pn 10 57 25.1 +2.0
MTN Manton Dam 6.16 163 P Pn 10 57 24.9 -2.0
baz=6.2,SNR=1000
MTN Manton Dam 6.16 163 Pn Pn 10 57 25.0 -1.9
MTN Manton Dam 6.16 163 P Pn 10 57 25.5 -1.4
SIJI Sorong 6.30 18 P Pn 10 57 26.9 -1.9
354nm,0.4s,baz=197,slow=23,SNR=32
SIJI S S 10 58 34.9 -5.9
825nm,0.2s,baz=231,slow=18,SNR=26
SIJI LR LR 10 59 47.4
comp=Z,3µm,21.3s,baz=122,slow=36
SWI Sorong 6.30 18 P Pn 10 57 26.7 -2.1
SWI pmax pmax
comp=Z,571nm,0.7s
SWI Sorong 6.30 18 P Pn 10 57 26.9 -1.9
comp=Z,11nmcomp=Z,7µmcomp=Z,17µmcomp=Z,564nm,0.6s
LBMI Labuha 6.49 344 P Pn 10 57 32.6 +1.4
comp=Z,3.9nmcomp=Z,3µmcomp=Z,8µmcomp=Z,604nm,0.7s
BATI Baumata 6.49 239 P Pn 10 57 30.8 -0.4
comp=Z,20µm,0.8s,baz=121,slow=2.1,SNR=874
BATI S S 10 58 42.8 -2.4
comp=Z,4µm,0.3s,baz=357,slow=23,SNR=9.2
BATI LR LR 10 59 56.7
comp=Z,3µm,19.8s,baz=289,slow=37
BATI Baumata 6.49 239 P Pn 10 57 30.6 -0.6
comp=Z,38nmcomp=Z,8µmcomp=Z,102µmcomp=Z,12µm,0.8s
KDU Kakadu 6.53 152 P Pn 10 57 29.5 -2.2
baz=6.5,SNR=1000
KDU Kakadu 6.53 152 P Pn 10 57 29.4 -2.2
BBSI Bau Bau 6.86 281 P Pn 10 57 38.7 +2.6
comp=Z,0.6nmcomp=Z,2µmcomp=Z,225nm,1.0s
MMRI Maumere 7.23 256 Pn Pn 10 57 40.2 -0.7
MMRI Maumere 7.23 256 P Pn 10 57 40.7 -0.1
comp=Z,9.5nmcomp=Z,9µmcomp=Z,24µmcomp=Z,3µm,0.9s
MMRI Maumere 7.23 256 P Pn 10 57 41.5 +0.7
EDFI Ende, Flores 7.79 256 P Pn 10 57 47.9 -0.2
comp=Z,2.5nmcomp=Z,4µmcomp=Z,10µmcomp=Z,809nm,1.2s
TNTI Ternate 7.88 346 Pn Pn 10 57 48.5 -0.8
TNTI Ternate 7.88 346 P Pn 10 57 50.2 +1.0
comp=Z,4µmcomp=Z,2µmcomp=Z,154nm,0.8s
TNTI Ternate 7.88 346 P Pn 10 57 50.6 +1.4
SRPI Serui, Papua 8.52 54 P Pn 10 57 56.5 -1.1
comp=Z,4µmcomp=Z,17µmcomp=Z,2µm,0.8s
KNRA Kununurra 8.73 184 P Pn 10 57 58.0 -2.3
baz=8.7,SNR=1000
KNRA Kununurra 8.73 184 Pn Pn 10 57 58.1 -2.3
KNRA Kununurra 8.73 184 P Pn 10 57 58.3 -2.1
LUWI Luwuk 8.76 311 Pn Pn 10 58 03.9 +3.2
LUWI Luwuk 8.76 311 P Pn 10 58 04.4 +3.7
comp=Z,9µmcomp=Z,728nm,1.2s
LUWI Luwuk 8.76 311 P Pn 10 58 02.3 +1.6
BSSI Bau Bau, Buton 8.81 274 P Pn 10 58 02.4 +1.0
comp=Z,3µmcomp=Z,5µmcomp=Z,442nm,0.9s
BAKI Biak 8.83 50 P Pn 10 58 02.0 +0.4
comp=Z,61µmcomp=Z,7µm,1.0s
KMSI Cibinong 9.15 324 P Pn 10 58 08.3 +2.5
comp=Z,4µmcomp=Z,401nm,0.6s
BASI Baing, Sumba 9.26 249 P Pn 10 58 05.8 -1.4
comp=Z,5µmcomp=Z,28µmcomp=Z,2µm,0.5s
BKSI Bulukumba 9.29 279 P Pn 10 58 08.7 +1.1
comp=Z,3µmcomp=Z,5µmcomp=Z,597nm,0.9s
APSI Ampana 9.70 308 P Pn 10 58 14.8 +1.8
comp=Z,2µmcomp=Z,229nm,0.9s
KAPI Kappang 9.71 281 P Pn 10 58 13.6 +0.5
comp=Z,175nm,1.0s,baz=110,slow=8.4,SNR=30
KAPI Kappang 9.71 281 Pn 10 58 14.0 +0.9
KAPI Kappang 9.71 281 c *i* P Pn 10 58 14.2 +1.1
KAPI Kappang 9.71 281 P Pn 10 58 15.2 +2.1
SPSI Sidrap Palu 9.95 287 P Pn 10 58 17.3 +1.1
comp=Z,2µmcomp=Z,3µmcomp=Z,283nm,1.2s
WBSI Waikabubak, Su 10.20 254 P Pn 10 58 17.5 -2.0
comp=Z,37µmcomp=Z,4µm,0.8s
TTSI Tana Toraja 10.22 292 P Pn 10 58 22.5 +2.8
comp=Z,4µmcomp=Z,354nm,1.1s
MRSI Marisa 10.40 315 P Pn 10 58 24.1 +2.1
comp=Z,2µmcomp=Z,5µmcomp=Z,571nm,1.2s
SMPI Sarmi 10.55 63 P Pn 10 58 23.0 -1.0
comp=Z,4µmcomp=Z,3µmcomp=Z,208nm,1.4s
SGSI Sangihe 11.19 340 P Pn 10 58 32.9 +0.8
comp=Z,6µmcomp=Z,590nm,0.6s
PLAI Plampang 11.60 260 P Pn 10 58 34.7 -2.7
comp=Z,4µmcomp=Z,19µmcomp=Z,2µm,0.7s
PLAI Plampang 11.60 260 P Pn 10 58 35.0 -2.4
GENI Genyem 11.62 69 P Pn 10 58 36.7 -1.0
comp=Z,5µmcomp=Z,5µmcomp=Z,286nm,1.0s
GENI Genyem 11.62 69 P Pn 10 58 39.3 +1.6
TOLI2 Tolitoli 11.67 313 Pn 10 58 38.9 +0.6
TOLI2 Tolitoli 11.67 313 P Pn 10 58 40.8 +2.5
FITZ Fitzroy Crossi 11.69 198 P Pn 10 58 35.0 -3.5
comp=Z,304nm,0.3s,baz=30,slow=9.5,SNR=392
FITZ S S 11 00 37.2 -12
comp=Z,355nm,0.5s,baz=70,slow=14,SNR=4.7
FITZ LR LR 11 04 16.2
comp=Z,2µm,18.5s,baz=12,slow=43
FITZ Fitzroy Crossi 11.69 198 P Pn 10 58 35.0 -3.5
baz=12,SNR=906
FITZ Fitzroy Crossi 11.69 198 P Pn 10 58 36.1 -2.4
MPSI Mapaga 11.85 307 P P 10 58 44.4 -1.1
comp=Z,2µmcomp=Z,3µmcomp=Z,133nm,1.0s
TWSI Taliwang, Sumb 12.46 261 P Pn 10 58 45.1 -3.3
comp=Z,2µmcomp=Z,5µmcomp=Z,528nm,0.8s
BKB Balikpapan 13.61 294 P P 10 59 07.6 +2.5
BKB Balikpapan 13.61 294 P P 10 59 04.7 -0.4
comp=Z,8µmcomp=Z,734nm,1.1s
BKB Balikpapan 13.61 294 P P 10 59 05.1 0.0
SMKI Samarinda 13.69 297 P P 10 59 08.1 +2.1
comp=Z,12µmcomp=Z,584nm,1.2s
WB0 Warramunga Arr 13.70 159 Pn Pn 10 59 01.1 -2.7
WRAB Tennant Creek 13.84 160 Pn 10 59 03.1 -2.4
WRAB Tennant Creek 13.84 160 P Pn 10 59 03.1 -2.4
WRA Warramunga Arr 13.84 160 P Pn 10 59 01.4 -4.2
comp=Z,173nm,0.7s,baz=339,slow=13,SNR=160
WRA S S 11 01 28.1 -12
comp=Z,215nm,1.0s,baz=335,slow=22,SNR=8.2
WRA LR LR 11 05 22.0
comp=Z,3µm,18.7s,baz=337,slow=41
WRA ScP ScP 11 07 27.0 -0.6
comp=Z,27nm,0.5s,baz=344,slow=1.3,SNR=12
WRA Warramunga Arr 13.84 160 Pn 10 59 02.5 -3.1
WRA Warramunga Arr 13.84 160 *i* P Pn 10 59 01.3 -4.3
WRA pmax pmax
comp=Z,173nm,0.7s
WB2 Warramunga Arr 13.85 160 Pn 10 59 03.2 -2.4
WR0 Warramunga Arr 13.93 159 Pn 10 59 03.4 -3.2
SRBI Singaraja 14.04 264 P Pn 10 59 05.6 -2.5
comp=Z,3µmcomp=Z,332nm,0.7s
DNP Denpasar 14.10 262 P Pn 10 59 08.8 0.0
comp=Z,851nm,0.5s
IGBI Denpasar 14.18 261 P Pn 10 59 05.9 -3.9
comp=Z,9µmcomp=Z,606nm,0.7s
BBKI Banjar Baru 14.83 283 P P 10 59 20.3 +1.7
comp=Z,11µmcomp=Z,1µm,0.8s
ABJI Asem Bagus 15.00 266 P Pn 10 59 19.0 -0.8
comp=Z,4µmcomp=Z,7µmcomp=Z,939nm,0.9s
JAGI Jajag, Banyuwa 15.12 263 P Pn 10 59 16.9 -4.5
JAGI Jajag, Banyuwa 15.12 263 P Pn 10 59 18.0 -3.3
comp=Z,3µmcomp=Z,6µmcomp=Z,342nm,0.7s
JAGI Jajag, Banyuwa 15.12 263 P Pn 10 59 19.5 -1.8
KMMI Kalianget 15.25 269 P P 10 59 23.5 +0.2
comp=Z,6µmcomp=Z,7µmcomp=Z,461nm,1.0s
COEN Coen 15.31 118 P Pn 10 59 22.7 -1.0
baz=15,SNR=154
COEN Coen 15.31 118 P Pn 10 59 22.4 -1.2
COEN Coen 15.31 118 P Pn 10 59 22.9 -0.7
MTKI Muara Teweh, K 15.56 292 P P 10 59 28.4 +1.6
comp=Z,356nm,0.9s
BLJI Banyuglugur 15.63 266 P P 10 59 27.2 -0.3
comp=Z,10µmcomp=Z,1µm,0.9s
GMJI Gumukmas 15.80 264 P P 10 59 26.8 -2.6
comp=Z,2µmcomp=Z,168nm,0.7s
MYLDM Lahad Datu 16.15 318 P P 10 59 32.6 -0.6
BWJI Bawean 16.60 273 P Pn 10 59 40.0 +0.8
comp=Z,4µmcomp=Z,7µmcomp=Z,762nm,1.2s
QIS Mount Isa 16.83 145 P P 10 59 40.8 +0.1
baz=17,SNR=1000
QIS Mount Isa 16.83 145 P P 10 59 41.2 +0.5
MBWA Marble Bar 16.94 212 P P 10 59 41.6 -0.2
MBWA Marble Bar 16.94 212 P P 10 59 42.2 +0.4
PSA00 Pilbara Seismi 17.22 211 P P 10 59 45.2 +0.3
PSA00 Pilbara Seismi 17.22 211 P P 10 59 44.8 -0.1
PSA00 Pilbara Seismi 17.22 211 P P 10 59 45.4 +0.5
AS31 Alice Springs 17.23 166 P P 10 59 45.3 +0.2
ASAR Alice Springs 17.23 166 P P 10 59 45.4 +0.2
comp=Z,2µm,0.7s,baz=347,slow=9.4,SNR=1537
ASAR S S 11 02 51.0 -3.2
comp=Z,490nm,0.9s,baz=348,slow=23,SNR=18
ASAR ScP ScP 11 07 33.2 -0.7
comp=Z,41nm,0.4s,baz=1.9,slow=1.8,SNR=15
ASAR P3KPbc 11 34 37.6
comp=Z,0.7nm,0.7s,baz=162,slow=3.8,SNR=9.9
ASAR Alice Springs 17.23 166 P P 10 59 45.5 +0.5
ASAR Alice Springs 17.23 166 P P 10 59 45.6 +0.5
SPMM Sapulut 17.26 312 P Pn 10 59 49.0 +1.9
TBJI Tambak Boyo 17.36 269 P Pn 10 59 48.1 0.0
comp=Z,2µmcomp=Z,7µmcomp=Z,781nm,0.9s
PWJI Pagerwojo 17.41 265 P P 10 59 45.7 -1.4
comp=Z,5µmcomp=Z,716nm,0.7s
NGJI Ngawi 17.73 267 P Pn 10 59 52.4 -0.2
comp=Z,5µmcomp=Z,505nm,0.7s
PMG Port Moresby 17.82 99 P P 10 59 51.3 -0.3
comp=Z,141nm,0.7s,baz=278,slow=7.3,SNR=21
PMG S S 11 03 01.3 -4.9
comp=Z,77nm,1.1s,baz=315,slow=22,SNR=2.8
PCJI Pacitan 18.04 265 P P 10 59 50.9 -3.0
comp=Z,6µmcomp=Z,860nm,1.0s
WRKA Warakurna 18.06 183 P P 10 59 54.4 +0.3
baz=18,SNR=441
WRKA Warakurna 18.06 183 P P 10 59 54.9 +0.8
PBKI Pangkalan Bun 18.08 282 P Pn 10 59 56.2 -0.5
comp=Z,17µmcomp=Z,2µm,1.1s
KKM Kota Kinabalu 18.35 314 P P 10 59 57.6 +0.2
KKM Kota Kinabalu 18.35 314 P Pn 10 59 59.8 -0.1
MTSU Mount Surprise 18.38 129 P P 10 59 58.2 +0.6
baz=18,SNR=299
MTSU Mount Surprise 18.38 129 P P 10 59 58.7 +1.0
UGM Wanagama 18.68 266 P P 10 59 58.8 -2.1
UGM Wanagama 18.68 266 P P 11 00 01.8 +0.9
comp=Z,6µmcomp=Z,573nm,0.8s
UGM Wanagama 18.68 266 P P 10 59 59.7 -1.2
SMRI Semarang 18.75 268 P P 11 00 01.6 0.0
SMRI Semarang 18.75 268 P Pn 11 00 04.7 +0.2
comp=Z,5µmcomp=Z,426nm,0.9s
SMRI Semarang 18.75 268 P Pn 11 00 03.3 -1.2
YOGI Yogyakarta 18.90 266 P Pn 11 00 04.8 -1.5
comp=Z,3µmcomp=Z,206nm,0.8s
STKI Sintang 19.11 291 P P 11 00 07.1 +1.6
comp=Z,183nm,1.0s
SBUM Sibu 19.44 298 P P 11 00 10.2 +1.1
SBUM Sibu 19.44 298 P P 11 00 10.0 +0.9
KSM Kuching 20.73 293 P P 11 00 21.4 -1.4
KSM Kuching 20.73 293 P P 11 00 24.5 +1.7
JCJI Jatiagi 20.92 270 P P 11 00 25.5 +0.7
comp=Z,421nm,0.8s
CTA Charters Tower 21.01 130 P P 11 00 26.6 +0.8
CTAO Charters Tower 21.01 130 P P 11 00 25.8 0.0
CTAO Charters Tower 21.01 130 P P 11 00 25.8 0.0
CTAO Charters Tower 21.01 130 P P 11 00 26.6 +0.8
GIRL Giralia 21.36 221 P P 11 00 29.8 +0.4
baz=21,SNR=20
GIRL Giralia 21.36 221 P P 11 00 29.7 +0.3
GIRL Giralia 21.36 221 P P 11 00 29.7 +0.3
LEM Lembang 21.55 269 P P 11 00 30.4 -1.3
comp=Z,378nm,1.0s,baz=65,slow=5.9,SNR=14
comp=Z,378nm,1.0s
OOD Oodnadatta 21.63 165 P P 11 00 31.7 -0.4
CNJI Cibinong 22.03 268 P P 11 00 33.0 -3.2
comp=Z,4µmcomp=Z,540nm,1.1s
MEEK Meekatharra 22.11 206 P P 11 00 36.3 -0.7
baz=22,SNR=29
MEEK Meekatharra 22.11 206 P P 11 00 36.6 -0.3
CBJI Citeko 22.33 270 P P 11 00 36.5 -2.5
comp=Z,375nm,0.9s
DBJI Dramaga 22.43 270 P P 11 00 41.1 +1.2
comp=Z,139nm,0.8s
SKJI Sukabumi 22.60 268 P P 11 00 39.0 -2.5
comp=Z,2µmcomp=Z,209nm,0.7s
KRVT Keravat (AS076 22.73 85 P P 11 00 43.2 +0.5
comp=Z,52nm,0.7s,baz=240,slow=4.1,SNR=15
comp=Z,52nm,0.7s
RABL Rabaul 22.89 84 P P 11 00 43.8 -0.3
RABL IAmb IAmb 11 00 45.2
comp=Z,153nm,1.2s
RABL Rabaul 22.89 84 P P 11 00 44.7 +0.6
INKA Innaminka 23.38 154 P P 11 00 49.2 +0.9
PPBI Pangkal Pinang 23.59 280 P P 11 00 51.5 +1.1
comp=Z,21µmcomp=Z,269nm,0.8s
XMI Christmas Isla 23.63 260 P P 11 00 51.2 +0.4
XMIS Christmas Isla 23.67 260 P P 11 00 50.8 -0.3
XMIS Christmas Isla 23.67 260 P P 11 00 51.2 0.0
MULG Mulgathing 23.68 170 P P 11 00 51.1 +0.1
FORT Forrest 23.78 183 P P 11 00 51.9 -0.1
baz=24,SNR=301
FORT Forrest 23.78 183 P P 11 00 51.8 -0.1
FORT Forrest 23.78 183 P P 11 00 52.2 +0.3
QLP Quilpie 24.17 146 P P 11 00 55.7 +0.1
baz=24,SNR=271
QLP Quilpie 24.17 146 P P 11 00 56.0 +0.4
KASI Kota Agung 24.72 272 P P 11 00 57.7 -3.0
comp=Z,2µmcomp=Z,100nm,0.8s
PMBI Palembang 24.78 278 P P 11 01 03.1 +1.9
PMBI Palembang 24.78 278 P P 11 01 01.6 +0.4
comp=Z,419nm,0.5s
PMBI Palembang 24.78 278 P P 11 01 04.2 +3.0
LCRK Leigh Creek 24.86 161 P P 11 01 01.9 +0.1
LWLI Liwa 25.20 273 P P 11 01 03.0 -2.2
comp=Z,53nm,0.5s
DSRI Dabo 25.50 283 P P 11 01 11.0 +3.3
comp=Z,51nm,0.9s
GUMO Guam 25.55 37 P P 11 01 08.7 +0.6
comp=Z,45nm,0.3s,baz=195,slow=12,SNR=5.8
comp=Z,45nm,0.3s
TPRI Tanjung Pinang 25.94 286 P P 11 01 16.1 +4.4
comp=Z,4µmcomp=Z,82nm,1.0s
RK1H Rockhampton Ha 26.12 131 P P 11 01 13.5 +0.2
JMBI JAMBI 26.14 280 P P 11 01 14.7 +1.2
BLDU Ballidu 26.39 205 P P 11 01 15.5 0.0
baz=26,SNR=62
BLDU Ballidu 26.39 205 P P 11 01 15.5 0.0
BBOO Buckleboo 26.52 167 P P 11 01 16.2 -0.4
baz=27,SNR=454
BBOO Buckleboo 26.52 167 P P 11 01 16.0 -0.7
BBOO Buckleboo 26.52 167 P P 11 01 16.3 -0.4
KLBR Kellerberrin 26.84 202 P P 11 01 20.0 +0.4
baz=27,SNR=84
KLBR Kellerberrin 26.84 202 P P 11 01 20.4 +0.9
MYKOM Kota Tinggi 26.86 288 P P 11 01 20.0 +0.1
RMQ Roma 26.86 139 P P 11 01 20.0 +0.2
baz=27,SNR=84
RMQ Roma 26.86 139 P P 11 01 20.1 +0.2
WHYH Whyalla 27.10 165 P P 11 01 21.6 -0.2
STKA Stephens Creek 27.36 157 P P 11 01 23.9 -0.2
comp=Z,340nm,0.7s,baz=326,slow=9.6,SNR=541
STKA LR LR 11 13 58.2
comp=Z,1µm,18.9s,baz=343,slow=40
comp=Z,340nm,0.7s
STKA Stephens Creek 27.36 157 P P 11 01 23.9 -0.2
baz=27,SNR=421
STKA Stephens Creek 27.36 157 P P 11 01 24.1 -0.1
STKA IAmb IAmb 11 01 25.7
comp=Z,73nm,0.8s
STKA Stephens Creek 27.36 157 P P 11 01 24.0 -0.1
EIDS Eidsvold 27.73 134 P P 11 01 27.0 -0.6
baz=28,SNR=9.3
EIDS Eidsvold 27.73 134 P P 11 01 26.7 -0.9
EIDS IAmb IAmb 11 02 23.8
comp=Z,67nm,1.1s
EIDS Eidsvold 27.73 134 P P 11 01 26.9 -0.6
MUN Mundaring 27.79 204 P P 11 01 28.0 +0.1
baz=28,SNR=24
MUN Mundaring 27.79 204 P P 11 01 28.3 +0.3
HTT Hallett 27.85 163 P P 11 01 28.5 -0.1
baz=28,SNR=121
HTT Hallett 27.85 163 P P 11 01 28.7 +0.1
NWAO Narrogin (SRO) 28.23 202 P P 11 01 32.3 +0.4
NWAO Narrogin (SRO) 28.23 202 P P 11 01 32.3 +0.4
NWAO pmax pmax
comp=Z,123nm,0.9s
NWAO Narrogin (SRO) 28.23 202 P P 11 01 32.3 +0.4
JRMM Jerantut 28.87 291 P P 11 01 40.0 +2.2
CMSA Cobar Meteorol 28.89 150 P P 11 01 38.0 +0.3
baz=29,SNR=199
CMSA Cobar Meteorol 28.89 150 P P 11 01 38.1 +0.3
BKNI Bangkinang 29.12 283 P P 11 01 42.3 +2.3
BKNI Bangkinang 29.12 283 P P 11 01 41.9 +1.9
GHSS Government Hou 29.16 164 P P 11 01 40.9 +0.9
TWOA Tennyson Woods 29.26 164 P P 11 01 41.4 +0.5
RKGY Rocky Gully 29.83 201 P P 11 01 47.7 +1.7
baz=30,SNR=23
RKGY Rocky Gully 29.83 201 P P 11 01 47.9 +1.9
HNR Honiara 30.41 97 P P 11 01 51.0 -0.3
comp=Z,367nm,0.9s,baz=213,slow=2.2,SNR=19
HNR LR LR 11 14 19.9
comp=Z,537nm,20.4s,baz=254,slow=36
comp=Z,367nm,0.9s
HNR Honiara 30.41 97 P P 11 01 50.5 -0.9
HNR Honiara 30.41 97 P P 11 01 50.9 -0.5
HNR Honiara 30.41 97 P P 11 01 51.2 -0.2
IPM Ipoh 30.43 291 P P 11 01 51.0 -0.6
IPM IAmb IAmb 11 01 55.1
comp=Z,58nm,1.0s
IPM Ipoh 30.43 291 P P 11 01 53.0 +1.4
IPM Ipoh 30.43 291 P P 11 01 53.5 +1.9
KULM Kulim 31.08 292 P P 11 01 57.5 +0.3
KULM IAmb IAmb 11 02 01.5
comp=Z,80nm,1.1s
KULM Kulim 31.08 292 P P 11 01 58.0 +0.7
TPUB Ta-pu 31.20 344 P P 11 01 56.8 -1.4
TPUB IAmb IAmb 11 02 03.9
comp=Z,24nm,0.6s
ARMA Armidale 31.39 141 P P 11 02 00.8 +0.9
baz=31,SNR=42
ARMA Armidale 31.39 141 P P 11 02 01.1 +1.2
ARMA Armidale 31.39 141 P P 11 02 00.6 +0.7
SSLB Suanglung 31.58 345 P P 11 02 00.4 -1.1
SSLB Suanglung 31.58 345 P P 11 02 03.4 +1.9
RPSI Rantau Prapat 31.81 286 P P 11 02 03.0 -0.7
PSI Prapat 31.84 287 P P 11 02 03.0 -1.1
PSI pmax pmax
comp=Z,187nm,0.8s
PSI Prapat 31.84 287 P P 11 02 05.6 +1.5
ARPS Mount Arapiles 31.84 161 P P 11 02 04.3 +0.7
baz=32,SNR=868
ARPS Mount Arapiles 31.84 161 P P 11 02 04.7 +1.0
QIZ Qiongzhong 32.14 324 P P 11 02 06.0 -0.5
QIZ Qiongzhong 32.14 324 P P 11 02 06.4 -0.1
QIZ S S 11 07 05.2 +1.0
QIZ sS ScP 11 08 13.7 -1.7
QIZ pmax pmax
comp=Z,12nm,0.8s
QIZ Qiongzhong 32.14 324 P P 11 02 06.4 -0.1
UBPT Khong Chiam 32.33 313 P P 11 02 07.9 -0.2
UBPT IAmb IAmb 11 02 10.3
comp=Z,53nm,0.7s
YHNB Yeheng 32.33 346 P P 11 02 07.6 -0.5
YHNB IAmb IAmb 11 02 11.2
comp=Z,31nm,0.6s
YHNB Yeheng 32.33 346 P P 11 02 08.5 +0.4
GSI Gunungsitoli 32.72 283 P P 11 02 10.2 -1.4
GSI Gunungsitoli 32.72 283 P P 11 02 12.5 +0.9
NTLH Newcastle Hard 33.18 144 P P 11 02 17.1 +1.8
BRAT Ballarat 33.27 159 P P 11 02 17.3 +1.3
SYDH Sydney Hard Ro 33.27 146 P P 11 02 17.6 +1.5
SRIT Nakonsritamara 33.40 297 P P 11 02 16.6 -0.9
SRIT IAmb IAmb 11 02 20.9
comp=Z,40nm,0.7s
JOW Kunigami 33.55 358 LR LR 11 14 56.7
comp=Z,334nm,21.4s,baz=174,slow=34
JOW Kunigami 33.55 358 P P 11 02 17.0 -1.6
JOW IAmb IAmb 11 02 20.5
comp=Z,74nm,1.0s
JOW Kunigami 33.55 358 P P 11 02 20.9 +2.3
CAN Canberra 33.56 150 P P 11 02 19.7 +1.0
CAN Canberra 33.56 150 P P 11 02 19.7 +1.0
CAN pmax pmax
comp=Z,384nm,0.7s
CAN Canberra 33.56 150 P P 11 02 19.9 +1.2
CNB Canberra Magne 33.74 150 P P 11 02 21.2 +1.0
baz=34,SNR=81
CNB Canberra Magne 33.74 150 P P 11 02 21.2 +1.0
MLBS Spotswood, Mel 33.87 158 P P 11 02 22.7 +1.5
TOO Toolangi 33.88 157 P P 11 02 22.9 +1.5
baz=34,SNR=215
TOO Toolangi 33.88 157 P P 11 02 22.9 +1.5
TOO Toolangi 33.88 157 P P 11 02 22.9 +1.5
TOO pmax pmax
comp=Z,137nm,0.9s
TOO Toolangi 33.88 157 P P 11 02 23.0 +1.6
GEXS Deakin Univers 33.98 159 P P 11 02 24.4 +2.3
LHMI Lhok Sumawe 34.49 290 P P 11 02 27.4 +0.5
LHMI Lhok Sumawe 34.49 290 P P 11 02 28.6 +1.7
MILA Mila 35.03 152 P P 11 02 32.6 +1.3
baz=35,SNR=21
KOUNC Koumac, New Ca 36.46 115 P P 11 02 44.3 +0.7
KOUNC IAmb IAmb 11 02 44.9
comp=Z,78nm,0.8s
KOUNC Koumac, New Ca 36.46 115 P P 11 02 44.0 +0.4
GULI GuiLin 36.94 331 ⇑P P 11 02 48.8 +1.3
GULI pmax pmax
comp=Z,10.0nm,1.2s
GULI LR LR
comp=Z,370nm,12.0s
GULI LR LR
comp=Z,420nm,15.7s
GULI LR LR
comp=Z,310nm,16.5s
LHI Lord Howe Isla 37.02 135 P P 11 02 48.4 +0.3
baz=37,SNR=3.9
GLAD Gladstone 37.81 157 P P 11 02 55.6 +1.0
CORO Coronation Par 37.88 158 P P 11 02 56.5 +1.3
comp=Z,107nm,0.9s
SSE Sheshan 38.58 349 P P 11 03 02.0 +0.8
SSE S S 11 08 49.4 +7.2
SSE pmax pmax
comp=Z,22nm,0.6s
SSE pmax pmax
comp=Z,48nm,3.5s
SSE LR LR
comp=Z,100nm,21.0s
SSE LR LR
comp=Z,130nm,24.1s
NOUC Port Laguerre 38.71 117 P P 11 03 03.0 +0.5
NOUC Port Laguerre 38.71 117 P P 11 03 02.3 -0.2
MOO Moorlands 38.76 159 P P 11 03 04.0 +1.5
baz=39,SNR=68
MOO Moorlands 38.76 159 P P 11 03 04.0 +1.5
DZM Mont Dzumac 38.83 117 P P 11 03 03.5 0.0
comp=Z,70nm,0.8s,baz=264,slow=7.7,SNR=31
comp=Z,70nm,0.8s
DZM Mont Dzumac 38.83 117 *e* P P 11 03 03.6 0.0
comp=Z,140nm,0.9s
DZM Mont Dzumac 38.83 117 *e* LR LR 11 13 56.8
comp=Z,817nm,26.0s
DZM Mont Dzumac 38.83 117 IAmb IAmb 11 03 06.2
comp=Z,62nm,0.7s
DZM Mont Dzumac 38.83 117 P P 11 03 04.3 +0.7
DZM Mont Dzumac 38.83 117 P P 11 03 04.0 +0.5
ONTNC Ouen Toro 38.91 117 P P 11 03 04.3 +0.2
ONTNC IAmb IAmb 11 03 05.3
comp=Z,70nm,0.9s
CM31 Chiang Mai Arr 39.16 311 P P 11 03 06.6 +0.4
CM31 IAmb IAmb 11 03 08.4
comp=Z,55nm,1.0s
CMAR Chiang Mai Arr 39.16 311 P P 11 03 06.8 +0.6
comp=Z,26nm,1.0s,baz=143,slow=7.4,SNR=95
CMAR PcP PcP 11 05 12.8 +1.2
comp=Z,6.5nm,0.7s,baz=170,slow=2.6,SNR=5.4
CMAR ScP ScP 11 08 42.0 +0.8
comp=Z,7.1nm,0.9s,baz=155,slow=3.1,SNR=12
comp=Z,26nm,1.0s
CMAR Chiang Mai Arr 39.16 311 P P 11 03 07.0 +0.8
CMAR Chiang Mai Arr 39.16 311 *i* P P 11 03 06.8 +0.6
CMAR pmax pmax
comp=Z,27nm,1.0s
TAU Tasmania Unive 39.21 159 P P 11 03 07.4 +1.1
TAU IAmb IAmb 11 03 10.2
comp=Z,146nm,1.4s

TAU	**Tasmania Unive**	**39.21**	**159**	P	**P**	**11 03 07.4**	**+1.1**		
TAU				pmax	pmax				
	comp=Z,146nm,1.4s								
TAU	**Tasmania Unive**	**39.21**	**159**	P	**P**	**11 03 07.4**	**+1.1**		
YATNC	**Mamie plateau,**	**39.22**	**117**	P	**P**	**11 03 07.9**	**+1.2**		
OUENC	**Ouen Island, N**	**39.28**	**117**	P	**P**	**11 03 08.2**	**+1.0**		
CHTO	**Chiang Mai**	**39.38**	**311**	P	**P**	**11 03 08.4**	**+0.3**		
CHTO				IAmb	IAmb	11 03 10.5			
	comp=Z,65nm,0.9s								
CHTO	**Chiang Mai**	**39.38**	**311**	P	**P**	**11 03 08.4**	**+0.4**		
CHTO				pmax	pmax				
	comp=Z,65nm,1.0s								
CHTO	**Chiang Mai**	**39.38**	**311**	P	**P**	**11 03 09.0**	**+1.0**		
CHTO	**Chiang Mai**	**39.38**	**311**	P	**P**	**11 03 08.3**	**+0.3**		
GYA	**Guiyang**	**39.79**	**327**	⇓P	**P**	**11 03 11.5**	**+0.1**		
GYA				pP	pP	11 03 53.1	+0.8		
GYA				PcP	**PcP**	**11 05 14.7**	**+1.1**		
GYA				ScP	**ScP**	**11 08 44.2**	**+0.6**		
GYA				S	**S**	**11 08 59.2**	**-1.5**		
GYA				pmax	pmax				
	comp=Z,14nm,1.4s								
GYA				pmax	pmax				
	comp=Z,130nm,5.3s								
JNU	**Nakatsue**	**39.83**	**2**	P	**P**	**11 03 11.4**	**-0.2**		
JNU				IAmb	IAmb	11 03 13.4			
	comp=Z,111nm,1.6s								
JNU	**Nakatsue**	**39.83**	**2**	P	**P**	**11 03 11.6**	**0.0**		
PINNC	**Pines Island,**	**39.88**	**117**	P	**P**	**11 03 12.4**	**+0.4**		
PINNC	**Pines Island,**	**39.88**	**117**	P	**P**	**11 03 13.3**	**+1.2**		
NJ2	**Nanjing**	**40.01**	**346**	⇓*i*P	**P**	**11 03 13.9**	**+1.0**		
NJ2				pP	**pP**	**11 03 53.9**	**0.0**		
NJ2				sP	**sP**	**11 04 18.1**	**+2.1**		
NJ2				ScP	**ScP**	**11 08 43.0**	**-1.1**		
NJ2				S	**S**	**11 09 01.8**	**-1.7**		
NJ2				pmax	pmax				
	comp=Z,45nm,0.9s								
NJ2				pmax	pmax				
	comp=Z,96nm,3.5s								
MARNC	**Mare, Loyalty**	**40.08**	**115**	P	**P**	**11 03 13.9**	**+0.2**		
MARNC	**Mare, Loyalty**	**40.08**	**115**	P	**P**	**11 03 14.5**	**+0.7**		
JMN	**Monobe**	**40.64**	**6**	IAmb	IAmb	11 03 20.8			
	comp=Z,81nm,1.3s								
KMI	**Kunming**	**41.03**	**322**	⇑P	**P**	**11 03 20.8**	**-0.9**		
KMI				pP	pP	11 04 03.4	+0.6		
KMI				pmax	pmax				
	comp=Z,24nm,1.3s								
KMI				pmax	pmax				
	comp=Z,94nm,4.4s								
KMI				LR	LR				
	comp=Z,150nm,20.6s								
KMI				LR	LR				
	comp=Z,180nm,14.6s								
KMI				LR	LR				
	comp=Z,260nm,31.6s								
JHS	**Saijyo**	**41.83**	**5**	P	**P**	**11 03 26.9**	**-1.0**		
JHS				IAmb	IAmb	11 03 30.4			
	comp=Z,67nm,1.1s								
KSBUS	**Busan**	**41.93**	**360**	P	**P**	**11 03 28.5**	**-0.1**		
KSBUS				IAmb	IAmb	11 03 31.1			
	comp=Z,53nm,1.1s								
NAWB	**Namwon**	**42.14**	**358**	P	**P**	**11 03 30.1**	**-0.2**		
NAWB				IAmb	IAmb	11 04 19.1			
	comp=Z,78nm,1.3s								
PZH	**PanZhiHua**	**42.65**	**322**	P	**P**	**11 03 35.2**	**+0.5**		
PZH				pP	**pwP**	**11 04 20.9**	**-1.7**		
PZH				sP	**sP**	**11 04 38.3**	**+0.3**		
PZH				PcP	**PcP**	**11 05 26.8**	**+3.8**		
PZH				ScP	**ScP**	**11 08 55.5**	**+0.6**		
PZH				S	**S**	**11 09 39.6**	**-3.2**		
PZH				sS	**sS**	**11 10 59.5**	**+2.5**		
PZH				SS	**SS**	**11 12 57.9**	**-3.7**		
PZH				pmax	pmax				
	comp=Z,30nm,1.1s								
PZH				pmax	pmax				
	comp=Z,120nm,6.2s								
PZH				LR	LR				
	comp=Z,440nm,20.1s								
PZH				LR	LR				
	comp=Z,960nm,20.1s								
PZH				LR	LR				
	comp=Z,800nm,21.5s								
INU	**Inuyama**	**42.65**	**9**	P	**P**	**11 03 35.0**	**+0.6**		
JGF	**Kuroka**	**42.95**	**10**	P	**P**	**11 03 35.9**	**-0.9**		
TJN	**Taejon**	**43.09**	**358**	P	**P**	**11 03 38.1**	**+0.2**		
TJN	**Taejon**	**43.09**	**358**	*ce*P	**P**	**11 03 37.9**	**0.0**		
TJN	**Taejon**	**43.09**	**358**	P	**P**	**11 03 39.0**	**+1.1**		
	comp=Z,199nm,1.1s								
KSCHJ	**Chungju**	**43.57**	**358**	P	**P**	**11 03 42.1**	**+0.3**		
KSCHJ				IAmb	IAmb	11 03 44.2			
	comp=Z,66nm,1.4s								
MJAR	**Matsushiro Arr**	**44.02**	**10**	P	**P**	**11 03 44.0**	**-1.3**		
	comp=Z,38nm,1.1s,baz=181,slow=8.9,SNR=51								
MJAR				ScP	**ScP**	**11 08 59.6**	**-0.5**		
	comp=Z,4.2nm,0.7s,baz=171,slow=6.4,SNR=7.5								
MJAR				LR	LR	11 19 56.5			
	comp=Z,193nm,20.9s,baz=212,slow=33								
	comp=Z,38nm,1.1s								
MJAR	**Matsushiro Arr**	**44.02**	**10**	P	**P**	**11 03 44.0**	**-1.3**		
MAJO	**Matsushiro**	**44.02**	**10**	P	**P**	**11 03 44.4**	**-0.9**		
MAJO				IAmb	IAmb	11 03 46.2			
	comp=Z,67nm,1.1s								
MAJO	**Matsushiro**	**44.02**	**10***c*	*i*P	**P**	**11 03 44.3**	**-1.0**		
MAJO				pmax	pmax				
	comp=Z,69nm,1.1s								
MAJO	**Matsushiro**	**44.02**	**10**	P	**P**	**11 03 44.8**	**-0.5**		
MAJO	**Matsushiro**	**44.02**	**10**	P	**P**	**11 03 44.6**	**-0.7**		
JYT	**Yasato**	**44.10**	**13**	IAmb	IAmb	11 03 47.5			
	comp=Z,108nm,1.5s								
KSAR	**Wonju Array Be**	**44.14**	**358**	P	**P**	**11 03 47.2**	**+1.0**		
KSAR	**Wonju Array Be**	**44.14**	**358**	P	**P**	**11 03 47.2**	**+1.0**		
KSRS	**Korea Array**	**44.15**	**358**	P	**P**	**11 03 46.1**	**-0.2**		
	comp=Z,13nm,0.8s,baz=177,slow=10,SNR=72								
KSRS				pP	**pP**	**11 04 28.5**	**+0.4**		
	comp=Z,6.6nm,1.0s,baz=175,slow=10,SNR=1.8								
KSRS				PcP	**PcP**	**11 05 28.1**	**+0.5**		
	comp=Z,2.9nm,0.6s,baz=177,slow=3.5,SNR=8.2								
KSRS				ScP	**ScP**	**11 09 00.5**	**-0.1**		
	comp=Z,2.9nm,0.8s,baz=175,slow=4.2,SNR=9.3								
	comp=Z,13nm,0.8s								
KS19	**Wonju Array Si**	**44.20**	**358**	P	**P**	**11 03 46.1**	**-0.6**		
LYN	**LuoYang**	**44.21**	**340**	⇓P	**P**	**11 03 46.5**	**-0.4**		
LYN				pP	pP	11 04 27.7	-0.8		
LYN				ScP	**ScP**	**11 09 01.0**	**+0.1**		
LYN				S	**S**	**11 10 08.9**	**+3.9**		
LYN				ScS	**ScS**	**11 13 16.0**	**-7.8**		
LYN				pmax	pmax				
	comp=Z,20nm,1.4s								
LYN				pmax	pmax				
	comp=Z,140nm,5.4s								
INCN	**Inchon**	**44.23**	**357**	P	**P**	**11 03 46.8**	**-0.2**		
INCN	**Inchon**	**44.23**	**357**	P	**P**	**11 03 46.8**	**-0.2**		
INCN				pmax	pmax				
	comp=Z,46nm,1.2s								
INCN	**Inchon**	**44.23**	**357**	P	**P**	**11 03 49.1**	**+2.1**		
TIA	**Tai'an**	**44.40**	**346**	P	**P**	**11 03 48.0**	**-0.3**		
TIA				pP	**pP**	**11 04 28.7**	**-1.5**		
TIA				ScP	**ScP**	**11 09 00.9**	**-0.8**		
TIA				ScS	**ScS**	**11 13 23.0**	**-2.0**		
TIA				pmax	pmax				
	comp=Z,8.0nm,0.6s								
TIA				pmax	pmax				
	comp=Z,40nm,3.5s								
TIA				LR	LR				
	comp=Z,110nm,8.6s								
TIA				LR	LR				
	comp=Z,150nm,10.3s								
TIA				LR	LR				
	comp=Z,160nm,12.8s								
CD2	**Chengdu**	**44.87**	**328**	P	**P**	**11 03 51.5**	**-0.7**		
CD2				pP	pP	11 04 32.7	-1.4		
CD2				ScP	**ScP**	**11 09 04.2**	**+0.4**		
CD2				S	**S**	**11 10 16.6**	**+1.8**		
CD2				sS	sS	11 11 27.9	-1.6		
CD2				pmax	pmax				
	comp=Z,30nm,0.9s								
CD2				pmax	pmax				
	comp=Z,90nm,5.3s								
XAN	**Xi'an**	**45.08**	**336**	P	**P**	**11 03 52.6**	**-1.2**		
XAN				pP	pP	11 04 34.2	-1.5		
XAN				sP	sP	11 04 54.4	-3.1		
XAN				ScP	**ScP**	**11 09 05.1**	**+0.5**		
XAN				S	**S**	**11 10 15.5**	**-2.1**		
XAN				sS	sS	11 11 28.7	-3.8		
XAN				ScS	**ScS**	**11 13 26.9**	**-2.7**		
XAN				pmax	pmax				
	comp=Z,31nm,1.1s								
XAN				LR	LR				
	comp=Z,210nm,22.0s								
XAN				LR	LR				
	comp=Z,280nm,17.9s								
XAN				LR	LR				
	comp=Z,310nm,19.2s								
JSD	**Sado**	**45.48**	**10**	IAmb	IAmb	11 03 59.3			
	comp=Z,80nm,1.4s								
DL2	**Dalian**	**46.14**	**352**	P	**P**	**11 04 02.4**	**+0.5**		
DL2				sP	**sP**	**11 05 04.5**	**-1.4**		
DL2				*e*S	**S**	**11 10 32.2**	**-0.3**		
DL2				ScS	**ScS**	**11 13 33.4**	**-2.6**		
DL2				pmax	pmax				
	comp=Z,29nm,1.0s								
HNS	**HongShan**	**46.15**	**344**	⇓P	**P**	**11 04 02.3**	**+0.3**		
HNS				pP	**pP**	**11 04 43.1**	**-1.0**		
HNS				sP	**sP**	**11 05 08.2**	**+2.3**		
HNS				ScP	**ScP**	**11 09 09.6**	**+0.8**		
HNS				*e*S	**S**	**11 10 31.3**	**-1.3**		
HNS				ScS	**ScS**	**11 13 38.3**	**+2.1**		
HNS				pmax	pmax				
	comp=Z,51nm,1.0s								
HNS				LR	LR				
	comp=Z,220nm,20.4s								
HNS				LR	LR				
	comp=Z,200nm,19.4s								
TIY	**Taiyuan**	**47.11**	**342**	*e*P	**P**	**11 04 11.2**	**+1.6**		
TIY				sP	**sP**	**11 05 14.7**	**+1.0**		
TIY				ScS	ScS	11 13 42.1	-0.6		
TIY				pmax	pmax				
	comp=Z,170nm,4.5s								
TIY				LR	LR				
	comp=Z,180nm,15.8s								
TIY				LR	LR				
	comp=Z,300nm,16.5s								
TIY				LR	LR				
	comp=Z,200nm,19.2s								
BJT	**Baijiatuan**	**48.25**	**346**	IAmb	IAmb	11 04 20.4			
	comp=Z,52nm,0.8s								
BJI	**Beijing**	**48.27**	**346**	P	**P**	**11 04 18.7**	**+0.4**		
BJI				pP	**pP**	**11 05 00.1**	**-0.8**		
BJI				PcP	**PcP**	**11 05 43.3**	**+1.2**		
BJI				ScP	**ScP**	**11 09 18.5**	**+0.8**		
BJI				pmax	pmax				
	comp=Z,57nm,1.2s								
BJI				pmax	pmax				
	comp=Z,46nm,3.5s								
MSVF	**Nonsavu**	**48.67**	**107**	P	**P**	**11 04 22.3**	**+0.3**		
MSVF	**Nonsavu**	**48.67**	**107**	P	**P**	**11 04 22.4**	**+0.4**		
MSVF				IAmb	IAmb	11 04 24.2			
	comp=Z,71nm,0.9s								
MSVF	**Nonsavu**	**48.67**	**107**	*i* P	**P**	**11 04 21.8**	**-0.2**		
MSVF				pmax	pmax				
	comp=Z,87nm,1.0s								
MSVF	**Nonsavu**	**48.67**	**107**	P	**P**	**11 04 23.4**	**+1.4**		
MSVF	**Nonsavu**	**48.67**	**107**	P	**P**	**11 04 22.8**	**+0.9**		
JTM	**Tenmabayashi**	**48.67**	**12**	P	**P**	**11 04 21.8**	**+0.3**		
JTM				IAmb	IAmb	11 04 23.7			
	comp=Z,107nm,1.1s								
SNY	**Shenyang**	**48.78**	**354**	⇑P	**P**	**11 04 21.3**	**-0.9**		
SNY				sP	**sP**	**11 05 25.4**	**-1.2**		
SNY				S	**S**	**11 11 05.6**	**-4.1**		
SNY				pmax	pmax				
	comp=Z,180nm,5.2s								
SNY				LR	LR				
	comp=Z,230nm,17.2s								
SNY				LR	LR				
	comp=Z,260nm,15.2s								
SNY				LR	LR				
	comp=Z,320nm,19.6s								
LZH	**Lanzhou**	**49.01**	**333**	⇓P	**P**	**11 04 25.3**	**+1.0**		
LZH				pP	pP	11 05 06.7	-0.1		
LZH				sP	sP	11 05 26.9	-1.6		
LZH				ScP	**ScP**	**11 09 22.1**	**+0.9**		
LZH				S	**S**	**11 11 15.7**	**+2.2**		
LZH				ScS	**ScS**	**11 13 53.6**	**-2.1**		
LZH				pmax	pmax				
	comp=Z,37nm,1.3s								
LZH				pmax	pmax				
	comp=Z,260nm,5.6s								
LZH				LR	LR				
	comp=Z,390nm,14.0s								
LZH				LR	LR				
	comp=Z,380nm,14.5s								
LZH				LR	LR				
	comp=Z,370nm,17.0s								
MSHR	**Mys Shultsa**	**49.28**	**2***ce*	P	**P**	**11 04 27.6**	**+1.6**		
MSHR				pmax	pmax				
	comp=Z,38nm,1.0s								
OUZ	**Omahuta**	**49.41**	**131**	P	**P**	**11 04 29.4**	**+2.2**		
OUZ				IAmb	IAmb	11 04 30.1			
	comp=Z,76nm,0.9s								
FUNA	**Funafuti**	**49.42**	**95**	P	**P**	**11 04 28.7**	**+1.1**		
HHC	**Hu-ho-hao-te**	**50.25**	**342**	*e*P	**P**	**11 04 34.8**	**+1.3**		
HHC				pP	pP	11 05 14.3	-2.0		
HHC				sP	sP	11 05 39.9	+1.9		
HHC				S	**S**	**11 11 35.9**	**+5.5**		
HHC				sS	sS	11 12 43.6	-3.0		
HHC				pmax	pmax				
	comp=Z,71nm,0.9s								
HHC				pmax	pmax				
	comp=Z,240nm,4.8s								
DCZ	**Deep Cove**	**50.45**	**146**	P	**P**	**11 04 35.6**	**+0.8**		
PALK	**Pallekele**	**50.51**	**285**	P	**P**	**11 04 35.6**	**-0.2**		
PALK				IAmb	IAmb	11 04 38.6			
	comp=Z,39nm,0.8s								
PALK	**Pallekele**	**50.51**	**285**	P	**P**	**11 04 35.6**	**-0.2**		
PALK				pmax	pmax				
	comp=Z,39nm,0.8s								
BTO	**Baotou**	**50.51**	**341**	*e*P	**P**	**11 04 36.8**	**+1.3**		
BTO				S	**S**	**11 11 37.8**	**+3.8**		
BTO				LR	LR				
	comp=Z,680nm,15.3s								
BTO				LR	LR				
	comp=Z,1μm,17.1s								
TAVE	**Taveuni**	**50.51**	**106**	P	**P**	**11 04 37.1**	**+1.3**		
CN2	**Changchun**	**50.59**	**356**	*e*P	**P**	**11 04 35.7**	**-0.2**		
CN2				*e*S	**S**	**11 11 34.4**	**-0.4**		
CN2				SS	**SS**	**11 15 07.4**	**-4.5**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.7s								
CN2				pmax	pmax				
	comp=Z,100nm,3.0s								
CN2				LR	LR				
	comp=Z,200nm,16.0s								
CN2				LR	LR				
	comp=Z,400nm,16.0s								
CN2				LR	LR				
	comp=Z,100nm,15.0s								
USA0B	**Ussuriysk Arra**	**50.92**	**2**	P	**P**	**11 04 39.0**	**+0.7**		
USA0B	**Ussuriysk Arra**	**50.92**	**2**	P	**P**	**11 04 39.0**	**+0.7**		
USA0B				pmax	pmax				
	comp=Z,9.0nm,0.8s								
USRK	**Ussuriysk Ar.**	**50.92**	**2**	P	**P**	**11 04 38.9**	**+0.5**		
	comp=Z,31nm,0.9s,baz=188,slow=6.3,SNR=47								
USRK				pP	**pP**	**11 05 21.9**	**+0.6**		
	comp=Z,5.7nm,0.9s,baz=145,slow=5.3,SNR=1.0								
	comp=Z,31nm,0.9s								
USRK	**Ussuriysk Ar.**	**50.92**	**2**	P	**P**	**11 04 38.4**	**0.0**		
USRK	**Ussuriysk Ar.**	**50.92**	**2**	P	**P**	**11 04 38.4**	**0.0**		
MLZ	**Mavora Lakes**	**50.93**	**145**	IAmb	IAmb	11 04 40.0			
	comp=Z,62nm,0.8s								
WKZ	**Wanaka**	**51.13**	**144**	IAmb	IAmb	11 04 54.5			
	comp=Z,65nm,0.8s								
MDJ	**Mudanjiang**	**51.29**	**0**	IAmb	IAmb	11 04 43.8			
	comp=Z,44nm,1.0s								
MDJ	**Mudanjiang**	**51.29**	**0**	P	**P**	**11 04 41.9**	**+0.9**		
MDJ				pmax	pmax				
	comp=Z,50nm,1.2s								
MDJ				pmax	pmax				
	comp=Z,260nm,4.4s								
MDJ	**Mudanjiang**	**51.29**	**0**	P	**P**	**11 04 42.6**	**+1.6**		
LSA	**Lhasa**	**51.67**	**317**	P	**P**	**11 04 45.3**	**+0.6**		
LSA	**Lhasa**	**51.67**	**317**	P	**P**	**11 04 45.3**	**+0.6**		
LSA				pmax	pmax				
	comp=Z,25nm,0.8s								
LSA	**Lhasa**	**51.67**	**317**	P	**P**	**11 04 46.0**	**+1.3**		
LKBA	**Tubou, Lakemba**	**51.69**	**108**	P	**P**	**11 04 45.8**	**+1.3**		
RPZ	**Rata Peaks**	**51.72**	**142**	P	**P**	**11 04 45.3**	**+0.9**		
	comp=Z,280nm,0.7s,baz=290,slow=1.9,SNR=139								
RPZ				LR	LR	11 27 29.1			
	comp=Z,612nm,19.4s,baz=310,slow=37								
	comp=Z,280nm,0.7s								
RPZ	**Rata Peaks**	**51.72**	**142**	P	**P**	**11 04 45.0**	**+0.6**		
RPZ	**Rata Peaks**	**51.72**	**142**	P	**P**	**11 04 45.6**	**+1.2**		
THZ	**Tophouse**	**51.88**	**139**	IAmb	IAmb	11 04 48.2			
	comp=Z,85nm,0.8s								
XLT	**XiLinHaoTe**	**51.97**	**348**	⇓*i*P	**P**	**11 04 47.0**	**+0.8**		
XLT				pP	pP	11 05 28.9	-0.5		
XLT				sP	sP	11 05 47.2	-3.8		
XLT				PcP	**PcP**	**11 05 57.0**	**+1.2**		
XLT				S	**S**	**11 11 54.6**	**+0.7**		
XLT				sS	sS	11 13 14.2	+3.7		
XLT				pmax	pmax				
	comp=Z,57nm,1.1s								
XLT				pmax	pmax				
	comp=Z,150nm,5.1s								
XLT				LR	LR				
	comp=Z,250nm,15.3s								
XLT				LR	LR				
	comp=Z,280nm,19.8s								
LTZ	**Lake Taylor**	**51.98**	**140**	IAmb	IAmb	11 04 58.5			
	comp=Z,74nm,1.2s								
TEY	**Ternei**	**52.12**	**7**	⇑*e*P	**P**	**11 04 47.7**	**+0.6**		
TEY				pmax	pmax				
	comp=N,20nm,0.9s								
TEY				pmax	pmax				
	comp=Z,20nm,0.9s								
ODZ	**Otahua Downs**	**52.20**	**144**	IAmb	IAmb	11 04 49.4			
	comp=Z,37nm,0.9s								
ODZ	**Otahua Downs**	**52.20**	**144**	P	**P**	**11 04 48.2**	**+0.3**		
BNX	**BinXian**	**52.44**	**358**	⇑P	**P**	**11 04 50.0**	**+0.5**		
BNX				pP	**pwP**	**11 05 38.7**	**0.0**		
BNX				sP	**sP**	**11 05 53.3**	**-1.0**		
BNX				S	**S**	**11 12 02.8**	**+2.9**		
BNX				sS	**sS**	**11 13 13.6**	**-3.1**		
BNX				pmax	pmax				
	comp=Z,17nm,1.1s								
BNX				pmax	pmax				
	comp=Z,210nm,3.9s								
BNX				LR	LR				
	comp=Z,230nm,18.4s								
BNX				LR	LR				
	comp=Z,130nm,15.4s								
BNX				LR	LR				
	comp=Z,290nm,19.4s								
MCQ	**Macquarie Isla**	**53.10**	**159**	P	**P**	**11 04 55.9**	**+1.6**		
	baz=53,SNR=7.5								
MCQ	**Macquarie Isla**	**53.10**	**159**	P	**P**	**11 04 55.7**	**+1.5**		
BKZ	**Black Stump Fm**	**53.14**	**135**	P	**P**	**11 04 55.1**	**+0.2**		
URZ	**Urewera**	**53.21**	**133**	P	**P**	**11 04 55.0**	**-0.4**		
	comp=Z,23nm,0.4s,baz=251,slow=4.0,SNR=21								
	comp=Z,23nm,0.4s								
URZ	**Urewera**	**53.21**	**133**	IAmb	IAmb	11 04 57.5			
	comp=Z,54nm,0.9s								
URZ	**Urewera**	**53.21**	**133**	P	**P**	**11 04 55.4**	**0.0**		
RAMN	**Ramite**	**53.33**	**311**	*e*P	**P**	**11 04 57.3**	**+0.6**		
	comp=Z,227nm,0.7s								
GTA	**Gaotai**	**53.57**	**332**	⇑P	**P**	**11 04 58.3**	**+0.2**		
GTA				pP	pP	11 05 40.7	-0.6		
GTA				sP	sP	11 06 03.3	+0.5		
GTA				ScP	**ScP**	**11 09 41.6**	**+0.8**		
GTA				S	**S**	**11 12 13.6**	**-2.2**		
GTA				sS	sS	11 13 30.4	-2.5		
GTA				ScS	**ScS**	**11 14 27.2**	**0.0**		
GTA				pmax	pmax				
	comp=Z,15nm,1.1s								
GTA				pmax	pmax				
	comp=Z,60nm,5.5s								
GTA				LR	LR				
	comp=Z,170nm,19.3s								
GTA				LR	LR				
	comp=Z,310nm,18.2s								
GTA				LR	LR				
	comp=Z,190nm,19.3s								
GOMU	**GeErMu**	**53.74**	**325**	P	P	11 04 50.8	-8.9		
GOMU				pP	pP	11 04 54.3	-49		
GOMU				sP	pwP	11 04 56.3	-53		
GOMU				PcP	PcP	11 05 40.6	-22		
GOMU				PP	PP	11 07 39.9	+37		
GOMU				S	**S**	**11 12 09.8**	**-8.8**		
GOMU				sS	sS	11 12 18.1	-78		
JIRN	**Jiri**	**54.02**	**311**	*e*P	**P**	**11 05 02.2**	**+0.3**		
RAO	**Raoul Island**	**54.33**	**121**	LR	LR	11 28 47.4			
	comp=Z,163nm,18.2s,baz=301,slow=36								
GUN	**Gumba**	**54.39**	**312**	*e*P	**P**	**11 05 04.9**	**+0.4**		
	comp=Z,233nm,0.8s								
PKI	**Pulchoki**	**54.56**	**311**	*e*P	**P**	**11 05 05.7**	**0.0**		
	comp=Z,56nm,0.5s								
PKIN	**Phulchoki**	**54.57**	**311**	*e*P	**P**	**11 05 06.5**	**+0.8**		
	comp=Z,73nm,0.6s								
DMN	**Daman**	**54.81**	**311**	*e*P	**P**	**11 05 07.7**	**+0.3**		
	comp=Z,140nm,0.8s								
YSS	**Yuzh-Sakhalins**	**54.94**	**11**	P	**P**	**11 05 07.1**	**-0.5**		
YSS				IAmb	IAmb	11 05 22.4			
	comp=Z,25nm,0.7s								
YSS	**Yuzh-Sakhalins**	**54.94**	**11**	⇑*e*P	**P**	**11 05 07.1**	**-0.5**		
YSS				*e*SP		11 06 12.2			
YSS				*e*S	**S**	**11 12 27.8**	**-5.6**		
YSS				pmax	pmax				
	comp=Z,20nm,0.7s								
YSS				smax	smax				
	comp=E,200nm,7.0s								
YSS	**Yuzh-Sakhalins**	**54.94**	**11**	P	**P**	**11 05 08.0**	**+0.4**		
GKN	**Gorkha**	**55.37**	**311**	*e*P	**P**	**11 05 11.5**	**+0.2**		
	comp=E,120nm,0.6s								
PCHI	**Peechi**	**55.52**	**288**	*e*P	**P**	**11 05 11.7**	**-0.7**		
HYB	**Hyderabad**	**55.67**	**296**	*e*P	**P**	**11 05 11.0**	**-2.5**		
HYBB	**Hyderabad (bro**	**55.68**	**296**	*e*P	**P**	**11 05 13.1**	**-0.4**		
HYBB				*es*P	**sP**	**11 06 14.6**	**-3.9**		
HYBB				*es*P	**PcP**	**11 06 15.0**	**+4.5**		
HYBB				*e*ScP	**ScP**	**11 09 50.5**	**0.0**		
KLR	**Kul'dur**	**55.94**	**2**	ScP	**ScP**	**11 09 50.2**	**-0.6**		
	baz=182,slow=4.1								
DANN	**Dangsing**	**56.21**	**311**	*e*P	**P**	**11 05 17.6**	**+0.2**		
	comp=E,101nm,0.6s								
UGL	**Uglegorsk**	**56.85**	**10**	*e*P	**P**	**11 05 22.6**	**+1.5**		
UGL				pmax	pmax				
	comp=Z,110nm,1.5s								
GRNR	**Gornyy**	**57.77**	**5**	*e*P	**P**	**11 05 27.7**	**+0.1**		
ULN	**Ulaanbaatar**	**57.97**	**342**	P	**P**	**11 05 30.4**	**+1.1**		
ULN				IAmb	IAmb	11 05 32.4			
	comp=Z,37nm,0.9s								
ULN	**Ulaanbaatar**	**57.97**	**342***ce*	P	**P**	**11 05 30.1**	**+0.9**		
ULN				pmax	pmax				
	comp=Z,77nm,1.7s								
ULN	**Ulaanbaatar**	**57.97**	**342**	P	**P**	**11 05 30.2**	**+0.9**		
SONM	**Songino Array**	**58

comp=Z,50nm,0.9s
CASY Casey 60.69 189 P **P** **11 05 46.8 -0.6**
CASY IAmb IAmb 11 05 49.2
comp=Z,64nm,0.9s
ZAK Zakamensk 61.36 341 *e*P **P** **11 05 52.8 +0.6**
ZAK pmax pmax
comp=Z,21nm,1.3s
ZAK pmax pmax
comp=Z,8.0nm,1.0s
SKR Severo-Kuril's 61.86 19 *e*P **P** **11 05 56.3 +0.9**
SKR *e*S **S** **11 14 04.2 +1.4**
SKR pmax pmax
comp=Z,100nm,3.5s
IRK Irkutsk 62.69 343 *e*P **P** **11 06 01.3 +0.4**
IRK *e* 11 06 45.4
IRK pmax pmax
comp=Z,93nm,1.4s
WMQ Urumqi 62.95 327 *e*P **P** **11 06 03.4 +0.5**
WMQ PcP **PcP** **11 06 37.6 -1.5**
WMQ pP pwP 11 06 53.8 -0.2
WMQ sP sP 11 07 15.4 +6.7
WMQ pmax pmax
comp=Z,45nm,0.7s
WMQ pmax pmax
comp=Z,120nm,5.7s
WMQ LR LR
comp=Z,350nm,17.3s
WMQ LR LR
comp=Z,190nm,22.3s
MOY Mondy 63.21 341 *e*P **P** **11 06 05.5 +1.0**
MOY pmax pmax
comp=Z,109nm,1.4s
PEA0B Petropavlovsk- 64.45 19 P **P** **11 06 12.8 +0.5**
PEA0B IAmb IAmb 11 06 15.3
comp=Z,47nm,1.0s
PEA0B Petropavlovsk- 64.45 19*ce*P **P** **11 06 13.3 +0.9**
PETK Petropavlovsk- 64.45 19 P **P** **11 06 12.3 0.0**
comp=Z,36nm,0.8s,baz=203,slow=11,SNR=57
PETK PcP **PcP** **11 06 44.8 -0.1**
comp=Z,8.5nm,0.7s,baz=198,slow=1.9,SNR=5.2
comp=Z,36nm,0.8s
PETK Petropavlovsk- 64.45 19 P **P** **11 06 12.7 +0.4**
PET Petropavlovsk 64.68 19 *e*P **P** **11 06 15.4 +1.6**
PET *e*S **S** **11 14 41.4 +3.8**
PET *e**SS **ScS** **11 15 51.0 +2.4**
PET pmax pmax
comp=Z,61nm,1.3s
PET MLR MLR
comp=Z,100nm,19.0s
BOD Bodaibo 65.70 351 *e*P **P** **11 06 20.8 +0.5**
BOD pmax pmax
comp=Z,42nm,1.4s
NIL Nilore 66.65 311 P **P** **11 06 27.3 +0.3**
NIL IAmb IAmb 11 06 39.9
comp=Z,28nm,0.8s
NIL Nilore 66.65 311 P **P** **11 06 27.3 +0.3**
NIL pmax pmax
comp=Z,28nm,0.8s
ZSN Zaisan 66.85 329 *e*P **P** **11 06 27.7 -0.2**
ZSN Zaisan 66.85 329 *e*P **P** **11 06 27.7 -0.2**
baz=329
SHLS Shalkode 67.24 323 *e*P **P** **11 06 29.1 -1.5**
SHLS Shalkode 67.24 323 *e*P **P** **11 06 29.1 -1.5**
baz=323
PDGK Podgornoye 67.32 323 P **P** **11 06 30.5 -0.6**
UZB Uzynbulak 67.50 322 *e*P **P** **11 06 32.1 -0.1**
UZB Uzynbulak 67.50 322 *e*P **P** **11 06 32.2 -0.1**
baz=322
KSH Kashi 67.50 318 P **P** **11 06 35.0 +2.7**
KSH pP pwP 11 07 24.0 -0.1
KSH pmax pmax
comp=Z,18nm,0.9s
MK31 Makanchi Array 67.78 327 P **P** **11 06 34.4 +0.6**
MK31 IAmb IAmb 11 06 36.7
comp=Z,45nm,0.9s
MK31 Makanchi Array 67.78 327*c* *i*P **P** **11 06 34.3 +0.5**
MKAR Makanchi Array 67.78 327 P **P** **11 06 34.6 +0.9**
comp=Z,38nm,0.5s,baz=125,slow=7.7,SNR=402
MKAR PKPPKP **P'P'df** **11 34 49.3 -3.7**
comp=Z,0.9nm,0.7s,baz=297,slow=2.7,SNR=6.8
comp=Z,38nm,0.5s
MKAR Makanchi Array 67.78 327 P **P** **11 06 34.3 +0.5**
MKAR Makanchi Array 67.78 327 *i*P **P** **11 06 34.7 +0.9**
MKAR pmax pmax
comp=Z,47nm,0.6s
SATY Saty 67.82 322 *e*P **P** **11 06 34.8 +0.5**
SATY Saty 67.82 322 *e*P **P** **11 06 34.8 +0.5**
baz=322
MAKZ Makanchi 67.96 327 P **P** **11 06 35.2 +0.4**
MAKZ IAmb IAmb 11 06 37.6
comp=Z,51nm,0.9s
MAKZ Makanchi 67.96 327 P **P** **11 06 35.2 +0.3**
MAKZ pmax pmax
comp=Z,51nm,1.0s
MAKZ Makanchi 67.96 327 P **P** **11 06 35.3 +0.4**
MA2 Magadan 68.44 12 P **P** **11 06 38.2 +0.7**
MA2 IAmb IAmb 11 06 40.7
comp=Z,57nm,0.9s
MA2 Magadan 68.44 12*ce*P **P** **11 06 38.7 +1.2**
MA2 pmax pmax
comp=Z,77nm,1.0s
MA2 Magadan 68.44 12 P **P** **11 06 38.9 +1.4**
MDOK Medeo 68.71 322 *e*P **P** **11 06 39.7 -0.1**
MDOK Medeo 68.71 322 *e*P **P** **11 06 39.7 -0.1**
baz=322
YAK Yakutsk 68.73 0 P **P** **11 06 39.5 +0.2**
comp=Z,72nm,0.8s,baz=128,slow=0.5,SNR=34
comp=Z,72nm,0.8s
YAK Yakutsk 68.73 0 P **P** **11 06 39.5 +0.2**
YAK Yakutsk 68.73 0*d* *i*P **P** **11 06 39.4 +0.1**
YAK *e* 11 07 02.1
YAK *e**PP **pwP** **11 07 32.6 +1.9**
YAK *e*PPP PPP 11 10 57.5
YAK *e*S **S** **11 15 24.8 -1.1**
YAK *e* 11 16 17.2
YAK *e*SS **SS** **11 19 54.1 -1.0**
YAK pmax pmax
comp=Z,136nm,0.9s
YAK pmax pmax
comp=N,33nm,1.0s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK smax smax
comp=E,84nm,1.6s
YAK smax smax
comp=N,31nm,1.7s
YAK Yakutsk 68.73 0 P **P** **11 06 39.6 +0.3**
AAA Alma-Ata 68.82 322 *e*P **P** **11 06 41.1 +0.7**
AAA Alma-Ata 68.82 322 *e*P **P** **11 06 41.1 +0.7**
baz=322
TDK Taldyqorghan 68.91 324 *e*P **P** **11 06 41.2 +0.4**
TDK pmax pmax
comp=Z,17nm,0.8s
TDK Taldyqorghan 68.91 324 *e*P **P** **11 06 41.3 +0.4**
comp=Z,17nm,0.8s,baz=324
CHKK Chushkaly 69.12 322 *e*P **P** **11 06 42.1 -0.1**
CHKK Chushkaly 69.12 322 *e*P **P** **11 06 42.1 -0.1**
baz=322
TKM2 Tokmak 2 69.49 321 P **P** **11 06 45.2 +0.5**
SNR=25
TKM2 Tokmak 2 69.49 321 P **P** **11 06 44.8 +0.1**
KUU Kurty 69.54 322 *e*P **P** **11 06 44.5 -0.2**
KUU pmax pmax
comp=Z,44nm,1.0s
KUU Kurty 69.54 322 *e*P **P** **11 06 44.5 -0.2**
comp=Z,44nm,1.0s,baz=322
RAR Rarotonga 69.75 110 P **P** **11 06 46.9 +0.5**
comp=Z,38nm,0.9s,baz=222,slow=3.6,SNR=5.8
comp=Z,38nm,0.9s
RAR Rarotonga 69.75 110 P **P** **11 06 46.6 +0.2**
RAR Rarotonga 69.75 110 P **P** **11 06 47.7 +1.3**
UCH Uchtor 69.82 320 P **P** **11 06 48.6 +1.6**
SNR=28
AAK Ala-Archa 70.04 320 P **P** **11 06 48.7 +0.7**
comp=Z,8.0nm,0.4s,baz=135,slow=5.8,SNR=26
AAK PKPPKP **P'P'df** **11 34 49.8 0.0**
comp=Z,11nm,0.9s,baz=251,slow=2.4,SNR=15
comp=Z,8.0nm,0.4s
AAK Ala-Archa 70.04 320 P **P** **11 06 49.4 +1.4**
SNR=8.5
AAK Ala-Archa 70.04 320 P **P** **11 06 49.2 +1.2**
AAK Ala-Archa 70.04 320*ce*P **P** **11 06 49.0 +1.0**
AAK pmax pmax
comp=Z,55nm,1.7s
AAK Ala-Archa 70.04 320 *i*P **P** **11 06 49.7 +1.7**
SNR=8.5
KBL Kabul 70.19 310 P **P** **11 06 49.6 +0.4**
KBL Kabul 70.19 310 P **P** **11 06 49.6 +0.4**
KBL pmax pmax
comp=Z,23nm,0.8s
AML Almayashu 70.30 319 P **P** **11 06 51.4 +1.5**
SNR=14
USP Ospenovka 70.36 321 P **P** **11 06 50.9 +1.2**
SNR=24
SGDS Sogindy 70.37 321 *e*P **P** **11 06 49.3 -0.5**
SGDS Sogindy 70.37 321 *e*P **P** **11 06 49.4 -0.5**
baz=321
EKS2 Erkin-Say 70.51 320 P **P** **11 06 52.1 +1.3**
SNR=24
SEM Semipalatinsk 71.08 329 *e*P **P** **11 06 54.0 -0.1**
SEM pmax pmax
comp=Z,21nm,1.1s
SEM Semipalatinsk 71.08 329 *e*P **P** **11 06 54.1 -0.1**
comp=Z,21nm,1.1s,baz=329
GAR Garm 71.13 315 P **P** **11 06 54.5 -0.1**
GAR IAmb IAmb 11 07 47.9
comp=Z,55nm,0.9s
ZAA0 Zalesovo Array 71.21 334 P **P** **11 06 54.7 +0.1**
ZAA0 IAmb IAmb 11 06 56.4
comp=Z,58nm,0.8s
ZALV Zalesovo Beam 71.21 334 P **P** **11 06 54.5 0.0**
comp=Z,46nm,0.7s,baz=124,slow=5.1,SNR=110
ZALV PKPPKP **P'P'df** **11 34 47.5 +0.8**
comp=Z,1.0nm,0.4s,baz=318,slow=2.0,SNR=4.7
comp=Z,46nm,0.7s
ZALV Zalesovo Beam 71.21 334 *i*P **P** **11 06 54.2 -0.3**
ZALV pmax pmax
comp=Z,46nm,0.7s
BTLS Baital 71.54 322 *e*P **P** **11 06 56.3 -0.4**
BTLS Baital 71.54 322 *e*P **P** **11 06 56.3 -0.4**
baz=322
CHGR Chuyangaron 71.80 314 IAmb IAmb 11 07 51.8
comp=Z,55nm,0.9s
SEY Seymchan 71.84 11*ce*P **P** **11 06 58.9 +0.8**
SEY pmax pmax
comp=Z,69nm,0.8s
KURBB Kurchatov Arra 72.08 329 P **P** **11 07 00.4 +0.6**
comp=Z,37nm,0.7s,baz=127,slow=4.8,SNR=230
KURBB pP **pP** **11 07 44.8 -0.9**
comp=Z,4.6nm,0.8s,baz=129,slow=4.9,SNR=1.0
KURBB S **S** **11 16 05.9 +0.7**
comp=Z,0.5nm,0.8s,baz=106,slow=20,SNR=4.7
KURBB PKPPKP **P'P'df** **11 34 41.3 -4.1**
comp=Z,0.5nm,0.7s,baz=292,slow=3.6,SNR=5.5
comp=Z,37nm,0.7s
KURBB Kurchatov Arra 72.08 329 P **P** **11 06 59.7 -0.1**
KURK Kurchatov 72.09 329 P **P** **11 07 00.4 +0.5**
KURK Kurchatov 72.09 329*ce*P **P** **11 06 59.9 0.0**
KURK pmax pmax
comp=Z,118nm,1.3s
AMKA Amchitka 72.12 30 P **P** **11 07 00.1 +0.1**
DZA Taraz 72.20 319 *e*P **P** **11 07 00.8 0.0**
DZA Taraz 72.20 319 *e*P **P** **11 07 00.8 0.0**
baz=319
RER Riviere de l'E 72.25 250 P **P** **11 07 04.6 +3.0**
VNDA Vanda 72.62 173 P **P** **11 07 02.6 0.0**
comp=Z,35nm,0.7s,baz=319,slow=6.5,SNR=249
VNDA S **S** **11 16 09.1 -1.5**
comp=Z,1.6nm,1.0s,baz=61,slow=23,SNR=8.0
VNDA LR LR 11 38 22.9
comp=Z,338nm,20.2s,baz=340,slow=35
comp=Z,35nm,0.7s
VNDA Vanda 72.62 173 P **P** **11 07 02.5 0.0**
VNDA IAmb IAmb 11 07 04.2
comp=Z,55nm,1.1s
IUG Iuzhnay 72.72 318 *e*P **P** **11 07 04.2 +0.3**
IUG Iuzhnay 72.72 318 *e*P **P** **11 07 04.3 +0.3**
baz=318
KK31 Karatay Array 72.83 319 P **P** **11 07 04.8 +0.2**
KK31 Karatay Array 72.83 319 *i*P **P** **11 07 04.7 +0.2**
KKAR Karatay Array 72.83 319 P **P** **11 07 04.7 +0.2**
KKAR Karatay Array 72.83 319 IAmb IAmb 11 07 07.2
comp=Z,24nm,1.0s
KKAR Karatay Array 72.83 319 P **P** **11 07 04.7 +0.2**
SBA Scott Base 73.52 172 P **P** **11 07 08.7 +0.9**
SBA IAmb IAmb 11 07 10.6
comp=Z,40nm,0.9s
SBA Scott Base 73.52 172 P **P** **11 07 08.7 +0.9**
SBA pmax pmax
comp=Z,40nm,0.9s
OTUK Ortayu 74.17 324 P **P** **11 07 13.0 +0.8**
ADK Adak 74.45 31 P **P** **11 07 13.6 0.0**
ADK IAmb IAmb 11 07 16.2
comp=Z,73nm,1.5s
ADK Adak 74.45 31 P **P** **11 07 13.6 0.0**
ADK pmax pmax
comp=Z,73nm,1.5s
MAW Mawson 74.79 201 P **P** **11 07 16.4 +1.0**
comp=Z,42nm,0.6s,baz=76,slow=5.4,SNR=153
MAW LR LR 11 37 50.6
comp=Z,192nm,20.5s,baz=74,slow=34
comp=Z,42nm,0.6s
MAW Mawson 74.79 201 P **P** **11 07 16.3 +1.0**
baz=75
MAW Mawson 74.79 201 P **P** **11 07 16.1 +0.8**
BRZS Berezniki 74.86 326 *e*P **P** **11 07 15.8 -0.3**
BRZS pmax pmax
comp=Z,20nm,0.8s
BRZS Berezniki 74.86 326 *e*P **P** **11 07 15.8 -0.3**
comp=Z,20nm,0.8s,baz=326
WSAR Wadi Sarin 75.22 296 P **P** **11 07 19.7 +0.9**
comp=Z,24nm,0.7s,baz=198,slow=4.6,SNR=21
comp=Z,24nm,0.7s
ATKA Atka Island 75.92 32 P **P** **11 07 22.2 +0.2**
SOHO SOHO 77.31 297 *i*P **P** **11 07 31.0 +0.6**
SNR=13
BVA0 Borovoye Array 77.63 328 *i*P **P** **11 07 31.4 -0.2**
BRVK Borovoye 77.70 328 P **P** **11 07 32.4 +0.4**
BRVK IAmb IAmb 11 07 34.3
comp=Z,51nm,0.9s
BRVK Borovoye 77.70 328*ce*P **P** **11 07 32.3 +0.3**
BRVK pmax pmax
comp=Z,63nm,1.0s
UOSS Minazif 77.79 297 P **P** **11 07 33.3 +0.2**
UOSS Minazif 77.79 297 P **P** **11 07 33.4 +0.4**
HATD Hatta, Dubai 77.82 297 P **P** **11 07 35.0 +1.7**
ASHO Ashiyiah 77.86 297 P **P** **11 07 34.3 +0.8**
MSFE Esma-Masafi 77.92 298 *i*P **P** **11 07 35.6 +1.7**
SNR=5.6
BANOM Banah 77.93 298 P **P** **11 07 35.0 +1.0**
SHME Shamm 78.10 298 *i*P **P** **11 07 35.5 +0.7**
SNR=9.7
TIXI Tiksi 78.39 360 P **P** **11 07 35.4 0.0**
comp=Z,21nm,0.6s,baz=270,slow=24,SNR=12
comp=Z,21nm,0.6s
TIXI Tiksi 78.39 360*ce*P **P** **11 07 36.1 +0.7**
TIXI pmax pmax
comp=Z,20nm,0.8s
ASUD Al Ashush, Dub 78.49 297 *i*P **P** **11 07 38.1 +1.2**
SNR=8.7
CLES Cleveland East 78.51 33 IAmb IAmb 11 07 40.6
comp=Z,343nm,1.4s
NIKH Nikolski High 79.14 33 P **P** **11 07 39.8 0.0**
baz=243
BILL Bilibino 79.18 13*ce*P **P** **11 07 41.7 +2.0**
BILL *e* 11 10 40.1
BILL *e*PPP PPP 11 12 31.9
BILL pmax pmax
comp=Z,6.0nm,0.8s
PAE Paea 79.48 107 *e*P **P** **11 07 44.3 +1.9**
comp=Z,18nm,1.0s
PPT2 Papeete2 79.49 107 *e*P **P** **11 07 44.7 +2.1**
comp=Z,120nm,0.9s
PPT2 Papeete2 79.49 107 *e*P **P** **11 07 45.5 +2.9**
comp=Z,38nm,21.2s
PPT2 *e*S **S** **11 17 30.8 +3.1**
comp=Z,59nm,25.2s
PPT2 *e*SS **SS** **11 22 44.5 +4.4**
PPT2 Papeete2 79.49 107 *e*LR LR 11 32 47.4
comp=Z,100nm,27.2s
comp=Z,127nm,22.8s
PPT Papeete 79.49 107 P **P** **11 07 42.1 -0.4**
comp=Z,169nm,1.0s,baz=300,slow=8.0,SNR=11
PPT LR LR 11 39 52.1
comp=Z,169nm,1.0s
comp=Z,66nm,21.2s,baz=285,slow=33
PPTF Pamatai, Papee 79.50 107 P **P** **11 07 45.2 +2.6**
PPTF Pamatai, Papee 79.50 107 P **P** **11 07 44.0 +1.3**
GEYT Alibeck 79.64 310 P **P** **11 07 43.9 +0.9**
comp=Z,7.1nm,0.6s,baz=74,slow=11,SNR=7.9
comp=Z,7.1nm,0.6s
GEYT Alibeck 79.64 310 P **P** **11 07 43.2 +0.2**
GYA0B ALIBECK ARRAY 79.64 310 P **P** **11 07 43.3 +0.3**
TVO Taravao 79.78 107 *e*P **P** **11 07 46.0 +1.8**
comp=Z,49nm,1.1s
MZR Muzera 79.79 295 *i*P **P** **11 07 45.2 +1.1**
SNR=7.4
SPIA Saint Paul Isl 80.40 29 P **P** **11 07 46.7 +0.2**
baz=241
VOI Vohitsoka 80.55 249 P **P** **11 07 48.8 +0.5**
UNV Unalaska Valle 80.79 33 P **P** **11 07 48.7 +0.1**
baz=245
PMOR Pomariorio Ree 81.30 104 *e*P **P** **11 07 54.2 +2.1**
comp=Z,143nm,1.0s
NRIK Noril'sk 81.31 346 P **P** **11 07 51.7 +0.7**
comp=Z,43nm,0.9s,baz=127,slow=6.5,SNR=28
NRIK LR LR 11 47 49.9
comp=Z,95nm,19.8s,baz=140,slow=38
comp=Z,43nm,0.9s
NRIK Noril'sk 81.31 346 P **P** **11 07 51.1 0.0**
NRIK IAmb IAmb 11 07 54.5
comp=Z,47nm,0.9s
NRIK Noril'sk 81.31 346*ce*P **P** **11 07 51.5 +0.4**
NRIK pmax pmax
comp=Z,45nm,0.9s
VAH Vaihoa 81.53 104 *e*P **P** **11 07 55.1 +1.7**
comp=Z,58nm,0.9s
AB31 Akbulak array 82.02 322 *i*P **P** **11 07 54.7 -0.5**
ABKAR Akbulak array 82.02 322 P **P** **11 07 55.8 +0.5**
QSPA South Pole Qui 83.07 180 P **P** **11 08 00.0 -0.5**
comp=Z,85nm,0.6s,baz=316,slow=1.2,SNR=651
QSPA S **S** **11 17 58.9 -4.0**
comp=Z,7.5nm,1.0s,baz=118,slow=20,SNR=19
QSPA LR LR 11 46 24.2
comp=Z,279nm,18.5s,baz=346,slow=36
comp=Z,85nm,0.6s
QSPA South Pole Qui 83.07 180 P **P** **11 08 00.1 -0.5**
GAMB Gambell 83.09 23 P **P** **11 08 00.3 -0.1**
baz=239
AKTO Aktyubinsk 83.59 322 P **P** **11 08 03.8 +0.4**
comp=Z,27nm,0.7s,baz=108,slow=7.4,SNR=50
AKTO PKKPbc **PKKPbc** **11 26 20.4 -1.9**
comp=Z,2.5nm,0.7s,baz=276,slow=3.3,SNR=8.1
AKTO LR LR 11 48 41.1
comp=Z,51nm,21.5s,baz=116,slow=38
comp=Z,27nm,0.7s
AKTO Aktyubinsk 83.59 322 P **P** **11 08 03.5 +0.2**
S12K Black Hills 83.89 32 P **P** **11 08 04.2 -0.5**
baz=248
SDPT Sand Point 84.60 33 P **P** **11 08 08.0 -0.2**
SDPT Sand Point 84.60 33 P **P** **11 08 07.8 -0.5**
baz=250,SNR=6.0
CHNA Chernabura Isl 84.91 33 P **P** **11 08 09.5 -0.3**
baz=250
ARU Arti 85.28 328 P **P** **11 08 11.3 -0.3**
comp=Z,90nm,0.9s,baz=121,slow=2.3,SNR=63
ARU PKKPbc **PKKPbc** **11 26 16.9 -1.7**
comp=Z,2.7nm,0.5s,baz=288,slow=7.8,SNR=5.0
ARU LR LR 11 48 59.4
comp=Z,59nm,20.5s,baz=146,slow=37
comp=Z,90nm,0.9s
ARU Arti 85.28 328 P **P** **11 08 11.8 +0.2**
ARU IAmb IAmb 11 08 13.6
comp=Z,57nm,0.7s
ARU Arti 85.28 328*c* *i*P **P** **11 08 11.3 -0.3**
ARU 11 11 27.7
ARU S **S** **11 18 17.2 -7.6**
ARU SS **SS** **11 24 05.6 +1.4**
ARU pmax pmax
comp=Z,59nm,0.7s
TNA Tin City 85.38 22 P **P** **11 08 11.4 -0.5**
baz=242
S14K Fog Glacier 85.41 32 P **P** **11 08 12.1 -0.3**
baz=250
ANM Nome 85.90 23 P **P** **11 08 14.7 +0.1**
baz=245
CHGN Chignik 86.02 32 P **P** **11 08 15.1 -0.1**
baz=251
R16K Pilot Point 86.85 31 P **P** **11 08 18.6 -0.6**
baz=252
RAYN Ar Rayn 87.10 294 P **P** **11 08 21.4 +0.1**
RAYN IAmb IAmb 11 08 33.2
comp=Z,30nm,0.9s
RAYN Ar Rayn 87.10 294 P **P** **11 08 21.4 +0.1**
RAYN pmax pmax
comp=Z,30nm,0.9s
RAYN Ar Rayn 87.10 294 *i*P **P** **11 08 22.0 +0.7**
SNR=19
N16K Nishlik Lake 87.19 28 P **P** **11 08 20.3 -0.6**
baz=251,SNR=11
O16K Kokwok River B 87.23 29 P **P** **11 08 20.6 -0.5**
baz=252,SNR=5.3
CHIR Chirikof Islan 87.37 33 P **P** **11 08 21.8 0.0**
baz=254
R17K Ugashik Creek 87.48 31 P **P** **11 08 21.6 -0.7**
baz=253
Q16K King Salmon 87.65 30 P **P** **11 08 23.1 +0.1**
baz=253
O17K Koliganek Bris 87.77 29 P **P** **11 08 23.4 -0.1**
baz=252
P17K Kvichak River 87.91 30 P **P** **11 08 24.0 -0.3**
baz=253
RDOG Red Dog Mine 88.25 20 P **P** **11 08 26.5 +0.8**
baz=247
SII Sitkinak Islan 88.34 33 P **P** **11 08 26.9 +0.5**
baz=255
P18K Big Mountain, 88.56 30 P **P** **11 08 27.6 +0.2**
baz=254
N18K Kilae Creek 88.61 28 IAmb IAmb 11 08 32.0
comp=Z,46nm,1.7s
N18K Kilae Creek 88.61 28 P **P** **11 08 27.9 +0.4**
baz=253
O18K Koktuh Hills 88.70 29 P **P** **11 08 27.8 -0.2**
baz=254
OHAK Old Harbor 88.99 32 P **P** **11 08 28.9 -0.5**
baz=256
TTA Tatalina 89.20 26 P **P** **11 08 30.2 -0.1**
baz=253
Q19K Cape Douglas, 89.23 30 P **P** **11 08 30.1 -0.4**
baz=255
N19K Bonanza Creek 89.31 28 P **P** **11 08 31.2 +0.3**
baz=255,SNR=6.7
KDAK Kodiak Island 89.49 32 P **P** **11 08 31.8 +0.1**
baz=256
L19K White Mountain 89.51 27 P **P** **11 08 31.7 -0.1**
baz=254,SNR=6.6
M19K Big River Lodg 89.64 27 P **P** **11 08 32.5 +0.1**
baz=255
Q20K Shuyak Island 89.78 31 P **P** **11 08 32.8 -0.2**
baz=256
O20K Slope Mountain 90.02 29 P **P** **11 08 33.6 -0.7**
baz=256
L20K Farewell, AK 90.02 27 P **P** **11 08 33.8 -0.4**
baz=255,SNR=7.1
K20K Telida 90.17 26 P **P** **11 08 34.4 -0.4**
baz=255,SNR=9.7
M20K Styx River 90.21 28 P **P** **11 08 34.7 -0.4**
baz=256
GNI Garni 90.28 310 LR LR 11 55 12.1
comp=Z,40nm,22.0s,baz=94,slow=39
J20K Nowinta River 90.35 25 P **P** **11 08 36.0 +0.5**
baz=255,SNR=9.0
BELG Belogornoye 90.38 323 P **P** **11 08 35.5 -0.4**
comp=Z,24nm,0.8s,baz=337,slow=1.9,SNR=6.5
BELG PKKPbc **PKKPdf** **11 26 03.8 +2.1**
comp=Z,12nm,0.8s,baz=311,slow=2.6,SNR=4.3
comp=Z,24nm,0.8s
KIRV Kirov 90.61 329 P **P** **11 08 37.0 +0.1**
comp=Z,21nm,0.7s,baz=28,slow=4.2,SNR=5.8
KIRV PKKPbc **PKKPdf** **11 26 02.2 +0.8**
comp=Z,14nm,0.5s,baz=8.8,slow=3.3,SNR=9.9
KIRV LR LR 11 53 00.7
comp=Z,39nm,20.6s,baz=120,slow=38
comp=Z,21nm,0.7s
KIRV Kirov 90.61 329*ce*P **P** **11 08 37.3 +0.4**
PPLA Purkeypile 90.88 27 P **P** **11 08 38.6 +0.3**
baz=257
CAPN Captain Cook N 90.88 29 P **P** **11 08 38.2 +0.1**
baz=258
CAST Castle Rocks 91.05 26 P **P** **11 08 38.9 0.0**
baz=257
CHUM Lake Minchumin 91.06 26 P **P** **11 08 38.7 -0.2**
baz=257,SNR=7.1
G21K Allakaket 91.21 23 P **P** **11 08 39.1 -0.5**
baz=256
H21K Melozitna Rive 91.27 24 P **P** **11 08 39.4 -0.5**
baz=256
ZEI Tsey 91.29 313 *e*P **P** **11 08 41.9 +1.1**
ZEI pmax pmax
comp=Z,31nm,2.0s

F21K **Alatna River** 91.39 22 P P 11 08 39.7 -0.7
baz=256
SEW **Seward** 91.57 30 P P 11 08 40.3 -1.0
baz=259
M22K **Willow** 91.58 28 IAmb IAmb 11 09 04.3
comp=Z,28nm,1.1s
M22K **Willow** 91.58 28 P P 11 08 39.7 -1.6
baz=258
KTH **Kantishna Hill** 91.59 26 IAmb IAmb 11 08 43.2
comp=Z,20nm,1.2s
RC01 **Rabbit Creek A** 91.63 29 P P 11 08 40.2 -1.4
baz=259
BPAW **Bear Paw Mtn.** 91.68 26 P P 11 08 40.7 -1.1
baz=258
TRF **Thorofare Moun** 91.84 26 P P 11 08 41.1 -1.7
baz=258
H22K **Ishtalitna Cre** 91.90 24 P P 11 08 41.8 -1.0
baz=258
KMBO **Kilima Mbogo** 91.93 269 P P 11 08 45.9 +1.5
comp=Z,2.5nm,0.8s,baz=80,slow=7.3,SNR=3.3
comp=Z,2.5nm,0.8s
F22K **John River** 91.95 22 P P 11 08 42.7 -0.3
baz=257,SNR=5.2
MLY **Manley** 91.98 25 IAmb IAmb 11 08 44.4
comp=Z,13nm,0.7s
MLY **Manley** 91.98 25 P P 11 08 41.8 -1.4
baz=258,SNR=19
PMR **Palmer** 92.01 28 P P 11 08 42.5 -0.8
baz=259
G22K **Bettles** 92.08 23 P P 11 08 42.8 -0.7
baz=257
KBZ **Khabaz** 92.15 314 P P 11 08 44.5 +0.1
comp=Z,2.6nm,0.8s,baz=126,slow=5.7,SNR=7.0
comp=Z,2.6nm,0.8s
KBZ **Khabaz** 92.15 314 *ce*P P 11 08 45.5 +1.1
KBZ pmax pmax
comp=Z,4.0nm,0.9s
E22K **Anaktuvuk Pass** 92.23 22 P P 11 08 43.7 -0.6
baz=257
PWL **Port Wells** 92.26 29 P P 11 08 43.1 -1.5
baz=260
KNK **Knik Glacier** 92.30 28 IAmb IAmb 11 08 47.9
comp=Z,41nm,1.3s
KNK **Knik Glacier** 92.30 28 P P 11 08 43.2 -1.5
baz=260
KIV **Kislovodsk** 92.33 314 *e*P P 11 08 46.3 +0.9
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,40nm,20.0s
SML **Sawmill** 92.42 28 IAmb IAmb 11 08 46.9
comp=Z,14nm,0.8s
SML **Sawmill** 92.42 28 P P 11 08 44.4 -0.9
baz=260
MCK **McKinley** 92.49 26 IAmb IAmb 11 08 47.2
comp=Z,29nm,1.2s
MCK **McKinley** 92.49 26 P P 11 08 44.3 -1.3
baz=260,SNR=7.1
WAT1 **Susitna Watana** 92.50 27 P P 11 08 44.6 -1.0
baz=260
I23K **Minto, Yukon-K** 92.57 25 IAmb IAmb 11 08 47.7
comp=Z,25nm,0.9s
I23K **Minto, Yukon-K** 92.57 25 P P 11 08 45.3 -0.5
baz=259,SNR=17
NEA2 **Nenana** 92.59 25 P P 11 08 45.0 -0.9
baz=260,SNR=6.7
G23K **Bananza Creek** 92.61 23 P P 11 08 46.0 0.0
baz=259,SNR=6.2
H23K **Yukon River** 92.63 24 IAmb IAmb 11 08 47.0
comp=Z,9.3nm,0.7s
H23K **Yukon River** 92.63 24 P P 11 08 45.7 -0.5
baz=259,SNR=12
COLD **Coldfoot** 92.64 23 P P 11 08 45.6 -0.5
baz=259,SNR=13
M23K **Glacier View** 92.70 28 P P 11 08 45.8 -0.8
baz=261
D23K **Nanushuk River** 92.81 21 P P 11 08 46.6 -0.3
baz=258
WAT6 **Susitna Watana** 92.83 27 P P 11 08 46.1 -1.2
baz=261,SNR=7.4
GLI **Glacier Island** 92.86 29 P P 11 08 46.1 -1.1
baz=261
SCM **Sheep Creek Mo** 92.90 28 IAmb IAmb 11 08 49.9
comp=Z,18nm,1.0s
SCM **Sheep Creek Mo** 92.90 28 P P 11 08 46.6 -1.0
baz=261
WRH **Wood River Hil** 92.99 25 IAmb IAmb 11 08 49.3
comp=Z,27nm,1.1s
Q23K **Middleton Isla** 93.01 31 P P 11 08 47.1 -0.9
baz=262
C23K **Ikilik River** 93.02 20 P P 11 08 47.4 -0.4
baz=258
PRGR **Permogore** 93.03 332 *e*P P 11 08 45.7 -2.3
DHY **Denali Highway** 93.07 27 IAmb IAmb 11 08 50.2
comp=Z,18nm,0.8s
DHY **Denali Highway** 93.07 27 P P 11 08 47.7 -0.7
baz=261,SNR=18
CCB **Clear Creek Bu** 93.14 25 IAmb IAmb 11 08 49.6
comp=Z,27nm,1.1s
TOLK **Toolik Lake Re** 93.15 21 P P 11 08 47.9 -0.6
baz=259
TCOL **CIGO, UAF Yank** 93.15 25 P P 11 08 47.3 -1.3
baz=261
COLA **College** 93.16 25 P P 11 08 47.3 -1.2
COLA **College** 93.16 25 P P 11 08 47.3 -1.2
COLA pmax pmax
comp=Z,7.0nm,0.8s
COLA **College** 93.16 25 P P 11 08 46.9 -1.6
baz=261
H24K **Noodor Dome** 93.30 24 IAmb IAmb 11 08 51.3
comp=Z,20nm,1.0s
H24K **Noodor Dome** 93.30 24 P P 11 08 48.6 -0.7
baz=261,SNR=18
POKR **Poker Plat Res** 93.37 25 P P 11 08 49.5 -0.1
baz=261
E24K **Your Creek** 93.44 22 P P 11 08 49.1 -0.8
baz=260
EYAK **Cordova Ski Ar** 93.47 30 P P 11 08 49.1 -0.9
baz=262
HDA **Harding Lake** 93.47 26 P P 11 08 48.2 -1.8
HDA IAmb IAmb 11 08 50.5
comp=Z,17nm,0.8s
HDA **Harding Lake** 93.47 26 P P 11 08 48.6 -1.4
baz=261,SNR=14
M24K **Tolsona, Glenn** 93.48 28 IAmb IAmb 11 08 53.0
comp=Z,35nm,1.1s
M24K **Tolsona, Glenn** 93.48 28 P P 11 08 49.1 -1.1
baz=262
D24K **Happy Valley** 93.51 21 P P 11 08 49.4 -0.6
baz=260
KLU **Klutina** 93.51 29 P P 11 08 49.2 -1.1
baz=262
DIV **Divide** 93.53 29 IAmb IAmb 11 08 53.1
comp=Z,20nm,0.8s
IL31 93.55 25 IAmb IAmb 11 08 51.0
comp=Z,20nm,1.6s
ILAR **Eielson Array** 93.55 25 P P 11 08 48.5 -1.8
comp=Z,5.1nm,0.7s,baz=272,slow=4.3,SNR=49
ILAR PP PP 11 12 35.2 -2.5
comp=Z,3.0nm,1.2s,baz=254,slow=7.4,SNR=5.9
ILAR PKKPbc PKKPdf 11 25 54.8 -1.6
comp=Z,1.8nm,0.7s,baz=25,slow=1.2,SNR=16
ILAR SKKPbc SKKPbc 11 29 15.1 -4.6
comp=Z,0.5nm,0.8s,baz=357,slow=1.4,SNR=5.1
ILAR LR LR 11 49 46.1
comp=Z,22nm,20.2s,baz=256,slow=34
F24K **Squaw Lake** 93.57 22 P P 11 08 49.7 -0.8
baz=261,SNR=11
G24K **Hadweenzic Riv** 93.60 23 P P 11 08 49.8 -0.8
baz=261,SNR=9.6
C24K **Franklin Bluff** 93.65 20 P P 11 08 50.1 -0.6
baz=260
VRH **Novokhopyorsk** 93.83 321 *e*P P 11 08 50.1 -1.8
VRH pmax pmax
comp=Z,10.0nm,0.7s
K24K **Donnelly Dome** 93.89 26 P P 11 08 51.9 -0.2
baz=262,SNR=6.4
PAX **Paxson** 93.92 27 IAmb IAmb 11 08 54.7
comp=Z,30nm,1.3s
PAX **Paxson** 93.92 27 P P 11 08 51.4 -0.8
baz=263,SNR=9.8
KAIM **Kayak Island** 94.05 30 P P 11 08 52.8 +0.1
baz=263
BMRM **Bremner River** 94.08 29 IAmb IAmb 11 08 55.4
comp=Z,17nm,0.9s
BMRM **Bremner River** 94.08 29 P P 11 08 51.6 -1.4
baz=263
TROLL **Troll, Antarti** 94.09 194 P P 11 08 53.3 +0.3

G25K **Bearman Lake** 94.15 23 P P 11 08 52.6 -0.5
baz=262
N25K **Chitina, Valde** 94.15 29 P P 11 08 52.4 -1.0
baz=263
J25K **Salcha River,** 94.17 26 P P 11 08 51.9 -1.4
baz=263,SNR=11
H25K **Birch Creek** 94.20 24 P P 11 08 52.7 -0.6
baz=262
PRP **Porcupine Dome** 94.22 25 P P 11 08 52.1 -1.5
baz=263
RIDG **Independent Ri** 94.29 26 IAmb IAmb 11 08 54.2
comp=Z,16nm,0.8s
RIDG **Independent Ri** 94.29 26 P P 11 08 52.4 -1.4
baz=263,SNR=8.6
D25K **Kavik River** 94.39 21 P P 11 08 53.5 -0.8
baz=262
SOC **Sochi** 94.43 313 *e*P P 11 08 53.2 -1.7
SOC *e* 11 12 45.5
SOC *e*S SKSac 11 19 09.4 -1.5
SOC *e*SSS SSS 11 29 59.2
F25K **Christian Rive** 94.44 23 P P 11 08 53.5 -0.9
baz=263
GLB **Gilahina Butte** 94.51 29 IAmb IAmb 11 08 57.4
comp=Z,11nm,1.1s
E25K **Arctic Village** 94.53 22 P P 11 08 53.9 -1.0
baz=263
DOT **Dot Lake** 94.63 27 IAmb IAmb 11 08 55.8
comp=Z,13nm,0.8s
SCRK **Sand Creek** 94.70 26 P P 11 08 54.7 -1.1
baz=264,SNR=6.0
CRQM **Cirque** 94.77 29 IAmb IAmb 11 08 59.0
comp=Z,21nm,0.9s
CRQE **Cirque** 94.79 29 P P 11 08 55.3 -1.1
baz=264
MCARA **McCarthy VSAT** 94.88 29 P P 11 08 55.7 -0.9
baz=265
L26K **Log Cabin Wild** 94.89 27 P P 11 08 55.8 -0.8
baz=264,SNR=6.3
J26L **Joseph Creek** 94.93 26 IAmb IAmb 11 08 57.4
comp=Z,15nm,0.7s
J26L **Joseph Creek** 94.93 26 P P 11 08 55.8 -1.1
baz=264,SNR=32
C26K **Camden Bay** 94.98 20 P P 11 08 56.9 +0.1
baz=264
M26K **Nabesna, AK** 94.99 28 P P 11 08 57.0 -0.1
baz=265
F26K **Sheenjek River** 95.02 22 P P 11 08 56.6 -0.5
baz=264
G26K **Porcupine Rive** 95.08 23 P P 11 08 57.0 -0.3
baz=264,SNR=10.0
I26K **Coal Creek Min** 95.18 25 P P 11 08 57.1 -0.7
baz=265
C27K **Jago River** 95.36 21 P P 11 08 58.5 -0.1
baz=265
VSR **Storozhevoye** 95.43 321 *e*P P 11 08 57.0 -2.3
VSR pmax pmax
comp=Z,8.0nm,0.4s
VORR **Voronezh** 95.44 321 *e*P P 11 08 57.9 -1.4
VORR pmax pmax
comp=Z,50nm,0.4s
M27K **Edge Creek, AK** 95.50 28 IAmb IAmb 11 09 01.8
comp=Z,9.2nm,1.0s
M27K **Edge Creek, AK** 95.50 28 P P 11 08 58.5 -1.1
baz=266,SNR=5.4
K27K **Chicken** 95.54 26 P P 11 08 59.0 -0.5
baz=266
L27K **Beaver Creek,** 95.58 27 IAmb IAmb 11 09 01.0
comp=Z,12nm,0.8s
L27K **Beaver Creek,** 95.58 27 P P 11 08 59.0 -0.7
baz=266,SNR=24
SNAA **Sanae** 95.60 194 P P 11 08 59.6 -0.2
SNAA **Sanae** 95.60 194 P P 11 08 59.5 -0.2
comp=Z,14nm,0.9s,baz=174,slow=3.9,SNR=80
SNAA LR LR 11 50 54.2
comp=Z,192nm,21.2s,baz=170,slow=34
comp=Z,14nm,0.9s
SNAA **Sanae** 95.60 194 P P 11 08 59.8 0.0
SNAA IAmb IAmb 11 09 03.2
comp=Z,20nm,1.1s
SNAA **Sanae** 95.60 194 P P 11 08 59.8 0.0
SNAA pmax pmax
comp=Z,20nm,1.1s
CTG **Chitna Glacier** 95.66 29 P P 11 08 59.9 -0.4
baz=266
LPSR **Galich'ya Gora** 95.67 322 *e*P P 11 08 58.2 -2.1
LPSR pmax pmax
comp=Z,9.0nm,0.6s
ASF **Jabal al Asfar** 95.68 302 P P 11 09 01.2 +0.2
comp=Z,4.8nm,1.0s,baz=140,slow=6.6,SNR=4.6
comp=Z,4.8nm,1.0s
I27K **Kandik River** 95.85 25 P P 11 09 00.4 -0.6
baz=266
KLMR **Klimovskoe** 95.89 331 *e*P P 11 08 58.0 -3.1
KLMR pmax pmax
comp=Z,11nm,0.9s
KLMR **Klimovskoe** 95.89 331 *e*P P 11 08 58.0 -3.1
KLMR AMP 11 09 01.1
comp=Z,11nm,0.9s
KLMR *e*PKKP PKKPbc 11 25 47.6 -4.3
G27K **Doyon Strip** 95.91 23 P P 11 09 01.2 0.0
baz=266
H27K **Steamboat Moun** 95.92 24 P P 11 09 00.7 -0.6
baz=266
BVCY **Beaver Creek** 95.98 28 P P 11 09 01.2 -0.4
baz=267
E27K **Coleen River** 96.02 22 P P 11 09 00.9 -0.7
baz=267
YUK3 **Moose Creek** 96.13 29 P P 11 09 02.0 -0.5
baz=267,SNR=5.2
ANN **Anapa** 96.16 314 *e*P P 11 09 01.1 -1.6
ANN pmax pmax
comp=Z,26nm,0.7s
PNL **Peninsula** 96.56 31 P P 11 09 03.9 -0.4
baz=268
DAWY **Dawson** 96.72 26 P P 11 09 05.1 +0.2
DAWY IAmb IAmb 11 09 07.7
comp=Z,20nm,1.1s
DAWY **Dawson** 96.72 26 P P 11 09 04.2 -0.8
baz=268
YUK4 **Talbot Arm** 96.98 29 P P 11 09 05.3 -1.0
baz=269
MMAI **Mount Meron Ar** 97.00 302 LR LR 11 58 10.0
comp=Z,52nm,21.2s,baz=258,slow=38
M29M **Somme Creek** 97.10 28 P P 11 09 05.7 -1.0
baz=269
VNA2 **Neumayer--Watz** 97.17 193 P Pdif 11 09 07.4 +0.5
baz=132,slow=5.0
OBN **Obninsk** 97.19 325 *de*P P 11 09 05.7 -1.4
OBN *e**PP pP 11 09 57.9 +2.6
OBN *e* 11 13 08.5
OBN *e*PPP PPP 11 15 10.9
OBN *e*SS SS 11 27 09.6 +14
OBN pmax pmax
comp=Z,11nm,0.5s
I29M **Ogilvie Camp,** 97.22 25 IAmb IAmb 11 09 09.6
comp=Z,14nm,1.1s
I29M **Ogilvie Camp,** 97.22 25 P P 11 09 06.6 -0.5
baz=269
VNA3 **Neumayer Olymp** 97.43 192 P Pdif 11 09 08.2 +0.2
HYT **Haines Junctio** 97.53 30 P P 11 09 08.2 -0.5
baz=269
VNA1 **Neumayer--Stat** 97.57 193 P Pdif 11 09 09.1 +0.5
N30M **Aishikik Lake** 97.73 29 P P 11 09 09.3 -0.2
baz=270
PLBC **Pleasant Camp** 98.09 31 P P 11 09 10.5 -0.6
baz=270
O30N **Mendenhall** 98.22 30 P P 11 09 11.4 -0.4
baz=271
MAYO **Mayo, Yukon** 98.27 27 IAmb IAmb 11 09 16.6
comp=Z,9.1nm,0.7s
N31M **Braeburn, Yuko** 98.36 29 P P 11 09 11.3 -1.0
baz=271
SKAG **Skagway** 98.62 31 IAmb IAmb 11 09 16.4
comp=Z,8.2nm,1.0s
SKAG **Skagway** 98.62 31 P P 11 09 12.3 -1.1
baz=271
BRTR **Keskin Array B** 98.74 309 P P 11 09 13.8 -0.9
comp=Z,1.0nm,0.7s,baz=131,slow=4.2,SNR=5.7
BRTR PKKPbc PKKPbc 11 25 43.0 -0.4
comp=Z,1.7nm,0.8s,baz=211,slow=2.8,SNR=8.1
BRTR LR LR 12 00 49.9
comp=Z,59nm,19.8s,baz=117,slow=39
comp=Z,1.0nm,0.7s
BRTR **Keskin Array B** 98.74 309 *i* P P 11 09 14.5 -0.2
BRTR pmax pmax
comp=Z,1.0nm,0.7s
WHY **Whitehorse** 98.82 30 P P 11 09 13.6 -0.9
baz=272
BOSA **Boshof** 98.94 240 P P 11 09 15.7 -0.1
comp=Z,3.0nm,0.9s,baz=108,slow=7.5,SNR=4.4
BOSA LR LR 11 50 44.6
comp=Z,85nm,18.7s,baz=134,slow=33
comp=Z,3.0nm,0.9s
M31M **Drury Creek, Y** 99.00 28 P Pdif 11 09 14.4 -0.8
baz=272
INK **Inuvik** 99.02 22 PKKPbc PKKPbc 11 25 40.5 -3.0
comp=Z,3.3nm,0.6s,baz=63,slow=4.7,SNR=7.4
INK LR LR 11 51 53.7
comp=Z,45nm,21.1s,baz=248,slow=34
P32M **Atlin** 99.44 31 P Pdif 11 09 16.1 -1.1
baz=272
N32M **Quiet Lake** 99.68 29 P Pdif 11 09 17.4 -0.8
baz=273
P33M **Teslin, Yukon** 99.86 30 P Pdif 11 09 18.2 -0.9
baz=273
R33M **Jennings River** 100.85 31 P Pdif 11 09 22.8 -0.8
baz=275
ARA0 **ARCESS Array S** 101.26 340 *e*Pdif Pdif 11 09 24.3 -0.7
ARA0 IAmb IAmb 11 09 25.5
comp=Z,10nm,0.9s
ARCES **ARCESS Array B** 101.26 340 P Pdif 11 09 24.3 -0.7
comp=Z,8.2nm,0.8s,baz=76,slow=5.1,SNR=20
ARCES PKiKP PKiKP 11 13 48.3 -0.2
comp=Z,1.9nm,0.9s,baz=104,slow=2.5,SNR=7.3
ARCES PKKPbc PKKPbc 11 25 33.6 -3.5
comp=Z,2.2nm,0.6s,baz=249,slow=3.3,SNR=12
AKASG **Malin Array Be** 101.71 320 P Pdif 11 09 26.3 -1.1
comp=Z,2.7nm,0.7s,baz=67,slow=5.1,SNR=7.7
AKASG PP PKiKP 11 13 47.2 -2.6
comp=Z,0.2nm,0.2s,baz=79,slow=6.1,SNR=4.6
MNK **Minsk** 102.24 324 *i* P Pdif 11 09 30.2 +0.6
MNK *i* 11 13 44.5
MNK *i* PPP PPP 11 15 55.3
MNK *i* S SKSac 11 19 51.1 +1.4
MNK *i* SS SS 11 28 07.5 +2.2
MNK *i* SSS SSS 11 32 02.5
MNK pmax pmax
comp=N,8.0nm,1.0s
MNK pmax pmax
comp=Z,22nm,0.7s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=N,14nm,15.0s
MNK MLR MLR
comp=Z,23nm,18.0s
MNK MLR MLR
comp=E,51nm,19.0s
MNK **Minsk** 102.24 324 *i* P Pdif 11 09 30.2 +0.6
comp=E,3.0nm,0.9s
MNK *i* P Pdif 11 09 30.2 +0.6
comp=N,8.0nm,1.0s
MNK *i* P Pdif 11 09 30.2 +0.6
comp=Z,22nm,0.7s,baz=84
MNK *i* pP pPdif 11 10 17.6 -0.2
MNK *i* PP PP 11 13 44.6 +0.3
MNK *i* PPP PPP 11 15 55.3
MNK *i* S SKSac 11 19 51.1 +1.4
MNK *i* sS pS 11 21 18.4 -40
MNK *i* SS SS 11 28 07.5 +2.2
MNK *i* SSS SSS 11 32 02.5
MNK *i* LRM MLR 11 56 26.4
comp=N,14nm,15.5s
MNK *i* LRM MLR 11 56 26.4
comp=Z,23nm,18.1s
MNK *i* LRM MLR 11 56 35.3
comp=E,51nm,19.3s
FINES **FINESS Array B** 102.36 331 P Pdif 11 09 28.8 -1.2
comp=E,1.7nm,0.8s,baz=57,slow=7.0,SNR=6.8
FINES PKiKP PKiKP 11 13 51.0 +0.4
comp=E,1.9nm,0.7s,baz=92,slow=4.3,SNR=5.0
FINES PKKPbc PKKPbc 11 25 30.8 -2.9
comp=E,1.4nm,0.7s,baz=242,slow=3.7,SNR=4.6
FINES **FINESS Array B** 102.36 331 *i* P Pdif 11 09 28.7 -1.4
FINES pmax pmax
comp=Z,2.0nm,0.8s
NACGM **Naroch** 102.83 325 *e*P Pdif 11 09 33.2 +0.9
baz=84
JETT **Jettan, Norway** 103.00 340 *e*P Pdif 11 09 32.1 -0.7
JETT IAmb IAmb 11 09 33.3
comp=Z,16nm,0.8s
KMPD **K-Podol'skiy** 103.66 318 P Pdif 11 09 36.0 -0.1
MLR **Muntele Rosu** 104.27 315 PKiKP PKiKP 11 13 56.0 +1.2
comp=Z,2.7nm,0.7s,baz=346,slow=4.2,SNR=4.1
MLR PKKPbc PKKPbc 11 25 26.9 -0.7
comp=Z,3.0nm,0.7s,baz=152,slow=11,SNR=5.5
BURAR **Bucovina Array** 104.58 317 ‖P Pdif 11 09 39.7 -0.7
IDI **Anoyia** 105.74 305 PKKPbc PKKPbc 11 25 22.1 -0.6
comp=Z,11nm,0.8s,baz=298,slow=4.4,SNR=5.2
YKA **Yellowknife Ar** 107.96 26 PKKPbc PKKPbc 11 25 13.4 -3.3
comp=Z,5.0nm,0.7s,baz=106,slow=3.1,SNR=10
J04D **Umpqua Nationa** 108.21 47 P PKiKP 11 14 01.0 -1.3
baz=278
HFS **Hagfors** 108.57 332 PKKPbc PKKPbc 11 25 12.7 -2.0
comp=Z,2.6nm,0.7s,baz=198,slow=4.4,SNR=7.1
J05D **Fort Rock, OR** 108.84 47 P PKiKP 11 14 02.5 -0.9
baz=278
NB2 **NORSAR Subarra** 109.39 333 P Pdif 11 10 01.0 -0.5
comp=Z,1.9nm,1.0s,baz=66,slow=4.6
NB2 **NORSAR Subarra** 109.39 333 PKPdf PKiKP 11 14 03.3 -0.5
comp=Z,0.9nm,0.7s,baz=68,slow=1.9
NB2 **NORSAR Subarra** 109.39 333 *e* PKiKP 11 14 03.3 -0.5
baz=68,slow=1.9
NOA **NORSAR Array B** 109.39 333 Pdiff Pdif 11 10 00.9 -0.5
comp=Z,0.7nm,0.7s,baz=97,slow=1.0,SNR=4.4
NOA PKiKP PKiKP 11 14 03.3 -0.5
comp=Z,1.3nm,0.7s,baz=263,slow=3.1,SNR=6.1
NOA PKKPbc PKKPbc 11 25 10.1 -2.1
comp=Z,1.7nm,0.7s,baz=261,slow=2.2,SNR=11
KRLC **Kraliky** 109.67 321 *e*PKP PKiKP 11 14 05.3 +0.7
DPC **Dobruska-Polom** 109.89 321 *e*PKP PKiKP 11 14 05.8 +0.8
OSTC **Ostas** 109.91 321 *e*PKP PKiKP 11 14 05.5 +0.5
CHVC **Chvalec** 110.00 321 *e*PKP PKiKP 11 14 05.1 -0.1
NEW **Newport** 110.73 41 P PKiKP 11 14 05.8 -0.9
baz=283
CONA **Conrad Observa** 110.75 319 *i* P PKKPbc 11 25 06.7 -0.8
comp=Z,5.2nm,1.0s
PVCC **Panska Ves** 110.94 322 *e*PKiKP PKiKP 11 14 08.3 +1.4
PVCC **Panska Ves** 110.94 322 *e*PKP PKiKP 11 14 08.3 +1.4
PKM **Mcpherson Peak** 111.02 55 P PKiKP 11 14 06.4 -1.4
baz=276
PRU **Pruhonice** 111.09 321 *e*PKiKP PKiKP 11 14 07.2 0.0
PRU **Pruhonice** 111.09 321 *e*PKP PKiKP 11 14 07.2 0.0
ARSA **Arzberg** 111.13 318 *i* P PKKPbc 11 25 05.4 -0.7
comp=Z,5.4nm,0.9s
BRG **Berggiesshubel** 111.23 322 *e*(PKP) PKiKP 11 14 07.9 +0.4
BRG Amp 11 14 18.5
comp=Z,3.5nm,0.9s
BRG **Berggiesshubel** 111.23 322 *e*PKiKP PKiKP 11 14 07.8 +0.4
BRG *e* 11 24 23.0
BRG pmax pmax
comp=Z,4.0nm,0.9s
CKRC **Cesky Krumlov** 111.54 320 *e*PKP PKiKP 11 14 08.4 +0.3
CLL **Collm** 111.68 323 *e*PKiKP PKiKP 11 14 08.0 -0.3
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL **Collm** 111.68 323 *e*PKiKP PKiKP 11 14 08.0 -0.3
comp=Z,4.0nm,0.9s
CLL *ex* x 11 15 42.0
CLL *e*SP SP 11 24 12.0 +7.5
CLL *e*PS PS 11 24 42.0 +13
CLL *e*PPS PPS 11 25 36.0
NVAR **Mina Array Bea** 111.76 51 Pdiff Pdif 11 10 15.2 +2.5
comp=Z,0.6nm,0.8s,baz=257,slow=7.5,SNR=5.3
NVAR PKiKP PKiKP 11 14 09.9 +0.8
comp=Z,1.0nm,0.6s,baz=233,slow=1.7,SNR=11
NVAR PKKPbc PKKPbc 11 25 04.5 +0.6
comp=Z,0.4nm,0.7s,baz=113,slow=3.0,SNR=3.8
MOA **Molln** 111.81 319 *i* P PKKPbc 11 25 03.1 -0.7
comp=Z,4.8nm,0.7s
GERES **GERESS Array B** 111.92 320 PKiKP PKiKP 11 14 09.0 0.0
comp=Z,3.0nm,0.6s,baz=73,slow=1.8,SNR=26
GERES PKKPbc PKKPbc 11 25 02.0 -1.6
comp=Z,0.7nm,0.7s,baz=243,slow=4.4,SNR=5.8
GERES **GERESS Array B** 111.92 320 *i* PKiKP PKiKP 11 14 09.0 0.0
KHC **Kasperske Hory** 111.92 320 *e*PKiKP PKiKP 11 14 08.8 -0.1
KHC **Kasperske Hory** 111.92 320 *e*PKP PKiKP 11 14 08.8 -0.1
OBKA **Obir** 111.95 317 *i* P PKKPbc 11 25 03.6 +0.1
comp=Z,5.7nm,0.7s
CWC **Cottonwood Cre** 112.22 54 P PKiKP 11 14 07.9 -2.2
baz=278
BIOA **Bad Ischl, Aus** 112.26 319 *i* P PKKPbc 11 25 01.5 -0.8
comp=Z,3.0nm,0.5s

SCI2	San Clemente I	112.27	57	P		PKiKP	11 14 08.3	-1.7	
	baz=276								
EDW2	Edwards Air Fo	112.50	55	P		PKiKP	11 14 08.4	-2.0	
	baz=278								
MYKA	Terra Mystica	112.53	318	*i* P		PKiKP	11 14 10.3	+0.2	
	comp=Z,4.7nm,0.8s								
MYKA				*i* P		PKKPbc	11 25 00.9	-0.6	
	comp=Z,6.3nm,0.6s								
KBA	Koelnbreinsper	112.61	318	*i* P		PKiKP	11 14 09.8	-0.7	
	comp=Z,3.7nm,0.7s								
MPMC	Manual Prospec	112.75	54	P		PKiKP	11 14 09.7	-1.4	
	baz=278								
BFSC	Mount Baldy Ra	112.86	56	P		PKiKP	11 14 09.5	-1.7	
	baz=278								
MSO	Missoula	113.17	42	P		PKiKP	11 14 10.4	-1.0	
	baz=285								
FURC	Furnace Creek,	113.19	53	P		PKiKP	11 14 09.4	-2.2	
	baz=279								
ABTA	Abfaltersbach	113.25	318	*e*P		PKiKP	11 14 11.1	-0.5	
	comp=Z,6.5nm,0.8s,SNR=4.9								
ABTA				*i* P		PKKPab	11 25 06.3	+0.7	
	comp=Z,4.9nm,0.9s								
GSC	Goldstone, Bar	113.41	55	P		PKiKP	11 14 10.2	-2.0	
	baz=278								
TPNV	Topopah Spring	113.60	53	P		PKiKP	11 14 11.7	-0.9	
	baz=280								
HLID	Hailey	113.66	45	P		PKiKP	11 14 10.9	-1.7	
	baz=284								
WTTA	Wattenberg	113.69	319	*i* P		PKiKP	11 14 12.7	+0.2	
	comp=Z,12nm,0.5s,SNR=15								
WTTA				*i* S		SKiKP	11 17 28.3	-0.9	
	comp=Z,8.2nm,0.5s								
WTTA				*i* P		PKKPab	11 25 05.3	+1.5	
	comp=Z,2.9nm,0.8s								
WATA	Walderalm	113.70	319	*i* P		PKiKP	11 14 12.4	-0.1	
	comp=Z,5.3nm,0.5s								
WATA				*i* S		SKiKP	11 17 28.9	-0.2	
	comp=Z,2.8nm,0.5s								
WATA				*i* P		PKKPab	11 25 04.8	+1.2	
	comp=Z,2.0nm,0.6s								
SHOC	Shoshone, Teco	113.75	54	P		PKiKP	11 14 11.7	-1.1	
	baz=279								
R11A	Troy Canyon, C	113.88	51	P		PKiKP	11 14 12.0	-1.1	
	baz=281								
PFO	Pinyon Flats O	113.93	56	P		PKiKP	11 14 12.0	-1.4	
	baz=278								
TPFO	Pinon Flats	113.94	56	P		PKiKP	11 14 12.4	-1.0	
	baz=278								
SQTA	Sankt Quirin	113.98	319	*i* P		PKiKP	11 14 13.0	0.0	
	comp=Z,3.3nm,0.6s								
SQTA				*i* S		SKiKP	11 17 29.6	0.0	
	comp=Z,3.1nm,0.5s								
SQTA				*i* P		PKKPab	11 25 03.8	+1.4	
	comp=Z,9.2nm,0.9s								
MOTA	Moosalm	114.01	319	*e*P		PKPdf	11 14 13.0	-0.1	
	comp=Z,10nm,1.0s,SNR=5.9								
MOTA				*i* S		SKiKP	11 17 29.5	-0.3	
	comp=Z,2.6nm,0.6s								
MONP2	Monument Peak	114.06	57	P		PKPdf	11 14 12.5	-1.2	
	baz=278								
TUQ	Turquoise Moun	114.10	54	P		PKPdf	11 14 12.2	-1.4	
	baz=279								
RETA	Reutte	114.19	319	*i* P		PKKPbc	11 25 01.8	+5.8	
	comp=Z,7.2nm,1.2s								
BELC	Belle Mtn. Jos	114.26	56	P		PKPdf	11 14 13.0	-0.9	
	baz=278,SNR=7.4								
IKP	In-Ko-Pah, Jac	114.35	57	P		PKPdf	11 14 12.6	-1.5	
	baz=278								
GMRC	Granite Mounta	114.42	55	P		PKPdf	11 14 14.0	-0.2	
	baz=279,SNR=5.7								
SWSC	Sam W. Stewart	114.57	57	P		PKPdf	11 14 13.6	-0.7	
	baz=278								
BC3	Big Chuckawall	114.75	56	P		PKPdf	11 14 14.3	-0.6	
	baz=278								
DAVA	Damuels	114.82	319	*i* P		PKPdf	11 14 14.8	+0.2	
	comp=Z,7.0nm,0.5s,SNR=7.3								
DAVA				*i* S		SKiKP	11 17 30.4	-0.9	
	comp=Z,2.4nm,0.4s								
DAVA				*i* P		PKKPab	11 25 00.2	+1.5	
	comp=Z,3.7nm,0.6s								
IRM	Iron Mountain	114.93	56	P		PKiKP	11 14 14.7	-0.5	
	baz=279								
DAVOX	Davos/Dischmat	114.97	319		PKKPbc	PKKPbc	11 24 53.4	0.0	
	comp=Z,4.6nm,0.6s,baz=212,slow=5.8,SNR=11								
BOZ	Bozeman (W)	115.05	43	P		PKPdf	11 14 15.2	0.0	
	baz=287								
EGMT	Eagleton	115.53	40	P		PKPdf	11 14 15.6	-0.3	
	baz=289								
DUG	Dugway, Tooele	115.61	49	P		PKPdf	11 14 15.6	-0.8	
	baz=283								
PDMCI	Parker Dam,Lak	115.73	55	P		PKPdf	11 14 16.0	-0.6	
	baz=280								
H17A	Grant Village	116.12	44	P		PKPdf	11 14 16.9	-0.5	
	baz=287								
RLMT	Red Lodge	116.78	43	P		PKPdf	11 14 18.0	-0.6	
	baz=288								
214A	Organ Pipe Nat	117.22	58	P		PKPdf	11 14 19.0	-0.5	
	baz=279								
BW06	Boulder Array	117.30	45	P		PKPdf	11 14 19.1	-0.6	
	baz=287								
PDAR	Pinedale Array	117.30	45	PKP		PKPdf	11 14 19.6	0.0	
	comp=Z,2.8nm,0.7s,baz=245,slow=0.7,SNR=31								
PDAR					PKKPbc	PKKPbc	11 24 43.8	-1.4	
	comp=Z,0.7nm,0.7s,baz=114,slow=6.8,SNR=4.9								
PDAR					SKKPbc	SKKPbc	11 28 09.6	-3.6	
	comp=Z,0.8nm,0.8s,baz=112,slow=5.0,SNR=4.3								
WUAZ	Wupatki	117.74	53	P		PKPdf	11 14 20.5	-0.1	
	baz=282,SNR=14								
LAO	LASA Array	118.25	40	P		PKiKP	11 14 21.2	+0.1	
	baz=292								
LAO	LASA Array	118.25	40	P		PKiKP	11 14 21.3	+0.1	
	baz=292								
DGMT	Dagmar	118.81	38	P		PKPdf	11 14 21.6	-0.5	
	baz=294								
TUC	Tucson	118.85	57			PKPdf	11 14 22.6	-0.2	
TUC	Tucson	118.85	57		PKIKP	PKPdf	11 14 22.6	-0.2	
TUC	Tucson	118.85	57	P		PKPdf	11 14 22.6	-0.2	
	baz=281								
O20A	White River Ci	119.01	48	P		PKPdf	11 14 22.6	-0.4	
	baz=287								
W18A	Petrified Fore	119.13	54	P		PKPdf	11 14 23.3	0.0	
	baz=283								
CLF	Chambon-Foret	119.36	322			PKiKP	11 14 23.3	+0.1	
K22A	Casper	119.46	45	P		PKPdf	11 14 23.5	-0.2	
	baz=289								
K22A	Casper	119.46	45	P		PKPdf	11 14 22.9	-0.8	
	baz=289								
MVCO	Mesa Verde	119.61	51			PKPdf	11 14 24.3	0.0	
MVCO	Mesa Verde	119.61	51	P		PKPdf	11 14 24.2	0.0	
	baz=285,SNR=13								
N23A	Red Feather La	120.44	46	P		PKPdf	11 14 25.3	-0.5	
	baz=289								
RSSD	Black Hills	120.64	42			PKPdf	11 14 25.8	-0.2	
RSSD	Black Hills	120.64	42		PKIKP	PKPdf	11 14 25.8	-0.2	
RSSD	Black Hills	120.64	42	P		PKPdf	11 14 25.6	-0.4	
	baz=292								
RSSD	Black Hills	120.64	42	P		PKiKP	11 14 26.1	0.0	
	baz=292								
S22A	4UR Ranch, Cre	120.74	50	P		PKPdf	11 14 25.9	-0.6	
	baz=286,SNR=15								
ISCO	Idaho Springs	121.03	47	P		PKiKP	11 14 27.9	+0.8	
	baz=289								
ISCO	Idaho Springs	121.03	47	P		PKPdf	11 14 26.1	-1.0	
	baz=289								
121A	Cookes Peak, D	121.29	56	P		PKiKP	11 14 28.4	+0.7	
	baz=283								
121A	Cookes Peak, D	121.29	56	P		PKPdf	11 14 27.1	-0.5	
	baz=283								
Y22A	Socorro	121.63	54	P		PKiKP	11 14 29.1	+0.8	
	baz=284								
Y22D	IRIS PASSCAL I	121.63	54	P		PKPdf	11 14 27.6	-0.6	
	baz=284								
Q24A	Divide	121.64	48	P		PKPdf	11 14 28.3	+0.1	
	baz=288								
SDCO	Great Sand Dun	121.75	50	P		PKiKP	11 14 29.5	+0.9	
	baz=288								
SDCO	Great Sand Dun	121.75	50	P		PKPdf	11 14 27.8	-0.7	
	baz=288,SNR=16								
E28A	Huff	121.77	38	P		PKPdf	11 14 27.9	+0.1	
	baz=297								
ANMO	Albuquerque	121.79	53		PKP	PKiKP	11 14 29.3	+0.7	
	comp=Z,8.0nm,0.8s,baz=194,slow=4.2,SNR=21								
ANMO	Albuquerque	121.79	53	P		PKiKP	11 14 29.5	+0.8	
	baz=285								
ANMO	Albuquerque	121.79	53	P		PKPdf	11 14 27.6	-0.9	
	baz=285								
MDND	Maddock	121.85	37	P		PKPdf	11 14 28.0	+0.1	
	baz=298								
MDND	Maddock	121.85	37	P		PKPdf	11 14 27.4	-0.5	
	baz=298								
T25A	Trinidad	122.76	50	P		PKPdf	11 14 28.7	-1.6	
	baz=288,SNR=5.8								
OGNE	Ogallala	123.20	45	P		PKiKP	11 14 31.8	+0.7	
	baz=292								
OGNE	Ogallala	123.20	45	P		PKPdf	11 14 29.9	-1.0	
	baz=292								
KSCO	Kaye Shedlock'	123.48	47	P		PKiKP	11 14 32.3	+0.5	
	baz=290								
KSCO	Kaye Shedlock'	123.48	47	P		PKPdf	11 14 30.1	-1.5	
	baz=290								
D32B	Dogwood Acres,	123.72	36	P		PKPdf	11 14 31.2	-0.3	
	baz=300								
F33A	5 Mile Ranch,	124.81	37	P		PKPdf	11 14 33.5	-0.2	
	baz=300								
B35A	Bob, Littlefor	124.95	34	P		PKPdf	11 14 33.0	-0.9	
	baz=304								
MSTX	Muleshoe	124.98	53	P		PKiKP	11 14 35.0	+0.1	
	baz=287								
MSTX	Muleshoe	124.98	53	P		PKPdf	11 14 33.5	-1.1	
	baz=287								
TX31	Lajitas Ar. Si	125.45	59	P		PKiKP	11 14 36.3	+0.4	
	baz=283								
TXAR	Lajitas Array	125.45	59	PKP		PKiKP	11 14 35.9	-0.1	
	comp=Z,4.2nm,0.7s,baz=181,slow=0.9,SNR=28								
TXAR					SKPbc	SKPbc	11 17 33.1		
	comp=Z,0.8nm,0.7s,baz=235,slow=2.3,SNR=4.4								
AMTX	Amarillo	125.56	52	P		PKiKP	11 14 36.0	+0.1	
	baz=289								
AMTX	Amarillo	125.56	52	P		PKPdf	11 14 34.9	-0.7	
	baz=289								
ECSD	EROS Data Cent	125.64	40			PKPdf	11 14 34.5	-0.9	
ECSD	EROS Data Cent	125.64	40	P		PKPdf	11 14 35.1	-0.3	
	baz=299								
ECSD	EROS Data Cent	125.64	40	P		PKPdf	11 14 33.8	-1.6	
	baz=299,SNR=5.6								
CBKS	Cedar Bluff	125.65	47	P		PKiKP	11 14 36.3	+0.3	
	baz=293								
CBKS	Cedar Bluff	125.65	47	P		PKPdf	11 14 33.4	-2.2	
	baz=293								
BGNE	Belgrade	125.70	43			PKPdf	11 14 35.3	-0.3	
BGNE	Belgrade	125.70	43	P		PKPdf	11 14 35.7	+0.1	
	baz=296								
BGNE	Belgrade	125.70	43	P		PKPdf	11 14 34.3	-1.3	
	baz=296,SNR=5.3								
EYMN	Ely	126.41	33			PKPdf	11 14 36.0	-0.7	
EYMN	Ely	126.41	33	P		PKPdf	11 14 36.3	-0.4	
	baz=306								
EYMN	Ely	126.41	33	P		PKPdf	11 14 35.7	-1.0	
	baz=306								
F36A	Milaca	126.45	36			PKPdf	11 14 36.2	-0.7	
F36A	Milaca	126.45	36	P		PKPdf	11 14 36.3	-0.5	
	baz=303								
R32A	Long Quarter,	126.54	47	P		PKiKP	11 14 38.0	+0.2	
	baz=293								
ESDC	Sonseca Array	126.97	315	PKP		PKiKP	11 14 38.6	0.0	
	comp=Z,1.1nm,0.8s,baz=19,slow=2.4,SNR=7.6								
ESDC				PP		PP	11 16 38.6	+0.1	
	comp=Z,3.1nm,0.9s,baz=57,slow=7.0,SNR=12								
ESDC					SKKPbc	SKKPbc	11 27 50.6	+9.5	
	comp=Z,1.7nm,1.1s,baz=233,slow=5.8,SNR=5.0								
SPMN	Marine on St.	127.22	37	P		PKiKP	11 14 38.7	-0.2	
	baz=303								
SPMN	Marine on St.	127.22	37	P		PKPdf	11 14 37.6	-0.7	
	baz=303								
I37B	Waseca	127.51	38	P		PKiKP	11 14 39.5	0.0	
	baz=302								
KSU1	Kansas State U	127.76	45	P		PKiKP	11 14 40.3	+0.2	
	baz=296								
KSU1	Kansas State U	127.76	45	P		PKPdf	11 14 38.7	-0.9	
	baz=296								
WMOK	Wichita Mounta	127.86	51	P		PKiKP	11 14 40.4	-0.1	
	baz=291								
WMOK	Wichita Mounta	127.86	51	P		PKPdf	11 14 38.9	-1.0	
	baz=291								
ABTX	Abilene, Hawle	127.89	54	P		PKiKP	11 14 41.1	+0.4	
	baz=288								
ABTX	Abilene, Hawle	127.89	54	P		PKPdf	11 14 39.5	-0.5	
	baz=288								
TORD	Torodi Ar. Bea	128.14	281	PKP		PKPdf	11 14 41.1	+0.3	
	comp=Z,6.5nm,0.6s,baz=78,slow=1.9,SNR=42								
TORD					SKPbc	SKPbc	11 17 41.1		
	comp=Z,11nm,0.9s,baz=75,slow=3.7,SNR=14								
TORD					PKKPbc	PKKPbc	11 24 06.1		
	comp=Z,1.5nm,0.9s,baz=255,slow=2.3,SNR=4.2								
MVO	Moncorvo	128.37	318	*i* P		SKPbc	11 17 41.1		
JCT	Junction City	128.40	56	P		PKPdf	11 14 41.0	-0.1	
	baz=287								
JCT	Junction City	128.40	56	P		PKPdf	11 14 40.1	-1.0	
	baz=287								
G40A	Rib Lake	128.71	35	P		PKiKP	11 14 41.9	0.0	
	baz=306								
T35B	Sooner Cattle	128.74	47	P		PKiKP	11 14 42.3	+0.1	
	baz=294								
PCAB	Cabril	128.75	319	*e*PKP		PKiKP	11 14 42.7	+0.6	
PVRL	Vila Real	128.77	319	*e*PKP		PKiKP	11 14 43.1	+0.9	
POLO	Lamas de Olo	128.77	319	*e*PKP		PKiKP	11 14 43.0	+0.8	
POLO				*i* P		SKPbc	11 17 44.0		
PGAV	Gavieira, Arco	128.78	320	*e*PKP		PKiKP	11 14 42.8	+0.6	
MTE	Manteigas	129.09	318	*e*PKP		PKiKP	11 14 43.2	+0.4	
MTE				*i* P		SKPbc	11 17 44.8	+0.5	
PVIS	Viseu	129.16	318	*i* P		SKPbc	11 17 44.8	+0.3	
PLCA	Paso Flores	129.19	161	PKP		PKiKP	11 14 43.2	+0.1	
	comp=Z,11nm,0.6s,baz=250,slow=1.9,SNR=38								
PLCA					SKPbc	SKPbc	11 17 45.0	+0.4	
	comp=Z,23nm,0.9s,baz=228,slow=3.0,SNR=19								
PLCA	Paso Flores	129.19	161			PKPdf	11 14 42.3	-0.1	
PLCA	Paso Flores	129.19	161		PKIKP	PKPdf	11 14 42.3	-0.1	
PCBR	Castelo Branco	129.31	317	*e*PKP		PKiKP	11 14 44.1	+0.9	
PCBR				*i* P		SKPbc	11 17 45.6	+0.6	
833A	Chaparral WMA,	129.33	59	P		PKPdf	11 14 42.1	-0.8	
	baz=285								
PMRV	Marv??o	129.45	317	*i* P		SKPbc	11 17 46.5	+0.9	
P38A	Dawn	129.64	43	P		PKPdf	11 14 43.2	+0.1	
	baz=299								
TUL1	Leonard	129.68	48	P		PKPdf	11 14 43.1	-0.2	
	baz=294								
TUL1	Leonard	129.68	48	P		PKPdf	11 14 42.5	-0.8	
	baz=294								
PBAR	Barrancos	129.78	315	*e*PKP		PKiKP	11 14 45.0	+0.8	
PBAR	Barrancos	129.78	315	*e*PP		PP	11 16 55.1	-1.7	
PBAR				*i* P		SKPbc	11 17 47.4	+0.5	
WHTX	Lake Whitney,	129.84	54	P		PKPdf	11 14 43.2	-0.5	
	baz=290								
PESTR	Estremoz	129.85	316	*e*PKP		PKiKP	11 14 44.8	+0.5	
PESTR				*i* P		SKPbc	11 17 47.4	+0.3	
PCAS	Casmilo, Conde	129.89	318	*e*PKP		PKiKP	11 14 45.4	+1.0	
PCAS	Casmilo, Conde	129.89	318	*e*PP		PP	11 17 00.5	+3.1	
PCAS				*i* P		SKPbc	11 17 47.6	+0.3	
L40A	Anamosa	129.90	39	P		PKPdf	11 14 43.5	0.0	
	baz=303								
JFWS	Jewell Farm	130.03	38	P		PKPdf	11 14 43.4	-0.3	
	baz=304								
435B	Jarrell	130.13	55	P		PKPdf	11 14 43.7	-0.6	
	baz=289								
PMTG	Montargil	130.19	317	*e*PKP		PKiKP	11 14 45.1	+0.1	
PMTG				*i* P		SKPbc	11 17 48.3	-0.1	
EVO	Evora	130.30	316	*e*PP		PP	11 17 07.8	+7.8	
EVO				*i* P		SKPbc	11 17 49.3	+0.5	
PBEJ	Beja	130.43	315	*i* P		SKPbc	11 17 49.5	+0.1	
SCHQ	Schefferville	130.48	12	SKPbc		SKPbc	11 17 48.5	-0.5	
	comp=Z,13nm,0.8s,baz=292,slow=3.1,SNR=9.6								
U38A	Gravette	130.49	47	P		PKPdf	11 14 44.0	-0.9	
	baz=296								
PVAQ	Vaqueiros	130.61	314	*i* P		SKPbc	11 17 50.6	+0.5	
S39A	Bolivar	130.69	45	P		PKPdf	11 14 45.2	0.0	
	baz=298								
PCVE	Castro Verde	130.73	315	*e*PKP		PKiKP	11 14 46.3	+0.2	
PCVE				*i* P		SKPbc	11 17 50.5	0.0	
MESJ	Messejana	130.76	315	*i* P		SKPbc	11 17 50.8	+0.2	
PBDV	Barranco-do-Ve	130.84	314	*i* P		SKPbc	11 17 50.7	-0.3	
PNCL	Nicolau / Gran	130.85	316	*i* P		SKPbc	11 17 51.4	+0.5	
HHAR	Hobbs	130.88	47	P		PKPdf	11 14 45.6	0.0	
	baz=296								
R40A	Maddies Statio	131.15	44	P		PKPdf	11 14 45.7	-0.2	
	baz=299								
MORF	Marmelete	131.32	315	*i* P		SKPbc	11 17 53.2	+0.5	
PFVI	Vila Bisbo	131.52	315	*e*PKP		PKiKP	11 14 48.4	+0.7	
MIAR	Mount Ida	131.89	49	P		PKPdf	11 14 47.0	-0.5	
	baz=295								
HDIL	Hopedale	131.94	40	P		PKPdf	11 14 46.9	-0.6	
	baz=304								
CCM	Cathedral Cave	131.96	44	P		PKPdf	11 14 46.6	-1.0	
	baz=300								
GLMI	Grayling	132.07	32	P		PKPdf	11 14 47.6	0.0	
	baz=312								
NATX	Nacogdoches	132.15	53	P		PKPdf	11 14 47.8	-0.3	
	baz=292								
Z41A	Richland Creek	133.01	50	P		PKPdf	11 14 49.2	-0.4	
	baz=294								
Q44A	Meyer Farm, Va	133.02	41	P		PKiKP	11 14 50.8	+0.1	
	baz=303								
SFIN	Lafayette	133.42	39	P		PKPdf	11 14 49.3	-0.9	
	baz=306								
KOWA	Kowa	133.61	283		PKPdf	PKPdf	11 14 51.1	-0.2	
OLIL	Olney	133.72	41	P		PKiKP	11 14 52.0	-0.1	
	baz=304								
P46A	Rosedale	133.79	40			PKiKP	11 14 52.3	0.0	
KIC	Kosan Boka	134.39	272	⇑ *i* P		PKPdf	11 14 52.7	-0.1	
	comp=Z,10.0nm,0.6s								
DBIC	Dimbokro	134.52	273	PKP		PKPdf	11 14 53.6	+0.6	
	comp=Z,5.7nm,0.6s,baz=126,slow=1.6,SNR=9.4								
DBIC					SKPbc	SKPbc	11 18 03.1	-1.1	
	comp=Z,29nm,0.7s,baz=99,slow=3.5,SNR=22								
LIC	Lamto	134.66	272	⇑ *i* P		PKiKP	11 14 54.5	-0.2	
	comp=Z,24nm,0.7s								
TIC	Toumodi	134.68	273	⇑ *i* P		PKiKP	11 14 54.6	-0.2	
	comp=Z,12nm,0.7s								
O48B	Farmland	134.69	38	P		PKPdf	11 14 51.8	-0.8	
	baz=308								
WVT	Waverly	135.29	44	PKPdf		PKPdf	11 14 53.7	-0.2	
WVT	Waverly	135.29	44	PKIKP		PKPdf	11 14 53.7	-0.2	
WVT	Waverly	135.29	44	P		PKPdf	11 14 53.3	-0.6	
	baz=302								
P49A	Miami Univ. Ec	135.39	38	P		PKPdf	11 14 53.1	-0.9	
	baz=308								
CMIG	Matias Romero	135.68	73	PKP		PKPdf	11 14 55.8	+0.7	
	comp=Z,6.3nm,0.8s,baz=283,slow=3.1,SNR=5.7								
ACSO	Alum Creek Sta	135.99	36	P		PKPdf	11 14 54.9	-0.2	
	baz=310								
ERPA	Erie	136.38	32	P		PKPdf	11 14 55.0	-0.7	
	baz=315								
X48A	Hartselle	136.71	46	P		PKPdf	11 14 57.3	+0.8	
	baz=301								
P52A	Corning	136.88	36	P		PKPdf	11 14 56.5	-0.2	
	baz=311								
O53A	New Philadelph	137.00	35	P		PKPdf	11 14 56.0	-0.9	
	baz=312								
LONY	Lake Ozonia	137.04	25	P		PKPdf	11 14 56.5	-0.3	
	baz=324								
LRAL	Lakeview Retre	137.45	47	P		PKPdf	11 14 57.8	-0.2	
	baz=300								
TZTN	Tazewell	137.93	41	P		PKPdf	11 14 58.1	-0.7	
	baz=307								
MCWV	Mont Chateau	138.17	34	P		PKPdf	11 14 58.8	-0.3	
	baz=314								
BRAL	Brewton	138.31	50	P		PKPdf	11 14 59.2	-0.4	
	baz=298								
BINY	Binghamton	138.32	29	P		PKPdf	11 14 59.2	-0.1	
	baz=320								
LBNH	Lisbon	138.43	23	P		PKPdf	11 14 59.1	-0.4	
	baz=327								
SSPA	Standing Stone	138.54	32	P		PKPdf	11 14 59.3	-0.4	
	baz=317								
LCO	Las Campanas	139.41	153			PKPpre	11 14 53.9		
LCO	Las Campanas	139.41	153		PKHKP	PKPpre	11 14 53.9		
BLA	Blacksburg	139.47	38	P		PKPdf	11 15 01.4	-0.2	
	baz=311								
L61B	Northampton	139.61	25	P		PKPdf	11 15 01.2	-0.4	
	baz=325								
GOGA	Godfrey	139.78	45	P		PKPdf	11 15 02.5	+0.3	
	baz=304								
KMSC	Kings Mountain	140.21	41	P		PKPdf	11 15 02.9	0.0	
	baz=308								
DWPF	Disney Wildern	144.06	50			PKPbc	11 15 09.1	+0.6	
DWPF	Disney Wildern	144.06	50	P		PKPbc	11 15 08.9	+0.5	
	baz=300								
ACON	Acoyapa	145.62	79	*e*P		PKPab	11 15 14.0	-0.2	
LVC	Limon Verde	145.66	149	PKPbc		PKPab	11 15 15.5	+0.9	
	comp=Z,104nm,0.7s,baz=252,slow=3.4,SNR=90								
LVC					SKPbc	SKiKP	11 18 35.0	+0.2	
	comp=Z,17nm,0.9s,baz=267,slow=3.9,SNR=5.8								
JTS	Las Juntas de	145.95	82			PKPab	11 15 16.0	+0.4	
JTS	Las Juntas de	145.95	82	PKP2		PKPab	11 15 16.0	+0.4	
JTS	Las Juntas de	145.95	82	*e*P		PKPab	11 15 15.4	-0.1	
CPUP	Villa Florida	146.34	169			PKPbc	11 15 15.8	+0.3	
	comp=Z,94nm,0.7s,baz=197,slow=2.2,SNR=179								
CPUP					SKPbc	SKPbc	11 18 35.4	0.0	
	comp=Z,50nm,1.0s,baz=155,slow=0.9,SNR=12								
CPUP	Villa Florida	146.34	169			PKPab	11 15 16.4	-0.1	
NNA	Nana	147.91	126	PKPbc		PKPbc	11 15 21.0	+0.8	
	comp=Z,158nm,0.7s,baz=250,slow=8.6,SNR=61			

OK032	**Salt Plains WL**	**0.80**	**34**	Pg	Pg	11 10 26.9	-0.7
OK032				Sg	Sg	11 10 38.2	+0.3
GC02	**Grant County #**	**1.02**	**46**		Pg	11 10 31.2	-0.5
GC02				Sg	Sg	11 10 45.2	+0.3
BCOK	**Bluff Creek, N**	**1.06**	**117**	Pg	Pg	11 10 31.7	-0.8
BCOK				Sg	Sg	11 10 46.5	+0.3
OK029	**Liberty Lake**	**1.12**	**108**	Pg	Pg	11 10 33.1	-0.6
OK029				Sg	Sg	11 10 48.4	+0.2
KAN17	**Caldwell West**	**1.21**	**42**	Pg	Pg	11 10 34.1	-1.2
KAN17				Sg	Sg	11 10 51.2	+0.2
OK025	**Westminster Rd**	**1.29**	**115**		Pn	11 10 35.9	-1.0
OK025				Sg	Sb	11 10 53.8	0.0
KAN06	**Argonia West S**	**1.32**	**33**	Pn	Pn	11 10 36.7	-0.7
KAN13	**South Haven SW**	**1.35**	**50**	Pn	Pn	11 10 37.4	-0.4
KAN13				lAmb_Lg		11 10 55.3	
	comp=Z,27nm,0.9s						
BLOK	**Blackwell**	**1.40**	**63**	Pn	Pn	11 10 37.8	-0.5
WMOK	**Wichita Mounta**	**1.40**	**180**	Pn	Pn	11 10 36.3	-2.2
FNO	**Franklin**	**1.42**	**128**	Pn	Pn	11 10 37.7	-1.0
OK031	**S. Brethren Rd**	**1.57**	**96**	Pn	Pn	11 10 38.6	-2.2
OK030	**Cody Creek RV**	**1.62**	**97**	Pn	Pn	11 10 40.5	-1.0
QUOK	**Quay**	**1.67**	**88**	Pn	Pn	11 10 41.2	-0.9
X34A	**Smith Ranch, M**	**1.72**	**153**	Pn	Pn	11 10 43.2	+0.4
X34A				lAmb_Lg		11 11 09.4	
	comp=Z,12nm,0.9s						
DEOK	**Depew**	**1.86**	**99**		Pn	11 10 44.3	-0.5
T35A	**Sooner Cattle**	**1.97**	**66**		Pn	11 10 47.0	+0.7
R32A	**Long Quarter,**	**2.27**	**1**		Pn	11 10 50.8	+0.3
TUL1	**Leonard**	**2.42**	**95**		Pn	11 10 52.8	+0.3
AMTX	**Amarillo**	**2.69**	**243**		Pn	11 10 57.6	+1.4
X37A	**Clayton**	**3.18**	**118**		Pn	11 11 02.7	-0.1
KSU1	**Kansas State U**	**3.41**	**29**	lAmb_Lg		11 12 02.7	
	comp=Z,6.9nm,0.9s						
U38A	**Gravette**	**3.55**	**84**		Pn	11 11 09.2	+1.2
ABTX	**Abilene, Hawle**	**3.58**	**192**	lAmb_Lg		11 12 03.8	
	comp=Z,5.6nm,1.0s						
HHAR	**Hobbs**	**3.91**	**87**		Pn	11 11 13.5	+0.6
HHAR				lAmb_Lg		11 12 25.8	
	comp=Z,4.9nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.20**	**314**	lAmb_Lg		11 12 32.8	
	comp=Z,4.3nm,0.8s						
MIAR	**Mount Ida**	**4.53**	**109**		Pn	11 11 20.5	-1.0
MIAR				lAmb_Lg		11 12 47.5	
	comp=Z,4.7nm,0.7s						
S39A	**Bolivar**	**4.63**	**69**	Pn	Pn	11 11 22.4	-0.4
T25A	**Trinidad**	**4.65**	**284**	lAmb_Lg		11 12 44.5	
	comp=Z,7.7nm,0.8s						
N35A	**Tabor**	**5.31**	**27**	lAmb_Lg		11 13 07.3	
	comp=Z,9.5nm,0.7s						
JCT	**Junction City**	**5.71**	**189**	lAmb_Lg		11 13 21.8	
	comp=Z,7.4nm,1.1s						
L34A	**Svendsen Farm,**	**6.11**	**17**	lAmb_Lg		11 13 27.3	
	comp=Z,11nm,0.8s						
PBMO	**Poplar Bluff**	**6.75**	**82**	lAmb_Lg		11 13 55.9	
	comp=Z,4.5nm,0.7s						
SIUC	**Southern Illin**	**7.81**	**76**	lAmb_Lg		11 14 41.5	
	comp=Z,7.8nm,0.7s						
MVCO	**Mesa Verde**	**7.89**	**281**	lAmb_Lg		11 14 26.7	
	comp=Z,8.1nm,0.8s						
PV07	**Paradox Valley**	**8.20**	**289**	lAmb_Lg		11 14 28.4	
	comp=Z,5.9nm,0.8s						

MEX ***06*** *11:53:05.8±0.7,14°.38N×92°.58W,h16km±999km,MD3.9*
GCG ***06*** *11:53:06.4±0.4,15°.38N×92°.15W,h50km±305km,MD3.5*
ISC 06 11:53:07.2±1.8,14°.8N±0.2×92°.4W±0°.1,h70km±16km**,n10,** σ0s**.84**/17**,1C,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**0.39**	**25**	*eP*	**Pn**	**11 53 18.2**	**-1.2**
PATR				*eS*	**Sn**	**11 53 28.8**	**+0.5**
CHUJ	**Union Juarez**	**0.44**	**41**	*eP*	**Pn**	**11 53 19.0**	**-0.8**
CHUJ				*eS*	**Sn**	**11 53 29.8**	**+0.8**
PAVE	**Pavencul**	**0.48**	**27**	*i* P	**Pn**	**11 53 19.8**	**-0.4**
PAVE				*eS*	**Sn**	**11 53 31.0**	**+1.4**
STG3	**Santiaguito 3,**	**0.81**	**93⇑**	*eP*	**Pn**	**11 53 23.1**	**-0.5**
STG3				*eS*	**Sn**	**11 53 36.0**	**+0.2**
CCIG	**Comitan**	**1.53**	**10**	*eP*	Pn	11 53 35.6	+2.8
FUG	**Fuego 3**	**1.54**	**101**	*eP*	**Pn**	**11 53 32.7**	**-0.3**
PCG	**Pacaya**	**1.78**	**102**	*eP*	**Pn**	**11 53 35.6**	**-0.5**
PCG				*eS*	**Sn**	**11 53 58.8**	**+0.8**
CARR	**Arriaga**	**2.07**	**316**	*eP*	**Pn**	**11 53 39.5**	**-0.4**
CARR				*eS*	**Sn**	**11 54 05.4**	**+0.6**
TGIG		**2.12**	**341**	*eP*	**Pn**	**11 53 39.7**	**-0.9**
TGIG				*eS*	**Sn**	**11 54 06.7**	**+0.6**
CMIG	**Matias Romero**	**3.33**	**314**	*eP*	**Pn**	**11 53 56.4**	**-0.5**
CMIG				*eS*	**Sn**	**11 54 36.2**	**+1.0**

RSNC 06 12:17:28.7±0.9,6°.80N×73°.16W,h152km±4km,ML2.7, 2C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**186**	*eP*	Pn	12 17 49.0	-0.6
BARC				*eS*	Sn	12 18 04.4	-1.2
BARC				*i*		12 18 05.3	
	comp=Z,165nm,0.3s						
BRRC	**Barranca, Sant**	**0.63**	**299⇑**	*i* P	Pn	12 17 50.9	-0.2
BRRC				*eS*	Sn	12 18 08.0	0.0
BRRC				*i*		12 18 11.9	
	comp=Z,82nm,0.3s						
PAMC	**Pamplona, Colo**	**0.70**	**40⇑**	*eP*	Pn	12 17 51.9	-0.2
PAMC				*eS*	Sn	12 18 09.3	-0.5
PAMC				*i*		12 18 11.3	
	comp=Z,94nm,0.5s						
RUSC	**La Rusia**	**0.91**	**175**	*eP*	Pn	12 17 53.1	-0.5
RUSC				*eS*	Sn	12 18 12.0	-0.5
RUSC				*i*		12 18 13.2	
	comp=Z,36nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.31**	**259**	*eP*	Pn	12 17 56.2	-0.4
PTBC				*eS*	Sn	12 18 17.6	-0.2
PTBC				*i*		12 18 18.9	
	comp=Z,23nm,0.2s						
TAMC	**Tame, Arauca**	**1.41**	**105⇓**	*i* P	Pn	12 17 57.4	-0.1
TAMC				*eS*	Sn	12 18 19.1	-0.5
TAMC				*i*		12 18 36.1	
	comp=Z,56nm,0.5s						
SPBC	**San Pablo de B**	**1.46**	**219**	*eP*	Pn	12 17 58.0	-0.1
SPBC				*eS*	Sn	12 18 20.3	-0.3
SPBC				*i*		12 18 24.9	
	comp=Z,102nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*eP*	Pn	12 18 01.5	-0.4
ZARC				*eS*	Sn	12 18 26.9	-0.6
ZARC				*i*		12 18 33.9	
	comp=Z,51nm,0.4s						
ROSC	**El Rosal**	**2.27**	**211**	*eP*	Pn	12 18 07.2	-0.3
ROSC				*eS*	Sn	12 18 37.0	-0.4
ROSC				*i*		12 18 43.6	
	comp=Z,69nm,0.5s						
UREC	**San Jos de Ur**	**2.54**	**292**	*eP*	Pn	12 18 09.4	-1.0
UREC				*eS*	Sn	12 18 41.6	-0.9
UREC				*i*		12 18 53.0	
	comp=Z,25nm,0.2s						
SOCV	**Socops**	**2.72**	**57**	*eP*	Pn	12 18 11.9	-0.8
SOCV				*eS*	Sn	12 18 43.6	-3.1
LL6C	**La Loma 6 Bece**	**2.92**	**358**	*eP*	Pn	12 18 14.4	-0.8
LL6C				*eS*	Sn	12 18 50.3	-0.8
PRAC	**Prado**	**3.52**	**209**	*i* P	Pn	12 18 20.7	-2.1
PRAC				*eS*	Sn	12 19 04.7	-0.1
PRAC				*i*		12 19 11.3	
	comp=Z,32nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*i* P	Pn	12 18 23.2	-1.6
SJCC				*eS*	Sn	12 19 04.8	-3.6
SJCC				*i*		12 19 11.1	
	comp=Z,11nm,0.7s						

RSNC 06 12:17:51.9±0.8,5°.04N×75°.92W,h114km±4km,ML2.5,1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLMC	**San Jos del P**	**0.39**	**250**	*eP*	Pn	12 18 08.3	-0.4
PLMC				*eS*	Sn	12 18 21.6	+0.3
PLMC				*i*		12 18 22.6	
	comp=Z,305nm,0.2s						
GUY2C	**Guyana, Caldas**	**0.58**	**72**	*eP*	Pn	12 18 10.2	-0.1
GUY2C				*eS*	Sn	12 18 23.7	-0.4
GUY2C				*i*		12 18 25.6	
	comp=Z,180nm,0.4s						
ANIL	**Santa Ana**	**0.75**	**137**	*eP*	Pn	12 18 11.0	-0.4
ANIL				*eS*	Sn	12 18 26.1	-0.1
ANIL				*i*		12 18 29.4	
	comp=Z,78nm,0.4s						
CBOC	**Ciudad Bolivar**	**0.82**	**353⇓**	*i* P	Pn	12 18 11.6	-0.4
CBOC				*eS*	Sn	12 18 26.6	-0.6
YOTC	**Yotoco, Valle**	**1.13**	**202**	*eP*	Pn	12 18 14.4	-0.7
YOTC				*eS*	Sn	12 18 31.7	-0.8
YOTC				*i*		12 18 31.9	
	comp=Z,49nm,0.3s						
NORC	**Norcasia**	**1.16**	**63**	*eS*	Sn	12 18 32.5	-0.4
NORC				*i*		12 18 34.7	
	comp=Z,38nm,0.3s						
NORC	**Norcasia**	**1.16**	**63**	*eP*	Pn	12 18 15.3	0.0
NORC				*eS*	Sn	12 18 32.6	-0.3
NORC				*i*		12 18 34.7	
	comp=Z,38nm,0.3s						
HELC	**Santa Helena**	**1.21**	**19**	*eP*	Pn	12 18 15.5	-0.5
HELC				*eS*	Sn	12 18 34.1	-0.1
HELC				*i*		12 18 35.9	
	comp=Z,27nm,0.7s						
MALC	**Bahia Malaga**	**1.75**	**234**	*eP*	Pn	12 18 22.3	+0.4
MALC				*eS*	Sn	12 18 46.0	+1.2
POPC	**Popayan, Colom**	**2.60**	**197**	*eP*	Pn	12 18 32.2	-0.8
POPC				*eS*	Sn	12 19 01.2	-3.3
POPC				*i*		12 19 03.9	
	comp=Z,14nm,0.5s						
GARC	**Garzon, Huila**	**2.87**	**172**	*eP*	Pn	12 18 35.8	-0.7
GARC				*eS*	Sn	12 19 10.2	-0.6
GARC				*i*		12 19 13.4	
	comp=Z,16nm,0.2s						
BBAC	**Balboa, Cauca**	**3.28**	**204**	*eP*	Pn	12 18 41.8	-0.2
BBAC				*eS*	Sn	12 19 20.3	-0.3
BBAC				*i*		12 19 23.9	
	comp=Z,15nm,0.3s						

IDC ***06*** *12:23:14.2±0.4,29°.17S×61°.18E,h0km,mb4.5/25, mbtmp4.5/26,ML4.8/1,MS3.9/61,Error ellipse: s-maj=14.2km s-min=12.6km az=35.0*
BJI ***06*** *12:23:16.1±0.0,29°.20S×61°.00E,h10km,mb4.9/35, mB5.1/18,Ms4.5/8,Ms7 4.3/10*
NEIC ***06*** *12:23:17.3±1.4,29°.12S±0°.08×61°.14E±0°.10,h14km±4km, mb5.0/63,Error ellipse: s-maj=12.7km s-min=11.6km az=127.0*
GCMT ***06*** *12:23:18.3±0.2,29°.13S±0°.01×60°.96E±0°.03,h13km, MW4.9/96,Moment Tensor Solution. s45,c53; s96,c131; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.76±.15; Mθθ2.92±.11; Mϕϕ-0.15±.10; Mrθ0.31±.20; Mrϕ0.98±.08; Mθϕ0.50±.29; Best double couple: Mo3.04600×10¹⁶ NP1:ϕs245.00000°,δ50.00000°,λ-102.00000°. NP2: ϕs83.00000°,δ42.00000°,λ-76.00000°. Principal axes: T 3.2350, Plg4.0000°, Azm343.0000°; N -0.3760, Plg9.0000°, Azm253.0000°; P -2.8570, Plg80.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 12:23:15.9±0.3,29°.10S±0°.06×61°.04E±0°.06,h10km**,n399,** σ0s**96**/375**,mb4.9**/86**,MS4.0**/65**,12C-4D,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.25**	**328**	Pn	**Pn**	**12 25 27.6**	**-1.8**
FOMA	**Nahampoana Res**	**13.19**	**285**	Pn	**Pn**	**12 26 22.0**	**-1.3**
VOI	**Vohitsoka**	**14.72**	**296**	Pn	**Pn**	**12 26 45.5**	**+1.1**
ABPO	**Ambohidrapnom**	**16.11**	**305**		**Pn**	**12 27 02.1**	**-0.6**
OPO	**Ambohidratompo**	**16.43**	**307**	Pn	**Pn**	**12 27 07.8**	**+1.0**
	0.4nm,0.3s,baz=117,slow=12,SNR=22						
OPO				Sn	**Sn**	**12 30 01.2**	**-8.2**
	0.2nm,0.3s,baz=212,slow=23,SNR=3.5						
OPO				LR	LR	12 32 04.5	
	comp=Z,448nm,19.7s,baz=5.0,slow=32 13nm,0.6s						
H08S1	**Diego Carcia H**	**23.91**	**29**	T	T	12 53 12.0	
	baz=203,slow=76,SNR=152						
H08S2	**Diego Garcia H**	**23.91**	**29**	T	T	12 53 13.4	
	baz=203,slow=76,SNR=82						
H08S3	**Diego Garcia H**	**23.93**	**29**	T	T	12 53 14.2	
	baz=203,slow=76,SNR=144						
POGA	**Pongola**	**25.88**	**267**	P	**P**	**12 28 48.9**	**+0.9**
POGA				lAmb	lAmb	12 29 01.3	
	comp=Z,28nm,1.2s						
BOSA	**Boshof**	**31.27**	**262**	P	**P**	**12 29 36.4**	**+0.1**
	comp=Z,6.3nm,1.0s,baz=108,slow=9.8,SNR=5.0						
BOSA				LR	LR	12 40 40.2	
	comp=Z,252nm,18.4s,baz=100,slow=33 comp=Z,6.3nm,1.0s						
BOSA	**Boshof**	**31.27**	**262**	P	**P**	**12 29 37.6**	**+1.4**
BOSA				lAmb	lAmb	12 29 39.0	
	comp=Z,20nm,1.3s						
LBTB	**Lobatse**	**31.75**	**269**	LR	LR	12 40 53.8	
	comp=Z,105nm,20.5s,baz=110,slow=33						
LSZ	**Lusaka**	**33.26**	**287**	P	**P**	**12 29 54.3**	**+0.5**
	comp=Z,11nm,0.8s,baz=128,slow=7.5,SNR=14 comp=Z,11nm,0.8s						
LSZ	**Lusaka**	**33.26**	**287**	P	**P**	**12 29 55.5**	**+1.7**
LSZ				lAmb	lAmb	12 29 58.1	
	comp=Z,32nm,1.4s						
KIBK	**Kibwezi**	**34.46**	**316**	P	**P**	**12 30 03.9**	**-0.3**
SUR	**Sutherland**	**34.59**	**254**	LR	LR	12 42 03.2	
	comp=Z,252nm,18.4s,baz=112,slow=32						
KMBO	**Kilima Mbogo**	**35.90**	**317**	LR	LR	12 42 13.4	
	comp=Z,399nm,20.1s,baz=97,slow=32						
MAW	**Mawson**	**38.55**	**179**	P	**P**	**12 30 37.3**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=354,slow=8.2,SNR=9.6						
MAW				PcP	**PcP**	**12 32 51.4**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=337,slow=1.8,SNR=3.9						
MAW				LR	LR	12 43 10.4	
	comp=Z,292nm,19.5s,baz=356,slow=31 comp=Z,2.9nm,0.7s						
MAW	**Mawson**	**38.55**	**179**	P	**P**	**12 30 38.2**	**-0.1**
MBAR	**Mbarara**	**40.48**	**309**	LR	LR	12 46 11.2	
	comp=Z,264nm,20.1s,baz=132,slow=34						
LODK	**Lodwar**	**40.66**	**318**	P	**P**	**12 30 56.8**	**+0.2**
TSUM	**Tsumeb**	**40.67**	**274**	P	**P**	**12 30 57.8**	**+1.0**
	comp=Z,6.0nm,1.1s,baz=120,slow=9.2,SNR=4.8						
TSUM				LR	LR	12 47 22.3	
	comp=Z,166nm,18.1s,baz=150,slow=36 comp=Z,6.0nm,1.1s						
TSUM	**Tsumeb**	**40.67**	**274**	P	**P**	**12 30 58.2**	**+1.4**
PALK	**Pallekele**	**40.82**	**31**	P	**P**	**12 30 57.9**	**0.0**
	comp=Z,7.1nm,0.6s,baz=318,slow=5.7,SNR=5.6						
PALK				LR	LR	12 44 03.2	
	comp=Z,174nm,18.5s,baz=310,slow=31 comp=Z,7.1nm,0.6s						
PALK	**Pallekele**	**40.82**	**31**	P	**P**	**12 30 58.4**	**+0.5**
ATD	**Arta Tunnel**	**44.05**	**334**	LR	LR	12 46 46.7	
	comp=Z,404nm,20.7s,baz=156,slow=32						
H01W2	**Cape Leeuwin H**	**44.96**	**112**	T	T	13 19 06.7	
	baz=261,slow=75,SNR=71						
H01W3	**Cape Leeuwin H**	**44.97**	**112**	T	T	13 19 08.8	
	baz=261,slow=75,SNR=32						
H01W1	**Cape Leeuwin H**	**44.98**	**112**	T	T	13 19 08.1	
	baz=261,slow=75,SNR=49						
PSI	**Prapat**	**48.21**	**55**	LR	LR	12 47 01.0	
	comp=Z,90nm,20.5s,baz=176,slow=30						
LEM	**Lembang**	**49.12**	**73**	LR	LR	12 47 31.4	
	comp=Z,81nm,21.3s,baz=254,slow=30						
HYBB	**Hyderabad (bro**	**49.24**	**22**	*eP*	**P**	**12 32 04.9**	**0.0**
HYBB				*eS*	**S**	**12 39 11.4**	**+0.5**
IPM	**Ipoh**	**50.88**	**56**	P	**P**	**12 32 16.3**	**-1.1**
IPM				lAmb	lAmb	12 32 31.0	
	comp=Z,19nm,1.2s						
WSAR	**Wadi Sarin**	**52.09**	**357**	LR	LR	12 48 59.2	
	comp=Z,141nm,21.4s,baz=188,slow=30						
RAYN	**Ar Rayn**	**54.42**	**342**	P	**P**	**12 32 44.0**	**+0.6**
RAYN				lAmb	lAmb	12 32 47.9	
	comp=Z,11nm,1.1s						
SNAA	**Sanae**	**54.49**	**200**	P	**P**	**12 32 41.7**	**-1.6**
SNAA	**Sanae**	**54.49**	**200**	P	**P**	**12 32 42.7**	**-0.7**
	comp=Z,3.3nm,0.9s,baz=59,slow=2.9,SNR=7.3						
SNAA				LR	LR	12 52 06.2	
	comp=Z,148nm,19.4s,baz=20,slow=32 comp=Z,3.3nm,0.9s						
SNAA	**Sanae**	**54.49**	**200**	P	**P**	**12 32 44.7**	**+1.4**
SBUM	**Sibu**	**58.16**	**66**	P	**P**	**12 33 10.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**59.57**	**95**	P	**P**	**12 33 18.3**	**-1.8**
	comp=Z,5.9nm,0.8s,baz=216,slow=8.6,SNR=4.0						
FITZ				LR	LR	12 54 37.8	
	comp=Z,33nm,20.0s,baz=236,slow=32 comp=Z,5.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**59.57**	**95**	P	**P**	**12 33 19.8**	**-0.3**
FITZ				lAmb	lAmb	12 33 20.2	
	comp=Z,7.8nm,0.9s						

CM31	**Chiang Mai Arr**	**59.79**	**42**	P	**P**	**12 33 21.8**	**+0.3**
CM31				lAmb	lAmb	12 33 31.8	
	comp=Z,13nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.79**	**42**	P	**P**	**12 33 21.8**	**+0.3**
	comp=Z,4.6nm,0.7s,baz=230,slow=7.3,SNR=30						
CMAR				LR	LR	12 55 34.2	
	comp=Z,79nm,19.5s,baz=230,slow=32 comp=Z,4.6nm,0.7s						
CHTO	**Chiang Mai**	**60.07**	**42**	P	**P**	**12 33 23.0**	**-0.4**
CHTO				lAmb	lAmb	12 33 34.8	
	comp=Z,15nm,1.4s						
KAPI	**Kappang**	**60.34**	**78**	P	**P**	**12 33 24.8**	**-0.6**
	comp=Z,6.4nm,0.3s,baz=232,slow=10,SNR=7.4 comp=Z,6.4nm,0.3s						
RAMN	**Ramite**	**60.88**	**26**	*eP*	**P**	**12 33 29.6**	**+0.5**
DMN	**Daman**	**60.92**	**24**	*eP*	**P**	**12 33 29.6**	**+0.3**
	comp=Z,98nm,1.0s						
PKI	**Pulchoki**	**60.99**	**25**	*eP*	**P**	**12 33 29.7**	**-0.2**
PKIN	**Phulchoki**	**60.99**	**25**	*eP*	**P**	**12 33 29.8**	**-0.1**
QSPA	**South Pole Qui**	**61.05**	**180**	P	**P**	**12 33 28.7**	**-1.0**
	comp=Z,5.0nm,0.8s,baz=267,slow=1.4,SNR=13						
QSPA				LR	LR	12 56 20.0	
	comp=Z,220nm,21.1s,baz=274,slow=33 comp=Z,5.0nm,0.8s						
QSPA	**South Pole Qui**	**61.05**	**180**	P	**P**	**12 33 28.7**	**-1.0**
QSPA				lAmb	lAmb	12 33 48.3	
	comp=Z,14nm,1.1s						
GKN	**Gorkha**	**61.11**	**24**	*eP*	**P**	**12 33 30.5**	**0.0**
	comp=Z,142nm,0.9s						
ODAN	**Odare**	**61.11**	**27**	*eP*	**P**	**12 33 30.9**	**+0.3**
DANN	**Dangsing**	**61.12**	**23**	*eP*	**P**	**12 33 30.6**	**-0.2**
KKN	**Kakani**	**61.15**	**25**	*eP*	**P**	**12 33 30.7**	**-0.1**
	comp=Z,37nm,1.2s						
GUN	**Gumba**	**61.48**	**25**	*eP*	**P**	**12 33 33.7**	**+0.5**
	comp=Z,92nm,0.9s						
BBOO	**Buckleboo**	**63.16**	**114**	P	**P**	**12 33 43.6**	**-0.6**
KNRA	**Kununurra**	**63.29**	**94**	P	**P**	**12 33 44.1**	**-1.2**
KNRA				lAmb	lAmb	12 33 57.3	
	comp=Z,13nm,1.0s						
NIL	**Nilore**	**63.47**	**11**	P	**P**	**12 33 45.9**	**-0.2**
EIL	**Elat**	**63.53**	**335**	LR	LR	12 57 52.0	
	comp=Z,198nm,19.6s,baz=98,slow=33						
KBL	**Kabul**	**63.75**	**7**	P	**P**	**12 33 49.0**	**+0.9**
KBL				lAmb	lAmb	12 33 50.2	
	comp=Z,10nm,1.1s						
VNDA	**Vanda**	**64.11**	**166**	P	**P**	**12 33 49.5**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=267,slow=6.6,SNR=20						
VNDA				LR	LR	12 59 37.3	
	comp=Z,310nm,18.9s,baz=250,slow=34 comp=Z,3.2nm,0.8s						
VNDA	**Vanda**	**64.11**	**166**	P	**P**	**12 33 49.5**	**-0.3**
TOLI2	**Tolitoli**	**64.43**	**73**	P	**P**	**12 33 52.1**	**-0.8**
ASAR	**Alice Springs**	**64.56**	**104**	P	**P**	**12 33 52.4**	**-1.3**
	comp=Z,7.1nm,0.8s,baz=243,slow=6.2,SNR=81						
ASAR				LR	LR	12 57 35.8	
	comp=Z,59nm,20.5s,baz=262,slow=32						
ASAR				PKPPKP	**P'P'df**	**13 02 38.5**	**-6.4**
	comp=Z,0.5nm,0.9s,baz=33,slow=4.8,SNR=4.2 comp=Z,7.1nm,0.8s						
AS31	**Alice Springs**	**64.56**	**104**	P	**P**	**12 33 52.1**	**-1.5**
SBA	**Scott Base**	**65.00**	**167**	P	**P**	**12 33 56.2**	**+0.6**
SBA				lAmb	lAmb	12 34 18.6	
	comp=Z,6.5nm,1.0s						
LSA	**Lhasa**	**65.15**	**29**	P	**P**	**12 33 58.8**	**+1.1**
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**	**12 34 04.3**	**-1.1**
	comp=Z,6.4nm,0.8s,baz=247,slow=6.0,SNR=63						
WRA				LR	LR	12 58 17.6	
	comp=Z,147nm,21.7s,baz=172,slow=32						
WRA				PKPPKP	**P'P'df**	**13 02 41.9**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=70,slow=3.0,SNR=6.4 comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**	**12 34 04.6**	**-0.8**
WB2	**Warramunga Arr**	**66.39**	**100**	P	**P**	**12 34 04.6**	**-0.9**
MMAI	**Mount Meron Ar**	**66.39**	**337**	LR	LR	12 59 39.0	
	comp=Z,149nm,20.2s,baz=336,slow=33						
WRAB	**Tennant Creek**	**66.39**	**100**	P	**P**	**12 34 04.1**	**-1.5**
WRAB				lAmb	lAmb	12 34 05.6	
	comp=Z,16nm,1.1s						
WB0	**Warramunga Arr**	**66.50**	**100**	P	**P**	**12 34 05.2**	**-1.0**
WB0				lAmb	lAmb	12 34 05.7	
	comp=Z,7.0nm,0.8s						
WR0	**Warramunga Arr**	**66.55**	**101**	P	**P**	**12 34 05.7**	**-0.9**
WR0				lAmb	lAmb	12 34 06.3	
	comp=Z,7.4nm,0.8s						
MTN	**Manton Dam**	**66.58**	**92**	P	**P**	**12 34 06.3**	**-0.4**
GEYT	**Alibeck**	**66.74**	**357**	LR	LR	13 02 05.1	
	comp=Z,64nm,18.5s,baz=176,slow=35						
KMI	**Kunming**	**67.17**	**41**	⇑P	P	12 34 20.0	+10
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PZH	**PanZhiHua**	**67.68**	**39**	P	P	12 34 18.6	+5.0
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,90nm,4.5s						
STKA	**Stephens Creek**	**67.88**	**115**	P	**P**	**12 34 13.7**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=262,slow=6.7,SNR=6.9						
STKA				LR	LR	13 00 19.4	
	comp=Z,56nm,18.8s,baz=211,slow=33 comp=Z,3.3nm,0.7s						
GAR	**Garm**	**68.30**	**8**	P	**P**	**12 34 16.6**	**-0.6**
TOO	**Toolangi**	**68.83**	**122**	P	**P**	**12 34 20.2**	**-0.5**
BTK	**Batken**	**69.40**	**8**	P	**P**	**12 34 23.9**	**-0.1**
KSH	**Kashi**	**69.67**	**12**	P

DBIC Dimbokro 72.59 288 P P 12 34 44.2 +0.4
DBIC IAmb IAmb 12 34 48.2
comp=Z,20nm,1.1s
TIC Toumodi 72.72 288⇓ eP P 12 34 45.9 +1.3
comp=Z,14nm,0.8s
TKM2 Tokmak 2 72.91 11 P P 12 34 45.9 +0.6
SNR=12
PRZ Przheval'sk 73.00 13 P P 12 34 47.1 +1.2
USP Ospenovka 73.07 10 P P 12 34 46.9 +0.9
SNR=16
BR131 Keskin Array S 73.07 338 P P 12 34 46.2 -0.1
BR131 IAmb IAmb 12 34 56.0
comp=Z,8.0nm,0.9s
BRTR Keskin Array B 73.07 338 P P 12 34 46.5 +0.2
comp=Z,5.5nm,1.0s,baz=169,slow=7.1,SNR=14
BRTR LR LR 13 04 02.1
comp=Z,94nm,20.5s,baz=149,slow=34
comp=Z,5.5nm,1.0s
BRTR Keskin Array B 73.07 338 P P 12 34 46.0 -0.3
ONI Oni 73.15 347 P P 12 34 47.1 +0.5
SGDS Sogindy 73.27 10 eP P 12 34 47.1 -0.2
baz=10
MDOK Medeo 73.40 12 eP P 12 34 48.2 +0.1
baz=12
AAA Alma-Ata 73.42 12 eP P 12 34 48.6 +0.4
baz=12
SATY Saty 73.56 13 eP P 12 34 49.3 +0.2
comp=Z,8.7nm,1.0s,baz=13
UZB Uzynbulak 73.77 14 eP P 12 34 50.7 +0.4
baz=14
SHLS Shalkode 73.87 14 eP P 12 34 51.8 +0.9
comp=Z,8.8nm,0.8s,baz=14
KUU Kurty 73.98 11 eP P 12 34 51.1 -0.2
comp=Z,16nm,0.9s,baz=11
KUU eS S 12 44 23.6 +0.1
baz=11
CHKK Chushkaly 74.06 12 eP P 12 34 51.3 -0.5
baz=12
KBZ Khabaz 74.36 346 P P 12 34 54.1 +0.6
comp=Z,1.2nm,0.4s,baz=337,slow=3.0,SNR=3.6
KBZ LR LR 13 05 49.1
comp=Z,215nm,21.6s,baz=155,slow=34
comp=Z,1.2nm,0.4s
KVAR Kislovodsk Arr 74.62 346 LR LR 13 06 15.3
comp=Z,168nm,20.9s,baz=86,slow=34
BTLS Baital 74.73 10 eP P 12 34 55.7 0.0
comp=Z,5.8nm,0.8s,baz=9.5
BTLS eS S 12 44 32.2 +0.3
baz=9.5
TDK Taldyqorghan 75.43 13 eP P 12 34 59.3 -0.5
comp=Z,19nm,1.0s,baz=13
KOWA Kowa 76.29 295 P P 12 35 05.9 +0.6
KOWA IAmb IAmb 12 35 10.8
comp=Z,13nm,0.9s
LZH Lanzhou 76.33 35 eP P 12 35 15.2 +10
LZH pP PcP 12 35 20.0 +2.9
LZH sP pwP 12 35 22.4 +9.4
LZH pmax pmax
comp=Z,26nm,1.3s
WMQ Urumqi 76.57 20 eP P 12 35 08.4 +2.1
WMQ LR LR
comp=Z,200nm,24.1s
AGG Agios Georgios 76.79 330 P P 12 35 08.7 +1.0
AGG IAmb IAmb 12 35 11.6
comp=Z,17nm,1.0s
GTA Gaotai 77.14 30 eP P 12 35 10.3 +0.6
GTA pP pwP 12 35 15.7 -1.8
GTA sP PcP 12 35 19.3 -1.2
GTA pmax pmax
comp=Z,13nm,1.5s
GTA pmax pmax
comp=Z,100nm,4.0s
GTA LR LR
comp=Z,71nm,16.0s
GTA LR LR
comp=Z,91nm,16.7s
PMSA Palmer Station 77.20 201 LR LR 13 00 37.7
comp=Z,103nm,21.7s,baz=202,slow=29
XAN Xi'an 77.42 39 P P 12 35 11.7 +0.4
XAN pP pwP 12 35 16.5 -2.6
XAN pmax pmax
comp=Z,17nm,1.1s
XAN LR LR
comp=Z,77nm,15.3s
XAN LR LR
comp=Z,120nm,15.5s
XAN LR LR
comp=Z,140nm,18.2s
MK31 Makanchi Array 77.95 15 P P 12 35 14.1 +0.1
MKAR Makanchi Array 77.95 15 P P 12 35 14.1 +0.1
comp=Z,6.5nm,0.8s,baz=193,slow=5.0,SNR=52
MKAR LR LR 13 07 18.2
comp=Z,89nm,20.5s,baz=220,slow=34
comp=Z,6.5nm,0.8s
MKAR Makanchi Array 77.95 15 P P 12 35 13.8 -0.1
ABKAR Akbulak array 78.01 359 P P 12 35 14.9 +0.7
ABKAR IAmb IAmb 12 35 15.5
comp=Z,11nm,0.9s
ABKAR Akbulak array 78.01 359 P P 12 35 14.4 +0.2
KEK Kerkira 78.48 329 P P 12 35 18.6 +1.5
KEK IAmb IAmb 12 35 19.2
comp=Z,16nm,0.9s
TIRR Tirgusor 79.04 337 P P 12 35 20.6 +0.6
ZSN Zaisan 79.16 16 eP P 12 35 21.1 +0.4
comp=Z,4.8nm,0.8s,baz=16
AKTO Aktyubinsk 79.23 358 LR LR 13 07 53.9
comp=Z,61nm,21.9s,baz=172,slow=34
VAE Valguarnera 79.34 324 LR LR 13 10 59.3
comp=Z,62nm,19.1s,baz=152,slow=36
BRZS Berezniki 79.41 8 eP P 12 35 21.8 -0.1
baz=7.6
CFR Carcaliu 79.77 337 ⇑P P 12 35 24.6 +0.7
BLKB Belogradchik 80.47 333 ⇑P P 12 35 27.9 +0.1
KEST Kesra 80.79 320 LR LR 13 13 10.9
comp=Z,210nm,18.0s,baz=27,slow=37
MLR Muntele Rosu 80.81 336 ⇑P P 12 35 30.2 +0.5
MLR Muntele Rosu 80.81 336 LR LR 13 11 22.6
comp=Z,69nm,18.6s,baz=164,slow=36
MLR Muntele Rosu 80.81 336 P P 12 35 30.2 +0.5
MLR IAmb IAmb 12 35 34.2
comp=Z,10nm,1.0s
VRI Vrincioaia 80.86 336 ⇑P P 12 35 30.5 +0.6
PLOR Plostina 80.87 336 ⇑P P 12 35 30.6 +0.7
KURBB Kurchatov Arra 80.87 11 LR LR 13 07 27.8
comp=Z,72nm,20.0s,baz=188,slow=33
SEM Semipalatinsk 80.97 12 eP P 12 35 30.6 0.0
comp=Z,11nm,0.7s,baz=12
KURK Kurchatov 80.97 11 P P 12 35 30.9 +0.6
KURK IAmb IAmb 12 35 34.1
comp=Z,15nm,0.9s
COVR Voineasa-Covas 81.02 336 ⇓P P 12 35 30.9 +0.2
VOIR 81.09 335 ⇑P P 12 35 30.9 -0.2
HERR Herculane 81.62 333 ⇓P P 12 35 33.1 -0.7
NJ2 Nanjing 81.93 47 eP P 12 35 34.6 -1.2
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
DIVS Divibare 81.95 331 P P 12 35 36.3 +0.6
DIVS IAmb IAmb 12 35 39.7
comp=Z,7.8nm,1.0s
BELG Belogornoye 81.99 352 LR LR 13 14 32.1
comp=Z,40nm,18.2s,baz=140,slow=38
BVAR Borovoye Array 82.18 6 LR LR 13 09 35.3
comp=Z,97nm,21.0s,baz=82,slow=34
BURAR Bucovina Array 82.89 336 ⇑P P 12 35 41.9 +1.3
BURAR Bucovina Array 82.89 336 P P 12 35 41.6 +1.0
BUR08 Bucovina Ar. S 82.92 336 P P 12 35 42.0 +1.2
HNS HongShan 83.09 40 ⇑P P 12 35 52.0 +10
HNS pmax pmax
comp=Z,24nm,1.1s
DRGR 83.10 335 ⇑P P 12 35 41.5 -0.2
RPZ Rata Peaks 83.34 137 LR LR 13 04 58.7
comp=Z,191nm,18.1s,baz=238,slow=30
TIA Tai'an 83.67 42 P P 12 35 44.9 +0.1
TIA pmax pmax
comp=Z,5.0nm,0.9s
HHC Hu-ho-hao-te 83.87 36 eP P 12 35 49.0 +3.2
HHC pmax pmax
comp=Z,30nm,0.9s
HHC pmax pmax
comp=Z,170nm,6.5s
AKASG Malin Array Be 84.29 340 P P 12 35 47.3 -0.3
comp=Z,3.7nm,0.8s,baz=153,slow=4.0,SNR=11
AKASG LR LR 13 14 06.8
comp=Z,46nm,18.6s,baz=166,slow=36
comp=Z,3.7nm,0.8s
AKBB Malin Array Si 84.29 340 P P 12 35 47.2 -0.4
AKBB IAmb IAmb 12 35 51.1
comp=Z,11nm,1.1s
ARU Arti 85.22 359 P P 12 35 52.6 +0.5
ZAA0 Zalesovo Array 85.23 14 P P 12 35 52.4 +0.2
ZAA0 IAmb IAmb 12 35 53.8
comp=Z,16nm,1.1s
ZALV Zalesovo Beam 85.23 14 P P 12 35 52.0 -0.2
comp=Z,11nm,0.9s,baz=219,slow=3.8,SNR=25
ZALV LR LR 13 10 17.0
comp=Z,77nm,21.6s,baz=197,slow=33
comp=Z,11nm,0.9s
ZALV Zalesovo Beam 85.23 14 P P 12 35 52.5 +0.2
USHA Ushuaia 85.83 207 LR LR 13 10 28.7
comp=Z,19nm,18.8s,baz=240,slow=33
ARSA Arzberg 86.36 331 eP P 12 35 59.6 +1.6
comp=Z,6.8nm,1.1s
RONA Rosalia, Austr 86.38 332 eP P 12 35 58.7 +0.5
comp=Z,12nm,1.6s
OBN Obninsk 86.47 346 LR LR 13 14 38.2
comp=Z,21nm,19.6s,baz=156,slow=36
SONM Songino Array 86.74 29 P P 12 36 00.2 +0.1
comp=Z,1.9nm,0.9s,baz=221,slow=4.6,SNR=7.2
SONM LR LR 13 12 34.7
comp=Z,96nm,21.0s,baz=230,slow=34
comp=Z,1.9nm,0.9s
CONA Conrad Observa 86.75 331 i P P 12 35 59.6 -0.4
comp=Z,7.7nm,1.2s
MOA Molln 87.36 331 i P P 12 36 03.5 +0.5
comp=Z,6.2nm,0.9s
VRAC Vranov 87.53 333 LR LR 13 13 51.3
comp=Z,28nm,21.6s,baz=146,slow=35
KIRV Kirov 87.89 354 LR LR 13 16 55.9
comp=Z,60nm,18.4s,baz=146,slow=37
MNK Minsk 88.03 341 i P P 12 36 05.5 -0.5
comp=E,2.0nm,0.9s
MNK i P P 12 36 05.5 -0.5
comp=N,8.0nm,0.9s
MNK i P P 12 36 05.5 -0.5
comp=Z,19nm,0.9s,baz=151
MNK i PP PP 12 39 31.5 -1.5
MNK i PPP PPP 12 41 26.6
MNK i S SKSac 12 46 33.2 -0.8
MNK i SS SS 12 52 38.0 -0.3
MNK i SSS SSS 12 56 11.7
MNK i LR LR 13 14 45.9
MNK i LRM MLR 13 16 16.7
comp=E,34nm,20.6s
MNK i LRM MLR 13 16 16.7
comp=N,18nm,15.5s
MNK i LRM MLR 13 16 21.2
comp=Z,76nm,21.9s
WTTA Wattenberg 88.08 329 i P P 12 36 07.0 +0.4
comp=Z,11nm,1.1s
WATA Walderalm 88.16 329 eP P 12 36 07.0 +0.1
comp=Z,7.1nm,0.9s
SQTA Sankt Quirin 88.24 329 i P P 12 36 07.8 +0.5
comp=Z,10nm,1.1s
FETA Feichten 88.31 328 i P P 12 36 08.4 +0.7
comp=Z,14nm,1.1s
GERES GERESS Array B 88.37 331 P P 12 36 08.0 +0.2
comp=Z,0.5nm,0.7s,baz=176,slow=3.5,SNR=5.6
comp=Z,0.5nm,0.7s
MOTA Moosalm 88.38 329 i P P 12 36 08.3 +0.3
comp=Z,13nm,1.1s
DPC Dobruska-Polom 88.46 333 eP P 12 36 08.2 0.0
DAVOX Davos/Dischmat 88.53 328 LR LR 13 15 55.0
comp=Z,27nm,20.7s,baz=261,slow=36
KHC Kasperske Hory 88.64 331 eP P 12 36 09.0 0.0
RETA Reutte 88.64 329 i P P 12 36 08.3 -0.8
comp=Z,6.2nm,0.9s
NACGM Naroch 88.70 341⇑ eP P 12 36 10.3 +1.3
baz=150
BNI Bardonecchia 88.85 325 P P 12 36 10.5 +0.3
BNI IAmb IAmb 12 36 15.3
comp=Z,17nm,1.4s
DAVA Damuels 88.90 328 eP P 12 36 10.8 +0.4
comp=Z,11nm,0.9s
BRG Berggiesshubel 89.82 332 eP P 12 36 15.3 +0.9
BRG Amp 12 36 18.4
comp=Z,6.6nm,1.1s
URZ Urewera 90.25 135 LR LR 13 09 10.5
comp=Z,167nm,19.2s,baz=213,slow=31
CLL Collm 90.54 332 eP P 12 36 19.0 +1.2
comp=Z,5.0nm,0.9s
KSRS Korea Array 91.12 47 P P 12 36 19.7 -1.1
comp=Z,0.8nm,0.8s,baz=235,slow=4.3,SNR=3.5
KSRS LR LR 13 17 22.4
comp=Z,24nm,18.0s,baz=250,slow=36
comp=Z,0.8nm,0.8s
ESDC Sonseca Array 91.28 316 P P 12 36 22.5 +0.9
comp=Z,4.5nm,1.1s,baz=116,slow=3.7,SNR=13
ESDC LR LR 13 15 56.9
comp=Z,78nm,21.9s,baz=124,slow=35
comp=Z,4.5nm,1.1s
ESDC Sonseca Array 91.28 316 P P 12 36 22.7 +1.1
ESDC IAmb IAmb 12 36 26.9
comp=Z,5.4nm,1.1s
KLMR Klimovskoe 91.34 350 eP P 12 36 19.1 -2.1
KLMR AMP 12 36 24.9
comp=Z,13nm,1.1s
DZM Mont Dzumac 92.00 117 LR LR 13 10 15.6
comp=Z,47nm,18.6s,baz=191,slow=31
HNR Honiara 93.15 103 LR LR 13 14 16.1
comp=Z,36nm,21.5s,baz=172,slow=33
RCBR Riachuelo 93.24 262 LR LR 13 11 59.0
comp=Z,68nm,18.9s,baz=312,slow=31
FINES FINESS Array B 94.57 344 LR LR 13 19 31.0
comp=Z,54nm,20.3s,baz=147,slow=36
HFS Hagfors 97.02 338 LR LR 13 20 55.9
comp=Z,43nm,19.0s,baz=135,slow=36
PLCA Paso Flores 97.29 215 LR LR 13 14 12.9
comp=Z,26nm,18.8s,baz=156,slow=31
MJAR Matsushiro Arr 97.49 52 LR LR 13 20 48.4
comp=Z,26nm,18.8s,baz=211,slow=36
NOA NORSAR Array B 98.51 338 LR LR 13 21 21.9
comp=Z,45nm,19.7s,baz=135,slow=35
PPT2 Papeete2 124.96 144 eSS SS 13 01 00.7 +1.0
comp=Z,103nm,30.0s
PPT2 eLR LR 13 21 09.5
comp=Z,85nm,22.8s
ILAR Eielson Array 140.22 18 PKP PKPdf 12 42 43.5 -0.7
comp=Z,0.6nm,0.7s,baz=296,slow=3.1,SNR=4.5
ILAR PP PP 12 45 45.4 +3.4
comp=Z,0.7nm,0.9s,baz=334,slow=4.8,SNR=4.3
O22K Cooper Landing 142.44 25 P PKPdf 12 42 47.3 -1.0
baz=313
DAWY Dawson 142.67 15 P PKPdf 12 42 47.8 -0.9
baz=330
KDAK Kodiak Island 143.03 30 P PKPdf 12 42 49.0 -0.4
baz=306
BINY Binghamton 143.09 302 P PKPdf 12 42 49.7 -0.4
baz=83
M26K Nanesna, AK 143.17 18 P PKPdf 12 42 49.7 +0.1
baz=323
N25K Chitina, Valde 143.33 20 P PKPdf 12 42 49.9 -0.1
baz=320
P23K Montague Islan 143.61 24 P PKPbc 12 42 49.0 +1.2
baz=315
BVCY Beaver Creek 143.73 17 P PKPbc 12 42 48.9 +0.7
baz=326
EYAK Cordova Ski Ar 143.78 22 P PKPdf 12 42 49.7 -0.9
baz=318
BMRM Bremner River 143.82 21 P PKPbc 12 42 49.4 +0.9
baz=320
MCARA McCarthy VSAT 143.98 20 P PKPdf 12 42 50.4 -0.6
baz=322
SDMD Soldier's Deli 143.99 298 P PKPab 12 42 49.4 +0.4
baz=86
M57A Sunshine Farm, 144.04 301 P PKPbc 12 42 49.8 +0.1
baz=84
M57A P PKPbc 12 42 49.8 +0.1
baz=84
L56A Greenwood 144.26 303 P PKPab 12 42 50.2 +0.2
baz=82,SNR=5.4
L56A P PKPab 12 42 50.2 +0.2
baz=82,SNR=5.4
M29M Somme Creek 144.29 15 P PKPbc 12 42 50.4 +0.5
baz=330
YUK3 Moose Creek 144.37 17 P PKPab 12 42 50.2 +0.1
baz=326
CRQE Cirque 144.46 20 P PKPbc 12 42 51.0 +0.5
baz=322,SNR=6.8
T59A Double "B" Far 144.63 294 P PKPab 12 42 51.4 -0.1
baz=89
T59A P PKPab 12 42 51.4 -0.1
baz=89
SSPA Standing Stone 144.69 300 P PKPab 12 42 51.7 +0.1
baz=84,SNR=6.7
SSPA Standing Stone 144.69 300 P PKPab 12 42 51.1 -0.5
baz=84
CTG Chitna Glacier 144.80 19 P PKPab 12 42 50.5 -1.0
baz=325,SNR=9.5
U59A Littleton 144.83 293 P PKPdf 12 42 53.2 -0.1
baz=90
U59A P PKPdf 12 42 53.2 -0.1
baz=90
R58B Mineral 144.87 296 P PKPab 12 42 52.4 +0.1
baz=88
R58B P PKPab 12 42 52.4 +0.1
baz=88
J54A Appleton 144.87 305 P PKPbc 12 42 52.8 +0.5
baz=80
J54A P PKPbc 12 42 52.8 +0.5
baz=80
P57A Homestead Farm 144.89 298 P PKPbc 12 42 52.6 +0.2
baz=86
P57A P PKPbc 12 42 52.6 +0.2
baz=86
CNNC Cliffs of the 144.89 291 P PKPab 12 42 51.8 -0.7
baz=92
WVNY West Valley, N 144.99 303 P PKPab 12 42 53.2 +0.5
baz=81,SNR=7.3
YUK4 Talbot Arm 145.20 17 P PKPbc 12 42 52.7 -0.3
baz=329,SNR=16
MESA MESA 145.26 20 P PKPbc 12 42 53.2 -0.1
baz=323
O28M Mount Upton 145.28 18 P PKPbc 12 42 53.2 -0.2
baz=326,SNR=6.4
PSDB Penn State Uni 145.28 301 P PKPbc 12 42 53.7 0.0
baz=83
M31M Drury Creek, Y 145.37 13 P PKPbc 12 42 53.1 -0.2
baz=336,SNR=10.0
N30M Aishikik Lake 145.47 15 P PKPdf 12 42 53.6 -0.1
baz=331,SNR=10
S57A Dark Hollow, R 145.73 295 P PKPab 12 42 56.0 +0.5
baz=87
S57A P PKPab 12 42 56.0 +0.5
baz=87
N31M Braeburn, Yuko 145.74 14 P PKPdf 12 42 54.0 -0.1
baz=333,SNR=6.8
PINM Pinnacle 145.82 19 P PKPdf 12 42 54.2 -0.1
baz=325
HYT Haines Junctio 145.93 16 P PKPdf 12 42 54.9 +0.3
baz=330,SNR=6.5
T57A Hurt 145.99 294 P PKPab 12 42 56.7 +0.1
baz=88
T57A P PKPab 12 42 56.7 +0.1
baz=88
O30N Mendenhall 146.31 15 P PKPdf 12 42 55.3 +0.2
baz=332,SNR=6.6
PNL Peninsula 146.42 19 P PKPdf 12 42 55.2 -0.1
baz=326
YKA Yellowknife Ar 146.48 356 PKPbc 12 42 56.1 -0.5
comp=Z,6.7nm,0.8s,baz=357,slow=3.4,SNR=13
N32M Quiet Lake 146.59 12 P PKPdf 12 42 56.2 +0.6
baz=337
O54A Avella 146.63 300 P PKPbc 12 42 58.4 +0.6
baz=83,SNR=7.0
O54A P PKPbc 12 42 58.4 +0.6
baz=83,SNR=7.0
M53A WI Miller and 146.67 302 P PKPdf 12 42 56.7 +0.5
baz=81
P30M Million Dollar 146.67 16 P PKPdf 12 42 56.2 +0.5
baz=330
WHY Whitehorse 146.68 14 P PKPbc 12 42 56.7 -0.8
baz=334
N53A Lisbon 146.89 301 P PKPdf 12 42 57.6 +1.0
baz=81
N53A P PKPdf 12 42 57.6 +1.0
baz=81
P29M Windy Craggy 146.90 17 P PKPbc 12 42 57.5 -0.5
baz=329
BLA Blacksburg 146.92 294 P PKPdf 12 42 57.9 +1.0
baz=87
BLA Blacksburg 146.92 294 P PKPdf 12 42 57.3 +0.4
baz=87
U56A King 146.92 293 P PKPdf 12 42 57.7 +0.9
baz=89
U56A P PKPdf 12 42 57.7 +0.9
baz=89
Q54A Coxs Mills 147.11 298 P PKPdf 12 42 56.6 -0.5
baz=84,SNR=11
Q54A P PKPdf 12 42 56.6 -0.5
baz=84,SNR=11
O53A New Philadelph 147.25 300 P PKPdf 12 42 57.9 +0.7
baz=82
P53A Whipple 147.49 299 P PKPdf 12 42 58.4 +0.7
baz=83,SNR=13
P53A P PKPdf 12 42 58.4 +0.7
baz=83,SNR=13
P33M Teslin, Yukon 147.51 13 P PKPbc 12 42 58.6 -1.1
baz=337
V55A Taylorsville 147.60 292 P PKPdf 12 42 58.9 +0.9
baz=89
V55A P PKPdf 12 42 58.9 +0.9
baz=89
JSC Jenkinsville 147.64 289 P PKPdf 12 42 59.0 +1.0
baz=91
SKAG Skagway 147.65 16 P PKPbc 12 42 58.7 -1.3
baz=332
KMSC Kings Mountain 147.71 291 P PKPbc 12 43 00.4 -0.6
baz=90
O52A Adamsville 147.74 300 P PKPdf 12 42 58.8 +0.7
baz=82
O52A P PKPdf 12 42 58.8 +0.7
baz=82
HAW Hawthorne Fire 147.90 287 P PKPdf 12 42 58.6 +0.1
baz=93
P32M Atlin 147.90 14 P PKPbc 12 43 00.5 -0.2
baz=335
P52A Corning 148.04 299 P PKPbc 12 43 01.3 -0.5
baz=82
U54A Nelsons Funny 148.07 293 P PKPdf 12 42 59.2 +0.3
baz=87,SNR=9.0
U54A P PKPdf 12 42 59.2 +0.3
baz=87,SNR=9.0
PAULI Pauline 148.10 290 P PKPdf 12 42 59.4 +0.6
baz=90
Q52A Bidwell 148.22 298 P PKPdf 12 42 59.3 +0.4
baz=83,SNR=8.2
Q52A P PKPdf 12 42 59.3 +0.4
baz=83,SNR=8.2
HODGE Hodges 148.46 289 P PKPdf 12 43 00.9 +1.5
baz=91,SNR=10
R33M Jennings River 148.62 12 P PKPbc 12 43 02.9 +0.1
baz=339
GLMI Grayling 148.67 309 P PKPbc 12 43 03.3 0.0
baz=72
V53A Saluda 148.91 292 P PKPdf 12 43 00.6 +0.4
baz=88,SNR=13
V53A P PKPdf 12 43 00.6 +0.4
baz=88,SNR=13
CASEE Lake Jocassee 149.02 290 P PKPdf 12 43 01.1 +0.7
baz=89,SNR=6.4
S51A Beattyville 149.41 295 P PKPdf 12 43 00.8 0.0
baz=84,SNR=8.5
S51A P PKPdf 12 43 00.8 0.0
baz=84,SNR=8.5
TIGA Tifton 149.44 283 P PKPbc 12 43 05.1 -0.4
baz=95
GOGA Godfrey 149.45 287 P PKPbc 12 43 05.1 -0.4
baz=92
TZTN Tazewell 149.46 293 P PKPbc 12 43 05.4 -0.1
baz=86
V52A Sevierville 149.54 292 P PKPdf 12 43 02.1 +0.9
baz=87,SNR=8.0
DLBC Dease Lake 149.69 12 P PKPbc 12 43 05.5 +0.1
baz=340
SIT Sitka 149.77 18 P PKPbc 12 43 05.4 -0.1
baz=330
W52A Murphy 149.83 290 P PKPbc 12 43 06.8 +0.3
baz=88,SNR=8.9
Y52A Lilburn 149.96 288 P PKPbc 12 43 05.8 -1.0
baz=90,SNR=7.7
Y52A P PKPbc 12 43 05.8 -1.0
baz=90,SNR=7.7
P49A Miami Univ. Ec 150.03 299 P PKPbc 12 43 06.4 -0.3
baz=80
P49A Miami Univ. Ec 150.03 299 P PKPbc 12 43 06.0 -0.7
baz=80
V51A Loudon 150.15 292 P PKiKP 12 43 07.8 -0.2
baz=87,SNR=19
O48B Farmland 150.22 301 P PKPbc 12 43 06.8 -0.4
baz=78
T50A Nancy 150.45 294 P PKPbc 12 43 08.0 +0.1
baz=84

T50A				P		PKPbc	12 43 08.0	+0.1
	baz=84							
152A	**Waverly Hall**	**150.48**	**286**	P		**PKPbc**	12 43 08.3	+0.2
	baz=92,SNR=10							
R49A	**Shelbyville**	**150.57**	**297**	P		**PKPbc**	12 43 07.7	-0.4
	baz=82							
R49A				P		PKPbc	12 43 07.7	-0.4
	baz=82							
P48A	**Milroy**	**150.58**	**299**	P		**PKPbc**	12 43 07.0	-1.1
	baz=80							
P48A				P		PKPbc	12 43 07.0	-1.1
	baz=80							
352A	**Blakely**	**150.59**	**283**	P		**PKPbc**	12 43 08.3	-0.1
	baz=94							
X51A	**Calhoun**	**150.61**	**289**	P		**PKiKP**	12 43 09.4	+0.4
	baz=89,SNR=12							
X51A				P		PKiKP	12 43 09.4	+0.4
	baz=89,SNR=12							
F42A	**Maple Grove Fa**	**150.65**	**313**	P		**PKiKP**	12 43 08.7	-0.1
	baz=66							
Z51A	**Franklin**	**150.88**	**287**	P		**PKiKP**	12 43 09.8	+0.2
	baz=91,SNR=6.5							
W50A	**Signal Mountai**	**150.96**	**291**	P		**PKiKP**	12 43 09.9	+0.2
	baz=87,SNR=27							
T35M	**Bob Quinn**	**151.02**	**13**	P		**PKPbc**	12 43 08.3	-0.3
	baz=339							
WRAK	**Wrangell Islan**	**151.09**	**15**	P		**PKPbc**	12 43 08.6	-0.1
	baz=335							
COWI	**Conover**	**151.14**	**314**	P		**PKPbc**	12 43 09.3	+0.1
	baz=64							
U49A	**Red Boiling Sp**	**151.25**	**294**	P		**PKiKP**	12 43 10.1	-0.1
	baz=85							
SFIN	**Lafayette**	**151.65**	**302**	P		**PKPbc**	12 43 10.0	-0.6
	baz=76							
EYMN	**Ely**	**151.67**	**319**	P		**PKPbc**	12 43 10.5	+0.2
	baz=58							
EYMN	**Ely**	**151.67**	**319**	P		**PKPbc**	12 43 09.8	-0.6
	baz=58							
CRAG	**Craig**	**151.76**	**17**	P		**PKPbc**	12 43 09.4	-0.9
	baz=333							
250A	**Grady**	**151.76**	**284**	P		**PKiKP**	12 43 11.9	+0.4
	baz=93,SNR=6.7							
L44A	**Lake County Fo**	**151.76**	**306**	P		**PKPbc**	12 43 10.4	-0.4
	baz=72							
Y49A	**Blount Mountai**	**151.91**	**288**	P		**PKPbc**	12 43 11.4	0.0
	baz=89							
V48A	**Smith Brothers**	**152.16**	**292**	P		**PKPbc**	12 43 11.6	-0.3
	baz=85							
G40A	**Rib Lake**	**152.18**	**313**	P		**PKPbc**	12 43 11.8	+0.1
	baz=64							
T47A	**Sharon Grove**	**152.26**	**295**	P		**PKPbc**	12 43 11.8	-0.3
	baz=83							
BRAL	**Brewton**	**152.38**	**282**	P		**PKPbc**	12 43 11.4	-1.0
	baz=94							
LRAL	**Lakeview Retre**	**152.40**	**286**	P		**PKiKP**	12 43 13.1	+0.4
	baz=90							
LRAL	**Lakeview Retre**	**152.40**	**286**	P		**PKPbc**	12 43 12.0	-0.5
	baz=90							
X48A	**Hartselle**	**152.42**	**289**	P		**PKPbc**	12 43 12.4	0.0
	baz=88							
B35A	**Bob, Littlefor**	**152.69**	**322**	P		**PKPbc**	12 43 12.3	-0.3
	baz=54							
O44A	**Mansfield**	**152.72**	**302**	P		**PKiKP**	12 43 13.3	+0.1
	baz=76							
OLIL	**Olney**	**152.76**	**299**	P		**PKPbc**	12 43 13.0	0.0
	baz=79							
WVT	**Waverly**	**152.94**	**293**	P		**PKPbc**	12 43 12.7	-0.8
	baz=84							
WVT	**Waverly**	**152.94**	**293**	P		**PKPbc**	12 43 12.6	-1.0
	baz=84							
JFWS	**Jewell Farm**	**153.15**	**309**	P		**PKPbc**	12 43 13.3	-0.6
	baz=68							
HDIL	**Hopedale**	**153.23**	**303**	P		**PKPbc**	12 43 14.0	-0.1
	baz=74							
SPMN	**Marine on St.**	**153.83**	**315**	P		**PKiKP**	12 43 15.4	+0.1
	baz=61							
AGMN	**Agassiz Nation**	**153.86**	**324**	P		**PKiKP**	12 43 15.7	+0.4
	baz=51							
OXF	**Oxford**	**154.37**	**290**	P		**PKPbc**	12 43 16.5	-0.2
	baz=86							
OXF	**Oxford**	**154.37**	**290**	P		**PKPbc**	12 43 16.0	-0.7
	baz=86							
PBMO	**Poplar Bluff**	**154.93**	**295**	P		**PKPbc**	12 43 17.9	0.0
	baz=80							
CCM	**Cathedral Cave**	**155.32**	**298**	P		**PKPdf**	12 43 09.3	-0.3
	baz=77							
ECSD	**EROS Data Cent**	**156.94**	**315**	P		**PKPdf**	12 43 11.4	-0.2
	baz=58							
MIAR	**Mount Ida**	**157.79**	**291**	P		**PKPdf**	12 43 12.5	-0.4
	baz=83							
EGMT	**Eagleton**	**159.81**	**342**	P		**PKPdf**	12 43 15.6	+0.5
	baz=24							
NEW	**Newport**	**160.81**	**356**	P		**PKPdf**	12 43 16.1	0.0
	baz=4.6							
WHTX	**Lake Whitney,**	**161.26**	**284**	P		**PKPdf**	12 43 17.4	+0.4
	baz=87							
MSO	**Missoula**	**161.87**	**349**	P		**PKPdf**	12 43 17.2	-0.1
	baz=14							
WMOK	**Wichita Mounta**	**161.98**	**293**	P		**PKPdf**	12 43 18.1	+0.3
	baz=77							
833A	**Chaparral WMA,**	**162.82**	**272**	P		**PKPdf**	12 43 18.8	+0.1
	baz=97							
ABTX	**Abilene, Hawle**	**163.05**	**287**	P		**PKPdf**	12 43 19.1	+0.3
	baz=83							
KSCO	**Kaye Shedlock'**	**163.26**	**310**	P		**PKPdf**	12 43 18.7	-0.3
	baz=58							
JCT	**Junction City**	**163.31**	**279**	P		**PKPdf**	12 43 18.6	-0.6
	baz=90							
N23A	**Red Feather La**	**164.14**	**321**	P		**PKPdf**	12 43 20.0	+0.1
	baz=46							
AMTX	**Amarillo**	**164.25**	**296**	P		**PKPdf**	12 43 20.8	+0.8
	baz=73							
H04D	**Lebanon**	**164.31**	**10**	P		**PKPdf**	12 43 20.5	+0.9
	baz=347							
BW06	**Boulder Array**	**164.40**	**333**	P		**PKPdf**	12 43 19.9	-0.2
	baz=32							
PDAR	**Pinedale Array**	**164.40**	**333**	PKP		**PKPdf**	12 43 19.6	-0.5
	comp=Z,1.6nm,0.8s,baz=122,slow=1.9,SNR=13							
I02E	**Swisshome, OR**	**164.52**	**13**	P		**PKPdf**	12 43 20.2	+0.5
	baz=344							
ISCO	**Idaho Springs**	**164.69**	**318**	P		**PKPdf**	12 43 21.1	+0.6
	baz=50							
Q24A	**Divide**	**164.92**	**314**	P		**PKPdf**	12 43 21.3	+0.5
	baz=53							
I04A	**Tendick Farm,**	**165.08**	**10**	P		**PKPdf**	12 43 21.4	+1.1
	baz=348							
T25A	**Trinidad**	**165.42**	**307**	P		**PKPdf**	12 43 22.1	+1.0
	baz=61							
SDCO	**Great Sand Dun**	**165.85**	**311**	P		**PKPdf**	12 43 22.4	+0.9
	baz=56							
O20A	**White River Ci**	**165.91**	**324**	P		**PKPdf**	12 43 22.2	+0.8
	baz=42							
TXAR	**Lajitas Array**	**166.64**	**275**	PKP		**PKPdf**	12 43 23.2	+1.1
	comp=Z,1.5nm,0.7s,baz=132,slow=2.3,SNR=16							
S22A	**4UR Ranch, Cre**	**166.71**	**314**	P		**PKPdf**	12 43 22.7	+0.5
	baz=53							
DUG	**Dugway, Tooele**	**167.84**	**337**	P		**PKPdf**	12 43 23.1	+0.3
	baz=26							
ANMO	**Albuquerque**	**167.90**	**302**	PKP		**PKPdf**	12 43 24.3	+1.3
	comp=Z,1.7nm,1.0s,baz=185,slow=4.8,SNR=4.8							
ANMO	**Albuquerque**	**167.90**	**302**	P		**PKPdf**	12 43 23.8	+0.7
	baz=64							
ELK	**Elko**	**167.99**	**346**	PKP		**PKPdf**	12 43 24.4	+1.5
	comp=Z,0.3nm,0.3s,baz=298,slow=6.7,SNR=3.7							
MVCO	**Mesa Verde**	**168.08**	**315**	P		**PKPdf**	12 43 23.9	+0.7
	baz=50							
121A	**Cookes Peak, D**	**169.80**	**292**	P		**PKPdf**	12 43 24.8	+0.5
	baz=73							
W18A	**Petrified Fore**	**170.15**	**310**	P		**PKPdf**	12 43 25.4	+1.0
	baz=55							
R11A	**Troy Canyon, C**	**170.36**	**344**	P		**PKPdf**	12 43 25.5	+1.1
	baz=17							
NVAR	**Mina Array Bea**	**170.68**	**357**	PKP		**PKPdf**	12 43 26.3	+1.6
	comp=Z,1.1nm,0.8s,baz=202,slow=2.0,SNR=7.0							
WUAZ	**Wupatki**	**170.94**	**317**	P		**PKPdf**	12 43 25.7	+0.9
	baz=47							
TPNV	**Topopah Spring**	**171.85**	**345**	P		**PKPdf**	12 43 26.1	+0.8
	baz=16							
GRAC	**Grapevine Rang**	**172.01**	**351**	P		**PKPdf**	12 43 25.8	+0.6
	baz=9.4							
TUC	**Tucson**	**172.27**	**296**	P		**PKPdf**	12 43 26.2	+0.7
	baz=67							
FURC	**Furnace Creek,**	**172.45**	**347**	P		**PKPdf**	12 43 26.0	+0.8
	baz=13							
CWC	**Cottonwood Cre**	**172.64**	**354**	P		**PKPdf**	12 43 27.0	+1.4
	baz=5.3							
SHOC	**Shoshone, Teco**	**172.85**	**342**	P		**PKPdf**	12 43 26.6	+1.1
	baz=18							
MPMC	**Manual Prospec**	**172.95**	**350**	P		**PKPdf**	12 43 27.3	+1.6
	baz=9.8							
NEE2	**Needles Airpor**	**173.25**	**328**	P		**PKPdf**	12 43 26.8	+1.1
	baz=34							
PDMCI	**Parker Dam,Lak**	**173.39**	**323**	P		**PKPdf**	12 43 26.3	+0.6
	baz=39							
LRMC	**Laurel Mtn Rad**	**173.55**	**351**	P		**PKPdf**	12 43 26.2	+0.3
	baz=9.2							
GSC	**Goldstone, Bar**	**173.55**	**344**	P		**PKPdf**	12 43 26.2	+0.3
	baz=16							
GMRC	**Granite Mounta**	**173.68**	**335**	P		**PKPdf**	12 43 26.7	+0.7
	baz=26							
HEC	**Hector,Ludlow**	**173.87**	**339**	P		**PKPdf**	12 43 27.1	+1.1
	baz=21							
214A	**Organ Pipe Nat**	**173.98**	**300**	P		**PKPdf**	12 43 26.9	+0.8
	baz=63							
IRM	**Iron Mountain**	**174.00**	**328**	P		**PKPdf**	12 43 27.5	+1.5
	baz=33							
EDW2	**Edwards Air Fo**	**174.18**	**352**	P		**PKPdf**	12 43 27.0	+0.9
	baz=7.5							
PKM	**Mcpherson Peak**	**174.18**	**7**	P		**PKPdf**	12 43 27.7	+1.4
	baz=352							
BELC	**Belle Mtn. Jos**	**174.50**	**333**	P		**PKPdf**	12 43 27.5	+1.2
	baz=27							
BC3	**Big Chuckawall**	**174.56**	**327**	P		**PKPdf**	12 43 27.3	+1.0
	baz=34							
PFO	**Pinyon Flats O**	**175.02**	**335**	P		**PKPdf**	12 43 27.8	+1.3
	baz=25							
TPFO	**Pinon Flats**	**175.03**	**335**	P		**PKPdf**	12 43 27.5	+1.1
	baz=25							
MONP2	**Monument Peak**	**175.64**	**331**	P		**PKPdf**	12 43 27.2	+0.5
	baz=30							
IKP	**In-Ko-Pah, Jac**	**175.70**	**326**	P		**PKPdf**	12 43 27.8	+1.2
	baz=34							

*CNRM **06** 12:42:51.0,35°.49N×3°.82W,h24km,ml2.8*
*IGIL **06** 12:42:51.7,35°.43N×3°.78W,h0km,ML2.2*
*SFS **06** 12:42:51.0,35°.40N×3°.70W,ML2.7,ALBORAN SUR*
*MDD **06** 12:42:51.9±0.4,35°.43N×3°.78W,h0km, mb_Lg2.7/17,*
Error ellipse: s-maj=3.6km s-min=2.4km az=172.0
*INMG **06** 12:42:52.7±1.8,35°.35N×3°.74W,h20km±8km,ML2.2, Error ellipse: s-maj=4.5km s-min=4.4km az=31.0*

ISC 06 12:42:51.8±1.3,35°.42N±0°.02×3°.79W±0°.02,h20km±6km, n50,σ1°48/90,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.24**	**211**	P	**Pb**	**12 42 57.1**	**-0.3**
PALE				S	**Sb**	**12 43 01.3**	**+0.1**
GOG	**Mont Gurugu**	**0.68**	**107**	P	**Pg**	**12 43 05.2**	**-0.1**
GOG				S	**Sb**	**12 43 13.4**	**-0.5**
EMEL	**Melilla**	**0.69**	**100**	Pg	**Pb**	**12 43 04.7**	**-0.4**
EMEL				Sg	**Sb**	**12 43 13.8**	**-0.4**
WMELI	**Melilla**	**0.69**	**99**	P	**Pb**	**12 43 04.7**	**-0.4**
WMELI				S	**Sg**	**12 43 14.4**	**-0.2**
TAF	**Taforalt**	**1.28**	**118**	P	**Pb**	**12 43 14.5**	**-0.1**
CHEFC	**Chefchaouen**	**1.31**	**256**	P	**Pb**	**12 43 16.1**	**+0.3**
SMIR	**Smir Dam**	**1.33**	**282**	P	**Pn**	**12 43 14.0**	**-1.2**
SMIR				S	**Sn**	**12 43 30.1**	**-2.2**
EMIJ	**Mijas**	**1.39**	**325**	Pg	**Pn**	**12 43 15.9**	**-0.2**
EMIJ				Sg	**Sb**	**12 43 35.0**	**+0.5**
EMIJ				*i* Vmb_Lg		12 43 38.7	
ELGU	**Los Guajares,**	**1.45**	**5**	Pg	**Pn**	**12 43 16.8**	**-0.2**
ELGU				Sg	**Sb**	**12 43 36.4**	**+0.2**
ELGU				*i* Vmb_Lg		12 43 39.5	
JBK	**JBK**	**1.48**	**137**	P	**Pn**	**12 43 17.2**	**-0.3**
JBK				S	**Sn**	**12 43 35.0**	**-1.3**
EBER	**Berja**	**1.64**	**26**	Pn	**Pn**	**12 43 19.1**	**-0.6**
EBER				*i* Vmb_Lg		12 43 42.3	
EBER				Sg	**Sb**	**12 43 42.4**	**+0.6**
EGOR	**Sierra Gorda,**	**1.70**	**351**	Pn	**Pb**	**12 43 21.6**	**-0.9**
EGOR				*i* Vmb_Lg		12 43 52.3	
EQUE	**Quentar**	**1.80**	**9**	Pn	**Pb**	**12 43 24.1**	**-0.1**
EQUE				Sn	**Sb**	**12 43 45.6**	**-0.7**
EQUE				*i* Vmb_Lg		12 43 47.6	
LCRM	**LCR**	**1.95**	**207**	P	**Pb**	**12 43 26.7**	**0.0**
LCRM				S	**Sb**	**12 43 51.5**	**+0.9**
LIJA	**Lijar**	**1.98**	**319**	P	**Pb**	**12 43 28.0**	**+0.8**
ENIJ	**Níjar**	**2.00**	**39**	Pn	**Pn**	**12 43 24.7**	**+0.1**
ENIJ				*i* Vmb_Lg		12 43 48.3	
ENIJ				Sn	**Sn**	**12 43 48.8**	**-0.3**
IFR	**Ifrane**	**2.20**	**211**	P	**Pn**	**12 43 28.2**	**+0.8**
IFR				S	**Sn**	**12 43 54.7**	**+0.5**
ESPR	**Espera**	**2.21**	**311**	Pn	**Pn**	**12 43 28.3**	**+0.9**
ESPR				Sn	**Sb**	**12 43 56.2**	**-1.9**
ESPR				*i* Vmb_Lg		12 44 09.4	
EQES	**Quesada**	**2.44**	**13**	Pn	**Pb**	**12 43 33.0**	**-2.1**
EQES				Sn	**Sn**	**12 44 01.9**	**+1.9**
EQES				*i* Vmb_Lg		12 44 06.4	
CZD	**Col de Zad**	**2.60**	**204**	P	**Pn**	**12 43 34.9**	**+1.9**
CZD				S	**Sn**	**12 44 03.5**	**-0.8**
MD31	**MD31**	**2.68**	**198**	P	**Pb**	**12 43 36.5**	**-2.6**
MD31				S	**Sn**	**12 44 06.8**	**+1.0**
MDT	**Midelt**	**2.69**	**195**	P	**Pn**	**12 43 36.1**	**+2.0**
MDT				S	**Sn**	**12 44 07.1**	**+0.9**
EADA	**Adamuz**	**2.81**	**347**	Pn	**Pn**	**12 43 37.7**	**+2.0**
EADA				Sn	**Sn**	**12 44 11.4**	**+2.4**
EADA				*i* Vmb_Lg		12 44 38.4	
ECAB	**El Cabril**	**2.95**	**334**	Pn	**Pn**	**12 43 39.9**	**+2.3**
ECAB				*i* Vmb_Lg		12 43 49.8	
ECAB				Sn	**Sn**	**12 44 14.4**	**+1.9**
EZAR	**Zarzadilla de**	**2.97**	**34**	Pn	**Pn**	**12 43 38.2**	**+0.3**
EZAR				Sn	**Sn**	**12 44 14.9**	**+1.9**
ZHG	**ZHG**	**3.08**	**231**	P	**Pn**	**12 43 40.2**	**+0.9**
ZHG				S	**Sn**	**12 44 16.7**	**+1.0**
EMUR	**La Murta**	**3.16**	**40**	Pn	**Pn**	**12 43 40.5**	**0.0**
EMUR				Sn	**Sn**	**12 44 17.1**	**-0.6**
EMUR				*i* Vmb_Lg		12 44 23.3	
EMIN	**Mina Concepcio**	**3.30**	**316**	Pn	**Pn**	**12 43 43.5**	**+1.2**
EMIN				*i* Vmb_Lg		12 44 13.5	
EMIN				Sn	**Sn**	**12 44 23.0**	**+2.1**
EGRO	**El Granado**	**3.65**	**306**	Pn	**Pn**	**12 43 47.4**	**+0.3**
EGRO				Sn	**Sn**	**12 44 30.2**	**+0.6**
EGRO				*i* Vmb_Lg		12 46 18.2	
ETOB	**Tobarra**	**3.68**	**28**	Pn	**Pn**	**12 43 50.0**	**+2.4**
ETOB				*i* Vmb_Lg		12 43 51.6	
ETOB				Sn	**Sn**	**12 44 30.8**	**+0.3**
PVAQ	**Vaqueiros**	**3.74**	**303**	P	**Pn**	**12 43 48.9**	**+0.5**
PVAQ				S	**Sn**	**12 44 29.1**	**-2.7**
PVAQ	**Vaqueiros**	**3.74**	**303**	*e*P	**Pn**	**12 43 49.6**	**+1.2**
PVAQ				*e*S	**Sn**	**12 44 31.3**	**-0.5**
PVAQ				A	A	12 44 33.4	
	5.3nm,0.3s						
PBAR	**Barrancos**	**3.79**	**317**	*e*P	**Pn**	**12 43 50.1**	**+1.0**
PBAR				*e*S	**Sn**	**12 44 32.2**	**-0.9**
PBAR				A	A	12 44 40.3	
	2.7nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.81**	**300**	*e*P	**Pn**	**12 43 50.7**	**+1.3**
PBDV				*e*S	**Sn**	**12 44 32.4**	**-1.2**
PBDV				A	A	12 44 38.8	
	6.3nm,0.8s						
PCVE	**Castro Verde**	**4.07**	**304**	*e*P	**Pn**	**12 43 55.1**	**+2.1**
PCVE				*e*S	**Sn**	**12 44 39.4**	**-0.7**
PCVE				A	A	12 44 43.8	
	2.3nm,0.3s						
PAB	**San Pablo**	**4.14**	**354**	Pn	**Pn**	**12 43 56.1**	**+2.1**
PAB				*i* Vmb_Lg		12 44 31.3	
EBAD	**Badajoz**	**4.21**	**323**	Pn	**Pn**	**12 43 56.2**	**+1.4**
EBAD				Sn	**Sn**	**12 44 42.3**	**-1.1**
EBAD				*i* Vmb_Lg		12 44 51.6	
MESJ	**Messejana**	**4.30**	**305**	*e*P	**Pn**	**12 43 56.3**	**+0.1**
MESJ				*e*S	**Sn**	**12 44 43.9**	**-1.9**
MESJ				IAML		12 44 48.1	
	comp=N,3.4nm,0.2s						
MESJ	**Messejana**	**4.30**	**305**	*e*P	**Pn**	**12 43 57.5**	**+1.3**
MESJ				*e*S	**Sn**	**12 44 45.0**	**-0.8**
MESJ				A	A	12 44 52.3	
	comp=N,4.5nm,0.3s						
MORF	**Marmelete**	**4.35**	**297**	*e*S	**Sn**	**12 44 45.2**	**-1.9**
MORF				IAML		12 44 48.7	
	comp=E,7.9nm,0.3s						
MORF	**Marmelete**	**4.35**	**297**	*e*P	**Pn**	**12 43 58.7**	**+1.8**
MORF				*e*S	**Sn**	**12 44 45.9**	**-1.2**
MORF				A	A	12 44 54.1	
	comp=E,1.9nm,0.4s						
PTEO	**Sao Teotonio**	**4.51**	**299**	*e*S	**Sn**	**12 44 48.6**	**-2.2**
PESTR	**Estremoz**	**4.59**	**320**	P	**Pn**	**12 43 58.4**	**-1.7**
PESTR				S	**Sn**	**12 44 47.5**	**-5.4**
PESTR	**Estremoz**	**4.59**	**320**	*e*P	**Pn**	**12 44 01.8**	**+1.7**
PESTR				*e*S	**Sn**	**12 44 52.0**	**-0.8**
PESTR				A	A	12 45 07.5	
	comp=E,1.8nm,0.6s						
PNCL	**Nicolau / Gran**	**4.66**	**307**	*e*P	**Pn**	**12 44 02.4**	**+1.4**
PNCL				*e*S	**Sn**	**12 44 53.1**	**-1.4**
PNCL				A	A	12 44 58.9	
	comp=E,2.3nm,0.5s						
PMRV	**Marv??o**	**4.92**	**325**	*e*P	**Pn**	**12 44 06.0**	**+1.3**
PMRV				*e*S	**Sn**	**12 44 58.9**	**-2.1**
PMRV				A	A	12 45 06.5	
	comp=E,2.0nm,0.8s						
PMTG	**Montargil**	**5.08**	**317**	*e*P	**Pn**	**12 44 07.8**	**+1.0**
PMTG				*e*S	**Sn**	**12 45 04.5**	**-0.3**
PSBE	**So Bento**	**5.71**	**317**	*e*P	**Pn**	**12 44 17.7**	**+2.3**
MTE	**Manteigas**	**5.79**	**330**	*e*P	**Pn**	**12 44 19.2**	**+2.6**
MVO	**Moncorvo**	**6.27**	**337**	*e*P	**Pn**	**12 44 25.3**	**+2.0**

IDC 06 14:05:53.6±4.9,22°.10S×177°.58W,h0km,mb3.6/2, mbtmp3.6/2,Error ellipse: s-maj=277.3km s-min=71.9km az=158.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.55**	**258**	P	P	14 14 07.0	-0.5
	0.4nm,0.7s,baz=90,slow=8.4,SNR=11						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**44.78**	**264**	P	P	14 14 09.7	+0.2
	0.6nm,0.4s,baz=102,slow=7.9,SNR=39						
	0.6nm,0.4s						
AKASG	**Malin Array Be**	**144.59**	**330**	PKP	PKPdf	14 25 31.4	-0.6
	1.8nm,0.5s,baz=41,slow=4.3,SNR=12						

*IDC **06** 14:21:41.4±11.0, 1°.50N×126°.20E,h0km,mb3.7/3, mbtmp3.7/3,MS2.5/1,Error ellipse: s-maj=173.9km s-min=162.7km az=163.0*
*DJA **06** 14:21:52.1±0.6,2°N±3°×12°7E±°,h74km±9km,M4.1/8, mb4.6/1,MLv3.8/8*

ISC 06 14:21:49.6±1.4,2°.27N±0°.08×127°.5E±0°.1,h100km,n10, σ1°36/12,mb3.4/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.49**	**184**	P	**Pn**	**14 22 17.3**	**+1.5**
TNTI				S	**Sn**	**14 22 35.6**	**-0.1**
SGSI	**Sangihe**	**2.39**	**306**	P	**Pn**	**14 22 27.8**	**+0.5**
SGSI				S	**Sn**	**14 22 55.8**	**-0.3**
LBMI	**Labuha**	**2.89**	**179**	P	**Pn**	**14 22 36.2**	**+2.2**
KMSI	**Cibinong**	**3.87**	**244**	P	**Pn**	**14 22 48.4**	**+1.4**
KMSI				S	**Sn**	**14 23 30.6**	**-0.9**
SANI	**Sanana**	**4.54**	**199**	P	**Pn**	**14 22 54.6**	**-1.5**
MRSI	**Marisa**	**5.80**	**252**	P	**Pn**	**14 23 14.9**	**+1.7**
WRA	**Warramunga Arr**	**23.09**	**163**	P	**P**	**14 26 46.1**	**-0.8**
	1.1nm,0.5s,baz=338,slow=11,SNR=36						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.54**	**167**	P	**P**	**14 27 17.8**	**-0.4**
	0.3nm,0.3s,baz=344,slow=7.5,SNR=13						
	0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**32.24**	**302**	LR	LR	14 41 40.8	
	comp=Z,8.3nm,19.1s,baz=195,slow=38						
STKA	**Stephens Creek**	**36.52**	**160**	P	**P**	**14 28 44.9**	**-0.6**
	0.6nm,0.3s,baz=346,slow=12,SNR=1.9						
	0.6nm,0.3s						

*IDC **06** 14:24:34.7±1.2,23°.88S×82°.48E,h0km,mb3.9/6, mbtmp3.9/6,MS3.0/1,Error ellipse: s-maj=43.0km s-min=25.7km az=16.0*

ISC 06 14:24:36.2±1.1,23°.9S±0°.3×82°.5E±0°.2,h10km,n13, σ0°25/6,mb4.0/6,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**18.79**	**328**	T	T	14 48 11.6	
	baz=151,slow=74,SNR=90						
H08S1	**Diego Garcia H**	**18.80**	**328**	T	T	14 48 17.5	
	baz=151,slow=74,SNR=59						
H08S3	**Diego Garcia H**	**18.81**	**328**	T	T	14 48 13.2	
	baz=151,slow=74,SNR=113						
H01W3	**Cape Leeuwin H**	**29.55**	**119**	T	T	15 01 28.2	
	baz=285						
H01W2	**Cape Leeuwin H**	**29.55**	**119**	T	T	15 01 29.4	
	baz=285,slow=74,SNR=6.0						
H01W1	**Cape Leeuwin H**	**29.57**	**119**	T	T	15 01 29.4	
	baz=285,slow=74,SNR=4.0						
PALK	**Pallekele**	**31.04**	**357**	LR	LR	14 41 19.3	
	comp=Z,23nm,18.2s,baz=241,slow=32						
ASAR	**Alice Springs**	**46.83**	**101**	P	**P**	**14 33 06.7**	**0.0**
	2.4nm,0.6s,baz=265,slow=7.3,SNR=42						
	2.4nm,0.6s						
WRA	**Warramunga Arr**	**48.05**	**96**	P	**P**	**14 33 16.3**	**+0.1**
	3.0nm,0.9s,baz=261,slow=8.1,SNR=25						
	3.0nm,0.9s						
BOSA	**Boshof**	**51.13**	**252**	P	**P**	**14 33 39.7**	**0.0**
	1.4nm,0.7s,baz=120,slow=6.4,SNR=4.3						
	1.4nm,0.7s						
STKA	**Stephens Creek**	**52.30**	**113**	P	**P**	**14 33 48.1**	**-0.1**
	0.6nm,0.4s,baz=252,slow=6.4,SNR=1.9						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**70.36**	**360**	P	**P**	**14 35 50.3**	**+0.2**
	0.3nm,0.7s,baz=160,slow=5.7,SNR=1.8						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**77.55**

DNR Sg 14 39 33.2 +0.3
XPFO Pion Flat 0.44 357 Pg 14 39 27.0 -0.2
XPFO Sg 14 39 32.6 -0.6
PFO Pinyon Flats O 0.44 357 Pg Pg 14 39 27.0 -0.2
PFO IAML 14 39 32.8
1µm,0.2s
PFO Pinyon Flats O 0.44 357 Pg 14 39 27.0 -0.2
PFO Sg 14 39 32.7 -0.5
PFO Pinyon Flats O 0.44 357 P Pg 14 39 27.0 -0.2
baz=176,SNR=143
PFO S **Sg 14 39 32.7 -0.5**
baz=176
EML El Monte Cty P 0.45 231 Pg 14 39 27.4 +0.1
EML Sg 14 39 33.4 0.0
EML El Monte Cty P 0.45 231 *e*P Pg 14 39 27.3 +0.1
EML *i* S Sg 14 39 33.4 0.0
DPP Dos Picos Cty 0.47 248 Pg 14 39 27.6 0.0
DPP Sg 14 39 34.0 0.0
PMD Palm Desert 0.48 5 Pg 14 39 27.6 -0.2
PMD IAML 14 39 33.8
comp=N,2µm,0.2s
PMD IAML 14 39 33.9
comp=E,2µm,0.2s
PMD Palm Desert 0.48 5 Sg 14 39 33.5 -0.8
CRR Carrizo Plain 0.48 126 Pb 14 39 27.9 0.0
CRR Carrizo Plain 0.48 126⇑*i*P Pb 14 39 27.9 0.0
ERRC Elmore Ranch 0.51 96 Pb 14 39 28.9 +0.5
BAR Barrett 0.53 203 Pg Pg 14 39 28.6 -0.1
BAR Barrett 0.53 203⇓*i*P Pg 14 39 28.6 -0.1
BAR *i* S Sg 14 39 35.8 -0.2
BAR IAML 14 39 36.0
comp=E,10µm,0.2s
BAR ⇑*e* 14 39 36.0
BAR IAML 14 39 36.0
comp=N,9µm,0.1s
GVDA Garner Valley 0.54 337 Pg 14 39 28.9 0.0
SUP Superstition M 0.55 113 Pb 14 39 29.1 +0.1
SUP Superstition M 0.55 113 Sb 14 39 36.6 +0.1
SWSC Sam W. Stewart 0.57 113 Pg 14 39 29.4 -0.1
SWSC Sg 14 39 37.0 -0.2
SWSC Sam W. Stewart 0.57 113 P Pg 14 39 29.4 -0.1
baz=293,SNR=173
SWSC S Sg 14 39 37.0 -0.2
baz=293
SWSC Sam W. Stewart 0.57 113⇑*i*P Pg 14 39 29.4 -0.1
SWSC *e*S Sg 14 39 37.0 -0.2
IKP In-Ko-Pah, Jac 0.59 153 Pg 14 39 29.7 -0.1
IKP In-Ko-Pah, Jac 0.59 153 P Pg 14 39 29.7 -0.1
baz=333,SNR=101
IKP S Sg 14 39 37.5 -0.1
baz=333
IKP In-Ko-Pah, Jac 0.59 153⇓*i*P Pg 14 39 29.7 -0.1
IKP *e*S Sg 14 39 37.4 -0.3
SDRC San Diego Road 0.61 225⇓*e*P Pb 14 39 29.9 -0.1
SDRC *e*S Sg 14 39 38.1 -0.4
SDRC ⇑*e* 14 39 38.4
SDRC IAML 14 39 38.4
comp=E,2µm,0.3s
SDRC IAML 14 39 38.7
comp=N,4µm,0.2s
SDRC ⇑*e* 14 39 38.7
TKX Tecate 0.62 194 IAML 14 39 39.6
comp=N,2µm,0.1s
TKX Tecate 0.62 194 Pb 14 39 30.0 -0.2
TKX Pb 14 39 30.1 -0.2
TKX Tecate 0.62 194 Sg 14 39 38.3 -0.4
TKX Tecate 0.62 194 *e*P Pb 14 39 30.1 -0.2
TKX *e*S Sg 14 39 38.5 -0.3
109C Camp Elliot, M 0.64 244 Pb 14 39 30.4 0.0
109C Camp Elliot, M 0.64 244 P Pb 14 39 30.4 0.0
baz=64,SNR=104
109C S **Sb 14 39 38.9 0.0**
baz=64
CPE Camp Elliot 0.64 244 Sb 14 39 38.9 -0.1
DUZA Dulzura 0.64 207 Pb 14 39 30.3 -0.2
MTRP Mission Trails 0.64 237 Pb 14 39 30.4 -0.1
MTRP Sb 14 39 38.8 -0.1
RMX La Rumorosa 0.64 153 Pn 14 39 31.8 -0.5
RMX Pg 14 39 32.1 +1.3
RMX IAML 14 39 41.8
comp=N,1µm,0.2s
RMX La Rumorosa 0.64 153 *e*P Pn 14 39 31.7 -0.5
RMX *i* S Sn 14 39 41.2 -0.7
RMX IAML 14 39 41.6
comp=E,2µm,0.1s
RMX ⇑*e* 14 39 41.6
RMX ⇑*e* 14 39 41.8
RMX IAML 14 39 41.8
comp=N,1µm,0.1s
POB Polly Butte 0.66 321 Pb 14 39 31.1 +0.1
COK2 Cook Ranch 2 0.67 118 Pb 14 39 31.1 +0.1
COK2 Sg 14 39 41.3 +1.1
COK2 Cook Ranch 2 0.67 118 *e*P Pb 14 39 31.1 +0.1
GORC Green Oak Ranc 0.67 269 Pb 14 39 31.0 -0.1
GORC Sb 14 39 39.9 -0.1
YUH Yuha Desert 0.67 141 Pb 14 39 31.0 -0.1
YUH Yuha Desert 0.67 141 IAML 14 39 40.9
comp=E,2µm,0.1s
YUH IAML 14 39 41.1
comp=N,1µm,0.1s
YUH2 Yuha Desert 0.67 141⇓*e*P Pg 14 39 31.4 0.0
YUH2 *e*S Sb 14 39 40.0 0.0
DGR Domenigoni Val 0.68 315 Sb 14 39 40.1 -0.2
CTW Cottonwood Mou 0.69 43 Pb 14 39 31.5 +0.1
CTW Sb 14 39 40.7 +0.2
OLP Otay Lakes Par 0.70 217 Pb 14 39 31.5 -0.2
OLP Sb 14 39 40.5 -0.4
OLP Otay Lakes Par 0.70 217⇓*i*P Pb 14 39 31.5 -0.2
OLP *e*S Sb 14 39 40.5 -0.4
SDMC San Diego Miss 0.71 237 Pb 14 39 31.8 0.0
SDMC Sb 14 39 41.3 +0.1
WESC Westside Schoo 0.72 125 Pb 14 39 31.8 -0.1
WESC Sg 14 39 42.6 +0.9
HMTC Hemet 0.72 318 Pb 14 39 31.9 -0.1
HMTC Sb 14 39 41.2 -0.3
WEMD Westmorland, C 0.72 100 Pb 14 39 31.8 -0.2
WEMD Sn 14 39 43.1 -0.7
EW2 E Wide Canyon 0.77 1 Pb 14 39 33.0 +0.2
EW2 Sb 14 39 43.2 +0.3
TJIG Tijuana 0.77 196⇓*e*P Pb 14 39 32.4 -0.4
TJIG *e*S Sb 14 39 42.6 -0.2
MURC Murrieta 0.77 304 Sb 14 39 43.0 -0.1
MURC Murrieta 0.77 304 P Pb 14 39 32.9 0.0
baz=124,SNR=141
MURC S **Sb 14 39 42.9 -0.1**
baz=124
DEVC Devers 0.77 351 Pb 14 39 33.2 +0.3
DEVC Sb 14 39 43.4 +0.3
IMPE Imperial 0.78 110 Pb 14 39 33.0 +0.1
IMPE Sn 14 39 45.6 +0.5
SGL Mount Signal 0.79 131 Pb 14 39 32.8 -0.4
SGL Sg 14 39 43.7 -0.3
SGL Mount Signal 0.79 131 *e*P Pb 14 39 32.8 -0.4
HAY Hayfield 0.82 49 Pg 14 39 34.2 +0.1
HAY Sg 14 39 45.5 +0.5
TJX Tijuana 0.84 219 Pg Pb 14 39 34.4 +0.3
TJX Pb 14 39 34.5 +0.3
BBSC Beaumont Base 0.88 328 Pb 14 39 35.1 +0.4
BBSC Sg 14 39 47.0 +0.1
CBX Cerro Bola 0.88 193 Pb 14 39 34.6 -0.2
CBX Pg 14 39 34.8 -0.4
CBX IAML 14 39 49.1
comp=N,451nm,0.3s
CBX IAML 14 39 50.9
comp=E,649nm,0.5s
CBX Cerro Bola 0.88 193⇓*i*P Pb 14 39 34.6 -0.2
CBX *e*S Sg 14 39 46.7 -0.2
CBX ⇑*e* 14 39 49.1
CBX IAML 14 39 49.1
comp=N,439nm,0.2s
CBX IAML 14 39 51.0
comp=E,626nm,0.5s
SNR Schaffner Ranc 0.89 110 Pb 14 39 34.3 -0.5
SNR Sn 14 39 48.7 +0.9
BLAC Blackrock camp 0.90 2 Pb 14 39 35.2 +0.2
BLAC Sb 14 39 47.0 +0.4
BELC Belle Mtn. Jos 0.90 23 Pb 14 39 34.9 -0.2
BELC Sb 14 39 47.4 +0.5
BELC Belle Mtn. Jos 0.90 23 P Pb 14 39 35.3 +0.1
baz=203,SNR=227
BELC S **Sb 14 39 47.2 +0.3**
baz=203

DREC Desert Rsrch C 0.90 114 Pb 14 39 34.7 -0.4
DREC Sn 14 39 49.8 +1.6
DREC Desert Rsrch C 0.90 114 *e*P Pb 14 39 34.7 -0.4
BC3 Big Chuckawall 0.95 59 Pb 14 39 35.2 -0.7
BC3 Big Chuckawall 0.95 59 P Pb 14 39 35.2 -0.7
baz=239,SNR=55
BC3 S **Sb 14 39 46.6 -1.6**
baz=239
ELS Elsinore Mount 0.96 300 Pg Pb 14 39 35.8 -0.4
ELS IAML 14 39 49.8
comp=N,354nm,0.2s
BBRC Big Bear Solar 1.16 339 Pg Pb 14 39 40.0 +0.3
baz=159,SNR=16
BBRC S **Sn 14 39 55.2 +0.2**
baz=159
CCX Cicese 1.32 189 Pb 14 39 41.9 -0.3
CCX IAML 14 40 00.1
comp=N,330nm,0.3s
CCX IAML 14 40 00.5
comp=E,249nm,0.3s
CCX Cicese 1.32 189 *e*P Pb 14 39 41.9 -0.3
SALX Saltillo 1.32 124⇑*i*P Pn 14 39 26.4 -15
SALX *i* S Sn 14 39 32.2 -26
GLA Glamis 1.35 95 Pn 14 39 40.6 -1.3
GLA IAML 14 40 10.8
comp=E,189nm,0.5s
GLA Glamis 1.35 95 P Pn 14 39 40.7 -1.3
baz=275,SNR=38
IRM Iron Mountain 1.45 47 P Pn 14 39 42.7 -0.6
baz=227,SNR=51
BFSC Mount Baldy Ra 1.48 316 Pb Pb 14 39 44.7 -0.3
baz=136
BFSC Sb **Sb 14 40 03.7 +0.2**
baz=136
FMP Fort Macarthur 1.65 290 Pb Pb 14 39 47.2 -0.6
baz=109
FMP Sb **Sb 14 40 09.3 +1.0**
baz=109
HEC Hector,Ludlow 1.65 3 Pg Pb 14 39 48.9 +0.9
baz=182
CIS Catalina Islan 1.68 278 Pb Pb 14 39 47.8 -0.6
baz=98
BLYC Blythe 1.69 70 Pn 14 39 45.6 -1.0
BLYC IAML 14 40 17.1
comp=E,141nm,0.6s
GMRC Granite Mounta 1.73 21 Pg Pb 14 39 50.4 +1.1
baz=202,SNR=72
RRX Edison Barstow 1.76 345 Pg Pg 14 39 51.1 -0.9
baz=164,SNR=9.5
PASC Pasadena Art C 1.77 305 Pb 14 39 49.5 -0.5
PASC IAML 14 40 14.6
comp=N,151nm,0.7s
PASC IAML 14 40 17.2
comp=E,108nm,0.4s
DECC Green Verdugo 1.92 305 Pb Pb 14 39 52.6 +0.1
baz=124
DECC Sb **Sb 14 40 17.0 +0.9**
baz=124
EDW2 Edwards Air Fo 2.14 323 P Pn 14 39 52.9 0.0
baz=142,SNR=26
EDW2 Sb **Sb 14 40 23.9 +1.3**
baz=142
GSC Goldstone, Bar 2.15 352 Pg Pg 14 39 58.2 -1.1
baz=171
NEE2 Needles Airpor 2.19 43 Pg Pb 14 39 58.6 +1.6
baz=224
113A Mohawk Valley, 2.27 99 Pn 14 39 53.5 -1.1
TUQ Turquoise Moun 2.30 10 P Pn 14 39 55.0 -0.1
baz=190,SNR=37
SNCC San Nicolas Is 2.60 273 S Sn 14 40 30.3 +0.2
baz=91
W13A Hualapai Mount 2.85 47 Pn Pn 14 40 01.6 -1.2
Y14A Wickenburg 2.96 74 Pn 14 40 04.2 +0.2
ISA Isabella, Lake 3.00 326 Pn Pn 14 40 05.6 +0.8
ISA IAML 14 40 56.4
comp=E,34nm,0.6s
ISA IAML 14 40 57.1
comp=N,31nm,0.7s
MPMC Manual Prospec 3.01 343 Pg Pg 14 40 14.4 -1.3
baz=163
GWY Greenwater Val 3.01 356 Pn Pn 14 40 05.2 +0.3
214A Organ Pipe Nat 3.29 111 Pn 14 40 07.4 -1.1
TPNV Topopah Spring 3.77 2 Pn 14 40 17.2 +1.9
LCH Last Change Ra 4.17 347 Pn 14 40 21.6 +0.8
X16A Lo Mia Camp, P 4.33 72 Pn 14 40 23.6 +0.5
PRN Pahroc Range 4.37 15 Pn Pn 14 40 25.0 +1.4
U15A North Rim 4.70 45 Pn Pn 14 40 29.8 +1.5
X18A Snowflake 5.56 74 Pn Pn 14 40 40.4 +0.5

*NEIC **06** 14:43:33.9± 1.9, 19.1°S± 0.1°× 177.7°W± 0.1, h556km± 9km, mb4.2/26, Error ellipse: s-maj=23.8km s-min=16.2km az=144.0*
*IDC **06** 14:43:34.5± 1.3, 19.2°S× 177.5°W, h560km± 14km, mb3.5/17, mbtmp4.4/20, Error ellipse: s-maj=17.8km s-min=11.9km az=148.0*
ISC 06 14:43:34.8±0.4, 19°13′S×0°09′×177°66′W×0°07, h570km, n112, σ0.99/114, mb4.2/31, 16C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.31**	**288**	P	**P**	**14 45 00.9**	**+0.3**
	54nm,0.4s,baz=170,slow=6.1,SNR=102						
MSVF	**Nonsavu**	**4.31**	**288**	P	**P**	**14 45 01.9**	**+1.4**
NIUE	**Niue**	**7.31**	**91**	P	**P**	**14 45 26.1**	**-0.4**
AFI	**Afiamalu**	**7.66**	**48**	P	**P**	**14 45 28.7**	**-1.4**
	26nm,0.4s,baz=193,slow=2.5,SNR=18						
AFI				S	**S**	**14 46 59.7**	**-4.7**
	42nm,0.5s,baz=230,slow=23,SNR=8.5						
AFI	**Afiamalu**	**7.66**	**48**	P	**P**	**14 45 28.6**	**-1.4**
AFI					**S**	**14 47 01.3**	**-3.1**
MARNC	**Mare, Loyalty**	**13.63**	**258**	P	**P**	**14 46 28.8**	**-1.4**
PINNC	**Pines Island,**	**14.35**	**253**	P	**P**	**14 46 36.1**	**-1.4**
RAR	**Rarotonga**	**16.92**	**100**	P	**P**	**14 47 01.8**	**-0.1**
	10nm,0.7s,baz=331,slow=5.5,SNR=3.6						
WHZ	**Wether Hill Ro**	**29.22**	**201**	P	**P**	**14 48 50.5**	**-0.7**
WHZ				IAmb	IAmb	14 49 01.9	
	comp=Z,8.9nm,1.1s						
ARMA	**Armidale**	**29.97**	**242**	P	**P**	**14 48 56.6**	**-1.5**
ARMA				IAmb	IAmb	14 48 59.1	
	comp=E,8.1nm,1.1s						
CTAO	**Charters Tower**	**33.97**	**262**	P	**P**	**14 49 32.1**	**0.0**
TOO	**Toolangi**	**36.97**	**232**	P	**P**	**14 49 56.2**	**-0.5**
TOO				IAmb	IAmb	14 49 57.0	
	comp=Z,4.2nm,0.9s						
COEN	**Coen**	**37.84**	**272**	P	**P**	**14 50 04.4**	**+0.4**
STKA	**Stephens Creek**	**38.69**	**243**	P	**P**	**14 50 10.3**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=96,slow=11,SNR=7.6						
	comp=E,1.5nm,0.3s						
STKA	**Stephens Creek**	**38.69**	**243**	P	**P**	**14 50 10.0**	**-0.7**
BBOO	**Buckleboo**	**43.46**	**242**	P	**P**	**14 50 47.9**	**-0.5**
BBOO				IAmb	IAmb	14 50 48.1	
	comp=Z,13nm,1.0s						
WR0	**Warramunga Arr**	**44.94**	**261**	P	**P**	**14 50 59.0**	**-1.0**
WB0	**Warramunga Arr**	**45.10**	**261**	P	**P**	**14 51 00.5**	**-0.7**
WB0				IAmb	IAmb	14 51 01.1	
	comp=Z,9.4nm,1.0s						
WB2	**Warramunga Arr**	**45.12**	**261**	P	**P**	**14 51 00.5**	**-0.8**
WB2				IAmb	IAmb	14 51 01.5	
	comp=Z,9.2nm,1.0s						
WRAB	**Tennant Creek**	**45.12**	**261**	P	**P**	**14 50 60.0**	**-1.4**
WRAB				IAmb	IAmb	14 51 01.4	
	comp=E,6.3nm,1.0s						
WRA	**Warramunga Arr**	**45.13**	**261**	P	**P**	**14 50 59.9**	**-1.6**
	comp=Z,3.0nm,0.3s,baz=97,slow=7.7,SNR=100						
WRA				PcP	**PcP**	**14 52 29.8**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=94,slow=3.7,SNR=7.1						
	comp=Z,3.0nm,0.3s						
WRA	**Warramunga Arr**	**45.13**	**261**	P	**P**	**14 50 59.6**	**-1.8**
AS31	**Alice Springs**	**45.16**	**255**	P	**P**	**14 51 01.2**	**-0.5**
ASAR	**Alice Springs**	**45.16**	**255**	P	**P**	**14 51 00.6**	**-1.1**
	comp=Z,5.1nm,0.6s,baz=89,slow=7.8,SNR=136						
ASAR				PcP	**PcP**	**14 52 29.6**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=106,slow=3.7,SNR=11						
ASAR				S	**S**	**14 56 58.3**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=92,slow=14,SNR=7.9						
	comp=Z,5.1nm,0.6s						
ASAR	**Alice Springs**	**45.16**	**255**	P	**P**	**14 51 00.3**	**-1.4**
SIJI	**Sorong**	**53.22**	**284**	P	**P**	**14 52 00.8**	**-0.2**
	comp=Z,28nm,0.7s,baz=164,slow=20,SNR=5.4						
	comp=E,28nm,0.7s						
BATI	**Baumata**	**57.24**	**270**	P	**P**	**14 52 28.4**	**-0.6**
	comp=Z,7.7nm,0.5s,baz=149,slow=16,SNR=1.8						
	comp=E,7.7nm,0.5s						
SBA	**Scott Base**	**59.25**	**184**	P	**P**	**14 52 42.6**	**+1.1**

VNDA Vanda 59.29 185 P P 14 52 42.7 +0.9
comp=Z,0.4nm,0.6s,baz=356,slow=7.2,SNR=6.1
comp=Z,0.4nm,0.6s
MJAR Matsushiro Arr 69.31 323 P P 14 53 45.5 -0.2
comp=Z,2.2nm,0.7s,baz=154,slow=6.6,SNR=13
comp=Z,2.2nm,0.7s
LEM Lembang 73.39 268 P P 14 54 10.8 +0.5
comp=Z,21nm,0.7s,baz=274,slow=21,SNR=4.0
comp=Z,21nm,0.7s
PETK Petropavlovsk- 75.04 345 P P 14 54 19.1 +0.7
comp=Z,2.6nm,0.5s,baz=139,slow=7.5,SNR=4.9
comp=Z,2.6nm,0.5s
KSRS Korea Array 76.08 318 P P 14 54 26.0 +1.4
comp=Z,0.4nm,0.6s,baz=128,slow=6.9,SNR=3.4
comp=Z,0.4nm,0.6s
USRK Ussuriysk Ar. 78.02 326 P P 14 54 37.3 +2.3
comp=Z,3.5nm,0.9s,baz=164,slow=4.8,SNR=9.3
comp=Z,3.5nm,0.9s
NVAR Mina Array Bea 79.81 43 P P 14 54 46.5 +1.6
comp=Z,0.8nm,0.7s,baz=225,slow=7.9,SNR=6.8
comp=Z,0.8nm,0.7s
ILSW Iliamna Southw 81.32 12 P P 14 54 53.1 +1.1
ILSW IAmb IAmb 14 54 53.7
comp=Z,35nm,1.0s
I07A Izee 82.32 38 P P 14 54 58.2 +0.7
MAW Mawson 82.95 200 P P 14 55 00.4 +0.3
comp=Z,1.4nm,0.6s,baz=158,slow=10,SNR=3.0
comp=Z,1.4nm,0.6s
IPM Ipoh 83.28 277 P P 14 55 03.3 +0.4
IPM IAmb IAmb 14 55 04.3
comp=Z,9.1nm,0.7s
GHO Glory Hole Cre 83.83 13 P P 14 55 05.1 +0.6
CAST Castle Rocks 84.68 11 P P 14 55 07.2 -1.4
CAST IAmb IAmb 14 55 08.6
comp=Z,6.4nm,0.8s
TXAR Lajitas Array 86.05 57 P P 14 55 18.4 +2.3
comp=Z,0.9nm,0.6s,baz=223,slow=6.7,SNR=12
comp=Z,0.9nm,0.6s
HDA Harding Lake 86.58 13 P P 14 55 17.8 +0.2
CCB Clear Creek Bu 86.62 12 P P 14 55 17.6 -0.2
MDM Murphy Dome 86.81 12 P P 14 55 18.2 -0.5
MDM IAmb IAmb 14 55 19.3
comp=Z,4.9nm,0.8s
IL31 86.92 13 P P 14 55 18.6 -0.6
IL31 IAmb IAmb 14 55 19.9
comp=Z,5.0nm,1.1s
ILAR Eielson Array 86.92 13 P P 14 55 19.0 -0.2
comp=Z,1.8nm,0.7s,baz=231,slow=5.0,SNR=26
comp=Z,1.8nm,0.7s
J25K Salcha River, 87.10 13 P P 14 55 19.9 -0.2
J25K IAmb IAmb 14 55 21.3
comp=Z,3.2nm,0.7s
POKR Poker Plat Res 87.11 12 P P 14 55 19.7 -0.5
POKR IAmb IAmb 14 55 20.6
comp=Z,5.1nm,1.0s
J26L Joseph Creek 87.41 14 P P 14 55 22.0 +0.4
J26L IAmb IAmb 14 55 23.1
comp=Z,2.9nm,0.8s
PDAR Pinedale Array 87.75 43 P P 14 55 24.6 +0.7
comp=Z,0.8nm,0.8s,baz=226,slow=3.9,SNR=6.4
comp=Z,0.8nm,0.8s
TROLL Troll, Antarti 89.09 180 P P 14 55 28.9 -0.7
VNA3 Neumayer Olymp 89.48 176 P P 14 55 30.8 -0.5
VNA2 Neumayer--Watz 89.92 177 P P 14 55 33.2 -0.1
baz=176,slow=4.0
CMAR Chiang Mai Arr 89.97 289 P P 14 55 36.3 +1.8
comp=Z,2.1nm,0.8s,baz=121,slow=3.0,SNR=13
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 110.50 314 PKiKP PKiKP 15 01 02.1 -0.9
comp=Z,0.7nm,0.5s,baz=104,slow=1.0,SNR=13
ARCES ARCESS Array B 127.64 350 PKP PKPdf 15 01 35.3 +0.2
comp=Z,1.4nm,0.4s,baz=360,slow=1.3,SNR=32
FINES FINESS Array B 134.55 344 PKiKP PKPpre 15 01 44.7
comp=Z,0.9nm,0.7s,baz=90,slow=3.8,SNR=5.6
NB2 NORSAR Subarra137.67 354 PKP PKPdf 15 01 47.0 -7.2
comp=Z,2.1nm,1.4s,baz=17,slow=2.6
NOA NORSAR Array B137.67 354 PKP PKPdf 15 01 55.5 +1.3
comp=Z,0.4nm,0.5s,baz=14,slow=4.0,SNR=2.2
AKASG Malin Array Be 141.97 332 PKhKP PKPpre 15 01 58.0
comp=Z,1.2nm,0.3s,baz=41,slow=4.0,SNR=12
SORM Soroca 144.20 330 ⇑P PKPbc 15 02 05.3 -0.6
BURAR Bucovina Array 146.02 332 ⇑P PKPab 15 02 13.7 +0.1
BURAR Bucovina Array 146.02 332 PKPab 15 02 13.4 -0.2
BIZ Bicaz 146.12 330 ⇑P PKPbc 15 02 13.0 +1.3
BRTR Keskin Array B 146.15 314 PKPbc PKPbc 15 02 12.1 -0.1
comp=Z,4.3nm,0.8s,baz=133,slow=4.7,SNR=18
BRTR Keskin Array B 146.15 314 PKPbc PKPbc 15 02 12.3 +0.1
CFR Carcaliu 146.34 326 ⇑P PKPbc 15 02 12.6 +0.3
TPGR Topolog 146.41 326 ⇑P PKPbc 15 02 13.3 +0.7
VRI Vrincioaia 146.59 328 ⇑P PKPbc 15 02 13.3 +0.3
PLOR Plostina 146.64 328 ⇑P PKPbc 15 02 13.3 +0.2
OSTC Ostas 146.76 344 *e*PKP PKPbc 15 02 14.1 +0.8
CLL Collm 146.81 348 PKPbc 15 02 14.1 +0.8
CLL Collm 146.81 348⇓*i*PKPbc PKPbc 15 02 13.6 +0.2
comp=Z,10.0nm,0.6s
CLL ⇑*i*PKPab **PKPab 15 02 16.6 +0.2**
comp=Z,6.0nm,0.9s
UPC Upice 146.86 344 *e*PKP PKPbc 15 02 14.3 +0.7
UPC *ex* x 15 02 17.9
DPC Dobruska-Polom 146.92 344 *e*PKP PKPbc 15 02 14.5 +0.7
DPC *ex* x 15 02 18.3
KRLC Kraliky 147.04 343 *e*PKP PKPbc 15 02 14.7 +0.6
KRLC *ex* x 15 02 18.5
MORC Moravsky Berou 147.09 342 *e*PKP PKPbc 15 02 14.6 +0.3
DOPR Dopca 147.17 330 ⇑P PKPbc 15 02 15.7 +1.2
MLR Muntele Rosu 147.24 329 ⇓P PKPbc 15 02 16.3 +1.3
PRU Pruhonice 147.71 345 *e*PKP PKPbc 15 02 16.3 +0.5
DRGR 147.75 333 ⇑P PKPbc 15 02 15.9 -0.2
VRAC Vranov 147.79 342 *e*PKP PKPbc 15 02 16.4 +0.4
JAVC Velka Javorina 147.87 341 *e*PKP PKiKP 15 02 18.0 +0.3
KRUC Moravsky 148.06 342 *e*PKP PKPbc 15 02 17.1 +0.4
KHC Kasperske Hory 148.73 346 *e*PKP PKPbc 15 02 18.7 +0.3
KHC *ex* x 15 02 24.5
GZR Gura Zlata 148.81 332 ⇑P PKPbc 15 02 19.0 +0.2
CKRC Cesky Krumlov 148.85 345 *e*PKP PKPbc 15 02 19.1 +0.4
GERES GERESS Array B 148.97 345 PKPbc PKPbc 15 02 19.1 0.0
comp=Z,4.7nm,0.8s,baz=45,slow=2.5,SNR=27
GERES GERESS Array B 148.97 345 PKPbc PKPbc 15 02 19.7 +0.6
BZS Buzias 149.14 333 ⇑P PKPbc 15 02 20.0 +0.5
CONA Conrad Observa 149.24 342 *i* P PKPbc 15 02 20.3 +0.6
comp=Z,7.3nm,0.7s
RONA Rosalia, Austr 149.32 341 *i* P PKPbc 15 02 20.5 +0.6
comp=Z,11nm,0.6s
HERR Herculane 149.37 331 ⇑P PKPbc 15 02 20.4 +0.4
MOA Molln 149.75 344 *i* P PKPbc 15 02 21.0 +0.2
comp=Z,2.6nm,0.6s
MORH Mrgy, Hungar 149.83 337 ⇑P PKPbc 15 02 21.4 +0.4
ARSA Arzberg 149.95 342 *i* P PKPbc 15 02 21.2 -0.2
comp=Z,4.4nm,1.0s
BIOA Bad Ischl, Aus 150.06 345 *i* P PKPbc 15 02 21.5 -0.2
comp=Z,7.5nm,1.1s
BLKB Belogradchik 150.20 329 ⇑P PKPbc 15 02 21.3 -0.8
FRGS Fruska Gora 150.26 335 ⇑P PKPbc 15 02 22.8 +0.6
SOKA Soboth 150.61 342 *i* P PKPbc 15 02 23.3 +0.3
comp=Z,3.2nm,0.6s
KBA Koelnbreinsper 150.71 345 *i* P PKPbc 15 02 23.5 +0.2
comp=Z,5.3nm,0.5s
WATA Walderalm 150.87 347 *i* P PKPbc 15 02 23.5 -0.1
comp=Z,6.9nm,0.5s,SNR=5.1
WTTA Wattenberg 150.93 347 *i* P PKPbc 15 02 24.0 +0.2
comp=Z,11nm,0.6s,SNR=10.0
MOTA Moosalm 150.96 348 *i* P PKPbc 15 02 23.8 -0.1
comp=Z,7.3nm,0.9s,SNR=5.7
MYKA Terra Mystica 151.04 344 *i* P PKPbc 15 02 23.4 -0.6
comp=Z,4.4nm,0.5s
SQTA Sankt Quirin 151.06 347 *i* P PKPbc 15 02 24.1 +0.1
comp=Z,6.9nm,0.6s,SNR=4.7
ABTA Abfaltersbach 151.22 345 *i* P PKPbc 15 02 23.9 -0.5
comp=Z,11nm,0.6s
DAVA Damuels 151.25 349 *i* P PKPbc 15 02 25.0 +0.5
comp=Z,3.9nm,0.5s
FETA Feichten 151.35 348 *i* P PKPbc 15 02 25.0 +0.2
comp=Z,5.3nm,0.7s
CIMO Cimolais 151.65 345 PKPbc 15 02 24.9 -0.3
TORD Torodi Ar. Bea 174.02 174 PKP PKPdf 15 02 39.5 -0.8
comp=Z,0.5nm,0.7s,baz=244,slow=1.5,SNR=3.8

IDC 06 14:45:24.0±2.1, 0.1°N×125.9°E, h0km, mb3.0/3, mbtmp3.0/3, MS2.5/1, Error ellipse: s-maj=190.6km s-min=28.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.63**	**158**	P	P	14 50 14.3	-1.8
	0.4nm,0.9s,baz=337,slow=11,SNR=9.7						

0.4nm,0.9s
ASAR Alice Springs 24.94 162 P P 14 50 50.6 +1.4
0.2nm,0.7s,baz=336,slow=11,SNR=6.2
0.2nm,0.7s
KSRS Korea Array 37.12 3 LR LR 15 11 26.5
comp=Z,6.0nm,18.0s,baz=235,slow=42
MKAR Makanchi Array 60.03 327 P P 14 55 32.6 -0.2
0.1nm,0.5s,baz=132,slow=6.0,SNR=1.9
0.1nm,0.5s

*JMA **06** 15:18:02.2±0.2,42.9°N±0.6×146.4°E±0.9,h39km±1km, MV2.5/29,OFF NEMURO PENINSULA*
*SKHL **06** 15:18:03.3±0.4,42.90°N×146.30°E,h55km±5km,mb3.7/2*
ISC 06 15:18:02.0±2.5,42.9N±0.1°×146.41E±0.09,h25km±14km, n12,σ0s56/23,Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.68**	**314**	*eP*	**Pb**	**15 18 15.5**	**+0.2**
NEM2				*eS*	**Sn**	**15 18 25.0**	**-0.7**
NMR	**Nemuro--Hokkai**	**0.69**	**314**	*eP*	**Pb**	**15 18 15.1**	**-0.3**
NMR				*eS*	**Sb**	**15 18 24.7**	**+0.1**
JKHN	**Kushirohamanak**	**0.94**	**282**	*eP*	**Pb**	**15 18 19.3**	**-0.3**
JKHN				*eS*	**Sn**	**15 18 31.7**	**-0.4**
SHO	**Shikotan**	**1.02**	**17**	*eP*	**Pn**	**15 18 21.1**	**+0.3**
SHO				AMB	AMB	15 18 21.4	
	10.0nm,0.2s						
SHO				*eS*	**Sb**	**15 18 34.1**	**0.0**
SHO				A	A	15 18 35.0	
	30nm,0.4s						
SHO				A	A	15 18 35.0	
	30nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**341**	*eP*	**Pn**	**15 18 23.3**	**0.0**
YUK				AMB	AMB	15 18 24.3	
	10.0nm,0.2s						
YUK				AMB	AMB	15 18 24.3	
	20nm,0.2s						
YUK				AMB	AMB	15 18 24.3	
	30nm,0.2s						
YUK				*eS*	**Sn**	**15 18 38.0**	**-0.9**
YUK				A	A	15 18 40.6	
	100nm,0.4s						
YUK				A	A	15 18 40.6	
	70nm,0.4s						
JAK	**Akkeshi**	**1.26**	**275**	*eP*	**Pn**	**15 18 23.7**	**-0.3**
JAK				*eS*	**Sn**	**15 18 40.0**	**-0.2**
JNSB	**Nemuroshibetsu**	**1.35**	**311**	*eP*	**Pn**	**15 18 25.5**	**+0.2**
JNSB				*eS*	**Sn**	**15 18 42.4**	**0.0**
JRA	**Rausu**	**1.40**	**319**	*eP*	**Pn**	**15 18 26.3**	**+0.4**
JRA				*eS*	**Sn**	**15 18 43.5**	**-0.1**
JNK	**Nakash**	**1.42**	**300**	*eP*	**Pn**	**15 18 26.0**	**-0.2**
JNK				*eS*	**Sn**	**15 18 43.1**	**-0.9**
JOB	**Onbets**	**1.89**	**271**	*eP*	**Pn**	**15 18 33.1**	**+0.4**
JAR	**Ashorobuto**	**1.98**	**283**	*eP*	**Pn**	**15 18 34.1**	**+0.2**
JAR				*eS*	**Sn**	**15 18 57.9**	**+0.1**
JTKR	**Abashiri--Toko**	**2.12**	**301**	*eP*	**Pn**	**15 18 36.9**	**+1.2**
JTKR				*eS*	**Sn**	**15 19 02.4**	**+1.2**

*IDC **06** 15:18:05.7±2.4,6.18S×130.71E,h112km±26km,mb3.8/1, mbtmp4.1/6,Error ellipse: s-maj=43.9km s-min=20.5km az=92.0*
ISC 06 15:18:03.5±1.0,6.27S±0.06×130.9E±0.1,h100km,n6, σ3s26/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.38**	**4**	P	**Pn**	**15 19 22.6**	**+1.2**
	31nm,0.2s,baz=28,slow=9.1,SNR=54						
SIJI				S	**Sn**	**15 20 18.4**	**-3.7**
	60nm,0.2s,baz=101,slow=23,SNR=15						
BATI	**Baumata**	**8.18**	**241**	P	**Pn**	**15 20 01.3**	**+1.8**
	6.9nm,0.4s,baz=97,slow=23,SNR=2.0						
BATI				S	**Sn**	**15 21 28.4**	**-2.0**
	16nm,0.5s,baz=39,slow=14,SNR=8.2						
FITZ	**Fitzroy Crossi**	**12.84**	**203**	P	**Pn**	**15 21 02.5**	**+0.2**
	3.4nm,0.3s,baz=24,slow=11,SNR=48						
FITZ				S	Sn	15 23 16.9	-6.6
	1.8nm,0.5s,baz=210,slow=18,SNR=2.2						
WRA	**Warramunga Arr**	**13.99**	**167**	P	**Pn**	**15 21 19.9**	**+2.6**
	0.6nm,0.3s,baz=348,slow=13,SNR=30						
WRA				S	**Sn**	**15 23 48.8**	**-2.7**
	1.8nm,0.5s,baz=355,slow=19,SNR=9.0						
ASAR	**Alice Springs**	**17.53**	**171**	P	**Pn**	**15 22 05.4**	**+3.8**
	1.3nm,0.6s,baz=342,slow=9.5,SNR=29						
ASAR				S	**Sn**	**15 25 12.1**	**-4.9**
	1.5nm,0.8s,baz=350,slow=27,SNR=7.4						
MKAR	**Makanchi Array**	**68.13**	**326**	P	**P**	**15 28 52.5**	**-0.3**
	1.0nm,0.4s,baz=119,slow=7.8,SNR=17						
	1.0nm,0.4s						

*REN **06** 15:22:28.9±0.9,38.259N±0.008×118.72W±0.02, h11km±5km,ML2.9/33,ML2.8/48(NEIC),Error ellipse: s-maj=3.0km s-min=0.6km az=109.0*
NEIC 06 15:22:29.1±1.1,38.27N±0.01×118.75W±0.02,h6km±7km, Error ellipse: s-maj=2.3km s-min=1.8km az=57.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHV	**Little Huntoon**	**0.19**	**95**		Pg	15 22 33.3	+0.4
LHV					Sg	15 22 36.4	+0.9
LHV	**Little Huntoon**	**0.19**	**95**	IAML		15 22 37.9	
	comp=N,6µm,0.5s						
HCK	**Huntoon Valley**	**0.23**	**147**		Pg	15 22 34.0	+0.4
NV08	**Mina Array Sit**	**0.36**	**68**		Pg	15 22 36.3	+0.1
NV08					Sg	15 22 41.4	+0.3
NV09	**Mina Array Sit**	**0.36**	**63**		Pg	15 22 36.4	+0.1
NV09					Sg	15 22 41.5	+0.4
NVAR	**Mina Array Bea**	**0.39**	**65**		Pg	15 22 36.5	-0.2
RYN	**Ryan**	**0.40**	**26**		Pg	15 22 37.2	+0.3
RYN					Sg	15 22 43.0	+0.7
RYN	**Ryan**	**0.40**	**26**	IAML		15 22 43.2	
	comp=N,836nm,0.4s						
RYN				IAML		15 22 48.2	
	comp=E,699nm,0.5s						
LUL	**Lundy Lake**	**0.40**	**238**		Pg	15 22 37.4	+0.4
MGNR	**McGee Canyon**	**0.46**	**175**		Pg	15 22 38.1	+0.2
NV11	**Mina Array Sit**	**0.49**	**70**		Pg	15 22 38.6	0.0
NV11					Sg	15 22 45.3	+0.2
NV11	**Mina Array Sit**	**0.49**	**70**	IAML		15 22 45.7	
	comp=E,448nm,0.6s						
BENR	**Benton**	**0.57**	**166**		Pg	15 22 39.9	-0.2
MCBM	**Casa Benchmark**	**0.63**	**191**		Pg	15 22 41.4	+0.1
ORC	**Owens River**	**0.64**	**173**		Pg	15 22 41.3	-0.1
MDYM	**Dry Creek**	**0.64**	**199**		Pg	15 22 41.5	0.0
MDYM					Sg	15 22 50.6	+0.7
MDPB	**Devils Postpil**	**0.69**	**203**		Pg	15 22 42.1	-0.2
MDPB					Pn	15 22 51.3	+5.6
MDPB	**Devils Postpil**	**0.69**	**203**	IAML		15 22 51.6	
	comp=N,508nm,0.3s						
MDPB				IAML		15 22 52.0	
	comp=E,394nm,0.2s						
MLNR	**Milner Canyon**	**0.74**	**154**		Pg	15 22 43.2	-0.2
RCCR	**Rock Creek Can**	**0.78**	**179**		Pg	15 22 43.7	-0.4
YERR	**Yerington**	**0.81**	**332**		Pg	15 22 44.7	-0.1
YERR					Sb	15 22 56.4	-0.8
SCHCA	**Scheelite**	**0.91**	**177**		Pg	15 22 46.1	-0.4
KVN	**Kaiserville**	**0.93**	**33**		Pg	15 22 46.7	-0.3
KVN					Sg	15 22 59.2	+0.1
KCC	**Kasler Creek**	**1.05**	**206**		Pg	15 22 48.6	-0.6
PNTR	**Pine Nut**	**1.06**	**321**		Pg	15 22 49.1	-0.3
PNTR					Sb	15 23 03.9	-0.3
PNTR	**Pine Nut**	**1.06**	**321**	IAML		15 23 07.9	
	comp=E,298nm,0.6s						
DSP	**Deep Springs**	**1.09**	**145**		Pg	15 22 49.5	-0.5
TPH	**Tonopah**	**1.22**	**99**		Pg	15 22 51.9	-0.6
TPH					Sg	15 23 08.0	-0.3
VCNR	**Virginia City**	**1.25**	**326**		Pg	15 22 52.6	-0.4
VCNR					Sb	15 23 09.8	+0.1
EMB	**Emerald Bay**	**1.27**	**304**		Pg	15 22 53.3	-0.3
EMB					Sn	15 23 10.9	-0.4
EMB	**Emerald Bay**	**1.27**	**304**	IAML		15 23 15.1	
	comp=E,208nm,0.7s						
CMB	**Columbia Colle**	**1.31**	**260**		Pn	15 22 53.6	-0.5
CMB	**Columbia Colle**	**1.31**	**260**	IAML		15 23 10.7	
	comp=N,288nm,0.2s						
CMB				IAML		15 23 11.1	
	comp=E,282nm,0.4s						
Q09A	**Carvers**	**1.35**	**65**		Pn	15 22 54.5	-0.3
Q09A					Sn	15 23 13.1	-0.1
LCH	**Last Change Ra**	**1.35**	**139**		Pn	15 22 54.2	-0.5
LCH	**Last Change Ra**	**1.35**	**139**	IAML		15 23 16.0	
	comp=E,96nm,0.3s						
MPK	**Martis Peak**	**1.43**	**316**		Pn	15 22 56.1	+0.1
MPK	**Martis Peak**	**1.43**	**316**	IAML		15 23 18.7	
	comp=N,137nm,0.9s						
MPK				IAML		15 23 25.1	
	comp=E,123nm,0.7s						
PAHR	**Pah Rah Range**	**1.52**	**341**		Pn	15 22 57.1	+0.1
VPK	**Verdi Peak**	**1.57**	**321**		Pb	15 22 58.5	-0.3
DONR	**Donner Summit**	**1.64**	**312**		Pn	15 22 59.3	+0.5
PEAR	**Peavine Mounta**	**1.64**	**325**		Pb	15 22 59.4	-0.5
WVA	**Winnemucca Val**	**1.87**	**334**		Pb	15 23 03.0	-0.8
SGV	**South Grapevin**	**1.87**	**133**		Pn	15 23 01.4	-0.5
BEKR	**Beckworth**	**2.03**	**322**		Pb	15 23 05.4	-1.2
TPNV	**Topopah Spring**	**2.38**	**123**		Pn	15 23 08.7	-0.2
TPNV	**Topopah Spring**	**2.38**	**123**	IAML		15 23 50.5	
	comp=E,71nm,1.1s						
TPNV				IAML		15 23 50.7	
	comp=E,59nm,0.9s						
S11A	**Rachel**	**2.45**	**104**		Pn	15 23 10.1	+0.3
BMN	**Battle Mountai**	**2.46**	**28**		Pn	15 23 08.5	-1.5
BBGB	**Big Mountain B**	**2.48**	**228**		Pn	15 23 08.2	-2.0
R11A	**Troy Canyon, C**	**2.49**	**87**		Pn	15 23 09.5	-0.9
R11A	**Troy Canyon, C**	**2.49**	**87**	IAML		15 23 49.1	
	comp=E,58nm,0.3s						
R11A				IAML		15 23 49.3	
	comp=N,67nm,0.3s						
SAO	**San Andreas Ge**	**2.62**	**236**	Pn	Pn	15 23 09.5	-2.5
PMPB	**Monarch Peak**	**2.62**	**219**		Pn	15 23 12.8	+0.6
GWY	**Greenwater Val**	**2.66**	**141**	Pn	Pn	15 23 12.3	-0.5
PRN	**Pahroc Range**	**3.05**	**105**	Pn	Pn	15 23 17.5	-0.6
GSC	**Goldstone, Bar**	**3.35**	**152**	Pn	Pn	15 23 20.4	-1.7
SHPR	**Sheep Range**	**3.36**	**121**	Pn	Pn	15 23 22.4	+0.1
ELK	**Elko**	**3.67**	**47**		Pn	15 23 26.1	-0.7
ELK				IAML		15 24 30.9	
	comp=N,12nm,0.3s						
CCUT	**Cedar City**	**4.32**	**98**	Pn	Pn	15 23 33.5	-2.1

*IDC **06** 15:45:51.8±3.3,5.58N×124.58E,h479km±37km,mb2.8/5, mbtmp4.0/7,Error ellipse: s-maj=65.9km s-min=15.6km az=67.0*
ISC 06 15:45:49.3±1.4,5.7N±0.2×124.8E±0.3,h450km,n7, σ1s21/9,mb3.4/5,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.77**	**205**	P	**P**	**15 48 26.3**	**+0.5**
	15nm,0.8s,baz=30,slow=20,SNR=7.6						
BATI	**Baumata**	**15.85**	**184**	P	**P**	**15 49 11.1**	**+1.4**
	12nm,0.4s,baz=314,slow=0.9,SNR=5.3						
FITZ	**Fitzroy Crossi**	**23.67**	**178**	P	**P**	**15 50 23.1**	**-0.9**
	1.7nm,0.7s,baz=7.3,slow=7.2,SNR=9.0						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**27.17**	**160**	P	**P**	**15 50 54.6**	**-0.5**
	0.8nm,1.1s,baz=338,slow=9.4,SNR=11						
	0.8nm,1.1s						
ASAR	**Alice Springs**	**30.52**	**163**	P	**P**	**15 51 24.8**	**+0.3**
	0.6nm,0.4s,baz=338,slow=7.6,SNR=44						
ASAR				PcP	**PcP**	**15 54 10.2**	**0.0**
	0.1nm,0.3s,baz=348,slow=2.5,SNR=4.5						
ASAR				S	**S**	**15 55 51.2**	**-2.0**
	0.6nm,1.0s,baz=356,slow=24,SNR=2.7						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**40.67**	**158**	P	**P**	**15 52 50.1**	**+1.0**
	1.0nm,0.7s,baz=318,slow=9.4,SNR=3.8						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**54.84**	**325**	P	**P**	**15 54 35.4**	**-0.4**
	0.2nm,0.3s,baz=120,slow=7.5,SNR=5.8						
	0.2nm,0.3s						

*IDC **06** 16:04:06.1±0.7,34.66N×80.33E,h0km,mb3.8/12, mbtmp3.8/17,ML3.3/5,MS3.0/14,Error ellipse: s-maj=20.8km s-min=14.6km az=51.0*
ISC 06 16:04:11.3±0.8,34.70N±0.09×80.4E±0.1,h35km,n25, σ1s23/19,mb3.7/12,MS2.9/11,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**9.16**	**332**	Pn	**Pn**	**16 06 22.2**	**+1.1**
	0.8nm,0.3s,baz=197,slow=5.7,SNR=1.9						
AAK				Lg	Lg	16 08 53.8	
	0.3nm,0.3s,baz=324,slow=9.6,SNR=4.7						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**12.17**	**6**	Pn	**Pn**	**16 07 00.1**	**-1.9**
	0.5nm,0.3s,baz=184,slow=13,SNR=22						
MKAR				Sn	**Sn**	**16 09 17.7**	**+1.3**
	0.1nm,0.3s,baz=187,slow=22,SNR=2.3						
MKAR				LR	LR	16 12 29.2	
	comp=Z,49nm,20.2s,baz=218,slow=41						
	2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**15.97**	**356**	Pn	**Pn**	**16 07 51.1**	**-2.0**
	baz=185,slow=12,SNR=1.6						
	0.8nm,0.3s						
GEYT	**Alibeck**	**18.23**	**287**	P	**Pn**	**16 08 19.4**	**-2.0**
	0.3nm,0.3s,baz=67,slow=5.0,SNR=1.7						
GEYT				LR	LR	16 16 37.6	
	comp=Z,54nm,18.6s,baz=135,slow=41						
	1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**19.50**	**8**	P	**P**	**16 08 34.4**	**-0.8**
	0.1nm,0.3s,baz=198,slow=9.1,SNR=1.6						
ZALV				LR	LR	16 16 52.8	
	comp=Z,33nm,18.4s,baz=178,slow=39						
	0.4nm,0.3s						
AKTO	**Aktyubinsk**	**22.64**	**321**	P	**P**	**16 09 10.0**	**+0.9**
	0.9nm,0.6s,baz=111,slow=8.6,SNR=1.9						
AKTO				LR	LR	16 18 07.3	
	comp=Z,24nm,18.4s,baz=141,slow=37						
	0.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**23.11**	**130**	P	**P**	**16 09 14.3**	**0.0**
	2.7nm,0.8s,baz=309,slow=10,SNR=11						
	2.7nm,0.8s						
SONM	**Songino Array**	**23.41**	**48**	P	**P**	**16 09 18.0**	**+0.8**
	1.0nm,0.8s,baz=243,slow=9.5,SNR=6.1						
SONM				LR	LR	16 19 08.4	
	comp=Z,28nm,20.0s,baz=224,slow=38						
	1.0nm,0.8s						
GNI	**Garni**	**28.70**	**292**	LR	LR	16 24 04.8	
	comp=Z,19nm,19.7s,baz=117,slow=42						
PSI	**Prapat**	**36.12**	**147**	LR	LR	16 29 12.0	
	comp=Z,98nm,18.1s,baz=216,slow=42						
OBN	**Obninsk**	**36.35**	**318**	LR	LR	16 25 59.3	
	comp=Z,15nm,19.0s,baz=186,slow=36						
BRTR	**Keskin Array B**	**37.23**	**292**	P	**P**	**16 11 20.4**	**+0.8**
	0.9nm,0.6s,baz=110,slow=9.3,SNR=6.5						
	0.9nm,0.6s						
KSRS	**Koca Array**	**38.20**	**72**	LR	LR	16 28 27.2	
	comp=Z,14nm,18.4s,baz=265,slow=38						
MLR	**Muntele Rosu**	**42.28**	**302**	LR	LR	16 32 09.3	
	comp=Z,19nm,19.0s,baz=32,slow=40						
FINES	**FINESS Array B**	**43.28**	**325**	P	**P**	**16 12 09.4**	**+0.3**
	0.8nm,0.6s,baz=127,slow=12,SNR=6.2						
	0.8nm,0.6s						
TIXI	**Tiksi**	**44.72**	**20**	LR	LR	16 33 12.0	
	comp=Z,34nm,18.5s,baz=182,slow=39						
IDI	**Amoyia**	**44.95**	**287**	LR	LR	16 35 33.5	
	comp=Z,19nm,19.3s,baz=70,slow=42						
ARCES	**ARCESS Array B**	**45.80**	**336**	P	**P**	**16 12 28.1**	**-1.0**
	1.2nm,0.8s,baz=87,slow=7.4,SNR=4.1						
ARCES				LR	LR	16 31 01.7	
	comp=Z,14nm,18.9s,baz=303,slow=35						
	1.2nm,0.8s						
NOA	**NORSAR Array B**	**50.38**	**324**	P	**P**	**16 13 03.2**	**-1.5**
	0.6nm,0.7s,baz=90,slow=7.5,SNR=2.5						
NOA				LR	LR	16 34 43.1	
	comp=Z,14nm,20.9s,baz=240,slow=36						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.41**	**275**	P	**P**	**16 15 40.1**	**-0.1**
	3.5nm,0.6s,baz=42,slow=5.1,SNR=23						
	3.5nm,0.6s						
ILAR	**Eielson Array**	**74.19**	**19**	P	**P**	**16 15 45.6**	**+1.6**
	0.5nm,0.8s,baz=283,slow=3.6,SNR=4.5						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**74.69**	**128**	P	**P**	**16 15 47.8**	**+0.3**
	0.7nm,0.9s,baz=321,slow=5.9,SNR=8.0						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**77.12**	**131**	P	**P**	**16 16 01.3**	**0.0**
	0.6nm,0.8s,baz=319,slow=5.7,SNR=10.0						
	0.6nm,0.8s						
BOSA	**Boshof**	**81.71**	**227**	P	**P**	**16 16 26.5**	**+0.2**
	2.1nm,0.8s,baz=58,slow=4.1,SNR=3.1						
	2.1nm,0.8s						
LPAZ	**La Paz**	**146.38**	**295**	PKPbc	**PKPbc**	**16 23 49.0**	**-0.8**
	1.6nm,0.9s,baz=57,slow=4.7,SNR=4.5						

*IDC **06** 16:29:23.4±1.2,47.57N×84.34E,h0km,mb3.5/3, mbtmp3.4/5,ML2.5/2,Error ellipse: s-maj=13.0km s-min=10.8km az=105.0*
*ASRS **06** 16:29:26.0±0.3,48°N±2°×8°4E±°,h0km,MLh4.0/10,Error ellipse: s-maj=5.1km s-min=2.3km az=137.9,confirmed*
*SOME **06** 16:29:26.9,47.42N×83.77E,h10km*
*NNC **06** 16:29:29.3±2.3,47.11N×84.24E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=21.2km s-min=9.2km az=132.0*
ISC 06 16:29:25.3±0.6,47.62N±0.03×84.29E±0.03,h10km,n55, σ2s83/98,mb3.5/3,13C-7D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**0.43**	**113**	*eP*	**Pn**	**16 29 36.4**	**-1.1**
	70nm,0.3s						
ZSN				*eS*	**Sb**	**16 29 43.9**	**+2.4**
	744nm,0.4s						
MK31	**Makanchi Array**	**1.59**	**239**	P	**Pn**	**16 29 53.5**	**0.0**
	6.3nm,0.1s,baz=62,slow=19,SNR=903						
MK31				⇓S	**Sb**	**16 30 16.0**	**+1.0**
	51nm,0.2s,baz=74,slow=32,SNR=28						
MKAR	**Makanchi Array**	**1.59**	**239**	Pg	**Pn**	**16 29 53.2**	**-0.4**
	15nm,0.3s,baz=59,slow=19,SNR=357						
MKAR				Lg	Lg	16 30 12.4	
	48nm,0.3s,baz=64,slow=36,SNR=25						
MKAR	**Makanchi Array**	**1.59**	**239**	Pg	**Pn**	**16 29 54.0**	**+0.5**
MKAR				Sg	**Sb**	**16 30 15.8**	**+0.8**
MAKZ	**Makanchi**	**1.77**	**244**	⇑P	**Pn**	**16 29 56.7**	**+0.6**
	18nm,0.5s						
MAKZ				⇓S	**Sn**	**16 30 18.5**	**-0.1**
	362nm,0.3s						
MAKZ	**Makanchi**	**1.77**	**244**	Pg	**Pn**	**16 29 56.9**	**+0.8**
MAKZ				Sg	**Sn**	**16 30 19.7**	**+1.1**
DGZ	**Jazzator, Alta**	**2.95**	**44**	Pg	**Pg**	**16 30 20.5**	**-1.3**
DGZ				Sg	**Sg**	**16 30 58.4**	**-1.5**
UKR	**Ust'-Kan**	**3.33**	**5**	Pn	**Pb**	**16 30 21.6**	**-3.0**
UKR				Pg	**Pg**	**16 30 29.2**	**+0.1**
UKR				S	**Sb**	**16 31 01.3**	**-3.7**
UKR				Sg	**Sg**	**16 31 12.6**	**+0.2**
CHBI	**Chibit, Altay**	**3.43**	**37**	Pn	**Pb**	**16 30 24.3**	**-1.9**
CHBI				Pg	**Pg**	**16 30 31.7**	**+0.7**
CHBI				Sg	**Sg**	**16 31 17.4**	**+2.0**
AKAR	**Aktash**	**3.48**	**38**	Pn	**Pb**	**16 30 24.1**	**-3.0**
AKAR				Pg	**Pg**	**16 30 32.5**	**+0.6**
AKAR				Sg	**Sg**	**16 31 18.1**	**+1.0**
CUR	**Chagan-Uzun**	**3.66**	**46**	Pn	**Pb**	**16 30 27.1**	**-2.9**
CUR				Pg	**Pg**	**16 30 34.4**	**-0.9**
CUR				Sg	**Sg**	**16 31 22.4**	**-0.2**
SEM	**Semipalatinsk**	**3.85**	**318**	*eP*	**Pg**	**16 30 37.3**	**-1.8**
	12nm,0.2s						
SEM				*eS*	**Sg**	**16 31 27.4**	**-1.5**
	114nm,0.2s						
DJR	**Jarkent**	**4.54**	**225**	*eP*	**Pb**	**16 30 43.0**	**-2.1**
	4.4nm,0.2s						
DJR				*eS*	**Sb**	**16 31 38.1**	**-1.8**
	6.7nm,0.1s						
DJR	**Jarkent**	**4.54**	**225**	Pg	**Pb**	**16 30 43.0**	**-2.1**
	4.4nm,0.2s						
DJR				Lg	Lg	16 31 38.1	
	16nm,0.5s						
ARTR	**Artybash**	**4.61**	**24**	Pn	**Pn**	**16 30 38.7**	**+3.7**
ARTR				Pg	**Pg**	**16 30 52.8**	**-0.7**
ARTR				S	**Sn**	**16 31 32.4**	**+3.8**
ARTR				Sg	**Sg**	**16 31 52.2**	**-1.1**
KURBB	**Kurchatov Arra**	**4.83**	**311**	Pn	**Pn**	**16 30 38.9**	**+1.0**
	0.3nm,0.3s,baz=119,slow=9.5,SNR=17						
KURBB				Sn	**Sn**	**16 31 34.8**	**+0.9**
	0.8nm,0.3s,baz=129,slow=19,SNR=6.5						
KURBB				Lg	Lg	16 31 55.6	
	1.9nm,0.3s,baz=120,slow=31,SNR=8.7						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**4.83**	**311**	⇑Pn	**Pn**	**16 30 38.5**	**+0.6**
	0.7nm,0.4s						
KURBB				⇓Pg	**Pg**	**16 30 55.4**	**-2.3**
	3.2nm,0.3s						
KURBB				⇑Lg	Lg	16 31 58.3	
	145nm,0.7s						
KURK	**Kurchatov**	**4.84**	**312**	⇑Pn	**Pn**	**16 30 38.1**	**0.0**
	0.6nm,0.8s						
KURK				⇑Lg	Lg	16 31 58.3	
	71nm,0.7s						
KURK	**Kurchatov**	**4.84**	**312**	Pn	**Pn**	**16 30 37.9**	**-0.2**
KURK				S	**Sn**	**16 31 32.4**	**-1.7**
KURK				Sg	**Sb**	**16 31 52.7**	**+4.5**
TDK	**Taldyqorghan**	**4.84**	**239**	*eP*	**Pb**	**16 30 50.7**	**+0.5**
	48nm,0.1s						
TDK				*eS*	**Sb**	**16 31 50.8**	**+2.3**
	132nm,0.7s						
TDK	**Taldyqorghan**	**4.84**	**239**	Pg	**Pb**	**16 30 50.7**	**+0.5**
	48nm,0.1s						
TDK				Lg	Lg	16 31 50.8	
	132nm,0.7s						
PDGK	**Podgornoye**	**5.46**	**220**	Pg	**Pb**	**16 30 59.5**	**-1.2**
	14nm,0.3s						
PDGK	**Podgornoye**	**5.46**	**220**	⇑Pn	**Pn**	**16 30 45.8**	**-1.0**
	1.4nm,0.2s						
PDGK				⇑Pg	**Pb**	**16 31 01.7**	**+0.9**
	6.3nm,0.2s						
PDGK				⇑Sn	**Sn**	**16 31 49.7**	**0.0**
	16nm,0.7s						
PDGK				⇑Lg	Lg	16 32 15.7	
	15nm,0.5s						
SHLS	**Shalkode**	**5.61**	**219**	*eP*	**Pb**	**16 31 00.4**	**-2.9**
	5.2nm,0.2s						
SHLS				*eS*	**Sb**	**16 32 06.2**	**-4.4**
	13nm,0.3s						
TASR	**Tashtagol**	**5.64**	**23**	Pg	**Pg**	**16 31 10.2**	**-3.0**
TASR				S	**Sn**	**16 31 57.7**	**+3.8**
TASR				Sg	**Sg**	**16 32 23.7**	**-2.4**
ARXS	**Arharly**	**5.65**	**235**	*eP*	**Pb**	**16 31 05.2**	**+1.2**
	2.0nm,0.4s						
ARXS				*eS*	**Sb**	**16 32 15.1**	**+3.4**
	25nm,0.7s						
ARXS	**Arharly**	**5.65**	**235**	Pg	**Pb**	**16 31 05.1**	**+1.2**
	2.0nm,0.4s						
ARXS				Lg	Lg	16 32 15.1	
	25nm,0.7s		

KTBS					Lg	Lg	16 32 46.8	
	13nm,0.5s							
KUU	**Kurty**	**6.69**	**239**	*e*P	**Pb**	**16 31 25.3**	**+3.6**	
	1.5nm,0.4s							
KUU				*e*S	**Sb**	**16 32 49.9**	**+8.3**	
	14nm,0.4s							
KUU	**Kurty**	**6.69**	**239**	Pg	**Pb**	**16 31 25.3**	**+3.6**	
	1.5nm,0.4s							
KUU				Lg	Lg	16 32 49.9		
	14nm,0.4s							
LUZB	**Luzhba, Kemero**	**6.72**	**24**	Pg	**Pg**	**16 31 31.5**	**-2.4**	
LUZB				S	**Sn**	**16 32 23.2**	**+2.7**	
LUZB				Sg	**Sg**	**16 33 00.3**	**-0.5**	
MDOK	**Medeo**	**6.77**	**231**	*e*P	**Pb**	**16 31 26.6**	**+3.5**	
	2.0nm,0.3s							
MDOK				*e*S	**Sb**	**16 32 52.1**	**+8.1**	
	10nm,0.7s							
MDOK	**Medeo**	**6.77**	**231**	Pg	**Pb**	**16 31 26.1**	**+3.0**	
	2.6nm,0.7s							
MDOK				Pg	Pg	16 31 26.6	-8.3	
	2.0nm,0.3s							
MDOK				⇓Lg	Lg	16 32 58.6		
	16nm,0.9s							
DJO	**Djoy, Khakassi**	**6.82**	**38**	Sg	**Sg**	**16 33 06.8**	**+2.9**	
SALR	**Pechorkino, Sa**	**6.86**	**7**	Sg	**Sg**	**16 33 05.3**	**-0.1**	
CERR	**Cheremushki**	**6.95**	**38**	Sg	**Sg**	**16 33 14.1**	**+5.9**	
KRBS	**Karabastau**	**7.20**	**240**	*e*P	**Pb**	**16 31 33.9**	**+3.6**	
	1.1nm,0.3s							
KRBS				*e*S	Sb	16 33 05.9	+10	
	4.6nm,0.8s							
KRBS	**Karabastau**	**7.20**	**240**	Pg	**Pb**	**16 31 33.9**	**+3.6**	
	1.1nm,0.3s							
KRBS				Lg	Lg	16 33 05.9		
	4.6nm,0.8s							
TKM2	**Tokmak 2**	**7.72**	**236**	⇑Pn	**Pn**	**16 31 17.6**	**-0.3**	
	1.5nm,0.6s							
TKM2				⇓Lg	Lg	16 33 28.3		
	7.2nm,0.8s							
OTUK	**Ortayu**	**8.05**	**279**	⇑Pn	**Pn**	**16 31 22.5**	**+0.3**	
	1.0nm,0.8s							
OTUK				⇓Lg	Lg	16 33 42.0		
	19nm,1.1s							
AAK	**Ala-Archa**	**8.53**	**238**	Lg	Lg	16 33 55.2		
	0.4nm,0.3s,baz=306,slow=17,SNR=6.1							
TORD	**Torodi Ar. Bea**	**75.44**	**274**	P	**P**	**16 41 08.1**	**-1.5**	
	0.2nm,0.3s,baz=49,slow=5.2,SNR=4.1							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**80.86**	**133**	P	**P**	**16 41 38.6**	**-0.8**	
	0.3nm,0.9s,baz=330,slow=4.1,SNR=1.8							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**83.81**	**135**	P	**P**	**16 41 54.0**	**-0.8**	
	0.3nm,0.9s,baz=330,slow=4.8,SNR=1.9							
	0.3nm,0.9s							

*ATH **06** 16:32:43.9, 37°.86N×20°.92E, h12km±2km, ML3.0/18, Error ellipse: s-maj=2.4km s-min=0.8km az=356.0*
*THE **06** 16:32:45.1, 38°.01N×20°.98E, h0km±1km, ML3.3/5, Error ellipse: s-maj=1.6km s-min=0.3km az=196.0*
ISC 06 16:32:43.9±1.0, 37°.94N±0°.03×21°.01E±0°.03, h13km±10km, n52, σ0s60/69, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAK2	**Zakynthos**	**0.17**	**210**	P	**Pb**	**16 32 49.9**	**+0.9**
PSDA	**Pessada-Kefalo**	**0.38**	**298**	P	**Pg**	**16 32 51.3**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.38**	**298**	P	**Pg**	**16 32 51.4**	**-0.1**
PSDA				S	**Sg**	**16 32 56.7**	**+0.1**
RLS	**Riolos of Patr**	**0.38**	**71**	P	**Pb**	**16 32 52.4**	**-0.2**
RLS				S	**Sb**	**16 32 58.4**	**0.0**
	4μm,0.3s						
RLS	**Riolos of Patr**	**0.38**	**71**	P	**Pb**	**16 32 52.3**	**-0.3**
RLS				S	**Sb**	**16 32 59.6**	**+1.1**
RLS				AML	AML	16 33 01.2	
	comp=N,7647μm,0.2s						
RLS				AML	AML	16 33 01.2	
	comp=E,8802μm,0.4s						
VLS	**Valsamata**	**0.41**	**306**	P	**Pg**	**16 32 52.0**	**-0.1**
VLS				S	**Sg**	**16 32 57.9**	**+0.3**
	comp=E,2μm,0.4s						
VLS	**Valsamata**	**0.41**	**306**	P	**Pg**	**16 32 51.6**	**-0.5**
VLS				S	**Sg**	**16 32 57.9**	**+0.3**
VLS				AML	AML	16 32 59.5	
	comp=E,4308μm,0.4s						
VLS				AML	AML	16 33 02.2	
	comp=N,3566μm,0.3s						
ARGA	**Argostoli. Kep**	**0.48**	**300**	P	**Pg**	**16 32 53.8**	**+0.4**
DRO	**Drossia**	**0.56**	**88**	P	**Pb**	**16 32 55.0**	**-0.5**
DRO				S	**Sn**	**16 33 05.1**	**-1.7**
DRO				AML	AML	16 33 07.3	
	comp=E,13330μm,0.3s						
DRO				AML	AML	16 33 08.2	
	comp=N,12789μm,0.3s						
KEF4	**Livadi, Kephal**	**0.56**	**305**	P	**Pg**	**16 32 54.9**	**0.0**
KEF4				S	**Sg**	**16 33 02.5**	**+0.1**
	comp=N,22μm,0.2s						
KEF4	**Livadi, Kephal**	**0.56**	**305**	P	**Pg**	**16 32 54.5**	**-0.4**
KEF4				S	**Sg**	**16 33 03.3**	**+0.9**
DMLN	**Damoulianata-K**	**0.58**	**301**	P	**Pg**	**16 32 55.2**	**-0.2**
KEF3	**Kipouria, Keph**	**0.58**	**297**	P	**Pg**	**16 32 55.0**	**-0.4**
KEF3				S	**Sg**	**16 33 03.0**	**-0.1**
	comp=N,5μm,0.2s						
KEF3	**Kipouria, Keph**	**0.58**	**297**	P	**Pg**	**16 32 54.8**	**-0.6**
KEF3				S	**Sg**	**16 33 04.0**	**+0.9**
FSK	**Fiskardo**	**0.63**	**326**	P	**Pg**	**16 32 56.2**	**0.0**
FSK	**Fiskardo**	**0.63**	**326**	P	**Pg**	**16 32 56.3**	**0.0**
FSK				AML	AML	16 33 17.9	
	comp=N,1447μm,0.6s						
FSK				AML	AML	16 33 18.6	
	comp=E,1822μm,0.4s						
EVGI	**Lefkada island**	**0.74**	**338**	P	**Pg**	**16 32 57.9**	**-0.4**
EVGI	**Lefkada island**	**0.74**	**338**	P	**Pg**	**16 32 57.8**	**-0.4**
PVO	**Paravola**	**0.79**	**31**	P	**Pn**	**16 33 00.3**	**-0.6**
PVO				S	**Sn**	**16 33 13.4**	**+0.8**
NYDR	**Nydri-Lefkada**	**0.81**	**343**	P	**Pg**	**16 32 59.1**	**-0.6**
DRAG	**Dragano-Lefkad**	**0.82**	**336**	P	**Pg**	**16 32 59.2**	**-0.6**
LAKA	**Lakka**	**0.82**	**68**	P	**Pb**	**16 33 00.4**	**+0.3**
LAKA				S	**Sn**	**16 33 12.4**	**-1.0**
	comp=E,3μm,0.6s						
LAKA	**Lakka**	**0.82**	**68**	P	**Pb**	**16 33 00.4**	**+0.3**
LAKA				S	**Sn**	**16 33 14.4**	**+1.0**
LAKA				AML	AML	16 33 16.6	
	comp=N,1493μm,0.4s						
LAKA				AML	AML	16 33 19.6	
	comp=E,1580μm,0.7s						
EFP	**Efpalio**	**0.86**	**55**	P	**Pn**	**16 33 01.0**	**-0.8**
EFP	**Efpalio**	**0.86**	**55**	P	**Pn**	**16 33 00.9**	**-0.8**
EFP				S	**Sn**	**16 33 15.4**	**+1.1**
EFP				AML	AML	16 33 20.6	
	comp=E,2333μm,0.6s						
EFP				AML	AML	16 33 26.8	
	comp=N,1476μm,0.7s						
LKD2	**Lefkada island**	**0.89**	**342**	P	**Pb**	**16 33 00.6**	**-0.8**
LKD2	**Lefkada island**	**0.89**	**342**	P	**Pb**	**16 33 00.6**	**-0.8**
KLV	**Kalavryta, Ach**	**0.91**	**83**	P	**Pb**	**16 33 01.2**	**-0.4**
KLV				S	**Sn**	**16 33 15.0**	**-0.5**
KLV				AML	AML	16 33 20.5	
	comp=E,1218μm,0.6s						
KLV				AML	AML	16 33 22.6	
	comp=N,1230μm,0.7s						
ALIK	**Aliki, Aigiali**	**0.93**	**69**	P	**Pn**	**16 33 02.5**	**-0.2**
ALIK				S	**Sn**	**16 33 16.6**	**+0.7**
TSLK	**Tsoukalades, L**	**0.93**	**343**	P	**Pb**	**16 33 01.4**	**-0.6**
TSLK				AML	AML	16 33 24.1	
	comp=E,2452μm,0.5s						
TSLK				AML	AML	16 33 24.8	
	comp=N,2023μm,0.5s						
SERG	**Sergoula**	**0.95**	**60**	P	**Pn**	**16 33 02.5**	**-0.6**
SERG				S	**Sn**	**16 33 18.4**	**+1.8**
SERG				AML	AML	16 33 20.2	
	comp=E,3106μm,0.2s						
SERG				AML	AML	16 33 20.8	
	comp=N,2986μm,0.2s						
ANX	**Ano Chora**	**0.97**	**47**	P	**Pn**	**16 33 03.1**	**-0.4**
ANX	**Ano Chora**	**0.97**	**47**	P	**Pn**	**16 33 03.0**	**-0.4**
ANX				AML	AML	16 33 26.6	
	comp=E,2189μm,0.4s						
ANX				AML	AML	16 33 30.6	
	comp=N,1978μm,0.5s						
ITM	**Ithomi**	**1.05**	**136**	P	**Pb**	**16 33 03.8**	**-0.2**
EVR	**Evrytania**	**1.16**	**32**	P	**Pg**	**16 33 06.5**	**+0.1**
EVR				AML	AML	16 33 34.9	
	comp=E,855μm,0.7s						
EVR				AML	AML	16 33 37.6	
	comp=N,729μm,0.8s						
THAL	**Thalero**	**1.31**	**85**	P	**Pg**	**16 33 09.0**	**-0.1**
THAL				AML	AML	16 33 41.2	
	comp=N,3265μm,0.4s						
THAL				AML	AML	16 33 41.2	
	comp=E,3225μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.39**	**39**	P	**Pg**	**16 33 11.1**	**+0.4**
MAKR				AML	AML	16 33 42.7	
	comp=E,1296μm,0.5s						
MAKR				AML	AML	16 33 45.6	
	comp=N,1324μm,0.7s						
ACOR	**Acrocorinthos**	**1.47**	**91**	P	**Pg**	**16 33 12.3**	**+0.1**
ACOR				AML	AML	16 33 46.1	
	comp=E,445μm,0.5s						
ACOR				AML	AML	16 33 47.7	
	comp=N,538μm,0.6s						
AXAR	**Agios Charalam**	**1.54**	**57**	P	**Pg**	**16 33 13.5**	**0.0**
AXAR				AML	AML	16 33 43.7	
	comp=E,1344μm,0.8s						
AXAR				AML	AML	16 33 51.9	
	comp=N,1589μm,0.5s						
LOUT	**Loutraki**	**1.56**	**88**	P	**Pg**	**16 33 13.3**	**-0.5**
IGT	**Igoumenitsa**	**1.68**	**342**	P	**Pb**	**16 33 14.7**	**0.0**
EPID	**Epidavros**	**1.70**	**100**	P	**Pg**	**16 33 16.1**	**-0.5**
ATAL	**Atalanti**	**1.75**	**64**	P	**Pb**	**16 33 16.2**	**+0.2**
VIL2	**Platees**	**1.81**	**81**	P	**Pg**	**16 33 18.3**	**-0.3**
VIL2				AML	AML	16 33 55.8	
	comp=E,919μm,1.0s						
VIL2				AML	AML	16 33 58.3	
	comp=N,438μm,0.6s						
THL	**Klokotos Trika**	**1.81**	**26**	P	**Pg**	**16 33 18.7**	**+0.1**
THL				AML	AML	16 33 54.7	
	comp=N,264μm,0.8s						
THL				AML	AML	16 33 58.9	
	comp=E,440μm,1.1s						
VLI	**Velíai**	**1.96**	**128**	P	**Pb**	**16 33 19.8**	**+0.2**
VLI				AML	AML	16 34 04.8	
	comp=N,232μm,0.7s						
VLI				AML	AML	16 34 05.3	
	comp=E,352μm,0.9s						
ATHU	**Athens Univers**	**2.19**	**88**	P	**Pb**	**16 33 24.0**	**+0.5**
VLY	**Voula,Athens**	**2.21**	**91**	P	**Pb**	**16 33 23.5**	**-0.2**
NEO	**Neokhori**	**2.21**	**51**	P	**Pb**	**16 33 24.2**	**+0.4**
XOR	**Xorichti**	**2.23**	**49**	P	**Pb**	**16 33 24.3**	**+0.2**
DION	**Dionisos Attik**	**2.31**	**86**	P	**Pb**	**16 33 25.9**	**+0.3**
KTHA	**Kythira Island**	**2.35**	**135**	P	**Pb**	**16 33 25.4**	**-0.8**

*SOME **06** 17:00:35.2, 38°.95N×70°.50E, h10km*
*NNC **06** 17:00:36.7±1.3, 38°.61N×70°.59E, h0km, mb4.6, mpv4.5, Error ellipse: s-maj=9.9km s-min=8.6km az=20.0*
*MOS **06** 17:00:37.5±1.4, 38°.78N×70°.72E, h14km, mb4.3/12, Error ellipse: s-maj=7.0km s-min=3.7km az=74.2*
*NEIC **06** 17:00:38.4±2.4, 38°.77N±0°.04×70°.68E±0°.04, h12km±3km, mb4.5/20, Error ellipse: s-maj=5.4km s-min=3.9km az=154.0*
*IDC **06** 17:00:44.1±2.8, 38°.76N×70°.94E, h68km±24km, mb3.7/16, mbtmp4.0/20, MS3.1/21, Error ellipse: s-maj=22.5km s-min=12.2km az=176.0*
ISC 06 17:00:39.1±0.4, 38°.80N±0°.03×70°.69E±0°.03, h17km, n199, σ2s35/208, mb4.1/35, MS3.2/18, 18C-16D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.36**	**304**	Pg	**Pg**	**17 00 44.9**	**-1.7**
GAR				Sg	**Sg**	**17 00 49.0**	**-2.6**
DRK	**Karamyk**	**1.09**	**51**		**Pb**	**17 00 56.6**	**-3.2**
CHGR	**Chuyangaron**	**1.21**	**264**		**Pn**	**17 00 59.6**	**-1.7**
CHGR				Sg	**Sb**	**17 01 14.4**	**-2.6**
CHGR	**Chuyangaron**	**1.21**	**264**	PG	**Pn**	**17 00 59.6**	**-1.7**
CHGR						17 01 14.4	
BTK	**Batken**	**1.26**	**4**		**Pn**	**17 01 01.4**	**-0.6**
BTK	**Batken**	**1.26**	**4**	PG	**Pn**	**17 01 01.4**	**-0.6**
TAS	**Tashkent**	**2.74**	**337**		**Pn**	**17 01 21.9**	**-0.4**
TAS	**Tashkent**	**2.74**	**337**	PN	**Pn**	**17 01 21.9**	**-0.4**
IUG	**luzhnay**	**3.38**	**352**	*e*PN	**Pn**	**17 01 34.1**	**+2.9**
IUG				*e*		17 01 41.6	
IUG				*e*		17 02 11.5	
IUG	**luzhnay**	**3.38**	**352**	*e*P	**Pn**	**17 01 34.7**	**+3.5**
	2μm,0.7s						
IUG				*e*S	**Sb**	**17 02 18.6**	**-0.9**
	2μm,0.6s						
IUG	**luzhnay**	**3.38**	**352**	*e*Pn	**Pn**	**17 01 34.1**	**+2.9**
	baz=351						
IUG				*e*Pg	**Pg**	**17 01 41.7**	**-2.2**
	baz=351						
IUG				*e*Sn	**Sn**	**17 02 11.6**	**+0.6**
	baz=351						
CHM	**Chimkent**	**3.61**	**347**	*e*P	**Pb**	**17 01 39.4**	**-3.1**
	4.9nm,0.2s						
CHM				*e*S	**Sb**	**17 02 26.6**	**+0.6**
	1μm,0.6s						
AML	**Almayashu**	**4.04**	**34**	P	**Pn**	**17 01 45.1**	**+4.7**
	SNR=158						
DZA	**Taraz**	**4.12**	**7**	*e*PN	**Pn**	**17 01 44.4**	**+3.2**
DZA	**Taraz**	**4.12**	**7**	*e*P	**Pb**	**17 01 46.4**	**-4.6**
	967nm,0.6s						
DZA				*e*S	**Sb**	**17 02 39.0**	**-1.5**
	907nm,0.6s						
DZA	**Taraz**	**4.12**	**7**	*e*Pn	**Pn**	**17 01 44.4**	**+3.2**
	baz=6.3						
KSH	**Kashi**	**4.17**	**78**	Pn	**Pn**	**17 01 39.9**	**-2.1**
KSH				Sn	**Sn**	**17 02 25.4**	**-4.9**
KSH				pmax	pmax		
	comp=Z,32nm,0.7s						
KSH				smax	smax		
	comp=N,870nm,0.7s						
KSH				smax	smax		
	comp=E,710nm,0.8s						
KK31	**Karatay Array**	**4.30**	**358**	Pn	**Pn**	**17 01 46.7**	**+3.0**
KK31	**Karatay Array**	**4.30**	**358**	*e*Pn	**Pn**	**17 01 47.3**	**+3.6**
KK31						17 02 42.3	
KK31	**Karatay Array**	**4.30**	**358**	Pn	**Pn**	**17 01 47.4**	**+3.6**
	comp=E,17nm,0.3s,baz=193,slow=17,SNR=313						
KK31				Sn	**Sb**	**17 02 40.4**	**-5.5**
	comp=E,94nm,0.5s,baz=180,slow=20,SNR=4.8						
KK31				⇑Lg	Lg	17 02 57.9	
	comp=E,248nm,0.7s,baz=179,slow=32,SNR=6.2						
KKAR	**Karatay Array**	**4.30**	**358**	Pn	**Pn**	**17 01 46.4**	**+2.6**
KKAR	**Karatay Array**	**4.30**	**358**		**Pn**	**17 01 46.8**	**+3.0**
KKAR	**Karatay Array**	**4.30**	**358**	PN	**Pn**	**17 01 46.4**	**+2.6**
MRKS	**Merke**	**4.38**	**25**	*e*P	**Pb**	**17 01 54.7**	**-1.0**
	comp=E,74nm,0.8s						
MRKS				*e*S	**Sb**	**17 02 52.0**	**+3.6**
	comp=E,156nm,0.4s						
KBL	**Kabul**	**4.45**	**198**	Pn	**Pn**	**17 01 46.4**	**+0.3**
KBL	**Kabul**	**4.45**	**198**	PN	**Pn**	**17 01 46.4**	**+0.3**
EKS2	**Erkin-Say**	**4.51**	**30**	P	Pn	17 01 51.7	+4.9
	SNR=126						
AAK	**Ala-Archa**	**4.80**	**36**	P	**Pn**	**17 01 54.2**	**+3.5**
	comp=E,183nm,0.6s,baz=218,slow=10,SNR=149						
AAK				S	**Sn**	**17 02 46.2**	**+0.3**
	comp=E,36nm,0.4s,baz=213,slow=17,SNR=1.4						
AAK	**Ala-Archa**	**4.80**	**36**	P	Pn	17 01 55.9	+5.1
	SNR=104						
AAK	**Ala-Archa**	**4.80**	**36**	Pn	**Pn**	**17 01 53.6**	**+2.8**
AAK	**Ala-Archa**	**4.80**	**36**	*ce*PN	**Pn**	**17 01 53.5**	**+2.8**
AAK				pmax	pmax		
	comp=Z,189nm,0.7s						
NRN	**Naryn**	**4.84**	**55**		**Pn**	**17 01 52.2**	**+0.7**
NRN	**Naryn**	**4.84**	**55**	PN	**Pn**	**17 01 52.2**	**+0.7**
KBK	**Karagaybulak**	**5.03**	**39**	P	Pn	17 01 59.8	+5.9
	SNR=317						
CEP	**Cherat**	**5.06**	**168**	P	Pb	17 02 01.3	-6.0
CHMS	**Chumysh**	**5.20**	**35**	P	Pn	17 02 01.2	+5.1
	SNR=8.1						
CHMS	**Chumysh**	**5.20**	**35**	PN	**Pn**	**17 01 59.5**	**+3.4**
CHMS				S	**Sn**	**17 03 02.8**	**+7.1**
CHMS	**Chumysh**	**5.20**	**35**	⇑Pn	**Pn**	**17 01 59.1**	**+2.9**
	comp=Z,170nm,0.7s						
CHMS				⇓Sn	**Sn**	**17 03 02.8**	**+7.1**
	comp=Z,86nm,0.7s						
USP	**Ospenovka**	**5.31**	**32**	P	**Pn**	**17 02 01.7**	**+4.1**
	SNR=54						
ULHL	**Ulahol**	**5.45**	**49**	P	Pn	17 02 04.6	+4.9
	SNR=21						
SGDS	**Sogindy**	**5.51**	**31**	*e*PN	**Pn**	**17 02 01.5**	**+1.0**
SGDS	**Sogindy**	**5.51**	**31**	*e*Pn	**Pn**	**17 02 01.5**	**+1.0**
	baz=31						
CHCP	**Chirah Chowk**	**5.54**	**157**	P	**Pn**	**17 02 04.8**	**+4.1**
NIL	**Nilore**	**5.54**	**157**	Pn	**Pn**	**17 02 03.6**	**+2.8**
NIL	**Nilore**	**5.54**	**157**	PN	**Pn**	**17 02 03.6**	**+2.8**
TKM2	**Tokmak 2**	**5.54**	**41**	P	Pn	17 02 06.2	+5.2
	SNR=175						
TKM2	**Tokmak 2**	**5.54**	**41**	*i* PN	**Pn**	**17 02 04.2**	**+3.2**
TKM2				pmax	pmax		
	comp=Z,73nm,0.7s						
TKM2	**Tokmak 2**	**5.54**	**41**	⇑Pn	**Pn**	**17 02 04.3**	**+3.2**
	comp=Z,85nm,0.8s						
TKM2				⇓Sn	**Sn**	**17 03 11.5**	**+7.0**
	comp=Z,100nm,0.8s						
TKM2				⇑Lg	Lg	17 03 35.9	
	comp=Z,101nm,0.8s						
KST	**Kastek**	**5.82**	**42**	*e*P	**Pb**	**17 02 23.0**	**+2.8**
	comp=Z,20nm,1.1s						
KST				*e*S	**Sg**	**17 03 41.8**	**-4.1**
	comp=Z,118nm,1.2s						
THW	**Thamme Wali**	**6.05**	**172**	P	**Pn**	**17 02 11.9**	**+4.0**
MTBS	**Maitube**	**6.13**	**43**	*e*P	**Pb**	**17 02 27.7**	**+2.3**
	comp=Z,15nm,0.7s						
MTBS				*e*S	**Sg**	**17 03 49.7**	**-6.0**
	comp=Z,82nm,1.1s						
AAA	**Alma-Ata**	**6.44**	**45**	*e*PN	**Pn**	**17 02 15.5**	**+2.3**
AAA				*i*		17 02 36.5	
AAA	**Alma-Ata**	**6.44**	**45**	*e*Pn	**Pn**	**17 02 15.6**	**+2.3**
	baz=45						
AAA				*i* Pg	Pb	17 02 36.5	+5.8
	baz=45						
AAA				*e*Lg	Lg	17 04 02.7	
	baz=45						
MDOK	**Medeo**	**6.49**	**46**	PN	**Pn**	**17 02 17.2**	**+3.3**
MDOK	**Medeo**	**6.49**	**46**	*e*Pn	**Pn**	**17 02 16.1**	**+2.2**
	baz=46						
MDOK				*e*Pg	Pb	17 02 36.6	+5.0
	baz=46						
MDOK				*e*Sn	**Sn**	**17 03 29.1**	**+1.5**
	baz=46						
MDOK	**Medeo**	**6.49**	**46**	⇓Pn	**Pn**	**17 02 17.2**	**+3.3**
	comp=Z,21nm,0.7s						
MDOK				Lg	Lg	17 04 07.8	
	comp=Z,144nm,1.5s						
KUU	**Kurty**	**6.63**	**38**	*e*PN	**Pn**	**17 02 18.0**	**+2.3**
KUU	**Kurty**	**6.63**	**38**	*e*Pn	**Pn**	**17 02 18.0**	**+2.3**
	baz=38						
BTLS	**Baital**	**6.72**	**21**	*e*PN	**Pn**	**17 02 19.2**	**+2.3**
BTLS				*e*		17 02 41.8	
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BTLS	**Baital**	**6.72**	**21**	*e*Pn	**Pn**	**17 02 19.2**	**+2.3**
	comp=Z,3.5nm,0.9s,baz=21						
BTLS				*e*Pg	Pg	17 02 41.8	-5.8
	baz=21						
CHKK	**Chushkaly**	**6.92**	**41**	*e*PN	**Pn**	**17 02 20.1**	**+0.4**
CHKK	**Chushkaly**	**6.92**	**41**	*e*Pn	**Pn**	**17 02 20.1**	**+0.4**
	baz=41						
JMU	**Jammu**	**6.97**	**149**	*e*P	Pn	17 02 26.5	+6.2
JMU				*e*S	**Sn**	**17 03 39.3**	**+0.2**
SATY	**Saty**	**7.22**	**51**	*e*P	**Pn**	**17 02 25.2**	**+1.2**
SATY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SATY	**Saty**	**7.22**	**51**	*e*Pn	**Pn**	**17 02 25.2**	**+1.2**
	comp=Z,2.4nm,0.9s,baz=51						
THN	**Thein Dam**	**7.55**	**146**	*e*P	Pn	17 02 35.3	+6.9
THN				*e*S	**Sn**	**17 03 55.1**	**+1.5**
UZB	**Uzynbulak**	**7.65**	**53**	*e*P	**Pn**	**17 02 32.0**	**+2.2**
UZB	**Uzynbulak**	**7.65**	**53**	*e*Pn	**Pn**	**17 02 32.1**	**+2.2**
	baz=53						
UZB				*e*Pg	Pb	17 02 58.1	+6.7
	baz=53						
UZB				*e*Lg	Lg	17 04 42.3	
	baz=53						
SHLS	**Shalkode**	**7.93**	**54**	*e*P	Pn	17 02 39.6	+5.9
SHLS	**Shalkode**	**7.93**	**54**	*e*Pn	Pn	17 02 39.7	+6.0
	baz=55						
SHLS				*e*Pg	Pb	17 03 09.0	+13
	baz=55						
SHLS				*e*Lg	Lg	17 04 59.5	
	baz=55						
PDGK	**Podgornoye**	**8.04**	**53**	P	**Pn**	**17 02 35.8**	**+0.7**
PDGK	**Podgornoye**	**8.04**	**53**	⇓Pn	**Pn**	**17 02 35.8**	**+0.7**
	comp=Z,11nm,0.8s						
PDGK				⇑Lg	Lg	17 04 06.3	
	comp=Z,66nm,1.0s						
HRA	**Herat**	**8.10**	**240**	Pn	**Pn**	**17 02 34.9**	**-1.2**
TDK	**Taldyqorghan**	**8.45**	**40**	*e*P	**Pn**	**17 02 42.8**	**+2.1**
TDK	**Taldyqorghan**	**8.45**	**40**	*e*Pn	**Pn**	**17 02 42.8**	**+2.1**
	baz=40						
SMLA	**Simla**	**9.31**	**143**	*e*P	**Pn**	**17 02 54.5**	**+2.0**
SMLA				*e*S	**Sn**	**17 04 35.6**	**-1.2**
SMLA				IAML		17 04 42.6	
	comp=N,49nm,1.1s						
SMLA				IAML		17 04 43.9	
	comp=E,40nm,0.8s						
OTUK	**Ortayu**	**9.52**	**7**	P	**Pn**	**17 02 57.1**	**+1.8**
OTUK				S	**Sn**	**17 04 48.2**	**+6.4**
OTUK	**Ortayu**	**9.52**	**7**	⇑Pn	**Pn**	**17 02 57.1**	**+1.8**
	comp=E,12nm,0.8s						
OTUK				⇓Sn	**Sn**	**17 04 48.2**	**+6.4**
	comp=E,82nm,1.1s						
OTUK				⇓Lg	Lg	17 04 53.0	
	comp=E,109nm,1.3s						
GEYT	**Alibeck**	**9.92**	**269**	P	Pn	17 03 06.5	+5.7
	comp=E,2.4nm,0.4s,baz=55,slow=12,SNR=5.1						
GEYT				S	**Sn**	**17 04 53.0**	**+1.3**
	comp=E,12nm,0.8s,baz=194,slow=12,SNR=3.6						
GEYT				LR	LR	17 07 56.2	
	comp=E,123nm,20.4s,baz=114,slow=43						
GEYT	**Alibeck**	**9.92**	**269**	Pn	**Pn**	**17 03 00.1**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**9.92**	**269**	Pn	**Pn**	**17 03 00.5**	**-0.4**
BRZS	**Berezniki**	**11.27**	**7**	*e*P	**Pn**	**17 03 20.0**	**+0.8**
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRZS	**Berezniki**	**11.27**	**7**	*e*Pn	**Pn**	**17 03 20.1**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=6.5						
BRZS				*e*Lg	Lg	17 06 37.4	
	baz=6.5						
MAKZ	**Makanchi**	**11.51**	**42**	Pn	**Pn**	**17 03 23.2**	**+0.6**
MAKZ

WMQ LR LR
comp=E,290nm,8.9s
WMQ LR LR
comp=Z,130nm,11.9s
BVA0 Borovoye Array 14.23 359 P **Pn 17 03 59.4 -0.3**
BVA0 17 06 36.2
BVA0 Borovoye Array 14.23 359 ⇓Pn **Pn 17 04 01.1 +1.4**
comp=Z,3.5nm,0.7s,baz=0.0,slow=0.1,SNR=21
BVA0 ⇑Sn **Sn 17 06 42.2 +5.2**
comp=Z,11nm,1.0s,baz=0.0,slow=0.1,SNR=4.6
BVAR Borovoye Array 14.23 359 LR LR 17 09 10.2
comp=Z,31nm,21.2s,baz=64,slow=36
BRVK Borovoye 14.26 359 Pn **Pn 17 04 00.3 +0.2**
BRVK Borovoye 14.26 359*ce*P **Pn 17 04 01.4 +1.3**
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 14.26 359 ⇑Pn **Pn 17 04 02.4 +2.2**
comp=Z,7.1nm,0.8s
BRVK ⇑Sn **Sn 17 06 42.9 +5.1**
comp=Z,4.3nm,0.7s
AKTO Aktyubinsk 14.70 326 P **Pn 17 04 05.9 -0.2**
comp=Z,2.8nm,0.5s,baz=136,slow=13,SNR=12
AKTO S **Sn 17 06 45.0 -3.5**
comp=Z,4.3nm,0.8s,baz=151,slow=23,SNR=1.7
AKTO LR LR 17 09 37.4
comp=Z,70nm,20.2s,baz=140,slow=36
AKTO Aktyubinsk 14.70 326 P **Pn 17 04 05.5 -0.6**
AKTO Aktyubinsk 14.70 326 ⇓Pn **Pn 17 04 05.5 -0.6**
comp=Z,14nm,1.2s
JHNI Jhansi 14.85 151 *e*P **P 17 04 14.5 +0.4**
ZAA0 Zalesovo Array 17.96 28 **Pn 17 04 46.0 -1.8**
ZALV Zalesovo Beam 17.96 28 P **Pn 17 04 46.6 -1.2**
comp=Z,4.5nm,0.6s,baz=221,slow=11,SNR=14
ZALV LR LR 17 12 16.7
comp=Z,96nm,19.1s,baz=210,slow=39
ZALV Zalesovo Beam 17.96 28 P **Pn 17 04 45.9 -1.9**
ZALV Zalesovo Beam 17.96 28 *i* P **P 17 04 50.5 +2.2**
ZALV pmax pmax
comp=Z,7.0nm,0.7s
WSAR Wadi Sarin 18.61 217 LR LR 17 14 02.8
comp=Z,70nm,21.1s,baz=18,slow=43
GOMU GeErMu 19.30 90 P **P 17 05 03.3 -0.3**
GOMU pP pP 17 05 08.1 -1.1
GOMU sP sP 17 05 09.2 -2.5
GOMU pmax pmax
comp=Z,4.0nm,0.9s
GOMU pmax pmax
comp=Z,50nm,4.7s
GOMU LR LR
comp=N,96nm,8.7s
GOMU LR LR
comp=E,83nm,5.7s
GOMU LR LR
comp=Z,110nm,9.6s
ARU Arti 19.39 339 P **Pn 17 05 05.3 +0.2**
comp=Z,5.0nm,0.7s,baz=166,slow=8.1,SNR=10
ARU Arti 19.39 339 **P 17 05 03.2 -0.7**
ARU Arti 19.39 339*c* *i*P **Pn 17 05 05.7 +0.6**
ARU S **S 17 08 46.0 +3.5**
ARU pmax pmax
comp=Z,12nm,1.1s
GNI Garni 20.06 282 LR LR 17 14 38.9
comp=Z,34nm,19.5s,baz=115,slow=41
ZEI Tsey 20.64 290 *e*P Pn 17 05 27.1 +6.9
ZEI pmax pmax
comp=Z,11nm,1.2s
ONI Oni 20.96 289 P **P 17 05 22.1 +0.8**
ONI IAmb IAmb 17 05 27.1
comp=Z,23nm,0.8s
ONI Oni 20.96 289 P **P 17 05 22.1 +0.8**
ONI pmax pmax
comp=Z,23nm,0.8s
BELG Belogornoye 20.98 318 P Pn 17 05 24.2 +0.3
comp=Z,36nm,0.9s,baz=128,slow=5.6,SNR=6.8
BELG LR LR 17 14 08.1
comp=Z,39nm,18.4s,baz=144,slow=38
comp=Z,36nm,0.9s
KBZ Khabaz 21.42 292 P **P 17 05 28.3 +2.3**
comp=Z,4.4nm,0.8s,baz=133,slow=8.6,SNR=7.4
KBZ LR LR 17 16 04.7
comp=Z,64nm,18.3s,baz=66,slow=43
comp=Z,4.4nm,0.8s
KBZ Khabaz 21.42 292 *i* P **P 17 05 28.8 +2.8**
KIV Kislovodsk 21.59 293 P **P 17 05 26.3 -1.7**
KIV IAmb IAmb 17 05 49.0
comp=Z,9.7nm,0.7s
KIV Kislovodsk 21.59 293 *e*P **P 17 05 30.2 +2.2**
KIV *e*S **S 17 09 30.4 +3.9**
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,29nm,14.0s
HYBB Hyderabad (bro 22.38 160 *e*P **P 17 05 36.8 +0.2**
GTA Gaotai 22.57 79 ⇓P **P 17 05 38.2 -0.4**
GTA pP pP 17 05 43.1 -1.1
GTA sP sP 17 05 45.8 -1.0
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,56nm,4.0s
GTA LR LR
comp=N,110nm,14.2s
GTA LR LR
comp=E,130nm,14.5s
GTA LR LR
comp=Z,110nm,17.5s
VRH Novokhopyorsk 23.77 311 *e*P P 17 05 58.6 +8.1
VRH pmax pmax
comp=Z,10.0nm,0.7s
MOY Mondy 24.71 49 *e*P **P 17 06 00.3 +0.9**
VSR Storozhevoye 25.30 310 *e*P **P 17 06 04.0 -0.5**
VSR pmax pmax
comp=Z,3.0nm,0.6s
VORR Voronezh 25.41 311 *e*P **P 17 06 09.0 +3.5**
ZAK Zakamensk 25.72 53 *e*P **P 17 06 08.6 +0.1**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 27.29 59 P **P 17 06 22.8 0.0**
comp=Z,0.7nm,0.7s,baz=262,slow=10.0,SNR=5.6
comp=Z,0.7nm,0.7s
ULN Ulaanbaatar 27.74 59*ce*P **P 17 06 26.5 -0.3**
ULN pmax pmax
comp=Z,5.0nm,2.5s
PZH PanZhiHua 28.73 106 P **P 17 06 38.6 +2.8**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,80nm,7.0s
EIL Elat 30.76 264 LR LR 17 21 29.9
comp=Z,54nm,18.3s,baz=89,slow=40
XAN Xi'an 30.97 87 P P 17 07 02.0 +6.5
XAN pP sP 17 07 05.8 +1.8
XAN pmax pmax
comp=Z,5.0nm,1.1s
HHC Hu-ho-hao-te 31.26 73 *e*P **P 17 06 56.4 -1.6**
HHC pmax pmax
comp=Z,79nm,0.9s
HHC pmax pmax
comp=Z,170nm,5.0s
AKASG Malin Array Be 31.36 306 P **P 17 06 59.0 +0.4**
comp=Z,0.5nm,0.4s,baz=81,slow=7.2,SNR=8.0
AKASG LR LR 17 22 09.8
comp=Z,44nm,19.2s,baz=98,slow=41
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 31.36 306 *i* P **P 17 07 00.3 +1.7**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKBB Malin Array Si 31.36 306 P **P 17 06 58.4 -0.2**
AKBB Malin Array Si 31.36 306 P **P 17 06 58.4 -0.2**
AKBB pmax pmax
comp=Z,2.0nm,0.8s
KIEV Kiev 31.37 306 P **P 17 07 01.0 +2.3**
NRIK Noril'sk 31.92 11 *i* P **P 17 07 02.6 -0.7**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
MNK Minsk 32.73 313 *i* P **P 17 07 10.0 -0.6**
MNK *i* 17 08 18.1
MNK *i* 17 09 55.0
MNK *i* S **S 17 12 27.5 +1.3**
MNK *i* SS **SnSn 17 14 24.2 +2.4**
MNK pmax pmax
comp=Z,7.0nm,0.6s
MNK pmax pmax
comp=N,2.0nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK MLR MLR
comp=N,19nm,17.0s
MNK MLR MLR
comp=E,30nm,22.0s
MNK MLR MLR
comp=Z,61nm,20.0s
MNK Minsk 32.73 313 *i* P **P 17 07 10.0 -0.6**
comp=E,2.0nm,0.8s
MNK *i* P **P 17 07 10.0 -0.6**
comp=N,2.0nm,0.9s
MNK *i* P **P 17 07 10.0 -0.6**
comp=Z,7.0nm,0.7s,baz=280
MNK *i* PP **PnPn 17 08 18.1 -0.6**
MNK *i* PPP PPP 17 08 28.3
MNK *i* S **S 17 12 27.5 +1.3**
MNK *i* SS **SnSn 17 14 24.2 +2.4**
MNK *i* SSS SSS 17 14 39.7
MNK *i* LQ LQ 17 17 57.1
MNK *i* LR LR 17 20 34.0
MNK *i* LRM MLR 17 21 36.6
comp=N,19nm,16.6s
MNK *i* LRM MLR 17 21 37.3
comp=E,30nm,22.4s
MNK *i* LRM MLR 17 21 46.0
comp=Z,61nm,19.8s
ENH Enshi 32.87 93 P **P 17 07 11.4 -0.8**
FIA1 FINESS Array S 35.46 324 P **P 17 07 34.5 +0.3**
FIA1 IAmb IAmb 17 08 07.8
comp=Z,12nm,1.4s
FINES FINESS Array B 35.46 324 P **P 17 07 34.5 +0.4**
comp=Z,2.0nm,0.8s,baz=106,slow=10,SNR=9.7
FINES LR LR 17 21 25.3
comp=Z,27nm,21.6s,baz=103,slow=35
comp=Z,2.0nm,0.8s
FINES FINESS Array B 35.46 324 *i* P **P 17 07 36.9 +2.7**
FINES pmax pmax
comp=Z,1.0nm,0.5s
UZH Uzhgorod 35.80 302 ⇓*i*P **P 17 07 39.0 +1.8**
UZH *i* 17 07 40.6
UZH *e* 17 07 43.9
IDI Anoyia 36.44 279 LR LR 17 25 35.0
comp=Z,13nm,19.0s,baz=168,slow=41
OJC Ojcow 37.36 305 P **P 17 07 49.7 -0.8**
OJC IAmb IAmb 17 07 56.3
comp=Z,9.7nm,1.5s
OJC Ojcow 37.36 305 P **P 17 07 49.7 -0.8**
OJC pmax pmax
comp=Z,10.0nm,1.5s
ARCES ARCESS Array B 38.93 337 P **P 17 08 04.4 +0.8**
comp=Z,1.6nm,0.7s,baz=101,slow=8.6,SNR=7.1
comp=Z,1.6nm,0.7s
ARCES ARCESS Array B 38.93 337 P **P 17 08 04.3 +0.7**
ARCES IAmb IAmb 17 08 30.7
comp=Z,11nm,1.4s
ARCES ARCESS Array B 38.93 337 *e*P **P 17 08 06.4 +2.8**
VRAC Vranov 39.49 304 LR LR 17 28 09.1
comp=Z,24nm,18.6s,baz=88,slow=42
HFS Hagfors 41.13 320 LR LR 17 25 37.8
comp=Z,30nm,18.3s,baz=50,slow=36
NC405 NORSAR Array S 42.18 322 P **P 17 08 30.2 -0.3**
NC405 IAmb IAmb 17 08 40.6
comp=Z,21nm,1.2s
NC602 NORSAR Array S 42.24 321 P **P 17 08 30.2 -0.7**
NORES NORESS Array B 42.24 321 P **P 17 08 34.2 +3.2**
YAK Yakutsk 42.26 37 P **P 17 08 28.5 -2.6**
comp=Z,2.3nm,0.5s,baz=75,slow=5.1,SNR=7.1
comp=Z,2.3nm,0.5s
YAK Yakutsk 42.26 37 P **P 17 08 29.1 -2.0**
YAK IAmb IAmb 17 08 31.1
comp=Z,9.6nm,0.9s
YAK Yakutsk 42.26 37 *e*P **P 17 08 28.8 -2.3**
YAK pmax pmax
comp=Z,12nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.3s
NC303 NORSAR Array S 42.35 322 P **P 17 08 30.5 -1.4**
NC303 IAmb IAmb 17 09 06.2
comp=Z,16nm,1.4s
NB201 NORSAR Array S 42.38 322 P **P 17 08 30.5 -1.7**
NB2 NORSAR Subarra 42.41 322 P **P 17 08 31.1 -1.4**
comp=Z,3.9nm,1.1s,baz=93,slow=8.6
NOA NORSAR Array B 42.41 322 P **P 17 08 31.2 -1.2**
comp=Z,1.3nm,0.8s,baz=94,slow=8.1,SNR=5.9
NOA LR LR 17 26 27.9
comp=Z,19nm,21.7s,baz=255,slow=36
comp=Z,1.3nm,0.8s
NBO00 NORSAR Array S 42.63 322 P **P 17 08 35.4 +1.2**
NC204 NORSAR Array S 42.65 322 P **P 17 08 35.6 +1.2**
NC204 IAmb IAmb 17 09 18.6
comp=Z,20nm,1.2s
KONO Kongsberg 43.16 319 P **P 17 08 38.8 +0.3**
KONO Kongsberg 43.16 319 P **P 17 08 38.8 +0.3**
KONO pmax pmax
comp=Z,24nm,1.3s
TIXI Tiksi 43.74 23 P **P 17 08 44.1 +1.1**
TIXI IAmb IAmb 17 08 48.7
comp=Z,6.7nm,0.8s
TIXI Tiksi 43.74 23 *i* P **P 17 08 42.8 -0.2**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
KLR Kul'dur 44.02 56 P **P 17 08 44.2 -1.3**
comp=Z,0.9nm,0.7s,baz=248,slow=9.6,SNR=2.7
comp=Z,0.9nm,0.7s
DAVOX Davos/Dischmat 44.34 301 LR LR 17 29 34.5
comp=Z,28nm,19.7s,baz=84,slow=39
KSRS Korea Array 44.40 73 LR LR 17 28 27.9
comp=Z,40nm,19.6s,baz=250,slow=38
MJAR Matsushiro Arr 52.37 70 P **P 17 09 47.6 -2.6**
comp=Z,2.2nm,0.8s,baz=288,slow=8.3,SNR=11
comp=Z,2.2nm,0.8s
MA2 Magadan 52.72 39 LR LR 17 33 08.0
comp=Z,27nm,21.5s,baz=134,slow=37
ESDC Sonseca Array 56.19 296 P **P 17 10 19.4 +1.3**
comp=Z,0.6nm,0.6s,baz=54,slow=6.7,SNR=6.2
comp=Z,0.6nm,0.6s
BILL Bilibino 56.66 27⇓*e*P **P 17 10 20.1 -0.8**
BILL *e* 17 12 32.1
BILL pmax pmax
comp=Z,3.0nm,1.1s
BILL MLR MLR
comp=Z,28nm,16.0s
TORD Torodi Ar. Bea 65.55 267 P **P 17 11 21.4 -0.6**
comp=Z,1.0nm,0.6s,baz=39,slow=4.7,SNR=5.8
comp=Z,1.0nm,0.6s
ILAR Eielson Array 72.64 16 P **P 17 12 04.0 -1.3**
comp=Z,0.8nm,0.9s,baz=323,slow=5.9,SNR=6.2
comp=Z,0.8nm,0.9s
ILAR Eielson Array 72.64 16 P **P 17 12 04.0 -1.3**
DBIC Dimbokro 74.59 266 LR LR 17 52 32.5
comp=Z,14nm,18.8s,baz=127,slow=42
YKA Yellowknife Ar 78.96 3 P **P 17 12 41.4 0.0**
comp=Z,1.7nm,0.7s,baz=347,slow=6.1,SNR=4.2
comp=Z,1.7nm,0.7s
WRA Warramunga Arr 83.41 122 P **P 17 13 01.4 -4.2**
comp=Z,1.4nm,0.9s,baz=326,slow=4.6,SNR=3.7
comp=Z,1.4nm,0.9s
WRA Warramunga Arr 83.41 122 *i* P **P 17 13 07.4 +1.8**
WRA pmax pmax
comp=Z,3.0nm,1.0s
ASAR Alice Springs 85.77 125 P **P 17 13 16.2 -1.3**
comp=Z,1.2nm,1.0s,baz=310,slow=4.9,SNR=6.0
comp=Z,1.2nm,1.0s

*NNC **06** 17:13:21.8±3.2, 37°.63N×71°.56E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=24.6km s-min=21.6km az=177.0*
SOME 06 17:13:14.8, 38°.28N×72°.38E, h10km, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**4.26**	**336**	*e*P		Pg	17 14 34.7 -1.7
	91nm,0.4s						
IUG				*e*S		Sg	17 15 32.5 +0.9
	11nm,0.3s						
MRKS	**Merke**	**4.50**	**8**	*e*P		Pg	17 14 39.1 -2.0
	1.5nm,0.1s						
MRKS				*e*S		Sg	17 15 39.6 +0.2
	2.9nm,0.2s						
KK31	**Karatay Array**	**5.02**	**344**	⇑P		Pb	17 14 46.1 +3.4
	11nm,0.5s,baz=175,slow=12,SNR=146						
KK31				⇓S		Sg	17 15 50.2 -5.8
	1.2nm,0.3s,baz=164,slow=22,SNR=5.0						
CHMS	**Chumysh**	**5.04**	**20**	⇓P		Pg	17 14 50.3 -1.1
	2.1nm,0.4s						
CHMS				⇑S		Sg	17 16 00.2 +3.5
	4.0nm,0.5s						
TKM2	**Tokmak 2**	**5.24**	**27**	⇑P		Pg	17 14 52.6 -2.5
	1.4nm,0.5s						
TKM2				⇑S		Sg	17 16 05.7 +2.7
	4.3nm,1.0s						
SGDS	**Sogindy**	**5.44**	**18**	*e*P		Pg	17 14 57.5 -1.4
	0.5nm,0.1s						
SGDS				*e*S		Sg	17 16 10.6 +1.3
	6.1nm,0.5s						
KST	**Kastek**	**5.48**	**29**	*e*P		Pg	17 14 58.2 -1.5
	1.1nm,0.5s						
KST				*e*S		Sg	17 16 12.3 +1.7
	2.5nm,1.0s						

IDC 06 18:00:52.9±4.9, 27°.68S×177°.68W, h220km±66km, mb2.5/2, mbtmp3.1/2, Error ellipse: s-maj=157.7km s-min=37.5km az=166.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.58**	**188**	P		Pn	18 01 29.9 +1.0
	354nm,0.3s,baz=93,slow=4.9,SNR=7.7						
RAO				S		S	18 01 57.0 -0.2
	372nm,0.3s,baz=84,slow=21,SNR=2.5						
ASAR	**Alice Springs**	**43.61**	**264**	P		P	18 08 35.8 -0.1
	0.1nm,0.6s,baz=101,slow=8.2,SNR=6.6						
	0.1nm,0.6s						
WRA	**Warramunga Arr**	**44.35**	**269**	P		P	18 08 41.4 -0.3
	0.2nm,0.6s,baz=106,slow=6.2,SNR=6.9						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**142.69**	**341**	PKP		PKPdf	18 19 57.7 -1.4
	1.1nm,0.9s,baz=27,slow=3.4,SNR=4.9						
NB2	**NORSAR Subarra**	**146.11**	**352**	PKP		PKiKP	18 20 08.8 -0.7
	comp=Z,0.3nm,0.5s,baz=13,slow=2.9						
NOA	**NORSAR Array B**	**146.11**	**352**	PKPbc		PKPbc	18 20 06.4 -0.1
	comp=Z,0.4nm,0.7s,baz=18,slow=3.0,SNR=3.3						

*GCG **06** 18:04:10.7±0.8, 14°.91N×89°.55W, h5km±41km, MD3.3*
*SNET **06** 18:04:10.3±0.7, 15°.01N×89°.64W, h14km±4km, ML3.4*
ISC 06 18:04:07.4±2.6, 15°.1N±0°.1×89°.50W±0°.07, h17km±14km, n14, σ0°.41/19, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRL	**Marmol**	**0.18**	**258**	⇓*i*P		**Pb**	**18 04 12.7 +0.3**
NBG	**Las Nubes**	**0.98**	**237**	*e*P		**Pn**	**18 04 26.9 +0.4**
NUBE	**Las Nubes**	**1.24**	**193**	*e*P		**Pn**	**18 04 30.1 0.0**
NUBE				*e*S		**Sb**	**18 04 45.6 -0.6**
CEVE	**Cerro Verde**	**1.29**	**185**	*e*P		**Pb**	**18 04 31.5 +0.2**
PCG	**Pacaya**	**1.29**	**236**	*e*P		**Pg**	**18 04 32.8 +0.4**
PCG				*e*S		**Sg**	**18 04 49.7 +0.3**
CEDA	**San Andres**	**1.31**	**176**	*e*P		**Pb**	**18 04 31.8 +0.2**
JAYA	**Jayaque - finc**	**1.46**	**178**	*e*P		**Pb**	**18 04 34.3 +0.2**
JAYA				IAML			18 04 54.3
	comp=Z,522nm,0.2s						
FUG	**Fuego 3**	**1.46**	**243**	*e*P		**Pg**	**18 04 35.4 -0.1**
FUG				*e*S		**Sg**	**18 04 54.7 0.0**
PAVA	**Las Pavas**	**1.50**	**159**	*e*P		**Pg**	**18 04 36.2 -0.1**
PAVA				*e*S		**Sg**	**18 04 56.2 +0.3**
PAVA				IAML			18 05 00.1
	comp=Z,804nm,0.4s						
SJTE	**Alcalda de S**	**1.57**	**162**	*e*P		**Pg**	**18 04 37.4 -0.3**
SJTE				*e*S		**Sg**	**18 04 57.6 -0.6**
SCLA	**Alcaldia de Sa**	**1.60**	**152**	*e*P		**Pg**	**18 04 38.1 0.0**
SCLA				*e*S		**Sg**	**18 04 59.4 +0.5**
COEG	**Centro de Oper**	**1.61**	**158**	*e*S		**Sg**	**18 04 59.1 -0.2**
STG3	**Santiaguito 3,**	**2.04**	**259**	*e*P		**Pg**	**18 04 45.8 -0.9**
LCND	**La Caada**	**2.38**	**139**	IAML			18 05 26.5
	comp=Z,180nm,0.2s						

*JMA **06** 18:13:32.3±0.1, 41°.8N±0°.3×140°.4E±0°.7, h137km±1km, MV3.1/40, OSHIMA PEN REG HOKKAIDO*
*IDC **06** 18:13:33.6±2.4, 41°.69N×140°.30E, h157km±23km, mb3.2/13, mbtmp3.6/16, Error ellipse: s-maj=17.6km s-min=14.8km az=88.0*
ISC 06 18:13:32.1±0.7, 41°.75N±0°.05×140°.38E±0°.06, h140km±5km, n33, σ0°.56/42, mb3.5/13, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSR	**Shiriuchi**	**0.22**	**172**	*e*P		**Pn**	**18 13 51.2 0.0**
JSR				*e*S		**Sn**	**18 14 05.4 -0.3**
JOMM	**Oshimamatsumae**	**0.35**	**232**	*e*P		**Pn**	**18 13 51.6 -0.1**
JOMM				*e*S		**Sn**	**18 14 06.3 0.0**
JYM2	**Yakumo 2**	**0.37**	**359**	*e*P		**Pn**	**18 13 51.6 -0.1**
JYM2				*e*S		**Sn**	**18 14 06.4 -0.3**
JKB	**Kayabe**	**0.51**	**74**	*e*P		**Pn**	**18 13 52.4 +0.1**
JKB				*e*S		**Sn**	**18 14 07.7 0.0**
JOT	**Ohata**	**0.62**	**126**	*e*P		**Pn**	**18 13 53.0 +0.1**
JOT				*e*S		**Sn**	**18 14 09.0 +0.2**
JOSM	**Okushiri--Mats**	**0.75**	**297**	*e*P		**Pn**	**18 13 53.6 -0.3**
JHST	**Hiyamasetana**	**0.77**	**331**	*e*P		**Pn**	**18 13 53.9 -0.2**
JHST				*e*S		**Sn**	**18 14 10.5 -0.2**
JNB	**Noboribetsu**	**0.88**	**34**	*e*P		**Pn**	**18 13 54.6 -0.2**
JSH	**Shimam**	**0.93**	**345**	*e*P		**Pn**	**18 13 55.2 0.0**
JTM	**Tenmabayashi**	**1.09**	**151**	*e*P		**Pn**	**18 13 57.0 +0.3**
JTM				*e*S		**Sn**	**18 14 15.9 +0.4**
JIW	**Iwasaki**	**1.18**	**194**	*e*P		**Pn**	**18 13 58.1 +0.5**
JIW				*e*S		**Sn**	**18 14 17.6 +0.5**
JEW	**Eniwo**	**1.35**	**36**	*e*P		**Pn**	**18 13 59.9 +0.6**
JIAM	**Iburiatsuma**	**1.44**	**52**	*e*P		**Pn**	**18 14 00.9 +0.7**
JAH	**Hinai**	**1.57**	**173**	*e*P		**Pn**	**18 14 02.2 +0.6**
JANG	**Nango**	**1.62**	**147**	*e*P		**Pn**	**18 14 01.7 -0.6**
JANG				*e*S		**Sn**	**18 14 24.8 -0.4**
JISS	**Ishikarishitsu**	**1.71**	**26**	*e*P		**Pn**	**18 14 04.1 +0.9**
JNBK	**Urakawa-nobuka**	**1.85**	**72**	*e*P		**Pn**	**18 14 04.6 -0.2**
MJAR	**Matsushiro Arr**	**5.46**	**199**	P		**Pn**	**18 14 52.1 +0.5**
	0.6nm,0.3s,baz=5.3,slow=15,SNR=6.2						
USRK	**Ussuriysk Ar.**	**6.62**	**295**	P		**Pn**	**18 15 07.8 +0.9**
	13nm,0.8s,baz=96,slow=15,SNR=27						
KSRS	**Korea Array**	**10.52**	**250**	P		**Pn**	**18 16 00.8 +1.7**
	0.9nm,0.9s,baz=61,slow=12,SNR=5.2						
SONM	**Songino Array**	**24.74**	**296**	P		**P**	**18 18 40.3 -0.1**
	0.5nm,0.5s,baz=101,slow=7.9,SNR=2.4						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**38.26**	**308**	P		**P**	**18 20 37.9 -0.5**
	1.5nm,0.4s,baz=94,slow=8.2,SNR=6.7						
	1.5nm,0.4s						
MKAR	**Makanchi Array**	**41.08**	**297**	P		**P**	**18 21 01.4 -0.4**
	1.7nm,0.7s,baz=84,slow=12,SNR=18						
	1.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.16**	**249**	P		**P**	**18 21 10.6 -0.3**
	0.4nm,0.4s,baz=52,slow=9.3,SNR=2.5						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**46.01**	**35**	P		**P**	**18 21 41.5 +0.5**
	1.2nm,0.9s,baz=287,slow=6.2,SNR=9.2						
	1.2nm,0.9s						
YKA	**Yellowknife Ar**	**60.17**	**31**	P		**P**	**18 23 24.4 -0.1**
	0.5nm,0.6s,baz=300,slow=6.9,SNR=1.8						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**61.63**	**186**	P		**P**	**18 23 33.5 -1.3**
	1.3nm,1.1s,baz=0.8,slow=7.2,SNR=8.1						
	1.3nm,1.1s						
FINES	**FINESS Array B**	**64.29**	**331**	P		**P**	**18 23 51.2 -0.8**
	0.6nm,0.6s,baz=69,slow=7.7,SNR=4.8						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**65.36**	**187**	P		**P**	**18 23 58.9 -0.4**
	0.4nm,0.6s,baz=9.0,slow=5.0,SNR=7.5						
	0.4nm,0.6s						
NOA	**NORSAR Array B**	**69.55**	**336**	P		**P**	**18 24 25.0 -0.2**
	0.1nm,0.4s,baz=24,slow=3.6,SNR=2.7						
	0.1nm,0.4s						
NVAR	**Mina Array Bea**	**72.83**	**54**	P		**P**	**18 24 46.7 +1.0**
	0.4nm,0.7s,baz=306,slow=3.2,SNR=2.2						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**74.95**	**46**	P		**P**	**18 24 57.9 -0.1**
	0.5nm,0.4s,baz=281,slow=1.5,SNR=5.1						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**87.86**	**52**	P		**P**	**18 26 06.1 +0.2**
	0.2nm,0.5s,baz=276,slow=3.5,SNR=2.6						
	0.2nm,0.5s						

*IDC **06** 18:16:03.1±6.5, 5°.92S×146°.38E, h134km±65km, mb3.1/3, mbtmp3.5/5, Error ellipse: s-maj=69.4km s-min=28.5km az=142.0*
ISC 06 18:15:59.8±1.4, 5°.7S±0°.1×146°.2E±0°.2, h100km, n6, σ0°.83/7, mb3.4/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.81**	**165**	P		**Pn**	**18 16 57.5 +1.0**
	45nm,0.4s,baz=349,slow=10,SNR=56						

PMG				S		Sn	18 17 39.1	-1.1	
	27nm,0.4s,baz=323,slow=20,SNR=9.3								
WRA	**Warramunga Arr**	**18.25**	**218**	P		P	18 20 05.3	-0.3	
	0.3nm,0.5s,baz=44,slow=12,SNR=8.2								
ASAR	**Alice Springs**	**21.42**	**212**	P		P	18 20 40.1	+0.2	
	0.4nm,0.6s,baz=46,slow=7.7,SNR=7.5								
	0.4nm,0.6s								
FITZ	**Fitzroy Crossi**	**23.54**	**237**	P		P	18 21 01.5	+0.2	
	0.9nm,0.5s,baz=64,slow=9.0,SNR=1.3								
	0.9nm,0.5s								
ILAR	**Eielson Array**	**85.53**	**23**	P		P	18 28 26.3	-0.1	
	0.5nm,0.6s,baz=242,slow=4.9,SNR=6.1								
	0.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**144.23**	**285**	PKP		**PKPdf**	18 35 24.7	-0.5	
	0.4nm,0.5s,baz=76,slow=3.0,SNR=4.5								

*AZER **06** 18:40:29.9±4.1,36°.07N×44°.75E,h1km, Error ellipse:*
s-maj=37.7km s-min=22.2km az=173.0
*DDA **06** 18:40:31.2±0.0,36°.22N×45°.15E,h3km±3km, ML3.2*
*TEH **06** 18:40:32.1,36°.45N×45°.23E,h5km, ML3.4*
*ISN **06** 18:40:34.7±1.5,36°.57N×45°.33E,h10km±999km, ML3.2*
ISC 06 18:40:33.6±1.3,36°.46N±0°.02×45°.29E±0°.03,h2km±14km, n47,σ1§56/63,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.45**	**48**	*e*Pg	**Pg**	**18 40 41.6**	**-0.7**
MAHB				*e*Sg	**Sg**	**18 40 48.8**	**+0.6**
MAHB				*e*		18 40 53.2	
	comp=Z,33μm,0.3s						
IAZR	**Azarshahr**	**1.33**	**24**	*e*Pg	**Pn**	**18 40 57.9**	**-1.6**
IAZR				*e*		18 41 22.0	
	comp=Z,12μm,0.4s						
YOVA	**Hakkari_Yksek**	**1.38**	**325**	P	**Pb**	**18 40 59.4**	**-0.8**
YOVA				S	**Sg**	**18 41 22.5**	**+4.6**
YOVA				*i* AML	AML	18 41 26.0	
	comp=Z,337nm,0.8s						
CUKT	**Cukurca**	**1.56**	**301**	P	**Pn**	**18 41 01.0**	**-1.4**
CUKT				S	**Sg**	**18 41 24.5**	**+0.9**
CUKT				*i* AML	AML	18 41 30.0	
	comp=Z,756nm,1.0s						
HAKT	**HAKKARI**	**1.67**	**311**	P	**Pb**	**18 41 04.8**	**-0.4**
HAKT				S	**Sg**	**18 41 29.6**	**+2.3**
HAKT				*i* AML	AML	18 41 31.0	
	comp=Z,466nm,0.4s						
HAKT				*i* AML	AML	18 41 31.0	
	comp=Z,328nm,0.5s						
IBST	**Bostanabad**	**1.78**	**46**	*e*		18 41 35.7	
	comp=Z,1μm,0.5s						
IBST				*e*Pn	**Pn**	**18 41 05.1**	**-0.5**
IHSH	**Hashtrud**	**1.79**	**61**	*e*		18 41 39.7	
	comp=Z,4μm,0.6s						
IHSH				*e*Pn	**Pn**	**18 41 05.7**	**-0.1**
ISHB	**Shabestar**	**1.84**	**8**	*e*		18 41 16.1	
	comp=Z,2μm,0.3s						
ISHB				*e*Pn	**Pn**	**18 41 05.7**	**-0.6**
ITBZ	**Tabriz**	**1.90**	**21**	*e*		18 41 38.0	
	comp=Z,1μm,0.5s						
ITBZ				*e*Pn	**Pn**	**18 41 06.8**	**-0.3**
IDHR	**Dehrash**	**1.97**	**153**	*e*		18 41 37.8	
	comp=Z,8μm,0.4s						
IDHR				*e*Pn	**Pn**	**18 41 07.0**	**-1.2**
ILIN	**Lien**	**2.06**	**138**	*e*		18 41 41.4	
	comp=Z,3μm,0.4s						
ILIN				*e*Pn	**Pn**	**18 41 08.7**	**-0.7**
IMRD	**Marand**	**2.27**	**8**	*e*Pn	**Pn**	**18 41 12.6**	**+0.3**
IMRD				*e*		18 41 17.4	
	comp=Z,2μm,0.3s						
IHRS	**Heris**	**2.32**	**37**	*e*Pn	**Pn**	**18 41 13.4**	**+0.4**
IHRS				*e*		18 41 52.1	
	comp=N,2μm,0.4s						
ISRB	**Sarab**	**2.34**	**54**	*e*Pn	**Pn**	**18 41 13.6**	**+0.4**
ISRB				*e*		18 41 55.1	
	comp=Z,1μm,0.6s						
IGHG	**Ghaleghazi**	**2.37**	**153**	*e*Pn	**Pn**	**18 41 13.4**	**-0.3**
IGHG				*e*		18 41 56.1	
	comp=Z,6μm,0.8s						
OZAP	**Van, Ozalp-Mer**	**2.42**	**335**	P	**Pn**	**18 41 13.3**	**-1.1**
ORD	**Ordubad**	**2.52**	**13**	P	**Pb**	**18 41 19.0**	**-0.7**
	SNR=48						
ORD				S	**Sg**	**18 41 56.2**	**+1.5**
TVAN	**Van**	**2.55**	**325**	P	**Pb**	**18 41 17.2**	**-2.9**
TVAN				*i* AML	AML	18 42 03.0	
	comp=Z,77nm,0.8s						
TVAN				*i* AML	AML	18 42 05.0	
	comp=Z,101nm,0.8s						
GEVA	**Gevas**	**2.56**	**317**	P	**Pb**	**18 41 19.4**	**-0.9**
GEVA				S	**Sb**	**18 41 53.4**	**+1.0**
KER	**Kermanshah**	**2.56**	**143**	*e*Pn	**Pn**	**18 41 16.3**	**+0.1**
KCHF	**Cheshme Sefid,**	**2.61**	**146**	*e*Pn	**Pn**	**18 41 17.0**	**+0.1**
KCHF				*e*		18 42 02.0	
	comp=Z,3μm,0.4s						
PERV	**Siirt/Pervari-**	**2.65**	**305**	P	**Pb**	**18 41 19.9**	**-1.8**
PERV				S	**Sb**	**18 41 52.8**	**-1.9**
PERV				*i* AML	AML	18 42 01.0	
	comp=Z,116nm,0.5s						
PERV				*i* AML	AML	18 42 03.0	
	comp=Z,110nm,0.6s						
NAX	**Nakhchivan**	**2.71**	**3**	P	**Pb**	**18 41 21.4**	**-1.4**
NAX				S	**Sg**	**18 42 03.7**	**+2.9**
ZNJK	**Zanjan**	**2.74**	**85**	*e*Pn	**Pn**	**18 41 19.5**	**+0.7**
IBZA	**Bozab**	**2.89**	**133**	*e*Pn	**Pn**	**18 41 20.6**	**-0.3**
IBZA				*e*		18 42 11.0	
	comp=Z,1μm,1.2s						
IKOM	**Komasi**	**2.92**	**141**	*e*Pn	**Pn**	**18 41 21.0**	**-0.1**
IKOM				*e*		18 42 12.0	
	comp=Z,2μm,1.2s						
MAKU	**Maku**	**2.93**	**351**	*e*Pn	**Pn**	**18 41 19.9**	**-1.4**
SBZ	**Shahbuz**	**2.94**	**4**	P	**Pb**	**18 41 26.0**	**-0.7**
SBZ				S	**Sg**	**18 42 07.0**	**-1.0**
MIDY	**Mardin/Midyat-**	**3.25**	**288**	P	**Pn**	**18 41 25.7**	**0.0**
MIDY				*i* AML	AML	18 42 23.0	
	comp=Z,62nm,0.9s						
MIDY				*i* AML	AML	18 42 24.0	
	comp=Z,71nm,0.8s						
LRK	**Lerik**	**3.26**	**47**	P	**Pb**	**18 41 29.9**	**-2.3**
	SNR=6.6						
LRK				S	**Sg**	**18 42 18.8**	**+0.5**
HYR	**Heyderabad**	**3.27**	**354**	S	**Sb**	**18 42 14.2**	**+1.6**
BHD	**Baghdad**	**3.27**	**193**	*e*Pg	**Pb**	**18 41 33.0**	**+0.7**
	baz=13						
BHD				*e*Sg	**Sg**	**18 42 18.0**	**-0.7**
BHD				AML	AML	18 42 32.5	
	comp=E,314nm,0.6s						
IBDR	**Badra**	**3.39**	**171**	*e*Pg	**Pb**	**18 41 36.0**	**+1.7**
IBDR				*e*Sg	**Sg**	**18 42 20.0**	**-2.4**
IBDR				AML	AML	18 42 29.6	
	comp=E,42nm,0.7s						
IBDR				AML	AML	18 42 29.8	
	comp=N,52nm,0.3s						
YRD	**Yardimli**	**3.39**	**43**	P	**Pb**	**18 41 32.4**	**-2.0**
	SNR=12						
YRD				S	**Sg**	**18 42 21.0**	**-1.5**
ASTR	**Astara**	**3.48**	**52**	P	**Pb**	**18 41 36.2**	**+0.2**
ASTR				S	**Sb**	**18 42 22.1**	**+3.4**
HSAM	**Samen**	**3.52**	**129**	*e*Pn	**Pn**	**18 41 30.2**	**+0.7**
IDOB	**Doab**	**3.57**	**138**	*e*Pn	**Pn**	**18 41 30.6**	**+0.5**
IKFM	**Kafar-mosalman**	**3.61**	**144**	*e*Pn	**Pn**	**18 41 30.4**	**0.0**
SVAN	**Silvan-Diyarba**	**3.67**	**299**	P	**Pb**	**18 41 40.0**	**+0.8**
SVAN				S	**Sb**	**18 42 25.4**	**+1.3**
GIDE	**GILAN DEYLAMAN**	**3.74**	**82**	*e*Pn	**Pn**	**18 41 34.1**	**+1.6**
IRAZ	**Razeghan**	**3.91**	**104**	*e*Pn	**Pn**	**18 41 35.7**	**+0.9**
IRAZ				*e*		18 42 55.5	
	comp=Z,252nm,0.8s						
GANJ	**Ganja**	**4.26**	**11**	P	**Pn**	**18 41 42.9**	**+3.5**
GANJ				S	**Sb**	**18 42 37.3**	**-3.7**
GDB	**GEDABAY**	**4.27**	**5**	P	**Pn**	**18 41 41.6**	**+1.9**
ASAO	**Ashtian**	**4.31**	**115**	*e*Pn	**Pn**	**18 41 40.4**	**0.0**
QALM	**Alamut, Qazvin**	**4.32**	**89**	*e*Pn	**Pn**	**18 41 40.8**	**+0.3**
KHMZ	**Khomeyn**	**4.70**	**124**	*e*Pn	**Pn**	**18 41 45.6**	**0.0**
IPIR	**Pirpir**	**5.96**	**128**	*e*Pn	**Pn**	**18 42 03.2**	**+0.1**

*FUNV **06** 18:56:10.6,9°.67N×70°.26W,h5km, MW3.9*
ISC 06 18:56:10.3±1.1,9°.69N±0°.03×70°.24W±0°.02,h16km±9km, n39,σ1§46/61,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CURV	**Curarigua**	**0.42**	**40**	*e*S	**Sb**	**18 56 26.5**	**+0.9**
SANV	**Sanarito**	**0.71**	**105**	*e*P	**Pg**	**18 56 24.6**	**+0.4**
SANV				*e*S	**Sg**	**18 56 34.8**	**+1.0**
SIQV	**Siquisique**	**1.04**	**24**	*e*P	**Pg**	**18 56 29.8**	**-0.7**
SIQV				*e*S	**Sb**	**18 56 44.6**	**+1.1**
DABV	**Dabajuro**	**1.29**	**342**	*i* P	**Pb**	**18 56 34.2**	**0.0**
DABV				*e*S	**Sg**	**18 56 52.5**	**+0.5**
DABV	**Dabajuro**	**1.29**	**342**	*e*P	**Pb**	**18 56 34.3**	**+0.1**
DABV				*e*S	**Sg**	**18 56 52.4**	**+0.5**
SOCV	**Socops**	**1.52**	**204**	*i* P	**Pn**	**18 56 37.3**	**+0.4**
SOCV				*e*S	**Sn**	**18 56 58.0**	**+1.5**
SOCV	**Socops**	**1.52**	**204**	*e*P	**Pn**	**18 56 37.4**	**+0.5**
SOCV				*e*S	**Sn**	**18 56 57.6**	**+1.2**
MAPV	**Macapo**	**1.76**	**85**	*e*P	**Pb**	**18 56 42.6**	**+0.4**
MAPV				*e*S	**Sb**	**18 57 04.6**	**+0.5**
JACV	**Jacura**	**1.96**	**45**	*e*P	**Pn**	**18 56 44.5**	**+1.5**
JACV				*e*S	**Sb**	**18 57 09.7**	**-0.2**
BAUV	**El Baul**	**2.29**	**109**	*e*P	**Pn**	**18 56 49.1**	**+1.7**
BAUV				*e*S	**Sn**	**18 57 16.5**	**+1.2**
MCQV	**Machiques**	**2.29**	**279**	*e*P	**Pn**	**18 56 48.0**	**+0.5**
MCQV				*e*S	**Sn**	**18 57 16.2**	**+0.8**
BENV	**Beln**	**2.61**	**84**	*e*P	**Pn**	**18 56 53.6**	**+1.7**
BENV				*e*S	**Sn**	**18 57 24.4**	**+1.0**
URIC	**Uribia, Colomb**	**2.64**	**319**	*e*P	**Pn**	**18 56 51.6**	**-0.7**
CAPV	**Capacho**	**2.74**	**229**	*e*S	**Sn**	**18 57 27.0**	**+0.3**
CRJC	**Cerrejon, Guaj**	**2.92**	**297**	*e*P	**Pn**	**18 56 55.4**	**-0.8**
CRJC				*e*S	**Sb**	**18 57 37.8**	**+0.2**
LL6C	**La Loma 6 Bece**	**2.99**	**271**	*e*P	**Pn**	**18 56 57.8**	**+0.7**
LL6C				*e*S	**Sb**	**18 57 39.7**	**+0.1**
PAMC	**Pamplona, Colo**	**3.37**	**226**	*e*P	**Pb**	**18 57 11.9**	**+1.9**
FUNV	**FUNVISIS**	**3.46**	**77**	*e*P	**Pn**	**18 57 05.1**	**+1.4**
FUNV				*e*S	**Sn**	**18 57 45.0**	**+0.5**
TAMC	**Tame, Arauca**	**3.58**	**206**	*e*P	**Pn**	**18 57 06.2**	**+0.9**
MERV	**Las Mercedes**	**3.91**	**96**	*e*P	**Pn**	**18 57 11.1**	**+1.3**
MERV				*e*S	**Sn**	**18 57 54.4**	**-0.9**
ARGC	**Ariguani, Magd**	**3.96**	**273**	*e*P	**Pb**	**18 57 18.0**	**-1.7**
ARGC				*e*S	**Sb**	**18 58 08.2**	**+0.9**
BIRV	**Birongo**	**3.98**	**78**	*e*P	**Pn**	**18 57 11.1**	**+0.3**
BIRV				*e*S	**Sn**	**18 57 56.6**	**-0.6**
SMRC	**Santa Marta, M**	**4.19**	**291**	*e*P	**Pn**	**18 57 12.0**	**-1.6**
CACV	**CAICARA DEL OR**	**4.22**	**120**	*e*P	**Pb**	**18 57 21.5**	**-2.7**
CACV				*e*S	**Sb**	**18 58 12.9**	**-2.1**
BARC	**Barichara**	**4.24**	**224**	*e*P	Pn	18 57 19.6	+5.1
BARC				*e*S	**Sg**	**18 58 23.6**	**-2.9**
BRRC	**Barranca, Sant**	**4.29**	**234**	*e*P	**Pn**	**18 57 19.0**	**+4.0**
BRRC				*e*S	**Sn**	**18 58 03.3**	**-1.4**
RUSC	**La Rusia**	**4.71**	**217**	*e*P	**Pn**	**18 57 23.4**	**+2.2**
SJCC	**San Jacinto, C**	**4.88**	**273**	*e*P	**Pn**	**18 57 23.7**	**+0.6**
PAYV	**Puerto Ayacuch**	**4.95**	**149**	*e*P	**Pn**	**18 57 23.7**	**-0.4**
PAYV				*e*S	**Sn**	**18 58 18.8**	**-2.2**
ZARC	**Zaragoza, Cauc**	**5.06**	**245**	*e*P	**Pn**	**18 57 25.7**	**+0.1**
PTBC	**PUERTO BERRIO,**	**5.22**	**233**	*e*P	**Pn**	**18 57 27.8**	**+0.1**
PCRV	**Puerto La Cruz**	**5.54**	**84**	*e*P	**Pn**	**18 57 32.0**	**-0.2**
PCRV				*e*S	**Sn**	**18 58 33.8**	**-1.8**
PRGV	**PARIAGUAN**	**5.59**	**99**	*e*P	**Pn**	**18 57 33.0**	**+0.1**
PRGV				*e*S	**Sn**	**18 58 34.3**	**-2.7**
PTGC	**Puerto Gaitan,**	**5.77**	**199**	*e*P	**Pn**	**18 57 36.7**	**+1.4**
NORC	**Norcasia**	**6.15**	**229**	*e*P	**Pn**	**18 57 41.6**	**+1.0**
NORC				*e*S	**Sn**	**18 58 49.6**	**-1.2**
HELC	**Santa Helena**	**6.29**	**237**	*e*P	**Pn**	**18 57 44.6**	**+1.8**
GUY2C	**Guyana, Caldas**	**6.75**	**229**	*e*P	**Pn**	**18 57 50.5**	**+1.3**
CBOC	**Ciudad Bolivar**	**6.87**	**237**	*e*P	Pn	18 57 57.4	+6.8
PRAC	**Prado**	**7.52**	**218**	*e*P	**Pn**	**18 58 03.3**	**+3.9**

*VIE **06** 19:03:30.6±0.7,51°.52N×16°.27E,h0km, mb2.5/3, ml2.8/3,*
Error ellipse: s-maj=6.5km s-min=4.3km az=22.0 70 km
NW of Wroclaw Suspected Mining induced.
*PRU **06** 19:03:30.4±0.0,51°.57N×16°.10E,h0km*
*IDC **06** 19:03:31.3±1.2,51°.46N×16°.13E,h0km, mbtmp3.1/3,*
ML2.6/3, Error ellipse: s-maj=23.1km s-min=10.0km
az=132.0
ISC 06 19:03:28.7±0.9,51°.65N±0°.04×16°.13E±0°.03,h0km,n28, σ0§79/55,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.81**	**172**	*e*Pg	**Pg**	**19 03 44.6**	**+0.4**
KSP				*e*Sg	**Sg**	**19 03 54.4**	**-0.3**
CHVC	**Chvalec**	**1.06**	**182**	*e*PG	**Pg**	**19 03 49.2**	**+0.2**
OSTC	**Ostas**	**1.09**	**177**	*e*PG	**Pg**	**19 03 49.9**	**+0.3**
OSTC				*e*SG	**Sg**	**19 04 03.4**	**-0.3**
	comp=Z,54nm,0.8s						
UPC	**Upice**	**1.14**	**184**	*e*PG	**Pg**	**19 03 50.7**	**+0.2**
UPC				*e*SG	**Sg**	**19 04 04.7**	**-0.6**
	comp=Z,51nm,0.4s						
DPC	**Dobruska-Polom**	**1.30**	**174**	*e*PG	**Pg**	**19 03 53.3**	**-0.3**
DPC				*e*SG	**Sg**	**19 04 09.1**	**-1.4**
	comp=Z,61nm,0.8s						
PVCC	**Panska Ves**	**1.49**	**222**	*e*PG	**Pg**	**19 03 57.2**	**0.0**
PVCC				*e*SG	**Sn**	**19 04 16.9**	**+0.1**
	comp=Z,111nm,0.4s						
BRG	**Berggiesshubel**	**1.57**	**241**	Pg	**Pg**	**19 03 59.2**	**+0.4**
BRG				Sg	**Sg**	**19 04 19.8**	**+0.6**
BRG				Amp		19 04 20.4	
	comp=Z,50nm,0.5s						
KRLC	**Kraliky**	**1.63**	**165**	*e*PG	**Pn**	**19 03 58.4**	**-0.2**
KRLC				*e*SG	**Sn**	**19 04 19.2**	**-1.1**
	comp=Z,29nm,0.4s						
PRU	**Pruhonice**	**1.94**	**212**	*e*PN	**Pn**	**19 04 02.0**	**-0.9**
PRU				*e*PG	**Pb**	**19 04 04.6**	**-0.3**
PRU				*e*SG	**Sn**	**19 04 28.8**	**+0.9**
	comp=Z,27nm,0.5s						
CLL	**Collm**	**1.98**	**261**	*e*Pn	**Pn**	**19 04 03.0**	**-0.5**
CLL				*i* Pg	**Pg**	**19 04 06.6**	**0.0**
CLL				*i* x	x	19 04 10.4	
CLL				*e*Sg	**Sg**	**19 04 33.0**	**+0.7**
	comp=Z,19nm,0.7s						
MORC	**Moravsky Berou**	**2.08**	**154**	*e*PN	**Pn**	**19 04 04.7**	**-0.1**
MORC				*e*SG	**Sb**	**19 04 33.5**	**-0.1**
OKC	**Ostrava-Krasne**	**2.22**	**144**	*e*SG	**Sb**	**19 04 37.6**	**0.0**
	comp=Z,42nm,0.6s						
VRAC	**Vranov**	**2.36**	**173**	*e*PN	**Pn**	**19 04 08.8**	**+0.1**
VRAC				*e*SG	**Sb**	**19 04 42.1**	**+0.4**
KRUC	**Moravsky**	**2.59**	**176**	*e*PN	**Pn**	**19 04 12.0**	**+0.1**
KRUC				*e*SG	**Sb**	**19 04 49.3**	**+0.9**
OJC	**Ojcow**	**2.73**	**120**	*e*Pg	**Pg**	**19 04 20.3**	**-0.6**
OJC				*e*Sg	**Sg**	**19 04 55.8**	**-0.5**
JAVC	**Velka Javorina**	**2.96**	**160**	*e*PN	**Pn**	**19 04 17.2**	**+0.2**
KHC	**Kasperske Hory**	**3.00**	**214**	*e*PN	**Pn**	**19 04 17.4**	**-0.1**
KHC				*e*PG	**Pb**	**19 04 23.5**	**+0.5**
KHC				*e*SN	**Sn**	**19 04 52.7**	**-1.4**
KHC				*e*SG	**Sg**	**19 05 03.3**	**-1.7**
	comp=Z,13nm,0.5s						
CKRC	**Cesky Krumlov**	**3.06**	**203**	*e*PN	**Pn**	**19 04 19.1**	**+0.8**
CKRC				*e*PG	**Pb**	**19 04 24.9**	**+0.9**
CKRC				*e*SG	**Sb**	**19 05 03.1**	**+1.3**
	comp=Z,14nm,0.5s						
GERES	**GERESS Array B**	**3.21**	**210**	Pn	**Pn**	**19 04 20.4**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=31,slow=13,SNR=27						
GERES				Pg	**Pg**	**19 04 27.2**	**+0.7**
	comp=Z,2.0nm,0.3s,baz=31,slow=16,SNR=33						
GERES				Sn	**Sn**	**19 04 56.7**	**-2.6**
	comp=Z,1.1nm,0.3s,baz=32,slow=26,SNR=6.7						
GERES				Lg	Lg	19 05 08.8	
	comp=Z,2.7nm,0.3s,baz=32,slow=28,SNR=13						
	comp=Z,1.5nm,0.3s						
LANS	**Liptovska Anna**	**3.29**	**138**	*e*SG	**Sg**	**19 05 14.9**	**+0.6**
MODS	**Modra-Piesok**	**3.36**	**167**	*e*PG	**Pg**	**19 04 34.0**	**+1.0**
MODS				*e*SG	**Sg**	**19 05 15.8**	**-0.7**
NIE	**Niedzica**	**3.47**	**128**	*e*P	**Pg**	**19 04 35.5**	**+0.3**
NIE				*e*S	**Sg**	**19 05 21.4**	**+1.2**
CONA	**Conrad Observa**	**3.73**	**183**	*i* Pn	**Pn**	**19 04 28.4**	**+0.9**
	comp=Z,0.5nm,0.1s						
CONA				*e*Sg	**Sg**	**19 05 27.2**	**-1.0**
	comp=Z,12nm,0.5s						
MOA	**Molln**	**3.99**	**198**	*i* Pn	**Pn**	**19 04 31.5**	**+0.5**
	comp=Z,2.9nm,0.3s						
MOA				*e*Sg	**Sg**	**19 05 35.5**	**-1.2**
	comp=Z,8.0nm,0.5s						
ARSA	**Arzberg**	**4.42**	**185**	*i* Pn	**Pn**	**19 04 37.9**	**+1.0**
	comp=Z,1.2nm,0.2s						
ARSA				Sg	**Sg**	**19 05 51.0**	**+0.5**
	comp=Z,5.9nm,0.5s						
KOLS	**Kolonicke sedl**	**4.79**	**122**	*e*PN	**Pn**	**19 04 42.0**	**0.0**
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**19 05 29.2**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=278,slow=12,SNR=2.6						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**11.24**	**25**	Pn	**Pn**	**19 06 10.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=211,slow=13,SNR=2.7						
	comp=Z,1.9nm,0.9s						

IDC 06 19:28:57.3±13.0,1°.88N×126°.99E,h168km±121km, mb3.1/4,mbtmp3.6/4,MS2.4/1,Error ellipse:
s-maj=172.4km s-min=29.2km az=63.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.07**	**123**	LR	LR	19 32 38.1	
	comp=Z,45nm,21.3s,baz=251,slow=44						
WRA	**Warramunga Arr**	**22.85**	**162**	P	P	19 33 45.7	-0.6
	1.3nm,0.4s,baz=342,slow=9.7,SNR=34						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**26.27**	**166**	P	P	19 34 17.2	0.0
	0.2nm,0.3s,baz=342,slow=11,SNR=7.3						
ASAR				PcP	PcP	19 37 40.2	+0.8
	0.1nm,0.4s,baz=357,slow=2.1,SNR=1.9						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**36.32**	**159**	P	P	19 35 45.1	+0.1
	0.7nm,0.3s,baz=334,slow=12,SNR=8.1						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**59.22**	**326**	P	P	19 38 40.4	-0.5
	0.1nm,0.3s,baz=120,slow=7.0,SNR=1.8						
	0.1nm,0.3s						

*IDC **06** 19:56:20.8±0.5,23°.07S×169°.61E,h0km,mb4.7/17,*
mbtmp4.7/20,ML4.8/3,MS4.2/47,Error ellipse:
s-maj=16.5km s-min=15.5km az=103.0
*MOS **06** 19:56:21.9±1.2,23°.04S×169°.45E,h10km,mb5.3/18,*
MS4.4/13,Error ellipse: s-maj=10.5km s-min=9.1km
az=115.6
*BJI **06** 19:56:22.3±0.0,22°.58S×169°.60E,h7km,mb5.0/45,*
mB5.1/34,Ms4.7/19,Ms7 4.4/21
*NEIC **06** 19:56:23.2±1.6,22°.95S±0°.08×169°.60E±0°.09,h10km±1km,*
mb5.2/86, Error ellipse: s-maj=14.7km s-min=12.1km
az=48.0
*NOU **06** 19:56:25.2,22°.88S×169°.48E,h11km,mb5.2/69,*
Southeast of Loyalty Islands
*GCMT **06** 19:56:28.2±0.1,22°.96S±0°.01×169°.43E±0°.01,h13km,*
MW5.2/135,Moment Tensor Solution. s105,c176;
s135,c239; Duration: 1§0 Moment tensor: Scale 10^{17}
Nm; M_{rr}=0.69±.01; $M_{\theta\theta}$=0.69±.01; $M_{\phi\phi}$=0.00±.01;
$M_{r\theta}$=0.25±.02; $M_{\theta\phi}$=-0.16±.01; $M_{\phi r}$=0.00±.02; Best double
couple: M_0=0.75100×10^{17} NP1:ϕ_S=278.00000°,δ55.00000°,
λ-95.00000°. NP2:ϕ_S=107.00000°,δ36.00000°,
λ-83.00000°. Principal axes: T 0.7690, Plg10.0000°,
Azm11.0000°; N -0.0360, Plg4.0000°; Azm281.0000°; P
-0.7340, Plg80.0000°, Azm168.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 06 19:56:24.6±0.3,23°.09S±0°.05×169°.61E±0°.05,h23km,n644, σ1§24/624,mb5.1/102,MS4.4/65,32C-22D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**2.05**	**283**	Pn	**Pn**	**19 56 56.4**	**-1.3**
PINNC	**Pines Island,**	**2.05**	**283**	P	**Pn**	**19 56 58.0**	**+0.3**
MARNC	**Mare, Loyalty**	**2.17**	**317**	Pn	**Pn**	**19 56 57.1**	**-2.3**
MARNC	**Mare, Loyalty**	**2.17**	**317**	P	**Pn**	**19 56 57.6**	**-1.8**
OUENC	**Ouen Island, N**	**2.64**	**284**	Pn	**Pn**	**19 57 04.3**	**-1.6**
OUENC	**Ouen Island, N**	**2.64**	**284**	P	**Pn**	**19 57 04.6**	**-1.3**
YATNC	**Mamie plateau,**	**2.72**	**292**	P	**Pn**	**19 57 06.1**	**-0.8**
ONTNC	**Ouen Toro**	**3.02**	**284**	Pn	**Pn**	**19 57 10.0**	**-1.1**
ONTNC	**Ouen Toro**	**3.02**	**284**	P	**Pn**	**19 57 10.3**	**-0.7**
DZM	**Mont Dzumac**	**3.10**	**289**	Pn	**Pn**	**19 57 11.1**	**-1.2**
	43nm,0.3s,baz=122,slow=17,SNR=476						
DZM				Sn	**Sn**	**19 57 45.6**	**-3.0**
	110nm,0.3s,baz=115,slow=19,SNR=5.2						
DZM				LR	LR	19 58 23.2	
	comp=Z,6μm,19.6s,baz=229,slow=40						
	148nm,0.4s						
DZM	**Mont Dzumac**	**3.10**	**289**	*e*Pn	**Pn**	**19 57 11.1**	**-1.2**
	802nm,0.8s						
DZM				*e*Sn	**Sn**	**19 57 42.8**	**-5.8**
	4μm,0.9s						
DZM	**Mont Dzumac**	**3.10**	**289**		**Pn**	**19 57 11.0**	**-1.2**
DZM	**Mont Dzumac**	**3.10**	**289**	P	**Pn**	**19 57 11.5**	**-0.7**
NOUC	**Port Laguerre**	**3.21**	**287**	P	**Pn**	**19 57 13.0**	**-0.7**
RTV	**Rentapao**	**5.39**	**348**	P	**Pn**	**19 57 41.7**	**-2.0**
KOUNC	**Koumac, New Ca**	**5.56**	**296**	Pn	**Pn**	**19 57 46.2**	**+0.2**
KOUNC	**Koumac, New Ca**	**5.56**	**296**	P	**Pn**	**19 57 46.3**	**+0.3**
NFK	**Norfolk Island**	**6.11**	**194**	P	**Pn**	**19 57 54.7**

comp=Z,27nm,0.7s,baz=163,slow=4.5,SNR=7.3
comp=Z,27nm,0.7s
PMG Port Moresby 25.44 299 P **P** **20 01 50.5 -0.4**
comp=Z,18nm,0.8s,baz=124,slow=8.9,SNR=3.5
PMG LR LR 20 11 10.0
comp=Z,2µm,19.0s,baz=142,slow=35
comp=Z,18nm,0.8s
GLAD Gladstone 25.45 220 P **P** **20 01 53.0 +2.2**
STKA Stephens Creek 26.29 244 P **P** **20 01 58.7 +0.2**
comp=Z,13nm,0.7s,baz=92,slow=12,SNR=25
STKA LR LR 20 11 38.0
comp=Z,1µm,18.4s,baz=71,slow=35
comp=Z,13nm,0.7s
STKA Stephens Creek 26.29 244 P **P** **20 01 59.2 +0.6**
baz=26,SNR=22
STKA Stephens Creek 26.29 244 P **P** **20 01 58.7 +0.2**
STKA Stephens Creek 26.29 244 *i* P **P** **20 01 58.2 -0.3**
STKA Stephens Creek 26.29 244 P **P** **20 01 59.4 +0.9**
comp=Z,6.1nm,1.1s
BRAT Ballarat 26.33 231 P **P** **20 02 01.1 +2.3**
comp=Z,12nm,0.8s
INKA Innaminka 26.45 254 P **P** **20 02 02.0 +2.0**
COEN Coen 26.62 285 P **P** **20 02 02.3 +0.7**
baz=27,SNR=12
COEN Coen 26.62 285 P **P** **20 02 01.6 -0.1**
COEN IAmb IAmb 20 02 15.3
comp=Z,34nm,0.9s
COEN Coen 26.62 285 P **P** **20 02 02.7 +1.0**
comp=Z,38nm,0.9s
MOO Moorlands 26.84 219 P **P** **20 02 05.0 +1.7**
baz=27,SNR=6.1
QIS Mount Isa 27.95 269 P **P** **20 02 13.7 +0.1**
RAR Rarotonga 28.39 92 LR LR 20 13 52.2
comp=Z,93nm,18.2s,baz=298,slow=37
HTT Hallett 28.83 242 P **P** **20 02 21.9 +0.5**
baz=29,SNR=9.5
HTT Hallett 28.83 242 P **P** **20 02 23.6 +2.2**
LCRK Leigh Creek 28.90 249 P **P** **20 02 22.5 +0.5**
TWOA Tennyson Woods 29.50 239 P **P** **20 02 28.8 +1.6**
comp=Z,19nm,0.8s
WHYH Whyalla 29.85 244 P **P** **20 02 31.1 +0.8**
comp=Z,33nm,0.8s
OOD Oodnadatta 30.93 254 P **P** **20 02 41.3 +1.4**
BBOO Buckleboo 31.07 244 P **P** **20 02 41.1 -0.1**
baz=31,SNR=9.0
BBOO Buckleboo 31.07 244 P **P** **20 02 41.0 -0.1**
BBOO IAmb IAmb 20 02 42.9
comp=Z,36nm,1.0s
BBOO Buckleboo 31.07 244 P **P** **20 02 41.7 +0.6**
comp=Z,37nm,0.9s
PATS Pohnpei 31.73 338 P **P** **20 02 46.6 -0.4**
baz=32,SNR=3.5
PATS Pohnpei 31.73 338 P **P** **20 02 45.4 -1.6**
PATS Pohnpei 31.73 338 P **P** **20 02 48.8 +1.8**
MULG Mulgathing 32.46 250 P **P** **20 02 53.5 +0.1**
AS31 Alice Springs 32.73 262 P **P** **20 02 55.1 -0.7**
ASAR Alice Springs 32.73 262 P **P** **20 02 54.6 -1.2**
comp=Z,25nm,0.8s,baz=98,slow=10.0,SNR=190
ASAR LR LR 20 16 04.1
comp=Z,358nm,18.7s,baz=102,slow=36
comp=Z,25nm,0.8s
ASAR Alice Springs 32.73 262 P **P** **20 02 55.0 -0.8**
ASAR Alice Springs 32.73 262 P **P** **20 02 55.0 -0.8**
WB0 Warramunga Arr 32.90 269 P **P** **20 02 56.4 -1.0**
WB2 Warramunga Arr 32.90 269 P **P** **20 02 56.5 -0.8**
WB2 IAmb IAmb 20 03 42.4
comp=Z,39nm,1.8s
WRA Warramunga Arr 32.91 269 P **P** **20 02 55.3 -2.1**
comp=Z,4.2nm,0.7s,baz=98,slow=8.4,SNR=84
WRA PcP **PcP** **20 05 41.1 -0.7**
comp=Z,1.4nm,0.7s,baz=101,slow=2.6,SNR=3.4
WRA LR LR 20 16 38.8
comp=Z,1µm,18.4s,baz=66,slow=37
comp=Z,4.2nm,0.7s
WRA Warramunga Arr 32.91 269 P **P** **20 02 56.3 -1.2**
WRA Warramunga Arr 32.91 269 P **P** **20 02 56.3 -1.2**
FORT Forrest 37.66 249 P **P** **20 03 37.9 -0.2**
baz=38,SNR=27
FORT Forrest 37.66 249 P **P** **20 03 38.0 -0.2**
FORT Forrest 37.66 249 P **P** **20 03 39.7 +1.5**
WRKA Warakurna 37.67 259 P **P** **20 03 37.9 -0.5**
baz=38,SNR=54
WRKA Warakurna 37.67 259 P **P** **20 03 38.2 -0.2**
MTN Manton Dam 37.89 279 P **P** **20 03 39.0 -1.3**
baz=38
MTN Manton Dam 37.89 279 P **P** **20 03 38.6 -1.6**
PPT2 Papeete2 38.57 90 *e*S **S** **20 09 42.1 +1.0**
comp=Z,145nm,26.0s
PPT2 *e*S **ScP** **20 09 42.3 -3.0**
comp=Z,110nm,26.0s
PPT2 *e*LR LR 20 14 14.3
comp=Z,228nm,27.5s
PPT2 *e*LR LR 20 14 14.7
comp=Z,290nm,24.0s
PPT Papeete 38.57 90 LR LR 20 19 08.7
comp=Z,194nm,18.0s,baz=274,slow=36
KNRA Kununurra 39.13 273 P **P** **20 03 49.7 -1.0**
baz=39,SNR=9.4
KNRA Kununurra 39.13 273 P **P** **20 03 49.4 -1.3**
KNRA IAmb IAmb 20 03 51.6
comp=Z,80nm,1.6s
KNRA Kununurra 39.13 273 P **P** **20 03 50.4 -0.3**
FITZ Fitzroy Crossi 41.34 268 LR LR 20 20 55.8
comp=Z,337nm,18.3s,baz=114,slow=36
FITZ Fitzroy Crossi 41.34 268 P **P** **20 04 08.6 -0.4**
baz=41,SNR=13
FITZ Fitzroy Crossi 41.34 268 P **P** **20 04 08.6 -0.4**
FITZ Fitzroy Crossi 41.34 268 P **P** **20 04 09.1 +0.1**
comp=Z,25nm,1.1s
SIJI Sorong 43.28 295 LR LR 20 23 23.5
comp=Z,722nm,18.8s,baz=90,slow=38
GUMO Guam 43.77 324 LR LR 20 20 40.4
comp=Z,303nm,18.1s,baz=132,slow=33
AAI Ambon 44.44 289 P **P** **20 04 35.2 +1.1**
comp=Z,31nm,0.7s
PSA00 Pilbara Seismi 45.88 262 P **P** **20 04 44.9 -0.7**
PSA00 IAmb IAmb 20 05 12.9
comp=Z,28nm,1.1s
PSA00 Pilbara Seismi 45.88 262 P **P** **20 04 44.2 -1.4**
PSA00 IAmb IAmb 20 04 46.0
comp=Z,8.7nm,1.0s
PSA00 Pilbara Seismi 45.88 262 P **P** **20 04 45.2 -0.4**
MBWA Marble Bar 46.07 262 P **P** **20 04 46.5 -0.5**
MBWA Marble Bar 46.07 262 P **P** **20 04 46.8 -0.3**
MEEK Meekatharra 46.16 255 P **P** **20 04 46.9 -0.9**
baz=46,SNR=10
MEEK Meekatharra 46.16 255 P **P** **20 04 48.0 +0.2**
comp=Z,32nm,0.8s
KLBR Kellerberrin 46.48 248 P **P** **20 04 49.5 -0.7**
baz=47,SNR=5.6
NWAO Narrogin (SRO) 46.86 246 P **P** **20 04 52.9 -0.3**
NWAO Narrogin (SRO) 46.86 246 P **P** **20 04 52.9 -0.3**
NWAO pmax pmax
comp=Z,60nm,1.2s
SANI Sanana 47.16 290 P **P** **20 04 55.8 +0.2**
comp=Z,86nm,0.9s
MMRI Maumere 47.56 280 P **P** **20 04 57.8 -1.0**
MMRI Maumere 47.56 280 P **P** **20 04 58.2 -0.6**
KAPI Kappang 51.30 283 LR LR 20 29 34.1
comp=Z,326nm,18.1s,baz=121,slow=39
KAPI Kappang 51.30 283 P **P** **20 05 26.9 -0.5**
KAPI IAmb IAmb 20 05 28.6
comp=Z,35nm,0.8s
KAPI Kappang 51.30 283 *d* P **P** **20 05 26.3 -1.1**
KAPI pmax pmax
comp=Z,35nm,0.9s
KAPI Kappang 51.30 283 P **P** **20 05 28.5 +1.1**
APSI Ampana 51.49 288 P **P** **20 05 29.1 +0.3**
comp=Z,19nm,0.9s
TWSI Taliwang, Sumb 52.40 277 P **P** **20 05 35.6 0.0**
comp=Z,30nm,0.8s
DAV Davao City (W) 52.46 300 LR LR 20 27 49.3
comp=Z,96nm,20.6s,baz=127,slow=36
TOLI2 Tolitoli 53.23 290 P **P** **20 05 40.6 -1.2**
TOLI2 IAmb IAmb 20 05 42.0
comp=Z,20nm,0.8s
TOLI2 Tolitoli 53.23 290 P **P** **20 05 40.8 -0.9**
MPSI Mapaga 53.62 289 P **P** **20 05 43.2 -1.4**
comp=Z,17nm,0.8s
VNDA Vanda 54.61 182 P **P** **20 05 50.8 -0.1**
comp=Z,1.9nm,0.8s,baz=11,slow=7.1,SNR=15
VNDA LR LR 20 26 48.0
comp=Z,277nm,18.3s,baz=12,slow=33
comp=Z,1.9nm,0.8s
VNDA Vanda 54.61 182 P **P** **20 05 51.5 +0.7**
VNDA Vanda 54.61 182 P **P** **20 05 51.6 +0.7**
VNDA pmax pmax
comp=Z,6.0nm,1.0s
SBA Scott Base 54.83 181 P **P** **20 05 53.9 +1.4**
SBA IAmb IAmb 20 05 56.0
comp=Z,21nm,0.9s
SBA Scott Base 54.83 181 P **P** **20 05 53.9 +1.4**
SBA pmax pmax
comp=Z,21nm,1.0s
JAGI Jajag, Banyuwa 55.00 276 P **P** **20 05 53.3 -1.4**
JAGI IAmb IAmb 20 05 54.4
comp=Z,31nm,0.8s
JAGI Jajag, Banyuwa 55.00 276 P **P** **20 05 53.8 -0.9**
JCJ Chichijima 56.50 331 LR LR 20 28 19.6
comp=Z,140nm,21.3s,baz=264,slow=34
PWJI Pagerwojo 57.32 275 P **P** **20 06 12.3 +1.1**
comp=Z,26nm,0.8s
UGM Wanagama 58.54 275 P **P** **20 06 19.4 -0.4**
KKM Kota Kinabalu 59.65 292 P **P** **20 06 27.3 -0.3**
KKM IAmb IAmb 20 08 13.2
comp=Z,40nm,1.2s
LEM Lembang 61.61 275 P **P** **20 06 41.3 +0.2**
LEM pmax pmax
comp=Z,69nm,0.8s
KSM Kuching 62.62 285 P **P** **20 06 46.8 -0.8**
KSM IAmb IAmb 20 06 48.5
comp=Z,26nm,0.9s
KSM Kuching 62.62 285 P **P** **20 06 47.7 +0.1**
comp=Z,32nm,0.9s
JHJ Hachijo jima 2 62.72 332 LR LR 20 32 31.8
comp=Z,51nm,20.0s,baz=317,slow=35
JOW Kunigami 63.73 319 LR LR 20 31 34.4
comp=Z,152nm,20.4s,baz=157,slow=33
JGF Kuroka 65.89 332 P **P** **20 07 08.0 -0.6**
JGF IAmb IAmb 20 07 35.5
comp=Z,18nm,1.4s
JMN Monobe 65.96 328 P **P** **20 07 08.8 -0.3**
JMN IAmb IAmb 20 07 23.3
comp=Z,26nm,1.1s
TPUB Ta-pu 66.28 311 P **P** **20 07 10.1 -1.3**
TPUB Ta-pu 66.28 311 P **P** **20 07 10.1 -1.3**
MJAR Matsushiro Arr 66.31 333 P **P** **20 07 07.1 -4.2**
comp=Z,3.0nm,1.1s,baz=160,slow=7.3,SNR=8.1
MAJO Matsushiro 66.31 333 P **P** **20 07 10.3 -1.0**
MAJO Matsushiro 66.31 333 *i* P **P** **20 07 10.7 -0.6**
MAJO pmax pmax
comp=Z,7.0nm,1.0s
MAJO Matsushiro 66.31 333 P **P** **20 07 11.1 -0.2**
SSLB Suanglung 66.37 311 P **P** **20 07 10.8 -1.2**
SSLB IAmb IAmb 20 07 12.0
comp=Z,18nm,0.8s
SSLB Suanglung 66.37 311 P **P** **20 07 11.1 -0.9**
YHNB Yeheng 66.66 312 P **P** **20 07 14.9 +1.0**
QSPA South Pole Qui 66.98 180 LR LR 20 33 22.8
comp=Z,419nm,18.9s,baz=31,slow=33
QSPA South Pole Qui 66.98 180 P **P** **20 07 15.5 +0.1**
JHS Saijyo 67.35 328 P **P** **20 07 17.4 -0.6**
JHS IAmb IAmb 20 07 31.7
comp=Z,20nm,1.0s
JSD Sado 67.57 334 P **P** **20 07 17.8 -1.5**
JSD IAmb IAmb 20 07 33.0
comp=Z,18nm,0.9s
MYKOM Kota Tinggi 68.55 282 P **P** **20 07 25.8 -0.2**
MYKOM IAmb IAmb 20 07 26.7
comp=Z,16nm,0.9s
TJN Taejon 71.35 325 *i* P **P** **20 07 41.6 -1.0**
TJN Taejon 71.35 325 P **P** **20 07 43.8 +1.2**
comp=Z,84nm,1.2s
QIZ Qiongzhong 71.81 301 P **P** **20 07 46.3 +0.5**
QIZ S **S** **20 17 08.1 +2.8**
QIZ LR LR
comp=Z,130nm,17.3s
QIZ LR LR
comp=Z,150nm,24.9s
KSRS Korea Array 71.88 326 P **P** **20 07 45.5 -0.2**
comp=Z,4.7nm,0.9s,baz=141,slow=6.1,SNR=20
KSRS LR LR 20 39 39.9
comp=Z,65nm,18.5s,baz=145,slow=36
comp=Z,4.7nm,0.9s
KSAR Wonju Array Be 71.89 326 P **P** **20 07 45.6 -0.2**
KSAR Wonju Array Be 71.89 326 P **P** **20 07 45.6 -0.2**
IPM Ipoh 72.25 283 P **P** **20 07 47.3 -1.3**
IPM IAmb IAmb 20 07 48.8
comp=Z,9.9nm,0.7s
IPM Ipoh 72.25 283 P **P** **20 07 48.4 -0.2**
comp=Z,18nm,1.0s
INCN Inchon 72.57 325 P **P** **20 07 49.4 -0.6**
INCN IAmb IAmb 20 08 03.5
comp=Z,14nm,0.7s
INCN Inchon 72.57 325 P **P** **20 07 49.4 -0.6**
INCN pmax pmax
comp=Z,14nm,0.7s
INCN Inchon 72.57 325 P **P** **20 07 50.7 +0.7**
KULM Kulim 72.93 284 P **P** **20 07 51.7 -1.0**
KULM IAmb IAmb 20 08 18.0
comp=Z,20nm,1.4s
NJ2 Nanjing 73.22 317 *e*P **P** **20 07 53.6 -0.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
PSI Prapat 73.43 280 LR LR 20 43 14.0
comp=Z,347nm,18.0s,baz=112,slow=38
YSS Yuzh-Sakhalins 73.82 341 P **P** **20 07 57.2 +0.1**
YSS IAmb IAmb 20 08 12.5
comp=Z,19nm,0.8s
YSS Yuzh-Sakhalins 73.82 341 *e*P **P** **20 07 59.5 +2.5**
YSS *e*S **S** **20 17 30.8 +3.7**
YSS *e*SS **SS** **20 22 13.3 +1.4**
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS smax smax
comp=E,200nm,5.2s
YSS MLR MLR
comp=Z,200nm,15.0s
YSS Yuzh-Sakhalins 73.82 341 P **P** **20 07 59.6 +2.5**
GSI Gunungsitoli 74.03 278 P **P** **20 07 58.2 -0.9**
GSI IAmb IAmb 20 08 00.1
comp=Z,28nm,0.9s
GSI Gunungsitoli 74.03 278 P **P** **20 08 01.2 +2.0**
MAW Mawson 75.01 202 P **P** **20 08 04.0 +0.1**
comp=Z,6.7nm,0.8s,baz=118,slow=8.0,SNR=17
MAW LR LR 20 37 09.9
comp=Z,150nm,19.5s,baz=110,slow=33
comp=Z,6.7nm,0.8s
MAW Mawson 75.01 202 P **P** **20 08 04.5 +0.6**
baz=75,SNR=10
MAW Mawson 75.01 202 P **P** **20 08 04.3 +0.4**
MAW Mawson 75.01 202 P **P** **20 08 04.3 +0.4**
MAW pmax pmax
comp=Z,1.0nm,0.9s
USRK Ussuriysk Ar. 75.31 333 P **P** **20 08 05.3 -0.5**
comp=Z,4.8nm,0.9s,baz=167,slow=5.4,SNR=7.0
comp=Z,4.8nm,0.9s
GSTR Great Sitkin T 75.91 9 P **P** **20 08 09.0 -0.1**
DL2 Dalian 76.29 323 P P 20 08 16.4 +4.8
DL2 S **S** **20 18 01.4 +6.5**
DL2 pmax pmax
comp=Z,16nm,1.0s
DL2 pmax pmax
comp=Z,180nm,4.2s
DL2 LR LR
comp=Z,100nm,16.6s
DL2 LR LR
comp=Z,130nm,17.2s
DL2 LR LR
comp=Z,220nm,21.1s
ATKA Atka Island 76.30 10 P **P** **20 08 14.4 +3.1**
comp=Z,37nm,1.7s
PET Petropavlovsk 76.39 353 *e*P P 20 08 22.6 +11
PET *e*S S 20 18 04.3 +8.9
PET *e*PS **PnS** **20 18 43.4 +8.3**
PET *e*PPS PPS 20 18 56.0
PET *e*SS **SS** **20 22 55.9 +5.2**
PET pmax pmax
comp=Z,100nm,15.7s
PEA0B Petropavlovsk- 76.58 353 P **P** **20 08 12.6 -0.3**
PEA0B Petropavlovsk- 76.58 353 *i* P **P** **20 08 12.1 -0.8**
PETK Petropavlovsk- 76.58 353 P **P** **20 08 12.6 -0.3**
comp=Z,6.6nm,0.8s,baz=171,slow=9.9,SNR=15
PETK LR LR 20 36 31.6
comp=Z,228nm,21.3s,baz=160,slow=32
comp=Z,6.6nm,0.8s
MDJ Mudanjiang 76.67 332 P **P** **20 08 14.0 +0.4**
MDJ pmax pmax
comp=Z,7.0nm,0.6s
MDJ pmax pmax
comp=Z,240nm,6.5s
MDJ Mudanjiang 76.67 332 P **P** **20 08 14.9 +1.3**
NIKH Nikolski High 78.03 13 P **P** **20 08 21.8 +0.8**
baz=200
GYA Guiyang 78.31 305 ⇑P **P** **20 08 23.7 +0.3**
GYA pmax pmax
comp=Z,8.0nm,1.0s
GYA pmax pmax
comp=Z,130nm,6.4s
ENH Enshi 78.39 310 P **P** **20 08 22.9 -0.7**
ENH IAmb IAmb 20 08 24.4
comp=Z,25nm,1.0s
BNX BinXian 78.51 331 ⇑P **P** **20 08 23.6 -0.2**
BNX pmax pmax
comp=Z,7.0nm,0.6s
BNX pmax pmax
comp=Z,91nm,4.1s
UNV Unalaska Valle 79.36 14 P **P** **20 08 28.4 +0.1**
baz=202
CRAI Chiangrai 80.07 297 P **P** **20 08 33.1 +0.2**
SMAI San Martin Ant 80.08 161 P **P** **20 08 32.8 +0.6**
SMAI IAmb IAmb 20 08 43.0
comp=Z,19nm,0.9s
BJT Baijiatuau 80.13 321 P **P** **20 08 32.9 +0.1**
BJT Baijiatuau 80.13 321 P **P** **20 08 32.9 +0.1**
BJT pmax pmax
comp=Z,9.0nm,1.0s
BJI Beijing 80.14 321 P **P** **20 08 33.2 +0.3**
BJI pP **pP** **20 08 35.6 -4.1**
BJI PcP **PcP** **20 08 41.0 +0.9**
BJI pmax pmax
comp=Z,8.0nm,0.8s
BJI pmax pmax
comp=Z,110nm,5.8s
CM31 Chiang Mai Arr 80.41 295 P **P** **20 08 35.6 +0.8**
CMAR Chiang Mai Arr 80.41 295 P **P** **20 08 36.0 +1.2**
comp=Z,9.1nm,0.8s,baz=136,slow=4.1,SNR=46
CMAR LR LR 20 47 50.9
comp=Z,67nm,18.8s,baz=105,slow=38
comp=Z,9.1nm,0.8s
CMAR Chiang Mai Arr 80.41 295 P **P** **20 08 35.2 +0.4**
CMAR Chiang Mai Arr 80.41 295 *ce* P **P** **20 08 36.0 +1.2**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 80.58 295 P **P** **20 08 35.8 +0.1**
CHTO IAmb IAmb 20 08 37.6
comp=Z,15nm,0.8s
CHTO Chiang Mai 80.58 295 P **P** **20 08 35.8 +0.1**
CHTO pmax pmax
comp=Z,15nm,0.9s
CHTO Chiang Mai 80.58 295 P **P** **20 08 38.4 +2.7**
KMI Kunming 80.61 302 ⇑P **P** **20 08 37.5 +1.5**
KMI pP pP 20 08 39.9 -2.9
KMI S **S** **20 18 46.5 +4.2**
KMI pmax pmax
comp=Z,14nm,1.0s
KMI pmax pmax
comp=Z,110nm,5.4s
KMI LR LR
comp=Z,110nm,15.0s
KMI LR LR
comp=Z,100nm,20.1s
KMI LR LR
comp=Z,190nm,22.3s
XAN Xi'an 80.97 313 P **P** **20 08 37.8 +0.3**
XAN pP PcP 20 08 42.5 -1.5
XAN S **S** **20 18 50.3 +5.0**
XAN pmax pmax
comp=Z,19nm,0.8s
XAN LR LR
comp=Z,110nm,20.8s
XAN LR LR
comp=Z,110nm,20.6s
XAN LR LR
comp=Z,200nm,22.6s
SPIA Saint Paul Isl 81.74 11 P **P** **20 08 41.8 +0.8**
baz=199
CHNA Chernabura Isl 81.98 17 P **P** **20 08 43.0 +0.7**
baz=208
PZH PanZhiHua 82.08 303 P **P** **20 08 45.5 +1.8**
PZH S **S** **20 18 58.9 +1.5**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,160nm,4.9s
PZH LR LR
comp=Z,260nm,19.6s
PZH LR LR
comp=Z,360nm,19.1s
PZH LR LR
comp=Z,340nm,20.6s
S12K Black Hills 82.11 16 P **P** **20 08 43.7 +0.7**
baz=206
SDPT Sand Point 82.20 17 P **P** **20 08 44.4 +1.0**
baz=208
CD2 Chengdu 82.85 308 P **P** **20 08 48.7 +1.2**
CD2 S **S** **20 19 04.1 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,8.4s
PMSA Palmer Station 83.19 160 LR LR 20 42 17.1
comp=Z,192nm,18.2s,baz=222,slow=33
HHC Hu-ho-hao-te 83.36 320 *e*P **P** **20 08 50.3 +0.3**
HHC S **S** **20 19 15.5 +5.7**
HHC sS sS 20 19 20.3 -0.8
HHC pmax pmax
comp=Z,30nm,1.0s
HHC pmax pmax
comp=Z,210nm,5.3s
HHC LR LR
comp=Z,200nm,17.1s
HHC LR LR
comp=Z,340nm,14.7s
HHC LR LR
comp=Z,210nm,16.7s
MA2 Magadan 83.81 350 LR LR 20 41 49.0
comp=Z,152nm,20.5s,baz=167,slow=33
MA2 Magadan 83.81 350 *i* P **P** **20 08 51.8 +0.1**
MA2 pmax pmax
comp=Z,12nm,1.1s
TROLL Troll, Antarti 84.73 184 P **P** **20 08 55.8 -0.9**
ZEA Zeya 84.81 336 *e*P P 20 09 02.5 +5.6
ZEA pmax pmax
comp=Z,10.0nm,1.3s
SII Sitkinak Islan 85.03 19 P **P** **20 08 57.9 -0.1**
baz=213
NVL N'lazarevskaya 85.09 187 *e*P **P** **20 08 57.0 -1.3**
NVL pmax pmax
comp=Z,16nm,0.9s
R17K Ugashik Creek 85.31 18 P **P** **20 09 00.3 +1.0**
baz=211
SNAA Sanae 85.34 182 P **P** **20 08 58.5 -1.1**
SNAA Sanae 85.34 182 LR LR 20 43 44.0
comp=Z,236nm,21.9s,baz=196,slow=33
SNAA Sanae 85.34 182 P **P** **20 08 58.7 -0.9**
SNAA Sanae 85.34 182 P **P** **20 08 58.7 -0.9**
SNAA pmax pmax
comp=Z,43nm,1.1s
LZH Lanzhou 85.56 312 ⇓P **P** **20 09 02.4 +1.1**
LZH sP pP 20 09 08.8 +0.6
LZH S **S** **20 19 34.1 +2.0**
LZH pmax pmax
comp=Z,35nm,1.3s
LZH LR LR
comp=Z,170nm,16.0s
LZH LR LR
comp=Z,220nm,16.2s
LZH LR LR
comp=Z,250nm,18.3s
OHAK Old Harbor 85.86 19 P **P** **20 09 03.6 +1.5**
baz=214
VNA3 Neumayer Olymp 85.92 180 P **P** **20 09 01.4 -1.1**
P16K Nushagak River 86.09 16 P **P** **20 09 03.9 +0.8**
baz=210
VNA2 Neumayer--Watz 86.21 181 P **P** **20 09 03.0 -0.9**
baz=164,slow=5.0
VNA1 Neumayer-Stat 86.50 181 P **P** **20 09 04.2 -1.1**
O16K Kokwok River B 86.55 16 P **P** **20 09 06.5 +1.1**
baz=210
SEY Seymchan 86.82 352 *i* P **P** **20 09 06.1 -0.5**
SEY pmax pmax
comp=Z,7.0nm,0.9s
O17K Koliganek Bris 86.96 16 P **P** **20 09 08.4 +1.0**
baz=210
P18K Big Mountain, 87.13 17 P **P** **20 09 08.7 +0.4**
baz=212
N16K Nishlik Lake 87.16 15 P **P** **20 09 09.1 +0.7**

baz=209
Q19K Cape Douglas, 87.18 18 P **P** **20 09 09.5 +1.0**
baz=214
Q20K Shuyak Island 87.28 19 P **P** **20 09 10.1 +1.2**
baz=215
GAMB Gambell 87.82 8 P **P** **20 09 12.8 +1.4**
baz=197
SCZ2 Santa Cruz Isl 87.99 52 P **P** **20 09 14.2 +1.1**
baz=240
SCI2 San Clemente I 88.29 53 P **P** **20 09 14.8 +0.3**
baz=241
PKM Mcpherson Peak 88.30 51 P **P** **20 09 14.8 +0.1**
baz=240
HOM Homer 88.36 19 P **P** **20 09 15.2 +1.1**
baz=215
PAGB Antelope Grade 88.41 50 P **P** **20 09 14.8 -0.2**
PAGB IAmb IAmb 20 09 28.6
comp=Z,25nm,1.0s
ARVC Arvin 89.12 51 P **P** **20 09 18.8 +0.5**
baz=241
PASC Pasadena Art C 89.12 52 P **P** **20 09 18.6 +0.2**
PASC IAmb IAmb 20 09 30.0
comp=Z,21nm,1.1s
VES Vestal, Richgr 89.29 50 P **P** **20 09 19.1 +0.1**
baz=241
CIT Chita 89.37 329 *e*P P 20 09 27.0 +7.9
CIT pmax pmax
comp=Z,28nm,3.8s
CMB Columbia Colle 89.47 48 P **P** **20 09 20.4 +0.5**
CMB Columbia Colle 89.47 48 P **P** **20 09 20.4 +0.5**
CMB pmax pmax
comp=Z,46nm,1.1s
M19K Big River Lodg 89.48 16 P **P** **20 09 20.5 +1.1**
baz=213
L02F Cave Junction 89.48 43 P **P** **20 09 19.8 -0.1**
baz=238
ANM Nome 89.51 11 P **P** **20 09 19.7 +0.3**
baz=203
BFSC Mount Baldy Ra 89.54 52 P **P** **20 09 20.5 0.0**
baz=242
MURC Murrieta 89.58 53 P **P** **20 09 20.6 0.0**
baz=242
L19K White Mountain 89.59 16 P **P** **20 09 20.1 +0.2**
baz=212
EDW2 Edwards Air Fo 89.60 52 P **P** **20 09 20.2 -0.5**
baz=241,SNR=8.3
ISA Isabella, Lake 89.64 51 P **P** **20 09 21.7 +0.8**
ISA Isabella, Lake 89.64 51 P **P** **20 09 21.7 +0.8**
ISA pmax pmax
comp=Z,53nm,1.1s
ISA Isabella, Lake 89.64 51 P **P** **20 09 20.8 -0.1**
baz=241,SNR=8.6
K02D Willamette Mer 89.73 43 P **P** **20 09 20.9 -0.2**
baz=238
M20K Styx River 89.79 17 P **P** **20 09 20.6 -0.4**
baz=214
J01E Myrtle Point 89.81 42 P **P** **20 09 21.1 -0.3**
baz=238
MONP2 Monument Peak 89.82 54 P **P** **20 09 21.1 -0.8**
baz=242,SNR=5.7
YBH Yreka Blue Hor 89.82 44 LR LR 20 41 55.5
comp=Z,96nm,20.3s,baz=264,slow=30
YBH Yreka Blue Hor 89.82 44 P **P** **20 09 21.9 +0.3**
YBH IAmb IAmb 20 09 33.4
comp=Z,21nm,1.1s
YBH Yreka Blue Hor 89.82 44 P **P** **20 09 21.9 +0.3**
YBH pmax pmax
comp=Z,21nm,1.2s
P23K Montague Islan 89.92 20 P **P** **20 09 22.2 +0.7**
baz=219
IKP In-Ko-Pah, Jac 89.94 54 P **P** **20 09 22.2 -0.2**
baz=242,SNR=5.9
TTA Tatalina 89.95 15 P **P** **20 09 22.0 +0.4**
baz=211
GTA Gaotai 90.01 313 ⇑P **P** **20 09 23.5 +0.9**
GTA pP pP 20 09 28.1 -1.4
GTA sP sP 20 09 31.2 -0.3
GTA SKS **SKSac** **20 19 53.3 +1.1**
GTA S **S** **20 20 16.2 +1.8**
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,58nm,5.5s
GTA LR LR
comp=Z,85nm,14.2s
GTA LR LR
comp=Z,110nm,14.9s
GTA LR LR
comp=Z,130nm,18.5s
L20K Farewell, AK 90.09 16 P **P** **20 09 22.3 +0.1**
baz=213
LRMC Laurel Mtn Rad 90.11 51 P **P** **20 09 23.0 -0.2**
baz=242,SNR=6.9
HUMO Hull Mountain 90.12 43 P **P** **20 09 23.4 +0.6**
HUMO IAmb IAmb 20 09 35.4
comp=Z,23nm,1.1s
PFO Pinyon Flats O 90.12 53 LR LR 20 41 56.1
comp=Z,172nm,20.1s,baz=243,slow=30
PFO Pinyon Flats O 90.12 53 **P** **20 09 23.7 +0.4**
PFO IAmb IAmb 20 09 35.8
comp=Z,26nm,1.2s
PFO Pinyon Flats O 90.12 53 P **P** **20 09 23.7 +0.4**
PFO pmax pmax
comp=Z,26nm,1.2s
PFO Pinyon Flats O 90.12 53 P **P** **20 09 23.0 -0.2**
baz=242,SNR=6.4
TPFO Pinon Flats 90.13 53 P **P** **20 09 23.3 0.0**
baz=242,SNR=5.8
ULN Ulaanbaatar 90.15 323 *i* P **P** **20 09 23.0 0.0**
ULN pmax pmax
comp=Z,8.0nm,0.9s
CWC Cottonwood Cre 90.29 50 P **P** **20 09 23.5 -0.5**
baz=241
SWSC Sam W. Stewart 90.31 54 P **P** **20 09 23.9 -0.1**
baz=243,SNR=5.6
PWL Port Wells 90.31 19 P **P** **20 09 23.4 +0.1**
baz=218
L04D Klamath Falls 90.33 44 P **P** **20 09 23.2 -0.9**
baz=239
I02E Swisshome, OR 90.37 41 P **P** **20 09 22.6 -1.4**
baz=238
I03D Drain, OR 90.46 42 P **P** **20 09 25.3 +1.0**
baz=238
SONM Songino Array 90.50 323 P **P** **20 09 24.8 +0.1**
comp=Z,4.9nm,0.8s,baz=142,slow=4.3,SNR=21
SONM LR LR 20 47 39.4
comp=Z,103nm,21.2s,baz=126,slow=34
comp=Z,4.9nm,0.8s
SONM Songino Array 90.50 323 P **P** **20 09 24.5 -0.2**
MPMC Manual Prospec 90.53 51 P **P** **20 09 25.8 +0.7**
baz=242,SNR=7.5
YAK Yakutsk 90.63 342 LR LR 20 50 06.6
comp=Z,137nm,18.2s,baz=89,slow=36
YAK Yakutsk 90.63 342 *i* P **P** **20 09 24.2 -0.5**
YAK pmax pmax
comp=Z,4.0nm,0.9s
BELC Belle Mtn. Jos 90.65 53 P **P** **20 09 26.1 +0.4**
baz=242,SNR=8.7
GSC Goldstone, Bar 90.66 52 P **P** **20 09 25.6 0.0**
baz=242,SNR=7.6
KNK Knik Glacier 90.71 19 P **P** **20 09 26.2 +1.0**
baz=218
LPIG La Paz 90.77 64 LR LR 20 44 29.9
comp=Z,164nm,18.0s,baz=236,slow=32
HEC Hector,Ludlow 90.78 52 P **P** **20 09 26.6 +0.4**
baz=242,SNR=6.3
EYAK Cordova Ski Ar 90.88 20 P **P** **20 09 27.3 +1.4**
baz=220
BC3 Big Chuckawall 90.89 54 P **P** **20 09 27.7 +0.9**
baz=243,SNR=7.5
BILL Bilibino 90.89 359⇓ *e*P **P** **20 09 23.3 -2.5**
BILL *e* 20 13 00.8
BILL *e*PPP PPP 20 15 01.4
BILL pmax pmax
comp=Z,23nm,1.1s
J04D Umpqua Nationa 90.99 43 P **P** **20 09 27.7 +0.6**
baz=239,SNR=5.6
GRAC Grapevine Rang 91.06 50 P **P** **20 09 28.3 +0.9**
baz=242,SNR=6.1
GLA Glamis 91.08 54 P **P** **20 09 28.1 +0.5**
baz=243,SNR=5.2
I04A Tendick Farm, 91.09 42 P **P** **20 09 27.9 +0.5**
baz=239
NVAR Mina Array Bea 91.09 48 P **P** **20 09 28.1 +0.4**
comp=Z,4.6nm,0.8s,baz=229,slow=8.5,SNR=29
NVAR LR LR 20 41 54.2
comp=Z,183nm,21.5s,baz=264,slow=30
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 91.09 48 P **P** **20 09 27.8 +0.1**
FURC Furnace Creek, 91.16 51 P **P** **20 09 28.3 +0.5**
baz=242,SNR=6.2
NV11 Mina Array Sit 91.19 48 P **P** **20 09 27.7 -0.4**
GMRC Granite Mounta 91.25 53 P **P** **20 09 28.9 +0.5**
baz=243,SNR=8.7
H04D Lebanon 91.27 41 P **P** **20 09 29.0 +0.9**
baz=238
G03D McMinnville, O 91.31 41 P **P** **20 09 28.0 -0.2**
baz=238
SHOC Shoshone, Teco 91.32 51 P **P** **20 09 28.7 +0.1**
baz=242
IRM Iron Mountain 91.35 53 P **P** **20 09 28.3 -0.5**
baz=243,SNR=9.8
J20K Nowinta River 91.45 15 P **P** **20 09 29.1 +0.6**
baz=213
KVN Kaiserville 91.53 48 P **P** **20 09 29.7 0.0**
KVN Kaiserville 91.53 48 P **P** **20 09 29.7 0.0**
KVN pmax pmax
comp=Z,41nm,1.1s
KLU Klutina 91.54 20 P **P** **20 09 29.9 +0.8**
baz=220
J05D Fort Rock, OR 91.56 43 P **P** **20 09 29.9 +0.1**
baz=239,SNR=5.8
BMRM Bremner River 91.56 20 P **P** **20 09 29.8 +0.6**
baz=221
WAT1 Susitna Watana 91.81 18 P **P** **20 09 30.9 +0.7**
baz=218
PALK Pallekele 91.81 277 LR LR 20 54 09.0
comp=Z,275nm,18.2s,baz=225,slow=38
TPNV Topopah Spring 91.83 50 P **P** **20 09 32.1 +0.9**
baz=242,SNR=5.4
E03A Lebam 91.84 39 **P** **20 09 31.0 +0.3**
WAT6 Susitna Watana 91.84 18 P **P** **20 09 30.6 0.0**
baz=219
CRQE Cirque 91.89 21 P **P** **20 09 31.0 +0.2**
baz=223
M24K Tolsona, Glenn 91.94 19 P **P** **20 09 31.6 +0.7**
baz=220
GOMU GeErMu 91.95 309 P **P** **20 09 29.3 -2.7**
GOMU pP PcP 20 09 35.6 +2.8
GOMU sP pP 20 09 37.9 -1.0
GOMU pmax pmax
comp=Z,3.0nm,0.9s
GOMU pmax pmax
comp=Z,94nm,5.4s
PINE Pine Mountain 92.00 43 P **P** **20 09 32.5 +0.7**
N25K Chitina, Valde 92.04 20 P **P** **20 09 31.5 +0.1**
baz=221
214A Organ Pipe Nat 92.12 56 P **P** **20 09 31.4 -1.0**
baz=244
PDMCI Parker Dam,Lak 92.16 54 P **P** **20 09 33.7 +1.2**
baz=244,SNR=5.1
GLB Gilahina Butte 92.17 20 P **P** **20 09 30.6 -1.4**
GLB IAmb IAmb 20 09 42.6
comp=Z,18nm,1.0s
GRNC Granite Creek 92.33 22 P **P** **20 09 32.0 -0.9**
GRNC IAmb IAmb 20 09 43.9
comp=Z,14nm,1.0s
TABL Table Mountain 92.33 22 P **P** **20 09 33.1 +0.1**
DHY Denali Highway 92.34 18 P **P** **20 09 33.2 +0.4**
baz=219
MCARA McCarthy VSAT 92.38 21 P **P** **20 09 33.4 +0.5**
baz=223
SHPR Sheep Range 92.40 51 **P** **20 09 33.4 -0.4**
SHPR IAmb IAmb 20 09 46.1
comp=Z,18nm,1.2s
PNL Peninsula 92.40 23 P **P** **20 09 33.4 +0.4**
baz=226
BBB Bella Bella 92.50 33 LR LR 20 43 25.9
comp=Z,81nm,20.4s,baz=249,slow=30
BARN Barnard Glacie 92.60 21 P **P** **20 09 34.4 +0.3**
CTG Chitna Glacier 92.64 22 P **P** **20 09 34.4 +0.1**
baz=224
WVOR Wild Horse Val 92.79 45 P **P** **20 09 35.9 +0.5**
WVOR IAmb IAmb 20 09 47.3
comp=Z,15nm,1.1s
WVOR Wild Horse Val 92.79 45 P **P** **20 09 35.9 +0.5**
WVOR pmax pmax
comp=Z,15nm,1.1s
PAX Paxson 92.81 19 P **P** **20 09 36.1 +1.2**
baz=221
O28M Mount Upton 92.90 22 P **P** **20 09 35.8 +0.1**
baz=225
R11A Troy Canyon, C 92.94 49 P **P** **20 09 36.1 -0.1**
baz=243,SNR=7.4
P29M Windy Craggy 92.99 24 P **P** **20 09 36.1 +0.3**
baz=227
MLY Manley 92.99 16 P **P** **20 09 35.9 +0.2**
baz=216
H21K Melozitna Rive 93.01 15 **P** **20 09 35.5 -0.2**
H21K IAmb IAmb 20 09 46.6
comp=Z,6.2nm,1.1s
H21K Melozitna Rive 93.01 15 P **P** **20 09 36.1 +0.4**
baz=214
I07A Izee 93.04 43 P **P** **20 09 36.4 -0.1**
I07A IAmb IAmb 20 09 48.3
comp=Z,15nm,1.2s
WRAK Wrangell Islan 93.06 28 P **P** **20 09 36.4 +0.3**
baz=232
IMAR Indian Mountai 93.06 14 **P** **20 09 35.3 -0.6**
M26K Nabesna, AK 93.14 20 P **P** **20 09 36.5 0.0**
baz=223
K24K Donnelly Dome 93.36 18 P **P** **20 09 37.5 +0.2**
baz=220
PLBC Pleasant Camp 93.39 24 P **P** **20 09 37.7 +0.1**
baz=228
M27K Edge Creek, AK 93.47 20 P **P** **20 09 38.8 +0.7**
baz=224
HDA Harding Lake 93.49 17 P **P** **20 09 38.4 +0.5**
baz=219
L26K Log Cabin Wild 93.50 20 P **P** **20 09 38.9 +0.9**
baz=222
YUK3 Moose Creek 93.52 21 P **P** **20 09 39.0 +0.6**
baz=225
H22K Ishtalitna Cre 93.54 15 P **P** **20 09 38.3 +0.1**
baz=216
G21K Allakaket 93.56 14 P **P** **20 09 37.8 -0.4**
baz=214
RIDG Independent Ri 93.58 19 P **P** **20 09 37.7 -0.7**
RIDG IAmb IAmb 20 09 49.1
comp=Z,17nm,1.0s
RIDG Independent Ri 93.58 19 P **P** **20 09 39.3 +0.8**
baz=221
P30M Million Dollar 93.61 24 P **P** **20 09 39.8 +1.2**
baz=226
TCOL CIGO, UAF Yank 93.61 17 P **P** **20 09 39.4 +1.0**
baz=219
ZAK Zakamensk 93.61 324 *e*P **P** **20 09 38.8 -0.1**
ZAK pmax pmax
comp=Z,6.0nm,1.3s
COLA College 93.61 17 *i* P **P** **20 09 37.8 -0.6**
COLA pmax pmax
comp=Z,6.0nm,1.0s
H03S2 Juan Fernandez 93.69 129 T T 21 53 53.1
baz=237
H03S1 Juan Fernandez 93.70 129 T T 21 53 56.0
baz=237
H03S3 Juan Fernandez 93.70 129 T T 21 53 54.9
baz=237
IL31 93.79 17 P **P** **20 09 37.6 -1.6**
IL31 IAmb IAmb 20 09 49.4
comp=Z,12nm,1.1s
ILAR Eielson Array 93.79 17 P **P** **20 09 37.1 -2.2**
comp=Z,2.2nm,0.9s,baz=236,slow=5.4,SNR=16
ILAR LR LR 20 47 28.6
comp=Z,138nm,19.9s,baz=241,slow=33
comp=Z,2.2nm,0.9s
ILAR Eielson Array 93.79 17 P **P** **20 09 37.8 -1.5**
ILAR Eielson Array 93.79 17 P **P** **20 09 37.8 -1.5**
TUC Tucson 93.83 57 P **P** **20 09 39.7 -0.7**
TUC IAmb IAmb 20 09 52.7
comp=Z,13nm,1.1s
TUC Tucson 93.83 57 P **P** **20 09 39.7 -0.7**
TUC pmax pmax
comp=Z,13nm,1.1s
TUC Tucson 93.83 57 P **P** **20 09 41.0 +0.6**
baz=245
H03N3 Juan Fernandez 93.88 129 T T 21 54 10.7
baz=234
H03N2 Juan Fernandez 93.88 129 T T 21 54 10.9
baz=234
HYT Haines Junctio 93.89 23 P **P** **20 09 40.6 +0.7**
baz=227
H03N1 Juan Fernandez 93.90 129 T T 21 54 04.2
baz=234
L27K Beaver Creek, 94.00 20 P **P** **20 09 39.3 -1.0**
baz=224
SCRK Sand Creek 94.01 19 P **P** **20 09 39.8 -0.6**
baz=222
BCAR Beaver Creek A 94.01 20 P **P** **20 09 39.9 -0.5**
J25K Salcha River, 94.09 18 P **P** **20 09 40.7 -0.1**
baz=221
F21K Alatna River 94.16 14 P **P** **20 09 41.5 +0.5**
baz=214
ELK Elko 94.26 47 LR LR 20 49 19.2
comp=Z,116nm,18.1s,baz=250,slow=34
O30N Mendenhall 94.36 24 P **P** **20 09 42.4 +0.3**
baz=229
U15A North Rim 94.44 52 P **P** **20 09 43.4 +0.1**
P32M Atlin 94.50 25 P **P** **20 09 42.8 +0.1**
baz=230
J26L Joseph Creek 94.52 18 P **P** **20 09 42.6 -0.2**
baz=222
G23K Bananza Creek 94.53 15 P **P** **20 09 42.7 0.0**
baz=217
K27K Chicken 94.62 19 P **P** **20 09 44.0 +0.9**
baz=224
M29M Somme Creek 94.66 22 P **P** **20 09 43.2 -0.2**
baz=227
F22K John River 94.68 14 P **P** **20 09 43.8 +0.5**
baz=215
PRP Porcupine Dome 94.74 17 P **P** **20 09 45.0 +1.2**
baz=221
COLD Coldfoot 94.90 15 P **P** **20 09 46.2 +1.9**
baz=217
G24K Hadweenzic Riv 95.14 16 P **P** **20 09 44.5 -0.9**
baz=219
I26K Coal Creek Min 95.24 18 P **P** **20 09 46.3 +0.4**
baz=223
P33M Teslin, Yukon 95.24 25 P **P** **20 09 46.9 +0.7**
baz=231
E22K Anaktuvuk Pass 95.28 14 P **P** **20 09 46.5 +0.4**
baz=215
DLBC Dease Lake 95.29 27 LR LR 20 48 19.1
comp=Z,60nm,19.0s,baz=299,slow=33
PLCA Paso Flores 95.43 139 LR LR 20 47 34.5
comp=Z,53nm,18.2s,baz=208,slow=32
DAWY Dawson 95.48 20 P **P** **20 09 47.9 +0.7**
DAWY IAmb IAmb 20 09 58.2
comp=Z,8.9nm,1.1s
DAWY Dawson 95.48 20 P **P** **20 09 47.4 +0.3**
baz=226
F24K Squaw Lake 95.68 15 P **P** **20 09 48.3 +0.4**
baz=219
W18A Petrified Fore 95.78 54 P **P** **20 09 49.6 +0.2**
baz=246
I27K Kandik River 95.90 18 P **P** **20 09 49.8 +0.8**
baz=224
E24K Your Creek 95.97 15 P **P** **20 09 50.7 +1.4**
baz=218
HLID Hailey 96.06 45 P **P** **20 09 51.3 +0.9**
baz=244
TOLK Toolik Lake Re 96.18 14 P **P** **20 09 51.0 +0.8**
baz=217
D23K Nanushuk River 96.20 13 P **P** **20 09 51.6 +1.4**
baz=216
121A Cookes Peak, D 96.24 57 P **P** **20 09 52.0 +0.5**
baz=247
G26K Porcupine Rive 96.28 17 P **P** **20 09 51.0 +0.4**
baz=222
F25K Christian Rive 96.29 16 P **P** **20 09 51.5 +0.8**
baz=221
BMAR Burnt Mountain 96.43 16 P **P** **20 09 50.3 -1.1**
NEW Newport 96.49 40 LR LR 20 49 55.6
comp=Z,77nm,18.1s,baz=264,slow=33
I29M Ogilvie Camp, 96.71 19 P **P** **20 09 53.0 +0.3**
baz=227
D24K Happy Valley 96.75 14 P **P** **20 09 53.1 +0.4**
baz=218
G27K Doyon Strip 96.75 17 P **P** **20 09 53.1 +0.3**
baz=224
MVCO Mesa Verde 97.54 53 P Pdif 20 09 59.3 +1.8
baz=247
E27K Coleen River 97.76 16 P Pdif 20 09 59.3 +1.8
baz=224
ANMO Albuquerque 98.19 56 LR LR 20 48 36.5
comp=Z,118nm,18.5s,baz=246,slow=32
TXAR Lajitas Array 98.29 62 P Pdif 20 10 01.3 +0.6
comp=Z,0.5nm,0.9s,baz=225,slow=5.0,SNR=2.1
TXAR PKKPbc **PKKPbc** **20 26 32.7 +0.3**
comp=Z,0.2nm,0.6s,baz=102,slow=3.8,SNR=4.0
TXAR LR LR 20 48 39.8
comp=Z,119nm,18.2s,baz=240,slow=32
comp=Z,0.5nm,0.9s
TIXI Tiksi 98.57 348 LR LR 20 56 07.1
comp=Z,60nm,18.0s,baz=176,slow=36
TIXI Tiksi 98.57 348 *i* P **P** **20 10 00.3 -0.5**
TIXI pmax pmax
comp=Z,5.0nm,1.1s
PDAR Pinedale Array 98.97 47 P Pdif 20 10 05.2 +1.5
comp=Z,0.3nm,0.3s,baz=235,slow=4.0,SNR=4.2
PDAR LR LR 20 49 21.9
comp=Z,54nm,19.6s,baz=259,slow=32
comp=Z,0.3nm,0.3s
WMQ Urumqi 100.10 313 *e*P **Pdif** **20 10 09.8 +1.3**
WMQ LR LR
comp=Z,120nm,19.9s
MKAR Makanchi Array 104.70 315 Pdiff **Pdif** **20 10 29.1 +0.3**
comp=Z,1.0nm,0.8s,baz=110,slow=5.3,SNR=8.2
MKAR PP **PP** **20 14 48.6 -0.2**
comp=Z,0.9nm,1.1s,baz=113,slow=7.0,SNR=8.9
MKAR PKKPbc **PKKPbc** **20 26 11.8 -2.4**
comp=Z,0.9nm,0.8s,baz=295,slow=2.9,SNR=7.5
MKAR PKKP **PKKPdf** **20 26 21.9 -2.7**
comp=Z,0.7nm,0.8s,baz=284,slow=2.0,SNR=4.9
BRVK Borovoye 113.64 319*c* *i*PKIKP **PKiKP** **20 15 00.0 -0.8**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
GEYT Alibeck 120.37 301 PKP **PKPdf** **20 15 13.8 -0.6**
comp=Z,2.7nm,0.7s,baz=147,slow=2.9,SNR=3.5
ARU Arti 120.53 323 PKPdf **PKPdf** **20 15 13.2 -0.8**
ARU Arti 120.53 323 *i* PKIKP **PKPdf** **20 15 13.1 -0.9**
ARU 20 16 40.1
ARU 20 22 24.9
SPITS Spitsbergen Ar 123.45 354 PKIKP **PKPdf** **20 15 18.6 -0.5**
KIRV Kirov 125.09 326*c* *i*PKIKP **PKPdf** **20 15 21.5 -1.1**
BDFB Brasilia 126.74 133 PKP **PKPdf** **20 15 26.7 -0.6**
comp=Z,5.4nm,0.7s,baz=152,slow=0.9,SNR=9.9
ARCES ARCESS Array B 128.86 345 PKP **PKPdf** **20 15 29.4 -0.2**
comp=Z,5.4nm,0.7s,baz=11,slow=0.9,SNR=16
KLMR Klimovskoe 129.08 331 *e*PKIKP **PKPdf** **20 15 28.8 -1.4**
KLMR pmax pmax
comp=Z,16nm,1.4s
KLMR Klimovskoe 129.08 331 AMP 20 15 40.5
comp=Z,16nm,1.4s
KLMR Klimovskoe 129.08 331 *e*PKPdf **PKPdf** **20 15 28.9 -1.3**
KBZ Khabaz 131.89 309 *i* PKIKP **PKPdf** **20 15 34.4 -1.7**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KIV Kislovodsk 132.01 309 *i* PKIKP **PKiKP** **20 15 37.0 -0.5**
KIV pmax pmax
comp=Z,5.0nm,1.0s
OBN Obninsk 132.87 325⇑ *e*PKIKP **PKPdf** **20 15 37.2 -0.3**
OBN *e* 20 18 02.8
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN MLR MLR
comp=Z,100nm,21.0s
GURO Guroymak-BITLI 133.03 302 PKPdf **PKPdf** **20 15 38.7 0.0**
FINES FINESS Array B 134.26 336 PKP **PKPdf** **20 15 39.8 -0.1**
comp=Z,2.8nm,0.8s,baz=42,slow=3.1,SNR=8.3
MNK Minsk 137.60 328 *i* PKIKP **PKPdf** **20 15 47.3 +0.9**
MNK *i* 20 18 33.3
MNK *i* PPP PPP 20 21 32.7
MNK *i* SS SS 20 36 42.5 +2.8
MNK *i* SSS SSS 20 41 48.9
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK MLR MLR
comp=E,39nm,22.0s
MNK MLR MLR
comp=Z,120nm,23.0s
MNK MLR MLR
comp=N,15nm,22.0s
MNK Minsk 137.60 328 *i* PKP **PKPdf** **20 15 47.3 +0.9**
comp=E,2.0nm,0.9s
MNK *i* PKP **PKPdf** **20 15 47.3 +0.9**
comp=N,7.0nm,0.8s

MNK *i* PKP **PKPdf** **20 15 47.3 +0.9**
comp=Z,10.0nm,0.8s,baz=57
MNK *i* PP **PP** **20 18 33.4 +0.6**
MNK *i* PPP PPP 20 21 32.8
MNK *i* SKS **SKSdf** **20 22 45.8 -10**
MNK *i* PS **PS** **20 29 05.3 +4.5**
MNK *i* SS **SS** **20 36 42.6 +2.9**
MNK *i* SSS SSS 20 41 49.0
MNK *i* LR LR 21 09 12.5
MNK *i* LRM MLR 21 14 42.2
comp=E,39nm,21.7s
MNK *i* LRM MLR 21 14 44.8
comp=Z,120nm,23.0s
MNK *i* LRM MLR 21 15 29.5
comp=N,15nm,21.7s
AKASG **Malin Array Be** **138.77 322** PKhKP PKPpre 20 15 44.1
comp=N,1.0nm,0.6s,baz=60,slow=2.7,SNR=1.9
AKASG PKP **PKPdf** **20 15 49.2 +0.5**
comp=N,3.9nm,0.8s,baz=59,slow=2.6,SNR=9.9
AKASG **Malin Array Be** **138.77 322** PKPdf **PKPdf** **20 15 48.0 -0.7**
AKBB **Malin Array Si** **138.77 322***c* *i*PKIKP **PKPdf** **20 15 46.9 -1.8**
NB2 **NORSAR Subarra** **139.23 344** PKPdf **PKiKP** **20 15 51.1 -0.5**
comp=Z,3.2nm,1.1s,baz=31,slow=1.9
NOA **NORSAR Array B** **139.23 344** PKP **PKiKP** **20 15 50.6 -0.9**
comp=Z,1.8nm,0.8s,baz=33,slow=2.0,SNR=9.7
HFS **Hagfors** **139.32 342** PKhKP PKPpre 20 15 45.2
comp=Z,1.9nm,0.7s,baz=76,slow=6.1,SNR=2.4
BRTR **Keskin Array B** **139.36 305** PKhKP PKPpre 20 15 40.2
comp=Z,0.7nm,0.7s,baz=75,slow=0.7,SNR=3.9
LVV **L'vov** **142.11 323** *e*PKIKP **PKiKP** **20 15 59.2 +1.5**
BIZ **Bicaz** **142.31 318** ⇓P **PKPdf** **20 15 52.4 -2.9**
VRI **Vrincioaia** **142.38 316** ⇑P **PKPdf** **20 15 56.2 +0.8**
BURAR **Bucovina Array** **142.53 320** ⇑P **PKPdf** **20 15 56.8 +1.0**
BURAR **Bucovina Array** **142.53 320** PKPdf **PKPdf** **20 15 54.8 -1.0**
MLR **Muntele Rosu** **143.03 316** ⇑P PKPbc 20 15 54.1 +0.5
MLR **Muntele Rosu** **143.03 316** PKPbc 20 15 54.9 +1.3
comp=Z,4.7nm,0.8s,baz=347,slow=6.4,SNR=3.1
ARCR **ARCALIA** **143.30 319** ⇑P PKPbc 20 15 55.1 +1.0
BMR **Baia Mare** **143.52 321** ⇑P PKPbc 20 15 55.5 +0.8
KOLS **Kolonicke sedl** **143.55 323** *e*PKIKP **PKPdf** **20 15 56.5 -0.9**
KOLS **Kolonicke sedl** **143.55 323** *e*PKP **PKPdf** **20 15 56.5 -0.9**
VOIR **143.63 316** ⇓P **PKPdf** **20 15 56.5 -1.2**
UZH **Uzhgorod** **143.71 323** ⇓*e*PKIKP PKPbc 20 15 55.0 -0.1
UZH *i* 20 15 59.2
SZH **Strazhica** **143.93 313** P PKPbc 20 15 56.3 +0.3
CJR **Cluj-Napoca** **143.94 319** ⇓P **PKPdf** **20 15 57.2 -1.0**
CRVS **Cervenica-Dubn** **144.01 324** *e*PKIKP **PKPdf** **20 15 57.3 -0.9**
CRVS **Cervenica-Dubn** **144.01 324** *e*PKP **PKPdf** **20 15 57.3 -0.9**
DRGR **144.43 320** ⇓P PKPbc 20 15 58.2 +0.6
LOT **Lotru** **144.43 317** ⇑P PKPbc 20 15 58.1 +0.4
LTVH **Ltavrtes, Hu** **144.60 321** ⇑P **PKPdf** **20 15 59.5 +0.2**
LTVH **Ltavrtes, Hu** **144.60 321** PKP **PKPdf** **20 15 59.4 +0.2**
DIM **Dimitrovgrad** **144.65 311** P PKPbc 20 15 58.7 +0.4
VLAD **Vladila** **144.66 315** ⇑P **PKPdf** **20 15 59.2 -0.2**
ALN **Alexandroupoli** **144.68 309** PKPdf **PKPab** **20 15 57.7 -0.6**
ALN **Alexandroupoli** **144.68 309** PKIKP **PKPab** **20 15 57.7 -0.6**
DEV **Deva** **144.76 318** ⇑P **PKPdf** **20 15 59.1 -0.5**
KDZ **Kurdzhali** **144.87 310** P **PKPab** **20 15 58.7 -0.3**
LANS **Liptovska Anna** **144.94 325** *e*PKIKP **PKPdf** **20 16 01.0 +1.2**
LANS **Liptovska Anna** **144.94 325** *e*PKP **PKPdf** **20 16 01.0 +1.2**
GZR **Gura Zlata** **145.07 318** ⇑P **PKPdf** **20 16 00.2 0.0**
OKC **Ostrava-Krasne** **145.19 327** *e*PKIKP **PKPdf** **20 16 00.4 +0.2**
OKC MLR MLR
comp=Z,100nm,22.1s
OKC **Ostrava-Krasne** **145.19 327** *e*PKP **PKPdf** **20 16 00.4 +0.2**
OKC AMS AMS 21 18 10.0
comp=Z,100nm,22.1s
KARP **Karpathos** **145.19 299** **PKPbc** **20 15 59.2 -1.1**
PLD **Plovdiv** **145.21 311** P **PKPab** **20 16 00.1 -0.1**
SIRR **Siria** **145.32 320** ⇑P **PKPdf** **20 16 01.3 +0.8**
RZN **Rozhen** **145.35 311** P **PKPbc** **20 16 00.8 0.0**
MPEP **Malo Peshtene** **145.36 314** P **PKPab** **20 16 00.8 0.0**
PGB **Panagyurishte** **145.40 312** P **PKPdf** **20 16 00.8 -0.1**
KSP **Ksiaz** **145.41 330** *e*PKPdf **PKPab** **20 16 01.0 +0.3**
PSZ **Piszkesteto** **145.43 323** ⇓P **PKPab** **20 16 01.3 +0.4**
PSZ **Piszkesteto** **145.43 323** **PKPbc** **20 16 00.1 -0.7**
PSZ **Piszkesteto** **145.43 323** PKIKP **PKPbc** **20 16 00.1 -0.7**
PSZ **Piszkesteto** **145.43 323** PKP **PKPab** **20 16 01.4 +0.5**
MORC **Moravsky Berou** **145.52 328** ⇓P **PKPab** **20 16 01.5 +0.3**
MORC **Moravsky Berou** **145.52 328** **PKPdf** **20 16 00.5 -0.4**
MORC **Moravsky Berou** **145.52 328** PKIKP **PKPdf** **20 16 00.5 -0.4**
MORC **Moravsky Berou** **145.52 328** *e*PKP **PKPab** **20 16 01.2 0.0**
HERR **Herculane** **145.54 317** ⇑P **PKPab** **20 16 01.6 +0.2**
OSTC **Ostas** **145.64 330** *e*PKP **PKPab** **20 16 01.5 -0.1**
OSTC AMS AMS 21 23 00.0
comp=Z,100nm,24.1s
BZS **Buzias** **145.68 319** ⇑P **PKPdf** **20 16 00.9 -0.3**
CHVC **Chvalec** **145.69 330** AMS AMS 21 22 50.0
KRLC **Kraliky** **145.70 329** *e*PKIKP **PKPbc** **20 16 01.3 -0.2**
KRLC MLR MLR
comp=Z,100nm,20.9s
KRLC **Kraliky** **145.70 329** *e*PKP **PKPbc** **20 16 01.3 -0.2**
KRLC AMS AMS 21 20 30.0
comp=Z,100nm,20.9s
DPC **Dobruska-Polom** **145.73 329** *e*PKIKP **PKPab** **20 16 02.5 +0.5**
DPC MLR MLR
comp=Z,100nm,21.9s
DPC **Dobruska-Polom** **145.73 329** *e*PKP **PKPab** **20 16 02.5 +0.5**
DPC *ex* x 20 16 11.1
DPC AMS AMS 21 21 10.0
comp=Z,100nm,21.9s
UPC **Upice** **145.77 330** *e*PKIKP **PKPab** **20 16 02.4 +0.4**
UPC MLR MLR
comp=Z,100nm,21.3s
UPC **Upice** **145.77 330** *e*PKP **PKPab** **20 16 02.4 +0.4**
UPC AMS AMS 21 22 40.0
comp=Z,100nm,21.3s
BLKB **Belogradchik** **145.95 315** ⇑P **PKPbc** **20 16 02.2 -0.2**
VTS **Vitosha** **146.00 313** ⇑P **PKPab** **20 16 03.4 0.0**
VTS **Vitosha** **146.00 313** PKPdf **PKPdf** **20 16 02.1 +0.1**
VTS **Vitosha** **146.00 313** PKP2 **PKPdf** **20 16 02.1 +0.1**
VTS **Vitosha** **146.00 313** P **PKPbc** **20 16 02.9 +0.1**
MDVR **Moldovita** **146.03 317** ⇑P **PKPab** **20 16 04.0 +0.7**
JAVC **Velka Javorina** **146.05 326** *e*PKP **PKPab** **20 16 04.2 +1.0**
MMB **Musomiste** **146.07 311** P **PKPbc** **20 16 02.5 -0.4**
BANR **Banloc** **146.09 319** ⇑P **PKPab** **20 16 03.8 +0.5**
BUD **Budapest** **146.16 323** PKP **PKPab** **20 16 03.9 +0.3**
VRAC **Vranov** **146.30 328** P **PKPab** **20 16 04.4 +0.3**
VRAC **Vranov** **146.30 328** PKPbc **PKPbc** **20 16 03.2 -0.1**
comp=Z,13nm,0.8s,baz=91,slow=2.5,SNR=29
VRAC **Vranov** **146.30 328** *e*PKP **PKPab** **20 16 03.7 -0.4**
SRO2 **Moca** **146.34 324** *e*PKP2 **PKPbc** **20 16 03.5 +0.1**
SRO2 **Moca** **146.34 324** *e*PKP **PKPbc** **20 16 03.5 +0.1**
SRO **Srobarova** **146.36 324** *e*PKP2 **PKPab** **20 16 04.6 +0.3**
SRO **Srobarova** **146.36 324** *e*PKP **PKPab** **20 16 04.6 +0.3**
SANT **Santorini** **146.37 301** ⇑P **PKPdf** **20 16 02.7 0.0**
SMOL **Smolenice** **146.39 326** *e*PKP2 **PKPab** **20 16 04.6 +0.2**
KKB **Krupnik** **146.41 312** P **PKPbc** **20 16 03.4 -0.5**
PVCC **Panska Ves** **146.41 331** *e*PKP2 **PKPab** **20 16 04.2 -0.3**
PVCC MLR MLR
comp=Z,100nm,20.4s
PVCC **Panska Ves** **146.41 331** *e*PKP **PKPab** **20 16 04.2 -0.3**
PVCC AMS AMS 21 20 20.0
comp=Z,100nm,20.4s
BRG **Berggiesshubel** **146.44 332** *i* PKP **PKPbc** **20 16 03.9 +0.3**
BRG Amp 20 16 05.2
comp=Z,24nm,0.9s
BRG *ex* x 20 16 12.9
BRG Amp 20 16 15.3
comp=Z,26nm,1.1s
BRG **Berggiesshubel** **146.44 332** *i* PKP2 **PKPbc** **20 16 03.9 +0.3**
BRG pmax pmax
comp=Z,24nm,0.9s
CLL **Collm** **146.52 333** **PKPbc** **20 16 03.9 0.0**
CLL **Collm** **146.52 333** *i* PKP2 **PKPbc** **20 16 04.0 +0.2**
CLL pmax pmax
comp=Z,31nm,1.0s
CLL **Collm** **146.52 333** *i* PKPbc **PKPbc** **20 16 04.0 +0.2**
comp=Z,31nm,1.0s
CLL *e*PKSdf **PKSdf** **20 19 39.0 +1.5**
CLL *e*PPP PPP 20 22 48.0
CLL *ex* x 20 25 18.0
CLL LmV 21 21 00.0
comp=Z,100nm,21.6s
MODS **Modra-Piesok** **146.56 326** *e*PKP2 **PKPab** **20 16 05.0 -0.1**
MODS **Modra-Piesok** **146.56 326** *e*PKP **PKPab** **20 16 05.0 -0.1**
KRUC **Moravsky** **146.56 327** *e*PKP **PKPbc** **20 16 04.2 +0.1**
BOVS **Bovan** **146.57 316** ⇑P **PKPdf** **20 16 03.4 +0.7**
CSKK **Cskako** **146.65 324** PKP **PKPab** **20 16 05.0 -0.5**
PRU **Pruhonice** **146.81 330** *e*PKP2 **PKPbc** **20 16 05.0 +0.3**
PRU MLR MLR
comp=Z,100nm,18.8s
PRU **Pruhonice** **146.81 330** *e*PKP **PKPbc** **20 16 05.0 +0.3**
PRU *ep*PKP **pPKPdf** **20 16 09.8 +0.1**
PRU AMS AMS 21 19 40.0
comp=Z,100nm,18.8s
TREC **Trest** **146.85 329** AMS AMS 21 23 40.0
comp=Z,200nm,24.2s
FRGS **Fruska Gora** **147.00 319** ⇑P **PKPbc** **20 16 05.9 +0.5**
FRGS **Fruska Gora** **147.00 319** *e*P **PKPbc** **20 16 05.3 -0.2**
IDI **Anoyia** **147.06 300** ⇑P **PKPdf** **20 16 03.8 -0.1**
IDI **Anoyia** **147.06 300** PKPbc **PKPbc** **20 16 05.3 -0.8**
comp=Z,21nm,0.8s,baz=55,slow=5.6,SNR=5.0
MORH **Mrgy, Hungar** **147.11 322** ⇑P **PKPbc** **20 16 06.3 +0.6**
MORH **Mrgy, Hungar** **147.11 322** *e*P **PKPbc** **20 16 05.5 -0.1**
MORH **Mrgy, Hungar** **147.11 322** PKP **PKPbc** **20 16 05.6 -0.1**
EGYH **Egyhazaskeszo** **147.12 324** PKP **PKPab** **20 16 06.8 -0.6**
MPLH **Magyarpolny** **147.16 324** PKP **PKPbc** **20 16 05.9 +0.1**
EKA **Eskdalemuir Ar** **147.36 352** PKPbc **PKPbc** **20 16 05.2 -0.8**
comp=Z,7.7nm,0.7s,baz=354,slow=2.1,SNR=17
DIVS **Divibare** **147.44 317** **PKPbc** **20 16 06.1 -0.7**
DIVS **Divibare** **147.44 317** *e*P **PKPbc** **20 16 06.5 -0.3**
KOVH **Kovagototos** **147.49 322** PKP **PKPbc** **20 16 06.8 0.0**
RONA **Rosalia, Austr** **147.49 326** *i* P **PKPbc** **20 16 07.1 +0.3**
comp=Z,24nm,0.9s,SNR=11
CONA **Conrad Observa** **147.57 326** *i* P **PKPbc** **20 16 07.5 +0.4**
comp=Z,13nm,0.8s,SNR=6.4
CKRC **Cesky Krumlov** **147.74 329** *e*PKP **PKPbc** **20 16 07.7 +0.3**
CKRC *ex* x 20 16 16.5
CKRC AMS AMS 21 20 40.0
comp=Z,100nm,20.7s
SJES **Sjenica** **147.86 316** *e*P **PKPbc** **20 16 08.3 +0.3**
KHC **Kasperske Hory** **147.86 330** *e*PKP2 **PKPbc** **20 16 08.0 +0.3**
KHC MLR MLR
comp=Z,100nm,23.2s
KHC **Kasperske Hory** **147.86 330** *e*PKP **PKPbc** **20 16 08.0 +0.3**
KHC AMS AMS 21 19 50.0
comp=Z,100nm,23.2s
BBLS **Lazići** **147.92 317** *e*P **PKPbc** **20 16 07.9 -0.2**
AGG **Agios Georgios** **148.00 307** **PKPbc** **20 16 07.2 -1.2**
AGG **Agios Georgios** **148.00 307** PKP2 **PKPbc** **20 16 07.2 -1.2**
BEHE **Becsehely** **148.00 323** PKP **PKiKP** **20 16 10.0 +0.1**
GEC2 **GERESS Array S** **148.01 329** **PKPbc** **20 16 08.2 0.0**
GERES **GERESS Array B** **148.01 329** PKP **PKPdf** **20 16 04.1 -1.0**
comp=Z,7.9nm,0.9s,baz=25,slow=2.6,SNR=18
GERES PKPbc **PKPbc** **20 16 08.2 0.0**
comp=Z,8.8nm,0.9s,baz=48,slow=2.0,SNR=43
RUDO **Rudo** **148.07 317** *e*P **PKPbc** **20 16 07.9 -0.5**
ARSA **Arzberg** **148.18 326** *i* P **PKPbc** **20 16 07.9 -0.7**
comp=Z,3.4nm,0.8s
MOA **Molln** **148.42 328** *i* P **PKPbc** **20 16 09.1 -0.1**
comp=Z,7.3nm,0.7s
UPM **Unac-Piva** **148.57 317** *e*P **PKPbc** **20 16 09.4 -0.6**
PDG **Podgorica** **148.72 315** ⇓P **PKPbc** **20 16 09.3 -0.9**
PDG **Podgorica** **148.72 315** **PKPbc** **20 16 09.4 -0.7**
PDG **Podgorica** **148.72 315** *e*P **PKPbc** **20 16 09.0 -1.1**
BLY **Banja Luka** **148.79 320** *e*P **PKPbc** **20 16 10.1 -0.1**
PERS **Pernice** **148.79 325** *i* PKPbc **PKPbc** **20 16 09.8 -0.5**
SOKA **Soboth** **148.81 325** *i* P **PKPbc** **20 16 09.8 -0.5**
comp=Z,13nm,0.8s,SNR=5.7
BIOA **Bad Ischl, Aus** **148.84 328** *i* P **PKPbc** **20 16 09.8 -0.5**
comp=Z,5.1nm,0.7s
DRME **Dracevica, Mon** **148.89 315** *e*P **PKPbc** **20 16 10.3 -0.3**
ITM **Ithomi** **148.90 304** **PKPbc** **20 16 09.9 -0.9**
BRY **Bratogost** **148.95 316** *e*P **PKPbc** **20 16 10.4 -0.5**
GCIS **Gornji Cirnik** **149.00 323** *i* PKPbc **PKPbc** **20 16 10.8 +0.1**
MGRS **Mrkonjic Grad** **149.03 320** *e*P **PKPbc** **20 16 10.8 -0.1**
TREB **Trebinje** **149.16 316** *e*P **PKPbc** **20 16 10.6 -0.7**
OBKA **Obir** **149.17 325** *i* P **PKPbc** **20 16 10.8 -0.5**
comp=Z,7.1nm,0.8s
HCY **Herceg Novi** **149.21 316** *e*P **PKPbc** **20 16 10.8 -0.6**
KBA **Koelnbreinsper** **149.41 327** *i* P **PKPbc** **20 16 11.1 -0.8**
comp=Z,14nm,0.9s
LJU **Ljubjana** **149.49 325** *i* PKPbc **PKPbc** **20 16 11.8 -0.2**
MYKA **Terra Mystica** **149.56 326** *i* P **PKPbc** **20 16 11.5 -0.8**
comp=Z,8.9nm,0.6s
BTNL **Ternell** **149.68 339** *d*PKiKP **PKPbc** **20 16 12.7 +0.3**
MEM **Membach** **149.71 339** *d*PKiKP **PKPbc** **20 16 12.5 +0.1**
CEY **Cerknica** **149.74 324** *e*P **PKPbc** **20 16 11.4 -1.2**
BSTI **Sart Tilman** **149.87 340** *d*PKiKP **PKPbc** **20 16 12.9 +0.1**
BHOU **Houvegnez** **149.92 339** *d*PKiKP **PKPbc** **20 16 13.1 +0.2**
ABTA **Abfaltersbach** **150.05 328** *i* P **PKPbc** **20 16 12.4 -1.0**
comp=Z,17nm,0.7s,SNR=6.7
CLUD **Cludinico** **150.06 327** **PKPbc** **20 16 12.0 -1.4**
WATA **Walderalm** **150.08 329** *i* P **PKPbc** **20 16 13.1 -0.5**
comp=Z,17nm,0.8s,SNR=7.5
BCLA **Clavier** **150.10 340** *d*PKiKP **PKPbc** **20 16 13.1 -0.2**
WTTA **Wattenberg** **150.11 329** *i* P **PKPbc** **20 16 13.4 -0.2**
comp=Z,26nm,0.9s,SNR=8.7
MOTA **Moosalm** **150.30 330** *i* P **PKPbc** **20 16 13.6 -0.5**
comp=Z,34nm,0.8s,SNR=12
SNF **Seneffe** **150.34 341** *d*PKiKP **PKPbc** **20 16 14.1 +0.2**
SQTA **Sankt Quirin** **150.34 330** *i* P **PKPbc** **20 16 14.0 -0.2**
comp=Z,35nm,0.9s,SNR=16
RETA **Reutte** **150.35 330** *e*P **PKPbc** **20 16 13.8 -0.3**
comp=Z,10nm,0.9s
RCHB **Roesfort** **150.35 340** *d*PKiKP **PKPbc** **20 16 13.8 -0.1**
BMRD **Maredsous** **150.37 340** *d*PKiKP **PKPbc** **20 16 13.9 0.0**
WLF **Walferdange** **150.46 338** **PKPbc** **20 16 14.3 +0.1**
WLF **Walferdange** **150.46 338** PKIKP **PKPbc** **20 16 14.3 +0.1**
WLF **Walferdange** **150.46 338** *d*PKiKP **PKiKP** **20 16 14.8 -0.1**
DOU **Dourbes** **150.60 340** *d*PKiKP **PKPbc** **20 16 14.6 +0.1**
DOU *d*PKPab **PKPab** **20 16 19.8 -1.5**
FETA **Feichten** **150.71 330** *i* P **PKPbc** **20 16 14.9 -0.2**
comp=Z,28nm,0.9s,SNR=14
BFO **Black Forest** **150.74 334** **PKPbc** **20 16 14.6 -0.4**
BFO **Black Forest** **150.74 334** PKIKP **PKPbc** **20 16 14.6 -0.4**
DAVA **Damuels** **150.90 331** *i* P **PKPbc** **20 16 15.3 -0.2**
comp=Z,9.9nm,0.7s,SNR=6.0
DAVOX **Davos/Dischmat** **151.28 330** PKPbc **PKPbc** **20 16 16.0 -0.5**
comp=Z,30nm,0.7s,baz=71,slow=1.3,SNR=77
DAVOX **Davos/Dischmat** **151.28 330** PKIKP **PKPbc** **20 16 16.0 -0.5**
TEOL **Teolo** **151.43 326** **PKPbc** **20 16 16.1 -0.5**
SENIN **Lac Senin/Sane** **152.73 333** **PKPbc** **20 16 19.3 -0.5**
BNI **Bardonecchia** **154.03 332** **PKPbc** **20 16 22.4 -0.2**
BNI **Bardonecchia** **154.03 332** PKIKP **PKPbc** **20 16 22.4 -0.2**
KEST **Kesra** **158.74 311** PKPab **PKPab** **20 16 56.7 +0.2**
comp=Z,5.1nm,1.1s,baz=100,slow=6.2,SNR=4.0
DBIC **Dimbokro** **162.82 199** PKPab **PKPab** **20 17 14.0 -0.5**
comp=Z,6.7nm,0.7s,baz=174,slow=3.5,SNR=7.8
DBIC **Dimbokro** **162.82 199** PKPab **PKPab** **20 17 14.7 +0.2**
DBIC **Dimbokro** **162.82 199** PKP2 **PKPab** **20 17 14.7 +0.2**
TORD **Torodi Ar. Bea** **164.85 231** PKP **PKPdf** **20 16 27.0 -0.6**
comp=Z,2.5nm,1.0s,baz=116,slow=0.6,SNR=8.5
TORD PKPab **PKPab** **20 17 23.0 -0.6**
comp=Z,2.9nm,0.9s,baz=133,slow=4.6,SNR=7.2

DSN ***06*** *20:22:06.5±1.5, 27.31N×55.85E, h10km, ML3.0/5, Error ellipse: s-maj=36.0km s-min=10.1km az=71.0*
TEH ***06*** *20:22:07.0, 26.96N×55.18E, h20km, ML3.0*
ISC 06 20:22:07.1±1.4, 27.00N±0.03×55.21E±0.04, h1km±13km, n18, σ0.68/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.94**	**65**	*e*Pg	**Pb**	**20 22 26.3**	**-0.1**
GENO				*e*Sg	**Sn**	**20 22 41.0**	**-0.9**
GENO				*e*		20 22 47.5	
	comp=Z,3μm,0.2s						
LAR1	**LAR**	**1.00**	**312**	*e*Pg	**Pg**	**20 22 26.0**	**-0.3**
LAR1				*e*Sg	**Sb**	**20 22 41.0**	**0.0**
LAR1				*e*		20 22 43.7	
	comp=Z,9μm,0.6s						
SHME	**Shamm**	**1.26**	**138**	P	**Pg**	**20 22 30.1**	**-1.2**
SHME				S	**Sg**	**20 22 48.5**	**+0.9**
IBND	**Bandar-abas**	**1.26**	**69**	*e*Pg	**Pg**	**20 22 31.3**	**0.0**
IBND				*e*Sg	**Sn**	**20 22 49.8**	**+0.2**
IBND				*e*		20 23 03.4	
	comp=Z,6μm,0.8s						
BANOM	**Banah**	**1.45**	**137**	P	**Pn**	**20 22 33.2**	**-1.3**
BANOM				S	**Sb**	**20 22 53.9**	**+0.1**
MSFE	**Esma-Masafi**	**1.84**	**152**	P	**Pn**	**20 22 40.1**	**+0.2**
MSFE				S	**Sn**	**20 23 04.5**	**+0.7**
LMD1	**Lamerd**	**1.86**	**281**	*e*Pn	**Pn**	**20 22 39.3**	**-0.8**
LMD1				*e*		20 23 22.3	
	comp=Z,2μm,0.4s						
UOSS	**Minazif**	**2.23**	**156**	P	**Pn**	**20 22 44.2**	**-1.0**
HATD	**Hatta, Dubai**	**2.32**	**159**	P	**Pn**	**20 22 47.1**	**+0.6**
ASUD	**Al Ashush, Dub**	**2.37**	**177**	P	**Pb**	**20 22 51.5**	**+1.0**
JASK	**Jask - Hormozg**	**2.63**	**115**	*e*Pn	**Pn**	**20 22 50.5**	**-0.3**
NGRK	**Negar Kerman**	**2.96**	**27**	*e*Pn	**Pn**	**20 22 55.2**	**-0.3**
NGRK				*e*		20 23 44.8	
	comp=Z,270nm,0.2s						
TVBK	**TV Kerman**	**3.27**	**24**	*e*Pn	**Pn**	**20 23 00.4**	**+0.5**
TVBK				*e*		20 23 47.2	
	comp=Z,482nm,0.3s						
CHMN	**Cheshme madani**	**3.51**	**35**	*e*Pn	**Pn**	**20 23 03.5**	**+0.3**
CHMN				*e*		20 23 49.5	
	comp=Z,165nm,0.3s						
KHGB	**Koh Gabri**	**3.54**	**18**	*e*		20 23 04.7	
	comp=Z,257nm,0.2s						
KHGB				*e*Pn	**Pn**	**20 23 03.9**	**+0.4**
IMEH	**Mehriz**	**4.41**	**353**	*e*Pn	**Pn**	**20 23 15.2**	**-0.2**
IRAM	**Ramesheh**	**5.39**	**333**	*e*Pn	**Pn**	**20 23 28.8**	**-0.1**
TPRV	**Parvadeh(Tabas**	**6.14**	**12**	*e*Pn	**Pn**	**20 23 38.7**	**-0.4**

HEL 06 20:13:36.5±0.2, 67.68N×33.75E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.41**	**57**	PG	Pg	20 13 44.2	-0.1
LVZ				SG	Sg	20 13 47.8	-1.8
VRF	**Varrio**	**1.58**	**274**	PG	Pn	20 14 04.6	-1.1
	baz=86						
VRF				MSG		20 14 23.7	
	comp=Z,2.8nm,0.2s						
VRF				SG	Sn	20 14 24.3	-2.5
OLKF	**Oulanka, Finla**	**2.19**	**233**	PG	Pb	20 14 15.5	-1.4
OLKF				SG	Sb	20 14 43.8	-0.7
KU6	**Riekki**	**2.26**	**224**	PG	Pb	20 14 16.6	-1.5
	baz=44						
KU6				MSG		20 14 43.4	
	comp=Z,3.3nm,0.2s						
KU6				SG	Sb	20 14 46.0	-0.5
MSF	**Maaselka**	**2.58**	**229**	PG	Pb	20 14 22.0	-1.5
MSF				SG	Sb	20 14 56.1	+0.4
SGF	**Sodankyl**	**2.78**	**268**	PG	Pb	20 14 25.3	-1.7
SGF				SB	Sn	20 14 58.6	+2.2
RNF	**Rovaniemi**	**3.21**	**254**	SN	Sn	20 15 06.4	-0.4
KEV	**Kevo**	**3.22**	**313**	PN	Pn	20 14 28.6	+0.4
KEV				SN	Sn	20 15 06.5	-0.7
KEV				MSG		20 15 11.1	
	comp=Z,0.9nm,0.2s						
ARA0	**ARCESS Array S**	**3.55**	**305**	PN	Pn	20 14 32.3	-0.4
	baz=115						
ARA0				SN	Sn	20 15 14.8	-0.5
RMF	**Romuvaara**	**3.81**	**206**	PN	Pn	20 14 36.5	+0.1
	baz=19						
HEF	**Hetta**	**3.86**	**286**	SN	Sn	20 15 21.3	-1.7
TOF	**Tornio**	**4.05**	**251**	SN	Sn	20 15 26.5	-1.1
KTK1	**Kautokeino**	**4.12**	**294**	PN	Pn	20 14 39.5	-1.1

IDC 06 20:44:24.8±3.7, 19.04N×145.92E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=158.6km s-min=32.7km az=84.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.37**	**197**	P	P	20 52 04.4	-0.2
	0.2nm,0.3s,baz=14,slow=8.4,SNR=13						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**58.38**	**314**	P	P	20 54 23.3	+1.1
	0.2nm,0.6s,baz=91,slow=8.6,SNR=2.3						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**86.67**	**335**	P	P	20 57 09.2	-1.0
	0.7nm,0.8s,baz=54,slow=7.1,SNR=4.1						
	0.7nm,0.8s						

NEIC ***06*** *20:51:35.7±1.2, 17.63N±0.08×147.44E±0.09, h10km±2km, mb4.2/9, Error ellipse: s-maj=16.4km s-min=12.9km az=52.0*
IDC ***06*** *20:51:40.7±4.6, 17.64N×147.21E, h55km±41km, mb3.3/9, mbtmp3.6/10, ML3.8/1, MS1.9/1, Error ellipse: s-maj=42.2km s-min=17.1km az=88.0*
ISC 06 20:51:37.1±0.7, 17.64N±0.07×147.4E±0.1, h26km, n25, σ0.92/25, mb3.6/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.72**	**212**	P	**Pn**	**20 52 48.8**	**+2.2**
	4.5nm,0.3s,baz=39,slow=18,SNR=1.0						
GUMO				S	**Sn**	**20 53 40.2**	**-0.3**
	50nm,0.4s,baz=134,slow=20,SNR=4.7						
GUMO				LR	LR	20 54 16.6	
	comp=Z,12nm,19.3s,baz=90,slow=34						
	12nm,0.3s						
GUMO	**Guam**	**4.72**	**212**	Pn	**Pn**	**20 52 47.3**	**+0.7**
GUMO				Sn	**Sn**	**20 53 40.1**	**-0.4**
PATS	**Pohnpei**	**15.10**	**134**	Pn	**Pn**	**20 55 08.5**	**-0.3**
PATS				IAmb	IAmb	20 55 22.1	
	comp=Z,18nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**18.56**	**81**	T	T	21 15 02.9	
	baz=266						
H11N2	**WAKE ISLAND Hy**	**18.56**	**80**	T	T	21 15 03.2	
	baz=266						
H11N3	**WAKE ISLAND Hy**	**18.58**	**81**	T	T	21 15 10.9	
	baz=266						
JGF	**Kuroka**	**20.01**	**335**	P	**P**	**20 56 07.7**	**-0.2**
JGF				IAmb	IAmb	20 56 11.7	
	comp=Z,8.5nm,1.2s						
MJAR	**Matsushiro Arr**	**20.52**	**338**	P	**P**	**20 56 13.9**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=169,slow=8.3,SNR=2.9						
	comp=Z,0.5nm,0.4s						
MAJO	**Matsushiro**	**20.52**	**338**		**P**	**20 56 14.6**	**+1.2**
MAJO				IAmb	IAmb	20 56 19.1	
	comp=Z,12nm,1.4s						
KSRS	**Korea Array**	**26.15**	**323**	P	**P**	**20 57 08.6**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=149,slow=9.1,SNR=4.9						
	comp=Z,0.5nm,0.6s						
WB0	**Warramunga Arr**	**39.31**	**200**	P	**P**	**20 59 03.2**	**-0.9**
WB0				IAmb	IAmb	20 59 12.4	
	comp=Z,2.4nm,0.9s						
WRA	**Warramunga Arr**	**39.49**	**200**	P	**P**	**20 59 05.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=24,slow=9.4,SNR=6.5						
	comp=Z,1.1nm,0.7s						
AS31	**Alice Springs**	**43.12**	**198**	P	**P**	**20 59 35.8**	**+0.3**
ASAR	**Alice Springs**	**43.12**	**198**	P	**P**	**20 59 35.8**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=21,slow=6.8,SNR=7.2						
ASAR				PcP	**PcP**	**21 01 25.6**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=26,slow=3.0,SNR=2.6						
	comp=Z,0.2nm,0.6s						
ASAR	**Alice Springs**	**43.12**	**198**	P	**P**	**20 59 35.6**	**+0.2**
DZM	**Mont Dzumac**	**43.63**	**154**	P	**P**

0.6nm,0.7s,baz=337,slow=9.3,SNR=9.3
0.6nm,0.7s
STKA Stephens Creek 37.78 150 P **P** **21 01 30.1 -1.0**
1.8nm,0.7s,baz=314,slow=12,SNR=4.1
1.8nm,0.7s
SONM Songino Array 48.83 347 P **P** **21 02 59.3 -1.0**
0.3nm,0.6s,baz=166,slow=8.6,SNR=2.0
0.3nm,0.6s
MKAR Makanchi Array 57.01 330 P **P** **21 04 01.0 +0.5**
0.2nm,0.4s,baz=119,slow=9.0,SNR=2.6
0.2nm,0.4s

JMA 06 20:55:22.1±0.1, 32°.2N±0°.2×130°.0E±0°.3, h10km, MV0.8/27, AMAKUSA REGION, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHD	**Hondo**	**0.25**	**27**	*i* P	Pg	20 55 27.5	+0.3
JHD				*e*S	Sg	20 55 31.5	+0.8
NGSJ	**Nagasakinomoza**	**0.43**	**336**	*e*P	Pg	20 55 30.4	-0.1
JZO	**Okuchi**	**0.52**	**101**	*e*S	Sg	20 55 39.3	+0.4
JSJ	**Shimokoshiki**	**0.61**	**204**	*e*S	Sg	20 55 41.2	-0.7
JSU	**Suzuyama**	**0.83**	**152**	*e*P	Pg	20 55 37.7	-0.3
JTA	**Tamana**	**0.85**	**32**	*e*S	Sb	20 55 50.6	+0.2
JTZ	**Takazaki**	**0.98**	**110**	S	Sn	20 55 55.3	-0.6

JMA 06 20:55:38.9±0.0, 32°.7N±0°.1×130°.7E±0°.1, h7km, MV1.5/32, NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.14**	**136**	*i* P	Pg	20 55 42.1	+0.1
JIU3				*e*S	Sg	20 55 44.6	+0.5
JTA	**Tamana**	**0.34**	**336**	*i* P	Pg	20 55 45.8	+0.2
JZO	**Okuchi**	**0.52**	**189**	P	Pg	20 55 49.0	+0.1
JZO				*e*S	Sg	20 55 56.1	+0.4

*DJA **06** 21:14:39.0±0.5, 5°.5S×152°.2E±°, h76km±6km, M4.6/12, mB4.9/3, mb4.7/12, MLv4.7/1, Mw(mB)4.2/3*
*IDC **06** 21:14:39.2±0.6, 5°.05S×151°.93E, h73km±5km, mb3.8/12, mbtmp4.2/13, MS3.2/9, Error ellipse: s-maj=19.4km s-min=8.4km az=112.0*
*NEIC **06** 21:14:40.5±1.5, 5°.02S±0°.07×151°.9E±0°.1, h81km±8km, mb4.5/19, Error ellipse: s-maj=18.5km s-min=9.3km az=101.0*
ISC 06 21:14:39.3±0.5, 5°.06S±0°.06×151°.90E±0°.08, h70km, n49, σ0s98/50, mb4.3/25, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.76**	**10**	P	**Pn**	**21 14 56.2**	**+1.3**
KRVT	1µm,0.4s,baz=175,slow=3.8,SNR=800			S	**Sn**	**21 15 07.7**	**+1.2**
RABL	**Rabaul**	**0.91**	**17**		**Pn**	**21 14 57.5**	**+0.9**
RABL				Sn	**Sn**	**21 15 11.4**	**+1.9**
PMG	**Port Moresby**	**6.38**	**227**	P	**Pn**	**21 16 12.3**	**+1.6**
PMG	126nm,0.5s,baz=56,slow=11,SNR=42			S	**Sn**	**21 17 22.9**	**+0.7**
PMG	92nm,0.4s,baz=270,slow=20,SNR=7.4			LR	LR	21 18 43.9	
HNR	comp=Z,262nm,18.7s,baz=331,slow=38 **Honiara**	**9.09**	**119**	LR	LR	21 20 04.3	
COEN	comp=Z,70nm,21.2s,baz=269,slow=36 **Coen**	**12.33**	**224**	Pn	**Pn**	**21 17 33.2**	**+1.2**
PATS	**Pohnpei**	**13.44**	**29**	Pn	**Pn**	**21 17 45.9**	**-1.2**
CTAO	**Charters Tower**	**15.91**	**200**		**P**	**21 18 21.8**	**+0.3**
CTAO	comp=Z,22nm,1.1s			IAmb	IAmb	21 18 32.9	
EIDS	**Eidsvold**	**20.21**	**182**	P	**P**	**21 19 07.5**	**-1.0**
EIDS	comp=Z,14nm,1.0s			IAmb	IAmb	21 19 12.4	
MTN	**Manton Dam**	**21.91**	**248**	P	**P**	**21 19 27.6**	**+0.8**
MTN	comp=Z,10nm,0.6s			IAmb	IAmb	21 19 43.6	
DZM	**Mont Dzumac**	**22.00**	**142**	P	**P**	**21 19 28.0**	**+0.1**
DZM	comp=Z,31nm,1.1s,baz=310,slow=16,SNR=4.1 comp=Z,97nm,18.7s,baz=241,slow=33 comp=Z,31nm,1.1s			LR	LR	21 26 49.6	
DZM	**Mont Dzumac**	**22.00**	**142**	P	**P**	**21 19 27.8**	**-0.2**
DZM	comp=Z,34nm,1.2s			IAmb	IAmb	21 19 29.3	
WB0	**Warramunga Arr**	**22.45**	**228**	P	**P**	**21 19 32.6**	**-0.2**
WB0	comp=Z,20nm,0.8s			IAmb	IAmb	21 20 00.8	
OUENC	**Ouen Island, N**	**22.51**	**141**	P	**P**	**21 19 33.5**	**+0.3**
OUENC	comp=Z,44nm,1.3s			IAmb	IAmb	21 19 48.1	
WRA	**Warramunga Arr**	**22.60**	**228**	P	**P**	**21 19 33.5**	**-0.8**
WRA	comp=Z,13nm,0.5s,baz=53,slow=9.8,SNR=47 comp=Z,12nm,0.7s,baz=51,slow=10,SNR=8.4 comp=Z,12nm,1.2s,baz=55,slow=19,SNR=10 comp=Z,13nm,0.5s			pP	**pP**	**21 19 49.5**	**+0.1**
WRA				S	**S**	**21 23 35.6**	**-1.6**
WRA	**Warramunga Arr**	**22.60**	**228**	P	**P**	**21 19 34.2**	**-0.1**
KNRA	**Kununurra**	**25.05**	**243**	P	**P**	**21 19 58.2**	**+0.9**
KNRA	comp=Z,14nm,0.8s			IAmb	IAmb	21 20 24.2	
ARMA	**Armidale**	**25.22**	**181**	P	**P**	**21 19 59.1**	**+0.3**
ARMA	comp=Z,22nm,1.4s			IAmb	IAmb	21 20 20.3	
ASAR	**Alice Springs**	**25.36**	**221**	P	**P**	**21 19 59.8**	**-0.3**
ASAR	comp=Z,11nm,0.7s,baz=51,slow=8.7,SNR=8.3 comp=Z,60nm,19.2s,baz=51,slow=34 comp=Z,11nm,0.7s			LR	LR	21 29 10.5	
STKA	**Stephens Creek**	**28.37**	**199**	P	**P**	**21 20 26.1**	**-0.8**
STKA	comp=Z,3.4nm,0.7s,baz=16,slow=12,SNR=4.7 comp=Z,1.2nm,0.4s,baz=356,slow=13,SNR=2.2			pP	**pP**	**21 20 44.5**	**+0.7**
STKA	comp=Z,75nm,21.9s,baz=23,slow=34 comp=Z,3.4nm,0.7s			LR	LR	21 30 33.9	
STKA	**Stephens Creek**	**28.37**	**199**	P	**P**	**21 20 25.9**	**-1.0**
BATI	**Baumata**	**28.44**	**258**	P	**P**	**21 20 29.6**	**+1.8**
FITZ	comp=Z,15nm,1.8s **Fitzroy Crossi**	**28.74**	**241**	pP	pP	21 20 48.1	+0.7
DAV	comp=Z,11nm,0.7s,baz=75,slow=6.2,SNR=5.0 **Davao City (W)**	**28.90**	**294**	LR	LR	21 32 05.2	
TAU	comp=Z,13nm,19.8s,baz=58,slow=36 **Tasmania Unive**	**37.91**	**185**	P	**P**	**21 21 50.6**	**+0.9**
NNZ	**Nelson**	**40.81**	**155**	P	**P**	**21 22 15.5**	**+1.6**
KSRS	**Korea Array**	**47.84**	**334**	pP	pP	21 23 29.4	+1.7
KULM	comp=Z,0.5nm,0.6s,baz=156,slow=7.9,SNR=3.1 **Kulim**	**52.20**	**281**	P	**P**	**21 23 42.5**	**-1.0**
USRK	**Ussuriysk Ar.**	**52.21**	**342**	pP	pP	21 24 03.1	+2.2
ENH	comp=Z,2.0nm,0.7s,baz=122,slow=11,SNR=5.3 **Enshi**	**53.68**	**314**	P	**P**	**21 23 52.6**	**-1.6**
ENH	comp=Z,6.2nm,1.2s			IAmb	IAmb	21 23 53.0	
GSI	**Gunungsitoli**	**54.63**	**275**	P	**P**	**21 23 59.5**	**-1.9**
CRAI	**Chiangrai**	**56.50**	**298**	P	**P**	**21 24 14.7**	**0.0**
CRAI	comp=Z,2.9nm,1.1s			IAmb	IAmb	21 24 39.1	
CMAR	**Chiang Mai Arr**	**57.18**	**296**	P	**P**	**21 24 20.3**	**+0.8**
CMAR	comp=Z,0.8nm,0.9s,baz=112,slow=5.0,SNR=4.3 comp=Z,0.3nm,0.4s,baz=109,slow=5.0,SNR=1.6 comp=Z,0.8nm,0.9s			pP	**pP**	**21 24 38.7**	**+1.0**
PETK	**Petropavlovsk-**	**58.16**	**4**	LR	LR	21 43 22.3	
SONM	comp=Z,19nm,20.8s,baz=146,slow=30 **Songino Array**	**66.07**	**328**	P	**P**	**21 25 18.7**	**-0.2**
SONM	comp=Z,0.3nm,0.5s,baz=137,slow=4.3,SNR=3.0 comp=Z,1.1nm,0.6s,baz=146,slow=5.0,SNR=5.0 comp=Z,0.3nm,0.5s			pP	**pP**	**21 25 38.7**	**+1.2**
VNDA	**Vanda**	**72.60**	**178**	P	**P**		
	comp=Z,2.0nm,0.9s,baz=336,slow=6.6,SNR=9.6 comp=Z,2.0nm,0.9s					**21 25 58.4**	**-0.3**
VNDA	**Vanda**	**72.60**	**178**	P	**P**	**21 25 58.7**	**0.0**
MKAR	**Makanchi Array**	**79.93**	**319**	P	**P**	**21 26 40.9**	**+0.1**
MKAR	comp=Z,0.4nm,0.8s,baz=90,slow=4.3,SNR=2.8 comp=Z,0.6nm,0.8s,baz=116,slow=3.4,SNR=4.5 comp=Z,0.4nm,0.8s			pP	**pP**	**21 26 59.8**	**-0.1**
ZALV	**Zalesovo Beam**	**80.87**	**327**	pP	pP	21 27 04.0	-0.7
ILAR	comp=Z,1.1nm,0.6s,baz=102,slow=7.4,SNR=3.8 **Eielson Array**	**82.74**	**22**	P	**P**	**21 26 54.1**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.4,SNR=1.9 comp=Z,0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**83.45**	**322**	P	**P**	**21 26 58.3**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=103,slow=5.3,SNR=1.8						
QSPA	**South Pole Qui**	**84.90**	**180**	P	**P**	**21 27 06.0**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=306,slow=1.1,SNR=22 comp=Z,4.1nm,0.8s						
QSPA	**South Pole Qui**	**84.90**	**180**	P	**P**	**21 27 05.8**	**-0.6**
QSPA	comp=Z,4.8nm,0.8s			IAmb	IAmb	21 27 06.9	
MAW	**Mawson**	**84.98**	**203**	P	**P**	**21 27 06.0**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=84,slow=4.5,SNR=5.6 comp=Z,3.1nm,0.9s						
MAW	**Mawson**	**84.98**	**203**	P	**P**	**21 27 06.3**	**-0.3**
BBB	**Bella Bella**	**87.85**	**37**	LR	LR	22 01 15.2	
	comp=Z,24nm,18.4s,baz=114,slow=32						
NVAR	**Mina Array Bea**	**92.95**	**52**	P	**P**	**21 27 46.1**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=261,slow=3.6,SNR=1.8						
NVAR	comp=Z,0.7nm,0.7s,baz=267,slow=6.0,SNR=3.3 comp=Z,0.3nm,0.7s			pP	**pP**	**21 28 04.2**	**-0.5**
ARU	**Arti**	**96.03**	**326**	LR	LR	22 13 34.4	
	comp=Z,19nm,18.6s,baz=124,slow=37						
TORD	**Torodi Ar. Bea**	**149.53**	**287**	PKPbc	**PKPbc**	**21 34 20.4**	**-1.4**
	comp=Z,2.1nm,0.7s,baz=85,slow=2.1,SNR=16						
BDFB	**Brasilia**	**151.51**	**137**	PKPbc	**PKPbc**	**21 34 25.6**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=304,slow=3.6,SNR=4.0						

*IDC **06** 21:16:32.7±2.5, 25°.71S×129°.79E, h0km, mb3.4/1, mbtmp3.7/5, ML3.8/4, MS3.5/1, Error ellipse: s-maj=39.9km s-min=24.4km az=31.0*
*AUST **06** 21:16:33.3±0.7, 25°.57S×129°.80E, h0km, Error ellipse: s-maj=10.4km s-min=7.3km az=13.0*
*NEIC **06** 21:16:35.0±2.9, 25°.52S±0°.07×129°.81E±0°.05, h10km±2km, Error ellipse: s-maj=12.3km s-min=6.8km az=346.0*
ISC 06 21:16:33.9±0.6, 25°.52S±0°.05×129°.80E±0°.04, h10km, n36, σ2s03/46, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	**Warakurna**	**1.44**	**289**	P	**Pb**	**21 17 01.9**	**+1.0**
WRKA	baz=1.5,SNR=445 baz=1.5,SNR=13			S	**Sg**	**21 17 22.3**	**+1.9**
ASPA	**Alice Springs**	**4.17**	**65**	P	**Pn**	**21 17 39.5**	**+1.9**
ASPA	baz=4.2 baz=4.2			S	**Sn**	**21 18 28.2**	**+1.7**
ASAR	**Alice Springs**	**4.17**	**65**	Pn	**Pn**	**21 17 39.5**	**+1.8**
ASAR	2.8nm,0.3s,baz=244,slow=12,SNR=189 7.1nm,0.3s,baz=240,slow=17,SNR=47			Pg	**Pb**	**21 17 51.1**	**+3.6**
ASAR	8.0nm,0.3s,baz=247,slow=22,SNR=13 7.5nm,0.3s,baz=247,slow=26,SNR=10 6.7nm,0.5s			Sn	**Sn**	**21 18 27.3**	**+0.7**
ASAR				Lg	Lg	21 18 40.2	
ASAR	**Alice Springs**	**4.17**	**65**		**Pn**	**21 17 39.7**	**+2.0**
AS31	**Alice Springs**	**4.17**	**65**		**Pn**	**21 17 39.5**	**+1.7**
AS31				Sn	**Sn**	**21 18 27.4**	**+0.8**
FORT	**Forrest**	**5.46**	**196**	P	**Pn**	**21 17 57.1**	**+1.8**
FORT	baz=5.4,SNR=18 baz=5.4			S	**Sn**	**21 19 00.3**	**+2.2**
FORT	**Forrest**	**5.46**	**196**		**Pn**	**21 17 56.9**	**+1.6**
FORT				Sn	**Sn**	**21 19 00.1**	**+1.9**
OOD	**Oodnadatta**	**5.74**	**115**	P	**Pn**	**21 18 00.7**	**+1.6**
OOD	baz=5.7,SNR=13 baz=5.7			S	**Sn**	**21 19 06.7**	**+1.6**
MULG	**Mulgathing**	**6.06**	**142**	P	**Pn**	**21 18 04.8**	**+1.2**
MULG	baz=6.0,SNR=6.1 baz=6.0			S	**Sn**	**21 19 13.9**	**+1.0**
WRA	**Warramunga Arr**	**6.96**	**38**	Pn	**Pn**	**21 18 17.4**	**+1.3**
WRA	1.4nm,0.3s,baz=218,slow=13,SNR=82 3.6nm,0.3s,baz=211,slow=29,SNR=7.1 2.5nm,0.4s			Lg	Lg	21 20 10.9	
WRAB	**Tennant Creek**	**6.97**	**38**	Pn	**Pn**	**21 18 17.1**	**+0.9**
WB0	**Warramunga Arr**	**7.13**	**37**		**Pn**	**21 18 19.7**	**+1.3**
FITZ	**Fitzroy Crossi**	**8.34**	**332**	Pn	**Pn**	**21 18 37.1**	**+2.2**
FITZ	0.8nm,0.3s,baz=150,slow=9.7,SNR=41 0.7nm,0.3s,baz=336,slow=22,SNR=3.1 2.3nm,0.2s			Sn	**Sn**	**21 20 05.0**	**-4.2**
FITZ	**Fitzroy Crossi**	**8.34**	**332**	P	**Pn**	**21 18 37.0**	**+2.2**
FITZ	baz=8.4,SNR=12 **Fitzroy Crossi**	**8.34**	**332**	Pn	**Pn**	**21 18 36.9**	**+2.0**
LCRK	**Leigh Creek**	**8.91**	**125**	P	**Pn**	**21 18 42.9**	**+0.2**
BBOO	baz=8.9,SNR=6.9 **Buckleboo**	**9.09**	**144**	P	**Pn**	**21 18 45.1**	**-0.1**
BBOO	baz=9.1,SNR=21 **Buckleboo**	**9.09**	**144**	Pn	**Pn**	**21 18 45.1**	**-0.1**
KNRA	**Kununurra**	**9.85**	**354**	P	**Pn**	**21 18 54.9**	**-0.7**
KNRA	baz=9.9,SNR=5.9 **Kununurra**	**9.85**	**354**	Pn	**Pn**	**21 18 55.2**	**-0.4**
PSA00	**Pilbara Seismi**	**9.94**	**291**	Pn	**Pn**	**21 18 56.6**	**-0.3**
INKA	**Innaminka**	**10.04**	**105**	P	**Pn**	**21 18 59.4**	**+1.2**
MEEK	baz=10.0,SNR=4.7 **Meekatharra**	**10.11**	**261**	P	**Pn**	**21 18 58.4**	**-0.9**
MBWA	baz=10,SNR=8.7 **Marble Bar**	**10.21**	**293**	Pn	**Pn**	**21 19 01.2**	**+0.5**
QIS	**Mount Isa**	**10.29**	**63**	P	**Pn**	**21 19 02.4**	**+0.6**
HTT	baz=11,SNR=7.9 **Hallett**	**11.19**	**137**	P	**Pn**	**21 19 12.7**	**-1.4**
STKA	baz=11 **Stephens Creek**	**12.13**	**124**	Pn	**Pn**	**21 19 25.1**	**-1.8**
STKA	0.6nm,0.3s,baz=302,slow=13,SNR=12 1.8nm,0.3s,baz=228,slow=16,SNR=7.6			Sn	**Sn**	**21 21 34.6**	**-7.7**
STKA	baz=40,slow=22 2.0nm,0.5s			Lg	Lg	21 22 53.8	
STKA	**Stephens Creek**	**12.13**	**124**	P	**Pn**	**21 19 25.0**	**-1.8**
KLBR	baz=12 **Kellerberrin**	**12.18**	**238**	P	**Pn**	**21 19 25.9**	**-1.7**
MTN	baz=12 **Manton Dam**	**12.68**	**6**	Pn	**Pn**	**21 19 32.5**	**-1.8**
NWAO	**Narrogin (SRO)**	**13.21**	**233**	Pn	**Pn**	**21 19 41.0**	**-0.7**
GIRL	**Giralia**	**14.50**	**278**	Pn	**Pn**	**21 19 59.7**	**+0.4**
COEN	**Coen**	**17.04**	**50**	Pn	**Pn**	**21 20 30.2**	**-2.2**
COEN	comp=Z,21nm,1.4s			IAmb	IAmb	21 20 35.0	
ARMA	**Armidale**	**19.88**	**109**	P	**P**	**21 21 05.9**	**+0.3**
ARMA	comp=Z,26nm,1.4s			IAmb	IAmb	21 21 24.2	
RPZ	**Rata Peaks**	**38.04**	**129**	LR	LR	21 37 11.7	
KURBB	comp=Z,65nm,20.2s,baz=318,slow=33 **Kurchatov Arra**	**88.29**	**330**	P	**P**	**21 29 26.7**	**+1.4**
	comp=Z,0.1nm,0.6s,baz=142,slow=4.7,SNR=1.9 comp=Z,0.1nm,0.6s						

IDC 06 21:17:38.7±6.7, 17°.06S×174°.71W, h193km±37km, mb3.3/2, mbtmp3.9/3, MS3.4/1, Error ellipse: s-maj=318.6km s-min=35.8km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.21**	**42**	P	Pn	21 18 43.0	0.0
AFI	31nm,0.3s,baz=232,slow=12,SNR=14 108nm,0.4s,baz=22,slow=15,SNR=10			S	Sn	21 19 28.3	-5.2
AFI	**Afiamalu**	**4.21**	**42**	P	Pn	21 18 43.6	+0.5
WRA	**Warramunga Arr**	**48.26**	**258**	P	P	21 26 00.5	0.0
ASAR	0.2nm,0.4s,baz=95,slow=7.5,SNR=1.4 0.2nm,0.4s **Alice Springs**	**48.42**	**253**	P	P	21 26 01.6	-0.1
	2.5nm,0.6s,baz=88,slow=8.4,SNR=16 2.5nm,0.6s						
SIJI	**Sorong**	**55.51**	**281**	LR	LR	21 51 46.3	
GERES	comp=Z,33nm,19.1s,baz=185,slow=37 **GERESS Array B**	**147.56**	**350**	PKPbc	PKPbc	21 36 59.4	-0.8
	0.3nm,0.6s,baz=1.4,slow=4.0,SNR=2.6						

*IDC **06** 21:24:33.8±4.2, 59°.22S×19°.00W, h0km, mb3.7/1, mbtmp3.7/1, MS3.0/1, Error ellipse: s-maj=239.3km s-min=94.5km az=85.0*
ISC 06 21:24:36.9±2.2, 59°.2S±0°.2×17°.5W±0°.8, h10km, n9, σ0s59/8, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.17**	**165**	P	**Pn**	**21 27 30.5**	**+0.4**
VNA2	**Neumayer--Watz**	**12.54**	**165**	P	**Pn**	**21 27 34.6**	**-0.5**
	baz=330,slow=15						
VNA3	**Neumayer Olymp**	**12.56**	**168**	P	**Pn**	**21 27 35.9**	**+0.4**
SNAA	**Sanae**	**13.91**	**161**	P	**Pn**	**21 27 53.6**	**-0.1**
SNAA	**Sanae**	**13.91**	**161**	LR	LR	21 31 56.4	
	comp=Z,62nm,20.5s,baz=2.5,slow=31						
TROLL	**Troll, Antarti**	**15.20**	**156**	P	**Pn**	**21 28 11.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.72**	**20**	P	**P**	**21 36 11.2**	**+0.5**
	0.4nm,0.6s,baz=206,slow=6.0,SNR=2.2 0.4nm,0.6s						
FINES	**FINESS Array B**	**124.90**	**24**	PKP	**PKPdf**	**21 43 34.5**	**-0.9**
	2.4nm,1.1s,baz=194,slow=3.9,SNR=4.5						
SONM	**Songino Array**	**145.79**	**84**	PKPbc	**PKPbc**	**21 44 15.3**	**0.0**
	1.3nm,0.8s,baz=220,slow=1.6,SNR=7.6						

*IDC **06** 21:35:04.2±1.1, 14°.57S×166°.20E, h0km, mb3.9/6, mbtmp4.0/7, ML4.4/1, MS3.0/3, Error ellipse: s-maj=40.6km s-min=26.2km az=138.0*
*NEIC **06** 21:35:06.0±2.4, 14°.4S±0°.1×166°.2E±0°.2, h10km±1km, mb4.7/11, Error ellipse: s-maj=26.3km s-min=18.8km az=88.0*
*NOU **06** 21:35:10.5, 14°.75S×166°.35E, h25km, mb4.5/9, Vanuatu Islands*
ISC 06 21:35:08.7±0.7, 14°.67S±0°.08×166°.3E±0°.1, h28km, n54, σ2s34/49, mb4.5/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.14**	**198**		**Pn**	**21 36 38.7**	**+1.1**
KOUNC	**Koumac, New Ca**	**6.14**	**198**	P	**Pn**	**21 36 39.1**	**+1.4**
MARNC	**Mare, Loyalty**	**6.97**	**166**	Pn	**Pn**	**21 36 50.6**	**+1.5**
DZM	**Mont Dzumac**	**7.36**	**179**	Pn	**Pn**	**21 36 55.0**	**+0.5**
DZM	5.7nm,0.3s,baz=346,slow=12,SNR=30 baz=283,slow=20			Sn	**Sn**	**21 38 14.8**	**-2.4**
DZM	comp=Z,79nm,21.6s,baz=245,slow=33 14nm,0.4s			LR	LR	21 39 08.8	
DZM	**Mont Dzumac**	**7.36**	**179**		**Pn**	**21 36 55.0**	**+0.5**
DZM	**Mont Dzumac**	**7.36**	**179**	P	**Pn**	**21 36 55.4**	**+0.9**
YATNC	**Mamie plateau,**	**7.37**	**176**	P	**Pn**	**21 36 53.8**	**-0.7**
NOUC	**Port Laguerre**	**7.39**	**180**	P	**Pn**	**21 36 55.9**	**+1.1**
OUENC	**Ouen Island, N**	**7.72**	**176**	Pn	**Pn**	**21 36 59.7**	**+0.3**
OUENC	**Ouen Island, N**	**7.72**	**176**	P	**Pn**	**21 37 00.7**	**+1.3**
PINNC	**Pines Island,**	**7.97**	**172**	Pn	**Pn**	**21 37 04.2**	**+1.4**
OMRZ	**Omania**	**25.00**	**161**	P	**P**	**21 40 29.9**	**-0.3**
UTU	**Utuhina**	**25.00**	**161**	P	**P**	**21 40 31.5**	**+1.2**
MKRZ	**Makatiti**	**25.05**	**161**	P	**P**	**21 40 33.3**	**+2.5**
HLRZ	**Highlands Stat**	**25.12**	**161**	P	**P**	**21 40 27.2**	**-4.1**
GRRZ	**Galatos Road**	**25.14**	**162**	P	**P**	**21 40 29.5**	**-1.9**
HSRZ	**Hossack Road**	**25.14**	**161**	P	**P**	**21 40 24.8**	**-6.8**
TARZ	**Mount Tarawera**	**25.16**	**161**	P	**P**	**21 40 27.5**	**-4.3**
HAZ	**Te Kaha**	**25.16**	**158**	P	P	21 40 48.6	+17
HRRZ	**Handcock Road**	**25.23**	**161**	P	P	21 40 22.9	-9.4
RRRZ	**Republican Roa**	**25.25**	**161**	P	**P**	**21 40 27.1**	**-5.4**
RUGZ	**Raukumara Rang**	**25.31**	**159**	P	P	21 40 45.7	+13
WPRZ	**Whakapapataran**	**25.31**	**162**	P	**P**	**21 40 30.0**	**-3.0**
PRRZ	**Plateau Road**	**25.36**	**161**	P	**P**	**21 40 28.3**	**-5.2**
URZ	**Urewera**	**25.38**	**160**		**P**	**21 40 35.8**	**+2.2**
URZ	**Urewera**	**25.38**	**160**	P	**P**	**21 40 36.2**	**+2.6**
ALRZ	**Allen Road**	**25.40**	**161**	P	**P**	**21 40 29.6**	**-4.3**
MUGZ	**Murupara**	**25.46**	**161**	P	**P**	**21 40 31.6**	**-2.8**
MRHZ	**Matea Rd**	**25.68**	**161**	P	**P**	**21 40 35.3**	**-1.1**
WNVZ	**Wahianoa**	**25.89**	**163**	P	P	21 40 47.0	+8.5
MHGZ	**Mahia Peninsul**	**26.45**	**159**	P	P	21 40 53.4	+10
WB0	**Warramunga Arr**	**30.84**	**256**	P	**P**	**21 41 20.4**	**-2.3**
WB0	comp=Z,9.6nm,1.5s			IAmb	IAmb	21 41 32.2	
WRA	**Warramunga Arr**	**30.90**	**256**	P	**P**	**21 41 22.0**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=84,slow=9.2,SNR=2.2 comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs**	**31.79**	**249**	P	**P**	**21 41 30.0**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=76,slow=9.1,SNR=11						
ASAR	comp=Z,0.4nm,0.7s,baz=70,slow=2.4,SNR=4.2 comp=Z,0.6nm,0.7s			PcP	**PcP**	**21 44 21.8**	**-0.2**
BBOO	**Buckleboo**	**32.85**	**231**	P	**P**	**21 41 41.7**	**+1.4**
BBOO	comp=Z,25nm,1.4s			IAmb	IAmb	21 41 50.5	
FITZ	**Fitzroy Crossi**	**39.07**	**259**	P	**P**	**21 42 33.0**	**-0.7**
VNDA	**Vanda**	**62.90**	**181**	P	**P**	**21 45 35.4**	**+3.5**
SBA	**Scott Base**	**63.19**	**180**	P	**P**	**21 45 35.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**74.05**	**294**	P	**P**	**21 46 42.6**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=112,slow=4.6,SNR=7.0 comp=Z,1.3nm,0.8s						
MA2	**Magadan**	**75.05**	**352**	LR	LR	22 15 20.3	
	comp=Z,16nm,20.2s,baz=114,slow=32						
QSPA	**South Pole Qui**	**75.35**	**180**	P	**P**	**21 46 50.7**	**+1.2**
QSPA	comp=Z,11nm,1.4s			IAmb	IAmb	21 46 55.1	
CAST	**Castle Rocks**	**84.23**	**17**	P	**P**	**21 47 36.4**	**-1.0**
CAST	comp=Z,5.1nm,0.8s			IAmb	IAmb	21 47 37.1	
RND	**Reindeer**	**85.19**	**19**	P	**P**	**21 47 40.8**	**-1.4**
IMAR	**Indian Mountai**	**85.77**	**15**	P	**P**	**21 47 44.7**	**-0.3**
WRH	**Wood River Hil**	**86.20**	**18**	P	**P**	**21 47 46.3**	**-0.8**
WRH	comp=Z,6.8nm,1.1s			IAmb	IAmb	21 47 47.6	
HDA	**Harding Lake**	**86.50**	**18**	P	**P**	**21 47 48.1**	**-0.5**
HDA	comp=Z,11nm,1.2s			IAmb	IAmb	21 47 49.5	
IL31		**86.78**	**18**	P	**P**	**21 47 48.8**	**-1.1**
IL31	comp=Z,3.1nm,0.8s			IAmb	IAmb	21 47 50.3	
ILAR	**Eielson Array**	**86.78**	**18**	P	**P**	**21 47 48.5**	**-1.5**
	comp=Z,2.5nm,0.7s,baz=236,slow=5.3,SNR=26 comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**86.78**	**18**	P	**P**	**21 47 48.7**	**-1.2**
NVAR	**Mina Array Bea**	**87.97**	**50**	P	**P**	**21 47 57.3**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=251,slow=5.6,SNR=4.0 comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**96.50**	**317**	P	**P**	**21 48 36.2**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=99,slow=4.8,SNR=2.7 comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**96.50**	**317**	P	**P**	**21 48 35.6**	**0.0**
ZALV	**Zalesovo Beam**	**96.78**	**324**	LR	LR	22 32 06.6	
	comp=Z,6.6nm,19.2s,baz=60,slow=35						
ARCES	**ARCESS Array B**	**119.95**	**345**	PKP	**PKiKP**	**21 53 55.6**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=41,slow=1.7,SNR=4.8						

NOU 06 21:45:21.6, 19°.03S×169°.27E, h153km, MLv4.0/14, Vanuatu Islands, Vanuatu Islands

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

δ61.00000°, λ-99.00000°.

JMA 06 22:13:12.8±0.1, 24°.4N±0°.7×124°.1E±0°.5, h43km, MV3.5/12, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.05**	**133**	P	Pn	22 13 19.4	-0.3
JIJ				S	Sn	22 13 24.4	-0.1
JKRS	**Kuro-shima**	**0.18**	**209**	P	Pn	22 13 20.3	0.0
JKRS				S	Sn	22 13 25.9	+0.4
IRIF	**Iriomote-Funau**	**0.35**	**260**	P	Pn	22 13 21.9	+0.1
IRIF				*e*S	Sn	22 13 28.1	-0.2
HATJ	**Hateruma jima**	**0.43**	**219**	P	Pn	22 13 22.6	-0.3
HATJ				S	Sn	22 13 29.9	0.0
JTJ	**Tarama**	**0.60**	**66**	P	Pn	22 13 25.1	+0.2
JTJ				S	Sn	22 13 34.5	+0.9
YOJ	**Yonaguni jima**	**1.00**	**274**	P	Pn	22 13 30.5	+0.1
YOJ				S	Sn	22 13 43.3	0.0
JYNG	**Yonagunijimaku**	**1.06**	**273**	P	Pn	22 13 31.4	+0.2
JYNG				*e*S	Sn	22 13 45.0	+0.2
JIRB	**Irabujima**	**1.06**	**66**	P	Pn	22 13 31.6	+0.3
JIRB				*e*S	Sn	22 13 45.7	+0.8
JIKM	**Ikemajima**	**1.17**	**63**	P	Pn	22 13 33.1	+0.4
JIKM				*e*S	Sn	22 13 47.9	+0.4
JMJ2	**Miyako jima3**	**1.17**	**73**	P	Pn	22 13 33.5	+0.8
JMJ2				*e*S	Sn	22 13 48.8	+1.4
JOGS	**Gusukube**	**1.24**	**73**	*e*P	Pn	22 13 34.6	+0.9

IDC 06 22:20:49.5±2.2, 2°.99N×127°.34E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=166.6km s-min=26.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.81**	**163**	P	P	22 26 05.3	+1.0
	0.4nm,0.9s,baz=345,slow=11,SNR=5.2 0.4nm,0.9s						
ASAR	**Alice Springs**	**27.26**	**167**	P	P	22 26 35.1	-0.7
	0.2nm,0.5s,baz=340,slow=7.7,SNR=5.7 0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.50**	**325**	P	P	22 30 47.5	-0.2
	0.2nm,0.3s,baz=112,slow=7.5,SNR=6.2 0.2nm,0.3s						

KRSC 06 22:22:58.3±1.2, 50°.03N×156°.83E, h70km±22km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.80**	**326**	*e*P	Pn	22 23 15.3	+1.0
SKR				*e*S	Sn	22 23 27.1	+0.9
PAU	**Pauzhetka**	**1.44**	**360**	*e*P	Pn	22 23 23.8	+1.4
PAU				*e*S	Sn	22 23 42.5	+1.9
KDTR	**Khodutka, Kamc**	**1.95**	**23**	*e*P	Pn	22 23 31.6	+2.4
KDTR				*e*S	Sn	22 23 55.6	+2.8
MTVR	**Mutnovka**	**2.60**	**19**	*e*P	Pn	22 23 41.1	+2.9
MTVR				*e*S	Sn	22 24 12.0	+3.2
RUS	**Russkaya**	**2.63**	**23**	*e*P	Pn	22 23 40.1	+1.7
RUS				*e*S	Sn	22 24 11.0	+1.8
GRL	**Gorelyy**	**2.65**	**17**	*e*P	Pn	22 23 42.0	+3.2
GRL				*e*S	Sn	22 24 13.4	+3.6
UGLR	**Uglovaya**	**3.42**	**21**	*e*P	Pn	22 23 52.3	+3.0
AVH	**Avacha**	**3.45**	**19**	*e*P	Pn	22 23 53.3	+3.6
KOK	**Koryaka**	**3.46**	**18**	*e*P	Pn	22 23 52.9	+3.1
SDLR	**Sedlovina**	**3.50**	**21**	*e*P	Pn	22 23 52.8	+2.5
KRX	**Arik**	**3.52**	**18**	*e*P	Pn	22 23 53.6	+2.9
SPN	**Mys Shipunski**	**3.67**	**32**	*e*P	Pn	22 23 55.3	+2.8
GNL	**Ganaly**	**3.74**	**10**	*e*P	Pn	22 23 55.6	+2.0
KBTR	**Krutoberegovo**	**7.16**	**28**	*e*P	Pn	22 24 43.0	+2.8

*NEIC **06** 22:33:37.3±1.3, 58°.1S±0°.1×26°.6W±0°.2, h140km±8km, mb4.4/13, Error ellipse: s-maj=17.2km s-min=12.9km az=127.0*
*IDC **06** 22:33:46.1±5.6, 58°.19S×26°.89W, h227km±53km, mb3.5/8, mbtmp4.1/9, Error ellipse: s-maj=25.6km s-min=14.9km az=62.0*

ISC 06 22:33:37.7±0.7, 58°.10S±0°.10×26°.7W±0°.1, h145km, n35, σ1§02/32, mb4.0/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.66**	**301**	Pn	**Pn**	**22 35 12.7**	**-0.3**
VNA1	**Neumayer--Stat**	**14.80**	**156**	P	P	22 37 09.0	+7.4
VNA3	**Neumayer Olymp**	**14.97**	**158**	P	P	22 37 10.9	+7.3
VNA3	**Neumayer Olymp**	**14.97**	**158**	P	**Pn**	**22 37 02.4**	**+0.7**
VNA2	**Neumayer--Watz** baz=317,slow=12	**15.20**	**155**	P	P	22 37 13.6	+7.6
VNA2	**Neumayer--Watz** baz=317,slow=12	**15.20**	**155**	P	**P**	**22 37 07.0**	**+0.9**
SNAA	**Sanae**	**16.77**	**154**	P	**Pn**	**22 37 24.1**	**+0.4**
SNAA	**Sanae** 4.4nm,0.6s,baz=298,slow=12,SNR=18	**16.77**	**154**	P	**Pn**	**22 37 24.1**	**+0.4**
SNAA	1.2nm,0.8s,baz=40,slow=23,SNR=2.2			S	**Sn**	**22 40 30.3**	**-0.3**
SNAA	**Sanae** comp=Z,17nm,1.4s	**16.77**	**154**	P	**Pn**	**22 37 24.0**	**+0.4**
SNAA				IAmb	IAmb	22 37 26.7	
TROLL	**Troll, Antarti**	**18.30**	**151**	P	**P**	**22 37 40.7**	**+0.4**
EFI	**East Falkland**	**19.02**	**276**	P	**Pn**	**22 37 49.7**	**-0.7**
EFI	comp=Z,37nm,1.0s			IAmb	IAmb	22 37 54.3	
BELA	**Belgrano 2** comp=Z,14nm,0.6s	**20.05**	**185**	P	**P**	**22 37 58.8**	**-0.2**
BELA				IAmb	IAmb	22 37 59.6	
USHA	**Ushuaia** comp=Z,6.3nm,1.0s,baz=16,slow=4.5,SNR=3.7 comp=Z,6.3nm,1.0s	**23.01**	**260**	P	**P**	**22 38 30.2**	**+0.7**
H09N1	**TRISTAN DA CUN** SNR=6.7	**23.08**	**30**	T	T	23 03 03.4	
GO09	**Cerro Castillo**	**26.80**	**265**	P	**P**	**22 39 02.9**	**-1.0**
QSPA	**South Pole Qui** comp=Z,7.0nm,0.6s,baz=206,slow=2.1,SNR=80 comp=Z,7.0nm,0.6s	**32.15**	**180**	P	**P**	**22 39 51.5**	**+0.4**
QSPA	**South Pole Qui** comp=Z,8.8nm,0.7s	**32.15**	**180**	P	**P**	**22 39 51.3**	**+0.1**
QSPA				IAmb	IAmb	22 39 52.3	
PLCA	**Paso Flores** comp=Z,1.8nm,0.7s,baz=123,slow=8.2,SNR=3.8 comp=Z,1.8nm,0.7s	**32.66**	**283**	P	**P**	**22 39 55.5**	**-0.4**
GO05	**Huala** comp=Z,12nm,1.2s	**37.72**	**288**	P	**P**	**22 40 38.6**	**-0.4**
GO05				IAmb	IAmb	22 41 02.4	
MT09	**Talagante**	**38.23**	**290**	P	**P**	**22 40 43.7**	**+0.3**
MAW	**Mawson** comp=Z,0.7nm,0.5s,baz=227,slow=7.6,SNR=1.8 comp=Z,0.7nm,0.5s	**38.36**	**142**	P	**P**	**22 40 43.7**	**-0.3**
MT02	**Curacav**	**38.71**	**290**	P	**P**	**22 40 47.8**	**+0.5**
SBA	**Scott Base**	**44.05**	**184**	P	**P**	**22 41 30.5**	**+0.2**
VNDA	**Vanda** comp=Z,1.3nm,0.6s,baz=183,slow=6.7,SNR=15 comp=Z,1.3nm,0.6s	**44.53**	**183**	P	**P**	**22 41 34.5**	**+0.4**
VNDA	**Vanda**	**44.53**	**183**	P	**P**	**22 41 34.1**	**0.0**
BDFB	**Brasilia** comp=Z,1.6nm,0.5s,baz=136,slow=2.4,SNR=3.3 comp=Z,1.6nm,0.5s	**45.28**	**330**	P	**P**	**22 41 41.6**	**+0.8**
TOA0	**Torodi Ar. Sit** comp=Z,5.2nm,1.4s	**74.72**	**29**	P	**P**	**22 45 00.3**	**-1.1**
TOA0				IAmb	IAmb	22 45 27.2	
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.4s,baz=199,slow=6.3,SNR=10 comp=Z,0.4nm,0.4s	**74.72**	**29**	P	**P**	**22 45 02.0**	**+0.7**
TORD	**Torodi Ar. Bea**	**74.72**	**29**	P	**P**	**22 45 01.7**	**+0.3**
RIMA	**Rio Macho** comp=Z,10.0nm,1.4s	**81.89**	**303**	P	**P**	**22 45 41.9**	**+0.9**
RIMA				IAmb	IAmb	22 45 52.3	
ASAR	**Alice Springs** comp=Z,0.3nm,0.6s,baz=182,slow=4.3,SNR=6.5 comp=Z,0.3nm,0.6s	**96.95**	**162**	P	**P**	**22 46 50.5**	**-2.1**
FINES	**FINESS Array B** comp=Z,0.7nm,0.9s,baz=170,slow=3.3,SNR=8.1	**126.07**	**28**	PKP	**PKPdf**	**22 52 19.7**	**-1.3**
ARCES	**ARCESS Array B** comp=Z,0.5nm,0.6s,baz=207,slow=3.8,SNR=4.3	**132.75**	**22**	PKP	**PKPdf**	**22 52 32.2**	**-1.3**
SONM	**Songino Array** comp=Z,0.5nm,0.5s,baz=237,slow=3.9,SNR=2.7	**150.53**	**90**	PKPbc	**PKPbc**	**22 53 09.9**	**-1.4**
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=133,slow=3.8,SNR=4.4	**151.64**	**309**	PKPbc	**PKPdf**	**22 53 10.2**	**+3.4**

*MAN **06** 22:37:49, 12°.90N×124°.89E, h1km, Ms3.0*
*IDC **06** 22:37:49.1±3.2, 12°.68N×126°.28E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=299.9km s-min=24.4km az=68.0*

ISC 06 22:37:50.3±1.4, 12°.7N±0°.1×126°.3E±0°.2, h10km, n8, σ1§37/6, mb3.5/4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.37**	**219⇑**	*e*P	**Pb**	**22 38 14.4**	**-1.6**
BESP				*i* S	**Sg**	**22 38 36.0**	**+1.5**
WRA	**Warramunga Arr** 0.3nm,0.9s,baz=347,slow=9.3,SNR=1.7 0.3nm,0.9s	**33.37**	**166**	P	**P**	**22 44 28.9**	**0.0**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=349,slow=7.7,SNR=4.4 0.2nm,0.4s	**36.88**	**168**	P	**P**	**22 44 59.9**	**+0.7**
H11N1	**WAKE ISLAND Hy** baz=267,slow=74,SNR=6.0	**39.52**	**74**	T	T	23 28 57.2	
H11N2	**WAKE ISLAND Hy** baz=267,slow=74,SNR=3.7	**39.52**	**74**	T	T	23 28 59.8	
H11N3	**WAKE ISLAND Hy** baz=267,slow=74,SNR=5.3	**39.53**	**74**	T	T	23 28 58.7	
ZALV	**Zalesovo Beam** 0.6nm,0.6s,baz=130,slow=5.8,SNR=2.6 0.6nm,0.6s	**52.55**	**330**	P	**P**	**22 47 04.3**	**+0.5**
KURBB	**Kurchatov Arra** 1.7nm,0.2s,baz=122,slow=8.0,SNR=4.6 1.7nm,0.2s	**54.13**	**324**	P	**P**	**22 47 15.6**	**+0.1**

*PRE **06** 22:46:26.8±2.2, 11°.83S×34°.69E, h10km, ML3.9*
*EAF **06** 22:46:47.9±8.7, 13°.03S×34°.42E, h20km±93km, MD4.2*

ISC 06 22:46:39.7±1.0, 12°.94S±0°.04×34°.63E±0°.09, h10km, n28, σ3§10/36, 2D, Malawi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZOMB	**Zomba**	**2.53**	**164**	*i* P	**Pb**	**22 47 26.0**	**+0.8**
ZOMB				S	**Sg**	**22 48 01.4**	**+0.5**
ZOMB	**Zomba**	**2.53**	**164**	*i* P	**Pb**	**22 47 26.0**	**+0.8**
ZOMB				S	**Sg**	**22 48 01.4**	**+0.5**
KARM1	**KARONGA**	**3.05**	**346**	*i* P	**Pg**	**22 47 36.4**	**-1.8**
KARM1				S	**Sb**	**22 48 12.6**	**+1.1**
KARM1	**KARONGA**	**3.05**	**346**	*i* P	**Pg**	**22 47 36.4**	**-1.8**
KARM1				S	**Sb**	**22 48 12.6**	**+1.1**
LSZ	**Lusaka**	**6.67**	**249**	*e*P	Pn	22 48 25.3	+7.4
LSZ				*e*S	**Sn**	**22 49 30.4**	**-3.7**
LSZ	**Lusaka**	**6.67**	**249**	*e*P	Pn	22 48 25.3	+7.4
LSZ				*e*S	**Sn**	**22 49 30.4**	**-3.7**
BLWY	**Bulawayo**	**9.20**	**218**	*e*P	**Pn**	**22 48 55.1**	**+2.6**
BLWY	comp=Z,52nm,0.5s			IAML		22 51 40.2	
BLWY	**Bulawayo**	**9.20**	**218**	*e*P	Pn	22 48 58.3	+5.7
BLWY	**Bulawayo**	**9.20**	**218**	*e*P	Pn	22 48 58.3	+5.7
MATP	**Matopo**	**9.48**	**217**	*e*P	**Pn**	**22 48 58.0**	**+1.5**
MATP	**Matopo**	**9.48**	**217**	*e*P	**Pn**	**22 49 00.1**	**+3.6**
MATP				*e*S	**Sn**	**22 50 44.8**	**+1.5**
MATP	**Matopo**	**9.48**	**217**	*e*P	**Pn**	**22 49 00.1**	**+3.6**
MATP				*e*S	**Sn**	**22 50 44.8**	**+1.5**
MUSN	**Musina, Limpop**	**10.35**	**205**	*e*P	**Pn**	**22 49 10.1**	**+1.8**
MUSN	**Musina, Limpop**	**10.35**	**205**	*e*P	**Pn**	**22 49 09.8**	**+1.5**
MUSN	**Musina, Limpop**	**10.35**	**205**	*e*P	**Pn**	**22 49 09.8**	**+1.5**
MOPA	**Mopani**	**10.96**	**196**	*e*P	**Pn**	**22 49 20.6**	**+4.0**
MOPA	**Mopani**	**10.96**	**196**	*e*P	Pn	22 49 23.5	+6.9
MOPA				*e*S	**Sn**	**22 51 11.1**	**-8.3**
MOPA	**Mopani**	**10.96**	**196**	*e*P	Pn	22 49 23.5	+6.9
MOPA				*e*S	**Sn**	**22 51 11.1**	**-8.3**
SLR	**Silverton**	**14.06**	**204**	*e*P	**P**	**22 50 04.5**	**-2.5**
LBTB	**Lobatse**	**14.73**	**214**	*e*P	**P**	**22 50 12.5**	**-2.0**
LBTB	**Lobatse**	**14.73**	**214**	*e*P	**Pn**	**22 50 10.2**	**+1.9**
LBTB				*e*S	**Sn**	**22 52 52.1**	**+0.4**
LBTB	**Lobatse**	**14.73**	**214**	*e*P	**Pn**	**22 50 10.2**	**+1.9**
LBTB				*e*S	**Sn**	**22 52 52.1**	**+0.4**
SNKL	**Senekal, Frees**	**16.55**	**202**	*e*P	**P**	**22 50 37.4**	**+2.7**
SWZ	**Schweizer**	**16.63**	**210**	*e*P	**P**	**22 50 37.8**	**+2.2**
BOSA	**Boshof**	**17.88**	**208**	*e*P	**P**	**22 50 55.0**	**+5.7**
BOSA	**Boshof**	**17.88**	**208⇓**	*e*P	**Pn**	**22 50 48.0**	**-0.7**
BOSA				*e*S	**Sn**	**22 54 05.7**	**-2.4**
BOSA	**Boshof**	**17.88**	**208⇓**	*e*P	**Pn**	**22 50 48.0**	**-0.7**
BOSA				*e*S	**Sn**	**22 54 05.7**	**-2.4**
KSTD	**Kokstad**	**18.27**	**195**	*e*P	**P**	**22 50 55.2**	**+1.5**

IDC 06 22:51:12.2±1.9, 2°.37S×128°.70E, h0km, mb3.2/2, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=147.2km s-min=28.5km az=74.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=343,slow=12,SNR=4.6 0.5nm,1.1s	**18.32**	**163**	P	Pn	22 55 27.3	-0.7
ASAR	**Alice Springs** 0.2nm,0.3s,baz=344,slow=11,SNR=5.3 0.2nm,0.3s	**21.77**	**167**	P	P	22 56 05.5	-0.2
SONM	**Songino Array** 0.2nm,0.3s,baz=143,slow=5.7,SNR=2.1 0.2nm,0.3s	**53.67**	**341**	P	P	23 00 36.1	+0.3

*TAP **06** 22:51:29.5, 24°.81N×122°.17E, h13km, ML3.0, B*
*JMA **06** 22:51:30.5±0.2, 24°.7N±0°.2×122°.2E±0°.1, h1km±1km, MV2.5/9, TAIWAN REGION*

ISC 06 22:51:29.8±0.9, 24°.80N±0°.02×122°.18E±0°.02, h12km±6km, n55, σ0§64/105, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.23**	**283**	P	**Pg**	**22 51 34.7**	**+0.1**
EGS	baz=272			*e*S	**Sb**	**22 51 38.8**	**+0.9**
TWB1	**Santiao Chiao** baz=319	**0.27**	**321⇑**	*i*P	**Pg**	**22 51 35.4**	**0.0**
TWB1				S	**Sg**	**22 51 39.0**	**-0.2**
NTC	**Toucheng** baz=277	**0.32**	**281**	*e*P	**Pg**	**22 51 36.5**	**+0.2**
NTC				*e*S	**Sb**	**22 51 42.1**	**-0.5**
TWC	**Suao** baz=234	**0.35**	**238**	P	**Pg**	**22 51 36.7**	**-0.2**
TWC				*e*S	**Sg**	**22 51 41.4**	**-0.1**
TIPB	**Shuangxi** baz=296	**0.36**	**299**	P	**Pb**	**22 51 37.3**	**-0.9**
TIPB				*e*S	**Sg**	**22 51 42.4**	**+0.4**
ILA	**Ilan** baz=252	**0.39**	**266**	P	**Pb**	**22 51 38.4**	**-0.3**
ILA				*e*S	**Sb**	**22 51 44.2**	**-0.4**
SXI1	**Grass Mountain** baz=318	**0.40**	**318**	P	**Pb**	**22 51 38.2**	**-0.8**
SXI1				*e*S	**Sg**	**22 51 43.4**	**+0.1**
NDS	**Dongshan** baz=240	**0.45**	**249**	*e*P	**Pg**	**22 51 37.8**	**-0.8**
NDS				*e*S	**Sb**	**22 51 46.2**	**-0.1**
NWF	**Wu-fen Shan** baz=299	**0.45**	**308**	*e*P	**Pb**	**22 51 39.2**	**-0.6**
TWE	**Neicheng** baz=252	**0.47**	**261**	*e*P	**Pg**	**22 51 39.0**	**0.0**
TWE				*e*S	**Sg**	**22 51 45.7**	**+0.5**
EWUT	**Wuta** baz=216	**0.50**	**226**	*e*P	**Pg**	**22 51 38.8**	**-0.8**
EWUT				*e*S	**Sg**	**22 51 45.0**	**-1.3**
FUSB	**Fushanzhiwuyua** baz=264	**0.54**	**266**	P	**Pb**	**22 51 40.7**	**-0.5**
FUSB				*e*S	**Sb**	**22 51 49.2**	**+0.3**
ENA	**Nanau** baz=217	**0.54**	**227**	*e*P	**Pg**	**22 51 40.2**	**-0.1**
ENA				*e*S	**Sg**	**22 51 47.1**	**-0.4**
ENTT	**Nioudou** baz=252	**0.57**	**255**	*e*P	**Pg**	**22 51 40.2**	**-0.8**
ENTT				*e*S	**Sb**	**22 51 49.6**	**-0.4**
NWLT	**Wulai** baz=266	**0.61**	**268**	*e*P	**Pb**	**22 51 42.1**	**-0.3**
NWLT				*e*S	**Sb**	**22 51 51.3**	**+0.2**
NDT	**Datong Townshi** baz=251	**0.63**	**252**	*e*P	**Pb**	**22 51 42.3**	**-0.5**
NDT				*e*S	**Sb**	**22 51 51.5**	**-0.2**
LATG	**Datong** baz=252	**0.65**	**246**	*e*P	**Pb**	**22 51 42.6**	**-0.5**
LATG				*e*S	**Sb**	**22 51 52.0**	**-0.1**
YM01	**YM01** baz=301	**0.65**	**303**	*e*P	**Pb**	**22 51 43.2**	**+0.1**
YHNB	**Yeheng** baz=255	**0.74**	**260**	P	**Pg**	**22 51 44.0**	**-0.1**
YHNB				*e*S	**Sn**	**22 51 56.2**	**-1.1**
NSK	**Sanguang** baz=255	**0.75**	**261**	*e*P	**Pg**	**22 51 43.3**	**-1.1**
NSK				*e*S	**Sg**	**22 51 54.4**	**+0.1**
JYNG	**Yonagunijimaku**	**0.78**	**116**	P	**Pb**	**22 51 45.2**	**-0.1**
JYNG				*e*S	**Sb**	**22 51 55.8**	**-0.1**
ETL	**Fush Village** baz=217	**0.81**	**219**	*e*P	**Pg**	**22 51 45.0**	**-0.5**
ETL				*e*S	**Sg**	**22 51 55.7**	**-0.4**
NNSB	**Datong** baz=233	**0.81**	**243**	*e*P	**Pg**	**22 51 45.4**	**-0.1**
NNSB				*e*S	**Sb**	**22 51 56.9**	**0.0**
NNS	**Nan Shan** baz=233	**0.81**	**244**	*e*P	**Pg**	**22 51 44.3**	**-1.2**
NNS				*e*S	**Sg**	**22 51 55.8**	**-0.4**
NACB	**Ninganchiao** baz=219	**0.81**	**221**	P	**Pg**	**22 51 45.0**	**-0.5**
NACB				S	**Sg**	**22 51 55.5**	**-0.7**
YOJ	**Yonaguni jima** baz=116	**0.83**	**113**	P	**Pg**	**22 51 45.8**	**0.0**
YOJ				S	**Sb**	**22 51 57.3**	**0.0**
YOJ	**Yonaguni jima**	**0.83**	**113**	P	**Pb**	**22 51 46.1**	**-0.1**
YOJ				*e*S	**Sb**	**22 51 57.2**	**-0.1**
PCYT	**Pengchaiyu** baz=2.0	**0.84**	**354**	P	**Pb**	**22 51 45.8**	**-0.5**
ETLH	**Xiulin Townshi** baz=226	**0.86**	**227**	*e*P	**Pg**	**22 51 46.3**	**-0.2**
ETLH				*e*S	**Sg**	**22 51 56.6**	**-1.1**
TWD	**Chiawan** baz=215	**0.89**	**217**	*e*P	**Pg**	**22 51 46.6**	**-0.3**
TWD				*e*S	**Sb**	**22 51 58.9**	**0.0**
NFF	**Wufeng Townshi** baz=274	**0.98**	**261**	*e*P	**Pg**	**22 51 48.7**	**0.0**
NFF				*e*S	**Sn**	**22 52 02.5**	**-0.7**
FUSS	**Fushou** baz=236	**1.01**	**237**	*e*P	**Pb**	**22 51 49.0**	**-0.3**
FUSS				*e*S	**Sb**	**22 52 02.8**	**+0.1**
WHF	**Hehuan Shan** baz=231	**1.05**	**232**	P	**Pb**	**22 51 50.0**	**-0.2**
WHF				*e*S	**Sb**	**22 52 04.0**	**-0.1**
TWT	**Tachien** baz=231	**1.06**	**240**	*e*P	**Pn**	**22 51 50.7**	**+0.1**
TWT				*e*S	**Sb**	**22 52 03.8**	**-0.3**
LIOB	**Emei** baz=261	**1.06**	**262**	*e*P	**Pn**	**22 51 52.3**	**+1.7**
LIOB				*e*S	**Sn**	**22 52 06.3**	**+0.9**
TDCB	**Techi** baz=231	**1.07**	**240**	*e*P	**Pn**	**22 51 50.8**	**0.0**
TDCB				*e*S	**Sg**	**22 52 04.7**	**+0.2**
NSTT	**Nanjuang** baz=260	**1.08**	**262**	*e*P	**Pn**	**22 51 51.9**	**+1.1**
NSTT				*e*S	**Sn**	**22 52 06.8**	**+1.1**
CHGB	**Renai** baz=230	**1.17**	**231**	P	**Pg**	**22 51 52.3**	**-0.1**
CHGB				*e*S	**Sg**	**22 52 07.5**	**-0.1**
ESL	**Shilin** baz=220	**1.19**	**215**	*e*P	**Pb**	**22 51 52.4**	**+0.1**
ESL				*e*S	**Sn**	**22 52 08.3**	**-0.1**
WHP	**Taichung City** baz=244	**1.23**	**246**	*e*P	**Pg**	**22 51 53.7**	**+0.2**
WHP				*e*S	**Sn**	**22 52 09.2**	**-0.4**
OWD	**Renai** baz=226	**1.24**	**228**	*e*P	**Pb**	**22 51 53.3**	**+0.1**
OWD				*e*S	**Sb**	**22 52 09.1**	**-0.1**
WUSB	**Renai** baz=229	**1.25**	**231**	P	**Pb**	**22 51 53.5**	**0.0**
WUSB				*e*S	**Sn**	**22 52 09.8**	**-0.4**
TWQ1	**Liyutan** baz=270	**1.35**	**251**	*e*P	**Pg**	**22 51 55.5**	**-0.3**
TWQ1				*e*S	**Sg**	**22 52 15.1**	**+1.7**
WCS	**Beigang Elemen** baz=243	**1.37**	**238**	*e*P	**Pb**	**22 51 55.1**	**-0.2**
WCS				*e*S	**Sg**	**22 52 16.2**	**+2.3**
VWDT	**VWDT** baz=229	**1.40**	**223**	*e*P	**Pb**	**22 51 55.9**	**0.0**
VWDT				*e*S	**Sg**	**22 52 15.5**	**+0.6**
HGSD	**Ruisui** baz=189	**1.47**	**208**	*e*P	**Pb**	**22 51 57.2**	**+0.2**
HGSD				*e*S	**Sg**	**22 52 19.2**	**+2.1**
SMLT	**Sun Moon Lake** baz=216	**1.48**	**232**	*e*P	**Pg**	**22 51 58.0**	**-0.2**
IRIF	**Iriomote-Funau**	**1.49**	**108**	*e*P	**Pg**	**22 51 58.2**	**-0.2**
IRIF				S	**Sb**	**22 52 16.1**	**-0.2**
TYC	**Yuchr** baz=232	**1.50**	**234**	*e*P	**Pg**	**22 51 58.2**	**-0.3**
TYC				*e*S	**Sg**	**22 52 19.6**	**+1.6**
SSLB	**Suanglung** baz=227	**1.50**	**228**	*e*P	**Pb**	**22 51 57.4**	**-0.3**
SSLB				*e*S	**Sb**	**22 52 16.6**	**-0.1**
YULB	**Yu-li** baz=208	**1.61**	**210**	*e*P	**Pn**	**22 51 58.0**	**-0.1**
YULB				*e*S	**Sg**	**22 52 20.9**	**-0.8**
HATJ	**Hateruma jima**	**1.66**	**116**	*e*S	**Sb**	**22 52 20.7**	**-0.4**
JKRS	**Kuro-shima**	**1.76**	**108**	P	**Pb**	**22 52 01.7**	**-0.3**
JKRS				*e*S	**Sb**	**22 52 23.6**	**-0.5**
CHN5	**Tsauling** baz=228	**1.81**	**229**	*e*P	**Pb**	**22 52 03.7**	**+0.7**
CHN5				*e*S	**Sg**	**22 52 27.6**	**-0.6**
JIJ	**Ishigaki jima**	**1.84**	**103**	*e*P	**Pb**	**22 52 03.1**	**-0.3**
JIJ				*e*S	**Sb**	**22 52 26.9**	**+0.5**

*IDC **06** 22:58:36.2±1.0, 11°.99N×45°.87E, h0km, mb3.7/12, mbtmp3.7/14, ML3.6/2, MS3.1/15, Error ellipse: s-maj=27.5km s-min=20.5km az=177.0*

ISC 06 22:58:38.0±0.8, 12°.0N±0°.1×45°.80E±0°.09, h13km, n25, σ1§00/15, mb3.7/12, MS3.0/11, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel** 14nm,0.3s,baz=230,slow=4.9,SNR=48	**2.93**	**262**	Pn	**Pn**	**22 59 23.4**	**-1.1**
ATD	9.3nm,0.3s,baz=74,slow=18,SNR=4.3			Sn	**Sn**	**22 59 58.8**	**-0.7**
ATD	comp=Z,207nm,19.4s,baz=146,slow=38 36nm,0.4s			LR	LR	23 00 31.1	
KMBO	**Kilima Mbogo** 0.1nm,0.3s,baz=36,slow=17,SNR=1.9	**15.54**	**214**	Pn	**Pn**	**23 02 17.8**	**+0.6**
KMBO	comp=Z,118nm,18.6s,baz=95,slow=37 0.6nm,0.4s			LR	LR	23 08 14.3	
WSAR	**Wadi Sarin** comp=Z,83nm,21.7s,baz=252,slow=36	**16.57**	**46**	LR	LR	23 08 31.9	
MBAR	**Mbarara** comp=Z,62nm,19.1s,baz=76,slow=36	**19.49**	**231**	LR	LR	23 10 24.7	
EIL	**Elat** comp=Z,28nm,19.3s,baz=70,slow=31	**20.30**	**332**	LR	LR	23 09 07.9	

MMAI	**Mount Meron Ar**	**23.02 337**	LR	LR	23 13 25.2		
	comp=Z,23nm,18.4s,baz=294,slow=39						
GNI	**Garni**	**28.09 358**	LR	LR	23 17 20.5		
	comp=Z,25nm,18.2s,baz=170,slow=40						
BRTR	**Keskin Array B**	**29.67 341**	P	**P**	**23 04 44.6**	**+0.8**	
	0.7nm,0.9s,baz=145,slow=4.5,SNR=4.0						
	0.7nm,0.9s						
LSZ	**Lusaka**	**32.20 213**	LR	LR	23 17 24.3		
	comp=Z,46nm,20.6s,baz=7.0,slow=35						
PALK	**Pallekele**	**34.70 94**	LR	LR	23 17 42.2		
	comp=Z,24nm,20.3s,baz=341,slow=33						
AAK	**Ala-Archa**	**39.42 34**	LR	LR	23 24 29.7		
	comp=Z,33nm,18.0s,baz=256,slow=40						
AKASG	**Malin Array Be**	**40.94 344**	P	**P**	**23 06 20.4**	**+0.2**	
	0.3nm,0.2s,baz=145,slow=6.6,SNR=1.8						
	0.3nm,0.2s						
TSUM	**Tsumeb**	**41.63 222**	LR	LR	23 25 31.2		
	comp=Z,50nm,18.3s,baz=301,slow=39						
TORD	**Torodi Ar. Bea**	**43.03 276**	P	**P**	**23 06 38.9**	**+1.0**	
	0.1nm,0.4s,baz=98,slow=6.8,SNR=1.7						
	0.1nm,0.4s						
BOSA	**Boshof**	**44.97 206**	LR	LR	23 24 06.1		
	comp=Z,44nm,18.6s,baz=14,slow=34						
GERES	**GERESS Array B**	**45.39 330**	P	**P**	**23 06 56.2**	**-0.3**	
	0.2nm,0.4s,baz=130,slow=9.1,SNR=2.1						
	0.2nm,0.4s						
ARU	**Arti**	**45.45 10**	LR	LR	23 29 28.5		
	comp=Z,19nm,19.2s,baz=177,slow=41						
MKAR	**Makanchi Array**	**46.35 34**	P	**P**	**23 07 01.8**	**-2.2**	
	0.5nm,0.8s,baz=224,slow=6.0,SNR=2.2						
MKAR			LR	LR	23 29 59.4		
	comp=Z,30nm,18.6s,baz=260,slow=41						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**51.44 348**	P	**P**	**23 07 43.5**	**+0.7**	
	1.8nm,0.9s,baz=132,slow=10,SNR=3.8						
	1.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**51.54 76**	P	**P**	**23 07 43.5**	**-0.7**	
	0.9nm,0.3s,baz=271,slow=9.1,SNR=7.1						
	0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**52.00 28**	P	**P**	**23 07 46.8**	**-0.2**	
	0.3nm,0.3s,baz=235,slow=5.1,SNR=1.4						
ZALV			LR	LR	23 34 31.0		
	comp=Z,13nm,18.2s,baz=147,slow=42						
	0.3nm,0.3s						
SONM	**Songino Array**	**61.58 42**	P	**P**	**23 08 54.8**	**-0.5**	
	0.2nm,0.4s,baz=247,slow=7.4,SNR=1.9						
	0.2nm,0.4s						
KLR	**Kul'dur**	**78.41 42**	P	**P**	**23 10 39.2**	**+0.7**	
	0.5nm,0.4s,baz=336,slow=20						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**92.65 110**	P	**P**	**23 11 51.6**	**+1.2**	
	0.8nm,1.0s,baz=296,slow=3.2,SNR=3.6						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**93.01 113**	P	**P**	**23 11 51.7**	**-0.2**	
	0.2nm,0.3s,baz=282,slow=5.4,SNR=2.1						
	0.2nm,0.3s						

*IDC **06** 23:35:25.2±1.7,2˚.17S×121˚.43E, h0km, mb3.4/3, mbtmp3.5/4, ML3.7/1, MS2.4/1, Error ellipse: s-maj=40.4km s-min=27.0km az=74.0*
*DJA **06** 23:35:26.7±0.9,2˚S±3˚×122˚1E±˚, h14km±7km, M4.0/12, mb4.3/1, MLv3.9/12*

ISC 06 23:35:25.1±2.2,2˚10S±0˚05×121˚33E±0˚06, h2km±15km, n13, σ0°60/19, mb3.4/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.22**	**15**	P	**Pg**	**23 35 48.6**	**+0.1**
APSI				S	**Sb**	**23 36 05.4**	**+0.2**
TTSI	**Tana Toraja**	**1.78**	**238**	P	**Pn**	**23 35 56.1**	**-0.8**
TTSI				S	**Sn**	**23 36 19.6**	**-0.5**
LUWI	**Luwuk**	**1.79**	**54**	P	**Pn**	**23 35 56.6**	**-0.4**
LUWI				S	**Sb**	**23 36 21.1**	**-0.3**
SPSI	**Sidrap Palu**	**2.42**	**220**	P	**Pn**	**23 36 05.8**	**+0.1**
SPSI				S	**Sn**	**23 36 35.8**	**-0.2**
MRSI	**Marisa**	**2.63**	**13**	P	**Pn**	**23 36 08.3**	**-0.3**
MRSI				S	**Sn**	**23 36 40.4**	**-0.8**
MPSI	**Mapaga**	**2.81**	**329**	P	**Pn**	**23 36 11.2**	**+0.1**
KAPI	**Kappang**	**3.30**	**208**	Pn	**Pn**	**23 36 18.0**	**+0.3**
	7.5nm,0.3s,baz=28,slow=5.8,SNR=21						
KAPI				Sn	**Sn**	**23 36 58.2**	**+0.6**
	4.1nm,0.3s,baz=70,slow=16,SNR=2.2						
KAPI				LR	LR	23 37 40.3	
	comp=Z,65nm,20.7s,baz=120,slow=41						
	37nm,0.4s						
BKSI	**Bulukumba**	**3.42**	**201**	P	**Pn**	**23 36 19.0**	**-0.5**
BSSI	**Bau Bau, Buton**	**4.10**	**192**	P	**Pn**	**23 36 29.0**	**+0.1**
LBMI	**Labuha**	**6.34**	**77**	P	**Pn**	**23 37 00.2**	**+0.5**
WRA	**Warramunga Arr**	**21.82**	**145**	P	**P**	**23 40 17.8**	**-1.1**
	1.8nm,0.7s,baz=323,slow=11,SNR=14						
	1.8nm,0.7s						
ASAR	**Alice Springs**	**24.66**	**151**	P	**P**	**23 40 47.0**	**-0.5**
	0.6nm,0.7s,baz=329,slow=8.3,SNR=8.3						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**59.54**	**330**	P	**P**	**23 45 31.3**	**+1.1**
	0.2nm,0.6s,baz=141,slow=5.0,SNR=2.2						
	0.2nm,0.6s						

*IDC **06** 23:49:40.0±2.8,21˚.57N×143˚.27E, h339km±29km, mb3.3/13, mbtmp4.0/14, Error ellipse: s-maj=27.2km s-min=12.8km az=78.0*
*NEIC **06** 23:49:41.3±1.0,21˚.55N±0˚.05×143˚.2E±0˚.2, h343km±10km, mb4.0/17, Error ellipse: s-maj=26.4km s-min=3.7km az=102.0*

ISC 06 23:49:37.3±0.7, 21˚49N±0˚.09×143˚2E±0˚.2, h311km, n39, σ0°79/41, mb3.7/19, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.01**	**168**	P	**P**	**23 51 36.2**	**0.0**
	52nm,0.8s,baz=206,slow=14,SNR=2.0						
GUMO	**Guam**	**8.01**	**168**	Pn	**P**	**23 51 35.9**	**-0.3**
JMN	**Monobe**	**14.72**	**328**	P	**Pn**	**23 52 52.5**	**+0.4**
JMM	**Marumori**	**16.45**	**353**	P	**P**	**23 53 10.6**	**+1.1**
JSD	**Sado**	**17.04**	**347**	P	**P**	**23 53 15.7**	**-0.2**
JSD				IAmb	IAmb	23 53 16.4	
	comp=Z,12nm,1.2s						
KSRS	**Korea Array**	**20.70**	**324**	P	**P**	**23 53 54.6**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=148,slow=9.0,SNR=14						
	comp=Z,2.0nm,0.7s						
KSAR	**Wonju Array Be**	**20.71**	**323**	P	**P**	**23 53 54.1**	**-0.4**
SONM	**Songino Array**	**39.52**	**321**	P	**P**	**23 56 39.0**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=131,slow=7.8,SNR=4.8						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**39.52**	**321**	P	**P**	**23 56 39.0**	**+0.3**
WB0	**Warramunga Arr**	**41.90**	**192**	P	**P**	**23 56 59.1**	**+0.9**
WB0				IAmb	IAmb	23 57 00.5	
	comp=Z,6.4nm,1.3s						
WRA	**Warramunga Arr**	**42.08**	**193**	P	**P**	**23 57 00.3**	**+0.6**
	comp=Z,0.9nm,0.2s,baz=12,slow=9.5,SNR=67						
	comp=Z,0.9nm,0.2s						
WRA	**Warramunga Arr**	**42.08**	**193**	P	**P**	**23 57 00.2**	**+0.6**
ASAR	**Alice Springs**	**45.79**	**192**	P	**P**	**23 57 29.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=13,slow=7.3,SNR=6.9						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**45.79**	**192**	P	**P**	**23 57 29.8**	**+0.9**
ZALV	**Zalesovo Beam**	**54.39**	**322**	P	**P**	**23 58 31.5**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=105,slow=5.9,SNR=10.0						
ZALV				PcP	**PcP**	**23 59 31.6**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=117,slow=3.5,SNR=5.6						
	comp=Z,2.1nm,0.6s						
MK31	**Makanchi Array**	**54.86**	**313**	P	**P**	**23 58 36.3**	**+0.2**
MKAR	**Makanchi Array**	**54.86**	**313**	P	**P**	**23 58 36.4**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=88,slow=8.3,SNR=18						
MKAR				PcP	**PcP**	**23 59 34.2**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=72,slow=3.4,SNR=6.2						
	comp=Z,1.4nm,0.5s						
MAKZ	**Makanchi**	**55.08**	**313**	P	**P**	**23 58 38.1**	**+0.4**
KURK	**Kurchatov**	**57.65**	**317**	P	**P**	**23 58 55.3**	**-0.3**
KURK				IAmb	IAmb	23 58 56.2	
	comp=Z,2.6nm,0.8s						
NRIK	**Noril'sk**	**58.20**	**340**	P	**P**	**23 58 58.7**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=118,slow=13,SNR=2.1						
	comp=Z,1.1nm,0.6s						
J20K	**Nowinta River**	**59.01**	**27**	P	**P**	**23 59 05.5**	**+0.8**
J20K				IAmb	IAmb	23 59 21.2	
	comp=Z,5.5nm,1.5s						
IMAR	**Indian Mountai**	**59.66**	**25**	P	**P**	**23 59 10.1**	**+1.0**
H21K	**Melozitna Rive**	**59.95**	**25**	P	**P**	**23 59 12.0**	**+0.9**
H21K				IAmb	IAmb	23 59 32.1	
	comp=Z,3.1nm,1.4s						
ILAR	**Eielson Array**	**62.21**	**27**	P	**P**	**23 59 24.0**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=259,slow=5.3,SNR=2.8						
	comp=Z,0.3nm,0.6s						
BRVK	**Borovoye**	**62.91**	**320**	P	**P**	**23 59 31.1**	**+0.1**
BRVK				IAmb	IAmb	23 59 32.0	
	comp=Z,4.3nm,0.7s						
KK31	**Karatay Array**	**63.21**	**308**	P	**P**	**23 59 33.5**	**+0.4**
KK31				IAmb	IAmb	23 59 34.4	
	comp=Z,2.6nm,0.8s						
KKAR	**Karatay Array**	**63.21**	**308**	P	**P**	**23 59 33.3**	**+0.2**
BMAR	**Burnt Mountain**	**63.52**	**24**	P	**P**	**23 59 36.2**	**+1.4**
ARU	**Arti**	**69.45**	**324**	P	**P**	**00 00 11.8**	**-0.4**
ABKAR	**Akbulak array**	**69.72**	**316**	P	**P**	**00 00 13.8**	**-0.1**
ABKAR	**Akbulak array**	**69.72**	**316**	P	**P**	**00 00 13.8**	**-0.1**
ABKAR				IAmb	IAmb	00 00 14.6	
	comp=Z,3.3nm,0.7s						
YKA	**Yellowknife Ar**	**76.62**	**28**	P	**P**	**00 00 53.8**	**0.0**
	comp=Z,0.8nm,0.6s,baz=294,slow=6.1,SNR=6.3						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**79.13**	**342**	P	**P**	**00 01 07.4**	**0.0**
	comp=Z,1.7nm,0.5s,baz=73,slow=8.0,SNR=20						
	comp=Z,1.7nm,0.5s						
ARCES	**ARCESS Array B**	**79.13**	**342**	P	**P**	**00 01 07.4**	**0.0**
KBZ	**Khabaz**	**82.53**	**314**	P	**P**	**00 01 26.4**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=77,slow=6.3,SNR=4.8						
	comp=Z,2.3nm,0.8s						
FIA1	**FINESS Array S**	**83.38**	**335**	P	**P**	**00 01 28.7**	**-1.0**
FINES	**FINESS Array B**	**83.38**	**335**	P	**P**	**00 01 28.7**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=68,slow=4.4,SNR=20						
	comp=Z,0.6nm,0.3s						
BRTR	**Keskin Array B**	**90.50**	**313**	P	**P**	**00 02 02.4**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=34,slow=5.4,SNR=2.3						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**128.89**	**309**	PKP	**PKPdf**	**00 08 08.6**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=120,slow=1.3,SNR=5.9						

*IDC **06** 23:51:32.1±2.6,44˚.50N×129˚.18W, h0km, mb2.8/2, mbtmp3.2/9, ML3.2/6, MS3.4/13, Error ellipse: s-maj=46.4km s-min=20.1km az=52.0*
*NEIC **06** 23:51:33.5±1.7,44˚.34N±0˚.09×129˚.5W±0˚.2, h10km±2km, mb3.9/12, ML3.3/40, Error ellipse: s-maj=20.3km s-min=13.9km az=249.0*

ISC 06 23:51:32.6±1.6,44˚3N±0˚.1×129˚6W±0˚2, h13km, n79, σ0°95/68, mb3.0/3, MS3.2/6, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**4.07**	**109**	Pn	**Pn**	**23 52 32.0**	**-2.7**
KEBM				IAML		23 53 37.7	
	comp=E,48nm,2.3s						
KEBM				IAML		23 54 56.6	
	comp=N,50nm,3.4s						
I02E	**Swisshome, OR**	**4.12**	**91**	Pn	**Pn**	**23 52 34.9**	**-0.3**
I02E				IAML		23 54 60.0	
	comp=E,37nm,2.8s						
HEBO	**Mount Hebo**	**4.23**	**76**	Pn	**Pn**	**23 52 35.8**	**-1.0**
J01E	**Myrtle Point**	**4.25**	**104**	Pn	**Pn**	**23 52 35.8**	**-1.2**
COR	**Corvallis**	**4.49**	**85**	Pn	**Pn**	**23 52 39.2**	**-1.2**
COR				IAML		23 53 37.7	
	comp=E,29nm,3.0s						
COR				IAML		23 54 21.7	
	comp=E,27nm,2.5s						
RADR	**Rader Ridge**	**4.57**	**61**	Pn	**Pn**	**23 52 40.4**	**-1.1**
RADR				IAML		23 53 45.2	
	comp=N,32nm,2.6s						
RADR				IAML		23 55 17.3	
	comp=E,32nm,4.0s						
G03D	**McMinnville, O**	**4.58**	**77**		**Pn**	**23 52 40.6**	**-0.9**
G03D				IAML		23 53 41.5	
	comp=N,36nm,2.9s						
BUCK	**Buck Mountain**	**4.73**	**89**		**Pn**	**23 52 44.0**	**+0.3**
BUCK				IAML		23 54 49.6	
	comp=N,25nm,3.6s						
BUCK				IAML		23 55 29.5	
	comp=E,23nm,2.7s						
DBO	**Dodson Butte**	**4.74**	**103**	Pn	**Pn**	**23 52 43.3**	**-0.5**
E03A	**Lebam**	**4.77**	**60**		**Pn**	**23 52 43.4**	**-0.7**
E03A				IAML		23 54 00.9	
	comp=E,28nm,2.2s						
H04D	**Lebanon**	**4.90**	**85**		**Pn**	**23 52 46.1**	**+0.2**
H04D				IAML		23 53 45.8	
	comp=E,24nm,2.3s						
H04D				IAML		23 53 55.3	
	comp=N,21nm,2.9s						
WISH	**Wishkah**	**4.92**	**54**		**Pn**	**23 52 46.6**	**+0.4**
WISH				IAML		23 54 07.5	
	comp=N,32nm,2.4s						
C03A	**Quillayute Air**	**5.02**	**42**	Pn	**Pn**	**23 52 48.0**	**+0.5**
NLWA	**Neilton Lookou**	**5.02**	**50**	Pn	**Pn**	**23 52 48.0**	**+0.3**
HUMO	**Hull Mountain**	**5.11**	**107**		**Pn**	**23 52 49.7**	**+0.8**
H04A	**Detroit Lake**	**5.29**	**84**		**Pn**	**23 52 51.6**	**+0.2**
H04A				IAML		23 53 57.5	
	comp=N,18nm,0.5s						
F04A	**Amboy**	**5.31**	**70**		**Pn**	**23 52 52.1**	**+0.6**
F04A				IAML		23 53 58.0	
	comp=E,24nm,0.6s						
OZB	**Mount Ozzard**	**5.41**	**30**	Pn	**Pn**	**23 52 53.3**	**+0.2**
B04A	**Port Angeles**	**5.62**	**46**		**Pn**	**23 52 56.0**	**+0.2**
YBH	**Yreka Blue Hor**	**5.66**	**115**	Pn	**Pn**	**23 52 56.7**	**+0.2**
	comp=E,0.1nm,0.3s,baz=298,slow=7.6,SNR=3.3						
YBH				Sn	Sn	23 53 48.2	-13
	baz=308,slow=22						
	comp=E,2.1nm,0.9s						
L04D	**Klamath Falls**	**5.71**	**109**	Pn	**Pn**	**23 52 58.2**	**+1.0**
HOOD	**Mount Hood Mea**	**5.72**	**77**		**Pn**	**23 52 57.5**	**+0.1**
CLRS	**Cowichan Lake**	**5.85**	**38**		**Pn**	**23 52 59.3**	**+0.4**
D05A	**Enumclaw**	**6.02**	**59**		**Pn**	**23 53 02.3**	**+1.0**
PGC	**Sidney**	**6.04**	**42**	Pn	**Pn**	**23 53 01.8**	**+0.2**
PINE	**Pine Mountain**	**6.24**	**92**	Pn	**Pn**	**23 53 04.8**	**+0.2**
CBB	**Campbell River**	**6.38**	**25**	Pn	**Pn**	**23 53 07.5**	**+1.3**
LTY	**Liberty**	**6.87**	**62**		**Pn**	**23 53 12.7**	**-0.5**
HOPS	**Hopland Field**	**7.22**	**135**	Pn	**Pn**	**23 53 18.2**	**+0.4**
I07A	**Izee**	**7.24**	**88**		**Pn**	**23 53 17.4**	**-0.8**
HAWA	**Hanford**	**7.36**	**70**		**Pn**	**23 53 19.8**	**0.0**
G08A	**Pilot Rock**	**7.61**	**79**		**Pn**	**23 53 23.3**	**0.0**
BBB	**Bella Bella**	**7.92**	**7**	LR	LR	23 55 37.6	
	comp=E,108nm,20.7s,baz=181,slow=32						
D08A	**Wollman Farm,**	**7.94**	**66**	Pn	**Pn**	**23 53 27.9**	**+0.2**
J08A	**Circle Bar Ran**	**8.08**	**93**		**Pn**	**23 53 31.5**	**+1.7**
LLLB	**Lillooet**	**8.15**	**37**	Pn	**Pn**	**23 53 31.2**	**+0.5**
BMO	**Blue Mountains**	**8.77**	**82**	Pn	**Pn**	**23 53 38.6**	**-0.5**
CMB	**Columbia Colle**	**9.35**	**129**	Pn	**Pn**	**23 53 47.1**	**+0.1**
NEW	**Newport**	**9.47**	**61**	Pn	**Pn**	**23 53 46.1**	**-2.6**
	comp=E,0.2nm,0.3s,baz=263,slow=8.1,SNR=1.8						
NEW				LR	LR	23 57 19.7	
	comp=E,367nm,20.6s,baz=258,slow=38						
	comp=E,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**10.31**	**121**	Pn	**Pn**	**23 54 00.5**	**+0.1**
	comp=E,0.1nm,0.3s,baz=297,slow=14,SNR=2.1						
NVAR				LR	LR	23 57 40.7	
	comp=E,127nm,19.6s,baz=301,slow=36						
	comp=E,0.4nm,0.6s						
JTMT	**Jette**	**11.16**	**67**	Pn	**Pn**	**23 54 12.4**	**+0.4**
ELK	**Elko**	**11.16**	**104**	Pn	**Pn**	**23 54 13.0**	**+0.9**
	comp=E,0.1nm,0.3s,baz=299,slow=15,SNR=6.4						
ELK				LR	LR	23 58 31.9	
	comp=E,152nm,21.6s,baz=290,slow=38						
	comp=E,0.8nm,0.6s						
ELK	**Elko**	**11.16**	**104**	Pn	**Pn**	**23 54 13.4**	**+1.3**
MCMT	**McKenzie Canyo**	**11.94**	**82**	Pn	**Pn**	**23 54 24.0**	**+1.3**
SPR3	**Spring Creek 3**	**12.57**	**110**	Pn	**Pn**	**23 54 33.1**	**+1.7**
GWY	**Greenwater Val**	**12.77**	**125**	Pn	**Pn**	**23 54 36.0**	**+2.0**
FXWY	**Fox Creek**	**13.37**	**86**	Pn	**Pn**	**23 54 44.1**	**+1.8**
CCUT	**Cedar City**	**13.99**	**113**	Pn	**Pn**	**23 54 51.0**	**+0.4**
DLBC	**Dease Lake**	**14.13**	**359**	LR	LR	23 59 41.8	
	comp=E,346nm,20.6s,baz=144,slow=35						
MVU	**Marysvale**	**14.26**	**108**	Pn	**Pn**	**23 54 55.4**	**+1.0**
MTPU	**Mount Pierson**	**14.51**	**110**	Pn	**Pn**	**23 54 58.8**	**+0.8**
PDAR	**Pinedale Array**	**14.60**	**89**	Pn	**Pn**	**23 55 00.4**	**+1.4**
	comp=E,0.1nm,0.3s,baz=290,slow=10,SNR=1.1						
PDAR				LR	LR	00 00 42.7	
	comp=E,245nm,19.2s,baz=286,slow=38						
	comp=E,0.3nm,0.3s						
PDAR	**Pinedale Array**	**14.60**	**89**	Pn	**Pn**	**23 54 58.8**	**-0.2**
PFO	**Pinyon Flats O**	**14.76**	**132**	LR	LR	00 00 13.6	
	comp=E,140nm,19.2s,baz=315,slow=36						
SRU	**San Rafael Swe**	**15.14**	**104**	Pn	**Pn**	**23 55 07.3**	**+1.0**
U15A	**North Rim**	**15.33**	**115**	Pn	**Pn**	**23 55 08.0**	**-1.0**
BLYC	**Blythe**	**15.73**	**127**	Pn	**Pn**	**23 55 14.1**	**+0.2**
BLYC				IAmb	IAmb	23 55 26.3	
	comp=Z,12nm,1.5s						
O20A	**White River Ci**	**16.33**	**97**	Pn	**Pn**	**23 55 21.6**	**-0.1**
WUAZ	**Wupatki**	**16.48**	**116**	Pn	**Pn**	**23 55 24.2**	**+0.7**
WUAZ				IAmb	IAmb	23 55 30.6	
	comp=Z,15nm,1.5s						
PV13	**Radium Mtn., P**	**16.76**	**104**	Pn	**Pn**	**23 55 27.1**	**-0.2**
MVCO	**Mesa Verde**	**17.45**	**107**	Pn	**Pn**	**23 55 35.6**	**-0.2**
MVCO				IAmb	IAmb	23 55 49.8	
	comp=Z,13nm,1.5s						
DGMT	**Dagmar**	**17.95**	**68**		**Pn**	**23 55 42.1**	**+0.3**
ISCO	**Idaho Springs**	**18.33**	**96**		**Pn**	**23 55 46.3**	**-0.5**
ANMO	**Albuquerque**	**20.06**	**110**	P	**P**	**23 56 05.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=163,slow=18,SNR=1.0						
ANMO				LR	LR	00 03 38.8	
	comp=E,66nm,18.9s,baz=302,slow=37						
YKA	**Yellowknife Ar**	**20.17**	**20**	P	**P**	**23 56 05.6**	**-0.8**
	baz=211,slow=11,SNR=2.9						
YKA				LR	LR	00 04 11.3	
	comp=Z,51nm,19.2s,baz=120,slow=38						
	comp=Z,0.9nm,0.8s						
T25A	**Trinidad**	**20.32**	**102**	P	**P**	**23 56 10.0**	**+1.3**
T25A				IAmb	IAmb	23 56 27.1	
	comp=Z,8.5nm,1.1s						
121A	**Cookes Peak, D**	**20.67**	**117**	P	**P**	**23 56 13.1**	**+0.8**
121A				IAmb	IAmb	23 56 24.1	
	comp=Z,7.5nm,1.1s						
ILAR	**Eielson Array**	**22.66**	**341**	P	**P**	**23 56 33.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=150,slow=9.4,SNR=4.7						
ILAR				LR	LR	00 03 53.6	
	comp=Z,110nm,21.3s,baz=127,slow=33						
	comp=Z,0.5nm,0.8s						
MSTX	**Muleshoe**	**23.12**	**107**	P	**P**	**23 56 36.8**	**-1.6**
MSTX				IAmb	IAmb	23 56 40.9	
	comp=Z,3.9nm,1.0s						
INK	**Inuvik**	**24.12**	**356**	LR	LR	00 05 28.1	
	comp=Z,107nm,21.4s,baz=184,slow=35						
IMAR	**Indian Mountai**	**25.40**	**337**	P	**P**	**23 56 59.8**	**+0.4**
TXAR	**Lajitas Array**	**25.43**	**117**	P	**P**	**23 57 00.1**	**0.0**
	comp=Z,0.1nm,0.6s,baz=330,slow=6.5,SNR=2.4						
TXAR				LR	LR	00 06 49.4	
	comp=Z,56nm,19.5s,baz=300,slow=36						
	comp=Z,0.1nm,0.6s						
LPIG	**La Paz**	**25.59**	**136**	LR	LR	00 05 53.9	
	comp=Z,88nm,19.7s,baz=270,slow=34						
H11N3	**WAKE ISLAND Hy**	**57.66**	**266**	T	T	01 03 33.9	
	baz=49,slow=75,SNR=184						
H11N2	**WAKE ISLAND Hy**	**57.67**	**267**	T	T	01 03 35.3	
	baz=49,slow=75,SNR=186						
H11N1	**WAKE ISLAND Hy**	**57.67**	**266**	T	T	01 03 33.5	
	baz=49,slow=75,SNR=190						
H11S1	**WAKE ISLAND Hy**	**58.59**	**266**	T	T	01 04 52.3	
	baz=48,slow=75,SNR=81						
H11S2	**WAKE ISLAND Hy**	**58.60**	**266**	T	T	01 04 44.3	
	baz=48,slow=75,SNR=69						
H11S3	**WAKE ISLAND Hy**	**58.61**	**266**	T	T	01 04 45.0	
	baz=48,slow=75,SNR=52						

*MAN **07** 00:17:20, 7˚.37N×126˚.78E, h10km, Ms3.3*
*IDC **07** 00:17:24.6±2.4, 7˚.32N×126˚.84E, h80km±21km, mb3.4/8, mbtmp3.7/8, MS2.8/3, Error ellipse: s-maj=29.6km s-min=16.1km az=83.0*

ISC 07 00:17:20.9±1.8, 7˚.20N±0˚.06×127˚1E±0˚.1, h49km±16km, n22, σ2°01/27, mb3.7/8, 9C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.86**	**253**	eP	**Pn**	**00 17 34.1**	**-2.6**
MATI				eS	**Sn**	**00 17 45.9**	**-2.4**
BIPH	**Bislig**	**1.21**	**324**	eP	**Pn**	**00 17 39.4**	**-2.1**
BIPH				*i* S	**Sn**	**00 17 55.4**	**-1.3**
DAV	**Davao City (W)**	**1.50**	**265**	P	**Pn**	**00 17 46.3**	**+0.9**
	599nm,0.3s,baz=124,slow=0.9,SNR=19						
DAV				S	**Sn**	**00 18 04.3**	**+0.5**
	427nm,0.5s,baz=83,slow=22,SNR=2.7						
DDMP	**Don Marcelino,**	**1.75**	**231**	eP	**Pn**	**00 17 48.2**	**-0.5**
DDMP				eS	**Sn**	**00 18 10.9**	**+1.1**
KCP	**Kidapawan**	**1.99**	**265**	eP	**Pn**	**00 17 53.5**	**+1.4**
BUKP	**Musuan**	**2.11**	**289**	eP	**Pn**	**00 17 54.5**	**+0.7**
BUKP				eS	Sn	00 18 33.1	+14
BUTP	**Butuan**	**2.27**	**321**	eP	**Pn**	**00 17 57.3**	**+1.3**
BUTP				eS	Sn	00 18 30.2	+7.3
SKMP	**Bagumbayan, Su**	**2.61**	**255**	eP	**Pn**	**00 18 00.5**	**-0.2**
SKMP				eS	**Sn**	**00 18 36.2**	**+5.0**
GLSP	**General Luna,**	**2.73**	**340**	eP	**Pn**	**00 18 05.2**	**+2.9**
GLSP				eS	Sn	00 18 43.9	+10
CTBH	**Cotabato--PC H**	**2.82**	**271**	*i*P	**Pn**	**00 18 04.8**	**+1.3**
SIJI	**Sorong**	**9.04**	**152**	LR	LR	00 24 57.4	
	comp=Z,45nm,18.2s,baz=164,slow=49						
FITZ	**Fitzroy Crossi**	**25.18**	**183**	P	**P**	**00 22 42.7**	**+0.7**
	0.7nm,0.3s,baz=360,slow=8.0,SNR=1.8						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**27.90**	**165**	P	**P**	**00 23 09.8**	**+3.3**
	0.3nm,0.5s,baz=338,slow=11,SNR=8.6						
WRA				PcP	**PcP**	**00 26 21.9**	**+0.5**
	0.6nm,1.0s,baz=345,slow=2.9,SNR=1.4						
	0.3nm,0.5s						
PS

KNZ	**Kokohu**	**4.77**	**194**	P		**Pn**	**00 23 36.8**	**+0.9**
KNZ				S		**S**	**00 24 40.5**	**-0.2**
RAHZ	**Arahi**	**4.80**	**199**	P		**Pn**	**00 23 36.9**	**+0.5**
MTHZ	**Maungataniwha**	**4.82**	**202**	P		**Pn**	**00 23 37.7**	**+1.2**
MHGZ	**Mahia Peninsul**	**4.85**	**191**	P		**Pn**	**00 23 38.6**	**+1.7**
TLZ	**Tolley Road**	**4.88**	**215**	P		**Pn**	**00 23 39.4**	**+2.2**
WHHZ	**Waihua**	**4.92**	**197**	P		**Pn**	**00 23 39.2**	**+1.7**
NMHZ	**Naumai**	**5.05**	**201**	P		**Pn**	**00 23 39.9**	**+0.9**
ARHZ	**Aropaoanui**	**5.15**	**199**	P		**Pn**	**00 23 40.7**	**+0.8**
BKZ	**Black Stump Fm**	**5.21**	**203**	P		**Pn**	**00 23 40.4**	**-0.3**
HIZ	**Hauiti**	**5.36**	**219**	P		**Pn**	**00 23 43.9**	**+1.7**
HIZ	**Hauiti**	**5.36**	**219**	P		**Pn**	**00 23 43.9**	**+1.7**
MCHZ	**McNeill Hill**	**5.41**	**200**	P		**Pn**	**00 23 43.3**	**+0.6**
SNVZ	**South Ngauruho**	**5.54**	**209**	P		**Pn**	**00 23 44.4**	**+0.1**
FWVZ	**Far West T-bar**	**5.63**	**209**	P		**Pn**	**00 23 45.4**	**+0.1**
WHVZ	**Whangaehu Hut**	**5.64**	**209**	P		**Pn**	**00 23 45.2**	**-0.3**
BHHZ	**Black Hill Sta**	**5.65**	**205**	P		**Pn**	**00 23 44.8**	**-0.5**
BHHZ				S		**S**	**00 24 55.6**	**-2.0**
KAHZ	**Kahuranaki**	**5.69**	**198**	P		**Pn**	**00 23 46.6**	**+1.0**
VRZ	**Vera Road**	**5.88**	**215**	P		**Pn**	**00 23 50.3**	**+2.6**
PXZ	**Pawanui**	**5.91**	**197**	P		**Pn**	**00 23 48.4**	**+0.4**
PXZ				S		**S**	**00 25 02.5**	**-0.1**
PNHZ	**Pukenui**	**5.99**	**202**	P		**Pn**	**00 23 48.3**	**-0.6**
PNHZ				S		**S**	**00 25 03.1**	**-1.2**
WPHZ	**Waipukurau**	**6.05**	**200**	P		**Pn**	**00 23 49.8**	**+0.2**
WPHZ				S		**S**	**00 25 06.3**	**+0.7**
PRHZ	**Porangahau**	**6.19**	**198**	P		**Pn**	**00 23 52.6**	**+1.6**
TSZ	**Takapari Road**	**6.19**	**203**	P		**Pn**	**00 23 50.9**	**-0.3**
PKE	**Pukeiti**	**6.32**	**219**	P		**Pn**	**00 23 56.4**	**+3.9**
DVHZ	**Dannevirke**	**6.35**	**201**	P		**Pn**	**00 23 52.5**	**-0.3**
ANWZ	**Angora Road**	**6.42**	**198**	P		**Pn**	**00 23 54.4**	**+0.9**
POWZ	**Post Office Ro**	**6.56**	**203**	P		**Pn**	**00 23 55.9**	**+0.8**
BFZ	**Birch Farm**	**6.68**	**199**	P		**Pn**	**00 23 56.8**	**+0.4**
BFZ	**Birch Farm**	**6.68**	**199**	P		**Pn**	**00 23 56.5**	**0.0**
MRZ	**Mangatainoka R**	**6.86**	**203**	P		**Pn**	**00 23 58.2**	**-0.3**
TIWZ	**Tintock**	**6.87**	**201**	P		**P**	**00 23 59.7**	**+0.4**
HOWZ	**Holdsworth Sta**	**7.10**	**203**	P		**Pn**	**00 24 00.7**	**-0.5**
OGWZ	**Otaki Gorge**	**7.14**	**205**	P		**Pn**	**00 24 01.3**	**-0.3**
TMWZ	**Te Maipa**	**7.18**	**200**	P		**P**	**00 24 03.5**	**+0.9**
KIW	**Kapiti Island**	**7.27**	**206**	P		**Pn**	**00 24 03.0**	**-0.1**
MTW	**Mount Morrison**	**7.34**	**202**	P		**Pn**	**00 24 04.4**	**+0.6**
CAW	**Cannon Point**	**7.43**	**204**	P		**Pn**	**00 24 04.3**	**-0.6**
TRWZ	**Traveller**	**7.50**	**200**	P		**P**	**00 24 07.3**	**+1.1**
PAWZ	**Paruwai Farm**	**7.57**	**202**	P		**P**	**00 24 07.5**	**+0.5**
DUWZ	**D'Urville Isla**	**7.61**	**211**	P		**Pn**	**00 24 06.8**	**-0.2**
MSWZ	**Moikau Station**	**7.65**	**202**	P		**Pn**	**00 24 07.5**	**+0.1**
PLWZ	**Palliser**	**7.79**	**202**	P		**Pn**	**00 24 09.6**	**+0.6**
TCW	**Tory Channel**	**7.81**	**208**	P		**Pn**	**00 24 09.2**	**0.0**
TUWZ	**Tuamarina**	**8.13**	**209**	P		**Pn**	**00 24 12.5**	**-0.3**
NNZ	**Nelson**	**8.19**	**212**	P		**Pn**	**00 24 13.6**	**+0.2**
QRZ	**Quartz Range**	**8.28**	**217**	P		**P**	**00 24 14.9**	**0.0**
BSWZ	**Blackbirch Sta**	**8.40**	**208**	P		**P**	**00 24 16.5**	**+0.3**
KHZ	**Kahutara**	**9.13**	**207**	P		**Pn**	**00 24 25.0**	**+0.7**
RPZ	**Rata Peaks**	**11.22**	**212**	P		**P**	**00 24 47.8**	**+0.4**
	2.5nm,0.3s,baz=232,slow=0.7,SNR=5.5							
RPZ				S		**S**	**00 26 50.3**	**-1.7**
	8.0nm,0.4s,baz=81,slow=20,SNR=13							
RPZ	**Rata Peaks**	**11.22**	**212**	P		**Pn**	**00 24 50.5**	**+2.0**
	75nm,2.5s							
ODZ	**Otahua Downs**	**12.47**	**209**	P		**Pn**	**00 25 05.7**	**+2.7**
ASAR	**Alice Springs**	**40.66**	**273**	P		**P**	**00 29 19.4**	**-0.6**
	0.6nm,0.6s,baz=113,slow=7.4,SNR=9.1							
	0.6nm,0.6s							
WRA	**Warramunga Arr**	**42.02**	**278**	P		**P**	**00 29 29.5**	**-1.4**
	0.5nm,0.5s,baz=118,slow=7.6,SNR=13							
	0.5nm,0.5s							
ARCES	**ARCESS Array B**	**141.89**	**345**	PKhKP		PKPpre	00 40 57.4	
	0.7nm,0.7s,baz=56,slow=2.3,SNR=1.2							
FINES	**FINESS Array B**	**147.91**	**336**	PKPbc		**PKPbc**	**00 41 14.2**	**-0.3**
	0.5nm,0.4s,baz=34,slow=5.2,SNR=9.3							

RSNC 07 00:34:12.6±0.7,**6.76N**×**73.15W**,**h157**km±5km,**ML1.7,**
Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.66**	**302**	*e*P	Pn	00 34 35.1	-0.5
BRRC				*e*S	Sn	00 34 52.8	-0.5
BRRC				*i*		00 34 54.8	
	comp=Z,8.3nm,0.1s						
RUSC	**La Rusia**	**0.86**	**176**	*e*P	Pn	00 34 37.2	-0.3
RUSC				*e*S	Sn	00 34 55.7	-1.0
RUSC				*i*		00 34 58.1	
	comp=Z,2.7nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.31**	**261**	*e*P	Pn	00 34 40.3	-0.6
PTBC				*e*S	Sn	00 35 01.7	-0.8
PTBC				*i*		00 35 07.2	
	comp=Z,9.9nm,0.3s						
SPBC	**San Pablo de B**	**1.43**	**220**	*e*P	Pn	00 34 42.0	-0.2
SPBC				*e*S	Sn	00 35 04.4	-0.4
SPBC				*i*		00 35 09.4	
	comp=Z,10nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**293**	*e*P	Pn	00 34 45.9	-0.5
ZARC				*e*S	Sn	00 35 12.3	-0.2
ZARC				*i*		00 35 17.8	
	comp=Z,4.7nm,0.2s						
UREC	**San Jos de Ur**	**2.56**	**293**	*e*P	Pn	00 34 53.9	-1.0
UREC				*e*S	Sn	00 35 25.5	-2.0
UREC				*i*		00 35 31.6	
	comp=Z,3.4nm,0.2s						
UREC	**San Jos de Ur**	**2.56**	**293**	*i*	Pn	00 35 31.6	+37
	comp=Z,3.4nm,0.2s						

RSNC 07 00:37:20.9±0.8,**6.73N**×**73.20W**,**h149**km±7km,**ML1.5,**
Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.63**	**306**	*e*P	Pn	00 37 42.2	-0.7
BRRC				*e*S	Sn	00 37 59.0	-0.6
BRRC				*i*		00 37 59.9	
	comp=Z,5.2nm,0.3s						
RUSC	**La Rusia**	**0.84**	**172**	*e*P	Pn	00 37 44.2	-0.8
RUSC				*e*S	Sn	00 38 03.5	+0.3
RUSC				*i*		00 38 04.3	
	comp=Z,3.3nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.26**	**261**	*e*P	Pn	00 37 47.4	-0.6
PTBC				*e*S	Sn	00 38 07.9	-0.8
PTBC				*i*		00 38 11.3	
	comp=Z,2.4nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.81**	**295**	*e*P	Pn	00 37 53.8	0.0
ZARC				*e*S	Sn	00 38 18.8	-0.2
ZARC				*i* Sg	Sn	00 38 18.8	-0.2

IDC ***07*** *00:40:05.9±1.3,33.7N×46.58E,h0km,mb3.6/10,*
mbtmp3.7/14,ML3.4/4,MS2.6/1,Error ellipse:
s-maj=30.1km s-min=14.4km az=164.0
TEH ***07*** *00:40:05.9,32.96N×46.56E,h9km,ML3.7*
ISN ***07*** *00:40:06.7±0.6,32.98N×46.51E,h15km±3km,ML3.7*
ISC 07 00:40:06.2±1.1,**32.93N**±0.03×**46.57E**±0.03,**h12**km±8km,
n82,σ1.**70/87,mb3.6**/10,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.57**	**289**	*e*Pg	**Pg**	**00 40 16.5**	**-0.8**
IBDR				*e*Sg	**Sg**	**00 40 24.0**	**-0.8**
DHL1	**Dehloran**	**0.65**	**112**	*e*Pg	**Pg**	**00 40 19.2**	**+0.5**
IKFM	**Kafar-mosalman**	**1.22**	**61**	*e*Pg	**Pb**	**00 40 29.1**	**-0.1**
IKFM				*e*Sg	**Sn**	**00 40 47.6**	**+2.1**
IKFM				*e*		00 40 53.5	
	comp=Z,39μm,0.4s						
RAFI	**Al-Rafai**	**1.26**	**198**	*e*Pg	**Pg**	**00 40 31.0**	**+0.5**
RAFI				*e*Sg	**Sn**	**00 40 48.0**	**+1.5**
RAFI				AML	AML	00 41 04.5	
	comp=E,1μm,0.6s						
IGHG	**Ghaleghazi**	**1.40**	**360**	*e*Pg	**Pg**	**00 40 32.5**	**-0.5**
IGHG				*e*Sg	**Sg**	**00 40 51.7**	**+0.5**
IGHG				*e*		00 41 04.2	
	comp=Z,23μm,0.7s						
KCHF	**Cheshme Sefid,**	**1.40**	**16**	*e*Pg	**Pg**	**00 40 32.3**	**-0.8**
KCHF				*e*		00 40 55.9	
	comp=Z,18μm,0.4s						
IKOM	**Komasi**	**1.47**	**32**	*e*Pg	**Pb**	**00 40 33.4**	**-0.1**
IKOM				*e*		00 40 60.0	
	comp=Z,11μm,0.6s						
KER	**Kermanshah**	**1.52**	**18**	*e*Pg	**Pg**	**00 40 35.1**	**-0.4**
IDOB	**Doab**	**1.59**	**57**	*e*Pn	**Pg**	**00 40 36.0**	**-0.8**
IDHR	**Dehrash**	**1.77**	**355**	*e*Pn	**Pb**	**00 40 38.4**	**-0.3**
BHD	**Baghdad**	**1.87**	**281**	*e*Pn	**Pb**	**00 40 39.0**	**-1.2**
BHD				*e*Sn	**Sb**	**00 41 03.0**	**-0.6**
BHD				AML	AML	00 41 24.6	
	comp=E,991nm,0.7s						
IBZA	**Bozab**	**1.88**	**35**	*e*Pn	**Pb**	**00 40 39.8**	**-0.7**
IBZA				*e*		00 41 16.6	
	comp=Z,4μm,0.5s						
ILIN	**Lien**	**2.01**	**9**	*e*Pn	**Pb**	**00 40 42.0**	**-0.8**
ILIN				*e*		00 41 15.7	
	comp=Z,5μm,0.5s						
HSAM	**Samen**	**2.12**	**52**	*e*Pn	**Pb**	**00 40 43.4**	**-1.3**
SNGE	**Sanandaj**	**2.25**	**16**	*e*Pn	**Pn**	**00 40 44.5**	**+1.1**
AMIS	**Naft Sefid**	**2.62**	**118**	*e*Pn	**Pb**	**00 40 51.5**	**-1.6**
HAGD	**Aghdareh**	**2.85**	**48**	*e*Pn	**Pn**	**00 40 53.5**	**+1.8**
HAGD				*e*		00 41 31.3	
	comp=Z,4μm,0.5s						
KHMZ	**Khomeyn**	**2.95**	**73**	*e*Pn	**Pn**	**00 40 54.9**	**+1.9**
ASAO	**Ashtian**	**3.30**	**60**	*e*Pn	**Pn**	**00 40 59.9**	**+2.0**
IPIR	**Pirpir**	**3.65**	**93**	*e*Pn	**Pn**	**00 41 05.2**	**+2.5**
IPIR				*e*		00 41 54.2	
	comp=Z,2μm,0.6s						
SHK1	**Shahrekord**	**3.69**	**98**	*e*Pn	**Pn**	**00 41 04.9**	**+1.7**
SHK1				*e*		00 42 18.4	
	comp=Z,1μm,0.6s						
IRAZ	**Razeghan**	**3.72**	**48**	*e*		00 41 25.8	
	comp=Z,1μm,0.6s						
IRAZ				*e*Pn	**Pn**	**00 41 05.7**	**+2.1**
MAHB	**Mahabad**	**3.89**	**350**	*e*Pn	**Pn**	**00 41 07.7**	**+1.8**
MAHB				*e*		00 42 20.2	
	comp=Z,1μm,0.7s						
IBRJ	**Brojen**	**4.09**	**103**	*e*Pn	**Pn**	**00 41 11.2**	**+2.4**
IBRJ				*e*		00 42 46.0	
	comp=Z,629nm,0.8s						
ZNJK	**Zanjan**	**4.12**	**24**	*e*Pn	**Pn**	**00 41 11.1**	**+2.0**
QAMS	**Qamsar**	**4.12**	**77**	*e*Pn	**Pn**	**00 41 11.5**	**+2.4**
IQOM	**Qom**	**4.20**	**62**	*e*Pn	**Pn**	**00 41 11.2**	**+0.9**
IKLH	**Kolahrood**	**4.22**	**83**	*e*Pn	**Pn**	**00 41 13.0**	**+2.5**
IKLH				*e*		00 42 35.6	
	comp=Z,645nm,0.7s						
GHVR	**GHOM**	**4.23**	**67**	*e*Pn	**Pn**	**00 41 12.0**	**+1.5**
JIR1	**Jirandeh**	**4.61**	**34**	*e*Pn	**Pn**	**00 41 16.9**	**+1.1**
IGAR	**Gharneh**	**4.64**	**95**	*e*Pn	**Pn**	**00 41 18.0**	**+1.7**
KLNJ	**Kolanjah**	**4.68**	**113**	*e*Pn	**Pn**	**00 41 18.4**	**+1.5**
IVRN	**Varamin**	**4.75**	**63**	*e*Pn	**Pn**	**00 41 19.2**	**+1.5**
KRSH	**Karshahi**	**4.76**	**76**	*e*Pn	**Pn**	**00 41 19.7**	**+1.7**
IBST	**Bostanabad**	**4.77**	**3**	*e*Pn	**Pn**	**00 41 19.7**	**+1.7**
CHTH	**Charan**	**4.79**	**50**	*e*Pn	**Pn**	**00 41 19.2**	**+0.8**
GIDE	**GILAN DEYLAMAN**	**4.84**	**34**	*e*Pn	**Pn**	**00 41 21.0**	**+2.1**
IZEF	**Zefreh**	**4.84**	**89**	*e*Pn	**Pn**	**00 41 21.5**	**+2.4**
QALM	**Alamut, Qazvin**	**4.84**	**43**	*e*Pn	**Pn**	**00 41 20.7**	**+1.6**
ISRB	**Sarab**	**4.97**	**10**	*e*Pn	**Pn**	**00 41 22.6**	**+1.9**
IRAM	**Ramesheh**	**5.04**	**101**	*e*Pn	**Pn**	**00 41 24.0**	**+2.2**
LHJ2	**Lahijan - Gila**	**5.11**	**33**	*e*Pn	**Pn**	**00 41 24.0**	**+1.6**
DAMV	**Damavand**	**5.22**	**57**	*e*Pn	**Pn**	**00 41 25.4**	**+1.1**
IDMV	**Damavand**	**5.24**	**58**	*e*Pn	**Pn**	**00 41 25.1**	**+0.6**
NASN	**Na'in**	**5.25**	**90**	*e*Pn	**Pn**	**00 41 27.3**	**+2.5**
IHRS	**Heris**	**5.39**	**4**	*e*Pn	**Pn**	**00 41 28.9**	**+2.3**
ISHB	**Shabestar**	**5.40**	**352**	*e*Pn	**Pn**	**00 41 27.2**	**+0.5**
ISHB				*e*		00 41 51.0	
	comp=Z,256nm,0.6s						
IFIR	**Firoozkooh**	**5.79**	**60**	*e*Pn	**Pn**	**00 41 32.9**	**+0.8**
ILAS	**Lasjerd**	**5.83**	**63**	*e*Pn	**Pn**	**00 41 33.7**	**+1.0**
GRMI	**Germi**	**5.96**	**10**	*e*Pn	**Pn**	**00 41 36.4**	**+2.0**
ISHM	**Shahmirzad**	**6.25**	**61**	*e*Pn	**Pn**	**00 41 39.3**	**+0.8**
MAKU	**Maku**	**6.59**	**347**	*e*Pn	**Pn**	**00 41 45.1**	**+2.1**
ICHK	**Chekchek**	**6.65**	**94**	*e*Pn	**Pn**	**00 41 45.2**	**+1.3**
YZKH	**Yazd**	**6.79**	**92**	*e*Pn	**Pn**	**00 41 47.3**	**+1.7**
IMEH	**Mehriz**	**6.99**	**101**	*e*Pn	**Pn**	**00 41 51.7**	**+3.1**
GNI	**Garni**	**7.36**	**349**	Pn	Pn	00 41 58.8	+5.3
	comp=Z,0.3nm,0.3s,baz=183,slow=18,SNR=2.5						
ASF	**Jabal al Asfar**	**8.20**	**267**	Pn	**Pn**	**00 42 04.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=272,slow=11,SNR=1.9						
ASF				Sn	**Sn**	**00 43 35.2**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=281,slow=10,SNR=2.0						
ASF				Lg	Lg	00 44 25.3	
	comp=Z,0.5nm,0.3s,baz=233,slow=20,SNR=1.7						
	comp=Z,0.8nm,0.4s						
SHRO	**Shahrood**	**8.37**	**66**	*e*Pn	**Pn**	**00 42 09.3**	**+1.9**
MRVT	**Maraveh tapeh**	**9.10**	**56**	*e*Pn	**Pn**	**00 42 18.9**	**+1.6**
RAYN	**Ar Rayn**	**9.42**	**186**	Pn	**Pn**	**00 42 20.9**	**-0.9**
EIL	**Elat**	**10.46**	**255**	Pn	**Pn**	**00 42 39.7**	**+3.8**
	comp=Z,0.2nm,0.3s,baz=10.0,slow=18,SNR=2.1						
EIL				Lg	Lg	00 45 44.6	
	comp=Z,0.3nm,0.3s,baz=53,slow=21,SNR=1.9						
	comp=Z,2.4nm,0.8s						
SHME	**Shamm**	**10.79**	**127**	Pn	**Pn**	**00 42 39.5**	**-0.9**
BANOM	**Banah**	**10.98**	**127**	Pn	**Pn**	**00 42 42.5**	**-0.6**
BANOM				Sn	**Sn**	**00 44 39.3**	**-6.6**
NAZ	**Nazwa, Dubai**	**11.22**	**133**	Pn	**Pn**	**00 42 47.6**	**+1.3**
ASUD	**Al Ashush, Dub**	**11.28**	**135**	Pn	**Pn**	**00 42 47.1**	**-0.1**
UOSS	**Minazif**	**11.59**	**131**	Pn	**Pn**	**00 42 49.9**	**-1.5**
MZR	**Muzera**	**11.62**	**147**	Pn	**Pn**	**00 42 51.1**	**-0.7**
HATD	**Hatta, Dubai**	**11.63**	**132**	Pn	**Pn**	**00 42 50.5**	**-1.5**
WSAR	**Wadi Sarin**	**14.36**	**129**	Pn	**Pn**	**00 43 28.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=305,slow=10,SNR=2.0						
WSAR				Sn	Sn	00 45 59.8	-8.8
	baz=151,slow=11,SNR=1.6						
IDI	**Anoyia**	**18.11**	**283**	P	**Pn**	**00 44 17.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=19,slow=8.2,SNR=1.0						
	comp=Z,3.9nm,0.8s						
AKTO	**Aktyubinsk**	**19.43**	**22**	P	**P**	**00 44 30.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=223,slow=14,SNR=2.5						
AKTO				LR	LR	00 54 23.7	
	comp=Z,18nm,19.3s,baz=209,slow=45						
	comp=Z,1.5nm,0.5s						
MLR	**Muntele Rosu**	**20.25**	**314**	P	Pn	00 44 43.8	+0.5
	comp=Z,2.1nm,0.9s,baz=183,slow=10,SNR=2.4						
AKASG	**Malin Array Be**	**21.87**	**329**	P	**P**	**00 44 58.4**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=134,slow=11,SNR=5.4						
	comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**29.36**	**43**	P	**P**	**00 46 09.2**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=249,slow=9.4,SNR=7.1						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**30.43**	**52**	P	**P**	**00 46 19.6**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=252,slow=7.9,SNR=5.5						
	comp=Z,0.7nm,0.8s						
FINES	**FINESS Array B**	**31.46**	**341**	P	**P**	**00 46 27.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=144,slow=9.8,SNR=9.4						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**34.23**	**41**	P	**P**	**00 46 51.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=246,slow=9.0,SNR=3.6						
	comp=Z,0.5nm,0.3s						
NOA	**NORSAR Array B**	**36.25**	**332**	P	**P**	**00 47 08.2**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=125,slow=8.6,SNR=3.5						
	comp=Z,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**38.51**	**348**	P	**P**	**00 47 26.8**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=138,slow=9.6,SNR=4.2						
	comp=Z,1.3nm,0.9s						
ESDC	**Sonseca Array**	**40.84**	**294**	P	**P**	**00 47 48.3**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=80,slow=7.5,SNR=4.7						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**45.35**	**255**	P	**P**	**00 48 26.7**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=78,slow=7.0,SNR=6.5						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**48.88**	**94**	P	**P**	**00 48 52.5**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=286,slow=7.4,SNR=1.7						
	comp=Z,0.9nm,0.3s						

HLW ***07*** *01:04:06.0,38.87N×23.83E,h25km±17km,Md3.6*
IDC ***07*** *01:04:06.1±1.1,38.44N×22.07E,h0km,mb3.6/9,*
mbtmp3.6/13,ML3.3/4,MS2.5/2,Error ellipse:
s-maj=19.8km s-min=18.5km az=126.0
ISK ***07*** *01:04:06.2,38.35N×22.14E,h10km,ML3.3/19*
THE ***07*** *01:04:07.6,38.40N×22.01E,h6km,ML3.6/13,Error*
ellipse: s-maj=0.6km s-min=0.2km az=271.0
ATH ***07*** *01:04:07.3,38.39N×22.02E,h8km±1km,ML3.6/12,Error*
ellipse: s-maj=1.8km s-min=0.7km az=256.0
ISC 07 01:04:06.9±0.7,**38.39N**±0.01×**22.03E**±0.02,**h11**km±4km,
n134,σ1.**96/167,mb3.7**/8,**11C-4D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERG	**Sergoula**	**0.03**	**34**	P	**Pg**	**01 04 09.2**	**+0.2**
SERG				S	**Sg**	**01 04 09.9**	**-0.7**
	241μm,0.3s						
SERG	**Sergoula**	**0.03**	**34**	P	**Pg**	**01 04 09.3**	**+0.3**
SERG				S	**Sg**	**01 04 10.0**	**-0.5**
SERG				AML	AML	01 04 11.7	
SERG				AML	AML	01 04 11.9	
EFP	**Efpalio**	**0.11**	**292**	P	**Pg**	**01 04 09.7**	**0.0**
EFP				S	**Sg**	**01 04 11.2**	**-0.6**
	44μm,0.2s						
EFP	**Efpalio**	**0.11**	**292**	P	**Pg**	**01 04 09.7**	**0.0**
EFP				S	**Sg**	**01 04 11.3**	**-0.5**
EFP				AML	AML	01 04 12.0	
	comp=N,99228μm,0.2s						
EFP				AML	AML	01 04 12.1	
	comp=E,75705μm,0.1s						
ALIK	**Aliki, Aigiali**	**0.14**	**154**	P	**Pb**	**01 04 11.1**	**-0.4**
ALIK				S	**Sg**	**01 04 13.7**	**+1.2**
LAKA	**Lakka**	**0.15**	**196**	P	**Pg**	**01 04 10.9**	**+0.5**
LAKA				S	**Sg**	**01 04 13.1**	**+0.2**
	comp=E,100μm,0.5s						
LAKA	**Lakka**	**0.15**	**196**	P	**Pg**	**01 04 10.9**	**+0.5**
LAKA				S	**Sg**	**01 04 13.1**	**+0.2**
LAKA				AML	AML	01 04 13.9	
	comp=E,50000μm,0.3s						
LAKA				AML	AML	01 04 13.9	
	comp=N,30776μm,0.3s						
UPR	**University Cam**	**0.22**	**242**	P	**Pg**	**01 04 11.7**	**+0.2**
UPR				S	**Sg**	**01 04 15.3**	**+0.6**
ANX	**Ano Chora**	**0.23**	**337**	P	**Pg**	**01 04 11.9**	**+0.2**
ANX				S	**Sg**	**01 04 14.8**	**-0.2**
ANX				AML	AML	01 04 15.8	
ANX				AML	AML	01 04 16.1	
KLV	**Kalavryta, Ach**	**0.35**	**165**	P	**Pg**	**01 04 14.4**	**+0.4**
KLV				S	**Sg**	**01 04 19.9**	**+1.2**
	comp=N,5μm,0.3s						
KLV	**Kalavryta, Ach**	**0.35**	**165**	P	**Pg**	**01 04 14.2**	**+0.2**
KLV				S	**Sg**	**01 04 19.2**	**+0.5**
KLV				AML	AML	01 04 20.7	
	comp=N,9005μm,0.2s						
KLV				AML	AML	01 04 20.8	
	comp=E,9284μm,0.1s						
PVO	**Paravola**	**0.46**	**300**	P	**Pg**	**01 04 16.1**	**+0.2**
PVO				S	**Sg**	**01 04 22.5**	**+0.4**
	comp=E,8μm,0.4s						
PVO	**Paravola**	**0.46**	**300**	P	**Pg**	**01 04 15.8**	**-0.1**
PVO				S	**Sg**	**01 04 22.7**	**+0.7**
DRO	**Drossia**	**0.50**	**211**	P	**Pg**	**01 04 16.9**	**+0.1**
DRO				S	**Sg**	**01 04 24.3**	**+0.9**
	comp=E,13μm,0.2s						
DRO	**Drossia**	**0.50**	**211**	P	**Pg**	**01 04 16.8**	**+0.1**
DRO				S	**Sg**	**01 04 23.2**	**-0.1**
DRO				AML	AML	01 04 25.5	
	comp=N,30197μm,0.5s						
DRO				AML	AML	01 04 28.8	
	comp=E,23039μm,0.2s						
RLS	**Riolos of Patr**	**0.55**	**234**	P	**Pg**	**01 04 17.8**	**+0.1**
RLS				S	**Sb**	**01 04 26.1**	**-0.4**
	comp=E,4μm,0.2s						
EVR	**Evrytania**	**0.56**	**342**	P	**Pg**	**01 04 17.8**	**0.0**
EVR				S	**Sg**	**01 04 26.0**	**+0.7**
	comp=E,10μm,0.3s						
EVR	**Evrytania**	**0.56**	**342**	P	**Pg**	**01 04 17.9**	**0.0**
EVR				S	**Sg**	**01 04 25.9**	**+0.7**
EVR				AML	AML	01 04 29.1	
	comp=N,14830μm,0.3s						
EVR				AML	AML	01 04 29.4	
	comp=E,24587μm,0.5s						
THAL	**Thalero**	**0.61**	**125**	P	**Pb**	**01 04 19.3**	**-0.2**
THAL	**Thalero**	**0.61**	**125**	P	**Pb**	**01 04 19.3**	**-0.2**
THAL				S	**Sg**	**01 04 26.8**	**+0.1**
AXAR	**Agios Charalam**	**0.62**	**52**	P	**Pg**	**01 04 19.2**	**+0.2**
AXAR				S	**Sb**	**01 04 28.4**	**-0.1**
	comp=E,13μm,0.3s						
AXAR	**Agios Charalam**	**0.62**	**52**	P	**Pg**	**01 04 19.2**	**+0.2**
AXAR				S	**Sb**	**01 04 27.8**	**-0.7**
AXAR				AML	AML	01 04

KDZ	**Kurdzhali**	**4.17**	**37**	PN	**Pn**	**01 05 10.2**	**-0.2**
TIP	**Timpagrande**	**4.20**	**283**	⇑P	**Pn**	**01 05 12.8**	**+1.9**
VTS	**Vitosha**	**4.33**	**12**	⇓P	**Pn**	**01 05 14.3**	**+1.6**
VTS	**Vitosha**	**4.33**	**12**	P	**Pn**	**01 05 14.7**	**+2.0**
BODT	**Bodrum**	**4.39**	**106**	PN	**Pn**	**01 05 13.7**	**+0.2**
MATE	**Matera**	**4.70**	**300**	⇑P	**Pn**	**01 05 18.6**	**+0.9**
DBRK	**Dubrovnik**	**5.20**	**327**	*e*Pn	**Pn**	**01 05 24.7**	**0.0**
BOVS	**Bovan**	**5.25**	**357**	⇑P	**Pn**	**01 05 26.8**	**+1.5**
BLKB	**Belogradchik**	**5.25**	**5**	⇑P	**Pn**	**01 05 27.4**	**+2.0**
STON	**Ston**	**5.56**	**325**	*e*Pn	**Pn**	**01 05 29.0**	**-0.5**
LSTV	**Lastovo**	**5.87**	**320**	*e*Pn	**Pn**	**01 05 34.2**	**+0.4**
MAKA	**Makarska**	**6.20**	**324**	*e*Pn	**Pn**	**01 05 39.4**	**+1.1**
HVAR	**Hvar**	**6.39**	**320**	*e*Pn	**Pn**	**01 05 41.3**	**+0.3**
MDVR	**Moldovita**	**6.39**	**358**	⇓P	**Pn**	**01 05 43.7**	**+2.6**
HERR	**Herculane**	**6.50**	**2**	⇑P	**Pn**	**01 05 44.2**	**+1.8**
KIJV	**Kijevo**	**7.04**	**325**	*e*Pn	**Pn**	**01 05 50.0**	**+0.2**
BZS	**Buzias**	**7.23**	**358**	⇑P	**Pn**	**01 05 51.1**	**-1.3**
MORI	**Morici**	**7.26**	**321**	*e*Pn	**Pn**	**01 05 54.0**	**+1.1**
SLUM	**Salum**	**7.36**	**158**	PN	**Pn**	**01 05 53.6**	**-0.6**
	baz=170						
SLUM				S	**Sn**	**01 07 11.7**	**-6.0**
	baz=170						
VOIR		**7.39**	**17**	⇑P	**Pn**	**01 05 57.9**	**+3.1**
MLR	**Muntele Rosu**	**7.67**	**21**	⇑P	**Pn**	**01 06 01.9**	**+3.2**
MLR	**Muntele Rosu**	**7.67**	**21**	Pn	**Pn**	**01 06 00.9**	**+2.2**
	comp=N,0.2nm,0.3s,baz=209,slow=12,SNR=3.4						
MLR				LR	LR	01 09 42.0	
	comp=N,51nm,21.2s,baz=330,slow=44 comp=N,0.9nm,0.4s						
DUGI	**Dugi Otok**	**7.68**	**319**	*e*Pn	**Pn**	**01 05 59.6**	**+1.0**
UDBI	**Udbina**	**7.73**	**325**	*e*Pn	**Pn**	**01 06 00.9**	**+1.5**
VIRC	**Vir**	**7.90**	**321**	*e*Pn	**Pn**	**01 06 02.3**	**+0.8**
A251A	**Rujevac**	**8.00**	**329**	*e*Pn	**Pn**	**01 06 05.2**	**+2.3**
PLIT	**Plitvice**	**8.07**	**326**	*e*Pn	**Pn**	**01 06 05.2**	**+1.2**
COVR	**Voineasa-Covas**	**8.07**	**21**	⇓P	**Pn**	**01 06 04.7**	**+0.7**
PLOR	**Plostina**	**8.21**	**23**	⇑P	Pn	01 06 11.4	+5.5
VRI	**Vrincioaia**	**8.25**	**23**	⇑P	**Pn**	**01 06 09.7**	**+3.2**
BRJN	**Brijuni**	**8.99**	**319**	*e*Pn	**Pn**	**01 06 17.6**	**+1.0**
BRTR	**Keskin Array B**	**9.13**	**78**	Pn	**Pn**	**01 06 21.6**	**+3.0**
	comp=N,0.2nm,0.3s,baz=258,slow=13,SNR=8.3 comp=N,0.5nm,0.4s						
SWA2		**9.55**	**162**	P	**Pn**	**01 06 24.3**	**0.0**
	baz=171						
SOKA	**Soboth**	**9.76**	**330**	*e*Pn	**Pn**	**01 06 28.6**	**+1.4**
	comp=N,1.3nm,0.4s						
OBKA	**Obir**	**9.82**	**328**	*e*Pn	**Pn**	**01 06 28.0**	**-0.1**
	comp=N,0.9nm,0.5s						
ABTA	**Abfaltersbach**	**10.91**	**323**	*e*Pn	**Pn**	**01 06 41.7**	**-1.2**
	comp=N,2.0nm,0.6s						
VRAC	**Vranov**	**11.60**	**342**	LR	LR	01 11 18.1	
	comp=N,17nm,18.4s,baz=147,slow=37						
WTTA	**Wattenberg**	**11.69**	**323**	*e*Pn	**Pn**	**01 06 53.0**	**-0.8**
	comp=N,1.4nm,0.3s						
WATA	**Walderalm**	**11.77**	**323**	*e*Pn	**Pn**	**01 06 55.2**	**+0.4**
	comp=N,0.9nm,0.3s						
MOTA	**Moosalm**	**12.01**	**322**	*e*Pn	**Pn**	**01 06 57.7**	**-0.3**
	comp=N,1.7nm,0.5s						
DAVOX	**Davos/Dischmat**	**12.26**	**317**	Pn	**Pn**	**01 07 03.0**	**+1.5**
	comp=N,0.1nm,0.3s,baz=347,slow=13,SNR=1.4 comp=N,0.5nm,0.5s						
HFRF	**Wahat Farafira**	**12.38**	**153**	P	**Pn**	**01 07 00.6**	**-2.5**
	baz=161						
ESDC	**Sonseca Array**	**20.22**	**282**	P	Pn	01 08 43.3	-0.5
	comp=N,0.7nm,0.7s,baz=70,slow=9.7,SNR=11 comp=N,0.7nm,0.7s						
HFS	**Hagfors**	**22.40**	**349**	P	**P**	**01 09 04.8**	**-0.3**
	comp=N,1.4nm,0.6s,baz=155,slow=11,SNR=2.7 comp=N,1.4nm,0.6s						
FINES	**FINESS Array B**	**23.22**	**5**	P	**P**	**01 09 12.9**	**-0.8**
	comp=N,1.0nm,0.8s,baz=189,slow=9.3,SNR=4.3 comp=N,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**23.67**	**347**	P	**P**	**01 09 18.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=158,slow=9.3						
NB2	**NORSAR Subarra**	**23.67**	**347**	P	**P**	**01 09 17.9**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**23.67**	**347**	P	**P**	**01 09 18.5**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=163,slow=9.6,SNR=8.1 comp=Z,0.8nm,0.7s						
EKA	**Eskdalemuir Ar**	**23.96**	**323**	P	**P**	**01 09 21.1**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=119,slow=12,SNR=4.7 comp=Z,1.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.95**	**221**	P	**P**	**01 10 25.8**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=34,slow=9.0,SNR=9.4 comp=Z,0.7nm,0.7s						
ARCES	**ARCESS Array B**	**31.27**	**2**	P	**P**	**01 10 26.6**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=181,slow=9.7,SNR=4.4 comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**44.18**	**59**	P	**P**	**01 12 16.1**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=271,slow=8.0,SNR=14 comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**44.66**	**48**	P	**P**	**01 12 19.2**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=266,slow=8.1,SNR=2.1 comp=Z,0.7nm,0.4s						

*TIR **07** 01:07:38.5, 41˚.04N×20˚.77E, h6km±1km, Md3.2, Ml3.1*
*PDG **07** 01:07:39.9±0.3, 41˚.04N×20˚.78E, h10km, ML2.9/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*THE **07** 01:07:39.7, 41˚.05N×20˚.73E, h4km±1km, ML2.7/7, Error ellipse: s-maj=1.2km s-min=0.5km az=232.0*
*BEO **07** 01:07:40.6±0.3, 41˚.05N×20˚.76E, h5km±3km, ML2.8/22*
*ATH **07** 01:07:40.4, 41˚.05N×20˚.80E, h14km±3km, ML3.0/5, Error ellipse: s-maj=4.1km s-min=1.5km az=126.0*

ISC 07 01:07:39.7±1.1, 41°03N±0'02×20°75E±0'02, h4km±9km, n109, σ0s85/152, 13C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.41**	**176**	P	**Pg**	**01 07 47.5**		**-0.2**
KBN				S	**Sg**	**01 07 54.3**		**+1.3**
	2µm,0.8s							
KBN	**Korca**	**0.41**	**176**	P	**Pg**	**01 07 47.2**		**-0.5**
	baz=178							
KBN				S	**Sg**	**01 07 53.5**		**+0.5**
	baz=178							
KBN				AMP				
	comp=N,8.6nm,0.9s,baz=178							
FNA	**Florina**	**0.54**	**118**	*e*Pg	**Pg**	**01 07 50.4**		**+0.4**
FNA				*e*Sg	**Sb**	**01 07 59.1**		**-0.8**
FNA	**Florina**	**0.54**	**118**	S	**Sg**	**01 07 57.7**		**+0.7**
	baz=119							
FNA	**Florina**	**0.54**	**118**	P	**Pg**	**01 07 50.5**		**+0.4**
FNA				S	**Sg**	**01 07 58.2**		**+1.2**
FNA				AML	AML	01 08 00.6		
	comp=N,7239µm,0.2s							
FNA				AML	AML	01 08 02.4		
	comp=E,8948µm,0.4s							
NEST	**Nestorio**	**0.66**	**160**	P	**Pg**	**01 07 52.1**		**-0.3**
NEST				S	**Sb**	**01 08 03.2**		**-0.3**
	comp=E,962nm,0.4s							
NEST	**Nestorio**	**0.66**	**160**	P	**Pg**	**01 07 52.2**		**-0.3**
NEST				S	**Sb**	**01 08 02.7**		**-0.8**
NEST				AML	AML	01 08 04.9		
	comp=E,2757µm,0.5s							
NEST				AML	AML	01 08 07.0		
	comp=N,2827µm,0.4s							
PHP	**Peshkopia**	**0.69**	**340**	P	**Pg**	**01 07 52.3**		**-0.7**
PHP	**Peshkopia**	**0.69**	**340**	P	**Pg**	**01 07 52.1**		**-0.8**
	baz=339							
PHP				S	**Sg**	**01 08 02.7**		**+0.7**
	baz=339							
PHP				AMP				
	comp=N,4.0nm,0.6s,baz=339							
TIR	**Tirane**	**0.74**	**295**	P	**Pg**	**01 07 53.5**		**-0.5**
TIR	**Tirane**	**0.74**	**295**	P	**Pg**	**01 07 53.4**		**-0.5**
TIR				S	**Sg**	**01 08 03.6**		**+0.1**
	comp=N,495nm,0.5s							
TIR	**Tirane**	**0.74**	**295**	*e*Pg	**Pg**	**01 07 53.3**		**-0.6**
TIR				*e*Sg	**Sb**	**01 08 04.9**		**-0.7**
TIR	**Tirane**	**0.74**	**295**	P	**Pg**	**01 07 52.9**		**-0.9**
	baz=295							
TIR				S	**Sb**	**01 08 04.9**		**-0.7**
	baz=295							
TIR				AMP				
	comp=N,1.9nm,0.5s,baz=295							
PENT	**Pentalofos**	**0.89**	**160**	P	**Pg**	**01 07 56.5**		**-0.3**
PENT				S	**Sb**	**01 08 09.8**		**-0.2**
LSK	**Leskovik**	**0.89**	**187**	P	**Pg**	**01 07 56.5**		**-0.3**
LSK				S	**Sb**	**01 08 09.7**		**-0.4**
	comp=N,618nm,0.7s							
LSK	**Leskovik**	**0.89**	**187**	P	**Pg**	**01 07 56.3**		**-0.5**
	baz=189							
LSK				S	**Sb**	**01 08 09.5**		**-0.6**
	baz=189							
LSK				AMP				
	comp=N,2.8nm,0.6s,baz=189							
KZN	**Kozani**	**1.06**	**133**	P	**Pg**	**01 08 00.0**		**-0.1**
KZN				S	**Sn**	**01 08 16.5**		**-0.3**
	comp=N,505nm,0.4s							
KZN	**Kozani**	**1.06**	**133**	P	**Pg**	**01 07 59.4**		**-0.7**
KZN				AML	AML	01 08 20.4		
	comp=E,1145µm,0.3s							
KZN				AML	AML	01 08 21.6		
	comp=N,827µm,0.4s							
GRG	**Griva**	**1.25**	**93**	P	**Pg**	**01 08 03.2**		**-0.5**
GRG	**Griva**	**1.25**	**93**	P	**Pg**	**01 08 03.2**		**-0.5**
SRN	**Sarande**	**1.29**	**207**	P	**Pg**	**01 08 03.9**		**-0.5**
SRN				S	**Sn**	**01 08 22.5**		**+0.3**
	comp=N,230nm,0.9s							
SRN	**Sarande**	**1.29**	**207**	P	**Pn**	**01 08 04.4**		**-0.1**
	baz=208							
SRN				S	**Sn**	**01 08 23.4**		**+1.2**
	baz=208							
JAN	**Janina**	**1.38**	**177**	P	**Pn**	**01 08 05.6**		**-0.2**
JAN				S	**Sb**	**01 08 24.0**		**-0.1**
JAN				AML	AML	01 08 30.3		
	comp=N,863µm,0.6s							
JAN				AML	AML	01 08 30.9		
	comp=E,941µm,0.6s							
BCI	**Bajram Curri**	**1.43**	**339**	P	**Pb**	**01 08 06.7**		**-0.2**
	baz=339							
BCI				S	**Sn**	**01 08 26.9**		**+1.1**
	baz=339							
ULC	**Ulcinj**	**1.46**	**310**	⇓*i*Pg	**Pn**	**01 08 06.4**		**-0.6**
ULC				*i* Sg	**Sg**	**01 08 29.4**		**+2.6**
KEK	**Kerkira**	**1.51**	**209**	P	**Pg**	**01 08 08.6**		**0.0**
IGT	**Igoumenitsa**	**1.53**	**192**	*e*Pg	**Pb**	**01 08 08.4**		**-0.3**
IGT				*e*Sg	**Sg**	**01 08 31.2**		**+2.2**
IGT	**Igoumenitsa**	**1.53**	**192**	P	**Pb**	**01 08 08.6**		**-0.2**
IGT				S	**Sn**	**01 08 27.7**		**-0.7**
IGT				AML	AML	01 08 34.8		
	comp=E,879µm,0.5s							
IGT				AML	AML	01 08 35.3		
	comp=N,645µm,0.5s							
KNT	**Kendrikon**	**1.63**	**85**	P	**Pn**	**01 08 08.8**		**-0.5**
KNT				S	**Sn**	**01 08 30.6**		**-0.1**
	comp=N,130nm,0.7s							
KNT	**Kendrikon**	**1.63**	**85**	P	**Pn**	**01 08 09.3**		**0.0**
DRME	**Dracevica, Mon**	**1.64**	**315**	*e*Pn	**Pn**	**01 08 09.3**		**-0.2**
DRME	**Dracevica, Mon**	**1.64**	**315**	⇓*i*Pn	**Pn**	**01 08 09.7**		**+0.2**
DRME				*i* Sn	**Sg**	**01 08 33.9**		**+1.3**
PVY	**Plav**	**1.67**	**339**	⇑*i*Pn	**Pn**	**01 08 10.4**		**+0.5**
PVY				*i* Sn	**Sg**	**01 08 34.1**		**+0.8**
THE	**Thessaloniki**	**1.73**	**103**	P	**Pn**	**01 08 10.4**		**-0.2**
TYRN	**Tyrnavos**	**1.74**	**139**	P	**Pn**	**01 08 11.3**		**+0.6**
THL	**Klokotos Trika**	**1.76**	**146**	P	**Pn**	**01 08 11.2**		**+0.2**
PRVS	**Prvonek**	**1.77**	**34**	*e*Pn	**Pn**	**01 08 11.4**		**+0.1**
PRVS				*e*Sn	**Sb**	**01 08 35.7**		**+0.1**
PDG	**Podgorica**	**1.79**	**322**	⇑P	**Pb**	**01 08 12.3**		**-0.8**
PDG	**Podgorica**	**1.79**	**322**	*e*Pn	**Pn**	**01 08 12.0**		**+0.6**
PDG	**Podgorica**	**1.79**	**322**	*e*Pn	**Pb**	**01 08 12.2**		**-0.8**
PDG				*e*Sn	**Sn**	**01 08 34.4**		**-0.2**
TTG	**Podgorica**	**1.79**	**322**	⇓*i*Pn	**Pn**	**01 08 12.0**		**+0.6**
TTG				*i* Sn	**Sg**	**01 08 37.4**		**+0.2**
BUM	**Brajici-Budva**	**1.88**	**313**	⇓*i*Pn	**Pn**	**01 08 13.5**		**+0.7**
BUM				*i* Sn	**Sg**	**01 08 39.8**		**-0.3**
KKB	**Krupnik**	**1.94**	**64**	P	**Pb**	**01 08 14.6**		**-1.1**
IVA	**Berane**	**1.94**	**341**	⇑*i*Pn	**Pn**	**01 08 14.4**		**+0.7**
IVA				*i* Sn	**Sb**	**01 08 40.5**		**0.0**
BARS	**Barje**	**1.95**	**24**	*e*Pn	**Pn**	**01 08 14.4**		**+0.7**
BOSS	**Bosilegrad**	**1.95**	**41**	*e*Pn	**Pn**	**01 08 14.2**		**+0.5**
BOSS				*e*Sn	**Sn**	**01 08 38.6**		**-0.1**
SOH	**Sokhos**	**1.98**	**95**	P	**Pn**	**01 08 14.4**		**+0.2**
KOME	**Kolasin**	**2.04**	**334**	⇓*i*Pn	**Pb**	**01 08 16.9**		**-0.5**
KOME				*i* Sn	**Sb**	**01 08 43.3**		**+0.2**
CEME	**Cevo**	**2.04**	**318**	⇑*i*Pn	**Pn**	**01 08 15.8**		**+0.8**
CEME				*i* Sn	**Sb**	**01 08 43.4**		**+0.2**
SRS	**Serrai**	**2.15**	**87**	*e*Pn	**Pn**	**01 08 16.3**		**-0.1**
SRS	**Serrai**	**2.15**	**87**	P	**Pn**	**01 08 16.6**		**+0.1**
NKME	**Niksic**	**2.19**	**323**	⇑*i*Pn	**Pn**	**01 08 17.8**		**+0.8**
NKME				*i* Sn	**Sb**	**01 08 46.8**		**-0.7**
HCY	**Herceg Novi**	**2.20**	**311**	*e*Pn	**Pb**	**01 08 18.6**		**-1.5**
HCY	**Herceg Novi**	**2.20**	**311**	⇓*i*Pn	**Pn**	**01 08 17.8**		**+0.7**
HCY				*i* Sn	**Sb**	**01 08 47.4**		**-0.4**
SELS	**Selova**	**2.20**	**7**	*e*Pn	**Pn**	**01 08 17.1**		**-0.1**
EVR	**Evrytania**	**2.27**	**159**	P	**Pb**	**01 08 20.5**		**-0.8**
SJES	**Sjenica**	**2.30**	**346**	*e*Pn	**Pb**	**01 08 20.2**		**-1.7**
SJES	**Sjenica**	**2.30**	**346**	*e*Pn	**Pn**	**01 08 18.5**		**-0.1**
SJES				*e*Sn	**Sn**	**01 08 48.1**		**+0.7**
MMB	**Musomiste**	**2.31**	**75**	P	**Pn**	**01 08 19.0**		**+0.3**
VTS	**Vitosha**	**2.44**	**49**	*e*Pn	**Pn**	**01 08 21.4**		**+0.8**
VTS	**Vitosha**	**2.44**	**49**	P	**Pn**	**01 08 21.3**		**+0.8**
VTS	**Vitosha**	**2.44**	**49**	⇓P	**Pn**	**01 08 21.4**		**+0.8**
TREB	**Trebinje**	**2.46**	**314**	*e*Pn	**Pn**	**01 08 21.2**		**+0.6**
BRY	**Bratogost**	**2.49**	**319**	*e*Pn	**Pn**	**01 08 22.8**		**+1.6**
BRY	**Bratogost**	**2.49**	**319**	⇓*i*Pn	**Pn**	**01 08 21.9**		**+0.7**
BRY				*i* Sn	**Sb**	**01 08 54.4**		**-1.8**
XOR	**Xorichti**	**2.50**	**131**	P	**Pn**	**01 08 21.4**		**+0.1**
PLE	**Pljevlja**	**2.51**	**337**	⇑*i*Pn	**Pn**	**01 08 20.0**		**+1.6**
PLE				*i* Sn	**Sn**	**01 08 54.3**		**+1.8**
DBRK	**Dubrovnik**	**2.54**	**311**	*e*Pn	**Pn**	**01 08 21.1**		**-0.7**
UPM	**Unac-Piva**	**2.56**	**328**	*e*Pn	**Pn**	**01 08 22.8**		**+0.5**
UPM	**Unac-Piva**	**2.56**	**328**	⇑*i*Pn	**Pn**	**01 08 22.6**		**+0.3**
UPM				*i* Sn	**Sn**	**01 08 56.1**		**+2.0**
IVAS	**Ivanjica**	**2.58**	**350**	*e*Pn	**Pn**	**01 08 21.7**		**-0.7**
IVAS				*e*Sn	**Sn**	**01 08 55.2**		**+1.0**
ZAPS	**Zavoj**	**2.64**	**31**	*e*Pn	**Pn**	**01 08 24.0**		**+0.8**
ZAPS				*e*Sn	**Sn**	**01 08 56.9**		**+1.2**
BOVS	**Bovan**	**2.69**	**15**	*e*Pn	**Pn**	**01 08 23.8**		**-0.1**
BOVS	**Bovan**	**2.69**	**15**	⇑P	**Pn**	**01 08 24.1**		**+0.3**
RUDO	**Rudo**	**2.78**	**339**	*e*Pn	**Pn**	**01 08 27.4**		**+2.3**
GRUS	**Gruza**	**2.85**	**359**	*e*Pn	**Pn**	**01 08 26.9**		**+0.8**
STON	**Ston**	**2.92**	**310**	*e*Pn	**Pn**	**01 08 26.2**		**-0.8**
STON	**Ston**	**2.92**	**310**	*e*Pn	**Pn**	**01 08 26.5**		**-0.5**
BLKB	**Belogradchik**	**2.95**	**28**	*e*Pn	**Pn**	**01 08 28.2**		**+0.7**
BLKB	**Belogradchik**	**2.95**	**28**	⇑P	**Pn**	**01 08 28.7**		**+1.2**
ZAGS	**Zajecar**	**2.99**	**21**	*e*Pn	**Pn**	**01 08 28.0**		**+0.1**
ZAGS				*e*Sn	**Sn**	**01 09 06.1**		**+1.9**
BBLS	**Lazići**	**3.00**	**341**	*e*Pn	**Pb**	**01 08 33.1**		**-0.7**
BBLS	**Lazići**	**3.00**	**341**	*e*Pn	**Pn**	**01 08 29.1**		**+0.9**
BBLS				*e*Sn	**Sn**	**01 09 05.2**		**+0.6**
RZN	**Rozhen**	**3.06**	**76**	*e*P	**Pn**	**01 08 30.8**		**+1.8**
DIVS	**Divibare**	**3.11**	**350**	*e*Pn	**Pn**	**01 08 28.7**		**-1.0**
DIVS	**Divibare**	**3.11**	**350**	*e*Pn	**Pn**	**01 08 30.0**		**+0.3**
PLD	**Plovdiv**	**3.15**	**69**	*e*Pn	**Pn**	**01 08 29.5**		**-0.7**
PLD				*e*Sn	**Sn**	**01 09 06.6**		**-1.7**
TRUS	**Trudelj**	**3.20**	**356**	*e*Pn	**Pn**	**01 08 31.1**		**+0.3**
LSTV	**Lastovo**	**3.36**	**302**	*e*Pn	**Pn**	**01 08 32.9**		**-0.2**
KUBS	**Kucevo**	**3.44**	**11**	*e*Pn	**Pn**	**01 08 33.4**		**-0.8**
MAKA	**Makarska**	**3.57**	**310**	*e*Pn	**Pn**	**01 08 36.5**		**+0.6**
RICI	**Ricice**	**3.64**	**314**	*e*Pn	**Pn**	**01 08 37.7**		**+0.8**
MDVR	**Moldovita**	**3.81**	**10**	⇑P	**Pn**	**01 08 38.5**		**-0.8**
HVAR	**Hvar**	**3.85**	**305**	*e*Pn	**Pn**	**01 08 39.5**		**-0.3**
BLJ	**Bijeljina**	**3.90**	**344**	*e*Pn	**Pn**	**01 08 42.1**		**+1.6**
SRKY	**Kupres RS**	**4.03**	**320**	*e*Pn	**Pn**	**01 08 42.2**		**-0.1**
HERR	**Herculane**	**4.03**	**17**	⇑P	**Pn**	**01 08 42.8**		**+0.5**
FRGS	**Fruska Gora**	**4.18**	**351**	⇓P	**Pn**	**01 08 44.1**		**-0.3**
FRGS	**Fruska Gora**	**4.18**	**351**	*e*Pn	**Pn**	**01 08 43.3**		**-1.0**
FRGS	**Fruska Gora**	**4.18**	**351**	*e*Pn	**Pn**	**01 08 43.9**		**-0.4**
MGRS	**Mrkonjic Grad**	**4.33**	**323**	*e*Pn	**Pn**	**01 08 47.7**		**+1.3**
BLY	**Banja Luka**	**4.54**	**326**	*e*Pn	**Pn**	**01 08 50.9**		**+1.6**
GZR	**Gura Zlata**	**4.60**	**18**	⇑P	**Pn**	**01 08 51.0**		**+0.8**
MORI	**Morici**	**4.68**	**309**	*e*Pn	**Pn**	**01 08 52.0**		**+0.8**
UDBI	**Udbina**	**5.06**	**315**	*e*Pn	**Pn**	**01 08 58.4**		**+1.8**
DUGI	**Dugi Otok**	**5.14**	**307**	*e*Pn	**Pn**	**01 08 57.8**		**+0.3**
VIRC	**Vir**	**5.31**	**310**	*e*Pn	**Pn**	**01 09 00.0**		**+0.2**
MORH	**Mrgy, Hungar**	**5.40**	**344**	⇑P	**Pn**	**01 09 01.2**		**+0.2**
MORH	**Mrgy, Hungar**	**5.40**	**344**	*e*Pn	**Pn**	**01 08 59.8**		**-1.2**

*IDC **07** 01:41:46.0±0.6, 49˚.48S×126˚.12E, h0km, mb4.2/11, mbtmp4.2/11, MS3.6/24, Error ellipse: s-maj=34.7km s-min=14.7km az=104.0*
*GCMT **07** 01:41:47.2±0.4, 49˚.58S±0˚.03×126˚.25E±0˚.08, h22km±1km, MW4.8/70, Moment Tensor Solution. s23,c24; s70,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.60±.20; $M_{\theta\theta}$1.66±.11; $M_{\phi\phi}$0.93±.12; $M_{r\theta}$0.05±.16; $M_{r\phi}$-0.50±.07; $M_{\theta\phi}$0.77±.29; Best double couple: M_o2.35400×10^{16} NP1:ϕ_s130.00000°,δ50.00000°,λ-75.00000°. NP2: ϕ_s287.00000°,δ42.00000°,λ-107.00000°. Principal axes: T 1.9410, Plg4.0000°, Azm210.0000°; N 0.8230, Plg11.0000°, Azm300.0000°; P -2.7670, Plg78.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **07** 01:41:48.1±1.5, 49˚.5S±0˚.1×126˚.0E±0˚.3, h10km±1km, mb4.4/13 Error ellipse: s-maj=34.3km s-min=19.0km az=275.0*

ISC 07 01:41:47.6±0.5, 49°49S±0'08×126°1E±0'2, h10km, n69, σ0s65/47, mb4.3/13, MS3.7/24, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**17.04**	**324**	T	T		02 03 31.8	
	baz=151,slow=74,SNR=31							
H01W2	**Cape Leeuwin H**	**17.04**	**324**	T	T		02 03 29.2	
	baz=151,slow=74,SNR=33							
H01W3	**Cape Leeuwin H**	**17.05**	**324**	T	T		02 03 25.0	
	baz=151,slow=74,SNR=27							
NWAO	**Narrogin (SRO)**	**17.82**	**335**		**P**		**01 45 56.3**	**-0.1**
TOO	**Toolangi**	**18.36**	**57**	P	**P**		**01 46 03.1**	**+0.9**
CASY	**Casey**	**18.66**	**200**	P	**P**		**01 46 04.4**	**-0.8**
CASY				IAmb	IAmb		01 46 21.3	
	comp=Z,14nm,1.2s							
FORT	**Forrest**	**18.75**	**5**	P	**P**		**01 46 05.7**	**-0.9**
FORT				IAmb	IAmb		01 46 14.9	
	comp=Z,27nm,1.1s							
STKA	**Stephens Creek**	**21.08**	**39**	P	**P**		**01 46 32.0**	**+0.1**
	comp=Z,12nm,0.8s,baz=202,slow=12,SNR=16							
STKA				LR	LR		01 53 05.9	
	comp=Z,265nm,21.9s,baz=206,slow=32 comp=Z,12nm,0.8s							
STKA	**Stephens Creek**	**21.08**	**39**	P	**P**		**01 46 32.7**	**+0.8**
ASAR	**Alice Springs**	**26.50**	**16**	P	**P**		**01 47 24.2**	**-0.9**
	comp=Z,3.5nm,0.9s,baz=193,slow=9.1,SNR=25							
ASAR				LR	LR		01 56 51.4	
	comp=Z,129nm,20.9s,baz=168,slow=34 comp=Z,3.5nm,0.9s							
ASAR	**Alice Springs**	**26.50**	**16**	P	**P**		**01 47 25.2**	**+0.2**
AS31	**Alice Springs**	**26.50**	**16**	P	**P**		**01 47 25.2**	**+0.1**
WRA	**Warramunga Arr**	**30.21**	**16**	P	**P**		**01 47 57.3**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=192,slow=11,SNR=7.7							
WRA				LR	LR		01 58 56.2	
	comp=Z,188nm,21.7s,baz=218,slow=34 comp=Z,0.8nm,0.9s							
WB2	**Warramunga Arr**	**30.21**	**16**	P	**P**		**01 47 58.1**	**-0.2**
WRAB	**Tennant Creek**	**30.22**	**16**	P	**P**		**01 47 58.3**	**0.0**
WB0	**Warramunga Arr**	**30.39**	**16**	P	**P**		**01 48 01.0**	**+1.2**
WB0				IAmb	IAmb		01 48 14.5	
	comp=Z,7.4nm,1.3s							
VNDA	**Vanda**	**31.23**	**166**	P	**P**		**01 48 06.7**	**0.0**
	comp=Z,4.4nm,0.8s,baz=318,slow=10,SNR=20							
VNDA				LR	LR		01 59 54.3	
	comp=Z,216nm,18.6s,baz=328,slow=35 comp=Z,4.4nm,0.8s							
VNDA	**Vanda**	**31.23**	**166**	P	**P**		**01 48 07.1**	**+0.4**
VNDA				IAmb	IAmb		01 48 09.0	
	comp=Z,7.3nm,1.0s							
FITZ	**Fitzroy Crossi**	**31.32**	**359**	LR	LR		01 59 50.0	
	comp=Z,204

Error ellipse: s-maj=3.6km s-min=3.4km az=94.0
*NEIC **07** 01:45:44.5±0.8, 36°.48N±0°.01×98°.48W×0°.06, h11km±7km,*
Error ellipse: s-maj=6.7km s-min=1.0km az=102.0
*TUL **07** 01:45:44.4±1.0, 36°.49N±0°.01×98°.49W±0°.04, h9km±7km,*
ML3.3, mb_Lg3.2/94(NEIC), Error ellipse: s-maj=4.4km
s-min=1.9km az=100.0

ISC 07 01:45:44.5±1.0, **36°.48N**±0°.02×**98°.47W**±0°.02, **h10**km±10km, **n108**, σ0°.49/95, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK038	**West end E0370**	**0.22**	**271**		**Pg**	**01 45 59.0**	**0.0**
OK035	**E0210 Rd and N**	**0.30**	**321**	Pg	**Pg**	**01 45 50.4**	**-0.1**
OK032	**Salt Plains WL**	**0.39**	**33**	Pg	**Pg**	**01 45 52.3**	**+0.1**
CROK	**Carrier**	**0.40**	**86**	Pg	**Pg**	**01 45 52.7**	**+0.4**
NOKA	**Waynoka**	**0.40**	**293**	Pg	**Pg**	**01 45 52.2**	**-0.2**
U32A	**Winter Ranch,**	**0.44**	**257**	Pg	**Pg**	**01 45 52.8**	**-0.3**
U32A				Sg	**Sg**	**01 45 59.0**	**+0.2**
U32A	**Winter Ranch,**	**0.44**	**257**	P	**Pg**	**01 45 52.8**	**-0.3**
	baz=75						
U32A				S	**Sg**	**01 45 59.0**	**+0.2**
	baz=75						
GC02	**Grant County #**	**0.62**	**53**	Pg	**Pg**	**01 45 56.5**	**0.0**
KAN14	**Manchester OK**	**0.63**	**40**		**Pg**	**01 45 56.6**	**-0.2**
KAN14				Sg	**Sg**	**01 46 05.2**	**+0.2**
KAN10	**Anthony SW Sta**	**0.71**	**25**	Pg	**Pg**	**01 45 58.0**	**-0.3**
KAN10				Sg	**Sg**	**01 46 07.8**	**+0.1**
KAN05	**Bluff City Nor**	**0.80**	**37**		**Pg**	**01 45 59.2**	**-0.6**
KAN05				Sg	**Sg**	**01 46 10.3**	**+0.1**
KAN17	**Caldwell West**	**0.80**	**45**	Pg	**Pg**	**01 45 59.8**	**-0.2**
KAN17				Sg	**Sg**	**01 46 10.4**	**0.0**
KAN16	**Harper SW Stat**	**0.82**	**24**	Pg	**Pg**	**01 45 59.9**	**-0.4**
KAN16				Sg	**Sg**	**01 46 10.8**	**-0.2**
CSTR	**Hydro, Custer**	**0.85**	**192**	Pg	**Pg**	**01 46 00.7**	**-0.1**
CSTR				IAmb_Lg		01 46 11.5	
	comp=Z,4.3nm,0.8s						
KAN08	**Anthony NE Sta**	**0.85**	**28**		**Pg**	**01 46 00.8**	**-0.2**
ELIS	**Ellis County**	**0.87**	**242**	Pg	**Pg**	**01 46 00.6**	**-0.5**
KAN01	**Argonia South**	**0.89**	**40**	Pg	**Pg**	**01 46 01.2**	**-0.4**
KAN12	**Harper NE Stat**	**0.90**	**25**	Pg	**Pg**	**01 46 01.3**	**-0.6**
KAN06	**Argonia West S**	**0.92**	**32**	Sg	**Sg**	**01 46 13.8**	**-0.3**
KAN13	**South Haven SW**	**0.96**	**56**	Pg	**Pg**	**01 46 02.5**	**-0.5**
KS21	**Milan North St**	**1.04**	**39**	Sg	**Sg**	**01 46 17.7**	**-0.3**
BLOK	**Blackwell**	**1.05**	**74**	Sg	**Sg**	**01 46 18.4**	**0.0**
OK029	**Liberty Lake**	**1.07**	**129**	Pg	**Pg**	**01 46 04.5**	**-0.5**
BCOK	**Bluff Creek, N**	**1.08**	**139**	Pg	**Pg**	**01 46 04.6**	**-0.6**
BCOK				Sg	**Sb**	**01 46 19.4**	**+0.1**
OK009	**Oakdale Elemen**	**1.23**	**136**		**Pn**	**01 46 07.4**	**-0.4**
OK025	**Westminster Rd**	**1.28**	**134**	Pn	**Pn**	**01 46 08.2**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**1.36**	**141**	Pn	**Pn**	**01 46 09.3**	**-0.3**
OK031	**S. Brethren Rd**	**1.42**	**111**		**Pn**	**01 46 10.4**	**+0.1**
T35A	**Sooner Cattle**	**1.64**	**74**		**Pn**	**01 46 14.0**	**+0.7**
T35A				IAmb_Lg		01 46 39.4	
	comp=Z,142nm,0.9s						
T35B	**Sooner Cattle**	**1.64**	**74**	P	**Pn**	**01 46 13.9**	**+0.5**
	baz=256						
T35B				S	**Sb**	**01 46 36.2**	**+0.7**
	baz=256						
DEOK	**Depew**	**1.72**	**111**	Pn	**Pn**	**01 46 14.3**	**-0.2**
WMOK	**Wichita Mounta**	**1.75**	**188**	Pn	**Pn**	**01 46 15.0**	**0.0**
WMOK	**Wichita Mounta**	**1.75**	**188**	P	**Pn**	**01 46 15.1**	**+0.1**
	baz=7.5						
WMOK				S	**Sb**	**01 46 38.7**	**-0.1**
	baz=7.5						
X34A	**Smith Ranch, M**	**1.94**	**164**		**Pn**	**01 46 18.0**	**+0.5**
X34A				IAmb_Lg		01 46 48.2	
	comp=Z,98nm,0.8s						
R32A	**Long Quarter,**	**1.95**	**355**		**Pn**	**01 46 18.6**	**+0.8**
R32A	**Long Quarter,**	**1.95**	**355**	P	**Pb**	**01 46 19.3**	**-0.9**
	baz=175						
R32A				S	**Sb**	**01 46 44.9**	**+0.3**
	baz=175						
TUL1	**Leonard**	**2.24**	**104**	Pn	**Pn**	**01 46 21.5**	**-0.2**
TUL1	**Leonard**	**2.24**	**104**	P	**Pn**	**01 46 22.1**	**+0.4**
	baz=286						
TUL1				S	**Sb**	**01 46 53.5**	**+0.6**
	baz=286						
CBKS	**Cedar Bluff**	**2.54**	**337**	S	**Sb**	**01 47 01.4**	**-0.1**
	baz=157						
LOOK	**Love County**	**2.69**	**156**	Pn	**Pn**	**01 46 27.6**	**-0.3**
LOOK				IAmb_Lg		01 47 16.6	
	comp=Z,50nm,0.8s						
RLO	**Rose Lookout**	**2.80**	**95**	Pn	**Pn**	**01 46 29.2**	**-0.2**
RLO				IAmb_Lg		01 47 20.1	
	comp=Z,49nm,0.8s						
KSU1	**Kansas State U**	**3.01**	**29**		**Pn**	**01 46 31.8**	**-0.4**
AMTX	**Amarillo**	**3.06**	**240**	Pb	**Pb**	**01 46 39.7**	**+0.7**
X37A	**Clayton**	**3.15**	**126**	Pn	**Pn**	**01 46 34.5**	**+0.3**
X37A	**Clayton**	**3.15**	**126**	P	**Pn**	**01 46 34.8**	**+0.6**
	baz=308						
U38A	**Gravette**	**3.30**	**89**	Pn	**Pn**	**01 46 36.8**	**+0.6**
U38A				IAmb_Lg		01 47 32.9	
	comp=Z,80nm,0.7s						
HHAR	**Hobbs**	**3.66**	**92**	IAmb_Lg		01 47 44.8	
	comp=Z,68nm,0.8s						
ABTX	**Abilene, Hawle**	**3.96**	**194**	Pn	**Pn**	**01 46 44.5**	**-0.9**
ABTX	**Abilene, Hawle**	**3.96**	**194**	P	**Pn**	**01 46 45.6**	**+0.2**
	baz=13						
KSCO	**Kaye Shedlock'**	**4.15**	**309**		**Pn**	**01 46 46.8**	**-1.3**
KSCO				IAmb_Lg		01 48 01.6	
	comp=Z,55nm,0.7s						
S39A	**Bolivar**	**4.29**	**72**		**Pn**	**01 46 49.8**	**-0.1**
S39A				IAmb_Lg		01 48 02.1	
	comp=Z,40nm,0.9s						
S39A	**Bolivar**	**4.29**	**72**	P	**Pn**	**01 46 50.1**	**+0.2**
	baz=255						
Z38A	**Mt. Pleasant**	**4.30**	**137**	Pn	**Pn**	**01 46 51.1**	**+1.0**
Z38A				IAmb_Lg		01 48 12.3	
	comp=Z,36nm,0.7s						
N33A	**J Bar K, Exete**	**4.33**	**10**	Pn	**Pn**	**01 46 50.6**	**+0.2**
N33A				IAmb_Lg		01 48 10.7	
	comp=Z,54nm,0.8s						
MIAR	**Mount Ida**	**4.43**	**114**		**Pn**	**01 46 51.8**	**0.0**
MIAR				IAmb_Lg		01 48 12.3	
	comp=Z,42nm,0.7s						
MIAR	**Mount Ida**	**4.43**	**114**	P	**Pn**	**01 46 52.2**	**+0.4**
	baz=297						
WHTX	**Lake Whitney,**	**4.55**	**169**	Pn	**Pn**	**01 46 53.5**	**0.0**
T25A	**Trinidad**	**4.81**	**280**	Pn	**Pn**	**01 46 57.1**	**-0.1**
N35A	**Tabor**	**4.91**	**26**	Pn	**Pn**	**01 46 58.8**	**+0.5**
BGNE	**Belgrade**	**4.93**	**3**	Pn	**Pn**	**01 46 58.6**	**0.0**
237A	**Washetta, Mont**	**4.98**	**153**	Pn	**Pn**	**01 46 58.2**	**-1.1**
237A				IAmb_Lg		01 48 36.8	
	comp=Z,38nm,0.9s						
P38A	**Dawn**	**5.01**	**50**	Pn	**Pn**	**01 46 59.9**	**+0.2**
P38A				IAmb_Lg		01 48 33.5	
	comp=Z,34nm,1.0s						
MGMO	**Mountain Grove**	**5.03**	**80**		**Pn**	**01 47 00.4**	**+0.4**
WHAR	**Wooly Hollow**	**5.16**	**101**		**Pn**	**01 47 01.7**	**-0.1**
WHAR				IAmb_Lg		01 48 31.7	
	comp=Z,60nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.17**	**95**	Pn	**Pn**	**01 47 02.6**	**+0.7**
FCAR				IAmb_Lg		01 48 31.0	
	comp=Z,56nm,0.9s						
WLAR	**White Oak Lake**	**5.20**	**121**	IAmb_Lg		01 48 42.5	
	comp=Z,41nm,0.8s						
OGNE	**Ogallala**	**5.26**	**329**	Pn	**Pn**	**01 47 03.5**	**+0.2**
R40A	**Maddies Statio**	**5.26**	**68**	Pn	**Pn**	**01 47 03.4**	**+0.2**
UALR	**University of**	**5.27**	**107**	Pn	**Pn**	**01 47 03.0**	**-0.3**
UALR				IAmb_Lg		01 48 42.7	
	comp=Z,50nm,0.9s						
Z41A	**Richland Creek**	**5.66**	**123**	Pn	**Pn**	**01 47 08.1**	**-0.6**
Z41A				IAmb_Lg		01 48 50.5	
	comp=Z,25nm,0.9s						
L34A	**Svendsen Farm,**	**5.72**	**16**	IAmb_Lg		01 49 01.5	
	comp=Z,54nm,0.8s						
435B	**Jarrell**	**5.73**	**172**	Pn	**Pn**	**01 47 10.1**	**+0.5**
435B				IAmb_Lg		01 48 52.3	
	comp=Z,39nm,0.8s						
SDCO	**Great Sand Dun**	**5.76**	**285**		**Pn**	**01 47 10.1**	**-0.2**
SDCO				IAmb_Lg		01 48 45.8	
	comp=Z,26nm,1.0s						
Q24A	**Divide**	**5.84**	**297**	Pn	**Pn**	**01 47 12.1**	**+0.6**
Q24A				IAmb_Lg		01 48 46.3	
	comp=Z,31nm,0.7s						
P40A	**Paris**	**5.92**	**57**	Pn	**Pn**	**01 47 12.4**	**+0.2**
P40A				IAmb_Lg		01 48 51.7	
	comp=Z,31nm,0.8s						
LCAR	**Lake Charles**	**5.93**	**92**	Pn	**Pn**	**01 47 12.3**	**-0.1**
N38A	**Joes South For**	**5.95**	**42**	IAmb_Lg		01 49 00.5	
	comp=Z,48nm,0.9s						
CCM	**Cathedral Cave**	**5.98**	**73**	Pn	**Pn**	**01 47 13.8**	**+0.7**
CCM				IAmb_Lg		01 48 53.1	
	comp=Z,42nm,0.9s						
CLN7	**Carlsbad 7**	**5.99**	**229**	Pn	**Pn**	**01 47 14.0**	**+0.8**
CCAR	**Cane Creek**	**6.05**	**113**	IAmb_Lg		01 49 07.1	
	comp=Z,48nm,0.9s						
JCT	**Junction City**	**6.08**	**191**	Pn	**Pn**	**01 47 14.8**	**+0.3**
JCT				IAmb_Lg		01 48 58.8	
	comp=Z,48nm,1.1s						
K31A	**O'Neill**	**6.14**	**358**	IAmb_Lg		01 49 03.0	
	comp=Z,47nm,0.8s						
GDL2	**Guadalupe Moun**	**6.47**	**230**	Pn	**Pn**	**01 47 21.3**	**+1.3**
PBMO	**Poplar Bluff**	**6.48**	**85**	IAmb_Lg		01 49 13.3	
	comp=Z,43nm,0.8s						
ISCO	**Idaho Springs**	**6.53**	**303**	Pn	**Pn**	**01 47 20.4**	**-0.5**
ISCO				IAmb_Lg		01 49 15.4	
	comp=Z,26nm,0.7s						
FVM	**French Village**	**6.59**	**74**	Pn	**Pn**	**01 47 22.7**	**+1.2**
FVM				IAmb_Lg		01 49 10.1	
	comp=Z,35nm,0.9s						
ANMO	**Albuquerque**	**6.67**	**259**	Pn	**Pn**	**01 47 23.4**	**+0.7**
SCIA	**State Center**	**6.79**	**35**	IAmb_Lg		01 49 21.7	
	comp=Z,24nm,0.8s						
SLM	**Saint Louis**	**6.89**	**69**	IAmb_Lg		01 49 20.3	
	comp=Z,40nm,0.8s						
143A	**Socs Landing,**	**6.94**	**121**	IAmb_Lg		01 49 32.7	
	comp=Z,30nm,0.8s						
BNM	**Barren Site**	**7.06**	**253**	Pn	**Pn**	**01 47 27.7**	**-0.4**
CGM3	**Cape Girardeau**	**7.11**	**81**	IAmb_Lg		01 49 29.3	
	comp=Z,30nm,0.8s						
441A	**DeRidder**	**7.21**	**141**	IAmb_Lg		01 49 42.7	
	comp=Z,31nm,0.8s						
PHWY	**Pilot Hill**	**7.27**	**314**	Pn	**Pn**	**01 47 31.1**	**+0.1**
PHWY				IAmb_Lg		01 49 43.7	
	comp=Z,20nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.31**	**253**	IAmb_Lg		01 49 57.0	
	comp=Z,26nm,1.0s						
ECSD	**EROS Data Cent**	**7.39**	**11**		**Pn**	**01 47 31.8**	**-0.6**
S44A	**Carbondale**	**7.47**	**78**	IAmb_Lg		01 49 43.8	
	comp=Z,26nm,0.7s						
SIUC	**Southern Illin**	**7.50**	**78**	IAmb_Lg		01 49 42.8	
	comp=Z,28nm,0.7s						
K38A	**Parkersburg**	**7.57**	**34**	IAmb_Lg		01 49 57.7	
	comp=Z,32nm,1.0s						
OXF	**Oxford**	**7.65**	**102**	IAmb_Lg		01 49 49.1	
	comp=Z,24nm,0.8s						
Y45A	**Yeager Farm, C**	**7.76**	**107**	IAmb_Lg		01 49 58.4	
	comp=Z,23nm,0.9s						
L40A	**Anamosa**	**7.92**	**43**	IAmb_Lg		01 50 00.5	
	comp=Z,18nm,0.8s						
MVCO	**Mesa Verde**	**8.07**	**278**	IAmb_Lg		01 50 10.7	
	comp=Z,20nm,1.3s						
RWWY	**Rawlins**	**8.56**	**310**	IAmb_Lg		01 50 26.4	
	comp=Z,16nm,0.9s						
RSSD	**Black Hills**	**8.74**	**333**	IAmb_Lg		01 50 31.7	
	comp=Z,19nm,1.1s						
K22A	**Casper**	**8.75**	**317**	IAmb_Lg		01 50 30.1	
	comp=Z,23nm,0.8s						
L42A	**Oliver, Polo**	**8.78**	**48**	IAmb_Lg		01 50 34.8	
	comp=Z,22nm,0.8s						
JFWS	**Jewell Farm**	**9.03**	**42**	IAmb_Lg		01 50 46.4	
	comp=Z,14nm,0.8s						

*IDC **07** 01:54:57.1±0.9, 29°.17S×61°.13E, h0km, mb3.9/9,*
mbtmp3.9/10, ML4.4/1, MS3.4/13, Error ellipse:
s-maj=35.2km s-min=21.3km az=40.0

ISC 07 01:54:58.7±0.8, **29°.2S**±0°.2×**61°.1E**±0°.2, **h10**km, **n31**, σ0°.73/13, **mb4.0/9, MS3.4/13, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.49**	**307**	Pn	**Pn**	**01 58 49.8**	**-0.7**
	0.1nm,0.3s,baz=129,slow=11,SNR=10						
OPO				Sn	Sn	02 01 38.3	-15
	0.1nm,0.3s,baz=118,slow=17,SNR=2.1						
	5.1nm,0.6s						
H08S1	**Diego Garcia H**	**23.95**	**29**	T	T	02 25 00.2	
	baz=204,slow=76,SNR=5.3						
H08S2	**Diego Garcia H**	**23.96**	**29**	T	T	02 24 56.0	
	baz=204,slow=76,SNR=4.0						
H08S3	**Diego Garcia H**	**23.97**	**29**	T	T	02 24 57.4	
	baz=204,slow=76,SNR=4.4						
BOSA	**Boshof**	**31.29**	**262**	LR	LR	02 11 54.4	
	comp=Z,69nm,19.1s,baz=95,slow=32						
LBTB	**Lobatse**	**31.78**	**269**	LR	LR	02 12 25.7	
	comp=Z,34nm,18.8s,baz=110,slow=33						
KMBO	**Kilima Mbogo**	**35.96**	**317**	LR	LR	02 14 25.4	
	comp=Z,54nm,19.2s,baz=96,slow=32						
MAW	**Mawson**	**38.48**	**179**	LR	LR	02 14 00.4	
	comp=Z,60nm,20.1s,baz=356,slow=30						
MBAR	**Mbarara**	**40.55**	**309**	LR	LR	02 17 23.1	
	comp=Z,46nm,21.8s,baz=130,slow=33						
H01W2	**Cape Leeuwin H**	**44.91**	**111**	T	T	02 51 15.9	
	baz=261,slow=74						
H01W3	**Cape Leeuwin H**	**44.92**	**111**	T	T	02 51 18.2	
	baz=261						
H01W1	**Cape Leeuwin H**	**44.93**	**111**	T	T	02 51 24.2	
	baz=261,slow=74						
CMAR	**Chiang Mai Arr**	**59.82**	**42**	P	**P**	**02 05 04.7**	**+0.1**
	0.8nm,0.3s,baz=232,slow=6.7,SNR=4.7						
	0.8nm,0.3s						
EIL	**Elat**	**63.60**	**335**	LR	LR	02 30 04.6	
	comp=Z,25nm,18.9s,baz=190,slow=33						
VNDA	**Vanda**	**64.04**	**166**	P	**P**	**02 05 32.4**	**+0.2**
	0.5nm,0.7s,baz=263,slow=4.8,SNR=3.7						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**64.52**	**104**	P	**P**	**02 05 35.3**	**-0.9**
	1.5nm,0.8s,baz=242,slow=6.4,SNR=13						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**66.34**	**100**	P	**P**	**02 05 47.5**	**-0.5**
	1.7nm,0.9s,baz=246,slow=5.7,SNR=11						
	1.7nm,0.9s						
GNI	**Garni**	**70.62**	**347**	LR	LR	02 35 12.4	
	comp=Z,27nm,20.4s,baz=176,slow=34						
TORD	**Torodi Ar. Bea**	**71.07**	**298**	P	**P**	**02 06 16.6**	**-0.8**
	1.1nm,0.8s,baz=133,slow=3.7,SNR=4.3						
	1.1nm,0.8s						
AAK	**Ala-Archa**	**72.51**	**10**	LR	LR	02 36 01.6	
	comp=Z,11nm,18.2s,baz=144,slow=34						
BRTR	**Keskin Array B**	**73.14**	**338**	P	**P**	**02 06 30.0**	**+0.5**
	0.9nm,1.0s,baz=163,slow=5.6,SNR=4.5						
	0.9nm,1.0s						
KBZ	**Khabaz**	**74.43**	**346**	LR	LR	02 37 21.5	
	comp=Z,35nm,21.4s,baz=167,slow=34						
MKAR	**Makanchi Array**	**78.00**	**15**	P	**P**	**02 06 56.8**	**-0.3**
	0.8nm,0.8s,baz=184,slow=4.9,SNR=6.6						
	0.8nm,0.8s						
AKTO	**Aktyubinsk**	**79.30**	**358**	LR	LR	02 39 25.2	
	comp=Z,17nm,19.6s,baz=164,slow=34						
BELG	**Belogornoye**	**82.06**	**352**	LR	LR	02 46 15.4	
	comp=Z,14nm,18.3s,baz=162,slow=38						
AKASG	**Malin Array Be**	**84.36**	**340**	P	**P**	**02 07 31.7**	**+1.0**
	0.4nm,0.5s,baz=151,slow=4.7,SNR=1.8						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**85.29**	**14**	P	**P**	**02 07 35.2**	**-0.1**
	0.7nm,0.5s,baz=184,slow=5.8,SNR=4.1						
ZALV				LR	LR	02 42 09.7	
	comp=Z,14nm,18.2s,baz=36,slow=33						
	0.7nm,0.5s						
RCBR	**Riachuelo**	**93.25**	**262**	LR	LR	02 43 44.9	
	comp=Z,43nm,20.3s,baz=318,slow=31						
YKA	**Yellowknife Ar**	**146.55**	**356**	PKPbc	**PKPbc**	**02 14 39.3**	**-0.4**
	0.3nm,0.6s,baz=350,slow=3.5,SNR=4.9						
PDAR	**Pinedale Array**	**164.47**	**333**	PKP	**PKPdf**	**02 15 03.2**	**+0.3**
	0.2nm,0.5s,baz=103,slow=4.1,SNR=1.5						
TXAR	**Lajitas Array**	**166.67**	**274**	PKP	**PKPdf**	**02 15 06.2**	**+1.2**
	0.4nm,0.8s,baz=130,slow=2.4,SNR=4.4						

*IDC **07** 02:04:46.4±4.0, 32°.22N×139°.90E, h106km±32km, mb3.2/5,*
mbtmp3.5/6, MS2.5/1, Error ellipse: s-maj=51.3km
s-min=26.5km az=86.0
*JMA **07** 02:04:46.4±0.2, 32°.3N±0°.5×14°.0E±°, h96km±2km,*
MV3.3/26, E OFF HACHIJOJIMA ISLAND

ISC 07 02:04:45.9±1.0, **32°.26N**±0°.08×**140°.25E**±0°.10, **h100**km, **n23**, σ1°.03/27, **mb3.4/5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**0.46**	**297**	*e*P	**Pn**	**02 05 01.6**	**+0.2**
JHCJ	**Hachijojimakas**	**0.90**	**335**	*e*P	**Pn**	**02 05 05.1**	**-0.1**
JHCJ				*e*S	**Sn**	**02 05 19.0**	**-0.8**
JHJ2	**Mitsune**	**0.93**	**337**	*e*P	**Pn**	**02 05 05.6**	**+0.1**
JHJ2				*e*S	**Sn**	**02 05 19.2**	**-1.1**
JMKN	**Mikurajimanish**	**1.72**	**341**	*e*P	**Pn**	**02 05 14.8**	**-0.1**
BSO1	**Boso 1**	**2.47**	**14**	*e*P	**Pn**	**02 05 23.9**	**-0.1**
BSO3	**Boso 3**	**2.55**	**5**	*e*P	**Pn**	**02 05 25.3**	**-0.1**
BSO3				*e*S	**Sn**	**02 05 55.1**	**-0.6**
JIM2	**Oshima 3**	**2.55**	**345**	P	**Pn**	**02 05 26.0**	**+0.3**
TK02	**Tokai 2**	**2.69**	**310**	P	**Pn**	**02 05 27.9**	**+0.7**
JIZS	**Izushimoda**	**2.71**	**335**	*e*P	**Pn**	**02 05 28.6**	**+0.8**
JOD2	**Odawara 2**	**3.15**	**342**	*e*P	**Pn**	**02 05 34.3**	**+0.6**
JYN	**Shimob**	**3.53**	**337**	P	**Pn**	**02 05 40.3**	**+1.5**
JIE	**Ise**	**3.65**	**307**	*e*P	**Pn**	**02 05 40.4**	**+0.1**
JRY	**Ryogami san**	**3.91**	**344**	P	**Pn**	**02 05 45.0**	**+1.1**
JTNC	**Tanabenakahech**	**4.20**	**293**	*e*P	**Pn**	**02 05 48.0**	**+0.4**
JAG	**Ashikaga**	**4.21**	**351**	*e*P	**Pn**	**02 05 47.1**	**-0.8**
JWY	**Kouya**	**4.36**	**298**	*e*P	**Pn**	**02 05 50.7**	**+0.6**
MJAR	**Matsushiro Arr**	**4.59**	**339**	P	**Pn**	**02 05 54.0**	**+0.9**
	1.2nm,0.3s,baz=173,slow=12,SNR=8.7						
MJAR				S	**Sn**	**02 06 43.4**	**-2.0**
	2.0nm,0.6s,baz=266,slow=23,SNR=1.7						
MJAR				LR	LR	02 07 39.9	
	comp=Z,55nm,18.6s,baz=173,slow=38						
KSRS	**Korea Array**	**11.37**	**301**	P	**Pn**	**02 07 27.8**	**+2.7**
	0.7nm,0.5s,baz=112,slow=14,SNR=5.4						
WRA	**Warramunga Arr**	**52.21**	**187**	P	**P**	**02 13 45.4**	**-1.3**
	0.1nm,0.4s,baz=2.6,slow=7.8,SNR=1.7						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**54.06**	**30**	P	**P**	**02 14 00.2**	**+0.5**
	0.3nm,0.7s,baz=257,slow=6.0,SNR=3.3						
	0.3nm,0.7s						
ARCES	**ARCESS Array B**	**68.13**	**340**	P	**P**	**02 15 34.4**	**-0.3**
	1.1nm,1.0s,baz=61,slow=7.3,SNR=5.4						
	1.1nm,1.0s						
FINES	**FINESS Array B**	**72.60**	**333**	P	**P**	**02 16 01.2**	**-0.8**
	1.2nm,0.8s,baz=49,slow=6.3,SNR=6.8						
	1.2nm,0.8s						
TXAR	**Lajitas Array**	**93.81**	**52**	P	**P**	**02 17 53.6**	**+1.4**
	0.1nm,0.6s,baz=322,slow=5.7,SNR=2.3						
	0.1nm,0.6s						

*JMA **07** 02:18:43.8±0.4, 25°.1N×122°.3E±0°.4, h2km±4km, MV2.4/6,*
TAIWAN REGION
*TAP **07** 02:18:44.7, 24°.82N×122°.31E, h5km±1km, ML2.6, C*

ISC 07 02:18:44.4±1.0, **24°.82N**±0°.03×**122°.31E**±0°.02, **h10**km±10km, **n34**, σ0°.48/57, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.35**	**302**	*e*P	**Pg**	**02 18 50.9**	**-0.4**
	baz=303						
TWB1				*e*S	**Sg**	**02 18 55.3**	**-0.6**
	baz=303						
NTC	**Toucheng**	**0.44**	**274**	P	**Pg**	**02 18 53.5**	**+0.5**
	baz=274						
TIPB	**Shuangxi**	**0.47**	**288**	P	**Pg**	**02 18 54.1**	**+0.6**
	baz=289						
TIPB				*e*S	**Sg**	**02 18 59.6**	**-0.1**
	baz=289						
TWC	**Suao**	**0.47**	**243**	P	**Pg**	**02 18 53.3**	**-0.3**
	baz=243						
TWC				*i* S	**Sg**	**02 19 00.0**	**+0.1**
	baz=243						
SXI1	**Grass Mountain**	**0.48**	**304**	P	**Pg**	**02 18 53.8**	**0.0**
	baz=304						
SXI1				*i* S	**Sg**	**02 19 00.7**	**+0.6**
	baz=304						
NWF	**Wu-fen Shan**	**0.54**	**297**	*e*P	**Pb**	**02 18 55.5**	**-0.6**
	baz=297						
NWF				S	**Sg**	**02 19 02.6**	**+0.4**
	baz=297						
WFSB	**Wu-fen Shan**	**0.54**	**297**	P	**Pb**	**02 18 55.6**	**-0.5**
	baz=297						
WFSB				*i* S	**Sg**	**02 19 02.9**	**+0.8**
	baz=297						
NDS	**Dongshan**	**0.58**	**251**	P	**Pg**	**02 18 55.8**	**+0.2**
	baz=251						
NDS				S	**Sb**	**02 19 04.5**	**-0.4**
	baz=251						
TNOU	**National Taiwa**	**0.59**	**304**	P	**Pg**	**02 18 55.9**	**+0.1**
	baz=303						
TNOU				*i* S	**Sb**	**02 19 04.4**	**-0.8**
	baz=303						
TWE	**Neicheng**	**0.60**	**260**	*e*P	**Pb**	**02 18 56.5**	**-0.4**
	baz=260						
EWUT	**Wuta**	**0.62**	**232**	P	**Pg**	**02 18 55.9**	**-0.4**
	baz=232						
EWUT				*e*S	**Sg**	**02 19 04.0**	**-0.4**
	baz=232						
ENA	**Nanau**	**0.65**	**233**	P	**Pg**	**02 18 57.2**	**+0.1**
	baz=232						
ENA				*e*S	**Sg**	**02 19 05.5**	**-0.1**
	baz=232						
FUSB	**Fushanzhiwuyua**	**0.66**	**265**	*e*P	**Pg**	**02 18 57.6**	**+0.4**
	baz=264						
FUSB				*e*S	**Sb**	**02 19 08.0**	**+0.6**

comp=N,84μm,1.2s
LMD Lutirano 0.16 305 P Pb 02 28 05.2 -0.3
LMD S Sb 02 28 09.7 -0.1
LMD AML AML
comp=E,89μm,0.8s
LMD AML AML
comp=N,153μm,1.5s
LMD AML AML
comp=E,89μm,0.8s
ASQU Asqua 0.20 201 ⇑P Pb 02 28 05.9 -0.1
ASQU S Sb 02 28 11.1 +0.6
ASQU AML AML
comp=E,206μm,0.2s
ASQU AML AML
comp=N,160μm,0.4s
RUFI Rufina 0.31 242 P Pb 02 28 07.2 +0.1
RUFI S Sb 02 28 13.3 +0.8
BRIS BRISIGHELLA 0.32 301 ⇓P Pb 02 28 06.6 -0.7
BRIS S Sb 02 28 12.7 0.0
BRIS AML AML
comp=E,886μm,1.6s
BRIS AML AML
comp=N,912μm,1.4s
BRIS AML AML
comp=N,194μm,1.3s
BRIS AML AML
comp=E,124μm,0.2s
BRIS AML AML
comp=N,194μm,1.3s
BRIS AML AML
comp=N,1505μm,1.6s
BRIS AML AML
comp=E,1494μm,1.6s
CRE Caprese Michel 0.37 173 P Pb 02 28 07.9 -0.1
CRE S Sn 02 28 14.8 +0.6
SEI Scarperia 0.39 280 P Pn 02 28 09.0 +0.3
RSM Repubblica di 0.41 98 P Pn 02 28 09.0 +0.1
PARC Parchiule 0.42 143 P Pb 02 28 08.3 -0.3
PARC S Sn 02 28 16.4 +0.9
SSP9 Sansepolcro 0.45 157 P Pb 02 28 08.9 -0.1
CSNT Castellina Chi 0.67 220 P Pb 02 28 13.3 +0.7
CSNT S Sn 02 28 22.8 +1.1
FSSB Fossombrone 0.70 114 P Pb 02 28 13.1 0.0
MPAG Monte Paganucc 0.72 119 P Pb 02 28 13.5 0.0
ZCCA Zocca 0.75 299 S Sb 02 28 26.0 +2.0

*NEIC **07** 02:28:54.3±1.3, 19°.49N±0°.09×65°.49W±0°.03, h7km±15km, Error ellipse: s-maj=13.0km s-min=4.4km az=177.0*
*RSPR **07** 02:28:56.0, 19°.44N×65°.44W, h101km±7km, MD3.9/7*
*OSPL **07** 02:28:58.2±0.3, 19°.46N×65°.50W, h68km±14km, ML3.1*
ISC 07 02:28:56.6±1.8, 19°.4N±0°.1×65°.50W±0°.04, h100km, n64, σ1℘34/71, 15C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**1.12 170**	⇑	*e*P	**Pn**		**02 29 17.1**	**-1.3**
CUPR	**Culebra, Puert**	**1.12 170**		*e*S	**Sn**		**02 29 34.5**	**-0.2**
CUPR	**Culebra, Puert**	**1.12 170**			**Pn**		**02 29 17.1**	**-1.3**
CUPR					**Sn**		**02 29 34.5**	**-0.2**
STVI	**Saint Thomas**	**1.17 154**	⇑	*e*P	**Pn**		**02 29 17.6**	**-1.4**
STVI	**Saint Thomas**	**1.17 154**		*e*S	**Sn**		**02 29 35.9**	**0.0**
STVI	**Saint Thomas**	**1.17 154**			**Sn**		**02 29 17.6**	**-1.4**
STVI					**Sn**		**02 29 35.9**	**0.0**
CBYP	**Canovanas**	**1.19 197**	⇑	*e*P	**Pn**		**02 29 17.8**	**-1.4**
CBYP	**Canovanas**	**1.19 197**		*e*S	**Sn**		**02 29 36.2**	**0.0**
CBYP	**Canovanas**	**1.19 197**			**Pn**		**02 29 17.8**	**-1.4**
CBYP					**Sn**		**02 29 36.2**	**0.0**
CBYP	**Canovanas**	**1.19 197**		IAML			02 29 41.9	
	comp=E,698nm,0.2s							
GCPR	**Guaynabo City**	**1.23 207**	⇑	*e*P	**Pn**		**02 29 18.6**	**-1.1**
GCPR	**Guaynabo City**	**1.23 207**		*e*S	**Sn**		**02 29 36.5**	**-0.5**
GCPR	**Guaynabo City**	**1.23 207**			**Pn**		**02 29 18.6**	**-1.1**
GCPR					**Sn**		**02 29 36.5**	**-0.5**
GCPR	**Guaynabo City**	**1.23 207**		IAML			02 29 38.7	
	comp=N,279nm,0.5s							
SJVI	**Gifft Hill Sch**	**1.27 147**	⇑	*e*P	**Pn**		**02 29 19.0**	**-1.2**
SJVI	**Gifft Hill Sch**	**1.27 147**		*e*S	**Sn**		**02 29 37.5**	**-0.4**
SJVI	**Gifft Hill Sch**	**1.27 147**			**Pn**		**02 29 19.0**	**-1.2**
SJVI					**Sn**		**02 29 37.5**	**-0.4**
TBVI	**Tortola**	**1.29 140**	⇑	*e*P	**Pn**		**02 29 18.9**	**-1.5**
TBVI	**Tortola**	**1.29 140**		*e*S	**Sn**		**02 29 38.0**	**-0.4**
TBVI	**Tortola**	**1.29 140**			**Pn**		**02 29 18.9**	**-1.5**
TBVI					**Sn**		**02 29 38.0**	**-0.4**
EMPR	**Esperanza - Ma**	**1.35 227**	⇑	*e*P	**Pn**		**02 29 20.4**	**-0.7**
EMPR	**Esperanza - Ma**	**1.35 227**		*e*S	**Sn**		**02 29 39.8**	**+0.3**
EMPR	**Esperanza - Ma**	**1.35 227**			**Pn**		**02 29 20.4**	**-0.7**
EMPR					**Sn**		**02 29 39.8**	**+0.3**
EMPR	**Esperanza - Ma**	**1.35 227**		IAML			02 29 52.0	
	comp=E,365nm,0.6s							
EMPR				IAML			02 29 56.5	
	comp=N,339nm,0.8s							
SJG	**San Juan**	**1.44 206**			**Pn**		**02 29 21.4**	**-0.7**
SJG				IAML			02 29 45.1	
	comp=N,174nm,0.6s							
SJG				IAML			02 29 51.8	
	comp=N,164nm,0.6s							
PDPR	**Patillas Dam,**	**1.47 200**			**Pn**		**02 29 21.8**	**-0.8**
PDPR				IAML			02 29 32.1	
	comp=E,336nm,2.0s							
IGPR	**InterUniversit**	**1.55 202**	⇑	*e*P	**Pn**		**02 29 22.9**	**-0.6**
IGPR	**InterUniversit**	**1.55 202**		*e*S	**Sn**		**02 29 44.4**	**+0.5**
AOPR	**Arecibo Observ**	**1.59 229**	⇑	*e*P	**Pn**		**02 29 23.2**	**-0.9**
AOPR	**Arecibo Observ**	**1.59 229**		*e*S	**Sn**		**02 29 46.0**	**+1.0**
AOPR	**Arecibo Observ**	**1.59 229**			**Pn**		**02 29 23.2**	**-0.9**
AOPR					**Sn**		**02 29 46.0**	**+1.0**
AOPR	**Arecibo Observ**	**1.59 229**		IAML			02 29 49.9	
	comp=N,479nm,0.4s							
OBIP	**Obispado Ponce**	**1.72 218**			**Pn**		**02 29 24.6**	**-1.0**
OBIP				IAML			02 29 53.9	
	comp=N,106nm,0.8s							
CDVI	**St. Croix**	**1.79 157**	⇓	*e*P	**Pn**		**02 29 27.4**	**+0.9**
CDVI	**St. Croix**	**1.79 157**		*e*S	**Sn**		**02 29 47.4**	**+0.9**
AGPR	**Aguadilla, PR**	**1.80 239**	⇑	*e*P	**Pn**		**02 29 27.4**	**+0.8**
AGPR	**Aguadilla, PR**	**1.80 239**		*e*S	**Sn**		**02 29 50.2**	**+0.8**
AGPR	**Aguadilla, PR**	**1.80 239**			**Pn**		**02 29 27.4**	**+0.8**
AGPR					**Sn**		**02 29 50.2**	**+0.8**
AGPR	**Aguadilla, PR**	**1.80 239**		IAML			02 29 54.5	
	comp=N,112nm,1.2s							
AGPR				IAML			02 30 09.1	
	comp=E,117nm,0.7s							
AGPR	**Aguadilla, PR**	**1.80 239**	*i*	P	**Pn**		**02 29 26.3**	**-0.3**
AGPR				IAML			02 29 54.2	
	comp=E,85nm,2.0s							
ICMP	**Isla Caja de M**	**1.81 213**		Pn	**Pn**		**02 29 26.1**	**-0.7**
ICMP				IAML			02 29 56.3	
	comp=N,149nm,1.4s							
ICMP				IAML			02 29 58.9	
	comp=E,167nm,0.8s							
GBPR	**Guanica, Bosqu**	**1.94 223**	⇑	*e*P	**Pn**		**02 29 29.1**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.94 223**		*e*S	**Sn**		**02 29 53.0**	**+0.3**
LSP	**Las Mesas**	**1.95 231**	⇓	*e*P	**Pn**		**02 29 28.7**	**+0.2**
LSP	**Las Mesas**	**1.95 231**		*e*S	**Sn**		**02 29 53.9**	**+1.0**
PRSN	**Puerto Rico Se**	**1.96 233**			**Pn**		**02 29 27.0**	**-1.7**
MLPR	**Magueyes Islan**	**2.05 226**	⇑	*e*P	**Pn**		**02 29 29.7**	**-0.2**
MLPR	**Magueyes Islan**	**2.05 226**		*e*S	**Sn**		**02 29 55.6**	**+0.3**
MLPR	**Magueyes Islan**	**2.05 226**			**Pn**		**02 29 29.7**	**-0.2**
MLPR					**Sn**		**02 29 55.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.07 228**	⇑	*e*P	**Pn**		**02 29 30.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.07 228**		*e*S	**Sn**		**02 29 56.9**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.07 228**			**Sn**		**02 29 30.4**	**+0.3**
CRPR					**Sn**		**02 29 56.9**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.07 228**	*i*	P	**Pn**		**02 29 30.1**	**-0.1**
CRPR				IAML			02 30 05.0	
	comp=Z,88nm,0.6s							
IDE	**Isla Desecheo**	**2.13 242**	⇑	*e*P	**Pn**		**02 29 30.8**	**-0.2**
IDE	**Isla Desecheo**	**2.13 242**		*e*S	**Sn**		**02 29 58.4**	**+1.2**
PCDR	**Punta Cana, DR**	**2.87 252**	*i*	P	**Pn**		**02 29 40.6**	**-0.1**
PCDR				IAML			02 30 21.7	
	comp=Z,87nm,2.4s							
DR12	**Loma Pena Alta**	**3.73 261**	⇑	*e*P	**Pn**		**02 29 52.6**	**+0.4**
DR12				*e*S	**Sn**		**02 30 36.6**	**+1.4**
DR12	**Loma Pena Alta**	**3.73 261**		Pn	**Pn**		**02 29 52.3**	**+0.1**
ANWB	**Willy Bob**	**3.92 116**		*e*P	Pn		02 30 05.9	+11
ANBD	**Bethesda, Anti**	**4.25 123**		*e*P	**Pn**		**02 29 58.5**	**-0.8**
ANBD	**Bethesda, Anti**	**4.25 123**		*e*S	**Sn**		**02 30 48.9**	**+1.1**
CBE	**Ff, Capester**	**4.98 131**		*e*P	**Pn**		**02 30 09.2**	**+0.1**
CBE	**Ff, Capester**	**4.98 131**		*e*S	**Sn**		**02 31 11.7**	**+6.2**
SDDR	**Presa de Saban**	**5.49 266**	*i*	P	**Pn**		**02 30 15.1**	**-1.0**
SDDR				*e*S	**Sn**		**02 31 12.1**	**-5.9**
SDDR				IAML			02 31 29.4	
	comp=Z,15nm,3.6s							

*IDC **07** 02:46:00.6±2.1, 19°.51N×38°.75E, h0km, mb3.7/7, mbtmp3.7/7, MS3.0/15, Error ellipse: s-maj=56.5km s-min=26.5km az=158.0*
ISC 07 02:46:03.3±2.0, 19°.5N±0°.3×38°.8E±0°.2, h18km, n20, σ0℘71/7, mb3.9/6, MS3.0/13, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**10.68**	**342**	LR	LR		02 51 48.5	
	comp=Z,61nm,20.7s,baz=194,slow=33							
WSAR	**Wadi Sarin**	**18.88**	**75**	LR	LR		02 58 38.6	
	comp=Z,70nm,18.3s,baz=306,slow=40							
KMBO	**Kilima Mbogo**	**20.57**	**184**	LR	LR		02 58 40.8	
	comp=Z,63nm,18.6s,baz=96,slow=37							
BRTR	**Keskin Array B**	**20.61**	**349**	P	**P**		**02 50 42.6**	**+0.9**
	1.0nm,0.9s,baz=153,slow=7.7,SNR=3.9							
BRTR				LR	LR		02 58 26.9	
	comp=Z,19nm,20.9s,baz=179,slow=36 1.0nm,0.9s							
GNI	**Garni**	**21.20**	**13**	LR	LR		02 59 28.0	
	comp=Z,34nm,20.5s,baz=211,slow=38							
MBAR	**Mbarara**	**21.49**	**202**	LR	LR		02 59 19.1	
	comp=Z,43nm,19.7s,baz=96,slow=37							
KBZ	**Khabaz**	**24.39**	**7**	LR	LR		03 01 42.0	
	comp=Z,28nm,20.0s,baz=192,slow=39							
GEYT	**Allbeck**	**24.91**	**39**	LR	LR		03 02 15.9	
	comp=Z,67nm,18.4s,baz=1.0,slow=39							
AKASG	**Malin Array Be**	**32.02**	**349**	P	**P**		**02 52 27.7**	**-0.9**
	0.1nm,0.3s,baz=166,slow=7.1,SNR=3.4 0.1nm,0.3s							
AKTO	**Aktyubinsk**	**34.44**	**22**	LR	LR		03 09 33.6	
	comp=Z,27nm,18.3s,baz=185,slow=41							
TORD	**Torodi Ar. Bea**	**36.07**	**266**	P	**P**		**02 53 04.3**	**+0.1**
	2.0nm,0.9s,baz=96,slow=7.6,SNR=5.7 2.0nm,0.9s							
AAK	**Ala-Archa**	**37.90**	**45**	LR	LR		03 10 49.3	
	comp=Z,22nm,21.0s,baz=286,slow=39							
ARU	**Arti**	**39.72**	**17**	LR	LR		03 11 43.0	
	comp=Z,29nm,18.2s,baz=228,slow=39							
BVAR	**Borovoye Array**	**41.43**	**29**	LR	LR		03 14 17.9	
	comp=Z,14nm,18.1s,baz=82,slow=41							
KURBB	**Kurchatov Arra**	**44.13**	**36**	P	**P**		**02 54 10.9**	**+0.3**
	1.1nm,0.7s,baz=239,slow=8.2,SNR=7.0 1.1nm,0.7s							
MKAR	**Makanchi Array**	**44.67**	**42**	P	**P**		**02 54 15.5**	**+0.4**
	0.8nm,0.8s,baz=246,slow=8.9,SNR=7.6							
MKAR				LR	LR		03 13 41.2	
	comp=Z,17nm,20.8s,baz=247,slow=37 0.8nm,0.8s							
ZALV	**Zalesovo Beam**	**49.10**	**34**	P	**P**		**02 54 49.6**	**+0.1**
	0.7nm,0.3s,baz=251,slow=9.2,SNR=7.3 0.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**56.66**	**80**	LR	LR		03 21 41.9	
	comp=Z,7.1nm,18.3s,baz=200,slow=38							
SONM	**Songino Array**	**60.84**	**46**	P	**P**		**02 56 14.5**	**-0.3**
	0.8nm,0.6s,baz=268,slow=7.6,SNR=3.5 0.8nm,0.6s							
KSRS	**Korea Array**	**77.76**	**55**	LR	LR		03 36 40.0	
	comp=Z,20nm,18.6s,baz=235,slow=39							

*IDC **07** 03:15:31.4±1.9, 21°.19S×178°.83W, h585km±20km, mb3.2/12, mbtmp4.1/13, Error ellipse: s-maj=20.8km s-min=15.6km az=111.0*
ISC 07 03:15:34.2±0.7, 21°.2S±0°.1×178°.9W±0°.2, h619km, n22, σ0℘77/21, mb3.7/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.52**	**320**	P	P		03 16 59.4	-5.5
	34nm,0.5s,baz=91,slow=24,SNR=59							
STKA	**Stephens Creek**	**36.73**	**245**	P	**P**		**03 21 50.8**	**-0.4**
	0.7nm,0.3s,baz=116,slow=9.6,SNR=3.3 0.7nm,0.2s							
ASAR	**Alice Springs**	**43.55**	**258**	P	**P**		**03 22 45.1**	**-0.4**
	4.2nm,0.8s,baz=96,slow=7.7,SNR=52							
ASAR				PcP	**PcP**		**03 24 19.4**	**+0.5**
	0.7nm,0.6s,baz=105,slow=4.3,SNR=6.4 4.2nm,0.8s							
WRA	**Warramunga Arr**	**43.68**	**263**	P	**P**		**03 22 45.6**	**-0.9**
	1.8nm,0.5s,baz=97,slow=7.6,SNR=51 1.8nm,0.5s							
VNDA	**Vanda**	**57.11**	**185**	P	**P**		**03 24 23.4**	**+0.5**
	0.3nm,0.5s,baz=6.5,slow=6.5,SNR=5.5 0.3nm,0.5s							
QSPA	**South Pole Qui**	**68.84**	**180**	P	**P**		**03 25 38.1**	**+0.1**
	1.7nm,0.7s,baz=320,slow=1.3,SNR=8.6 1.7nm,0.7s							
MJAR	**Matsushiro Arr**	**70.31**	**324**	P	**P**		**03 25 46.8**	**-0.3**
	0.6nm,0.6s,baz=109,slow=11,SNR=4.3 0.6nm,0.6s							
PETK	**Petropavlovsk-**	**76.77**	**346**	P	**P**		**03 26 23.1**	**-0.1**
	2.0nm,0.7s,baz=123,slow=5.3,SNR=2.6 2.0nm,0.7s							
USRK	**Ussuriysk Ar.**	**79.11**	**326**	P	**P**		**03 26 37.6**	**+1.8**
	2.1nm,0.7s,baz=48,slow=2.8,SNR=5.9 2.1nm,0.7s							
NVAR	**Mina Array Bea**	**82.12**	**44**	P	**P**		**03 26 52.1**	**+0.3**
	0.5nm,0.6s,baz=220,slow=9.1,SNR=5.5 0.5nm,0.6s							
ILAR	**Eielson Array**	**89.21**	**13**	P	**P**		**03 27 24.2**	**-0.7**
	0.5nm,0.4s,baz=217,slow=5.1,SNR=7.7 0.5nm,0.4s							
CMAR	**Chiang Mai Arr**	**89.58**	**290**	P	**P**		**03 27 28.9**	**+1.1**
	0.6nm,0.3s,baz=123,slow=3.3,SNR=6.5 0.6nm,0.3s							
PDAR	**Pinedale Array**	**90.06**	**44**	P	**P**		**03 27 29.7**	**0.0**
	0.4nm,0.6s,baz=197,slow=2.8,SNR=3.1 0.4nm,0.6s							
ARCES	**ARCESS Array B**	**129.48**	**349**	PKP	**PKPdf**		**03 33 32.6**	**-0.5**
	0.9nm,0.8s,baz=352,slow=1.7,SNR=9.8							
FINES	**FINESS Array B**	**136.23**	**343**	PKP	**PKPdf**		**03 33 44.3**	**-1.7**
	0.5nm,0.5s,baz=104,slow=2.9,SNR=5.9							
AKASG	**Malin Array Be**	**143.24**	**330**	PKP	PKPab		03 33 56.9	-0.4
	3.2nm,0.4s,baz=44,slow=4.6,SNR=28							
BRTR	**Keskin Array B**	**146.70**	**311**	PKPbc	**PKPbc**		**03 34 08.6**	**+0.2**
	0.9nm,0.7s,baz=122,slow=5.1,SNR=7.2							
DPC	**Dobruska-Polom**	**148.56**	**341**	*e*PKP	**PKiKP**		**03 34 13.5**	**-0.1**
PRU	**Pruhonice**	**149.40**	**343**	*e*PKP	**PKiKP**		**03 34 15.1**	**-0.1**
KHC	**Kasperske Hory**	**150.44**	**343**	*e*PKP	**PKiKP**		**03 34 17.1**	**-0.4**
KHC				*ex*	x		03 34 26.9	
CKRC	**Cesky Krumlov**	**150.52**	**342**	*e*PKP	**PKiKP**		**03 34 17.7**	**+0.1**
GERES	**GERESS Array B**	**150.66**	**343**	PKPbc	**PKPbc**		**03 34 16.8**	**-0.8**
	1.1nm,0.9s,baz=43,slow=2.5,SNR=8.2							

IDC 07 03:18:13.8±2.5, 28°.85S×61°.30E, h0km, mb3.5/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=283.5km s-min=29.6km az=23.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.47**	**305**	Pn	Pn		03 22 05.5	-1.0
	baz=297,slow=24,SNR=1.5							
OPO				Sn	Sn		03 24 52.6	-17
	baz=117,slow=11,SNR=1.1 1.2nm,0.4s							
H08S1	**Diego Garcia H**	**23.58**	**29**	T	T		03 48 13.3	
	baz=206,slow=76							
H08S2	**Diego Garcia H**	**23.59**	**29**	T	T		03 48 16.2	
	baz=206							
H08S3	**Diego Garcia H**	**23.60**	**29**	T	T		03 48 18.6	
	baz=206,slow=76							
H01W2	**Cape Leeuwin H**	**44.85**	**112**	T	T		04 14 18.8	
	baz=260							
H01W3	**Cape Leeuwin H**	**44.85**	**112**	T	T		04 14 21.0	
	baz=260							
H01W1	**Cape Leeuwin H**	**44.87**	**112**	T	T		04 14 24.8	
	baz=260							
ASAR	**Alice Springs**	**64.40**	**104**	P	P		03 28 52.8	+0.7
	0.4nm,0.8s,baz=234,slow=6.1,SNR=5.2 0.4nm,0.8s							
WRA	**Warramunga Arr**	**66.21**	**100**	P	P		03 29 02.8	-1.0
	0.3nm,0.7s,baz=246,slow=6.0,SNR=1.8 0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**71.10**	**297**	P	P		03 29 34.7	+0.4
	0.7nm,1.1s,baz=134,slow=6.2,SNR=2.2 0.7nm,1.1s							

IDC 07 03:49:01.6±2.7, 19°.92N×38°.57E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=79.2km s-min=30.2km az=151.0, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**20.19**	**349**	P	P		03 53 38.0	-0.1
	0.2nm,0.6s,baz=158,slow=9.4,SNR=1.7							
	0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**35.93**	**265**	P	P		03 56 04.0	-0.1
	1.3nm,0.8s,baz=72,slow=8.7,SNR=5.5 1.3nm,0.8s							
MKAR	**Makanchi Array**	**44.50**	**43**	P	P		03 57 14.7	-0.1
	0.3nm,0.7s,baz=230,slow=8.6,SNR=3.6 0.3nm,0.7s							
ZALV	**Zalesovo Beam**	**48.87**	**35**	P	P		03 57 48.8	-0.1
	0.6nm,0.5s,baz=232,slow=11,SNR=2.2 0.6nm,0.5s							

*IDC **07** 05:32:34.8±10.0, 17°.53S×178°.25W, h576km±26km, mb3.0/5, mbtmp4.0/6, Error ellipse: s-maj=209.7km s-min=36.2km az=54.0*
*NEIC **07** 05:32:38.0±2.0, 17°.6S±0°.3×178°.6W±0°.2, h584km±18km, mb4.0/16, Error ellipse: s-maj=38.0km s-min=20.7km az=197.0*
ISC 07 05:32:37.1±1.3, 17°.3S±0°.2×178°.6W±0°.1, h600km, n26, σ1℘59/26, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.24**	**261**	P	**P**		**05 33 55.4**	**-2.3**
	49nm,0.6s,baz=119,slow=11,SNR=36							
MSVF	**Nonsavu**	**3.24**	**261**	P	**P**		**05 33 55.7**	**-2.0**
NIUE	**Niue**	**8.43**	**104**	P	**P**		**05 34 39.5**	**-1.0**
KOUNC	**Koumac, New Ca**	**16.52**	**256**	P	**P**		**05 35 59.0**	**-0.3**
URZ	**Urewera**	**21.25**	**189**	P	**P**		**05 36 38.6**	**-3.2**
	3.2nm,0.4s,baz=23,slow=10,SNR=1.5 3.2nm,0.4s							
TUWZ	**Tuamarina**	**24.92**	**193**	P	**P**		**05 37 12.5**	**-1.8**
WKZ	**Wanaka**	**29.38**	**198**	P	**P**		**05 37 50.3**	**-3.0**
ARMA	**Armidale**	**30.11**	**239**	P	**P**		**05 38 00.2**	**+0.3**
COEN	**Coen**	**36.93**	**270**	P	**P**		**05 38 56.5**	**-0.6**
COEN				IAmb	IAmb		05 39 01.9	
	comp=Z,16nm,1.4s							
TOO	**Toolangi**	**37.44**	**230**	P	**P**		**05 39 01.6**	**+0.7**
TOO				IAmb	IAmb		05 39 14.3	
	comp=Z,11nm,1.4s							
STKA	**Stephens Creek**	**38.79**	**240**	P	**P**		**05 39 13.0**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=135,slow=5.7,SNR=3.1 comp=Z,1.3nm,0.7s							
STKA	**Stephens Creek**	**38.79**	**240**	P	**P**		**05 39 12.2**	**+0.3**
BBOO	**Buckleboo**	**43.56**	**240**	P	**P**		**05 39 50.0**	**+0.5**
WB0	**Warramunga Arr**	**44.54**	**259**	P	**P**		**05 39 58.8**	**+1.5**
WB0				IAmb	IAmb		05 40 24.3	
	comp=Z,7.1nm,1.2s							
WB2	**Warramunga Arr**	**44.57**	**259**	P	**P**		**05 39 57.7**	**+0.3**
WB2				IAmb	IAmb		05 40 21.6	
	comp=Z,8.6nm,1.4s							
WRA	**Warramunga Arr**	**44.58**	**259**	P	**P**		**05 39 58.1**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=95,slow=7.8,SNR=23 comp=Z,0.3nm,0.5s							
WRA	**Warramunga Arr**	**44.58**	**259**	P	**P**		**05 39 58.1**	**+0.6**
AS31	**Alice Springs**	**44.80**	**254**	P	**P**		**05 40 00.3**	**+1.1**
ASAR	**Alice Springs**	**44.80**	**254**	P	**P**		**05 40 00.2**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=89,slow=7.7,SNR=54 comp=Z,2.0nm,0.4s							
ASAR	**Alice Springs**	**44.80**	**254**	P	**P**		**05 39 59.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**52.96**	**260**	P	**P**		**05 41 01.3**	**+2.0**
	comp=Z,1.7nm,1.0s,baz=76,slow=8.3,SNR=3.6 comp=Z,1.7nm,1.0s							
SOEI	**Soe**	**55.90**	**270**	P	**P**		**05 41 20.0**	**0.0**
SOEI				IAmb	IAmb		05 41 48.8	
	comp=Z,14nm,0.9s							
SBA	**Scott Base**	**61.04**	**184**	P	**P**		**05 41 55.9**	**+2.6**
SBA				IAmb	IAmb		05 42 04.3	
	comp=Z,4.0nm,1.5s							
VNDA	**Vanda**	**61.06**	**185**	P	**P**		**05 41 53.9**	**+0.5**
QSPA	**South Pole Qui**	**72.78**	**180**	P	**P**		**05 43 07.4**	**+1.8**
QSPA				IAmb	IAmb		05 43 07.6	
	comp=Z,2.3nm,0.9s							
BELA	**Belgrano 2**	**82.82**	**173**	P	**P**		**05 44 00.5**	**+1.4**
BELA				IAmb	IAmb		05 44 01.1	
	comp=Z,1.9nm,1.0s							

*IDC **07** 05:40:08.1±1.0, 5°.06S×144°.89E, h0km, mb3.8/10, mbtmp3.9/12, ML3.6/1, MS3.2/4, Error ellipse: s-maj=32.9km s-min=17.9km az=96.0*
ISC 07 05:40:15.0±0.7, 5°.24S±0°.07×144°.8E±0°.1, h54km, n17, σ1℘12/17, mb3.8/10, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.73**	**151**	Pn	**Pn**		**05 41 24.3**	**+0.4**
	20nm,0.8s,baz=338,slow=19,SNR=1.8							
PMG				Sn	**Sn**		**05 42 16.6**	**-0.9**
	1.6nm,0.3s,baz=307,slow=20,SNR=1.2							
SIJI	**Sorong**	**14.23**	**287**	LR	LR		05 49 42.3	
	comp=Z,41nm,18.5s,baz=68,slow=40							
WRA	**Warramunga Arr**	**17.84**	**214**	P	**Pn**		**05 44 19.7**	**+0.1**
	0.2nm,0.3s,baz=39,slow=12,SNR=29							
WRA				S	**Sn**		**05 47 35.1**	**-2.6**
	0.6nm,0.9s,baz=50,slow=26,SNR=1.6							
WRA				LR	LR		05 50 54.1	
	comp=Z,60nm,19.8s,baz=223,slow=36 5.4nm,0.9s							
ASAR	**Alice Springs**	**21.14**	**209**	P	**P**		**05 44 56.9**	**+1.3**
	3.2nm,0.9s,baz=33,slow=13,SNR=14							
ASAR				LR	LR		05 53 53.3	
	comp=Z,51nm,19.4s,baz=32,slow=39 3.2nm,0.9s							
BATI	**Baumata**	**21.55**	**255**	LR	LR		05 53 57.9	
	comp=Z,146nm,19.4s,baz=77,slow=38							
FITZ	**Fitzroy Crossi**	**22.70**	**234**	P	**P**		**05 45 12.6**	**+0.2**
	4.5nm,0.8s,baz=67,slow=7.4,SNR=7.8 4.5nm,0.8s							
KSRS	**Korea Array**	**45.31**	**341**	P	**P**		**05 48 27.4**	**-0.2**
	0.4nm,0.5s,baz=151,slow=9.4,SNR=2.5 0.4nm,0.5s	

comp=Z,80nm,20.2s,baz=224,slow=34
1.5nm,0.9s
MDT Midelt 37.43 43 LR LR 06 15 55.1
comp=Z,26nm,20.7s,baz=254,slow=34
CPUP Villa Florida 40.16 214 LR LR 06 17 53.2
comp=Z,76nm,18.7s,baz=30,slow=35
ROSC El Rosal 40.24 269 LR LR 06 17 43.4
comp=Z,147nm,19.0s,baz=58,slow=35
LPAZ La Paz 41.00 235 P **P 06 02 18.8 -0.6**
LPAZ LR LR 06 18 38.5
comp=Z,35nm,18.6s,baz=354,slow=35
1.3nm,0.8s
ESDC Sonseca Array 42.21 35 LR LR 06 17 02.7
comp=Z,39nm,18.3s,baz=320,slow=32
LVC Limon Verde 45.15 228 LR LR 06 22 09.4
comp=Z,40nm,19.4s,baz=54,slow=37
ATAH Atahualpa 46.53 253 LR LR 06 21 35.7
comp=Z,58nm,19.4s,baz=34,slow=35
NNA Nana 46.66 246 LR LR 06 22 27.4
comp=Z,61nm,19.1s,baz=58,slow=36
TSUM Tsumeb 57.01 118 LR LR 06 23 00.6
comp=Z,62nm,20.6s,baz=334,slow=30
GERES GERESS Array B 57.81 35 P **P 06 04 27.1 +0.3**
0.4nm,0.9s,baz=259,slow=3.6,SNR=3.1
0.4nm,0.9s
IDI Anoyia 60.65 53 LR LR 06 31 00.7
comp=Z,32nm,20.9s,baz=275,slow=36
LBTB Lobatse 66.04 121 LR LR 06 30 04.4
comp=Z,47nm,18.0s,baz=201,slow=32
BOSA Boshof 67.07 125 P **P 06 05 30.4 +1.3**
2.7nm,0.9s,baz=274,slow=4.1,SNR=3.5
2.7nm,0.9s
EIL Elat 68.22 61 LR LR 06 35 56.2
comp=Z,48nm,20.1s,baz=278,slow=36
TXAR Lajitas Array 68.97 299 P **P 06 05 41.4 +0.3**
0.3nm,0.8s,baz=140,slow=4.7,SNR=4.4
0.3nm,0.8s
FINES FINESS Array B 69.85 26 P **P 06 05 46.2 +0.5**
3.0nm,1.0s,baz=266,slow=8.2,SNR=4.2
3.0nm,1.0s
PDAR Pinedale Array 74.75 312 P **P 06 06 15.5 -0.2**
0.4nm,0.8s,baz=108,slow=5.8,SNR=3.9
0.4nm,0.8s

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*DJA **07** 05:56:11.6±0.4,6°S±3°×15°4E±°, h33km±2km, M5.0/19, mb4.8/19, mB5.2/5, MLv5.4/1, Mw(mB)4.5/5, MwMwp5.6/1, Mwp5.8/1*

*GCMT **07** 05:56:14.8±0.2, 5°.79S±0°.01×153°.84E±0°.02, h38km, MW5.0/90, Moment Tensor Solution. s90, c112; s84, c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.76±.14; $M_{\theta\theta}$=2.40±.10; $M_{\phi\phi}$=-2.36±.10; $M_{r\theta}$=0.46±.10; $M_{\theta\phi}$=2.23±.07; $M_{\phi r}$=0.80±.10; Best double couple: M_o=4.77500×10^{16} NP1:φ±138.00000°, δ±50.00000°, λ94.00000°. NP2:φ±312.00000°, δ40.00000°, λ86.00000°. Principal axes: T 4.8560, Plg84.0000°, Azm72.0000°; N -0.1620, Plg3.0000°, Azm315.0000°; P -4.6950, Plg5.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **07** 05:56:14.2±1.9, 5°.55S×153°.97E, h53km±16km, mb4.1/26, mbtmp4.4/28, ML3.8/3, MS4.0/43 Error ellipse: s-maj=15.3km s-min=10.9km az=73.0*

*NEIC **07** 05:56:14.8±1.1, 5°.54S±0°.08×154°.03E±0°.03, h58km±7km, mb4.9/50, Error ellipse: s-maj=12.6km s-min=2.0km az=196.0*

ISC 07 05:56:16.4±0.3, 5°.58S±0°.05×153°.94E±0°.05, h74km, n146, σ1s 43/130, mb4.8/65, 4C, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.24**	**308**		**Pn**	**05 56 50.1**	**-1.2**
KRVT	**Keravat (AS076**	**2.29**	**303**	P	**Pn**	**05 56 51.0**	**-1.0**
	46nm,0.3s,baz=175,slow=5.1,SNR=18						
KRVT				S	**Sn**	**05 57 17.6**	**-1.7**
	1μm,0.5s,baz=143,slow=20,SNR=4.6						
KRVT				LR	LR	05 57 35.7	
	comp=Z,3μm,21.5s,baz=280,slow=36						
	293nm,0.6s						
HNR	**Honiara**	**7.08**	**123**	P	**Pn**	**05 57 56.6**	**-0.7**
	7.2nm,0.3s,baz=311,slow=20,SNR=1.9						
HNR				S	**Sn**	**05 59 19.0**	**+2.6**
	200nm,0.7s,baz=41,slow=20,SNR=2.1						
HNR				LR	LR	06 00 45.8	
	comp=Z,2μm,20.5s,baz=284,slow=38						
	153nm,0.9s						
MANU	**Manus Island**	**7.44**	**298**	Pn	**Pn**	**05 58 01.1**	**-1.2**
PMG	**Port Moresby**	**7.72**	**240**	P	**Pn**	**05 58 04.1**	**-2.1**
	18nm,0.3s,baz=56,slow=6.6,SNR=38						
PMG				S	**Sn**	**05 59 28.4**	**-3.8**
	81nm,0.6s,baz=333,slow=18,SNR=1.5						
PMG				LR	LR	06 00 57.7	
	comp=Z,2μm,21.6s,baz=45,slow=36						
PATS	**Pohnpei**	**13.08**	**20**	Pn	**Pn**	**05 59 16.1**	**-3.2**
COEN	**Coen**	**13.48**	**231**	Pn	**Pn**	**05 59 24.2**	**-0.3**
GENI	**Genyem**	**14.05**	**282**	P	**Pn**	**05 59 32.3**	**+0.2**
	72nm,1.4s						
SMPI	**Sarmi**	**15.61**	**283**	P	**Pn**	**05 59 52.3**	**+0.2**
	46nm,1.1s						
SMPI				pP	**P**	**06 00 01.2**	**+6.4**
	46nm,1.1s						
CTAO	**Charters Tower**	**16.25**	**207**	Pn	**Pn**	**05 59 59.8**	**-0.3**
EIDS	**Eidsvold**	**19.87**	**188**		**P**	**06 00 41.0**	**-0.7**
DZM	**Mont Dzumac**	**20.38**	**145**	P	**P**	**06 00 47.4**	**+0.1**
	24nm,0.5s,baz=266,slow=8.5,SNR=25						
DZM				LR	LR	06 06 24.2	
	comp=Z,353nm,22.0s,baz=344,slow=30						
	24nm,0.5s						
DZM	**Mont Dzumac**	**20.38**	**145**	*e*P	**P**	**06 00 44.7**	**-2.6**
	170nm,1.4s						
DZM				*e*LR	LR	06 05 39.5	
	comp=Z,1μm,23.2s						
DZM	**Mont Dzumac**	**20.38**	**145**	P	**P**	**06 00 46.6**	**-0.7**
DZM				IAmb	IAmb	06 00 57.9	
	comp=Z,82nm,1.2s						
OUENC	**Ouen Island, N**	**20.88**	**145**	P	**P**	**06 00 51.2**	**-1.3**
OUENC				IAmb	IAmb	06 01 04.4	
	comp=Z,27nm,0.8s						
MARNC	**Mare, Loyalty**	**20.89**	**141**	P	**P**	**06 00 51.1**	**-1.6**
GUMO	**Guam**	**21.06**	**335**	P	**P**	**06 00 55.7**	**+1.1**
	comp=Z,22nm,0.4s,baz=223,slow=14,SNR=2.1						
GUMO				LR	LR	06 08 49.2	
	comp=Z,117nm,19.5s,baz=150,slow=36						
	comp=Z,22nm,0.4s						
FAKI	**Fak Fak**	**21.79**	**276**	P	**P**	**06 01 02.5**	**+0.1**
FAKI				IAmb	IAmb	06 01 17.6	
	comp=Z,98nm,1.2s						
SIJI	**Sorong**	**23.11**	**281**	P	**P**	**06 01 15.8**	**-0.5**
	comp=Z,16nm,0.8s,baz=29,slow=6.8,SNR=7.6						
	comp=Z,16nm,0.8s						
SWI	**Sorong**	**23.12**	**281**	P	**P**	**06 01 15.2**	**-1.2**
	comp=Z,36nm,1.2s						
WR0	**Warramunga Arr**	**23.67**	**231**	P	**P**	**06 01 21.5**	**+0.1**
WR0				IAmb	IAmb	06 01 35.4	
	comp=Z,18nm,0.8s						
WB0	**Warramunga Arr**	**23.68**	**232**	P	**P**	**06 01 21.0**	**-0.5**
WB0				IAmb	IAmb	06 01 45.0	
	comp=Z,27nm,1.1s						
WRAB	**Tennant Creek**	**23.80**	**231**	P	**P**	**06 01 22.8**	**+0.1**
WB2	**Warramunga Arr**	**23.81**	**231**	P	**P**	**06 01 22.5**	**-0.2**
WB2				IAmb	IAmb	06 01 50.2	
	comp=Z,16nm,0.6s						
WRA	**Warramunga Arr**	**23.82**	**231**	P	**P**	**06 01 22.4**	**-0.4**
	comp=Z,4.7nm,0.8s,baz=55,slow=9.5,SNR=36						
WRA				PcP	**PcP**	**06 05 05.2**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=58,slow=2.6,SNR=9.7						
WRA				LR	LR	06 10 40.1	
	comp=Z,783nm,19.8s,baz=58,slow=36						
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**23.82**	**231**	P	**P**	**06 01 22.4**	**-0.4**
ARMA	**Armidale**	**24.81**	**185**	P	**P**	**06 01 31.9**	**+0.2**
ARMA				IAmb	IAmb	06 01 46.2	
	comp=Z,44nm,1.2s						
MSAI	**Masohi**	**25.03**	**274**	P	**P**	**06 01 36.3**	**+2.4**
AS31	**Alice Springs**	**26.37**	**225**	P	**P**	**06 01 46.1**	**+0.1**
ASAR	**Alice Springs**	**26.38**	**225**	P	**P**	**06 01 45.7**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=59,slow=8.7,SNR=19						
ASAR				PcP	**PcP**	**06 05 11.2**	**+1.0**
	comp=Z,4.7nm,0.6s,baz=62,slow=2.3,SNR=17						
ASAR				ScP	**ScP**	**06 08 48.4**	**+4.7**
	comp=Z,0.4nm,0.7s,baz=44,slow=3.1,SNR=2.4						
ASAR				LR	LR	06 12 08.3	
	comp=Z,878nm,19.7s,baz=112,slow=36						
	comp=Z,2.9nm,0.8s						

ASAR	**Alice Springs**	**26.38**	**225**	P	**P**	**06 01 45.4 -0.6**
MSVF	**Nonsavu**	**26.48**	**119**	LR	LR	06 11 16.6
	comp=Z,664nm,21.6s,baz=294,slow=34					
KNRA	**Kununurra**	**26.67**	**246**	P	**P**	**06 01 47.4 -1.2**
H11S3	**WAKE ISLAND Hy**	**27.02**	**27**	T	T	06 30 11.5
	baz=208,slow=76,SNR=202					
H11S2	**WAKE ISLAND Hy**	**27.02**	**27**	T	T	06 30 16.1
	baz=208,slow=76,SNR=97					
H11S1	**WAKE ISLAND Hy**	**27.04**	**27**	T	T	06 30 17.1
	baz=208,slow=76,SNR=76					
STKA	**Stephens Creek**	**28.60**	**202**	P	**P**	**06 02 05.1 -0.6**
	comp=Z,1.3nm,0.5s,baz=14,slow=14,SNR=1.7					
STKA				LR	LR	06 13 27.0
	comp=Z,466nm,20.6s,baz=25,slow=36					
	comp=Z,1.3nm,0.5s					
STKA	**Stephens Creek**	**28.60**	**202**	P	**P**	**06 02 05.5 -0.2**
FITZ	**Fitzroy Crossi**	**30.30**	**243**	P	**P**	**06 02 20.2 -0.7**
	comp=Z,9.3nm,0.8s,baz=84,slow=7.6,SNR=17					
FITZ				LR	LR	06 14 57.4
	comp=Z,491nm,20.4s,baz=75,slow=37					
	comp=Z,9.3nm,0.8s					
FITZ	**Fitzroy Crossi**	**30.30**	**243**	P	**P**	**06 02 19.9 -1.0**
FITZ				IAmb	IAmb	06 02 42.9
	comp=Z,12nm,0.8s					
DAV	**Davao City (W)**	**30.96**	**294**	LR	LR	06 14 44.4
	comp=Z,243nm,18.1s,baz=143,slow=36					
LUWI	**Luwuk**	**31.43**	**277**	P	**P**	**06 02 31.3 +0.3**
	comp=Z,51nm,1.4s					
MMRI	**Maumere**	**31.60**	**263**	P	**P**	**06 02 31.0 -1.5**
EDFI	**Ende, Flores**	**32.15**	**262**	P	**P**	**06 02 35.5 -1.9**
	comp=Z,10nm,0.9s					
BKSI	**Bulukumba**	**33.66**	**269**	P	**P**	**06 02 49.9 -0.6**
	comp=Z,15nm,1.2s					
KAPI	**Kappang**	**34.04**	**269**	P	**P**	**06 02 54.0 +0.2**
	comp=Z,12nm,0.9s,baz=182,slow=3.0,SNR=5.5					
KAPI				LR	LR	06 18 54.6
	comp=Z,165nm,20.3s,baz=79,slow=40					
	comp=Z,12nm,0.9s					
KAPI	**Kappang**	**34.04**	**269**	P	**P**	**06 02 53.5 -0.3**
KAPI				IAmb	IAmb	06 02 54.7
	comp=Z,29nm,1.2s					
JCJ	**Chichijima**	**34.41**	**341**	LR	LR	06 15 10.0
	comp=Z,213nm,20.6s,baz=145,slow=33					
AFI	**Afiamalu**	**34.75**	**106**	LR	LR	06 16 39.1
	comp=Z,310nm,18.1s,baz=300,slow=35					
FORT	**Forrest**	**34.93**	**221**	P	**P**	**06 03 00.7 -0.5**
TAU	**Tasmania Unive**	**37.64**	**188**	P	**P**	**06 03 24.4 +0.3**
URZ	**Urewera**	**38.75**	**150**	P	**P**	**06 03 33.9 +0.3**
	comp=Z,8.7nm,0.6s,baz=16,slow=2.5,SNR=8.6					
URZ				LR	LR	06 18 47.1
	comp=Z,236nm,18.3s,baz=20,slow=35					
	comp=Z,8.7nm,0.6s					
BBKI	**Banjar Baru**	**39.03**	**271**	P	**P**	**06 03 37.2 +0.9**
	comp=Z,32nm,0.9s					
RPZ	**Rata Peaks**	**40.87**	**161**	P	**P**	**06 03 51.3 +0.3**
	comp=Z,5.8nm,0.7s,baz=63,slow=9.0,SNR=3.0					
RPZ				LR	LR	06 19 19.1
	comp=Z,463nm,20.5s,baz=328,slow=34					
	comp=Z,5.8nm,0.7s					
PWJI	**Pagerwojo**	**41.90**	**264**	P	P	06 04 17.7 +18
NACB	**Ninganchiao**	**43.22**	**314**	P	**P**	**06 04 09.2 -1.3**
NACB				IAmb	IAmb	06 04 26.4
	comp=Z,18nm,1.0s					
KSM	**Kuching**	**44.13**	**278**	P	**P**	**06 04 17.8 -0.2**
KSM				IAmb	IAmb	06 04 31.5
	comp=Z,9.8nm,0.9s					
JNU	**Nakatsue**	**44.27**	**332**	P	**P**	**06 04 17.8 -1.1**
JNU				IAmb	IAmb	06 04 39.6
	comp=Z,13nm,0.8s					
MJAR	**Matsushiro Arr**	**44.41**	**342**	P	**P**	**06 04 19.0 -0.9**
	comp=Z,0.6nm,0.5s,baz=160,slow=10,SNR=1.9					
MJAR				LR	LR	06 22 36.5
	comp=Z,56nm,19.0s,baz=168,slow=36					
	comp=Z,0.6nm,0.5s					
JHS	**Saijyo**	**44.88**	**336**	P	**P**	**06 04 22.9 -0.7**
LEM	**Lembang**	**46.05**	**266**	LR	LR	06 26 20.4
	comp=Z,107nm,21.6s,baz=106,slow=39					
CNJI	**Cibinong**	**46.53**	**265**	P	P	06 04 53.5 +17
RAR	**Rarotonga**	**47.43**	**114**	LR	LR	06 21 25.2
	comp=Z,147nm,21.4s,baz=296,slow=32					
KSRS	**Korea Array**	**49.20**	**333**	P	**P**	**06 04 56.8 -0.4**
	comp=Z,2.2nm,0.8s,baz=152,slow=8.6,SNR=12					
KSRS				LR	LR	06 24 24.3
	comp=Z,31nm,18.1s,baz=135,slow=34					
	comp=Z,2.2nm,0.8s					
QIZ	**Qiongzhong**	**49.84**	**301**	P	**P**	**06 05 03.1 +0.7**
QIZ				S	**S**	**06 12 11.2 +4.2**
QIZ				LR	LR	
	comp=N,95nm,15.5s					
QIZ				LR	LR	
	comp=E,190nm,20.2s					
QIZ				LR	LR	
	comp=Z,250nm,21.2s					
NJ2	**Nanjing**	**50.16**	**321**	*e*P	**P**	**06 05 03.0 -1.6**
NJ2				pmax	pmax	
	comp=Z,9.0nm,0.6s					
USRK	**Ussuriysk Ar.**	**53.35**	**340**	P	**P**	**06 05 28.5 +0.4**
	comp=Z,1.6nm,0.6s,baz=154,slow=5.5,SNR=2.5					
USRK				LR	LR	06 24 15.2
	comp=Z,80nm,19.9s,baz=217,slow=32					
	comp=Z,1.6nm,0.6s					
IPM	**Ipoh**	**53.78**	**280**	P	**P**	**06 05 31.4 -0.5**
IPM				IAmb	IAmb	06 05 33.7
	comp=Z,22nm,1.5s					
KULM	**Kulim**	**54.29**	**281**	P	**P**	**06 05 35.5 0.0**
KULM				IAmb	IAmb	06 05 36.5
	comp=Z,10.0nm,0.7s					
MDJ	**Mudanjiang**	**54.55**	**339**	P	**P**	**06 05 35.5 -1.3**
MDJ				IAmb	IAmb	06 05 36.3
	comp=Z,7.7nm,0.4s					
ENH	**Enshi**	**55.51**	**313**	P	**P**	**06 05 44.0 -0.1**
HNS	**HongShan**	**56.25**	**323**	⇑P	**P**	**06 05 49.7 +0.5**
HNS				pmax	pmax	
	comp=Z,16nm,1.1s					
PPT	**Papeete**	**56.41**	**107**	LR	LR	06 27 42.1
	comp=Z,84nm,18.8s,baz=301,slow=34					
PPT2	**Papeete2**	**56.41**	**107**	*e*P	**P**	**06 05 51.9 +1.1**
	comp=Z,44nm,27.2s					
PPT2				*e*S	**S**	**06 13 35.0 -1.6**
	comp=Z,100nm,25.5s					
PPT2				*e*LR	LR	06 22 20.7
	comp=Z,192nm,27.5s					
GSI	**Gunungsitoli**	**56.70**	**275**	P	**P**	**06 05 51.4 -1.5**
GSI				IAmb	IAmb	06 06 04.6
	comp=Z,15nm,0.8s					
KLR	**Kul'dur**	**57.91**	**343**	P	**P**	**06 06 00.6 -0.1**
	comp=Z,1.1nm,0.8s,baz=129,slow=9.9,SNR=2.3					
	comp=Z,1.1nm,0.8s					
XAN	**Xi'an**	**57.96**	**316**	P	**P**	**06 06 01.8 +0.3**
XAN				pP	pP	06 06 17.2 -2.4
XAN				pmax	pmax	
	comp=Z,21nm,1.4s					
XAN				LR	LR	
	comp=N,180nm,17.9s					
XAN				LR	LR	
	comp=E,190nm,19.3s					
XAN				LR	LR	
	comp=Z,250nm,22.7s					
KMI	**Kunming**	**58.36**	**304**	⇑P	**P**	**06 06 07.7 +3.1**
KMI				pP	pP	06 06 20.5 -1.9
KMI				pmax	pmax	
	comp=Z,10.0nm,0.5s					
KMI				LR	LR	
	comp=N,130nm,16.4s					
KMI				LR	LR	
	comp=E,200nm,19.7s					
KMI				LR	LR	
	comp=Z,250nm,25.8s					
CRAI	**Chiangrai**	**58.54**	**298**	IAmb	IAmb	06 06 07.7
	comp=Z,13nm,0.9s					
PEA0B	**Petropavlovsk-**	**58.55**	**3**	P	**P**	**06 06 05.6 +0.5**
PETK	**Petropavlovsk-**	**58.55**	**3**	P	**P**	**06 06 05.2 +0.2**
	comp=Z,3.2nm,0.7s,baz=173,slow=6.5,SNR=8.4					
PETK				LR	LR	06 27 34.6
	comp=Z,129nm,21.7s,baz=175,slow=32					
	comp=Z,3.2nm,0.7s					
PETK	**Petropavlovsk-**	**58.55**	**3**	P	**P**	**06 06 05.6 +0.5**
CM31	**Chiang Mai Arr**	**59.23**	**295**	P	**P**	**06 06 11.4 +0.9**
CMAR	**Chiang Mai Arr**	**59.23**	**295**	P	**P**	**06 06 12.1 +1.6**
	comp=Z,12nm,0.8s,baz=112,slow=5.1,SNR=55					
CMAR				LR	LR	06 30 15.4
	comp=Z,91nm,20.6s,baz=135,slow=34					
	comp=Z,12nm,0.8s					
CMAR	**Chiang Mai Arr**	**59.23**	**295**	P	**P**	**06 06 10.8 +0.3**
CHTO	**Chiang Mai**	**59.34**	**296**	P	**P**	**06 06 10.4 -0.8**
CHTO				IAmb	IAmb	06 06 25.5
	comp=Z,22nm,1.2s					

PZH	**PanZhiHua**	**59.74**	**305**	P	**P**	**06 06 13.6 -0.4**
PZH				S	**S**	**06 14 18.2 -1.7**
PZH				pmax	pmax	
	comp=Z,20nm,0.9s					
PZH				pmax	pmax	
	comp=Z,90nm,5.2s					
PZH				LR	LR	
	comp=N,440nm,23.5s					
PZH				LR	LR	
	comp=E,370nm,23.0s					
PZH				LR	LR	
	comp=Z,730nm,24.0s					
XLT	**XiLinHaoTe**	**59.91**	**329**	*e*P	**P**	**06 06 14.8 0.0**
XLT				pmax	pmax	
	comp=Z,15nm,0.5s					
XLT				pmax	pmax	
	comp=Z,100nm,5.0s					
CD2	**Chengdu**	**60.10**	**310**	P	**P**	**06 06 16.8 +0.5**
CD2				pP	pP	06 06 32.5 -2.2
CD2				sP	pwP	06 06 38.4 +0.7
CD2				S	**S**	**06 14 26.6 +2.4**
CD2				sS	sS	06 14 53.5 -3.1
CD2				pmax	pmax	
	comp=Z,30nm,0.8s					
CD2				LR	LR	
	comp=N,230nm,16.2s					
CD2				LR	LR	
	comp=E,230nm,22.6s					
CD2				LR	LR	
	comp=Z,200nm,20.6s					
HHC	**Hu-ho-hao-te**	**60.34**	**324**	*e*P	**P**	**06 06 18.9 +1.1**
HHC				pmax	pmax	
	comp=Z,18nm,1.1s					
HHC				pmax	pmax	
	comp=Z,230nm,6.1s					
HHC				LR	LR	
	comp=N,190nm,16.5s					
HHC				LR	LR	
	comp=E,230nm,17.1s					
HHC				LR	LR	
	comp=Z,370nm,20.3s					
DRV	**Dumont d'Urvil**	**61.75**	**186**	P	**P**	**06 06 27.1 +0.3**
LZH	**Lanzhou**	**62.58**	**316**	⇑P	**P**	**06 06 33.9 +0.8**
LZH				pP	pP	06 06 45.2 -6.2
LZH				sP	pwP	06 06 54.4 -0.5
LZH				pmax	pmax	
	comp=Z,31nm,1.3s					
LZH				pmax	pmax	
	comp=Z,120nm,6.7s					
LZH				LR	LR	
	comp=N,140nm,16.3s					
LZH				LR	LR	
	comp=E,240nm,16.0s					
LZH				LR	LR	
	comp=Z,240nm,18.2s					
MA2	**Magadan**	**65.00**	**358**	LR	LR	06 29 59.9
	comp=Z,53nm,22.0s,baz=149,slow=31					
GTA	**Gaotai**	**66.99**	**317**	⇑P	**P**	**06 07 03.2 +1.5**
GTA				pP	pP	06 07 13.3 -6.9
GTA				sP	pwP	06 07 19.5 -4.4
GTA				pmax	pmax	
	comp=Z,19nm,1.2s					
GTA				pmax	pmax	
	comp=Z,150nm,5.5s					
GTA				LR	LR	
	comp=N,77nm,15.3s					
GTA				LR	LR	
	comp=E,160nm,16.7s					
GTA				LR	LR	
	comp=Z,130nm,17.1s					
SONM	**Songino Array**	**67.58**	**327**	P	**P**	**06 07 05.8 +0.6**
	comp=Z,1.8nm,0.5s,baz=140,slow=5.5,SNR=9.8					
SONM				LR	LR	06 36 28.4
	comp=Z,82nm,19.5s,baz=146,slow=36					
	comp=Z,1.8nm,0.5s					
SONM	**Songino Array**	**67.58**	**327**	P	**P**	**06 07 05.2 -0.1**
GOMU	**GeErMu**	**69.12**	**312**	P	**P**	**06 07 11.2 -4.2**
GOMU				S	S	06 16 25.3 +10
GOMU				sS	sS	06 16 42.2 -4.6
GOMU	**GeErMu**	**69.12**	**312**	SS	SS	06 20 34.5 -8.9
GOMU				pmax	pmax	
	comp=Z,3.0nm,0.5s					
GOMU				LR	LR	
	comp=N,80nm,21.4s					
GOMU				LR	LR	
	comp=E,76nm,19.6s					
GOMU				LR	LR	
	comp=Z,120nm,21.6s					
LSA	**Lhasa**	**69.61**	**304**	P	**P**	**06 07 18.3 -0.3**
LSA				IAmb	IAmb	06 07 34.0
	comp=Z,12nm,1.1s					
YAK	**Yakutsk**	**69.96**	**348**	LR	LR	06 39 41.0
	comp=Z,45nm,18.5s,baz=90,slow=37					
CCD	**Concordia, Ant**	**71.65**	**188**	P	P	06 07 41.1 +11
VNDA	**Vanda**	**72.02**	**178**	P	**P**	**06 07 32.4 +0.6**
	comp=Z,1.6nm,1.0s,baz=299,slow=3.5,SNR=3.1					
	comp=Z,1.6nm,1.0s					
VNDA	**Vanda**	**72.02**	**178**	P	**P**	**06 07 32.5 +0.6**
SBA	**Scott Base**	**72.55**	**177**	P	**P**	**06 07 34.5 -0.4**
SBA				IAmb	IAmb	06 08 00.9
	comp=Z,22nm,1.5s					
PALK	**Pallekele**	**74.18**	**279**	LR	LR	06 42 57.1
	comp=Z,43nm,21.3s,baz=224,slow=38					
WMQ	**Urumqi**	**77.08**	**317**	*e*P	**P**	**06 08 02.8 +1.0**
WMQ				LR	LR	
	comp=N,180nm,18.9s					
WMQ				LR	LR	
	comp=E,250nm,20.7s					
WMQ				LR	LR	
	comp=Z,75nm,22.7s					
HYBB	**Hyderabad (bro**	**77.82**	**289**	*e*P	**P**	**06 08 08.8 +2.4**
L19K	**White Mountain**	**78.04**	**22**	P	**P**	**06 08 06.0 -0.7**
L19K				IAmb	IAmb	06 08 27.6
	comp=Z,7.6nm,1.0s					
TIXI	**Tiksi**	**78.81**	**352**	LR	LR	06 40 49.6
	comp=Z,54nm,21.9s,baz=180,slow=34					
MLY	**Manley**	**81.20**	**21**	P	**P**	**06 08 23.4 -0.4**
MKAR	**Makanchi Array**	**81.65**	**319**	P	**P**	**06 08 26.9 +0.3**
	comp=Z,4.5nm,0.8s,baz=108,slow=5.3,SNR=21					
MKAR				LR	LR	06 44 22.3
	comp=Z,69nm,20.6s,baz=95,slow=35					
	comp=Z,4.5nm,0.8s					
MKAR	**Makanchi Array**	**81.65**	**319**	P	**P**	**06 08 27.3 +0.7**
MAKZ	**Makanchi**	**81.86**	**319**	P	**P**	**06 08 28.1 +0.4**
MAKZ				IAmb	IAmb	06 08 39.3
	comp=Z,15nm,0.9s					
ZALV	**Zalesovo Beam**	**82.42**	**326**	P	**P**	**06 08 29.6 -0.8**
	comp=Z,2.6nm,0.5s,baz=118,slow=6.0,SNR=8.3					
ZALV				LR	LR	06 43 20.6
	comp=Z,41nm,21.9s,baz=111,slow=34					
	comp=Z,2.6nm,0.5s					
ILAR	**Eielson Array**	**82.45**	**22**	P	**P**	**06 08 28.9 -1.4**
	comp=Z,1.3nm,0.6s,baz=245,slow=5.3,SNR=14					
ILAR				LR	LR	06 42 11.3
	comp=Z,276nm,20.4s,baz=228,slow=34					
	comp=Z,1.3nm,0.6s					
J25K	**Salcha River,**	**82.94**	**22**	P	**P**	**06 08 31.9 -1.0**
M27K	**Edge Creek, AK**	**83.29**	**25**	IAmb	IAmb	06 08 56.0
	comp=Z,6.5nm,0.8s					
KSH	**Kashi**	**84.30**	**311**	P	**P**	**06 08 43.8 +3.2**
KSH				pP	pP	06 08 54.2 -5.8
KSH				sP	sP	06 09 10.0 +2.1
KSH				pmax	pmax	
	comp=Z,8.0nm,0.8s					
QSPA	**South Pole Qui**	**84.39**	**180**	P	**P**	**06 08 40.9 +0.4**
QSPA				IAmb	IAmb	06 09 02.6
	comp=Z,17nm,0.9s					
BMAR	**Burnt Mountain**	**84.58**	**20**	P	**P**	**06 08 41.8 +0.5**
KURK	**Kurchatov**	**85.08**	**322**	P	**P**	**06 08 43.5 -0.5**
KURK				IAmb	IAmb	06 08 55.1
	comp=Z,17nm,1.2s					
KURBB	**Kurchatov Arra**	**85.11**	**322**	P	**P**	**06 08 43.8 -0.4**
	comp=Z,1.2nm,0.6s,baz=103,slow=4.1,SNR=12					
	comp=Z,1.2nm,0.6s					
**MAW

KKAR	**Karatay Array**	**88.99**	**313**	P	**P**	06 09 02.6	-0.6
BRVK	**Borovoye**	**90.61**	**323**	P	**P**	06 09 09.7	-0.8
BRVK				IAmb	IAmb	06 09 32.7	
	comp=Z,5.7nm,0.9s						
NVAR	**Mina Array Bea**	**91.67**	**52**	P	**P**	06 09 15.5	-0.5
	comp=Z,0.5nm,0.8s,baz=251,slow=8.5,SNR=2.3						
NVAR				LR	LR	06 47 13.8	
	comp=Z,107nm,18.3s,baz=274,slow=33						
	comp=Z,0.5nm,0.8s						
PFO	**Pinyon Flats O**	**92.72**	**57**	LR	LR	06 43 03.8	
	comp=Z,118nm,20.9s,baz=281,slow=30						
NEW	**Newport**	**93.41**	**42**	LR	LR	06 45 42.4	
	comp=Z,248nm,20.1s,baz=286,slow=32						
RPN	**Rapa Nui**	**93.45**	**118**	LR	LR	06 45 57.7	
	comp=Z,60nm,19.9s,baz=320,slow=32						
ELK	**Elko**	**94.22**	**50**	LR	LR	06 44 22.3	
	comp=Z,175nm,22.0s,baz=284,slow=31						
YKA	**Yellowknife Ar**	**95.58**	**28**	LR	LR	06 48 17.7	
	comp=Z,102nm,20.8s,baz=318,slow=33						
LPIG	**La Paz**	**97.49**	**66**	LR	LR	06 45 02.0	
	comp=Z,156nm,22.0s,baz=240,slow=30						
ARU	**Arti**	**97.59**	**326**	LR	LR	06 55 01.5	
	comp=Z,54nm,20.6s,baz=114,slow=36						
AKTO	**Aktyubinsk**	**98.04**	**320**	LR	LR	06 53 26.9	
	comp=Z,42nm,21.9s,baz=69,slow=35						
PDAR	**Pinedale Array**	**98.53**	**48**	P	**P**	**06 09 47.2**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=252,slow=4.6,SNR=1.3						
PDAR				LR	LR	06 47 35.9	
	comp=Z,235nm,21.9s,baz=263,slow=31						
	comp=Z,0.1nm,0.5s						
TROLL	**Troll, Antarti**	**100.36**	**189**	Pdiff	**Pdif**	06 09 54.5	-0.2
BOSA	**Boshof**	**120.06**	**232**	PKP	**PKiKP**	06 15 00.1	+0.5
	comp=Z,1.4nm,0.7s,baz=165,slow=2.3,SNR=4.4						
GERES	**GERESS Array B**	**125.30**	**329**	PKP	**PKPdf**	**06 15 08.9**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=90,slow=1.3,SNR=2.4						
BDFB	**Brasilia**	**149.72**	**134**	PKPbc	**PKPbc**	**06 15 59.1**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=198,slow=0.3,SNR=6.1						
TORD	**Torodi Ar. Bea**	**151.62**	**287**	PKPbc	**PKPbc**	**06 16 03.2**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=78,slow=2.2,SNR=22						
TORD				PKPab	**PKPab**	**06 16 12.1**	**-0.1**
	comp=Z,10nm,0.9s,baz=62,slow=2.5,SNR=26						
DBIC	**Dimbokro**	**158.89**	**274**	PKPab	**PKPab**	**06 16 43.1**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=113,slow=5.5,SNR=4.5						

*ARE **07** 06:06:35±2.6, 18°.08S±0°.05×70°.4W±0°.1, h30km±7km, Error ellipse: s-maj=14.5km s-min=6.5km az=100.0*
*GUC **07** 06:06:36.7±0.7, 17°.89S×70°.26W, h32km±2km, ML3.9*
*NEIC **07** 06:06:37.0±2.1, 17°.94S±0°.05×70°.5W±0°.1, h36km±11km, mb4.2/1, ML3.9(GUC), ML4.0(ARE), Error ellipse: s-maj=16.8km s-min=6.5km az=93.0*

ISC 07 06:06:35.8±1.7, 17°.89S±0°.07×70°.40W±0°.09, h30km±12km, n37, σ0s99/44, 1C-3D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AP01	**Chacalluta**	**0.48**	**173**			**Pb**	**06 06 46.0**	**+0.1**
AP01				Sn		**Sn**	06 06 53.7	-0.5
AP01	**Chacalluta**	**0.48**	**173**	⇓*i*	*P*	**Pb**	**06 06 46.2**	**+0.2**
AP01				*i*	S	**Sn**	06 06 53.8	-0.3
PB12	**IPOC Station P**	**0.72**	**175**			**Pn**	**06 06 49.4**	**-0.8**
PB12				Sn		**Sb**	06 06 59.5	-0.2
PB12	**IPOC Station P**	**0.72**	**175**	⇓*i*	*P*	**Pn**	**06 06 49.5**	**-0.7**
PB12				*i*	S	**Sb**	06 06 59.3	-0.4
PB12				IAML			06 07 00.2	
	comp=N,6μm,0.2s							
PB18	**Visviri**	**0.93**	**71**			**Pn**	**06 06 54.1**	**+0.8**
PB16	**IPOC Station P**	**0.96**	**118**			**Pn**	**06 06 52.6**	**-1.1**
PB16	**IPOC Station P**	**0.96**	**118**	⇑*i*	*P*	**Pn**	**06 06 52.7**	**-1.1**
PB16				*i*	S	**Sn**	**06 07 04.9**	**-1.8**
PB16				IAML			06 07 05.5	
	comp=N,8μm,0.4s							
GO01	**Chusmiza**	**2.11**	**147**			**Pn**	**06 07 10.7**	**+1.2**
GO01	**Chusmiza**	**2.11**	**147**	⇓*i*	*P*	**Pn**	**06 07 10.7**	**+1.2**
GO01				*i*	S	**Sn**	**06 07 36.3**	**+1.4**
GO01				IAML			06 07 43.6	
	comp=E,1μm,0.1s							
TA02	**Huaiquique**	**2.38**	**174**			**Pn**	**06 07 13.6**	**+0.7**
TA02	**Huaiquique**	**2.38**	**174**	*e*	*P*	**Pn**	**06 07 13.3**	**+0.5**
TA01	**Diego Aracena**	**2.67**	**176**	Pn		**Pn**	**06 07 17.6**	**+0.8**
TA01	**Diego Aracena**	**2.67**	**176**	*e*	*P*	**Pn**	**06 07 17.1**	**+0.3**
TA01				*i*	S	**Sn**	**06 07 48.8**	**+0.7**
TA01				IAML			06 08 04.3	
	comp=E,336nm,0.3s							
LPAZ	**La Paz**	**2.69**	**54**			**Pn**	**06 07 19.4**	**+1.8**
PATCX	**Punta Patache**	**2.93**	**175**			**Pn**	**06 07 20.6**	**+0.2**
PATCX	**Punta Patache**	**2.93**	**175**	*e*	*P*	**Pn**	**06 07 20.6**	**+0.2**
PATCX				IAML			06 08 16.6	
	comp=E,487nm,0.6s							
PB01	**IPOC Station P**	**3.25**	**165**			**Pn**	**06 07 24.6**	**-0.2**
PB01	**IPOC Station P**	**3.25**	**165**	*i*	*P*	**Pn**	**06 07 24.7**	**-0.2**
PB01				IAML			06 08 19.4	
	comp=E,339nm,0.5s							
PB02	**IPOC Station P**	**3.45**	**172**			**Pn**	**06 07 28.0**	**+0.5**
PB02	**IPOC Station P**	**3.45**	**172**	*i*	*P*	**Pn**	**06 07 28.1**	**+0.5**
PB07	**IPOC Station P**	**3.85**	**173**			**Pn**	**06 07 33.5**	**+0.4**
PB07	**IPOC Station P**	**3.85**	**173**	*i*	*P*	**Pn**	**06 07 33.9**	**+0.7**
PB09	**IPOC Station P**	**4.04**	**165**			**Pn**	**06 07 37.5**	**+1.7**
PB09	**IPOC Station P**	**4.04**	**165**	*i*	*P*	**Pn**	**06 07 37.6**	**+1.9**
PB04	**IPOC Station P**	**4.43**	**177**			**Pn**	**06 07 42.0**	**+0.8**
PB06	**IPOC Station P**	**4.86**	**171**			**Pn**	**06 07 46.9**	**-0.1**
LVC	**Limon Verde**	**4.90**	**164**	Pn		**Pn**	**06 07 49.4**	**+1.6**
PB15	**IPOC Station P**	**5.37**	**171**			**Pn**	**06 07 54.8**	**+0.8**
PB14	**IPOC Station P**	**6.71**	**180**	Pn		**Pn**	**06 08 11.4**	**-1.1**
GO02	**Mina Guanaco**	**7.28**	**174**	Pn		**Pn**	**06 08 20.6**	**+0.2**
AC01	**Pan de Azucar**	**8.22**	**181**	Pn		**Pn**	**06 08 31.1**	**-2.0**
AC02	**Maricunga**	**8.98**	**173**	Pn		**Pn**	**06 08 43.0**	**-0.9**
ETMB	**Extrema**	**8.99**	**27**	Pn		**Pn**	**06 08 44.4**	**+0.7**
VILB	**Vilhena**	**10.99**	**65**	Pn		**Pn**	**06 09 12.5**	**+1.4**
PTLB	**Pontes e Lacer**	**11.06**	**79**	Pn		**Pn**	**06 09 13.0**	**+1.0**
SAML	**Samuel**	**11.32**	**39**	Pn		**Pn**	**06 09 15.7**	**+0.1**
TRQA	**Tornquist**	**21.41**	**162**	P		**P**	**06 11 20.8**	**-0.4**
TRQA				IAmb		IAmb	06 11 29.3	
	comp=Z,16nm,1.5s							

*IDC **07** 06:09:49.8±1.2, 10°.35N×83°.77W, h0km, mb3.9/8, mbtmp4.0/11, ML3.7/3, MS3.5/8, Error ellipse: s-maj=34.1km s-min=21.8km az=35.0*
*INET **07** 06:09:50.1±1.1, 10°.58N×83°.81W, h2km±2km, MW4.8*
*NEIC **07** 06:09:50.9±2.0, 10°.60N±0°.04×83°.87W±0°.04, h16km±6km, mb4.5/12, ML4.8(UCR), Error ellipse: s-maj=7.9km s-min=2.9km az=225.0*
*UCR **07** 06:09:51.7±1.4, 10°.58N×83°.89W, h13km±6km, MW4.9, mb4.5(NEIC), Fault plane solution: NP1:φs221.32000°, δ85.02000°, λ29.62000°.*
*UPA **07** 06:09:51.5±2.3, 10°.56N×83°.87W, h9km±53km, MW4.1*

ISC 07 06:09:50.5±1.1, 10°.61N±0°.03×83°.83W±0°.03, h11km±7km, n156, σ1s52/179, mb4.0/13, MS3.5/8, 23C-27D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RIFO	**Rio Frio, Sara**	**0.31**	**197**	⇓*eP*		**Pg**	**06 09 57.2**	**+0.4**
RIFO				*eS*		**Sg**	**06 10 01.7**	**+0.8**
CRPO	**Crater poas**	**0.57**	**223**	⇑*eP*		**Pg**	**06 10 01.7**	**0.0**
CRPO				*eS*		**Sb**	**06 10 09.4**	**-1.6**
COVE	**Coope Vega, Sa**	**0.57**	**281**			**Pg**	**06 10 01.6**	**-0.1**
COVE	**Coope Vega, Sa**	**0.57**	**281**	⇑*eP*		**Pg**	**06 10 01.6**	**-0.1**
COVE				*eS*		**Sg**	**06 10 09.3**	**+0.2**
VTUN	**Crater Central**	**0.59**	**173**	⇓*eP*		**Pg**	**06 10 02.6**	**+0.4**
CVTR	**Volcan Turrial**	**0.59**	**173**			**Pg**	**06 10 02.6**	**+0.4**
CVTR	**Volcan Turrial**	**0.59**	**173**	⇓*eP*		**Pg**	**06 10 02.6**	**+0.4**
VTRT	**Volcan Turrial**	**0.61**	**176**	⇓*eP*		**Pg**	**06 10 02.8**	**+0.3**
VTCV	**VTCV, Calle Va**	**0.64**	**171**	⇓*eP*		**Pg**	**06 10 03.2**	**+0.2**
RAFA	**San Farael, Vo**	**0.65**	**178**	⇓*eP*		**Pg**	**06 10 03.2**	**-0.1**
HDC3	**Heredia 3**	**0.67**	**204**	⇓*eP*		**Pg**	**06 10 03.3**	**-0.2**
HDC3	**Heredia 3**	**0.67**	**204**	*eP*		**Pg**	**06 10 03.4**	**-0.1**
HDC3				*eS*		**Sb**	**06 10 13.6**	**-0.1**
HDC	**Heredia**	**0.67**	**204**			**Pg**	**06 10 03.3**	**-0.2**
HDC				Sg		**Sb**	**06 10 12.9**	**-0.9**
HDC	**Heredia**	**0.67**	**204**	⇓*eP*		**Pg**	**06 10 03.4**	**-0.2**
HDC	**Heredia**	**0.67**	**204**	⇓*iP*		**Pg**	**06 10 03.4**	**-0.1**
HDC				*eS*		**Sb**	**06 10 12.5**	**-1.2**
SJS	**Escuela Geolog**	**0.70**	**198**	⇓*eP*		**Pg**	**06 10 04.1**	**-0.2**
OCM	**Ochomogo**	**0.73**	**190**	⇓*eP*		**Pg**	**06 10 04.4**	**-0.3**
SRA1	**San Ramn**	**0.83**	**231**	⇑*eP*		**Pg**	**06 10 06.0**	**-0.5**
FORC	**Fortuna**	**0.84**	**260**	⇑*eP*		**Pg**	**06 10 06.4**	**-0.3**
RIMA	**Rio Macho**	**0.84**	**182**			**Pg**	**06 10 06.4**	**-0.4**
RIMA				Sg		**Sg**	**06 10 17.4**	**-0.5**
RIMA	**Rio Macho**	**0.84**	**182**	⇓*eP*		**Pg**	**06 10 06.5**	**-0.4**
RIMA	**Rio Macho**	**0.84**	**182**	*eP*		**Pg**	**06 10 06.5**	**-0.4**
CEDE	**Laguna Cedeo**	**0.87**	**262**	⇑*eP*		**Pg**	**06 10 06.9**	**-0.4**
MRVA	**Moravia de Chi**	**0.87**	**154**	⇓*eP*		**Pg**	**06 10 07.1**	**-0.3**
LCR2	**La Lucha 2**	**0.88**	**191**	⇓*eP*		**Pb**	**06 10 08.3**	**+0.2**
LCR2				*eS*		**Sb**	**06 10 19.9**	**-0.1**
CDM	**Cerro de Muert**	**1.06**	**176**	⇓*eP*		**Pg**	**06 10 09.9**	**-1.0**
CDM	**Cerro de Muert**	**1.06**	**176**	*eP*		**Pg**	**06 10 10.0**	**-1.0**
JTS	**Las Juntas de**	**1.15**	**254**	Pn		**Pb**	**06 10 10.7**	**-1.7**
JTS	**Las Juntas de**	**1.15**	**254**	⇑*iP*		**Pb**	**06 10 10.9**	**-1.5**
JTS				*eS*		**Sb**	**06 10 22.6**	**-4.8**
JTS	**Las Juntas de**	**1.15**	**254**	⇑*eP*		**Pb**	**06 10 10.8**	**-1.7**
JTS	**Las Juntas de**	**1.15**	**254**	*eP*		**Pb**	**06 10 10.9**	**-1.5**
JTS				*eS*		**Sb**	**06 10 25.4**	**-2.0**
ACAL	**Aguas Claras**	**1.18**	**271**	⇑*eP*		**Pb**	**06 10 11.5**	**-1.6**
ACAL				*eS*		**Sb**	**06 10 26.7**	**-1.7**
PEZE	**Perez Zeledon,**	**1.23**	**173**	Pn		**Pn**	**06 10 12.3**	**-1.6**
PEZE	**Perez Zeledon,**	**1.23**	**173**	⇓*eP*		**Pn**	**06 10 12.5**	**-1.3**
PEZE	**Perez Zeledon,**	**1.23**	**173**	*eP*		**Pn**	**06 10 12.6**	**-1.3**
JACO	**JACO, Garabito**	**1.25**	**221**			**Pn**	**06 10 13.1**	**-0.9**
JACO	**JACO, Garabito**	**1.25**	**221**	⇓*eP*		**Pn**	**06 10 12.8**	**-1.2**
CUI	**Cuipilapa**	**1.31**	**272**	⇑*eP*		**Pn**	**06 10 13.6**	**-1.3**
HORNC	**Hornillas**	**1.33**	**274**	⇑*eP*		**Pn**	**06 10 13.7**	**-1.4**
LAFE	**Finca La Fe, P**	**1.33**	**233**	⇑*eP*		**Pn**	**06 10 14.9**	**-0.2**
LAFE	**Finca La Fe, P**	**1.33**	**233**	*eP*		**Pn**	**06 10 14.9**	**-0.2**
COLC	**Colonia**	**1.35**	**272**	⇑*eP*		**Pn**	**06 10 14.3**	**-1.1**
EDDO	**Dominical**	**1.35**	**181**	*eP*		**Pn**	**06 10 15.2**	**-0.2**
GUAB	**Guayabo de Bag**	**1.38**	**274**	⇑*eP*		**Pn**	**06 10 14.7**	**-1.1**
SRBA	**San Rafael, Bu**	**1.45**	**161**	Pn		**Pn**	**06 10 15.9**	**-1.0**
DRK0	**Durika**	**1.46**	**157**			**Pn**	**06 10 17.4**	**+0.3**
DRK0	**Durika**	**1.46**	**157**	⇓*eP*		**Pn**	**06 10 17.6**	**+0.5**
DRK0	**Durika**	**1.46**	**157**	⇓*iP*		**Pn**	**06 10 17.4**	**+0.3**
DRK0				*eS*		**Sn**	**06 10 35.5**	**-0.9**
GPS2	**Hotel Rincn d**	**1.50**	**275**	*eP*		**Pn**	**06 10 16.4**	**-1.1**
GPS3	**Bodega del ICE**	**1.51**	**275**	*eP*		**Pn**	**06 10 17.2**	**-0.4**
VRLE	**La Escondida,**	**1.52**	**277**	⇑*eP*		**Pn**	**06 10 16.5**	**-1.2**
PLVR	**Palo Verde**	**1.52**	**260**	⇑*eP*		**Pn**	**06 10 16.0**	**-1.8**
EDBA	**Buenos Aires**	**1.54**	**159**	⇓*eP*		**Pn**	**06 10 17.4**	**-0.6**
GB1A	**Borinquen Arri**	**1.55**	**278**	*eP*		**Pn**	**06 10 17.9**	**-0.3**
BUEV	**Buena Vista**	**1.56**	**277**	*eP*		**Pn**	**06 10 17.5**	**-0.8**
ORTG	**Ortega, Santa**	**1.62**	**261**			**Pn**	**06 10 18.3**	**-0.9**
ORTG	**Ortega, Santa**	**1.62**	**261**	⇑*eP*		**Pn**	**06 10 18.2**	**-0.9**
ORTG	**Ortega, Santa**	**1.62**	**261**	*eP*		**Pn**	**06 10 18.4**	**-0.7**
ESPN	**Las Esperanzas**	**1.64**	**344**			**Pn**	**06 10 18.8**	**-0.5**
ESPN	**Las Esperanzas**	**1.64**	**344**	⇓*eP*		**Pn**	**06 10 19.0**	**-0.3**
EDPN	**Palmar Norte**	**1.68**	**167**	⇓*eP*		**Pn**	**06 10 21.0**	**+1.0**
POTG	**Potrero Grande**	**1.70**	**156**	⇓*eP*		**Pn**	**06 10 20.5**	**+0.2**
DUNO	**Dulce Nombre,**	**1.72**	**252**			**Pn**	**06 10 20.0**	**-0.5**
DUNO	**Dulce Nombre,**	**1.72**	**252**	⇑*eP*		**Pn**	**06 10 20.0**	**-0.5**
DUNO	**Dulce Nombre,**	**1.72**	**252**	*eP*		**Pn**	**06 10 20.2**	**-0.3**
HZTE	**Horizontes, Gu**	**1.73**	**273**			**Pn**	**06 10 20.2**	**-0.6**
HZTE	**Horizontes, Gu**	**1.73**	**273**	*eP*		**Pn**	**06 10 19.9**	**-0.8**
HZTE	**Horizontes, Gu**	**1.73**	**273**	*eP*		**Pn**	**06 10 20.1**	**-0.6**
HZTE				*eS*		**Sb**	**06 10 44.3**	**-0.1**
CNI2	**El Empalme, Bo**	**1.79**	**131**	⇑*iP*		**Pn**	**06 10 21.7**	**+0.3**
CNI2				*eS*		**Sn**	**06 10 42.6**	**-1.5**
INDI	**Punta indio, G**	**1.80**	**246**	⇑*eP*		**Pn**	**06 10 21.4**	**-0.3**
ACON	**Acoyapa**	**1.88**	**316**			**Pn**	**06 10 21.7**	**-1.0**
ACON	**Acoyapa**	**1.88**	**316**	⇓*eP*		**Pn**	**06 10 21.7**	**-1.0**
ACON	**Acoyapa**	**1.88**	**316**	*eP*		**Pn**	**06 10 21.8**	**-1.0**
GRZA	**Playa Garza**	**1.91**	**249**	⇑*eP*		**Pn**	**06 10 22.9**	**-0.1**
SAJU	**San Juanillo,**	**1.93**	**254**	⇑*eP*		**Pn**	**06 10 23.1**	**-0.2**
EDSV	**San Vito**	**1.97**	**154**	*eP*		**Pn**	**06 10 25.9**	**+1.8**
BRU2	**Volcan**	**2.13**	**148**			**Pn**	**06 10 26.8**	**+0.5**
BRU2	**Volcan**	**2.13**	**148**	*eP*		**Pn**	**06 10 27.0**	**+0.7**
BRU2				*eS*		**Sn**	**06 10 53.9**	**+1.1**
BRU2				*i*			06 10 59.6	
	comp=Z,1μm,0.4s							
BRU2	**Volcan**	**2.13**	**148**	*eP*		**Pn**	**06 10 26.8**	**+0.5**
BRU2	**Volcan**	**2.13**	**148**	*eP*		**Pn**	**06 10 26.9**	**+0.7**
BRU2				*eS*		**Sn**	**06 10 52.4**	**-0.5**
PTJ1	**Puerto Jimnez**	**2.13**	**166**	*eP*		**Pn**	**06 10 27.1**	**+0.9**
BC3P	**Paso Ancho**	**2.15**	**146**	*eP*		**Pn**	**06 10 27.6**	**+0.9**
CDITO	**Canoas**	**2.24**	**155**			**Pn**	**06 10 28.4**	**+0.7**
CDITO	**Canoas**	**2.24**	**155**	⇓*eP*		**Pn**	**06 10 28.3**	**+0.7**
CDITO	**Canoas**	**2.24**	**155**	⇑*iP*		**Pn**	**06 10 29.5**	**+1.9**
CDITO				*eS*		**Sb**	**06 10 59.0**	**+0.2**
BCO2	**Palmira**	**2.28**	**146**	*eP*		**Pn**	**06 10 29.3**	**+0.9**
BCO2				*eS*		**Sn**	**06 10 57.0**	**+0.4**
PTAR3	**Potrerillos Ar**	**2.32**	**145**	*eP*		**Pn**	**06 10 30.5**	**+1.6**
PTAR3				*eS*		**Sn**	**06 10 58.2**	**+0.8**
CCOL	**Caracol de Cor**	**2.35**	**159**	⇓*eP*		**Pn**	**06 10 29.8**	**+0.7**
CHGR2	**Aguacate**	**2.35**	**135**	*eP*		**Pn**	**06 10 29.3**	**+0.1**
CHGR2				*eS*		**Sn**	**06 10 56.8**	**-1.4**
DVD	**David**	**2.56**	**148**	*eP*		**Pn**	**06 10 33.7**	**+1.7**
DVD				*eS*		**Sn**	**06 11 04.5**	**+1.3**
BOAB	**BOACO BROADBAN**	**2.56**	**316**	Pn		**Pn**	**06 10 31.1**	**-1.0**
CHIR3	**Chiriqui UPA,**	**2.66**	**146**	⇓*iP*		**Pn**	**06 10 34.9**	**+1.6**
CHIR3				*eS*		**Sn**	**06 11 05.8**	**+0.2**
MATN	**Matagalpa**	**3.08**	**319**			**Pn**	**06 10 38.6**	**-0.7**
REME3	**Remedios, Chir**	**3.09**	**140**	*eS*		**Sn**	**06 11 19.4**	**+3.2**
CNGN	**Cerro Negro**	**3.38**	**304**			**Pn**	**06 10 43.5**	**+0.1**
CNGN	**Cerro Negro**	**3.38**	**304**	*eP*		**Pn**	**06 10 48.8**	**-1.7**
RCON	**San Juan de Ri**	**3.65**	**322**	*eP*		**Pn**	**06 10 46.8**	**-0.4**
PRVC	**Isla de Provid**	**3.66**	**41**	*eP*		**Pn**	**06 10 47.4**	**+0.3**
PRVC				*eS*		**Sn**	**06 11 29.1**	**-1.2**
PRVC				*i*			06 11 34.0	
	comp=Z,462nm,0.4s							
BCIP	**Isla Barro Col**	**4.19**	**110**	Pn		**Pn**	**06 10 53.5**	**-1.0**
BCIP	**Isla Barro Col**	**4.19**	**110**	⇑*eP*		**Pn**	**06 10 53.3**	**-1.2**
BCIP				*eS*		**Sn**	**06 11 38.8**	**-4.7**
BCIP				*i*			06 11 42.2	
	comp=Z,235nm,0.3s							
BCIP	**Isla Barro Col**	**4.19**	**110**	*eP*		**Pn**	**06 10 53.5**	**-1.0**
BCIP				*eS*		**Sn**	**06 11 39.6**	**-4.0**
BCIP	**Isla Barro Col**	**4.19**	**110**	*eP*		**Pn**	**06 10 53.5**	**-1.0**
CACAO	**El Cacao, Vera**	**4.38**	**138**	*eP*		**Pn**	**06 10 59.5**	**+2.4**
AZU	**Azuero**	**4.50**	**128**	*eS*		**Sn**	**06 11 50.8**	**-0.2**
UPA	**Univ. de Panam**	**4.54**	**111**	*eP*		**Pn**	**06 10 58.7**	**-0.6**
UPA				*eS*		**Sn**	**06 11 47.5**	**-4.6**
UPA				*i*			06 11 51.9	
	comp=Z,77nm,0.4s							
UPA	**Univ. de Panam**	**4.54**	**111**	*eP*		**Pn**	**06 10 58.3**	**-0.9**
UPA				*eS*		**Sn**	**06 11 47.8**	**-4.3**
TGUH	**Tegucigalpa,Un**	**4.80**	**316**	Pn		**Pn**	**06 11 02.4**	**0.0**
TGUH	**Tegucigalpa,Un**	**4.80**	**316**	*eP*		**Pn**	**06 11 03.0**	**+0.1**
TGUH				*eS*		**Sb**	**06 12 13.7**	**+1.0**
TGUH				*i*			06 12 23.8	
	comp=Z,484nm,0.6s							
TGUH	**Tegucigalpa,Un**	**4.80**	**316**	*eP*		**Pn**	**06 11 03.0**	**0.0**
MTO3	**Montecristo**	**6.58**	**305**			**Pn**	**06 11 28.4**	**+0.8**
LCBC	**Los crdobas,**	**7.56**	**103**	*eP*		**Pn**	**06 11 42.1**	**+1.3**
LCBC				*eS*		**Sn**	**06 13 02.5**	**-4.1**
LCBC				*i*			06 13 11.8	
	comp=Z,72nm,0.3s							
SJCC	**San Jacinto, C**	**8.55**	**94**	*eP*		**Pn**	**06 11 54.2**	**-0.2**
UREC	**San Jos de Ur**	**8.67**	**108**	*eP*		**Pn**	**06 11 55.9**	**-0.2**
ZARC	**Zaragoza, Cauc**	**9.39**	**109**	*eP*		**Pn**	**06 12 06.6**	**+0.7**
ZARC				*i*			06 13 51.7	
	comp=Z,15nm,0.5s							
ARGC	**Ariguani, Magd**	**9.47**	**94**	*eP*		**Pn**	**06 12 06.8**	**-0.2**
MTDJ	**Mount Denham**	**9.72**	**38**	*eP*		**Pn**	**06 12 12.1**	**+1.6**
CRJC	**Cerrejon, Guaj**	**10.77**	**87**	*eP*		**Pn**	**06 12 22.9**	**-1.9**
CRJC				*i*			06 14 26.8	
	comp=Z,24nm,0.5s							
URIC	**Uribia, Colomb**	**11.67**	**84**	*eP*		**Pn**	**06 12 35.9**	**-1.3**
PULU	**Pululahua**	**11.78**	**153**	Pn		**Pn**	**06 12 38.6**	**-0.5**
GTBY	**Guantanamo Bay**	**12.51**	**41**	*eP*		**Pn**	**06 12 50.7**	**+2.1**
CMIG	**Matias Romero**	**12.51**	**302**	Pn		**Pn**	**06 12 50.6**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=127,slow=10,SNR=1.9							
	comp=Z,0.8nm,0.5s							
CHSH	**Refugio Sur-Vo**	**13.00**	**157**	Pn		**Pn**	**06 12 55.1**	**-0.8**
PORT	**Chimborazo Vol**	**13.01**	**157**	Pn		**Pn**	**06 12 54.3**	**-1.8**
SDV	**Santo Domingo**	**13.12**	**96**	Pn		**Pn**	**06 12 56.3**	**-0.9**
	comp=Z,2.7nm,0.3s,baz=297,slow=11,SNR=11							
SDV				Sn		**Sn**	**06 15 16.8**	**-6.6**
	comp=Z,9.2nm,0.3s,baz=330,slow=15,SNR=8.5							
	comp=Z,17nm,0.6s							
SDV	**Santo Domingo**	**13.12**	**96**			**Pn**	**06 12 55.8**	**-1.4**
BAUV	**El Baul**	**15.65**	**95**			**Pn**	**06 13 29.2**	**-2.1**
BAUV				IAmb		IAmb	06 13 37.3	
	comp=Z,15nm,0.7s							
BIRV	**Birongo**	**17.27**	**89**	P		**Pn**	**06 13 50.8**	**-1.1**
SJG	**San Juan**	**18.67**	**64**	P		**P**	**06 14 10.2**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=263,slow=12,SNR=3.2							
	comp=Z,9.7nm,0.8s							
PDPR	**Patillas Dam,**	**18.75**	**65**	P		**Pn**	**06 14 12.3**	**+2.2**
CBYP	**Canovanas**	**18.99**	**64**	P		**P**	**06 14 10.9**	**-1.4**
CBYP				IAmb		IAmb	06 14 19.2	
	comp=Z,26nm,1.1s							
435B	**Jarrell**	**23.79**	**330**	P		**P**	**06 15 03.0**	**-0.5**
435B				IAmb		IAmb	06 15 13.8	
	comp=Z,14nm,0.7s							
WLAR	**White Oak Lake**	**24.49**	**341**	P		**P**	**06 15 08.2**	**-1.7**
WLAR				IAmb		IAmb	06 15 17.4	
	comp=Z,19nm,1.0s							
BOAV	**Boa Vista**	**24.54**	**108**	P		**P**	**06 15 08.5**	**-2.1**
BOAV				IAmb		IAmb	06 15 12.9	
	comp=Z,8.9nm,1.3s							
JCT	**Junction City**	**24.73**	**325**	P		**P**	**06 15 11.6**	**-0.5**
TKL	**Tuckaleechee C**	**24.93**	**0**	P		**P**	**06 15 17.4**	**+3.5**
	comp=Z,5.0nm,0.9s,baz=172,slow=8.3,SNR=4.1							
TKL				LR		LR	06 24 00.4	
	comp=Z,30nm,19.6s,baz=162,slow=34							
	comp=Z,5.0nm,0.9s							
V53A	**Saluda**	**24.96**	**2**	P		**P**	**06 15 14.0**	**-0.2**
V53A				IAmb		IAmb	06 15 22.8	
	comp=Z,12nm,0.8s							
MIAR	**Mount Ida**	**25.43**	**341**	P		**P**	**06 15 17.6**	**-0.8**
MIAR				IAmb		IAmb	06 15 25.8	
	comp=Z,9.0nm,0.9s							
TXAR	**Lajitas Array**	**26.27**	**318**	P		**P**	**06 15 29.3**	**+3.0**
	comp=Z,0.9nm,0.6s,baz=137,slow=11,SNR=9.7							

*IDC **07** 06:29:01.5±4.2, 19.°08N×145.°44E, h154km±36km, mb3.3/5, mbtmp3.9/6, Error ellipse: s-maj=61.3km s-min=25.4km az=109.0*

ISC 07 06:29:07.3±1.1, 18.°75N±0.°10×145.°5E±0.°3, h214km, n15, σ2s 25/12, mb3.7/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.17**	**187**	P	**Pn**	**06 30 23.4**	**-0.9**
	47nm,1.1s,baz=183,slow=23,SNR=1.5						
GUMO				S	**S**	**06 31 22.6**	**-2.4**
	20nm,0.7s,baz=263,slow=17,SNR=1.2						
GUMO	**Guam**	**5.17**	**187**	Pn	Pn	06 30 18.6	-5.7
WR0	**Warramunga Arr**	**39.94**	**196**	P	**P**	**06 36 22.9**	**+1.9**
WR0				IAmb	IAmb	06 36 30.0	
	comp=Z,6.5nm,1.2s						
WB2	**Warramunga Arr**	**39.98**	**196**	P	**P**	**06 36 23.8**	**+2.4**
WB2				IAmb	IAmb	06 36 24.5	
	comp=Z,3.7nm,1.0s						
WRA	**Warramunga Arr**	**39.98**	**196**	P	**P**	**06 36 23.4**	**+2.1**
	comp=Z,0.9nm,0.5s,baz=18,slow=8.6,SNR=15						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**39.98**	**196**	P	**P**	**06 36 23.2**	**+1.9**
FITZ	**Fitzroy Crossi**	**41.49**	**209**	P	**P**	**06 36 36.3**	**+2.6**
	comp=Z,1.4nm,0.6s,baz=32,slow=9.6,SNR=2.2						
	comp=Z,1.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**41.49**	**209**	P	**P**	**06 36 36.5**	**+2.9**
FITZ				IAmb	IAmb	06 36 36.7	
	comp=Z,5.1nm,1.2s						
ULN	**Ulaanbaatar**	**42.60**	**322**	P	**P**	**06 36 41.7**	**-0.9**
ASAR	**Alice Springs**	**43.65**	**195**	P	**P**	**06 36 53.2**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=17,slow=7.9,SNR=5.9						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**06 41 10.6**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=264,slow=6.8,SNR=4.4						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**86.75**	**335**	P	**P**	**06 41 26.0**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=64,slow=3.2,SNR=7.6						
	comp=Z,0.4nm,0.3s						
H03N2	**Juan Fernandez**	**137.83**	**119**	T	T	09 18 59.4	
	baz=269,slow=75,SNR=17						
H03N3	**Juan Fernandez**	**137.84**	**119**	T	T	09 19 05.9	
	baz=269,slow=75,SNR=19						
H03N1	**Juan Fernandez**	**137.85**	**119**	T	T	09 19 00.3	
	baz=269,slow=75,SNR=34						

*UCR **07** 06:43:50.2±1.4, 8.°36N×82.°62W, h20km±10km, MW3.9*
*UPA **07** 06:43:51.6±1.2, 8.°47N×82.°60W, h11km±3km, MW3.0*

ISC 07 06:43:50.9±1.1, 8.°43N±0.°04×82.°62W±0.°03, h14km±8km, n20, σ0s 62/33, 1C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVD	**David**	**0.16**	**87**	⇑*i* P	**Pb**	**06 43 55.5**	**-0.2**
DVD				*e*S	**Sb**	**06 43 59.0**	**+0.1**
CHIR3	**Chiriqui UPA,**	**0.28**	**96**	⇓*i* P	**Pb**	**06 43 57.4**	**-0.4**
CHIR3				*e*S	**Sb**	**06 44 02.5**	**+0.1**
PTAR3	**Potrerillos Ar**	**0.29**	**24**	⇓*i* P	**Pb**	**06 43 58.0**	**0.0**
PTAR3				*e*S	**Sg**	**06 44 01.3**	**0.0**
CDITO	**Canoas**	**0.29**	**300**	*e*P	**Pg**	**06 43 57.2**	**+0.2**
CDITO				*e*S	**Sb**	**06 44 02.5**	**-0.1**
CDITO	**Canoas**	**0.29**	**300**	⇓*i* P	**Pg**	**06 43 57.2**	**+0.2**
CDITO				*e*S	**Sb**	**06 44 02.4**	**-0.3**
BCO2	**Palmira**	**0.30**	**17**	⇓*i* P	**Pb**	**06 43 58.2**	**0.0**
BCO2				*e*S	**Sb**	**06 44 02.6**	**-0.5**
CCOL	**Caracol de Cor**	**0.35**	**267**	*e*P	**Pg**	**06 43 57.8**	**-0.3**
BRU2	**Volcan**	**0.37**	**349**	*e*P	**Pb**	**06 43 59.3**	**0.0**
BRU2				*e*S	**Sb**	**06 44 05.5**	**+0.4**
BRU2	**Volcan**	**0.37**	**349**	*e*P	**Pb**	**06 43 59.4**	**0.0**
BRU2				*e*S	**Sb**	**06 44 06.0**	**+0.9**
BC3P	**Paso Ancho**	**0.39**	**1**	*i* P	**Pg**	**06 43 59.3**	**+0.5**
CHGR2	**Aguacate**	**0.69**	**43**	*e*P	**Pg**	**06 44 03.8**	**-0.6**
CHGR2				*e*S	**Sg**	**06 44 13.5**	**0.0**
POTG	**Potrero Grande**	**0.80**	**321**	*e*P	**Pg**	**06 44 06.1**	**-0.3**
CNI2	**El Empalme, Bo**	**1.00**	**8**	*e*P	**Pb**	**06 44 09.4**	**-0.6**
CNI2				*e*S	**Sb**	**06 44 22.2**	**-0.8**
DRK0	**Durika**	**1.04**	**323**	*e*P	**Pb**	**06 44 10.8**	**0.0**
DRK0	**Durika**	**1.04**	**323**	*e*P	**Pb**	**06 44 10.7**	**0.0**
DRK0				*e*S	**Sn**	**06 44 26.2**	**+0.6**
SAFE3	**Santa Fe, Vera**	**1.52**	**87**	*e*P	**Pn**	**06 44 16.8**	**-0.9**
SAFE3				*e*S	**Sn**	**06 44 36.9**	**-0.4**
CDM	**Cerro de Muert**	**1.59**	**315**	*e*P	**Pn**	**06 44 18.4**	**-0.7**
STIA3	**Santiago, Vera**	**1.66**	**101**	*e*S	**Sb**	**06 44 41.1**	**-0.9**
AZU	**Azuero**	**2.40**	**105**	*e*P	**Pn**	**06 44 31.4**	**+1.6**
AZU				*e*S	**Sn**	**06 44 59.7**	**+0.6**
BCIP	**Isla Barro Col**	**2.84**	**75**	*e*S	**Sb**	**06 45 17.6**	**+1.5**

*IDC **07** 07:55:06.2±2.4, 7.°45S×128.°14E, h0km, mb3.5/1, mbtmp3.6/3, ML4.0/2, MS3.1/1, Error ellipse: s-maj=208.5km s-min=33.3km az=65.0*

ISC 07 07:55:17.6±1.5, 7.°5S±0.°1×128.°5E±0.°1, h100km, n12, σ2s 27/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.85**	**100**	P	**Pn**	**07 55 58.1**	**-3.3**
MTN	**Manton Dam**	**5.92**	**154**	P	**Pn**	**07 56 44.4**	**+1.5**
KDU	**Kakadu**	**6.49**	**143**	P	**Pn**	**07 56 51.7**	**+1.1**
KNRA	**Kununurra**	**8.13**	**178**	P	**Pn**	**07 57 13.7**	**+0.8**
FITZ	**Fitzroy Crossi**	**10.88**	**194**	P	**Pn**	**07 57 48.9**	**-1.4**
WRA	**Warramunga Arr**	**13.62**	**156**	Pn	**Pn**	**07 58 23.2**	**-3.4**
	1.1nm,0.3s,baz=334,slow=9.5,SNR=65						
WRA				Sn	Sn	08 00 46.9	-10
	0.5nm,0.3s,baz=326,slow=22,SNR=5.7						
	1.0nm,0.4s						
QIS	**Mount Isa**	**16.88**	**141**	P	**P**	**07 59 10.5**	**+2.3**
ASAR	**Alice Springs**	**16.90**	**163**	P	**Pn**	**07 59 06.2**	**-1.9**
	0.3nm,0.3s,baz=338,slow=10,SNR=24						
ASAR				S	Sn	08 02 04.4	-12
	0.2nm,0.4s,baz=319,slow=18,SNR=2.1						
	0.5nm,0.3s						
WRKA	**Warakurna**	**17.44**	**180**	P	**Pn**	**07 59 16.4**	**+1.8**
PMG	**Port Moresby**	**18.59**	**97**	LR	LR	08 07 06.9	
	comp=Z,56nm,21.1s,baz=122,slow=38						
MTSU	**Mount Surprise**	**18.71**	**126**	P	**Pn**	**07 59 30.5**	**+0.6**
MKAR	**Makanchi Array**	**67.82**	**328**	P	**P**	**08 06 04.8**	**-0.2**
	0.2nm,0.4s,baz=129,slow=7.9,SNR=2.4						
	0.2nm,0.4s						

*BJI **07** 08:15:03.0±0.0, 47.°20N×37.°60E, h10km, mb4.9/45, mB5.0/27, Ms4.5/21, Ms7 4.2/22*
*IDC **07** 08:15:04.1±0.4, 47.°00N×37.°54E, h0km, mb4.5/22, mbtmp4.5/38, ML4.4/15, MS3.7/52, Error ellipse: s-maj=6.8km s-min=5.3km az=35.0*
*NEIC **07** 08:15:05.5±2.2, 47.°07N±0.°06×37.°59E±0.°09, h10km±1km, mb4.8/128, Error ellipse: s-maj=10.5km s-min=9.8km az=172.0*
*MCSM **07** 08:15:05.5±0.4, 47.°N±3.°×3.°8E±.°, h10km±1km, ML4.8*
*MED_RC **07** 08:15:05.0±0.4, 47.°16N×37.°61E, h27km±1km, MW4.6/24, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s24,c30; Duration: 1s1 Moment tensor: Scale 10^16^Nm; Mrr-0.08±.11; Mθθ-0.22±.09; Mϕϕ0.30±.07; Mrθ-0.05±.08; Mθϕ-0.98±.04; Mϕr-0.35±.08; Best double couple: M0 1.07000×10^16^ NP1:ϕs7.00000°, δ88.00000°, λ-20.00000°. NP2:ϕs98.00000°, δ70.00000°, λ-178.00000°. Principal axes: T 1.1100, Plg12.0000°, Azm54.0000°; N -0.0600, Plg70.0000°, Azm181.0000°; P -1.0400, Plg15.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
*MOS **07** 08:15:06.7±0.0, 47.°09N×37.°63E, h24km, MPVA3.8, Felt V MSK at Mariupol, IV-V MSK at Taganrog, TroitskoeYu Pokrovskoe, Primorsk, Pologi, IV MSK at Agrobaza, Belosarayskaya Kosa, Michurinsk, Khartsyzsk, III-IV MSK at Volnovaha, Donetsk, Rostov-on-Don, III MSK at Berdyansk, Ilovaysk, Yasinovataya, II-III MSK at Azov, Aksay, Melitopol, Dnieper (Dnepropetrovsk), II MSK at Bahmut)*
*GCMT **07** 08:15:08.5±0.4, 47.°06N±0.°03×37.°59E±0.°03, h18km±2km, MW4.6/72, Moment Tensor Solution. s13,c13; s72,c98; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.13±.07; Mθθ-0.34±.07; Mϕϕ0.46±.07; Mrθ0.05±.13; Mθϕ-0.92±.04; Mϕr-0.33±.15; Best double couple: M0 1.05100×10^16^ NP1:ϕs192.00000°, δ88.00000°, λ17.00000°. NP2: ϕs101.00000°, δ73.00000°, λ178.00000°. Principal axes: T 1.1380, Plg14.0000°, Azm58.0000°; N -0.1750, Plg73.0000°, Azm199.0000°; P -0.9630, Plg10.0000°, Azm325.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*CFUSG **07** 08:15:08.3, 47.°20N×37.°51E, h24km, mb4.4/7, MD4.3/6, Ukraine Mariupol Magtype MSH 4.6 from 4 stations*
*NNC **07** 08:15:12.6±1.6, 47.°52N×38.°77E, h0km, mb4.9, Error ellipse: s-maj=33.0km s-min=20.1km az=142.0*

ISC 07 08:15:06.6±0.9, 47.°16N±0.°03×37.°63E±0.°03, h16km±5km, n711, σ1s 97/749, mb4.8/146, MS3.8/47, 66C-60D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGUR	**Krasnodar**	**2.35**	**155**	*e*Pn	**Pn**	**08 15 44.6**	**+0.2**
KGUR				*e*Sn	**Sn**	**08 16 12.9**	**+0.1**
ANN	**Anapa**	**2.36**	**183**	*e*P	**Pn**	**08 15 44.0**	**-0.6**
ANN				*e*		08 16 19.8	
ANN	**Anapa**	**2.36**	**183**	*e*Pg	**Pn**	**08 15 42.8**	**-1.8**
ANN				*e*Sg	**Sn**	**08 16 11.1**	**-2.1**
SPGR	**Shapsug**	**2.44**	**173**	*e*Pn	**Pn**	**08 15 44.9**	**-0.7**
SPGR				*e*Sn	**Sn**	**08 16 14.2**	**-0.9**
ERBR	**Yeremizino-Bor**	**2.44**	**125**	*i* P	**Pb**	**08 15 49.0**	**-1.1**
ERBR				*e*S	**Sb**	**08 16 18.4**	**-1.5**
ERBR	**Yeremizino-Bor**	**2.44**	**125**	*e*Pn	**Pn**	**08 15 47.0**	**+1.3**
ERBR				*e*Sn	**Sn**	**08 16 16.3**	**+1.1**
GL1R	**Gelendzhik**	**2.63**	**173**	*e*Pn	**Pn**	**08 15 47.1**	**-1.1**
GL1R				*e*Sn	**Sn**	**08 16 18.5**	**-1.2**
FEO	**Feodosiya**	**2.65**	**217**	*e*P	**Pn**	**08 15 48.7**	**+0.2**
FEO				*e*		08 16 25.8	
FEO	**Feodosiya**	**2.65**	**217**	*e*Pn	**Pn**	**08 15 48.7**	**+0.2**
FEO				Pnm		08 16 00.2	
	comp=Z,415nm,0.3s						
FEO				*e*Sn	**Sb**	**08 16 25.8**	**0.0**
FEO				Snm		08 16 29.5	
	comp=N,3μm,0.3s						
FEO				Snm		08 16 29.5	
	comp=E,1μm,0.3s						
FEO	**Feodosiya**	**2.65**	**217**	*e*Pn	**Pn**	**08 15 48.8**	**+0.2**
FEO				*e*Sn	**Sn**	**08 16 19.8**	**-0.5**
SUDU	**Sudak**	**2.92**	**220**	⇑*i*P	**Pn**	**08 15 52.3**	**+0.1**
SUDU				*e*		08 16 26.8	
SUDU	**Sudak**	**2.92**	**220**	⇑*i*Pn	**Pn**	**08 15 52.3**	**+0.1**
SUDU				Pnm		08 16 04.3	
	comp=Z,2μm,0.5s						
SUDU				*e*Sn	**Sn**	**08 16 26.8**	**-0.1**
GOYR	**Goytkh**	**3.16**	**157**	*i* P	**Pn**	**08 15 56.2**	**+0.6**
GOYR				*e*S	**Sn**	**08 16 32.9**	**+0.1**
GOYR	**Goytkh**	**3.16**	**157**	*e*Pn	**Pn**	**08 15 56.1**	**+0.5**
GOYR				*e*Sn	**Sn**	**08 16 32.7**	**-0.1**
SIM	**Simferopol'**	**3.30**	**229**	*e*P	**Pn**	**08 15 57.1**	**-0.4**
SIM				*e*		08 16 35.2	
SIM	**Simferopol'**	**3.30**	**229**	*e*Pn	**Pn**	**08 15 57.1**	**-0.4**
SIM				Pnm		08 16 07.1	
	comp=Z,2μm,0.5s						
SIM				*e*Sn	**Sn**	**08 16 35.2**	**-1.1**
SIM				Snm		08 16 40.1	
	comp=N,2μm,0.8s						
SIM				Snm		08 16 40.1	
	comp=E,970nm,0.5s						
SIM	**Simferopol'**	**3.30**	**229**	*e*Pn	**Pn**	**08 15 57.6**	**+0.1**
SIM				*e*Sn	**Sn**	**08 16 36.2**	**-0.1**
LABN	**Labinsk**	**3.31**	**138**	*i* P	**Pn**	**08 15 59.0**	**+1.3**
LABN	**Labinsk**	**3.31**	**138**	*e*Pn	**Pn**	**08 15 57.9**	**+0.2**
LABN				*e*Sn	**Sn**	**08 16 36.4**	**-0.3**
ALU	**Alushta**	**3.35**	**223**	⇑*i*P	**Pn**	**08 15 58.2**	**0.0**
ALU				*e*		08 16 37.0	
ALU	**Alushta**	**3.35**	**223**	⇑*i*Pn	**Pn**	**08 15 58.2**	**0.0**
ALU				Pnm		08 16 11.5	
	comp=Z,506nm,0.4s						
ALU				*e*Sn	**Sn**	**08 16 37.0**	**-0.5**
ALU	**Alushta**	**3.35**	**223**	*e*Pn	**Pn**	**08 15 58.1**	**0.0**
ALU				*e*Sn	**Sn**	**08 16 36.8**	**-0.7**
LZRR	**Lazarevskoye**	**3.45**	**159**	⇓*i*P	**Pn**	**08 15 59.7**	**+0.1**
LZRR				*e*		08 16 39.2	
LZRR	**Lazarevskoye**	**3.45**	**159**	*i* Pn	**Pn**	**08 15 59.6**	**0.0**
LZRR				*e*Sn	**Sn**	**08 16 38.6**	**-1.4**
GUZR	**Guzeripl'**	**3.61**	**150**	*d i*P	**Pn**	**08 16 01.3**	**-0.6**
GUZR	**Guzeripl'**	**3.61**	**150**	*i* Pn	**Pn**	**08 16 01.2**	**-0.6**
GUZR				*e*Sn	**Sn**	**08 16 42.1**	**-2.0**
YAL	**Yalta**	**3.61**	**224**	⇑*i*P	**Pn**	**08 16 00.7**	**-1.1**
YAL				*e*		08 16 42.1	
YAL	**Yalta**	**3.61**	**224**	⇑*i*Pn	**Pn**	**08 16 00.7**	**-1.1**
YAL				Pnm		08 16 13.0	
	comp=Z,273nm,0.4s						
YAL				*e*Sn	**Sn**	**08 16 42.1**	**-1.9**
YAL				Snm		08 16 44.7	
	comp=N,657nm,0.5s						
YAL				Snm		08 16 44.7	
	comp=E,220nm,0.3s						
YAL	**Yalta**	**3.61**	**224**	*e*Pn	**Pn**	**08 16 01.7**	**0.0**
YAL				*e*Sn	**Sn**	**08 16 41.7**	**-2.3**
SEV	**Sevastopol'**	**3.81**	**228**	⇑*e*P	**Pn**	**08 16 04.1**	**-0.4**
SEV				*e*		08 16 47.5	
SEV	**Sevastopol'**	**3.81**	**228**	⇑*e*Pn	**Pn**	**08 16 04.1**	**-0.4**
SEV				Pnm		08 16 05.6	
	comp=Z,222nm,0.2s						
SEV				*e*Sn	**Sn**	**08 16 47.5**	**-1.4**
SEV				Snm		08 16 49.8	
	comp=N,335nm,0.2s						
SEV				Snm		08 16 49.8	
	comp=E,619nm,0.3s						
SEV	**Sevastopol'**	**3.81**	**228**	*i* Pn	**Pn**	**08 16 04.1**	**-0.4**
SEV				*e*Sn	**Sn**	**08 16 46.9**	**-2.0**
AHMR	**Akhmetovskaya**	**3.84**	**140**	*e*Pn	**Pn**	**08 16 05.4**	**+0.4**
AHMR				*e*Sn	**Sn**	**08 16 48.0**	**-1.6**
SOC	**Sochi**	**3.87**	**157**	*e*P	**Pn**	**08 16 04.7**	**-0.6**
SOC				*e*		08 16 48.8	
SOC				pmax	pmax		
	comp=Z,125nm,0.5s						
SOC				MLR	MLR		
	comp=Z,776nm,14.0s						
SOC	**Sochi**	**3.87**	**157**	*i* Pn	**Pn**	**08 16 05.3**	**0.0**
SOC				*e*Sn	**Sn**	**08 16 48.0**	**-2.3**
RPOR	**Krasnaya Polya**	**3.92**	**151**	*d i*P	**Pn**	**08 16 06.2**	**+0.1**
RPOR	**Krasnaya Polya**	**3.92**	**151**	*e*Pn	**Pn**	**08 16 06.3**	**+0.2**
RPOR				*e*Sn	**Sn**	**08 16 50.7**	**-1.1**
NVNR	**Nevinnomyssk**	**3.95**	**129**	*i* P	**Pn**	**08 16 07.7**	**+1.2**
NVNR				*e*S	**Sn**	**08 16 53.2**	**+0.8**
NVNR	**Nevinnomyssk**	**3.95**	**129**	*e*Pn	**Pn**	**08 16 06.1**	**-0.4**
NVNR				*e*Sn	**Sn**	**08 16 48.0**	**-4.5**
VSLR	**Vesyoloye**	**4.07**	**155**	*d i*P	**Pn**	**08 16 07.8**	**-0.2**
VSLR	**Vesyoloye**	**4.07**	**155**	*e*Pn	**Pn**	**08 16 07.8**	**-0.2**
VSLR				*e*Sn	**Sn**	**08 16 52.2**	**-3.1**
VSR	**Storozhevoye**	**4.18**	**13**	*e*P	**Pn**	**08 16 11.8**	**+2.2**
VSR				*e*S	**Sn**	**08 17 00.1**	**+2.0**
VSR				pmax	pmax		
	comp=Z,80nm,0.4s						
VSR				smax	smax		
	comp=N,4μm,1.0s						
VSR				MLR	MLR		
	comp=Z,60nm,2.0s						
GOF	**Gofitskoye**	**4.31**	**117**	⇓*i*P	**Pn**	**08 16 12.3**	**+0.9**
GOF				*e*S	**Sn**	**08 17 00.0**	**-1.2**
GOF				pmax	pmax		
	comp=Z,618nm,0.5s						
GOF				smax	smax		
	comp=N,5μm,0.6s						
GOF				smax	smax		
	comp=E,3μm,0.6s						
GOF	**Gofitskoye**	**4.31**	**117**	*i* Pn	**Pn**	**08 16 12.5**	**+1.1**
GOF				*e*Sn	**Sn**	**08 17 00.2**	**-1.1**
ALER	**Alexandrovskoy**	**4.39**	**121**	*e*Pn	**Pn**	**08 16 13.4**	**+0.9**
ALER				*e*Sn	**Sn**	**08 17 02.3**	**-1.1**
ARXR	**Arkhyz**	**4.42**	**143**	*e*Pn	**Pn**	**08 16 13.2**	**+0.2**
ARXR				*e*Pn	**Sn**	**08 17 02.8**	**-1.4**
VORR	**Voronezh**	**4.63**	**12**	*e*P	**Pn**	**08 16 17.7**	**+1.9**
VORR				*e*S	**Sn**	**08 17 11.4**	**+2.2**
VORR				pmax	pmax		
	comp=Z,20nm,1.3s						
VORR				MLR	MLR		
	comp=Z,2μm,15.0s						
KIV	**Kislovodsk**	**4.78**	**130**	P	**Pn**	**08 16 17.3**	**-0.7**
KIV	**Kislovodsk**	**4.78**	**130**	Pn	**Pn**	**08 16 17.4**	**-0.5**
KIV	**Kislovodsk**	**4.78**	**130**	*e*P	**Pn**	**08 16 17.3**	**-0.7**
KIV				*e*S	**Sn**	**08 17 14.5**	**+1.5**
KIV				pmax	pmax		
	comp=Z,138nm,1.0s						
KIV				MLR	MLR		
	comp=Z,211nm,8.0s						
KIV	**Kislovodsk**	**4.78**	**130**	*i* Pn	**Pn**	**08 16 17.4**	**-0.5**
KIV				*e*Sn	**Sn**	**08 17 10.8**	**-2.2**
DOMR	**Dombai**	**4.78**	**142**	*d i*P	**Pn**	**08 16 18.7**	**+0.7**
DOMR	**Dombai**	**4.78**	**142**	*e*Pn	**Pn**	**08 16 18.8**	**+0.7**
DOMR				*e*Sn	**Sn**	**08 17 11.7**	**-1.5**
KVAR	**Kislovodsk Arr**	**4.78**	**130**	Pn	**Pn**	**08 16 17.8**	**-0.2**
	baz=74,slow=23						
KVAR				Sn	**Sn**	**08 17 10.7**	**-2.4**
	baz=304,slow=12						
KVAR				Lg	Lg	08 17 33.7	
	baz=358,slow=13						
KVAR				LR	LR	08 18 15.7	
	comp=Z,2μm,20.5s,baz=142,slow=40						
	comp=Z,26nm,0.4s						
BEYR	**Belyy Ugol+**	**4.81**	**129**	*e*Pn	**Pn**	**08 16 19.4**	**+1.1**
BEYR				*e*Sn	**Sn**	**08 17 10.7**	**-3.0**
VRH	**Novokhopyorsk**	**4.86**	**32**	*e*P	**Pn**	**08 16 20.8**	**+2.0**
VRH				*e*S	**Sn**	**08 17 15.6**	**+1.0**
VRH				pmax	pmax		
	comp=Z,90nm,0.5s						
VRH				smax	smax		
	comp=N,4μm,0.6s						
VRH				MLR	MLR		
	comp=Z,30nm,1.0s						
SHA1	**Shidzhatmaz**	**4.92**	**132**	*i* Pn	**Pn**	**08 16 19.5**	**-0.5**
SHA1				*e*Sn	**Sn**	**08 17 14.1**	**-2.5**
PYA1	**Pyatigorsk**	**4.93**	**127**	*e*Pn	**Pn**	**08 16 19.8**	**-0.1**
PYA1				*e*Sn	**Sn**	**08 17 12.9**	**-3.6**
KBZ	**Khabaz**	**5.05**	**131**	Pn	**Pn**	**08 16 21.1**	**-0.4**
	comp=Z,11nm,0.3s,baz=310,slow=5.6,SNR=126						
KBZ				Sn	**Sn**	**08 17 16.9**	**-2.5**
	comp=Z,61nm,0.3s,baz=247,slow=21,SNR=6.4						
KBZ				Lg	Lg	08 17 42.8	
	comp=Z,69nm,0.3s,baz=339,slow=23,SNR=5.7						
	comp=Z,43nm,0.3s						
KBZ	**Khabaz**	**5.05**	**131**	*d i*P	**Pn**	**08 16 21.0**	**-0.5**
KBTC	**Kuba-Taba**	**5.26**	**127**	*e*Pn	**Pn**	**08 16 25.4**	**+0.9**
KBTC				*e*Sn	**Sn**	**08 17 22.3**	**-2.4**
NEY	**Neytrino**	**5.31**	**136**	*e*Pn	**Pn**	**08 16 26.7**	**+1.3**
NEY				*e*Sn	**Sn**	**08 17 24.2**	**-2.0**
PURM	**Purcari**	**5.36**	**266**	⇑P	**Pn**	**08 16 25.3**	**-0.5**
LPSR	**Galich'ya Gora**	**5.51**	**8**	*e*P	**Pn**	**08 16 29.6**	**+1.7**
LPSR				*e*S	**Sn**	**08 17 31.4**	**+0.6**
LPSR				pmax	pmax		
	comp=Z,80nm,0.9s						
LPSR				smax	smax		
	comp=N,1μm,0.7s						
LPSR				MLR	MLR		
	comp=Z,40nm,1.0s						
NCK	**Nalchik**	**5.58**	**129**	*ce*P	**Pn**	**08 16 28.4**	**-0.4**
NCK	**Nalchik**	**5.58**	**129**	*e*Pn	**Pn**	**08 16 29.8**	**+1.0**
NCK				*e*Sn	**Sn**	**08 17 31.1**	**-1.4**
DIKM	**Dikmen**	**5.76**	**198**	⇓P	**Pn**	**08 16 30.4**	**-0.9**
DIKM	**Dikmen**	**5.76**	**198**	P	**Pn**	**08 16 29.9**	**-1.5**
DIKM	**Dikmen**	**5.76**	**198**	Pn	**Pn**	**08 16 30.2**	**-1.2**
BZK	**Bozkurt**	**5.81**	**208**	⇑P	**Pn**	**08 16 30.1**	**-1.8**
BZK	**Bozkurt**	**5.81**	**208**	P	**Pn**	**08 16 30.1**	**-1.8**
BZK	**Bozkurt**	**5.81**	**208**	Pn	**Pn**	**08 16 29.8**	**-2.2**
NE55	**Skvira**	**5.89**	**299**	Pn	**Pn**	**08 16 33.2**	**+0.1**
STDR	**Stavd-Durt**	**5.91**	**128**	*e*Pn	**Pn**	**08 16 34.6**	**+1.2**
STDR				*e*Sn	**Sn**	**08 17 39.5**	**-1.3**
KIS	**Kishinev**	**6.02**	**272**	*e*P	**Pn**	**08 16 34.0**	**-0.9**
	comp=Z,140nm,0.7s						
KIS				*e*S	**Sn**	**08 17 40.0**	**-3.5**
KIS				LgM		08 18 19.0	
	comp=Z,10μm,1.0s						
KIS	**Kishinev**	**6.02**	**272**	⇓P	**Pn**	**08 16 34.5**	**-0.4**
KIS	**Kishinev**	**6.02**	**272**	*e*P	**Pn**	**08 16 34.0**	**-0.9**
KIS				*e*S	**Sn**	**08 17 40.0**	**-3.5**
MILM	**Milestii Mici**	**6.03**	**271**	*e*P	**Pn**	**08 16 34.0**	**-1.0**
	comp=Z,200nm,0.5s						
MILM				*e*S	**Sn**	**08 17 40.0**	**-3.7**
MILM				LqM		08 18 17.0	
	comp=Z,16μm,1.3s						
MILM	**Milestii Mici**	**6.03**	**271**	⇓P	**Pn**	**08 16 34.0**	**-1.0**
MILM	**Milestii Mici**	**6.03**	**271**	*e*P	**Pn**	**08 16 34.0**	**-1.0**
MILM				*e*S	**Sn**	**08 17 40.0**	**-3.7**
MILM				pmax	pmax		
	comp=Z,200nm,0.5s						
MILM	**Milestii Mici**	**6.03**	**271**	Pn	**Pn**	**08 16 34.4**	**-0.6**
TRKR	**Terskaya**	**6.06**	**122**	*e*Pn	**Pn**	**08 16 36.5**	**+1.1**
TRKR				*e*Sn	**Sn**	**08 17 42.0**	**-2.4**
ARNR	**Ardon**	**6.16**	**128**	*e*Pn	**Pn**	**08 16 37.9**	**+1.2**
ARNR				*e*Sn	**Sn**	**08 17 47.8**	**+1.0**
ONI	**Oni**	**6.16**	**136**	Pn	**Pn**	**08 16 36.2**	**-0.7**
ONI	**Oni**	**6.16**	**136**	P	**Pn**	**08 16 36.2**	**-0.7**
ONI	**Oni**	**6.16**	**136**	*e*Pn	**Pn**	**08 16 37.5**	**+0.7**
ONI				*e*Sn	**Sn**	**08 17 44.6**	**-2.4**
BTKR	**Batakoyurt**	**6.17**	**125**	*e*Pn	**Pn**	**08 16 38.9**	**+1.9**
BTKR				*e*Sn	**Sn**	**08 17 44.2**	**-3.0**
KVT	**Kavak**	**6.18**	**191**	P	**Pn**	**08 16 37.3**	**+0.1**
ZEI	**Tsey**	**6.23**	**132**	*e

comp=N,389nm,0.7s
GROC smax smax
comp=E,836nm,0.6s
GROC smax smax
comp=E,2µm,1.0s
GROC MLR MLR
comp=Z,557nm,2.0s
GROC Groznyy 6.99 121 *e*Pn **Pn 08 16 47.6 -0.6**
GROC *e*Sn **Sn 08 18 04.2 -3.1**
BAYT Aydıntepe-Bayb 7.00 164 P **Pn 08 16 47.6 -0.9**
SLCR Slobozia Conac 7.00 261 ⇓P **Pn 08 16 48.0 -0.3**
EFOR EFORIE 7.02 247 ⇑P **Pn 08 16 47.6 -1.0**
TUDR 7.07 261 ⇑P **Pn 08 16 48.5 -0.8**
MFTR Murfatlar 7.11 249 ⇓P **Pn 08 16 49.5 -0.3**
AKH Akhalkalaki 7.12 142 P **Pn 08 16 50.9 +0.8**
AKH Akhalkalaki 7.12 142 *e*Pn **Pn 08 16 50.7 +0.5**
AKH *e*Sn **Sn 08 18 07.9 -2.8**
GHRR 7.13 265 ⇑P **Pn 08 16 49.9 -0.2**
CANT Cankiri 7.16 205 P Pn 08 16 57.6 +7.0
MI30 MI30,Zelenitsa 7.18 303 Pn **Pn 08 16 49.9 -0.8**
MANR Mangalia 7.18 246 ⇑P **Pn 08 16 50.0 -0.8**
TLBR Topalu 7.19 252 ⇓P **Pn 08 16 50.8 -0.1**
HARR Harsova 7.20 253 ⇑P **Pn 08 16 51.1 0.0**
HARR Harsova 7.20 253 P **Pn 08 16 51.4 +0.3**
MI29 MI29, Kamyanyy 7.24 300 Pn **Pn 08 16 51.2 -0.4**
SVSK Karacayir 7.25 184 P **Pn 08 16 51.2 -0.6**
CVDA Cernavoda 7.28 251 ⇑P **Pn 08 16 52.0 -0.2**
CORM Corum 7.31 198 P **Pn 08 16 49.4 -3.3**
DVE Vedeno 7.33 122*ce*P **Pn 08 16 53.5 +0.5**
DVE Vedeno 7.33 122 *e*Pn **Pn 08 16 52.4 -0.6**
DVE *e*Sn **Sn 08 18 11.1 -4.7**
KDZE Karadeniz Ereo 7.34 219 P **Pn 08 16 50.7 -2.3**
SENK Senkaya-Erzuru 7.42 151 P **Pn 08 16 55.6 +1.3**
ODBI Odobesti 7.44 263 ⇑P **Pn 08 16 54.4 0.0**
ICOR Ion Corvin 7.53 250 ⇑P **Pn 08 16 54.6 -1.0**
MI28 Mi28,Pidlybu 7.56 304 Pn **Pn 08 16 55.1 -0.8**
DLMR Dylym 7.56 119 *e*Pn **Pn 08 16 56.7 +0.6**
DLMR *e*Sn **Sn 08 18 15.6 -5.8**
TESR Tescani 7.56 269 ⇓P **Pn 08 16 55.6 -0.5**
GRER 7.60 260 ⇓P **Pn 08 16 56.6 +0.1**
KARS Kars 7.62 147 Pn **Pn 08 16 55.9 -1.1**
KARS Kars 7.62 147 P **Pn 08 16 55.9 -1.1**
VRI Vrincioaia 7.63 264 ⇓P **Pn 08 16 56.6 -0.5**
VRI Vrincioaia 7.63 264 P **Pn 08 16 57.2 +0.1**
VRI pmax pmax
comp=Z,130nm,0.7s
KMPD K-Podol'skiy 7.65 285 Pn **Pn 08 16 55.1 -2.1**
PLOR Plostina 7.69 264 ⇓P **Pn 08 16 57.7 -0.1**
YOZ Yozgat 7.70 193 P **Pn 08 16 56.2 -1.9**
DBC Dubki 7.71 119⇑ *e*P **Pn 08 16 57.8 -0.3**
DBC Dubki 7.71 119 *e*Pn **Pn 08 16 58.5 +0.4**
DBC *e*Sn **Sn 08 18 20.6 -4.5**
KOPR Koprukoy-ERZUR 7.79 155 P **Pn 08 17 00.2 +0.9**
BIZ Bicaz 7.88 273 ⇓P **Pn 08 17 00.3 -0.1**
ISR Istrita 7.97 259 ⇑P **Pn 08 17 01.3 -0.3**
ISR Istrita 7.97 259 P **Pn 08 17 03.2 +1.5**
ISR pmax pmax
comp=Z,225nm,0.9s
BR106 Keskin Array S 7.97 203 Pn **Pn 08 17 00.4 -1.4**
BR131 Keskin Array S 7.98 203 **Pn 08 17 01.0 -0.9**
BR131 Keskin Array S 7.98 203*ce*P **Pn 08 17 00.9 -1.0**
BRTR Keskin Array B 7.98 203 Pn **Pn 08 16 59.1 -2.8**
comp=Z,0.6nm,0.3s,baz=24,slow=12,SNR=13
BRTR Sn **Sn 08 18 25.3 -6.5**
comp=Z,3.7nm,0.3s,baz=334,slow=25,SNR=8.0
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 7.98 203 P **Pn 08 17 01.5 -0.4**
BRTR Keskin Array B 7.98 203 Pn **Pn 08 17 00.3 -1.6**
BRTR Keskin Array B 7.98 203 *i* P **Pn 08 17 00.8 -1.1**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BR105 Keskin Array S 7.99 203 Pn **Pn 08 17 00.6 -1.5**
BUJR Buynaksk 7.99 119 *e*Pn **Pn 08 17 02.6 +0.7**
BUJR *e*Sn **Sn 08 18 28.3 -3.7**
BR104 Keskin Array S 7.99 203 Pn **Pn 08 17 00.6 -1.5**
OBN Obninsk 8.00 356 Pn **Pn 08 17 02.8 +1.0**
comp=Z,6.5nm,0.3s,baz=191,slow=23,SNR=57
OBN Sn **Sn 08 18 30.4 -1.4**
comp=Z,16nm,0.3s,baz=353,slow=22,SNR=11
comp=Z,23nm,0.4s
OBN Obninsk 8.00 356 P **Pn 08 17 01.8 -0.1**
OBN Obninsk 8.00 356⇑ *e*P **Pn 08 17 02.3 +0.4**
OBN *e*S **Sn 08 18 30.6 -1.2**
OBN pmax pmax
comp=Z,109nm,0.6s
OBN MLR MLR
comp=Z,756nm,16.0s
COVR Voineasa-Covas 8.00 265 ⇑P **Pn 08 17 01.9 -0.1**
YUVA Yuva-Kibriscik 8.01 215 P **Pn 08 17 00.6 -1.8**
NEHR Nehoiu 8.04 262 ⇓P **Pn 08 17 01.9 -0.7**
ARPR Arapgir-MALATY 8.08 176 P **Pn 08 17 02.8 -0.5**
LODJ Lodumlu 8.08 203 P **Pn 08 17 06.8 +3.6**
ANTO Ankara 8.09 207 **Pn 08 17 02.4 -0.9**
ANTO Ankara 8.09 207 P **Pn 08 17 02.4 -0.9**
BR231 Keskin MP Arra 8.12 207 **Pn 08 17 00.8 -3.0**
MDUB Mudurnu 8.14 217 P **Pn 08 17 06.7 +2.6**
MDUB Mudurnu 8.14 217 **Pn 08 17 02.3 -1.8**
MAK Makhachkala 8.15 117*d i*P **Pn 08 17 02.5 -1.6**
MAK *e*S **Sn 08 18 34.8 -1.0**
MAK pmax pmax
comp=Z,261nm,1.3s
MAK MLR MLR
comp=Z,1µm,11.0s
OZUR 8.22 267 ⇑P **Pn 08 17 04.8 -0.3**
PRD Provadia 8.24 245 P **Pn 08 17 04.9 -0.4**
MLR Muntele Rosu 8.26 263 ⇓P **Pn 08 17 06.0 +0.3**
MLR Muntele Rosu 8.26 263 Pn **Pn 08 17 03.9 -1.9**
comp=Z,3.8nm,0.3s,baz=69,slow=5.6,SNR=30
MLR Sn **Sn 08 18 34.1 -4.6**
comp=Z,37nm,0.3s,baz=223,slow=19,SNR=14
MLR Lg Lg 08 19 21.1
comp=Z,12nm,0.3s,baz=221,slow=18,SNR=3.2
MLR LR LR 08 20 48.8
comp=Z,842nm,21.6s,baz=62,slow=42
comp=Z,17nm,0.5s
MLR Muntele Rosu 8.26 263 Pn **Pn 08 17 05.9 +0.2**
MLR Muntele Rosu 8.26 263 P **Pn 08 17 05.9 +0.2**
SAUV Serdivan-Sakar 8.30 222 P **Pn 08 17 04.1 -2.1**
SILT Sile 8.31 227 P **Pn 08 17 05.5 -0.7**
SULR 8.31 257 ⇓P **Pn 08 17 05.1 -1.2**
BELG Belogornoye 8.32 47 Pn **Pn 08 17 07.2 +0.9**
comp=Z,49nm,0.3s,baz=360,slow=0.9,SNR=134
BELG Sn **Sn 08 18 39.0 -0.9**
comp=Z,35nm,0.3s,baz=228,slow=21,SNR=7.0
BELG LR LR 08 20 53.4
comp=Z,348nm,21.1s,baz=170,slow=41
BELG Belogornoye 8.32 47*c i*P **Pn 08 17 06.9 +0.6**
BNN Bunyan 8.40 190 Pn **Pn 08 17 06.0 -1.8**
KMKR Kumukh 8.41 123 *e*Pn **Pn 08 17 10.1 +2.2**
KMKR *e*Sn **Sn 08 18 39.7 -2.9**
BURAR Bucovina Array 8.44 278 ⇓P **Pn 08 17 07.4 -0.8**
BURAR Bucovina Array 8.44 278 Pn **Pn 08 17 06.7 -1.5**
BURAR Bucovina Array 8.44 278 P **Pn 08 17 06.7 -1.5**
BUR08 Bucovina Ar. S 8.45 278 **Pn 08 17 07.2 -1.2**
GULT Gulveren 8.46 220 P **Pn 08 17 07.5 -1.0**
DOPR Dopca 8.52 266 ⇓P **Pn 08 17 08.6 -0.7**
KLYT Kilyos 8.54 229 P **Pn 08 17 07.8 -1.6**
KLYT Kilyos 8.54 229 Pn **Pn 08 17 07.7 -1.6**
MOS Moscow 8.59 360 *e*P **Pn 08 17 10.6 +0.5**
MOS *e*S **Sn 08 18 43.4 -3.2**
MOS pmax pmax
comp=Z,220nm,0.9s
MOS MLR MLR
comp=Z,400nm,7.0s
ISK Istanbul-Kandi 8.66 228 P **Pn 08 17 09.7 -1.5**
KAVV Kandilli-Istan 8.66 228 P **Pn 08 17 09.8 -1.4**
SGRR Singureni 8.67 254 ⇑P **Pn 08 17 10.3 -1.0**
GNI Garni 8.69 141 Pn **Pn 08 17 09.9 -1.8**
comp=Z,2.5nm,0.3s,baz=0.0,slow=18,SNR=1.3
GNI LR LR 08 20 54.0
comp=Z,462nm,21.1s,baz=332,slow=41
GNI Garni 8.69 141*ce*P **Pn 08 17 15.1 +3.4**
GNI pmax pmax
comp=Z,8.0nm,1.1s
RNPP5 Staryi Chortor 8.70 302 Pn **Pn 08 17 10.9 -0.7**
RNPP8 Varash 8.76 303 Pn **Pn 08 17 11.7 -0.8**
RNPP9 Sopachiv 8.78 303 Pn **Pn 08 17 11.6 -1.0**
SARI SarD1z-Kayseri 8.79 186 P **Pn 08 17 14.2 +1.1**
ADVT Abdulvahap 8.82 223 P **Pn 08 17 11.2 -2.0**
RNPP1 Kostyukhnivka 8.82 303 Pn **Pn 08 17 12.4 -0.8**
CTKS Kestanelik-??a 8.83 231 P **Pn 08 17 12.9 -0.5**
VOIR 8.88 263 ⇑P **Pn 08 17 14.0 -0.2**
VOIR 8.88 263 P **Pn 08 17 13.8 -0.4**
VOIR pmax pmax
comp=Z,73nm,1.0s
VOIR 8.88 263 Pn **Pn 08 17 12.9 -1.3**
YLV Yalova 8.88 225 P **Pn 08 17 13.7 -0.6**
YLV Yalova 8.88 225 Pn **Pn 08 17 13.5 -0.8**
MTUR Matau 8.93 262 ⇓P **Pn 08 17 14.0 -0.9**
MTUR Matau 8.93 262 P **Pn 08 17 15.0 +0.1**
SLVT Silivri 8.99 232 P **Pn 08 17 14.6 -1.1**
TGMR Targu Mures 9.01 271 ⇑P **Pn 08 17 15.4 -0.5**
ARCR ARCALIA 9.06 274 ⇑P **Pn 08 17 15.1 -1.4**
ARMT Armutlu 9.14 227 P **Pn 08 17 15.3 -2.4**
GURO Guroymak-BITLI 9.19 158 Pn **Pn 08 17 18.0 -0.5**
AKT Akhty 9.19 124 *i* P **Pn 08 17 20.8 +2.3**
HUMR Humele 9.22 258 ⇓P **Pn 08 17 17.6 -1.1**
EDRB Edirne 9.42 240 P **Pn 08 17 19.1 -2.4**
LVV L'vov 9.42 291 *e*P **Pn 08 17 20.1 -1.3**
LVV *e*S **Sn 08 19 03.4 -3.5**
LVV MLR MLR
comp=Z,2µm,5.0s
MNK Minsk 9.59 324 *i* P **Pn 08 17 20.5 -3.2**
MNK *i* S **Sn 08 19 08.2 -2.8**
MNK pmax pmax
comp=E,6.0nm,0.8s
MNK pmax pmax
comp=Z,44nm,0.8s
MNK MLR MLR
comp=Z,506nm,16.0s
MNK Minsk 9.59 324 *i* P **Pn 08 17 20.5 -3.2**
comp=E,6.0nm,0.8s
MNK *i* P **Pn 08 17 20.5 -3.2**
MNK *i* P **Pn 08 17 20.5 -3.2**
comp=Z,44nm,0.8s,baz=135
MNK *i* S **Sn 08 19 08.3 -2.8**
MNK *i* LQ LQ 08 20 05.2
MNK *i* LR LR 08 20 44.3
MNK *i* LRM MLR 08 21 11.6
comp=Z,506nm,16.3s
MNK *i* LRM MLR 08 21 13.6
MNK *i* LRM MLR 08 21 15.1
comp=E,46nm,16.3s
CJR Cluj-Napoca 9.62 272 ⇓P **Pn 08 17 23.5 -0.7**
CJR Cluj-Napoca 9.62 272 P **Pn 08 17 27.1 +2.9**
TVSB Tavsanli 9.73 221 P Pn 08 17 21.7 -4.2
LOT Lotru 9.75 265 ⇓P **Pn 08 17 25.6 -0.5**
DRGR 10.21 273 ⇑P **Pn 08 17 30.9 -1.5**
DRGR 10.21 273 P **Pn 08 17 30.9 -1.5**
DRGR pmax pmax
comp=Z,25nm,1.1s
KWP Kalwaria Pacla 10.23 289 **Pn 08 17 32.1 -0.5**
KWP Kalwaria Pacla 10.23 289 P **Pn 08 17 32.1 -0.5**
DEV Deva 10.24 268 P **Pn 08 17 31.9 -0.8**
DEV pmax pmax
comp=Z,22nm,0.9s
NACGM Naroch 10.32 323 ⇓*i*P **Pn 08 17 31.9 -1.9**
KDZ Kurdzhali 10.33 242 P **Pn 08 17 33.2 -0.7**
BALB Balikesir 10.33 227 P **Pn 08 17 32.2 -1.8**
BALB Balikesir 10.33 227 **Pn 08 17 31.7 -2.3**
UZH Uzhgorod 10.41 284⇑ *i*P **Pn 08 17 33.5 -1.5**
UZH *e*S **Sn 08 19 29.3 -1.9**
UZH MLR MLR
comp=Z,500nm,13.0s
ALN Alexandroupoli 10.42 237 Pn **Pn 08 17 32.0 -3.3**
ALN Alexandroupoli 10.42 237 P **Pn 08 17 32.0 -3.3**
GZR Gura Zlata 10.44 266 ⇓P **Pn 08 17 35.2 -0.3**
KOLS Kolonicke sedl 10.44 285 *e*P **Pn 08 17 34.8 -0.7**
KOLS *e* 08 19 25.6
KOLS Kolonicke sedl 10.44 285 *e*PN **Pn 08 17 34.8 -0.7**
KOLS *e*SN **Sn 08 19 25.6 -6.4**
PLD Plovdiv 10.51 246 P **Pn 08 17 36.9 +0.5**
PLD pmax pmax
comp=Z,166nm,1.1s
RDO Rodhopi 10.56 240 **Pn 08 17 34.9 -2.3**
ISP Isparta 10.70 212*de*P **Pn 08 17 40.2 +1.0**
ISP pmax pmax
comp=Z,15nm,1.8s
RZN Rozhen 10.73 244 P **Pn 08 17 41.2 +1.6**
HERR Herculane 10.83 263 ⇓P **Pn 08 17 39.8 -1.0**
IIGN Ignalina 10.87 323 *e*P **Pn 08 17 39.0 -2.3**
IIGN IAmb IAmb 08 18 17.7
comp=Z,38nm,0.6s
CRVS Cervenica-Dubn 10.97 285 *e*P **Pn 08 17 40.3 -2.5**
CRVS *e* 08 19 38.1
CRVS Cervenica-Dubn 10.97 285 *e*PN **Pn 08 17 40.2 -2.5**
CRVS *e*SN **Sn 08 19 38.1 -7.0**
SIRR Siria 11.01 271 ⇑P **Pn 08 17 41.7 -1.6**
ISAL Salakas 11.06 324 *e*P **Pn 08 17 41.8 -2.1**
ISAL IAmb IAmb 08 18 11.3
comp=Z,18nm,0.6s
BLKB Belogradchik 11.10 257 ⇑P **Pn 08 17 43.9 -0.6**
BZS Buzias 11.17 268 ⇓P **Pn 08 17 43.7 -1.8**
VTS Vitosha 11.18 251 Pn **Pn 08 17 46.4 +0.8**
VTS Vitosha 11.18 251 P **Pn 08 17 46.4 +0.8**
VTS Vitosha 11.18 251 P **Pn 08 17 46.5 +0.8**
MDVR Moldovita 11.33 264 ⇓P **Pn 08 17 46.3 -1.5**
MMB Musomiste 11.40 246 *e*P Pn 08 17 53.8 +5.2
KKB Krupnik 11.65 248 *e*P **Pn 08 17 51.4 -0.7**
BOVS Bovan 11.74 258 ⇑P **Pn 08 17 51.6 -1.6**
NIE Niedzica 11.77 287 *e*P **Pn 08 17 52.0 -1.7**
NIE *e*S **Sn 08 19 57.3 -7.2**
NIE Niedzica 11.77 287 P **Pn 08 17 52.1 -1.5**
NIE pmax pmax
comp=Z,31nm,1.3s
BEL Belsk 11.90 299 *e*P **Pn 08 17 53.5 -1.9**
BEL *e*S **Sn 08 20 02.3 -5.5**
BEL Belsk 11.90 299 P **Pn 08 17 53.6 -1.9**
BEL pmax pmax
comp=Z,131nm,0.7s
PABE Paberze 11.93 319 Pn **Pn 08 17 53.0 -2.8**
PABE Paberze 11.93 319 *e*P **Pn 08 17 52.5 -3.3**
PSZ Piszkesteto 12.02 280 Pn **Pn 08 17 54.0 -3.1**
PSZ Piszkesteto 12.02 280 P **Pn 08 17 54.0 -3.1**
OJC Ojcow 12.18 291 Pn **Pn 08 17 55.0 -4.2**
OJC Ojcow 12.18 291 P **Pn 08 17 55.0 -4.2**
VSVD Vaisvydziai 12.26 321 *e*P **Pn 08 17 57.2 -3.0**
LANS Liptovska Anna 12.29 286 *e*P **Pn 08 17 58.5 -2.4**
LANS Liptovska Anna 12.29 286 *e*PN **Pn 08 17 58.5 -2.4**
CSS Mathiatis 12.61 196 Pn **Pn 08 18 03.1 -2.0**
DIVS Divibare 12.72 263 Pn **Pn 08 18 05.1 -1.6**
MORH Mrgy, Hungar 13.07 273 P **Pn 08 18 11.2 -0.2**
VSU Vasula 13.08 334*d i*P **Pn 08 18 08.1 -3.3**
VSU Vasula 13.08 334 *e*P **Pn 08 18 08.4 -3.0**
PBUR Paburge 13.17 318 *e*P **Pn 08 18 09.2 -3.5**
OKC Ostrava-Krasne 13.20 289 *e*P **Pn 08 18 09.9 -3.2**
OKC MLR MLR
comp=Z,1µm,6.9s
OKC Ostrava-Krasne 13.20 289 *e*P **Pn 08 18 09.9 -3.2**
OKC AMS AMS 08 22 30.0
comp=Z,1µm,6.9s
PUL Pulkovo 13.35 344*de*P **Pn 08 18 13.3 -1.9**
PUL MLR MLR
comp=Z,389nm,15.0s
KIRV Kirov 13.45 27 Pn **Pn 08 18 14.2 -2.3**
comp=Z,10nm,0.3s,baz=219,slow=4.7,SNR=22
KIRV Sn Sn 08 20 36.3 -9.1
comp=Z,5.3nm,0.3s,baz=356,slow=23,SNR=24
KIRV Lg Lg 08 22 12.9
comp=Z,6.3nm,0.3s,baz=118,slow=12,SNR=6.2
comp=Z,60nm,0.5s
KIRV Kirov 13.45 27*d i*P **Pn 08 18 14.0 -2.5**
KOVH Kovagotottos 13.47 273 P **Pn 08 18 17.4 +0.6**
JAVC Velka Javorina 13.47 285 *e*PN Pn 08 18 12.6 -4.3
MORC Moravsky Berou 13.58 289 Pn **Pn 08 18 14.6 -3.8**
MORC Moravsky Berou 13.58 289 P **Pn 08 18 14.6 -3.8**
MORC Moravsky Berou 13.58 289 *e*PN Pn 08 18 13.6 -4.8
MORC Moravsky Berou 13.58 289 *e*SN Sn 08 20 38.2 -11
MORC *e* 08 22 07.0
MPLH Magyarpolny 13.67 277 P **Pn 08 18 19.2 -0.4**
MODS Modra-Piesok 13.75 283 *e*P **Pn 08 18 19.3 -1.3**
MODS *e* 08 20 45.5
MODS Modra-Piesok 13.75 283 *e*PN **Pn 08 18 19.3 -1.3**
MODS Modra-Piesok 13.75 283 *e*SN **Sn 08 20 45.5 -7.3**
KLMR Klimovskoe 13.77 4 *e*P **Pn 08 18 18.0 -2.8**
KLMR *e* 08 20 48.4
KLMR pmax pmax
comp=Z,90nm,0.8s
KLMR Klimovskoe 13.77 4 *e*Pn **Pn 08 18 18.0 -2.8**
KLMR AMP 08 18 30.7
comp=Z,90nm,0.8s
KLMR *e*Sn **Sn 08 20 48.5 -4.7**
KLMR *e*Sn **Sn 08 20 48.5 -4.7**
AKTO Aktyubinsk 13.82 69 Pn **Pn 08 18 17.7 -4.0**
comp=Z,9.2nm,0.3s,baz=269,slow=13,SNR=94
AKTO Sn Sn 08 20 43.3 -11
comp=Z,8.1nm,0.3s,baz=109,slow=20,SNR=6.9
AKTO LR LR 08 25 11.3
comp=Z,176nm,18.4s,baz=252,slow=44
comp=Z,48nm,0.6s
AKTO Aktyubinsk 13.82 69 P **Pn 08 18 18.3 -3.4**
AKTO Aktyubinsk 13.82 69 ⇓P **Pn 08 18 18.1 -3.6**
comp=Z,36nm,0.5s
AKTO ⇑S Sn 08 20 43.6 -11
comp=Z,85nm,0.8s
KRLC Kraliky 14.09 290 *e*P **Pn 08 18 21.4 -4.0**
KRLC MLR MLR
comp=Z,800nm,6.8s
KRLC Kraliky 14.09 290 *e*P **Pn 08 18 21.4 -4.0**
KRLC AMS AMS 08 22 50.0
comp=Z,800nm,6.8s
VRAC Vranov 14.18 286 Pn **Pn 08 18 23.7 -2.9**
comp=Z,0.3nm,0.3s,baz=65,slow=7.7,SNR=3.9
VRAC Lg Lg 08 22 32.6
comp=Z,1.2nm,0.3s,baz=55,slow=7.3,SNR=5.7
VRAC LR LR 08 24 24.3
comp=Z,413nm,20.4s,baz=86,slow=40
comp=Z,1.8nm,0.5s
VRAC Vranov 14.18 286 *e*PN **Pn 08 18 24.0 -2.6**
VRAC *e* 08 22 32.6
MTSE Matsula 14.22 330 *e*P **Pn 08 18 23.5 -3.6**
KRUC Moravsky 14.31 285 *e*PN **Pn 08 18 25.5 -2.9**
KRUC *e* 08 22 40.5
DPC Dobruska-Polom 14.41 291 *e*P **Pn 08 18 26.3 -3.4**
DPC MLR MLR
comp=Z,700nm,11.1s
DPC Dobruska-Polom 14.41 291 *e*P **Pn 08 18 26.3 -3.4**
DPC AMS AMS 08 23 00.0
comp=Z,700nm,11.1s
RONA Rosalia, Austr 14.45 280 *e*P **P 08 18 38.1 +1.1**
comp=Z,8.7nm,0.6s,SNR=6.0
OSTC Ostas 14.49 291 *e*P Pn 08 18 25.7 -5.2
OSTC AMS AMS 08 23 00.0
comp=Z,1µm,13.6s
CHVC Chvalec 14.60 292 *e*P **Pn 08 18 28.6 -3.7**
CHVC AMS AMS 08 23 10.0
comp=Z,100nm,10.2s
UPC Upice 14.62 291 *e*P **Pn 08 18 28.3 -4.2**
UPC MLR MLR
comp=Z,700nm,13.4s
UPC Upice 14.62 291 *e*P **Pn 08 18 28.3 -4.2**
UPC AMS AMS 08 23 10.0
comp=Z,700nm,13.4s
CONA Conrad Observa 14.72 281 *e*P **Pn 08 18 31.6 -2.5**
comp=Z,1.7nm,0.6s
CONA *e*P **P 08 18 41.4 +1.4**
comp=Z,7.7nm,0.6s,SNR=7.5
VALR Valaam 14.75 347 *i* P Pn 08 18 29.5 -4.8
VALR pmax pmax
comp=Z,19nm,0.8s
TREC Trest 14.91 286 AMS AMS 08 23 30.0
comp=Z,800nm,7.6s
AB31 Akbulak array 15.02 74 *i* P **Pn 08 18 34.3 -3.6**
AB31 Akbulak array 15.02 74 ⇓P **Pn 08 18 33.7 -4.2**
comp=Z,35nm,0.7s,baz=270,slow=15,SNR=317
AB31 ⇑S Sn 08 21 13.2 -11
comp=Z,24nm,0.6s,baz=272,slow=23,SNR=5.5
ABKAR Akbulak array 15.02 74 Pn **Pn 08 18 34.0 -3.9**
ABKAR Akbulak array 15.02 74 Pn **Pn 08 18 34.8 -3.1**
ABKAR IAmb IAmb 08 18 55.0
comp=Z,45nm,0.8s
PRGR Permogore 15.22 15 *e*P **Pn 08 18 35.4 -5.1**
PRGR pmax pmax
comp=Z,77nm,0.8s
IDI Anoyia 15.22 223 Pn **Pn 08 18 40.2 -0.7**
comp=Z,0.9nm,0.3s,baz=32,slow=14,SNR=9.9
comp=Z,7.6nm,0.6s
IDI Anoyia 15.22 223 Pn **Pn 08 18 38.4 -2.4**
IDI IAmb IAmb 08 18 49.2
comp=Z,50nm,1.4s
ITM Ithomi 15.30 235 Pn **Pn 08 18 40.7 -1.1**
ITM IAmb IAmb 08 18 52.7
comp=Z,30nm,0.9s
PRU Pruhonice 15.53 289 *e*P **Pn 08 18 43.0 -1.7**
PRU MLR MLR
comp=Z,700nm,9.0s
PRU Pruhonice 15.53 289 *e*P **Pn 08 18 43.0 -1.7**
PRU AMS AMS 08 23 40.0
comp=Z,700nm,9.0s
PVCC Panska Ves 15.54 291 AMS AMS 08 23 50.0
comp=Z,600nm,13.8s
CKRC Cesky Krumlov 15.69 285 *e*P **P 08 18 49.7 -1.1**
FINES FINESS Array B 15.78 339 Pn **Pn 08 18 42.1 -5.7**
comp=Z,2.2nm,0.3s,baz=150,slow=13,SNR=107
FINES Sn Sn 08 21 30.6 -12
comp=Z,6.2nm,0.3s,baz=150,slow=20,SNR=7.1
FINES LR LR 08 25 15.4
comp=Z,369nm,18.8s,baz=150,slow=38
comp=Z,15nm,0.6s
FINES FINESS Array B 15.78 339 Pn **Pn 08 18 42.8 -5.0**
FINES FINESS Array B 15.78 339 P **Pn 08 18 42.8 -5.0**
FIA1 FINESS Array S 15.78 339 Pn **Pn 08 18 44.2 -3.7**
FIA1 IAmb IAmb 08 18 53.6
comp=Z,33nm,0.6s
MOA Molln 15.80 281 *e*P **P 08 18 53.2 +1.2**
comp=Z,18nm,1.1s,SNR=9.1
ARU Arti 15.87 47 Pn **Pn 08 18 44.2 -4.8**
comp=Z,0.1nm,0.3s,baz=247,slow=8.1,SNR=83
ARU Sn Sn 08 21 30.7 -14
baz=43,slow=20,SNR=2.8
ARU LR LR 08 25 17.5
comp=Z,417nm,19.7s,baz=249,slow=38
comp=Z,30nm,0.4s
ARU Arti 15.87 47 Pn **Pn 08 18 44.9 -4.1**
ARU IAmb IAmb 08 18 49.2
comp=Z,41nm,0.6s
ARU Arti 15.87 47*d i*P **Pn 08 18 44.2 -4.8**
ARU S **Sn 08 21 39.4 -5.0**
ARU pmax pmax
comp=Z,36nm,0.6s
BRG Berggiesshubel 15.96 292 *e*P **Pn 08 18 46.9 -3.3**
BRG Amp 08 18 51.3
comp=Z,8.2nm,1.1s
BRG *ex* x 08 18 54.0
BRG Amp 08 18 55.6
comp=Z,17nm,1.1s
BRG *ex* x 08 21 38.7
BRG Amp 08 21 39.6
comp=Z,19nm,0.8s
BRG Amp 08 24 18.0
comp=N,1.2nm,17.8s
BRG Amp 08 24 19.0
comp=E,1.2nm,14.0s
BRG Amp 08 24 23.0
comp=Z,0.9nm,12.6s
BRG Berggiesshubel 15.96 292 *e*P **Pn 08 18 46.9 -3.3**
BRG *e* 08 21 38.7
BRG pmax pmax
comp=Z,8.0nm,1.1s
BRG MLR MLR
comp=N,1µm,17.8s
BRG MLR MLR
comp=E,1µm,14.0s
BRG MLR MLR
comp=Z,919nm,12.6s
GERES GERESS Array B 16.09 285 Pn **Pn 08 18 50.2 -1.8**
comp=Z,1.3nm,0.3s,baz=75,slow=15,SNR=8.9
GERES LR LR 08 25 49.9
comp=Z,222nm,20.2s,baz=88,slow=40
comp=Z,0.9nm,0.4s
GERES GERESS Array B 16.09 285 **Pn 08 18 50.4 -1.6**
GERES GERESS Array B 16.09 285 P **Pn 08 18 50.4 -1.6**
KHC Kasperske Hory 16.16 286 IAmb IAmb 08 18 57.9
comp=Z,48nm,0.9s
KHC Kasperske Hory 16.16 286 *e*P **P 08 18 55.8 -0.2**
KHC MLR MLR
comp=Z,700nm,8.4s
KHC Kasperske Hory 16.16 286 *e*P **P 08 18 55.8 -0.2**
KHC AMS AMS 08 25 20.0
comp=Z,700nm,8.4s
BLEU Blekinge 16.26 312 *i* P **Pn 08 18 50.0 -4.0**
BSD Bornholm Skovb 16.27 308 *e*P **Pn 08 18 50.8 -3.4**
BSD Bornholm Skovb 16.27 308 *i* P **Pn 08 18 50.0 -4.2**
BSD IAmb IAmb 08 18 50.8
comp=Z,23nm,0.7s
KBA Koelnbreinsper 16.52 279 P **Pn 08 18 57.4 -0.2**
KBA pmax pmax
comp=Z,19nm,1.1s
CLL Collm 16.59 294 *e*P **Pn 08 18 59.0 +0.8**
CLL pmax pmax

comp=Z,38nm,1.3s
CLL Collm 16.59 294 *e*P **Pn** **08 18 59.0 +0.8**
CLL *i* Pmax 08 19 00.6
comp=Z,38nm,1.3s
CLL *e*PP **sP** **08 19 09.0 +1.6**
CLL *ex* x 08 21 52.0
CLL *e*SS **S** **08 22 20.0 +6.8**
CLL *e*Lmax 08 24 11.0
WET Wettzell 16.62 286 P **Pn** **08 18 58.8 +0.1**
RAF Rauma 16.65 332 *e*P **Pn** **08 18 55.0 -3.9**
CLUD Ciudinico 16.95 277 Pn **Pn** **08 19 01.4 -1.4**
STAL STALIGIAL 17.10 276 P **Pn** **08 19 03.2 -1.6**
ABTA Abfaltersbach 17.14 278 *e*P **Pn** **08 19 04.5 -0.8**
comp=Z,17nm,1.1s
CIMO Cimolais 17.27 276 P **Pn** **08 19 05.0 -1.9**
CIMO lAmb lAmb 08 19 13.8
comp=Z,22nm,1.4s
DEL Delary 17.32 311 *i* P **Pn** **08 19 02.6 -4.7**
GRB1 Grafenberg Arr 17.41 287 P **P** **08 19 10.4 +0.6**
GRB1 pmax pmax
comp=Z,32nm,1.1s
MOX Moxa 17.42 291 P **Pn** **08 19 04.8 -3.9**
MOX pmax pmax
comp=Z,16nm,1.0s
EIL Elat 17.59 188 LR LR 08 26 54.5
comp=Z,76nm,19.9s,baz=80,slow=41
BJUU Bjuv 17.61 309 *i* P **Pn** **08 19 04.6 -6.4**
WTTA Wattenberg 17.64 280 P **Pn** **08 19 11.3 -0.3**
WTTA pmax pmax
comp=Z,33nm,0.9s
WTTA Wattenberg 17.64 280 *e*P **Pn** **08 19 11.0 -0.7**
comp=Z,19nm,0.7s,SNR=6.5
GEYT Alibeck 17.64 114 P **Pn** **08 19 10.7 -0.9**
comp=Z,1.3nm,0.3s,baz=294,slow=7.6,SNR=8.7
GEYT S **Sn** **08 22 18.1 -10**
comp=Z,6.1nm,0.5s,baz=307,slow=22,SNR=1.4
GEYT LR LR 08 27 17.7
comp=Z,160nm,18.7s,baz=328,slow=42
comp=Z,13nm,1.0s
GEYT Alibeck 17.64 114 P **Pn** **08 19 10.6 -1.0**
GYA0B ALIBECK ARRAY 17.64 114 P **Pn** **08 19 10.6 -1.0**
WATA Walderalm 17.67 280 *e*P **Pn** **08 19 11.8 -0.1**
comp=Z,11nm,1.0s
GRF Grafenberg Arr 17.68 288 P **P** **08 19 13.9 +1.1**
GRF pmax pmax
comp=Z,15nm,0.8s
SQTA Sankt Quirin 17.94 280 *e*P **Pn** **08 19 13.9 -1.3**
comp=Z,9.4nm,1.0s
MOTA Moosalm 17.99 280 *e*P **Pn** **08 19 14.5 -1.4**
comp=Z,5.8nm,0.9s
RETA Reutte 18.19 281 *e*P **Pn** **08 19 15.2 -3.2**
comp=Z,15nm,1.3s
FETA Feichten 18.29 279 *e*P **Pn** **08 19 19.4 -0.2**
comp=Z,3.6nm,0.6s,SNR=6.2
BORU Boraas 18.33 314 *i* P **Pn** **08 19 19.8 0.0**
BSEG Bad Segeberg 18.56 302 P **P** **08 19 18.8 -3.6**
BSEG pmax pmax
comp=Z,35nm,1.1s
ONAU Onsala 18.66 313 *i* P **P** **08 19 19.6 -3.8**
DAVA Damuels 18.82 281 *e*P **P** **08 19 24.8 -0.7**
comp=Z,9.2nm,0.5s,SNR=11
DAVOX Davos/Dischmat 18.91 279 P **P** **08 19 24.3 -2.2**
comp=Z,2.4nm,0.3s,baz=90,slow=7.7,SNR=18
DAVOX LR LR 08 27 23.7
comp=Z,466nm,18.1s,baz=80,slow=39
comp=Z,8.8nm,0.6s
TJOU Tjoern 19.05 314 *i* P **P** **08 19 26.9 -0.9**
OUL Oulu 19.06 345 P **P** **08 19 23.8 -4.0**
OUL pmax pmax
comp=Z,47nm,1.0s
STU Stuttgart 19.07 285 P **Pn** **08 19 30.6 +1.7**
HFS Hagfors 19.09 322 P **P** **08 19 25.9 -2.3**
comp=Z,25nm,0.4s,baz=118,slow=12,SNR=45
HFS S **Sn** **08 22 59.9 -2.4**
comp=Z,25nm,0.7s,baz=142,slow=24,SNR=3.4
HFS LR LR 08 26 58.8
comp=Z,350nm,19.4s,baz=122,slow=37
MSF Maaselka 19.35 349 P **P** **08 19 27.9 -3.1**
MSF pmax pmax
comp=Z,52nm,0.8s
SLE Schleitheim 19.67 283 P **P** **08 19 34.6 0.0**
SLE pmax pmax
comp=Z,23nm,0.9s
STRU Stroemstad 19.68 317 *i* P **P** **08 19 31.9 -2.7**
BFO Black Forest 19.69 284 P **P** **08 19 33.4 -1.5**
BFO Black Forest 19.69 284 P **P** **08 19 33.4 -1.5**
BFO pmax pmax
comp=Z,13nm,0.9s
MSSA Maissana 19.79 272 P **P** **08 19 36.3 +0.3**
MSSA lAmb lAmb 08 19 48.2
comp=Z,43nm,0.9s
OSL Oslo 20.29 319 *e*P **P** **08 19 41.9 +0.7**
OSL lAmb lAmb 08 19 43.0
comp=Z,53nm,0.9s
NC602 NORSAR Array S 20.32 322 *e*P **P** **08 19 41.8 +0.2**
NC602 lAmb lAmb 08 19 42.7
comp=Z,66nm,1.2s
NC602 *e* 08 23 17.3
NORES NORESS Array B 20.32 322 P **P** **08 19 42.0 +0.4**
NORES pmax pmax
comp=Z,2.0nm,0.5s
CDF Champ du Feu 20.38 285 *e*P **P** **08 19 41.5 -0.9**
CDF pmax pmax
comp=Z,6.0nm,0.9s
ECH Echery 20.48 284 P **P** **08 19 42.3 -1.2**
ECH Echery 20.48 284 P **P** **08 19 42.3 -1.2**
ECH pmax pmax
comp=Z,10.0nm,1.1s
APA Apatity 20.58 355⇑ *i*P **P** **08 19 45.8 +1.4**
APA *i* 08 20 09.2
APA *i* S **S** **08 23 29.0 -4.6**
APA pmax pmax
comp=Z,32nm,0.8s
APA MLR MLR
comp=Z,600nm,11.0s
NB2 NORSAR Subarra 20.61 322 P **P** **08 19 43.4 -1.4**
comp=Z,36nm,0.7s,baz=121,slow=10
NB2 NORSAR Subarra 20.61 322 P **P** **08 19 43.4 -1.4**
baz=121,slow=10
NOA NORSAR Array B 20.61 322 P **P** **08 19 43.8 -1.0**
comp=Z,26nm,0.9s,baz=123,slow=10,SNR=72
NOA S **S** **08 23 26.7 -7.7**
comp=Z,4.8nm,0.7s,baz=129,slow=22,SNR=3.8
NOA LR LR 08 27 55.0
comp=Z,285nm,19.4s,baz=125,slow=37
comp=Z,26nm,0.9s
NOD Norderasen 20.65 330 *e*P **P** **08 19 44.1 -1.0**
HOMB Homborsund 20.68 313 *i* P **P** **08 19 44.0 -1.4**
HOMB *i* P Pn 08 19 44.0 -3.8
HOMB Homborsund 20.68 313 *e*P **P** **08 19 44.2 -1.3**
KONO Kongsberg 20.68 317 **P** **08 19 44.8 -0.6**
KONO lAmb lAmb 08 19 47.3
comp=Z,40nm,0.8s
KONO Kongsberg 20.68 317⇓ *e*P **P** **08 19 45.2 -0.3**
KONO pmax pmax
comp=Z,61nm,1.1s
KONO Kongsberg 20.68 317 *e*P **P** **08 19 45.2 -0.3**
KONO lAmb lAmb 08 19 47.1
comp=Z,48nm,0.9s
KONO *e* 08 25 31.5
SENIN Lac Senin/Sane 20.74 279 P **P** **08 19 44.7 -1.8**
HINF Hinteralfeld 20.75 283 *e*P **P** **08 19 46.0 -0.4**
HINF pmax pmax
comp=Z,26nm,1.5s
NBO00 NORSAR Array S 20.79 322 P **P** **08 19 46.1 -0.6**
LVZ Lovozero 20.85 357 **P** **08 19 47.3 -0.1**
LVZ lAmb lAmb 08 19 52.1
comp=Z,43nm,0.6s
LVZ Lovozero 20.85 357 *de*P **P** **08 19 47.5 +0.2**
LVZ pmax pmax
comp=Z,25nm,0.6s
BTNL Ternell 20.92 291 *d*P **P** **08 19 49.5 +1.3**
comp=Z,16nm,0.9s
WLF Walferdange 20.97 289 P **P** **08 19 48.1 -0.6**
WLF lAmb lAmb 08 19 50.7
comp=Z,35nm,0.9s
WLF Walferdange 20.97 289 P **P** **08 19 48.1 -0.6**
WLF pmax pmax
comp=Z,35nm,0.9s
WLF Walferdange 20.97 289 *d*P **P** **08 19 49.9 +1.2**
comp=Z,26nm,0.9s
MEM Membach 21.00 291 P **P** **08 19 50.4 +1.4**
MEM pmax pmax
comp=Z,54nm,0.9s
MEM Membach 21.00 291 *d*P **P** **08 19 50.2 +1.3**
comp=Z,37nm,0.9s
HAU Haudompre 21.05 284 *e*P **P** **08 19 48.6 -1.1**
HAU pmax pmax
comp=Z,26nm,1.1s
BSTI Sart Tilman 21.28 291 *d*P **P** **08 19 53.6 +1.6**
LPG La Plagne 21.32 277 *e*P **P** **08 19 51.5 -1.4**
LPG pmax pmax
comp=Z,12nm,0.7s
SNART Snartemo 21.35 313 *i* P **P** **08 19 49.6 -3.1**
SNART Snartemo 21.35 313 *e*P **P** **08 19 52.7 +0.1**
SNART lAmb lAmb 08 19 53.2
comp=Z,295nm,1.4s
BCLA Clavier 21.45 291 *d*P **P** **08 19 55.4 +1.5**
comp=Z,42nm,0.9s
BNI Bardonecchia 21.50 276 P **P** **08 19 53.2 -1.4**
BNI Bardonecchia 21.50 276 P **P** **08 19 53.2 -1.4**
BNI pmax pmax
comp=Z,15nm,0.9s
ISO Isola 21.51 273 P **P** **08 19 54.6 0.0**
ISO pmax pmax
comp=Z,25nm,1.2s
RCHB Rochefort 21.52 290 *d*P **P** **08 19 55.9 +1.3**
comp=Z,19nm,0.9s
BRVK Borovoye 21.63 62 P **P** **08 19 56.2 +0.5**
BRVK Borovoye 21.63 62*c i*P **P** **08 19 56.2 +0.5**
BRVK pmax pmax
comp=Z,63nm,0.8s
BRVK Borovoye 21.63 62 ⇑P **P** **08 19 55.9 +0.2**
comp=Z,78nm,0.7s
BVA0 Borovoye Array 21.69 62 ⇑P **P** **08 19 56.7 +0.3**
comp=Z,42nm,0.8s,baz=272,slow=8.0,SNR=81
BVA0 S **S** **08 23 48.9 -6.9**
comp=Z,1.7nm,0.7s,baz=276,slow=26,SNR=5.9
BVAR Borovoye Array 21.69 62 LR LR 08 29 02.3
comp=Z,131nm,20.4s,baz=140,slow=38
SKAR Skarslia 21.70 319 *e*P **P** **08 19 57.1 +0.6**
SKAR lAmb lAmb 08 19 57.9
comp=Z,75nm,0.8s
BMRD Maredsous 21.81 290 *d*P **P** **08 19 58.3 +0.6**
comp=Z,10nm,0.9s
DOU Dourbes 21.93 290 *d*P **P** **08 19 59.8 +0.8**
comp=Z,10nm,1.0s
DOMB Dombas 22.01 323 *e*P **P** **08 19 59.3 -0.5**
DOMB lAmb lAmb 08 20 15.1
comp=Z,49nm,1.3s
BLS5 Blasjo 22.07 315 *e*P **P** **08 20 01.8 +1.3**
BLS5 *e* 08 26 34.2
ORIF Oris-en-Rattie 22.08 276 *e*P **P** **08 19 59.7 -1.1**
ORIF pmax pmax
comp=Z,17nm,0.8s
SNF Seneffe 22.10 291 *d*P **P** **08 20 02.2 +1.4**
comp=Z,38nm,0.9s
ODD1 Odda 22.16 317 *e*P **P** **08 20 02.5 +1.0**
ODD1 lAmb lAmb 08 20 05.6
comp=Z,74nm,1.1s
LMR La Mourre 22.17 272 *e*P **P** **08 20 01.1 -0.5**
LMR pmax pmax
comp=Z,15nm,0.9s
TBLU Trondheim 22.17 327 *e*P **P** **08 20 00.3 -1.2**
TBLU lAmb lAmb 08 20 03.3
comp=Z,62nm,0.6s
NSS Namsos 22.32 330 *e*P **P** **08 20 02.9 -0.1**
NSS lAmb lAmb 08 20 05.6
comp=Z,33nm,0.9s
MOR8 Moi Rana 22.67 335 *e*P **P** **08 20 06.9 +0.2**
MOR8 lAmb lAmb 08 20 13.2
comp=Z,27nm,0.7s
MOR8 *e*S **S** **08 24 13.8 -0.2**
MOL Molde 22.88 323 *e*P **P** **08 20 08.5 -0.5**
SSB Saint Sauveur 22.88 278 P **P** **08 20 07.3 -2.0**
SSB lAmb lAmb 08 20 10.3
comp=Z,13nm,0.6s
SSB Saint Sauveur 22.88 278 P **P** **08 20 07.3 -2.0**
SSB pmax pmax
comp=Z,13nm,0.6s
VIVF Saint-Julien-l 22.92 276 *e*P **P** **08 20 07.1 -2.5**
VIVF pmax pmax
comp=Z,9.0nm,0.7s
AKN Aaknes 22.93 322 *e*P **P** **08 20 10.1 +0.5**
AKN lAmb lAmb 08 20 11.2
comp=Z,85nm,1.1s
AKN *e*ScP ScP 08 27 19.5 -17
BER Bergen 22.94 317 *e*P **P** **08 20 08.9 -0.7**
ASK Askoy 23.04 317 *e*P **P** **08 20 12.0 +1.4**
SSF Saint Saulge 23.12 282 *e*P **P** **08 20 10.9 -0.8**
SSF pmax pmax
comp=Z,21nm,1.2s
BRZS Berezniki 23.23 70 *e*P **P** **08 20 12.8 0.0**
ARA0 ARCESS Array S 23.23 349 *e*P **P** **08 20 12.8 +0.2**
ARA0 lAmb lAmb 08 20 15.2
comp=Z,18nm,0.8s
ARA0 *e*S **S** **08 24 24.4 +0.7**
ARCES ARCESS Array B 23.23 349 P **P** **08 20 13.0 +0.4**
comp=Z,12nm,0.5s,baz=160,slow=9.8,SNR=160
ARCES S **S** **08 24 25.1 +1.5**
comp=Z,13nm,0.8s,baz=154,slow=18,SNR=3.4
ARCES LR LR 08 30 03.5
comp=Z,222nm,20.4s,baz=152,slow=38
comp=Z,12nm,0.5s
ARCES ARCESS Array B 23.23 349 P **P** **08 20 12.0 -0.6**
ARCES lAmb lAmb 08 20 38.5
comp=Z,24nm,0.8s
KEV Kevo 23.26 351 P **P** **08 20 12.8 -0.1**
KEV lAmb lAmb 08 20 26.6
comp=Z,28nm,0.8s
KEV Kevo 23.26 351 P **P** **08 20 12.8 -0.1**
KEV pmax pmax
comp=Z,28nm,0.8s
OTUK Ortayu 23.27 74 P **P** **08 20 13.3 +0.1**
OTUK Ortayu 23.27 74 ⇑P **P** **08 20 13.3 +0.1**
comp=Z,34nm,0.9s
KONS Konsvik 23.28 335 *e*P **P** **08 20 14.3 +1.3**
KONS *e* 08 24 27.8
AVF Avril sur Loir 23.29 282 *e*P **P** **08 20 12.3 -1.0**
AVF pmax pmax
comp=Z,4.0nm,0.8s
TAS Tashkent 23.32 93 P **P** **08 20 15.2 +1.5**
TAS Tashkent 23.32 93 P **P** **08 20 15.2 +1.5**
TAS pmax pmax
comp=Z,63nm,0.8s
FAUS Fauske 23.34 338 *e*P **P** **08 20 14.0 +0.4**
FAUS lAmb lAmb 08 20 15.5
comp=Z,41nm,0.6s
FAUS *e*S **S** **08 24 25.8 +0.5**
FAUS *e*ScP **ScP** **08 27 36.0 -1.1**
KK31 Karatay Array 23.45 88 P **P** **08 20 15.6 +0.7**
KK31 lAmb lAmb 08 20 18.3
comp=Z,28nm,0.6s
KK31 Karatay Array 23.45 88 *i* P **P** **08 20 15.7 +0.7**
KK31 Karatay Array 23.45 88 ⇓P **P** **08 20 15.6 +0.7**
comp=Z,17nm,0.6s,baz=311,slow=12,SNR=189
KKAR Karatay Array 23.45 88 P **P** **08 20 15.4 +0.4**
KKAR lAmb lAmb 08 20 18.3
comp=Z,28nm,0.6s
KKAR Karatay Array 23.45 88 P **P** **08 20 15.6 +0.6**
KKAR Karatay Array 23.45 88 P **P** **08 20 15.4 +0.4**
KKAR pmax pmax
comp=Z,28nm,0.6s
IUG Iuzhnay 23.48 90 *e*P **P** **08 20 16.8 +1.3**
BGF Bois d'Agland 23.68 281 *e*P **P** **08 20 16.3 -1.0**
BGF pmax pmax
comp=Z,9.0nm,0.8s
STEI Steigen 23.77 339 *e*P **P** **08 20 18.8 +1.0**
STEI lAmb lAmb 08 20 23.6
comp=Z,23nm,0.9s
KEST Kesra 23.95 252 LR LR 08 31 38.9
comp=Z,207nm,18.3s,baz=14,slow=42
JETT Jettan, Norway 24.02 345 *e*P **P** **08 20 20.8 +0.5**
JETT lAmb lAmb 08 20 27.1
comp=Z,53nm,0.6s
LOF Lofoten 24.34 338 *e*P **P** **08 20 22.6 -0.6**
LOF *e*S **S** **08 24 47.3 +6.0**
TRO Tromso 24.36 344 *e*P **P** **08 20 23.7 +0.4**
RAYN Ar Rayn 24.41 162 P **P** **08 20 23.8 -0.5**
RAYN Ar Rayn 24.41 162 P **P** **08 20 23.8 -0.5**
RAYN pmax pmax
comp=Z,8.0nm,1.0s
CHGR Chuyangaron 24.47 99 P **P** **08 20 25.3 +0.5**
CHGR Chuyangaron 24.47 99 P **P** **08 20 25.3 +0.5**
CHGR pmax pmax
comp=Z,50nm,0.7s
HAMF Hammerfest 24.50 349 *e*P **P** **08 20 25.4 +0.8**
HAMF *e*S **S** **08 24 45.5 +1.5**
HAMF *e* 08 27 55.5
CAF Calviac 24.66 278 *e*P **P** **08 20 25.3 -1.1**
CAF pmax pmax
comp=Z,7.0nm,0.7s
RJF Les Rejaudoux 24.92 279 *e*P **P** **08 20 27.7 -0.9**
RJF pmax pmax
comp=Z,11nm,1.1s
GAR Garm 25.08 97 P **P** **08 20 31.6 +1.3**
MTLF Montolieu 25.09 274 *e*P **P** **08 20 30.0 -0.2**
MTLF pmax pmax
comp=Z,33nm,1.4s
BTLS Baital 25.20 81 *e*P **P** **08 20 31.9 +0.7**
FLN La Foliniere 25.40 288 *e*P **P** **08 20 32.2 -0.8**
FLN pmax pmax
comp=Z,13nm,0.9s
MFF Saint Martin d 25.67 283 *e*P **P** **08 20 34.0 -1.4**
MFF pmax pmax
comp=Z,3.0nm,0.8s
GRR Gorron 25.72 287 *e*P **P** **08 20 34.7 -1.2**
GRR pmax pmax
comp=Z,78nm,2.0s
EKS2 Erkin-Say 25.84 87 P **P** **08 20 39.2 +2.0**
SNR=14
DRK Karamyk 25.86 95 lAmb lAmb 08 20 41.8
comp=Z,19nm,0.8s
AML Almayashu 25.99 88 P **P** **08 20 43.6 +4.8**
SNR=5.6
USP Ospenovka 26.10 85 P **P** **08 20 40.2 +0.7**
SNR=17
SGDS Sogindy 26.12 84 *e*P **P** **08 20 40.3 +0.6**
AAK Ala-Archa 26.33 86 P **P** **08 20 43.0 +1.3**
comp=Z,29nm,0.9s,baz=326,slow=8.4,SNR=30
AAK LR LR 08 32 58.3
comp=Z,126nm,20.4s,baz=302,slow=41
comp=Z,29nm,0.9s
AAK Ala-Archa 26.33 86 P **P** **08 20 43.9 +2.2**
SNR=12
AAK Ala-Archa 26.33 86 P **P** **08 20 43.3 +1.5**
AAK lAmb lAmb 08 20 44.5
comp=Z,30nm,0.9s
AAK Ala-Archa 26.33 86*c i*P **P** **08 20 43.2 +1.5**
AAK pmax pmax
comp=Z,33nm,1.0s
EPF Esparros 26.48 275 *e*P **P** **08 20 41.0 -1.9**
EPF pmax pmax
comp=Z,8.0nm,0.9s
EKA Eskdalemuir Ar 26.48 303 P **P** **08 20 41.7 -1.0**
comp=Z,4.9nm,0.7s,baz=102,slow=9.1,SNR=16
EKA LR LR 08 32 31.0
comp=Z,240nm,19.1s,baz=176,slow=40
comp=Z,4.9nm,0.7s
ESK Eskdalemuir 26.51 303 P **P** **08 20 43.0 +0.1**
ESK lAmb lAmb 08 20 43.5
comp=Z,42nm,1.2s
ESK Eskdalemuir 26.51 303 P **P** **08 20 43.0 +0.1**
ESK pmax pmax
comp=Z,42nm,1.3s
KBK Karagaybulak 26.64 86 P **P** **08 20 46.6 +2.2**
SNR=6.5
UOSS Minazif 26.64 140 P **P** **08 20 45.1 +0.7**
UOSS lAmb lAmb 08 20 58.8
comp=Z,13nm,0.8s
SGMF Saint Gilles 26.86 287 *e*P **P** **08 20 45.5 -0.6**
SGMF pmax pmax
comp=Z,24nm,1.2s
KURBB Kurchatov Arra 26.87 67 P **P** **08 20 46.6 +0.4**
comp=Z,5.4nm,0.7s,baz=278,slow=9.9,SNR=54
KURBB LR LR 08 34 05.0
comp=Z,164nm,18.2s,baz=248,slow=42
comp=Z,5.4nm,0.7s
KURBB Kurchatov Arra 26.87 67 P **P** **08 20 46.4 +0.2**
KURK Kurchatov 26.91 67 P **P** **08 20 47.0 +0.4**
KURK Kurchatov 26.91 67*c i*P **P** **08 20 46.7 +0.1**
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 26.91 67 ⇓P **P** **08 20 46.5 -0.1**
comp=Z,6.1nm,0.8s
TKM2 Tokmak 2 26.98 85 P **P** **08 20 49.2 +1.7**
SNR=24
TKM2 Tokmak 2 26.98 85 ⇑P **P** **08 20 48.4 +0.9**
comp=Z,18nm,0.8s
ETSF Etsaut 27.14 275 *e*P **P** **08 20 49.9 +1.0**
ETSF pmax pmax
comp=Z,12nm,1.2s
QUIF Quistinic 27.33 287 *e*P **P** **08 20 49.8 -0.6**
QUIF pmax pmax
comp=Z,28nm,1.3s
MDOK Medeo 27.87 84 P **P** **08 20 57.0 +1.5**
MDOK Medeo 27.87 84 ⇓P **P** **08 20 57.2 +1.7**
comp=Z,12nm,1.0s
ARXS Arharly 28.02 81 *e*P **P** **08 20 57.7 +1.0**
KSH Kashi 28.68 91 P **P** **08 21 04.1 +1.4**
KSH pmax pmax
comp=Z,11nm,0.9s
PDGK Podgornoye 29.46 82 P **P** **08 21 10.4 +0.8**
PDGK Podgornoye 29.46 82 ⇑P **P** **08 21 10.8 +1.2**
comp=Z,24nm,1.1s
MAKZ Makanchi 29.95 74 P **P** **08 21 15.1 +1.3**
MAKZ lAmb lAmb 08 21 15.4
comp=Z,7.7nm,0.7s
MAKZ Makanchi 29.95 74 P **P** **08 21 15.1 +1.3**
MAKZ pmax pmax
comp=Z,8.0nm,0.7s
MAKZ Makanchi 29.95 74 ⇑P **P** **08 21 14.6 +0.8**
comp=Z,8.2nm,0.7s
MK31 Makanchi Array 30.16 74 P **P** **08 21 16.8 +1.1**
MK31 lAmb lAmb 08 21 17.5
comp=Z,11nm,0.6s
MK31 Makanchi Array 30.16 74 *i* P **P** **08 21 16.7 +1.1**
MK31 pmax pmax
comp=Z,12nm,0.5s
MK31 Makanchi Array 30.16 74 ⇓P **P** **08 21 16.6 +1.0**
comp=Z,12nm,0.6s,baz=282,slow=7.2,SNR=161
MKAR Makanchi Array 30.16 74 P **P** **08 21 16.8 +1.1**
comp=Z,14nm,0.5s,baz=281,slow=7.2,SNR=90
MKAR LR LR 08 35 21.8
comp=Z,159nm,19.4s,baz=290,slow=40
comp=Z,14nm,0.5s
ZALV Zalesovo Beam 30.26 59 P **P** **08 21 16.6 +0.2**
comp=Z,16nm,0.6s,baz=277,slow=9.2,SNR=66
ZALV LR LR 08 34 15.5
comp=Z,93nm,18.7s,baz=301,slow=38
comp=Z,16nm,0.6s
ESDC Sonseca Array 30.83 271 P **P** **08 21 20.1 -1.5**
comp=Z,1.3nm,0.9s,baz=53,slow=11,SNR=7.5
ESDC LR LR 08 34 19.6
comp=Z,116nm,18.8s,baz=94,slow=38
comp=Z,1.3nm,0.9s
SPB2 Spitsbergen Ar 32.17 352 P **P** **08 21 34.1 +1.1**
SPA0 Spitsbergen Ar 32.18 352 *e*P **P** **08 21 34.3 +1.2**
SPITS Spitsbergen Ar 32.18 352 P **P** **08 21 33.8 +0.7**
comp=Z,7.0nm,0.5s,baz=127,slow=13,SNR=22
comp=Z,7.0nm,0.5s
SPITS Spitsbergen Ar 32.18 352 P **P** **08 21 34.4 +1.3**
SPITS pmax pmax
comp=Z,28nm,1.1s
JMIC Jan Mayen 32.27 334 LR LR 08 34 42.3
comp=Z,169nm,18.7s,baz=46,slow=36
NRIK Noril'sk 32.93 30 P **P** **08 21 41.6 +1.9**
comp=Z,3.8nm,0.5s,baz=257,slow=4.0,SNR=6.4
NRIK LR LR 08 36 09.6
comp=Z,132nm,18.6s,baz=238,slow=38
comp=Z,3.8nm,0.5s
NRIK Noril'sk 32.93 30*ce*P **P** **08 21 41.3 +1.6**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
NRIK MLR MLR
comp=Z,115nm,18.0s
KBS Kingsbay 33.27 351 P **P** **08 21 44.0 +1.4**
KBS Kingsbay 33.27 351⇑ *e*P **P** **08 21 43.4 +0.8**
KBS pmax pmax
comp=Z,10.0nm,1.1s
PESTR Estremoz 33.69 273 P **P** **08 21 46.5 -0.2**
WMQ Urumqi 34.77 77 *e*P **P** **08 21 57.9 +1.8**
WMQ pP pP 08 22 00.5 -0.7
WMQ pmax pmax
comp=Z,38nm,0.9s
WMQ LR LR
comp=Z,380nm,14.9s
MDT Midelt 34.95 261 LR LR 08 37 19.4
comp=Z,56nm,18.4s,baz=70,slow=38
TAM Tamanrasset 35.41 238 P **P** **08 22 02.5 +0.6**
ATD Arta Tunnel 35.78 171 LR LR 08 37 30.8
comp=Z,35nm,19.7s,baz=319,slow=38
BORG Borgarnes 35.78 321 LR LR 08 37 52.4
comp=Z,129nm,18.1s,baz=110,slow=38
KNGR Kungurtug, Tuv 38.60 62⇓ *e*P **P** **08 22 30.4 +1.7**
KNGR pmax pmax
comp=Z,5.0nm,0.9s

DANN Dangsing 40.34 101 *e*P **P** **08 22 44.9 +1.2**
GKN Gorkha 41.16 101 *e*P **P** **08 22 51.0 +0.8**
SUMG Summit 41.72 334 P **P** **08 22 56.0 +1.5**
SUMG IAmb IAmb 08 22 57.1
comp=Z,12nm,1.0s
SUMG Summit 41.72 334 P **P** **08 22 56.1 +1.5**
SUMG pmax pmax
comp=Z,12nm,1.0s
SUMG Summit 41.72 334 *i* P **P** **08 22 55.0 +0.4**
KKN Kakani 41.73 100 *e*P **P** **08 22 55.5 +0.5**
comp=Z,16nm,0.7s
DMN Daman 41.73 101 *e*P **P** **08 22 55.9 +0.9**
PKIN Phulchoki 41.94 101 *e*P **P** **08 22 57.5 +0.7**
comp=Z,15nm,0.6s
PKI Pulchoki 41.96 101 *e*P **P** **08 22 57.6 +0.6**
comp=Z,29nm,0.8s
GUN Gumba 42.05 100 *e*P **P** **08 22 58.7 +0.9**
ZAK Zakamensk 42.13 60 *e*P **P** **08 22 59.0 +1.2**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
JIRN Jiri 42.42 100 *e*P **P** **08 23 01.8 +1.0**
comp=Z,37nm,0.6s
ICESG Greenland Ices 42.59 329 *i* P **P** **08 23 02.4 +0.7**
ICESG IAmb IAmb 08 23 03.2
comp=Z,11nm,0.6s
RAMN Ramite 43.16 100 *e*P **P** **08 23 07.7 +1.0**
comp=Z,26nm,0.6s
GOMU GeErMu 43.20 83 P **P** **08 23 03.4 -3.6**
GOMU pP pP 08 23 07.6 -4.6
GOMU S **S** **08 29 35.4 +2.1**
GOMU SS **SS** **08 32 43.0 -3.0**
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,110nm,4.3s
GOMU LR LR
comp=Z,110nm,12.7s
GOMU LR LR
comp=Z,130nm,12.3s
GOMU LR LR
comp=Z,110nm,13.1s
TAPN Taplejung 43.65 99 *e*P **P** **08 23 12.0 +1.3**
ODAN Odare 43.75 100 *e*P **P** **08 23 12.5 +1.1**
comp=Z,16nm,0.9s
LSA Lhasa 44.49 93 P **P** **08 23 16.1 -1.5**
LSA IAmb IAmb 08 23 20.4
comp=Z,15nm,0.7s
LSA Lhasa 44.49 93 P **P** **08 23 16.1 -1.5**
LSA pmax pmax
comp=Z,15nm,0.7s
HYBB Hyderabad (bro 44.78 117 *e*P **P** **08 23 18.8 -0.7**
GTA Gaotai 44.85 76 ⇓P **P** **08 23 21.4 +1.4**
GTA pP sP 08 23 27.7 +0.5
GTA sP pP 08 23 31.3 +6.1
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,61nm,5.1s
GTA LR LR
comp=Z,140nm,16.7s
GTA LR LR
comp=Z,130nm,15.6s
GTA LR LR
comp=Z,120nm,18.5s
SONM Songino Array 45.03 63 P **P** **08 23 22.0 +0.7**
comp=Z,3.7nm,0.8s,baz=292,slow=8.8,SNR=17
SONM LR LR 08 45 20.8
comp=Z,101nm,18.1s,baz=295,slow=40
comp=Z,3.7nm,0.8s
SONM Songino Array 45.03 63 P **P** **08 23 22.0 +0.7**
BOD Bodaibo 45.29 47 *e*P **P** **08 23 23.4 +0.4**
BOD pmax pmax
comp=Z,6.0nm,1.5s
TOA0 Torodi Ar. Sit 45.30 234 P **P** **08 23 21.3 -2.2**
TORD Torodi Ar. Bea 45.30 234 P **P** **08 23 22.4 -1.1**
comp=Z,1.8nm,0.6s,baz=27,slow=8.6,SNR=12
comp=Z,1.8nm,0.6s
ULN Ulaanbaatar 45.42 62 P **P** **08 23 24.9 +0.5**
ULN Ulaanbaatar 45.42 62 *ce*P **P** **08 23 25.7 +1.3**
ULN pmax pmax
comp=Z,6.0nm,0.9s
ULN MLR MLR
comp=Z,126nm,19.0s
DY2G Dye2 45.69 326 *i* P **P** **08 23 26.5 +0.1**
DY2G IAmb IAmb 08 23 27.5
comp=Z,22nm,0.6s
TIXI Tiksi 46.48 26 LR LR 08 43 30.1
comp=Z,126nm,19.1s,baz=218,slow=37
TIXI Tiksi 46.48 26⇑ *e*P **P** **08 23 30.5 -1.7**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
TIXI MLR MLR
comp=Z,111nm,18.0s
ILULI Ilulissat 46.52 331 P **P** **08 23 32.7 +0.2**
ILULI Ilulissat 46.52 331 P **P** **08 23 32.7 +0.2**
ILULI pmax pmax
comp=Z,21nm,0.5s
SFJD Kangerlussuaq 47.13 328 P **P** **08 23 37.6 +0.2**
SFJD Kangerlussuaq 47.13 328 P **P** **08 23 37.6 +0.2**
SFJD pmax pmax
comp=Z,12nm,0.7s
MBAR Mbarara 47.95 189 LR LR 08 46 07.3
comp=Z,38nm,19.9s,baz=122,slow=39
MBAR Mbarara 47.95 189⇑ *e*P **P** **08 23 42.3 -2.2**
KMBO Kiiima Mbogo 48.09 181 LR LR 08 43 47.3
comp=Z,16nm,18.9s,baz=316,slow=36
IVI Ivigtut 48.41 320 P **P** **08 23 48.0 +0.6**
IVI Ivigtut 48.41 320 *i* P **P** **08 23 47.2 -0.1**
IVI IAmb IAmb 08 23 48.3
comp=Z,14nm,0.6s
LZH Lanzhou 49.34 78 ⇑P **P** **08 23 56.6 +1.6**
LZH sP sP 08 24 02.3 0.0
LZH pmax pmax
comp=Z,34nm,1.3s
LZH LR LR
comp=Z,230nm,13.7s
LZH LR LR
comp=Z,190nm,14.0s
LZH LR LR
comp=Z,200nm,16.5s
YAK Yakutsk 50.72 37 LR LR 08 47 52.1
comp=Z,110nm,18.2s,baz=269,slow=39
YAK Yakutsk 50.72 37 *i* P **P** **08 24 02.4 -2.5**
YAK pmax pmax
comp=Z,9.0nm,0.5s
YAK MLR MLR
comp=Z,114nm,17.0s
HHC Hu-ho-hao-te 51.72 68 *e*P **P** **08 24 12.6 -0.3**
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.0s
HHC LR LR
comp=Z,230nm,17.1s
HHC LR LR
comp=Z,240nm,16.5s
HHC LR LR
comp=Z,390nm,16.5s
XLT XiLinHaoTe 52.85 63 *e*P **P** **08 24 23.3 +2.0**
XLT pmax pmax
comp=Z,15nm,0.9s
XLT pmax pmax
comp=Z,67nm,4.4s
PZH PanZhiHua 53.74 89 P **P** **08 24 30.2 +2.1**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.4s
ZEA Zeya 53.79 47 *e*P **P** **08 24 30.2 +2.3**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
XAN Xi'an 53.91 77 P **P** **08 24 29.9 +0.8**
XAN pP pP 08 24 33.4 -1.0
XAN pmax pmax
comp=Z,14nm,0.7s
XAN LR LR
comp=Z,170nm,11.7s
XAN LR LR
comp=Z,120nm,15.1s
XAN LR LR
comp=Z,170nm,16.5s
PALK Pallekele 54.09 123 LR LR 08 50 35.6
comp=Z,84nm,19.7s,baz=86,slow=39
DBIC Dimbokro 54.25 236 P **P** **08 24 29.1 -2.6**
comp=Z,3.4nm,0.6s,baz=54,slow=6.7,SNR=5.3
comp=Z,3.4nm,0.6s

BJT Baijiatuao 55.09 67 P **P** **08 24 36.4 -1.1**
BJT IAmb IAmb 08 24 39.6
comp=Z,14nm,1.1s
BJT Baijiatuao 55.09 67 P **P** **08 24 36.4 -1.1**
BJT pmax pmax
comp=Z,14nm,1.1s
FRB Frobisher Bay 55.24 329 LR LR 08 48 34.4
comp=Z,92nm,18.2s,baz=26,slow=36
HNS HongShan 55.69 70 ⇑P **P** **08 24 43.3 +1.4**
HNS pmax pmax
comp=Z,20nm,0.8s
CHTO Chiang Mai 57.00 98 P **P** **08 24 50.5 -1.0**
CHTO IAmb IAmb 08 24 52.2
comp=Z,8.4nm,1.0s
CHTO Chiang Mai 57.00 98 P **P** **08 24 50.5 -1.0**
CHTO pmax pmax
comp=Z,8.0nm,1.0s
CMAR Chiang Mai Arr 57.25 98 P **P** **08 24 52.6 -0.6**
comp=Z,1.8nm,0.5s,baz=306,slow=8.2,SNR=13
CMAR LR LR 08 53 54.0
comp=Z,54nm,18.8s,baz=240,slow=41
comp=Z,1.8nm,0.5s
CMAR Chiang Mai Arr 57.25 98 P **P** **08 24 52.9 -0.3**
CMAR Chiang Mai Arr 57.25 98 *i* P **P** **08 24 53.5 +0.3**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CN2 Changchun 58.47 58 *e*P **P** **08 25 01.9 +0.4**
CN2 *e*S **S** **08 33 01.2 -2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,100nm,15.0s
CN2 LR LR
comp=Z,100nm,13.1s
SEY Seymchan 58.72 29⇓ *e*P **P** **08 25 05.1 +2.2**
SEY pmax pmax
comp=Z,6.0nm,0.9s
SCHQ Schefferville 60.16 320 P **P** **08 25 12.9 -0.1**
comp=Z,5.1nm,0.6s,baz=52,slow=4.2,SNR=9.2
comp=Z,5.1nm,0.6s
MA2 Magadan 60.48 33 LR LR 08 53 59.8
comp=Z,91nm,18.2s,baz=301,slow=38
NJ2 Nanjing 61.67 72 *e*P **P** **08 25 20.3 -3.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
SEHB SEOHWA 63.57 62 P **P** **08 25 37.2 +1.0**
SEHB IAmb IAmb 08 25 38.0
comp=Z,8.2nm,0.8s
GBN Guysborough 63.74 309 P **P** **08 25 37.8 +0.6**
KS19 Wonju Array Si 63.84 62 P **P** **08 25 37.9 -0.1**
KSAR Wonju Array Be 63.89 62 P **P** **08 25 38.2 -0.1**
KSAR Wonju Array Be 63.89 62 P **P** **08 25 38.2 -0.1**
KSRS Korea Array 63.90 62 P **P** **08 25 38.2 -0.2**
comp=Z,7.1nm,0.8s,baz=312,slow=5.8,SNR=42
KSRS LR LR 08 57 12.8
comp=Z,57nm,18.9s,baz=325,slow=40
comp=Z,7.1nm,0.8s
TOLK Toolik Lake Re 64.40 3 P **P** **08 25 44.2 +3.0**
TOLK IAmb IAmb 08 25 44.5
comp=Z,7.3nm,0.9s
COLD Coldfoot 65.79 3 P **P** **08 25 51.1 +0.9**
COLD IAmb IAmb 08 25 53.3
comp=Z,4.5nm,0.9s
PQI Presque Isle 66.22 314 P **P** **08 25 52.8 -0.4**
H23K Yukon River 67.22 3 P **P** **08 26 00.3 +0.9**
H23K IAmb IAmb 08 26 03.3
comp=Z,6.0nm,1.0s
H21K Melozitna Rive 67.23 5 P **P** **08 26 01.9 +2.4**
H21K IAmb IAmb 08 26 02.7
comp=Z,4.4nm,1.0s
I29M Ogilvie Camp, 67.77 358 IAmb IAmb 08 26 04.9
comp=Z,6.8nm,0.7s
PETK Petropavlovsk- 67.85 34 P **P** **08 26 03.7 +0.1**
comp=Z,2.2nm,0.9s,baz=343,slow=4.6,SNR=1.6
PETK LR LR 08 58 48.5
comp=Z,63nm,19.6s,baz=323,slow=39
comp=Z,2.2nm,0.9s
MLY Manley 67.96 4 IAmb IAmb 08 26 07.3
comp=Z,6.4nm,1.2s
MDM Murphy Dome 68.13 3 IAmb IAmb 08 26 08.3
comp=Z,4.7nm,0.8s
COLA College 68.23 3 P **P** **08 26 07.5 +1.8**
COLA IAmb IAmb 08 26 08.7
comp=Z,8.3nm,0.8s
COLA College 68.23 3 P **P** **08 26 07.5 +1.8**
COLA pmax pmax
comp=Z,8.0nm,0.8s
TCOL CIGO, UAF Yank 68.23 3 IAmb IAmb 08 26 08.7
comp=Z,8.0nm,0.8s
ILAR Eielson Array 68.36 2 P **P** **08 26 08.1 +1.5**
comp=Z,0.6nm,0.7s,baz=351,slow=5.3,SNR=6.9
comp=Z,0.6nm,0.7s
YKA Yellowknife Ar 68.47 347 P **P** **08 26 08.2 +0.9**
comp=Z,4.8nm,0.6s,baz=18,slow=6.6,SNR=23
comp=Z,4.8nm,0.6s
YKA Yellowknife Ar 68.47 347 P **P** **08 26 08.7 +1.5**
WRH Wood River Hil 68.62 3 IAmb IAmb 08 26 10.6
comp=Z,4.7nm,0.9s
J26L Joseph Creek 68.68 1 IAmb IAmb 08 26 11.1
comp=Z,4.2nm,0.7s
HDA Harding Lake 68.72 2 IAmb IAmb 08 26 10.9
comp=Z,7.6nm,1.0s
PSI Prapat 68.72 110 LR LR 09 00 47.0
comp=Z,98nm,18.9s,baz=296,slow=40
DAWY Dawson 69.09 359 P **P** **08 26 12.8 +1.5**
DAWY IAmb IAmb 08 26 13.6
comp=Z,6.4nm,0.9s
K27K Chicken 69.16 360 IAmb IAmb 08 26 14.6
comp=Z,7.7nm,0.9s
CAST Castle Rocks 69.50 5 IAmb IAmb 08 26 16.1
comp=Z,8.0nm,1.0s
DOT Dot Lake 69.53 1 IAmb IAmb 08 26 16.9
comp=Z,8.5nm,1.0s
TRQ Mont Tremblant 69.69 317 P **P** **08 26 15.8 +0.6**
TRQ IAmb IAmb 08 26 16.8
comp=Z,7.0nm,0.8s
L26K Log Cabin Wild 70.16 0 IAmb IAmb 08 26 20.9
comp=Z,8.5nm,1.1s
M26K Nabesna, AK 70.79 0 IAmb IAmb 08 26 24.8
comp=Z,5.7nm,1.0s
B35A Bob, Littlefor 75.88 329 IAmb IAmb 08 26 53.9
comp=Z,8.5nm,1.1s
BOSA Boshof 76.24 191 P **P** **08 26 54.7 +0.6**
comp=Z,4.3nm,0.5s,baz=26,slow=5.0,SNR=5.4
comp=Z,1.3nm,0.5s
G40A Rib Lake 77.18 325 IAmb IAmb 08 27 00.8
comp=Z,16nm,1.2s
F36A Milaca 77.94 327 IAmb IAmb 08 27 04.8
comp=Z,6.5nm,0.9s
SPMN Marine on St. 78.21 327 IAmb IAmb 08 27 06.8
comp=Z,11nm,1.1s
I37A Lemond, Waseca 79.46 326 IAmb IAmb 08 27 13.8
comp=Z,18nm,1.2s
BBB Bella Bella 80.28 351 LR LR 09 04 41.8
comp=Z,58nm,19.5s,baz=57,slow=37
ECSD EROS Data Cent 80.89 328 P **P** **08 27 20.9 +1.2**
ECSD IAmb IAmb 08 27 21.5
comp=Z,7.6nm,0.9s
LAO LASA Array 81.33 336 IAmb IAmb 08 27 25.0
comp=Z,15nm,1.1s
LEM Lembang 81.63 109 LR LR 09 07 18.5
comp=Z,68nm,21.0s,baz=160,slow=38
TKL Tuckaleechee C 82.26 315 P **P** **08 27 27.7 +0.7**
comp=Z,7.2nm,1.1s,baz=150,slow=18,SNR=4.3
TKL LR LR 09 05 02.8
comp=Z,69nm,18.7s,baz=44,slow=36
comp=Z,7.2nm,1.1s
NEW Newport 82.45 343 LR LR 09 06 08.9
comp=Z,49nm,18.4s,baz=60,slow=37
R40A Maddies Statio 83.88 323 IAmb IAmb 08 27 37.0
comp=Z,6.8nm,0.7s
DLMT Dillon 84.22 339 IAmb IAmb 08 27 39.6
comp=Z,6.9nm,1.2s
F10A Beach Ranch, E 84.66 343 IAmb IAmb 08 27 41.4
comp=Z,4.3nm,1.1s
HAWA Hanford 84.71 344 IAmb IAmb 08 27 42.0
comp=Z,4.3nm,0.9s
K22A Casper 85.11 334 IAmb IAmb 08 27 43.1
comp=Z,6.2nm,0.9s
FXWY Fox Creek 85.44 338 IAmb IAmb 08 27 46.7
comp=Z,5.3nm,1.1s
TPAW Teton Pass 85.56 338 IAmb IAmb 08 27 46.4
comp=Z,6.7nm,1.1s

G08A Pilot Rock 85.66 344 P **P** **08 27 45.2 +0.9**
BMO Blue Mountains 85.75 342 IAmb IAmb 08 27 46.6
comp=Z,5.0nm,1.1s
PDAR Pinedale Array 85.86 336 P **P** **08 27 46.4 +0.8**
comp=Z,1.0nm,0.9s,baz=27,slow=2.4,SNR=8.7
PDAR LR LR 09 06 31.1
comp=Z,62nm,18.1s,baz=41,slow=36
comp=Z,1.0nm,0.9s
SJG San Juan 85.92 292 LR LR 09 01 22.2
comp=Z,28nm,22.0s,baz=86,slow=32
PHWY Pilot Hill 86.02 333 IAmb IAmb 08 27 48.6
comp=Z,7.4nm,1.2s
MDP Montagnes des 86.48 274 LR LR 09 04 22.8
comp=Z,28nm,19.8s,baz=100,slow=34
ELK Elko 89.21 340 LR LR 09 10 51.8
comp=Z,62nm,18.2s,baz=78,slow=38
PV11 David Mesa, Pa 89.81 334 IAmb IAmb 08 28 20.9
comp=Z,8.9nm,1.1s
MVCO Mesa Verde 90.70 334 IAmb IAmb 08 28 13.3
comp=Z,8.9nm,1.4s
GUMO Guam 91.49 68 LR LR 09 12 16.7
comp=Z,20nm,21.0s,baz=293,slow=38
CCUT Cedar City 91.76 337 P **P** **08 28 16.1 +2.4**
CCUT IAmb IAmb 08 28 40.1
comp=Z,4.4nm,1.2s
ANMO Albuquerque 92.14 331 LR LR 09 11 24.8
comp=Z,75nm,18.3s,baz=46,slow=37
BLYC Blythe 95.66 337 P **P** **08 28 28.9 -2.4**
TXAR Lajitas Array 96.25 327 LR LR 09 12 31.6
comp=Z,58nm,18.1s,baz=21,slow=36

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*RSNC **07** 08:20:10.8±0.9, 6°.92N×76°.28W, h0km±3km, ML3.9, Mw4.8*
*NEIC **07** 08:20:13.2±1.6, 6°.93N±0°.06×76°.21W±0°.06, h28km±6km, mb4.6/40, Mwr4.6(RSNC), Error ellipse: s-maj=10.2km s-min=8.4km az=223.0*
*IDC **07** 08:20:15.0±2.2, 6°.79N×76°.26W, h55km±21km, mb3.8/15, mbtmp4.1/19, ML3.4/4, MS3.8/27, Error ellipse: s-maj=16.0km s-min=13.0km az=55.0*
ISC 07 08:20:10.4±0.8, 6°.93N±0°.02×76°.23W±0°.02, h13km±5km, n147, σ1°88/169, mb4.5/27, MS3.8/25, 6C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.09**	**14**⇑	*i*P	**Pg**		**08 20 13.3**	**-0.1**
DBBC				*e*S	**Sg**		**08 20 16.2**	**+0.6**
DBBC				*i*			08 20 18.0	
	comp=Z,40μm,0.7s							
HELC	**Santa Helena**	**1.01**	**136**	*e*P	**Pg**		**08 20 28.4**	**-1.6**
HELC				*e*S	**Sg**		**08 20 41.5**	**-1.8**
HELC				*i*			08 20 46.9	
	comp=Z,1μm,0.8s							
UREC	**San Jos de Ur**	**1.07**	**40**	*e*P	**Pb**		**08 20 30.9**	**0.0**
UREC				*e*S	**Sn**		**08 20 47.8**	**+1.8**
UREC				*i*			08 20 49.8	
	comp=Z,5μm,0.3s							
CBOC	**Ciudad Bolivar**	**1.08**	**168**	*e*P	**Pb**		**08 20 29.9**	**-1.1**
CBOC				*e*S	**Sg**		**08 20 45.4**	**0.0**
CBOC				*i*			08 20 48.4	
	comp=Z,4μm,0.7s							
SOLC	**Bahia Solano**	**1.36**	**239**	*e*P	**Pn**		**08 20 34.4**	**-0.7**
SOLC				*e*S	**Sn**		**08 20 52.8**	**-0.2**
SOLC				*i*			08 20 55.5	
	comp=Z,531nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.48**	**68**⇑	*i*P	**Pn**		**08 20 37.2**	**+0.5**
ZARC				*e*S	**Sb**		**08 20 57.1**	**+0.7**
ZARC				*i*			08 21 03.5	
	comp=Z,3μm,0.5s							
PTAC	**Punta Ardita,**	**1.58**	**278**	*e*P	**Pn**		**08 20 37.5**	**-0.6**
PTAC				*e*S	**Sn**		**08 20 58.0**	**-0.5**
PTAC				*i*			08 21 07.6	
	comp=Z,917nm,0.4s							
PTBC	**PUERTO BERRIO,**	**1.81**	**102**⇑	*e*P	**Pn**		**08 20 42.0**	**+0.8**
PTBC				*e*S	**Sg**		**08 21 07.6**	**-0.9**
PTBC				*i*			08 21 10.4	
	comp=Z,3μm,0.8s							
GUY2C	**Guyana, Caldas**	**1.90**	**153**⇑	*e*P	**Pn**		**08 20 43.7**	**+0.7**
GUY2C				*e*S	**Sb**		**08 21 09.7**	**+0.7**
GUY2C				*i*			08 21 23.1	
	comp=Z,2μm,0.6s							
NORC	**Norcasia**	**1.92**	**135**	*e*P	**Pn**		**08 20 43.5**	**+0.7**
NORC				*e*S	**Sb**		**08 21 09.5**	**+0.4**
NORC				*i*			08 21 14.9	
	comp=Z,986nm,0.5s							
LCBC	**Los crdobas,**	**1.92**	**356**⇓	*e*P	**Pn**		**08 20 44.1**	**+1.2**
LCBC				*e*S	**Sg**		**08 21 11.5**	**-0.8**
LCBC				*i*			08 21 31.8	
	comp=Z,402nm,0.5s							
PLMC	**San Jos del P**	**2.01**	**181**	*e*P	**Pb**		**08 20 46.0**	**-0.9**
PLMC				*e*S	**Sg**		**08 21 14.8**	**-0.3**
PLMC				*i*			08 21 23.9	
	comp=Z,1μm,0.5s							
UPD2	**Meteti**	**2.39**	**312**	*e*P	**Pn**		**08 20 50.7**	**+1.4**
UPD2				*e*S	**Sb**		**08 21 24.4**	**+1.6**
UPD2				*i*			08 21 36.9	
	comp=Z,772nm,0.5s							
SPBC	**San Pablo de B**	**2.49**	**120**⇑	*i*P	**Pn**		**08 20 53.1**	**+2.3**
SPBC				*e*S	**Sb**		**08 21 27.6**	**+1.8**
SPBC				*i*			08 21 40.8	
	comp=Z,266nm,0.5s							
BRRC	**Barranca, Sant**	**2.51**	**86**	*e*P	**Pb**		**08 20 53.4**	**-1.9**
BRRC				*e*S	**Sb**		**08 21 28.1**	**+1.9**
BRRC				*i*			08 21 37.8	
	comp=Z,626nm,0.6s							
ANIL	**Santa Ana**	**2.56**	**161**	*e*P	**Pb**		**08 20 55.0**	**-1.3**
ANIL				*e*S	**Sb**		**08 21 26.2**	**-1.7**
ANIL				*i*			08 21 39.2	
	comp=Z,779nm,0.5s							
ROSC	**El Rosal**	**2.81**	**137**	P	**Pn**		**08 20 58.1**	**+2.6**
	comp=Z,63nm,0.3s,baz=350,slow=12,SNR=29							
ROSC				S	**Sb**		**08 21 37.1**	**+1.8**
	comp=Z,549nm,0.8s,baz=109,slow=17,SNR=4.1							
	comp=Z,390nm,0.8s							
ROSC	**El Rosal**	**2.81**	**137**	Pn	**Pn**		**08 20 55.7**	**+0.2**
ROSC	**El Rosal**	**2.81**	**137**	*e*P	**Pb**		**08 20 59.1**	**-1.6**
ROSC				*e*S	**Sg**		**08 21 41.7**	**+0.7**
ROSC				*i*			08 21 44.9	
	comp=Z,320nm,0.5s							
YOTC	**Yotoco, Valle**	**2.93**	**182**	*e*P	**Pn**		**08 20 56.6**	**-0.2**
YOTC				*e*S	**Sb**		**08 21 39.0**	**+0.7**
YOTC				*i*			08 21 42.2	
	comp=Z,221nm,0.6s							
BARC	**Barichara**	**3.05**	**96**	*e*P	**Pb**		**08 21 01.9**	**-2.7**
BARC				*e*S	**Sn**		**08 21 38.4**	**+3.4**
BARC				*e*S	**Sb**		**08 21 39.5**	**-2.4**
BARC				*i*			08 21 53.5	
	comp=Z,865nm,0.7s							
SJCC	**San Jacinto, C**	**3.13**	**19**	*e*P	**Pn**		**08 20 60.0**	**+0.4**
SJCC				*e*S	**Sn**		**08 21 36.4**	**-0.4**
SJCC				*i*			08 22 10.9	
	comp=Z,281nm,0.8s							
RUSC	**La Rusia**	**3.29**	**108**	*e*P	**Pn**		**08 21 05.6**	**+3.5**
RUSC				*e*S	**Sb**		**08 21 48.3**	**-1.0**
PRAC	**Prado**	**3.46**	**157**	*e*P	**Pn**		**08 21 07.3**	**+3.2**
PRAC				*e*S	**Sb**		**08 21 57.0**	**+3.3**
PRAC				*i*			08 22 14.2	
	comp=Z,357nm,0.7s							
ARGC	**Ariguani, Magd**	**3.51**	**34**	*e*P	**Pb**		**08 21 11.3**	**-1.2**
ARGC				*e*S	**Sn**		**08 21 44.6**	**-1.6**
ARGC				*i*			08 22 43.8	
	comp=Z,158nm,0.8s							
PAMC	**Pamplona, Colo**	**3.53**	**83**	*e*P	**Pn**		**08 21 08.8**	**+3.5**
PAMC				*e*S	**Sb**		**08 21 52.8**	**-3.2**
PAMC				*i*			08 22 06.2	
	comp=Z,382nm,0.7s							
LL1C	**La Loma 1 Cana**	**3.71**	**45**	*e*P	**Pg**		**08 21 22.6**	**+1.0**
LL1C				*e*S	**Sb**		**08 22 01.6**	**+0.8**
LL5C	**La Loma 5 El P**	**3.75**	**41**	*e*P	Pn		08 20 49.4	-19
LL5C				*i*			08 21 59.8	
	comp=Z,273nm,0.5s							
LL5C				*e*S	**Sb**		**08 22 04.7**	**+2.9**
VILC	**Villavicencio,**	**3.77**	**138**	*e*P	**Pb**		**08 21 13.7**	**-3.3**
VILC				*e*S	**Sb**		**08 22 07.0**	**+4.4**
VILC				*i*			08 22 14.8	
	comp=Z,250nm,0.6s							
UPA	**Univ. de Panam**	**3.85**	**302**	*e*P	**Pn**		**08 21 09.2**	**-0.2**
UPA				*e*S	**Sn**		**08 21 56.7**	**+2.0**
AZU	**Azuero**	**4.10**	**282**	*e*P	**Pn**		**08 21 12.4**	**-0.4**
AZU				*e*S	**Sn**		**08 21 58.5**	**-2.1**
BCIP	**Isla Barro Col**	**4.21**	**302**	Pn	**Pn**		**08 21 14.4**	**+0.1**
BCIP	**Isla Barro Col**	**4.21**	**302**	*e*P	**Pn**		**08 21 13.9**	**-0.3**
BCIP				*e*S	**Sn**		**08 22 04.2**	**+0.9**

BETC Betania 4.29 169 *eP* Pn 08 21 18.9 +3.4
BETC *eS* Sn **08 22 07.9 +2.4**
POPC Popayan, Colom 4.38 186 *eP* Pn 08 21 19.4 +2.5
POPC *eS* Sn **08 22 13.4 +5.4**
POPC *i* 08 22 29.9
comp=Z,64nm,0.6s
TAMC Tame, Arauca 4.44 96 *eP* Pn **08 21 20.9 +3.4**
TAMC *eS* Sn **08 22 12.3 +3.2**
TAMC *i* 08 22 44.0
comp=Z,150nm,0.7s
CACAO El Cacao, Vera 4.61 275 *eP* Pn **08 21 18.7 -1.2**
SMRC Santa Marta, M 4.65 25 *eP* Pn **08 21 23.4 +3.0**
GARC Garzon, Huila 4.77 171 *eP* Pn **08 21 24.2 +2.0**
PTGC Puerto Gaitan, 4.90 123⇑ *eP* Pn **08 21 25.4 +1.6**
BBAC Balboa, Cauca 4.98 192 *eP* Pn **08 21 29.2 +4.1**
BBAC *eS* Sn **08 22 29.4 +6.8**
BBAC *i* 08 22 36.9
comp=Z,33nm,0.5s
CRJC Cerrejon, Guaj 5.24 39 *eP* Pn **08 21 30.8 +2.2**
CRJC *eS* Sn **08 22 27.0 -2.0**
CRJC *i* 08 23 01.3
comp=Z,94nm,0.4s
MACC Macarena, Meta 5.31 153 *eP* Pn **08 21 31.1 +1.6**
MACC *eS* Sn **08 22 37.1 +6.5**
MACC *i* 08 23 17.6
comp=Z,84nm,0.6s
FLOC Florencia 5.34 174 *eP* Pn **08 21 32.0 +2.1**
FLOC *i* 08 23 12.9
comp=Z,28nm,0.6s
SOCV Socops 5.50 75 *eP* Pn **08 21 35.3 +3.2**
SOCV *eS* Sn **08 22 38.4 +3.2**
GUVC San Jose del G 5.64 140 *eP* Pn **08 21 36.2 +2.1**
GCUF Volcan Galeras 5.77 191 *eP* Pn **08 21 40.8 +4.5**
GCUF *i* 08 23 04.8
comp=Z,19nm,0.6s
SDV Santo Domingo 5.88 70 P Pn **08 21 39.5 +2.0**
comp=Z,5.2nm,0.3s,baz=224,slow=13,SNR=10
SDV S Sn **08 22 48.8 +3.9**
comp=Z,68nm,0.5s,baz=45,slow=18,SNR=3.1
comp=Z,27nm,0.6s
SDV Santo Domingo 5.88 70 Pn Pn **08 21 38.6 +1.1**
URIC Uribia, Colomb 6.33 41 *eP* Pn **08 21 44.7 +1.3**
URIC *eS* Sn **08 22 56.1 +0.5**
URIC *i* 08 23 38.5
comp=Z,35nm,0.6s
BRU2 Volcan 6.66 287 Pn Pn **08 21 49.0 +0.8**
CDTO Canoas 6.78 284 Pn **08 21 51.0 +1.4**
DABV Dabajuro 6.81 54 *eP* Pn **08 21 52.2 +2.1**
DABV *eS* Sn **08 23 09.5 +2.0**
PTLC Puerto Leguiza 6.86 168 *eP* Pn 08 21 58.1 +7.2
PTLC *i* 08 23 12.9
comp=Z,22nm,0.1s
IMBA Imbabura, San 6.89 197 Pn **08 21 52.9 +1.3**
OTAV Otavalo 7.00 199 Pn **08 21 53.8 +0.7**
DRK0 Durika 7.32 289 Pn **08 21 58.2 +0.9**
SRBA San Rafael, Bu 7.42 288 Pn **08 21 60.0 +1.4**
PEZE Perez Zeledon, 7.76 289 Pn **08 22 05.5 +2.2**
RIMA Rio Macho 8.06 291 Pn **08 22 08.2 +0.8**
BAUV El Baul 8.36 76 Pn Pn **08 22 10.7 -0.6**
HDC Heredia 8.37 292 Pn Pn **08 22 12.6 +0.9**
COVE Coope Vega, Sa 8.91 296 Pn **08 22 19.9 +1.0**
ESPN Las Esperanzas 9.52 304 Pn **08 22 27.5 +0.1**
ACON Acoyapa 10.14 300 Pn **08 22 37.9 +2.1**
BOAB BOACO BROADBAND 10.80 301 Pn Pn **08 22 44.0 -0.8**
MATN Matagalpa 11.26 303 Pn **08 22 51.4 +0.3**
MCRA Macar, Loja 11.82 198 Pn **08 23 01.2 +2.3**
SDDR Presa de Saban 12.91 21 Pn Pn **08 23 15.9 +2.2**
TGUH Tegucigalpa,Un 12.96 304 Pn Pn **08 23 15.7 +1.2**
ATAH Atahualpa 14.13 189 P Pn **08 23 31.9 +1.0**
comp=Z,0.2nm,0.3s,baz=152,slow=18,SNR=1.8
ATAH LR LR 08 30 13.2
comp=Z,474nm,19.2s,baz=11,slow=43
comp=Z,2.1nm,0.6s
SJG San Juan 14.84 41 P Pn **08 23 42.2 +2.2**
comp=Z,0.7nm,0.3s,baz=227,slow=21,SNR=2.5
comp=Z,6.1nm,0.6s
MTO3 Montecristo 14.88 301 Pn **08 23 40.8 0.0**
CZSB Cruzeiro do Su 14.98 166 Pn **08 23 42.1 +0.1**
SVB Belmont 16.03 66 Pn Pn **08 23 57.1 +1.3**
SVB IAmb IAmb 08 23 59.3
comp=Z,35nm,0.8s
BOAV Boa Vista 16.29 105 Pn Pn **08 23 56.8 -2.3**
BOAV IAmb IAmb 08 24 07.1
comp=Z,12nm,0.9s
GDHS Morne Mazeau, 16.93 55 P Pn **08 24 08.2 +1.0**
GDHS IAmb IAmb 08 24 20.8
comp=Z,46nm,1.0s
MACA Manacapuru-AM 18.47 122 P **08 24 24.0 -2.2**
MACA IAmb IAmb 08 24 27.4
comp=Z,35nm,1.2s
NNA Nana 18.80 182 LR LR 08 33 00.9
comp=Z,451nm,21.4s,baz=356,slow=41
ETMB Extrema 19.40 149 P **08 24 35.1 -1.3**
ETMB IAmb IAmb 08 24 44.5
comp=Z,16nm,0.9s
SAML Samuel 20.44 140 P P **08 24 46.0 -1.7**
SAML IAmb IAmb 08 24 55.3
comp=Z,44nm,1.1s
CMIG Matias Romero 20.83 301 P **08 24 53.1 +1.1**
comp=Z,1.8nm,0.7s,baz=163,slow=12,SNR=3.6
CMIG LR LR 08 34 04.7
comp=Z,304nm,19.7s,baz=123,slow=40
comp=Z,1.8nm,0.7s
MDP Montagnes des 23.53 93 P P **08 25 20.5 -0.1**
comp=Z,5.7nm,0.7s,baz=278,slow=7.4,SNR=6.5
MDP LR LR 08 34 56.5
comp=Z,414nm,21.7s,baz=262,slow=37
comp=Z,5.7nm,0.7s
LPAZ La Paz 24.42 161 P P **08 25 28.4 -1.2**
comp=Z,7.2nm,1.1s,baz=12,slow=7.1,SNR=11
LPAZ LR LR 08 35 31.0
comp=Z,437nm,20.0s,baz=340,slow=38
comp=Z,7.2nm,1.1s
LPAZ La Paz 24.42 161 P P **08 25 28.8 -0.8**
LPAZ IAmb IAmb 08 25 36.4
comp=Z,16nm,1.2s
VILB Vilhena 25.37 141 P P **08 25 37.6 0.0**
VILB IAmb IAmb 08 25 45.4
comp=Z,49nm,1.1s
SIV San Ignacio 27.27 147 P P **08 25 53.0 -1.8**
comp=Z,5.3nm,1.0s,baz=317,slow=12,SNR=11
SIV LR LR 08 37 03.8
comp=Z,443nm,19.3s,baz=350,slow=37
comp=Z,5.3nm,1.0s
GO01 Chusmiza 27.32 165 IAmb IAmb 08 25 55.1
comp=Z,13nm,1.2s
GO01 P P **08 25 55.2 -0.5**
PTLB Pontes e Lacer 27.95 143 P P **08 26 00.4 -0.4**
PTLB IAmb IAmb 08 26 07.4
comp=Z,8.9nm,1.3s
PB01 IPOC Station P 28.57 167 P P **08 26 05.9 -0.5**
PB01 IAmb IAmb 08 26 06.7
comp=Z,16nm,1.1s
TKL Tuckaleechee C 29.42 347 LR LR 08 38 03.5
comp=Z,121nm,21.4s,baz=171,slow=36
LVC Limon Verde 30.22 166 LR LR 08 39 25.3
comp=Z,198nm,20.2s,baz=328,slow=38
V48A Smith Brothers 30.28 343 P P **08 26 20.8 -0.5**
V48A IAmb IAmb 08 26 36.9
comp=Z,12nm,1.4s
SIUC Southern Illin 32.84 341 P P **08 26 45.0 +1.2**
SIUC IAmb IAmb 08 27 13.2
comp=Z,7.3nm,1.0s
FVM French Village 33.49 339 P P **08 26 50.5 +1.0**
FVM IAmb IAmb 08 26 59.4
comp=Z,5.6nm,0.7s
ABTX Abilene, Hawle 33.58 323 P P **08 26 51.3 +0.8**
ABTX IAmb IAmb 08 27 00.4
comp=Z,11nm,1.1s
CCM Cathedral Cave 33.85 338 P P **08 26 53.4 +0.8**
CCM IAmb IAmb 08 27 02.1
comp=Z,6.1nm,1.1s
TXAR Lajitas Array 34.13 314 P P **08 26 53.8 -1.5**
comp=Z,0.5nm,1.0s,baz=116,slow=4.1,SNR=2.2
TXAR LR LR 08 43 40.0
comp=Z,18nm,18.7s,baz=114,slow=41
comp=Z,0.5nm,1.0s
AC02 Maricunga 34.26 169 P P **08 26 56.5 -0.4**
AC02 IAmb IAmb 08 26 59.1
comp=Z,15nm,1.0s
BDFB Brasilia 35.83 129 P P **08 27 08.7 -1.5**
comp=Z,5.8nm,0.9s,baz=256,slow=3.2,SNR=6.3
BDFB LR LR 08 43 09.1
comp=Z,201nm,21.1s,baz=315,slow=38
comp=Z,5.8nm,0.9s

BDFB Brasilia 35.83 129 P P **08 27 09.6 -0.6**
BDFB IAmb IAmb 08 27 16.3
comp=Z,19nm,1.4s
MSTX Muleshoe 36.41 321 P P **08 27 15.7 +0.7**
MSTX IAmb IAmb 08 27 25.8
comp=Z,19nm,1.2s
LPIG La Paz 36.86 301 LR LR 08 42 37.1
comp=Z,61nm,21.3s,baz=177,slow=36
CPUP Villa Florida 37.81 152 LR LR 08 44 09.3
comp=Z,322nm,18.0s,baz=352,slow=38
ZON Zonda 38.93 170 P P **08 27 36.5 +0.3**
ZON IAmb IAmb 08 27 43.7
comp=Z,17nm,0.9s
ANMO Albuquerque 39.37 319 P P **08 27 40.6 +0.5**
comp=Z,1.5nm,0.9s,baz=141,slow=10.0,SNR=7.8
ANMO LR LR 08 48 00.5
comp=Z,22nm,18.3s,baz=116,slow=42
comp=Z,1.5nm,0.9s
ANMO Albuquerque 39.37 319 P P **08 27 41.3 +1.2**
TUC Tucson 40.88 313 P P **08 27 52.7 +0.3**
BO01 Tunca 41.38 174 P P **08 27 57.2 +0.8**
GO05 Huala 41.91 175 P P **08 28 00.8 +0.1**
GO05 IAmb IAmb 08 28 08.3
comp=Z,28nm,1.2s
ISCO Idaho Springs 42.02 326 P P **08 28 02.9 +0.8**
RCBR Riachuelo 42.19 107 LR LR 08 47 03.2
comp=Z,345nm,20.0s,baz=94,slow=38
214A Organ Pipe Nat 42.20 311 P P **08 28 02.7 -0.5**
PV13 Radium Mtn., P 42.85 321 P P **08 28 09.1 +0.4**
PV13 IAmb IAmb 08 28 19.9
comp=Z,12nm,1.1s
PFO Pinyon Flats O 45.69 311 LR LR 08 50 44.4
comp=Z,57nm,18.5s,baz=97,slow=40
PDAR Pinedale Array 46.22 326 P P **08 28 36.3 +0.8**
comp=Z,0.6nm,0.8s,baz=139,slow=13,SNR=2.3
comp=Z,0.6nm,0.8s
R11A Troy Canyon, C 47.34 317 IAmb IAmb 08 28 55.0
comp=Z,5.4nm,1.1s
PLCA Paso Flores 47.71 174 P P **08 28 45.5 -1.5**
comp=Z,6.0nm,1.0s,baz=351,slow=5.5,SNR=7.0
PLCA LR LR 08 48 26.6
comp=Z,71nm,18.4s,baz=348,slow=36
comp=Z,6.0nm,1.0s
PLCA Paso Flores 47.71 174 P P **08 28 46.4 -0.6**
NVAR Mina Array Bea 49.23 316 LR LR 08 52 39.5
comp=Z,64nm,20.6s,baz=116,slow=40
MCMT McKenzie Canyo 49.37 326 P P **08 29 00.3 +0.3**
YBH Yreka Blue Hor 53.76 318 LR LR 08 55 48.0
comp=Z,52nm,20.6s,baz=130,slow=40
NRS Narsarsuaq 58.79 17 P P **08 30 07.9 -0.2**
PTCN Pitcairn Islan 61.28 237 P P **08 30 25.1 -0.9**
USHA Ushuaia 61.88 175 LR LR 08 55 56.2
comp=Z,94nm,20.1s,baz=221,slow=35
YKA Yellowknife Ar 62.13 341 P P **08 30 30.0 -0.9**
comp=Z,1.8nm,0.9s,baz=128,slow=7.5,SNR=5.4
YKA LR LR 08 57 44.3
comp=Z,45nm,18.0s,baz=6.0,slow=36
comp=Z,1.8nm,0.9s
RES Resolute Bay 68.56 355 LR LR 09 01 43.1
comp=Z,84nm,21.4s,baz=323,slow=36
BORG Borgarnes 69.33 22 LR LR 08 58 43.6
comp=Z,40nm,19.5s,baz=303,slow=33
DBIC Dimbokro 70.81 85 P P **08 31 27.0 -0.4**
comp=Z,4.5nm,1.1s,baz=236,slow=3.6,SNR=2.6
comp=Z,4.5nm,1.1s
INK Inuvik 71.90 341 LR LR 09 04 52.3
comp=Z,72nm,19.5s,baz=120,slow=37
ESDC Sonseca Array 71.97 51 P P **08 31 33.5 -0.6**
comp=Z,3.9nm,1.1s,baz=270,slow=6.4,SNR=12
comp=Z,3.9nm,1.1s
ESDC Sonseca Array 71.97 51 P P **08 31 34.0 -0.1**
BCAR Beaver Creek A 72.92 334 P P **08 31 39.5 +0.2**
L27K Beaver Creek, 72.93 334 P P **08 31 40.1 +0.8**
MENT Mentasta 73.72 334 P P **08 31 41.8 -2.1**
ILAR Eielson Array 75.57 335 P P **08 31 55.5 +0.9**
comp=Z,0.6nm,0.8s,baz=102,slow=3.7,SNR=4.3
comp=Z,0.6nm,0.8s
TORD Torodi Ar. Bea 76.74 78 P P **08 32 01.4 -0.8**
comp=Z,0.5nm,0.7s,baz=289,slow=5.5,SNR=3.0
comp=Z,0.5nm,0.7s
SPITS Spitsbergen Ar 83.80 12 LR LR 09 12 01.4
comp=Z,22nm,18.0s,baz=236,slow=37
CLL Collm 84.17 39 *eP* P **08 32 42.0 +0.6**
GERES GERESS Array B 84.80 42 P P **08 32 45.2 +0.4**
comp=Z,1.6nm,1.0s,baz=310,slow=1.0,SNR=7.8
comp=Z,1.6nm,1.0s
TSUM Tsumeb 95.83 109 LR LR 09 15 22.8
comp=Z,38nm,18.1s,baz=327,slow=34
SUR Sutherland 99.61 122 LR LR 09 17 34.9
comp=Z,123nm,18.0s,baz=262,slow=35
TIXI Tiksi 99.85 352 LR LR 09 20 30.5
comp=Z,37nm,21.7s,baz=359,slow=36
ASAR Alice Springs 146.62 237 PKPbc **PKPdf** **08 39 51.0 -0.1**
comp=Z,2.0nm,0.9s,baz=131,slow=3.1,SNR=10
PZH PanZhiHua 146.71 3 PKPbc **PKPdf** **08 39 48.4 -3.0**
WRA Warrumunga Arr 147.65 243 PKPbc **PKPdf** **08 39 52.1 -0.9**
comp=Z,2.2nm,1.0s,baz=115,slow=1.5,SNR=11
CMAR Chiang Mai Arr 154.33 11 PKPbc **PKiKP** **08 40 11.7 +0.1**
comp=Z,0.6nm,0.4s,baz=296,slow=2.1,SNR=4.4

RSNC 07 08:40:30.3±1.2, 6.91N×76.21W, h0km±4km, ML3.1, Mw3.8, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.11**	**1⇑**	*iP*	Pg	08 40 32.0	-0.4
DBBC				*eS*	Sg	08 40 34.8	+1.0
DBBC				*i*		08 40 36.9	
	comp=Z,6μm,0.5s						
HELC	**Santa Helena**	**0.98**	**136⇓**	*iP*	Pg	08 40 46.8	-2.4
HELC				*eS*	Sg	08 40 59.9	-2.1
HELC				*i*		08 41 05.8	
	comp=Z,155nm,0.6s						
CBOC	**Ciudad Bolivar**	**1.06**	**169⇓**	*iP*	Pg	08 40 48.0	-2.6
CBOC				*eS*	Sg	08 41 04.0	-0.3
CBOC				*i*		08 41 07.8	
	comp=Z,348nm,0.6s						
UREC	**San Jos de Ur**	**1.07**	**39**	*eP*	Pg	08 40 49.8	-1.2
UREC				*eS*	Sb	08 41 05.9	-0.5
UREC				*i*		08 41 09.2	
	comp=Z,631nm,0.3s						
SOLC	**Bahia Solano**	**1.37**	**240**	*eP*	Pg	08 40 52.9	-3.7
ZARC	**Zaragoza, Cauc**	**1.46**	**67**	*eP*	Pn	08 40 55.8	-2.2
ZARC				*eS*	Sg	08 41 15.7	-1.6
ZARC				*i*		08 41 18.9	
	comp=Z,618nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.78**	**102**	*eP*	Pn	08 41 00.8	-1.6
PTBC				*eS*	Sn	08 41 24.9	-0.8
PTBC				*i*		08 41 27.5	
	comp=Z,271nm,0.4s						
GUY2C	**Guyana, Caldas**	**1.87**	**153**	*eP*	Pn	08 41 02.4	-1.6
GUY2C				*eS*	Sn	08 41 28.1	-0.5
GUY2C				*i*		08 41 32.2	
	comp=Z,151nm,0.6s						
NORC	**Norcasia**	**1.89**	**135**	*eP*	Pn	08 41 02.5	-1.4
NORC				*eS*	Sn	08 41 27.4	-1.1
NORC				*i*		08 41 30.1	
	comp=Z,176nm,0.4s						
LCBC	**Los crdobas,**	**1.94**	**355**	*eP*	Pn	08 41 02.8	-1.8
LCBC				*eS*	Sn	08 41 29.1	-0.6
LCBC				*i*		08 41 36.9	
	comp=Z,74nm,0.4s						
PLMC	**San Jos del P**	**1.99**	**182**	*eP*	Pn	08 41 03.8	-1.6
PLMC				*eS*	Sn	08 41 31.3	+0.3
PLMC				*i*		08 41 43.8	
	comp=Z,185nm,0.5s						
UPD2	**Meteti**	**2.42**	**312**	*eP*	Pn	08 41 09.4	-1.7
UPD2				*eS*	Sb	08 41 45.2	+0.1
UPD2				*i*		08 41 55.1	
	comp=Z,97nm,0.6s						
SPBC	**San Pablo de B**	**2.46**	**120**	*eP*	Pn	08 41 12.1	+0.2
SPBC				*eS*	Sn	08 41 44.5	+1.7
SPBC				*i*		08 41 52.9	
	comp=Z,48nm,0.5s						
BRRC	**Barranca, Sant**	**2.49**	**85**	*eP*	Pn	08 41 12.4	+0.3
BRRC				*eS*	Sn	08 41 42.1	-1.1
BRRC				*i*		08 41 55.2	
	comp=Z,81nm,0.5s						
ANIL	**Santa Ana**	**2.53**	**161**	*eP*	Pn	08 41 13.7	+0.7
ROSC	**El Rosal**	**2.79**	**137**	*eP*	Pn	08 41 18.2	+1.7
ROSC				*i*		08 42 02.1	
	comp=Z,78nm,0.6s						
YOTC	**Yotoco, Valle**	**2.91**	**183**	*eP*	Pn	08 41 14.9	-3.1
YOTC				*eS*	Sb	08 41 58.1	-1.3
YOTC				*i*		08 42 00.4	

comp=Z,23nm,0.5s
BARC Barichara 3.02 96 *eP* Pn 08 41 20.6 +1.0
BARC *i* 08 42 12.0
comp=Z,192nm,0.6s
SJCC San Jacinto, C 3.14 19 *eP* Pn 08 41 18.3 -2.8
SJCC *i* 08 42 20.9
comp=Z,16nm,0.5s
RUSC La Rusia 3.27 108 *eP* Pn 08 41 25.1 +1.8
RUSC *eS* Sb 08 42 07.1 -3.0
RUSC *i* 08 42 14.7
comp=Z,68nm,0.4s
PRAC Prado 3.44 157 *eP* Pn 08 41 26.8 +1.6
PRAC *i* 08 42 31.4
comp=Z,37nm,0.6s
PAMC Pamplona, Colo 3.51 83 *eP* Pn 08 41 26.4 -0.2
PAMC *i* 08 42 23.5
comp=Z,60nm,0.5s
ARGC Ariguani, Magd 3.52 33 *eP* Pb 08 41 33.4 -0.1
VILC Villavicencio, 3.74 138 *eP* Pn 08 41 32.1 +2.7
VILC *i* 08 42 31.6
comp=Z,47nm,0.5s
AZU Azuero 4.12 283 *eP* Pn 08 41 31.4 -3.2
POPC Popayan, Colom 4.36 186 *eP* Pn 08 41 37.7 -0.4
GARC Garzon, Huila 4.74 171 *eP* Pn 08 41 43.0 -0.3
PTGC Puerto Gaitan, 4.87 123 *eP* Pn 08 41 44.6 -0.3
BBAC Balboa, Cauca 4.96 192 *eP* Pn 08 41 47.0 +0.6
CRJC Cerrejon, Guaj 5.25 39 *eP* Pn 08 41 47.4 -2.7
MACC Macarena, Meta 5.29 153 *eP* Pn 08 41 49.7 -1.0
FLOC Florencia 5.32 174 *eP* Pn 08 41 50.5 -0.6
SOCV Socops 5.48 75 *eP* Pn 08 41 54.5 +1.2
SOCV *eS* Sn 08 42 54.4 -2.7
GUVC San Jose del G 5.62 140 *eP* Pn 08 41 55.0 -0.2
PTLC Puerto Leguiza 6.84 168 *eP* Pb 08 42 24.7 -5.5

*ASRS **07** 08:41:29.8±0.3, 50°N±2°×9°3E±°, h5km, MLh3.7/12, Error ellipse: s-maj=3.9km s-min=2.3km az=166.3, confirmed*
*IDC **07** 08:41:29.4±2.2, 49.62N×92.60E, h0km, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=31.8km s-min=20.7km az=8.0*
ISC 07 08:41:27.7±0.9, 49.58N±0.04×92.61E±0.03, h10km, n34, σ1§83/54, 1C-4D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERNS	**Erzin**	**1.78**	**67**	Pg	**Pg**	**08 42 02.0**	**+0.1**
ERNS				Sg	**Sg**	**08 42 25.2**	**+0.3**
KZLR	**Kyzyl**	**2.43**	**28**	Pg	**Pg**	**08 42 14.4**	**+0.2**
KZLR				Sg	**Sg**	**08 42 45.7**	**0.0**
CUR	**Chagan-Uzun**	**2.80**	**282**	Pg	**Pg**	**08 42 21.5**	**+0.1**
CUR				Sg	**Sg**	**08 42 59.8**	**+2.1**
ARDR	**Aradan**	**3.05**	**9**	Pn	**Pb**	**08 42 21.3**	**-0.7**
ARDR				Pg	**Pg**	**08 42 24.6**	**-1.4**
ARDR				Sg	**Sg**	**08 43 04.7**	**-0.8**
AKAR	**Aktash**	**3.30**	**285**	Pn	**Pb**	**08 42 24.7**	**-1.7**
AKAR				Pg	**Pg**	**08 42 31.9**	**+0.9**
AKAR				Sg	**Sg**	**08 43 15.0**	**+1.2**
DJOS	**Djoyskaya Sosn**	**3.31**	**347**	Pg	**Pg**	**08 42 31.9**	**+0.9**
DJOS				Sg	**Sg**	**08 43 15.7**	**+1.9**
DJO	**Djoy, Khakassi**	**3.32**	**345**	Pg	**Pg**	**08 42 30.7**	**-0.5**
DJO				Sg	**Sg**	**08 43 14.0**	**-0.3**
KNGR	**Kungurtug, Tuv**	**3.32**	**70**	Pg	**Pg**	**08 42 30.8**	**-0.5**
KNGR				Sg	**Sg**	**08 43 17.5**	**+3.1**
CERR	**Cheremushki**	**3.36**	**348**	Pg	**Pg**	**08 42 33.4**	**+1.4**
CERR				Sg	**Sg**	**08 43 15.4**	**-0.1**
DGZ	**Jazzator, Alta**	**3.37**	**274**	Pn	**Pb**	**08 42 25.3**	**-2.2**
DGZ				Pg	**Pg**	**08 42 32.0**	**-0.2**
DGZ				Sg	**Sg**	**08 43 18.5**	**+2.7**
CHBI	**Chibit, Altay**	**3.38**	**284**	Pn	**Pb**	**08 42 25.8**	**-1.8**
CHBI				Pg	**Pg**	**08 42 33.5**	**+1.2**
CHBI				Sg	**Sg**	**08 43 18.6**	**+2.5**
ARTR	**Artybash**	**4.05**	**305**	Pg	**Pg**	**08 42 46.4**	**+1.2**
ARTR				Sg	**Sg**	**08 43 39.3**	**+1.7**
ABNR	**Abakan**	**4.21**	**350**	Pg	**Pg**	**08 42 49.4**	**+1.1**
ABNR	**Abakan**	**4.21**	**350**	Sg	**Sg**	**08 43 41.7**	**-1.1**
TASR	**Tashtagol**	**4.36**	**319**	Pg	**Pg**	**08 42 51.3**	**+0.2**
TASR				Sg	**Sg**	**08 43 48.4**	**+0.9**
LUZB	**Luzhba, Kemero**	**4.69**	**332**	Pg	**Pg**	**08 42 57.0**	**-0.4**
LUZB				Sg	**Sg**	**08 43 57.9**	**-0.3**
GALT	**Gorno-Altaysk,**	**4.85**	**302**	Pg	**Pg**	**08 43 01.1**	**+0.6**
GALT				Sg	**Sg**	**08 44 04.8**	**+1.6**
UKR	**Ust'-Kan**	**5.21**	**288**	Pg	**Pg**	**08 43 06.4**	**-0.9**
UKR				Sg	**Sg**	**08 44 15.2**	**+0.5**
ELT	**Eltsovka**	**5.42**	**315**	Pg	**Pg**	**08 43 11.3**	**-0.2**
ELT				Sg	**Sg**	**08 44 18.2**	**-3.5**
ORY	**Orie**	**5.64**	**15**	Sg	**Sg**	**08 44 25.2**	**-3.4**
MOY	**Mondy**	**5.73**	**65**	Pg	**Pg**	**08 43 13.2**	**-4.1**
MOY				Sg	**Sg**	**08 44 28.9**	**-2.7**
SALR	**Pechorkino, Sa**	**6.45**	**321**	Sg	**Sg**	**08 44 53.9**	**-0.6**
ZALV	**Zalesovo Beam**	**6.52**	**315**	Pn	**Pn**	**08 43 06.9**	**+3.4**
	0.2nm,0.3s,baz=119,slow=12,SNR=2.1						
ZALV				Lg	Lg	08 44 52.4	
	0.5nm,0.3s,baz=130,slow=25,SNR=3.6						
	0.8nm,0.5s						
ZAK	**Zakamensk**	**6.93**	**79**	Sg	**Sg**	**08 45 11.0**	**+1.0**
MK31	**Makanchi Array**	**7.44**	**252**	⇓Pn	Pn	08 43 20.8	+4.6
	0.6nm,0.7s,baz=70,slow=17,SNR=3.9						
MK31				⇓Pg	**Pg**	**08 43 46.9**	**-3.1**
	1.1nm,0.6s,baz=75,slow=20,SNR=7.5						
MK31				⇑Lg	Lg	08 45 21.7	
	6.7nm,0.7s,baz=70,slow=30,SNR=6.7						
MKAR	**Makanchi Array**	**7.44**	**252**	Pn	Pn	08 43 20.9	+4.6
	0.1nm,0.3s,baz=61,slow=16,SNR=2.2						
MKAR				Lg	Lg	08 45 24.6	
	0.4nm,0.3s,baz=71,slow=35,SNR=4.1						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**7.44**	**252**	Pg	**Pg**	**08 43 47.4**	**-2.6**
MKAR	**Makanchi Array**	**7.44**	**252**	Sg	**Sg**	**08 45 23.2**	**-3.0**
MKAR	**Makanchi Array**	**7.44**	**252**	Pn	Pn	08 43 21.9	+5.7
MAKZ	**Makanchi**	**7.63**	**253**	⇓Pg	**Pg**	**08 43 51.5**	**-2.1**
	2.2nm,0.9s						
MAKZ				⇓Lg	Lg	08 45 27.9	
	9.2nm,1.1s						
MAKZ	**Makanchi**	**7.63**	**253**	Pg	**Pg**	**08 43 51.6**	**-2.1**
MAKZ				Sg	**Sg**	**08 45 30.9**	**-1.4**
BSTK	**Bystrovka, Nov**	**7.90**	**313**	Sg	**Sg**	**08 45 40.1**	**-1.0**
KURBB	**Kurchatov Arra**	**9.11**	**282**	Pn	**Pn**	**08 43 41.6**	**+2.5**
	baz=95,slow=15,SNR=4.7						
	0.3nm,0.4s						
SONM	**Songino Array**	**9.29**	**96**	Pg	Pg	08 44 19.1	
	0.5nm,0.3s,baz=283,slow=17,SNR=4.6						
SONM				Lg	Lg	08 46 23.2	
	0.8nm,0.3s,baz=281,slow=26,SNR=10						

*IDC **07** 08:50:16.6±1.2, 16.09S×176.15W, h344km±12km, mb3.5/7, mbtmp4.2/9, Error ellipse: s-maj=37.0km s-min=11.7km az=149.0*
*NEIC **07** 08:50:16.6±1.1, 15.7S±0.2×176.2W±0.1, h332km±8km, mb4.2/48, Error ellipse: s-maj=31.2km s-min=12.7km az=151.0*
ISC 07 08:50:17.7±0.6, 16.0S±0.2×176.1W±0.1, h360km, n79, σ0§96/71, mb4.2/31, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.64**	**65**	P	**Pn**	**08 51 32.2**	**-1.9**
	80nm,0.6s,baz=181,slow=1.4,SNR=23						
AFI				S	**S**	**08 52 34.5**	**-1.3**
	14nm,0.3s,baz=40,slow=22,SNR=1.4						
AFI	**Afiamalu**	**4.64**	**65**	Pn	**Pn**	**08 51 31.9**	**-2.1**
MSVF	**Nonsavu**	**5.88**	**252**	P	**Pn**	**08 51 46.0**	**-1.7**
	25nm,0.9s,baz=100,slow=12,SNR=11						
MSVF	**Nonsavu**	**5.88**	**252**		**Pn**	**08 51 47.9**	**+0.2**
MARNC	**Mare, Loyalty**	**16.01**	**248**	P	**P**	**08 53 42.4**	**-0.5**
URZ	**Urewera**	**23.01**	**194**	P	**P**	**08 54 49.7**	**-2.6**
	10nm,0.8s,baz=124,slow=18,SNR=2.4						
	10nm,0.8s						
CAN	**Canberra**	**36.65**	**232**	P	**P**	**08 56 52.1**	**+0.7**
CAN				IAmb	IAmb	08 57 03.2	
	comp=Z,20nm,1.4s						
WR0	**Warramunga Arr**	**47.00**	**257**	P	**P**	**08 58 14.5**	**0.0**
WB0	**Warramunga Arr**	**47.15**	**258**	P	**P**	**08 58 15.5**	**-0.2**
WB2	**Warramunga Arr**	**47.18**	**257**	P	**P**	**08 58 14.8**	**-1.1**
WRA	**Warramunga Arr**	**47.19**	**257**	P	**P**	**08 58 14.2**	**-1.8**
	comp=Z,1.3nm,0.9s,baz=80,slow=5.9,SNR=20						
	comp=Z,1.3nm,0.9s						
WRA	**Warramunga Arr**	**47.19**	**257**	P	**P**	**08 58 15.4**	**-0.6**
ASAR	**Alice Springs**	**47.47**	**252**	P	**P**	**08 58 17.3**	**-0.8**
	comp=Z,2.8nm,0.5s,baz=89,slow=7.9,SNR=38						
	comp=Z,2.8nm,0.5s						
ASAR	**Alice Springs**	**47.47**	**252**	P	**P**	**08 58 17.2**	**-0.9**
KNRA	**Kununurra**	**52.92**	**262**	P	**P**	**08

KNRA				IAmb	IAmb	08 59 16.0	
	comp=Z,15nm,1.3s						
SBA	**Scott Base**	**62.51**	**184**	P	**P**	**09 00 06.2**	**+2.6**
NVAR	**Mina Array Bea**	**76.49**	**43**	P	**P**	**09 01 29.9**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=228,slow=9.2,SNR=10						
	comp=Z,1.6nm,0.8s						
KVN	**Kaiserville**	**76.96**	**43**	P	**P**	**09 01 32.1**	**+0.4**
KVN				IAmb	IAmb	09 01 33.7	
	comp=Z,4.0nm,1.1s						
TPH	**Tonopah**	**77.01**	**44**	P	**P**	**09 01 32.7**	**+0.6**
MOD	**Modoc Plateau**	**77.17**	**39**	P	**P**	**09 01 33.5**	**+0.7**
MOD				IAmb	IAmb	09 01 34.9	
	comp=Z,5.2nm,1.4s						
PINE	**Pine Mountain**	**77.89**	**37**	P	**P**	**09 01 37.9**	**+1.1**
PINE				IAmb	IAmb	09 01 39.4	
	comp=Z,5.6nm,0.9s						
BMN	**Battle Mountai**	**78.28**	**42**	P	**P**	**09 01 40.1**	**+1.3**
BMN				IAmb	IAmb	09 01 40.6	
	comp=Z,2.6nm,0.7s						
WVOR	**Wild Horse Val**	**78.49**	**40**	P	**P**	**09 01 40.7**	**+0.8**
WVOR				IAmb	IAmb	09 01 42.1	
	comp=Z,4.3nm,1.1s						
I07A	**Izee**	**78.91**	**38**	P	**P**	**09 01 43.1**	**+0.9**
I07A				IAmb	IAmb	09 01 44.4	
	comp=Z,3.9nm,1.0s						
J08A	**Circle Bar Ran**	**79.11**	**39**	P	**P**	**09 01 44.2**	**+0.9**
J08A				IAmb	IAmb	09 01 45.4	
	comp=Z,4.9nm,1.2s						
X16A	**Lo Mia Camp, P**	**79.23**	**50**	P	**P**	**09 01 45.7**	**+1.5**
U15A	**North Rim**	**79.57**	**47**	P	**P**	**09 01 47.8**	**+1.6**
ELK	**Elko**	**79.72**	**42**	P	**P**	**09 01 47.8**	**+1.0**
G08A	**Pilot Rock**	**79.92**	**37**	P	**P**	**09 01 48.5**	**+0.9**
G08A				IAmb	IAmb	09 01 49.6	
	comp=Z,5.1nm,1.0s						
HAWA	**Hanford**	**80.23**	**36**	P	**P**	**09 01 49.3**	**+0.3**
E08A	**Dider Farm, El**	**80.55**	**36**	P	**P**	**09 01 51.5**	**+0.9**
E08A				IAmb	IAmb	09 01 52.8	
	comp=Z,6.6nm,1.2s						
BMO	**Blue Mountains**	**80.64**	**38**	P	**P**	**09 01 52.2**	**+0.9**
MSU	**Marysvale**	**80.65**	**46**	P	**P**	**09 01 52.5**	**+0.8**
D08A	**Wollman Farm,**	**80.95**	**36**	P	**P**	**09 01 53.8**	**+1.0**
D08A				IAmb	IAmb	09 01 54.9	
	comp=Z,5.9nm,1.1s						
F10A	**Beach Ranch, E**	**81.31**	**37**	P	**P**	**09 01 55.3**	**+0.5**
F10A				IAmb	IAmb	09 01 56.3	
	comp=Z,4.0nm,0.8s						
B08A	**Colville Reser**	**81.48**	**34**	P	**P**	**09 01 56.1**	**+0.6**
J20K	**Nowinta River**	**81.65**	**10**	P	**P**	**09 01 56.9**	**+0.9**
J20K				IAmb	IAmb	09 02 00.4	
	comp=Z,4.6nm,1.1s						
TMUT	**Trail Mountain**	**81.69**	**45**	IAmb	IAmb	09 01 59.9	
	comp=Z,4.1nm,0.8s						
HLID	**Hailey**	**81.71**	**40**	P	**P**	**09 01 57.9**	**+0.9**
SRU	**San Rafael Swe**	**82.07**	**46**	IAmb	IAmb	09 02 01.2	
	comp=Z,3.8nm,0.8s						
PV23	**Carpenter Ridg**	**82.82**	**47**	P	**P**	**09 02 04.0**	**+1.0**
WRH	**Wood River Hil**	**83.00**	**12**	P	**P**	**09 02 03.0**	**+0.1**
TX32	**Lajitas Array**	**83.08**	**57**	IAmb	IAmb	09 02 07.4	
	comp=Z,4.0nm,1.1s						
TXAR	**Lajitas Array**	**83.08**	**57**	P	**P**	**09 02 06.5**	**+2.2**
	comp=Z,1.2nm,0.9s,baz=214,slow=5.6,SNR=11						
	comp=Z,1.2nm,0.9s						
ANMO	**Albuquerque**	**83.15**	**51**	P	**P**	**09 02 05.6**	**+1.0**
HDA	**Harding Lake**	**83.17**	**12**	P	**P**	**09 02 03.9**	**+0.1**
CCB	**Clear Creek Bu**	**83.21**	**12**	P	**P**	**09 02 04.2**	**+0.3**
CCB				IAmb	IAmb	09 02 04.8	
	comp=Z,4.3nm,0.8s						
COLA	**College**	**83.41**	**12**	P	**P**	**09 02 05.3**	**+0.4**
ILAR	**Eielson Array**	**83.51**	**12**	P	**P**	**09 02 05.3**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=221,slow=5.8,SNR=16						
	comp=Z,2.2nm,0.8s						
J25K	**Salcha River,**	**83.68**	**13**	IAmb	IAmb	09 02 07.7	
	comp=Z,4.7nm,0.8s						
REDW	**Red Top Meadow**	**83.86**	**42**	IAmb	IAmb	09 02 10.8	
	comp=Z,5.0nm,1.2s						
SNOW	**Snow King Moun**	**83.97**	**42**	IAmb	IAmb	09 02 11.0	
	comp=Z,4.2nm,1.1s						
IMW	**Indian Meadow**	**84.06**	**41**	IAmb	IAmb	09 02 11.5	
	comp=Z,5.9nm,1.3s						
PDAR	**Pinedale Array**	**84.42**	**43**	P	**P**	**09 02 11.6**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=237,slow=3.3,SNR=7.0						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**84.42**	**43**	P	**P**	**09 02 11.2**	**+0.3**
BOZ	**Bozeman (W)**	**84.45**	**40**	IAmb	IAmb	09 02 13.7	
	comp=Z,4.3nm,1.1s						
DAWY	**Dawson**	**84.62**	**15**	IAmb	IAmb	09 02 12.8	
	comp=Z,3.3nm,0.8s						
ULN	**Ulaanbaatar**	**93.13**	**319**	P	**P**	**09 02 51.5**	**-0.3**
ARCES	**ARCESS Array B**	**124.77**	**351**	PKP	**PKPdf**	**09 08 33.7**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=2.9,slow=2.4,SNR=6.5						
CLL	**Collm**	**143.99**	**350**	*e*(PKPdf)	**PKPab**	**09 09 09.0**	**-0.1**
OSTC	**Ostas**	**144.08**	**347**	*e*PKP	**PKPdf**	**09 09 10.8**	**-0.1**
UPC	**Upice**	**144.18**	**347**	*e*PKP	**PKPdf**	**09 09 10.7**	**-0.3**
DPC	**Dobruska-Polom**	**144.25**	**346**	*e*PKP	**PKPdf**	**09 09 10.9**	**-0.3**
MORC	**Moravsky Berou**	**144.49**	**345**		**PKPdf**	**09 09 11.7**	**0.0**
MORC	**Moravsky Berou**	**144.49**	**345**	*e*PKP	**PKPab**	**09 09 11.3**	**+0.1**
BRTR	**Keskin Array B**	**144.90**	**318**	PKP	**PKPab**	**09 09 13.5**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=103,slow=2.2,SNR=14						
BRTR	**Keskin Array B**	**144.90**	**318**		**PKPab**	**09 09 12.8**	**-0.4**
PRU	**Pruhonice**	**144.97**	**348**	*e*PKP	**PKPab**	**09 09 12.9**	**0.0**
VRAC	**Vranov**	**145.16**	**345**	*e*PKP	**PKPab**	**09 09 13.5**	**-0.2**
MLR	**Muntele Rosu**	**145.22**	**332**		**PKPdf**	**09 09 13.1**	**-0.1**
JAVC	**Velka Javorina**	**145.30**	**344**	*e*PKP	**PKPab**	**09 09 14.9**	**+0.6**
KRUC	**Moravsky**	**145.44**	**345**	*e*PKP	**PKPbc**	**09 09 14.1**	**+0.1**
KHC	**Kasperske Hory**	**145.98**	**349**	*e*PKP	**PKPab**	**09 09 16.8**	**-0.1**
CKRC	**Cesky Krumlov**	**146.13**	**348**	*e*PKP	**PKPbc**	**09 09 16.2**	**+0.1**
GERES	**GERESS Array B**	**146.23**	**348**	PKPbc	**PKPbc**	**09 09 16.2**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=0.0,slow=2.9,SNR=7.1						
CONA	**Conrad Observa**	**146.62**	**345**	*i* P	**PKPab**	**09 09 18.8**	**-0.7**
	comp=Z,3.8nm,0.8s						
RONA	**Rosalia, Austr**	**146.73**	**345**	*e*P	**PKPab**	**09 09 19.1**	**-0.8**
	comp=Z,9.0nm,1.7s						
MOA	**Molln**	**147.06**	**347**	*e*P	**PKPbc**	**09 09 19.6**	**+0.9**
	comp=Z,3.9nm,0.8s						
ABTA	**Abfaltersbach**	**148.47**	**349**	*e*P	**PKPbc**	**09 09 22.7**	**+0.2**
	comp=Z,2.4nm,0.7s						

WEL 07 09:39:25.0±0.7, 44°S±4°×16°9E±°, h5km±3km, M3.5/15, ML3.7/20, MLv3.5/15, Error ellipse: s-maj=0.0km s-min=0.0km az=126.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.04**	**87**	P	Pg	09 39 27.0	+0.8
JCZ				S	Sg	09 39 28.0	+0.8
WKZ	**Wanaka**	**0.78**	**165**	P	Pg	09 39 39.7	-0.3
WKZ				S	Sg	09 39 50.3	+0.2
MSZ	**Milford Sound**	**0.83**	**224**	P	Pg	09 39 40.3	-0.7
FOZ	**Fox Glacier**	**0.95**	**56**	P	Pg	09 39 43.2	-0.1
FOZ				P	Sn	09 39 58.1	-1.0
LBZ	**Lake Benmore**	**1.09**	**107**	P	Pg	09 39 46.0	+0.1
EAZ	**Earnscleugh**	**1.23**	**161**	P	Pg	09 39 47.7	-0.9
EAZ				S	Sg	09 40 03.5	-0.9
MLZ	**Mavora Lakes**	**1.36**	**198**	P	Pn	09 39 49.5	-1.3
GCSZ	**Gaunt Creek Bo**	**1.38**	**57**	P	Pn	09 39 50.1	-0.9
TMZ	**Timaru**	**1.67**	**101**	P	Pn	09 39 54.7	-0.2
ODZ	**Otahua Downs**	**1.68**	**126**	P	Pn	09 39 54.7	-0.3
RPZ	**Rata Peaks**	**1.72**	**79**	P	Pn	09 39 55.5	-0.1
RPZ				S	Sg	09 40 20.1	-0.1
WVZ	**Waitaha Valley**	**1.77**	**56**	P	Pn	09 39 55.2	-1.1
ARCZ	**Arundel**	**1.77**	**87**	P	Pn	09 39 55.9	-0.5
DCZ	**Deep Cove**	**1.79**	**218**	P	Pn	09 39 56.5	-0.1
WHZ	**Wether Hill Ro**	**1.90**	**197**	P	Pn	09 39 57.8	-0.4
WHZ				S	Sb	09 40 23.4	-0.9
TUZ	**Tuapeka**	**1.98**	**162**	P	Pb	09 40 01.5	-0.1
HHSZ	**Highcliff Hill**	**2.24**	**144**	P	Pb	09 40 06.7	+0.7
WACZ	**Wakanui South**	**2.25**	**88**	P	Pn	09 40 01.9	-0.9
INZ	**Inchbonnie**	**2.40**	**57**	P	Pn	09 40 04.1	-0.8
SYZ	**Scrubby Hill**	**2.48**	**173**	P	Pn	09 40 06.4	+0.4
OXZ	**Oxford**	**2.51**	**74**	P	Pn	09 40 05.3	-1.2
PYZ	**Puysegur Point**	**2.54**	**214**	P	Pb	09 40 09.7	-1.5
APZ	**The Paps**	**2.81**	**190**	P	Pn	09 40 11.0	+0.4
MQZ	**McQueen's Vall**	**2.86**	**84**	P	Pn	09 40 09.9	-1.4
LTZ	**Lake Taylor**	**2.88**	**65**	P	Pn	09 40 11.3	-0.4
DSZ	**Denniston Nort**	**3.24**	**45**	P	Pn	09 40 15.9	-0.8
GVZ	**Greta Valley S**	**3.32**	**72**	P	Pn	09 40 17.1	-0.6
THZ	**Tophouse**	**3.84**	**54**	P	Pn	09 40 24.9	0.0
MRNZ	**Matariki Terra**	**3.99**	**49**	P	Pn	09 40 27.3	+0.5
QRZ	**Quartz Range**	**4.29**	**42**	P	Pn	09 40 30.9	-0.1
TKNZ	**Takaka Hill**	**4.36**	**47**	P	Pn	09 40 31.8	-0.1
NNZ	**Nelson**	**4.46**	**52**	P	Pn	09 40 33.6	+0.3
TUWZ	**Tuamarina**	**4.66**	**57**	P	Pn	09 40 38.1	+2.1
TCW	**Tory Channel**	**4.99**	**57**	P	Pn	09 40 41.0	+0.4
DUWZ	**D'Urville Isla**	**5.04**	**51**	P	Pn	09 40 41.8	+0.5
CAW	**Cannon Point**	**5.54**	**60**	P	Pn	09 40 47.5	-0.6
KIW	**Kapiti Island**	**5.58**	**57**	P	Pn	09 40 52.5	+3.7
MRZ	**Mangatainoka R**	**6.11**	**58**	P	Pn	09 41 01.5	+5.5
NEZ	**North Egmont**	**6.26**	**42**	P	Pn	09 40 58.6	+0.5
PKE	**Pukeiti**	**6.27**	**41**	P	Pn	09 41 00.2	+2.0

NNC 07 09:40:03.2±2.8, 37°98N×74°21E, h0km, mb3.8, mpv3.3, 3C-3D, Error ellipse: s-maj=20.1km s-min=13.9km az=159.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.82**	**351**	Pg	Pb	09 41 31.1	+2.5
	3.2nm,0.5s						
MRKS				Lg	Lg	09 42 37.1	
	2.8nm,0.1s						
TKM2	**Tokmak 2**	**5.05**	**12**	⇓Pn	Pn	09 41 22.0	+1.6
	2.5nm,0.8s						
TKM2				⇑Pg	Pb	09 41 34.3	+1.7
	3.1nm,0.7s						
TKM2				⇑Sn	Sn	09 42 22.8	+3.3
	4.2nm,0.7s						
TKM2				⇓Lg	Lg	09 42 45.1	
	8.9nm,1.3s						
IUG	**Iuzhnay**	**5.25**	**324**	Pg	Pb	09 41 39.3	+3.3
	6.8nm,0.8s						
IUG				Lg	Lg	09 42 50.4	
	10.0nm,1.1s						
SGDS	**Sogindy**	**5.48**	**3**	Pg	Pb	09 41 41.3	+1.6
	2.3nm,1.1s						
SGDS				Lg	Lg	09 42 54.5	
	1.7nm,1.1s						
MDOK	**Medeo**	**5.61**	**22**	Pg	Pb	09 41 43.4	+1.3
	2.1nm,0.4s						
MDOK				Lg	Lg	09 42 58.1	
	8.0nm,0.8s						
KRBS	**Karabastau**	**5.82**	**11**	Pg	Pb	09 41 48.5	+2.9
	2.1nm,0.6s						
KRBS				Lg	Lg	09 43 06.9	
	3.9nm,0.9s						
KK31	**Karatay Array**	**5.84**	**332**	⇓Pn	Pn	09 41 30.9	-0.1
	4.9nm,0.7s,baz=146,slow=13,SNR=32						
KK31				⇑Sn	Sn	09 42 39.6	+0.9
	3.2nm,0.6s,baz=152,slow=22,SNR=6.6						
KTBS	**Karatobe**	**6.03**	**17**	Pg	Pb	09 41 50.8	+1.7
	1.5nm,0.5s						
KTBS				Lg	Lg	09 43 11.0	
	1.2nm,0.6s						
KUU	**Kurty**	**6.12**	**15**	Pg	Pb	09 41 54.8	+4.0
	1.3nm,0.6s						
KUU				Lg	Lg	09 43 17.5	
	4.8nm,0.5s						
ARXS	**Arharly**	**6.80**	**23**	Pg	Pb	09 42 06.4	+4.1
	0.8nm,0.3s						
ARXS				Lg	Lg	09 43 37.6	
	2.6nm,0.4s						

IDC 07 09:44:03.4±1.5, 35°97S×78°11E, h0km, mb3.7/4, mbtmp3.7/4, MS3.7/17, Error ellipse: s-maj=76.9km s-min=29.2km az=180.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**28.66**	**348**	T	T	10 19 58.4	
	baz=170,slow=76,SNR=54						
H08S1	**Diego Carcia H**	**28.66**	**348**	T	T	10 19 58.7	
	baz=170,slow=76,SNR=46						
H08S3	**Diego Garcia H**	**28.68**	**348**	T	T	10 19 59.9	
	baz=170,slow=76,SNR=54						
MAW	**Mawson**	**32.85**	**191**	LR	LR	10 01 22.9	
	comp=Z,163nm,19.7s,baz=20,slow=32						
LEM	**Lembang**	**49.64**	**50**	LR	LR	10 04 43.5	
	comp=Z,119nm,19.4s,baz=188,slow=31						
PALK	**Pallekele**	**43.08**	**4**	LR	LR	10 06 13.9	
	comp=Z,62nm,19.4s,baz=279,slow=31						
PSI	**Prapat**	**43.20**	**31**	LR	LR	10 06 15.3	
	comp=Z,142nm,20.3s,baz=206,slow=31						
BOSA	**Boshof**	**44.82**	**264**	P	P	09 52 19.1	-0.3
	1.6nm,1.0s,baz=104,slow=12,SNR=4.1						
BOSA				LR	LR	10 07 17.8	
	comp=Z,97nm,18.3s,baz=148,slow=31						
	1.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**45.45**	**80**	LR	LR	10 08 08.1	
	comp=Z,94nm,20.2s,baz=307,slow=32						
LBTB	**Lobatse**	**46.06**	**269**	LR	LR	10 08 34.2	
	comp=Z,75nm,19.0s,baz=114,slow=32						
SUR	**Sutherland**	**46.96**	**257**	LR	LR	10 07 57.5	
	comp=Z,104nm,21.4s,baz=138,slow=30						
KAPI	**Kappang**	**49.11**	**61**	LR	LR	10 09 34.5	
	comp=Z,106nm,22.0s,baz=198,slow=31						
ASAR	**Alice Springs**	**49.34**	**92**	P	P	09 52 55.0	+0.3
	0.7nm,0.9s,baz=230,slow=7.2,SNR=2.0						
ASAR				LR	LR	10 11 20.6	
	comp=Z,64nm,20.7s,baz=300,slow=33						
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**51.51**	**88**	P	P	09 53 10.7	-0.3
	1.0nm,0.8s,baz=241,slow=7.9,SNR=6.4						
WRA				LR	LR	10 12 31.9	
	comp=Z,74nm,20.2s,baz=218,slow=33						
	1.0nm,0.8s						
STKA	**Stephens Creek**	**52.02**	**105**	LR	LR	10 10 20.5	
	comp=Z,38nm,21.0s,baz=15,slow=30						
SNAA	**Sanae**	**53.48**	**203**	LR	LR	10 12 13.9	
	comp=Z,67nm,21.4s,baz=14,slow=32						
QSPA	**South Pole Qui**	**54.18**	**180**	LR	LR	10 14 34.4	
	comp=Z,159nm,19.7s,baz=284,slow=34						
TSUM	**Tsumeb**	**55.36**	**270**	LR	LR	10 13 36.8	
	comp=Z,99nm,20.8s,baz=150,slow=32						
AAK	**Ala-Archa**	**78.30**	**357**	LR	LR	10 26 25.7	
	comp=Z,59nm,22.0s,baz=144,slow=32						
MKAR	**Makanchi Array**	**82.48**	**3**	P	P	09 56 27.5	+0.2
	0.2nm,0.5s,baz=188,slow=8.7,SNR=2.0						
	0.2nm,0.5s						
DBIC	**Dimbokro**	**88.21**	**279**	LR	LR	10 33 53.7	
	comp=Z,22nm,18.3s,baz=141,slow=34						

*IDC **07** 09:46:30.7±0.9, 29°13S×61°30E, h0km, mb3.9/6, mbtmp3.9/7, ML4.3/1, Error ellipse: s-maj=36.1km s-min=25.4km az=31.0*
*NEIC **07** 09:46:31.6±1.7, 28°.99S±0°.06×61°.1E±0°.2, h10km±1km, mb4.5/7, Error ellipse: s-maj=27.2km s-min=10.9km az=268.0*
ISC 07 09:46:31.8±0.8, 29°1S±0°.1×61°2E±0°.1, h10km, n27, σ0s93/21, mb4.1/10, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.29**	**327**	Pn	**Pn**	**09 48 44.6**	**-1.2**
FOMA	**Nahampoana Res**	**13.27**	**285**	Pn	**Pn**	**09 49 38.9**	**-1.5**
VOI	**Vohitsoka**	**14.79**	**296**		**Pn**	**09 50 00.7**	**-0.6**
ABPO	**Ambohimpanom**	**16.18**	**305**	Pn	**Pn**	**09 50 18.4**	**-1.1**
OPO	**Ambohidratompo**	**16.50**	**306**	Pn	**Pn**	**09 50 23.3**	**-0.3**
	0.1nm,0.3s,baz=117,slow=15,SNR=3.2						
	2.7nm,0.5s						
H08S1	**Diego Carcia H**	**23.86**	**29**	T	T	10 16 29.8	
	baz=207						
H08S2	**Diego Garcia H**	**23.86**	**29**	T	T	10 16 30.0	
	baz=207						
H08S3	**Diego Garcia H**	**23.88**	**29**	T	T	10 16 30.5	
	baz=207						
H01W2	**Cape Leeuwin H**	**44.88**	**112**	T	T	10 42 27.6	
	baz=261,slow=74,SNR=7.3						
H01W3	**Cape Leeuwin H**	**44.89**	**112**	T	T	10 42 25.8	
	baz=261,slow=74,SNR=5.6						
H01W1	**Cape Leeuwin H**	**44.90**	**112**	T	T	10 42 26.7	
	baz=261,slow=74,SNR=5.3						
SNAA	**Sanae**	**54.53**	**200**	P	**P**	**09 55 59.8**	**+0.2**
	0.8nm,0.9s,baz=114,slow=11,SNR=1.7						
	0.8nm,0.9s						
SNAA	**Sanae**	**54.53**	**200**	P	**P**	**09 55 59.3**	**-0.3**
SNAA				IAmb	IAmb	09 56 42.3	
	comp=Z,5.3nm,1.5s						
QSPA	**South Pole Qui**	**61.06**	**180**	P	**P**	**09 56 45.5**	**-0.1**
QSPA				IAmb	IAmb	09 56 54.6	
	comp=Z,5.9nm,1.2s						
ASAR	**Alice Springs**	**64.47**	**104**	P	**P**	**09 57 08.4**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=240,slow=5.9,SNR=10						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**64.47**	**104**	P	**P**	**09 57 08.2**	**-0.8**
WRA	**Warramunga Arr**	**66.29**	**100**	P	**P**	**09 57 20.7**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=245,slow=5.9,SNR=9.4						
	comp=Z,1.0nm,0.8s						
WB2	**Warramunga Arr**	**66.30**	**100**	P	**P**	**09 57 19.6**	**-1.2**
WB2				IAmb	IAmb	09 57 46.7	
	comp=Z,3.3nm,0.9s						
WB0	**Warramunga Arr**	**66.41**	**100**	P	**P**	**09 57 21.6**	**0.0**
WB0				IAmb	IAmb	09 57 22.6	
	comp=Z,5.5nm,1.2s						
WR0	**Warramunga Arr**	**66.46**	**100**	P	**P**	**09 57 21.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**71.09**	**298**	P	**P**	**09 57 52.9**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=152,slow=3.5,SNR=4.1						
	comp=Z,0.9nm,0.9s						
MK31	**Makanchi Array**	**77.91**	**15**	P	**P**	**09 58 28.8**	**-0.8**
MK31				IAmb	IAmb	09 58 31.6	
	comp=Z,2.3nm,1.3s						
MKAR	**Makanchi Array**	**77.91**	**15**	P	**P**	**09 58 30.5**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=168,slow=6.2,SNR=5.3						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**77.91**	**15**	P	**P**	**09 58 29.2**	**-0.4**
ABKAR	**Akbulak array**	**78.00**	**359**	P	**P**	**09 58 30.6**	**+0.6**
ZALV	**Zalesovo Beam**	**85.20**	**14**	P	**P**	**09 59 07.9**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=197,slow=4.6,SNR=4.3						
	comp=Z,0.8nm,0.4s						
YKA	**Yellowknife Ar**	**146.48**	**356**	PKPbc	**PKPbc**	**10 06 12.7**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=342,slow=3.2,SNR=5.0						

*IDC **07** 09:47:49.3±1.0, 29°.11S×61°.03E, h0km, mb3.7/7, mbtmp3.8/8, ML4.1/1, Error ellipse: s-maj=33.5km s-min=27.3km az=23.0*
ISC 07 09:47:51.0±0.9, 29°1S±0°.2×61°0E±0°.2, h10km, n14, σ0s55/8, mb3.9/7, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.42**	**307**	Pn	**Pn**	**09 51 41.8**	**0.0**
	0.1nm,0.3s,baz=71,slow=16,SNR=2.0						
	3.0nm,0.4s						
H08S1	**Diego Carcia H**	**23.91**	**29**	T	T	10 17 46.9	
	baz=204,slow=76,SNR=7.1						
H08S2	**Diego Garcia H**	**23.92**	**29**	T	T	10 17 47.7	
	baz=204,slow=76,SNR=5.8						
H08S3	**Diego Garcia H**	**23.93**	**29**	T	T	10 17 48.2	
	baz=204,slow=76,SNR=5.9						
H01W2	**Cape Leeuwin H**	**44.97**	**112**	T	T	10 43 46.2	
	baz=261,slow=74,SNR=4.0						
H01W3	**Cape Leeuwin H**	**44.98**	**112**	T	T	10 43 49.1	
	baz=261,slow=74,SNR=4.0						
H01W1	**Cape Leeuwin H**	**44.99**	**112**	T	T	10 43 47.2	
	baz=261,slow=74,SNR=3.9						
SNAA	**Sanae**	**54.49**	**200**	P	**P**	**09 57 18.8**	**+0.3**
	1.0nm,1.0s,baz=131,slow=9.3,SNR=1.6						
	1.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**59.79**	**42**	P	**P**	**09 57 56.5**	**-0.1**
	0.3nm,0.3s,baz=243,slow=6.0,SNR=1.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	**09 58 28.8**	**0.0**
	0.6nm,0.7s,baz=244,slow=5.8,SNR=6.2						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**66.39**	**100**	P	**P**	**09 58 40.0**	**-0.6**
	0.4nm,0.7s,baz=252,slow=6.5,SNR=2.2						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.01**	**298**	P	**P**	**09 59 08.8**	**-0.6**
	1.3nm,0.8s,baz=109,slow=5.8,SNR=5.3						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**77.94**	**15**	P	**P**	**09 59 49.3**	**+0.3**
	0.4nm,0.8s,baz=183,slow=5.8,SNR=2.5						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**85.23**	**14**	P	**P**	**10 00 28.1**	**+0.8**
	0.4nm,0.3s,baz=197,slow=3.0,SNR=1.6						
	0.4nm,0.3s						

RSNC 07 09:56:01.4±1.4, 6°91N×76°28W, h0km±4km, ML3.1, Mw3.8, 3C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.13**	**32**	⇑*i*P	Pg	09 56 03.9	0.0
DBBC				*e*S	Sg	09 56 06.6	+1.0
DBBC				*i*		09 56 08.1	
	comp=Z,5μm,0.7s						
HELC	**Santa Helena**	**1.03**	**134**	⇓*i*P	Pg	09 56 18.8	-2.4
HELC				*e*S	Sg	09 56 32.8	-1.7
HELC				*i*		09 56 35.4	
	comp=Z,341nm,0.3s						
CBOC	**Ciudad Bolivar**	**1.07**	**166**	⇓*i*P	Pg	09 56 19.9	-2.0
CBOC				*e*S	Sg	09 56 36.0	+0.1
CBOC				*i*		09 56 39.8	
	comp=Z,757nm,0.6s						
UREC	**San Jos de Ur**	**1.12**	**41**	*e*P	Pg	09 56 22.3	-0.5
UREC				*e*S	Sg	09 56 37.5	+0.1
UREC				*i*		09 56 39.7	
	comp=Z,397n

PAMC *i* 09 57 55.3
comp=Z,71nm,0.6s
VILC Villavicencio, 3.79 137 *eP* Pn 09 57 04.6 +3.4
VILC *eS* Sb 09 57 53.4 -2.3
AZU Azuero 4.06 283 *eP* Pn 09 57 03.1 -1.7
AZU *eS* Sn 09 57 49.8 -3.3
BCIP Isla Barro Col 4.18 303 *eP* Pn 09 57 04.6 -1.9
BCIP *eS* Sn 09 57 55.6 -0.4
BETC Betania 4.28 169 *eP* Pn 09 57 08.6 +0.7
BETC *eS* Sn 09 57 59.8 +1.2
POPC Popayan, Colom 4.36 185 *eP* Pn 09 57 08.7 -0.4
POPC *eS* Sn 09 58 01.2 +0.4
POPC *i* 09 58 11.8
comp=Z,12nm,0.6s
TAMC Tame, Arauca 4.48 96 *eP* Pn 09 57 10.9 +0.2
TAMC *eS* Sn 09 58 05.3 +1.8
TAMC *i* 09 58 30.8
comp=Z,38nm,0.5s
GARC Garzon, Huila 4.75 170 *eP* Pn 09 57 15.0 +0.4
PTGC Puerto Gaitan, 4.92 123 *eP* Pn 09 57 16.1 -0.6
PTGC *eS* Sn 09 58 12.9 -1.5
PTGC *i* 09 58 19.2
comp=Z,17nm,0.4s
BBAC Balboa, Cauca 4.95 191 *eP* Pn 09 57 20.3 +3.1
BBAC *eS* Sn 09 58 20.0 +4.7
BBAC *i* 09 58 29.9
comp=Z,6.1nm,0.5s
CRJC Cerrejon, Guaj 5.29 39 *eP* Pn 09 57 23.0 +1.2
CRJC *eS* Sn 09 58 17.2 -6.3
CRJC *i* 09 58 38.7
comp=Z,16nm,0.5s
MACC Macarena, Meta 5.31 153 *eP* Pn 09 57 21.4 -0.7
MACC *eS* Sb 09 58 33.8 -5.9
MACC *i* 09 59 02.8
comp=Z,19nm,0.6s
FLOC Florencia 5.33 173 *eP* Pn 09 57 22.8 +0.6
FLOC *i* 09 59 02.7
comp=Z,4.2nm,0.6s
SOCV Socops 5.55 75 *eP* Pn 09 57 26.5 +1.2
SOCV *eS* Sn 09 58 28.2 -1.6

IDC 07 10:04:07.0±7.4, 18°.78N×145°.94E, h90km±46km, mb3.3/3, mbtmp3.7/4, Error ellipse: s-maj=246.9km s-min=33.6km az=92.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.27**	**191**	P	Pn	10 05 23.0	-0.3
	16nm,0.4s,baz=16,slow=12,SNR=1.8						
GUMO				S	Sn	10 06 23.6	+0.8
	17nm,0.4s,baz=166,slow=23,SNR=1.1						
H11S3	**WAKE ISLAND Hy 19.66**	**88**		T	T	10 29 15.1	
	baz=274,slow=74,SNR=7.7						
H11S1	**WAKE ISLAND Hy 19.67**	**87**		T	T	10 29 15.8	
	baz=274,slow=74,SNR=7.6						
H11S2	**WAKE ISLAND Hy 19.68**	**88**		T	T	10 29 16.6	
	baz=274,slow=74,SNR=8.3						
WRA	**Warramunga Arr**	**40.13**	**197**	P	P	10 11 34.0	-0.3
	0.4nm,0.5s,baz=22,slow=8.0,SNR=14						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**43.80**	**196**	P	P	10 12 04.0	-0.1
	0.2nm,0.5s,baz=25,slow=7.2,SNR=6.6						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**86.90**	**335**	P	P	10 16 41.8	+0.1
	1.0nm,0.9s,baz=76,slow=5.9,SNR=6.5						
	1.0nm,0.9s						

WEL 07 10:23:49.0±0.7, 33°.5S±10°×18°.0W±2°.5, h33km, M4.2/6, mB4.8/5, ML4.5/13, MLv4.2/6, Mw(mB)4.1/5, Error ellipse: s-maj=0.0km s-min=0.0km az=111.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.06**	**27**	S	Sn	10 25 32.2	-2.9
MXZ	**Matakaoa Point**	**4.84**	**196**	P	Pn	10 25 02.3	+2.9
MXZ				S	Sn	10 25 55.6	+1.3
WMGZ	**Waiomatatini S**	**5.06**	**194**	P	Pn	10 25 06.0	+3.6
WMGZ				S	Sn	10 26 00.3	+0.6
HAZ	**Te Kaha**	**5.16**	**200**	P	Pn	10 25 04.9	+1.1
HAZ				S	Sn	10 26 03.8	+1.7
PKGZ	**Pakihiroa**	**5.20**	**197**	P	Pn	10 25 04.0	-0.5
PKGZ				S	Sn	10 26 05.0	+1.6
PUZ	**Puketiti**	**5.34**	**195**	P	Pn	10 25 07.5	+1.2
PUZ				S	Sn	10 26 06.2	-0.4
RUGZ	**Raukumara Rang**	**5.38**	**200**	P	Pn	10 25 08.9	+1.9
RUGZ				S	Sn	10 26 06.6	-1.3
TWGZ	**Tauwhareparae**	**5.50**	**197**	P	Pn	10 25 09.8	+1.2
TWGZ				S	Sn	10 26 11.4	+0.7
CNGZ	**Carnagh Statio**	**5.74**	**194**	P	Pn	10 25 10.9	-1.0
MWZ	**Matawai**	**5.77**	**200**	P	Pn	10 25 11.7	-0.5
MWZ				S	Sn	10 26 16.6	-0.6
TKGZ	**Te Karaka**	**5.78**	**197**	P	Pn	10 25 14.4	+2.0
TKGZ				S	Sn	10 26 16.6	-0.9
URZ	**Urewera**	**5.83**	**203**	P	Pn	10 25 13.0	0.0
URZ				S	Sn	10 26 15.6	-3.0
RIGZ	**Rimuhau**	**6.05**	**197**	P	Pn	10 25 16.0	-0.2
RIGZ				S	Sn	10 26 23.9	-0.5
MUGZ	**Murupara**	**6.14**	**204**	P	Pn	10 25 18.9	+1.6
MUGZ				S	Sn	10 26 27.2	+0.8
SNGZ	**Shannon Statio**	**6.24**	**200**	P	Pn	10 25 19.7	+1.0
SNGZ				S	Sn	10 26 29.0	+0.2
ALRZ	**Allen Road**	**6.37**	**207**	P	Pn	10 25 22.1	+1.6
MRHZ	**Matea Rd**	**6.58**	**205**	P	Pn	10 25 23.6	+0.2
MRHZ				S	Sn	10 26 35.7	-1.7
NMHZ	**Naumai**	**6.69**	**202**	P	Pn	10 25 25.4	+0.5
NMHZ				S	Sn	10 26 40.1	+0.2

*IDC **07** 10:25:56.7±0.7, 2°.92S×129°.88E, h0km, mb4.1/10, mbtmp4.2/14, ML4.0/4, MS3.3/12, Error ellipse: s-maj=28.4km s-min=14.5km az=76.0*
*DJA **07** 10:26:01.0±0.5, 3°.5±2°×13°.0E±°, h26km±4km, M4.3/12, mb4.5/8, mB5.2/3, MLv4.2/12, Mw(mB)4.5/3*
*NEIC **07** 10:26:03.6±2.4, 2°.97S±0°.09×129°.87E±0°.09, h45km±5km, mb4.2/15, Error ellipse: s-maj=14.6km s-min=10.2km az=221.0*

ISC 07 10:26:00.6±0.5, 2°.92S±0°.04×129°.86E±0°.05, h25km, n59, σ1s52/59, mb4.0/10, MS3.3/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.02**	**246**	P	Pn	10 26 19.8	+0.5
MSAI				S	Sn	10 26 34.6	+1.7
BNDI	**Bandanaira**	**1.59**	**178**	P	Pb	10 26 29.4	+0.1
AAI	**Ambon**	**1.83**	**245**	P	Pn	10 26 31.1	+0.7
FAKI	**Fak Fak**	**2.39**	**90**		Pn	10 26 40.1	+1.9
FAKI	**Fak Fak**	**2.39**	**90**	P	Pn	10 26 39.8	+1.7
FAKI				S	Sn	10 27 10.0	+3.4
SIJI	**Sorong**	**2.48**	**35**	Pn	Pn	10 26 39.5	+0.2
	67nm,0.3s,baz=55,slow=8.4,SNR=331						
SIJI				Sn	Sn	10 27 09.8	+1.0
	72nm,0.3s,baz=30,slow=22,SNR=12						
SIJI				LR	LR	10 28 00.7	
	comp=Z,563nm,21.1s,baz=191,slow=50						
	182nm,0.2s						
SWI	**Sorong**	**2.48**	**34**	P	Pn	10 26 39.4	0.0
SWI				S	Sn	10 27 08.2	-0.6
NLAI	**Namlea**	**2.77**	**263**	P	Pn	10 26 43.8	+0.3
LBMI	**Labuha**	**3.27**	**314**	P	Pn	10 26 49.3	-1.0
SANI	**Sanana**	**3.96**	**283**	P	Pn	10 26 58.1	-1.7
SGSI	**Sangihe**	**7.86**	**327**	P	Pn	10 27 52.5	-0.9
	0.6nm7μm90nm,0.5s						
APSI	**Ampana**	**8.45**	**284**	P	Pn	10 28 01.5	+0.1
	758nm53nm,0.6s						
MRSI	**Marisa**	**8.61**	**293**	P	Pn	10 28 02.2	-1.4
	28nm,0.6s						
BATI	**Baumata**	**9.50**	**220**	LR	LR	10 32 11.4	
	comp=Z,484nm,19.1s,baz=328,slow=39						
TOLI2	**Tolitoli**	**9.92**	**294**	Pn	Pn	10 28 21.9	+0.2
MTN	**Manton Dam**	**9.94**	**173**		Pn	10 28 22.9	+0.9
KAPI	**Kappang**	**10.30**	**258**	Pn	Pn	10 28 28.0	+1.2
	1.4nm,0.3s,baz=90,slow=7.7,SNR=6.2						
KAPI				LR	LR	10 33 24.9	
	comp=Z,252nm,18.8s,baz=76,slow=44						
	6.8nm,0.6s						
KAPI	**Kappang**	**10.30**	**258**	Pn	Pn	10 28 31.0	+4.2
MPSI	**Mapaga**	**10.47**	**288**	P	Pn	10 28 26.6	-2.6
	12nm,0.6s						
KNRA	**Kununurra**	**12.72**	**185**	Pn	Pn	10 29 00.8	+0.8
FITZ	**Fitzroy Crossi**	**15.64**	**195**	Pn	Pn	10 29 39.2	-0.2
	0.4nm,0.3s,baz=22,slow=13,SNR=9.6						
FITZ				LR	LR	10 36 19.3	
	comp=Z,107nm,19.0s,baz=354,slow=40						
	7.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.64**	**195**	Pn	Pn	10 29 38.6	-0.9
FITZ				IAmb	IAmb	10 29 58.7	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**17.12**	**131**	P	Pn	10 29 59.0	+0.6
COEN				IAmb	IAmb	10 30 28.2	
	comp=Z,13nm,1.1s						
WB0	**Warramunga Arr**	**17.32**	**166**	P	Pn	10 29 59.5	-1.3
WB0				IAmb	IAmb	10 30 09.8	
	comp=Z,26nm,1.2s						
WRAB	**Tennant Creek**	**17.47**	**166**	P	Pn	10 30 01.6	-1.0
WRAB				IAmb	IAmb	10 30 12.2	
	comp=Z,22nm,1.2s						
WRA	**Warramunga Arr**	**17.47**	**166**	P	Pn	10 30 00.4	-2.3
	comp=Z,0.5nm,0.3s,baz=347,slow=9.9,SNR=34						
WRA				S	Sn	10 33 10.8	-5.9
	comp=Z,1.4nm,0.7s,baz=329,slow=23,SNR=5.0						
WRA				LR	LR	10 38 40.4	
	comp=Z,54nm,18.0s,baz=22,slow=44						
	comp=Z,9.5nm,1.0s						
WRA	**Warramunga Arr**	**17.47**	**166**	P	Pn	10 30 01.2	-1.5
WB2	**Warramunga Arr**	**17.48**	**166**		Pn	10 30 01.4	-1.3
WB2				IAmb	IAmb	10 30 05.8	
	comp=Z,22nm,1.1s						
WR0	**Warramunga Arr**	**17.54**	**165**	P	Pn	10 30 03.1	-0.5
WR0				IAmb	IAmb	10 30 11.4	
	comp=Z,28nm,1.4s						
PSA00	**Pilbara Seismi**	**20.94**	**207**	P	P	10 30 40.3	-1.5
PSA00				IAmb	IAmb	10 30 55.8	
	comp=Z,15nm,1.0s						
AS31	**Alice Springs**	**20.99**	**170**	P	P	10 30 42.4	+0.1
AS31				IAmb	IAmb	10 30 49.8	
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**20.99**	**170**	P	P	10 30 42.3	0.0
	comp=Z,34nm,0.9s,baz=348,slow=11,SNR=176						
ASAR				S	S	10 34 32.4	-2.7
	comp=Z,2.6nm,0.8s,baz=353,slow=25,SNR=8.3						
ASAR				PcP	PcP	10 34 50.0	+0.7
	comp=Z,0.8nm,0.5s,baz=349,slow=1.6,SNR=6.9						
	comp=Z,34nm,0.9s						
GUMO	**Guam**	**22.15**	**42**	LR	LR	10 41 00.8	
	comp=Z,24nm,18.2s,baz=240,slow=41						
LEM	**Lembang**	**22.50**	**259**	LR	LR	10 41 13.1	
	comp=Z,190nm,21.3s,baz=72,slow=41						
CTAO	**Charters Tower**	**23.39**	**138**	P	P	10 31 08.5	+0.8
BBOO	**Buckleboo**	**30.30**	**170**	P	P	10 32 10.2	+0.2
STKA	**Stephens Creek**	**30.85**	**160**	P	P	10 32 14.4	-0.5
	comp=Z,1.4nm,0.5s,baz=344,slow=9.1,SNR=9.5						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**30.85**	**160**	P	P	10 32 14.6	-0.3
CMAR	**Chiang Mai Arr**	**37.12**	**306**	P	P	10 33 09.4	-0.1
	comp=Z,2.4nm,1.0s,baz=132,slow=6.0,SNR=12						
CMAR				LR	LR	10 50 35.5	
	comp=Z,28nm,18.2s,baz=125,slow=40						
	comp=Z,2.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.12**	**306**	P	P	10 33 11.0	+1.5
MJAR	**Matsushiro Arr**	**40.02**	**10**	P	P	10 33 33.1	-0.5
	comp=Z,1.0nm,0.5s,baz=186,slow=9.8,SNR=2.9						
	comp=Z,1.0nm,0.5s						
KSRS	**Korea Array**	**40.21**	**358**	LR	LR	10 51 21.6	
	comp=Z,19nm,18.4s,baz=105,slow=38						
SONM	**Songino Array**	**54.56**	**341**	P	P	10 35 28.6	+1.8
	comp=Z,0.7nm,0.7s,baz=154,slow=8.8,SNR=3.9						
	comp=Z,0.7nm,0.7s						
TUWZ	**Tuamarina**	**55.05**	**140**	P	P	10 35 30.5	+0.2
AFI	**Afiamalu**	**58.62**	**104**	LR	LR	11 01 10.1	
	comp=Z,32nm,19.2s,baz=176,slow=36						
MK31	**Makanchi Array**	**64.77**	**326**	P	P	10 36 36.7	-0.4
MK31				IAmb	IAmb	10 36 44.5	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**64.77**	**326**	P	P	10 36 36.8	-0.3
	comp=Z,0.4nm,0.4s,baz=107,slow=8.1,SNR=5.7						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**64.77**	**326**	P	P	10 36 36.5	-0.7
ZALV	**Zalesovo Beam**	**67.89**	**333**	P	P	10 36 56.7	-0.2
	comp=Z,1.0nm,0.4s,baz=112,slow=4.0,SNR=6.2						
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**68.99**	**328**	P	P	10 37 02.9	-0.9
	comp=Z,1.2nm,0.3s,baz=126,slow=5.9,SNR=8.8						
	comp=Z,1.2nm,0.3s						
VNDA	**Vanda**	**76.49**	**173**	P	P	10 37 48.6	+0.8
	comp=Z,0.7nm,0.7s,baz=311,slow=6.4,SNR=3.6						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**76.49**	**173**	P	P	10 37 49.0	+1.1
NRIK	**Noril'sk**	**77.59**	**346**	P	P	10 37 54.9	+0.7
	comp=Z,2.0nm,0.4s,baz=44,slow=5.0,SNR=3.1						
	comp=Z,2.0nm,0.4s						
ABKAR	**Akbulak array**	**79.25**	**321**	P	P	10 38 03.8	0.0
QSPA	**South Pole Qui**	**87.03**	**180**	P	P	10 38 43.0	-0.8
ILAR	**Eielson Array**	**89.74**	**25**	LR	LR	11 19 48.2	
	comp=Z,18nm,18.3s,baz=72,slow=36						
SPITS	**Spitsbergen Ar**	**97.56**	**349**	LR	LR	11 33 39.1	
	comp=Z,19nm,18.1s,baz=120,slow=42						
CPUP	**Villa Florida**	**150.10**	**167**	PKPbc	**PKPbc**	**10 45 50.5**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=197,slow=4.9,SNR=4.3						
LPAZ	**La Paz**	**153.91**	**138**	PKPbc	**PKPbc**	**10 45 58.1**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=247,slow=8.5,SNR=2.0						

*IDC **07** 10:39:27.3±1.8, 6°.48S×130°.01E, h162km±17km, mb3.5/2, mbtmp4.0/7, Error ellipse: s-maj=31.8km s-min=17.0km az=84.0*
*NEIC **07** 10:39:27.1±2.0, 6°.42S±0°.05×129°.9E±0°.1, h157km±10km, mb4.2/8, Error ellipse: s-maj=21.1km s-min=7.2km az=95.0*

ISC 07 10:39:26.0±0.7, 6°.50S±0°.06×129°.96E±0°.08, h146km, n38, σ2s04/42, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.98**	**138**	Pn	Pn	10 40 04.0	+3.3
FAKI	**Fak Fak**	**4.23**	**33**		Pn	10 40 30.2	+1.0
SIJI	**Sorong**	**5.75**	**13**	P	Pn	10 40 49.7	+0.3
	3.9nm,0.3s,baz=234,slow=23,SNR=16						
SIJI				S	Sn	10 41 50.2	-4.2
	15nm,0.3s,baz=260,slow=23,SNR=9.6						
MTN	**Manton Dam**	**6.41**	**170**		Pn	10 40 60.0	+1.8
KDU	**Kakadu**	**6.63**	**158**	P	Pn	10 41 02.3	+1.2
BATI	**Baumata**	**7.24**	**239**	P	Pn	10 41 10.7	+1.4
	36nm,0.4s,baz=148,slow=2.4,SNR=6.9						
BATI				S	Sn	10 42 30.4	+0.2
	24nm,0.5s,baz=140,slow=19,SNR=7.1						
KNRA	**Kununurra**	**9.19**	**187**		Pn	10 41 36.3	+0.9
KNRA	**Kununurra**	**9.19**	**187**	P	Pn	10 41 37.0	+1.6
FITZ	**Fitzroy Crossi**	**12.27**	**200**	P	Pn	10 42 16.7	+0.7
	0.5nm,0.3s,baz=23,slow=12,SNR=9.4						
FITZ				S	Sn	10 44 25.7	-6.0
	2.6nm,0.5s,baz=173,slow=16,SNR=5.7						
FITZ	**Fitzroy Crossi**	**12.27**	**200**	Pn	Pn	10 42 18.0	+2.0
FITZ	**Fitzroy Crossi**	**12.27**	**200**	P	Pn	10 42 18.7	+2.7
WB0	**Warramunga Arr**	**13.87**	**162**	Pn	Pn	10 42 37.2	+0.7
WRAB	**Tennant Creek**	**14.02**	**163**		P	10 42 41.9	+0.2
WRAB	**Tennant Creek**	**14.02**	**163**	P	Pn	10 42 37.6	-0.8
WRA	**Warramunga Arr**	**14.02**	**163**	P	Pn	10 42 38.2	-0.2
	1.6nm,0.3s,baz=348,slow=13,SNR=36						
WRA				S	Sn	10 45 04.6	-9.2
	1.1nm,0.3s,baz=338,slow=22,SNR=5.3						
WB2	**Warramunga Arr**	**14.03**	**163**	Pn	Pn	10 42 40.0	+1.5
WR0	**Warramunga Arr**	**14.10**	**162**	Pn	Pn	10 42 41.3	+1.9
COEN	**Coen**	**14.96**	**121**		P	10 42 52.7	+0.5
COEN				IAmb	IAmb	10 43 35.6	
	comp=Z,18nm,1.1s						
AS31	**Alice Springs**	**17.48**	**168**	P	Pn	10 43 21.8	+0.8
ASAR	**Alice Springs**	**17.48**	**168**	P	Pn	10 43 21.6	+0.5
	comp=Z,2.0nm,0.5s,baz=347,slow=10,SNR=68						
ASAR				S	S	10 46 30.0	-4.7
	comp=Z,0.9nm,0.7s,baz=354,slow=26,SNR=5.4						
ASAR				ScP	ScP	10 51 10.1	-4.8
	comp=Z,0.3nm,0.5s,baz=357,slow=2.0,SNR=5.9						
ASAR	**Alice Springs**	**17.48**	**168**	P	Pn	10 43 21.8	+0.8
PSA00	**Pilbara Seismi**	**17.89**	**212**	P	P	10 43 25.2	+0.7
PSA00				IAmb	IAmb	10 43 56.3	
	comp=Z,12nm,1.1s						
WRKA	**Warakurna**	**18.50**	**185**	P	Pn	10 43 32.7	-0.3
OOD	**Oodnadatta**	**21.86**	**166**	P	P	10 44 07.5	+0.3
INKA	**Innaminka**	**23.47**	**155**	P	P	10 44 24.7	+2.2
MULG	**Mulgathing**	**23.97**	**171**	P	P	10 44 27.9	+0.9
QLP	**Quilpie**	**24.16**	**147**	P	P	10 44 31.6	+2.8
	comp=Z,5.8nm,0.7s						
LCRK	**Leigh Creek**	**25.05**	**163**	P	P	10 44 37.4	+0.6
BBOO	**Buckleboo**	**26.79**	**169**	P	P	10 44 52.5	+0.1
STKA	**Stephens Creek**	**27.49**	**158**	P	P	10 44 59.0	+0.3
	comp=Z,0.8nm,0.3s,baz=327,slow=13,SNR=7.0						
	comp=Z,0.8nm,0.3s						
STKA	**Stephens Creek**	**27.49**	**158**	P	P	10 44 58.6	-0.1
STKA	**Stephens Creek**	**27.49**	**158**	P	P	10 44 59.2	+0.5
HTT	**Hallett**	**28.06**	**164**	P	P	10 45 05.4	+1.6
CMSA	**Cobar Meteorol**	**28.93**	**151**	P	P	10 45 12.6	+1.1
TOO	**Toolangi**	**34.00**	**158**	P	P	10 45 57.1	+1.2
TOO				IAmb	IAmb	10 46 37.2	
	comp=Z,11nm,1.4s						
JNU	**Nakatsue**	**39.41**	**1**	P	P	10 46 36.4	-5.3
MKAR	**Makanchi Array**	**67.79**	**327**	P	P	10 50 08.4	+0.2
	comp=Z,0.5nm,0.4s,baz=112,slow=7.0,SNR=7.3						
	comp=Z,0.5nm,0.4s						
VNDA	**Vanda**	**72.94**	**173**	P	P	10 50 39.1	+0.2
VNDA				IAmb	IAmb	10 51 15.5	
	comp=Z,3.3nm,1.5s						

*KRNET **07** 10:49:31.3±0.1, 39°.14N×73°.96E, mb3.2*
*NNC **07** 10:49:38.0±6.2, 39°.67N×73°.84E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=43.7km s-min=31.6km az=152.0*
*SOME **07** 10:49:39.7, 39°.68N×73°.07E, h10km*

ISC 07 10:49:39.0±1.5, 39°.70N±0°.07×73°.23E±0°.05, h10km, n13, σ1s63/24, 5C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**2.31**	**211**	↑*iP*	Pn	10 50 17.7	+0.4
	baz=6.0						
ARLS				↑*iS*	Sg	10 50 51.7	-1.6
	baz=6.0						
GAR	**Garm**	**2.36**	**254**	↓*iP*	Pn	10 50 19.3	+1.4
	baz=68						
GAR				↓*iS*	Sg	10 50 54.2	-0.7
	baz=68						
UCH	**Uchtor**	**2.70**	**21**	↓*iP*	Pn	10 50 23.4	+0.5
	baz=8.0						
UCH				↓*iS*	Sb	10 51 01.4	+0.3
	baz=8.0						
MRKS	**Merke**	**3.04**	**0**	*eP*	Pg	10 50 37.5	+0.3
	3.3nm,0.2s						
MRKS				*eS*	Sg	10 51 18.2	+1.6
	7.4nm,0.4s						
MRKS	**Merke**	**3.04**	**0**	Pg	Pg	10 50 35.9	-1.3
	2.2nm,0.3s						
MRKS				Lg	Lg	10 51 18.2	
	6.6nm,0.6s						
IUG	**Iuzhnay**	**3.44**	**316**	*eP*	Pb	10 50 40.2	+0.2
	73nm,0.6s						
IUG				*eS*	Sb	10 51 22.7	+0.9
	9.5nm,0.0s						
IUG	**Iuzhnay**	**3.44**	**316**	Pg	Pb	10 50 38.2	-1.8
	40nm,0.3s						
IUG				Lg	Lg	10 51 21.9	
	2.9nm,0.2s						
DZA	**Taraz**	**3.49**	**336**	*eP*	Pg	10 50 44.3	-1.5
	76nm,0.1s						
DZA				*eS*	Sg	10 51 30.0	-1.1
	89nm,0.4s						
SGDS	**Sogindy**	**3.89**	**15**	*eP*	Pg	10 50 50.9	-2.6
	1.4nm,0.5s						
SGDS				*eS*	Sg	10 51 41.3	-2.6
	2.7nm,0.3s						
SGDS	**Sogindy**	**3.89**	**15**	Pg	Pb	10 50 49.5	+1.8
	1.3nm,0.4s						
SGDS				Lg	Lg	10 51 41.6	
	2.4nm,0.8s						
KK31	**Karatay Array**	**3.96**	**330**	↑Pn	Pn	10 50 43.0	+3.2
	0.4nm,0.5s						
KK31				Pg	Pg	10 50 53.6	-1.2
	0.3nm,0.3s,baz=143,slow=14,SNR=5.3						
KK31				↑Sn	Sb	10 51 35.2	-1.7
	0.5nm,0.3s						
KK31				↑Lg	Lg	10 51 52.2	
	1.2nm,0.5s,baz=138,slow=30						
MDOK	**Medeo**	**4.50**	**38**	*eP*	Pg	10 51 03.8	-1.3
	1.3nm,1.1s						
MDOK				*eS*	Sg	10 52 03.3	0.0
	3.7nm,0.3s						
BTLS	**Baital**	**5.37**	**6**	*eP*	Pg	10 51 21.3	-0.5
	0.7nm,0.2s						
BTLS				*eS*	Sg	10 52 33.6	+2.3
	1.6nm,0.9s						

RSNC 07 10:58:09.0±0.7, 3°.28N×76°.44W, h14km±4km, ML1.6, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOTC	**Yotoco, Valle**	**0.70**	**8**	*eP*	Pg	10 58 21.6	-1.2
YOTC				*eS*	Sg	10 58 31.5	-0.6
YOTC				*i*		10 58 32.6	
	comp=Z,23nm,0.3s						
YOTC	**Yotoco, Valle**	**0.70**	**8**	↑*iP*	Pg	10 58 21.7	-1.1
YOTC				*eS*	Sg	10 58 31.7	-0.4
YOTC				*i*		10 58 32.6	
	comp=Z,26nm,0.2s						
POPC	**Popayan, Colom**	**0.77**	**197**	*eP*	Pg	10 58 23.2	-1.0
POPC				*eS*	Sg	10 58 34.0	-0.3
POPC				*i*		10 58 34.8	
	comp=Z,18nm,0.2s						
POPC	**Popayan, Colom**	**0.77**	**197**	*eP*	Pg	10 58 23.1	-1.0
POPC				*eS*	Sg	10 58 34.0	-0.4
POPC				*i*		10 58 34.8	
	comp=Z,19nm,0.2s						
PRAC	**Prado**	**1.61**	**75**	*eP*	Pn	10 58 36.0	-1.1
PRAC				*eS*	Sn	10 58 56.8	-0.9
PRAC				*i*		10 59 01.4	
	comp=Z,4.8nm,0.3s						
PLMC	**San Jos del P**	**1.62**	**6**	*eP*	Pn	10 58 35.0	-2.2
PLMC				*eS*	Sn	10 58 56.4	-1.6
PLMC				*i*		10 58 59.8	
	comp=Z,5.0nm,0.3s						
PLMC	**San Jos del P**	**1.62**	**6**	*eP*	Pn	10 58 35.3	-1.9
PLMC				*eS*	Sn	10 58 57.5	-0.4
PLMC				*i*		10 58 59.9	
	comp=Z,5.0nm,0.4s						

RSNC 07 10:58:44.7±0.7, 6°.94N×76°.13W, h0km±10km, ML1.0, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

NIED ***07*** *11:36:43.4, 40.88N×142.91E, h19km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.79; $M_{\theta\theta}$1.37; $M_{\phi\phi}$-2.16; $M_{r\theta}$1.87; $M_{\theta\phi}$-0.14; $M_{r\phi}$1.74; Fault plane solution: $M_0$3.18000×10^{14} NP1: ϕ_s144.00000°, δ34.00000°, λ15.00000°. NP2:ϕ_s41.00000°, δ81.00000°, λ123.00000°.*

ISC 07 11:36:39.9±1.7, 40.89N±0.04×143.14E±0.06, h10km±11km, n39, σ1.947/35, mb3.3/10, MS3.3/3, 6D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.12**	**1**	P			**Pn**	**11 37 04.3**	**+2.6**
JKEN	**Kujiedanarisaw**	**1.29**	**238**	‖P			**Pn**	**11 37 03.8**	**-0.1**
JANG	**Nango**	**1.34**	**248**	‖*i*P			**Pn**	**11 37 04.8**	**+0.1**
JARK	**Aomorirokkasho**	**1.35**	**276**	‖*i*P			**Pb**	**11 37 04.5**	**-0.8**
JTH	**Tanohata**	**1.36**	**226**	P			**Pn**	**11 37 05.4**	**+0.4**
JTH				S			**Sn**	**11 37 21.2**	**-1.9**
JAHD	**Aomorihigashid**	**1.42**	**286**	‖*i*P			**Pb**	**11 37 05.7**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.42**	**348**	P			**Pg**	**11 37 08.4**	**+1.3**
JTM	**Tenmabayashi**	**1.58**	**267**	*i*P			**Pb**	**11 37 08.3**	**-0.8**
JOT	**Ohata**	**1.66**	**288**	‖*i*P			**Pb**	**11 37 09.3**	**-1.2**
JCH	**Churui**	**1.73**	**5**	P			**Pg**	**11 37 13.0**	**-0.1**
JCH				eS			**Sg**	**11 37 34.5**	**-1.0**
JKB	**Kayabe**	**1.87**	**303**	‖P			**Pb**	**11 37 12.8**	**-1.4**
JOM	**Ohasama**	**2.00**	**226**	P			**Pn**	**11 37 15.4**	**+1.6**
JEW	**Eniwo**	**2.32**	**328**	P			**Pb**	**11 37 21.2**	**-0.6**
JEW				eS			**Sb**	**11 37 49.1**	**-1.5**
JAK	**Akkeshi**	**2.40**	**28**	P			**Pb**	**11 37 22.3**	**-0.9**
JAK				S			**Sn**	**11 37 49.5**	**+0.8**
JMK	**Ichinoseki**	**2.44**	**218**	P			**Pb**	**11 37 22.4**	**-1.4**
JAR	**Ashorobuto**	**2.45**	**11**	eP			**Pb**	**11 37 22.4**	**-1.6**
JAR				eS			**Sb**	**11 37 51.0**	**-3.2**
JOMM	**Oshimamatsumae**	**2.45**	**286**	P			**Pn**	**11 37 21.0**	**+1.1**
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=32,slow=14,SNR=8.1 1.2nm,0.6s	**5.81**	**223**	Pn			**Pn**	**11 38 08.3**	**+2.2**
JHJ	**Hachijo jima 2** comp=Z,262nm,21.2s,baz=234,slow=36	**8.21**	**200**	LR			LR	11 41 42.6	
USRK	**Ussuriysk Ar.** 0.3nm,0.3s,baz=103,slow=14,SNR=3.7 4.1nm,0.7s	**8.87**	**296**	Pn			**Pn**	**11 38 49.6**	**+1.5**
KSRS	**Korea Array** 0.1nm,0.3s,baz=68,slow=14,SNR=2.6 0.5nm,0.6s	**12.30**	**259**	Pn			**Pn**	**11 39 38.9**	**+3.8**
SEY	**Seymchan** 1.2nm,0.5s,baz=208,slow=8.6,SNR=7.5 1.2nm,0.5s	**22.75**	**11**	P			**P**	**11 41 40.3**	**-1.7**
SONM	**Songino Array** 0.7nm,0.7s,baz=80,slow=9.1,SNR=4.2	**26.98**	**297**	P			**P**	**11 42 21.6**	**-0.2**
SONM	comp=Z,34nm,20.0s,baz=61,slow=38 0.7nm,0.7s			LR			LR	11 53 35.6	
H11N2	**WAKE ISLAND Hy** baz=321,slow=74,SNR=19	**29.25**	**129**	T			T	12 13 44.9	
H11N1	**WAKE ISLAND Hy** baz=321,slow=74,SNR=19	**29.26**	**129**	T			T	12 13 50.1	
H11N3	**WAKE ISLAND Hy** baz=321,slow=74,SNR=17	**29.27**	**129**	T			T	12 13 56.4	
H11S1	**WAKE ISLAND Hy** baz=324,slow=76,SNR=12	**30.09**	**131**	T			T	12 15 07.5	
H11S3	**WAKE ISLAND Hy** baz=324,slow=76,SNR=7.4	**30.10**	**131**	T			T	12 15 22.2	
H11S2	**WAKE ISLAND Hy** baz=324,slow=76,SNR=8.4	**30.11**	**131**	T			T	12 15 02.9	
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=106,slow=7.9,SNR=2.5 0.9nm,0.3s	**40.42**	**309**	P			**P**	**11 44 18.4**	**+0.4**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=88,slow=11,SNR=5.1 0.6nm,0.7s	**43.32**	**299**	P			**P**	**11 44 42.1**	**+0.2**
KURBB	**Kurchatov Arra** 1.4nm,0.5s,baz=79,slow=8.9,SNR=8.8 1.4nm,0.5s	**44.79**	**305**	P			**P**	**11 44 53.7**	**+0.1**
ILAR	**Eielson Array** 0.5nm,0.9s,baz=267,slow=6.1,SNR=4.8 0.5nm,0.9s	**45.54**	**34**	P			**P**	**11 44 59.3**	**0.0**
AAK	**Ala-Archa** comp=Z,45nm,18.3s,baz=142,slow=38	**49.92**	**296**	LR			LR	12 07 59.9	
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=6.2,slow=6.8,SNR=5.3 0.5nm,0.9s	**61.07**	**189**	P			**P**	**11 46 54.6**	**+0.6**
ASAR	**Alice Springs** 0.3nm,1.0s,baz=0.0,slow=6.5,SNR=1.9 0.3nm,1.0s	**64.80**	**189**	P			**P**	**11 47 19.3**	**+0.6**
FINES	**FINESS Array B** 1.5nm,0.5s,baz=50,slow=6.8,SNR=20 1.5nm,0.5s	**66.04**	**332**	P			**P**	**11 47 26.2**	**-0.1**
NOA	**NORSAR Array B** comp=Z,15nm,18.3s,baz=225,slow=39	**71.15**	**338**	LR			LR	12 22 51.3	
AKASG	**Malin Array Be** 0.4nm,0.3s,baz=48,slow=5.9,SNR=4.2 0.4nm,0.3s	**72.07**	**322**	P			**P**	**11 48 03.8**	**-0.2**

TAP ***07*** *12:05:22.9, 24.09N×121.31E, h69km, ML3.6, B*
JMA ***07*** *12:05:24.3±0.2, 24.1N±0.7×121.4E±0.9, h61km, MV3.0/11, TAIWAN REGION*

ISC 07 12:05:22.9±1.2, 24.10N±0.02×121.31E±0.02, h74km±5km, n151, σ0.959/211, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WHF	**Hehuan Shan** baz=313	**0.06**	**319**	*e*P			**Pn**	**12 05 34.4**	**+0.2**
WHF	baz=313			*e*S			**Sn**	**12 05 41.6**	**-0.8**
CHGB	**Renai** baz=270	**0.13**	**254**	P			**Pn**	**12 05 34.2**	**+0.2**
CHGB	baz=270			S			**Sn**	**12 05 41.9**	**-0.2**
FUSS	**Fushou** baz=331	**0.16**	**338**	P			**Pn**	**12 05 34.4**	**+0.2**
FUSS	baz=331			*e*S			**Sn**	**12 05 42.2**	**-0.2**
OWD	**Renai** baz=231	**0.19**	**221**	P			**Pn**	**12 05 34.1**	**-0.1**
OWD	baz=231			S			**Sn**	**12 05 41.9**	**-0.4**
ETLH	**Xiulin Townshi** baz=62	**0.19**	**55**	*e*P			**Pn**	**12 05 34.2**	**+0.1**
ETLH	baz=62			*e*S			**Sn**	**12 05 42.1**	**-0.2**
TWT	**Tachien** baz=307	**0.20**	**322**	*e*P			**Pn**	**12 05 34.5**	**+0.3**
TWT	baz=307			S			**Sn**	**12 05 42.5**	**0.0**
WUSB	**Renai** baz=252	**0.20**	**239**	P			**Pn**	**12 05 34.3**	**+0.1**
TDCB	**Techi** baz=307	**0.21**	**318**	*e*P			**Pn**	**12 05 34.2**	**0.0**
ETM	**Tongmen** baz=115	**0.21**	**128**	*e*P			**Pn**	**12 05 34.6**	**+0.6**
ETM	baz=115			*e*S			**Sn**	**12 05 42.6**	**+0.3**
TWD	**Chiawan** baz=100	**0.26**	**94**	*e*P			**Pn**	**12 05 33.6**	**-0.7**
NACB	**Ninganchiao** baz=82	**0.27**	**74**	P			**Pn**	**12 05 33.7**	**-0.7**
ETL	**Fush Village** baz=86	**0.29**	**78**	P			**Pn**	**12 05 34.1**	**-0.4**
HWA	**Hwalien** baz=120	**0.29**	**114**	*e*P			**Pn**	**12 05 35.5**	**+1.1**
ESL	**Shilin** baz=147	**0.30**	**158**	*e*P			**Pn**	**12 05 34.0**	**-0.6**
WPL	**Puli Township** baz=261	**0.33**	**255**	P			**Pn**	**12 05 34.9**	**+0.1**
NNSB	**Datong** baz=6.0	**0.34**	**11**	P			**Pn**	**12 05 35.5**	**+0.6**
NNSH	**Datong** baz=5.0	**0.34**	**11**	*e*P			**Pn**	**12 05 35.5**	**+0.6**
NNS	**Nan Shan** baz=6.0	**0.35**	**9**	*e*P			**Pn**	**12 05 34.8**	**-0.2**
TEYL	**Yanliau Villag** baz=117	**0.35**	**131**	*e*P			**Pn**	**12 05 35.2**	**+0.4**
TEYL	baz=117			*e*S			**Sn**	**12 05 44.2**	**+0.6**
DPDB	**Guoxing** baz=268	**0.36**	**260**	P			**Pn**	**12 05 35.1**	**+0.1**
DPDB	baz=268			S			**Sn**	**12 05 43.9**	**0.0**
WCS	**Beigang Elemen** baz=272	**0.37**	**264**	*e*P			**Pn**	**12 05 34.1**	**-0.9**
WCS	baz=272			*e*S			**Sn**	**12 05 42.7**	**-1.1**
VWDT	**VWDT** baz=210	**0.38**	**204**	*e*P			**Pn**	**12 05 35.7**	**+0.6**
WHP	**Taichung City** baz=308	**0.38**	**298**	*e*P			**Pn**	**12 05 35.2**	**0.0**
WHP	baz=308			*e*S			**Sn**	**12 05 43.6**	**-0.6**
SMLT	**Sun Moon Lake** baz=241	**0.43**	**241**	P			**Pn**	**12 05 35.9**	**+0.2**
SMLT	baz=241			S			**Sn**	**12 05 45.2**	**+0.2**
EGFH	**Guangfu** baz=155	**0.44**	**166**	*e*P			**Pn**	**12 05 36.0**	**+0.4**
SSLB	**Suanglung** baz=236	**0.45**	**227**	*e*P			**Pn**	**12 05 35.8**	**+0.1**
SSLB	baz=236			*e*S			**Sn**	**12 05 45.0**	**-0.1**
TYC	**Yuchr** baz=246	**0.46**	**245**	*e*P			**Pn**	**12 05 35.8**	**+0.1**
TYC	baz=246			S			**Sn**	**12 05 45.2**	**+0.1**
LATG	**Datong** baz=25	**0.48**	**24**	*e*P			**Pn**	**12 05 36.5**	**+0.5**
LATG	baz=25			*e*S			**Sn**	**12 05 46.4**	**+0.6**
ENA	**Nanau** baz=57	**0.51**	**50**	*e*P			**Pn**	**12 05 36.4**	**+0.2**
NDT	**Datong Townshi** baz=14	**0.54**	**20**	P			**Pn**	**12 05 37.2**	**+0.7**
NDT	baz=14			*e*S			**Sn**	**12 05 47.0**	**+0.5**
EWUT	**Wuta** baz=57	**0.55**	**51**	*e*P			**Pn**	**12 05 35.1**	**-1.4**
TWQ1	**Liyutan** baz=307	**0.55**	**297**	*e*P			**Pn**	**12 05 36.5**	**-0.1**
TWQ1	baz=307			*e*S			**Sn**	**12 05 46.3**	**-0.4**
NFF	**Wufeng Townshi** baz=331	**0.56**	**342**	*e*P			**Pn**	**12 05 35.9**	**-0.9**
NFF	baz=331			*e*S			**Sn**	**12 05 45.8**	**-1.2**
WWF	**Wufeng** baz=274	**0.56**	**265**	*e*P			**Pn**	**12 05 36.2**	**-0.5**
YHNB	**Yeheng** baz=360	**0.57**	**6**	*e*P			**Pn**	**12 05 37.3**	**+0.4**
YHNB	baz=360			*e*S			**Sn**	**12 05 47.9**	**+0.7**
NSK	**Sanuang** baz=356	**0.58**	**4**	*e*P			**Pn**	**12 05 36.5**	**-0.4**
WHYT	**Xinyi Township** baz=233	**0.58**	**226**	*e*P			**Pn**	**12 05 37.2**	**+0.3**
WHYT	baz=233			*e*S			**Sn**	**12 05 47.6**	**+0.4**
TCU	**Taichung** baz=284	**0.58**	**275**	P			**Pn**	**12 05 37.0**	**+0.1**
ENTT	**Nioudou** baz=33	**0.59**	**23**	*e*P			**Pn**	**12 05 36.7**	**-0.3**
EHY	**Hungye** baz=168	**0.59**	**179**	P			**Pn**	**12 05 37.4**	**+0.4**
NSY	**Sanyi** baz=303	**0.59**	**302**	*e*P			**Pn**	**12 05 37.4**	**+0.3**
NSY	baz=303			*e*S			**Sn**	**12 05 47.6**	**+0.2**
WJS	**Zhushan** baz=252	**0.60**	**243**	*e*P			**Pn**	**12 05 37.4**	**+0.3**
NSTT	**Nanjuang** baz=326	**0.60**	**332**	*e*P			**Pn**	**12 05 37.2**	**+0.1**
NSTT	baz=326			*e*S			**Sn**	**12 05 47.2**	**-0.3**
WNT1	**Nantou City** baz=261	**0.61**	**252**	*e*P			**Pn**	**12 05 37.5**	**+0.3**
LIOB	**Emei** baz=326	**0.61**	**334**	*e*P			**Pn**	**12 05 37.3**	**+0.1**
HGSD	**Ruisui** baz=164	**0.61**	**170**	*e*P			**Pn**	**12 05 37.0**	**-0.2**
WNT	**Mingjian** baz=258	**0.61**	**249**	*e*P			**Pn**	**12 05 37.4**	**+0.2**
NMLH	**Miaoli** baz=313	**0.65**	**313**	*e*P			**Pn**	**12 05 37.6**	**0.0**
NMLH	baz=313			*e*S			**Sn**	**12 05 48.2**	**-0.1**
NDS	**Dongshan** baz=43	**0.65**	**35**	*e*P			**Pn**	**12 05 36.6**	**-1.0**
NDS	baz=43			*e*S			**Sn**	**12 05 47.3**	**-1.1**
WDJ	**Dajia District** baz=301	**0.66**	**292**	*e*P			**Pn**	**12 05 37.9**	**+0.2**
WDJ	baz=301			*e*S			**Sn**	**12 05 48.5**	**-0.1**
WYL	**Yuanlin Townsh** baz=267	**0.68**	**259**	*e*P			**Pn**	**12 05 38.4**	**+0.5**
WCHH	**Zhanghua** baz=278	**0.69**	**269**	*e*P			**Pn**	**12 05 38.2**	**+0.2**
YUS	**Yu-Shan** baz=217	**0.69**	**209**	*e*P			**Pn**	**12 05 38.9**	**+0.3**
YUS	baz=217			*e*S			**Sn**	**12 05 51.0**	**+1.0**
NWLT	**Wulai** baz=9.0	**0.70**	**14**	*e*P			**Pn**	**12 05 38.7**	**+0.5**
NWLT	baz=9.0			*e*S			**Sn**	**12 05 49.6**	**+0.2**
TWE	**Neicheng** baz=38	**0.70**	**28**	*e*P			**Pn**	**12 05 38.8**	**+0.7**
TWE	baz=38			*e*S			**Sn**	**12 05 49.9**	**+0.6**
YULB	**Yu-li** baz=171	**0.70**	**181**	*e*P			**Pn**	**12 05 37.2**	**-1.0**
FUSB	**Fushanzhiwuyua** baz=29	**0.71**	**21**	*e*P			**Pn**	**12 05 39.2**	**+0.9**
FUSB	baz=29			*e*S			**Sn**	**12 05 50.6**	**+1.0**
TWC	**Suao** baz=44	**0.71**	**44**	*e*P			**Pn**	**12 05 38.6**	**+0.4**
NJN	**Zhunan** baz=318	**0.71**	**326**	*e*P			**Pn**	**12 05 38.3**	**+0.1**
NJN	baz=318			*e*S			**Sn**	**12 05 49.8**	**+0.3**
HSN1	**Hsinchu** baz=329	**0.73**	**339**	*e*P			**Pn**	**12 05 38.8**	**+0.3**
TWF1	**Yuli** baz=173	**0.74**	**181**	*e*P			**Pn**	**12 05 38.0**	**-0.6**
ALS	**Alishan** baz=228	**0.75**	**219**	*e*P			**Pn**	**12 05 39.2**	**+0.3**
ALS	baz=228			*e*S			**Sn**	**12 05 51.2**	**+0.5**
EYUL	**Yuli** baz=173	**0.75**	**179**	*e*P			**Pn**	**12 05 38.0**	**-0.7**
SBCB	**Hsinchu** baz=328	**0.75**	**337**	*e*P			**Pn**	**12 05 39.0**	**+0.3**
HSN	**Hsinchu** baz=328	**0.77**	**336**	*e*P			**Pn**	**12 05 39.2**	**+0.3**
HSN	baz=328			*e*S			**Sn**	**12 05 51.2**	**+0.6**
ILA	**Ilan** baz=38	**0.78**	**31**	*e*P			**Pn**	**12 05 39.6**	**+0.7**
ILA	baz=38			*e*S			**Sn**	**12 05 52.1**	**+1.3**
WGK	**Gukeng** baz=251	**0.80**	**239**	*e*P			**Pn**	**12 05 39.7**	**+0.5**
NCUH	**Zhongli** baz=351	**0.87**	**352**	*e*P			**Pn**	**12 05 40.4**	**+0.3**
NCUH	baz=351			*e*S			**Sn**	**12 05 53.1**	**+0.2**
NCU	**National Centr** baz=352	**0.88**	**353**	*e*P			**Pn**	**12 05 40.5**	**+0.3**
NCU	baz=352			*e*S			**Sn**	**12 05 53.4**	**+0.5**
WRL	**Guolierlin Hig** baz=258	**0.88**	**257**	*e*P			**Pn**	**12 05 39.0**	**-1.2**
NHDH	**Xindian Distri** baz=22	**0.88**	**13**	*e*P			**Pn**	**12 05 40.7**	**+0.4**
NHDH	baz=22			*e*S			**Sn**	**12 05 53.5**	**+0.5**
TATO	**Taipei** baz=359	**0.89**	**10**	*e*P			**Pn**	**12 05 40.6**	**+0.3**
NTC	**Toucheng** baz=39	**0.89**	**32**	*e*P			**Pn**	**12 05 40.9**	**+0.6**
NTC	baz=39			*e*S			**Sn**	**12 05 53.6**	**+0.4**
FULB	**Fuli** baz=177	**0.90**	**181**	*e*P			**Pn**	**12 05 40.2**	**-0.2**
NTY	**Taoyuan** baz=350	**0.90**	**359**	*e*P			**Pn**	**12 05 40.8**	**+0.3**
NTY	baz=350			*e*S			**Sn**	**12 05 54.0**	**+0.6**
TWA	**Mucha** baz=15	**0.91**	**16**	*e*P			**Pn**	**12 05 41.2**	**+0.6**
TWA	baz=15			*e*S			**Sn**	**12 05 54.3**	**+0.5**
EGS	baz=37	**0.94**	**37**	*e*P			**Pn**	**12 05 41.7**	**+0.8**
NHW	**Xinwu Township** baz=334	**0.94**	**345**	*e*P			**Pn**	**12 05 41.3**	**+0.4**
NHW	baz=334			*e*S			**Sn**	**12 05 54.8**	**+0.6**
WTK	**Tuku** baz=246	**0.94**	**244**	*e*P			**Pn**	**12 05 41.1**	**+0.2**
ELDTW	**Lidau** baz=189	**0.94**	**197**	*e*P			**Pn**	**12 05 41.5**	**+0.5**
TAP	**Taipei** baz=21	**0.95**	**11**	*e*P			**Pn**	**12 05 41.5**	**+0.4**
TAP	baz=21			*e*S			**Sn**	**12 05 55.1**	**+0.6**
TIPB	**Shuangxi** baz=15	**0.99**	**28**	*e*P			**Pn**	**12 05 42.2**	**+0.6**
TIPB	baz=15			*e*S			**Sn**	**12 05 55.9**	**+0.5**
CHN4	**Tsaushan** baz=223	**0.99**	**222**	*e*P			**Pn**	**12 05 40.9**	**-0.7**
ECS	**Chishang** baz=177	**1.00**	**185**	*e*P			**Pn**	**12 05 42.5**	**+0.8**
TWS1	**Kuangyinshan** baz=4.0	**1.00**	**6**	*e*P			**Pn**	**12 05 42.2**	**+0.5**
TWS1	baz=4.0			*e*S			**Sn**	**12 05 56.5**	**+0.8**
CHY	**Chiayi** baz=244	**1.01**	**234**	*e*P			**Pn**	**12 05 42.2**	**+0.5**
CHY	baz=244			*e*S			**Sn**	**12 05 56.2**	**+0.5**
TPUB	**Ta-pu** baz=220	**1.01**	**218**	*e*P			**Pn**	**12 05 41.9**	**+0.1**
TPUB	baz=220			*e*S			**Sn**	**12 05 56.4**	**+0.5**
STYH	**Taoyuan** baz=209	**1.04**	**208**	*e*P			**Pn**	**12 05 41.6**	**-0.6**
NWF	**Wu-fen Shan** baz=22	**1.06**	**24**	*e*P			**Pn**	**12 05 42.9**	**+0.4**
NWF	baz=22			*e*S			**Sn**	**12 05 57.4**	**+0.4**
WFSB	**Wu-fen Shan** baz=22	**1.06**	**24**	*e*P			**Pn**	**12 05 42.9**	**+0.6**
WFSB	baz=22			*e*S			**Sn**	**12 05 57.2**	**+0.3**
WTP	**Ta-pu** baz=217	**1.06**	**217**	*e*P			**Pn**	**12 05 42.7**	**+0.2**
WTP	baz=217			*e*S			**Sn**	**12 05 57.5**	**+0.5**
NTST	**Danshui** baz=5.0	**1.07**	**7**	*e*P			**Pn**	**12 05 43.0**	**+0.5**
NTST	baz=5.0			*e*S			**Sn**	**12 05 57.6**	**+0.5**
YM01	**YM01** baz=21	**1.07**	**13**	*e*P			**Pn**	**12 05 42.6**	**+0.1**
TWB1	**Santiao Chiao** baz=33	**1.10**	**34**	*e*P			**Pn**	**12 05 43.6**	**+0.8**
WSF	**Szhu** baz=247	**1.10**	**246**	*e*P			**Pn**	**12 05 43.0**	**+0.2**
ANP	**Anpu** baz=19	**1.10**	**10**	*e*P			**Pn**	**12 05 43.0**	**0.0**
YM08	**YM08** baz=12	**1.11**	**13**	*e*P			**Pn**	**12 05 43.2**	**+0.1**
SXI1	**Grass Mountain** baz=26	**1.12**	**27**	*e*P			**Pn**	**12 05 43.8**	**+0.6**
TWK	**Hsinying** baz=224	**1.12**	**223**	*e*P			**Pn**	**12 05 43.6**	**+0.4**
TWK	baz=224			*e*S			**Sn**	**12 05 58.9**	**+0.6**
EDH	**Donghe** baz=172	**1.12**	**180**	*e*P			**Pn**	**12 05 42.8**	**-0.3**
TNOU	**National Taiwa** baz=21	**1.13**	**22**	*e*P			**Pn**	**12 05 43.8**	**+0.5**
WSL	**Shulin Townsh** baz=242	**1.15**	**240**	*e*P			**Pn**	**12 05 43.9**	**+0.5**
SNST	**Tainan City** baz=222	**1.15**	**221**	*e*P			**Pn**	**12 05 44.0**	**+0.5**
CHN1	**Nanshi** baz=229	**1.16**	**218**	*e*P			**Pn**	**12 05 43.8**	**+0.1**
ICHU	**Yijhu** baz=235	**1.20**	**232**	*e*P			**Pn**	**12 05 44.5**	**+0.4**
ICHU	baz=235			*e*S			**Sn**	**12 06 00.2**	**+0.3**
LONT	**Longtian** baz=197	**1.20**	**188**	*e*P			**Pn**	**12 05 43.3**	**-0.9**
TWY	**Chenhua** baz=12	**1.20**	**13**	*e*P			**Pn**	**12 05 45.0**	**+0.8**
SGST	**Jiashian** baz=223	**1.21**	**214**	*e*P			**Pn**	**12 05 43.8**	**-0.5**
SGST	baz=223			*e*S			**Sn**	**12 06 00.1**	**-0.2**
CHN8	**Yiju** baz=236	**1.25**	**234**	*e*P			**Pn**	**12 05 45.2**	**+0.4**
CHN8	baz=236			*e*S			**Sn**	**12 06 01.9**	**+0.6**
CHN3	**Shinhua** baz=223	**1.34**	**221**	*e*P			**Pn**	**12 05 47.3**	**+1.4**
SSHA	**Shanhua** baz=238	**1.34**	**225**	*e*P			**Pn**	**12 05 47.0**	**+1.1**
SCLT	**Jiali** baz=230	**1.38**	**228**	*e*P			**Pn**	**12 05 47.2**	**+0.8**
SHHT	**Tainan City** baz=222	**1.39**	**220**	*e*P			**Pn**	**12 05 47.1**	**+0.5**
SCST	**Cishan** baz=214	**1.42**	**212**	*e*P			**Pn**	**12 05 47.9**	**+0.9**
LDUT	**Ludao** baz=168	**1.43**	**174**	*e*P			**Pn**	**12 05 46.7**	**-0.3**
SSD	**Sandimen** baz=218	**1.48**	**205**	*e*P			**Pn**	**12 05 48.4**	**+0.6**
TWM1	**Shoushan** baz=215	**1.51**	**213**	*e*P			**Pn**	**12 05 49.1**	**+1.0**
ECL	**Taimali** baz=194	**1.53**	**192**	*e*P			**Pn**	**12 05 49.5**	**+1.1**
JYNG	**Yonagunijimaku** JYNG	**1.53**	**76**	P *e*S			**Pn** **Sn**	**12 05 48.5** **12 06 08.3**	**+0.1** **+0.6**
YOJ	**Yonaguni jima** baz=75	**1.59**	**76**	*e*P			**Pn**	**12 05 49.3**	**+0.1**
YOJ	**Yonaguni jima** YOJ	**1.59**	**76**	P *e*S			**Pn** **Sn**	**12 05 49.4** **12 06 09.3**	**+0.1** **+0.2**
MASBT	**Mashibuluo** baz=217	**1.60**	**203**	*e*P			**Pn**	**12 05 49.9**	**+0.5**
PNG	**Penghu** baz=253	**1.69**	**252**	*e*P			**Pn**	**12 05 49.8**	**-0.8**
WDGT	**Dungji** baz=234	**1.73**	**241**	*e*P			**Pn**	**12 05 50.7**	**-0.3**
WSSB	**Gushan** baz=216	**1.74**	**214**	*e*P			**Pn**	**12 05 52.1**	**+0.8**
SSPT	**Xinbi** baz=217	**1.75**	**203**	*e*P			**Pn**	**12 05 51.8**	**+0.5**
EAST	**Anshuo** baz=206	**1.76**	**194**	*e*P			**Pn**	**12 05 52.5**	**+1.0**
TAW	**Tawu** baz=194	**1.77**	**193**	*e*P			**Pn**	**12 05 53.0**	**+1.3**
TAWH	**Dawu Township** baz=195	**1.79**	**193**	*e*P			**Pn**	**12 05 52.5**	**+0.6**
VWUC	**VWUC** baz=299	**1.92**	**298**	*e*P			**Pn**	**12 05 52.8**	**-0.7**
SLIU	**Shizi** baz=197	**1.93**	**194**	*e*P			**Pn**	**12 05 54.2**	**+0.4**
VCHM	**Qimei** baz=236	**1.94**	**243**	*e*P			**Pn**	**12 05 53.4**	**-0.5**
LAY	**Lan-yu** baz=168	**2.06**	**174**	*e*P			**Pn**	**12 05 55.3**	**-0.2**
TWKBT	**Hengchun** baz=195	**2.19**	**192**	*e*P			**Pn**	**12 05 57.6**	**+0.3**
IRIF	**Iriomote-Funau** IRIF	**2.22**	**83**	P *e*S			**Pn** **Sn**	**12 05 57.7** **12 06 22.8**	**0.0** **-1.3**
HATJ	**Hateruma jima** HATJ	**2.28**	**91**	P S			**Pn** **Sn**	**12 05 59.1** **12 06 25.6**	**+0.7** **0.0**
MATB	**Ma-tsu** baz=327	**2.39**	**329**	*e*P			**Pn**	**12 05 59.0**	**-0.9**
MSUT	**Lienchiang** baz=327	**2.42**	**329**	*e*P			**Pn**	**12 06 00.5**	**+0.2**
JKRS	**Kuro-shima** JKRS	**2.47**	**86**	P S			**Pn** **Sn**	**12 06 01.6** **12 06 29.8**	**+0.6** **-0.3**
JIJ	**Ishigaki jima** JIJ	**2.60**	**84**	P S			**Pn** **Sn**	**12 06 02.7** **12 06 31.6**	**-0.1** **-1.7**
KNM	**Kinmen** baz=279	**2.65**	**277**	*e*P			**Pn**	**12 06 04.3**	**+1.0**
KNMB	**Chin-men Tao** baz=280	**2.69**	**278**	*e*P			**Pn**	**12 06 03.0**	**-0.9**
JISG	**Ishigakijimahi**	**2.78**	**79**	*e*S			**Sn**	**12 06 36.4**	**-1.3**
LYJJ	**Jianjiangzhen** baz=327	**2.82**	**330**	*e*P			**Pn**	**12 06 05.2**	**-0.5**
MHZQ	**Yeshan** baz=314	**2.87**	**314**	*e*P			**Pn**	**12 06 06.9**	**+0.4**
XPSS	**Dashiqiu** baz=337	**3.00**	**340**	*e*P			**Pn**	**12 06 07.3**	**-0.8**
JTJ	**Tarama** JTJ	**3.14**	**79**	P *e*S			**Pn** **Sn**	**12 06 10.4** **12 06 45.3**	**+0.4** **-1.1**
AXDP	**Jialang**	**3.15**	**285**	*e*P			**Pn**	**12 06 09.5**	**-0.6**

baz=287
ZPLA Ao Xicun 3.26 268 *e*P Pn 12 06 11.0 -0.7
baz=270
DSXP Dongshan 3.58 265 *e*P Pn 12 06 15.2 -0.8
baz=267
SXFK Yanhouchang 4.03 305 *e*P Pn 12 06 21.7 -0.6
baz=306

*KRNET **07** 12:22:31.2±0.1, 42°.17N×76°.36E, h15km, mb2.6*
*SOME **07** 12:22:31.1, 42°.15N×76°.32E, h10km*
*NNC **07** 12:22:32.0±0.9, 42°.22N×76°.28E, h0km, mb2.4, mpv2.4,*
Error ellipse: s-maj=6.0km s-min=2.6km az=0.0
ISC 07 12:22:31.6±1.4, 42°.19N±0°.06×76°.31E±0°.03, h10km±7km, n25, σ0s51/48, 6C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.07**	**315**	⇑*i*P	**Pg**	**12 22 34.0**	**-0.2**
	baz=11						
ULHL				⇑*i*S	**Sg**	**12 22 36.2**	**+0.1**
	baz=11						
KST	**Kastek**	**0.89**	**343**	*e*P	**Pg**	**12 22 48.7**	**-0.1**
	2.0nm,0.1s						
KST				*e*S	**Sb**	**12 23 01.5**	**+0.4**
	4.6nm,0.2s						
KST	**Kastek**	**0.89**	**343**	P	**Pg**	**12 22 48.7**	**-0.1**
	2.0nm,0.1s						
KST				S	**Sb**	**12 23 01.5**	**+0.4**
	4.6nm,0.2s						
KST	**Kastek**	**0.89**	**343**	*e*P	**Pg**	**12 22 48.7**	**-0.1**
	baz=42						
KST				*e*S	**Sb**	**12 23 01.5**	**+0.4**
	baz=42						
TKM2	**Tokmak 2**	**0.90**	**324**	⇓P	**Pg**	**12 22 48.3**	**-0.7**
	0.3nm,0.2s						
TKM2				⇓S	**Sg**	**12 23 00.7**	**0.0**
	0.9nm,0.3s						
TKM2	**Tokmak 2**	**0.90**	**324**	⇑*i*P	**Pg**	**12 22 48.8**	**-0.2**
	baz=23						
TKM2				⇑*i*S	**Sb**	**12 23 01.7**	**+0.2**
	baz=23						
MTBS	**Maitube**	**0.94**	**5**	*e*P	**Pg**	**12 22 49.5**	**-0.3**
	1.8nm,0.1s						
MTBS				*e*S	**Sg**	**12 23 02.6**	**+0.6**
	6.0nm,0.2s						
MTBS	**Maitube**	**0.94**	**5**	*e*P	**Pg**	**12 22 49.5**	**-0.3**
	baz=3.0						
MTBS				*e*S	**Sg**	**12 23 02.6**	**+0.6**
	baz=3.0						
MDOK	**Medeo**	**1.11**	**29**	*e*P	**Pg**	**12 22 52.1**	**-0.9**
	1.2nm,0.2s						
MDOK				*e*S	**Sg**	**12 23 07.1**	**-0.4**
	2.2nm,0.5s						
MDOK	**Medeo**	**1.11**	**29**	⇓P	**Pg**	**12 22 52.9**	**-0.1**
	1.0nm,0.3s						
MDOK				S	**Sn**	**12 23 08.5**	**-0.3**
	2.2nm,0.6s						
MDOK	**Medeo**	**1.11**	**29**	*e*P	**Pg**	**12 22 52.1**	**-0.9**
	baz=27						
MDOK				*e*S	**Sg**	**12 23 07.1**	**-0.4**
	baz=27						
CHMS	**Chumysh**	**1.41**	**305**	⇑P	**Pb**	**12 22 57.7**	**-0.3**
	1.0nm,0.4s						
CHMS				⇑S	**Sg**	**12 23 17.3**	**+0.5**
	1.6nm,0.5s						
KTBS	**Karatobe**	**1.54**	**10**	*e*P	**Pb**	**12 23 00.3**	**0.0**
	1.3nm,0.2s						
KTBS				*e*S	**Sg**	**12 23 21.3**	**0.0**
	6.1nm,0.4s						
KTBS	**Karatobe**	**1.54**	**10**	P	**Pb**	**12 23 00.3**	**0.0**
	1.3nm,0.2s						
KTBS				S	**Sg**	**12 23 21.3**	**0.0**
	6.1nm,0.4s						
KTBS	**Karatobe**	**1.54**	**10**	*e*P	**Pb**	**12 23 00.3**	**0.0**
	baz=9.0						
KTBS				*e*S	**Sg**	**12 23 21.3**	**0.0**
	baz=9.0						
KRBS	**Karabastau**	**1.57**	**343**	*e*P	**Pb**	**12 23 01.1**	**+0.2**
	0.7nm,0.2s						
KRBS				*e*S	**Sg**	**12 23 22.5**	**+0.3**
	2.4nm,0.4s						
KRBS	**Karabastau**	**1.57**	**343**	P	**Pb**	**12 23 00.8**	**0.0**
	0.7nm,0.2s						
KRBS				S	**Sg**	**12 23 22.3**	**+0.1**
	2.9nm,0.3s						
KRBS	**Karabastau**	**1.57**	**343**	*e*P	**Pb**	**12 23 01.1**	**+0.2**
	baz=42						
KRBS				*e*S	**Sg**	**12 23 22.6**	**+0.3**
	baz=42						
SATY	**Saty**	**1.77**	**60**	*e*P	**Pb**	**12 23 04.6**	**+0.4**
SATY				*e*S	**Sg**	**12 23 28.8**	**+0.2**
SATY	**Saty**	**1.77**	**60**	P	**Pb**	**12 23 04.6**	**+0.4**
SATY				S	**Sg**	**12 23 28.8**	**+0.2**
UZB	**Uzynbulak**	**2.21**	**64**	*e*P	**Pb**	**12 23 11.7**	**-0.2**
	0.5nm,0.1s						
UZB				*e*S	**Sb**	**12 23 40.9**	**+1.5**
	2.9nm,0.3s						
UZB	**Uzynbulak**	**2.21**	**64**	Pg	**Pb**	**12 23 11.7**	**-0.2**
	0.5nm,0.1s						
UZB				Lg	Lg	12 23 40.9	
	2.9nm,0.3s						
ARXS	**Arharly**	**2.30**	**28**	*e*P	**Pb**	**12 23 13.4**	**+0.2**
	2.5nm,0.4s						
ARXS				*e*S	**Sg**	**12 23 44.1**	**-1.5**
	2.6nm,0.4s						
ARXS	**Arharly**	**2.30**	**28**	Pg	**Pb**	**12 23 13.3**	**0.0**
	2.5nm,0.4s						
ARXS				Lg	Lg	12 23 43.6	
	2.6nm,0.4s						
MRKS	**Merke**	**2.35**	**285**	*e*P	**Pb**	**12 23 14.6**	**+0.6**
	1.1nm,0.2s						
MRKS				*e*S	**Sg**	**12 23 45.9**	**-1.2**
	2.4nm,0.2s						

*SKHL **07** 12:35:06.6±0.6, 42°.90N×146°.00E, h35km±3km, mb4.0/2*
*JMA **07** 12:35:06.3±0.2, 42°.9N±0°.6×145°.9E±0°.8, h34km±1km,*
MV2.8/37, OFF NEMURO PENINSULA
ISC 07 12:35:06.0±2.0, 42°.92N±0°.09×145°.92E±0°.06, h29km±12km, n12, σ0s59/23, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.47**	**344**	*i* P	**Pn**	**12 35 16.3**	**-0.4**
NEM2				S	**Sb**	**12 35 23.2**	**+0.7**
NMR	**Nemuro--Hokkai**	**0.47**	**343**	*e*P	**Pb**	**12 35 16.1**	**+0.1**
NMR				*e*S	**Sb**	**12 35 23.1**	**+0.4**
JKHN	**Kushirohamanak**	**0.58**	**287**	*i* P	**Pn**	**12 35 18.3**	**0.0**
JKHN				*e*S	**Sn**	**12 35 26.9**	**+0.1**
JAK	**Akkeshi**	**0.90**	**275**	P	**Pn**	**12 35 22.9**	**+0.1**
JAK				*e*S	**Sb**	**12 35 35.1**	**+0.4**
JNSB	**Nemuroshibetsu**	**1.09**	**322**	*e*P	**Pb**	**12 35 25.9**	**-0.3**
JNSB				*e*S	**Sb**	**12 35 40.1**	**+0.1**
JNK	**Nakash**	**1.10**	**308**	*e*P	**Pn**	**12 35 25.6**	**+0.1**
JNK				*e*S	**Sb**	**12 35 39.8**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**1.12**	**358**	*e*P	**Pb**	**12 35 26.0**	**-0.7**
YUK				AMB	AMB	12 35 26.6	
	100nm,0.5s						
YUK				*e*S	**Sn**	**12 35 40.6**	**+0.5**
YUK				A	A	12 35 43.0	
	580nm,0.5s						
YUK				A	A	12 35 43.0	
	830nm,0.5s						
SHO	**Shikotan**	**1.16**	**35**	*e*P	**Pb**	**12 35 26.9**	**-0.6**
SHO				AMB	AMB	12 35 29.5	
	10.0nm,0.2s						
SHO				AMB	AMB	12 35 29.5	
	10.0nm,0.2s						
SHO				AMB	AMB	12 35 29.5	
	20nm,0.2s						
SHO				*e*S	**Sn**	**12 35 41.6**	**+0.4**
SHO				A	A	12 35 43.8	
	110nm,0.3s						
SHO				A	A	12 35 43.8	
	160nm,0.3s						
JRA	**Rausu**	**1.17**	**331**	*e*P	**Pb**	**12 35 27.2**	**-0.5**
JRA				*e*S	**Sn**	**12 35 42.1**	**+0.7**
JOB	**Onbets**	**1.53**	**270**	*e*P	**Pn**	**12 35 31.7**	**+0.3**
JOB				*e*S	**Sn**	**12 35 50.6**	**+0.3**
JAR	**Ashorobuto**	**1.62**	**284**	*e*P	**Pn**	**12 35 33.0**	**+0.4**
JAR				*e*S	**Sn**	**12 35 53.2**	**+0.7**
JTKR	**Abashiri--Toko**	**1.80**	**306**	*e*P	**Pb**	**12 35 36.8**	**-1.5**

*AZER **07** 12:44:43.2±3.7, 37°.27N×53°.96E, h10km, Error ellipse:*
s-maj=91.1km s-min=34.6km az=26.0
TEH 07 12:44:37.5, 37°.33N×54°.53E, h11km, ML3.2,
Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**1.00**	**215**	*e*Pg	Pn	12 44 57.5	-0.1
IGLO				*e*Sg	Sn	12 45 11.4	-0.4
IGLO				*e*		12 45 13.9	
	comp=Z,21μm,0.4s						
MRVT	**Maraveh tapeh**	**1.28**	**75**	*e*Pg	Pg	12 45 02.2	+0.1
MRVT				*e*		12 45 22.1	
	comp=Z,99nm,0.3s						
SHRO	**Shahrood**	**1.79**	**138**	*e*Pn	Pn	12 45 09.3	+0.9
ISHM	**Shahmirzad**	**1.82**	**214**	*e*Pn	Pb	12 45 11.5	+0.6
ISHM				*e*		12 45 40.2	
	comp=Z,4μm,0.4s						
IANJ	**Anjilo**	**1.92**	**195**	*e*Pn	Pb	12 45 12.6	-0.1
IANJ				*e*		12 45 41.8	
	comp=Z,2μm,0.2s						
IPRN	**Peran**	**2.07**	**239**	*e*Pn	Pb	12 45 14.0	-1.1
IPRN				*e*		12 45 46.0	
	comp=Z,3μm,0.5s						
IFIR	**Firoozkooh**	**2.21**	**221**	*e*Pn	Pb	12 45 17.3	-0.3
IFIR				*e*		12 45 17.7	
	comp=Z,1μm,0.3s						
BJRD	**Bojnurd**	**2.31**	**80**	*e*Pn	Pb	12 45 18.1	-1.2
ILAS	**Lasjerd**	**2.32**	**214**	*e*Pn	Pb	12 45 18.3	-1.2
ILAS				*e*		12 46 02.6	
	comp=Z,923nm,0.4s						
SBZV	**Sabzevar**	**2.64**	**110**	*e*Pn	Pn	12 45 21.8	+1.6
IDMV	**Damavand**	**2.67**	**230**	*e*Pn	Pb	12 45 23.5	-1.9
IDMV				*e*		12 45 29.2	
	comp=Z,1μm,0.3s						
DAMV	**Damavand**	**2.67**	**231**	*e*Pn	Pn	12 45 22.8	+2.1
ISFR	**Sfrayin**	**2.78**	**95**	*e*Pn	Pb	12 45 24.9	-2.5
CHTH	**Charan**	**3.09**	**244**	*e*Pn	Pn	12 45 28.3	+1.9
QALM	**Alamut, Qazvin**	**3.24**	**255**	*e*Pn	Pn	12 45 31.1	+2.6
IVRN	**Varamin**	**3.25**	**225**	*e*Pn	Pn	12 45 30.5	+2.0
IVRN				*e*		12 46 27.6	
	comp=Z,356nm,0.3s						
ISFB	**Sefidab**	**3.51**	**213**	*e*Pn	Pn	12 45 33.7	+1.7
GIDE	**GILAN DEYLAMAN**	**3.72**	**265**	*e*Pn	Pn	12 45 36.2	+1.2
TNSJ	**Nastanj**	**3.76**	**153**	*e*Pn	Pn	12 45 37.8	+2.3
GHVR	**GHOM**	**3.87**	**224**	*e*Pn	Pn	12 45 39.3	+2.3
KRSH	**Karshahi**	**3.88**	**211**	*e*Pn	Pn	12 45 39.1	+1.9
KRSH				*e*		12 47 01.1	
	comp=Z,340nm,0.6s						
TABS	**Tabas**	**4.23**	**149**	*e*Pn	Pn	12 45 43.4	+1.4
TKDS	**Koohdasht(Taba**	**4.27**	**150**	*e*Pn	Pn	12 45 43.5	+1.0
TKDS				*e*		12 47 03.7	
	comp=Z,157nm,0.6s						
TPRV	**Parvadeh(Tabas**	**4.64**	**157**	*e*Pn	Pn	12 45 49.3	+1.7
TPRV				*e*		12 47 17.9	
	comp=Z,216nm,0.5s						
ASTR	**Astara**	**4.70**	**287**	S	Sn	12 46 40.4	-2.4
ZNJK	**Zanjan**	**4.73**	**264**	*e*Pn	Pn	12 45 50.6	+1.7
NASN	**Na'in**	**4.74**	**198**	*e*Pn	Pn	12 45 50.4	+1.3
YZKH	**Yazd**	**4.93**	**179**	*e*Pn	Pn	12 45 53.2	+1.7
LRK	**Lerik**	**5.07**	**287**	P	Pn	12 45 53.7	+0.1
LRK				S	Sn	12 46 48.6	-3.5
YRD	**Yardimli**	**5.21**	**290**	P	Pn	12 45 55.5	0.0
YRD				S	Sn	12 46 51.9	-3.8
GRMI	**Germi**	**5.44**	**288**	*e*Pn	Pn	12 46 00.1	+1.4
XNQ	**Khinaliq**	**6.27**	**310**	P	Pn	12 46 11.0	+0.9
XNQ				S	Sn	12 47 21.3	-0.5
QSAR	**Qusar**	**6.41**	**313**	S	Sn	12 47 25.9	+1.0
BSRN	**Basiran**	**6.55**	**143**	*e*Pn	Pn	12 46 15.8	+1.9

IDC 07 12:55:53.6±3.4, 22°.01N×144°.09E, h0km, mb3.6/5,
mbtmp3.6/5, Error ellipse: s-maj=145.8km
s-min=24.4km az=79.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.77**	**194**	P	P	13 03 53.3	+0.2
	0.5nm,0.7s,baz=10,slow=9.4,SNR=11						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**46.47**	**193**	P	P	13 04 22.2	-0.5
	0.2nm,0.5s,baz=14,slow=6.5,SNR=4.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**55.11**	**312**	P	P	13 05 28.0	+0.4
	0.3nm,0.7s,baz=90,slow=8.4,SNR=2.6						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**57.87**	**317**	P	P	13 05 47.6	+0.4
	0.7nm,0.4s,baz=94,slow=7.3,SNR=8.3						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**83.26**	**335**	P	P	13 08 20.8	-1.1
	0.4nm,0.6s,baz=64,slow=4.4,SNR=4.0						
	0.4nm,0.6s						

*NEIC **07** 13:12:49.5±2.0, 26°.15S±0°.01×69°.4W±0°.2, h108km±10km,*
Error ellipse: s-maj=20.0km s-min=1.5km az=92.0
*GUC **07** 13:12:50.1±0.6, 26°.10S×69°.39W, h106km±3km, ML3.5*
ISC 07 13:12:49.4±0.8, 26°.09S±0°.03×69°.43W±0°.07, h108km±9km, n54, σ1s56/70, 11C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC02	**Maricunga**	**0.79**	**160**		**Pn**	**13 13 09.0**	**+0.1**
AC02	**Maricunga**	**0.79**	**160**	⇑*e*P	**Pn**	**13 13 09.1**	**+0.2**
AC02				*i* S	**Sn**	**13 13 22.9**	**-0.6**
AC02				IAML		13 13 23.4	
	comp=N,2μm,0.3s						
GO02	**Mina Guanaco**	**0.94**	**351**		**Pn**	**13 13 10.9**	**+0.8**
GO02	**Mina Guanaco**	**0.94**	**351**	*e*P	**Pn**	**13 13 10.9**	**+0.8**
GO02				*i* S	**Sn**	**13 13 26.6**	**+0.9**
AC01	**Pan de Azucar**	**1.06**	**267**		**Pn**	**13 13 11.8**	**+0.8**
AC01	**Pan de Azucar**	**1.06**	**267**	⇑*e*P	**Pn**	**13 13 11.9**	**+0.9**
AC01				*i* S	**Sn**	**13 13 28.0**	**+0.7**
AC01				IAML		13 13 28.5	
	comp=N,791nm,0.2s						
GO03	**Copiap**	**1.66**	**206**		**Pn**	**13 13 18.5**	**+0.4**
GO03	**Copiap**	**1.66**	**206**	⇑*e*P	**Pn**	**13 13 18.8**	**+0.7**
GO03				*i* S	**Sn**	**13 13 40.9**	**+1.0**
GO03				IAML		13 13 42.9	
	comp=N,653nm,0.4s						
PB14	**IPOC Station P**	**1.71**	**329**		**Pn**	**13 13 20.5**	**+1.6**
PB14	**IPOC Station P**	**1.71**	**329**	*e*P	**Pn**	**13 13 20.6**	**+1.7**
PB14				*i* S	**Sn**	**13 13 43.2**	**+1.9**
PB14				IAML		13 13 45.0	
	comp=N,282nm,0.5s						
AC04	**Llanos de Chal**	**2.57**	**215**		**Pn**	**13 13 29.8**	**+0.2**
AC04	**Llanos de Chal**	**2.57**	**215**	⇑*e*P	**Pn**	**13 13 29.9**	**+0.3**
AC04				*i* S	**Sn**	**13 14 00.5**	**0.0**
AC04				IAML		13 14 12.5	
	comp=N,245nm,0.4s						
PB10	**IPOC Station P**	**2.76**	**338**		**Pn**	**13 13 33.7**	**+1.5**
PB10	**IPOC Station P**	**2.76**	**338**	⇑*e*P	**Pn**	**13 13 33.9**	**+1.7**
PB10				*i* S	**Sn**	**13 13 59.9**	**-5.2**
PB10				IAML		13 14 20.7	
	comp=E,119nm,0.3s						
PB15	**IPOC Station P**	**2.87**	**359**		**Pn**	**13 13 35.1**	**+1.3**
PB15	**IPOC Station P**	**2.87**	**359**	⇑*e*P	**Pn**	**13 13 35.3**	**+1.5**
PB15				*i* S	**Sn**	**13 14 10.0**	**+2.0**
LCO	**Las Campanas**	**3.12**	**201**		**Pn**	**13 13 37.2**	**+0.1**
LCO	**Las Campanas**	**3.12**	**201**	*e*P	**Pn**	**13 13 37.3**	**+0.1**
LCO				*i* S	Sn	13 14 04.8	-9.2
AF01	**San Pedro de A**	**3.32**	**20**		**Pn**	**13 13 40.2**	**+0.2**
PB06	**IPOC Station P**	**3.37**	**358**		**Pn**	**13 13 40.8**	**+0.3**
PB06	**IPOC Station P**	**3.37**	**358**	⇓*e*P	**Pn**	**13 13 41.4**	**+1.0**
PB06				*i* S	**Sn**	**13 14 20.6**	**+0.7**
PB06				IAML		13 14 35.4	
	comp=E,134nm,0.2s						
LVC	**Limon Verde**	**3.50**	**8**		**Pn**	**13 13 43.1**	**+0.8**
LVC	**Limon Verde**	**3.50**	**8**	⇑*e*P	**Pn**	**13 13 43.2**	**+0.9**
LVC				*e*S	**Sn**	**13 14 22.5**	**-0.7**
PB04	**IPOC Station P**	**3.80**	**350**		**Pn**	**13 13 46.1**	**0.0**
PB04	**IPOC Station P**	**3.80**	**350**	*e*P	**Pn**	**13 13 46.1**	**0.0**
PB04				*e*S	**Sn**	**13 14 32.2**	**+2.1**
CO01	**Juntas del Tor**	**3.92**	**189**	*e*P	**Pn**	**13 13 49.8**	**+2.0**
CO01				*e*S	**Sn**	**13 14 34.8**	**+1.8**
CO05	**La Serena**	**4.14**	**202**	Pn	**Pn**	**13 13 50.5**	**+0.1**
CO05	**La Serena**	**4.14**	**202**	*e*P	**Pn**	**13 13 51.6**	**+1.1**
GO04	**Tololo Observa**	**4.24**	**196**	Pn	**Pn**	**13 13 52.0**	**-0.2**
GO04	**Tololo Observa**	**4.24**	**196**	⇑*e*P	**Pn**	**13 13 51.8**	**-0.4**
GO04				*e*S	**Sn**	**13 14 40.2**	**-0.6**
PB09	**IPOC Station P**	**4.28**	**2**		**Pn**	**13 13 53.9**	**+1.3**
PB09	**IPOC Station P**	**4.28**	**2**	⇑*e*P	**Pn**	**13 13 53.9**	**+1.3**
PB09				*e*S	**Sn**	**13 14 42.6**	**+1.0**
PB07	**IPOC Station P**	**4.36**	**354**		**Pn**	**13 13 53.5**	**-0.3**
PB07	**IPOC Station P**	**4.36**	**354**	⇑*e*P	**Pn**	**13 13 53.5**	**-0.3**
PB02	**IPOC Station P**	**4.77**	**355**		**Pn**	**13 13 59.1**	**-0.1**
PB02	**IPOC Station P**	**4.77**	**355**	⇑*e*P	**Pn**	**13 13 59.1**	**-0.1**
PB02				*e*S	**Sn**	**13 14 46.9**	**-6.5**
CO03	**El Pedregal**	**4.86**	**193**	Pn	**Pn**	**13 13 59.8**	**-0.6**
CO03	**El Pedregal**	**4.86**	**193**	*e*P	**Pn**	**13 14 00.2**	**-0.1**
CO03				*e*S	**Sn**	**13 14 54.0**	**-1.5**
CO06	**Fray Jorge**	**4.96**	**203**	Pn	**Pn**	**13 13 59.9**	**-1.8**
CO06	**Fray Jorge**	**4.96**	**203**	*e*P	**Pn**	**13 14 01.2**	**-0.4**
PB01	**IPOC Station P**	**5.02**	**359**		**Pn**	**13 14 02.0**	**-0.6**
CO02	**Combarbal**	**5.28**	**195**	Pn	**Pn**	**13 14 04.8**	**-1.2**
TA01	**Diego Aracena**	**5.54**	**353**	Pn	**Pn**	**13 14 09.6**	**0.0**
GO01	**Chusmiza**	**6.39**	**2**	Pn	**Pn**	**13 14 21.1**	**-0.4**
VA06	**Catapilco**	**6.65**	**194**	Pn	**Pn**	**13 14 22.3**	**-2.2**
VA03	**San Esteban**	**6.72**	**188**	Pn	**Pn**	**13 14 24.9**	**-0.7**
ROC1	**El Roble**	**7.00**	**191**	Pn	**Pn**	**13 14 28.9**	**-0.6**
MT02	**Curacav**	**7.30**	**191**	Pn	**Pn**	**13 14 30.4**	**-2.9**
PB12	**IPOC Station P**	**7.49**	**353**	Pn	**Pn**	**13 14 34.0**	**-2.1**
MT09	**Talagante**	**7.78**	**190**	Pn	**Pn**	**13 14 36.5**	**-3.5**
LPAZ	**La Paz**	**9.83**	**7**	Pn	**Pn**	**13 15 08.5**	**+0.2**
ITAB	**Concordia**	**15.51**	**98**	P	**Pn**	**13 16 23.1**	**+1.0**
ITAB				IAmb	IAmb	13 16 56.9	
	comp=Z,15nm,1.2s						
SNAA	**Sanae**	**58.13**	**160**	P	**P**	**13 22 32.6**	**+1.2**
SNAA				IAmb	IAmb	13 22 56.1	
	comp=Z,5.6nm,1.5s						
QSPA	**South Pole Qui**	**64.12**	**180**	P	**P**	**13 23 11.7**	**-0.3**
QSPA				IAmb	IAmb	13 23 43.3	
	comp=Z,7.3nm,1.4s						

*CNRM **07** 13:16:24.0, 36°.02N×7°.76W, h77km, ml2.8*
*INMG **07** 13:16:25.0±2.2, 36°.19N×7°.89W, h26km±17km, ML1.8,*
Error ellipse: s-maj=7.2km s-min=6.0km az=58.0
*MDD **07** 13:16:25.6±0.8, 36°.29N×7°.87W, h30km, mb_Lg2.1/6,*
Error ellipse: s-maj=6.7km s-min=3.0km az=25.0
ISC 07 13:16:22.3±1.3, 36°.19N±0°.03×7°.82W±0°.04, h29km±14km, n34, σ1s78/56, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**1.05**	**355**	*e*P	**Pn**	**13 16 42.7**	**+1.6**
PBDV				S	**Sn**	**13 16 56.0**	**+1.2**
PBDV				A	A	13 16 57.8	
	9.2nm,0.1s						
PVAQ	**Vaqueiros**	**1.21**	**4**	P	**Pb**	**13 16 45.9**	**+1.2**
PVAQ	**Vaqueiros**	**1.21**	**4**	*e*P	**Pb**	**13 16 45.1**	**+0.5**
PVAQ				A	A	13 17 01.7	
	10nm,0.1s						
PFVI	**Vila Bisbo**	**1.24**	**320**	*e*P	**Pb**	**13 16 45.4**	**+0.3**
PFVI				S	**Sb**	**13 16 59.9**	**-0.8**
PFVI				A	A	13 17 03.0	
	14nm,0.4s						
MORF	**Marmelete**	**1.30**	**329**	*e*P	**Pn**	**13 16 44.7**	**+0.2**
MORF				S	**Sn**	**13 17 01.6**	**+0.7**
MORF				A	A	13 17 02.9	
	18nm,0.2s						
EGRO	**El Granado**	**1.37**	**11**	P	**Pn**	**13 16 46.0**	**+0.7**
EGRO				S	**Sn**	**13 17 02.5**	**-0.1**
EGRO				*i* Vmb_Lg		13 17 08.2	
PCVE	**Castro Verde**	**1.45**	**353**	*e*P	**Pn**	**13 16 47.3**	**+0.8**
PCVE				S	**Sn**	**13 17 03.2**	**-1.3**
PCVE				A	A	13 17 09.9	
	7.3nm,0.4s						
PTEO	**Sao Teotonio**	**1.53**	**332**	S	**Sb**	**13 17 08.7**	**-0.4**
PTEO				A	A	13 17 11.3	
	4.5nm,0.1s						
MESJ	**Messejana**	**1.68**	**349**	*e*P	**Pb**	**13 16 51.5**	**-1.0**
MESJ				*e*S	**Sn**	**13 17 09.9**	**-0.2**
MESJ				A	A	13 17 18.0	
	6.6nm,0.2s						
ESPR	**Espera**	**1.72**	**66**	P	**Pb**	**13 16 52.4**	**-0.9**
ESPR				S	**Sn**	**13 17 12.2**	**+1.0**
ESPR				*i* Vmb_Lg		13 17 15.3	
EMIN	**Mina Concepcio**	**1.82**	**30**	P	**Pb**	**13 16 53.6**	**-1.4**
EMIN				S	**Sn**	**13 17 12.5**	**-1.3**
EMIN				*i* Vmb_Lg		13 17 17.8	
PBEJ	**Beja**	**1.83**	**359**	*e*P	**Pb**	**13 16 53.7**	**-1.5**
PBEJ				*e*Sn	**Sn**	**13 17 15.1**	**+1.1**
PBEJ				A	A	13 17 22.3	
	3.6nm,0.1s						
EJIF	**Jimena Fronter**	**1.92**	**82**	P	**Pb**	**13 16 56.1**	**-0.5**
EJIF				S	**Sn**	**13 17 16.5**	**+0.4**
PNCL	**Nicolau / Gran**	**2.00**	**344**	*e*P	**Pn**	**13 16 54.6**	**+0.5**
PNCL				*e*S	**Sn**	**13 17 17.7**	**-0.4**
PNCL				A	A	13 17 25.3	
	5.5nm,0.2s						
PBAR	**Barrancos**	**2.08**	**17**	*e*P	**Pn**	**13 16 57.1**	**+2.0**
PBAR				*e*S	**Sn**	**13 17 20.4**	**+0.4**
PBAR				A	A	13 17 32.9	
	2.6nm,0.6s						
EVO	**Evora**	**2.34**	**356**	A	A	13 17 37.9	
	2.6nm,0.1s						
EMIJ	**Mijas**	**2.49**	**81**	S	**Sn**	**13 17 32.3**	**+2.1**
EBAD	**Badajoz**	**2.64**	**14**	P	**Pn**	**13 17 33.9**	**+1.1**
EBAD				S	**Sn**	**13 17 33.3**	**-0.6**
EBAD				*i* Vmb_Lg		13 17 46.3	
PESTR	**Estremoz**	**2.68**	**4**	P	**Pb**	**13 17 07.9**	**-1.6**
PESTR				S	**Sb**	**13 17 42.6**	**+0.7**
PESTR	**Estremoz**	**2.68**	**4**	*e*S	**Sn**	**13 17 35.3**	**+0.4**
PESTR				A	A	13 17 48.7	
	0.9nm,0.2s						
ECAB	**El Cabril**	**2.69**	**45**	P	**Pn**	**13 17 05.2**	**+1.6**
ECAB				S	**Sn**	**13 17 33.9**	**-1.3**
ECAB				*i* Vmb_Lg		13 17 44.3	
PMTG	**Montargil**	**2.89**	**354**	*e*P	**Pn**	**13 17 07.2**	**+0.9**
PMTG				*e*S	**Sn**	**13 17 38.5**	**-1.6**
PMTG				A	A	13 17 58.

0.7nm,1.1s
ASAR Alice Springs 54.63 176 P P 13 27 33.0 -0.7
0.2nm,0.6s,baz=359,slow=6.4,SNR=6.8
0.2nm,0.6s

IDC ***07*** *13:53:42.6±1.9,54°.23S×146°.72E,h0km,mb3.9/5, mbtmp3.9/5,MS3.5/3,Error ellipse: s-maj=143.1km s-min=23.9km az=79.0*

ISC 07 13:53:44.0±1.8,54°2S±0°.3×147°.1E±1°.0,h10km,n8, σ1§48/8,mb4.0/5,MS3.5/3,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**22.62**	**348**	P		**P**	**13 58 45.9**	**+1.1**
	11nm,1.0s,baz=154,slow=7.6,SNR=10							
STKA				LR		LR	14 06 03.3	
	comp=Z,54nm,20.0s,baz=204,slow=33							
	11nm,1.0s							
VNDA	**Vanda**	**24.06**	**172**	P		**P**	**13 59 00.0**	**+1.2**
	0.5nm,0.8s,baz=333,slow=7.6,SNR=3.6							
VNDA				LR		LR	14 07 04.8	
	comp=Z,156nm,18.5s,baz=348,slow=33							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**32.03**	**337**	P		**P**	**14 00 10.7**	**+0.1**
	2.2nm,1.0s,baz=161,slow=9.1,SNR=10							
ASAR				PcP		**PcP**	**14 02 58.8**	**-1.4**
	0.3nm,0.6s,baz=156,slow=3.2,SNR=5.2							
	2.2nm,1.0s							
WRA	**Warramunga Arr**	**35.53**	**339**	P		**P**	**14 00 40.8**	**-0.3**
	3.6nm,0.9s,baz=161,slow=7.5,SNR=23							
	3.6nm,0.9s							
QSPA	**South Pole Qui**	**35.95**	**180**	LR		LR	14 14 29.5	
	comp=Z,84nm,20.6s,baz=350,slow=35							
CMAR	**Chiang Mai Arr**	**83.25**	**315**	P		**P**	**14 06 11.8**	**+1.3**
	0.4nm,0.4s,baz=170,slow=3.2,SNR=4.8							
	0.4nm,0.4s							
FINES	**FINESS Array B**	**148.77**	**307**	PKPbc		**PKPbc**	**14 13 29.5**	**-0.7**
	2.7nm,0.8s,baz=197,slow=3.2,SNR=7.3							
GERES	**GERESS Array B**	**150.96**	**279**	PKPbc		**PKPbc**	**14 13 34.0**	**-2.0**
	2.2nm,0.9s,baz=132,slow=2.0,SNR=11							

DJA ***07*** *14:02:39.6±0.2,6°S±2°×10°4E±°,h54km±2km,M4.7/66, mb4.9/66,mB5.2/25,MLv5.0/26,Mw(mB)4.6/25, MwMwp4.6/1,Mwp5.0/1*

IDC ***07*** *14:02:39.9±1.9,5°.76S×104°.27E,h44km±17km,mb4.5/30, mbtmp4.7/32,ML4.3/2,MS3.7/42,Error ellipse: s-maj=15.2km s-min=10.0km az=58.0*

NEIC ***07*** *14:02:40.1±2.9,5°.96S±0°.04×104°.16E±0°.07,h49km±4km, mb5.0/69,Error ellipse: s-maj=10.5km s-min=4.8km az=67.0*

BJI ***07*** *14:02:41.0±0.0,6°.00S×104°.10E,h73km,mb4.8/51, mB5.0/29,Ms4.5/26,Ms7 4.2/25*

MOS ***07*** *14:02:42.3±1.1,5°.76S×104°.34E,h46km,mb5.1/48,Error ellipse: s-maj=10.0km s-min=4.7km az=116.3*

GCMT ***07*** *14:02:43.1±0.4,6°.32S±0°.02×104°.34E±0°.03,h55km±1km, MW4.9/71,Moment Tensor Solution. s37,c42; s71,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.08±.16; Mθθ-1.99±.11; Mφφ-0.08±.14; Mrθ0.67±.07; Mrφ1.28±.08; Mθφ-0.88±.09; Best double couple: Mo2.61900×10¹⁶ NP1:φs281.00000°,δ36.00000°,λ66.00000°. NP2: φs130.00000°,δ58.00000°,λ106.00000°. Principal axes: T 2.4010, Plg72.0000°, Azm80.0000°; N 0.4400, Plg14.0000°, Azm301.0000°; P -2.8360, Plg12.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 14:02:39.1±0.3,5°.97S±0°.04×104°.16E±0°.04,h48km±2km, h48km:pP-P,n647,σ1§30/659,mb4.9/116,MS3.9/52, 23C-31D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KASI	**Kota Agung**	**0.56**	**37**	P		**Pn**	**14 02 52.8**	**+1.8**
LWLI	**Liwa**	**0.95**	**354**	P		**Pn**	**14 02 59.3**	**+3.0**
BLSI	**Bandar Lampung**	**1.24**	**61**	P		**Pn**	**14 03 02.0**	**+2.0**
BLSI				S		**Sn**	**14 03 17.9**	**+2.3**
KLI	**Kotabumi**	**1.30**	**32**	P		**Pn**	**14 03 04.3**	**+3.4**
KLI	**Kotabumi**	**1.30**	**32**	P		**Pn**	**14 03 03.7**	**+2.8**
KLI				S		**Sn**	**14 03 20.7**	**+3.5**
SBJI	**Serang**	**1.97**	**94**	P		**Pn**	**14 03 11.5**	**+1.5**
SBJI				S		**Sn**	**14 03 35.5**	**+2.0**
MNAI	**Manna**	**2.00**	**323**			**Pn**	**14 03 13.5**	**+3.1**
MNAI	**Manna**	**2.00**	**323**	P		**Pn**	**14 03 12.3**	**+1.9**
MNAI	**Manna**	**2.00**	**323**	P		Pn	14 03 14.8	+4.4
TNG	**Tangerang**	**2.48**	**95**	P		**Pn**	**14 03 18.5**	**+1.4**
SKJI	**Sukabumi**	**2.60**	**113**	P		**Pn**	**14 03 19.1**	**+0.4**
DBJI	**Dramaga**	**2.64**	**103**	P		**Pn**	**14 03 20.1**	**+0.8**
CBJI	**Citeko**	**2.71**	**100**	S		**Sn**	**14 03 57.0**	**+5.1**
KSI	**Kapahiang**	**2.78**	**326**	P		Pn	14 03 26.5	+5.2
KSI	**Kapahiang**	**2.78**	**326**	P		**Pn**	**14 03 23.5**	**+2.2**
PMBI	**Palembang**	**3.08**	**12**			**Pn**	**14 03 27.2**	**+1.8**
PMBI	**Palembang**	**3.08**	**12**	P		**Pn**	**14 03 28.8**	**+3.4**
PMBI	**Palembang**	**3.08**	**12**	P		Pn	14 03 31.2	+5.8
CNJI	**Cibinong**	**3.24**	**114**	P		**Pn**	**14 03 28.6**	**+1.1**
CNJI				S		**Sn**	**14 04 03.2**	**-1.6**
LEM	**Lembang**	**3.54**	**104**	P		**Pn**	**14 03 33.5**	**+1.7**
	29nm,0.3s,baz=185,slow=21,SNR=37							
LEM				S		**Sn**	**14 04 13.9**	**+1.4**
	346nm,0.7s,baz=86,slow=21,SNR=3.6							
LEM				LR		LR	14 05 18.2	
	comp=Z,2μm,18.1s,baz=300,slow=45							
	133nm,0.5s							
LEM	**Lembang**	**3.54**	**104**	P		**Pn**	**14 03 33.0**	**+1.2**
JCJI	**Jatiwangi**	**4.12**	**97**	P		**Pn**	**14 03 41.6**	**+2.0**
PPBI	**Pangkal Pinang**	**4.27**	**28**	P		**Pn**	**14 03 44.8**	**+3.2**
JMBI	**JAMBI**	**4.34**	**353**	P		**Pn**	**14 03 45.4**	**+2.8**
KRJI	**Kerinci**	**4.70**	**325**	P		**Pn**	**14 03 49.7**	**+2.1**
XMI	**Christmas Isla**	**4.70**	**161**	P		**Pn**	**14 03 44.3**	**-3.3**
XMIS	**Christmas Isla**	**4.72**	**162**	Pn		**Pn**	**14 03 43.6**	**-4.2**
XMIS	**Christmas Isla**	**4.72**	**162**	P		**Pn**	**14 03 44.2**	**-3.6**
TPI	**Tanjungpandan**	**4.73**	**48**	P		**Pn**	**14 03 50.2**	**+2.3**
PPSI	**Pulau Pagai**	**5.22**	**307**	P		**Pn**	**14 03 56.1**	**+1.4**
	7.0nm7μm604nm,1.1s							
DSRI	**Dabo**	**5.47**	**4**	P		**Pn**	**14 04 00.7**	**+2.6**
	0.4nm1μm128nm,0.8s							
SMRI	**Semarang**	**6.33**	**100**	Pn		**Pn**	**14 04 11.3**	**+1.2**
SMRI	**Semarang**	**6.33**	**100**	P		**Pn**	**14 04 11.4**	**+1.4**
	0.8nm150nm,0.8s							
UGM	**Wanagama**	**6.61**	**107**	Pn		**Pn**	**14 04 15.4**	**+1.6**
UGM	**Wanagama**	**6.61**	**107**	P		**Pn**	**14 04 14.3**	**+0.5**
	1.0nm182nm,1.0s							
PPI	**Padang Panjang**	**6.64**	**325**	P		**Pn**	**14 04 16.6**	**+2.4**
	0.5nm904nm49nm,0.9s							
SISI	**Saibi**	**6.84**	**312**	P		**Pn**	**14 04 18.1**	**+1.1**
	0.5nm121nm,0.8s							
TPRI	**Tanjung Pinang**	**6.85**	**3**	P		**Pn**	**14 04 19.9**	**+2.8**
BKNI	**Bangkinang**	**6.99**	**333**	Pn		**Pn**	**14 04 20.8**	**+1.8**
BKNI	**Bangkinang**	**6.99**	**333**	P		**Pn**	**14 04 20.9**	**+2.0**
	1.1nm2μm159nm,0.9s							
BKNI	**Bangkinang**	**6.99**	**333**	P		Pn	14 04 23.3	+4.4
PCJI	**Pacitan**	**7.31**	**108**	P		**Pn**	**14 04 23.8**	**+0.4**
	0.7nm113nm,0.8s							
NGJI	**Ngawi**	**7.39**	**101**	P		**Pn**	**14 04 25.3**	**+0.9**
	0.5nm75nm,0.7s							
MYKOM	**Kota Tinggi**	**7.71**	**358**			**Pn**	**14 04 31.0**	**+2.1**
PWJI	**Pagerwojo**	**7.86**	**105**	P		**Pn**	**14 04 31.6**	**+0.7**
	0.6nm2μm134nm,0.7s							
MNSI	**Mandailing Nat**	**8.13**	**326**	P		**Pn**	**14 04 34.6**	**0.0**
	688nm40nm,0.8s							
STKI	**Sintang**	**9.45**	**51**	P		**Pn**	**14 04 55.3**	**+2.5**
	63nm,0.9s							
GMJI	**Gumukmas**	**9.50**	**104**	P		**Pn**	**14 04 54.2**	**+0.8**
	60nm,0.8s							
COCO	**West Island**	**9.51**	**229**			**Pn**	**14 04 54.4**	**+0.9**
COCO	**West Island**	**9.51**	**229**	P		**Pn**	**14 04 54.4**	**+0.9**
BLJI	**Banyuglugur**	**9.54**	**101**	P		**Pn**	**14 04 54.9**	**+1.0**
	1μm59nm,0.7s							
KSM	**Kuching**	**9.61**	**40**			**Pn**	**14 04 57.1**	**+2.2**
KSM	**Kuching**	**9.61**	**40**	P		Pn	14 04 59.6	+4.6
	28nm,1.1s							
GSI	**Gunungsitoli**	**9.77**	**318**	Pn		**Pn**	**14 04 57.0**	**-0.1**
GSI	**Gunungsitoli**	**9.77**	**318**	P		**Pn**	**14 04 57.1**	**0.0**
	33nm,0.7s							
GSI	**Gunungsitoli**	**9.77**	**318**	P		**Pn**	**14 04 57.5**	**+0.4**
KMMI	**Kalianget**	**9.81**	**97**	P		**Pn**	**14 04 58.5**	**+0.9**
	57nm,1.1s							
PSI	**Prapat**	**10.16**	**329**	LR		LR	14 09 47.9	
	comp=Z,381nm,18.5s,baz=145,slow=43							
ABJI	**Asem Bagus**	**10.17**	**101**	P		**Pn**	**14 05 03.4**	**+0.8**
	4μm489nm,0.8s							
JAGI	**Jajag, Banyuwa**	**10.22**	**105**	Pn		**Pn**	**14 05 05.0**	**+1.7**
JAGI	**Jajag, Banyuwa**	**10.22**	**105**	P		**Pn**	**14 05 04.3**	**+1.0**
	4μm454nm,0.9s							
JAGI	**Jajag, Banyuwa**	**10.22**	**105**	P		**Pn**	**14 05 05.7**	**+2.4**
SRBI	**Singaraja**	**11.17**	**101**	P		**Pn**	**14 05 17.6**	**+1.3**
	150nm,0.6s							
SBUM	**Sibu**	**11.61**	**44**	Pn		**Pn**	**14 05 24.3**	**+2.0**
TWSI	**Taliwang, Sumb**	**12.92**	**103**	P		**Pn**	**14 05 38.0**	**-2.2**
	41nm,0.7s							
PLAI	**Plamang**	**13.80**	**103**	P		**Pn**	**14 05 49.8**	**-2.5**
	1μm111nm,0.9s							
PLAI	**Plampang**	**13.80**	**103**	P		**Pn**	**14 05 50.6**	**-1.7**
WBSI	**Waikabubak, Su**	**15.53**	**105**	P		**Pn**	**14 06 14.2**	**-0.9**
	79nm,0.6s							
KAPI	**Kappang**	**15.55**	**87**	P		**Pn**	**14 06 15.6**	**+0.3**
	0.9nm,0.3s,baz=252,slow=12,SNR=8.2							
KAPI				LR		LR	14 12 27.2	
	comp=Z,414nm,21.4s,baz=254,slow=38							
	12nm,0.7s							
KAPI	**Kappang**	**15.55**	**87**	Pn		**Pn**	**14 06 15.9**	**+0.6**
KAPI	**Kappang**	**15.55**	**87**	*de*P		**Pn**	**14 06 16.5**	**+1.1**
KAPI				pmax		pmax		
	comp=Z,14nm,0.8s							
KAPI	**Kappang**	**15.55**	**87**	P		**P**	**14 06 18.0**	**-0.9**
SPSI	**Sidrap Palu**	**15.68**	**83**	P		**Pn**	**14 06 18.5**	**+1.5**
	comp=Z,491nmcomp=Z,28nm,1.0s							
TTSI	**Tana Toraja**	**15.88**	**80**	P		**Pn**	**14 06 20.7**	**+1.1**
	comp=Z,1μmcomp=Z,44nm,0.9s							
BKSI	**Bulukumba**	**15.90**	**88**	P		**P**	**14 06 21.6**	**-1.2**
	comp=Z,1μmcomp=Z,190nm,0.9s							
MPSI	**Mapaga**	**16.92**	**69**	P		**P**	**14 06 34.7**	**+0.6**
	comp=Z,662nmcomp=Z,39nm,0.8s							
KKM	**Kota Kinabalu**	**16.95**	**45**	P		**P**	**14 06 38.8**	**+4.3**
	comp=Z,39nm,0.9s							
EDFI	**Ende, Flores**	**17.61**	**100**	P		**Pn**	**14 06 39.8**	**-1.5**
	comp=Z,383nmcomp=Z,30nm,0.7s							
TOLI2	**Tolitoli**	**18.03**	**68**			**Pn**	**14 06 45.3**	**-1.0**
TOLI2	**Tolitoli**	**18.03**	**68**	P		**P**	**14 06 49.1**	**+2.7**
MMRI	**Maumere**	**18.13**	**99**	P		**P**	**14 06 45.8**	**-1.7**
MMRI				IAmb		IAmb	14 06 49.5	
	comp=Z,91nm,0.9s							
MMRI	**Maumere**	**18.13**	**99**	P		**Pn**	**14 06 48.3**	**+0.7**
	comp=Z,114nm,0.8s							
MMRI	**Maumere**	**18.13**	**99**	P		**Pn**	**14 06 48.8**	**+1.2**
	comp=Z,115nm,0.8s							
APSI	**Ampana**	**18.16**	**75**	P		**Pn**	**14 06 49.5**	**+1.5**
	comp=Z,838nmcomp=Z,103nm,1.0s							
MRSI	**Marisa**	**18.87**	**71**	P		**Pn**	**14 06 57.1**	**+0.5**
	comp=Z,918nmcomp=Z,93nm,0.6s							
MRSI				pP		**sP**	**14 07 09.2**	**-3.5**
	comp=Z,918nmcomp=Z,93nm,0.6s							
LUWI	**Luwuk**	**19.21**	**76**			**P**	**14 06 59.3**	**0.0**
LUWI				IAmb		IAmb	14 07 04.3	
	comp=Z,120nm,0.8s							
LUWI	**Luwuk**	**19.21**	**76**	P		**Pn**	**14 07 00.8**	**+0.2**
	comp=Z,174nm,0.9s							
LUWI	**Luwuk**	**19.21**	**76**	P		**Pn**	**14 07 01.6**	**+1.0**
GIRL	**Giralia**	**19.22**	**151**	P		**Pn**	**14 07 02.2**	**+1.5**
	baz=19,SNR=7.5							
GIRL	**Giralia**	**19.22**	**151**	P		**P**	**14 06 59.0**	**-0.3**
BATI	**Baumata**	**19.76**	**104**	P		**Pn**	**14 07 06.5**	**-0.8**
	comp=Z,405nm,0.7s,baz=267,slow=1.8,SNR=65							
BATI				S		**S**	**14 10 43.4**	**-2.4**
	comp=Z,35nm,0.6s,baz=179,slow=23,SNR=3.6							
BATI	**Baumata**	**19.76**	**104**	P		**Pn**	**14 07 06.4**	**-0.8**
	comp=Z,3μmcomp=Z,319nm,0.8s							
MBWA	**Marble Bar**	**21.35**	**136**	P		**P**	**14 07 23.1**	**+0.6**
PSA00	**Pilbara Seismi**	**21.71**	**137**	P		**P**	**14 07 25.9**	**-0.4**
PSA00	**Pilbara Seismi**	**21.71**	**137**	P		**P**	**14 07 28.2**	**+1.9**
SANI	**Sanana**	**22.12**	**81**	P		**P**	**14 07 30.6**	**-0.2**
	comp=Z,40nm,0.8s							
SANI	**Sanana**	**22.12**	**81**	P		**P**	**14 07 31.2**	**+0.4**
NLAI	**Namlea**	**23.03**	**84**	P		**P**	**14 07 41.6**	**+1.2**
	comp=Z,38nm,0.9s							
LBMI	**Labuha**	**23.89**	**78**	P		**P**	**14 07 49.4**	**+0.7**
	comp=Z,793nmcomp=Z,123nm,0.8s							
TNTI	**Ternate**	**24.12**	**75**	P		**P**	**14 07 49.9**	**-0.9**
	comp=Z,106nm,0.9s							
TNTI	**Ternate**	**24.12**	**75**	P		**P**	**14 07 51.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**24.19**	**122**	P		**P**	**14 07 51.5**	**+0.1**
	comp=Z,22nm,0.8s,baz=284,slow=4.9,SNR=40							
	comp=Z,22nm,0.8s							
FITZ	**Fitzroy Crossi**	**24.19**	**122**	P		**P**	**14 07 52.0**	**+0.7**
	baz=24,SNR=27							
FITZ	**Fitzroy Crossi**	**24.19**	**122**	P		**P**	**14 07 51.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**24.19**	**122**	P		**P**	**14 07 52.2**	**+0.9**
CM31	**Chiang Mai Arr**	**24.81**	**348**	P		**P**	**14 07 57.0**	**0.0**
CM31				IAmb		IAmb	14 07 59.7	
	comp=Z,23nm,0.8s							
CMAR	**Chiang Mai Arr**	**24.81**	**348**	P		**P**	**14 07 54.5**	**-2.5**
	comp=Z,15nm,0.7s,baz=179,slow=8.5,SNR=39							
CMAR				LR		LR	14 18 33.8	
	comp=Z,233nm,19.7s,baz=160,slow=39							
	comp=Z,15nm,0.7s							
CMAR	**Chiang Mai Arr**	**24.81**	**348**	P		**P**	**14 07 56.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**24.81**	**348**	P		**P**	**14 07 56.2**	**-0.8**
DAV	**Davao City (W)**	**25.00**	**59**	LR		LR	14 17 35.1	
	comp=Z,132nm,21.3s,baz=272,slow=36							
CHTO	**Chiang Mai**	**25.16**	**348**	P		**P**	**14 07 58.5**	**-1.6**
CHTO	**Chiang Mai**	**25.16**	**348**	P		**P**	**14 07 58.5**	**-1.6**
CHTO				pmax		pmax		
	comp=Z,12nm,0.9s							
QIZ	**Qiongzhong**	**25.47**	**13**	P		**P**	**14 08 05.1**	**+2.2**
QIZ				S		**S**	**14 12 29.9**	**+3.0**
QIZ				sS		sS	14 12 57.8	+11
QIZ				LR		LR		
	comp=Z,390nm,17.9s							
QIZ				LR		LR		
	comp=Z,130nm,15.0s							
QIZ				LR		LR		
	comp=Z,390nm,18.9s							
KNRA	**Kununurra**	**25.99**	**114**	P		**P**	**14 08 07.6**	**-0.2**
	baz=26,SNR=6.8							
KNRA	**Kununurra**	**25.99**	**114**	P		**P**	**14 08 06.9**	**-0.9**
KNRA				IAmb		IAmb	14 08 16.2	
	comp=Z,57nm,0.7s							
KNRA	**Kununurra**	**25.99**	**114**	P		**P**	**14 08 07.5**	**-0.2**
CRAI	**Chiangrai**	**26.30**	**352**	P		**P**	**14 08 09.1**	**-1.4**
PALK	**Pallekele**	**26.84**	**299**	LR		LR	14 17 59.5	
	comp=Z,69nm,19.0s,baz=224,slow=34							
MTN	**Manton Dam**	**27.46**	**106**	P		**P**	**14 08 20.7**	**-0.3**
	baz=27,SNR=31							
MTN	**Manton Dam**	**27.46**	**106**	P		**P**	**14 08 20.4**	**-0.6**
MTN	**Manton Dam**	**27.46**	**106**	P		**P**	**14 08 21.1**	**+0.1**
SWI	**Sorong**	**27.52**	**80**	P		**P**	**14 08 21.7**	**+0.2**
	comp=Z,44nm,1.1s							
SIJI	**Sorong**	**27.52**	**80**	P		**P**	**14 08 21.8**	**+0.1**
	comp=Z,25nm,0.9s,baz=315,slow=5.3,SNR=8.8							
SIJI				LR		LR	14 21 44.1	
	comp=Z,64nm,19.6s,baz=82,slow=42							
	comp=Z,25nm,0.9s							
KDU	**Kakadu**	**28.71**	**105**	P		**P**	**14 08 31.0**	**-1.2**
	baz=29,SNR=8.4							
KDU	**Kakadu**	**28.71**	**105**	P		**P**	**14 08 31.0**	**-1.2**
WRKA	**Warakurna**	**29.91**	**132**	P		**P**	**14 08 43.8**	**+1.1**
	baz=30,SNR=5.3							
H01W3	**Cape Leeuwin H**	**30.21**	**164**	T		T	14 40 18.7	
	baz=343,slow=74,SNR=53							
H01W1	**Cape Leeuwin H**	**30.23**	**164**	T		T	14 40 16.0	
	baz=343,SNR=92							
H01W2	**Cape Leeuwin H**	**30.23**	**164**	T		T	14 40 13.6	
	baz=343,slow=74,SNR=85							
KMI	**Kunming**	**30.94**	**358**	‖P		**P**	**14 08 56.5**	**+4.5**
KMI				pmax		pmax		
	comp=Z,12nm,0.6s							
KMI				LR		LR		
	comp=Z,300nm,18.9s							
KMI				LR		LR		
	comp=Z,230nm,17.5s							
KMI				LR		LR		
	comp=Z,470nm,22.1s							
H08S2	**Diego Garcia H**	**31.48**	**265**	T		T	14 42 37.3	
	baz=89,slow=76,SNR=147							
H08S3	**Diego Garcia H**	**31.49**	**265**	T		T	14 42 33.4	
	baz=89,slow=76,SNR=86							
H08S1	**Diego Garcia H**	**31.50**	**265**	T		T	14 42 35.9	
	baz=89,slow=76,SNR=94							
GYA	**Guiyang**	**32.33**	**4**	P		P	14 09 10.0	+5.9
GYA				LR		LR		
	comp=Z,320nm,17.2s							
PZH	**PanZhiHua**	**32.37**	**356**	P		**P**	**14 09 07.0**	**+2.6**
PZH				S		**S**	**14 14 13.4**	**-2.1**
PZH				pmax		pmax		
	comp=Z,20nm,0.8s							
PZH				pmax		pmax		
	comp=Z,80nm,4.6s							
PZH				LR		LR		
	comp=Z,610nm,24.0s							
PZH				LR		LR		
	comp=Z,430nm,22.6s							
PZH				LR		LR		
	comp=Z,970nm,24.5s							
WB0	**Warramunga Arr**	**32.43**	**118**	P		**P**	**14 09 03.4**	**-1.6**
WRA	**Warramunga Arr**	**32.45**	**118**	P		**P**	**14 09 05.6**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=306,slow=8.6,SNR=50							
WRA				PcP		**PcP**	**14 11 52.8**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=309,slow=1.9,SNR=4.6							
WRA				LR		LR	14 24 08.1	
	comp=Z,74nm,20.5s,baz=236,slow=40							
	comp=Z,3.8nm,0.7s							
WRA	**Warramunga Arr**	**32.45**	**118**	*i* P		**P**	**14 09 05.5**	**+0.4**
WRA				pmax		pmax		
	comp=Z,4.0nm,0.8s							
WRAB	**Tennant Creek**	**32.45**	**118**	P		**P**	**14 09 03.9**	**-1.3**
WRAB				IAmb		IAmb	14 09 30.9	
	comp=Z,17nm,0.8s							
WRAB	**Tennant Creek**	**32.45**	**118**	‖*e*P		**P**	**14 09 04.7**	**-0.5**
WRAB				pmax		pmax		
	comp=Z,7.0nm,0.8s							
WRAB	**Tennant Creek**	**32.45**	**118**	P		**P**	**14 09 05.6**	**+0.4**
WB2	**Warramunga Arr**	**32.46**	**118**	P		**P**	**14 09 04.4**	**-0.8**
WB2				IAmb		IAmb	14 09 30.8	
	comp=Z,16nm,0.9s							
WR0	**Warramunga Arr**	**32.63**	**118**	P		**P**	**14 09 05.9**	**-0.8**
WR0				IAmb		IAmb	14 09 16.1	
	comp=Z,13nm,0.6s							
FORT	**Forrest**	**33.36**	**141**	P		**P**	**14 09 12.5**	**-0.5**
AS31	**Alice Springs**	**33.59**	**125**	P		**P**	**14 09 14.9**	**-0.2**
ASAR	**Alice Springs**	**33.59**	**125**	P		**P**	**14 09 15.9**	**+0.8**
	comp=Z,11nm,0.8s,baz=301,slow=8.2,SNR=87							
ASAR				PcP		**PcP**	**14 11 56.2**	**+1.4**
	comp=Z,3.4nm,0.7s,baz=318,slow=2.1,SNR=9.6							
ASAR				S		**S**	**14 14 30.8**	**-3.8**
	comp=Z,5.8nm,1.0s,baz=293,slow=16,SNR=16							
ASAR				ScP		**ScP**	**14 15 36.1**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=300,slow=4.7,SNR=4.2							
ASAR				LR		LR	14 24 08.7	
	comp=Z,96nm,19.4s,baz=298,slow=38							
	comp=Z,11nm,0.8s							
ASAR	**Alice Springs**	**33.59**	**125**	P		**P**	**14 09 15.2**	**+0.1**
ASAR	**Alice Springs**	**33.59**	**125**	P		**P**	**14 09 15.2**	**+0.1**
HYBB	**Hyderabad (bro**	**34.35**	**313**	*e*P		**P**	**14 09 22.1**	**+0.4**
HYBB				*es*P		**sP**	**14 09 41.0**	**+1.9**
ENH	**Enshi**	**36.40**	**8**	P		**P**	**14 09 38.5**	**-0.7**
CD2	**Chengdu**	**36.67**	**359**	*e*P		**P**	**14 09 43.4**	**+1.9**
TAPN	**Taplejung**	**36.75**	**335**	*e*P		**P**	**14 09 42.5**	**0.0**
	comp=Z,69nm,0.9s							
OOD	**Oodnadatta**	**36.97**	**130**	P		**P**	**14 09 45.2**	**+1.2**
QIS	**Mount Isa**	**37.31**	**116**	P		**P**	**14 09 47.7**	**+0.6**
	baz=37,SNR=4.0							
QIS	**Mount Isa**	**37.31**	**116**	P		**P**	**14 09 47.6**	**+0.5**
LSA	**Lhasa**	**37.60**	**341**	P		**P**	**14 09 49.8**	**-0.1**
LSA				IAmb		IAmb	14 09 52.5	
	comp=Z,10nm,0.7s							
LSA	**Lhasa**	**37.60**	**341**	P		**P**	**14 09 49.8**	**-0.1**
LSA				pmax		pmax		
	comp=Z,10.0nm,0.7s							
JIRN	**Jiri**	**37.67**	**333**	*e*P		**P**	**14 09 50.3**	**-0.1**
	comp=Z,77nm,0.9s							
PKI	**Pulchoki**	**37.95**	**332**	*e*P		**P**	**14 09 53.1**	**+0.4**
PKIN	**Phulchoki**	**37.96**	**332**	*e*P		**P**	**14 09 53.1**	**+0.4**
	comp=Z,7.1nm,0.3s							
GUN	**Gumba**	**38.03**	**333**	*e*P		**P**	**14 09 53.5**	**+0.1**
DMN	**Daman**	**38.12**	**332**	*e*P		**P**	**14 09 54.8**	**+0.7**
GKN	**Gorkha**	**38.68**	**332**	*e*P		**P**	**14 09 58.4**	**-0.2**
COEN	**Coen**	**39.19**	**105**	P		**P**	**14 10 02.2**	**-0.8**
	baz=39,SNR=12							
COEN	**Coen**	**39.19**	**105**	P		**P**	**14 10 02.0**	**-1.0**
COEN				IAmb		IAmb	14 10 03.2	
	comp=Z,22nm,0.8s							
COEN	**Coen**	**39.19**	**105**	P		**P**	**14 10 02.4**	**-0.6**
DANN	**Dangsing**	**39.38**	**331**	*e*P		**P**	**14 10 04.7**	**0.0**
	comp=Z,86nm,0.7s							
BBOO	**Buckleboo**	**39.93**	**136**	P		**P**	**14 10 08.1**	**-0.8**
BBOO				IAmb		IAmb	14 11 33.1	
	comp=Z,75nm

comp=Z,20nm,1.2s
BJT Baijiatuau 47.08 13 P **P** **14 11 05.2 -1.1**
BJT Baijiatuau 47.08 13 P **P** **14 11 05.2 -1.1**
BJT pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 47.08 8 *eP* **P** **14 11 10.0 +3.6**
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,150nm,4.4s
HHC LR LR
comp=Z,290nm,14.6s
HHC LR LR
comp=Z,470nm,14.6s
HHC LR LR
comp=Z,510nm,14.6s
RMQ Roma 47.11 121 P **P** **14 11 07.0 +0.2**
baz=47,SNR=9.0
RMQ Roma 47.11 121 P **P** **14 11 09.2 +2.3**
JMN Monobe 48.49 33 P **P** **14 11 17.2 -0.1**
JMN IAmb IAmb 14 11 20.1
comp=Z,23nm,0.9s
KSAR Wonju Array Be 48.53 25 P **P** **14 11 17.9 +0.4**
KSAR Wonju Array Be 48.53 25 P **P** **14 11 17.9 +0.4**
KSRS Korea Array 48.56 25 P **P** **14 11 18.4 +0.7**
comp=Z,5.6nm,0.7s,baz=219,slow=7.5,SNR=44
KSRS LR LR 14 31 55.8
comp=Z,29nm,21.8s,baz=200,slow=36
comp=Z,5.6nm,0.7s
KS19 Wonju Array Si 48.58 25 P **P** **14 11 18.2 +0.3**
KS19 IAmb IAmb 14 11 19.6
comp=Z,47nm,1.9s
EIDS Eidsvold 48.81 119 P **P** **14 11 19.6 -0.4**
EIDS IAmb IAmb 14 12 08.3
comp=Z,42nm,1.8s
JHS Saijyo 49.04 32 P **P** **14 11 21.8 +0.2**
JHS IAmb IAmb 14 11 23.7
comp=Z,20nm,0.7s
NIL Nilore 49.09 325 P **P** **14 11 21.7 -0.3**
NIL Nilore 49.09 325 P **P** **14 11 21.7 -0.3**
NIL pmax pmax
comp=Z,42nm,0.8s
JCJ Chichijima 49.33 46 LR LR 14 33 30.3
comp=Z,36nm,20.0s,baz=24,slow=38
XLT XiLinHaoTe 50.80 11 *eP* **P** **14 11 35.3 +0.5**
XLT pmax pmax
comp=Z,9.0nm,0.8s
XLT pmax pmax
comp=Z,130nm,4.6s
WMQ Urumqi 51.75 345 *eP* **P** **14 11 44.1 +2.2**
WMQ sP sP 14 12 11.3 +11
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ LR LR
comp=Z,260nm,17.3s
WMQ LR LR
comp=Z,120nm,17.3s
JGF Kuroka 51.80 35 P **P** **14 11 41.5 -0.9**
KBL Kabul 52.17 323 P **P** **14 11 44.6 -0.8**
KBL Kabul 52.17 323 P **P** **14 11 44.6 -0.8**
KBL pmax pmax
comp=Z,57nm,1.8s
KSH Kashi 52.22 332 P **P** **14 11 45.2 -0.4**
KSH S **S** **14 19 02.0 -5.1**
KSH pmax pmax
comp=Z,32nm,0.7s
MAJO Matsushiro 52.96 34 P **P** **14 11 49.0 -1.9**
MAJO IAmb IAmb 14 11 53.4
comp=Z,12nm,1.1s
MAJO Matsushiro 52.96 34⇓ *eP* **P** **14 11 48.8 -2.2**
MAJO pmax pmax
comp=Z,9.0nm,1.1s
MAJO Matsushiro 52.96 34 P **P** **14 11 49.1 -1.9**
MAJO pP **sP** **14 12 06.2 -3.2**
MJAR Matsushiro Arr 52.96 34 P **P** **14 11 49.7 -1.2**
comp=Z,4.5nm,0.6s,baz=204,slow=7.1,SNR=19
MJAR LR LR 14 34 18.6
comp=Z,70nm,20.6s,baz=196,slow=36
comp=Z,4.5nm,0.6s
WSAR Wadi Sarin 53.10 305 LR LR 14 32 35.6
comp=Z,76nm,19.9s,baz=138,slow=34
CN2 Changchun 53.15 19 *eP* **P** **14 11 51.8 -0.4**
CN2 *eS* **S** **14 19 13.4 -6.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,300nm,15.1s
SONM Songino Array 53.61 2 P **P** **14 11 55.5 -0.2**
comp=Z,10.0nm,0.8s,baz=179,slow=8.9,SNR=40
SONM LR LR 14 38 32.9
comp=Z,91nm,18.2s,baz=162,slow=40
comp=Z,10.0nm,0.8s
SONM Songino Array 53.61 2 P **P** **14 11 55.7 0.0**
SONM IAmb IAmb 14 11 58.1
comp=Z,9.7nm,0.9s
SONM Songino Array 53.61 2 P **P** **14 11 55.7 0.0**
SONM pmax pmax
comp=Z,10.0nm,0.9s
PRZ Przheval'sk 53.62 336 P **P** **14 11 56.6 +0.7**
PRZ pmax pmax
comp=Z,17nm,0.8s
ULN Ulaanbaatar 53.66 2 P **P** **14 11 56.4 +0.3**
ULN Ulaanbaatar 53.66 2*d iP* **P** **14 11 57.1 +1.0**
ULN pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 53.66 2 P **P** **14 11 56.8 +0.7**
ULN sP **sP** **14 12 16.2 +2.0**
NRN Naryn 53.75 334 P **P** **14 11 56.5 -0.6**
NRN IAmb IAmb 14 11 58.6
comp=Z,22nm,0.9s
NRN Naryn 53.75 334 P **P** **14 11 56.5 -0.6**
NRN pmax pmax
comp=Z,22nm,0.9s
SHLS Shalkode 53.78 338 *eP* **P** **14 11 55.7 -1.3**
SHLS *eS* **S** **14 19 25.7 -2.6**
SHLS pmax pmax
comp=Z,13nm,1.1s
SHLS Shalkode 53.78 338 *eP* **P** **14 11 55.8 -1.3**
comp=Z,13nm,1.1s,baz=338
SHLS *eS* **S** **14 19 25.8 -2.6**
baz=338
PDGK Podgornoye 53.92 338 P **P** **14 11 58.5 +0.5**
UZB Uzynbulak 53.94 337 *eP* **P** **14 11 57.9 -0.3**
UZB Uzynbulak 53.94 337 *eP* **P** **14 11 57.9 -0.3**
baz=337
JSD Sado 54.06 33 P **P** **14 11 57.6 -1.3**
SATY Saty 54.10 337 *eP* **P** **14 11 58.7 -0.7**
SATY pmax pmax
comp=Z,9.0nm,0.8s
SATY Saty 54.10 337 *eP* **P** **14 11 58.7 -0.7**
comp=Z,9.1nm,0.8s,baz=337
GAR Garm 54.62 328 P **P** **14 12 01.5 -1.7**
MDOK Medeo 54.73 336 *eP* **P** **14 12 03.8 -0.2**
MDOK Medeo 54.73 336 *eP* **P** **14 12 03.8 -0.2**
baz=336
AAA Alma-Ata 54.82 336 *eP* **P** **14 12 03.7 -0.8**
AAA pmax pmax
comp=Z,12nm,0.6s
AAA Alma-Ata 54.82 336 *eP* **P** **14 12 03.7 -0.8**
comp=Z,12nm,0.6s,baz=336
CHGR Chuyangaron 54.99 327 P **P** **14 12 03.8 -2.1**
CHGR Chuyangaron 54.99 327 P **P** **14 12 03.8 -2.1**
CHGR pmax pmax
comp=Z,63nm,1.1s
TKM2 Tokmak 2 55.14 335 P **P** **14 12 07.3 +0.3**
SNR=32
TKM2 Tokmak 2 55.14 335 P **P** **14 12 07.3 +0.3**
BTK Batken 55.14 329 P **P** **14 12 07.0 +0.1**
BTK pmax pmax
comp=Z,16nm,0.7s
KBK Karagaybulak 55.20 334 P **P** **14 12 08.3 +0.9**
SNR=10.0
CHKK Chushkaly 55.33 336 *eP* **P** **14 12 07.2 -0.9**
CHKK Chushkaly 55.33 336 *eP* **P** **14 12 07.2 -0.9**
baz=336
AML Almayashu 55.34 333 P **P** **14 12 09.3 +0.6**
SNR=22
JMM Marumori 55.35 35 P **P** **14 12 06.9 -1.5**
AAK Ala-Archa 55.38 334*de*P **P** **14 12 09.5 +0.8**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 55.38 334 P **P** **14 12 09.1 +0.4**
BNX BinXian 55.51 20⇓ P **P** **14 12 09.5 +0.2**
BNX pmax pmax
comp=Z,36nm,1.1s
BNX pmax pmax
comp=Z,83nm,7.0s
PATS Pohnpei 55.52 78 P **P** **14 12 09.9 -0.1**
baz=55,SNR=3.2
KUU Kurty 55.62 336 *eP* **P** **14 12 09.6 -0.6**
KUU pmax pmax
comp=Z,23nm,0.8s
KUU Kurty 55.62 336 *eP* **P** **14 12 09.6 -0.6**
comp=Z,23nm,0.8s,baz=336
EKS2 Erkin-Say 55.72 333 P **P** **14 12 11.9 +0.8**
SNR=29
TDK Taldyqorghan 55.75 338 *eP* **P** **14 12 10.6 -0.5**
TDK *eS* **S** **14 19 53.0 -1.5**
TDK pmax pmax
comp=Z,16nm,0.7s
TDK Taldyqorghan 55.75 338 *eP* **P** **14 12 10.7 -0.5**
comp=Z,16nm,0.7s,baz=338
TDK *eS* **S** **14 19 53.1 -1.5**
baz=338
ZSN Zaisan 55.86 344 *eP* **P** **14 12 11.6 -0.2**
ZSN Zaisan 55.86 344 *eP* **P** **14 12 11.7 -0.2**
baz=344
USRK Ussuriysk Ar. 55.88 24 P **P** **14 12 12.1 0.0**
comp=Z,17nm,0.8s,baz=216,slow=6.0,SNR=26
comp=Z,17nm,0.8s
USRK Ussuriysk Ar. 55.88 24 P **P** **14 12 11.7 -0.3**
USRK Ussuriysk Ar. 55.88 24 P **P** **14 12 11.7 -0.3**
USP Ospenovka 55.89 334 P **P** **14 12 12.4 +0.3**
SNR=5.8
SGDS Sogindy 55.98 334 *eP* **P** **14 12 12.2 -0.6**
SGDS Sogindy 55.98 334 *eP* **P** **14 12 12.2 -0.6**
baz=334
MK31 Makanchi Array 56.00 342 P **P** **14 12 12.6 -0.3**
MK31 IAmb IAmb 14 12 14.2
comp=Z,7.8nm,0.8s
MK31 Makanchi Array 56.00 342*d iP* **P** **14 12 12.9 0.0**
MKAR Makanchi Array 56.00 342 P **P** **14 12 12.9 0.0**
comp=Z,10nm,0.7s,baz=141,slow=7.8,SNR=70
comp=Z,10nm,0.7s
MAKZ Makanchi 56.11 342 P **P** **14 12 13.0 -0.7**
MAKZ Makanchi 56.11 342 P **P** **14 12 13.0 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
MAKZ Makanchi 56.11 342 P **P** **14 12 12.6 -1.1**
MAKZ pP **pP** **14 12 26.5 -0.2**
DZA Taraz 57.03 332 *eP* **P** **14 12 19.4 -0.9**
DZA pmax pmax
comp=Z,9.0nm,0.7s
DZA Taraz 57.03 332 *eP* **P** **14 12 19.4 -0.9**
comp=Z,8.7nm,0.7s,baz=332
IUG luzhnay 57.10 330 *eP* **P** **14 12 20.3 -0.5**
IUG *eS* **S** **14 20 10.0 -2.6**
IUG luzhnay 57.10 330 *eP* **P** **14 12 20.3 -0.5**
baz=330
IUG *eS* **S** **14 20 10.1 -2.6**
baz=330
BTLS Baital 57.51 335 *eP* **P** **14 12 22.3 -1.2**
BTLS Baital 57.51 335 *eP* **P** **14 12 22.4 -1.2**
baz=335
KK31 Karatay Array 57.58 331 P **P** **14 12 23.6 -0.6**
KK31 Karatay Array 57.58 331 P **P** **14 12 23.6 -0.6**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 57.58 331 P **P** **14 12 23.3 -0.9**
KKAR Karatay Array 57.58 331 P **P** **14 12 23.4 -0.8**
KKAR IAmb IAmb 14 12 26.6
comp=Z,4.7nm,0.8s
KKAR Karatay Array 57.58 331 P **P** **14 12 23.3 -0.9**
KKAR pmax pmax
comp=Z,5.0nm,0.9s
SEM Semipalatinsk 59.84 343 *eP* **P** **14 12 38.8 -1.1**
SEM pmax pmax
comp=Z,5.0nm,0.8s
SEM Semipalatinsk 59.84 343 *eP* **P** **14 12 38.9 -1.1**
comp=Z,4.5nm,0.8s,baz=342
KLR Kul'dur 60.01 21 P **P** **14 12 40.2 -0.7**
comp=Z,13nm,0.7s,baz=225,slow=6.1,SNR=32
comp=Z,13nm,0.7s
CASY Casey 60.37 177 P **P** **14 12 44.2 +1.2**
CASY pP **sP** **14 12 59.0 -2.0**
KURBB Kurchatov Arra 60.55 342 P **P** **14 12 44.2 -0.3**
KURK Kurchatov 60.61 342 P **P** **14 12 43.5 -1.4**
KURK IAmb IAmb 14 12 45.9
comp=Z,19nm,0.8s
KURK Kurchatov 60.61 342*c iP* **P** **14 12 44.7 -0.2**
KURK pmax pmax
comp=Z,22nm,0.8s
KURK Kurchatov 60.61 342 P **P** **14 12 43.7 -1.2**
KURK pP **pP** **14 12 57.2 -0.8**
KURK sP **sP** **14 13 04.0 +0.7**
OTUK Ortayu 60.78 336 P **P** **14 12 46.1 -0.1**
GEYT Alibeck 61.14 319 P **P** **14 12 49.9 +1.0**
comp=Z,9.9nm,0.6s,baz=120,slow=9.0,SNR=19
GEYT LR LR 14 40 27.6
comp=Z,58nm,21.7s,baz=124,slow=37
comp=Z,9.9nm,0.6s
GEYT Alibeck 61.14 319 P **P** **14 12 47.5 -1.3**
GEYT IAmb IAmb 14 12 50.9
comp=Z,12nm,0.8s
GYA0 ALIBECK ARRAY 61.14 319 P **P** **14 12 49.3 +0.5**
GYA0 pmax pmax
comp=Z,13nm,0.9s
ZAA0 Zalesovo Array 61.87 347 P **P** **14 12 51.8 -1.6**
ZAA0 IAmb IAmb 14 12 53.9
comp=Z,17nm,0.9s
ZALV Zalesovo Beam 61.87 347 P **P** **14 12 53.1 -0.3**
comp=Z,4.2nm,0.3s,baz=156,slow=4.7,SNR=42
ZALV LR LR 14 41 32.1
comp=Z,208nm,18.4s,baz=108,slow=38
comp=Z,4.2nm,0.3s
ZALV Zalesovo Beam 61.87 347 P **P** **14 12 51.9 -1.5**
BRZS Berezniki 62.05 338 *eP* **P** **14 12 53.8 -0.9**
BRZS pmax pmax
comp=Z,4.0nm,0.8s
BRZS Berezniki 62.05 338 *eP* **P** **14 12 53.9 -0.8**
comp=Z,4.4nm,0.8s,baz=338
DZM Mont Dzumac 62.12 112 LR LR 14 40 44.9
comp=Z,61nm,18.2s,baz=52,slow=37
ZEA Zeya 62.59 15 *eP* **P** **14 12 58.5 +0.3**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
YSS Yuzh-Sakhalins 62.79 29 P **P** **14 12 58.9 -0.8**
YSS Yuzh-Sakhalins 62.79 29*ce*P **P** **14 12 59.2 -0.5**
YSS pmax pmax
comp=Z,11nm,0.6s
ATD Arta Tunnel 63.42 286 LR LR 14 38 07.0
comp=Z,12nm,18.1s,baz=18,slow=34
BOD Bodaibo 64.08 6 *eP* **P** **14 13 07.6 -0.4**
BOD pmax pmax
comp=Z,17nm,1.1s
RAYN Ar Rayn 64.28 300 P **P** **14 13 11.4 +1.3**
RAYN pP **sP** **14 13 25.3 -2.7**
BRVK Borovoye 65.41 338 P **P** **14 13 16.1 -0.7**
BRVK IAmb IAmb 14 13 17.5
comp=Z,12nm,0.7s
BRVK Borovoye 65.41 338*ce*P **P** **14 13 16.4 -0.4**
BRVK pmax pmax
comp=Z,9.0nm,0.6s
DRV Dumont d'Urvil 65.42 165 P **P** **14 13 17.1 +0.5**
KMBO Kilima Mbogo 66.91 271 LR LR 14 37 48.9
comp=Z,70nm,21.6s,baz=92,slow=32
AB31 Akbulak array 67.11 330 *i* P **P** **14 13 27.9 +0.2**
ABKAR Akbulak array 67.11 330 P **P** **14 13 27.7 0.0**
MAW Mawson 67.55 196 P **P** **14 13 32.7 +2.5**
comp=Z,1.7nm,0.5s,baz=53,slow=4.1,SNR=8.8
MAW LR LR 14 36 55.9
comp=Z,133nm,21.2s,baz=22,slow=30
comp=Z,1.7nm,0.5s
AKTO Aktyubinsk 68.82 330 P **P** **14 13 38.5 0.0**
RPZ Rata Peaks 69.26 135 LR LR 14 44 22.1
comp=Z,61nm,19.7s,baz=261,slow=36
CCD Concordia, Ant 69.95 175 P **P** **14 13 47.2 +1.6**
CCD pP **sP** **14 14 02.5 -1.5**
YAK Yakutsk 70.61 12 P **P** **14 13 48.5 -0.7**
comp=Z,19nm,0.6s,baz=159,slow=0.6,SNR=21
YAK LR LR 14 47 04.6
comp=Z,47nm,18.2s,baz=269,slow=38
comp=Z,19nm,0.6s
YAK Yakutsk 70.61 12 P **P** **14 13 47.8 -1.4**
YAK Yakutsk 70.61 12*c iP* **P** **14 13 47.9 -1.3**
YAK pmax pmax
comp=Z,41nm,0.7s
YAK Yakutsk 70.61 12 P **P** **14 13 47.4 -1.7**
YAK pP **pP** **14 14 03.0 +0.3**
ARU Arti 72.50 335 P **P** **14 14 00.7 0.0**
ARU IAmb IAmb 14 14 02.2
comp=Z,26nm,1.0s
ARU Arti 72.50 335*c iP* **P** **14 14 01.1 +0.4**
ARU *PP **PcP** **14 14 18.7 +0.5**
ARU 14 16 39.7
ARU S **S** **14 23 22.3 +1.0**
ARU pmax pmax
comp=Z,30nm,1.0s
ZEI Tsey 72.94 318 *eP* **P** **14 14 03.6 -0.3**
ZEI pmax pmax
comp=Z,12nm,0.6s
URZ Urewera 72.95 128 LR LR 14 49 30.7
comp=Z,60nm,18.4s,baz=215,slow=38
ONI Oni 73.16 318 P **P** **14 14 03.8 -1.2**
ONI pmax pmax
comp=Z,9.0nm,1.1s
MBAR Mbarara 73.45 271 LR LR 14 42 47.6
comp=Z,69nm,19.8s,baz=76,slow=33
NCK Nalchik 73.45 319⇓ *eP* **P** **14 14 08.4 +1.7**
NCK pmax pmax
comp=Z,12nm,0.8s
KBZ Khabaz 74.00 319 P **P** **14 14 10.7 +0.9**
comp=Z,8.7nm,0.8s,baz=111,slow=4.6,SNR=20
comp=Z,8.7nm,0.8s
KBZ Khabaz 74.00 319*c iP* **P** **14 14 11.1 +1.3**
PETK Petropavlovsk- 74.10 30 LR LR 14 48 59.2
comp=Z,20nm,18.1s,baz=235,slow=38
KIV Kislovodsk 74.24 319 *eP* **P** **14 14 13.4 +2.0**
KIV pmax pmax
comp=Z,9.0nm,0.9s
MA2 Magadan 75.00 23 P **P** **14 14 14.8 -0.5**
comp=Z,6.5nm,0.8s,baz=175,slow=2.1,SNR=4.2
MA2 LR LR 14 48 54.2
comp=Z,28nm,19.0s,baz=244,slow=37
comp=Z,6.5nm,0.8s
MA2 Magadan 75.00 23 P **P** **14 14 14.8 -0.5**
MA2 IAmb IAmb 14 16 05.4
comp=Z,39nm,1.6s
MA2 Magadan 75.00 23 P **P** **14 14 14.8 -0.5**
MA2 pmax pmax
comp=Z,39nm,1.6s
BELG Belogornoye 75.26 328⇓ *eP* **P** **14 14 17.6 +0.7**
BELG pmax pmax
comp=Z,1.0nm,0.9s
NRIK Noril'sk 76.01 354 P **P** **14 14 20.2 -0.7**
comp=Z,5.4nm,0.5s,baz=149,slow=5.8,SNR=11
comp=Z,5.4nm,0.5s
NRIK Noril'sk 76.01 354 P **P** **14 14 20.2 -0.7**
NRIK IAmb IAmb 14 14 21.6
comp=Z,14nm,1.1s
NRIK Noril'sk 76.01 354*ce*P **P** **14 14 20.3 -0.7**
NRIK pmax pmax
comp=Z,13nm,1.0s
SOC Sochi 76.06 318 *eP* **P** **14 14 19.8 -1.9**
SOC *e* 14 17 13.7
SOC *e*PPP PPP 14 18 57.8
SOC *eS* **S** **14 23 58.1 -3.7**
SOC *eSS* **SS** **14 28 51.0 -4.8**
SOC MLR MLR
comp=Z,93nm,18.0s
LBTB Lobatse 77.15 246 LR LR 14 42 25.8
comp=Z,113nm,20.8s,baz=90,slow=31
BOSA Boshof 77.43 242 P **P** **14 14 31.6 +1.6**
comp=Z,3.2nm,1.1s,baz=68,slow=2.5,SNR=5.9
BOSA LR LR 14 41 24.3
comp=Z,71nm,21.8s,baz=177,slow=30
comp=Z,3.2nm,1.1s
VNDA Vanda 77.50 169 P **P** **14 14 31.4 +2.2**
comp=Z,1.8nm,0.8s,baz=328,slow=5.3,SNR=17
VNDA LR LR 14 44 15.2
comp=Z,59nm,20.1s,baz=316,slow=32
comp=Z,1.8nm,0.8s
VNDA Vanda 77.50 169 P **P** **14 14 30.4 +1.1**
VNDA Vanda 77.50 169 P **P** **14 14 30.4 +1.1**
VNDA pmax pmax
comp=Z,4.0nm,1.0s
KIRV Kirov 77.72 334*ce*P **P** **14 14 31.6 +0.9**
SEY Seymchan 77.80 20 P **P** **14 14 30.6 -0.5**
comp=Z,4.1nm,0.9s,baz=241,slow=5.1,SNR=17
comp=Z,4.1nm,0.9s
SEY Seymchan 77.80 20⇓ *eP* **P** **14 14 31.4 +0.3**
SEY pmax pmax
comp=Z,12nm,1.7s
VRH Novokhopyorsk 77.92 325 *eP* **P** **14 14 32.2 +0.2**
VRH pmax pmax
comp=Z,20nm,0.8s
SBA Scott Base 78.58 169 P **P** **14 14 37.7 +2.4**
SBA IAmb IAmb 14 15 10.8
comp=Z,27nm,2.0s
SBA Scott Base 78.58 169 P **P** **14 14 37.7 +2.4**
SBA pmax pmax
comp=Z,27nm,2.0s
BR131 Keskin Array S 79.04 312 P **P** **14 14 38.0 -0.6**
BR131 IAmb IAmb 14 14 40.5
comp=Z,15nm,0.8s
BR131 Keskin Array S 79.04 312*d iP* **P** **14 14 39.5 +0.8**
BRTR Keskin Array B 79.04 312 P **P** **14 14 39.5 +0.8**
comp=Z,8.6nm,0.8s,baz=130,slow=7.3,SNR=40
comp=Z,8.6nm,0.8s
BRTR Keskin Array B 79.04 312 P **P** **14 14 39.3 +0.6**
TIXI Tiksi 79.15 8 P **P** **14 14 36.9 -1.4**
comp=Z,5.9nm,0.8s,baz=90,slow=23,SNR=6.5
TIXI LR LR 14 54 33.4
comp=Z,55nm,18.2s,baz=181,slow=40
comp=Z,5.9nm,0.8s
TIXI Tiksi 79.15 8 P **P** **14 14 37.1 -1.3**
TIXI Tiksi 79.15 8*ce*P **P** **14 14 36.8 -1.6**
TIXI pmax pmax
comp=Z,14nm,2.5s
VSR Storozhevoye 79.39 325 *eP* **P** **14 14 39.5 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 79.55 325 *eP* **P** **14 14 41.2 +0.3**
VORR pmax pmax
comp=Z,20nm,0.3s
LPSR Galich'ya Gora 80.08 326 *eP* **P** **14 14 43.5 -0.3**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
SUR Sutherland 81.22 238 LR LR 14 44 00.4
comp=Z,78nm,21.0s,baz=137,slow=30
MOS Moscow 82.02 328 *eP* **P** **14 14 53.5 -0.5**
OBN Obninsk 82.34 328*d iP* **P** **14 14 57.0 +1.3**
OBN *e* 14 18 07.5
OBN pmax pmax
comp=Z,7.0nm,0.6s
KLMR Klimovskoe 83.20 334 *eP* **P** **14 14 59.7 -0.4**
KLMR pmax pmax
comp=Z,25nm,1.2s
KLMR Klimovskoe 83.20 334 *eP* **P** **14 14 59.7 -0.4**
KLMR AMP 14 15 16.6
comp=Z,25nm,1.2s
QSPA South Pole Qui 84.01 180 LR LR 14 47 34.2
comp=Z,119nm,21.7s,baz=304,slow=32
QSPA South Pole Qui 84.01 180 P **P** **14 15 06.0 +1.6**
QSPA IAmb IAmb 14 15 49.8
comp=Z,26nm,1.9s
MILM Milestii Mici 84.42 318 ⇓P **P** **14 15 08.1 +1.5**
MILM Milestii Mici 84.42 318 ⇓P **P** **14 15 08.1 +1.5**
CFR Carcaliu 84.44 316 ⇓P **P** **14 15 06.3 -0.5**
CFR Carcaliu 84.44 316 ⇓P **P** **14 15 06.3 -0.5**
IDI Anoyia 84.71 306 LR LR 14 56 36.3
comp=Z,12nm,19.9s,baz=85,slow=38
TSUM Tsumeb 84.84 251 LR LR 14 48 25.3
comp=Z,90nm,20.9s,baz=147,slow=32
SORM Soroca 85.03 319 ⇑P **P** **14 15 10.2 +0.6**
SORM Soroca 85.03 319 ⇑P **P** **14 15 10.2 +0.6**
AKASG Malin Array Be 85.14 322 P **P** **14 15 10.7 +0.5**
comp=Z,2.4nm,0.6s,baz=81,slow=5.1,SNR=19
comp=Z,2.4nm,0.6s
AKBB Malin Array Si 85.14 322 P **P** **14 15 10.0 -0.2**
AKBB IAmb IAmb 14 15 11.7
comp=Z,8.5nm,0.7s
AKBB Malin Array Si 85.14 322 P **P** **14 15 10.0 -0.2**
AKBB pmax pmax
comp=Z,8.0nm,0.7s
BILL Bilibino 85.45 19⇓ *eP* **P** **14 15 10.7 -0.7**
BILL pmax pmax
comp=Z,6.0nm,1.0s

BILL MLR MLR
comp=Z,39nm,17.0s
VRI Vrincioaia 85.56 317 ⇓P **P 14 15 13.4 +0.9**
VRI Vrincioaia 85.56 317 ⇓P **P 14 15 13.4 +0.9**
PLOR Plostina 85.61 317 ⇑P **P 14 15 13.7 +1.0**
PLOR Plostina 85.61 317 ⇑P **P 14 15 13.7 +1.0**
MLR Muntele Rosu 86.02 316 ⇓P **P 14 15 15.5 +0.6**
MLR Muntele Rosu 86.02 316 P **P 14 15 13.9 -1.0**
MLR Muntele Rosu 86.02 316 ⇓P **P 14 15 15.5 +0.6**
DOPR Dopca 86.50 317 ⇓P **P 14 15 18.9 +1.8**
VOIR 86.62 316 ⇑P **P 14 15 19.0 +1.3**
VOIR 86.62 316 ⇑P **P 14 15 19.0 +1.3**
BURAR Bucovina Array 86.96 318 ⇑P **P 14 15 21.9 +2.5**
BURAR Bucovina Array 86.96 318 **P 14 15 21.4 +2.0**
BURAR Bucovina Array 86.96 318 ⇑P **P 14 15 21.9 +2.5**
BUR08 Bucovina Ar. S 86.98 318 **P 14 15 21.5 +2.0**
BUR08 IAmb IAmb 14 15 22.9
comp=Z,11nm,0.8s
VALR Valaam 87.28 332*de*P **P 14 15 21.2 +0.7**
VALR pmax pmax
comp=Z,10.0nm,1.0s
VTS Vitosha 87.36 313 ⇓P **P 14 15 21.3 -0.2**
VTS Vitosha 87.36 313 ⇓P **P 14 15 21.3 -0.2**
NACGM Naroch 87.64 326 ⇓*i*P **P 14 15 23.8 +1.5**
baz=104
LVZ Lovozero 87.93 339 P **P 14 15 24.0 +0.5**
LVZ Lovozero 87.93 339 P **P 14 15 24.0 +0.5**
LVZ pmax pmax
comp=Z,125nm,2.0s
TROLL Troll, Antarti 87.94 198 pP pP 14 15 41.2 +4.2
DEV Deva 88.18 316 ⇓P **P 14 15 28.0 +2.8**
DEV Deva 88.18 316 ⇓P **P 14 15 28.0 +2.8**
GZR Gura Zlata 88.18 316 ⇓P **P 14 15 27.5 +2.2**
GZR Gura Zlata 88.18 316 ⇓P **P 14 15 27.5 +2.2**
DRGR 88.48 317 ⇑P **P 14 15 29.5 +2.9**
DRGR 88.48 317 ⇑P **P 14 15 29.5 +2.9**
MDVR Moldovita 88.82 315 ⇑P **P 14 15 30.3 +2.1**
KWP Kalwaria Pacla 88.99 320 P **P 14 15 28.8 -0.1**
KWP pmax pmax
comp=Z,453nm,0.6s
BZS Buzias 89.02 316 ⇑P **P 14 15 31.6 +2.5**
BZS Buzias 89.02 316 ⇑P **P 14 15 31.6 +2.5**
KOLS Kolonicke sedl 89.14 319 *e*P **P 14 15 32.5 +2.9**
KOLS pmax pmax
comp=Z,27nm,0.9s
KOLS Kolonicke sedl 89.14 319 *e*P **P 14 15 32.5 +2.9**
FIA1 FINESS Array S 89.53 332 P **P 14 15 31.2 +0.1**
FIA1 IAmb IAmb 14 15 33.1
comp=Z,7.6nm,0.8s
FINES FINESS Array B 89.54 332 P **P 14 15 32.0 +0.9**
comp=Z,4.9nm,0.7s,baz=101,slow=8.0,SNR=19
comp=Z,4.9nm,0.7s
FINES FINESS Array B 89.54 332 P **P 14 15 31.5 +0.4**
SNAA Sanae 89.65 198 pP pP 14 15 50.3 +5.2
SNAA Sanae 89.65 198 LR LR 14 51 44.6
comp=Z,44nm,19.1s,baz=76,slow=33
CRVS Cervenica-Dubn 89.67 319 *e*P **P 14 15 36.0 +3.9**
CRVS pmax pmax
comp=Z,12nm,1.2s
CRVS Cervenica-Dubn 89.67 319 *e*P **P 14 15 36.0 +3.9**
VNA2 Neumayer--Watz 91.29 198 P **P 14 15 40.1 +0.8**
baz=91,slow=5.0
VNA2 Neumayer--Watz 91.29 198 pP pP 14 15 59.4 +6.8
ARCES ARCESS Array B 91.60 340 P **P 14 15 41.0 +0.4**
comp=Z,2.7nm,0.8s,baz=120,slow=2.7,SNR=11
comp=Z,2.7nm,0.8s
VNA1 Neumayer--Stat 91.66 198 pP pP 14 16 02.4 +8.1
VNA3 Neumayer Olymp 91.85 197 P **P 14 15 39.7 -2.2**
VNA3 Neumayer Olymp 91.85 197 pP pP 14 16 02.8 +7.6
RAR Rarotonga 93.50 112 LR LR 14 59 16.3
comp=Z,33nm,18.6s,baz=283,slow=36
GERES GERESS Array B 94.75 318 P **P 14 15 56.9 +1.2**
comp=Z,0.4nm,0.5s,baz=90,slow=5.3,SNR=3.6
comp=Z,0.4nm,0.5s
SPITS Spitsbergen Ar 95.35 348 LR LR 15 05 56.7
comp=Z,87nm,18.7s,baz=68,slow=40
NOA NORSAR Array B 96.61 331 P **P 14 16 04.8 +0.9**
comp=Z,0.8nm,0.8s,baz=118,slow=3.6,SNR=3.4
comp=Z,0.8nm,0.8s
DAVOX Davos/Dischmat 97.24 316 LR LR 15 07 44.9
comp=Z,31nm,18.2s,baz=268,slow=40
S14K Fog Glacier 98.43 34 P **P 14 16 11.6 -0.6**
baz=272
CHNA Chernabura Isl 98.45 36 P **P 14 16 12.0 -0.2**
baz=272
A21K Barrow 98.58 19 P **P 14 16 12.4 0.0**
baz=277
K20K Telida 100.59 27 P **Pdif 14 16 21.5 -0.1**
baz=278
M20K Styx River 101.23 28 P **Pdif 14 16 23.4 -1.1**
baz=278
CHUM Lake Minchumin 101.28 26 P **Pdif 14 16 23.5 -1.1**
baz=280
SII Sitkinak Islan 101.38 34 P **Pdif 14 16 24.8 -0.5**
baz=276
Q19K Cape Douglas, 101.38 31 P **Pdif 14 16 25.1 -0.1**
baz=277
H24K Noodor Dome 102.73 24 P **Pdif 14 16 31.6 +0.5**
baz=284
H25K Birch Creek 103.43 23 P **Pdif 14 16 32.7 -1.4**
baz=286
RIDG Independent Ri 104.54 25 P **Pdif 14 16 39.1 -0.2**
baz=286
J01E Myrtle Point 123.82 41 P **PKPdf 14 21 31.7 -0.5**
baz=297
B08A Colville Reser 123.94 34 **PKPdf 14 21 32.6 +0.3**
H04D Lebanon 123.94 39 P **PKPdf 14 21 31.9 -0.5**
baz=299
I03D Drain, OR 123.95 40 P **PKPdf 14 21 31.4 -0.9**
baz=298
K02D Willamette Mer 124.21 41 P **PKPdf 14 21 32.3 -0.8**
baz=297
G05D Wamic, OR 124.47 38 P **PKPdf 14 21 32.5 -0.8**
baz=301
I04A Tendick Farm, 124.50 40 P **PKPdf 14 21 32.6 -0.9**
baz=299
L02F Cave Junction 124.53 42 P **PKPdf 14 21 33.1 -0.5**
baz=297
I05D Terrebonne, OR 124.91 39 P **PKPdf 14 21 33.9 -0.4**
baz=300
J04D Umpqua Nationa 124.96 40 P **PKPdf 14 21 33.9 -0.7**
baz=299
NEW Newport 125.19 33 P **PKPdf 14 21 34.2 -0.5**
baz=307
L04D Klamath Falls 125.32 41 P **PKPdf 14 21 34.3 -1.0**
baz=298
J05D Fort Rock, OR 125.50 40 P **PKPdf 14 21 34.6 -1.0**
baz=300
MSO Missoula 127.78 32 **PKPdf 14 21 40.0 +0.2**
MSO Missoula 127.78 32 P **PKPdf 14 21 39.1 -0.7**
baz=309
EGMT Eagleton 129.10 29 P **PKPdf 14 21 41.4 -0.9**
baz=314
HLID Hailey 129.51 36 P **PKPdf 14 21 42.1 -1.2**
baz=307
BOZ Bozeman (W) 129.80 32 P **PKPdf 14 21 42.8 -0.9**
baz=311
NVAR Mina Array Bea 129.81 44 PKP **PKiKP 14 21 45.8 +1.0**
comp=Z,1.1nm,0.6s,baz=328,slow=2.1,SNR=11
CWC Cottonwood Cre 130.91 46 P **PKPdf 14 21 45.7 -0.5**
baz=298
RLMT Red Lodge 131.35 31 P **PKPdf 14 21 46.1 -0.7**
baz=313
MPMC Manual Prospec 131.51 46 P **PKPdf 14 21 47.0 -0.3**
baz=298
R11A Troy Canyon, C 131.70 42 P **PKPdf 14 21 46.1 -1.5**
baz=302
LAO LASA Array 131.73 28 P **PKPdf 14 21 47.0 -0.3**
baz=318
GSC Goldstone, Bar 132.36 47 P **PKPdf 14 21 48.0 -0.8**
baz=298
SHOC Shoshone, Teco 132.46 46 P **PKPdf 14 21 47.9 -1.0**
baz=299
DUG Dugway, Tooele 132.47 39 P **PKPdf 14 21 47.4 -1.5**
baz=306
BW06 Boulder Array 132.78 34 P **PKPdf 14 21 47.7 -1.8**
baz=311
PDAR Pinedale Array 132.78 34 PKP **PKiKP 14 21 51.3 +0.6**
comp=Z,0.9nm,0.6s,baz=303,slow=1.1,SNR=12
PDAR SKPbc **SKPbc 14 25 13.2 -0.1**
comp=Z,0.8nm,0.8s,baz=318,slow=1.2,SNR=4.5
HEC Hector,Ludlow 132.92 47 P **PKPdf 14 21 48.8 -1.0**
baz=298
PFO Pinyon Flats O 133.39 48 P **PKPdf 14 21 48.9 -1.9**
baz=297
TPFO Pinon Flats 133.40 48 P **PKPdf 14 21 48.7 -2.1**
baz=297
GMRC Granite Mounta 133.43 47 P **PKPdf 14 21 49.7 -1.2**
baz=299
BELC Belle Mtn. Jos 133.56 48 P **PKPdf 14 21 51.2 0.0**
baz=298
MDND Maddock 133.59 22 P **PKPdf 14 21 49.7 -0.9**
baz=326
K22A Casper 134.50 32 P **PKPdf 14 21 52.8 +0.1**
baz=315
RSSD Black Hills 134.67 29 PKPdf **PKPdf 14 21 52.8 -0.3**
RSSD Black Hills 134.67 29 PKIKP **PKPdf 14 21 52.8 -0.3**
RSSD Black Hills 134.67 29 P **PKPdf 14 21 53.3 +0.3**
baz=319
RSSD Black Hills 134.67 29 P **PKPdf 14 21 52.7 -0.3**
baz=319
O20A White River Ci 135.25 36 P **PKPdf 14 21 53.2 -1.0**
baz=311
N23A Red Feather La 136.03 33 P **PKPdf 14 21 55.2 -0.5**
baz=314
WUAZ Wupatki 136.06 43 P **PKPdf 14 21 55.8 -0.1**
baz=304
EYMN Ely 136.09 15 P **PKPdf 14 21 55.2 -0.1**
baz=337
MVCO Mesa Verde 136.95 39 P **PKPdf 14 21 57.5 0.0**
baz=308
ISCO Idaho Springs 136.97 34 P **PKPdf 14 21 57.4 -0.2**
baz=314
ECSD EROS Data Cent 138.19 23 **PKPdf 14 21 59.5 +0.1**
ECSD EROS Data Cent 138.19 23 P **PKPdf 14 21 59.7 +0.4**
baz=328
SPMN Marine on St. 138.20 18 P **PKPdf 14 21 59.2 0.0**
baz=334
SDCO Great Sand Dun 138.43 36 P **PKPdf 14 22 00.1 -0.2**
baz=312
T25A Trinidad 139.48 36 P **PKPdf 14 22 01.1 -1.1**
baz=313
ANMO Albuquerque 139.65 40 P **PKPdf 14 22 01.5 -1.0**
baz=309
T35B Sooner Cattle 143.87 29 P PKPbc 14 22 08.2 +0.8
baz=324
WMOK Wichita Mounta 144.39 33 **PKPab 14 22 08.7 -0.2**
WMOK Wichita Mounta 144.39 33 PKIKP **PKPab 14 22 08.7 -0.2**
WMOK Wichita Mounta 144.39 33 P PKPbc 14 22 09.5 +0.3
baz=318,SNR=8.9
WMOK Wichita Mounta 144.39 33 P PKPbc 14 22 09.5 +0.3
baz=318,SNR=8.9
M53A WI Miller and 144.42 6 P **PKPab 14 22 09.1 +0.3**
baz=352
R40A Maddies Statio 144.54 23 **PKPab 14 22 09.0 -0.3**
R40A Maddies Statio 144.54 23 P **PKPab 14 22 09.2 -0.1**
baz=331
S39A Bolivar 144.64 24 **PKPab 14 22 09.1 -0.5**
S39A Bolivar 144.64 24 P **PKPab 14 22 08.8 -0.9**
baz=329
N51A Ashland 144.72 9 P **PKPab 14 22 09.9 +0.1**
baz=349
N51A P **PKPab 14 22 09.9 +0.1**
baz=349
DEOK Depew 144.73 30 **PKPab 14 22 10.1 +0.1**
FNO Franklin 144.73 31 **PKPab 14 22 10.4 +0.3**
M57A Sunshine Farm, 144.77 2 **PKPab 14 22 10.1 0.0**
M57A Sunshine Farm, 144.77 2 P PKPbc 14 22 10.4 +0.3
baz=358
M57A P PKPbc 14 22 10.4 +0.3
baz=358
PSWB Penn State Wil 144.82 0 P **PKPab 14 22 10.5 +0.3**
baz=360
O48B Garland 144.85 12 P **PKPab 14 22 10.1 -0.2**
baz=344
O48B Farmland 144.85 12 P **PKPab 14 22 08.7 -1.7**
baz=344,SNR=5.9
TX31 Lajitas Ar. Si 144.93 45 P **PKPdf 14 22 12.2 +0.3**
baz=306
TX32 Lajitas Array 144.93 45 PKPdf PKPbc 14 22 11.8 +0.7
TXAR Lajitas Array 144.93 45 PKP **PKPdf 14 22 12.4 +0.5**
comp=Z,17nm,0.7s,baz=276,slow=1.4,SNR=201
TXAR Lajitas Array 144.93 45 PKPdf **PKPdf 14 22 12.0 +0.1**
TXAR Lajitas Array 144.93 45 PKIKP **PKPdf 14 22 12.0 +0.1**
TUL1 Leonard 145.02 29 P **PKPbc 14 22 11.3 +0.2**
baz=324,SNR=9.2
TUL1 Leonard 145.02 29 P **PKPbc 14 22 09.1 -2.0**
baz=324,SNR=9.2
ODNJ Ogdensburg 145.02 358 P **PKPbc 14 22 10.7 -0.2**
baz=2.1
N53A Lisbon 145.03 7 P **PKPab 14 22 11.5 +0.5**
baz=351,SNR=5.6
N53A P **PKPab 14 22 11.5 +0.5**
baz=351,SNR=5.6
BDFB Brasilia 145.06 232 PKPbc **PKiKP 14 22 14.9 -1.5**
comp=Z,5.0nm,0.8s,baz=134,slow=5.4,SNR=6.8
PAL Palisades 145.07 357 P **PKPbc 14 22 09.9 -1.2**
baz=3.3
O49A Covington 145.09 11 P **PKPbc 14 22 10.3 -0.9**
baz=345
O49A P **PKPbc 14 22 10.3 -0.9**
baz=345
CCM Cathedral Cave 145.13 22 P **PKPbc 14 22 10.6 -0.7**
baz=333
CCM Cathedral Cave 145.13 22 P **PKPbc 14 22 10.2 -1.2**
baz=333
U38A Gravette 145.24 27 P **PKPbc 14 22 11.7 -0.2**
baz=326,SNR=24
N58A Sunbury 145.27 1 P **PKPbc 14 22 11.8 +0.1**
baz=358,SNR=13
N58A P **PKPbc 14 22 11.8 +0.1**
baz=358,SNR=13
ACSO Alum Creek Sta 145.29 10 P **PKPbc 14 22 11.9 +0.1**
baz=348,SNR=12
ACSO Alum Creek Sta 145.29 10 P **PKPbc 14 22 10.9 -1.0**
baz=348
ABTX Abilene, Hawle 145.43 37 P **PKPbc 14 22 12.9 +0.3**
baz=315,SNR=7.4
ABTX Abilene, Hawle 145.43 37 P **PKPbc 14 22 11.6 -0.9**
baz=315,SNR=7.4
UPAO U. Pittsburgh 145.43 6 P **PKPbc 14 22 12.6 +0.3**
baz=353
SSPA Standing Stone 145.44 3 P **PKPdf 14 22 12.7 +0.4**
baz=356,SNR=7.6
SSPA Standing Stone 145.44 3 P **PKPbc 14 22 11.1 -1.2**
baz=356
FVM French Village 145.48 21 **PKPdf 14 22 11.5 -1.0**
FVM French Village 145.48 21 PKIKP **PKPdf 14 22 11.5 -1.0**
FVM French Village 145.48 21 P **PKPdf 14 22 12.5 0.0**
baz=334
O53A New Philadelph 145.53 7 P **PKPdf 14 22 12.0 -0.5**
baz=351,SNR=7.5
OLIL Olney 145.55 17 P **PKPbc 14 22 13.1 +0.4**
baz=338
P48A Milroy 145.56 13 PKPdf **PKPdf 14 22 11.9 -0.7**
P48A Milroy 145.56 13 P **PKPdf 14 22 12.2 -0.4**
baz=343
P48A P **PKPdf 14 22 12.2 -0.4**
baz=343
HHAR Hobbs 145.57 26 P **PKPdf 14 22 12.4 -0.3**
baz=327
O52A Adamsville 145.58 8 **PKPdf 14 22 12.2 -0.3**
O52A Adamsville 145.58 8 P **PKPdf 14 22 12.4 -0.2**
baz=349,SNR=5.7
O52A P **PKPdf 14 22 12.4 -0.2**
baz=349,SNR=5.7
P49A Miami Univ. Ec 145.64 12 P **PKPdf 14 22 12.9 +0.2**
baz=344,SNR=7.7
P49A Miami Univ. Ec 145.64 12 P **PKPdf 14 22 11.6 -1.1**
baz=344,SNR=7.7
O54A Avella 145.69 6 **PKPdf 14 22 11.7 -1.1**
O54A Avella 145.69 6 P **PKPbc 14 22 13.5 +0.4**
baz=352,SNR=5.6
O54A P **PKPbc 14 22 13.5 +0.4**
baz=352,SNR=5.6
PAGS Pennsylvania G 145.88 1 PKPbc **PKPdf 14 22 13.0 -0.1**
TUPA Temple Univers 145.95 359 P **PKPbc 14 22 14.0 +0.2**
baz=1.1
P51A Williamsport 146.01 10 PKPbc **PKPdf 14 22 13.6 +0.3**
P51A Williamsport 146.01 10 P **PKPdf 14 22 14.0 +0.7**
baz=347
P51A P **PKPdf 14 22 14.0 +0.7**
baz=347
P52A Corning 146.01 9 PKPbc **PKPdf 14 22 13.2 -0.1**
P52A Corning 146.01 9 P **PKPdf 14 22 12.0 -1.3**
baz=349,SNR=6.8
S44A Carbondale 146.14 19 P **PKPbc 14 22 15.2 +0.6**
baz=336,SNR=5.9
PSUB Penn St. - Bra 146.19 359 P **PKPbc 14 22 14.5 -0.1**
baz=0.7
P53A Whipple 146.26 8 P **PKPbc 14 22 15.0 +0.1**
baz=350,SNR=5.2
P53A P **PKPbc 14 22 15.0 +0.1**
baz=350,SNR=5.2
MCWV Mont Chateau 146.27 6 PKPdf **PKPdf 14 22 12.5 -1.3**
MCWV Mont Chateau 146.27 6 P **PKPbc 14 22 15.2 +0.3**
baz=353
MCWV Mont Chateau 146.27 6 P **PKPdf 14 22 13.6 -0.2**
baz=353
X37A Clayton 146.28 30 **PKPbc 14 22 14.9 -0.1**
X37A Clayton 146.28 30 P **PKPbc 14 22 15.1 0.0**
baz=323,SNR=6.1
Q51A Peebles 146.40 11 P **PKPbc 14 22 15.6 +0.2**
baz=346,SNR=9.6
Q51A P **PKPbc 14 22 15.6 +0.2**
baz=346,SNR=9.6
PBMO Poplar Bluff 146.56 22 PKPbc **PKPdf 14 22 14.8 +0.5**
PBMO Poplar Bluff 146.56 22 P **PKPdf 14 22 15.3 +1.0**
baz=333,SNR=15
P57A Homestead Farm 146.58 3 PKPbc **PKPdf 14 22 15.3 +1.0**
P57A Homestead Farm 146.58 3 P **PKPbc 14 22 16.0 +0.2**
baz=356,SNR=6.0
P57A P **PKPbc 14 22 16.0 +0.2**
baz=356,SNR=6.0
Q52A Bidwell 146.65 9 P **PKPbc 14 22 16.2 +0.2**
baz=348,SNR=8.0
Q52A P **PKPbc 14 22 16.2 +0.2**
baz=348,SNR=8.0
R49A Shelbyville 146.73 13 PKPbc **PKPdf 14 22 15.6 +1.0**
R49A Shelbyville 146.73 13 P **PKPbc 14 22 16.6 +0.3**
baz=343,SNR=8.8
R49A P **PKPbc 14 22 16.6 +0.3**
baz=343,SNR=8.8
JCT Junction City 146.81 40 P **PKPbc 14 22 16.6 -0.2**
baz=313
JCT Junction City 146.81 40 P **PKPdf 14 22 16.2 +1.2**
baz=313
Q54A Coxs Mills 146.83 7 PKPbc **PKPdf 14 22 15.8 +1.1**
Q54A Coxs Mills 146.83 7 P **PKPbc 14 22 16.5 0.0**
baz=351,SNR=7.5
Q54A P **PKPbc 14 22 16.5 0.0**
baz=351,SNR=7.5
LCAR Lake Charles 146.91 23 PKPbc **PKPdf 14 22 15.8 +0.8**
R50A Paris 146.93 12 P **PKPbc 14 22 16.6 -0.2**
baz=344,SNR=6.2
R50A P **PKPbc 14 22 16.6 -0.2**
baz=344,SNR=6.2
WHTX Lake Whitney, 147.16 35 P **PKPbc 14 22 18.5 +0.8**
baz=318,SNR=7.5
WHTX Lake Whitney, 147.16 35 P **PKPbc 14 22 17.5 -0.3**
baz=318,SNR=7.5
MIAR Mount Ida 147.18 28 P **PKPbc 14 22 18.3 +0.6**
baz=326,SNR=18
MIAR Mount Ida 147.18 28 P **PKPbc 14 22 17.0 -0.7**
baz=326,SNR=18
R53A Hurricane 147.31 9 P **PKPbc 14 22 18.0 0.0**
baz=349,SNR=7.9
R53A P **PKPbc 14 22 18.0 0.0**
baz=349,SNR=7.9
T47A Sharon Grove 147.46 17 **PKPbc 14 22 18.1 -0.3**
T47A Sharon Grove 147.46 17 P **PKPbc 14 22 18.1 -0.3**
baz=339,SNR=7.0
S51A Beattyville 147.70 12 PKPbc **PKPbc 14 22 18.2 -0.8**
S51A Beattyville 147.70 12 P **PKPbc 14 22 19.0 0.0**
baz=346,SNR=9.0
S51A P **PKPbc 14 22 19.0 0.0**
baz=346,SNR=9.0
CBN Corbin Frederi 147.88 2 P **PKPbc 14 22 18.4 -1.0**
baz=357
S54A Dingess, Beckl 147.93 8 PKPbc **PKPbc 14 22 19.1 -0.6**
435B Jarrell 147.97 37 P **PKPbc 14 22 19.0 -0.9**
baz=316
T50A Nancy 148.02 14 PKPbc **PKPbc 14 22 19.3 -0.6**
T50A Nancy 148.02 14 P **PKPbc 14 22 19.6 -0.3**
baz=343
T50A P **PKPbc 14 22 19.6 -0.3**
baz=343
WVT Waverly 148.03 19 PKPbc **PKPbc 14 22 20.0 0.0**
WVT Waverly 148.03 19 PKP2 **PKPbc 14 22 20.0 0.0**
WVT Waverly 148.03 19 P **PKPbc 14 22 20.4 +0.4**
baz=337,SNR=31
WVT Waverly 148.03 19 P **PKPbc 14 22 19.5 -0.4**
baz=337
237A Washetta, Mont 148.08 33 PKPbc **PKPbc 14 22 19.6 -0.6**
R58B Mineral 148.10 3 PKPbc **PKPbc 14 22 19.7 -0.4**
U49A Red Boiling Sp 148.27 15 PKPbc **PKPbc 14 22 20.1 -0.5**
U49A Red Boiling Sp 148.27 15 P **PKPbc 14 22 20.6 +0.1**
baz=341,SNR=10
JSRW J. Sargeant Re 148.37 3 PKPbc **PKPbc 14 22 20.8 0.0**
833A Chaparral WMA, 148.50 42 PKPbc **PKPbc 14 22 20.1 -1.3**
833A Chaparral WMA, 148.50 42 P **PKPbc 14 22 20.1 -1.3**
baz=311
CLTN Cedars of Leba 148.51 16 PKPbc **PKPbc 14 22 21.2 0.0**
BLA Blacksburg 148.62 7 P **PKPbc 14 22 21.4 -0.1**
baz=351
V48A Smith Brothers 148.70 17 P **PKPbc 14 22 21.8 0.0**
baz=339,SNR=12
TZTN Tazewell 148.76 12 PKPbc **PKPbc 14 22 21.8 -0.1**
TZTN Tazewell 148.76 12 P **PKPbc 14 22 22.4 +0.6**
baz=345,SNR=6.0
TZTN Tazewell 148.76 12 P **PKPbc 14 22 21.8 -0.1**
baz=345
NATX Nacogdoches 148.88 32 P **PKiKP 14 22 23.6 0.0**
baz=322
NATX Nacogdoches 148.88 32 P **PKPbc 14 22 22.5 +0.2**
baz=322
OXF Oxford 148.95 22 P **PKPbc 14 22 22.6 +0.2**
baz=333
OXF Oxford 148.95 22 P **PKPbc 14 22 22.7 +0.3**
baz=333
T59A Double "B" Far 149.10 3 P **PKPbc 14 22 23.3 +0.6**
baz=357
T59A P **PKPbc 14 22 23.3 +0.6**
baz=357
V51A Loudon 149.30 14 P **PKPbc 14 22 23.6 +0.4**
baz=343,SNR=5.6
V52A Sevierville 149.43 12 **PKPbc 14 22 23.4 -0.2**
V52A Sevierville 149.43 12 P **PKPbc 14 22 24.0 +0.4**
baz=345,SNR=12
SWET Sewanee 149.44 16 **PKPbc 14 22 22.8 -0.9**
TKL Tuckaleechee C 149.57 13 P **PKPbc 14 22 24.2 +0.3**
baz=344
W50A Signal Mountai 149.63 15 P **PKPbc 14 22 24.3 +0.2**
baz=341,SNR=5.8
V53A Saluda 149.76 11 P **PKPbc 14 22 24.9 +0.4**
baz=346,SNR=13
V53A P **PKPbc 14 22 24.9 +0.4**
baz=346,SNR=13
X48A Hartselle 149.82 19 P **PKPbc 14 22 24.4 -0.2**
baz=338,SNR=14
CASEE Lake Jocassee 150.39 12 P **PKPbc 14 22 26.1 +0.2**
baz=346,SNR=8.7
VBMS Vicksburg 150.51 26 P **PKPbc 14 22 26.1 -0.2**
baz=329
KMSC Kings Mountain 150.53 9 P **PKPbc 14 22 26.9 +0.6**
baz=349,SNR=5.7
KMSC Kings Mountain 150.53 9 P **PKPbc 14 22 26.3 +0.1**
baz=349
Y49A Blount Mountai 150.57 18 P **PKPbc 14 22 26.6 +0.2**
baz=338,SNR=16
Z47A Carrollton 150.62 21 P **PKPbc 14 22 27.1 +0.6**
baz=335
146A Union 150.75 23 P **PKiKP 14 22 28.1 +0.6**
baz=332,SNR=9.5
PAULI Pauline 150.76 10 **PKPbc 14 22 26.4 -0.4**
PAULI Pauline 150.76 10 P **PKPbc 14 22 26.3 -0.4**
baz=348
LRAL Lakeview Retre 151.14 20 P **PKPbc 14 22 26.9 -0.8**
baz=337
LRAL Lakeview Retre 151.14 20 P **PKPbc 14 22 27.7 0.0**
baz=337
Y52A Lilburn 151.22 14 P **PKiKP 14 22 28.9 +0.5**
baz=343,SNR=10
Y52A P **PKiKP 14 22 28.9 +0.5**
baz=343,SNR=10
HODGE Hodges 151.26 11 P **PKPbc 14 22 27.7 -0.2**
baz=347
JSC Jenkinsville 151.38 9 **PKPbc 14 22 27.9 -0.3**
JSC Jenkinsville 151.38 9 PKIKP **PKPbc 14 22 27.9 -0.3**
JSC Jenkinsville 151.38 9 P **PKiKP 14 22 29.1 +0.4**
baz=349
Z51A Franklin 151.44 16 P **PKPbc 14 22 28.8 +0.3**
baz=340
GOGA Godfrey 151.79 14 P **PKPbc 14 22 29.6 +0.4**
baz=344
GOGA Godfrey 151.79 14 P **PKPbc 14 22 28.6 -0.6**
baz=344
HAW Hawthorne Fire 152.22 10 P **PKPbc 14 22 30.5 +0.3**
baz=348
NHSC New Hope 152.70 8 P **PKPbc 14 22 30.7 -0.5**

baz=351
BRAL Brewton 152.82 21 P PKPbc 14 22 30.2 -1.3
baz=335
TIGA Tifton 153.64 15 P PKPbc 14 22 32.5 -0.8
baz=342

IDC ***07*** *14:12:17.2±0.5,46°.94N×155°.51E,h0km,mb4.3/24, mbtmp4.2/28,ML3.0/4,MS3.6/17,Error ellipse: s-maj=15.5km s-min=11.8km az=141.0*
MOS ***07*** *14:12:19.5±1.5,46°.98N×155°.45E,h31km,mb4.9/45,Error ellipse: s-maj=7.2km s-min=5.3km az=75.7*
SKHL ***07*** *14:12:19.2±0.0,47°.10N×155°.30E,h33km±3km,mb4.9/9*
NEIC ***07*** *14:12:19.4±1.3,46°.92N±0°.10×155°.7E±0°.1,h10km±1km, mb4.7/123,Error ellipse: s-maj=17.6km s-min=12.7km az=154.0*
BJI ***07*** *14:12:26.0±0.0,47°.60N×156°.00E,h40km,mb4.8/22, mB4.8/12,Ms4.4/13,Ms7 4.0/13*
ISC 07 14:12:18.6±0.4,**47°.00N**±0°.05×**155°.49E**±0°.04,**h10**km,**n489**, σ18**57**/472,**mb4.7**/150,**MS3.8**/22,**17C-7D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.71**	**6**	*e*PN		pmax	**Pn**	**14 13 16.3**	**+0.4**
SKR	comp=Z,25nm,0.6s					pmax	pmax		
SKR	**Severo-Kuril's**	**3.71**	**6**	*e*P		AMB	**Pn**	**14 13 14.2**	**-1.7**
SKR	comp=Z,70nm,0.8s					AMB	AMB	14 13 17.4	
SKR					*e*S	A	**Sn**	**14 13 55.0**	**-4.6**
SKR	comp=Z,380nm,0.5s					A	A	14 14 00.8	
SKR	comp=Z,410nm,0.5s					A	A	14 14 00.8	
PAU	**Pauzhetka**	**4.56**	**10**	*e*P		AMB	**Pn**	**14 13 26.8**	**-0.7**
PAU	comp=Z,40nm,0.4s					AMB	AMB	14 13 30.8	
PAU					*e*S	A	**Sn**	**14 14 16.2**	**-4.3**
PAU	comp=Z,740nm,0.3s					A	A	14 14 19.0	
PAU	comp=Z,810nm,0.3s					A	A	14 14 19.0	
KUR	**Kuril'sk**	**5.59**	**254**	*e*PN		pmax	**Pn**	**14 13 42.5**	**+0.8**
KUR	comp=Z,141nm,0.7s					pmax	pmax		
KUR	comp=N,70nm,0.5s					pmax	pmax		
KUR	**Kuril'sk**	**5.59**	**254**	*e*P		AMB	**Pn**	**14 13 40.3**	**-1.4**
KUR	comp=N,140nm,0.6s					AMB	AMB	14 13 56.6	
KUR					*e*S	A	**Sn**	**14 14 42.0**	**-3.9**
KUR	comp=N,380nm,0.5s					A	A	14 14 45.3	
KUR	comp=N,170nm,0.5s					A	A	14 14 45.3	
PEA0B	**Petropavlovsk-**	**6.28**	**12**	Pn			**Pn**	**14 13 50.4**	**-0.8**
PEA0B	**Petropavlovsk-**	**6.28**	**12**	*e*PN			**Pn**	**14 13 50.2**	**-1.0**
PETK	**Petropavlovsk-**	**6.28**	**12**	Pn			**Pn**	**14 13 49.9**	**-1.3**
PETK	comp=N,2.8nm,0.3s,baz=201,slow=13,SNR=70					LR	LR	14 16 32.8	
	comp=N,320nm,20.8s,baz=193,slow=40 comp=N,7.9nm,0.4s								
PETK	**Petropavlovsk-**	**6.28**	**12**				**Pn**	**14 13 49.6**	**-1.6**
PET	**Petropavlovsk**	**6.37**	**17**				**Pn**	**14 13 50.0**	**-2.3**
PET	**Petropavlovsk**	**6.37**	**17**	*e*PN		pmax	**Pn**	**14 13 51.0**	**-1.4**
PET	comp=Z,44nm,0.5s					pmax	pmax		
PET	comp=Z,500nm,13.0s					MLR	MLR		
PET	**Petropavlovsk**	**6.37**	**17**	*e*P		AMB	**Pn**	**14 13 50.8**	**-1.6**
PET	comp=Z,40nm,0.5s					AMB	AMB	14 13 53.0	
PET					*e*S	A	**Sn**	**14 14 59.5**	**-5.5**
PET	comp=Z,300nm,0.5s					A	A	14 15 01.4	
PET	comp=Z,220nm,0.5s					A	A	14 15 01.4	
SHO	**Shikotan**	**6.85**	**246**	*e*PN			**Pn**	**14 13 56.6**	**-2.4**
SHO	comp=E,54nm,0.3s					pmax	pmax		
SHO	comp=Z,99nm,0.3s					pmax	pmax		
SHO	comp=N,27nm,0.2s					pmax	pmax		
SHO	**Shikotan**	**6.85**	**246**	*e*P			**Pn**	**14 13 56.6**	**-2.4**
SHO	comp=N,100nm,0.3s					AMB	AMB	14 13 59.1	
SHO					*e*S	A	**Sn**	**14 15 09.4**	**-7.6**
SHO	comp=N,120nm,0.3s					A	A	14 15 16.7	
SHO	comp=N,90nm,0.3s					A	A	14 15 16.7	
YUK	**Yuzh-Kuril'sk**	**7.38**	**250**	*e*PN			**Pn**	**14 14 05.9**	**-0.5**
YUK	comp=N,55nm,0.2s					pmax	pmax		
YUK	comp=Z,131nm,0.2s					pmax	pmax		
YUK	comp=E,39nm,0.1s					pmax	pmax		
YUK	**Yuzh-Kuril'sk**	**7.38**	**250**	*e*P		AMB	**Pn**	**14 14 05.9**	**-0.5**
YUK	comp=E,130nm,0.2s					AMB	AMB	14 14 06.4	
YUK					*e*S	A	**Sn**	**14 15 24.6**	**-5.5**
YUK	comp=E,330nm,0.5s					A	A	14 15 33.1	
YUK	comp=E,270nm,0.5s					A	A	14 15 33.1	
RUSJ	**Misakicho**	**7.75**	**252**	*e*PN			**Pn**	**14 14 11.8**	**+0.4**
NMR	**Nemuro--Hokkai**	**7.79**	**246**	*e*PN			**Pn**	**14 14 09.7**	**-2.3**
NMR	**Nemuro--Hokkai**	**7.79**	**246**	*e*P			**Pn**	**14 14 09.7**	**-2.3**
NMR					*e*S		**Sn**	**14 15 32.9**	**-7.3**
YSS	**Yuzh-Sakhalins**	**8.71**	**274**	Pn			**Pn**	**14 14 28.9**	**+4.3**
YSS	**Yuzh-Sakhalins**	**8.71**	**274**	*e*PN			**Pn**	**14 14 29.0**	**+4.4**
YSS	comp=Z,30nm,0.8s					pmax	pmax		
YSS	comp=Z,800nm,15.0s					MLR	MLR		
YSS	**Yuzh-Sakhalins**	**8.71**	**274**	*e*P		AMB	**Pn**	**14 14 23.5**	**-1.1**
YSS	comp=Z,20nm,0.5s					AMB	AMB	14 14 24.5	
TYV	**Tymovskoe**	**9.29**	**299**	*e*PN		pmax	Pn	14 14 28.2	-4.3
TYV	comp=Z,13nm,1.0s					pmax	pmax		
TYV	comp=Z,200nm,1.6s					pmax	pmax		
TYV	**Tymovskoe**	**9.29**	**299**	*e*P		AMB	**Pn**	**14 14 31.3**	**-1.2**
TYV	comp=Z,50nm,0.7s					AMB	AMB	14 14 33.7	
TYV					*e*S		Sn	14 16 08.9	-8.1
ERM	**Erimo**	**10.12**	**245**	Pn			**Pn**	**14 14 42.4**	**-1.4**
ERM	**Erimo**	**10.12**	**245**	*e*PN			**Pn**	**14 14 42.3**	**-1.5**
ERM	comp=Z,10.0nm,0.3s					pmax	pmax		
OKH	**Okha**	**10.37**	**314**	*de*PN			Pn	14 14 54.3	+7.1
OKH					*e*S		Sn	14 16 55.1	+12
OKH	comp=E,700nm,14.0s					MLR	MLR		
OKH	comp=N,700nm,13.0s					MLR	MLR		
OKH	comp=Z,500nm,13.0s					MLR	MLR		
JEW	**Eniwo**	**10.79**	**252**	Pn			**Pn**	**14 14 49.1**	**-3.9**
NKL	**Nikolayevsk**	**11.32**	**308**	*e*PN			**Pn**	**14 14 57.7**	**-2.6**
NKL	comp=E,3.0nm,0.8s					pmax	pmax		
NKL	comp=N,322nm,0.9s					pmax	pmax		
NKL	comp=Z,15nm,1.3s					MLR	MLR		
NKL	comp=E,29nm,18.0s					MLR	MLR		
NKL	comp=N,13μm,12.0s					MLR	MLR		
NKL	comp=Z,366nm,15.0s					MLR	MLR		
NKL	**Nikolayevsk**	**11.32**	**308**	*e*P		AMB	**Pn**	**14 14 57.6**	**-2.7**
NKL	comp=Z,20nm,0.9s					AMB	AMB	14 15 03.9	
JTM	**Tenmabayashi**	**12.11**	**244**	Pn			**Pn**	**14 15 07.2**	**-3.8**
MA2	**Magadan**	**12.91**	**349**	Pn			**Pn**	**14 15 22.9**	**+1.0**
MA2	comp=Z,0.3nm,0.3s,baz=150,slow=20,SNR=1.6 comp=Z,152nm,18.6s,baz=170,slow=43					LR	LR	14 21 38.4	

MA2	**Magadan**	**12.91**	**349**	Pn			**Pn**	**14 15 22.7**	**+0.8**
MA2	**Magadan**	**12.91**	**349**	PN			**Pn**	**14 15 22.7**	**+0.8**
SMY	**Shemya**	**13.29**	**58**	Pn			**Pn**	**14 15 24.9**	**-2.2**
SMY	**Shemya**	**13.29**	**58**	PN			**Pn**	**14 15 24.9**	**-2.2**
JMM	**Marumori**	**14.16**	**235**	Pn			Pn	14 15 34.6	-4.5
KLR	**Kul'dur**	**16.00**	**287**	Pn			**Pn**	**14 16 04.7**	**+1.1**
KLR	comp=Z,0.2nm,0.3s,baz=80,slow=9.9,SNR=3.0 comp=Z,158nm,21.1s,baz=67,slow=35 comp=Z,2.1nm,0.7s					LR	LR	14 21 39.3	
KLR	**Kul'dur**	**16.00**	**287**	*e*P	ǁ	pmax	**Pn**	**14 16 02.1**	**-1.5**
KLR	comp=Z,1.0nm,1.0s					pmax	pmax		
KLR	**Kul'dur**	**16.00**	**287**	*e*P			**Pn**	**14 16 00.1**	**-3.5**
SEY	**Seymchan**	**16.07**	**355**	*e*P	⇑		**Pn**	**14 16 04.3**	**0.0**
SEY	comp=Z,6.0nm,1.4s					pmax	pmax		
MAJO	**Matsushiro**	**16.56**	**237**	Pn			**Pn**	**14 16 07.4**	**-3.4**
MAJO	**Matsushiro**	**16.56**	**237**	*e*P	⇑		**Pn**	**14 16 08.4**	**-2.4**
MAJO	comp=Z,8.0nm,0.9s					pmax	pmax		
MJAR	**Matsushiro Arr**	**16.56**	**237**	Pn			**Pn**	**14 16 08.2**	**-2.6**
USRK	baz=38,slow=12,SNR=7.7 comp=Z,2.1nm,0.8s **Ussuriysk Ar.**	**16.67**	**269**	Pn			**Pn**	**14 16 11.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=80,slow=12,SNR=5.4 comp=Z,5.0nm,0.7s								
USRK	**Ussuriysk Ar.**	**16.67**	**269**				**Pn**	**14 16 11.2**	**-0.9**
USRK	**Ussuriysk Ar.**	**16.67**	**269**	P			**Pn**	**14 16 11.0**	**-1.2**
ADK	**Adak**	**18.68**	**65**	P			**P**	**14 16 36.1**	**-0.6**
ADK	**Adak**	**18.68**	**65**	P			**P**	**14 16 36.1**	**-0.6**
ADK	comp=Z,26nm,1.2s					pmax	pmax		
GSTR	**Great Sitkin T**	**19.08**	**64**	P			**P**	**14 16 40.5**	**-0.6**
ZEA	**Zeya**	**19.15**	**301**	*e*P			**Pn**	**14 16 45.4**	**+2.7**
ZEA	comp=E,10.0nm,0.7s					pmax	pmax		
ZEA	comp=Z,10.0nm,0.9s					pmax	pmax		
ZEA	comp=E,200nm,15.0s					MLR	MLR		
ZEA	comp=N,100nm,13.0s					MLR	MLR		
ZEA	comp=Z,200nm,15.0s					MLR	MLR		
ZEA	**Zeya**	**19.15**	**301**	*e*P			**P**	**14 16 41.4**	**-0.4**
YAK	**Yakutsk**	**21.02**	**325**	P			**P**	**14 17 02.3**	**+0.2**
YAK	comp=Z,6.5nm,0.4s,baz=270,slow=3.2,SNR=8.5 comp=Z,123nm,21.7s,baz=88,slow=35 comp=Z,6.5nm,0.4s					LR	LR	14 24 37.9	
YAK	**Yakutsk**	**21.02**	**325**	P			**P**	**14 17 01.4**	**-0.7**
YAK	comp=Z,31nm,1.0s					IAmb	IAmb	14 17 05.0	
YAK	**Yakutsk**	**21.02**	**325**	*e*P			**P**	**14 17 01.5**	**-0.6**
YAK					*e*	*PP	**pwP**	**14 17 17.7**	**+6.4**
YAK					*e*S		**S**	**14 20 48.7**	**-7.2**
YAK					*e*	*S	Sn	14 21 20.0	+18
YAK	comp=Z,24nm,0.9s					pmax	pmax		
YAK	comp=N,5.0nm,1.1s					pmax	pmax		
YAK	comp=E,6.0nm,1.0s					pmax	pmax		
YAK	comp=E,65nm,1.8s					smax	smax		
YAK	comp=N,53nm,1.8s					smax	smax		
YAK	**Yakutsk**	**21.02**	**325**	*e*P			**P**	**14 17 01.5**	**-0.6**
CN2	**Changchun**	**21.27**	**272**	*e*P			**P**	**14 17 11.3**	**+6.3**
CN2					*e*S		**S**	**14 21 02.9**	**+1.7**
CN2	comp=N,10.0nm,1.0s					pmax	pmax		
CN2	comp=N,100nm,3.0s					pmax	pmax		
CN2	comp=N,200nm,13.0s					LR	LR		
CN2	comp=N,200nm,13.0s					LR	LR		
CN2	comp=N,300nm,14.4s					LR	LR		
SEHB	**SEOHWA**	**21.77**	**256**	P			**P**	**14 17 11.2**	**+0.8**
BILL	**Bilibino**	**21.81**	**11**	*e*P	⇑		**P**	**14 17 09.2**	**-1.3**
BILL				*i*				14 17 32.4	
BILL					*e*S		**S**	**14 21 03.3**	**-8.0**
BILL	comp=Z,3.0nm,0.8s					pmax	pmax		
BILL	comp=Z,77nm,15.0s					MLR	MLR		
BILL	**Bilibino**	**21.81**	**11**	*e*P			**P**	**14 17 09.2**	**-1.3**
KSRS	**Korea Array**	**22.43**	**255**	P			**P**	**14 17 17.9**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=59,slow=9.3,SNR=27 comp=Z,4.7nm,0.8s								
KSRS	**Korea Array**	**22.43**	**255**	P			**P**	**14 17 18.0**	**+0.6**
KSRS	**Korea Array**	**22.43**	**255**	*e*P			**P**	**14 17 18.0**	**+0.6**
KS19	**Wonju Array Si**	**22.44**	**255**	P			**P**	**14 17 18.8**	**+1.3**
KSAR	**Wonju Array Be**	**22.46**	**255**	P			**P**	**14 17 19.1**	**+1.3**
KSAR	**Wonju Array Be**	**22.46**	**255**	P			**P**	**14 17 19.1**	**+1.3**
JCJ	**Chichijima**	**22.47**	**212**	P			**P**	**14 17 16.7**	**-1.1**
JCJ	**Chichijima**	**22.47**	**212**	P			**P**	**14 17 17.0**	**-0.9**
KSCHJ	**Chungju**	**22.73**	**254**	P			**P**	**14 17 22.1**	**+1.5**
KSCHJ	comp=Z,25nm,1.0s					IAmb	IAmb	14 17 33.0	
KSBUS	**Busan**	**22.96**	**249**	P			**P**	**14 17 24.8**	**+1.7**
KSBUS	comp=Z,39nm,1.3s					IAmb	IAmb	14 17 35.4	
SPIA	**Saint Paul Isl** baz=259	**23.14**	**51**	P			**P**	**14 17 22.1**	**-2.6**
TJN	**Taejon**	**23.41**	**253**	*e*P	ǁ		**P**	**14 17 26.2**	**-1.4**
NIKH	**Nikolski High** baz=270	**23.51**	**62**	P			**P**	**14 17 26.0**	**-2.5**
GAMB	**Gambell** baz=242	**24.67**	**35**	P			**P**	**14 17 38.9**	**-0.3**
UNV	**Unalaska Valle** baz=270	**24.93**	**60**	P			**P**	**14 17 41.7**	**+0.1**
XLT	**XiLinHaoTe**	**27.62**	**278**	*e*P			P	14 18 15.9	+10
XLT	comp=Z,15nm,0.8s					pmax	pmax		
XLT	comp=Z,89nm,5.0s					pmax	pmax		
TIXI	**Tiksi**	**27.71**	**342**	P			**P**	**14 18 07.6**	**+1.1**
TIXI	comp=Z,2.9nm,0.6s,baz=91,slow=23,SNR=3.2 comp=Z,79nm,18.1s,baz=174,slow=38 comp=Z,2.9nm,0.6s					LR	LR	14 29 52.5	
TIXI	**Tiksi**	**27.71**	**342**	P			**P**	**14 18 07.7**	**+1.2**
TIXI	**Tiksi**	**27.71**	**342**	*e*P	⇑		**P**	**14 18 05.8**	**-0.7**
TIXI	comp=Z,3.0nm,1.1s					pmax	pmax		
TIXI	**Tiksi**	**27.71**	**342**	*e*P			**P**	**14 18 05.8**	**-0.7**
N16K	**Nishlik Lake** baz=264	**29.55**	**46**	P			**P**	**14 18 23.3**	**+0.2**
O17K	**Koliganek Bris** baz=266	**30.32**	**48**	P			**P**	**14 18 29.7**	**-0.2**
Q16K	**King Salmon** baz=269	**30.50**	**50**	P			**P**	**14 18 30.9**	**-0.5**
R17K	**Ugashik Creek** baz=271	**30.64**	**52**	P			**P**	**14 18 32.3**	**-0.4**
N18K	**Kilae Creek** baz=266	**30.98**	**46**	P			**P**	**14 18 34.7**	**-1.0**
GCSA	**Galena City Sc** baz=258	**31.08**	**38**	P			**P**	**14 18 35.9**	**-0.6**
TTA	**Tatalina**	**31.15**	**41**	P			**P**	**14 18 36.4**	**-0.9**
TTA	comp=Z,7.2nm,0.8s					IAmb	IAmb	14 18 38.8	
TTA	**Tatalina**	**31.15**	**41**	P			**P**	**14 18 36.4**	**-0.9**
TTA	comp=Z,7.0nm,0.8s					pmax	pmax		
TTA	**Tatalina** baz=262,SNR=5.1	**31.15**	**41**	P			**P**	**14 18 36.8**	**-0.5**
L19K	**White Mountain**	**31.60**	**43**	P			**P**	**14 18 42.0**	**+0.9**
L19K	**White Mountain** baz=264	**31.60**	**43**	P			**P**	**14 18 40.6**	**-0.6**
NJ2	**Nanjing**	**31.63**	**255**	*e*P			**P**	**14 18 42.1**	**+0.4**
NJ2	comp=Z,12nm,0.5s					pmax	pmax		
M19K	**Big River Lodg** baz=265	**31.79**	**44**	P			**P**	**14 18 42.7**	**-0.1**
SII	**Sitkinak Islan** baz=274	**31.89**	**54**	P			**P**	**14 18 43.3**	**-0.5**
HHC	**Hu-ho-hao-te**	**31.90**	**275**	*e*P			P	14 18 54.2	+10
HHC	comp=Z,22nm,0.9s					pmax	pmax		
HHC	comp=Z,120nm,4.8s					pmax	pmax		

HHC	comp=Z,300nm,14.0s					LR	LR		
HHC	comp=Z,530nm,14.0s					LR	LR		
HHC	comp=Z,510nm,14.0s					LR	LR		
L20K	**Farewell, AK** baz=265	**32.08**	**43**	P			**P**	**14 18 45.0**	**-0.4**
K20K	**Telida**	**32.08**	**41**	P			**P**	**14 18 45.4**	**0.0**
K20K	comp=Z,8.3nm,0.9s					IAmb	IAmb	14 18 47.0	
K20K	**Telida** baz=263	**32.08**	**41**	P			**P**	**14 18 44.6**	**-0.8**
J20K	**Nowinta River**	**32.15**	**39**	P			**P**	**14 18 46.3**	**+0.4**
J20K	comp=Z,11nm,1.1s					IAmb	IAmb	14 18 47.6	
J20K	**Nowinta River** baz=262,SNR=7.0	**32.15**	**39**	P			**P**	**14 18 45.6**	**-0.4**
OHAK	**Old Harbor**	**32.34**	**52**	P			**P**	**14 18 47.1**	**-0.5**
ULN	**Ulaanbaatar**	**32.35**	**290**	*e*P	⇑		**P**	**14 18 48.4**	**+0.3**
ULN	comp=Z,2.0nm,1.3s					pmax	pmax		
ULN	**Ulaanbaatar**	**32.35**	**290**	*e*P			**P**	**14 18 48.4**	**+0.3**
M20K	**Styx River**	**32.39**	**44**	P			**P**	**14 18 48.3**	**+0.1**
M20K	comp=Z,8.6nm,1.0s					IAmb	IAmb	14 18 49.7	
M20K	**Styx River** baz=267	**32.39**	**44**	P			**P**	**14 18 48.1**	**-0.1**
IMAR	**Indian Mountai**	**32.61**	**36**	P			**P**	**14 18 50.0**	**+0.1**
KDAK	**Kodiak Island**	**32.68**	**51**	P			**P**	**14 18 49.5**	**-1.1**
KDAK	**Kodiak Island**	**32.68**	**51**	P			**P**	**14 18 49.5**	**-1.1**
KDAK	comp=Z,21nm,0.9s					pmax	pmax		
KDAK	**Kodiak Island** baz=274	**32.68**	**51**	P			**P**	**14 18 50.1**	**-0.5**
SONM	**Songino Array** comp=Z,1.4nm,0.7s,baz=73,slow=11,SNR=6.2 comp=Z,1.4nm,0.7s	**32.79**	**290**	P			**P**	**14 18 51.9**	**+0.1**
G21K	**Allakaket** baz=259	**32.80**	**35**	P			**P**	**14 18 51.7**	**+0.1**
PPLA	**Purkeypile** baz=266	**32.89**	**42**	P			**P**	**14 18 51.9**	**-0.7**
CHUM	**Lake Minchumin** baz=264	**32.92**	**40**	P			**P**	**14 18 52.4**	**-0.3**
H21K	**Melozitna Rive**	**32.94**	**37**	P			**P**	**14 18 53.4**	**+0.6**
H21K	comp=Z,12nm,0.9s					IAmb	IAmb	14 18 54.5	
H21K	**Melozitna Rive** baz=261,SNR=13	**32.94**	**37**	P			**P**	**14 18 52.7**	**-0.1**
F21K	**Alatna River** baz=258	**32.95**	**34**	P			**P**	**14 18 53.4**	**+0.4**
CAST	**Castle Rocks**	**32.98**	**41**	P			**P**	**14 18 53.8**	**+0.6**
CAST	comp=Z,7.2nm,0.8s					IAmb	IAmb	14 18 55.1	
CAST	**Castle Rocks** baz=265,SNR=7.0	**32.98**	**41**	P			**P**	**14 18 53.1**	**-0.1**
I21K	**Tanana**	**33.21**	**38**	P			**P**	**14 18 55.8**	**+0.7**
I21K	comp=Z,9.3nm,1.1s					IAmb	IAmb	14 18 57.1	
I21K	**Tanana** baz=262,SNR=7.5	**33.21**	**38**	P			**P**	**14 18 55.3**	**+0.1**
CNPM	**China Poot**	**33.29**	**48**	P			**P**	**14 18 56.1**	**+0.1**
CAPN	**Captain Cook N** baz=270	**33.31**	**46**	P			**P**	**14 18 55.9**	**-0.2**
F22K	**John River** baz=259	**33.50**	**33**	P			**P**	**14 18 57.6**	**-0.1**
KTH	**Kantishna Hill**	**33.51**	**41**	P			**P**	**14 18 58.6**	**+0.7**
BPAW	**Bear Paw Mtn.**	**33.52**	**40**	P			**P**	**14 18 58.5**	**+0.6**
BPAW	comp=Z,7.4nm,0.8s					IAmb	IAmb	14 18 59.6	
BPAW	**Bear Paw Mtn.** baz=265,SNR=7.3	**33.52**	**40**	P			**P**	**14 18 57.6**	**-0.3**
H22K	**Ishtalitna Cre** baz=262,SNR=5.9	**33.55**	**36**	P			**P**	**14 18 57.9**	**-0.4**
G22K	**Bettles** baz=260	**33.66**	**35**	P			**P**	**14 18 58.6**	**-0.5**
MLY	**Manley**	**33.71**	**38**	P			**P**	**14 19 00.3**	**+0.6**
MLY	comp=Z,7.7nm,1.0s					IAmb	IAmb	14 19 01.5	
MLY	**Manley** baz=264,SNR=9.1	**33.71**	**38**	P			**P**	**14 18 59.3**	**-0.3**
TRF	**Thorofare Moun** baz=267	**33.79**	**41**	P			**P**	**14 18 59.6**	**-0.9**
RC01	**Rabbit Creek A** baz=271	**34.00**	**45**	P			**P**	**14 19 01.5**	**-0.6**
BWN	**Browne**	**34.19**	**40**	P			**P**	**14 19 04.7**	**+1.0**
G23K	**Bananza Creek** baz=262	**34.20**	**35**	P			**P**	**14 19 03.5**	**-0.4**
COLD	**Coldfoot**	**34.21**	**34**	P			**P**	**14 19 04.2**	**+0.3**
COLD	comp=Z,6.7nm,1.0s					IAmb	IAmb	14 19 05.5	
COLD	**Coldfoot** baz=261,SNR=6.2	**34.21**	**34**	P			**P**	**14 19 03.6**	**-0.3**
PMR	**Palmer** baz=271	**34.28**	**44**	P			**P**	**14 19 04.4**	**-0.1**
H23K	**Yukon River**	**34.29**	**37**	P			**P**	**14 19 04.9**	**+0.3**
H23K	**Yukon River** baz=264,SNR=5.5	**34.29**	**37**	P			**P**	**14 19 04.7**	**+0.1**
I23K	**Minto, Yukon-K**	**34.31**	**38**	P			**P**	**14 19 04.8**	**+0.1**
I23K	comp=Z,4.9nm,0.7s					IAmb	IAmb	14 19 06.0	
I23K	**Minto, Yukon-K** baz=265,SNR=6.3	**34.31**	**38**	P			**P**	**14 19 04.9**	**+0.2**
D23K	**Nanushuk River** baz=258	**34.34**	**31**	P			**P**	**14 19 05.6**	**+0.6**
NEA2	**Nenana**	**34.39**	**39**	P			**P**	**14 19 05.7**	**+0.3**
NEA2	**Nenana** baz=266,SNR=12	**34.39**	**39**	P			**P**	**14 19 05.9**	**+0.4**
MCK	**McKinley**	**34.40**	**41**	P			**P**	**14 19 05.4**	**-0.2**
MCK	comp=Z,14nm,1.0s					IAmb	IAmb	14 19 06.7	
MCK	**McKinley**	**34.40**	**41**	P			**P**	**14 19 05.4**	**-0.2**
MCK	comp=Z,14nm,1.0s					pmax	pmax		
MCK	**McKinley** baz=268	**34.40**	**41**	P			**P**	**14 19 05.6**	**0.0**
RND	**Reindeer**	**34.43**	**41**	P			**P**	**14 19 05.5**	**-0.3**
RND	comp=Z,12nm,0.8s					IAmb	IAmb	14 19 06.6	
RND	**Reindeer**	**34.43**	**41**	P			**P**	**14 19 05.6**	**-0.3**
RND	comp=Z,13nm,0.8s					pmax	pmax		
C23K	**Itkillik River** baz=257,SNR=6.4	**34.55**	**30**	P			**P**	**14 19 07.1**	**+0.4**
KNK	**Knik Glacier** baz=272	**34.61**	**45**	P			**P**	**14 19 07.1**	**-0.3**
SML	**Sawmill**	**34.66**	**44**	P			**P**	**14 19 07.9**	**-0.1**
SML	**Sawmill**	**34.66**	**44**	P			**P**	**14 19 07.5**	**-0.4**
SML	comp=Z,30nm,0.7s					pmax	pmax		
SML	**Sawmill** baz=271,SNR=6.0	**34.66**	**44**	P			**P**	**14 19 07.8**	**-0.1**
TOLK	**Toolik Lake Re**	**34.67**	**32**	P			**P**	**14 19 08.5**	**+0.6**
TOLK	comp=Z,9.6nm,1.1s					IAmb	IAmb	14 19 09.9	
TOLK	**Toolik Lake Re** baz=260	**34.67**	**32**	P			**P**	**14 19 08.1**	**+0.2**
MDM	**Murphy Dome**	**34.77**	**38**	P			**P**	**14 19 09.2**	**+0.4**
MDM	comp=Z,11nm,0.8s					IAmb	IAmb	14 19 10.5	
WRH	**Wood River Hil**	**34.81**	**39**	P			**P**	**14 19 09.1**	**+0.1**
WRH	comp=Z,6.1nm,0.7s					IAmb	IAmb	14 19 10.2	
TCOL	**CIGO, UAF Yank**	**34.92**	**39**	P			**P**	**14 19 10.6**	**+0.5**
TCOL	**CIGO, UAF Yank** baz=267,SNR=6.4	**34.92**	**39**	P			**P**	**14 19 10.1**	**+0.1**
COLA	**College**	**34.93**	**39**	P			**P**	**14 19 10.6**	**+0.5**
COLA	**College**	**34.93**	**39**	*d*	*i*	P	**P**	**14 19 10.6**	**+0.5**
COLA	comp=Z,17nm,0.9s					pmax	pmax		
COLA	**College** baz=267	**34.93**	**39**	P			**P**	**14 19 10.0**	**0.0**
WAT6	**Susitna Watana** baz=270	**34.93**	**43**	P			**P**	**14 19 10.9**	**+0.6**
CCB	**Clear Creek Bu**	**34.94**	**39**	P			**P**	**14 19 10.2**	**+0.1**
M23K	**Glacier View** baz=272	**34.95**	**44**	P			**P**	**14 19 10.6**	**+0.3**
H24K	**Noodor Dome**	**34.98**	**37**	P			**P**	**14 19 11.1**	**+0.6**
H24K	comp=Z,10nm,1.0s					IAmb	IAmb	14 19 12.6	
H24K	**Noodor Dome** baz=266,SNR=9.0	**34.98**	**37**	P			**P**	**14 19 10.4**	**-0.2**
E24K	**Your Creek** baz=262,SNR=9.5	**34.98**	**33**	P			**P**	**14 19 10.6**	**0.0**
D24K	**Happy Valley** baz=260	**35.03**	**31**	P			**P**	**14 19 11.1**	**+0.2**

DHY Denali Highway 35.09 42 P P 14 19 11.6 -0.1
DHY IAmb IAmb 14 19 12.6
comp=Z,10nm,0.8s
DHY Denali Highway 35.09 42 P P 14 19 11.2 -0.5
baz=270,SNR=6.5
YHNB Yeheng 35.10 243 P P 14 19 13.5 +1.5
YHNB IAmb IAmb 14 19 57.8
comp=Z,20nm,1.2s
POKR Poker Plat Res 35.12 38 P P 14 19 12.4 +0.6
POKR Poker Plat Res 35.12 38 P P 14 19 12.0 +0.3
baz=267,SNR=5.3
F24K Squaw Lake 35.14 34 P P 14 19 12.1 +0.1
baz=263
SCM Sheep Creek Mo 35.14 44 P P 14 19 12.0 0.0
SCM IAmb IAmb 14 19 14.3
comp=Z,15nm,0.9s
SCM Sheep Creek Mo 35.14 44 P P 14 19 12.0 0.0
SCM pmax pmax
comp=Z,15nm,0.9s
SCM Sheep Creek Mo 35.14 44 P P 14 19 12.4 +0.3
baz=272
C24K Franklin Bluff 35.17 30 P P 14 19 12.7 +0.6
baz=259
G24K Hadweenzic Riv 35.21 35 P P 14 19 12.6 0.0
baz=265,SNR=17
HDA Harding Lake 35.30 39 P P 14 19 13.5 +0.2
HDA IAmb IAmb 14 19 14.5
comp=Z,9.1nm,0.7s
HDA Harding Lake 35.30 39 P P 14 19 12.9 -0.4
baz=268,SNR=7.5
IL31 35.34 39 P P 14 19 13.4 -0.1
ILAR Eielson Array 35.34 39 P P 14 19 13.7 +0.1
comp=Z,2.3nm,0.5s,baz=250,slow=7.9,SNR=47
comp=Z,2.3nm,0.5s
ILAR Eielson Array 35.34 39 P P 14 19 13.2 -0.4
ILAR Eielson Array 35.34 39 P P 14 19 13.2 -0.4
M24K Tolsona, Glenn 35.67 43 P P 14 19 17.6 +1.0
M24K Tolsona, Glenn 35.67 43 P P 14 19 16.3 -0.3
baz=272
G25K Bearman Lake 35.76 35 P P 14 19 17.5 +0.3
baz=266,SNR=6.8
K24K Donnelly Dome 35.81 40 P P 14 19 17.2 -0.5
baz=270,SNR=5.8
KLU Klutina 35.82 44 P P 14 19 17.9 -0.1
KLU IAmb IAmb 14 19 23.1
comp=Z,9.4nm,0.7s
KLU Klutina 35.82 44 P P 14 19 17.6 -0.4
baz=274
H25K Birch Creek 35.84 36 P P 14 19 18.3 +0.4
baz=267
D25K Kavik River 35.92 31 P P 14 19 18.3 -0.3
baz=262,SNR=11
PRP Porcupine Dome 35.93 37 P P 14 19 18.7 -0.2
baz=268
PAX Paxson 35.96 42 P P 14 19 19.8 +0.7
PAX Paxson 35.96 42 P P 14 19 19.8 +0.7
PAX pmax pmax
comp=Z,6.0nm,1.0s
PAX Paxson 35.96 42 P P 14 19 18.6 -0.6
baz=272
J25K Salcha River, 35.98 39 P P 14 19 18.3 -1.0
J25K IAmb IAmb 14 19 19.3
comp=Z,6.0nm,0.7s
J25K Salcha River, 35.98 39 P P 14 19 18.1 -1.2
baz=270,SNR=8.4
F25K Christian Rive 36.00 34 P P 14 19 19.8 +0.4
baz=265
E25K Arctic Village 36.07 33 P P 14 19 20.5 +0.5
baz=264
FYU Fort Yukon 36.09 36 P P 14 19 21.4 +1.3
RIDG Independent Ri 36.22 41 P P 14 19 20.9 -0.5
RIDG IAmb IAmb 14 19 24.9
comp=Z,12nm,0.9s
RIDG Independent Ri 36.22 41 P P 14 19 20.8 -0.5
baz=271,SNR=6.4
BMAR Burnt Mountain 36.40 34 P P 14 19 24.1 +1.3
N25K Chitina, Valde 36.45 44 P P 14 19 24.1 +0.8
N25K IAmb IAmb 14 19 51.8
comp=Z,15nm,1.1s
N25K Chitina, Valde 36.45 44 P P 14 19 22.8 -0.5
baz=274
BMRM Bremner River 36.50 45 P P 14 19 23.2 -0.5
baz=275
C26K Camden Bay 36.50 30 P P 14 19 23.4 -0.1
baz=263
DOT Dot Lake 36.58 41 P P 14 19 24.3 0.0
DOT IAmb IAmb 14 19 25.1
comp=Z,6.9nm,0.8s
F26K Sheenjek River 36.58 34 P P 14 19 24.5 +0.2
baz=266
SCRK Sand Creek 36.60 40 P P 14 19 24.8 +0.2
SCRK Sand Creek 36.60 40 P P 14 19 24.1 -0.5
baz=272
G26K Porcupine Rive 36.68 35 P P 14 19 26.0 +0.9
baz=268,SNR=17
MENT Mentasta 36.77 42 P P 14 19 26.2 +0.3
MENT IAmb IAmb 14 19 33.4
comp=Z,6.8nm,0.7s
J26L Joseph Creek 36.77 39 P P 14 19 25.9 -0.1
J26L Joseph Creek 36.77 39 P P 14 19 26.1 +0.2
baz=271
GLB Gilahina Butte 36.84 44 P P 14 19 26.3 -0.3
GLB IAmb IAmb 14 19 30.8
comp=Z,14nm,1.3s
C27K Jago River 36.89 31 P P 14 19 27.9 +1.1
baz=264
L26K Log Cabin Wild 36.93 42 P P 14 19 28.2 +0.9
L26K Log Cabin Wild 36.93 42 P P 14 19 27.4 +0.1
baz=274,SNR=7.4
VRDI Verde Repeater 37.03 45 P P 14 19 29.1 +0.7
VRDI IAmb IAmb 14 19 29.9
comp=Z,12nm,0.8s
M26K Nabesna, AK 37.14 43 P P 14 19 30.5 +1.4
M26K IAmb IAmb 14 19 31.4
comp=Z,13nm,0.8s
M26K Nabesna, AK 37.14 43 P P 14 19 30.0 +0.9
baz=275,SNR=9.5
XAN Xi'an 37.16 267 P P 14 19 38.9 +9.3
XAN pmax pmax
comp=Z,9.0nm,1.1s
XAN LR LR
comp=Z,180nm,13.7s
XAN LR LR
comp=Z,240nm,14.4s
XAN LR LR
comp=Z,190nm,15.5s
CRQM Cirque 37.24 45 P P 14 19 30.9 +0.7
CRQE Cirque 37.26 45 P P 14 19 31.0 +0.7
baz=277
TGL Tana Glacier 37.39 45 P P 14 19 31.8 +0.5
TGL IAmb IAmb 14 19 33.1
comp=Z,16nm,1.0s
K27K Chicken 37.44 40 P P 14 19 32.3 +0.8
K27K IAmb IAmb 14 19 33.5
comp=Z,17nm,0.9s
K27K Chicken 37.44 40 P P 14 19 31.9 +0.4
baz=273
G27K Doyon Strip 37.52 35 P P 14 19 33.0 +0.7
baz=270
I27K Kandik River 37.56 37 P P 14 19 32.7 0.0
baz=272
E27K Coleen River 37.56 33 P P 14 19 33.7 +1.1
baz=268,SNR=5.5
H27K Steamboat Moun 37.58 36 P P 14 19 34.0 +1.2
baz=271
L27K Beaver Creek, 37.62 42 P P 14 19 33.8 +0.7
L27K IAmb IAmb 14 19 35.5
comp=Z,10.0nm,0.7s
L27K Beaver Creek, 37.62 42 P P 14 19 33.9 +0.7
baz=275,SNR=16
BCAR Beaver Creek A 37.64 42 P P 14 19 34.1 +0.8
M27K Edge Creek, AK 37.66 43 P P 14 19 34.4 +0.7
baz=276
MESA MESA 37.90 46 P P 14 19 35.8 +0.1
baz=278
BARN Barnard Glacie 37.91 45 P P 14 19 36.7 +0.8
BARN IAmb IAmb 14 19 37.9
comp=Z,13nm,0.7s
GRNC Granite Creek 37.91 45 P P 14 19 36.3 +0.4
GRNC IAmb IAmb 14 19 37.8
comp=Z,20nm,1.0s
YAH Yahtse 37.97 46 P P 14 19 37.1 +0.7
YAH IAmb IAmb 14 19 38.4
comp=Z,13nm,0.8s
CTG Chitina Glacier 38.08 45 P P 14 19 37.7 +0.5
baz=278

CTGM Chitina Glacie 38.09 45 P P 14 19 38.0 +0.7
CTGM IAmb IAmb 14 19 41.6
comp=Z,17nm,0.8s
BVCY Beaver Creek 38.12 43 P P 14 19 38.1 +0.6
baz=276
TABL Table Mountain 38.26 46 P P 14 19 39.0 +0.2
TABL IAmb IAmb 14 19 40.5
comp=Z,15nm,0.9s
LOGN Logan Glacier 38.27 45 P P 14 19 39.1 +0.3
LOGN IAmb IAmb 14 19 40.5
comp=Z,9.4nm,0.8s
YUK3 Moose Creek 38.39 43 P P 14 19 40.1 +0.2
baz=278,SNR=8.2
DAWY Dawson 38.61 40 P P 14 19 41.9 +0.4
DAWY Dawson 38.61 40 P P 14 19 42.1 +0.5
baz=276
O28M Mount Upton 38.67 45 P P 14 19 42.3 0.0
baz=279,SNR=5.6
PINM Pinnacle 38.75 46 P P 14 19 43.1 +0.3
baz=280
BCPM Bancas Point 39.08 46 P P 14 19 46.0 +0.6
BCPM IAmb IAmb 14 20 29.7
comp=Z,16nm,0.9s
M29M Somme Creek 39.23 42 P P 14 19 47.6 +0.8
baz=278
YUK4 Talbot Arm 39.31 44 P P 14 19 47.9 +0.2
baz=280
NRIK Noril'sk 39.39 329⇑ *e*P P 14 19 47.4 -0.5
NRIK pmax pmax
comp=Z,3.0nm,1.0s
LZH Lanzhou 39.51 273 *e*P P 14 20 01.8 +12
LZH pP pwP 14 20 05.4 +6.6
LZH pmax pmax
comp=Z,22nm,1.3s
LZH LR LR
comp=Z,210nm,13.7s
LZH LR LR
comp=Z,220nm,13.8s
LZH LR LR
comp=Z,190nm,16.7s
YUK6 Outpost Mounta 39.52 45 P P 14 19 49.9 +0.5
baz=280
O29M Mount Kennedy 39.54 46 P P 14 19 50.2 +0.8
baz=281
HYT Haines Junctio 39.95 45 P P 14 19 53.2 +0.4
HYT IAmb IAmb 14 19 55.7
comp=Z,13nm,0.8s
HYT Haines Junctio 39.95 45 P P 14 19 53.4 +0.5
baz=281,SNR=12
N30M Aishikik Lake 40.03 44 P P 14 19 53.9 +0.5
baz=281
P29M Windy Craggy 40.09 46 P P 14 19 54.9 +1.1
baz=282
P30M Million Dollar 40.36 46 P P 14 19 56.4 +0.2
baz=282
GTA Gaotai 40.54 280 *e*P P 14 19 59.5 +1.5
GTA sP pwP 14 20 09.9 +2.6
GTA PcP **PcP** **14 22 01.1 +0.9**
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,96nm,5.1s
GTA LR LR
comp=N,110nm,16.4s
GTA LR LR
comp=E,170nm,16.7s
GTA LR LR
comp=Z,93nm,17.1s
INK Inuvik 40.56 33 P P 14 19 57.6 0.0
comp=Z,8.3nm,0.8s,baz=269,slow=8.4,SNR=10
comp=Z,8.3nm,0.8s
INK Inuvik 40.56 33 P P 14 19 58.8 +1.2
INK Inuvik 40.56 33 P P 14 19 58.7 +1.1
baz=275,SNR=7.1
N31M Braeburn, Yuko 40.64 43 P P 14 19 59.0 +0.5
baz=282
O30N Mendenhall 40.65 44 P P 14 19 58.1 -0.4
baz=282,SNR=5.3
PLBC Pleasant Camp 40.81 46 P P 14 19 59.5 -0.2
baz=284
M31M Drury Creek, Y 41.14 42 P P 14 20 04.1 +1.6
M31M Drury Creek, Y 41.14 42 P P 14 20 03.6 +1.0
baz=282
FARO Faro, Yukon 41.61 42 P P 14 20 07.4 +1.0
P32M Atlin 42.08 46 P P 14 20 11.5 +1.2
baz=285
P33M Teslin, Yukon 42.35 45 P P 14 20 13.9 +1.4
P33M IAmb IAmb 14 20 15.2
comp=Z,12nm,0.9s
P33M Teslin, Yukon 42.35 45 P P 14 20 13.3 +0.7
baz=285,SNR=9.3
CD2 Chengdu 42.52 267 *e*P P 14 20 14.8 +0.6
R33M Jennings River 43.48 45 P P 14 20 22.2 +0.4
baz=287,SNR=7.4
C36M Paulatuk 43.78 30 P P 14 20 24.9 +1.1
baz=282
ZAA0 Zalesovo Array 43.78 306 P P 14 20 24.3 +0.2
ZALV Zalesovo Beam 43.78 306 P P 14 20 23.2 -0.9
comp=Z,1.8nm,0.7s,baz=54,slow=7.5,SNR=8.0
ZALV PcP **PcP** **14 22 11.0 +0.5**
comp=Z,3.7nm,0.8s,baz=77,slow=3.2,SNR=8.2
comp=Z,1.8nm,0.7s
ZALV Zalesovo Beam 43.78 306 P P 14 20 23.7 -0.4
DLBC Dease Lake 44.24 47 P P 14 20 28.3 +0.5
comp=Z,5.6nm,0.9s,baz=270,slow=8.3,SNR=8.0
comp=Z,5.6nm,0.9s
DLBC Dease Lake 44.24 47 P P 14 20 27.0 -0.8
DLBC IAmb IAmb 14 20 33.4
comp=Z,9.5nm,1.1s
DLBC Dease Lake 44.24 47 P P 14 20 28.1 +0.3
baz=289
GOMU GeErMu 45.59 279 P P 14 20 40.8 +1.6
GOMU pP sP 14 20 45.0 +4.2
GOMU sP pwP 14 20 46.4 -2.2
GOMU pmax pmax
comp=Z,2.0nm,0.7s
GOMU pmax pmax
comp=Z,61nm,5.2s
RUBB Prince Rupert 45.60 52 P P 14 20 37.6 -0.9
WMQ Urumqi 46.35 292 *e*P P 14 20 55.0 +10
WMQ LR LR
comp=Z,130nm,16.7s
WMQ LR LR
comp=Z,220nm,16.7s
WMQ LR LR
comp=Z,34nm,20.3s
PZH PanZhiHua 46.66 263 P P 14 20 57.6 +10
PZH pmax pmax
comp=Z,20nm,0.8s
KMI Kunming 46.89 261 ⇑P P 14 21 00.4 +11
KMI pmax pmax
comp=Z,10.0nm,1.2s
MK31 Makanchi Array 48.27 298 P P 14 21 00.0 +0.4
MK31 Makanchi Array 48.27 298⇓ *e*P P 14 20 59.9 +0.3
MKAR Makanchi Array 48.27 298 P P 14 20 59.0 -0.6
comp=Z,1.3nm,0.6s,baz=66,slow=8.2,SNR=10
MKAR PcP **PcP** **14 22 26.6 +0.1**
comp=Z,1.1nm,0.7s,baz=64,slow=4.2,SNR=3.8
comp=Z,1.3nm,0.6s
MKAR Makanchi Array 48.27 298 P P 14 20 59.3 -0.2
MKAR Makanchi Array 48.27 298 *e*P P 14 20 59.0 -0.6
MAKZ Makanchi 48.45 298 P P 14 21 01.8 +0.8
MAKZ Makanchi 48.45 298 P P 14 21 01.8 +0.8
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
EUNU Eureka 48.55 12 P P 14 21 02.7 +1.3
EUNU IAmb IAmb 14 21 03.8
comp=Z,8.5nm,0.9s
KURK Kurchatov 48.58 304 P P 14 21 01.9 +0.1
KURK Kurchatov 48.58 304 *c i*P P 14 21 02.3 +0.5
KURK pmax pmax
comp=Z,15nm,1.2s
KURK Kurchatov 48.58 304 *e*P P 14 21 02.3 +0.5
YKA Yellowknife Ar 49.74 37 P P 14 21 11.2 +0.6
comp=Z,3.6nm,0.9s,baz=296,slow=7.5,SNR=5.5
comp=Z,3.6nm,0.9s
CRAI Chiangrai 51.82 259 P P 14 21 28.5 +1.7
CRAI IAmb IAmb 14 21 39.9
comp=Z,7.6nm,0.9s
BRVK Borovoye 51.99 310 P P 14 21 29.0 +1.3
BRVK IAmb IAmb 14 21 39.9
comp=Z,8.1nm,0.8s
BRVK Borovoye 51.99 310 *c e*P P 14 21 27.4 -0.3
BRVK pmax pmax
comp=Z,7.0nm,0.7s
BRVK Borovoye 51.99 310 *e*P P 14 21 27.4 -0.3

TULEG Thule 53.56 12 P P 14 21 41.1 +2.2
CHTO Chiang Mai 53.77 258 P P 14 21 41.9 +0.7
CHTO IAmb IAmb 14 21 43.6
comp=Z,11nm,1.0s
CHTO Chiang Mai 53.77 258 P P 14 21 41.9 +0.7
CHTO pmax pmax
comp=Z,11nm,1.0s
CM31 Chiang Mai Arr 54.02 258 P P 14 21 44.5 +1.5
CM31 IAmb IAmb 14 21 45.6
comp=Z,6.6nm,0.7s
CMAR Chiang Mai Arr 54.02 258 P P 14 21 45.0 +2.0
comp=Z,3.7nm,0.6s,baz=35,slow=7.3,SNR=26
CMAR PcP **PcP** **14 22 49.0 +0.9**
comp=Z,1.4nm,0.8s,baz=17,slow=3.8,SNR=4.4
comp=Z,3.7nm,0.6s
CMAR Chiang Mai Arr 54.02 258 P P 14 21 44.3 +1.3
CMAR Chiang Mai Arr 54.02 258 P P 14 21 44.3 +1.3
K02D Willamette Mer 55.05 63 P P 14 21 50.2 -0.2
baz=305
AAK Ala-Archa 55.18 297⇑ *e*P P 14 21 48.9 -2.5
AAK pmax pmax
comp=Z,2.0nm,0.7s
I05D Terrebonne, OR 55.52 60 P P 14 21 54.7 +1.0
baz=305
NEW Newport 55.72 54 P P 14 21 55.1 0.0
baz=304
ARU Arti 55.92 318 P P 14 21 56.6 +0.3
ARU Arti 55.92 318 *c i*P P 14 21 56.6 +0.3
ARU 14 22 54.3
ARU 14 23 59.1
ARU S S **14 29 46.2 +2.5**
ARU SS SS **14 33 28.4 -0.4**
ARU pmax pmax
comp=Z,5.0nm,0.6s
ARU Arti 55.92 318 *e*P P 14 21 56.5 +0.2
KSH Kashi 56.06 294 P P 14 22 03.6 +5.9
KSH pmax pmax
comp=Z,5.0nm,0.6s
J05D Fort Rock, OR 56.18 61 P P 14 21 58.6 +0.1
baz=305
KK31 Karatay Array 57.30 300 P P 14 22 06.7 +0.3
KK31 Karatay Array 57.30 300 P P 14 22 06.7 +0.3
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 57.30 300 P P 14 22 06.8 +0.4
KKAR Karatay Array 57.30 300 P P 14 22 06.8 +0.4
ARCES ARCESS Array B 58.15 342 P P 14 22 13.7 +1.8
comp=Z,2.8nm,0.8s,baz=32,slow=7.1,SNR=6.9
ARCES LR LR 14 50 33.7
comp=Z,74nm,22.0s,baz=48,slow=40
comp=Z,2.8nm,0.8s
PLID Pearl Lake 58.18 56 P P 14 22 13.2 +0.3
PLID IAmb IAmb 14 22 14.5
comp=Z,5.3nm,1.0s
MSO Missoula 58.31 54 P P 14 22 13.4 -0.1
baz=307
KIRV Kirov 58.55 324⇑ *e*P P 14 22 15.4 +0.6
ABKAR Akbulak array 59.51 311 P P 14 22 22.0 +0.4
ABKAR IAmb IAmb 14 22 26.0
comp=Z,11nm,1.1s
LRM Limekiln Ridge 59.74 54 P P 14 22 23.9 +0.3
AKTO Aktyubinsk 59.77 313 LR LR 14 49 07.0
comp=Z,40nm,19.7s,baz=62,slow=37
EGMT Eagleton 59.85 51 P P 14 22 23.9 -0.2
baz=308
HLID Hailey 60.01 57 P P 14 22 25.5 0.0
baz=308
BMN Battle Mountai 60.28 61 P P 14 22 27.9 +0.6
BMN Battle Mountai 60.28 61 P P 14 22 27.9 +0.6
BMN pmax pmax
comp=Z,3.0nm,0.9s
BOZ Bozeman (W) 60.33 54 P P 14 22 27.9 +0.3
BOZ Bozeman (W) 60.33 54 P P 14 22 27.9 +0.3
BOZ pmax pmax
comp=Z,4.0nm,1.0s
BOZ Bozeman (W) 60.33 54 P P 14 22 27.7 +0.1
baz=308
KVN Kaiserville 60.60 63 P P 14 22 29.7 +0.1
KVN Kaiserville 60.60 63 P P 14 22 29.7 +0.1
KVN pmax pmax
comp=Z,3.0nm,1.0s
KLMR Klimovskoe 60.73 330 *e*P P 14 22 30.9 +1.1
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR Klimovskoe 60.73 330 *e*P P 14 22 30.9 +1.1
KLMR AMP 14 22 35.6
comp=Z,22nm,1.2s
CHGR Chuyangaron 60.80 296 P P 14 22 31.5 +0.7
CHGR Chuyangaron 60.80 296 P P 14 22 31.5 +0.7
CHGR pmax pmax
comp=Z,21nm,0.9s
NVAR Mina Array Bea 60.87 64 P P 14 22 32.0 +0.6
comp=Z,1.0nm,0.8s,baz=280,slow=7.5,SNR=5.1
comp=Z,1.0nm,0.8s
NVAR Mina Array Bea 60.87 64 P P 14 22 31.0 -0.4
NIL Nilore 61.37 290 P P 14 22 34.5 -0.2
NIL Nilore 61.37 290 P P 14 22 34.5 -0.2
NIL pmax pmax
comp=Z,20nm,1.1s
RLMT Red Lodge 61.93 53 P P 14 22 38.9 +0.4
baz=310
CWC Cottonwood Cre 62.26 65 P P 14 22 41.5 +0.8
baz=310
GRAC Grapevine Rang 62.34 65 P P 14 22 41.9 +0.7
baz=310
MPMC Manual Prospec 62.87 65 P P 14 22 45.2 +0.3
baz=310
FURC Furnace Creek, 62.99 65 P P 14 22 46.4 +0.9
baz=310
DUG Dugway, Tooele 63.05 59 P P 14 22 46.1 +0.2
DUG IAmb IAmb 14 22 47.9
comp=Z,5.0nm,1.2s
DUG Dugway, Tooele 63.05 59 P P 14 22 46.2 +0.2
DUG pmax pmax
comp=Z,5.0nm,1.2s
DUG Dugway, Tooele 63.05 59 P P 14 22 46.4 +0.4
baz=310
VALR Valaam 63.16 334⇑ *e*P P 14 22 44.0 -2.1
VALR pmax pmax
comp=Z,11nm,1.2s
BW06 Boulder Array 63.27 55 P P 14 22 47.5 0.0
BW06 Boulder Array 63.27 55 P P 14 22 48.1 +0.5
baz=310
PD31 Pinedale Array 63.27 55 P P 14 22 47.9 +0.3
PDAR Pinedale Array 63.27 55 P P 14 22 48.0 +0.5
comp=Z,1.6nm,0.8s,baz=318,slow=2.0,SNR=9.0
comp=Z,1.6nm,0.8s
PDAR Pinedale Array 63.27 55 P P 14 22 47.8 +0.3
BELG Belogornoye 63.42 319⇓ *e*P P 14 22 47.7 -0.3
BELG pmax pmax
comp=Z,2.0nm,0.6s
HEC Hector,Ludlow 64.38 66 P P 14 22 55.1 +0.3
baz=311
FIA1 FINESS Array S 64.50 336 P P 14 22 55.3 +0.4
FINES FINESS Array B 64.50 336 P P 14 22 55.2 +0.3
comp=Z,4.2nm,0.4s,baz=41,slow=7.5,SNR=19
FINES LR LR 14 53 05.0
comp=Z,134nm,18.6s,baz=20,slow=38
comp=Z,4.2nm,0.4s
RDMU Red Mountain 64.70 57 P P 14 22 57.3 +0.4
GMRC Granite Mounta 64.83 65 P P 14 22 58.4 +0.6
baz=311
MOS Moscow 65.15 327 *e*P P 14 23 02.6 +3.3
RSSD Black Hills 65.41 51 P P 14 23 01.8 +0.4
baz=312
MONP2 Monument Peak 65.59 67 P P 14 23 03.7 +0.9
baz=312
BC3 Big Chuckawall 65.70 66 P P 14 23 03.6 +0.3
baz=312
N23A Red Feather La 66.54 55 P P 14 23 09.3 +0.4
baz=313
AFI Afiamalu 67.36 145 LR LR 14 52 55.0
comp=Z,29nm,18.0s,baz=307,slow=36
ISCO Idaho Springs 67.46 55 P P 14 23 15.5 +0.6
ISCO Idaho Springs 67.46 55 P P 14 23 15.5 +0.6
ISCO pmax pmax
comp=Z,3.0nm,1.1s
ISCO Idaho Springs 67.46 55 P P 14 23 15.4 +0.6
baz=313
VORR Voronezh 67.56 323 *e*P P 14 23 16.7 +1.9
VORR pmax pmax
comp=Z,40nm,0.4s
B35A Bob, Littlefor 67.59 42 P P 14 23 15.1 0.0
B35A IAmb IAmb 14 23 17.9
comp=Z,4.7nm,1.0s
GSI Gunungsitoli 67.67 246 P P 14 23 16.9 +0.9

NC204	**NORSAR Array S**	**68.39**	**343**	P	**P**	**14 23 23.3**	**+3.3**
NB201	**NORSAR Array S**	**68.48**	**342**	P	**P**	**14 23 23.1**	**+2.6**
NB2	**NORSAR Subarra**	**68.50**	**342**	P	**P**	**14 23 23.4**	**+2.7**
	comp=Z,3.6nm,0.8s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.50**	**342**	P	**P**	**14 23 22.4**	**+1.7**
	comp=Z,3.0nm,0.9s,baz=25,slow=6.4,SNR=6.4						
NOA				LR	LR	14 57 12.6	
	comp=Z,32nm,19.8s,baz=5.0,slow=39						
	comp=Z,3.0nm,0.9s						
OGNE	**Ogallala**	**68.66**	**53**	P	**P**	**14 23 22.3**	**+0.3**
	baz=314						
WB0	**Warramunga Arr**	**69.12**	**201**	P	P	**14 23 24.1**	**-0.7**
WB0				IAmb	IAmb	14 23 24.7	
	comp=Z,5.9nm,0.8s						
WR0	**Warramunga Arr**	**69.27**	**201**	P	**P**	**14 23 25.0**	**-0.8**
WR0				IAmb	IAmb	14 23 26.9	
	comp=Z,6.8nm,1.1s						
WRAB	**Tennant Creek**	**69.30**	**201**	P	**P**	**14 23 25.1**	**-0.8**
WRAB				IAmb	IAmb	14 23 26.5	
	comp=Z,6.9nm,0.9s						
WRAB	**Tennant Creek**	**69.30**	**201**	⇑*e*P	**P**	**14 23 25.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WB2	**Warramunga Arr**	**69.30**	**201**	P	**P**	**14 23 25.1**	**-0.9**
WRA	**Warramunga Arr**	**69.31**	**201**	P	**P**	**14 23 25.6**	**-0.5**
	comp=Z,5.1nm,0.8s,baz=20,slow=6.6,SNR=28						
	comp=Z,5.1nm,0.8s						
WRA	**Warramunga Arr**	**69.31**	**201**	P	**P**	**14 23 25.1**	**-0.9**
WRA	**Warramunga Arr**	**69.31**	**201**	P	**P**	**14 23 25.1**	**-0.9**
TUC	**Tucson**	**69.50**	**64**	P	**P**	**14 23 28.5**	**+1.2**
	baz=314						
FITZ	**Fitzroy Crossi**	**70.15**	**210**	P	P	**14 23 32.5**	**+1.3**
FITZ				IAmb	IAmb	14 23 44.7	
	comp=Z,8.4nm,1.3s						
ANMO	**Albuquerque**	**70.31**	**60**	P	**P**	**14 23 32.8**	**+0.3**
	baz=314						
I37A	**Lemond, Waseca**	**70.92**	**45**	P	**P**	**14 23 35.8**	**+0.1**
KIV	**Kislovodsk**	**71.78**	**316**	*e*P	**P**	**14 23 41.0**	**-0.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,47nm,18.0s						
KIV	**Kislovodsk**	**71.78**	**316**	*e*P	**P**	**14 23 41.0**	**-0.1**
KBZ	**Khabaz**	**71.85**	**315**	P	**P**	**14 23 42.7**	**+1.4**
	comp=Z,3.0nm,0.8s,baz=186,slow=7.9,SNR=7.6						
KBZ				LR	LR	14 57 45.2	
	comp=Z,82nm,18.6s,baz=46,slow=38						
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**72.23**	**327**	P	**P**	**14 23 44.6**	**+1.1**
	comp=Z,1.6nm,0.6s,baz=37,slow=7.5,SNR=9.1						
	comp=Z,1.6nm,0.6s						
AKBB	**Malin Array Si**	**72.23**	**327**	P	**P**	**14 23 45.2**	**+1.7**
AKBB	**Malin Array Si**	**72.23**	**327**	⇓*e*P	**P**	**14 23 40.7**	**-2.8**
AS31	**Alice Springs**	**72.99**	**201**	P	**P**	**14 23 48.4**	**+0.2**
ASAR	**Alice Springs**	**72.99**	**201**	P	**P**	**14 23 48.5**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=16,slow=5.4,SNR=52						
	comp=Z,3.4nm,0.7s						
GNI	**Garni**	**73.60**	**312**	LR	LR	14 59 43.7	
	comp=Z,30nm,19.3s,baz=70,slow=39						
L44A	**Lake County Fo**	**74.94**	**43**	P	**P**	**14 24 00.6**	**+1.0**
	baz=321						
TX31	**Lajitas Ar. Si**	**75.94**	**62**	P	**P**	**14 24 05.8**	**+0.1**
TX32	**Lajitas Array**	**75.94**	**62**	P	**P**	**14 24 05.9**	**+0.2**
TX32				IAmb	IAmb	14 24 36.2	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**75.94**	**62**	P	**P**	**14 24 06.2**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=306,slow=4.5,SNR=3.7						
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**75.94**	**62**	P	**P**	**14 24 05.9**	**+0.2**
BUR08	**Bucovina Ar. S**	**76.24**	**328**	P	**P**	**14 24 07.2**	**+0.1**
BUR08				IAmb	IAmb	14 24 18.8	
	comp=Z,5.6nm,1.1s						
BURAR	**Bucovina Array**	**76.26**	**328**	P	**P**	**14 24 07.1**	**-0.2**
DPC	**Dobruska-Polom**	**76.82**	**335**	P	P	14 24 15.4	+5.1
DPC	**Dobruska-Polom**	**76.82**	**335**	*e*P	**P**	**14 24 12.3**	**+2.0**
DPC				*e*pP	**P**	**14 24 15.4**	**+5.1**
CLL	**Collm**	**76.90**	**337**	P	**P**	**14 24 14.5**	**+3.9**
CLL				pmax	pmax		
	comp=Z,17nm,1.3s						
CLL	**Collm**	**76.90**	**337**	*i* P	**P**	**14 24 10.9**	**+0.3**
	comp=Z,5.0nm,0.8s						
CLL				*i* P(2)		14 24 15.3	
	comp=Z,16nm,1.3s						
CLL				*e*PP	**PP**	**14 27 07.0**	**+4.2**
LANS	**Liptovska Anna**	**76.91**	**332**	*e*P	P	14 24 16.6	+5.8
LANS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	**Liptovska Anna**	**76.91**	**332**	*e*P	P	14 24 16.6	+5.8
KRLC	**Kraliky**	**76.93**	**334**	*e*P	P	14 24 16.8	+5.9
KRLC	**Kraliky**	**76.93**	**334**	*e*P	P	14 24 16.8	+5.9
MORC	**Moravsky Berou**	**76.96**	**334**	P	**P**	**14 24 15.9**	**+4.8**
MORC				pmax	pmax		
	comp=Z,12nm,1.3s						
MORC	**Moravsky Berou**	**76.96**	**334**	*e*P	**P**	**14 24 15.8**	**+4.7**
BRG	**Berggiesshubel**	**77.03**	**336**	*e*P	P	14 24 19.3	+7.9
BRG				Amp		14 24 21.1	
	comp=Z,8.5nm,1.3s						
BRG	**Berggiesshubel**	**77.03**	**336**	*e*P	P	14 24 19.2	+7.8
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PRU	**Pruhonice**	**77.66**	**335**	*e*P	**P**	**14 24 18.7**	**+3.8**
PRU				*e*		14 24 22.1	
PRU	**Pruhonice**	**77.66**	**335**	*e*P	**P**	**14 24 18.7**	**+3.8**
PRU				*e*pP	**pwP**	**14 24 22.1**	**-2.6**
VRAC	**Vranov**	**77.67**	**334**	*e*P	**P**	**14 24 19.5**	**+4.5**
MLR	**Muntele Rosu**	**77.78**	**326**	LR	LR	15 01 07.9	
	comp=Z,82nm,18.8s,baz=36,slow=38						
MLR	**Muntele Rosu**	**77.78**	**326**	P	**P**	**14 24 16.7**	**+0.8**
MLR				IAmb	IAmb	14 24 27.4	
	comp=Z,7.1nm,1.0s						
MLR	**Muntele Rosu**	**77.78**	**326**	P	**P**	**14 24 16.7**	**+0.8**
MLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WSAR	**Wadi Sarin**	**77.83**	**291**	LR	LR	15 04 53.2	
	comp=Z,28nm,20.3s,baz=64,slow=40						
KRUC	**Moravsky**	**77.94**	**334**	*e*P	**P**	**14 24 20.1**	**+3.6**
VOIR		**78.17**	**327**	P	P	14 24 22.8	+4.9
VOIR				pmax	pmax		
	comp=Z,11nm,0.9s						
KHC	**Kasperske Hory**	**78.71**	**336**	*e*P	**P**	**14 24 20.9**	**+0.1**
KHC				*e*		14 24 26.3	
KHC	**Kasperske Hory**	**78.71**	**336**	*e*P	**P**	**14 24 20.9**	**+0.1**
KHC				*e*pP	**sP**	**14 24 26.3**	**+3.9**
CKRC	**Cesky Krumlov**	**78.78**	**335**	*e*P	P	14 24 26.1	+4.9
CKRC				*ex*	x	14 24 30.5	
WET	**Wettzell**	**78.89**	**336**	P	**P**	**14 24 24.5**	**+2.7**
WET				pmax	pmax		
	comp=Z,7.0nm,1.7s						
GERES	**GERESS Array B**	**78.93**	**335**	P	**P**	**14 24 22.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=46,slow=5.8,SNR=4.8						
	comp=Z,0.7nm,0.5s						
CONA	**Conrad Observa**	**79.12**	**334**	*e*P	P	14 24 29.0	+5.8
	comp=Z,3.7nm,0.9s						
RONA	**Rosalia, Austr**	**79.19**	**333**	*e*P	**P**	**14 24 26.9**	**+3.4**
	comp=Z,6.2nm,1.2s						
BZS	**Buzias**	**79.26**	**329**	P	**P**	**14 24 27.1**	**+3.2**
BZS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BR131	**Keskin Array S**	**79.31**	**318**	*e*P	**P**	**14 24 22.4**	**-2.0**
BRTR	**Keskin Array B**	**79.31**	**318**	P	**P**	**14 24 25.0**	**+0.6**
	comp=Z,2.1nm,1.0s,baz=43,slow=2.2,SNR=5.8						
	comp=Z,2.1nm,1.0s						
BATG	**Bathurst New B**	**79.33**	**27**	P	**P**	**14 24 24.4**	**+0.2**
ARSA	**Arzberg**	**79.83**	**334**	*e*P	P	14 24 32.6	+5.6
	comp=Z,5.7nm,1.3s						
BIOA	**Bad Ischl, Aus**	**79.99**	**335**	*e*P	P	14 24 33.6	+5.8
	comp=Z,6.6nm,1.2s						
PKME	**Peaks-Kenny Pk**	**80.03**	**30**	P	**P**	**14 24 28.4**	**+0.3**
	baz=331						
BAIF	**Baives**	**80.18**	**342**	*e*P	P	14 24 34.3	+5.5
BAIF				pmax	pmax		
	comp=Z,22nm,1.6s						
SOKA	**Soboth**	**80.49**	**334**	*e*P	**P**	**14 24 34.8**	**+4.2**
	comp=Z,5.4nm,0.8s						
KBA	**Koelnbreinsper**	**80.63**	**335**	*e*P	P	14 24 37.8	+6.4
	comp=Z,6.9nm,0.6s						
WATA	**Walderalm**	**80.90**	**336**	*e*P	**P**	**14 24 33.9**	**+1.0**
	comp=Z,6.5nm,1.2s						
WTTA	**Wattenberg**	**80.95**	**336**	P	**P**	**14 24 34.6**	**+1.4**
WTTA				pmax	pmax		
	comp=Z,16nm,1.2s						
WTTA	**Wattenberg**	**80.95**	**336**	*e*P	**P**	**14 24 34.1**	**+0.9**
	comp=Z,5.8nm,0.8s						
RETA	**Reutte**	**80.98**	**337**	*e*P	**P**	**14 24 34.3**	**+1.1**
	comp=Z,3.0nm,1.2s						
GGN	**Saint George**	**80.99**	**29**	P	**P**	**14 24 33.3**	**+0.1**
GGN				IAmb	IAmb	14 25 16.4	
	comp=Z,12nm,1.1s						
MOTA	**Moosalm**	**81.02**	**336**	*e*P	**P**	**14 24 34.5**	**+0.9**
	comp=Z,3.8nm,0.9s						
CDF	**Champ du Feu**	**81.02**	**339**	*e*P	P	14 24 38.8	+5.3
CDF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SQTA	**Sankt Quirin**	**81.11**	**336**	*e*P	**P**	**14 24 35.1**	**+1.1**
	comp=Z,7.7nm,1.1s						
ABTA	**Abfaltersbach**	**81.17**	**335**	*e*P	**P**	**14 24 34.6**	**+0.4**
	comp=Z,5.8nm,1.2s						
VTS	**Vitosha**	**81.25**	**326**	P	**P**	**14 24 39.3**	**+4.5**
VTS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAVA	**Damuels**	**81.40**	**337**	*e*P	**P**	**14 24 36.3**	**+0.7**
	comp=Z,8.3nm,1.0s						
FETA	**Feichten**	**81.42**	**336**	*e*P	**P**	**14 24 36.3**	**+0.6**
	comp=Z,6.7nm,1.8s						
LRAL	**Lakeview Retre**	**82.53**	**49**	P	**P**	**14 24 42.8**	**+1.3**
	baz=322						
LOR	**Lormes**	**82.89**	**341**	*e*P	P	14 24 49.0	+5.8
LOR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SSF	**Saint Saulge**	**83.17**	**341**	*e*P	P	14 24 51.3	+6.7
SSF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LPL	**La Plagne**	**83.86**	**338**	*e*P	**P**	**14 24 50.1**	**+1.6**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LPG	**La Plagne**	**83.87**	**338**	*e*P	**P**	**14 24 49.8**	**+1.2**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TCF	**Toulx Ste Croi**	**84.19**	**342**	*e*P	P	14 24 56.3	+6.4
TCF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VIVF	**Saint-Julien-l**	**84.98**	**340**	*e*P	**P**	**14 24 55.5**	**+1.5**
VIVF				pmax	pmax		
	comp=Z,16nm,1.4s						
EIL	**Elat**	**86.77**	**311**	LR	LR	15 10 18.3	
	comp=Z,36nm,18.1s,baz=86,slow=40						
ESDC	**Sonseca Array**	**91.78**	**344**	P	**P**	**14 25 25.9**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=333,slow=2.1,SNR=4.6						
ESDC				LR	LR	15 12 52.7	
	comp=Z,30nm,19.0s,baz=320,slow=40						
	comp=Z,0.6nm,0.7s						
MDT	**Midelt**	**98.56**	**343**	LR	LR	15 18 20.7	
	comp=Z,22nm,18.1s,baz=5.0,slow=40						
TORD	**Torodi Ar. Bea**	**115.69**	**331**	PKP	**PKiKP**	**14 31 00.4**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=321,slow=2.0,SNR=3.4						
VNDA	**Vanda**	**124.31**	**178**	PKP	**PKPdf**	**14 31 15.3**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=174,slow=20,SNR=1.8						
MAW	**Mawson**	**133.27**	**212**	PKP	**PKPdf**	**14 31 33.4**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=104,slow=13,SNR=2.5						
PLCA	**Paso Flores**	**146.61**	**96**	PKPbc	**PKPbc**	**14 31 59.8**	**-0.2**
	comp=Z,8.2nm,0.9s,baz=319,slow=2.1,SNR=10.0						
CPUP	**Villa Florida**	**146.91**	**63**	PKPbc	**PKPbc**	**14 32 00.7**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=291,slow=5.5,SNR=4.4						
TROLL	**Troll, Antarti**	**151.93**	**197**	PKPdf	**PKPbc**	**14 32 11.8**	**-0.7**
SNAA	**Sanae**	**153.23**	**195**	PKPdf	**PKPbc**	**14 32 13.8**	**-1.6**
VNA2	**Neumayer--Watz**	**154.63**	**193**	PKPdf	**PKPbc**	**14 32 17.2**	**-1.0**
	baz=167,slow=3.0						
VNA3	**Neumayer Olymp**	**154.67**	**191**	PKPdf	**PKPbc**	**14 32 17.0**	**-1.4**
VNA1	**Neumayer--Stat**	**155.01**	**193**	PKPdf		14 32 18.5	
VNA1	**Neumayer--Stat**	**155.01**	**193**	pPKPdf		14 32 21.7	

KRNET 07 14:30:05.0±0.1, 41.52N×73.95E, h14km, mb2.8, 3C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**0.44**	**39**	⇓*i*P	Pg	14 30 13.6	-0.2
	baz=40						
ARLS				⇓*i*S	Sg	14 30 19.8	+0.1
	baz=40						
UCH	**Uchtor**	**0.82**	**30**	⇑*e*P	Pg	14 30 20.5	-0.5
	baz=30						
UCH				⇑*i*S	Sg	14 30 31.9	+0.1
	baz=30						
KK31	**Karatay Array**	**3.00**	**303**	⇑Pg	Pb	14 30 58.9	+0.6
	0.1nm,0.3s,baz=130,slow=16,SNR=5.9						
KK31				⇓Lg	Lg	14 31 41.3	
	0.1nm,0.2s,baz=131,slow=27						

*NAO **07** 14:36:55.3±5.0, 74.72N×9.80E, ML3.1*
*BER **07** 14:36:57.0±2.0, 74.67N×9.23E, h25km±32km, ML3.1(NAO), Confirmed Earthquake*
*IEPN **07** 14:36:58.0, 74.64N×10.29E, h10km*
ISC 07 14:36:51.5±2.6, 74.64N±0.09×9.3E±0.1, h10km, n18, σ2s51/35, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**2.59**	**88**	P	**Pn**	**14 37 32.1**	**-1.3**
BJO1				*i* S	Sn	14 37 53.8	-11
HSPB	**Hornsund (broa**	**2.83**	**30**	Pn	**Pn**	**14 37 38.2**	**+1.6**
HSPB				Sn	**Sn**	**14 38 07.8**	**-3.0**
HSPB	**Hornsund (broa**	**2.83**	**30**	*e*P	**Pn**	**14 37 38.6**	**+1.9**
HSPB				*e*S	**Sn**	**14 38 08.5**	**-2.2**
HSPB				IAML		14 38 08.7	
	comp=Z,4.2nm,0.4s						
HSPB	**Hornsund (broa**	**2.83**	**30**	*e*P	**Pn**	**14 37 38.1**	**+1.5**
HSPB				*i* S	**Sn**	**14 38 07.2**	**-3.5**
BRBA	**Barentsburg A**	**3.63**	**16**	Pn	**Pn**	**14 37 49.4**	**+1.7**
BRBA				Sn	**Sn**	**14 38 30.7**	**+0.1**
BRBA	**Barentsburg A**	**3.63**	**16**	*e*P	**Pn**	**14 37 49.7**	**+2.0**
BRBA				*e*S	**Sn**	**14 38 30.4**	**-0.1**
BRBA				IAML		14 38 34.8	
	comp=Z,3.3nm,0.1s						
SPA0	**Spitsbergen Ar**	**3.93**	**22**	Pn	**Pn**	**14 37 54.4**	**+2.6**
	baz=202,slow=14						
SPA0				Sn	**Sn**	**14 38 36.2**	**-1.6**
	baz=188,slow=22						
SPA0	**Spitsbergen Ar**	**3.93**	**22**	*e*P	**Pn**	**14 37 54.4**	**+2.6**
SPA0				*e*S	**Sn**	**14 38 36.3**	**-1.6**
SPA0	**Spitsbergen Ar**	**3.93**	**22**	*e*P	**Pn**	**14 37 54.3**	**+2.5**
SPA0				*e*S	**Sn**	**14 38 35.8**	**-2.1**
HOPEN	**Hopen**	**4.35**	**57**	Pn	**Pn**	**14 38 00.6**	**+3.1**
HOPEN				Sn	**Sn**	**14 38 46.5**	**-1.6**
HOPEN	**Hopen**	**4.35**	**57**	*e*P	**Pn**	**14 38 00.6**	**+3.1**
HOPEN				*e*S	**Sn**	**14 38 46.6**	**-1.6**
HOPEN				IAML		14 38 50.9	
	comp=Z,8.4nm,0.3s						
HOPEN	**Hopen**	**4.35**	**57**	P	**Pn**	**14 38 00.6**	**+3.1**
HOPEN				*e*S	**Sn**	**14 38 46.3**	**-1.8**
KBS	**Kingsbay**	**4.36**	**7**	Pn	**Pn**	**14 37 59.3**	**+1.7**
KBS				Sn	**Sn**	**14 38 44.9**	**-3.5**
KBS	**Kingsbay**	**4.36**	**7**	*e*P	**Pn**	**14 37 59.0**	**+1.3**
KBS				*e*S	**Sn**	**14 38 45.1**	**-3.3**
KBS				IAML		14 38 52.0	
	comp=Z,3.6nm,0.7s						
KBS	**Kingsbay**	**4.36**	**7**	*e*P	**Pn**	**14 37 58.7**	**+1.1**
KBS				*e*S	**Sn**	**14 38 46.3**	**-2.1**
ARA0	**ARCESS Array S**	**7.12**	**128**	Pn	**Pn**	**14 38 39.0**	**+3.3**
	baz=330,slow=12						
ARA0				Sn	**Sn**	**14 39 54.2**	**-2.4**
	baz=327,slow=22						
ARA0	**ARCESS Array S**	**7.12**	**128**	Pn	**Pn**	**14 38 39.0**	**+3.3**
	baz=330,slow=12						
ARA0				Sn	**Sn**	**14 39 54.2**	**-2.4**
	baz=327,slow=22						
ZFI	**Zemlya Franca-**	**9.98**	**35**	*e*P	**Pn**	**14 39 18.4**	**+3.8**
ZFI				*e*S	**Sn**	**14 41 03.0**	**-3.4**

*IDC **07** 14:50:13.4±2.1, 1.57N×126.64E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=172.9km s-min=26.2km az=66.0*
*DJA **07** 14:50:15.7±2.1, 1.1°N±4.2°×12.6°E±0.7°, h15km±19km, M3.5/7, MLv3.5/7*
ISC 07 14:50:18.8±1.1, 1.48N±0.09×126.48E±0.09, h47km, n7, σ1s54/8, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.13**	**128**	P	**Pn**	**14 50 36.5**	**-1.7**
TNTI				S	**Sn**	**14 50 52.2**	**-0.4**
LBMI	**Labuha**	**2.34**	**154**	P	**Pn**	**14 50 54.4**	**-0.3**
SGSI	**Sangihe**	**2.39**	**337**	P	**Pn**	**14 50 54.3**	**-1.2**
KMSI	**Cibinong**	**2.65**	**250**	P	**Pn**	**14 50 57.5**	**-1.5**
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**14 55 16.0**	**0.0**
	2.7nm,0.9s,baz=340,slow=11,SNR=44						
	2.7nm,0.9s						
ASAR	**Alice Springs**	**26.01**	**164**	P	**P**	**14 55 49.5**	**+1.9**
	0.4nm,0.3s,baz=344,slow=9.6,SNR=30						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**15 00 16.8**	**+1.2**
	0.3nm,0.6s,baz=118,slow=7.2,SNR=4.2						
	0.3nm,0.6s						

IDC 07 14:52:41.8±2.2, 6.91S×129.49E, h0km, mb3.3/1, mbtmp3.9/5, ML4.0/4, Error ellipse: s-maj=51.3km s-min=29.9km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.62**	**240**	Pn	Pn	14 54 21.4	+0.8
	2.4nm,0.3s,baz=56,slow=3.6,SNR=2.4						
BATI				Sn	Sn	14 55 30.3	-6.5
	4.3nm,0.3s,baz=87,slow=10,SNR=7.4						
	8.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.73**	**198**	Pn	Pn	14 55 29.1	-1.4
	0.8nm,0.3s,baz=13,slow=9.8,SNR=33						
FITZ				Sn	Sn	14 57 27.2	-15
	1.5nm,0.3s,baz=133,slow=21,SNR=8.2						
	1.8nm,0.3s						
WRA	**Warramunga Arr**	**13.78**	**160**	Pn	Pn	14 55 59.2	+0.6
	1.1nm,0.3s,baz=340,slow=13,SNR=24						
WRA				Sn	Sn	14 58 20.7	-12
	1.7nm,0.3s,baz=332,slow=22,SNR=8.9						
	1.8nm,0.3s						
ASAR	**Alice Springs**	**17.19**	**166**	P	Pn	14 56 44.0	+0.4
	0.4nm,0.3s,baz=341,slow=8.7,SNR=15						
ASAR				S	Sn	14 59 41.5	-14
	0.6nm,0.3s,baz=348,slow=26,SNR=6.4						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**67.88**	**327**	P	P	15 03 42.1	-0.1
	0.2nm,0.5s,baz=119,slow=7.3,SNR=1.8						
	0.2nm,0.5s						

*IDC **07** 14:56:33.3±1.6, 4.38N×126.72E, h0km, mb3.7/5, mbtmp3.8/6, ML4.0/1, MS3.0/1, Error ellipse: s-maj=83.6km s-min=22.8km az=64.0*
*NEIC **07** 14:56:38.2±1.1, 4.3N±0.1×126.8E±0.1, h31km±9km, mb4.1/6, Error ellipse: s-maj=21.8km s-min=13.3km az=57.0*
*MAN **07** 14:56:39.3±4.4N×126.38E, h33km, Ms3.0*
*DJA **07** 14:56:40.3±0.6, 4.1°N±5.2°×12.7°E±0.7°, h29km±3km, M4.0/8, mB4.6/1, mb4.0/6, MLv4.0/8, Mw(mB)3.9/1*
ISC 07 14:56:42.0±0.8, 3.93N±0.04×126.63E±0.07, h35km, n29, σ2s14/32, mb3.8/7, 8C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.12**	**258**	P	**Pn**	**14 57 00.8**	**-0.4**
SGSI				S	**Sn**	**14 57 15.4**	**0.0**
DDMP	**Don Marcelino,**	**2.35**	**337**	*e*P	**Pn**	**14 57 14.1**	**-4.1**
DDMP				*e*S	**Sn**	**14 57 46.0**	**+0.2**
GSPH	**General Santos**	**2.72**	**322**	*e*P	**Pn**	**14 57 19.9**	**-3.5**
MATI	**Mati**	**3.02**	**353**	*e*P	**Pn**	**14 57 26.7**	**-0.7**
MATI				*e*S	**Sn**	**14 58 08.7**	**+6.3**
TNTI	**Ternate**	**3.22**	**167**	Pn	**Pn**	**14 57 29.8**	**-0.4**
SKMP	**Bagumbayan, Su**	**3.31**	**321**	*e*P	**Pn**	**14 57 29.9**	**-1.5**
KCP	**Kalbapan**	**3.42**	**334**	*i*P	**Pn**	**14 57 33.8**	**+0.8**
KCP				*i* S	**Sn**	**14 58 16.8**	**+4.4**
CTBH	**Cotabato--PC H**	**4.04**	**324**	*i*P	**Pn**	**14 57 42.7**	**+1.3**
BUKP	**Musuan**	**4.22**	**338**	*e*P	**Pn**	**14 57 43.0**	**-1.0**
BUKP				*e*S	**Sn**	**14 58 34.3**	**+2.1**
BIPH	**Bislig**	**4.24**	**356**	*e*P	**Pn**	**14 57 45.2**	**+1.0**
BIPH				*e*S	**Sn**	**14 58 36.2**	**+3.7**
PAGZ	**Pagadian**	**5.06**	**321**	*e*P	**Pn**	**14 57 54.8**	**-0.6**
MRSI	**Marisa**	**5.80**	**234**	P	**Pn**	**14 58 06.3**	**+0.7**
	0.2nm536nm34nm,0.5s						
SANI	**Sanana**	**5.97**	**186**	P	**Pn**	**14 58 09.0**	**+1.0**
	0.1nm13nm,1.2s						
TOLI2	**Tolitoli**	**6.47**	**245**	Pn	**Pn**	**14 58 15.6**	**+0.8**
SWI	**Sorong**	**6.64**	**136**	P	**Pn**	**14 58 17.5**	**+0.3**
	0.1nm13nm,0.5s						
SIJI	**Sorong**	**6.65**	**136**	Pn	**Pn**	**14 58 17.9**	**+0.6**
	2.7nm,0.3s,baz=324,slow=19,SNR=6.6						
	6.4nm,0.3s						
MTN	**Manton Dam**	**17.25**	**165**		**Pn**	**15 00 40.2**	**-0.1**
MTN				IAmb	IAmb	15 01 24.3	
	comp=Z,9.2nm,1.1s						
KNRA	**Kununurra**	**19.59**	**174**	P	**P**	**15 01 06.5**	**-0.9**
KNRA				IAmb	IAmb	15 01 16.4	
	comp=Z,12nm,1.3s						
FITZ	**Fitzroy Crossi**	**21.91**	**183**	P	**P**	**15 01 34.3**	**+2.0**
	comp=Z,0.9nm,0.5s,baz=18,slow=10.0,SNR=1.6						
	comp=Z,0.9nm,0.5s						
WB0	**Warramunga Arr**	**24.75**	**162**	P	**P**	**15 02 00.4**	**-0.2**
WB0				IAmb	IAmb	15 02 22.3	
	comp=Z,7.7nm,1.2s						
WRAB	**Tennant Creek**	**24.90**	**163**	P	**P**	**15 02 00.6**	**-1.2**
WRAB				IAmb	IAmb	15 02 32.8	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**

UXUV				*e*S		**Sn**	**15 06 19.1**	**-2.1**
CRIG	**Cruz Grande**	**2.67**	**285**			**Pn**	**15 05 54.0**	**+0.8**
CRIG						**Sn**	**15 06 20.9**	**-3.4**
CRIG	**Cruz Grande**	**2.67**	**285**	*e*P		**Pn**	**15 05 54.0**	**+0.8**
CRIG				*e*S		**Sn**	**15 06 20.9**	**-3.4**
DAIG	**Los Arroyos**	**3.23**	**288**			**Pn**	**15 06 01.8**	**+0.9**
DAIG						**Sn**	**15 06 36.3**	**-1.8**
DAIG	**Los Arroyos**	**3.23**	**288**	*e*P		**Pn**	**15 06 01.8**	**+0.9**
DAIG				*i* S		**Sn**	**15 06 36.3**	**-1.8**
TGIG		**3.27**	**77**			Pn	15 06 07.5	+6.0
TGIG						**Sn**	**15 06 45.3**	**+6.1**
TGIG		**3.27**	**77**	*e*P		Pn	15 06 07.5	+6.0
TGIG				*i* S		**Sn**	**15 06 45.3**	**+6.1**
JAUV	**Jalcomulco**	**3.33**	**354**	*e*P		**Pn**	**15 06 01.9**	**-0.4**
JAUV				*i* S		**Sn**	**15 06 43.7**	**+3.0**
LVIG	**Laguna Verde**	**3.67**	**0**	*e*P		**Pn**	**15 06 06.7**	**-0.1**
LVIG				*e*S		**Sn**	**15 06 47.2**	**-1.6**
YAIG	**Yautepec**	**3.76**	**319**			**Pn**	**15 06 10.9**	**+2.6**
YAIG						**Sn**	**15 06 50.6**	**-0.9**
YAIG	**Yautepec**	**3.76**	**319**	*e*P		**Pn**	**15 06 10.9**	**+2.6**
YAIG				*e*S		**Sn**	**15 06 50.6**	**-0.9**
CAIG	**El Cayaco**	**3.80**	**286**			**Pn**	**15 06 10.3**	**+1.6**
CAIG						Sn	15 07 02.1	+10
CAIG	**El Cayaco**	**3.80**	**286**	*e*P		**Pn**	**15 06 10.3**	**+1.6**
CAIG				*e*S		Sn	15 07 02.1	+10
CCIG	**Comitan**	**4.14**	**86**	Pn		**Pn**	**15 06 13.9**	**+0.4**
CCIG	**Comitan**	**4.14**	**86**	*e*P		Pn	15 06 19.1	+5.5
CCIG				*e*S		**Sn**	**15 07 06.3**	**+5.4**
PATR	**El Naranjo**	**4.16**	**102**	*e*P		**Pn**	**15 06 13.9**	**+0.1**
PATR				*i* S		Sn	**15 06 56.0**	**-5.3**
COVM	**Coyoacan**	**4.19**	**322**	*e*P		Pn	15 06 23.7	+9.4
COVM				*i* S		**Sn**	**15 07 01.3**	**-0.9**
PAVE	**Pavencul**	**4.20**	**101**	*e*P		**Pn**	**15 06 15.1**	**+0.7**
PAVE				*i* S		**Sn**	**15 06 57.0**	**-5.2**
AOVM	**Tlapan**	**4.23**	**320**	*e*P		Pn	15 06 22.3	+7.3
AOVM				*i* S		**Sn**	**15 07 06.9**	**+3.6**
CHUJ	**Union Juarez**	**4.28**	**102**	*e*P		**Pn**	**15 06 16.1**	**+0.6**
CHUJ				*i* S		**Sn**	**15 07 00.3**	**-4.0**
TEIG	**Tepich**	**8.81**	**61**	Pn		**Pn**	**15 07 16.7**	**-0.7**
X37A	**Clayton**	**18.50**	**3**	P		**Pn**	**15 09 25.2**	**-0.5**
X37A				IAmb		IAmb	15 09 28.3	
	comp=Z,3.8nm,0.8s							
MIAR	**Mount Ida**	**18.61**	**7**	P		**Pn**	**15 09 26.5**	**-0.4**
AMTX	**Amarillo**	**19.35**	**347**	Pn		**Pn**	**15 09 36.5**	**+0.6**
PLAL	**Pickwick Lake**	**20.30**	**20**	P		**Pn**	**15 09 44.5**	**-0.3**
PLAL				IAmb		IAmb	15 10 05.2	
	comp=Z,5.9nm,1.4s							

IDC ***07*** *15:37:18.4±1.2,9.°79N×123.°77E,h0km,mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=86.0km s-min=23.2km az=75.0*

MAN ***07*** *15:37:20,9.°88N×124.°03E,h4km,Ms3.1*

ISC 07 15:37:20.9±1.0,9.°94N±0.°03×124.°01E±0.°03,h15km±7km, n21,σ1°04/39,mb3.3/4,9C-8D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.29**	**210**	⇓*i*P			**Pg**	**15 37 26.8**	**-0.2**
TBP				*i* S			**Sg**	**15 37 31.4**	**+0.3**
LLP	**Lapu-Lapu**	**0.37**	**354**	⇓*i*P			**Pn**	**15 37 31.4**	**-0.5**
LLP				*i* S			**Sn**	**15 37 37.7**	**-1.2**
MSLP	**Maasin**	**0.86**	**77**	⇑*e*P			**Pb**	**15 37 37.5**	**-0.1**
MSLP				*e*S			**Sn**	**15 37 50.4**	**-0.5**
SNPH	**Sibulan**	**0.97**	**232**	⇓*i*P			**Pb**	**15 37 39.3**	**-0.1**
SNPH				*i* S			**Sn**	**15 37 55.4**	**+1.8**
OCLP	**Ormoc**	**1.25**	**28**	⇑*e*P			**Pb**	**15 37 44.5**	**+0.3**
OCLP				*e*S			**Sg**	**15 38 03.3**	**+2.0**
CNOP	**Candoni, Negro**	**1.35**	**265**	⇑*e*P			**Pb**	**15 37 46.2**	**+0.2**
CNOP				*e*S			**Sb**	**15 38 04.3**	**+1.1**
DCPH	**Dipolog City**	**1.50**	**206**	⇓*e*P			**Pn**	**15 37 47.0**	**-0.3**
DCPH				*e*S			**Sn**	**15 38 07.2**	**+0.5**
GUIM	**Jordan**	**1.55**	**296**	⇑*e*P			**Pb**	**15 37 49.1**	**-0.3**
GUIM				*e*S			**Sg**	**15 38 10.7**	**-0.3**
BUTP	**Butuan**	**1.86**	**121**	⇑*e*P			**Pn**	**15 37 52.6**	**+0.3**
BUTP				*e*S			**Sb**	**15 38 17.6**	**-0.2**
RCP	**Roxas**	**2.03**	**322**	⇓*e*P			**Pb**	**15 37 56.8**	**-0.8**
RCP				*e*S			**Sb**	**15 38 23.5**	**+0.8**
GLSP	**General Luna,**	**2.09**	**94**	⇑*e*P			**Pn**	**15 37 55.9**	**+0.4**
GLSP				*e*S			**Sn**	**15 38 22.1**	**+0.8**
BESP	**Borongan**	**2.17**	**40**	⇑*e*P			**Pn**	**15 37 57.9**	**+1.5**
BESP				*e*S			**Sg**	**15 38 29.4**	**-1.1**
PAGZ	**Pagadian**	**2.17**	**197**	⇑*e*P			**Pn**	**15 37 57.4**	**+0.8**
PAGZ				*e*S			**Sb**	**15 38 25.8**	**-0.9**
BUKP	**Musuan**	**2.30**	**153**	⇑*e*P			**Pn**	**15 37 58.7**	**+0.3**
BUKP				*e*S			**Sb**	**15 38 29.8**	**-0.6**
CTBH	**Cotabato--PC H**	**2.71**	**175**	⇓*i*P			**Pn**	**15 38 04.4**	**+0.4**
CTBH				*i* S			**Sn**	**15 38 38.5**	**+1.9**
BIPH	**Bislig**	**2.91**	**127**	⇓*e*P			**Pn**	**15 38 07.7**	**+1.1**
BIPH				*e*S			**Sn**	**15 38 43.4**	**+1.9**
KCP	**Kidapawan**	**3.10**	**160**	⇓*e*P			**Pg**	**15 38 20.2**	**-0.3**
KCP				*i* S			**Sb**	**15 38 51.4**	**-2.3**
KSRS	**Korea Array**	**27.62**	**7**	P			**P**	**15 43 09.2**	**+1.4**
	0.4nm,0.6s,baz=186,slow=9.9,SNR=4.7 0.4nm,0.6s								
WRA	**Warramunga Arr**	**31.39**	**161**	P			**P**	**15 43 40.3**	**-1.2**
	0.5nm,1.1s,baz=340,slow=9.3,SNR=1.8 0.5nm,1.1s								
ASAR	**Alice Springs**	**34.78**	**164**	P			**P**	**15 44 10.7**	**-0.4**
	0.3nm,0.7s,baz=340,slow=6.7,SNR=6.9								
ASAR				PcP			**PcP**	**15 46 43.4**	**-1.3**
	0.6nm,1.1s,baz=341,slow=2.9,SNR=4.9 0.3nm,0.7s								
MKAR	**Makanchi Array**	**50.96**	**324**	P			**P**	**15 46 21.8**	**-0.2**
	0.4nm,0.6s,baz=130,slow=7.8,SNR=3.8 0.4nm,0.6s								

ISK ***07*** *15:47:03.2,37.°31N×37.°14E,h9km,ML3.4/11*
DDA ***07*** *15:47:04.0±0.0,37.°33N×37.°10E,h7km±1km,ML3.5*

ISC 07 15:47:03.7±1.0,37.°30N±0.°03×37.°13E±0.°02,h11km±8km, n45,σ0°97/58,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HCB	**Kahramanmara**	**0.18**	**284**	P			**Pg**	**15 47 07.6**	**-0.1**
KAHM	**Kahramanmaras,**	**0.24**	**333**	P			**Pg**	**15 47 08.8**	**0.0**
KAHM				S			**Sg**	**15 47 12.1**	**0.0**
KAHM				*i* AML			AML	15 47 13.0	
	comp=E,5μm,0.3s								
KMRS	**Kahramanmaras**	**0.27**	**318**	PG			**Pg**	**15 47 09.2**	**-0.1**
KMRS				SG			**Sg**	**15 47 13.4**	**+0.3**
GZT	**Gaziantep**	**0.35**	**81**	P			**Pb**	**15 47 11.6**	**-0.6**
KAMA	**Osmaniye**	**0.39**	**253**	P			**Pg**	**15 47 11.7**	**+0.4**
KAMA				S			**Sg**	**15 47 16.9**	**+0.5**
KAMA				*i* AML			AML	15 47 18.0	
	comp=N,1μm,0.2s								
KAMA				*i* AML			AML	15 47 19.0	
	comp=E,2μm,0.6s								
KUZU	**Kuzuini**	**0.53**	**185**	P			**Pb**	**15 47 15.1**	**0.0**
ANDN	**Andirin**	**0.68**	**294**	P			**Pb**	**15 47 17.2**	**-0.5**
ATAB	**Bozova**	**0.94**	**79**	P			**Pn**	**15 47 22.8**	**-0.2**
ATAB				S			**Sb**	**15 47 35.8**	**+1.0**
ATAB				*i* AML			AML	15 47 38.0	
	comp=E,6μm,0.8s								
ATAB				*i* AML			AML	15 47 38.0	
	comp=N,2μm,0.3s								
ELBS	**KAHRAMANMARAS**	**1.02**	**0**	P			**Pg**	**15 47 22.8**	**-0.6**
ELBS				S			**Sb**	**15 47 36.8**	**-0.3**
ELBS				*i* AML			AML	15 47 41.0	
	comp=N,1μm,0.5s								
ELBS				*i* AML			AML	15 47 41.0	
	comp=E,1μm,0.3s								
KOZT	**Kozan**	**1.05**	**280**	PG			**Pb**	**15 47 23.9**	**-0.1**
KOZT				SG			**Sn**	**15 47 39.5**	**+0.3**
SAIM	**ADANA**	**1.07**	**309**	P			**Pg**	**15 47 23.6**	**-0.8**
SAIM				S			**Sb**	**15 47 38.3**	**-0.1**
SAIM				*i* AML			AML	15 47 41.0	
	comp=N,2μm,0.2s								
CEYT	**Ceyhan**	**1.14**	**256**	PN			**Pn**	**15 47 26.0**	**+0.3**
AKCD	**Akcadag**	**1.18**	**32**	P			**Pn**	**15 47 27.8**	**+1.5**
AKCD				S			**Sn**	**15 47 43.6**	**+1.2**
AKCD				*i* AML			AML	15 47 44.0	
	comp=N,3μm,0.6s								
TAHT	**Tahtakopru-Hat**	**1.19**	**220**	PN			**Pn**	**15 47 26.8**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.24**	**333**	PN			**Pg**	**15 47 26.3**	**-1.3**
SARI				SN			**Sn**	**15 47 45.0**	**+0.9**
YURE	**YUREGIR**	**1.29**	**249**	P			**Pn**	**15 47 27.1**	**-0.7**
DARE	**Darende-Malaty**	**1.30**	**12**	PN			**Pg**	**15 47 28.6**	**-0.1**
AKO	**Adana**	**1.35**	**277**	P			**Pn**	**15 47 28.0**	**-0.6**
CUGUR	**Gurin_SVAS**	**1.43**	**5**	P			**Pb**	**15 47 30.3**	**-0.2**
CUGUR				S			**Sn**	**15 47 48.5**	**-0.1**
CUGUR				*i* AML			AML	15 47 54.0	
	comp=E,2μm,0.5s								
SANL	**SANLIURFA_Merk**	**1.49**	**94**	P			**Pn**	**15 47 29.6**	**-0.9**
SANL				S			**Sn**	**15 47 48.5**	**-1.6**
SANL				*i* AML			AML	15 47 56.0	
	comp=N,2μm,0.4s								
SANL				*i* AML			AML	15 48 02.0	
	comp=E,856nm,0.4s								
YAYL	**Yayladag**	**1.51**	**213**	P			**Pn**	**15 47 30.2**	**-0.7**
KRTS	**Karatas**	**1.58**	**243**	PN			**Pn**	**15 47 32.5**	**+0.8**
YAHY	**KAYSERI_Yahyal**	**1.61**	**300**	P			**Pb**	**15 47 33.1**	**-0.5**
YAHY				S			**Sb**	**15 47 53.9**	**-0.1**
YAHY				*i* AML			AML	15 47 59.0	
	comp=N,331nm,0.7s								
KARA	**Karaisali**	**1.65**	**269**	PN			**Pn**	**15 47 33.3**	**+0.5**
HEKM	**Malatya_Hekimh**	**1.71**	**22**	P			**Pg**	**15 47 37.3**	**+0.8**
HEKM				S			**Sg**	**15 47 59.4**	**+0.7**
HEKM				*i* AML			AML	15 48 02.0	
	comp=N,1μm,0.6s								
CMRD	**Camardi-Nigde**	**1.74**	**283**	PN			**Pn**	**15 47 34.6**	**+0.6**
BNN	**Bunyan**	**1.85**	**327**	PN			**Pn**	**15 47 36.0**	**+0.4**
GULE	**Gulek**	**1.88**	**270**	P			**Pn**	**15 47 36.0**	**+0.1**
ELZG	**Elazig**	**1.89**	**50**	P			**Pn**	**15 47 37.0**	**+0.8**
CUAYA	**Sivas-Altinyay**	**1.98**	**351**	P			**Pn**	**15 47 38.2**	**+0.7**
GUNE	**Kayseri**	**1.99**	**324**	P			**Pg**	**15 47 40.8**	**-1.1**
NIDE	**Nigde/Merkez-G**	**1.99**	**291**	P			**Pn**	**15 47 37.6**	**+0.1**
ARPR	**Arapgir-MALATY**	**2.03**	**28**	PN			**Pn**	**15 47 38.2**	**+0.2**
CUKAN	**kangal_SIVAS**	**2.03**	**7**	P			**Pb**	**15 47 39.6**	**-1.2**
MERS	**Mersin**	**2.13**	**259**	PN			**Pn**	**15 47 39.9**	**+0.6**
NIG	**Nigde**	**2.15**	**293**	PN			**Pn**	**15 47 40.3**	**+0.4**
KEMA	**Kemaliye**	**2.24**	**28**	P			**Pb**	**15 47 44.0**	**-0.3**
KERG	**Konya-Eregli**	**2.40**	**274**	P			**Pn**	**15 47 43.2**	**+0.2**
KIZK	**Mersin**	**2.53**	**252**	P			**Pn**	**15 47 44.7**	**-0.1**
TNCL	**Tunceli-Merkez**	**2.63**	**46**	P			**Pb**	**15 47 50.5**	**-0.4**
CUZAR	**Zara_SIVAS**	**2.63**	**11**	P			**Pg**	**15 47 52.7**	**-1.5**
HWQ	**Hawqa**	**3.17**	**198**	*e*P			**Pb**	**15 47 57.6**	**-2.5**
CDAG	**Cicekdag**	**3.17**	**318**	P			**Pn**	**15 47 55.2**	**+1.5**
BHL	**Bhannes**	**3.59**	**200**	*e*P			**Pn**	**15 48 01.4**	**+1.9**
DQRL	**Deir Qamar**	**3.81**	**200**	*e*P			**Pn**	**15 48 06.4**	**+4.0**

NIC ***07*** *16:08:16.3±0.0,35.°59N×31.°68E,h17km±1km,Ml4.4/9*
ISK ***07*** *16:08:16.3,35.°29N×31.°66E,h15km,ML4.2/56*
DDA ***07*** *16:08:17.8±0.0,35.°46N×31.°76E,h24km±1km,MW4.1*
NEIC ***07*** *16:08:18.7±2.3,35.°29N±0.°05×31.°63E±0.°06,h41km±9km, mb4.1/23,ML4.2(CSEM),Error ellipse: s-maj=9.8km s-min=4.9km az=221.0*
IDC ***07*** *16:08:18.5±1.9,35.°44N×31.°53E,h38km±17km,mb3.9/23, mbtmp4.1/31,ML4.2/9,MS3.2/18,Error ellipse: s-maj=12.3km s-min=11.6km az=174.0*
MOS ***07*** *16:08:18.6±1.4,35.°33N×31.°51E,h38km,mb4.3/17,Error ellipse: s-maj=7.4km s-min=4.3km az=101.0*
GII ***07*** *16:08:19.4±0.3,35.°31N×31.°65E,h40km,mb4.0/1, MD3.5/6,Mm3.9/3*
HLW ***07*** *16:08:22.4,34.°90N×31.°91E,h8km±26km,Md3.7,Ml4.3*

ISC 07 16:08:19.0±0.8,35.°33N±0.°02×31.°61E±0.°03,h41km±8km, n316,σ1°55/349,mb4.2/41,MS3.0/11,10C-11D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.67**	**118**	⇓*i*P			**Pn**	**16 08 30.9**	**-1.2**
AKMS				S			**Sn**	**16 08 43.5**	**+2.0**
AKMS				AML			AML	16 08 43.9	
	102nm,0.3s								
AKMS				AML			AML	16 08 43.9	
	102nm,0.3s								
AKMS				AML			AML	16 08 44.4	
	84nm,0.3s								
AKMS				AML			AML	16 08 44.4	
	84nm,0.3s								
ALFC	**Alefka**	**0.83**	**102**	⇓*i*P			**Pn**	**16 08 32.6**	**-1.7**
ALFC				S			**Sn**	**16 08 45.7**	**+0.4**
ALFC				AML			AML	16 08 50.5	
	55nm,0.3s								
ALFC				AML			AML	16 08 50.5	
	55nm,0.3s								
ALFC				AML			AML	16 08 53.5	
	52nm,0.3s								
ALFC				AML			AML	16 08 53.5	
	52nm,0.3s								
NATA	**Nata**	**0.96**	**125**	⇓*i*P			**Pn**	**16 08 37.0**	**+0.9**
NATA				S			**Sn**	**16 08 52.1**	**+3.6**
NATA				AML			AML	16 08 58.5	
	105nm,0.6s								
NATA				AML			AML	16 08 58.5	
	105nm,0.6s								
NATA				AML			AML	16 08 59.8	
	102nm,0.6s								
NATA				AML			AML	16 08 59.8	
	102nm,0.6s								
GAZI	**Gazipasa**	**1.07**	**32**	P			**Pn**	**16 08 35.1**	**-2.5**
GAZI				S			**Sn**	**16 08 47.9**	**-3.3**
GAZI				*i* AML			AML	16 08 54.0	
	comp=N,3μm,0.3s								
LEF	**Lefka**	**1.07**	**101**	PG			**Pn**	**16 08 35.6**	**-1.9**
LEF				SG			**Sn**	**16 08 50.2**	**-0.9**
AKDN	**Akdeniz- Kıbrı**	**1.11**	**91**	PG			**Pn**	**16 08 37.6**	**-0.5**
AKDN				SG			**Sn**	**16 08 52.5**	**+0.3**
SZAC	**Souni**	**1.19**	**119**	⇓*i*P			**Pn**	**16 08 39.8**	**+0.6**
SZAC				S			**Sn**	**16 08 56.7**	**+2.5**
SZAC				AML			AML	16 09 04.0	
	18nm,0.4s								
SZAC				AML			AML	16 09 04.0	
	18nm,0.4s								
SZAC				AML			AML	16 09 06.9	
	22nm,0.4s								
SZAC				AML			AML	16 09 06.9	
	22nm,0.4s								
AKUM	**Antalya-Kumluc**	**1.43**	**314**	P			**Pn**	**16 08 44.0**	**+1.5**
AKUM				S			**Sn**	**16 09 04.3**	**+4.3**
AKUM				*i* AML			AML	16 09 08.0	
	comp=N,1μm,0.6s								
ASGA	**Asgata**	**1.45**	**112**	P			**Pn**	**16 08 43.0**	**+0.3**
ASGA				AML			AML	16 09 13.5	
	22nm,0.6s								
ASGA				AML			AML	16 09 15.8	
	19nm,0.5s								
CSS	**Mathiatis**	**1.46**	**104**	PN			**Pn**	**16 08 42.3**	**-0.6**
CSS	**Mathiatis**	**1.46**	**104**				**Pn**	**16 08 41.4**	**-1.4**
CSS	**Mathiatis**	**1.46**	**104**	P			**Pn**	**16 08 41.6**	**-1.3**
CSS				S			**Sn**	**16 09 02.6**	**+1.9**
CSS				AML			AML	16 09 12.4	
	4.0nm,0.4s								
CSS				AML			AML	16 09 12.4	
	4.0nm,0.4s								
CSS				AML			AML	16 09 12.7	
	4.8nm,0.8s								
CSS				AML			AML	16 09 12.7	
	4.8nm,0.8s								
TEKE	**Tekeli-Mersin**	**1.47**	**56**	PN			**Pn**	**16 08 41.6**	**-1.4**
ATHAL	**Athalassa**	**1.47**	**97**	P			**Pn**	**16 08 42.2**	**-0.8**
ATHAL				AML			AML	16 09 14.2	
	24nm,0.4s								
ATHAL				AML			AML	16 09 18.3	
	24nm,0.5s								
KEMT	**Kemer-ANTALYA**	**1.53**	**326**	PN			**Pn**	**16 08 44.7**	**+0.8**
AKIN	**Akıncılar- Kıb**	**1.55**	**101**	PN			**Pn**	**16 08 43.7**	**-0.5**
KEPZ	**Antalya-Kepez**	**1.57**	**360**	P			**Pn**	**16 08 42.3**	**-2.2**
KEPZ				S			**Sn**	**16 09 01.2**	**-2.4**
KEPZ				*i* AML			AML	16 09 06.0	
	comp=E,1μm,0.6s								
LFK	**Lefkose**	**1.57**	**91**	PN			**Pn**	**16 08 43.5**	**-1.0**
DEMR	**Demre-Antalya**	**1.66**	**304**	PN			**Pn**	**16 08 46.5**	**+0.9**
BERE	**Bereket-Mersin**	**1.66**	**52**	PN			**Pn**	**16 08 45.0**	**-0.7**
YORU	**Yoruktepe-Mers**	**1.67**	**60**	PN			**Pn**	**16 08 45.8**	**-0.1**
MVOU	**Mavrovouni**	**1.69**	**100**	P			**Pn**	**16 08 44.7**	**-1.3**
MVOU				S			**Sn**	**16 09 06.4**	**0.0**
MVOU				AML			AML	16 09 18.7	
	8.0nm,0.7s								
MVOU				AML			AML	16 09 18.7	
	8.0nm,0.7s								
MVOU				AML			AML	16 09 19.4	
	13nm,0.4s								
MVOU				AML			AML	16 09 19.4	
	13nm,0.4s								
OREN	**Orenkoy-Mersin**	**1.74**	**59**	PN			**Pn**	**16 08 46.7**	**0.0**
ANTB	**Antalya**	**1.75**	**334**	PN			**Pn**	**16 08 47.7**	**+0.9**
AKK1	**Akkuyu-Mersin**	**1.77**	**62**	PN			**Pn**	**16 08 47.2**	**+0.1**
AKK2	**Akkuyu-Mersin**	**1.77**	**62**	PN			**Pn**	**16 08 47.1**	**0.0**
AKKU	**Akkuyu-Mersin**	**1.78**	**62**	PN			**Pn**	**16 08 46.6**	**-0.7**
TEPK	**Tepekoy-MERSIN**	**1.81**	**60**	PN			**Pn**	**16 08 47.6**	**-0.1**
OSC1	**CSNet OBS 1**	**1.85**	**189**	P			**Pn**	**16 08 48.4**	**+0.2**
OSC1				S			**Sn**	**16 09 17.7**	**+7.4**
TEVE	**Tevekalti-Mers**	**1.85**	**53**	PN			**Pn**	**16 08 48.1**	**-0.2**
AKAS	**Kas**	**1.86**	**299**	P			**Pn**	**16 08 51.5**	**+3.0**
YESI	**Yesilovacik-Me**	**1.86**	**62**	PN			**Pn**	**16 08 48.6**	**+0.2**
TISA	**Tisan-Mersin**	**1.88**	**63**	PN			**Pn**	**16 08 48.3**	**-0.3**
IKL	**Isikli**	**1.91**	**61**	PN			**Pn**	**16 08 48.4**	**-0.7**
KARG	**Kargicak-Mersi**	**1.92**	**62**	PN			**Pn**	**16 08 49.4**	**+0.3**
KORT	**Korkueli**	**1.95**	**329**	P			**Pn**	**16 08 52.7**	**+2.9**
ELL	**Elmali**	**1.98**	**316**	PN			**Pn**	**16 08 51.1**	**+1.0**
ELL	**Elmali**	**1.98**	**316**	Pn			**Pn**	**16 08 51.5**	**+1.4**
ELL	**Elmali**	**1.98**	**316**	P			**Pn**	**16 08 51.5**	**+1.4**
ELL	**Elmali**	**1.98**	**316**	P			**Pn**	**16 08 49.9**	**-0.3**
ELL				S			**Sn**	**16 09 11.3**	**-2.4**
PARAL	**Paralimni**	**2.02**	**99**	P			**Pn**	**16 08 50.7**	**+0.1**
PARAL				AML			AML	16 09 27.9	
	13nm,1.1s								
PARAL				AML			AML	16 09 31.0	
	13nm,0.6s								
KEBE	**Keben-Mersin**	**2.04**	**56**	PN			**Pn**	**16 08 51.5**	**+0.6**
SEYD	**Seydisehir-KON**	**2.08**	**5**	PN			**Pn**	**16 08 51.8**	**+0.3**
EREN	**Erenkoy**	**2.10**	**84**	PN			**Pn**	**16 08 51.7**	**+0.1**
EREN	**Erenkoy**	**2.10**	**84**	P			**Pn**	**16 08 51.8**	**+0.2**
EREN				S			**Sn**	**16 09 18.4**	**+1.9**
EREN				*i* AML			AML	16 09 19.0	
	comp=N,2μm,0.4s								
SEDI	**Konya, Seydise**	**2.12**	**3**	P			**Pn**	**16 08 52.5**	**+0.4**
SEDI				S			**Sn**	**16 09 18.9**	**+1.7**
SEDI				*i* AML			AML	16 09 27.0	
	comp=N,852nm,0.5s								
SEDI				*i* AML			AML	16 09 28.0	
	comp=E,2μm,0.6s								
SILI	**Silifke-Mersin**	**2.14**	**61**	PN			**Pn**	**16 08 52.5**	**+0.2**
BUCA	**Burdur, Bucak-**	**2.17**	**337**	P			**Pn**	**16 08 55.5**	**+2.8**
KKBE	**Karaman, Kazim**	**2.17**	**29**	P			**Pn**	**16 08 54.0**	**+1.2**
KKBE				S			**Sn**	**16 09 18.7**	**+0.3**
KKBE				*i* AML			AML	16 09 28.0	
	comp=E,935nm,0.7s								
SUTC	**Sutluce-Ispart**	**2.20**	**347**	PN			**Pn**	**16 08 54.2**	**+1.0**
KRMN	**Karaman**	**2.27**	**35**	PN			**Pn**	**16 08 55.1**	**+0.9**
BCK	**Bucak**	**2.28**	**339**	PN			**Pn**	**16 08 55.3**	**+1.1**
BCK	**Bucak**	**2.28**	**339**	P			**Pn**	**16 08 55.3**	**+1.1**
OSC2	**CSNet OBS 4**	**2.31**	**166**	P			**Pn**	**16 08 53.7**	**-1.0**
KIZK	**Mersin**	**2.35**	**60**	P			**Pn**	**16 08 55.9**	**+0.8**
KIZK				S			**Sn**	**16 09 21.2**	**-1.6**
KIZK				*i* AML			AML	16 09 26.0	
	comp=N,1μm,0.4s								
KIZK				*i* AML			AML	16 09 27.0	
	comp=E,1μm,0.3s								
FETY	**Fethiye**	**2.43**	**303**	PN			**Pn**	**16 08 57.9**	**+1.7**
FETY	**Fethiye**	**2.43**	**303**	P			**Pn**	**16 08 54.8**	**-1.4**
CAME	**Cameli-Denizli**	**2.47**	**311**	PN			**Pn**	**16 08 58.3**	**+1.4**
KMER	**Konya-Meram**	**2.51**	**14**	P			**Pn**	**16 08 59.0**	**+1.6**
KMER				S			**Sn**	**16 09 31.1**	**+4.3**
KMER				*i* AML			AML	16 09 36.0	
	comp=N,1μm,0.7s								
GOLH	**Golhisar**	**2.52**	**320**	P			**Pn**	**16 08 57.8**	**+0.2**
CAEL	**Denizli, Camel**	**2.58**	**315**	P			**Pn**	**16 09 02.0**	**+3.6**
ISP	**Isparta**	**2.64**	**341**	PN			**Pn**	**16 09 00.4**	**+1.2**
ISP	**Isparta**	**2.64**	**341**				**Pn**	**16 09 00.6**	**+1.5**
ISP	**Isparta**	**2.64**	**341**	*de*P			**Pn**	**16 09 00.7**	**+1.5**
BRDR	**BURDUR-Merkez**	**2.67**	**333**	P			**Pn**	**16 09 02.0**	**+2.4**
KONT	**Konya--Tatoy**	**2.68**	**13**	PN			**Pn**	**16 09 00.6**	**+0.9**
KONT	**Konya--Tatoy**	**2.68**	**13**	P			**Pn**	**16 09 01.3**	**+1.7**
BAGO	**Egridir - ISPA**	**

BRTR Keskin Array B 4.67 20 Pn **Pn 16 09 27.9 +0.7**
5.5nm,0.3s,baz=190,slow=16,SNR=99
BRTR Sn **Sn 16 10 21.2 +1.0**
2.1nm,0.3s,baz=195,slow=22,SNR=3.6
BRTR LR LR 16 11 42.2
comp=Z,495nm,20.2s,baz=182,slow=44
24nm,0.5s
BRTR Keskin Array B 4.67 20 Pn **Pn 16 09 27.6 +0.4**
AMAZ Amatzia 4.69 143 Pn **Pn 16 09 28.1 +0.8**
KMRS Kahramanmaras 4.79 61 PN **Pn 16 09 30.1 +1.5**
BNN Bunyan 4.88 43 PN **Pn 16 09 30.5 +0.5**
BNN Bunyan 4.88 43 Pn **Pn 16 09 30.1 +0.1**
DSI Dead Sea 4.90 139 Pn **Pn 16 09 30.6 +0.5**
DSI Sn **Sn 16 10 25.5 -0.1**
YTIR Yattir 4.92 142 Pn **Pn 16 09 31.1 +0.5**
SARI SarD1z-Kayseri 4.93 50 PN **Pn 16 09 32.1 +1.4**
KZIT Kziot 4.99 151 Pn **Pn 16 09 32.0 +0.5**
BILE Bilecik/Merkez 5.01 345 P **Pn 16 09 31.2 -0.6**
KIBS BOLU 5.08 2 P **Pn 16 09 30.6 -2.1**
SANT Santorini 5.10 284 Pn **Pn 16 09 31.8 -1.2**
MDUB Mudurnu 5.14 356 **Pn 16 09 33.7 +0.1**
GZT Gaziantep 5.21 65 P **Pn 16 09 34.2 -0.3**
APE Apeiranthos 5.21 291⇓*eP* **Pn 16 09 33.8 -0.7**
APE pmax pmax
comp=Z,25nm,0.7s
BALB Balikesir 5.22 327 **Pn 16 09 33.7 -0.9**
ELBS KAHRAMANMARAS 5.34 54 P **Pn 16 09 36.0 -0.3**
KOT Kottamia 5.39 178⇑P **Pn 16 09 36.9 0.0**
baz=181
KOT S **Sn 16 10 33.6 -4.2**
baz=181
ASF Jabal al Asfar 5.41 124 Pn **Pn 16 09 38.7 +1.4**
comp=Z,11nm,0.3s,baz=308,slow=9.5,SNR=80
ASF Sn **Sn 16 10 41.8 +3.4**
comp=Z,4.5nm,0.3s,baz=300,slow=20,SNR=1.5
comp=Z,20nm,0.3s
IDI Anoyia 5.50 271 Pn **Pn 16 09 37.3 -1.1**
comp=Z,3.0nm,0.3s,baz=85,slow=17,SNR=26
IDI Sn **Sn 16 10 36.0 -4.4**
comp=Z,15nm,0.3s,baz=53,slow=20,SNR=11
comp=Z,10nm,0.3s
IDI Anoyia 5.50 271 Pn **Pn 16 09 36.8 -1.6**
HMYD Mayadein 5.56 187 P **Pn 16 09 40.5 +1.3**
baz=191
SUZ Suez 5.57 169⇑P **Pn 16 09 40.1 +0.7**
baz=170
HSAF As Saff 5.70 181⇑P **Pn 16 09 41.9 +0.7**
baz=184
PRNI Paran 5.73 149 Pn **Pn 16 09 41.7 +0.1**
PRNI Sn **Sn 16 10 45.9 -0.1**
GLL Jalalah 5.74 179⇑P **Pn 16 09 42.2 +0.4**
baz=182
HNAT Natroun 5.74 189 S **Sn 16 10 40.7 -5.7**
baz=193
HRFI Mount Harif 6.02 150 Pn **Pn 16 09 45.8 +0.3**
HRFI Sn **Sn 16 10 52.9 -0.3**
EIL Elat 6.31 153 Pn **Pn 16 09 50.1 +0.6**
comp=Z,20nm,0.3s,baz=344,slow=13,SNR=309
EIL Sn **Sn 16 10 58.3 -2.1**
comp=Z,14nm,0.3s,baz=317,slow=19,SNR=7.0
EIL LR LR 16 13 36.7
comp=Z,78nm,19.0s,baz=267,slow=50
EIL Elat 6.31 153 Pn **Pn 16 09 49.4 -0.1**
HBST Basata 6.64 156 P **Pn 16 09 54.2 +0.1**
baz=156
NUB Nuweibaa 6.79 157 P **Pn 16 09 56.5 +0.4**
baz=157
ALN Alexandroupoli 7.08 323 Pn **Pn 16 10 01.8 +1.8**
ALN Alexandroupoli 7.08 323 P **Pn 16 10 01.8 +1.8**
TR2 Tor 2 7.15 165⇑P **Pn 16 10 00.9 -0.2**
baz=166
SWA2 8.00 222 P **Pn 16 10 12.8 +0.1**
baz=226
ITM Ithomi 8.04 286 Pn **Pn 16 10 12.8 -0.4**
AGG Agios Georgios 8.27 299 Pn **Pn 16 10 17.7 +1.2**
AGG Agios Georgios 8.27 299 P **Pn 16 10 17.7 +1.2**
VTS Vitosha 9.77 321 P **Pn 16 10 39.1 +2.1**
VTS pmax pmax
comp=Z,5.0nm,1.1s
KEK Kerkira 10.35 298 Pn **Pn 16 10 44.7 -0.1**
MLR Muntele Rosu 11.03 339 Pn **Pn 16 10 53.0 -1.2**
comp=Z,0.2nm,0.3s,baz=180,slow=14,SNR=2.2
MLR LR LR 16 16 01.4
comp=Z,109nm,19.4s,baz=144,slow=42
comp=Z,0.8nm,0.5s
VRI Vrincioaia 11.16 342 P **Pn 16 10 59.4 +3.5**
VRI pmax pmax
comp=Z,11nm,1.4s
SCTE Santa Cesarea 11.44 298 Pn **Pn 16 10 58.4 -1.3**
KBZ Khabaz 12.08 43 Pn **Pn 16 11 13.0 +4.5**
comp=Z,0.2nm,0.3s,baz=209,slow=10,SNR=1.8
KBZ LR LR 16 16 39.2
comp=Z,105nm,19.9s,baz=232,slow=42
KBZ Khabaz 12.08 43⇓*eP* Pn 16 11 13.4 +4.9
KIV Kislovodsk 12.12 41 *eP* **Pn 16 11 12.3 +3.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,29nm,13.0s
TIP Timpagrande 12.44 292 Pn **Pn 16 11 09.8 -3.7**
CUC Castrocucco 13.35 295 **Pn 16 11 22.9 -3.0**
RAFF Raffo Rosso 14.05 283 Pn **Pn 16 11 31.8 -3.6**
KOLS Kolonicke sedl 15.24 336 *eP* **P 16 11 57.1 +1.6**
KOLS Kolonicke sedl 15.24 336 *eP* **P 16 11 57.1 +1.6**
AKASG Malin Array Be 15.46 354 Pn **Pn 16 11 52.5 -1.6**
comp=Z,0.3nm,0.3s,baz=178,slow=9.4,SNR=3.4
comp=Z,0.5nm,0.5s
AKASG Malin Array Be 15.46 354 Pn **Pn 16 11 55.8 +1.8**
AKASG Malin Array Be 15.46 354 P **Pn 16 11 55.8 +1.8**
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKBB Malin Array Si 15.46 354 **Pn 16 11 56.3 +2.3**
AKBB IAmb IAmb 16 12 01.0
comp=Z,16nm,0.7s
AKBB Malin Array Si 15.46 354⇓*eP* **P 16 11 57.7 -0.2**
LANS Liptovska Anna 16.45 331 *eP* **P 16 12 11.2 +2.2**
LANS Liptovska Anna 16.45 331 *eP* **P 16 12 11.2 +2.2**
VSR Storozhevoye 16.79 17 *eP* **Pn 16 12 07.9 -3.0**
VSR pmax pmax
comp=Z,3.0nm,0.4s
SOKA Soboth 16.85 317 *eP* **Pn 16 12 12.2 +0.4**
comp=Z,3.0nm,0.6s
ARSA Arzberg 16.93 320 *eP* **P 16 12 14.4 +0.1**
comp=Z,5.5nm,0.7s
OBKA Obir 17.02 316 *eP* **P 16 12 15.2 -0.2**
comp=Z,5.6nm,1.1s
VRH Novokhopyorsk 17.46 22 *eP* **Pn 16 12 19.0 -0.3**
VRH pmax pmax
comp=Z,10.0nm,1.0s
OKC Ostrava-Krasne 17.52 330 *eP* **P 16 12 21.8 +1.0**
OKC Ostrava-Krasne 17.52 330 *eP* **P 16 12 21.8 +1.0**
VRAC Vranov 17.80 326 LR LR 16 20 20.3
comp=Z,57nm,20.0s,baz=130,slow=41
KBA Koelnbreinsper 18.02 316 *eP* **Pn 16 12 26.9 +0.4**
comp=Z,3.0nm,0.7s
LPSR Galich'ya Gora 18.03 15 *eP* **P 16 12 24.3 -2.1**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
DPC Dobruska-Polom 18.68 328 *eP* **Pn 16 12 34.6 +0.4**
DPC Dobruska-Polom 18.68 328 *eP* **Pn 16 12 34.6 +0.4**
OSTC Ostas 18.88 328 *eP* **Pn 16 12 39.1 +2.5**
GEC2 GERESS Array S 18.88 321 P **P 16 12 35.5 -0.4**
GERES GERESS Array B 18.88 321 P **P 16 12 35.6 -0.3**
comp=Z,0.5nm,0.3s,baz=131,slow=11,SNR=20
comp=Z,1.1nm,0.4s
WTTA Wattenberg 19.10 315 *eP* **P 16 12 38.6 +0.1**
comp=Z,3.2nm,0.7s
KHC Kasperske Hory 19.13 322 P **P 16 12 38.4 -0.1**
KHC IAmb IAmb 16 12 39.4
comp=Z,4.9nm,0.6s
KHC Kasperske Hory 19.13 322 *eP* **P 16 12 38.8 +0.3**
KHC Kasperske Hory 19.13 322 *eP* **P 16 12 38.4 -0.1**
SQTA Sankt Quirin 19.33 314 *eP* **P 16 12 40.7 -0.1**
comp=Z,4.3nm,0.6s
MOTA Moosalm 19.46 314 *eP* **P 16 12 42.0 -0.3**
comp=Z,3.1nm,0.6s
WET Wettzell 19.49 321 P **P 16 12 41.6 -0.9**
WET pmax pmax
comp=Z,6.0nm,0.9s
FETA Feichten 19.52 313 P **P 16 12 43.3 +0.4**
comp=Z,12nm,1.3s
RETA Reutte 19.73 314 *eP* **P 16 12 44.5 -0.7**
comp=Z,3.4nm,0.5s
DAVOX Davos/Dischmat 19.91 312 P **P 16 12 46.9 -0.4**
comp=Z,0.4nm,0.3s,baz=116,slow=11,SNR=7.0
DAVOX LR LR 16 22 32.0
comp=Z,66nm,18.5s,baz=88,slow=43
comp=Z,3.1nm,0.6s
OBN Obninsk 20.08 8⇓*eP* **P 16 12 49.6 +0.9**
OBN pmax pmax
comp=Z,7.0nm,1.2s
BRG Berggiesshubel 20.11 326 *eP* **P 16 12 49.8 +0.7**
BRG Amp 16 12 53.1
comp=Z,7.0nm,0.9s
BRG *ex* x 16 13 12.3
BRG Amp 16 13 15.7
comp=Z,7.7nm,1.2s
BRG Berggiesshubel 20.11 326 *eP* **P 16 12 49.8 +0.7**
BRG *e* 16 13 12.3
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,1.3s
DAVA Damuels 20.15 313 *eP* **P 16 12 49.1 -0.7**
comp=Z,5.1nm,0.6s
GRB1 Grafenberg Arr 20.28 320 P **P 16 12 51.5 +0.4**
GRB1 pmax pmax
comp=Z,17nm,0.9s
BELG Belogornoye 20.52 29 P **P 16 12 52.9 -0.6**
comp=Z,10nm,0.4s,baz=207,slow=9.0,SNR=5.8
BELG LR LR 16 22 27.4
comp=Z,42nm,18.2s,baz=96,slow=42
comp=Z,10nm,0.4s
BELG Belogornoye 20.52 29⇑*eP* **P 16 12 54.9 +1.4**
BELG pmax pmax
comp=Z,4.0nm,1.1s
CLL Collm 20.84 326 *eP* **P 16 12 57.0 0.0**
CLL pmax pmax
comp=Z,14nm,1.5s
CLL Collm 20.84 326 *eP* **P 16 12 57.0 0.0**
comp=Z,14nm,1.5s
CLL *es*P **pwP 16 13 12.0 +2.1**
CLL *e*PPP PPP 16 13 24.0
MOX Moxa 21.07 323 P **P 16 12 57.6 -1.9**
MOX pmax pmax
comp=Z,13nm,1.1s
BNI Bardonecchia 21.30 305 P **P 16 13 02.1 -0.2**
BNI IAmb IAmb 16 13 19.2
comp=Z,6.1nm,1.0s
BNI Bardonecchia 21.30 305 P **P 16 13 02.1 -0.2**
BNI pmax pmax
comp=Z,6.0nm,1.0s
SENIN Lac Senin/Sane 21.36 308 P **P 16 13 02.5 -0.4**
SENIN IAmb IAmb 16 13 23.0
comp=Z,8.5nm,1.0s
GEYT Alibeck 21.41 75 P **P 16 13 06.3 +3.0**
comp=Z,3.5nm,0.4s,baz=271,slow=14,SNR=5.1
GEYT Alibeck 21.41 75 P **P 16 13 01.6 -1.7**
GEYT IAmb IAmb 16 13 12.8
comp=Z,4.3nm,0.8s
GYA0B ALIBECK ARRAY 21.41 75 P **P 16 13 01.6 -1.6**
GYA0B IAmb IAmb 16 13 10.0
comp=Z,5.2nm,0.5s
BFO Black Forest 21.57 314 P **P 16 13 04.6 -0.3**
BFO IAmb IAmb 16 13 20.0
comp=Z,6.5nm,0.9s
BFO Black Forest 21.57 314 P **P 16 13 04.6 -0.3**
BFO pmax pmax
comp=Z,7.0nm,0.9s
AKTO Aktyubinsk 24.36 44 P **P 16 13 32.5 -0.5**
comp=Z,1.4nm,0.3s,baz=250,slow=11,SNR=7.6
AKTO LR LR 16 24 07.0
comp=Z,38nm,18.8s,baz=261,slow=39
comp=Z,1.4nm,0.3s
ABKAR Akbulak array 24.98 47 P **P 16 13 38.1 -0.4**
KLMR Klimovskoe 26.04 9 *eP* **P 16 13 46.4 -1.7**
KLMR pmax pmax
comp=Z,11nm,1.0s
KLMR Klimovskoe 26.04 9 *eP* **P 16 13 46.4 -1.7**
KLMR AMP 16 14 00.4
comp=Z,11nm,1.0s
KIRV Kirov 26.08 21 P **P 16 13 46.2 -2.2**
comp=Z,5.8nm,0.5s,baz=243,slow=14,SNR=2.5
comp=Z,5.8nm,0.5s
KIRV Kirov 26.08 21⇑*eP* **P 16 13 49.6 +1.2**
FINES FINESS Array B 26.37 354 P **P 16 13 49.0 -2.0**
comp=Z,4.7nm,0.5s,baz=153,slow=9.4,SNR=25
comp=Z,4.7nm,0.5s
FINES FINESS Array B 26.37 354 P **P 16 13 48.9 -2.1**
FIA1 FINESS Array S 26.37 354 P **P 16 13 48.9 -2.2**
HFS Hagfors 27.40 340 P **P 16 13 57.5 -2.8**
comp=Z,2.2nm,0.8s,baz=148,slow=8.4,SNR=2.3
HFS LR LR 16 27 50.4
comp=Z,57nm,18.1s,baz=171,slow=43
comp=Z,2.2nm,0.8s
ARU Arti 27.92 33 P **P 16 14 05.0 0.0**
comp=Z,3.0nm,0.3s,baz=251,slow=8.3,SNR=4.3
ARU LR LR 16 27 53.0
comp=Z,31nm,20.1s,baz=207,slow=42
comp=Z,3.0nm,0.3s
ARU Arti 27.92 33*c iP* **P 16 14 07.4 +2.4**
ARU 16 14 55.4
ARU S **S 16 18 52.5 +6.8**
ARU SS **SnSn 16 20 06.8 +4.8**
ARU pmax pmax
comp=Z,8.0nm,1.3s
ESDC Sonseca Array 28.43 289 P **P 16 14 09.1 -0.8**
comp=Z,1.1nm,0.9s,baz=83,slow=10.0,SNR=8.4
comp=Z,1.1nm,0.9s
NORES NORESS Array B 28.50 339 P **P 16 14 08.2 -2.0**
NOA NORSAR Array B 28.84 339 P **P 16 14 10.8 -2.5**
comp=Z,1.0nm,0.8s,baz=144,slow=9.7,SNR=2.4
NOA LR LR 16 28 03.0
comp=Z,32nm,20.4s,baz=250,slow=41
comp=Z,1.0nm,0.8s
KK31 Karatay Array 30.90 64 P **P 16 14 31.0 -0.7**
KK31 Karatay Array 30.90 64 P **P 16 14 31.0 -0.7**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 30.90 64 P **P 16 14 31.1 -0.6**
KKAR Karatay Array 30.90 64 P **P 16 14 31.1 -0.6**
BVAR Borovoye Array 32.45 45 LR LR 16 30 12.7
comp=Z,31nm,18.3s,baz=143,slow=40
ARCES ARCESS Array B 34.42 356 P **P 16 14 59.9 -2.2**
comp=Z,1.5nm,0.5s,baz=167,slow=8.3,SNR=25
ARCES LR LR 16 29 34.3
comp=Z,60nm,19.0s,baz=168,slow=37
comp=Z,1.5nm,0.5s
ARCES ARCESS Array B 34.42 356 P **P 16 14 59.9 -2.2**
ARCES IAmb IAmb 16 15 23.6
comp=Z,5.8nm,1.1s
KEV Kevo 34.57 357 P **P 16 15 02.4 -1.0**
KEV Kevo 34.57 357 P **P 16 15 02.4 -1.0**
KEV pmax pmax
comp=Z,10.0nm,1.3s
TOA0 Torodi Ar. Sit 34.87 238 P **P 16 15 06.5 0.0**
TOA0 IAmb IAmb 16 15 07.8
comp=Z,3.2nm,0.8s
TORD Torodi Ar. Bea 34.87 238 P **P 16 15 06.7 +0.2**
comp=Z,3.2nm,0.8s,baz=37,slow=8.0,SNR=18
comp=Z,3.2nm,0.8s
TORD Torodi Ar. Bea 34.87 238 P **P 16 15 06.4 -0.1**
TORD IAmb IAmb 16 15 07.8
comp=Z,3.5nm,1.0s
KURBB Kurchatov Arra 36.91 51 P **P 16 15 22.9 -0.7**
comp=Z,1.4nm,0.5s,baz=264,slow=8.5,SNR=15
comp=Z,1.4nm,0.5s
KURK Kurchatov 36.98 51⇑*eP* **P 16 15 24.3 +0.1**
KURK pmax pmax
comp=Z,2.0nm,1.0s
MAKZ Makanchi 39.04 57 P **P 16 15 41.8 +0.1**
MAKZ IAmb IAmb 16 15 51.7
comp=Z,2.3nm,0.9s
MAKZ Makanchi 39.04 57 P **P 16 15 41.8 +0.1**
MAKZ pmax pmax
comp=Z,2.0nm,1.0s
MK31 Makanchi Array 39.26 57 P **P 16 15 43.6 0.0**
MK31 Makanchi Array 39.26 57⇑*eP* **P 16 15 43.3 -0.2**
MKAR Makanchi Array 39.26 57 P **P 16 15 43.7 +0.1**
comp=Z,1.2nm,0.5s,baz=248,slow=12,SNR=21
comp=Z,1.2nm,0.5s
MKAR Makanchi Array 39.26 57 P **P 16 15 43.9 +0.4**
MKAR Makanchi Array 39.26 57 P **P 16 15 43.9 +0.4**
ZAA0 Zalesovo Array 41.08 46 P **P 16 15 57.4 -1.0**
ZALV Zalesovo Beam 41.08 46 P **P 16 15 57.3 -1.1**
comp=Z,1.0nm,0.3s,baz=260,slow=8.2,SNR=5.7
ZALV LR LR 16 37 19.8
comp=Z,16nm,19.2s,baz=3.5,slow=42
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 41.08 46 P **P 16 15 57.7 -0.7**
ZALV Zalesovo Beam 41.08 46 *i* P **P 16 15 57.5 -0.9**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
SPB2 Spitsbergen Ar 43.44 355 P **P 16 16 18.5 +1.1**
SPITS Spitsbergen Ar 43.45 355 P **P 16 16 18.4 +1.0**
SPITS pmax pmax
comp=Z,27nm,1.2s
DBIC Dimbokro 43.98 238 P **P 16 16 21.3 -1.2**
comp=Z,4.3nm,0.7s,baz=47,slow=5.4,SNR=7.4
comp=Z,4.3nm,0.7s
DBIC Dimbokro 43.98 238 P **P 16 16 21.6 -0.8**
DBIC IAmb IAmb 16 16 54.7
comp=Z,11nm,1.2s
DBIC Dimbokro 43.98 238 P **P 16 16 21.6 -0.8**
DBIC pmax pmax
comp=Z,11nm,1.3s
TIC Toumodi 44.11 238⇑*iP* **P 16 16 23.2 -0.3**
comp=Z,9.1nm,0.8s
KIC Kosan Boka 44.12 238⇑*iP* **P 16 16 23.4 -0.2**
comp=Z,11nm,0.5s
LIC Lamto 44.42 238⇑*iP* **P 16 16 25.7 -0.2**
comp=Z,4.1nm,0.4s
NRIK Noril'sk 45.51 24 P **P 16 16 33.4 -0.6**
comp=Z,1.1nm,0.3s,baz=278,slow=8.2,SNR=2.1
comp=Z,1.1nm,0.3s
NRIK Noril'sk 45.51 24⇑*eP* **P 16 16 36.8 +2.8**
NRIK pmax pmax
comp=Z,2.0nm,1.3s
GOMU GeErMu 50.45 69 P **P 16 17 14.4 +1.3**
GOMU pP pP 16 17 18.7 -5.4
GOMU sP pwP 16 17 21.2 -6.2
GOMU pmax pmax
comp=Z,2.0nm,0.4s
GOMU pmax pmax
comp=Z,90nm,4.4s
PALK Pallekele 52.87 110 LR LR 16 40 42.0
comp=Z,40nm,18.5s,baz=208,slow=37
SONM Songino Array 55.25 52 P **P 16 17 48.2 +0.1**
comp=Z,1.1nm,0.5s,baz=281,slow=7.0,SNR=7.5
comp=Z,1.1nm,0.5s
SONM Songino Array 55.25 52 P **P 16 17 48.1 +0.1**
SONM IAmb IAmb 16 18 01.1
comp=Z,1.4nm,0.8s
ULN Ulaanbaatar 55.66 52⇓*eP* **P 16 17 53.3 +2.2**
ULN pmax pmax
comp=Z,2.0nm,0.9s
TIXI Tiksi 59.11 21 LR LR 16 45 51.1
comp=Z,29nm,18.8s,baz=184,slow=38
PZH PanZhiHua 59.70 77 P **P 16 18 19.9 +0.2**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,7.0s
CMAR Chiang Mai Arr 61.30 87 P **P 16 18 30.5 -0.1**
comp=Z,0.3nm,0.5s,baz=306,slow=7.7,SNR=1.6
comp=Z,0.3nm,0.5s
BOSA Boshof 63.88 186 P **P 16 18 48.2 +0.7**
comp=Z,3.2nm,1.0s,baz=342,slow=4.2,SNR=3.5
comp=Z,3.2nm,1.0s
SCHQ Schefferville 66.42 321 P **P 16 19 02.9 -0.8**
comp=Z,4.7nm,0.9s,baz=82,slow=12,SNR=2.1
comp=Z,4.7nm,0.9s
BILL Bilibino 71.50 16⇓*eP* **P 16 19 36.4 +1.4**
BILL pmax pmax
comp=Z,5.0nm,1.8s
USRK Ussuriysk Ar. 72.90 48 P **P 16 19 43.8 0.0**
comp=Z,1.4nm,0.8s,baz=267,slow=5.2,SNR=4.7
comp=Z,1.4nm,0.8s
KSRS Korea Array 73.91 55 P **P 16 19 50.4 +0.6**
comp=Z,0.4nm,0.8s,baz=301,slow=5.0,SNR=2.5
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 78.79 345 P **P 16 20 16.4 -0.7**
comp=Z,0.6nm,0.7s,baz=37,slow=6.7,SNR=1.8
comp=Z,0.6nm,0.7s
IMAR Indian Mountai 78.92 2 P **P 16 20 17.6 -0.2**
MJAR Matsushiro Arr 81.19 51 P **P 16 20 31.4 +0.8**
comp=Z,1.0nm,0.8s,baz=324,slow=3.5,SNR=4.3
comp=Z,1.0nm,0.8s
MDP Montagnes des 82.39 271 LR LR 16 57 46.8
comp=Z,14nm,18.8s,baz=118,slow=36
ECSD EROS Data Cent 88.29 325 P **P 16 21 05.0 -1.1**

NEIC ***07*** *16:12:02.8±1.4,3.25N±0.10×124.82E±0.10,*
h260km±10km,mb4.3/17,Error ellipse: s-maj=14.5km
s-min=14.2km az=221.0
DJA ***07*** *16:12:03.5±1.0,3.1N±8.1×12.5E±.1,h245km±9km,M3.9/13,*
mb3.7/5,mB5.3/1,MLv4.0/13,Mw(mB)4.7/1
IDC ***07*** *16:12:03.1±2.2,3.21N×124.72E,h269km±23km,mb3.3/16,*
mbtmp4.0/18,Error ellipse: s-maj=26.1km s-min=9.7km
az=77.0

ISC 07 16:12:01.5±0.5,3.24N±0.05×124.95E±0.08,h250km,n62,
σ1s44/67,mb3.8/22,6C-1D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.73**	**53**	P	**Pn**		**16 12 37.2**	**+2.0**
SGSI				S	**S**		**16 13 03.4**	**+1.7**
KMSI	**Cibinong**	**2.82**	**200**	P	**Pn**		**16 12 53.6**	**+1.5**
GSPH	**General Santos**	**2.83**	**360**	*eP*	**Pn**		**16 12 55.6**	**+3.3**
DDMP	**Don Marcelino,**	**2.94**	**15**⇑	*eP*	**Pn**		**16 12 55.1**	**+1.7**
DDMP				*eS*	**S**		**16 13 36.0**	**+1.4**
SKMP	**Bagumbayan, Su**	**3.28**	**353**⇑	*eP*	**Pn**		**16 12 59.4**	**+2.3**
TNTI	**Ternate**	**3.44**	**135**		**Pn**		**16 13 00.0**	**+1.1**
TNTI	**Ternate**	**3.44**	**135**	P	**Pn**		**16 12 59.8**	**+0.9**
KCP	**Kidapawan**	**3.75**	**2**⇑	*iP*	**Pn**		**16 13 06.2**	**+3.7**
MATI	**Mati**	**3.90**	**19**⇑	*eP*	**Pn**		**16 13 06.2**	**+1.9**
MATI				*eS*	**S**		**16 13 50.9**	**-3.2**
CTBH	**Cotabato--PC H**	**4.02**	**350**⇓	*iP*	**Pn**		**16 13 07.7**	**+2.3**
MRSI	**Marisa**	**4.07**	**228**	P	**Pn**		**16 13 08.5**	**+2.3**
BUKP	**Musuan**	**4.61**	**1**⇑	*eP*	**Pn**		**16 13 14.2**	**+1.6**
LBMI	**Labuha**	**4.62**	**146**	P	**Pn**		**16 13 13.6**	**+0.9**
TOLI2	**Tolitoli**	**4.67**	**243**	Pn	**Pn**		**16 13 14.0**	**+0.6**
LUWI	**Luwuk**	**4.78**	**207**	Pn	**Pn**		**16 13 17.0**	**+2.3**
LUWI	**Luwuk**	**4.78**	**207**	P	**Pn**		**16 13 16.2**	**+1.6**
BIPH	**Bislig**	**5.11**	**16**⇑	*iP*	**Pn**		**16 13 20.3**	**+1.7**
APSI	**Ampana**	**5.28**	**219**	P	**Pn**		**16 13 22.5**	**+1.7**
	0.1nm19nm,1.2s							
SANI	**Sanana**	**5.36**	**169**	P	**Pn**		**16 13 20.6**	**-1.1**
	1.1nm6μm17nm,1.0s							
MPSI	**Mapaga**	**5.81**	**240**	P	**Pn**		**16 13 29.1**	**+1.7**
	0.0nm10.0nm,0.8s							
NLAI	**Namlea**	**6.79**	**162**	P	**Pn**		**16 13 40.6**	**+1.1**
KAPI	**Kappang**	**9.71**	**212**	P	**Pn**		**16 14 16.9**	**+0.5**
	4.8nm,0.4s,baz=17,slow=9.9,SNR=5.1							
BATI	**Baumata**	**13.42**	**185**	P	**P**		**16 15 04.8**	**+0.8**
	28nm,0.5s,baz=29,slow=18,SNR=14							
JAGI	**Jajag, Banyuwa**	**15.85**	**223**	P	**P**		**16 15 30.3**	**-0.6**
MTN	**Manton Dam**	**17.12**	**159**	P	**P**		**16 15 45.6**	**+0.9**
MTN				IAmb	IAmb		16 15 49.6	
	comp=Z,12nm,1.2s							
KNRA	**Kununurra**	**19.17**	**169**	P	**P**		**16 16 06.1**	**-0.7**
KNRA				IAmb	IAmb		16 16 09.5	
	comp=Z,16nm,1.4s							
TPUB	**Ta-pu**	**20.38**	**349**	P	**P**		**16 16 18.2**	**-1.4**
FITZ	**Fitzroy Crossi**	**21.21**	**178**	P	**P**		**16 16 27.9**	**-0.4**
	comp=Z,6.5nm,0.3s,baz=10,slow=13,SNR=48							
	comp=Z,6.5nm,0.3s							
FITZ	**Fitzroy Crossi**	**21.21**	**178**	P	**P**		**16 16 27.9**	**-0.4**
FITZ				IAmb	IAmb		16 16 29.6	
	comp=Z,7.4nm,0.4s							
WB0	**Warramunga Arr**	**24.68**	**158**	P	**P**		**16 16 59.7**	**-0.2**
WB0				IAmb	IAmb		16 17 06.9	
	comp=Z,12nm,1.4s							
MBWA	**Marble Bar**	**24.78**	**192**	P	**P**		**16 17 00.2**	**-0.7**
MBWA				IAmb	IAmb		16 17 21.2	
	comp=Z,13nm,1.4s							
WRAB	**Tennant Creek**	**24.81**	**159**	P	**P**		**16 17 00.7**	**-0.5**
WRA	**Warramunga Arr**	**24.82**	**159**	P	**P**		**16 17 01.0**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=332,slow=11,SNR=25							
	comp=Z,1.0nm,0.5s							
WB2	**Warramunga Arr**	**24.82**	**159**	P	**P**		**16 17 01.1**	**-0.2**
WB2				IAmb	IAmb		16 17 04.6	
	comp=Z,16nm,1.5s							
PSA00	**Pilbara Seismi**	**25.16**	**191**	P	**P**		**16 17 03.5**	**-0.8**
PSA00				IAmb	IAmb		16 17 46.5	
	comp=Z,13nm,1.2s							
AS31	**Alice Springs**	**28.13**	**162**	P	**P**		**16 17 30.8**	**0.0**
ASAR	**Alice Springs**	**28.13**	**162**	P	**P**		**16 17 31.0**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=343,slow=7.5,SNR=44							
ASAR				PcP	**PcP**		**16 20 38.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=356,slow=2.4,SNR=4.0							
ASAR				ScP	**ScP**		**16 23 53.1**	**-2.3**
	comp=Z,0.2nm,0.6s,baz=336,slow=2.7,SNR=1.6							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**28.13**	**162**	P	**P**		**16 17 30.9**	**+0.1**

FORT	Forrest	33.96	175	P		P		16 18 21.7	+0.1
KSRS	Korea Array	34.16	4	P		P		16 18 24.0	+0.8
	comp=Z,0.5nm,0.7s,baz=173,slow=10,SNR=2.6 comp=Z,0.5nm,0.7s								
MJAR	Matsushiro Arr	35.32	19	P		P		16 18 32.8	-0.4
	comp=Z,0.8nm,0.7s,baz=190,slow=9.0,SNR=2.1 comp=Z,0.8nm,0.7s								
BBOO	Buckleboo	37.37	164	P		P		16 18 50.9	+0.4
STKA	Stephens Creek	38.34	157	P		P		16 18 59.5	+0.9
	comp=Z,1.4nm,0.7s,baz=320,slow=16,SNR=2.0 comp=Z,1.4nm,0.7s								
USRK	Ussuriysk Ar.	41.26	8	P		P		16 19 23.6	+1.2
	comp=Z,0.8nm,0.6s,baz=168,slow=7.4,SNR=1.7 comp=Z,0.8nm,0.6s								
KLR	Kul'dur	46.19	6	P		P		16 20 00.9	-0.5
	comp=Z,1.4nm,0.6s,baz=201,slow=9.9,SNR=3.5 comp=Z,1.4nm,0.6s								
SONM	Songino Array	47.22	343	P		P		16 20 09.2	-0.4
	comp=Z,0.4nm,0.6s,baz=159,slow=9.6,SNR=2.5 comp=Z,0.4nm,0.6s								
PETK	Petropavlovsk-	56.56	23	P		P		16 21 19.4	+1.3
	comp=Z,0.7nm,0.5s,baz=177,slow=2.5,SNR=1.2 comp=Z,0.7nm,0.5s								
MK31	Makanchi Array	56.96	326	P		P		16 21 20.3	-0.8
MKAR	Makanchi Array	56.96	326	P		P		16 21 19.9	-1.2
	comp=Z,0.9nm,0.4s,baz=121,slow=8.0,SNR=25 comp=Z,0.9nm,0.4s								
MKAR	Makanchi Array	56.96	326	P		P		16 21 20.1	-0.9
MA2	Magadan	59.62	15	P		P		16 21 40.4	+1.3
MA2				IAmb		IAmb		16 21 46.5	
	comp=Z,20nm,1.4s								
ZALV	Zalesovo Beam	60.23	334	P		P		16 21 42.4	-0.9
	comp=Z,0.7nm,0.5s,baz=134,slow=4.2,SNR=2.5 comp=Z,0.7nm,0.5s								
KURBB	Kurchatov Arra	61.20	328	P		P		16 21 48.6	-1.3
	comp=Z,1.9nm,0.5s,baz=128,slow=6.3,SNR=25 comp=Z,1.9nm,0.5s								
KURK	Kurchatov	61.21	328	P		P		16 21 48.8	-1.2
KURK				IAmb		IAmb		16 21 50.7	
	comp=Z,4.1nm,0.5s								
TIXI	Tiksi	68.36	1	P		P		16 22 35.3	-0.3
ABKAR	Akbulak array	71.41	321	P		P		16 22 53.2	-1.4
AKTO	Aktyubinsk	72.94	322	P		P		16 23 02.4	-1.3
	comp=Z,1.3nm,0.8s,baz=71,slow=7.0,SNR=4.7 comp=Z,1.3nm,0.8s								
IMAR	Indian Mountai	83.51	24	P		P		16 24 02.6	+1.5
BMAR	Burnt Mountain	87.21	23	P		P		16 24 20.1	+0.7
BCAR	Beaver Creek A	88.62	27	P		P		16 24 27.1	+1.0
ARCES	ARCESS Array B	90.29	340	P		P		16 24 34.5	+0.8
	comp=Z,1.4nm,1.0s,baz=81,slow=6.7,SNR=5.5 comp=Z,1.4nm,1.0s								
FINES	FINESS Array B	91.42	332	P		P		16 24 36.8	-2.2
	comp=Z,1.4nm,0.9s,baz=110,slow=7.7,SNR=3.5 comp=Z,1.4nm,0.9s								

*NEIC **07** 16:22:02.0±1.5, 18°.77N±0°.07×145°.5E±0°.2, h193km±5km, mb4.2/27, Error ellipse: s-maj=24.2km s-min=8.2km az=76.0*
*IDC **07** 16:22:02.1±2.0, 18°.78N×145°.58E, h203km±19km, mb3.4/14, mbtmp3.9/16, Error ellipse: s-maj=23.7km s-min=10.7km az=83.0*
ISC 07 16:22:02.1±0.6,**18°.78N**±0°.07×**145°.5E**±0°.2,**h200km**,**n60,** σ0§**67**/57,**mb4.0**/28,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.19	186	P	Pn	16 23 19.0	0.0
	21nm,0.6s,baz=22,slow=19,SNR=1.5						
GUMO				S	Sn	16 24 19.9	+0.2
	31nm,0.6s,baz=0.0,slow=20,SNR=2.0						
GUMO	Guam	5.19	186	Pn	Pn	16 23 18.6	-0.3
JMN	Monobe	18.13	327	P	P	16 25 58.5	-0.8
JGF	Kuroka	18.23	338	Pn	Pn	16 26 03.1	+0.3
JGF				IAmb	IAmb	16 26 10.0	
	comp=Z,14nm,1.2s						
MJAR	Matsushiro Arr	18.81	342	P	P	16 26 07.5	+0.9
	comp=Z,1.3nm,0.6s,baz=173,slow=9.5,SNR=7.7						
H11S3	WAKE ISLAND Hy	20.12	87	T	T	16 47 23.7	
	baz=274,slow=75,SNR=6.2						
H11S1	WAKE ISLAND Hy	20.13	87	T	T	16 47 24.4	
	baz=274,slow=75,SNR=6.7						
H11S2	WAKE ISLAND Hy	20.14	87	T	T	16 47 24.6	
	baz=274,slow=75,SNR=6.3						
H11N1	WAKE ISLAND Hy	20.26	84	T	T	16 47 41.2	
	baz=266						
H11N2	WAKE ISLAND Hy	20.27	84	T	T	16 47 43.9	
	baz=266						
H11N3	WAKE ISLAND Hy	20.28	84	T	T	16 47 45.0	
	baz=266						
KSRS	Korea Array	24.12	324	P	P	16 27 00.6	+1.1
	comp=Z,0.5nm,0.5s,baz=1.0,slow=28,SNR=5.0 comp=Z,0.5nm,0.5s						
USRK	Ussuriysk Ar.	27.75	339	P	P	16 27 31.3	-0.8
	comp=Z,1.8nm,1.0s,baz=153,slow=9.7,SNR=1.7 comp=Z,1.8nm,1.0s						
MTN	Manton Dam	34.45	205	P	P	16 28 31.5	+0.5
MTN				IAmb	IAmb	16 28 36.0	
	comp=Z,7.6nm,0.9s						
KNRA	Kununurra	37.98	207	P	P	16 28 60.0	-0.9
WB0	Warramunga Arr	39.81	196	P	P	16 29 16.1	0.0
WB0				IAmb	IAmb	16 29 45.4	
	comp=Z,11nm,1.5s						
WR0	Warramunga Arr	39.96	196	P	P	16 29 17.7	+0.4
WR0				IAmb	IAmb	16 29 37.6	
	comp=Z,9.0nm,1.4s						
WB2	Warramunga Arr	39.99	196	P	P	16 29 18.0	+0.4
WB2				IAmb	IAmb	16 29 19.0	
	comp=Z,6.3nm,1.1s						
WRA	Warramunga Arr	39.99	196	P	P	16 29 17.7	+0.1
	comp=Z,0.9nm,0.3s,baz=14,slow=8.2,SNR=53						
WRA				PcP	PcP	16 31 18.4	-0.3
	comp=Z,0.4nm,0.4s,baz=18,slow=3.4,SNR=6.4 comp=Z,0.9nm,0.3s						
FITZ	Fitzroy Crossi	41.50	209	P	P	16 29 30.9	+1.1
SONM	Songino Array	42.94	321	P	P	16 29 42.3	+0.9
	comp=Z,0.5nm,0.5s,baz=134,slow=10,SNR=3.8 comp=Z,0.5nm,0.5s						
SONM	Songino Array	42.94	321	P	P	16 29 41.5	+0.2
AS31	Alice Springs	43.66	195	P	P	16 29 47.6	+0.3
ASAR	Alice Springs	43.67	195	P	P	16 29 47.5	+0.2
	comp=Z,0.2nm,0.4s,baz=15,slow=6.6,SNR=20						
ASAR				PcP	PcP	16 31 29.9	-0.9
	comp=Z,0.4nm,0.8s,baz=23,slow=3.7,SNR=5.4 comp=Z,0.2nm,0.4s						
ASAR	Alice Springs	43.67	195	P	P	16 29 47.6	+0.3
ZALV	Zalesovo Beam	57.81	323	P	P	16 31 32.8	+0.4
	comp=Z,1.0nm,0.6s,baz=101,slow=8.2,SNR=4.6 comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	58.24	314	P	P	16 31 35.2	-0.4
MK31				IAmb	IAmb	16 31 38.3	
	comp=Z,4.4nm,1.3s						
MKAR	Makanchi Array	58.24	314	P	P	16 31 36.1	+0.5
	comp=Z,1.0nm,0.5s,baz=93,slow=8.3,SNR=13 comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	58.24	314	P	P	16 31 35.3	-0.3
MAKZ	Makanchi	58.46	314	P	P	16 31 37.7	+0.6
SKT	Skwentna	60.98	29	P	P	16 31 53.7	-0.4
SKT				IAmb	IAmb	16 32 10.7	
	comp=Z,7.5nm,1.2s						
KURBB	Kurchatov Arra	61.11	318	P	P	16 31 55.5	+0.5
	comp=Z,1.4nm,0.5s,baz=96,slow=7.4,SNR=15 comp=Z,1.4nm,0.5s						
IMAR	Indian Mountai	61.24	24	P	P	16 31 56.5	+0.8
NRIK	Noril'sk	61.46	340	P	P	16 31 56.8	-0.3
	comp=Z,1.4nm,0.5s,baz=103,slow=5.8,SNR=1.4 comp=Z,1.4nm,0.5s						
H21K	Melozitna Rive	61.50	25	P	P	16 31 58.3	+0.8
H21K				IAmb	IAmb	16 32 20.9	
	comp=Z,5.0nm,1.4s						
RC01	Rabbit Creek A	61.60	30	P	P	16 31 58.3	+0.1
KTH	Kantishna Hill	61.67	27	P	P	16 31 59.2	+0.5
BPAW	Bear Paw Mtn.	61.79	27	P	P	16 31 59.9	+0.5
BPAW				IAmb	IAmb	16 32 07.0	
	comp=Z,4.1nm,1.2s						
MLY	Manley	62.15	26	P	P	16 32 02.4	+0.7
MLY				IAmb	IAmb	16 32 39.5	
	comp=Z,7.5nm,1.5s						
I23K	Minto, Yukon-K	62.74	26	P	P	16 32 06.2	+0.6
I23K				IAmb	IAmb	16 32 46.0	
	comp=Z,4.6nm,1.4s						
WRH	Wood River Hil	63.10	26	P	P	16 32 07.3	-0.7
WRH				IAmb	IAmb	16 32 48.8	
	comp=Z,3.1nm,1.1s						
CCB	Clear Creek Bu	63.26	26	P	P	16 32 08.4	-0.7
IL31		63.68	26	P	P	16 32 11.0	-0.8
IL31				IAmb	IAmb	16 32 27.2	
	comp=Z,2.9nm,1.1s						
ILAR	Eielson Array	63.68	26	P	P	16 32 11.1	-0.7
	comp=Z,0.5nm,0.4s,baz=249,slow=6.1,SNR=6.9 comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	63.68	26	P	P	16 32 10.6	-1.2
BMAR	Burnt Mountain	65.14	24	P	P	16 32 21.7	+0.5
L27K	Beaver Creek,	65.60	29	P	P	16 32 24.2	-0.2
BCAR	Beaver Creek A	65.62	29	P	P	16 32 24.5	0.0
BRVK	Borovoye	66.33	320	P	P	16 32 29.9	+0.8
BRVK				IAmb	IAmb	16 32 31.7	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	66.54	310	P	P	16 32 30.6	-0.1
HYT	Haines Junctio	67.48	31	P	P	16 32 37.1	+0.7
HYT				IAmb	IAmb	16 32 59.8	
	comp=Z,11nm,1.5s						
ABKAR	Akbulak array	73.13	317	P	P	16 33 10.6	-0.1
YKA	Yellowknife Ar	78.03	28	P	P	16 33 38.0	-0.2
	comp=Z,0.6nm,0.5s,baz=291,slow=5.2,SNR=3.9 comp=Z,0.6nm,0.5s						
ARCES	ARCESS Array B	82.35	342	P	P	16 34 00.4	-0.8
	comp=Z,1.1nm,0.8s,baz=66,slow=4.4,SNR=11 comp=Z,1.1nm,0.8s						
ARCES	ARCESS Array B	82.35	342	P	P	16 34 00.6	-0.6
NVAR	Mina Array Bea	83.27	52	P	P	16 34 07.1	+0.2
	comp=Z,0.9nm,0.6s,baz=271,slow=5.6,SNR=9.7 comp=Z,0.9nm,0.6s						
LRM	Limekiln Ridge	84.84	43		P	16 34 15.0	+0.4
HRY	Holter Researc	84.91	42		P	16 34 15.5	+0.7
FIA1	FINESS Array S	86.72	335	P	P	16 34 21.7	-1.4
FINES	FINESS Array B	86.72	335	P	P	16 34 21.4	-1.8
	comp=Z,0.9nm,0.3s,baz=71,slow=4.5,SNR=22 comp=Z,0.9nm,0.3s						

*ASRS **07** 16:32:09.9±0.3,48°.N±2°.×8°.5E±°, h5km, MLh3.7/11, Error ellipse: s-maj=5.1km s-min=2.3km az=138.0, confirmed*
*SOME **07** 16:32:12.3,48°.00N×84°.33E, h0km*
*NNC **07** 16:32:14.3±1.8, 47°.38N×85°.06E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=12.0km s-min=11.2km az=42.0*
ISC 07 16:32:09.0±1.1,**48.07N**±0.03×**84.48E**±0.04,**h9**km±13km, **n32,** σ2§**33**/56,**6C, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	0.67	157	eP	Pn	16 32 22.8	-2.0
	84nm,0.1s						
ZSN				eS	Sb	16 32 30.7	-1.7
	365nm,0.4s						
MK31	Makanchi Array	1.96	230	⇑Pn	Pg	16 32 48.7	+2.2
	24nm,0.2s,baz=77,slow=13,SNR=1732						
MK31				⇑Sn	Sg	16 33 16.0	+4.2
	59nm,0.5s,baz=71,slow=26,SNR=12						
MKAR	Makanchi Array	1.96	230	Pg	Pg	16 32 49.1	+2.6
MKAR				Sg	Sg	16 33 15.3	+3.4
MAKZ	Makanchi	2.11	234	⇑Pn	Pg	16 32 51.6	+2.1
	33nm,0.3s						
MAKZ				⇑Sn	Sg	16 33 20.4	+3.5
	62nm,0.3s						
MAKZ	Makanchi	2.11	234	Pg	Pg	16 32 52.1	+2.6
MAKZ				Sg	Sg	16 33 20.6	+3.8
DGZ	Jazzator, Alta	2.54	49	Pg	Pg	16 32 59.1	+1.3
DGZ				Sg	Sg	16 33 31.2	+0.5
UKR	Ust'-Kan	2.88	4	Pg	Pg	16 33 03.4	-0.8
UKR				Sg	Sg	16 33 40.6	-0.9
CHBI	Chibit, Altay	3.00	40	Pg	Pg	16 33 09.2	+2.7
CHBI				Sg	Sg	16 33 45.2	-0.2
AKAR	Aktash	3.06	41	Pg	Pg	16 33 08.9	+1.4
AKAR				Sg	Sg	16 33 46.4	-0.7
CUR	Chagan-Uzun	3.26	50	Pg	Pg	16 33 11.7	+0.3
CUR				Sg	Sg	16 33 52.1	-1.5
GALT	Gorno-Altaysk,	4.01	13	Pg	Pg	16 33 23.9	-2.0
GALT				Sg	Sg	16 34 19.3	+1.5
ARTR	Artybash	4.15	25	Pn	Pb	16 33 21.9	-0.4
ARTR				Pg	Pg	16 33 30.0	+1.5
ARTR				Sg	Sg	16 34 23.4	+1.2
KURK	Kurchatov	4.65	307	Pn	Pn	16 33 25.1	+5.6
KURK				Pg	Pg	16 33 38.9	+0.8
KURK				S	Sn	16 34 18.3	+4.6
KURK				Sg	Sg	16 34 43.2	+4.8
DJR	Jarkent	4.95	223	eP	Pg	16 33 43.5	-0.3
	2.6nm,0.3s						
DJR				eS	Sg	16 34 49.4	+1.4
	8.2nm,0.8s						
TASR	Tashtagol	5.18	24	Pg	Pg	16 33 48.1	0.0
TASR				Sg	Sg	16 34 56.4	+1.2
TDK	Taldyqorghan	5.19	236	eP	Pg	16 33 48.1	-0.3
	21nm,0.5s						
TDK				eS	Sg	16 34 57.2	+1.6
	44nm,0.6s						
TDK	Taldyqorghan	5.19	236	Pg	Pg	16 33 49.4	+1.0
	16nm,0.4s						
TDK				Lg	Lg	16 34 57.2	
	44nm,0.6s						
ELT	Eltsovka	5.32	11	Pn	Pn	16 33 35.1	+6.4
ELT				Pg	Pg	16 33 50.1	-0.8
ELT				Sg	Sg	16 35 01.5	+1.7
PDGK	Podgornoye	5.88	218	Pg	Pg	16 33 57.6	-4.1
	1.0nm,0.4s						
PDGK				Lg	Lg	16 35 13.3	
	4.9nm,0.6s						
PDGK	Podgornoye	5.88	218	⇑Pn	Pn	16 33 41.5	+5.0
	2.4nm,0.5s						
PDGK				⇑Lg	Lg	16 35 14.9	
	13nm,0.8s						
ARXS	Arharly	6.02	233	eP	Pg	16 34 02.8	-1.4
	5.4nm,0.4s						
ARXS				eS	Sg	16 35 22.1	0.0
	12nm,0.7s						
ARXS	Arharly	6.02	233	Pg	Pg	16 34 02.8	-1.4
	5.4nm,0.4s						
ARXS				Lg	Lg	16 35 22.1	
	12nm,0.7s						
UZB	Uzymbulak	6.23	220	eP	Pg	16 34 07.0	-1.4
	0.8nm,0.1s						
UZB				eS	Sg	16 35 29.5	+0.5
	4.5nm,0.6s						
UZB	Uzymbulak	6.23	220	Pg	Pg	16 34 05.2	-3.1
UZB				Lg	Lg	16 35 26.4	
LUZB	Luzhba, Kemero	6.26	25	Pg	Pg	16 34 07.8	-1.1
LUZB				Sg	Sg	16 35 30.9	+1.0
DJO	Djoy, Khakassi	6.39	40	Sg	Sg	16 35 35.7	+1.7
KUU	Kurty	7.04	237	eP	Pg	16 34 20.9	-2.8
	0.9nm,0.2s						
KUU				eS	Sg	16 35 53.6	-1.2
	6.6nm,0.6s						
KUU	Kurty	7.04	237	Pg	Pg	16 34 20.1	-3.6
	1.3nm,0.1s						
KUU				Lg	Lg	16 35 51.2	
	5.8nm,0.3s						
BTLS	Baital	7.80	251	eP	Pg	16 34 35.2	-3.1
	0.9nm,0.2s						
BTLS				eS	Sg	16 36 17.5	-1.8
	6.1nm,0.7s						
BTLS	Baital	7.80	251	Pg	Pg	16 34 35.2	-3.1
	0.9nm,0.2s						
BTLS				Lg	Lg	16 36 17.5	
	6.1nm,0.7s						
BRZS	Berezniki	7.99	288	eP	Pg	16 34 38.1	-3.8
	0.9nm,0.1s						
BRZS				eS	Sg	16 36 23.2	-2.1
	7.4nm,0.7s						
BRZS	Berezniki	7.99	288	Pg	Pg	16 34 38.1	-3.8
	0.9nm,0.1s						
BRZS				Lg	Lg	16 36 23.2	
	7.4nm,0.7s						

*IDC **07** 16:40:38.1±0.8, 1°.93S×141°.45E, h0km, mb4.0/11, mbtmp4.1/13, ML4.4/2, MS3.3/14, Error ellipse: s-maj=30.0km s-min=15.2km az=93.0*
*NEIC **07** 16:40:45.8±1.1, 2°.4S±0°.1×141°.1E±0°.1, h10km±1km, mb4.4/25, Error ellipse: s-maj=23.2km s-min=19.0km az=125.0*
*DJA **07** 16:40:46.6±1.1, 2°.5S±6°.×14°.1E±°, h15km±8km, M4.1/10, mB5.6/2, mb4.4/10, MLv4.0/4, Mw(mB)5.0/2*
ISC 07 16:40:47.4±0.7,**2°.46S**±0°.09×**141°.1E**±0°.1,**h31**km,**n63,** σ1§**48**/46,**mb4.3**/24,**MS3.3**/13,**1C, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.96	262	P	Pn	16 41 04.1	-0.7
SMPI	Sarmi	2.46	281	P	Pn	16 41 23.4	-1.9
WAMI	Wamena	2.80	239	P	Pn	16 41 29.6	-0.4

FAKI	Fak Fak	8.88	267	Pn		Pn		16 42 53.7	+0.1
MTN	Manton Dam	14.29	223	Pn		Pn		16 44 08.0	+0.3
GUMO	Guam	16.37	13			Pn		16 44 37.6	+2.6
KNRA	Kununurra	17.91	222	P		P		16 44 56.1	+1.3
CTAO	Charters Tower	18.23	164	P		Pn		16 44 58.9	+0.7
CTAO				IAmb		IAmb		16 45 04.0	
	comp=Z,26nm,1.3s								
WB0	Warramunga Arr	18.42	200	P		Pn		16 45 01.5	+1.0
WB0				IAmb		IAmb		16 45 04.5	
	comp=Z,21nm,0.9s								
WR0	Warramunga Arr	18.55	200	P		Pn		16 45 02.5	+0.4
WR0				IAmb		IAmb		16 45 05.6	
	comp=Z,17nm,0.8s								
WRAB	Tennant Creek	18.59	200	P		Pn		16 45 03.1	+0.5
WRAB				IAmb		IAmb		16 45 06.5	
	comp=Z,18nm,0.8s								
WB2	Warramunga Arr	18.60	200	P		Pn		16 45 03.2	+0.5
WB2				IAmb		IAmb		16 45 06.6	
	comp=Z,18nm,0.7s								
WRA	Warramunga Arr	18.60	200	P		Pn		16 45 03.6	+0.9
	comp=Z,0.9nm,0.3s,baz=25,slow=12,SNR=54								
WRA				LR		LR		16 53 02.1	
	comp=Z,173nm,20.3s,baz=6.0,slow=39 comp=Z,11nm,0.7s								
BATI	Baumata	18.97	245	P		Pn		16 45 07.6	+0.3
	comp=Z,2.8nm,0.3s,baz=49,slow=9.3,SNR=3.1 comp=Z,14nm,0.4s								
APSI	Ampana	19.53	274	P		P		16 45 12.9	+0.4
	comp=Z,21nm,1.0s								
TTSI	Tana Toraja	21.29	268	P		P		16 45 32.6	+1.0
	comp=Z,852nmcomp=Z,17nm,0.9s								
SPSI	Sidrap Palu	21.37	265	P		P		16 45 32.6	+0.1
	comp=Z,26nm,0.8s								
FITZ	Fitzroy Crossi	21.73	223	P		P		16 45 37.0	+0.7
	comp=Z,2.7nm,0.6s,baz=40,slow=14,SNR=15								
FITZ				LR		LR		16 56 05.1	
	comp=Z,90nm,18.8s,baz=48,slow=42 comp=Z,2.7nm,0.6s								
FITZ	Fitzroy Crossi	21.73	223	P		P		16 45 36.9	+0.7
AS31	Alice Springs	22.21	198	P		P		16 45 42.6	+1.1
ASAR	Alice Springs	22.21	198	P		P		16 45 42.5	+1.0
	comp=Z,7.3nm,0.8s,baz=26,slow=11,SNR=178								
ASAR				LR		LR		16 55 15.4	
	comp=Z,149nm,19.9s,baz=10.0,slow=38 comp=Z,7.3nm,0.8s								
ASAR	Alice Springs	22.21	198	P		P		16 45 42.2	+0.7
BBKI	Banjar Baru	26.27	267	P		P		16 46 22.2	+2.0
	comp=Z,3µmcomp=Z,18nm,0.7s								
STKA	Stephens Creek	29.27	179	P		P		16 46 48.0	+1.1
	comp=Z,2.0nm,0.8s,baz=350,slow=11,SNR=3.9								
STKA				LR		LR		16 58 56.5	
	comp=Z,83nm,20.2s,baz=25,slow=37 comp=Z,2.0nm,0.8s								
STKA	Stephens Creek	29.27	179	P		P		16 46 47.8	+0.9
BBOO	Buckleboo	30.57	188	P		P		16 46 58.5	+0.2
FORT	Forrest	30.76	202	P		P		16 47 00.1	0.0
CAN	Canberra	33.51	168	P		P		16 47 24.5	+0.3
KSRS	Korea Array	41.56	344	LR		LR		17 04 41.3	
	comp=Z,27nm,18.4s,baz=145,slow=35								
CMAR	Chiang Mai Arr	46.42	298	P		P		16 49 06.7	-4.9
	comp=Z,0.3nm,0.5s,baz=119,slow=9.4,SNR=2.2 comp=Z,0.3nm,0.5s								
USRK	Ussuriysk Ar.	47.16	351	P		P		16 49 09.4	-7.6
	comp=Z,1.3nm,0.7s,baz=165,slow=5.9,SNR=4.7 comp=Z,1.3nm,0.7s								
URZ	Urewera	48.50	142	LR		LR		17 08 28.0	
	comp=Z,43nm,21.9s,baz=30,slow=34								
BNX	BinXian	49.51	347	⇑P		P		16 49 27.4	-7.6
BNX				pmax		pmax			
	comp=Z,9.0nm,0.5s								
BNX				pmax		pmax			
	comp=Z,130nm,6.6s								
KLR	Kul'dur	52.12	352	P		P		16 49 46.8	-7.8
	comp=Z,1.6nm,0.8s,baz=194,slow=12,SNR=3.6 comp=Z,1.6nm,0.8s								
GTA	Gaotai	56.33	322	eP		P		16 50 20.7	-4.9
GTA				pP		pP		16 50 28.0	-6.6
GTA				sP		pwP		16 50 32.2	-4.7
GTA				pmax		pmax			
	comp=Z,3.0nm,1.0s								
PETK	Petropavlovsk-	57.09	12	LR		LR		17 10 07.1	
	comp=Z,19nm,21.8s,baz=183,slow=31								
SONM	Songino Array	58.55	333	LR		LR		17 13 48.9	
	comp=Z,23nm,21.7s,baz=110,slow=34								
RAR	Rarotonga	60.40	113	LR		LR		17 16 12.9	
	comp=Z,26nm,18.0s,baz=298,slow=35								
MA2	Magadan	62.31	6	LR		LR		17 16 27.1	
	comp=Z,11nm,19.1s,baz=128,slow=35								
YAK	Yakutsk	64.90	354	LR		LR		17 16 27.4	
	comp=Z,17nm,20.6s,baz=142,slow=33								
MKAR	Makanchi Array	71.08	322	P		P		16 51 57.6	-5.1
	comp=Z,1.5nm,0.9s,baz=107,slow=7.9,SNR=8.3 comp=Z,1.5nm,0.9s								
ZALV	Zalesovo Beam	72.94	329	P		P		16 52 07.5	-6.2
	comp=Z,1.4nm,0.7s,baz=103,slow=6.4,SNR=7.2								
ZALV				LR		LR		17 24 41.0	
	comp=Z,13nm,18.4s,baz=55,slow=36 comp=Z,1.4nm,0.7s								
TIXI	Tiksi	74.40	356	LR		LR		17 26 05.6	
	comp=Z,16nm,18.2s,baz=181,slow=37								
VNDA	Vanda	75.83	175	P		P		16 52 28.4	-1.6
	comp=Z,0.4nm,0.6s,baz=324,slow=7.0,SNR=6.8 comp=Z,0.4nm,0.6s								
VNDA	Vanda	75.83	175	P		P		16 52 29.1	-0.9
NRIK	Noril'sk	80.17	343	P		P		16 52 47.7	-6.6
	comp=Z,1.1nm,0.4s,baz=117,slow=4.5,SNR=2.2 comp=Z,1.1nm,0.4s								
L19K	White Mountain	80.34	25	P		P		16 52 57.1	+1.7
L19K				IAmb		IAmb		16 53 26.2	
	comp=Z,13nm,1.5s								
CNPM	China Poot	80.96	29	P		P		16 52 59.9	+1.2
K20K	Telida	81.16	24	P		P		16 53 02.1	+2.4
K20K				IAmb		IAmb		16 53 43.2	
	comp=Z,7.6nm,1.4s								
IMAR	Indian Mountai	82.35	22	P		P	

baz=204,slow=75,SNR=6.2

BOSA	**Boshof**	**31.32**	**262**	LR	LR	17 25 07.7	
	comp=Z,47nm,18.7s,baz=164,slow=32						
LSZ	**Lusaka**	**33.37**	**287**	LR	LR	17 26 43.1	
	comp=Z,27nm,18.4s,baz=145,slow=33						
SUR	**Sutherland**	**34.62**	**254**	LR	LR	17 26 41.2	
	comp=Z,91nm,18.1s,baz=113,slow=32						
MBAR	**Mbarara**	**40.63**	**309**	LR	LR	17 31 08.2	
	comp=Z,52nm,19.3s,baz=154,slow=34						
PALK	**Pallekele**	**40.91**	**31**	LR	LR	17 29 11.0	
	comp=Z,33nm,20.1s,baz=171,slow=31						
ATD	**Arta Tunnel**	**44.21**	**334**	LR	LR	17 31 53.1	
	comp=Z,57nm,19.8s,baz=72,slow=32						
H01W2	**Cape Leeuwin H**	**44.84**	**111**	T	T	18 04 06.1	
	baz=261,slow=74,SNR=9.0						
H01W3	**Cape Leeuwin H**	**44.85**	**111**	T	T	18 04 05.8	
	baz=261,slow=74,SNR=7.4						
H01W1	**Cape Leeuwin H**	**44.86**	**111**	T	T	18 04 07.9	
	baz=261,slow=74,SNR=9.7						
CMAR	**Chiang Mai Arr**	**59.85**	**42**	P	**P**	**17 18 17.6**	**-0.4**
	0.6nm,0.7s,baz=223,slow=8.7,SNR=2.2 0.6nm,0.7s						
QSPA	**South Pole Qui**	**60.91**	**180**	P	**P**	**17 18 24.9**	**0.0**
	0.7nm,0.8s,baz=246,slow=4.7,SNR=1.4 0.7nm,0.8s						
EIL	**Elat**	**63.69**	**335**	LR	LR	17 42 48.5	
	comp=Z,38nm,20.0s,baz=70,slow=33						
VNDA	**Vanda**	**63.96**	**166**	LR	LR	17 44 23.4	
	comp=Z,43nm,18.4s,baz=259,slow=34						
ASAR	**Alice Springs**	**64.46**	**104**	P	**P**	**17 18 48.9**	**-0.2**
	0.8nm,0.8s,baz=241,slow=6.3,SNR=10 0.8nm,0.8s						
WRA	**Warramunga Arr**	**66.28**	**100**	P	**P**	**17 19 00.9**	**-0.1**
	0.9nm,0.9s,baz=249,slow=5.5,SNR=6.6 0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.15**	**298**	P	**P**	**17 19 31.7**	**+0.4**
	1.6nm,1.0s,baz=118,slow=5.4,SNR=6.3 1.6nm,1.0s						
IDI	**Anoyia**	**72.71**	**330**	LR	LR	17 48 46.9	
	comp=Z,12nm,21.8s,baz=228,slow=34						
KBZ	**Khabaz**	**74.52**	**346**	LR	LR	17 52 15.7	
	comp=Z,24nm,18.7s,baz=136,slow=36						
MKAR	**Makanchi Array**	**78.07**	**15**	P	**P**	**17 20 11.4**	**+0.6**
	0.4nm,0.8s,baz=186,slow=5.4,SNR=2.2 0.4nm,0.8s						
AKTO	**Aktyubinsk**	**79.38**	**358**	LR	LR	17 52 50.7	
	comp=Z,23nm,18.3s,baz=204,slow=34						
BVAR	**Borovoye Array**	**82.32**	**6**	LR	LR	17 56 11.8	
	comp=Z,22nm,18.6s,baz=94,slow=35						
RPZ	**Rata Peaks**	**83.18**	**137**	LR	LR	17 49 05.0	
	comp=Z,43nm,21.5s,baz=250,slow=30						
JOW	**Kunigami**	**85.13**	**56**	LR	LR	17 54 34.6	
	comp=Z,64nm,18.9s,baz=114,slow=33						
ZALV	**Zalesovo Beam**	**85.36**	**14**	P	**P**	**17 20 49.5**	**+0.5**
	0.4nm,0.4s,baz=202,slow=7.3,SNR=1.9 0.4nm,0.4s						

NOU 07 17:09:32.0,15.00S×167.61E,h112km,MLv4.5/8,
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.77**	**169**	P	Pn	17 10 14.7	-0.3
YATNC	**Mamie plateau,**	**7.05**	**185**	P	Pn	17 11 11.2	-1.5
DZM	**Mont Dzumac**	**7.12**	**189**	P	Pn	17 11 12.9	-0.7
OUENC	**Ouen Island, N**	**7.42**	**186**	P	Pn	17 11 17.5	-0.1

*IDC **07** 17:18:16.8±2.4,0.27N×123.90E,h119km±23km,mb3.5/8,*
mbtmp3.9/11,Error ellipse: s-maj=22.9km s-min=13.4km az=60.0
*DJA **07** 17:18:19.4±0.3,0.3N±3.3×12.4E±*,h108km±6km,M4.1/23,*
mB4.2/3,mb4.1/10,MLv4.1/23,Mw(mB)3.2/3
ISC 07 17:18:16.7±0.7,0.20N±0.06×123.77E±0.05,h110km,n34,
σ1§94/38,mb3.7/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.43**	**29**	P	Pn	17 18 39.4	+6.3
LUWI	**Luwuk**	**1.58**	**219**	P	**Pn**	**17 18 45.7**	**+1.2**
LUWI				S	**Sn**	**17 19 05.7**	**0.0**
LUWI	**Luwuk**	**1.58**	**219**	P	**Pn**	**17 18 46.2**	**+1.7**
MRSI	**Marisa**	**1.85**	**279**	P	**Pn**	**17 18 49.0**	**+1.2**
MRSI				S	**Sn**	**17 19 11.9**	**+0.4**
APSI	**Ampana**	**2.39**	**243**	P	**Pn**	**17 18 55.6**	**+0.9**
SANI	**Sanana**	**3.14**	**135**	P	**Pn**	**17 19 04.9**	**+0.3**
SANI	**Sanana**	**3.14**	**135**	P	**Pn**	**17 19 05.7**	**+1.1**
TNTI	**Ternate**	**3.64**	**81**	P	**Pn**	**17 19 14.9**	**+3.7**
TNTI	**Ternate**	**3.64**	**81**	P	**Pn**	**17 19 15.4**	**+4.2**
LBMI	**Labuha**	**3.82**	**103**	P	**Pn**	**17 19 16.3**	**+2.6**
MPSI	**Mapaga**	**3.88**	**272**	P	**Pn**	**17 19 16.4**	**+2.0**
NLAI	**Namlea**	**4.76**	**136**	P	**Pn**	**17 19 28.8**	**+2.4**
TTSI	**Tana Toraja**	**5.09**	**231**	P	**Pn**	**17 19 31.5**	**+0.7**
SPSI	**Sidrap Palu**	**5.75**	**224**	P	**Pn**	**17 19 40.4**	**+0.7**
	0.1nm18nm,1.0s						
BBSI	**Bau Bau**	**5.77**	**192**	P	**Pn**	**17 19 40.6**	**+0.6**
	0.0nm68nm3.4nm,0.9s						
AAI	**Ambon**	**5.87**	**131**	P	**Pn**	**17 19 44.7**	**+3.4**
	0.2nm30nm,0.6s						
MSAI	**Masohi**	**6.24**	**124**	P	**Pn**	**17 19 49.7**	**+3.3**
KAPI	**Kappang**	**6.55**	**218**	P	**Pn**	**17 19 52.5**	**+2.0**
	4.9nm,0.5s,baz=39,slow=5.2,SNR=5.9						
KAPI				S	**Sn**	**17 21 04.1**	**+0.3**
	8.4nm,0.6s,baz=154,slow=19,SNR=5.9						
KAPI	**Kappang**	**6.55**	**218**	P	**Pn**	**17 19 52.9**	**+2.4**
BKSI	**Bulukumba**	**6.58**	**214**	P	**Pn**	**17 19 51.6**	**+0.6**
	0.1nm13nm,0.9s						
SWI	**Sorong**	**7.56**	**98**	P	**Pn**	**17 20 07.9**	**+3.6**
	0.1nm11nm,0.7s						
SIJI	**Sorong**	**7.57**	**98**	P	**Pn**	**17 20 02.6**	**-1.8**
	6.7nm,0.5s,baz=45,slow=22,SNR=2.7						
SIJI				S	**Sn**	**17 21 27.1**	**-1.6**
	3.3nm,0.5s,baz=227,slow=22,SNR=1.2						
MTKI	**Muara Teweh, K**	**8.95**	**263**	P	**Pn**	**17 20 24.7**	**+1.6**
FAKI	**Fak Fak**	**9.02**	**110**	P	**Pn**	**17 20 26.4**	**+2.3**
KKM	**Kota Kinabalu**	**9.52**	**308**	P	Pn	17 20 36.5	+5.5
FITZ	**Fitzroy Crossi**	**18.27**	**174**	P	**P**	**17 22 21.8**	**-0.2**
	2.1nm,0.4s,baz=7.0,slow=7.7,SNR=22						
WRA	**Warramunga Arr**	**22.53**	**153**	P	**P**	**17 23 05.4**	**-2.3**
	1.9nm,0.4s,baz=333,slow=10,SNR=70 1.9nm,0.4s						
ASAR	**Alice Springs**	**25.68**	**158**	P	**P**	**17 23 36.5**	**-0.1**
	0.7nm,0.5s,baz=342,slow=14,SNR=33						
ASAR				PcP	**PcP**	**17 27 03.6**	**-0.8**
	0.6nm,0.4s,baz=349,slow=2.3,SNR=14 0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.40**	**308**	P	**P**	**17 24 19.2**	**+0.5**
	0.4nm,0.4s,baz=127,slow=6.9,SNR=4.9 0.4nm,0.4s						
STKA	**Stephens Creek**	**36.08**	**154**	P	**P**	**17 25 08.3**	**+0.3**
	1.6nm,0.5s,baz=330,slow=7.8,SNR=5.7 1.6nm,0.5s						
SONM	**Songino Array**	**49.80**	**345**	P	**P**	**17 26 57.6**	**-0.7**
	0.4nm,0.5s,baz=161,slow=9.2,SNR=2.6 0.4nm,0.5s						
MKAR	**Makanchi Array**	**58.86**	**328**	P	**P**	**17 28 02.9**	**-1.1**
	1.6nm,0.5s,baz=123,slow=8.7,SNR=23						
MKAR				PcP	**PcP**	**17 28 49.9**	**-2.3**
	0.6nm,0.4s,baz=150,slow=3.0,SNR=9.4 1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**62.46**	**335**	P	**P**	**17 28 27.1**	**-1.1**
	0.6nm,0.5s,baz=92,slow=4.5,SNR=4.2 0.6nm,0.5s						
VNDA	**Vanda**	**80.33**	**172**	P	**P**	**17 30 14.5**	**-0.7**
	0.6nm,0.8s,baz=302,slow=7.9,SNR=3.6 0.6nm,0.8s						

IDC 07 17:24:15.2±3.2,33.04N×139.98E,h0km,mb3.3/2,
mbtmp3.1/3,ML1.7/1,Error ellipse: s-maj=160.8km
s-min=26.4km az=77.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**3.79**	**338**	Pn	Pn	17 25 15.0	+0.1
	0.1nm,0.3s,baz=155,slow=13,SNR=5.9						
MJAR				Sn	Sn	17 25 59.4	-0.8
	baz=356,slow=24,SNR=2.4 0.6nm,0.4s						
WRA	**Warramunga Arr**	**52.96**	**187**	P	P	17 33 33.4	-0.1
	0.7nm,1.0s,baz=4.9,slow=7.5,SNR=13 0.7nm,1.0s						
ASAR	**Alice Springs**	**56.69**	**187**	P	P	17 34 00.4	-0.2
	0.2nm,0.7s,baz=7.0,slow=8.4,SNR=1.3 0.2nm,0.7s						

*IDC **07** 17:30:29.9±3.6,13.79N×90.14W,h66km±25km,mb3.8/5,*
mbtmp4.0/7,MS3.1/9,Error ellipse: s-maj=38.3km
s-min=23.6km az=27.0
*UCR **07** 17:30:32.8±1.4,13.79N×90.84W,h32km±5km,ML4.7,*
MW3.9,mb4.3(NEIC)
*NEIC **07** 17:30:33.4±2.6,13.90N±0.09×90.76W±0.05,h77km±7km,*
mb4.3/30,Md5.0(SNET),Error ellipse: s-maj=13.1km
s-min=5.9km az=200.0
*INET **07** 17:30:33.9±0.8,13.87N×90.73W,h58km±21km,MW4.2*
*SNET **07** 17:30:33.0±2.5,13.80N×90.80W,h28km±9km,ML4.9*
*GCG **07** 17:30:35.8±0.7,14.14N×90.81W,h78km±4km,MD4.1*
ISC 07 17:30:33.3±0.7,13.92N±0.05×90.78W±0.04,h87km±5km,
n175,σ1§19/213,mb4.3/15,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.41**	**52**	eP	**Pn**	**17 30 49.0**	**+1.6**
IXG				eS	**Sn**	**17 30 58.9**	**+1.1**
PCG	**Pacaya**	**0.50**	**20**	eP	**Pn**	**17 30 48.2**	**+0.1**
PCG				eS	**Sn**	**17 30 59.6**	**+0.5**
FUG	**Fuego 3**	**0.53**	**353**	eP	**Pn**	**17 30 48.3**	**0.0**
NBG	**Las Nubes**	**0.79**	**32**	eP	**Pn**	**17 30 51.5**	**+0.7**
NBG				eS	**Sn**	**17 31 05.1**	**+1.3**
NUBE	**Las Nubes**	**0.97**	**91**	eP	**Pn**	**17 30 51.6**	**-1.1**
NUBE				eS	**Sn**	**17 31 06.0**	**-1.1**
NUBE	**Las Nubes**	**0.97**	**91**	eP	**Pn**	**17 30 51.6**	**-1.1**
NUBE				eS	**Sn**	**17 31 06.0**	**-1.1**
LOAL	**Lomas de Alarc**	**0.97**	**85**	eP	**Pn**	**17 30 51.9**	**-0.7**
LOAL				eS	**Sn**	**17 31 07.3**	**+0.3**
LOAL	**Lomas de Alarc**	**0.97**	**85**	eP	**Pn**	**17 30 51.9**	**-0.7**
LOAL				eS	**Sn**	**17 31 07.3**	**+0.3**
RTAL	**Retalhuleu**	**1.07**	**304**		**Pn**	**17 30 53.3**	**-0.4**
RTAL				Sn	**Sn**	**17 31 07.7**	**-1.3**
RTAL	**Retalhuleu**	**1.07**	**304**	eP	**Pn**	**17 30 53.3**	**-0.4**
RTAL				eS	**Sn**	**17 31 10.0**	**+1.0**
STG3	**Santiaguito 3,**	**1.10**	**316**	eP	**Pn**	**17 30 54.7**	**+0.5**
STG3				eS	**Sn**	**17 31 09.0**	**-0.9**
CEVE	**Cerro Verde**	**1.13**	**94**	eP	**Pn**	**17 30 53.9**	**-0.7**
CEVE				eS	**Sn**	**17 31 10.8**	**+0.2**
CEVE				IAML		17 31 17.6	
	comp=Z,55μm,0.4s						
CEVE	**Cerro Verde**	**1.13**	**94**	eP	**Pn**	**17 30 53.9**	**-0.7**
CEVE				eS	**Sn**	**17 31 10.8**	**+0.2**
CEVE				IAML		17 31 17.6	
	comp=Z,55μm,0.4s						
SBLS	**San Blas**	**1.13**	**94**	eP	**Pn**	**17 30 53.9**	**-0.7**
SBLS	**San Blas**	**1.13**	**94**	eP	**Pn**	**17 30 53.9**	**-0.7**
SNJE	**San Jose**	**1.14**	**92**	eP	**Pn**	**17 30 54.1**	**-0.6**
SNJE	**San Jose**	**1.14**	**92**	eP	**Pn**	**17 30 54.1**	**-0.6**
UNIC	**Universidad Ca**	**1.20**	**87**	eP	**Pn**	**17 30 54.3**	**-1.0**
UNIC				eS	**Sn**	**17 31 11.4**	**-0.4**
UNIC	**Universidad Ca**	**1.20**	**87**	eP	**Pn**	**17 30 54.3**	**-1.0**
UNIC				eS	**Sn**	**17 31 11.4**	**-0.4**
JAYA	**Jayaque - finc**	**1.32**	**101**	eP	**Pn**	**17 30 55.8**	**-1.1**
JAYA				eS	**Sn**	**17 31 13.9**	**-0.7**
JAYA				IAML		17 31 16.0	
	comp=Z,28μm,0.2s						
JAYA	**Jayaque - finc**	**1.32**	**101**	eP	**Pn**	**17 30 55.8**	**-1.1**
JAYA				eS	**Sn**	**17 31 13.9**	**-0.7**
JAYA				IAML		17 31 16.0	
	comp=Z,28μm,0.2s						
CEDA	**San Andres**	**1.35**	**95**	eP	**Pn**	**17 30 56.1**	**-1.0**
CEDA				eS	**Sn**	**17 31 14.9**	**-0.1**
CEDA				IAML		17 31 23.1	
	comp=Z,14μm,0.5s						
CEDA	**San Andres**	**1.35**	**95**	eP	**Pn**	**17 30 56.1**	**-1.0**
CEDA				eS	**Sn**	**17 31 14.9**	**-0.1**
CEDA				IAML		17 31 23.1	
	comp=Z,14μm,0.5s						
MTO3	**Montecristo**	**1.46**	**71**		**Pn**	**17 30 57.3**	**-1.3**
MTO3				Sn	**Sn**	**17 31 17.2**	**-0.5**
MTO3	**Montecristo**	**1.46**	**71**	eP	**Pn**	**17 30 57.8**	**-0.9**
MTO3	**Montecristo**	**1.46**	**71**	eP	**Pn**	**17 30 57.8**	**-0.9**
MTO3				eS	**Sn**	**17 31 17.5**	**-0.2**
MTO3	**Montecristo**	**1.46**	**71**	eP	**Pn**	**17 30 57.7**	**-0.9**
BOQS	**Boqueron**	**1.47**	**97**	eP	**Pn**	**17 30 57.9**	**-0.9**
BOQS	**Boqueron**	**1.47**	**97**	eP	**Pn**	**17 30 57.9**	**-0.9**
ITCA	**Escuela Especi**	**1.48**	**99**	eP	**Pn**	**17 30 57.9**	**-0.9**
ITCA	**Escuela Especi**	**1.48**	**99**	eP	**Pn**	**17 30 57.9**	**-0.9**
ITCA				eS	**Sn**	**17 31 15.9**	**-2.1**
SNET	**Serv Nac Est T**	**1.52**	**98**		**Pn**	**17 30 57.6**	**-1.7**
SNET	**Serv Nac Est T**	**1.52**	**98**	eP	**Pn**	**17 30 58.4**	**-0.9**
SNET				eS	**Sn**	**17 31 18.6**	**-0.4**
SNET				IAML		17 31 20.8	
	comp=Z,12μm,0.3s						
SNET	**Serv Nac Est T**	**1.52**	**98**	eP	**Pn**	**17 30 58.4**	**-0.9**
SNET				eS	**Sn**	**17 31 18.6**	**-0.4**
SNET				IAML		17 31 20.8	
	comp=Z,12μm,0.3s						
SNET	**Serv Nac Est T**	**1.52**	**98**	eP	**Pn**	**17 30 58.2**	**-1.1**
SEMO	**Seminario San**	**1.53**	**98**	eP	**Pn**	**17 30 59.4**	**0.0**
ESQI	**Esquipulas**	**1.53**	**65**		**Pn**	**17 30 59.2**	**-0.3**
ESQI				Sn	**Sn**	**17 31 17.6**	**-1.7**
ESQI	**Esquipulas**	**1.53**	**65**	eP	**Pn**	**17 30 59.2**	**-0.3**
ESQI				eS	**Sn**	**17 31 20.3**	**+1.0**
UESS	**Universidad de**	**1.55**	**97**	eP	**Pn**	**17 30 59.2**	**-0.4**
UESS				eS	**Sn**	**17 31 20.3**	**+0.8**
UESS	**Universidad de**	**1.55**	**97**	eP	**Pn**	**17 30 59.2**	**-0.4**
UESS				eS	**Sn**	**17 31 20.3**	**+0.8**
HUEH	**Huehuetenango**	**1.56**	**333**		**Pn**	**17 31 00.6**	**+0.7**
HUEH	**Huehuetenango**	**1.56**	**333**	eP	**Pn**	**17 31 00.9**	**+0.9**
HUEH	**Huehuetenango**	**1.56**	**333**	eP	**Pn**	**17 31 00.9**	**+0.9**
HUEH	**Huehuetenango**	**1.56**	**333**	eP	**Pn**	**17 31 00.7**	**+0.7**
MRL	**Marmol**	**1.57**	**42**	eP	**Pn**	**17 31 01.1**	**+1.0**
MRL				eS	**Sn**	**17 31 20.8**	**+0.5**
LFU	**La Fuente**	**1.63**	**96**	eP	**Pn**	**17 31 00.0**	**-0.7**
LFU	**La Fuente**	**1.63**	**96**	eP	**Pn**	**17 31 00.0**	**-0.7**
AEIL	**Aeropuerto Ilo**	**1.63**	**98**	eP	**Pn**	**17 31 00.3**	**-0.4**
AEIL				IAML		17 31 32.8	
	comp=Z,11μm,0.4s						
AEIL	**Aeropuerto Ilo**	**1.63**	**98**	eP	**Pn**	**17 31 00.3**	**-0.4**
AEIL				eS	**Sn**	**17 31 24.4**	**+2.9**
AEIL				IAML		17 31 32.8	
	comp=Z,11μm,0.4s						
LFRS	**El Faro**	**1.69**	**100**	eP	**Pn**	**17 31 00.6**	**-1.0**
LFRS	**El Faro**	**1.69**	**100**	eP	**Pn**	**17 31 00.6**	**-1.0**
LBRS	**Las Brisas**	**1.70**	**96**	eP	**Pn**	**17 31 00.9**	**-0.6**
LBRS	**Las Brisas**	**1.70**	**96**	eP	**Pn**	**17 31 00.9**	**-0.6**
SJTE	**Alcalda de S**	**1.75**	**100**	eP	**Pn**	**17 31 01.5**	**-0.8**
SJTE				eS	**Sn**	**17 31 24.1**	**-0.1**
SJTE	**Alcalda de S**	**1.75**	**100**	eP	**Pn**	**17 31 01.5**	**-0.8**
SJTE				eS	**Sn**	**17 31 24.1**	**-0.1**
LLGN	**La Laguna**	**1.80**	**82**	eP	**Pn**	**17 31 01.9**	**-1.0**
LLGN				eS	**Sn**	**17 31 25.5**	**+0.1**
LLGN	**La Laguna**	**1.80**	**82**	eP	**Pn**	**17 31 01.9**	**-1.0**
LLGN				eS	**Sn**	**17 31 25.5**	**+0.1**
PAVA	**Las Pavas**	**1.80**	**96**	eP	**Pn**	**17 31 02.3**	**-0.7**
PAVA				eS	**Sn**	**17 31 25.7**	**+0.2**
PAVA	**Las Pavas**	**1.80**	**96**	eP	**Pn**	**17 31 02.3**	**-0.7**
PAVA				eS	**Sn**	**17 31 25.7**	**+0.2**
COEG	**Centro de Oper**	**1.87**	**99**	eP	**Pn**	**17 31 03.4**	**-0.4**
COEG				eS	**Sn**	**17 31 27.3**	**+0.3**
COEG	**Centro de Oper**	**1.87**	**99**	eP	**Pn**	**17 31 03.4**	**-0.4**
COEG				eS	**Sn**	**17 31 27.3**	**+0.3**
P5NO	**Presa 5 de nov**	**1.96**	**88**	eP	**Pn**	**17 31 03.8**	**-1.2**
PQSS	**Presa 15 de Se**	**2.18**	**97**	eP	**Pn**	**17 31 07.3**	**-0.5**
PQSS				eS	**Sn**	**17 31 35.4**	**+1.3**
PQSS	**Presa 15 de Se**	**2.18**	**97**	eP	**Pn**	**17 31 07.3**	**-0.5**
PQSS				eS	**Sn**	**17 31 35.4**	**+1.3**
PACA	**Pacayal**	**2.43**	**100**	eP	**Pn**	**17 31 11.0**	**-0.2**
PACA	**Pacayal**	**2.43**	**100**	eP	**Pn**	**17 31 11.0**	**-0.2**
PACA	**Pacayal**	**2.43**	**100**	eP	**Pn**	**17 31 10.9**	**-0.4**
CCIG	**Comitan**	**2.69**	**331**		**Pn**	**17 31 15.7**	**+0.9**
LCND	**La Caada**	**2.87**	**102**	eP	**Pn**	**17 31 16.6**	**-0.5**
LCND				eS	**Sn**	**17 31 51.9**	**+1.0**
LCND				IAML		17 32 03.4	
	comp=Z,2μm,0.4s						
LCND	**La Caada**	**2.87**	**102**	eP	**Pn**	**17 31 16.6**	**-0.5**
LCND				eS	**Sn**	**17 31 51.9**	**+1.0**
LCND				IAML		17 32 03.4	
	comp=Z,2μm,0.4s						
PETF	**Flores**	**3.11**	**16**		**Pn**	**17 31 19.4**	**-0.9**
TGUH	**Tegucigalpa,Un**	**3.41**	**87**		**Pn**	**17 31 22.6**	**-1.9**
TGUH	**Tegucigalpa,Un**	**3.41**	**87**	eP	**Pn**	**17 31 23.8**	**-0.6**
CRIN	**San Cristobal**	**3.83**	**108**		**Pn**	**17 31 30.5**	**+0.4**
CRIN	**San Cristobal**	**3.83**	**108**	eP	**Pn**	**17 31 27.9**	**-2.2**
CRIN	**San Cristobal**	**3.83**	**108**	eP	**Pn**	**17 31 30.1**	**+0.1**
CRIN				eS	**Sn**	**17 32 16.5**	**+2.4**
TEL3	**Telica 3**	**4.06**	**109**	eP	**Pn**	**17 31 32.6**	**-0.6**
TELN	**Telica**	**4.06**	**108**	eP	**Pn**	**17 31 32.7**	**-0.6**
CNGN	**Cerro Negro**	**4.22**	**109**		**Pn**	**17 31 34.7**	**-0.7**
CNGN	**Cerro Negro**	**4.22**	**109**	eP	**Pn**	**17 31 34.8**	**-0.5**
CNGN	**Cerro Negro**	**4.22**	**109**	eP	**Pn**	**17 31 34.3**	**-1.1**
MOMN	**Momotombo**	**4.39**	**109**	eP	**Pn**	**17 31 37.1**	**-0.6**
COPN	**Copaltepe**	**4.43**	**112**	eP	**Pn**	**17 31 37.0**	**-1.3**
APYN	**Apoyeque**	**4.63**	**111**	eP	**Pn**	**17 31 40.1**	**-0.9**
MATN	**Matagalpa**	**4.82**	**101**		**Pn**	**17 31 43.2**	**-0.5**
MATN	**Matagalpa**	**4.82**	**101**	eP	**Pn**	**17 31 42.7**	**-0.9**
BOAB	**BOACO BROADBAN**	**5.19**	**106**	Pn	**Pn**	**17 31 47.2**	**-1.3**
BOAB	**BOACO BROADBAN**	**5.19**	**106**	eP	**Pn**	**17 31 47.0**	**-1.6**
CONN	**Concepcion**	**5.55**	**114**	eP	**Pn**	**17 31 52.4**	**-1.0**
ACON	**Acoyapa**	**5.80**	**109**		**Pn**	**17 31 55.7**	**-1.1**
ACON	**Acoyapa**	**5.80**	**109**	eP	**Pn**	**17 31 55.5**	**-1.4**
HZTE	**Horizontes, Gu**	**5.98**	**122**		**Pn**	**17 32 00.1**	**+0.7**
GPS2	**Hotel Rincn d**	**6.17**	**120**	eP	**Pn**	**17 32 02.5**	**+0.5**
ORTG	**Ortega, Santa**	**6.29**	**124**	Pn	**Pn**	**17 32 04.1**	**+0.5**
GUAB	**Guayabo de Bag**	**6.29**	**120**	eP	**Pn**	**17 32 04.0**	**+0.4**
HORNC	**Hornillas**	**6.33**	**120**	eP	**Pn**	**17 32 03.9**	**-0.4**
COLC	**Colonia**	**6.34**	**120**	eP	**Pn**	**17 32 04.4**	**+0.2**
CUI	**Cuipilapa**	**6.37**	**120**	eP	**Pn**	**17 32 05.2**	**+0.4**
DUNO	**Dulce Nombre,**	**6.43**	**126**		**Pn**	**17 32 06.0**	**+0.6**
ACAL	**Aguas Claras**	**6.49**	**120**	eP	**Pn**	**17 32 06.1**	**-0.3**
ESPN	**Las Esperanzas**	**6.54**	**104**		**Pn**	**17 32 06.6**	**-0.3**
ESPN	**Las Esperanzas**	**6.54**	**104**	eP	**Pn**	**17 32 06.7**	**-0.3**
TEIG	**Tepich**	**6.71**	**21**	Pn	**Pn**	**17 32 09.6**	**+0.3**
JTS	**Las Juntas de**	**6.74**	**122**	Pn	**Pn**	**17 32 08.9**	**-0.9**
JTS	**Las Juntas de**	**6.74**	**122**	eP	**Pn**	**17 32 07.3**	**-2.5**
CEDE	**Laguna Cedeo**	**6.85**	**119**	eP	**Pn**	**17 32 12.2**	**+0.9**
FORC	**Fortuna**	**6.89**	**119**	eP	**Pn**	**17 32 12.7**	**+0.9**
COVE	**Coope Vega, Sa**	**7.00**	**116**		**Pn**	**17 32 11.7**	**-1.5**
JACO	**JACO, Garabito**	**7.33**	**125**		**Pn**	**17 32 18.9**	**+1.1**
HDC	**Heredia**	**7.59**	**120**		**Pn**	**17 32 19.9**	**-1.5**
CVTR	**Volcan Turrial**	**7.88**	**119**		**Pn**	**17 32 25.5**	**-0.2**
RIMA	**Rio Macho**	**7.93**	**121**		**Pn**	**17 32 26.6**	**+0.5**
PEZE	**Perez Zeledon,**	**8.29**	**122**	Pn	**Pn**	**17 32 32.1**	**+1.2**
TLIG	**Tlapa**	**8.33**	**297**		**Pn**	**17 32 33.5**	**+2.1**
SRBA	**San Rafael, Bu**	**8.63**	**122**		**Pn**	**17 32 36.3**	**+0.7**
DRK0	**Durika**	**8.71**	**121**		**Pn**	**17 32 37.8**	**+1.0**
BRU2	**Volcan**	**9.42**	**122**	Pn	**Pn**	**17 32 43.9**	**-2.6**
BRU2	**Volcan**	**9.42**	**122**	eP	**Pn**	**17 32 45.6**	**-0.9**
MOIG	**Morelia**	**11.49**	**301**		**Pn**	**17 33 13.2**	**-1.5**
SOR	**Soroa**	**11.50**	**39**	Pn	**Pn**	**17 33 15.7**	**+1.2**
061Z	**Ochoppi**	**15.07**	**36**	P	**P**	**17 34 07.1**	**+2.3**
833A	**Chaparral WMA,**	**16.42**	**332**		**Pn**	**17 34 18.5**	**0.0**
833A				IAmb	IAmb	17 34 23.5	
	comp=Z,34nm,1.5s						
656A	**Willston**	**17.17**	**25**		**Pn**	**17 34 27.0**	**-0.7**
553A	**Crawfordville**	**17.22**	**19**	P	**P**	**17 34 33.1**	**+4.6**
YOTC	**Yotoco, Valle**	**17.33**	**123**	eP	**P**	**17 34 29.8**	**-0.2**
BBAC	**Balboa, Cauca**	**17.85**	**130**	eP	**Pn**	**17 34 37.7**	**+1.3**
POPC	**Popayan, Colom**	**17.95**	**128**	eP	**Pn**	**17 34 38.2**	**+0.7**
PAMC	**Pamplona, Colo**	**18.93**	**108**	eP	**Pn**	**17 34 55.7**	**+6.2**
FLOC	**Florencia**	**19.34**	**128**	eP	**Pn**	**17 34 55.4**	**+1.4**
Z47A	**Carrollton**	**19.35**	**7**	P	**P**	**17 34 52.2**	**+0.3**
PORT	**Chimborazo Vol**	**19.37**	**141**		**Pn**	**17 34 53.7**	**-1.1**
TX32	**Lajitas Array**	**19.44**	**324**	P	**Pn**	**17 34 55.0**	**-0.1**
TXAR	**Lajitas Array**	**19.44**	**324**	P	**Pn**	**17 34 55.5**	**+0.5**

comp=Z,2.2nm,0.5s,baz=333,slow=3.1,SNR=13

*IDC **07** 17:34:08.0±1.6,29°.86S×60°.70E,h0km,mb3.7/5, mbtmp3.8/6,ML4.1/1,MS3.2/7,Error ellipse: s-maj=63.4km s-min=27.2km az=27.0*

ISC 07 17:34:10.9±1.8,29°.5S±0°.5×60°.9E±0°.3,h14km,n19, σ0s29/5,mb3.9/5,MS3.2/7,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.56**	**308**	Pn	**Pn**	**17 38 02.6**	**-0.3**
	0.1nm,0.3s,baz=121,slow=12,SNR=4.1						
OPO				Sn	Sn	17 40 49.3	-17
	baz=301,slow=18,SNR=1.6						
	2.5nm,0.4s						
H08S1	**Diego Carcia H**	**24.29**	**29**	T	T	18 04 07.7	
	baz=204,slow=76,SNR=9.5						
H08S2	**Diego Garcia H**	**24.30**	**29**	T	T	18 04 08.6	
	baz=204,slow=76,SNR=5.7						
H08S3	**Diego Garcia H**	**24.31**	**29**	T	T	18 04 09.5	
	baz=204,slow=76,SNR=9.1						
SUR	**Sutherland**	**34.38**	**255**	LR	LR	17 51 56.5	
	comp=Z,61nm,18.5s,baz=126,slow=31						
MAW	**Mawson**	**38.18**	**179**	LR	LR	17 55 15.0	
	comp=Z,34nm,18.3s,baz=330,slow=34						
MBAR	**Mbarara**	**40.63**	**309**	LR	LR	17 57 39.0	
	comp=Z,6.5nm,18.3s,baz=152,slow=35						
ATD	**Arta Tunnel**	**44.33**	**334**	LR	LR	17 57 39.9	
	comp=Z,35nm,21.3s,baz=30,slow=32						
H01W2	**Cape Leeuwin H**	**44.94**	**111**	T	T	18 30 04.1	
	baz=261,slow=74,SNR=5.6						
H01W3	**Cape Leeuwin H**	**44.95**	**111**	T	T	18 30 05.5	
	baz=261,slow=74,SNR=6.0						
H01W1	**Cape Leeuwin H**	**44.96**	**111**	T	T	18 30 05.6	
	baz=261,slow=74,SNR=6.9						
WSAR	**Wadi Sarin**	**52.45**	**357**	LR	LR	18 01 39.9	
	comp=Z,25nm,20.5s,baz=192,slow=31						
CMAR	**Chiang Mai Arr**	**60.15**	**42**	P	P	17 44 22.1	+3.9
	0.4nm,0.4s,baz=217,slow=7.4,SNR=2.2						
	0.4nm,0.4s						
VNDA	**Vanda**	**63.78**	**166**	LR	LR	18 10 50.1	
	comp=Z,34nm,18.3s,baz=266,slow=35						
ASAR	**Alice Springs**	**64.59**	**104**	P	**P**	**17 44 48.0**	**-0.1**
	0.8nm,0.8s,baz=242,slow=5.9,SNR=9.9						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**66.43**	**100**	P	**P**	**17 44 60.0**	**-0.1**
	0.8nm,0.9s,baz=247,slow=5.6,SNR=5.1						
	0.8nm,0.9s						
GNI	**Garni**	**70.88**	**347**	LR	LR	18 15 04.4	
	comp=Z,21nm,19.2s,baz=113,slow=34						
TORD	**Torodi Ar. Bea**	**71.08**	**298**	P	**P**	**17 45 29.2**	**+0.2**
	0.7nm,0.8s,baz=129,slow=3.0,SNR=3.5						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**78.34**	**15**	P	**P**	**17 46 10.5**	**+0.1**
	0.5nm,0.7s,baz=193,slow=5.9,SNR=4.0						
	0.5nm,0.7s						

IDC 07 17:42:08.6±2.3,4°.10N×127°.41E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=163.1km s-min=28.3km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.85**	**164**	P	P	17 47 32.2	-0.8
	0.5nm,0.9s,baz=344,slow=10,SNR=2.2						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**28.32**	**167**	P	P	17 48 04.8	+0.6
	0.2nm,0.7s,baz=351,slow=7.2,SNR=5.4						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**57.64**	**325**	P	P	17 52 00.6	-0.1
	0.2nm,0.5s,baz=121,slow=6.5,SNR=4.8						
	0.2nm,0.5s						

*IDC **07** 18:04:39.6±0.5,40°.06N×29°.56W,h0km,mb4.3/31, mbtmp4.3/32,ML4.7/1,MS3.5/39,Error ellipse: s-maj=15.7km s-min=11.6km az=161.0*

*MOS **07** 18:04:40.4±1.1,39°.72N×29°.53W,h28km,mb4.8/51,Error ellipse: s-maj=8.7km s-min=4.5km az=141.5*

*NEIC **07** 18:04:40.5±2.2,39°.90N±0°.09×29°.4W±0°.1,h15km±4km, mb4.8/112,Error ellipse: s-maj=14.2km s-min=10.9km az=206.0*

*INMG **07** 18:04:41.0,40°.02N×29°.58W,h10km,ML4.1*

*SVSA **07** 18:04:41.7±1.3,40°.02N×29°.59W,h10km,ML4.1(INMG), Error ellipse: s-maj=6.2km s-min=4.1km az=58.0*

ISC 07 18:04:42.9±1.6,39°.86N±0°.05×29°.44W±0°.04,h28km±11km, n517,σ1s34/511,mb4.6/150,MS3.5/40,16C-22D,Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H07N1	**FLORES T-PHASE**	**1.30**	**263**	Pn	**Pb**	**18 05 09.0**	**+2.3**
H07N1				T	T	18 06 29.2	
	SNR=1240						
H07N1	**FLORES T-PHASE**	**1.30**	**263**	*e*P	Pn	18 04 59.8	-5.4
H07N1				*e*T	T	18 06 10.6	
PCAPE	**Capelo, Faial**	**1.35**	**159**	*e*S	**Sn**	**18 05 21.9**	**-0.8**
PCAPE				A	A	18 05 23.7	
	1μm,0.2s						
PCED	**Cedros**	**1.36**	**155**	*e*P	**Pn**	**18 05 04.8**	**-1.1**
PCED				*e*S	**Sn**	**18 05 21.7**	**-1.3**
PCED				A	A	18 05 24.1	
	850nm,0.3s						
CALA	**Caldeira**	**1.40**	**155**	*e*P	**Pn**	**18 05 06.0**	**-0.6**
CALA				*e*S	**Sn**	**18 05 23.2**	**-1.0**
CALA				A	A	18 05 26.1	
	1μm,0.3s						
PGRA	**Graciosa**	**1.40**	**126**	*e*P	**Pn**	**18 05 04.6**	**-2.0**
PGRA				*e*S	**Sn**	**18 05 22.9**	**-1.2**
PGRA				A	A	18 05 24.5	
	555nm,0.3s						
H07S1	**FLORES T-PHASE**	**1.44**	**251**	Pn	**Pb**	**18 05 10.0**	**+0.9**
H07S1				T	T	18 06 33.2	
H07S1	**FLORES T-PHASE**	**1.44**	**251**	*e*P	Pn	18 04 53.9	-13
H07S1				*e*T	T	18 06 22.3	
ROSA	**Rosais**	**1.47**	**140**	*e*P	**Pn**	**18 05 06.2**	**-1.3**
ROSA				*e*S	**Sn**	**18 05 24.4**	**-1.4**
ROSA				A	A	18 05 28.5	
	208nm,0.2s						
ROSA	**Rosais**	**1.47**	**140**	Pn	**Pn**	**18 05 05.4**	**-2.1**
HOR	**Horta**	**1.47**	**154**	*e*P	**Pn**	**18 05 06.8**	**-0.7**
HOR				*e*S	**Sn**	**18 05 24.9**	**-0.9**
HOR				A	A	18 05 25.5	
	2μm,0.4s						
PICO	**Pico**	**1.57**	**149**	*e*P	**Pn**	**18 05 08.2**	**-0.7**
PICO				*e*S	**Sn**	**18 05 27.6**	**-0.8**
PICO				A	A	18 05 29.8	
	1μm,0.5s						
PCAN	**Candelaria**	**1.58**	**152**	*e*P	**Pn**	**18 05 08.3**	**-0.7**
PCAN				*e*S	**Sn**	**18 05 27.5**	**-1.0**
PCAN				A	A	18 05 33.4	
	2μm,0.3s						
PMAN	**Manadas**	**1.61**	**139**	*e*P	**Pn**	**18 05 08.2**	**-1.3**
PMAN				*e*S	**Sn**	**18 05 28.1**	**-1.2**
PMAN				A	A	18 05 29.3	
	422nm,0.4s						
PPNO	**Prainha do Nor**	**1.66**	**146**	*e*P	**Pn**	**18 05 10.1**	**-0.1**
PPNO				*e*S	**Sn**	**18 05 29.8**	**-0.8**
PPNO				A	A	18 05 50.8	
	406nm,0.5s						
PID	**Ribeirinha**	**1.75**	**144**	*e*P	**Pn**	**18 05 10.3**	**-1.1**
PID				*e*S	**Sn**	**18 05 31.4**	**-1.3**
PID				A	A	18 05 37.0	
	298nm,0.3s						
PAGU	**Agualva, Azore**	**2.06**	**121**	*e*P	**Pn**	**18 05 14.0**	**-1.7**
ADH	**Angra Heroismo**	**2.10**	**124**	*e*P	**Pn**	**18 05 14.9**	**-1.2**
ADH				*e*S	**Sn**	**18 05 40.0**	**-1.2**
ADH				A	A	18 05 45.7	
	185nm,0.3s						
PSCM	**Serra do Cume**	**2.15**	**122**	*e*P	**Pn**	**18 05 15.3**	**-1.5**
PSCM				*e*S	**Sn**	**18 05 40.9**	**-1.5**
PSCM				A	A	18 05 43.3	
	195nm,0.4s						
PSET	**Sete Cidades**	**3.55**	**124**	*e*P	**Pn**	**18 05 34.9**	**-1.2**
PDA	**Ponta Delgada**	**3.63**	**124**	*e*P	**Pn**	**18 05 36.4**	**-0.8**
CMLA	**Cha da Macela**	**3.71**	**123**	*e*P	**Pn**	**18 05 38.0**	**-0.3**
CMLA				*e*S	**Sn**	**18 06 19.4**	**-1.6**
CMLA				A	A	18 06 27.1	
	166nm,0.3s						
CMLA	**Cha da Macela**	**3.71**	**123**		**Pn**	**18 05 36.2**	**-2.1**
CMLA				Sn	**Sn**	**18 06 21.8**	**+0.8**
PGRON	**Lagoa das Cont**	**3.80**	**122**	*e*P	**Pn**	**18 05 38.3**	**-1.3**
BART	**Pico Bartolome**	**3.93**	**121**	*e*P	**Pn**	**18 05 40.5**	**-0.9**
PSMA	**Santa Maria**	**4.43**	**129**	*e*P	**Pn**	**18 05 47.3**	**-0.9**
PSMN	**Pico do Norte,**	**4.47**	**128**	*e*P	**Pn**	**18 05 47.8**	**-0.9**
PSMN				*e*S	**Sn**	**18 06 37.7**	**-2.0**
PSMN				A	A	18 06 40.4	
	16nm,0.3s						
PMAFR	**Mafra**	**15.61**	**87**	*e*P	**Pn**	**18 08 21.5**	**+0.6**
PMST	**Lisbon--Monsan**	**15.73**	**88**	*e*P	**Pn**	**18 08 23.1**	**+0.8**
PCAS	**Casmilo, Conde**	**16.06**	**83**	*e*P	**Pn**	**18 08 26.5**	**-0.2**
	45nm,1.8s						
COI	**Coimbra**	**16.11**	**82**	Pn	**Pn**	**18 08 25.4**	**-1.9**
COI	**Coimbra**	**16.11**	**82**	P	**Pn**	**18 08 25.4**	**-1.9**
COI				pmax	pmax		
	comp=Z,57nm,1.2s						
PGAV	**Gavieira, Arco**	**16.14**	**76**	*e*P	**Pn**	**18 08 27.1**	**-0.7**
PTEO	**Sao Teotonio**	**16.34**	**92**	*e*P	**Pn**	**18 08 30.6**	**+0.4**
PNCL	**Nicolau / Gran**	**16.36**	**89**	*e*P	**Pn**	**18 08 30.2**	**-0.2**
	comp=Z,54nm,2.2s						
PFVI	**Vila Bisbo**	**16.37**	**93**	Pn	**Pn**	**18 08 27.4**	**-3.2**
PFVI				IAmb	IAmb	18 08 28.5	
	comp=Z,58nm,1.1s						
PMTG	**Montargil**	**16.41**	**86**	*e*P	**Pn**	**18 08 32.4**	**+1.4**
	comp=Z,45nm,1.4s						
MORF	**Marmelete**	**16.46**	**92**	*e*P	**Pn**	**18 08 32.7**	**+1.0**
PVIS	**Viseu**	**16.46**	**80**	*e*P	**Pn**	**18 08 32.2**	**+0.4**
MESJ	**Messejana**	**16.66**	**90**	*e*P	**Pn**	**18 08 34.8**	**+0.6**
EVO	**Evora**	**16.67**	**88**	*e*P	**Pn**	**18 08 35.0**	**+0.7**
	comp=Z,42nm,2.3s						
MTE	**Manteigas**	**16.76**	**81**		**Pn**	**18 08 32.8**	**-2.7**
PCVE	**Castro Verde**	**16.84**	**91**	*e*P	**Pn**	**18 08 37.7**	**+1.1**
PBEJ	**Beja**	**16.89**	**89**	*e*P	**Pn**	**18 08 38.1**	**+1.0**
PESTR	**Estremoz**	**16.93**	**86**	Pn	**Pn**	**18 08 34.6**	**-3.1**
PESTR	**Estremoz**	**16.93**	**86**	*e*P	**P**	**18 08 39.2**	**-0.2**
PMRV	**Marv??o**	**16.99**	**84**	*e*P	**Pn**	**18 08 39.1**	**+0.7**
PBDV	**Barranco-do-Ve**	**17.03**	**92**	*e*P	**P**	**18 08 40.9**	**+0.4**
PVAQ	**Vaqueiros**	**17.15**	**91**		**P**	**18 08 41.9**	**0.0**
PVAQ	**Vaqueiros**	**17.15**	**91**	*e*P	**P**	**18 08 41.7**	**-0.1**
PBAR	**Barrancos**	**17.49**	**88**	*e*P	**P**	**18 08 46.1**	**+0.5**
PAB	**San Pablo**	**19.30**	**83**	P	**P**	**18 09 04.4**	**-1.2**
PAB	**San Pablo**	**19.30**	**83**	P	**P**	**18 09 04.4**	**-1.2**
PAB				pmax	pmax		
	comp=Z,32nm,1.3s						
ESDC	**Sonseca Array**	**19.57**	**82**	P	**Pn**	**18 09 09.8**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=287,slow=10,SNR=23						
ESDC				LR	LR	18 15 50.3	
	comp=Z,127nm,18.4s,baz=298,slow=34						
	comp=Z,8.3nm,1.1s						
ESDC	**Sonseca Array**	**19.57**	**82**	P	**P**	**18 09 05.4**	**-3.1**
ESBB	**Sonseca Array**	**19.57**	**82**	P	**P**	**18 09 04.7**	**-3.9**
SGMF	**Saint Gilles**	**20.98**	**58**	*e*P	**P**	**18 09 23.5**	**-0.2**
SGMF				pmax	pmax		
	comp=Z,16nm,1.0s						
MDT	**Midelt**	**21.17**	**102**	P	**P**	**18 09 27.8**	**+1.9**
	comp=Z,12nm,1.0s,baz=299,slow=11,SNR=8.9						
MDT				LR	LR	18 16 17.9	
	comp=Z,56nm,18.6s,baz=337,slow=33						
	comp=Z,12nm,1.0s						
GRR	**Gorron**	**22.12**	**58**	*e*P	**P**	**18 09 36.5**	**+0.6**
GRR				pmax	pmax		
	comp=Z,40nm,1.5s						
MFF	**Saint Martin d**	**22.30**	**63**	*e*P	**P**	**18 09 36.5**	**-1.4**
MFF				pmax	pmax		
	comp=Z,43nm,1.4s						
EPF	**Esparros**	**22.50**	**72**	*e*P	**P**	**18 09 41.5**	**+1.4**
EPF				pmax	pmax		
	comp=Z,26nm,1.4s						
EKA	**Eskdalemuir Ar**	**23.33**	**40**	P	**P**	**18 09 46.8**	**-1.7**
	comp=Z,7.8nm,1.0s,baz=232,slow=6.9,SNR=5.1						
EKA				LR	LR	18 16 56.2	
	comp=Z,128nm,18.0s,baz=184,slow=32						
	comp=Z,7.8nm,1.0s						
RJF	**Les Rejaudoux**	**23.35**	**66**	*e*P	**P**	**18 09 47.5**	**-1.3**
RJF				pmax	pmax		
	comp=Z,17nm,1.4s						
NRS	**Narsarsuaq**	**23.49**	**340**	P	**P**	**18 09 49.7**	**-0.3**
NRS	**Narsarsuaq**	**23.49**	**340**	P	**P**	**18 09 49.7**	**-0.3**
NRS				pmax	pmax		
	comp=Z,16nm,0.9s						
CAF	**Calviac**	**23.73**	**67**	*e*P	**P**	**18 09 51.5**	**-1.0**
CAF				pmax	pmax		
	comp=Z,25nm,1.2s						
MTLF	**Montolieu**	**23.86**	**71**	*e*P	**P**	**18 09 54.1**	**+0.4**
MTLF				pmax	pmax		
	comp=Z,17nm,1.2s						
TCF	**Toulx Ste Croi**	**23.89**	**64**	*e*P	**P**	**18 09 54.0**	**0.0**
TCF				pmax	pmax		
	comp=Z,24nm,1.3s						
CLF	**Chambon-Foret**	**24.11**	**60**	P	**P**	**18 09 53.5**	**-2.5**
CLF				IAmb	IAmb	18 10 20.6	
	comp=Z,40nm,1.4s						
BGF	**Bois d'Agland**	**24.35**	**63**	*e*P	**P**	**18 09 58.1**	**-0.1**
BGF				pmax	pmax		
	comp=Z,28nm,1.0s						
AVF	**Avril sur Loir**	**24.72**	**63**	*e*P	**P**	**18 10 01.2**	**-0.3**
AVF				pmax	pmax		
	comp=Z,15nm,1.2s						
SSF	**Saint Saulge**	**24.84**	**62**	*e*P	**P**	**18 10 02.5**	**-0.2**
SSF				pmax	pmax		
	comp=Z,28nm,1.4s						
SMF	**Signal de Mont**	**25.04**	**63**	*e*P	**P**	**18 10 04.5**	**0.0**
SMF				pmax	pmax		
	comp=Z,35nm,1.3s						
LOR	**Lormes**	**25.10**	**62**	*e*P	**P**	**18 10 04.8**	**-0.2**
LOR				pmax	pmax		
	comp=Z,50nm,1.9s						
SSB	**Saint Sauveur**	**25.48**	**67**	P	**P**	**18 10 07.0**	**-1.5**
SSB	**Saint Sauveur**	**25.48**	**67**	P	**P**	**18 10 07.1**	**-1.5**
SSB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HAL	**Halifax**	**25.61**	**292**	P	**P**	**18 10 06.5**	**-3.1**
HAL				IAmb	IAmb	18 10 21.0	
	comp=Z,26nm,1.1s						
HAL	**Halifax**	**25.61**	**292**	P	**P**	**18 10 08.5**	**-1.1**
HAL				pmax	pmax		
	comp=Z,26nm,1.1s						
BAIF	**Baives**	**25.70**	**55**	*e*P	**P**	**18 10 10.4**	**0.0**
BAIF				pmax	pmax		
	comp=Z,20nm,1.1s						
SNF	**Seneffe**	**25.83**	**54**	*d*P	**P**	**18 10 11.8**	**+0.2**
DOU	**Dourbes**	**25.95**	**55**	*d*P	**P**	**18 10 14.3**	**+1.6**
	comp=Z,7.3nm,1.1s						
RCHB	**Rochefort**	**26.37**	**55**	*d*PP	P	18 10 55.2	+39
ORIF	**Oris-en-Rattie**	**26.44**	**67**	P	**P**	**18 10 21.6**	**+4.3**
ORIF				pmax	pmax		
	comp=Z,18nm,2.5s						
BCLA	**Clavier**	**26.46**	**55**	*d*P	**P**	**18 10 16.8**	**-0.5**
	comp=Z,7.6nm,1.1s						
CABF	**La Chapelle**	**26.59**	**64**	*e*P	**P**	**18 10 20.0**	**+1.4**
CABF				pmax	pmax		
	comp=Z,22nm,1.3s						
BSTI	**Sart Tilman**	**26.65**	**55**	*d*P	**P**	**18 10 22.0**	**+3.0**
HAU	**Haudompre**	**26.84**	**60**	*e*P	**P**	**18 10 20.4**	**-0.4**
HAU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MEM	**Membach**	**26.93**	**55**	*d*P	**P**	**18 10 24.7**	**+3.1**
	comp=Z,7.9nm,1.1s						
BNI	**Bardonecchia**	**27.00**	**67**	P	**P**	**18 10 18.8**	**-3.6**
BNI	**Bardonecchia**	**27.00**	**67**	P	**P**	**18 10 18.8**	**-3.6**
BNI				pmax	pmax		
	comp=Z,14nm,1.2s						
LPL	**La Plagne**	**27.03**	**66**	*e*P	**P**	**18 10 23.5**	**+0.8**
LPL				pmax	pmax		
	comp=Z,11nm,1.2s						
LPG	**La Plagne**	**27.04**	**66**	*e*P	**P**	**18 10 23.9**	**+1.0**
LPG				pmax	pmax		
	comp=Z,13nm,1.3s						
HINF	**Hinteralfeld**	**27.16**	**61**	*e*P	**P**	**18 10 26.5**	**+2.8**
HINF				pmax	pmax		
	comp=Z,14nm,1.4s						
ECH	**Echery**	**27.39**	**60**	P	**P**	**18 10 23.1**	**-2.7**
ECH	**Echery**	**27.39**	**60**	P	**P**	**18 10 28.9**	**+3.1**
ECH				pmax	pmax		
	comp=Z,12nm,1.1s						
CDF	**Champ du Feu**	**27.49**	**60**	*e*P	**P**	**18 10 26.5**	**-0.2**
CDF				pmax	pmax		
	comp=Z,15nm,1.2s						
BFO	**Black Forest**	**28.18**	**60**	P	**P**	**18 10 29.1**	**-3.6**
BFO	**Black Forest**	**28.18**	**60**	P	**P**	**18 10 29.2**	**-3.6**
BFO				pmax	pmax		
	comp=Z,13nm,1.2s						
F64A	**Sherman**	**28.93**	**295**	P	**P**	**18 10 36.0**	**-3.5**
SCHQ	**Schefferville**	**29.01**	**314**	LR	LR	18 20 57.8	
	comp=Z,65nm,19.3s,baz=76,slow=34						
DAVOX	**Davos/Dischmat**	**29.20**	**63**	P	**P**	**18 10 43.8**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=156,slow=19,SNR=3.9						
DAVOX				LR	LR	18 20 46.6	
	comp=Z,46nm,18.1s,baz=264,slow=33						
	comp=Z,1.1nm,0.6s						
F63A	**Nahmakanta, Br**	**29.46**	**295**	P	**P**	**18 10 41.8**	**-2.4**
SFJD	**Kangerlussuaq**	**29.65**	**343**	LR	LR	18 19 33.3	
	comp=Z,66nm,19.5s,baz=133,slow=30						
MOTA	**Moosalm**	**30.03**	**62**	*e*P	**P**	**18 10 49.3**	**-0.1**
	comp=Z,4.3nm,0.7s						
SQTA	**Sankt Quirin**	**30.10**	**62**	*e*P	**P**	**18 10 50.8**	**+0.9**
	comp=Z,7.6nm,1.3s						
WTTA	**Wattenberg**	**30.39**	**62**	*e*P	**P**	**18 10 53.4**	**+0.8**
	comp=Z,6.3nm,1.1s						
CTI	**Castel Tesino**	**30.45**	**65**	P	**P**	**18 10 51.5**	**-1.5**
CTI				IAmb	IAmb	18 10 54.3	
	comp=Z,16nm,1.4s						
CTI	**Castel Tesino**	**30.45**	**65**	P	**P**	**18 10 51.5**	**-1.5**
CTI				pmax	pmax		
	comp=Z,16nm,1.4s						
ABTA	**Abfaltersbach**	**31.01**	**63**	*e*P	**P**	**18 10 59.4**	**+1.5**
	comp=Z,8.7nm,1.2s						
CLL	**Collm**	**31.41**	**54**	*e*P	**P**	**18 11 01.0**	**-0.3**
CLL	**Collm**	**31.41**	**54**	*e*P	**P**	**18 11 01.0**	**-0.3**
KBA	**Koelnbreinsper**	**31.56**	**62**	P	**P**	**18 11 03.7**	**+0.8**
KBA				pmax	pmax		
	comp=Z,21nm,1.4s						
KBA	**Koelnbreinsper**	**31.56**	**62**	*e*P	**P**	**18 11 03.5**	**+0.6**
	comp=Z,30nm,1.4s						
LBNH	**Lisbon**	**31.59**	**292**	P	**P**	**18 11 01.9**	**-1.0**
	baz=83						
KHC	**Kasperske Hory**	**31.68**	**59**	*e*P	**P**	**18 11 03.5**	**-0.3**
KHC	**Kasperske Hory**	**31.68**	**59**	*e*P	**P**	**18 11 03.5**	**-0.3**
BIOA	**Bad Ischl, Aus**	**31.74**	**61**	*e*P	**P**	**18 11 04.6**	**+0.4**
	comp=Z,7.0nm,1.1s						
GERES	**GERESS Array B**	**31.76**	**59**	P	**P**	**18 11 03.7**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=268,slow=8.9,SNR=4.7						
	comp=Z,0.4nm,0.7s						
MOA	**Molln**	**32.16**	**61**	*e*P	**P**	**18 11 08.3**	**+0.4**
	comp=Z,7.0nm,1.1s						
NOA	**NORSAR Array B**	**32.66**	**36**	P	**P**	**18 11 12.2**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=249,slow=9.6,SNR=3.5						
NOA				LR	LR	18 21 59.4	
	comp=Z,78nm,18.2s,baz=260,slow=32						
	comp=Z,0.7nm,0.8s						
FRB	**Frobisher Bay**	**33.13**	**329**	LR	LR	18 20 44.2	
	comp=Z,88nm,20.7s,baz=188,slow=29						
DPC	**Dobruska-Polom**	**33.47**	**56**	*e*P	**P**	**18 11 20.0**	**+0.6**
DPC	**Dobruska-Polom**	**33.47**	**56**	*e*P	**P**	**18 11 20.0**	**+0.6**
HFS	**Hagfors**	**33.51**	**38**	LR	LR	18 22 21.7	
	comp=Z,93nm,19.1s,baz=245,slow=32						
KRUC	**Moravsky**	**33.53**	**59**	*e*P	**P**	**18 11 20.1**	**+0.2**
VRAC	**Vranov**	**33.66**	**58**	*e*P	**P**	**18 11 21.0**	**0.0**
KRLC	**Kraliky**	**33.77**	**57**	*e*P	**P**	**18 11 22.2**	**+0.2**
KRLC	**Kraliky**	**33.77**	**57**	*e*P	**P**	**18 11 22.2**	**+0.2**
CUC	**Castrocucco**	**34.42**	**75**	P	**P**	**18 11 28.6**	**+0.8**
CUC				IAmb	IAmb	18 11 29.4	
	comp=Z,21nm,1.2s						
BINY	**Binghamton**	**34.85**	**289**	P	**P**	**18 11 31.3**	**-0.1**
	baz=78						
KOVH	**Kovagotottos**	**34.91**	**64**	P	**P**	**18 11 31.7**	**-0.3**
MORH	**Mrgy, Hungar**	**35.27**	**63**	⇓P	**P**	**18 11 35.6**	**+0.6**
MORH	**Mrgy, Hungar**	**35.27**	**63**	P	**P**	**18 11 34.8**	**-0.2**
OJC	**Ojcow**	**35.70**	**56**	P	**P**	**18 11 36.2**	**-2.5**
OJC				IAmb	IAmb	18 11 39.8	
	comp=Z,11nm,0.9s						
OJC	**Ojcow**	**35.70**	**56**	P	**P**	**18 11 36.2**	**-2.5**
OJC				pmax	pmax		
	comp=Z,11nm,0.9s						
NIE	**Niedzica**	**36.07**	**58**	P	**P**	**18 11 43.5**	**+1.6**
NIE				pmax	pmax		
	comp=Z,4.0nm,3.0s						
SSPA	**Standing Stone**	**36.61**	**287**	P	**P**	**18 11 46.0**	**-0.5**
	baz=75						
SADO	**Sadowa**	**36.61**	**294**	LR	LR	18 25 42.9	
	comp=Z,104nm,19.9s,baz=307,slow=35						
CRVS	**Cervenica-Dubn**	**36.87**	**59**	*e*P	**P**	**18 11 50.2**	**+1.5**
CRVS	**Cervenica-Dubn**	**36.87**	**59**	*e*P	**P**	**18 11 50.2**	**+1.5**
KOLS	**Kolonicke sedl**	**37.40**	**58**	*e*P	**P**	**18 11 54.7**	**+1.5**
KOLS	**Kolonicke sedl**	**37.40**	**58**	*e*P	**P**	**18 11 54.7**	**+1.5**
BZS	**Buzias**	**37.41**	**64**	⇓P	**P**	**18 11 54.2**	**+0.9**
UZH	**Uzhgorod**	**37.45**	**59**	*e*P	**P**	**18 11 56.4**	**+2.9**
MDVR	**Moldovita**	**37.63**	**65**	⇓P	**P**	**18 11 55.8**	**+0.6**
BOVS	**Bovan**	**37.86**	**67**	⇑P	**P**	**18 11 57.2**	**+0.1**
DRGR		**37.97**	**62**	P	**P**	**18 11 59.4**	**+1.3**
TOA0	**Torodi Ar. Sit**	**38.18**	**125**	P	**P**	**18 11 58.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**38.18**	**125**	P	**P**	**18 12 01.3**	**+1.2**
	comp=Z,4.7nm,1.0s,baz=321,slow=7.9,SNR=18						
	comp=Z,4.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**38.18**	**125**	P	**P**	**18 12 00.6**	**+0.5**
GZR	**Gura Zlata**	**38.26**	**64**	⇑P	**P**	**18 12 01.1**	**+0.6**
SJG	**San Juan**	**38.36**	**246**	LR	LR	18 23 37.6	
	comp=Z,24nm,21.7s,baz=92,slow=30						
LVV	**L'vov**	**38.45**	**57**	*e*P	**P**	**18 12 03.0**	**+1.0**
O53A	**New Philadelph**	**39.16**	**288**	P	**P**	**18 12 06.9**	**-1.1**
	baz=73						
VTS	**Vitosha**	**39.18**	**68**	⇑P	**P**	**18 12 08.6**	**+0.1**
VTS	**Vitosha**	**39.18**	**68**	P	**P**	**18 12 08.5**	**+0.1**
BUR08	**Bucovina Ar. S**	**39.51**	**60**	P	**P**	**18 12 11.3**	**+0.2**
BLA	**

MNK *i* PPP PPP 18 14 15.6
MNK *i* S **S** **18 18 25.7 +0.4**
MNK *i* SS SS 18 21 11.3 -13
MNK *i* LQ LQ 18 25 58.9
MNK *i* LR LR 18 27 10.8
MNK *i* LRM MLR 18 29 16.0
comp=Z,119nm,16.6s
MNK *i* LRM MLR 18 29 28.0
MNK *i* LRM MLR 18 29 34.0
comp=E,31nm,16.6s
COVR Voineasa-Covas 40.53 63 ⇑P **P** **18 12 19.9 +0.6**
P51A Williamsport 40.74 287 P **P** **18 12 20.7 -0.5**
P51A IAmb IAmb 18 12 22.8
comp=Z,21nm,1.1s
U54A Nelsons Funny 40.82 283 P **P** **18 12 21.9 -0.1**
U54A IAmb IAmb 18 12 24.1
comp=Z,14nm,1.0s
VRI Vrincioaia 40.88 62 ⇓P **P** **18 12 22.7 +0.4**
VRI Vrincioaia 40.88 62 P **P** **18 12 23.2 +0.9**
VRI pmax pmax
comp=Z,11nm,1.4s
KMSC Kings Mountain 40.96 280 P **P** **18 12 22.3 -0.7**
baz=67
Q51A Peebles 41.10 287 P **P** **18 12 23.9 -0.3**
Q51A IAmb IAmb 18 12 25.9
comp=Z,24nm,1.4s
ARCES ARCESS Array B 41.14 26 P **P** **18 12 24.3 +0.2**
comp=Z,3.7nm,1.0s,baz=263,slow=3.1,SNR=4.6
ARCES LR LR 18 25 56.7
comp=Z,50nm,21.3s,baz=223,slow=31
comp=Z,3.7nm,1.0s
AKASG Malin Array Be 41.65 55 P **P** **18 12 28.4 -0.1**
comp=Z,2.3nm,0.6s,baz=279,slow=8.0,SNR=15
AKASG LR LR 18 28 27.6
comp=Z,80nm,18.6s,baz=334,slow=34
comp=Z,2.3nm,0.6s
AKASG Malin Array Be 41.65 55*ce*P **P** **18 12 28.3 -0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 41.65 55 P **P** **18 12 27.6 -0.9**
AKBB IAmb IAmb 18 12 29.4
comp=Z,23nm,1.3s
AKBB Malin Array Si 41.65 55*ce*P **P** **18 12 28.2 -0.3**
ALN Alexandroupoli 41.67 70 P **P** **18 12 28.5 -0.3**
ALN IAmb IAmb 18 12 31.5
comp=Z,21nm,1.2s
ALN Alexandroupoli 41.67 70 P **P** **18 12 28.5 -0.3**
ALN pmax pmax
comp=Z,21nm,1.2s
P49A Miami Univ. Ec 41.94 288 P **P** **18 12 30.0 -1.0**
baz=71
CFR Carcaliu 42.00 63 ⇓P **P** **18 12 31.6 +0.1**
CFR Carcaliu 42.00 63 P **P** **18 12 31.5 +0.1**
VALR Valaam 42.01 39*d i*P **P** **18 12 31.4 +0.1**
VALR pmax pmax
comp=Z,28nm,1.1s
O48B Farmland 42.03 289 P **P** **18 12 30.4 -1.4**
baz=72
TKL Tuckaleechee C 42.61 282 LR LR 18 31 02.8
comp=Z,48nm,18.0s,baz=93,slow=37
IDI Anoyia 42.75 78 P **P** **18 12 38.9 +1.1**
comp=Z,3.5nm,0.6s,baz=46,slow=9.6,SNR=1.3
comp=Z,3.5nm,0.6s
V51A Loudon 42.99 283 P **P** **18 12 39.3 -0.3**
V51A IAmb IAmb 18 12 41.5
comp=Z,17nm,1.2s
GOGA Godfrey 43.27 279 P **P** **18 12 40.3 -1.6**
baz=65
SFIN Lafayette 43.40 290 P **P** **18 12 41.6 -1.3**
baz=71
Y52A Lilburn 43.54 280 P **P** **18 12 43.1 -1.0**
LVZ Lovozero 44.10 29⇑*e*P **P** **18 12 49.3 +1.1**
EYMN Ely 44.35 302 P **P** **18 12 50.5 +0.1**
EYMN IAmb IAmb 18 12 53.0
comp=Z,18nm,1.4s
EYMN Ely 44.35 302 P **P** **18 12 49.5 -0.9**
baz=76
SWET Sewanee 44.40 283 P **P** **18 12 51.0 -0.1**
T47A Sharon Grove 44.59 286 P **P** **18 12 51.4 -1.1**
T47A IAmb IAmb 18 12 53.6
comp=Z,11nm,1.1s
OLIL Olney 44.69 288 P **P** **18 12 50.8 -2.4**
HDIL Hopedale 44.93 291 P **P** **18 12 54.0 -1.1**
baz=70
Q44A Meyer Farm, Va 45.30 289 P **P** **18 12 56.8 -1.3**
OBN Obninsk 45.39 48 P **P** **18 12 59.3 +0.7**
comp=Z,3.7nm,0.5s,baz=144,slow=23,SNR=5.6
comp=Z,3.7nm,0.5s
OBN Obninsk 45.39 48*de*P **P** **18 12 59.4 +0.9**
OBN *i* 18 13 03.8
OBN pmax pmax
comp=Z,55nm,1.7s
WVT Waverly 45.46 285 P **P** **18 12 59.2 -0.2**
baz=67
L40A Anamosa 45.80 294 P **P** **18 13 01.4 -0.6**
L40A IAmb IAmb 18 13 03.0
comp=Z,16nm,1.1s
SIUC Southern Illin 45.88 287 P **P** **18 13 01.5 -1.2**
S44A Carbondale 45.91 287 P **P** **18 13 02.5 -0.5**
S44A IAmb IAmb 18 13 05.2
comp=Z,20nm,1.2s
SPMN Marine on St. 45.93 298 P **P** **18 13 02.2 -0.8**
SPMN IAmb IAmb 18 13 04.3
comp=Z,7.2nm,0.8s
SPMN Marine on St. 45.93 298 P **P** **18 13 01.5 -1.4**
baz=73
PLAL Pickwick Lake 46.10 283 P **P** **18 13 04.5 0.0**
PLAL IAmb IAmb 18 13 06.3
comp=Z,8.4nm,0.8s
LRAL Lakeview Retre 46.11 280 P **P** **18 13 03.9 -0.6**
baz=64
BAUV El Baul 46.14 239 P **P** **18 13 05.8 +0.9**
KLMR Klimovskoe 46.22 39 *e*P **P** **18 13 04.1 -0.9**
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR Klimovskoe 46.22 39 *e*P **P** **18 13 04.2 -0.8**
KLMR AMP 18 13 09.3
comp=Z,18nm,1.3s
FVM French Village 46.66 288 P **P** **18 13 08.4 -0.5**
FVM IAmb IAmb 18 13 09.6
comp=Z,11nm,1.1s
FVM French Village 46.66 288 P **P** **18 13 08.4 -0.5**
FVM pmax pmax
comp=Z,11nm,1.1s
Z47A Carrollton 46.85 281 P **P** **18 13 06.7 -3.7**
W45A Hickory Valley 46.86 284 P **P** **18 13 09.1 -1.4**
BRAL Brewton 46.98 278 P **P** **18 13 10.9 -0.5**
baz=63
AGMN Agassiz Nation 47.09 303 P **P** **18 13 11.6 -0.4**
baz=74
PBMO Poplar Bluff 47.13 287 P **P** **18 13 11.2 -1.3**
PBMO IAmb IAmb 18 13 14.2
comp=Z,15nm,1.1s
CCM Cathedral Cave 47.23 289 P **P** **18 13 12.1 -1.2**
CCM IAmb IAmb 18 13 14.6
comp=Z,7.6nm,0.9s
CCM Cathedral Cave 47.23 289 P **P** **18 13 12.1 -1.2**
CCM pmax pmax
comp=Z,8.0nm,0.9s
CCM Cathedral Cave 47.23 289 P **P** **18 13 12.3 -1.0**
baz=67
LPSR Galich'ya Gora 47.24 51 *e*P **P** **18 13 13.4 +0.3**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
P40A Paris 47.27 291 P **P** **18 13 13.6 +0.1**
OXF Oxford 47.30 283 P **P** **18 13 13.4 -0.4**
OXF Oxford 47.30 283 P **P** **18 13 13.4 -0.4**
OXF pmax pmax
comp=Z,71nm,1.0s
OXF Oxford 47.30 283 P **P** **18 13 13.2 -0.6**
baz=65,SNR=13
BR131 Keskin Array S 47.54 69 P **P** **18 13 15.2 -0.6**
BR131 IAmb IAmb 18 13 18.0
comp=Z,7.9nm,0.9s
BR131 Keskin Array S 47.54 69 P **P** **18 13 15.2 -0.6**
BR131 pmax pmax
comp=Z,8.0nm,1.0s
BRTR Keskin Array B 47.54 69 P **P** **18 13 17.1 +1.3**
comp=Z,3.4nm,0.8s,baz=288,slow=5.7,SNR=17
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 47.54 69 P **P** **18 13 15.5 -0.3**
BRTR Keskin Array B 47.54 69 P **P** **18 13 15.5 -0.3**
VORR Voronezh 47.62 52 *e*P **P** **18 13 16.0 -0.1**
VORR pmax pmax
comp=Z,20nm,0.3s
N38A Joes South For 47.66 293 P **P** **18 13 16.1 -0.5**
Y45A Yeager Farm, C 47.67 283 P **P** **18 13 15.7 -1.1**
VSR Storozhevoye 47.71 52 *e*P **P** **18 13 15.9 -0.9**
VSR pmax pmax
comp=Z,6.0nm,0.6s
R40A Maddies Statio 47.89 289 P **P** **18 13 16.9 -1.4**
LCAR Lake Charles 47.95 286 P **P** **18 13 18.0 -0.9**
LCAR IAmb IAmb 18 13 20.3
comp=Z,8.8nm,1.0s
S39A Bolivar 48.89 289 P **P** **18 13 25.3 -0.8**
ECSD ERS Data Cent 48.99 298 P **P** **18 13 25.2 -1.6**
baz=70,SNR=10
VBMS Vicksburg 49.13 281 P **P** **18 13 27.0 -1.1**
baz=63
VRH Novokhopyorsk 49.27 52 *e*P **P** **18 13 28.4 -0.4**
VRH pmax pmax
comp=Z,20nm,1.8s
MDND Maddock 49.62 304 P **P** **18 13 30.0 -1.6**
baz=72
SUSD Miller 50.33 299 P **P** **18 13 35.6 -1.4**
baz=69
Z41A Richland Creek 50.38 284 P **P** **18 13 36.5 -1.0**
baz=63
MIAR Mount Ida 50.39 285 P **P** **18 13 35.9 -1.7**
MIAR IAmb IAmb 18 13 38.2
comp=Z,15nm,0.9s
MIAR Mount Ida 50.39 285 P **P** **18 13 35.9 -1.7**
MIAR pmax pmax
comp=Z,15nm,0.9s
MIAR Mount Ida 50.39 285 P **P** **18 13 36.6 -1.0**
baz=64,SNR=12
KSU1 Kansas State U 50.70 292 P **P** **18 13 38.7 -1.1**
baz=66
BGNE Belgrade 50.88 295 P **P** **18 13 40.1 -1.2**
baz=68
TUL1 Leonard 51.43 288 P **P** **18 13 44.0 -1.4**
baz=64
T35A Sooner Cattle 51.53 289 P **P** **18 13 45.1 -1.0**
KIRV Kirov 51.56 41 P **P** **18 13 45.5 -0.5**
comp=Z,13nm,0.4s,baz=269,slow=5.6,SNR=5.1
KIRV LR LR 18 34 39.1
comp=Z,70nm,18.2s,baz=273,slow=35
comp=Z,13nm,0.4s
KIRV Kirov 51.56 41*de*P **P** **18 13 46.2 +0.2**
BELG Belogornoye 52.41 49 P **P** **18 13 53.1 +0.8**
comp=Z,11nm,0.8s,baz=144,slow=7.6,SNR=8.0
BELG LR LR 18 35 46.5
comp=Z,38nm,18.4s,baz=155,slow=36
comp=Z,11nm,0.8s
NATX Nacogdoches 52.47 283 P **P** **18 13 52.0 -1.1**
baz=62
KBZ Khabaz 52.48 61 P **P** **18 13 54.4 +1.3**
comp=Z,4.1nm,0.9s,baz=289,slow=5.7,SNR=7.8
comp=Z,4.1nm,0.9s
KBZ Khabaz 52.48 61*de*P **P** **18 13 55.5 +2.4**
KBZ pmax pmax
comp=Z,10.0nm,1.3s
EIL Elat 52.85 80 LR LR 18 40 04.7
comp=Z,19nm,18.1s,baz=269,slow=40
CBKS Cedar Bluff 53.04 293 P **P** **18 13 56.1 -1.3**
baz=65
NCK Nalchik 53.04 61⇑*e*P **P** **18 13 59.0 +1.7**
NCK pmax pmax
comp=Z,7.0nm,1.1s
ASF Jabal al Asfar 53.11 76 P **P** **18 14 00.2 +2.2**
comp=Z,6.1nm,0.9s,baz=267,slow=3.0,SNR=6.8
comp=Z,6.1nm,0.9s
YKA Yellowknife Ar 53.45 325 P **P** **18 14 00.2 +0.2**
comp=Z,1.3nm,1.0s,baz=76,slow=7.7,SNR=1.6
YKA LR LR 18 34 10.8
comp=Z,52nm,18.0s,baz=7.0,slow=33
comp=Z,1.3nm,1.0s
ZEI Tsey 53.53 61 *e*P **P** **18 14 02.8 +1.7**
ZEI pmax pmax
comp=Z,16nm,1.0s
U32A Winter Ranch, 53.56 290 **P** **18 14 00.1 -1.1**
OGNE Ogallala 53.76 296 P **P** **18 14 01.2 -1.5**
baz=66
WMOK Wichita Mounta 54.14 288 **P** **18 14 03.8 -1.7**
WMOK IAmb IAmb 18 14 06.3
comp=Z,9.1nm,1.0s
WMOK Wichita Mounta 54.14 288 P **P** **18 14 03.8 -1.7**
WMOK pmax pmax
comp=Z,9.0nm,1.0s
WMOK Wichita Mounta 54.14 288 P **P** **18 14 03.7 -1.8**
baz=62,SNR=7.3
LAO LASA Array 54.25 304 P **P** **18 14 04.8 -1.4**
baz=67
WHTX Lake Whitney, 54.45 284 P **P** **18 14 07.1 -0.6**
WHTX Lake Whitney, 54.45 284 P **P** **18 14 06.7 -1.0**
baz=61,SNR=12
KSCO Kaye Shedlock' 54.99 294 P **P** **18 14 10.4 -1.3**
baz=64
435B Jarrell 55.13 283 P **P** **18 14 11.9 -0.8**
baz=60
ABTX Abilene, Hawle 55.77 286 P **P** **18 14 16.0 -1.3**
ABTX Abilene, Hawle 55.77 286 P **P** **18 14 16.3 -1.0**
baz=61,SNR=7.1
EGMT Eagleton 55.94 307 P **P** **18 14 17.0 -1.3**
baz=66
PHWY Pilot Hill 55.95 298 P **P** **18 14 18.0 -0.8**
PHWY IAmb IAmb 18 14 19.5
comp=Z,6.7nm,0.8s
K22A Casper 56.09 300 P **P** **18 14 18.2 -1.4**
baz=65,SNR=6.1
AMTX Amarillo 56.19 290 P **P** **18 14 18.7 -1.6**
AMTX Amarillo 56.19 290 P **P** **18 14 19.7 -0.6**
baz=62
ACON Accoyapa 56.24 257 P **P** **18 14 20.8 0.0**
N23A Red Feather La 56.46 298 P **P** **18 14 21.6 -0.8**
baz=64,SNR=13
ISCO Idaho Springs 56.72 297 P **P** **18 14 23.3 -1.0**
ISCO Idaho Springs 56.72 297 P **P** **18 14 23.6 -0.7**
baz=63
Q24A Divide 56.77 295 P **P** **18 14 23.9 -0.8**
baz=63
GCMT Greycliff 56.80 305 P **P** **18 14 23.1 -1.4**
RLMT Red Lodge 56.83 304 P **P** **18 14 23.7 -1.2**
baz=65,SNR=5.8
ARU Arti 56.93 41 P **P** **18 14 25.4 +0.3**
comp=Z,4.2nm,0.7s,baz=296,slow=5.1,SNR=12
ARU LR LR 18 37 55.6
comp=Z,44nm,18.4s,baz=334,slow=35
comp=Z,4.2nm,0.7s
ARU Arti 56.93 41 P **P** **18 14 24.0 -1.1**
ARU IAmb IAmb 18 14 26.6
comp=Z,8.7nm,0.9s
ARU Arti 56.93 41*ce*P **P** **18 14 25.3 +0.2**
ARU pmax pmax
comp=Z,20nm,1.7s
JCT Junction City 56.94 284 P **P** **18 14 23.0 -2.7**
JCT Junction City 56.94 284 P **P** **18 14 23.0 -2.7**
JCT pmax pmax
comp=Z,14nm,0.9s
JCT Junction City 56.94 284 P **P** **18 14 24.9 -0.7**
baz=60,SNR=6.4
T25A Trinidad 57.09 293 P **P** **18 14 26.9 +0.1**
T25A IAmb IAmb 18 14 29.2
comp=Z,12nm,0.9s
T25A Trinidad 57.09 293 P **P** **18 14 25.9 -0.9**
baz=62,SNR=5.1
MSTX Muleshoe 57.41 289 P **P** **18 14 28.3 -0.8**
MSTX Muleshoe 57.41 289 P **P** **18 14 28.2 -0.8**
baz=61,SNR=9.9
SDCO Great Sand Dun 57.58 294 P **P** **18 14 30.0 -0.4**
SDCO Great Sand Dun 57.58 294 P **P** **18 14 28.6 -1.8**
baz=62,SNR=5.3
833A Chaparral WMA, 57.73 282 P **P** **18 14 30.2 -1.0**
baz=59
BDFB Brasilia 57.86 201 P **P** **18 14 34.9 +2.7**
comp=Z,3.4nm,0.9s,baz=43,slow=21,SNR=2.9
comp=Z,3.4nm,0.9s
MTO3 Montecristo 57.88 262 P **P** **18 14 31.6 -1.1**
MTO3 IAmb IAmb 18 14 38.4
comp=Z,17nm,1.2s
SMCO Snowmass 57.94 296 P **P** **18 14 32.8 -0.3**
SMCO IAmb IAmb 18 14 34.0
comp=Z,6.6nm,0.9s
WALA Waterton Lakes 58.02 309 P **P** **18 14 32.2 -0.9**
WALA IAmb IAmb 18 14 37.7
comp=Z,10nm,1.0s
BW06 Boulder Array 58.05 301 P **P** **18 14 32.2 -1.3**
BW06 IAmb IAmb 18 14 37.6
comp=Z,11nm,1.1s
BW06 Boulder Array 58.05 301 P **P** **18 14 31.7 -1.8**
baz=63,SNR=6.0
PD31 Pinedale Array 58.05 301 P **P** **18 14 31.8 -1.8**
PD31 IAmb IAmb 18 14 33.5
comp=Z,7.2nm,1.0s
PDAR Pinedale Array 58.05 301 P **P** **18 14 32.4 -1.2**
comp=Z,4.3nm,0.9s,baz=69,slow=8.1,SNR=23
PDAR LR LR 18 39 25.2
comp=Z,79nm,18.0s,baz=62,slow=36
comp=Z,4.3nm,0.9s
PDAR Pinedale Array 58.05 301 P **P** **18 14 32.2 -1.3**
BOZ Bozeman (W) 58.13 305 P **P** **18 14 32.5 -1.4**
BOZ Bozeman (W) 58.13 305 P **P** **18 14 32.5 -1.4**
BOZ pmax pmax
comp=Z,6.0nm,1.3s
BOZ Bozeman (W) 58.13 305 P **P** **18 14 32.7 -1.3**
baz=64
O20A White River Ci 58.36 298 P **P** **18 14 34.9 -0.8**
baz=62
INK Inuvik 58.47 335 LR LR 18 36 30.9
comp=Z,28nm,19.0s,baz=42,slow=33
MSO Missoula 59.02 307 P **P** **18 14 39.3 -0.7**
baz=63
AHID Auburn Hatcher 59.06 302 P **P** **18 14 39.7 -0.9**
AHID IAmb IAmb 18 14 44.6
comp=Z,12nm,1.2s
AKTO Aktyubinsk 59.16 48 P **P** **18 14 42.0 +1.1**
comp=Z,3.8nm,0.8s,baz=293,slow=9.1,SNR=8.8
comp=Z,3.8nm,0.8s
AKTO Aktyubinsk 59.16 48 P **P** **18 14 42.0 +1.1**
OTAV Otavalo 59.50 241 P **P** **18 14 42.8 -1.4**
OTAV IAmb IAmb 18 14 46.7
comp=Z,11nm,1.4s
OTAV Otavalo 59.50 241 P **P** **18 14 42.8 -1.4**
OTAV pmax pmax
comp=Z,11nm,1.5s
ANMO Albuquerque 59.59 292 LR LR 18 39 04.4
comp=Z,44nm,18.2s,baz=46,slow=35
ANMO Albuquerque 59.59 292 P **P** **18 14 44.6 +0.2**
ANMO Albuquerque 59.59 292*de*P **P** **18 14 45.1 +0.7**
ANMO pmax pmax
comp=Z,5.0nm,1.7s
ANMO Albuquerque 59.59 292 P **P** **18 14 43.5 -0.9**
baz=60
PV23 Carpenter Ridg 59.68 297 P **P** **18 14 45.5 +0.4**
MVCO Mesa Verde 59.93 295 P **P** **18 14 46.8 +0.1**
baz=61,SNR=5.3
BNM Barren Site 60.11 291 P **P** **18 14 48.8 +0.8**
NEW Newport 60.28 310 LR LR 18 38 52.6
comp=Z,88nm,19.8s,baz=43,slow=34
NEW Newport 60.28 310 P **P** **18 14 48.0 -0.7**
NEW IAmb IAmb 18 14 49.2
comp=Z,8.8nm,1.1s
NEW Newport 60.28 310 P **P** **18 14 48.0 -0.7**
NEW pmax pmax
comp=Z,9.0nm,1.1s
NEW Newport 60.28 310 P **P** **18 14 48.0 -0.7**
baz=62,SNR=5.6
SRU San Rafael Swe 60.40 298 P **P** **18 14 49.6 -0.2**
SRU IAmb IAmb 18 14 52.4
comp=Z,9.8nm,1.2s
SRU San Rafael Swe 60.40 298 P **P** **18 14 49.6 -0.2**
SRU pmax pmax
comp=Z,10.0nm,1.2s
TX31 Lajitas Ar. Si 60.40 285 P **P** **18 14 50.0 +0.1**
TX32 Lajitas Array 60.40 285 P **P** **18 14 50.0 +0.1**
TXAR Lajitas Array 60.40 285 P **P** **18 14 49.9 +0.1**
comp=Z,8.2nm,0.8s,baz=71,slow=7.1,SNR=75
TXAR LR LR 18 39 23.5
comp=Z,29nm,19.9s,baz=78,slow=35
comp=Z,8.2nm,0.8s
TXAR Lajitas Array 60.40 285 P **P** **18 14 49.6 -0.3**
TXAR Lajitas Array 60.40 285 P **P** **18 14 49.6 -0.3**
SBM South Baldy 60.60 291 P **P** **18 14 50.4 -1.1**
TMUT Trail Mountain 60.77 298 P **P** **18 14 50.9 -1.6**
HLID Hailey 60.83 304 P **P** **18 14 51.7 -0.9**
baz=61
C27K Jago River 60.85 339 P **P** **18 14 51.6 -0.6**
baz=53
E27K Coleen River 61.08 337 P **P** **18 14 52.8 -1.0**
baz=54
DUG Dugway, Tooele 61.41 300 P **P** **18 14 56.2 -0.4**
DUG Dugway, Tooele 61.41 300 P **P** **18 14 56.2 -0.4**
DUG pmax pmax
comp=Z,15nm,1.2s
DUG 61.41 300 P **P** **18 14 56.2 -0.4**
baz=60,SNR=10
PTLB Pontes e Lacer 61.59 213 P **P** **18 14 57.4 -0.3**
PTLB IAmb IAmb 18 15 00.6
comp=Z,3.0nm,0.9s
I29M Ogilvie Camp, 61.62 333 P **P** **18 14 56.7 -0.8**
baz=56
121A Cookes Peak, D 61.77 290 P **P** **18 14 58.4 -0.8**
baz=59,SNR=9.6
D25K Kavik River 61.78 339 P **P** **18 14 58.0 -0.5**
baz=51
NRIK Noril'sk 61.78 21*ce*P **P** **18 15 00.4 +2.0**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
W18A Petrified Fore 61.84 294 P **P** **18 14 59.1 -0.5**
baz=59
G27K Doyon Strip 61.91 335 P **P** **18 14 59.2 -0.2**
baz=54
MTPU Mount Pierson 62.06 298 P **P** **18 14 59.7 -1.6**
MTPU IAmb IAmb 18 15 07.5
comp=Z,4.9nm,0.9s
F26K Sheenjek River 62.14 337 P **P** **18 14 59.6 -1.3**
baz=52
C24K Franklin Bluff 62.15 340 P **P** **18 14 59.9 -1.0**
baz=49
H27K Steamboat Moun 62.21 335 P **P** **18 15 01.0 -0.5**
baz=54
E25K Arctic Village 62.30 338 P **P** **18 15 01.4 -0.6**
baz=51
P33M Teslin, Yukon 62.34 327 P **P** **18 15 01.8 -0.7**
baz=58
BMAR Burnt Mountain 62.44 337 P **P** **18 15 03.8 +0.9**
G26K Porcupine Rive 62.49 336 P **P** **18 15 02.8 -0.5**
baz=52
D24K Happy Valley 62.55 339 P **P** **18 15 02.8 -0.8**
baz=49
C23K Itkillik River 62.57 340 P **P** **18 15 03.1 -0.7**
baz=48
I27K Kandik River 62.61 334 P **P** **18 15 03.8 -0.4**
baz=53
F25K Christian Rive 62.66 337 P **P** **18 15 03.7 -0.7**
baz=51
ELK Elko 62.75 302 LR LR 18 42 36.2
comp=Z,43nm,19.2s,baz=72,slow=36
DAWY Dawson 62.75 332 P **P** **18 15 04.5 -0.6**
baz=54
WUAZ Wupatki 62.78 295 P **P** **18 15 06.0 +0.1**
WUAZ IAmb IAmb 18 15 08.1
comp=Z,10nm,1.0s
WUAZ Wupatki 62.78 295 P **P** **18 15 04.6 -1.3**
baz=59,SNR=6.9
U15A North Rim 62.95 296 P **P** **18 15 05.7 -1.5**
U15A IAmb IAmb 18 15 28.4
comp=Z,5.7nm,1.2s
TOLK Toolik Lake Re 63.10 339 P **P** **18 15 05.9 -1.4**
baz=48
CCUT Cedar City 63.11 298 P **P** **18 15 08.2 +0.1**
CCUT IAmb IAmb 18 15 09.8
comp=Z,8.7nm,0.9s
E24K Your Creek 63.17 338 P **P** **18 15 06.1 -1.7**
baz=49
D23K Nanushuk River 63.18 340 P **P** **18 15 06.1 -1.7**
baz=48
I26K Coal Creek Min 63.30 334 P **P** **18 15 07.5 -1.2**
baz=52
G25K Bearman Lake 63.32 337 P **P** **18 15 07.4 -1.4**
baz=50
M29M Somme Creek 63.35 331 P **P** **18 15 07.3 -1.9**
baz=54
F24K Squaw Lake 63.37 338 P **P** **18 15 07.3 -1.8**
baz=49
O30N Mendenhall 63.39 328 P **P** **18 15 07.5 -1.9**
baz=56
N30M Aishikik Lake 63.39 329 P **P** **18 15 07.5 -1.9**
baz=55
J08A Circle Bar Ran 63.50 305 P **P** **18 15 10.4 -0.1**
H25K Birch Creek 63.55 336 P **P** **18 15 08.4 -1.8**
baz=50
K27K Chicken 63.72 333 P **P** **18 15 09.8 -1.7**
baz=52
G24K Hadweenzic Riv 63.78 337 P **P** **18 15 10.6 -1.2**
baz=49
J26L Joseph Creek 63.94 334 P **P** **18 15 11.7 -1.3**
baz=51
PRP Porcupine Dome 63.94 335 P **P** **18 15 11.5 -1.6**
baz=50

TUC	**Tucson**	**64.04 291**	P	**P**	**18 15 15.3**	**+1.1**
TUC			IAmb	IAmb	18 15 16.3	
	comp=Z,6.1nm,0.9s					
TUC	**Tucson**	**64.04 291**	P	**P**	**18 15 15.3**	**+1.1**
TUC			pmax	pmax		
	comp=Z,6.0nm,1.0s					
TUC	**Tucson**	**64.04 291**	P	**P**	**18 15 12.8**	**-1.3**
	baz=58					
WVOR	**Wild Horse Val**	**64.08 305**	P	**P**	**18 15 14.8**	**+0.5**
WVOR			IAmb	IAmb	18 15 16.1	
	comp=Z,7.7nm,1.0s					
WVOR	**Wild Horse Val**	**64.08 305**	P	**P**	**18 15 14.8**	**+0.5**
WVOR			pmax	pmax		
	comp=Z,8.0nm,1.0s					
WRAK	**Wrangell Islan**	**64.20 323**	P	**P**	**18 15 12.8**	**-1.9**
	baz=56					
R11A	**Troy Canyon, C**	**64.20 299**	P	**P**	**18 15 12.9**	**-2.4**
	baz=58,SNR=5.8					
BBB	**Bella Bella**	**64.43 318**	LR	LR	18 41 20.6	
	comp=Z,51nm,19.0s,baz=130,slow=34					
J25K	**Salcha River,**	**64.47 335**	P	**P**	**18 15 14.4**	**-2.1**
	baz=50					
H24K	**Noodor Dome**	**64.47 336**	P	**P**	**18 15 14.6**	**-1.8**
	baz=49					
BRVK	**Borovoye**	**64.50 41**	P	**P**	**18 15 17.0**	**+0.2**
BRVK			IAmb	IAmb	18 15 21.4	
	comp=Z,5.2nm,1.1s					
BRVK	**Borovoye**	**64.50 41**⇓	*e*P	**P**	**18 15 18.1**	**+1.4**
BRVK			pmax	pmax		
	comp=Z,8.0nm,1.7s					
G23K	**Bananza Creek**	**64.53 338**	P	**P**	**18 15 15.1**	**-1.7**
	baz=47					
BVAR	**Borovoye Array**	**64.57 41**	LR	LR	18 42 39.9	
	comp=Z,24nm,18.5s,baz=188,slow=35					
F22K	**John River**	**64.59 339**	P	**P**	**18 15 15.5**	**-1.7**
	baz=46					
M27K	**Edge Creek, AK**	**64.68 332**	P	**P**	**18 15 15.8**	**-2.1**
	baz=52					
RIDG	**Independent Ri**	**64.86 334**	P	**P**	**18 15 16.4**	**-2.5**
	baz=50					
ILAR	**Eielson Array**	**64.87 335**	P	**P**	**18 15 18.7**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=67,slow=4.7,SNR=4.1					
ILAR			LR	LR	18 40 07.1	
	comp=Z,29nm,19.1s,baz=78,slow=33					
	comp=Z,0.9nm,1.0s					
SHPR	**Sheep Range**	**64.88 297**	P	**P**	**18 15 19.9**	**+0.2**
SHPR			IAmb	IAmb	18 15 23.2	
	comp=Z,9.1nm,1.2s					
H23K	**Yukon River**	**64.99 337**	P	**P**	**18 15 17.6**	**-2.1**
	baz=47					
HDA	**Harding Lake**	**65.12 335**	P	**P**	**18 15 18.7**	**-1.9**
	baz=49					
F21K	**Alatna River**	**65.15 339**	P	**P**	**18 15 18.9**	**-1.9**
	baz=45					
PDMCI	**Parker Dam,Lak**	**65.35 295**	P	**P**	**18 15 21.1**	**-1.5**
	baz=57					
I23K	**Minto, Yukon-K**	**65.40 336**	P	**P**	**18 15 20.5**	**-1.8**
	baz=47					
PINM	**Pinnacle**	**65.45 329**	P	**P**	**18 15 20.8**	**-2.1**
	baz=52					
H22K	**Ishtalitna Cre**	**65.49 337**	P	**P**	**18 15 21.2**	**-1.8**
	baz=46					
KVN	**Kaiserville**	**65.50 301**	P	**P**	**18 15 21.7**	**-2.0**
KVN			IAmb	IAmb	18 15 24.4	
	comp=Z,7.8nm,0.9s					
KVN	**Kaiserville**	**65.50 301**	P	**P**	**18 15 21.7**	**-2.0**
KVN			pmax	pmax		
	comp=Z,8.0nm,0.9s					
PAX	**Paxson**	**65.57 333**	P	**P**	**18 15 21.2**	**-2.5**
	baz=49					
G21K	**Allakaket**	**65.66 339**	P	**P**	**18 15 22.1**	**-2.0**
	baz=44					
214A	**Organ Pipe Nat**	**65.68 292**	P	**P**	**18 15 23.4**	**-1.4**
	baz=57,SNR=6.0					
NEA2	**Nenana**	**65.68 336**	P	**P**	**18 15 23.7**	**-0.6**
NEA2			IAmb	IAmb	18 15 26.6	
	comp=Z,9.6nm,1.2s					
NEA2	**Nenana**	**65.68 336**	P	**P**	**18 15 22.8**	**-1.4**
	baz=47					
MLY	**Manley**	**65.90 337**	P	**P**	**18 15 24.2**	**-1.5**
	baz=46					
BLYC	**Blythe**	**65.92 295**	P	**P**	**18 15 26.9**	**+0.6**
BLYC			IAmb	IAmb	18 15 28.3	
	comp=Z,5.8nm,0.9s					
HSIG		**65.94 288**	P	**P**	**18 15 26.0**	**-0.4**
HSIG			IAmb	IAmb	18 15 28.3	
	comp=Z,5.6nm,1.0s					
NVAR	**Mina Array Bea**	**65.97 301**	P	**P**	**18 15 26.5**	**-0.3**
	comp=Z,2.2nm,1.1s,baz=72,slow=5.3,SNR=6.0					
	comp=Z,2.2nm,1.1s					
PAHR	**Pah Rah Range**	**65.99 302**	P	**P**	**18 15 26.7**	**-0.2**
PAHR			IAmb	IAmb	18 15 29.9	
	comp=Z,8.7nm,1.3s					
RYN	**Ryan**	**66.01 301**	P	**P**	**18 15 26.0**	**-1.0**
FURC	**Furnace Creek,**	**66.06 298**	P	**P**	**18 15 26.2**	**-0.9**
	baz=57					
H21K	**Melozitna Rive**	**66.08 338**	P	**P**	**18 15 26.9**	**+0.1**
H21K			IAmb	IAmb	18 15 29.5	
	comp=Z,8.0nm,1.3s					
H21K	**Melozitna Rive**	**66.08 338**	P	**P**	**18 15 25.2**	**-1.6**
	baz=45					
IMAR	**Indian Mountai**	**66.11 338**	P	**P**	**18 15 25.8**	**-1.2**
GRAC	**Grapevine Rang**	**66.12 299**	P	**P**	**18 15 26.5**	**-1.0**
	baz=57					
IRM	**Iron Mountain**	**66.13 295**	P	**P**	**18 15 28.4**	**+0.7**
	baz=57,SNR=7.1					
GMRC	**Granite Mounta**	**66.15 296**	P	**P**	**18 15 26.6**	**-1.3**
	baz=57					
I21K	**Tanana**	**66.17 337**	P	**P**	**18 15 26.1**	**-1.3**
	baz=45					
LCH	**Last Change Ra**	**66.18 299**	P	**P**	**18 15 26.5**	**-1.5**
LCH			IAmb	IAmb	18 15 30.5	
	comp=Z,11nm,1.2s					
MCK	**McKinley**	**66.23 335**	P	**P**	**18 15 27.0**	**-0.8**
	baz=47					
LPAZ	**La Paz**	**66.48 221**	P	**P**	**18 15 32.6**	**+2.0**
	comp=Z,1.8nm,1.0s,baz=62,slow=5.3,SNR=4.9					
	comp=Z,1.8nm,1.0s					
LPAZ	**La Paz**	**66.48 221**	P	**P**	**18 15 31.2**	**+0.6**
LPAZ	**La Paz**	**66.48 221**	P	**P**	**18 15 31.2**	**+0.6**
LPAZ			pmax	pmax		
	comp=Z,5.0nm,1.3s					
L04D	**Klamath Falls**	**66.49 306**	P	**P**	**18 15 28.9**	**-1.1**
	baz=57					
GLA	**Glamis**	**66.51 294**	P	**P**	**18 15 29.2**	**-0.9**
GLA	**Glamis**	**66.51 294**	P	**P**	**18 15 29.2**	**-0.9**
GLA			pmax	pmax		
	comp=Z,14nm,1.3s					
GLA	**Glamis**	**66.51 294**	P	**P**	**18 15 29.6**	**-0.5**
	baz=57,SNR=6.5					
BC3	**Big Chuckawall**	**66.62 295**	P	**P**	**18 15 29.1**	**-1.9**
	baz=57					
BPAW	**Bear Paw Mtn.**	**66.63 336**	P	**P**	**18 15 29.2**	**-1.1**
	baz=46					
GSC	**Goldstone, Bar**	**66.66 297**	P	**P**	**18 15 30.1**	**-0.9**
	baz=57					
MPMC	**Manual Prospec**	**66.71 298**	P	**P**	**18 15 30.2**	**-1.3**
	baz=57,SNR=11					
BELC	**Belle Mtn. Jos**	**66.81 296**	P	**P**	**18 15 30.8**	**-1.3**
	baz=56					
CWC	**Cottonwood Cre**	**66.90 299**	P	**P**	**18 15 30.9**	**-1.9**
	baz=57					
J01E	**Myrtle Point**	**66.98 308**	P	**P**	**18 15 31.1**	**-1.8**
	baz=56					
YBH	**Yreka Blue Hor**	**67.01 306**	LR	LR	18 44 08.8	
	comp=Z,60nm,18.1s,baz=33,slow=36					
K02D	**Willamette Mer**	**67.07 307**	P	**P**	**18 15 31.8**	**-1.8**
	baz=56					
M23K	**Glacier View**	**67.14 333**	P	**P**	**18 15 31.8**	**-1.8**
	baz=47					
CHUM	**Lake Minchumin**	**67.20 336**	P	**P**	**18 15 32.7**	**-1.2**
	baz=44					
PMD	**Palm Desert**	**67.27 295**	P	**P**	**18 15 35.2**	**+0.3**
PMD			IAmb	IAmb	18 15 42.0	
	comp=Z,7.4nm,1.0s					
L02F	**Cave Junction**	**67.33 306**	P	**P**	**18 15 33.8**	**-1.4**
	baz=56					
PFO	**Pinyon Flats O**	**67.34 295**	LR	LR	18 45 19.6	
	comp=Z,54nm,18.0s,baz=58,slow=36					
PFO	**Pinyon Flats O**	**67.34 295**	P	**P**	**18 15 36.5**	**+1.0**
PFO			IAmb	IAmb	18 15 38.9	
	comp=Z,10nm,1.1s					
PFO	**Pinyon Flats O**	**67.34 295**⇑	*e*P	**P**	**18 15 36.8**	**+1.3**
PFO			pmax	pmax		
	comp=Z,12nm,1.2s					
PFO	**Pinyon Flats O**	**67.34 295**	P	**P**	**18 15 34.8**	**-0.7**
	baz=56					
TPFO	**Pinon Flats**	**67.34 295**	P	**P**	**18 15 34.7**	**-0.9**
	baz=56					
J20K	**Nowinta River**	**67.55 337**	P	**P**	**18 15 35.6**	**-0.5**
	baz=43					
CMB	**Columbia Colle**	**67.56 301**	P	**P**	**18 15 35.0**	**-1.7**
CMB	**Columbia Colle**	**67.56 301**	P	**P**	**18 15 35.0**	**-1.7**
CMB			pmax	pmax		
	comp=Z,5.0nm,1.2s					
IKP	**In-Ko-Pah, Jac**	**67.63 294**	P	**P**	**18 15 36.8**	**-0.5**
	baz=56					
EDW2	**Edwards Air Fo**	**67.70 297**	P	**P**	**18 15 37.9**	**+0.2**
	baz=56					
MONP2	**Monument Peak**	**67.72 295**	P	**P**	**18 15 37.2**	**-0.8**
	baz=56					
PMR	**Palmer**	**67.77 333**	P	**P**	**18 15 37.0**	**-0.5**
	baz=46					
NNA	**Nana**	**67.78 231**	LR	LR	18 43 26.8	
	comp=Z,12nm,21.3s,baz=26,slow=34					
BFSC	**Mount Baldy Ra**	**67.83 297**	P	**P**	**18 15 37.9**	**-0.6**
	baz=56					
MURC	**Murrieta**	**67.86 296**	P	**P**	**18 15 38.2**	**-0.5**
	baz=56					
MBAR	**Mbarara**	**67.91 111**	LR	LR	18 46 22.2	
	comp=Z,28nm,18.1s,baz=302,slow=37					
K20K	**Telida**	**68.12 336**	P	**P**	**18 15 38.9**	**-0.9**
	baz=43					
LPIG	**La Paz**	**68.23 284**	LR	LR	18 43 49.6	
	comp=Z,31nm,21.5s,baz=72,slow=34					
SKT	**Skwentna**	**68.31 334**	P	**P**	**18 15 40.5**	**-0.5**
	baz=44					
RC01	**Rabbit Creek A**	**68.33 333**	P	**P**	**18 15 40.0**	**-1.1**
	baz=46					
L20K	**Farewell, AK**	**68.71 336**	P	**P**	**18 15 42.7**	**-0.8**
	baz=43					
M19K	**Big River Lodg**	**69.30 335**	P	**P**	**18 15 45.6**	**-1.5**
	baz=42					
KURK	**Kuratov**	**70.06 40**	P	**P**	**18 15 52.4**	**+0.4**
KURK	**Kurchatov**	**70.06 40**	*de*P	**P**	**18 15 52.9**	**+0.9**
KURK			pmax	pmax		
	comp=Z,9.0nm,1.7s					
N18K	**Kilae Creek**	**70.69 335**	P	**P**	**18 15 54.0**	**-1.7**
	baz=41					
ZALV	**Zalesovo Beam**	**70.86 35**	P	**P**	**18 15 57.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=308,slow=7.3,SNR=6.4					
	comp=Z,1.0nm,0.6s					
N16K	**Nishlik Lake**	**71.76 336**	P	**P**	**18 16 01.3**	**-0.9**
	baz=39					
TSUM	**Tsumeb**	**73.31 134**	LR	LR	18 46 13.3	
	comp=Z,37nm,18.1s,baz=320,slow=34					
MK31	**Makanchi Array**	**74.45 41**⇑	*e*P	**P**	**18 16 18.9**	**+0.5**
MKAR	**Makanchi Array**	**74.45 41**	P	**P**	**18 16 18.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=347,slow=5.0,SNR=6.1					
MKAR			LR	LR	18 46 58.3	
	comp=Z,26nm,21.6s,baz=280,slow=34					
	comp=Z,0.7nm,0.6s					
KSH	**Kashi**	**75.74 50**	P	**P**	**18 16 28.9**	**+2.9**
KSH			pP	pP	18 16 33.6	-0.9
KSH			pmax	pmax		
	comp=Z,12nm,0.9s					
LSZ	**Lusaka**	**76.67 123**	LR	LR	18 49 55.8	
	comp=Z,58nm,19.8s,baz=242,slow=35					
YAK	**Yakutsk**	**77.06 10**⇓	*e*P	**P**	**18 16 33.4**	**+0.5**
YAK			pmax	pmax		
	comp=Z,12nm,1.7s					
SEY	**Seymchan**	**77.54 359**⇓	*e*P	**P**	**18 16 36.0**	**+0.4**
SEY			pmax	pmax		
	comp=Z,2.0nm,1.2s					
BOD	**Bodaibo**	**77.97 19**	*e*P	**P**	**18 16 37.9**	**-0.2**
BOD			pmax	pmax		
	comp=Z,9.0nm,1.4s					
MOY	**Mondy**	**79.13 29**	*e*P	**P**	**18 16 46.4**	**+1.6**
MOY			pmax	pmax		
	comp=Z,8.0nm,1.8s					
WMQ	**Urumqi**	**79.26 41**	*e*P	**P**	**18 16 46.8**	**+1.2**
SONM	**Songino Array**	**84.28 28**	P	**P**	**18 17 12.9**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=284,slow=6.0,SNR=5.3					
	comp=Z,0.9nm,0.8s					
ULN	**Ulaanbaatar**	**84.49 28**	*de*P	**P**	**18 17 14.4**	**+1.3**
ULN			pmax	pmax		
	comp=Z,8.0nm,1.7s					
BOSA	**Boshof**	**85.01 134**	LR	LR	18 52 40.7	
	comp=Z,32nm,19.7s,baz=314,slow=34					
GTA	**Gaotai**	**88.49 37**	*e*P	**P**	**18 17 34.1**	**+1.3**
GTA			pP	sP	18 17 43.6	-1.0
GTA			sP	pwP	18 17 49.7	+6.2
GTA			pmax	pmax		
	comp=Z,3.0nm,1.0s					
GTA			pmax	pmax		
	comp=Z,80nm,4.6s					
GTA			LR	LR		
	comp=N,65nm,16.0s					
GTA			LR	LR		
	comp=E,97nm,15.3s					
GTA			LR	LR		
	comp=Z,88nm,16.4s					
GOMU	**GeErMu**	**88.57 42**	P	**P**	**18 17 37.6**	**+4.0**
GOMU			pP	pP	18 17 38.7	-3.5
GOMU			sP	sP	18 17 43.8	-1.5
GOMU			pmax	pmax		
	comp=Z,1.0nm,0.8s					
GOMU			pmax	pmax		
	comp=Z,54nm,4.4s					
HHC	**Hu-ho-hao-te**	**92.17 29**	*e*P	**P**	**18 17 48.2**	**-1.7**
HHC			pmax	pmax		
	comp=Z,17nm,0.8s					
HHC			pmax	pmax		
	comp=Z,140nm,4.8s					
LZH	**Lanzhou**	**93.05 36**	*e*P	**P**	**18 17 58.3**	**+4.2**
LZH			pP	sP	18 18 07.6	+1.7
LZH			pmax	pmax		
	comp=Z,16nm,1.4s					
PZH	**PanZhiHua**	**99.84 43**	P	**Pdif**	**18 18 22.2**	**-2.8**
PZH			pmax	pmax		
	comp=Z,20nm,0.6s					
PZH			pmax	pmax		
	comp=Z,100nm,5.5s					
WRA	**Warramunga Arr**	**155.75 40**	PKPab	**PKPab**	**18 25 02.9**	**+2.1**
	comp=Z,0.5nm,0.9s,baz=340,slow=4.3,SNR=4.9					
ASAR	**Alice Springs**	**158.59 46**	PKPab	**PKPab**	**18 25 13.0**	**0.0**
	comp=Z,1.7nm,1.1s,baz=336,slow=4.7,SNR=5.7					

DJA 07 18:38:14.1±0.9, 1°N×6°×12°1E±°, h19km±7km, M3.7/7, MLv3.7/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.07**	**144**	P	Pb	18 38 33.3	-0.7
MRSI				S	Sb	18 38 47.3	-0.2
MPSI	**Mapaga**	**1.74**	**235**	P	Pn	18 38 41.9	-1.4
APSI	**Ampana**	**2.27**	**172**	P	Pn	18 38 51.0	+0.4
LUWI	**Luwuk**	**2.78**	**149**	P	Pn	18 38 59.3	+1.6
TTSI	**Tana Toraja**	**4.62**	**199**	P	Pn	18 39 24.2	+1.3

*TEH **07** 19:07:11.5, 34°.85N×46°.10E, h9km, ML3.2*
*ISN **07** 19:07:13.1±0.9, 34°.88N×46°.12E, h8km±7km, ML2.7*
ISC 07 19:07:12.5±1.0, 34°.83N±0°.05×46°.17E±0°.05, h10km, n17, σ0s51/20, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.22**	**126**	*e*Pg	**Pg**	**19 07 17.1**	**-0.1**
IGHG	**Ghaleghazi**	**0.60**	**146**	*e*Pg	**Pg**	**19 07 23.8**	**-0.4**
ILIN	**Lien**	**0.66**	**82**	*e*Pg	**Pg**	**19 07 25.0**	**-0.3**
ILIN				*e*Sg	**Sb**	**19 07 36.3**	**+0.7**
KCHF	**Cheshme Sefid,**	**0.91**	**127**	*e*Pg	**Pg**	**19 07 29.9**	**-0.1**
KCHF				*e*		19 07 48.0	
	comp=Z,15μm,0.3s						
KER	**Kermanshah**	**0.91**	**119**	*e*Pg	**Pg**	**19 07 30.2**	**+0.1**
IKOM	**Komasi**	**1.29**	**120**	*e*Pg	**Pn**	**19 07 37.1**	**+0.4**
IKOM				*e*		19 08 05.6	
	comp=Z,4μm,0.4s						
IBZA	**Bozab**	**1.44**	**104**	*e*Pn	**Pn**	**19 07 38.3**	**-0.6**
IBZA				*e*		19 08 10.1	
	comp=Z,2μm,0.6s						
IBDR	**Badra**	**1.73**	**187**	*e*Pg	**Pb**	**19 07 45.0**	**+0.7**
	baz=5.0						
IBDR				*e*Sg	**Sg**	**19 08 08.0**	**-0.1**
IBDR				AML	AML	19 08 15.2	
	comp=N,103nm,0.9s						
IBDR				AML	AML	19 08 16.8	
	comp=E,80nm,0.4s						
IKFM	**Kafar-mosalman**	**1.91**	**133**	*e*Pn	**Pb**	**19 07 47.1**	**-0.2**
IKFM				*e*		19 07 51.4	
	comp=Z,3μm,0.2s						
IDOB	**Doab**	**1.96**	**121**	*e*Pn	**Pb**	**19 07 48.3**	**-0.1**
IDOB				*e*		19 08 25.9	
	comp=Z,717nm,0.8s						
MAHB	**Mahabad**	**1.97**	**349**	*e*Pn	**Pn**	**19 07 45.7**	**-0.3**
HSAM	**Samen**	**2.10**	**106**	*e*Pn	**Pb**	**19 07 50.4**	**-0.5**
BHD	**Baghdad**	**2.15**	**224**	*e*Pn	**Pn**	**19 07 48.0**	**-0.4**
BHD				*e*Sn	**Sn**	**19 08 15.0**	**-0.1**
IAZR	**Azarshahr**	**2.84**	**357**	*e*Pn	**Pn**	**19 07 57.9**	**-0.3**
IAZR				*e*		19 08 47.5	
	comp=Z,1μm,0.7s						
IBST	**Bostanabad**	**2.92**	**11**	*e*Pn	**Pn**	**19 07 58.7**	**-0.5**
ISHB	**Shabestar**	**3.47**	**353**	*e*Pn	**Pn**	**19 08 06.7**	**-0.1**
GRMI	**Germi**	**4.20**	**19**	*e*Pn	**Pn**	**19 08 18.0**	**+1.3**

*IDC **07** 19:34:15.8±0.7, 5°.41S×150°.94E, h140km±10km, mb3.3/3, mbtmp3.7/4, MS3.4/2, Error ellipse: s-maj=45.8km s-min=10.4km az=128.0*
ISC 07 19:34:16.0±1.2, 5°.5S±0°.2×151°.1E±0°.3, h150km, n8, σ1s02/11, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.48**	**38**	P	**Pn**	**19 34 44.8**	**-0.6**
	93nm,0.4s,baz=22,slow=0.6,SNR=25						
KRVT				S	**Sn**	**19 35 07.3**	**-0.6**
	51nm,0.4s,baz=248,slow=22,SNR=13						
PMG	**Port Moresby**	**5.53**	**225**	P	**Pn**	**19 35 36.7**	**+0.3**
	7.4nm,0.6s,baz=31,slow=3.3,SNR=6.5						
PMG				S	**Sn**	**19 36 37.7**	**-1.5**
	36nm,0.3s,baz=84,slow=22,SNR=12						
WRA	**Warramunga Arr**	**21.74**	**227**	P	**P**	**19 38 54.9**	**-0.8**
	1.3nm,0.4s,baz=50,slow=9.7,SNR=20						
WRA				S	**S**	**19 42 46.5**	**0.0**
	0.6nm,0.8s,baz=43,slow=16,SNR=3.8						
WRA				PcP	**PcP**	**19 42 51.5**	**+1.0**
	0.5nm,1.1s,baz=40,slow=1.7,SNR=2.0						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**24.52**	**221**	P	**P**	**19 39 22.5**	**+0.7**
	0.7nm,0.4s,baz=53,slow=9.1,SNR=26						
ASAR				PcP	**PcP**	**19 42 57.7**	**+1.5**
	0.4nm,1.0s,baz=32,slow=3.6,SNR=2.3						
	0.7nm,0.4s						
BATI	**Baumata**	**27.59**	**259**	LR	LR	19 54 34.7	
	comp=Z,162nm,18.9s,baz=296,slow=44						
FITZ	**Fitzroy Crossi**	**27.86**	**241**	LR	LR	19 50 52.4	
	comp=Z,39nm,20.5s,baz=328,slow=36						
KSRS	**Korea Array**	**47.89**	**335**	P	**P**	**19 42 39.4**	**+0.5**
	0.7nm,0.6s,baz=150,slow=8.1,SNR=6.6						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**148.91**	**286**	PKPbc	**PKPbc**	**19 53 46.4**	**-0.8**
	0.2nm,0.3s,baz=90,slow=2.8,SNR=8.8						

*JMA **07** 19:41:30.3±0.2, 24°N±1°×121°.9E±0°.6, h30km, MV2.8/12, TAIWAN REGION*
*TAP **07** 19:41:31.8, 23°.65N×121°.95E, h34km, ML3.1, C*
ISC 07 19:41:31.2±0.9, 23°.65N±0°.02×121°.98E±0°.02, h31km±8km, n117, σ0s70/217, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.41**	**278**	*e*P	**Pb**	**19 41 40.1**	**0.0**
	baz=278						
TEGC				*e*S	**Sb**	**19 41 46.3**	**0.0**
	baz=278						
HWA	**Hwalien**	**0.47**	**314**	*e*P	**Pb**	**19 41 41.2**	**0.0**
	baz=315						
HWA				*e*S	**Sn**	**19 41 48.3**	**-0.9**
	baz=315						
EGFH	**Guangfu**	**0.51**	**272**	*e*P	**Pb**	**19 41 41.7**	**0.0**
	baz=272						
EGFH				S	**Sb**	**19 41 49.5**	**+0.5**
	baz=272						
ESL	**Shilin**	**0.53**	**288**	P	**Pb**	**19 41 41.6**	**-0.5**
	baz=283						
ESL				S	**Sb**	**19 41 48.7**	**-0.8**
	baz=283						
HGSD	**Ruisui**	**0.53**	**253**	P	**Pb**	**19 41 41.8**	**-0.4**
	baz=252						
HGSD				S	**Sb**	**19 41 49.5**	**-0.2**
	baz=252						
TWD	**Chiawan**	**0.55**	**321**	P	**Pb**	**19 41 42.0**	**-0.4**
	baz=323						
TWD				S	**Sb**	**19 41 49.9**	**-0.3**
	baz=323						
ETL	**Fush Village**	**0.60**	**327**	*e*P	**Pb**	**19 41 43.0**	**-0.3**
	baz=329						
ETL				*e*S	**Sn**	**19 41 51.7**	**-0.7**
	baz=329						
EHY	**Hungye**	**0.62**	**257**	P	**Pb**	**19 41 43.5**	**-0.1**
	baz=256						
EHY				S	**Sb**	**19 41 52.3**	**+0.2**
	baz=256						
NACB	**Ninganchiao**	**0.63**	**326**	P	**Pb**	**19 41 43.2**	**-0.5**
	baz=327						
NACB				S	**Sb**	**19 41 52.0**	**-0.3**
	baz=327						
EYUL	**Yuli**	**0.68**	**244**	P	**Pn**	**19 41 44.4**	**-0.2**
	baz=234						
EYUL				S	**Sb**	**19 41 53.8**	**+0.2**
	baz=234						
YULB	**Yu-li**	**0.68**	**248**	P	**Pn**	**19 41 44.5**	**-0.2**
	baz=261						
YULB				S	**Sb**	**19 41 53.8**	**+0.2**
	baz=261						
ETLH	**Xiulin Townshi**	**0.72**	**321**	P	**Pn**	**19 41 44.7**	**-0.6**
	baz=322						
ETLH				*e*S	**Sn**	**19 41 54.9**	**-0.4**
	baz=322						
FULB	**Fuli**	**0.77**	**235**	P	**Pn**	**19 41 45.1**	**-0.9**
	baz=223						
FULB				*e*S	**Sb**	**19 41 57.1**	**+0.7**
	baz=223						
VWDT	**VWDT**	**0.77**	**278**	P	**Pb**	**19 41 46.2**	**+0.1**
	baz=272						
VWDT				S	**Sn**	**19 41 55.9**	**-0.7**
	baz=272						
OWD	**Renai**	**0.79**	**293**	P	**Pb**	**19 41 46.4**	**-0.2**
	baz=293						
OWD				S	**Sn**	**19 41 56.6**	**-0.7**
	baz=293						
ENA	**Nanau**	**0.80**	**344**	P	**Pb**	**19 41 46.4**	**-0.3**
	baz=346						
ENA				S	**Sb**	**19 41 57.5**	**+0.2**
	baz=346						
EWUT	**Wuta**	**0.81**	**347**	P	**Pn**	**19 41 45.8**	**-0.8**
	baz=348						
EWUT				*e*S	**Sn**	**19 41 56.7**	**-0.9**
	baz=348						
WHF	**Hehuan Shan**	**0.82**	**307**	P	**Pn**	**19 41 46.8**	**-0.2**
	baz=308						
WHF				S	**Sn**	**19 41 57.6**	**-0.6**
	baz=308						
CHGB	**Renai**	**0.84**	**299**	P	**Pb**	**19 41 47.3**	**-0.2**
	baz=299						
CHGB				S	**Sb**	**19 41 59.0**	**+0.4**
	baz=299						
WUSB	**Renai**	**0.86**	**293**	P	**Pb**	**19 41 47.6**	**-0.1**
	baz=294						
WUSB				*e*S	**Sn**	**19 41 58.3**	**-0.6**
	baz=294						
FUSS	**Fushou**	**0.90**	**312**	P	**Pb**	**19 41 48.2**	**-0.2**
	baz=312						
FUSS				S	**Sn**	**19 41 59.5**	**-0.6**
	baz=312						
EDH	**Donghe**	**0.92**	**223**	P	**Pn**	**19 41 46.9**	**-1.1**
	baz=215						
EDH				*e*S	**Sn**	**19 41 58.6**	**-1.5**
	baz=215						
NNSB	**Datong**	**0.95**	**325**	P	**Pb**	**19 41 48.7**	**

	baz=309							
TDCB				*e*S		**Sb**	**19 42 02.4**	**+0.6**
	baz=309							
NNS	**Nan Shan**	**0.96**	**325**	*e*P		**Pb**	**19 41 48.8**	**-0.6**
	baz=326							
NNS				*e*S		**Sn**	**19 42 00.6**	**-0.8**
	baz=326							
TWC	**Suao**	**0.96**	**353**	P		**Pb**	**19 41 49.1**	**-0.2**
	baz=354							
TWC				S		**Sb**	**19 42 02.2**	**+0.5**
	baz=354							
LATG	**Datong**	**0.97**	**335**	P		**Pb**	**19 41 49.2**	**-0.3**
	baz=336							
LATG				S		**Sb**	**19 42 02.1**	**-0.1**
	baz=336							
ELDTW	**Lidau**	**0.99**	**243**	P		**Pn**	**19 41 48.8**	**-0.3**
	baz=242							
ELDTW				*e*S		**Sn**	**19 42 00.6**	**-1.6**
	baz=242							
NDS	**Dongshan**	**1.01**	**346**	P		**Pn**	**19 41 49.0**	**-0.2**
	baz=341							
NDS				S		**Sb**	**19 42 02.3**	**-0.7**
	baz=341							
SMLT	**Sun Moon Lake**	**1.01**	**283**	*e*P		**Pn**	**19 41 49.1**	**-0.3**
	baz=291							
SMLT				*e*S		**Sn**	**19 42 02.4**	**-0.3**
	baz=291							
WHYT	**Xinyi Township**	**1.03**	**273**	*e*P		**Pn**	**19 41 49.5**	**-0.1**
	baz=265							
WHYT				*e*S		**Sn**	**19 42 03.0**	**0.0**
	baz=265							
NDT	**Datong Townshi**	**1.04**	**336**	*e*P		**Pn**	**19 41 49.5**	**-0.2**
	baz=344							
NDT				*e*S		**Sn**	**19 42 02.9**	**-0.3**
	baz=344							
ENTT	**Nioudou**	**1.05**	**339**	P		**Pn**	**19 41 49.7**	**-0.2**
	baz=340							
ENTT				S		**Sb**	**19 42 03.5**	**-0.9**
	baz=340							
TYC	**Yuchr**	**1.06**	**284**	*e*P		**Pn**	**19 41 49.8**	**-0.1**
	baz=294							
TYC				*e*S		**Sn**	**19 42 03.4**	**-0.2**
	baz=294							
WCS	**Beigang Elemen**	**1.06**	**293**	*e*P		**Pn**	**19 41 49.9**	**0.0**
	baz=293							
WCS				*e*S		**Sn**	**19 42 03.4**	**-0.2**
	baz=293							
LONT	**Longtian**	**1.08**	**227**	*e*P		**Pn**	**19 41 49.6**	**-0.5**
	baz=237							
LONT				*e*S		**Sn**	**19 42 03.7**	**-0.4**
	baz=237							
LDUT	**Ludao**	**1.08**	**206**	*e*P		**Pn**	**19 41 49.4**	**-0.9**
	baz=205							
LDUT				*e*S		**Sn**	**19 42 02.9**	**-1.2**
	baz=205							
ALS	**Alishan**	**1.08**	**263**	*e*P		**Pn**	**19 41 50.8**	**+0.3**
	baz=262							
ALS				*e*S		**Sn**	**19 42 04.7**	**0.0**
	baz=262							
TWE	**Neicheng**	**1.10**	**345**	*e*P		**Pb**	**19 41 50.8**	**-0.9**
	baz=346							
TWE				*e*S		**Sb**	**19 42 04.7**	**-1.1**
	baz=346							
WHP	**Taichung City**	**1.13**	**304**	*e*P		**Pn**	**19 41 51.2**	**+0.2**
	baz=313							
WHP				*e*S		**Sn**	**19 42 05.7**	**+0.1**
	baz=313							
YHNB	**Yeheng**	**1.15**	**332**	P		**Pb**	**19 41 52.3**	**-0.3**
	baz=332							
YHNB				*e*S		**Sb**	**19 42 06.8**	**-0.5**
	baz=332							
FUSB	**Fushanzhiwuyua**	**1.16**	**342**	P		**Pb**	**19 41 52.0**	**-0.8**
	baz=331							
FUSB				*e*S		**Sb**	**19 42 06.6**	**-0.9**
	baz=331							
NSK	**Sanguang**	**1.17**	**331**	P		**Pn**	**19 41 51.4**	**-0.1**
	baz=332							
NSK				S		**Sn**	**19 42 06.2**	**-0.3**
	baz=332							
TTN	**Taitung**	**1.18**	**221**	*e*S		**Sn**	**19 42 06.8**	**+0.3**
	baz=211							
JYNG	**Yonagunijimaku**	**1.19**	**48**	*i* P		**Pb**	**19 41 52.6**	**-0.5**
JYNG				S		**Sb**	**19 42 07.8**	**-0.5**
NWLT	**Wulai**	**1.20**	**339**	*e*P		**Pn**	**19 41 52.2**	**+0.3**
	baz=328							
NWLT				*e*S		**Sb**	**19 42 07.5**	**-1.1**
	baz=328							
STYH	**Taoyuan**	**1.20**	**247**	*e*P		**Pn**	**19 41 52.0**	**+0.1**
	baz=240							
STYH				*e*S		**Sn**	**19 42 06.9**	**-0.3**
	baz=240							
NTC	**Toucheng**	**1.21**	**354**	*e*P		**Pb**	**19 41 52.3**	**-1.1**
	baz=6.0							
NTC				*e*S		**Sb**	**19 42 07.6**	**-1.0**
	baz=6.0							
WNT	**Mingjian**	**1.21**	**281**	*e*P		**Pn**	**19 41 52.0**	**0.0**
	baz=281							
WNT				*e*S		**Sn**	**19 42 07.2**	**0.0**
	baz=281							
YOJ	**Yonaguni jima**	**1.24**	**49**	*e*P		**Pb**	**19 41 53.6**	**-0.4**
	baz=49							
YOJ				*e*S		**Sb**	**19 42 09.7**	**0.0**
	baz=49							
YOJ	**Yonaguni jima**	**1.24**	**49**	P		**Pb**	**19 41 53.4**	**-0.6**
YOJ				*e*S		**Sb**	**19 42 09.8**	**0.0**
NFF	**Wufeng Townshi**	**1.25**	**321**	*e*P		**Pn**	**19 41 53.0**	**+0.3**
	baz=322							
NFF				*e*S		**Sn**	**19 42 08.4**	**-0.2**
	baz=322							
TPUB	**Ta-pu**	**1.29**	**255**	*e*P		**Pb**	**19 41 54.3**	**-0.5**
	baz=254							
TPUB				*e*S		**Sb**	**19 42 11.1**	**+0.1**
	baz=254							
TCU	**Taichung**	**1.29**	**293**	*e*P		**Pb**	**19 41 54.4**	**-0.4**
	baz=293							
TCU				*e*S		**Sb**	**19 42 11.3**	**+0.2**
	baz=293							
TWQ1	**Liyutan**	**1.30**	**302**	*e*P		**Pb**	**19 41 55.1**	**0.0**
	baz=302							
TWQ1				*e*S		**Sb**	**19 42 12.6**	**+1.2**
	baz=302							
WDLH	**Douliu**	**1.32**	**272**	*e*P		**Pn**	**19 41 54.3**	**+0.8**
	baz=271							
WDLH				*e*S		**Sb**	**19 42 11.6**	**-0.4**
	baz=271							
NSTT	**Nanjuang**	**1.32**	**318**	*e*P		**Pb**	**19 41 54.4**	**-1.0**
	baz=318							
NSTT				*e*S		**Sn**	**19 42 10.1**	**-0.1**
	baz=318							
TIPB	**Shuangxi**	**1.32**	**354**	*e*P		**Pb**	**19 41 54.7**	**-0.7**
	baz=7.0							
TIPB				*e*S		**Sb**	**19 42 11.0**	**-1.0**
	baz=7.0							
LIOB	**Emei**	**1.32**	**319**	*e*P		**Pb**	**19 41 55.8**	**+0.4**
	baz=319							
LIOB				*e*S		**Sb**	**19 42 12.6**	**+0.5**
	baz=319							
NSY	**Sanyi**	**1.35**	**305**	*e*P		**Pb**	**19 41 55.9**	**+0.1**
	baz=305							
NSY				*e*S		**Sb**	**19 42 13.5**	**+0.8**
	baz=305							
NHDH	**Xindian Distri**	**1.37**	**343**	*e*P		**Pb**	**19 41 55.3**	**-1.0**
	baz=332							
NHDH				*e*S		**Sb**	**19 42 12.1**	**-1.2**
	baz=332							
TWA	**Mucha**	**1.37**	**345**	*e*P		**Pb**	**19 41 55.5**	**-0.8**
	baz=335							
TWA				*e*S		**Sb**	**19 42 13.1**	**-0.4**
	baz=335							
CHN2	**Minshiung**	**1.38**	**265**	*e*S		**Sb**	**19 42 14.3**	**+0.6**
	baz=265							
SGST	**Jiashian**	**1.40**	**246**	*e*P		**Pb**	**19 41 56.1**	**-0.7**
	baz=237							
SGST				*e*S		**Sb**	**19 42 13.8**	**-0.5**
	baz=237							
WDJ	**Dajia District**	**1.41**	**300**	*e*S		**Sn**	**19 42 12.6**	**+0.4**
	baz=300							
CHN1	**Nanshi**	**1.41**	**251**	*e*P		**Pb**	**19 41 56.5**	**-0.4**
	baz=250							
CHN1				*e*S		**Sb**	**19 42 15.6**	**+1.1**
	baz=250							
ECL	**Taimali**	**1.41**	**222**	*e*P		**Pn**	**19 41 54.6**	**-0.1**
	baz=221							
ECL				*e*S		**Sn**	**19 42 11.8**	**-0.5**
	baz=221							
NWF	**Wu-fen Shan**	**1.43**	**353**	*e*P		**Pb**	**19 41 57.1**	**-0.1**
	baz=353							
NWF				*e*S		**Sb**	**19 42 15.8**	**+0.8**
	baz=353							
SNST	**Tainan City**	**1.43**	**253**	*e*P		**Pb**	**19 41 57.6**	**+0.4**
	baz=252							
SNST				*e*S		**Sb**	**19 42 14.6**	**-0.3**
	baz=252							
CHY	**Chiayi**	**1.43**	**264**	*e*S		**Sb**	**19 42 14.1**	**-1.1**
	baz=264							
TAP	**Taipei**	**1.45**	**343**	*e*S		**Sb**	**19 42 13.8**	**-1.8**
	baz=332							
WTK	**Tuku**	**1.46**	**272**	*e*P		**Pn**	**19 41 57.5**	**-0.2**
	baz=271							
WTK				*e*S		**Sb**	**19 42 16.4**	**+0.5**
	baz=271							
WRL	**Guolierlin Hig**	**1.49**	**280**	*e*P		**Pn**	**19 41 56.5**	**+0.7**
	baz=279							
WRL				*e*S		**Sn**	**19 42 14.6**	**+0.4**
	baz=279							
SSD	**Sandimen**	**1.53**	**234**	*e*P		**Pn**	**19 41 57.0**	**+0.6**
	baz=230							
SSD				*e*S		**Sn**	**19 42 15.8**	**+0.5**
	baz=230							
TWS1	**Kuangyinshan**	**1.53**	**341**	*e*P		**Pb**	**19 41 57.6**	**-1.4**
	baz=341							
TWS1				*e*S		**Sb**	**19 42 16.6**	**-1.3**
	baz=341							
YM01	**YM01**	**1.54**	**346**	*e*P		**Pb**	**19 41 57.6**	**-1.5**
	baz=331							
YM01				*e*S		**Sb**	**19 42 16.8**	**-1.3**
	baz=331							
SCST	**Cishan**	**1.56**	**241**	*e*P		**Pn**	**19 41 57.9**	**+1.1**
	baz=241							
SCST				*e*S		**Sb**	**19 42 19.8**	**+0.9**
	baz=241							
NTST	**Danshui**	**1.58**	**342**	*e*P		**Pn**	**19 41 57.7**	**+0.5**
	baz=342							
NTST				*e*S		**Sn**	**19 42 17.2**	**+0.7**
	baz=342							
ANP	**Anpu**	**1.58**	**345**	*e*P		**Pn**	**19 41 57.9**	**+0.6**
	baz=345							
ANP				*e*S		**Sn**	**19 42 16.5**	**-0.3**
	baz=345							
ICHU	**Yijhu**	**1.59**	**260**	*e*S		**Sn**	**19 42 17.1**	**+0.5**
	baz=259							
WSF	**Szhu**	**1.61**	**270**	*e*S		**Sn**	**19 42 17.7**	**+0.4**
	baz=269							
WSL	**Shuilin Townsh**	**1.61**	**266**	*e*P		**Pb**	**19 41 58.9**	**-1.4**
	baz=265							
WSL				*e*S		**Sb**	**19 42 19.6**	**-0.6**
	baz=265							
MASBT	**Mashibuluo**	**1.61**	**230**	*e*P		**Pn**	**19 41 58.2**	**+0.7**
	baz=228							
MASBT				*e*S		**Sn**	**19 42 17.9**	**+0.5**
	baz=228							
EAST	**Anshuo**	**1.64**	**220**	*e*P		**Pn**	**19 41 57.6**	**-0.3**
	baz=219							
EAST				*e*S		**Sn**	**19 42 16.6**	**-1.4**
	baz=219							
TAWH	**Dawu Township**	**1.65**	**218**	*e*P		**Pn**	**19 41 57.7**	**-0.4**
	baz=217							
TAWH				*e*S		**Sn**	**19 42 17.1**	**-1.0**
	baz=217							
CHN8	**Yiju**	**1.65**	**260**	*e*S		**Sb**	**19 42 20.3**	**-1.0**
	baz=259							
TWM1	**Shoushan**	**1.65**	**240**	*e*P		**Pb**	**19 42 00.2**	**-0.7**
	baz=240							
TWM1				*e*S		**Sb**	**19 42 22.3**	**+0.9**
	baz=240							
LAY	**Lan-yu**	**1.65**	**194**	*e*P		**Pn**	**19 41 57.0**	**-1.1**
	baz=193							
LAY				*e*S		**Sn**	**19 42 16.9**	**-1.4**
	baz=193							
HATJ	**Hateruma jima**	**1.72**	**76**	P		**Pn**	**19 41 59.6**	**+0.5**
HATJ				S		**Sn**	**19 42 20.1**	**+0.1**
IRIF	**Iriomote-Funau**	**1.74**	**67**	P		**Pn**	**19 42 00.2**	**+0.9**
IRIF				*e*S		**Sn**	**19 42 21.5**	**+1.0**
SSPT	**Xinbi**	**1.74**	**228**	*e*P		**Pn**	**19 41 60.0**	**+0.6**
	baz=224							
SSPT				*e*S		**Sn**	**19 42 20.9**	**+0.4**
	baz=224							
SCZT	**Fangliau**	**1.79**	**225**	*e*P		**Pn**	**19 42 00.7**	**+0.8**
	baz=220							
SCZT				*e*S		**Sn**	**19 42 21.7**	**+0.2**
	baz=220							
SLIU	**Shizi**	**1.79**	**218**	*e*P		**Pn**	**19 42 00.2**	**+0.2**
	baz=217							
SLIU				*e*S		**Sn**	**19 42 22.4**	**+0.5**
	baz=217							
WSSB	**Gushan**	**1.87**	**238**	*e*S		**Sb**	**19 42 27.2**	**-0.6**
	baz=237							
JKRS	**Kuro-shima**	**1.95**	**72**	P		**Pn**	**19 42 03.0**	**+0.9**
JKRS				*e*S		**Sn**	**19 42 26.5**	**+0.9**
HEN	**Hengchun**	**2.00**	**215**	*e*P		**Pn**	**19 42 03.2**	**+0.3**
	baz=208							
HEN				*e*S		**Sn**	**19 42 27.6**	**+0.8**
	baz=208							
TSEB	**Hengchuen, Pin**	**2.01**	**210**	*e*S		**Sn**	**19 42 27.9**	**+0.9**
	baz=211							
TWKBT	**Hengchun**	**2.01**	**213**	*e*P		**Pn**	**19 42 04.0**	**+0.9**
	baz=212							
TWKBT				*e*S		**Sn**	**19 42 26.7**	**-0.5**
	baz=212							
JIJ	**Ishigaki jima**	**2.10**	**70**	P		**Pn**	**19 42 04.6**	**+0.3**
JIJ				S		**Sn**	**19 42 29.8**	**+0.4**
WDGT	**Dungji**	**2.16**	**260**	*e*P		**Pn**	**19 42 05.6**	**+0.5**
	baz=259							
WDGT				*e*S		**Sn**	**19 42 31.3**	**+0.4**
	baz=259							
PHUB	**P'eng-hu**	**2.21**	**267**	*e*P		**Pn**	**19 42 06.0**	**+0.3**
	baz=266							
PHUB				*e*S		**Sn**	**19 42 33.1**	**+1.0**
	baz=266							
PNG	**Penghu**	**2.22**	**268**	*e*P		**Pn**	**19 42 06.8**	**+0.8**
	baz=268							
PNG				*e*S		**Sn**	**19 42 31.7**	**-0.7**
	baz=268							
VCHM	**Qimei**	**2.38**	**260**	*e*S		**Sn**	**19 42 35.7**	**-0.6**
	baz=259							
VWUC	**VWUC**	**2.67**	**301**	*e*P		**Pn**	**19 42 13.2**	**+1.1**
	baz=300							
VWUC				*e*S		**Sn**	**19 42 43.0**	**-0.3**
	baz=300							
JTJ	**Tarama**	**2.68**	**68**	P		**Pn**	**19 42 12.9**	**+0.7**
MATB	**Ma-tsu**	**3.10**	**324**	*e*P		**Pn**	**19 42 19.7**	**+1.7**
	baz=334							
MATB				*e*S		**Sn**	**19 42 55.5**	**+1.5**
	baz=334							
JIRB	**Irabujima**	**3.14**	**67**	P		**Pn**	**19 42 19.4**	**+0.8**
JMJ2	**Miyako jima3**	**3.25**	**70**	P		**Pn**	**19 42 21.2**	**+1.1**
KNMB	**Chin-men Tao**	**3.38**	**285**	*e*P		**Pn**	**19 42 22.9**	**+1.1**
	baz=284							
KNMB				*e*S		**Sn**	**19 42 60.0**	**-0.9**
	baz=284							
LYJJ	**Jianjiangzhen**	**3.52**	**326**	*e*S		**Sn**	**19 43 05.9**	**+1.6**
	baz=336							
MHZQ	**Yeshan**	**3.62**	**313**	*e*S		**Sn**	**19 43 06.2**	**-0.7**
	baz=312							
XPSS	**Dashiqiu**	**3.64**	**334**	*e*P		**Pn**	**19 42 27.0**	**+1.5**
	baz=333							
XPSS				*e*S		**Sn**	**19 43 08.0**	**+0.6**
	baz=333							
AXDP	**Jialang**	**3.86**	**290**	*e*P		**Pn**	**19 42 29.8**	**+1.3**
	baz=289							
AXDP				*e*S		**Sn**	**19 43 13.1**	**+0.2**
	baz=289							
ZPLA	**Ao Xicun**	**3.88**	**275**	*e*S		**Sn**	**19 43 14.7**	**+1.3**
	baz=286							

*IDC **07** 20:14:40.6±7.2, 10.87N×142.76E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=297.6km s-min=26.9km az=81.0, South of Mariana Islands*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.72**	**195**	P	P	20 21 05.3	-1.1
	0.2nm,0.6s,baz=18,slow=9.2,SNR=1.8 0.2nm,0.6s						
ASAR	**Alice Springs**	**35.40**	**194**	P	P	20 21 39.4	+0.9
	0.3nm,1.0s,baz=23,slow=12,SNR=1.3 0.3nm,1.0s						
MKAR	**Makanchi Array**	**62.04**	**317**	P	P	20 25 03.0	0.0
	0.5nm,0.8s,baz=101,slow=6.3,SNR=3.2 0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**65.39**	**321**	P	P	20 25 25.0	0.0
	2.0nm,0.7s,baz=110,slow=6.4,SNR=14 2.0nm,0.7s						

*IDC **07** 21:08:51.5±0.8, 54.15S×133.79W, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=45.0km s-min=22.7km az=173.0*

ISC 07 21:08:53.5±0.9, 54.0S±0.2×133.8W±0.2, h12km, n29, σ0.68/13, mb4.1/6, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**43.11**	**85**	T	T	22 02 51.8	
	baz=224,SNR=24						
H03S1	**Juan Fernandez**	**43.12**	**85**	T	T	22 02 51.6	
	baz=224,SNR=26						
H03S3	**Juan Fernandez**	**43.13**	**85**	T	T	22 02 52.2	
	baz=224,SNR=27						
H03N3	**Juan Fernandez**	**43.38**	**85**	T	T	22 03 07.6	
	baz=226,slow=72,SNR=208						
H03N2	**Juan Fernandez**	**43.39**	**85**	T	T	22 03 04.7	
	baz=226,slow=72,SNR=247						
H03N1	**Juan Fernandez**	**43.40**	**85**	T	T	22 03 16.5	
	baz=226,slow=72,SNR=195						
VNA3	**Neumayer Olymp**	**48.92**	**159**	P	**P**	**21 17 39.5**	**+0.7**
VNA2	**Neumayer--Watz**	**49.64**	**160**	P	**P**	**21 17 45.2**	**+0.9**
	baz=215,slow=8.0						
VNA1	**Neumayer--Stat**	**49.67**	**159**	P	**P**	**21 17 44.4**	**0.0**
SNAA	**Sanae**	**49.93**	**162**	P	**P**	**21 17 46.0**	**-0.6**
SNAA	**Sanae**	**49.93**	**162**	P	**P**	**21 17 46.0**	**-0.6**
	1.3nm,1.0s,baz=205,slow=13,SNR=3.1 1.3nm,1.0s						
TROLL	**Troll, Antarti**	**50.58**	**164**	P	**P**	**21 17 52.6**	**+1.0**
CPUP	**Villa Florida**	**61.31**	**96**	P	**P**	**21 19 08.1**	**-0.6**
	2.6nm,1.0s,baz=207,slow=2.3,SNR=3.9 2.6nm,1.0s						
LPAZ	**La Paz**	**62.71**	**80**	P	**P**	**21 19 18.9**	**-0.1**
	5.8nm,1.1s,baz=227,slow=5.4,SNR=8.0 5.8nm,1.1s						
ASAR	**Alice Springs**	**72.50**	**254**	P	**P**	**21 20 19.7**	**-0.4**
	1.4nm,0.9s,baz=140,slow=6.2,SNR=10 1.4nm,0.9s						
H01W1	**Cape Leeuwin H**	**73.86**	**232**	T	T	22 42 21.3	
	baz=145,slow=76,SNR=26						
H01W2	**Cape Leeuwin H**	**73.87**	**232**	T	T	22 42 20.1	
	baz=145,slow=76,SNR=33						
H01W3	**Cape Leeuwin H**	**73.88**	**232**	T	T	22 42 22.1	
	baz=145,slow=76,SNR=27						
WRA	**Warramunga Arr**	**75.18**	**257**	P	**P**	**21 20 35.2**	**-0.6**
	1.4nm,0.8s,baz=140,slow=5.2,SNR=9.8 1.4nm,0.8s						
TXAR	**Lajitas Array**	**87.03**	**26**	P	**P**	**21 21 39.1**	**+0.6**
	0.3nm,0.7s,baz=191,slow=9.2,SNR=3.0 0.3nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**88.31**	**305**	T	T	22 59 23.5	
	baz=148,slow=75,SNR=24						
H11S3	**WAKE ISLAND Hy**	**88.32**	**305**	T	T	22 59 22.4	
	baz=148,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**88.33**	**305**	T	T	22 59 28.7	
	baz=148,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**89.26**	**306**	T	T	23 00 33.9	
	baz=149,slow=76,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**89.27**	**306**	T	T	23 00 37.3	
	baz=149,slow=76,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**89.28**	**306**	T	T	23 00 32.5	
	baz=149,slow=76,SNR=6.2						
SONM	**Songino Array**	**142.59**	**286**	PKhKP	PKPpre	21 28 21.7	
	0.3nm,0.7s,baz=103,slow=4.6,SNR=1.9						
MKAR	**Makanchi Array**	**156.10**	**267**	PKPab	**PKPab**	**21 29 14.9**	**+0.4**
	0.3nm,0.8s,baz=108,slow=4.7,SNR=2.7						
ZALV	**Zalesovo Beam**	**157.48**	**286**	PKPab	**PKPab**	**21 29 20.6**	**+0.3**
	0.4nm,0.3s,baz=94,slow=4.3,SNR=4.3						

*IDC **07** 21:01:01.5±0.5, 53.79S×133.99W, h0km, mb4.4/14, mbtmp4.4/14, MS4.2/45, Error ellipse: s-maj=23.5km s-min=14.3km az=163.0*

*NEIC **07** 21:21:06.3±1.8, 54.02S±0.10×132.8W±0.1, h10km±1km, mb5.1/70, Error ellipse: s-maj=18.1km s-min=12.8km az=211.0*

*GCMT **07** 21:21:07.3±0.2, 54.05S±0.01×133.68W±0.02, h15km±1km, MW5.0/120, Moment Tensor Solution. s52,c65; s120,c180; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.21±.11; Mθθ2.61±.14; Mϕϕ-2.40±.10; Mrθ0.84±.23; Mθϕ3.06±.10; Mϕr1.09±.22; Best double couple: Mo4.17400×10^16 NP1:φs19.00000°, δ87.00000°, λ162.00000°. NP2:φs110.00000°, δ72.00000°, λ4.00000°. Principal axes: T 4.3880, Plg15.0000°, Azm333.0000°; N -0.4260, Plg72.0000°, Azm189.0000°; P -3.9600, Plg10.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 21:21:05.4±0.4, 54.01S±0.08×133.04W±0.08, h10km, n177, σ1.971/121, mb5.1/46, MS4.2/47, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**31.68**	**200**		**P**	**21 27 30.3**	**+1.9**
VA02	**Isla de Pascua**	**31.96**	**42**	P	**P**	**21 27 31.4**	**0.0**
RPN	**Rapa Nui**	**32.03**	**43**	LR	LR	21 37 11.5	
	comp=Z,627nm,20.9s,baz=214,slow=30						
VNDA	**Vanda**	**32.66**	**201**	P	**P**	**21 27 36.2**	**-0.8**
	0.7nm,0.9s,baz=80,slow=6.1,SNR=3.3						
VNDA				LR	LR	21 36 51.7	
	comp=Z,226nm,20.6s,baz=83,slow=29 0.7nm,0.9s						
VNDA	**Vanda**	**32.66**	**201**	P	**P**	**21 27 37.9**	**+0.9**
PMSA	**Palmer Station**	**34.91**	**136**	LR	LR	21 37 48.1	
	comp=Z,734nm,21.5s,baz=242,slow=28						
PMSA	**Palmer Station**	**34.91**	**136**	P	**P**	**21 27 56.7**	**0.0**
PMSA				IAmb	IAmb	21 28 34.6	
	comp=Z,26nm,0.9s						
GO10	**Punta Arenas**	**35.77**	**115**	P	**P**	**21 28 05.7**	**+1.3**
QSPA	**South Pole Qui**	**36.17**	**180**	P	**P**	**21 28 08.7**	**+1.0**
	comp=Z,6.7nm,1.1s,baz=99,slow=2.5,SNR=8.9						
QSPA				LR	LR	21 40 59.2	
	comp=Z,275nm,18.0s,baz=74,slow=33 comp=Z,6.7nm,1.1s						
QSPA	**South Pole Qui**	**36.17**	**180**	P	**P**	**21 28 07.9**	**+0.1**
QSPA				IAmb	IAmb	21 28 19.2	
	comp=Z,35nm,1.6s						
MG01	**Puerto William**	**36.78**	**119**	P	**P**	**21 28 14.8**	**+2.0**
BSWZ	**Blackbirch Sta**	**36.82**	**267**	P	**P**	**21 28 15.5**	**+2.2**
URZ	**Urewera**	**37.12**	**274**	LR	LR	21 39 58.9	
	comp=Z,396nm,18.8s,baz=188,slow=31						
RPZ	**Rata Peaks**	**37.27**	**263**	LR	LR	21 40 12.6	
	comp=Z,432nm,18.3s,baz=114,slow=31						
WKZ	**Wanaka**	**37.81**	**260**	P	**P**	**21 28 23.3**	**+1.6**
WKZ				IAmb	IAmb	21 28 52.7	
	comp=Z,54nm,1.3s						
WHZ	**Wether Hill Ro**	**37.82**	**258**	P	**P**	**21 28 24.2**	**+2.4**
WHZ				IAmb	IAmb	21 29 25.5	
	comp=Z,65nm,1.6s						
MEH	**Mehetia**	**37.89**	**336**	*e*T	T	22 08 13.8	
	comp=Z,24nm,0.4s						
TVO	**Taravao**	**38.27**	**335**	*e*T	T	22 08 42.9	
	comp=Z,2.7nm,0.3s						
PAE	**Paea**	**38.47**	**334**	*e*T	T	22 08 53.3	
	comp=Z,1.1nm,0.2s						
RAR	**Rarotonga**	**38.53**	**318**	LR	LR	21 38 57.7	
	comp=Z,698nm,20.8s,baz=148,slow=28						
PPT2	**Papeete2**	**38.54**	**334**	*e*S	**S**	**21 34 27.4**	**+3.6**
	comp=Z,60nm,24.8s						
PPT2				*e*LR	LR	21 38 59.8	
	comp=Z,690nm,21.2s						
PPT2				*e*LR	LR	21 39 00.6	
	comp=Z,1μm,23.0s						
PPT2	**

PLCA	**Paso Flores**	**42.95**	**98**	P	**P**	**21 29 06.2**	**+1.8**
	comp=Z,4.7nm,1.0s,baz=241,slow=17,SNR=3.7						
PLCA				LR	LR	21 42 33.9	
	comp=Z,256nm,20.1s,baz=231,slow=30						
	comp=Z,4.7nm,1.0s						
PLCA	**Paso Flores**	**42.95**	**98**	P	**P**	**21 29 04.3**	**-0.1**
GO06	**Curarrehue**	**43.16**	**97**	P	**P**	**21 29 06.8**	**+0.7**
ORCD	**Orcadas**	**44.63**	**136**	P	**P**	**21 29 18.0**	**+0.5**
ORCD				IAmb	IAmb	21 29 19.4	
	comp=Z,32nm,0.8s						
TAOE	**Nuku Hiva Isla**	**45.39**	**350**	*e*LR	LR	21 42 12.2	
	comp=Z,648nm,23.2s						
ML02	**Panimavida**	**45.75**	**93**	P	**P**	**21 29 27.1**	**+0.4**
ML02				IAmb	IAmb	21 29 44.3	
	comp=Z,43nm,1.2s						
GO05	**Huala**	**45.96**	**91**	P	**P**	**21 29 26.0**	**-2.4**
GO05				IAmb	IAmb	21 29 32.1	
	comp=Z,26nm,1.1s						
BO02	**Sierra Bellavi**	**46.79**	**92**	P	**P**	**21 29 35.5**	**+0.5**
BO02				IAmb	IAmb	21 29 45.5	
	comp=Z,23nm,1.2s						
LMEL	**Las Melosas**	**47.80**	**92**	P	**P**	**21 29 43.4**	**+0.4**
LMEL				IAmb	IAmb	21 29 56.3	
	comp=Z,20nm,1.1s						
MT05	**Renca**	**47.80**	**91**	P	**P**	**21 29 43.5**	**+0.6**
ROC1	**El Roble**	**47.93**	**90**	P	**P**	**21 29 42.1**	**-2.0**
ROC1				IAmb	IAmb	21 30 12.9	
	comp=Z,19nm,1.0s						
PEL	**Peldehue**	**48.01**	**91**	P	**P**	**21 29 43.8**	**-0.7**
VA03	**San Esteban**	**48.36**	**90**	P	**P**	**21 29 47.6**	**+0.3**
VNA3	**Neumayer Olymp**	**48.80**	**159**	P	**P**	**21 29 49.2**	**-0.9**
CO02	**Combarbal**	**49.21**	**88**	P	**P**	**21 29 53.3**	**-0.6**
VNA2	**Neumayer--Watz**	**49.52**	**159**	P	**P**	**21 29 54.9**	**-0.6**
	baz=214,slow=9.0						
VNA1	**Neumayer--Stat**	**49.55**	**159**	P	**P**	**21 29 55.3**	**-0.4**
TRQA	**Tornquist**	**49.70**	**102**	P	**P**	**21 29 57.1**	**-0.3**
TRQA				IAmb	IAmb	21 29 59.9	
	comp=Z,40nm,1.6s						
SNAA	**Sanae**	**49.82**	**162**	P	**P**	**21 29 56.9**	**-1.1**
SNAA	**Sanae**	**49.82**	**162**	LR	LR	21 48 56.8	
	comp=Z,546nm,21.8s,baz=194,slow=33						
SNAA	**Sanae**	**49.82**	**162**	P	**P**	**21 29 56.8**	**-1.1**
GO04	**Tololo Observa**	**50.08**	**88**	P	**P**	**21 29 60.0**	**-0.6**
GO04				IAmb	IAmb	21 30 18.0	
	comp=Z,46nm,1.2s						
AFI	**Afiamalu**	**50.21**	**308**	LR	LR	21 47 18.6	
	comp=Z,174nm,18.4s,baz=160,slow=32						
ZON	**Zonda**	**50.33**	**91**	P	**P**	**21 30 02.6**	**+0.3**
ZON				IAmb	IAmb	21 30 12.0	
	comp=Z,25nm,1.4s						
TROLL	**Troll, Antarti**	**50.49**	**164**	P	**P**	**21 30 00.8**	**-2.2**
CASY	**Casey**	**50.81**	**208**	P	**P**	**21 30 06.6**	**+1.3**
MSVF	**Nonsavu**	**52.11**	**294**	LR	LR	21 46 19.0	
	comp=Z,95nm,20.7s,baz=162,slow=30						
DZM	**Mont Dzumac**	**55.18**	**280**	LR	LR	21 50 55.9	
	comp=Z,156nm,18.6s,baz=205,slow=33						
DZM	**Mont Dzumac**	**55.18**	**280**	*e*LR	LR	21 46 42.5	
	comp=Z,408nm,29.1s						
PB10	**IPOC Station P**	**55.21**	**82**	P	**P**	**21 30 39.4**	**+1.0**
PB15	**IPOC Station P**	**56.08**	**83**	P	**P**	**21 30 45.5**	**+0.6**
PB15				IAmb	IAmb	21 30 55.7	
	comp=Z,18nm,1.0s						
PB04	**IPOC Station P**	**56.36**	**82**	P	**P**	**21 30 45.1**	**-1.7**
PB04				IAmb	IAmb	21 30 48.6	
	comp=Z,29nm,1.1s						
LVC	**Limon Verde**	**56.87**	**83**	LR	LR	21 50 33.0	
	comp=Z,38nm,21.6s,baz=217,slow=31						
LVC	**Limon Verde**	**56.87**	**83**	P	**P**	**21 30 49.3**	**-1.4**
LVC				IAmb	IAmb	21 30 53.4	
	comp=Z,39nm,1.6s						
PB09	**IPOC Station P**	**57.30**	**82**	P	**P**	**21 30 52.2**	**-1.3**
TA01	**Diego Aracena**	**57.71**	**81**	P	**P**	**21 30 55.4**	**-0.8**
TA01				IAmb	IAmb	21 31 34.5	
	comp=Z,23nm,0.9s						
PB01	**IPOC Station P**	**57.74**	**81**	P	**P**	**21 30 55.8**	**-0.8**
PB01				IAmb	IAmb	21 31 00.8	
	comp=Z,18nm,1.0s						
TA02	**Huaiquique**	**57.97**	**80**	P	**P**	**21 30 57.4**	**-0.6**
TA02				IAmb	IAmb	21 31 01.7	
	comp=Z,26nm,0.9s						
MAW	**Mawson**	**58.13**	**187**	P	**P**	**21 30 57.1**	**-1.3**
	comp=Z,6.1nm,0.8s,baz=178,slow=7.7,SNR=10						
MAW				LR	LR	21 55 31.5	
	comp=Z,127nm,18.5s,baz=155,slow=36						
	comp=Z,6.1nm,0.8s						
MAW	**Mawson**	**58.13**	**187**	P	**P**	**21 30 58.2**	**-0.3**
ITQB	**Itaqui**	**58.79**	**98**	P	**P**	**21 31 02.8**	**-0.9**
GO01	**Chusmiza**	**58.98**	**81**	P	**P**	**21 31 03.8**	**-1.9**
GO01				IAmb	IAmb	21 31 16.0	
	comp=Z,11nm,1.1s						
PLTB	**Pedras Altas**	**59.00**	**102**	P	**P**	**21 31 05.6**	**+0.4**
PLTB				IAmb	IAmb	21 31 07.6	
	comp=Z,21nm,1.2s						
PB16	**IPOC Station P**	**59.85**	**80**	P	**P**	**21 31 10.6**	**-1.2**
PB16				IAmb	IAmb	21 31 15.8	
	comp=Z,24nm,1.2s						
NNA	**Nana**	**60.80**	**69**	LR	LR	21 50 56.3	
	comp=Z,659nm,21.8s,baz=216,slow=29						
CPUP	**Villa Florida**	**60.87**	**95**	P	**P**	**21 31 18.4**	**+0.4**
	comp=Z,8.3nm,1.0s,baz=252,slow=7.8,SNR=8.1						
CPUP				LR	LR	21 53 27.7	
	comp=Z,392nm,20.3s,baz=224,slow=32						
	comp=Z,8.3nm,1.0s						
CPUP	**Villa Florida**	**60.87**	**95**	P	**P**	**21 31 17.4**	**-0.6**
CPUP				IAmb	IAmb	21 31 27.5	
	comp=Z,16nm,1.2s						
LPAZ	**La Paz**	**62.27**	**79**	P	**P**	**21 31 29.6**	**+1.3**
	comp=Z,18nm,1.0s,baz=189,slow=3.6,SNR=31						
LPAZ				LR	LR	21 52 26.3	
	comp=Z,106nm,21.8s,baz=229,slow=30						
	comp=Z,18nm,1.0s						
LPAZ	**La Paz**	**62.27**	**79**	P	**P**	**21 31 28.2**	**0.0**
STKA	**Stephens Creek**	**62.30**	**253**	P	P	21 31 22.7	-4.9
	comp=Z,2.2nm,0.9s,baz=145,slow=16,SNR=2.9						
STKA				LR	LR	21 53 44.1	
	comp=Z,130nm,20.2s,baz=158,slow=32						
	comp=Z,2.2nm,0.9s						
ATAH	**Atahualpa**	**63.99**	**64**	LR	LR	21 53 07.4	
	comp=Z,297nm,19.1s,baz=214,slow=30						
MCRA	**Macar, Loja**	**65.50**	**61**	P	**P**	**21 31 48.0**	**-1.0**
CZSB	**Cruzeiro do Su**	**66.58**	**70**	P	**P**	**21 31 55.7**	**-0.2**
CZSB				IAmb	IAmb	21 32 51.9	
	comp=Z,18nm,0.4s						
SIV	**San Ignacio**	**66.63**	**85**	LR	LR	21 57 32.4	
	comp=Z,94nm,20.5s,baz=292,slow=33						
BOSC	**San Juan Bosco**	**67.30**	**62**	P	**P**	**21 31 58.6**	**-1.9**
BOSC				IAmb	IAmb	21 32 02.9	
	comp=Z,11nm,0.8s						
PTLB	**Pontes e Lacer**	**68.19**	**86**	P	**P**	**21 32 05.7**	**-0.3**
PTLB				IAmb	IAmb	21 32 15.3	
	comp=Z,9.5nm,1.1s						
ETMB	**Extrema**	**68.55**	**77**	P	**P**	**21 32 07.5**	**-0.7**
ETMB				IAmb	IAmb	21 32 12.1	
	comp=Z,13nm,1.3s						
HNR	**Honiara**	**68.97**	**283**	LR	LR	21 55 18.7	
	comp=Z,81nm,20.7s,baz=184,slow=30						
VILB	**Vilhena**	**69.54**	**84**	P	**P**	**21 32 13.6**	**-0.8**
VILB				IAmb	IAmb	21 32 23.9	
	comp=Z,32nm,1.0s						
OTAV	**Otavalo**	**70.20**	**60**	P	**P**	**21 32 18.5**	**-0.5**
OTAV				IAmb	IAmb	21 32 31.7	
	comp=Z,15nm,1.3s						
SAML	**Samuel**	**71.00**	**79**	P	**P**	**21 32 23.1**	**-0.3**
SAML				IAmb	IAmb	21 32 25.1	
	comp=Z,12nm,1.1s						
ASAR	**Alice Springs**	**72.94**	**253**	P	P	21 32 29.4	-5.6
	comp=Z,4.7nm,0.9s,baz=139,slow=6.1,SNR=29						
ASAR				LR	LR	22 01 06.8	
	comp=Z,287nm,18.4s,baz=150,slow=33						
	comp=Z,4.7nm,0.9s						
H01W1	**Cape Leeuwin H**	**74.24**	**232**	T	T	22 54 28.2	
	baz=145,slow=76,SNR=108						
H01W2	**Cape Leeuwin H**	**74.25**	**232**	T	T	22 54 26.9	
	baz=145,slow=76,SNR=125						
H01W3	**Cape Leeuwin H**	**74.26**	**232**	T	T	22 54 29.0	
	baz=145,slow=76,SNR=118						
BDFB	**Brasilia**	**74.60**	**95**	P	**P**	**21 32 45.3**	**+0.5**
	comp=Z,9.9nm,1.0s,baz=119,slow=4.6,SNR=8.3						
BDFB				LR	LR	22 02 30.0	
	comp=Z,188nm,18.9s,baz=218,slow=33						
	comp=Z,9.9nm,1.0s						
BDFB	**Brasilia**	**74.60**	**95**	P	**P**	**21 32 43.7**	**-1.2**
BDFB				IAmb	IAmb	21 32 47.6	
	comp=Z,20nm,1.2s						
WB2	**Warramunga Arr**	**75.62**	**256**	P	**P**	**21 32 50.8**	**+0.2**
WRA	**Warramunga Arr**	**75.62**	**256**	P	P	21 32 44.7	-5.9
	comp=Z,5.7nm,0.9s,baz=139,slow=5.4,SNR=27						
WRA				LR	LR	22 02 19.9	
	comp=Z,291nm,20.1s,baz=208,slow=33						
	comp=Z,5.7nm,0.9s						
WRAB	**Tennant Creek**	**75.62**	**256**	P	**P**	**21 32 52.2**	**+1.6**
WRAB				IAmb	IAmb	21 35 18.9	
	comp=Z,24nm,1.5s						
RSD	**Rainshed**	**75.63**	**338**	P	**P**	**21 32 51.6**	**+1.0**
ROSC	**El Rosal**	**76.25**	**61**	P	**P**	**21 32 56.2**	**+1.6**
	comp=Z,7.2nm,0.4s,baz=106,slow=11,SNR=5.7						
ROSC				LR	LR	22 00 11.8	
	comp=Z,265nm,20.2s,baz=238,slow=31						
	comp=Z,7.2nm,0.4s						
ROSC	**El Rosal**	**76.25**	**61**	P	**P**	**21 32 54.0**	**-0.6**
ROSC				IAmb	IAmb	21 33 00.1	
	comp=Z,21nm,1.1s						
PMG	**Port Moresby**	**76.46**	**273**	LR	LR	22 02 19.1	
	comp=Z,123nm,18.6s,baz=121,slow=33						
CRIN	**San Cristobal**	**77.06**	**46**	P	**P**	**21 32 59.0**	**+0.3**
MACA	**Manacapuru-AM**	**77.12**	**77**	P	**P**	**21 32 58.0**	**-1.1**
MACA				IAmb	IAmb	21 33 00.8	
	comp=Z,19nm,0.9s						
LPIG	**La Paz**	**80.23**	**21**	LR	LR	22 00 00.7	
	comp=Z,67nm,19.3s,baz=206,slow=29						
SDV	**Santo Domingo**	**81.59**	**62**	LR	LR	22 03 52.2	
	comp=Z,116nm,21.9s,baz=175,slow=31						
BOAV	**Boa Vista**	**81.74**	**74**	P	**P**	**21 33 22.7**	**-1.5**
BOAV				IAmb	IAmb	21 33 32.6	
	comp=Z,7.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**82.01**	**250**	P	P	21 33 20.9	-4.7
	comp=Z,2.8nm,0.9s,baz=174,slow=7.8,SNR=5.3						
FITZ				LR	LR	22 06 34.1	
	comp=Z,220nm,18.1s,baz=152,slow=34						
	comp=Z,2.8nm,0.9s						
BAUV	**El Baul**	**83.00**	**64**	P	**P**	**21 33 30.0**	**-0.8**
BAUV				IAmb	IAmb	21 33 32.4	
	comp=Z,24nm,1.1s						
TX32	**Lajitas Array**	**86.80**	**25**	P	**P**	**21 33 51.0**	**+1.3**
TXAR	**Lajitas Array**	**86.80**	**25**	P	**P**	**21 33 49.0**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=193,slow=7.8,SNR=7.6						
	comp=Z,1.2nm,1.0s						
TX31	**Lajitas Ar. Si**	**86.81**	**25**	P	**P**	**21 33 51.1**	**+1.4**
TX31				IAmb	IAmb	21 34 35.7	
	comp=Z,27nm,1.7s						
113A	**Mohawk Valley,**	**88.02**	**16**	P	**P**	**21 33 57.1**	**+1.9**
TUC	**Tucson**	**88.09**	**19**	P	**P**	**21 33 56.4**	**+0.6**
TUC				IAmb	IAmb	21 34 05.8	
	comp=Z,8.1nm,1.3s						
PFO	**Pinyon Flats O**	**88.43**	**14**	LR	LR	22 03 59.3	
	comp=Z,110nm,21.4s,baz=196,slow=29						
MDP	**Montagnes des**	**88.47**	**79**	LR	LR	22 07 51.9	
	comp=Z,113nm,21.8s,baz=209,slow=32						
H11S2	**WAKE ISLAND Hy**	**88.65**	**304**	T	T	23 11 37.1	
	baz=148,slow=75,SNR=65						
H11S3	**WAKE ISLAND Hy**	**88.67**	**304**	T	T	23 11 34.8	
	baz=148,slow=75,SNR=58						
H11S1	**WAKE ISLAND Hy**	**88.67**	**304**	T	T	23 11 55.7	
	baz=148,slow=75,SNR=36						
RCBR	**Riachuelo**	**89.52**	**99**	LR	LR	22 11 43.2	
	comp=Z,318nm,18.0s,baz=348,slow=34						
HKT	**Hockley**	**89.59**	**32**	P	**P**	**21 34 03.6**	**+0.9**
H11N3	**WAKE ISLAND Hy**	**89.60**	**305**	T	T	23 12 43.9	
	baz=149,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**89.61**	**305**	T	T	23 12 52.3	
	baz=149,slow=76,SNR=22						
H11N2	**WAKE ISLAND Hy**	**89.62**	**305**	T	T	23 12 45.2	
	baz=149,slow=76,SNR=19						
SUR	**Sutherland**	**91.04**	**158**	LR	LR	22 08 02.5	
	comp=Z,184nm,21.4s,baz=182,slow=31						
SHPR	**Sheep Range**	**91.46**	**14**	P	**P**	**21 34 13.7**	**+2.1**
ANMO	**Albuquerque**	**91.53**	**22**	LR	LR	22 07 57.7	
	comp=Z,56nm,19.7s,baz=196,slow=31						
ANMO	**Albuquerque**	**91.53**	**22**	P	**P**	**21 34 11.4**	**-0.6**
SJG	**San Juan**	**91.67**	**61**	LR	LR	22 10 21.0	
	comp=Z,86nm,19.5s,baz=245,slow=32						
U15A	**North Rim**	**91.84**	**17**	P	**P**	**21 34 14.2**	**+0.7**
U15A				IAmb	IAmb	21 34 23.3	
	comp=Z,6.6nm,1.0s						
SIJI	**Sorong**	**92.66**	**265**	LR	LR	22 12 51.5	
	comp=Z,66nm,21.5s,baz=68,slow=34						
NVAR	**Mina Array Bea**	**92.94**	**12**	P	**P**	**21 34 17.2**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=193,slow=7.4,SNR=2.2						
NVAR				LR	LR	22 06 59.4	
	comp=Z,135nm,19.8s,baz=176,slow=30						
	comp=Z,0.1nm,0.3s						
R11A	**Troy Canyon, C**	**93.21**	**14**	P	**P**	**21 34 21.0**	**+1.4**
ELK	**Elko**	**95.61**	**13**	LR	LR	22 09 58.2	
	comp=Z,71nm,19.6s,baz=218,slow=31						
YBH	**Yreka Blue Hor**	**95.78**	**8**	LR	LR	22 08 15.4	
	comp=Z,166nm,19.7s,baz=175,slow=30						
KAPI	**Kappang**	**95.96**	**253**	LR	LR	22 13 40.3	
	comp=Z,81nm,20.5s,baz=132,slow=33						
GUMO	**Guam**	**96.28**	**284**	LR	LR	22 09 41.5	
	comp=Z,37nm,21.5s,baz=169,slow=30						
PDAR	**Pinedale Array**	**98.46**	**1**	LR	LR	22 12 06.4	
	comp=Z,103nm,18.4s,baz=212,slow=31						
TKL	**Tuckaleechee C**	**98.90**	**39**	LR	LR	22 12 43.3	
	comp=Z,59nm,20.7s,baz=208,slow=31						
LBTB	**Lobatse**	**99.17**	**160**	LR	LR	22 15 01.6	
	comp=Z,167nm,19.7s,baz=182,slow=32						
H02S1	**DAWSON INLET T**	**100.86**	**4**	**0**	T	23 34 52.7	
	SNR=4.8						
ILAR	**Eielson Array**	**118.92**	**353**	PKP	**PKPdf**	**21 39 49.1**	**-3.5**
	comp=Z,0.7nm,0.7s,baz=209,slow=1.9,SNR=6.3						
ILAR				PKKPbc	**PKKPbc**	**21 50 12.4**	**+4.9**
	comp=Z,0.3nm,0.7s,baz=21,slow=4.4,SNR=4.4						
TORD	**Torodi Ar. Bea**	**125.95**	**121**	PKP	**PKPdf**	**21 40 05.2**	**-2.5**
	comp=Z,1.3nm,0.8s,baz=174,slow=1.5,SNR=6.0						
PZH	**PanZhiHua**	**131.55**	**258**	PKP	**PKiKP**	**21 40 20.8**	**+1.7**
CD2	**Chengdu**	**133.66**	**264**	*e*PKP	**PKPdf**	**21 40 22.8**	**+0.9**
HHC	**Hu-ho-hao-te**	**135.89**	**280**	*e*PKP	**PKPdf**	**21 40 24.9**	**-0.9**
LZH	**Lanzhou**	**137.27**	**269**	*e*PKP	**PKPdf**	**21 40 28.6**	**0.0**
SONM	**Songino Array**	**143.01**	**285**	PKhKP	PKPpre	21 40 31.6	
	comp=Z,1.9nm,1.1s,baz=160,slow=3.3,SNR=8.3						
ESDC	**Sonseca Array**	**143.17**	**92**	PKP	PKPbc	21 40 37.1	+1.1
	comp=Z,2.1nm,1.0s,baz=226,slow=2.9,SNR=8.5						
KEST	**Kesra**	**148.18**	**110**	PKPbc	**PKPbc**	**21 40 51.8**	**+0.7**
	comp=Z,9.5nm,1.0s,baz=282,slow=6.1,SNR=6.0						
RAYN	**Ar Rayn**	**149.54**	**177**		**PKPdf**	**21 40 50.6**	**+0.3**
EKA	**Eskdalemuir Ar**	**151.49**	**67**	PKPbc	**PKPbc**	**21 40 57.4**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=242,slow=1.8,SNR=4.4						
WMQ	**Urumqi**	**151.73**	**266**	*e*PKPbc	**PKPdf**	**21 40 54.5**	**+1.4**
BNI	**Bardonecchia**	**152.69**	**93**	PKPdf	**PKPdf**	**21 40 55.5**	**+0.9**
DAVOX	**Davos/Dischmat**	**155.51**	**92**	PKP	**PKPdf**	**21 40 56.4**	**-2.1**
	comp=Z,1.9nm,0.8s,baz=360,slow=14,SNR=2.8						
DAVOX				PKPab	**PKPab**	**21 41 24.5**	**0.0**
	comp=Z,5.4nm,0.9s,baz=189,slow=3.6,SNR=9.2						
DAVA	**Damuels**	**155.76**	**91**	*e*P	**PKPab**	**21 41 25.2**	**-0.3**
	comp=Z,5.6nm,0.9s						
FETA	**Feichten**	**156.13**	**92**	*e*P	**PKPab**	**21 41 28.9**	**+1.7**
	comp=Z,7.2nm,1.2s						
RETA	**Reutte**	**156.38**	**91**	*e*P	**PKPab**	**21 41 28.6**	**+0.5**
	comp=Z,5.9nm,1.1s						
MOTA	**Moosalm**	**156.51**	**92**	*e*P	**PKPab**	**21 41 28.9**	**+0.2**
	comp=Z,6.1nm,1.0s						
SQTA	**Sant Quirin**	**156.51**	**92**	*e*P	**PKPab**	**21 41 28.5**	**-0.2**
	comp=Z,14nm,1.3s						
MKAR	**Makanchi Array**	**156.54**	**267**	PKPab	**PKPab**	**21 41 24.1**	**-4.6**
	comp=Z,2.4nm,0.9s,baz=121,slow=5.0,SNR=11						
MKAR				PP	**PP**	**21 45 01.9**	**-5.5**
	comp=Z,0.6nm,0.9s,baz=148,slow=12,SNR=2.7						
ABTA	**Abfaltersbach**	**157.04**	**94**	*e*P	**PKPab**	**21 41 30.8**	**-0.2**
	comp=Z,7.8nm,0.9s						
ZALV	**Zalesovo Beam**	**157.91**	**285**	PKPab	**PKPab**	**21 41 28.8**	**-5.5**
	comp=Z,3.2nm,0.8s,baz=119,slow=5.2,SNR=11						
OBKA	**Obir**	**158.11**	**97**	P	**PKPab**	**21 41 36.3**	**+0.7**
	comp=Z,15nm,1.5s						
SOKA	**Soboth**	**158.49**	**97**	*e*P	**PKPab**	**21 41 38.3**	**+1.1**
	comp=Z,5.8nm,1.6s						
MOA	**Molln**	**158.63**	**93**	*e*P	**PKPab**	**21 41 38.4**	**+0.7**
	comp=Z,5.6nm,1.2s						
GERES	**GERESS Array B**	**158.76**	**90**	PKPab	**PKPab**	**21 41 36.3**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=224,slow=3.7,SNR=7.3						
CLL	**Collm**	**159.34**	**84**	*e*PKPdf	**PKPdf**	**21 41 05.0**	**+2.1**
CLL				*i* PKPab	**PKPab**	**21 41 41.3**	**+0.7**
	comp=Z,34nm,1.8s						
CLL				*i* pPKPab	**sPKPab**	**21 41 49.6**	**+6.2**
RONA	**Rosalia, Austr**	**159.75**	**96**	*e*P	**PKPab**	**21 41 42.0**	**-0.6**
	comp=Z,3.3nm,0.9s						
BRTR	**Keskin Array B**	**163.10**	**142**	PKPab	**PKPab**	**21 41 56.4**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=182,slow=6.8,SNR=4.9						
AKASG	**Malin Array Be**	**168.66**	**100**	PKPab	**PKPab**	**21 42 21.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=264,slow=2.3,SNR=6.1						
AKTO	**Aktyubinsk**	**172.33**	**247**	PKPab	**PKPab**	**21 42 32.5**	**-5.4**
	comp=Z,0.6nm,0.5s,baz=108,slow=6.9,SNR=2.3						

*IDC **07** 21:42:54.3±1.3,5°.70S×106°.79E, h177km±14km, mb3.4/6, mbtmp3.9/6, Error ellipse: s-maj=78.1km s-min=15.8km az=47.0*

*DJA **07** 21:42:54.6±0.4,6°.5S×6°.×10°6E±°, h168km±4km, M4.0/13, mb4.3/2, mB5.1/1, MLv3.8/13, Mw(mB)4.5/1*

ISC 07 21:42:53.5±0.9, 6°.5S±0°.2×106°.4E±0°.1, h200km, n25, σ2°.3 31/24, mb3.7/6, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**0.39**	**99**	P	**Pn**	**21 43 16.8**	**-3.5**
DBJI				S	**Sn**	**21 43 36.6**	**-4.3**
SBJI	**Serang**	**0.43**	**329**	P	Pn	21 43 38.8	+18
CBJI	**Citeko**	**0.49**	**81**	P	**Pn**	**21 43 19.0**	**-1.6**
SKJI	**Sukabumi**	**0.55**	**159**	P	**Pn**	**21 43 19.9**	**-0.9**
SKJI				S	**Sn**	**21 43 38.5**	**-3.6**
CNJI	**Cibinong**	**1.11**	**137**	P	**Pn**	**21 43 22.4**	**-1.7**
CNJI				S	**Sn**	**21 43 43.6**	**-4.2**
LEM	**Lembang**	**1.29**	**105**	P	**Pn**	**21 43 24.9**	**-0.7**
	316nm,0.8s,baz=338,slow=19,SNR=59						
LEM	**Lembang**	**1.29**	**105**	P	**Pn**	**21 43 24.3**	**-1.4**
BLSI	**Bandar Lampung**	**1.57**	**315**	P	**Pn**	**21 43 27.4**	**-0.5**
JCJI	**Jatiwangi**	**1.90**	**90**	P	**Pn**	**21 43 29.9**	**-1.1**
KASI	**Kota Agung**	**2.09**	**297**	P	**Pn**	**21 43 32.8**	**-0.1**
KASI				S	**Sn**	**21 44 01.9**	**-1.7**
LWLI	**Liwa**	**2.72**	**303**	P	**Pn**	**21 43 38.7**	**-1.3**
MNAI	**Manna**	**4.00**	**302**	P	**Pn**	**21 43 55.8**	**+0.5**
UGM	**Wanagama**	**4.37**	**109**	P	**Pn**	**21 43 59.5**	**-0.4**
PWJI	**Pagerwojo**	**5.61**	**106**	P	**Pn**	**21 44 15.5**	**-0.3**
	0.2nm20nm,2.2s						
KRJI	**Kerinci**	**6.55**	**312**	P	**Pn**	**21 44 29.3**	**+1.2**
PPI	**Padang Panjang**	**8.45**	**315**	P	Pn	21 45 02.9	+10
MNSI	**Mandailing Nat**	**9.91**	**317**	P	**Pn**	**21 45 10.2**	**-1.5**
GSI	**Gunungsitoli**	**11.70**	**311**	P	Pn	21 45 28.9	-5.8
PCI	**Palu**	**14.55**	**68**	P	Pn	21 45 58.1	-12
WRA	**Warramunga Arr**	**30.27**	**119**	P	**P**	**21 48 49.5**	**+3.4**
	0.3nm,0.7s,baz=307,slow=8.9,SNR=4.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**31.50**	**126**	P	**P**	**21 49 00.6**	**+3.6**
	0.6nm,0.5s,baz=295,slow=8.1,SNR=9.0						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**41.45**	**132**	P	P	21 50 25.4	+4.5
	2.0nm,0.6s,baz=299,slow=8.4,SNR=8.2						
	2.0nm,0.6s						
MKAR	**Makanchi Array**	**57.20**	**341**	P	**P**	**21 52 19.4**	**-0.3**
	0.5nm,0.5s,baz=158,slow=8.7,SNR=6.3						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**61.76**	**340**	P	**P**	**21 52 49.2**	**-1.6**
	0.6nm,0.2s,baz=160,slow=5.6,SNR=1.9						
	0.6nm,0.2s						
BRTR	**Keskin Array B**	**81.02**	**312**	P	**P**	**21 54 48.5**	**+2.1**
	1.3nm,0.7s,baz=139,slow=8.9,SNR=11						
	1.3nm,0.7s						

DJA 07 21:43:59.4±0.6, 3°.S±4°.×10°.0E±°, h28km±4km, M2.7/5, mb1.8/1, MLv3.2/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPSI	**Pulau Pagai**	**0.41**	**347**	P	Pn	21 44 09.5	0.0
PPSI				S	Sn	21 44 17.3	+1.0
PPSI	**Pulau Pagai**	**0.41**	**347**	P	Pn	21 44 09.6	+0.1
KRJI	**Kerinci**	**1.73**	**52**	P	Pn	21 44 28.5	+0.7
SISI	**Saibi**	**2.09**	**331**	P	Pn	21 44 32.5	+0.2
SISI				S	Sn	21 44 58.3	+0.6

*IDC **07** 21:54:33.5±3.8, 5°.37S×102°.86E, h0km, mb3.8/6, mbtmp3.8/6, MS3.3/2, Error ellipse: s-maj=159.3km s-min=22.2km az=54.0*

*DJA **07** 21:54:39.4±0

BAUV	**El Baul**	**1.71**	**195**	*eP*	Pb	21 59 36.0	-0.4
BAUV				*eS*	Sn	21 59 56.9	-0.7
MERV	**Las Mercedes**	**1.86**	**136**	*eP*	Pn	21 59 37.2	0.0
MERV				*eS*	Sn	22 00 01.3	0.0
SIQV	**Siquisique**	**2.17**	**271**	*eP*	Pn	21 59 41.0	-0.6
SIQV				*eS*	Sn	22 00 07.0	-2.1
SANV	**Sanarito**	**2.20**	**240**	*eP*	Pn	21 59 42.2	+0.2
SANV				*eS*	Sn	22 00 09.6	-0.3
CURV	**Curarigua**	**2.40**	**256**	*eP*	Pn	21 59 44.1	-0.6
CURV				*eS*	Sn	22 00 13.3	-1.5
PCRV	**Puerto La Cruz**	**2.95**	**98**	*eP*	Pn	21 59 52.6	+0.4
PCRV				*eS*	Sn	22 00 27.3	-0.9
CACV	**CAICARA DEL OR**	**3.19**	**161**	*eP*	Pn	21 59 58.2	+2.6
CACV				*eS*	Sn	22 00 37.0	+2.7
SOCV	**Socops**	**3.95**	**235**	*eP*	Pn	22 00 05.2	-0.9
SOCV				*eS*	Sn	22 00 49.2	-3.9
PAYV	**Puerto Ayacuch**	**5.15**	**181**	*eP*	Pn	22 00 20.9	-1.6
PAYV				*eS*	Sn	22 01 17.3	-5.2

*JMA **07** 22:02:31.2±0.2,30°.0N±0°.7×13°.9E±°, h455km±3km, MV3.7/22,NEAR TORISHIMA IS*
*IDC **07** 22:02:32.2±0.8,30°.03N×138°.79E, h412km±8km, mb3.7/22, mbtmp4.4/27,Error ellipse: s-maj=11.7km s-min=7.7km az=79.0*
*NEIC **07** 22:02:33.6±1.3,29°.97N±0°.10×138°.8E±0°.1, h425km±8km, mb4.3/65, Error ellipse: s-maj=16.4km s-min=13.9km az=102.0*

ISC 07 22:02:32.6±0.4,**30°.00N**±0°.05×**138°.84E**±0°.06,**h421**km,
n142,σ1§**15**/156,**mb4.2**/57,**1C-1D**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.17**	**15**	*eP*	**P**	**P**	**22 03 39.8**	**+1.1**
JHJ2	**Mitsune**	**3.21**	**15**	P	**P**	**P**	**22 03 40.3**	**+1.3**
JHJ2	**Mitsune**	**3.21**	**15**	*eP*	**P**	**P**	**22 03 40.2**	**+1.3**
TK02	**Tokai 2**	**4.04**	**347**	P	**P**	**P**	**22 03 47.3**	**+1.4**
CBIJ	**Chichi jima**	**4.13**	**134**	P	**P**	**P**	**22 03 47.3**	**+0.1**
CBIJ				*eS*	**S**	**S**	**22 04 46.9**	**-0.8**
JCJ	**Chichijima**	**4.13**	**134**	P	**P**	**P**	**22 03 46.9**	**-0.3**
JCJ	193nm,0.4s,baz=273,slow=23,SNR=31			S	**S**	**S**	**22 04 45.4**	**-2.4**
	312nm,0.5s,baz=289,slow=23,SNR=10							
JCJ	**Chichijima**	**4.13**	**134**	P	**P**	**P**	**22 03 47.6**	**+0.5**
JTNC	**Tanabenakahech**	**4.69**	**325**	P	**P**	**P**	**22 03 54.8**	**+2.4**
JIE	**Ise**	**4.74**	**338**	*eP*	**P**	**P**	**22 03 55.0**	**+2.2**
BSO1	**Boso 1**	**4.98**	**21**	P	**P**	**P**	**22 03 55.1**	**+0.5**
BSO1				S	**S**	**S**	**22 05 00.7**	**-1.0**
JOD2	**Odawara 2**	**5.25**	**2**	P	**P**	**P**	**22 03 58.7**	**+0.7**
JOD2				*eS*	**S**	**S**	**22 05 07.4**	**-0.4**
INU	**Inuyama**	**5.55**	**344**	P	**P**	**P**	**22 04 02.8**	**+1.8**
JMN	**Monobe**	**5.62**	**313**	P	**P**	**P**	**22 04 04.3**	**+2.5**
JGF	**Kuroka**	**5.72**	**348**	P	**P**	**P**	**22 04 04.4**	**+1.5**
JRY	**Ryogami san**	**6.00**	**0**	P	**P**	**P**	**22 04 06.2**	**+0.5**
JRY				*eS*	**S**	**S**	**22 05 20.9**	**-1.2**
MJAR	**Matsushiro Arr**	**6.55**	**356**	P	**P**	**P**	**22 04 10.1**	**-1.9**
MJAR	4.5nm,0.3s,baz=192,slow=13,SNR=23			S	**S**	**S**	**22 05 29.9**	**-2.9**
	5.0nm,0.6s,baz=118,slow=22,SNR=8.8							
MAJO	**Matsushiro**	**6.55**	**356**		**P**	**P**	**22 04 12.4**	**+0.4**
JHS	**Saijyo**	**6.94**	**317**		**P**	**P**	**22 04 16.9**	**+0.6**
JHS	**Saijyo**	**6.94**	**317**	*eP*	**P**	**P**	**22 04 18.0**	**+1.7**
JNU	**Nakatsue**	**7.47**	**297**	P	**P**	**P**	**22 04 23.1**	**+1.0**
JMM	**Marumori**	**8.02**	**11**	P	**P**	**P**	**22 04 28.3**	**+0.5**
JSJ	**Shimokoshiki**	**8.02**	**284**	P	**P**	**P**	**22 04 30.0**	**+1.9**
JSD	**Sado**	**8.03**	**357**		**P**	**P**	**22 04 27.5**	**-0.5**
JMK	**Ichinoseki**	**9.15**	**12**	P	**P**	**P**	**22 04 39.4**	**-0.8**
JMK				S	**S**	**S**	**22 06 20.9**	**-4.7**
JTU	**Tsushima**	**9.18**	**302**	P	**P**	**P**	**22 04 42.7**	**+2.0**
JTU	**Tsushima**	**9.18**	**302**	*eP*	**P**	**P**	**22 04 42.6**	**+1.9**
KSBUS	**Busan**	**9.73**	**305**		**P**	**P**	**22 04 48.7**	**+1.9**
JTM	**Tenmabayashi**	**10.92**	**9**	P	**P**	**P**	**22 05 01.4**	**+1.6**
NAWB	**Namwon**	**11.05**	**302**	P	**P**	**P**	**22 05 02.3**	**+1.0**
JOT	**Ohata**	**11.50**	**8**	P	**P**	**P**	**22 05 05.7**	**-0.5**
TJN	**Taejon**	**11.52**	**307**	P	**P**	**P**	**22 05 06.3**	**-0.2**
KSRS	**Korea Array**	**11.73**	**312**	P	**P**	**P**	**22 05 08.0**	**-0.9**
KSRS	4.0nm,0.5s,baz=126,slow=11,SNR=37			ScP	**ScP**	**ScP**	**22 13 09.8**	**-2.0**
	0.8nm,0.5s,baz=149,slow=1.8,SNR=5.7							
KS19	**Wonju Array Si**	**11.80**	**312**	P	**P**	**P**	**22 05 10.0**	**+0.4**
SEHB	**SEOHWA**	**12.03**	**316**		**P**	**P**	**22 05 12.7**	**+0.6**
USRK	**Ussuriysk Ar.**	**15.18**	**341**	P	**P**	**P**	**22 05 46.7**	**+0.5**
	1.7nm,0.4s,baz=160,slow=8.5,SNR=7.9							
NACB	**Ninganchiao**	**16.41**	**253**	P	**P**	**P**	**22 05 57.8**	**-1.8**
YULB	**Yu-li**	**16.99**	**251**	P	**P**	**P**	**22 06 05.0**	**-0.7**
YULB				IAmb	IAmb	IAmb	22 06 10.5	
	comp=Z,12nm,0.7s							
SSLB	**Suanglung**	**17.10**	**253**	P	**P**	**P**	**22 06 07.1**	**+0.1**
BNX	**BinXian**	**18.09**	**333**	⇑P	**P**	**P**	**22 06 17.1**	**0.0**
BNX				pmax	pmax			
	comp=Z,16nm,0.6s							
BNX				pmax	pmax			
	comp=Z,100nm,5.9s							
KLR	**Kul'dur**	**19.95**	**346**	P	**P**	**P**	**22 06 35.2**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=145,slow=9.9,SNR=6.0							
BJT	**Baijiatuau**	**21.04**	**304**	P	**P**	**P**	**22 06 45.1**	**0.0**
BJT				IAmb	IAmb	IAmb	22 06 45.2	
	comp=Z,11nm,0.9s							
ENH	**Enshi**	**25.36**	**278**	P	**P**	**P**	**22 07 23.7**	**-0.4**
XAN	**Xi'an**	**25.64**	**287**	P	**P**	**P**	**22 07 26.0**	**-0.6**
XAN				pmax	pmax			
	comp=Z,19nm,0.9s							
PETK	**Petropavlovsk-**	**26.90**	**26**	P	**P**	**P**	**22 07 37.4**	**0.0**
	comp=Z,3.0nm,0.7s,baz=197,slow=8.8,SNR=7.0							
	comp=Z,3.0nm,0.7s							
LZH	**Lanzhou**	**29.85**	**291**	*eP*	**P**	**P**	**22 08 03.8**	**0.0**
LZH				pmax	pmax			
	comp=Z,19nm,1.5s							
ULN	**Ulaanbaatar**	**30.20**	**315**	P	**P**	**P**	**22 08 06.9**	**+0.2**
ULN				IAmb	IAmb	IAmb	22 08 07.9	
	comp=Z,10nm,1.1s							
SONM	**Songino Array**	**30.59**	**315**	P	**P**	**P**	**22 08 10.1**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=123,slow=8.1,SNR=15							
	comp=Z,1.8nm,0.4s							
MA2	**Magadan**	**30.66**	**12**	P	**P**	**P**	**22 08 10.6**	**+0.2**
	comp=Z,9.2nm,0.6s,baz=196,slow=9.3,SNR=7.7							
	comp=Z,9.2nm,0.6s							
MA2	**Magadan**	**30.66**	**12**	P	**P**	**P**	**22 08 11.3**	**+1.0**
MA2				IAmb	IAmb	IAmb	22 08 12.9	
	comp=Z,11nm,0.7s							
GTA	**Gaotai**	**33.21**	**297**	⇓P	**P**	**P**	**22 08 32.2**	**-0.5**
GTA				pmax	pmax			
	comp=Z,13nm,0.5s							
SEY	**Seymchan**	**34.09**	**11**	P	**P**	**P**	**22 08 40.6**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=199,slow=6.2,SNR=13							
	comp=Z,3.5nm,0.8s							
GOMU	**GeErMu**	**37.15**	**291**	P	**P**	**P**	**22 09 07.0**	**+0.8**
GOMU				pmax	pmax			
	comp=Z,20nm,0.7s							
GOMU				pmax	pmax			
	comp=Z,39nm,5.2s							
CHTO	**Chiang Mai**	**37.82**	**262**	P	**P**	**P**	**22 09 11.3**	**-0.2**
CHTO				IAmb	IAmb	IAmb	22 09 12.6	
	comp=Z,12nm,0.8s							
CM31	**Chiang Mai Arr**	**37.97**	**262**	P	**P**	**P**	**22 09 12.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**37.97**	**262**	P	**P**	**P**	**22 09 13.1**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=49,slow=7.2,SNR=20							
	comp=Z,2.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**37.97**	**262**	P	**P**	**P**	**22 09 12.5**	**-0.2**
ZAA0	**Zalesovo Array**	**45.37**	**318**	P	**P**	**P**	**22 10 10.6**	**-0.6**
ZAA0				IAmb	IAmb	IAmb	22 10 11.5	
	comp=Z,5.0nm,0.6s							
ZALV	**Zalesovo Beam**	**45.37**	**318**	P	**P**	**P**	**22 10 10.8**	**-0.4**
	comp=Z,4.2nm,0.4s,baz=101,slow=8.3,SNR=25							
ZALV				PcP	**PcP**	**PcP**	**22 11 42.1**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=100,slow=3.5,SNR=6.9							
ZALV				ScP	**ScP**	**ScP**	**22 14 52.3**	**-1.8**
	comp=Z,1.7nm,0.6s,baz=113,slow=4.8,SNR=8.1							
	comp=Z,4.2nm,0.4s							
ZALV	**Zalesovo Beam**	**45.37**	**318**	P	**P**	**P**	**22 10 10.6**	**-0.7**
RAMN	**Ramite**	**45.70**	**280**	*eP*	**P**	**P**	**22 10 14.6**	**+0.1**
	comp=Z,34nm,0.5s							
JIRN	**Jiri**	**45.85**	**281**	*eP*	**P**	**P**	**22 10 16.3**	**+0.5**
	comp=Z,58nm,0.4s							
GUN	**Gumba**	**46.04**	**281**	*eP*	**P**	**P**	**22 10 17.8**	**+0.5**
	comp=Z,36nm,0.4s							
MK31	**Makanchi Array**	**46.37**	**308**	P	**P**	**P**	**22 10 18.8**	**-0.3**
MKAR	**Makanchi Array**	**46.37**	**308**	P	**P**	**P**	**22 10 18.9**	**-0.2**
	comp=Z,3.5nm,0.4s,baz=88,slow=11,SNR=87							
MKAR				PcP	**pwP**		**22 11 45.8**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=91,slow=4.7,SNR=5.7							
MKAR				ScP	**ScP**	**ScP**	**22 14 56.5**	**-1.9**
	comp=Z,0.9nm,0.7s,baz=78,slow=7.6,SNR=6.2							
	comp=Z,3.5nm,0.4s							
MKAR	**Makanchi Array**	**46.37**	**308**	P	**P**	**P**	**22 10 18.8**	**-0.3**
KNRA	**Kununurra**	**46.44**	**193**	P	**P**	**P**	**22 10 19.9**	**+0.1**
KNRA				IAmb	IAmb	IAmb	22 10 21.8	
	comp=Z,9.2nm,0.9s							
PKI	**Pulchoki**	**46.54**	**281**	*eP*	**P**	**P**	**22 10 20.8**	**-0.2**
PKIN	**Phulchoki**	**46.55**	**281**	*eP*	**P**	**P**	**22 10 20.8**	**-0.2**
	comp=Z,5.8nm,0.4s							
DMN	**Daman**	**46.79**	**281**	*eP*	**P**	**P**	**22 10 22.9**	**+0.1**
	comp=Z,16nm,0.4s							
GKN	**Gorkha**	**47.08**	**282**	*eP*	**P**	**P**	**22 10 25.1**	**+0.2**
	comp=Z,14nm,0.3s							
DANN	**Dangsing**	**47.72**	**282**	*eP*	**P**	**P**	**22 10 30.5**	**+0.5**
	comp=Z,20nm,0.3s							
GSI	**Gunungsitoli**	**48.46**	**242**	P	**P**	**P**	**22 10 34.0**	**-1.3**
KURK	**Kurchatov**	**48.86**	**313**	P	**P**	**P**	**22 10 36.5**	**-1.3**
KURK				IAmb	IAmb	IAmb	22 10 37.7	
	comp=Z,7.7nm,0.7s							
WB0	**Warramunga Arr**	**49.66**	**185**	P	**P**	**P**	**22 10 44.4**	**+0.3**
WB0				IAmb	IAmb	IAmb	22 10 45.7	
	comp=Z,8.8nm,0.7s							
WB2	**Warramunga Arr**	**49.84**	**186**	P	**P**	**P**	**22 10 45.5**	**0.0**
WB2				IAmb	IAmb	IAmb	22 10 47.0	
	comp=Z,8.1nm,0.6s							
WRA	**Warramunga Arr**	**49.84**	**186**	P	**P**	**P**	**22 10 46.2**	**+0.8**
	comp=Z,6.8nm,0.6s,baz=0.2,slow=7.7,SNR=147							
WRA				PcP	**PcP**		**22 12 00.2**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=359,slow=4.0,SNR=5.4							
WRA				ScP	**ScP**		**22 15 15.7**	**+2.3**
	comp=Z,0.2nm,0.7s,baz=0.9,slow=4.3,SNR=1.3							
	comp=Z,6.8nm,0.6s							
WRA	**Warramunga Arr**	**49.84**	**186**	P	**P**	**P**	**22 10 45.5**	**+0.1**
WR0	**Warramunga Arr**	**49.84**	**185**	P	**P**	**P**	**22 10 45.1**	**-0.3**
WR0				IAmb	IAmb	IAmb	22 10 47.1	
	comp=Z,7.7nm,0.6s							
KSH	**Kashi**	**51.59**	**299**	P	**P**	**P**	**22 11 02.3**	**+4.0**
KSH				pmax	pmax			
	comp=Z,11nm,0.7s							
AAK	**Ala-Archa**	**52.20**	**303**	P	**P**	**P**	**22 11 01.4**	**-1.4**
AAK				IAmb	IAmb	IAmb	22 11 03.5	
	comp=Z,6.5nm,0.5s							
K20K	**Telida**	**53.40**	**31**	P	**P**	**P**	**22 11 11.1**	**+0.2**
K20K				IAmb	IAmb	IAmb	22 11 14.1	
	comp=Z,11nm,0.7s							
J20K	**Nowinta River**	**53.45**	**30**	P	**P**	**P**	**22 11 12.6**	**+1.4**
J20K				IAmb	IAmb	IAmb	22 11 14.2	
	comp=Z,12nm,0.8s							
AS31	**Alice Springs**	**53.56**	**186**	P	**P**	**P**	**22 11 12.9**	**+0.4**
ASAR	**Alice Springs**	**53.57**	**186**	P	**P**	**P**	**22 11 13.4**	**+0.9**
	comp=Z,3.5nm,0.5s,baz=4.8,slow=6.6,SNR=52							
	comp=Z,3.5nm,0.5s							
BRVK	**Borovoye**	**53.98**	**316**	P	**P**	**P**	**22 11 14.8**	**-0.3**
BRVK				IAmb	IAmb	IAmb	22 11 15.9	
	comp=Z,10nm,0.6s							
H21K	**Melozitna Rive**	**54.17**	**28**	P	**P**	**P**	**22 11 17.9**	**+1.5**
CAST	**Castle Rocks**	**54.29**	**31**	P	**P**	**P**	**22 11 19.5**	**+2.3**
CAST				IAmb	IAmb	IAmb	22 11 20.6	
	comp=Z,8.4nm,0.8s							
I21K	**Tanana**	**54.47**	**29**	P	**P**	**P**	**22 11 19.6**	**+1.2**
NIL	**Nilore**	**55.01**	**292**	P	**P**	**P**	**22 11 22.3**	**-0.5**
NIL				IAmb	IAmb	IAmb	22 11 24.1	
	comp=Z,13nm,0.7s							
KK31	**Karatay Array**	**55.02**	**304**	P	**P**	**P**	**22 11 22.7**	**0.0**
KK31				IAmb	IAmb	IAmb	22 11 23.5	
	comp=Z,13nm,0.6s							
KKAR	**Karatay Array**	**55.02**	**304**	P	**P**	**P**	**22 11 21.9**	**-0.8**
KKAR				IAmb	IAmb	IAmb	22 11 23.5	
	comp=Z,13nm,0.6s							
KKAR	**Karatay Array**	**55.02**	**304**	P	**P**	**P**	**22 11 22.3**	**-0.4**
BTK	**Batken**	**55.38**	**300**	P	**P**	**P**	**22 11 24.4**	**-1.0**
NEA2	**Nenana**	**55.68**	**30**	P	**P**	**P**	**22 11 27.9**	**+1.0**
MCK	**McKinley**	**55.72**	**31**	P	**P**	**P**	**22 11 26.5**	**-0.8**
MCK				IAmb	IAmb	IAmb	22 11 29.3	
	comp=Z,18nm,1.1s							
RND	**Reindeer**	**55.75**	**31**	P	**P**	**P**	**22 11 28.4**	**+0.8**
GAR	**Garm**	**55.99**	**299**	P	**P**	**P**	**22 11 29.5**	**-0.2**
MDM	**Murphy Dome**	**56.05**	**29**	P	**P**	**P**	**22 11 29.6**	**+0.1**
HDA	**Harding Lake**	**56.59**	**30**	P	**P**	**P**	**22 11 34.0**	**+0.6**
IL31		**56.62**	**30**	P	**P**	**P**	**22 11 34.0**	**+0.5**
ILAR	**Eielson Array**	**56.62**	**30**	P	**P**	**P**	**22 11 33.8**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=261,slow=4.7,SNR=25							
	comp=Z,1.7nm,0.6s							
CHGR	**Chuyangaron**	**56.95**	**299**	P	**P**	**P**	**22 11 36.0**	**-0.3**
PRP	**Porcupine Dome**	**57.19**	**29**	P	**P**	**P**	**22 11 38.5**	**+0.9**
J25K	**Salcha River,**	**57.27**	**30**	P	**P**	**P**	**22 11 38.8**	**+0.7**
RIDG	**Independent Ri**	**57.53**	**31**	P	**P**	**P**	**22 11 41.1**	**+1.2**
RIDG				IAmb	IAmb	IAmb	22 11 43.0	
	comp=Z,5.1nm,0.7s							
DOT	**Dot Lake**	**57.89**	**31**	P	**P**	**P**	**22 11 43.3**	**+1.0**
DOT				IAmb	IAmb	IAmb	22 11 44.0	
	comp=Z,7.1nm,0.8s							
SCRK	**Sand Creek**	**57.90**	**31**	P	**P**	**P**	**22 11 43.7**	**+1.1**
SCRK				IAmb	IAmb	IAmb	22 11 44.3	
	comp=Z,8.1nm,0.6s							
J26L	**Joseph Creek**	**58.06**	**30**	P	**P**	**P**	**22 11 44.4**	**+0.9**
J26L				IAmb	IAmb	IAmb	22 11 45.3	
	comp=Z,10nm,0.7s							
KBL	**Kabul**	**58.12**	**294**	P	**P**	**P**	**22 11 44.1**	**-0.6**
KBL				IAmb	IAmb	IAmb	22 11 45.1	
	comp=Z,5.6nm,0.8s							
L27K	**Beaver Creek,**	**58.94**	**32**	P	**P**	**P**	**22 11 50.9**	**+1.4**
ARU	**Arti**	**60.33**	**321**	P	**P**	**P**	**22 11 58.7**	**-0.1**
ABKAR	**Akbulak array**	**60.97**	**313**	P	**P**	**P**	**22 12 03.1**	**-0.1**
ABKAR	**Akbulak array**	**60.97**	**313**	P	**P**	**P**	**22 12 03.2**	**-0.1**
ABKAR				IAmb	IAmb	IAmb	22 12 03.7	
	comp=Z,12nm,0.5s							
STKA	**Stephens Creek**	**61.59**	**177**	P	**P**	**P**	**22 12 07.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=353,slow=8.0,SNR=4.6							
	comp=Z,1.2nm,0.4s							
M31M	**Drury Creek, Y**	**62.47**	**32**	P	**P**	**P**	**22 12 14.3**	**+1.4**
M31M				IAmb	IAmb	IAmb	22 12 15.0	
	comp=Z,4.1nm,0.7s							
FARO	**Faro, Yukon**	**62.94**	**32**		**S**	**S**	**22 20 14.6**	**+2.8**
GEYT	**Alibeck**	**65.47**	**301**	P	**P**	**P**	**22 12 32.5**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=205,slow=9.4,SNR=4.1							
	comp=Z,3.2nm,0.7s							
ARCES	**ARCESS Array B**	**69.83**	**340**	P	**P**	**P**	**22 12 59.3**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=67,slow=8.3,SNR=40							
	comp=Z,1.9nm,0.5s							
YKA	**Yellowknife Ar**	**70.99**	**28**	P	**P**	**P**	**22 13 06.7**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=300,slow=6.2,SNR=8.7							
	comp=Z,1.7nm,0.6s							
KBZ	**Khabaz**	**73.89**	**311**	P	**P**	**P**	**22 13 23.5**	**+0.4**
	comp=Z,7.3nm,0.8s,baz=106,slow=2.9,SNR=15							
	comp=Z,7.3nm,0.8s							
FINES	**FINESS Array B**	**74.04**	**333**	P	**P**	**P**	**22 13 23.6**	**-0.1**
	comp=Z,3.2nm,0.4s,baz=67,slow=5.3,SNR=76							
	comp=Z,3.2nm,0.4s							
GURO	**Guroymak-BITLI**	**76.81**	**307**	P	**P**	**P**	**22 13 40.7**	**+0.9**
AKASG	**Malin Array Be**	**78.54**	**322**	P	**P**	**P**	**22 13 48.4**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=51,slow=5.6,SNR=18							
	comp=Z,2.0nm,0.4s							
NB2	**NORSAR Subarra**	**79.82**	**337**	P	**P**	**P**	**22 13 55.4**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=44,slow=5.3							
NOA	**NORSAR Array B**	**79.82**	**337**	P	**P**	**P**	**22 13 55.1**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=54,slow=6.7,SNR=10							
	comp=Z,2.4nm,0.7s							
NVAR	**Mina Array Bea**	**81.01**	**51**	P	**P**	**P**	**22 14 03.1**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=294,slow=6.3,SNR=11							
	comp=Z,0.9nm,0.6s							
RAYN	**Ar Rayn**	**81.31**	**292**	P	**P**	**P**	**22 14 03.4**	**-0.7**
RAYN				IAmb	IAmb	IAmb	22 14 05.2	
	comp=Z,5.2nm,0.9s							
BR131	**Keskin Array S**	**81.88**	**311**	P	**P**	**P**	**22 14 07.2**	**+0.3**
BRTR	**Keskin Array B**	**81.88**	**311**	P	**P**	**P**	**22 14 07.0**	**+0.2**
	comp=Z,5.7nm,0.9s,baz=101,slow=4.0,SNR=31							
	comp=Z,5.7nm,0.9s							
BUR08	**Bucovina Ar. S**	**82.46**	**321**	P	**P**	**P**	**22 14 10.2**	**+0.6**
BUR08				IAmb	IAmb	IAmb	22 14 10.7	
	comp=Z,4.9nm,0.7s							
BURAR	**Bucovina Array**	**82.47**	**321**	P	**P**	**P**	**22 14 10.3**	**+0.6**
BURAR				IAmb	IAmb	IAmb	22 14 11.0	
	comp=Z,5.6nm,0.7s							
QSM	**Queen of Sheba**	**83.28**	**52**	P	**P**	**P**	**22 14 15.2**	**+1.3**
QSM				IAmb	IAmb	IAmb	22 14 16.8	
	comp=Z,4.5nm,0.9s							
GWY	**Greenwater Val**	**83.30**	**52**	P	**P**	**P**	**22 14 15.2**	**+1.1**
GWY				IAmb	IAmb	IAmb	22 14 16.5	
	comp=Z,4.7nm,0.9s							
P18A	**Preston Nutter**	**85.59**	**46**	P	**P**	**P**	**22 14 26.1**	**+0.5**
P18A				IAmb	IAmb	IAmb	22 14 37.7	
	comp=Z,3.7nm,1.0s							
GUVIX	**Guadalupe Vict**	**86.50**	**55**	P	**P**	**P**	**22 14 31.0**	**+1.3**
GERES	**GERESS Array B**	**87.50**	**327**	P	**P**	**P**	**22 14 33.0**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=40,slow=4.4,SNR=6.7							
	comp=Z,0.4nm,0.4s							
OK030	**Cody Creek RV**	**96.14**	**42**	P	**P**	**P**	**22 15 12.0**	**-2.2**
TXAR	**Lajitas Array**	**96.16**	**51**	P	**P**	**P**	**22 15 15.9**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=297,slow=3.0,SNR=3.9							
	comp=Z,0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**120.47**	**310**	PKP	**PKPdf**	**PKPdf**	**22 20 34.9**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=52,slow=2.5,SNR=2.9							
BOSA	**Boshof**	**122.83**	**254**	PKP	**PKiKP**	**PKiKP**	**22 20 40.6**	**+0.3**
	comp=Z,2.0nm,1.0s,baz=87,slow=22,SNR=1.1							
DBIC	**Dimbokro**	**129.57**	**310**	PKP	**PKPdf**	**PKPdf**	**22 20 53.5**	**+0.2**
	comp=Z,7.3nm,1.1s,baz=146,slow=10,SNR=2.6							
PLCA	**Paso Flores**	**153.86**	**122**	PKPbc	**PKiKP**	**PKiKP**	**22 21 44.2**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=16,slow=22,SNR=1.1							

*IDC **07** 22:25:22.5±2.0, 1°.93N×126°.34E, h0km, mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=172.6km s-min=24.0km az=65.0*
*DJA **07** 22:25:29.2±1.8,2°.1N±3°×12°.6E±°, h17km±16km, M4.1/10, mb4.7/1, mB4.6/1, MLv3.8/10, Mw(mB)3.8/1*

ISC 07 22:25:30.0±1.1,**1°.91N**±0°.07×**126°.44E**±0°.08,**h47**km,**n11**,
σ1§**42**/12,**mb3.5**/3,**Northern Moluca Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.46**	**141**	P	**P**	**Pn**	**22 25 53.9**	**-0.1**
TNTI				S	**S**	**Sn**	**22 26 13.6**	**+1.6**
SGSI	**Sangihe**	**1.98**	**333**	P	**P**	**Pn**	**22 26 01.8**	**+0.7**
SGSI				S	**S**	**Sn**	**22 26 26.5**	**+1.7**
LBMI	**Labuha**	**2.75**	**157**	P	**P**	**Pn**	**22 26 13.7**	**+2.1**
KMSI	**Cibinong**	**2.79**	**242**	P	**P**	**Pn**	**22 26 12.8**	**+0.6**
SANI	**Sanana**	**3.96**	**187**	P	**P**	**Pn**	**22 26 28.1**	**-0.2**
MRSI	**Marisa**	**4.72**	**252**	P	**P**	**Pn**	**22 26 39.0**	**+0.3**
APSI	**Ampana**	**5.55**	**240**	P	**P**	**Pn**	**22 26 51.3**	**+1.2**
MPSI	**Mapaga**	**6.72**	**257**	P	Pn	22 27 11.7	+5.5	
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	**P**	**22 30 29.8**	**-1.8**
	1.0nm,0.5s,baz=338,slow=11,SNR=35							
	1.0nm,0.5s							
ASAR	**Alice Springs**	**26.44**	**164**	P	**P**	**P**	**22 31 02.3**	**-0.4**
	0.3nm,0.3s,baz=347,slow=8.0,SNR=5.2							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**58.88**	**326**	P	**P**	**P**	**22 35 22.7**	**-1.5**
	0.6nm,0.5s,baz=120,slow=8.4,SNR=12							
	0.6nm,0.5s							

*IDC **07** 22:25:28.1±1.4, 18°.21N×146°.27E, h0km, mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=102.0km s-min=25.5km az=106.0*

ISC 07 22:25:36.9±1.3,**18°.2N**±0°.2×**146

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.08**	**312**	*eP*	Pn	22 49 55.7	-0.2
PB14				*eS*	Sn	22 50 00.9	-0.5
GO02	**Mina Guanaco**	**0.83**	**125**⇓	*eP*	Pn	22 50 04.2	+0.3
GO02				*i* S	Sn	22 50 16.0	+0.8
GO02				IAML		22 50 17.6	
	comp=E,3μm,0.1s						
PB10	**IPOC Station P**	**1.18**	**350**⇓	*eP*	Pn	22 50 08.3	0.0
PB10				*eS*	Sn	22 50 24.1	+0.9
AC01	**Pan de Azucar**	**1.48**	**189**	*eP*	Pn	22 50 13.4	+0.9
AC01				*i* S	Sn	22 50 32.8	+2.2
PB15	**IPOC Station P**	**1.67**	**29**	*eP*	Pn	22 50 16.3	+1.1
PB15				*i* S	Sn	22 50 38.0	+2.5
PB06	**IPOC Station P**	**2.09**	**20**⇑	*iP*	Pn	22 50 21.1	+0.2
PB06				*i* S	Sn	22 50 48.1	+2.3
PB06				IAML		22 50 51.4	
	comp=E,390nm,0.4s						
PB04	**IPOC Station P**	**2.34**	**4**⇑	*iP*	Pn	22 50 23.8	-0.6
PB04				*eS*	Sn	22 50 54.3	+2.2
PB04				IAML		22 51 06.2	
	comp=E,452nm,0.8s						
AC02	**Maricunga**	**2.41**	**153**	*eP*	Pn	22 50 29.1	+3.5
AC02				*eS*	Sn	22 50 59.1	+5.0
AC02				IAML		22 51 04.6	
	comp=N,308nm,0.1s						
LVC	**Limon Verde**	**2.44**	**33**⇓	*eP*	Pn	22 50 27.4	+1.4
LVC				*i* S	Sn	22 50 56.9	+2.1
LVC				IAML		22 51 01.8	
	comp=N,734nm,0.1s						
AF01	**San Pedro de A**	**2.62**	**49**	*eP*	Pn	22 50 30.8	+2.5
AF01				*eS*	Sn	22 51 06.1	+7.0
GO03	**Copiap**	**2.90**	**178**	*eP*	Pn	22 50 33.0	+1.0
GO03				IAML		22 51 22.9	
	comp=N,88nm,0.4s						
PB07	**IPOC Station P**	**2.97**	**8**	*eP*	Pn	22 50 32.2	-0.8
PB07				*eS*	Sn	22 51 11.8	+4.3
PB07				IAML		22 51 25.6	
	comp=E,185nm,0.3s						
PB09	**IPOC Station P**	**3.04**	**20**⇓	*eP*	Pn	22 50 34.9	+0.9
PB09				*eS*	Sn	22 51 15.4	+6.1
PB09				IAML		22 51 20.2	
	comp=N,160nm,0.3s						
PB02	**IPOC Station P**	**3.37**	**7**⇑	*eP*	Pn	22 50 37.6	-0.8
PB02				*eS*	Sn	22 51 26.5	+9.2
PB02				IAML		22 51 34.0	
	comp=E,174nm,1.0s						
AC04	**Llanos de Chal**	**3.57**	**190**	*eP*	Pn	22 50 40.8	-0.3
PB01	**IPOC Station P**	**3.70**	**12**	*iP*	Pn	22 50 42.4	-0.6
PATCX	**Punta Patache**	**3.84**	**3**	*iP*	Pn	22 50 43.0	-2.0
HMBC	**Humberstone**	**4.40**	**6**	*eP*	Pn	22 50 52.4	-0.2
HMBC				*eS*	Sn	22 55.2	+12
VCA	**Vinchina**	**4.47**	**155**	*iP*	Pn	22 50 58.0	+4.4
GO01	**Chusmiza**	**5.10**	**12**	*eP*	Pn	22 51 02.9	+0.3

*IDC **07** 22:50:24.0±2.1,28°.75S×178°.71W,h0km,mb4.0/3, mbtmp4.1/4,ML4.4/1,Error ellipse: s-maj=64.3km s-min=15.6km az=23.0*
*NEIC **07** 22:50:29.7±1.6,29°.0S±0°.2×177°.8W±0°.1,h104km±5km, mb4.3/10,Error ellipse: s-maj=23.8km s-min=10.3km az=154.0*
ISC 07 22:50:29.7±0.8,**28°.9S**±0°.1×**177°.9W**±0°.1,**h100**km,**n24,** σ1$**00**/20,**mb4.3**/9,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.32**	**178**	Pn	**Pn**	**22 50 43.7**	**-0.7**
	190nm,0.3s,baz=92,slow=13,SNR=7.2						
RAO				Sn	**Sn**	**22 50 56.6**	**+1.2**
	511nm,0.3s,baz=134,slow=22,SNR=5.7						
RAO	**Raoul Island**	**0.32**	**178**	Pn	**Pn**	**22 50 43.6**	**-0.8**
RAO				Sn	**Sn**	**22 50 56.0**	**+0.6**
NIUE	**Niue**	**12.23**	**38**	Pn	**Pn**	**22 53 20.4**	**0.0**
RPZ	**Rata Peaks**	**17.20**	**208**	P	**P**	**22 54 24.6**	**+1.0**
	1.3nm,0.3s,baz=76,slow=20,SNR=2.3						
	4.5nm,0.4s						
HNR	**Honiara**	**28.41**	**309**	P	**P**	**22 56 14.0**	**-0.9**
STKA	**Stephens Creek**	**34.89**	**255**	P	**P**	**22 57 11.3**	**-0.4**
	2.6nm,0.6s,baz=95,slow=10,SNR=7.1						
	2.6nm,0.6s						
STKA	**Stephens Creek**	**34.89**	**255**	P	**P**	**22 57 11.4**	**-0.2**
BBOO	**Buckleboo**	**39.45**	**252**	P	**P**	**22 57 49.2**	**-0.9**
BBOO				IAmb	IAmb	22 58 08.3	
	comp=Z,30nm,1.5s						
ASAR	**Alice Springs**	**43.27**	**265**	P	**P**	**22 58 21.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=105,slow=6.9,SNR=7.9						
	comp=Z,0.7nm,0.6s						
WR0	**Warramunga Arr**	**43.94**	**271**	P	**P**	**22 58 27.3**	**+0.4**
WR0				IAmb	IAmb	22 59 10.4	
	comp=Z,6.6nm,1.3s						
WB2	**Warramunga Arr**	**44.11**	**271**	P	**P**	**22 58 28.2**	**-0.1**
WB2				IAmb	IAmb	22 59 11.5	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**44.12**	**271**	P	**P**	**22 58 29.5**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=111,slow=7.8,SNR=23						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**44.12**	**271**	P	**P**	**22 58 28.2**	**-0.2**
WB0	**Warramunga Arr**	**44.14**	**271**	P	**P**	**22 58 30.1**	**+1.6**
WB0				IAmb	IAmb	22 59 07.0	
	comp=Z,6.4nm,1.3s						
FORT	**Forrest**	**46.50**	**254**	P	**P**	**22 58 47.4**	**+0.3**
VNDA	**Vanda**	**49.56**	**186**	P	**P**	**22 59 09.7**	**-0.2**
VNDA				IAmb	IAmb	22 59 17.1	
	comp=Z,2.5nm,1.4s						
QSPA	**South Pole Qui**	**61.18**	**180**	P	**P**	**23 00 32.4**	**-1.2**
QSPA				IAmb	IAmb	23 00 37.6	
	comp=Z,2.4nm,1.0s						
H03S2	**Juan Fernandez**	**81.23**	**124**	T	T	00 31 42.6	
	baz=238						
H03S1	**Juan Fernandez**	**81.24**	**124**	T	T	00 31 45.0	
	baz=238						
H03S3	**Juan Fernandez**	**81.24**	**124**	T	T	00 31 42.4	
	baz=238						
H03N3	**Juan Fernandez**	**81.41**	**123**	T	T	00 31 54.5	
	baz=242						
H03N2	**Juan Fernandez**	**81.41**	**123**	T	T	00 31 55.0	
	baz=242						
H03N1	**Juan Fernandez**	**81.43**	**123**	T	T	00 31 58.9	
	baz=242						
FINES	**FINESS Array B**	**143.78**	**341**	PKP	**PKiKP**	**23 09 58.2**	**+2.4**
	comp=Z,1.2nm,0.5s,baz=51,slow=3.6,SNR=12						

*IDC **07** 22:57:10.2±1.5,2°.92S×100°.54E,h0km,mb4.1/13, mbtmp4.1/13,MS3.1/4,Error ellipse: s-maj=47.8km s-min=16.8km az=54.0*
*DJA **07** 22:57:12.5±0.6,3°.S±3°×10°.0E±°,h24km±5km,M3.9/10, mb3.4/3,mB4.8/1,MLv4.2/10,Mw(mB)4.1/1*
*NEIC **07** 22:57:18.8±1.4,3°.0S±0°.1×100°.8E±0°.1,h67km±11km, mb4.4/5,Error ellipse: s-maj=25.5km s-min=8.4km az=223.0*
ISC 07 22:57:11.9±0.9,**3°.2S**±0°.1×**100°.23E**±0°.09,**h27**km,**n47,** σ1$**62**/38,**mb4.2**/14,**MS3.3**/3,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.51**	**335**	P	**Pb**	**22 57 21.4**	**-1.0**
KRJI	**Kerinci**	**1.67**	**48**	P	**Pn**	**22 57 38.7**	**-0.8**
SISI	**Saibi**	**2.20**	**329**	P	**Pn**	**22 57 44.6**	**-2.1**
SISI				S	**Sn**	**22 58 10.8**	**-2.3**
KSI	**Kapahiang**	**2.40**	**100**	P	**Pb**	**22 57 52.8**	**-1.7**
PPI	**Padang Panjang**	**2.75**	**4**	P	**Pn**	**22 57 53.9**	**-0.5**
MNAI	**Manna**	**2.95**	**113**	Pn	**Pn**	**22 57 58.5**	**+1.4**
MNAI				Sn	**Sn**	**22 58 27.3**	**-4.3**
MNAI	**Manna**	**2.95**	**113**	P	**Pn**	**22 58 00.6**	**+3.6**
BKNI	**Bangkinang**	**3.62**	**13**	Pn	**Pn**	**22 58 07.2**	**+0.9**
MNSI	**Mandailing Nat**	**4.05**	**351**	P	**Pn**	**22 58 11.7**	**-0.4**
LWLI	**Liwa**	**4.22**	**115**	P	**Pn**	**22 58 16.4**	**+1.8**
DSRI	**Dabo**	**5.13**	**58**	P	**Pn**	**22 58 26.9**	**-0.2**
	0.1nm1μm18nm,0.9s						
GSI	**Gunungsitoli**	**5.22**	**329**		Pb	22 58 35.5	-7.1
GSI	**Gunungsitoli**	**5.22**	**329**	P	**Pn**	**22 58 27.6**	**-0.7**
	0.2nm23nm,0.6s						
PSI	**Prapat**	**6.13**	**348**	LR	LR	23 01 11.5	
	comp=Z,70nm,20.8s,baz=228,slow=42						
IPM	**Ipoh**	**7.70**	**6**	Pn	**Pn**	**22 59 03.6**	**+1.3**
KULM	**Kulim**	**8.47**	**3**	Pn	**Pn**	**22 59 14.9**	**+1.9**
MPSI	**Mapaga**	**19.98**	**80**	P	Pn	23 01 53.3	+9.0
CMAR	**Chiang Mai Arr**	**21.58**	**357**	P	**P**	**23 01 59.1**	**-0.7**
	1.2nm,0.4s,baz=185,slow=8.7,SNR=1.9						
CMAR				LR	LR	23 10 27.1	
	comp=Z,52nm,18.7s,baz=175,slow=37						
	1.2nm,0.4s						
H08S2	**Diego Garcia H**	**27.95**	**260**	T	T	23 32 04.5	
	baz=82,slow=75,SNR=702						
H08S3	**Diego Garcia H**	**27.95**	**260**	T	T	23 32 05.0	
	baz=82,slow=75,SNR=745						
H08S1	**Diego Garcia H**	**27.97**	**260**	T	T	23 32 05.9	
	baz=82,slow=75,SNR=950						
FITZ	**Fitzroy Crossi**	**28.95**	**123**	P	**P**	**23 03 10.6**	**+1.2**
	1.8nm,0.9s,baz=306,slow=4.0,SNR=2.0						
	1.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.95**	**123**	P	**P**	**23 03 07.2**	**-2.1**
MTN	**Manton Dam**	**32.02**	**109**	P	**P**	**23 03 34.9**	**-1.6**
H01W3	**Cape Leeuwin H**	**34.05**	**159**	T	T	23 39 52.7	
	baz=335,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**34.06**	**159**	T	T	23 39 53.7	
	baz=335,slow=76,SNR=26						
H01W1	**Cape Leeuwin H**	**34.06**	**159**	T	T	23 39 54.3	
	baz=335,slow=76,SNR=18						
WRA	**Warramunga Arr**	**37.19**	**119**	P	**P**	**23 04 22.9**	**+1.7**
	0.3nm,0.6s,baz=306,slow=9.3,SNR=7.6						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**38.36**	**125**	P	**P**	**23 04 32.9**	**+1.8**
	0.5nm,0.7s,baz=300,slow=7.7,SNR=5.1						
	0.5nm,0.7s						
PMG	**Port Moresby**	**47.02**	**100**	P	**P**	**23 05 40.0**	**-1.5**
	14nm,0.6s,baz=232,slow=8.8,SNR=3.3						
	14nm,0.6s						
KSRS	**Korea Array**	**47.96**	**30**	P	**P**	**23 05 45.8**	**-2.5**
	1.0nm,0.6s,baz=224,slow=8.8,SNR=5.4						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**48.18**	**131**	LR	LR	23 26 36.4	
	comp=Z,32nm,20.3s,baz=30,slow=37						
SONM	**Songino Array**	**51.13**	**5**	P	**P**	**23 06 13.2**	**+0.6**
	3.2nm,0.6s,baz=188,slow=9.4,SNR=24						
	3.2nm,0.6s						
SONM	**Songino Array**	**51.13**	**5**	P	**P**	**23 06 13.7**	**+1.1**
SONM				IAmb	IAmb	23 06 14.5	
	comp=Z,2.9nm,0.8s						
MK31	**Makanchi Array**	**52.26**	**344**	P	**P**	**23 06 21.9**	**+1.0**
MK31				IAmb	IAmb	23 06 22.3	
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**52.26**	**344**	P	**P**	**23 06 21.7**	**+0.8**
	comp=Z,3.7nm,0.6s,baz=148,slow=8.2,SNR=40						
	comp=Z,3.7nm,0.6s						
MKAR	**Makanchi Array**	**52.26**	**344**	P	**P**	**23 06 21.2**	**+0.3**
MJAR	**Matsushiro Arr**	**53.09**	**38**	P	**P**	**23 06 26.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=206,slow=8.1,SNR=2.6						
	comp=Z,0.5nm,0.4s						
USRK	**Ussuriysk Ar.**	**55.13**	**27**	P	**P**	**23 06 41.7**	**-0.2**
	comp=Z,6.0nm,0.8s,baz=230,slow=7.5,SNR=10.0						
	comp=Z,6.0nm,0.8s						
USRK	**Usuysk Ar.**	**55.13**	**27**	P	**P**	**23 06 42.2**	**+0.4**
ZALV	**Zalesovo Beam**	**58.41**	**349**	P	**P**	**23 07 05.2**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=172,slow=4.5,SNR=10						
	comp=Z,1.9nm,0.6s						
ABKAR	**Akbulak array**	**62.82**	**332**	P	**P**	**23 07 35.3**	**+0.1**
ABKAR	**Akbulak array**	**62.82**	**332**	P	**P**	**23 07 36.0**	**+0.9**
ABKAR				IAmb	IAmb	23 07 38.3	
	comp=Z,1.2nm,0.8s						
EIL	**Elat**	**70.37**	**303**	LR	LR	23 38 40.9	
	comp=Z,17nm,19.3s,baz=112,slow=35						
FINES	**FINESS Array B**	**85.30**	**332**	P	**P**	**23 09 47.5**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=92,slow=5.7,SNR=5.3						
	comp=Z,0.9nm,0.7s						
ARCES	**ARCESS Array B**	**87.69**	**340**	P	**P**	**23 09 58.8**	**+1.0**
	comp=Z,2.9nm,1.1s,baz=98,slow=4.6,SNR=3.6						
	comp=Z,2.9nm,1.1s						
TXAR	**Lajitas Array**	**145.52**	**39**	PKPbc	**PKPab**	**23 16 50.3**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=319,slow=1.0,SNR=22						

IDC 07 23:03:50.8±10.0,**50°.56S×112°.30E,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=356.1km s-min=29.5km az=100.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**31.66**	**40**	P	P	23 10 14.9	-0.9
	0.2nm,0.3s,baz=199,slow=8.4,SNR=5.5						
	0.2nm,0.3s						
VNDA	**Vanda**	**32.67**	**162**	P	P	23 10 24.1	0.0
	1.0nm,0.8s,baz=301,slow=5.9,SNR=8.3						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**35.18**	**38**	P	P	23 10 47.4	+1.0
	0.3nm,0.7s,baz=206,slow=8.8,SNR=1.6						
	0.3nm,0.7s						

*IDC **07** 23:13:24.0±2.3,18°.81N×145°.50E,h202km±22km, mb3.5/11,mbtmp4.0/13,Error ellipse: s-maj=24.9km s-min=13.3km az=86.0*
*NEIC **07** 23:13:26.5±1.0,18°.6N±0°.1×145°.19E±0°.08,h195km±14km, mb4.2/13,Error ellipse: s-maj=15.9km s-min=9.8km az=199.0*
ISC 07 23:13:25.4±0.6,**18°.78N**±0°.07×**145°.4E**±0°.1,**h214**km,**n28,** σ1$**33**/29,**mb3.9**/18,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.18**	**186**	P	**Pn**	**23 14 42.7**	**+0.2**
	18nm,0.3s,baz=170,slow=22,SNR=1.9						
GUMO				S	**S**	**23 15 42.0**	**-1.2**
	27nm,0.3s,baz=348,slow=22,SNR=1.6						
JGF	**Kuroka**	**18.20**	**339**	P	**P**	**23 17 25.2**	**+2.7**
JGF				IAmb	IAmb	23 17 25.9	
	comp=Z,9.1nm,0.8s						
MJAR	**Matsushiro Arr**	**18.79**	**342**	P	**P**	**23 17 27.5**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=156,slow=13,SNR=1.3						
JSD	**Sado**	**20.17**	**344**	P	**P**	**23 17 45.8**	**+2.2**
TARA	**Tarawa**	**32.08**	**119**	P	**P**	**23 19 35.8**	**+3.3**
COEN	**Coen**	**32.60**	**184**	P	**P**	**23 19 35.7**	**-1.3**
MTN	**Manton Dam**	**34.42**	**205**	P	**P**	**23 19 52.6**	**-0.1**
MTN				IAmb	IAmb	23 19 53.0	
	comp=Z,9.4nm,1.0s						
SBUM	**Sibu**	**36.29**	**247**	P	**P**	**23 20 10.4**	**+1.6**
SBUM				IAmb	IAmb	23 20 11.9	
	comp=Z,3.7nm,0.7s						
KNRA	**Kununurra**	**37.94**	**207**	P	**P**	**23 20 23.2**	**+0.7**
KNRA				IAmb	IAmb	23 20 24.2	
	comp=Z,7.1nm,0.9s						
WB0	**Warramunga Arr**	**39.79**	**196**	P	**P**	**23 20 38.1**	**+0.3**
WR0	**Warramunga Arr**	**39.94**	**196**	P	**P**	**23 20 39.1**	**+0.1**
WR0				IAmb	IAmb	23 21 18.7	
	comp=Z,7.2nm,1.3s						
WRAB	**Tennant Creek**	**39.96**	**196**	P	**P**	**23 20 39.6**	**+0.4**
WRAB				IAmb	IAmb	23 20 40.0	
	comp=Z,7.7nm,1.1s						
WB2	**Warramunga Arr**	**39.97**	**196**	P	**P**	**23 20 39.6**	**+0.3**
WB2				IAmb	IAmb	23 20 39.8	
	comp=Z,5.7nm,0.7s						
WRA	**Warramunga Arr**	**39.97**	**196**	P	**P**	**23 20 39.6**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=21,slow=8.3,SNR=88						
	comp=Z,2.0nm,0.3s						
WRA	**Warramunga Arr**	**39.97**	**196**	P	**P**	**23 20 39.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**41.46**	**209**	P	**P**	**23 20 52.1**	**+0.6**
ASAR	**Alice Springs**	**43.65**	**195**	P	**P**	**23 21 08.9**	**-0.1**
	comp=Z,6nm,0.4s,baz=10.0,slow=8.1,SNR=9.9						
	comp=Z,0.6nm,0.4s						
DZM	**Mont Dzumac**	**45.52**	**152**	P	**P**	**23 21 23.0**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=312,slow=18,SNR=2.0						
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**57.77**	**323**	P	**P**	**23 22 53.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=114,slow=8.0,SNR=2.5						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**58.19**	**314**	P	**P**	**23 22 58.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=97,slow=8.7,SNR=5.7						
	comp=Z,0.4nm,0.5s						
NRIK	**Noril'sk**	**61.44**	**340**	P	**P**	**23 23 17.6**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=118,slow=5.8,SNR=2.0						
	comp=Z,1.4nm,0.5s						
ILAR	**Eielson Array**	**63.71**	**26**	P	**P**	**23 23 32.3**	**-1.5**
	comp=Z,6nm,0.7s,baz=265,slow=4.7,SNR=4.3						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**78.06**	**28**	P	**P**	**23 24 59.8**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=289,slow=5.4,SNR=5.9						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**82.33**	**342**	P	**P**	**23 25 23.5**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=60,slow=7.2,SNR=4.4						
	comp=Z,1.1nm,0.9s						
NVAR	**Mina Array Bea**	**83.33**	**52**	P	**P**	**23 25 29.2**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=267,slow=5.9,SNR=14						
	comp=Z,1.6nm,0.7s						
FINES	**FINESS Array B**	**86.69**	**335**	P	**P**	**23 25 42.0**	**-2.7**
	comp=Z,0.6nm,0.4s,baz=58,slow=4.2,SNR=8.5						
PDAR	**Pinedale Array**	**87.99**	**45**	P	**P**	**23 25 51.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=133,slow=1.7,SNR=4.6						
	comp=Z,0.2nm,0.4s						
LPAZ	**La Paz**	**147.98**	**91**	PKPbc	**PKPbc**	**23 32 46.7**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=312,slow=5.4,SNR=5.7						

*NEIC **07** 23:41:36.0±0.9,18°.8N±0°.1×145°.2E±0°.3,h175km±10km, mb3.9/7,Error ellipse: s-maj=36.2km s-min=16.8km az=89.0*
*IDC **07** 23:41:42.2±16.0,18°.74N×145°.38E,h243km±153km, mb3.2/8,mbtmp3.7/8,Error ellipse: s-maj=64.6km s-min=18.4km az=73.0*
ISC 07 23:41:38.0±0.9,**18°.8N**±0°.1×**145°.3E**±0°.2,**h200**km,**n19,** σ1$**01**/19,**mb3.7**/13,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB0	**Warramunga Arr**	**39.74**	**196**	P	**P**	**23 48 51.6**	**+0.2**
WR0	**Warramunga Arr**	**39.89**	**196**	P	**P**	**23 48 52.5**	**-0.1**
WR0				IAmb	IAmb	23 49 01.9	
	comp=Z,4.0nm,1.2s						
WB2	**Warramunga Arr**	**39.92**	**196**	P	**P**	**23 48 52.8**	**-0.1**
WB2				IAmb	IAmb	23 49 03.0	
	comp=Z,7.3nm,1.2s						
WRA	**Warramunga Arr**	**39.93**	**196**	P	**P**	**23 48 52.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=13,slow=8.1,SNR=13						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**39.93**	**196**	P	**P**	**23 48 51.5**	**-1.4**
SONM	**Songino Array**	**42.83**	**322**	P	**P**	**23 49 17.5**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=129,slow=9.2,SNR=1.8						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**43.60**	**195**	P	**P**	**23 49 23.0**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=16,slow=8.3,SNR=1.7						
	comp=Z,0.2nm,0.7s						
MK31	**Makanchi Array**	**58.12**	**314**	P	**P**	**23 51 10.1**	**-0.6**
MK31				IAmb	IAmb	23 51 18.6	
	comp=Z,1.9nm,1.2s						
MKAR	**Makanchi Array**	**58.12**	**314**	P	**P**	**23 51 11.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=98,slow=4.9,SNR=4.9						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.12**	**314**	P	**P**	**23 51 09.9**	**-0.8**
K20K	**Telida**	**60.36**	**27**	P	**P**	**23 51 26.2**	**+0.5**
K20K				IAmb	IAmb	23 51 43.1	
	comp=Z,3.8nm,1.2s						
IMAR	**Indian Mountai**	**61.33**	**24**	P	**P**	**23 51 33.5**	**+1.3**
NRIK	**Noril'sk**	**61.41**	**340**	P	**P**	**23 51 32.2**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=112,slow=6.8,SNR=2.5						
	comp=Z,0.9nm,0.3s						
BMAR	**Burnt Mountain**	**65.23**	**24**	P	**P**	**23 51 57.4**	**-0.4**
ABKAR	**Akbulak array**	**73.01**	**317**	P	**P**	**23 52 45.6**	**-0.3**
ABKAR				IAmb	IAmb	23 52 58.1	
	comp=Z,2.6nm,1.5s						
ARCES	**ARCESS Array B**	**82.31**	**342**	P	**P**	**23 53 36.7**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=61,slow=5.6,SNR=1.5						
	comp=Z,1.2nm,0.9s						
NVAR	**Mina Array Bea**	**83.43**	**52**	P	**P**	**23 53 42.5**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=237,slow=6.3,SNR=3.6						
	comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**86.65**	**335**	P	**P**	**23 53 57.3**	**-1.5**
	comp=Z,3.0nm,1.1s,baz=72,slow=4.5,SNR=7.4						
	comp=Z,3.0nm,1.1s						
LPAZ	**La Paz**	**148.09**	**91**	PKPbc	**PKPdf**	**00 01 00.4**	**+2.2**
	comp=Z,1.4nm,0.5s,baz=260,slow=6.5,SNR=7.0						

*MAN **07** 23:43:40,16°.76N×119°.85E,h1km,Ms4.2*
*IDC **07** 23:43:42.3±3.5,16°.61N×119°.99E,h46km±34km,mb4.1/33, mbtmp4.4/33,MS3.7/51,Error ellipse: s-maj=15.3km s-min=9.6km az=76.0*
*BJI **07** 23:43:46.7±0.0,16°.61N×119°.62E,h75km,mb4.4/41, mB4.6/29,Ms4.2/29,Ms7 3.9/29*
*NEIC **07** 23:43:47.2±1.5,16°.57N±0°.08×119°.8E±0°.1,h79km±7km, mb4.6/107,Error ellipse: s-maj=15.2km s-min=11.0km az=101.0*
*DJA **07** 23:43:51.7±0.6,17°.N±4°×12°.0E±°,h136km±6km,M4.6/33, mB5.2/11,mb4.7/33,Mw(mB)4.6/11*
ISC 07 23:43:47.1±0.6,**16°.65N**±0°.03×**119°.89E**±0°.04,**h85**km±6km, **n250,** σ1$**82**/228,**mb4.6**/106,**22C-6D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.87**	**178**⇑	*eP*	Pn	23 44 09.6	+4.7
SCZP				*eS*	**Sn**	**23 44 23.0**	**+4.8**
SAMP	**Sagada Mountai**	**1.06**	**66**⇑	*eP*	Pn	23 44 01.1	-6.0
SAMP				*eS*	**Sn**	**23 44 15.7**	**-6.6**
SIPP	**Brgy, Tapao**	**1.38**	**23**⇓	*eP*	Pn	23 44 04.1	-6.9
SIPP				*eS*	**Sn**	**23 44 33.2**	**+4.1**
PCPH	**Palayan**	**1.59**	**133**⇓	*eP*	**Pn**	**23 44 10.8**	**-2.9**
PCPH				*eS*	**Sn**	**23 44 33.9**	**0.0**
BALP	**Baler**	**1.86**	**119**⇑	*eP*	**Pn**	**23 44 15.5**	**-1.8**
BALP				*eS*	**Sn**	**23 44 40.6**	**+0.4**
CAUP	**Cauayan**	**1.88**	**81**⇑	*eP*	**Pn**	**23 44 16.3**	**-1.1**
CAUP				*eS*	**Sn**	**23 44 45.0**	**+4.3**
QVP	**Quezon City--P**	**2.29**	**152**⇑	*eP*	**Pn**	**23 44 21.3**	**-1.6**
QVP				*eS

comp=Z,480nm,15.7s
CRAI Chiangrai 18.85 284 P P 23 48 01.3 +0.8
LYN LuoYang 19.03 341 ⇑P Pn 23 48 07.8 +3.9
LYN S **S** **23 51 35.1 +1.3**
LYN sS sS 23 51 58.6 -2.2
LYN pmax pmax
comp=Z,10.0nm,1.0s
LYN pmax pmax
comp=Z,160nm,9.0s
JNU Nakatsue 19.17 29 P Pn 23 48 06.7 +1.0
JNU lAmb lAmb 23 48 15.2
comp=Z,65nm,1.1s
PZH PanZhiHua 19.49 303 P Pn 23 48 10.4 +0.8
PZH S **S** **23 51 43.8 +0.2**
PZH pmax pmax
comp=Z,20nm,1.2s
PZH pmax pmax
comp=Z,140nm,5.5s
PZH LR LR
comp=Z,860nm,16.6s
PZH LR LR
comp=Z,890nm,17.4s
PZH LR LR
comp=Z,1μm,18.6s
TTSI Tana Toraja 19.57 180 P P 23 48 08.6 +0.3
comp=Z,350nm,0.9s
NAWB Namwon 19.86 18 P Pn 23 48 13.7 0.0
NAWB lAmb lAmb 23 48 18.3
comp=Z,31nm,1.2s
XAN Xi'an 19.92 332 P P 23 48 12.0 -0.1
XAN pP pP 23 48 27.1 -1.0
XAN S **S** **23 51 51.6 -0.2**
XAN pmax pmax
comp=Z,13nm,1.3s
XAN LR LR
comp=Z,320nm,11.8s
XAN LR LR
comp=Z,380nm,14.9s
XAN LR LR
comp=Z,390nm,14.5s
CM31 Chiang Mai Arr 20.05 278 P P 23 48 13.3 -0.3
CMAR Chiang Mai Arr 20.05 278 P P 23 48 14.6 +1.0
comp=Z,5.2nm,0.8s,baz=94,slow=8.7,SNR=14
CMAR LR LR 23 56 21.7
comp=Z,206nm,18.1s,baz=95,slow=38
comp=Z,5.2nm,0.8s
CMAR Chiang Mai Arr 20.05 278 P 23 48 13.4 -0.2
CHTO Chiang Mai 20.06 279 P P 23 48 13.0 -0.7
KSBUS Busan 20.27 22 P Pn 23 48 18.2 -0.3
KSBUS lAmb lAmb 23 48 21.5
comp=Z,32nm,1.2s
CD2 Chengdu 20.44 317 P P 23 48 18.0 +0.3
CD2 pP pP 23 48 32.8 -0.9
CD2 sP sP 23 48 44.9 +0.9
CD2 S **S** **23 52 03.4 +1.4**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 LR LR
comp=Z,540nm,12.7s
CD2 LR LR
comp=Z,530nm,14.2s
CD2 LR LR
comp=Z,490nm,10.8s
SPSI Sidrap Palu 20.48 180 P P 23 48 16.2 -2.0
comp=Z,37nm,1.0s
BBKI Banjar Baru 20.60 194 P P 23 48 20.4 +0.9
comp=Z,42nm,1.1s
SIJI Sorong 20.71 146 P P 23 48 17.0 -3.8
comp=Z,6.7nm,0.6s,baz=164,slow=23,SNR=1.4
comp=Z,6.7nm,0.6s
TJN Taejon 20.74 17 P P 23 48 22.6 +1.8
NLAI Namlea 21.01 160 P P 23 48 24.8 +0.9
comp=Z,2μm comp=Z,29nm,1.0s
HNS HongShan 21.17 349 ⇑P P 23 48 28.1 +2.7
HNS pP **pP** **23 48 39.4 -2.1**
HNS eS **S** **23 52 15.9 -0.2**
HNS pmax pmax
comp=Z,9.0nm,0.9s
HNS LR LR
comp=Z,420nm,15.4s
HNS LR LR
comp=Z,400nm,16.7s
SRIT Nakonsritamara 21.33 250 P P 23 48 27.4 0.0
SRIT lAmb lAmb 23 48 44.1
comp=Z,45nm,1.4s
KSCHJ Chungju 21.38 18 P P 23 48 30.6 +2.9
KAPI Kappang 21.52 180 P P 23 48 27.6 -1.8
comp=Z,11nm,0.5s,baz=349,slow=14,SNR=6.0
KAPI LR LR 23 58 15.6
comp=Z,99nm,18.5s,baz=24,slow=41
comp=Z,11nm,0.5s
KAPI Kappang 21.52 180 P P 23 48 28.9 -0.5
KAPI lAmb lAmb 23 48 34.3
comp=Z,26nm,0.9s
INCN Inchon 21.59 15 P P 23 48 32.7 +2.7
INCN lAmb lAmb 23 48 44.6
comp=Z,25nm,0.8s
MYKOM Kota Tinggi 21.61 229 P P 23 48 29.6 -0.7
MYKOM lAmb lAmb 23 48 33.3
comp=Z,28nm,0.8s
JHS Saijyo 21.77 30 P P 23 48 34.7 +2.8
MSAI Masohi 21.79 155 P P 23 48 33.0 +0.8
KSAR Wonju Array Be 21.88 17 P P 23 48 32.9 -0.1
KSRS Korea Array 21.91 17 P P 23 48 31.0 -2.3
comp=Z,3.1nm,0.9s,baz=198,slow=11,SNR=12
KSRS LR LR 23 58 16.7
comp=Z,201nm,18.1s,baz=200,slow=40
comp=Z,3.1nm,0.9s
KS19 Wonju Array Si 21.93 17 P P 23 48 36.1 +2.5
KULM Kulim 21.97 241 P P 23 48 31.9 -2.3
IPM Ipoh 22.11 239 P P 23 48 33.9 -1.8
TPI Tanjungpandan 22.75 213 P P 23 48 42.6 +0.1
comp=Z,414mmcomp=Z,31nm,1.1s
PPBI Pangkal Pinang 23.10 217 P P 23 48 46.2 +0.3
comp=Z,36nm,0.7s
JCJ Chichijima 23.12 59 LR LR 23 57 54.4
comp=Z,61nm,18.3s,baz=288,slow=37
JCJ Chichijima 23.12 59 P P 23 48 46.8 +0.8
BJT Baijiatuau 23.51 353 P 23 48 50.0 +0.5
LZH Lanzhou 24.05 327 *e*P **P 23 48 56.6 +2.1**
LZH pP pwP 23 49 14.5 -1.8
LZH sP sP 23 49 20.3 -2.2
LZH PP **PnPn** **23 49 32.8 +4.4**
LZH S **S** **23 53 06.1 +0.2**
LZH sS sS 23 53 29.1 -10
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,200nm,4.6s
LZH LR LR
comp=Z,580nm,11.4s
LZH LR LR
comp=Z,450nm,12.0s
LZH LR LR
comp=Z,560nm,14.5s
INU Inuyama 24.09 36 P P 23 48 55.9 +1.1
INU lAmb lAmb 23 49 11.6
comp=Z,17nm,0.9s
JMBI JAMBI 24.23 223 P P 23 48 55.9 -0.2
comp=Z,121nm,0.9s
KMMI Kalianget 24.26 194 P P 23 48 53.1 -3.3
comp=Z,102nm,1.1s
GUMO Guam 24.30 94 LR LR 23 56 41.3
comp=Z,123nm,20.3s,baz=286,slow=32
JHJ Hachijo jima 2 24.32 44 LR LR 23 56 38.4
comp=Z,149nm,20.4s,baz=238,slow=32
JGF Kuroka 24.47 36 P P 23 49 00.8 +2.5
JGF lAmb lAmb 23 49 02.2
comp=Z,28nm,1.0s
BKNI Bangkinang 24.66 231 P P 23 49 00.9 +0.8
PSI Prapat 24.78 238 P P 23 49 00.8 -0.5
comp=Z,14nm,1.0s,baz=65,slow=2.2,SNR=4.8
PSI LR LR 23 58 28.5
comp=Z,332nm,19.1s,baz=44,slow=36
comp=Z,14nm,1.0s
RPSI Rantau Prapat 24.84 238 P P 23 49 01.0 -0.7
BLJI Banyuglugur 25.02 195 P P 23 49 03.3 -0.1
comp=Z,30nm,0.9s
HHC Hu-ho-hao-te 25.17 345 *e*P **P 23 49 07.1 +2.5**
HHC S **S** **23 53 22.4 -1.2**
HHC pmax pmax
comp=Z,40nm,0.6s
HHC pmax pmax
comp=Z,150nm,7.2s
HHC LR LR
comp=Z,430nm,12.7s
HHC LR LR
comp=Z,400nm,13.3s
HHC LR LR
comp=Z,620nm,14.6s
MMRI Maumere 25.23 175 P P 23 49 04.9 -0.4
MMRI lAmb lAmb 23 49 10.2
comp=Z,36nm,0.9s
NGJI Ngawi 25.28 200 P P 23 49 05.8 +0.2
comp=Z,79nm,0.8s
EDFI Ende, Flores 25.30 176 P P 23 49 04.9 -1.1
comp=Z,290nmcomp=Z,24nm,0.6s
SMRI Semarang 25.33 202 P P 23 49 06.3 +0.1
PLAI Plampang 25.40 185 P P 23 49 07.1 +0.3
comp=Z,1μmcomp=Z,150nm,1.0s
MNSI Mandailing Nat 25.46 234 P P 23 49 06.8 -0.6
comp=Z,3μmcomp=Z,28nm,0.8s
MJAR Matsushiro Arr 25.62 36 P P 23 49 07.9 -0.8
comp=Z,1.5nm,0.6s,baz=178,slow=11,SNR=1.5
MJAR LR LR 23 59 54.8
comp=Z,97nm,18.4s,baz=208,slow=38
comp=Z,1.5nm,0.6s
PPI Padang Panjang 25.66 230 P P 23 49 08.9 -0.2
comp=Z,21nm,1.1s
PWJI Pagerwojo 25.78 199 P P 23 49 10.2 0.0
comp=Z,68nm,0.9s
KRJI Kerinci 26.03 226 P P 23 49 10.2 -2.4
LEM Lembang 26.29 208 P P 23 49 13.4 -1.6
comp=Z,10nm,0.5s,baz=301,slow=19,SNR=1.8
LEM LR LR 23 59 54.1
comp=Z,170nm,18.1s,baz=22,slow=37
comp=Z,10nm,0.5s
LWLI Liwa 26.61 217 P P 23 49 18.1 +0.2
comp=Z,104nm,1.0s
GSI Gunungsitoli 26.74 238 P P 23 49 17.7 -1.2
BATI Baumata 26.94 172 P P 23 49 19.2 -1.5
comp=Z,9.8nm,0.3s,baz=70,slow=12,SNR=1.6
BATI LR LR 00 03 30.1
comp=Z,134nm,18.1s,baz=327,slow=44
comp=Z,9.8nm,0.3s
SISI Saibi 27.21 231 P P 23 49 21.9 -1.2
comp=Z,24nm,1.0s
XLT XiLinHaoTe 27.35 354 *e*P **P 23 49 26.9 +2.7**
XLT sP sP 23 49 50.6 -1.8
XLT pmax pmax
comp=Z,13nm,1.0s
XLT pmax pmax
comp=Z,46nm,4.4s
GTA Gaotai 28.65 326 ⇓P **P 23 49 37.1 +1.2**
GTA pP pP 23 49 52.2 -2.3
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,75nm,6.5s
GTA LR LR
comp=Z,210nm,16.7s
GTA LR LR
comp=Z,200nm,16.4s
GTA LR LR
comp=Z,280nm,17.5s
USRK Ussuriysk Ar. 29.31 18 P P 23 49 40.6 -0.9
comp=Z,3.2nm,0.7s,baz=203,slow=12,SNR=4.2
comp=Z,3.2nm,0.7s
USRK Ussuriysk Ar. 29.31 18 P P 23 49 42.2 +0.7
LSA Lhasa 29.34 301 P P 23 49 42.5 -0.1
BNX BinXian 29.68 11 ⇑P P 23 49 50.3 +5.6
BNX pmax pmax
comp=Z,5.0nm,0.6s
BNX pmax pmax
comp=Z,48nm,4.4s
ULN Ulaanbaatar 32.87 344 P P 23 50 13.4 +0.4
SONM Songino Array 33.02 343 P P 23 50 14.1 -0.2
comp=Z,2.8nm,0.7s,baz=161,slow=9.6,SNR=15
SONM LR LR 00 04 27.7
comp=Z,174nm,18.4s,baz=155,slow=38
comp=Z,2.8nm,0.7s
SONM Songino Array 33.02 343 P P 23 50 14.6 +0.3
PMG Port Moresby 37.39 132 LR LR 00 08 05.4
comp=Z,18nm,21.0s,baz=309,slow=39
MBWA Marble Bar 37.57 180 P P 23 50 52.7 -0.7
KRVT Keravat (AS076 37.98 120 P P 23 50 54.1 -3.0
comp=Z,34nm,0.5s,baz=170,slow=20,SNR=2.3
PSA00 Pilbara Seismi 37.99 180 P P 23 50 56.3 -0.6
PSA00 Pilbara Seismi 37.99 180 lAmb lAmb 23 50 57.0
comp=Z,23nm,1.1s
WMQ Urumqi 38.40 322 *e*P **P 23 51 02.6 +2.3**
WMQ LR LR
comp=Z,320nm,16.9s
WMQ LR LR
comp=Z,370nm,16.5s
WMQ LR LR
comp=Z,220nm,18.5s
WB0 Warramunga Arr 38.90 158 P P 23 51 02.4 -2.2
WB0 lAmb lAmb 23 51 03.1
comp=Z,9.0nm,0.8s
WRAB Tennant Creek 39.03 158 P P 23 51 04.0 -1.7
WRA Warramunga Arr 39.04 158 P P 23 51 03.8 -2.0
comp=Z,8.0nm,0.8s,baz=327,slow=10,SNR=71
WRA LR LR 00 08 51.7
comp=Z,57nm,19.7s,baz=62,slow=39
comp=Z,8.0nm,0.8s
WRA Warramunga Arr 39.04 158 P P 23 51 04.0 -1.8
WB2 Warramunga Arr 39.04 158 P P 23 51 03.9 -1.9
WR0 Warramunga Arr 39.13 158 P P 23 51 04.0 -2.4
WR0 lAmb lAmb 23 51 05.2
comp=Z,8.6nm,0.9s
PALK Pallekele 39.38 261 LR LR 00 07 23.1
comp=Z,118nm,19.1s,baz=179,slow=36
AS31 Alice Springs 42.35 161 P P 23 51 31.3 -1.7
ASAR Alice Springs 42.35 161 P P 23 51 31.6 -1.4
comp=Z,7.7nm,0.6s,baz=339,slow=7.0,SNR=89
ASAR LR LR 00 12 18.2
comp=Z,38nm,18.4s,baz=339,slow=41
comp=Z,7.7nm,0.6s
ASAR Alice Springs 42.35 161 P P 23 51 31.3 -1.6
MK31 Makanchi Array 43.22 322 P P 23 51 40.0 +0.1
MKAR Makanchi Array 43.22 322 P P 23 51 40.1 +0.3
comp=Z,2.8nm,0.7s,baz=119,slow=9.9,SNR=24
MKAR PcP **PcP** **23 53 28.3 +0.6**
comp=Z,2.1nm,0.7s,baz=103,slow=5.2,SNR=4.3
comp=Z,2.8nm,0.7s
KSH Kashi 44.38 310 P P 23 51 52.4 +3.0
KSH pmax pmax
comp=Z,6.0nm,1.0s
NRN Naryn 44.99 312 P P 23 51 54.3 -0.1
NIL Nilore 45.08 301 P P 23 51 54.4 -0.5
YAK Yakutsk 45.86 6 LR LR 00 14 34.2
comp=Z,67nm,18.6s,baz=92,slow=40
ZAA0 Zalesovo Array 46.09 332 P P 23 52 02.5 -0.1
ZALV Zalesovo Beam 46.09 332 P P 23 52 01.5 -1.0
comp=Z,2.6nm,0.8s,baz=123,slow=7.9,SNR=8.7
ZALV PcP **PcP** **23 53 37.4 0.0**
comp=Z,1.0nm,0.5s,baz=133,slow=4.3,SNR=2.7
ZALV LR LR 00 11 31.8
comp=Z,79nm,19.4s,baz=120,slow=36
comp=Z,2.6nm,0.8s
PETK Petropavlovsk- 46.86 30 P P 23 52 08.1 -0.5
comp=Z,3.1nm,0.9s,baz=121,slow=31,SNR=5.1
PETK LR LR 00 11 10.1
comp=Z,68nm,21.5s,baz=235,slow=35
comp=Z,3.1nm,0.9s
PETK Petropavlovsk- 46.86 30 P P 23 52 09.7 +1.1
KURK Kurchatov 47.32 325 P P 23 52 12.3 +0.1
BTK Batken 48.35 309 P P 23 52 21.2 +0.8
BTK lAmb lAmb 23 52 38.2
comp=Z,8.2nm,1.1s
MA2 Magadan 48.41 20 P P 23 52 19.9 -0.5
comp=Z,3.1nm,0.3s,baz=170,slow=21,SNR=1.9
MA2 LR LR 00 13 09.0
comp=Z,70nm,19.5s,baz=168,slow=36
comp=Z,3.1nm,0.3s
MA2 Magadan 48.41 20 P P 23 52 21.5 +1.1
MA2 lAmb lAmb 23 52 32.7
comp=Z,7.7nm,0.9s
GAR Garm 48.48 308 P P 23 52 21.4 0.0
KBL Kabul 48.67 302 P P 23 52 22.6 -0.5
KBL lAmb lAmb 23 52 24.4
comp=Z,5.4nm,0.8s
CHGR Chuyangaron 49.29 307 P P 23 52 27.4 -0.3
KK31 Karatay Array 49.38 313 P P 23 52 28.3 +0.1
KK31 lAmb lAmb 23 52 41.0
comp=Z,7.0nm,1.1s
KKAR Karatay Array 49.38 313 P P 23 52 28.1 0.0
KKAR Karatay Array 49.38 313 P P 23 52 28.0 -0.1
KKAR lAmb lAmb 23 52 41.0
comp=Z,7.0nm,1.1s
SEY Seymchan 51.46 18 P P 23 52 43.3 -0.1
comp=Z,1.9nm,0.2s,baz=179,slow=13,SNR=4.6
comp=Z,1.9nm,0.2s
STKA Stephens Creek 52.55 157 P P 23 52 50.5 -1.5
comp=Z,7.1nm,0.6s,baz=329,slow=7.4,SNR=16
STKA LR LR 00 17 39.6
comp=Z,72nm,18.8s,baz=21,slow=39
comp=Z,7.1nm,0.6s
STKA Stephens Creek 52.55 157 P P 23 52 51.2 -0.7
BVAR Borovoye Array 52.91 325 LR LR 00 16 38.2
comp=Z,48nm,19.7s,baz=355,slow=37
BRVK Borovoye 52.98 325 P P 23 52 54.9 0.0
BRVK lAmb lAmb 23 53 10.4
comp=Z,6.0nm,0.9s
TIXI Tiksi 55.25 3 LR LR 00 19 18.9
comp=Z,127nm,18.6s,baz=181,slow=39
NRIK Noril'sk 56.38 347 P P 23 53 18.6 -0.6
comp=Z,3.1nm,0.7s,baz=137,slow=7.0,SNR=7.5
comp=Z,3.1nm,0.7s
NRIK Noril'sk 56.38 347 lAmb lAmb 23 53 36.5
comp=Z,11nm,1.1s
WSAR Wadi Sarin 57.60 287 LR LR 00 21 10.5
comp=Z,26nm,18.5s,baz=114,slow=39
GEYT Alibeck 57.80 305 P P 23 53 30.5 +0.7
comp=Z,5.0nm,0.8s,baz=109,slow=6.3,SNR=8.6
GEYT LR LR 00 20 30.0
comp=Z,102nm,21.1s,baz=78,slow=38
comp=Z,5.0nm,0.8s
GEYT Alibeck 57.80 305 P P 23 53 29.8 0.0
GYA0B ALIBECK ARRAY 57.80 305 P P 23 53 29.8 0.0
ABKAR Akbulak array 58.01 318 P P 23 53 30.9 -0.1
ABKAR Akbulak array 58.01 318 P P 23 53 31.1 0.0
ABKAR lAmb lAmb 23 53 32.1
comp=Z,6.1nm,1.1s
AMKA Amchitka 58.16 39 P P 23 53 34.3 +2.3
AKTO Aktyubinsk 59.47 319 LR LR 00 21 05.8
comp=Z,129nm,18.2s,baz=103,slow=38
DZM Mont Dzumac 59.67 129 P P 23 53 41.8 -1.1
comp=Z,9.4nm,1.0s,baz=85,slow=4.4,SNR=2.7
DZM LR LR 00 19 12.6
comp=Z,43nm,18.4s,baz=185,slow=36
comp=Z,9.4nm,1.0s
ARU Arti 60.51 326 LR LR 00 19 25.5
comp=Z,56nm,18.1s,baz=97,slow=35
ARU Arti 60.51 326 P P 23 53 47.7 -0.4
ARU lAmb lAmb 23 53 48.4
comp=Z,6.4nm,0.9s
NIKH Nikolski High 65.61 39 P P 23 54 23.4 +1.4
KIRV Kirov 65.77 327 LR LR 00 23 43.1
comp=Z,70nm,18.5s,baz=89,slow=36
BELG Belogornoye 66.17 320 LR LR 00 24 22.2
comp=Z,54nm,18.3s,baz=189,slow=37
GNI Garni 68.20 307 P P 23 54 39.7 +0.8
GNI lAmb lAmb 23 55 09.1
comp=Z,12nm,1.1s
ONI Oni 69.02 310 P P 23 54 42.6 -1.2
ONI lAmb lAmb 23 55 11.5
comp=Z,9.2nm,1.0s
KBZ Khabaz 69.35 311 P P 23 54 45.6 -0.1
comp=Z,3.4nm,0.9s,baz=161,slow=4.3,SNR=5.2
KBZ LR LR 00 29 26.7
comp=Z,73nm,18.0s,baz=72,slow=40
comp=Z,3.4nm,0.9s
KARS Kars 69.44 308 P P 23 54 47.3 +0.8
KIV Kislovodsk 69.49 311 P P 23 54 47.1 +0.3
KIV lAmb lAmb 23 55 02.0
comp=Z,18nm,1.3s
RAYN Ar Rayn 69.52 289 P P 23 54 47.3 +0.1
RAYN lAmb lAmb 23 54 48.7
comp=Z,7.1nm,0.9s
GURO Guroymak-BITLI 70.43 306 P P 23 54 52.6 0.0
GURO lAmb lAmb 23 55 08.8
comp=Z,8.7nm,0.9s
L19K White Mountain 73.22 29 P P 23 55 10.1 +1.3
L19K lAmb lAmb 23 55 13.2
comp=Z,6.8nm,0.9s
RER Riviere de l'E 73.26 241 P P 23 55 09.5 -0.2
J20K Nowinta River 73.41 27 lAmb lAmb 23 55 31.1
comp=Z,5.9nm,0.9s
IMAR Indian Mountai 73.46 25 P P 23 55 11.2 +1.1
M19K Big River Lodg 73.46 30 P P 23 55 11.6 +1.4
K20K Telida 73.50 28 P P 23 55 12.4 +2.0
K20K lAmb lAmb 23 55 52.2
comp=Z,9.9nm,1.2s
AFI Afiamalu 74.00 110 LR LR 00 25 29.0
comp=Z,24nm,19.6s,baz=43,slow=34
M20K Styx River 74.06 29 P P 23 55 15.9 +2.2
M20K lAmb lAmb 23 55 42.7
comp=Z,15nm,1.3s
CAST Castle Rocks 74.39 28 P P 23 55 16.4 +0.9
CAST lAmb lAmb 23 55 19.6
comp=Z,9.5nm,0.7s
ATD Arta Tunnel 74.50 278 LR LR 00 28 01.2
comp=Z,15nm,19.2s,baz=358,slow=36
MLY Manley 74.80 26 lAmb lAmb 23 55 28.8
comp=Z,6.6nm,1.0s
BPAW Bear Paw Mtn. 74.80 27 P P 23 55 19.2 +1.3
BPAW lAmb lAmb 23 55 29.3
comp=Z,16nm,1.2s
SKT Skwentna 74.80 29 P P 23 55 20.1 +2.1
SKT lAmb lAmb 23 55 22.8
comp=Z,22nm,1.5s
TOLK Toolik Lake Re 74.83 22 P P 23 55 19.7 +1.6
TOLK lAmb lAmb 23 55 40.2
comp=Z,11nm,1.4s
H23K Yukon River 75.19 25 lAmb lAmb 23 55 31.7
comp=Z,8.9nm,1.1s
BWN Browne 75.45 27 P P 23 55 24.0 +2.4
BWN lAmb lAmb 23 55 41.3
comp=Z,14nm,1.0s
NEA2 Nenana 75.56 26 lAmb lAmb 23 55 31.4
comp=Z,5.2nm,0.9s
MCK McKinley 75.75 27 P P 23 55 24.6 +1.3
MCK lAmb lAmb 23 55 34.0
comp=Z,11nm,1.0s
RC01 Rabbit Creek A 75.77 30 P P 23 55 25.6 +2.1
RND Reindeer 75.83 28 lAmb lAmb 23 55 25.1
comp=Z,8.1nm,0.7s
MDM Murphy Dome 75.86 26 lAmb lAmb 23 55 35.8
comp=Z,9.2nm,1.2s
H24K Noodor Dome 75.87 25 P P 23 55 27.2 +3.1
H24K lAmb lAmb 23 55 36.6
comp=Z,11nm,1.4s
WRH Wood River Hil 76.00 27 lAmb lAmb 23 56 05.2
comp=Z,8.0nm,1.2s
ARCES ARCESS Array B 76.06 339 P P 23 55 24.5 -0.5
comp=Z,3.6nm,1.1s,baz=58,slow=3.0,SNR=4.0
ARCES LR LR 00 30 47.5
comp=Z,44nm,19.4s,baz=50,slow=37
comp=Z,3.6nm,1.1s
ILAR Eielson Array 76.46 26 P P 23 55 26.7 -0.7
comp=Z,0.5nm,0.6s,baz=249,slow=3.6,SNR=5.1
ILAR LR LR 00 30 48.8
comp=Z,27nm,18.1s,baz=166,slow=37
comp=Z,0.5nm,0.6s
SPITS Spitsbergen Ar 76.56 348 LR LR 00 32 13.1
comp=Z,120nm,21.4s,baz=40,slow=38
BRTR Keskin Array B 76.72 308 P P 23 55 28.7 -0.8
comp=Z,2.3nm,1.2s,baz=131,slow=5.6,SNR=3.9
BRTR LR LR 00 33 57.2
comp=Z,44nm,19.5s,baz=118,slow=39
comp=Z,2.3nm,1.2s
FINES FINESS Array B 77.34 331 P P 23 55 32.2 -0.1
comp=Z,1.1nm,0.6s,baz=59,slow=6.0,SNR=14
FINES LR LR 00 32 58.5
comp=Z,64nm,19.1s,baz=80,slow=38
comp=Z,1.1nm,0.6s
EIL Eiat 77.65 297 LR LR 00 34 01.1
comp=Z,45nm,20.4s,baz=86,slow=39
AKASG Malin Array Be 77.72 319 P P 23 55 33.8 -0.9
comp=Z,0.5nm,0.5s,baz=64,slow=5.6,SNR=4.4
comp=Z,0.5nm,0.5s
I26K Coal Creek Min 77.90 25 lAmb lAmb 23 55 46.2
comp=Z,6.5nm,0.9s
M26K Nabesna, AK 78.66 28 lAmb lAmb 23 55 51.6
comp=Z,14nm,1.1s
L27K Beaver Creek, 79.01 27 lAmb lAmb 23 55 45.8
comp=Z,5.9nm,0.9s
INK Inuvik 80.64 21 LR LR 00 33 48.9
comp=Z,30nm,20.8s,baz=238,slow=37
INK Inuvik 80.64 21 P P 23 55 50.0 -0.2
INK lAmb lAmb 23 56 05.3
comp=Z,13nm,1.5s
BURAR Bucovina Array 80.97 317 P P 23 55 52.4 -0.1
BUR08 Bucovina Ar. S 80.98 317 P P 23 55 52.7 +0.1
MLR Muntele Rosu 81.02 315 LR LR 00 35 48.8
comp=Z,71nm,19.6s,baz=76,slow=38
HYT Haines Junctio 81.62 29 P P 23 55 56.8 +1.0
HYT PcP **PcP** **23 55 57.0 -4.5**

HYT					IAmb	IAmb	23 56 00.0			
	comp=Z,5.7nm,0.8s									
FARO	**Faro, Yukon**	**82.99**	**27**	P	**P**		**23 56 04.1**	**+1.3**		
FARO					IAmb	IAmb	23 56 07.1			
	comp=Z,4.9nm,0.8s									
KMBO	**Kilima Mbogo**	**83.26**	**267**	P	**P**		**23 56 05.3**	**0.0**		
	comp=Z,1.8nm,0.9s,baz=47,slow=10,SNR=3.6									
	comp=Z,1.8nm,0.9s									
C36M	**Paulatuk**	**83.29**	**19**	P	**P**		**23 56 05.0**	**+1.0**		
HFS	**Hagfors**	**83.53**	**331**	LR	LR		00 38 35.9			
	comp=Z,68nm,18.1s,baz=38,slow=39									
OJC	**Ojcow**	**83.66**	**320**	P	**P**		**23 56 05.7**	**-0.7**		
OJC					IAmb	IAmb	23 56 29.9			
	comp=Z,4.1nm,0.8s									
VTS	**Vitosha**	**83.67**	**312**	P	**P**		**23 56 06.9**	**0.0**		
VTS					IAmb	IAmb	23 56 08.3			
	comp=Z,8.5nm,1.3s									
NB2	**NORSAR Subarra**	**84.30**	**332**	P	**P**		**23 56 09.3**	**-0.2**		
	comp=Z,4.6nm,0.8s,baz=66,slow=4.6									
NB2	**NORSAR Subarra**	**84.30**	**332**	P	**P**		**23 56 09.3**	**-0.2**		
	baz=66,slow=4.6									
NOA	**NORSAR Array B**	**84.30**	**332**	P	**P**		**23 56 09.5**	**+0.1**		
	comp=Z,2.4nm,0.8s,baz=65,slow=4.6,SNR=8.7									
NOA					LR	LR	00 34 48.5			
	comp=Z,70nm,18.1s,baz=70,slow=36									
	comp=Z,2.4nm,0.8s									
NAO01	**NORSAR Array S**	**84.52**	**332**	P	**P**		**23 56 09.1**	**-1.4**		
DLBC	**Dease Lake**	**86.04**	**30**	LR	LR		00 34 59.5			
	comp=Z,28nm,20.9s,baz=337,slow=36									
RES	**Resolute Bay**	**86.26**	**9**	LR	LR		00 37 26.7			
	comp=Z,32nm,21.1s,baz=8.5,slow=37									
CONA	**Conrad Observa**	**86.88**	**319**	*eP*	**P**		**23 56 22.6**	**0.0**		
	comp=Z,2.9nm,1.1s									
BRG	**Berggiesshubel**	**86.93**	**322**	*eP*	**P**		**23 56 23.1**	**+0.4**		
BRG					Amp		23 56 23.9			
	comp=Z,4.3nm,0.9s									
GERES	**GERESS Array B**	**87.86**	**321**	P	**P**		**23 56 27.5**	**+0.2**		
	comp=Z,0.6nm,0.7s,baz=0.0,slow=5.3,SNR=5.9									
	comp=Z,0.6nm,0.7s									
MOA	**Molln**	**87.90**	**320**	*eP*	**P**		**23 56 27.7**	**+0.3**		
	comp=Z,4.8nm,1.0s									
MBAR	**Mbarara**	**89.35**	**269**	LR	LR		00 36 55.7			
	comp=Z,23nm,18.7s,baz=69,slow=36									
ABTA	**Abfaltersbach**	**89.43**	**319**	*eP*	**P**		**23 56 34.0**	**-0.8**		
	comp=Z,5.4nm,1.4s									
WTTA	**Wattenberg**	**89.77**	**320**	*eP*	**P**		**23 56 35.7**	**-0.7**		
	comp=Z,3.9nm,0.6s									
WATA	**Walderalm**	**89.78**	**320**	*eP*	**P**		**23 56 36.0**	**-0.4**		
	comp=Z,2.5nm,0.7s									
SQTA	**Sankt Quirin**	**90.05**	**320**	*eP*	**P**		**23 56 37.5**	**-0.2**		
	comp=Z,8.4nm,1.2s									
MOTA	**Moosalm**	**90.06**	**320**	*eP*	**P**		**23 56 37.2**	**-0.5**		
	comp=Z,5.8nm,1.1s									
YKA	**Yellowknife Ar**	**90.36**	**22**	P	**P**		**23 56 38.1**	**-0.5**		
	comp=Z,1.4nm,0.8s,baz=314,slow=5.0,SNR=5.8									
	comp=Z,1.4nm,0.8s									
FETA	**Feichten**	**90.43**	**320**	*eP*	**P**		**23 56 39.5**	**-0.1**		
	comp=Z,5.2nm,1.0s									
DAVOX	**Davos/Dischmat**	**91.06**	**320**	LR	LR		00 40 23.8			
	comp=Z,98nm,18.9s,baz=60,slow=37									
MAW	**Mawson**	**93.61**	**199**	P	**P**		**23 56 54.6**	**+1.3**		
	comp=Z,3.3nm,0.9s,baz=24,slow=5.8,SNR=4.2									
	comp=Z,3.3nm,0.9s									
BORG	**Borgarnes**	**93.63**	**344**	LR	LR		00 43 59.3			
	comp=Z,33nm,19.1s,baz=37,slow=39									
EKA	**Eskdalemuir Ar**	**93.72**	**331**	LR	LR		00 45 08.7			
	comp=Z,154nm,18.6s,baz=188,slow=39									
LSZ	**Lusaka**	**95.85**	**256**	LR	LR		00 38 18.9			
	comp=Z,90nm,18.6s,baz=132,slow=34									
VNDA	**Vanda**	**97.06**	**172**	P	**P**		**23 57 08.9**	**0.0**		
	comp=Z,0.9nm,0.8s,baz=303,slow=4.9,SNR=7.2									
VNDA					LR	LR	00 45 07.6			
	comp=Z,14nm,18.2s,baz=303,slow=38									
	comp=Z,0.9nm,0.8s									
TXAR	**Lajitas Array**	**117.89**	**43**	PKP	**PKiKP**		**00 02 25.9**	**+1.3**		
	comp=Z,0.2nm,0.6s,baz=163,slow=1.3,SNR=3.4									

IDC 08 00:10:53.0±2.3, 7°00S×128°91E, h0km, mb3.4/1, mbtmp3.6/3, ML3.5/2, Error ellipse: s-maj=145.1km s-min=33.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**158**	Pn		Pn	00 14 11.1	-0.3
	0.3nm,0.3s,baz=340,slow=13,SNR=4.5							
WRA				Sn		Sn	00 16 31.3	-15
	0.7nm,0.3s,baz=330,slow=22,SNR=12							
	0.4nm,0.3s							
ASAR	**Alice Springs**	**17.25**	**164**	P		Pn	00 14 55.7	+0.2
	0.3nm,0.3s,baz=340,slow=11,SNR=25							
ASAR				S		Sn	00 17 53.0	-15
	0.8nm,0.6s,baz=343,slow=26,SNR=6.3							
	1.6nm,0.6s							
MKAR	**Makanchi Array**	**67.64**	**327**	P		P	00 21 51.9	0.0
	0.3nm,0.7s,baz=138,slow=6.7,SNR=2.6							
	0.3nm,0.7s							

*IDC **08** 00:32:25.3±2.9, 36°22N×70°42E, h159km±25km, mb3.3/14, mbtmp3.8/19, Error ellipse: s-maj=20.9km s-min=13.8km az=176.0*

*NNC **08** 00:32:33.4±3.6, 36°86N×70°27E, h164km±45km, mb3.8, mpv4.6, Error ellipse: s-maj=32.3km s-min=20.8km az=25.0*

ISC 08 00:32:30.3±0.5, 36°52N±0'06×70°38E±0'07, h204km, n54, σ1§42/58, mb3.5/13, 5C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CEP	**Cherat**	**2.97**	**155**	P		**Pn**	**00 33 19.9**	**-0.1**
CEP				S		**S**	**00 33 57.0**	**-1.2**
CHCP	**Chirah Chowk**	**3.71**	**140**	P		**Pn**	**00 33 29.1**	**+0.3**
THW	**Thamme Wali**	**3.89**	**163**	P		**Pn**	**00 33 30.5**	**-0.4**
IUG	**luzhnay**	**5.62**	**357**	Pg		**Pn**	**00 33 53.0**	**+0.2**
	2µm,0.2s							
IUG				Lg		Lg	00 34 52.9	
	307nm,0.5s							
AML	**Almayashu**	**6.16**	**24**	P		**Pn**	**00 33 59.7**	**-0.3**
	SNR=88							
DZA	**Taraz**	**6.40**	**6**	Pg		**Pn**	**00 34 01.7**	**-1.0**
	183nm,0.3s							
DZA				Lg		Lg	00 35 08.8	
	278nm,0.4s							
UCH	**Uchtor**	**6.54**	**28**	P		**Pn**	**00 34 04.9**	**0.0**
	SNR=13							
KK31	**Karatay Array**	**6.57**	**1**	P		**Pn**	**00 34 04.1**	**-0.8**
	6.8nm,0.3s,baz=189,slow=13,SNR=124							
KK31				⇑S		**S**	**00 35 14.7**	**-5.1**
	13nm,0.6s,baz=200,slow=30,SNR=7.1							
MRKS	**Merke**	**6.59**	**19**	Pg		**Pn**	**00 34 04.7**	**-0.5**
	30nm,0.3s							
MRKS				Lg		Lg	00 35 13.9	
	83nm,0.5s							
EKS2	**Erkin-Say**	**6.67**	**22**	P		**Pn**	**00 34 06.3**	**+0.1**
	SNR=11							
AAK	**Ala-Archa**	**6.88**	**26**	P		**Pn**	**00 34 09.0**	**-0.1**
	10nm,0.3s,baz=167,slow=2.8,SNR=12							
AAK				S		**S**	**00 35 24.3**	**-3.1**
	16nm,0.6s,baz=330,slow=20,SNR=22							
AAK	**Ala-Archa**	**6.88**	**26**	P		**Pn**	**00 34 09.4**	**+0.3**
	SNR=8.6							
KBK	**Karagaybulak**	**7.07**	**29**	P		**Pn**	**00 34 11.8**	**+0.3**
	SNR=7.9							
CHMS	**Chumysh**	**7.29**	**26**	P		**Pn**	**00 34 13.8**	**-0.4**
	SNR=8.6							
CHMS	**Chumysh**	**7.29**	**26**	⇑P		**Pn**	**00 34 13.3**	**-0.9**
	8.0nm,0.5s							
CHMS				⇑S		**S**	**00 35 32.7**	**-4.2**
	20nm,0.6s							
USP	**Ospenovka**	**7.44**	**24**	P		**Pn**	**00 34 16.1**	**-0.1**
	SNR=8.5							
TKM2	**Tokmak 2**	**7.55**	**31**	P		**Pn**	**00 34 17.8**	**0.0**
	SNR=24							
TKM2	**Tokmak 2**	**7.55**	**31**	⇓P		**Pn**	**00 34 17.4**	**-0.4**
	14nm,0.5s							
SGDS	**Sogindy**	**7.65**	**24**	Pg		**Pn**	**00 34 17.9**	**-1.1**
	5.1nm,0.4s							
SGDS				Lg		Lg	00 35 37.6	
	8.8nm,0.4s							
KST	**Kastek**	**7.80**	**32**	Pg		**Pn**	**00 34 20.6**	**-0.4**
	7.2nm,0.4s							
KST				Lg		Lg	00 35 42.7	
	15nm,0.5s							
KRBS	**Karabastau**	**8.23**	**28**	Pg		**Pn**	**00 34 25.9**	**-0.6**
	4.0nm,0.4s							
KRBS				Lg		Lg	00 35 52.2	
	6.0nm,0.4s							
KTBS	**Karatobe**	**8.65**	**32**	P		**Pn**	**00 34 31.1**	**-0.8**
	2.1nm,0.6s							
BTLS	**Baital**	**8.95**	**17**	P		**Pn**	**00 34 36.3**	**+0.6**
	1.8nm,0.2s							
GEYT	**Alibeck**	**9.88**	**282**	P		**Pn**	**00 34 45.4**	**-2.5**
	2.4nm,0.7s,baz=140,slow=9.5,SNR=5.0							
MK31	**Makanchi Array**	**13.57**	**37**	P		**P**	**00 35 38.5**	**+1.5**
	2.8nm,0.7s,baz=205,slow=9.2,SNR=16							
MKAR	**Makanchi Array**	**13.57**	**37**	P		**Pn**	**00 35 35.3**	**+0.7**
	0.9nm,0.4s,baz=222,slow=15,SNR=11							
DANN	**Dangsing**	**13.93**	**122**	*eP*		**Pn**	**00 35 38.4**	**-1.1**
GKN	**Gorkha**	**14.74**	**121**	*eP*		**Pn**	**00 35 49.1**	**-0.3**
	26nm,0.3s							
AB31	**Akbulak array**	**14.82**	**332**	⇑P		**P**	**00 35 48.8**	**-1.2**
	2.9nm,0.5s,baz=147,slow=12,SNR=95							
KURBB	**Kurchatov Arra**	**15.27**	**20**	P		**Pn**	**00 35 55.0**	**-0.3**
	0.5nm,0.7s,baz=214,slow=10,SNR=4.3							
DMN	**Daman**	**15.31**	**121**	*eP*		**P**	**00 35 56.8**	**+0.1**
	27nm,0.5s							
PKIN	**Phulchoki**	**15.53**	**121**	*eP*		**P**	**00 35 58.7**	**-0.4**
	27nm,0.6s							
PKI	**Pulchoki**	**15.55**	**121**	*eP*		**P**	**00 35 58.5**	**-0.8**
	18nm,0.4s							
JIRN	**Jiri**	**16.04**	**119**	*eP*		**P**	**00 36 05.1**	**+0.3**
	50nm,0.5s							
BVA0	**Borovoye Array**	**16.50**	**0**	P		**Pn**	**00 36 11.5**	**+1.3**
	baz=195,slow=13,SNR=6.0							
AKTO	**Aktyubinsk**	**16.51**	**331**	P		**Pn**	**00 36 10.3**	**-0.1**
	5.1nm,0.8s,baz=132,slow=12,SNR=20							
AKTO	**Aktyubinsk**	**16.51**	**331**	⇑P		**Pn**	**00 36 10.6**	**+0.3**
	5.6nm,0.8s							
RAMN	**Ramite**	**16.76**	**120**	*eP*		**Pn**	**00 36 13.4**	**-0.4**
	23nm,0.6s							
ZALV	**Zalesovo Beam**	**20.11**	**25**	P		**P**	**00 36 49.4**	**+1.1**
	1.7nm,0.3s,baz=214,slow=11,SNR=14							
	1.7nm,0.3s							
GNI	**Garni**	**20.41**	**288**	P		**P**	**00 36 51.5**	**-0.3**
	5.6nm,0.8s,baz=11,slow=14,SNR=4.6							
	5.6nm,0.8s							
ARU	**Arti**	**21.45**	**342**	P		**P**	**00 37 04.0**	**+1.6**
	1.8nm,0.6s,baz=161,slow=8.7,SNR=4.5							
	1.8nm,0.6s							
BELG	**Belogornoye**	**22.56**	**322**	P		**P**	**00 37 10.8**	**-2.2**
	7.4nm,1.0s,baz=112,slow=12,SNR=2.7							
SONM	**Songino Array**	**28.74**	**55**	P		**P**	**00 38 10.0**	**+1.3**
	0.4nm,0.7s,baz=250,slow=12,SNR=2.9							
	0.4nm,0.7s							
AKASG	**Malin Array Be**	**32.54**	**309**	P		**P**	**00 38 42.8**	**+0.9**
	0.6nm,0.5s,baz=64,slow=2.8,SNR=4.4							
	0.6nm,0.5s							
NRIK	**Noril'sk**	**34.20**	**11**	P		**P**	**00 38 58.4**	**+2.5**
	1.8nm,0.5s,baz=204,slow=7.2,SNR=3.8							
	1.8nm,0.5s							
FINES	**FINESS Array B**	**37.18**	**326**	P		**P**	**00 39 23.1**	**+1.7**
	2.1nm,0.6s,baz=120,slow=9.7,SNR=18							
	2.1nm,0.6s							
ARCES	**ARCESS Array B**	**40.93**	**338**	P		**P**	**00 39 54.1**	**+1.7**
	1.0nm,0.5s,baz=106,slow=8.9,SNR=19							
	1.0nm,0.5s							
GERES	**GERESS Array B**	**42.51**	**305**	P		**P**	**00 40 07.7**	**+2.2**
	0.2nm,0.6s,baz=128,slow=8.6,SNR=3.6							
	0.2nm,0.6s							
NB2	**NORSAR Subarra**	**44.06**	**323**	P		**P**	**00 40 18.6**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=97,slow=7.9							
NOA	**NORSAR Array B**	**44.06**	**323**	P		**P**	**00 40 19.1**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=104,slow=7.3,SNR=5.3							
	comp=Z,0.7nm,0.4s							
TORD	**Torodi Ar. Bea**	**65.22**	**268**	P		**P**	**00 42 49.3**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=49,slow=5.9,SNR=19							
	comp=Z,0.5nm,0.4s							
ILAR	**Eielson Array**	**74.89**	**16**	P		**P**	**00 43 48.9**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=272,slow=2.4,SNR=3.4							
	comp=Z,0.5nm,0.9s							
WRA	**Warramunga Arr**	**82.43**	**121**	P		**P**	**00 44 28.9**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=322,slow=4.8,SNR=5.0							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**84.68**	**124**	P		**P**	**00 44 40.4**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=315,slow=5.6,SNR=6.7							
	comp=Z,0.6nm,0.6s							

*IDC **08** 00:36:53.5±1.4, 5°92N×82°77W, h0km, mb3.6/5, mbtmp3.9/8, ML3.5/3, MS3.4/18, Error ellipse: s-maj=45.9km s-min=22.2km az=36.0*

*UCR **08** 00:36:54.3±1.4, 6°08N×82°63W, h10km, MW4.3, mb4.3(NEIC)*

*UPA **08** 00:36:54.6±0.8, 6°09N×82°59W, h10km±22km, MW4.1*

*NEIC **08** 00:36:54.1±1.5, 6°03N±0°06×82°67W±0°08, h10km±1km, mb4.3/35, Error ellipse: s-maj=13.7km s-min=9.3km az=241.0*

*INET **08** 00:36:57.2±0.6, 6°16N×82°68W, h15km±12km, MW3.6*

ISC 08 00:36:56.4±3.1, 6°01N±0'05×82°59W±0'05, h29km±24km, n182, σ1§36/186, mb4.3/19, MS3.4/15, 7C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CACAO	**El Cacao, Vera**	**2.17**	**52**	*eP*		**Pn**	**00 37 28.8**	**-1.7**
CACAO	**El Cacao, Vera**	**2.17**	**52**	⇓*iP*		**Pn**	**00 37 28.9**	**-1.6**
CACAO				*eS*		**Sn**	**00 37 56.1**	**-0.3**
MAPC	**Malpelo**	**2.22**	**154**	*eP*		Pn	00 37 25.7	-5.6
CCOL	**Caracol de Cor**	**2.41**	**351**	*eP*		**Pn**	**00 37 32.5**	**-1.4**
CCOL				*eS*		**Sn**	**00 38 02.2**	**-0.2**
CDITO	**Canoas**	**2.56**	**354**	Pn		**Pn**	**00 37 33.9**	**-2.1**
CDITO				Sn		**Sn**	**00 38 04.7**	**-1.4**
CDITO	**Canoas**	**2.56**	**354**	*eP*		**Pn**	**00 37 33.8**	**-2.1**
CDITO	**Canoas**	**2.56**	**354**	⇑*iP*		**Pn**	**00 37 34.0**	**-2.0**
CDITO				*eS*		**Sn**	**00 38 05.1**	**-1.0**
PTJ1	**Puerto Jimnez**	**2.60**	**344**	*eP*		**Pn**	**00 37 34.1**	**-2.5**
BRU2	**Volcan**	**2.76**	**358**	Pn		**Pn**	**00 37 37.5**	**-1.4**
BRU2				Sn		**Sn**	**00 38 11.3**	**-0.1**
BRU2	**Volcan**	**2.76**	**358**	*eP*		**Pn**	**00 37 37.6**	**-1.3**
BRU2				*eS*		**Sn**	**00 38 09.3**	**-2.1**
BRU2	**Volcan**	**2.76**	**358**	*eP*		**Pn**	**00 37 37.8**	**-1.1**
BRU2				*eS*		**Sn**	**00 38 10.7**	**-0.7**
EDSV	**San Vito**	**2.81**	**352**	*eP*		**Pn**	**00 37 38.2**	**-1.3**
AZU	**Azuero**	**2.90**	**52**	*eP*		**Pn**	**00 37 39.6**	**-1.0**
AZU	**Azuero**	**2.90**	**52**	*eP*		**Pn**	**00 37 39.6**	**-1.0**
AZU	**Azuero**	**2.90**	**52**	⇓*iP*		**Pn**	**00 37 39.6**	**-1.0**
AZU				*eS*		**Sn**	**00 38 13.1**	**-1.4**
CHGR2	**Aguacate**	**2.94**	**9**	*eP*		**Pn**	**00 37 40.2**	**-0.9**
CHGR2				*eS*		**Sn**	**00 38 14.3**	**-1.2**
EDPN	**Palmar Norte**	**3.05**	**344**	*eP*		**Pn**	**00 37 41.0**	**-1.7**
POTG	**Potrero Grande**	**3.06**	**350**	*eP*		**Pn**	**00 37 41.5**	**-1.5**
POTG				*eS*		**Sn**	**00 38 19.0**	**+0.3**
SRBA	**San Rafael, Bu**	**3.29**	**347**			**Pn**	**00 37 44.6**	**-1.4**
SRBA					Sn	**Sn**	**00 38 24.6**	**+0.3**
SRBA	**San Rafael, Bu**	**3.29**	**347**	⇑*eP*		**Pn**	**00 37 44.4**	**-1.6**
SRBA				*eS*		**Sn**	**00 38 24.1**	**-0.2**
DRK0	**Durika**	**3.29**	**349**			**Pn**	**00 37 45.7**	**-0.5**
DRK0					Sn	**Sn**	**00 38 26.7**	**+2.2**
DRK0	**Durika**	**3.29**	**349**	⇑*eP*		**Pn**	**00 37 45.4**	**-0.8**
DRK0	**Durika**	**3.29**	**349**	*eP*		**Pn**	**00 37 45.9**	**-0.3**
DRK0				*eS*		**Sn**	**00 38 23.7**	**-0.8**
PNME	**Penonome**	**3.33**	**42**	*eP*		**Pn**	**00 37 46.4**	**0.0**
PNME				*eS*		**Sn**	**00 38 23.6**	**-1.5**
EDDO	**Dominical**	**3.46**	**339**	*eP*		**Pn**	**00 37 46.0**	**-2.3**
PEZE	**Perez Zeledon,**	**3.52**	**342**	Pn		**Pn**	**00 37 47.8**	**-1.4**
PEZE				Sn		**Sn**	**00 38 30.2**	**+0.3**
PEZE	**Perez Zeledon,**	**3.52**	**342**	*eP*		**Pn**	**00 37 47.9**	**-1.4**
PEZE	**Perez Zeledon,**	**3.52**	**342**	*eP*		**Pn**	**00 37 48.0**	**-1.2**
CDM	**Cerro de Muert**	**3.71**	**342**	*eP*		**Pn**	**00 37 50.7**	**-1.4**
CDM				*eS*		**Sn**	**00 38 34.7**	**-0.3**
CDM	**Cerro de Muert**	**3.71**	**342**	*eP*		**Pn**	**00 37 50.8**	**-1.3**
CDM				*eS*		**Sn**	**00 38 34.0**	**-1.0**
MRVA	**Moravia de Chi**	**3.88**	**347**	⇑*eP*		**Pn**	**00 37 53.5**	**-0.8**
RIMA	**Rio Macho**	**3.94**	**341**			**Pn**	**00 37 53.9**	**-1.1**
RIMA					Sn	**Sn**	**00 38 39.1**	**-1.3**
RIMA	**Rio Macho**	**3.94**	**341**	*eP*		**Pn**	**00 37 53.6**	**-1.5**
RIMA	**Rio Macho**	**3.94**	**341**	*eP*		**Pn**	**00 37 53.9**	**-1.1**
LCR2	**La Lucha 2**	**3.96**	**339**	*eP*		**Pn**	**00 37 55.2**	**-0.2**
OCM	**Ochomogo**	**4.09**	**341**	⇑*eP*		**Pn**	**00 37 56.1**	**-1.1**
RAFA	**San Farael, Vo**	**4.10**	**343**	*eP*		**Pn**	**00 37 56.5**	**-0.9**
CVTR	**Volcan Turrial**	**4.15**	**344**	Pn		**Pn**	**00 37 57.4**	**-0.8**
BCIP	**Isla Barro Col**	**4.15**	**41**	Pn		**Pn**	**00 37 57.7**	**-0.1**
BCIP	**Isla Barro Col**	**4.15**	**41**	*eP*		**Pn**	**00 37 57.8**	**-0.1**
BCIP	**Isla Barro Col**	**4.15**	**41**	*eP*		**Pn**	**00 37 57.9**	**-0.1**
BCIP				*eS*		**Sn**	**00 38 44.2**	**-1.3**
BCIP	**Isla Barro Col**	**4.15**	**41**	*eP*		**Pn**	**00 37 57.8**	**-0.1**
JACO	**JACO, Garabito**	**4.17**	**331**			**Pn**	**00 37 55.7**	**-2.3**
JACO	**JACO, Garabito**	**4.17**	**331**	*eP*		**Pn**	**00 37 55.4**	**-2.7**
UPA	**Univ. de Panam**	**4.23**	**46**	*eP*		**Pn**	**00 37 59.0**	**+0.2**
UPA	**Univ. de Panam**	**4.23**	**46**	*eP*		**Pn**	**00 37 58.8**	**0.0**
UPA				*eS*		**Sn**	**00 38 46.0**	**-1.2**

HDC	**Heredia**	**4.24**	**339**			**Pn**	**00 37 58.1**	**-1.1**		
HDC	**Heredia**	**4.24**	**339**	⇑*eP*		**Pn**	**00 37 58.3**	**-0.8**		
HDC	**Heredia**	**4.24**	**339**	*eP*		**Pn**	**00 37 58.5**	**-0.7**		
HDC				*eS*		**Sn**	**00 38 46.0**	**-1.8**		
HDC3	**Heredia 3**	**4.24**	**339**	⇑*iP*		**Pn**	**00 37 58.3**	**-0.9**		
HDC3	**Heredia 3**	**4.24**	**339**	*eP*		**Pn**	**00 37 58.7**	**-0.5**		
LAFE	**Finca La Fe, P**	**4.42**	**329**	*eP*		**Pn**	**00 37 59.4**	**-2.1**		
LAFE	**Finca La Fe, P**	**4.42**	**329**	*eP*		**Pn**	**00 37 59.7**	**-1.8**		
SRA1	**San Ramn**	**4.46**	**335**	*eP*		**Pn**	**00 38 00.9**	**-1.3**		
RIFO	**Rio Frio, Sara**	**4.47**	**343**	*i P*		**Pn**	**00 38 01.9**	**-0.4**		
INDI	**Punta indio, G**	**4.79**	**323**	*eP*		**Pn**	**00 38 04.4**	**-2.3**		
JTS	**Las Juntas de**	**4.85**	**331**	Pn		**Pn**	**00 38 06.0**	**-1.5**		
JTS	**Las Juntas de**	**4.85**	**331**	*eP*		**Pn**	**00 38 05.7**	**-1.8**		
JTS	**Las Juntas de**	**4.85**	**331**	*eP*		**Pn**	**00 38 06.1**	**-1.4**		
JTS				*eS*		**Sn**	**00 39 01.4**	**-1.3**		
JTS	**Las Juntas de**	**4.85**	**331**	*eP*		**Pn**	**00 38 06.0**	**-1.5**		
FORC	**Fortuna**	**4.88**	**335**	*eP*		**Pn**	**00 38 07.0**	**-0.9**		
PTAC	**Punta Ardita,**	**4.88**	**76**	*eP*		**Pn**	**00 38 08.2**	**+0.3**		
PTAC				*eS*		**Sn**	**00 39 01.2**	**-2.2**		
ARE1	**Arenal 1**	**4.90**	**335**	*eP*		**Pn**	**00 38 07.6**	**-0.5**		
CEDE	**Laguna Cedeo**	**4.91**	**335**	*eP*		**Pn**	**00 38 07.9**	**-0.5**		
GRZA	**Playa Garza**	**4.91**	**322**	*eP*		**Pn**	**00 38 05.9**	**-2.4**		
DUNO	**Dulce Nombre,**	**4.96**	**325**			**Pn**	**00 38 07.1**	**-1.8**		
DUNO	**Dulce Nombre,**	**4.96**	**325**	*eP*		**Pn**	**00 38 07.6**	**-1.4**		
DUNO	**Dulce Nombre,**	**4.96**	**325**	*eP*		**Pn**	**00 38 06.9**	**-2.1**		
COVE	**Coope Vega, Sa**	**5.01**	**339**			**Pn**	**00 38 08.7**	**-0.9**		
COVE	**Coope Vega, Sa**	**5.01**	**339**	*eP*		**Pn**	**00 38 08.9**	**-0.8**		
SAJU	**San Juanillo,**	**5.08**	**323**	*eP*		**Pn**	**00 38 08.8**	**-1.8**		
PLVR	**Palo Verde**	**5.10**	**328**	*eP*		**Pn**	**00 38 09.1**	**-2.0**		
ORTG	**Ortega, Santa**	**5.17**	**327**	Pn		**Pn**	**00 38 10.6**	**-1.3**		
ORTG	**Ortega, Santa**	**5.17**	**327**	*eP*		**Pn**	**00 38 10.8**	**-1.2**		
ACAL	**Aguas Claras**	**5.19**	**332**	*eP*		**Pn**	**00 38 11.8**	**-0.4**		
CUI	**Cuipilapa**	**5.27**	**331**	*eP*		**Pn**	**00 38 13.1**	**-0.2**		
COLC	**Colonia**	**5.30**	**331**	*eP*		**Pn**	**00 38 13.7**	**+0.1**		
HORNC	**Hornillas**	**5.33**	**331**	*eP*		**Pn**	**00 38 13.3**	**-0.8**		
GUAB	**Guayabo de Bag**	**5.35**	**331**	*eP*		**Pn**	**00 38 14.7**	**+0.3**		
GPS2	**Hotel Rincn d**	**5.45**	**330**	*eP*		**Pn**	**00 38 15.5**	**-0.2**		
BUEV	**Buena Vista**	**5.51**	**330**	*eP*		**Pn**	**00 38 16.8**	**+0.2**		
HZTE	**Horizontes, Gu**	**5.54**	**328**			**Pn**	**00 38 16.2**	**-0.7**		
HZTE	**Horizontes, Gu**	**5.54**	**328**	*eP*		**Pn**	**00 38 16.5**	**-0.4**		
HZTE	**Horizontes, Gu**	**5.54**	**328**	*eP*		**Pn**	**00 38 16.8**	**-0.1**		
ESPN	**Las Esperanzas**	**6.37**	**345**	Pn		**

SMCO	**Snowmass**	**39.69**	**330**	P	**P**	**00 44 26.1**	**-0.4**
PV15	**Paradox Valley**	**39.84**	**328**	P	**P**	**00 44 26.9**	**-0.7**
PV15				IAmb	IAmb	00 44 32.2	
	comp=Z,9.0nm,1.5s						
PV13	**Radium Mtn., P**	**39.89**	**327**	P	**P**	**00 44 27.2**	**-0.8**
PV13				IAmb	IAmb	00 44 38.7	
	comp=Z,4.3nm,0.9s						
SPMN	**Marine on St.**	**40.06**	**349**	P	**P**	**00 44 28.1**	**-0.9**
SPMN				IAmb	IAmb	00 44 28.7	
	comp=Z,7.3nm,0.9s						
CPUP	**Villa Florida**	**40.42**	**144**	LR	LR	01 04 14.2	
	comp=Z,49nm,18.7s,baz=310,slow=41						
SRU	**San Rafael Swe**	**41.50**	**327**	P	**P**	**00 44 41.3**	**0.0**
SRU				IAmb	IAmb	00 44 58.0	
	comp=Z,4.0nm,0.8s						
PFO	**Pinyon Flats O**	**41.72**	**316**	LR	LR	01 01 25.9	
	comp=Z,37nm,18.4s,baz=211,slow=35						
ELS	**Elsinore Mount**	**42.41**	**315**	P	**P**	**00 44 47.3**	**-1.4**
ELS				IAmb	IAmb	00 44 48.1	
	comp=Z,8.6nm,1.2s						
PD31	**Pinedale Array**	**43.69**	**331**	P	**P**	**00 44 57.0**	**-2.0**
PDAR	**Pinedale Array**	**43.69**	**331**	P	**P**	**00 44 59.9**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=121,slow=14,SNR=2.8						
PDAR				PcP	**PcP**	**00 46 49.6**	**+3.7**
	comp=Z,0.5nm,0.8s,baz=123,slow=3.3,SNR=3.5						
PDAR				LR	LR	01 04 53.7	
	comp=Z,30nm,19.3s,baz=120,slow=38						
	comp=Z,0.5nm,0.7s						
HWUT	**Hardware Ranch**	**43.84**	**328**	P	**P**	**00 44 59.8**	**-0.4**
HWUT				IAmb	IAmb	00 45 05.1	
	comp=Z,2.8nm,0.8s						
MDND	**Maddock**	**44.15**	**344**	P	**P**	**00 45 01.9**	**-0.5**
REDW	**Red Top Meadow**	**44.76**	**331**	P	**P**	**00 45 07.4**	**-0.2**
REDW				IAmb	IAmb	00 45 46.8	
	comp=Z,7.1nm,1.4s						
ELK	**Elko**	**45.26**	**325**	LR	LR	01 05 17.4	
	comp=Z,37nm,19.1s,baz=89,slow=38						
NVAR	**Mina Array Bea**	**45.68**	**320**	P	**P**	**00 45 16.8**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=144,slow=7.8,SNR=3.1						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**45.68**	**320**	P	**P**	**00 45 15.6**	**+0.6**
YBH	**Yreka Blue Hor**	**50.34**	**321**	LR	LR	01 08 59.3	
	comp=Z,30nm,18.2s,baz=108,slow=38						
NEW	**Newport**	**51.33**	**331**	LR	LR	01 13 07.8	
	comp=Z,30nm,18.4s,baz=140,slow=42						
TLCB	**Telegraph Cove**	**57.68**	**328**	P	**P**	**00 46 43.0**	**-1.1**
YKA	**Yellowknife Ar**	**61.07**	**344**	P	**P**	**00 47 07.7**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=145,slow=6.5,SNR=5.8						
	comp=Z,1.6nm,0.8s						
USHA	**Ushuaia**	**61.77**	**171**	LR	LR	01 10 52.3	
	comp=Z,158nm,19.5s,baz=156,slow=33						
ILAR	**Eielson Array**	**73.81**	**336**	LR	LR	01 23 28.7	
	comp=Z,24nm,19.0s,baz=217,slow=38						
TORD	**Torodi Ar. Bea**	**83.11**	**78**	P	**P**	**00 49 23.0**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=283,slow=7.3,SNR=5.7						
	comp=Z,0.4nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**107.51**	**291**	T	T	02 51 27.1	
	baz=77,slow=75,SNR=4.0						
H11S1	**WAKE ISLAND Hy**	**107.51**	**291**	T	T	02 51 24.4	
	baz=77,slow=75,SNR=3.6						
H11S3	**WAKE ISLAND Hy**	**107.53**	**291**	T	T	02 51 28.7	
	baz=77,slow=75,SNR=3.8						
ASAR	**Alice Springs**	**140.77**	**240**	PKP	**PKPdf**	**00 56 24.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=158,slow=0.5,SNR=2.6						
PZH	**PanZhiHua**	**147.41**	**353**	PKPbc	**PKPdf**	**00 56 32.2**	**-3.7**

*BEO **08** 00:39:43.7±0.4,41°.87N×22°.10E,h8^{km}±2^{km},ML2.4/14*
*ATH **08** 00:39:44.1,41°.79N×22°.13E,h5^{km}±3^{km},ML2.6/3,Error ellipse: s-maj=5.3km s-min=2.2km az=189.0*
*THE **08** 00:39:45.3,41°.71N×22°.19E,h0^{km}±1^{km},ML2.4/7,Error ellipse: s-maj=2.3km s-min=0.9km az=5.0*

ISC 08 00:39:42.7±1.2,41°.84N±0°.02×22°.10E±0°.03,h0^{km}±10^{km}, n46,σ0^{s}91/72,8C-7D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRVS	**Prvonek**	**0.67**	**359**	*e*P	**Pg**	**00 39 55.1**	**-0.5**
PRVS				*e*Sg	**Sg**	**00 40 04.3**	**0.0**
BOSS	**Bosilegrad**	**0.72**	**23**	*e*P	**Pg**	**00 39 56.2**	**-0.3**
BOSS				*e*Sg	**Sg**	**00 40 05.5**	**-0.3**
KNT	**Kendrikon**	**0.90**	**138**	P	**Pg**	**00 39 59.9**	**-0.1**
KNT				S	**Sg**	**00 40 11.9**	**+0.2**
	610nm,0.3s						
KNT	**Kendrikon**	**0.90**	**138**	P	**Pg**	**00 39 59.9**	**-0.1**
KNT				S	**Sg**	**00 40 12.3**	**+0.6**
GRG	**Griva**	**0.91**	**165**	P	**Pg**	**00 40 00.0**	**-0.1**
GRG				S	**Sg**	**00 40 10.7**	**-1.1**
	220nm,0.4s						
GRG	**Griva**	**0.91**	**165**	P	**Pg**	**00 40 00.2**	**+0.2**
BARS	**Barje**	**1.00**	**348**	*e*Pg	**Pg**	**00 40 01.1**	**-0.8**
BARS				*e*Sg	**Sg**	**00 40 14.8**	**-0.1**
VTS	**Vitosha**	**1.15**	**47**	⇓P	**Pg**	**00 40 05.3**	**+0.5**
VTS				⇓S	**Sg**	**00 40 19.7**	**0.0**
VTS	**Vitosha**	**1.15**	**47**	*e*Pg	**Pg**	**00 40 04.1**	**-0.7**
VTS				*e*Sg	**Sg**	**00 40 19.2**	**-0.5**
SRS	**Serrai**	**1.33**	**122**	P	**Pn**	**00 40 07.9**	**-0.6**
SRS				S	**Sg**	**00 40 25.5**	**0.0**
	150nm,0.5s						
SRS	**Serrai**	**1.33**	**122**	*e*Pg	**Pn**	**00 40 07.8**	**-0.7**
SRS				*e*Sg	**Sn**	**00 40 26.3**	**-0.7**
SRS	**Serrai**	**1.33**	**122**	P	**Pn**	**00 40 08.0**	**-0.5**
SRS				S	**Sg**	**00 40 25.2**	**-0.3**
SRS				AML	AML	00 40 29.4	
	comp=N,366μm,0.5s						
SRS				AML	AML	00 40 31.6	
	comp=E,230μm,0.6s						
THE	**Thessaloniki**	**1.37**	**151**	P	**Pn**	**00 40 08.0**	**-1.0**
THE	**Thessaloniki**	**1.37**	**151**	P	**Pn**	**00 40 08.7**	**-0.3**
SOH	**Sokhos**	**1.39**	**137**	P	**Pn**	**00 40 08.3**	**-1.0**
SOH				S	**Sb**	**00 40 26.9**	**-0.8**
	comp=E,185nm,0.5s						
SOH	**Sokhos**	**1.39**	**137**	P	**Pb**	**00 40 09.7**	**+0.2**
SOH				S	**Sb**	**00 40 26.8**	**-1.0**
SOH				AML	AML	00 40 29.8	
	comp=E,524μm,0.5s						
SOH				AML	AML	00 40 30.1	
	comp=N,403μm,0.5s						
NVR	**Nevrokopi**	**1.41**	**110**	P	**Pn**	**00 40 09.6**	**0.0**
NVR				S	**Sn**	**00 40 28.9**	**0.0**
	comp=N,192nm,0.3s						
NVR	**Nevrokopi**	**1.41**	**110**	P	**Pn**	**00 40 09.5**	**-0.2**
NVR				S	**Sn**	**00 40 29.1**	**+0.1**
NVR				AML	AML	00 40 31.1	
	comp=N,395μm,0.4s						
NVR				AML	AML	00 40 32.9	
	comp=E,365μm,0.4s						
HORT	**Hortiatis**	**1.45**	**148**	P	**Pn**	**00 40 10.4**	**+0.2**
HORT				S	**Sb**	**00 40 28.9**	**-0.7**
	comp=E,55nm,0.5s						
ZAPS	**Zavoj**	**1.49**	**15**	*e*Pg	**Pn**	**00 40 10.4**	**-0.3**
ZAPS				*e*Sg	**Sn**	**00 40 30.1**	**-0.8**
KZN	**Kozani**	**1.55**	**189**	P	**Pg**	**00 40 12.9**	**+0.5**
SELS	**Selova**	**1.56**	**333**	*e*Pg	**Pn**	**00 40 10.9**	**-0.8**
KBN	**Korca**	**1.56**	**220**	P	**Pn**	**00 40 12.7**	**+0.9**
KBN				S	**Sg**	**00 40 34.1**	**+1.2**
	comp=E,58nm,0.8s						
NEST	**Nestorio**	**1.63**	**209**	P	**Pn**	**00 40 13.0**	**+0.4**
NEST				S	**Sg**	**00 40 35.3**	**+0.4**
NEST	**Nestorio**	**1.63**	**209**	P	**Pn**	**00 40 13.4**	**+0.8**
KOKK	**Kokkinochori,**	**1.76**	**125**	P	**Pn**	**00 40 14.7**	**+0.3**
KOKK				S	**Sn**	**00 40 37.4**	**0.0**
KOKK	**Kokkinochori,**	**1.76**	**125**	P	**Pn**	**00 40 15.1**	**+0.8**
BOVS	**Bovan**	**1.82**	**351**	*e*Pn	**Pn**	**00 40 14.2**	**-1.0**
BLKB	**Belogradchik**	**1.84**	**13**	⇑P	**Pn**	**00 40 17.4**	**+1.9**
BLKB				⇑S	**Sn**	**00 40 40.3**	**+0.9**
PLD	**Plovdiv**	**1.96**	**81**	*e*Pn	**Pn**	**00 40 17.3**	**+0.1**
PLD				*e*Sn	**Sn**	**00 40 41.1**	**-1.4**
ZAGS	**Zajecar**	**1.98**	**3**	*e*Pn	**Pn**	**00 40 17.3**	**-0.1**
ZAGS				*e*Sn	**Sn**	**00 40 41.2**	**-1.7**
SJES	**Sjenica**	**2.12**	**313**	*e*Pn	**Pn**	**00 40 20.0**	**+0.5**
IVAS	**Ivanjica**	**2.25**	**321**	*e*Pn	**Pn**	**00 40 20.6**	**-0.7**
GRUS	**Gruza**	**2.29**	**334**	*e*Pn	**Pn**	**00 40 21.4**	**-0.3**
BAIL	**Bailesti**	**2.37**	**22**	⇓P	**Pn**	**00 40 24.3**	**+1.5**
PUNG	**Punghina**	**2.52**	**14**	⇑P	**Pn**	**00 40 26.7**	**+1.9**
PUNG				⇑S	**Sn**	**00 40 57.0**	**+0.8**
KUBS	**Kucevo**	**2.59**	**353**	*e*Pn	**Pn**	**00 40 24.9**	**-1.0**
TRUS	**Trudelj**	**2.69**	**333**	*e*Pn	**Pn**	**00 40 26.6**	**-0.6**
TRUS				*e*Sn	**Sn**	**00 40 59.9**	**-0.5**
DIVS	**Divibare**	**2.74**	**326**	*e*Pn	**Pn**	**00 40 27.7**	**-0.2**
VLAD	**Vladila**	**2.75**	**37**	⇑P	**Pn**	**00 40 29.5**	**+1.6**
VLAD				⇑S	**Sn**	**00 41 02.8**	**+1.0**
HUMR	**Humele**	**3.42**	**37**	⇑P	**Pn**	**00 40 38.4**	**+1.2**
BZS	**Buzias**	**3.79**	**355**	⇓P	**Pn**	**00 40 43.1**	**+0.8**
DEV	**Deva**	**4.09**	**8**	⇑P	**Pn**	**00 40 48.6**	**+2.2**
VOIR		**4.19**	**30**	⇓P	**Pn**	**00 40 50.2**	**+2.3**
MLR	**Muntele Rosu**	**4.60**	**36**	⇓P	**Pn**	**00 40 55.2**	**+1.7**
DRGR		**4.97**	**5**	⇓P	**Pn**	**00 41 00.4**	**+1.7**

*IDC **08** 00:44:26.8±1.5,51°.67N×174°.52W,h0^{km},mb3.7/11, mbtmp3.7/13,ML3.6/2,MS3.4/6,Error ellipse: s-maj=45.8km s-min=17.5km az=179.0*
*AEIC **08** 00:44:30±2.0,51°.44N±0°.09×174°.52W±0°.07,h17^{km}±7^{km}, Error ellipse: s-maj=12.5km s-min=6.1km az=175.0*
*NEIC **08** 00:44:32.3±1.8,51°.40N±0°.09×174°.50W±0°.07, h46^{km}±18^{km},mb3.9/40,ML3.6(AEIC),Error ellipse: s-maj=13.2km s-min=4.3km az=159.0*

ISC 08 00:44:31.8±0.8,51°.4N±0°.1×174°.48W±0°.05,h38^{km},n114, σ0^{s}92/105,mb3.9/15,MS3.7/5,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.79**	**13**		**Pn**	**00 44 45.6**	**-0.8**
KOFP	**Korovin Flat P**	**0.88**	**16**		**Pn**	**00 44 47.4**	**-0.3**
KOKL	**Mount Kliuchef**	**0.91**	**11**		**Pn**	**00 44 47.8**	**-0.3**
KOSE	**Korovin Southe**	**0.95**	**16**		**Pn**	**00 44 48.6**	**-0.1**
KONE	**Korovin Northe**	**0.99**	**13**		**Pn**	**00 44 49.1**	**0.0**
GSMY	**Great Sitkin M**	**1.15**	**303**		**Pn**	**00 44 50.8**	**-0.7**
GSTR	**Great Sitkin T**	**1.18**	**305**		**Pn**	**00 44 51.6**	**-0.2**
GSCK	**Great Sitkin C**	**1.19**	**300**		**Pn**	**00 44 51.3**	**-0.7**
GSTD	**Great Sitkin T**	**1.21**	**302**		**Pn**	**00 44 51.6**	**-0.6**
ETKA	**Kagalaska Isla**	**1.27**	**290**		**Pn**	**00 44 52.7**	**-0.3**
ADK	**Adak**	**1.44**	**289**	Pn	**Pn**	**00 44 54.9**	**-0.5**
ADK					**Sn**	**00 45 15.2**	**+2.2**
KIWB	**Kanaga Island**	**1.71**	**285**		**Pn**	**00 44 59.0**	**-0.1**
KIKV	**Kanaga Island**	**1.73**	**286**		**Pn**	**00 44 59.4**	**0.0**
KIMD	**Kanaga Island**	**1.75**	**282**		**Pn**	**00 44 59.1**	**-0.5**
KICM	**Kanaga Island**	**1.76**	**287**		**Pn**	**00 44 59.9**	**+0.2**
TAPA	**Tanaga Point A**	**2.11**	**282**		**Pn**	**00 45 04.9**	**+0.3**
TAFP	**Tanaga Falls P**	**2.23**	**283**		**Pn**	**00 45 06.7**	**+0.5**
TASE	**Tanaga Southea**	**2.25**	**282**		**Pn**	**00 45 07.3**	**+0.8**
TANO	**Tanaga North**	**2.32**	**283**		**Pn**	**00 45 08.2**	**+0.8**
GAEA	**Gareloi East**	**2.68**	**279**		**Pn**	**00 45 13.1**	**+0.7**
GANE	**Gareloi Northe**	**2.70**	**280**		**Pn**	**00 45 13.9**	**+1.2**
GAKI	**Gareloi-Kavalg**	**2.71**	**274**		**Pn**	**00 45 13.7**	**+0.9**
GANO	**Gareloi North**	**2.72**	**280**		**Pn**	**00 45 13.9**	**+0.9**
CLES	**Cleveland East**	**3.15**	**62**		**Pn**	**00 45 19.9**	**+1.1**
CLCO	**Concord Point,**	**3.23**	**63**		**Pn**	**00 45 20.7**	**+0.8**
CEPE	**Semis' Perret**	**3.69**	**281**		**Pn**	**00 45 26.7**	**+0.4**
CESW	**Semis' Southwe**	**3.74**	**279**		**Pn**	**00 45 27.5**	**+0.6**
NIKH	**Nikolski High**	**3.79**	**64**		**Pn**	**00 45 28.4**	**+0.9**
AMKA	**Amchitka**	**3.89**	**272**		**Pn**	**00 45 29.0**	**0.0**
LSPA	**Little Sitkin**	**4.35**	**280**		**Pn**	**00 45 35.6**	**+0.3**
LSNW	**Little Sitkin**	**4.39**	**280**		**Pn**	**00 45 36.4**	**+0.6**
LSSA	**Little Sitkin**	**4.39**	**279**		**Pn**	**00 45 36.2**	**+0.3**
MAPS	**Pakushin South**	**5.17**	**60**		**Pn**	**00 45 48.0**	**+1.4**
MSW	**Makushin Switc**	**5.30**	**59**		**Pn**	**00 45 49.9**	**+1.5**
UNV	**Unalaska Valle**	**5.42**	**60**		**Pn**	**00 45 52.0**	**+2.0**
AKUT	**Akutan**	**5.94**	**60**	Pn	**Pn**	**00 45 59.2**	**+2.1**
SPIA	**Saint Paul Isl**	**6.26**	**22**	Pn	**Pn**	**00 46 03.8**	**+2.3**
SMY	**Shemya**	**7.16**	**285**	Pn	**Pn**	**00 46 14.0**	**+0.2**
SDPT	**Sand Point**	**9.24**	**59**	Pn	**Pn**	**00 46 42.3**	**0.0**
CNBA	**Chernabura Isl**	**9.57**	**63**	Pn	**Pn**	**00 46 47.3**	**+0.4**
CHGN	**Chignik**	**10.66**	**57**	Pn	**Pn**	**00 47 02.0**	**+0.3**
GAMB	**Gambell**	**12.46**	**6**	Pn	**Pn**	**00 47 28.3**	**+2.0**
Q19K	**Cape Douglas,**	**14.03**	**50**	P	**P**	**00 47 54.6**	**-0.3**
KDAK	**Kodiak Island**	**14.15**	**55**	P	**P**	**00 47 56.0**	**-0.3**
SVW2	**Sparrevohn**	**14.22**	**40**	Pn	**Pn**	**00 47 52.6**	**+2.2**
TNA	**Tin City**	**14.56**	**11**	Pn	**Pn**	**00 47 56.1**	**+1.3**
L19K	**White Mountain**	**15.14**	**37**	P	**P**	**00 48 08.0**	**+0.7**
M19K	**Big River Lodg**	**15.15**	**38**	P	**P**	**00 48 07.0**	**-0.4**
M19K				IAmb	IAmb	00 48 21.6	
	comp=Z,5.7nm,0.9s						
TTA	**Tatalina**	**15.19**	**34**	P	**P**	**00 48 07.4**	**-0.5**
TTA				IAmb	IAmb	00 48 34.2	
	comp=Z,8.4nm,1.5s						
CNPM	**China Poot**	**15.40**	**49**	Pn	**Pn**	**00 48 06.6**	**+0.5**
M20K	**Styx River**	**15.64**	**40**	Pn	**Pn**	**00 48 07.8**	**-1.4**
M20K				IAmb	IAmb	00 48 20.4	
	comp=Z,14nm,1.4s						
K20K	**Telida**	**16.14**	**34**		**Pn**	**00 48 17.1**	**+1.6**
J20K	**Nowinta River**	**16.64**	**32**		**P**	**00 48 24.0**	**+0.2**
CAST	**Castle Rocks**	**16.89**	**36**	P	**P**	**00 48 28.6**	**+1.9**
PETK	**Petropavlovsk-**	**17.07**	**287**	Pn	**Pn**	**00 48 27.4**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=333,slow=8.1,SNR=3.2						
PETK				LR	LR	00 54 08.8	
	comp=Z,52nm,20.1s,baz=100,slow=34						
	comp=Z,1.0nm,0.5s						
PWL	**Port Wells**	**17.24**	**47**	P	**Pn**	**00 48 28.7**	**-0.6**
GHO	**Glory Hole Cre**	**17.34**	**43**		**Pn**	**00 48 31.1**	**+0.4**
KTH	**Kantishna Hill**	**17.40**	**37**		**P**	**00 48 32.5**	**+0.1**
KTH				IAmb	IAmb	00 48 55.2	
	comp=Z,9.5nm,1.2s						
BPAW	**Bear Paw Mtn.**	**17.68**	**35**		**P**	**00 48 36.7**	**+1.3**
H21K	**Melozitna Rive**	**18.04**	**30**	P	**P**	**00 48 40.4**	**+1.0**
MLY	**Manley**	**18.32**	**33**	P	**Pn**	**00 48 44.5**	**+1.9**
MLY				IAmb	IAmb	00 48 46.5	
	comp=Z,8.1nm,1.3s						
M24K	**Tolsona, Glenn**	**18.66**	**44**	P	**P**	**00 48 46.0**	**-0.3**
I23K	**Minto, Yukon-K**	**18.86**	**34**	P	**P**	**00 48 49.1**	**+0.8**
I23K				IAmb	IAmb	00 49 14.8	
	comp=Z,4.9nm,0.8s						
WRH	**Wood River Hil**	**18.95**	**36**	P	**P**	**00 48 49.7**	**+0.4**
WRH				IAmb	IAmb	00 49 02.3	
	comp=Z,9.7nm,1.5s						
CCB	**Clear Creek Bu**	**19.15**	**36**	P	**P**	**00 48 52.1**	**+0.7**
CCB				IAmb	IAmb	00 48 53.4	
	comp=Z,3.1nm,0.4s						
MDM	**Murphy Dome**	**19.16**	**35**	P	**P**	**00 48 52.1**	**+0.5**
N25K	**Chitina, Valde**	**19.19**	**46**	P	**P**	**00 48 52.0**	**-0.1**
H23K	**Yukon River**	**19.20**	**32**	P	**Pn**	**00 48 54.0**	**+0.8**
H23K				IAmb	IAmb	00 49 15.5	
	comp=Z,9.5nm,1.4s						
PAX	**Paxson**	**19.30**	**42**	P	**P**	**00 48 52.8**	**-0.4**
HDA	**Harding Lake**	**19.35**	**37**	P	**P**	**00 48 54.3**	**+0.6**
HDA				IAmb	IAmb	00 49 11.9	
	comp=Z,4.9nm,0.7s						
IL31		**19.55**	**36**	P	**P**	**00 48 56.0**	**+0.2**
ILAR	**Eielson Array**	**19.55**	**36**	P	**P**	**00 48 55.1**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=229,slow=8.7,SNR=41						
	comp=Z,1.0nm,0.4s						
ILAR	**Eielson Array**	**19.55**	**36**	P	**P**	**00 48 56.1**	**+0.3**
H24K	**Noodor Dome**	**19.76**	**33**	P	**P**	**00 48 58.5**	**+0.2**
H24K				IAmb	IAmb	00 49 18.8	
	comp=Z,7.5nm,1.4s						
RIDG	**Independent Ri**	**19.87**	**40**	P	**P**	**00 48 59.1**	**-0.4**
MENT	**Mentasta**	**20.03**	**43**	P	**P**	**00 49 02.0**	**+0.9**
MENT				IAmb	IAmb	00 49 43.1	
	comp=Z,3.4nm,0.8s						
J25K	**Salcha River,**	**20.05**	**38**	P	**P**	**00 49 00.2**	**-1.2**
DOT	**Dot Lake**	**20.15**	**41**	P	**P**	**00 49 01.6**	**-0.9**
DOT				IAmb	IAmb	00 49 19.7	
	comp=Z,4.1nm,0.8s						
M26K	**Nabesna, AK**	**20.16**	**45**	P	**P**	**00 49 03.4**	**+0.7**
M26K				IAmb	IAmb	00 49 45.2	
	comp=Z,15nm,1.5s						
SCRK	**Sand Creek**	**20.31**	**40**	P	**P**	**00 49 03.8**	**-0.6**
J26L	**Joseph Creek**	**20.70**	**39**	P	**P**	**00 49 07.6**	**-0.9**
L27K	**Beaver Creek,**	**20.88**	**44**	P	**P**	**00 49 12.2**	**+1.8**
L27K				IAmb	IAmb	00 49 23.2	
	comp=Z,8.2nm,1.4s						
BCAR	**Beaver Creek A**	**20.90**	**44**	P	Pn	00 49 13.3	0.0
TOLK	**Toolik Lake Re**	**20.99**	**26**	P	**P**	**00 49 12.1**	**+0.6**
TOLK				IAmb	IAmb	00 49 34.4	
	comp=Z,6.9nm,1.1s						
MA2	**Magadan**	**21.08**	**306**	LR	LR	00 57 18.8	
	comp=Z,34nm,19.1s,baz=116,slow=37						
K27K	**Chicken**	**21.11**	**41**	P	**P**	**00 49 13.3**	**+0.5**
I26K	**Coal Creek Min**	**21.20**	**37**	P	**P**	**00 49 13.1**	**-0.6**
I26K				IAmb	IAmb	00 49 35.2	
	comp=Z,6.1nm,1.1s						
BMAR	**Burnt Mountain**	**21.74**	**31**	P	**P**	**00 49 20.7**	**+1.2**
EGAK	**Eagle**	**21.76**	**39**	P	**P**	**00 49 19.6**	**-0.1**
EGAK				IAmb	IAmb	00 49 20.1	
	comp=Z,5.9nm,0.7s						
DAWY	**Dawson**	**22.24**	**42**	P	**P**	**00 49 25.0**	**+0.1**
DAWY				IAmb	IAmb	00 49 36.2	
	comp=Z,7.4nm,1.4s						
HYT	**Haines Junctio**	**22.36**	**51**	P	**P**	**00 49 26.3**	**0.0**
HYT				IAmb	IAmb	00 49 49.4	
	comp=Z,7.6nm,1.4s						
DLBC	**Dease Lake**	**26.07**	**57**	P	**P**	**00 50 01.9**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=332,slow=17,SNR=2.0						
	comp=Z,0.8nm,0.4s						
YAK	**Yakutsk**	**31.41**	**312**	LR	LR	01 04 29.6	
	comp=Z,30nm,18.0s,baz=89,slow=38						
KLR	**Kul'dur**	**33.75**	**288**	P	**P**	**00 51 08.9**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=109,slow=7.9,SNR=4.2						
	comp=Z,1.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.86**	**212**	T	T	01 29 03.4	
	baz=21,slow=74						
H11N3	**WAKE ISLAND Hy**	**34.87**	**212**	T	T	01 29 17.6	
	baz=21,slow=74						
H11N1	**WAKE ISLAND Hy**	**34.88**	**212**	T	T	01 29 00.9	
	baz=21						
USRK	**Ussuriysk Ar.**	**35.96**	**280**	P	**P**	**00 51 28.0**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=52,slow=11,SNR=2.5						
	comp=Z,2.2nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**36.07**	**211**	T	T	01 30 41.8	
	baz=20,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**36.08**	**211**	T	T	01 30 36.4	
	baz=20,slow=75,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**36.09**	**211**	T	T	01 30 36.3	
	baz=20,slow=75,SNR=3.1						
PDAR	**Pinedale Array**	**43.70**	**75**	P	**P**	**00 52 32.9**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=300,slow=3.6,SNR=4.4						
	comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**49.01**	**299**	P	**P**	**00 53 14.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=90,slow=7.2,SNR=2.4						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**55.92**	**315**	P	**P**	**00 54 04.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=39,slow=9.3,SNR=1.8						
ZALV				PcP	**PcP**	**00 55 03.6**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=1.4,slow=5.8,SNR=1.8						
	comp=Z,0.2nm,0.3s						
TXAR	**Lajitas Array**	**55.96**	**84**	P	**P**	**00 54 06.1**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=302,slow=7.2,SNR=3.6						
	comp=Z,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**58.46**	**352**	P	**P**	**00 54 20.7**	**-2.5**
	comp=Z,1.3nm,0.8s,baz=353,slow=9.0,SNR=5.9						
ARCES				PcP	**PcP**	**00 55 13.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=357,slow=2.7,SNR=5.1						
	comp=Z,1.3nm,0.8s						
KURBB	**Kurchatov Array**	**61.01**	**316**	P	**P**	**00 54 40.5**	**-0.5**
	baz=43,slow=6.0						
MKAR	**Makanchi Array**	**62.08**	**311**	P	**P**	**00 54 47.8**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=46,slow=6.8,SNR=9.6						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**66.28**	**349**	P	**P**	**00 55 14.2**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=15,slow=5.9,SNR=1.0						
	comp=Z,0.5nm,0.6s						
NOA	**NORSAR Array B**	**67.78**	**357**	P	**P**	**00 55 24.4**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=7.5,slow=7.4,SNR=1.9						
	comp=Z,0.3nm,0.5s						
PPT	**Papeete**	**72.08**	**155**	LR	LR	01 19 50.2	
	comp=Z,131nm,20.7s,baz=10.0,slow=29						
RPZ	**Rata Peaks**	**95.60**	**190**	LR	LR	01 45 03.2	
	comp=Z,25nm,18.4s,baz=278,slow=38						
RPN	**Rapa Nui**	**96.85**	**125**	LR	LR	01 32 36.0	
	comp=Z,57nm,19.7s,baz=256,slow=30						
BOSA	**Boshof**	**152.82**	**319**	PKPbc	**PKiKP**	**01 04 25.7**	**+1.0**
	comp=Z,2.3nm,1.0s,baz=32,slow=2.3,SNR=1.3

SJCC				*e*S		**Sn**	01 59 03.8 **-1.8**
SJCC				*i*			01 59 07.7
	comp=Z,9.8nm,0.5s						
UREC	**San Jos de Ur**	**3.17**	**119**	*e*P		**Pn**	01 58 29.4 **+1.0**
UREC				*e*S		**Sn**	01 59 05.4 **-0.6**
UREC				*i*			01 59 07.5
	comp=Z,5.2nm,0.2s						
UREC	**San Jos de Ur**	**3.17**	**119**	⇓ *i* P		**Pn**	01 58 29.6 **+1.2**
ZARC	**Zaragoza, Cauc**	**3.88**	**118**	*e*P		**Pn**	01 58 39.2 **+1.0**
ZARC				*e*S		**Sn**	01 59 21.0 **-2.5**
ZARC				*i*			01 59 23.5
	comp=Z,7.1nm,0.3s						

IDC 08 02:03:12.4±2.2, 12°24'N×143°90'E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=182.3km s-min=22.5km az=119.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.64**	**35**	Pn	Pn	02 03 42.6	+0.1
	14nm,0.3s,baz=188,slow=14,SNR=5.6						
GUMO				Sn	Sn	02 04 03.8	-0.5
	80nm,0.3s,baz=271,slow=18,SNR=26						
H11N1	**WAKE ISLAND Hy**	**23.30**	**68**	T	T	02 32 51.1	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**23.31**	**68**	T	T	02 32 57.5	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**23.32**	**68**	T	T	02 32 52.4	
	baz=255						
WRA	**Warramunga Arr**	**33.34**	**197**	P	P	02 09 51.9	-0.5
	0.3nm,0.6s,baz=20,slow=9.6,SNR=4.6 0.3nm,0.6s						
YKA	**Yellowknife Ar**	**84.48**	**27**	P	P	02 15 46.2	-0.8
	0.5nm,0.6s,baz=285,slow=5.1,SNR=2.1 0.5nm,0.6s						
NVAR	**Mina Array Bea**	**88.49**	**51**	P	P	02 16 08.8	+1.3
	0.4nm,0.7s,baz=284,slow=5.5,SNR=4.2 0.4nm,0.7s						

*NEIC **08** 02:23:27.9±1.9, 17°.90S±0°.09×174°.34W±0°.09, h22km±5km, mb4.8/58, Error ellipse: s-maj=13.7km s-min=12.6km az=147.0*

*IDC **08** 02:23:28.4±0.6, 18°.02S×174°.66W, h0km, mb4.2/14, mbtmp4.3/14, MS3.5/23, Error ellipse: s-maj=26.2km s-min=15.8km az=133.0*

ISC 08 02:23:30.2±0.4, 17°.96S±0°.07×174°.34W±0°.08, h35km, n149, σ2°12/105, mb4.7/39, MS3.7/23, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.33**	**106**		**Pn**	**02 24 30.5**	**-3.1**
AFI	**Afiamalu**	**4.72**	**32**	Pn	**Pn**	**02 24 39.4**	**+0.4**
	5.1nm,0.3s,baz=232,slow=13,SNR=5.1						
AFI				Sn	**Sn**	02 25 30.1	-2.5
	7.3nm,0.3s,baz=231,slow=21,SNR=1.1						
AFI	**Afiamalu**	**4.72**	**32**	Pn	**Pn**	**02 24 34.7**	**-4.3**
MSVF	**Nonsavu**	**7.25**	**271**	Pn	Pn	02 25 19.0	+5.2
	1.0nm,0.3s,baz=115,slow=15,SNR=1.7						
MSVF				LR	LR	02 26 54.7	
	comp=Z,107nm,19.0s,baz=72,slow=30						
MSVF	**Nonsavu**	**7.25**	**271**	Pn	Pn	02 25 19.3	+5.5
MARNC	**Mare, Loyalty**	**16.96**	**255**	P	**Pn**	**02 27 24.4**	**-0.5**
PINNC	**Pines Island,**	**17.70**	**252**	Pn	**Pn**	**02 27 32.0**	**-2.0**
PINNC				IAmb	IAmb	02 27 40.0	
	comp=Z,106nm,1.5s						
OUENC	**Ouen Island, N**	**18.21**	**253**	P	**Pn**	**02 27 38.6**	**-1.7**
DZM	**Mont Dzumac**	**18.51**	**254**	P	**Pn**	**02 27 49.2**	**+5.2**
	comp=Z,14nm,0.9s,baz=83,slow=19,SNR=5.2						
DZM	**Mont Dzumac**	**18.51**	**254**	*e*LR	LR	02 32 09.3	
	comp=Z,467nm,28.8s						
DZM	**Mont Dzumac**	**18.51**	**254**	P	**P**	**02 27 40.2**	**-3.6**
ONTNC	**Ouen Toro**	**18.54**	**253**	P	**P**	**02 27 40.4**	**-3.6**
ONTNC				IAmb	IAmb	02 27 51.1	
	comp=Z,78nm,1.5s						
URZ	**Urewera**	**21.56**	**199**	P	**P**	**02 28 16.4**	**-0.2**
	comp=Z,8.1nm,0.7s,baz=27,slow=11,SNR=4.4 comp=Z,8.1nm,0.7s						
URZ	**Urewera**	**21.56**	**199**	P	**P**	**02 28 16.5**	**-0.1**
URZ				IAmb	IAmb	02 28 37.3	
	comp=Z,40nm,1.3s						
PAE	**Paea**	**23.57**	**93**	*e*T	T	02 52 58.0	
	comp=Z,29nm,0.2s						
PPT2	**Papeete2**	**23.58**	**93**	*e*LR	LR	02 34 24.0	
	comp=Z,44nm,22.5s						
PPT2	**Papeete2**	**23.58**	**93**	*e*T	T	02 53 01.4	
	comp=Z,27nm,0.3s						
PPT	**Papeete**	**23.58**	**93**	LR	LR	02 35 53.9	
	comp=Z,49nm,18.8s,baz=31,slow=31						
TVO	**Taravao**	**23.87**	**93**	*e*T	T	02 53 05.9	
	comp=Z,14nm,0.3s						
MEH	**Mehetia**	**24.99**	**94**	*e*T	T	02 54 44.0	
	comp=Z,28nm,0.2s						
VAH	**Vaihoa**	**25.73**	**88**	*e*T	T	02 55 40.0	
	comp=Z,9.4nm,0.2s						
RPZ	**Rata Peaks**	**28.48**	**203**	LR	LR	02 40 27.8	
	comp=Z,349nm,18.0s,baz=22,slow=36						
RPZ	**Rata Peaks**	**28.48**	**203**	P	**P**	**02 29 18.7**	**-3.3**
TAOE	**Nuku Hiva Isla**	**34.41**	**79**	*e*T	T	03 06 27.6	
	comp=Z,134nm,0.2s						
TOO	**Toolangi**	**40.18**	**233**	P	**P**	**02 31 02.7**	**-0.5**
TOO				IAmb	IAmb	02 31 06.3	
	comp=Z,43nm,1.8s						
H11S2	**WAKE ISLAND Hy**	**40.73**	**332**	T	T	03 15 13.5	
	baz=149,slow=75,SNR=48						
H11S3	**WAKE ISLAND Hy**	**40.75**	**332**	T	T	03 15 14.4	
	baz=149,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**40.75**	**332**	T	T	03 15 14.9	
	baz=149,slow=75,SNR=39						
H11N3	**WAKE ISLAND Hy**	**41.72**	**333**	T	T	03 16 01.9	
	baz=151,slow=76,SNR=54						
H11N1	**WAKE ISLAND Hy**	**41.73**	**333**	T	T	03 15 59.2	
	baz=151,slow=76,SNR=76						
H11N2	**WAKE ISLAND Hy**	**41.74**	**333**	T	T	03 16 01.5	
	baz=151,slow=76,SNR=49						
STKA	**Stephens Creek**	**42.02**	**242**	P	**P**	**02 31 19.2**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=73,slow=13,SNR=4.9 comp=Z,2.2nm,0.7s						
WB0	**Warramunga Arr**	**48.40**	**259**	P	**P**	**02 32 08.7**	**-0.6**
WB0				IAmb	IAmb	02 32 24.9	
	comp=Z,17nm,1.3s						
WB2	**Warramunga Arr**	**48.42**	**259**	P	**P**	**02 32 05.4**	**-3.9**
WRAB	**Tennant Creek**	**48.42**	**259**	P	**P**	**02 32 05.1**	**-4.3**
WRA	**Warramunga Arr**	**48.43**	**259**	P	**P**	**02 32 11.4**	**+1.9**
	comp=Z,1.9nm,0.6s,baz=96,slow=6.0,SNR=27						
WRA				LR	LR	02 50 31.1	
	comp=Z,112nm,21.2s,baz=140,slow=34 comp=Z,1.9nm,0.6s						
WRA	**Warramunga Arr**	**48.43**	**259**	P	**P**	**02 32 07.4**	**-2.0**
AS31	**Alice Springs**	**48.50**	**254**	P	**P**	**02 32 09.7**	**-0.3**
AS31				IAmb	IAmb	02 32 13.6	
	comp=Z,7.0nm,0.8s						
ASAR	**Alice Springs**	**48.51**	**254**	P	**P**	**02 32 11.2**	**+1.1**
	comp=Z,25nm,0.8s,baz=89,slow=8.4,SNR=8.5						
ASAR				LR	LR	02 51 35.5	
	comp=Z,62nm,19.2s,baz=122,slow=35 comp=Z,25nm,0.8s						
ASAR	**Alice Springs**	**48.51**	**254**	P	**P**	**02 32 09.0**	**-1.0**
KNRA	**Kununurra**	**54.34**	**263**	P	**P**	**02 32 51.7**	**-1.9**
KNRA				IAmb	IAmb	02 32 59.5	
	comp=Z,13nm,1.0s						
FITZ	**Fitzroy Crossi**	**56.84**	**260**	P	**P**	**02 33 11.1**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=109,slow=13,SNR=2.6						
FITZ				LR	LR	02 56 22.0	
	comp=Z,86nm,18.2s,baz=98,slow=35 comp=Z,1.5nm,0.7s						
SOEI	**Soe**	**59.95**	**269**	P	**P**	**02 33 30.8**	**-2.8**
RPN	**Rapa Nui**	**60.17**	**111**	LR	LR	02 53 19.0	
	comp=Z,20nm,20.2s,baz=240,slow=30						
SBA	**Scott Base**	**60.64**	**185**	P	**P**	**02 33 35.6**	**-1.5**
VNDA	**Vanda**	**60.75**	**186**	P	**P**	**02 33 41.1**	**+3.2**
	comp=Z,1.4nm,0.9s,baz=5.6,slow=6.3,SNR=11						
VNDA				LR	LR	02 54 13.2	
	comp=Z,19nm,21.6s,baz=55,slow=30 comp=Z,1.4nm,0.9s						
VNDA	**Vanda**	**60.75**	**186**	P	**P**	**02 33 38.6**	**+0.6**
PSA00	**Pilbara Seismi**	**61.64**	**255**	P	**P**	**02 33 42.5**	**-2.4**
PSA00				IAmb	IAmb	02 33 48.5	
	comp=Z,7.3nm,1.1s						
TOLI2	**Tolitoli**	**66.54**	**279**	P	**P**	**02 34 15.6**	**-1.6**
TOLI2				IAmb	IAmb	02 34 27.5	
	comp=Z,6.9nm,1.0s						
MJAR	**Matsushiro Arr**	**70.33**	**321**	P	**P**	**02 34 42.6**	**+2.3**
	comp=Z,2.2nm,0.8s,baz=167,slow=11,SNR=1.7 comp=Z,2.2nm,0.8s						

QSPA	**South Pole Qui**	**72.10**	**180**	P	**P**	**02 34 51.0**	**+0.2**
QSPA				IAmb	IAmb	02 34 59.6	
	comp=Z,9.9nm,0.8s						
JSU	**Suzuyama**	**72.27**	**313**	P	**P**	**02 34 52.9**	**+0.7**
KMPM	**Mount Pierce**	**74.51**	**38**	P	**P**	**02 35 05.1**	**-0.2**
PETK	**Petropavlovsk-**	**74.79**	**343**	P	**P**	**02 35 09.2**	**+2.6**
	comp=Z,3.1nm,1.0s,baz=227,slow=9.6,SNR=3.4 comp=Z,3.1nm,1.0s						
YULB	**Yu-li**	**75.09**	**301**	P	**P**	**02 35 07.3**	**-1.6**
ISA	**Isabella, Lake**	**75.10**	**44**	P	**P**	**02 35 08.9**	**0.0**
PFO	**Pinyon Flats O**	**75.31**	**47**	LR	LR	03 04 07.0	
	comp=Z,35nm,18.4s,baz=162,slow=32						
GSC	**Goldstone, Bar**	**76.02**	**45**	P	**P**	**02 35 14.4**	**+0.3**
YBH	**Yreka Blue Hor**	**76.17**	**37**	P	P	02 35 19.4	+4.6
	comp=Z,2.1nm,0.8s,baz=264,slow=2.4,SNR=6.2						
YBH				LR	LR	03 01 08.5	
	comp=Z,42nm,19.5s,baz=218,slow=30 comp=Z,2.1nm,0.8s						
LHV	**Little Huntoon**	**76.59**	**42**	P	**P**	**02 35 17.2**	**+0.1**
LHV				IAmb	IAmb	02 35 28.1	
	comp=Z,9.5nm,1.2s						
GRAC	**Grapevine Rang**	**76.60**	**44**	P	**P**	**02 35 16.7**	**-0.6**
L04D	**Klamath Falls**	**76.71**	**37**	P	**P**	**02 35 16.6**	**-1.3**
L04D				IAmb	IAmb	02 35 33.5	
	comp=Z,19nm,1.4s						
BLYC	**Blythe**	**76.75**	**48**	P	**P**	**02 35 16.9**	**-1.2**
BLYC				IAmb	IAmb	02 36 49.7	
	comp=Z,13nm,1.8s						
113A	**Mohawk Valley,**	**76.77**	**49**	P	**P**	**02 35 18.9**	**+0.7**
NVAR	**Mina Array Bea**	**76.82**	**42**	P	P	02 35 24.2	+5.5
	comp=Z,3.1nm,1.0s,baz=223,slow=9.2,SNR=14						
NVAR				LR	LR	03 01 10.8	
	comp=Z,38nm,20.6s,baz=274,slow=29 comp=Z,3.1nm,1.0s						
NVAR	**Mina Array Bea**	**76.82**	**42**	P	**P**	**02 35 18.0**	**-0.8**
PAHR	**Pah Rah Range**	**76.90**	**40**	P	**P**	**02 35 19.4**	**+0.3**
PAHR				IAmb	IAmb	02 35 33.7	
	comp=Z,13nm,1.7s						
NV11	**Mina Array Sit**	**76.92**	**42**	P	**P**	**02 35 19.7**	**+0.5**
NV11				IAmb	IAmb	02 35 30.4	
	comp=Z,11nm,1.3s						
214A	**Organ Pipe Nat**	**77.04**	**50**	P	**P**	**02 35 18.0**	**-1.9**
SHPR	**Sheep Range**	**77.79**	**45**	P	**P**	**02 35 22.9**	**-1.3**
SHPR				IAmb	IAmb	02 35 35.7	
	comp=Z,16nm,1.6s						
W13A	**Hualapai Mount**	**77.91**	**47**	P	**P**	**02 35 23.9**	**-1.0**
BMN	**Battle Mountai**	**78.67**	**41**	P	**P**	**02 35 27.8**	**-1.1**
TUC	**Tucson**	**78.70**	**51**	P	**P**	**02 35 29.3**	**+0.1**
SPR3	**Spring Creek 3**	**79.71**	**43**	P	**P**	**02 35 34.3**	**-0.5**
SPR3				IAmb	IAmb	02 35 45.6	
	comp=Z,4.3nm,1.2s						
SMAI	**San Martin Ant**	**79.72**	**159**	P	**P**	**02 35 33.8**	**-0.3**
PSUT	**Pine Spring**	**79.77**	**44**	P	**P**	**02 35 34.5**	**-0.5**
ELK	**Elko**	**80.09**	**41**	LR	LR	03 03 22.3	
	comp=Z,52nm,20.7s,baz=248,slow=30						
G08A	**Pilot Rock**	**80.52**	**36**	P	**P**	**02 35 37.0**	**-1.8**
G08A				IAmb	IAmb	02 35 54.1	
	comp=Z,8.6nm,1.2s						
HAWA	**Hanford**	**80.88**	**35**	P	**P**	**02 35 40.0**	**-0.5**
HAWA				IAmb	IAmb	02 35 56.0	
	comp=Z,21nm,1.6s						
BELA	**Belgrano 2**	**81.60**	**172**	P	**P**	**02 35 42.9**	**-1.1**
BELA				IAmb	IAmb	02 35 54.6	
	comp=Z,7.3nm,1.0s						
F10A	**Beach Ranch, E**	**81.90**	**36**	P	**P**	**02 35 49.9**	**+3.7**
F10A				IAmb	IAmb	02 36 00.1	
	comp=Z,12nm,1.2s						
TMUT	**Trail Mountain**	**81.92**	**44**	P	**P**	**02 35 46.2**	**-0.5**
PLID	**Pearl Lake**	**82.09**	**37**	P	**P**	**02 35 45.4**	**-1.9**
PLID				IAmb	IAmb	02 36 03.0	
	comp=Z,15nm,1.7s						
MA2	**Magadan**	**82.33**	**343**	LR	LR	03 14 56.1	
	comp=Z,30nm,18.5s,baz=136,slow=38						
TX31	**Lajitas Ar. Si**	**82.78**	**56**	P	**P**	**02 35 48.8**	**-2.3**
TX32	**Lajitas Array**	**82.78**	**56**	P	**P**	**02 35 49.6**	**-1.5**
TX32				IAmb	IAmb	02 36 10.2	
	comp=Z,16nm,1.9s						
TXAR	**Lajitas Array**	**82.78**	**56**	P	P	02 35 56.8	+5.7
	comp=Z,0.5nm,0.8s,baz=216,slow=5.9,SNR=8.8						
TXAR				LR	LR	03 03 53.4	
	comp=Z,21nm,19.4s,baz=330,slow=29 comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**82.78**	**56**	P	**P**	**02 35 49.7**	**-1.4**
PV23	**Carpenter Ridg**	**82.98**	**46**	P	**P**	**02 35 49.5**	**-2.7**
PV23				IAmb	IAmb	02 36 01.0	
	comp=Z,10nm,1.0s						
ANMO	**Albuquerque**	**83.13**	**50**	LR	LR	03 07 33.9	
	comp=Z,31nm,18.6s,baz=247,slow=32						
PV07	**Paradox Valley**	**83.22**	**46**	P	**P**	**02 35 52.2**	**-1.2**
PV07				IAmb	IAmb	02 36 14.4	
	comp=Z,7.3nm,1.2s						
NEW	**Newport**	**83.32**	**34**	LR	LR	03 05 07.5	
	comp=Z,30nm,19.9s,baz=190,slow=30						
AHID	**Auburn Hatcher**	**83.78**	**41**	P	**P**	**02 35 55.9**	**-0.2**
DLMT	**Dillon**	**84.24**	**39**	P	**P**	**02 35 57.0**	**-1.3**
REDW	**Red Top Meadow**	**84.25**	**41**	P	**P**	**02 35 58.7**	**+0.2**
TPAW	**Teton Pass**	**84.25**	**41**	P	**P**	**02 35 57.9**	**-0.7**
TPAW				IAmb	IAmb	02 36 04.4	
	comp=Z,4.7nm,0.8s						
H03S2	**Juan Fernandez**	**84.54**	**124**	T	T	04 09 12.7	
	baz=254						
H03S1	**Juan Fernandez**	**84.56**	**124**	T	T	04 09 15.3	
	baz=254						
H03S3	**Juan Fernandez**	**84.56**	**124**	T	T	04 09 14.8	
	baz=254						
QLMT	**Earthquake Lak**	**84.66**	**40**	P	**P**	**02 35 58.2**	**-2.3**
H03N2	**Juan Fernandez**	**84.66**	**123**	T	T	04 09 14.9	
	baz=257,slow=72,SNR=279						
H03N3	**Juan Fernandez**	**84.66**	**123**	T	T	04 09 16.5	
	baz=257,slow=72,SNR=271						
H03N1	**Juan Fernandez**	**84.67**	**123**	T	T	04 09 17.9	
	baz=257,slow=72,SNR=391						
FLWY	**Flagg Ranch**	**84.71**	**40**	P	**P**	**02 35 59.8**	**-1.0**
PDAR	**Pinedale Array**	**84.76**	**42**	P	P	02 36 06.0	+4.9
	comp=Z,2.6nm,0.7s,baz=214,slow=3.1,SNR=29						
PDAR				LR	LR	03 07 35.2	
	comp=Z,27nm,19.2s,baz=268,slow=31 comp=Z,2.6nm,0.7s						
HDA	**Harding Lake**	**84.78**	**12**	P	**P**	**02 35 59.5**	**-0.9**
HDA				IAmb	IAmb	02 36 14.0	
	comp=Z,7.0nm,1.0s						
MAW	**Mawson**	**85.09**	**199**	P	**P**	**02 36 04.4**	**+2.3**
	comp=Z,2.5nm,0.9s,baz=72,slow=4.6,SNR=4.0 comp=Z,2.5nm,0.9s						
ILAR	**Eielson Array**	**85.12**	**11**	P	**P**	**02 36 05.6**	**+3.5**
	comp=Z,1.5nm,0.9s,baz=222,slow=6.1,SNR=10						
ILAR				LR	LR	03 06 59.9	
	comp=Z,30nm,20.0s,baz=244,slow=31 comp=Z,1.5nm,0.9s						
CMIG	**Matias Romero**	**85.58**	**71**	LR	LR	03 09 19.7	
	comp=Z,29nm,18.3s,baz=182,slow=32						
LYN	**LuoYang**	**86.90**	**308**	⇑ P	P	02 36 18.8	+7.2
HHC	**Hu-ho-hao-te**	**90.11**	**313**	*e*P	P	02 36 35.7	+8.9
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,4.6s						
TROLL	**Troll, Antarti**	**90.23**	**179**	PcP	**PcP**	**02 36 30.1**	**+1.9**
VNA3	**Neumayer Olymp**	**90.40**	**175**	PcP	**PcP**	**02 36 30.8**	**+2.1**
SNAA	**Sanae**	**90.41**	**177**	PcP	**PcP**	**02 36 30.6**	**+1.8**
VNA2	**Neumayer--Watz**	**90.88**	**176**	PcP	**PcP**	**02 36 33.4**	**+2.6**
	baz=179,slow=4.0						
INK	**Inuvik**	**90.95**	**14**	LR	LR	03 10 21.0	
	comp=Z,25nm,19.3s,baz=159,slow=31						
VNA1	**Neumayer--Stat**	**91.09**	**175**	PcP	**PcP**	**02 36 34.2**	**+2.5**
CD2	**Chengdu**	**92.38**	**302**	*e*P	P	02 36 43.6	+6.1
CMAR	**Chiang Mai Arr**	**92.56**	**288**	LR	LR	03 15 30.9	
	comp=Z,18nm,20.1s,baz=0.0,slow=34						
PZH	**PanZhiHua**	**92.62**	**297**	P	P	02 36 45.5	+6.7
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,5.2s						
YKA	**Yellowknife Ar**	**92.79**	**24**	LR	LR	03 11 50.8	
	comp=Z,33nm,18.5s,baz=346,slow=31						
NNA	**Nana**	**93.34**	**104**	LR	LR	03 10 29.2	
	comp=Z,13nm,21.2s,baz=206,slow=30						
CLL	**Collm**	**146.22**	**352**	*e*PKiKP	**PKiKP**	**02 43 11.0**	**+1.1**
	comp=Z,5.0nm,0.8s						
CLL				*e*(pPKPbc)		02 43 14.0	
	comp=Z,8.0nm,1.0s						
CLL				*e*x	x	02 43 33.0	
OSTC	**Ostas**	**146.40**	**348**	*e*PKP	**PKiKP**	**02 43 13.4**	**+3.0**
BRG	**Berggiesshubel**	**146.50**	**350**	*e*PKP	PKiKP	02 43 20.5	+10
BRG				Amp		02 43 22.7	
	comp=Z,24nm,1.9s						

DPC	**Dobruska-Polom**	**146.57**	**348**	*e*PKP	**PKiKP**	**02 43 12.7**	**+1.9**
KRLC	**Kraliky**	**146.74**	**347**	*e*PKP	**PKiKP**	**02 43 13.5**	**+2.4**
MORC	**Moravsky Berou**	**146.85**	**346**	*e*PKP	**PKPab**	**02 43 08.6**	**-1.4**
BRTR	**Keskin Array B**	**147.50**	**318**	PKPbc	**PKiKP**	**02 43 15.2**	**+2.0**
	comp=Z,1.6nm,0.9s,baz=113,slow=2.5,SNR=8.4						
VRAC	**Vranov**	**147.50**	**347**	*e*PKP	**PKiKP**	**02 43 16.8**	**+4.1**
JAVC	**Velka Javorina**	**147.67**	**345**	*e*PKP	**PKPab**	**02 43 16.8**	**+3.5**
KRUC	**Moravsky**	**147.78**	**347**	*e*PKP	**PKPab**	**02 43 17.0**	**+3.3**
MODS	**Modra-Piesok**	**148.22**	**345**	*e*PKP	**PKPab**	**02 43 21.0**	**+5.5**
KHC	**Kasperske Hory**	**148.25**	**350**	*e*PKP	**PKPab**	**02 43 17.7**	**+2.1**
CKRC	**Cesky Krumlov**	**148.43**	**349**	*e*PKP	**PKPab**	**02 43 18.4**	**+2.1**
GERES	**GERESS Array B**	**148.51**	**350**	PKPbc	**PKPab**	**02 43 17.6**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=10,slow=1.5,SNR=9.4						
CONA	**Conrad Observa**	**148.97**	**347**	*e*P	**PKPab**	**02 43 19.5**	**+0.9**
	comp=Z,5.2nm,1.1s						
RONA	**Rosalia, Austr**	**149.08**	**346**	*e*P	**PKPab**	**02 43 18.2**	**-0.8**
	comp=Z,5.3nm,1.0s						
MOA	**Molln**	**149.37**	**349**	*e*P	**PKPab**	**02 43 21.2**	**+1.1**
	comp=Z,4.3nm,1.2s						
BIOA	**Bad Ischl, Aus**	**149.63**	**349**	*e*P	PKPab	02 43 30.1	+8.9
	comp=Z,6.6nm,1.2s						
ARSA	**Arzberg**	**149.68**	**347**	*e*P	**PKPab**	**02 43 25.2**	**+3.8**
	comp=Z,4.2nm,1.2s						
RETA	**Reutte**	**150.25**	**353**	*e*P	PKPab	02 43 30.7	+6.9
	comp=Z,9.0nm,1.7s						
WATA	**Walderalm**	**150.30**	**352**	*e*P	**PKPab**	**02 43 22.9**	**-1.2**
	comp=Z,2.5nm,0.7s						
MOTA	**Moosalm**	**150.35**	**353**	*e*P	**PKPab**	**02 43 23.8**	**-0.6**
	comp=Z,8.7nm,1.3s						
WTTA	**Wattenberg**	**150.36**	**352**	*e*P	**PKPab**	**02 43 23.4**	**-1.1**
	comp=Z,7.4nm,1.3s						
SQTA	**Sankt Quirin**	**150.46**	**352**	*e*P	**PKPab**	**02 43 23.8**	**-1.0**
	comp=Z,6.9nm,1.1s						
DAVA	**Damuels**	**150.55**	**354**	*e*P	**PKPab**	**02 43 23.5**	**-1.6**
	comp=Z,8.8nm,1.1s						
FETA	**Feichten**	**150.72**	**353**	*e*P	**PKPab**	**02 43 24.4**	**-1.4**
	comp=Z,6.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**173.88**	**141**	PKP	**PKPdf**	**02 43 39.8**	**+2.9**
	comp=Z,0.6nm,0.8s,baz=259,slow=5.4,SNR=3.3						
TORD				PKPab	**PKPab**	**02 45 11.5**	**+4.2**
	comp=Z,0.7nm,0.9s,baz=242,slow=5.3,SNR=3.1						

IDC 08 02:26:15.8±1.7, 3°39S×124°99E, h0km, mb3.6/2, mbtmp3.5/4, ML2.9/2, MS3.2/1, Error ellipse: s-maj=129.6km s-min=28.5km az=67.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.63**	**178**	Pn	Pn	02 29 43.5	-0.8
	baz=359,slow=14,SNR=1.8 2.0nm,1.1s						
WRA	**Warramunga Arr**	**18.81**	**152**	P	P	02 30 37.0	-0.2
	baz=329,slow=11,SNR=5.7 0.3nm,0.9s						
JHJ	**Hachijo jima 2**	**38.91**	**20**	LR	LR	02 52 54.0	
	comp=Z,31nm,18.1s,baz=239,slow=41						
MKAR	**Makanchi Array**	**52.52**	**328**	P	P	02 36 41.4	0.0
	0.3nm,0.4s,baz=116,slow=8.2,SNR=5.3 0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**66.20**	**335**	P	P	02 37 05.5	+0.2
	0.4nm,0.4s,baz=132,slow=8.0,SNR=1.5 0.4nm,0.4s						

*NORS **08** 02:31:00.8±0.0, 43°.81N×43°.45E, h19km, MPVA3.5*
*MOS **08** 02:31:02.3±0.0, 43°.76N×43°.54E, h20km, MPVA3.3*

ISC 08 02:31:02.5±0.9, 43°.76N±0°.04×43°.53E±0°.03, h16km±6km, n18, σ0°.77/36, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTC	**Kuba-Taba**	**0.11**	**304**	*i* Pg	**Pg**	**02 31 06.0**	**-0.1**
KBTC				*e*Sg	**Sg**	**02 31 09.1**	**+0.6**
NCK	**Nalchik**	**0.27**	**170**	*i* Pg	**Pg**	**02 31 07.6**	**-0.8**
NCK				*i* Sg	**Sg**	**02 31 12.5**	**+0.2**
PYA1	**Pyatigorsk**	**0.44**	**314**	*i* Pg	**Pg**	**02 31 11.1**	**-0.3**
PYA1				*i* Sg	**Sb**	**02 31 17.9**	**-0.3**
KBZ	**Khabaz**	**0.46**	**267**	*e*Pg	**Pg**	**02 31 12.0**	**+0.2**
KBZ				*i* Sg	**Sb**	**02 31 19.4**	**+0.6**
LSNR	**Lesken**	**0.53**	**156**	*e*Pg	**Pg**	**02 31 12.5**	**-0.5**
LSNR				*e*Sg	**Sg**	**02 31 21.3**	**+1.2**
PRTR	**Priterechnaya**	**0.54**	**90**	*e*Pg	**Pg**	**02 31 13.0**	**-0.4**
PRTR				*e*Sg	**Sb**	**02 31 21.3**	**+0.1**
STDR	**Stavd-Durt**	**0.55**	**135**	*e*Pg	**Pg**	**02 31 13.5**	**+0.1**
STDR				*e*Sg	**Sb**	**02 31 22.6**	**+1.3**
BEYR	**

TAFP						Sn	03 13 14.5	+1.4
TASE	**Tanaga Southea**	**1.78**	**274**			**Pn**	**03 12 53.4**	**+0.8**
GALAA	**Gareloi Lava P**	**2.23**	**271**			**Pn**	**03 12 59.4**	**+0.6**
GANO	**Gareloi North**	**2.25**	**273**			**Pn**	**03 13 00.3**	**+1.3**
GASW	**Gareloi Southwe**	**2.29**	**272**			**Sn**	**03 13 30.0**	**+3.7**
CERAA	**Semis' Rag'd T**	**3.19**	**275**			**Pn**	**03 13 12.4**	**+0.5**
CEPE	**Semis' Perret**	**3.21**	**276**			**Pn**	**03 13 12.9**	**+0.7**
CESW	**Semis' Southwe**	**3.27**	**275**			**Pn**	**03 13 13.2**	**+0.3**
AMKA	**Amchitka**	**3.47**	**266**			**Pn**	**03 13 16.1**	**+0.5**
CLCO	**Concord Point,**	**3.50**	**71**			**Pn**	**03 13 18.2**	**+2.0**
LSPA	**Little Sitkin**	**3.88**	**275**			**Pn**	**03 13 22.3**	**+1.0**
LSSA	**Little Sitkin**	**3.92**	**275**			**Pn**	**03 13 23.1**	**+1.2**
NIKH	**Nikolski High**	**4.06**	**70**	Pn		**Pn**	**03 13 25.3**	**+1.5**
UNV	**Unalaska Valle**	**5.66**	**65**	Pn		**Pn**	**03 13 47.4**	**+1.7**
SPIA	**Saint Paul Isl**	**6.14**	**26**	Pn		**Pn**	**03 13 54.3**	**+2.0**
CNBA	**Chernabura Isl**	**9.82**	**66**	Pn		**Pn**	**03 14 42.5**	**-0.2**
OHAK	**Old Harbor**	**13.82**	**58**	Pn		**Pn**	**03 15 38.8**	**+1.6**
N18K	**Kilae Creek**	**13.91**	**43**	Pn		**P**	**03 15 42.8**	**-2.6**
KDAK	**Kodiak Island**	**14.33**	**56**			**Pn**	**03 15 41.7**	**-2.3**
N19K	**Bonanza Creek**	**14.57**	**43**	P		**P**	**03 15 50.9**	**-1.8**
RC01	**Rabbit Creek A**	**16.78**	**46**	Pn		**Pn**	**03 16 15.5**	**0.0**
KTH	**Kantishna Hill**	**17.41**	**38**			**P**	**03 16 25.0**	**+0.9**
KTH					IAmb	IAmb	03 16 27.3	
	comp=Z,3.6nm,0.9s							
BPAW	**Bear Paw Mtn.**	**17.68**	**36**			**P**	**03 16 27.9**	**+0.9**
BPAW					IAmb	IAmb	03 16 49.0	
	comp=Z,5.8nm,1.5s							
H23K	**Yukon River**	**19.15**	**33**	P		**P**	**03 16 43.7**	**+0.5**
HDA	**Harding Lake**	**19.36**	**38**			**P**	**03 16 44.9**	**-0.5**
ILAR	**Eielson Array**	**19.55**	**37**	P		**P**	**03 16 47.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=238,slow=11,SNR=11							
	comp=Z,0.2nm,0.4s							
ILAR	**Eielson Array**	**19.55**	**37**			**P**	**03 16 47.4**	**-0.1**
H24K	**Noodor Dome**	**19.73**	**34**	P		**Pn**	**03 16 51.5**	**+0.2**
H24K					IAmb	IAmb	03 17 05.9	
	comp=Z,8.4nm,1.4s							
RIDG	**Independent Ri**	**19.91**	**41**	P		**P**	**03 16 49.7**	**-1.8**
J25K	**Salcha River,**	**20.06**	**39**	P		**P**	**03 16 51.5**	**-1.6**
J25K					IAmb	IAmb	03 17 22.0	
	comp=Z,5.5nm,1.4s							
SCRK	**Sand Creek**	**20.35**	**41**	P		**P**	**03 16 54.1**	**-2.3**
SCRK					IAmb	IAmb	03 17 00.8	
	comp=Z,5.7nm,1.4s							
J26L	**Joseph Creek**	**20.72**	**40**	P		**P**	**03 16 59.1**	**-1.2**
J26L					IAmb	IAmb	03 17 07.3	
	comp=Z,4.9nm,1.4s							
K27K	**Chicken**	**21.15**	**42**	P		**P**	**03 17 07.0**	**+2.1**
K27K					IAmb	IAmb	03 17 17.5	
	comp=Z,3.4nm,1.2s							
H11N2	**WAKE ISLAND Hy**	**34.92**	**210**	T		T	03 56 00.2	
	baz=18,slow=76,SNR=12							
H11N3	**WAKE ISLAND Hy**	**34.93**	**210**	T		T	03 55 58.2	
	baz=18,slow=76,SNR=11							
H11N1	**WAKE ISLAND Hy**	**34.94**	**210**	T		T	03 56 01.1	
	baz=18,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**36.13**	**210**	T		T	03 57 30.5	
	baz=19,slow=76,SNR=4.5							
H11S2	**WAKE ISLAND Hy**	**36.14**	**210**	T		T	03 57 34.0	
	baz=19,slow=76,SNR=7.1							
H11S3	**WAKE ISLAND Hy**	**36.14**	**210**	T		T	03 57 34.6	
	baz=19,slow=76,SNR=3.6							
PDAR	**Pinedale Array**	**44.03**	**75**	P		**P**	**03 20 27.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=290,slow=4.3,SNR=4.3							
	comp=Z,0.2nm,0.3s							
TXAR	**Lajitas Array**	**56.36**	**84**	P		**P**	**03 21 59.6**	**-0.8**
	comp=Z,0.2nm,0.8s,baz=314,slow=6.9,SNR=2.0							
	comp=Z,0.2nm,0.8s							

*IDC **08** 03:47:31.0±2.3,37°.44N×141°.96E, h0km, mb3.5/3, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=45.0km s-min=28.1km az=61.0*

*JMA **08** 03:47:34.3±0.2,37°.4N±0°.5×141°.8E±0°.9, h31km±2km, MV3.7/39, E OFF FUKUSHIMA PREF*

ISC 08 03:47:33.9±1.4,37°.42N±0°.06×141°.8E±0°.1, h20km±6km, n25, σ0°96/28, mb3.3/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.75**	**266**	*i* P	**Pn**	**03 47 48.6**	**-0.8**
JFK				S	**Sb**	**03 47 58.7**	**+0.7**
JMST	**Minamisoumatoc**	**0.80**	**293**	P	**Pn**	**03 47 49.1**	**-0.8**
JMST				S	**Sb**	**03 47 59.7**	**+0.3**
ONAJ	**Iwakimizuishiy**	**0.87**	**249**	S	**Sn**	**03 48 02.0**	**-1.1**
JMM	**Marumori**	**0.92**	**299**	*i* P	**Pn**	**03 47 51.2**	**-0.5**
JMM				S	**Sn**	**03 48 03.3**	**-1.0**
JIKH	**Ishinomakibobu**	**0.93**	**343**	*e*P	**Pn**	**03 47 51.1**	**-0.6**
JIKH				S	**Sn**	**03 48 03.1**	**-1.4**
JIO	**Ouri**	**1.09**	**341**	*i* P	**Pn**	**03 47 53.7**	**-0.3**
JIO				S	**Sn**	**03 48 07.2**	**-1.3**
JFT	**Otama**	**1.18**	**275**	*i* P	**Pb**	**03 47 56.0**	**+0.4**
JFT				*e*S	**Sb**	**03 48 11.1**	**+0.7**
JHO	**Hitachi**	**1.28**	**231**	P	**Pn**	**03 47 56.1**	**-0.6**
JHO				S	**Sn**	**03 48 11.9**	**-1.3**
JOU	**Okura**	**1.31**	**316**	*i* P	**Pb**	**03 47 58.0**	**+0.2**
JOU				*e*S	**Sb**	**03 48 15.0**	**+0.9**
JMK	**Ichinoseki**	**1.60**	**343**	*i* P	**Pb**	**03 48 02.0**	**-0.7**
JMK				*e*S	**Sb**	**03 48 22.6**	**+0.2**
JYS	**Shirataka**	**1.60**	**300**	*i* P	**Pb**	**03 48 02.6**	**-0.1**
JYS				S	**Sb**	**03 48 23.7**	**+1.3**
JFY	**Yanaizu**	**1.68**	**270**	P	**Pb**	**03 48 03.4**	**-0.7**
JFY				S	**Sb**	**03 48 25.7**	**+0.9**
MJAR	**Matsushiro Arr**	**3.02**	**254**	Pn	**Pn**	**03 48 20.9**	**+0.4**
	0.4nm,0.3s,baz=71,slow=15,SNR=11						
MJAR				Sn	**Sb**	**03 49 01.5**	**-1.8**
	0.4nm,0.3s,baz=74,slow=40,SNR=6.8						
	5.1nm,0.6s						
SONM	**Songino Array**	**27.84**	**303**	P	**P**	**03 53 23.5**	**+1.6**
	0.6nm,0.9s,baz=101,slow=7.5,SNR=2.4						
	0.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.08**	**122**	T	T	04 22 40.5	
	baz=315,slow=75,SNR=376						
H11N1	**WAKE ISLAND Hy**	**28.09**	**122**	T	T	04 22 43.7	
	baz=315,slow=75,SNR=268						
H11N3	**WAKE ISLAND Hy**	**28.09**	**122**	T	T	04 22 49.6	
	baz=315,slow=75,SNR=322						
H11S1	**WAKE ISLAND Hy**	**28.81**	**124**	T	T	04 23 38.5	
	baz=316,slow=76,SNR=196						
H11S3	**WAKE ISLAND Hy**	**28.81**	**124**	T	T	04 23 41.4	
	baz=316,slow=76,SNR=184						
H11S2	**WAKE ISLAND Hy**	**28.82**	**124**	T	T	04 23 42.5	
	baz=316,slow=76,SNR=178						
MKAR	**Makanchi Array**	**44.18**	**302**	P	**P**	**03 55 41.2**	**0.0**
	0.2nm,0.5s,baz=81,slow=10,SNR=2.3						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**57.49**	**188**	P	**P**	**03 57 22.4**	**+0.8**
	0.4nm,0.4s,baz=6.8,slow=7.4,SNR=8.1						
	0.4nm,0.4s						
H03N2	**Juan Fernandez**	**146.75**	**96**	T	T	06 51 10.2	
	baz=291,slow=76,SNR=5.6						
H03N3	**Juan Fernandez**	**146.76**	**96**	T	T	06 51 07.2	
	baz=291,slow=76,SNR=7.2						
H03N1	**Juan Fernandez**	**146.76**	**96**	T	T	06 51 05.8	
	baz=291,slow=76,SNR=5.6						

IDC 08 03:51:24.4±4.8,5°.40S×150°.63E, h43km±74km, mb2.9/3, mbtmp3.1/3, Error ellipse: s-maj=103.9km s-min=22.5km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.77**	**52**	P	Pn	03 51 52.2	-0.4
	114nm,0.3s,baz=208,slow=1.9,SNR=20						
KRVT				S	Sn	03 52 14.2	+0.2
	83nm,0.3s,baz=181,slow=19,SNR=6.8						
WRA	**Warramunga Arr**	**21.45**	**226**	P	P	03 56 09.6	+0.4
	0.5nm,0.8s,baz=52,slow=10,SNR=6.4						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**24.27**	**220**	P	P	03 56 37.4	-0.5
	0.2nm,0.5s,baz=58,slow=9.7,SNR=1.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**79.36**	**319**	P	P	04 03 26.0	0.0
	0.1nm,0.4s,baz=106,slow=6.1,SNR=1.6						
	0.1nm,0.4s						

*IDC **08** 03:59:09.3±0.9,20°.16S×172°.67E, h0km, mb4.0/9, mbtmp4.0/11, ML4.5/2, MS3.6/34, Error ellipse: s-maj=51.1km s-min=17.8km az=152.0*

*NEIC **08** 03:59:11.8±1.9,20°.3S±0°.1×172°.74E±0°.09, h10km±1km, mb4.7/29, Error ellipse: s-maj=25.9km s-min=11.3km az=159.0*

ISC 08 03:59:11.2±0.5,20°.3S±0°.1×172°.79E±0°.08, h10km, n82, σ1°45/55, mb4.6/23, MS3.6/31, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.60**	**254**		**Pn**	**04 00 20.9**	**+0.1**
PINNC	**Pines Island,**	**5.48**	**244**	Pn	**Pn**	**04 00 33.1**	**+0.2**
MSVF	**Nonsavu**	**5.60**	**64**	Pn	**Pn**	**04 00 34.0**	**-0.6**
	1.2nm,0.3s,baz=218,slow=9.9,SNR=6.7						
	16nm,0.9s						
MSVF	**Nonsavu**	**5.60**	**64**	Pn	**Pn**	**04 00 36.5**	**+1.9**
OUENC	**Ouen Island, N**	**5.93**	**248**	Pn	**Pn**	**04 00 40.4**	**+1.3**
DZM	**Mont Dzumac**	**6.17**	**252**	Pn	**Pn**	**04 00 43.0**	**+0.5**
	1.8nm,0.3s,baz=73,slow=18,SNR=19						
DZM				LR	LR	04 02 42.2	
	comp=Z,336nm,19.8s,baz=176,slow=35						
	23nm,0.7s						
DZM	**Mont Dzumac**	**6.17**	**252**	*e*Pn	**Pn**	**04 00 43.8**	**+1.2**
	70nm,0.8s						
DZM				*e*LR	LR	04 02 12.1	
	comp=Z,673nm,26.5s						
DZM	**Mont Dzumac**	**6.17**	**252**	Pn	**Pn**	**04 00 43.9**	**+1.4**
KOUNC	**Koumac, New Ca**	**7.97**	**267**	Pn	**Pn**	**04 01 09.1**	**+1.9**
RAO	**Raoul Island**	**12.27**	**138**	LR	LR	04 05 47.5	
	comp=Z,362nm,19.8s,baz=208,slow=32						
NIUE	**Niue**	**16.33**	**89**		**P**	**04 03 05.1**	**+1.5**
HNR	**Honiara**	**16.44**	**309**	LR	LR	04 08 19.3	
	comp=Z,312nm,21.4s,baz=130,slow=34						
URZ	**Urewera**	**18.29**	**169**	LR	LR	04 09 04.6	
	comp=Z,244nm,19.0s,baz=32,slow=32						
EIDS	**Eidsvold**	**20.62**	**252**		Pn	04 03 53.0	-0.1
ARMA	**Armidale**	**21.58**	**238**	P	**P**	**04 04 03.0**	**+1.8**
LTZ	**Lake Taylor**	**22.42**	**181**	P	**P**	**04 04 10.3**	**+0.3**
LTZ				IAmb	IAmb	04 04 17.0	
	comp=Z,29nm,1.3s						
FOZ	**Fox Glacier**	**23.30**	**185**	P	**P**	**04 04 21.9**	**+2.8**
RPZ	**Rata Peaks**	**23.39**	**183**	LR	LR	04 12 12.3	
	comp=Z,242nm,21.5s,baz=0.0,slow=33						
CTAO	**Charters Tower**	**24.89**	**266**	P	**P**	**04 04 36.0**	**+1.5**
CTAO				IAmb	IAmb	04 04 55.0	
	comp=Z,36nm,1.5s						
MLZ	**Mavora Lakes**	**25.30**	**188**	P	**P**	**04 04 39.0**	**+1.1**
RAR	**Rarotonga**	**25.67**	**97**	LR	LR	04 12 29.2	
	comp=Z,94nm,20.6s,baz=277,slow=31						
WHZ	**Wether Hill Ro**	**25.83**	**188**	P	**P**	**04 04 43.6**	**+0.9**
PMG	**Port Moresby**	**26.99**	**290**	LR	LR	04 13 34.7	
	comp=Z,142nm,22.0s,baz=190,slow=32						
STKA	**Stephens Creek**	**30.19**	**241**	P	**P**	**04 05 19.5**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=88,slow=10,SNR=4.7						
STKA				LR	LR	04 15 41.2	
	comp=Z,82nm,21.3s,baz=76,slow=33						
	comp=Z,0.4nm,0.4s						
PPT2	**Papeete2**	**35.65**	**92**	*e*LR	LR	04 15 27.5	
	comp=Z,258nm,26.5s						
PPT2				*e*LR	LR	04 15 27.5	
	comp=Z,238nm,29.2s						
PPT	**Papeete**	**35.66**	**92**	LR	LR	04 16 40.0	
	comp=Z,141nm,20.8s,baz=282,slow=29						
WB0	**Warramunga Arr**	**36.02**	**264**	P	**P**	**04 06 11.7**	**-1.2**
WRA	**Warramunga Arr**	**36.05**	**264**	P	**P**	**04 06 11.1**	**-2.0**
	comp=Z,1.2nm,0.9s,baz=102,slow=8.0,SNR=6.2						
WRA				PcP	**PcP**	**04 08 40.6**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=157,slow=1.8,SNR=2.4						
WRA				LR	LR	04 19 51.5	
	comp=Z,141nm,20.2s,baz=46,slow=35						
	comp=Z,1.2nm,0.9s						
WRA	**Warramunga Arr**	**36.05**	**264**	P	**P**	**04 06 10.8**	**-2.3**
AS31	**Alice Springs**	**36.13**	**257**	P	**P**	**04 06 13.3**	**-0.6**
ASAR	**Alice Springs**	**36.14**	**257**	P	**P**	**04 06 13.1**	**-0.8**
	comp=Z,2.3nm,0.9s,baz=84,slow=9.1,SNR=16						
ASAR				LR	LR	04 19 49.1	
	comp=Z,102nm,21.3s,baz=98,slow=34						
	comp=Z,2.3nm,0.9s						
ASAR	**Alice Springs**	**36.14**	**257**	P	**P**	**04 06 12.6**	**-1.3**
GUMO	**Guam**	**43.45**	**319**	LR	LR	04 23 15.6	
	comp=Z,92nm,21.7s,baz=138,slow=33						
FITZ	**Fitzroy Crossi**	**44.46**	**265**	LR	LR	04 25 11.5	
	comp=Z,118nm,19.4s,baz=100,slow=35						
FITZ	**Fitzroy Crossi**	**44.46**	**265**	P	**P**	**04 07 23.2**	**+0.4**
FITZ				IAmb	IAmb	04 07 27.1	
	comp=Z,7.0nm,0.9s						
SIJI	**Sorong**	**44.94**	**290**	LR	LR	04 26 06.5	
	comp=Z,86nm,21.5s,baz=38,slow=36						
BATI	**Baunata**	**48.29**	**274**	LR	LR	04 28 02.7	
	comp=Z,198nm,18.5s,baz=111,slow=36						
KAPI	**Kappang**	**53.68**	**279**	LR	LR	04 30 47.1	
	comp=Z,38nm,20.4s,baz=75,slow=35						
DAV	**Davao City (W)**	**53.79**	**295**	LR	LR	04 29 01.5	
	comp=Z,28nm,20.7s,baz=20,slow=33						
VNDA	**Vanda**	**57.51**	**183**	LR	LR	04 29 20.5	
	comp=Z,77nm,21.5s,baz=5.5,slow=31						
LEM	**Lembang**	**64.39**	**272**	LR	LR	04 35 57.5	
	comp=Z,39nm,21.8s,baz=162,slow=34						
RPN	**Rapa Nui**	**70.61**	**113**	LR	LR	04 34 17.1	
	comp=Z,49nm,20.0s,baz=1.0,slow=30						
PSI	**Prapat**	**75.89**	**278**	LR	LR	04 47 22.3	
	comp=Z,100nm,18.6s,baz=133,slow=38						
UNV	**Unalaska Valle**	**75.97**	**12**	P	**P**	**04 10 58.1**	**+0.1**
MAW	**Mawson**	**78.69**	**202**	P	**P**	**04 11 13.8**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=110,slow=12,SNR=2.6						
	comp=Z,1.7nm,0.7s						
ENH	**Enshi**	**78.94**	**308**	P	**P**	**04 11 15.3**	**+0.1**
ENH				IAmb	IAmb	04 11 16.9	
	comp=Z,15nm,1.3s						
MA2	**Magadan**	**81.61**	**349**	LR	LR	04 41 26.4	
	comp=Z,35nm,19.8s,baz=174,slow=31						
CMAR	**Chiang Mai Arr**	**81.99**	**293**	LR	LR	04 50 17.4	
	comp=Z,12nm,18.1s,baz=175,slow=38						
HOPS	**Hopland Field**	**84.09**	**45**	P	**P**	**04 11 42.4**	**0.0**
GAMB	**Gambell**	**84.67**	**7**	P	**P**	**04 11 45.6**	**+1.0**
ISA	**Isabella, Lake**	**85.59**	**50**	P	**P**	**04 11 49.6**	**-0.5**
ISA				IAmb	IAmb	04 11 51.1	
	comp=Z,7.2nm,0.9s						
YBH	**Yreka Blue Hor**	**85.77**	**43**	LR	LR	04 42 08.5	
	comp=Z,16nm,21.5s,baz=236,slow=30						
PFO	**Pinyon Flats O**	**86.09**	**52**	LR	LR	04 42 59.1	
	comp=Z,26nm,18.6s,baz=208,slow=30						
BEKR	**Beckworth**	**86.34**	**45**	P	**P**	**04 11 52.9**	**-0.9**
BEKR				IAmb	IAmb	04 11 54.6	
	comp=Z,4.1nm,0.9s						
NVAR	**Mina Array Bea**	**87.03**	**47**	P	**P**	**04 11 57.0**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=227,slow=8.7,SNR=7.2						
	comp=Z,1.1nm,0.8s						
TROLL	**Troll, Antarti**	**87.69**	**183**	P	**P**	**04 11 57.2**	**-2.7**
TPNV	**Topopah Spring**	**87.78**	**49**	P	**P**	**04 12 00.0**	**-0.8**
TPNV				IAmb	IAmb	04 12 01.7	
	comp=Z,3.7nm,0.9s						
SNAA	**Sanae**	**88.22**	**181**	P	**P**	**04 11 59.3**	**-3.1**
SNAA	**Sanae**	**88.22**	**181**	LR	LR	04 49 52.0	
	comp=Z,44nm,19.5s,baz=192,slow=34						
BBB	**Bella Bella**	**88.57**	**32**	LR	LR	04 49 16.3	
	comp=Z,22nm,18.8s,baz=160,slow=34						
VNA3	**Neumayer Olymp**	**88.68**	**179**	P	**P**	**04 12 03.8**	**-0.6**
VNA2	**Neumayer--Watz**	**89.02**	**180**	P	**P**	**04 12 02.3**	**-3.7**
	baz=177,slow=4.0						
VNA1	**Neumayer--Stat**	**89.29**	**180**	P	**P**	**04 12 07.0**	**-0.3**
J08A	**Circle Bar Ran**	**89.30**	**43**	P	**P**	**04 12 07.2**	**-0.7**
J08A				IAmb	IAmb	04 12 08.7	
	comp=Z,4.8nm,0.9s						
G08A	**Pilot Rock**	**89.93**	**41**	P	**P**	**04 12 10.1**	**-0.6**
G08A				IAmb	IAmb	04 12 11.6	
	comp=Z,4.1nm,0.9s						
LCMT	**Little Creek M**	**89.96**	**50**	P	**P**	**04 12 10.4**	**-0.7**
SPR3	**Spring Creek 3**	**90.05**	**48**	P	**P**	**04 12 10.4**	**-1.3**
SPR3				IAmb	IAmb	04 12 13.7	
	comp=Z,4.7nm,1.2s						
SONM	**Songino Array**	**90.09**	**322**	P	**P**	**04 12 11.4**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=129,slow=4.0,SNR=4.6						
	comp=Z,0.7nm,0.8s						
CCUT	**Cedar City**	**90.10**	**50**	P	**P**	**04 12 11.8**	**-0.1**
CCUT				IAmb	IAmb	04 12 13.8	
	comp=Z,3.6nm,1.1s						
PSUT	**Pine Spring**	**90.18**	**49**	P	**P**	**04 12 12.1**	**-0.1**
ELK	**Elko**	**90.20**	**46**	LR	LR	04 47 57.6	
	comp=Z,27nm,18.1s,baz=267,slow=32						
ILAR	**Eielson Array**	**90.28**	**16**	P	**P**	**04 12 09.4**	**-2.3**
	comp=Z,1.2nm,0.7s,baz=230,slow=5.3,SNR=12						
ILAR				LR	LR	04 47 08.9	
	comp=Z,50nm,19.1s,baz=242,slow=32						
	comp=Z,1.2nm,0.7s						
SZCU	**Shurtz Canyon**	**90.32**	**50**	P	**P**	**04 12 12.9**	**0.0**
SZCU				IAmb	IAmb	04 12 14.1	
	comp=Z,3.5nm,1.0s						
U15A	**North Rim**	**90.40**	**51**	P	**P**	**04 12 12.8**	**-0.6**
U15A				IAmb	IAmb	04 12 14.7	
	comp=Z,4.2nm,1.0s						
MTPU	**Mount Pierson**	**91.16**	**50**	P	**P**	**04 12 16.0**	**-1.0**
MTPU				IAmb	IAmb	04 12 18.7	
	comp=Z,4.6nm,1.0s						
NEW	**Newport**	**92.47**	**39**	LR	LR	04 51 20.7	
	comp=Z,18nm,18.3s,baz=258,slow=34						
TXAR	**Lajitas Array**	**94.36**	**60**	P	**P**	**04 12 31.3**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=202,slow=6.2,SNR=4.1						
TXAR				LR	LR	04 46 33.5	
	comp=Z,34nm,21.0s,baz=240,slow=30						
	comp=Z,0.4nm,0.8s						
PALK	**Pallekele**	**94.43**	**276**	LR	LR	04 53 42.6	
	comp=Z,22nm,21.6s,baz=240,slow=35						
PDAR	**Pinedale Array**	**94.91**	**46**	P	**P**	**04 12 35.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=217,slow=7.1,SNR=2.5						
PDAR				LR	LR	04 51 29.4	
	comp=Z,17nm,18.0s,baz=358,slow=33						
	comp=Z,0.1nm,0.3s						
INK	**Inuvik**	**96.52**	**18**	LR	LR	04 50 14.0	
	comp=Z,34nm,19.0s,baz=174,slow=32						
CLL	**Collm**	**145.22**	**338**	*i* PKPbc	**PKPbc**	**04 18 48.1**	**-0.5**
	comp=Z,11nm,1.2s						
CLL				*i* pPKiKP	**PKiKP**	**04 18 56.3**	**+3.5**
GERES	**GERESS Array B**	**146.94**	**334**	PKPbc	**PKPbc**	**04 18 53.0**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=71,slow=5.8,SNR=3.6						

*IDC **08** 04:12:22.1±1.3, 12°.21N×143°.97E, h0km, mb3.9/4, mbtmp3.8/4, Error ellipse: s-maj=103.6km s-min=29.3km az=107.0*

*NEIC **08** 04:12:27.1±1.2, 12°.09N±0°.07×143°.8E±0°.2, h17km±6km, mb4.4/9, Error ellipse: s-maj=22.1km s-min=10.1km az=78.0*

ISC 08 04:12:27.0±0.7, 12°.1N±0°.1×143°.9E±0°.2, h26km, n23, σ0°87/17, mb4.4/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.74**	**34**	Pn	**Pn**	**04 12 56.2**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**22.88**	**71**	T	T	04 41 36.2	
	baz=253,slow=74						
H11S1	**WAKE ISLAND Hy**	**22.90**	**71**	T	T	04 41 38.9	
	baz=253,slow=74						
H11S2	**WAKE ISLAND Hy**	**22.90**	**71**	T	T	04 41 36.5	
	baz=253,slow=74						
H11N1	**WAKE ISLAND Hy**	**23.36**	**68**	T	T	04 42 12.7	
	baz=255,slow=75,SNR=8.6						
H11N2	**WAKE ISLAND Hy**	**23.37**	**68**	T	T	04 42 13.1	
	baz=255,slow=75,SNR=8.2						
H11N3	**WAKE ISLAND Hy**	**23.38**	**68**	T	T	04 42 13.1	
	baz=255,slow=75,SNR=6.6						
KSAR	**Wonju Array Be**	**28.99**	**333**	P	**P**	**04 18 26.1**	**+1.5**
KS19	**Wonju Array Si**	**29.05**	**333**	P	**P**	**04 18 25.4**	**+0.3**
WB0	**Warramunga Arr**	**33.04**	**197**	P	**P**	**04 19 00.2**	**-0.3**
WB0				IAmb	IAmb	04 19 13.6	
	comp=Z,6.3nm,1.2s						
WR0	**Warramunga Arr**	**33.19**	**196**	P	**P**	**04 19 01.7**	**0.0**
WR0				IAmb	IAmb	04 19 08.7	
	comp=Z,8.7nm,1.3s						
WB2	**Warramunga Arr**	**33.22**	**197**	P	**P**	**04 19 02.4**	**+0.4**
WB2				IAmb	IAmb	04 19 29.6	
	comp=Z,6.1nm,1.1s						
WRA	**Warramunga Arr**	**33.23**	**197**	P	**P**	**04 19 02.0**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=20,slow=9.7,SNR=14						
	comp=Z,1.2nm,0.7s						
WRA	**Warramunga Arr**	**33.23**	**197**	P	**P**	**04 19 01.9**	**-0.2**
EIDS	**Eidsvold**	**37.93**	**169**	P	**P**	**04 19 42.6**	**+0.2**
EIDS				IAmb	IAmb	04 19 43.4	
	comp=Z,11nm,1.4s						
ARMA	**Armidale**	**42.96**	**170**	P	**P**	**04 20 25.5**	**+1.4**
ARMA				IAmb	IAmb	04 20 55.9	
	comp=Z,6.5nm,1.0s						
STKA	**Stephens Creek**	**43.81**	**183**	P	**P**	**04 20 31.1**	**+0.3**
BBOO	**Buckleboo**	**45.31**	**189**	P	**P**	**04 20 42.6**	**-0.2**
ILAR	**Eielson Array**	**70.29**	**25**	P	**P**	**04 23 36.4**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=266,slow=5.2,SNR=1.9						
	comp=Z,0.2nm,0.5s						
BMAR	**Burnt Mountain**	**71.81**	**23**	P	**P**	**04 23 48.2**	**+1.1**
BCAR	**Beaver Creek A**	**72.18**	**27**	P	**P**	**04 23 48.8**	**-0.6**
YKA	**Yellowknife Ar**	**84.59**	**27**	P	**P**	**04 24 56.9**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=292,slow=4.8,SNR=2.6						
	comp=

MJAR	**Matsushiro Arr**	**72.50**	**326**	P		**P**	**04 26 36.1**	**-2.3**
	comp=Z,1.0nm,0.4s,baz=154,slow=6.5,SNR=2.3							
	comp=Z,1.0nm,0.4s							
KSRS	**Korea Array**	**78.80**	**320**	P		**P**	**04 27 13.4**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=123,slow=5.1,SNR=6.1							
	comp=Z,1.3nm,0.7s							
PEA0B	**Petropavlovsk-**	**79.84**	**347**	P		**P**	**04 27 17.8**	**-0.7**
PEA0B				IAmb		IAmb	04 27 51.8	
	comp=Z,23nm,1.2s							
PETK	**Petropavlovsk-**	**79.84**	**347**	P		**P**	**04 27 18.5**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=136,slow=7.0,SNR=2.5							
	comp=Z,1.5nm,0.5s							
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P		**P**	**04 28 09.2**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=133,slow=5.0,SNR=4.9							
	comp=Z,1.3nm,0.3s							
TXAR	**Lajitas Array**	**90.91**	**58**	P		**P**	**04 28 13.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=216,slow=6.2,SNR=5.0							
	comp=Z,0.4nm,0.7s							
ARCES	**ARCESS Array B**	**132.64**	**348**	PKP		**PKPdf**	**04 34 18.3**	**-1.3**
	comp=Z,1.9nm,1.0s,baz=60,slow=2.2,SNR=3.5							
FINES	**FINESS Array B**	**139.16**	**341**	PKhKP		PKPpre	04 34 22.4	
	comp=Z,2.0nm,0.9s,baz=321,slow=1.2,SNR=3.8							
FINES				PKP		**PKPdf**	**04 34 32.4**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=90,slow=3.2,SNR=5.0							
AKASG	**Malin Array Be**	**145.59**	**327**	PKPbc		**PKPdf**	**04 34 43.3**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=46,slow=4.4,SNR=8.4							
BRTR	**Keskin Array B**	**147.99**	**306**	PKPbc		**PKPbc**	**04 34 51.2**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=140,slow=2.4,SNR=4.5							

*NEIC **08** 04:19:42.9,31.72S×72.33W,h18km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.99; Mθθ0.11; Mφφ-1.10; Mrθ-0.00; Mrφ0.07; Mθφ0.46; Fault plane solution: Mo1.15000×10^15^ NP1:φs175.04000°, δ33.17000°, λ87.55000°. NP2:φs357.97000°, δ56.86000°, λ91.60000°. Principal axes: T 1.0872, Plg78.0000°, Azm273.0000°; N 0.1143, Plg1.0000°, Azm177.0000°; P -1.2015, Plg12.0000°, Azm87.0000°:*

*NEIC **08** 04:19:42.9±1.2,31.72S±0.05×72.33W±0.07,h10km±1km, mb4.3/5,Mwr4.0/55,ML4.0(GUC) Error ellipse: s-maj=10.7km s-min=6.0km az=124.0*

*IDC **08** 04:19:43.3±1.1,31.69S×71.91W,h0km,mb3.9/5, mbtmp3.8/9,ML3.7/3,MS3.4/8,Error ellipse: s-maj=32.8km s-min=22.7km az=90.0*

*GUC **08** 04:19:45.3±0.8,31.73S×72.09W,h40km±4km,ML4.0*

ISC 08 04:19:42.9±2.8,31.74S±0.03×72.16W±0.06,h3km±18km, n83,σ1s90/91,mb4.2/7,MS3.6/4,6C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VA06	**Catapilco**	**1.09**	**138**			**Pb**	**04 20 04.6**	**+0.1**
VA06	**Catapilco**	**1.09**	**138**	↓ *i*	P	**Pb**	**04 20 04.6**	**+0.1**
VA06				*i*	S	**Sb**	**04 20 18.5**	**-0.6**
VA06					IAML		04 20 26.8	
	comp=N,11μm,0.4s							
CO02	**Combarbal**	**1.13**	**62**			**Pb**	**04 20 04.8**	**-0.3**
CO02	**Combarbal**	**1.13**	**62**	↓ *i*	P	**Pb**	**04 20 04.8**	**-0.3**
CO02				*i*	S	**Sb**	**04 20 18.5**	**-1.6**
CO02					IAML		04 20 22.4	
	comp=N,8μm,0.2s							
CO06	**Fray Jorge**	**1.16**	**23**			**Pn**	**04 20 05.2**	**-0.8**
CO06	**Fray Jorge**	**1.16**	**23**	↑ *i*	P	**Pn**	**04 20 05.3**	**-0.7**
VA01	**Torpederas**	**1.35**	**161**	Pn		**Pn**	**04 20 08.5**	**-0.1**
VA01	**Torpederas**	**1.35**	**161**	*i*	P	**Pn**	**04 20 08.5**	**-0.1**
VA01				*e*	S	**Sn**	**04 20 24.6**	**-2.4**
CO03	**El Pedregal**	**1.55**	**55**	Pn		**Pn**	**04 20 11.8**	**+0.3**
CO03	**El Pedregal**	**1.55**	**55**	*i*	P	**Pn**	**04 20 11.7**	**+0.3**
CO03				*i*	S	**Sn**	**04 20 30.8**	**-1.2**
CO03					IAML		04 20 34.2	
	comp=E,2μm,0.5s							
ROCH	**El Roble**	**1.56**	**142**	↑ *i*	P	**Pn**	**04 20 11.8**	**0.0**
ROCH				*i*	S	**Sn**	**04 20 32.1**	**-0.6**
ROCH					IAML		04 20 37.3	
	comp=N,6μm,0.4s							
ROC1	**El Roble**	**1.56**	**142**			**Pn**	**04 20 12.0**	**+0.2**
VA03	**San Esteban**	**1.70**	**127**			**Pn**	**04 20 13.9**	**+0.3**
VA03	**San Esteban**	**1.70**	**127**	↑ *i*	P	**Pn**	**04 20 13.9**	**+0.3**
VA03				*i*	S	**Sn**	**04 20 35.2**	**-0.6**
VA03					IAML		04 20 43.7	
	comp=E,5μm,0.4s							
MT02	**Curacav**	**1.74**	**151**	Pn		**Pn**	**04 20 14.0**	**0.0**
MT02	**Curacav**	**1.74**	**151**	↑ *i*	P	**Pn**	**04 20 14.2**	**+0.2**
MT02					IAML		04 20 42.7	
	comp=E,1μm,0.3s							
PEL	**Peldehue**	**1.87**	**139**	Pn		**Pn**	**04 20 15.8**	**0.0**
GO04	**Tololo Observa**	**1.95**	**37**	Pn		**Pn**	**04 20 17.1**	**-0.1**
GO04	**Tololo Observa**	**1.95**	**37**	↑ *i*	P	**Pn**	**04 20 17.0**	**-0.1**
GO04				*i*	S	**Sn**	**04 20 41.4**	**-0.9**
VA05	**Santo Domingo**	**1.96**	**167**	Pn		**Pn**	**04 20 17.1**	**+0.1**
VA05	**Santo Domingo**	**1.96**	**167**	*i*	P	**Pn**	**04 20 17.1**	**+0.1**
VA05					IAML		04 20 55.0	
	comp=E,4μm,0.3s							
CO05	**La Serena**	**1.98**	**24**	Pn		**Pn**	**04 20 17.4**	**+0.1**
CO05	**La Serena**	**1.98**	**24**	*e*	P	**Pn**	**04 20 17.1**	**-0.2**
CO05				*e*	S	**Sn**	**04 20 42.0**	**-0.6**
CO05					IAML		04 20 51.3	
	comp=N,1μm,0.4s							
MT05	**Renca**	**2.04**	**144**	Pn		**Pn**	**04 20 18.6**	**+0.5**
MT05	**Renca**	**2.04**	**144**	*i*	P	**Pn**	**04 20 18.6**	**+0.5**
MT05					IAML		04 20 52.8	
	comp=E,3μm,0.3s							
FCH	**Farellones**	**2.23**	**136**	*i*	P	**Pn**	**04 20 21.7**	**+0.7**
FCH				*i*	S	**Sn**	**04 20 49.0**	**-0.3**
FCH					IAML		04 20 56.4	
	comp=E,814nm,0.5s							
MT03	**Universidad Ad**	**2.23**	**142**	Pn		**Pn**	**04 20 21.3**	**+0.4**
MT03	**Universidad Ad**	**2.23**	**142**	*e*	P	**Pn**	**04 20 21.6**	**+0.7**
MT03					IAML		04 20 57.1	
	comp=N,2μm,0.5s							
MT01	**Popeta**	**2.25**	**160**	Pn		**Pn**	**04 20 21.3**	**+0.3**
MT01	**Popeta**	**2.25**	**160**	*i*	P	**Pn**	**04 20 21.3**	**+0.3**
MT01				*i*	S	**Sn**	**04 20 46.8**	**-2.5**
MT01					IAML		04 21 02.3	
	comp=N,1μm,0.7s							
MT09	**Talagante**	**2.25**	**154**	Pn		**Pn**	**04 20 22.3**	**+1.1**
MT09	**Talagante**	**2.25**	**154**	*i*	P	**Pn**	**04 20 22.1**	**+0.9**
MT09				*i*	S	**Sn**	**04 20 48.9**	**-0.7**
MT09					IAML		04 21 05.0	
	comp=N,2μm,0.4s							
CO01	**Juntas del Tor**	**2.50**	**46**	Pn		**Pn**	**04 20 25.6**	**+0.9**
CO01	**Juntas del Tor**	**2.50**	**46**	*e*	P	**Pn**	**04 20 25.8**	**+1.1**
CO01					IAML		04 21 02.6	
	comp=N,408nm,0.4s							
LMEL	**Las Melosas**	**2.67**	**142**			**Pn**	**04 20 28.1**	**+1.2**
LMEL	**Las Melosas**	**2.67**	**142**	↑ *i*	P	**Pn**	**04 20 28.1**	**+1.2**
LMEL				*i*	S	**Sn**	**04 20 59.6**	**-0.2**
LMEL					IAML		04 21 10.9	
	comp=E,828nm,0.2s							
BO03	**Pichilemu**	**2.75**	**177**	*i*	P	**Pn**	**04 20 27.8**	**-0.1**
BO01	**Tunca**	**2.79**	**161**	Pn		**Pn**	**04 20 29.0**	**+0.5**
BO01	**Tunca**	**2.79**	**161**	*i*	P	**Pn**	**04 20 29.0**	**+0.5**
BO01					IAML		04 21 23.5	
	comp=E,330nm,0.5s							
LCO	**Las Campanas**	**3.00**	**25**	Pn		**Pn**	**04 20 31.2**	**-0.3**
BO02	**Sierra Bellavi**	**3.25**	**160**	Pn		**Pn**	**04 20 35.0**	**+0.2**
BO02	**Sierra Bellavi**	**3.25**	**160**	*e*	P	**Pn**	**04 20 35.6**	**+0.7**
GO05	**Huala**	**3.26**	**177**	Pn		**Pn**	**04 20 34.4**	**-0.5**
GO05	**Huala**	**3.26**	**177**	*e*	P	**Pn**	**04 20 34.8**	**-0.2**
AC04	**Llanos de Chal**	**3.65**	**15**	Pn		**Pn**	**04 20 39.4**	**-0.9**
AC04	**Llanos de Chal**	**3.65**	**15**	*e*	P	**Pn**	**04 20 39.5**	**-0.8**
ML02	**Panimavida**	**4.06**	**171**	Pn		**Pn**	**04 20 46.3**	**+0.4**
GO03	**Copiap**	**4.46**	**23**	Pn		**Pn**	**04 20 51.2**	**-0.3**
BI05	**Punta Hualpn**	**5.07**	**189**	Pn		**Pn**	**04 20 57.8**	**-1.9**
AC02	**Maricunga**	**5.56**	**29**	Pn		**Pn**	**04 21 06.7**	**-0.3**
AC01	**Pan de Azucar**	**5.74**	**14**	Pn		**Pn**	**04 21 06.3**	**-2.7**
H03N1	**Juan Fernandez**	**5.95**	**252**	T		T	04 27 53.7	
	baz=78,slow=72,SNR=259							
H03N3	**Juan Fernandez**	**5.96**	**252**	T		T	04 27 52.4	
	baz=78,slow=72,SNR=300							
H03N2	**Juan Fernandez**	**5.96**	**252**	T		T	04 27 50.2	
	baz=78,slow=72,SNR=312							
GO06	**Curarrehue**	**7.84**	**176**	Pn		**Pn**	**04 21 36.1**	**-1.9**
LR03	**Panguipulli**	**7.87**	**181**	Pn		**Pn**	**04 21 37.6**	**-0.6**
PLCA	**Paso Flores**	**9.06**	**172**	Pn		**Pn**	**04 21 56.4**	**+1.7**
	comp=E,0.5nm,0.3s,baz=332,slow=11,SNR=12							
PLCA					LR	LR	04 25 38.6	
	comp=E,154nm,18.8s,baz=287,slow=39							
	comp=E,0.9nm,0.4s							
PLCA	**Paso Flores**	**9.06**	**172**	Pn		**Pn**	**04 21 55.9**	**+1.2**
LVC	**Limon Verde**	**9.54**	**18**	Pn		**Pn**	**04 22 04.6**	**+3.0**
	comp=E,0.2nm,0.3s,baz=238,slow=9.0,SNR=2.9							
LVC					Sn	**Sn**	**04 23 50.7**	**+1.1**
	baz=196,slow=6.8							
LVC					LR	LR	04 25 46.2	
	comp=E,99nm,21.1s,baz=202,slow=38							
TRQA	**Tornquist**	**10.46**	**130**	Pn		**Pn**	**04 22 14.0**	**+0.2**
ITQB	**Itaqui**	**13.53**	**85**	Pn		**Pn**	**04 22 56.4**	**+0.8**
CPUP	**Villa Florida**	**14.04**	**71**	Pn		**Pn**	**04 23 00.4**	**-2.4**
	comp=E,0.7nm,0.7s,baz=145,slow=13,SNR=1.4							
CPUP					Sn	**Sn**	**04 25 39.1**	**-0.1**
	comp=E,0.1nm,0.3s,baz=199,slow=12,SNR=3.8							
CPUP					LR	LR	04 28 50.6	
	comp=E,177nm,18.0s,baz=220,slow=40							
LPAZ	**La Paz**	**15.82**	**14**	Pn		**Pn**	**04 23 27.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=176,slow=10,SNR=4.0							
	comp=E,1.2nm,0.8s							
LPAZ	**La Paz**	**15.82**	**14**	Pn		**Pn**	**04 23 26.2**	**-1.0**
SIV	**San Ignacio**	**18.65**	**35**	P		**P**	**04 24 01.3**	**-0.7**
	baz=224,slow=11,SNR=6.4							
SIV					LR	LR	04 30 54.0	
	comp=E,41nm,20.1s,baz=178,slow=36							
	comp=E,0.7nm,0.2s							
ETMB	**Extrema**	**22.50**	**15**	P		**P**	**04 24 43.7**	**0.0**
ETMB				IAmb		IAmb	04 24 45.6	
	comp=Z,5.4nm,1.0s							
BDFB	**Brasilia**	**27.21**	**60**	P		**P**	**04 25 26.9**	**-1.3**
	comp=Z,4.4nm,0.8s,baz=299,slow=3.9,SNR=6.3							
BDFB					LR	LR	04 37 22.6	
	comp=Z,194nm,18.4s,baz=84,slow=39							
	comp=Z,4.4nm,0.8s							
BDFB	**Brasilia**	**27.21**	**60**	P		**P**	**04 25 26.1**	**-2.2**
VNA3	**Neumayer Olymp**	**51.48**	**158**	P		**P**	**04 28 50.2**	**+1.0**
VNA1	**Neumayer--Stat**	**51.79**	**158**	P		**P**	**04 28 52.5**	**+1.0**
VNA2	**Neumayer--Watz**	**52.13**	**158**	P		**P**	**04 28 55.1**	**+1.1**
	baz=279,slow=8.0							
SNAA	**Sanae**	**53.71**	**158**	P		**P**	**04 29 06.4**	**+0.7**
SNAA	**Sanae**	**53.71**	**158**	P		**P**	**04 29 06.3**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=258,slow=6.7,SNR=18							
	comp=Z,3.3nm,0.8s							
SNAA	**Sanae**	**53.71**	**158**	P		**P**	**04 29 06.0**	**+0.3**
SNAA				IAmb		IAmb	04 29 07.3	
	comp=Z,3.3nm,0.8s							
TROLL	**Troll, Antarti**	**55.42**	**159**	P		**P**	**04 29 19.2**	**+0.9**
QSPA	**South Pole Qui**	**58.49**	**180**	P		**P**	**04 29 39.4**	**-0.7**
QSPA				IAmb		IAmb	04 30 23.5	
	comp=Z,5.6nm,1.3s							
VNDA	**Vanda**	**66.29**	**191**	LR		LR	04 57 39.6	
	comp=Z,38nm,18.3s,baz=182,slow=34							
TXAR	**Lajitas Array**	**67.72**	**330**	P		**P**	**04 30 42.2**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=159,slow=5.8,SNR=1.5							
	comp=Z,0.1nm,0.6s							
DBIC	**Dimbokro**	**74.56**	**72**	LR		LR	05 03 34.6	
	comp=Z,21nm,19.0s,baz=164,slow=35							
NVAR	**Mina Array Bea**	**81.98**	**325**	P		**P**	**04 32 06.4**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=170,slow=6.4,SNR=2.9							
	comp=Z,0.2nm,0.5s							
LBTB	**Lobatse**	**83.35**	**115**	LR		LR	05 01 60.0	
	comp=Z,27nm,22.0s,baz=162,slow=30							
TORD	**Torodi Ar. Bea**	**83.54**	**70**	P		**P**	**04 32 12.6**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=260,slow=4.5,SNR=10							
	comp=Z,2.1nm,0.8s							
ZALV	**Zalesovo Beam**	**152.35**	**30**	PKPbc		**PKPbc**	**04 39 40.2**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=277,slow=3.8,SNR=6.2							

IDC 08 04:21:37.8±11.0,30.96N×140.73E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=424.1km s-min=28.5km az=67.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SONM	**Songino Array**	**31.10**	**313**	P		P	04 27 58.2	+0.3
	0.5nm,0.4s,baz=115,slow=7.9,SNR=1.2							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**47.09**	**307**	P		P	04 30 11.0	-0.4
	0.3nm,0.5s,baz=99,slow=7.7,SNR=2.6							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**50.98**	**188**	P		P	04 30 41.3	-0.1
	0.5nm,0.6s,baz=6.8,slow=7.8,SNR=4.8							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**54.71**	**188**	P		P	04 31 08.9	-0.1
	0.4nm,0.7s,baz=354,slow=4.9,SNR=2.5							
	0.4nm,0.7s							

ASRS 08 04:28:59.5±0.3,52.7°N±2.°×99.5°E,h5km,MLh3.6/6,Error ellipse: s-maj=4.7km s-min=2.8km az=53.4,confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KZLR	**Kyzyl**	**0.71**	**241**	Pg		Pn	04 29 16.1	-0.1
KZLR				Sg		Sb	04 29 24.1	-0.3
ARDR	**Aradan**	**1.34**	**294**	Pg		Pg	04 29 28.3	+3.1
ARDR				Sg		Sn	04 29 45.6	+2.4
ERNS	**Erzin**	**1.81**	**186**	Pg		Pb	04 29 33.3	+0.2
ERNS				Sg		Sb	04 29 55.7	-0.3
KNGR	**Kungurtug, Tuv**	**1.95**	**137**	Pg		Pg	04 29 38.8	+2.0
KNGR				Sg		Sg	04 30 03.5	+1.4
DJOS	**Djoyskaya Sosn**	**2.59**	**288**	Pg		Pg	04 29 48.3	-0.7
DJOS				Sg		Sg	04 30 24.5	+2.0
CERR	**Cheremushki**	**2.59**	**290**	Pg		Pg	04 29 48.3	-0.8
CERR				Sg		Sg	04 30 24.9	+2.2
DJO	**Djoy, Khakassi**	**2.69**	**287**	Pg		Pg	04 29 52.6	+1.6
DJO				Sg		Sg	04 30 26.3	+0.5
ABNR	**Abakan**	**2.95**	**306**	Sg		Sg	04 30 34.9	+0.8
ABNR	**Abakan**	**2.95**	**306**	Pg		Pg	04 29 54.8	-1.2
ORY	**Orie**	**2.96**	**356**	Sg		Sg	04 30 35.8	+1.4
ORY	**Orie**	**2.96**	**356**	Pg		Pg	04 29 57.1	+1.0
LUZB	**Luzhba, Kemero**	**4.28**	**295**	Pg		Pg	04 30 20.8	-0.6
LUZB				Sg		Sg	04 31 15.3	-1.6
TASR	**Tashtagol**	**4.69**	**282**	Pg		Pg	04 30 28.9	-0.3
TASR				Sg		Sg	04 31 28.1	-1.8
CUR	**Chagan-Uzun**	**4.88**	**249**	Pg		Pg	04 30 32.0	-1.0
CUR				Sg		Sg	04 31 33.6	-2.6
ARTR	**Artybash**	**5.06**	**270**	Sg		Sg	04 31 41.7	-0.2
ZAK	**Zakamensk**	**5.20**	**106**	Pg		Pg	04 30 38.3	-0.7
ZAK				Sg		Sg	04 31 45.1	-1.2
AKAR	**Aktash**	**5.22**	**254**	Pg		Pg	04 30 38.2	-1.2
AKAR				Sg		Sg	04 31 45.3	-1.8
CHBI	**Chibit, Altay**	**5.29**	**254**	Sg		Sg	04 31 46.5	-2.8
DGZ	**Jazzator, Alta**	**5.60**	**248**	Pg		Pg	04 30 46.1	-0.5
DGZ				Sg		Sg	04 31 53.7	-5.3
ELT	**Eltsovka**	**5.73**	**286**	Pg		Pg	04 30 46.4	-2.8
ELT				Sg		Sg	04 31 59.8	-3.6
SALR	**Pechorkino, Sa**	**6.31**	**296**	Sg		Sg	04 32 22.3	+0.4
UKR	**Ust'-Kan**	**6.76**	**265**	Pg		Pg	04 31 08.6	-0.3
UKR				Sg		Sg	04 32 37.6	+1.2

*ATH **08** 04:37:29.7,37.59N×21.74E,h35km±2km,ML3.2/14,Error ellipse: s-maj=2.8km s-min=0.9km az=243.0*

*THE **08** 04:37:30.2,37.60N×21.71E,h8km±1km,ML3.1/11,Error ellipse: s-maj=1.3km s-min=0.6km az=23.0*

*IDC **08** 04:37:31.6±3.7,37.57N×21.93E,h70km±48km,mb3.4/5, mbtmp3.6/6,MS1.6/1,Error ellipse: s-maj=28.2km s-min=24.2km az=155.0*

ISC 08 04:37:29.5±0.9,37.61N±0.02×21.75E±0.02,h31km±8km, n83,σ1s10/106,mb3.7/4,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DRO	**Drossia**	**0.35**	**355**	P		**Pn**	**04 37 38.1**	**-0.4**
DRO				S		**Sn**	**04 37 44.4**	**-0.1**
DRO					AML	AML	04 37 45.5	
	comp=N,18736μm,0.5s							
DRO					AML	AML	04 37 49.0	
	comp=E,23538μm,0.5s							
ITM	**Ithomi**	**0.45**	**161**	P		**Pb**	**04 37 39.1**	**-0.1**
ITM				S		**Sb**	**04 37 45.7**	**0.0**
	comp=E,3μm,0.3s							
ITM	**Ithomi**	**0.45**	**161**	P		**Pb**	**04 37 39.0**	**-0.1**
ITM				S		**Sn**	**04 37 46.7**	**-0.2**
ITM					AML	AML	04 37 47.5	
	comp=E,6846μm,0.3s							
ITM					AML	AML	04 37 47.8	
	comp=N,6436μm,0.4s							
RLS	**Riolos of Patr**	**0.50**	**334**	P		**Pn**	**04 37 40.2**	**-0.4**
RLS				S		**Sb**	**04 37 46.9**	**-0.3**
	comp=N,2μm,0.6s							
RLS	**Riolos of Patr**	**0.50**	**334**	P		**Pn**	**04 37 40.2**	**-0.4**
RLS				S		**Sn**	**04 37 48.1**	**-0.1**
RLS					AML	AML	04 37 49.9	
	comp=N,4418μm,0.5s							
RLS					AML	AML	04 37 50.2	
	comp=E,3864μm,0.6s							
KLV	**Kalavryta, Ach**	**0.54**	**36**	P		**Pb**	**04 37 40.5**	**-0.2**
KLV				S		**Sn**	**04 37 49.5**	**+0.2**
	comp=E,1μm,0.8s							
KLV	**Kalavryta, Ach**	**0.54**	**36**	P		**Pb**	**04 37 40.6**	**-0.2**
KLV				S		**Sn**	**04 37 49.9**	**+0.6**
KLV					AML	AML	04 37 50.5	
	comp=E,1990μm,0.5s							
KLV					AML	AML	04 37 51.9	
	comp=N,1647μm,0.4s							
LAKA	**Lakka**	**0.66**	**16**	P		**Pn**	**04 37 42.8**	**0.0**
LAKA				S		**Sn**	**04 37 53.1**	**+0.9**
	comp=N,10μm,0.6s							
LAKA	**Lakka**	**0.66**	**16**	P		**Pn**	**04 37 42.8**	**0.0**
LAKA				S		**Sn**	**04 37 52.6**	**+0.4**
LAKA					AML	AML	04 37 54.1	
	comp=N,20432μm,0.5s							
LAKA					AML	AML	04 37 55.9	
	comp=E,20434μm,0.7s							
UPR	**University Cam**	**0.68**	**3**	P		**Pn**	**04 37 43.5**	**+0.5**
UPR				S		**Sn**	**04 37 53.6**	**+1.0**
PYL	**PYLOS**	**0.71**	**180**	P		**Pb**	**04 37 42.7**	**-0.7**
PYL				S		**Sn**	**04 37 54.7**	**+1.4**
	comp=E,3μm,0.6s							
PYL	**PYLOS**	**0.71**	**180**	P		**Pb**	**04 37 42.7**	**-0.7**
PYL				S		**Sn**	**04 37 54.3**	**+1.0**
PYL					AML	AML	04 37 57.2	
	comp=N,8554μm,0.6s							
PYL					AML	AML	04 37 57.5	
	comp=E,3770μm,0.6s							
ALIK	**Aliki, Aigiali**	**0.72**	**24**	P		**Pn**	**04 37 43.8**	**+0.3**
ALIK				S		**Sn**	**04 37 54.5**	**+1.0**
LTHK	**Lithakia**	**0.73**	**279**	P		**Pb**	**04 37 43.5**	**-0.2**
LTHK				S		**Sb**	**04 37 52.9**	**-0.5**
	comp=E,2μm,0.4s							
LTHK	**Lithakia**	**0.73**	**279**	P		**Pb**	**04 37 43.4**	**-0.2**
EFP	**Efpalio**	**0.83**	**9**	P		**Pn**	**04 37 45.8**	**+0.7**
EFP				S		**Sn**	**04 37 58.7**	**+2.4**
	comp=E,2μm,0.5s							
EFP	**Efpalio**	**0.83**	**9**	P		**Pn**	**04 37 45.7**	**+0.7**
EFP					AML	AML	04 37 59.7	
	comp=N,2756μm,0.6s							
EFP					AML	AML	04 38 00.9	
	comp=E,3817μm,0.6s							
SERG	**Sergoula**	**0.84**	**17**	P		**Pn**	**04 37 45.8**	**+0.5**
SERG				S		**Sn**	**04 37 58.0**	**+1.3**
	comp=E,988nm,0.4s							
SERG	**Sergoula**	**0.84**	**17**	P		**Pn**	**04 37 45.9**	**+0.5**
SERG				S		**Sn**	**04 37 58.1**	**+1.3**
SERG					AML	AML	04 38 05.8	
	comp=E,2277μm,0.4s							
SERG					AML	AML	04 38 07.9	
	comp=N,3033μm,0.4s							
THAL	**Thalero**	**0.84**	**59**	P		**Pn**	**04 37 46.7**	**+1.4**
THAL	**Thalero**	**0.84**	**59**	P		**Pn**	**04 37 46.3**	**+1.1**
THAL				S		**Sn**	**04 37 57.6**	**+0.9**
THAL					AML	AML	04 38 01.7	
	comp=E,5740μm,0.7s							
THAL					AML	AML	04 38 03.6	
	comp=N,4623μm,0.6s							
ACOR	**Acrocorinthos**	**0.94**	**72**	P		**Pn**	**04 37 47.5**	**+1.0**
ACOR				S		**Sn**	**04 37 59.2**	**+0.2**
ACOR					AML	AML	04 38 05.3	
	comp=N,1653μm,0.6s							
ACOR					AML	AML	04 38 05.9	
	comp=E,1584μm,0.8s							
ANX	**Ano Chora**	**1.00**	**8**	P		**Pn**	**04 37 48.3**	**+0.8**
ANX				S		**Sn**	**04 38 03.8**	**+3.2**
	comp=E,3μm,0.5s							
ANX	**Ano Chora**	**1.00**	**8**	P		**Pn**	**04 37 48.6**	**+1.1**
ANX					AML	AML	04 38 10.7	
	comp=N,5233μm,0.5s							
ANX					AML	AML	04 38 11.6	
	comp=E,5452μm,0.4s							
PVO	**Paravola**	**1.02**	**350**	P		**Pn**	**04 37 49.0**	**+1.2**
PVO				S		**Sn**	**04 38 03.6**	**+2.5**
	comp=E,2μm,0.4s							
PVO	**Paravola**	**1.02**	**350**	P		**Pn**	**04 37 48.9**	**+1.1**
LOUT	**Loutraki**	**1.04**	**68**	P		**Pn**	**04 37 50.3**	**+2.2**
LOUT	**Loutraki**	**1.04**	**68**	P		**Pn**	**04 37 49.7**	**+1.6**
PSDA	**Pessada-Kefalo**	**1.05**	**299**	P		**Pb**	**04 37 49.2**	**+0.1**
PSDA				S		**Sn**	**04 38 05.1**	**+3.4**
PSDA	**Pessada-Kefalo**	**1.05**	**299**	P		**Pb**	**04 37 49.0

*TEH **08** 05:05:49.2,24˙.85N×63˙.09E, h9km, ML3.6*
*OMAN **08** 05:06:06.1±0.1,24˙.91N×62˙.27E, h53km±28km, mb4.1/4, ml3.5/9, Error ellipse: s-maj=4.1km s-min=2.9km az=301.0*
ISC 08 05:05:51.7±2.2, 24˙92N±0˙07×62˙9E±0˙1, h10km, n34, σ2°73/38, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	**1.67**	**285**	*e*Pg	**Pg**	**05 06 24.6**	**+0.8**
NGCH				*e*		05 06 46.1	
	comp=N,5µm,0.2s						
NGCH	**Negor - Chabah**	**1.67**	**285**	P	**Pg**	**05 06 24.7**	**+0.8**
	SNR=6.0						
CHBR	**Chabahar**	**2.31**	**287**	*e*Pn	**Pb**	**05 06 32.7**	**-0.7**
CHBR				*e*		05 07 04.1	
	comp=Z,99nm,0.3s						
SRVN	**Saravan**	**2.52**	**349**	*e*Pn	**Pb**	**05 06 35.1**	**-2.0**
SRVN				*e*		05 07 02.8	
	comp=Z,2µm,0.8s						
JLN	**Jalan Bani Buh**	**4.24**	**230**	P	**Pn**	**05 06 56.5**	**+0.2**
	SNR=33						
JLN				S	**Sn**	**05 07 44.3**	**-1.6**
WSAR	**Wadi Sarin**	**4.26**	**248**	P	**Pn**	**05 07 00.5**	**+3.7**
WSAR				S	**Sn**	**05 07 42.5**	**-4.1**
WBK	**Wadi Bani Khal**	**4.29**	**238**	*e*Pn	**Pn**	**05 06 58.8**	**+1.7**
WBK	**Wadi Bani Khal**	**4.29**	**238**	P	**Pn**	**05 06 58.7**	**+1.7**
	SNR=184						
WBK				S	**Sn**	**05 07 45.0**	**-2.2**
	SNR=8.0						
BIDO	**Bidbid**	**4.59**	**253**	*e*Pn	**Pn**	**05 07 02.7**	**+1.5**
BIDO	**Bidbid**	**4.59**	**253**	P	Pn	05 07 05.8	+4.6
BIDO				S	**Sn**	**05 07 52.2**	**-2.5**
JASK	**Jask - Hormozg**	**4.67**	**283**	*e*		05 07 07.6	
	comp=Z,585nm,0.2s						
JASK				*e*Pn	**Pn**	**05 07 05.9**	**+3.6**
SMDO	**Samad**	**4.82**	**248**	P	Pn	05 07 08.5	+3.9
SMDO				S	**Sn**	**05 07 57.7**	**-2.9**
JMDO	**Jabal Madar**	**5.09**	**241**	P	**Pn**	**05 07 10.7**	**+2.6**
	SNR=26						
JMDO				S	**Sn**	**05 08 06.3**	**-0.8**
	SNR=6.6						
HOQ	**Hoqain**	**5.29**	**257**	*e*Pn	**Pn**	**05 07 13.1**	**+2.3**
HOQ	**Hoqain**	**5.29**	**257**	P	Pn	05 07 15.6	+4.7
BSY	**Bisya**	**5.67**	**249**	P	Pn	05 07 20.0	+4.0
BSY				S	**Sn**	**05 08 19.8**	**-1.5**
KBAM	**BAM**	**5.79**	**317**	*e*Pn	**Pn**	**05 07 19.6**	**+1.9**
KBAM				*e*		05 07 30.4	
	comp=E,263nm,0.3s						
SOHO	**SOHO**	**5.87**	**264**	P	Pn	05 07 23.7	+5.0
SOHO				S	**Sn**	**05 08 22.3**	**-3.8**
MDH	**Madha**	**6.01**	**275**	*e*Pn	**Pn**	**05 07 22.0**	**+1.2**
MDH	**Madha**	**6.01**	**275**	P	**Pn**	**05 07 24.4**	**+3.6**
MDH				S	**Sn**	**05 08 25.7**	**-4.0**
ARQ	**Araqi**	**6.05**	**256**	P	Pn	05 07 26.1	+4.8
	SNR=13						
BANOM	**Banah**	**6.07**	**281**	*e*Pn	**Pn**	**05 07 24.2**	**+2.6**
BANOM	**Banah**	**6.07**	**281**	P	**Pn**	**05 07 24.0**	**+2.5**
	SNR=15						
BANOM				S	**Sn**	**05 08 27.4**	**-3.7**
UOSS	**Minazif**	**6.10**	**272**	*e*Pn	**Pn**	**05 07 22.7**	**+0.8**
UOSS	**Minazif**	**6.10**	**272**	P	**Pn**	**05 07 26.2**	**+4.2**
MASF	**Masafi**	**6.14**	**276**	P	**Pn**	**05 07 26.0**	**+3.4**
HATD	**Hatta, Dubai**	**6.17**	**271**	*e*Pn	**Pn**	**05 07 23.7**	**+0.8**
HATD	**Hatta, Dubai**	**6.17**	**271**	P	Pn	05 07 27.4	+4.5
SHME	**Shamm**	**6.23**	**282**	*e*Pn	**Pn**	**05 07 27.4**	**+3.7**
SHME	**Shamm**	**6.23**	**282**	P	**Pn**	**05 07 26.1**	**+2.4**
	SNR=17						
SHME				S	**Sn**	**05 08 31.5**	**-3.5**
ASHO	**Ashiyiah**	**6.24**	**269**	P	Pn	05 07 28.4	+4.5
	SNR=12						
ASHO				S	**Sn**	**05 08 38.5**	**+3.2**
	SNR=5.3						
GENO	**Geno**	**6.55**	**294**	*e*Pn	**Pn**	**05 07 31.4**	**+3.1**
CHMN	**Cheshme madani**	**6.86**	**317**	*e*Pn	**Pn**	**05 07 34.9**	**+2.2**
CHMN				*e*		05 07 35.8	
	comp=N,234nm,0.4s						
KLNJ	**Kolanjah**	**11.70**	**304**	*e*Pn	**Pn**	**05 08 41.2**	**+2.1**

*NEIC **08** 05:33:26.3±1.2, 18˙.89N±0˙.05×67˙.51W±0˙.05, h28km±9km, Error ellipse: s-maj=9.8km s-min=3.0km az=225.0*
*RSPR **08** 05:33:27.4, 18˙.89N×67˙.48W, h9km±1km, MD2.6/5*
*OSPL **08** 05:33:29.0±0.6, 18˙.79N×67˙.46W, h13km±57km, ML1.9*
ISC 08 05:33:27.4±1.6, 18°84N±0˙.09×67°45W±0˙.05, h27km, n26, σ0°62/30, 2C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.46**	**183**	*e*P	**Pb**	**05 33 36.7**	**-0.3**
AGPR	**Aguadilla, PR**	**0.49**	**139**	*e*P	**Pb**	**05 33 37.6**	**0.0**
AGPR	**Aguadilla, PR**	**0.49**	**139**	*e*S	**Sb**	**05 33 46.0**	**+1.4**
AGPR	**Aguadilla, PR**	**0.49**	**139**		**Pb**	**05 33 37.6**	**0.0**
AGPR					**Sb**	**05 33 45.8**	**+1.3**
AGPR				IAML		05 33 50.4	
	comp=N,59nm,1.9s						
AGPR	**Aguadilla, PR**	**0.49**	**139**	*i* P	**Pb**	**05 33 37.5**	**-0.1**
AGPR				*e*S	**Sb**	**05 33 43.5**	**-1.0**
AGPR				IAML		05 33 48.1	
	comp=Z,96nm,1.6s						
PRSN	**Puerto Rico Se**	**0.69**	**155**	Pg	**Pb**	**05 33 40.4**	**-0.4**
LSP	**Las Mesas**	**0.75**	**152**	*e*P	**Pb**	**05 33 41.6**	**-0.3**
LSP	**Las Mesas**	**0.75**	**152**	*e*S	**Sb**	**05 33 52.1**	**+0.4**
AOPR	**Arecibo Observ**	**0.83**	**127**	*e*P	**Pn**	**05 33 42.9**	**-0.4**
AOPR	**Arecibo Observ**	**0.83**	**127**	*e*S	**Sb**	**05 33 54.1**	**+0.2**
AOPR	**Arecibo Observ**	**0.83**	**127**		**Pn**	**05 33 42.9**	**-0.4**
AOPR	**Arecibo Observ**	**0.83**	**127**		**Sb**	**05 33 54.5**	**+0.6**
AOPR				IAML		05 34 01.0	
	comp=E,38nm,0.5s						
CRPR	**Cabo Rojo, PR**	**0.89**	**159**	*e*P	**Pn**	**05 33 43.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.89**	**159**	*e*S	**Sb**	**05 33 56.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.89**	**159**		**Pn**	**05 33 43.5**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.89**	**159**		**Sb**	**05 33 56.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.89**	**159**	*i* P	**Pn**	**05 33 43.5**	**-0.7**
CRPR				*e*S	**Sb**	**05 33 55.1**	**-0.7**
CRPR				IAML		05 33 56.9	
	comp=Z,9.2nm,0.8s						
PCDR	**Punta Cana, DR**	**0.94**	**250**	*i* P	**Pb**	**05 33 45.4**	**+0.3**
PCDR				*e*S	**Sn**	**05 33 57.0**	**-0.4**
PCDR				IAML		05 33 58.6	
	comp=Z,51nm,1.6s						
MLPR	**Magueyes Islan**	**0.95**	**156**	*e*P	**Pn**	**05 33 44.5**	**-0.5**
MLPR	**Magueyes Islan**	**0.95**	**156**	*e*S	**Sn**	**05 33 58.1**	**+0.5**
MLPR	**Magueyes Islan**	**0.95**	**156**		**Pn**	**05 33 44.5**	**-0.5**
MLPR				IAML		05 34 00.1	
	comp=N,22nm,1.6s						
MLPR	**Magueyes Islan**	**0.95**	**156**		**Sn**	**05 33 58.1**	**+0.5**
OBIP	**Obispado Ponce**	**1.13**	**135**		**Pn**	**05 33 47.5**	**+0.1**
OBIP				IAML		05 34 12.9	
	comp=N,15nm,2.2s						
ICMP	**Isla Caja de M**	**1.30**	**137**	Pn	**Pn**	**05 33 50.0**	**+0.3**
GCPR	**Guaynabo City**	**1.40**	**112**	Pn	**Pb**	**05 33 52.1**	**-0.8**
GCPR				IAML		05 34 05.8	
	comp=E,11nm,3.5s						
GCPR				IAML		05 34 21.2	
	comp=N,11nm,2.9s						
SJG	**San Juan**	**1.43**	**120**	Pn	**Pn**	**05 33 51.9**	**+0.3**
SJG				IAML		05 34 13.1	
	comp=N,11nm,1.0s						
SJG				IAML		05 34 40.5	
	comp=N,10nm,2.2s						

*RSNC **08** 05:59:11.2±1.0, 6˙.79N×73˙.14W, h144km±4km, ML3.1, Mw3.4*
*IDC **08** 05:59:12.1±5.5, 6˙.63N×73˙.09W, h177km±37km, mb2.6/1, mbtmp3.2/2, Error ellipse: s-maj=80.8km s-min=37.3km az=67.0*
ISC 08 05:59:09.9±0.9, 6°84N±0˙.03×73°12W±0˙.04, h151km±6km, n28, σ1°40/53, 2C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**195**	*i* P	**Pn**	**05 59 30.6**	**-0.1**
BARC				*e*S	**Sn**	**05 59 45.1**	**-1.5**
BARC				*i*		05 59 46.9	
	comp=Z,467nm,0.2s						
PAMC	**Pamplona, Colo**	**0.64**	**40**	*i* P	**Pn**	**05 59 33.5**	**+0.8**
PAMC				*e*S	**Sn**	**05 59 50.5**	**+0.4**
PAMC				*i*		05 59 52.8	
	comp=Z,234nm,0.4s						
BRRC	**Barranca, Sant**	**0.65**	**294**	*i* P	**Pn**	**05 59 32.6**	**+0.4**
BRRC				*e*S	**Sn**	**05 59 49.3**	**+0.2**
BRRC				*i*		05 59 54.1	
	comp=Z,332nm,0.1s						
RUSC	**La Rusia**	**0.94**	**178**	*e*P	**Pn**	**05 59 34.5**	**-0.4**
RUSC				*e*S	**Sn**	**05 59 52.9**	**-1.0**
RUSC				*i*		05 59 53.8	
	comp=Z,221nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	*e*P	**Pn**	**05 59 37.1**	**-1.0**
PTBC				*e*S	**Sn**	**05 59 58.3**	**-1.5**
PTBC				*i*		06 00 00.6	
	comp=Z,159nm,0.2s						
TAMC	**Tame, Arauca**	**1.38**	**107**	*i* P	**Pn**	**05 59 38.9**	**+0.6**
TAMC				*e*S	**Sn**	**06 00 00.1**	**+0.1**
TAMC				*i*		06 00 00.9	
	comp=Z,132nm,0.2s						
SPBC	**San Pablo de B**	**1.52**	**219**	*e*P	**Pn**	**05 59 39.5**	**-0.3**
SPBC				*e*S	**Sn**	**06 00 01.2**	**-1.5**
SPBC				*i*		06 00 07.2	
	comp=Z,171nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	**Pn**	**05 59 43.4**	**+0.1**
ZARC				*e*S	**Sn**	**06 00 09.4**	**+0.5**
ZARC				*i*		06 00 17.3	
	comp=Z,246nm,0.2s						
NORC	**Norcasia**	**2.16**	**234**	*e*P	**Pn**	**05 59 46.8**	**-0.2**
NORC				*e*S	**Sn**	**06 00 14.3**	**-1.2**
NORC				*i*		06 00 19.1	
	comp=Z,104nm,0.2s						
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**05 59 51.0**	**+1.7**
	comp=Z,24nm,0.3s,baz=37,slow=13,SNR=32						
ROSC				S	**Sn**	**06 00 21.6**	**+2.0**
	comp=Z,84nm,0.4s,baz=34,slow=21,SNR=24						
ROSC	**El Rosal**	**2.32**	**211**	*e*P	**Pn**	**05 59 50.4**	**+1.1**
ROSC				*e*S	**Sn**	**06 00 19.4**	**-0.2**
ROSC				*i*		06 00 24.9	
	comp=Z,82nm,0.4s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**05 59 51.0**	**-0.2**
HELC				*e*S	**Sn**	**06 00 21.7**	**-1.2**
HELC				*i*		06 00 29.1	
	comp=Z,55nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	**Pn**	**05 59 50.9**	**-0.9**
UREC				*e*S	**Sn**	**06 00 22.4**	**-1.8**
UREC				*i*		06 00 33.2	
	comp=Z,147nm,0.2s						
SOCV	**Socops**	**2.66**	**57**	*i* P	**Pn**	**05 59 53.5**	**+0.4**
SOCV				*e*S	**Sn**	**06 00 24.7**	**-1.7**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*e*P	**Pn**	**05 59 55.1**	**+0.4**
GUY2C				*e*S	**Sn**	**06 00 29.1**	**-0.1**
GUY2C				*i*		06 00 35.5	
	comp=Z,49nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*i* P	**Pn**	**05 59 53.5**	**-1.3**
PTGC				*e*S	**Sn**	**06 00 26.2**	**-3.4**
PTGC				*i*		06 00 28.1	
	comp=Z,72nm,0.6s						
LL6C	**La Loma 6 Bece**	**2.88**	**357**	*e*P	**Pn**	**05 59 55.6**	**-0.2**
LL6C				*e*S	**Sn**	**06 00 28.6**	**-2.8**
LL6C				*i*		06 00 44.4	
	comp=Z,25nm,0.5s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**05 59 58.7**	**+0.8**
CBOC				*e*S	**Sn**	**06 00 34.6**	**-0.5**
CBOC				*i*		06 00 38.5	
	comp=Z,28nm,0.5s						
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P	**Pn**	**06 00 01.3**	**+1.5**
ARGC				*e*S	**Sn**	**06 00 39.4**	**+0.9**
ARGC				*i*		06 00 45.7	
	comp=Z,31nm,0.2s						
ANIL	**Santa Ana**	**3.26**	**224**	*e*P	**Pn**	**06 00 01.6**	**+0.6**
ANIL				*e*S	**Sn**	**06 00 40.2**	**-0.2**
ANIL				*i*		06 00 51.7	
	comp=Z,82nm,0.3s						
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**06 00 04.2**	**-0.5**
PRAC				*e*S	**Sn**	**06 00 46.0**	**-1.2**
PRAC				*i*		06 00 52.1	
	comp=Z,53nm,0.3s						
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**06 00 04.9**	**-0.9**
SJCC				*e*S	**Sn**	**06 00 46.8**	**-2.4**
SJCC				*i*		06 00 51.1	
	comp=Z,70nm,0.5s						
PLMC	**San Jos del P**	**3.69**	**239**	*e*P	**Pn**	**06 00 06.5**	**+0.3**
PLMC				*e*S	**Sn**	**06 00 49.8**	**-0.2**
PLMC				*i*		06 00 55.3	
	comp=Z,28nm,0.3s						
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P	**Pn**	**06 00 15.7**	**-0.2**
SMRC				*e*S	**Sn**	**06 01 04.2**	**-3.1**
SMRC				*i*		06 01 05.5	
	comp=Z,17nm,0.2s						
POPC	**Popayan, Colom**	**5.55**	**220**	*e*P	**Pn**	**06 00 30.8**	**-0.1**
POPC				*e*S	**Sn**	**06 01 30.9**	**-3.3**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**06 06 01.7**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=130,slow=8.3,SNR=2.2						
	comp=Z,0.2nm,0.7s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPdf**	**06 18 39.9**	**+2.9**
	comp=Z,0.2nm,0.6s,baz=99,slow=4.8,SNR=1.6						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**06 18 42.7**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=106,slow=2.7,SNR=9.7						

IDC 08 06:01:09.8±2.5, 6˙26S×129˙94E, h0km, mb3.5/1, mbtmp3.3/4, ML2.9/3, MS3.1/1, Error ellipse: s-maj=96.3km s-min=31.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.49**	**199**	Pn	Pn	06 04 10.2	+1.2
	0.1nm,0.3s,baz=26,slow=14,SNR=0.9						
FITZ				Sn	Sn	06 06 15.5	-13
	0.1nm,0.3s,baz=242,slow=24,SNR=1.3						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**14.26**	**163**	Pn	Pn	06 04 32.9	-0.2
	baz=344,slow=13,SNR=1.7						
WRA				Sn	Sn	06 07 02.0	-10
	0.1nm,0.3s,baz=341,slow=22,SNR=2.1						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**17.72**	**168**	P	Pn	06 05 17.3	-0.9
	0.1nm,0.3s,baz=351,slow=12,SNR=2.2						
	0.2nm,0.5s						
RPZ	**Rata Peaks**	**51.85**	**143**	LR	LR	06 31 08.1	
	comp=Z,21nm,21.1s,baz=276,slow=35						
MKAR	**Makanchi Array**	**67.58**	**327**	P	P	06 12 08.3	0.0
	0.3nm,0.6s,baz=125,slow=6.9,SNR=1.3						
	0.3nm,0.6s						

IDC 08 06:13:32.5±2.5, 54˙06N×86˙27E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=20.4km s-min=11.9km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.86**	**263**	*i*		06 17 20.0	
	baz=82,slow=322,SNR=3.9						
ZALV	**Zalesovo Beam**	**0.86**	**263**	Pg	Pg	06 13 47.6	-1.4
	1.4nm,0.3s,baz=82,slow=17,SNR=10						
ZALV				Lg	Lg	06 14 02.1	
	1.7nm,0.3s,baz=83,slow=31,SNR=4.1						
ZALV				Rg	Rg	06 14 06.5	
	5.7nm,0.5s,baz=78,slow=36,SNR=9.3						
KURBB	**Kurchatov Arra**	**5.86**	**237**	Pn	Pn	06 15 01.4	+0.9
	0.2nm,0.3s,baz=54,slow=13,SNR=5.6						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**7.70**	**201**	Pn	Pn	06 15 27.0	+1.1
	0.2nm,0.3s,baz=20,slow=13,SNR=7.6						
	0.3nm,0.3s						

*GUC **08** 06:18:02.9±0.6, 34˙.22S×73˙.31W, h31km±2km, ML3.6*
ISC 08 06:18:01.4±2.4, 34˙22S±0˙.05×73˙28W±0˙.09, h8km±14km, n25, σ0°68/40, 11C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**1.12**	**105**	*i* P	**Pg**	**06 18 23.2**	**+0.2**
GO05	**Huala**	**1.36**	**126**	*i* P	**Pn**	**06 18 26.3**	**-0.5**
GO05				*i* S	**Sb**	**06 18 42.9**	**-2.0**
GO05				IAML		06 18 44.6	
	comp=N,888nm,0.5s						
VA05	**Santo Domingo**	**1.49**	**68**	*i* P	**Pn**	**06 18 28.4**	**-0.1**
VA05				*e*S	**Sb**	**06 18 47.2**	**-1.2**
VA05				IAML		06 18 51.4	
	comp=E,651nm,0.4s						
MT01	**Popeta**	**1.72**	**79**	*i* P	**Pn**	**06 18 31.4**	**-0.3**
MT01				*i* S	**Sn**	**06 18 53.6**	**-0.2**
BO01	**Tunca**	**1.82**	**96**	*i* P	**Pn**	**06 18 33.1**	**0.0**
BO01				*i* S	**Sn**	**06 18 56.4**	**0.0**
MT09	**Talagante**	**1.95**	**78**	*i* P	**Pn**	**06 18 34.9**	**-0.1**
MT09				*i* S	**Sn**	**06 18 59.7**	**-0.1**
MT09				IAML		06 19 00.9	
	comp=N,409nm,0.5s						
MT02	**Curacav**	**2.02**	**62**	*i* P	**Pn**	**06 18 35.8**	**0.0**
MT02				*i* S	**Sn**	**06 19 01.1**	**-0.3**
BO02	**Sierra Bellavi**	**2.14**	**106**	*i* P	**Pn**	**06 18 38.6**	**+1.0**
BO02				*i* S	**Sn**	**06 19 05.1**	**+0.7**
BO02				IAML		06 19 06.7	
	comp=N,1µm,0.2s						
ML02	**Panimavida**	**2.17**	**136**	*i* P	**Pn**	**06 18 38.1**	**+0.2**
ML02				*i* S	**Sn**	**06 19 04.3**	**-0.7**
ML02				IAML		06 19 07.6	
	comp=N,1µm,0.4s						
ROCH	**El Roble**	**2.26**	**57**	*i* P	**Pn**	**06 18 39.7**	**+0.3**
ROCH				*i* S	**Sn**	**06 19 07.8**	**+0.2**
ROCH				IAML		06 19 11.4	
	comp=N,275nm,0.3s						
MT05	**Renca**	**2.27**	**69**	*e*P	**Pn**	**06 18 40.1**	**+0.8**
MT05				*i* S	**Sn**	**06 19 07.7**	**+0.1**
MT05				IAML		06 19 13.6	
	comp=E,299nm,0.3s						
VA06	**Catapilco**	**2.34**	**46**	*i* P	**Pn**	**06 18 39.8**	**-0.3**
VA06				*i* S	**Sn**	**06 19 08.4**	**-0.7**
PEL	**Peldehue**	**2.41**	**64**	*e*P	**Pn**	**06 18 42.0**	**+0.8**
PEL				IAML		06 19 14.8	
	comp=N,305nm,0.2s						
MT03	**Universidad Ad**	**2.41**	**73**	*e*P	**Pn**	**06 18 41.7**	**+0.3**
MT03				*i* S	**Sn**	**06 19 11.8**	**+0.6**
MT03				IAML		06 19 16.4	
	comp=E,372nm,0.1s						
BI05	**Punta Hualpn**	**2.53**	**178**	*i* S	Sn	06 19 06.1	-7.6
LMEL	**Las Melosas**	**2.58**	**83**	*e*P	**Pn**	**06 18 44.7**	**+1.1**
LMEL				*e*S	**Sn**	**06 19 15.4**	**+0.1**
LMEL				IAML		06 19 26.2	
	comp=N,303nm,0.2s						
FCH	**Farellones**	**2.64**	**71**	*i* P	**Pn**	**06 18 45.5**	**+0.8**
FCH				*i* S	**Sn**	**06 19 18.5**	**+1.4**
FCH				IAML		06 19 19.8	
	comp=N,320nm,0.5s						
VA03	**San Esteban**	**2.70**	**58**	*i* P	**Pn**	**06 18 46.0**	**+0.7**
VA03				*i* S	**Sn**	**06 19 18.0**	**-0.2**
VA03				IAML		06 19 21.8	
	comp=N,279nm,0.6s						
CO02	**Combarbal**	**3.57**	**33**	*i* P	**Pn**	**06 18 57.1**	**0.0**
CO03	**El Pedregal**	**4.02**	**34**	*i* P	**Pn**	**06 19 03.7**	**+0.4**
CO03				*e*S	**Sn**	**06 19 50.5**	**-0.1**
GO04	**Tololo Observa**	**4.55**	**28**	*i* P	**Pn**	**06 19 10.2**	**-0.5**
VNA3	**Neumayer Olymp**	**49.55**	**158**	P	**P**	**06 26 53.0**	**+0.6**
VNA2	**Neumayer--Watz**	**50.21**	**157**	P	**P**	**06 26 58.0**	**+0.7**
	baz=285,slow=8.0						
SNAA	**Sanae**	**51.77**	**158**	P	**P**	**06 27 09.5**	**+0.3**
TROLL	**Troll, Antarti**	**53.48**	**158**	P	**P**	**06 27 22.3**	**+0.4**

*NOU **08** 06:22:45.7, 41˙.50S×173˙.69E, h79km, MLv4.1/10, South Island, New Zealand*
*WEL **08** 06:22:46.5±0.6, 41˙.5±4˙×17˙4E±˙, h61km±6km, M3.6/19, ML3.8/19, MLv3.6/19, Error ellipse: s-maj=0.0km s-min=0.0km az=2.3*
ISC 08 06:22:45.0±1.3, 41˙49S±0˙.03×173˙59E±0˙.03, h89km±7km, n118, σ1°04/130, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	**Tuamarina**	**0.27**	**76**	P	**Pn**	**06 22 58.5**	**+0.3**
TUWZ				S	**Sn**	**06 23 06.6**	**-1.3**
BSWZ	**Blackbirch Sta**	**0.31**	**136**	P	**Pn**	**06 22 59.0**	**+0.7**
BSWZ				S	**Sn**	**06 23 08.0**	**-0.2**
NNZ	**Nelson**	**0.32**	**330**	P	**Pn**	**06 22 58.0**	**-0.3**
CMWZ	**Cape Campbell**	**0.53**	**119**	P	**Pn**	**06 23 01.1**	**+1.3**
CMWZ				S	**Sn**	**06 23 13.2**	**+2.2**
THZ	**Tophouse**	**0.58**	**242**	P	**Pn**	**06 23 00.8**	**+0.4**
TCW	**Tory Channel**	**0.59**	**61**	P	**Pn**	**06 23 00.9**	**+0.6**
TCW				S	**Sn**	**06 23 10.8**	**-1.0**
MRNZ	**Matariki Terra**	**0.63**	**278**	P	**Pn**	**06 23 01.0**	**+0.3**
MRNZ				S	**Sn**	**06 23 11.9**	**-0.6**
TKNZ	**Takaka Hill**	**0.66**	**314**	P	**Pn**	**06 23 01.0**	**-0.1**
TKNZ				S	**Sn**	**06 23 11.1**	**-1.9**
DUWZ	**D'Urville Isla**	**0.73**	**20**	P	**Pn**	**06 23 02.2**	**+0.4**
DUWZ				S	**Sn**	**06 23 13.4**	**-0.9**
SNZO	**South Karori**	**0.86**	**78**	P	**Pn**	**06 23 03.7**	**+0.7**
WEL	**Wellington**	**0.91**	**77**	P	**Pn**	**06 23 04.2**	**+0.7**
KHZ	**Kahutara**	**0.92**	**182**	P	**Pn**	**06 23 05.2**	**+1.5**
KHZ				S	**Sn**	**06 23 18.0**	**+0.3**
KHZ	**Kahutara**	**0.92**	**182**	P	**Pn**	**06 23 05.3**	**+1.6**
QRZ	**Quartz Range**	**1.04**	**309**	P	**Pn**	**06 23 04.9**	**-0.2**
QRZ				S	**Sn**	**06 23 19.1**	**-2.1**
QRZ	**Quartz Range**	**1.04**	**309**	P	**Pn**	**06 23 05.1**	**0.0**
CAW	**Cannon Point**	**1.18**	**71**	P	**Pn**	**06 23 07.2**	**+0.5**
CAW				S	**Sn**	**06 23 23.2**	**+0.3**
KIW	**Kapiti Island**	**1.18**	**58**	P	**Pn**	**06 23 07.5**	**+0.7**
MSWZ	**Moikau Station**	**1.25**	**87**	P	**Pn**	**06 23 07.9**	**+0.3**
MSWZ				S	**Sn**	**06 23 24.2**	**-0.4**
PLWZ	**Palliser**	**1.25**	**94**	P	**Pn**	**06 23 08.0**	**+0.3**
PLWZ				S	**Sn**	**06 23 24.4**	**-0.3**
DSZ	**Denniston Nort**	**1.36**	**259**	P	**Pn**	**06 23 09.4**	**+0.4**
OGWZ	**Otaki Gorge**	**1.37**	**61**	P	**Pn**	**06 23 09.5**	**+0.5**
PAWZ	**Paruwai Farm**	**1.39**	**86**	P	**Pn**	**06 23 09.4**	**+0.1**
MTW	**Mount Morrison**	**1.48**	**78**	P	**Pn**	**06 23 10.4**	**0.0**
GVZ	**Greta Valley S**	**1.53**	**195**	P	**Pn**	**06 23 12.2**	**+1.1**
HOWZ	**Holdsworth Sta**	**1.57**	**68

BKZ	Black Stump Fm	3.21	45	P	Pn	06 23 32.7	-0.7
MRHZ	Matea Rd	3.43	40	P	Pn	06 23 35.4	-0.9
NMHZ	Naumai	3.43	47	P	Pn	06 23 35.8	-0.6
FOZ	Fox Glacier	3.46	233	P	Pn	06 23 36.6	0.0
TMZ	Timaru	3.46	212	P	Pn	06 23 36.2	-0.4
TLZ	Tolley Road	3.50	26	P	Pn	06 23 39.0	+1.8
MTHZ	Maungataniwha	3.63	44	P	Pn	06 23 37.9	-1.1
PRRZ	Plateau Road	3.68	37	P	Pn	06 23 39.2	-0.6
LBZ	Lake Benmore	3.82	220	P	Pn	06 23 41.0	-0.6
SNGZ	Shannon Statio	3.95	48	P	Pn	06 23 41.7	-1.6
TOZ	Tahuroa Road	4.04	22	P	Pn	06 23 45.4	+1.0
ODZ	Otahua Downs	4.15	210	P	Pn	06 23 46.5	+0.5
ODZ	Otahua Downs	4.15	210	P	Pn	06 23 47.2	+1.2
URZ	Urewera	4.21	41	P	Pn	06 23 44.9	-2.0
JCZ	Jackson Bay	4.38	232	P	Pn	06 23 49.1	-0.1
AWAZ	Awhitu Peninsu	4.50	11	P	Pn	06 23 52.3	+1.5
MKAZ	Moumakai	4.55	16	P	Pn	06 23 52.3	+0.9
ETAZ	East Tamaki Re	4.65	13	P	Pn	06 23 53.9	+1.1
WKZ	Wanaka	4.72	224	P	Pn	06 23 51.9	-1.9
TWGZ	Tauwhareparae	4.73	47	P	Pn	06 23 52.0	-2.0
MBAZ	Motutapu North	4.83	13	P	Pn	06 23 56.7	+1.5
EAZ	Earnscleugh	4.87	218	P	Pn	06 23 54.9	-0.9
ABAZ	Army Bay	4.98	12	P	Pn	06 23 58.8	+1.4
KUZ	Kuaotunu	5.02	20	P	Pn	06 23 58.6	+0.8
MSZ	Milford Sound	5.23	231	P	Pn	06 24 01.1	+0.5
GRZ	Great Barrier	5.43	16	P	Pn	06 24 04.2	+0.8
WCZ	Waipu Caves	5.58	6	P	Pn	06 24 06.9	+1.4
WHZ	Wether Hill Ro	6.00	221	P	Pn	06 24 11.9	+0.6
OUZ	Omahuta	6.26	0	P	Pn	06 24 17.1	+2.3
OUZ	Omahuta	6.26	0	P	Pn	06 24 16.9	+2.1
CTZ	Chatham Island	7.56	110	P	Pn	06 24 33.3	+0.9

IDC 08 06:24:12.1±2.2, 30°.37N×140°.51E, h58km±21km, mb3.4/5, mbtmp3.6/8, ML3.1/2, MS3.1/3, Error ellipse: s-maj=33.6km s-min=14.9km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.57**	**155**	P	Pn	06 25 05.1	0.0
	5.0nm,0.3s,baz=82,slow=23,SNR=1.6						
JCJ				S	Sn	06 25 46.8	+0.7
	76nm,0.8s,baz=308,slow=22,SNR=1.5 40nm,0.4s						
MJAR	**Matsushiro Arr**	**6.45**	**343**	P	Pn	06 25 42.8	-1.7
	0.1nm,0.3s,baz=164,slow=14,SNR=2.3 1.2nm,0.3s						
JOW	**Kunigami**	**11.31**	**255**	LR	LR	06 30 41.9	
	comp=Z,114nm,20.2s,baz=152,slow=34						
KSRS	**Korea Array**	**12.61**	**307**	P	Pn	06 27 10.5	+1.8
	0.7nm,0.5s,baz=115,slow=14,SNR=5.4						
KSRS				LR	LR	06 31 28.5	
	comp=Z,57nm,18.8s,baz=120,slow=34						
H11N2	**WAKE ISLAND Hy**	**26.09**	**108**	T	T	06 57 05.9	
	baz=300,slow=75,SNR=181						
H11N1	**WAKE ISLAND Hy**	**26.09**	**108**	T	T	06 57 05.6	
	baz=300,slow=75,SNR=113						
H11N3	**WAKE ISLAND Hy**	**26.10**	**108**	T	T	06 57 05.6	
	baz=300,slow=75,SNR=128						
H11S3	**WAKE ISLAND Hy**	**26.53**	**110**	T	T	06 57 38.2	
	baz=302,slow=75,SNR=84						
H11S1	**WAKE ISLAND Hy**	**26.54**	**110**	T	T	06 57 39.5	
	baz=302,slow=75,SNR=66						
H11S2	**WAKE ISLAND Hy**	**26.55**	**110**	T	T	06 57 39.3	
	baz=302,slow=75,SNR=67						
CMAR	**Chiang Mai Arr**	**39.46**	**262**	LR	LR	06 48 15.6	
	comp=Z,23nm,18.4s,baz=180,slow=37						
WRA	**Warramunga Arr**	**50.37**	**189**	P	P	06 33 02.7	-0.9
	1.4nm,0.8s,baz=8.0,slow=8.1,SNR=6.6 1.4nm,0.8s						
ASAR	**Alice Springs**	**54.09**	**187**	P	P	06 33 31.6	+0.4
	0.4nm,0.7s,baz=19,slow=12,SNR=5.3 0.4nm,0.7s						
ILAR	**Eielson Array**	**55.59**	**30**	P	P	06 33 41.4	-0.1
	0.7nm,1.1s,baz=284,slow=7.3,SNR=3.6 0.7nm,1.1s						
NVAR	**Mina Array Bea**	**79.65**	**52**	P	P	06 36 14.6	+0.8
	0.2nm,0.5s,baz=282,slow=4.2,SNR=2.1 0.2nm,0.5s						
TXAR	**Lajitas Array**	**94.80**	**52**	P	P	06 37 27.3	-0.7
	0.3nm,0.8s,baz=290,slow=2.7,SNR=4.4 0.3nm,0.8s						
H03N2	**Juan Fernandez**	**146.51**	**106**	T	T	09 27 39.6	
	baz=280,slow=75,SNR=21						
H03N3	**Juan Fernandez**	**146.52**	**106**	T	T	09 27 39.7	
	baz=280,slow=75,SNR=19						
H03N1	**Juan Fernandez**	**146.53**	**106**	T	T	09 27 39.9	
	baz=280,slow=75,SNR=20						

IDC 08 06:35:38.5±17.0, 16°.16S×177°.55W, h557km±31km, mb2.8/3, mbtmp3.7/4, Error ellipse: s-maj=369.5km s-min=33.9km az=34.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.50**	**249**	P	P	06 37 04.8	0.0
	6.3nm,0.7s,baz=160,slow=7.5,SNR=4.1						
WRA	**Warramunga Arr**	**45.78**	**258**	P	P	06 43 10.8	-0.3
	0.1nm,0.3s,baz=91,slow=7.8,SNR=14 0.1nm,0.3s						
ASAR	**Alice Springs**	**46.08**	**253**	P	P	06 43 13.3	0.0
	2.9nm,0.6s,baz=89,slow=8.1,SNR=39 2.9nm,0.6s						
VNDA	**Vanda**	**62.25**	**185**	P	P	06 45 05.9	-0.1
	0.3nm,0.4s,baz=19,slow=8.5,SNR=6.1 0.3nm,0.4s						

IDC 08 07:04:36.6±46.0, 45°.21N×148°.65E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=1061.0km s-min=62.7km az=154.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**28.93**	**291**	P	P	07 10 37.3	-0.1
	0.5nm,0.4s,baz=76,slow=7.6,SNR=1.3 0.5nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**29.57**	**143**	T	T	07 41 35.1	
	baz=333,slow=75,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**29.58**	**143**	T	T	07 41 29.8	
	baz=333,slow=75,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	**29.59**	**143**	T	T	07 41 36.5	
	baz=333,slow=75,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**30.58**	**145**	T	T	07 42 51.2	
	baz=334,slow=76,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**30.59**	**145**	T	T	07 42 40.5	
	baz=334,slow=76,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**30.60**	**145**	T	T	07 42 50.8	
	baz=334,slow=76,SNR=5.7						
MKAR	**Makanchi Array**	**44.87**	**297**	P	P	07 12 52.5	0.0
	0.8nm,0.6s,baz=74,slow=7.4,SNR=6.7 0.8nm,0.6s						
FINES	**FINESS Array B**	**64.06**	**333**	P	P	07 15 11.6	-0.1
	1.1nm,0.6s,baz=45,slow=8.4,SNR=5.9 1.1nm,0.6s						
NOA	**NORSAR Array B**	**68.62**	**339**	P	P	07 15 41.1	+0.1
	0.3nm,0.4s,baz=31,slow=6.2,SNR=3.8 0.3nm,0.4s						

*IDC **08** 07:09:39.1±1.3, 30°.64N×138°.93E, h390km±30km, mb3.0/6, mbtmp3.8/8, Error ellipse: s-maj=79.7km s-min=14.0km az=71.0*

ISC 08 07:09:39.5±0.8, 30°.7N±0°.2×139°.1E±0°.2, h400km, n8, σ0s55/9, mb3.3/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.48**	**142**	P	Pn	07 10 56.5	+0.3
	75nm,0.8s,baz=4.4,slow=22,SNR=9.7						
JCJ				S	S	07 11 57.9	-0.7
	49nm,0.4s,baz=299,slow=23,SNR=12						
MJAR	**Matsushiro Arr**	**5.92**	**353**	P	Pn	07 11 11.0	-0.1
	1.4nm,0.4s,baz=167,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**45.02**	**317**	P	P	07 17 16.9	-0.1
	0.8nm,0.4s,baz=90,slow=8.6,SNR=0.8 0.8nm,0.4s						
MKAR	**Makanchi Array**	**46.13**	**307**	P	P	07 17 25.0	-0.8
	0.9nm,0.7s,baz=92,slow=9.6,SNR=8.1 0.9nm,0.7s						
WRA	**Warramunga Arr**	**50.51**	**186**	P	P	07 17 59.6	+0.7
	0.4nm,0.4s,baz=1.9,slow=7.6,SNR=10 0.4nm,0.4s						
ASAR	**Alice Springs**	**54.24**	**186**	P	P	07 18 25.6	-0.3
	0.1nm,0.4s,baz=357,slow=4.8,SNR=1.7						
FINES	**FINESS Array B**	**73.55**	**333**	P	P	07 20 30.0	+0.4
	2.9nm,0.9s,baz=48,slow=2.8,SNR=3.4 2.9nm,0.9s						
AKASG	**Malin Array Be**	**78.14**	**322**	P	P	07 20 55.6	+0.1
	0.6nm,0.4s,baz=52,slow=4.7,SNR=2.4 0.6nm,0.4s						

IDC 08 07:42:31.9±8.6, 31°.29N×141°.19E, h0km, mb3.4/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=315.8km s-min=31.4km az=65.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.27**	**168**	Pn	Pn	07 43 38.5	+0.4
	5.2nm,0.3s,baz=279,slow=20,SNR=1.7						
JCJ				Sn	Sn	07 44 25.8	-2.9
	5.3nm,0.3s,baz=281,slow=20,SNR=1.5 182nm,1.2s						
MKAR	**Makanchi Array**	**47.21**	**307**	P	P	07 51 06.4	0.0
	0.2nm,0.6s,baz=88,slow=9.6,SNR=1.5 0.2nm,0.6s						
WRA	**Warramunga Arr**	**51.36**	**188**	P	P	07 51 38.4	0.0
	0.6nm,0.8s,baz=6.7,slow=7.6,SNR=14 0.6nm,0.8s						
ASAR	**Alice Springs**	**55.09**	**188**	P	P	07 52 05.3	-0.5
	0.2nm,0.5s,baz=2.2,slow=5.7,SNR=4.0 0.2nm,0.5s						

*OTT **08** 07:45:11.9±0.2, 73°.02N×74°.30W, h18km, MN3.3/5, 127km east from Pond Inlet, Nu Eastern Arctic Background Seismic Zone.*

ISC 08 07:45:08.0±0.9, 73°.11N±0°.05×74°.15W±0°.06, h10km, n9, σ2s90/16, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLRN	**Clyde River**	**3.17**	**144**	PN	Pn	**07 46 00.1**	**+2.3**
CLRN				SN	Sn	**07 46 35.1**	**-0.6**
CLRN				Trac		07 46 38.0	
	comp=Z,24nm,0.1s						
TULEG	**Thule**	**3.72**	**20**	*e*	Pn	**07 46 06.4**	**+1.1**
	baz=218,slow=12						
TULEG				*i* P	Pb	07 46 07.2	-6.4
TULEG				*i* S	Sn	**07 46 46.9**	**-2.2**
TULEG				IAML		07 46 48.3	
	comp=Z,13nm,0.3s						
ILON	**Igloolik, Nuna**	**4.50**	**217**	PN	Pn	**07 46 17.7**	**+1.7**
ILON				SN	Sn	**07 47 05.4**	**-2.9**
ILON				LG	Lg	07 47 30.4	
ILON				Trac		07 47 33.2	
	comp=Z,12nm,0.2s						
UPNV	**Upernavik**	**5.30**	**85**	*i* P	Pn	**07 46 30.7**	**+3.6**
UPNV				*i* S	Sn	**07 47 25.0**	**-3.2**
UPNV				IAML		07 47 29.6	
	comp=Z,4.8nm,0.4s						
RES	**Resolute Bay**	**5.97**	**295**	PN	Pn	**07 46 38.6**	**+2.5**
RES				SN	Sn	**07 47 42.5**	**-2.0**
RES				SN	Sn	**07 47 42.8**	**-1.7**
RES				LG	Lg	07 48 18.8	
RES				Trac		07 48 41.1	
	comp=Z,25nm,0.8s						
EUNU	**Eureka**	**7.51**	**344**	PN	Pn	**07 46 59.5**	**+2.2**
EUNU				Trac		07 48 30.9	
	comp=Z,81nm,2.5s						
ILULI	**Ilulissat**	**8.38**	**106**	PN	Pn	**07 47 08.3**	**-0.9**
FRB	**Frobisher Bay**	**9.63**	**165**	PN	Pn	**07 47 27.7**	**+1.4**
FRB				SN	Sn	**07 49 07.7**	**-6.6**
FRB				LG	Lg	07 50 09.8	
FRB				Trac		07 50 15.5	
	comp=Z,42nm,0.9s						
KNGQ	**Kangiqsujuaq**	**11.61**	**175**	PN	Pn	**07 47 53.7**	**+0.3**
KNGQ				SN	Sn	07 49 53.4	-10
KNGQ				Trac		07 51 25.4	
	comp=Z,0.5nm,0.0s						

*SOME **08** 08:02:14.5, 39°.47N×73°.45E, h5km*
*ISU **08** 08:02:14, 39°.49N×73°.67E, h5km*
*NNC **08** 08:02:17.0±1.8, 39°.52N×73°.45E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=11.6km s-min=9.8km az=6.0*
*KRNET **08** 08:02:17.0±0.1, 39°.48N×73°.52E, mb3.1*

ISC 08 08:02:14.3±1.8, 39°.49N±0°.08×73°.64E±0°.05, h0km±13km, n25, σ1s64/37, 10C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.23**	**328**	*e*P	Pn	**08 02 39.7**	**+0.9**
	baz=32						
OHH				⇑*i*S	Sn	**08 02 56.4**	**+0.3**
	baz=32						
OHH	**Osh**	**1.23**	**328**	P	Pn	**08 02 38.8**	**0.0**
OHH				S	Sn	**08 02 56.7**	**+0.6**
TSTA	**Tashata**	**1.41**	**321**	P	Sn	**08 03 01.5**	**+1.0**
ANR	**Andizhan**	**1.60**	**323**	S	Sg	**08 03 09.9**	**+4.1**
FRG	**Fergana**	**1.68**	**303**	S	Sg	**08 03 09.7**	**+1.4**
BTK	**Batken**	**2.25**	**286**	⇑*i*P	Pb	**08 02 56.5**	**+0.7**
	baz=86						
BTK				⇑*i*S	Sb	**08 03 25.0**	**+0.8**
	baz=86						
BTK	**Batken**	**2.25**	**286**	P	Pb	**08 02 56.1**	**+0.3**
BTK				S	Sg	**08 03 28.3**	**+1.8**
ARLS	**Aral**	**2.43**	**12**	⇓*e*P	Pg	**08 03 00.5**	**-0.4**
	baz=14						
ARLS				⇓*i*S	Sg	**08 03 32.1**	**-0.3**
	baz=14						
GAR	**Garm**	**2.62**	**260**	⇑*e*P	Pb	**08 03 01.7**	**-0.6**
	baz=60						
GAR				⇑*i*S	Sb	**08 03 34.0**	**-1.1**
	baz=60						
CHDK	**Chadak**	**2.66**	**305**	S	Sg	**08 03 39.3**	**-0.5**
TRKS	**Terek-Say**	**2.79**	**318**	⇑*i*P	Pb	**08 03 03.4**	**-1.8**
	baz=19						
TRKS				⇑*i*S	Sb	**08 03 37.6**	**-2.4**
	baz=19						
MRKS	**Merke**	**3.27**	**355**	*e*P	Pg	**08 03 15.6**	**-1.4**
	1.8nm,0.2s						
MRKS				*e*S	Sg	**08 03 59.0**	**-0.4**
	5.4nm,0.3s						
MRKS	**Merke**	**3.27**	**355**	Pg	Pg	**08 03 15.6**	**-1.4**
	1.8nm,0.2s						
MRKS				Lg	Lg	08 03 59.0	
	5.4nm,0.3s						
TKM2	**Tokmak 2**	**3.74**	**23**	Pg	Pg	**08 03 25.1**	**-0.8**
	3.6nm,1.1s						
TKM2				⇑Lg	Lg	08 04 16.7	
	4.6nm,0.7s						
KST	**Kastek**	**3.96**	**25**	*e*P	Pg	**08 03 30.6**	**+0.3**
	2.6nm,0.2s						
KST				*e*S	Sg	**08 04 25.2**	**+3.5**
	8.9nm,0.3s						
KST	**Kastek**	**3.96**	**25**	Pg	Pg	**08 03 30.6**	**+0.3**
	2.6nm,0.2s						
KST				Lg	Lg	08 04 25.2	
	8.9nm,0.3s						
KK31	**Karatay Array**	**4.31**	**328**	⇑Lg	Lg	08 04 31.9	
	1.3nm,0.3s						
KRBS	**Karabastau**	**4.48**	**19**	*e*P	Pg	**08 03 39.7**	**-0.4**
	1.5nm,0.4s						
KRBS				*e*S	Sg	**08 04 41.1**	**+3.0**
	4.5nm,0.4s						
KRBS	**Karabastau**	**4.48**	**19**	Pg	Pg	**08 03 39.7**	**-0.4**
	1.5nm,0.4s						
KRBS				Lg	Lg	08 04 41.1	
	4.5nm,0.4s						
KTBS	**Karatobe**	**4.80**	**27**	*e*P	Pg	**08 03 45.5**	**-0.8**
	1.1nm,0.7s						
KTBS				*e*S	Sg	**08 04 50.9**	**+2.4**
	6.0nm,0.3s						
KTBS	**Karatobe**	**4.80**	**27**	Pg	Pg	**08 03 45.5**	**-0.8**
	1.1nm,0.7s						
KTBS				Lg	Lg	08 04 50.9	
	6.0nm,0.3s						
KUU	**Kurty**	**4.85**	**24**	*e*P	Pg	**08 03 45.0**	**-2.2**
	0.9nm,0.2s						
KUU				*e*S	Sg	**08 04 50.0**	**0.0**
	4.7nm,0.6s						
KUU	**Kurty**	**4.85**	**24**	Pg	Pg	**08 03 45.0**	**-2.2**
	0.9nm,0.2s						
KUU				Lg	Lg	08 04 50.0	
	4.7nm,0.6s						
ARXS	**Arharly**	**5.67**	**32**	*e*P	Pg	**08 04 01.0**	**-1.9**
	1.7nm,0.4s						
ARXS				*e*S	Sg	**08 05 17.7**	**+1.4**
	3.4nm,0.3s						
ARXS	**Arharly**	**5.67**	**32**	Pg	Pg	**08 04 01.0**	**-1.9**
	1.7nm,0.4s						
ARXS				Lg	Lg	08 05 17.7	
	3.4nm,0.3s						

IDC 08 08:12:12.0±2.0, 19°.45N×144°.58E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=184.7km s-min=24.6km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.42**	**195**	P	P	08 19 52.5	+0.4
	0.5nm,0.3s,baz=14,slow=8.1,SNR=11 0.5nm,0.3s						
ASAR	**Alice Springs**	**44.11**	**194**	P	P	08 20 21.4	-0.8
	0.3nm,0.8s,baz=18,slow=6.6,SNR=1.7 0.3nm,0.8s						
ILAR	**Eielson Array**	**63.44**	**26**	P	P	08 22 43.9	+0.6
	0.3nm,0.5s,baz=249,slow=5.9,SNR=5.7 0.3nm,0.5s						
NVAR	**Mina Array Bea**	**83.50**	**52**	P	P	08 24 41.7	-0.6
	0.7nm,0.7s,baz=267,slow=5.8,SNR=7.0 0.7nm,0.7s						

*IDC **08** 08:15:45.7±4.6, 25°.44S×69°.05W, h0km, mb3.7/1, mbtmp3.7/2, ML3.8/1, Error ellipse: s-maj=147.2km s-min=58.6km az=76.0*
*GUC **08** 08:16:01.6±0.6, 24°.55S×69°.03W, h123km±4km, ML3.7*

ISC 08 08:16:01.9±1.0, 24°.55S±0°.05×69°.0W±0°.1, h120km±10km, n15, σ0s44/21, 9C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO02	**Mina Guanaco**	**0.79**	**219**	⇑*i*P	Pn	**08 16 22.3**	**-0.1**
GO02				*i* S	Sn	**08 16 38.0**	**+0.2**
PB15	**IPOC Station P**	**1.39**	**344**	⇑*i*P	Pn	**08 16 28.5**	**+0.1**
PB15				*i* S	Sn	**08 16 48.9**	**+0.4**
AF01	**San Pedro de A**	**1.78**	**27**	*e*P	Pn	**08 16 32.6**	**-0.4**
AF01				*i* S	Sn	**08 16 56.3**	**-0.3**
PB06	**IPOC Station P**	**1.90**	**345**	⇑*i*P	Pn	**08 16 34.5**	**+0.1**
PB06				*i* S	Sn	**08 16 58.8**	**-0.3**
PB06				IAML		08 17 05.0	
	comp=E,784nm,0.2s						
LVC	**Limon Verde**	**1.94**	**4**	⇑*i*P	Pn	**08 16 34.6**	**-0.4**
LVC				*i* S	Sn	**08 16 59.7**	**-0.5**
AC01	**Pan de Azucar**	**2.12**	**221**	⇑*i*P	Pn	**08 16 36.9**	**0.0**
AC01				IAML		08 17 07.9	
	comp=N,196nm,0.2s						
AC02	**Maricunga**	**2.27**	**182**	⇑*i*P	Pn	**08 16 39.7**	**+0.4**
PB04	**IPOC Station P**	**2.43**	**335**	⇑*i*P	Pn	**08 16 41.0**	**0.0**
PB04				IAML		08 17 29.6	
	comp=N,394nm,0.1s						
PB09	**IPOC Station P**	**2.75**	**356**	⇑*i*P	Pn	**08 16 45.7**	**+0.6**
PB09				IAML		08 17 26.6	
	comp=E,290nm,0.4s						
PB07	**IPOC Station P**	**2.92**	**344**	⇑*i*P	Pn	**08 16 47.1**	**-0.3**
GO03	**Copiap**	**3.21**	**199**	*e*P	Pn	**08 16 50.5**	**-0.6**
GO03				*i* S	Sn	**08 17 28.5**	**-0.5**
GO03				IAML		08 17 29.7	
	comp=E,103nm,0.2s						
PB02	**IPOC Station P**	**3.31**	**346**	*e*P	Pn	**08 16 51.9**	**-0.6**
LPAZ	**La Paz**	**8.27**	**6**	Pn	Pn	**08 17 59.6**	**0.0**
	comp=E,0.4nm,0.3s,baz=166,slow=3.9,SNR=23 comp=E,1.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**78.51**	**70**	P	P	**08 27 51.0**	**+0.8**
	comp=E,0.4nm,0.6s,baz=255,slow=5.2,SNR=5.4 comp=E,0.4nm,0.6s						
MKAR	**Makanchi Array**	**148.13**	**39**	PKPbc	**PKiKP**	**08 35 34.6**	**-0.5**
	comp=E,0.3nm,0.5s,baz=332,slow=4.5,SNR=4.4						

*IDC **08** 08:21:41.9±22.0, 42°.10N×143°.11E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=498.8km s-min=91.1km az=159.0*
*JMA **08** 08:22:00.0±0.2, 42°.6N±0°.8×142°.2E±0°.9, h120km±1km, MV2.9/39, HIDAKA REGION*

ISC 08 08:22:00.7±1.0, 42°.55N±0°.05×142°.21E±0°.04, h116km±6km, n22, σ0s85/33, mb3.9/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIAM	**Iburiatsuma**	**0.22**	**289**	*e*P	Pn	**08 22 17.1**	**+0.3**
JIAM				*e*S	Sn	**08 22 29.8**	**+0.9**
JSHD	**Hidakashinhida**	**0.24**	**126**	*e*P	Pn	**08 22 17.0**	**+0.1**
JSHD				*e*S	Sn	**08 22 30.1**	**+1.0**
JBT2	**Biratori 2**	**0.26**	**27**	*e*S	Sn	**08 22 28.8**	**-0.5**
JNBK	**Urakawa-nobuka**	**0.49**	**123**	*e*P	Pn	**08 22 18.1**	**+0.1**
JNBK				*e*S	Sn	**08 22 32.0**	**+0.8**
JEW	**Eniwo**	**0.63**	**298**	*e*P	Pn	**08 22 18.7**	**-0.4**
JEW				*e*S	Sn	**08 22 31.6**	**-1.2**
JFR	**Furan**	**0.68**	**25**	*e*P	Pn	**08 22 18.7**	**-0.7**
JCH	**Churui**	**0.86**	**85**	*e*P	Pn	**08 22 20.7**	**-0.3**
JCH				*e*S	Sn	**08 22 35.1**	**-1.1**
JNB	**Noboribetsu**	**0.87**	**265**	*e*P	Pn	**08 22 20.2**	**-0.8**
JNB				*e*S	Sn	**08 22 35.1**	**-1.3**
JEM	**Erimo**	**0.89**	**127**	*e*P	Pn	**08 22 21.4**	**+0.2**
JISS	**Ishikarishitsu**	**0.93**	**322**	*e*P	Pn	**08 22 21.1**	**-0.4**
JISS				*e*S	Sn	**08 22 36.7**	**-0.7**
JAB	**Ashibetsu**	**0.95**	**1**	*e*P	Pn	**08 22 21.9**	**0.0**
JAB				*e*S	Sn	**08 22 37.6**	**-0.3**
JHR	**Hokuryu**	**1.24**	**344**	*e*S	Sn	**08 22 43.3**	**0.0**
JAR	**Ashorobuto**	**1.37**	**56**	*e*P	Pn	**08 22 26.0**	**-0.3**
JAR				*e*S	Sn	**08 22 44.7**	**-1.1**
JKK2	**Kamakawa 2**	**1.38**	**17**	*e*P	Pn	**08 22 26.3**	**-0.1**
JKK2				*e*S	Sn	**08 22 45.4**	**-0.7**
JOT	**Ohata**	**1.45**	**217**	*e*P	Pn	**08 22 26.6**	**-0.6**
JOT				*e*S	Sn	**08 22 45.9**	**-1.5**
JAK	**Akkeshi**	**1.89**	**75**	*e*P	Pn	**08 22 31.8**	**-0.7**
JAK				*e*S	Sn	**08 22 54.7**	**-2.1**
JTKR	**Abashiri--Toko**	**1.89**	**41**	*e*P	Pn	**08 22 32.7**	**+0.2**
ZALV	**Zalesovo Beam**	**38.84**	**307**	P	P	**08 29 15.0**	**+0.9**
	0.9nm,0.5s,baz=86,slow=6.1,SNR=4.2 0.9nm,0.5s						
MKAR	**Makanchi Array**	**41.92**	**297**	P	P	**08 29 40.6**	**+1.0**
	0.4nm,0.5s,baz=80,slow=11,SNR=4.3 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**43.27**	**304**	P	P	**08 29 51.1**	**+0.7**
	1.2nm,0.4s,baz=76,slow=8.9,SNR=7.1 1.2nm,0.4s						
DAG	**Danmarks Havn**	**60.34**	**355**	*i* P	P	08 32 07.0	+10
FINES	**FINESS Array B**	**64.25**	**331**	P	P	**08 32 22.9**	**+0.1**
	0.8nm,0.5s,baz=54,slow=8.2,SNR=7.5 0.8nm,0.5s						

IDC 08 08:33:50.3±3.5, 54°.41N×86°.71E, h0km, mbtmp2.9/2, ML2.2/2, Error ellipse: s-maj=30.5km s-min=18.0km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**248**	*i*		08 41 33.4	
	baz=69,slow=317,SNR=5.9						
ZALV	**Zalesovo Beam**	**1.20**	**248**	Pg

*IDC **08** 09:13:52.5±10.0, 7.°40S×128.°41E, h120km±103km, mb3.5/3, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=120.3km s-min=30.5km az=54.0*

ISC 08 09:13:55.4±1.0, 7.°49S±0.°10×128.°55E±0.°08, h151km, n19, σ1°90/21, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**4.79**	**242**	P	**Pn**	**09 15 08.7**	**+2.5**
BATI	**Baumata**	**5.53**	**240**	P	**Pn**	**09 15 17.9**	**+2.0**
	107nm,0.5s,baz=63,slow=1.9,SNR=17						
BATI				S	**Sn**	**09 16 20.0**	**+1.2**
	58nm,0.3s,baz=122,slow=21,SNR=9.8						
KDU	**Kakadu**	**6.45**	**143**	P	**Pn**	**09 15 29.1**	**+1.0**
KNRA	**Kununurra**	**8.13**	**179**	P	**Pn**	**09 15 51.0**	**+0.3**
PLAI	**Plampang**	**10.74**	**262**	P	**Pn**	**09 16 24.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**10.91**	**195**	P	**Pn**	**09 16 26.8**	**-0.7**
	0.4nm,0.3s,baz=14,slow=8.6,SNR=7.6						
FITZ				S	Sn	09 18 20.0	-8.3
	3.4nm,0.3s,baz=125,slow=11,SNR=6.1						
	1.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.91**	**195**	P	**Pn**	**09 16 27.1**	**-0.4**
BKB	**Balikpapan**	**13.16**	**298**	P	**Pn**	**09 16 55.0**	**-1.7**
WRAB	**Tennant Creek**	**13.59**	**156**	P	**Pn**	**09 17 03.8**	**+1.7**
WRA	**Warramunga Arr**	**13.59**	**156**	P	**Pn**	**09 17 01.2**	**-1.0**
	0.2nm,0.3s,baz=324,slow=14,SNR=22						
WRA				S	Sn	09 19 22.8	-10
	1.4nm,0.3s,baz=330,slow=22,SNR=9.1						
	0.2nm,0.3s						
COEN	**Coen**	**15.74**	**115**	P	**P**	**09 17 29.9**	**+0.1**
QIS	**Mount Isa**	**16.83**	**142**	P	**Pn**	**09 17 43.6**	**+1.3**
ASAR	**Alice Springs**	**16.88**	**163**	P	**P**	**09 17 43.1**	**+0.7**
	0.2nm,0.3s,baz=341,slow=11,SNR=14						
ASAR				S	**S**	**09 20 44.8**	**-5.9**
	0.5nm,0.4s,baz=347,slow=24,SNR=5.2						
	0.7nm,0.4s						
OOD	**Oodnadatta**	**21.29**	**162**	P	**P**	**09 18 32.1**	**+1.9**
LCRK	**Leigh Creek**	**24.57**	**160**	P	**P**	**09 19 01.5**	**+0.1**
BBOO	**Buckleboo**	**26.14**	**166**	P	**P**	**09 19 16.9**	**+1.3**
STKA	**Stephens Creek**	**27.14**	**155**	P	**P**	**09 19 25.8**	**+1.3**
	0.8nm,0.5s,baz=335,slow=8.9,SNR=4.6						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**67.86**	**328**	P	**P**	**09 24 37.4**	**-0.1**
	0.5nm,0.4s,baz=121,slow=8.1,SNR=7.7						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**71.39**	**334**	P	**P**	**09 24 57.9**	**-1.0**
	0.4nm,0.4s,baz=145,slow=5.3,SNR=2.3						
	0.4nm,0.4s						

IDC 08 09:18:35.0±53.0, 19.°55S×177.°13W, h0km, mb3.9/3, mbtmp3.9/3, MS3.6/2, Error ellipse: s-maj=982.0km s-min=158.6km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.94**	**243**	P	P	09 26 02.9	0.0
	1.3nm,0.7s,baz=82,slow=12,SNR=5.1						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**45.53**	**256**	P	P	09 26 56.5	-0.3
	1.3nm,0.5s,baz=98,slow=7.6,SNR=22						
ASAR				LR	LR	09 45 17.6	
	comp=Z,81nm,18.5s,baz=295,slow=35						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**45.55**	**261**	P	P	09 26 56.9	-0.1
	0.4nm,0.3s,baz=97,slow=7.5,SNR=27						
WRA				LR	LR	09 44 01.3	
	comp=Z,63nm,19.8s,baz=324,slow=34						
	0.4nm,0.3s						

*NEIC **08** 09:35:01.1±1.6, 43.°05N±0.°06×126.°5W±0.°1, h10km±2km, ML2.9/66, Error ellipse: s-maj=16.8km s-min=10.6km az=259.0*

*ANF **08** 09:35:03.7±1.0, 43.°11N×126.°21W, h10km, ML3.1/14, Error ellipse: s-maj=9.6km s-min=6.4km az=81.0*

*IDC **08** 09:35:13.0±7.3, 43.°13N×124.°98W, h0km, mb2.8/1, mbtmp3.1/6, ML3.3/5, MS2.7/3, Error ellipse: s-maj=95.4km s-min=20.1km az=91.0*

ISC 08 09:35:02.2±1.8, 43.°07N±0.°05×126.°4W±0.°1, h10km, n63, σ1°12/68, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**1.52**	**97**		**Pn**	**09 35 28.4**	**-1.2**
KEBM				IAML		09 35 53.7	
	comp=E,217nm,0.7s						
KEBM				IAML		09 35 56.4	
	comp=N,95nm,1.1s						
J01E	**Myrtle Point**	**1.80**	**86**		**Pn**	**09 35 32.2**	**-1.0**
J01E				IAML		09 36 00.1	
	comp=E,92nm,0.6s						
J01E				IAML		09 36 02.5	
	comp=N,108nm,0.3s						
J01E	**Myrtle Point**	**1.80**	**86**	P	**Pn**	**09 35 32.1**	**-1.2**
	baz=269,SNR=296						
J01E				S	**Sn**	**09 35 55.0**	**-1.1**
	baz=269						
KBO	**Bosley Butte**	**1.81**	**118**		**Pn**	**09 35 32.5**	**-1.1**
KBO				IAML		09 36 02.4	
	comp=E,104nm,1.8s						
K02D	**Willamette Mer**	**2.03**	**100**	P	**Pn**	**09 35 35.7**	**-0.9**
	baz=283,SNR=19						
K02D				S	**Sn**	**09 36 01.9**	**-0.2**
	baz=283						
I02E	**Swisshome, OR**	**2.11**	**60**		**Pn**	**09 35 36.6**	**-1.0**
I02E	**Swisshome, OR**	**2.11**	**60**	P	**Pn**	**09 35 36.6**	**-1.0**
	baz=240,SNR=117						
I02E				S	**Sn**	**09 36 02.8**	**-1.1**
	baz=240						
KSXB	**Camp Six Broad**	**2.23**	**123**		**Pn**	**09 35 38.5**	**-0.9**
L02F	**Cave Junction**	**2.29**	**114**	P	**Pn**	**09 35 39.5**	**-0.5**
	baz=298						
L02F				S	**Sn**	**09 36 07.8**	**-0.4**
	baz=298						
I03D	**Drain, OR**	**2.30**	**73**	P	**Pn**	**09 35 39.4**	**-0.8**
	baz=255,SNR=562						
I03D				S	**Sn**	**09 36 07.8**	**-0.7**
	baz=255						
DBO	**Dodson Butte**	**2.30**	**88**		**Pn**	**09 35 40.0**	**-0.3**
HUMO	**Hull Mountain**	**2.56**	**99**		**Pn**	**09 35 43.5**	**-0.4**
KRPM	**Rodgers**	**2.60**	**137**	Pn	**Pn**	**09 35 43.0**	**-1.4**
KRPM				IAML		09 36 33.2	
	comp=N,48nm,2.6s						
KRPM				IAML		09 36 48.3	
	comp=E,51nm,1.8s						
COR	**Corvallis**	**2.69**	**55**		**Pn**	**09 35 45.3**	**-0.3**
COR				IAML		09 36 31.9	
	comp=E,32nm,0.7s						
COR				IAML		09 36 41.2	
	comp=E,35nm,2.1s						
BUCK	**Buck Mountain**	**2.71**	**64**		**Pn**	**09 35 46.3**	**+0.4**
BUCK				IAML		09 36 25.7	
	comp=N,27nm,2.2s						
BUCK				IAML		09 36 39.8	
	comp=E,32nm,2.5s						
HEBO	**Mount Hebo**	**2.86**	**41**	Pn	**Pn**	**09 35 47.0**	**-1.0**
HEBO				IAML		09 36 24.1	
	comp=N,58nm,1.4s						
JCC	**Jacoby Creek,**	**2.86**	**141**	Pn	**Pn**	**09 35 47.2**	**-0.7**
JCC				IAML		09 37 03.5	
	comp=E,25nm,3.5s						
I04A	**Tendick Farm,**	**2.98**	**75**	P	**Pn**	**09 35 49.7**	**+0.1**
	baz=257,SNR=52						
H04D	**Lebanon**	**3.01**	**60**		**Pn**	**09 35 50.0**	**+0.1**
H04D				IAML		09 36 12.8	
	comp=N,32nm,0.8s						
H04D				IAML		09 36 35.8	
	comp=E,38nm,0.7s						
H04D	**Lebanon**	**3.01**	**60**	P	**Pn**	**09 35 49.8**	**-0.2**
	baz=242						
YBH	**Yreka Blue Hor**	**3.03**	**115**	Pn	**Pn**	**09 35 51.2**	**+0.8**
	comp=E,2.8nm,0.3s,baz=284,slow=15,SNR=74						
YBH				Sn	**Sb**	**09 36 29.9**	**-3.6**
	comp=E,1.0nm,0.3s,baz=155,slow=6.9,SNR=5.6						
	comp=E,6.7nm,0.3s						
YBH	**Yreka Blue Hor**	**3.03**	**115**		**Pn**	**09 35 51.2**	**+0.8**
G03D	**McMinnville, O**	**3.10**	**45**		**Pn**	**09 35 51.1**	**0.0**
G03D				IAML		09 36 29.6	
	comp=E,49nm,0.6s						
G03D	**McMinnville, O**	**3.10**	**45**	P	**Pn**	**09 35 50.9**	**-0.3**
	baz=226,SNR=28						
L04D	**Klamath Falls**	**3.13**	**104**		**Pn**	**09 35 52.6**	**+0.9**
L04D				IAML		09 36 49.2	
	comp=E,26nm,2.5s						
L04D	**Klamath Falls**	**3.13**	**104**	P	**Pn**	**09 35 52.6**	**+0.9**
	baz=288,SNR=20						
J04D	**Umpqua Nationa**	**3.13**	**85**		**Pn**	**09 35 53.3**	**+1.5**
J04D	**Umpqua Nationa**	**3.13**	**85**	P	**Pn**	**09 35 53.2**	**+1.3**
	baz=269,SNR=123						
K04D	**Chiloquin, OR**	**3.43**	**96**	P	**Pn**	**09 35 55.5**	**-0.4**
	baz=280						
H04A	**Detroit Lake**	**3.44**	**61**		**Pn**	**09 35 56.1**	**+0.3**
H04A				IAML		09 36 21.9	
	comp=N,27nm,0.5s						
H04A				IAML		09 36 47.9	
	comp=E,23nm,0.5s						
KMRM	**Mail Ridge**	**3.48**	**144**	Pn	**Pn**	**09 35 57.1**	**+0.6**
KMRM				IAML		09 36 33.0	
	comp=E,37nm,3.6s						
KMRM				IAML		09 37 43.0	
	comp=N,34nm,3.2s						
J05D	**Fort Rock, OR**	**3.77**	**85**	P	**Pn**	**09 36 01.0**	**+0.4**
	baz=269,SNR=28						
RADR	**Rader Ridge**	**3.82**	**28**	Pn	**Pn**	**09 36 00.9**	**-0.2**
RADR				IAML		09 36 34.4	
	comp=N,30nm,2.6s						
RADR				IAML		09 36 47.3	
	comp=E,42nm,2.0s						
F04D	**Rainier, OR**	**3.85**	**38**	P	**Pn**	**09 36 01.4**	**-0.2**
	baz=219						
I05D	**Terrebonne, OR**	**3.87**	**69**	P	**Pn**	**09 36 02.2**	**+0.3**
	baz=252,SNR=38						
E03A	**Lebam**	**4.01**	**29**		**Pn**	**09 36 03.2**	**-0.5**
F04A	**Amboy**	**4.03**	**43**		**Pn**	**09 36 04.2**	**+0.3**
F04A				IAML		09 36 58.3	
	comp=N,24nm,0.7s						
PINE	**Pine Mountain**	**4.03**	**78**		**Pn**	**09 36 04.5**	**+0.4**
PINE				IAML		09 37 11.9	
	comp=E,11nm,4.5s						
PINE				IAML		09 38 24.9	
	comp=N,11nm,4.8s						
K05A	**Summer Lake**	**4.05**	**93**		**Pn**	**09 36 05.3**	**+0.9**
K05A				IAML		09 36 36.3	
	comp=E,9.9nm,3.5s						
K05A				IAML		09 38 15.0	
	comp=N,17nm,4.6s						
HOOD	**Mount Hood Mea**	**4.08**	**55**		**Pn**	**09 36 05.4**	**+0.7**
HOOD				IAML		09 37 01.5	
	comp=N,22nm,1.4s						
G05D	**Wamic, OR**	**4.24**	**58**	P	**Pn**	**09 36 07.4**	**+0.5**
	baz=240,SNR=7.5						
WISH	**Wishkah**	**4.45**	**24**	Pn	**Pn**	**09 36 09.2**	**-0.4**
MOD	**Modoc Plateau**	**4.65**	**103**		**Pn**	**09 36 13.0**	**+0.4**
C03A	**Quillayute Air**	**5.04**	**14**	Pn	**Pn**	**09 36 17.5**	**-0.3**
I07A	**Izee**	**5.10**	**76**		**Pn**	**09 36 19.8**	**+1.0**
I07A				IAML		09 37 21.1	
	comp=N,7.9nm,4.0s						
I07A				IAML		09 37 32.6	
	comp=E,6.4nm,3.5s						
D05A	**Enumclaw**	**5.16**	**36**		**Pn**	**09 36 20.2**	**+0.7**
F07A	**Phinny Hill Vi**	**5.41**	**56**		**Pn**	**09 36 23.0**	**+0.1**
WVOR	**Wild Horse Val**	**5.74**	**94**		**Pn**	**09 36 27.5**	**0.0**
J08A	**Circle Bar Ran**	**5.79**	**84**		**Pn**	**09 36 28.6**	**+0.4**
HAWA	**Hanford**	**5.90**	**53**		**Pn**	**09 36 30.1**	**+0.4**
PGC	**Sidney**	**5.94**	**19**	Pn	**Pn**	**09 36 29.3**	**-0.9**
CLRS	**Cowichan Lake**	**5.96**	**14**	Pn	**Pn**	**09 36 29.0**	**-1.4**
E08A	**Dider Farm, El**	**6.23**	**54**		**Pn**	**09 36 34.9**	**+0.7**
BMO	**Blue Mountains**	**6.79**	**72**		**Pn**	**09 36 42.6**	**+0.7**
F10A	**Beach Ranch, E**	**7.16**	**63**		**Pn**	**09 36 47.1**	**+0.1**
B08A	**Colville Reser**	**7.23**	**41**	Pn	**Pn**	**09 36 48.0**	**+0.1**
NVAR	**Mina Array Bea**	**7.69**	**124**	Pn	**Pn**	**09 36 56.8**	**+2.4**
	comp=E,0.1nm,0.3s,baz=302,slow=14,SNR=5.2						
	comp=E,0.4nm,0.6s						
PLID	**Pearl Lake**	**7.74**	**71**	Pn	**Pn**	**09 36 56.3**	**+1.1**
NEW	**Newport**	**8.30**	**48**	Pn	**Pn**	**09 37 06.1**	**+3.4**
	comp=E,0.3nm,0.3s,baz=260,slow=12,SNR=3.0						
NEW				LR	LR	09 40 29.6	
	comp=E,48nm,18.4s,baz=248,slow=42						
	comp=E,0.7nm,0.4s						
BBB	**Bella Bella**	**9.19**	**353**	LR	LR	09 40 03.6	
	comp=E,44nm,20.5s,baz=181,slow=31						
PDAR	**Pinedale Array**	**12.34**	**86**	Pn	**Pn**	**09 37 59.8**	**+1.6**
	comp=E,0.1nm,0.3s,baz=279,slow=9.9,SNR=5.8						
PDAR				LR	LR	09 43 13.5	
	comp=E,46nm,20.0s,baz=279,slow=42						
	comp=E,0.7nm,0.8s						
ANMO	**Albuquerque**	**17.46**	**111**	Pn	**P**	**09 39 08.1**	**+1.0**
	comp=E,0.1nm,0.3s,baz=307,slow=13,SNR=5.9						
	comp=E,0.8nm,0.7s						
TXAR	**Lajitas Array**	**22.80**	**120**	P	**P**	**09 40 09.1**	**+3.9**
	comp=E,0.3nm,0.8s,baz=300,slow=8.5,SNR=4.8						
	comp=E,0.3nm,0.8s						

IDC 08 09:51:13.7±2.8, 53.°78N×86.°84E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=26.0km s-min=14.6km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**279**	*i*		09 56 40.0	
	baz=97,slow=314,SNR=5.0						
ZALV	**Zalesovo Beam**	**1.21**	**279**	Pg	Pb	09 51 37.5	+0.1
	0.6nm,0.3s,baz=96,slow=18,SNR=14						
ZALV				Lg	Lg	09 51 52.3	
	1.5nm,0.3s,baz=96,slow=27,SNR=9.4						
KURBB	**Kurchatov Arra**	**6.01**	**242**	Pn	Pn	09 52 44.9	+1.2
	baz=60,slow=15,SNR=2.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**7.58**	**204**	Pn	Pn	09 53 06.1	+0.8
	0.1nm,0.3s,baz=24,slow=13,SNR=8.5						
	0.2nm,0.2s						

GUC 08 09:57:53.9±0.6, 23.°22S×68.°42W, h121km±3km, ML3.5, 8C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.34**	**40**	*i*↓P	Pn	09 58 10.8	-0.7
AF01				*i* S	Sn	09 58 23.5	-1.2
LVC	**Limon Verde**	**0.75**	**323**	*i*↑P	Pn	09 58 13.9	-0.3
LVC				*i* S	Sn	09 58 28.6	-0.8
PB15	**IPOC Station P**	**0.97**	**270**	*i*↑P	Pn	09 58 15.9	0.0
PB15				*i* S	Sn	09 58 32.5	0.0
PB06	**IPOC Station P**	**1.18**	**295**	*i*↑P	Pn	09 58 18.0	0.0
PB06				*i* S	Sn	09 58 35.7	-0.4
PB06				IAML		09 58 37.6	
	comp=N,1μm,0.3s						
PB09	**IPOC Station P**	**1.60**	**332**	*e*P	Pn	09 58 23.3	+0.5
PB09				*e*S	Sn	09 58 44.9	+0.2
PB04	**IPOC Station P**	**1.82**	**298**	*i*↑P	Pn	09 58 25.2	-0.1
PB04				*i* S	Sn	09 58 48.8	-0.6
PB04				IAML		09 58 55.5	
	comp=E,338nm,0.1s						
PB07	**IPOC Station P**	**2.01**	**317**	*i*↑P	Pn	09 58 27.8	+0.1
PB07				*i* S	Sn	09 58 52.6	-0.9
PB07				IAML		09 58 56.4	
	comp=N,318nm,0.3s						
GO02	**Mina Guanaco**	**2.21**	**209**	*i*↑P	Pn	09 58 30.8	+0.5
GO02				*i* S	Sn	09 58 59.0	+0.7
PB14	**IPOC Station P**	**2.29**	**232**	*e*P	Pn	09 58 31.3	-0.1
PB02	**IPOC Station P**	**2.33**	**324**	*i*↑P	Pn	09 58 31.6	0.0
PB02				*e*S	Sn	09 58 59.2	-1.4
PB02				IAML		09 59 05.2	
	comp=E,354nm,0.3s						
PATCX	**Punta Patache**	**2.87**	**326**	*e*P	Pn	09 58 38.5	-0.1
PATCX				*e*S	Sn	09 59 07.6	-5.5
PATCX				IAML		09 59 16.9	
	comp=N,92nm,0.7s						
AC01	**Pan de Azucar**	**3.53**	**214**	*e*P	Pn	09 58 46.2	-0.9
AC01				*e*S	Sn	09 59 25.7	-2.7
GO01	**Chusmiza**	**3.60**	**348**	*e*P	Pn	09 58 48.6	-0.1
GO01				*i* S	Sn	09 59 30.9	0.0
AC02	**Maricunga**	**3.66**	**190**	*i*↑P	Pn	09 58 50.1	+0.7
AC02				*e*S	Sn	09 59 34.8	+2.5
GO03	**Copiap**	**4.66**	**200**	*e*P	Pn	09 59 00.7	-1.7
GO03				*e*S	Sn	09 59 53.8	-1.7
PB12	**IPOC Station P**	**4.91**	**338**	*e*P	Pn	09 59 04.3	-1.6
PB12				*e*S	Sn	09 59 55.9	-5.9
PB16	**IPOC Station P**	**4.96**	**348**	*e*P	Pn	09 59 07.6	+0.7
PB16				*e*S	Sn	10 00 02.8	-0.8
AC04	**Llanos de Chal**	**5.51**	**205**	*e*P	Pn	09 59 10.8	-2.9
AC04				*e*S	Sn	10 00 11.0	-5.1

*IDC **08** 10:00:29.9±1.1, 27.°69N×66.°08E, h0km, mb3.6/6, mbtmp3.6/7, ML3.5/1, MS3.1/1, Error ellipse: s-maj=29.4km s-min=24.8km az=137.0*

ISC 08 10:00:33.5±1.1, 27.°6N±0.°2×65.°9E±0.°2, h25km, n8, σ2°11/8, mb3.6/6, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**7.85**	**238**	Pn	**Pn**	**10 02 27.6**	**+1.5**
	0.7nm,0.3s,baz=93,slow=4.5,SNR=11						
WSAR				Sn	**Sn**	**10 03 51.0**	**-3.3**
	0.6nm,0.3s,baz=287,slow=11,SNR=2.9						
	3.2nm,0.6s						
MKAR	**Makanchi Array**	**23.10**	**30**	P	**P**	**10 05 35.9**	**-1.5**
	0.5nm,0.6s,baz=214,slow=4.9,SNR=3.0						
	0.5nm,0.6s						
AKTO	**Aktyubinsk**	**23.56**	**347**	P	**P**	**10 05 42.3**	**+0.4**
	0.7nm,0.5s,baz=153,slow=11,SNR=2.4						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**24.92**	**19**	P	**P**	**10 05 52.5**	**-1.9**
	0.5nm,0.5s,baz=212,slow=8.8,SNR=3.7						
	0.5nm,0.5s						
MMAI	**Mount Meron Ar**	**26.78**	**289**	LR	LR	10 19 13.5	
	comp=Z,37nm,19.0s,baz=28,slow=42						
TORD	**Torodi Ar. Bea**	**61.26**	**270**	P	**P**	**10 10 48.7**	**+1.8**
	0.7nm,0.6s,baz=59,slow=6.0,SNR=8.9						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**81.38**	**118**	P	**P**	**10 12 48.4**	**-0.1**
	0.9nm,0.9s,baz=314,slow=5.3,SNR=3.9						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**83.10**	**121**	P	**P**	**10 12 57.4**	**0.0**
	0.4nm,0.5s,baz=300,slow=5.4,SNR=6.9						
	0.4nm,0.5s						

*IDC **08** 10:11:18.5±1.4, 26.°77N×128.°23E, h0km, mb4.0/10, mbtmp3.9/11, ML3.5/1, MS3.1/6, Error ellipse: s-maj=76.5km s-min=19.6km az=69.0*

*JMA **08** 10:11:23.5±0.1, 26.°8N±0.°3×128.°4E±0.°4, h31km, MD4.0/10, MV4.0/10, NEAR OKINAWAJIMA ISLAND*

JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .

*NIED **08** 10:11:23.5, 26.°80N×128.°42E, h31km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.04; $M_{\theta\theta}$-0.45; $M_{\phi\phi}$-0.60; $M_{r\theta}$-0.13; $M_{\theta\phi}$-0.69; $M_{\phi r}$-0.18; Fault plane solution: $M_0$1.15000×10^{15} NP1: ϕ_s43.00000°, δ39.00000°, λ92.00000°. NP2:ϕ_s221.00000°, δ51.00000°, λ88.00000°.*

ISC 08 10:11:23.1±1.1, 26.°81N±0.°05×128.°44E±0.°07, h32km±7km, n37, σ0°68/27, mb3.9/10, MS3.1/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**0.15**	**280**	P	**Pn**	**10 11 29.2**	**0.0**
JOW				S	**Sb**	**10 11 33.1**	**0.0**
JOW	**Kunigami**	**0.15**	**280**	A	A	10 11 29.2	
	comp=E,131nm,0.3s,comp=E,114nm,0.6s						
JYRO	**Yoronjima**	**0.22**	**3**	P	**Pn**	**10 11 29.9**	**-0.2**
JYRO				S	**Sn**	**10 11 34.7**	**+0.1**
JYRO	**Yoronjima**	**0.22**	**3**	A	A	10 11 29.9	
	comp=E,63nm,0.3s,comp=E,38nm,0.3s						
JNTH	**Nagotoyohara**	**0.47**	**232**	P	**Pb**	**10 11 32.9**	**-0.2**
JNTH				S	**Sb**	**10 11 39.6**	**-0.4**
JNTH	**Nagotoyohara**	**0.47**	**232**	A	A	10 11 32.9	
	comp=E,13nm,1.0s,comp=E,16nm,1.5s						
JIH	**Iheya**	**0.48**	**299**	P	**Pb**	**10 11 33.3**	**0.0**
JIH				S	**Sb**	**10 11 40.4**	**+0.2**
JIH	**Iheya**	**0.48**	**299**	A	A	10 11 33.3	
	comp=E,17nm,0.3s,comp=E,9.0nm,1.4s						
JOKE	**Okinoerabujima**	**0.56**	**12**	P	**Pn**	**10 11 34.9**	**-0.1**
JOKE				S	**Sb**	**10 11 42.9**	**+0.2**
JOKE	**Okinoerabujima**	**0.56**	**12**	A	A	10 11 34.9	
	comp=E,12nm,0.3s,comp=E,7.0nm,0.2s						
JJT3	**Tamagusuku3**	**0.88**	**222**	P	**Pn**	**10 11 40.2**	**+0.9**
JJT3				*e*S	**Sn**	**10 11 51.5**	**+0.5**
JJT3	**Tamagusuku3**	**0.88**	**222**	A	A	10 11 40.2	
	comp=E,15nm,2.0s,comp=E,14nm,1.2s						
JTK	**Tokunoshima**	**1.08**	**25**	P	**Pn**	**10 11 42.7**	**+0.7**
JTK				S	**Sb**	**10 11 57.5**	**+0.5**
JTK	**Tokunoshima**	**1.08**	**25**	A	A	10 11 42.7	
	comp=E,3.0nm,0.8s,comp=E,3.0nm,0.6s						
JAGN	**Aguni-jima**	**1.09**	**259**	P	**Pn**	**10 11 42.5**	**+0.4**
JAGN				S	**Sn**	**10 11 56.8**	**+0.6**
JAGN	**Aguni-jima**	**1.09**	**259**	A	A	10 11 42.5	
	comp=E,5.0nm,2.2s,comp=E,9.0nm,1.0s						
KSRS	**Korea Array**	**10.62**	**358**	Pn	**Pn**	**10 13 54.4**	**+1.3**
	0.3nm,0.3s,baz=174,slow=12,SNR=2.4						
KSRS				LR	LR	10 18 21.9	
	comp=Z,76nm,18.5s,baz=170,slow=40						
	2.9nm,1.0s						
DAV	**Davao City (W)**	**19.82**	**188**	LR	LR	10 23 29.9	
	comp=Z,35nm,20.8s,baz=332,slow=37						
GUMO	**Guam**	**20.23**	**127**	LR	LR	10 22 31.9	
	comp=Z,35nm,20.0s,baz=244,slow=33						
SONM	**Songino Array**	**27.17**	**326**	P	**P**	**10 17 05.0**	**+1.3**
	1.1nm,0.7s,baz=145,slow=12,SNR=4.0						
SONM				LR	LR	10 28 52.2	
	comp=Z,68nm,18.9s,baz=140,slow=39						
	1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.41**	**259**	LR	LR	10 28 33.4	
	comp=Z,29nm,18.9s,baz=270,slow=37						
H11N2	**WAKE ISLAND Hy**	**35.92**	**93**	T	T	10 56 25.1	
	baz=290,slow=74,SNR=19						
H11N1	**WAKE ISLAND Hy**	**35.92**	**93**	T	T	10 56 30.1	
	baz=290,slow=74,SNR=18						
H11N3	**WAKE ISLAND Hy**	**35.94**	**93**	T	T	10 56 34.2	
	baz=290,slow=74,SNR=21						
H11S3	**WAKE ISLAND Hy**	**36.15**	**95**	T	T	10 56 44.5	
	baz=290,slow=74,SNR=20						
H11S1	**WAKE ISLAND Hy**	**36.15**	**95**	T	T	10 56 40.6	
	baz=290,slow=74,SNR=16						
H11S2	**WAKE ISLAND Hy**	**36.16**	**95**	T	T	10 56 40.8	
	baz=290,slow=74,SNR=17						
MKAR	**Makanchi Array**	**41.29**	**311**	P	**P**	**10 19 05.1**	**-0.4**
	1.3nm,0.6s,baz=93,slow=9.7,SNR=14						
	1.3nm,0.6s						
ZALV	**Z

SEUS	St. Eustatius	1.01 274			Pn	10 16 14.6	+0.8
SEUS	St. Eustatius	1.01 274	eP		Pn	10 16 14.2	+0.4
SEUS			eS		Sn	10 16 27.5	+0.1
ABD	La Joyeuse, An	1.03 156			Pn	10 16 14.0	0.0
ABD	La Joyeuse, An	1.03 156	⇓iP		Pn	10 16 14.1	0.0
ABD			eS		Sn	10 16 28.3	+0.6
GDHS	Morne Mazeau,	1.15 173			Pn	10 16 15.8	+0.1
SMRT	St. Maarten	1.27 300			Pn	10 16 17.5	+0.4
SMRT	St. Maarten	1.27 300	⇓iP		Pn	10 16 17.4	+0.4
SMRT			eS		Sn	10 16 33.2	-0.1
GDSD	La Dsirade Is	1.37 143			Pn	10 16 18.8	+0.3
CBE	Ff, Capester	1.38 167			Pn	10 16 19.0	+0.3
CBE	Ff, Capester	1.38 167	⇓iP		Pn	10 16 19.1	+0.4
CBE			eS		Sn	10 16 37.0	+1.0
TBG	Guadaloupe-3	1.58 170	eP		Pn	10 16 21.9	+0.6
MAGL	Barre de l'ile	1.59 157			Pn	10 16 21.9	+0.4
MAGL	Barre de l'ile	1.59 157	⇓iP		Pn	10 16 21.8	+0.4
MAGL			eS		Sn	10 16 41.6	+0.7
TDBA	Terre de Bas,	1.59 170			Pn	10 16 22.2	+0.8
TDBA	Terre de Bas,	1.59 170	eP		Pn	10 16 22.1	+0.8
TDBA			eS		Sn	10 16 42.4	+1.4
MDCT	Cottage Hill,	1.85 166	eP		Pn	10 16 26.9	+2.0
MDCT			eS		Sn	10 16 48.7	+1.4
MDVC	Dominica, Viel	1.86 165	eP		Pn	10 16 25.7	+0.5
MDVC			eS		Sn	10 16 49.1	+1.4
DSLB	Salisbury	2.03 166	⇓iP		Pn	10 16 28.2	+0.7
DSLB			eS		Sn	10 16 52.6	+0.8
MDN	Morne-Daniel	2.15 166	⇓iP		Pn	10 16 29.9	+0.8
MDN			eS		Sn	10 16 55.5	+0.9
DLPL	La Plaine	2.18 163			Pn	10 16 29.8	+0.4
DLPL	La Plaine	2.18 163	eP		Pn	10 16 29.6	+0.2
DLPL			eS		Sn	10 16 55.7	+0.4
SVN	Savane Anatole	2.67 164			Pn	10 16 36.6	+0.5
SVN	Savane Anatole	2.67 164	eP		Pn	10 16 37.0	+0.8
PCM	Pelee Case Pet	2.68 165	eP		Pn	10 16 37.2	+0.9
PCM	Pelee Case Pet	2.68 165	eP		Pn	10 16 38.1	+1.8
CXM	Morne La Croix	2.69 164	eP		Pn	10 16 37.0	+0.4
BAMF	Morne Balai	2.70 164	eP		Pn	10 16 37.3	+0.7
GBMF	Grand Be	2.71 164	eP		Pn	10 16 37.3	+0.5
PML	Morne Lenard	2.72 165	eP		Pn	10 16 37.5	+0.7
CDVI	St. Croix	2.73 277			Pn	10 16 37.8	+0.8
FDF	Fort de France	2.77 164			Pn	10 16 37.8	+0.2
FDF	Fort de France	2.77 164	eP		Pn	10 16 37.8	+0.2
FDF			eS		Sn	10 17 09.4	-0.6
ILAM	Ilet Lapin Mar	2.82 159			Pn	10 16 38.0	-0.1
ILAM	Ilet Lapin Mar	2.82 159	eP		Pn	10 16 38.1	0.0
ILAM			eS		Sn	10 17 10.5	-0.4
ZAM	Aeronautique	2.96 163	eP		Pn	10 16 40.2	+0.1
LPMF	Morne Lapointe	2.98 162	eP		Pn	10 16 40.1	-0.2
TRMF	Trois Ilets	2.98 164	eP		Pn	10 16 40.9	+0.5
BIM	Bigot	3.00 164			Pn	10 16 41.4	+0.8
BIM	Bigot	3.00 164	eP		Pn	10 16 41.5	+0.8
BIM			eS		Sn	10 17 15.2	-0.3
MVM	Montagne Vaucl	3.02 161	eP		Pn	10 16 41.1	+0.2
STVI	Saint Thomas	3.03 288			Pn	10 16 41.2	+0.1
MPOM	Morne Pois Mar	3.13 161			Pn	10 16 42.5	+0.1
MPOM	Morne Pois Mar	3.13 161	eP		Pn	10 16 42.4	0.0
MPOM			eS		Sn	10 17 17.8	-0.9
CUPR	Culebra, Puert	3.32 286			Pn	10 16 45.5	+0.5
SLCP	Castries, St.	3.51 165	eP		Pn	10 16 48.4	+0.8
SLCP			eS		Sn	10 17 28.3	+0.4
SLW	Petit Monier	3.51 164	eP		Pn	10 16 49.3	+1.6
SLB	Belfond	3.67 167	eP		Pn	10 16 51.7	+1.8
MCLT	Moule a Chique	3.81 166	Pn		Pn	10 16 52.3	+0.6
MCLT	Moule a Chique	3.81 166	eP		Pn	10 16 52.6	+0.9
MCLT			eS		Sn	10 17 34.8	-0.5
CBPP	Canovanas	3.84 283			Pn	10 16 52.9	+0.7
GCPR	Guaynabo City	4.06 283			Pn	10 16 55.8	+0.6
SJG	San Juan	4.09 280	P		Pn	10 16 56.6	+1.1
	54nm,0.3s,baz=98,slow=12,SNR=134						
SJG			S		Sn	10 17 41.7	-0.3
	234nm,0.5s,baz=202,slow=20,SNR=14						
SJG			LR	LR		10 18 52.4	
	comp=Z,89nm,21.4s,baz=86,slow=44						
SVB	Belmont	4.18 171	eP		Pn	10 16 57.4	+0.6
ICMP	Isla Caja de M	4.42 277			Pn	10 17 00.7	+0.7
BBGH	Gun Hill	4.83 151	eP		Pn	10 17 07.0	+1.4
MLPR	Magueyes Islan	4.91 277			Pn	10 17 06.1	-0.7
GCMP	Grenada, Carri	4.93 174	eP		Pn	10 17 07.2	+0.1
CRPR	Cabo Rojo, PR	4.98 277			Pn	10 17 07.9	+0.2
PRSN	Puerto Rico Se	5.04 280			Pn	10 17 09.7	+1.2
AGPR	Aguadilla, PR	5.05 283			Pn	10 17 09.8	+1.2
GRGR	Grenville	5.26 177	Pn		Pn	10 17 11.9	+0.2
GRGR	Grenville	5.26 177	eP		Pn	10 17 12.1	+0.4
GRFF	Grenada Fort F	5.34 178	eP		Pn	10 17 13.3	+0.6
TOSP	Speyside	6.23 167	eP		Pn	10 17 25.8	+0.8
DR12	Loma Pena Alta	7.22 282			Pn	10 17 39.7	+1.2
BIRV	Birongo	8.09 212	Pn		Pn	10 17 49.6	-0.8
SC01	Santiago de lo	8.59 285	Pn		Pn	10 17 56.4	-0.8
SDDR	Presa de Saban	9.04 281	Pn		Pn	10 18 02.8	-0.5
BAUV	El Baul	10.32 216	Pn		Pn	10 18 20.7	-0.2
SOCV	Socops	12.58 225	eP		P	10 19 09.9	+8.7
SJCC	San Jacinto, C	14.89 242	eP		P	10 19 27.1	+0.2
MDP	Montagnes des	15.25 142	P		Pn	10 19 23.8	-3.3
	2.0nm,0.5s,baz=71,slow=17,SNR=1.8						
MDP			S		Sn	10 21 57.0	-18
	3.4nm,0.8s,baz=346,slow=8.3,SNR=1.9						
NORC	Norcasia	17.30 229	eP		Pn	10 19 52.6	-0.4
HELC	Santa Helena	17.36 232	eP		Pn	10 19 53.4	-0.7
GUY2C	Guyana, Caldas	17.89 229	eP		Pn	10 20 03.3	+2.6
CBOC	Ciudad Bolivar	17.94 232	eP		Pn	10 20 05.8	+4.8
PRAC	Prado	18.64 224	eP		P	10 20 05.8	-2.6
PLMC	San Jos del P	18.77 230	eP		P	10 20 09.9	0.0
MACC	Macarena, Meta	19.18 219	eP		P	10 20 13.2	-1.1
BCIP	Isla Barro Col	19.26 247	P		P	10 20 15.6	+0.5
BCIP	Isla Barro Col	19.26 247	eP		P	10 20 15.6	+0.5
GARC	Garzon, Huila	20.17 223	eP		Pn	10 20 27.9	+0.2
SOR	Soroa	20.50 289	P		Pn	10 20 30.0	-1.3
BBAC	Balboa, Cauca	21.47 226	eP		P	10 20 38.6	-0.6
TKL	Tuckaleechee C	26.58 317	LR	LR		10 33 29.7	
	comp=Z,22nm,18.0s,baz=148,slow=40						
CZSB	Cruzeiro do Su	27.17 204	P		P	10 21 32.6	-0.7
CZSB			IAmb	IAmb		10 21 34.8	
	comp=Z,11nm,0.5s						
OXF	Oxford	29.86 310	P		P	10 21 57.8	+0.6
SADO	Sadowa	30.86 336	LR	LR		10 35 51.8	
	comp=Z,17nm,18.2s,baz=6.0,slow=39						
LPAZ	La Paz	34.05 191	P		P	10 22 34.5	-0.2
	comp=Z,0.4nm,0.5s,baz=22,slow=25,SNR=1.9						
	comp=Z,0.4nm,0.5s						
OK031	S. Brethren Rd	35.99 308	P		P	10 22 50.7	+0.1
T35A	Sooner Cattle	36.11 309	P		P	10 22 51.7	+0.1
T35A			IAmb	IAmb		10 22 52.4	
	comp=Z,11nm,1.0s						
TXAR	Lajitas Array	39.91 295	P		P	10 23 23.4	-0.4
	comp=Z,0.2nm,0.4s,baz=131,slow=7.7,SNR=12						
	comp=Z,0.2nm,0.4s						
SDCO	Great Sand Dun	43.14 307	P		P	10 23 50.0	-0.3
BNM	Barren Site	43.20 302	P		P	10 23 51.5	+0.6
CPUP	Villa Florida	43.72 174	P		P	10 23 53.5	-1.2
	comp=Z,0.7nm,0.4s,baz=360,slow=8.4,SNR=3.7						
	comp=Z,0.7nm,0.4s						
BW06	Boulder Array	47.54 312	P		P	10 24 25.2	+0.1
BW06			IAmb	IAmb		10 24 42.3	
	comp=Z,2.3nm,0.7s						
PD31	Pinedale Array	47.54 312	P		P	10 24 25.2	+0.2
PDAR	Pinedale Array	47.54 312	P		P	10 24 25.3	+0.2
	comp=Z,1.8nm,0.7s,baz=116,slow=9.2,SNR=23						
	comp=Z,1.8nm,0.7s						
PDAR	Pinedale Array	47.54 312	P		P	10 24 24.9	-0.2
JLU	Jordanelle	48.34 309	IAmb	IAmb		10 24 32.9	
	comp=Z,3.6nm,0.8s						
HWUT	Hardware Ranch	48.66 310	P		P	10 24 33.9	+0.2
HWUT			IAmb	IAmb		10 24 34.7	
	comp=Z,3.1nm,0.8s						
HWUT					pP	10 24 49.6	0.0
HVU	Hansel Valley	49.59 310	P		P	10 24 40.9	+0.2
HVU			IAmb	IAmb		10 24 41.8	
	comp=Z,2.9nm,0.7s						
PRN	Pahroc Range	50.49 304	P		P	10 24 46.8	-0.8
PRN			IAmb	IAmb		10 24 48.8	
	comp=Z,5.4nm,1.4s						
H10N3	ASCENSION HYDR	53.15 114	T	T		11 22 23.9	
	baz=299,slow=75,SNR=231						
H10N2	ASCENSION HYDR	53.16 114	T	T		11 22 24.3	
	baz=299,slow=75,SNR=200						
H10N1	ASCENSION HYDR	53.17 114	T	T		11 22 25.4	
	baz=299,slow=75,SNR=244						
H10S3	ASCENSION HYDR	53.55 116	T	T		11 22 52.8	
	baz=293,slow=74,SNR=80						
H10S2	ASCENSION HYDR	53.57 116	T	T		11 22 57.6	
	baz=287,slow=74,SNR=12						

ESDC	Sonseca Array	54.54	53	P	P	10 25 17.2	-0.2
	comp=Z,0.5nm,0.6s,baz=256,slow=5.4,SNR=4.2						
	comp=Z,0.5nm,0.6s						
I07A	Izee	54.89	312	IAmb	IAmb	10 25 21.1	
	comp=Z,2.7nm,0.8s						
DBIC	Dimbokro	56.64	93	P	P	10 25 32.8	0.0
	comp=Z,4.0nm,0.6s,baz=280,slow=8.0,SNR=7.3						
DBIC				LR	LR	10 47 22.2	
	comp=Z,21nm,19.3s,baz=182,slow=33						
	comp=Z,4.0nm,0.6s						
YKA	Yellowknife Ar	57.84	334	P	P	10 25 40.2	-0.3
	comp=Z,1.2nm,0.6s,baz=97,slow=7.2,SNR=5.1						
	comp=Z,1.2nm,0.6s						
TORD	Torodi Ar. Bea	61.28	84	P	P	10 26 05.0	0.0
	comp=Z,1.8nm,0.7s,baz=291,slow=6.5,SNR=9.6						
	comp=Z,1.8nm,0.7s						
ILAR	Eielson Array	72.26	333	P	P	10 27 14.1	+0.2
	comp=Z,0.3nm,0.7s,baz=76,slow=3.8,SNR=2.4						
	comp=Z,0.3nm,0.7s						
ARCES	ARCESS Array B	72.92	22	P	P	10 27 18.8	+1.0
	comp=Z,1.7nm,0.8s,baz=289,slow=3.7,SNR=5.0						
	comp=Z,1.7nm,0.8s						
FINES	FINESS Array B	73.92	30	P	P	10 27 24.8	+1.0
	comp=Z,1.4nm,0.6s,baz=254,slow=4.8,SNR=7.7						
	comp=Z,1.4nm,0.6s						

*INET **08** 10:48:44.9±1.1,9.°49N×83.°71W,h4km±3km,ML3.2*
*UPA **08** 10:48:45.5±1.0,9.°46N×83.°74W,h10km±4km,MW3.2*
ISC 08 10:48:45.1±1.0,**9.°42N**±0.°07×**83.°72W**±0.°06,**h17**km±4km,
n16,σ0**s75**/31,**1C**,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PEZE	Perez Zeledon,	0.05	136	eP	Pb		10 48 48.6	+0.3
PEZE				eS	Sg		10 48 50.6	+0.2
PEZE				IAML			10 48 51.4	
	comp=N,23μm,0.2s							
CDM	Cerro de Muert	0.14	340	eP	Pg		10 48 49.3	-0.2
CDM				eS	Sg		10 48 51.6	-0.8
CDM				IAML			10 48 53.3	
	comp=N,14μm,0.3s							
RIMA	Rio Macho	0.37	337	eP	Pg		10 48 52.8	-0.1
RIMA				eS	Sg		10 48 57.8	-0.4
RIMA				IAML			10 48 58.3	
	comp=E,4μm,0.2s							
DRK0	Durika	0.49	109	⇑iP	Pb		10 48 55.6	+0.2
DRK0				eS	Sg		10 49 02.1	+0.5
HDC3	Heredia 3	0.70	326	eP	Pb		10 48 59.0	+0.1
HDC3				eS	Sg		10 49 08.6	+0.5
HDC3				IAML			10 49 09.6	
	comp=N,558nm,0.2s							
HDC	Heredia	0.70	326	eP	Pb		10 48 59.1	+0.3
HDC				eS	Sg		10 49 08.8	+0.7
MLIR3	Monte Lirio, C	1.08	125	eP	Pg		10 49 06.3	+0.3
MLIR3				eS	Sn		10 49 22.4	+2.2
CDITO	Canoas	1.19	135	eP	Pg		10 49 07.4	-0.6
CDITO				eS	Sg		10 49 23.6	+0.1
BRU2	Volcan	1.19	122	eP	Pg		10 49 07.4	-0.7
BRU2				eS	Sg		10 49 25.1	+1.4
CNI2	El Empalme, Bo	1.23	90	eP	Pn		10 49 07.2	-0.3
CNI2				eS	Sn		10 49 23.3	-0.4
BCO2	Palmira	1.36	121	eP	Pg		10 49 11.1	-0.4
BCO2				eS	Sg		10 49 29.5	+0.3
PTAR3	Potrerillos Ar	1.41	121	eP	Pg		10 49 10.8	-1.4
PTAR3				eS	Sg		10 49 30.2	-0.3
JTS	Las Juntas de	1.49	305	eP	Pg		10 49 13.0	-0.8
JTS				eS	Sg		10 49 33.4	0.0
DVD	David	1.59	128	eS	Sg		10 49 35.6	-0.7
CHGR2	Aguacate	1.62	107	eP	Pb		10 49 14.2	-0.4
CHGR2				eS	Sb		10 49 35.5	+0.6
CHIR3	Chiriqui UPA,	1.71	127	eP	Pb		10 49 15.1	-0.9
CHIR3				eS	Sb		10 49 37.7	+0.4

IDC 08 10:49:15.5±2.8,**6.°33S**×**129.°55E**,**h172**km±40km,**mb3.1**/1,
mbtmp3.4/5,**Error ellipse: s-maj=66.1km s-min=20.5km az=88.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SIJI	Sorong	5.69	18	P	Pn		10 50 38.5	+0.1
	2.2nm,0.3s,baz=211,slow=22,SNR=9.4							
SIJI				S	Sn		10 51 38.0	-5.6
	17nm,0.2s,baz=199,slow=23,SNR=11							
FITZ	Fitzroy Crossi	12.30	198	P	Pn		10 52 05.6	+0.5
	2.5nm,1.2s,baz=27,slow=13,SNR=1.5							
FITZ				S	Sn		10 54 13.4	-8.2
	2.3nm,0.7s,baz=273,slow=19,SNR=2.8							
WRA	Warramunga Arr	14.31	161	P	Pn		10 52 29.3	-1.2
	0.3nm,0.7s,baz=345,slow=14,SNR=28							
WRA				S	Sn		10 55 01.5	-8.4
	0.6nm,0.5s,baz=340,slow=21,SNR=7.5							
ASAR	Alice Springs	17.74	167	P	P		10 53 10.8	+0.4
	0.4nm,0.9s,baz=349,slow=11,SNR=7.4							
MKAR	Makanchi Array	67.42	327	P	P		10 59 52.5	0.0
	0.2nm,0.4s,baz=109,slow=7.5,SNR=2.7							
	0.2nm,0.4s							

IDC 08 11:08:47.9±59.0,**12.°37S**×**165.°40E**,**h0**km,**mb3.8**/3,
mbtmp3.8/3,**MS3.5**/1,**Error ellipse: s-maj=996.5km s-min=113.6km az=61.0**,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
STKA	Stephens Creek	29.27	225	P	P		11 14 51.7	-0.2
	1.4nm,0.9s,baz=73,slow=11,SNR=2.8							
	1.4nm,0.9s							
WRA	Warramunga Arr	30.74	252	P	P		11 15 05.2	+0.1
	0.4nm,0.6s,baz=84,slow=8.6,SNR=7.1							
	0.4nm,0.6s							
ASAR	Alice Springs	31.92	245	P	P		11 15 15.6	0.0
	1.4nm,0.7s,baz=68,slow=9.9,SNR=30							
	1.4nm,0.7s							
RAR	Rarotonga	34.41	109	LR	LR		11 27 57.2	
	comp=Z,74nm,18.1s,baz=254,slow=33							

IDC 08 11:17:05.8±2.5,**25.°37N**×**100.°32E**,**h0**km,**mb3.8**/4,
mbtmp3.8/4,**Error ellipse: s-maj=488.4km s-min=21.6km az=57.0**,**Yunnan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MKAR	Makanchi Array	25.76	331	P	P		11 22 39.5	+1.3
	1.7nm,0.8s,baz=126,slow=9.7,SNR=6.9							
	1.7nm,0.8s							
KURBB	Kurchatov Arra	30.28	332	P	P		11 23 17.0	-1.6
	0.6nm,0.8s,baz=123,slow=10,SNR=4.0							
	0.6nm,0.8s							
WRA	Warramunga Arr	55.88	141	P	P		11 26 44.4	-1.1
	1.7nm,1.0s,baz=318,slow=12,SNR=10							
	1.7nm,1.0s							
ASAR	Alice Springs	58.60	144	P	P		11 27 05.8	+1.0
	0.8nm,0.7s,baz=325,slow=6.4,SNR=8.7							
	0.8nm,0.7s							

*IDC **08** 11:19:04.4±1.8,39.°54N×67.°72E,h0km,mb3.4/2,*
mbtmp3.7/8,ML3.5/6,MS3.3/1,Error ellipse: s-maj=34.8km s-min=14.0km az=166.0
*ISU **08** 11:19:09,39.°89N×67.°66E,h5km*
*NNC **08** 11:19:09.0±4.7,40.°06N×67.°53E,h12km±20km,mb4.4,*
mpv4.2,Error ellipse: s-maj=31.9km s-min=18.3km az=26.0
*SOME **08** 11:19:09.1,39.°43N×69.°07E,h15km*
ISC 08 11:19:07.6±0.9,**39.°90N**±0.°03×**67.°72E**±0.°03,**h11**km±7km,
n45,σ2**s18**/53,**7C-3D**,**Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DZI	Dzhizak	0.23	19	P	Pg		11 19 13.9	+1.5
DZI				S	Sg		11 19 17.8	+2.1
BXML	Bakhmal	0.32	132	P	Pg		11 19 11.9	-2.2
BXML				S	Sg		11 19 14.7	-3.8
SAM	Samarkand	0.61	248	P	Pb		11 19 21.1	+0.8
SAM				S	Sb		11 19 29.7	+0.9
AGL	Agalyk	0.76	240	P	Pb		11 19 23.1	+0.3
AGL				S	Sb		11 19 33.4	+0.3
NZBK	Nazarbek	1.69	38	P	Pg		11 19 41.5	+1.4
NUT	Nurota	1.69	293	P	Pg		11 19 40.3	+0.2
PKMR	Pachkamar	1.71	218	P	Pg		11 19 40.6	+0.3
BAYS	Baysun	1.74	194	P	Pg		11 19 40.9	0.0
TAS	Tashkent	1.86	40	P	Pg		11 19 43.6	+0.4

BUXR	Bukhara	2.61	268	S	Sg		11 20 31.1	-0.2
IUG	Iuzhnay	2.84	37	eP	Pg		11 20 01.1	-1.0
IUG	2μm,0.5s							
IUG				eS	Sg		11 20 38.8	-0.1
	203nm,0.3s							
IUG	Iuzhnay	2.84	37	Pg	Pg		11 20 01.1	-1.0
	2μm,0.5s							
IUG				Lg	Lg		11 20 38.8	
	203nm,0.3s							
KK31	Karatay Array	3.82	32	⇑Pn	Pn		11 20 07.5	+1.1
	7.3nm,0.6s,baz=229,slow=14,SNR=254							
KK31				⇓Pg	Pg		11 20 18.1	-2.7
	16nm,0.4s,baz=213,slow=17,SNR=12							
KK31				⇑Lg	Lg		11 21 09.2	
	29nm,0.3s,baz=212,slow=29,SNR=7.2							
MRKS	Merke	5.02	54	eP	Pb		11 20 34.0	-1.5
	24nm,0.5s							
MRKS				eS	Sb		11 21 34.7	-1.2
	50nm,0.5s							
MRKS	Merke	5.02	54	Pg	Pb		11 20 34.0	-1.5
	24nm,0.5s							
MRKS				Lg	Lg		11 21 34.7	
	50nm,0.5s							
AML	Almayashu	5.04	62	P	Pn		11 20 24.4	+1.0
	SNR=49							
EKS2	Erkin-Say	5.33	57	P	Pn		11 20 30.0	+2.8
	SNR=8.6							
UCH	Uchtor	5.63	63	P	Pn		11 20 29.7	-1.9
	SNR=9.7							
AAK	Ala-Archa	5.79	60	Pn	Pn		11 20 34.6	+1.1
	2.9nm,0.3s,baz=196,slow=9.5,SNR=15							
	17nm,0.5s							
AAK	Ala-Archa	5.79	60	P	Pn		11 20 34.4	+0.9
	SNR=7.5							
USP	Ospenovka	6.09	54	P	Pn		11 20 38.1	+0.6
	SNR=6.6							
KBK	Karagaybulak	6.10	61	P	Pn		11 20 44.5	+6.7
	SNR=8.6							
CHMS	Chumysh	6.12	57	P	Pn		11 20 39.5	+1.6
	SNR=5.8							
CHMS	Chumysh	6.12	57	⇓Pn	Pn		11 20 39.1	+1.1
	8.2nm,0.6s							
SGDS	Sogindy	6.27	53	eP	Pb		11 20 56.3	-0.4
	7.9nm,0.5s							
SGDS				eS	Sb		11 22 12.3	+0.6
	18nm,0.4s							
SGDS	Sogindy	6.27	53	Pg	Pb		11 20 56.3	-0.4
	7.9nm,0.5s							
SGDS				Lg	Lg		11 22 12.3	
	18nm,0.4s							
TKM2	Tokmak 2	6.64	60	⇑Pn	Pn		11 20 46.5	+1.2
	8.4nm,0.6s							
ULHL	Ulahol	6.85	67	P	Pn		11 20 41.9	-6.2
	SNR=8.7							
CEP	Cherat	6.93	150	P	Pn		11 20 53.5	+4.3
CEP				S	Sn		11 22 16.0	+7.9
KST	Kastek	6.94	60	Pg	Pb		11 21 07.4	-0.8
	8.0nm,0.3s							
KST				Lg	Lg		11 22 31.7	
	48nm,0.6s							
KRBS	Karabastau	7.05	55	Pg	Pb		11 21 12.1	+2.1
	3.6nm,0.4s							
KRBS				Lg	Lg		11 22 39.9	
	13nm,0.5s							
MDOK	Medeo	7.72	62	⇑Pn	Pn		11 21 02.6	+2.7
	13nm,0.7s							
GEYT	Alibeck	7.74	258	Pn	Pn		11 20 58.5	-1.7
	1.7nm,0.3s,baz=87,slow=9.8,SNR=10							
GEYT				Sn	Sn		11 22 24.8	-3.2
	3.2nm,0.3s,baz=118,slow=18,SNR=4.7							
	3.8nm,0.3s							
OTUK	Ortayu	8.97	20	⇓Pn	Pn		11 21 19.1	+2.1
	4.3nm,0.5s							
AB31	Akbulak array	10.87	332	Pn	Pn		11 21 41.2	-1.7
	0.5nm,0.2s,baz=166,slow=12,SNR=73							
AB31				⇑Sn	Sn		11 23 38.8	-5.6
	2.4nm,0.6s,baz=158,slow=23,SNR=3.7							
AKTO	Aktyubinsk	12.55	330	Pn	Pn		11 22 05.7	-0.3
	0.6nm,0.3s,baz=150,slow=15,SNR=8.3							
	1.6nm,0.3s							
AKTO	Aktyubinsk	12.55	330	⇑Pn	Pn		11 22 05.7	-0.3
	1.6nm,0.6s							
MK31	Makanchi Array	12.63	52	⇑Pn	Pn		11 22 10.9	+3.8
	2.5nm,0.8s,baz=120,slow=10,SNR=4.9							
MKAR	Makanchi Array	12.63	52	Pn	Pn		11 22 07.4	+0.3
	0.2nm,0.3s,baz=237,slow=14,SNR=8.8							
	0.6nm,0.5s							
KURBB	Kurchatov Arra	13.13	32	Pn	Pn		11 22 13.3	-0.5
	0.1nm,0.3s,baz=223,slow=12,SNR=2.2							
	0.1nm,0.3s							
BVA0	Borovoye Array	13.25	7	Pn	Pn		11 22 15.5	0.0
	4.3nm,1.0s,baz=186,slow=10.0,SNR=8.3							
ZALV	Zalesovo Beam	18.20	34	P	P		11 23 22.0	+1.8
	0.3nm,0.3s,baz=235,slow=12,SNR=11							
	2.2nm,0.5s							
NOA	NORSAR Array B	40.12	321	P	P		11 26 43.1	+0.2
	0.4nm,0.5s,baz=95,slow=8.3,SNR=1.6							
	2.4nm,0.5s							
MDT	Midelt	57.23	287	LR	LR		11 57 16.0	
	comp

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.13**	**279**	Pn	**Pn**	**11 50 13.7**	**-2.0**
RABL				Sn	**Sn**	**11 50 49.9**	**-2.4**
KRVT	**Keravat (AS076**	**3.25**	**277**	P	**Pn**	**11 50 15.6**	**-1.7**
	50nm,0.3s,baz=291,slow=0.3,SNR=53						
KRVT				S	**Sn**	**11 50 53.2**	**-1.9**
	405nm,0.5s,baz=256,slow=20,SNR=10						
KRVT				LR	LR	11 51 20.6	
	comp=Z,113nm,21.9s,baz=235,slow=35						
	127nm,0.4s						
HNR	**Honiara**	**6.60**	**135**	Pn	**Pn**	**11 51 01.9**	**-0.8**
HNR				Sn	**Sn**	**11 52 14.9**	**-1.6**
PMG	**Port Moresby**	**9.29**	**239**	LR	LR	11 55 09.6	
	comp=Z,84nm,18.8s,baz=70,slow=38						
PATS	**Pohnpei**	**11.87**	**15**	Pn	**Pn**	**11 52 12.4**	**-1.8**
FAKI	**Fak Fak**	**23.03**	**274**	P	**P**	**11 54 25.0**	**+0.1**
FAKI				IAmb	IAmb	11 54 33.9	
	comp=Z,17nm,1.0s						
SIJI	**Sorong**	**24.26**	**278**	P	**P**	**11 54 37.6**	**+1.4**
	comp=Z,5.4nm,0.5s,baz=76,slow=11,SNR=3.9						
	comp=Z,5.4nm,0.5s						
WR0	**Warramunga Arr**	**25.23**	**231**	P	**P**	**11 54 45.8**	**+0.8**
WR0				IAmb	IAmb	11 55 03.8	
	comp=Z,14nm,1.1s						
WB0	**Warramunga Arr**	**25.24**	**232**	P	**P**	**11 54 45.4**	**+0.4**
WB0				IAmb	IAmb	11 55 03.4	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**25.37**	**232**	P	**P**	**11 54 46.9**	**+0.8**
WRAB				IAmb	IAmb	11 55 00.1	
	comp=Z,7.2nm,0.9s						
WB2	**Warramunga Arr**	**25.37**	**232**	P	**P**	**11 54 47.0**	**+0.8**
WB2				IAmb	IAmb	11 55 09.5	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**25.38**	**232**	P	**P**	**11 54 47.0**	**+0.7**
	comp=Z,3.0nm,0.6s,baz=56,slow=9.8,SNR=26						
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**25.38**	**232**	P	**P**	**11 54 46.0**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**25.66**	**26**	T	T	12 21 45.6	
	baz=207,slow=74,SNR=41						
H11S2	**WAKE ISLAND Hy**	**25.67**	**26**	T	T	12 21 44.7	
	baz=207,slow=74,SNR=63						
H11S1	**WAKE ISLAND Hy**	**25.68**	**26**	T	T	12 21 40.8	
	baz=207,slow=74,SNR=40						
AS31	**Alice Springs**	**27.91**	**226**	P	**P**	**11 55 09.4**	**+0.3**
ASAR	**Alice Springs**	**27.91**	**225**	P	**P**	**11 55 08.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=56,slow=9.1,SNR=9.5						
ASAR				PcP	**PcP**	**11 58 25.6**	**+3.2**
	comp=Z,0.5nm,0.8s,baz=42,slow=1.5,SNR=4.5						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**27.91**	**225**	P	**P**	**11 55 09.6**	**+0.5**
KNRA	**Kununurra**	**28.22**	**245**	P	**P**	**11 55 12.1**	**+0.3**
KNRA				IAmb	IAmb	11 55 53.9	
	comp=Z,8.4nm,1.2s						
FITZ	**Fitzroy Crossi**	**31.87**	**243**	P	**P**	**11 55 43.7**	**-0.3**
FITZ				IAmb	IAmb	11 55 45.8	
	comp=Z,8.5nm,1.4s						
BBOO	**Buckleboo**	**33.21**	**210**	P	**P**	**11 55 56.1**	**+0.5**
PSA00	**Pilbara Seismi**	**38.20**	**241**	P	**P**	**11 56 38.3**	**-0.1**
MORW	**Morawa**	**44.32**	**232**	P	**P**	**11 57 28.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**60.07**	**294**	P	**P**	**11 59 29.2**	**+4.0**
	comp=Z,1.4nm,0.6s,baz=115,slow=5.8,SNR=8.5						
	comp=Z,1.4nm,0.6s						
VNDA	**Vanda**	**72.84**	**179**	P	**P**	**12 00 44.2**	**-1.4**
N18K	**Kilae Creek**	**75.42**	**23**	P	**P**	**12 01 02.6**	**+1.9**
N18K				IAmb	IAmb	12 01 28.3	
	comp=Z,7.3nm,1.1s						
BMAR	**Burnt Mountain**	**83.33**	**20**	P	**P**	**12 01 41.6**	**-2.1**
TORD	**Torodi Ar. Bea**	**152.60**	**290**	PKPbc	**PKiKP**	**12 09 16.2**	**+1.9**
	comp=Z,2.1nm,0.8s,baz=53,slow=2.3,SNR=10						

*IDC **08** 11:50:25.8±0.7, 39.°77N×67.°66E, h0km, mb4.3/15, mbtmp4.4/26, ML4.1/10, MS3.4/28, Error ellipse: s-maj=13.8km s-min=9.5km az=180.0*
*BJI **08** 11:50:27.7±0.0, 39.°93N×67.°77E, h10km, mb4.3/28, mB4.9/19, ML4.5/3, Ms3.9/15, Ms7 3.7/15*
*ISU **08** 11:50:29, 40.°00N×67.°54E, h5km*
*NNC **08** 11:50:29.0±0.9, 40.°03N×67.°56E, h19km±5km, mb5.2, mpv5.0, Error ellipse: s-maj=6.8km s-min=4.6km az=164.0*
*MOS **08** 11:50:29.0±1.1, 39.°96N×67.°70E, h28km, mb4.7/31, Error ellipse: s-maj=4.9km s-min=3.9km az=52.3*
*SOME **08** 11:50:29.6, 39.°48N×69.°13E, h10km*
*NEIC **08** 11:50:29.4±2.3, 39.°95N±0.°05×67.°55E±0.°07, h16km±4km, mb4.6/46, Error ellipse: s-maj=8.3km s-min=7.3km az=116.0*

ISC 08 11:50:28.4±0.7, 39°91N±0°02×67°73E±0°02, h13km±4km, n301, σ1°68/312, mb4.5/63, MS3.4/20, 23C-15D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZI	**Dzhizak**	**0.22**	**18**	P	**Pg**	**11 50 34.2**	**+1.0**
DZI				S	**Sg**	**11 50 38.2**	**+1.7**
BXML	**Bakhmal**	**0.32**	**134**	P	**Pg**	**11 50 32.3**	**-2.7**
BXML				S	**Sg**	**11 50 37.3**	**-2.2**
SAM	**Samarkand**	**0.62**	**248**	P	**Pb**	**11 50 41.4**	**+0.3**
SAM				S	**Sb**	**11 50 50.1**	**+0.4**
AGL	**Agalyk**	**0.76**	**239**	P	**Pg**	**11 50 43.5**	**+0.3**
AGL				S	**Sg**	**11 50 53.1**	**-0.1**
CHGR	**Chuyangaron**	**1.67**	**138**	Pn	**Pn**	**11 50 59.1**	**+1.6**
CHGR	**Chuyangaron**	**1.67**	**138**	PN	**Pn**	**11 50 59.1**	**+1.6**
NZBK	**Nazarbek**	**1.68**	**38**	P	**Pg**	**11 51 01.9**	**+1.2**
NUT	**Nurota**	**1.70**	**293**	P	**Pg**	**11 51 00.6**	**-0.4**
PKMR	**Pachkamar**	**1.72**	**218**	P	**Pb**	**11 51 01.1**	**+1.2**
PKMR				S	**Sb**	**11 51 23.9**	**+2.5**
BAYS	**Baysun**	**1.75**	**194**	P	**Pb**	**11 51 01.3**	**+0.9**
TAS	**Tashkent**	**1.85**	**40**	Pn	**Pb**	**11 51 02.1**	**0.0**
TAS	**Tashkent**	**1.85**	**40**	PN	**Pb**	**11 51 02.1**	**0.0**
TAS	**Tashkent**	**1.85**	**40**	P	**Pg**	**11 51 04.0**	**+0.1**
GAR	**Garm**	**2.20**	**114**	Pn	**Pn**	**11 51 07.8**	**+3.0**
BTK	**Batken**	**2.38**	**85**		**Pn**	**11 51 08.3**	**+1.1**
BTK	**Batken**	**2.38**	**85**	PN	**Pn**	**11 51 08.3**	**+1.1**
BTK	**Batken**	**2.38**	**85**	P	**Pb**	**11 51 11.7**	**+0.5**
CHM	**Chimkent**	**2.79**	**30**	*e*PN	**Pn**	**11 51 14.4**	**+1.6**
CHM				*e*		11 51 20.7	
CHM				*e*		11 51 48.7	
CHM				*e*		11 51 58.2	
CHM	**Chimkent**	**2.79**	**30**	*e*Pn	**Pn**	**11 51 14.5**	**+1.6**
	baz=31						
CHM				*e*Pg	**Pg**	**11 51 20.7**	**-1.2**
	baz=31						
CHM				*e*Sn	**Sn**	**11 51 48.8**	**+2.4**
	baz=31						
CHM				*e*Lg	Lg	11 51 58.2	
	baz=31						
IUG	**Iuzhnay**	**2.83**	**37**	*i* PN	**Pn**	**11 51 14.5**	**+1.0**
IUG				*e*		11 51 21.0	
IUG				*e*		11 51 57.8	
IUG	**Iuzhnay**	**2.83**	**37**	*e*P	**Pg**	**11 51 21.8**	**-0.9**
	25μm,0.7s						
IUG				*e*S	**Sg**	**11 51 59.0**	**-0.4**
	4μm,1.0s						
IUG	**Iuzhnay**	**2.83**	**37**	*i* Pn	**Pn**	**11 51 14.6**	**+1.0**
	baz=39						
IUG				*e*Pg	**Pg**	**11 51 21.0**	**-1.7**
	baz=39						
IUG				*e*Lg	Lg	11 51 57.8	
	baz=39						
IUG	**Iuzhnay**	**2.83**	**37**	Pg	**Pg**	**11 51 21.8**	**-0.9**
	25μm,0.7s						
IUG				Lg	Lg	11 51 57.2	
	4μm,1.0s						
TRKS	**Terek-Say**	**3.06**	**57**	PN	**Pn**	**11 51 17.7**	**+1.1**
DZN	**Dzhankel'dy**	**3.48**	**287**	P	**Pn**	**11 51 22.4**	**+0.1**
ARK	**Arkit**	**3.72**	**58**	PN	**Pn**	**11 51 27.1**	**+1.3**
KK31	**Karatay Array**	**3.81**	**32**	Pn	**Pn**	**11 51 28.0**	**+1.1**
KK31	**Karatay Array**	**3.81**	**32**	*i* PN	**Pn**	**11 51 27.5**	**+0.6**
KK31						11 51 38.6	
KK31	**Karatay Array**	**3.81**	**32**	⇓Pn	**Pn**	**11 51 27.5**	**+0.6**
	74nm,0.6s,baz=220,slow=16,SNR=1471						
KK31				Pg	**Pg**	**11 51 38.7**	**-2.8**
	522nm,0.8s,baz=189,slow=5.4,SNR=46						
KK31				⇑Lg	Lg	11 52 29.4	
	671nm,0.6s,baz=210,slow=28,SNR=9.5						
KKAR	**Karatay Array**	**3.81**	**32**	Pn	**Pn**	**11 51 27.5**	**+0.6**
KKAR	**Karatay Array**	**3.81**	**32**		**Pn**	**11 51 27.9**	**+1.0**
KKAR	**Karatay Array**	**3.81**	**32**	PN	**Pn**	**11 51 27.5**	**+0.6**
OHH	**Osh**	**3.92**	**79**	PN	**Pn**	**11 51 29.2**	**+0.8**
MRKS	**Merke**	**5.01**	**54**	*e*P	**Pb**	**11 51 52.5**	**-3.6**
	197nm,0.6s						
MRKS				*e*S	**Sb**	**11 52 51.5**	**-4.8**
	298nm,0.4s						
MRKS	**Merke**	**5.01**	**54**	Pg	**Pb**	**11 51 53.2**	**-2.9**
	197nm,0.6s						
MRKS				Lg	Lg	11 52 51.5	
	298nm,0.4s						
AML	**Almayashu**	**5.03**	**62**	P	**Pn**	**11 51 44.7**	**+0.8**
	SNR=45						
EKS2	**Erkin-Say**	**5.32**	**57**	P	**Pn**	**11 51 49.9**	**+2.2**
	SNR=36						
ARLS	**Aral**	**5.36**	**67**	PN	**Pn**	**11 51 49.1**	**+0.8**
ARLS				pmax	pmax		
	comp=Z,204nm,0.5s						
KBL	**Kabul**	**5.46**	**169**	Pn	**Pn**	**11 51 51.1**	**+1.4**
KBL	**Kabul**	**5.46**	**169**	PN	**Pn**	**11 51 51.1**	**+1.4**
UCH	**Uchtor**	**5.62**	**64**	P	**Pn**	**11 51 53.0**	**+0.8**
	SNR=24						
AAK	**Ala-Archa**	**5.78**	**60**	Pn	**Pn**	**11 51 55.8**	**+1.8**
	comp=Z,13nm,0.3s,baz=231,slow=4.3,SNR=16						
AAK				Lg	Lg	11 53 28.9	
	comp=Z,16nm,0.3s,baz=62,slow=12,SNR=7.7						
AAK				LR	LR	11 54 29.0	
	comp=Z,264nm,21.6s,baz=253,slow=41						
	comp=Z,48nm,0.4s						
AAK	**Ala-Archa**	**5.78**	**60**	P	**Pn**	**11 51 56.0**	**+2.0**
	SNR=19						
AAK	**Ala-Archa**	**5.78**	**60**	Pn	**Pn**	**11 51 55.3**	**+1.2**
USP	**Ospenovka**	**6.08**	**54**	P	**Pn**	**11 51 58.5**	**+0.4**
	SNR=32						
KBK	**Karagaybulak**	**6.09**	**61**	P	**Pn**	**11 52 00.2**	**+1.9**
	SNR=30						
CHMS	**Chumysh**	**6.11**	**57**	P	**Pn**	**11 51 59.4**	**+0.9**
	SNR=15						
CHMS	**Chumysh**	**6.11**	**57**	*i* PN	**Pn**	**11 51 59.2**	**+0.7**
CHMS				pmax	pmax		
	comp=Z,49nm,0.9s						
CHMS	**Chumysh**	**6.11**	**57**	⇑Pn	**Pn**	**11 51 59.3**	**+0.9**
	comp=Z,49nm,0.9s						
CHMS				⇑Pg	**Pg**	**11 52 22.2**	**-3.1**
	comp=Z,84nm,0.6s						
CHMS				⇓Lg	Lg	11 53 43.0	
	comp=Z,473nm,1.1s						
SGDS	**Sogindy**	**6.26**	**53**	*i* PN	**Pn**	**11 52 00.9**	**+0.4**
SGDS				*e*		11 52 22.0	
SGDS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SGDS	**Sogindy**	**6.26**	**53**	*i* Pn	**Pn**	**11 52 00.9**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=54						
SGDS				*e*Pg	Pb	11 52 22.1	+4.8
	baz=54						
KSH	**Kashi**	**6.37**	**91**	Pn	**Pn**	**11 52 00.0**	**-2.1**
KSH				Sn	**Sn**	**11 53 09.9**	**-4.9**
KSH				smax	smax		
	comp=Z,410nm,0.9s						
KSH				smax	smax		
	comp=Z,370nm,1.1s						
TKM2	**Tokmak 2**	**6.63**	**60**	P	**Pn**	**11 52 06.4**	**+0.6**
	SNR=26						
TKM2	**Tokmak 2**	**6.63**	**60**	*i* PN	**Pn**	**11 52 06.1**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,58nm,0.8s						
TKM2	**Tokmak 2**	**6.63**	**60**	⇓Pn	**Pn**	**11 52 06.7**	**+0.9**
	comp=Z,58nm,0.8s						
TKM2				⇑Pg	**Pg**	**11 52 32.1**	**-3.3**
	comp=Z,50nm,0.6s						
TKM2				⇓Lg	Lg	11 53 58.0	
	comp=Z,550nm,0.9s						
BOOM	**Boomskoye usch**	**6.71**	**65**	Pn	**Pn**	**11 52 08.1**	**+1.3**
BOOM	**Boomskoye usch**	**6.71**	**65**	PN	**Pn**	**11 52 08.1**	**+1.3**
ULHL	**Ulahol**	**6.84**	**67**	P	Pn	11 52 13.9	+5.2
	SNR=16						
KST	**Kastek**	**6.93**	**60**	Pg	**Pb**	**11 52 26.7**	**-2.0**
	comp=Z,18nm,0.4s						
KST				Lg	Lg	11 53 49.2	
	comp=Z,497nm,0.7s						
BTLS	**Baital**	**6.93**	**40**	*i* PN	**Pn**	**11 52 10.4**	**+0.7**
BTLS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BTLS	**Baital**	**6.93**	**40**	*i* Pn	**Pn**	**11 52 10.5**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=41						
BTLS				*e*Lg	Lg	11 54 07.6	
	baz=41						
BTLS				*e*Lg	Lg	11 54 08.2	
	baz=41						
KRBS	**Karabastau**	**7.04**	**55**	Pg	**Pb**	**11 52 28.4**	**-2.1**
	comp=Z,29nm,0.5s						
KRBS				Lg	Lg	11 53 51.5	
	comp=Z,148nm,0.8s						
HRA	**Herat**	**7.04**	**220**	Pn	**Pn**	**11 52 11.8**	**+0.4**
MTBS	**Maitube**	**7.28**	**61**	Pg	**Pb**	**11 52 32.0**	**-2.6**
	comp=Z,32nm,0.5s						
MTBS				Lg	Lg	11 53 58.9	
	comp=Z,182nm,0.9s						
KUU	**Kurty**	**7.55**	**55**	*e*P	**Pn**	**11 52 17.8**	**-0.4**
KUU	**Kurty**	**7.55**	**55**	*e*Pn	**Pn**	**11 52 17.9**	**-0.4**
	baz=56						
KUU				*e*Pb	**Pb**	**11 52 40.0**	**+0.7**
	baz=56						
KUU				*e*Pg	Pg	11 52 47.6	-5.3
	baz=56						
KUU	**Kurty**	**7.55**	**55**	Pg	**Pb**	**11 52 39.8**	**+0.5**
	comp=Z,23nm,0.6s						
KUU				Lg	Lg	11 54 12.3	
	comp=Z,164nm,0.8s						
AAA	**Alma-Ata**	**7.63**	**61**	*e*P	**Pn**	**11 52 20.4**	**+1.0**
AAA				*e*		11 53 47.5	
AAA	**Alma-Ata**	**7.63**	**61**	*e*Pn	**Pn**	**11 52 20.5**	**+1.0**
	baz=62						
AAA				*e*Sn	**Sn**	**11 53 47.5**	**+1.7**
	baz=62						
NIL	**Nilore**	**7.66**	**143**		**Pn**	**11 52 21.1**	**+1.4**
NIL	**Nilore**	**7.66**	**143**	P	**Pn**	**11 52 21.1**	**+1.4**
KNDC	**Almaty**	**7.67**	**62**	P	**Pn**	**11 52 21.8**	**+1.8**
KNDC	**Almaty**	**7.67**	**62**	⇑Pn	**Pn**	**11 52 21.8**	**+1.8**
	comp=Z,103nm,0.6s						
KNDC				⇑Lg	Lg	11 54 34.7	
	comp=Z,1μm,1.6s						
KTBS	**Karatobe**	**7.69**	**57**	Pg	**Pb**	**11 52 41.0**	**-0.6**
	comp=Z,40nm,0.6s						
KTBS				Lg	Lg	11 54 14.0	
	comp=Z,472nm,0.7s						
MDOK	**Medeo**	**7.71**	**62**	*e*P	**Pn**	**11 52 21.1**	**+0.6**
MDOK	**Medeo**	**7.71**	**62**	*e*Pn	**Pn**	**11 52 21.1**	**+0.6**
	baz=63						
MDOK	**Medeo**	**7.71**	**62**	⇓Pn	**Pn**	**11 52 20.7**	**+0.2**
	comp=Z,123nm,0.8s						
MDOK				Pg	Pb	11 52 37.5	-4.5
	comp=Z,95nm,0.5s						
MDOK				Lg	Lg	11 54 08.9	
	comp=Z,189nm,1.5s						
MDOK				⇓Lg	Lg	11 54 35.2	
	comp=Z,320nm,1.0s						
GEYT	**Alibeck**	**7.75**	**258**	Pn	**Pn**	**11 52 18.6**	**-2.4**
	comp=Z,12nm,0.3s,baz=98,slow=9.1,SNR=40						
GEYT				Sn	**Sn**	**11 53 46.4**	**-2.2**
	comp=Z,46nm,0.3s,baz=318,slow=4.0,SNR=12						
GEYT				LR	LR	11 56 02.6	
	comp=Z,265nm,18.9s,baz=86,slow=44						
	comp=Z,38nm,0.5s						
GEYT	**Alibeck**	**7.75**	**258**	Pn	**Pn**	**11 52 18.9**	**-2.1**
GYA0	**ALIBECK ARRAY**	**7.75**	**258**	P	**Pn**	**11 52 18.5**	**-2.5**
GYA0						11 53 44.8	
GYA0B	**ALIBECK ARRAY**	**7.75**	**258**		**Pn**	**11 52 18.6**	**-2.4**
GYA0B	**ALIBECK ARRAY**	**7.75**	**258**	⇑Pn	**Pn**	**11 52 18.5**	**-2.4**
GYA0B				⇓Sn	**Sn**	**11 53 47.2**	**-1.5**
CHKK	**Chushkaly**	**7.95**	**57**	*e*P	**Pn**	**11 52 24.5**	**+0.8**
CHKK	**Chushkaly**	**7.95**	**57**	*e*Pn	**Pn**	**11 52 24.6**	**+0.8**
	baz=58						
CHKK				*e*Pg	Pb	11 52 53.4	+7.4
	baz=58						
PRZ	**Przheval'sk**	**8.45**	**69**	Pn	**Pn**	**11 52 32.2**	**+1.5**
PRZ	**Przheval'sk**	**8.45**	**69**	P	**Pn**	**11 52 32.2**	**+1.5**
SATY	**Saty**	**8.61**	**65**	*e*P	**Pn**	**11 52 33.4**	**+0.6**
SATY	**Saty**	**8.61**	**65**	*e*Pn	**Pn**	**11 52 33.5**	**+0.6**
	baz=66						
ARXS	**Arharly**	**8.65**	**57**	*e*P	**Pn**	**11 52 37.9**	**+4.5**
OTUK	**Ortayu**	**8.96**	**20**	P	**Pn**	**11 52 38.1**	**+0.5**
OTUK	**Ortayu**	**8.96**	**20**	⇑Pn	**Pn**	**11 52 38.1**	**+0.5**
	comp=Z,15nm,0.6s						
OTUK				⇓Lg	Lg	11 55 12.2	
	comp=Z,126nm,1.0s						
UZB	**Uzynbulak**	**9.06**	**65**	*e*P	**Pn**	**11 52 39.7**	**+0.6**
UZB	**Uzynbulak**	**9.06**	**65**	*e*Pn	**Pn**	**11 52 39.8**	**+0.6**
	baz=66						
JMU	**Jammu**	**9.22**	**139**	*e*S	**Sn**	**11 54 20.3**	**-4.3**
SHLS	**Shalkode**	**9.38**	**66**	*e*P	Pn	11 52 48.2	+4.9
SHLS	**Shalkode**	**9.38**	**66**	*e*Pn	Pn	11 52 48.2	+4.9
	baz=67						
SHLS				*e*Lg	Lg	11 55 36.6	
	baz=67						
TDK	**Taldyqorghan**	**9.39**	**54**	*e*P	**Pn**	**11 52 44.1**	**+0.7**
TDK	**Taldyqorghan**	**9.39**	**54**	*e*Pn	**Pn**	**11 52 44.1**	**+0.7**
	baz=54						
TDK				*e*Lg	Lg	11 55 27.7	
	baz=54						
PDGK	**Podgornoye**	**9.45**	**65**	P	**Pn**	**11 52 45.7**	**+1.4**
PDGK	**Podgornoye**	**9.45**	**65**	⇓Pn	**Pn**	**11 52 45.8**	**+1.4**
	comp=Z,13nm,0.7s						
PDGK				⇑Pg		11 53 24.2	
	comp=Z,25nm,0.7s						
PDGK				⇑Lg	Lg	11 55 32.8	
	comp=Z,75nm,0.8s						
THN	**Thein Dam**	**9.86**	**137**	*e*P	**Pn**	**11 52 50.9**	**+1.0**
THN				*e*S	**Sn**	**11 54 39.9**	**-0.6**
BRZS	**Berezniki**	**10.66**	**18**	*e*P	**Pn**	**11 53 00.6**	**-0.2**
BRZS				*e*		11 54 59.6	
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRZS	**Berezniki**	**10.66**	**18**	*e*Pn	**Pn**	**11 53 00.7**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=18						
BRZS				*e*Sn	**Sn**	**11 54 59.7**	**-0.3**
	baz=18						
BRZS				*e*Lg	Lg	11 56 05.3	
	baz=18						
AB31	**Akbulak array**	**10.86**	**332**	*e*P	**Pn**	**11 53 01.3**	**-2.2**
AB31				*e*		11 54 58.4	
AB31	**Akbulak array**	**10.86**	**332**	⇓Pn	**Pn**	**11 53 01.3**	**-2.2**
	comp=Z,7.2nm,0.4s,baz=156,slow=12,SNR=312						
AB31				⇑Sn	**Sn**	**11 55 01.4**	**-3.5**
	comp=Z,26nm,0.7s,baz=159,slow=21,SNR=5.0						
AB31				⇑Lg	Lg	11 56 10.7	
	comp=Z,60nm,0.7s						
ABKAR	**Akbulak array**	**10.86**	**332**	Pn	**Pn**	**11 53 01.9**	**-1.7**
ABKAR	**Akbulak array**	**10.86**	**332**	Pn	**Pn**	**11 53 01.4**	**-2.1**
BHK	**Bhakra**	**11.03**	**138**	*e*S	**Sn**	**11 55 05.8**	**-3.4**
SMLA	**Simla**	**11.65**	**136**	*e*P	**Pn**	**11 53 13.5**	**-0.9**
SMLA				*e*S	**Sn**	**11 55 19.5**	**-4.8**
SMLA				IAML		11 55 32.2	
	comp=N,77nm,0.2s						
SMLA				IAML		11 55 34.9	
	comp=E,50nm,0.7s						
AKTO	**Aktyubinsk**	**12.54**	**330**	Pn	**Pn**	**11 53 25.4**	**-1.1**
	comp=E,3.2nm,0.3s,baz=143,slow=14,SNR=93						
AKTO				Sn	**Sn**	**11 55 40.1**	**-5.9**
	comp=E,0.5nm,0.3s,baz=139,slow=20,SNR=1.6						
AKTO				Lg	Lg	11 57 06.3	
	comp=E,0.4nm,0.3s,baz=45,slow=20,SNR=2.1						
AKTO				LR	LR	11 58 41.5	
	comp=E,162nm,19.2s,baz=147,slow=39						
	comp=E,20nm,0.7s						
AKTO	**Aktyubinsk**	**12.54**	**330**	⇑Pn	**Pn**	**11 53 25.2**	**-1.4**
	comp=E,25nm,0.7s						
AKTO				⇓Sn	**Sn**	**11 55 42.3**	**-3.7**
	comp=E,48nm,1.1s						
AKTO				⇑Lg	Lg	11 57 02.3	
	comp=E,111nm,1.1s						
MK31	**Makanchi Array**	**12.62**	**52**	Pn	**Pn**	**11 53 27.4**	**-0.3**
MK31	**Makanchi Array**	**12.62**	**52**	*i* P	**Pn**	**11 53 27.6**	**-0.1**
MK31	**Makanchi Array**	**12.62**	**52**	Pn	**Pn**	**11 53 27.5**	**-0.1**
	comp=E,18nm,0.7s,baz=240,slow=13,SNR=109						
MK31				⇑Lg	Lg	11 57 11.8	
	comp=E,39nm,0.8s,baz=270,slow=12,SNR=7.8						
MKAR	**Makanchi Array**	**12.62**	**52**	Pn	**Pn**	**11 53 26.6**	**-1.1**
	comp=E,1.1nm,0.3s,baz=240,slow=15,SNR=32						
MKAR				LR	LR	11 58 40.3	
	comp=E,199nm,20.0s,baz=260,slow=39						
	comp=E,3.1nm,0.5s						
MKAR	**Makanchi Array**	**12.62**	**52**	Pn	**Pn**	**11 53 26.7**	**-0.9**
MKAR	**Makanchi Array**	**12.62**	**52**	*i* P	**Pn**	**11 53 27.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KURBB	**Kurchatov Arra**	**13.12**	**32**	Pn	**Pn**	**11 53 32.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=223,slow=13,SNR=8.8						
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**13.12**	**32**	P	**Pn**	**11 53 34.4**	**0.0**
KURBB	**Kurchatov Arra**	**13.12**	**32**	⇓Pn	**Pn**	**11 53 34.4**	**0.0**
	comp=Z,13nm,0.8s						
KURBB				⇓Lg	Lg	11 57 24.5	
	comp=Z,153nm,0.8s						
KURK	**Kurchatov**	**13.23**	**32**	Pn	**Pn**	**11 53 35.8**	**-0.1**
KURK	**Kurchatov**	**13.23**	**32**	*i* P	**Pn**	**11 53 36.3**	**+0.4**
KURK	**Kurchatov**	**13.23**	**32**	⇑Pn	**Pn**	**11 53 36.2**	**+0.4**
	comp=Z,17nm,0.9s						
KURK				⇑Lg	Lg	11 57 28.8	
	comp=Z,187nm,1.4s						
BVA0	**Borovoye Array**	**13.24**	**7**	P	**Pn**	**11 53 33.8**	**-2.3**
BVA0				S	**Sn**	**11 56 01.7**	**-1.4**
BVA0	**Borovoye Array**	**13.24**	**7**	Pn	**Pn**	**11 53 33.8**	**-2.3**
	comp=Z,11nm,0.6s,baz=162,slow=12,SNR=54						
BVA0				⇓Sn	**Sn**	**11 56 01.1**	**-2.1**
	comp=Z,18nm,0.6s,baz=187,slow=20,SNR=3.9						
BVA0				⇑Lg	Lg	11 57 28.3	
	comp=Z,78nm,1.1s,baz=187,slow=20,SNR=3.9						
BVAR	**Borovoye Array**	**13.24**	**7**	LR	LR	11 59 18

comp=Z,2.2nm,0.3s,baz=38,slow=6.1,SNR=4.7
BELG LR LR 12 03 07.6
comp=Z,94nm,21.4s,baz=173,slow=41
comp=Z,19nm,0.6s
BELG Belogornoye 18.62 319 *i* P **P** **11 54 43.7 -1.8**
BELG pmax pmax
comp=Z,4.0nm,0.7s
KBZ Khabaz 18.87 290 P **P** **11 54 47.0 -1.3**
comp=Z,0.6nm,0.3s,baz=125,slow=8.5,SNR=18
KBZ LR LR 12 03 52.2
comp=Z,125nm,19.4s,baz=64,slow=43
comp=Z,9.2nm,0.8s
KBZ Khabaz 18.87 290 *ce*P **P** **11 54 46.5 -1.8**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
DMN Daman 18.91 125 *e*P **P** **11 54 49.3 +0.1**
comp=Z,22nm,0.4s
KVAR Kislovodsk Arr 19.03 290 P **P** **11 54 49.7 -0.6**
baz=90,slow=20
comp=Z,4.6nm,0.4s
KIV Kislovodsk 19.04 290 P **P** **11 54 49.7 -0.6**
KIV IAmb IAmb 11 54 52.2
comp=Z,32nm,1.0s
KIV Kislovodsk 19.04 290 *e*P **P** **11 54 49.3 -1.0**
KIV *e*S **Sn** **11 58 23.2 -0.9**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV MLR MLR
comp=Z,50nm,14.0s
PKIN Phulchoki 19.12 125 *e*P **P** **11 54 51.3 -0.1**
PKI Pulchoki 19.13 125 *e*P **P** **11 54 51.3 -0.3**
comp=Z,20nm,0.6s
JIRN Jiri 19.57 123 *e*P **P** **11 54 56.3 -0.2**
comp=Z,29nm,0.4s
RAMN Ramite 20.32 124 *e*P **P** **11 55 06.5 +1.9**
TAPN Taplejung 20.77 121 *e*P **P** **11 55 11.6 +2.1**
comp=Z,25nm,0.5s
MARD Mardin 21.19 272 P **P** **11 55 15.0 +1.2**
MARD IAmb IAmb 11 55 18.6
comp=Z,25nm,0.8s
VRH Novokhopyorsk 21.31 311 *e*P **P** **11 55 14.1 -0.6**
VRH pmax pmax
comp=Z,40nm,0.8s
GOMU GeErMu 21.61 91 P **P** **11 55 19.2 +0.6**
GOMU pP pP 11 55 22.4 -0.1
GOMU sP sP 11 55 25.0 +0.7
GOMU S S 11 59 06.8 -11
GOMU pmax pmax
comp=Z,3.0nm,0.7s
GOMU pmax pmax
comp=Z,47nm,7.2s
GOMU LR LR
comp=Z,120nm,10.4s
GOMU LR LR
comp=Z,99nm,11.7s
GOMU LR LR
comp=Z,130nm,10.2s
KIRV Kirov 22.05 334 *ce*P **P** **11 55 24.1 +1.5**
VSR Storozhevoye 22.82 309 *e*P **P** **11 55 29.8 -1.1**
VSR pmax pmax
comp=Z,20nm,0.5s
ANN Anapa 22.84 292 *e*P **P** **11 55 32.0 +0.8**
ANN pmax pmax
comp=Z,45nm,0.6s
VORR Voronezh 22.95 310 *e*P **P** **11 55 30.1 -2.1**
VORR pmax pmax
comp=Z,50nm,0.4s
LPSR Galich'ya Gora 23.43 312 *e*P **P** **11 55 37.5 +0.3**
LPSR pmax pmax
comp=Z,30nm,0.9s
HYBB Hyderabad (bro 24.30 154 *e*P **P** **11 55 46.6 +0.8**
HYBB *ep*P **sP** **11 55 51.5 0.0**
GTA Gaotai 24.64 81 *e*P **P** **11 55 50.9 +2.1**
GTA pP sP 11 55 56.0 +1.2
GTA sP pP 11 56 00.0 +7.1
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,56nm,4.4s
GTA LR LR
comp=Z,170nm,14.5s
GTA LR LR
comp=Z,110nm,13.5s
GTA LR LR
comp=Z,160nm,16.7s
RAYN Ar Rayn 24.89 236 P **P** **11 55 51.5 +0.5**
RAYN Ar Rayn 24.89 236 P **P** **11 55 51.5 +0.5**
RAYN pmax pmax
comp=Z,6.0nm,0.9s
SIM Simferopol' 25.20 293 *e*P **P** **11 55 52.8 -0.9**
SIM pmax pmax
comp=Z,91nm,1.4s
MOS Moscow 25.40 319 *e*P **P** **11 55 48.7 -6.6**
OBN Obninsk 25.68 317 LR LR 12 08 09.5
comp=Z,13nm,18.1s,baz=126,slow=41
OBN Obninsk 25.68 317 *i* P **P** **11 55 58.3 +0.4**
OBN *i* 11 56 06.7
OBN pmax pmax
comp=Z,18nm,0.7s
OBN MLR MLR
comp=Z,82nm,15.0s
MOY Mondy 25.77 52 *e*P **P** **11 56 04.8 +5.9**
MOY pmax pmax
comp=Z,7.0nm,1.4s
BR131 Keskin Array S 26.10 281 P **P** **11 56 01.9 -0.1**
BR131 IAmb IAmb 11 56 06.4
comp=Z,15nm,0.9s
BR131 Keskin Array S 26.10 281 P **P** **11 56 02.0 -0.1**
BR131 pmax pmax
comp=Z,15nm,1.0s
BRTR Keskin Array B 26.10 281 P **P** **11 56 02.6 +0.6**
comp=Z,8.1nm,0.8s,baz=87,slow=7.8,SNR=23
BRTR LR LR 12 08 45.8
comp=Z,23nm,18.2s,baz=70,slow=42
comp=Z,8.1nm,0.8s
BRTR Keskin Array B 26.10 281 P **P** **11 56 02.2 +0.2**
BRTR Keskin Array B 26.10 281 P **P** **11 56 02.2 +0.2**
ZAK Zakamensk 26.93 55 *e*P **P** **11 56 11.9 +2.5**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
KLMR Klimovskoe 27.25 330 *e*P **P** **11 56 15.2 +3.3**
KLMR pmax pmax
comp=Z,11nm,1.4s
KLMR Klimovskoe 27.25 330 *e*P **P** **11 56 15.3 +3.3**
KLMR AMP 11 56 17.4
comp=Z,11nm,1.4s
EIL Elat 28.65 259 LR LR 12 10 29.3
comp=Z,83nm,19.5s,baz=87,slow=42
SONM Songino Array 28.73 61 LR LR 12 09 04.5
comp=Z,71nm,18.9s,baz=266,slow=39
AKASG Malin Array Be 28.84 305 P **P** **11 56 25.9 -0.4**
comp=Z,3.9nm,0.7s,baz=80,slow=7.8,SNR=30
AKASG LR LR 12 10 16.3
comp=Z,68nm,18.0s,baz=60,slow=41
comp=Z,3.9nm,0.7s
AKASG Malin Array Be 28.84 305 P **P** **11 56 25.5 -0.8**
AKASG Malin Array Be 28.84 305 P **P** **11 56 25.5 -0.8**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 28.84 305 P **P** **11 56 25.4 -0.9**
AKBB IAmb IAmb 11 56 26.8
comp=Z,10nm,0.7s
AKBB Malin Array Si 28.84 305 *ce*P **P** **11 56 25.9 -0.4**
ULN Ulaanbaatar 29.18 61 P **P** **11 56 33.0 +3.4**
ULN Ulaanbaatar 29.18 61 *i* P **P** **11 56 31.0 +1.4**
ULN pmax pmax
comp=Z,6.0nm,1.1s
CD2 Chengdu 30.54 96 *e*P **P** **11 56 42.4 +0.8**
MLR Muntele Rosu 30.95 294 LR LR 12 13 22.8
comp=Z,72nm,18.1s,baz=68,slow=44
MLR Muntele Rosu 30.95 294 P **P** **11 56 42.8 -2.4**
MLR IAmb IAmb 11 56 48.0
comp=Z,16nm,1.4s
MLR Muntele Rosu 30.95 294 P **P** **11 56 42.8 -2.4**
MLR pmax pmax
comp=Z,16nm,1.4s
PZH PanZhiHua 31.24 105 P **P** **11 56 49.9 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,120nm,5.5s
NRIK Noril'sk 31.32 13 LR LR 12 11 13.1
comp=Z,67nm,19.8s,baz=277,slow=40
BURAR Bucovina Array 31.33 298 P **P** **11 56 47.7 -0.8**
BURAR Bucovina Array 31.33 298 P **P** **11 56 47.7 -0.8**
BURAR pmax pmax
comp=Z,3.0nm,0.9s
HHC Hu-ho-hao-te 33.15 74 *e*P **P** **11 57 07.7 +3.2**
HHC pmax pmax
comp=Z,26nm,0.8s
HHC pmax pmax
comp=Z,270nm,5.8s
FIA1 FINESS Array S 33.22 324 P **P** **11 57 04.9 +0.1**
FIA1 IAmb IAmb 11 57 18.7
comp=Z,9.7nm,1.0s
FINES FINESS Array B 33.22 324 P **P** **11 57 05.0 +0.3**
comp=Z,3.4nm,0.6s,baz=121,slow=9.4,SNR=20
FINES LR LR 12 10 51.6
comp=Z,82nm,19.6s,baz=90,slow=37
comp=Z,3.4nm,0.6s
FINES FINESS Array B 33.22 324 P **P** **11 57 05.3 +0.6**
FINES FINESS Array B 33.22 324 P **P** **11 57 05.3 +0.6**
BZS Buzias 33.96 295 P **P** **11 57 12.4 +1.0**
BZS pmax pmax
comp=Z,7.0nm,1.3s
IDI Anoyia 34.01 276 P **P** **11 57 12.7 +0.6**
CMAR Chiang Mai Arr 34.36 119 P **P** **11 57 16.0 +0.8**
comp=Z,1.0nm,0.5s,baz=301,slow=9.3,SNR=5.9
CMAR LR LR 12 13 59.2
comp=Z,36nm,18.1s,baz=245,slow=41
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 34.36 119 *i* P **P** **11 57 19.7 +4.5**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
BOD Bodaibo 34.48 43 *e*P **P** **11 57 18.6 +2.8**
BOD pmax pmax
comp=Z,4.0nm,1.0s
PALK Pallekele 34.52 157 LR LR 12 11 34.0
comp=Z,112nm,18.2s,baz=96,slow=37
NIE Niedzica 34.54 302 P **P** **11 57 17.7 +1.3**
OJC Ojcow 34.83 303 P **P** **11 57 17.1 -1.9**
OJC IAmb IAmb 11 57 19.3
comp=Z,9.6nm,0.9s
OJC Ojcow 34.83 303 P **P** **11 57 17.1 -1.9**
OJC pmax pmax
comp=Z,10.0nm,0.9s
DIVS Divibare 35.33 293 P **P** **11 57 23.6 +0.2**
ATD Arta Tunnel 35.83 225 LR LR 12 15 26.6
comp=Z,61nm,18.8s,baz=301,slow=42
MORC Moravsky Berou 36.31 303 *e*P **P** **11 57 32.3 +0.6**
VRAC Vranov 36.96 302 LR LR 12 16 36.8
comp=Z,82nm,18.0s,baz=66,slow=42
VRAC Vranov 36.96 302 *e*P **P** **11 57 36.8 -0.4**
ARCES ARCESS Array B 37.01 337 P **P** **11 57 37.7 +0.4**
comp=Z,3.7nm,0.8s,baz=113,slow=9.3,SNR=11
comp=Z,3.7nm,0.8s
ARCES ARCESS Array B 37.01 337 P **P** **11 57 37.9 +0.6**
DPC Dobruska-Polom 37.05 304 P **P** **11 57 38.9 +0.9**
DPC pmax pmax
comp=Z,9.0nm,2.5s
KRUC Moravsky 37.11 302 P **P** **11 57 39.2 +0.7**
KRUC pmax pmax
comp=Z,5.0nm,1.0s
KRUC Moravsky 37.11 302 *e*P **P** **11 57 38.0 -0.5**
UPC Upice 37.24 304 P **P** **11 57 40.2 +0.6**
UPC pmax pmax
comp=Z,9.0nm,1.4s
BRG Berggiesshubel 38.53 305 P **P** **11 57 51.0 +0.6**
BRG pmax pmax
comp=Z,12nm,0.9s
HFS Hagfors 38.80 320 LR LR 12 14 34.9
comp=Z,137nm,18.9s,baz=39,slow=37
GEC2 GERESS Array S 38.90 302 P **P** **11 57 54.8 +1.1**
GEC2 pmax pmax
comp=Z,6.0nm,2.7s
GERES GERESS Array B 38.90 302 P **P** **11 57 54.4 +0.7**
comp=Z,1.3nm,0.6s,baz=72,slow=8.9,SNR=10
comp=Z,1.3nm,0.6s
GERES GERESS Array B 38.90 302 P **P** **11 57 54.8 +1.1**
KHC Kasperske Hory 38.95 302 P **P** **11 57 54.3 +0.3**
KHC Kasperske Hory 38.95 302 P **P** **11 57 54.3 +0.3**
KHC pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 39.08 306 *e*P **P** **11 57 55.0 0.0**
CLL Collm 39.08 306 *e*P **P** **11 57 55.0 0.0**
CLL LmV 13 29 00.0
comp=Z,100nm,19.0s
KBA Koelnbreinsper 39.41 299 P **P** **11 57 58.0 -0.1**
KBA pmax pmax
comp=Z,6.0nm,1.2s
NC405 NORSAR Array S 39.88 321 P **P** **11 58 01.5 -0.1**
NC405 IAmb IAmb 11 58 20.8
comp=Z,22nm,1.2s
NORES NORESS Array B 39.92 320 P **P** **11 58 01.8 -0.1**
NC303 NORSAR Array S 40.05 321 P **P** **11 58 02.7 -0.4**
NB2 NORSAR Subarra 40.11 321 P **P** **11 58 03.4 -0.2**
comp=Z,4.5nm,0.5s,baz=96,slow=8.6
NOA NORSAR Array B 40.11 321 P **P** **11 58 03.4 -0.2**
comp=Z,6.6nm,0.6s,baz=96,slow=8.3,SNR=28
NOA LR LR 12 15 58.5
comp=Z,33nm,19.6s,baz=305,slow=38
comp=Z,6.6nm,0.6s
BSEG Bad Segeberg 40.51 310 P **P** **11 58 07.4 +0.6**
BSEG pmax pmax
comp=Z,12nm,0.8s
NJ2 Nanjing 41.63 84 *e*P **P** **11 58 17.9 +1.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
DAVOX Davos/Dischmat 41.80 299 LR LR 12 17 05.8
comp=Z,62nm,19.8s,baz=263,slow=38
SPITS Spitsbergen Ar 43.59 346 P **P** **11 58 32.3 +0.6**
SPITS pmax pmax
comp=Z,21nm,1.2s
SENIN Lac Senin/Sane 43.62 299 P **P** **11 58 31.8 -0.9**
SENIN IAmb IAmb 11 58 33.5
comp=Z,5.6nm,0.7s
TIXI Tiksi 43.63 24 P **P** **11 58 32.4 +0.3**
TIXI IAmb IAmb 11 58 40.7
comp=Z,5.3nm,0.6s
TIXI Tiksi 43.63 24 P **P** **11 58 32.4 +0.3**
TIXI pmax pmax
comp=Z,5.0nm,0.6s
SAOF Saorge 44.08 296 P **P** **11 58 36.5 +0.4**
SAOF pmax pmax
comp=Z,9.0nm,1.0s
BNI Bardonecchia 44.38 298 P **P** **11 58 38.8 +0.1**
BNI pmax pmax
comp=Z,9.0nm,2.4s
KBS Kingsbay 44.72 347 P **P** **11 58 42.7 +1.9**
KBS Kingsbay 44.72 347 *ce*P **P** **11 58 43.1 +2.4**
KBS pmax pmax
comp=Z,17nm,1.7s
SSB Saint Sauveur 45.77 298 P **P** **11 58 49.5 -0.1**
KSRS Korea Array 46.27 73 LR LR 12 19 09.6
comp=Z,50nm,19.6s,baz=290,slow=37
EKA Eskdalemuir Ar 48.06 313 P **P** **11 59 06.8 -0.5**
MBAR Mbarara 52.58 229 *ce*P P 11 59 37.8 -4.4
MBAR pmax pmax
comp=Z,12nm,2.5s
MA2 Magadan 53.31 39 LR LR 12 24 45.1
comp=Z,33nm,18.6s,baz=216,slow=38
ESDC Sonseca Array 53.64 295 P **P** **11 59 49.1 -0.6**
comp=Z,1.0nm,0.7s,baz=58,slow=8.2,SNR=6.9
comp=Z,1.0nm,0.7s
BORG Borgarnes 54.36 328 LR LR 12 23 23.1
comp=Z,38nm,18.5s,baz=88,slow=36
BORG Borgarnes 54.36 328 *i* P **P** **11 59 51.2 -3.2**
EUNU Eureka 59.40 355 P **P** **12 00 31.2 +1.1**
EUNU IAmb IAmb 12 00 33.0
comp=Z,3.1nm,0.8s
TOA0 Torodi Ar. Sit 63.34 265 P **P** **12 00 56.3 -1.2**
TORD Torodi Ar. Bea 63.34 265 P **P** **12 00 56.2 -1.3**
comp=Z,2.2nm,0.7s,baz=52,slow=6.3,SNR=10
comp=Z,2.2nm,0.7s
TORD Torodi Ar. Bea 63.34 265 P **P** **12 00 56.4 -1.1**
KOWA Kowa 66.90 270 P **P** **12 01 19.5 -1.2**
TOLK Toolik Lake Re 68.25 14 P **P** **12 01 28.8 +0.3**
COLD Coldfoot 69.36 15 P **P** **12 01 35.7 +0.4**
COLD IAmb IAmb 12 01 44.2
comp=Z,4.7nm,0.8s
IMAR Indian Mountai 69.68 17 P **P** **12 01 36.7 -0.6**
SIJI Sorong 70.54 108 P **P** **12 01 46.1 +2.8**
comp=Z,7.5nm,0.6s,baz=32,slow=6.7,SNR=4.7
C36M Paulatuk 70.71 4 P **P** **12 01 43.3 -0.2**
H23K Yukon River 70.71 15 P **P** **12 01 44.3 +0.6**
INK Inuvik 70.93 8 P **P** **12 01 43.7 -1.2**
comp=Z,3.3nm,0.7s,baz=321,slow=6.1,SNR=9.8
comp=Z,3.3nm,0.7s
INK Inuvik 70.93 8 P **P** **12 01 44.9 0.0**
INK IAmb IAmb 12 02 21.8
comp=Z,9.6nm,1.4s
INK Inuvik 70.93 8 P **P** **12 01 44.9 0.0**
INK pmax pmax
comp=Z,10.0nm,1.4s
H24K Noodor Dome 71.03 15 P **P** **12 01 46.0 +0.4**
H24K IAmb IAmb 12 02 02.3
comp=Z,3.6nm,1.2s
ILAR Eielson Array 72.18 15 P **P** **12 01 52.1 -0.4**
comp=Z,0.9nm,0.8s,baz=328,slow=5.7,SNR=9.7
comp=Z,0.9nm,0.8s
ILAR Eielson Array 72.18 15 P **P** **12 01 51.9 -0.7**
J26L Joseph Creek 73.05 14 P **P** **12 01 58.5 +0.7**
J26L IAmb IAmb 12 01 58.9
comp=Z,3.6nm,0.9s
BCAR Beaver Creek A 74.69 13 P **P** **12 02 07.9 +0.5**
YKA Yellowknife Ar 77.93 1 P **P** **12 02 25.5 -0.2**
comp=Z,1.5nm,0.5s,baz=353,slow=5.6,SNR=6.0
comp=Z,1.5nm,0.5s
SCHQ Schefferville 77.94 335 P **P** **12 02 25.4 -0.6**
comp=Z,5.0nm,0.7s,baz=68,slow=3.3,SNR=7.3
comp=Z,5.0nm,0.7s
SCHQ Schefferville 77.94 335 P **P** **12 02 25.4 -0.6**
KNRA Kununurra 79.21 121 P **P** **12 02 32.2 -1.2**
KNRA IAmb IAmb 12 02 37.5
comp=Z,8.1nm,0.8s
DLBC Dease Lake 80.90 9 P **P** **12 02 42.2 +0.2**
GBN Guysborough 83.64 327 P **P** **12 02 57.0 +0.5**
WB0 Warramunga Arr 85.86 120 P **P** **12 03 06.8 -1.3**
WRA Warramunga Arr 85.95 120 P **P** **12 03 07.1 -1.4**
comp=Z,2.6nm,0.9s,baz=322,slow=4.8,SNR=11
comp=Z,2.6nm,0.9s
WRAB Tennant Creek 85.95 120 P **P** **12 03 07.5 -1.0**
WRAB IAmb IAmb 12 03 12.3
comp=Z,6.3nm,1.1s
WRAB Tennant Creek 85.95 120 P **P** **12 03 07.5 -1.0**
WRAB pmax pmax
comp=Z,6.0nm,1.1s
WB2 Warramunga Arr 85.96 120 P **P** **12 03 06.8 -1.7**
WB2 IAmb IAmb 12 03 14.8
comp=Z,3.8nm,0.7s
WR0 Warramunga Arr 86.10 120 P **P** **12 03 07.7 -1.5**
WR0 IAmb IAmb 12 03 09.4
comp=Z,9.0nm,1.4s
AS31 Alice Springs 88.29 123 P **P** **12 03 18.3 -1.5**
ASAR Alice Springs 88.29 123 P **P** **12 03 18.4 -1.4**
comp=Z,1.4nm,0.8s,baz=311,slow=4.7,SNR=20
comp=Z,1.4nm,0.8s
ASAR Alice Springs 88.29 123 P **P** **12 03 18.8 -1.0**
ASAR Alice Springs 88.29 123 P **P** **12 03 18.8 -1.0**
HRY Holter Researc 93.76 360 P **P** **12 03 44.0 -1.2**
PLCA Paso Flores 148.39 255 PKPbc **PKPdf** **12 10 13.7 +2.8**
comp=Z,2.6nm,0.9s,baz=147,slow=3.0,SNR=5.0

*IDC **08** 11:58:05.1±3.3,36.16N×71.07E,h124km±29km,mb3.5/8, mbtmp4.0/12,Error ellipse: s-maj=25.0km s-min=16.7km az=3.0*
*NEIC **08** 11:58:07.7±1.1,36.42N±0.07×71.1E±0.1,h147km±11km, mb4.0/2,Error ellipse: s-maj=12.9km s-min=9.6km az=114.0*
*NNC **08** 11:58:10.9±4.3,36.65N×71.06E,h131km±72km,mb3.8, mpv4.4,Error ellipse: s-maj=42.1km s-min=32.1km az=49.0*
ISC 08 11:58:07.0±0.6,**36.37N**±0.05×**71.15E**±0.06,**h150**km,**n49,** σ**1**°**55**/**58**,**mb3.6**/**7**,**2C-5D**,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.51**	**224**		Pn		**Pn**	**11 58 49.3**	**+0.8**
GAR	**Garm**	**2.71**	**346**				**Pn**	**11 58 50.4**	**-0.4**
CHGR	**Chuyangaron**	**2.78**	**326**				**Pn**	**11 58 51.0**	**-0.6**
DRK	**Karamyk**	**3.15**	**9**		Pn		**Pn**	**11 58 56.8**	**+0.3**
NIL	**Nilore**	**3.21**	**147**		Pn		**Pn**	**11 58 58.9**	**+1.8**
BTK	**Batken**	**3.69**	**356**				**Pn**	**11 59 04.2**	**+0.9**
JMU	**Jammu**	**4.78**	**139**	*e*P			**Pn**	**11 59 18.5**	**+1.1**
JMU				*e*S			**Sn**	**12 00 11.5**	**-0.8**
THN	**Thein Dam**	**5.44**	**135**	*e*P			**Pn**	**11 59 27.5**	**+1.2**
THN				*e*S			**Sn**	**12 00 27.5**	**-0.7**
BHK	**Bhakra**	**6.60**	**137**	*e*P			**Pn**	**11 59 42.8**	**+1.1**
BHK				*e*S			**Sn**	**12 00 53.5**	**-2.4**
KK31	**Karatay Array**	**6.74**	**356**	Pn			**Pn**	**11 59 42.9**	**-0.7**
KK31	**Karatay Array**	**6.74**	**356**	⇓P			**Pn**	**11 59 42.8**	**-0.8**
	20nm,0.5s,baz=167,slow=11,SNR=140								
KK31				⇓S			**Sn**	**12 00 56.9**	**-2.4**
	14nm,0.4s,baz=189,slow=24,SNR=10								
KKAR	**Karatay Array**	**6.74**	**356**	Pn			**Pn**	**11 59 42.6**	**-0.9**
KKAR	**Karatay Array**	**6.74**	**356**	Pn			**Pn**	**11 59 42.9**	**-0.7**
AAK	**Ala-Archa**	**6.77**	**21**	P			**Pn**	**11 59 45.1**	**+1.0**
	11nm,0.3s,baz=169,slow=4.7,SNR=6.2								
AAK				S			**Sn**	**12 00 55.1**	**-5.0**
	8.9nm,0.4s,baz=355,slow=21,SNR=7.0								
AAK	**Ala-Archa**	**6.77**	**21**	Pn			**Pn**	**11 59 44.8**	**+0.7**
BOOM	**Boomskoye usch**	**7.15**	**30**	Pn			**Pn**	**11 59 49.5**	**+0.5**
CHMS	**Chumysh**	**7.18**	**22**	⇓P			**Pn**	**11 59 49.8**	**+0.5**
	15nm,0.8s								
CHMS				⇓S			**Sn**	**12 01 07.8**	**-1.9**
	26nm,0.9s								
SMLA	**Simla**	**7.24**	**135**	*e*P			**Pn**	**11 59 50.0**	**-0.2**
SMLA				*e*S			**Sn**	**12 01 08.5**	**-2.7**
SMLA				IAML				12 01 10.9	
	comp=E,104nm,0.3s								
SMLA				IAML				12 01 12.4	
	comp=N,114nm,0.4s								
TKM2	**Tokmak 2**	**7.39**	**26**	⇑P			**Pn**	**11 59 54.3**	**+2.0**
	comp=N,16nm,0.5s								
AJM	**Ajmer**	**10.30**	**162**	*e*P			**Pn**	**12 00 28.7**	**-2.3**
GEYT	**Alibeck**	**10.52**	**282**	P			**Pn**	**12 00 33.1**	**-0.8**
	comp=N,3.3nm,0.3s,baz=96,slow=12,SNR=7.2								
GEYT				S			**Sn**	**12 02 26.9**	**-3.3**
	comp=N,5.5nm,0.5s,baz=58,slow=36,SNR=3.6								
GEYT	**Alibeck**	**10.52**	**282**	Pn			**Pn**	**12 00 33.3**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**10.52**	**282**	Pn			**Pn**	**12 00 33.1**	**-0.8**
DANN	**Dangsing**	**13.31**	**123**	*e*P			**Pn**	**12 01 08.9**	**-1.6**
	comp=N,45nm,0.4s								
MKAR	**Makanchi Array**	**13.32**	**35**	P			**Pn**	**12 01 13.5**	**-1.0**
	comp=N,2.0nm,0.8s,baz=205,slow=11,SNR=7.8								
GKN	**Gorkha**	**14.13**	**122**	*e*P			**Pn**	**12 01 19.6**	**-1.1**
	comp=N,60nm,0.5s								
DMN	**Daman**	**14.70**	**123**	*e*P			**Pn**	**12 01 26.4**	**-1.5**
	comp=N,30nm,0.5s								
PKIN	**Phulchoki**	**14.92**	**122**	*e*P			**Pn**	**12 01 30.0**	**-0.6**
	comp=N,34nm,0.4s								
PKI	**Pulchoki**	**14.93**	**122**	*e*P			**Pn**	**12 01 29.9**	**-1.0**
	comp=N,20nm,0.4s								
GUN	**Gumba**	**15.04**	**120**	*e*P			**Pn**	**12 01 31.6**	**-0.7**
	comp=N,24nm,0.4s								
AB31	**Akbulak array**	**15.26**	**331**	⇑P			**Pn**	**12 01 35.3**	**+0.9**
	comp=N,3.9nm,0.7s,baz=286,slow=28,SNR=60								
ABKAR	**Akbulak array**	**15.26**	**331**	P			**Pn**	**12 01 34.8**	**+0.4**
ABKAR	**Akbulak array**	**15.26**	**331**	P			**Pn**	**12 01 35.0**	**+0.6**
ABKAR				IAmb			IAmb	12 01 39.8	
	comp=Z,11nm,1.2s								
JIRN	**Jiri**	**15.41**	**120**	*e*P			**Pn**	**12 01 36.7**	**-0.2**
	comp=Z,73nm,0.4s								
RAMN	**Ramite**	**16.14**	**121**	*e*P			**Pn**	**12 01 44.9**	**-0.8**
	comp=Z,15nm,0.3s								
AKTO	**Aktyubinsk**	**16.95**	**330**	P			**Pn**	**12 01 56.0**	**+0.9**
	comp=Z,6.7nm,0.8s,baz=116,slow=7.0,SNR=4.3								
AKTO	**Aktyubinsk**	**16.95**	**330**	⇓P			**Pn**	**12 01 56.7**	**+1.6**
	comp=Z,15nm,1.1s								
HYBB	**Hyderabad (bro**	**19.98**	**159**	*e*P			**Pn**	**12 02 29.2**	**-1.9**
HYBB				*e*S			**S**	**12 06 07.0**	**+2.5**
ZAA0	**Zalesovo Array**	**19.98**	**24**	P			**P**	**12 02 28.5**	**+1.0**
ZAA0				IAmb			IAmb	12 02 31.8	
	comp=Z,9.7nm,1.4s								
ZALV	**Zalesovo Beam**	**19.98**	**24**	P			**P**	**12 02 28.2**	**+0.7**
	comp=Z,2.9nm,0.4s,baz=210,slow=9.9,SNR=13								
	comp=Z,2.9nm,0.4s								
ZALV	**Zalesovo Beam**	**19.98**	**24**	P			**P**	**12 02 28.9**	**+1.4**
AKASG	**Malin Array Be**	**33.12**	**309**	P			**P**	**12 04 30.4**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=83,slow=6.4,SNR=4.1								
	comp=Z,0.4nm,0.4s								
FINES	**FINESS Array B**	**37.66**	**326**	P			**P**	**12 05 09.4**	**+2.2**
	comp=Z,1.1nm,0.7s,baz=116,slow=3.2,SNR=3.8								
	comp=Z,1.1nm,0.7s								
NB2	**NORSAR Subarra**	**44.56**	**323**	P			**P**	**12 06 04.9**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=98,slow=7.9								
NOA	**NORSAR Array B**	**44.56**	**323**	P			**P**	**12 06 05.2**	**+1.6**
	comp=Z,1.4nm,0.8s,baz=97,slow=7.7,SNR=5.0								
	comp=Z,1.4nm,0.8s								
TORD	**Torodi Ar. Bea**	**65.84**	**269**	P			**P**	**12 08 36.6**	**0.0**
	comp=Z,0.6nm,0.4s,baz=54,slow=5.7,SNR=12								
	comp=Z,0.6nm,0.4s								
INK	**Inuvik**	**74.01**	**9**	P			**P**	**12 09 28.2**	**+2.6**
	comp=Z,1.5nm,0.9s,baz=288,slow=4.4,SNR=5.8								
	comp=Z,1.5nm,0.9s								

WRA	**Warramunga Arr**	**81.82**	**122**	P	**P**	**12 10 10.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=326,slow=4.8,SNR=8.4						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**84.08**	**125**	P	**P**	**12 10 22.1**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=307,slow=4.9,SNR=15						
	comp=Z,0.6nm,0.6s						

*NORS **08** 12:09:49.9±0.0, 42.90N×46.29E, h91km±2km, MPVA4.2*
*MOS **08** 12:09:50.7±0.0, 42.96N×46.09E, h77km±2km, MPVA4.2*
*TIF **08** 12:09:50.6, 43.05N×46.17E, h76km±3km*
*DRS **08** 12:09:52.2±0.0, 42.92N×45.55E, h27km*

ISC 08 12:09:49.9±0.9, 43.05N±0.03×46.15E±0.02, h88km±6km, n96, σ2s19/177, 3C-6D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.09**	**191**	*i* P		**Pn**	**12 10 03.1**	**+0.6**
DVE	**Vedeno**	**0.09**	**191**	*e*Pg		**Pn**	**12 10 03.2**	**+0.7**
DVE				*e*Sg		**Sn**	**12 10 11.7**	**0.0**
DLMR	**Dylym**	**0.35**	**86**	*e*P		**Pn**	**12 10 04.4**	**+1.0**
DLMR				*e*S		**Sn**	**12 10 14.2**	**+0.8**
DLMR				*e*S			12 10 15.2	
DLMR				pmax	pmax			
	comp=Z,273nm,0.2s							
DLMR				smax	smax			
	comp=E,2μm,0.4s							
DLMR				smax	smax			
	comp=N,1μm,0.4s							
DLMR				smax	smax			
	comp=E,1μm,0.4s							
DLMR	**Dylym**	**0.35**	**86**	*e*Pg		**Pn**	**12 10 04.3**	**+1.0**
DLMR				*e*Sg		**Sn**	**12 10 14.1**	**+0.6**
DBC	**Dubki**	**0.50**	**93**	⇑*i* P		**Pn**	**12 10 05.4**	**+0.9**
DBC				*e*S		**Sn**	**12 10 15.9**	**+0.5**
DBC				*e*S			12 10 16.4	
DBC				pmax	pmax			
	comp=Z,168nm,0.2s							
DBC				smax	smax			
	comp=E,974nm,0.3s							
DBC				smax	smax			
	comp=N,762nm,0.3s							
DBC				smax	smax			
	comp=E,874nm,0.4s							
DBC	**Dubki**	**0.50**	**93**	*e*Pg		**Pn**	**12 10 05.5**	**+1.0**
DBC				*e*Sg		**Sn**	**12 10 15.9**	**+0.5**
UNCR	**Uncukul**	**0.58**	**125**	*e*P		**Pn**	**12 10 05.6**	**+0.5**
UNCR				*e*S		**Sn**	**12 10 17.1**	**+0.6**
UNCR				*e*S			12 10 18.2	
UNCR				pmax	pmax			
	comp=Z,115nm,0.2s							
UNCR				smax	smax			
	comp=E,300nm,0.6s							
UNCR				smax	smax			
	comp=N,414nm,0.5s							
UNCR				smax	smax			
	comp=N,242nm,0.2s							
UNCR	**Uncukul**	**0.58**	**125**	*e*Pg		**Pn**	**12 10 05.5**	**+0.3**
UNCR				*e*Sg		**Sn**	**12 10 17.1**	**+0.6**
KRNR	**Karanay**	**0.60**	**111**	*e*P		**Pn**	**12 10 06.1**	**+0.7**
KRNR				*e*S		**Sn**	**12 10 17.3**	**+0.4**
KRNR				*e*S			12 10 18.0	
KRNR				pmax	pmax			
	comp=Z,50nm,0.1s							
KRNR				smax	smax			
	comp=E,377nm,0.3s							
KRNR				smax	smax			
	comp=N,206nm,0.4s							
KRNR				smax	smax			
	comp=E,334nm,0.2s							
KRNR	**Karanay**	**0.60**	**111**	*i* Pg		**Pn**	**12 10 06.0**	**+0.7**
KRNR				*e*Sg		**Sn**	**12 10 17.2**	**+0.4**
XNZR	**Khunzakh**	**0.65**	**141**	*e*P		**Pn**	**12 10 06.9**	**+1.0**
XNZR				*e*S		**Sn**	**12 10 18.4**	**+0.6**
XNZR				*e*S			12 10 19.2	
XNZR				pmax	pmax			
	comp=Z,113nm,0.4s							
XNZR				smax	smax			
	comp=N,385nm,0.3s							
XNZR				smax	smax			
	comp=E,454nm,0.2s							
XNZR				smax	smax			
	comp=E,458nm,0.2s							
XNZR	**Khunzakh**	**0.65**	**141**	*e*Pg		**Pn**	**12 10 07.0**	**+1.0**
XNZR				*e*Sg		**Sn**	**12 10 18.5**	**+0.6**
BUJR	**Buynaksk**	**0.74**	**107**	*e*P		**Pn**	**12 10 08.0**	**+1.4**
BUJR				*e*S		**Sn**	**12 10 20.3**	**+1.2**
BUJR				*e*S			12 10 21.6	
BUJR				pmax	pmax			
	comp=Z,194nm,0.3s							
BUJR				smax	smax			
	comp=N,2μm,0.4s							
BUJR				smax	smax			
	comp=E,993nm,0.4s							
BUJR				smax	smax			
	comp=N,1μm,0.4s							
BUJR	**Buynaksk**	**0.74**	**107**	*e*Pg		**Pn**	**12 10 08.1**	**+1.5**
BUJR				*e*Sg		**Sn**	**12 10 20.8**	**+1.7**
KMGR	**Komgaron**	**0.94**	**271**	*e*P		**Pn**	**12 10 10.9**	**+2.1**
KMGR				*e*S		**Sn**	**12 10 26.0**	**+3.0**
KMGR	**Komgaron**	**0.94**	**271**	*e*Pg		**Pn**	**12 10 10.7**	**+1.8**
KMGR				*e*Sg		**Sn**	**12 10 25.5**	**+2.5**
KANR	**Karaman**	**0.99**	**81**	*e*P		**Pn**	**12 10 11.7**	**+2.4**
KANR				*e*S		**Sn**	**12 10 26.3**	**+2.5**
KANR	**Karaman**	**0.99**	**81**	*e*Pg		**Pn**	**12 10 11.7**	**+2.4**
KANR				*e*Sg		**Sn**	**12 10 27.5**	**+3.6**
MAK	**Makhachkala**	**1.00**	**94**	⇓*i* P		**Pn**	**12 10 11.3**	**+1.9**
MAK				*e*			12 10 25.8	
MAK				pmax	pmax			
	comp=Z,143nm,0.4s							
MAK				smax	smax			
	comp=N,1μm,0.5s							
MAK				smax	smax			
	comp=N,897nm,0.5s							
MAK	**Makhachkala**	**1.00**	**94**	*e*Pg		**Pn**	**12 10 11.2**	**+1.9**
MAK				*e*Sg		**Sn**	**12 10 26.9**	**+2.9**
VLKR	**Vladikavkaz**	**1.08**	**271**	*e*P		**Pn**	**12 10 12.4**	**+2.0**
VLKR				*e*S		**Sn**	**12 10 29.3**	**+3.5**
VLKR	**Vladikavkaz**	**1.08**	**271**	*e*Pg		**Pn**	**12 10 11.8**	**+1.4**
VLKR				*e*Sg		**Sn**	**12 10 26.3**	**+0.5**
KMKR	**Kumukh**	**1.15**	**142**	*e*P		**Pn**	**12 10 12.8**	**+1.3**
KMKR				*e*S		**Sn**	**12 10 29.5**	**+1.9**
KMKR				*e*S			12 10 30.4	
KMKR				pmax	pmax			
	comp=Z,93nm,0.2s							
KMKR				smax	smax			
	comp=E,556nm,0.2s							
KMKR				smax	smax			
	comp=N,349nm,0.3s							
KMKR				smax	smax			
	comp=E,543nm,0.2s							
KMKR	**Kumukh**	**1.15**	**142**	*e*Pg		**Pn**	**12 10 12.0**	**+0.6**
KMKR				*e*Sg		**Sn**	**12 10 28.4**	**+0.8**
PNSH	**Pansheti**	**1.20**	**251**	P		**Pn**	**12 10 13.1**	**+1.0**
PNSH				S		**Sn**	**12 10 29.6**	**+1.0**
PNSH	**Pansheti**	**1.20**	**251**	P		**Pn**	**12 10 13.0**	**+1.0**
PNSH				S		**Sn**	**12 10 29.6**	**+1.0**
LGD	**Lagodekhi**	**1.21**	**177**	P		**Pn**	**12 10 13.2**	**+1.2**
LGD				S		**Sn**	**12 10 29.5**	**+0.9**
LGD	**Lagodekhi**	**1.21**	**177**	P		**Pn**	**12 10 13.2**	**+1.2**
LGD				S		**Sn**	**12 10 29.5**	**+0.9**
BTKR	**Batakoyurt**	**1.22**	**286**	⇓*i* P		**Pn**	**12 10 14.8**	**+2.7**
BTKR				*e*S		**Sn**	**12 10 32.2**	**+3.4**
BTKR	**Batakoyurt**	**1.22**	**286**	*i* Pg		**Pn**	**12 10 14.3**	**+2.2**
BTKR				*e*Sg		**Sn**	**12 10 31.9**	**+3.1**
TRKR	**Terskaya**	**1.24**	**304**	⇓*i* P		**Pn**	**12 10 14.7**	**+2.4**
TRKR				*e*S		**Sn**	**12 10 32.8**	**+3.8**
TRKR	**Terskaya**	**1.24**	**304**	*i* Pg		**Pn**	**12 10 14.6**	**+2.4**
TRKR				*e*Sg		**Sn**	**12 10 32.7**	**+3.6**
SGKR	**Sergokala**	**1.26**	**117**	*e*P		**Pn**	**12 10 14.9**	**+2.4**
SGKR				*e*S		**Sn**	**12 10 32.8**	**+3.3**
SGKR				*e*S			12 10 33.7	
SGKR				pmax	pmax			
	comp=Z,51nm,0.2s							
SGKR				smax	smax			
	comp=E,221nm,0.3s							
SGKR				smax	smax			
	comp=N,331nm,0.4s							
SGKR				smax	smax			
	comp=N,244nm,0.3s							
SGKR	**Sergokala**	**1.26**	**117**	*e*Pg		**Pn**	**12 10 15.2**	**+2.7**
SGKR				*e*Sg		**Sn**	**12 10 32.8**	**+3.3**
GUDG	**Gudauri**	**1.36**	**245**	P		**Pn**	**12 10 15.5**	**+1.5**
GUDG				S		**Sn**	**12 10 33.6**	**+1.4**
GUDG	**Gudauri**	**1.36**	**245**	P		**Pn**	**12 10 15.5**	**+1.5**
GUDG				S		**Sn**	**12 10 33.6**	**+1.4**
ARNR	**Ardon**	**1.37**	**276**	⇓*i* P		**Pn**	**12 10 16.3**	**+2.3**
ARNR				*e*S		**Sn**	**12 10 34.9**	**+2.8**
ARNR	**Ardon**	**1.37**	**276**	*e*Pg		**Pn**	**12 10 16.2**	**+2.3**
ARNR				*e*Sg		**Sn**	**12 10 34.3**	**+2.2**
LACR	**Lac**	**1.38**	**262**	*e*P		**Pn**	**12 10 15.0**	**+0.9**
LACR				*e*S		**Sn**	**12 10 33.0**	**+0.6**
LACR	**Lac**	**1.38**	**262**	*e*Pg		**Pn**	**12 10 15.0**	**+0.9**
LACR				*e*Sg		**Sn**	**12 10 32.6**	**+0.2**
URKR	**Urkarakh**	**1.40**	**128**	*e*P		**Pn**	**12 10 16.4**	**+1.9**
URKR				*e*S		**Sn**	**12 10 35.2**	**+2.2**
URKR				*e*S			12 10 36.8	
URKR				pmax	pmax			
	comp=Z,52nm,0.4s							
URKR				smax	smax			
	comp=N,242nm,0.6s							
URKR				smax	smax			
	comp=E,230nm,0.1s							
URKR				smax	smax			
	comp=N,198nm,0.3s							
URKR	**Urkarakh**	**1.40**	**128**	*e*Pg		**Pn**	**12 10 16.6**	**+2.1**
URKR				*e*Sg		**Sn**	**12 10 34.5**	**+1.5**
ZKTA	**Zakatala**	**1.45**	**166**	P		**Pn**	**12 10 15.7**	**+0.8**
KORR	**Kora**	**1.53**	**272**	*e*P		**Pn**	**12 10 17.8**	**+1.9**
KORR				*e*S		**Sn**	**12 10 37.9**	**+2.3**
KORR	**Kora**	**1.53**	**272**	*e*Pg		**Pn**	**12 10 17.8**	**+1.9**
KORR				*e*Sg		**Sn**	**12 10 37.6**	**+2.0**
PRTR	**Priterechnaya**	**1.53**	**298**	*e*P		**Pn**	**12 10 18.5**	**+2.6**
PRTR				*e*S		**Sn**	**12 10 39.2**	**+3.5**
PRTR	**Priterechnaya**	**1.53**	**298**	*e*Pg		**Pn**	**12 10 18.5**	**+2.6**
PRTR				*e*Sg		**Sn**	**12 10 39.1**	**+3.5**
STDR	**Stavd-Durt**	**1.56**	**283**	⇓*i* P		**Pn**	**12 10 18.7**	**+2.4**
STDR				*e*S		**Sn**	**12 10 39.3**	**+3.0**
STDR	**Stavd-Durt**	**1.56**	**283**	*i* Pg		**Pn**	**12 10 18.7**	**+2.4**
STDR				*e*Sg		**Sn**	**12 10 38.6**	**+2.3**
DDFL	**Dedoflistskaro**	**1.60**	**181**	P		**Pn**	**12 10 20.6**	**+3.7**
DDFL				S		**Sn**	**12 10 44.4**	**+7.0**
DDFL	**Dedoflistskaro**	**1.60**	**181**	P		**Pn**	**12 10 20.6**	**+3.7**
DDFL				S		**Sn**	**12 10 44.3**	**+7.0**
SEAG	**Tbilisi Sea**	**1.62**	**218**	P		**Pn**	**12 10 18.8**	**+1.6**
SEAG				S		**Sn**	**12 10 39.5**	**+1.7**
SEAG	**Tbilisi Sea**	**1.62**	**218**	P		**Pn**	**12 10 18.8**	**+1.6**
SEAG				S		**Sn**	**12 10 39.5**	**+1.7**
ZEI	**Tsey**	**1.67**	**262**	*e*P		**Pn**	**12 10 18.5**	**+0.6**
ZEI				*e*S		**Sn**	**12 10 39.0**	**-0.2**
ZEI	**Tsey**	**1.67**	**262**	*e*Pg		**Pn**	**12 10 18.6**	**+0.6**
ZEI				*e*Sg		**Sn**	**12 10 38.8**	**-0.4**
BTNK	**Botanikuri**	**1.69**	**217**	P		Pn	12 10 12.6	-5.4
BTNK				S		**Sn**	**12 10 33.8**	**-5.6**
BTNK	**Botanikuri**	**1.69**	**217**	P		Pn	12 10 12.6	-5.4
BTNK				S		**Sn**	**12 10 33.8**	**-5.6**
DGRG	**David-gareji**	**1.69**	**200**	P		**Pn**	**12 10 18.9**	**+0.8**
DGRG				S		**Sn**	**12 10 41.3**	**+1.8**
DGRG	**David-gareji**	**1.69**	**200**	P		**Pn**	**12 10 18.9**	**+0.8**
DGRG				S		**Sn**	**12 10 41.2**	**+1.8**
LSNR	**Lesken**	**1.72**	**279**	*e*P		**Pn**	**12 10 20.4**	**+2.0**
LSNR				*e*S		**Sn**	**12 10 42.3**	**+2.3**
LSNR	**Lesken**	**1.72**	**279**	*e*Pg		**Pn**	**12 10 20.2**	**+1.9**
LSNR				*e*Sg		**Sn**	**12 10 41.9**	**+1.9**
DIGR	**Digorskoe uzhe**	**1.89**	**266**	*e*P		**Pn**	**12 10 21.8**	**+1.0**
DIGR				*e*S		**Sn**	**12 10 44.4**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.89**	**266**	*e*Pg		**Pn**	**12 10 21.8**	**+1.0**
DIGR				*e*Sg		**Sn**	**12 10 44.4**	**+0.1**
NCK	**Nalchik**	**1.92**	**284**	*i* P		**Pn**	**12 10 23.0**	**+2.0**
AKT	**Akhty**	**1.96**	**143**	*e*P		**Pn**	**12 10 23.0**	**+1.5**
AKT				*e*S		**Sn**	**12 10 47.8**	**+2.2**
AKT				*e*S			12 10 48.2	
AKT				pmax	pmax			
	comp=Z,25nm,0.3s							
AKT				smax	smax			
	comp=N,181nm,0.2s							
AKT				smax	smax			
	comp=E,177nm,0.3s							
AKT				smax	smax			
	comp=N,162nm,0.3s							
AKT	**Akhty**	**1.96**	**143**	*e*Pg		**Pn**	**12 10 23.4**	**+1.8**
AKT				*e*Sg		**Sn**	**12 10 45.8**	**+0.1**
SEKA	**Sheki**	**1.99**	**157**	P		**Pn**	**12 10 22.8**	**+0.8**
ONI	**Oni**	**2.04**	**258**	P		**Pn**	**12 10 25.1**	**+2.6**
ONI				S		**Sn**	**12 10 50.1**	**+2.6**
ONI	**Oni**	**2.04**	**258**	*e*P		**Pn**	**12 10 25.2**	**+2.6**
ONI				*e*S		**Sn**	**12 10 50.6**	**+3.1**
ONI	**Oni**	**2.04**	**258**	*e*Pg		**Pn**	**12 10 25.2**	**+2.6**
ONI				*e*Sg		**Sn**	**12 10 47.8**	**+0.4**
KSMR	**Kasumkent**	**2.06**	**134**	*e*P		**Pn**	**12 10 25.0**	**+2.2**
KSMR				*e*S		**Sn**	**12 10 50.8**	**+2.9**
KSMR				*e*S			12 10 51.5	
KSMR				pmax	pmax			
	comp=Z,25nm,0.2s							
KSMR				smax	smax			
	comp=E,46nm,0.0s							
KSMR				smax	smax			
	comp=N,767nm,0.4s							
KSMR				smax	smax			
	comp=N,626nm,0.4s							
KSMR	**Kasumkent**	**2.06**	**134**	*e*Pg		**Pn**	**12 10 25.0**	**+2.2**
KSMR				*e*Sg		**Sn**	**12 10 50.2**	**+2.2**
TRLG	**Trialeti**	**2.14**	**226**	P		**Pn**	**12 10 26.0**	**+2.0**
TRLG				S		**Sn**	**12 10 51.3**	**+1.3**
TRLG	**Trialeti**	**2.14**	**226**	P		**Pn**	**12 10 26.0**	**+2.0**
TRLG				S		**Sn**	**12 10 51.3**	**+1.3**
KBTC	**Kuba-Taba**	**2.14**	**292**	*e*Pg		**Pn**	**12 10 25.5**	**+1.6**
KBTC				*e*Sg		**Sn**	**12 10 50.7**	**+0.8**
DMNI	**Dmanisi**	**2.25**	**221**	P		**Pn**	**12 10 26.1**	**+0.6**
DMNI				S		**Sn**	**12 10 51.8**	**-0.8**
DMNI	**Dmanisi**	**2.25**	**221**	P		**Pn**	**12 10 26.0**	**+0.6**
DMNI				S		**Sn**	**12 10 51.8**	**-0.8**
GANJ	**Ganja**	**2.40**	**177**	P		**Pn**	**12 10 27.8**	**+0.4**
PYA1	**Pyatigorsk**	**2.44**	**296**	*i* Pn		**Pn**	**12 10 29.3**	**+1.4**
PYA1				*e*Sn		**Sn**	**12 10 56.6**	**-0.4**
KBZ	**Khabaz**	**2.47**	**287**	*i* P		**Pn**	**12 10 29.1**	**+1.0**
KBZ	**Khabaz**	**2.47**	**287**	*i* Pn		**Pn**	**12 10 29.2**	**+1.0**
KBZ				*e*Sn		**Sn**	**12 10 56.7**	**-0.8**
NEY	**Neytrino**	**2.52**	**276**	*e*Pn		**Pn**	**12 10 30.4**	**+1.3**
NEY				*e*Sn		**Sn**	**12 10 59.3**	**+0.3**
BEYR	**Belyy Ugol+**	**2.61**	**293**	*e*Pn		**Pn**	**12 10 31.4**	**+1.2**
BEYR				*e*Sn		**Sn**	**12 11 00.4**	**-0.6**
SHA1	**Shidzhatmaz**	**2.64**	**286**	*i* Pn		**Pn**	**12 10 31.7**	**+1.0**
SHA1				*e*Sn		**Sn**	**12 11 01.1**	**-1.0**
KIV0	**Kislovodsk Arr**	**2.67**	**291**	*i* Pn		**Pn**	**12 10 32.3**	**+1.2**
KIV0				*e*Sn		**Sn**	**12 11 02.0**	**-0.7**
KIV	**Kislovodsk**	**2.68**	**291**	*i* P		**Pn**	**12 10 32.6**	**+1.5**
KIV	**Kislovodsk**	**2.68**	**291**	*i* Pn		**Pn**	**12 10 32.5**	**+1.4**
KIV				*e*Sn		**Sn**	**12 11 02.4**	**-0.4**
ALER	**Alexandrovskoy**	**2.90**	**307**	*i* Pn		**Pn**	**12 10 36.3**	**+2.3**
ALER				*e*Sn		**Sn**	**12 11 09.3**	**+1.2**
GOF	**Gofitskoye**	**3.01**	**313**	⇑*e*P		Pn	12 10 30.1	-5.4
GOF				*e*S		**Sn**	**12 11 12.7**	**+2.1**
GOF				pmax	pmax			
	comp=Z,16nm,0.6s							
GOF				smax	smax			
	comp=E,128nm,0.4s							
GOF				smax	smax			
	comp=N,59nm,0.3s							
GOF	**Gofitskoye**	**3.01**	**313**	*e*Pn		**Pn**	**12 10 36.6**	**+1.1**
GOF				*e*Sn		**Sn**	**12 11 10.0**	**-0.6**
DOMR	**Dombai**	**3.32**	**276**	*i* P		**Pn**	**12 10 41.1**	**+1.3**
ANN	**Anapa**	**6.54**	**289**	*e*P		**Pn**	**12 11 24.1**	**+0.8**
ANN				pmax	pmax			
	comp=Z,44nm,0.9s							
AKTO	**Aktyubinsk**	**10.99**	**44**	⇑Sn		**Sn**	**12 14 19.6**	**-5.3**
	comp=Z,2.8nm,0.9s							
AB31	**Akbulak array**	**11.40**	**52**	P		**Pn**	**12 12 29.3**	**-0.2**
AB31				S		**Sn**	**12 14 28.0**	**-6.8**
AB31	**Akbulak array**	**11.40**	**52**	Pn		**Pn**	**12 12 29.3**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=239,slow=12,SNR=14							
AB31				⇓Sn		**Sn**	**12 14 28.0**	**-6.8**
	comp=Z,0.9nm,0.6s,baz=240,slow=24,SNR=7.6							
BRVK	**Borovoye**	**18.90**	**50**	*i* P		**P**	**12 14 05.0**	**+1.7**
BRVK				pmax	pmax			
	comp=Z,8.0nm,3.4s							

*IDC **08** 12:10:07.2±1.3, 34.17N×86.03E, h0km, mb3.4/4, mbtmp3.5/7, ML2.9/2, Error ellipse: s-maj=40.8km s-min=25.2km az=70.0*

ISC 08 12:10:12.5±1.3, 34.3N±0.2×86.1E±0.2, h35km, n7, σ0s34/7, mb3.4/3, Xizang

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

MKAR	**Makanchi Array**	**12.84**	**348**	Pn		**Pn**	**12 13 12.2**	**-0.2**
	baz=174,slow=16,SNR=2.2							
	1.0nm,1.1s							
KURBB	**Kurchatov Arra**	**17.25**	**344**	P		**Pn**	**12 14 10.7**	**+0.2**
	1.6nm,0.9s,baz=160,slow=12,SNR=7.3							
ZALV	**Zalesovo Beam**	**19.70**	**358**	P		**P**	**12 14 38.3**	**-0.2**
	0.3nm,0.3s,baz=198,slow=9.3,SNR=3.9							
	0.5nm,0.4s							
SONM	**Songino Array**	**20.39**	**42**	P		**P**	**12 14 46.8**	**+0.4**
	0.7nm,0.6s,baz=237,slow=10,SNR=4.6							
	0.7nm,0.6s							
WRA	**Warramunga Arr**	**70.83**	**132**	P		**P**	**12 21 25.5**	**-0.3**
	0.5nm,0.9s,baz=325,slow=6.5,SNR=2.3							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**73.39**	**135**	P		**P**	**12 21 41.0**	**0.0**
	0.4nm,0.8s,baz=305,slow=5.9,SNR=2.4							
	0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.11**	**278**	P		**P**	**12 22 08.5**	**+0.2**
	0.2nm,0.6s,baz=46,slow=6.2,SNR=1.8							
	0.2nm,0.6s							

*INET **08** 12:22:46.9±0.9, 11.96N×88.09W, h15km±12km, ML3.3*
*SNET **08** 12:22:52.5±0.5, 12.26N×88.04W, h14km±5km, ML3.3*

ISC 08 12:22:47.5±2.4, 12.1N±0.1×87.93W±0.09, h10km, n13, σ0s78/17, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.96**	**22**	*e*P		**Pn**	**12 23 07.2**	**0.0**
CRIN	**San Cristobal**	**1.06**	**54**	*e*P		**Pn**	**12 23 08.7**	**+0.3**
TEL3	**Telica 3**	**1.17**	**65**	*e*P		**Pn**	**12 23 09.7**	**-0.2**
CNCH	**Conchagua**	**1.19**	**5**	*e*P		**Pn**	**12 23 10.9**	**+0.6**
LCND	**La Caada**	**1.22**	**2**	*e*P		**Pg**	**12 23 11.2**	**+0.3**
LCND				*e*S		**Sg**	**12 23 26.0**	**-0.8**
LCND				IAML			12 23 28.5	
	comp=Z,756nm,0.4s							
CNGN	**Cerro Negro**	**1.27**	**71**	*e*P		**Pg**	**12 23 11.6**	**-0.4**
CNGN				*e*S		**Sn**	**12 23 30.6**	**+2.0**
CNGN				IAML			12 23 33.0	
	comp=N,422nm,0.3s							
COPN	**Copaltepe**	**1.31**	**86**	*e*P		**Pb**	**12 23 11.9**	**-0.4**
MOMN	**Momotombo**	**1.40**	**76**	*e*P		**Pb**	**12 23 13.1**	**-0.6**
PACA	**Pacayal**	**1.43**	**344**	*e*P		**Pg**	**12 23 14.9**	**-0.1**
PACA				*e*S		**Sn**	**12 23 31.7**	**-0.9**
HUEN		**1.74**	**81**	*e*P		**Pn**	**12 23 18.1**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.79**	**334**	*e*P		**Pb**	**12 23 20.3**	**-0.1**
SCLA				*e*S		**Sn**	**12 23 42.0**	**+0.6**
MATN	**Matagalpa**	**2.13**	**67**	*e*P		**Pn**	**12 23 22.9**	**-0.4**
RCON	**San Juan de Ri**	**2.22**	**51**	*e*P		**Pn**	**12 23 25.6**	**+1.1**

*SJA **08** 12:24:25.7±0.6, 31.59S×72.20W, h9km, ML5.0, MW4.9*
*IDC **08** 12:24:27.1±0.6, 31.74S×71.57W, h0km, mb4.6/12, mbtmp4.5/17, ML4.4/5, MS4.0/38, Error ellipse: s-maj=20.4km s-min=14.6km az=89.0*
*MOS **08** 12:24:30.6±1.1, 31.57S×71.76W, h28km, mb5.1/28, Error ellipse: s-maj=12.6km s-min=6.8km az=101.2*
*NEIC **08** 12:24:32.4, 31.58S×71.67W, h37km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr0.48; Mθθ0.47; Mϕϕ-0.95; Mrθ0.58; Mϕϕ0.28; Mϕr-0.29; Fault plane solution: M0 1.08000×10^16 NP1:ϕs25.52000°, δ46.35000°, λ154.29000°. NP2:ϕs133.90000°, δ71.71000°, λ46.63000°. Principal axes: T 1.0533, Plg45.0000°, Azm0.0000°; N 0.0571, Plg41.0000°, Azm150.0000°; P -1.1104, Plg15.0000°, Azm254.0000°;*
*NEIC **08** 12:24:32.8±1.6, 31.59S±0.04×71.65W±0.08, h30km±3km, mb5.1/147, Mwr4.6/71, Mwr5.0(GUC) Error ellipse: s-maj=9.9km s-min=5.3km az=95.0*
*VAO **08** 12:24:32.1±0.4, 31.67S×71.52W, h31km, mb4.9*
*GUC **08** 12:24:32.4±0.8, 31.64S×71.61W, h34km±2km, ML4.7*
*GCMT **08** 12:24:34.8±0.3, 31.71S±0.02×71.74W±0.03, h30km±1km, MW5.0/69, Moment Tensor Solution. s27,c27; s69,c81; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.36±.18; Mθθ0.38±.10; Mϕϕ-2.73±.14; Mrθ1.56±.15; Mϕθ1.37±.08; Mθr-0.37±.19; Best double couple: M0 3.31800×10^16 NP1:ϕs133.00000°, δ60.00000°, λ57.00000°. NP2: ϕs6.00000°, δ43.00000°, λ134.00000°. Principal axes: T 3.2370, Plg60.0000°, Azm353.0000°; N 0.1670, Plg28.0000°, Azm151.0000°; P -3.3990, Plg10.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 12:24:31.5±0.7, 31.62S±0.02×71.73W±0.03, h27km±4km, n659, σ1s23/711, mb5.1/101, MS4.0/39, 10C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.75**	**57**			**Pb**	**12 24 45.9**	**-0.2**
CO02				Pn		**Pb**	**12 24 46.1**	**-0.1**
CO02	**Combarbal**	**0.75**	**57**	⇓*i* P		**Pb**	**12 24 46.0**	**-0.2**
CO02				*i* S		**Sb**	**12 24 53.5**	**-2.6**
CO02				IAML			12 24 56.8	
	comp=E,173μm,0.5s							
CO02	**Combarbal**	**0.75**	**57**	*e*P		**Pb**	**12 24 46.0**	**-0.1**
CO02				*e*S		**Sb**	**12 24 56.2**	**+0.1**
CO02				IAML			12 25 00.9	
	comp=Z,45μm,0.8s							
CO06	**Fray Jorge**	**0.95**	**5**			**Pb**	**12 24 50.0**	**+0.6**
CO06	**Fray Jor

MT05 eS Sn 12 25 28.5 +1.9
MT05 IAML 12 25 38.2
comp=E,12µm,0.4s
MT05 Renca 1.95 155 eP Pn 12 25 04.3 +1.4
MT05 eS Sb 12 25 33.5 +3.0
MT05 IAML 12 25 40.9
comp=Z,7µm,1.1s
VA05 Santo Domingo 2.03 177 Pn Pn 12 25 04.3 +0.3
VA05 Santo Domingo 2.03 177 eP Pn 12 25 04.1 +0.1
VA05 IAML 12 25 43.2
comp=E,6µm,0.2s
RTLS Leoncito 2.08 95 eP Pb 12 25 07.9 -1.0
RTLS eS Sn 12 25 30.0 -0.2
RTLS IAML 12 25 35.7
comp=Z,11µm,0.7s
FCH Farellones 2.09 145 eP Pn 12 25 06.3 +1.2
FCH i S Sb 12 25 32.6 -2.1
MT03 Universidad Ad 2.13 151 Pn 12 25 06.8 +1.3
MT03 Universidad Ad 2.13 151 eP Pn 12 25 06.6 +1.1
MT03 eS Sn 12 25 32.9 +1.8
MT03 IAML 12 25 42.1
comp=N,8µm,0.7s
MT03 Universidad Ad 2.13 151 eP Pn 12 25 07.0 +1.6
MT03 eS Sb 12 25 36.8 +1.2
MT03 IAML 12 25 43.3
comp=Z,8µm,0.9s
CO01 Juntas del Tor 2.16 41 eP Pn 12 25 08.0 +2.0
CO01 eS Sb 12 25 37.2 +0.6
CO01 IAML 12 25 44.9
comp=Z,14µm,0.5s
MT09 Talagante 2.24 164 eP Pn 12 25 08.2 +1.2
MT09 eS Sn 12 25 35.5 +1.8
MT09 IAML 12 25 45.6
comp=N,5µm,0.3s
MT01 Popeta 2.27 170 eP Pn 12 25 08.2 +0.9
MT01 eS Sb 12 25 37.0 -2.5
MT01 IAML 12 25 47.1
comp=E,3µm,0.4s
MT01 Popeta 2.27 170 eP Pn 12 25 08.5 +1.2
MT01 eS Sb 12 25 37.5 -2.0
AROD Rodeo 2.42 54 eP Pb 12 25 13.0 -1.7
AROD eS Sb 12 25 47.3 +3.0
ACCO Cerro Coronel 2.51 66 eP Pb 12 25 14.8 -1.3
LMEL Las Melosas 2.57 150 Pn 12 25 13.3 +1.8
LMEL Las Melosas 2.57 150 eP Pn 12 25 13.2 +1.8
LMEL eS Sn 12 25 43.8 +1.9
LMEL IAML 12 25 50.5
comp=N,3µm,0.4s
ZON Zonda 2.61 89 Pb 12 25 15.6 -2.0
ZON Zonda 2.61 89 P Pb 12 25 15.6 -2.0
ZON Zonda 2.61 89 eP Pb 12 25 15.0 -2.6
ZON eP Pn 12 25 15.8 +3.9
ZON eS Sb 12 25 54.0 +4.7
ZON IAML 12 26 01.9
comp=Z,5µm,0.7s
ASAL Salagasta 2.64 112 eP Pb 12 25 16.9 -1.3
ASAL eP Pb 12 25 16.9 -1.3
ASAL eP Pb 12 25 17.0 -1.3
ASAL eS Sb 12 25 57.2 +6.9
ARCO CERRO ARCO 2.67 118 eP Pb 12 25 17.0 -1.7
ARCO eS Sb 12 25 53.5 +2.4
ARCO IAML 12 26 05.3
comp=Z,4µm,0.9s
ACDV Cuesta del Vie 2.67 58 eP Pb 12 25 16.9 -1.8
ACDV eP Pb 12 25 17.0 -1.8
ACDV eS Sb 12 25 54.1 +2.9
ACDV IAML 12 25 55.9
comp=Z,2µm,0.7s
RTCV Cerro Valdivia 2.73 96 eP Pb 12 25 19.0 -0.7
RTCV eS Sb 12 25 59.9 +7.1
LCO Las Campanas 2.75 19 Pn 12 25 15.2 +1.1
LCO Las Campanas 2.75 19 P Pn 12 25 15.2 +1.1
LCO Las Campanas 2.75 19 ⇑ i P Pn 12 25 15.2 +1.1
LCO eS Sn 12 25 49.7 +3.1
LCO Las Campanas 2.75 19 eP Pn 12 25 15.0 +0.9
RTLL Cerro Villicun 2.80 85 eP Pb 12 25 18.9 -2.0
RTLL eS Sb 12 25 58.4 +3.7
BO01 Tunca 2.81 169 Pn Pn 12 25 15.7 +0.9
BO01 Tunca 2.81 169 eP Pn 12 25 15.4 +0.7
BO01 eS Sn 12 25 50.4 +2.6
BO01 Tunca 2.81 169 eP Pn 12 25 15.7 +0.9
BO01 eS Sb 12 25 54.4 -0.7
AAGR Agrelo 2.86 121 eP Pb 12 25 20.0 -1.9
AAGR eS Sb 12 26 03.2 +6.7
BO03 Pichilemu 2.87 184 eP Pn 12 25 15.1 -0.5
BO02 Sierra Bellavi 3.26 166 eP Pn 12 25 22.0 +1.1
BO02 IAML 12 26 15.4
comp=N,2µm,0.3s
BO02 Sierra Bellavi 3.26 166 eP Pn 12 25 22.0 +1.1
BO02 eS Sb 12 26 05.9 -2.1
BO02 IAML 12 26 15.6
comp=Z,2µm,1.0s
GO05 Huala 3.38 183 i P Pn 12 25 22.3 -0.3
GO05 IAML 12 26 39.1
comp=N,727nm,0.7s
GO05 Huala 3.38 183 eP Pn 12 25 22.0 -0.6
GO05 eS Sb 12 26 20.0 +8.5
AC04 Llanos de Chal 3.45 10 Pn Pn 12 25 23.9 +0.4
AC04 Llanos de Chal 3.45 10 ⇑ i P Pn 12 25 23.8 +0.3
AC04 IAML 12 26 27.4
comp=E,3µm,0.5s
AVFE Valle Fertil 3.79 76 eP Pn 12 25 30.7 +2.5
AVFE eS Sb 12 26 22.5 -0.8
AVFE IAML 12 26 35.5
comp=Z,3µm,0.6s
GO03 Copiap 4.22 18 Pn Pn 12 25 34.9 +0.7
GO03 Copiap 4.22 18 eP Pn 12 25 34.8 +0.6
H03N1 Juan Fernandez 6.33 251 T T 12 32 46.7
baz=78,slow=72,SNR=6455
H03N3 Juan Fernandez 6.34 251 T T 12 32 45.7
baz=78,slow=72,SNR=6623
H03N2 Juan Fernandez 6.34 252 T T 12 32 43.9
baz=78,slow=72,SNR=6807
H03S3 Juan Fernandez 6.43 248 T T 12 32 53.8
baz=83,SNR=19
H03S1 Juan Fernandez 6.44 248 T T 12 33 05.9
baz=83,SNR=22
H03S2 Juan Fernandez 6.45 248 T T 12 33 08.0
baz=83,SNR=32
PB15 IPOC Station P 8.62 14 Pn 12 26 32.8 -1.9
PLCA Paso Flores 9.14 174 Pn Pn 12 26 40.0 -1.6
comp=Z,1.2nm,0.3s,baz=332,slow=13,SNR=34
PLCA Lg Lg 12 29 08.4
comp=Z,0.2nm,0.3s,baz=265,slow=18,SNR=1.2
comp=Z,2.5nm,0.4s
PLCA Paso Flores 9.14 174 Pn 12 26 42.9 +1.2
PLCA Paso Flores 9.14 174 P Pn 12 26 42.9 +1.2
PLCA Paso Flores 9.14 174 eP Pn 12 26 41.3 -0.4
LVC Limon Verde 9.32 16 Pn Pn 12 26 42.4 -2.1
comp=Z,1.4nm,0.3s,baz=184,slow=10,SNR=14
LVC Sn Sn 12 28 33.3 +4.7
comp=Z,6.4nm,0.3s,baz=198,slow=10,SNR=5.0
LVC LR LR 12 30 31.4
comp=Z,1µm,21.9s,baz=212,slow=39
comp=Z,3.4nm,0.3s
LVC Limon Verde 9.32 16 Pn 12 26 45.7 +1.2
LVC Limon Verde 9.32 16 P Pn 12 26 45.7 +1.2
LVC Limon Verde 9.32 16 eP Pn 12 26 44.1 -0.4
TRQA Tornquist 10.26 131 Pn Pn 12 26 59.2 +2.2
TRQA Tornquist 10.26 131 P Pn 12 26 59.2 +2.2
ITQB Itaqui 13.15 85 Pn 12 27 35.1 -1.4
ITQB Itaqui 13.15 85 eP Pn 12 27 34.8 -1.8
CPUP Villa Florida 13.66 71 Pn Pn 12 27 41.6 -1.9
comp=Z,0.5nm,0.3s,baz=242,slow=11,SNR=13
CPUP Sn Sn 12 30 14.0 -0.4
comp=Z,1.1nm,0.3s,baz=339,slow=10,SNR=2.5
CPUP Lg Lg 12 31 28.6
comp=Z,0.2nm,0.3s,baz=356,slow=20,SNR=3.3
CPUP LR LR 12 33 32.6
comp=Z,1µm,18.4s,baz=247,slow=40
comp=Z,6.9nm,0.8s
CPUP Villa Florida 13.66 71 Pn Pn 12 27 42.7 -0.8
CPUP Villa Florida 13.66 71 P Pn 12 27 42.7 -0.8
CPUP Villa Florida 13.66 71 eP Pn 12 27 42.2 -1.3
RODS Rosario do Sul 14.24 89 eP Pn 12 27 48.3 -3.1
UNIS Unistalda (Bra 14.61 84 eP Pn 12 27 53.9 -2.6
PLTB Pedras Altas 15.44 95 eP Pn 12 28 05.2 -2.3
LPAZ La Paz 15.62 13 Pn Pn 12 28 11.2 +0.8
comp=Z,0.6nm,0.3s,baz=179,slow=7.7,SNR=90
comp=Z,27nm,0.8s
LPAZ La Paz 15.62 13 eP Pn 12 28 09.6 -0.8
CPSB Cacapava Do Su 15.73 90 eP Pn 12 28 09.1 -2.2
CRSM Crissiumal (Br 15.93 80 eP Pn 12 28 10.7 -3.2

ALGR Alto Alegre (B 16.41 85 eP Pn 12 28 17.4 -2.6
ANTJ Antonio Joao (16.98 59 eP Pn 12 28 25.4 -1.8
MCR1 Marechal Candi 17.16 70 eP Pn 12 28 28.1 -1.4
FRBT Francisco Belt 17.30 76 eP Pn 12 28 28.7 -2.5
ITAB Concordia 17.62 81 P Pn 12 28 34.9 -0.3
ITAB Concordia 17.62 81 eP Pn 12 28 33.7 -1.4
CNLB Canela 18.15 88 eP Pn 12 28 40.0 -1.7
SIV San Ignacio 18.34 34 P P 12 28 43.6 -0.5
comp=Z,0.1nm,0.3s,baz=215,slow=10.0,SNR=46
SIV LR LR 12 37 09.3
comp=Z,462nm,20.7s,baz=230,slow=42
comp=Z,13nm,0.7s
PTGB Pitanga 18.64 73 eP P 12 28 46.9 -0.4
RVDE Rio Verde (Bra 19.66 54 eP P 12 28 57.9 -0.5
PTLB Pontes e Lacer 19.79 38 P P 12 28 59.4 -0.4
PTLB IAmb IAmb 12 29 14.4
comp=Z,145nm,1.5s
PTLB Pontes e Lacer 19.79 38 eP P 12 28 59.2 -0.5
TER01 Tubaro-SC 19.80 87 eP P 12 28 58.6 -1.3
NNA Nana 20.10 345 P Pn 12 29 06.0 +0.8
comp=Z,20nm,0.8s,baz=170,slow=3.7,SNR=7.1
NNA LR LR 12 35 08.6
comp=Z,341nm,20.9s,baz=171,slow=32
comp=Z,20nm,0.8s
NNA Nana 20.10 345 i P P 12 29 03.3 0.0
NNA pmax pmax
comp=Z,110nm,1.3s
PCMB Pacaembu 20.81 66 eP P 12 29 10.2 -0.8
TIJ01 Guaruva-PR 20.93 78 eP P 12 29 08.8 -3.5
FRTB Fartura 21.30 73 eP P 12 29 13.8 -2.4
C2SB Chapadao do Su 21.32 58 eP P 12 29 15.8 -0.5
VILB Vilhena 21.40 32 P P 12 29 16.5 -0.8
VILB IAmb IAmb 12 29 36.0
comp=Z,94nm,0.8s
VILB Vilhena 21.40 32 eP P 12 29 16.4 -0.8
SALV Santo Antonio 21.41 47 eP P 12 29 16.0 -1.4
ETMB Extrema 22.30 14 P P 12 29 27.1 +0.2
ETMB IAmb IAmb 12 29 44.9
comp=Z,93nm,1.0s
ETMB Extrema 22.30 14 eP P 12 29 27.1 +0.2
ITRB Iturama 22.58 63 eP P 12 29 28.9 -1.0
PET01 Itanhaem-SP 22.78 77 eP P 12 29 29.4 -2.6
BB19B Bebedouro 23.26 69 eP P 12 29 36.1 -0.8
USHA Ushuaia 23.32 175 P P 12 29 36.9 -0.3
comp=Z,9.9nm,0.4s,baz=339,slow=8.6,SNR=2.2
comp=Z,9.9nm,0.4s
RCLB Rio Claro- Sao 23.39 73 eP P 12 29 36.9 -1.3
VAO Valinhos 23.58 75 eP P 12 29 39.6 -0.6
CZSB Cruzeiro do Su 23.79 358 P P 12 29 43.1 +1.1
CZSB IAmb IAmb 12 29 44.7
comp=Z,65nm,0.9s
CZSB Cruzeiro do Su 23.79 358 eP P 12 29 43.8 +1.7
SAML Samuel 23.92 21 P P 12 29 42.3 -1.0
SAML Samuel 23.92 21 P P 12 29 42.3 -1.0
SAML pmax pmax
comp=Z,25nm,1.0s
PDRB Porto dos Gac 24.26 38 eP P 12 29 45.1 -1.3
ATAH Atahualpa 25.14 344 P P 12 29 57.1 +2.2
comp=Z,10nm,0.9s,baz=180,slow=3.0,SNR=6.1
ATAH LR LR 12 37 55.6
comp=Z,206nm,21.3s,baz=183,slow=32
comp=Z,10nm,0.9s
IPMB Ipameri, GO 25.23 63 eP P 12 29 54.0 -1.4
CLDB Colider 25.37 39 eP P 12 29 55.6 -1.0
PMNB Patos De Minas 26.28 66 eP P 12 30 04.4 -0.5
BDFB Brasilia 26.84 59 P P 12 30 09.0 -0.9
comp=Z,36nm,1.0s,baz=227,slow=8.2,SNR=23
BDFB LR LR 12 41 33.9
comp=Z,654nm,21.0s,baz=243,slow=38
comp=Z,36nm,1.0s
BDFB Brasilia 26.84 59 P P 12 30 08.9 -1.1
BDFB Brasilia 26.84 59 P P 12 30 08.9 -1.1
BDFB pmax pmax
comp=Z,82nm,1.0s
BDFB Brasilia 26.84 59 eP P 12 30 09.1 -0.9
SNDB Serra Nova Dou 27.16 48 eP P 12 30 12.0 -0.7
MCRA Macar, Loja 28.19 342 P P 12 30 22.3 +0.3
DIAM Diamantina, MG 28.59 69 eP P 12 30 24.9 -0.8
NPGB Novo Progresso 28.84 35 eP P 12 30 26.2 -1.5
BOSC San Juan Bosco 29.03 346 P P 12 30 30.3 +0.7
MC01 Montes Claros 29.27 66 eP P 12 30 30.7 -0.9
JANB Januaria 29.37 63 eP P 12 30 36.4 -1.5
MACA Manacapuru-AM 30.16 22 eP P 12 30 39.8 +0.3
SJMB Sao Joao De Ma 30.38 72 eP P 12 30 39.3 -2.1
RIB01 Linhares ES 30.72 74 eP P 12 30 42.6 -1.8
ITTB Itaituba 31.00 32 eP P 12 30 45.3 -1.6
SDBA SAO DESIDERIO 31.23 58 eP P 12 30 47.1 -1.8
NAN01 Guarapari, ES 31.69 72 eP P 12 30 51.6 -1.3
SMTB Santa Maria do 31.88 50 eP P 12 30 54.5 -0.2
OTAV Otavalo 32.32 347 P P 12 30 58.4 -0.6
OTAV Otavalo 32.32 347 P P 12 30 58.4 -0.6
OTAV pmax pmax
comp=Z,11nm,1.2s
OTAV Otavalo 32.32 347 eP P 12 30 59.6 +0.6
PRPB Parauapebas 32.58 44 eP P 12 30 59.5 -1.3
GUA01 Guaratinga, BA 32.62 70 eP P 12 30 59.2 -1.9
RPN Rapa Nui 32.96 268 LR LR 12 41 20.8
comp=Z,174nm,18.5s,baz=115,slow=31
PMSA Palmer Station 33.52 174 LR LR 12 44 14.2
comp=Z,544nm,20.1s,baz=329,slow=36
CMC01 Camacan, BA 33.52 69 eP P 12 31 08.4 -0.6
MALB Monte Alegre 33.89 33 eP P 12 31 11.6 -0.6
GDU01 Guandu, BA 34.43 66 eP P 12 31 15.7 -1.2
BOAV Boa Vista 35.47 20 P P 12 31 25.4 -0.4
BOAV IAmb IAmb 12 31 26.2
comp=Z,17nm,0.9s
BOAV Boa Vista 35.47 20 eP P 12 31 25.3 -0.5
MCPB Macapa, AP 36.24 35 eP P 12 31 31.4 -1.0
ROSC El Rosal 36.34 356 LR LR 12 47 09.2
comp=Z,183nm,18.4s,baz=246,slow=37
NBLA Lagarto - SE 37.46 64 eP P 12 31 40.6 -2.3
NBAN Anadia - AL 39.45 64 eP P 12 31 58.2 -1.4
SDV Santo Domingo 40.29 2 LR LR 12 49 52.2
comp=Z,198nm,20.2s,baz=208,slow=38
BAUV El Baul 40.49 6 P P 12 32 07.6 -0.5
BAUV IAmb IAmb 12 32 08.8
comp=Z,38nm,0.9s
MDP Montagnes des 40.81 30 LR LR 12 51 09.9
comp=Z,265nm,19.8s,baz=222,slow=39
BIRV Birongo 42.19 8 P P 12 32 21.6 -0.5
BIRV IAmb IAmb 12 32 30.6
comp=Z,36nm,1.2s
RCBR Riachuelo 42.21 60 LR LR 12 51 31.7
comp=Z,428nm,19.0s,baz=5.0,slow=39
BELA Belgrano 2 49.17 170 P P 12 33 17.8 +1.2
BELA IAmb IAmb 12 33 27.7
comp=Z,22nm,1.2s
MLPR Magueyes Islan 49.51 6 P P 12 33 18.9 -0.9
OBIP Obispado Ponce 49.63 6 P P 12 33 20.3 -0.3
PDPR Patillas Dam, 49.66 7 P P 12 33 20.1 -0.8
PDPR IAmb IAmb 12 33 20.7
comp=Z,19nm,0.9s
CBYP Canovanas 49.93 7 P P 12 33 22.4 -0.7
VNA3 Neumayer Olymp 51.46 159 P P 12 33 34.9 +0.8
VNA1 Neumayer--Stat 51.76 158 P P 12 33 37.7 +1.4
VNA2 Neumayer--Watz 52.10 158 P P 12 33 39.5 +0.7
baz=286,slow=8.0
CMIG Matias Romero 53.29 332 LR LR 12 52 52.0
comp=Z,74nm,18.7s,baz=150,slow=32
SNAA Sanae 53.69 159 P P 12 33 51.2 +0.6
SNAA Sanae 53.69 159 LR LR 12 54 43.6
comp=Z,136nm,21.8s,baz=295,slow=34
SNAA Sanae 53.69 159 P P 12 33 50.5 -0.1
SNAA IAmb IAmb 12 34 01.0
comp=Z,26nm,1.0s
SNAA Sanae 53.69 159 i P P 12 33 50.4 -0.1
SNAA pmax pmax
comp=Z,28nm,1.0s
SOR Soroa 55.17 347 P P 12 34 02.2 +0.4
TROLL Troll, Antarti 55.40 159 P P 12 34 03.2 +0.2
NVL N'lazarevskaya 58.40 157 eP P 12 34 32.8 +8.7
NVL pmax pmax
comp=Z,11nm,0.8s
QSPA South Pole Qui 58.61 180 LR LR 12 59 22.7
comp=Z,80nm,20.0s,baz=150,slow=36
QSPA South Pole Qui 58.61 180 P P 12 34 27.0 +1.1
QSPA IAmb IAmb 12 34 37.4
comp=Z,17nm,0.8s
152A Waverly Hall 65.11 348 P P 12 35 08.6 -1.1
152A IAmb IAmb 12 35 10.4
comp=Z,13nm,0.9s
833A Chaparral WMA, 65.17 333 P P 12 35 11.5 +1.3
833A IAmb IAmb 12 35 12.8
comp=Z,19nm,0.9s

833A Chaparral WMA, 65.17 333 P P 12 35 12.2 +1.9
baz=154,SNR=6.5
833A Chaparral WMA, 65.17 333 P P 12 35 11.6 +1.3
baz=154
GOGA Godfrey 65.63 349 P P 12 35 12.8 -0.2
GOGA pmax pmax
comp=Z,14nm,1.2s
GOGA Godfrey 65.63 349 P P 12 35 11.9 -1.1
baz=169
LRAL Lakeview Retre 65.91 346 P P 12 35 14.6 -0.3
LRAL IAmb IAmb 12 35 15.2
comp=Z,23nm,1.6s
LRAL Lakeview Retre 65.91 346 P P 12 35 13.8 -1.1
baz=166
JSC Jenkinsville 66.17 351 P P 12 35 17.1 +0.6
JSC IAmb IAmb 12 35 17.5
comp=Z,11nm,0.9s
JSC Jenkinsville 66.17 351 P P 12 35 17.1 +0.6
JSC pmax pmax
comp=Z,11nm,0.9s
JSC Jenkinsville 66.17 351 P P 12 35 16.8 +0.3
baz=171
Y52A Lilburn 66.17 349 P P 12 35 16.8 +0.3
Y52A IAmb IAmb 12 35 17.5
comp=Z,17nm,0.9s
Y52A Lilburn 66.17 349 P P 12 35 16.7 +0.2
baz=168
Y52A P P 12 35 16.7 +0.2
baz=168
VNDA Vanda 66.48 191 P P 12 35 19.2 +1.2
comp=Z,0.4nm,0.8s,baz=146,slow=3.6,SNR=2.0
LPIG La Paz 66.57 322 LR LR 12 59 22.7
comp=Z,19nm,18.3s,baz=118,slow=31
143A Socs Landing, 66.63 342 P P 12 35 21.1 +1.6
PAULI Pauline 66.77 351 P P 12 35 19.3 -1.0
PAULI IAmb IAmb 12 35 21.5
comp=Z,15nm,1.1s
X51A Calhoun 66.99 348 P P 12 35 22.0 +0.2
X51A Calhoun 66.99 348 P P 12 35 22.1 +0.3
baz=168,SNR=6.9
X51A P P 12 35 22.1 +0.3
baz=168,SNR=6.9
KMSC Kings Mountain 67.02 351 P P 12 35 22.3 +0.3
baz=171
KMSC Kings Mountain 67.02 351 P P 12 35 22.5 +0.5
baz=171
BG3 Lake Jocassee 67.10 350 P P 12 35 23.0 +0.6
BG3 IAmb IAmb 12 35 23.7
comp=Z,16nm,0.9s
CASEE Lake Jocassee 67.10 350 P P 12 35 22.8 +0.4
baz=170,SNR=7.4
JCT Junction City 67.26 334 P P 12 35 24.3 +0.7
JCT IAmb IAmb 12 35 25.8
comp=Z,15nm,0.9s
JCT Junction City 67.26 334 P P 12 35 24.3 +0.7
JCT pmax pmax
comp=Z,15nm,1.0s
JCT Junction City 67.26 334 P P 12 35 24.0 +0.3
baz=154
X48A Hartselle 67.29 346 P P 12 35 23.9 +0.3
X48A Hartselle 67.29 346 P P 12 35 23.9 +0.3
baz=166,SNR=9.8
W52A Murphy 67.35 349 P P 12 35 24.1 0.0
W52A IAmb IAmb 12 35 25.3
comp=Z,21nm,1.1s
W52A Murphy 67.35 349 P P 12 35 24.5 +0.5
baz=169
V58A Windy Hill, Pi 67.42 354 P P 12 35 24.8 +0.3
V58A IAmb IAmb 12 35 25.9
comp=Z,18nm,1.1s
V58A Windy Hill, Pi 67.42 354 P P 12 35 24.6 +0.2
baz=173
V58A P P 12 35 24.6 +0.2
baz=173
W50A Signal Mountai 67.69 348 P P 12 35 26.4 +0.2
W50A Signal Mountai 67.69 348 P P 12 35 26.6 +0.4
baz=168,SNR=8.0
V55A Taylorsville 67.71 352 P P 12 35 26.6 +0.3
V55A IAmb IAmb 12 35 27.5
comp=Z,16nm,0.8s
V55A Taylorsville 67.71 352 P P 12 35 26.5 +0.3
baz=171,SNR=6.2
V55A P P 12 35 26.5 +0.3
baz=171,SNR=6.2
V53A Saluda 67.74 350 P P 12 35 26.6 +0.1
V53A IAmb IAmb 12 35 27.6
comp=Z,19nm,0.9s
V53A Saluda 67.74 350 P P 12 35 26.7 +0.2
baz=170,SNR=9.1
V53A P P 12 35 26.7 +0.2
baz=170,SNR=9.1
CPCT Cooper Cave 67.79 349 P P 12 35 26.9 +0.1
WHTX Lake Whitney, 67.79 337 P P 12 35 26.6 -0.3
baz=156
TXAR Lajitas Array 67.80 330 P P 12 35 27.7 +0.6
comp=Z,2.5nm,0.9s,baz=146,slow=8.4,SNR=24
TXAR LR LR 13 00 51.5
comp=Z,94nm,18.8s,baz=143,slow=32
comp=Z,2.5nm,0.9s
TXAR Lajitas Array 67.80 330 P P 12 35 28.1 +1.0
TXAR Lajitas Array 67.80 330 P P 12 35 28.1 +1.0
TX31 Lajitas Ar. Si 67.80 330 P P 12 35 27.5 +0.3
TX31 IAmb IAmb 12 35 29.4
comp=Z,16nm,1.1s
TX31 Lajitas Ar. Si 67.80 330 P P 12 35 28.6 +1.4
baz=151,SNR=7.8
TX32 Lajitas Array 67.80 330 P P 12 35 28.5 +1.3
SWET Sewanee 67.81 347 P P 12 35 26.4 -0.6
OXF Oxford 67.86 344 P P 12 35 26.8 -0.4
OXF Oxford 67.86 344 P P 12 35 26.8 -0.4
OXF pmax pmax
comp=Z,53nm,1.0s
OXF Oxford 67.86 344 P P 12 35 27.9 +0.7
baz=164,SNR=8.0
OXF Oxford 67.86 344 P P 12 35 26.7 -0.5
baz=164
U59A Littleton 67.86 355 P P 12 35 28.5 +1.4
baz=174
U59A P P 12 35 28.5 +1.4
baz=174
TKL Tuckaleechee C 67.88 349 P P 12 35 27.2 -0.1
TKL IAmb IAmb 12 35 28.1
comp=Z,18nm,0.9s
TKL Tuckaleechee C 67.88 349 P P 12 35 27.2 -0.1
TKL pmax pmax
comp=Z,18nm,0.9s
TKL Tuckaleechee C 67.88 349 P P 12 35 27.5 +0.2
baz=169,SNR=9.1
PLAL Pickwick Lake 68.01 346 P P 12 35 28.1 -0.1
PLAL IAmb IAmb 12 35 29.1
comp=Z,12nm,0.9s
U56A King 68.10 352 P P 12 35 29.1 +0.3
U56A IAmb IAmb 12 35 30.2
comp=Z,14nm,0.9s
U56A King 68.10 352 P P 12 35 29.4 +0.7
baz=172
U56A P P 12 35 29.4 +0.7
baz=172
U54A Nelsons Funny 68.44 351 P P 12 35 30.7 -0.3
U54A Nelsons Funny 68.44 351 P P 12 35 31.5 +0.6
baz=171,SNR=7.1
U54A P P 12 35 31.5 +0.6
baz=171,SNR=7.1
T59A Double "B" Far 68.45 355 P P 12 35 31.5 +0.6
T59A IAmb IAmb 12 35 32.6
comp=Z,20nm,1.0s
T59A Double "B" Far 68.45 355 P P 12 35 31.7 +0.8
baz=175,SNR=6.5
T59A P P 12 35 31.7 +0.8
baz=175,SNR=6.5
V48A Smith Brothers 68.49 347 P P 12 35 31.8 +0.7
V48A Smith Brothers 68.49 347 P P 12 35 31.9 +0.7
baz=166,SNR=9.1
TZTN Tazewell 68.71 350 P P 12 35 31.8 -0.8
baz=169
CLTN Cedars of Leba 68.74 347 P P 12 35 32.3 -0.4
MIAR Mount Ida 68.95 341 P P 12 35 33.9 -0.2
MIAR Mount Ida 68.95 341 P P 12 35 33.9 -0.2
MIAR pmax pmax
comp=Z,11nm,1.3s
MIAR Mount Ida 68.95 341 P P 12 35 34.0 -0.1
baz=160
BLA Blacksburg 68.96 353 P P 12 35 33.7 -0.4
baz=172
U49A Red Boiling Sp 69.05 348 P P 12 35 34.3 -0.3
U49A IAmb IAmb 12 35 35.6

comp=Z,13nm,0.9s
U49A Red Boiling Sp 69.05 348 P **P** **12 35 34.4 -0.3**
baz=167
WVT Waverly 69.07 346 P **P** **12 35 34.4 -0.4**
WVT Waverly 69.07 346 P **P** **12 35 34.4 -0.4**
WVT pmax pmax
comp=Z,32nm,0.9s
WVT Waverly 69.07 346 P **P** **12 35 34.9 +0.2**
baz=165,SNR=20
WVT Waverly 69.07 346 P **P** **12 35 34.3 -0.5**
baz=165
ABTX Abilene, Hawle 69.13 335 P **P** **12 35 36.0 +0.7**
ABTX IAmb IAmb 12 35 37.2
comp=Z,20nm,1.1s
ABTX Abilene, Hawle 69.13 335 P **P** **12 35 36.4 +1.1**
baz=155
ABTX Abilene, Hawle 69.13 335 P **P** **12 35 35.3 0.0**
baz=155
JSRW J. Sergeant Re 69.20 355 P **P** **12 35 35.8 +0.3**
S57A Dark Hollow, R 69.35 354 P **P** **12 35 36.2 -0.3**
S57A IAmb IAmb 12 35 38.0
comp=Z,15nm,0.9s
S57A Dark Hollow, R 69.35 354 P **P** **12 35 37.4 +0.9**
baz=173,SNR=5.8
S57A P **P** **12 35 37.4 +0.9**
baz=173,SNR=5.8
T50A Nancy 69.38 349 P **P** **12 35 36.4 -0.3**
baz=168
T50A P **P** **12 35 36.4 -0.3**
baz=168
MEH Mehetia 69.44 261 *e*T T 13 51 33.9
comp=Z,42nm,0.2s
R58B Mineral 69.47 355 P **P** **12 35 37.5 +0.3**
R58B IAmb IAmb 12 35 39.3
comp=Z,18nm,1.1s
R58B Mineral 69.47 355 P **P** **12 35 38.4 +1.2**
baz=174
R58B P **P** **12 35 38.4 +1.2**
baz=174
S54A Dingess, Beckl 69.64 352 P **P** **12 35 38.5 +0.1**
baz=171
S54A P **P** **12 35 38.5 +0.1**
baz=171
T47A Sharon Grove 69.75 347 P **P** **12 35 39.4 +0.4**
T47A Sharon Grove 69.75 347 P **P** **12 35 39.2 +0.2**
baz=166,SNR=7.1
LCAR Lake Charles 69.76 343 P **P** **12 35 38.9 -0.1**
LCAR IAmb IAmb 12 35 40.1
comp=Z,14nm,0.9s
S51A Beattyville 69.79 350 P **P** **12 35 39.4 +0.2**
S51A IAmb IAmb 12 35 40.1
comp=Z,16nm,0.9s
S51A Beattyville 69.79 350 P **P** **12 35 39.5 +0.2**
baz=169,SNR=5.2
S51A P **P** **12 35 39.5 +0.2**
baz=169,SNR=5.2
R55A Marlinton 69.98 353 P **P** **12 35 40.5 0.0**
R55A IAmb IAmb 12 35 42.2
comp=Z,16nm,0.9s
R55A Marlinton 69.98 353 P **P** **12 35 41.3 +0.9**
baz=172
R55A P **P** **12 35 41.3 +0.9**
baz=172
PBMO Poplar Bluff 70.26 344 P **P** **12 35 42.3 +0.2**
PBMO IAmb IAmb 12 35 43.2
comp=Z,9.8nm,0.7s
PBMO Poplar Bluff 70.26 344 P **P** **12 35 42.6 +0.5**
baz=163
X34A Smith Ranch, M 70.31 337 P **P** **12 35 43.3 +0.8**
X34A IAmb IAmb 12 35 44.3
comp=Z,18nm,1.0s
TVO Taravao 70.48 261 *e*T T 13 52 45.5
comp=Z,1.7nm,0.2s
HTMS Hat Mesa 70.53 332 P **P** **12 35 45.2 +1.2**
CGM3 Cape Girardeau 70.58 345 P **P** **12 35 44.0 -0.1**
CGM3 IAmb IAmb 12 35 44.6
comp=Z,9.2nm,0.9s
Q56A Snyder Ridge, 70.64 354 P **P** **12 35 45.2 +0.7**
Q56A IAmb IAmb 12 35 46.5
comp=Z,14nm,0.9s
Q56A Snyder Ridge, 70.64 354 P **P** **12 35 45.6 +1.2**
baz=173
Q56A P **P** **12 35 45.6 +1.2**
baz=173
TIAR Tiarei 70.67 261 *e*T T 13 53 01.6
comp=Z,3.3nm,0.2s
HHAR Hobbs 70.69 341 P **P** **12 35 45.4 +0.6**
HHAR IAmb IAmb 12 35 46.0
comp=Z,13nm,0.9s
HHAR Hobbs 70.69 341 P **P** **12 35 45.1 +0.4**
baz=160
WMOK Wichita Mounta 70.75 337 P **P** **12 35 45.0 -0.2**
WMOK Wichita Mounta 70.75 337 P **P** **12 35 45.0 -0.2**
WMOK pmax pmax
comp=Z,7.0nm,1.2s
WMOK Wichita Mounta 70.75 337 P **P** **12 35 44.9 -0.3**
baz=156
PPT2 Papeete2 70.85 261 *e*LR LR 12 57 15.6
comp=Z,65nm,24.0s
PPT2 Papeete2 70.85 261 *e*T T 13 52 59.6
comp=Z,1.1nm,0.2s
TUL1 Leonard 70.87 339 P **P** **12 35 45.7 -0.2**
baz=158
S44A Carbondale 70.87 345 P **P** **12 35 46.2 +0.4**
S44A IAmb IAmb 12 35 46.9
comp=Z,16nm,0.9s
Q52A Bidwell 70.91 351 P **P** **12 35 46.3 +0.3**
P57A Homestead Farm 70.99 355 P **P** **12 35 47.6 +1.1**
P57A IAmb IAmb 12 35 48.7
comp=Z,19nm,0.9s
P57A Homestead Farm 70.99 355 P **P** **12 35 48.0 +1.6**
baz=174,SNR=6.5
P57A P **P** **12 35 48.0 +1.6**
baz=174,SNR=6.5
MGMO Mountain Grove 71.06 343 P **P** **12 35 47.2 +0.2**
Q51A Peebles 71.11 350 P **P** **12 35 47.2 -0.1**
Q51A IAmb IAmb 12 35 48.7
comp=Z,19nm,1.0s
WUPA West Chester U 71.28 357 P **P** **12 35 48.5 +0.2**
P53A Whipple 71.32 352 P **P** **12 35 48.7 +0.3**
baz=171
P53A P **P** **12 35 48.7 +0.3**
baz=171
MCWV Mont Chateau 71.32 353 P **P** **12 35 48.3 -0.2**
baz=173
FVM French Village 71.41 345 P **P** **12 35 49.4 +0.3**
FVM IAmb IAmb 12 35 50.5
comp=Z,21nm,1.0s
FVM French Village 71.41 345 P **P** **12 35 49.4 +0.3**
FVM pmax pmax
comp=Z,21nm,1.0s
FVM French Village 71.41 345 P **P** **12 35 49.8 +0.7**
baz=163,SNR=5.7
MSTX Muleshoe 71.50 333 P **P** **12 35 50.5 +0.6**
MSTX Muleshoe 71.50 333 P **P** **12 35 50.5 +0.6**
baz=152,SNR=14
MSTX Muleshoe 71.50 333 P **P** **12 35 49.4 -0.5**
baz=152
P51A Williamsport 71.52 351 P **P** **12 35 49.5 -0.2**
P51A IAmb IAmb 12 35 50.5
comp=Z,17nm,0.8s
P52A Corning 71.55 352 P **P** **12 35 49.1 -0.8**
baz=171
PAGS Pennsylvania G 71.64 356 P **P** **12 35 51.0 +0.6**
CCM Cathedral Cave 71.67 344 P **P** **12 35 51.0 +0.4**
CCM IAmb IAmb 12 35 52.0
comp=Z,24nm,0.9s
CCM Cathedral Cave 71.67 344 P **P** **12 35 51.0 +0.4**
CCM pmax pmax
comp=Z,24nm,1.0s
CCM Cathedral Cave 71.67 344 P **P** **12 35 51.1 +0.4**
baz=162,SNR=16
CCM Cathedral Cave 71.67 344 P **P** **12 35 49.9 -0.7**
baz=162
P49A Miami Univ. Ec 71.82 349 P **P** **12 35 50.8 -0.7**
baz=168
S39A Bolivar 71.84 342 P **P** **12 35 52.0 +0.3**
S39A IAmb IAmb 12 35 53.1
comp=Z,16nm,1.1s
S39A Bolivar 71.84 342 P **P** **12 35 52.0 +0.3**
baz=161,SNR=11
P48A Milroy 71.86 349 P **P** **12 35 52.1 -0.6**
P48A IAmb IAmb 12 35 52.1
comp=Z,20nm,0.9s
P48A Milroy 71.86 349 P **P** **12 35 51.1 -0.6**
baz=168
P48A P **P** **12 35 51.1 -0.6**
baz=168
AMTX Amarillo 71.90 334 P **P** **12 35 52.3 +0.1**
AMTX IAmb IAmb 12 35 54.1
comp=Z,17nm,1.1s
AMTX Amarillo 71.90 334 P **P** **12 35 53.1 +0.8**
baz=153
AMTX Amarillo 71.90 334 P **P** **12 35 51.9 -0.3**
baz=153
T35A Sooner Cattle 72.02 339 P **P** **12 35 53.4 +0.6**
O53A New Philadelph 72.05 352 P **P** **12 35 52.2 -0.7**
baz=172
SSPA Standing Stone 72.12 355 P **P** **12 35 52.8 -0.5**
baz=174
R40A Maddies Statio 72.14 343 P **P** **12 35 53.8 +0.3**
R40A IAmb IAmb 12 35 54.8
comp=Z,24nm,0.9s
R40A Maddies Statio 72.14 343 P **P** **12 35 53.8 +0.3**
baz=162,SNR=12
N58A Sunbury 72.25 356 P **P** **12 35 55.4 +1.3**
baz=176,SNR=5.2
N58A P **P** **12 35 55.4 +1.3**
baz=176,SNR=5.2
ACSO Alum Creek Sta 72.25 351 P **P** **12 35 53.9 -0.2**
ACSO Alum Creek Sta 72.25 351 P **P** **12 35 54.2 +0.2**
baz=170,SNR=6.0
ACSO Alum Creek Sta 72.25 351 P **P** **12 35 54.1 0.0**
baz=170
PAL Palisades 72.29 358 P **P** **12 35 54.1 -0.2**
baz=178
P46A Rosedale 72.32 348 P **P** **12 35 54.4 -0.1**
P46A IAmb IAmb 12 35 55.4
comp=Z,19nm,0.8s
P46A Rosedale 72.32 348 P **P** **12 35 54.4 -0.1**
baz=166
121A Cookes Peak, D 72.34 329 P **P** **12 35 56.5 +1.4**
121A Cookes Peak, D 72.34 329 P **P** **12 35 56.9 +1.8**
baz=148,SNR=9.3
121A Cookes Peak, D 72.34 329 P **P** **12 35 55.9 +0.8**
baz=148
ODNJ Ogdensburg 72.39 358 P **P** **12 35 56.1 +1.2**
baz=177
O49A Covington 72.40 350 P **P** **12 35 54.4 -0.5**
O49A IAmb IAmb 12 35 55.8
comp=Z,22nm,0.9s
O49A Covington 72.40 350 P **P** **12 35 55.0 +0.1**
baz=169,SNR=6.1
O49A P **P** **12 35 55.0 +0.1**
baz=169,SNR=6.1
KAN13 South Haven SW 72.40 339 P **P** **12 35 56.1 +1.0**
O48B Farmland 72.59 349 P **P** **12 35 55.5 -0.6**
baz=168
KS20 Mayfield South 72.63 339 P **P** **12 35 57.6 +1.2**
KS20 IAmb IAmb 12 35 58.1
comp=Z,17nm,0.9s
P43A Skaggs, Pawnee 72.80 346 P **P** **12 35 57.6 +0.3**
M55A Ridgway 73.02 354 P **P** **12 35 59.1 +0.5**
baz=174,SNR=7.3
M55A P **P** **12 35 59.1 +0.5**
baz=174,SNR=7.3
SFIN Lafayette 73.04 348 P **P** **12 35 58.3 -0.5**
baz=166
NPNY Mohonk Preserv 73.05 358 P **P** **12 36 00.2 +1.4**
baz=178,SNR=5.3
N49A Columbus Grove 73.09 350 P **P** **12 35 59.0 -0.1**
N49A Columbus Grove 73.09 350 P **P** **12 35 59.5 +0.4**
baz=169,SNR=7.6
N49A P **P** **12 35 59.5 +0.4**
baz=169,SNR=7.6
M53A WI Miller and 73.17 353 P **P** **12 35 59.5 +0.1**
baz=172
BNM Barren Site 73.22 330 P **P** **12 36 01.3 +1.0**
P40A Paris 73.26 344 P **P** **12 36 00.5 +0.4**
P40A Paris 73.26 344 P **P** **12 36 00.6 +0.4**
baz=162,SNR=17
N47A Urbana 73.29 349 P **P** **12 35 59.7 -0.5**
baz=168
N47A P **P** **12 35 59.7 -0.5**
baz=168
L59A Walton 73.51 357 P **P** **12 36 03.0 +1.4**
baz=177,SNR=8.4
L59A P **P** **12 36 03.0 +1.4**
baz=177,SNR=8.4
TUC Tucson 73.53 326 P **P** **12 36 02.6 +0.6**
TUC pmax pmax
comp=Z,3.0nm,1.6s
TUC Tucson 73.53 326 P **P** **12 36 01.2 -0.8**
baz=146
BINY Binghamton 73.56 357 P **P** **12 36 02.3 +0.4**
baz=176
L56A Greenwood 73.59 355 P **P** **12 36 02.3 +0.3**
L56A Greenwood 73.59 355 P **P** **12 36 03.0 +1.0**
baz=175,SNR=9.0
L56A P **P** **12 36 03.0 +1.0**
baz=175,SNR=9.0
HDIL Hopedale 73.64 346 P **P** **12 36 02.1 -0.2**
baz=164
P38A Dawn 73.72 343 P **P** **12 36 02.1 -0.6**
P38A IAmb IAmb 12 36 03.9
comp=Z,16nm,0.9s
P38A Dawn 73.72 343 P **P** **12 36 03.2 +0.4**
baz=161,SNR=7.2
ERPA Erie 73.77 354 P **P** **12 36 04.0 +1.0**
baz=173
ERPA Erie 73.77 354 P **P** **12 36 02.9 -0.2**
baz=173
LIC Lamto 73.79 72⇑ *i*P **P** **12 36 02.8 -1.0**
comp=Z,20nm,0.4s
ANMO Albuquerque 73.83 331 LR LR 13 04 20.4
comp=Z,97nm,19.2s,baz=147,slow=32
ANMO Albuquerque 73.83 331 P **P** **12 36 04.4 +0.5**
ANMO Albuquerque 73.83 331 *i* P **P** **12 36 04.7 +0.9**
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO Albuquerque 73.83 331 P **P** **12 36 04.5 +0.7**
baz=150
WVNY West Valley, N 73.94 355 P **P** **12 36 04.4 +0.4**
WVNY West Valley, N 73.94 355 P **P** **12 36 04.7 +0.7**
baz=174,SNR=5.2
TRY Troy 74.01 359 P **P** **12 36 05.4 +1.0**
TRY IAmb IAmb 12 36 07.2
comp=Z,27nm,1.0s
TIC Toumodi 74.04 72⇑ *e*P **P** **12 36 04.6 -0.7**
comp=Z,6.1nm,0.3s
KSU1 Kansas State U 74.07 340 P **P** **12 36 04.9 0.0**
baz=158
KIC Kosan Boka 74.10 72⇑ *e*P **P** **12 36 05.0 -0.6**
comp=Z,18nm,0.5s
N41A Harden Midland 74.11 345 P **P** **12 36 05.0 -0.1**
baz=163,SNR=7.4
DBIC Dimbokro 74.18 72 P **P** **12 36 05.5 -0.6**
comp=Z,14nm,0.7s,baz=240,slow=4.6,SNR=16
DBIC LR LR 13 05 31.0
comp=Z,107nm,21.5s,baz=227,slow=33
comp=Z,14nm,0.7s
DBIC Dimbokro 74.18 72 P **P** **12 36 05.5 -0.6**
DBIC IAmb IAmb 12 36 06.4
comp=Z,17nm,0.8s
DBIC Dimbokro 74.18 72 P **P** **12 36 05.5 -0.6**
DBIC pmax pmax
comp=Z,17nm,0.8s
MMNY Mt. Morris Dam 74.21 355 P **P** **12 36 06.5 +0.9**
214A Organ Pipe Nat 74.23 325 P **P** **12 36 06.1 +0.1**
baz=144
J61A Chester 74.61 359 P **P** **12 36 09.6 +1.7**
baz=179
J61A P **P** **12 36 09.6 +1.7**
baz=179
ACCN Adirondack Com 74.67 359 P **P** **12 36 08.9 +0.7**
ACCN IAmb IAmb 12 36 10.1
comp=Z,18nm,1.1s
ACCN Adirondack Com 74.67 359 P **P** **12 36 08.7 +0.5**
baz=178
J56A Wolcott 74.68 356 P **P** **12 36 08.6 +0.3**
baz=175
J56A P **P** **12 36 08.6 +0.3**
baz=175
N38A Joes South For 74.75 343 P **P** **12 36 09.0 +0.2**
J59A Piesco 74.77 358 P **P** **12 36 09.5 +0.6**
baz=178,SNR=5.2
J59A P **P** **12 36 09.5 +0.6**
baz=178,SNR=5.2
CBKS Cedar Bluff 74.77 338 P **P** **12 36 09.9 +0.9**
CBKS IAmb IAmb 12 36 11.0
comp=Z,16nm,0.9s
CBKS Cedar Bluff 74.77 338 P **P** **12 36 09.9 +0.9**
CBKS pmax pmax
comp=Z,16nm,0.9s
CBKS Cedar Bluff 74.77 338 P **P** **12 36 09.6 +0.6**
baz=156
T25A Trinidad 74.92 333 P **P** **12 36 11.8 +1.7**
T25A IAmb IAmb 12 36 12.9
comp=Z,20nm,1.0s
T25A Trinidad 74.92 333 P **P** **12 36 10.9 +0.8**
baz=152,SNR=13
NCB Newcomb 75.26 358 P **P** **12 36 12.3 +0.6**
baz=178
I63A Otisfield 75.32 1 P **P** **12 36 12.3 +0.4**
baz=181
I63A P **P** **12 36 12.3 +0.4**
baz=181
MAW Mawson 75.38 164 P **P** **12 36 10.0 -2.2**
comp=Z,3.1nm,1.0s,baz=221,slow=11,SNR=2.4
MAW LR LR 13 11 43.5
comp=Z,159nm,19.4s,baz=196,slow=38
comp=Z,3.1nm,1.0s
MAW Mawson 75.38 164 P **P** **12 36 12.8 +0.6**
MAW pmax pmax
comp=Z,2.0nm,1.3s
N35A Tabor 75.44 341 P **P** **12 36 12.8 +0.1**
L40A Anamosa 75.49 345 P **P** **12 36 13.0 0.0**
baz=163,SNR=12
LBNH Lisbon 75.50 360 P **P** **12 36 14.6 +1.6**
baz=180
X16A Lo Mia Camp, P 75.58 327 P **P** **12 36 15.0 +1.0**
SUR Sutherland 75.76 119 LR LR 13 06 01.5
comp=Z,63nm,19.2s,baz=252,slow=33
SDCO Great Sand Dun 75.87 333 P **P** **12 36 16.2 +0.5**
SDCO Great Sand Dun 75.87 333 P **P** **12 36 17.0 +1.3**
baz=151,SNR=7.9
SDCO Great Sand Dun 75.87 333 P **P** **12 36 16.1 +0.5**
baz=151,SNR=7.9
LONY Lake Ozonia 75.92 358 P **P** **12 36 15.1 -0.4**
LONY IAmb IAmb 12 36 17.6
comp=Z,18nm,1.0s
LONY Lake Ozonia 75.92 358 P **P** **12 36 16.4 +0.9**
baz=177
JFWS Jewell Farm 76.10 346 P **P** **12 36 16.7 +0.3**
baz=164
FRNY Flat Rock 76.11 359 P **P** **12 36 17.0 +0.5**
FRNY IAmb IAmb 12 36 18.6
comp=Z,17nm,0.9s
FRNY Flat Rock 76.11 359 P **P** **12 36 17.6 +1.1**
baz=178,SNR=6.4
BMNY Brushton-Moira 76.14 358 P **P** **12 36 17.5 +0.8**
baz=178,SNR=6.9
SADO Sadowa 76.33 355 LR LR 13 12 50.1
comp=Z,32nm,19.3s,baz=170,slow=38
SADO Sadowa 76.33 355 P **P** **12 36 18.1 +0.4**
SADO IAmb IAmb 12 36 18.8
comp=Z,18nm,0.8s
WUAZ Wupatki 76.46 328 P **P** **12 36 20.1 +1.2**
WUAZ Wupatki 76.46 328 P **P** **12 36 19.8 +0.9**
baz=146,SNR=6.1
SWSC Sam W. Stewart 76.53 323 P **P** **12 36 19.8 +0.7**
baz=142
PKME Peaks-Kenny Pk 76.56 2 P **P** **12 36 19.8 +0.9**
baz=182
MVCO Mesa Verde 76.62 331 P **P** **12 36 20.2 +0.4**
baz=148,SNR=6.6
PDMCI Parker Dam,Lak 76.78 325 P **P** **12 36 21.2 +0.6**
baz=144
Q24A Divide 76.80 334 P **P** **12 36 21.7 +0.8**
Q24A IAmb IAmb 12 36 23.5
comp=Z,15nm,0.9s
Q24A Divide 76.80 334 P **P** **12 36 21.6 +0.7**
baz=151,SNR=17
MONP2 Monument Peak 76.81 323 P **P** **12 36 21.8 +0.8**
baz=142
BC3 Big Chuckawall 76.91 324 P **P** **12 36 22.4 +1.0**
baz=143
IRM Iron Mountain 77.16 324 P **P** **12 36 24.0 +1.2**
baz=143
TPFO Pinon Flats 77.38 323 P **P** **12 36 25.3 +1.2**
baz=142
PFO Pinyon Flats O 77.39 323 LR LR 13 04 05.1
comp=Z,73nm,19.3s,baz=150,slow=31
PFO Pinyon Flats O 77.39 323 *i* P **P** **12 36 24.0 -0.2**
PFO pmax pmax
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 77.39 323 P **P** **12 36 25.3 +1.2**
baz=142
BELC Belle Mtn. Jos 77.46 324 P **P** **12 36 26.0 +1.4**
baz=142
TRQ Mont Tremblant 77.52 358 P **P** **12 36 24.3 -0.2**
TRQ IAmb IAmb 12 36 26.2
comp=Z,23nm,0.9s
PV13 Radium Mtn., P 77.56 331 P **P** **12 36 26.3 +1.2**
RAR Rarotonga 77.59 253 LR LR 13 02 01.3
comp=Z,62nm,20.4s,baz=130,slow=29
SMCO Snowmass 77.69 333 P **P** **12 36 26.9 +0.9**
ISCO Idaho Springs 77.70 334 P **P** **12 36 26.8 +0.8**
ISCO Idaho Springs 77.70 334 P **P** **12 36 26.8 +0.8**
ISCO pmax pmax
comp=Z,6.0nm,1.1s
ISCO Idaho Springs 77.70 334 P **P** **12 36 27.4 +1.5**
baz=151,SNR=5.9
ISCO Idaho Springs 77.70 334 P **P** **12 36 27.2 +1.2**
baz=151,SNR=5.9
MURC Murrieta 77.76 323 P **P** **12 36 27.3 +1.2**
baz=142
I37B Waseca 77.84 344 P **P** **12 36 26.6 +0.4**
baz=161
E62A Clayton Lake 77.91 2 P **P** **12 36 28.2 +1.7**
baz=182
E62A P **P** **12 36 28.2 +1.7**
baz=182
GMRC Gerdie Mounta 77.91 324 P **P** **12 36 27.8 +0.8**
baz=143,SNR=7.0
K31A O'Neill 77.94 340 P **P** **12 36 27.4 +0.5**
SCI2 San Clemente I 77.99 321 P **P** **12 36 28.4 +1.1**
baz=141
PQI Presque Isle 78.00 3 P **P** **12 36 27.8 +0.7**
PQI IAmb IAmb 12 36 29.0
comp=Z,18nm,1.0s
BBRC Big Bear Solar 78.14 323 P **P** **12 36 29.4 +0.9**
baz=142
HEC Hector,Ludlow 78.29 324 P **P** **12 36 30.0 +0.9**
baz=142
G40A Rib Lake 78.35 347 P **P** **12 36 29.1 0.0**
ECSD EROS Data Cent 78.37 342 P **P** **12 36 29.7 +0.4**
ECSD IAmb IAmb 12 36 30.6
comp=Z,20nm,0.9s
ECSD EROS Data Cent 78.37 342 P **P** **12 36 29.7 +0.4**
baz=158,SNR=17
ECSD EROS Data Cent 78.37 342 P **P** **12 36 29.8 +0.6**
baz=158
D62A Allapoint, All 78.38 2 P **P** **12 36 30.5 +1.3**
baz=182
D62A P **P** **12 36 30.5 +1.3**
baz=182
E46A Sault Ste Mari 78.45 351 P **P** **12 36 29.8 +0.2**
E46A Sault Ste Mari 78.45 351 P **P** **12 36 29.9 +0.3**
baz=169,SNR=9.2
BFSC Mount Baldy Ra 78.50 323 P **P** **12 36 31.1 +0.8**
baz=141
TUQ Turquoise Moun 78.56 324 P **P** **12 36 31.9 +1.2**
baz=143,SNR=8.0
N23A Red Feather La 78.78 334 P **P** **12 36 33.1 +1.2**
baz=151
E43A Lone Tree Farm 78.85 349 P **P** **12 36 32.4 +0.6**
E43A IAmb IAmb 12 36 33.5
comp=Z,15nm,0.8s
E43A Lone Tree Farm 78.85 349 P **P** **12 36 32.5 +0.7**
baz=167,SNR=6.2
GSC Goldstone, Bar 78.89 324 P **P** **12 36 33.0 +0.6**
baz=142
COWI Conover 78.95 348 P **P** **12 36 33.0 +0.7**
baz=165
O20A White River Ci 79.01 332 P **P** **12 36 34.2 +1.1**
baz=149
CCUT Cedar City 79.04 327 P **P** **12 36 35.0 +1.7**
EDW2 Edwards Air Fo 79.17 323 P **P** **12 36 34.8 +0.9**
baz=141
Q16A Castle Valley 79.19 330 P **P** **12 36 35.6 +1.5**
KOWA Kowa 79.42 66 P **P** **12 36 35.3 -0.3**
KOWA IAmb IAmb 12 36 36.5
comp=Z,18nm,1.0s
P17A Butcher Ranch, 79.47 330 P **P** **12 36 36.4 +0.8**
LRMC Laurel Mtn Rad 79.48 323 P **P** **12 36 37.0 +1.3**
baz=142
F36A Milaca 79.61 345 P **P** **12 36 36.1 +0.1**
F36A Milaca 79.61 345 P **P** **12 36 36.1 +0.1**
baz=161,SNR=8.9
TSUM Tsumeb 79.62 106 LR LR 13 07 01.8

comp=Z,127nm,18.3s,baz=329,slow=32
PRN Pahroc Range 79.71 326 P **P** **12 36 38.3 +1.4**
D41A Chassel 79.78 348 P **P** **12 36 37.8 +1.0**
baz=165,SNR=10
MPMC Manual Prospec 79.83 324 P **P** **12 36 38.4 +0.8**
baz=142,SNR=5.5
FURC Furnace Creek, 79.84 325 P **P** **12 36 39.3 +1.9**
baz=142
E38A The Farm, Brul 79.90 346 P **P** **12 36 37.5 0.0**
baz=163
TPNV Topopah Spring 79.92 325 P **P** **12 36 39.7 +1.7**
baz=143,SNR=7.4
RWWY Rawlins 79.94 334 P **P** **12 36 38.9 +0.7**
ISA Isabella, Lake 80.03 323 P **P** **12 36 40.8 +2.2**
ISA Isabella, Lake 80.03 323 P **P** **12 36 40.8 +2.2**
ISA pmax pmax
comp=Z,10.0nm,1.0s
ISA Isabella, Lake 80.03 323 P **P** **12 36 40.2 +1.6**
baz=141,SNR=8.0
PKM Mcpherson Peak 80.13 322 P **P** **12 36 40.3 +1.0**
baz=140
CWC Cottonwood Cre 80.43 324 P **P** **12 36 41.9 +1.0**
baz=141
VES Vestal, Richgr 80.48 323 P **P** **12 36 41.9 +1.0**
baz=140
GRAC Grapevine Rang 80.51 325 P **P** **12 36 41.8 +0.8**
baz=142
K22A Casper 80.52 335 P **P** **12 36 42.5 +1.3**
baz=150,SNR=5.6
K22A Casper 80.52 335 P **P** **12 36 42.2 +1.0**
baz=150
R11A Troy Canyon, C 80.72 326 P **P** **12 36 43.8 +1.5**
baz=143,SNR=11
BOSA Boshof 80.95 118 P **P** **12 36 43.5 -0.5**
comp=Z,5.6nm,1.0s,baz=238,slow=8.0,SNR=3.4
BOSA LR LR 13 08 59.6
comp=Z,66nm,18.7s,baz=196,slow=33
comp=Z,5.6nm,1.0s
BOSA Boshof 80.95 118 P **P** **12 36 44.0 0.0**
RSSD Black Hills 80.95 337 P **P** **12 36 43.9 +0.4**
RSSD Black Hills 80.95 337 P **P** **12 36 43.9 +0.4**
RSSD pmax pmax
comp=Z,6.0nm,1.0s
RSSD Black Hills 80.95 337 P **P** **12 36 44.4 +0.9**
baz=152
RSSD Black Hills 80.95 337 P **P** **12 36 43.7 +0.2**
baz=152
DUG Dugway, Tooele 80.96 329 P **P** **12 36 43.4 -0.2**
DUG Dugway, Tooele 80.96 329 P **P** **12 36 43.4 -0.2**
DUG pmax pmax
comp=Z,11nm,1.5s
DUG Dugway, Tooele 80.96 329 P **P** **12 36 44.7 +1.2**
baz=145
EYMN Ely 81.17 347 P **P** **12 36 44.3 0.0**
baz=163,SNR=7.8
EYMN Ely 81.17 347 P **P** **12 36 44.2 0.0**
baz=163
TPH Tonopah 81.28 325 P **P** **12 36 46.5 +1.1**
TPH Tonopah 81.28 325 P **P** **12 36 46.5 +1.1**
TPH pmax pmax
comp=Z,38nm,1.0s
MLAC Mammoth, Mammo 81.73 324 P **P** **12 36 49.1 +1.3**
baz=141
PDAR Pinedale Array 81.77 333 P **P** **12 36 47.9 0.0**
comp=Z,1.2nm,0.9s,baz=149,slow=3.8,SNR=8.1
PDAR LR LR 13 09 41.7
comp=Z,43nm,20.5s,baz=132,slow=33
comp=Z,1.2nm,0.9s
BW06 Boulder Array 81.77 333 P **P** **12 36 47.9 0.0**
baz=148
B35A Bob, Littlefor 82.02 345 P **P** **12 36 48.8 0.0**
baz=161,SNR=6.3
NVAR Mina Array Bea 82.09 325 P **P** **12 36 50.9 +1.2**
comp=Z,4.4nm,0.9s,baz=154,slow=5.7,SNR=29
comp=Z,4.4nm,0.9s
AGMN Agassiz Nation 82.44 344 P **P** **12 36 50.9 -0.1**
baz=159
AGMN Agassiz Nation 82.44 344 P **P** **12 36 50.9 -0.1**
baz=159
ELK Elko 82.48 328 LR LR 13 11 28.8
comp=Z,64nm,18.1s,baz=147,slow=34
ELK Elko 82.48 328 P **P** **12 36 52.2 +0.5**
ELK Elko 82.48 328 P **P** **12 36 52.2 +0.5**
ELK pmax pmax
comp=Z,5.0nm,1.0s
MDND Maddock 82.97 342 P **P** **12 36 54.7 +1.0**
MDND Maddock 82.97 342 P **P** **12 36 53.9 +0.1**
baz=156
LBTB Lobatse 83.07 115 LR LR 13 09 57.5
comp=Z,153nm,18.9s,baz=222,slow=33
TOA0 Torodi Ar. Sit 83.16 70 P **P** **12 36 55.0 -0.5**
TOA0 IAmb IAmb 12 37 05.8
comp=Z,15nm,0.9s
TORD Torodi Ar. Bea 83.16 70 P **P** **12 36 54.9 -0.6**
comp=Z,12nm,0.9s,baz=249,slow=4.3,SNR=47
comp=Z,12nm,0.9s
TORD Torodi Ar. Bea 83.16 70 P **P** **12 36 54.6 -0.9**
TORD IAmb IAmb 12 37 05.8
comp=Z,12nm,0.9s
PAHR Pah Rah Range 83.61 325 P **P** **12 36 58.9 +1.5**
RLMT Red Lodge 83.66 334 P **P** **12 36 57.5 -0.1**
baz=148
LAO LASA Array 83.94 337 P **P** **12 36 59.1 +0.2**
baz=151
BEKR Beckworth 84.21 325 P **P** **12 37 01.2 +0.7**
HLID Hailey 84.40 330 P **P** **12 37 01.7 +0.3**
baz=144
MCMT McKenzie Canyo 84.79 332 P **P** **12 37 04.6 +1.1**
DGMT Dagmar 84.86 339 P **P** **12 37 04.0 +0.6**
DGMT Dagmar 84.86 339 P **P** **12 37 04.5 +1.1**
baz=153
DGMT Dagmar 84.86 339 P **P** **12 37 04.2 +0.8**
baz=153
BOZ Bozeman (W) 84.95 333 P **P** **12 37 04.3 +0.2**
baz=147
DLMT Dillon 85.14 332 P **P** **12 37 06.4 +1.4**
DLMT IAmb IAmb 12 37 07.2
comp=Z,12nm,1.2s
WVOR Wild Horse Val 85.37 327 P **P** **12 37 07.0 +0.8**
WVOR pmax pmax
comp=Z,5.0nm,1.3s
URZ Urewera 85.45 227 LR LR 13 05 45.8
comp=Z,99nm,21.5s,baz=209,slow=29
LRM Limekiln Ridge 85.46 333 P **P** **12 37 07.9 +1.1**
RPZ Rata Peaks 85.62 220 LR LR 13 07 10.6
comp=Z,56nm,21.0s,baz=104,slow=30
MOD Modoc Plateau 85.74 326 P **P** **12 37 08.8 +0.7**
J08A Circle Bar Ran 86.02 328 P **P** **12 37 11.1 +1.7**
EGMT Eagleton 86.31 336 P **P** **12 37 10.7 0.0**
baz=148
MSO Missoula 86.87 332 P **P** **12 37 14.6 +1.0**
baz=145
L04D Klamath Falls 86.95 325 P **P** **12 37 14.8 +0.7**
baz=139
I07A Izee 87.05 328 P **P** **12 37 15.5 +1.0**
I07A IAmb IAmb 12 37 16.9
comp=Z,9.0nm,1.1s
J05D Fort Rock, OR 87.24 326 P **P** **12 37 16.0 +0.5**
baz=140
RAO Raoul Island 87.37 237 LR LR 13 05 42.5
comp=Z,72nm,21.7s,baz=35,slow=28
PINE Pine Mountain 87.49 327 P **P** **12 37 18.2 +1.4**
PINE IAmb IAmb 12 37 19.3
comp=Z,10nm,0.9s
L02F Cave Junction 87.51 324 P **P** **12 37 17.7 +1.1**
baz=138
J04D Umpqua Nationa 87.63 326 P **P** **12 37 17.9 +0.5**
baz=139
K02D Willamette Mer 87.98 324 P **P** **12 37 19.7 +0.8**
baz=138
I05D Terrebonne, OR 88.09 327 P **P** **12 37 20.6 +1.2**
baz=140
I04A Tendick Farm, 88.19 326 P **P** **12 37 20.6 +0.7**
baz=139
WALA Waterton Lakes 88.69 334 P **P** **12 37 22.7 +0.5**
WALA IAmb IAmb 12 37 23.7
comp=Z,11nm,1.1s
G05D Wamic, OR 88.77 327 P **P** **12 37 23.2 +0.7**
baz=140
HAWA Hanford 88.85 329 P **P** **12 37 23.4 +0.5**
HAWA IAmb IAmb 12 37 25.0
comp=Z,12nm,1.2s
I02E Swisshome, OR 89.11 325 P **P** **12 37 23.5 -0.5**
baz=138
NEW Newport 89.31 332 P **P** **12 37 24.4 -0.6**
NEW pmax pmax
comp=Z,6.0nm,1.3s
NEW Newport 89.31 332 P **P** **12 37 25.2 +0.2**
baz=143
C09A Chrisman Ranch 89.41 331 P **P** **12 37 25.2 -0.3**
MDT Midelt 90.12 51 LR LR 13 17 27.5
comp=Z,71nm,20.6s,baz=288,slow=35
LSZ Lusaka 90.30 108 LR LR 13 14 56.8
comp=Z,114nm,18.0s,baz=240,slow=34
AFI Afiamalu 91.14 253 LR LR 13 11 40.4
comp=Z,60nm,18.6s,baz=120,slow=31
ESDC Sonseca Array 94.74 46 P **P** **12 37 50.2 -0.2**
comp=Z,0.8nm,0.7s,baz=254,slow=4.1,SNR=4.3
ESDC LR LR 13 18 45.5
comp=Z,91nm,19.1s,baz=200,slow=34
comp=Z,0.8nm,0.7s
FRB Frobisher Bay 95.08 1 LR LR 13 21 58.1
comp=Z,30nm,20.3s,baz=199,slow=36
MSVF Nonsavu 97.07 244 LR LR 13 11 07.4
comp=Z,39nm,20.3s,baz=156,slow=29
DZM Mont Dzumac 102.84 234 *e*LR LR 13 12 07.9
comp=Z,131nm,27.4s
EYAK Cordova Ski Ar 109.73 330 P **PKiKP** **12 43 00.2 +1.1**
baz=119
K27K Chicken 110.01 334 P **PKiKP** **12 43 00.8 +1.2**
baz=121
G27K Doyon Strip 111.29 336 P **PKiKP** **12 43 04.1 +2.1**
baz=121
SML Sawmill 111.42 330 P **PKiKP** **12 43 04.3 +1.9**
baz=117
WAT6 Susitna Watana 111.53 331 P **PKiKP** **12 43 03.6 +0.9**
baz=117
J25K Salcha River, 111.54 334 P **PKiKP** **12 43 03.4 +0.8**
baz=118
BRSE Bradley Lake S 111.56 328 P **PKiKP** **12 43 03.4 +0.7**
baz=116
DHY Denali Highway 111.61 332 P **PKiKP** **12 43 03.8 +0.9**
baz=117
PMR Palmer 111.67 330 P **PKiKP** **12 43 03.4 +0.7**
baz=116
CHNA Chernabura Isl 114.02 321 P **PKiKP** **12 43 08.2 +0.7**
baz=111
M19K Big River Lodg 114.08 329 P **PKiKP** **12 43 09.2 +1.8**
baz=112
N18K Kilae Creek 114.30 328 P **PKiKP** **12 43 09.1 +1.2**
baz=111
I21K Tanana 114.33 333 P **PKiKP** **12 43 09.1 +1.3**
baz=113
H22K Ishtalitna Cre 114.38 334 P **PKiKP** **12 43 09.4 +1.5**
baz=113
H21K Melozitna Rive 114.83 333 P **PKiKP** **12 43 10.0 +1.2**
baz=112
NIKH Nikolski High 118.65 317 P **PKiKP** **12 43 17.6 +1.1**
baz=105
ASAR Alice Springs 119.80 207 PKP **PKPdf** **12 43 18.8 -1.0**
comp=Z,1.2nm,0.9s,baz=137,slow=1.4,SNR=7.7
ASAR PKKPbc **PKKPbc** **12 53 29.6 +0.5**
comp=Z,0.4nm,0.9s,baz=334,slow=3.0,SNR=5.2
AKASG Malin Array Be 120.39 46 PKP **PKPdf** **12 43 19.1 -0.7**
comp=Z,0.1nm,0.2s,baz=258,slow=3.1,SNR=4.6
BRTR Keskin Array B 120.43 60 PKP **PKPdf** **12 43 19.2 -1.3**
comp=Z,0.7nm,0.7s,baz=245,slow=3.0,SNR=2.7
TNA Tin City 120.85 331 P **PKiKP** **12 43 21.9 +1.5**
baz=99
WRA Warramunga Arr 122.95 210 PKP **PKPdf** **12 43 24.3 -1.6**
comp=Z,1.1nm,0.7s,baz=154,slow=2.0,SNR=8.5
WRA Warramunga Arr 122.95 210 **PKPdf** **12 43 25.6 -0.3**
WRA Warramunga Arr 122.95 210 PKIKP **PKPdf** **12 43 25.6 -0.3**
OBN Obninsk 125.52 42 *i* PKIKP **PKPdf** **12 43 29.7 +0.2**
OBN *i* 12 43 39.3
OBN pmax pmax
comp=Z,4.0nm,0.7s
H11S2 WAKE ISLAND Hyl 126.03 271 T T 15 02 25.3
baz=116,slow=74,SNR=872
H11S1 WAKE ISLAND Hyl 126.04 271 T T 15 02 25.1
baz=116,slow=74,SNR=753
H11S3 WAKE ISLAND Hyl 126.05 271 T T 15 02 21.3
baz=116,slow=74,SNR=539
H11N3 WAKE ISLAND Hyl 126.38 272 T T 15 02 47.3
baz=116,slow=75,SNR=352
H11N1 WAKE ISLAND Hyl 126.40 272 T T 15 02 46.4
baz=116,slow=75,SNR=119
H11N2 WAKE ISLAND Hyl 126.40 272 T T 15 02 48.5
baz=116,slow=75,SNR=594
KLMR Klimovskoe 127.33 35 *e*PKIKP **PKPdf** **12 43 31.2 -1.6**
KLMR pmax pmax
comp=Z,15nm,1.1s
KLMR Klimovskoe 127.33 35 *e*PKPdf **PKPdf** **12 43 31.2 -1.6**
KLMR AMP 12 43 43.6
comp=Z,15nm,1.1s
FITZ Fitzroy Crossi 127.83 201 PKP **PKPdf** **12 43 34.5 -0.7**
comp=Z,2.8nm,0.9s,baz=243,slow=2.3,SNR=4.4
KIV Kislovodsk 128.00 57 *i* PKIKP **PKiKP** **12 43 35.2 -0.2**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,52nm,23.0s
ARU Arti 137.76 39 *i* PKIKP **PKPdf** **12 43 52.3 -0.3**
SEY Seymchan 138.09 332 *i* PKIKP **PKPdf** **12 43 53.5 +0.5**
PET Petropavlovsk 138.11 316 *i* PKIKP **PKPdf** **12 43 53.7 +0.3**
ABKAR Akbulak array 139.98 50 **PKPdf** **12 43 57.9 +1.0**
ABKAR Akbulak array 139.98 50 PKPdf **PKPdf** **12 43 57.9 +1.0**
BRVK Borovoye 145.27 41 **PKPdf** **12 44 06.9 +0.7**
BRVK Borovoye 145.27 41 PKIKP **PKPdf** **12 44 06.9 +0.7**
YAK Yakutsk 146.57 342 **PKPbc** **12 44 09.6 -0.1**
YAK Yakutsk 146.57 342 *e*PKP2 **PKPbc** **12 44 09.4 -0.3**
YAK *e* 12 47 34.9
YAK pmax pmax
comp=Z,68nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=Z,79nm,4.3s
YAK pmax pmax
comp=N,77nm,5.0s
YAK pmax pmax
comp=E,43nm,4.4s
TOLI2 Tolitoli 147.43 204 **PKPbc** **12 44 13.1 -0.5**
KK31 Karatay Array 148.13 58 **PKPbc** **12 44 14.2 -0.4**
KK31 Karatay Array 148.13 58 PKP2 **PKPbc** **12 44 14.2 -0.4**
KKAR Karatay Array 148.13 58 **PKPbc** **12 44 14.1 -0.6**
KKAR Karatay Array 148.13 58 **PKPbc** **12 44 14.2 -0.4**
KKAR Karatay Array 148.13 58 PKP2 **PKPbc** **12 44 14.1 -0.6**
GAR Garm 148.34 66 **PKPbc** **12 44 16.0 +0.5**
HYB Hyderabad 149.61 111 *e*P **PKPbc** **12 44 18.0 -1.1**
HYBB Hyderabad (bro 149.61 111 *e*PKiKP **PKiKP** **12 44 20.1 -0.1**
RPSI Rantau Prapat 149.91 161 **PKPbc** **12 44 19.5 -0.4**
KSM Kuching 149.95 184 **PKPbc** **12 44 20.2 +0.1**
KSM PKPab **sPKPdf** **12 44 27.6 +0.3**
PSI Prapat 150.01 161 PKP2 **PKPbc** **12 44 19.5 -0.9**
NIL Nilore 150.53 77 **PKPbc** **12 44 21.0 0.0**
NIL PKPab **pPKPbc** **12 44 29.5 -0.3**
NIL Nilore 150.53 77 PKIKP **PKPbc** **12 44 21.0 0.0**
NIL 12 44 29.5
KURK Kurchatov 150.94 40 **PKiKP** **12 44 21.7 -0.2**
KURK PKPab **pPKPbc** **12 44 29.8 -0.3**
KURK Kurchatov 150.94 40 PKIKP **PKiKP** **12 44 21.7 -0.2**
KURK 12 44 29.8
AAK Ala-Archa 151.09 58 **PKiKP** **12 44 23.2 +0.5**
AAK PKPab **pPKPbc** **12 44 31.6 +0.6**
AAK Ala-Archa 151.09 58 PKIKP **PKiKP** **12 44 23.2 +0.5**
AAK 12 44 31.6
ZAA0 Zalesovo Array 152.06 30 PKPdf **PKPdf** **12 44 17.8 +0.6**
ZAA0 PKPbc **PKiKP** **12 44 24.3 +0.2**
ZAA0 PKPab **PKPab** **12 44 33.9 +0.6**
ZALV Zalesovo Beam 152.06 30 PKP **PKPdf** **12 44 17.0 -0.1**
comp=E,1.2nm,0.7s,baz=298,slow=3.2,SNR=6.4
ZALV PKPbc **PKPbc** **12 44 23.7 -0.1**
comp=E,40nm,0.9s,baz=298,slow=3.2,SNR=84
ZALV Zalesovo Beam 152.06 30 PKPdf **PKPdf** **12 44 17.1 -0.1**
ZALV PKPbc **PKiKP** **12 44 24.3 +0.2**
ZALV PKPab **PKPab** **12 44 33.1 -0.2**
ZALV Zalesovo Beam 152.06 30 PKIKP **PKPdf** **12 44 17.1 -0.1**
ZALV 12 44 24.3
ZALV 12 44 33.1
IPM Ipoh 152.16 164 PKPdf **PKPdf** **12 44 16.5 -2.1**
IPM **PKPbc** **12 44 24.7 -0.6**
IPM PKPab **PKPab** **12 44 34.6 -0.1**
KSH Kashi 152.69 64 PKPbc **PKiKP** **12 44 26.5 +0.4**
KSH pPKP PKPab 12 44 36.1 -0.5
BOD Bodaibo 153.51 353 *e*PKIKP **PKPbc** **12 44 26.4 -0.4**
BOD pmax pmax
comp=Z,16nm,1.2s
MKAR Makanchi Array 154.96 45 PKPbc **PKPbc** **12 44 30.1 -0.3**
comp=Z,1.9nm,0.9s,baz=317,slow=2.1,SNR=9.4
MKAR Makanchi Array 154.96 45 PKPdf **PKPdf** **12 44 21.0 -0.6**
MKAR **PKPbc** **12 44 30.3 -0.1**
MKAR PKPab **PKPab** **12 44 46.1 +0.2**
MKAR Makanchi Array 154.96 45 PKIKP **PKPdf** **12 44 21.0 -0.6**
MKAR 12 44 30.3
WMQ Urumqi 159.74 47 *e*PKP **PKPdf** **12 44 28.7 +0.9**
WMQ LR LR
comp=Z,120nm,22.3s
SONM Songino Array 163.75 5 PKPab **PKPab** **12 45 23.9 -0.1**
comp=Z,1.7nm,1.0s,baz=347,slow=4.6,SNR=5.9
ULN Ulaanbaatar 163.75 3 PKPdf **PKPdf** **12 44 30.3 -1.6**
ULN **PKPab** **12 45 25.1 +1.1**
ULN Ulaanbaatar 163.75 3 PKIKP **PKPdf** **12 44 30.3 -1.6**
GOMU GeErMu 167.93 64 PKP **PKPdf** **12 44 38.0 +2.1**
GOMU pPKP pPKPdf 12 44 43.6 -1.3
GOMU sPKP 12 44 46.0
GOMU AMB AMB
comp=Z,36nm,4.6s
GTA Gaotai 169.62 39 ⇓PKP **PKPdf** **12 44 37.6 +1.0**
GTA sPKP 12 44 48.0
GTA PKPab **PKPab** **12 45 50.9 +0.6**
GTA LR LR
comp=Z,99nm,16.0s
GTA LR LR
comp=Z,79nm,17.1s
GTA LR LR
comp=Z,91nm,17.5s
HHC Hu-ho-hao-te 170.42 345 *e*PKP **PKPdf** **12 44 35.4 -1.6**
NJ2 Nanjing 170.98 275 *e*PKP **PKPdf** **12 44 36.2 -1.2**
PZH PanZhiHua 172.34 130 PKP **PKPdf** **12 44 37.3 -1.1**
CD2 Chengdu 176.07 99 *e*PKP **PKPdf** **12 44 38.6 -0.8**
XAN Xi'an 177.53 347 PKP **PKPdf** **12 44 45.0 +5.4**
XAN pPKP pPKPdf 12 44 50.0 +1.4

*NEIC **08** 12:27:07.9±1.4,4.3S±0.2×153.7E±0.1,h103km±17km, mb4.1/9,Error ellipse: s-maj=27.9km s-min=20.0km az=172.0*
*IDC **08** 12:27:08.1±4.6,4.39S×153.63E,h107km±33km,mb3.4/4, mbtmp3.9/5,Error ellipse: s-maj=50.2km s-min=43.9km az=126.0*
ISC 08 12:27:06.6±2.2,4.4S±0.2×153.7E±0.2,h100km,n14, σ0≤64/16,mb4.0/8,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.57**	**276**		Pn	**Pn**	**12 27 34.2**	**+0.4**
KRVT	**Keravat (AS076**	**1.70**	**272**		P	**Pn**	**12 27 36.0**	**+0.6**
	140nm,0.7s,baz=257,slow=0.8,SNR=21							
KRVT					S	**Sn**	**12 27 57.1**	**-0.1**
	86nm,0.4s,baz=139,slow=7.5,SNR=9.8							
PMG	**Port Moresby**	**8.23**	**232**		P	**Pn**	**12 29 03.8**	**+0.6**
	11nm,0.4s,baz=53,slow=8.7,SNR=8.4							
PMG					S	**Sn**	**12 30 34.1**	**-0.4**
	10nm,0.5s,baz=196,slow=6.2,SNR=3.2							
WB0	**Warramunga Arr**	**24.29**	**229**		P	**P**	**12 32 15.3**	**+0.5**
WR0	**Warramunga Arr**	**24.29**	**229**		P	**P**	**12 32 15.8**	**+0.9**
WR0					IAmb	IAmb	12 32 33.4	
	comp=Z,8.2nm,1.3s							
WRAB	**Tennant Creek**	**24.42**	**229**		P	**P**	**12 32 16.9**	**+0.8**
WRAB					IAmb	IAmb	12 32 52.1	
	comp=Z,15nm,1.5s							
WB2	**Warramunga Ar**	**24.42**	**229**		P	**P**	**12 32 17.0**	**+0.9**
WB2					IAmb	IAmb	12 32 38.7	
	comp=Z,9.5nm,1.4s							
WRA	**Warramunga Ar**	**24.43**	**229**		P	**P**	**12 32 16.9**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=54,slow=10.0,SNR=9.7							
	comp=Z,1.8nm,0.5s							
KNRA	**Kununurra**	**27.00**	**244**		P	**P**	**12 32 38.9**	**-0.4**
KNRA					IAmb	IAmb	12 33 06.0	
	comp=Z,16nm,1.5s							
ASAR	**Alice Springs**	**27.10**	**223**		P	**P**	**12 32 39.8**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=55,slow=8.9,SNR=7.5							
	comp=Z,0.3nm,0.7s							
STKA	**Stephens Creek**	**29.65**	**201**		P	**P**	**12 33 02.4**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=0.0,slow=12,SNR=3.2							
	comp=Z,1.4nm,0.8s							
STKA	**Stephens Creek**	**29.65**	**201**		P	**P**	**12 33 03.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**30.68**	**241**		P	**P**	**12 33 11.6**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=85,slow=10,SNR=1.7							
	comp=Z,0.8nm,0.6s							
FITZ	**Fitzroy Crossi**	**30.68**	**241**		P	**P**	**12 33 12.1**	**+0.1**
FITZ					IAmb	IAmb	12 33 38.5	
	comp=Z,5.5nm,1.2s							

*KRNET **08** 12:30:14.6±0.1,41.41N×78.06E,h35km,mb2.5*
*SOME **08** 12:30:14.6,42.05N×78.25E,h10km*
ISC 08 12:30:14.9±2.1,42.0N±0.1×78.17E±0.05,h17km±13km, n14,σ1≤32/26,8D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.56**	**18**	⇓*e*P		Pn	12 30 35.4	+7.0
	baz=13							
PRZ				⇓*e*S		Sn	12 30 50.4	+13
	baz=13							
SATY	**Saty**	**1.13**	**9**	*e*P		**Pn**	**12 30 34.7**	**-1.4**
	1.8nm,0.1s							
SATY				*e*S		**Sb**	**12 30 49.0**	**-1.4**
	11nm,0.1s							
ULHL	**Ulahol**	**1.47**	**282**	⇓*e*P		**Pg**	**12 30 42.8**	**-0.3**
	baz=2.0							
ULHL				⇓*e*S		**Sg**	**12 31 03.9**	**+1.7**
	baz=2.0							
MDOK	**Medeo**	**1.47**	**326**	*e*P		**Pb**	**12 30 41.8**	**-0.1**
	1.1nm,0.4s							
MDOK				*e*S		**Sb**	**12 31 01.3**	**+0.9**
	4.4nm,0.2s							
SHLS	**Shalkode**	**1.54**	**38**	*e*P		**Pg**	**12 30 45.0**	**+0.4**
	2.4nm,0.2s							
SHLS				*e*S		**Sg**	**12 31 06.8**	**+2.2**
	4.3nm,0.4s							
BOOM	**Boomskoye usch**	**1.74**	**289**	⇓*e*P		**Pg**	**12 30 47.2**	**-1.2**
	baz=5.0							
BOOM				⇓*i*S		**Sg**	**12 31 11.2**	**+0.1**
	baz=5.0							
MTBS	**Maitube**	**1.75**	**313**	*e*P		**Pg**	**12 30 47.5**	**-1.0**
	3.1nm,0.1s							
MTBS				*e*S		**Sg**	**12 31 11.1**	**-0.1**
	11nm,0.2s							
KST	**Kastek**	**1.97**	**305**	*e*P		**Pb**	**12 30 50.4**	**+0.1**
	1.2nm,0.2s							
KST				*e*S		**Sb**	**12 31 16.3**	**+1.7**
	9.7nm,0.3s							
KTBS	**Karatobe**	**2.08**	**329**	*e*P		**Pb**	**12 30 52.2**	**0.0**
	1.3nm,0.2s							
KTBS				*e*S		**Sb**	**12 31 19.6**	**+1.8**
	9.8nm,0.2s							
CHKK	**Chushkaly**	**2.10**	**336**	*e*P		**Pb**	**12 30 52.5**	**0.0**
	2.0nm,0.2s							
CHKK				*e*S		**Sb**	**12 31 19.7**	**+1.5**
	9.8nm,0.3s							
TKM2	**Tokmak 2**	**2.14**	**298**	⇓*e*P		**Pb**	**12 30 53.8**	**+0.5**
	baz=10.0							
TKM2				⇓*e*S		**Sg**	**12 31 22.1**	**-1.6**
	baz=10.0							
ARXS	**Arharly**	**2.28**	**354**	*e*P		**Pb**	**12 30 54.7**	**-0.9**
	2.0nm,0.2s							
ARXS				*e*S		**Sb**	**12 31 23.5**	**-0.1**
	8.5nm,0.3s							
KUU	**Kurty**	**2.37**	**326**	*e*P		**Pb**	**12 30 57.2**	**+0.2**
	1.0nm,0.3s							
KUU				*e*S		**Sb**	**12 31 28.0**	**+2.0**
	7.5nm,0.4s							
KRBS	**Karabastau**	**2.54**	**314**	*e*P		**Pb**	**12 31 00.3**	**+0.3**
	1.2nm,0.2s							
KRBS				*e*S		**Sb**	**12 31 33.5**	**+2.6**
	3.4nm,0.4s							

*JMA **08** 12:33:06.0±0.3,24°N±1°×12°2E±°,h57km±3km,MV2.4/10, TAIWAN REGION*
*TAP **08** 12:33:07.4,24.44N×121.89E,h20km,ML3.5,B*
ISC 08 12:33:07.5±0.9,24.43N±0.01×121.93E±0.02,h18km±2km, n105,σ0≤58/200,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.14**	**277**	P		**Pb**	**12 33 11.1**	**+0.7**
	baz=273							
EWUT				S		**Sg**	**12 33 14.4**	**0.0**
	baz=273							
ENA	**Nanau**	**0.17**	**270**	P		**Pg**	**12 33 12.5**	**+0.4**
	baz=264							
ENA				S		**Sg**	**12 33 16.2**	**+1.0**

baz=264
TWC Suao 0.20 337 P Pg 12 33 13.0 +0.6
baz=350
TWC S Sg 12 33 16.5 +0.8
baz=350
EHP Heping Village 0.21 236 eP Pg 12 33 13.0 +0.4
baz=224
EHP eS Sg 12 33 17.1 +1.0
baz=224
NDS Dongshan 0.28 316 P Pb 12 33 13.3 -0.7
baz=321
NDS S Sb 12 33 18.1 -0.2
baz=321
ILA Ilan 0.38 334 eP Pg 12 33 15.9 +0.5
baz=339
ILA S Sb 12 33 22.2 +1.1
baz=339
TWE Neicheng 0.38 320 P Pg 12 33 15.7 +0.3
baz=325
TWE S Sg 12 33 21.0 +0.3
baz=325
LATG Datong 0.38 286 P Pg 12 33 15.8 +0.3
baz=286
LATG S Sg 12 33 21.5 +0.5
baz=286
ETL Fush Village 0.39 226 eP Pg 12 33 15.8 +0.2
baz=221
ETL eS Sb 12 33 22.0 +0.5
baz=221
ENTT Nioudou 0.39 302 P Pg 12 33 15.0 -0.7
baz=304
ENTT S Sg 12 33 20.9 -0.3
baz=304
NACB Ninganchiao 0.40 231 P Pg 12 33 15.7 -0.1
baz=225
NACB S Sb 12 33 22.2 +0.4
baz=225
EGS 0.41 0 P Pg 12 33 16.5 +0.5
baz=6.0
EGS eS Sb 12 33 23.3 +1.1
baz=6.0
NDT Datong Townshi 0.42 294 eP Pg 12 33 16.0 -0.1
baz=295
NDT eS Sg 12 33 22.0 +0.1
baz=295
NTC Toucheng 0.43 348 eP Pg 12 33 16.6 +0.3
baz=352
NTC S Sb 12 33 23.2 +0.4
baz=352
FUSB Fushanzhiwuyua 0.45 317 P Pg 12 33 17.2 +0.4
baz=319
FUSB S Sg 12 33 23.6 +0.5
baz=319
TWD Chiawan 0.46 221 P Pg 12 33 16.8 -0.1
baz=216
TWD S Sb 12 33 24.4 +0.8
baz=216
ETLH Xiulin Townshi 0.47 242 P Pg 12 33 16.7 -0.3
baz=238
ETLH S Sb 12 33 24.2 +0.4
baz=238
NNSB Datong 0.50 270 P Pb 12 33 17.7 -0.1
baz=268
NNSB S Sg 12 33 24.9 +0.5
baz=268
NNS Nan Shan 0.51 271 P Pb 12 33 16.8 -1.1
baz=269
NNS S Sg 12 33 24.1 -0.6
baz=269
NWLT Wulai 0.52 312 P Pb 12 33 18.1 0.0
baz=313
NWLT S Sb 12 33 24.9 -0.4
baz=313
HWA Hwalien 0.54 214 eP Pb 12 33 18.7 +0.4
baz=208
HWA eS Sg 12 33 26.6 +1.1
baz=208
TIPB Shuangxi 0.55 350 P Pb 12 33 18.7 +0.2
baz=353
TIPB S Sg 12 33 26.8 +0.9
baz=353
YHNB Yeheng 0.56 295 P Pb 12 33 18.8 0.0
baz=296
YHNB S Sb 12 33 26.5 +0.1
baz=296
NSK Sanguang 0.58 295 P Pb 12 33 17.9 -1.1
baz=296
NSK S Sb 12 33 25.9 -0.9
baz=296
TWB1 Santiao Chiao 0.58 5 P Pb 12 33 19.1 +0.1
baz=9.0
TWB1 S Sb 12 33 26.7 -0.2
baz=9.0
TWA Mucha 0.63 330 eP Pb 12 33 19.8 -0.1
baz=333
TWA eS Sg 12 33 29.2 +0.7
baz=333
NHDH Xindian Distri 0.65 325 eP Pb 12 33 20.3 +0.1
baz=327
NHDH eS Sg 12 33 29.6 +0.6
baz=327
FUSS Fushou 0.65 254 P Pb 12 33 20.3 -0.1
baz=252
FUSS S Sb 12 33 29.3 +0.1
baz=252
NWF Wu-fen Shan 0.65 348 P Pb 12 33 20.8 +0.5
baz=351
NWF S Sg 12 33 30.0 +0.8
baz=351
SXI1 Grass Mountain 0.66 356 P Pb 12 33 20.8 +0.2
baz=358
SXI1 S Sg 12 33 30.2 +0.6
baz=358
WHF Hehuan Shan 0.67 245 P Pb 12 33 20.9 +0.1
baz=242
WHF S Sb 12 33 29.9 0.0
baz=242
TWT Tachien 0.71 256 eP Pb 12 33 21.3 -0.1
baz=254
TWT eS Sg 12 33 31.6 +0.6
baz=254
TAP Taipei 0.72 328 eP Pb 12 33 21.3 -0.1
baz=330
TAP eS Sb 12 33 31.4 +0.5
baz=330
TDCB Techi 0.73 256 eP Pb 12 33 21.8 +0.2
baz=254
TDCB eS Sb 12 33 31.6 +0.3
baz=254
ESL Shilin 0.76 217 eP Pb 12 33 21.2 -1.0
baz=213
ESL eS Sb 12 33 32.5 +0.2
baz=213
NFF Wufeng Townshi 0.77 285 P Pb 12 33 21.6 -0.7
baz=285
NFF S Sb 12 33 32.2 -0.3
baz=285
CHGB Renai 0.78 242 P Pb 12 33 22.5 -0.2
baz=240
CHGB S Sg 12 33 33.7 +0.4
baz=240
YM01 YM01 0.79 335 eP Pb 12 33 23.1 +0.4
baz=337
YM01 eS Sg 12 33 33.7 +0.4
baz=337
TWS1 Kuangyinshan 0.82 325 eP Pb 12 33 23.7 +0.6
baz=327
TWS1 eS Sg 12 33 34.6 +0.3
baz=327
OWD Renai 0.84 236 P Pb 12 33 22.9 -0.7
baz=233
OWD S Sb 12 33 34.8 +0.3
baz=233
ANP Anpu 0.84 334 eP Pb 12 33 23.4 -0.1
baz=336
ANP eS Sb 12 33 35.1 +0.5
baz=336
NTST Danshui 0.85 329 eP Pb 12 33 23.9 +0.1
baz=331
NTST eS Sb 12 33 35.3 +0.4
baz=331
WUSB Renai 0.86 240 P Pb 12 33 23.6 -0.3
baz=237
WUSB S Sb 12 33 35.6 +0.4
baz=237
LIOB Emei 0.86 285 P Pb 12 33 24.4 +0.6
baz=284
LIOB eS Sg 12 33 36.4 +0.7
baz=284

NCUH Zhongli 0.87 308 eP Pb 12 33 24.2 +0.3
baz=309
NCUH eS Sg 12 33 35.9 +0.1
baz=309
NSTT Nanjuang 0.87 284 eP Pb 12 33 24.4 +0.3
baz=283
NSTT eS Sb 12 33 35.4 0.0
baz=283
EGFH Guangfu 0.89 211 eP Pb 12 33 24.1 -0.1
baz=208
EGFH eS Sg 12 33 37.0 +0.5
baz=208
TWY Chenhua 0.90 340 eP Pb 12 33 24.5 0.0
baz=342
TWY eS Sg 12 33 36.9 +0.1
baz=342
WHP Taichung City 0.91 261 eP Pb 12 33 25.3 +0.5
baz=259
WHP eS Sg 12 33 37.8 +0.5
baz=259
JYNG Yonagunijimaku 0.92 88 eP Pb 12 33 24.5 -0.4
JYNG eS Sb 12 33 37.1 +0.3
SBCB Hsinchu 0.93 293 eP Pb 12 33 24.7 -0.4
baz=293
SBCB eS Sb 12 33 37.8 +0.6
baz=293
YOJ Yonaguni jima 0.98 88 eP Pb 12 33 26.4 +0.4
baz=88
YOJ eS Sb 12 33 39.1 +0.5
baz=88
YOJ Yonaguni jima 0.98 88 eP Pb 12 33 25.4 -0.5
YOJ S Sb 12 33 38.9 +0.3
VWDT VWDT 0.99 227 P Pb 12 33 25.4 -0.6
baz=225
VWDT S Sb 12 33 39.2 +0.5
baz=225
WCS Beigang Elemen 1.00 249 P Pb 12 33 25.8 -0.4
baz=246
WCS eS Sb 12 33 39.4 +0.3
baz=246
HGSD Ruisui 1.04 207 P Pb 12 33 26.4 -0.5
baz=204
HGSD eS Sb 12 33 40.9 +0.6
baz=204
NMLH Miaoli 1.04 276 eP Pb 12 33 26.7 -0.3
baz=275
NMLH eS Sb 12 33 40.4 0.0
baz=275
TWQ1 Liyutan 1.06 266 eP Pb 12 33 26.9 -0.4
baz=264
TWQ1 eS Sb 12 33 40.6 -0.2
baz=264
NSY Sanyi 1.07 270 eP Pb 12 33 26.8 -0.6
baz=268
NSY eS Sb 12 33 41.0 0.0
baz=268
EHY Hungye 1.07 211 eP Pb 12 33 27.6 +0.1
baz=208
EHY eS Sn 12 33 42.0 -0.1
baz=208
SMLT Sun Moon Lake 1.09 240 eP Pb 12 33 27.5 -0.3
baz=238
SMLT eS Sb 12 33 41.3 -0.4
baz=238
SSLB Suanglung 1.10 235 P Pn 12 33 26.9 -1.1
baz=232
SSLB eS Sb 12 33 41.5 -0.4
baz=232
TYC Yuchr 1.11 242 eP Pn 12 33 27.5 -0.5
baz=240
TYC eS Sb 12 33 42.6 +0.3
baz=240
TCU Taichung 1.18 257 eP Pn 12 33 28.7 -0.3
baz=255
TCU eS Sb 12 33 44.5 +0.2
baz=255
YULB Yu-li 1.18 209 eP Pn 12 33 27.4 -1.7
baz=207
YULB eS Sb 12 33 43.9 -0.5
baz=207
EYUL Yuli 1.21 208 eP Pn 12 33 29.6 +0.1
baz=205
EYUL eS Sn 12 33 45.8 +0.3
baz=205
WHYT Xinyi Township 1.23 234 eP Pn 12 33 29.2 -0.5
baz=232
WHYT eS Sn 12 33 46.5 +0.6
baz=232
FULB Fuli 1.36 206 eP Pn 12 33 31.7 +0.2
baz=203
FULB eS Sn 12 33 49.3 +0.3
baz=203
ALS Alishan 1.38 229 P Pn 12 33 31.6 -0.5
baz=226
ALS S Sn 12 33 49.3 -0.6
baz=226
CHN5 Tsauling 1.41 234 eP Pn 12 33 31.6 -0.7
baz=232
CHN5 eS Sn 12 33 50.6 0.0
baz=232
WDLH Douliu 1.47 240 eP Pn 12 33 32.9 -0.2
baz=238
WDLH eS Sn 12 33 51.3 -0.6
baz=238
ELDTW Lidau 1.49 214 eP Pn 12 33 32.5 -0.9
baz=212
ELDTW eS Sn 12 33 51.7 -0.8
baz=212
WRL Guolierlin Hig 1.51 250 eP Pn 12 33 32.9 -0.7
baz=248
WRL eS Sn 12 33 51.9 -0.9
baz=248
EDH Donghe 1.56 202 eP Pn 12 33 34.8 +0.5
baz=200
EDH eS Sn 12 33 54.3 +0.3
baz=200
WTK Tuku 1.59 243 eP Pn 12 33 34.4 -0.3
baz=241
WTK eS Sn 12 33 54.9 +0.1
baz=241
TPUB Ta-pu 1.64 227 eP Pn 12 33 35.6 +0.2
baz=225
TPUB eS Sn 12 33 56.2 +0.3
baz=225
STYH Taoyuan 1.64 220 eP Pn 12 33 34.8 -0.6
baz=219
STYH eS Sn 12 33 55.6 -0.4
baz=219
IRIF Iriomote-Funau 1.64 93 eP Pn 12 33 34.3 -1.1
IRIF S Sn 12 33 55.0 -1.1
CHY Chiayi 1.66 236 eS Sn 12 33 56.2 -0.3
baz=234
WTP Ta-pu 1.69 226 eP Pn 12 33 36.0 0.0
baz=224
WTP eS Sn 12 33 56.8 -0.4
baz=224
HATJ Hateruma jima 1.75 102 eS Sn 12 33 57.7 -1.0
WSF Szhu 1.75 244 eS Sn 12 33 58.2 -0.5
baz=242
TWK Hsinying 1.76 229 eP Pn 12 33 37.1 0.0
baz=227
TWK eS Sn 12 33 57.3 -1.7
baz=227
SNST Tainan City 1.78 228 eP Pn 12 33 37.2 -0.1
baz=226
SNST eS Sn 12 33 59.7 +0.2
baz=226
CHN1 Nanshi 1.79 226 eP Pn 12 33 38.1 +0.7
baz=224
CHN1 eS Sn 12 33 59.3 -0.3
baz=224
LDUT Ludao 1.80 194 eP Pn 12 33 37.6 +0.1
baz=192
LDUT eS Sn 12 33 59.8 -0.1
baz=192
WSL Shuilin Townsh 1.80 240 eP Pn 12 33 38.0 +0.4
baz=239
WSL eS Sn 12 34 00.8 +0.8
baz=239
SGST Jiashian 1.82 223 eP Pn 12 33 37.9 0.0
baz=221
SGST eS Sn 12 34 00.8 +0.2
baz=221
ICHU Yijhu 1.85 235 eS Sn 12 34 01.5 +0.3
baz=233
JKRS Kuro-shima 1.91 95 S Sn 12 34 02.2 -0.3
JIJ Ishigaki jima 2.02 91 eS Sn 12 34 03.5 -1.8
ECL Taimali 2.03 206 eP Pn 12 33 41.0 +0.3
baz=204
ECL eS Sn 12 34 05.4 -0.2
baz=204
SSD Sandimen 2.06 216 eP Pn 12 33 41.0 -0.1
baz=214
SSD eS Sn 12 34 05.7 -0.6
baz=214
MASBT Mashibuluo 2.17 214 eP Pn 12 33 43.0 +0.4
baz=212
MASBT eS Sn 12 34 09.4 +0.4
baz=212
EAST Anshuo 2.27 206 eP Pn 12 33 44.8 +0.8
baz=204
EAST eS Sn 12 34 11.0 -0.5
baz=204
VWUC VWUC 2.33 284 eP Pn 12 33 45.0 +0.2
baz=283
VWUC eS Sn 12 34 11.8 -1.1
baz=283
PNG Penghu 2.34 249 eS Sn 12 34 13.1 -0.1
baz=247
WDGT Dungji 2.38 241 eP Pn 12 33 45.7 +0.1
baz=239
WDGT eS Sn 12 34 13.8 -0.5
baz=239
MATB Ma-tsu 2.48 314 eP Pn 12 33 48.3 +1.3
baz=313
MATB eS Sn 12 34 15.0 -1.9
baz=313
JTJ Tarama 2.53 85 eS Sn 12 34 18.1 +0.1
VCHM Qimei 2.59 243 eS Sn 12 34 19.7 +0.2
baz=241
LYJJ Jianjiangzhen 2.88 318 eP Pn 12 33 51.6 -0.9
baz=317
LYJJ eS Sn 12 34 26.0 -0.7
baz=317
XPSS Dashiqiu 2.94 328 eP Pn 12 33 53.2 -0.1
baz=328
XPSS eS Sn 12 34 27.0 -1.2
baz=328
MHZQ Yeshan 3.11 303 eS Sn 12 34 31.4 -0.8
baz=302
AXDP Jialang 3.63 278 eP Pn 12 34 02.7 -0.1
baz=277
AXDP eS Sn 12 34 44.0 -1.2
baz=277

NEIC ***08*** *12:53:28.7±2.6,24.3°S×0.2°×177.3°W±0.2,h172km±14km, mb4.2/12, Error ellipse: s-maj=26.5km s-min=18.8km az=214.0*

IDC ***08*** *12:53:31.9±1.9,24.29°S×177.51°W,h193km±17km,mb3.2/6, mbtmp3.9/8, Error ellipse: s-maj=22.5km s-min=19.0km az=123.0*

ISC 08 12:53:30.8±0.7,**24.19S**±0.09×**177.3W**±0.1,**h200**km,**n28,** σ**2.5**11/28,**mb3.9**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
RAO	**Raoul Island**	**5.08**	**186**	P		**Pn**	**12 54 46.4**	**+0.3**
	485nm,0.3s,baz=30,slow=20,SNR=6.2							
MSVF	**Nonsavu**	**7.76**	**325**	P		**Pn**	**12 55 22.6**	**+1.5**
	8.5nm,0.5s,baz=195,slow=12,SNR=15							
MSVF	**Nonsavu**	**7.76**	**325**	Pn		**Pn**	**12 55 22.4**	**+1.4**
NIUE	**Niue**	**8.52**	**55**	Pn		**Pn**	**12 55 31.0**	**+0.1**
AFI	**Afiamalu**	**11.47**	**28**	P		**Pn**	**12 56 04.4**	**-4.6**
	26nm,0.5s,baz=215,slow=14,SNR=21							
AFI				S		Sn	12 58 01.6	-15
	11nm,0.5s,baz=345,slow=18,SNR=2.0							
AFI	**Afiamalu**	**11.47**	**28**	Pn		**Pn**	**12 56 05.2**	**-3.8**
URZ	**Urewera**	**14.82**	**197**	P		**P**	**12 56 48.9**	**-2.7**
	4.2nm,0.3s,baz=36,slow=18,SNR=12							
URZ				S		S	12 59 19.1	-16
	4.8nm,0.5s,baz=344,slow=10,SNR=1.9							
URZ	**Urewera**	**14.82**	**197**			**P**	**12 56 49.4**	**-2.1**
BKZ	**Black Stump Fm**	**15.84**	**198**			**P**	**12 56 59.4**	**-3.5**
TUWZ	**Tuamarina**	**18.69**	**201**	P		**P**	**12 57 29.8**	**-4.2**
RPZ	**Rata Peaks**	**21.71**	**203**	P		**P**	**12 58 05.3**	**-0.7**
	3.3nm,0.7s,baz=338,slow=18,SNR=1.2							
	3.3nm,0.7s							
CTAO	**Charters Tower**	**33.96**	**270**	P		**P**	**12 59 55.6**	**+0.2**
STKA	**Stephens Creek**	**36.93**	**249**	P		**P**	**13 00 21.7**	**+1.1**
	0.8nm,0.5s,baz=111,slow=14,SNR=5.6							
	0.8nm,0.5s							
STKA	**Stephens Creek**	**36.93**	**249**	P		**P**	**13 00 21.2**	**+0.6**
BBOO	**Buckleboo**	**41.62**	**247**	P		**P**	**13 00 59.6**	**+0.1**
BBOO					IAmb	IAmb	13 01 31.2	
	comp=Z,16nm,1.3s							
AS31	**Alice Springs**	**44.44**	**260**	P		**P**	**13 01 22.1**	**-0.1**
ASAR	**Alice Springs**	**44.44**	**260**	P		**P**	**13 01 21.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=95,slow=7.1,SNR=19							
ASAR				PcP		**PcP**	**13 03 02.3**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=100,slow=5.2,SNR=1.2							
ASAR				ScP		**ScP**	**13 06 38.6**	**+3.3**
	comp=Z,0.1nm,0.6s,baz=107,slow=4.0,SNR=4.1							
	comp=Z,0.2nm,0.3s							
ASAR	**Alice Springs**	**44.44**	**260**	P		**P**	**13 01 22.0**	**-0.2**
WB2	**Warramunga Arr**	**44.85**	**266**	P		**P**	**13 01 23.9**	**-1.6**
WB2					IAmb	IAmb	13 01 50.4	
	comp=Z,11nm,1.4s							
WRAB	**Tennant Creek**	**44.85**	**266**	P		**P**	**13 01 24.5**	**-1.0**
WRAB					IAmb	IAmb	13 02 06.4	
	comp=Z,10nm,1.4s							
WB0	**Warramunga Arr**	**44.86**	**266**	P		**P**	**13 01 24.8**	**-0.7**
WB0					IAmb	IAmb	13 01 45.2	
	comp=Z,7.2nm,1.3s							
WRA	**Warramunga Arr**	**44.86**	**266**	P		**P**	**13 01 24.6**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=101,slow=8.3,SNR=15							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**44.86**	**266**	P		**P**	**13 01 24.6**	**-0.9**
KNRA	**Kununurra**	**51.17**	**269**	P		**P**	**13 02 14.1**	**+0.3**
KNRA					IAmb	IAmb	13 02 45.2	
	comp=Z,7.9nm,1.1s							
QSPA	**South Pole Qui**	**65.90**	**180**	P		P	13 03 57.1	+2.1
NVAR	**Mina Array Bea**	**83.25**	**43**	P		P	13 05 38.3	+3.1
	comp=Z,0.5nm,0.6s,baz=220,slow=6.7,SNR=5.5							
	comp=Z,0.5nm,0.6s							
SNAA	**Sanae**	**84.32**	**178**	P		**P**	**13 05 41.5**	**+1.5**
SNAA					IAmb	IAmb	13 05 58.8	
	comp=Z,3.5nm,1.3s							
TXAR	**Lajitas Array**	**88.49**	**57**	P		**P**	**13 06 03.6**	**+2.7**
	comp=Z,0.5nm,1.0s,baz=208,slow=7.1,SNR=3.7							
	comp=Z,0.5nm,1.0s							

IDC ***08*** *13:12:18.7±1.0,50.05°N×78.66°E,h0km,mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=12.0km s-min=6.7km az=67.0*

NNC ***08*** *13:12:18.1±0.3,50.00°N×78.72°E,h0km,mb3.5,mpv3.3, Error ellipse: s-maj=5.6km s-min=1.5km az=79.0, Suspected Mining explosion.*

ISC 08 13:12:15.1±1.4,**50.67N**±0.08×**79.78E**±0.06,**h0**km,**n27,** σ**1.5**21/36,**24C-5D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KURK	**Kurchatov**	**0.74**	**274**	⇓P		**Pb**	**13 12 31.7**	**+0.8**
KURK				⇓S		**Sb**	**13 12 42.1**	**+0.6**
	49nm,0.9s							
KUR14	**Kurchatov Arra**	**0.76**	**266**	⇑P		**Pg**	**13 12 30.0**	**+0.3**
KUR14				⇑S		**Sg**	**13 12 38.9**	**-0.5**
KUR15	**Kurchatov Arra**	**0.78**	**266**	⇑P		**Pg**	**13 12 30.2**	**+0.2**
KUR15				⇑S		**Sg**	**13 12 39.1**	**-1.0**
KUR04	**Kurchatov Arra**	**0.79**	**270**	⇑P		**Pb**	**13 12 30.9**	**-0.7**
KUR04				⇓S		**Sg**	**13 12 40.5**	**+0.1**
KUR05	**Kurchatov Arra**	**0.79**	**268**	⇑P		**Pg**	**13 12 30.7**	**+0.4**
KUR05				⇑S		**Sg**	**13 12 39.8**	**-0.7**
KURBB	**Kurchatov Arra**	**0.80**	**267**	Pg		**Pg**	**13 12 30.2**	**-0.2**
	3.2nm,0.3s,baz=167,slow=18,SNR=197							
KURBB				Lg		Lg	13 12 38.1	
	1.9nm,0.3s,baz=172,slow=29,SNR=13							
KURBB	**Kurchatov Arra**	**0.80**	**267**	⇑P		**Pg**	**13 12 30.5**	**+0.1**
KURBB				⇑S		**Sg**	**13 12 39.7**	**-1.0**
	90nm,0.5s							
KUR06	**Kurchatov Arra**	**0.80**	**265**	⇑P		**Pg**	**13 12 29.9**	**-0.6**
KUR06				⇑S		**Sg**	**13 12 39.3**	**-1.6**
KUR07	**Kurchatov Arra**	**0.81**	**264**	⇑P		**Pg**	**13 12 29.5**	**-1.2**
KUR07				⇑S		**Sg**	**13 12 38.8**	**-2.3**
KUR16	**Kurchatov Arra**	**0.82**	**267**	⇑P		**Pg**	**13 12 30.4**	**-0.3**
KUR16				⇑S		**Sg**	**13 12 39.6**	**-1.7**
KUR17	**Kurchatov Arra**	**0.83**	**268**	⇑P		**Pg**	**13 12 30.7**	**-0.5**
KUR17				⇓S		**Sg**	**13 12 39.7**	**-2.3**
MAKZ	**Makanchi**	**4.13**	**159**	⇑Pn		**Pn**	**13 13 19.7**	**+0.2**
	1.7nm,0.8s							
MAKZ				⇑Pg		**Pb**	**13 13 27.9**	**-0.8**

	5.2nm,0.9s									
MAKZ					⇑Lg		Lg		13 14 19.5	
	11nm,0.7s									
MK31	**Makanchi Array**	**4.22**	**156**	⇑Pn			**Pn**		**13 13 22.1**	**+1.4**
	0.2nm,0.2s,baz=278,slow=7.1,SNR=22									
MK31					⇑Pg		**Pb**		**13 13 30.5**	**+0.2**
	0.7nm,0.3s,baz=318,slow=13,SNR=18									
MK31					Lg		Lg		13 14 25.6	
	9.3nm,0.6s,baz=328,slow=27,SNR=13									
MKAR	**Makanchi Array**	**4.22**	**156**	Pn			**Pn**		**13 13 22.6**	**+1.9**
	0.4nm,0.3s,baz=322,slow=10,SNR=18									
MKAR					Pg		**Pb**		**13 13 28.8**	**-1.5**
	0.5nm,0.3s,baz=319,slow=13,SNR=14									
MKAR					Lg		Lg		13 14 22.0	
	1.6nm,0.3s,baz=334,slow=26,SNR=14									
	0.4nm,0.2s									
ZALV	**Zalesovo Beam**	**4.51**	**41**	Pn			**Pg**		**13 13 42.9**	**+1.5**
	0.6nm,0.3s,baz=231,slow=14,SNR=7.5									
ZALV					Lg		Lg		13 15 12.6	
	0.2nm,0.3s,baz=233,slow=22,SNR=4.5									
	1.5nm,0.3s									
I46RU	**ZALESOVO INFRA**	**4.51**	**41**	*i*					13 52 40.0	
	baz=229,slow=319,SNR=5.6									
BRZS	**Berezniki**	**4.60**	**264**		Pg		**Sn**		**13 14 22.6**	**+2.5**
	5.5nm,0.3s									
BRZS					Lg		Lg		13 15 22.3	
	2.7nm,0.1s									
ZSN	**Zaisan**	**4.65**	**132**		Pg		Pg		13 14 05.5	+21
	2.3nm,0.2s									
ZSN					Lg		Lg		13 14 52.4	
	8.8nm,0.5s									
OTUK	**Ortayu**	**5.43**	**246**	⇑Pn			Pn		13 13 28.3	-9.0
	1.1nm,0.3s									
OTUK					⇑Lg		Lg		13 14 42.1	
	4.7nm,0.5s									
BVA0	**Borovoye Array**	**6.28**	**296**	⇑Sn			**Sn**		**13 14 59.4**	**-1.9**
	1.8nm,0.8s,baz=111,slow=22,SNR=5.6									
BVA0					⇓Lg		Lg		13 15 30.4	
	1.9nm,0.6s,baz=111,slow=29,SNR=3.6									
ARXS	**Arharly**	**6.60**	**192**		Pg		**Pg**		**13 14 21.6**	**+0.1**
	1.8nm,0.4s									
ARXS					Lg		Lg		13 15 20.2	
	9.5nm,0.3s									
CHKK	**Chushkaly**	**7.08**	**197**		Pg		**Pg**		**13 14 30.1**	**-0.6**
	2.3nm,0.2s									
CHKK					Lg		Lg		13 15 35.3	
	8.9nm,0.3s									
KUU	**Kurty**	**7.18**	**200**		Pg		**Pg**		**13 14 32.5**	**-0.1**
	0.6nm,0.1s									
KUU					Lg		Lg		13 15 38.9	
	12nm,0.3s									
KTBS	**Karatobe**	**7.28**	**198**		Pg		**Pg**		**13 14 34.5**	**0.0**
	0.9nm,0.4s									
KTBS					Lg		Lg		13 15 42.6	
	18nm,0.3s									
KRBS	**Karabastau**	**7.52**	**203**		Pg		**Pg**		**13 14 41.1**	**+1.9**
	0.8nm,0.4s									
KRBS					Lg		Lg		13 15 53.8	
	6.1nm,0.4s									
KST	**Kastek**	**8.07**	**200**		Pg		**Pg**		**13 14 50.6**	**+0.9**
	2.0nm,0.3s									
KST					Lg		Lg		13 16 10.3	
	5.5nm,0.6s									
I31KZ	**AKTYUBINSK INF**	**13.83**	**277**	*i*					14 31 30.0	
	baz=84,slow=312,SNR=1.3									

*IDC **08** 13:42:07.8±1.1,73˚.37N×8˚.13E,h0km,mb3.9/8, mbtmp3.9/13,ML2.8/4,MS3.4/2,Error ellipse: s-maj=21.3km s-min=12.2km az=86.0*

*NAO **08** 13:42:08.8±4.4,73˚.53N×8˚.56E,ML3.7*

*IEPN **08** 13:42:11.0,73˚.59N×8˚.17E,h10km*

*BER **08** 13:42:11.3±2.4,73˚.55N×8˚.57E,h10km,ML3.7(NAO), Confirmed Earthquake*

*HEL **08** 13:42:14.0±0.5,73˚.39N×9˚.40E,h10km,ML2.9,Confirmed Earthquake*

ISC 08 13:42:08.6±0.7,**73˚.45N**±0˚.04×**8˚.57E**±0˚.07,**h10**km,**n64,** σ**2s 94/85,mb3.9/8,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
BJO1	**Bjornoya**	**3.08**	**65**	Pn		**Pn**	**13**	**42**	**58.0**	**+0.7**
BJO1	**Bjornoya**	**3.08**	**65**	*eP*		**Pn**	**13**	**42**	**58.0**	**+0.7**
BJO1	**Bjornoya**	**3.08**	**65**	*eP*		Pg	13	43	24.9	+17
BJO1	**Bjornoya**	**3.08**	**65**	*eP*		**Pn**	**13**	**42**	**56.8**	**-0.4**
BJO1				S		**Sn**	**13**	**43**	**32.4**	**-1.7**
HSPB	**Hornsund (broa**	**3.99**	**23**	Pn		**Pn**	**13**	**43**	**08.9**	**-0.8**
HSPB	**Hornsund (broa**	**3.99**	**23**	*eP*		**Pn**	**13**	**43**	**08.7**	**-1.0**
HSPB	**Hornsund (broa**	**3.99**	**23**	*eP*		Pg	13	43	35.6	+11
HSPB	**Hornsund (broa**	**3.99**	**23**	*eP*		**Pn**	**13**	**43**	**08.4**	**-1.3**
HSPB				S		**Sn**	**13**	**43**	**51.3**	**-5.2**
BRBA	**Barentsburg A**	**4.84**	**14**	Pn		**Pn**	**13**	**43**	**19.7**	**-1.7**
BRBA	**Barentsburg A**	**4.84**	**14**	*eP*		**Pn**	**13**	**43**	**20.0**	**-1.4**
TRO	**Tromso**	**5.04**	**134**	Pn		**Pn**	**13**	**43**	**26.2**	**+2.0**
TRO				Sn		**Sn**	**13**	**44**	**19.4**	**-3.0**
TRO	**Tromso**	**5.04**	**134**	*eP*		**Pn**	**13**	**43**	**26.1**	**+2.0**
TRO				*eS*		**Sn**	**13**	**44**	**19.1**	**-3.2**
SPA0	**Spitsbergen Ar**	**5.12**	**18**	Pn		**Pn**	**13**	**43**	**25.1**	**-0.2**
	baz=193,slow=16									
SPA0	**Spitsbergen Ar**	**5.12**	**18**	*eP*		**Pn**	**13**	**43**	**25.2**	**-0.2**
SPA0	**Spitsbergen Ar**	**5.12**	**18**	*eP*		Pg	13	43	52.7	+6.1
SPA0	**Spitsbergen Ar**	**5.12**	**18**	*eP*		**Pn**	**13**	**43**	**24.6**	**-0.7**
SPA0				*eS*		**Sn**	**13**	**44**	**19.4**	**-5.0**
SPITS	**Spitsbergen Ar**	**5.12**	**18**	Pn		**Pn**	**13**	**43**	**25.1**	**-0.2**
	18nm,0.3s,baz=189,slow=15,SNR=392									
SPITS				Sn		**Sn**	**13**	**44**	**23.4**	**-1.0**
	baz=202,slow=26									
HOPEN	**Hopen**	**5.25**	**47**	Pn		**Pn**	**13**	**43**	**26.9**	**-0.1**
HOPEN				Sn		**Sn**	**13**	**44**	**26.2**	**-1.2**
HOPEN	**Hopen**	**5.25**	**47**	*eP*		**Pn**	**13**	**43**	**26.8**	**-0.2**
HOPEN	**Hopen**	**5.25**	**47**	*eP*		Pg	13	43	54.0	+5.0
HOPEN	**Hopen**	**5.25**	**47**	*eP*		**Pn**	**13**	**43**	**26.4**	**-0.6**
HOPEN				*eS*		**Sn**	**13**	**44**	**22.8**	**-4.7**
JETT	**Jettan, Norway**	**5.42**	**130**	Pn		**Pn**	**13**	**43**	**31.5**	**+2.1**
JETT				Sn		**Sn**	**13**	**44**	**30.6**	**-1.1**
HAMF	**Hammerfest**	**5.45**	**114**	Pn		**Pn**	**13**	**43**	**31.4**	**+1.7**
HAMF				Sn		**Sn**	**13**	**44**	**30.3**	**-2.0**
HAMF	**Hammerfest**	**5.45**	**114**	*eP*		**Pn**	**13**	**43**	**31.4**	**+1.7**
HAMF				*eS*		**Sn**	**13**	**44**	**29.1**	**-3.2**
KBS	**Kingsbay**	**5.57**	**7**	Pn		**Pn**	**13**	**43**	**30.0**	**-1.5**
KBS	**Kingsbay**	**5.57**	**7**	*eP*		**Pn**	**13**	**43**	**29.9**	**-1.5**
KBS	**Kingsbay**	**5.57**	**7**	*eP*		**Pg**	**13**	**43**	**56.8**	**+1.6**
KBS	**Kingsbay**	**5.57**	**7**	*eP*		**Pn**	**13**	**43**	**29.6**	**-1.8**
KBS				S		**Sn**	**13**	**44**	**26.7**	**-8.6**
LOF	**Lofoten**	**5.58**	**161**	*eP*		**Pn**	**13**	**43**	**33.0**	**+1.4**
LOF				*eS*		**Sn**	**13**	**44**	**27.7**	**-8.1**
KIF	**Kilpisjarvi**	**5.95**	**133**	Pn		**Pn**	**13**	**43**	**38.4**	**+1.9**
KIF				Sn		**Sn**	**13**	**44**	**42.3**	**-2.3**
KIF	**Kilpisjarvi**	**5.95**	**133**	*eP*		**Pn**	**13**	**43**	**38.7**	**+2.1**
KIF				*eS*		**Sn**	**13**	**44**	**41.1**	**-3.5**
KIF	**Kilpisjarvi**	**5.95**	**133**	*eP*		**Pn**	**13**	**43**	**38.2**	**+1.6**
KIF				*eS*		**Sn**	**13**	**44**	**41.8**	**-2.8**
KIF				MSN			13	44	45.0	
	comp=Z,4.7nm,0.2s									
STEI	**Steigen**	**5.96**	**155**	*eP*		**Pn**	**13**	**43**	**37.9**	**+1.1**
FAUS	**Fauske**	**6.49**	**156**	*eP*		**Pn**	**13**	**43**	**46.5**	**+2.5**
FAUS				*eS*		**Sn**	**13**	**44**	**54.3**	**-3.8**
ARA0	**ARCESS Array S**	**6.65**	**118**	Pn		**Pn**	**13**	**43**	**47.9**	**+1.6**
	baz=314,slow=14									
ARA0				Sn		**Sn**	**13**	**44**	**60.0**	**-2.0**
	baz=311,slow=18									
ARA0	**ARCESS Array S**	**6.65**	**118**	Pn		**Pn**	**13**	**43**	**47.9**	**+1.6**
	baz=314,slow=14									
ARA0				Sn		**Sn**	**13**	**44**	**60.0**	**-2.0**
	baz=311,slow=18									
ARA0	**ARCESS Array S**	**6.65**	**118**	*eP*		**Pn**	**13**	**43**	**48.4**	**+2.2**
ARA0				*eS*		**Sn**	**13**	**44**	**57.7**	**-4.2**
ARCES	**ARCESS Array B**	**6.65**	**118**	Pn		**Pn**	**13**	**43**	**47.1**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=312,slow=13,SNR=34									
ARCES				Sn		**Sn**	**13**	**44**	**58.9**	**-3.0**
	comp=Z,0.7nm,0.3s,baz=315,slow=20,SNR=3.8									
	comp=Z,1.7nm,0.4s									
KEV	**Kevo**	**6.89**	**113**	*eP*		**Pn**	**13**	**43**	**52.0**	**+2.6**
KEV	**Kevo**	**6.89**	**113**	*eP*		**Pn**	**13**	**43**	**51.0**	**+1.6**
KEV				*eS*		**Sn**	**13**	**45**	**04.0**	**-3.8**
KEV				MSN			13	45	09.2	
	comp=Z,3.0nm,0.3s									
LANU	**Lannavaara**	**6.98**	**134**	*eP*		**Pn**	**13**	**43**	**53.0**	**+2.1**
LANU				*eS*		**Sn**	**13**	**45**	**06.3**	**-3.8**
HEF	**Hetta**	**7.05**	**128**	*eP*		**Pn**	**13**	**43**	**53.2**	**+1.5**
HEF				*eS*		**Sn**	**13**	**45**	**09.1**	**-2.7**
KONS	**Konsvik**	**7.15**	**165**	*eP*		**Pn**	**13**	**43**	**54.5**	**+1.4**
KONS				*eS*		**Sn**	**13**	**45**	**07.1**	**-7.1**
MOR8	**Moi Rana**	**7.58**	**162**	*eP*		**Pn**	**13**	**44**	**00.6**	**+1.6**
MOR8				*eS*		**Sn**	**13**	**45**	**17.2**	**-7.7**
MOR8	**Moi Rana**	**7.58**	**162**	*eS*		**Sn**	**13**	**45**	**17.2**	**-7.7**
DAG	**Danmarks Havn**	**7.70**	**308**	*eP*		Pn	13	43	55.5	-5.1
DAG				*eS*		Sn	13	45	08.8	-19
DBG	**Daneborg**	**8.01**	**290**	*eP*		**Pn**	**13**	**44**	**03.4**	**-1.4**
KLF	**Kolari**	**8.08**	**133**	*eS*		**Sn**	**13**	**45**	**33.7**	**-3.4**
NSS	**Namsos**	**9.04**	**171**	*eP*		**Pn**	**13**	**44**	**20.6**	**+1.7**
OLKF	**Oulanka, Finla**	**10.06**	**125**	*eP*		**Pn**	**13**	**44**	**33.4**	**+0.5**
OLKF				*eS*		**Sn**	**13**	**46**	**19.6**	**-6.0**
ZFI	**Zemlya Franca-**	**11.09**	**32**	*eP*		**Pn**	**13**	**44**	**45.5**	**-1.4**
NOA	**NORSAR Array B**	**12.50**	**174**	Pn		**Pn**	**13**	**45**	**05.9**	**-0.5**
	baz=352,slow=13,SNR=2.6									
	comp=Z,0.5nm,0.6s									
HFS	**Hagfors**	**13.51**	**169**	Pn		**Pn**	**13**	**45**	**18.4**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=15,slow=12,SNR=1.3									
	comp=Z,1.7nm,0.7s									
FINES	**FINESS Array B**	**13.70**	**142**	Pn		**Pn**	**13**	**45**	**21.5**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=334,slow=13,SNR=5.1									
	comp=Z,1.4nm,0.6s									
KLMR	**Klimovskoe**	**17.11**	**121**	*e*Pn		**P**	**13**	**46**	**09.7**	**+0.5**
KLMR				AMP			13	46	17.1	
	comp=Z,24nm,1.1s									
KIRV	**Kirov**	**21.61**	**112**	P		**P**	**13**	**46**	**59.8**	**+1.4**
	comp=Z,11nm,0.5s,baz=318,slow=16,SNR=2.4									
	comp=Z,11nm,0.5s									
NRIK	**Noril'sk**	**23.78**	**60**	P		**P**	**13**	**47**	**23.8**	**+3.0**
	comp=Z,3.2nm,0.4s,baz=55,slow=2.5,SNR=2.9									
	comp=Z,3.2nm,0.4s									
AKASG	**Malin Array Be**	**24.50**	**147**	P		**P**	**13**	**47**	**28.3**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=345,slow=9.4,SNR=10									
	comp=Z,2.3nm,0.6s									
GERES	**GERESS Array B**	**24.79**	**172**	P		**P**	**13**	**47**	**31.4**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=12,slow=10.0,SNR=2.2									
	comp=Z,0.6nm,0.7s									
ARU	**Arti**	**25.98**	**104**	P		**P**	**13**	**47**	**43.8**	**+2.9**
	comp=Z,2.6nm,0.3s,baz=284,slow=12,SNR=1.4									
ARU				LR		LR	13	57	59.7	
	comp=Z,65nm,18.5s,baz=330,slow=36									
	comp=Z,2.6nm,0.3s									
BRTR	**Keskin Array B**	**35.89**	**146**	P		**P**	**13**	**49**	**11.1**	**+2.4**
	comp=Z,1.1nm,0.7s,baz=347,slow=6.8,SNR=4.9									
	comp=Z,1.1nm,0.7s									
DLBC	**Dease Lake**	**45.44**	**331**	LR		LR	14	09	43.4	
	comp=Z,41nm,18.8s,baz=68,slow=36									
TORD	**Torodi Ar. Bea**	**60.41**	**188**	P		**P**	**13**	**52**	**17.9**	**0.0**
	comp=Z,0.7nm,0.8s,baz=351,slow=7.1,SNR=4.5									
	comp=Z,0.7nm,0.8s									
NVAR	**Mina Array Bea**	**62.75**	**315**	P		**P**	**13**	**52**	**34.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=29,slow=6.2,SNR=2.7									
	comp=Z,0.3nm,0.6s									

*NOU **08** 13:53:07.9,31˚.84S×179˚.93E,h390km,mb4.6/50, Kermadec Islands Region*

*NEIC **08** 13:53:07.6±1.7,31˚.83S±0˚.09×180˚.0E±0˚.2,h375km±7km, mb4.5/36,Error ellipse: s-maj=20.1km s-min=11.2km az=108.0*

*IDC **08** 13:53:10.7±1.5,31˚.67S×179˚.75E,h406km±14km, mb3.9/11,mbtmp4.6/13,Error ellipse: s-maj=12.1km s-min=10.1km az=129.0*

*WEL **08** 13:53:13.4±0.5,32˚.5S±4˚×18˚.0E±˚,h300km±7km,M4.6/60, mB5.2/48,ML5.8/54,MLv5.6/60,Mw(mB)4.5/48,Error ellipse: s-maj=0.0km s-min=0.0km az=110.8*

ISC 08 13:53:07.3±0.4,**31.78S**±0.05×**179.84E**±0.07,**h375**km, **n215,**σ**1s 70/235,mb4.5/31,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
GLKZ	**Green Lake**	**3.17**	**38**	P		**Pn**	**13**	**54**	**10.6**	**+0.5**
GLKZ				S		**S**	**13**	**55**	**00.7**	**0.0**
RAO	**Raoul Island**	**3.17**	**38**	P		**Pn**	**13**	**54**	**10.6**	**+0.4**
	1μm,0.3s,baz=162,slow=16,SNR=17									
RAO				S		**S**	**13**	**54**	**59.0**	**-1.9**
	1μm,0.3s,baz=73,slow=22,SNR=8.1									
RAO	**Raoul Island**	**3.17**	**38**	P		**Pn**	**13**	**54**	**11.8**	**+1.6**
RIZ	**Raoul Island**	**3.17**	**38**	P		**Pn**	**13**	**54**	**10.5**	**+0.3**
RIZ				S		**S**	**13**	**55**	**03.0**	**+2.1**
GRZ	**Great Barrier**	**5.76**	**218**	P		Pn	13	54	41.8	+5.6
MXZ	**Matakaoa Point**	**5.91**	**192**	Pn		**Pn**	**13**	**54**	**38.2**	**+0.3**
MXZ	**Matakaoa Point**	**5.91**	**192**	P		**Pn**	**13**	**54**	**38.7**	**+0.8**
MXZ				S		**S**	**13**	**55**	**50.7**	**-0.8**
KUZ	**Kuaotunu**	**6.01**	**213**	P		Pn	13	54	44.1	+5.1
WIZ	**White Island**	**6.14**	**200**	P		Pn	13	54	45.3	+4.9
WIZ				S		**S**	**13**	**55**	**59.8**	**+3.6**
WMGZ	**Waiomatatini S**	**6.14**	**191**	P		**Pn**	**13**	**54**	**42.3**	**+1.8**
WMGZ				S		**S**	**13**	**55**	**56.0**	**-0.3**
WCZ	**Waipu Caves**	**6.17**	**226**	P		Pn	13	54	46.6	+5.8
HAZ	**Te Kaha**	**6.20**	**195**	P		**Pn**	**13**	**54**	**41.5**	**+0.4**
HAZ				S		**S**	**13**	**55**	**57.4**	**0.0**
PKGZ	**Pakihiroa**	**6.27**	**193**	P		**Pn**	**13**	**54**	**42.4**	**+0.4**
PKGZ				S		**S**	**13**	**55**	**55.9**	**-3.1**
PUZ	**Puketiti**	**6.41**	**191**	P		**Pn**	**13**	**54**	**43.9**	**+0.4**
PUZ				S		**S**	**13**	**56**	**01.1**	**-0.8**
RUGZ	**Raukumara Rang**	**6.42**	**195**	P		**Pn**	**13**	**54**	**45.0**	**+1.2**
RUGZ				S		**S**	**13**	**55**	**57.8**	**-4.5**
MBAZ	**Motutapu North**	**6.44**	**218**	P		Pn	13	54	49.9	+6.0
WHRZ	**Whale Island**	**6.51**	**200**	P		Pn	13	54	50.7	+6.1
WHRZ				S		**S**	**13**	**56**	**06.5**	**+2.6**
TWGZ	**Tauwhareparae**	**6.57**	**193**	P		**P**	**13**	**54**	**46.0**	**-0.3**
TWGZ				S		**S**	**13**	**56**	**03.5**	**-1.6**
OPRZ	**Ohinepanea**	**6.63**	**203**	P		**P**	**13**	**54**	**49.6**	**+2.7**
TGRZ	**Tauranga**	**6.63**	**205**	P		**P**	**13**	**54**	**50.5**	**+3.5**
MARZ	**Manawahe**	**6.72**	**202**	P		**P**	**13**	**54**	**52.2**	**+4.1**
EDRZ	**Edgecumbe**	**6.81**	**201**	P		**P**	**13**	**54**	**52.7**	**+3.5**
MWZ	**Matawai**	**6.81**	**195**	P		**P**	**13**	**54**	**49.0**	**-0.2**
MWZ				S		**S**	**13**	**56**	**09.3**	**-1.0**
CNGZ	**Carnagh Statio**	**6.83**	**191**	P		**P**	**13**	**54**	**49.9**	**+0.7**
CNGZ				S		**S**	**13**	**56**	**08.0**	**-2.4**
URZ	**Urewera**	**6.84**	**198**	P		**Pn**	**13**	**54**	**48.0**	**-0.4**
	66nm,0.3s,baz=338,slow=6.0,SNR=93									
URZ				S		**S**	**13**	**56**	**07.1**	**-3.7**
	480nm,0.4s,baz=81,slow=23,SNR=15									
URZ	**Urewera**	**6.84**	**198**	Pn		**Pn**	**13**	**54**	**48.1**	**-0.3**
URZ	**Urewera**	**6.84**	**198**	P		**Pn**	**13**	**54**	**48.2**	**-0.2**
URZ				S		**S**	**13**	**56**	**09.0**	**-1.9**
URZ	**Urewera**	**6.84**	**198**	P		**P**	**13**	**54**	**49.6**	**+0.2**
TKGZ	**Te Karaka**	**6.84**	**193**	P		**P**	**13**	**54**	**49.9**	**+0.5**
TKGZ				S		**S**	**13**	**56**	**09.0**	**-1.8**
KMRZ	**Kaimai**	**6.85**	**207**	P		**P**	**13**	**54**	**53.6**	**+4.1**
KARZ	**Kaharoa**	**6.89**	**204**	P		**P**	**13**	**54**	**54.1**	**+4.1**
OMRZ	**Omania**	**6.93**	**203**	P		**P**	**13**	**54**	**54.8**	**+4.4**
NGRZ	**Ngongotaha**	**6.99**	**204**	P		P	13	54	56.3	+5.2
RAGZ	**Rawiri**	**6.99**	**196**	P		**P**	**13**	**54**	**51.7**	**+0.5**
RAGZ				S		**S**	**13**	**56**	**12.8**	**-1.3**
TARZ	**Mount Tarawera**	**7.00**	**202**	P		**P**	**13**	**54**	**54.8**	**+3.4**
UTU	**Utuhina**	**7.05**	**204**	P		P	13	54	57.0	+5.2
HLRZ	**Highlands Stat**	**7.07**	**203**	P		**P**	**13**	**54**	**55.9**	**+3.9**
RRRZ	**Republican Roa**	**7.09**	**202**	P		**P**	**13**	**54**	**54.2**	**+1.9**
RIGZ	**Rimuhau**	**7.12**	**193**	P		**P**	**13**	**54**	**52.7**	**+0.1**
MUGZ	**Murupara**	**7.14**	**200**	P		**P**	**13**	**54**	**52.8**	**0.0**
HSRZ	**Hossack Road**	**7.15**	**203**	P		**P**	**13**	**54**	**57.6**	**+4.6**
HRRZ	**Handcock Road**	**7.21**	**203**	P		**P**	**13**	**54**	**56.8**	**+3.1**
GRRZ	**Galatos Road**	**7.24**	**204**	P		**P**	**13**	**54**	**58.0**	**+4.1**
PRRZ	**Plateau Road**	**7.28**	**202**	P		**P**	**13**	**54**	**55.9**	**+1.5**
SNGZ	**Shannon Statio**	**7.28**	**196**	P		**P**	**13**	**54**	**54.3**	**-0.1**
ALRZ	**Allen Road**	**7.35**	**202**	P		**P**	**13**	**54**	**57.2**	**+2.0**
WPRZ	**Whakapapatarin**	**7.37**	**203**	P		**P**	**13**	**54**	**58.2**	**+2.8**
TLZ	**Tolley Road**	**7.43**	**207**	P		**P**	**13**	**54**	**59.6**	**+3.5**
KNZ	**Kokohu**	**7.44**	**193**	P		**P**	**13**	**54**	**56.1**	**-0.1**
KUTZ	**Kaahu Road**	**7.46**	**205**	P		**P**	**13**	**55**	**00.1**	**+3.6**
MTHZ	**Maungataniwha**	**7.47**	**198**	P		**P**	**13**	**54**	**57.3**	**+0.7**
MHGZ	**Mahia Peninsul**	**7.53**	**192**	P		**P**	**13**	**54**	**57.7**	**+0.6**
WHTZ	**Whakaora**	**7.57**	**204**	P		**P**	**13**	**55**	**01.7**	**+3.9**
MRHZ	**Matea Rd**	**7.58**	**201**	P		**P**	**13**	**54**	**60.0**	**+2.1**
WATZ	**Wairara**	**7.69**	**205**	P		**P**	**13**	**55**	**02.4**	**+3.3**
NMHZ	**Naumai**	**7.71**	**198**	P		**P**	**13**	**55**	**00.0**	**+0.6**
HATZ	**Hinemaiaia**	**7.73**	**202**	P		**P**	**13**	**55**	**01.4**	**+1.9**
RATZ	**Rangitukua**	**7.81**	**204**	P		**P**	**13**	**55**	**02.2**	**+1.7**
ARHZ	**Arapaoanui**	**7.82**	**196**	P		**P**	**13**	**55**	**01.5**	**+1.0**
BKZ	**Black Stump Fm**	**7.86**	**199**	Pn		**Pn**	**13**	**55**	**00.0**	**-0.2**
BKZ	**Black Stump Fm**	**7.86**	**199**	P		**Pn**	**13**	**54**	**59.6**	**-0.6**
BKZ	**Black Stump Fm**	**7.86**	**199**	P		**Pn**	**13**	**55**	**00.2**	**0.0**
RITZ	**Rihia Road**	**7.88**	**203**	P		**P**	**13**	**55**	**03.3**	**+2.0**
KATZ	**Kakaramea**	**7.94**	**204**	P		**P**	**13**	**55**	**04.9**	**+2.9**
NTVZ	**North Tongarir**	**8.06**	**204**	P		**P**	**13**	**55**	**05.8**	**+1.7**
TMVZ	**Te Maari**	**8.06**	**204**	P		**P**	**13**	**55**	**05.8**	**+1.7**
KRVZ	**Karewarewa**	**8.06**	**204**	P		**P**	**13**	**55**	**06.4**	**+2.3**
MCHZ	**McNeill Hill**	**8.07**	**198**	P		**P**	**13**	**55**	**04.0**	**0.0**
ETVZ	**East Tongariro**	**8.08**	**203**	P		**P**	**13**	**55**	**05.3**	**+1.0**
WTVZ	**West Tongariro**	**8.10**	**204**	P		**P**	**13**	**55**	**05.0**	**+0.4**
NNVZ	**North Ngauruho**	**8.11**	**204**	P		**P**	**13**	**55**	**06.5**	**+1.9**
KWHZ	**Kaweka Forest**	**8.12**	**199**	P		**Pn**	**13**	**55**	**03.7**	**+0.5**
NGZ	**Ngauruhoe**	**8.15**	**204**	P		**P**	**13**	**55**	**05.4**	**+0.3**
CKHZ	**Cape Kidnapper**	**8.18**	**195**	P		**P**	**13**	**55**	**06.6**	**+1.3**
TUVZ	**Tukino**	**8.21**	**203**	P		**P**	**13**	**55**	**06.3**	**+0.4**
DRZ	**Dome Shelter**	**8.25**	**204**	P		**P**	**13**	**55**	**08.1**	**+1.7**
TRVZ	**Turoa**	**8.28**	**204**	P		**P**	**13**	**55**	**08.4**	**+1.7**
BHHZ	**Black Hill Sta**	**8.29**	**201**	P		**Pn**	**13**	**55**	**05.5**	**+0.3**
KAHZ	**Kahuranaki**	**8.35**	**196**	P		**P**	**13**	**55**	**06.8**	**-0.5**
MTVZ	**Mangateitei**	**8.38**	**204**	P		**P**	**13**	**55**	**09.4**	**+1.7**
PXZ	**Pawanui**	**8.58**	**195**	P		**Pn**	**13**	**55**	**09.0**	**+0.5**
WPHZ	**Waipukurau**	**8.72**	**197**	P		**P**	**13**	**55**	**11.4**	**+0.1**
PRHZ	**Porangahau**	**8.86**	**196**	P		**P**	**13**	**55**	**12.6**	**-0.3**
DVHZ	**Dannevirke**	**9.01**	**198**	P		**Pn**	**13**	**55**	**13.9**	**+0.4**
ANWZ	**Angora Road**	**9.08**	**196**	P		**P**	**13**	**55**	**16.4**	**+1.1**
PRWZ	**Pori Road**	**9.30**	**199**	P		**P**	**13**	**55**	**18.2**	**+0.4**
BFZ	**Birch Farm**	**9.35**	**197**	Pn		**Pn**	**13**	**55**	**16.3**	**-1.2**
BFZ	**Birch Farm**	**9.35**	**197**	P		**Pn**	**13**	**55**	**16.8**	**-0.7**
TIWZ	**Tintock**	**9.53**	**198**	P		**P**	**13**	**55**	**20.5**	**+0.1**
CPWZ	**Castlepoint**	**9.57**	**197**	P		**P**	**13**	**55**	**22.2**	**+1.4**
SNZO	**South Karori**	**10.37**	**202**	P		**Pn**	**13**	**55**	**28.2**	**-1.2**
SNZO	**South Karori**	**10.37**	**202**	P		**Pn**	**13**	**55**	**29.2**	**-0.2**

comp=Z,46nm,0.7s
BELA Belgrano 2 68.67 173 P **P** **14 03 31.0 +0.3**
BELA IAmb IAmb 14 03 32.2
comp=Z,8.4nm,0.6s
MAW Mawson 70.36 201 P **P** **14 03 41.1 0.0**
comp=Z,3.4nm,0.7s,baz=137,slow=15,SNR=4.7
comp=Z,3.4nm,0.7s
MAW Mawson 70.36 201 P **P** **14 03 41.1 0.0**
TROLL Troll, Antarti 76.48 181 P **P** **14 04 17.2 +0.7**
SNAA Sanae 76.82 179 P **P** **14 04 18.9 +0.6**
SNAA Sanae 76.82 179 P **P** **14 04 18.6 +0.3**
SNAA IAmb IAmb 14 04 19.8
comp=Z,12nm,0.9s
VNA3 Neumayer Olymp 77.05 177 P **P** **14 04 20.1 +0.6**
VNA2 Neumayer--Watz 77.46 178 P **P** **14 04 22.7 +0.9**
baz=176,slow=6.0
VNA1 Neumayer--Stat 77.70 177 P **P** **14 04 24.0 +1.0**
PLCA Paso Flores 82.91 134 P **P** **14 04 52.4 +1.1**
comp=Z,1.8nm,0.9s,baz=274,slow=4.1,SNR=3.0
comp=Z,1.8nm,0.9s
KSRS Korea Array 84.22 321 P **P** **14 04 58.1 +0.7**
comp=Z,1.9nm,0.8s,baz=146,slow=5.4,SNR=7.6
comp=Z,1.9nm,0.8s
PEA0B Petropavlovsk- 86.70 347 P **P** **14 05 09.5 +0.3**
PETK Petropavlovsk- 86.70 347 P **P** **14 05 08.8 -0.4**
comp=Z,7.2nm,0.7s,baz=140,slow=7.0,SNR=21
comp=Z,7.2nm,0.7s
PETK Petropavlovsk- 86.70 347 P **P** **14 05 09.2 0.0**
NVAR Mina Array Bea 90.51 44 P **P** **14 05 27.8 +0.1**
comp=Z,1.7nm,0.7s,baz=221,slow=7.2,SNR=16
comp=Z,1.7nm,0.7s
TPH Tonopah 90.92 45 P **P** **14 05 29.3 -0.3**
KVN Kaiserville 91.04 43 P **P** **14 05 30.1 0.0**
J04D Umpqua Nationa 91.63 38 P **P** **14 05 33.2 +0.5**
MOD Modoc Plateau 91.69 40 P **P** **14 05 33.1 +0.1**
MOD IAmb IAmb 14 05 33.8
comp=Z,3.8nm,0.7s
K05A Summer Lake 91.92 39 P **P** **14 05 34.6 +0.5**
K05A IAmb IAmb 14 05 35.8
comp=Z,4.8nm,0.8s
PINE Pine Mountain 92.62 39 P **P** **14 05 37.9 +0.6**
PZH PanZhiHua 94.31 298 P **P** **14 05 46.9 +1.5**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,80nm,4.7s
TXAR Lajitas Array 94.69 58 P **P** **14 05 47.7 +0.7**
comp=Z,0.4nm,0.7s,baz=205,slow=4.0,SNR=4.3
comp=Z,0.4nm,0.7s
CD2 Chengdu 95.26 303 *e*P **P** **14 05 50.5 +1.0**
HHC Hu-ho-hao-te 95.87 315 *e*P **P** **14 05 52.6 +0.5**
HHC pmax pmax
comp=Z,22nm,0.8s
HHC pmax pmax
comp=Z,300nm,5.8s
WMQ Urumqi 112.62 308 *e*P **PKiKP** **14 10 59.6 +0.1**
MKAR Makanchi Array 117.23 310 PKP **PKPdf** **14 11 06.5 -1.8**
comp=Z,0.6nm,0.6s,baz=188,slow=1.0,SNR=5.8
ZALV Zalesovo Beam 117.82 318 PKP **PKPdf** **14 11 07.3 -1.8**
comp=Z,0.5nm,0.4s,baz=113,slow=3.7,SNR=2.3
GEYT Alibeck 132.44 294 SKPbc **SKPbc** **14 14 26.2 -2.5**
comp=Z,3.8nm,0.7s,baz=205,slow=3.0,SNR=5.7
ARCES ARCESS Array B 139.51 346 PKhKP PKPpre 14 11 41.4
comp=Z,0.5nm,0.4s,baz=57,slow=1.4,SNR=12
ARCES SKPbc **SKPbc** **14 14 47.0 -2.1**
comp=Z,3.3nm,0.8s,baz=15,slow=4.8,SNR=4.4
GEVA Gevas 144.27 293 PKPbc 14 11 58.2 -0.5
KBZ Khabaz 144.30 302 PKP PKPbc 14 11 58.0 -0.3
comp=Z,5.6nm,0.8s,baz=90,slow=3.0,SNR=11
GURO Guroymak-BITLI 145.08 293 PKPbc **PKPdf** **14 12 01.2 +0.5**
FINES FINESS Array B 145.75 338 PKPbc **PKPdf** **14 12 01.3 +0.4**
comp=Z,18nm,0.6s,baz=48,slow=4.2,SNR=118
MARD Mardin 146.02 291 PKPbc **PKPdf** **14 12 03.4 +1.0**
NB2 NORSAR Subarra 149.79 349 PKP **PKPbc** **14 12 12.1 -0.7**
comp=Z,2.0nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 149.79 349 PKPbc **PKPbc** **14 12 12.0 -0.8**
comp=Z,2.8nm,0.5s,baz=17,slow=4.2,SNR=12
NOA PKPab **PKPab** **14 12 19.0 -0.7**
comp=Z,2.1nm,0.6s,baz=26,slow=4.0,SNR=7.8
AKASG Malin Array Be 151.20 320 PKPbc **PKPbc** **14 12 15.5 -0.9**
comp=Z,2.3nm,0.6s,baz=56,slow=2.9,SNR=10
BRTR Keskin Array B 151.57 296 PKPbc **PKPbc** **14 12 17.3 -0.5**
comp=Z,1.5nm,0.5s,baz=139,slow=4.0,SNR=7.7
BRTR PKPab **PKPab** **14 12 27.4 -0.6**
comp=Z,2.8nm,0.8s,baz=123,slow=3.8,SNR=9.5
GERES GERESS Array B 159.99 332 PKPab **PKPab** **14 13 03.2 -0.6**
comp=Z,0.8nm,0.7s,baz=16,slow=6.9,SNR=5.2
TORD Torodi Ar. Bea 161.38 186 PKPab **PKPab** **14 13 10.1 -0.3**
comp=Z,2.7nm,0.8s,baz=179,slow=4.3,SNR=13
ESDC Sonseca Array 171.54 20 PKPab **PKPab** **14 13 52.4 -2.5**
comp=Z,1.0nm,0.9s,baz=345,slow=4.4,SNR=4.2

*NEIC **08** 14:09:37.9±1.5,22.4S±0.1×176.7W±0.1,h163km±7km, mb4.3/22,Error ellipse: s-maj=20.4km s-min=14.6km az=111.0*
*IDC **08** 14:09:39.6±4.5,22.4S×176.69W,h173km±33km,mb3.6/5, mbtmp4.1/7,Error ellipse: s-maj=39.0km s-min=25.5km az=101.0*
ISC 08 14:09:36.6±0.7,22.45S±0.1×176.6W±0.1,h150km,n38, σ1s02/39,mb4.2/13,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.86**	**312**	P		**Pn**	**Pn**	**14 11 17.4**	**+2.5**
	8.1nm,0.8s,baz=146,slow=15,SNR=4.7								
MSVF	**Nonsavu**	**6.86**	**312**	Pn		**Pn**	**Pn**	**14 11 15.7**	**+0.8**
AFI	**Afiamalu**	**9.66**	**29**	P		Pn	Pn	14 11 43.7	-8.6
	8.8nm,0.5s,baz=220,slow=16,SNR=1.8								
AFI				S		Sn	Sn	14 13 16.8	-23
	16nm,0.8s,baz=249,slow=23,SNR=2.1								
RAR	**Rarotonga**	**15.70**	**89**	P		**P**	**P**	**14 13 11.8**	**+1.3**
URZ	**Urewera**	**16.65**	**197**	P		**P**	**P**	**14 13 21.2**	**+0.2**
	7.2nm,0.6s,baz=356,slow=6.1,SNR=7.5								
URZ				S		S		14 16 15.2	-11
	5.1nm,0.9s,baz=19,slow=12,SNR=1.8								
URZ	**Urewera**	**16.65**	**197**	P		**Pn**	**Pn**	**14 13 22.0**	**+0.8**
URZ				IAmb		IAmb	IAmb	14 13 31.0	
	comp=Z,16nm,1.1s								
BKZ	**Black Stump Fm**	**17.67**	**198**	P		**P**	**P**	**14 13 31.1**	**-1.1**
TUWZ	**Tuamarina**	**20.52**	**201**	P		**P**	**P**	**14 14 02.1**	**-0.9**
RPZ	**Rata Peaks**	**23.53**	**203**	P		**P**	**P**	**14 14 35.0**	**+1.9**
	comp=Z,5.4nm,0.8s,baz=54,slow=14,SNR=1.3								
	comp=Z,5.4nm,0.8s								
FOZ	**Fox Glacier**	**23.84**	**205**	P		**P**	**P**	**14 14 36.1**	**+0.2**
WHZ	**Wether Hill Ro**	**26.55**	**205**	P		**P**	**P**	**14 14 59.9**	**-0.5**
CTAO	**Charters Tower**	**34.62**	**267**	P		**P**	**P**	**14 16 10.5**	**-1.2**
STKA	**Stephens Creek**	**38.14**	**247**	P		**P**	**P**	**14 16 42.2**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=110,slow=12,SNR=4.4								
	comp=Z,1.1nm,0.5s								
AS31	**Alice Springs**	**45.35**	**258**	P		**P**	**P**	**14 17 39.4**	**-0.7**
ASAR	**Alice Springs**	**45.35**	**258**	P		**P**	**P**	**14 17 40.3**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=96,slow=7.3,SNR=40								
ASAR				PcP		**PcP**	**PcP**	**14 19 17.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=113,slow=3.7,SNR=5.9								
	comp=Z,3.1nm,0.7s								
WR0	**Warramunga Arr**	**45.44**	**264**	P		**P**	**P**	**14 17 39.9**	**-0.9**
WR0				IAmb		IAmb	IAmb	14 17 52.5	
	comp=Z,7.3nm,1.3s								
WB0	**Warramunga Arr**	**45.62**	**264**	P		**P**	**P**	**14 17 41.1**	**-1.1**
WB0				IAmb		IAmb	IAmb	14 18 16.7	
	comp=Z,7.9nm,1.2s								
WB2	**Warramunga Arr**	**45.62**	**264**	P		**P**	**P**	**14 17 41.3**	**-0.9**
WRAB	**Tennant Creek**	**45.62**	**264**	P		**P**	**P**	**14 17 41.4**	**-0.8**
WRA	**Warramunga Arr**	**45.63**	**264**	P		**P**	**P**	**14 17 41.8**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=95,slow=7.5,SNR=15								
WRA				PcP		**PcP**	**PcP**	**14 19 18.5**	**+0.3**
	comp=Z,0.9nm,1.1s,baz=94,slow=3.4,SNR=3.3								
	comp=Z,1.5nm,0.7s								
KNRA	**Kununurra**	**51.83**	**267**	P		**P**	**P**	**14 18 29.7**	**0.0**
KNRA				IAmb		IAmb	IAmb	14 18 31.6	
	comp=Z,9.4nm,0.8s								
FITZ	**Fitzroy Crossi**	**54.06**	**263**	P		**P**	**P**	**14 18 46.3**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=102,slow=5.3,SNR=6.8								
	comp=Z,2.5nm,0.8s								
FITZ	**Fitzroy Crossi**	**54.06**	**263**	P		**P**	**P**	**14 18 46.5**	**+0.5**
FITZ				IAmb		IAmb	IAmb	14 18 48.8	
	comp=Z,12nm,1.4s								
VNDA	**Vanda**	**56.09**	**186**	P		**P**	**P**	**14 19 00.4**	**+0.7**
VNDA				IAmb		IAmb	IAmb	14 19 05.0	
	comp=Z,2.3nm,0.8s								
QSPA	**South Pole Qui**	**67.63**	**180**	P		**P**	**P**	**14 20 17.5**	**+0.5**
GAMB	**Gambell**	**86.03**	**2**	P		**P**	**P**	**14 21 59.7**	**+0.1**
TRF	**Thorofare Moun**	**88.09**	**12**	P		**P**	**P**	**14 22 07.6**	**-2.2**
I21K	**Tanana**	**89.39**	**10**	P		**P**	**P**	**14 22 14.6**	**-1.0**
I21K				IAmb		IAmb	IAmb	14 22 32.5	
	comp=Z,3.4nm,1.4s								
WRH	**Wood River Hil**	**89.43**	**12**	P		**P**	**P**	**14 22 14.9**	**-0.9**
WRH				IAmb		IAmb	IAmb	14 22 40.6	
	comp=Z,7.5nm,1.5s								
MLY	**Manley**	**89.46**	**11**	P		**P**	**P**	**14 22 14.6**	**-1.4**
MLY				IAmb		IAmb	IAmb	14 22 57.9	
	comp=Z,4.9nm,1.4s								
BCAR	**Beaver Creek A**	**89.56**	**15**	P		**P**	**P**	**14 22 16.4**	**-0.2**
CCB	**Clear Creek Bu**	**89.64**	**12**	P		**P**	**P**	**14 22 15.4**	**-1.4**
H21K	**Melozitna Rive**	**89.70**	**10**	P		**P**	**P**	**14 22 17.0**	**-0.1**
H21K				IAmb		IAmb	IAmb	14 22 18.3	
	comp=Z,4.0nm,1.5s								
IMAR	**Indian Mountai**	**89.86**	**9**	P		**P**	**P**	**14 22 17.1**	**-0.7**
ARCES	**ARCESS Array B**	**131.06**	**350**	PKP		**PKPdf**	**PKPdf**	**14 28 29.2**	**-0.6**
	comp=Z,3.6nm,1.1s,baz=45,slow=1.4,SNR=3.6								
AKASG	**Malin Array Be**	**145.34**	**331**	PKPbc		**PKPdf**	**PKPdf**	**14 28 54.8**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=42,slow=4.2,SNR=6.9								
BRTR	**Keskin Array B**	**149.09**	**311**	PKPbc		**PKPbc**	**PKPbc**	**14 29 06.7**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=92,slow=4.3,SNR=5.9								
MMAI	**Mount Meron Ar**	**149.87**	**297**	PKPbc		**PKiKP**	**PKiKP**	**14 29 10.2**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=85,slow=5.1,SNR=2.6								

*NEIC **08** 14:14:50.4±2.8,9.9S±0.2×162.2E±0.1,h64km±19km, mb4.2/3,Error ellipse: s-maj=32.6km s-min=11.8km az=195.0*
*IDC **08** 14:14:54.6±3.4,10.43S×161.74E,h67km±25km,mb3.2/3, mbtmp3.8/5,Error ellipse: s-maj=46.2km s-min=20.5km az=49.0*
ISC 08 14:14:51.8±1.3,10.3S±0.1×162.0E±0.1,h50km,n13, σ2s38/15,mb3.6/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.18**	**292**	P		**Pn**	**Pn**	**14 15 25.9**	**+0.3**
	528nm,0.5s,baz=158,slow=3.0,SNR=25								
HNR				S		**Sn**	**Sn**	**14 15 51.5**	**+0.1**
	443nm,0.3s,baz=319,slow=22,SNR=7.4								
HNR	**Honiara**	**2.18**	**292**	Pn		**Pn**	**Pn**	**14 15 25.6**	**0.0**
KOUNC	**Koumac, New Ca**	**10.46**	**168**	Pn		**Pn**	**Pn**	**14 17 21.2**	**+2.0**
DZM	**Mont Dzumac**	**12.49**	**161**	P		**Pn**	**Pn**	**14 17 49.0**	**+2.1**
	5.5nm,1.0s,baz=329,slow=5.0,SNR=27								
DZM				S		**Sn**	**Sn**	**14 20 02.3**	**-2.5**
	6.8nm,1.0s,baz=61,slow=20,SNR=2.0								
DZM	**Mont Dzumac**	**12.49**	**161**	Pn		**Pn**	**Pn**	**14 17 50.1**	**+3.1**
ONTNC	**Ouen Toro**	**12.71**	**161**	Pn		**Pn**	**Pn**	**14 17 53.5**	**+3.5**
PINNC	**Pines Island,**	**13.34**	**158**	Pn		**Pn**	**Pn**	**14 18 02.0**	**+3.4**
MSVF	**Nonsavu**	**17.25**	**117**	Pn		**Pn**	**Pn**	**14 18 46.5**	**-3.0**
MSVF				IAmb		IAmb	IAmb	14 19 19.4	
	comp=Z,24nm,1.5s								
WB0	**Warramunga Arr**	**28.23**	**247**	P		**P**	**P**	**14 20 38.5**	**-1.9**
WB0				IAmb		IAmb	IAmb	14 20 50.8	
	comp=Z,6.7nm,1.4s								
WB2	**Warramunga Arr**	**28.32**	**247**	P		**P**	**P**	**14 20 39.6**	**-1.5**
WB2				IAmb		IAmb	IAmb	14 21 20.6	
	comp=Z,15nm,1.4s								
WRA	**Warramunga Arr**	**28.33**	**247**	P		**P**	**P**	**14 20 39.9**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=77,slow=9.6,SNR=4.6								
	comp=Z,0.3nm,0.6s								
ASAR	**Alice Springs**	**29.91**	**240**	P		**P**	**P**	**14 20 53.8**	**-1.4**
	comp=Z,0.4nm,0.9s,baz=65,slow=9.9,SNR=2.7								
	comp=Z,0.4nm,0.9s								
SONM	**Songino Array**	**75.89**	**325**	P		**P**	**P**	**14 26 34.2**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=137,slow=5.3,SNR=2.7								
	comp=Z,0.4nm,0.5s								

*NAO **08** 14:57:09.5±4.6,73.46N×7.77E,ML3.3*
*IDC **08** 14:57:11.1±1.2,73.47N×8.18E,h0km,mb3.6/4, mbtmp3.7/7,ML2.9/2,MS3.1/15,Error ellipse: s-maj=26.7km s-min=12.8km az=79.0*
*IEPN **08** 14:57:12.0,73.15N×9.39E,h10km*
*BER **08** 14:57:13.2±2.8,73.52N×8.34E,h2km±28km,ML3.3(NAO), Confirmed Earthquake*
ISC 08 14:57:12.1±1.0,73.53N±0.05×8.94E±0.09,h10km,n48, σ1s46/55,mb3.6/4,MS3.0/11,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.95**	**66**	Pn		**Pn**	**Pn**	**14 58 00.6**	**+1.7**
BJO1	**Bjornoya**	**2.95**	**66**	*e*P		**Pn**	**Pn**	**14 58 01.0**	**+2.0**
BJO1	**Bjornoya**	**2.95**	**66**	*e*P		**Pn**	**Pn**	**14 58 00.2**	**+1.3**
BJO1				S		**Sn**	**Sn**	**14 58 32.4**	**-1.9**
HSPB	**Hornsund (broa**	**3.88**	**23**	Pn		**Pn**	**Pn**	**14 58 11.6**	**0.0**
HSPB	**Hornsund (broa**	**3.88**	**23**	*e*P		**Pn**	**Pn**	**14 58 11.6**	**0.0**
HSPB	**Hornsund (broa**	**3.88**	**23**	*e*P		**Pn**	**Pn**	**14 58 11.1**	**-0.5**
HSPB				*e*S		**Sn**	**Sn**	**14 58 55.9**	**-1.2**
BRBA	**Barentsburg A**	**4.74**	**13**	Pn		**Pn**	**Pn**	**14 58 23.5**	**0.0**
BRBA	**Barentsburg A**	**4.74**	**13**	*e*P		**Pn**	**Pn**	**14 58 23.0**	**-0.4**
SPA0	**Spitsbergen Ar**	**5.01**	**18**	Pn		**Pn**	**Pn**	**14 58 28.0**	**+0.8**
	baz=196,slow=14								
SPA0				Sn		**Sn**	**Sn**	**14 59 25.5**	**+0.3**
	baz=219,slow=28								
SPA0	**Spitsbergen Ar**	**5.01**	**18**	*e*P		**Pn**	**Pn**	**14 58 28.1**	**+0.8**
SPA0				Sn		**Sn**	**Sn**	**14 59 25.5**	**+0.3**
	baz=219,slow=28								
SPA0	**Spitsbergen Ar**	**5.01**	**18**	*e*P		**Pn**	**Pn**	**14 58 27.7**	**+0.5**
SPA0				*i*S		**Sn**	**Sn**	**14 59 25.4**	**+0.3**
SPITS	**Spitsbergen Ar**	**5.01**	**18**	Pn		**Pn**	**Pn**	**14 58 27.9**	**+0.6**
	13nm,0.3s,baz=195,slow=10,SNR=153								
SPITS				Sn		**Sn**	**Sn**	**14 59 25.4**	**+0.3**
	baz=184,slow=19								
HOPEN	**Hopen**	**5.12**	**47**	Pn		**Pn**	**Pn**	**14 58 30.0**	**+1.3**
HOPEN				Sn		**Sn**	**Sn**	**14 59 28.6**	**+0.9**
HOPEN	**Hopen**	**5.12**	**47**	*e*P		**Pn**	**Pn**	**14 58 29.9**	**+1.2**
HOPEN				*e*				14 59 23.8	
HOPEN				IAML				14 59 30.9	
	comp=Z,6.2nm,0.6s								
HOPEN	**Hopen**	**5.12**	**47**	*e*P		**Pn**	**Pn**	**14 58 29.4**	**+0.8**
HOPEN				*e*S		**Sn**	**Sn**	**14 59 26.7**	**-1.0**
HAMF	**Hammerfest**	**5.38**	**115**	Pn		**Pn**	**Pn**	**14 58 34.4**	**+2.1**
HAMF				Sn		**Sn**	**Sn**	**14 59 29.8**	**-4.5**
HAMF	**Hammerfest**	**5.38**	**115**	*e*P		**Pn**	**Pn**	**14 58 34.5**	**+2.1**
HAMF				*e*S		**Sn**	**Sn**	**14 59 33.0**	**-1.3**
HAMF				IAML				14 59 36.5	
	comp=Z,8.1nm,0.4s								
JETT	**Jettan, Norway**	**5.39**	**132**	Pn		**Pn**	**Pn**	**14 58 34.7**	**+2.1**
JETT				Sn		**Sn**	**Sn**	**14 59 34.0**	**-0.6**
KBS	**Kingsbay**	**5.48**	**6**	Pn		**Pn**	**Pn**	**14 58 33.3**	**-0.3**
KBS	**Kingsbay**	**5.48**	**6**	*e*P		**Pn**	**Pn**	**14 58 32.7**	**-0.9**
KBS	**Kingsbay**	**5.48**	**6**	*e*P		**Pn**	**Pn**	**14 58 32.6**	**-1.0**
KBS				*e*tx		tx		14 59 33.0	
KBS				*e*S		**Sn**	**Sn**	**14 59 34.3**	**-2.2**
KIF	**Kilpisjarvi**	**5.92**	**134**	Pn		**Pn**	**Pn**	**14 58 41.2**	**+1.5**
KIF				Sn		**Sn**	**Sn**	**14 59 46.3**	**-1.3**
KIF	**Kilpisjarvi**	**5.92**	**134**	*e*P		**Pn**	**Pn**	**14 58 41.5**	**+1.7**
KIF				*e*S		**Sn**	**Sn**	**14 59 46.1**	**-1.0**
STEI	**Steigen**	**6.00**	**157**	*e*P		**Pn**	**Pn**	**14 58 40.5**	**-0.3**
STEI				IAML				14 59 49.9	
	comp=Z,2.9nm,0.5s								
ARA0	**ARCESS Array S**	**6.59**	**119**	Pn		**Pn**	**Pn**	**14 58 50.8**	**+1.8**
	baz=322,slow=12								
ARA0				Sn		**Sn**	**Sn**	**15 00 03.0**	**-1.2**
	baz=311,slow=18								
ARA0	**ARCESS Array S**	**6.59**	**119**	Pn		**Pn**	**Pn**	**14 58 50.8**	**+1.8**
	baz=322,slow=12								
ARA0				*e*P		**Pn**	**Pn**	**14 58 51.5**	**+2.5**
ARA0				*e*S		**Sn**	**Sn**	**15 00 01.8**	**-2.3**
ARA0				Sn		**Sn**	**Sn**	**15 00 03.0**	**-1.2**
	baz=311,slow=18								
ARA0				IAML				15 00 09.4	
	comp=Z,3.0nm,0.6s								
ARCES	**ARCESS Array B**	**6.59**	**119**	Pn		**Pn**	**Pn**	**14 58 50.9**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=323,slow=12,SNR=26								
ARCES				Sn		**Sn**	**Sn**	**15 00 01.8**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=316,slow=19,SNR=1.9								
ARCES				LR		LR	LR	15 01 10.7	
	comp=Z,92nm,21.4s,baz=292,slow=36								
	comp=Z,1.7nm,0.4s								
KEV	**Kevo**	**6.83**	**115**	*e*P		**Pn**	**Pn**	**14 58 54.5**	**+2.4**
ZFI	**Zemlya Franca-**	**10.96**	**32**	P		Pn	Pn	14 59 41.7	-7.0
ZFI				*e*S		Sn	Sn	15 01 34.8	-16
NOA	**NORSAR Array B**	**12.57**	**175**	LR		LR	LR	15 04 05.4	
	comp=Z,45nm,21.8s,baz=0.0,slow=33								
HFS	**Hagfors**	**13.58**	**170**	LR		LR	LR	15 06 21.5	
	comp=Z,42nm,18.2s,baz=17,slow=41								
FINES	**FINESS Array B**	**13.70**	**143**	Pn		**Pn**	**Pn**	**15 00 26.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=338,slow=10,SNR=4.2								
FINES				LR		LR	LR	15 05 30.5	
	comp=Z,87nm,18.9s,baz=14,slow=36								
	comp=Z,1.8nm,0.8s								
KLMR	**Klimovskoe**	**17.06**	**122**	*e*P		**P**	**P**	**15 01 12.3**	**+0.1**
KLMR	**Klimovskoe**	**17.06**	**122**	*e*Pn		**P**	**P**	**15 01 12.6**	**+0.5**
KLMR				AMP				15 01 20.5	
	comp=Z,18nm,1.3s								
SFJD	**Kangerlussuaq**	**20.26**	**282**	LR		LR		15 08 27.7	
	comp=Z,63nm,19.7s,baz=28,slow=34								
OBN	**Obninsk**	**21.61**	**134**	LR		LR		15 11 25.7	
	comp=Z,24nm,18.2s,baz=310,slow=39								
AKASG	**Malin Array Be**	**24.51**	**148**	P		**P**		**15 02 31.4**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=343,slow=9.3,SNR=5.2								
AKASG				LR		LR		15 12 15.2	
	comp=Z,71nm,18.2s,baz=5.0,slow=37								
	comp=Z,1.4nm,0.5s								
VRAC	**Vranov**	**24.54**	**168**	P		**P**		**15 02 33.2**	**+1.8**
	comp=Z,3.1nm,0.5s,baz=326,slow=8.5,SNR=2.3								
	comp=Z,3.1nm,0.5s								
GERES	**GERESS Array B**	**24.86**	**173**	P		**P**		**15 02 34.7**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=359,slow=7.8,SNR=4.0								
	comp=Z,0.5nm,0.6s								
RES	**Resolute Bay**	**25.07**	**322**	LR		LR		15 11 52.7	
	comp=Z,35nm,18.1s,baz=44,slow=35								
BELG	**Belogornoye**	**26.64**	**121**	LR		LR		15 13 46.4	
	comp=Z,53nm,18.6s,baz=317,slow=37								
AKTO	**Aktyubinsk**	**31.09**	**111**	LR		LR		15 15 41.9	
	comp=Z,35nm,19.4s,baz=341,slow=36								
KBZ	**Khabaz**	**33.72**	**133**	LR		LR		15 17 58.8	
	comp=Z,43nm,20.5s,baz=2.0,slow=37								
INK	**Inuvik**	**36.33**	**338**	LR		LR		15 19 59.9	
	comp=Z,18nm,19.7s,baz=136,slow=38								
ILAR	**Eielson Array**	**41.03**	**344**	P		**P**		**15 04 55.1**	**+0.3**
	comp=Z,0.4nm,1.0s,baz=359,slow=6.6,SNR=3.0								
ILAR				PcP		**PcP**		**15 06 54.2**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=324,slow=4.0,SNR=4.8								
	comp=Z,0.4nm,1.0s								
GEYT	**Alibeck**	**42.76**	**118**	LR		LR		15 24 13.7	
	comp=Z,73nm,19.1s,baz=110,slow=38								
AAK	**Ala-Archa**	**42.78**	**98**	LR		LR		15 24 55.8	
	comp=Z,20nm,18.8s,baz=340,slow=39								
PDAR	**Pinedale Array**	**56.76**	**309**	LR		LR		15 30 40.7	
	comp=Z,27nm,19.7s,baz=44,slow=36								

*IDC **08** 15:03:01.1±3.2,24.99N×123.99E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=226.5km s-min=22.2km az=63.0*
*JMA **08** 15:03:13.2±0.1,25.1N±1.1×124.2E±0.7,h93km±2km, MV3.0/12,NW OFF ISHIGAKIJIMA IS*
ISC 08 15:03:12.5±1.0,25.1N±0.1×124.18E±0.05,h100km±10km, n15,σ0s46/26,mb3.5/4,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.62**	**130**	P		**Pn**	**Pn**	**15 03 29.5**	**+0.3**
JTJ				S		**Sn**	**Sn**	**15 03 41.6**	**-0.1**
JIJ	**Ishigaki jima**	**0.68**	**183**	P		**Pn**	**Pn**	**15 03 29.6**	**-0.2**
JIJ				S		**Sn**	**Sn**	**15 03 41.8**	**-0.8**
IRIF	**Iriomote-Funau**	**0.82**	**210**	P		**Pn**	**Pn**	**15 03 31.1**	**+0.1**
IRIF				S		**Sn**	**Sn**	**15 03 44.6**	**-0.3**
JKRS	**Kuro-shima**	**0.82**	**191**	P		**Pn**	**Pn**	**15 03 31.3**	**+0.2**
JKRS				S		**Sn**	**Sn**	**15 03 45.1**	**+0.1**
JIRB	**Irabujima**	**0.93**	**103**	P		**Pn**	**Pn**	**15 03 32.1**	**+0.1**
JIRB				S		**Sn**	**Sn**	**15 03 46.3**	**-0.5**
JIKM	**Ikemajima**	**0.98**	**97**	P		**Pn**	**Pn**	**15 03 33.0**	**+0.5**
JIKM				S		**Sn**	**Sn**	**15 03 47.8**	**+0.1**
HATJ	**Hateruma jima**	**1.04**	**199**	P		**Pn**	**Pn**	**15 03 33.6**	**+0.2**
HATJ				S		**Sn**	**Sn**	**15 03 49.2**	**+0.1**
JMJ2	**Miyako jima3**	**1.09**	**106**	P		**Pn**	**Pn**	**15 03 34.4**	**+0.6**
JMJ2				S		**Sn**	**Sn**	**15 03 50.1**	**+0.2**
JOGS	**Gusukube**	**1.15**	**104**	P		**Pn**	**Pn**	**15 03 35.0**	**+0.4**
JOGS				S		**Sn**	**Sn**	**15 03 51.5**	**+0.3**
**YOJ

	comp=E,377nm,0.1s							
TA01	**Diego Aracena**	**2.56**	**159**	*e*P		Pn	15 10 19.8	-0.2
TA01				*e*S		Sn	15 10 47.9	-1.9
TA01				IAML			15 10 59.5	
	comp=E,175nm,0.6s							
PATCX	**Punta Patache**	**2.80**	**160**	*e*P		Pn	15 10 23.1	-0.3
PATCX				*e*S		Sn	15 10 53.9	-2.1
PATCX				IAML			15 11 16.5	
	comp=E,208nm,0.2s							
PB02	**IPOC Station P**	**3.35**	**159**	⇓*i*P		Pn	15 10 31.0	0.0
PB02				*e*S		Sn	15 11 01.4	-8.2
PB07	**IPOC Station P**	**3.73**	**162**	*e*P		Pn	15 10 36.3	0.0
PB07				*e*S		Sn	15 11 15.8	-3.3
PB09	**IPOC Station P**	**4.03**	**154**	⇓*i*P		Pn	15 10 35.6	-4.8
PB09				*e*S		Sn	15 11 25.7	-0.8
PB04	**IPOC Station P**	**4.25**	**167**	⇓*i*P		Pn	15 10 42.3	-1.1
PB04				*e*S		Sn	15 11 27.1	-4.8
PB06	**IPOC Station P**	**4.75**	**162**	⇑*i*P		Pn	15 10 42.7	-7.6
PB06				*e*S		Sn	15 11 40.0	-4.3
LVC	**Limon Verde**	**4.89**	**155**	*e*P		Pn	15 10 52.9	+0.5
LVC				*e*S		Sn	15 11 48.8	+0.7
PB15	**IPOC Station P**	**5.26**	**163**	⇑*i*P		Pn	15 10 47.5	-10
PB15				*e*S		Sn	15 11 54.8	-2.0

*IDC **08** 15:12:23.5±2.1, 39°.03N×74°.33E, h0km, mb3.8/4, mbtmp3.7/8, ML3.1/4, MS3.1/4, Error ellipse: s-maj=32.9km s-min=22.2km az=130.0*
*SOME **08** 15:12:23.0, 39°.18N×74°.27E, h15km*
*KRNET **08** 15:12:24.5±0.1, 39°.25N×74°.19E, mb4.0*
*NNC **08** 15:12:27.4±1.6, 39°.32N×74°.30E, h0km±7km, mb4.2, mpv3.9, Error ellipse: s-maj=11.1km s-min=7.6km az=5.0*
ISC 08 15:12:27.4±1.0, 39°25N±0'.06×74°22E±0'.04, h10km, n62, σ2$31/87, mb3.8/4, MS3.5/3, 28C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.69**	**320**	⇑*e*P		**Pn**	**15 12 55.8**	**-1.3**
	baz=20							
OHH				⇑*e*S		**Sn**	**15 13 18.9**	**+0.2**
	baz=20							
ARLS	**Aral**	**2.61**	**2**	⇑*e*P		**Pn**	**15 13 10.1**	**+0.2**
	baz=2.0							
ARLS				⇑*e*S		**Sn**	**15 13 43.3**	**+1.6**
	baz=2.0							
BTK	**Batken**	**2.75**	**288**	⇑*e*P		**Pn**	**15 13 12.0**	**+0.4**
	baz=88							
BTK				⇑*i*S		**Sn**	**15 13 46.4**	**+1.5**
	baz=88							
AML	**Almayashu**	**2.91**	**352**	P		**Pn**	**15 13 16.6**	**+2.5**
	SNR=42							
UCH	**Uchtor**	**2.98**	**4**	P		**Pn**	**15 13 17.8**	**+2.5**
	SNR=19							
UCH	**Uchtor**	**2.98**	**4**	⇓*e*P		**Pn**	**15 13 15.6**	**+0.3**
	baz=5.0							
UCH				⇓*e*S		**Sn**	**15 13 52.8**	**+1.4**
	baz=5.0							
GAR	**Garm**	**3.04**	**267**	⇑*i*P		**Pn**	**15 13 16.0**	**+0.2**
	baz=66							
GAR				⇑*e*S		**Sn**	**15 13 53.4**	**+1.1**
	baz=66							
TRKS	**Terek-Say**	**3.27**	**315**	⇑*e*P		**Pn**	**15 13 18.2**	**-0.8**
	baz=15							
TRKS				⇑*e*S		**Sn**	**15 13 57.5**	**-0.6**
	baz=15							
ULHL	**Ulahol**	**3.37**	**27**	P		**Pb**	**15 13 26.6**	**-0.7**
	SNR=12							
AAK	**Ala-Archa**	**3.39**	**3**	Pn		**Pn**	**15 13 23.2**	**+2.6**
	4.1nm,0.3s,baz=180,slow=8.2,SNR=13							
AAK				Sn		**Sb**	**15 14 07.7**	**-1.4**
	2.0nm,0.3s,baz=114,slow=20,SNR=1.8							
AAK				Lg		Lg	15 14 13.9	
	3.2nm,0.3s,baz=108,slow=20,SNR=7.1							
AAK				LR		LR	15 14 57.9	
	comp=Z,46nm,20.7s,baz=324,slow=43							
	15nm,0.4s							
AAK	**Ala-Archa**	**3.39**	**3**	P		**Pn**	**15 13 23.4**	**+2.8**
	SNR=13							
AAK	**Ala-Archa**	**3.39**	**3**	⇑*e*P		**Pn**	**15 13 21.0**	**+0.4**
	baz=4.0							
AAK				⇑*e*S		**Sn**	**15 14 02.3**	**+1.3**
	baz=4.0							
EKS2	**Erkin-Say**	**3.43**	**355**	P		**Pn**	**15 13 25.0**	**+4.0**
	SNR=18							
EKS2	**Erkin-Say**	**3.43**	**355**	⇑*e*P		**Pn**	**15 13 21.5**	**+0.5**
	baz=55							
EKS2				⇑*e*S		**Sn**	**15 14 03.0**	**+1.2**
	baz=55							
KBK	**Karagaybulak**	**3.45**	**9**	P		**Pn**	**15 13 25.0**	**+3.5**
	SNR=13							
KBK	**Karagaybulak**	**3.45**	**9**	⇑*e*P		**Pn**	**15 13 21.8**	**+0.4**
	baz=9.0							
KBK				⇑*e*S		**Sn**	**15 14 03.8**	**+1.4**
	baz=9.0							
MRKS	**Merke**	**3.57**	**348**	*e*P		**Pb**	**15 13 33.1**	**+2.3**
	14nm,0.3s							
MRKS				*e*S		**Sg**	**15 14 24.2**	**+2.0**
	46nm,0.4s							
MRKS	**Merke**	**3.57**	**348**	Pg		**Pb**	**15 13 33.1**	**+2.3**
	14nm,0.3s							
MRKS				Lg		Lg	15 14 24.2	
	46nm,0.4s							
CHMS	**Chumysh**	**3.77**	**6**	⇑Pn		**Pn**	**15 13 26.0**	**+0.4**
	11nm,0.7s							
CHMS				⇑Lg		Lg	15 14 22.6	
	67nm,0.9s							
TKM2	**Tokmak 2**	**3.81**	**15**	P		**Pn**	**15 13 27.9**	**+1.5**
	SNR=7.7							
TKM2	**Tokmak 2**	**3.81**	**15**	⇑Pn		**Pn**	**15 13 27.3**	**+0.8**
	2.5nm,0.4s							
TKM2				⇑Pg		**Pb**	**15 13 34.1**	**-0.9**
	18nm,0.6s							
TKM2				⇑Lg		Lg	15 14 25.3	
	29nm,0.6s							
KST	**Kastek**	**4.01**	**19**	*e*P		**Pb**	**15 13 39.0**	**+0.7**
	17nm,0.4s							
KST				*e*S		**Sg**	**15 14 33.7**	**-2.7**
	53nm,0.7s							
KST	**Kastek**	**4.01**	**19**	Pg		**Pb**	**15 13 39.0**	**+0.7**
	17nm,0.4s							
KST				Lg		Lg	15 14 33.7	
	53nm,0.7s							
USP	**Ospenovka**	**4.02**	**3**	P		**Pb**	**15 13 39.4**	**+1.0**
	SNR=8.7							
SGDS	**Sogindy**	**4.21**	**4**	*e*P		**Pb**	**15 13 42.1**	**+0.4**
	14nm,0.5s							
SGDS				*e*S		**Sg**	**15 14 39.4**	**-3.3**
	24nm,0.8s							
SGDS	**Sogindy**	**4.21**	**4**	Pg		**Pb**	**15 13 42.1**	**+0.4**
	14nm,0.5s							
SGDS				Lg		Lg	15 14 39.4	
	24nm,0.8s							
MTBS	**Maitube**	**4.22**	**23**	*e*P		**Pb**	**15 13 43.5**	**+1.6**
	9.4nm,0.3s							
MTBS				*e*S		**Sg**	**15 14 41.3**	**-1.7**
	21nm,0.5s							
MTBS	**Maitube**	**4.22**	**23**	Pg		**Pb**	**15 13 43.5**	**+1.6**
	9.4nm,0.3s							
MTBS				Lg		Lg	15 14 41.3	
	21nm,0.5s							
IUG	**Iuzhnay**	**4.30**	**314**	*e*P		**Pb**	**15 13 46.4**	**+3.2**
	1μm,0.6s							
IUG				*e*S		**Sg**	**15 14 46.8**	**+1.2**
	84nm,0.7s							
IUG	**Iuzhnay**	**4.30**	**314**	Pg		**Pb**	**15 13 46.4**	**+3.2**
	1μm,0.6s							
IUG				Lg		Lg	15 14 46.8	
	84nm,0.7s							
MDOK	**Medeo**	**4.46**	**28**	*e*P		**Pb**	**15 13 45.8**	**-0.1**
	30nm,0.4s							
MDOK				*e*S		**Sb**	**15 14 45.4**	**+5.6**
	29nm,0.8s							
MDOK	**Medeo**	**4.46**	**28**	⇑Pn		**Pn**	**15 13 36.2**	**+1.0**
	3.2nm,0.6s							
MDOK				Pg		**Pb**	**15 13 45.8**	**-0.1**
	30nm,0.4s							
MDOK				⇓Pg		Pg	15 13 46.3	-6.5
	25nm,0.6s							
MDOK				⇓Lg		Lg	15 14 45.0	
	41nm,0.8s							
MDOK				Lg		Lg	15 14 45.3	
	29nm,0.8s							
KNDC	**Almaty**	**4.47**	**27**	⇑Pg		**Pb**	**15 13 47.3**	**+1.2**
	91nm,0.6s							
KNDC				⇓Lg		Lg	15 14 46.8	
	173nm,1.4s							

KRBS	**Karabastau**	**4.58**	**13**	*e*P		**Pb**	**15 13 48.1**	**+0.3**
	12nm,0.5s							
KRBS				*e*S		**Sg**	**15 14 50.7**	**-3.7**
	12nm,0.8s							
KRBS	**Karabastau**	**4.58**	**13**	Pg		**Pb**	**15 13 48.1**	**+0.3**
	12nm,0.5s							
KRBS				Lg		Lg	15 14 50.7	
	12nm,0.8s							
KK31	**Karatay Array**	**4.76**	**325**	Pn		**Pn**	**15 13 40.3**	**+1.0**
	2.1nm,0.3s,baz=130,slow=12,SNR=30							
KK31				⇓Sn		**Sn**	**15 14 35.0**	**+0.5**
	5.1nm,0.5s,baz=163,slow=25,SNR=3.6							
KTBS	**Karatobe**	**4.83**	**22**	*e*P		**Pb**	**15 13 54.0**	**+1.8**
	19nm,0.4s							
KTBS				*e*S		**Sg**	**15 14 59.9**	**-2.6**
	33nm,0.5s							
KTBS	**Karatobe**	**4.83**	**22**	Pg		**Pb**	**15 13 54.0**	**+1.8**
	19nm,0.4s							
KTBS				Lg		Lg	15 14 59.9	
	33nm,0.5s							
KUU	**Kurty**	**4.91**	**18**	*e*P		**Pb**	**15 13 54.4**	**+0.9**
	20nm,1.0s							
KUU				*e*S		**Sg**	**15 15 00.1**	**-4.9**
	29nm,1.3s							
KUU	**Kurty**	**4.91**	**18**	Pg		**Pb**	**15 13 54.4**	**+0.9**
	20nm,1.0s							
KUU				Lg		Lg	15 15 00.1	
	29nm,1.3s							
KURS	**Kuram**	**5.18**	**34**	*e*P		**Pb**	**15 13 59.0**	**+1.0**
	12nm,1.1s							
KURS				*e*S		**Sb**	**15 15 08.1**	**+7.8**
	16nm,1.2s							
KURS	**Kuram**	**5.18**	**34**	Pg		**Pb**	**15 13 59.0**	**+1.0**
	12nm,1.1s							
KURS				Lg		Lg	15 15 08.1	
	16nm,1.2s							
UZB	**Uzynbulak**	**5.32**	**41**	*e*P		**Pb**	**15 14 01.8**	**+1.2**
	4.7nm,0.8s							
UZB				*e*S		**Sg**	**15 15 13.2**	**-5.1**
	9.5nm,1.3s							
UZB	**Uzynbulak**	**5.32**	**41**	Pg		**Pb**	**15 14 01.8**	**+1.2**
	4.7nm,0.8s							
UZB				Lg		Lg	15 15 13.2	
	9.5nm,1.3s							
SHLS	**Shalkode**	**5.56**	**44**	*e*P		**Pb**	**15 14 09.2**	**+4.6**
	11nm,0.9s							
SHLS				*e*S		**Sg**	**15 15 26.2**	**+0.3**
	22nm,1.4s							
SHLS	**Shalkode**	**5.56**	**44**	Pg		**Pb**	**15 14 09.2**	**+4.6**
	11nm,0.9s							
SHLS				Lg		Lg	15 15 26.2	
	22nm,1.4s							
PDGK	**Podgornoye**	**5.69**	**43**	⇑Pn		**Pn**	**15 13 52.6**	**+0.5**
	2.6nm,0.7s							
PDGK				⇓Pg		**Pb**	**15 14 10.3**	**+3.4**
	9.7nm,0.6s							
PDGK				⇑Lg		Lg	15 15 24.7	
	21nm,0.8s							
BTLS	**Baital**	**5.79**	**359**	*e*P		**Pb**	**15 14 12.7**	**+4.2**
	4.1nm,0.8s							
BTLS				*e*S		**Sg**	**15 15 31.1**	**-2.2**
	12nm,1.1s							
BTLS	**Baital**	**5.79**	**359**	Pg		**Pb**	**15 14 10.2**	**+1.7**
	4.1nm,0.8s							
BTLS				Lg		Lg	15 15 28.0	
	12nm,1.1s							
OTUK	**Ortayu**	**9.10**	**352**	⇑Pn		**Pn**	**15 14 39.0**	**+0.3**
	2.4nm,1.0s							
OTUK				⇑Lg		Lg	15 17 10.7	
	16nm,1.0s							
MKAR	**Makanchi Array**	**9.58**	**35**	Pn		**Pn**	**15 14 46.6**	**+1.3**
	0.1nm,0.3s,baz=223,slow=14,SNR=5.0							
	0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**11.78**	**14**	Lg		Lg	15 18 35.5	
	baz=200,slow=29,SNR=1.5							
AB31	**Akbulak array**	**14.28**	**319**	⇑P		**Pn**	**15 15 47.6**	**-2.1**
	0.5nm,0.4s,baz=128,slow=14,SNR=21							
AKTO	**Aktyubinsk**	**15.99**	**320**	Pn		**Pn**	**15 16 10.6**	**-1.8**
	0.1nm,0.3s,baz=136,slow=13,SNR=7.6							
AKTO				Sn		**Sn**	**15 19 05.4**	**-4.3**
	0.1nm,0.3s,baz=161,slow=18,SNR=2.5							
	1.8nm,0.7s							
AKTO	**Aktyubinsk**	**15.99**	**320**	⇓P		**Pn**	**15 16 11.3**	**-1.1**
	2.7nm,0.8s							
ZALV	**Zalesovo Beam**	**16.38**	**23**	Pn		**Pn**	**15 16 15.2**	**-2.1**
	0.1nm,0.3s,baz=206,slow=12,SNR=4.3							
	1.0nm,0.7s							
FINES	**FINESS Array B**	**36.72**	**323**	P		**P**	**15 19 34.4**	**0.0**
	1.4nm,0.6s,baz=105,slow=10,SNR=4.7							
	1.4nm,0.6s							
ARCES	**ARCESS Array B**	**39.64**	**336**	P		**P**	**15 19 60.0**	**+1.0**
	1.8nm,0.9s,baz=101,slow=7.5,SNR=1.6							
	1.8nm,0.9s							
NOA	**NORSAR Array B**	**43.78**	**321**	P		**P**	**15 20 33.0**	**+0.1**
	0.8nm,0.7s,baz=90,slow=7.9,SNR=2.4							
NOA				LR		LR	15 38 25.3	
	comp=Z,14nm,18.2s,baz=15,slow=36							
	0.8nm,0.7s							
VAE	**Valguarnera**	**46.17**	**288**	LR		LR	15 42 44.4	
	comp=Z,54nm,18.6s,baz=82,slow=39							
TORD	**Torodi Ar. Bea**	**68.31**	**269**	P		**P**	**15 23 25.9**	**-3.2**
	0.4nm,0.6s,baz=48,slow=6.8,SNR=4.3							
	0.4nm,0.6s							
TSUM	**Tsumeb**	**78.60**	**234**	LR		LR	16 02 55.8	
	comp=Z,33nm,21.0s,baz=152,slow=39							

*IDC **08** 15:17:36.3±1.8, 5°.11S×129°.58E, h206km±23km, mb3.1/1, mbtmp4.0/6, Error ellipse: s-maj=35.3km s-min=17.2km az=90.0*
*NEIC **08** 15:17:37.3±1.7, 5°.13S±0'.08×129°.7E±0'.2, h226km±16km, mb4.0/5, Error ellipse: s-maj=25.8km s-min=11.9km az=95.0*
ISC 08 15:17:36.2±0.8, 5°.16S±0'.07×129°.7E±0'.1, h250km, n18, σ2$67/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.21**	**151**	Pn		**Pn**	**15 18 33.6**	**+2.7**
FAKI	**Fak Fak**	**3.35**	**48**			**Pn**	**15 18 32.7**	**+0.1**
SIJI	**Sorong**	**4.52**	**20**	P		**Pn**	**15 18 45.4**	**-0.9**
	16nm,0.3s,baz=241,slow=18,SNR=52							
SIJI				S		**S**	**15 19 36.5**	**-5.6**
	42nm,0.2s,baz=270,slow=23,SNR=31							
MTN	**Manton Dam**	**7.76**	**170**			**Pn**	**15 19 26.6**	**+0.1**
BATI	**Baumata**	**7.84**	**230**	P		**Pn**	**15 19 28.0**	**+0.5**
	21nm,0.8s,baz=76,slow=4.2,SNR=4.1							
BATI				S		**S**	**15 20 55.5**	**-1.6**
	11nm,0.6s,baz=16,slow=20,SNR=2.1							
KNRA	**Kununurra**	**10.50**	**185**	Pn		**Pn**	**15 20 01.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**13.47**	**197**	P		**Pn**	**15 20 38.7**	**+0.8**
	1.2nm,0.3s,baz=19,slow=12,SNR=18							
FITZ				S		**S**	**15 23 00.7**	**-6.7**
	0.8nm,0.4s,baz=342,slow=20,SNR=3.1							
FITZ	**Fitzroy Crossi**	**13.47**	**197**	Pn		**P**	**15 20 38.9**	**-0.2**
WB0	**Warramunga Arr**	**15.21**	**163**			**Pn**	**15 21 00.8**	**+1.7**
WRAB	**Tennant Creek**	**15.36**	**163**			**Pn**	**15 21 02.5**	**+1.7**
WRAB				IAmb		IAmb	15 21 06.9	
	comp=Z,9.5nm,1.4s							
WRA	**Warramunga Arr**	**15.36**	**163**	P		**Pn**	**15 21 02.5**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=341,slow=13,SNR=27							
WRA				S		**S**	**15 23 46.8**	**-2.9**
	comp=Z,0.4nm,0.4s,baz=341,slow=22,SNR=3.1							
WB2	**Warramunga Arr**	**15.37**	**163**			**Pn**	**15 21 02.6**	**+1.8**
WB2				IAmb		IAmb	15 21 08.1	
	comp=Z,7.2nm,1.2s							
WR0	**Warramunga Arr**	**15.44**	**163**			**Pn**	**15 21 03.5**	**+1.8**
WR0				IAmb		IAmb	15 21 17.9	
	comp=Z,12nm,1.5s							
AS31	**Alice Springs**	**18.84**	**168**	P		**Pn**	**15 21 41.4**	**-0.3**
ASAR	**Alice Springs**	**18.84**	**168**	P		**Pn**	**15 21 42.3**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=351,slow=12,SNR=62							
ASAR				S		**S**	**15 25 01.4**	**+2.7**
	comp=Z,1.0nm,0.9s,baz=352,slow=23,SNR=5.8							
ASAR	**Alice Springs**	**18.84**	**168**	P		**Pn**	**15 21 41.8**	**+0.1**
MKAR	**Makanchi Array**	**66.55**	**327**	P		**P**	**15 28 03.0**	**+3.5**
	comp=Z,0.3nm,0.4s,baz=120,slow=7.3,SNR=6.1							
	comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**66.55**	**327**	P		**P**	**15 28 02.8**	**+3.3**

*IDC **08** 15:28:42.0±0.8, 47°.00N×155°.56E, h0km, mb3.9/14, mbtmp3.9/15, ML2.8/1, MS3.3/7, Error ellipse: s-maj=22.8km s-min=17.1km az=118.0*
*NEIC **08** 15:28:44.4±1.6, 47°.1N±0'.1×155°.5E±0'.2, h10km±1km, mb4.2/33, Error ellipse: s-maj=22.0km s-min=13.9km az=141.0*
*MOS **08** 15:28:44.7±1.1, 47°.10N×155°.50E, h71km, mb4.3/3, Error ellipse: s-maj=14.3km s-min=9.1km az=81.9*
*SKHL **08** 15:28:45.8±0.7, 47°.20N×155°.30E, h39km±8km, mb4.5/5*
ISC 08 15:28:45.0±0.8, 47°.10N±0'.08×155°.39E±0'.09, h18km, n92, σ1$34/92, mb4.2/30, MS3.5/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.62**	**7**	*e*PN		**Pg**	**15 29 53.5**	**-0.8**
SKR				*e*S		**Sn**	**15 30 20.7**	**-1.6**
SKR				pmax		pmax		
	comp=Z,36nm,0.9s							
SKR				smax		smax		
	comp=N,97nm,0.4s							
SKR				smax		smax		
	comp=E,123nm,0.8s							
SKR	**Severo-Kuril's**	**3.62**	**7**	*e*P		**Pn**	**15 29 39.0**	**-1.1**
SKR				AMB		AMB	15 29 45.5	
	comp=E,20nm,0.4s							
SKR				*e*S		**Sn**	**15 30 18.0**	**-4.3**
SKR				A		A	15 30 24.7	
	comp=E,170nm,0.2s							
SKR				A		A	15 30 24.7	
	comp=E,170nm,0.2s							
PAU	**Pauzhetka**	**4.47**	**11**	*e*P		**Pn**	**15 29 51.9**	**+0.1**
PAU				AMB		AMB	15 29 53.9	
	comp=E,20nm,0.5s							
PAU				*e*S		**Sn**	**15 30 40.4**	**-2.9**
PAU				A		A	15 30 42.6	
	comp=E,190nm,0.3s							
PAU				A		A	15 30 42.6	
	comp=E,190nm,0.3s							
KUR	**Kuril'sk**	**5.55**	**253**	*e*PN		**Pn**	**15 30 07.2**	**+0.5**
KUR				pmax		pmax		
	comp=Z,53nm,0.5s							
KUR				pmax		pmax		
	comp=E,17nm,0.2s							
KUR				pmax		pmax		
	comp=N,24nm,0.3s							
KUR	**Kuril'sk**	**5.55**	**253**	*e*P		**Pn**	**15 30 06.8**	**+0.1**
KUR				AMB		AMB	15 30 08.8	
	comp=N,50nm,0.5s							
KUR				*e*S		**Sn**	**15 31 07.4**	**-2.5**
KUR				A		A	15 31 09.8	
	comp=N,110nm,0.4s							
KUR				A		A	15 31 09.8	
	comp=N,110nm,0.4s							
PEA0B	**Petropavlovsk-**	**6.20**	**13**	Pn		**Pn**	**15 30 15.2**	**-0.3**
PEA0B	**Petropavlovsk-**	**6.20**	**13**	PN		**Pn**	**15 30 15.2**	**-0.3**
PETK	**Petropavlovsk-**	**6.20**	**13**	Pn		**Pn**	**15 30 14.6**	**-1.0**
	comp=N,1.1nm,0.3s,baz=194,slow=9.6,SNR=26							
PETK				Sn		**Sn**	**15 31 29.4**	**+3.6**
	comp=N,0.4nm,0.3s,baz=216,slow=25,SNR=1.2							
PETK				LR		LR	15 32 55.8	
	comp=N,64nm,18.1s,baz=225,slow=40							
	comp=N,3.8nm,0.5s							
PET	**Petropavlovsk**	**6.29**	**18**			**Pn**	**15 30 15.1**	**-1.7**
PET	**Petropavlovsk**	**6.29**	**18**	*e*PN		**Pn**	**15 30 15.7**	**-1.1**
PET				pmax		pmax		
	comp=Z,18nm,0.3s							
PET				MLR		MLR		
	comp=Z,100nm,10.0s							
PET	**Petropavlovsk**	**6.29**	**18**	*e*P		**Pn**	**15 30 15.1**	**-1.7**
PET				AMB		AMB	15 30 16.0	
	comp=Z,20nm,0.3s							
PET				*e*S		**Sn**	**15 31 24.2**	**-3.9**
PET				A		A	15 31 25.8	
	comp=Z,70nm,0.5s							
PET				A		A	15 31 25.8	
	comp=Z,50nm,0.5s							
SHO	**Shikotan**	**6.83**	**245**	*e*PN		**Pn**	**15 30 21.6**	**-2.6**
SHO	**Shikotan**	**6.83**	**245**	*e*P		**Pn**	**15 30 21.9**	**-2.3**
SHO				AMB		AMB	15 30 23.9	
	comp=Z,60nm,0.3s							
SHO				*e*S		**Sn**	**15 31 35.9**	**-5.5**
SHO				A		A	15 31 38.0	
	comp=Z,80nm,0.3s							
SHO				A		A	15 31 38.0	
	comp=Z,50nm,0.3s							
YSS	**Yuzh-Sakhalins**	**8.64**	**274**	Pn		**Pn**	**15 30 50.8**	**+1.8**
ERM	**Erimo**	**10.10**	**244**	Pn		**Pn**	**15 31 09.1**	**0.0**
ERM	**Erimo**	**10.10**	**244**	PN		**Pn**	**15 31 09.1**	**0.0**
JEW	**Eniwo**	**10.76**	**252**	Pn		**Pn**	**15 31 16.4**	**-1.6**
JTM	**Tenmabayashi**	**12.09**	**244**	Pn		Pn	15 31 32.0	-4.3
MA2	**Magadan**	**12.80**	**349**	LR		LR	15 36 31.8	
	comp=Z,40nm,20.8s,baz=144,slow=36							
YAK	**Yakutsk**	**20.90**	**325**	P		Pn	15 33 28.6	0.0
	comp=Z,2.4nm,0.3s,baz=127,slow=5.1,SNR=4.0							
	comp=Z,2.4nm,0.3s							
KSRS	**Korea Array**	**22.39**	**254**	P		**P**	**15 33 43.7**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=59,slow=12,SNR=4.2							
	comp=Z,1.3nm,0.6s							
H11S1	**WAKE ISLAND Hy**	**29.99**	**158**	T		T	16 06 11.2	
	baz=345							
H11S3	**WAKE ISLAND Hy**	**30.00**	**158**	T		T	16 06 12.0	
	baz=345							
H11S2	**WAKE ISLAND Hy**	**30.01**	**158**	T		T	16 06 10.9	
	baz=345							
Q19K	**Cape Douglas,**	**32.06**	**49**	P		**P**	**15 35 11.3**	**+0.9**
J20K	**Nowinta River**	**32.12**	**39**	P		**P**	**15 35 11.5**	**+0.7**
J20K				IAmb		IAmb	15 35 17.7	
	comp=Z,3.4nm,1.4s							
IMAR	**Indian Mountai**	**32.56**	**36**	P		**P**	**15 35 14.7**	**0.0**
KDAK	**Kodiak Island**	**32.67**	**51**	P		**P**	**15 35 15.1**	**-0.6**
KDAK	**Kodiak Island**	**32.67**	**51**	P		**P**	**15 35 15.1**	**-0.6**
SONM	**Songino Array**	**32.69**	**290**	P		**P**	**15 35 16.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=70,slow=10,SNR=2.3							
SONM				LR		LR	15 50 02.6	
	comp=Z,41nm,18.1s,baz=43,slow=39							
	comp=Z,0.4nm,0.6s							
H21K	**Melozitna Rive**	**32.90**	**37**	P		**P**	**15 35 18.6**	**+0.9**
CAST	**Castle Rocks**	**32.95**	**41**	P		**P**	**15 35 19.1**	**+1.0**
CAST				IAmb		IAmb	15 35 19.8	
	comp=Z,2.2nm,0.9s							
I21K	**Tanana**	**33.17**	**38**	P		**P**	**15 35 20.5**	**+0.5**
MLY	**Manley**	**33.68**	**38**	P		**P**	**15 35 25.3**	**+0.8**
I23K	**Minto, Yukon-K**	**34.27**	**38**	P		**P**	**15 35 30.3**	**+0.7**

comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 43.67 306 P **P** 15 36 48.4 +0.1
ZALV Zalesovo Beam 43.67 306 P **P** 15 36 48.4 +0.1
MK31 Makanchi Array 48.16 298 P **P** 15 37 24.4 +0.5
MK31 IAmb IAmb 15 38 03.2
comp=Z,2.9nm,1.2s
MK31 Makanchi Array 48.16 298 P **P** 15 37 24.4 +0.5
MK31 pmax pmax
comp=Z,3.0nm,1.3s
MKAR Makanchi Array 48.16 298 P **P** 15 37 24.7 +0.8
comp=Z,0.8nm,0.9s,baz=63,slow=8.3,SNR=4.0
MKAR PcP **PcP** 15 38 50.8 -0.3
comp=Z,0.9nm,0.9s,baz=72,slow=4.7,SNR=2.5
comp=Z,0.8nm,0.9s
MKAR Makanchi Array 48.16 298 P **P** 15 37 24.4 +0.5
MKAR Makanchi Array 48.16 298 P **P** 15 37 24.4 +0.5
MKAR Makanchi Array 48.16 298 *eP* **P** 15 37 24.4 +0.5
KURK Kurchatov 48.47 304 P **P** 15 37 26.2 +0.1
KURK IAmb IAmb 15 37 28.3
comp=Z,3.2nm,0.8s
KURK Kurchatov 48.47 304 P **P** 15 37 26.2 +0.1
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 48.47 304 *eP* **P** 15 37 26.2 +0.1
BRVK Borovoye 51.88 310 P **P** 15 37 52.9 +0.9
BRVK IAmb IAmb 15 37 54.2
comp=Z,3.4nm,0.7s
BRVK Borovoye 51.88 310 P **P** 15 37 52.9 +0.9
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 51.88 310 *eP* **P** 15 37 52.9 +0.9
SPITS Spitsbergen Ar 52.54 350 P **P** 15 37 56.5 -0.1
SPB2 Spitsbergen Ar 52.54 350 P **P** 15 37 56.3 -0.3
CMAR Chiang Mai Arr 53.97 258 P **P** 15 38 09.3 +1.5
comp=Z,1.1nm,0.5s,baz=35,slow=7.4,SNR=7.4
comp=Z,1.1nm,0.5s
ARU Arti 55.80 318 P **P** 15 38 21.2 +0.6
KKAR Karatay Array 57.19 300 P **P** 15 38 31.9 +1.1
KKAR Karatay Array 57.19 300 P **P** 15 38 31.9 +1.1
ARCES ARCESS Array B 58.03 341 P **P** 15 38 36.0 -0.2
comp=Z,5.2nm,1.0s,baz=35,slow=10.0,SNR=4.0
ARCES LR LR 16 06 42.9
comp=Z,58nm,19.1s,baz=220,slow=39
comp=Z,5.2nm,1.0s
ABKAR Akbulak array 59.39 311 P **P** 15 38 46.6 +0.6
AKTO Aktyubinsk 59.65 313 LR LR 16 09 29.2
comp=Z,35nm,18.8s,baz=329,slow=41
BATI Baumata 63.68 215 LR LR 16 07 03.3
comp=Z,69nm,19.9s,baz=272,slow=36
FINES FINESS Array B 64.38 336 P **P** 15 39 20.1 +0.8
comp=Z,0.7nm,0.4s,baz=33,slow=8.1,SNR=8.6
comp=Z,0.7nm,0.4s
NOA NORSAR Array B 68.39 342 LR LR 16 14 16.7
comp=Z,25nm,18.3s,baz=0.0,slow=40
WRA Warramunga Arr 69.38 201 P **P** 15 39 50.2 -1.3
comp=Z,0.7nm,0.8s,baz=20,slow=7.0,SNR=4.2
comp=Z,0.7nm,0.8s
KBZ Khabaz 71.73 315 P **P** 15 40 07.5 +1.8
comp=Z,0.9nm,0.4s,baz=44,slow=6.1,SNR=3.1
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 72.11 327 P **P** 15 40 08.7 +0.8
comp=Z,0.3nm,0.3s,baz=40,slow=6.3,SNR=2.6
comp=Z,0.3nm,0.3s
AS31 Alice Springs 73.06 201 P **P** 15 40 13.6 -0.2
ASAR Alice Springs 73.06 201 P **P** 15 40 13.6 -0.3
comp=Z,0.4nm,0.5s,baz=17,slow=6.0,SNR=15
comp=Z,0.4nm,0.5s
ASAR Alice Springs 73.06 201 P **P** 15 40 13.7 -0.1
TX31 Lajitas Ar. Si 75.95 62 P **P** 15 40 31.3 +0.4
TX31 IAmb IAmb 15 41 03.9
comp=Z,4.1nm,1.1s
TX32 Lajitas Array 75.95 62 P **P** 15 40 31.3 +0.4
TXAR Lajitas Array 75.95 62 P **P** 15 40 31.1 +0.2
comp=Z,0.4nm,0.6s,baz=284,slow=3.7,SNR=5.0
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 75.95 62 P **P** 15 40 30.9 0.0

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*IDC **08** 15:43:36.5±2.4, 7.02S×130.03E, h109km±25km, mb3.7/3, mbtmp3.9/8, Error ellipse: s-maj=38.3km s-min=22.1km az=92.0*

ISC 08 15:43:34.8±0.9, 7.03S±0.06×130.2E±0.1, h104km, n8, σ2s80/12, mb3.9/3, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.22**	**10**	P	**Pn**		**15 45 05.5**	**+1.5**
	2.6nm,0.3s,baz=287,slow=19,SNR=2.2							
SIJI				S	**Sn**		**15 46 08.7**	**-5.1**
	10nm,0.3s,baz=244,slow=22,SNR=9.8							
BATI	**Baumata**	**7.17**	**243**	P	**Pn**		**15 45 18.5**	**+1.5**
	20nm,0.4s,baz=76,slow=8.3,SNR=10							
BATI				S	**Sn**		**15 46 34.1**	**-2.8**
	10nm,0.3s,baz=17,slow=18,SNR=2.4							
FITZ	**Fitzroy Crossi**	**11.86**	**201**	P	**Pn**		**15 46 20.1**	**-0.4**
	0.9nm,0.3s,baz=21,slow=11,SNR=18							
FITZ				S	Sn		15 48 20.9	-10
	4.2nm,0.3s,baz=319,slow=20,SNR=10.0							
WRA	**Warramunga Arr**	**13.46**	**163**	P	**Pn**		**15 46 42.9**	**+1.3**
	0.9nm,0.3s,baz=339,slow=13,SNR=37							
WRA				S	**Sn**		**15 49 07.0**	**-2.9**
	2.0nm,0.4s,baz=328,slow=23,SNR=11							
ASAR	**Alice Springs**	**16.93**	**168**	P	**P**		**15 47 28.2**	**+2.6**
	0.5nm,0.5s,baz=345,slow=10,SNR=26							
ASAR				S	**Sn**		**15 50 29.9**	**-3.7**
	0.9nm,0.5s,baz=344,slow=25,SNR=7.3							
MKAR	**Makanchi Array**	**68.34**	**327**	P	**P**		**15 54 25.9**	**+0.9**
	0.8nm,0.5s,baz=121,slow=7.0,SNR=15							
	0.8nm,0.5s							
ZALV	**Zalesovo Beam**	**71.68**	**334**	P	**P**		**15 54 45.4**	**+0.2**
	0.4nm,0.3s,baz=133,slow=6.1,SNR=2.3							
	0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**72.62**	**328**	P	**P**		**15 54 51.4**	**+0.5**
	1.1nm,0.4s,baz=127,slow=5.1,SNR=5.7							
	1.1nm,0.4s							

MEX 08 15:57:08.4±37.0, 19.44N×96.72W, h20km, MD3.8, 1C, Veracruz

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAUV	**Jalcomulco**	**0.11**	**229**	*eP*	Pb		15 57 15.0	+2.5
JAUV				*eS*	Sb		15 57 20.4	+5.1
JAUV	**Jalcomulco**	**0.11**	**229**	*eP*	Pb		15 57 14.9	+2.4
JAUV				*eS*	Sb		15 57 20.2	+4.9
LVIG	**Laguna Verde**	**0.40**	**45**	*i* P	Pb		15 57 15.5	-1.3
LVIG				*i* S	Sb		15 57 20.8	-1.7
LVIG	**Laguna Verde**	**0.40**	**45**	⇑*i* P	Pb		15 57 15.5	-1.3
	baz=172,slow=14							
LVIG				*i* S	Sb		15 57 20.8	-1.7
OZST	**Orizaba**	**0.68**	**212**	*i* P	Pn		15 57 23.8	+0.9
OZST				*eS*	Sn		15 57 34.2	+1.2
OZST	**Orizaba**	**0.68**	**212**	*i* P	Pn		15 57 23.8	+0.9
OZST				*eS*	Sn		15 57 34.2	+1.2
CXUV	**Coxquihui**	**1.10**	**312**	*eP*	Pb		15 57 31.9	+3.1
CXUV				*eS*	Sn		15 57 50.0	+6.6
CXUV	**Coxquihui**	**1.10**	**312**	*eP*	Pb		15 57 31.9	+3.1
CXUV				*eS*	Sn		15 57 50.0	+6.6
TPIG	**Tehuac#an**	**1.18**	**211**	*eP*	Pb		15 57 31.2	+0.9
TPIG				*eS*	Sn		15 57 47.9	+2.4
TPIG	**Tehuac#an**	**1.18**	**211**	*eP*	Pb		15 57 31.2	+0.9
TPIG				*eS*	Sn		15 57 47.9	+2.4
TOIG	**Toxpalan**	**1.37**	**194**	*eP*	Pn		15 57 32.1	-0.5
TOIG				*eS*	Sb		15 57 50.8	+0.2
TOIG	**Toxpalan**	**1.37**	**194**	*eP*	Pn		15 57 32.1	-0.5
TOIG				*eS*	Sb		15 57 50.8	+0.2
PPM	**Popocatepetl**	**1.84**	**259**	*eP*	Pb		15 57 45.6	+3.9
PPM				*eS*	Sb		15 58 08.7	+4.2
PPM	**Popocatepetl**	**1.84**	**259**	*eP*	Pb		15 57 44.8	+3.1
PPM				*eS*	Sb		15 58 08.7	+4.2
HLIG	**Huajuapan de L**	**1.90**	**213**	*eP*	Pn		15 57 41.2	+1.3
HLIG				*eS*	Sb		15 58 05.1	-0.9
HLIG	**Huajuapan de L**	**1.90**	**213**	*eP*	Pn		15 57 41.2	+1.3
HLIG				*eS*	Sb		15 58 05.1	-0.9
NEUV	**Arroyo Zacate**	**1.92**	**153**	*eP*	Pn		15 57 39.2	-0.8
NEUV				*eS*	Sn		15 58 02.6	-1.0
NEUV	**Arroyo Zacate**	**1.92**	**153**	*eP*	Pn		15 57 35.7	-4.3
NEUV				*eS*	Sn		15 58 02.6	-1.0
VHO	**Vista Hermosa**	**2.35**	**180**	*eP*	Pb		15 57 49.9	-0.4
VHO				*eS*	Sn		15 58 11.9	-2.6
VHO	**Vista Hermosa**	**2.35**	**180**	*eP*	Pb		15 57 49.9	-0.4
VHO				*eS*	Sn		15 58 11.9	-2.6
TXIG	**Tlaxiaco**	**2.39**	**205**	*eP*	Pn		15 57 48.0	+1.3
TXIG				*eS*	Sn		15 58 17.7	+2.1
TXIG	**Tlaxiaco**	**2.39**	**205**	*eP*	Pn		15 57 47.7	+1.0
TXIG				*eS*	Sn		15 58 17.7	+2.1
TLIG	**Tlapa**	**2.56**	**224**	*eP*	Pn		15 57 50.6	+1.7
TLIG				*eS*	Sb		15 58 23.3	-1.5
TLIG	**Tlapa**	**2.56**	**224**	*eP*	Pn		15 57 50.6	+1.7
TLIG				*eS*	Sb		15 58 23.3	-1.5
YOIG	**Yosondua**	**2.68**	**197**	*eP*	Pn		15 57 51.4	+0.7
YOIG				*eS*	Sn		15 58 25.2	+2.4
YOIG	**Yosondua**	**2.68**	**197**	*eP*	Pn		15 57 51.2	+0.4
YOIG				*eS*	Sn		15 58 25.2	+2.4
PNIG	**Pinotepa**	**3.31**	**204**	*eP*	Pn		15 57 58.5	-0.7
PNIG				*eS*	Sb		15 58 43.7	-2.7
PNIG	**Pinotepa**	**3.31**	**204**	*eP*	Pn		15 57 57.6	-1.5
PNIG				*eS*	Sb		15 58 43.7	-2.7
PEIG	**Puerto Escondi**	**3.44**	**187**	*eP*	Pn		15 58 03.3	+2.3
PEIG				*eS*	Sn		15 58 45.3	+4.0
PEIG	**Puerto Escondi**	**3.44**	**187**	*eP*	Pn		15 58 03.3	+2.3
PEIG				*eS*	Sn		15 58 45.3	+4.0
HUIG	**Huatulco**	**3.69**	**171**	*eP*	Pn		15 58 04.3	-0.1
HUIG				*i* S	Sn		15 58 49.0	+1.7
HUIG	**Huatulco**	**3.69**	**171**	*eP*	Pn		15 58 04.3	-0.1
HUIG				*i* S	Sn		15 58 49.0	+1.7

IDC 08 16:01:07.9±39.0, 26.55N×44.63W, h0km, mb3.7/3, mbtmp3.7/3, MS2.9/4, Error ellipse: s-maj=1009.0km s-min=58.0km az=166.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**21.58**	**252**	LR	LR		16 14 35.1	
	comp=Z,12nm,19.0s,baz=166,slow=37							
TKL	**Tuckaleechee C**	**34.54**	**295**	LR	LR		16 19 22.9	
	comp=Z,26nm,21.1s,baz=124,slow=32							
MDT	**Midelt**	**35.18**	**70**	LR	LR		16 18 58.0	
	comp=Z,43nm,19.8s,baz=340,slow=30							
H10N2	**ASCENSION HYDR**	**44.98**	**135**	T	T		16 57 20.5	
	baz=320,slow=75,SNR=135							
H10N3	**ASCENSION HYDR**	**44.98**	**135**	T	T		16 57 16.7	
	baz=320,slow=75,SNR=89							
H10N1	**ASCENSION HYDR**	**45.00**	**135**	T	T		16 57 17.8	
	baz=320,slow=75,SNR=131							
H10S3	**ASCENSION HYDR**	**45.74**	**136**	T	T		16 58 11.8	
	baz=320,slow=74,SNR=28							
H10S2	**ASCENSION HYDR**	**45.75**	**136**	T	T		16 58 12.0	
	baz=260,slow=74,SNR=9.1							
ANMO	**Albuquerque**	**53.06**	**295**	LR	LR		16 32 48.0	
	comp=Z,14nm,18.3s,baz=75,slow=36							
PDAR	**Pinedale Array**	**54.53**	**305**	P	P		16 10 37.8	-0.2
	0.2nm,0.5s,baz=81,slow=11,SNR=1.9							
	0.2nm,0.5s							
ARCES	**ARCESS Array B**	**58.45**	**23**	P	P		16 11 05.1	-0.2
	2.0nm,0.8s,baz=269,slow=6.2,SNR=3.9							
	2.0nm,0.8s							
ILAR	**Eielson Array**	**71.33**	**334**	P	P		16 12 29.4	+0.2
	0.5nm,0.7s,baz=75,slow=5.2,SNR=4.4							
	0.5nm,0.7s							

IDC 08 16:05:03.7±2.2, 4.74N×124.30E, h0km, mb3.2/3, mbtmp3.2/3, MS2.7/2, 1D, Error ellipse: s-maj=223.7km s-min=27.6km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.95**	**46**	⇓*eP*	Pg		16 05 42.2	+1.1
DDMP				*eS*	Sn		16 06 02.1	-1.2
SIJI	**Sorong**	**8.91**	**128**	LR	LR		16 11 04.8	
	comp=Z,23nm,20.5s,baz=218,slow=40							
PSI	**Prapat**	**25.40**	**267**	LR	LR		16 20 38.6	
	comp=Z,33nm,20.5s,baz=202,slow=37							
WRA	**Warramunga Arr**	**26.43**	**158**	P	P		16 10 42.8	+0.3
	0.3nm,0.9s,baz=337,slow=11,SNR=5.7							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**29.74**	**162**	P	P		16 11 11.7	-0.3
	0.2nm,0.8s,baz=340,slow=7.2,SNR=1.7							
	0.2nm,0.8s							
MKAR	**Makanchi Array**	**55.37**	**326**	P	P		16 14 39.4	-0.1
	0.3nm,0.4s,baz=112,slow=7.2,SNR=5.4							
	0.3nm,0.4s							

IDC 08 16:07:59.5±166.0, 46.18N×151.59E, h0km, Error ellipse: s-maj=369.1km s-min=17.6km az=120.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H11N2	**WAKE ISLAND Hy**	**29.23**	**149**	H	H		16 44 38.2	
	baz=338,slow=76,SNR=280							
H11N1	**WAKE ISLAND Hy**	**29.25**	**149**	H	H		16 44 39.3	
	baz=338,slow=76,SNR=267							
H11N3	**WAKE ISLAND Hy**	**29.25**	**149**	H	H		16 44 39.5	
	baz=338,slow=76,SNR=443							
H11S1	**WAKE ISLAND Hy**	**30.30**	**151**	H	H		16 45 56.9	
	baz=338,slow=76,SNR=211							
H11S3	**WAKE ISLAND Hy**	**30.30**	**151**	H	H		16 45 57.5	
	baz=338,slow=76,SNR=214							
H11S2	**WAKE ISLAND Hy**	**30.31**	**151**	H	H		16 45 58.1	
	baz=338,slow=76,SNR=263							
H03N2	**Juan Fernandez**	**139.81**	**90**	H	H		19 02 57.8	
	baz=307,slow=77,SNR=7.4							
H03N1	**Juan Fernandez**	**139.82**	**90**	H	H		19 03 00.2	
	baz=307,slow=77,SNR=8.1							
H03N3	**Juan Fernandez**	**139.82**	**90**	H	H		19 02 58.6	
	baz=307,slow=77,SNR=7.5							

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*NEIC **08** 16:08:14.8, 24.17S×68.09W, h119km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=0.83; Mθθ=0.19; Mφφ=0.64; Mrθ=0.58; Mrφ=-0.61; Mθφ=-0.32; Fault plane solution: M0=1.17000×10^16 NP1:φs=307.98000°, δ=63.46000°, λ=-108.73000°. NP2:φs=165.18000°, δ=32.09000°, λ=-57.26000°. Principal axes: T 1.2372, Plg=16.0000°, Azm=52.0000°; N -0.1443, Plg=17.0000°, Azm=317.0000°; P -1.0929, Plg=66.0000°, Azm=184.0000°:*

*NEIC **08** 16:08:16.0±1.4, 24.18S±0.05×68.11W±0.09, h115km±4km, mb4.7/195, Mwr=4.6/38, Mwr=4.9(GUC) Error ellipse: s-maj=11.7km s-min=7.6km az=96.0*

*GUC **08** 16:08:15.9±0.7, 24.12S×68.23W, h135km±5km, ML5.0*

*IDC **08** 16:08:15.5±0.7, 24.09S×67.91W, h112km±5km, mb4.3/13, mbtmp4.7/17, MS3.4/11, Error ellipse: s-maj=14.9km s-min=8.9km az=53.0*

ISC 08 16:08:15.5±0.3, 24.14S±0.03×68.13W±0.04, h118km±2km, h118km:pP-P, n442, σ1s40/471, mb4.8/109, 21C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.19**	**358**				**16 08 40.5**	**+0.9**
AF01	**San Pedro de A**	**1.19**	**358**	*i* S		**Sn**	**16 08 59.5**	**+1.6**
PB15	**IPOC Station P**	**1.54**	**307**			**Pn**	**16 08 44.5**	**+1.0**
PB15	**IPOC Station P**	**1.54**	**307**	⇑*i* P		**Pn**	**16 08 44.4**	**+0.9**
PB15				*i* S		**Sn**	**16 09 05.4**	**+0.6**
GO02	**Mina Guanaco**	**1.67**	**232**	Pn		**Pn**	**16 08 45.5**	**+0.4**
GO02	**Mina Guanaco**	**1.67**	**232**	⇑*i* P		**Pn**	**16 08 46.0**	**+0.8**
GO02				*i* S		**Sn**	**16 09 09.0**	**+1.4**
GO02	**Mina Guanaco**	**1.67**	**232**	⇑*i* P		**Pn**	**16 08 45.9**	**+0.8**
GO02				*i* S		**Sn**	**16 09 09.2**	**+1.5**
GO02				IAML			16 09 12.6	
	comp=N,8μm,0.3s							
LVC	**Limon Verde**	**1.69**	**335**	P		**Pn**	**16 08 46.4**	**+1.0**
	comp=N,2μm,0.3s,baz=167,slow=8.5,SNR=3024							
LVC				S		**Sn**	**16 09 08.7**	**+0.6**
	comp=N,4μm,0.3s,baz=70,slow=3.5,SNR=22							
LVC	**Limon Verde**	**1.69**	**335**	*eP*		**Pn**	**16 08 45.9**	**+0.5**
LVC				*i* S		**Sn**	**16 09 08.8**	**+0.8**
PB06	**IPOC Station P**	**1.95**	**317**			**Pn**	**16 08 48.9**	**+0.5**
PB06	**IPOC Station P**	**1.95**	**317**	⇑*i* P		**Pn**	**16 08 49.2**	**+0.8**
PB06				*i* S		**Sn**	**16 09 13.9**	**+0.4**
PB06				IAML			16 09 16.6	
	comp=E,18μm,0.2s							
PB14	**IPOC Station P**	**2.13**	**256**	Pn		**Pn**	**16 08 50.6**	**-0.1**
PB14	**IPOC Station P**	**2.13**	**256**	⇑*i* P		**Pn**	**16 08 50.8**	**0.0**
PB14				*i* S		**Sn**	**16 09 16.8**	**-0.9**
PB14	**IPOC Station P**	**2.13**	**256**	⇑*i* P		**Pn**	**16 08 50.8**	**0.0**
PB14				*i* S		**Sn**	**16 09 16.8**	**-0.9**
PB10	**IPOC Station P**	**2.31**	**285**	Pn		**Pn**	**16 08 53.2**	**+0.5**
PB10	**IPOC Station P**	**2.31**	**285**	⇑*i* P		**Pn**	**16 08 53.0**	**+0.3**
PB10				*i* S		**Sn**	**16 09 20.7**	**-0.6**
PB10				IAML			16 09 24.5	
	comp=N,8μm,0.3s							
SLA	**San Lorenzo**	**2.46**	**104**	⇑*i* P		**Pn**	**16 08 56.7**	**+1.9**
SLA				*i* S		**Sn**	**16 09 27.3**	**+2.2**
PB09	**IPOC Station P**	**2.55**	**336**			**Pn**	**16 08 57.2**	**+1.2**
PB09	**IPOC Station P**	**2.55**	**336**	⇓*i* P		**Pn**	**16 08 57.2**	**+1.2**
PB09				*i* S		**Sn**	**16 09 28.0**	**+0.8**
PB09				IAML			16 09 35.3	
	comp=N,5μm,0.4s							
PB04	**IPOC Station P**	**2.59**	**314**			**Pn**	**16 08 56.3**	**-0.2**
PB04	**IPOC Station P**	**2.59**	**314**	⇑*i* P		**Pn**	**16 08 56.7**	**+0.2**
PB04				*i* S		**Sn**	**16 09 27.4**	**-0.6**
PB04				IAML			16 09 40.0	
	comp=N,11μm,0.4s							
AC02	**Maricunga**	**2.83**	**198**	Pn		**Pn**	**16 09 00.8**	**+0.9**
AC02	**Maricunga**	**2.83**	**198**	⇑*i* P		**Pn**	**16 09 01.2**	**+1.2**
AC02				*eS*		**Sn**	**16 09 34.3**	**+0.2**
AC02	**Maricunga**	**2.83**	**198**	⇑*i* P		**Pn**	**16 09 01.1**	**+1.2**
PB07	**IPOC Station P**	**2.90**	**326**			**Pn**	**16 09 00.7**	**+0.2**
PB07	**IPOC Station P**	**2.90**	**326**	⇓*i* P		**Pn**	**16 09 00.8**	**+0.2**
PB07				*i* S		**Sn**	**16 09 34.7**	**-0.6**
PB07				IAML			16 09 43.0	
	comp=N,4μm,0.1s							
AC01	**Pan de Azucar**	**3.00**	**228**			**Pn**	**16 09 00.6**	**-1.0**
AC01	**Pan de Azucar**	**3.00**	**228**	⇑*i* P		**Pn**	**16 09 00.7**	**-1.0**
AC01				*eS*		**Sn**	**16 09 32.3**	**-5.0**
AC01	**Pan de Azucar**	**3.00**	**228**	⇑*i* P		**Pn**	**16 09 00.7**	**-1.0**
AC01				*i* S		**Sn**	**16 09 33.5**	**-3.8**
AC01				IAML			16 09 44.0	
	comp=N,2μm,0.6s							
PB02	**IPOC Station P**	**3.25**	**330**			**Pn**	**16 09 05.1**	**0.0**
PB02	**IPOC Station P**	**3.25**	**330**	⇓*i* P		**Pn**	**16 09 05.1**	**0.0**
PB02				*i* S		**Sn**	**16 09 42.9**	**-0.5**
PB01	**IPOC Station P**	**3.33**	**338**			**Pn**	**16 09 05.8**	**-0.4**
PB01	**IPOC Station P**	**3.33**	**338**	⇑*i* P		**Pn**	**16 09 06.3**	**+0.1**
PB01				*i* S		**Sn**	**16 09 44.2**	**-1.1**
PB01				IAML			16 09 54.2	
	comp=N,4μm,0.6s							
AHML	**Horco Molle**	**3.65**	**137**	*i* P		**Pn**	**16 09 12.2**	**+1.9**
AHML				*eS*		**Sn**	**16 09 54.7**	**+1.9**
PATCX	**Punta Patache**	**3.80**	**330**			**Pn**	**16 09 11.2**	**-1.1**
PATCX	**Punta Patache**	**3.80**	**330**	⇓*i* P		**Pn**	**16 09 11.3**	**-1.1**
GO03	**Copiap**	**3.92**	**208**	Pn		**Pn**	**16 09 12.6**	**-1.4**
GO03	**Copiap**	**3.92**	**208**	*eP*		**Pn**	**16 09 12.9**	**-1.1**
GO03				*eS*		**Sn**	**16 09 57.4**	**-2.0**
GO03	**Copiap**	**3.92**	**208**	⇑*i* P		**Pn**	**16 09 12.9**	**-1.1**
TA01	**Diego Aracena**	**4.04**	**332**	Pn		**Pn**	**16 09 13.6**	**-1.9**
TA01	**Diego Aracena**	**4.04**	**332**	*i* S		**Sn**	**16 10 01.5**	**-0.5**
HMBC	**Humberstone**	**4.18**	**337**	⇑*i* P		**Pn**	**16 09 16.1**	**-1.4**
TA02	**Huaiquique**	**4.28**	**334**			**Pn**	**16 09 17.5**	**-1.2**
GO01	**Chusmiza**	**4.56**	**347**			**Pn**	**16 09 20.9**	**-2.1**
AC04	**Llanos de Chal**	**4.83**	**213**	Pn		**Pn**	**16 09 23.1**	**-3.0**
LCO	**Las Campanas**	**5.37**	**205**	Pn		**Pn**	**16 09 30.6**	**-2.9**
PB12	**IPOC Station P**	**5.87**	**339**	Pn		**Pn**	**16 09 37.2**	**-3.1**
PB16	**IPOC Station P**	**5.92**	**347**	Pn		**Pn**	**16 09 40.3**	**-1.1**
CO03	**El Pedregal**	**7.04**	**198**	Pn		**Pn**	**16 09 53.3**	**-2.8**
LPAZ	**La Paz**	**7.82**	**0**	P		**Pn**	**16 10 06.5**	**-0.5**
	comp=N,30nm,0.5s,baz=184,slow=7.3,SNR=117							
LPAZ					LR	LR	16 13 09.3	
	comp=N,113nm,20.7s,baz=195,slow=38							
LPAZ	**La Paz**	**7.82**	**0**			**Pn**	**16 10 06.2**	**-0.9**
LPAZ	**La Paz**	**7.82**	**0**	*eP*		**Pn**	**16 10 06.6**	**-0.5**
CPUP	**Villa Florida**	**10.02**	**105**	P		**Pn**	**16 10 33.4**	**-2.8**
	comp=N,12nm,0.8s,baz=286,slow=12,SNR=18							
CPUP					LR	LR	16 14 32.7	
	comp=N,208nm,18.2s,baz=271,slow=38							
CPUP	**Villa Florida**	**10.02**	**105**			**Pn**	**16 10 33.9**	**-2.3**
CPUP	**Villa Florida**	**10.02**	**105**	*i* P		**Pn**	**16 10 33.5**	**-2.8**
SIV	**San Ignacio**	**10.47**	**41**	P		**Pn**	**16 10 38.8**	**-3.7**
	comp=N,153nm,0.5s,baz=217,slow=14,SNR=256							
SIV				S		**Sn**	**16 12 30.0**	**-8.0**
	comp=N,7.5nm,0.5s,baz=254,slow=18,SNR=1.2							
PTLB	**Pontes e Lacer**	**12.10**	**46**			**Pn**	**16 11 00.8**	**-3.3**
VILB	**Vilhena**	**13.43**	**35**	Pn		**Pn**	**16 11 19.3**	**-2.1**
TRCB	**Terra Rica**	**14.29**	**88**	P		**P**	**16 11 35.1**	**-1.0**
ETMB	**Extrema**	**14.37**	**8**			**Pn**	**16 11 29.3**	**-4.1**
NNA	**Nana**	**14.65**	**324**	LR	LR		16 16 45.1	
	comp=N,45nm,19.2s,baz=166,slow=35							
TRQA	**Tornquist**	**14.83**	**161**	P		**P**	**16 11 40.7**	**-1.3**
PLTB	**Pedras Altas**	**14.90**	**124**			**Pn**	**16 11 38.0**	**-2.2**
GO06	**Curarrehue**	**15.65**	**190**			**Pn**	**16 11 48.0**	**-1.5**
SAML	**Samuel**	**15.83**	**18**	P		**Pn**	**16 11 48.1**	**-3.8**
PLCA	**Paso Flores**	**16.67**	**186**	P		**P**	**16 12 02.3**	**-0.1**
	comp=N,1.5nm,0.6s,baz=3.9,slow=13,SNR=7.2							
PLCA				PcP		**PcP**	**16 16 45.5**	**+1.0**
	comp=N,2.4nm,0.8s,baz=358,slow=3.2,SNR=4.4							
PLCA	**Paso Flores**	**16.67**	**186**	P		**Pn**	**16 12 01.9**	**-0.2**
CZSB	**Cruzeiro do Su**	**16.90**	**344**	P		**Pn**	**16 12 03.4**	**-1.6**
LL03	**Petrohue**	**17.32**	**191**	P		**P**	**16 12 08.7**	**-0.8**
LL05	**Los Muermos**	**17.78**	**193**	P		**P**	**16 12 14.3**	**-0.3**
GO07	**Milladeo Hill,**	**19.46**	**192**	P		**P**	**16 12 32.4**	**-0.5**
BDFB	**Brasilia**	**20.70**	**70**	P		**P**	**16 12 44.

baz=160
W57A **Gilead** 60.03 349 P P 16 18 10.1 +0.3
833A **Chaparral WMA,** 60.23 328 P P 16 18 12.1 +0.8
833A **Chaparral WMA,** 60.23 328 P P 16 18 12.3 +1.0
baz=147
Y49A **Blount Mountai** 60.25 343 P P 16 18 10.9 -0.4
KMSC **Kings Mountain** 60.28 348 P P 16 18 11.8 +0.3
baz=166
X48A **Hartselle** 60.98 342 P P 16 18 15.6 -0.6
X48A IAmb IAmb 16 18 16.9
comp=Z,17nm,1.2s
CPCT **Cooper Cave** 61.27 345 P P 16 18 17.8 -0.4
CPCT IAmb IAmb 16 18 51.3
comp=Z,7.4nm,0.9s
TROLL **Troll, Antarti** 61.27 160 P P 16 18 18.6 +0.5
TKL **Tuckaleechee C** 61.29 346 LR LR 16 48 22.0
comp=Z,36nm,18.6s,baz=195,slow=39
TKL **Tuckaleechee C** 61.29 346 P P 16 18 18.0 -0.4
TKL IAmb IAmb 16 18 51.3
comp=Z,11nm,1.0s
SWET **Sewanee** 61.40 343 P P 16 18 18.2 -1.0
SWET IAmb IAmb 16 18 52.1
comp=Z,13nm,0.9s
V48A **Smith Brothers** 62.13 343 P P 16 18 23.7 -0.3
JCT **Junction City** 62.23 329 P P 16 18 25.1 +0.3
JCT **Junction City** 62.23 329 P P 16 18 25.4 +0.6
baz=147
WLAR **White Oak Lake** 62.23 337 P P 16 18 25.5 +0.9
WHTX **Lake Whitney,** 62.46 332 P P 16 18 26.4 +0.2
WHTX IAmb IAmb 16 18 27.6
comp=Z,8.1nm,0.8s
WHTX **Lake Whitney,** 62.46 332 P P 16 18 26.8 +0.5
baz=150
WVT **Waverly** 62.77 342 P P 16 18 27.5 -0.8
WVT IAmb IAmb 16 18 28.4
comp=Z,7.2nm,0.6s
WVT **Waverly** 62.77 342 P P 16 18 27.6 -0.6
baz=160
WVT **Waverly** 62.77 342 P P 16 18 27.3 -0.9
WVT pP pP 16 18 50.5 -7.2
S51A **Beattyville** 63.15 346 P P 16 18 30.5 -0.2
MIAR **Mount Ida** 63.17 337 P P 16 18 31.1 +0.2
MIAR IAmb IAmb 16 18 32.1
comp=Z,14nm,1.2s
MIAR **Mount Ida** 63.17 337 P P 16 18 31.1 +0.2
baz=154
TX31 **Lajitas Ar. Si** 63.20 325 P P 16 18 31.6 +0.3
TX31 IAmb IAmb 16 19 27.9
comp=Z,16nm,1.2s
TX32 **Lajitas Array** 63.20 325 P P 16 18 31.8 +0.5
TXAR **Lajitas Array** 63.20 325 P P 16 18 32.1 +0.8
comp=Z,1.3nm,0.6s,baz=152,slow=8.4,SNR=19
comp=Z,1.3nm,0.6s
TXAR **Lajitas Array** 63.20 325 P P 16 18 31.6 +0.2
T47A **Sharon Grove** 63.38 343 P P 16 18 31.7 -0.5
Z35A **Perchaven, San** 63.53 333 P P 16 18 33.8 +0.5
X37A **Clayton** 63.88 335 P P 16 18 36.1 +0.6
X37A IAmb IAmb 16 18 37.2
comp=Z,6.0nm,0.8s
ABTX **Abilene, Hawle** 63.96 331 P P 16 18 36.1 -0.1
ABTX IAmb IAmb 16 18 37.6
comp=Z,7.0nm,0.8s
ABTX **Abilene, Hawle** 63.96 331 P P 16 18 36.6 +0.4
baz=148
FVM **French Village** 65.25 341 P P 16 18 44.1 -0.4
WMOK **Wichita Mounta** 65.39 332 P P 16 18 45.0 -0.4
WMOK IAmb IAmb 16 20 54.3
comp=Z,5.1nm,0.7s
DEOK **Depew** 65.42 335 P P 16 18 45.5 0.0
DEOK IAmb IAmb 16 20 34.1
comp=Z,27nm,0.4s
ACSO **Alum Creek Sta** 65.52 348 P P 16 18 45.9 -0.2
baz=165
CCM **Cathedral Cave** 65.57 340 P P 16 18 45.7 -0.7
CCM IAmb IAmb 16 18 47.1
comp=Z,6.9nm,0.8s
CCM **Cathedral Cave** 65.57 340 P P 16 18 46.3 -0.2
baz=157
CCM **Cathedral Cave** 65.57 340 P P 16 18 45.8 -0.7
CCM pP pP 16 19 14.4 -1.7
CCM sP sP 16 19 28.9 -0.4
OK030 **Cody Creek RV** 65.60 335 P P 16 18 46.9 +0.1
OK031 **S. Brethren Rd** 65.65 335 P P 16 18 47.1 0.0
GDL2 **Guadalupe Moun** 65.86 327 P P 16 18 49.3 +0.7
S39A **Bolivar** 65.91 338 P P 16 18 48.6 -0.1
S39A IAmb IAmb 16 18 49.7
comp=Z,13nm,0.8s
O48B **Farmland** 66.00 346 P P 16 18 48.5 -0.7
baz=163
QSPA **South Pole Qui** 66.06 180 P P 16 18 50.1 +0.6
QSPA **South Pole Qui** 66.06 180 P P 16 18 49.4 -0.2
QSPA pP pP 16 19 22.6 +2.8
R40A **Maddies Statio** 66.11 339 P P 16 18 49.8 -0.1
M53A **WI Miller and** 66.28 350 P P 16 18 49.8 -1.1
baz=168
L59A **Walton** 66.31 354 P P 16 18 52.2 +1.0
N49A **Columbus Grove** 66.43 347 P P 16 18 51.6 -0.3
N49A IAmb IAmb 16 18 52.0
comp=Z,9.7nm,0.7s
MSTX **Muleshoe** 66.52 329 P P 16 18 53.1 +0.3
MSTX IAmb IAmb 16 18 54.2
comp=Z,14nm,0.9s
MSTX **Muleshoe** 66.52 329 P P 16 18 53.0 +0.3
baz=146
ERPA **Erie** 66.83 350 P P 16 18 54.9 +0.4
baz=168
HSIG 67.01 320 P P 16 18 57.0 +1.1
HSIG IAmb IAmb 16 18 58.7
comp=Z,16nm,1.0s
J59A **Piesco** 67.53 355 P P 16 18 59.8 +0.9
J56A **Wolcott** 67.56 353 P P 16 18 59.4 +0.4
J56A IAmb IAmb 16 19 00.2
comp=Z,12nm,0.8s
J57A **Williamstown** 67.61 354 P P 16 18 59.8 +0.6
319A **Douglas** 67.81 323 P P 16 19 02.5 +1.5
121A **Cookes Peak, D** 67.89 324 P P 16 19 03.4 +1.8
121A **Cookes Peak, D** 67.89 324 P P 16 19 03.5 +2.0
baz=141
PECO **Prince Edward** 68.23 353 P P 16 19 03.1 0.0
PECO IAmb IAmb 16 19 36.3
comp=Z,11nm,1.0s
LIC **Lamto** 68.47 72⇑*e*P P 16 19 02.7 -2.6
comp=Z,25nm,1.0s
R32A **Long Quarter,** 68.53 335 P P 16 19 05.6 +0.4
R32A IAmb IAmb 16 19 06.8
comp=Z,13nm,0.8s
BNM **Barren Site** 68.55 326 P P 16 19 06.1 +0.4
TIC **Toumodi** 68.67 72⇑*e*P P 16 19 04.8 -1.9
comp=Z,15nm,0.9s
LONY **Lake Ozonia** 68.68 355 P P 16 19 06.7 +0.7
LONY **Lake Ozonia** 68.68 355 P P 16 19 06.8 +0.8
baz=174
SBM **South Baldy** 68.70 326 P P 16 19 07.0 +0.2
KIC **Kosan Boka** 68.78 72⇑*e*P P 16 19 06.9 -0.4
comp=Z,18nm,0.5s
DBIC **Dimbokro** 68.83 72 P P 16 19 07.1 -0.4
comp=Z,11nm,0.7s,baz=245,slow=6.0,SNR=13
DBIC LR LR 16 48 11.0
comp=Z,30nm,19.7s,baz=216,slow=35
comp=Z,11nm,0.7s
DBIC **Dimbokro** 68.83 72 P P 16 19 07.2 -0.4
DBIC IAmb IAmb 16 19 08.0
comp=Z,11nm,0.8s
DBIC **Dimbokro** 68.83 72 P P 16 19 06.2 -1.3
DBIC pP pP 16 19 36.8 -1.3
DBIC sP sP 16 19 54.2 +2.8
ANMO **Albuquerque** 69.10 327 P P 16 19 09.7 +0.6
ANMO **Albuquerque** 69.10 327 P P 16 19 10.6 +1.5
baz=143
ANMO **Albuquerque** 69.10 327 P P 16 19 09.5 +0.4
ANMO pP pP 16 19 40.5 +1.5
ANMO sP sP 16 19 56.0 +3.9
L40A **Anamosa** 69.25 342 P P 16 19 09.4 -0.1
L40A IAmb IAmb 16 19 10.2
comp=Z,17nm,1.1s
CBKS **Cedar Bluff** 69.27 334 P P 16 19 10.7 +0.8
CBKS **Cedar Bluff** 69.27 334 P P 16 19 10.8 +0.9
baz=149
TUC **Tucson** 69.36 322 P P 16 19 10.3 -0.3
TUC IAmb IAmb 16 19 13.3
comp=Z,15nm,1.4s
TUC **Tucson** 69.36 322 P P 16 19 12.1 +1.5
baz=139
TUC **Tucson** 69.36 322 P P 16 19 10.3 -0.3
JFWS **Jewell Farm** 69.77 343 P P 16 19 11.6 -1.1
JFWS IAmb IAmb 16 19 13.5
comp=Z,10nm,0.7s
JFWS **Jewell Farm** 69.77 343 P P 16 19 12.7 0.0
baz=158
T25A **Trinidad** 69.88 330 P P 16 19 14.7 +0.9
T25A IAmb IAmb 16 19 16.6
comp=Z,21nm,1.6s
T25A **Trinidad** 69.88 330 P P 16 19 15.2 +1.4
baz=145
214A **Organ Pipe Nat** 70.25 321 P P 16 19 15.7 -0.3
214A IAmb IAmb 16 19 19.1
comp=Z,14nm,1.1s
214A **Organ Pipe Nat** 70.25 321 P P 16 19 18.1 +2.2
baz=137
I42A **Draeger Farm,** 70.34 344 P P 16 19 16.1 -0.1
I42A IAmb IAmb 16 19 17.0
comp=Z,12nm,0.6s
H43A **Windswept, Lux** 70.61 345 P P 16 19 17.6 -0.2
H43A IAmb IAmb 16 19 18.1
comp=Z,9.5nm,0.6s
KSCO **Kaye Shedlock'** 70.64 332 P P 16 19 19.7 +1.4
baz=147
SDCO **Great Sand Dun** 70.88 329 P P 16 19 20.9 +0.9
SDCO **Great Sand Dun** 70.88 329 P P 16 19 21.3 +1.4
baz=144,SNR=11
W18A **Petrified Fore** 70.91 325 P P 16 19 21.8 +1.7
W18A IAmb IAmb 16 19 22.9
comp=Z,13nm,0.9s
W18A **Petrified Fore** 70.91 325 P P 16 19 21.9 +1.8
baz=140
BGNE **Belgrade** 70.91 337 P P 16 19 20.0 +0.2
BGNE **Belgrade** 70.91 337 P P 16 19 20.5 +0.8
baz=151
X16A **Lo Mia Camp, P** 71.30 323 P P 16 19 24.1 +1.6
113A **Mohawk Valley,** 71.39 321 P P 16 19 24.1 +1.3
E46A **Sault Ste Mari** 71.69 348 P P 16 19 24.3 0.0
E46A IAmb IAmb 16 19 25.0
comp=Z,8.4nm,0.8s
Q24A **Divide** 71.70 330 P P 16 19 26.6 +1.6
baz=145
MVCO **Mesa Verde** 71.89 327 P P 16 19 27.6 +1.5
MVCO IAmb IAmb 16 19 28.7
comp=Z,7.9nm,0.8s
MVCO **Mesa Verde** 71.89 327 P P 16 19 27.6 +1.5
baz=142
OGNE **Ogallala** 72.01 334 P P 16 19 27.6 +1.2
baz=148
WUAZ **Wupatki** 72.08 324 P P 16 19 28.9 +1.8
WUAZ IAmb IAmb 16 19 30.2
comp=Z,14nm,0.9s
WUAZ **Wupatki** 72.08 324 P P 16 19 29.3 +2.2
baz=139
GLA **Glamis** 72.22 320 P P 16 19 29.8 +1.9
baz=136
E43A **Lone Tree Farm** 72.24 346 P P 16 19 27.3 -0.3
VLDQ **Val d'Or** 72.41 353 P P 16 19 29.0 +0.5
ECSD **EROS Data Cent** 72.43 339 P P 16 19 28.7 -0.1
ECSD **EROS Data Cent** 72.43 339 P P 16 19 29.1 +0.3
baz=153
BLYC **Blythe** 72.54 321 P P 16 19 31.4 +1.8
BLYC IAmb IAmb 16 19 32.8
comp=Z,13nm,0.9s
YUH **Yuha Desert** 72.58 319 P P 16 19 31.4 +1.4
ISCO **Idaho Springs** 72.59 331 P P 16 19 31.0 +0.8
ISCO **Idaho Springs** 72.59 331 P P 16 19 31.7 +1.5
baz=144
IKP **In-Ko-Pah, Jac** 72.69 319 P P 16 19 32.8 +2.1
baz=135
SMCO **Snowmass** 72.72 329 P P 16 19 32.6 +1.5
SMCO IAmb IAmb 16 19 33.9
comp=Z,7.5nm,0.8s
SWSC **Sam W. Stewart** 72.72 319 P P 16 19 32.6 +1.9
baz=135
PDMCI **Parker Dam,Lak** 72.72 321 P P 16 19 32.5 +1.8
baz=137
PV15 **Paradox Valley** 72.77 328 P P 16 19 32.0 +0.8
PV15 IAmb IAmb 16 19 34.3
comp=Z,8.5nm,0.9s
PV13 **Radium Mtn., P** 72.80 327 P P 16 19 32.7 +1.3
PV07 **Paradox Valley** 72.93 328 P P 16 19 33.4 +1.3
PV11 **David Mesa, Pa** 72.93 328 P P 16 19 33.4 +1.3
PV11 IAmb IAmb 16 20 36.1
comp=Z,26nm,1.8s
BC3 **Big Chuckawall** 73.01 320 P P 16 19 34.5 +1.9
baz=136,SNR=9.9
MONP2 **Monument Peak** 73.05 319 P P 16 19 34.8 +1.8
baz=135
IRM **Iron Mountain** 73.19 321 P P 16 19 35.3 +1.8
baz=136,SNR=8.6
D41A **Chassel** 73.24 346 P P 16 19 34.0 +0.5
D41A IAmb IAmb 16 19 34.9
comp=Z,22nm,1.0s
U15A **North Rim** 73.26 324 P P 16 19 35.9 +1.7
SBA **Scott Base** 73.37 190 P P 16 19 35.7 +1.8
SBA IAmb IAmb 16 19 37.4
comp=Z,26nm,1.6s
F36A **Milaca** 73.40 342 P P 16 19 34.1 -0.3
KOWA **Kowa** 73.43 65 P P 16 19 35.5 +0.1
KOWA IAmb IAmb 16 19 36.8
comp=Z,12nm,0.8s
TPFO **Pinon Flats** 73.57 319 P P 16 19 37.9 +2.0
baz=135
PFO **Pinyon Flats O** 73.58 319 P P 16 19 37.2 +1.3
PFO **Pinyon Flats O** 73.58 319 P P 16 19 38.0 +2.0
baz=135
BELC **Belle Mtn. Jos** 73.58 320 P P 16 19 37.9 +1.9
baz=135
N23A **Red Feather La** 73.63 331 P P 16 19 37.8 +1.5
N23A IAmb IAmb 16 19 38.8
comp=Z,8.5nm,0.8s
N23A **Red Feather La** 73.63 331 P P 16 19 37.6 +1.3
baz=144
PHWY **Pilot Hill** 73.75 332 P P 16 19 38.3 +1.4
GMRC **Granite Mounta** 73.94 321 P P 16 19 40.2 +2.2
baz=136,SNR=16
MURC **Murrieta** 74.01 319 P P 16 19 40.3 +2.0
baz=134
O20A **White River Ci** 74.07 329 P P 16 19 40.1 +1.4
O20A IAmb IAmb 16 19 41.4
comp=Z,14nm,0.8s
O20A **White River Ci** 74.07 329 P P 16 19 40.5 +1.7
baz=142,SNR=5.5
ELS **Elsinore Mount** 74.18 319 P P 16 19 40.8 +1.5
ELS IAmb IAmb 16 19 42.2
comp=Z,8.9nm,0.8s
LCMT **Little Creek M** 74.20 324 P P 16 19 40.4 +0.8
BBRC **Big Bear Solar** 74.30 320 P P 16 19 41.9 +1.6
baz=135
HEC **Hector,Ludlow** 74.36 320 P P 16 19 42.7 +2.3
baz=135,SNR=5.3
SRU **San Rafael Swe** 74.37 327 P P 16 19 41.7 +1.2
SRU IAmb IAmb 16 19 42.9
comp=Z,12nm,0.7s
VNDA **Vanda** 74.38 190 P P 16 19 41.3 +1.4
comp=Z,4.6nm,0.9s,baz=123,slow=5.2,SNR=26
comp=Z,4.6nm,0.9s
VNDA **Vanda** 74.38 190 P P 16 19 41.0 +1.2
MTPU **Mount Pierson** 74.41 325 P P 16 19 42.4 +1.4
TUQ **Turquoise Moun** 74.55 321 P P 16 19 43.6 +2.0
baz=136,SNR=7.8
Q16A **Castle Valley** 74.55 326 P P 16 19 42.3 +0.7
Q16A IAmb IAmb 16 19 45.1
comp=Z,42nm,1.9s
P18A **Preston Nutter** 74.63 328 P P 16 19 43.2 +1.0
P18A IAmb IAmb 16 19 44.9
comp=Z,9.5nm,0.7s
CCUT **Cedar City** 74.66 324 P P 16 19 44.2 +1.9
CCUT IAmb IAmb 16 19 45.9
comp=Z,14nm,0.9s
BFSC **Mount Baldy Ra** 74.73 319 P P 16 19 43.9 +1.3
baz=134
MSU **Marysvale** 74.76 326 P P 16 19 44.3 +1.5
P17A **Butcher Ranch,** 74.76 327 P P 16 19 44.2 +1.5
P17A IAmb IAmb 16 19 45.3
comp=Z,11nm,0.9s
EYMN **Ely** 74.77 344 P P 16 19 43.1 +0.7
baz=158
MVU **Marysvale** 74.77 326 P P 16 19 44.4 +1.4
RWWY **Rawlins** 74.83 331 P P 16 19 44.0 +0.8
RWWY IAmb IAmb 16 21 10.6
comp=Z,14nm,1.0s
TMUT **Trail Mountain** 74.86 327 P P 16 19 44.4 +0.9
SHPR **Sheep Range** 74.88 322 P P 16 19 45.0 +1.5
SHPR IAmb IAmb 16 19 46.6
comp=Z,11nm,1.1s
GSC **Goldstone, Bar** 74.97 321 P P 16 19 45.6 +1.7
GSC IAmb IAmb 16 19 46.9
comp=Z,7.6nm,0.8s
GSC **Goldstone, Bar** 74.97 321 P P 16 19 45.9 +2.0
baz=135,SNR=5.1
RDMU **Red Mountain** 75.04 329 P P 16 19 45.4 +1.0
RDMU IAmb IAmb 16 19 46.6
comp=Z,22nm,1.4s
K22A **Casper** 75.31 332 P P 16 19 46.7 +0.9
K22A **Casper** 75.31 332 P P 16 19 47.1 +1.3
baz=144
EDW2 **Edwards Air Fo** 75.37 319 P P 16 19 47.9 +1.7
baz=134
QSM **Queen of Sheba** 75.47 321 P P 16 19 47.6 +1.0
QSM IAmb IAmb 16 19 49.2
comp=Z,7.4nm,0.7s
RSSD **Black Hills** 75.48 334 P P 16 19 47.5 +0.6
RSSD **Black Hills** 75.48 334 P P 16 19 48.1 +1.3
baz=146
GWY **Greenwater Val** 75.51 321 P P 16 19 48.4 +1.3
GWY IAmb IAmb 16 19 49.7
comp=Z,11nm,0.7s
LRMC **Laurel Mtn Rad** 75.60 320 P P 16 19 49.3 +1.7
baz=134
PSUT **Pine Spring** 75.65 325 P P 16 19 49.5 +1.5
PSUT IAmb IAmb 16 19 50.9
comp=Z,8.1nm,0.8s
NLU **North Lily Min** 75.79 327 P P 16 19 49.7 +1.0
TPNV **Topopah Spring** 75.81 322 P P 16 19 50.5 +1.7
TPNV IAmb IAmb 16 19 52.0
comp=Z,8.8nm,0.8s
TPNV **Topopah Spring** 75.81 322 P P 16 19 50.8 +2.0
baz=136,SNR=9.5
FURC **Furnace Creek,** 75.82 321 P P 16 19 50.4 +1.8
baz=135,SNR=8.3
MPMC **Manual Prospec** 75.89 321 P P 16 19 50.6 +1.3
baz=134
JLU **Jordanelle** 75.97 327 P P 16 19 51.3 +1.5
JLU IAmb IAmb 16 19 52.3
comp=Z,31nm,1.7s
ISA **Isabella, Lake** 76.19 320 P P 16 19 52.9 +2.0
ISA IAmb IAmb 16 19 53.8
comp=Z,11nm,0.7s
ISA **Isabella, Lake** 76.19 320 P P 16 19 52.9 +2.0
baz=134
AGMN **Agassiz Nation** 76.28 341 P P 16 19 51.5 +0.5
baz=154
DUG **Dugway, Tooele** 76.35 326 P P 16 19 53.1 +1.4
DUG **Dugway, Tooele** 76.35 326 P P 16 19 53.4 +1.7
baz=139
TCUT **Toone Canyon** 76.35 328 P P 16 19 53.3 +1.5
R11A **Troy Canyon, C** 76.45 323 P P 16 19 53.6 +1.2
R11A IAmb IAmb 16 19 55.7
comp=Z,16nm,1.5s
R11A **Troy Canyon, C** 76.45 323 P P 16 19 54.4 +2.0
baz=136,SNR=11
PKM **Mcpherson Peak** 76.47 318 P P 16 19 54.6 +2.0
baz=133
GRAC **Grapevine Rang** 76.48 321 P P 16 19 54.5 +2.1
baz=135
CWC **Cottonwood Cre** 76.50 321 P P 16 19 54.5 +1.8
baz=134
SUR **Sutherland** 76.64 120 P P 16 19 55.1 +1.3
VES **Vestal, Richgr** 76.67 320 P P 16 19 55.3 +1.8
baz=133
BW06 **Boulder Array** 76.75 330 P P 16 19 54.9 +0.8
BW06 **Boulder Array** 76.75 330 P P 16 19 54.8 +0.8
baz=142
PD31 **Pinedale Array** 76.75 330 P P 16 19 54.9 +0.8
PDAR **Pinedale Array** 76.75 330 P P 16 19 54.9 +0.8
comp=Z,1.3nm,0.7s,baz=136,slow=7.6,SNR=15
PDAR pP pP 16 20 23.7 -1.1
comp=Z,0.6nm,0.5s,baz=130,slow=7.2,SNR=2.2
comp=Z,1.3nm,0.7s
PDAR **Pinedale Array** 76.75 330 P P 16 19 54.7 +0.6
HWUT **Hardware Ranch** 76.80 328 P P 16 19 54.8 +0.5
HWUT IAmb IAmb 16 19 57.8
comp=Z,7.6nm,0.7s
LCH **Last Change Ra** 76.80 321 P P 16 19 55.5 +1.1
SMMC **Simmler** 76.86 319 P P 16 19 56.8 +2.2
baz=133
BGU **Big Grassy Mou** 77.00 327 P P 16 19 56.7 +1.2
TIN **Tinemaha, Big** 77.01 321 P P 16 19 57.5 +2.0
baz=134
MDND **Maddock** 77.05 339 P P 16 19 56.3 +1.0
baz=151
PAGB **Antelope Grade** 77.30 319 P P 16 19 58.0 +1.0
PAGB IAmb IAmb 16 19 59.9
comp=Z,18nm,1.1s
AHID **Auburn Hatcher** 77.46 329 P P 16 19 58.8 +0.7
AHID IAmb IAmb 16 20 00.2
comp=Z,14nm,0.8s
HVU **Hansel Valley** 77.52 327 P P 16 19 58.8 +0.5
TOA0 **Torodi Ar. Sit** 77.59 69 P P 16 19 58.9 -0.2
TOA0 IAmb IAmb 16 20 03.3
comp=Z,9.4nm,0.6s
TORD **Torodi Ar. Bea** 77.59 69 P P 16 19 59.0 -0.1
comp=Z,7.7nm,0.6s,baz=258,slow=5.8,SNR=56
comp=Z,7.7nm,0.6s
TORD **Torodi Ar. Bea** 77.59 69 P P 16 19 58.6 -0.5
REDW **Red Top Meadow** 77.81 330 P P 16 20 00.8 +0.8
REDW IAmb IAmb 16 20 02.4
comp=Z,8.5nm,0.9s
LOHW **Long Hollow** 77.89 330 P P 16 20 01.1 +0.7
LOHW IAmb IAmb 16 20 02.8
comp=Z,30nm,1.8s
NV11 **Mina Array Sit** 77.93 322 P P 16 20 01.7 +1.1
TPAW **Teton Pass** 77.95 330 P P 16 20 00.9 +0.1
ELK **Elko** 78.00 325 P P 16 20 01.3 +0.2
NVAR **Mina Array Bea** 78.01 322 P P 16 20 02.8 +1.6
comp=Z,1.8nm,0.8s,baz=150,slow=5.6,SNR=11
comp=Z,1.8nm,0.8s
NVAR **Mina Array Bea** 78.01 322 P P 16 20 02.1 +1.0
MOOW **Moose Ponds** 78.06 330 P P 16 20 02.4 +1.1
FXWY **Fox Creek** 78.10 330 P P 16 20 02.5 +0.9
IMW **Indian Meadow** 78.26 330 P P 16 20 03.8 +1.3
RYN **Ryan** 78.27 322 P P 16 20 03.7 +1.2
FLWY **Flagg Ranch** 78.30 330 P P 16 20 03.7 +1.1
FLWY IAmb IAmb 16 20 05.5
comp=Z,11nm,0.8s
KVN **Kaiserville** 78.33 322 P P 16 20 03.3 +0.4
KVN IAmb IAmb 16 20 05.3
comp=Z,10.0nm,1.0s
LAO **LASA Array** 78.47 334 P P 16 20 04.6 +1.3
LAO IAmb IAmb 16 20 05.4
comp=Z,18nm,0.9s
LAO **LASA Array** 78.47 334 P P 16 20 04.3 +1.0
baz=145
RLMT **Red Lodge** 78.47 332 P P 16 20 04.7 +1.1
RLMT **Red Lodge** 78.47 332 P P 16 20 05.0 +1.4
baz=142
TSUM **Tsumeb** 78.61 106 LR LR 16 52 49.2
comp=Z,24nm,18.8s,baz=303,slow=34
TSUM **Tsumeb** 78.61 106 P P 16 20 05.6 +0.8
TSUM IAmb IAmb 16 20 06.7
comp=Z,12nm,0.8s
SCHQ **Schefferville** 78.66 1 P P 16 20 04.3 +0.3
comp=Z,2.8nm,0.7s,baz=167,slow=3.5,SNR=2.2
comp=Z,2.8nm,0.7s
YERR **Yerington** 78.92 322 P P 16 20 06.5 +0.3
YERR IAmb IAmb 16 20 08.9
comp=Z,23nm,1.6s
DGMT **Dagmar** 79.17 336 P P 16 20 07.8 +0.8
DGMT **Dagmar** 79.17 336 P P 16 20 08.5 +1.5
baz=147
GCMT **Greycliff** 79.17 332 P P 16 20 07.8 +0.5
PNTR **Pine Nut** 79.20 322 P P 16 20 09.4 +1.7
PNTR IAmb IAmb 16 20 10.7
comp=Z,14nm,0.8s
PAHR **Pah Rah Range** 79.50 322 P P 16 20 10.2 +1.0
PAHR IAmb IAmb 16 20 12.2
comp=Z,15nm,0.9s
HLID **Hailey** 79.65 328 P P 16 20 11.0 +1.0
HLID IAmb IAmb 16 20 13.0
comp=Z,13nm,0.9s
HLID **Hailey** 79.65 328 P P 16 20 12.0 +2.1
baz=138
MCMT **McKenzie Canyo** 79.85 329 P P 16 20 12.2 +1.1
BOZ **Bozeman (W)** 79.89 331 P P 16 20 12.0 +0.8
BOZ **Bozeman (W)** 79.89 331 P P 16 20 12.3 +1.2
baz=140
DLMT **Dillon** 80.14 330 P P 16 20 13.5 +0.9
DLMT IAmb IAmb 16 20 15.3
comp=Z,14nm,1.2s
BEKR **Beckworth** 80.16 322 P P 16 20 14.2 +1.4
MFID **Camas Ranch** 80.24 327 P P 16 20 14.4 +1.4
MFID IAmb IAmb 16 20 15.8

comp=Z,22nm,1.7s
LRM Limekiln Ridge 80.43 330 P P 16 20 15.2 +1.0
EGMT Eagleton 80.97 333 P P 16 20 17.5 +0.7
EGMT IAmb IAmb 16 20 18.6
comp=Z,10nm,0.9s
EGMT Eagleton 80.97 333 P P 16 20 17.7 +0.9
baz=142
MOD Modoc Plateau 81.51 323 P P 16 20 20.9 +0.9
PLID Pearl Lake 81.55 328 P P 16 20 21.2 +1.1
PLID IAmb IAmb 16 20 22.4
comp=Z,16nm,0.8s
J08A Circle Bar Ran 81.55 325 P P 16 20 20.7 +0.7
J08A IAmb IAmb 16 20 22.7
comp=Z,9.7nm,0.9s
BOSA Boshof 81.59 117 P P 16 20 21.0 +0.3
comp=Z,5.0nm,0.5s,baz=250,slow=3.3,SNR=17
comp=Z,5.0nm,0.5s
MAW Mawson 81.60 163 P P 16 20 21.1 +1.3
comp=Z,20nm,0.6s,baz=208,slow=6.2,SNR=32
comp=Z,20nm,0.6s
MAW Mawson 81.60 163 P P 16 20 20.8 +0.9
MSO Missoula 81.86 330 P P 16 20 23.0 +1.4
baz=139
BMO Blue Mountains 82.02 327 P P 16 20 23.4 +1.0
K05A Summer Lake 82.39 324 P P 16 20 26.2 +1.6
K05A IAmb IAmb 16 20 27.4
comp=Z,12nm,0.9s
I07A Izee 82.59 325 P P 16 20 26.8 +1.4
I07A IAmb IAmb 16 20 27.9
comp=Z,22nm,1.7s
JTMT Jette 82.71 331 P P 16 20 26.8 +0.8
JTMT IAmb IAmb 16 20 28.2
comp=Z,10nm,0.7s
YBH Yreka Blue Hor 82.73 322 P P 16 20 26.3 +0.1
F10A Beach Ranch, E 82.78 328 P P 16 20 27.4 +1.1
L04D Klamath Falls 82.83 323 P P 16 20 27.6 +0.9
baz=132
J05D Fort Rock, OR 82.96 324 P P 16 20 28.6 +1.2
baz=133
PINE Pine Mountain 83.14 324 P P 16 20 29.4 +1.0
PINE IAmb IAmb 16 20 31.1
comp=Z,13nm,0.8s
G08A Pilot Rock 83.15 327 P P 16 20 29.2 +0.9
LBTB Lobatse 83.27 114 LR LR 16 55 44.9
comp=Z,28nm,18.0s,baz=235,slow=34
LBTB Lobatse 83.27 114 P P 16 20 29.8 +0.3
LBTB IAmb IAmb 16 20 30.9
comp=Z,15nm,0.9s
J04D Umpqua Nationa 83.40 323 P P 16 20 30.6 +0.9
J04D IAmb IAmb 16 20 31.8
comp=Z,12nm,0.8s
J04D Umpqua Nationa 83.40 323 P P 16 20 30.9 +1.2
baz=132
L02F Cave Junction 83.47 322 P P 16 20 31.3 +1.4
baz=131
WALA Waterton Lakes 83.53 332 P P 16 20 30.4 +0.3
WALA IAmb IAmb 16 20 32.6
comp=Z,8.8nm,1.1s
I05D Terrebonne, OR 83.72 325 P P 16 20 32.9 +1.7
baz=133
K02D Willamette Mer 83.90 322 P P 16 20 33.8 +1.6
baz=131
I04A Tendick Farm, 83.93 324 P P 16 20 34.1 +1.9
baz=132
DBO Dodson Butte 83.94 323 P P 16 20 33.7 +1.4
HAWA Hanford 84.21 327 P P 16 20 33.5 -0.1
HAWA IAmb IAmb 16 20 35.4
comp=Z,6.1nm,0.7s
G05D Wamic, OR 84.33 325 P P 16 20 35.7 +1.5
baz=133
J01E Myrtle Point 84.35 323 P P 16 20 36.5 +2.2
baz=131
H04A Detroit Lake 84.41 325 P P 16 20 35.0 +0.4
H04A IAmb IAmb 16 20 36.2
comp=Z,14nm,1.4s
I02E Swisshome, OR 84.92 323 P P 16 20 38.6 +1.5
I02E Swisshome, OR 84.92 323 P P 16 20 39.4 +2.3
baz=131
FCC Fort Churchill 85.36 347 P P 16 20 39.8 +0.9
D05A Enumclaw 85.98 326 P P 16 20 43.1 +0.8
E03A Lebam 86.36 325 P P 16 20 45.3 +1.1
NLWA Neilton Lookou 87.08 326 P P 16 20 48.5 +0.7
NLWA IAmb IAmb 16 20 49.8
comp=Z,9.0nm,1.0s
ESDC Sonseca Array 87.22 44 P P 16 20 49.3 +0.7
comp=Z,1.0nm,0.8s,baz=233,slow=5.0,SNR=5.6
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 87.22 44 P P 16 20 49.0 +0.3
ESDC IAmb IAmb 16 21 23.3
comp=Z,10nm,1.4s
PGC Sidney 87.69 327 P P 16 20 51.5 +0.9
PGC IAmb IAmb 16 20 52.5
comp=Z,9.2nm,0.8s
CLRS Cowichan Lake 88.14 327 P P 16 20 53.5 +0.8
CLRS IAmb IAmb 16 22 53.4
comp=Z,15nm,1.4s
OZB Mount Ozzard 88.92 326 P P 16 20 57.6 +1.1
CBB Campbell River 89.54 327 P P 16 21 00.3 +1.0
CASY Casey 89.86 179 P P 16 21 01.5 +0.9
SFJD Kangerlussuaq 91.81 7 LR LR 17 07 43.9
comp=Z,17nm,18.1s,baz=130,slow=39
YKA Yellowknife Ar 93.91 340 P P 16 21 19.4 +0.2
comp=Z,4.0nm,0.7s,baz=133,slow=4.3,SNR=8.0
YKA pP **pP 16 21 49.6 -1.1**
comp=Z,1.8nm,0.7s,baz=131,slow=5.3,SNR=3.0
comp=Z,4.0nm,0.7s
DLBC Dease Lake 96.87 332 P P 16 21 34.4 +1.5
baz=126
P33M Teslin, Yukon 99.06 333 P Pdif 16 21 44.1 +1.4
baz=123
P32M Atlin 99.09 332 P Pdif 16 21 44.1 +1.3
baz=123
I26K Coal Creek Min 105.66 335 P PKiKP 16 26 25.0 +0.8
baz=114
POKR Poker Plat Res 107.27 334 P PKiKP 16 26 28.3 +1.1
baz=110
SII Sitkinak Islan 107.69 325 P PKiKP 16 26 30.1 +1.9
baz=107
AKASG Malin Array Be 112.85 43 PKiKP PKiKP 16 26 37.2 -0.9
comp=Z,1.1nm,0.8s,baz=260,slow=3.4,SNR=2.2
ARCES ARCESS Array B 113.65 23 PKKPbc PKKPbc 16 37 23.7 -1.4
comp=Z,0.9nm,0.6s,baz=90,slow=4.5,SNR=6.8
KBZ Khabaz 121.19 52 PKP PKPdf 16 26 54.1 -0.2
comp=Z,0.8nm,0.5s,baz=168,slow=0.7,SNR=5.1
ASAR Alice Springs 127.89 206 PKhKP PKPpre 16 27 01.9
comp=Z,0.2nm,0.6s,baz=136,slow=1.7,SNR=6.8
ASAR PKP **PKPdf 16 27 08.1 0.0**
comp=Z,6.2nm,0.7s,baz=132,slow=1.8,SNR=86
ARU Arti 129.90 35 PKP PKiKP 16 27 11.7 +0.3
comp=Z,1.3nm,0.3s,baz=285,slow=2.6,SNR=4.4
WRA Warramunga Arr 131.02 208 PKhKP PKPpre 16 27 07.3
comp=Z,0.8nm,1.0s,baz=136,slow=1.9,SNR=7.2
WRA PKP **PKPdf 16 27 14.4 +0.4**
comp=Z,3.6nm,0.6s,baz=151,slow=1.7,SNR=84
WRA SKPbc **SKPab 16 30 28.0 -0.1**
comp=Z,0.4nm,0.6s,baz=155,slow=3.9,SNR=6.1
AKTO Aktyubinsk 131.09 43 PKP PKiKP 16 27 14.0 -0.1
comp=Z,1.3nm,0.7s,baz=345,slow=3.2,SNR=4.7
AKTO SKPbc **SKPab 16 30 27.4 0.0**
comp=Z,1.5nm,0.6s,baz=248,slow=5.4,SNR=5.9
FITZ Fitzroy Crossi 135.92 199 PKP PKPdf 16 27 23.9 +0.7
comp=Z,3.3nm,0.7s,baz=185,slow=7.1,SNR=8.3
KURBB Kurchatov Arra 143.10 36 PKhKP PKPpre 16 27 32.5
comp=Z,1.8nm,0.7s,baz=300,slow=2.9,SNR=12
ZALV Zalesovo Beam 144.00 27 PKP PKPbc 16 27 35.5 +0.6
comp=Z,13nm,0.8s,baz=301,slow=4.3,SNR=46
ZALV pPKP pPKPdf 16 28 06.5 -3.5
comp=Z,3.0nm,0.7s,baz=293,slow=4.0,SNR=1.4
ZALV SKPbc **SKiKP 16 31 05.5 0.0**
comp=Z,1.2nm,0.6s,baz=297,slow=4.4,SNR=4.6
AAK Ala-Archa 144.12 50 PKP PKPdf 16 27 37.2 -0.3
comp=Z,1.5nm,0.2s,baz=227,slow=5.4,SNR=4.8
KSH Kashi 146.12 54 PKPbc PKPab 16 27 43.2 +0.2
GUMO Guam 147.13 257 PKPbc PKPbc 16 27 45.7 +0.1
comp=Z,78nm,0.8s,baz=203,slow=7.7,SNR=4.4
MKAR Makanchi Array 147.29 39 PKPbc PKPdf 16 27 43.2 +0.6
comp=Z,12nm,0.6s,baz=297,slow=3.2,SNR=68
SIJI Sorong 148.81 220 PKPbc PKiKP 16 27 50.9 -0.5
comp=Z,28nm,0.7s,baz=104,slow=1.0,SNR=4.1
KLR Kul'dur 150.50 333 PKPbc PKPbc 16 27 53.3 +0.2
baz=352,slow=3.3
WMQ Urumqi 152.12 39 *e*P PKPdf 16 27 50.7 +0.3
USRK Ussuriysk Ar. 154.10 326 PKPbc PKiKP 16 28 01.9 +0.6
comp=Z,0.8nm,0.5s,baz=3.8,slow=2.7,SNR=5.2
USRK PKPab **PKPab 16 28 15.8 +0.5**
comp=Z,1.4nm,0.6s,baz=36,slow=4.7,SNR=4.8
MJAR Matsushiro Arr 154.22 305 PKPbc PKiKP 16 28 03.2 +1.3
comp=Z,1.0nm,0.5s,baz=60,slow=1.7,SNR=3.1
MJAR PKPab **PKPab 16 28 17.2 +1.0**
comp=Z,4.3nm,1.0s,baz=91,slow=2.7,SNR=6.7
BNX BinXian 155.06 334 ⇑P **PKPab 16 28 20.0 +0.6**
BNX pmax pmax
comp=Z,12nm,0.8s
BNX pmax pmax
comp=Z,130nm,4.4s
SONM Songino Array 155.96 9 PKP PKPdf 16 27 56.4 +0.7
comp=Z,1.4nm,0.9s,baz=306,slow=1.0,SNR=7.2
SONM PKPab **PKPab 16 28 24.3 +1.0**
comp=Z,1.5nm,0.7s,baz=320,slow=4.6,SNR=7.5
KSRS Korea Array 160.90 318 PKPab PKPab 16 28 46.3 +1.4
comp=Z,1.8nm,0.8s,baz=51,slow=5.0,SNR=4.4
GTA Gaotai 161.68 31 ⇑PKP **PKPdf 16 28 04.0 +1.2**
GTA LR LR
comp=N,86nm,15.6s
GTA LR LR
comp=E,140nm,15.6s
GTA LR LR
comp=Z,100nm,15.3s
HHC Hu-ho-hao-te 163.34 1 *e*P PKPdf 16 28 06.7 +2.4
CMAR Chiang Mai Arr 166.69 113 PKP PKPdf 16 28 08.4 +0.7
comp=Z,0.3nm,0.3s,baz=241,slow=1.9,SNR=4.8
CMAR PKPab **PKPab 16 29 11.1 0.0**
comp=Z,0.5nm,0.3s,baz=257,slow=4.6,SNR=5.7
PZH PanZhiHua 170.54 74 PKP PKPdf 16 28 08.8 -1.4

GUC 08 16:08:20.1±0.7, 30.09°S×71.46°W, h49km±8km, ML3.7, 2C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.26**	**49**	IAML		16 08 38.2	
	comp=E,5µm,0.3s						
CO05	**La Serena**	**0.26**	**49**	⇑*i* P	Pn	16 08 30.0	+1.2
CO05	**La Serena**	**0.26**	**49**	*i* S	Sn	16 08 37.6	+2.6
GO04	**Tololo Observa**	**0.58**	**98**	*i* S	Sn	16 08 44.4	+2.9
GO04	**Tololo Observa**	**0.58**	**98**	*e*P	Pn	16 08 33.6	+1.0
GO04				*i* S	Sn	16 08 44.3	+2.8
GO04	**Tololo Observa**	**0.58**	**98**	*e*P	Pn	16 08 33.8	+1.2
CO06	**Fray Jorge**	**0.60**	**194**	IAML		16 08 39.2	
	comp=N,13µm,0.2s						
CO06	**Fray Jorge**	**0.60**	**194**	⇑*i* P	Pn	16 08 30.3	-2.2
CO06	**Fray Jorge**	**0.60**	**194**	*i* S	Sn	16 08 38.1	-3.4
CO03	**El Pedregal**	**1.00**	**138**	IAML		16 08 51.7	
	comp=E,1µm,0.1s						
CO03	**El Pedregal**	**1.00**	**138**	⇓*i* P	Pn	16 08 37.6	-0.3
CO03	**El Pedregal**	**1.00**	**138**	*i* S	Sn	16 08 51.0	-0.1
CO02	**Combarbal**	**1.18**	**160**	IAML		16 08 55.0	
	comp=E,6µm,0.3s						
CO02	**Combarbal**	**1.18**	**160**	⇓*i* P	Pn	16 08 39.5	-0.9
CO02	**Combarbal**	**1.18**	**160**	*i* S	Sn	16 08 53.8	-1.5
CO01	**Juntas del Tor**	**1.19**	**85**	IAML		16 09 01.7	
	comp=N,630nm,0.2s						
CO01	**Juntas del Tor**	**1.19**	**85**	⇓*i* P	Pn	16 08 42.9	+2.3
CO01	**Juntas del Tor**	**1.19**	**85**	*i* S	Sn	16 09 00.1	+4.2
LCO	**Las Campanas**	**1.27**	**32**	*i* S	Sn	16 09 01.9	+4.2
LCO	**Las Campanas**	**1.27**	**32**	*e*P	Pn	16 08 43.5	+1.8
LCO				*i* S	Sn	16 09 01.9	+4.2
LCO	**Las Campanas**	**1.27**	**32**	*e*P	Pn	16 08 43.4	+1.8
AC04	**Llanos de Chal**	**1.91**	**10**	*i* P	Pn	16 08 51.6	+1.3
VA06	**Catapilco**	**2.46**	**177**	*e*P	Pn	16 08 60.0	+2.2
VA06				*i* S	Sn	16 09 30.3	+3.6
VA06				IAML		16 09 47.0	
	comp=N,298nm,0.3s						
GO03	**Copiap**	**2.71**	**24**	*e*P	Pn	16 09 02.9	+1.6
GO03				IAML		16 09 59.4	
	comp=N,824nm,0.5s						
VA03	**San Esteban**	**2.77**	**164**	IAML		16 09 52.3	
	comp=E,260nm,0.3s						
VA03	**San Esteban**	**2.77**	**164**	*e*P	Pn	16 09 02.2	0.0
VA03				*i* S	Sn	16 09 34.4	-0.1
VA03				IAML		16 09 52.2	
	comp=E,248nm,0.2s						
VA03	**San Esteban**	**2.77**	**164**	*i* P	Pn	16 09 02.1	0.0
VA03	**San Esteban**	**2.77**	**164**	*e*S	Sn	16 09 33.9	-0.6
ROCH	**El Roble**	**2.90**	**172**	*e*P	Pn	16 09 06.7	+2.8
ROCH				*i* S	Sn	16 09 41.3	+3.7
ROCH				IAML		16 09 51.1	
	comp=N,177nm,0.3s						
VCA	**Vinchina**	**3.15**	**65**	⇓*i* P	Pn	16 09 13.1	+5.8
VCA	**Vinchina**	**3.15**	**65**	*e*S	Sn	16 09 46.7	+3.0
MT02	**Curacav**	**3.17**	**175**	*e*P	Pn	16 09 09.6	+2.1
LMEL	**Las Melosas**	**3.90**	**164**	*e*P	Pn	16 09 20.1	+2.5
LMEL				*i* S	Sn	16 10 02.0	-0.1

WEL 08 16:28:07.7±0.5, 39°S±3°×17°5E±°, h10km±4km, M2.0/7, ML2.3/12, MLv2.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=164.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.22**	**141**	P	Pb	16 28 13.4	-0.5
VRZ				S	Sg	16 28 17.7	+2.2
MHEZ	**Mangahewa**	**0.24**	**238**	P	Pb	16 28 13.8	-0.3
MHEZ				S	Sg	16 28 18.2	+2.3
HIZ	**Hauiti**	**0.49**	**26**	P	Pb	16 28 18.1	-0.2
HIZ				S	Sb	16 28 25.8	+0.3
NEZ	**North Egmont**	**0.49**	**230**	P	Pb	16 28 18.0	-0.5
NEZ				S	Sb	16 28 25.5	-0.4
PKE	**Pukeiti**	**0.52**	**242**	P	Pg	16 28 18.4	+0.4
PKE				S	Sb	16 28 26.4	-0.2
LREZ	**Lake Rotokare**	**0.53**	**195**	P	Pg	16 28 18.2	+0.2
LREZ				S	Sb	16 28 26.9	+0.1
KHEZ	**Kahui Hut**	**0.56**	**232**	P	Pg	16 28 19.0	+0.4
KHEZ				S	Sb	16 28 27.1	-0.6
NBEZ	**Newall Road No**	**0.64**	**240**	P	Pg	16 28 20.5	+0.4
NBEZ				S	Sb	16 28 30.1	+0.2
TWVZ	**Taurewa**	**0.68**	**100**	P	Pg	16 28 20.9	0.0
TWVZ				S	Sg	16 28 30.2	+0.4
NMEZ	**Namu Road**	**0.72**	**230**	P	Pg	16 28 21.7	+0.1
NMEZ				S	Sb	16 28 32.6	+0.4
NGZ	**Ngauruhoe**	**0.83**	**106**	S	Sb	16 28 36.2	+0.7
NNVZ	**North Ngauruho**	**0.83**	**103**	P	Pg	16 28 23.7	0.0
NNVZ				S	Sb	16 28 36.4	+0.9
SNVZ	**South Ngauruho**	**0.86**	**106**	P	Pg	16 28 24.3	0.0
SNVZ				S	Sg	16 28 35.5	-0.1
BHHZ	**Black Hill Sta**	**1.27**	**116**	P	Pn	16 28 31.0	-0.6
BHHZ				S	Sb	16 28 47.2	-1.0
TSZ	**Takapari Road**	**1.54**	**136**	P	Pn	16 28 35.2	-0.1

*IDC **08** 16:28:21.5±3.3, 18°.32S×177°.96W, h615km±20km, mb2.9/5, mbtmp4.0/6, Error ellipse: s-maj=60.0km s-min=28.9km az=58.0*
*NEIC **08** 16:28:21.6±1.7, 17°.8S±0°.1×178°.0W±0°.2, h615km±10km, mb4.4/21, Error ellipse: s-maj=27.3km s-min=17.2km az=127.0*

ISC 08 16:28:19.4±0.9, 18°.0S±0°.1×177°.8W±0°.2, h590km, n26, σ1§68/28, mb4.2/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.01**	**274**	P	**P**	**16 29 47.1**	**+2.8**
	28nm,0.7s,baz=128,slow=12,SNR=22						
URZ	**Urewera**	**20.64**	**192**	P	**P**	**16 32 16.7**	**-2.5**
	2.2nm,0.3s,baz=2.7,slow=14,SNR=1.4						
	2.2nm,0.3s						
URZ	**Urewera**	**20.64**	**192**	P	**P**	**16 32 16.8**	**-2.3**
URZ				IAmb	IAmb	16 32 52.0	
	comp=Z,33nm,1.3s						
QRZ	**Quartz Range**	**24.20**	**198**	P	**P**	**16 32 50.2**	**-0.6**
KHZ	**Kahutara**	**25.41**	**195**	P	**P**	**16 32 59.2**	**-2.2**
RPZ	**Rata Peaks**	**27.28**	**198**	P	**P**	**16 33 17.1**	**-0.9**
	comp=Z,4.7nm,0.8s,baz=7.3,slow=16,SNR=1.0						
	comp=Z,4.7nm,0.8s						
CTAO	**Charters Tower**	**34.04**	**261**	P	**P**	**16 34 16.8**	**+0.7**
CAN	**Canberra**	**34.12**	**233**	P	**P**	**16 34 16.2**	**-0.4**
CAN				IAmb	IAmb	16 34 42.1	
	comp=Z,16nm,1.4s						
TOO	**Toolangi**	**37.57**	**231**	P	**P**	**16 34 44.3**	**-0.6**
TOO				IAmb	IAmb	16 34 45.3	
	comp=Z,8.1nm,0.9s						
STKA	**Stephens Creek**	**39.11**	**241**	P	**P**	**16 34 55.3**	**-2.1**
	comp=Z,1.0nm,0.5s,baz=90,slow=10,SNR=3.3						
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**39.11**	**241**	P	**P**	**16 34 57.0**	**-0.4**
MCQ	**Macquarie Isla**	**40.56**	**201**	P	**P**	**16 35 10.2**	**+1.8**
SBLHI	**Steaming Bluff**	**43.29**	**32**	P	**P**	**16 35 30.1**	**-0.5**
BBOO	**Buckleboo**	**43.89**	**241**	P	**P**	**16 35 33.9**	**-1.1**
BBOO				IAmb	IAmb	16 35 37.4	
	comp=Z,18nm,1.3s						
WR0	**Warramunga Arr**	**45.03**	**260**	P	**P**	**16 35 42.7**	**-1.2**
WR0				IAmb	IAmb	16 36 01.4	
	comp=Z,8.1nm,1.4s						
WB0	**Warramunga Ar**	**45.19**	**260**	P	**P**	**16 35 43.7**	**-1.4**
WRAB	**Tennant Creek**	**45.21**	**260**	P	**P**	**16 35 43.6**	**-1.7**
WRAB				IAmb	IAmb	16 36 03.0	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Ar**	**45.22**	**260**	P	**P**	**16 35 43.7**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=97,slow=7.3,SNR=16						
WRA				PcP	**PcP**	**16 37 11.3**	**-1.4**
	comp=Z,0.6nm,1.1s,baz=91,slow=3.8,SNR=2.3						
	comp=Z,0.2nm,0.3s						
AS31	**Alice Springs**	**45.35**	**254**	P	**P**	**16 35 44.7**	**-1.6**
ASAR	**Alice Springs**	**45.35**	**254**	P	**P**	**16 35 45.1**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=95,slow=7.3,SNR=48						
ASAR				PcP	**PcP**	**16 37 11.7**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=103,slow=4.0,SNR=6.6						
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**45.35**	**254**	P	**P**	**16 35 44.5**	**-1.9**
FITZ	**Fitzroy Crossi**	**53.62**	**261**	P	**P**	**16 36 45.9**	**-1.0**
FITZ				IAmb	IAmb	16 36 51.1	
	comp=Z,9.3nm,1.3s						
PSA00	**Pilbara Seismi**	**58.48**	**255**	P	**P**	**16 37 20.2**	**-0.1**
CASY	**Casey**	**66.28**	**205**	P	**P**	**16 38 13.3**	**+3.6**
CASY				IAmb	IAmb	16 38 34.6	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**72.02**	**180**	P	**P**	**16 38 44.1**	**-0.2**
SCM	**Sheep Creek Mo**	**83.20**	**14**	P	**P**	**16 39 44.5**	**+0.2**
SCM				IAmb	IAmb	16 40 21.0	
	comp=Z,17nm,1.2s						

WEL 08 16:28:20.6±0.5, 40°S±4°×17°5E±°, h15km±6km, M2.1/6, ML2.5/8, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=153.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIW	**Kapiti Island**	**0.46**	**144**	P	Pb	16 28 31.1	+0.7
KIW				S	Sb	16 28 37.9	+0.9
OGWZ	**Otaki Gorge**	**0.57**	**125**	P	Pb	16 28 33.0	+0.7
OGWZ				S	Sb	16 28 41.5	+1.3
DUWZ	**D'Urville Isla**	**0.57**	**237**	P	Pb	16 28 32.2	-0.2
DUWZ				S	Sb	16 28 41.5	+1.2
OHWZ	**Ohakea**	**0.65**	**64**	P	Pg	16 28 33.1	-0.2
OHWZ				S	Sb	16 28 42.7	+0.3
CAW	**Cannon Point**	**0.73**	**148**	P	Pb	16 28 35.6	+0.6
TCW	**Tory Channel**	**0.75**	**196**	P	Pb	16 28 35.5	+0.2
TCW				S	Sb	16 28 45.9	+0.6
MRZ	**Mangatainoka R**	**0.80**	**103**	P	Pb	16 28 36.6	+0.4
MRZ				S	Sb	16 28 47.8	+1.0
HOWZ	**Holdsworth Sta**	**0.84**	**119**	P	Pn	16 28 37.6	-0.3
HOWZ				S	Sn	16 28 49.6	-0.2
TUWZ	**Tuamarina**	**1.04**	**206**	P	Pb	16 28 40.2	-0.2
TUWZ				S	Sb	16 28 53.8	-0.1
TSZ	**Takapari Road**	**1.16**	**69**	P	Pn	16 28 41.9	-0.4
TSZ				S	Sb	16 28 56.5	-0.7
TSZ	**Takapari Road**	**1.16**	**69**	S	Sb	16 28 56.3	-0.9
KHEZ	**Kahui Hut**	**1.27**	**341**	S	Sg	16 29 01.5	0.0

*JMA **08** 16:40:37.6±0.1, 45°N±2°×14°2E±°, h281km, MV2.6/25, SOYA REGION*
*SKHL **08** 16:40:41.4±0.6, 45°.00N×143°.10E, h203km±2km*

ISC 08 16:40:38.3±3.3, 45.07N±0°.07×143°.1E±0°.1, h273km±24km, n12, σ1§88/16, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	**Soyaes**	**0.34**	**252**	*e*P	**Pn**	**16 41 13.6**	**+0.1**
ASAJ	**Asahikawa**	**1.00**	**199**	*e*P	**Pn**	**16 41 16.1**	**+0.2**
JMP	**Maruseppu**	**1.08**	**168**	*e*P	**Pn**	**16 41 17.7**	**+1.3**
JKK2	**Kamakawa 2**	**1.21**	**190**	*e*P	**Pn**	**16 41 17.6**	**+0.5**
JKK2				*e*S	**S**	**16 41 47.8**	**+0.1**
JTKR	**Abashiri--Toko**	**1.26**	**150**	*e*P	**Pn**	**16 41 19.8**	**+2.5**
JAR	**Ashorobuto**	**1.84**	**163**	*e*P	**Pn**	**16 41 23.7**	**+2.2**
JRA	**Rausu**	**1.87**	**126**	*e*P	Pn	16 41 26.4	+4.8
YSS	**Yuzh-Sakhalins**	**1.90**	**354**	*e*P	**Pn**	**16 41 22.8**	**+1.0**
YSS				AMB	AMB	16 41 22.9	
	20nm,0.3s						
YSS				*e*S	**S**	**16 41 55.2**	**-1.1**
				A	A	16 41 56.0	
	20nm,0.8s						
YSS				A	A	16 41 56.0	
	10.0nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**2.26**	**116**	*e*P	**Pn**	**16 41 24.6**	**-0.4**
YUK				*e*S	**S**	**16 41 58.8**	**-3.3**
AKK	**Akkeshi**	**2.42**	**147**	*e*P	**Pn**	**16 41 28.3**	**+1.7**
AKK				*e*S	**S**	**16 42 07.0**	**+2.1**
JCH	**Churui**	**2.46**	**175**	*e*P	**Pn**	**16 41 26.4**	**-0.5**
JCH				*e*S	**S**	**16 42 02.7**	**-2.8**
JNBK	**Urakawa-nobuka**	**2.79**	**184**	*e*P	**Pn**	**16 41 30.2**	**0.0**

*BER **08** 17:02:30.6±1.8, 72°.42N×6°.18E, h10km, Confirmed Earthquake*
*IDC **08** 17:02:37.3±12.0, 74°.05N×7°.22E, h0km, mb3.4/1, mbtmp3.3/3, ML2.6/2, Error ellipse: s-maj=159.6km s-min=49.0km az=154.0*

ISC 08 17:02:45.5±1.6, 73°.61N±0°.10×8°.4E±0°.2, h10km, n9, σ1§14/9, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.05**	**68**	*e*P	**Pn**	**17 03 34.2**	**+0.5**
HSPB	**Hornsund (broa**	**3.86**	**25**	*e*P	**Pn**	**17 03 44.9**	**+0.1**
BRBA	**Barentsburg A**	**4.69**	**15**	*e*P	**Pn**	**17 03 54.9**	**-1.3**
SPA0	**Spitsbergen Ar**	**4.98**	**19**	*e*P	**Pn**	**17 04 01.5**	**+1.3**
HOPEN	**Hopen**	**5.17**	**48**	*e*P	**Pn**	**17 04 03.4**	**+0.6**
KBS	**Kingsbay**	**5.41**	**7**	*e*P	**Pn**	**17 04 06.2**	**+0.2**
ARCES	**ARCESS Array B**	**6.76**	**119**	Pn	**Pn**	**17 04 23.9**	**-0.7**
	0.2nm,0.3s,baz=320,slow=12,SNR=11						
ARCES				Sn	Sn	17 05 33.1	-8.5
	0.1nm,0.3s,baz=306,slow=21,SNR=1.0						
	1.2nm,0.5s						
NOA	**NORSAR Array B**	**12.67**	**174**	Pn	**Pn**	**17 05 46.4**	**+0.9**
	baz=353,slow=14,SNR=1.9						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**24.66**	**147**	P	**P**	**17 08 04.4**	**-1.5**
	0.3nm,0.4s,baz=343,slow=9.5,SNR=2.1						
	0.3nm,0.4s						

*NAO **08** 17:05:56.3±872.0, 73°.54N×8°.62E, h16km±154km, ML3.3*
*BER **08** 17:05:57.0±3.4, 73°.56N×8°.74E, h10km, ML3.3(NAO), Confirmed Earthquake*

ISC 08 17:05:54.4±1.9, 73°.48N±0°.06×8°.9E±0°.1, h10km, n26, σ1§61/33, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**2.98**	**65**	Pn	**Pn**	**17 06 43.2**	**+1.6**
BJO1	**Bjornoya**	**2.98**	**65**	*e*P	**Pn**	**17 06 43.2**	**+1.6**
HSPB	**Hornsund (broa**	**3.92**	**22**	Pn	**Pn**	**17 06 54.0**	**-0.5**
HSPB	**Hornsund (broa**	**3.92**	**22**	*e*P	**Pn**	**17 06 54.0**	**-0.5**
BRBA	**Barentsburg A**	**4.78**	**13**	Pn	**Pn**	**17 07 05.8**	**-0.5**
BRBA	**Barentsburg A**	**4.78**	**13**	*e*P	**Pn**	**17 07 05.4**	**-0.9**
TRO	**Tromso**	**5.00**	**136**	*e*P	**Pn**	**17 07 10.4**	**+1.1**
SPA0	**Spitsbergen Ar**	**5.06**	**18**	Pn	**Pn**	**17 07 10.3**	**+0.2**
	baz=193,slow=12

ARA0				Sn	**Sn**	**17 08 43.1**	**-2.9**
	baz=319,slow=18							
KEV	**Kevo**	**6.81**	**114**	*eP*	**Pn**	**17 07 36.5**	**+2.3**
KONS	**Konsvik**	**7.16**	**166**	*eP*	**Pn**	**17 07 39.0**	**0.0**
APA0	**Apatity Array**	**9.89**	**114**	Pn	**Pn**	**17 08 16.9**	**+0.6**
	baz=351,slow=12							
APA0	**Apatity Array**	**9.89**	**114**	Pn	**Pn**	**17 08 16.9**	**+0.6**
	baz=351,slow=12							
SCO	**Scoresbysund**	**9.93**	**268**	*i* P	Pn	17 08 09.0	-7.9

*EAF **08** 17:08:17.5±9.5,26˚.46S×23˚.64E, h10km, MD3.4*
*PRE **08** 17:08:24.0±0.9,26˚.92S×26˚.78E, h2km, ML2.5*
*BUL **08** 17:08:26.8±0.2,26˚.96S×26˚.59E, h10km, MD3.5*
ISC 08 17:08:25.0±1.5,**26˚.93S**±0˚.04×**26.74E**±0˚.05,**h11**km±11km,
n14,σ1°**73**/28,**South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSR	**Koster**	**1.08**	**7**	*eP*			**Pg**	**17 08 44.6**	**-1.1**
KSR				*eS*			**Sg**	**17 08 59.4**	**-0.5**
KSR				IAML				17 09 06.3	
	comp=Z,366nm,0.1s								
SWZ	**Schweizer**	**1.28**	**258**	*eP*			**Pg**	**17 08 50.0**	**+0.3**
SWZ				*eS*			**Sn**	**17 09 07.1**	**+0.8**
SWZ				IAML				17 09 11.1	
	comp=Z,87nm,0.1s								
SNKL	**Senekal, Frees**	**1.62**	**146**	*eP*			**Pn**	**17 08 54.6**	**+0.9**
SNKL				*eS*			**Sb**	**17 09 16.1**	**+0.4**
SNKL				IAML				17 09 20.7	
	comp=Z,40nm,0.7s								
SLR	**Silverton**	**1.82**	**50**	*eP*			**Pn**	**17 08 57.2**	**+0.8**
SLR				*eS*			**Sn**	**17 09 20.3**	**+0.8**
SLR				IAML				17 09 24.3	
	comp=Z,34nm,0.2s								
BOSA	**Boshof**	**2.14**	**218**	*i* P			**Pn**	**17 09 00.8**	**+0.1**
BOSA				*i* S			**Sn**	**17 09 25.8**	**-1.5**
BOSA	**Boshof**	**2.14**	**218**	*i* P			**Pn**	**17 09 00.8**	**+0.1**
BOSA				*i* S			**Sn**	**17 09 25.8**	**-1.5**
LBTB	**Lobatse**	**2.17**	**331**	*i* P			**Pn**	**17 09 02.2**	**+1.1**
LBTB				*i* S			**Sn**	**17 09 28.1**	**+0.1**
LBTB	**Lobatse**	**2.17**	**331**	*i* P			**Pn**	**17 09 02.2**	**+1.1**
LBTB				*i* S			**Sn**	**17 09 28.1**	**+0.1**
MUSN	**Musina, Limpop**	**5.42**	**32**	*i* P			**Pn**	**17 09 48.3**	**+2.5**
MUSN				*i* S			**Sn**	**17 10 47.8**	**-0.4**
MUSN	**Musina, Limpop**	**5.42**	**32**	*i* P			**Pn**	**17 09 48.3**	**+2.5**
MUSN				*i* S			**Sn**	**17 10 47.8**	**-0.4**
MATP	**Matopo**	**6.67**	**14**	*i* P			**Pn**	**17 10 04.9**	**+1.8**
MATP				*i* S			**Sn**	**17 11 16.5**	**-2.6**
MATP	**Matopo**	**6.67**	**14**	*i* P			**Pn**	**17 10 04.9**	**+1.8**
MATP				*i* S			**Sn**	**17 11 16.5**	**-2.6**
BLWY	**Bulawayo**	**6.97**	**15**	*i* P			**Pn**	**17 10 08.8**	**+1.6**
BLWY				*i* S			**Sn**	**17 11 23.3**	**-3.3**
BLWY	**Bulawayo**	**6.97**	**15**	*i* P			**Pn**	**17 10 08.8**	**+1.6**
BLWY				*i* S			**Sn**	**17 11 23.3**	**-3.3**

*CRAAG **08** 17:13:49.6,36˚.36N×0˚.33E, Ml3.1*
*MDD **08** 17:13:51.2±0.6,36˚.50N×0˚.37E, h0km, mb_Lg2.8/17, Error ellipse: s-maj=4.7km s-min=3.2km az=132.0*
ISC 08 17:13:49.4±0.9,**36˚.51N**±0˚.05×**0.35E**±0˚.04,**h10**km,**n25**,
σ1°**75**/43,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EANR	**'Ain N'Sour**	**0.83**	**133**	P			**Pg**	**17 14 04.7**	**-0.6**
ECHA	**Ech Chlef**	**0.90**	**113**	P			**Pg**	**17 14 05.1**	**-1.6**
EBNR	**Beni Rached**	**0.98**	**103**	P			**Pn**	**17 14 12.0**	**+2.8**
EMUR	**La Murta**	**1.84**	**317**	P			**Pb**	**17 14 22.5**	**-0.6**
EMUR				S			**Sb**	**17 14 45.1**	**-1.0**
ENIJ	**Nijar**	**2.10**	**283**	P			**Pn**	**17 14 25.3**	**+0.7**
ENIJ				S			**Sn**	**17 14 50.8**	**-0.1**
ENIJ				*i* Vmb_Lg				17 14 51.9	
EZAR	**Zarzadilla de**	**2.12**	**310**	P			**Pn**	**17 14 26.0**	**+1.0**
EZAR				S			**Sb**	**17 14 52.7**	**-1.7**
EBEN2	**Beniarda presa**	**2.20**	**349**	P			**Pb**	**17 14 27.7**	**-1.6**
EBEN2				S			**Sn**	**17 14 54.3**	**+1.0**
AFON	**Font Roja**	**2.26**	**342**	S			**Sn**	**17 14 55.8**	**+0.9**
ETOB	**Tobarra**	**2.61**	**325**	P			**Pb**	**17 14 34.6**	**-1.7**
ETOB				S			**Sn**	**17 15 05.3**	**+1.9**
ETOB				*i* Vmb_Lg				17 15 08.7	
EBER	**Berja**	**2.63**	**279**	P			**Pb**	**17 14 34.4**	**-2.3**
EBER				S			**Sn**	**17 15 05.8**	**+1.6**
EBER				*i* Vmb_Lg				17 15 30.7	
EIBI	**Ibiza**	**2.63**	**17**	P			**Pn**	**17 14 33.1**	**+1.3**
EIBI				S			**Sn**	**17 15 04.1**	**+0.2**
EIBI				*i* Vmb_Lg				17 15 04.6	
EQES	**Quesada**	**3.02**	**296**	P			**Pb**	**17 14 40.6**	**-2.7**
EQES				*i* Vmb_Lg				17 14 41.9	
EQES				S			**Sn**	**17 15 15.2**	**+1.6**
ELGU	**Los Guajares,**	**3.21**	**278**	P			**Pn**	**17 14 42.2**	**+2.3**
ELGU				*i* Vmb_Lg				17 14 42.5	
ELGU				S			**Sn**	**17 15 20.5**	**+2.1**
ECHE	**Chera**	**3.24**	**342**	P			**Pn**	**17 14 42.7**	**+2.3**
ECHE				*i* Vmb_Lg				17 16 50.3	
EGOR	**Sierra Gorda,**	**3.63**	**281**	P			**Pn**	**17 14 47.3**	**+1.6**
EGOR				S			**Sn**	**17 15 29.8**	**+1.2**
EGOR				*i* Vmb_Lg				17 15 38.5	
ETOS	**Mallorca**	**3.79**	**30**	P			**Pn**	**17 14 48.6**	**+0.8**
ETOS				*i* Vmb_Lg				17 16 1.6	
EMOS	**Mosqueruela**	**3.90**	**351**	P			**Pn**	**17 14 52.3**	**+2.8**
EMOS				S			**Sn**	**17 15 35.4**	**0.0**
EMIJ	**Mijas**	**4.12**	**272**	P			**Pn**	**17 14 55.2**	**+2.7**
EMIJ				S			**Sn**	**17 15 41.3**	**+0.6**
EMIJ				*i* Vmb_Lg				17 16 03.2	
EADA	**Adamuz**	**4.26**	**294**	P			**Pn**	**17 14 56.7**	**+2.5**
EADA				S			**Sn**	**17 15 45.8**	**+1.8**
EADA				*i* Vmb_Lg				17 15 57.5	
ERTA	**Horta de San J**	**4.44**	**360**	P			**Pn**	**17 14 59.2**	**+2.5**
ERTA				*i* Vmb_Lg				17 15 05.3	
ERTA				S			**Sn**	**17 15 49.6**	**+1.1**
PAB	**San Pablo**	**4.79**	**311**	P			**Pn**	**17 15 03.5**	**+2.0**
PAB				S			**Sn**	**17 15 57.3**	**+0.1**
PAB				*i* Vmb_Lg				17 16 58.9	
ECAB	**El Cabril**	**4.86**	**290**	P			**Pn**	**17 15 03.9**	**+1.4**
ECAB				S			**Sn**	**17 15 59.1**	**+0.4**
ECAB				*i* Vmb_Lg				17 16 52.8	
EPOB	**Poblet**	**4.87**	**6**	P			**Pn**	**17 15 04.8**	**+2.2**
EPOB				S			**Sn**	**17 15 59.4**	**+0.3**
EPOB				*i* Vmb_Lg				17 17 37.5	
GUD	**Guadarrama**	**5.43**	**321**	P			**Pn**	**17 15 13.1**	**+2.6**
GUD				S			**Sn**	**17 16 14.4**	**+1.4**
EMIN	**Mina Concepcio**	**5.75**	**285**	P			**Pn**	**17 15 16.8**	**+2.0**
EMIN				*i* Vmb_Lg				17 17 13.1	

*NORS **08** 17:25:40.2±0.0,42˚.96N×45˚.82E, h97km±1km, MPVA5.1*
*MOS **08** 17:25:40.6±0.0,43˚.04N×45˚.70E, h85km±2km, MPVA5.0*
*TIF **08** 17:25:41.4,43˚.05N×45˚.74E, h79km±2km*
*IDC **08** 17:25:41.3±2.1,43˚.10N×45˚.59E, h85km±23km, mb3.3/5, mbtmp3.6/7, MS2.9/1, Error ellipse: s-maj=26.9km s-min=17.3km az=44.0*
*AZER **08** 17:25:42.6±0.1,42˚.78N×45˚.73E, h34km±4km, Error ellipse: s-maj=10.1km s-min=1.4km az=332.0*
*DRS **08** 17:25:42.9±0.0,43˚.16N×45˚.22E, h28km*
*NNC **08** 17:25:53.6±4.7,43˚.76N×46˚.78E, h75km±71km, mb3.6, Error ellipse: s-maj=163.9km s-min=33.6km az=140.0*
ISC 08 17:25:41.0±0.6,**43˚.05N**±0˚.03×**45.70E**±0˚.02,**h95**km±4km,
n175,σ1°**74**/299,**mb3.4**/5,**13C-10D**,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.17**	**24**	*i* P			**Pn**	**17 25 54.4**	**0.0**
GROC					pmax		pmax		
	comp=Z,264nm,0.1s								
GROC	**Groznyy**	**0.17**	**24**	*i* Pg			**Pn**	**17 25 54.5**	**0.0**
GROC					*e*Sg		**Sn**	**17 26 04.3**	**-0.1**
DVE	**Vedeno**	**0.32**	**107**	⇑*i*P			**Pn**	**17 25 54.5**	**-0.6**
DVE					*e*S		**Sn**	**17 26 04.0**	**-1.7**
DVE	**Vedeno**	**0.32**	**107**	*i* Pg			**Pn**	**17 25 54.5**	**-0.6**
DVE					*e*Sg		**Sn**	**17 26 03.9**	**-1.8**
KMGR	**Komgaron**	**0.61**	**271**	⇓*i*P			**Pn**	**17 25 58.0**	**+0.8**
KMGR					*e*S		**Sn**	**17 26 10.9**	**+1.6**
KMGR	**Komgaron**	**0.61**	**271**	*e*Pg			**Pn**	**17 25 57.9**	**+0.7**
KMGR					*e*Sg		**Sn**	**17 26 10.9**	**+1.6**
DLMR	**Dylym**	**0.68**	**88**	*e*P			**Pn**	**17 25 57.4**	**-0.3**
DLMR					*e*S		**Sn**	**17 26 09.6**	**-0.6**
DLMR					*e*S			17 26 10.4	
DLMR					pmax		pmax		
	comp=Z,2μm,0.2s								
DLMR					smax		smax		
	comp=E,18μm,0.4s								
DLMR	**Dylym**	**0.68**	**88**	*e*Pg			**Pn**	**17 25 57.4**	**-0.3**
DLMR					*e*Sg		**Sn**	**17 26 09.0**	**-1.2**
VLKR	**Vladikavkaz**	**0.75**	**270**	⇓*i*P			**Pn**	**17 25 59.2**	**+0.8**
VLKR					*e*S		**Sn**	**17 26 13.2**	**+1.7**
VLKR	**Vladikavkaz**	**0.75**	**270**	*i* Pg			**Pn**	**17 25 59.2**	**+0.8**
VLKR					*e*Sg		**Sn**	**17 26 12.8**	**+1.3**
DBC	**Dubki**	**0.83**	**92**	*d*iP			**Pn**	**17 25 59.1**	**-0.1**
DBC	**Dubki**	**0.83**	**92**	*i* Pg			**Pn**	**17 25 59.1**	**-0.1**
DBC					*e*Sg		**Sn**	**17 26 12.1**	**-0.7**
UNCR	**Uncukul**	**0.87**	**112**	*e*P			**Pn**	**17 25 59.6**	**0.0**
UNCR					*e*S		**Sn**	**17 26 13.1**	**-0.5**
UNCR					*e*S			17 26 13.8	
UNCR					pmax		pmax		
	comp=Z,1μm,0.3s								
UNCR					smax		smax		
	comp=N,7μm,0.4s								
UNCR					smax		smax		
	comp=E,9μm,0.6s								
UNCR	**Uncukul**	**0.87**	**112**	*i* Pg			**Pn**	**17 25 59.5**	**-0.2**
UNCR					*e*Sg		**Sn**	**17 26 12.7**	**-0.9**
XNZR	**Khunzakh**	**0.90**	**124**	*e*P			**Pn**	**17 26 00.6**	**+0.6**
XNZR					*e*S		**Sn**	**17 26 14.1**	**-0.2**
XNZR					*e*S			17 26 14.8	
XNZR					pmax		pmax		
	comp=Z,407nm,0.3s								
XNZR					smax		smax		
	comp=N,4μm,0.2s								
XNZR					smax		smax		
	comp=E,5μm,0.4s								
XNZR					smax		smax		
	comp=E,5μm,0.4s								
XNZR	**Khunzakh**	**0.90**	**124**	*e*Pg			**Pn**	**17 26 00.6**	**+0.6**
XNZR				*i* Sg			**Sn**	**17 26 14.2**	**-0.2**
PNSH	**Pansheti**	**0.90**	**243**	P			**Pn**	**17 26 00.2**	**0.0**
PNSH				S			**Sn**	**17 26 13.6**	**-0.9**
PNSH	**Pansheti**	**0.90**	**243**	P			**Pn**	**17 26 00.1**	**0.0**
PNSH				S			**Sn**	**17 26 13.6**	**-0.9**
BTKR	**Batakoyurt**	**0.91**	**291**	*e*P			**Pn**	**17 26 01.1**	**+1.1**
BTKR					*e*S		**Sn**	**17 26 16.5**	**+2.2**
BTKR	**Batakoyurt**	**0.91**	**291**	*i* Pg			**Pn**	**17 26 01.1**	**+1.1**
BTKR					*e*Sg		**Sn**	**17 26 16.3**	**+2.0**
KRNR	**Karanay**	**0.91**	**104**	*e*P			**Pn**	**17 26 00.1**	**0.0**
KRNR					*e*S		**Sn**	**17 26 13.9**	**-0.6**
KRNR					*e*S			17 26 14.4	
KRNR					pmax		pmax		
	comp=Z,119nm,0.1s								
KRNR					smax		smax		
	comp=N,2μm,0.3s								
KRNR					smax		smax		
	comp=E,3μm,0.4s								
KRNR					smax		smax		
	comp=E,3μm,0.4s								
KRNR	**Karanay**	**0.91**	**104**	*i* Pg			**Pn**	**17 26 00.1**	**0.0**
KRNR					*e*Sg		**Sn**	**17 26 13.6**	**-0.9**
TRKR	**Terskaya**	**0.98**	**314**	⇓*i*P			**Pn**	**17 26 01.7**	**+1.0**
TRKR					*e*S		**Sn**	**17 26 17.2**	**+1.7**
TRKR	**Terskaya**	**0.98**	**314**	*i* Pg			**Pn**	**17 26 01.7**	**+1.0**
TRKR					*e*Sg		**Sn**	**17 26 16.9**	**+1.4**
ARNR	**Ardon**	**1.05**	**278**	*i* P			**Pn**	**17 26 02.6**	**+1.1**
ARNR					pmax		pmax		
	comp=Z,759nm,0.2s								
ARNR	**Ardon**	**1.05**	**278**	*i* Pg			**Pn**	**17 26 02.6**	**+1.1**
ARNR					*e*Sg		**Sn**	**17 26 17.3**	**+0.3**
ARKR	**Arakani**	**1.05**	**115**	*e*P			**Pn**	**17 26 02.5**	**+0.9**
ARKR					*e*S		**Sn**	**17 26 18.0**	**+0.9**
ARKR					*e*S			17 26 18.5	
ARKR					pmax		pmax		
	comp=Z,374nm,0.6s								
ARKR					smax		smax		
	comp=N,5μm,0.4s								
ARKR					smax		smax		
	comp=E,4μm,0.4s								
ARKR					smax		smax		
	comp=N,4μm,0.4s								
ARKR	**Arakani**	**1.05**	**115**	*i* Pg			**Pn**	**17 26 01.9**	**+0.3**
ARKR					*e*Sg		**Sn**	**17 26 17.4**	**+0.2**
BUJR	**Buynaksk**	**1.06**	**102**	*e*P			**Pn**	**17 26 02.4**	**+0.8**
BUJR					*e*S		**Sn**	**17 26 18.0**	**+0.9**
BUJR					*e*S			17 26 18.5	
BUJR					pmax		pmax		
	comp=Z,1μm,0.4s								
BUJR					smax		smax		
	comp=E,12μm,0.4s								
BUJR					smax		smax		
	comp=N,9μm,0.4s								
BUJR					smax		smax		
	comp=E,8μm,0.4s								
BUJR	**Buynaksk**	**1.06**	**102**	*i* Pg			**Pn**	**17 26 02.4**	**+0.8**
BUJR					*e*Sg		**Sn**	**17 26 18.1**	**+0.9**
LACR	**Lac**	**1.06**	**258**	*e*P			**Pn**	**17 26 01.8**	**0.0**
LACR					*e*S		**Sn**	**17 26 16.8**	**-0.6**
LACR	**Lac**	**1.06**	**258**	*i* Pg			**Pn**	**17 26 01.7**	**0.0**
LACR					*e*Sg		**Sn**	**17 26 16.7**	**-0.7**
GUDG	**Gudauri**	**1.08**	**237**	P			**Pn**	**17 26 02.7**	**+0.6**
GUDG				S			**Sn**	**17 26 18.2**	**+0.2**
GUDG	**Gudauri**	**1.08**	**237**	P			**Pn**	**17 26 02.7**	**+0.6**
GUDG				S			**Sn**	**17 26 18.2**	**+0.2**
KORR	**Kora**	**1.20**	**272**	⇓*i*P			**Pn**	**17 26 04.0**	**+0.6**
KORR					*e*S		**Sn**	**17 26 21.2**	**+1.0**
KORR	**Kora**	**1.20**	**272**	*i* Pg			**Pn**	**17 26 03.9**	**+0.6**
KORR					*e*Sg		**Sn**	**17 26 20.8**	**+0.6**
STDR	**Stavd-Durt**	**1.24**	**285**	⇓*i*P			**Pn**	**17 26 05.0**	**+1.2**
STDR					*e*S		**Sn**	**17 26 23.0**	**+2.0**
STDR	**Stavd-Durt**	**1.24**	**285**	*i* Pg			**Pn**	**17 26 05.0**	**+1.2**
STDR					*e*Sg		**Sn**	**17 26 23.0**	**+2.0**
PRTR	**Priterechnaya**	**1.25**	**304**	⇑*i*P			**Pn**	**17 26 05.1**	**+1.2**
PRTR					*e*S		**Sn**	**17 26 23.0**	**+1.9**
PRTR	**Priterechnaya**	**1.25**	**304**	*i* Pg			**Pn**	**17 26 05.1**	**+1.2**
PRTR					*e*Sg		**Sn**	**17 26 23.0**	**+1.9**
LGD	**Lagodekhi**	**1.28**	**162**	P			**Pn**	**17 26 05.0**	**+0.7**
LGD				S			**Sn**	**17 26 22.0**	**+0.2**
LGD	**Lagodekhi**	**1.28**	**162**	P			**Pn**	**17 26 05.0**	**+0.7**
LGD				S			**Sn**	**17 26 22.0**	**+0.2**
KANR	**Karaman**	**1.31**	**83**	*e*P			**Pn**	**17 26 05.8**	**+1.2**
KANR					*e*S		**Sn**	**17 26 24.1**	**+1.6**
KANR					*e*S			17 26 24.7	
KANR					pmax		pmax		
	comp=Z,655nm,0.5s								
KANR					smax		smax		
	comp=E,2μm,0.2s								
KANR					smax		smax		
	comp=N,3μm,0.3s								
KANR					smax		smax		
	comp=N,3μm,0.3s								
KANR	**Karaman**	**1.31**	**83**	*i* Pg			**Pn**	**17 26 05.7**	**+1.2**
KANR					*e*Sg		**Sn**	**17 26 24.9**	**+2.4**
MAK	**Makhachkala**	**1.32**	**93**	⇑*i*P			**Pn**	**17 26 05.9**	**+1.2**
MAK					*e*			17 26 24.2	
MAK					pmax		pmax		
	comp=Z,657nm,0.3s								
MAK					smax		smax		
	comp=E,5μm,0.4s								
MAK					smax		smax		
	comp=E,6μm,0.4s								
MAK	**Makhachkala**	**1.32**	**93**	*e*Pg			**Pn**	**17 26 05.8**	**+1.0**
MAK					*e*Sg		**Sn**	**17 26 24.1**	**+1.4**
ZEI	**Tsey**	**1.35**	**259**	⇑*i*P			**Pn**	**17 26 05.3**	**0.0**
ZEI					*e*S		**Sn**	**17 26 22.5**	**-1.2**
ZEI	**Tsey**	**1.35**	**259**	*e*Pg			**Pn**	**17 26 05.2**	**0.0**
ZEI					*e*Sg		**Sn**	**17 26 22.4**	**-1.2**
KMKR	**Kumukh**	**1.38**	**131**	*e*P			**Pn**	**17 26 06.9**	**+1.2**
KMKR					*e*S		**Sn**	**17 26 25.4**	**+1.1**
KMKR					*e*S			17 26 25.8	
KMKR					pmax		pmax		
	comp=Z,386nm,0.2s								
KMKR					smax		smax		
	comp=E,5μm,0.3s								
KMKR					smax		smax		
	comp=N,3μm,0.2s								
KMKR					smax		smax		
	comp=E,4μm,0.2s								
KMKR	**Kumukh**	**1.38**	**131**	*e*Pg			**Pn**	**17 26 07.0**	**+1.3**
KMKR					*e*Sg		**Sn**	**17 26 25.4**	**+1.1**
LSNR	**Lesken**	**1.39**	**280**	⇓*i*P			**Pn**	**17 26 06.6**	**+0.9**
LSNR					*e*S		**Sn**	**17 26 25.5**	**+1.2**
LSNR	**Lesken**	**1.39**	**280**	*i* Pg			**Pn**	**17 26 06.6**	**+0.9**
LSNR					*e*Sg		**Sn**	**17 26 25.1**	**+0.8**
SEAG	**Tbilisi Sea**	**1.45**	**208**	P			**Pn**	**17 26 07.8**	**+1.4**
SEAG				S			**Sn**	**17 26 26.3**	**+0.7**
SEAG	**Tbilisi Sea**	**1.45**	**208**	P			**Pn**	**17 26 07.7**	**+1.4**
SEAG				S			**Sn**	**17 26 26.3**	**+0.7**
BTNK	**Botanikuri**	**1.52**	**206**	P			**Pn**	17 26 01.4	-5.9
BTNK				S			**Sn**	**17 26 20.7**	**-6.4**
SGKR	**Sergokala**	**1.56**	**112**	*e*P			**Pn**	**17 26 09.5**	**+1.8**
SGKR				*e*S			**Sn**	**17 26 31.4**	**+3.5**
SGKR				*e*S				17 26 32.0	
SGKR				pmax		pmax			
	comp=Z,435nm,0.6s								
SGKR				smax		smax			
	comp=E,2μm,0.4s								
SGKR				smax		smax			
	comp=N,2μm,0.4s								
SGKR				smax		smax			
	comp=N,2μm,0.4s								
SGKR	**Sergokala**	**1.56**	**112**	*e*Pg			**Pn**	**17 26 09.3**	**+1.7**
SGKR				*e*Sg			**Sn**	**17 26 30.6**	**+2.7**
DIGR	**Digorskoe uzhe**	**1.57**	**265**	*e*P			**Pn**	**17 26 08.0**	**0.0**
DIGR				*e*S			**Sn**	**17 26 27.7**	**-0.7**
DIGR	**Digorskoe uzhe**	**1.57**	**265**	*e*Pg			**Pn**	**17 26 07.8**	**-0.1**
DIGR				*e*Sg			**Sn**	**17 26 27.2**	**-1.2**
ZKTA	**Zakatala**	**1.57**	**154**	P			**Pn**	**17 26 08.3**	**+0.5**
ZKTA	**Zakatala**	**1.57**	**154**	P			**Pn**	**17 26 08.4**	**+0.5**
	SNR=44								
ZKTA				S			**Sn**	**17 26 27.9**	**-0.3**
NCK	**Nalchik**	**1.60**	**287**	*d*iP			**Pn**	**17 26 09.2**	**+0.9**
NCK	**Nalchik**	**1.60**	**287**	*i* Pg			**Pn**	**17 26 09.2**	**+0.9**
NCK				*e*Sg			**Sn**	**17 26 29.7**	**+0.8**
DGRG	**David-gareji**	**1.62**	**189**	P			**Pn**	**17 26 08.9**	**+0.4**
DGRG				S			**Sn**	**17 26 29.6**	**+0.3**
DGRG	**David-gareji**	**1.62**	**189**	P			**Pn**	**17 26 08.9**	**+0.4**
DGRG				S			**Sn**	**17 26 29.6**	**+0.3**
DDFL	**Dedoflistskaro**	**1.63**	**169**	P			**Pn**	**17 26 12.1**	**+3.3**
DDFL				S			**Sn**	**17 26 34.6**	**+4.9**
DDFL	**Dedoflistskaro**	**1.63**	**169**	P			**Pn**	**17 26 12.0**	**+3.3**
DDFL				S			**Sn**	**17 26 34.6**	**+4.9**
URKR	**Urkarakh**	**1.68**	**121**	*e*P			**Pn**	**17 26 11.1**	**+1.8**
URKR				*e*S			**Sn**	**17 26 33.6**	**+2.8**
URKR				*e*S				17 26 35.0	
URKR				pmax		pmax			
	comp=Z,337nm,0.4s								
URKR				smax		smax			
	comp=E,1μm,0.2s								
URKR				smax		smax			
	comp=N,1μm,0.6s								
URKR				smax		smax			
	comp=N,1μm,0.2s								
URKR	**Urkarakh**	**1.68**	**121**	*e*Pg			**Pn**	**17 26 10.7**	**+1.4**
URKR				*e*Sg			**Sn**	**17 26 32.9**	**+2.1**
ONI	**Oni**	**1.72**	**255**	P			**Pn**	**17 26 11.2**	**+1.3**
ONI	**Oni**	**1.72**	**255**	P			**Pn**	**17 26 11.1**	**+1.3**
ONI	**Oni**	**1.72**	**255**	*i* Pg			**Pn**	**17 26 11.1**	**+1.3**
ONI				*i* Sg			**Sn**	**17 26 33.6**	**+1.9**
KBTC	**Kuba-Taba**	**1.84**	**295**	*i* Pg			**Pn**	**17 26 11.9**	**+0.6**
KBTC				*i* Sg			**Sn**	**17 26 34.6**	**+0.2**
TRLG	**Trialeti**	**1.92**	**219**	P			**Pn**	**17 26 14.1**	**+1.6**
TRLG				S			**Sn**	**17 26 38.1**	**+1.6**
TRLG	**Trialeti**	**1.92**	**219**	P			**Pn**	**17 26 14.1**	**+1.6**
TRLG				S			**Sn**	**17 26 38.1**	**+1.6**
KZRT	**Kazreti**	**1.93**	**211**	P			**Pn**	**17 26 12.5**	**+0.1**
KZRT				S			**Sn**	**17 26 36.1**	**-0.3**
KZRT	**Kazreti**	**1.93**	**211**	P			**Pn**	**17 26 12.5**	**+0.1**
KZRT				S			**Sn**	**17 26 36.0**	**-0.3**
QZX	**Qazax, Azerbai**	**2.01**	**187**	P			**Pn**	**17 26 13.5**	**0.0**
	SNR=21								
QZX				S			**Sn**	**17 26 37.7**	**-0.5**
DMNI	**Dmanisi**	**2.06**	**214**	P			**Pn**	**17 26 14.5**	**+0.3**
DMNI				S			**Sn**	**17 26 39.4**	**-0.2**
DMNI	**Dmanisi**	**2.06**	**214**	P			**Pn**	**17 26 14.5**	**+0.3**
DMNI				S			**Sn**	**17 26 39.3**	**-0.2**
BKRG	**Bakuriani**	**2.07**	**232**	P			**Pn**	**17 26 16.3**	**+1.9**
BKRG				S			**Sn**	**17 26 41.8**	**+1.9**
BKRG	**Bakuriani**	**2.07**	**232**	P			**Pn**	**17 26 16.3**	**+1.9**
BKRG				S			**Sn**	**17 26 41.8**	**+1.9**
TKB	**Tkibuli**	**2.12**	**252**	P			**Pn**	**17 26 16.6**	**+1.7**
TKB	**Tkibuli**	**2.12**	**252**	P			**Pn**	**17 26 16.5**	**+1.7**
PYA1	**Pyatigorsk**	**2.15**	**299**	*i* Pg			**Pn**	**17 26 15.6**	**+0.3**
PYA1				*i* Sg			**Sn**	**17 26 40.3**	**-1.2**
SEKA	**Sheki**	**2.15**	**148**	P			**Pn**	**17 26 15.7**	**+0.3**
SEKA	**Sheki**	**2.15**	**148**	P			**Pn**	**17 26 15.7**	**+0.3**
	SNR=85								

GNI				S		**Sn**	**17 26 57.2**	**-4.5**
	comp=E,45nm,0.4s,baz=323,slow=15,SNR=5.6								
GNI	**Garni**	**2.99**	**194**	*ce*P		**Pn**	**17 26 27.9**	**+1.3**
GNI				pmax	pmax				
	comp=Z,46nm,1.0s								
GNI	**Garni**	**2.99**	**194**	*i* Pn		**Pn**	**17 26 27.9**	**+1.3**
GNI				*e*Sn		**Sn**	**17 27 01.7**	**0.0**
DOMR	**Dombai**	**2.99**	**276**	*i* P		**Pn**	**17 26 28.5**	**+1.9**
BRDA	**Brd**	**3.00**	**158**	P		**Pn**	**17 26 28.0**	**+1.4**
BRDA				S		**Sn**	**17 27 02.7**	**+1.1**
SIZA	**Siyzn**	**3.09**	**129**	P		**Pn**	**17 26 29.3**	**+1.4**
	SNR=5.9								
SIZA				S		**Sn**	**17 27 05.8**	**+1.7**
AGDM	**Agdam**	**3.12**	**160**	P		**Pn**	**17 26 29.0**	**+0.7**
	SNR=24								
AGDM				S		**Sn**	**17 27 04.6**	**-0.1**
PQL	**Pirkuli**	**3.12**	**135**	P		**Pn**	**17 26 29.5**	**+1.1**
	SNR=4.9								
PQL				S		**Sn**	**17 27 03.6**	**-1.3**
ZRD	**Zardab**	**3.14**	**151**	P		**Pn**	**17 26 29.7**	**+1.3**
ZRD				S		**Sn**	**17 27 06.4**	**+1.3**
KDMR	**Kurdemir**	**3.25**	**144**	S		**Sn**	**17 27 07.3**	**-0.5**
ATGJ	**Altiaghaj**	**3.26**	**131**	P		**Pn**	**17 26 30.8**	**+0.7**
	SNR=7.3								
ATGJ				S		**Sn**	**17 27 08.6**	**+0.6**
ARXR	**Arkhyz**	**3.27**	**280**	*i* P		**Pn**	**17 26 33.0**	**+2.6**
GBS	**Qobustan**	**3.49**	**135**	P		**Pn**	**17 26 34.8**	**+1.6**
GBS				S		**Sn**	**17 27 14.8**	**+1.1**
BLQ	**Beylaqan**	**3.61**	**157**	P		**Pn**	**17 26 34.9**	**+0.1**
BLQ				S		**Sn**	**17 27 15.6**	**-0.8**
SBZ	**Shahbuz**	**3.65**	**182**	P		**Pn**	**17 26 36.7**	**+1.2**
	SNR=5.0								
SBZ				S		**Sn**	**17 27 17.6**	**-0.1**
SAAT	**Saatly**	**3.79**	**146**	S		**Sn**	**17 27 17.9**	**-2.8**
QRD	**Qoradiz**	**3.79**	**161**	P		**Pn**	**17 26 37.7**	**+0.5**
QRD				S		**Sn**	**17 27 18.5**	**-2.2**
LABN	**Labinsk**	**3.94**	**296**	*e*Pn		**Pn**	**17 26 39.9**	**+0.8**
LABN				*e*Sn		**Sn**	**17 27 24.8**	**+0.5**
ALIB	**Äli-Bayra**	**3.96**	**140**	P		**Pn**	**17 26 41.7**	**+2.2**
ALIB				S		**Sn**	**17 27 25.6**	**+0.6**
GOBA	**Gobu**	**4.01**	**130**	P		**Pn**	**17 26 42.3**	**+2.1**
	SNR=7.5								
GOBA				S		**Sn**	**17 27 27.2**	**+1.1**
NDR	**Nardaran**	**4.04**	**126**	P		**Pn**	**17 26 43.0**	**+2.4**
NDR				S		**Sn**	**17 27 26.5**	**-0.3**
VSLR	**Vesyoloye**	**4.16**	**278**	*i* P		**Pn**	**17 26 44.4**	**+2.2**
GLBA	**Cilabad**	**4.31**	**151**	P		**Pn**	**17 26 45.0**	**+0.7**
	SNR=5.3								
GLBA				S		**Sn**	**17 27 31.2**	**-2.3**
SOC	**Sochi**	**4.40**	**279**	*i* P		**Pn**	**17 26 47.6**	**+2.2**
YRD	**Yardimli**	**4.56**	**154**	P		**Pn**	**17 26 48.0**	**+0.2**
	SNR=57								
YRD				S		**Sn**	**17 27 36.9**	**-2.8**
ERBR	**Yeremizino-Bor**	**4.59**	**307**	*e*Pn		**Pn**	**17 26 49.2**	**+1.2**
ERBR				*e*Sn		**Sn**	**17 27 38.1**	**-2.0**
GOYR	**Goytkh**	**4.74**	**287**	*e*Pn		**Pn**	**17 26 52.4**	**+2.3**
GOYR				*e*Sn		**Sn**	**17 27 41.9**	**-2.0**
LRK	**Lerik**	**4.84**	**155**	P		**Pn**	**17 26 52.0**	**+0.4**
	SNR=35								
LRK				S		**Sn**	**17 27 44.8**	**-1.6**
LKRN	**Lenkeran, Azer**	**4.92**	**151**	S		**Sn**	**17 27 44.3**	**-4.0**
ASTR	**Astara**	**5.06**	**151**	P		**Pn**	**17 26 54.4**	**0.0**
ASTR				S		**Sn**	**17 27 46.7**	**-5.0**
ANN	**Anapa**	**6.22**	**289**	*e*P		Pn	17 27 15.9	+5.7
ANN				*e*S		**Sn**	**17 28 28.1**	**+8.3**
ANN				pmax	pmax				
	comp=Z,38nm,1.3s								
VRH	**Novokhopyorsk**	**8.59**	**343**	*e*P		**Pn**	**17 27 39.6**	**-2.8**
VRH				pmax	pmax				
	comp=Z,7.0nm,0.4s								
VSR	**Storozhevoye**	**9.30**	**334**	*e*P		**Pn**	**17 27 51.0**	**-1.0**
VSR				*e*S		**Sn**	**17 29 28.8**	**-5.9**
VSR				pmax	pmax				
	comp=Z,5.0nm,0.4s								
VSR				smax	smax				
	comp=N,30nm,0.4s								
BELG	**Belogornoye**	**9.44**	**7**	*i* P		**Pn**	**17 27 52.5**	**-1.3**
BRTR	**Keskin Array B**	**9.66**	**254**	P		**Pn**	**17 28 00.4**	**+3.3**
	comp=N,0.7nm,0.7s,baz=59,slow=13,SNR=3.9								
VORR	**Voronezh**	**9.68**	**335**	*e*P		Pn	17 27 51.3	-5.9
VORR				pmax	pmax				
	comp=Z,50nm,0.4s								
GEYT	**Alibeck**	**10.75**	**114**	LR		LR	17 34 00.4		
	comp=Z,74nm,21.0s,baz=310,slow=46								
AKTO	**Aktyubinsk**	**11.21**	**45**	P		**Pn**	**17 28 16.0**	**-2.0**
AKTO	**Aktyubinsk**	**11.21**	**45**	⇑Pn		**Pn**	**17 28 16.0**	**-2.0**
	comp=Z,3.8nm,0.6s								
AKTO				⇑Sn		Sn	17 30 10.3	-11	
	comp=Z,26nm,0.5s								
AB31	**Akbulak array**	**11.65**	**53**	P		**Pn**	**17 28 22.2**	**-1.7**
AB31	**Akbulak array**	**11.65**	**53**	Pn		**Pn**	**17 28 22.2**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=238,slow=11,SNR=118								
AB31				Sn		Sn	17 30 22.4	-10	
	comp=Z,4.2nm,0.2s,baz=239,slow=19,SNR=16								
AKASG	**Malin Array Be**	**13.60**	**310**	P		**Pn**	**17 28 49.7**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=110,slow=14,SNR=2.7								
AKASG				S		Sn	17 31 11.2	-8.0	
	comp=Z,0.6nm,0.5s,baz=107,slow=24,SNR=3.1								
AKASG	**Malin Array Be**	**13.60**	**310**	*i* P		**P**	**17 28 58.0**	**+2.6**
ARU	**Arti**	**15.72**	**27**	*d* iP		**P**	**17 29 19.8**	**+1.0**
ARU				S		**Sn**	**17 32 14.9**	**+4.6**
ARU				pmax	pmax				
	comp=Z,10.0nm,1.1s								
KIRV	**Kirov**	**15.72**	**7**	*ce*P		**Pn**	**17 29 13.8**	**-3.0**
KLMR	**Klimovskoe**	**18.22**	**350**	*e*P		**P**	**17 29 44.3**	**-2.0**
KLMR				pmax	pmax				
	comp=Z,16nm,0.8s								
KLMR	**Klimovskoe**	**18.22**	**350**	*e*Pn		**P**	**17 29 44.4**	**-1.9**
KLMR				AMP			17 29 46.6		
	comp=Z,16nm,0.8s								
PRGR	**Permogore**	**18.61**	**360**	*e*P		**P**	**17 29 49.2**	**-1.4**
BRVK	**Borovoye**	**19.15**	**50**	*ce*P		**P**	**17 29 58.2**	**+1.7**
BRVK				pmax	pmax				
	comp=Z,2.0nm,0.6s								
BVA0	**Borovoye Array**	**19.19**	**50**	P		**Pn**	**17 30 01.2**	**+2.2**
BVA0				S		**S**	**17 33 22.2**	**-7.2**
BVA0	**Borovoye Array**	**19.19**	**50**	⇑Pn		**Pn**	**17 30 01.0**	**+2.1**
	comp=Z,1.2nm,0.5s,baz=261,slow=11,SNR=22								
BVA0				⇓Sn		**S**	**17 33 22.2**	**-7.2**
	comp=Z,5.2nm,0.6s,baz=260,slow=25,SNR=18								
FINES	**FINESS Array B**	**21.83**	**334**	P		**P**	**17 30 26.2**	**+0.9**
	comp=Z,3.2nm,0.7s,baz=144,slow=12,SNR=9.3								
FINES				S		**S**	**17 34 17.8**	**-3.0**
	comp=Z,7.3nm,1.1s,baz=136,slow=23,SNR=3.0								
	comp=Z,3.2nm,0.7s								
MKAR	**Makanchi Array**	**26.02**	**69**	P		**P**	**17 31 06.2**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=269,slow=8.9,SNR=11								
MKAR				pP		**pP**	**17 31 26.3**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=263,slow=11,SNR=3.6								
	comp=Z,0.3nm,0.3s								
NOA	**NORSAR Array B**	**27.34**	**323**	P		**P**	**17 31 17.1**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=124,slow=9.2,SNR=2.3								
	comp=Z,0.6nm,0.8s								
ARCES	**ARCESS Array B**	**28.51**	**345**	P		**P**	**17 31 28.3**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=156,slow=9.8,SNR=7.9								
ARCES				pP		**pP**	**17 31 48.1**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=132,slow=12,SNR=1.5								
	comp=Z,1.8nm,0.9s								
TORD	**Torodi Ar. Bea**	**48.14**	**245**	P		**P**	**17 34 12.1**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=28,slow=8.6,SNR=1.7								
	comp=Z,0.3nm,0.6s								

DJA 08 17:27:03.7±0.3,1°S±3′×12°4E±°,h10km,M3.8/13,mB4.6/1, mb4.0/4,MLv3.8/13,Mw(mB)3.8/1,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.15**	**353**	P	Pb	17 27 24.8	-0.8
LUWI	**Luwuk**	**1.43**	**251**	P	Pn	17 27 29.2	-0.5
SANI	**Sanana**	**2.38**	**128**	P	Pn	17 27 41.4	-1.4
MRSI	**Marisa**	**2.42**	**296**	P	Pn	17 27 42.3	-1.0
APSI	**Ampana**	**2.49**	**262**	P	Pn	17 27 44.2	-0.2
TNTI	**Ternate**	**3.51**	**68**	P	Pn	17 27 59.0	+0.6
NLAI	**Namlea**	**3.99**	**132**	P	Pn	17 28 04.8	-0.1
MPSI	**Mapaga**	**4.32**	**282**	P	Pn	17 28 09.8	+0.3
TTSI	**Tana Toraja**	**4.95**	**240**	P	Pn	17 28 18.0	-0.2
BBSI	**Bau Bau**	**5.12**	**198**	P	Pn	17 28 20.8	+0.2
	0.0nm3.1nm,0.8s						
SPSI	**Sidrap Palu**	**5.50**	**232**	P	Pn	17 28 25.7	-0.1
	0.1nm550nm22nm,0.5s						
BKSI	**Bulukumba**	**6.18**	**220**	P	Pn	17 28 35.7	+0.6
	0.0nm7.7nm,0.7s						
BSSI	**Bau Bau, Buton**	**6.62**	**213**	P	Pn	17 28 41.6	+0.5

*BJI **08** 18:11:03.8±0.0, 18°.45N×145°.83E, h218km, mb4.4/49, mA7.2/23*

*DJA **08** 18:11:04.8±0.9, 18°N±4°×14°E±°, h215km±8km, M5.0/66, mb5.2/66, mB5.4/22, MLv5.3/1, Mw(mB)4.8/22, MwMwp6.1/3, Mwp6.1/3*

*NEIC **08** 18:11:04.8±1.3, 18°.32N±0°.07×145°.58E±0°.08, h196km±4km, mb5.1/352, Error ellipse: s-maj=12.2km s-min=9.5km az=57.0*

*MOS **08** 18:11:04.4±0.9, 18°.36N×145°.36E, h218km, mb5.1/30, Error ellipse: s-maj=7.8km s-min=5.2km az=101.0*

*IDC **08** 18:11:05.9±0.5, 18°.35N×145°.40E, h220km±4km, mb4.4/24, mbtmp4.9/27, Error ellipse: s-maj=11.1km s-min=6.0km az=87.0*

*GCMT **08** 18:11:06.8±0.5, 18°.35N±0°.03×145°.64E±0°.04, h216km±2km, MW4.9/79, Moment Tensor Solution. s26,c27; s79,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.65±.11; $M_{\theta\theta}$-1.10±.19; $M_{\phi\phi}$-1.56±.21; $M_{r\theta}$0.32±.12; $M_{\theta\phi}$-1.04±.18; $M_{\phi r}$0.56±.12; Best double couple: M_o2.60300×10^{16} NP1:ϕ_s37.00000°, δ52.00000°, λ88.00000°. NP2:ϕ_s221.00000°, δ38.00000°, λ93.00000°. Principal axes: T 2.7330, Plg83.0000°, Azm293.0000°; N -0.2690, Plg2.0000°, Azm38.0000°; P -2.4740, Plg7.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:11:04.9±0.3, 18°.35N±0°.03×145°.60E±0°.05, h212km±2km, h213km:pP-P, n1017, σ1§43/1042, mb5.0/294, 14C-3D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.79**	**189**	P	**Pn**	**18 12 17.7**	**+0.7**
	87nm,0.3s,baz=352,slow=7.1,SNR=13						
GUMO				S	**S**	**18 13 11.4**	**-2.3**
	238nm,0.4s,baz=57,slow=22,SNR=9.3						
GUMO	**Guam**	**4.79**	**189**	Pn	**Pn**	**18 12 15.9**	**-1.0**
GUMO	**Guam**	**4.79**	**189**	P	**Pn**	**18 12 16.0**	**-1.0**
GUMO	**Guam**	**4.79**	**189**	P	**Pn**	**18 12 17.1**	**+0.1**
GUMO	**Guam**	**4.79**	**189**	P	**Pn**	**18 12 18.8**	**+1.8**
JCJ	**Chichijima**	**9.25**	**341**	P	**Pn**	**18 13 14.2**	**-0.1**
	38nm,0.6s,baz=270,slow=20,SNR=1.7						
JCJ				S	**S**	**18 14 52.7**	**-5.6**
	77nm,0.7s,baz=121,slow=22,SNR=2.5						
PATS	**Pohnpei**	**16.86**	**131**	Pn	**Pn**	**18 14 49.4**	**+0.3**
JOW	**Kunigami**	**18.07**	**301**	Pn	**Pn**	**18 15 03.6**	**+0.4**
JOW	**Kunigami**	**18.07**	**301**	P	**Pn**	**18 15 03.7**	**+0.5**
JGF	**Kuroka**	**18.67**	**339**	P	**P**	**18 15 07.5**	**+0.3**
MJAR	**Matsushiro Arr**	**19.26**	**342**	P	**P**	**18 15 13.3**	**-0.1**
	3.1nm,0.5s,baz=167,slow=9.7,SNR=20						
MJAR				S	**S**	**18 18 37.5**	**-2.5**
	1.5nm,0.5s,baz=154,slow=19,SNR=2.1						
MAJO	**Matsushiro**	**19.26**	**342**	P	**P**	**18 15 13.6**	**+0.2**
MAJO	**Matsushiro**	**19.26**	**342**	*i* P	**P**	**18 15 14.6**	**+1.1**
MAJO	**Matsushiro**	**19.26**	**342**	P	**Pn**	**18 15 16.7**	**-0.4**
JHS	**Saijyo**	**19.95**	**329**	P	**P**	**18 15 21.7**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**20.00**	**86**	T	T	18 36 42.0	
	baz=274,slow=74,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**20.02**	**86**	T	T	18 36 41.6	
	baz=274,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	**20.02**	**86**	T	T	18 36 45.6	
	baz=274,slow=74,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**20.17**	**83**	T	T	18 36 58.6	
	baz=266,slow=74						
H11N2	**WAKE ISLAND Hy**	**20.18**	**83**	T	T	18 37 25.4	
	baz=266,slow=74						
H11N3	**WAKE ISLAND Hy**	**20.19**	**83**	T	T	18 37 11.6	
	baz=266,slow=74						
JSD	**Sado**	**20.64**	**343**	P	**P**	**18 15 29.3**	**+1.1**
SMPI	**Sarmi**	**21.32**	**199**	P	**P**	**18 15 36.2**	**+0.7**
	31nm,1.2s						
GENI	**Genyem**	**21.49**	**195**	P	**P**	**18 15 36.2**	**-1.0**
GENI	**Genyem**	**21.49**	**195**	P	**P**	**18 15 37.7**	**+0.5**
BAKI	**Biak**	**21.55**	**207**	P	**P**	**18 15 37.9**	**0.0**
	98nm,0.6s						
SRPI	**Serui, Papua**	**22.11**	**206**	P	**P**	**18 15 44.0**	**+0.7**
	77nm,1.3s						
NACB	**Ninganchiao**	**23.10**	**289**	P	**P**	**18 15 52.9**	**+0.8**
WAMI	**Wamena**	**23.12**	**198**	P	**P**	**18 15 54.0**	**+1.6**
	72nm,0.8s						
YULB	**Yu-li**	**23.25**	**287**	P	**P**	**18 15 54.6**	**+1.1**
RABL	**Rabaul**	**23.32**	**163**	P	**P**	**18 15 53.4**	**-0.8**
RABL	**Rabaul**	**23.32**	**163**	P	**P**	**18 15 53.8**	**-0.4**
TATO	**Taipei**	**23.34**	**291**	P	**P**	**18 15 54.8**	**+0.5**
YHNB	**Yeheng**	**23.38**	**290**	P	**P**	**18 15 56.0**	**+1.1**
YHNB	**Yeheng**	**23.38**	**290**	P	**P**	**18 15 56.4**	**+1.6**
KRVT	**Keravat (AS076**	**23.39**	**164**	P	**P**	**18 15 56.2**	**+1.3**
	41nm,0.4s,baz=325,slow=2.1,SNR=15						
	41nm,0.4s						
SSLB	**Suanglung**	**23.61**	**287**	P	**P**	**18 15 58.3**	**+1.4**
SSLB	**Suanglung**	**23.61**	**287**	P	**P**	**18 15 58.4**	**+1.5**
ERM	**Erimo**	**23.68**	**355**	P	**P**	**18 15 59.6**	**+2.4**
ERM				IAmb	IAmb	18 16 02.2	
	comp=Z,56nm,1.0s						
ERM	**Erimo**	**23.68**	**355**	*i* P	**P**	**18 15 58.5**	**+1.3**
ERM				pmax	pmax		
	comp=Z,36nm,0.7s						
SWI	**Sorong**	**23.74**	**218**	P	**P**	**18 15 58.4**	**+0.3**
	comp=Z,48nm,0.7s						
SIJI	**Sorong**	**23.74**	**218**	P	**P**	**18 15 58.6**	**+0.5**
	comp=Z,14nm,0.4s,baz=27,slow=12,SNR=21						
	comp=Z,14nm,0.4s						
TPUB	**Ta-pu**	**23.84**	**286**	P	**P**	**18 15 59.5**	**+0.6**
TPUB				IAmb	IAmb	18 16 00.9	
	comp=Z,69nm,1.1s						
TPUB	**Ta-pu**	**23.84**	**286**	P	**P**	**18 16 00.3**	**+1.3**
KSRS	**Korea Array**	**24.54**	**324**	P	**P**	**18 16 04.8**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=150,slow=8.5,SNR=26						
KSRS				pP	**pwP**	**18 16 48.1**	**-1.7**
	comp=Z,8.3nm,0.9s,baz=148,slow=9.8,SNR=4.1						
	comp=Z,3.5nm,0.7s						
KS19	**Wonju Array Si**	**24.61**	**324**	P	**P**	**18 16 05.4**	**-0.4**
FAKI	**Fak Fak**	**24.90**	**213**	P	**P**	**18 16 08.2**	**-0.4**
FAKI				IAmb	IAmb	18 16 14.1	
	comp=Z,30nm,0.6s						
FAKI	**Fak Fak**	**24.90**	**213**	P	**P**	**18 16 08.0**	**-0.6**
	comp=Z,46nm,0.7s						
FAKI	**Fak Fak**	**24.90**	**213**	P	**P**	**18 16 09.4**	**+0.8**
QZH	**Quanzhou**	**25.92**	**289**	*e*P	**P**	**18 16 18.6**	**+0.9**
LBMI	**Labuha**	**25.94**	**225**	P	**P**	**18 16 17.6**	**-0.4**
	comp=Z,13nm,0.7s						
PMG	**Port Moresby**	**27.63**	**177**	P	**P**	**18 16 32.4**	**-0.5**
	comp=Z,18nm,0.6s,baz=48,slow=3.1,SNR=12						
	comp=Z,18nm,0.6s						
NJ2	**Nanjing**	**27.69**	**305**	*e*P	**P**	**18 16 35.4**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AAI	**Ambon**	**27.82**	**220**	P	**P**	**18 16 35.0**	**+0.3**
	comp=Z,42nm,0.7s						
USRK	**Ussuriysk Ar.**	**28.19**	**339**	P	**P**	**18 16 39.3**	**+1.6**
	comp=Z,2.6nm,0.7s,baz=148,slow=8.4,SNR=2.7						
	comp=Z,2.6nm,0.7s						
YSS	**Yuzh-Sakhalins**	**28.62**	**356**	P	**P**	**18 16 41.9**	**+0.5**
YSS	**Yuzh-Sakhalins**	**28.62**	**356**	*e*P	**P**	**18 16 42.3**	**+0.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS	**Yuzh-Sakhalins**	**28.62**	**356**	P	**P**	**18 16 42.8**	**+1.4**
MRSI	**Marisa**	**29.25**	**235**	P	**P**	**18 16 48.8**	**+1.4**
	comp=Z,45nm,1.1s						
MDJ	**Mudanjiang**	**29.42**	**336**	P	**P**	**18 16 52.3**	**+3.8**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,210nm,3.9s						
MYLDM	**Lahad Datu**	**29.53**	**247**	P	**P**	**18 16 52.5**	**+2.6**
MYLDM				IAmb	IAmb	18 16 53.3	
	comp=Z,23nm,0.6s						
LUWI	**Luwuk**	**29.59**	**232**	P	**P**	**18 16 49.6**	**-0.8**
	comp=Z,65nm,0.9s						
TOLI2	**Tolitoli**	**29.79**	**238**	P	**P**	**18 16 51.4**	**-0.7**
TOLI2				IAmb	IAmb	18 16 53.8	
	comp=Z,22nm,0.8s						
TOLI2	**Tolitoli**	**29.79**	**238**	P	**P**	**18 16 53.0**	**+0.9**
MPSI	**Mapaga**	**30.95**	**237**	P	**P**	**18 17 02.0**	**-0.4**
	comp=Z,445nmcomp=Z,20nm,1.0s						
KKM	**Kota Kinabalu**	**31.16**	**251**	P	**P**	**18 17 05.5**	**+1.2**
KKM	**Kota Kinabalu**	**31.16**	**251**	P	**P**	**18 17 05.8**	**+1.5**
BNX	**BinXian**	**31.21**	**335**	⇑P	**P**	**18 17 04.9**	**+0.6**
BNX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BNX				pmax	pmax		
	comp=Z,63nm,4.7s						
COEN	**Coen**	**32.20**	**184**	P	**P**	**18 17 12.7**	**-0.5**
COEN	**Coen**	**32.20**	**184**	P	**P**	**18 17 13.1**	**-0.1**
TYV	**Tymovskoe**	**32.52**	**357**	*e*P	**P**	**18 17 16.0**	**+0.4**
TYV				pmax	pmax		
	comp=Z,29nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,4.6s						
TTSI	**Tana Toraja**	**33.12**	**233**	P	**P**	**18 17 23.0**	**+1.7**
	comp=Z,790nmcomp=Z,113nm,0.9s						
KDU	**Kakadu**	**33.45**	**204**	P	**P**	**18 17 23.9**	**-0.2**
SPSI	**Sidrap Palu**	**33.77**	**231**	P	**P**	**18 17 27.4**	**+0.6**
	comp=Z,61nm,0.9s						
QIZ	**Qiongzhong**	**33.85**	**277**	P	**P**	**18 17 29.7**	**+2.1**
QIZ				IAmb	IAmb	18 17 30.6	
	comp=Z,28nm,0.8s						
QIZ	**Qiongzhong**	**33.85**	**277**	P	**P**	**18 17 29.3**	**+1.8**
QIZ				pP	**pP**	**18 18 10.1**	**+0.4**
QIZ				S	**S**	**18 22 37.9**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,29nm,0.7s						
QIZ				pmax	pmax		
	comp=Z,94nm,3.1s						
QIZ	**Qiongzhong**	**33.85**	**277**	P	**P**	**18 17 29.7**	**+2.1**
MTN	**Manton Dam**	**34.13**	**206**	P	**P**	**18 17 30.1**	**+0.2**
BKSI	**Bulukumba**	**34.42**	**229**	P	**P**	**18 17 33.1**	**+0.6**
	comp=Z,29nm,0.9s						
KAPI	**Kappang**	**34.48**	**230**	P	**P**	**18 17 33.1**	**+0.1**
KAPI				IAmb	IAmb	18 17 34.8	
	comp=Z,33nm,0.9s						
KAPI	**Kappang**	**34.48**	**230**	*i* P	**P**	**18 17 33.6**	**+0.6**
KAPI				pmax	pmax		
	comp=Z,27nm,0.9s						
KAPI	**Kappang**	**34.48**	**230**	P	**P**	**18 17 34.1**	**+1.1**
	comp=Z,46nm,0.9s						
BSSI	**Bau Bau, Buton**	**34.73**	**228**	P	**P**	**18 17 36.2**	**+1.1**
	comp=Z,85nm,0.6s						
MMRI	**Maumere**	**35.37**	**223**	P	**P**	**18 17 39.8**	**-0.8**
MMRI				IAmb	IAmb	18 17 41.1	
	comp=Z,35nm,0.8s						
BATI	**Baumata**	**35.70**	**219**	P	**P**	**18 17 42.4**	**-1.0**
	comp=Z,37nm,0.7s						
MTKI	**Muara Teweh, K**	**35.77**	**241**	P	**P**	**18 17 45.2**	**+1.2**
	comp=Z,58nm,0.7s						
EDFI	**Ende, Flores**	**35.81**	**223**	P	**P**	**18 17 43.6**	**-0.8**
	comp=Z,9.6nm,0.6s						
PETK	**Petropavlovsk-**	**35.94**	**12**	P	**P**	**18 17 46.6**	**+1.6**
	comp=Z,14nm,0.7s,baz=184,slow=8.2,SNR=27						
	comp=Z,14nm,0.7s						
PETK	**Petropavlovsk-**	**35.94**	**12**	P	**P**	**18 17 46.4**	**+1.4**
PETK	**Petropavlovsk-**	**35.94**	**12**	P	**P**	**18 17 46.4**	**+1.4**
XAN	**Xi'an**	**36.21**	**303**	*e*P	**P**	**18 17 49.8**	**+2.2**
XAN				pP	pwP	18 18 34.7	-0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MTSU	**Mount Surprise**	**36.28**	**182**	P	**P**	**18 17 48.7**	**+0.4**
SBUM	**Sibu**	**36.33**	**248**	P	**P**	**18 17 50.0**	**+1.2**
HHC	**Hu-ho-hao-te**	**36.78**	**315**	*e*P	**P**	**18 17 54.9**	**+2.5**
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,6.1s						
GYA	**Guiyang**	**36.78**	**290**	⇑P	**P**	**18 17 55.2**	**+2.6**
GYA				pmax	pmax		
	comp=Z,18nm,1.3s						
BBKI	**Banjar Baru**	**37.26**	**237**	P	**P**	**18 17 57.1**	**+0.5**
	comp=Z,25nm,0.7s						
KNRA	**Kununurra**	**37.67**	**207**	P	**P**	**18 18 00.2**	**+0.3**
KNRA	**Kununurra**	**37.67**	**207**	P	**P**	**18 18 00.7**	**+0.8**
WBSI	**Waikabubak, Su**	**37.99**	**225**	P	**P**	**18 17 59.4**	**-3.3**
	comp=Z,107nm,0.7s						
ZEA	**Zeya**	**38.07**	**342**	*i* P	**P**	**18 18 02.4**	**-0.5**
KSM	**Kuching**	**38.47**	**248**	P	**P**	**18 18 07.2**	**+0.5**
KSM				IAmb	IAmb	18 18 08.2	
	comp=Z,48nm,0.8s						
KSM	**Kuching**	**38.47**	**248**	P	**P**	**18 18 07.4**	**+0.6**
UBPT	**Khong Chiam**	**38.49**	**272**	P	**P**	**18 18 08.3**	**+1.5**
UBPT				IAmb	IAmb	18 18 10.3	
	comp=Z,39nm,0.9s						
TWSI	**Taliwang, Sumb**	**39.09**	**229**	P	**P**	**18 18 11.4**	**-0.5**
	comp=Z,769nmcomp=Z,67nm,0.7s						
QIS	**Mount Isa

comp=Z,6.0nm,0.6s
EIDS Eidsvold 43.78 173 P P 18 18 49.6 -0.2
MYKOM Kota Tinggi 44.12 253 P P 18 18 53.8 +1.1
MYKOM IAmb IAmb 18 18 55.7
comp=Z,53nm,0.8s
CHTO Chiang Mai 44.13 278 P P 18 18 53.6 +0.9
CHTO Chiang Mai 44.13 278 P P 18 18 53.7 +0.9
CHTO pmax pmax
comp=Z,17nm,0.6s
CHTO Chiang Mai 44.13 278 P P 18 18 54.2 +1.5
CHTO Chiang Mai 44.13 278 P P 18 18 53.4 +0.7
CHTO pP **pwP 18 19 48.0 +5.6**
CM31 Chiang Mai Arr 44.17 278 P P 18 18 54.3 +1.2
CM31 IAmb IAmb 18 18 56.1
comp=Z,66nm,1.1s
CMAR Chiang Mai Arr 44.17 278 P P 18 18 55.0 +1.9
comp=Z,31nm,0.7s,baz=71,slow=7.4,SNR=209
CMAR pP **pP 18 19 38.3 +1.1**
comp=Z,1.1nm,0.6s,baz=70,slow=7.8,SNR=0.7
CMAR PcP **PcP 18 20 34.7 +0.5**
comp=Z,1.1nm,0.5s,baz=93,slow=1.8,SNR=2.1
CMAR Chiang Mai Arr 44.17 278 P P 18 18 54.9 +1.8
CMAR Chiang Mai Arr 44.17 278 P P 18 18 54.9 +1.8
KIWB Kanaga Island 44.40 32 P P 18 18 56.5 +2.2
ADK Adak 44.66 33 P P 18 18 58.2 +1.8
ADK IAmb IAmb 18 18 59.5
comp=Z,74nm,0.8s
ADK Adak 44.66 33 P P 18 18 58.2 +1.8
ADK pmax pmax
comp=Z,75nm,0.8s
ADK Adak 44.66 33 P P 18 18 58.7 +2.3
ADK Adak 44.66 33 P P 18 18 57.3 +0.9
ADK sP **sP 18 20 01.0 -3.1**
RMQ Roma 44.68 176 P P 18 18 55.9 -0.9
GTA Gaotai 44.69 308 *e*P **P 18 18 58.0 +1.0**
GTA pP pP 18 19 41.6 +0.2
GTA sP sP 18 20 04.6 -0.2
GTA PcP **PcP 18 20 35.9 +0.2**
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA pmax pmax
comp=Z,67nm,5.5s
GTA LR LR
comp=Z,99nm,15.3s
GTA LR LR
comp=Z,470nm,16.4s
GTA LR LR
comp=Z,96nm,16.4s
QLP Quilpie 44.69 182 P P 18 18 55.8 -1.1
SEY Seymchan 44.78 4*ce*P **P 18 18 58.0 +0.8**
SEY pmax pmax
comp=Z,7.0nm,0.6s
NOUC Port Laguerre 45.02 152 P P 18 19 00.2 +0.6
NOUC Port Laguerre 45.02 152 P P 18 18 58.9 -0.7
YAK Yakutsk 45.04 349 P P 18 18 58.2 -1.0
YAK IAmb IAmb 18 18 59.8
comp=Z,53nm,0.5s
YAK Yakutsk 45.04 349*ce*P **P 18 18 58.3 -1.0**
YAK *e**PP **pP 18 19 41.4 -3.2**
YAK *e* 18 20 36.7
YAK *e* 18 20 50.0
YAK *e*S **S 18 25 22.6 +1.2**
YAK *e**SS **sS 18 26 40.7 +0.5**
YAK *e* 18 28 41.1
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=Z,32nm,0.8s
YAK pmax pmax
comp=Z,33nm,2.5s
YAK pmax pmax
comp=N,21nm,2.5s
YAK pmax pmax
comp=E,15nm,2.3s
YAK smax smax
comp=E,25nm,2.2s
YAK smax smax
comp=N,20nm,1.9s
YAK Yakutsk 45.04 349 P P 18 18 57.5 -1.7
DZM Mont Dzumac 45.05 152 *e*P **P 18 19 00.5 +0.5**
comp=N,41nm,0.7s
DZM Mont Dzumac 45.05 152 *e*LR LR 18 31 19.9
comp=N,95nm,23.1s
DZM Mont Dzumac 45.05 152 P P 18 19 00.6 +0.6
DZM IAmb IAmb 18 19 01.8
comp=Z,58nm,0.9s
DZM Mont Dzumac 45.05 152 P P 18 19 00.9 +0.9
DZM Mont Dzumac 45.05 152 P P 18 18 59.4 -0.5
YATNC Mamie plateau, 45.24 152 P P 18 19 02.0 +0.6
OUENC Ouen Island, N 45.53 152 P P 18 19 04.3 +0.7
OUENC IAmb IAmb 18 19 05.5
comp=Z,59nm,0.7s
OUENC Ouen Island, N 45.53 152 P P 18 19 04.4 +0.7
SRIT Nakonsritamara 45.66 264 P P 18 19 07.5 +2.6
SRIT IAmb IAmb 18 19 08.5
comp=Z,48nm,0.9s
IPM Ipoh 45.67 258 P P 18 19 05.6 +0.6
IPM IAmb IAmb 18 19 08.0
comp=Z,52nm,0.9s
IPM Ipoh 45.67 258 P P 18 19 07.1 +2.1
KULM Kulim 45.74 259 P P 18 19 07.5 +2.1
KULM IAmb IAmb 18 19 08.9
comp=Z,95nm,1.0s
JMBI JAMBI 45.81 249 P P 18 19 07.9 +1.9
comp=Z,29µmcomp=Z,120nm,0.6s
PINNC Pines Island, 45.98 151 P P 18 19 07.6 +0.6
PINNC IAmb IAmb 18 19 18.1
comp=Z,51nm,1.0s
INKA Innaminka 46.06 186 P P 18 19 07.2 -0.4
ATKA Atka Island 46.12 33 P P 18 19 09.7 +1.9
BLSI Bandar Lampung 46.25 243 P P 18 19 09.8 +0.4
comp=Z,241nm,0.8s
WRKA Warakurna 46.31 202 P P 18 19 10.3 +0.6
ZAK Zakamensk 46.37 323 *e*P **P 18 19 09.5 -0.5**
ZAK *e* 18 19 52.3
MBWA Marble Bar 46.74 214 P P 18 19 13.3 +0.3
MBWA IAmb IAmb 18 19 14.3
comp=Z,50nm,0.6s
MBWA Marble Bar 46.74 214 P P 18 19 13.6 +0.6
MBWA Marble Bar 46.74 214 P P 18 19 12.4 -0.6
MBWA pP **pP 18 19 54.3 -3.4**
OOD Oodnadatta 46.87 192 P P 18 19 13.9 0.0
KASI Kota Agung 46.97 244 P P 18 19 13.9 -1.1
comp=Z,109nm,0.7s
PSA00 Pilbara Seismi 47.02 214 P P 18 19 15.6 +0.4
PSA00 IAmb IAmb 18 19 16.6
comp=Z,74nm,1.1s
PSA00 Pilbara Seismi 47.02 214 P P 18 19 15.2 +0.1
PSA00 IAmb IAmb 18 19 16.6
comp=Z,32nm,1.2s
PSA00 Pilbara Seismi 47.02 214 P P 18 19 15.9 +0.7
LWLI Liwa 47.08 244 P P 18 19 16.1 +0.1
comp=Z,1µmcomp=Z,74nm,0.8s
KSI Kapahiang 47.68 247 P P 18 19 20.0 -0.5
comp=Z,117nm,0.8s
KRJI Kerinci 47.95 250 P P 18 19 23.1 +0.4
GOMU GeErMu 47.96 302 P P 18 19 25.9 +3.1
GOMU pmax pmax
comp=Z,4.0nm,0.5s
GOMU pmax pmax
comp=Z,54nm,5.9s
PPI Padang Panjang 48.19 252 P P 18 19 24.7 +0.3
comp=Z,23nm,0.7s
PSI Prapat 48.24 257 P P 18 19 26.9 +2.0
PSI pmax pmax
comp=Z,68nm,1.0s
PSI Prapat 48.24 257 P P 18 19 26.9 +2.0
RPSI Rantau Prapat 48.28 257 P P 18 19 26.9 +1.8
RPSI IAmb IAmb 18 19 27.8
comp=Z,68nm,1.0s
MNSI Mandailing Nat 48.42 254 P P 18 19 27.4 +1.3
comp=Z,178nm,0.6s
CLES Cleveland East 48.71 34 P P 18 19 29.1 +1.3
CLES IAmb IAmb 18 19 30.1
comp=Z,242nm,0.6s
LCRK Leigh Creek 49.04 188 P P 18 19 30.5 0.0
KCSI Kotacane, Aceh 49.04 258 P P 18 19 31.3 +0.4
comp=Z,66nm,1.1s
NIKH Nikolski High 49.34 35 P P 18 19 33.7 +1.2
NIKH IAmb IAmb 18 19 34.5
comp=Z,123nm,1.3s
NIKH Nikolski High 49.34 35 P P 18 19 33.7 +1.2
baz=243,SNR=5.5
CMSA Cobar Meteorol 49.60 180 P P 18 19 34.4 -0.4
MULG Mulgathing 49.62 193 P P 18 19 35.1 +0.2

SISI Saibi 49.74 252 P P 18 19 35.7 -0.5
comp=Z,1µmcomp=Z,120nm,0.6s
GSI Gunungsitoli 50.05 256 P P 18 19 39.6 +1.0
GSI Gunungsitoli 50.05 256 P P 18 19 39.4 +0.9
comp=Z,3µmcomp=Z,317nm,0.6s
GSI Gunungsitoli 50.05 256 P P 18 19 39.9 +1.4
STKA Stephens Creek 50.09 184 P P 18 19 37.8 -0.6
comp=Z,16nm,0.5s,baz=4.6,slow=7.4,SNR=81
comp=Z,16nm,0.5s
STKA Stephens Creek 50.09 184 P P 18 19 37.6 -0.8
STKA Stephens Creek 50.09 184 P P 18 19 37.9 -0.6
LSA Lhasa 50.60 294 P P 18 19 43.7 +0.7
LSA Lhasa 50.60 294 P P 18 19 44.9 +1.9
LSA pmax pmax
comp=Z,10.0nm,0.6s
LSA Lhasa 50.60 294 P P 18 19 43.7 +0.7
LSA pmax pmax
comp=Z,9.0nm,0.9s
SPIA Saint Paul Isl 50.68 29 P P 18 19 44.6 +2.0
baz=239
UNV Unalaska Valle 50.99 34 P P 18 19 46.0 +1.1
UNV IAmb IAmb 18 19 47.5
comp=Z,45nm,0.7s
UNV Unalaska Valle 50.99 34 P P 18 19 46.5 +1.7
baz=245,SNR=9.6
UNV Unalaska Valle 50.99 34 P P 18 19 46.3 +1.4
BILL Bilibino 51.37 10*di* P **P 18 19 48.6 +1.1**
BILL *i* *PP **pwP 18 20 35.5 -1.0**
BILL *i* 18 20 54.3
BILL pmax pmax
comp=Z,48nm,1.0s
AKUT Akutan 51.50 34 P P 18 19 49.9 +1.2
FORT Forrest 51.68 199 P P 18 19 50.8 +0.5
FORT Forrest 51.68 199 P P 18 19 50.9 +0.6
BBOO Buckleboo 51.69 190 P P 18 19 49.9 -0.4
MEEK Meekatharra 51.84 211 P P 18 19 51.6 +0.1
CAN Canberra 53.48 177 P P 18 20 03.7 +0.3
CAN Canberra 53.48 177 P P 18 20 03.7 +0.3
CAN pmax pmax
comp=Z,44nm,1.7s
TAPN Taplejung 53.70 291 *e*P **P 18 20 07.6 +2.0**
comp=Z,18nm,0.4s
GAMB Gambell 53.80 22 P P 18 20 06.9 +1.6
GAMB Gambell 53.80 22 P P 18 20 07.1 +1.8
baz=233
S12K Black Hills 54.09 34 P P 18 20 08.5 +0.9
baz=248
TIXI Tiksi 54.20 354 P P 18 20 07.3 -0.8
TIXI Tiksi 54.20 354 P P 18 20 07.3 -0.8
TIXI pmax pmax
comp=Z,5.0nm,0.5s
WMQ Urumqi 54.47 311 *e*P **P 18 20 12.3 +1.7**
WMQ pP pwP 18 21 02.9 +0.7
WMQ sP sP 18 21 27.4 +7.9
WMQ pmax pmax
comp=Z,19nm,0.9s
RAMN Ramite 54.71 290 *e*P **P 18 20 15.1 +2.2**
comp=Z,14nm,0.5s
SDPT Sand Point 54.80 34 P P 18 20 13.8 +1.1
SDPT Sand Point 54.80 34 P P 18 20 13.9 +1.1
baz=250,SNR=8.5
ARPS Mount Arapiles 54.94 184 P P 18 20 14.0 +0.1
JIRN Jiri 55.03 291 *e*P **P 18 20 15.8 +0.5**
comp=Z,19nm,0.4s
CHNA Chernabura Isl 55.11 35 P P 18 20 16.3 +1.4
baz=251
MORW Morawa 55.12 212 P P 18 20 15.3 0.0
MORW Morawa 55.12 212 P P 18 20 15.5 +0.2
comp=Z,93nm,0.8s
S14K Fog Glacier 55.61 34 P P 18 20 20.0 +1.4
baz=250
PKI Pulchoki 55.73 291 *e*P **P 18 20 20.5 +0.3**
comp=Z,13nm,0.4s
PKIN Phulchoki 55.73 291 *e*P **P 18 20 20.5 +0.3**
comp=Z,17nm,0.4s
BLDU Ballidu 56.06 210 P P 18 20 22.3 +0.3
TNA Tin City 56.17 21 P P 18 20 23.5 +1.3
baz=236
CHGN Chignik 56.22 34 P P 18 20 23.7 +1.0
CHGN Chignik 56.22 34 P P 18 20 23.5 +0.7
baz=251
GKN Gorkha 56.38 292 *e*P **P 18 20 25.2 +0.6**
comp=Z,10nm,0.3s
KLBR Kellerberrin 56.40 209 P P 18 20 24.3 0.0
ANM Nome 56.55 23 P P 18 20 26.8 +1.8
baz=239
ZSN Zaisan 56.98 315 *e*P **P 18 20 28.3 0.0**
ZSN Zaisan 56.98 315 *e*P **P 18 20 28.3 0.0**
baz=315
DANN Dangsing 57.12 292 *e*P **P 18 20 30.4 +0.4**
comp=Z,66nm,0.6s
P16K Nushagak River 57.34 31 P P 18 20 32.7 +2.2
baz=250
N16K Nishlik Lake 57.49 29 P P 18 20 33.7 +2.0
baz=248,SNR=13
O16K Kokwok River B 57.49 30 P P 18 20 33.2 +1.6
baz=250,SNR=9.0
CHIR Chirikof Islan 57.57 35 P P 18 20 34.0 +1.7
baz=254
R17K Ugashik Creek 57.69 33 P P 18 20 33.7 +0.6
baz=252
NWAO Narrogin (SRO) 57.76 208 P P 18 20 34.0 +0.1
NWAO Narrogin (SRO) 57.76 208 P P 18 20 34.0 +0.1
NWAO pmax pmax
comp=Z,57nm,0.7s
NWAO Narrogin (SRO) 57.76 208 P P 18 20 34.2 +0.4
NWAO Narrogin (SRO) 57.76 208 P P 18 20 33.3 -0.5
Q16K King Salmon 57.88 31 P P 18 20 34.7 +0.4
baz=252
O17K Koliganek Bris 58.02 30 P P 18 20 37.2 +1.9
baz=250
P17K Kvichak River 58.15 31 P P 18 20 37.2 +1.0
baz=251
ZAA0 Zalesovo Array 58.23 323 P P 18 20 36.0 -1.0
ZALV Zalesovo Beam 58.23 323 P P 18 20 36.1 -0.8
comp=Z,7.2nm,0.6s,baz=116,slow=7.6,SNR=28
ZALV PcP **pP 18 21 24.0 +0.3**
comp=Z,6.6nm,0.8s,baz=112,slow=5.1,SNR=7.0
comp=Z,7.2nm,0.6s
ZALV Zalesovo Beam 58.23 323 P P 18 20 35.9 -1.0
SII Sitkinak Islan 58.54 34 P P 18 20 41.1 +2.0
SII Sitkinak Islan 58.54 34 P P 18 20 41.0 +2.0
baz=255,SNR=8.2
SII Sitkinak Islan 58.54 34 P P 18 20 41.1 +2.0
MK31 Makanchi Array 58.64 314 P P 18 20 40.1 +0.2
MK31 Makanchi Array 58.64 314 *i* P **P 18 20 40.2 +0.3**
MKAR Makanchi Array 58.64 314 P P 18 20 40.2 +0.3
comp=Z,3.9nm,0.4s,baz=91,slow=8.0,SNR=120
MKAR PcP **pP 18 21 26.8 +0.2**
comp=Z,2.6nm,0.5s,baz=90,slow=6.1,SNR=7.0
comp=Z,3.9nm,0.4s
MKAR Makanchi Array 58.64 314 P P 18 20 40.0 +0.1
MAKZ Makanchi 58.85 314 P P 18 20 41.3 -0.1
MAKZ Makanchi 58.85 314 P P 18 20 41.3 -0.1
MAKZ pmax pmax
comp=Z,11nm,0.5s
MAKZ Makanchi 58.85 314 P P 18 20 41.0 -0.4
MAKZ pP **pwP 18 21 32.6 -1.1**
N18K Kilae Creek 58.89 29 P P 18 20 43.1 +1.7
N18K IAmb IAmb 18 20 44.3
comp=Z,22nm,0.7s
N18K Kilae Creek 58.89 29 P P 18 20 43.5 +2.1
baz=251,SNR=11
O18K Koktuh Hills 58.95 30 P P 18 20 43.4 +1.6
O18K Koktuh Hills 58.95 30 P P 18 20 43.8 +2.0
baz=252
SVW2 Sparrevohn 59.17 29 P P 18 20 45.3 +2.0
SVW2 IAmb IAmb 18 20 46.1
comp=Z,20nm,0.7s
OHAK Old Harbor 59.19 34 P P 18 20 45.1 +1.7
OHAK IAmb IAmb 18 20 46.0
comp=Z,36nm,0.9s
OHAK Old Harbor 59.19 34 P P 18 20 45.0 +1.6
baz=256,SNR=5.8
Q19K Cape Douglas, 59.45 32 P P 18 20 45.6 +0.3
Q19K IAmb IAmb 18 20 46.3
comp=Z,27nm,0.6s
Q19K Cape Douglas, 59.45 32 P P 18 20 45.3 +0.1
baz=254
O19K Port Alsworth 59.48 30 P P 18 20 47.1 +1.7
O19K Port Alsworth 59.48 30 P P 18 20 46.7 +1.4
baz=253
N19K Bonanza Creek 59.59 29 P P 18 20 48.2 +2.0
N19K IAmb IAmb 18 20 49.2
comp=Z,39nm,0.8s

N19K Bonanza Creek 59.59 29 P P 18 20 48.2 +2.0
baz=252,SNR=32
TTA Tatalina 59.60 27 P P 18 20 47.8 +1.6
TTA Tatalina 59.60 27 P P 18 20 47.8 +1.6
TTA pmax pmax
comp=Z,10.0nm,0.7s
TTA Tatalina 59.60 27 P P 18 20 47.7 +1.6
baz=250,SNR=5.4
KDAK Kodiak Island 59.69 33 P P 18 20 48.2 +1.4
KDAK IAmb IAmb 18 22 48.7
comp=Z,51nm,1.4s
KDAK Kodiak Island 59.69 33 P P 18 20 48.2 +1.4
KDAK pmax pmax
comp=Z,51nm,1.4s
KDAK Kodiak Island 59.69 33 P P 18 20 48.3 +1.4
baz=256
L19K White Mountain 59.85 28 P P 18 20 49.6 +1.7
L19K White Mountain 59.85 28 P P 18 20 49.4 +1.5
baz=251,SNR=7.6
M19K Big River Lodg 59.97 28 P P 18 20 50.6 +1.9
M19K Big River Lodg 59.97 28 P P 18 20 50.5 +1.9
baz=252,SNR=8.9
ILSW Iliamna Southw 59.99 31 P P 18 20 49.4 +0.4
ILSW IAmb IAmb 18 20 52.0
comp=Z,11nm,0.8s
Q20K Shuyak Island 60.00 32 P P 18 20 49.9 +1.0
baz=256,SNR=7.4
O20K Slope Mountain 60.26 31 P P 18 20 52.1 +1.3
baz=254
RSO Redoubt South 60.30 30 P P 18 20 51.9 +0.7
SHLS Shalkode 60.37 310 *eP* **P 18 20 49.5 -2.4**
SHLS Shalkode 60.37 310 *eP* **P 18 20 49.6 -2.4**
baz=310
L20K Farewell, AK 60.38 28 P P 18 20 53.3 +1.8
baz=252,SNR=13
SEM Semipalatinsk 60.40 318 *eP* **P 18 20 50.4 -1.7**
SEM Semipalatinsk 60.40 318 *eP* **P 18 20 50.5 -1.7**
baz=318
M20K Styx River 60.53 28 P P 18 20 54.3 +1.7
M20K IAmb IAmb 18 20 55.6
comp=Z,18nm,0.7s
M20K Styx River 60.53 28 P P 18 20 54.5 +1.9
baz=253,SNR=14
K20K Telida 60.57 27 P P 18 20 54.7 +2.0
K20K IAmb IAmb 18 20 55.8
comp=Z,26nm,0.7s
K20K Telida 60.57 27 P P 18 20 54.7 +2.0
baz=251
HOM Homer 60.63 31 P P 18 20 55.1 +1.9
baz=256
UZB Uzynbulak 60.69 310 *eP* **P 18 20 53.3 -0.8**
UZB Uzynbulak 60.69 310 *eP* **P 18 20 53.4 -0.8**
baz=310
N20K Mount Spurr 60.76 29 P P 18 20 56.4 +2.2
baz=254
SPCR Spurr Chakacha 60.76 29 P P 18 20 56.4 +2.2
baz=254
CNPM China Poot 60.80 31 P P 18 20 55.1 +0.7
J20K Nowinta River 60.80 26 P P 18 20 56.2 +1.9
J20K Nowinta River 60.80 26 P P 18 20 56.5 +2.2
baz=251,SNR=46
BRLK Bradley Lake 61.03 31 P P 18 20 56.4 +0.5
BRLK IAmb IAmb 18 20 59.1
comp=Z,36nm,0.7s
BRSE Bradley Lake S 61.10 31 P P 18 20 56.9 +0.5
baz=256,SNR=6.7
SATY Saty 61.14 310 *eP* **P 18 20 55.4 -1.7**
SATY Saty 61.14 310 *eP* **P 18 20 55.5 -1.7**
baz=310
CAPN Captain Cook N 61.15 30 P P 18 20 58.1 +1.5
baz=256
TDK Taldyqorghan 61.20 312 *eP* **P 18 20 57.1 -0.3**
TDK pmax pmax
comp=Z,8.0nm,0.6s
TDK Taldyqorghan 61.20 312 *eP* **P 18 20 57.1 -0.3**
comp=Z,7.7nm,0.6s,baz=312
PPLA Purkeypile 61.24 28 P P 18 20 59.0 +1.6
PPLA IAmb IAmb 18 20 59.5
comp=Z,14nm,0.6s
PPLA Purkeypile 61.24 28 P P 18 20 58.8 +1.4
baz=253,SNR=8.0
CAST Castle Rocks 61.44 27 P P 18 21 00.2 +1.6
baz=253,SNR=69
KURK Kurchatov 61.47 318 P P 18 20 58.1 -0.8
KURK Kurchatov 61.47 318*ce*P **P 18 20 58.6 -0.4**
KURK pmax pmax
comp=Z,19nm,0.9s
KURK Kurchatov 61.47 318 P P 18 20 57.6 -1.4
KURK pP **pP 18 21 44.9 -1.4**
CHUM Lake Minchumin 61.48 26 P P 18 21 00.6 +1.8
baz=253,SNR=42
IMAR Indian Mountai 61.57 24 P P 18 21 00.5 +1.1
O22K Cooper Landing 61.76 31 P P 18 21 01.8 +1.0
O22K Cooper Landing 61.76 31 P P 18 21 02.1 +1.4
baz=257,SNR=6.1
SEW Seward 61.81 31 P P 18 21 02.0 +1.0
SEW Seward 61.81 31 P P 18 21 02.2 +1.2
baz=257,SNR=5.9
H21K Melozitna Rive 61.83 24 P P 18 21 02.8 +1.6
H21K IAmb IAmb 18 21 03.4
comp=Z,23nm,0.6s
H21K Melozitna Rive 61.83 24 P P 18 21 02.9 +1.8
baz=251,SNR=44
G21K Allakaket 61.84 23 P P 18 21 02.8 +1.6
baz=250,SNR=18
M22K Willow 61.87 29 P P 18 21 02.2 +0.8
M22K Willow 61.87 29 P P 18 21 01.8 +0.3
baz=256
RC01 Rabbit Creek A 61.90 30 P P 18 21 02.2 +0.6
RC01 Rabbit Creek A 61.90 30 P P 18 21 02.2 +0.6
baz=257,SNR=11
NRIK Noril'sk 61.90 340 P P 18 21 01.2 -0.3
comp=Z,7.7nm,0.4s,baz=105,slow=9.3,SNR=16
NRIK pP **pP 18 21 50.3 +1.4**
comp=Z,6.3nm,0.6s,baz=117,slow=5.0,SNR=2.2
comp=Z,7.7nm,0.4s
NRIK Noril'sk 61.90 340 P P 18 21 00.8 -0.8
NRIK Noril'sk 61.90 340*ce*P **P 18 21 01.2 -0.3**
NRIK pmax pmax
comp=Z,10.0nm,0.6s
CUT Chulitna 61.97 28 P P 18 21 02.4 +0.3
baz=256
KTH Kantishna Hill 61.98 27 P P 18 21 03.1 +0.9
KTH IAmb IAmb 18 21 04.3
comp=Z,40nm,1.0s
I21K Tanana 62.01 25 P P 18 21 03.8 +1.5
I21K Tanana 62.01 25 P P 18 21 04.2 +1.9
baz=252,SNR=45
F21K Alatna River 62.09 23 P P 18 21 04.3 +1.4
baz=250,SNR=20
BPAW Bear Paw Mtn. 62.10 26 P P 18 21 04.5 +1.5
BPAW Bear Paw Mtn. 62.10 26 P P 18 21 04.5 +1.5
baz=254,SNR=60
MDOK Medeo 62.13 310 *eP* **P 18 21 03.1 -0.7**
MDOK Medeo 62.13 310 *eP* **P 18 21 03.2 -0.7**
baz=310
CHKK Chushkaly 62.19 310 *eP* **P 18 21 03.3 -0.6**
CHKK Chushkaly 62.19 310 *eP* **P 18 21 03.4 -0.6**
baz=310
TRF Thorofare Moun 62.23 27 P P 18 21 04.5 +0.5
TRF IAmb IAmb 18 21 05.6
comp=Z,38nm,1.0s
TRF Thorofare Moun 62.23 27 P P 18 21 04.7 +0.7
baz=255,SNR=16
AAA Alma-Ata 62.23 310 *i* P **P 18 21 04.4 +0.1**
AAA pmax pmax
comp=Z,15nm,0.6s
AAA Alma-Ata 62.23 310 *i* P **P 18 21 04.5 +0.1**
comp=Z,14nm,0.6s,baz=310
PMR Palmer 62.30 29 P P 18 21 04.9 +0.6
PMR IAmb IAmb 18 21 05.7
comp=Z,26nm,0.6s
PMR Palmer 62.30 29 P P 18 21 04.9 +0.6
PMR pmax pmax
comp=Z,26nm,0.6s
PMR Palmer 62.30 29 P P 18 21 04.7 +0.4
baz=257,SNR=5.3
GHO Glory Hole Cre 62.43 29 P P 18 21 06.0 +0.7
H22K Ishtalitna Cre 62.46 24 P P 18 21 07.0 +1.6
baz=253,SNR=22
MLY Manley 62.47 25 P P 18 21 06.8 +1.3
MLY Manley 62.47 25 P P 18 21 07.0 +1.6
baz=254
TOZ Tahuroa Road 62.48 154 P P 18 21 06.6 +0.8
PWL Port Wells 62.51 30 P P 18 21 07.0 +1.1
PWL Port Wells 62.51 30 P P 18 21 06.9 +1.1

baz=258,SNR=8.3
KNK Knik Glacier 62.57 30 P P 18 21 07.2 +1.0
KNK Knik Glacier 62.57 30 P P 18 21 07.2 +1.0
baz=258,SNR=12
KUU Kurty 62.66 310 *eP* **P 18 21 06.6 -0.4**
KUU pmax pmax
comp=Z,7.0nm,0.4s
KUU Kurty 62.66 310 *eP* **P 18 21 06.6 -0.4**
comp=Z,7.1nm,0.4s,baz=310
F22K John River 62.66 23 P P **18 21 08.5 +1.9**
baz=251,SNR=60
SML Sawmill 62.71 29 P P **18 21 08.0 +0.8**
SML Sawmill 62.71 29 P P **18 21 08.3 +1.2**
baz=258,SNR=30
G22K Bettles 62.73 23 P P **18 21 08.3 +1.3**
baz=252
BWN Browne 62.77 27 P P **18 21 08.9 +1.5**
P23K Montague Islan 62.80 31 P P **18 21 09.1 +1.5**
baz=259
RND Reindeer 62.84 27 P P **18 21 08.3 +0.3**
RND IAmb IAmb 18 21 09.9
comp=Z,19nm,0.8s
RND Reindeer 62.84 27 P P **18 21 08.3 +0.3**
RND pmax pmax
comp=Z,19nm,0.8s
WAT1 Susitna Watana 62.84 28 P P **18 21 08.5 +0.6**
baz=257
MCK McKinley 62.88 27 P P **18 21 08.7 +0.5**
MCK McKinley 62.88 27 P P **18 21 08.7 +0.5**
MCK pmax pmax
comp=Z,16nm,1.0s
MCK McKinley 62.88 27 P P **18 21 08.5 +0.3**
baz=256
BOOM Boomskoye usch 62.95 309 P P **18 21 09.8 +0.6**
BOOM IAmb IAmb 18 21 11.8
comp=Z,9.4nm,0.5s
BOOM Boomskoye usch 62.95 309 P P **18 21 09.8 +0.6**
BOOM pmax pmax
comp=Z,9.0nm,0.5s
M23K Glacier View 62.99 29 P P **18 21 09.8 +0.9**
baz=258,SNR=14
KSH Kashi 62.99 306 P P **18 21 14.3 +4.8**
KSH pP pwP 18 22 05.5 +3.1
KSH pmax pmax
comp=Z,13nm,0.8s
NEA2 Nenana 63.04 26 P P **18 21 09.8 +0.7**
NEA2 IAmb IAmb 18 21 11.3
comp=Z,19nm,0.7s
NEA2 Nenana 63.04 26 P P **18 21 10.4 +1.2**
baz=256,SNR=21
I23K Minto, Yukon-K 63.06 25 P P **18 21 10.6 +1.4**
I23K Minto, Yukon-K 63.06 25 P P **18 21 10.8 +1.5**
baz=255,SNR=51
GLI Glacier Island 63.11 30 P P **18 21 10.7 +1.0**
GLI IAmb IAmb 18 21 11.6
comp=Z,25nm,0.6s
GLI Glacier Island 63.11 30 P P **18 21 10.7 +1.0**
baz=259
WAT6 Susitna Watana 63.15 28 P P **18 21 11.0 +0.8**
baz=258,SNR=25
H23K Yukon River 63.16 25 P P **18 21 11.6 +1.5**
H23K IAmb IAmb 18 21 12.6
comp=Z,27nm,0.7s
H23K Yukon River 63.16 25 P P **18 21 11.6 +1.5**
baz=254,SNR=33
SCM Sheep Creek Mo 63.19 29 P P **18 21 11.5 +1.3**
SCM Sheep Creek Mo 63.19 29 P P **18 21 11.5 +1.3**
SCM pmax pmax
comp=Z,67nm,0.8s
SCM Sheep Creek Mo 63.19 29 P P **18 21 11.6 +1.3**
baz=258,SNR=20
G23K Bananza Creek 63.22 24 P P **18 21 12.1 +1.7**
baz=254,SNR=24
Q23K Middleton Isla 63.22 32 P P **18 21 12.5 +2.0**
baz=261
COLD Coldfoot 63.30 23 P P **18 21 12.7 +1.8**
COLD IAmb IAmb 18 21 13.1
comp=Z,17nm,0.6s
COLD Coldfoot 63.30 23 P P **18 21 12.6 +1.8**
baz=253,SNR=26
DHY Denali Highway 63.42 28 P P **18 21 12.5 +0.6**
DHY IAmb IAmb 18 21 15.6
comp=Z,12nm,0.6s
DHY Denali Highway 63.42 28 P P **18 21 12.9 +1.0**
baz=258,SNR=12
WRH Wood River Hil 63.42 26 P P **18 21 11.7 +0.1**
WRH IAmb IAmb 18 21 12.9
comp=Z,22nm,0.6s
HYBB Hyderabad (bro 63.47 281 *eP* **P 18 21 13.7 +0.9**
HYBB *epP* **pP 18 21 59.0 -1.4**
MDM Murphy Dome 63.48 26 P P **18 21 12.6 +0.5**
CCB Clear Creek Bu 63.58 26 P P **18 21 12.9 +0.3**
CCB IAmb IAmb 18 21 14.0
comp=Z,9.1nm,0.5s
TCOL CIGO, UAF Yank 63.61 26 P P **18 21 13.4 +0.6**
baz=257
URZ Urewera 63.61 153 P P **18 21 12.8 -0.4**
COLA College 63.61 26 P P **18 21 13.5 +0.6**
COLA IAmb IAmb 18 21 16.4
comp=Z,22nm,0.7s
COLA College 63.61 26 *i* P P **18 21 13.3 +0.4**
COLA pmax pmax
comp=Z,20nm,0.8s
COLA College 63.61 26 P P **18 21 13.7 +0.9**
baz=257
COLA College 63.61 26 P P **18 21 13.2 +0.3**
D23K Nanushuk River 63.66 21 P P **18 21 15.3 +2.2**
baz=252,SNR=21
EYAK Cordova Ski Ar 63.70 31 P P **18 21 15.1 +1.6**
baz=261,SNR=5.6
PKGZ Pakihiroa 63.73 152 P P **18 21 14.4 +0.3**
OTVZ Oturere 63.76 154 P P **18 21 15.1 +0.7**
M24K Tolsona, Glenn 63.77 29 P P **18 21 15.5 +1.5**
M24K Tolsona, Glenn 63.77 29 P P **18 21 15.6 +1.5**
baz=260
KLU Klutina 63.78 30 P P **18 21 15.6 +1.4**
KLU IAmb IAmb 18 21 16.6
comp=Z,25nm,0.7s
KLU Klutina 63.78 30 P P **18 21 15.5 +1.4**
baz=260,SNR=14
FWVZ Far West T-bar 63.79 154 P P **18 21 15.1 +0.4**
DIV Divide 63.79 30 P P **18 21 15.9 +1.6**
DIV IAmb IAmb 18 21 16.7
comp=Z,19nm,0.7s
WHVZ Whangaehu Hut 63.83 154 P P **18 21 15.3 +0.4**
H24K Noodor Dome 63.83 25 P P **18 21 15.8 +1.4**
H24K IAmb IAmb 18 21 16.7
comp=Z,20nm,0.6s
H24K Noodor Dome 63.83 25 P P **18 21 15.8 +1.4**
baz=256,SNR=43
POKR Poker Plat Res 63.84 26 P P **18 21 14.7 +0.2**
baz=257
HDA Harding Lake 63.89 27 P P **18 21 14.6 -0.1**
HDA IAmb IAmb 18 21 15.5
comp=Z,23nm,0.8s
HDA Harding Lake 63.89 27 P P **18 21 14.6 -0.1**
baz=256,SNR=23
SGDS Sogindy 63.90 310 *eP* **P 18 21 14.4 -0.9**
SGDS Sogindy 63.90 310 *eP* **P 18 21 14.4 -0.9**
baz=310
TWGZ Tauwhareparae 63.93 152 P P **18 21 17.2 +1.9**
RAGZ Rawiri 63.94 153 P P **18 21 15.3 -0.2**
TOLK Toolik Lake Re 63.95 22 P P **18 21 16.8 +1.7**
TOLK Toolik Lake Re 63.95 22 P P **18 21 16.8 +1.7**
baz=253,SNR=43
C23K Itkillik River 63.96 20 P P **18 21 16.8 +1.7**
baz=252,SNR=30
QRZ Quartz Range 63.97 158 P P **18 21 15.8 +0.3**
QRZ Quartz Range 63.97 158 P P **18 21 16.3 +0.8**
MTHZ Maungataniwha 63.99 153 P P **18 21 15.3 -0.4**
IL31 63.99 26 P P **18 21 15.1 -0.2**
IL31 IAmb IAmb 18 21 16.1
comp=Z,30nm,0.9s
ILAR Eielson Array 63.99 26 P P **18 21 15.2 -0.3**
comp=Z,24nm,0.8s,baz=257,slow=4.8,SNR=144
ILAR pP **pwP 18 22 05.0 -2.2**
comp=Z,4.8nm,1.0s,baz=262,slow=4.5,SNR=2.6
comp=Z,24nm,0.8s
MOVZ Moawhango 64.00 154 P P **18 21 15.8 0.0**
AAK Ala-Archa 64.02 309 *ceP* **P 18 21 16.7 +0.5**
AAK pmax pmax
comp=Z,2.0nm,0.3s
BKZ Black Stump Fm 64.10 154 P P **18 21 16.3 -0.2**
SNGZ Shannon Statio 64.14 153 P P **18 21 17.1 +0.4**
E24K Your Creek 64.17 22 P P **18 21 18.3 +1.7**
baz=254,SNR=31

G24K Hadweenzic Riv 64.20 24 P P **18 21 18.3 +1.6**
baz=256,SNR=22
F24K Squaw Lake 64.25 23 P P **18 21 19.0 +1.9**
baz=255,SNR=27
PAX Paxson 64.25 28 P P **18 21 18.3 +1.1**
PAX Paxson 64.25 28 P P **18 21 18.3 +1.1**
PAX pmax pmax
comp=Z,28nm,0.6s
PAX Paxson 64.25 28 P P **18 21 18.3 +1.1**
baz=260,SNR=31
K24K Donnelly Dome 64.27 27 P P **18 21 18.0 +0.7**
baz=259
KAIM Kayak Island 64.27 32 P P **18 21 19.4 +2.1**
baz=262
HARP HAARP 64.29 29 P P **18 21 18.8 +1.4**
baz=260,SNR=11
BTLS Baital 64.30 312 *eP* **P 18 21 17.1 -0.6**
BTLS Baital 64.30 312 *eP* **P 18 21 17.1 -0.6**
baz=312
BMRM Bremner River 64.33 31 P P **18 21 19.1 +1.4**
BMRM Bremner River 64.33 31 P P **18 21 19.1 +1.4**
baz=262,SNR=7.4
D24K Happy Valley 64.35 21 P P **18 21 19.9 +2.2**
baz=254
N25K Chitina, Valde 64.42 30 P P **18 21 20.0 +1.6**
N25K IAmb IAmb 18 21 20.9
comp=Z,19nm,0.8s
N25K Chitina, Valde 64.42 30 P P **18 21 20.0 +1.6**
baz=261,SNR=11
C24K Franklin Bluff 64.56 21 P P **18 21 20.6 +1.7**
baz=253
J25K Salcha River, 64.60 26 P P **18 21 19.3 -0.1**
J25K IAmb IAmb 18 21 20.0
comp=Z,16nm,0.6s
J25K Salcha River, 64.60 26 P P **18 21 19.3 -0.1**
baz=259,SNR=27
NNZ Nelson 64.63 157 P P **18 21 19.0 -0.7**
RIDG Independent Ri 64.66 27 P P **18 21 20.7 +0.8**
RIDG Independent Ri 64.66 27 P P **18 21 20.6 +0.8**
baz=260,SNR=25
BERG Berg Lake 64.69 31 P P **18 21 21.8 +1.8**
PRP Porcupine Dome 64.71 25 P P **18 21 19.3 -0.9**
PRP Porcupine Dome 64.71 25 P P **18 21 19.2 -0.9**
baz=258
G25K Bearman Lake 64.75 24 P P **18 21 21.9 +1.7**
baz=257,SNR=15
H25K Birch Creek 64.75 25 P P **18 21 21.9 +1.7**
baz=258
GLB Gilahina Butte 64.78 30 P P **18 21 21.9 +1.3**
GLB IAmb IAmb 18 21 23.1
comp=Z,49nm,1.2s
VRDI Verde Repeater 64.92 30 P P **18 21 22.9 +1.2**
VRDI IAmb IAmb 18 21 23.4
comp=Z,22nm,0.8s
THZ Tophouse 64.93 158 P P **18 21 21.6 -0.2**
DOT Dot Lake 64.99 28 P P **18 21 22.2 +0.2**
CRQM Cirque 65.01 31 P P **18 21 23.7 +1.4**
CRQE Cirque 65.03 31 P P **18 21 23.8 +1.4**
baz=263,SNR=8.2
MENT Mentasta 65.03 28 P P **18 21 23.4 +1.2**
MENT IAmb IAmb 18 21 31.1
comp=Z,10.0nm,0.5s
SCRK Sand Creek 65.08 27 P P **18 21 23.2 +0.6**
SCRK IAmb IAmb 18 21 24.4
comp=Z,34nm,1.1s
SCRK Sand Creek 65.08 27 P P **18 21 23.5 +0.9**
baz=261,SNR=26
F25K Christian Rive 65.10 23 P P **18 21 24.6 +2.0**
baz=257,SNR=40
MCARA McCarthy VSAT 65.14 30 P P **18 21 24.5 +1.6**
MCARA IAmb IAmb 18 21 25.3
comp=Z,34nm,0.8s
MCARA McCarthy VSAT 65.14 30 P P **18 21 24.2 +1.4**
baz=263,SNR=7.7
L26K Log Cabin Wild 65.22 28 P P **18 21 24.9 +1.5**
L26K Log Cabin Wild 65.22 28 P P **18 21 24.6 +1.3**
baz=262,SNR=18
BRZS Berezniki 65.22 317 *eP* **P 18 21 23.2 -0.4**
BRZS Berezniki 65.22 317 *eP* **P 18 21 23.2 -0.4**
baz=317
D25K Kavik River 65.24 21 P P **18 21 25.0 +1.6**
baz=256,SNR=72
E25K Arctic Village 65.25 23 P P **18 21 25.3 +1.9**
baz=257
M26K Nabesna, AK 65.29 29 P P **18 21 25.4 +1.5**
M26K Nabesna, AK 65.29 29 P P **18 21 25.2 +1.3**
baz=262
J26L Joseph Creek 65.35 27 P P **18 21 25.0 +0.7**
J26L IAmb IAmb 18 21 25.9
comp=Z,50nm,1.2s
J26L Joseph Creek 65.35 27 P P **18 21 25.1 +0.9**
baz=261,SNR=37
BMAR Burnt Mountain 65.47 23 P P **18 21 26.9 +2.0**
MESA MESA 65.53 32 P P **18 21 27.6 +2.0**
baz=264
LTZ Lake Taylor 65.60 159 P P **18 21 25.2 -0.9**
LTZ IAmb IAmb 18 21 38.4
comp=Z,54nm,1.4s
NIL Nilore 65.62 299 P P **18 21 27.4 +0.9**
NIL Nilore 65.62 299 P P **18 21 27.4 +0.9**
NIL pmax pmax
comp=Z,39nm,0.8s
YAH Yahtse 65.65 31 P P **18 21 28.3 +1.9**
YAH IAmb IAmb 18 21 29.1
comp=Z,32nm,0.7s
I26K Coal Creek Min 65.65 26 P P **18 21 25.8 -0.3**
I26K Coal Creek Min 65.65 26 P P **18 21 26.0 -0.1**
baz=261,SNR=7.0
GRNC Granite Creek 65.68 31 P P **18 21 28.3 +1.6**
F26K Sheenjek River 65.68 23 P P **18 21 28.4 +2.1**
baz=259,SNR=57
KHZ Kahutara 65.73 158 P P **18 21 24.8 -2.0**
KHZ IAmb IAmb 18 21 25.9
comp=Z,35nm,0.7s
M27K Edge Creek, AK 65.80 29 P P **18 21 28.7 +1.5**
M27K Edge Creek, AK 65.80 29 P P **18 21 28.5 +1.3**
baz=263,SNR=9.2
C26K Camden Bay 65.88 21 P P **18 21 29.7 +2.3**
baz=257,SNR=12
CTG Chitna Glacier 65.91 31 P P **18 21 29.7 +1.7**
baz=264,SNR=9.2
L27K Beaver Creek, 65.91 28 P P **18 21 29.2 +1.3**
L27K IAmb IAmb 18 21 29.6
comp=Z,14nm,0.6s
L27K Beaver Creek, 65.91 28 P P **18 21 29.1 +1.3**
baz=263,SNR=23
CTGM Chitina Glacie 65.91 31 P P **18 21 29.7 +1.7**
CTGM IAmb IAmb 18 21 31.0
comp=Z,31nm,0.7s
K27K Chicken 65.92 27 P P **18 21 29.3 +1.5**
K27K Chicken 65.92 27 P P **18 21 29.3 +1.5**
baz=262
BCAR Beaver Creek A 65.93 28 P P **18 21 29.2 +1.2**
TABL Table Mountain 65.95 31 P P **18 21 29.8 +1.5**
OXZ Oxford 66.01 159 P P **18 21 27.0 -1.6**
OXZ IAmb IAmb 18 21 28.1
comp=Z,24nm,0.6s
LOGN Logan Glacier 66.06 31 P P **18 21 30.5 +1.6**
LOGN IAmb IAmb 18 21 31.5
comp=Z,29nm,0.8s
C27K Jago River 66.22 21 P P **18 21 31.4 +1.7**
baz=258,SNR=26
BVCY Beaver Creek 66.28 29 P P **18 21 31.6 +1.4**
baz=264
I27K Kandik River 66.33 26 P P **18 21 31.3 +0.9**
baz=262
PCA Pinnacle 66.36 32 P P **18 21 32.4 +1.6**
PINM Pinnacle 66.37 32 P P **18 21 32.4 +1.6**
baz=266
YUK3 Moose Creek 66.40 30 P P **18 21 32.6 +1.4**
baz=265,SNR=11
O28M Mount Upton 66.45 31 P P **18 21 33.2 +1.6**
baz=266,SNR=15
H27K Steamboat Moun 66.45 25 P P **18 21 32.9 +1.7**
baz=262
G27K Doyon Strip 66.48 24 P P **18 21 32.8 +1.4**
baz=262,SNR=9.7
E27K Coleen River 66.72 23 P P **18 21 34.5 +1.6**
baz=261,SNR=20
BRVK Borovoye 66.75 321 P P **18 21 32.9 -0.4**
BRVK Borovoye 66.75 321 *ceP* **P 18 21 33.4 +0.1**
BRVK pmax pmax
comp=Z,16nm,0.7s
PNL Peninsula 66.77 32 P P **18 21 34.6 +1.3**
baz=267
KK31 Karatay Array 66.92 310 P P **18 21 34.7 +0.1**

KK31 Karatay Array 66.92 310 P P **18 21 34.7 +0.1**
KK31 pmax pmax
comp=Z,13nm,1.0s
KKAR Karatay Array 66.92 310 P P **18 21 34.7 +0.1**
KKAR Karatay Array 66.92 310 P P **18 21 34.2 -0.4**
KKAR Karatay Array 66.92 310 P P **18 21 34.2 -0.4**
KKAR pmax pmax
comp=Z,13nm,1.0s
DAWY Dawson 67.10 27 P P **18 21 36.7 +1.4**
DAWY Dawson 67.10 27 P P **18 21 36.8 +1.4**
baz=265,SNR=13
O29M Mount Kennedy 67.22 32 P P **18 21 38.5 +2.3**
baz=267,SNR=12
YUK4 Talbot Arm 67.24 30 P P **18 21 39.0 +2.5**
baz=267,SNR=36
IUG luzhnay 67.34 309 *eP* **P 18 21 36.7 -0.7**
IUG luzhnay 67.34 309 *eP* **P 18 21 36.8 -0.7**
baz=309
YUK6 Outpost Mounta 67.35 31 P P **18 21 39.5 +2.3**
baz=267,SNR=9.2
M29M Somme Creek 67.39 29 P P **18 21 39.2 +1.9**
baz=266
GAR Garm 67.41 305 P P **18 21 38.6 +0.7**
GAR IAmb IAmb 18 21 39.1
comp=Z,21nm,0.9s
P29M Windy Craggy 67.61 32 P P **18 21 40.8 +2.2**
P29M Windy Craggy 67.61 32 P P **18 21 40.7 +2.2**
baz=268,SNR=10
J29M Klondike Camp 67.64 27 P P **18 21 40.3 +1.5**
I29M Ogilvie Camp, 67.67 26 P P **18 21 39.9 +1.1**
I29M Ogilvie Camp, 67.67 26 P P **18 21 40.0 +1.1**
baz=265,SNR=16
HYT Haines Junctio 67.77 31 P P **18 21 41.9 +2.2**
HYT Haines Junctio 67.77 31 P P **18 21 41.9 +2.2**
baz=268,SNR=21
N30M Aishikik Lake 67.99 30 P P **18 21 43.0 +2.0**
baz=268,SNR=15
P30M Million Dollar 68.02 32 P P **18 21 43.2 +2.1**
baz=269
PLBC Pleasant Camp 68.30 33 P P **18 21 44.9 +2.0**
baz=269,SNR=13
CHGR Chuyangaron 68.35 305 P P **18 21 43.7 0.0**
CHGR IAmb IAmb 18 21 45.3
comp=Z,37nm,0.8s
CHGR Chuyangaron 68.35 305 P P **18 21 43.7 0.0**
CHGR pmax pmax
comp=Z,37nm,0.8s
EPYK Eagle Plains 68.40 25 P P **18 21 44.5 +1.1**
EPYK IAmb IAmb 18 21 45.5
comp=Z,20nm,0.7s
EPYK Eagle Plains 68.40 25 P P **18 21 44.7 +1.3**
baz=257
O30N Mendenhall 68.46 31 P P **18 21 45.7 +1.8**
baz=269
N31M Braeburn, Yuko 68.62 30 P P **18 21 46.8 +1.9**
N31M IAmb IAmb 18 21 47.9
comp=Z,32nm,0.8s
N31M Braeburn, Yuko 68.62 30 P P **18 21 46.7 +1.9**
baz=269,SNR=8.5
SKAG Skagway 68.83 33 P P **18 21 48.1 +1.9**
SKAG IAmb IAmb 18 21 48.7
comp=Z,20nm,0.6s
SKAG Skagway 68.83 33 P P **18 21 48.0 +1.9**
baz=270,SNR=6.6
KBL Kabul 68.97 301 P P **18 21 47.5 -0.2**
KBL IAmb IAmb 18 21 49.0
comp=Z,20nm,0.6s
KBL Kabul 68.97 301 P P **18 21 47.5 -0.2**
KBL pmax pmax
comp=Z,20nm,0.6s
BESE Bessie Mountai 69.09 33 P P **18 21 49.9 +2.0**
M31M Drury Creek, Y 69.28 30 P P **18 21 50.4 +1.5**
M31M Drury Creek, Y 69.28 30 P P **18 21 50.1 +1.2**
baz=270,SNR=12
JIS Juneau Island 69.34 34 P P **18 21 51.2 +1.9**
JIS IAmb IAmb 18 21 52.1
comp=Z,22nm,0.7s
P32M Atlin 69.65 32 P P **18 21 53.1 +1.8**
baz=272,SNR=6.0
INK Inuvik 69.72 23 P P **18 21 52.1 +0.7**
INK IAmb IAmb 18 21 53.1
comp=Z,31nm,0.8s
INK Inuvik 69.72 23 P P **18 21 52.1 +0.7**
INK pmax pmax
comp=Z,31nm,0.8s
INK Inuvik 69.72 23 P P **18 21 52.3 +0.9**
baz=269,SNR=14
FARO Faro, Yukon 69.77 30 P P **18 21 53.3 +1.4**
N32M Quiet Lake 69.92 31 P P **18 21 53.9 +1.0**
baz=272
P33M Teslin, Yukon 70.08 32 P P **18 21 55.4 +1.5**
P33M Teslin, Yukon 70.08 32 P P **18 21 55.2 +1.3**
baz=272,SNR=7.0
CRAG Craig 70.16 37 P P **18 21 55.3 +1.0**
baz=274
WRAK Wrangell Islan 70.54 36 P P **18 21 58.3 +1.8**
baz=274
R33M Jennings River 71.06 33 P P **18 22 01.7 +1.8**
baz=274,SNR=6.8
DLBC Dease Lake 71.63 33 P P **18 22 05.2 +2.0**
DLBC IAmb IAmb 18 22 05.8
comp=Z,19nm,0.7s
DLBC Dease Lake 71.63 33 P P **18 22 05.1 +2.0**
baz=275,SNR=13
T35M Bob Quinn 71.64 35 P P **18 22 05.2 +1.9**
baz=276,SNR=5.9
PPT2 Papeete2 73.06 116 *e*LR LR 18 44 20.5
comp=Z,73nm,23.0s
C36M Paulatuk 73.10 22 P P **18 22 12.0 +0.4**
baz=277
ARU Arti 73.29 325 P P **18 22 12.2 -0.8**
ARU Arti 73.29 325 *d iP* **P 18 22 12.3 -0.7**
ARU 18 22 26.1
ARU *PP **pP 18 22 59.2 -2.7**
ARU S S **18 31 25.4 +1.6**
ARU pmax pmax
comp=Z,12nm,0.7s
ABKAR Akbulak array 73.53 317 P P **18 22 13.3 -1.2**
HOLB Holberg 73.70 41 P P **18 22 17.7 +2.2**
HRA Herat 74.53 302 P P **18 22 21.2 +0.4**
CBB Campbell River 75.55 42 P P **18 22 28.0 +1.9**
OZB Mount Ozzard 75.68 43 P P **18 22 28.8 +1.9**
OZB IAmb IAmb 18 22 29.9
comp=Z,29nm,0.9s
CLRS Cowichan Lake 76.59 43 P P **18 22 33.6 +1.7**
GEYT Alibeck 77.03 306 P P **18 22 34.8 +0.1**
comp=Z,11nm,0.8s,baz=122,slow=1.9,SNR=12
comp=Z,11nm,0.8s
GEYT Alibeck 77.03 306 P P **18 22 35.2 +0.5**
GYA0B ALIBECK ARRAY 77.03 306 P P **18 22 35.7 +1.0**
PGC Sidney 77.06 43 P P **18 22 36.3 +1.7**
PGC IAmb IAmb 18 22 37.4
comp=Z,23nm,0.7s
NLWA Neilton Lookou 77.07 44 P P **18 22 37.2 +2.4**
NLWA IAmb IAmb 18 22 38.1
comp=Z,32nm,0.8s
B04A Port Angeles 77.16 43 P P **18 22 37.6 +2.4**
B04A IAmb IAmb 18 22 38.4
comp=Z,36nm,0.8s
WISH Wishkah 77.20 44 P P **18 22 38.0 +2.6**
WISH IAmb IAmb 18 22 39.0
comp=Z,40nm,0.8s
E03A Lebam 77.47 45 P P **18 22 38.7 +1.8**
LLLB Lillooet 77.60 41 P P **18 22 39.5 +1.9**
KIRV Kirov 77.70 328 *ceP* **P 18 22 37.5 -0.4**
KEBM Edson Butte 77.80 49 P P **18 22 41.0 +2.1**
KEBM IAmb IAmb 18 22 42.6
comp=Z,38nm,0.9s
I02E Swisshome, OR 77.85 47 P P **18 22 41.4 +2.4**
I02E Swisshome, OR 77.85 47 P P **18 22 41.1 +2.1**
baz=284,SNR=6.1
G03D McMinnville, O 77.99 46 P P **18 22 41.6 +1.8**
G03D McMinnville, O 77.99 46 P P **18 22 41.7 +1.9**
baz=284,SNR=5.3
J01E Myrtle Point 78.01 48 P P **18 22 41.7 +1.7**
J01E IAmb IAmb 18 22 43.6
comp=Z,32nm,0.8s
J01E Myrtle Point 78.01 48 P P **18 22 42.0 +2.0**
baz=284,SNR=6.0
EUNU Eureka 78.08 8 P P **18 22 40.3 +0.5**
EUNU IAmb IAmb 18 22 41.4
comp=Z,27nm,1.1s
I03D Drain, OR 78.30 48 P P **18 22 43.4 +1.9**
baz=284,SNR=8.1
K02D Willamette Mer 78.31 49 P P **18 22 43.7 +1.9**
baz=284,SNR=7.3

YKA **Yellowknife Ar** 78.33 28 P **P** 18 22 42.0 +0.6
comp=Z,22nm,0.8s,baz=292,slow=5.6,SNR=32
YKA pP **pwP** 18 23 34.0 -1.2
comp=Z,3.3nm,0.7s,baz=287,slow=5.0,SNR=2.9
comp=Z,22nm,0.8s
YKA Yellowknife Ar 78.33 28 P **P** 18 22 41.5 +0.1
YKA Yellowknife Ar 78.33 28 *i* P **P** 18 22 42.0 +0.6
YKA pmax pmax
comp=Z,23nm,0.8s
D05A Enumclaw 78.36 44 P **P** 18 22 43.3 +1.5
KSXB Camp Six Broad 78.37 50 P **P** 18 22 44.5 +2.4
F04A Amboy 78.39 45 P **P** 18 22 43.8 +1.8
BUCK Buck Mountain 78.43 47 P **P** 18 22 44.5 +2.2
DBO Dodson Butte 78.51 48 P **P** 18 22 44.6 +1.7
H04D Lebanon 78.52 47 P **P** 18 22 44.9 +2.1
H04D IAmb IAmb 18 22 45.9
comp=Z,38nm,1.1s
H04D Lebanon 78.52 47 P **P** 18 22 44.6 +1.9
baz=284
L02F Cave Junction 78.52 49 P **P** 18 22 44.6 +1.8
baz=284,SNR=6.4
KMPM Mount Pierce 78.54 51 P **P** 18 22 45.6 +2.5
KMPM IAmb IAmb 18 22 46.5
comp=Z,33nm,0.8s
PRGR Permogore 78.67 331 *e*P **P** 18 22 42.5 -0.7
KHMM Horse Mountain 78.72 51 P **P** 18 22 46.6 +2.5
KHMM IAmb IAmb 18 22 47.5
comp=Z,31nm,0.7s
HUMO Hull Mountain 78.84 49 P **P** 18 22 46.5 +1.8
HUMO IAmb IAmb 18 22 49.0
comp=Z,17nm,0.6s
H04A Detroit Lake 78.86 47 P **P** 18 22 46.2 +1.5
H04A IAmb IAmb 18 22 47.1
comp=Z,28nm,0.9s
I04A Tendick Farm, 78.93 48 P **P** 18 22 46.5 +1.5
baz=285,SNR=17
HOOD Mount Hood Mea 79.06 46 P **P** 18 22 47.6 +1.8
HOOD IAmb IAmb 18 22 52.9
comp=Z,24nm,0.7s
KCPM Cahto Peak 79.12 52 P **P** 18 22 48.7 +2.4
LTY Liberty 79.22 44 P **P** 18 22 48.0 +1.4
LTY IAmb IAmb 18 22 48.8
comp=Z,30nm,0.7s
YBH Yreka Blue Hor 79.24 50 P **P** 18 22 48.5 +1.6
YBH IAmb IAmb 18 22 49.9
comp=Z,22nm,0.7s
YBH Yreka Blue Hor 79.24 50 P **P** 18 22 48.5 +1.6
YBH pmax pmax
comp=Z,22nm,0.7s
J04D Umpqua Nationa 79.28 48 P **P** 18 22 49.1 +1.9
J04D Umpqua Nationa 79.28 48 P **P** 18 22 49.0 +1.7
baz=285,SNR=22
G05D Wamic, OR 79.31 46 P **P** 18 22 48.6 +1.5
baz=285,SNR=6.4
L04D Klamath Falls 79.41 49 P **P** 18 22 49.5 +1.7
L04D Klamath Falls 79.41 49 P **P** 18 22 49.5 +1.7
baz=285,SNR=32
SPA0 Spitsbergen Ar 79.49 351 *e*P **P** 18 22 46.8 -0.6
I05D Terrebonne, OR 79.53 47 P **P** 18 22 49.5 +1.1
baz=285
KBS Kingsbay 79.61 352 *e*P **P** 18 22 48.2 +0.2
KBS IAmb IAmb 18 22 48.5
comp=Z,14nm,0.7s
K04D Chiloquin, OR 79.70 49 P **P** 18 22 51.1 +1.7
baz=285
RES Resolute Bay 79.78 14 P **P** 18 22 49.5 +0.5
RES Resolute Bay 79.78 14 P **P** 18 22 49.5 +0.5
RES pmax pmax
comp=Z,23nm,1.0s
B08A Colville Reser 79.79 42 P **P** 18 22 51.0 +1.3
J05D Fort Rock, OR 79.89 48 P **P** 18 22 52.3 +1.9
baz=286,SNR=50
PINE Pine Mountain 79.96 47 P **P** 18 22 52.7 +1.9
HAWA Hanford 80.20 44 P **P** 18 22 52.6 +0.8
HAWA IAmb IAmb 18 22 54.0
comp=Z,18nm,0.6s
K05A Summer Lake 80.28 48 P **P** 18 22 54.4 +1.9
BELG Belogornoye 80.41 322 *i* P **P** 18 22 52.3 -0.4
BELG pmax pmax
comp=Z,8.0nm,1.4s
HSPB Hornsund (broa 80.42 350 *e*P **P** 18 22 52.4 +0.1
D08A Wollman Farm, 80.42 44 P **P** 18 22 54.4 +1.5
D08A IAmb IAmb 18 22 54.9
comp=Z,20nm,0.6s
E08A Dider Farm, El 80.49 44 P **P** 18 22 54.9 +1.6
C09A Chrisman Ranch 80.63 43 P **P** 18 22 55.3 +1.3
C09A IAmb IAmb 18 22 55.8
comp=Z,18nm,0.6s
ORV Oroville 80.71 51 P **P** 18 22 55.9 +1.2
ORV IAmb IAmb 18 22 56.8
comp=Z,21nm,0.7s
ORV Oroville 80.71 51 P **P** 18 22 55.9 +1.2
ORV pmax pmax
comp=Z,21nm,0.7s
I07A Izee 80.87 47 P **P** 18 22 56.9 +1.3
G08A Pilot Rock 80.90 45 P **P** 18 22 57.0 +1.3
MOD Modoc Plateau 80.93 49 P **P** 18 22 57.3 +1.3
MOD IAmb IAmb 18 22 58.4
comp=Z,20nm,0.7s
E09A Wood Farm, Sta 81.09 44 P **P** 18 22 58.0 +1.6
E09A IAmb IAmb 18 22 59.0
comp=Z,22nm,0.7s
NEW Newport 81.23 42 P **P** 18 22 58.4 +1.1
NEW IAmb IAmb 18 22 59.5
comp=Z,65nm,1.5s
NEW Newport 81.23 42 P **P** 18 22 58.4 +1.1
NEW pmax pmax
comp=Z,65nm,1.5s
NEW Newport 81.23 42 P **P** 18 22 58.6 +1.3
baz=288,SNR=17
BEKR Beckworth 81.47 51 P **P** 18 23 00.1 +1.2
BANOM Banah 81.58 294 P **P** 18 23 00.8 +1.2
SHME Shamm 81.68 295 *i* P **P** 18 23 01.3 +1.3
SNR=8.2
KLMR Klimovskoe 81.72 332 *e*P **P** 18 22 57.2 -2.3
KLMR pmax pmax
comp=Z,22nm,0.8s
KLMR Klimovskoe 81.72 332 *e*P **P** 18 22 57.2 -2.3
KLMR AMP 18 23 00.1
comp=Z,22nm,0.8s
J08A Circle Bar Ran 81.80 47 P **P** 18 23 01.9 +1.5
J08A IAmb IAmb 18 23 03.0
comp=Z,21nm,0.8s
F10A Beach Ranch, E 81.86 44 P **P** 18 23 01.8 +1.1
MSFE Esma-Masafi 81.86 294 P **P** 18 23 02.2 +1.2
MPK Martis Peak 81.88 51 P **P** 18 23 01.6 +0.4
UOSS Minazif 81.93 294 P **P** 18 23 01.5 +0.1
UOSS IAmb IAmb 18 23 02.5
comp=Z,19nm,0.7s
UOSS Minazif 81.93 294 *i* P **P** 18 23 01.9 +0.5
SNR=6.3
WVOR Wild Horse Val 81.96 48 P **P** 18 23 02.6 +1.3
WVOR Wild Horse Val 81.96 48 P **P** 18 23 02.6 +1.3
WVOR pmax pmax
comp=Z,18nm,0.9s
CMB Columbia Colle 81.98 53 P **P** 18 23 02.7 +1.3
CMB IAmb IAmb 18 23 03.8
comp=Z,29nm,0.6s
CMB Columbia Colle 81.98 53 P **P** 18 23 02.7 +1.3
CMB pmax pmax
comp=Z,29nm,0.6s
HATD Hatta, Dubai 82.03 293 *i* P **P** 18 23 02.7 +0.8
SNR=7.6
ASHO Ashiyiah 82.14 293 P **P** 18 23 02.4 0.0
BMO Blue Mountains 82.15 45 P **P** 18 23 02.7 +0.5
BMO IAmb IAmb 18 23 04.6
comp=Z,32nm,1.3s
BMO Blue Mountains 82.15 45 P **P** 18 23 02.7 +0.5
BMO pmax pmax
comp=Z,32nm,1.3s
VCNR Virginia City 82.16 51 P **P** 18 23 03.9 +1.4
VCNR IAmb IAmb 18 23 05.1
comp=Z,23nm,0.8s
KEV Kevo 82.23 342 P **P** 18 23 01.4 -0.5
KEV Kevo 82.23 342 P **P** 18 23 01.5 -0.5
KEV pmax pmax
comp=Z,12nm,0.7s
PAHR Pah Rah Range 82.23 51 P **P** 18 23 04.2 +1.3
PAHR IAmb IAmb 18 23 05.2
comp=Z,26nm,1.0s
PNTR Pine Nut 82.26 52 P **P** 18 23 04.8 +1.8
NAZ Nazwa, Dubai 82.39 294 *i* P **P** 18 23 04.5 +0.8
SNR=5.9
YERR Yerington 82.55 52 P **P** 18 23 05.8 +1.3
YERR IAmb IAmb 18 23 07.1
comp=Z,34nm,0.7s
HAMF Hammerfest 82.67 343 *e*P **P** 18 23 02.9 -1.3
PAGB Antelope Grade 82.76 55 P **P** 18 23 06.9 +1.4
PAGB IAmb IAmb 18 23 08.4
comp=Z,47nm,1.4s
ASUD Al Ashush, Dub 82.79 293 P **P** 18 23 05.9 +0.1
ARA0 ARCESS Array S 82.79 342 *e*P **P** 18 23 04.0 -0.9
ARCES ARCESS Array B 82.79 342 P **P** 18 23 04.1 -0.8
comp=Z,9.0nm,0.6s,baz=71,slow=7.8,SNR=66
comp=Z,9.0nm,0.6s
ARCES ARCESS Array B 82.79 342 P **P** 18 23 03.9 -1.0
ARCES ARCESS Array B 82.79 342 P **P** 18 23 03.9 -1.0
ARCES pmax pmax
comp=Z,12nm,0.7s
PLID Pearl Lake 82.95 45 P **P** 18 23 07.1 +0.5
WALA Waterton Lakes 82.99 41 P **P** 18 23 08.0 +1.5
TULEG Thule 83.07 8 P **P** 18 23 06.5 +0.3
TULEG IAmb IAmb 18 23 07.7
comp=Z,35nm,0.9s
RYN Ryan 83.20 52 P **P** 18 23 09.4 +1.6
RYN IAmb IAmb 18 23 10.3
comp=Z,27nm,0.7s
JTMT Jette 83.20 42 P **P** 18 23 09.0 +1.4
JTMT IAmb IAmb 18 23 10.5
comp=Z,21nm,0.8s
LHV Little Huntoon 83.33 52 P **P** 18 23 10.3 +2.1
LHV IAmb IAmb 18 23 11.2
comp=Z,58nm,1.4s
PKM Mcpherson Peak 83.35 56 P **P** 18 23 10.2 +1.5
baz=288,SNR=6.2
KVN Kaiserville 83.38 51 P **P** 18 23 10.0 +1.2
KVN IAmb IAmb 18 23 11.2
comp=Z,34nm,0.7s
KVN Kaiserville 83.38 51 P **P** 18 23 10.0 +1.2
KVN pmax pmax
comp=Z,34nm,0.7s
NVAR Mina Array Bea 83.42 52 P **P** 18 23 10.7 +1.7
comp=Z,33nm,0.6s,baz=268,slow=5.9,SNR=280
NVAR pP **pwP** 18 24 03.0 -1.0
comp=Z,12nm,0.8s,baz=261,slow=6.1,SNR=7.1
NVAR Mina Array Bea 83.42 52 P **P** 18 23 10.5 +1.4
NV11 Mina Array Sit 83.53 52 P **P** 18 23 10.6 +1.1
NV11 IAmb IAmb 18 23 12.0
comp=Z,22nm,0.7s
BMN Battle Mountai 83.59 50 P **P** 18 23 10.5 +0.7
BMN Battle Mountai 83.59 50 P **P** 18 23 10.5 +0.7
BMN pmax pmax
comp=Z,11nm,0.7s
MFID Camas Ranch 83.61 46 P **P** 18 23 11.1 +1.3
MFID IAmb IAmb 18 23 12.3
comp=Z,85nm,1.6s
MSO Missoula 83.73 43 P **P** 18 23 11.2 +0.9
MSO Missoula 83.73 43 P **P** 18 23 10.9 +0.6
baz=290,SNR=6.2
TIN Tinemaha, Big 83.91 53 P **P** 18 23 12.9 +1.5
baz=288
ISA Isabella, Lake 84.15 55 P **P** 18 23 13.4 +0.8
ISA Isabella, Lake 84.15 55 P **P** 18 23 13.4 +0.8
ISA pmax pmax
comp=Z,4.0nm,0.7s
ISA Isabella, Lake 84.15 55 P **P** 18 23 13.2 +0.5
baz=288
CWC Cottonwood Cre 84.21 54 P **P** 18 23 14.2 +1.1
baz=288
JETT Jettan, Norway 84.22 343 *e*P **P** 18 23 11.3 -1.0
JETT IAmb IAmb 18 23 11.7
comp=Z,32nm,0.6s
LCH Last Change Ra 84.29 53 P **P** 18 23 14.5 +1.1
TPH Tonopah 84.34 52 P **P** 18 23 15.1 +1.4
TPH Tonopah 84.34 52 P **P** 18 23 15.1 +1.4
TPH pmax pmax
comp=Z,115nm,0.6s
HLID Hailey 84.53 46 P **P** 18 23 15.8 +1.3
HLID Hailey 84.53 46 P **P** 18 23 15.8 +1.3
baz=290,SNR=31
TRO Tromso 84.57 344 *e*P **P** 18 23 12.4 -1.4
TRO IAmb IAmb 18 23 13.0
comp=Z,20nm,0.6s
GRAC Grapevine Rang 84.58 53 P **P** 18 23 16.1 +1.4
baz=289
EDW2 Edwards Air Fo 84.77 55 P **P** 18 23 17.1 +1.3
baz=289,SNR=5.5
MPMC Manual Prospec 84.79 54 P **P** 18 23 17.2 +1.3
baz=289,SNR=22
LRMC Laurel Mtn Rad 84.82 54 P **P** 18 23 17.1 +1.0
baz=289,SNR=6.9
MZR Muzera 84.88 292 *i* P **P** 18 23 16.2 -0.3
SNR=14
CIS Catalina Islan 84.91 57 P **P** 18 23 17.5 +1.1
baz=289
ELK Elko 84.91 49 P **P** 18 23 17.9 +1.3
ELK IAmb IAmb 18 23 19.1
comp=Z,27nm,1.0s
ELK Elko 84.91 49 P **P** 18 23 17.9 +1.3
ELK pmax pmax
comp=Z,27nm,1.0s
LRM Limekiln Ridge 85.05 43 P **P** 18 23 18.0 +0.9
DLMT Dillon 85.12 44 P **P** 18 23 18.3 +0.9
DLMT IAmb IAmb 18 23 19.6
comp=Z,65nm,1.5s
HRY Holter Researc 85.13 42 P **P** 18 23 18.6 +1.2
FURC Furnace Creek, 85.13 53 P **P** 18 23 18.8 +1.4
baz=289,SNR=11
MCMT McKenzie Canyo 85.15 44 P **P** 18 23 18.8 +1.1
QSM Queen of Sheba 85.29 54 P **P** 18 23 19.5 +1.3
GWY Greenwater Val 85.37 54 P **P** 18 23 19.8 +1.0
GWY IAmb IAmb 18 23 21.2
comp=Z,47nm,1.5s
TPNV Topopah Spring 85.44 53 P **P** 18 23 20.3 +1.2
TPNV IAmb IAmb 18 23 21.4
comp=Z,30nm,0.7s
TPNV Topopah Spring 85.44 53 P **P** 18 23 20.3 +1.2
TPNV pmax pmax
comp=Z,30nm,0.7s
TPNV Topopah Spring 85.44 53 P **P** 18 23 20.4 +1.2
baz=290,SNR=22
R11A Troy Canyon, C 85.47 51 P **P** 18 23 20.4 +1.1
R11A IAmb IAmb 18 23 22.0
comp=Z,39nm,1.4s
R11A Troy Canyon, C 85.47 51 P **P** 18 23 20.6 +1.3
baz=290
VORR Voronezh 85.53 323 *e*P **P** 18 23 17.5 -1.5
VORR pmax pmax
comp=Z,30nm,0.5s
GSC Goldstone, Bar 85.56 54 P **P** 18 23 20.8 +1.2
GSC Goldstone, Bar 85.56 54 P **P** 18 23 20.8 +1.2
GSC pmax pmax
comp=Z,28nm,1.5s
GSC Goldstone, Bar 85.56 54 P **P** 18 23 21.0 +1.4
baz=289,SNR=9.7
S11A Rachel 85.58 52 P **P** 18 23 20.8 +1.0
S11A IAmb IAmb 18 23 22.4
comp=Z,28nm,0.9s
ELS Elsinore Mount 85.61 56 P **P** 18 23 20.9 +1.0
ELS IAmb IAmb 18 23 22.1
comp=Z,38nm,1.8s
BOZ Bozeman (W) 85.67 43 P **P** 18 23 21.1 +1.0
BOZ IAmb IAmb 18 23 22.2
comp=Z,53nm,1.6s
BOZ Bozeman (W) 85.67 43 P **P** 18 23 21.1 +1.0
BOZ pmax pmax
comp=Z,53nm,1.6s
BOZ Bozeman (W) 85.67 43 P **P** 18 23 21.3 +1.2
baz=292,SNR=30
MURC Murrieta 85.81 56 P **P** 18 23 21.7 +0.8
baz=289
EGMT Eagleton 85.94 41 P **P** 18 23 21.7 +0.5
baz=293,SNR=5.4
ZEI Tsey 85.98 314 *e*P **P** 18 23 19.5 -2.2
ZEI pmax pmax
comp=Z,7.0nm,0.5s
HEC Hector,Ludlow 86.08 55 P **P** 18 23 23.1 +0.9
baz=290,SNR=5.7
QLMT Earthquake Lak 86.08 44 P **P** 18 23 23.8 +1.6
SPR3 Spring Creek 3 86.17 50 P **P** 18 23 24.3 +1.4
SPR3 IAmb IAmb 18 23 25.6
comp=Z,34nm,1.2s
PRN Pahroc Range 86.19 52 P **P** 18 23 23.9 +1.1
PRN IAmb IAmb 18 23 25.5
comp=Z,22nm,1.0s
TUQ Turquoise Moun 86.19 54 P **P** 18 23 23.9 +1.1
baz=290,SNR=7.7
HVU Hansel Valley 86.29 47 P **P** 18 23 24.6 +1.4
HVU IAmb IAmb 18 23 25.9
comp=Z,38nm,1.1s
HVU Hansel Valley 86.29 47 P **P** 18 23 24.6 +1.4
HVU pmax pmax
comp=Z,38nm,1.1s
KBZ Khabaz 86.32 315 P **P** 18 23 22.7 -0.3
comp=Z,5.6nm,0.8s,baz=163,slow=5.0,SNR=11
comp=Z,5.6nm,0.8s
KBZ Khabaz 86.32 315 *ce*P **P** 18 23 22.0 -1.0
KBZ pmax pmax
comp=Z,7.0nm,1.1s
ONI Oni 86.36 314 P **P** 18 23 23.8 +0.4
ONI Oni 86.36 314 P **P** 18 23 23.8 +0.4
ONI pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 86.38 315 *e*P **P** 18 23 22.8 -0.7
KIV pmax pmax
comp=Z,7.0nm,1.0s
PFO Pinyon Flats O 86.39 56 P **P** 18 23 24.2 +0.4
PFO Pinyon Flats O 86.39 56 *i* P **P** 18 23 24.2 +0.4
PFO pmax pmax
comp=Z,10.0nm,1.0s
PFO Pinyon Flats O 86.39 56 P **P** 18 23 24.6 +0.8
baz=290,SNR=5.5
TPFO Pinon Flats 86.39 56 P **P** 18 23 24.7 +0.9
baz=290
SHPR Sheep Range 86.41 53 P **P** 18 23 25.1 +1.2
BGU Big Grassy Mou 86.42 48 P **P** 18 23 24.8 +1.0
PMD Palm Desert 86.44 56 P **P** 18 23 25.0 +1.1
PMD IAmb IAmb 18 23 25.9
comp=Z,28nm,1.6s
YMR Madison River 86.45 44 P **P** 18 23 25.4 +1.3
GMRC Granite Mounta 86.62 55 P **P** 18 23 26.1 +1.2
baz=290,SNR=14
BELC Belle Mtn. Jos 86.62 55 P **P** 18 23 25.7 +0.8
baz=290,SNR=8.8
YNR Norris Junctio 86.62 44 P **P** 18 23 26.2 +1.3
MONP2 Monument Peak 86.66 57 P **P** 18 23 26.2 +1.0
baz=290,SNR=6.4
PSUT Pine Spring 86.68 51 P **P** 18 23 26.4 +1.2
PSUT IAmb IAmb 18 23 27.5
comp=Z,29nm,0.9s
STEI Steigen 86.71 343 *e*P **P** 18 23 23.2 -1.3
STEI IAmb IAmb 18 23 23.9
comp=Z,41nm,0.7s
IMW Indian Meadow 86.76 45 P **P** 18 23 26.9 +1.3
IMW IAmb IAmb 18 23 28.3
comp=Z,20nm,1.1s
FXWY Fox Creek 86.80 45 P **P** 18 23 27.1 +1.4
DUG Dugway, Tooele 86.84 49 P **P** 18 23 27.2 +1.3
DUG Dugway, Tooele 86.84 49 P **P** 18 23 27.2 +1.3
DUG pmax pmax
comp=Z,57nm,1.3s
DUG Dugway, Tooele 86.84 49 P **P** 18 23 27.1 +1.3
baz=291,SNR=30
FLWY Flagg Ranch 86.85 45 P **P** 18 23 27.8 +1.8
FLWY IAmb IAmb 18 23 29.0
comp=Z,32nm,1.1s
GCMT Greycliff 86.87 43 P **P** 18 23 27.0 +1.1
TPAW Teton Pass 86.91 45 P **P** 18 23 26.7 +0.4
TPAW IAmb IAmb 18 23 28.1
comp=Z,28nm,1.4s
MOOW Moose Ponds 86.95 45 P **P** 18 23 27.9 +1.4
IKP In-Ko-Pah, Jac 86.99 57 P **P** 18 23 27.7 +1.1
baz=290
REDW Red Top Meadow 87.02 45 P **P** 18 23 28.0 +1.2
REDW IAmb IAmb 18 23 29.4
comp=Z,32nm,1.6s
FAUS Fauske 87.08 343 *e*P **P** 18 23 24.7 -1.6
FAUS IAmb IAmb 18 23 26.4
comp=Z,32nm,1.1s
AHID Auburn Hatcher 87.08 46 P **P** 18 23 28.1 +1.0
AHID IAmb IAmb 18 23 29.3
comp=Z,22nm,1.0s
LOHW Long Hollow 87.10 45 P **P** 18 23 27.8 +0.6
SWSC Sam W. Stewart 87.13 56 P **P** 18 23 28.3 +1.1
baz=290
YUH Yuha Desert 87.14 57 P **P** 18 23 28.4 +1.2
FINES FINESS Array B 87.16 335 P **P** 18 23 24.5 -2.2
comp=Z,7.3nm,0.4s,baz=57,slow=5.1,SNR=91
comp=Z,7.3nm,0.4s
FINES FINESS Array B 87.16 335 *i* P **P** 18 23 24.3 -2.4
FINES pmax pmax
comp=Z,7.0nm,0.4s
BC3 Big Chuckawall 87.16 56 P **P** 18 23 28.7 +1.2
baz=290,SNR=10
HWUT Hardware Ranch 87.20 47 P **P** 18 23 28.8 +1.2
HWUT IAmb IAmb 18 23 29.9
comp=Z,28nm,0.8s
IRM Iron Mountain 87.23 55 P **P** 18 23 28.9 +1.2
baz=290,SNR=10
RLMT Red Lodge 87.39 43 P **P** 18 23 30.0 +1.5
RLMT IAmb IAmb 18 23 32.3
comp=Z,16nm,0.8s
RLMT Red Lodge 87.39 43 P **P** 18 23 30.0 +1.5
baz=294,SNR=19
CCUT Cedar City 87.39 51 P **P** 18 23 30.5 +1.8
CCUT IAmb IAmb 18 23 31.5
comp=Z,23nm,1.0s
CTU Camp Tracy 87.41 48 P **P** 18 23 29.8 +1.2
CTU IAmb IAmb 18 23 30.8
comp=Z,19nm,0.9s
NEE2 Needles Airpor 87.43 54 P **P** 18 23 29.7 +1.1
baz=290
NLU North Lily Min 87.45 49 P **P** 18 23 29.9 +1.0
NLU IAmb IAmb 18 23 31.2
comp=Z,22nm,1.0s
TCUT Toone Canyon 87.49 47 P **P** 18 23 30.4 +1.2
TCUT IAmb IAmb 18 23 31.2
comp=Z,24nm,0.7s
JLU Jordanelle 87.66 48 P **P** 18 23 31.1 +1.2
JLU IAmb IAmb 18 23 32.2
comp=Z,30nm,0.9s
LCMT Little Creek M 87.67 52 P **P** 18 23 31.6 +1.6
LCMT IAmb IAmb 18 23 32.6
comp=Z,28nm,1.1s
TCRU Three Creeks R 87.68 50 P **P** 18 23 31.0 +0.9
MPU Maple Canyon 87.75 49 P **P** 18 23 31.6 +1.3
MPU IAmb IAmb 18 23 32.6
comp=Z,28nm,1.2s
BLYC Blythe 87.86 55 P **P** 18 23 31.9 +1.3
BLYC IAmb IAmb 18 23 33.4
comp=Z,44nm,1.6s
GLA Glamis 87.86 56 P **P** 18 23 32.3 +1.5
GLA IAmb IAmb 18 23 32.7
comp=Z,17nm,0.6s
GLA Glamis 87.86 56 P **P** 18 23 32.3 +1.5
GLA pmax pmax
comp=Z,17nm,0.6s
GLA Glamis 87.86 56 P **P** 18 23 32.1 +1.3
baz=290,SNR=8.0
W13A Hualapai Mount 87.88 54 P **P** 18 23 32.2 +1.2
MSU Marysvale 87.92 50 P **P** 18 23 32.7 +1.5
MSU Marysvale 87.92 50 P **P** 18 23 32.7 +1.5
PDMCI Parker Dam,Lak 87.96 55 P **P** 18 23 32.6 +1.5
baz=291,SNR=7.9
MTPU Mount Pierson 88.08 51 P **P** 18 23 33.8 +1.7
BW06 Boulder Array 88.13 45 P **P** 18 23 32.4 +0.4
BW06 Boulder Array 88.13 45 P **P** 18 23 32.5 +0.4
baz=293
PD31 Pinedale Array 88.13 45 P **P** 18 23 32.4 +0.4
PDAR Pinedale Array 88.13 45 P **P** 18 23 32.5 +0.4
comp=Z,1.7nm,0.4s,baz=272,slow=4.2,SNR=17
PDAR pP **pwP** 18 24 25.8 -1.8
comp=Z,1.4nm,0.7s,baz=260,slow=2.7,SNR=2.1
comp=Z,1.7nm,0.4s
PDAR Pinedale Array 88.13 45 P **P** 18 23 32.3 +0.2
PKCU Pink Cliffs 88.21 51 P **P** 18 23 33.6 +1.0
TMUT Trail Mountain 88.32 49 P **P** 18 23 34.2 +1.1
TMUT IAmb IAmb 18 23 35.5
comp=Z,15nm,0.8s
Q16A Castle Valley 88.49 49 P **P** 18 23 35.0 +1.2
P17A Butcher Ranch, 88.59 49 P **P** 18 23 35.6 +1.3
P17A IAmb IAmb 18 23 36.7
comp=Z,28nm,1.0s
U15A North Rim 88.60 52 P **P** 18 23 35.5 +1.0
U15A IAmb IAmb 18 23 37.3
comp=Z,31nm,1.1s
LAO LASA Array 88.68 41 P **P** 18 23 35.5 +1.1
LAO IAmb IAmb 18 23 36.4
comp=Z,31nm,0.8s
LAO LASA Array 88.68 41 P **P** 18 23 35.7 +1.4
baz=296
LAO LASA Array 88.68 41 P **P** 18 23 35.3 +1.0
baz=296
113A Mohawk Valley, 88.80 56 P **P** 18 23 36.1 +1.1
113A IAmb IAmb 18 23 37.6
comp=Z,26nm,1.5s

P18A	**Preston Nutter**	**88.88**	**49**	P	**P**	**18 23 36.9**	**+1.1**
P18A				IAmb	IAmb	18 23 38.0	
	comp=Z,14nm,0.8s						
GURO	**Guroymak-BITLI**	**88.88**	**310**	P	**P**	**18 23 35.5**	**-0.1**
SRU	**San Rafael Swe**	**88.88**	**49**	P	**P**	**18 23 36.6**	**+1.0**
SRU	**San Rafael Swe**	**88.88**	**49**	P	**P**	**18 23 36.6**	**+1.0**
SRU				pmax	pmax		
	comp=Z,31nm,0.7s						
Y14A	**Wickenburg**	**88.97**	**55**	P	**P**	**18 23 37.3**	**+1.4**
Y14A				IAmb	IAmb	18 23 38.5	
	comp=Z,11nm,0.6s						
RDMU	**Red Mountain**	**88.99**	**47**	P	**P**	**18 23 37.1**	**+1.0**
RDMU				IAmb	IAmb	18 23 38.4	
	comp=Z,26nm,1.0s						
DGMT	**Dagmar**	**89.12**	**39**	P	**P**	**18 23 36.4**	**0.0**
	baz=297						
WUAZ	**Wupatki**	**89.63**	**53**	P	**P**	**18 23 40.8**	**+1.7**
WUAZ	**Wupatki**	**89.63**	**53**	P	**P**	**18 23 41.0**	**+1.8**
	baz=292						
214A	**Organ Pipe Nat**	**89.84**	**56**	P	**P**	**18 23 41.7**	**+1.7**
214A				IAmb	IAmb	18 23 42.9	
	comp=Z,21nm,0.8s						
214A	**Organ Pipe Nat**	**89.84**	**56**	P	**P**	**18 23 41.7**	**+1.7**
	baz=292						
X16A	**Lo Mia Camp, P**	**90.00**	**54**	P	**P**	**18 23 42.8**	**+1.9**
NSS	**Namsos**	**90.07**	**342**	*e*P	**P**	**18 23 38.4**	**-1.9**
O20A	**White River Ci**	**90.09**	**47**	P	**P**	**18 23 42.2**	**+0.9**
O20A				IAmb	IAmb	18 23 43.2	
	comp=Z,17nm,0.8s						
O20A	**White River Ci**	**90.09**	**47**	P	**P**	**18 23 42.2**	**+0.9**
	baz=294						
MNK	**Minsk**	**90.20**	**329**	*i* P	**P**	**18 23 41.3**	**+0.2**
MNK				*i* *PP	**pP**	**18 24 30.7**	**-1.3**
MNK				*i*		18 27 17.4	
MNK				*i* PPP	PPP	18 29 15.7	
MNK				*i* S	**SKSac**	**18 33 43.3**	**-8.5**
MNK				*i* *SS	**sS**	**18 35 52.1**	**+6.4**
MNK				*i* SS	**SS**	**18 40 13.0**	**-6.8**
MNK				*i* SSS	SSS	18 43 56.3	
MNK				pmax	pmax		
	comp=Z,19nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.4s						
MNK	**Minsk**	**90.20**	**329**	*i* P	**P**	**18 23 41.4**	**+0.2**
	comp=E,4.0nm,1.4s						
MNK				*i* P	**P**	**18 23 41.4**	**+0.2**
MNK				*i* P	**P**	**18 23 41.4**	**+0.2**
	comp=Z,19nm,0.8s,baz=58						
MNK				*i* pP	**pP**	**18 24 30.8**	**-1.3**
MNK				*i* PP	**PP**	**18 27 17.4**	**+0.1**
MNK				*i* PPP	PPP	18 29 15.7	
MNK				*i* S	**SKSac**	**18 33 43.4**	**-8.5**
MNK				*i* sS	**sS**	**18 35 52.2**	**+6.4**
MNK				*i* SS	**SS**	**18 40 13.0**	**-6.8**
MNK				*i* SSS	SSS	18 43 56.4	
K22A	**Casper**	**90.22**	**45**	P	**P**	**18 23 42.8**	**+1.0**
K22A				IAmb	IAmb	18 23 44.7	
	comp=Z,19nm,1.0s						
K22A	**Casper**	**90.22**	**45**	P	**P**	**18 23 42.6**	**+0.8**
	baz=295						
PV23	**Carpenter Ridg**	**90.23**	**49**	P	**P**	**18 23 43.2**	**+1.2**
PV10	**Paradox Valley**	**90.24**	**49**	P	**P**	**18 23 43.0**	**+1.0**
MARD	**Mardin**	**90.28**	**310**	P	**P**	**18 23 41.5**	**-0.6**
MARD				IAmb	IAmb	18 23 41.7	
	comp=Z,14nm,0.9s						
PV11	**David Mesa, Pa**	**90.39**	**49**	P	**P**	**18 23 43.8**	**+1.1**
PV13	**Radium Mtn., P**	**90.48**	**49**	P	**P**	**18 23 44.0**	**+0.8**
PV07	**Paradox Valley**	**90.50**	**49**	P	**P**	**18 23 44.1**	**+0.9**
PV07				IAmb	IAmb	18 23 45.2	
	comp=Z,29nm,1.3s						
NACGM	**Naroch**	**90.51**	**330**	⇓*e*P	**P**	**18 23 41.1**	**-1.5**
	baz=56						
PV15	**Paradox Valley**	**90.66**	**49**	P	**P**	**18 23 44.9**	**+0.9**
PV15				IAmb	IAmb	18 23 46.0	
	comp=Z,24nm,1.0s						
W18A	**Petrified Fore**	**91.02**	**52**	P	**P**	**18 23 47.3**	**+1.6**
	baz=293						
MVCO	**Mesa Verde**	**91.10**	**50**	P	**P**	**18 23 46.9**	**+0.9**
MVCO				IAmb	IAmb	18 23 48.4	
	comp=Z,22nm,1.1s						
MVCO	**Mesa Verde**	**91.10**	**50**	P	**P**	**18 23 46.9**	**+0.9**
	baz=294,SNR=10.0						
RSSD	**Black Hills**	**91.19**	**42**	P	**P**	**18 23 46.7**	**+0.4**
RSSD				IAmb	IAmb	18 23 47.7	
	comp=Z,13nm,0.7s						
RSSD	**Black Hills**	**91.19**	**42**	P	**P**	**18 23 46.7**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,13nm,0.7s						
RSSD	**Black Hills**	**91.19**	**42**	P	**P**	**18 23 46.8**	**+0.4**
	baz=297						
RSSD	**Black Hills**	**91.19**	**42**	P	**P**	**18 23 46.7**	**+0.4**
	baz=297						
TUC	**Tucson**	**91.31**	**55**	P	**P**	**18 23 48.0**	**+1.1**
TUC				IAmb	IAmb	18 23 49.9	
	comp=Z,14nm,1.0s						
TUC	**Tucson**	**91.31**	**55**	P	**P**	**18 23 48.0**	**+1.1**
TUC				pmax	pmax		
	comp=Z,14nm,1.0s						
TUC	**Tucson**	**91.31**	**55**	P	**P**	**18 23 48.7**	**+1.8**
	baz=293						
N23A	**Red Feather La**	**91.36**	**46**	P	**P**	**18 23 48.4**	**+1.2**
N23A	**Red Feather La**	**91.36**	**46**	P	**P**	**18 23 48.8**	**+1.6**
	baz=296,SNR=8.9						
SMCO	**Snowmass**	**91.38**	**48**	P	**P**	**18 23 48.6**	**+1.1**
AKASG	**Malin Array Be**	**91.54**	**325**	P	**P**	**18 23 44.5**	**-2.9**
	comp=Z,0.8nm,0.4s,baz=50,slow=5.5,SNR=6.7						
ISCO	**Idaho Springs**	**92.07**	**47**	P	**P**	**18 23 51.8**	**+1.3**
ISCO				IAmb	IAmb	18 23 53.0	
	comp=Z,14nm,0.9s						
ISCO	**Idaho Springs**	**92.07**	**47**	P	**P**	**18 23 51.8**	**+1.3**
ISCO				pmax	pmax		
	comp=Z,14nm,1.0s						
ISCO	**Idaho Springs**	**92.07**	**47**	P	**P**	**18 23 51.6**	**+1.1**
	baz=296						
ISCO	**Idaho Springs**	**92.07**	**47**	P	**P**	**18 23 51.9**	**+1.3**
	baz=296,SNR=18						
E28A	**Huff**	**92.11**	**39**	P	**P**	**18 23 51.1**	**+0.8**
MDND	**Maddock**	**92.12**	**38**	P	**P**	**18 23 50.8**	**+0.6**
	baz=300						
Q24A	**Divide**	**92.75**	**47**	P	**P**	**18 23 54.6**	**+0.8**
	baz=296						
NB2	**NORSAR Subarra**	**92.86**	**340**	P	**P**	**18 23 51.0**	**-2.4**
	comp=Z,2.1nm,0.7s,baz=44,slow=5.1						
NB2	**NORSAR Subarra**	**92.86**	**340**	P	**P**	**18 23 51.0**	**-2.4**
	baz=44,slow=5.1						
NOA	**NORSAR Array B**	**92.86**	**340**	P	**P**	**18 23 51.2**	**-2.2**
	comp=Z,1.1nm,0.6s,baz=44,slow=4.6,SNR=5.3						
	comp=Z,1.1nm,0.6s						
SDCO	**Great Sand Dun**	**93.04**	**49**	P	**P**	**18 23 56.1**	**+1.0**
SDCO				IAmb	IAmb	18 23 57.1	
	comp=Z,15nm,1.2s						
SDCO	**Great Sand Dun**	**93.04**	**49**	P	**P**	**18 23 56.0**	**+1.0**
	baz=296						
SDCO	**Great Sand Dun**	**93.04**	**49**	P	**P**	**18 23 56.3**	**+1.2**
	baz=296,SNR=13						
BNN	**Bunyan**	**93.16**	**313**	P	**P**	**18 23 53.5**	**-1.9**
SBM	**South Baldy**	**93.41**	**53**	P	**P**	**18 23 59.4**	**+2.4**
LENM	**Lemitar**	**93.49**	**52**	P	**P**	**18 23 58.9**	**+1.8**
121A	**Cookes Peak, D**	**93.55**	**54**	P	**P**	**18 23 58.2**	**+0.8**
121A				IAmb	IAmb	18 24 00.4	
	comp=Z,20nm,1.1s						
121A	**Cookes Peak, D**	**93.55**	**54**	P	**P**	**18 23 59.3**	**+1.9**
	baz=294						
121A	**Cookes Peak, D**	**93.55**	**54**	P	**P**	**18 23 58.7**	**+1.4**
	baz=294						
ANMO	**Albuquerque**	**93.55**	**52**	P	**P**	**18 23 58.1**	**+0.8**
ANMO				IAmb	IAmb	18 23 59.8	
	comp=Z,15nm,1.2s						
ANMO	**Albuquerque**	**93.55**	**52**	*i* P	**P**	**18 23 58.6**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,15nm,1.3s						
ANMO	**Albuquerque**	**93.55**	**52**	P	**P**	**18 23 58.7**	**+1.3**
	baz=295						
ANMO	**Albuquerque**	**93.55**	**52**	P	**P**	**18 23 58.5**	**+1.1**
	baz=295						
Y22A	**Socorro**	**93.59**	**53**	P	**P**	**18 23 59.0**	**+1.5**
	baz=295						
BNM	**Barren Site**	**93.75**	**52**	P	**P**	**18 23 59.4**	**+1.1**
CRNM	**Carthage**	**93.76**	**53**	P	**P**	**18 23 59.1**	**+0.8**
AGMN	**Agassiz Nation**	**94.01**	**36**	P	**P**	**18 23 58.3**	**-0.6**
AGMN				IAmb	IAmb	18 23 59.9	
	comp=Z,7.4nm,0.8s						
AGMN	**Agassiz Nation**	**94.01**	**36**	P	**P**	**18 23 59.5**	**+0.6**
	baz=303						
AGMN	**Agassiz Nation**	**94.01**	**36**	P	**P**	**18 23 59.2**	**+0.3**
	baz=303						
T25A	**Trinidad**	**94.09**	**49**	P	**P**	**18 24 00.8**	**+1.0**
T25A				IAmb	IAmb	18 24 02.1	
	comp=Z,14nm,1.2s						
T25A	**Trinidad**	**94.09**	**49**	P	**P**	**18 24 00.9**	**+1.0**
	baz=297						
SUSD	**Miller**	**94.23**	**40**	P	**P**	**18 24 00.7**	**+0.7**
	baz=301						
BR131	**Keskin Array S**	**94.29**	**314**	P	**P**	**18 23 59.0**	**-1.5**
BR131				IAmb	IAmb	18 24 00.4	
	comp=Z,8.0nm,0.8s						
BR131	**Keskin Array S**	**94.29**	**314**	*i* P	**P**	**18 23 59.2**	**-1.3**
BRTR	**Keskin Array B**	**94.29**	**314**	*i* P	**P**	**18 23 58.8**	**-1.8**
	comp=Z,3.6nm,0.6s,baz=101,slow=2.6,SNR=20						
	comp=Z,3.6nm,0.6s						
BRTR	**Keskin Array B**	**94.29**	**314**	P	**P**	**18 23 58.5**	**-2.0**
BRTR	**Keskin Array B**	**94.29**	**314**	*i* P	**P**	**18 23 59.0**	**-1.5**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSCO	**Kaye Shedlock'**	**94.48**	**47**	P	**P**	**18 24 02.0**	**+0.6**
KSCO	**Kaye Shedlock'**	**94.48**	**47**	P	**P**	**18 24 02.5**	**+1.1**
	baz=298						
KSCO	**Kaye Shedlock'**	**94.48**	**47**	P	**P**	**18 24 02.2**	**+0.7**
	baz=298						
F33A	**5 Mile Ranch,**	**95.10**	**38**	P	**P**	**18 24 03.6**	**-0.3**
F33A				IAmb	IAmb	18 24 04.8	
	comp=Z,13nm,0.9s						
B35A	**Bob, Littlefor**	**95.16**	**35**	P	**P**	**18 24 04.2**	**0.0**
	baz=305						
ECSD	**EROS Data Cent**	**96.04**	**40**	P	**P**	**18 24 08.0**	**-0.3**
ECSD	**EROS Data Cent**	**96.04**	**40**	P	**P**	**18 24 08.1**	**-0.1**
	baz=302						
ECSD	**EROS Data Cent**	**96.04**	**40**	P	**P**	**18 24 08.8**	**+0.5**
	baz=302						
CBKS	**Cedar Bluff**	**96.56**	**46**	P	**P**	**18 24 10.8**	**0.0**
	baz=300						
AMTX	**Amarillo**	**97.08**	**50**	P	Pdif	18 24 13.7	+0.3
AMTX				IAmb	IAmb	18 24 15.3	
	comp=Z,9.6nm,0.8s						
AMTX	**Amarillo**	**97.08**	**50**	P	Pdif	18 24 14.5	+1.2
	baz=298						
TXAR	**Lajitas Array**	**98.11**	**56**	P	Pdif	18 24 19.1	+1.0
	comp=Z,0.6nm,0.5s,baz=296,slow=2.9,SNR=12						
TXAR				PKKPbc	**PKKPbc**	**18 40 50.3**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=140,slow=4.8,SNR=4.2						
	comp=Z,0.6nm,0.5s						
VYHS	**Vyhne**	**98.31**	**327**	*e*P	**P**	**18 24 16.5**	**-1.9**
VYHS	**Vyhne**	**98.31**	**327**	*e*PDIFF	**P**	**18 24 16.5**	**-1.9**
G40A	**Rib Lake**	**98.94**	**36**	P	Pdif	18 24 21.6	+0.4
	baz=307						
ABTX	**Abilene, Hawle**	**99.65**	**51**	P	**Pdif**	**18 24 25.7**	**+1.0**
	baz=299						
GERES	**GERESS Array B**	**100.61**	**330**	P	**Pdif**	**18 24 26.9**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=38,slow=6.8,SNR=4.8						
GERES				PKKPbc	**PKKPbc**	**18 40 39.9**	**-3.9**
	comp=Z,0.6nm,0.7s,baz=169,slow=1.4,SNR=4.3						
CCM	**Cathedral Cave**	**102.58**	**43**	P	**Pdif**	**18 24 38.5**	**+0.9**
	baz=306						
MIAR	**Mount Ida**	**103.00**	**47**	P	**Pdif**	**18 24 40.5**	**+1.0**
	baz=303						
Q52A	**Bidwell**	**107.50**	**37**	P	**PKiKP**	**18 29 04.3**	**-2.4**
	baz=312						
Q52A				P	**PKiKP**	**18 29 04.3**	**-2.4**
	baz=312						
BLA	**Blacksburg**	**109.76**	**38**	P	**PKiKP**	**18 29 11.7**	**+0.7**
	baz=314						
ESDC	**Sonseca Array**	**115.66**	**334**	PKKPbc	PKKPbc	18 39 55.4	-1.0
	comp=Z,1.1nm,0.8s,baz=222,slow=1.7,SNR=3.8						
ESDC				PKKPab	**PKKPab**	**18 40 01.7**	**-1.6**
	comp=Z,1.5nm,1.0s,baz=228,slow=4.4,SNR=7.7						
TROLL	**Troll, Antarti**	**122.24**	**193**	PKPdf	**PKPdf**	**18 29 33.3**	**-0.7**
SNAA	**Sanae**	**123.57**	**191**	PKPdf	**PKPdf**	**18 29 35.3**	**-1.2**
SNAA	**Sanae**	**123.57**	**191**		**PKPdf**	**18 29 35.1**	**-1.3**
SNAA	**Sanae**	**123.57**	**191**	PKIKP	**PKPdf**	**18 29 35.1**	**-1.3**
VNA2	**Neumayer--Watz**	**125.02**	**191**	PKPdf	**PKPdf**	**18 29 38.1**	**-1.0**
	baz=161,slow=2.0						
VNA3	**Neumayer Olymp**	**125.12**	**190**	PKPdf	**PKPdf**	**18 29 38.2**	**-1.1**
VNA1	**Neumayer--Stat**	**125.40**	**190**	PKPdf	**PKPdf**	**18 29 39.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**132.60**	**309**	PKP	**PKPdf**	**18 29 52.9**	**-2.3**
	comp=Z,0.5nm,0.7s,baz=38,slow=2.1,SNR=2.9						
TORD				SKPbc	**SKPbc**	**18 32 58.6**	**-3.8**
	comp=Z,1.2nm,0.7s,baz=32,slow=3.5,SNR=6.3						
BAUV	**El Baul**	**137.12**	**54**		PKPpre	18 29 53.3	
DBIC	**Dimbokro**	**141.69**	**308**	PKhKP	PKPpre	18 30 05.8	
	comp=Z,4.9nm,0.6s,baz=38,slow=3.0,SNR=9.2						
PLCA	**Paso Flores**	**141.83**	**133**	PKhKP	PKPpre	18 30 06.8	
	comp=Z,2.3nm,0.6s,baz=257,slow=3.8,SNR=13						
MT01	**Popeta**	**143.70**	**123**		PKPbc	18 30 13.1	-0.1
BO02	**Sierra Bellavi**	**143.81**	**124**		PKPbc	18 30 13.9	+0.4
MT09	**Talagante**	**143.94**	**122**		PKPbc	18 30 14.2	+0.2
MT02	**Curacav**	**143.95**	**122**		PKPbc	18 30 14.1	+0.2
ROC1	**El Roble**	**144.12**	**121**		PKPbc	18 30 14.9	+0.2
PEL	**Peldehue**	**144.35**	**122**		PKPbc	18 30 15.8	+0.7
PEL	**Peldehue**	**144.35**	**122**	PKIKP	PKPbc	18 30 15.8	+0.7
LMEL	**Las Melosas**	**144.54**	**123**		PKPbc	18 30 16.4	+0.5
CO02	**Combarbal**	**144.55**	**118**		PKPbc	18 30 16.2	+0.2
VA03	**San Esteban**	**144.56**	**121**		PKPbc	18 30 16.3	+0.4
GO04	**Tololo Observa**	**144.93**	**117**		PKPbc	18 30 17.4	+0.1
LCO	**Las Campanas**	**145.23**	**115**		**PKPab**	**18 30 18.6**	**+0.1**
LCO	**Las Campanas**	**145.23**	**115**	PKP2	**PKPab**	**18 30 18.7**	**+0.1**
CO01	**Juntas del Tor**	**145.57**	**116**		**PKPab**	**18 30 20.4**	**+0.5**
GO03	**Copiap**	**145.85**	**112**		**PKPbc**	**18 30 20.1**	**+0.2**
PB12	**IPOC Station P**	**145.96**	**96**	PKPbc	**PKPab**	**18 30 21.6**	**+0.2**
PB14	**IPOC Station P**	**145.99**	**107**		**PKPbc**	**18 30 21.2**	**+0.5**
TA02	**Huaiquique**	**146.26**	**99**	PKPbc	**PKPab**	**18 30 22.0**	**-0.4**
PB04	**IPOC Station P**	**146.29**	**103**		**PKPbc**	**18 30 22.0**	**+0.5**
ZON	**Zonda**	**146.40**	**120**		**PKPbc**	**18 30 21.0**	**-0.4**
ZON	**Zonda**	**146.40**	**120**	PKP2	**PKPbc**	**18 30 21.0**	**-0.4**
PB02	**IPOC Station P**	**146.52**	**101**		**PKPbc**	**18 30 22.9**	**+0.8**
PB07	**IPOC Station P**	**146.53**	**102**		**PKPdf**	**18 30 20.9**	**+0.5**
GO02	**Mina Guanaco**	**146.69**	**108**		**PKPbc**	**18 30 23.2**	**+0.4**
PB16	**IPOC Station P**	**146.70**	**96**		**PKPab**	**18 30 24.6**	**-0.4**
PB06	**IPOC Station P**	**146.82**	**104**		**PKPbc**	**18 30 23.1**	**+0.1**
PB01	**IPOC Station P**	**146.89**	**101**		**PKPbc**	**18 30 23.8**	**+0.7**
PB15	**IPOC Station P**	**146.91**	**104**		**PKPbc**	**18 30 23.6**	**+0.3**
AC02	**Maricunga**	**146.93**	**111**	PKPab	**PKPbc**	**18 30 24.3**	**+0.7**
BOAV	**Boa Vista**	**147.03**	**54**		**PKPbc**	**18 30 23.3**	**-0.3**
PB09	**IPOC Station P**	**147.13**	**102**		**PKPbc**	**18 30 24.7**	**+0.8**
LVC	**Limon Verde**	**147.44**	**103**	PKPbc	**PKPbc**	**18 30 26.0**	**+1.1**
	comp=Z,18nm,0.6s,baz=279,slow=2.3,SNR=27						
LVC	**Limon Verde**	**147.44**	**103**		**PKPbc**	**18 30 25.5**	**+0.6**
LVC	**Limon Verde**	**147.44**	**103**	PKP2	**PKPbc**	**18 30 25.5**	**+0.6**
LPAZ	**La Paz**	**147.75**	**92**	PKPbc	**PKPbc**	**18 30 27.1**	**+0.9**
	comp=Z,24nm,0.6s,baz=296,slow=2.2,SNR=69						
LPAZ	**La Paz**	**147.75**	**92**	PKPdf	**PKPdf**	**18 30 23.3**	**+0.2**
LPAZ	**La Paz**	**147.75**	**92**	PKIKP	**PKPdf**	**18 30 23.3**	**+0.2**
ETMB	**Extrema**	**148.04**	**79**		**PKPbc**	**18 30 25.5**	**-0.7**
TRQA	**Tornquist**	**148.94**	**135**		**PKPbc**	**18 30 27.3**	**-0.6**
TRQA	**Tornquist**	**148.94**	**135**	PKHKP	PKPpre	18 30 27.3	
MACA	**Manacapuru-AM**	**150.16**	**63**		**PKPbc**	**18 30 31.4**	**-0.2**
SAML	**Samuel**	**150.55**	**75**		**PKPbc**	**18 30 32.3**	**-0.1**
SAML	**Samuel**	**150.55**	**75**	PKIKP	**PKPbc**	**18 30 32.3**	**-0.1**
MDP	**Montagnes des**	**150.56**	**39**	PKPbc	**PKPbc**	**18 30 32.3**	**-0.3**
	comp=Z,7.4nm,0.5s,baz=315,slow=1.5,SNR=11						
SIV	**San Ignacio**	**154.41**	**89**	PKP	**PKPdf**	**18 30 32.4**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=211,slow=2.7,SNR=4.4						
SIV				PKPbc	**PKPbc**	**18 30 40.3**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=102,slow=0.4,SNR=8.0						
SIV				PKPab	**PKPab**	**18 30 56.2**	**0.0**
	comp=Z,2.0nm,0.5s,baz=299,slow=4.4,SNR=8.8						
CPUP	**Villa Florida**	**157.38**	**115**	PKPab	**PKPab**	**18 31 10.1**	**+1.4**
	comp=Z,10nm,0.8s,baz=262,slow=5.1,SNR=21						
CPUP	**Villa Florida**	**157.38**	**115**	PKPab	**PKPab**	**18 31 09.2**	**+0.5**
CPUP	**Villa Florida**	**157.38**	**115**	PKP2	**PKPab**	**18 31 09.2**	**+0.5**
BDFB	**Brasilia**	**166.70**	**80**	PKPab	**PKPab**	**18 31 50.7**	**+0.7**
	comp=Z,3.0nm,0.5s,baz=340,slow=5.3,SNR=3.4						

*TIR **08** 18:22:26.2, 41°.84N×20°.15E, h30km±1km, Md2.4, Ml2.8*
*PDG **08** 18:22:26.3±0.1, 41°.83N×20°.15E, h13km, ML2.5/10, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*BEO **08** 18:22:27.4±0.3, 41°.84N×20°.16E, h3km±3km, ML2.2/13*
*THE **08** 18:22:27.1, 41°.85N×20°.16E, h0km±4km, ML2.7/3, Error ellipse: s-maj=7.8km s-min=1.8km az=345.0*

ISC 08 18:22:26.4±0.9, 41°.87N±0°.02×20°.17E±0°.02, h13km±8km, n41, σ1s38/71, 8C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.27**	**132**	P	**Pg**	**18 22 31.5**	**-0.6**
PHP				S	**Sg**	**18 22 36.2**	**+0.2**
	3µm,0.3s						
PHP	**Peshkopia**	**0.27**	**132**	P	**Pg**	**18 22 31.5**	**-0.6**
	baz=125						
PHP				S	**Sg**	**18 22 36.4**	**+0.4**
	baz=125						
PHP				AMP			
	comp=N,18nm,0.3s,baz=125						
BCI	**Bajram Curri**	**0.51**	**351**	P	**Pb**	**18 22 37.4**	**+0.2**
	baz=354						
BCI				S	**Sn**	**18 22 46.2**	**-1.6**
	baz=354						
BCI				AMP			
	comp=E,0.9nm,0.3s,baz=354						
TIR	**Tirane**	**0.57**	**204**	P	**Pg**	**18 22 36.7**	**-0.7**
TIR				S	**Sg**	**18 22 45.5**	**+0.5**
TIR	**Tirane**	**0.57**	**204**	*e*Pg	**Pg**	**18 22 36.8**	**-0.7**
TIR				*e*Sg	**Sg**	**18 22 44.7**	**-0.3**
TIR	**Tirane**	**0.57**	**204**	P	**Pg**	**18 22 36.9**	**-0.7**
	baz=204						
TIR				S	**Sg**	**18 22 45.6**	**+0.7**
	baz=204						
TIR				AMP			
	comp=E,2.0nm,0.2s,baz=204						
ULC	**Ulcinj**	**0.70**	**278**	⇑*i*Pg	**Pb**	**18 22 39.1**	**-1.3**
ULC				*i* Sg	**Sg**	**18 22 50.3**	**+1.1**
PVY	**Plav**	**0.74**	**348**	⇑*i*Pg	**Pb**	**18 22 40.7**	**-0.6**
PVY				*i* Sg	**Sn**	**18 22 53.1**	**-0.8**
DRME	**Dracevica, Mon**	**0.80**	**294**	⇑*i*Pg	**Pb**	**18 22 40.9**	**-1.2**
DRME				*i* Sg	**Sn**	**18 22 53.8**	**-1.3**
PDG	**Podgorica**	**0.88**	**310**	*e*Pg	**Pb**	**18 22 42.7**	**-0.8**
PDG				*e*Sg	**Sn**	**18 22 57.0**	**-0.1**
TTG	**Podgorica**	**0.88**	**310**	⇑*i*Pg	**Pb**	**18 22 42.7**	**-0.8**
TTG				*i* Sg	**Sn**	**18 22 57.4**	**+0.3**
IVA	**Berane**	**1.03**	**349**	⇑*i*Pg	**Pn**	**18 22 46.0**	**-0.5**
IVA				*i* Sg	**Sn**	**18 23 02.6**	**+1.8**
BUM	**Brajici-Budva**	**1.04**	**295**	⇓*i*Pg	**Pb**	**18 22 45.9**	**-0.4**
BUM				*i* Sg	**Sg**	**18 23 02.5**	**+2.3**
KOME	**Kolasin**	**1.10**	**334**	⇑*i*Pg	**Pn**	**18 22 47.0**	**-0.5**
KOME				*i* Sg	**Sg**	**18 23 05.0**	**+3.1**
CEME	**Cevo**	**1.15**	**307**	⇑*i*Pg	**Pn**	**18 22 47.4**	**-0.8**
CEME				*i* Sg	**Sg**	**18 23 06.2**	**+2.6**
NKME	**Niksic**	**1.27**	**315**	⇑*i*Pg	**Pb**	**18 22 49.9**	**-0.3**
NKME				*i* Sg	**Sg**	**18 23 10.9**	**+3.4**
KBN	**Korca**	**1.33**	**159**	P	**Pg**	**18 22 52.3**	**+0.4**
KBN	**Korca**	**1.33**	**159**	P	**Pg**	**18 22 53.4**	**+1.5**
	baz=158						
KBN				S	**Sg**	**18 23 12.0**	**+2.9**
	baz=158						
KBN				AMP			
	comp=E,0.9nm,0.4s,baz=158						
SJES	**Sjenica**	**1.40**	**354**	*e*Pn	**Pg**	**18 22 54.5**	**+1.2**
SJES				*e*Sn	**Sg**	**18 23 13.0**	**+1.4**
SELS	**Selova**	**1.52**	**27**	*e*Pn	**Pg**	**18 22 55.6**	**0.0**
BARS	**Barje**	**1.55**	**52**	*e*Pn	**Pg**	**18 22 55.3**	**-0.8**
BARS				*e*Sg	**Sg**	**18 23 16.7**	**+0.6**
PRVS	**Prvonek**	**1.55**	**65**	*e*Pn	**Pb**	**18 22 54.8**	**-0.2**
PRVS				*e*Sn	**Sg**	**18 23 17.7**	**+1.3**
BRY	**Bratogost**	**1.59**	**311**	⇓*i*Pn	**Pb**	**18 22 55.4**	**-0.3**
BRY				*i* Sn	**Sg**	**18 23 18.6**	**+1.0**
NEST	**Nestorio**	**1.59**	**155**	P	**Pb**	**18 22 55.5**	**-0.2**
NEST				S	**Sg**	**18 23 18.4**	**+0.7**
	comp=E,112nm,0.3s						
TREB	**Trebinje**	**1.60**	**303**	*e*Pn	**Pb**	**18 22 55.3**	**-0.4**
TREB				*e*Sn	**Sg**	**18 23 19.0**	**+1.2**
DBRK	**Dubrovnik**	**1.70**	**299**	*e*Pn	**Pn**	**18 22 56.3**	**+0.6**
DBRK				Sn	**Sg**	**18 23 22.8**	**+1.7**
IVAS	**Ivanjica**	**1.71**	**360**	*e*Pn	**Pg**	**18 22 59.4**	**+0.2**
IVAS				*e*Sn	**Sg**	**18 23 20.6**	**-0.8**
LSK	**Leskovik**	**1.75**	**169**	P	**Pb**	**18 22 58.8**	**+0.5**
LSK				S	**Sb**	**18 23 20.8**	**+0.7**
	comp=E,260nm,0.9s						
LSK	**Leskovik**	**1.75**	**169**	P	**Pg**	**18 23 00.9

CHMS	**Chumysh**	**2.52**	**50**	⇑Pg	**Pg**	**18 35 57.0**	**+0.5**
	1.3nm,0.4s							
CHMS				⇓Lg	Lg	18 36 29.0		
	5.4nm,0.5s							
SGDS	**Sogindy**	**2.76**	**41**	*eP*	**Pg**	**18 36 01.1**	**0.0**
	1.4nm,0.1s							
SGDS				*eS*	**Sg**	**18 36 38.4**	**+1.5**
	10nm,0.4s							
SGDS	**Sogindy**	**2.76**	**41**	Pg	**Pb**	**18 35 56.8**	**-1.2**
	2.6nm,0.1s							
SGDS				Lg	Lg	18 36 31.5		
	7.3nm,0.1s							
TKM2	**Tokmak 2**	**2.99**	**58**	⇑Pg	**Pg**	**18 36 05.3**	**-0.3**
	0.5nm,0.2s							
TKM2				⇑Lg	Lg	18 36 44.2		
	6.8nm,0.7s							
KST	**Kastek**	**3.28**	**59**	*eP*	**Pg**	**18 36 10.6**	**-0.6**
	2.1nm,0.4s							
KST				*eS*	**Sg**	**18 36 54.4**	**+0.7**
	9.3nm,0.8s							
KST	**Kastek**	**3.28**	**59**	Pg	**Pg**	**18 36 10.6**	**-0.6**
	2.1nm,0.4s							
KST				Lg	Lg	18 36 54.4		
	9.3nm,0.8s							
KRBS	**Karabastau**	**3.48**	**48**	*eP*	**Pg**	**18 36 13.7**	**-1.2**
	0.5nm,0.2s							
KRBS				*eS*	**Sg**	**18 36 59.9**	**-0.1**
	4.0nm,0.4s							
KRBS	**Karabastau**	**3.48**	**48**	Pg	**Pg**	**18 36 13.7**	**-1.2**
	0.5nm,0.2s							
KRBS				Lg	Lg	18 36 59.9		
	4.0nm,0.4s							
KUU	**Kurty**	**3.98**	**50**	*eP*	**Pg**	**18 36 22.4**	**-2.0**
	1.3nm,0.4s							
KUU				*eS*	**Sg**	**18 37 14.7**	**-1.3**
	3.4nm,0.9s							
KUU	**Kurty**	**3.98**	**50**	Pg	**Pg**	**18 36 22.4**	**-2.0**
	1.3nm,0.4s							
KUU				Lg	Lg	18 37 14.7		
	3.4nm,0.9s							
KTBS	**Karatobe**	**4.08**	**54**	*eP*	**Pg**	**18 36 24.2**	**-2.2**
	1.1nm,0.5s							
KTBS				*eS*	**Sg**	**18 37 17.8**	**-1.4**
	7.6nm,0.5s							
KTBS	**Karatobe**	**4.08**	**54**	Pg	**Pg**	**18 36 24.2**	**-2.2**
	1.1nm,0.5s							
KTBS				Lg	Lg	18 37 17.8		
	7.6nm,0.5s							

*IDC **08** 18:42:53.9±2.1,6˚.65S×129˚.94E,h154km±17km,mb3.5/3, mbtmp4.1/7,Error ellipse: s-maj=42.0km s-min=19.0km az=99.0*

*NEIC **08** 18:42:54.2±1.7,6˚.63S±0˚.08×129˚.92E±0˚.04,h156km±11km, mb4.4/13,Error ellipse: s-maj=12.1km s-min=3.1km az=157.0*

ISC 08 18:42:52.5±0.6,**6˚.66S**±0˚.06×**129˚.96E**±0˚.07,**h146**km,**n33,** σ1§**76**/38,**mb4.3/7,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.87**	**135**	Pn	**Pn**	**18 43 29.9**	**+4.0**
FAKI	**Fak Fak**	**4.36**	**32**		**Pn**	**18 43 58.5**	**+1.0**
SIJI	**Sorong**	**5.90**	**13**	P	**Pn**	**18 44 18.8**	**+0.8**
	11nm,0.3s,baz=199,slow=18,SNR=24						
SIJI				S	**Sn**	**18 45 21.1**	**-3.5**
	36nm,0.2s,baz=47,slow=22,SNR=5.6						
MTN	**Manton Dam**	**6.25**	**169**		**Pn**	**18 44 24.0**	**+1.4**
BATI	**Baumata**	**7.15**	**240**	P	**Pn**	**18 44 35.8**	**+1.1**
	51nm,0.4s,baz=63,slow=6.8,SNR=27						
BATI				S	**Sn**	**18 45 53.3**	**-1.4**
	93nm,0.4s,baz=276,slow=23,SNR=13						
KNRA	**Kununurra**	**9.04**	**187**		**Pn**	**18 44 59.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**12.12**	**200**	P	**Pn**	**18 45 40.9**	**+0.3**
	2.2nm,0.3s,baz=28,slow=14,SNR=24						
FITZ				S	Sn	18 47 43.2	-11
	4.5nm,0.4s,baz=219,slow=8.9,SNR=6.2						
WB0	**Warramunga Arr**	**13.72**	**162**	Pn	**Pn**	**18 45 59.2**	**-2.0**
WRAB	**Tennant Creek**	**13.87**	**162**	Pn	**Pn**	**18 46 02.2**	**-0.8**
WRA	**Warramunga Arr**	**13.87**	**163**	P	**Pn**	**18 46 01.0**	**-2.1**
	0.7nm,0.3s,baz=336,slow=13,SNR=32						
WRA				S	Sn	18 48 28.0	-8.8
	2.5nm,0.5s,baz=336,slow=25,SNR=8.4						
WRA				ScP	**ScP**	**18 54 32.6**	**-2.0**
	0.6nm,0.8s,baz=326,slow=1.7,SNR=3.1						
WRA	**Warramunga Arr**	**13.87**	**163**	Pn	**Pn**	**18 46 02.3**	**-0.8**
WB2	**Warramunga Arr**	**13.88**	**163**	Pn	**Pn**	**18 46 00.9**	**-2.3**
WR0	**Warramunga Arr**	**13.95**	**162**		**Pn**	**18 46 02.7**	**-1.4**
COEN	**Coen**	**14.88**	**120**	Pn	**Pn**	**18 46 16.4**	**+0.6**
JAGI	**Jajag, Banyuwa**	**15.77**	**262**	Pn	**Pn**	**18 46 25.7**	**-1.1**
JAGI				IAmb	IAmb	18 46 51.2	
	comp=Z,71nm,1.5s						
AS31	**Alice Springs**	**17.33**	**168**	P	**P**	**18 46 45.2**	**+0.4**
ASAR	**Alice Springs**	**17.33**	**168**	P	**Pn**	**18 46 47.0**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=347,slow=11,SNR=17						
ASAR				S	**S**	**18 49 52.4**	**-5.7**
	comp=Z,0.5nm,0.5s,baz=354,slow=26,SNR=3.4						
ASAR				ScP	**ScP**	**18 54 39.1**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=356,slow=1.9,SNR=4.8						
ASAR	**Alice Springs**	**17.33**	**168**	P	**Pn**	**18 46 45.8**	**+0.1**
MBWA	**Marble Bar**	**17.48**	**213**	P	**P**	**18 46 46.9**	**+0.4**
MBWA				IAmb	IAmb	18 47 16.0	
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**17.76**	**212**	P	**Pn**	**18 46 50.5**	**-0.3**
PSA00				IAmb	IAmb	18 46 51.6	
	comp=Z,13nm,0.7s						
PSA00	**Pilbara Seismi**	**17.76**	**212**	P	**P**	**18 46 49.5**	**0.0**
PSA00				IAmb	IAmb	18 46 51.5	
	comp=Z,3.6nm,0.8s						
SBUM	**Sibu**	**19.88**	**297**	P	**Pn**	**18 47 14.9**	**-1.0**
GIRL	**Giralia**	**21.96**	**222**	P	**P**	**18 47 34.6**	**-0.2**
FORT	**Forrest**	**24.06**	**184**	P	**P**	**18 47 56.0**	**+1.7**
MORW	**Morawa**	**25.87**	**209**	P	**P**	**18 48 10.4**	**-0.4**
MORW				IAmb	IAmb	18 48 35.9	
	comp=Z,26nm,1.2s						
NWAO	**Narrogin (SRO)**	**28.69**	**203**	P	**P**	**18 48 36.3**	**+0.4**
GSI	**Gunungsitoli**	**33.27**	**283**	P	**P**	**18 49 17.8**	**+1.3**
GSI				IAmb	IAmb	18 49 49.2	
	comp=Z,9.4nm,1.2s						
SONM	**Songino Array**	**58.11**	**342**	P	**P**	**18 52 31.8**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=145,slow=5.3,SNR=2.2						
	comp=Z,0.2nm,0.3s						
MK31	**Makanchi Array**	**67.92**	**327**	P	**P**	**18 53 36.5**	**+1.0**
MK31				IAmb	IAmb	18 53 37.2	
	comp=Z,3.5nm,0.9s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**18 53 36.4**	**+0.9**
	comp=Z,3.1nm,0.4s,baz=126,slow=8.1,SNR=64						
	comp=Z,3.1nm,0.4s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**18 53 36.5**	**+1.1**
MAKZ	**Makanchi**	**68.10**	**327**	P	**P**	**18 53 37.6**	**+1.0**
MAKZ				IAmb	IAmb	18 53 38.1	
	comp=Z,6.3nm,1.2s						
ZALV	**Zalesovo Beam**	**71.26**	**334**	P	**P**	**18 53 54.8**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=131,slow=4.1,SNR=2.2						
	comp=Z,0.5nm,0.4s						

*IDC **08** 19:03:21.8±0.5,14˚.63S×76˚.28W,h0km,mb4.5/20, mbtmp4.6/25,ML4.3/5,MS4.7/55,Error ellipse: s-maj=18.3km s-min=10.6km az=68.0*

*ARE **08** 19:03:22±2.8,14˚.70S±0˚.06×76˚.72W±0˚.10,h6km±3km, Error ellipse: s-maj=14.1km s-min=7.8km az=67.0*

*NEIC **08** 19:03:23.4±1.6,14˚.52S±0˚.06×76˚.25W±0˚.09,h10km±1km, mb5.1/212,ML5.2(ARE),Error ellipse: s-maj=16.3km s-min=9.2km az=245.0*

*VAO **08** 19:03:24.0±0.6,14˚.43S×76˚.13W,h10km,mb5.1*

*GCMT **08** 19:03:28.4±0.2,14˚.35S±0˚.01×76˚.40W±0˚.01,h27km, MW5.3/108,Moment Tensor Solution. s92,c136; s108,c174; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.71±.02; $M_{\theta\theta}$0.10±.02; $M_{\phi\phi}$-0.80±.02; $M_{r\theta}$0.24±.03; $M_{\theta\phi}$0.36±.01; $M_{\phi r}$-0.76±.04; Best double couple: $M_0$1.14700×10^{17} NP1:ϕ_s162.00000°,δ67.00000°, λ92.00000°. NP2:ϕ_s338.00000°,δ23.00000°,λ86.00000°. Principal axes: T 1.0340, Plg68.0000°, Azm75.0000°; N 0.2270, Plg1.0000°, Azm342.0000°; P -1.2610, Plg22.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 19:03:23.1±0.3,**14˚.54S**±0˚.04×**76˚.27W**±0˚.06,**h10**km,**n605,** σ1§**40**/555,**mb5.1**/130,**MS4.7**/58,**5C-2D,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.60**	**348**	Pn	**Pn**	**19 04 04.4**	**-0.8**
	76nm,0.3s,baz=187,slow=9.9,SNR=31						
NNA				Sn	**Sb**	**19 04 39.2**	**-2.5**
	1µm,0.3s,baz=203,slow=8.8,SNR=12						
	155nm,0.3s						
NNA	**Nana**	**2.60**	**348**	Pn	**Pn**	**19 04 03.8**	**-1.4**
NNA	**Nana**	**2.60**	**348**	*eP*	**Pn**	**19 04 01.2**	**-4.0**
AP01	**Chacalluta**	**6.85**	**125**	Pn	**Pn**	**19 05 02.4**	**-1.2**
PB12	**IPOC Station P**	**6.99**	**126**	Pn	**Pn**	**19 05 04.5**	**-1.2**
PB18	**Visviri**	**7.20**	**116**		**Pn**	**19 05 09.6**	**+0.6**
PB16	**IPOC Station P**	**7.51**	**121**	Pn	**Pn**	**19 05 13.2**	**0.0**
CZSB	**Cruzeiro do Su**	**7.62**	**28**	Pn	**Pn**	**19 05 13.9**	**-0.3**
ATAH	**Atahualpa**	**7.65**	**344**	Pn	**Pn**	**19 05 15.9**	**+1.0**
	4.4nm,0.3s,baz=117,slow=13,SNR=32						
ATAH				Sn	**Sn**	**19 06 43.0**	**+1.0**
	17nm,0.3s,baz=16,slow=5.5,SNR=3.9						
ATAH				Lg	Lg	19 07 04.8	
	27nm,0.3s,baz=86,slow=20,SNR=4.3						
	7.4nm,0.3s						
LPAZ	**La Paz**	**8.04**	**104**	Pn	Pn	19 05 25.1	+4.5
	30nm,0.3s,baz=272,slow=7.1,SNR=429						
LPAZ				Sn	**Sn**	**19 06 52.6**	**+0.7**
	0.8nm,0.3s,baz=212,slow=13,SNR=1.4						
LPAZ				LR	LR	19 09 08.6	
	comp=Z,5µm,18.1s,baz=288,slow=43						
LPAZ	**La Paz**	**8.04**	**104**	Pn	**Pn**	**19 05 24.3**	**+3.7**
LPAZ	**La Paz**	**8.04**	**104**	*eP*	Pn	19 05 26.0	+5.4
TA02	**Huaiquique**	**8.18**	**135**		**Pn**	**19 05 21.8**	**-0.1**
TA01	**Diego Aracena**	**8.35**	**137**	Pn	**Pn**	**19 05 23.9**	**-0.2**
GO01	**Chasmisza**	**8.47**	**128**		**Pn**	**19 05 26.5**	**+0.1**
PATCX	**Punta Patache**	**8.55**	**138**		**Pn**	**19 05 26.4**	**-0.7**
PB02	**IPOC Station P**	**9.07**	**139**		**Pn**	**19 05 34.4**	**+0.1**
PB01	**IPOC Station P**	**9.14**	**136**		**Pn**	**19 05 35.7**	**+0.4**
PB07	**IPOC Station P**	**9.38**	**141**		**Pn**	**19 05 38.3**	**-0.2**
PB04	**IPOC Station P**	**9.69**	**144**		**Pn**	**19 05 41.9**	**-0.9**
PB09	**IPOC Station P**	**9.83**	**138**		**Pn**	**19 05 45.6**	**+0.8**
PB06	**IPOC Station P**	**10.31**	**143**		**Pn**	**19 05 50.8**	**-0.4**
PB10	**IPOC Station P**	**10.44**	**150**	Pn	**Pn**	**19 05 51.6**	**-1.3**
LVC	**Limon Verde**	**10.64**	**140**	Pn	**Pn**	**19 05 56.7**	**+0.8**
	10nm,0.3s,baz=314,slow=9.5,SNR=63						
LVC				Sn	**Sn**	**19 07 52.8**	**-2.6**
	12nm,0.3s,baz=242,slow=22,SNR=6.6						
LVC				Lg	Lg	19 08 53.7	
	4.0nm,0.3s,baz=125,slow=17,SNR=8.5						
LVC				LR	LR	19 09 29.4	
	comp=Z,3µm,21.6s,baz=314,slow=35						
	63nm,0.6s						
LVC	**Limon Verde**	**10.64**	**140**		**Pn**	**19 05 57.0**	**+1.1**
LVC	**Limon Verde**	**10.64**	**140**	*eP*	**Pn**	**19 05 56.2**	**+0.3**
MCRA	**Macar, Loja**	**10.74**	**340**		**Pn**	**19 05 55.1**	**-1.9**
MCRA	**Macar, Loja**	**10.74**	**340**	*eP*	**Pn**	**19 05 56.6**	**-0.4**
PB15	**IPOC Station P**	**10.76**	**144**		**Pn**	**19 05 57.2**	**-0.2**
ETMB	**Extrema**	**10.90**	**66**	Pn	**Pn**	**19 05 59.9**	**+0.7**
ETMB	**Extrema**	**10.90**	**66**	*eP*	**Pn**	**19 05 59.3**	**+0.1**
PB14	**IPOC Station P**	**11.46**	**152**	Pn	**Pn**	**19 06 07.0**	**-0.1**
BOSC	**San Juan Bosco**	**11.53**	**349**		**Pn**	**19 06 05.6**	**-2.4**
GO02	**Mina Guanaco**	**12.29**	**150**		**Pn**	**19 06 18.4**	**-0.2**
CHSH	**Refugio Sur-Vo**	**13.21**	**349**		**Pn**	**19 06 32.4**	**+0.9**
PORT	**Chimborazo Vol**	**13.22**	**349**	Pn	**Pn**	**19 06 33.4**	**+1.8**
PPLP	**Puerto Lpez**	**13.66**	**341**	*eP*	**P**	**19 06 44.5**	**-1.4**
AC02	**Maricunga**	**13.94**	**153**	Pn	**Pn**	**19 06 42.2**	**+1.1**
SAML	**Samuel**	**13.97**	**68**		**Pn**	**19 06 39.4**	**-1.8**
GO03	**Copiap**	**14.15**	**158**		**Pn**	**19 06 47.0**	**+3.2**
FLF1	**Flavio Alfaro-**	**14.53**	**346**	*eP*	**Pn**	**19 06 47.3**	**-1.6**
PULU	**Pululahua**	**14.63**	**351**	P	**P**	**19 06 54.7**	**-2.5**
PTLC	**Puerto Leguiza**	**14.69**	**6**	*eP*	Pn	19 06 45.0	-6.1
SIV	**San Ignacio**	**14.74**	**98**	Pn	**Pn**	**19 06 49.7**	**-2.2**
	0.2nm,0.3s,baz=266,slow=12,SNR=27						
SIV				Sn	**Sn**	**19 09 38.4**	**+3.0**
	baz=346,slow=13						
SIV				LR	LR	19 13 17.7	
	comp=Z,15µm,18.4s,baz=288,slow=40						
	9.3nm,0.4s						
OTAV	**Otavalo**	**14.84**	**351**	P	**P**	**19 06 57.4**	**-2.1**
OTAV	**Otavalo**	**14.84**	**351**	*eP*	**Pn**	**19 06 55.4**	**+1.8**
IMBA	**Imbabura, San**	**14.84**	**352**	P	**P**	**19 06 58.0**	**-1.6**
PAC1	**Pacto, Paraso**	**14.92**	**350**	*eP*	**Pn**	**19 06 56.6**	**+2.3**
BONI	**La Bonita**	**14.95**	**355**	*eP*	**P**	**19 07 02.2**	**+1.8**
LCO	**Las Campanas**	**15.30**	**161**	Pn	**Pn**	**19 06 59.9**	**+0.5**
VILB	**Vilhena**	**15.70**	**86**		**Pn**	**19 07 03.2**	**-1.3**
VILB				IAmb	IAmb	19 07 12.0	
	comp=Z,91nm,0.9s						
VILB	**Vilhena**	**15.70**	**86**	*eP*	**Pn**	**19 07 02.9**	**-1.6**
GCUF	**Volcan Galeras**	**15.70**	**356**	*eP*	**P**	**19 07 08.0**	**-1.1**
FLOC	**Florencia**	**16.03**	**2**	*eP*	**P**	**19 07 12.8**	**+0.6**
GO04	**Tololo Observa**	**16.36**	**163**	Pn	**Pn**	**19 07 13.2**	**0.0**
GO04				IAmb	IAmb	19 07 19.2	
	comp=Z,301nm,1.9s						
BBAC	**Balboa, Cauca**	**16.48**	**357**	*eP*	**Pn**	**19 07 15.0**	**+0.3**
PTLB	**Pontes e Lacer**	**16.58**	**95**		**Pn**	**19 07 15.4**	**-0.4**
PTLB				IAmb	IAmb	19 07 23.0	
	comp=Z,37nm,0.9s						
PTLB	**Pontes e Lacer**	**16.58**	**95**	*eP*	**Pn**	**19 07 14.5**	**-1.3**
GARC	**Garzon, Huila**	**16.64**	**3**	*eP*	Pn	19 07 09.1	-7.6
MACC	**Macarena, Meta**	**16.75**	**8**	*eP*	**Pn**	**19 07 14.4**	**-3.6**
POPC	**Popayan, Colom**	**16.97**	**359**	*eP*	**Pn**	**19 07 17.1**	**-3.9**
CO03	**El Pedregal**	**17.02**	**163**	P	**P**	**19 07 23.3**	**+0.1**
BETC	**Betania**	**17.13**	**3**	*eP*	**P**	**19 07 23.7**	**-0.8**
GUVC	**San Jose del G**	**17.35**	**12**	*eP*	**P**	**19 07 27.7**	**+0.7**
PRAC	**Prado**	**18.19**	**4**	*eP*	**P**	**19 07 40.9**	**+4.7**
YOTC	**Yotoco, Valle**	**18.40**	**360**	*eP*	**P**	**19 07 38.8**	**+0.2**
VILC	**Villavicencio,**	**18.71**	**8**	*eP*	**Pn**	**19 07 44.3**	**+2.0**
ANIL	**Santa Ana**	**18.93**	**3**	*eP*	**Pn**	**19 07 45.7**	**+0.6**
H03N1	**Juan Fernandez**	**18.97**	**187**	T	T	19 27 12.4	
	baz=8.7,slow=74,SNR=4951						
H03N2	**Juan Fernandez**	**18.97**	**187**	T	T	19 27 13.3	
	baz=8.7,slow=74,SNR=6507						
H03N3	**Juan Fernandez**	**18.99**	**187**	T	T	19 27 13.0	
	baz=8.7,slow=74,SNR=5497						
PTGC	**Puerto Gaitan,**	**19.06**	**13**	*eP*	Pn	19 07 55.6	+9.1
MACA	**Manacapuru-AM**	**19.09**	**55**	*eP*	**P**	**19 07 45.3**	**-0.7**
CHIC	**Chingaza**	**19.21**	**8**	*eP*	**Pn**	**19 07 53.5**	**+4.8**
PDRB	**Porto dos Gac**	**19.26**	**84**	*eP*	**P**	**19 07 47.9**	**-0.1**
PLMC	**San Jos del P**	**19.32**	**360**	*eP*	**P**	**19 07 48.4**	**-0.2**
ROSC	**El Rosal**	**19.35**	**6**	P	**Pn**	**19 07 51.1**	**+0.7**
	comp=Z,4.5nm,0.3s,baz=209,slow=13,SNR=5.2						
ROSC				S	**S**	**19 11 35.2**	**+6.6**
	comp=Z,14nm,0.6s,baz=200,slow=17,SNR=1.7						
ROSC				LR	LR	19 16 05.8	
	comp=Z,3µm,20.6s,baz=214,slow=39						
	comp=Z,12nm,0.4s						
GUY2C	**Guyana, Caldas**	**19.66**	**3**	*eP*	**Pn**	**19 07 53.2**	**-0.9**
MT09	**Talagante**	**19.74**	**167**	P	**P**	**19 07 53.2**	**0.0**
SALV	**Santo Antonio**	**19.91**	**97**	*eP*	**P**	**19 07 54.0**	**-1.0**
LMEL	**Las Melosas**	**20.00**	**165**	P	**P**	**19 07 56.4**	**+0.4**
NORC	**Norcasia**	**20.02**	**4**	*eP*	**P**	**19 07 53.8**	**-2.5**
SPBC	**San Pablo de B**	**20.18**	**6**	*eP*	Pn	19 08 02.5	+2.6
CBOC	**Ciudad Bolivar**	**20.27**	**1**	*eP*	**P**	**19 07 57.2**	**-2.0**
CLDB	**Colider**	**20.30**	**82**	*eP*	**P**	**19 07 58.1**	**-1.3**
BO01	**Tunca**	**20.32**	**168**	P	**P**	**19 07 59.5**	**+0.2**
RUSC	**La Rusia**	**20.55**	**9**	*eP*	**P**	**19 08 01.9**	**-0.6**
HELC	**Santa Helena**	**20.61**	**2**	*eP*	Pn	19 08 07.0	+1.8
ANTJ	**Antonio Joao (**	**20.61**	**114**	*eP*	Pn	19 08 03.9	-1.1
BO02	**Sierra Bellavi**	**20.77**	**167**	P	**P**	**19 08 04.5**	**+0.2**
PTBC	**PUERTO BERRIO,**	**21.02**	**5**	*eP*	**P**	**19 08 01.3**	**-5.8**
BARC	**Barichara**	**21.22**	**9**	*eP*	**P**	**19 08 14.6**	**+5.2**
CPUP	**Villa Florida**	**21.25**	**126**	P	**P**	**19 08 10.3**	**+0.9**
	comp=Z,37nm,1.1s,baz=306,slow=11,SNR=41						
CPUP				LR	LR	19 18 01.6	
	comp=Z,2µm,18.9s,baz=300,slow=42						
	comp=Z,37nm,1.1s						
CPUP	**Villa Florida**	**21.25**	**126**	P	**P**	**19 08 09.4**	**-0.1**
CPUP				IAmb	IAmb	19 08 11.8	
	comp=Z,138nm,1.4s						
CPUP	**Villa Florida**	**21.25**	**126**	*eP*	**P**	**19 08 09.9**	**+0.5**
TAMC	**Tame, Arauca**	**21.31**	**12**	*eP*	P	19 08 18.4	+8.2
DBBC	**Dabeiba**	**21.42**	**0**	*eP*	**P**	**19 08 10.1**	**-1.4**
BRRC	**Barranca, Sant**	**21.66**	**7**	*eP*	**P**	**19 08 18.3**	**+4.4**
NPGB	**Novo Progresso**	**21.84**	**72**	*eP*	**P**	**19 08 13.8**	**-2.2**
ZARC	**Zaragoza, Cauc**	**21.93**	**4**	*eP*	**P**	**19 08 15.4**	**-1.5**
PAMC	**Pamplona, Colo**	**22.02**	**9**	*eP*	**P**	**19 08 18.8**	**+0.5**
UREC	**San Jos de Ur**	**22.16**	**2**	*eP*	**P**	**19 08 16.6**	**-2.8**
AZU	**Azuero**	**22.54**	**350**	*eP*	**P**	**19 08 27.6**	**+4.3**
ITTB	**Itaituba**	**22.62**	**65**	*eP*	**P**	**19 08 22.1**	**-2.2**
C2SB	**Chapadao do Su**	**22.84**	**104**	*eP*	**P**	**19 08 26.6**	**+0.1**
BOAV	**Boa Vista**	**22.95**	**44**	P	**P**	**19 08 26.5**	**-1.3**
BOAV				IAmb	IAmb	19 08 36.2	
	comp=Z,70nm,1.1s						
BOAV	**Boa Vista**	**22.95**	**44**	*eP*	**P**	**19 08 26.5**	**-1.3**
MCR1	**Marechal Candi**	**23.14**	**119**	*eP*	**P**	**19 08 29.7**	**+0.1**
SOCV	**Socops**	**23.30**	**14**	*eP*	**P**	**19 08 26.3**	**-5.0**
ITQB	**Itaqui**	**23.57**	**133**	P	**P**	**19 08 34.4**	**+0.5**
ITQB	**Itaqui**	**23.57**	**133**	*eP*	**P**	**19 08 34.4**	**+0.5**
BCIP	**Isla Barro Col**	**23.82**	**351**	P	**P**	**19 08 38.2**	**+1.8**
BCIP	**Isla Barro Col**	**23.82**	**351**	*eP*	**P**	**19 08 33.0**	**-3.4**
SDV	**Santo Domingo**	**23.94**	**14**	P	**P**	**19 08 38.3**	**+0.5**
	comp=Z,44nm,0.8s,baz=186,slow=7.2,SNR=31						
SDV				S	Sn	19 13 09.4	-8.1
	comp=Z,3.8nm,0.4s,baz=276,slow=22,SNR=1.2						
	comp=Z,44nm,0.8s						
SDV	**Santo Domingo**	**23.94**	**14**	*eP*	**P**	**19 08 38.2**	**+0.5**
BRU2	**Volcan**	**24.04**	**344**	P	**P**	**19 08 37.1**	**-1.6**
BRU2	**Volcan**	**24.04**	**344**	*eP*	**P**	**19 08 38.0**	**-0.7**
LL6C	**La Loma 6 Bece**	**24.30**	**7**	*eP*	**P**	**19 08 41.7**	**+0.7**
SJCC	**San Jacinto, C**	**24.30**	**3**	*eP*	**P**	**19 08 46.8**	**+5.8**
ARGC	**Ariguani, Magd**	**24.32**	**5**	*eP*	**P**	**19 08 42.2**	**+1.1**
UNIS	**Unistalda (Bra**	**24.36**	**130**	*eP*	**P**	**19 08 41.9**	**+0.4**
CRSM	**Crissiumal (Br**	**24.38**	**125**	*eP*	**P**	**19 08 41.6**	**0.0**
SNDB	**Serra Nova Dou**	**24.44**	**87**	*eP*	**P**	**19 08 41.3**	**-1.0**
FRBT	**Francisco Belt**	**24.52**	**121**	*eP*	**P**	**19 08 42.8**	**-0.2**
BAUV	**El Baul**	**24.72**	**20**	P	**P**	**19 08 44.5**	**-0.3**
PCMB	**Pacaembu**	**24.77**	**110**	*eP*	**P**	**19 08 45.6**	**+0.4**
PTGB	**Pitanga**	**24.91**	**118**	*eP*	**P**	**19 08 46.8**	**+0.2**
RODS	**Rosario do Sul**	**24.97**	**133**	*eP*	**P**	**19 08 47.9**	**+1.0**
MALB	**Monte Alegre**	**25.13**	**62**	*eP*	**P**	**19 08 47.3**	**-1.1**
ITRB	**Iturama**	**25.28**	**105**	*eP*	**P**	**19 08 50.5**	**+0.6**
RIMA	**Rio Macho**	**25.29**	**342**	P	**P**	**19 08 50.7**	**+0.2**
GO06	**Curarrehue**	**25.30**	**171**	P	**P**	**19 08 49.0**	**-1.0**
CVTR	**Volcan Turrial**	**25.50**	**343**	P	**P**	**19 08 50.7**	**-1.6**
CRJC	**Cerrejon, Guaj**	**25.62**	**8**	*eP*	**P**	**19 08 48.0**	**-5.0**
ALGR	**Alto Alegre (B**	**25.78**	**127**	*eP*	**P**	**19 08 55.0**	**+0.6**
ITAB	**Concordia**	**25.79**	**123**	P	**P**	**19 08 53.8**	**-0.6**
ITAB	**Concordia**	**25.79**	**123**	*eP*	**P**	**19 08 55.0**	**+0.5**
DABV	**Dabajuro**	**25.91**	**13**	*eP*	**P**	**19 09 01.7**	**+6.2**
JTS	**Las Juntas de**	**26.13**	**340**	*eP*	**P**	**19 08 56.1**	**-1.5**
CPSB	**Cacapava Do Su**	**26.27**	**131**	*eP*	**P**	**19 08 58.6**	**-0.1**
COVE	**Coope Vega, Sa**	**26.36**	**342**	P	**P**	**19 08 59.0**	**-0.6**
LL04	**Puerto Octay**	**26.49**	**173**	P	**P**	**19 08 60.0**	**-0.6**
PLCA	**Paso Flores**	**26.57**	**170**	P	**P**	**19 09 01.5**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=353,slow=10,SNR=13						
PLCA				LR	LR	19 17 13.1	
	comp=Z,749nm,21.2s,baz=336,slow=31						
	comp=Z,2.9nm,0.7s						
PLCA	**Paso Flores**	**26.57**	**170**	P	**P**	**19 08 59.1**	**-2.3**
PLCA	**Paso Flores**	**26.57**	**170**	*eP*	**P**	**19 09 02.9**	**+1.5**
TRQA	**Tornquist**	**26.63**	**154**	P	**P**	**19 08 59.5**	**-2.4**
BIRV	**Birongo**	**26.76**	**22**	P	**P**	**19 09 01.9**	**-1.3**
BIRV				IAmb	IAmb	19 09 19.9	
	comp=Z,29nm,0.8s						
PLTB	**Pedras Altas**	**26.90**	**133**	P	**P**	**19 09 03.6**	**-0.8**
PLTB	**Pedras Altas**	**26.90**	**133**	*eP*	**P**	**19 09 04.0**	**-0.4**

V48A Smith Brothers 50.99 349 P P 19 12 24.1 -1.1
V48A IAmb IAmb 19 12 52.6
comp=Z,15nm,0.8s
V48A Smith Brothers 50.99 349 P P 19 12 25.4 +0.3
baz=167
TXAR Lajitas Array 51.01 329 P P 19 12 26.3 +0.8
comp=Z,3.6nm,0.6s,baz=150,slow=9.0,SNR=39
TXAR LR LR 19 32 48.1
comp=Z,760nm,18.2s,baz=148,slow=35
comp=Z,3.6nm,0.6s
TXAR Lajitas Array 51.01 329 P P 19 12 25.1 -0.5
TX31 Lajitas Ar. Si 51.01 329 P P 19 12 25.6 +0.1
TX31 Lajitas Ar. Si 51.01 329 P P 19 12 26.1 +0.6
baz=145,SNR=16
TX32 Lajitas Array 51.01 329 P P 19 12 25.6 +0.1
U54A Nelsons Funny 51.05 354 P P 19 12 25.5 -0.2
T59A Double "B" Far 51.25 359 P P 19 12 26.6 -0.4
T59A IAmb IAmb 19 12 28.0
comp=Z,23nm,1.1s
T59A Double "B" Far 51.25 359 P P 19 12 27.4 +0.4
baz=178,SNR=5.5
T59A P P 19 12 27.4 +0.4
baz=178,SNR=5.5
TZTN Tazewell 51.27 352 P P 19 12 27.1 -0.1
TZTN IAmb IAmb 19 13 01.4
comp=Z,23nm,0.7s
TZTN Tazewell 51.27 352 P P 19 12 27.0 -0.1
baz=171
T57A Hurt 51.34 357 P P 19 12 26.6 -1.1
UALR University of 51.36 343 P P 19 12 27.2 -0.7
UALR IAmb IAmb 19 12 51.9
comp=Z,21nm,1.0s
MIAR Mount Ida 51.51 342 P P 19 12 28.7 -0.3
MIAR Mount Ida 51.51 342 P P 19 12 29.1 +0.1
baz=158,SNR=5.9
WVT Waverly 51.56 348 P P 19 12 27.9 -1.4
WHAR Wooly Hollow 51.83 343 P P 19 12 30.9 -0.5
ABTX Abilene, Hawle 51.95 335 P P 19 12 32.2 -0.2
ABTX IAmb IAmb 19 12 43.0
comp=Z,21nm,0.8s
ABTX Abilene, Hawle 51.95 335 P P 19 12 33.4 +1.0
baz=151
JSRW J. Sargeant Re 51.98 358 P P 19 12 31.4 -1.0
S57A Dark Hollow, R 52.08 357 P P 19 12 32.7 -0.5
X37A Clayton 52.12 340 P P 19 12 33.4 -0.2
X37A IAmb IAmb 19 12 52.2
comp=Z,23nm,0.8s
R58B Mineral 52.24 358 P P 19 12 33.7 -0.8
R58B IAmb IAmb 19 12 35.7
comp=Z,26nm,1.1s
R58B Mineral 52.24 358 P P 19 12 34.6 +0.2
baz=178,SNR=6.1
R58B P P 19 12 34.6 +0.2
baz=178,SNR=6.1
LCAR Lake Charles 52.26 345 P P 19 12 34.3 -0.3
LCAR IAmb IAmb 19 12 36.4
comp=Z,50nm,1.7s
FCAR Ozark Folk Cen 52.35 344 P P 19 12 34.4 -0.9
R55A Marlinton 52.66 356 P P 19 12 37.4 -0.3
PBMO Poplar Bluff 52.76 346 P P 19 12 37.8 -0.4
PBMO IAmb IAmb 19 12 45.2
comp=Z,27nm,1.4s
X34A Smith Ranch, M 52.99 338 P 19 12 39.9 -0.2
X34A IAmb IAmb 19 13 01.1
comp=Z,26nm,0.9s
CGM3 Cape Girardeau 53.08 347 P P 19 12 39.3 -1.3
CGM3 IAmb IAmb 19 12 51.5
comp=Z,17nm,1.1s
R50A Paris 53.08 352 P P 19 12 40.2 -0.5
R50A IAmb IAmb 19 13 03.5
comp=Z,16nm,0.8s
R49A Shelbyville 53.21 351 P P 19 12 40.7 -0.9
R49A IAmb IAmb 19 12 43.3
comp=Z,36nm,1.4s
HHAR Hobbs 53.23 342 P P 19 12 41.9 +0.1
Q56A Snyder Ridge, 53.37 357 P P 19 12 43.1 +0.3
S44A Carbondale 53.37 347 P P 19 12 41.8 -1.0
S44A IAmb IAmb 19 12 54.2
comp=Z,14nm,0.8s
SIUC Southern Illin 53.38 347 P P 19 12 41.3 -1.6
SIUC IAmb IAmb 19 12 54.3
comp=Z,18nm,0.9s
TUL1 Leonard 53.47 340 P P 19 12 42.8 -0.7
TUL1 IAmb IAmb 19 13 03.8
comp=Z,30nm,1.1s
TUL1 Leonard 53.47 340 P P 19 12 44.2 +0.7
baz=156
WMOK Wichita Mounta 53.47 337 P 19 12 43.4 -0.2
U38A Gravette 53.51 342 P 19 12 44.1 +0.2
U38A IAmb IAmb 19 13 03.4
comp=Z,19nm,1.2s
MGMO Mountain Grove 53.58 344 P P 19 12 44.2 -0.2
MGMO IAmb IAmb 19 13 02.9
comp=Z,36nm,1.4s
GDL2 Guadalupe Moun 53.70 330 P P 19 12 45.6 +0.1
OLIL Olney 54.14 349 P P 19 12 47.5 -0.8
OLIL IAmb IAmb 19 13 14.7
comp=Z,21nm,0.8s
MVL Millersville 54.26 360 P P 19 12 49.3 +0.1
S39A Bolivar 54.37 343 P P 19 12 49.6 -0.4
S39A IAmb IAmb 19 13 17.8
comp=Z,15nm,0.9s
P48A Milroy 54.39 351 P P 19 12 49.8 -0.4
TUPA Temple Univers 54.43 1 P P 19 12 51.4 +0.9
baz=181
MSTX Muleshoe 54.44 333 P P 19 12 50.6 -0.3
MSTX IAmb IAmb 19 12 58.8
comp=Z,20nm,0.9s
MSTX Muleshoe 54.44 333 P P 19 12 52.5 +1.6
baz=148
Q44A Meyer Farm, Va 54.48 348 P P 19 12 50.0 -0.8
T35A Sooner Cattle 54.62 340 P P 19 12 52.5 +0.5
T35A IAmb IAmb 19 13 12.5
comp=Z,29nm,1.1s
T35B Sooner Cattle 54.62 340 P P 19 12 53.3 +1.4
baz=156
R40A Maddies Statio 54.65 345 P P 19 12 51.1 -1.0
R40A IAmb IAmb 19 13 17.1
comp=Z,14nm,0.9s
R40A Maddies Statio 54.65 345 P P 19 12 51.3 -0.9
baz=161,SNR=6.6
P46A Rosedale 54.83 350 P P 19 12 52.1 -1.3
P46A IAmb IAmb 19 13 13.1
comp=Z,20nm,0.8s
ELIS Ellis County 54.88 337 P P 19 12 52.5 -1.5
ELIS IAmb IAmb 19 12 57.9
comp=Z,151nm,0.1s
SSPA Standing Stone 54.91 358 P P 19 12 52.5 -1.4
O49A Covington 54.96 352 P P 19 12 53.5 -0.9
O49A IAmb IAmb 19 13 39.1
comp=Z,40nm,1.4s
N58A Sunbury 55.10 360 P P 19 12 54.1 -1.2
N58A IAmb IAmb 19 13 06.3
comp=Z,14nm,0.7s
OK032 Salt Plains WL 55.10 339 P 19 12 55.0 -0.4
OK032 IAmb IAmb 19 13 09.0
comp=Z,16nm,0.9s
O48B Farmland 55.14 352 P P 19 12 54.8 -0.8
baz=170
OK035 E0210 Rd and N 55.19 338 P 19 12 55.1 -1.0
KAN01 Argonia South 55.26 339 P 19 12 57.1 +0.5
KAN01 IAmb IAmb 19 13 35.6
comp=Z,18nm,0.7s
TRNY Table Rock, Ra 55.43 2 P P 19 12 58.0 +0.2
TRNY IAmb IAmb 19 12 58.9
comp=Z,18nm,0.9s
PSWB Penn State Wil 55.56 0 P P 19 12 59.3 +0.6
baz=180
319A Douglas 55.57 326 P P 19 13 00.3 +1.2
319A IAmb IAmb 19 13 08.0
comp=Z,21nm,0.8s
M57A Sunshine Farm, 55.60 359 P P 19 12 59.0 +0.1
M57A IAmb IAmb 19 13 10.0
comp=Z,18nm,0.8s
M57A Sunshine Farm, 55.60 359 P P 19 12 59.2 +0.3
baz=179
M57A P P 19 12 59.2 +0.3
baz=179
N49A Columbus Grove 55.66 353 P P 19 12 58.5 -0.8
121A Cookes Peak, D 55.68 328 P P 19 12 59.2 -0.7
121A IAmb IAmb 19 13 09.3
comp=Z,30nm,1.2s
121A Cookes Peak, D 55.68 328 P P 19 13 01.3 +1.4
baz=142
M55A Ridgway 55.77 358 P P 19 12 59.9 -0.3

KSPA Keystone Colle 55.81 0 P P 19 13 00.1 -0.3
KSCT Kent School, K 56.04 3 P P 19 13 01.6 -0.4
KSCT IAmb IAmb 19 14 20.0
comp=Z,20nm,1.3s
P38A Dawn 56.24 344 P P 19 13 02.6 -0.9
P38A IAmb IAmb 19 13 21.8
comp=Z,25nm,1.2s
BNM Barren Site 56.38 330 P P 19 13 03.1 -1.9
L56A Greenwood 56.40 359 P P 19 13 03.7 -1.0
L56A IAmb IAmb 19 14 39.2
comp=Z,17nm,1.1s
BINY Binghamton 56.45 0 P P 19 13 04.9 -0.2
BINY IAmb IAmb 19 13 16.2
comp=Z,20nm,0.8s
L59A Walton 56.46 1 P P 19 13 04.8 -0.3
L59A Walton 56.46 1 P P 19 13 06.0 +0.9
baz=181,SNR=10
L59A P P 19 13 06.0 +0.9
baz=181,SNR=10
SBM South Baldy 56.52 329 P P 19 13 04.7 -1.5
LENM Lemitar 56.57 330 P P 19 13 06.5 +0.3
WVNY West Valley, N 56.70 358 P P 19 13 06.4 -0.4
WVNY IAmb IAmb 19 13 21.6
comp=Z,38nm,1.4s
ANMO Albuquerque 56.95 330 P P 19 13 10.0 +1.1
comp=Z,4.4nm,0.8s,baz=156,slow=8.7,SNR=9.3
ANMO LR LR 19 36 25.2
comp=Z,544nm,18.0s,baz=138,slow=35
comp=Z,4.4nm,0.8s
ANMO Albuquerque 56.95 330 P P 19 13 08.4 -0.5
ANMO Albuquerque 56.95 330 P P 19 13 08.8 -0.2
baz=145,SNR=5.4
K57A Scipio Center 56.99 360 P P 19 13 08.8 0.0
TUC Tucson 57.11 325 P P 19 13 10.1 +0.1
N38A Joes South For 57.26 345 P P 19 13 10.1 -0.6
N38A IAmb IAmb 19 13 38.3
comp=Z,21nm,0.8s
CBKS Cedar Bluff 57.44 338 P P 19 13 11.8 -0.3
J56A Wolcott 57.53 359 P P 19 13 12.0 -0.6
J56A IAmb IAmb 19 13 23.0
comp=Z,17nm,0.8s
J57A Williamstown 57.66 0 P P 19 13 12.5 -1.1
J57A IAmb IAmb 19 13 24.1
comp=Z,16nm,0.8s
ACCN Adirondack Com 57.69 2 P P 19 13 14.1 +0.3
ACCN Adirondack Com 57.69 2 P P 19 13 14.7 +1.0
baz=183,SNR=5.4
J59A Piesco 57.74 2 P P 19 13 14.0 -0.1
J59A IAmb IAmb 19 13 26.0
comp=Z,44nm,1.6s
J59A Piesco 57.74 2 P P 19 13 14.7 +0.6
baz=182
J59A P P 19 13 14.7 +0.6
baz=182
T25A Trinidad 57.83 334 P P 19 13 15.2 0.0
T25A Trinidad 57.83 334 P P 19 13 16.1 +0.9
baz=147
214A Organ Pipe Nat 57.99 323 P P 19 13 17.1 +1.0
baz=137
PECO Prince Edward 58.19 359 P P 19 13 16.6 -0.6
PECO IAmb IAmb 19 13 28.1
comp=Z,33nm,1.2s
NCB Newcomb 58.26 2 P P 19 13 16.2 -1.5
DELO Deloro Mine 58.78 359 P P 19 13 20.8 -0.6
DELO IAmb IAmb 19 13 21.5
comp=Z,11nm,0.9s
SDCO Great Sand Dun 58.81 333 P P 19 13 21.6 -0.5
SDCO IAmb IAmb 19 13 30.6
comp=Z,13nm,0.9s
SDCO Great Sand Dun 58.81 333 P P 19 13 22.8 +0.7
baz=146,SNR=25
LONY Lake Ozonia 58.89 1 P P 19 13 21.7 -0.4
LONY IAmb IAmb 19 13 24.0
comp=Z,11nm,0.8s
X16A Lo Mia Camp, P 59.06 326 P P 19 13 24.4 +0.6
X16A IAmb IAmb 19 13 32.7
comp=Z,9.0nm,0.8s
SADO Sadowa 59.08 358 P P 19 13 22.7 -0.8
comp=Z,5.1nm,0.6s,baz=193,slow=3.8
SADO LR LR 19 42 21.9
comp=Z,361nm,18.2s,baz=182,slow=40
comp=Z,5.1nm,0.6s
SADO Sadowa 59.08 358 P P 19 13 21.4 -2.0
SADO IAmb IAmb 19 13 36.1
comp=Z,28nm,1.4s
BMNY Brushton-Moira 59.12 1 P P 19 13 24.3 +0.6
baz=182
FRNY Flat Rock 59.14 2 P P 19 13 24.2 +0.3
FRNY IAmb IAmb 19 13 25.2
comp=Z,20nm,0.9s
FRNY Flat Rock 59.14 2 P P 19 13 24.5 +0.7
baz=183,SNR=6.8
Q24A Divide 59.68 334 P P 19 13 26.6 -1.5
Q24A IAmb IAmb 19 13 36.5
comp=Z,11nm,1.0s
Q24A Divide 59.68 334 P P 19 13 29.4 +1.3
baz=147
MVCO Mesa Verde 59.75 330 P P 19 13 27.2 -1.3
WUAZ Wupatki 59.86 327 P P 19 13 29.4 +0.1
WUAZ IAmb IAmb 19 13 38.8
comp=Z,20nm,1.1s
K31A O'Neill 60.52 341 P P 19 13 33.2 -0.2
SMCO Snowmass 60.64 333 P P 19 13 34.7 -0.2
SMCO IAmb IAmb 19 13 49.7
comp=Z,19nm,1.4s
PV13 Radium Mtn., P 60.66 331 P P 19 13 35.1 +0.4
PV13 IAmb IAmb 19 14 11.5
comp=Z,14nm,1.1s
BC3 Big Chuckawall 60.76 323 P P 19 13 36.6 +1.2
baz=136
ECSD EROS Data Cent 60.90 343 P P 19 13 35.3 -0.7
ECSD IAmb IAmb 19 13 55.0
comp=Z,16nm,1.1s
IRM Iron Mountain 60.94 323 P P 19 13 37.6 +1.1
baz=136
U15A North Rim 61.04 327 P P 19 13 36.0 -1.4
PFO Pinyon Flats O 61.32 322 P P 19 13 38.8 -0.4
comp=Z,2.1nm,0.8s,baz=118,slow=7.7,SNR=1.7
PFO LR LR 19 38 28.1
comp=Z,304nm,18.4s,baz=149,slow=34
comp=Z,2.1nm,0.8s
BELC Belle Mtn. Jos 61.32 323 P P 19 13 40.7 +1.5
baz=135
GMRC Granite Mounta 61.68 324 P P 19 13 42.5 +0.9
baz=136
KNB Kanab 61.76 327 P P 19 13 42.8 +0.6
KNB IAmb IAmb 19 13 50.5
comp=Z,13nm,0.9s
O20A White River Ci 61.99 333 P P 19 13 42.4 -1.3
O20A IAmb IAmb 19 13 52.2
comp=Z,14nm,0.9s
O20A White River Ci 61.99 333 P P 19 13 44.9 +1.2
baz=145
HEC Hector,Ludlow 62.10 323 P P 19 13 45.8 +1.4
baz=135
F36A Milaca 62.11 346 P P 19 13 43.1 -1.0
F36A Milaca 62.11 346 P P 19 13 44.4 +0.3
baz=161,SNR=6.6
VLDQ Val d'Or 62.38 359 P P 19 13 45.8 0.0
VLDQ IAmb IAmb 19 13 54.1
comp=Z,9.0nm,0.8s
CCUT Cedar City 62.45 327 P P 19 13 47.4 +0.6
P17A Butcher Ranch, 62.61 330 P P 19 13 48.0 +0.1
P17A IAmb IAmb 19 13 56.0
comp=Z,9.4nm,0.8s
SHPR Sheep Range 62.64 325 P P 19 13 48.6 +0.5
TAOE Nuku Hiva Isla 62.64 267 *e*LR LR 19 32 23.4
comp=Z,1µm,24.3s
TAOE Nuku Hiva Isla 62.64 267 *e*T T 20 21 36.0
comp=Z,36nm,0.2s
F33A 5 Mile Ranch, 62.76 344 P P 19 13 47.9 -0.5
RWWY Rawlins 62.82 334 P P 19 13 48.9 -0.4
RWWY IAmb IAmb 19 15 46.1
comp=Z,17nm,1.1s
RDMU Red Mountain 62.94 332 P P 19 13 49.8 -0.2
RDMU IAmb IAmb 19 13 59.0
comp=Z,20nm,1.1s
QSM Queen of Sheba 63.21 324 P P 19 13 51.6 -0.1
QSM IAmb IAmb 19 14 00.8
comp=Z,13nm,1.0s
GWY Greenwater Val 63.26 324 P P 19 13 51.0 -1.2
GWY IAmb IAmb 19 14 01.1
comp=Z,9.1nm,0.9s
K22A Casper 63.34 335 P P 19 13 53.9 +1.3
baz=147
TPNV Topopah Spring 63.56 325 P P 19 13 54.0 -0.2

TPNV IAmb IAmb 19 14 03.8
comp=Z,12nm,0.9s
FURC Furnace Creek, 63.57 324 P P 19 13 55.1 +1.1
baz=135
MPMC Manual Prospec 63.64 323 P P 19 13 55.5 +0.8
baz=135
EYMN Ely 63.67 349 P P 19 13 53.6 -0.8
EYMN IAmb IAmb 19 14 09.2
comp=Z,9.0nm,0.9s
ISA Isabella, Lake 63.94 322 P P 19 13 58.4 +1.8
baz=134
SPR3 Spring Creek 3 64.04 328 P P 19 13 57.7 +0.2
SPR3 IAmb IAmb 19 14 11.4
comp=Z,9.5nm,0.9s
R11A Troy Canyon, C 64.22 326 P P 19 14 00.0 +1.5
R11A Troy Canyon, C 64.22 326 P P 19 14 00.4 +1.9
baz=137
B35A Bob, Littlefor 64.52 347 P P 19 13 58.9 -1.1
B35A IAmb IAmb 19 14 10.5
comp=Z,12nm,0.8s
B35A Bob, Littlefor 64.52 347 P P 19 13 59.6 -0.4
baz=161
LCH Last Change Ra 64.55 324 P P 19 14 00.4 -0.3
E28A Huff 64.68 342 P P 19 14 00.6 -0.6
PDAR Pinedale Array 64.70 333 LR LR 19 42 09.8
comp=Z,255nm,20.3s,baz=150,slow=36
PDAR Pinedale Array 64.70 333 P P 19 14 00.1 -1.6
TPH Tonopah 64.91 325 P P 19 14 03.6 +0.5
AGMN Agassiz Nation 64.94 346 P P 19 14 02.7 -0.1
AGMN Agassiz Nation 64.94 346 P P 19 14 03.3 +0.5
baz=159
LHV Little Huntoon 65.75 325 P P 19 14 09.7 +1.5
LHV IAmb IAmb 19 14 18.0
comp=Z,12nm,0.9s
NVAR Mina Array Bea 65.76 325 P P 19 14 10.6 +2.0
comp=Z,1.6nm,0.7s,baz=146,slow=6.2,SNR=11
NVAR LR LR 19 42 10.7
comp=Z,290nm,18.8s,baz=108,slow=35
comp=Z,1.6nm,0.7s
NVAR Mina Array Bea 65.76 325 P P 19 14 09.2 +0.6
ELK Elko 65.80 328 LR LR 19 42 03.9
comp=Z,890nm,18.0s,baz=138,slow=35
LOHW Long Hollow 65.83 333 P P 19 14 08.4 -0.6
LOHW IAmb IAmb 19 14 11.7
comp=Z,23nm,1.8s
FXWY Fox Creek 66.04 333 P P 19 14 10.0 -0.3
BELA Belgrano 2 66.62 171 P P 19 14 13.5 +0.2
GCMT Greycliff 67.20 335 P P 19 14 17.8 +0.3
BOZ Bozeman (W) 67.86 334 P P 19 14 21.3 -0.5
BEKR Beckworth 67.91 325 P P 19 14 21.6 -0.6
BEKR IAmb IAmb 19 14 31.6
comp=Z,13nm,1.2s
VNA3 Neumayer Olymp 68.87 161 P P 19 14 28.8 +1.2
VNA1 Neumayer--Stat 69.14 161 P P 19 14 30.8 +1.6
MOD Modoc Plateau 69.28 326 P P 19 14 30.9 +0.2
MOD IAmb IAmb 19 14 42.0
comp=Z,19nm,1.2s
VNA2 Neumayer--Watz 69.49 161 P P 19 14 32.5 +1.1
baz=284,slow=6.0
SCHQ Schefferville 69.56 6 P P 19 14 31.5 -0.4
comp=Z,2.8nm,0.7s,baz=186,slow=9.2,SNR=2.2
SCHQ LR LR 19 46 40.8
comp=Z,248nm,20.1s,baz=212,slow=37
comp=Z,2.8nm,0.7s
MSO Missoula 69.82 333 P P 19 14 33.4 -0.5
MSO IAmb IAmb 19 14 45.7
comp=Z,14nm,1.1s
BMO Blue Mountains 69.86 330 P P 19 14 33.8 -0.4
PPT2 Papeete2 70.10 256 *e*LR LR 19 35 50.9
comp=Z,564nm,26.8s
PPT Papeete 70.11 256 LR LR 19 37 51.7
comp=Z,193nm,19.6s,baz=122,slow=30
K05A Summer Lake 70.17 327 P P 19 14 35.0 -1.2
I07A Izee 70.39 328 P P 19 14 38.7 +1.3
YBH Yreka Blue Hor 70.48 325 P P 19 14 38.0 0.0
comp=Z,1.9nm,0.8s,baz=90,slow=8.5,SNR=3.4
YBH LR LR 19 44 47.0
comp=Z,274nm,19.2s,baz=140,slow=35
comp=Z,1.9nm,0.8s
YBH Yreka Blue Hor 70.48 325 P P 19 14 37.3 -0.7
L04D Klamath Falls 70.58 325 P P 19 14 40.4 +1.7
baz=132
F10A Beach Ranch, E 70.66 331 P P 19 14 38.4 -0.6
F10A IAmb IAmb 19 14 57.2
comp=Z,12nm,0.8s
J05D Fort Rock, OR 70.73 327 P P 19 14 40.2 +0.5
baz=134
PINE Pine Mountain 70.93 327 P P 19 14 39.5 -1.4
G08A Pilot Rock 70.99 330 P P 19 14 40.4 -0.7
SNAA Sanae 71.09 161 P P 19 14 42.0 +0.7
SNAA Sanae 71.09 161 LR LR 19 41 44.2
comp=Z,332nm,21.9s,baz=286,slow=32
SNAA Sanae 71.09 161 P P 19 14 41.5 +0.2
SNAA IAmb IAmb 19 15 13.8
comp=Z,12nm,0.9s
L02F Cave Junction 71.22 325 P P 19 14 44.8 +2.3
baz=131
WALA Waterton Lakes 71.55 335 P P 19 14 44.7 +0.3
I04A Tendick Farm, 71.71 327 P P 19 14 46.9 +1.6
baz=133
HAWA Hanford 72.06 330 P P 19 14 47.8 +0.5
G05D Wamic, OR 72.13 328 P P 19 14 48.8 +1.0
baz=134
NEW Newport 72.31 333 P P 19 14 49.5 +0.7
comp=Z,2.4nm,0.6s,baz=132,slow=8.1,SNR=4.8
NEW LR LR 19 46 18.8
comp=Z,274nm,20.1s,baz=133,slow=36
comp=Z,2.4nm,0.6s
NEW Newport 72.31 333 P P 19 14 48.8 -0.1
TROLL Troll, Antarti 72.81 161 P P 19 14 53.1 +1.4
F04A Amboy 73.17 328 P P 19 14 52.3 -1.6
F04A IAmb IAmb 19 15 03.9
comp=Z,20nm,1.0s
B08A Colville Reser 73.38 332 P P 19 14 55.2 0.0
LIC Lamto 73.58 79⇑*i*P P 19 14 56.6 -0.5
comp=Z,94nm,1.4s
TIC Toumodi 73.71 79⇑*e*P P 19 14 58.6 +0.7
comp=Z,13nm,0.9s
DBIC Dimbokro 73.87 79 P P 19 14 58.4 -0.4
comp=Z,9.8nm,0.8s,baz=266,slow=6.1,SNR=9.9
DBIC LR LR 19 45 36.8
comp=Z,1µm,20.6s,baz=246,slow=34
comp=Z,9.8nm,0.8s
KIC Kosan Boka 73.89 79⇑*i*P P 19 14 58.4 -0.5
comp=Z,18nm,0.7s
NLWA Neilton Lookou 74.89 329 P P 19 15 05.5 +1.4
NLWA IAmb IAmb 19 15 14.4
comp=Z,16nm,0.9s
QSPA South Pole Qui 75.61 180 P P 19 15 08.4 +0.2
KOWA Kowa 77.07 71 P P 19 15 16.9 -0.3
FRB Frobisher Bay 78.27 4 LR LR 19 52 18.4
comp=Z,287nm,19.8s,baz=190,slow=38
RAR Rarotonga 78.93 251 LR LR 19 41 16.5
comp=Z,393nm,20.0s,baz=126,slow=29
BBB Bella Bella 80.11 331 LR LR 19 51 05.9
comp=Z,112nm,18.9s,baz=126,slow=36
SBA Scott Base 81.33 191 P P 19 15 42.5 +3.2
SBA IAmb IAmb 19 16 05.7
comp=Z,36nm,1.9s
MORF Marmelete 81.75 48 *e*P P 19 15 44.6 +2.3
TOA0 Torodi Ar. Sit 81.94 74 P P 19 15 43.5 -0.2
TORD Torodi Ar. Bea 81.94 74 P P 19 15 43.7 0.0
comp=Z,26nm,0.9s,baz=261,slow=5.3,SNR=75
TORD LR LR 19 51 18.2
comp=Z,607nm,20.1s,baz=210,slow=35
comp=Z,26nm,0.9s
TORD Torodi Ar. Bea 81.94 74 P P 19 15 43.3 -0.4
PNCL Nicolau / Gran 82.19 47 *e*P P 19 15 46.9 +2.4
PBDV Barranco-do-Ve 82.25 48 *e*P P 19 15 47.4 +2.5
MESJ Messejana 82.29 48 *e*P P 19 15 47.4 +2.4
PCVE Castro Verde 82.33 48 *e*P P 19 15 48.0 +2.7
comp=Z,58nm,2.0s
VNDA Vanda 82.40 191 P P 19 15 46.5 +1.6
comp=Z,0.9nm,0.8s,baz=105,slow=5.6,SNR=5.7
VNDA LR LR 19 47 55.1
comp=Z,225nm,18.1s,baz=124,slow=32
comp=Z,0.9nm,0.8s
YKA Yellowknife Ar 82.43 343 P P 19 15 45.3 +0.1
comp=Z,3.1nm,0.6s,baz=144,slow=6.0,SNR=10
YKA LR LR 19 54 45.3
comp=Z,251nm,18.2s,baz=121,slow=37
comp=Z,3.1nm,0.6s
PVAQ Vaqueiros 82.47 48 *e*P P 19 15 49.5 +3.5
PVAQ Vaqueiros 82.47 48 *e*LR LR 19 44 44.0
comp=Z,396nm,20.0s
PBEJ Beja 82.62 48 *e*P P 19 15 49.2 +2.4

comp=Z,52nm,2.0s
EVO Evora 82.73 47 *e*P **P** 19 15 49.4 +2.1
comp=Z,44nm,1.7s
PMTG Montargil 82.81 47 *e*P **P** 19 15 49.9 +2.2
comp=Z,67nm,1.9s
MDT Midelt 83.00 54 LR LR 19 51 48.9
comp=Z,367nm,18.4s,baz=266,slow=35
PCAS Casmilo, Conde 83.04 46 *e*P **P** 19 15 50.8 +1.9
comp=Z,70nm,2.0s
COI Coimbra 83.16 46 P **P** 19 15 49.7 +0.2
PESTR Estremoz 83.17 47 P **P** 19 15 49.3 -0.3
PESTR Estremoz 83.17 47 *e*P **P** 19 15 51.6 +2.0
comp=Z,47nm,1.8s
PBAR Barrancos 83.28 48 *e*P **P** 19 15 52.3 +2.1
comp=Z,32nm,1.9s
SFJD Kangerlussuaq 83.47 10 LR LR 19 55 07.7
comp=Z,140nm,19.1s,baz=212,slow=37
PMRV Marv??o 83.55 47 *e*P **P** 19 15 52.6 +1.1
PMRV Marv??o 83.55 47 *e*SS SS 19 31 38.8 -1.5
PMRV Marv??o 83.55 47 *e*LR LR 19 42 58.1
comp=Z,847nm,20.0s
MTE Manteigas 83.84 46 *e*P **P** 19 15 54.6 +1.5
comp=Z,38nm,1.8s
MTE Manteigas 83.84 46 *e*PP **PP** 19 19 07.7 +1.0
MTE Manteigas 83.84 46 *e*LQ LQ 19 39 11.0
MTE *e*LR LR 19 44 31.1
comp=Z,860nm,20.0s
PGAV Gavieira, Arco 84.01 44 *e*LR LR 19 45 14.8
comp=Z,573nm,22.0s
POLO Lamas de Olo 84.08 45 *e*P **P** 19 15 55.8 +1.4
comp=Z,24nm,1.6s
MVO Moncorvo 84.52 45 *e*P **P** 19 15 57.0 +0.5
MVO Moncorvo 84.52 45 *e*LQ LQ 19 38 28.1
MVO *e*LR LR 19 45 17.2
comp=Z,585nm,20.0s
DLBC Dease Lake 84.89 335 P **P** 19 15 59.3 +1.2
comp=Z,5.7nm,0.8s,baz=132,slow=6.9,SNR=10
DLBC LR LR 19 56 52.1
comp=Z,208nm,18.7s,baz=112,slow=38
comp=Z,5.7nm,0.8s
DLBC Dease Lake 84.89 335 P **P** 19 15 59.1 +1.0
DLBC IAmb IAmb 19 16 08.1
comp=Z,15nm,1.1s
DLBC Dease Lake 84.89 335 P **P** 19 15 59.3 +1.2
baz=128
PBRG Braganca 84.98 45 *e*P **P** 19 16 00.1 +1.3
comp=Z,36nm,1.8s
PAB San Pablo 85.75 47 P **P** 19 16 03.3 +0.6
PAB IAmb IAmb 19 16 04.0
comp=Z,28nm,1.5s
R33M Jennings River 85.87 335 P **P** 19 16 03.6 +0.6
baz=128
ESDC Sonseca Array 86.07 47 P **P** 19 16 05.5 +1.1
comp=Z,2.4nm,0.7s,baz=259,slow=5.5,SNR=15
ESDC LR LR 19 51 33.9
comp=Z,623nm,19.7s,baz=244,slow=34
comp=Z,2.4nm,0.7s
ESDC Sonseca Array 86.07 47 P **P** 19 16 03.4 -0.9
ESDC IAmb IAmb 19 16 06.3
comp=Z,33nm,1.9s
P33M Teslin, Yukon 87.11 335 P **P** 19 16 10.2 +1.3
baz=126
ICESG Greenland Ices 87.35 12 *e*P P 19 16 03.5 -6.8
SUR Sutherland 88.17 123 LR LR 19 54 02.7
comp=Z,578nm,19.0s,baz=254,slow=34
TAM Tamanrasset 88.20 66 P **P** 19 16 11.3 -3.9
TAM IAmb IAmb 19 16 12.7
comp=Z,14nm,1.1s
FARO Faro, Yukon 88.50 337 P **P** 19 16 16.2 +0.7
FARO IAmb IAmb 19 16 23.8
comp=Z,12nm,0.9s
O30N Mendenhall 88.76 335 P **P** 19 16 17.7 +0.9
baz=123
P29M Windy Craggy 88.84 333 P **P** 19 16 18.0 +0.8
baz=122
TSUM Tsumeb 88.86 109 LR LR 19 55 05.3
comp=Z,316nm,19.0s,baz=258,slow=35
TSUM Tsumeb 88.86 109 P **P** 19 16 17.2 -1.1
M31M Drury Creek, Y 88.89 337 P **P** 19 16 17.6 +0.3
M31M IAmb IAmb 19 16 42.2
comp=Z,12nm,1.1s
M31M Drury Creek, Y 88.89 337 P **P** 19 16 18.2 +0.9
baz=125
N31M Braeburn, Yuko 89.03 336 P **P** 19 16 18.2 +0.2
N31M Braeburn, Yuko 89.03 336 P **P** 19 16 18.4 +0.4
baz=123
BORG Borgarnes 89.24 21 LR LR 19 54 33.4
comp=Z,169nm,19.9s,baz=237,slow=34
N30M Aishikik Lake 89.54 335 P **P** 19 16 21.7 +1.2
baz=122
RES Resolute Bay 89.81 355 LR LR 19 58 53.3
comp=Z,147nm,19.4s,baz=168,slow=37
SUMG Summit 90.42 11 P **P** 19 16 24.6 -0.2
SUMG Summit 90.42 11 *i* P **P** 19 16 25.0 +0.2
M29M Somme Creek 90.61 336 P **P** 19 16 25.8 +0.3
baz=121
L29M L29M 90.83 336 P **P** 19 16 28.0 +1.6
baz=121
AFI Afiamalu 91.75 255 LR LR 19 49 58.5
comp=Z,272nm,18.1s,baz=68,slow=30
DAWY Dawson 91.81 337 P **P** 19 16 30.0 -0.9
DAWY IAmb IAmb 19 16 32.1
comp=Z,21nm,1.7s
DAWY Dawson 91.81 337 P **P** 19 16 31.6 +0.7
baz=120
I29M Ogilvie Camp, 92.07 338 P **P** 19 16 31.5 -0.6
I29M IAmb IAmb 19 16 47.3
comp=Z,8.4nm,0.9s
INK Inuvik 92.11 342 LR LR 20 00 52.4
comp=Z,351nm,21.1s,baz=114,slow=37
BCAR Beaver Creek A 92.25 335 P **P** 19 16 32.8 -0.3
L27K Beaver Creek, 92.27 335 P **P** 19 16 33.2 +0.2
L27K IAmb IAmb 19 17 22.2
comp=Z,6.2nm,1.0s
L27K Beaver Creek, 92.27 335 P **P** 19 16 33.5 +0.4
baz=118
EKA Eskdalemuir Ar 92.52 33 LR LR 19 56 39.2
comp=Z,217nm,18.3s,baz=198,slow=34
K27K Chicken 92.82 336 P **P** 19 16 35.4 -0.2
K27K Chicken 92.82 336 P **P** 19 16 36.5 +1.0
baz=118
RAO Raoul Island 92.84 239 LR LR 19 48 29.9
comp=Z,263nm,21.0s,baz=116,slow=29
MAW Mawson 92.88 165 LR LR 19 54 59.5
comp=Z,379nm,21.9s,baz=222,slow=33
BOSA Boshof 92.94 120 P **P** 19 16 37.1 -0.1
comp=Z,1.9nm,0.8s,baz=255,slow=5.9,SNR=5.4
BOSA LR LR 19 54 50.5
comp=Z,458nm,21.8s,baz=250,slow=33
comp=Z,1.9nm,0.8s
I27K Kandik River 93.39 338 P **P** 19 16 38.2 0.0
baz=118
SCRK Sand Creek 93.55 336 P **P** 19 16 38.4 -0.7
baz=116
J26L Joseph Creek 93.61 336 P **P** 19 16 38.5 -0.8
J26L IAmb IAmb 19 16 49.3
comp=Z,4.4nm,0.8s
J26L Joseph Creek 93.61 336 P **P** 19 16 39.6 +0.3
baz=116
M24K Tolsona, Glenn 93.65 334 P **P** 19 16 39.3 -0.2
baz=114
H27K Steamboat Moun 93.66 338 P **P** 19 16 39.9 +0.5
baz=118
URZ Urewera 93.68 229 LR LR 19 49 44.7
comp=Z,376nm,21.3s,baz=37,slow=30
PAX Paxson 93.71 335 P **P** 19 16 39.7 -0.1
baz=115
RIDG Independent Ri 93.79 335 P **P** 19 16 40.5 +0.4
baz=115
I26K Coal Creek Min 93.82 337 P **P** 19 16 40.3 +0.2
baz=117
G27K Doyon Strip 93.97 339 P **P** 19 16 41.0 +0.1
baz=118
LBTB Lobatse 94.35 117 LR LR 19 56 49.4
comp=Z,481nm,19.8s,baz=252,slow=34
J25K Salcha River, 94.37 336 P **P** 19 16 40.3 -2.5
J25K Salcha River, 94.37 336 P **P** 19 16 42.9 +0.2
baz=115
WAT6 Susitna Watana 94.51 334 P **P** 19 16 43.8 +0.3
baz=113
E27K Coleen River 94.60 340 P **P** 19 16 44.0 +0.3
baz=118
G26K Porcupine Rive 94.79 339 P **P** 19 16 44.6 +0.1
baz=116
KEST Kesra 94.87 55 LR LR 19 59 19.9
comp=Z,352nm,20.3s,baz=204,slow=35
ILAR Eielson Array 95.03 336 P **P** 19 16 46.1 +0.4
comp=Z,0.9nm,0.8s,baz=96,slow=2.8,SNR=6.9
ILAR PP **PP** 19 20 38.3 +3.1
comp=Z,0.7nm,0.8s,baz=130,slow=6.2,SNR=4.3
ILAR LR LR 20 01 35.9
comp=Z,127nm,20.3s,baz=108,slow=37
comp=Z,0.9nm,0.8s
H25K Birch Creek 95.23 338 P **P** 19 16 47.6 +1.1
baz=114
F26K Sheenjek River 95.24 339 P **P** 19 16 47.4 +0.7
baz=116
CCB Clear Creek Bu 95.34 336 P **P** 19 16 45.5 -1.6
CCB IAmb IAmb 19 18 27.1
comp=Z,17nm,1.9s
WRH Wood River Hil 95.39 336 P **P** 19 16 47.2 -0.1
WRH IAmb IAmb 19 17 01.3
comp=Z,6.2nm,1.2s
BMRD Maredsous 95.44 40 *d*PcP **P** 19 16 47.9 0.0
G25K Bearman Lake 95.54 338 P **P** 19 16 48.9 +0.9
baz=114
MDM Murphy Dome 95.63 336 P **P** 19 16 47.9 -0.5
MDM IAmb IAmb 19 17 09.4
comp=Z,6.0nm,0.9s
RPZ Rata Peaks 95.67 222 LR LR 19 50 45.7
comp=Z,318nm,20.0s,baz=97,slow=30
F25K Christian Rive 95.72 339 P **P** 19 16 49.4 +0.6
baz=114
H24K Noodor Dome 95.83 337 P **P** 19 16 48.3 -1.1
H24K Noodor Dome 95.83 337 P **P** 19 16 49.9 +0.5
baz=112
E25K Arctic Village 95.91 339 P **P** 19 16 50.1 +0.5
baz=114
C27K Jago River 95.94 341 P **P** 19 16 50.2 +0.4
baz=116
G24K Hadweenzic Riv 96.01 338 P **P** 19 16 50.9 +0.7
baz=113
ECH Echery 96.39 42 P **P** 19 16 51.0 -1.4
BPAW Bear Paw Mtn. 96.43 335 P **P** 19 16 52.5 +0.4
baz=110
F24K Squaw Lake 96.48 338 P **P** 19 16 53.0 +0.7
baz=112
JMIC Jan Mayen 96.64 18 LR LR 19 53 08.5
comp=Z,204nm,21.8s,baz=338,slow=31
MLY Manley 96.65 336 P **P** 19 16 53.1 -0.1
baz=110
CAST Castle Rocks 96.66 334 P **P** 19 16 51.5 -1.7
CAST IAmb IAmb 19 17 07.5
comp=Z,10.0nm,1.2s
CAST Castle Rocks 96.66 334 P **P** 19 16 52.7 -0.5
baz=109
D25K Kavik River 96.67 340 P **P** 19 16 53.2 0.0
baz=114
E24K Your Creek 96.90 339 P **P** 19 16 55.0 +0.7
baz=112
G23K Bananza Creek 96.96 337 P **P** 19 16 55.4 +0.9
baz=110
C24K Franklin Bluff 97.58 340 P Pdif 19 16 57.9 +0.7
baz=111
DAVOX Davos/Dischmat 97.85 44 LR LR 19 59 38.9
comp=Z,600nm,19.2s,baz=250,slow=34
DAVA Damuels 97.96 43 *e*P Pdif 19 17 00.4 +0.7
comp=Z,11nm,1.1s
FETA Feichten 98.47 44 *i* P Pdif 19 17 03.0 +1.0
comp=Z,9.1nm,1.3s
RETA Reutte 98.59 43 *i* P Pdif 19 17 03.2 +0.9
comp=Z,9.9nm,1.3s
MOTA Mosalm 98.79 43 *i* P Pdif 19 17 04.3 +1.0
comp=Z,11nm,0.9s
SQTA Sankt Quirin 98.83 44 *i* P Pdif 19 17 04.6 +1.1
comp=Z,15nm,1.1s
WATA Walderalm 99.10 43 *i* P **Pdif** 19 17 05.8 +1.0
comp=Z,18nm,1.6s
WTTA Wattenberg 99.13 44 *e*P **Pdif** 19 17 06.1 +1.2
comp=Z,13nm,1.0s
VAE Valguarnera 99.23 54 LR LR 20 00 34.4
comp=Z,312nm,20.1s,baz=336,slow=35
ABTA Abfaltersbach 99.61 44 *i* P **Pdif** 19 17 08.1 +1.2
comp=Z,13nm,1.3s
LSZ Lusaka 99.68 109 LR LR 19 59 40.0
comp=Z,1μm,21.1s,baz=262,slow=34
MSVF Nonsavu 100.01 249 LR LR 19 52 04.6
comp=Z,316nm,20.5s,baz=103,slow=29
KBA Koelnbreinsper 100.24 44 *i* P **Pdif** 19 17 10.7 +0.9
comp=Z,6.8nm,1.4s
MYKA Terra Mystica 100.36 44 *i* P **Pdif** 19 17 11.2 +1.0
comp=Z,2.2nm,0.5s
BIOA Bad Ischl, Aus 100.54 43 *i* P **Pdif** 19 17 12.0 +1.0
comp=Z,9.5nm,1.2s
GERES GERESS Array B 100.78 42 P **Pdif** 19 17 12.2 +0.1
comp=Z,0.8nm,0.7s,baz=242,slow=2.9,SNR=8.2
CONA Conrad Observa 102.06 43 *e*P **Pdif** 19 17 19.1 +1.3
comp=Z,8.4nm,1.9s
MODS Modra-Piesok 103.06 43 *e*PDIFF **Pdif** 19 17 23.3 +1.2
VYHS Vyhne 104.10 43 *e*PDIFF **Pdif** 19 17 28.1 +1.3
DZM Mont Dzumac 108.57 240 eLR LR 19 53 40.0
comp=Z,442nm,28.6s
H11N3 WAKE ISLAND Hyl 19.69 285 T T 21 33 02.2
baz=96,slow=74
H11N2 WAKE ISLAND Hyl 19.70 285 T T 21 33 07.8
baz=96,slow=74
H11N1 WAKE ISLAND Hyl 19.70 285 T T 21 33 06.5
baz=96,slow=74
H11S2 WAKE ISLAND Hyl 19.75 283 T T 21 33 06.1
baz=98,slow=75
H11S1 WAKE ISLAND Hyl 19.75 283 T T 21 33 03.7
baz=98,slow=75
H11S3 WAKE ISLAND Hyl 19.76 283 T T 21 33 09.1
baz=98,slow=75
ABKAR Akbulak array 130.28 36 PKPdf **PKPdf** 19 22 33.4 -0.2
ABKAR Akbulak array 130.28 36 PKPdf **PKPdf** 19 22 33.8 +0.2
ASAR Alice Springs 131.91 218 PKP **PKPdf** 19 22 38.0 +0.4
comp=Z,0.8nm,0.7s,baz=125,slow=1.9,SNR=8.6
WRA Warramunga Arr 134.38 222 PKP **PKPdf** 19 22 43.0 +0.6
comp=Z,0.9nm,0.6s,baz=125,slow=1.9,SNR=7.5
ZALV Zalesovo Beam 137.97 17 PKP **PKiKP** 19 22 49.0 -0.9
comp=Z,1.8nm,0.6s,baz=270,slow=1.5,SNR=9.9
ZALV Zalesovo Beam 137.97 17 PKPdf **PKPdf** 19 22 48.3 +0.4
MKAR Makanchi Array 143.19 25 PKP **PKPdf** 19 22 56.9 -0.7
comp=Z,0.5nm,0.7s,baz=316,slow=3.3,SNR=4.4
KSH Kashi 145.19 39 PKPbc **PKPdf** 19 23 02.9 +1.4
CN2 Changchun 145.43 332 *e*PKPbc **PKPbc** 19 23 00.3 -1.2
CN2 PP **PP** 19 26 23.9 +3.1
CN2 AMB AMB
comp=Z,100nm,5.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,200nm,14.0s
NIL Nilore 146.49 50 **PKPbc** 19 23 04.7 -0.5
ULN Ulaanbaatar 146.66 356 **PKPbc** 19 23 05.1 -0.3
SONM Songino Array 146.73 357 PKPbc **PKPbc** 19 23 05.4 -0.1
comp=Z,6.4nm,0.6s,baz=330,slow=1.7,SNR=54
SONM Songino Array 146.73 357 **PKPbc** 19 23 04.9 -0.6
WMQ Urumqi 147.76 22 *e*PKPbc **PKPdf** 19 23 05.3 -0.3
WMQ LR LR
comp=Z,300nm,18.7s
WMQ LR LR
comp=Z,170nm,18.3s
KSRS Korea Array 148.65 321 PKPbc **PKPbc** 19 23 11.1 +0.3
comp=Z,2.5nm,1.0s,baz=28,slow=3.0,SNR=8.0
KSAR Wonju Array Be 148.68 321 **PKPdf** 19 23 08.5 +1.3
XLT XiLinHaoTe 148.89 343 *i* PKPbc **PKPbc** 19 23 11.7 +0.3
HHC Hu-ho-hao-te 152.91 347 *e*PKPbc **PKPdf** 19 23 07.6 -6.2
PCHI Peechi 152.99 95 *e*P **PKPbc** 19 23 20.1 -1.7
PCHI *ex* x 19 38 35.1
GTA Gaotai 154.99 7 *e*PKPbc **PKPdf** 19 23 18.8 +2.0
GTA LR LR
comp=Z,120nm,18.5s
GTA LR LR
comp=Z,310nm,20.7s
GTA LR LR
comp=Z,250nm,21.4s
HNS HongShan 155.22 339 ⇑PKP PKPdf 19 23 27.6 +11
TIA Tai'an 155.31 333 ⇓P PKPdf 19 23 26.5 +9.3
TIA pmax pmax
comp=Z,9.0nm,1.3s
HYBB Hyderabad (bro 155.64 80 *e*PKPdf **PKPdf** 19 23 16.7 -1.5
GOMU GeErMu 157.00 19 PKP **PKPdf** 19 23 24.0 +4.1
GOMU pPKP sPKPdf 19 23 27.0 +2.7
GOMU AMB AMB
comp=Z,170nm,6.1s
GOMU LR LR
comp=Z,160nm,19.9s
GOMU LR LR
comp=Z,110nm,15.7s
GOMU LR LR
comp=Z,210nm,17.3s
NJ2 Nanjing 157.75 324 *e*PKP **PKPdf** 19 23 23.3 +2.8
LZH Lanzhou 158.54 360 *e*PKP **PKPdf** 19 23 18.2 -3.4
LZH pPKP sPKPdf 19 23 28.1 +2.1
XAN Xi'an 160.02 347 *e*PKP **PKPdf** 19 23 24.4 +1.2
XAN LR LR
comp=Z,200nm,15.8s
XAN LR LR
comp=Z,120nm,18.8s
XAN LR LR
comp=Z,250nm,21.6s
PZH PanZhiHua 167.95 9 PKP **PKPdf** 19 23 28.7 -2.0
KMI Kunming 169.43 5 ⇑PKP **PKPdf** 19 23 31.6 -0.2
KMI LR LR
comp=Z,180nm,18.5s
KMI LR LR
comp=Z,220nm,19.2s
KMI LR LR
comp=Z,230nm,19.7s
QIZ Qiongzhong 172.63 308 PKP **PKPdf** 19 23 32.6 -0.7
QIZ PP **PP** 19 28 47.9 -1.9
QIZ SS SS 19 50 03.6 +1.2
QIZ LR LR
comp=Z,140nm,17.1s
QIZ LR LR
comp=Z,230nm,18.6s
QIZ LR LR
comp=Z,190nm,17.6s
CMAR Chiang Mai Arr 173.98 49 PKP **PKPdf** 19 23 33.6 -0.3
comp=Z,0.6nm,0.5s,baz=340,slow=3.0,SNR=6.4
CMAR PKPab **PKPab** 19 25 05.0 +0.3
comp=Z,1.3nm,1.1s,baz=290,slow=6.8,SNR=4.9
CMAR PP **PP** 19 28 59.6 +3.4
comp=Z,0.5nm,0.9s,baz=290,slow=4.7,SNR=4.3

IDC 08 19:47:53.0±1.6, 4°.51S×133°.54E, h0km, mb4.5/1, mbtmp3.7/5, ML3.0/4, Error ellipse: s-maj=67.5km s-min=25.1km az=91.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.27**	**328**	Pn	Pn	19 48 59.0	-0.3
	0.7nm,0.3s,baz=115,slow=8.7,SNR=2.4						
SIJI				Sn	Sn	19 49 36.2	-14
	0.6nm,0.3s,baz=224,slow=22,SNR=2.4						
	4.7nm,0.7s						
WRA	**Warramunga Arr**	**15.36**	**177**	Pn	Pn	19 51 30.2	-1.1
	0.1nm,0.3s,baz=356,slow=12,SNR=1.7						
WRA				Sn	Sn	19 54 13.4	-8.8
	baz=78,slow=24,SNR=2.3						
	0.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.56**	**209**	Pn	Pn	19 51 34.2	+0.3
	baz=22,slow=11,SNR=3.3						
FITZ				Sn	Sn	19 54 18.9	-8.2
	baz=192,slow=14,SNR=1.3						
	2.8nm,1.1s						
ASAR	**Alice Springs**	**19.05**	**179**	P	P	19 52 17.3	+0.3
	0.1nm,0.3s,baz=6.0,slow=12,SNR=7.5						
	0.9nm,0.7s						
PETK	**Petropavlovsk-**	**60.92**	**16**	P	P	19 58 07.7	0.0
	2.8nm,0.5s,baz=198,slow=8.1,SNR=6.6						
	2.8nm,0.5s						

*CNRM **08** 19:48:14.6, 36°.83N×9°.10W, h84km, ml2.9*
*IGIL **08** 19:48:17.5, 36°.77N×9°.44W, h27km, ML1.6*
*INMG **08** 19:48:17.5±1.7, 36°.78N×9°.45W, h26km±7km, ML1.6, Error ellipse: s-maj=6.5km s-min=4.5km az=69.0*
*MDD **08** 19:48:17.4±1.1, 36°.80N×9°.44W, h28km±9km, mb_Lg2.1/5, Error ellipse: s-maj=10.3km s-min=6.0km az=40.0*
ISC 08 19:48:13.4±2.8, 36°.67N±0°.05×9°.54W±0°.09, h33km±7km, n29, σ1°39/45, 3C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.74**	**51**	P	**Pn**	**19 48 28.1**	**+0.6**
PFVI				S	**Sb**	**19 48 36.9**	**-0.8**
PFVI	**Vila Bisbo**	**0.74**	**51**	⇑*e*P	**Pn**	**19 48 28.8**	**+1.3**
PFVI				*e*S	**Sb**	**19 48 37.3**	**-0.4**
PFVI				A	A	19 48 38.4	
	9.9nm,0.4s						
MORF	**Marmelete**	**0.95**	**48**	*e*P	**Pn**	**19 48 31.9**	**+1.3**
MORF				*e*S	**Sn**	**19 48 42.6**	**-0.4**
MORF				IAML		19 48 44.0	
	comp=N,19nm,0.2s						
MORF	**Marmelete**	**0.95**	**48**	⇑*e*P	**Pn**	**19 48 31.9**	**+1.3**
MORF				*e*S	**Sn**	**19 48 42.7**	**-0.4**
MORF				A	A	19 48 44.6	
	comp=N,9.5nm,0.2s						
PTEO	**Sao Teotonio**	**1.09**	**37**	*e*S	**Sn**	**19 48 45.9**	**-0.4**
PBDV	**Barranco-do-Ve**	**1.41**	**66**	⇑*e*Pn	**Pn**	**19 48 38.5**	**+1.7**
PBDV				A	A	19 48 54.6	
	comp=N,1.8nm,0.1s						
PBDV				*e*Sn	**Sn**	**19 48 55.0**	**+0.7**
PCVE	**Castro Verde**	**1.54**	**51**	*e*Pn	**Pn**	**19 48 40.3**	**+1.8**
PCVE				*e*Sn	**Sn**	**19 48 57.5**	**+0.1**
PCVE				A	A	19 48 58.8	
	comp=N,3.8nm,0.2s						
MESJ	**Messejana**	**1.57**	**42**	*e*P	**Pn**	**19 48 40.4**	**+1.5**
MESJ				*e*S	**Sn**	**19 48 57.3**	**-0.9**
MESJ				IAML		19 48 57.9	
	comp=N,4.3nm,0.2s						
MESJ	**Messejana**	**1.57**	**42**	*e*Pn	**Pn**	**19 48 40.5**	**+1.5**
MESJ				*e*Sn	**Sn**	**19 48 57.6**	**-0.6**
MESJ				A	A	19 49 01.8	
	comp=N,2.6nm,0.4s						
PVAQ	**Vaqueiros**	**1.63**	**63**	P	Pn	19 48 38.8	-1.0
PVAQ				S	Sn	19 48 55.7	-4.1
PVAQ	**Vaqueiros**	**1.63**	**63**	*e*Pn	**Pn**	**19 48 41.4**	**+1.6**
PVAQ				A	A	19 49 01.9	
	comp=N,4.1nm,0.3s						
PNCL	**Nicolau / Gran**	**1.65**	**29**	*e*Sn	**Sn**	**19 48 59.4**	**-0.7**
PNCL				A	A	19 49 00.9	
	comp=N,8.5nm,0.5s						
EGRO	**El Granado**	**1.86**	**62**	P	**Pn**	**19 48 44.8**	**+1.9**
EGRO				S	**Sn**	**19 49 05.0**	**-0.3**
EGRO				*i* Vmb_Lg		19 49 07.0	
EVO	**Evora**	**2.22**	**33**	*e*Sn	**Sn**	**19 49 12.4**	**-1.8**
EVO				A	A	19 49 13.8	
	comp=N,6.9nm,0.3s						
PMAFR	**Mafra**	**2.29**	**5**	*e*Pn	**Pn**	**19 48 50.8**	**+1.9**
PMAFR				*e*Sn	**Sn**	**19 49 15.1**	**-0.8**
PMAFR				A	A	19 49 17.7	
	comp=N,9.6nm,0.7s						
PBAR	**Barrancos**	**2.50**	**52**	*e*Pn	**Pn**	**19 48 53.1**	**+1.4**
PBAR				*e*Sn	**Sn**	**19 49 20.6**	**-0.4**
PBAR				A	A	19 49 23.6	
	comp=N,1.4nm,0.8s						
EMIN	**Mina Concepcio**	**2.54**	**64**	S	**Sn**	**19 49 22.2**	**+0.2**
PMTG	**Montargil**	**2.61**	**23**	*e*Pn	**Pn**	**19 48 55.4**	**+2.1**
PMTG				*e*Sn	**Sn**	**19 49 22.3**	**-1.5**
PMTG				A	A	19 49 23.9	
	comp=N,1.9nm,0.4s						
PESTR	**Estremoz**	**2.68**	**35**	P	Pn	19 48 49.7	-4.6
PESTR				S	Sn	19 49 19.0	-6.7
PESTR	**Estremoz**	**2.68**	**35**	*e*Sn	**Sn**	**19 49 24.3**	**-1.4**
PESTR				A	A	19 49 26.9	
	comp=N,1.5nm,0.3s						
EBAD	**Badajoz**	**2.89**	**43**	P	**Pn**	**19 48 57.9**	**+0.8**
EBAD				S	**Sn**	**19 49 29.0**	**-1.8**
EBAD				*i* Vmb_Lg		19 49 31.5	
PSBE	**So Bento**	**2.90**	**12**	*e*Sn	**Sn**	**19 49 29.3**	**-1.7**
ESPR	**Espera**	**2.97**	**85**	P	**Pn**	**19 49 00.2**	**+2.1**
ESPR				S	**Sn**	**19 49 32.1**	**-0.5**
ESPR				*i* Vmb_Lg		19 49 33.7	
PMRV	**Marv??o**	**3.23**	**31**	⇓*e*Pn	**Pn**	**19 49 03.0**	**+1.1**
PMRV				*e*Sn	**Sn**	**19 49 36.9**	**-2.4**
PMRV				A	A	19 49 38.5	
	comp=N,2.8nm,0.3s						
ECAB	**El Cabril**	**3.57**	**66**	P	**Pn**	**19 49 08.4**	**+1.9**
ECAB				S	**Sn**	**19 49 45.2**	**-2.4**
ECAB				*i* Vmb_Lg		19 49 47.5	
EADA	**Adamuz**	**4.23**	**68**	P	**Pn**	**19 49 17.0**	**+1.5**
EADA				S	**Sn**	**19 50 02.3**	**-1.4**
EADA				*i* Vmb_Lg		19 50 05.2	
PAB	**San Pablo**	**5.00**	**53**	P	**Pn**	**19 49 26.3**	**0.0**
PAB				S	Sn	19 50 18.8	-4.2
MD31	**MD31**	**5.47**	**133**	P	**Pn**	**19 49 33.1**	**+0.4**
MD31				S	Sn	19 50 29.2	-5.2
MDT	**Midelt**	**5.60**	**132**	P	**Pn**	**19 49 35.1**	**+0.7**
MDT				S	**Sn**	**19 50 35.9**	**-1.8**

*ARE **08** 20:22:55.1±1.7, 14°.53S±0°.08×76°.3W±0°.1, h11km±6km, ML4.3, mb4.9/5(NEIC), Error ellipse: s-maj=18.0km s-min=8.8km az=65.0*
*NEIC **08** 20:22:57.6±2.0, 14°.43S±0°.08×76°.2W±0°.1, h24km±5km, Error ellipse: s-maj=20.0km s-min=6.3km az=61.0*
*IDC **08** 20:23:01.2±3.0, 14°.68S×76°.40W, h58km±24km, mb3.4/5, mbtmp3.9/9, ML4.0/4, MS3.3/6, Error ellipse: s-maj=50.3km s-min=15.6km az=43.0*

ISC 08 20:22:54.2±0.7, **14°.55S**±0°.07×**76°.37W**±0°.09, **h10km, n52, σ1§53/42, mb4.0/8, MS3.2/3, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.59**	**350**	P			**Pb**	**20 23 42.1**	**+1.3**
	30nm,0.3s,baz=152,slow=11,SNR=17								
NNA				S			**Sb**	**20 24 11.1**	**-1.5**
	406nm,0.3s,baz=142,slow=4.4,SNR=8.7								
NNA				LR		LR	LR	20 24 54.4	
	comp=Z,189nm,19.7s,baz=84,slow=42 61nm,0.3s								
NNA	**Nana**	**2.59**	**350**				**Pn**	**20 23 36.4**	**+0.2**
PB12	**IPOC Station P**	**7.06**	**126**				**Pn**	**20 24 37.0**	**-0.8**
PB18	**Visviri**	**7.28**	**115**	Pn			**Pn**	**20 24 41.7**	**+0.5**
PB16	**IPOC Station P**	**7.58**	**121**				**Pn**	**20 24 47.3**	**+1.9**
ATAH	**Atahualpa**	**7.63**	**345**	P			Pn	20 24 52.5	+6.5
	0.9nm,0.3s,baz=128,slow=4.1,SNR=3.1								
ATAH				S			Sn	20 26 24.2	+12
	6.6nm,0.5s,baz=143,slow=19,SNR=1.4 3.3nm,0.4s								
CZSB	**Cruzeiro do Su**	**7.67**	**28**				**Pn**	**20 24 44.1**	**-1.9**
LPAZ	**La Paz**	**8.13**	**103**	P			Pn	20 24 57.9	+5.0
	2.2nm,0.3s,baz=297,slow=8.0,SNR=50								
LPAZ				S			**Sn**	**20 26 28.7**	**+3.5**
	2.2nm,0.6s,baz=325,slow=23,SNR=0.9 9.5nm,0.5s								
LPAZ	**La Paz**	**8.13**	**103**				Pn	20 24 58.0	+5.1
TA01	**Diego Aracena**	**8.40**	**136**	Pn			**Pn**	**20 24 55.4**	**-0.6**
GO01	**Chusmiza**	**8.54**	**128**				**Pn**	**20 24 58.8**	**+0.4**
PATCX	**Punta Patache**	**8.60**	**137**	Pn			**Pn**	**20 24 59.5**	**+0.6**
PB02	**IPOC Station P**	**9.12**	**138**				**Pn**	**20 25 07.0**	**+0.9**
PB01	**IPOC Station P**	**9.20**	**136**	Pn			**Pn**	**20 25 08.6**	**+1.5**
PB07	**IPOC Station P**	**9.43**	**140**	Pn			**Pn**	**20 25 10.8**	**+0.5**
PB04	**IPOC Station P**	**9.73**	**144**	Pn			**Pn**	**20 25 15.2**	**+0.7**
PB09	**IPOC Station P**	**9.89**	**138**	Pn			**Pn**	**20 25 16.6**	**-0.1**
LVC	**Limon Verde**	**10.69**	**140**	P			**Pn**	**20 25 30.2**	**+2.5**
	0.6nm,0.3s,baz=314,slow=7.1,SNR=3.3								
LVC				S			**Sn**	**20 27 25.2**	**-2.5**
	2.9nm,0.6s,baz=51,slow=11,SNR=1.6								
LVC				LR		LR	LR	20 29 01.7	
	comp=Z,109nm,19.6s,baz=297,slow=34 3.2nm,0.5s								
LVC	**Limon Verde**	**10.69**	**140**	Pn			**Pn**	**20 25 29.2**	**+1.5**
PB15	**IPOC Station P**	**10.80**	**144**				**Pn**	**20 25 29.6**	**+0.4**
ETMB	**Extrema**	**10.98**	**66**				**Pn**	**20 25 30.1**	**-1.4**
BOSC	**San Juan Bosco**	**11.52**	**349**				**Pn**	**20 25 40.1**	**+1.0**
BOSC							**Sn**	**20 27 45.9**	**-2.1**
PORT	**Chimborazo Vol**	**13.22**	**349**	Pn			**Pn**	**20 26 02.5**	**-0.1**
SLOR	**San Lorenzo -**	**13.89**	**351**	Pn			**Pn**	**20 26 11.4**	**-0.4**
SAML	**Samuel**	**14.05**	**68**				**Pn**	**20 26 12.7**	**-0.8**
GO03	**Copiap**	**14.18**	**157**	Pn			**Pn**	**20 26 12.4**	**-2.8**
SIV	**San Ignacio**	**14.83**	**98**	LR			LR	20 32 32.7	
	comp=Z,248nm,18.9s,baz=294,slow=38								
H03N1	**Juan Fernandez**	**18.95**	**187**	T			T	20 46 55.6	
	baz=8.2,slow=74,SNR=273								
H03N2	**Juan Fernandez**	**18.95**	**187**	T			T	20 46 54.9	
	baz=8.2,slow=74,SNR=274								
H03N3	**Juan Fernandez**	**18.96**	**187**	T			T	20 46 54.3	
	baz=8.2,slow=74,SNR=266								
CPUP	**Villa Florida**	**21.31**	**126**	P			**P**	**20 27 42.7**	**+1.4**
	1.6nm,0.5s,baz=295,slow=12,SNR=4.3								
CPUP				LR			LR	20 36 26.9	
	comp=Z,87nm,21.4s,baz=232,slow=38 1.6nm,0.5s								
BOAV	**Boa Vista**	**23.02**	**44**	P			**P**	**20 27 58.9**	**-0.7**
BOAV				IAmb			IAmb	20 28 13.7	
	comp=Z,5.2nm,1.2s								
ITQB	**Itaqui**	**23.63**	**133**	P			**P**	**20 28 04.1**	**-1.6**
ITQB				IAmb			IAmb	20 28 10.0	
	comp=Z,21nm,1.4s								
BAUV	**El Baul**	**24.76**	**20**	P			**P**	**20 28 14.1**	**-2.1**
BAUV				IAmb			IAmb	20 28 32.8	
	comp=Z,49nm,1.6s								
MDP	**Montagnes des**	**30.57**	**52**	LR			LR	20 42 01.4	
	comp=Z,137nm,18.9s,baz=242,slow=37								
TX31	**Lajitas Ar. Si**	**50.97**	**329**	P			**P**	**20 31 57.9**	**+1.5**
TX31				IAmb			IAmb	20 33 32.9	
	comp=Z,47nm,1.9s								
TXAR	**Lajitas Array**	**50.97**	**329**	P			**P**	**20 31 57.8**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=152,slow=10.0,SNR=6.6								
TXAR				LR			LR	20 50 21.8	
	comp=Z,25nm,19.0s,baz=338,slow=32 comp=Z,0.6nm,0.7s								
TXAR	**Lajitas Array**	**50.97**	**329**	P			**P**	**20 31 57.6**	**+1.2**
BAR	**Barrett**	**60.75**	**321**	P			**P**	**20 33 07.7**	**+1.3**
PDAR	**Pinedale Array**	**64.67**	**334**	P			**P**	**20 33 32.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=113,slow=6.9,SNR=1.8 comp=Z,0.1nm,0.3s								
NVAR	**Mina Array Bea**	**65.72**	**325**	P			**P**	**20 33 41.7**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=132,slow=5.4,SNR=1.9 comp=Z,0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**82.03**	**74**	P			**P**	**20 35 16.1**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=273,slow=4.2,SNR=13 comp=Z,1.6nm,0.6s								
H11N3	**WAKE ISLAND Hyl**	**19.60**	**285**	T			T	22 52 40.6	
	baz=96,slow=74,SNR=24								
H11N2	**WAKE ISLAND Hyl**	**19.61**	**285**	T			T	22 52 39.2	
	baz=96,slow=74,SNR=26								
H11N1	**WAKE ISLAND Hyl**	**19.62**	**285**	T			T	22 52 39.5	
	baz=96,slow=74,SNR=16								
H11S2	**WAKE ISLAND Hyl**	**19.66**	**283**	T			T	22 52 39.7	
	baz=97,slow=75,SNR=24								
H11S1	**WAKE ISLAND Hyl**	**19.67**	**283**	T			T	22 52 39.9	
	baz=97,slow=75,SNR=41								
H11S3	**WAKE ISLAND Hyl**	**19.68**	**283**	T			T	22 52 41.1	
	baz=97,slow=75,SNR=36								
WRA	**Warramunga Arr**	**134.32**	**222**	PKP			**PKPdf**	**20 42 13.0**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=124,slow=1.9,SNR=1.5								
ZALV	**Zalesovo Beam**	**138.00**	**17**	PKP			**PKPab**	**20 42 19.5**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=316,slow=4.0,SNR=1.7								
ULN	**Ulaanbaatar**	**146.66**	**356**				**PKPab**	**20 42 38.0**	**+0.5**
HYBB	**Hyderabad (bro**	**155.72**	**80**	*e*PKPdf			**PKPdf**	**20 42 46.6**	**-2.8**

*IDC **08** 20:39:09.2±1.2, 35°.51N×98°.38E, h0km, mb3.5/5, mbtmp3.6/8, ML3.7/3, Error ellipse: s-maj=33.5km s-min=19.5km az=63.0*

ISC 08 20:39:13.4±1.0, **35°.6N**±0°.1×**98°.3E**±0°.2, **h35km, n8, σ1§26/8, mb3.6/3, Qinghai**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**13.67**	**24**	Pn			**Pn**	**20 42 24.4**	**-0.4**
	0.1nm,0.3s,baz=202,slow=14,SNR=3.5								
SONM				Lg			Lg	20 46 24.0	
	0.1nm,0.3s,baz=204,slow=24,SNR=1.9 0.3nm,0.4s								
MKAR	**Makanchi Array**	**16.40**	**318**	Pn			**Pn**	**20 42 59.1**	**-1.7**
	0.2nm,0.3s,baz=127,slow=14,SNR=8.6								
MKAR				Sn			Sn	20 45 53.2	-8.4
	baz=133,slow=26,SNR=2.4 0.5nm,0.5s								
CMAR	**Chiang Mai Arr**	**17.06**	**178**	Pn			**Pn**	**20 43 08.7**	**-0.5**
	0.4nm,0.3s,baz=359,slow=9.0,SNR=2.1 0.7nm,0.3s								
ZALV	**Zalesovo Beam**	**20.64**	**337**	P			**P**	**20 43 50.9**	**+1.2**
	1.2nm,0.5s,baz=153,slow=12,SNR=5.9 1.2nm,0.5s								
KURBB	**Kurchatov Arra**	**20.73**	**323**	P			**P**	**20 43 52.4**	**+1.7**
	2.9nm,0.7s,baz=126,slow=11,SNR=20 2.9nm,0.7s								
KSRS	**Korea Array**	**23.88**	**77**	P			**P**	**20 44 23.6**	**-0.1**
	1.1nm,0.6s,baz=274,slow=9.5,SNR=3.9 1.1nm,0.6s								
WRA	**Warramunga Arr**	**64.95**	**142**	P			**P**	**20 49 50.3**	**+0.6**
	0.5nm,0.8s,baz=335,slow=7.4,SNR=3.0 0.5nm,0.8s								
ASAR	**Alice Springs**	**67.90**	**145**	P			**P**	**20 50 08.4**	**0.0**
	0.2nm,0.7s,baz=336,slow=7.1,SNR=1.6 0.2nm,0.7s								

*IDC **08** 20:41:47.6±1.1, 41°.31N×112°.99W, h0km, mbtmp2.1/1, Error ellipse: s-maj=48.2km s-min=5.3km az=155.0*
*NEIC **08** 20:41:48.1±0.7, 41°.12N±0°.02×112°.87W±0°.03, h0km±2km, ML1.8/24, Error ellipse: s-maj=4.4km s-min=3.0km az=268.0*

ISC 08 20:41:45.9±1.0, **41°.23N**±0°.04×**112°.89W**±0°.04, **h0km, n17, σ0§56/17, Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.33**	**199**				**Pg**	**20 41 52.7**	**+0.5**
BGU						IAML		20 42 00.8	
	comp=E,179nm,0.4s								
HVU	**Hansel Valley**	**0.55**	**9**	Pg			**Pn**	**20 42 00.8**	**-0.4**
HVU						IAML		20 42 12.8	
	comp=E,47nm,0.6s								
HVU						IAML		20 42 18.5	
	comp=N,76nm,0.4s								
CTU	**Camp Tracy**	**1.02**	**122**				**Pb**	**20 42 06.7**	**+0.2**
CTU						IAML		20 42 24.3	
	comp=N,29nm,0.5s								
CTU						IAML		20 42 25.0	
	comp=E,27nm,0.6s								
DUG	**Dugway, Tooele**	**1.04**	**177**				**Pg**	**20 42 05.6**	**-0.3**
DUG						IAML		20 42 22.4	
	comp=E,31nm,0.4s								
HWUT	**Hardware Ranch**	**1.06**	**69**	Pg			**Pn**	**20 42 09.1**	**+0.8**
HWUT						IAML		20 42 33.6	
	comp=E,18nm,0.4s								
TCUT	**Toone Canyon**	**1.12**	**95**				**Pn**	**20 42 10.0**	**+0.8**
JLU	**Jordanelle**	**1.26**	**120**	Pg			**Pb**	**20 42 10.6**	**-0.1**
JLU						IAML		20 42 30.9	
	comp=N,18nm,0.8s								
NLU	**North Lily Min**	**1.42**	**154**				**Pg**	**20 42 12.7**	**-0.4**
NLU						IAML		20 42 39.5	
	comp=N,14nm,0.6s								
ELK	**Elko**	**1.84**	**255**	Pg			**Pg**	**20 42 21.2**	**-0.1**
	comp=N,2.0nm,0.3s,baz=74,slow=11,SNR=24								
ELK				Lg			Lg	20 42 44.6	
	comp=N,2.2nm,0.3s,baz=184,slow=21,SNR=11								
ELK	**Elko**	**1.84**	**255**				**Pg**	**20 42 21.1**	**-0.1**
ELK						IAML		20 42 51.7	
	comp=N,8.0nm,0.4s								
AHID	**Auburn Hatcher**	**2.03**	**40**				**Pg**	**20 42 24.8**	**0.0**
TMUT	**Trail Mountain**	**2.32**	**146**				**Pn**	**20 42 25.5**	**-0.2**
TMUT						IAML		20 43 07.1	
	comp=N,8.3nm,0.7s								
HLID	**Hailey**	**2.59**	**335**				**Pb**	**20 42 34.0**	**+0.7**
HLID						IAML		20 43 35.0	
	comp=N,4.1nm,3.8s								
MSU	**Marysvale**	**2.77**	**168**	Pn			**Pn**	**20 42 32.4**	**+0.5**
PDAR	**Pinedale Array**	**2.92**	**57**	Pn			**Pb**	**20 42 37.9**	**-1.1**
	comp=N,0.5nm,0.3s,baz=233,slow=13,SNR=1.4								
PDAR				Pg			**Pg**	**20 42 42.0**	**+0.1**
	comp=N,0.8nm,0.3s,baz=239,slow=12,SNR=10.0								
PDAR				Lg			Lg	20 43 20.9	
	comp=N,0.5nm,0.3s,baz=243,slow=15,SNR=1.0								
NVAR	**Mina Array Bea**	**5.02**	**238**	Pg			**Pb**	**20 43 14.2**	**-0.6**
	comp=N,0.2nm,0.3s,baz=54,slow=17,SNR=3.0								
NVAR				Lg			Lg	20 44 26.9	
	comp=N,0.3nm,0.3s,baz=40,slow=25,SNR=5.6								
I56US	**NEWPORT INFRAS**	**7.65**	**338**	*i*				21 25 20.0	
	comp=N,0.1nm,1.0s,baz=160,slow=317,SNR=7.7								

*IDC **08** 20:43:17.1±0.6, 29°.41S×61°.00E, h0km, mb4.0/14, mbtmp4.0/15, ML3.7/1, MS3.6/30, Error ellipse: s-maj=23.5km s-min=18.3km az=66.0*
*NEIC **08** 20:43:19.9±2.0, 29°.04S±0°.08×61°.0E±0°.1, h10km±1km, mb4.6/7, Error ellipse: s-maj=20.1km s-min=13.3km az=269.0*

ISC 08 20:43:18.9±0.6, **29°.3S**±0°.1×**61°.0E**±0°.1, **h10km, n67, σ1§13/39, mb4.3/22, MS3.7/29, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.35**	**328**	Pn			**Pn**	**20 45 31.7**	**-2.1**
VOI	**Vohitsoka**	**14.74**	**296**	Pn			**Pn**	**20 46 48.2**	**+0.5**
OPO	**Ambohidratompo**	**16.48**	**307**	Pn			**Pn**	**20 47 11.7**	**+1.2**
	baz=120,slow=16,SNR=2.0								
OPO						Sn	Sn	20 49 58.8	-15
	baz=308,slow=23,SNR=1.2								
OPO				LR			LR	20 52 35.9	
	comp=Z,111nm,19.2s,baz=12,slow=34 0.9nm,0.3s								
H08S1	**Diego Carcia H**	**24.06**	**29**	T			T	21 13 16.0	
	baz=203,slow=76,SNR=26								
H08S2	**Diego Garcia H**	**24.07**	**29**	T			T	21 13 16.6	
	baz=203,slow=76,SNR=17								
H08S3	**Diego Garcia H**	**24.08**	**29**	T			T	21 13 17.5	
	baz=203,slow=76,SNR=36								
BOSA	**Boshof**	**31.21**	**262**	LR			LR	21 00 08.8	
	comp=Z,38nm,21.3s,baz=136,slow=32								
LBTB	**Lobatse**	**31.70**	**269**	LR			LR	21 00 17.3	
	comp=Z,43nm,19.2s,baz=109,slow=32								
LSZ	**Lusaka**	**33.26**	**288**	LR			LR	21 03 10.0	
	comp=Z,62nm,19.1s,baz=120,slow=36								
LSZ	**Lusaka**	**33.26**	**288**	P			**P**	**20 49 56.0**	**-0.8**
LSZ						IAmb	IAmb	20 50 02.6	
	comp=Z,7.1nm,1.1s								
MAW	**Mawson**	**38.40**	**179**	LR			LR	21 03 14.2	
	comp=Z,118nm,19.4s,baz=356,slow=31								
MBAR	**Mbarara**	**40.54**	**309**	LR			LR	21 06 25.0	
	comp=Z,104nm,19.6s,baz=104,slow=34								
TSUM	**Tsumeb**	**40.63**	**274**	LR			LR	21 05 44.2	
	comp=Z,66nm,20.4s,baz=127,slow=33								
PALK	**Pallekele**	**40.97**	**31**	LR			LR	21 03 27.9	
	comp=Z,67nm,21.5s,baz=193,slow=30								
ATD	**Arta Tunnel**	**44.16**	**334**	LR			LR	21 07 10.7	
	comp=Z,146nm,19.0s,baz=131,slow=32								
H01W2	**Cape Leeuwin H**	**44.95**	**111**	T			T	21 39 08.4	
	baz=261,slow=75,SNR=49								
H01W3	**Cape Leeuwin H**	**44.96**	**111**	T			T	21 39 14.1	
	baz=261,slow=75,SNR=58								
H01W1	**Cape Leeuwin H**	**44.97**	**111**	T			T	21 39 15.2	
	baz=261,slow=75,SNR=64								
WSAR	**Wadi Sarin**	**52.23**	**357**	LR			LR	21 10 14.1	
	comp=Z,51nm,18.4s,baz=174,slow=31								
SNAA	**Sanae**	**54.33**	**200**	P			**P**	**20 52 43.7**	**-1.6**
	comp=Z,1.1nm,1.0s,baz=352,slow=12,SNR=1.6								
SNAA				LR			LR	21 11 10.2	
	comp=Z,64nm,20.9s,baz=22,slow=31 comp=Z,1.1nm,1.0s								
FITZ	**Fitzroy Crossi**	**59.60**	**95**				**P**	**20 53 22.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**59.93**	**42**	P			**P**	**20 53 26.4**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=231,slow=6.8,SNR=10								
CMAR				LR			LR	21 16 29.3	
	comp=Z,28nm,18.7s,baz=180,slow=33 comp=Z,1.4nm,0.8s								
QSPA	**South Pole Qui**	**60.91**	**180**	P			**P**	**20 53 30.4**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=187,slow=2.6,SNR=1.5								
QSPA				LR			LR	21 16 00.9	
	comp=Z,71nm,21.6s,baz=280,slow=32 comp=Z,0.5nm,0.4s								
QSPA	**South Pole Qui**	**60.91**	**180**	P			**P**	**20 53 34.1**	**+2.4**
QSPA						IAmb	IAmb	20 53 37.8	
	comp=Z,6.8nm,1.2s								
EIL	**Elat**	**63.64**	**335**	LR			LR	21 17 45.2	
	comp=Z,69nm,18.4s,baz=68,slow=32								
VNDA	**Vanda**	**63.98**	**166**	P			**P**	**20 53 50.1**	**-1.8**
	comp=Z,1.7nm,0.9s,baz=232,slow=6.7,SNR=6.3								
VNDA				LR			LR	21 19 20.9	
	comp=Z,115nm,19.0s,baz=266,slow=34 comp=Z,1.7nm,0.9s								
VNDA	**Vanda**	**63.98**	**166**	P			**P**	**20 53 53.5**	**+1.5**
ASAR	**Alice Springs**	**64.57**	**104**	P			**P**	**20 53 56.7**	**0.0**
	comp=Z,2.2nm,0.9s,baz=246,slow=6.0,SNR=22 comp=Z,2.2nm,0.9s								
ASAR	**Alice Springs**	**64.57**	**104**	P			**P**	**20 53 55.6**	**-1.1**
WRA	**Warramunga Arr**	**66.40**	**100**	P			**P**	**20 54 08.1**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=246,slow=6.0,SNR=14								
WRA				LR			LR	21 20 00.2	
	comp=Z,58nm,18.0s,baz=17,slow=33 comp=Z,1.5nm,0.8s								
WRA	**Warramunga Arr**	**66.40**	**100**	P			**P**	**20 54 09.2**	**+0.7**
WB2	**Warramunga Arr**	**66.41**	**100**	P			**P**	**20 54 06.8**	**-1.8**
WB2						IAmb	IAmb	20 54 21.5	
	comp=Z,7.4nm,1.2s								
MMAI	**Mount Meron Ar**	**66.51**	**337**	LR			LR	21 19 22.7	
	comp=Z,82nm,20.2s,baz=220,slow=32								
WB0	**Warramunga Arr**	**66.52**	**100**	P			**P**	**20 54 09.4**	**+0.1**
WR0	**Warramunga Arr**	**66.56**	**100**	P			**P**	**20 54 09.9**	**+0.3**
GNI	**Garni**	**70.68**	**347**	LR			LR	21 23 53.2	
	comp=Z,68nm,19.9s,baz=170,slow=34								
TOA0	**Torodi Ar. Sit**	**71.05**	**298**	P			**P**	**20 54 35.5**	**-1.9**
TOA0						IAmb	IAmb	20 55 11.8	
	comp=Z,8.2nm,1.4s								
TORD	**Torodi Ar. Bea**	**71.05**	**298**	P			**P**	**20 54 38.6**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=118,slow=4.8,SNR=7.6 comp=Z,1.4nm,0.8s								
TORD	**Torodi Ar. Bea**	**71.05**	**298**				**P**	**20 54 37.7**	**+0.2**
KK31	**Karatay Array**	**72.53**	**7**	P			**P**	**20 54 45.5**	**-0.3**
KK31						IAmb	IAmb	20 54 48.3	
	comp=Z,5.4nm,1.1s								
KKAR	**Karatay Array**	**72.53**	**7**	P			**P**	**20 54 46.6**	**+0.9**
KKAR	**Karatay Array**	**72.53**	**7**	P			**P**	**20 54 46.0**	**+0.2**
KKAR						IAmb	IAmb	20 54 48.3	
	comp=Z,5.4nm,1.1s								
DBIC	**Dimbokro**	**72.60**	**288**	LR			LR	21 25 57.7	
	comp=Z,48nm,19.0s,baz=136,slow=35								
AAK	**Ala-Archa**	**72.60**	**10**	P			**P**	**20 54 47.0**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=196,slow=7.7,SNR=4.2								
AAK				LR			LR	21 23 21.2	
	comp=Z,32nm,19.7s,baz=204,slow=33 comp=Z,1.6nm,0.3s								
IDI	**Anoyia**	**72.66**	**330**	LR			LR	21 26 53.7	
	comp=Z,15nm,18.1s,baz=115,slow=36								
PRZ	**Przheval'sk**	**73.16**	**13**	P			**P**	**20 54 50.0**	**+0.3**
BRTR	**Keskin Array B**	**73.19**	**338**	P			**P**	**20 54 50.6**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=99,slow=16,SNR=3.5 comp=Z,0.9nm,0.9s								
KBZ	**Khabaz**	**74.49**	**346**	LR			LR	21 25 31.5	
	comp=Z,83nm,21.9s,baz=156,slow=34								
MK31	**Makanchi Array**	**78.10**	**15**	P			**P**	**20 55 16.4**	**-1.3**
MK31						IAmb	IAmb	20 55 51.0	
	comp=Z,6.8nm,1.4s								
MKAR	**Makanchi Array**	**78.10**	**15**	P			**P**	**20 55 18.5**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=193,slow=5.0,SNR=8.5 comp=Z,1.7nm,0.9s								
MKAR	**Makanchi Array**	**78.10**	**15**	P			**P**	**20 55 18.3**	**+0.5**
ABKAR	**Akbulak array**	**78.16**	**359**	P			**P**	**20 55 18.1**	**+0.2**
ABKAR						IAmb	IAmb	20 55 20.1	
	comp=Z,4.1nm,1.0s								
AKTO	**Aktyubinsk**	**79.37**	**358**	LR			LR	21 27 23.8	
	comp=Z,51nm,19.2s,baz=157,slow=33								
KURK	**Kurchatov**	**81.13**	**11**				**P**	**20 55 34.6**	**+0.5**
RPZ	**Rata Peaks**	**83.26**	**137**	LR			LR	21 24 52.1	
	comp=Z,110nm,18.1s,baz=241,slow=30								
AKASG	**Malin Array Be**	**84.42**	**340**	P			**P**	**20 55 50.0**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=150,slow=4.1,SNR=2.1 comp=Z,1.2nm,0.9s								
ARU	**Arti**	**85.36**	**359**	LR			LR	21 32 26.6	
	comp=Z,29nm,18.3s,baz=197,slow=34								
ZAA0	**Zalesovo Array**	**85.39**	**14**	P			**P**	**20 55 55.2**	**-0.8**
ZAA0						IAmb	IAmb	20 56 11.7	
	comp=Z,3.7nm,0.9s								
ZALV	**Zalesovo Beam**	**85.39**	**14**	P			**P**	**20 55 55.8**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=230,slow=3.7,SNR=8.3								
ZALV				LR			LR	21 30 21.5	
	comp=Z,55nm,18.1s,baz=192,slow=33 comp=Z,2.1nm,0.8s								
SONM	**Songino Array**	**86.89**	**29**	P			**P**	**20 56 03.9**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=238,slow=4.9,SNR=2.9 comp=Z,0.2nm,0.4s								
MDT	**Midelt**	**87.60**	**310**	LR			LR	21 34 25.9	
	comp=Z,70nm,20.2s,baz=126,slow=35								
VRAC	**Vranov**	**87.64**	**333**	LR			LR	21 34 40.7	
	comp=Z,17nm,19.2s,baz=76,slow=35								
KIRV	**Kirov**	**88.03**	**354**	LR			LR	21 36 16.6	
	comp=Z,28nm,18.2s,baz=141,slow=36								
DAVOX	**Davos/Dischmat**	**88.63**	**328**	LR			LR	21 38 03.1	
	comp=Z,24nm,18.1s,baz=67,slow=37								
BRG	**Berggiesshubel**	**89.93**	**332**	*e*(P)			**P**	**20 56 19.8**	**+1.9**
BRG						Amp		20 56 21.6	
	comp=Z,5.0nm,1.3s								
ESDC	**Sonseca Array**	**91.35**	**316**	P			**P**	**20 56 25.7**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=109,slow=2.3,SNR=5.6 comp=Z,0.9nm,0.9s								
TXAR	**Lajitas Array**	**166.61**	**274**	PKP			**PKPdf**	**21 03 25.1**	**0.0**
	comp=Z,0.3nm,0.7s,baz=189,slow=3.2,SNR=4.1								

IDC 08 20:48:52.5±1.6, **29°.25S×61°.17E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=59.8km s-min=30.6km az=23.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.61**	**307**			Sn	Sn	20 55 39.3	-13
	0.1nm,0.3s,baz=267,slow=6.0,SNR=1.9								
H08S1	**Diego Carcia H**	**23.98**	**29**	T			T	21 18 50.4	
	baz=203,slow=76								
H08S2	**Diego Garcia H**	**23.99**	**29**	T	

*ARE **08** 21:45:01±2.3, 14°52S±0°09×76°3W±0°1, h16km±4km, Error ellipse: s-maj=18.1km s-min=8.4km az=51.0*
*NEIC **08** 21:45:02.0±1.4, 14°57S±0°10×76°3W±0°1, h13km±5km, mb4.6/12, ML4.7(ARE), Error ellipse: s-maj=19.4km s-min=8.6km az=51.0*
*IDC **08** 21:45:08.7±4.7, 14°46S×76°13W, h67km±42km, mb3.6/7, mbtmp4.0/8, ML4.6/1, MS3.5/15, Error ellipse: s-maj=37.4km s-min=25.5km az=46.0*

ISC 08 21:45:02.6±0.7, 14°56S±0°08×76°36W±0°09, h23km, n69, σ1§46/50, mb4.1/11, MS3.6/10, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.60**	**350**	Pn	**Pn**	**21 45 43.6**	**+0.2**
PB12	**IPOC Station P**	**7.05**	**126**	Pn	**Pn**	**21 46 42.5**	**-2.1**
PB18	**Visviri**	**7.27**	**115**	Pn	**Pn**	**21 46 48.4**	**+0.3**
PB16	**IPOC Station P**	**7.57**	**121**	Pn	**Pn**	**21 46 52.9**	**+0.7**
ATAH	**Atahualpa**	**7.64**	**345**	LR	LR	21 50 24.9	
	comp=Z,42nm,19.6s,baz=181,slow=42						
LPAZ	**La Paz**	**8.12**	**103**	P	**Pn**	**21 47 02.9**	**+3.1**
	3.7nm,0.3s,baz=284,slow=8.2,SNR=80						
LPAZ				S	**Sn**	**21 48 36.2**	**+4.9**
	5.8nm,0.8s,baz=311,slow=5.3,SNR=1.1						
LPAZ				LR	LR	21 50 46.2	
	comp=Z,185nm,19.3s,baz=286,slow=43						
	18nm,0.5s						
LPAZ	**La Paz**	**8.12**	**103**	Pn	**Pn**	**21 47 01.8**	**+1.9**
TA01	**Diego Aracena**	**8.39**	**136**	Pn	**Pn**	**21 47 02.1**	**-0.8**
GO01	**Chusmiza**	**8.53**	**128**	Pn	**Pn**	**21 47 03.9**	**-1.4**
PATCX	**Punta Patache**	**8.59**	**137**	Pn	**Pn**	**21 47 04.5**	**-1.3**
PB02	**IPOC Station P**	**9.11**	**138**	Pn	**Pn**	**21 47 12.1**	**-0.9**
PB01	**IPOC Station P**	**9.19**	**136**	Pn	**Pn**	**21 47 12.5**	**-1.5**
PB07	**IPOC Station P**	**9.42**	**140**	Pn	**Pn**	**21 47 15.8**	**-1.4**
PB04	**IPOC Station P**	**9.72**	**144**	Pn	**Pn**	**21 47 20.4**	**-0.9**
PB09	**IPOC Station P**	**9.88**	**138**	Pn	**Pn**	**21 47 22.9**	**-0.5**
LVC	**Limon Verde**	**10.68**	**140**	LR	LR	21 51 18.4	
	comp=Z,83nm,21.8s,baz=306,slow=35						
LVC	**Limon Verde**	**10.68**	**140**		**Pn**	**21 47 35.1**	**+0.6**
MCRA	**Macar, Loja**	**10.72**	**340**	Pn	**Pn**	**21 47 36.1**	**+1.1**
PB15	**IPOC Station P**	**10.72**	**144**	Pn	**Pn**	**21 47 35.6**	**-0.4**
ETMB	**Extrema**	**10.98**	**66**	Pn	**Pn**	**21 47 37.6**	**-0.9**
PB14	**IPOC Station P**	**11.48**	**152**	Pn	**Pn**	**21 47 44.2**	**-1.3**
BOSC	**San Juan Bosco**	**11.53**	**349**	Pn	**Pn**	**21 47 46.4**	**+0.3**
GO02	**Mina Guanaco**	**12.32**	**150**	Pn	**Pn**	**21 47 55.5**	**-1.5**
AC02	**Maricunga**	**13.96**	**152**	Pn	**Pn**	**21 48 19.2**	**-0.4**
SAML	**Samuel**	**14.05**	**68**	Pn	**Pn**	**21 48 16.4**	**-4.1**
SIV	**San Ignacio**	**14.82**	**97**	LR	LR	21 54 37.1	
	comp=Z,570nm,19.1s,baz=292,slow=39						
PTLB	**Pontes e Lacer**	**16.67**	**95**	Pn	**Pn**	**21 48 54.0**	**-0.9**
PTLB				IAmb	IAmb	21 49 08.7	
	comp=Z,3.8nm,0.8s						
H03N1	**Juan Fernandez**	**18.94**	**187**	T	T	22 08 58.7	
	baz=8.3,slow=74,SNR=674						
H03N2	**Juan Fernandez**	**18.94**	**187**	T	T	22 09 00.5	
	baz=8.3,slow=74,SNR=551						
H03N3	**Juan Fernandez**	**18.96**	**187**	T	T	22 08 59.9	
	baz=8.3,slow=74,SNR=671						
MACA	**Manacapuru-AM**	**19.17**	**55**	P	**P**	**21 49 23.5**	**-1.3**
MACA				IAmb	IAmb	21 49 30.4	
	comp=Z,40nm,1.4s						
ROSC	**El Rosal**	**19.38**	**6**	LR	LR	21 57 42.4	
	comp=Z,163nm,20.3s,baz=221,slow=39						
CPUP	**Villa Florida**	**21.30**	**126**	P	**P**	**21 49 47.9**	**0.0**
	comp=Z,2.8nm,0.7s,baz=302,slow=11,SNR=6.4						
CPUP				LR	LR	21 59 28.1	
	comp=Z,91nm,20.6s,baz=263,slow=41						
	comp=Z,2.8nm,0.7s						
CPUP	**Villa Florida**	**21.30**	**126**		**P**	**21 49 47.0**	**-0.8**
BOAV	**Boa Vista**	**23.02**	**44**	P	**P**	**21 50 05.5**	**-0.8**
BOAV				IAmb	IAmb	21 50 40.9	
	comp=Z,7.3nm,1.0s						
ITQB	**Itaqui**	**23.62**	**133**	P	**P**	**21 50 11.7**	**-0.5**
ITQB				IAmb	IAmb	21 50 14.8	
	comp=Z,24nm,1.0s						
BAUV	**El Baul**	**24.77**	**20**	P	**P**	**21 50 23.0**	**+0.2**
BAUV				IAmb	IAmb	21 50 43.7	
	comp=Z,18nm,0.9s						
COVE	**Coope Vega, Sa**	**26.35**	**342**	P	**P**	**21 50 37.1**	**-0.1**
PLCA	**Paso Flores**	**26.57**	**170**	P	**P**	**21 50 40.8**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=355,slow=11,SNR=1.6						
PLCA				LR	LR	21 58 39.9	
	comp=Z,71nm,20.1s,baz=264,slow=30						
	comp=Z,1.1nm,0.8s						
BIRV	**Birongo**	**26.81**	**22**	P	**P**	**21 50 40.8**	**-0.5**
BIRV				IAmb	IAmb	21 51 02.8	
	comp=Z,13nm,1.0s						
BDFB	**Brasilia**	**27.39**	**96**	P	**P**	**21 50 45.6**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=270,slow=9.1,SNR=2.7						
BDFB				LR	LR	22 02 29.1	
	comp=Z,313nm,21.8s,baz=202,slow=38						
	comp=Z,1.9nm,0.5s						
MDP	**Montagnes des**	**30.58**	**52**	LR	LR	22 04 08.5	
	comp=Z,219nm,19.8s,baz=184,slow=38						
CMIG	**Matias Romero**	**36.38**	**329**	LR	LR	22 03 57.6	
	comp=Z,38nm,19.1s,baz=159,slow=31						
RCBR	**Riachuelo**	**40.70**	**82**	LR	LR	22 10 24.0	
	comp=Z,189nm,18.1s,baz=324,slow=38						
TXAR	**Lajitas Array**	**50.98**	**329**	P	**P**	**21 54 04.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=157,slow=9.8,SNR=1.4						
	comp=Z,0.3nm,0.6s						
CLNB	**Carlsbad**	**53.50**	**331**	P	**P**	**21 54 20.7**	**-0.9**
SBM	**South Baldy**	**56.49**	**329**	P	**P**	**21 54 44.8**	**+1.3**
ANMO	**Albuquerque**	**56.92**	**331**	LR	LR	22 18 21.8	
	comp=Z,35nm,19.1s,baz=186,slow=35						
PHWY	**Pilot Hill**	**61.75**	**335**	P	**P**	**21 55 21.4**	**+1.7**
NVAR	**Mina Array Bea**	**65.73**	**325**	P	**P**	**21 55 46.3**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=153,slow=8.1,SNR=2.2						
	comp=Z,0.3nm,0.6s						
MFID	**Camas Ranch**	**68.06**	**330**	P	**P**	**21 56 01.9**	**+1.4**
MFID				IAmb	IAmb	21 56 15.4	
	comp=Z,4.9nm,1.2s						
RAR	**Rarotonga**	**78.84**	**251**	LR	LR	22 25 35.7	
	comp=Z,66nm,20.1s,baz=256,slow=31						
TOA0	**Torodi Ar. Sit**	**82.03**	**74**	P	**P**	**21 57 21.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**82.03**	**74**	P	**P**	**21 57 21.6**	**0.0**
	comp=Z,5.7nm,0.8s,baz=266,slow=5.8,SNR=24						
	comp=Z,5.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.03**	**74**	P	**P**	**21 57 21.1**	**-0.5**
TORD				IAmb	IAmb	21 57 24.4	
	comp=Z,5.5nm,0.8s						
VNDA	**Vanda**	**82.36**	**191**	LR	LR	22 29 08.4	
	comp=Z,26nm,18.2s,baz=140,slow=32						
ESDC	**Sonseca Array**	**86.15**	**48**	P	**P**	**21 57 40.5**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=261,slow=6.4,SNR=4.0						
	comp=Z,0.8nm,1.0s						
TSUM	**Tsumeb**	**88.93**	**109**	LR	LR	22 35 14.8	
	comp=Z,26nm,19.9s,baz=181,slow=34						
H11N3	**WAKE ISLAND Hyl**	**19.61**	**285**	T	T	00 14 41.9	
	baz=96,slow=74,SNR=44						
H11N2	**WAKE ISLAND Hyl**	**19.62**	**285**	T	T	00 14 46.1	
	baz=96,slow=74,SNR=38						
H11N1	**WAKE ISLAND Hyl**	**19.62**	**285**	T	T	00 14 45.9	
	baz=96,slow=74,SNR=18						
H11S2	**WAKE ISLAND Hyl**	**19.67**	**283**	T	T	00 14 45.9	
	baz=98,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hyl**	**19.67**	**283**	T	T	00 14 46.3	
	baz=98,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hyl**	**19.68**	**283**	T	T	00 14 43.4	
	baz=98,slow=75,SNR=36						
WRA	**Warramunga Arr**	**134.31**	**222**	PKP	**PKiKP**	**22 04 21.5**	**+0.5**
	comp=Z,0.8nm,1.1s,baz=127,slow=1.9,SNR=2.1						
ZALV	**Zalesovo Beam**	**138.01**	**17**	PKP	**PKPdf**	**22 04 24.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=336,slow=3.2,SNR=2.1						
KSH	**Kashi**	**145.26**	**39**	PKPbc	**PKPdf**	**22 04 40.6**	**+1.6**
SONM	**Songino Array**	**146.74**	**357**	PKPbc	**PKPbc**	**22 04 42.8**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=12,slow=2.2,SNR=4.8						
PZH	**PanZhiHua**	**167.98**	**8**	PKP	**PKPdf**	**22 05 08.0**	**-0.1**

*NEIC **08** 21:47:46.4±2.9, 23°39S±0°06×175°1W±0°1, h10km±2km, mb4.6/15, Error ellipse: s-maj=17.6km s-min=5.2km az=117.0*
*IDC **08** 21:47:49.6±0.9, 23°01S×176°04W, h0km, mb4.2/7, mbtmp4.2/8, ML4.7/2, MS3.4/5, Error ellipse: s-maj=29.3km s-min=22.7km az=111.0*

ISC 08 21:47:51.4±0.8, 23°27S±0°07×176°0W±0°1, h10km, n53, σ1§87/41, mb4.4/12, MS3.6/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**6.20**	**196**	Pn	**Pn**	**21 49 25.1**	**+2.1**
	49nm,0.3s,baz=112,slow=21,SNR=1.8						
RAO				Sn	**Sn**	**21 50 38.3**	**+4.3**
	40nm,0.3s,baz=84,slow=22,SNR=1.4						
RAO	**Raoul Island**	**6.20**	**196**	Pn	**Pn**	**21 49 21.2**	**-1.8**
NIUE	**Niue**	**7.04**	**55**	Pn	Pn	21 49 21.9	-13
MSVF	**Nonsavu**	**7.83**	**314**	Pn	**Pn**	**21 49 46.0**	**+0.5**
	1.0nm,0.3s,baz=275,slow=23,SNR=1.6						
MSVF				LR	LR	21 52 29.7	
	comp=Z,295nm,21.3s,baz=109,slow=37						
MSVF	**Nonsavu**	**7.83**	**314**	Pn	Pn	21 49 51.8	+6.3
AFI	**Afiamalu**	**10.13**	**24**	LR	LR	21 53 45.9	
	comp=Z,76nm,20.7s,baz=66,slow=36						
AFI	**Afiamalu**	**10.13**	**24**	Pn	Pn	21 50 10.2	-6.9
RAR	**Rarotonga**	**15.17**	**85**	Pn	Pn	21 51 18.4	-7.5
	5.8nm,0.3s,baz=274,slow=7.8,SNR=13						
RAR	**Rarotonga**	**15.17**	**85**	P	Pn	21 51 16.9	-9.0
URZ	**Urewera**	**16.06**	**200**	Pn	**Pn**	**21 51 38.2**	**+0.9**
	1.1nm,0.3s,baz=182,slow=17,SNR=3.1						
URZ				Sn	**Sn**	**21 54 28.2**	**-7.3**
	1.3nm,0.3s,baz=123,slow=14,SNR=2.5						
	7.6nm,0.4s						
URZ	**Urewera**	**16.06**	**200**	P	**Pn**	**21 51 38.3**	**+0.9**
URZ				IAmb	IAmb	21 51 39.7	
	comp=Z,36nm,1.4s						
DZM	**Mont Dzumac**	**16.24**	**271**	Sn	**Sn**	**21 54 40.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=356,slow=22,SNR=1.6						
BKZ	**Black Stump Fm**	**17.09**	**200**	P	**Pn**	**21 51 49.9**	**-0.5**
BKZ				IAmb	IAmb	21 51 50.0	
	comp=Z,39nm,1.4s						
BFZ	**Birch Farm**	**18.55**	**199**	P	**P**	**21 52 05.9**	**-2.4**
BFZ				IAmb	IAmb	21 52 16.2	
	comp=Z,98nm,1.4s						
TUWZ	**Tuamarina**	**19.97**	**203**	P	**P**	**21 52 20.6**	**-3.3**
KHZ	**Kahutara**	**20.99**	**202**	P	**P**	**21 52 32.6**	**-2.2**
KHZ				IAmb	IAmb	21 52 52.5	
	comp=Z,36nm,1.1s						
RPZ	**Rata Peaks**	**23.02**	**205**	P	**P**	**21 52 57.9**	**+1.4**
	comp=Z,6.8nm,0.5s,baz=42,slow=2.5,SNR=5.7						
	comp=Z,6.8nm,0.5s						
CTAO	**Charters Tower**	**35.15**	**268**	P	**P**	**21 54 46.9**	**+1.4**
STKA	**Stephens Creek**	**38.35**	**248**	P	**P**	**21 55 13.2**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=111,slow=11,SNR=7.3						
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**38.35**	**248**	P	**P**	**21 55 14.2**	**+1.4**
BBOO	**Buckleboo**	**43.05**	**246**	P	**P**	**21 55 51.2**	**-0.4**
BBOO				IAmb	IAmb	21 55 53.5	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**45.75**	**259**	P	**P**	**21 56 14.6**	**+1.3**
ASAR	**Alice Springs**	**45.75**	**259**	P	**P**	**21 56 13.5**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=99,slow=6.9,SNR=15						
	comp=Z,1.5nm,0.7s						
WR0	**Warramunga Arr**	**45.92**	**264**	P	**P**	**21 56 13.8**	**-0.8**
WR0				IAmb	IAmb	21 56 29.8	
	comp=Z,5.7nm,1.4s						
WB2	**Warramunga Arr**	**46.10**	**264**	P	**P**	**21 56 15.2**	**-0.9**
WB0	**Warramunga Arr**	**46.10**	**264**	P	**P**	**21 56 15.6**	**-0.5**
WB0				IAmb	IAmb	21 56 17.7	
	comp=Z,6.1nm,0.8s						
WRAB	**Tennant Creek**	**46.10**	**264**	P	**P**	**21 56 14.5**	**-1.6**
WRAB				IAmb	IAmb	21 56 17.2	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**46.11**	**264**	P	**P**	**21 56 15.6**	**-0.6**
	comp=Z,3.3nm,0.5s,baz=90,slow=5.9,SNR=161						
	comp=Z,3.3nm,0.5s						
WRA	**Warramunga Arr**	**46.11**	**264**	P	**P**	**21 56 15.2**	**-1.0**
KNRA	**Kununurra**	**52.36**	**268**	P	**P**	**21 57 03.6**	**-0.4**
KNRA				IAmb	IAmb	21 57 06.5	
	comp=Z,7.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**54.53**	**264**	P	**P**	**21 57 20.1**	**+0.1**
VNDA	**Vanda**	**55.34**	**186**	P	**P**	**21 57 27.6**	**+2.7**
	comp=Z,1.9nm,0.9s,baz=0.7,slow=7.8,SNR=10						
	comp=Z,1.9nm,0.9s						
MORW	**Morawa**	**60.52**	**249**	P	**P**	**21 58 01.3**	**-0.8**
LPIG	**La Paz**	**79.26**	**58**	LR	LR	22 28 36.4	
	comp=Z,23nm,18.4s,baz=106,slow=31						
MAW	**Mawson**	**79.59**	**199**	P	**P**	**21 59 59.4**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=104,slow=3.8,SNR=3.9						
	comp=Z,4.2nm,0.9s						
NVAR	**Mina Array Bea**	**81.79**	**42**	P	**P**	**22 00 09.9**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=215,slow=7.7,SNR=2.0						
	comp=Z,0.2nm,0.5s						
H03S2	**Juan Fernandez**	**82.92**	**124**	T	T	23 31 59.8	
	baz=246						
H03S1	**Juan Fernandez**	**82.93**	**124**	T	T	23 32 00.5	
	baz=246						
H03S3	**Juan Fernandez**	**82.94**	**124**	T	T	23 32 02.1	
	baz=246						
H03N2	**Juan Fernandez**	**83.07**	**123**	T	T	23 31 49.3	
	baz=251,slow=73,SNR=59						
H03N3	**Juan Fernandez**	**83.07**	**123**	T	T	23 31 57.5	
	baz=251,slow=73,SNR=62						
H03N1	**Juan Fernandez**	**83.08**	**123**	T	T	23 31 49.0	
	baz=251,slow=73,SNR=73						
TROLL	**Troll, Antarti**	**84.97**	**180**	P	**P**	**22 00 27.4**	**+0.7**
SNAA	**Sanae**	**85.20**	**178**	P	**P**	**22 00 28.2**	**+0.4**
VNA3	**Neumayer Olymp**	**85.26**	**176**	P	**P**	**22 00 28.3**	**+0.3**
VNA2	**Neumayer--Watz**	**85.72**	**176**	P	**P**	**22 00 30.8**	**+0.5**
	baz=172,slow=4.0						
VNA1	**Neumayer--Stat**	**85.94**	**176**	P	**P**	**22 00 32.0**	**+0.7**
NEW	**Newport**	**88.55**	**35**	LR	LR	22 32 11.4	
	comp=Z,26nm,21.2s,baz=162,slow=30						
INK	**Inuvik**	**96.46**	**15**	LR	LR	22 39 46.4	
	comp=Z,23nm,20.2s,baz=180,slow=32						
AKASG	**Malin Array Be**	**146.32**	**331**	PKPbc	**PKPdf**	**22 07 30.5**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=42,slow=4.4,SNR=8.6						
BRTR	**Keskin Array B**	**150.04**	**310**	PKPbc	**PKPbc**	**22 07 41.5**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=149,slow=2.9,SNR=4.5						
MLR	**Muntele Rosu**	**151.54**	**327**	PKPbc	**PKPbc**	**22 07 45.2**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=274,slow=22,SNR=5.3						
TORD	**Torodi Ar. Bea**	**169.70**	**167**	PKP	**PKPdf**	**22 07 58.4**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=194,slow=3.0,SNR=2.6						
TORD				PKPab	**PKPab**	**22 09 14.2**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=189,slow=4.3,SNR=9.9						

*IDC **08** 21:51:12.7±1.8, 73°40N×8°35E, h0km, mb3.2/2, mbtmp3.5/5, ML2.7/2, MS3.1/7, Error ellipse: s-maj=27.5km s-min=13.1km az=77.0*
*IEPN **08** 21:51:12.0, 73°19N×8°18E, h10km*
*NAO **08** 21:51:13.6±4.8, 73°52N×8°50E, ML3.3*
*BER **08** 21:51:15.9±2.4, 73°50N×8°40E, h10km, ML3.3(NAO), Confirmed Earthquake*
*HEL **08** 21:51:18.5±0.5, 73°46N×9°56E, h10km, ML2.6, Confirmed Earthquake*

ISC 08 21:51:12.0±1.0, 73°49N±0°05×8°54E±0°09, h10km, n50, σ2§48/66, MS3.0/6, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.07**	**66**	Pn	**Pn**	**21 52 02.9**	**+2.5**
BJO1	**Bjornoya**	**3.07**	**66**	*eP*	**Pn**	**21 52 03.2**	**+2.9**
BJO1	**Bjornoya**	**3.07**	**66**	P	**Pn**	**21 52 02.1**	**+1.7**
BJO1				*eS*	**Sn**	**21 52 37.7**	**+0.6**
HSPB	**Hornsund (broa**	**3.95**	**24**	Pn	**Pn**	**21 52 13.8**	**+1.2**
HSPB				Sn	**Sn**	**21 53 00.8**	**+1.9**
HSPB	**Hornsund (broa**	**3.95**	**24**	*eP*	**Pn**	**21 52 13.7**	**+1.2**
BRBA	**Barentsburg A**	**4.80**	**14**	Pn	**Pn**	**21 52 25.0**	**+0.9**
SPA0	**Spitsbergen Ar**	**5.08**	**18**	Pn	**Pn**	**21 52 30.0**	**+1.9**
	baz=196,slow=14						
SPA0	**Spitsbergen Ar**	**5.08**	**18**	*eP*	**Pn**	**21 52 30.2**	**+2.1**
SPA0	**Spitsbergen Ar**	**5.08**	**18**	*eP*	**Pn**	**21 52 29.8**	**+1.7**
SPA0				*eS*	**Sn**	**21 53 28.2**	**+1.5**
SPITS	**Spitsbergen Ar**	**5.08**	**18**	Pn	**Pn**	**21 52 30.0**	**+1.9**
	6.1nm,0.3s,baz=201,slow=15,SNR=152						
SPITS				Sn	**Sn**	**21 53 26.6**	**-0.1**
	baz=205,slow=24						
TRO	**Tromso**	**5.08**	**135**	*eP*	**Pn**	**21 52 30.9**	**+2.8**
TRO				*eS*	**Sn**	**21 53 25.5**	**-1.2**
TRO				IAML		21 53 29.8	
	comp=Z,6.3nm,0.4s						
HOPEN	**Hopen**	**5.23**	**47**	Pn	**Pn**	**21 52 32.3**	**+2.3**
HOPEN	**Hopen**	**5.23**	**47**	*eP*	**Pn**	**21 52 32.1**	**+2.1**
HOPEN	**Hopen**	**5.23**	**47**	*eP*	**Pn**	**21 52 31.8**	**+1.8**
HOPEN				*eS*	**Sn**	**21 53 29.5**	**-0.7**
JETT	**Jettan, Norway**	**5.46**	**131**	*eP*	**Pn**	**21 52 36.4**	**+3.2**
HAMF	**Hammerfest**	**5.47**	**114**	Pn	**Pn**	**21 52 35.9**	**+2.5**
HAMF				Sn	**Sn**	**21 53 33.7**	**-2.6**
HAMF	**Hammerfest**	**5.47**	**114**	*eP*	**Pn**	**21 52 37.0**	**+3.5**
HAMF				*eS*	**Sn**	**21 53 33.9**	**-2.5**
HAMF				IAML		21 53 38.1	
	comp=Z,4.7nm,0.5s						
KBS	**Kingsbay**	**5.52**	**7**	Pn	**Pn**	**21 52 35.0**	**+1.0**
KBS	**Kingsbay**	**5.52**	**7**	*eP*	**Pn**	**21 52 35.1**	**+1.0**
KBS	**Kingsbay**	**5.52**	**7**	P	**Pn**	**21 52 34.0**	**-0.1**
KBS				*eS*	**Sn**	**21 53 35.4**	**-2.1**
LOF	**Lofoten**	**5.63**	**161**	*eP*	**Pn**	**21 52 38.0**	**+2.4**
LOF				*eS*	**Sn**	**21 53 35.6**	**-4.6**
LOF				IAML		21 53 36.0	
	comp=Z,7.4nm,0.6s						
KIF	**Kilpisjarvi**	**5.98**	**133**	Pn	**Pn**	**21 52 43.1**	**+2.7**
KIF				Sn	**Sn**	**21 53 47.2**	**-1.6**
KIF	**Kilpisjarvi**	**5.98**	**133**	*eP*	**Pn**	**21 52 43.1**	**+2.7**
KIF				*eS*	**Sn**	**21 53 47.6**	**-1.3**
KIF	**Kilpisjarvi**	**5.98**	**133**	*eP*	**Pn**	**21 52 43.0**	**+2.7**
KIF				*eS*	**Sn**	**21 53 46.9**	**-1.9**
KIF				MSN		21 53 50.4	
	comp=Z,2.6nm,0.2s						
STEI	**Steigen**	**6.01**	**155**	*eP*	**Pn**	**21 52 41.9**	**+1.1**
STEI				*eS*	**Sn**	**21 53 46.0**	**-3.5**
STEI				IAML		21 53 52.0	
	comp=Z,2.3nm,0.5s						
ARA0	**ARCESS Array S**	**6.68**	**118**	Pn	**Pn**	**21 52 52.9**	**+2.9**
	baz=316,slow=11						
ARA0				Sn	**Sn**	**21 54 03.2**	**-2.8**
	baz=311,slow=18						
ARA0	**ARCESS Array S**	**6.68**	**118**	Pn	**Pn**	**21 52 52.9**	**+2.9**
	baz=316,slow=11						
ARA0				Sn	**Sn**	**21 54 03.2**	**-2.8**
	baz=311,slow=18						
ARA0				IAML		21 54 15.0	
	comp=Z,2.5nm,0.6s						
ARA0	**ARCESS Array S**	**6.68**	**118**	*eP*	**Pn**	**21 52 52.7**	**+2.8**
ARA0				*eS*	**Sn**	**21 54 02.9**	**-3.1**
ARCES	**ARCESS Array B**	**6.68**	**118**	Pn	**Pn**	**21 52 52.9**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=321,slow=11,SNR=33						
ARCES				Sn	**Sn**	**21 54 04.6**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=314,slow=18,SNR=6.2						
	comp=Z,1.4nm,0.4s						
KEV	**Kevo**	**6.91**	**114**	*eP*	**Pn**	**21 52 55.9**	**+2.7**
KEV	**Kevo**	**6.91**	**114**	*eP*	**Pn**	**21 52 55.5**	**+2.3**
KEV				*eS*	**Sn**	**21 54 08.0**	**-3.8**
KEV				MSN		21 54 13.9	
	comp=Z,0.9nm,0.2s						
LANU	**Lannavaara**	**7.02**	**134**	*eP*	**Pn**	**21 52 58.1**	**+3.4**
LANU				*eS*	**Sn**	**21 54 11.8**	**-2.7**
HEF	**Hetta**	**7.09**	**129**	*eP*	**Pn**	**21 52 57.4**	**+1.8**
HEF				*eS*	**Sn**	**21 54 13.5**	**-2.5**
KONS	**Konsvik**	**7.20**	**165**	*eP*	**Pn**	**21 52 59.4**	**+2.3**
SCO	**Scoresbysund**	**9.83**	**267**	*i* P	Pn	21 53 29.0	-4.1
APA0	**Apatity Array**	**9.99**	**114**	Pn	**Pn**	**21 53 37.3**	**+2.0**
	baz=326,slow=8.6						
ZFI	**Zemlya Franca-**	**11.05**	**32**	*eP*	**Pn**	**21 53 49.6**	**-0.1**
ZFI				S	**Sn**	**21 55 47.6**	**-5.5**
ZFI2	**Zemlya Franca-**	**11.05**	**32**	*eP*	**Pn**	**21 53 49.6**	**-0.1**
ZFI2				S	**Sn**	**21 55 47.2**	**-5.9**
NOA	**NORSAR Array B**	**12.55**	**174**	LR	LR	21 58 30.2	
	comp=Z,77nm,18.1s,baz=355,slow=35						
FINES	**FINESS Array B**	**13.74**	**142**	Pn	**Pn**	**21 54 26.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=343,slow=13,SNR=2.1						
	comp=Z,1.7nm,0.8s						
LSH	**Leshukonskoye**	**15.47**	**105**	*eP*	**Pn**	**21 54 51.3**	**+1.5**
KLMR	**Klimovskoe**	**17.14**	**121**	*eP*	**Pn**	**21 55 13.9**	**+2.7**
KLMR	**Klimovskoe**	**17.14**	**121**	*ePn*	**P**	**21 55 14.3**	**+1.4**
KLMR				AMP		21 55 19.5	
	comp=Z,14nm,1.3s						
SFJD	**Kangerlussuaq**	**20.16**	**282**	LR	LR	22 02 20.7	
	comp=Z,61nm,18.5s,baz=40,slow=33						
KIRV	**Kirov**	**21.64**	**112**	LR	LR	22 03 34.5	
	comp=Z,50nm,21.2s,baz=272,slow=34						
VRAC	**Vranov**	**24.52**	**167**	LR	LR	22 06 04.8	
	comp=Z,52nm,18.2s,baz=348,slow=36						
AKASG	**Malin Array Be**	**24.55**	**147**	P	**P**	**21 56 32.9**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=342,slow=9.1,SNR=4.3						
AKASG				LR	LR	22 05

mb4.4/28, Error ellipse: s-maj=18.6km s-min=13.1km az=174.0

ISC 08 22:21:17.5±0.6, 31°5′N±0″.1×100°08′E±0″.08, h9km, n63, σ1§05/59, mb4.3/27, MS3.1/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.91**	**259**	Pn	**Pn**	**22 23 15.6**	**+2.5**
ENH	**Enshi**	**8.18**	**96**	Pn	**Pn**	**22 23 17.8**	**+1.3**
RAMN	**Ramite**	**12.62**	**252**	*eP*	**Pn**	**22 24 17.9**	**+0.4**
JIRN	**Jiri**	**12.69**	**256**	*eP*	**Pn**	**22 24 17.5**	**-1.0**
	7.2nm,0.3s						
GUN	**Gumba**	**12.86**	**257**	*eP*	**Pn**	**22 24 19.7**	**-1.1**
	14nm,0.3s						
PKI	**Pulchoki**	**13.37**	**257**	*eP*	**Pn**	**22 24 26.2**	**-1.5**
	15nm,0.6s						
PKIN	**Phulchoki**	**13.37**	**257**	*eP*	**Pn**	**22 24 26.3**	**-1.5**
	11nm,0.4s						
DMN	**Daman**	**13.60**	**257**	*eP*	**Pn**	**22 24 29.5**	**-1.4**
	14nm,0.6s						
GKN	**Gorkha**	**13.87**	**259**	*eP*	**Pn**	**22 24 33.3**	**-1.1**
	17nm,0.6s						
SONM	**Songino Array**	**16.97**	**15**	Pn	**Pn**	**22 25 15.3**	**0.0**
	0.3nm,0.3s,baz=201,slow=12,SNR=28						
SONM				LR	LR	22 32 28.7	
	comp=Z,59nm,20.2s,baz=184,slow=40						
	4.8nm,0.7s						
SONM	**Songino Array**	**16.97**	**15**		**Pn**	**22 25 15.6**	**+0.3**
ULN	**Ulaanbaatar**	**17.15**	**16**		**Pn**	**22 25 17.7**	**+0.2**
MK31	**Makanchi Array**	**20.47**	**323**	P	Pn	22 25 56.4	-1.3
MKAR	**Makanchi Array**	**20.47**	**323**	P	**P**	**22 25 56.3**	**+0.8**
	0.8nm,0.7s,baz=119,slow=11,SNR=6.9						
MKAR				LR	LR	22 34 49.6	
	comp=Z,76nm,19.6s,baz=114,slow=40						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**20.47**	**323**	P	**P**	**22 25 55.4**	**-0.1**
MAKZ	**Makanchi**	**20.64**	**323**	P	Pn	22 25 58.8	-0.8
BOOM	**Boomskoye usch**	**22.08**	**306**	P	**P**	**22 26 15.1**	**+2.0**
NIL	**Nilore**	**22.68**	**282**	P	**P**	**22 26 18.5**	**-0.8**
NIL				IAmb	IAmb	22 26 22.4	
	comp=Z,9.7nm,1.1s						
KSAR	**Wonju Array Be**	**23.62**	**68**	P	**P**	**22 26 28.9**	**0.0**
KSRS	**Korea Array**	**23.65**	**68**	P	**P**	**22 26 28.7**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=258,slow=9.5,SNR=11						
	comp=Z,3.3nm,0.8s						
HYBB	**Hyderabad (bro**	**24.05**	**239**	*eP*	**P**	**22 26 34.5**	**+1.3**
KURBB	**Kurchatov Arra**	**24.89**	**326**	P	**P**	**22 26 40.7**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=132,slow=8.8,SNR=7.5						
	comp=Z,1.2nm,0.4s						
KURK	**Kurchatov**	**24.91**	**326**	P	**P**	**22 26 39.5**	**-1.2**
KURK				IAmb	IAmb	22 26 45.6	
	comp=Z,4.9nm,1.1s						
ZAA0	**Zalesovo Array**	**24.93**	**338**	P	**P**	**22 26 40.5**	**-0.4**
ZAA0				IAmb	IAmb	22 26 44.2	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**24.93**	**338**	P	**P**	**22 26 41.1**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=145,slow=9.3,SNR=16						
ZALV				LR	LR	22 37 33.2	
	comp=Z,49nm,18.8s,baz=135,slow=39						
	comp=Z,6.5nm,0.7s						
ZALV	**Zalesovo Beam**	**24.93**	**338**	P	**P**	**22 26 40.2**	**-0.7**
KBL	**Kabul**	**26.14**	**285**	P	**P**	**22 26 52.3**	**0.0**
KBL				IAmb	IAmb	22 26 59.8	
	comp=Z,8.6nm,1.1s						
CHGR	**Chuyangaron**	**26.19**	**294**	P	**P**	**22 26 53.9**	**+1.4**
CHGR				IAmb	IAmb	22 27 06.5	
	comp=Z,6.4nm,0.7s						
BVAR	**Borovoye Array**	**30.36**	**324**	LR	LR	22 40 43.8	
	comp=Z,57nm,19.5s,baz=5.5,slow=38						
ABKAR	**Akbulak array**	**34.82**	**312**	P	**P**	**22 28 08.6**	**0.0**
ASF	**Jabal al Asfar**	**52.95**	**289**	LR	LR	22 57 20.2	
	comp=Z,621nm,22.0s,baz=288,slow=41						
FIA1	**FINESS Array S**	**55.28**	**326**	P	**P**	**22 30 49.3**	**-1.6**
FINES	**FINESS Array B**	**55.28**	**326**	P	**P**	**22 30 50.7**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=84,slow=7.3,SNR=19						
	comp=Z,5.4nm,0.9s						
FINES	**FINESS Array B**	**55.28**	**326**	P	**P**	**22 30 50.0**	**-0.9**
ARCES	**ARCESS Array B**	**55.45**	**336**	P	**P**	**22 30 51.8**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=84,slow=7.0,SNR=12						
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**55.45**	**336**	P	**P**	**22 30 51.9**	**-0.2**
WRA	**Warramunga Arr**	**60.83**	**143**	P	**P**	**22 31 29.2**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=333,slow=7.3,SNR=9.3						
	comp=Z,1.1nm,0.9s						
WRA	**Warramunga Arr**	**60.83**	**143**	P	**P**	**22 31 30.2**	**-0.1**
WB2	**Warramunga Arr**	**60.84**	**143**	P	**P**	**22 31 30.4**	**0.0**
WB2				IAmb	IAmb	22 31 34.2	
	comp=Z,5.2nm,1.0s						
WR0	**Warramunga Arr**	**60.95**	**142**	P	**P**	**22 31 28.8**	**-2.3**
WR0				IAmb	IAmb	22 32 06.0	
	comp=Z,6.5nm,1.4s						
NB2	**NORSAR Subarra**	**62.42**	**327**	P	**P**	**22 31 39.3**	**-1.3**
	comp=Z,2.7nm,0.7s,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**62.42**	**327**	P	**P**	**22 31 39.8**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=74,slow=6.9,SNR=5.6						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**63.73**	**145**	P	**P**	**22 31 48.6**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=326,slow=7.4,SNR=5.1						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**64.76**	**313**	P	**P**	**22 31 56.0**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=68,slow=3.6,SNR=4.9						
	comp=Z,0.5nm,0.7s						
KMBO	**Kilima Mbogo**	**67.68**	**254**	P	**P**	**22 32 15.8**	**0.0**
	comp=Z,0.7nm,0.3s,baz=69,slow=17,SNR=1.9						
	comp=Z,0.7nm,0.3s						
IMAR	**Indian Mountai**	**67.81**	**25**	P	**P**	**22 32 15.1**	**-0.4**
H21K	**Melozitna Rive**	**68.31**	**25**	P	**P**	**22 32 19.0**	**+0.3**
H21K				IAmb	IAmb	22 32 19.9	
	comp=Z,5.8nm,1.4s						
J20K	**Nowinta River**	**68.51**	**27**	P	**P**	**22 32 19.8**	**-0.1**
J20K				IAmb	IAmb	22 32 27.0	
	comp=Z,6.7nm,1.4s						
I21K	**Tanana**	**68.84**	**26**	P	**P**	**22 32 22.4**	**+0.4**
I21K				IAmb	IAmb	22 32 28.2	
	comp=Z,5.6nm,1.4s						
K20K	**Telida**	**68.93**	**28**	P	**P**	**22 32 22.8**	**+0.2**
MLY	**Manley**	**69.38**	**25**	P	**P**	**22 32 24.7**	**-0.6**
MLY				IAmb	IAmb	22 32 28.8	
	comp=Z,1.6nm,0.7s						
BPAW	**Bear Paw Mtn.**	**69.76**	**26**	P	**P**	**22 32 27.2**	**-0.5**
BPAW				IAmb	IAmb	22 32 59.9	
	comp=Z,4.6nm,1.5s						
PPLA	**Purkeypile**	**69.90**	**28**	P	**P**	**22 32 28.7**	**-0.1**
BMAR	**Burnt Mountain**	**70.18**	**22**	P	**P**	**22 32 30.6**	**+0.4**
MDM	**Murphy Dome**	**70.32**	**25**	P	**P**	**22 32 31.2**	**+0.1**
ILAR	**Eielson Array**	**70.91**	**25**	P	**P**	**22 32 32.2**	**-2.4**
	comp=Z,0.8nm,0.8s,baz=298,slow=4.6,SNR=5.6						
	comp=Z,0.8nm,0.8s						
RIDG	**Independent Ri**	**72.23**	**25**	P	**P**	**22 32 40.7**	**-2.0**
RIDG				IAmb	IAmb	22 32 41.3	
	comp=Z,6.7nm,1.4s						
SCRK	**Sand Creek**	**72.40**	**25**	P	**P**	**22 32 41.9**	**-2.0**
SCRK				IAmb	IAmb	22 32 43.9	
	comp=Z,2.3nm,0.8s						
BCAR	**Beaver Creek A**	**73.74**	**25**	P	**P**	**22 32 51.8**	**+0.1**
ESDC	**Sonseca Array**	**80.15**	**311**	P	**P**	**22 33 28.8**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=43,slow=5.4,SNR=5.8						
	comp=Z,1.1nm,0.9s						
ESDC	**Sonseca Array**	**80.15**	**311**	P	**P**	**22 33 29.6**	**+1.4**
LSZ	**Lusaka**	**83.11**	**248**	P	**P**	**22 33 44.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**90.20**	**285**	P	**P**	**22 34 19.0**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=36,slow=3.4,SNR=5.2						
	comp=Z,0.6nm,0.8s						

*NEIC **08** 22:27:17.5±1.4, 24°.12S±0°.02×67°.3W±0°.2, h219km±16km, mb3.9/2, Md3.6(SJA), ML4.0(GUC), Error ellipse: s-maj=23.1km s-min=2.2km az=94.0*

*GUC **08** 22:27:18.6±0.4, 24°.14S×67°.15W, h186km±4km, ML3.9*

ISC 08 22:27:16.6±1.0, 24°.12S±0°.06×67°.12W±0°.05, h202km±10km, n36, σ0§83/44, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.51**	**320**	Pn	**Pn**	**22 27 51.4**	**+0.4**
SLA	**San Lorenzo**	**1.59**	**113**	⇓*iP*	**Pn**	**22 27 52.0**	**+0.5**
SLA				*i* S	**S**	22 28 17.3	-0.9
LVC	**Limon Verde**	**2.23**	**312**	Pn	**Pn**	**22 27 58.9**	**+0.8**
LVC	**Limon Verde**	**2.23**	**312**	*eP*	**Pn**	**22 27 59.0**	**+1.0**
LVC				*i* S	**S**	**22 28 29.4**	**-0.3**
LVC				IAML		22 28 34.1	
	comp=Z,328nm,0.4s						
PB15	**IPOC Station P**	**2.34**	**292**	Pn	**Pn**	**22 28 00.0**	**+0.9**
PB15	**IPOC Station P**	**2.34**	**292**	⇑*eP*	**Pn**	**22 28 00.2**	**+1.1**
PB15				*i* S	**S**	**22 28 31.2**	**-0.3**
GO02	**Mina Guanaco**	**2.48**	**245**	Pn	**Pn**	**22 28 01.6**	**+0.9**
GO02	**Mina Guanaco**	**2.48**	**245**	⇑*iP*	**Pn**	**22 28 01.6**	**+0.9**
GO02				*i* S	**S**	**22 28 34.7**	**+0.2**
GO02				IAML		22 28 38.4	
	comp=E,439nm,0.1s						
PB06	**IPOC Station P**	**2.65**	**301**	Pn	**Pn**	**22 28 03.2**	**+0.7**
PB06	**IPOC Station P**	**2.65**	**301**	⇑*iP*	**Pn**	**22 28 03.6**	**+1.0**
PB06				*i* S	**S**	**22 28 37.1**	**-0.6**
PB06				IAML		22 28 38.9	
	comp=E,335nm,0.3s						
PB09	**IPOC Station P**	**3.03**	**319**	Pn	**Pn**	**22 28 07.2**	**+0.3**
PB14	**IPOC Station P**	**3.04**	**260**	Pn	**Pn**	**22 28 07.1**	**0.0**
PB14	**IPOC Station P**	**3.04**	**260**	*eP*	**Pn**	**22 28 08.4**	**+1.3**
PB14				*eS*	**S**	**22 28 44.8**	**-1.1**
PB10	**IPOC Station P**	**3.20**	**280**	Pn	**Pn**	**22 28 09.5**	**+0.8**
PB10	**IPOC Station P**	**3.20**	**280**	*eP*	**Pn**	**22 28 09.8**	**+1.0**
PB10				*i* S	**S**	**22 28 48.6**	**-0.3**
PB10				IAML		22 28 52.1	
	comp=E,92nm,0.3s						
AC02	**Maricunga**	**3.26**	**213**	Pn	**Pn**	**22 28 10.3**	**+0.4**
PB04	**IPOC Station P**	**3.30**	**302**		**Pn**	**22 28 10.4**	**+0.3**
PB04	**IPOC Station P**	**3.30**	**302**	*eP*	**Pn**	**22 28 11.4**	**+1.2**
PB04				*eS*	**S**	**22 28 50.5**	**-0.9**
PB07	**IPOC Station P**	**3.49**	**312**	Pn	**Pn**	**22 28 12.3**	**0.0**
AC01	**Pan de Azucar**	**3.75**	**237**	Pn	**Pn**	**22 28 14.7**	**-0.7**
PB01	**IPOC Station P**	**3.76**	**324**	Pn	**Pn**	**22 28 15.5**	**-0.2**
PB02	**IPOC Station P**	**3.78**	**317**	Pn	**Pn**	**22 28 15.6**	**-0.3**
PATCX	**Punta Patache**	**4.32**	**319**	Pn	**Pn**	**22 28 21.8**	**-0.8**
GO03	**Copiap**	**4.46**	**218**	Pn	**Pn**	**22 28 23.1**	**-1.1**
TA01	**Diego Aracena**	**4.53**	**321**	Pn	**Pn**	**22 28 26.1**	**+1.0**
GO01	**Chusmiza**	**4.83**	**336**	Pn	**Pn**	**22 28 30.1**	**+0.7**
AC04	**Llanos de Chal**	**5.41**	**220**	Pn	**Pn**	**22 28 35.0**	**-1.2**
LCO	**Las Campanas**	**5.84**	**213**	Pn	**Pn**	**22 28 40.9**	**-1.1**
PB16	**IPOC Station P**	**6.17**	**338**	Pn	**Pn**	**22 28 46.8**	**+0.2**
PB12	**IPOC Station P**	**6.24**	**331**	Pn	**Pn**	**22 28 45.9**	**-1.2**
CO01	**Juntas del Tor**	**6.41**	**204**	Pn	**Pn**	**22 28 49.7**	**+0.3**
GO04	**Tololo Observa**	**6.87**	**208**	Pn	**Pn**	**22 28 55.6**	**+0.3**
LPAZ	**La Paz**	**7.84**	**353**	Pn	**Pn**	**22 29 09.5**	**+1.1**
TRQA	**Tornquist**	**14.57**	**164**	P	**P**	**22 30 34.5**	**-0.1**
SAML	**Samuel**	**15.54**	**15**	P	**P**	**22 30 44.6**	**-0.9**
SAML				IAmb	IAmb	22 30 54.0	
	comp=Z,2.8nm,1.5s						
BDFB	**Brasília**	**19.83**	**68**	P	**P**	**22 31 33.3**	**+1.0**
BDFB				IAmb	IAmb	22 31 42.6	
	comp=Z,14nm,1.4s						

*BJI **08** 22:30:33.7±0.0, 26°.08N×99°.58E, h18km, mb4.3/9, mB4.6/2, ML4.1/11, Ms3.9/5, Ms7 3.8/2*

*IDC **08** 22:30:34.5±0.8, 26°.21N×99°.93E, h0km, mb4.0/13, mbtmp4.0/14, ML4.5/1, MS3.3/10, Error ellipse: s-maj=25.6km s-min=15.4km az=62.0*

*NEIC **08** 22:30:40.3±2.6, 26°.05N±0°.07×99°.92E±0°.04, h43km±6km, mb4.2/13, Error ellipse: s-maj=11.2km s-min=1.6km az=207.0*

ISC 08 22:30:36.4±0.5, 26°.18N±0°.05×99°.88E±0°.04, h10km, n60, σ1§73/62, mb4.1/20, MS3.2/10, 2C-3D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**1.71**	**79**	⇑Pg	**Pg**	**22 31 10.5**	**+1.4**
PZH				Sg	**Sg**	**22 31 36.6**	**+5.3**
PZH				smax	smax		
	comp=N,2μm,0.7s						
PZH				smax	smax		
	comp=E,2μm,0.6s						
KMI	**Kunming**	**2.79**	**112**	⇓Pn	**Pb**	**22 31 25.0**	**-1.5**
KMI				Pg	**Pg**	**22 31 31.0**	**+1.1**
KMI				Sg	**Sg**	**22 32 09.8**	**+3.7**
KMI				smax	smax		
	comp=N,1μm,0.9s						
KMI				smax	smax		
	comp=E,1μm,0.8s						
KMI				LR	LR		
	comp=E,3μm,6.1s						
MND	**Mandalay**	**5.38**	**220**	Pn	**Pn**	**22 31 57.8**	**+1.1**
ITAN	**ITANAGAR**	**5.59**	**281**	*ex*	**Pb**	**22 32 15.2**	**+1.1**
CD2	**Chengdu**	**5.82**	**35**	Pn	**Pn**	**22 32 03.7**	**+0.9**
CD2				Pg	**Pg**	**22 32 25.1**	**-2.7**
CD2				Sn	**Sn**	**22 33 08.9**	**-0.7**
CD2				Sg	**Sg**	**22 33 43.9**	**+0.7**
CD2				smax	smax		
	comp=N,180nm,1.6s						
CD2				smax	smax		
	comp=E,300nm,1.7s						
CRAI	**Chiangrai**	**5.94**	**175**	Pn	**Pn**	**22 32 01.9**	**-2.6**
GYA	**Guiyang**	**6.10**	**86**	⇑Pn	Pn	22 32 13.5	+6.8
GYA				Pg	**Pg**	**22 32 33.4**	**+0.2**
GYA				Sn	**Sg**	**22 33 45.9**	**-6.3**
GYA				Sg	Sg	22 34 03.4	+11
GYA				smax	smax		
	comp=N,28nm,1.0s						
GYA				smax	smax		
	comp=E,35nm,0.8s						
GYA				LR	LR		
	comp=N,710nm,5.0s						
GYA				LR	LR		
	comp=E,560nm,8.0s						
GYA				LR	LR		
	comp=Z,510nm,7.7s						
AZL	**Aizawl**	**6.96**	**251**	*ex*	**Pn**	**22 32 16.2**	**-2.3**
CHTO	**Chiang Mai**	**7.38**	**187**	Pn	**Pn**	**22 32 22.1**	**-2.1**
CM31	**Chiang Mai Arr**	**7.74**	**187**	Pn	**Pn**	**22 32 27.4**	**-1.7**
CMAR	**Chiang Mai Arr**	**7.74**	**187**	Pn	**Pn**	**22 32 28.2**	**-0.9**
	comp=Z,1.7nm,0.3s,baz=1.8,slow=12,SNR=20						
CMAR				Pg	Pg	22 32 56.6	-7.9
	comp=Z,0.7nm,0.3s,baz=2.9,slow=17,SNR=5.8						
CMAR				Lg	Lg	22 34 36.5	
	comp=Z,4.3nm,0.3s,baz=2.0,slow=30,SNR=13						
	comp=Z,3.4nm,0.4s						
LSA	**Lhasa**	**8.47**	**296**		**Pn**	**22 32 39.1**	**-0.5**
ENH	**Enshi**	**9.40**	**62**		**Pn**	**22 32 52.5**	**+0.5**
LZH	**Lanzhou**	**10.44**	**18**	*eP*	**Pn**	**22 33 11.1**	**+4.8**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
GOMU	**GeErMu**	**10.88**	**338**	P	**Pn**	**22 33 14.0**	**+1.5**
GOMU				pP		22 33 17.8	
GOMU				sP		22 33 19.0	
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOMU				LR	LR		
	comp=Z,190nm,7.7s						
GOMU				LR	LR		
	comp=Z,140nm,7.1s						
XAN	**Xi'an**	**11.07**	**43**	P	**Pn**	**22 33 15.3**	**+0.5**
XAN				S	**Sn**	**22 35 18.6**	**-0.1**
CNSH	**ChangSha**	**11.79**	**77**	⇓P	**Pn**	**22 33 24.4**	**-0.3**
CNSH				S	**Sn**	**22 35 37.8**	**+1.4**
TIA	**Tai'an**	**17.80**	**52**	⇓P	**P**	**22 34 46.3**	**+1.3**
TIA				pmax	pmax		
	comp=Z,18nm,0.7s						
BJT	**Baijiatuau**	**19.37**	**41**	Pn	**Pn**	**22 35 04.6**	**+1.4**
WMQ	**Urumqi**	**20.19**	**334**	*eP*	**P**	**22 35 09.9**	**-1.3**
WMQ				sP	sP	22 35 18.2	+1.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
HYBB	**Hyderabad (bro**	**21.61**	**250**	*eP*	**P**	**22 35 26.2**	**-0.5**
SONM	**Songino Array**	**22.21**	**12**	P	**P**	**22 35 33.5**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=199,slow=11,SNR=5.0						
SONM				LR	LR	22 44 45.0	
	comp=Z,45nm,20.5s,baz=198,slow=38						
	comp=Z,0.3nm,0.3s						
NIL	**Nilore**	**24.20**	**294**	P	**P**	**22 35 52.8**	**-0.4**
NIL				IAmb	IAmb	22 36 00.6	
	comp=Z,10.0nm,0.9s						
MK31	**Makanchi Array**	**24.85**	**330**	P	**P**	**22 35 57.9**	**-1.1**
MK31				IAmb	IAmb	22 36 13.0	
	comp=Z,3.5nm,0.8s						
MKAR	**Makanchi Array**	**24.85**	**330**	P	**P**	**22 35 58.4**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=144,slow=9.4,SNR=20						
MKAR				PcP	**PcP**	**22 39 35.9**	**+1.0**
	comp=Z,0.7nm,1.0s,baz=132,slow=2.1,SNR=1.9						
	comp=Z,3.5nm,0.8s						
MKAR	**Makanchi Array**	**24.85**	**330**	P	**P**	**22 35 57.5**	**-1.5**
MAKZ	**Makanchi**	**25.00**	**330**	P	**P**	**22 35 59.3**	**-1.1**
JOW	**Kunigami**	**25.40**	**82**	LR	LR	22 47 31.5	
	comp=Z,127nm,18.3s,baz=70,slow=40						
BOOM	**Boomskoye usch**	**25.47**	**316**	P	**P**	**22 36 04.3**	**-0.5**
BOOM				IAmb	IAmb	22 36 36.8	
	comp=Z,6.1nm,1.2s						
PALK	**Pallekele**	**26.21**	**228**	LR	LR	22 46 44.1	
	comp=Z,51nm,20.9s,baz=148,slow=37						
KSRS	**Korea Array**	**26.25**	**58**	P	**P**	**22 36 10.1**	**-1.6**
KSRS				LR	LR	22 47 29.3	
	comp=Z,0.6nm,0.5s,baz=243,slow=11,SNR=2.2						
	comp=Z,34nm,19.6s,baz=250,slow=39						
	comp=Z,0.6nm,0.5s						
AAK	**Ala-Archa**	**26.46**	**315**	P	**P**	**22 36 13.4**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=225,slow=8.1,SNR=1.7						
	comp=Z,1.7nm,0.4s						
KBL	**Kabul**	**27.80**	**295**	P	**P**	**22 36 25.8**	**-0.1**
KBL				IAmb	IAmb	22 36 44.8	
	comp=Z,3.1nm,0.6s						
KURBB	**Kurchatov Arra**	**29.38**	**332**	P	**P**	**22 36 40.3**	**+0.8**
	comp=Z,3.3nm,0.2s,baz=135,slow=10,SNR=1.2						
KURBB				LR	LR	22 49 23.7	
	comp=Z,61nm,19.9s,baz=357,slow=38						
	comp=Z,3.3nm,0.2s						
ZAA0	**Zalesovo Array**	**29.90**	**342**	P	**P**	**22 36 44.9**	**+0.7**
ZALV	**Zalesovo Beam**	**29.90**	**342**	P	**P**	**22 36 42.5**	**-1.6**
	comp=Z,1.3nm,0.6s,baz=151,slow=9.7,SNR=5.4						
ZALV				LR	LR	22 49 10.7	
	comp=Z,60nm,18.1s,baz=69,slow=37						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**29.90**	**342**	P	**P**	**22 36 44.9**	**+0.7**
USRK	**Ussuriysk Ar.**	**31.54**	**47**	P	**P**	**22 36 57.8**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=127,slow=31,SNR=4.5						
	comp=Z,0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**34.13**	**63**	LR	LR	22 52 30.9	
	comp=Z,79nm,19.8s,baz=332,slow=39						
GEYT	**Alibeck**	**37.00**	**299**	P	**P**	**22 37 46.0**	**-0.2**
JCJ	**Chichijima**	**37.70**	**79**	LR	LR	22 53 15.7	
	comp=Z,32nm,18.5s,baz=112,slow=36						
ABKAR	**Akbulak array**	**38.47**	**317**	P	**P**	**22 37 58.8**	**+0.4**
ARU	**Arti**	**42.28**	**327**	LR	LR	22 55 47.7	
	comp=Z,82nm,18.1s,baz=114,slow=36						
NRIK	**Noril'sk**	**43.79**	**354**	LR	LR	22 57 29.2	
	comp=Z,64nm,21.6s,baz=68,slow=37						
WB0	**Warramunga Arr**	**56.65**	**140**	P	**P**	**22 40 19.3**	**-0.7**
WB0				IAmb	IAmb	22 40 27.6	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**56.76**	**140**	P	**P**	**22 40 19.7**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=328,slow=7.7,SNR=14						
	comp=Z,1.5nm,0.6s						
WB2	**Warramunga Arr**	**56.77**	**140**	P	**P**	**22 40 19.3**	**-1.5**
WR0	**Warramunga Arr**	**56.89**	**140**	P	**P**	**22 40 19.8**	**-1.9**
WR0				IAmb	IAmb	22 41 01.9	
	comp=Z,7.6nm,1.3s						
AKASG	**Malin Array Be**	**58.13**	**315**	P	**P**	**22 40 29.3**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=78,slow=6.1,SNR=5.5						
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**59.49**	**143**	P	**P**	**22 40 40.7**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=338,slow=9.5,SNR=4.1						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**59.65**	**328**	P	**P**	**22 40 40.8**	**+0.4**
	comp=Z,4.0nm,1.1s,baz=74,slow=10,SNR=1.8						
	comp=Z,4.0nm,1.1s						
MLR	**Muntele Rosu**	**60.86**	**309**	P	**P**	**22 40 49.7**	**+0.4**
NOA	**NORSAR Array B**	**66.82**	**328**	P	**P**	**22 41 27.8**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=70,slow=8.1,SNR=2.3						
	comp=Z,1.1nm,0.8s						
GERES	**GERESS Array B**	**68.34**	**315**	P	**P**	**22 41 38.0**	**0.0**
	comp=Z,0.6nm,0.6s,baz=90,slow=5.3,SNR=6.2						
	comp=Z,0.6nm,0.6s						
GERES	**GERESS Array B**	**68.34**	**315**	P	**P**	**22 41 38.6**	**+0.5**
IMAR	**Indian Mountai**	**72.74**	**24**	P	**P**	**22 42 04.1**	**-0.3**
BPAW	**Bear Paw Mtn.**	**74.64**	**25**	P	**P**	**22 42 15.4**	**-0.3**
BPAW				IAmb	IAmb	22 42 20.4	
	comp=Z,1.7nm,0.8s						
BMAR	**Burnt Mountain**	**75.21**	**21**	P	**P**	**22 42 19.1**	**+0.2**
PGRON	**Lagoa das Cont**	**98.24**	**319**	*eP*	Pdif	22 44 19.1	+4.8
CMLA	**Cha da Macela**	**98.33**	**319**	*eP*	Pdif	22 44 18.3	+3.7

IDC 08 22:33:13.0±1.9, 1.70S×132°.79E, h0km, mb3.6/2, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=40.0km s-min=14.4km az=46.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.73**	**298**	Pg	Pn	22 33 44.7	+0.2
	7.4nm,0.3s,baz=268,slow=23,SNR=27						
SIJI				Lg	Lg	22 34 07.6	
	22nm,0.3s,baz=269,slow=22,SNR=7.9						
FITZ	**Fitzroy Crossi**	**17.74**	**203**	P	Pn	22 37 20.5	-1.2
	0.2nm,0.3s,baz=34,slow=11,SNR=1.9						
FITZ				S	Sn	22 40 22.7	-17
	2.6nm,0.9s,baz=240,slow=14,SNR=2.6						
	0.7nm,0.4s						
WRA	**

10nm,0.6s,baz=75,slow=19,SNR=10
URZ **Urewera** 14.68 189 P **P** 23 05 29.0 -1.4
URZ **Urewera** 14.68 189 P **P** 23 05 27.2 -3.2
URZ S **S** 23 07 59.7 -3.9
MWZ **Matawai** 14.70 188 P **P** 23 05 30.3 -0.3
MWZ S **S** 23 08 00.8 -3.3
TKGZ **Te Karaka** 14.77 187 P **P** 23 05 30.5 -0.7
CNGZ **Carnagh Statio** 14.78 186 P **P** 23 05 33.2 +1.9
HRRZ **Handcock Road** 14.95 192 P **P** 23 05 33.8 +0.7
MUGZ **Murupara** 14.95 190 S **S** 23 08 09.6 +1.0
TLZ **Tolley Road** 15.04 194 P **P** 23 05 35.6 +1.4
SNGZ **Shannon Statio** 15.16 188 P **P** 23 05 33.0 -2.3
MTHZ **Maungataniwha** 15.30 190 P **P** 23 05 34.1 -2.7
RAHZ **Arahi** 15.33 189 P **P** 23 05 34.2 -2.9
HIZ **Hauiti** 15.37 196 P **P** 23 05 41.8 +4.4
HIZ **Hauiti** 15.37 196 P **P** 23 05 41.9 +4.4
RATZ **Rangitukua** 15.51 193 P **P** 23 05 39.1 +0.2
NMHZ **Naumai** 15.55 189 P **P** 23 05 37.3 -2.0
NMHZ S **S** 23 08 18.3 -0.9
BKZ **Black Stump Fm** 15.67 190 P **P** 23 05 39.4 -1.2
BKZ **Black Stump Fm** 15.67 190 P **P** 23 05 37.8 -2.7
BKZ S **S** 23 08 16.7 -4.4
NTVZ **North Tongarir** 15.75 193 P **P** 23 05 41.0 -0.5
TMVZ **Te Maari** 15.76 193 P **P** 23 05 40.9 -0.7
TMVZ S **S** 23 08 15.5 -7.3
TWVZ **Taurewa** 15.77 193 P **P** 23 05 41.7 +0.1
ETVZ **East Tongariro** 15.78 193 P **P** 23 05 41.1 -0.6
WTVZ **West Tongariro** 15.78 193 P **P** 23 05 40.9 -0.9
OTVZ **Oturere** 15.81 193 P **P** 23 05 40.0 -2.1
SNVZ **South Ngauruho** 15.84 193 P **P** 23 05 41.4 -1.0
MCHZ **McNeill Hill** 15.91 190 P **P** 23 05 40.3 -2.5
MCHZ S **S** 23 08 23.9 -1.1
TUVZ **Tukino** 15.92 193 P **P** 23 05 42.3 -0.8
FWVZ **Far West T-bar** 15.93 193 P **P** 23 05 42.4 -0.9
KWHZ **Kaweka Forest** 15.93 190 P **P** 23 05 41.6 -1.5
KWHZ S **S** 23 08 22.6 -2.9
WHVZ **Whangaehu Hut** 15.95 193 P **P** 23 05 41.9 -1.6
VRZ **Vera Road** 15.98 195 P **P** 23 05 45.1 +1.6
PKVZ **Pokaka** 16.00 193 P **P** 23 05 44.0 +0.2
MOVZ **Moawhango** 16.03 192 P **P** 23 05 42.8 -1.3
BHHZ **Black Hill Sta** 16.05 191 P **P** 23 05 41.4 -2.9
MTVZ **Mangateitei** 16.07 193 P P 23 05 36.3 -8.2
KAHZ **Kahuranaki** 16.22 189 P **P** 23 05 45.1 -0.8
PNHZ **Pukenui** 16.44 191 P **P** 23 05 46.4 -1.5
TSZ **Takapari Road** 16.63 191 P **P** 23 05 48.6 -1.0
DVHZ **Dannevirke** 16.83 190 P **P** 23 05 50.0 -1.4
BFZ **Birch Farm** 17.19 190 P **P** 23 05 52.5 -2.1
BFZ **Birch Farm** 17.19 190 P **P** 23 05 52.5 -2.1
SNZO **South Karori** 18.08 193 P **P** 23 06 01.8 -0.9
SNZO S **S** 23 09 04.6 +4.1
QRZ **Quartz Range** 18.16 199 P **P** 23 06 04.2 +0.6
PLWZ **Palliser** 18.22 192 P **P** 23 06 04.2 +0.1
NNZ **Nelson** 18.30 196 P **P** 23 06 04.4 -0.3
TUWZ **Tuamarina** 18.36 195 P **P** 23 06 04.3 -1.0
CMWZ **Cape Campbell** 18.60 194 P **P** 23 06 10.0 +2.4
BSWZ **Blackbirch Sta** 18.65 195 P **P** 23 06 07.9 -0.1
RAR **Rarotonga** 18.81 86 P **P** 23 06 08.9 -0.8
THZ **Tophouse** 18.93 197 P **P** 23 06 10.7 +0.1
KHZ **Kahutara** 19.39 195 P **P** 23 06 14.1 -0.6
LTZ **Lake Taylor** 20.05 197 P **P** 23 06 21.1 +0.3
OXZ **Oxford** 20.62 197 P **P** 23 06 26.1 +0.2
MQZ **McQueen's Vall** 20.82 195 P **P** 23 06 27.9 +0.3
RPZ **Rata Peaks** 21.25 198 P **P** 23 06 32.0 +0.5
5.1nm,0.4s,baz=9.6,slow=2.0,SNR=11
5.1nm,0.4s
RPZ **Rata Peaks** 21.25 198 P **P** 23 06 32.5 +1.0
FOZ **Fox Glacier** 21.46 201 P **P** 23 06 35.3 +1.9
ODZ **Otahua Downs** 22.59 198 P **P** 23 06 45.5 +2.0
ODZ IAmb IAmb 23 07 07.1
comp=Z,27nm,1.5s
MLZ **Mavora Lakes** 23.65 201 P **P** 23 06 54.1 +1.1
MLZ IAmb IAmb 23 06 59.6
comp=Z,34nm,1.4s
DCZ **Deep Cove** 24.07 203 P **P** 23 06 56.8 +0.2
DCZ IAmb IAmb 23 07 36.9
comp=Z,16nm,1.1s
WHZ **Wether Hill Ro** 24.17 201 P **P** 23 06 58.7 +1.1
WHZ IAmb IAmb 23 06 59.0
comp=Z,26nm,1.4s
EIDS **Eidsvold** 26.38 260 P **P** 23 07 17.9 +0.5
EIDS IAmb IAmb 23 07 18.7
comp=Z,10nm,1.2s
CTAO **Charters Tower** 31.53 270 P **P** 23 08 02.8 +0.7
PMG **Port Moresby** 34.49 289 P **P** 23 08 26.9 -0.3
comp=Z,29nm,0.8s,baz=115,slow=6.6,SNR=4.8
comp=Z,29nm,0.8s
AS31 **Alice Springs** 42.11 260 P **P** 23 09 29.1 +0.2
ASAR **Alice Springs** 42.11 260 P **P** 23 09 28.7 -0.2
comp=Z,2.7nm,0.6s,baz=92,slow=8.0,SNR=25
ASAR PP **pP** 23 11 06.7 +1.4
comp=Z,1.5nm,0.9s,baz=92,slow=8.1,SNR=4.5
ASAR ScP **ScP** 23 14 13.1 +4.0
comp=Z,4.0nm,0.9s,baz=109,slow=4.3,SNR=15
ASAR S **S** 23 15 09.3 0.0
comp=Z,0.1nm,0.3s,baz=98,slow=13,SNR=1.3
comp=Z,2.7nm,0.6s
ASAR **Alice Springs** 42.11 260 P **P** 23 09 28.9 -0.1
WR0 **Warramunga Arr** 42.28 266 P **P** 23 09 29.9 -0.4
WR0 IAmb IAmb 23 09 45.7
comp=Z,12nm,1.4s
WB2 **Warramunga Arr** 42.46 266 P **P** 23 09 31.5 -0.2
WB2 IAmb IAmb 23 09 31.6
comp=Z,6.4nm,0.5s
WB0 **Warramunga Arr** 42.46 266 P **P** 23 09 31.3 -0.4
WB0 IAmb IAmb 23 09 32.0
comp=Z,7.4nm,0.7s
WRAB **Tennant Creek** 42.46 266 P **P** 23 09 31.4 -0.3
WRAB IAmb IAmb 23 09 32.2
comp=Z,11nm,1.2s
WRA **Warramunga Arr** 42.47 266 P **P** 23 09 31.3 -0.5
comp=Z,4.5nm,0.5s,baz=90,slow=6.0,SNR=198
WRA ScP **ScP** 23 14 14.6 +4.1
comp=Z,1.8nm,1.1s,baz=94,slow=4.8,SNR=5.7
WRA S **S** 23 15 10.3 -4.1
comp=Z,0.5nm,0.9s,baz=103,slow=12,SNR=3.3
comp=Z,4.5nm,0.5s
WRA **Warramunga Arr** 42.47 266 P **P** 23 09 31.3 -0.5
FORT **Forrest** 46.41 249 P **P** 23 10 02.2 +0.2
KNRA **Kununurra** 48.74 270 P **P** 23 10 19.9 +0.4
FITZ **Fitzroy Crossi** 50.89 265 P **P** 23 10 36.1 +0.8
VNDA **Vanda** 54.53 185 P **P** 23 11 02.0 +1.7
comp=Z,0.8nm,0.8s,baz=349,slow=6.0,SNR=7.2
comp=Z,0.8nm,0.8s
GIRL **Giralia** 60.00 257 P **P** 23 11 38.4 -0.2
CASY **Casey** 60.27 206 P **P** 23 11 40.1 +0.5
TOLI2 **Tolitoli** 62.59 284 P **P** 23 11 55.5 -0.1
QSPA **South Pole Qui** 66.33 180 P **P** 23 12 20.6 +2.0
QSPA IAmb IAmb 23 12 21.4
comp=Z,17nm,1.1s
MJAR **Matsushiro Arr** 71.80 326 P **P** 23 12 51.6 0.0
comp=Z,0.5nm,0.3s,baz=92,slow=12,SNR=2.3
comp=Z,0.5nm,0.3s
JSD **Sado** 72.92 327 P **P** 23 12 56.2 -1.8
ADK **Adak** 75.36 2 P **P** 23 13 11.7 +0.3
ADK IAmb IAmb 23 13 54.7
comp=Z,20nm,1.1s
BELA **Belgrano 2** 76.58 173 P **P** 23 13 18.9 +0.9
BELA IAmb IAmb 23 13 19.7
comp=Z,14nm,1.2s
MAW **Mawson** 77.91 200 P **P** 23 13 26.9 +1.6
comp=Z,2.5nm,0.6s,baz=151,slow=3.3,SNR=6.1
comp=Z,2.5nm,0.6s
MAW **Mawson** 77.91 200 P **P** 23 13 26.9 +1.6
KSRS **Korea Array** 78.16 320 P **P** 23 13 27.8 +0.7
comp=Z,0.4nm,0.3s,baz=149,slow=0.5,SNR=1.6
comp=Z,0.4nm,0.3s
KSAR **Wonju Array Be** 78.18 320 P **P** 23 13 28.5 +1.3
KS19 **Wonju Array Si** 78.23 320 P **P** 23 13 28.2 +0.8
KS19 IAmb IAmb 23 13 38.0
comp=Z,28nm,1.5s
PETK **Petropavlovsk-** 78.97 346 P **P** 23 13 30.7 -0.3
CNBA **Chernabura Isl** 80.18 12 P **P** 23 13 40.6 +3.3
CNBA IAmb IAmb 23 14 07.6
comp=Z,37nm,1.1s
SLBS **Sierra La Lagu** 82.68 60 P **P** 23 13 52.9 +1.9
SLBS IAmb IAmb 23 13 53.6
comp=Z,25nm,1.0s
ISA **Isabella, Lake** 82.88 46 P **P** 23 13 52.6 +0.9
ISA IAmb IAmb 23 13 54.2
comp=Z,8.0nm,0.8s
YUH **Yuha Desert** 82.90 50 P **P** 23 13 52.6 +0.8
YUH IAmb IAmb 23 13 54.6
comp=Z,14nm,1.2s
CMB **Columbia Colle** 83.05 43 P **P** 23 13 53.1 +0.6
CMB **PcP** 23 13 53.4 -2.3
PFO **Pinyon Flats O** 83.06 49 P **P** 23 13 54.0 +1.2
comp=Z,5.7nm,1.2s,baz=258,slow=1.3,SNR=2.4
comp=Z,5.7nm,1.2s
PFO **Pinyon Flats O** 83.06 49 P **P** 23 13 53.8 +1.0
PMD **Palm Desert** 83.14 49 P **P** 23 13 53.9 +0.9
PMD IAmb IAmb 23 13 57.9
comp=Z,5.9nm,1.1s
ORV **Oroville** 83.29 42 P **P** 23 13 54.4 +0.8
GSC **Goldstone, Bar** 83.78 47 P **P** 23 13 56.8 +0.6
GSC IAmb IAmb 23 13 58.6
comp=Z,7.4nm,1.1s
GLA **Glamis** 83.89 50 P **P** 23 13 58.1 +1.3
GLA IAmb IAmb 23 14 00.0
comp=Z,9.9nm,0.9s
YBH **Yreka Blue Hor** 83.94 39 P **P** 23 13 58.5 +1.6
comp=Z,2.9nm,0.9s,baz=180,slow=4.0,SNR=6.8
comp=Z,2.9nm,0.9s
YBH **Yreka Blue Hor** 83.94 39 P **P** 23 13 58.1 +1.3
BEKR **Beckworth** 84.18 42 P **P** 23 13 59.1 +0.8
PNTR **Pine Nut** 84.18 43 P **P** 23 13 57.8 -0.5
PNTR IAmb IAmb 23 14 01.3
comp=Z,9.2nm,0.7s
LCH **Last Change Ra** 84.33 45 P **P** 23 13 59.8 +0.8
HUMO **Hull Mountain** 84.35 38 P **P** 23 13 59.9 +1.1
HUMO IAmb IAmb 23 14 02.0
comp=Z,9.5nm,1.2s
LHV **Little Huntoon** 84.37 44 P **P** 23 13 58.8 -0.2
LHV IAmb IAmb 23 14 05.8
comp=Z,10nm,1.4s
GWY **Greenwater Val** 84.38 47 P **P** 23 13 59.5 +0.2
TROLL **Troll, Antarti** 84.48 181 P **P** 23 13 59.9 +0.7
SNAA **Sanae** 84.82 179 P **P** 23 14 00.8 +0.1
SNAA **Sanae** 84.82 179 P **P** 23 14 01.2 +0.5
VNA3 **Neumayer Olymp** 85.02 177 P **P** 23 14 02.0 +0.4
KVN **Kaiserville** 85.10 44 P **P** 23 14 03.7 +1.0
VNA2 **Neumayer--Watz** 85.44 178 P **P** 23 14 04.3 +0.6
baz=177,slow=5.0
MOD **Modoc Plateau** 85.45 40 P **P** 23 14 04.9 +0.6
MOD IAmb IAmb 23 14 06.8
comp=Z,15nm,1.5s
VNA1 **Neumayer--Stat** 85.68 177 P **P** 23 14 05.4 +0.6
PINE **Pine Mountain** 86.24 38 P **P** 23 14 09.9 +1.8
PINE IAmb IAmb 23 14 11.9
comp=Z,11nm,1.3s
TUC **Tucson** 86.38 52 P **P** 23 14 11.3 +2.4
TUC IAmb IAmb 23 14 12.3
comp=Z,8.2nm,0.9s
WVOR **Wild Horse Val** 86.76 41 P **P** 23 14 11.7 +1.2
WVOR IAmb IAmb 23 14 13.1
comp=Z,9.4nm,1.3s
X16A **Lo Mia Camp, P** 87.00 50 P **P** 23 14 12.8 +0.9
I07A **Izee** 87.24 39 P **P** 23 14 14.0 +1.4
I07A IAmb IAmb 23 14 15.4
comp=Z,7.3nm,1.0s
U15A **North Rim** 87.46 48 P **P** 23 14 15.7 +1.5
U15A IAmb IAmb 23 14 17.1
comp=Z,7.2nm,0.9s
G08A **Pilot Rock** 88.27 38 P **P** 23 14 19.0 +1.5
G08A IAmb IAmb 23 14 20.0
comp=Z,7.6nm,1.1s
HAWA **Hanford** 88.62 37 pP pP 23 16 22.3 +3.6
TMUT **Trail Mountain** 89.70 46 P **P** 23 14 26.3 +1.8
TMUT IAmb IAmb 23 14 27.4
comp=Z,10.0nm,0.8s
HLID **Hailey** 89.95 41 P **P** 23 14 26.9 +1.5
HLID IAmb IAmb 23 14 28.0
comp=Z,4.4nm,1.1s
HVU **Hansel Valley** 89.99 44 P **P** 23 14 26.7 +1.1
HVU IAmb IAmb 23 14 27.5
comp=Z,4.2nm,0.7s
SRU **San Rafael Swe** 90.06 47 P **P** 23 14 27.0 +1.0
SRU IAmb IAmb 23 14 28.3
comp=Z,10nm,0.9s
LENM **Lemitar** 90.08 52 P **P** 23 14 27.4 +1.2
TX31 **Lajitas Ar. Si** 90.31 58 P **P** 23 14 29.3 +2.0
TX32 **Lajitas Array** 90.31 58 P **P** 23 14 29.0 +1.8
TX32 IAmb IAmb 23 14 30.2
comp=Z,4.1nm,0.8s
TXAR **Lajitas Array** 90.31 58 P **P** 23 14 29.0 +1.7
comp=Z,3.0nm,0.7s,baz=212,slow=6.8,SNR=44
comp=Z,3.0nm,0.7s
HHC **Hu-ho-hao-te** 90.35 315 *eP* **P** 23 14 27.9 +0.7
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,290nm,5.6s
TCUT **Toone Canyon** 90.51 45 P **P** 23 14 29.1 +0.9
TCUT IAmb IAmb 23 15 03.2
comp=Z,12nm,1.0s
PZH **PanZhiHua** 90.66 299 P **P** 23 14 29.6 +0.6
PZH pmax pmax
comp=Z,20nm,1.2s
PZH pmax pmax
comp=Z,100nm,5.3s
HWUT **Hardware Ranch** 90.67 44 P **P** 23 14 29.6 +0.8
HWUT IAmb IAmb 23 14 30.6
comp=Z,2.3nm,0.7s
ANMO **Albuquerque** 90.82 52 P **P** 23 14 30.0 +0.3
ANMO IAmb IAmb 23 14 32.0
comp=Z,3.8nm,1.1s
GDL2 **Guadalupe Moun** 91.08 55 P **P** 23 14 31.4 +0.5
GDL2 **PcP** 23 14 31.5 0.0
ILAR **Eielson Array** 91.87 14 P **P** 23 14 33.1 -0.4
comp=Z,0.3nm,0.7s,baz=205,slow=4.0,SNR=2.6
comp=Z,0.3nm,0.7s
PDAR **Pinedale Array** 92.54 44 P **P** 23 14 38.2 +0.8
comp=Z,1.2nm,0.8s,baz=219,slow=3.3,SNR=8.7
comp=Z,1.2nm,0.8s
MKAR **Makanchi Array** 112.09 313 PKiKP **PKiKP** 23 19 57.1 -0.4
comp=Z,0.3nm,0.6s,baz=65,slow=2.2,SNR=4.7
KURBB **Kurchatov Arra** 115.17 316 PKP **PKiKP** 23 20 02.7 -0.4
comp=Z,0.2nm,0.2s,baz=90,slow=1.9,SNR=4.4
ARU **Arti** 126.79 324 PKP **PKiKP** 23 20 25.2 -0.7
comp=Z,1.2nm,0.4s,baz=337,slow=13,SNR=4.1
ARCES **ARCESS Array B** 131.75 348 PKP **PKPdf** 23 20 34.3 -0.1
comp=Z,0.7nm,0.5s,baz=60,slow=2.9,SNR=7.7
FINES **FINESS Array B** 138.32 342 PKhKP PKPpre 23 20 40.5
comp=Z,2.0nm,1.0s,baz=338,slow=3.3,SNR=3.6
FINES SKPbc **SKiKP** 23 23 32.2 -0.9
comp=Z,9.2nm,1.2s,baz=133,slow=8.4,SNR=4.4
HFS **Hagfors** 142.41 349 PKhKP PKPpre 23 20 51.2
comp=Z,2.0nm,0.3s,baz=58,slow=3.7,SNR=26
AKASG **Malin Array Be** 144.87 327 PKP **PKPdf** 23 20 57.9 -0.8
comp=Z,0.4nm,0.3s,baz=47,slow=4.4,SNR=6.1
AKASG SKPbc **SKiKP** 23 23 49.9 +3.0
comp=Z,1.6nm,0.7s,baz=29,slow=2.0,SNR=4.7
BRTR **Keskin Array B** 147.53 307 PKPbc **PKiKP** 23 21 07.8 -1.0
comp=Z,0.4nm,0.6s,baz=142,slow=4.9,SNR=2.0
MMAI **Mount Meron Ar** 147.69 295 PKPbc **PKiKP** 23 21 09.2 -0.1
comp=Z,3.3nm,0.6s,baz=74,slow=7.1,SNR=13
EKA **Eskdalemuir Ar** 148.36 4 PKPbc **PKPbc** 23 21 08.4 -0.3
comp=Z,0.8nm,0.3s,baz=341,slow=2.6,SNR=12
KOLS **Kolonicke sedl** 149.37 331 *e*PKP **PKiKP** 23 21 13.4 +1.2
MLR **Muntele Rosu** 149.83 322 PKPbc **PKiKP** 23 21 13.3 0.0
comp=Z,0.7nm,0.4s,baz=335,slow=17,SNR=4.9
LANS **Liptovska Anna** 150.40 334 *e*PKP **PKiKP** 23 21 16.1 +1.8
OSTC **Ostas** 150.44 339↑*e*PKP **PKiKP** 23 21 15.3 +1.0
UPC **Upice** 150.54 339↑*e*PKP **PKiKP** 23 21 15.4 +0.9
DPC **Dobruska-Polom** 150.58 339↑*e*PKP **PKiKP** 23 21 15.3 +0.6
MORC **Moravsky Berou** 150.63 337 *e*PKP **PKiKP** 23 21 15.2 +0.4
KRLC **Kraliky** 150.65 338↑*e*PKP **PKiKP** 23 21 15.2 +0.4
CLL **Collm** 150.72 343 *i* PKPbc **PKiKP** 23 21 15.3 +0.5
comp=Z,10.0nm,1.0s
CLL *ep*PKPbc **pPKPbc** 23 23 21.0 -0.4
BRG **Berggiesshubel** 150.86 342 *i* PKP **PKiKP** 23 21 15.8 +0.7
BRG Amp 23 21 16.9
comp=Z,5.4nm,0.9s
PVCC **Panska Ves** 150.98 341↑*e*PKP **PKiKP** 23 21 16.2 +0.8
JAVC **Velka Javorina** 151.34 335 *e*PKP **PKiKP** 23 21 17.7 +1.4
KRUC **Moravsky** 151.64 337 *e*PKP **PKiKP** 23 21 17.2 +0.4
KHC **Kasperske Hory** 152.52 341↑*e*PKP **PKiKP** 23 21 19.4 +0.7
CKRC **Cesky Krumlov** 152.56 339↑*e*PKP **PKiKP** 23 21 19.1 +0.3
GERES **GERESS Array B** 152.73 340 PKPbc **PKPbc** 23 21 18.6 -0.6
comp=Z,0.6nm,0.8s,baz=22,slow=0.7,SNR=5.3
ESDC **Sonseca Array** 163.76 11 PKPab **PKPab** 23 22 20.5 -0.3
comp=Z,0.3nm,0.9s,baz=301,slow=2.7,SNR=3.7
TORD **Torodi Ar. Bea** 169.34 189 PKP **PKPdf** 23 21 29.1 -0.5
comp=Z,1.9nm,1.2s,baz=207,slow=0.4,SNR=4.8
TORD PKPab **PKPab** 23 22 46.1 +0.2
comp=Z,1.4nm,0.9s,baz=164,slow=5.1,SNR=5.4

*IDC **08** 23:19:06.7±3.9,2.°52S×153.°06E,h0km,mb4.0/2,*

mbtmp4.0/3,ML4.1/1,MS3.1/2,Error ellipse:
s-maj=161.4km s-min=34.3km az=112.0
*NEIC **08** 23:19:11.5±1.4,3.°S×153.°7E±1.°0,h45km±24km,*
mb4.1/6,Error ellipse: s-maj=232.9km s-min=7.6km
az=142.0

ISC 08 23:19:09.3±2.0,3.°0S±0.°7×153.°8E±0.°5,h35km,n16,
σ0.°50/13,mb4.1/6,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.02**	**234**	Pn	**Pn**	**23 19 40.2**	**-0.7**
RABL				Sn	**Sn**	**23 20 05.3**	**+0.3**
KRVT	**Keravat (AS076**	**2.20**	**233**	Pn	**Pn**	**23 19 43.2**	**-0.2**
	70nm,0.3s,baz=18,slow=20,SNR=12						
KRVT				Sn	**Sn**	**23 20 09.7**	**+0.3**
	68nm,0.3s,baz=72,slow=20,SNR=6.5						
	197nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**24.84**	**30**	T	T	23 50 49.4	
	baz=208						
H11S2	**WAKE ISLAND Hy**	**24.84**	**30**	T	T	23 51 10.5	
	baz=208						
H11S1	**WAKE ISLAND Hy**	**24.86**	**30**	T	T	23 51 14.7	
	baz=208						
WB0	**Warramunga Arr**	**25.24**	**227**	P	**P**	**23 24 32.3**	**0.0**
WB0				IAmb	IAmb	23 24 33.1	
	comp=Z,4.5nm,0.9s						
WR0	**Warramunga Arr**	**25.25**	**227**	P	**P**	**23 24 32.8**	**+0.3**
WR0				IAmb	IAmb	23 25 00.7	
	comp=Z,7.4nm,1.2s						
WRAB	**Tennant Creek**	**25.38**	**227**	P	**P**	**23 24 33.8**	**+0.2**
WRAB				IAmb	IAmb	23 24 33.9	
	comp=Z,4.6nm,0.8s						
WB2	**Warramunga Arr**	**25.38**	**227**	P	**P**	**23 24 34.1**	**+0.6**
WB2				IAmb	IAmb	23 25 03.1	
	comp=Z,9.8nm,1.3s						
WRA	**Warramunga Arr**	**25.39**	**227**	P	**P**	**23 24 33.9**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=50,slow=9.6,SNR=73						
	comp=Z,3.3nm,0.6s						
WRA	**Warramunga Arr**	**25.39**	**227**	P	**P**	**23 24 33.3**	**-0.3**
MSVF	**Nonsavu**	**27.94**	**123**	LR	LR	23 35 11.2	
	baz=Z,33nm,18.6s,baz=23,slow=34						
ASAR	**Alice Springs**	**28.15**	**221**	P	**P**	**23 24 59.4**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=49,slow=8.8,SNR=5.7						
	comp=Z,0.4nm,0.4s						
FORT	**Forrest**	**36.81**	**219**	P	**P**	**23 26 13.5**	**-0.6**
MKAR	**Makanchi Array**	**79.62**	**319**	LR	LR	00 07 08.9	
	comp=Z,10nm,19.4s,baz=56,slow=37						
TORD	**Torodi Ar. Bea**	**150.62**	**292**	PKPbc	**PKiKP**	**23 38 59.7**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=90,slow=2.2,SNR=4.1						

*TEH **08** 23:22:05.5,39.°43N×54.°35E,h10km,ML3.2*
*AZER **08** 23:22:15.9±0.7,39.°49N×53.°56E,h40km,Error ellipse:*
s-maj=15.3km s-min=7.0km az=44.0

ISC 08 23:22:05.2±0.9,39.°70N±0.°06×54.°36E±0.°05,h31km,n31,
σ2.°81/38,3C,Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRVT	**Maraveh tapeh**	**2.44**	**146**	*e*Pn	**Pn**	**23 22 44.7**	**+1.7**
BJRD	**Bojnurd**	**3.11**	**129**	*e*Pn	**Pn**	**23 22 54.5**	**+2.3**
IGLO	**Ghaloghah**	**3.22**	**188**	*e*Pn	**Pn**	**23 22 54.4**	**+0.6**
IGLO				*e*		23 23 30.7	
	comp=Z,563nm,0.1s						
GYA0B	**ALIBECK ARRAY**	**3.42**	**120**	⇑Pn	**Pn**	**23 22 58.1**	**+1.7**
GYA0B				⇑Sn	**Sn**	**23 23 34.0**	**-1.9**
IPRN	**Peran**	**3.81**	**205**	*e*Pn	**Pn**	**23 23 01.8**	**0.0**
SHRO	**Shahrood**	**3.93**	**160**	*e*Pn	**Pn**	**23 23 05.1**	**+1.7**
ISHM	**Shahmirzad**	**3.98**	**193**	*e*Pn	**Pn**	**23 23 05.4**	**+1.1**
IANJ	**Anjilo**	**4.24**	**185**	*e*		23 23 19.0	
	comp=E,285nm,0.2s						
IANJ				*e*Pn	**Pn**	**23 23 09.6**	**+1.7**
IFIR	**Firoozkooh**	**4.25**	**198**	*e*Pn	**Pn**	**23 23 09.9**	**+1.9**
SIZA	**Siyzn**	**4.39**	**290**	P	Pn	23 23 15.0	+5.2
SIZA				S	**Sn**	**23 24 02.3**	**+2.4**
ASTR	**Astara**	**4.48**	**257**	S	**Sn**	**23 23 57.5**	**-4.4**
IDMV	**Damavand**	**4.51**	**205**	*e*Pn	**Pn**	**23 23 12.4**	**+0.8**
IDMV				*e*		23 23 15.5	
	comp=Z,223nm,0.2s						
CHTH	**Charan**	**4.57**	**215**	*e*Pn	**Pn**	**23 23 14.9**	**+2.5**
GLBA	**Clilabad**	**4.64**	**266**	S	**Sn**	**23 24 02.2**	**-3.7**
IAKL	**Akhelmad**	**4.64**	**130**	*e*Pn	**Pn**	**23 23 16.0**	**+2.6**
IAKL				*e*		23 24 12.0	
	comp=Z,110nm,0.2s						
IGZV	**Ghazvin**	**4.65**	**226**	*e*	**Sn**	**23 24 04.7**	**-1.9**
	comp=N,408nm,0.2s						
LRK	**Lerik**	**4.80**	**259**	P	**Pn**	**23 23 19.3**	**+3.8**
LRK				S	**Sn**	**23 24 05.4**	**-4.7**
YRD	**Yardimli**	**4.81**	**263**	P	Pn	23 23 20.5	+4.9
YRD				S	**Sn**	**23 24 06.7**	**-3.7**
IPAY	**Payeh**	**4.89**	**130**	*e*Pn	**Pn**	**23 23 19.0**	**+2.3**
IPAY				*e*		23 24 19.5	
	comp=N,294nm,0.2s						
XNQ	**Khinaliq**	**4.97**	**289**	S	**Sn**	**23 24 14.7**	**+0.4**
ZRD	**Zardab**	**5.16**	**279**	P	**Pn**	**23 23 22.9**	**+2.6**
ZRD				S	**Sn**	**23 24 15.0**	**-3.8**
ZNJK	**Zanjan**	**5.40**	**238**	*e*Pn	**Pn**	**23 23 26.7**	**+2.9**
AGDM	**Agdam**	**5.59**	**276**	S	**Sn**	**23 24 25.3**	**-4.1**
SEKA	**Sheki**	**5.67**	**288**	P	**Pn**	**23 23 31.4**	**+4.1**
SEKA				S	**Sn**	**23 24 29.9**	**-1.4**
ZKTA	**Zakatala**	**6.20**	**291**	P	Pn	23 23 39.3	+4.8
ZKTA				S	**Sn**	**23 24 44.7**	**+0.4**
ORD	**Ordubad**	**6.54**	**266**	S	**Sn**	**23 24 49.6**	**-3.2**
GDB	**GEDABAY**	**6.67**	**282**	P	**Pn**	**23 23 44.7**	**+3.5**
GDB				S	**Sn**	**23 24 52.6**	**-3.5**
SBZ	**Shahbuz**	**6.82**	**270**	P	**Pn**	**23 23 46.8**	**+3.7**
SBZ				S	**Sn**	**23 24 58.6**	**-1.0**
QZX	**Qazax, Azerbai**	**7.00**	**284**	S	**Sn**	**23 25 01.9**	**-2.2**
YZKH	**Yazd**	**7.30**	**178**	*e*Pn	**Pn**	**23 23 51.5**	**+1.8**
AB31	**Akbulak array**	**10.35**	**21**	⇑Pn	**Pn**	**23 24 32.1**	**+0.8**
	comp=N,0.4nm,0.6s,baz=181,slow=14,SNR=4.4						
AB31				Sn	**Sn**	**23 26 22.5**	**-3.7**
	comp=N,0.3nm,0.4s,baz=179,slow=23,SNR=10						

IDC 08 23:30:40.0±3.2,7.°18S×129.°13E,h140km±43km,mb3.1/1,
mbtmp3.5/5,Error ellipse: s-maj=66.1km s-min=22.7km
az=90.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.62**	**19**	P	Pn	23 32 15.1	0.0
	3.8nm,0.5s,baz=198,slow=19,SNR=1.5						
SIJI				S	Sn	23 33 21.2	-8.2
	4.1nm,0.5s,baz=190,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**11.37**	**197**	P	Pn	23 33 18.7	+0.3
	2.2nm,1.0s,baz=29,slow=11,SNR=2.3						
FITZ				S	Sn	23 35 20.2	-3.8
	1.3nm,0.4s,baz=342,slow=12,SNR=6.5						
WRA	**Warramunga Arr**	**13.66**	**159**	P	Pn	23 33 47.3	-0.8
	0.3nm,0.3s,baz=337,slow=12,SNR=2.0						
WRA				S	Sn	23 36 08.7	-10
	0.4nm,0.3s,baz=332,slow=23,SNR=8.2						
ASAR	**Alice Springs**	**17.02**	**165**	P	Pn	23 34 29.6	-0.1
	0.8nm,0.8s,baz=344,slow=9.8,SNR=8.0						
MKAR	**Makanchi Array**	**67.91**	**327**	P	P	23 41 23.5	0.0
	0.2nm,0.5s,baz=115,slow=8.0,SNR=2.1						
	0.2nm,0.5s						

*NEIC **08** 23:42:24.9±1.6,0.°5N±0.°2×19.°0W±0.°1,h10km±2km,*
mb4.2/11,Error ellipse: s-maj=29.8km s-min=13.5km
az=151.0
*IDC **08** 23:42:28.7±34.0,1.°00N×18.°71W,h0km,mb3.4/2,*
mbtmp3.7/3,ML4.1/1,MS3.4/2,Error ellipse:
s-maj=1078.0km s-min=104.0km az=176.0

ISC 08 23:42:24.6±2.2,0.°5N±0.°3×19.°0W±0.°1,h10km,n25,
σ1.°44/17,mb4.2/7,2C-2D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**9.44**	**152**	T	T	23 53 09.8	
	baz=331,slow=73,SNR=21						
H10N3	**ASCENSION HYDR**	**9.44**	**152**	T	T	23 53 05.1	
	baz=331,slow=73,SNR=62						
H10N1	**ASCENSION HYDR**	**9.45**	**152**	T	T	23 53 04.4	
	baz=331,slow=73,SNR=78						
H10S3	**ASCENS

SACV					IAmb	IAmb	23 46 03.1		
	comp=Z,26nm,1.0s								
TIC	**Toumodi**	**15.19**	**66**	ǁ*i*PKIKP	**P**		**23 46 01.9**	**-2.6**	
	comp=Z,4.6nm,0.5s								
KIC	**Kosan Boka**	**15.34**	**68**	ǁ*e*PKIKP	**Pn**		**23 46 02.4**	**+1.0**	
	comp=Z,3.4nm,0.5s								
DBIC	**Dimbokro**	**15.35**	**66**	Pn	**Pn**		**23 46 01.0**	**-0.5**	
	comp=Z,0.8nm,0.3s,baz=274,slow=15,SNR=17								
DBIC				Sn	Sn		23 48 38.3	-13	
	comp=Z,0.1nm,0.3s,baz=220,slow=8.9,SNR=1.5								
	comp=Z,1.8nm,0.3s								
DBIC	**Dimbokro**	**15.35**	**66**	Pn	**Pn**		**23 46 01.7**	**+0.3**	
DBIC				IAmb	IAmb		23 46 22.3		
	comp=Z,20nm,1.3s								
KOWA	**Kowa**	**20.28**	**46**		Pn		23 47 04.4	+1.7	
KOWA				IAmb	IAmb		23 47 05.9		
	comp=Z,8.2nm,1.1s								
TOA0	**Torodi Ar. Sit**	**24.01**	**58**	P	**P**		**23 47 40.1**	**+0.2**	
TORD	**Torodi Ar. Bea**	**24.01**	**58**	P	**P**		**23 47 41.0**	**+1.1**	
	comp=Z,0.8nm,0.7s,baz=235,slow=10,SNR=5.0								
	comp=Z,0.8nm,0.7s								
TORD	**Torodi Ar. Bea**	**24.01**	**58**	P	**P**		**23 47 40.6**	**+0.7**	
MDP	**Montagnes des**	**33.92**	**278**	LR	LR		00 01 49.8		
	comp=Z,36nm,18.2s,baz=168,slow=34								
PESTR	**Estremoz**	**39.55**	**14**	P	**P**		**23 49 53.3**	**-2.6**	
PESTR				IAmb	IAmb		23 50 20.9		
	comp=Z,6.7nm,1.3s								
GEC2	**GERESS Array S**	**55.74**	**26**	P	**P**		**23 52 02.2**	**+0.6**	
GEC2				IAmb	IAmb		23 52 04.8		
	comp=Z,2.9nm,1.2s								
MLR	**Muntele Rosu**	**59.69**	**35**	P	**P**		**23 52 28.5**	**-1.1**	
MLR				IAmb	IAmb		23 52 56.9		
	comp=Z,4.1nm,1.2s								
BRTR	**Keskin Array B**	**61.70**	**44**	P	**P**		**23 52 45.5**	**+2.1**	
	comp=Z,0.3nm,0.5s,baz=258,slow=7.2,SNR=1.7								
	comp=Z,0.3nm,0.5s								
PLCA	**Paso Flores**	**62.21**	**222**	LR	LR		00 20 26.6		
	comp=Z,9.1nm,18.1s,baz=210,slow=36								
SFJD	**Kangerlussuaq**	**69.94**	**347**	P	**P**		**23 53 35.8**	**+0.1**	
FPAL	**Fort Paine**	**70.57**	**307**	P	**P**		**23 53 39.7**	**-0.7**	
AB31	**Akbulak array**	**82.36**	**40**	ǁP	**P**		**23 54 47.8**	**+0.9**	
	comp=Z,0.4nm,0.3s,baz=160,slow=12,SNR=18								
ABKAR	**Akbulak array**	**82.36**	**40**	P	**P**		**23 54 48.4**	**+1.5**	
ABKAR				IAmb	IAmb		23 54 48.6		
	comp=Z,1.9nm,0.9s								

*IDC **08** 23:46:42.9±2.2,29.6°64N×42.5°55W,h0km,mb3.7/6, mbtmp3.7/6,MS3.3/22,Error ellipse: s-maj=72.0km s-min=25.7km az=18.0*

ISC 08 23:46:44.1±2.0,29.6°6N±0.4×42.6°6W±0.2,h10km,n30, σ1°36/6,mb3.8/6,MS3.3/22,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SJG	**San Juan**	**24.34**	**247**	LR		LR	00 00 22.8	
	comp=Z,16nm,20.1s,baz=82,slow=34							
SCHQ	**Schefferville**	**30.66**	**332**	P		**P**	**23 52 57.8**	**-0.8**
	2.8nm,0.7s,baz=115,slow=19,SNR=2.1							
SCHQ				LR		LR	00 03 51.5	
	comp=Z,59nm,20.3s,baz=68,slow=34							
	2.8nm,0.7s							
SADO	**Sadowa**	**32.52**	**308**	LR		LR	00 06 09.4	
	comp=Z,30nm,18.0s,baz=150,slow=36							
MDT	**Midelt**	**32.53**	**75**	LR		LR	00 05 00.4	
	comp=Z,37nm,18.0s,baz=287,slow=34							
ESDC	**Sonseca Array**	**33.11**	**62**	LR		LR	00 02 59.3	
	comp=Z,33nm,20.7s,baz=294,slow=30							
SDV	**Santo Domingo**	**33.38**	**238**	LR		LR	00 06 08.9	
	comp=Z,22nm,19.5s,baz=91,slow=35							
TKL	**Tuckaleechee C**	**35.02**	**291**	LR		LR	00 04 40.2	
	comp=Z,45nm,21.1s,baz=100,slow=31							
RCBR	**Riachuelo**	**35.80**	**169**	LR		LR	00 04 20.8	
	comp=Z,74nm,21.8s,baz=138,slow=30							
SFJD	**Kangerlussuaq**	**37.75**	**355**	LR		LR	00 05 01.7	
	comp=Z,48nm,18.9s,baz=142,slow=29							
FRB	**Frobisher Bay**	**37.97**	**342**	LR		LR	00 07 41.4	
	comp=Z,29nm,18.1s,baz=195,slow=33							
ROSC	**El Rosal**	**38.80**	**237**	LR		LR	00 11 05.0	
	comp=Z,32nm,18.1s,baz=78,slow=38							
TORD	**Torodi Ar. Bea**	**44.07**	**102**	P		**P**	**23 54 51.8**	**-0.7**
	1.1nm,1.0s,baz=313,slow=7.5,SNR=3.6							
	1.1nm,1.0s							
H10N2	**ASCENSION HYDR**	**45.99**	**140**	T		T	00 44 16.2	
	baz=326,slow=75,SNR=2197							
H10N3	**ASCENSION HYDR**	**45.99**	**140**	T		T	00 44 16.5	
	baz=326,slow=75,SNR=1962							
H10N1	**ASCENSION HYDR**	**46.01**	**140**	T		T	00 44 17.7	
	baz=326,slow=75,SNR=2864							
GERES	**GERESS Array B**	**46.51**	**49**	P		**P**	**23 55 12.5**	**+0.8**
	0.1nm,0.3s,baz=262,slow=6.8,SNR=2.1							
	0.1nm,0.3s							
H10S3	**ASCENSION HYDR**	**46.81**	**141**	T		T	00 45 18.6	
	baz=326,slow=74,SNR=798							
H10S2	**ASCENSION HYDR**	**46.86**	**141**	T		T	00 45 19.7	
	baz=254,slow=74,SNR=316							
LPAZ	**La Paz**	**51.85**	**212**	LR		LR	00 16 04.3	
	comp=Z,32nm,20.2s,baz=66,slow=34							
PDAR	**Pinedale Array**	**54.32**	**303**	P		**P**	**23 56 12.4**	**+1.4**
	0.9nm,0.4s,baz=81,slow=8.3,SNR=9.1							
PDAR				LR		LR	00 18 19.4	
	comp=Z,36nm,19.6s,baz=84,slow=35							
	0.9nm,0.4s							
YKA	**Yellowknife Ar**	**55.95**	**328**	LR		LR	00 19 18.2	
	comp=Z,20nm,18.5s,baz=170,slow=35							
LVC	**Limon Verde**	**57.75**	**209**	LR		LR	00 21 11.9	
	comp=Z,55nm,18.4s,baz=218,slow=36							
NEW	**Newport**	**58.62**	**311**	LR		LR	00 20 11.3	
	comp=Z,14nm,21.7s,baz=91,slow=34							
ELK	**Elko**	**58.89**	**302**	LR		LR	00 20 19.4	
	comp=Z,32nm,20.4s,baz=62,slow=34							
BRTR	**Keskin Array B**	**61.79**	**58**	P		**P**	**23 57 03.8**	**+0.5**
	0.7nm,0.9s,baz=267,slow=5.8,SNR=2.5							
	0.7nm,0.9s							
INK	**Inuvik**	**63.21**	**335**	LR		LR	00 23 07.6	
	comp=Z,52nm,20.2s,baz=114,slow=35							
DLBC	**Dease Lake**	**64.00**	**324**	LR		LR	00 23 52.9	
	comp=Z,70nm,21.4s,baz=102,slow=35							
YBH	**Yreka Blue Hor**	**64.05**	**305**	LR		LR	00 23 16.1	
	comp=Z,23nm,21.8s,baz=6.5,slow=34							
BBB	**Bella Bella**	**64.60**	**317**	LR		LR	00 25 60.0	
	comp=Z,31nm,19.6s,baz=138,slow=36							
ILAR	**Eielson Array**	**69.41**	**334**	P		**P**	**23 57 50.7**	**-1.2**
	0.5nm,0.8s,baz=59,slow=7.4,SNR=2.7							
ILAR				LR		LR	00 28 01.0	
	comp=Z,57nm,18.9s,baz=68,slow=36							
	0.5nm,0.8s							

IDC 09 00:00:59.6±5.6,50.11S×111.36E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=200.0km s-min=29.5km az=102.0,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H01W2	**Cape Leeuwin H**	**15.34**	**9**	T		T	00 19 21.0	
	baz=195,slow=74,SNR=333							
H01W1	**Cape Leeuwin H**	**15.34**	**9**	T		T	00 19 19.7	
	baz=195,slow=74,SNR=210							
H01W3	**Cape Leeuwin H**	**15.35**	**9**	T		T	00 19 19.3	
	baz=195,slow=74,SNR=198							
ASAR	**Alice Springs**	**31.72**	**42**	P		P	00 07 24.9	-0.1
	0.8nm,0.8s,baz=213,slow=9.6,SNR=5.3							
	0.8nm,0.8s							
VNDA	**Vanda**	**33.29**	**162**	P		P	00 07 37.0	-1.2
	0.3nm,0.4s,baz=301,slow=5.9,SNR=5.4							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**35.21**	**40**	P		P	00 07 54.7	-0.7
	1.3nm,1.0s,baz=208,slow=8.6,SNR=6.2							
	1.3nm,1.0s							
TXAR	**Lajitas Array**	**146.44**	**115**	PKPbc		PKPab	00 20 43.9	+0.6
	0.3nm,0.8s,baz=213,slow=4.3,SNR=3.0							

*MOS **09** 00:06:46.9±0.9,46.86N×150.45E,h164km,mb4.5/67, Error ellipse: s-maj=8.7km s-min=4.6km az=96.8*

*SKHL **09** 00:06:46.4±0.4,46.30N×151.00E,h179km±4km,mb5.0/6, msha5.8/4*

*NEIC **09** 00:06:47.9±1.7,46.7°N±0.1×150.5°E±0.1,h165km±7km, mb4.5/169,Error ellipse: s-maj=17.1km s-min=10.9km az=150.0*

*IDC **09** 00:06:48.5±2.0,46.7°6N×150.5°5E,h176km±17km, mb3.8/25,mbtmp4.3/31,Error ellipse: s-maj=13.3km s-min=10.0km az=152.0*

*JMA **09** 00:06:50.6±0.8,46°N±4°×15°1E±°,h160km,MV3.8/13, KURILE ISLANDS REGION*

ISC 09 00:06:47.2±0.4,46.63N±0.06×150.64E±0.05,h167km, n551,σ1°38/566,mb4.4/190,15C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**2.39**	**235**	*d* iPN		**Pn**	**00 07 30.3**	**+2.5**
KUR				*e*S		**Sn**	**00 08 02.1**	**+2.9**
KUR				pmax		pmax		
	comp=Z,309nm,0.4s							
KUR				pmax		pmax		
	comp=N,94nm,0.3s							
KUR				smax		smax		
	comp=N,989nm,0.7s							
KUR				smax		smax		
	comp=E,428nm,0.7s							
KUR	**Kuril'sk**	**2.39**	**235**	*i* P		**Pn**	**00 07 30.0**	**+2.2**
KUR				AMB		AMB	00 07 30.7	
	comp=E,310nm,0.4s							
KUR				*e*S		**Sn**	**00 08 04.3**	**+5.1**
KUR				A		A	00 08 05.9	
	comp=E,990nm,0.7s							
KUR				A		A	00 08 05.9	
	comp=E,430nm,0.7s							
SHO	**Shikotan**	**3.86**	**226**	*c* iPN		**Pn**	**00 07 45.8**	**-0.2**
SHO				*i* S		**Sn**	**00 08 28.0**	**-3.9**
SHO				pmax		pmax		
	comp=N,41nm,0.4s							
SHO				pmax		pmax		
	comp=E,48nm,0.4s							
SHO				pmax		pmax		
	comp=Z,96nm,0.4s							
SHO				smax		smax		
	comp=N,157nm,0.4s							
SHO				smax		smax		
	comp=E,374nm,0.5s							
SHO	**Shikotan**	**3.86**	**226**	*i* P		**Pn**	**00 07 45.8**	**-0.2**
SHO				AMB		AMB	00 07 46.3	
	comp=E,40nm,0.4s							
SHO				AMB		AMB	00 07 46.3	
	comp=E,50nm,0.4s							
SHO				AMB		AMB	00 07 46.3	
	comp=E,100nm,0.4s							
SHO				*i* S		**Sn**	**00 08 28.0**	**-3.9**
SHO				A		A	00 08 32.5	
	comp=E,160nm,0.5s							
SHO				A		A	00 08 32.5	
	comp=E,370nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**4.26**	**234**	*e*PN		**Pn**	**00 07 52.9**	**+1.8**
YUK				*i* S		**Sn**	**00 08 42.1**	**+1.1**
YUK				pmax		pmax		
	comp=N,83nm,0.4s							
YUK				pmax		pmax		
	comp=Z,232nm,0.4s							
YUK				pmax		pmax		
	comp=E,50nm,0.1s							
YUK				smax		smax		
	comp=N,344nm,0.2s							
YUK				smax		smax		
	comp=E,576nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**4.26**	**234**	*e*P		**Pn**	**00 07 52.0**	**+0.9**
YUK				AMB		AMB	00 07 53.9	
	comp=E,230nm,0.3s							
YUK				*i* S		**Sn**	**00 08 42.9**	**+1.9**
YUK				A		A	00 08 45.4	
	comp=E,340nm,0.3s							
YUK				A		A	00 08 45.4	
	comp=E,580nm,0.3s							
RUSJ	**Misakicho**	**4.57**	**238**	*e*PN		**Pn**	**00 07 56.8**	**+1.7**
RUSJ				*e*S		**Sn**	**00 08 54.3**	**+6.0**
JRA	**Rausu**	**4.74**	**237**	*e*P		**Pn**	**00 07 59.1**	**+1.7**
NEM2	**Nemuro 2**	**4.77**	**229**	*e*P		**Pn**	**00 07 57.1**	**-0.7**
NEM2				*e*S		**Sn**	**00 08 48.5**	**-4.5**
NMR	**Nemuro--Hokkai**	**4.77**	**229**	ǁ *i*PN		**Pn**	**00 07 57.2**	**-0.6**
NMR				*i* S		**Sn**	**00 08 48.5**	**-4.6**
NMR	**Nemuro--Hokkai**	**4.77**	**229**	*i* P		**Pn**	**00 07 57.3**	**-0.6**
JNK	**Nakash**	**5.18**	**236**	*e*P		**Pn**	**00 08 04.9**	**+1.7**
JNK				*e*S		**Sn**	**00 09 03.0**	**+0.3**
YSS	**Yuzh-Sakhalins**	**5.43**	**276**			**Pn**	**00 08 06.3**	**-0.1**
YSS	**Yuzh-Sakhalins**	**5.43**	**276**	*e*PN		**Pn**	**00 08 09.5**	**+3.1**
YSS				pmax		pmax		
	comp=Z,40nm,0.7s							
YSS	**Yuzh-Sakhalins**	**5.43**	**276**	*e*P		**Pn**	**00 08 09.5**	**+3.1**
YSS				AMB		AMB	00 08 10.4	
	comp=Z,40nm,0.7s							
SKR	**Severo-Kuril's**	**5.44**	**40**	*e*PN		**Pn**	**00 08 06.9**	**+0.4**
SKR				*e*S		**Sn**	**00 09 05.7**	**-3.0**
SKR				pmax		pmax		
	comp=Z,100nm,6.7s							
SKR				smax		smax		
	comp=E,45nm,0.9s							
SKR				smax		smax		
	comp=N,60nm,0.9s							
SKR				MLR		MLR		
	comp=Z,400nm,10.0s							
SKR	**Severo-Kuril's**	**5.44**	**40**	*e*P		**Pn**	**00 08 09.0**	**+2.5**
SKR				AMB		AMB	00 08 12.2	
	comp=Z,40nm,0.7s							
SKR				*e*S		**Sn**	**00 09 07.7**	**-1.0**
SKR				A		A	00 09 09.7	
	comp=Z,60nm,0.2s							
SKR				A		A	00 09 09.7	
	comp=Z,70nm,0.2s							
JTKR	**Abashiri--Toko**	**5.45**	**243**	*e*P		**Pn**	**00 08 08.7**	**+2.1**
AKK	**Akkeshi**	**5.49**	**231**	*e*P		**Pn**	**00 08 09.1**	**+1.9**
JAK	**Akkeshi**	**5.58**	**231**	*e*P		**Pn**	**00 08 08.0**	**-0.4**
JAK				*e*S		**Sn**	**00 09 07.9**	**-4.2**
JAR	**Ashorobuto**	**5.91**	**238**	*e*P		**Pn**	**00 08 15.0**	**+2.2**
JAR				*e*S		**Sn**	**00 09 20.3**	**+0.4**
JKK2	**Kamakawa 2**	**6.22**	**246**	*e*P		**Pn**	**00 08 19.5**	**+2.7**
JWK2	**Keihoku**	**6.24**	**261**	*e*P		Pn	00 08 21.9	+4.9
PAU	**Pauzhetka**	**6.31**	**38**	*e*P		**Pn**	**00 08 17.4**	**-0.6**
PAU				AMB		AMB	00 08 20.3	
	comp=Z,40nm,0.3s							
JCH	**Churui**	**6.57**	**235**	*e*P		**Pn**	**00 08 21.5**	**0.0**
JCH				*e*S		**Sn**	**00 09 31.9**	**-3.6**
TYV	**Tymovskoe**	**6.76**	**312**	*e*P		Pn	00 08 29.0	+5.0
ERM	**Erimo**	**7.08**	**232**	*i* PN		**Pn**	**00 08 29.9**	**+1.7**
JNBK	**Urakawa-nobuka**	**7.13**	**235**	*e*P		**Pn**	**00 08 28.5**	**-0.4**
PEA0B	**Petropavlovsk-**	**7.92**	**33**	Pn		**Pn**	**00 08 39.5**	**+0.2**
PEA0B	**Petropavlovsk-**	**7.92**	**33**	PN		**Pn**	**00 08 39.5**	**+0.2**
PETK	**Petropavlovsk-**	**7.92**	**33**	P		**Pn**	**00 08 39.1**	**-0.2**
	comp=Z,5.7nm,0.5s,baz=192,slow=12,SNR=8.1							
PETK	**Petropavlovsk-**	**7.92**	**33**	Pn		**Pn**	**00 08 38.5**	**-0.8**
JTM	**Tenmabayashi**	**9.06**	**233**	Pn		**Pn**	**00 08 52.7**	**-1.8**
JTM				Sn		**Sn**	**00 10 27.2**	**-8.1**
KLR	**Kul'dur**	**12.93**	**288**	P		**Pn**	**00 09 46.5**	**+1.8**
	comp=Z,3.0nm,0.8s,baz=95,slow=14,SNR=6.4							
KLR	**Kul'dur**	**12.93**	**288**	*i* PN		**P**	**00 09 47.8**	**-1.3**
KLR	**Kul'dur**	**12.93**	**288**	*e*P		**P**	**00 09 47.6**	**-1.5**
USA0B	**Ussuriysk Arra**	**13.33**	**266**	P		**P**	**00 09 52.8**	**-0.7**
USA0B	**Ussuriysk Arra**	**13.33**	**266**	PN		**P**	**00 09 52.8**	**-0.7**
USRK	**Ussuriysk Ar.**	**13.33**	**266**	P		**Pn**	**00 09 51.7**	**+2.0**
	comp=Z,6.0nm,0.6s,baz=74,slow=12,SNR=7.6							
USRK	**Ussuriysk Ar.**	**13.33**	**266**	P		**P**	**00 09 52.3**	**-1.2**
USRK	**Ussuriysk Ar.**	**13.33**	**266**	PN		**P**	**00 09 52.3**	**-1.2**
SEY	**Seymchan**	**16.36**	**3**	P		**P**	**00 10 26.6**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=188,slow=11,SNR=7.1							
SEY	**Seymchan**	**16.36**	**3**	*i* P		**P**	**00 10 26.5**	**-0.4**
ZEA	**Zeya**	**16.53**	**304**	*e*P		**P**	**00 10 23.3**	**-5.6**
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.4s							
CN2	**Changchun**	**17.95**	**270**	*e*P		**P**	**00 10 41.8**	**-2.7**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
KSRS	**Korea Array**	**19.15**	**250**	P		**P**	**00 10 57.3**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=151,slow=40,SNR=5.7							
KSRS	**Korea Array**	**19.15**	**250**	*e*P		**Pn**	**00 11 04.3**	**+4.0**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KS19	**Wonju Array Si**	**19.16**	**250**	P		**P**	**00 10 57.5**	**-0.2**
KS19				IAmb		IAmb	00 10 58.4	
	comp=Z,19nm,0.8s							
KSAR	**Wonju Array Be**	**19.18**	**250**	P		**P**	**00 10 56.9**	**-1.0**
KSAR	**Wonju Array Be**	**19.18**	**250**	P		**P**	**00 10 56.9**	**-1.0**
YAK	**Yakutsk**	**19.53**	**330**	P		**P**	**00 11 01.1**	**-0.3**
	comp=Z,23nm,0.3s,baz=130,slow=4.5,SNR=6.8							
YAK	**Yakutsk**	**19.53**	**330**	P		**P**	**00 11 01.3**	**-0.1**
YAK	**Yakutsk**	**19.53**	**330**	*e*P		**P**	**00 11 01.6**	**+0.2**
YAK				pmax		pmax		
	comp=Z,16nm,0.9s							
YAK				pmax		pmax		
	comp=N,6.0nm,1.0s							
YAK				pmax		pmax		
	comp=E,3.0nm,0.8s							
BILL	**Bilibino**	**22.92**	**15**	*e*P		**P**	**00 11 34.1**	**-2.1**
BILL				*e**PP		**pP**	**00 12 03.9**	**-2.1**
BILL				*e**SP		**sP**	**00 12 22.9**	**-3.5**
BILL				pmax		pmax		
	comp=Z,2.0nm,1.0s							
BOD	**Bodaibo**	**24.76**	**310**	*e*P		**P**	**00 11 53.2**	**+0.2**
BOD				pmax		pmax		
	comp=Z,5.0nm,1.5s							
BOD	**Bodaibo**	**24.76**	**310**	*e*P		**P**	**00 11 53.2**	**+0.2**
TIXI	**Tiksi**	**27.12**	**345**	P		**P**	**00 12 12.3**	**-1.8**
	comp=Z,2.7nm,0.3s,baz=269,slow=22,SNR=7.7							
	comp=Z,2.7nm,0.3s							
TIXI	**Tiksi**	**27.12**	**345**	P		**P**	**00 12 11.5**	**-2.5**
TIXI	**Tiksi**	**27.12**	**345**	*i* P		**P**	**00 12 12.6**	**-1.4**
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.4s							
NJ2	**Nanjing**	**28.34**	**250**	*e*P		**P**	**00 12 23.8**	**-1.5**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.6s							
ULN	**Ulaanbaatar**	**29.33**	**289**	*c*eP		**P**	**00 12 37.3**	**+3.2**
ULN				pmax		pmax		
	comp=Z,3.0nm,1.2s							
SONM	**Songino Array**	**29.76**	**289**	P		**P**	**00 12 36.6**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=70,slow=10,SNR=4.7							
SONM				PcP		**PcP**	**00 15 35.9**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=104,slow=3.0,SNR=2.9							
	comp=Z,0.8nm,0.7s							
SONM	**Songino Array**	**29.76**	**289**	*e*P		**P**	**00 12 38.0**	**+0.1**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**29.96**	**148**	T		T	00 43 48.8	
	baz=336,slow=75,SNR=204							
H11N1	**WAKE ISLAND Hy**	**29.97**	**148**	T		T	00 43 58.8	
	baz=336,slow=75,SNR=160							
H11N3	**WAKE ISLAND Hy**	**29.98**	**148**	T		T	00 44 00.7	
	baz=336,slow=75,SNR=175							
H11S1	**WAKE ISLAND Hy**	**31.02**	**149**	T		T	00 45 54.8	
	baz=340,slow=76							
H11S3	**WAKE ISLAND Hy**	**31.02**	**149**	T		T	00 45 53.1	
	baz=340							
H11S2	**WAKE ISLAND Hy**	**31.03**	**149**	T		T	00 45 57.6	
	baz=340,slow=76							
ZAK	**Zakamensk**	**31.18**	**295**	*e*P		**P**	**00 12 50.0**	**-0.3**
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.1s							
ZAK	**Zakamensk**	**31.18**	**295**	*e*P		**P**	**00 12 50.0**	**-0.3**
CHNA	**Chernabura Isl**	**31.94**	**57**	P		**P**	**00 12 58.2**	**+1.4**
	baz=276							
N16K	**Nishlik Lake**	**32.20**	**46**	P		**P**	**00 13 00.0**	**+1.1**
	baz=268							
N18K	**Kilae Creek**	**33.62**	**46**	P		**P**	**00 13 12.5**	**+1.2**
	baz=270							
TTA	**Tatalina**	**33.63**	**42**	P		**P**	**00 13 12.4**	**+1.0**
	baz=267							
XAN	**Xi'an**	**33.81**	**263**	P		**P**	**00 13 14.4**	**+1.1**
XAN				pmax		pmax		
	comp=Z,9.0nm,0.7s							
M19K	**Big River Lodg**	**34.35**	**43**	P		**P**	**00 13 18.8**	**+1.2**
	baz=270							
J20K	**Nowinta River**	**34.55**	**39**	P		**P**	**00 13 20.2**	**+1.0**
J20K						**S**	**00 18 34.0**	**-1.3**
J20K	**Nowinta River**	**34.55**	**39**	P		**P**	**00 13 20.2**	**+1.0**
	baz=267							
L20K	**Farewell, AK**	**34.60**	**42**	P		**P**	**00 13 20.9**	**+1.2**
	baz=269							
IMAR	**Indian Mountai**	**34.87**	**36**	P		**P**	**00 13 21.9**	**-0.1**
M20K	**Styx River**	**34.95**	**43**	P		**P**	**00 13 23.9**	**+1.1**
M20K	**Styx River**	**34.95**	**43**	P		**P**	**00 13 24.0**	**+1.2**
	baz=271							
G21K	**Allakaket**	**35.02**	**35**	P		**P**	**00 13 24.3**	**+1.0**
	baz=264							
F21K	**Alatna River**	**35.11**	**34**	P		**P**	**00 13 25.1**	**+1.0**
	baz=263							
OHAK	**Old Harbor**	**35.18**	**52**	P		**P**	**00 13 24.7**	**-0.1**
H21K	**Melozitna Rive**	**35.22**	**37**	P		**P**	**00 13 26.0**	**+1.0**
H21K	**Melozitna Rive**	**35.22**	**37**	P		**P**	**00 13 25.7**	**+0.7**
	baz=266							
CHUM	**Lake Minchumin**	**35.34**	**40**	P		**P**	**00 13 27.2**	**+1.2**
	baz=269							
CAST	**Castle Rocks**	**35.43**	**41**	P		**P**	**00 13 28.3**	**+1.4**
	baz=270							
KDAK	**Kodiak Island**	**35.49**	**51**	P		**P**	**00 13 27.1**	**-0.2**
KDAK				IAmb		IAmb	00 13 55.5	
	comp=Z,25nm,1.5s							
KDAK	**Kodiak Island**	**35.49**	**51**	P		**P**	**00 13 27.1**	**-0.2**
KDAK				pmax		pmax		
	comp=Z,25nm,1.5s							
I21K	**Tanana**	**35.53**	**38**	P		**P**	**00 13 28.3**	**+0.7**
I21K	**Tanana**	**35.53**	**38**	P		**P**	**00 13 28.7**	**+1.1**
	baz=267							
F22K	**John River**	**35.65**	**34**	P		**P**	**00 13 29.5**	**+0.9**
	baz=264							
H22K	**Ishtalitna Cre**	**35.83**	**37**	P		**P**	**00 13 31.0**	**+0.8**
	baz=267							
BPAW	**Bear Paw Mtn.**	**35.93**	**40**	P		**P**	**00 13 32.0**	**+0.9**
BPAW	**Bear Paw Mtn.**	**35.93**	**40**	P		**P**	**00 13 31.8**	**+0.8**
	baz=270							
KTH	**Kantishna Hill**	**35.95**	**41**	P		**P**	**00 13 32.7**	**+1.4**
KTH				IAmb		IAmb	00 13 33.3	
	comp=Z,7.3nm,0.8s							
CNPM	**China Poot**	**36.01**	**47

baz=271
COLA College 37.28 38 P P 00 13 43.3 +0.9
baz=271
F24K Squaw Lake 37.30 34 P P 00 13 43.3 +0.7
baz=268
GTA Gaotai 37.30 278 *e*P P 00 13 45.3 +2.2
GTA pmax pmax
comp=Z,7.0nm,0.8s
CCB Clear Creek Bu 37.31 39 P P 00 13 43.6 +1.0
CCB IAmb IAmb 00 13 44.2
comp=Z,5.1nm,0.4s
PWL Port Wells 37.31 45 P P 00 13 43.5 +0.7
PWL IAmb IAmb 00 14 25.7
comp=Z,11nm,1.0s
G24K Hadweenzic Riv 37.43 35 P P 00 13 45.1 +1.3
baz=269,SNR=7.0
WAT6 Susitna Watana 37.44 42 P P 00 13 44.4 +0.4
baz=274
POKR Poker Plat Res 37.45 38 P P 00 13 45.6 +1.7
POKR IAmb IAmb 00 14 28.2
comp=Z,7.8nm,0.7s
POKR Poker Plat Res 37.45 38 P P 00 13 45.7 +1.7
baz=272
DHY Denali Highway 37.57 41 P P 00 13 45.5 +0.4
DHY IAmb IAmb 00 13 59.6
comp=Z,9.2nm,1.5s
DHY Denali Highway 37.57 41 P P 00 13 45.4 +0.3
baz=274
HDA Harding Lake 37.69 39 P P 00 13 46.2 +0.4
HDA IAmb IAmb 00 13 46.7
comp=Z,6.1nm,0.5s
HDA Harding Lake 37.69 39 P P 00 13 46.3 +0.4
baz=273
SCM Sheep Creek Mo 37.70 43 P P 00 13 47.4 +1.3
SCM IAmb IAmb 00 14 27.9
comp=Z,20nm,1.4s
SCM Sheep Creek Mo 37.70 43 P P 00 13 47.4 +1.3
SCM pmax pmax
comp=Z,20nm,1.4s
ILAR Eielson Array 37.70 38 P P 00 13 46.4 +0.4
comp=Z,1.7nm,0.5s,baz=267,slow=7.1,SNR=32
comp=Z,1.7nm,0.5s
ILAR Eielson Array 37.70 38 P P 00 13 46.8 +0.8
D25K Kavik River 37.95 31 P P 00 13 48.5 +0.5
baz=267,SNR=23
G25K Bearman Lake 37.98 35 P P 00 13 48.8 +0.5
baz=270
NRIK Noril'sk 37.98 329 P P 00 13 46.6 -1.6
comp=Z,1.7nm,0.6s,baz=136,slow=4.6,SNR=4.1
comp=Z,1.7nm,0.6s
NRIK Noril'sk 37.98 329 *i* P P 00 13 47.7 -0.6
NRIK pmax pmax
comp=Z,4.0nm,0.9s
H25K Birch Creek 38.10 36 P P 00 13 50.6 +1.3
baz=271
F25K Christian Rive 38.16 34 P P 00 13 51.1 +1.2
baz=270,SNR=5.1
M24K Tolsona, Glenn 38.21 43 P P 00 13 51.3 +1.0
M24K IAmb IAmb 00 14 14.6
comp=Z,18nm,1.1s
M24K Tolsona, Glenn 38.21 43 P P 00 13 51.4 +1.0
baz=276
K24K Donnelly Dome 38.23 40 P P 00 13 50.9 +0.4
baz=275
PRP Porcupine Dome 38.24 37 P P 00 13 51.8 +1.1
PRP IAmb IAmb 00 13 52.4
comp=Z,4.7nm,0.6s
PRP Porcupine Dome 38.24 37 P P 00 13 51.3 +0.7
baz=273
J25K Salcha River, 38.36 39 P P 00 13 51.1 -0.5
J25K Salcha River, 38.36 39 P P 00 13 51.6 0.0
baz=274
KLU Klutina 38.40 44 P P 00 13 52.8 +0.8
baz=277
BMAR Burnt Mountain 38.57 34 P P 00 13 54.7 +1.5
F26K Sheenjek River 38.73 34 P P 00 13 56.2 +1.6
baz=271,SNR=7.5
G26K Porcupine Rive 38.89 35 P P 00 13 57.5 +1.6
baz=272,SNR=7.9
C27K Jago River 38.90 31 P P 00 13 56.9 +1.0
baz=269,SNR=8.6
SCRK Sand Creek 39.01 40 P P 00 13 56.9 -0.1
SCRK Sand Creek 39.01 40 P P 00 13 57.0 -0.1
baz=276,SNR=6.2
BMRM Bremner River 39.11 44 P P 00 13 58.1 +0.3
BMRM IAmb IAmb 00 14 09.1
comp=Z,12nm,1.2s
J26L Joseph Creek 39.14 39 P P 00 13 58.2 0.0
J26L Joseph Creek 39.14 39 P P 00 13 57.9 -0.2
baz=276
I26K Coal Creek Min 39.25 37 P P 00 13 59.5 +0.7
GLB Gilahina Butte 39.41 44 P P 00 14 01.2 +0.8
GLB IAmb IAmb 00 14 18.1
comp=Z,12nm,1.2s
VRDI Verde Repeater 39.62 44 P P 00 14 03.1 +0.9
VRDI IAmb IAmb 00 14 20.9
comp=Z,14nm,1.3s
M26K Nabesna, AK 39.65 42 P P 00 14 04.1 +1.8
M26K IAmb IAmb 00 14 09.5
comp=Z,9.4nm,1.3s
M26K Nabesna, AK 39.65 42 P P 00 14 04.2 +1.8
baz=279
E27K Coleen River 39.68 33 P P 00 14 04.0 +1.6
baz=273
G27K Doyon Strip 39.74 35 P P 00 14 04.5 +1.5
baz=274
H27K Steamboat Moun 39.84 36 P P 00 14 05.4 +1.6
baz=275
K27K Chicken 39.84 39 IAmb IAmb 00 14 05.6
comp=Z,6.3nm,0.8s
K27K Chicken 39.84 39 P P 00 14 04.9 +1.1
baz=277
I27K Kandik River 39.86 37 P P 00 14 06.0 +2.0
baz=276
L27K Beaver Creek, 40.08 41 P P 00 14 07.3 +1.5
L27K IAmb IAmb 00 14 08.9
comp=Z,4.9nm,0.8s
L27K Beaver Creek, 40.08 41 P P 00 14 07.4 +1.5
baz=279,SNR=7.2
BCAR Beaver Creek A 40.10 41 P P 00 14 07.4 +1.4
EGAK Eagle 40.14 38 P P 00 14 06.4 +0.2
EGAK IAmb IAmb 00 14 07.2
comp=Z,5.6nm,0.5s
M27K Edge Creek, AK 40.17 42 P P 00 14 08.0 +1.3
M27K Edge Creek, AK 40.17 42 P P 00 14 08.2 +1.5
baz=280
I29M Ogilvie Camp, 41.26 37 P P 00 14 16.9 +1.5
I29M IAmb IAmb 00 14 17.2
comp=Z,6.8nm,0.7s
I29M Ogilvie Camp, 41.26 37 P P 00 14 16.6 +1.2
baz=279
ZALV Zalesovo Beam 41.29 305 P P 00 14 14.4 -1.4
comp=Z,1.0nm,0.5s,baz=59,slow=7.5,SNR=4.5
ZALV PcP PcP 00 16 11.2 +0.2
comp=Z,2.6nm,0.6s,baz=58,slow=2.9,SNR=10
comp=Z,1.0nm,0.5s
M29M Somme Creek 41.72 41 P P 00 14 20.8 +1.5
baz=282
EPYK Eagle Plains 41.75 35 P P 00 14 20.9 +1.5
EPYK IAmb IAmb 00 14 23.6
comp=Z,13nm,1.1s
EPYK Eagle Plains 41.75 35 P P 00 14 20.8 +1.4
baz=279
GOMU GeErMu 42.34 276 P P 00 14 25.9 +0.9
GOMU pmax pmax
comp=Z,6.0nm,0.7s
GOMU pmax pmax
comp=Z,66nm,4.3s
HYT Haines Junctio 42.53 44 P P 00 14 27.9 +2.0
HYT IAmb IAmb 00 14 29.1
comp=Z,6.9nm,0.9s
HYT Haines Junctio 42.53 44 P P 00 14 28.3 +2.4
baz=285
INK Inuvik 42.66 32 P P 00 14 26.7 +0.1
comp=Z,2.6nm,0.3s,baz=282,slow=13,SNR=4.8
comp=Z,2.6nm,0.3s
INK Inuvik 42.66 32 P P 00 14 27.8 +1.2
baz=280
P29M Windy Craggy 42.73 45 P P 00 14 29.3 +1.9
baz=286
P30M Million Dollar 42.98 44 P P 00 14 32.0 +2.6
baz=286
O30N Mendenhall 43.22 43 P P 00 14 32.8 +1.5
baz=286
PLBC Pleasant Camp 43.45 45 P P 00 14 35.4 +2.3
baz=287
M31M Drury Creek, Y 43.62 41 P P 00 14 36.4 +1.9
baz=286
FARO Faro, Yukon 44.09 41 P P 00 14 39.7 +1.5
P33M Teslin, Yukon 44.93 43 P P 00 14 46.8 +1.8
P33M Teslin, Yukon 44.93 43 P P 00 14 46.8 +1.8
baz=289
MK31 Makanchi Array 45.48 296 P P 00 14 49.0 -0.4
MK31 Makanchi Array 45.48 296 *i* P P 00 14 48.8 -0.6
MKAR Makanchi Array 45.48 296 P P 00 14 49.5 0.0
comp=Z,3.7nm,0.9s,baz=64,slow=7.5,SNR=16
MKAR PcP PcP 00 16 25.6 +0.3
comp=Z,0.8nm,0.5s,baz=223,slow=2.6,SNR=6.1
MKAR ScP ScP 00 20 02.0 -0.1
comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=3.7
comp=Z,3.7nm,0.9s
MKAR Makanchi Array 45.48 296 P P 00 14 49.1 -0.3
MAKZ Makanchi 45.66 297 P P 00 14 51.0 +0.2
MAKZ Makanchi 45.66 297 P P 00 14 51.0 +0.2
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
C36M Paulatuk 45.76 30 P P 00 14 52.2 +0.9
KURK Kurchatov 46.00 303 P P 00 14 52.6 -0.7
KURK Kurchatov 46.00 303 *i* P P 00 14 52.7 -0.7
KURK pmax pmax
comp=Z,5.0nm,0.7s
KURK Kurchatov 46.00 303 *e*P P 00 14 52.7 -0.7
R33M Jennings River 46.09 44 P P 00 14 56.6 +2.4
baz=291
DLBC Dease Lake 46.89 45 P P 00 15 02.6 +2.3
baz=292
LSA Lhasa 48.58 271 P P 00 15 16.8 +2.6
LSA IAmb IAmb 00 15 17.4
comp=Z,10nm,0.6s
LSA Lhasa 48.58 271 P P 00 15 16.8 +2.6
LSA pmax pmax
comp=Z,10.0nm,0.6s
EUNU Eureka 49.57 11 P P 00 15 20.9 +0.4
BRVK Borovoye 49.65 309 P P 00 15 20.7 -0.7
BRVK Borovoye 49.65 309 *i* P P 00 15 20.7 -0.7
BRVK pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 49.65 309 *e*P P 00 15 20.7 -0.7
CMAR Chiang Mai Arr 50.70 254 P P 00 15 31.6 +1.9
comp=Z,1.1nm,0.4s,baz=37,slow=6.7,SNR=5.7
comp=Z,1.1nm,0.4s
RES Resolute Bay 51.48 18 P P 00 15 35.1 +0.3
RES IAmb IAmb 00 15 35.7
comp=Z,14nm,1.1s
RES Resolute Bay 51.48 18 P P 00 15 35.1 +0.3
RES pmax pmax
comp=Z,14nm,1.1s
BOOM Boomskoye usch 51.52 294 P P 00 15 36.5 +0.7
BOOM IAmb IAmb 00 15 37.4
comp=Z,8.4nm,1.2s
BOOM Boomskoye usch 51.52 294 P P 00 15 36.5 +0.7
BOOM pmax pmax
comp=Z,8.0nm,1.2s
YKA Yellowknife Ar 52.02 36 P P 00 15 39.5 +0.6
comp=Z,2.1nm,0.5s,baz=298,slow=6.9,SNR=11
comp=Z,2.1nm,0.5s
AAK Ala-Archa 52.35 295 *i* P P 00 15 42.9 +1.0
AAK pmax pmax
comp=Z,3.0nm,0.9s
AAK Ala-Archa 52.35 295 *e*P P 00 15 42.9 +1.0
TAPN Taplejung 52.40 272 *e*P P 00 15 44.2 +1.5
comp=Z,19nm,0.4s
KSH Kashi 53.12 291 P P 00 15 52.2 +4.7
KSH pmax pmax
comp=Z,5.0nm,0.6s
JIRN Jiri 53.26 273 *e*P P 00 15 50.6 +1.6
RAMN Ramite 53.42 272 *e*P P 00 15 51.3 +1.2
comp=Z,64nm,0.5s
KKN Kakani 53.80 274 *e*P P 00 15 54.0 +1.2
PKI Pulchoki 53.85 273 *e*P P 00 15 54.3 +1.0
PKIN Phulchoki 53.85 273 *e*P P 00 15 54.4 +1.2
comp=Z,19nm,0.5s
ARU Arti 53.94 317 P P 00 15 52.0 -1.0
ARU IAmb IAmb 00 15 53.4
comp=Z,9.7nm,0.7s
ARU Arti 53.94 317 *c i* P P 00 15 51.8 -1.3
ARU 00 17 51.1
ARU S S 00 23 16.4 +1.2
ARU SS SS 00 26 52.8 -5.2
ARU pmax pmax
comp=Z,10.0nm,0.7s
ARU Arti 53.94 317 *e*P P 00 15 51.8 -1.3
DMN Daman 54.03 274 *e*P P 00 15 56.1 +1.6
comp=Z,35nm,0.5s
GKN Gorkha 54.11 274 *e*P P 00 15 56.3 +1.4
comp=Z,39nm,0.5s
DANN Dangsing 54.49 275 *e*P P 00 15 59.4 +1.5
comp=Z,66nm,0.6s
LSH Leshukonskoye 54.57 330 *e*P P 00 15 55.8 -1.7
comp=Z,28nm,1.4s
BTK Batken 56.08 294 IAmb IAmb 00 16 10.5
comp=Z,3.9nm,0.7s
LVZ Lovozero 56.19 336 P P 00 16 08.6 -0.4
LVZ Lovozero 56.19 336 P P 00 16 08.6 -0.4
LVZ pmax pmax
comp=Z,11nm,0.8s
PRGR Permogore 56.53 326 *e*P P 00 16 09.9 -1.6
PRGR Permogore 56.53 326 *e*P P 00 16 11.0 -0.5
KIRV Kirov 56.84 322 *i* P P 00 16 13.5 -0.2
KEV Kevo 56.87 340 P P 00 16 13.4 -0.4
KEV IAmb IAmb 00 16 30.1
comp=Z,10nm,1.0s
KEV Kevo 56.87 340 P P 00 16 13.4 -0.4
KEV pmax pmax
comp=Z,11nm,1.0s
GAR Garm 57.01 294 P P 00 16 16.3 +0.9
ABKAR Akbulak array 57.18 309 P P 00 16 15.8 -0.5
ABKAR Akbulak array 57.18 309 IAmb IAmb 00 16 16.4
comp=Z,7.4nm,1.2s
ARA0 ARCESS Array S 57.39 340 *e*P P 00 16 17.0 -0.5
ARCES ARCESS Array B 57.39 340 P P 00 16 16.8 -0.7
comp=Z,5.6nm,0.8s,baz=68,slow=6.7,SNR=20
ARCES PcP PcP 00 17 10.5 +1.1
comp=Z,1.8nm,0.8s,baz=54,slow=6.2,SNR=3.5
comp=Z,5.6nm,0.8s
ARCES ARCESS Array B 57.39 340 P P 00 16 17.1 -0.4
ARCES ARCESS Array B 57.39 340 P P 00 16 17.1 -0.4
ARCES pmax pmax
comp=Z,3.0nm,1.0s
JETT Jettan, Norway 58.53 342 *e*P P 00 16 25.4 -0.1
JETT IAmb IAmb 00 16 26.0
comp=Z,13nm,0.6s
TRO Tromso 58.78 342 *e*P P 00 16 26.4 -0.7
TRO IAmb IAmb 00 16 27.6
comp=Z,13nm,0.7s
KLMR Klimovskoe 59.31 328 *e*P P 00 16 26.6 -4.3
KLMR pmax pmax
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 59.31 328 *e*P P 00 16 26.3 -4.6
comp=Z,36nm,2.4s
KLMR Klimovskoe 59.31 328 *e*P P 00 16 26.6 -4.3
KLMR AMP 00 16 30.8
comp=Z,7.0nm,1.0s
SUMG Summit 60.92 3 P P 00 16 42.1 -0.1
SUMG Summit 60.92 3 P P 00 16 42.1 -0.1
SUMG pmax pmax
comp=Z,26nm,0.9s
SUMG Summit 60.92 3 *i* P P 00 16 42.0 -0.1
SUMG IAmb IAmb 00 16 43.0
comp=Z,16nm,0.8s
STEI Steigen 60.95 342 *e*P P 00 16 40.6 -1.3
STEI IAmb IAmb 00 16 41.4
comp=Z,14nm,1.0s
PLID Pearl Lake 61.12 54 P P 00 16 44.8 +1.1
FAUS Fauske 61.40 342 *e*P P 00 16 44.0 -0.9
MOR8 Moi Rana 62.61 342 *e*P P 00 16 50.9 -2.1
MOR8 IAmb IAmb 00 16 53.1
comp=Z,272nm,2.4s
BOZ Bozeman (W) 63.19 51 P P 00 16 58.6 +1.2
BOZ IAmb IAmb 00 16 59.5
comp=Z,1.9nm,0.6s
BOZ Bozeman (W) 63.19 51 P P 00 16 58.6 +1.2
BOZ pmax pmax
comp=Z,2.0nm,0.6s
FIA1 FINESS Array S 63.40 334 P P 00 16 57.3 -1.0
FIA0 FINESS Array S 63.41 334 P P 00 16 57.6 -0.7
FIA0 FINESS Array S 63.41 334 P P 00 16 57.6 -0.7
FINES FINESS Array B 63.41 334 P P 00 16 56.9 -1.4
comp=Z,3.4nm,0.3s,baz=34,slow=7.2,SNR=54
FINES PcP PcP 00 17 33.5 -0.2
comp=Z,5.7nm,1.0s,baz=56,slow=3.5,SNR=1.9
comp=Z,3.4nm,0.3s
FINES FINESS Array B 63.41 334 P P 00 16 57.4 -0.9
FINES FINESS Array B 63.41 334 P P 00 16 57.4 -0.9
NVAR Mina Array Bea 63.98 61 P P 00 17 03.2 +0.4
comp=Z,0.2nm,0.5s,baz=294,slow=5.6,SNR=2.0
comp=Z,0.2nm,0.5s
ICESG Greenland Ices 64.34 4 *i* P P 00 17 03.8 -1.0
ICESG IAmb IAmb 00 17 05.4
comp=Z,23nm,0.7s
OBN Obninsk 64.43 324 *e*P P 00 17 04.7 -0.4
OBN *e**PP pP 00 17 44.4 +1.1
OBN *e**SP sP 00 18 02.5 +1.5
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 64.43 324 *e*P P 00 17 04.7 -0.4
NSS Namsos 64.55 342 *e*P P 00 17 04.7 -1.0
RLMT Red Lodge 64.77 50 P P 00 17 08.6 +0.8
MOOW Moose Ponds 64.88 52 P P 00 17 09.7 +1.2
VRH Novokhopyorsk 64.99 319 *e*P P 00 17 07.9 -0.9
VRH pmax pmax
comp=Z,10.0nm,0.6s
GEYT Alibeck 65.19 300 P P 00 17 10.9 +0.6
comp=Z,4.9nm,0.5s,baz=62,slow=11,SNR=8.0
comp=Z,4.9nm,0.5s
GEYT Alibeck 65.19 300 P P 00 17 10.8 +0.4
GEYT IAmb IAmb 00 17 12.1
comp=Z,5.2nm,0.7s
GYA0B ALIBECK ARRAY 65.19 300 P P 00 17 10.6 +0.2
GYA0B IAmb IAmb 00 17 12.0
comp=Z,4.6nm,0.7s
LPSR Galich'ya Gora 65.24 321 *e*P P 00 17 09.4 -1.0
LPSR pmax pmax
comp=Z,20nm,0.6s
VORR Voronezh 65.78 321 *e*P P 00 17 15.3 +1.4
VORR pmax pmax
comp=Z,10.0nm,0.6s
S11A Rachel 66.03 60 P P 00 17 14.3 -1.6
VSR Storozhevoye 66.12 320 *e*P P 00 17 14.6 -1.5
VSR pmax pmax
comp=Z,10.0nm,0.5s
PD31 Pinedale Array 66.18 52 P P 00 17 17.9 +1.0
PDAR Pinedale Array 66.18 52 P P 00 17 17.4 +0.5
comp=Z,0.8nm,0.6s,baz=258,slow=2.6,SNR=5.3
comp=Z,0.8nm,0.6s
DY2G Dye2 66.48 7 *i* P P 00 17 17.4 -0.9
DY2G IAmb IAmb 00 17 18.7
comp=Z,9.8nm,0.6s
MVU Marysvale 67.54 57 P P 00 17 28.5 +2.9
NC303 NORSAR Array S 67.57 340 P P 00 17 24.5 -0.6
NC303 NORSAR Array S 67.57 340 *e*P P 00 17 24.5 -0.6
NC405 NORSAR Array S 67.59 340 P P 00 17 24.7 -0.5
RDMU Red Mountain 67.65 54 P P 00 17 27.5 +1.3
RDMU IAmb IAmb 00 17 28.3
comp=Z,4.0nm,0.9s
NC204 NORSAR Array S 67.67 340 P P 00 17 25.1 -0.7
WB0 Warramunga Arr 67.70 197 P P 00 17 27.5 +1.2
WB0 IAmb IAmb 00 17 37.7
comp=Z,12nm,1.4s
NB201 NORSAR Array S 67.74 340 P P 00 17 25.5 -0.7
NB2 NORSAR Subarra 67.77 340 P P 00 17 25.5 -0.9
comp=Z,2.8nm,0.3s,baz=29,slow=6.5
NB2 NORSAR Subarra 67.77 340 P P 00 17 25.5 -0.9
baz=29,slow=6.5
NOA NORSAR Array B 67.77 340 P P 00 17 25.5 -0.9
comp=Z,3.2nm,0.3s,baz=29,slow=6.6,SNR=41
comp=Z,3.2nm,0.3s
WR0 Warramunga Arr 67.86 196 P P 00 17 27.9 +0.6
WR0 IAmb IAmb 00 18 09.1
comp=Z,5.9nm,1.1s
NBO00 NORSAR Array S 67.88 340 P P 00 17 26.6 -0.4
WB2 Warramunga Arr 67.88 197 P P 00 17 27.9 +0.5
WB2 IAmb IAmb 00 17 44.0
comp=Z,9.9nm,1.4s
WRA Warramunga Arr 67.88 197 P P 00 17 27.5 +0.1
comp=Z,1.0nm,0.9s,baz=17,slow=6.7,SNR=6.7
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 67.88 197 P P 00 17 27.8 +0.3
WRA Warramunga Arr 67.88 197 *e*P P 00 17 27.0 -0.4
WRA pmax pmax
comp=Z,1.0nm,1.0s
NC602 NORSAR Array S 67.96 340 P P 00 17 26.6 -0.9
NORES NORESS Array B 67.96 340 P P 00 17 26.3 -1.2
NAO01 NORSAR Array S 68.02 340 P P 00 17 26.8 -1.1
BORG Borgarnes 68.78 356 P P 00 17 34.4 +1.9
BORG Borgarnes 68.78 356 P P 00 17 34.4 +1.9
BORG pmax pmax
comp=Z,32nm,1.4s
PABE Paberze 68.79 331 P P 00 17 32.1 -0.5
KIV Kislovodsk 69.65 313 *e*P P 00 17 38.2 -0.1
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 69.65 313 *e*P P 00 17 38.2 -0.1
KBZ Khabaz 69.70 313 P P 00 17 38.9 +0.4
comp=Z,2.9nm,0.8s,baz=258,slow=1.4,SNR=8.2
comp=Z,2.9nm,0.8s
KBZ Khabaz 69.70 313 *i* P P 00 17 38.6 +0.1
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 69.70 313 *e*P P 00 17 38.6 +0.1
AKASG Malin Array Be 70.68 325 P P 00 17 43.1 -1.3
comp=Z,6.0nm,0.4s,baz=38,slow=6.5,SNR=23
comp=Z,6.0nm,0.4s
AKASG Malin Array Be 70.68 325 P P 00 17 44.5 +0.1
AKBB Malin Array Si 70.68 325 P P 00 17 43.6 -0.7
AKBB Malin Array Si 70.68 325 P P 00 17 43.6 -0.7
AKBB pmax pmax
comp=Z,9.0nm,0.5s
IVI Ivigtut 71.44 9 P P 00 17 50.9 +2.2
ASAR Alice Springs 71.59 196 P P 00 17 51.2 +1.1
comp=Z,1.1nm,0.7s,baz=14,slow=6.1,SNR=8.1
comp=Z,1.1nm,0.7s
ASAR Alice Springs 71.59 196 P P 00 17 51.9 +1.8
NRS Narsarsuaq 71.78 8 P P 00 17 48.5 -2.2
NRS Narsarsuaq 71.78 8 P P 00 17 48.5 -2.2
NRS pmax pmax
comp=Z,22nm,0.5s
ECSD EROS Data Cent 72.18 45 P P 00 17 53.4 -0.1
SORM Soroca 73.05 324 ⇓P P 00 17 57.1 -1.4
SORM Soroca 73.05 324 P P 00 17 57.1 -1.4
MILM Milestii Mici 73.83 323 ⇑P P 00 18 01.6 -1.4
MILM Milestii Mici 73.83 323 P P 00 18 01.6 -1.4
SCHQ Schefferville 74.06 21 P P 00 18 04.2 -0.1
comp=Z,2.8nm,0.4s,baz=352,slow=7.1,SNR=12
comp=Z,2.8nm,0.4s
SCHQ Schefferville 74.06 21 P P 00 18 04.5 +0.2
VASR Vaslui 74.47 323 ⇑P P 00 18 05.7 -1.1
OJC Ojcow 74.58 330 P P 00 18 06.6 -0.8
OJC IAmb IAmb 00 18 08.5
comp=Z,7.2nm,1.0s
OJC Ojcow 74.58 330 P P 00 18 06.6 -0.8
OJC pmax pmax
comp=Z,7.0nm,1.0s
BUR08 Bucovina Ar. S 74.71 325 P P 00 18 08.9 +0.5
BUR08 IAmb IAmb 00 18 10.0
comp=Z,6.3nm,0.8s
BURAR Bucovina Array 74.73 325 ⇑P P 00 18 08.5 +0.1
BURAR Bucovina Array 74.73 325 P P 00 18 08.6 +0.1
BURAR IAmb IAmb 00 18 09.9
comp=Z,9.1nm,0.8s
BURAR Bucovina Array 74.73 325 P P 00 18 08.4 +0.1
KOLS Kolonicke sedl 74.77 328 *e*P P 00 18 09.3 +0.8
KOLS pmax pmax
comp=Z,7.0nm,0.9s
KOLS Kolonicke sedl 74.77 328 *e*P P 00 18 09.3 +0.8
BIZ Bicaz 74.92 324 ⇑P P 00 18 08.4 -1.1
VLDR Vladesti 74.99 322 ⇑P P 00 18 09.6 -0.2
TESR Tescani 75.05 324 ⇑P P 00 18 10.2 0.0
CRVS Cervenica-Dubn 75.09 328 *e*P P 00 18 11.4 +1.0
CRVS Cervenica-Dubn 75.09 328 *e*P P 00 18 11.4 +1.0
UOSS Minazif 75.19 291 P P 00 18 11.8 +0.5
UOSS IAmb IAmb 00 18 38.5
comp=Z,17nm,1.2s
TLCR 75.20 322 ⇑P P 00 18 10.0 -1.1
TLCR 75.20 322 P P 00 18 09.9 -1.1
OSTC Ostas 75.50 332 *e*P P 00 18 12.8 +0.1
LANS Liptovska Anna 75.60 329 *e*P P 00 18 14.1 +0.8
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 75.60 329 *e*P P 00 18 14.1 +0.8
UPC Upice 75.61 332 *e*P P 00 18 14.2 +0.9
UPC Upice 75.61 332 *e*P P 00 18 14.2 +0.9
TPGR Topolog 75.64 322 ⇓P P 00 18 12.4 -1.1
DPC Dobruska-Polom 75.64 332 *e*P P 00 18 13.4 -0.1
DPC Dobruska-Polom 75.64 332 *e*P P 00 18 13.4 -0.1

KRLC Kraliky 75.73 331 eP P 00 18 13.6 -0.4
KRLC Kraliky 75.73 331 eP P 00 18 13.6 -0.4
MORC Moravsky Berou 75.73 331 ⇑P P 00 18 12.6 -1.4
MORC Moravsky Berou 75.73 331 P P 00 18 14.2 +0.3
MORC IAmb IAmb 00 18 15.6
comp=Z,7.7nm,0.9s
MORC Moravsky Berou 75.73 331 P P 00 18 14.3 +0.3
MORC pmax pmax
comp=Z,8.0nm,0.9s
MORC Moravsky Berou 75.73 331 eP P 00 18 14.4 +0.4
COVR Voineasa-Covas 75.77 324 ⇑P P 00 18 13.9 -0.4
CLL Collm 75.85 334 P P 00 18 14.7 +0.1
CLL IAmb IAmb 00 18 15.4
comp=Z,8.1nm,1.0s
CLL Collm 75.85 334 P P 00 18 14.7 +0.1
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 75.85 334 i P P 00 18 14.3 -0.3
comp=Z,9.0nm,1.0s
EKA Eskdalemuir Ar 76.03 345 P P 00 18 15.0 -0.5
ESK Eskdalemuir 76.05 345 P P 00 18 15.6 -0.1
ESK Eskdalemuir 76.05 345 P P 00 18 15.6 -0.1
ESK pmax pmax
comp=Z,24nm,1.2s
MLR Muntele Rosu 76.16 323 P P 00 18 17.9 +1.2
MLR IAmb IAmb 00 18 18.9
comp=Z,4.4nm,0.6s
MLR Muntele Rosu 76.16 323 P P 00 18 17.9 +1.2
MLR pmax pmax
comp=Z,4.0nm,0.6s
VYHS Vyhne 76.38 329 eP P 00 18 17.8 +0.1
VYHS Vyhne 76.38 329 eP P 00 18 17.8 +0.1
DRGR 76.38 326 ⇓P P 00 18 17.2 -0.7
DRGR 76.38 326 P P 00 18 17.1 -0.7
VRAC Vranov 76.45 331 ⇓P P 00 18 18.0 -0.1
VRAC Vranov 76.45 331 P P 00 18 17.9 -0.1
VRAC Vranov 76.45 331 eP P 00 18 17.8 -0.3
JAVC Velka Javorina 76.47 330 eP P 00 18 20.1 +1.9
KAN01 Argonia South 76.52 50 P P 00 18 20.7 +2.0
KAN01 IAmb IAmb 00 18 23.3
comp=Z,15nm,1.1s
PRU Pruhonice 76.53 333 eP P 00 18 18.5 +0.1
PRU Pruhonice 76.53 333 eP P 00 18 18.5 +0.1
VOIR 76.57 324 ⇑P P 00 18 19.1 +0.2
VOIR 76.57 324 P P 00 18 19.1 +0.2
KRUC Moravsky 76.73 331 eP P 00 18 19.9 +0.3
ARR Arges 76.80 324 ⇓P P 00 18 20.1 0.0
SMOL Smolenice 76.85 330 eP P 00 18 21.8 +1.5
SRO2 Moca 77.16 329 eP P 00 18 22.9 +0.9
SRO2 Moca 77.16 329 eP P 00 18 22.9 +0.9
SIRR Siria 77.22 326 ⇑P P 00 18 22.0 -0.4
BRTR Keskin Array B 77.29 315 P P 00 18 23.0 -0.1
comp=Z,1.9nm,0.8s,baz=71,slow=4.0,SNR=11
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 77.29 315 P P 00 18 24.1 +1.1
BRTR Keskin Array B 77.29 315 eP P 00 18 24.2 +1.1
BRTR pmax pmax
comp=Z,2.0nm,0.8s
GZR Gura Zlata 77.52 325 ⇑P P 00 18 23.9 -0.3
KHC Kasperske Hory 77.58 333 P P 00 18 24.6 +0.2
KHC Kasperske Hory 77.58 333 eP P 00 18 24.0 -0.4
KHC Kasperske Hory 77.58 333 eP P 00 18 24.0 -0.4
CKRC Cesky Krumlov 77.62 332 eP P 00 18 24.6 0.0
BZS Buzias 77.78 326 ⇓P P 00 18 25.0 -0.6
BZS Buzias 77.78 326 P P 00 18 24.9 -0.6
GEC2 GERESS Array S 77.79 333 P P 00 18 25.6 -0.1
GERES GERESS Array B 77.79 333 P P 00 18 25.2 -0.4
comp=Z,0.6nm,0.4s,baz=44,slow=5.2,SNR=12
comp=Z,0.6nm,0.4s
GERES GERESS Array B 77.79 333 P P 00 18 25.1 -0.6
GRA1 Grafenberg Arr 77.81 334 P P 00 18 25.9 +0.2
GRA1 IAmb IAmb 00 18 38.1
comp=Z,6.9nm,1.0s
GRF Grafenberg Arr 77.81 334 P P 00 18 25.9 +0.2
GRF pmax pmax
comp=Z,7.0nm,1.0s
GRFO Grafenberg 77.81 334 P P 00 18 25.9 +0.3
GRFO IAmb IAmb 00 18 38.1
comp=Z,8.1nm,1.1s
GRFO Grafenberg 77.81 334 P P 00 18 25.9 +0.3
GRFO pmax pmax
comp=Z,8.0nm,1.1s
CONA Conrad Observa 77.89 331 eP P 00 18 26.8 +0.6
comp=Z,0.3nm,0.5s
RONA Rosalia, Austr 77.94 330 eP P 00 18 27.0 +0.6
comp=Z,2.5nm,0.6s
MOA Molln 78.48 332 eP P 00 18 29.5 +0.2
comp=Z,2.0nm,0.7s
DSB Dublin 78.58 346 P P 00 18 29.8 0.0
U38A Gravette 78.81 48 P P 00 18 30.6 -0.8
BIOA Bad Ischl, Aus 78.83 332 eP P 00 18 32.3 +1.0
comp=Z,2.3nm,0.5s
TX31 Lajitas Ar. Si 79.02 59 P P 00 18 33.6 +0.9
TX31 IAmb IAmb 00 19 16.1
comp=Z,9.7nm,1.3s
TX32 Lajitas Array 79.02 59 P P 00 18 33.4 +0.7
TXAR Lajitas Array 79.02 59 P P 00 18 33.3 +0.6
comp=Z,0.7nm,0.7s,baz=296,slow=3.8,SNR=12
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 79.02 59 P P 00 18 33.6 +0.9
SOKA Soboth 79.25 331 eP P 00 18 34.6 +0.9
comp=Z,3.9nm,0.9s
KBA Koelnbreinsper 79.46 332 eP P 00 18 35.4 +0.4
comp=Z,5.1nm,0.6s
OBKA Obir 79.56 331 eP P 00 18 36.6 +1.2
comp=Z,5.1nm,1.0s
LMQ La Malbaie 79.60 27 P P 00 18 35.8 +0.4
LMQ IAmb IAmb 00 19 14.1
comp=Z,10nm,1.1s
DIVS Divibare 79.68 326 P P 00 18 35.8 -0.3
WATA Walderalm 79.80 333 eP P 00 18 37.0 +0.3
comp=Z,5.0nm,0.5s
WTTA Wattenberg 79.84 333 eP P 00 18 37.2 +0.2
comp=Z,10nm,0.6s
ALN Alexandroupoli 79.86 321 P P 00 18 37.6 +0.7
ALN Alexandroupoli 79.86 321 P P 00 18 37.6 +0.7
ALN pmax pmax
comp=Z,27nm,1.4s
BFO Black Forest 79.87 336 P P 00 18 38.2 +1.3
BFO IAmb IAmb 00 18 40.9
comp=Z,6.7nm,0.9s
BFO Black Forest 79.87 336 P P 00 18 38.3 +1.3
BFO pmax pmax
comp=Z,7.0nm,0.9s
RDO Rodhopi 79.88 321 P P 00 18 37.4 +0.4
RDO IAmb IAmb 00 19 18.8
comp=Z,25nm,1.5s
RETA Reutte 79.91 334 eP P 00 18 39.4 +2.2
comp=Z,6.6nm,1.4s
MOTA Moosalm 79.93 333 eP P 00 18 37.4 0.0
comp=Z,7.3nm,1.0s
PRED Cave del Predi 79.95 331 P P 00 18 37.0 -0.5
SQTA Sankt Quirin 80.01 333 eP P 00 18 38.2 +0.4
comp=Z,5.1nm,0.8s
ABTA Abfaltersbach 80.02 332 eP P 00 18 37.6 -0.2
comp=Z,4.2nm,1.3s
CDF Champ du Feu 80.10 336 eP P 00 18 38.0 -0.2
CDF pmax pmax
comp=Z,6.0nm,1.0s
CLUD Cludinico 80.16 332 P P 00 18 38.4 -0.1
CLUD IAmb IAmb 00 18 39.0
comp=Z,5.9nm,1.1s
ECH Echery 80.31 336 P P 00 18 39.2 -0.1
ECH Echery 80.31 336 P P 00 18 39.2 -0.1
ECH pmax pmax
comp=Z,4.0nm,0.8s
FETA Feichten 80.34 333 eP P 00 18 40.3 +0.7
comp=Z,4.2nm,1.0s
DAVA Damuels 80.36 334 eP P 00 18 40.2 +0.5
comp=Z,5.2nm,0.7s
STAL STALIGIAL 80.39 332 P P 00 18 39.3 -0.4
CIMO Cimolais 80.43 332 P P 00 18 39.3 -0.7
CIMO IAmb IAmb 00 18 52.6
comp=Z,5.1nm,1.3s
E62A Clayton Lake 80.67 27 P P 00 18 41.2 0.0
E62A IAmb IAmb 00 19 18.8
comp=Z,6.2nm,1.0s
HAU Haudompre 80.72 337 eP P 00 18 41.1 -0.4
HAU pmax pmax
comp=Z,3.0nm,0.6s
M52A Chesterland 80.78 37 P P 00 18 43.0 +1.1
CTI Castel Tesino 80.92 332 P P 00 18 41.4 -1.2
CTI IAmb IAmb 00 18 46.6
comp=Z,6.8nm,1.3s
CTI Castel Tesino 80.92 332 P P 00 18 41.4 -1.2
CTI pmax pmax
comp=Z,7.0nm,1.3s
RABC Rab 81.02 330 i P P 00 18 42.2 -0.8
KIJV Kijevo 81.09 328 i P P 00 18 43.1 -0.4
BATG Bathurst New B 81.11 24 P P 00 18 43.8 +0.3
BATG IAmb IAmb 00 19 20.2
comp=Z,22nm,1.4s
CSS Mathiatis 81.16 312 P P 00 18 44.2 +0.2
CSS IAmb IAmb 00 18 50.5
comp=Z,6.9nm,0.8s
KAAM Kaadhehdhoo 81.16 261 P P 00 18 43.3 -0.9
T45A Paducah 81.21 44 P P 00 18 43.6 -0.6
RICI Ricice 81.27 328 i P P 00 18 43.1 -1.3
VIRC Vir 81.33 329 i P P 00 18 43.1 -1.5
PDG Podgorica 81.38 326 P P 00 18 44.6 -0.3
PDG IAmb IAmb 00 18 45.5
comp=Z,9.2nm,0.6s
ELL Elmali 81.44 316 P P 00 18 45.8 +0.2
ELL Elmali 81.44 316 P P 00 18 45.8 +0.2
ELL pmax pmax
comp=Z,27nm,0.9s
MORI Morici 81.47 329 i P P 00 18 43.4 -2.0
MAKA Makarska 81.49 328 i P P 00 18 43.6 -1.9
TEOL Teolo 81.52 332 P P 00 18 45.5 -0.2
TEOL IAmb IAmb 00 18 47.5
comp=Z,6.6nm,0.7s
DUGI Dugi Otok 81.59 329 i P P 00 18 44.9 -1.1
STON Ston 81.60 327 i P P 00 18 43.3 -2.8
FLN La Foliniere 81.72 341 eP P 00 18 46.4 -0.2
FLN pmax pmax
comp=Z,63nm,1.8s
CLF Chambon-Foret 81.77 339 P P 00 18 47.9 +1.0
LDF La Druitiere 81.79 341 eP P 00 18 46.7 -0.3
LDF pmax pmax
comp=Z,25nm,1.4s
M55A Ridgway 81.89 35 P P 00 18 47.6 -0.1
M55A IAmb IAmb 00 19 28.4
comp=Z,11nm,1.4s
SENIN Lac Senin/Sane 81.95 335 P P 00 18 49.7 +1.5
SENIN IAmb IAmb 00 18 50.8
comp=Z,6.6nm,0.7s
TIR Tirane 82.06 325 P P 00 18 49.0 +0.4
TIR Tirane 82.06 325 P P 00 18 49.0 +0.4
TIR pmax pmax
comp=Z,23nm,0.7s
LOR Lormes 82.06 338 eP P 00 18 48.2 -0.3
LOR pmax pmax
comp=Z,16nm,1.1s
CABF La Chapelle 82.07 336 eP P 00 18 49.0 +0.3
CABF pmax pmax
comp=Z,5.0nm,0.8s
GRR Gorron 82.15 341 eP P 00 18 48.9 0.0
GRR pmax pmax
comp=Z,12nm,0.6s
KBN Korca 82.31 324 P P 00 18 49.7 -0.3
KBN IAmb IAmb 00 18 57.2
comp=Z,8.2nm,1.0s
KBN Korca 82.31 324 P P 00 18 49.7 -0.3
KBN pmax pmax
comp=Z,8.0nm,1.0s
G65A Princeton 82.55 26 P P 00 18 51.0 -0.1
G65A IAmb IAmb 00 19 10.3
comp=Z,20nm,1.2s
I63A Otisfield 82.62 29 P P 00 18 51.6 +0.2
I63A IAmb IAmb 00 19 00.9
comp=Z,11nm,1.1s
AVF Avril sur Loir 82.64 338 eP P 00 18 51.4 -0.1
AVF pmax pmax
comp=Z,4.0nm,0.4s
SGMF Saint Gilles 82.64 342 eP P 00 18 51.5 0.0
SGMF pmax pmax
comp=Z,46nm,1.2s
SMF Signal de Mont 82.65 338 eP P 00 18 51.5 0.0
SMF pmax pmax
comp=Z,12nm,0.8s
ZCCA Zocca 82.65 332 P P 00 18 53.7 +2.1
ZCCA IAmb IAmb 00 19 09.5
comp=Z,12nm,1.3s
ARG Arkhangelos 82.72 317 P P 00 18 52.5 +0.4
ARG Arkhangelos 82.72 317 P P 00 18 52.5 +0.4
ARG pmax pmax
comp=Z,28nm,1.1s
GHAJ Ghor Haditha 82.84 309 P P 00 18 54.2 +1.5
GHAJ IAmb IAmb 00 18 55.2
comp=Z,7.5nm,0.8s
LPL La Plagne 82.89 335 eP P 00 18 53.4 +0.3
LPL pmax pmax
comp=Z,9.0nm,0.8s
LPG La Plagne 82.90 335 eP P 00 18 53.6 +0.4
LPG pmax pmax
comp=Z,12nm,0.8s
SSPA Standing Stone 82.94 35 P P 00 18 53.5 +0.3
SSPA IAmb IAmb 00 18 53.8
comp=Z,10.0nm,1.4s
RAYN Ar Rayn 82.97 297 P P 00 18 54.9 +1.3
RAYN IAmb IAmb 00 18 55.5
comp=Z,5.2nm,0.7s
RAYN Ar Rayn 82.97 297 P P 00 18 54.9 +1.3
RAYN pmax pmax
comp=Z,5.0nm,0.7s
BGF Bois d'Agland 82.98 338 eP P 00 18 53.7 +0.4
BGF pmax pmax
comp=Z,6.0nm,0.8s
T50A Nancy 83.00 42 P P 00 18 54.3 +0.8
VLC Villacollemand 83.01 332 P P 00 18 54.3 +0.8
VLC IAmb IAmb 00 18 55.9
comp=Z,6.8nm,0.8s
AGG Agios Georgios 83.01 322 P P 00 18 52.9 -0.7
AGG Agios Georgios 83.01 322 P P 00 18 52.9 -0.7
AGG pmax pmax
comp=Z,26nm,1.4s
QUIF Quistinic 83.09 343 eP P 00 18 53.7 -0.1
QUIF pmax pmax
comp=Z,23nm,1.2s
MURB Monte Urbino 83.10 331 P P 00 18 55.4 +1.3
MURB IAmb IAmb 00 18 56.6
comp=Z,12nm,0.9s
MSSA Maissana 83.14 333 P P 00 18 53.8 -0.5
NRCA Norcia 83.28 330 P P 00 18 55.8 +0.9
NRCA IAmb IAmb 00 18 56.3
comp=Z,9.8nm,0.8s
SGRT San Giovanni R 83.29 328 P P 00 18 54.6 -0.4
OSSC Osservatorio P 83.30 332 P P 00 18 55.6 +0.7
OSSC IAmb IAmb 00 18 55.8
comp=Z,4.3nm,0.7s
TCF Toulx Ste Croi 83.40 339 eP P 00 18 56.5 +1.1
TCF pmax pmax
comp=Z,5.0nm,0.8s
MBDF Montbardon 83.60 335 eP P 00 18 56.5 -0.1
MBDF pmax pmax
comp=Z,3.0nm,0.5s
MFF Saint Martin d 83.67 340 eP P 00 18 57.0 +0.2
MFF pmax pmax
comp=Z,13nm,0.6s
ORIF Oris-en-Rattie 83.68 336 eP P 00 18 58.1 +1.1
ORIF pmax pmax
comp=Z,11nm,0.6s
SCTE Santa Cesarea 83.70 325 P P 00 18 55.5 -1.6
KARP Karpathos 83.72 317 P P 00 18 57.4 +0.1
SSB Saint Sauveur 83.72 337 P P 00 18 58.1 +1.0
SSB IAmb IAmb 00 18 58.9
comp=Z,6.1nm,0.6s
SSB Saint Sauveur 83.72 337 P P 00 18 58.1 +1.0
SSB pmax pmax
comp=Z,6.0nm,0.6s
VIVF Saint-Julien-l 84.07 336 eP P 00 18 59.9 +1.0
VIVF pmax pmax
comp=Z,5.0nm,0.7s
PAL Palisades 84.14 32 P P 00 18 57.0 -2.3
PAL IAmb IAmb 00 18 58.0
comp=Z,8.1nm,0.7s
PAL Palisades 84.14 32 P P 00 18 57.0 -2.3
PAL pmax pmax
comp=Z,8.0nm,0.7s
RJF Les Rejaudoux 84.49 339 eP P 00 19 01.6 +0.7
RJF pmax pmax
comp=Z,15nm,1.1s
V52A Sevierville 84.53 41 P P 00 19 01.6 +0.2
V52A IAmb IAmb 00 19 02.1
comp=Z,10nm,1.4s
TKL Tuckaleechee C 84.60 42 P P 00 19 02.9 +1.2
TKL IAmb IAmb 00 19 38.8
comp=Z,10nm,1.4s
TKL Tuckaleechee C 84.60 42 P P 00 19 02.9 +1.2
TKL pmax pmax
comp=Z,10.0nm,1.4s
CAF Calviac 84.70 338 eP P 00 19 02.9 +0.8
CAF pmax pmax
comp=Z,8.0nm,0.7s
ITM Ithomi 84.73 321 P P 00 19 02.3 0.0
CUC Castrocucco 84.80 327 P P 00 19 01.7 -0.9
CUC IAmb IAmb 00 19 02.7
comp=Z,5.2nm,0.7s
Y49A Blount Mountai 84.84 45 P P 00 19 03.0 +0.1
Y49A IAmb IAmb 00 19 36.6
comp=Z,8.9nm,1.3s
PGF Pioggiola 84.90 333 eP P 00 19 02.7 -0.5
PGF pmax pmax
comp=Z,3.0nm,0.6s
LMR La Mourre 84.95 335 eP P 00 19 03.6 +0.4
LMR pmax pmax
comp=Z,4.0nm,0.6s
IDI Anoyia 84.99 318 P P 00 19 02.6 -1.1
MTLF Montolieu 86.14 337 eP P 00 19 10.0 +0.8
MTLF pmax pmax
comp=Z,8.0nm,0.7s
EPF Esparros 86.92 339 eP P 00 19 13.9 +0.9
EPF pmax pmax
comp=Z,2.0nm,0.6s
SJPF Ste Jean 87.22 340 eP P 00 19 17.4 +3.0
SJPF pmax pmax
comp=Z,13nm,1.4s
ETSF Etsaut 87.26 339 eP P 00 19 15.7 +1.0
ETSF pmax pmax
comp=Z,4.0nm,0.6s
KEST Kesra 90.93 329 P P 00 19 31.9 -0.1
comp=Z,4.3nm,0.8s,baz=352,slow=1.2,SNR=6.4
comp=Z,4.3nm,0.8s
ESDC Sonseca Array 91.12 341 P P 00 19 31.4 -1.4
comp=Z,0.5nm,0.7s,baz=360,slow=4.1,SNR=6.5
comp=Z,0.5nm,0.7s
TORD Torodi Ar. Bea 114.28 327 PKP PKiKP 00 25 06.1 -1.0
comp=Z,0.2nm,0.4s,baz=28,slow=2.4,SNR=6.6
DBIC Dimbokro 122.63 331 PKP PKPdf 00 25 21.9 -1.3
comp=Z,3.6nm,0.9s,baz=34,slow=3.6,SNR=1.6
H03N2 Juan Fernandez 140.45 89 T T 03 02 18.1
baz=307,slow=77,SNR=11
H03N1 Juan Fernandez 140.47 89 T T 03 02 19.8
baz=307,slow=77,SNR=9.3
H03N3 Juan Fernandez 140.47 89 T T 03 02 20.2
baz=307,slow=77,SNR=11
BDFB Brasilia 145.40 33 PKPbc PKPdf 00 26 02.5 -2.9
comp=Z,1.9nm,0.4s,baz=94,slow=26,SNR=2.9
PLCA Paso Flores 149.89 94 PKPbc PKPbc 00 26 17.0 -0.1
comp=Z,0.7nm,0.6s,baz=277,slow=8.1,SNR=1.7
CPUP Villa Florida 149.98 57 PKPbc PKPbc 00 26 17.6 0.0
comp=Z,0.5nm,0.4s,baz=63,slow=2.3,SNR=1.8
SNAA Sanae 151.95 197 PKPbc PKPbc 00 26 21.1 +0.1
comp=Z,0.8nm,0.9s,baz=216,slow=3.5,SNR=5.3

IDC ***09*** *00:17:59.4±0.9, 49°.24S×123°.39E, h0km, mb4.1/6, mbtmp4.1/6, MS3.6/15, Error ellipse: s-maj=57.9km s-min=18.3km az=96.0*

NEIC ***09*** *00:18:01.4±1.6, 49°.28S±0°.07×123°.3E±0°.2, h10km±1km, mb4.5/13, Error ellipse: s-maj=27.0km s-min=6.5km az=69.0*

ISC 09 00:18:00.9±0.7, 49°.25S±0°.08×123°.3E±0°.2, h10km, n43, σ0°88/25, mb4.3/9, MS3.6/15, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.87	331	T	T		00 38 05.6	
	baz=156,slow=74,SNR=391							
H01W2	Cape Leeuwin H	15.87	331	T	T		00 38 07.5	
	baz=156,slow=74,SNR=286							
H01W3	Cape Leeuwin H	15.88	331	T	T		00 37 59.2	
	baz=156,slow=74,SNR=445							
NWAO	Narrogin (SRO)	16.94	342	Pn	Pn		00 21 58.1	+0.2
NWAO				IAmb	IAmb		00 22 34.0	
	comp=Z,87nm,1.4s							
CASY	Casey	18.32	197	P	P		00 22 14.9	0.0
BBOO	Buckleboo	18.98	35	P	Pn		00 22 23.5	+0.4
BBOO				IAmb	IAmb		00 22 59.6	
	comp=Z,42nm,1.4s							
MORW	Morawa	20.92	342	P	P		00 22 42.2	-1.3
STKA	Stephens Creek	22.12	45	LR	LR		00 29 44.4	
	comp=Z,135nm,21.7s,baz=207,slow=32							
ASAR	Alice Springs	26.86	22	P	P		00 23 41.0	-0.7
	comp=Z,1.7nm,0.8s,baz=202,slow=8.6,SNR=8.3							
ASAR				LR	LR		00 33 23.8	
	comp=Z,88nm,19.9s,baz=180,slow=34							
	comp=Z,1.7nm,0.8s							
WRA	Warramunga Arr	30.55	21	P	P		00 24 14.0	-0.6
	comp=Z,0.7nm,1.0s,baz=197,slow=9.1,SNR=1.7							
WRA				LR	LR		00 36 08.4	
	comp=Z,92nm,19.2s,baz=76,slow=36							
	comp=Z,0.7nm,1.0s							
WRA	Warramunga Arr	30.55	21	P	P		00 24 15.4	+0.8
WR0	Warramunga Arr	30.58	21	P	P		00 24 14.8	0.0
WR0				IAmb	IAmb		00 24 40.0	
	comp=Z,7.5nm,1.2s							
FITZ	Fitzroy Crossi	31.14	4	LR	LR		00 35 50.7	
	comp=Z,97nm,20.0s,baz=181,slow=34							
VNDA	Vanda	31.91	165	P	P		00 24 25.7	-0.3
	comp=Z,1.4nm,0.9s,baz=310,slow=9.4,SNR=7.1							
VNDA				LR	LR		00 36 16.8	
	comp=Z,186nm,20.2s,baz=320,slow=34							
	comp=Z,1.4nm,0.9s							
VNDA	Vanda	31.91	165	P	P		00 24 26.0	0.0
VNDA				IAmb	IAmb		00 24 27.2	
	comp=Z,6.7nm,1.4s							
RPZ	Rata Peaks	32.87	99	LR	LR		00 34 01.9	
	comp=Z,113nm,20.4s,baz=257,slow=29							
SBA	Scott Base	32.95	164	P	P		00 24 36.7	+1.5
SBA				IAmb	IAmb		00 25 17.1	
	comp=Z,5.6nm,1.4s							
LTZ	Lake Taylor	34.09	98	P	P		00 24 43.0	-2.4
BATI	Baumata	38.92	1	LR	LR		00 43 17.9	
	comp=Z,228nm,18.0s,baz=200,slow=39							
QSPA	South Pole Qui	40.87	180	P	P		00 25 42.5	-0.2
	comp=Z,3.6nm,1.0s,baz=329,slow=5.7,SNR=8.1							
QSPA				LR	LR		00 42 01.5	
	comp=Z,147nm,18.6s,baz=345,slow=35							
	comp=Z,3.6nm,1.0s							
QSPA	South Pole Qui	40.87	180	P	P		00 25 42.9	+0.2
KOUNC	Koumac, New Ca	43.33	64	P	P		00 26 05.1	+2.0
DZM	Mont Dzumac	43.45	67	LR	LR		00 41 36.8	
	comp=Z,84nm,19.4s,baz=180,slow=33							
KAPI	Kappang	44.19	355	LR	LR		00 46 05.8	
	comp=Z,36nm,18.1s,baz=171,slow=38							
LEM	Lembang	44.32	337	LR	LR		00 45 11.6	
	comp=Z,71nm,18.6s,baz=182,slow=37							
PMG	Port Moresby	44.43	35	LR	LR		00 43 12.0	
	comp=Z,47nm,20.8s,baz=143,slow=34							
TROLL	Troll, Antarti	52.14	200	P	P		00 27 10.8	-0.2
BELA	Belgrano 2	52.41	186	P	P		00 27 12.6	-0.2
BELA				IAmb	IAmb		00 27 13.3	
	comp=Z,8.0nm,1.0s							
SNAA	Sanae	53.54	199	P	P		00 27 21.6	+0.3
SNAA	Sanae	53.54	199	P	P		00 27 21.5	+0.3
	comp=Z,3.8nm,0.8s,baz=151,slow=10,SNR=12							
	comp=Z,3.8nm,0.8s							
SNAA	Sanae	53.54	199	P	P		00 27 21.6	+0.3
SNAA				IAmb	IAmb		00 27 29.7	
	comp=Z,6.2nm,0.8s							
VNA2	Neumayer--Watz	55.05	198	P	P		00 27 32.4	+0.2
	baz=146,slow=6.7							
VNA3	Neumayer Olymp	55.23	197	P	P		00 27 33.4	-0.1
VNA1	Neumayer--Stat	55.44	198	P	P		00 27 35.5	+0.6
H08S2	Diego Garcia H	59.34	297	T	T		01 32 15.0	
	baz=144,slow=76							
H08S1	Diego Carcia H	59.35	297	T	T		01 32 13.3	
	baz=144,slow=76							
H08S3	Diego Garcia H	59.36	297	T	T		01 32 16.7	
	baz=144,slow=76							
CMAR	Chiang Mai Arr	70.81	335	P	P		00 29 17.6	0.0
	comp=Z,2.2nm,0.3s,baz=168,slow=4.6,SNR=6.4							
CMAR				LR	LR		01 00 25.0	
	comp=Z,29nm,18.4s,baz=195,slow=36							
	comp=Z,2.2nm,0.3s							
KSRS	Korea Array	86.43	4	LR	LR		01 08 31.9	
	comp=Z,7.3nm,21.9s,baz=330,slow=35							
PLCA	Paso Flores	89.56	169	LR	LR		01 07 16.3	
	comp=Z,34nm,20.8s,baz=186,slow=33							
H10S2	ASCENSION HYDR	111.35	225	T	T		02 38 31.0	
	baz=149,slow=74,SNR=12							
H10S3	ASCENSION HYDR	111.36	225	T	T		02 38 33.7	

baz=71,slow=74,SNR=32
YKA Yellowknife Ar 146.16 45 PKPbc **PKPab 00 37 41.3 +0.5**
comp=Z,0.9nm,0.7s,baz=271,slow=2.9,SNR=1.6

*IDC **09** 00:36:00.2±2.3, 18°.75N×145°.44E, h192km±23km, mb3.4/9, mbtmp4.0/10, Error ellipse: s-maj=27.4km s-min=14.7km az=94.0*
*NEIC **09** 00:36:01.3±2.0, 18°.73N±0°.08×145°.4E±0°.1, h192km±3km, mb4.5/37, Error ellipse: s-maj=19.8km s-min=11.2km az=88.0*
ISC 09 00:36:01.3±0.5, 18°.73N±0°.05×145°.2E±0°.1, h200km, n60, σ1s07/56, mb4.2/27, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.12**	**184**	P	**Pn**	**00 37 17.7**	**+0.3**
	16nm,0.3s,baz=228,slow=18,SNR=1.5						
GUMO				S	**Sn**	**00 38 16.4**	**-0.9**
	44nm,0.3s,baz=180,slow=22,SNR=4.1						
JCJ	**Chichijima**	**8.78**	**342**	P	Pn	00 37 58.9	-5.9
	30nm,0.6s,baz=285,slow=22,SNR=1.3						
JCJ				S	**Sn**	**00 39 41.7**	**-1.6**
	62nm,0.9s,baz=257,slow=21,SNR=2.3						
JHJ2	**Mitsune**	**15.12**	**342**	Pn	**Pn**	**00 39 23.7**	**-1.2**
PATS	**Pohnpei**	**17.39**	**131**	P	**Pn**	**00 39 53.9**	**+1.6**
JGF	**Kuroka**	**18.19**	**339**	P	**Pn**	**00 40 03.0**	**+1.5**
JGF				IAmb	IAmb	00 40 04.8	
	comp=Z,8.0nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**20.36**	**87**	T	T	01 01 34.0	
	baz=274,slow=74,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**20.38**	**87**	T	T	01 01 26.9	
	baz=274,slow=74,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**20.38**	**87**	T	T	01 01 25.9	
	baz=274,slow=74,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**20.50**	**84**	T	T	01 01 52.8	
	baz=267						
H11N2	**WAKE ISLAND Hy**	**20.51**	**84**	T	T	01 01 51.7	
	baz=267						
H11N3	**WAKE ISLAND Hy**	**20.52**	**84**	T	T	01 01 58.3	
	baz=267						
FAKI	**Fak Fak**	**25.01**	**212**	P	**P**	**00 41 04.2**	**-2.9**
FAKI				IAmb	IAmb	00 41 08.5	
	comp=Z,24nm,1.1s						
COEN	**Coen**	**32.54**	**184**	P	**P**	**00 42 14.3**	**+0.6**
COEN				IAmb	IAmb	00 42 25.7	
	comp=Z,32nm,1.4s						
PEA0B	**Petropavlovsk-**	**35.66**	**13**	P	**P**	**00 42 40.6**	**+0.4**
KNRA	**Kununurra**	**37.83**	**206**	P	**P**	**00 42 59.6**	**+0.8**
KNRA				IAmb	IAmb	00 43 14.8	
	comp=Z,22nm,1.5s						
WB0	**Warramunga Arr**	**39.70**	**196**	P	**P**	**00 43 14.6**	**+0.3**
WB0				IAmb	IAmb	00 43 41.8	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**39.84**	**196**	P	**P**	**00 43 15.3**	**-0.2**
WR0				IAmb	IAmb	00 43 59.1	
	comp=Z,12nm,1.5s						
WRAB	**Tennant Creek**	**39.87**	**196**	P	**P**	**00 43 16.2**	**+0.4**
WRAB				IAmb	IAmb	00 43 56.5	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**39.88**	**196**	P	**P**	**00 43 16.2**	**+0.4**
WB2				IAmb	IAmb	00 43 17.9	
	comp=Z,4.3nm,0.5s						
WRA	**Warramunga Arr**	**39.88**	**196**	P	**P**	**00 43 16.2**	**+0.3**
	comp=Z,2.1nm,0.3s,baz=17,slow=8.6,SNR=72						
WRA				PcP	**PcP**	**00 45 16.5**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=18,slow=3.5,SNR=1.5						
	comp=Z,2.1nm,0.3s						
WRA	**Warramunga Arr**	**39.88**	**196**	P	**P**	**00 43 14.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**41.34**	**209**	P	**P**	**00 43 28.8**	**+1.0**
SONM	**Songino Array**	**42.83**	**322**	P	**P**	**00 43 40.3**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=95,slow=10,SNR=1.5						
	comp=Z,0.4nm,0.4s						
ASAR	**Alice Springs**	**43.55**	**195**	P	**P**	**00 43 45.5**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=17,slow=8.0,SNR=9.0						
	comp=Z,0.6nm,0.4s						
SEY	**Seymchan**	**44.45**	**5**	P	**P**	**00 43 51.0**	**-1.2**
	30nm,0.6s,baz=215,slow=9.7,SNR=1.8						
	comp=Z,0.6nm,0.3s						
MBWA	**Marble Bar**	**46.84**	**213**	P	**P**	**00 44 11.9**	**+0.5**
MBWA				IAmb	IAmb	00 44 12.7	
	comp=Z,32nm,1.4s						
FORT	**Forrest**	**51.91**	**199**	P	**P**	**00 44 50.2**	**+0.6**
BBOO	**Buckleboo**	**51.99**	**190**	P	**P**	**00 44 50.0**	**-0.2**
BBOO				IAmb	IAmb	00 45 00.4	
	comp=Z,42nm,1.4s						
SDPT	**Sand Point**	**54.71**	**35**	P	**P**	**00 45 09.5**	**-0.2**
CNBA	**Chernabura Isl**	**55.03**	**35**	P	**P**	**00 45 12.8**	**+0.8**
CNBA				IAmb	IAmb	00 45 27.3	
	comp=Z,19nm,1.0s						
MORW	**Morawa**	**55.23**	**211**	P	**P**	**00 45 14.4**	**+0.6**
CHGN	**Chignik**	**56.12**	**34**	P	**P**	**00 45 18.8**	**-0.9**
ANM	**Nome**	**56.35**	**23**	P	**P**	**00 45 21.4**	**+0.2**
ANM				IAmb	IAmb	00 45 30.5	
	comp=Z,18nm,1.2s						
ZALV	**Zalesovo Beam**	**57.71**	**323**	P	**P**	**00 45 31.7**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=1.8						
	comp=Z,0.5nm,0.4s						
NWAO	**Narrogin (SRO)**	**57.91**	**208**	P	**P**	**00 45 30.1**	**-2.4**
MKAR	**Makanchi Array**	**58.10**	**314**	P	**P**	**00 45 35.7**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=89,slow=9.3,SNR=3.3						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**58.10**	**314**	P	**P**	**00 45 36.4**	**+2.5**
SII	**Sitkinak Islan**	**58.45**	**34**	P	**P**	**00 45 35.8**	**-0.3**
KDAK	**Kodiak Island**	**59.59**	**33**	P	**P**	**00 45 45.2**	**+1.3**
KDAK				IAmb	IAmb	00 46 07.3	
	comp=Z,25nm,1.4s						
K20K	**Telida**	**60.41**	**27**	P	**P**	**00 45 50.5**	**+1.1**
J20K	**Nowinta River**	**60.64**	**26**	P	**P**	**00 45 51.7**	**+0.8**
J20K				IAmb	IAmb	00 46 20.7	
	comp=Z,6.0nm,1.4s						
IMAR	**Indian Mountai**	**61.38**	**24**	P	**P**	**00 45 56.3**	**+0.4**
H21K	**Melozitna Rive**	**61.65**	**25**	P	**P**	**00 45 57.1**	**-0.6**
I21K	**Tanana**	**61.83**	**25**	P	**P**	**00 45 59.4**	**+0.6**
I21K				IAmb	IAmb	00 46 02.0	
	comp=Z,5.8nm,1.2s						
BPAW	**Bear Paw Mtn.**	**61.94**	**27**	P	**P**	**00 45 59.6**	**0.0**
BPAW				IAmb	IAmb	00 46 04.7	
	comp=Z,8.0nm,1.4s						
MLY	**Manley**	**62.29**	**26**	P	**P**	**00 46 02.0**	**-0.1**
MLY				IAmb	IAmb	00 46 33.6	
	comp=Z,4.8nm,1.4s						
PWL	**Port Wells**	**62.38**	**30**	P	**P**	**00 46 01.6**	**-1.0**
PWL				IAmb	IAmb	00 46 07.7	
	comp=Z,12nm,1.1s						
I23K	**Minto, Yukon-K**	**62.89**	**26**	P	**P**	**00 46 06.8**	**+0.9**
H23K	**Yukon River**	**62.99**	**25**	P	**P**	**00 46 07.1**	**+0.6**
WRH	**Wood River Hil**	**63.26**	**26**	P	**P**	**00 46 07.2**	**-1.1**
H24K	**Noodor Dome**	**63.66**	**25**	P	**P**	**00 46 11.5**	**+0.5**
ILAR	**Eielson Array**	**63.83**	**26**	P	**P**	**00 46 10.3**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=259,slow=4.9,SNR=8.2						
	comp=Z,1.2nm,0.9s						
PAX	**Paxson**	**64.10**	**28**	P	**P**	**00 46 13.5**	**-0.5**
PAX				IAmb	IAmb	00 46 39.4	
	comp=Z,6.6nm,1.5s						
J25K	**Salcha River,**	**64.44**	**27**	P	**P**	**00 46 14.5**	**-1.6**
J26L	**Joseph Creek**	**65.19**	**27**	P	**P**	**00 46 20.5**	**-0.5**
BMAR	**Burnt Mountain**	**65.28**	**24**	P	**P**	**00 46 22.3**	**+0.9**
ABKAR	**Akbulak array**	**73.00**	**317**	P	**P**	**00 47 10.6**	**+1.4**
NVAR	**Mina Array Bea**	**83.49**	**52**	P	**P**	**00 48 06.7**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=261,slow=7.3,SNR=9.3						
	comp=Z,1.2nm,0.7s						
FINES	**FINESS Array B**	**86.66**	**335**	P	**P**	**00 48 21.1**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=92,slow=4.6,SNR=6.6						
	comp=Z,1.5nm,0.8s						
LPAZ	**La Paz**	**148.14**	**91**	PKPbc	**PKPbc**	**00 55 24.8**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=163,slow=1.2,SNR=4.0						

*SNET **09** 00:49:08.5±1.9, 12°.47N×88°.06W, h13km±14km, ML4.8*
*INET **09** 00:49:08.2±1.0, 12°.51N×87°.87W, h62km±8km, MW4.6*
*UCR **09** 00:49:08.9±1.5, 12°.51N×87°.89W, h32km±7km, ML4.7, mb4.5(NEIC)*
*IDC **09** 00:49:09.0±0.7, 12°.81N×87°.44W, h77km±5km, mb3.8/21, mbtmp4.2/24, MS3.2/11, Error ellipse: s-maj=19.8km s-min=10.4km az=54.0*
*NEIC **09** 00:49:10.3±1.9, 12°.62N±0°.06×87°.71W±0°.05, h81km±6km, mb4.5/236, Md4.7(SNET), Error ellipse: s-maj=9.2km s-min=5.7km az=215.0*
ISC 09 00:49:08.8±0.5, 12°.63N±0°.04×87°.77W±0°.03, h77km±4km, n355, σ1s20/368, mb4.5/124, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.40**	**31**	*eP*	**Pn**	**00 49 20.4**	**-1.2**
CNCH	**Conchagua**	**0.64**	**354**	*eP*	**Pn**	**00 49 23.3**	**-0.6**
CNCH				*eS*	**Sn**	**00 49 37.2**	**+2.3**
CNCH				IAML		00 49 44.3	
	comp=Z,34μm,0.4s						
CNCH	**Conchagua**	**0.64**	**354**	*eP*	**Pn**	**00 49 23.3**	**-0.6**
CNCH				*eS*	**Sn**	**00 49 37.2**	**+2.3**
CNCH				IAML		00 49 44.3	
	comp=Z,34μm,0.4s						
LCND	**La Caada**	**0.68**	**350**	*eP*	**Pn**	**00 49 23.6**	**-0.5**
LCND				*eS*	**Sn**	**00 49 35.5**	**0.0**
LCND				IAML		00 49 38.3	
	comp=Z,18μm,0.3s						
LCND	**La Caada**	**0.68**	**350**	*eP*	**Pn**	**00 49 23.6**	**-0.5**
LCND				*eS*	**Sn**	**00 49 35.5**	**0.0**
LCND				IAML		00 49 38.3	
	comp=Z,18μm,0.3s						
CRIN	**San Cristobal**	**0.70**	**85**			**00 49 24.4**	**0.0**
CRIN					Sn	**00 49 37.1**	**+1.2**
CRIN	**San Cristobal**	**0.70**	**85**	*eP*	**Pn**	**00 49 24.4**	**0.0**
CRIN				*eS*	**Sn**	**00 49 37.4**	**+1.4**
TEL3	**Telica 3**	**0.90**	**94**	*eP*	**Pn**	**00 49 26.2**	**-0.4**
TELN	**Telica**	**0.91**	**92**	*eP*	**Pn**	**00 49 26.1**	**-0.7**
PACA	**Pacayal**	**0.99**	**327**	*eP*	**Pn**	**00 49 27.5**	**-0.3**
PACA				*eS*	**Sn**	**00 49 42.5**	**+0.6**
PACA				IAML		00 49 43.4	
	comp=Z,74μm,0.4s						
PACA	**Pacayal**	**0.99**	**327**	*eP*	**Pn**	**00 49 27.5**	**-0.3**
PACA				*eS*	**Sn**	**00 49 42.5**	**+0.6**
PACA				IAML		00 49 43.4	
	comp=Z,74μm,0.4s						
PACA	**Pacayal**	**0.99**	**327**	*eP*	**Pn**	**00 49 27.4**	**-0.4**
CNGN	**Cerro Negro**	**1.05**	**97**		**Pn**	**00 49 28.2**	**-0.2**
CNGN					**Sn**	**00 49 42.8**	**-0.2**
CNGN	**Cerro Negro**	**1.05**	**97**	*eP*	**Pn**	**00 49 27.8**	**-0.6**
CNGN				*eS*	**Sn**	**00 49 44.0**	**+1.0**
COEB	**Comit de Eme**	**1.14**	**319**	*eP*	**Pn**	**00 49 29.5**	**-0.1**
COEB				*eS*	**Sn**	**00 49 44.5**	**-0.5**
COEB	**Comit de Eme**	**1.14**	**319**	*eP*	**Pn**	**00 49 29.5**	**-0.1**
COEB				*eS*	**Sn**	**00 49 44.5**	**-0.5**
CAHU	**Cacacuatique**	**1.21**	**339**	*eP*	**Pn**	**00 49 30.8**	**+0.3**
CAHU	**Cacacuatique**	**1.21**	**339**	*eP*	**Pn**	**00 49 30.8**	**+0.3**
MOMN	**Momotombo**	**1.22**	**100**	*eP*	**Pn**	**00 49 29.9**	**-0.5**
MOMN				*eS*	**Sn**	**00 49 46.4**	**-0.4**
COPN	**Copaltepe**	**1.23**	**111**	*eP*	**Pn**	**00 49 29.7**	**-1.0**
APYN	**Apoyeque**	**1.44**	**106**	*eP*	**Pn**	**00 49 32.0**	**-1.3**
COEG	**Centro de Oper**	**1.46**	**312**	*eP*	**Pn**	**00 49 33.6**	**0.0**
COEG				*eS*	**Sn**	**00 49 51.9**	**-0.5**
COEG				IAML		00 49 55.7	
	comp=Z,7μm,0.3s						
COEG	**Centro de Oper**	**1.46**	**312**	*eP*	**Pn**	**00 49 33.6**	**0.0**
COEG				*eS*	**Sn**	**00 49 51.9**	**-0.5**
COEG				IAML		00 49 55.7	
	comp=Z,7μm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.49**	**19**		**Pn**	**00 49 35.2**	**+1.1**
TGUH					**Sn**	**00 49 55.1**	**+2.0**
TGUH	**Tegucigalpa,Un**	**1.49**	**19**	*eP*	**Pn**	**00 49 35.2**	**+1.1**
TISN	**Laguna Tiscapa**	**1.54**	**108**	*eP*	**Pn**	**00 49 34.3**	**-0.3**
MGAN	**Managua**	**1.56**	**108**	*eP*	**Pn**	**00 49 34.5**	**-0.3**
PAVA	**Las Pavas**	**1.57**	**313**	*eP*	**Pn**	**00 49 35.0**	**0.0**
PAVA				*eS*	**Sn**	**00 49 55.7**	**+0.9**
PAVA	**Las Pavas**	**1.57**	**313**	*eP*	**Pn**	**00 49 35.0**	**0.0**
PAVA				*eS*	**Sn**	**00 49 55.7**	**+0.9**
HUEN		**1.58**	**101**	*eP*	**Pn**	**00 49 35.0**	**-0.1**
HUEN				*eS*	**Sn**	**00 49 55.8**	**+0.8**
LFRS	**El Faro**	**1.60**	**308**	*i P*	**Pn**	**00 49 35.0**	**-0.5**
LFRS	**El Faro**	**1.60**	**308**	*i P*	**Pn**	**00 49 35.0**	**-0.5**
WILN	**Americas 2**	**1.61**	**107**	*eP*	**Pn**	**00 49 35.6**	**+0.1**
LBRS	**Las Brisas**	**1.66**	**312**	*eP*	**Pn**	**00 49 36.7**	**+0.5**
LBRS	**Las Brisas**	**1.66**	**312**	*eP*	**Pn**	**00 49 36.7**	**+0.5**
MASN	**Masaya**	**1.70**	**112**	*eP*	**Pn**	**00 49 36.4**	**-0.4**
LFU	**La Fuente**	**1.72**	**310**	*eP*	**Pn**	**00 49 37.5**	**+0.5**
LFU	**La Fuente**	**1.72**	**310**	*eP*	**Pn**	**00 49 37.5**	**+0.5**
SNET	**Serv Nac Est T**	**1.77**	**306**		**Pn**	**00 49 37.3**	**-0.4**
RCON	**San Juan de Ri**	**1.78**	**62**	*eP*	**Pn**	**00 49 38.9**	**+1.0**
MATN	**Matagalpa**	**1.82**	**81**		**Pn**	**00 49 38.6**	**+0.3**
MATN					**Sn**	**00 50 01.2**	**+0.4**
MATN	**Matagalpa**	**1.82**	**81**	*eP*	**Pn**	**00 49 38.6**	**+0.3**
BOQS	**Boqueron**	**1.84**	**307**	*eP*	**Pn**	**00 49 38.7**	**0.0**
BOQS	**Boqueron**	**1.84**	**307**	*eP*	**Pn**	**00 49 38.7**	**0.0**
JAYA	**Jayaque - finc**	**1.93**	**302**	*eP*	**Pn**	**00 49 38.9**	**-0.9**
JAYA	**Jayaque - finc**	**1.93**	**302**	*eP*	**Pn**	**00 49 38.9**	**-0.9**
CEDA	**San Andres**	**1.97**	**306**	*eP*	**Pn**	**00 49 40.2**	**-0.1**
CEDA				*eS*	**Sn**	**00 50 04.4**	**+0.2**
CEDA	**San Andres**	**1.97**	**306**	*eP*	**Pn**	**00 49 40.2**	**-0.1**
CEDA				*eS*	**Sn**	**00 50 04.4**	**+0.2**
BOAB	**BOACO BROADBAN**	**2.06**	**95**		**Pn**	**00 49 41.4**	**-0.1**
BOAB					**Sn**	**00 50 05.0**	**+0.7**
BOAB	**BOACO BROADBAN**	**2.06**	**95**	*eP*	**Pn**	**00 49 41.3**	**+0.1**
CEVE	**Cerro Verde**	**2.16**	**303**	*eP*	**Pn**	**00 49 43.1**	**+0.1**
CEVE				*eS*	**Sn**	**00 50 10.9**	**+1.7**
CEVE				IAML		00 50 26.3	
	comp=Z,6μm,0.3s						
CEVE	**Cerro Verde**	**2.16**	**303**	*eP*	**Pn**	**00 49 43.1**	**+0.1**
CEVE				*eS*	**Sn**	**00 50 10.9**	**+1.7**
CEVE				IAML		00 50 26.3	
	comp=Z,6μm,0.3s						
ESQI	**Esquipulas**	**2.45**	**322**	Pn	**Pn**	**00 49 47.6**	**+0.7**
ACON	**Acoyapa**	**2.62**	**104**		**Pn**	**00 49 48.3**	**-0.6**
ACON	**Acoyapa**	**2.62**	**104**	*eP*	**Pn**	**00 49 48.4**	**-0.6**
HZTE	**Horizontes, Gu**	**2.86**	**132**		**Pn**	**00 49 52.9**	**+0.7**
HZTE	**Horizontes, Gu**	**2.86**	**132**	*eP*	**Pn**	**00 49 53.3**	**+1.1**
GB1A	**Borinquen Arri**	**2.94**	**128**	*eP*	**Pn**	**00 49 53.0**	**-0.4**
BUEV	**Buena Vista**	**2.94**	**128**	*eP*	**Pn**	**00 49 53.8**	**+0.3**
BUEV				*eS*	**Sn**	**00 50 29.4**	**+1.5**
GPS2	**Hotel Rincn d**	**3.02**	**128**	*eP*	**Pn**	**00 49 55.2**	**+0.8**
GUAB	**Guayabo de Bag**	**3.14**	**127**	*eP*	**Pn**	**00 49 56.9**	**+0.8**
VMAR	**Armenia, Volca**	**3.16**	**125**	*eP*	**Pn**	**00 49 57.0**	**+0.6**
HORNC	**Hornillas**	**3.17**	**127**	*eP*	**Pn**	**00 49 55.8**	**-0.8**
COLC	**Colonia**	**3.18**	**128**	*eP*	**Pn**	**00 49 57.7**	**+1.0**
ORTG	**Ortega, Santa**	**3.20**	**135**	Pn	**Pn**	**00 49 57.3**	**+0.4**
CUI	**Cuipilapa**	**3.22**	**127**	*eP*	**Pn**	**00 49 57.7**	**+0.5**
SAJU	**San Juanillo,**	**3.25**	**141**	*eP*	**Pn**	**00 49 57.1**	**-0.5**
ACAL	**Aguas Claras**	**3.33**	**126**	*eP*	**Pn**	**00 49 58.4**	**-0.4**
DUNO	**Dulce Nombre,**	**3.38**	**139**		**Pn**	**00 49 59.4**	**+0.1**
ESPN	**Las Esperanzas**	**3.41**	**97**		**Pn**	**00 50 00.4**	**+0.6**
INDI	**Punta indio, G**	**3.54**	**141**	*eP*	**Pn**	**00 50 01.2**	**-0.3**
JTS	**Las Juntas de**	**3.61**	**130**	Pn	**Pn**	**00 50 03.1**	**+0.6**
JTS	**Las Juntas de**	**3.61**	**130**	*eP*	**Pn**	**00 50 03.6**	**+1.2**
CEDE	**Laguna Cedeo**	**3.68**	**125**	*eP*	**Pn**	**00 50 06.1**	**+2.6**
ARE1	**Arenal 1**	**3.69**	**126**	*eP*	**Pn**	**00 50 05.2**	**+1.7**
COVE	**Coope Vega, Sa**	**3.81**	**120**		**Pn**	**00 50 05.7**	**+0.6**
COVE	**Coope Vega, Sa**	**3.81**	**120**	*eP*	**Pn**	**00 50 05.9**	**+0.8**
LAFE	**Finca La Fe, P**	**3.97**	**135**	*eP*	**Pn**	**00 50 07.6**	**+0.3**
JACO	**JACO, Garabito**	**4.25**	**134**		**Pn**	**00 50 13.7**	**+2.6**
JACO	**JACO, Garabito**	**4.25**	**134**	*eP*	**Pn**	**00 50 13.4**	**+2.3**
RTAL	**Retalhuleu**	**4.26**	**297**	Pn	**Pn**	**00 50 12.3**	**+1.1**
HDC	**Heredia**	**4.44**	**126**	Pn	**Pn**	**00 50 15.6**	**+1.8**
HUEH	**Huehuetenango**	**4.50**	**307**	Pn	**Pn**	**00 50 16.5**	**+1.6**
LCR2	**La Lucha 2**	**4.68**	**128**	*eP*	**Pn**	**00 50 20.0**	**+2.8**
CVTR	**Volcan Turrial**	**4.71**	**123**		**Pn**	**00 50 18.8**	**+0.9**
PETF	**Flores**	**4.72**	**335**	Pn	**Pn**	**00 50 19.3**	**+1.8**
RIMA	**Rio Macho**	**4.77**	**126**		**Pn**	**00 50 18.9**	**+0.4**
RIMA	**Rio Macho**	**4.77**	**126**	*eP*	**Pn**	**00 50 20.0**	**+1.5**
CDM	**Cerro de Muert**	**4.98**	**128**	*eP*	**Pn**	**00 50 23.4**	**+1.8**
PEZE	**Perez Zeledon,**	**5.15**	**128**		**Pn**	**00 50 25.1**	**+1.5**
PEZE	**Perez Zeledon,**	**5.15**	**128**	*eP*	**Pn**	**00 50 26.0**	**+2.4**
SRBA	**San Rafael, Bu**	**5.49**	**128**	Pn	**Pn**	**00 50 29.4**	**+1.2**
SRBA	**San Rafael, Bu**	**5.49**	**128**	*eP*	**Pn**	**00 50 29.6**	**+1.4**
DRK0	**Durika**	**5.56**	**127**		**Pn**	**00 50 31.4**	**+2.1**
CCIG	**Comitan**	**5.57**	**311**		**Pn**	**00 50 30.9**	**+1.5**
CDITO	**Canoas**	**6.28**	**130**		**Pn**	**00 50 38.3**	**-0.6**
BRU2	**Volcan**	**6.28**	**127**		**Pn**	**00 50 38.7**	**-0.3**
TEIG	**Tepich**	**7.56**	**356**	Pn	**Pn**	**00 50 58.0**	**+1.6**
CMIG	**Matias Romero**	**8.18**	**304**	P	**Pn**	**00 51 06.1**	**+1.2**
	comp=Z,5.3nm,0.3s,baz=154,slow=6.3,SNR=18						
CMIG				S	**Sn**	**00 52 32.8**	**-3.0**
	comp=Z,5.4nm,0.5s,baz=80,slow=16,SNR=1.8						
BCIP	**Isla Barro Col**	**8.52**	**113**	Pn	**Pn**	**00 51 10.3**	**+0.9**
MTDJ	**Mount Denham**	**11.32**	**59**	Pn	**Pn**	**00 51 50.7**	**+2.9**
TLJG	**Tlapa**	**11.52**	**296**		**Pn**	**00 51 52.2**	**+1.6**
ROSC	**El Rosal**	**15.37**	**119**	P	**Pn**	**00 52 39.7**	**-2.1**
	comp=Z,4.5nm,0.3s,baz=115,slow=22,SNR=2.1						
ROSC				LR	LR	00 59 07.1	
	comp=Z,52nm,20.5s,baz=57,slow=39						
ROSC	**El Rosal**	**15.37**	**119**	P	**P**	**00 52 43.9**	**-1.0**
TULM	**Tulcn-Chalpat**	**15.43**	**139**	P	**P**	**00 52 45.3**	**-0.3**
TULM				IAmb	IAmb	00 53 00.8	
	comp=Z,17nm,0.8s						
IMBA	**Imbabura, San**	**15.52**	**142**		**Pn**	**00 52 42.8**	**-0.9**
IMBA				IAmb	IAmb	00 52 56.2	
	comp=Z,24nm,0.8s						
PULU	**Pululahua**	**15.54**	**143**		**Pn**	**00 52 43.6**	**-0.3**
060A	**Indiantown**	**15.92**	**25**		**Pn**	**00 52 46.3**	**-2.0**
SLOR	**San Lorenzo -**	**16.15**	**145**	Pn	**Pn**	**00 52 49.3**	**-2.4**
CHSH	**Refugio Sur-Vo**	**16.58**	**147**	Pn	**Pn**	**00 52 55.6**	**-1.6**
CHSH				IAmb	IAmb	00 53 20.7	
	comp=Z,9.0nm,0.7s						
PORT	**Chimborazo Vol**	**16.61**	**147**		**Pn**	**00 52 57.4**	**-0.1**
SDV	**Santo Domingo**	**17.24**	**101**	P	**Pn**	**00 53 02.7**	**-2.2**
	comp=Z,1.1nm,0.7s,baz=5.6,slow=18,SNR=2.9						
SDV				LR	LR	01 00 16.2	
	comp=Z,42nm,19.9s,baz=271,slow=39						
SDV	**Santo Domingo**	**17.24**	**101**		**Pn**	**00 53 03.4**	**-1.5**
344A	**Westbrook Farm**	**18.93**	**352**	P	**P**	**00 53 24.8**	**+1.3**
344A				IAmb	IAmb	00 53 27.5	
	comp=Z,21nm,1.1s						
352A	**Blakely**	**18.94**	**7**	P	**P**	**00 53 23.3**	**-0.4**
833A	**Chaparral WMA,**	**19.01**	**327**	P	**Pn**	**00 53 26.0**	**0.0**
TIGA	**Tifton**	**19.11**	**11**	P	**P**	**00 53 26.9**	**+1.4**
342A	**Flagon Creek P**	**19.12**	**348**	P	**P**	**00 53 25.8**	**+0.2**
342A				IAmb	IAmb	00 53 39.5	
	comp=Z,22nm,0.7s						
BAUV	**El Baul**	**19.72**	**99**	P	**P**	**00 53 31.1**	**-1.2**
BAUV				IAmb	IAmb	00 53 34.1	
	comp=Z,20nm,0.6s						
152A	**Waverly Hall**	**20.14**	**7**	P	**P**	**00 53 38.3**	**+1.6**
152A				IAmb	IAmb	00 53 42.4	
	comp=Z,14nm,0.6s						
LRAL	**Lakeview Retre**	**20.32**	**2**		**P**	**00 53 40.7**	**+2.1**
154A	**Montrose**	**20.34**	**11**	P	**P**	**00 53 41.0**	**+2.1**
Z47A	**Carrollton**	**20.47**	**359**	P	**P**	**00 53 42.5**	**+2.1**
Z51A	**Franklin**	**20.72**	**6**	P	**P**	**00 53 44.3**	**+1.3**
Z51A				IAmb	IAmb	00 53 48.2	
	comp=Z,11nm,0.6s						
JCT	**Junction City**	**20.96**	**330**	P	**P**	**00 53 46.8**	**+1.1**
Z41A	**Richland Creek**	**21.04**	**348**	P	**P**	**00 53 47.1**	**+0.7**
Z41A				IAmb	IAmb	00 53 49.5	
	comp=Z,10.0nm,0.7s						
GOGA	**Godfrey**	**21.05**	**10**	P	**P**	**00 53 49.1**	**+2.6**
Y49A	**Blount Mountai**	**21.16**	**3**	P	**P**	**00 53 49.8**	**+2.0**
BIRV	**Birongo**	**21.17**	**94**	P	**P**	**00 53 48.1**	**+0.1**
BIRV				IAmb	IAmb	00 53 49.1	
	comp=Z,16nm,0.6s						
Y52A	**Lilburn**	**21.40**	**8**	P	**P**	**00 53 52.0**	**+1.7**
Y52A				IAmb	IAmb	00 53 54.1	
	comp=Z,18nm,0.6s						
WLAR	**White Oak Lake**	**21.52**	**348**	P	**P**	**00 53 53.0**	**+1.5**
WLAR				IAmb	IAmb	00 53 55.7	
	comp=Z,21nm,1.0s						
SJG	**San Juan**	**21.53**	**73**	P	**P**	**00 53 49.5**	**-2.4**
	comp=Z,11nm,0.8s,baz=323,slow=21,SNR=2.4						
SJG				LR	LR	01 02 36.4	
	comp=Z,45nm,19.1s,baz=256,slow=38						
	comp=Z,11nm,0.8s						
X48A	**Hartselle**	**21.73**	**2**	P	**P**	**00 53 55.9**	**+2.2**
FPAL

QUOK IAmb IAmb 00 54 24.1
comp=Z,9.8nm,0.9s
CSTR Hydro, Custer 24.95 339 P P 00 54 25.5 +0.5
CSTR IAmb IAmb 00 54 27.6
comp=Z,1.7nm,0.9s
CZSB Cruzeiro do Su 25.17 143 P P **00 54 28.3 +1.2**
CZSB IAmb IAmb 00 54 32.5
comp=Z,14nm,0.9s
S51A Beattyville 25.18 8 IAmb IAmb 00 54 49.1
comp=Z,19nm,1.5s
MSTX Muleshoe 25.26 330 P P **00 54 28.1 +0.2**
MSTX IAmb IAmb 00 54 29.0
comp=Z,14nm,0.8s
T35A Sooner Cattle 25.42 344 P P **00 54 31.1 +1.8**
T57A Hurt 25.43 16 P P **00 54 30.5 +1.1**
S39A Bolivar 25.44 350 IAmb IAmb 00 54 30.1
comp=Z,9.0nm,0.8s
BLOK Blackwell 25.48 342 P P **00 54 31.3 +1.5**
BLOK IAmb IAmb 00 54 33.3
comp=Z,8.0nm,0.5s
CROK Carrier 25.48 341 P P **00 54 31.1 +1.2**
CROK IAmb IAmb 00 54 31.8
comp=Z,7.6nm,0.5s
CCM Cathedral Cave 25.51 354 P P **00 54 29.9 -0.2**
ELIS Ellis County 25.59 338 P P **00 54 31.8 +1.0**
ELIS IAmb IAmb 00 54 33.9
comp=Z,17nm,0.3s
KAN17 Caldwell West 25.91 341 P P **00 54 33.6 0.0**
KAN17 IAmb IAmb 00 54 33.8
comp=Z,6.7nm,0.6s
OK035 E0210 Rd and N 25.91 340 P P **00 54 34.5 +0.8**
OK035 IAmb IAmb 00 54 53.8
comp=Z,13nm,1.1s
NOKA Waynoka 25.92 339 P P **00 54 33.9 +0.1**
NOKA IAmb IAmb 00 54 35.1
comp=Z,30nm,0.7s
KAN06 Argonia West S 26.12 341 P P **00 54 36.7 +1.1**
KAN06 IAmb IAmb 00 54 38.0
comp=Z,5.8nm,0.6s
Q51A Peebles 26.58 8 P P **00 54 40.1 +0.4**
Q51A IAmb IAmb 00 54 41.9
comp=Z,11nm,0.7s
Q52A Bidwell 26.67 10 P P **00 54 41.1 +0.6**
Q52A IAmb IAmb 00 54 41.9
comp=Z,13nm,0.8s
Q54A Coxs Mills 26.95 12 P P **00 54 43.5 +0.4**
Q54A IAmb IAmb 00 54 44.4
comp=Z,17nm,1.1s
121A Cookes Peak, D 27.00 320 P P **00 54 45.6 +1.8**
P53A Whipple 27.33 11 P P **00 54 47.2 +0.7**
P53A IAmb IAmb 00 54 48.2
comp=Z,14nm,0.8s
P52A Corning 27.35 9 P P **00 54 46.8 +0.2**
P52A IAmb IAmb 00 54 48.1
comp=Z,7.8nm,0.8s
P38A Dawn 27.36 350 IAmb IAmb 00 54 47.7
comp=Z,7.9nm,0.7s
BNM Barren Site 27.44 324 P P **00 54 48.9 +1.1**
LENM Lemitar 27.65 324 P P **00 54 52.1 +2.5**
ACSO Alum Creek Sta 27.81 8 P P **00 54 51.0 +0.3**
ACSO IAmb IAmb 00 54 51.9
comp=Z,9.8nm,0.9s
ANMO Albuquerque 27.93 326 P P **00 54 53.9 +1.8**
comp=Z,1.2nm,0.7s,baz=142,slow=6.1,SNR=6.6
comp=Z,1.2nm,0.7s
ANMO Albuquerque 27.93 326 P P **00 54 53.4 +1.3**
P57A Homestead Farm 28.10 16 P P **00 54 54.7 +1.4**
O53A New Philadelph 28.11 11 IAmb IAmb 00 54 55.1
comp=Z,15nm,1.1s
O54A Avella 28.20 12 P P **00 54 54.9 +0.7**
O54A IAmb IAmb 00 54 57.8
comp=Z,14nm,1.2s
SDMD Soldier's Deli 28.37 18 P P **00 54 56.5 +0.8**
SDMD IAmb IAmb 00 54 58.8
comp=Z,5.9nm,0.7s
MVL Millersville 29.06 18 P **00 55 02.0 +0.2**
PAGS Pennsylvania G 29.16 18 P P **00 55 03.0 +0.3**
SDCO Great Sand Dun 29.60 331 P P **00 55 08.5 +1.5**
LUPA Lehigh Univers 29.91 19 P P **00 55 10.5 +1.1**
LUPA IAmb IAmb 00 55 11.7
comp=Z,10.0nm,1.0s
M57A Sunshine Farm, 30.07 16 IAmb IAmb 00 55 12.2
comp=Z,7.1nm,0.8s
ODNJ Ogdensburg 30.60 20 P P **00 55 16.4 +1.0**
ODNJ IAmb IAmb 00 55 18.3
comp=Z,8.9nm,1.3s
MVCO Mesa Verde 30.72 326 P P **00 55 17.4 +0.6**
ETMB Extrema 30.92 135 P P **00 55 18.7 +0.2**
ETMB IAmb IAmb 00 55 19.4
comp=Z,24nm,0.6s
I42A Draeger Farm, 31.16 358 P P **00 55 19.6 -0.7**
I42A IAmb IAmb 00 55 37.8
comp=Z,14nm,1.4s
MMNY Mt. Morris Dam 31.18 14 P P **00 55 21.3 +0.7**
MMNY IAmb IAmb 00 55 57.4
comp=Z,16nm,1.4s
BINY Binghamton 31.19 17 P P **00 55 21.6 +1.0**
BINY IAmb IAmb 00 55 22.5
comp=Z,5.5nm,0.7s
SMCO Snowmass 31.44 331 P P **00 55 25.6 +2.2**
L59A Walton 31.46 18 P P **00 55 24.4 +1.3**
L59A IAmb IAmb 00 55 24.7
comp=Z,6.2nm,0.7s
MEDO Medina 31.47 13 P P **00 55 25.7 +2.7**
J54A Appleton 31.53 13 P P **00 55 23.6 +0.1**
K57A Scipio Center 31.54 16 P P **00 55 23.8 +0.1**
K57A IAmb IAmb 00 55 24.5
comp=Z,7.2nm,0.8s
KSCT Kent School, K 31.55 21 P P **00 55 24.9 +1.1**
KSCT IAmb IAmb 00 55 30.4
comp=Z,15nm,1.4s
J55A Hilton 31.71 14 P P **00 55 25.7 +0.5**
J55A IAmb IAmb 00 55 26.6
comp=Z,7.9nm,0.8s
PV11 David Mesa, Pa 31.72 327 P P **00 55 27.2 +1.6**
PV11 IAmb IAmb 00 55 27.7
comp=Z,7.7nm,0.6s
M63A Gales Ferry 31.79 23 P P **00 55 27.2 +1.3**
PV20 West Nyswonger 31.80 327 P P **00 55 27.3 +1.0**
PV20 IAmb IAmb 00 55 28.2
comp=Z,4.9nm,0.7s
PV23 Carpenter Ridg 31.91 327 IAmb IAmb 00 55 29.7
comp=Z,5.8nm,0.7s
ECSD EROS Data Cent 31.91 348 P P **00 55 26.5 -0.5**
ECSD IAmb IAmb 00 55 27.0
comp=Z,6.6nm,1.1s
J56A Wolcott 31.95 15 P P **00 55 27.8 +0.5**
UCCT U. Connecticut 32.06 22 P P **00 55 29.8 +1.6**
UCCT IAmb IAmb 00 55 34.8
comp=Z,14nm,1.1s
J57A Williamstown 32.31 16 P P **00 55 30.8 +0.4**
J57A IAmb IAmb 00 55 31.2
comp=Z,5.7nm,0.7s
BRYW Bryant College 32.42 23 P P **00 55 32.2 +0.7**
J58A Remsen 32.46 17 P P **00 55 32.8 +1.0**
J58A IAmb IAmb 00 55 36.7
comp=Z,9.7nm,1.3s
SAML Samuel 32.50 130 P P **00 55 31.6 -0.9**
PECO Prince Edward 32.54 15 P P **00 55 32.0 -0.4**
PECO IAmb IAmb 00 55 58.3
comp=Z,5.2nm,0.9s
G40A Rib Lake 32.59 357 P P **00 55 32.8 -0.1**
G40A IAmb IAmb 00 55 36.1
comp=Z,8.0nm,1.5s
L64A Middleborough 32.71 24 P P **00 55 35.3 +1.4**
SPMN Marine on St. 32.76 353 IAmb IAmb 00 55 33.9
comp=Z,9.9nm,0.9s
J59A Piesco 32.78 18 P P **00 55 34.7 +0.1**
J59A IAmb IAmb 00 56 01.1
comp=Z,6.5nm,1.1s
O20A White River Ci 32.80 330 IAmb IAmb 00 55 37.9
comp=Z,8.0nm,0.8s
K62A Royalston 32.81 21 P P **00 55 35.8 +0.9**
K62A IAmb IAmb 00 56 16.4
comp=Z,14nm,1.2s
SADO Sadowa 32.86 11 P P **00 55 35.0 -0.2**
comp=Z,7.7nm,0.6s,baz=245,slow=6.2,SNR=22
comp=Z,7.7nm,0.6s
DELO Deloro Mine 32.94 13 P P **00 55 36.2 +0.3**
DELO IAmb IAmb 00 55 37.3
comp=Z,3.7nm,0.8s
SRU San Rafael Swe 33.19 327 IAmb IAmb 00 55 40.4
comp=Z,3.7nm,0.7s
COWI Conover 33.38 358 P P **00 55 39.1 -0.6**
COWI IAmb IAmb 00 55 39.7
comp=Z,3.6nm,0.7s
P18A Preston Nutter 33.42 328 IAmb IAmb 00 55 42.2
comp=Z,9.4nm,1.5s
RWWY Rawlins 33.55 333 P P **00 55 43.5 +1.8**
RWWY IAmb IAmb 00 56 06.7
comp=Z,8.5nm,1.2s
P17A Butcher Ranch, 33.57 327 IAmb IAmb 00 55 43.7
comp=Z,6.8nm,0.8s
E43A Lone Tree Farm 33.64 1 P P **00 55 41.2 -0.8**
E43A IAmb IAmb 00 56 09.5
comp=Z,8.9nm,1.0s
HNH Hanover 33.71 20 P P **00 55 44.0 +1.4**
HNH IAmb IAmb 00 56 06.0
comp=Z,12nm,1.3s
LONY Lake Ozonia 33.81 17 P P **00 55 43.4 -0.2**
LONY IAmb IAmb 00 55 45.3
comp=Z,7.0nm,0.8s
RSSD Black Hills 34.35 339 P P **00 55 50.2 +1.8**
RSSD IAmb IAmb 00 55 50.7
comp=Z,3.0nm,0.7s
I63A Otisfield 34.62 22 P P **00 55 52.4 +1.9**
I63A IAmb IAmb 00 56 29.6
comp=Z,9.1nm,1.0s
LPAZ La Paz 34.68 145 P P **00 55 53.1 +1.1**
comp=Z,1.6nm,0.5s,baz=333,slow=8.3,SNR=7.2
comp=Z,1.6nm,0.5s
LPAZ La Paz 34.68 145 P P **00 55 53.3 +1.3**
PB18 Visviri 35.04 149 P P **00 55 59.0 +3.9**
TRQ Mont Tremblant 35.30 16 P P **00 55 56.7 +0.3**
TRQ IAmb IAmb 00 56 15.9
comp=Z,5.1nm,1.3s
EYMN Ely 35.34 356 P P **00 55 55.4 -1.3**
EYMN IAmb IAmb 00 56 22.4
comp=Z,11nm,1.3s
PD31 Pinedale Array 35.47 332 P P **00 55 59.0 +0.9**
PDAR Pinedale Array 35.47 332 P P **00 55 58.8 +0.6**
comp=Z,0.8nm,0.3s,baz=129,slow=9.6,SNR=8.4
PDAR pP **pP** **00 56 16.4 -0.1**
comp=Z,0.8nm,0.6s,baz=123,slow=8.0,SNR=2.2
PDAR LR LR 01 14 40.0
comp=Z,16nm,18.0s,baz=122,slow=43
comp=Z,0.8nm,0.3s
PDAR Pinedale Array 35.47 332 P P **00 55 59.5 +1.4**
MDP Montagnes des 35.47 99 LR LR 01 13 28.5
comp=Z,39nm,18.4s,baz=349,slow=42
G62A West of Eustis 35.64 21 P P **00 56 00.5 +1.2**
PKME Peaks-Kenny Pk 36.13 22 P P **00 56 04.2 +0.8**
AGMN Agassiz Nation 36.19 351 P P **00 56 03.3 -0.6**
AGMN IAmb IAmb 00 56 05.3
comp=Z,6.5nm,0.7s
HVU Hansel Valley 36.31 328 IAmb IAmb 00 56 07.9
comp=Z,3.5nm,0.8s
EMMW East Machias 36.38 25 P P **00 56 07.6 +2.1**
F63A Nahmakanta, Br 36.57 22 P P **00 56 07.6 +0.4**
F63A IAmb IAmb 00 56 26.6
comp=Z,11nm,1.2s
LOHW Long Hollow 36.60 332 IAmb IAmb 00 56 09.7
comp=Z,6.0nm,1.1s
G65A Princeton 36.74 24 P P **00 56 09.3 +0.7**
MOOW Moose Ponds 36.77 332 IAmb IAmb 00 56 11.2
comp=Z,4.6nm,0.8s
ELK Elko 36.94 324 P P **00 56 11.8 +1.1**
comp=Z,1.7nm,0.8s,baz=148,slow=5.3,SNR=7.8
comp=Z,1.7nm,0.8s
GGN Saint George 36.97 25 P P **00 56 12.0 +1.5**
IMW Indian Meadow 36.98 332 IAmb IAmb 00 56 14.0
comp=Z,3.4nm,0.5s
F64A Sherman 36.99 23 P P **00 56 12.0 +1.2**
FLWY Flagg Ranch 37.01 332 P P **00 56 12.6 +1.3**
FLWY IAmb IAmb 00 56 13.1
comp=Z,6.2nm,0.9s
RLMT Red Lodge 37.21 335 P P **00 56 13.7 +0.8**
E62A Clayton Lake 37.21 21 P P **00 56 12.7 +0.1**
E62A IAmb IAmb 00 56 44.7
comp=Z,8.8nm,1.1s
LKWY Lake 37.25 333 P P **00 56 14.3 +1.0**
VILB Vilhena 37.33 132 P P **00 56 13.7 -0.3**
VILB IAmb IAmb 00 56 14.8
comp=Z,5.8nm,0.8s
NVAR Mina Array Bea 37.36 319 P P **00 56 16.4 +2.1**
comp=Z,0.9nm,0.7s,baz=102,slow=6.2,SNR=5.6
NVAR PcP **PcP** **00 58 32.6 +0.6**
comp=Z,0.9nm,0.6s,baz=139,slow=3.6,SNR=5.3
comp=Z,0.9nm,0.7s
LMQ La Malbaie 37.75 19 P P **00 56 17.0 -0.2**
D62A Allapoint, All 37.77 21 P P **00 56 17.8 +0.4**
GCMT Greycliff 37.91 335 P P **00 56 20.3 +1.6**
LMN Caledonia Moun 38.41 26 P P **00 56 23.5 +0.8**
BOZ Bozeman (W) 38.60 333 IAmb IAmb 00 56 26.5
comp=Z,4.0nm,0.8s
PAHR Pah Rah Range 38.78 320 P P **00 56 25.9 -0.3**
PAHR IAmb IAmb 00 56 27.4
comp=Z,3.4nm,0.7s
DLMT Dillon 38.86 332 P P **00 56 28.3 +1.6**
DLMT IAmb IAmb 00 56 28.8
comp=Z,6.2nm,0.8s
BATG Bathurst New B 39.04 24 P P **00 56 28.9 +0.9**
HRY Holter Researc 39.56 334 P P **00 56 32.8 +0.3**
PLID Pearl Lake 40.31 329 P **00 56 39.0 +0.2**
MSO Missoula 40.58 332 P P **00 56 42.0 +1.1**
MSO IAmb IAmb 00 56 42.8
comp=Z,7.0nm,1.1s
F10A Beach Ranch, E 41.54 329 P P **00 56 48.2 -0.6**
F10A IAmb IAmb 00 56 49.5
comp=Z,4.7nm,1.0s
YBH Yreka Blue Hor 42.01 320 LR LR 01 16 00.4
comp=Z,38nm,18.9s,baz=176,slow=38
PINE Pine Mountain 42.14 324 P P **00 56 54.5 +0.7**
PINE IAmb IAmb 00 56 55.1
comp=Z,5.1nm,0.8s
WALA Waterton Lakes 42.26 334 P P **00 56 56.1 +1.5**
KSXB Camp Six Broad 42.80 320 P P **00 56 60.0 +0.8**
NEW Newport 43.10 331 P P **00 57 00.4 -0.9**
comp=Z,0.9nm,0.3s,baz=156,slow=10,SNR=3.7
comp=Z,0.9nm,0.3s
NEW Newport 43.10 331 P P **00 57 01.1 -0.3**
H04A Detroit Lake 43.39 324 P P **00 57 04.3 +0.5**
H04A IAmb IAmb 00 57 04.4
comp=Z,4.4nm,0.9s
J01E Myrtle Point 43.55 321 P P **00 57 06.7 +1.7**
KEBM Edson Butte 43.64 321 P P **00 57 07.4 +1.6**
I02E Swisshome, OR 44.03 322 P P **00 57 09.3 +0.5**
DRLN Deer Lake 44.23 28 P P **00 57 09.9 -0.5**
SCHQ Schefferville 45.19 17 P P **00 57 16.1 -1.8**
comp=Z,15nm,0.7s,baz=223,slow=5.4,SNR=20
SCHQ LR LR 01 15 56.5
comp=Z,48nm,20.0s,baz=160,slow=36
comp=Z,15nm,0.7s
SCHQ Schefferville 45.19 17 P P **00 57 17.3 -0.6**
E03A Lebam 45.27 325 P P **00 57 19.0 +0.3**
RADR Rader Ridge 45.33 325 P P **00 57 20.2 +1.0**
RADR IAmb IAmb 00 57 49.3
comp=Z,42nm,1.3s
NLWA Neilton Lookou 45.95 326 P P **00 57 25.0 +0.9**
NLWA IAmb IAmb 00 57 43.0
comp=Z,6.3nm,1.1s
FCC Fort Churchill 46.28 355 P P **00 57 25.6 -0.8**
CPUP Villa Florida 48.75 143 P P **00 57 44.7 -1.3**
comp=Z,2.3nm,0.5s,baz=341,slow=8.8,SNR=8.9
CPUP PcP **PcP** **00 59 09.3 -0.7**
comp=Z,0.9nm,0.4s,baz=298,slow=5.8,SNR=2.9
comp=Z,2.3nm,0.5s
CPUP Villa Florida 48.75 143 P P **00 57 45.3 -0.7**
CPUP IAmb IAmb 00 57 45.3
comp=Z,2.9nm,0.7s
ITQB Itaqui 51.68 145 P P **00 58 08.6 +0.5**
ITAB Concordia 52.60 139 P P **00 58 14.5 -0.4**
HG4B Hotspring 52.64 328 P P **00 58 18.6 +3.7**
FRB Frobisher Bay 52.80 11 P P **00 58 13.9 -2.0**
comp=Z,4.8nm,0.3s,baz=41,slow=10,SNR=3.3
comp=Z,4.8nm,0.3s
YKA Yellowknife Ar 53.35 345 P P **00 58 18.5 -1.5**
comp=Z,1.5nm,0.7s,baz=226,slow=9.8,SNR=4.2
comp=Z,1.5nm,0.7s
RCBR Riachuelo 54.71 107 LR LR 01 24 43.9
comp=Z,22nm,18.4s,baz=324,slow=39
PLTB Pedras Altas 54.96 144 P P **00 58 31.8 -0.4**
PLTB IAmb IAmb 00 58 32.5
comp=Z,7.5nm,1.0s
PLCA Paso Flores 55.44 164 P P **00 58 37.7 +2.2**
comp=Z,0.9nm,0.5s,baz=338,slow=9.2,SNR=3.8
PLCA pP **pP** **00 58 55.5 +0.4**
comp=Z,1.1nm,0.7s,baz=338,slow=5.7,SNR=2.2
comp=Z,0.9nm,0.5s
PLCA Paso Flores 55.44 164 P P **00 58 39.3 +3.8**
PLCA IAmb IAmb 00 58 54.3
comp=Z,8.3nm,1.4s
DLBC Dease Lake 55.61 335 P P **00 58 37.0 +0.4**
comp=Z,2.8nm,0.7s,baz=160,slow=4.5,SNR=6.7
DLBC pP **pP** **00 58 56.4 +0.3**
comp=Z,1.7nm,0.6s,baz=126,slow=5.6,SNR=2.5
comp=Z,2.8nm,0.7s
DLBC Dease Lake 55.61 335 P P **00 58 36.9 +0.4**
DLBC IAmb IAmb 00 58 37.7
comp=Z,3.4nm,0.8s
TRQA Tornquist 55.92 156 P P **00 58 39.7 +0.8**
TRQA IAmb IAmb 00 59 06.0
comp=Z,8.4nm,1.4s
RES Resolute Bay 62.17 358 P P **00 59 20.1 -1.5**
comp=Z,1.8nm,0.4s,baz=171,slow=9.1,SNR=8.3
comp=Z,1.8nm,0.4s
RES Resolute Bay 62.17 358 P P **00 59 20.3 -1.3**
INK Inuvik 62.94 343 P P **00 59 27.8 +1.1**
INK IAmb IAmb 00 59 34.8
comp=Z,9.8nm,1.4s
BCAR Beaver Creek A 62.96 336 P P **00 59 26.9 -0.3**
L27K Beaver Creek, 62.97 336 P P **00 59 26.7 -0.5**
L27K IAmb IAmb 00 59 31.2
comp=Z,6.1nm,1.4s
ILAR Eielson Array 65.73 336 P P **00 59 43.2 -1.9**
comp=Z,0.8nm,0.8s,baz=148,slow=5.2,SNR=6.6
ILAR pP **pP** **01 00 04.4 -0.8**
comp=Z,0.7nm,0.9s,baz=109,slow=4.8,SNR=3.4
ILAR LR LR 01 30 22.8
comp=Z,28nm,21.6s,baz=253,slow=38
comp=Z,0.8nm,0.8s
BMAR Burnt Mountain 66.00 339 P P **00 59 46.5 -0.3**
MLY Manley 67.35 336 P P **00 59 54.8 -0.8**
BBTS Babate 68.99 79 LR LR 01 28 38.0
comp=Z,20nm,18.2s,baz=115,slow=34
PAB San Pablo 77.04 52 P P **01 00 51.5 -2.3**
PAB IAmb IAmb 01 01 27.1
comp=Z,13nm,1.4s
ESDC Sonseca Array 77.32 52 P P **01 00 52.3 -3.1**
comp=Z,0.4nm,0.7s,baz=274,slow=6.3,SNR=2.7
ESDC pP **pP** **01 01 14.5 -1.5**
comp=Z,0.8nm,0.7s,baz=290,slow=5.1,SNR=5.6
comp=Z,0.4nm,0.7s
JOHN Johnston Islan 78.69 285 P P **01 01 06.8 +3.6**
ADK Adak 79.52 321 P P **01 01 06.5 -0.6**
SPITS Spitsbergen Ar 80.59 12 LR LR 01 37 51.0
comp=Z,44nm,19.5s,baz=116,slow=36
AMKA Amchitka 82.06 321 P P **01 01 20.8 +0.1**
ARCES ARCESS Array B 86.11 19 P P **01 01 39.3 -1.7**
comp=Z,0.4nm,0.4s,baz=292,slow=3.6,SNR=6.0
comp=Z,0.4nm,0.4s
TORD Torodi Ar. Bea 86.67 77 P P **01 01 41.5 -3.2**
comp=Z,0.5nm,1.0s,baz=296,slow=5.1,SNR=4.9
comp=Z,0.5nm,1.0s
WRA Warramunga Arr 139.02 254 PKhKP PKPpre 01 08 23.4
comp=Z,0.4nm,0.6s,baz=89,slow=3.3,SNR=6.8
WRA PKP **PKiKP** **01 08 29.4 -0.3**
comp=Z,0.9nm,0.4s,baz=88,slow=2.6,SNR=22
ASAR Alice Springs 139.05 248 PKP **PKiKP** **01 08 28.6 -1.1**
comp=Z,1.0nm,0.6s,baz=78,slow=2.0,SNR=8.7
CMAR Chiang Mai Arr 148.40 348 PKPbc **PKPbc** **01 08 46.2 -1.2**
comp=Z,2.8nm,0.3s,baz=346,slow=2.8,SNR=5.3

*IDC **09** 01:06:54.5±1.8, 15°.01S×66°.82E, h0km, mb3.8/6, mbtmp3.8/6, MS3.6/30, Error ellipse: s-maj=54.3km s-min=38.5km az=33.0*

ISC 09 01:06:57.4±1.8, 15°.0S±0°.3×66°.9E±0°.3, h16km, n40, σ0°.74/7, mb4.0/6, MS3.7/29, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.14**	**38**	T	T		01 18 32.2	
	baz=217,slow=76,SNR=457							
H08S2	**Diego Garcia H**	**9.15**	**38**	T	T		01 18 33.0	
	baz=217,slow=76,SNR=638							
H08S3	**Diego Garcia H**	**9.16**	**38**	T	T		01 18 31.8	
	baz=217,slow=76,SNR=643							
OPO	**Ambohidratompo**	**19.16**	**257**	LR	LR		01 16 53.5	
	comp=Z,84nm,19.7s,baz=201,slow=31							
PALK	**Pallekele**	**26.03**	**33**	LR	LR		01 20 21.9	
	comp=Z,183nm,20.8s,baz=306,slow=31							
KMBO	**Kilima Mbogo**	**32.32**	**292**	LR	LR		01 23 46.2	
	comp=Z,52nm,19.2s,baz=92,slow=31							
PSI	**Prapat**	**36.34**	**63**	LR	LR		01 26 07.4	
	comp=Z,164nm,18.8s,baz=222,slow=32							
LSZ	**Lusaka**	**37.30**	**264**	LR	LR		01 28 14.2	
	comp=Z,241nm,18.7s,baz=128,slow=34							
MBAR	**Mbarara**	**38.44**	**289**	LR	LR		01 28 21.9	
	comp=Z,106nm,18.2s,baz=108,slow=34							
BOSA	**Boshof**	**40.73**	**243**	LR	LR		01 28 23.6	
	comp=Z,108nm,20.1s,baz=138,slow=32							
LEM	**Lembang**	**40.78**	**83**	LR	LR		01 29 20.8	
	comp=Z,102nm,18.0s,baz=155,slow=33							
SUR	**Sutherland**	**45.21**	**239**	LR	LR		01 29 49.7	
	comp=Z,124nm,22.0s,baz=112,slow=30							
CMAR	**Chiang Mai Arr**	**45.87**	**45**	P	**P**		**01 15 18.6**	**-0.6**
	1.5nm,0.4s,baz=228,slow=8.0,SNR=4.5							
CMAR					LR	LR	01 32 18.2	
	comp=Z,73nm,20.2s,baz=230,slow=33							
	1.5nm,0.4s							
H01W3	**Cape Leeuwin H**	**46.74**	**124**	T	T		02 05 28.3	
	baz=283,slow=75,SNR=54							
H01W2	**Cape Leeuwin H**	**46.74**	**124**	T	T		02 05 28.5	
	baz=283,slow=75,SNR=66							
H01W1	**Cape Leeuwin H**	**46.76**	**124**	T	T		02 05 29.5	
	baz=283,slow=75,SNR=51							
TSUM	**Tsumeb**	**47.16**	**258**	LR	LR		01 34 01.8	
	comp=Z,110nm,18.5s,baz=128,slow=34							
KAPI	**Kappang**	**52.91**	**85**	LR	LR		01 35 52.9	
	comp=Z,60nm,20.7s,baz=272,slow=33							
FITZ	**Fitzroy Crossi**	**56.24**	**102**	LR	LR		01 38 45.1	
	comp=Z,60nm,19.0s,baz=254,slow=34							
AAK	**Ala-Archa**	**57.77**	**7**	LR	LR		01 39 56.7	
	comp=Z,44nm,20.5s,baz=214,slow=34							
GNI	**Garni**	**58.59**	**340**	LR	LR		01 40 37.4	
	comp=Z,28nm,19.8s,baz=330,slow=34							
DAV	**Davao City (W)**	**62.19**	**74**	LR	LR		01 42 27.0	
	comp=Z,23nm,19.7s,baz=118,slow=34							
MKAR	**Makanchi Array**	**63.04**	**12**	P	**P**		**01 17 23.7**	**0.0**
	0.9nm,1.0s,baz=165,slow=6.0,SNR=3.0							
MKAR					LR	LR	01 43 00.2	
	comp=Z,48nm,20.6s,baz=271,slow=34							
	0.9nm,1.0s							
ASAR	**Alice Springs**	**63.38**	**109**	LR	LR		01 42 31.1	
	comp=Z,52nm,18.5s,baz=322,slow=34							
WRA	**Warramunga Arr**	**64.19**	**105**	P	**P**		**01 17 32.2**	**+0.3**
	1.2nm,1.0s,baz=265,slow=7.3,SNR=5.1							
	1.2nm,1.0s							
KURBB	**Kurchatov Arra**	**66.13**	**8**	LR	LR		01 44 22.3	
	comp=Z,64nm,21.8s,baz=183,slow=34							
BVAR	**Borovoye Array**	**67.80**	**2**	LR	LR		01 46 17.5	
	comp=Z,21nm,18.9s,baz=101,slow=35							
BELG	**Belogornoye**	**69.14**	**348**	LR	LR		01 48 38.8	
	comp=Z,22nm,18.4s,baz=297,slow=36							
SNAA	**Sanae**	**69.52**	**198**	LR	LR		01 45 25.6	
	comp=Z,47nm,18.8s,baz=230,slow=33							
ZALV	**Zalesovo Beam**	**70.36**	**11**	P	**P**		**01 18 10.4**	**+0.2**
	0.7nm,0.4s,baz=208,slow=2.8,SNR=2.3							
	0.7nm,0.4s							
ARU	**Arti**	**71.48**	**355**	LR	LR		01 47 56.5	
	comp=Z,19nm,18.7s,baz=252,slow=34							
SONM	**Songino Array**	**71.81**	**27**	P	**P**		**01 18 20.0**	**+0.7**
	0.2nm,0.4s,baz=212,slow=5.1,SNR=1.5							
SONM					LR	LR	01 48 54.1	
	comp=Z,54nm,19.2s,baz=221,slow=35							
	0.2nm,0.4s							
JOW	**Kunigami**	**72.68**	**55**	LR	LR		01 50 16.6	
	comp=Z,50nm,19.7s,baz=130,slow=36							
DBIC	**Dimbokro**	**74.24**	**281**	LR	LR		01 49 49.7	
	comp=Z,44nm,19.1s,baz=142,slow=35							
KSRS	**Korea Array**	**77.50**	**46**	LR	LR		01 54 17.0	
	comp=Z,28nm,18.1s,baz=245,slow=37							
MJAR	**Matsushiro Arr**	**84.46**	**50**	LR	LR		01 57 32.4	
	comp=Z,23nm,18.9s,baz=224,slow=36							
ESDC	**Sonseca Array**	**85.32**	**313**	P	**P**		**01 19 34.0**	**+0.2**
	0.7nm,1.0s,baz=90,slow=1.9,SNR=4.5							
	0.7nm,1.0s							
YAK	**Yakutsk**	**91.06**	**25**	LR	LR		02 00 37.8	
	comp=Z,36nm,19.1s,baz=266,slow=35							
MA2	**Magadan**	**99.73**	**31**	LR	LR		02 07 26.5	
	comp=Z,29nm,18.4s,baz=238,slow=36							
PDAR	**Pinedale Array**	**152.15**	**354**	PKPbc	**PKPbc**		**01 26 51.6**	**-1.1**
	0.4nm,0.7s,baz=44,slow=4.5,SNR=4.8							

*IDC **09** 01:21:34.5±1.1, 43°.56S×39°.59E, h0km, mb3.8/4, mbtmp3.9/5, ML4.5/1, MS3.6/9, Error ellipse: s-maj=64.8km*

s-min=24.8km az=47.0
*NEIC **09** 01:21:35.6±1.0, 44.°0S×0.°2×39.°1E×0.°4, h10km±1km, mb4.3/9, Error ellipse: s-maj=50.7km s-min=22.2km az=74.0.*
*PRE **09** 01:21:40.1±2.5, 43.°55S×38.°33E, h10km, mb4.6*

ISC 09 01:21:36.2±0.9, 44.°0S±0.°1×38.°8E±0.°2, h10km, n51, σ1§47/37, mb4.2/8, MS3.7/9, 1C, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KROM	**Kromhout**	**14.72**	**307**	*eP*	**Pn**	**01 25 02.5**	**-1.8**
ROSN	**Rosenhof**	**14.79**	**307**	*eP*	**Pn**	**01 25 03.5**	**-1.9**
SOE	**Somerset East**	**15.27**	**313**	Pn	**Pn**	**01 25 10.4**	**-1.5**
SOE	**Somerset East**	**15.27**	**313**	*eP*	**Pn**	**01 25 10.8**	**-1.1**
KSTD	**Kokstad**	**15.30**	**328**	*eP*	**Pn**	**01 25 10.0**	**-2.4**
GRAF	**Camdeboo Natio**	**16.18**	**311**	*eP*	**Pn**	**01 25 23.9**	**+0.2**
ROOI	**Rooidraai Farm**	**16.53**	**309**	*eP*	**Pn**	**01 25 28.7**	**+0.5**
BFON	**Badsfontein, M**	**16.98**	**311**	*eP*	**Pn**	**01 25 34.5**	**+0.5**
HVD	**Gariep Dam**	**16.99**	**317**	*eP*	**P**	**01 25 36.0**	**0.0**
ELIM	**Elim**	**17.41**	**296**	*eP*	**P**	**01 25 40.3**	**-0.2**
GRAN	**Grantham**	**17.46**	**306**	*eP*	**P**	**01 25 40.4**	**-0.7**
POGA	**Pongola**	**17.55**	**339**	P	**P**	**01 25 42.8**	**+0.8**
POGA				IAmb	IAmb	01 25 45.0	
	comp=Z,35nm,1.2s						
POGA	**Pongola**	**17.55**	**339**	*eP*	**Pn**	**01 25 42.2**	**+1.2**
MATJ	**Matjiesfontein**	**17.75**	**301**	*eP*	**P**	**01 25 45.7**	**+1.5**
SUR	**Sutherland**	**18.21**	**303**	P	**P**	**01 25 50.9**	**+1.4**
SUR				IAmb	IAmb	01 25 55.2	
	comp=Z,30nm,1.4s						
SUR	**Sutherland**	**18.21**	**303**	*eP*	**P**	**01 25 49.1**	**-0.4**
CER	**Ceres**	**18.49**	**298**	⇑*iP*	**Pn**	**01 25 52.2**	**-0.1**
BOSA	**Boshof**	**18.77**	**320**	P	**Pn**	**01 25 56.1**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=152,slow=13,SNR=22						
BOSA				S	Sn	01 29 13.4	-13
	comp=Z,1.9nm,0.9s,baz=102,slow=17,SNR=1.7						
	comp=Z,22nm,1.1s						
BOSA	**Boshof**	**18.77**	**320**	P	**Pn**	**01 25 56.5**	**+0.5**
BOSA				IAmb	IAmb	01 25 59.0	
	comp=Z,18nm,1.0s						
BOSA	**Boshof**	**18.77**	**320**	*eP*	**Pn**	**01 25 58.3**	**+2.3**
CVNA	**Calvinia**	**19.48**	**304**	*eP*	**Pn**	**01 26 08.3**	**+3.8**
SWZ	**Schweizer**	**19.96**	**323**	*eP*	**Pn**	**01 26 14.1**	**+3.7**
SLR	**Silverton**	**20.11**	**332**	*eP*	**P**	**01 26 11.6**	**+1.4**
SLR				IAmb	IAmb	01 26 12.0	
	comp=Z,12nm,0.8s						
KSR	**Koster**	**20.50**	**328**	*eP*	Pn	01 26 20.7	+4.0
KEIM	**Keimoes**	**20.86**	**311**	*eP*	**P**	**01 26 18.2**	**-0.1**
KEIM				IAmb	IAmb	01 26 26.0	
	comp=Z,133nm,2.3s						
UPI	**Upington**	**20.98**	**312**	*eP*	**P**	**01 26 19.1**	**-0.5**
MOPA	**Mopani**	**21.30**	**341**	*eP*	**P**	**01 26 22.8**	**-0.2**
MOPA				IAmb	IAmb	01 26 26.0	
	comp=Z,22nm,1.4s						
LBTB	**Lobatse**	**21.76**	**326**	P	**P**	**01 26 28.8**	**+0.7**
LBTB	**Lobatse**	**21.76**	**326**	*eP*	**P**	**01 26 29.3**	**+1.2**
LBTB				IAmb	IAmb	01 26 52.8	
	comp=Z,37nm,1.6s						
MATP	**Matopo**	**25.01**	**337**	*eP*	**P**	**01 27 00.7**	**+0.3**
MATP				IAmb	IAmb	01 27 06.0	
	comp=Z,125nm,2.2s						
OPO	**Ambohidratompo**	**26.32**	**18**	LR	LR	01 35 34.8	
	comp=Z,76nm,19.9s,baz=321,slow=33						
MAW	**Mawson**	**26.91**	**160**	P	**P**	**01 27 19.2**	**+2.2**
	comp=Z,4.5nm,1.0s,baz=304,slow=7.3,SNR=4.4						
	comp=Z,4.5nm,1.0s						
LSZ	**Lusaka**	**30.00**	**339**	LR	LR	01 38 20.6	
	comp=Z,28nm,19.3s,baz=167,slow=34						
LSZ	**Lusaka**	**30.00**	**339**	P	**P**	**01 27 43.6**	**-1.6**
LSZ				IAmb	IAmb	01 27 55.4	
	comp=Z,3.0nm,0.8s						
SNAA	**Sanae**	**34.17**	**202**	P	**P**	**01 28 20.5**	**-0.7**
MBAR	**Mbarara**	**43.79**	**348**	LR	LR	01 47 03.0	
	comp=Z,41nm,18.2s,baz=167,slow=35						
QSPA	**South Pole Qui**	**46.22**	**180**	P	**P**	**01 30 00.1**	**-1.0**
VNDA	**Vanda**	**53.86**	**167**	LR	LR	01 52 45.6	
	comp=Z,30nm,20.1s,baz=272,slow=35						
H01W2	**Cape Leeuwin H**	**57.05**	**109**	T	T	02 32 30.8	
	baz=238,slow=75,SNR=15						
H01W3	**Cape Leeuwin H**	**57.06**	**109**	T	T	02 32 34.4	
	baz=238,slow=75,SNR=14						
H01W1	**Cape Leeuwin H**	**57.07**	**109**	T	T	02 32 31.8	
	baz=238,slow=75,SNR=13						
TORD	**Torodi Ar. Bea**	**66.13**	**320**	P	**P**	**01 32 24.5**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=154,slow=6.3,SNR=3.9						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.13**	**320**	P	**P**	**01 32 24.5**	**+0.7**
TORD				IAmb	IAmb	01 32 50.2	
	comp=Z,3.0nm,1.4s						
PLCA	**Paso Flores**	**74.42**	**228**	LR	LR	02 02 16.4	
	comp=Z,77nm,18.8s,baz=182,slow=32						
RCBR	**Riachuelo**	**74.94**	**277**	LR	LR	02 00 07.0	
	comp=Z,42nm,18.8s,baz=318,slow=31						
ASAR	**Alice Springs**	**77.48**	**111**	P	P	01 33 28.5	-3.6
	comp=Z,0.3nm,0.5s,baz=217,slow=4.5,SNR=2.0						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**80.30**	**108**	P	**P**	**01 33 46.3**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=224,slow=4.0,SNR=2.1						
	comp=Z,0.3nm,0.8s						
MDT	**Midelt**	**86.06**	**325**	LR	LR	02 12 23.0	
	comp=Z,28nm,18.7s,baz=165,slow=35						
LVC	**Limon Verde**	**86.43**	**242**	LR	LR	02 07 15.0	
	comp=Z,65nm,20.1s,baz=206,slow=31						
DZM	**Mont Dzumac**	**98.67**	**132**	LR	LR	02 10 59.5	
	comp=Z,44nm,19.0s,baz=12,slow=30						
TXAR	**Lajitas Array**	**146.80**	**257**	PKPbc	**PKPbc**	**01 41 19.1**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=131,slow=6.1,SNR=9.4						

*MDD **09** 01:21:46.7±1.1, 37.°26N×13.°12W, h0km, Mb4.1/4, M_mb3.4/4, Error ellipse: s-maj=7.1km s-min=8.8km az=44.0*
*INMG **09** 01:21:47.5±1.3, 36.°98N×13.°59W, h10km, ML2.1, Error ellipse: s-maj=8.1km s-min=7.8km az=74.0*
*IGIL **09** 01:21:49.5, 37.°26N×13.°12W, h5km, ML1.8*
*CNRM **09** 01:21:53.1, 36.°86N×12.°81W, h146km, ml4.4*

ISC 09 01:21:46.8±1.7, 37.°30N±0.°07×13.°12W±0.°09, h10km, n35, σ1§82/50, 4C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.43**	**91**	*e*Pn	**Pn**	**01 22 41.0**	**+0.7**
PFVI				*e*Sn	**Sn**	**01 23 19.5**	**-1.4**
PFVI				A	A	01 23 20.7	
	3.7nm,0.1s						
PMAFR	**Mafra**	**3.45**	**60**	*e*Pn	**Pn**	**01 22 41.7**	**+1.2**
PMAFR				*e*Sn	**Sn**	**01 23 23.5**	**+2.1**
PMAFR				A	A	01 23 26.5	
	11nm,0.7s						
PTEO	**Sao Teotonio**	**3.50**	**85**	*e*Pn	**Pn**	**01 22 41.5**	**+0.2**
PTEO				*e*Sn	**Sn**	**01 23 22.2**	**-0.6**
PTEO				A	A	01 23 27.2	
	3.2nm,0.7s						
MORF	**Marmelete**	**3.56**	**89**	*e*P	**Pn**	**01 22 43.7**	**+1.6**
MORF				*e*S	**Sn**	**01 23 23.1**	**-1.2**
MORF				IAML		01 23 25.8	
	comp=N,3.4nm,0.1s						
MORF	**Marmelete**	**3.56**	**89**	*e*Pn	**Pn**	**01 22 43.7**	**+1.6**
MORF				*e*Sn	**Sn**	**01 23 23.4**	**-0.9**
MORF				A	A	01 23 24.6	
	comp=N,2.7nm,0.2s						
PACT	**Alcochete**	**3.69**	**65**	*e*Sn	**Sn**	**01 23 29.5**	**+2.2**
PNCL	**Nicolau / Gran**	**3.73**	**76**	*e*Pn	**Pn**	**01 22 45.5**	**+1.1**
PNCL				*e*Sn	**Sn**	**01 23 27.7**	**-0.6**
PNCL				A	A	01 23 32.9	
	comp=N,2.7nm,0.1s						
MESJ	**Messejana**	**3.93**	**81**	*e*S	**Sn**	**01 23 32.1**	**-1.1**
MESJ				IAML		01 23 34.9	
	comp=E,2.0nm,0.1s						
MESJ	**Messejana**	**3.93**	**81**	*e*Pn	**Pn**	**01 22 47.5**	**+0.4**
MESJ				*e*Sn	**Sn**	**01 23 33.0**	**-0.3**
MESJ				A	A	01 23 36.0	
	comp=E,2.8nm,0.5s						
PSBE	**So Bento**	**4.05**	**56**	*e*Pn	**Pn**	**01 22 50.5**	**+1.6**
PSBE				*e*Sn	**Sn**	**01 23 38.1**	**+1.7**
PCVE	**Castro Verde**	**4.05**	**84**	*e*Sn	**Sn**	**01 23 35.8**	**-0.6**
PBDV	**Barranco-do-Ve**	**4.14**	**89**	*e*Sn	**Sn**	**01 23 37.3**	**-1.2**
EVO	**Evora**	**4.22**	**71**	*e*Sn	**Sn**	**01 23 39.4**	**-1.1**
PBEJ	**Beja**	**4.23**	**79**	*e*Sn	**Sn**	**01 23 41.2**	**+0.5**
PMTG	**Montargil**	**4.24**	**64**	*e*Pn	**Pn**	**01 22 53.3**	**+1.9**
PMTG				*e*Sn	**Sn**	**01 23 41.6**	**+0.6**
PVAQ	**Vaqueiros**	**4.30**	**87**	P	**Pn**	**01 22 55.2**	**+2.9**
PVAQ				S	**Sn**	**01 23 42.3**	**-0.2**
PVAQ	**Vaqueiros**	**4.30**	**87**	*e*Pn	**Pn**	**01 22 56.1**	**+3.8**
EGRO	**El Granado**	**4.49**	**85**	P	**Pn**	**01 22 55.4**	**+0.5**
EGRO				⇑*iV*mb_V		01 22 56.4	
	comp=E,210nm,SNR=1.4						
EGRO				S	**Sn**	**01 23 44.8**	**-2.4**
PCAS	**Casmilo, Conde**	**4.54**	**51**	*e*Pn	**Pn**	**01 22 56.4**	**+0.8**
PESTR	**Estremoz**	**4.63**	**69**	P	Pn	01 23 02.2	+5.3
PESTR				S	**Sn**	**01 23 53.3**	**+2.6**
PESTR	**Estremoz**	**4.63**	**69**	*e*Sn	**Sn**	**01 23 50.5**	**-0.2**
PESTR				A	A	01 23 59.9	
	comp=E,1.0nm,0.6s						
PBAR	**Barrancos**	**4.90**	**78**	*e*Sn	**Sn**	**01 23 56.2**	**-0.9**
PMRV	**Marv??o**	**4.98**	**63**	*e*Pn	**Pn**	**01 23 02.3**	**+0.7**
PMRV				*e*Sn	**Sn**	**01 23 59.1**	**-0.1**
EBAD	**Badajoz**	**5.03**	**71**	P	**Pn**	**01 23 03.4**	**+1.1**
EBAD				⇑*iV*mb_V		01 23 12.4	
	comp=E,100nm,SNR=1.2						
EBAD				S	**Sn**	**01 23 57.2**	**-3.3**
EMIN	**Mina Concepcio**	**5.14**	**83**	S	**Sn**	**01 24 01.7**	**-1.6**
MTE	**Manteigas**	**5.34**	**53**	*e*Pn	**Pn**	**01 23 07.4**	**+0.8**
MTE				*e*Sn	**Sn**	**01 24 08.8**	**+0.6**
PMOZ	**Porto Moniz, M**	**5.58**	**218**	P	**Pn**	**01 23 12.5**	**+2.6**
PMOZ				S	**Sn**	**01 24 12.9**	**-1.3**
ESPR	**Espera**	**5.82**	**92**	S	**Sn**	**01 24 19.0**	**-0.9**
ELOB	**Lobios**	**6.00**	**39**	P	**Pn**	**01 23 15.1**	**-0.6**
ELOB				⇑*iV*mb_V		01 23 21.0	
	comp=E,212nm,SNR=2.0						
ELOB				S	**Sn**	**01 24 21.9**	**-2.7**
ECAB	**El Cabril**	**6.15**	**80**	P	**Pn**	**01 23 18.1**	**+0.4**
ECAB				⇑*iV*mb_V		01 23 18.8	
	comp=E,58nm,SNR=1.1						
ECAB				S	**Sn**	**01 24 25.1**	**-3.1**
EAGO	**Agolada(Pontev**	**6.71**	**33**	S	**Sn**	**01 24 36.8**	**-5.1**
EADA	**Adamuz**	**6.82**	**80**	S	**Sn**	**01 24 42.2**	**-2.5**
OUK	**Oukaimeden**	**7.47**	**143**	P	Pn	01 23 31.7	-4.5
OUK				S	Sn	01 24 53.2	-7.9
MD31	**MD31**	**8.15**	**120**	P	Pn	01 23 41.8	-3.4
MD31				S	Sn	01 25 09.3	-8.1
MDT	**Midelt**	**8.29**	**120**	P	**Pn**	**01 23 44.8**	**-2.3**
MDT				S	Sn	01 25 12.8	-8.0

*IDC **09** 01:35:46.3±2.0, 17.°61S×178.°88W, h572km±17km, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=83.2km s-min=17.3km az=152.0*

ISC 09 01:35:45.5±1.6, 17.°3S±0.°7×178.°9W±0.°4, h550km, n25, σ2§27/26, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.94**	**261**	P	**P**	**01 37 03.2**	**+2.9**
	46nm,0.6s,baz=122,slow=5.4,SNR=12						
WRA	**Warramunga Arr**	**44.28**	**259**	P	**P**	**01 43 05.3**	**-1.7**
	0.2nm,0.5s,baz=94,slow=7.5,SNR=11						
WRA				PcP	**PcP**	**01 44 37.5**	**-1.9**
	0.3nm,0.5s,baz=97,slow=3.6,SNR=5.2						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**44.51**	**254**	P	**P**	**01 43 07.5**	**-1.3**
	0.9nm,0.5s,baz=91,slow=7.8,SNR=10						
ASAR				PcP	**PcP**	**01 44 37.8**	**-2.3**
	0.4nm,0.3s,baz=99,slow=4.2,SNR=2.9						
	0.9nm,0.5s						
NVAR	**Mina Array Bea**	**79.30**	**44**	P	**P**	**01 46 54.7**	**0.0**
	0.7nm,0.7s,baz=220,slow=10.0,SNR=6.4						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**85.38**	**13**	P	**P**	**01 47 23.8**	**-0.7**
	0.5nm,0.4s,baz=219,slow=5.3,SNR=9.1						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**01 47 28.4**	**-0.3**
	0.8nm,0.6s,baz=225,slow=6.6,SNR=11						
	0.8nm,0.6s						
PDAR	**Pinedale Array**	**87.22**	**44**	P	**P**	**01 47 33.2**	**-0.8**
	0.7nm,0.5s,baz=219,slow=3.2,SNR=8.9						
	0.7nm,0.5s						
ARCES	**ARCESS Array B**	**125.61**	**350**	PKP	**PKPdf**	**01 53 42.1**	**-1.8**
	1.5nm,0.9s,baz=90,slow=0.2,SNR=3.8						
BRTR	**Keskin Array B**	**144.00**	**315**	PKP	PKPbc	01 54 18.1	-0.4
	1.1nm,0.8s,baz=115,slow=2.4,SNR=9.6						
DPC	**Dobruska-Polom**	**144.80**	**343**	*e*PKP	**PKPdf**	**01 54 20.5**	**+0.5**
KRLC	**Kraliky**	**144.92**	**342**	*e*PKP	**PKPdf**	**01 54 20.8**	**+0.6**
MLR	**Muntele Rosu**	**145.04**	**329**	PKPbc	**PKPdf**	**01 54 20.6**	**-0.1**
	1.0nm,0.4s,baz=145,slow=9.3,SNR=3.1						
MMAI	**Mount Meron Ar**	**145.40**	**303**	PKPbc	**PKPdf**	**01 54 21.9**	**+0.4**
	1.1nm,0.4s,baz=87,slow=5.9,SNR=4.1						
KHC	**Kasperske Hory**	**146.64**	**345**	*e*PKP	**PKPdf**	**01 54 25.1**	**+2.0**
CKRC	**Cesky Krumlov**	**146.74**	**344**	*e*PKP	**PKPdf**	**01 54 25.7**	**+2.4**
GERES	**GERESS Array B**	**146.87**	**345**	PKPbc	**PKPdf**	**01 54 25.9**	**+2.3**
	1.5nm,0.6s,baz=26,slow=3.4,SNR=17						
CONA	**Conrad Observa**	**147.11**	**342**	*e*P	**PKPbc**	**01 54 27.1**	**0.0**
	1.6nm,0.6s						
RONA	**Rosalia, Austr**	**147.18**	**341**	*e*P	**PKPdf**	**01 54 27.1**	**+3.0**
	1.8nm,0.7s						
WATA	**Walderalm**	**148.79**	**346**	*e*P	**PKPdf**	**01 54 30.5**	**+3.6**
	1.4nm,0.6s						
WTTA	**Wattenberg**	**148.85**	**346**	*e*P	**PKPdf**	**01 54 30.6**	**+3.6**
	2.0nm,0.5s						
MYKA	**Terra Mystica**	**148.93**	**343**	*e*P	**PKPdf**	**01 54 30.6**	**+3.6**
	4.0nm,1.0s						
SQTA	**Sankt Quirin**	**148.99**	**347**	*e*P	**PKPbc**	**01 54 31.0**	**-0.9**
	1.9nm,0.6s						
ABTA	**Abfaltersbach**	**149.12**	**345**	*e*P	**PKPdf**	**01 54 30.9**	**+3.6**
	1.9nm,0.6s						
DAVA	**Damuels**	**149.20**	**348**	*e*P	**PKPbc**	**01 54 32.2**	**-0.3**
	2.4nm,0.7s						
FETA	**Feichten**	**149.28**	**347**	*e*P	**PKPdf**	**01 54 31.5**	**+3.8**
	4.1nm,1.4s						

*IDC **09** 01:59:04.5±1.6, 5.°70S×152.°53E, h0km, mb3.7/4, mbtmp3.8/5, ML2.3/1, MS3.1/1, Error ellipse: s-maj=41.1km s-min=18.4km az=105.0*

ISC 09 01:59:10.4±1.5, 5.°70S±0.°09×152.°4E±0.°2, h40km, n8, σ1§18/9, mb3.7/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.43**	**344**	Pn	**Pn**	**01 59 33.4**	**-0.5**
	163nm,0.3s,baz=299,slow=4.1,SNR=63						
KRVT				Sn	**Sn**	**01 59 52.4**	**+0.9**
	72nm,0.3s,baz=320,slow=18,SNR=14						
KRVT				LR	LR	02 00 10.0	
	comp=Z,442nm,18.5s,baz=178,slow=45						
PMG	**Port Moresby**	**6.38**	**234**	Pn	**Pn**	**02 00 42.5**	**+0.5**
	3.7nm,0.3s,baz=79,slow=16,SNR=2.2						
PMG				Sn	**Sn**	**02 01 53.0**	**-0.7**
	6.6nm,0.3s,baz=143,slow=18,SNR=7.3						
	7.8nm,0.3s						
WRA	**Warramunga Arr**	**22.57**	**230**	P	**P**	**02 04 06.4**	**-1.1**
	0.5nm,0.6s,baz=54,slow=10,SNR=7.6						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**25.24**	**223**	P	**P**	**02 04 34.5**	**+1.7**
	2.1nm,0.9s,baz=56,slow=9.4,SNR=12						
	2.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.90**	**242**	P	**P**	**02 05 05.5**	**-0.2**
	1.1nm,0.6s,baz=79,slow=9.5,SNR=3.0						
	1.1nm,0.6s						
RPZ	**Rata Peaks**	**41.27**	**159**	LR	LR	02 24 42.3	
	comp=Z,24nm,18.6s,baz=247,slow=37						
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**02 11 32.1**	**+0.4**
	0.9nm,0.7s,baz=252,slow=5.0,SNR=8.2						
	0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.21**	**287**	PKPbc	**PKPbc**	**02 18 56.7**	**-1.5**
	0.5nm,0.8s,baz=58,slow=2.9,SNR=3.0						

*UPA **09** 01:59:56.9±0.9, 8.°32N×82.°92W, h10km±3km, MW4.0*
*UCR **09** 01:59:57.4±2.4, 8.°40N×82.°89W, h5km, MW4.2*

ISC 09 01:59:56.0±1.7, 8.°27N±0.°07×82.°94W±0.°04, h9km±11km, n37, σ1§17/51, 6D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.30**	**13**	*e*P	**Pg**	**02 00 02.8**	**+0.7**
BAGA3	**Bagala, Chiriq**	**0.45**	**65**	⇓*iP*	**Pb**	**02 00 06.3**	**+0.1**
BAGA3				*e*S	**Sb**	**02 00 12.1**	**-0.9**
DVD	**David**	**0.51**	**72**	*e*P	**Pb**	**02 00 06.9**	**-0.3**
DVD				*e*S	**Sb**	**02 00 13.9**	**-0.9**
MLIR3	**Monte Lirio, C**	**0.53**	**13**	⇓*iP*	**Pg**	**02 00 06.2**	**-0.1**
MLIR3				*e*S	**Sb**	**02 00 15.4**	**+0.1**
EDSV	**San Vito**	**0.54**	**357**	*e*P	**Pg**	**02 00 07.0**	**+0.4**
BRU2	**Volcan**	**0.57**	**26**	⇓*eP*	**Pb**	**02 00 07.8**	**-0.5**
BRU2				*e*S	**Sb**	**02 00 16.3**	**-0.4**
BCO2	**Palmira**	**0.60**	**43**	*e*P	**Pb**	**02 00 08.5**	**-0.3**
BCO2				*e*S	**Sb**	**02 00 17.3**	**-0.2**
PTAR3	**Potrerillos Ar**	**0.61**	**47**	⇓*eP*	**Pb**	**02 00 08.6**	**-0.3**
PTAR3				*e*S	**Sb**	**02 00 17.8**	**+0.2**
CHIR3	**Chiriqui UPA,**	**0.62**	**79**	⇓*iP*	**Pg**	**02 00 08.6**	**+0.7**
CHIR3				*e*S	**Sb**	**02 00 17.8**	**0.0**
BC3P	**Paso Ancho**	**0.63**	**31**	⇓*iP*	**Pb**	**02 00 08.7**	**-0.6**
LNBQ3	**Los Naranjos,**	**0.71**	**44**	*eP*	**Pg**	**02 00 09.8**	**0.0**
CHGR2	**Aguacate**	**1.03**	**50**	*eP*	**Pg**	**02 00 14.8**	**-1.0**
CHGR2				*e*S	**Sb**	**02 00 28.5**	**-1.1**
DRK0	**Durika**	**1.03**	**343**	*eP*	**Pg**	**02 00 15.4**	**-0.4**
DRK0				*e*S	**Sb**	**02 00 30.0**	**+0.2**
SRBA	**San Rafael, Bu**	**1.04**	**337**	*eP*	**Pg**	**02 00 14.6**	**-1.4**
SRBA				*e*S	**Sb**	**02 00 29.3**	**-0.7**
REME3	**Remedios, Chir**	**1.10**	**92**	*eP*	**Pg**	**02 00 16.8**	**-0.3**
PEZE	**Perez Zeledon,**	**1.32**	**327**	*eP*	**Pn**	**02 00 19.0**	**-1.8**
PEZE				*e*S	**Sb**	**02 00 37.7**	**-0.5**
EDDO	**Dominical**	**1.33**	**317**	*eP*	**Pn**	**02 00 20.2**	**-0.6**
EDDO				*e*S	**Sg**	**02 00 39.0**	**0.0**
CDM	**Cerro de Muert**	**1.51**	**327**	*eP*	**Pn**	**02 00 22.2**	**-1.4**
RIMA	**Rio Macho**	**1.74**	**329**	*eP*	**Pn**	**02 00 25.9**	**-0.8**
LCR2	**La Lucha 2**	**1.80**	**324**	*eP*	**Pn**	**02 00 28.8**	**+1.4**
HDC	**Heredia**	**2.07**	**326**	*eP*	**Pn**	**02 00 32.4**	**+1.2**
HDC	**Heredia**	**2.07**	**326**	*eP*	**Pn**	**02 00 30.9**	**-0.2**
HDC				*e*S	**Sn**	**02 00 57.9**	**+0.7**
LAFE	**Finca La Fe, P**	**2.47**	**308**	*eP*	**Pn**	**02 00 35.8**	**-0.7**
ARE1	**Arenal 1**	**2.79**	**321**	*eP*	**Pn**	**02 00 43.4**	**+2.4**
CEDE	**Laguna Cedeo**	**2.80**	**322**	*eP*	**Pn**	**02 00 43.3**	**+2.1**
JTS	**Las Juntas de**	**2.82**	**315**	*eP*	**Pn**	**02 00 41.4**	**0.0**
JTS	**Las Juntas de**	**2.82**	**315**	*eP*	**Pn**	**02 00 41.6**	**+0.2**
JTS				*e*S	**Sn**	**02 01 15.9**	**+0.4**
INDI	**Punta indio, G**	**2.98**	**302**	*eP*	**Pn**	**02 00 43.4**	**-0.2**
ACAL	**Aguas Claras**	**3.12**	**319**	*eP*	**Pn**	**02 00 48.1**	**+2.5**
CUI	**Cuipilapa**	**3.23**	**317**	*eP*	**Pn**	**02 00 49.2**	**+2.3**
COLC	**Colonia**	**3.26**	**317**	*eP*	**Pn**	**02 00 49.5**	**+2.1**
SAJU	**San Juanillo,**	**3.26**	**303**	*eP*	**Pn**	**02 00 46.9**	**-0.5**
HORNC	**Hornillas**	**3.28**	**318**	*eP*	**Pn**	**02 00 49.9**	**+2.2**
VMAR	**Armenia, Volca**	**3.31**	**320**	*eP*	**Pn**	**02 00 50.2**	**+2.0**
BUEV	**Buena Vista**	**3.49**	**316**	*eP*	**Pn**	**02 00 52.3**	**+1.6**
GB1A	**Borinquen Arri**	**3.50**	**316**	*eP*	**Pn**	**02 00 52.5**	**+1.7**
HZTE	**Horizontes, Gu**	**3.57**	**313**	*eP*	**Pn**	**02 00 53.4**	**+1.7**

*IDC **09** 02:06:19.4±1.0, 15.°53N×43.°37E, h0km, mb3.7/8, mbtmp3.8/10, ML4.0/2, MS3.3/2, Error ellipse: s-maj=25.1km s-min=16.4km az=106.0*
*NEIC **09** 02:06:22.2±1.6, 15.°6N±0.°1×43.°7E±0.°1, h15km±6km, mb4.1/6, Error ellipse: s-maj=19.5km s-min=9.6km az=132.0*
*SGS **09** 02:06:23.1, 15.°86N×42.°95E, h6km, Ml3.6*

ISC 09 02:06:21.1±0.7, 15.°75N±0.°05×43.°19E±0.°08, h10km, n37, σ2§21/37, mb3.8/11, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**1.43**	**314**	S	**Sn**	**02 07 00.8**	**-5.2**
FRSS	**Farasan al Kab**	**1.43**	**314**	P	**Pn**	**02 06 44.6**	**-2.5**
AKWA	**Algayed**	**1.57**	**343**	P	**Pn**	**02 06 47.7**	**-1.5**
AKWA	**Algayed**	**1.57**	**343**	S	**Sn**	**02 07 08.4**	**-1.3**
BESHS	**BESHS**	**1.64**	**348**	P	**Pn**	**02 06 48.8**	**-1.2**
MKHL	**Mahalah**	**1.68**	**343**	P	**Pn**	**02 06 49.5**	**-1.1**
FRSS2	**Sair Farasan I**	**1.73**	**309**	P	**Pn**	**02 06 48.7**	**-2.6**
DJNS	**Zahran al Janu**	**1.97**	**10**	P	**Pb**	**02 06 55.8**	**-1.5**
DRBS	**Ad Darb**	**2.24**	**338**	P	**Pn**	**02 06 56.8**	**-1.4**
KNGHS	**KNGHS**	**2.55**	**7**	P	**Pb**	**02 07 04.1**	**-3.0**
AMGES	**AMGES**	**3.13**	**330**	P	**Pn**	**02 07 09.0**	**-1.6**
ENMS	**ENMS**	**3.35**	**350**	P	**Pn**	**02 07 14.5**	**+0.6**
ATD	**Arta Tunnel**	**4.21**	**185**	Pn	**Pn**	**02 07

*NAO **09** 02:46:10.2±1.6, 73°.46N×7°.47E, ML3.8*
*IDC **09** 02:46:11.7±0.5, 73°.40N×7°.66E, h0km, mb4.0/29, mbtmp4.0/35, ML3.2/5, MS3.6/27, Error ellipse: s-maj=12.9km s-min=8.9km az=65.0*
*IEPN **09** 02:46:12.0, 73°.43N×8°.24E, h10km*
*MOS **09** 02:46:12.3±1.2, 73°.56N×8°.30E, h10km, mb4.6/33, Error ellipse: s-maj=23.0km s-min=4.5km az=94.7*
*NEIC **09** 02:46:13.6±1.5, 73°.47N±0°.04×8°.00E±0°.05, h10km±1km, mb4.4/33, Error ellipse: s-maj=13.6km s-min=12.1km az=235.0*
*BER **09** 02:46:14.8±2.7, 73°.54N×8°.10E, h10km, ML3.8(NAO), Confirmed Earthquake*
*KOLA **09** 02:46:19.1, 73°.40N×9°.29E, h0km, ML2.3*
ISC 09 02:46:13.3±0.4, 73°.49N±0°.04×8°.00E±0°.05, h10km, n248, σ2ᵖ36/265, mb4.2/81, MS3.5/25, 13C-1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.21**	**66**	Pn	**Pn**	**02 47 02.4**	**-1.2**
BJO1	**Bjornoya**	**3.21**	**66**	*eP*	**Pn**	**02 47 02.4**	**-1.2**
BJO1	**Bjornoya**	**3.21**	**66**	*eP*	**Pn**	**02 47 01.9**	**-1.7**
BJO1				S	**Sn**	**02 47 38.8**	**-3.0**
HSPB	**Hornsund (broa**	**4.02**	**25**	Pn	**Pn**	**02 47 13.4**	**-1.3**
HSPB	**Hornsund (broa**	**4.02**	**25**	P	**Pn**	**02 47 12.3**	**-2.4**
HSPB	**Hornsund (broa**	**4.02**	**25**	*eP*	**Pn**	**02 47 13.3**	**-1.3**
HSPB				IAML		02 48 01.3	
	comp=Z,8.1nm,0.7s						
HSPB	**Hornsund (broa**	**4.02**	**25**	*eP*	**Pn**	**02 47 12.7**	**-1.9**
HSPB				S	**Sn**	**02 47 59.1**	**-2.5**
BRBA	**Barentsburg A**	**4.84**	**16**	Pn	**Pn**	**02 47 24.8**	**-1.1**
BRBA	**Barentsburg A**	**4.84**	**16**	*eP*	**Pn**	**02 47 24.9**	**-1.1**
SPB2	**Spitsbergen Ar**	**5.13**	**20**		**Pn**	**02 47 29.6**	**-0.4**
SPA0	**Spitsbergen Ar**	**5.13**	**20**	Pn	**Pn**	**02 47 29.6**	**-0.4**
	baz=201,slow=14						
SPA0	**Spitsbergen Ar**	**5.13**	**20**	Pn	**Pn**	**02 47 29.6**	**-0.4**
	baz=201,slow=14						
SPA0	**Spitsbergen Ar**	**5.13**	**20**	P	**Pn**	**02 47 29.6**	**-0.4**
SPA0				*eS*	**Sn**	**02 48 26.5**	**-2.7**
SPITS	**Spitsbergen Ar**	**5.13**	**20**	Pn	**Pn**	**02 47 29.6**	**-0.4**
	comp=Z,22nm,0.3s,baz=190,slow=14,SNR=689						
SPITS				Sn	**Sn**	**02 48 25.1**	**-4.0**
	baz=192,slow=10						
TRO	**Tromso**	**5.20**	**133**	*eP*	**Pn**	**02 47 30.7**	**-0.2**
TRO				*e*		02 48 22.8	
HOPEN	**Hopen**	**5.34**	**48**	Pn	**Pn**	**02 47 31.4**	**-1.4**
HOPEN				Sn	**Sn**	**02 48 30.7**	**-3.5**
HOPEN	**Hopen**	**5.34**	**48**	*eP*	**Pn**	**02 47 31.2**	**-1.6**
HOPEN				*eS*	**Sn**	**02 48 28.9**	**-5.3**
HOPEN				IAML		02 48 35.5	
	comp=Z,14nm,0.8s						
HOPEN	**Hopen**	**5.34**	**48**	*eP*	**Pn**	**02 47 30.6**	**-2.2**
HOPEN				*eS*	**Sn**	**02 48 28.9**	**-5.3**
KBS	**Kingsbay**	**5.54**	**8**	Pn	**Pn**	**02 47 34.5**	**-1.1**
KBS	**Kingsbay**	**5.54**	**8**	Pn	**Pn**	**02 47 34.4**	**-1.2**
KBS	**Kingsbay**	**5.54**	**8**	*ceP*	**Pn**	**02 47 34.4**	**-1.2**
KBS				pmax	pmax		
	comp=Z,22nm,0.8s						
KBS	**Kingsbay**	**5.54**	**8**	*i* P	**Pn**	**02 47 33.4**	**-2.2**
KBS	**Kingsbay**	**5.54**	**8**	*eP*	**Pn**	**02 47 34.1**	**-1.6**
KBS	**Kingsbay**	**5.54**	**8**	*eP*	**Pn**	**02 47 33.8**	**-1.8**
KBS				*i* S	**Sn**	**02 48 35.7**	**-3.5**
JETT	**Jettan, Norway**	**5.58**	**129**	*eP*	**Pn**	**02 47 36.0**	**-0.2**
JETT				*eS*	**Sn**	**02 48 35.4**	**-4.8**
JETT				IAML		02 48 41.3	
	comp=Z,11nm,0.3s						
HAMF	**Hammerfest**	**5.62**	**113**	Pn	**Pn**	**02 47 35.5**	**-1.2**
HAMF				Sn	**Sn**	**02 48 34.1**	**-7.0**
HAMF	**Hammerfest**	**5.62**	**113**	*eP*	**Pn**	**02 47 35.5**	**-1.2**
HAMF				*eS*	**Sn**	**02 48 34.2**	**-6.9**
HAMF				IAML		02 48 38.0	
	comp=Z,16nm,0.4s						
JMIC	**Jan Mayen**	**5.63**	**252**	LR	LR	02 49 16.9	
	comp=Z,529nm,19.8s,baz=72,slow=34						
LOF	**Lofoten**	**5.69**	**159**	*eP*	**Pn**	**02 47 36.7**	**-0.9**
LOF				*e*		02 48 30.7	
LOF				*eS*	Sn	02 48 33.7	-9.2
LOF				IAML		02 48 37.7	
	comp=Z,16nm,0.3s						
STEI	**Steigen**	**6.08**	**153**	*eP*	**Pn**	**02 47 41.6**	**-1.4**
STEI				IAML		02 48 51.8	
	comp=Z,8.2nm,0.7s						
KIF	**Kilpisjarvi**	**6.10**	**131**	Pn	**Pn**	**02 47 42.8**	**-0.4**
KIF				Sn	**Sn**	**02 48 46.6**	**-6.3**
KIF	**Kilpisjarvi**	**6.10**	**131**	*eP*	**Pn**	**02 47 42.7**	**-0.5**
KIF				*eS*	**Sn**	**02 48 46.6**	**-6.3**
FAUS	**Fauske**	**6.60**	**155**	*eP*	**Pn**	**02 47 50.8**	**+0.6**
ARA0	**ARCESS Array S**	**6.82**	**117**	Pn	**Pn**	**02 47 52.5**	**-0.6**
	baz=310,slow=12						
ARA0				Sn	**Sn**	**02 49 05.0**	**-5.7**
	baz=309,slow=18						
ARA0	**ARCESS Array S**	**6.82**	**117**	*eP*	**Pn**	**02 47 53.4**	**+0.3**
ARA0				*eS*	**Sn**	**02 49 04.2**	**-6.4**
ARA0				IAML		02 49 08.9	
	comp=Z,5.5nm,0.3s						
ARCES	**ARCESS Array B**	**6.82**	**117**	Pn	**Pn**	**02 47 52.5**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=321,slow=11,SNR=62						
ARCES				Sn	Sn	02 48 57.1	-14
	comp=Z,0.3nm,0.3s,baz=328,slow=13,SNR=1.5						
	comp=Z,3.4nm,0.4s						
ARCES	**ARCESS Array B**	**6.82**	**117**	Pn	**Pn**	**02 47 52.7**	**-0.5**
ARCES	**ARCESS Array B**	**6.82**	**117**	P	**Pn**	**02 47 52.4**	**-0.7**
ARCES				S	**Sn**	**02 49 04.4**	**-6.2**
KEV	**Kevo**	**7.06**	**113**	P	**Pn**	**02 47 55.0**	**-1.4**
KEV				pmax	pmax		
	comp=Z,13nm,1.5s						
KEV	**Kevo**	**7.06**	**113**	*eP*	**Pn**	**02 47 55.5**	**-0.9**
KEV				*eS*	**Sn**	**02 49 09.8**	**-6.7**
HEF	**Hetta**	**7.21**	**127**	*eP*	**Pn**	**02 47 58.6**	**+0.1**
HEF				*eS*	**Sn**	**02 49 14.0**	**-6.3**
KONS	**Konsvik**	**7.24**	**164**	Pn	**Pn**	**02 47 58.9**	**0.0**
KONS				Sn	Sn	02 49 11.6	-9.4
KONS	**Konsvik**	**7.24**	**164**	*eP*	**Pn**	**02 47 58.6**	**-0.3**
KONS				*eS*	Sn	02 49 11.0	-10
KONS				IAML		02 49 15.2	
	comp=Z,6.3nm,0.3s						
STOK	**Stokkvaagen**	**7.40**	**164**	*eP*	**Pn**	**02 48 01.1**	**+0.1**
MOR8	**Moi Rana**	**7.68**	**160**	*eP*	**Pn**	**02 48 05.1**	**+0.2**
MOR8				*eS*	Sn	02 49 20.4	-11
MOR8				IAML		02 49 23.7	
	comp=Z,8.0nm,0.3s						
DBG	**Daneborg**	**7.84**	**289**	Pn	Pn	02 48 01.6	-5.5
DBG				Sn	Sn	02 49 22.5	-13
DBG	**Daneborg**	**7.84**	**289**	*i* P	Pn	02 48 01.1	-6.0
DBG	**Daneborg**	**7.84**	**289**	Pn	Pn	02 48 01.6	-5.5
DBG				Sn	Sn	02 49 22.5	-13
SGF	**Sodankyl**	**8.64**	**125**	P	**Pn**	**02 48 17.0**	**-1.1**
SGF				pmax	pmax		
	comp=Z,14nm,2.8s						
TERR	**Teriberka**	**9.62**	**103**	P	**Pn**	**02 48 31.6**	**+0.2**
TERR				S	Sn	02 50 08.6	-11
SCO	**Scoresbysund**	**9.68**	**267**		**Pn**	**02 48 28.9**	**-3.3**
SCO	**Scoresbysund**	**9.68**	**267**	P	**Pn**	**02 48 28.9**	**-3.3**
SCO	**Scoresbysund**	**9.68**	**267**	*i* P	**Pn**	**02 48 28.7**	**-3.6**
APA0	**Apatity Array**	**10.13**	**113**	Pn	**Pn**	**02 48 36.7**	**-1.8**
	baz=313,slow=8.6						
APA0				Sn	**Sn**	**02 50 23.8**	**-8.2**
	baz=324,slow=37						
APA0	**Apatity Array**	**10.13**	**113**	Pn	**Pn**	**02 48 36.7**	**-1.8**
	baz=313,slow=8.6						
APA0				Sn	**Sn**	**02 50 23.8**	**-8.2**
	baz=324,slow=37						
APA0	**Apatity Array**	**10.13**	**113**	P	**Pn**	**02 48 36.9**	**-1.6**
APA0				S	Sn	02 50 22.1	-10
LVZ	**Lovozero**	**10.36**	**109**	*ceP*	**Pn**	**02 48 39.8**	**-1.9**
LVZ				pmax	pmax		
	comp=Z,30nm,1.7s						
MSF	**Maaselka**	**10.47**	**126**	P	**Pn**	**02 48 43.1**	**-0.1**
MSF				pmax	pmax		
	comp=Z,22nm,2.2s						
ZFI	**Zemlya Franca-**	**11.13**	**32**	*eP*	**Pn**	**02 48 50.4**	**-1.7**
ZFI				S	Sn	02 50 46.5	-10
ZFI2	**Zemlya Franca-**	**11.13**	**32**	*eP*	**Pn**	**02 48 50.3**	**-1.8**
NOA	**NORSAR Array B**	**12.57**	**173**	Pn	**Pn**	**02 49 10.6**	**-1.3**
	baz=345,slow=11,SNR=3.5						
NOA				LR	LR	02 53 41.9	
	comp=Z,258nm,19.2s,baz=0.0,slow=36						
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**12.57**	**173**	*eP*	Pn	02 49 16.8	+4.9
BORG	**Borgarnes**	**13.46**	**245**	LR	LR	02 53 05.1	
	comp=Z,172nm,20.4s,baz=29,slow=31						
HFS	**Hagfors**	**13.59**	**168**	Pn	**Pn**	**02 49 24.4**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=354,slow=10,SNR=5.5						
HFS				LR	LR	02 54 14.6	
	comp=Z,358nm,21.0s,baz=350,slow=36						
	comp=Z,0.9nm,0.4s						
HFS	**Hagfors**	**13.59**	**168**	Pn	**Pn**	**02 49 24.5**	**-1.3**
	baz=349,slow=11						
HFS	**Hagfors**	**13.59**	**168**	Pn	**Pn**	**02 49 24.5**	**-1.3**
	baz=349,slow=11						
FIA0	**FINESS Array S**	**13.84**	**141**	Pn	**Pn**	**02 49 28.0**	**-1.1**
	baz=344,slow=14						
FIA0	**FINESS Array S**	**13.84**	**141**	Pn	**Pn**	**02 49 28.0**	**-1.1**
	baz=344,slow=14						
FINES	**FINESS Array B**	**13.84**	**141**	Pn	**Pn**	**02 49 27.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=340,slow=12,SNR=12						
FINES				LR	LR	02 54 29.5	
	comp=Z,379nm,21.6s,baz=335,slow=36						
	comp=Z,4.7nm,0.9s						
ADZR	**Andozero**	**14.37**	**116**	*eP*	**P**	**02 49 43.4**	**0.0**
	comp=Z,16nm,1.0s						
LSH	**Leshukonskoye**	**15.62**	**104**	*eP*	**Pn**	**02 49 53.3**	**+0.3**
	comp=Z,45nm,2.1s						
KLMR	**Klimovskoe**	**17.27**	**120**	*eP*	**Pn**	**02 50 11.4**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,68nm,1.3s						
KLMR	**Klimovskoe**	**17.27**	**120**	*eP*	**Pn**	**02 50 11.3**	**-2.8**
	comp=Z,68nm,1.3s						
KLMR	**Klimovskoe**	**17.27**	**120**	*ePn*	**Pn**	**02 50 11.5**	**-2.7**
KLMR				AMP		02 50 22.8	
	comp=Z,68nm,1.3s						
PRGR	**Permogore**	**18.18**	**111**	*eP*	**P**	**02 50 25.6**	**0.0**
PRGR	**Permogore**	**18.18**	**111**	*eP*	**P**	**02 50 25.6**	**0.0**
	comp=Z,182nm,1.8s						
EKA	**Eskdalemuir Ar**	**18.79**	**200**	P	**P**	**02 50 30.3**	**-2.1**
	baz=343,slow=14						
	comp=Z,3.0nm,0.9s						
EUNU	**Eureka**	**19.98**	**330**	P	**P**	**02 50 45.9**	**+0.7**
EUNU				IAmb	IAmb	02 50 48.6	
	comp=Z,34nm,1.4s						
SFJD	**Kangerlussuaq**	**20.01**	**281**	LR	LR	02 57 29.5	
	comp=Z,414nm,19.4s,baz=50,slow=34						
NACGM	**Naroch**	**20.18**	**147**	*eP*	Pn	02 50 49.6	+0.2
	baz=345						
MNK	**Minsk**	**20.74**	**146**	*i* P	**P**	**02 50 53.4**	**-0.2**
MNK				*i* PPP	PPP	02 51 19.3	
MNK				*i* S	**S**	**02 54 46.7**	**+2.0**
MNK				*i* SS	**SnSn**	**02 55 11.5**	**+7.5**
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,175nm,14.0s						
MNK				MLR	MLR		
	comp=E,17nm,14.0s						
MNK	**Minsk**	**20.74**	**146**	*i* P	**P**	**02 50 53.4**	**-0.2**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**02 50 53.4**	**-0.2**
MNK				*i* P	**P**	**02 50 53.4**	**-0.2**
	comp=Z,11nm,0.9s,baz=344						
MNK				*i* PP	**PnPn**	**02 51 10.6**	**-0.7**
MNK				*i* PPP	PPP	02 51 19.4	
MNK				*i* S	**S**	**02 54 46.7**	**+2.0**
MNK				*i* SS	**SnSn**	**02 55 11.6**	**+7.5**
MNK				*i* LR	LR	02 57 07.7	
MNK				*i* LRM	MLR	02 58 49.3	
	comp=Z,175nm,14.4s						
MNK				*i* LRM	MLR	02 58 53.2	
	comp=E,17nm,14.4s						
KIRV	**Kirov**	**21.78**	**111**	P	**P**	**02 51 04.0**	**-0.8**
	comp=E,15nm,0.4s,baz=328,slow=18,SNR=6.8						
	comp=E,15nm,0.4s						
KIRV	**Kirov**	**21.78**	**111**	*ceP*	**P**	**02 51 05.2**	**+0.5**
OBN	**Obninsk**	**21.79**	**132**	P	**P**	**02 51 03.1**	**-1.6**
	comp=E,2.1nm,0.5s,baz=356,slow=19,SNR=1.8						
OBN				LR	LR	02 59 18.9	
	comp=E,88nm,21.4s,baz=356,slow=36						
	comp=E,2.1nm,0.5s						
OBN	**Obninsk**	**21.79**	**132**	*eP*	**P**	**02 51 03.5**	**-1.3**
OBN				*e*PPP	PPP	02 51 33.4	
OBN				*i*		02 55 05.4	
OBN				pmax	pmax		
	comp=Z,42nm,1.7s						
CLL	**Collm**	**22.37**	**172**	P	**P**	**02 51 12.2**	**+1.1**
CLL				IAmb	IAmb	02 51 44.9	
	comp=Z,17nm,1.4s						
CLL	**Collm**	**22.37**	**172**	*i* P	**P**	**02 51 11.9**	**+0.8**
CLL				*eS*	**S**	**02 55 19.0**	**+2.4**
CLL				pmax	pmax		
	comp=Z,44nm,2.0s						
CLL	**Collm**	**22.37**	**172**	*i* P	**P**	**02 51 11.9**	**+0.8**
	comp=Z,12nm,1.6s						
CLL				*i* sP	**pwP**	**02 51 15.8**	**-0.9**
	comp=Z,44nm,2.0s						
CLL				*e*PP	**PnPn**	**02 51 34.0**	**+0.3**
CLL				*eS*	**S**	**02 55 19.0**	**+2.4**
CLL				Lm	MLR	02 59 00.0	
	comp=Z,200nm,18.9s						
BRG	**Berggiesshubel**	**22.85**	**170**	*eP*	**P**	**02 51 16.6**	**+0.4**
BRG				Amp		02 51 19.7	
	comp=Z,11nm,1.3s						
BRG	**Berggiesshubel**	**22.85**	**170**	P	**P**	**02 51 16.7**	**+0.5**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MOX	**Moxa**	**22.98**	**174**	P	**P**	**02 51 18.7**	**+1.1**
MOX				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSP	**Ksiaz**	**23.01**	**166**	P	**P**	**02 51 19.3**	**+1.4**
KSP				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PVCC	**Panska Ves**	**23.22**	**169**	P	**P**	**02 51 20.8**	**+0.7**
PVCC				pmax	pmax		
	comp=Z,19nm,1.3s						
OSTC	**Ostas**	**23.29**	**167**	*eP*	**P**	**02 51 23.6**	**+2.8**
UPC	**Upice**	**23.33**	**167**	*eP*	**P**	**02 51 25.5**	**+4.4**
UPC	**Upice**	**23.33**	**167**	*eP*	**P**	**02 51 25.5**	**+4.4**
DPC	**Dobruska-Polom**	**23.50**	**167**	*eP*	**P**	**02 51 22.4**	**-0.5**
DPC				*e*		02 51 26.9	
DPC	**Dobruska-Polom**	**23.50**	**167**	*eP*	**P**	**02 51 22.4**	**-0.5**
DPC				*ep*P	**sP**	**02 51 26.9**	**+0.8**
KRLC	**Kraliky**	**23.81**	**166**	P	**P**	**02 51 25.9**	**0.0**
KRLC				pmax	pmax		
	comp=Z,7.0nm,2.5s						
KRLC	**Kraliky**	**23.81**	**166**	*eP*	**P**	**02 51 25.6**	**-0.3**
KRLC				*ex*	x	02 51 31.1	
NRIK	**Noril'sk**	**23.90**	**59**	P	**P**	**02 51 27.4**	**+0.9**
	comp=Z,1.3nm,0.4s,baz=314,slow=6.5,SNR=7.4						
NRIK				LR	LR	03 02 45.1	
	comp=Z,64nm,19.8s,baz=328,slow=41						
	comp=Z,1.3nm,0.4s						
NRIK	**Noril'sk**	**23.90**	**59**	P	**P**	**02 51 27.9**	**+1.4**
OJC	**Ojcow**	**23.91**	**161**	P	**P**	**02 51 27.6**	**+0.8**
OJC				IAmb	IAmb	02 51 39.0	
	comp=Z,11nm,1.0s						
OJC	**Ojcow**	**23.91**	**161**	P	**P**	**02 51 27.6**	**+0.8**
OJC				pmax	pmax		
	comp=Z,11nm,1.0s						
MORC	**Moravsky Berou**	**24.16**	**165**	P	**P**	**02 51 29.4**	**+0.2**
MORC	**Moravsky Berou**	**24.16**	**165**	P	**P**	**02 51 29.4**	**+0.2**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MORC	**Moravsky Berou**	**24.16**	**165**	*eP*	**P**	**02 51 29.3**	**+0.1**
WET	**Wettzell**	**24.53**	**172**	P	**P**	**02 51 34.8**	**+2.2**
WET				pmax	pmax		
	comp=Z,9.0nm,1.9s						
VRAC	**Vranov**	**24.56**	**166**	P	**P**	**02 51 32.0**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=0.9,slow=12,SNR=6.6						
VRAC				LR	LR	03 00 43.3	
	comp=Z,136nm,18.8s,baz=348,slow=36						
	comp=Z,3.4nm,0.7s						
VRAC	**Vranov**	**24.56**	**166**	P	**P**	**02 51 34.5**	**+1.7**
VRAC				pmax	pmax		
	comp=Z,10.0nm,1.6s						
VRAC	**Vranov**	**24.56**	**166**	*eP*	**P**	**02 51 33.7**	**+0.9**
KHC	**Kasperske Hory**	**24.57**	**171**	*eP*	**P**	**02 51 34.3**	**+1.3**
KHC				*e*		02 51 39.2	
KHC	**Kasperske Hory**	**24.57**	**171**	*eP*	**P**	**02 51 34.3**	**+1.3**
KHC				*ep*P	**pwP**	**02 51 39.2**	**+0.6**
AKASG	**Malin Array Be**	**24.63**	**146**	P	**P**	**02 51 33.2**	**-0.2**
	comp=Z,4.0nm,0.6s,baz=344,slow=9.5,SNR=15						
	comp=Z,4.0nm,0.6s						
AKASG	**Malin Array Be**	**24.63**	**146**	*eP*	**P**	**02 51 33.2**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	**Malin Array Si**	**24.63**	**146**	P	**P**	**02 51 32.9**	**-0.5**
AKBB	**Malin Array Si**	**24.63**	**146**	P	**P**	**02 51 32.9**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,27nm,1.5s						
LPSR	**Galich'ya Gora**	**24.64**	**131**	*eP*	**P**	**02 51 29.2**	**-4.3**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
NIE	**Niedzica**	**24.75**	**161**	P	**P**	**02 51 34.7**	**+0.1**
NIE				pmax	pmax		
	comp=Z,6.0nm,2.0s						
KRUC	**Moravsky**	**24.79**	**167**	*eP*	**P**	**02 51 35.5**	**+0.6**
GEC2	**GERESS Array S**	**24.86**	**171**	P	**P**	**02 51 36.4**	**+0.8**
GEC2				IAmb	IAmb	02 51 48.7	
	comp=Z,12nm,1.4s						
GERES	**GERESS Array B**	**24.86**	**171**	P	**P**	**02 51 36.5**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=0.0,slow=8.0,SNR=14						
GERES				LR	LR	03 01 39.1	
	comp=Z,171nm,18.6s,baz=41,slow=37						
	comp=Z,2.4nm,0.9s						
GERES	**GERESS Array B**	**24.86**	**171**	P	**P**	**02 51 36.1**	**+0.5**
GERES	**GERESS Array B**	**24.86**	**171**	*eP*	**P**	**02 51 36.9**	**+1.3**
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CKRC	**Cesky Krumlov**	**24.91**	**170**	*eP*	**P**	**02 51 36.3**	**+0.3**
RES	**Resolute Bay**	**24.93**	**322**	P	**P**	**02 51 35.5**	**-0.4**
	comp=Z,8.1nm,1.0s,baz=317,slow=2.3,SNR=3.3						
RES				LR	LR	03 01 24.9	
	comp=Z,157nm,18.5s,baz=20,slow=37						
	comp=Z,8.1nm,1.0s						
LANS	**Liptovska Anna**	**24.94**	**162**	*eP*	**P**	**02 51 37.4**	**+1.1**
LANS	**Liptovska Anna**	**24.94**	**162**	*eP*	**P**	**02 51 37.4**	**+1.1**
ECH	**Echery**	**25.37**	**181**	P	**P**	**02 51 41.3**	**+1.2**
ECH				pmax	pmax		
	comp=Z,57nm,1.9s						
CRVS	**Cervenica-Dubn**	**25.38**	**159**	*eP*	**P**	**02 51 41.8**	**+1.6**
CRVS				pmax	pmax		
	comp=Z,89nm,2.1s						
CRVS	**Cervenica-Dubn**	**25.38**	**159**	*eP*	**P**	**02 51 41.8**	**+1.6**
KOLS	**Kolonicke sedl**	**25.43**	**158**	*eP*	**P**	**02 51 42.4**	**+1.7**
KOLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KOLS	**Kolonicke sedl**	**25.43**	**158**	*eP*	**P**	**02 51 42.4**	**+1.7**
FUR	**Furstenfeldbru**	**25.45**	**175**	P	**P**	**02 51 41.7**	**+0.8**
FUR				pmax	pmax		
	comp=Z,15nm,0.6s						
MODS	**Modra-Piesok**	**25.54**	**166**	*eP*	**P**	**02 51 44.4**	**+2.7**
MODS				pmax	pmax		
	comp=Z,85nm,1.8s						
MODS	**Modra-Piesok**	**25.54**	**166**	*eP*	**P**	**02 51 44.4**	**+2.7**
VYHS	**Vyhne**	**25.54**	**163**	*eP*	**P**	**02 51 43.7**	**+2.0**
VYHS				pmax	pmax		
	comp=Z,28nm,1.8s						
VYHS	**Vyhne**	**25.54**	**163**	*eP*	**P**	**02 51 43.7**	**+2.0**
VORR	**Voronezh**	**25.57**	**132**	*eP*	**P**	**02 51 48.0**	**+6.1**
VORR				pmax	pmax		
	comp=Z,20nm,0.3s						
UZH	**Uzhgorod**	**25.73**	**158**	*eP*	**P**	**02 51 41.8**	**-1.6**
UZH				*e*		02 51 49.1	
MOA	**Molln**	**25.88**	**170**	*eP*	**P**	**02 51 45.8**	**+1.0**
	comp=Z,2.1nm,0.8s						
CONA	**Conrad Observa**	**25.89**	**168**	*eP*	**P**	**02 51 46.3**	**+1.4**
	comp=Z,2.4nm,0.7s						
VSR	**Storozhevoye**	**25.99**	**132**	*eP*	**P**	**02 51 48.8**	**+3.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.8s						
BIOA	**Bad Ischl, Aus**	**26.01**	**171**	*eP*	**P**	**02 51 49.5**	**+3.5**
	comp=Z,1.5nm,0.6s						
RONA	**Rosalia, Austr**	**26.14**	**167**	*eP*	**P**	**02 51 48.5**	**+1.3**
	comp=Z,1.1nm,1.9s						
ARU	**Arti**	**26.14**	**103**	P	**P**	**02 51 48.6**	**+1.5**
	comp=Z,4.6nm,0.7s,baz=328,slow=9.3,SNR=11						
ARU				LR	LR	03 02 57.8	
	comp=Z,84nm,18.7s,baz=324,slow=38						
	comp=Z,4.6nm,0.7s						
ARU	**Arti**	**26.14**	**103**	P	**P**	**02 51 48.5**	**+1.4**
ARU	**Arti**	**26.14**	**103**	*ceP*	**P**	**02 51 49.0**	**+1.9**
ARU						02 52 25.3	
ARU				S	**S**	**02 56 24.3**	**+6.0**
ARU				SS	**SnSn**	**02 57 23.4**	**+7.2**
ARU				pmax	pmax		
	comp=Z,26nm,1.4s						
WATA	**Walderalm**	**26.29**	**175**	*eP*	**P**	**02 51 51.5**	**+2.8**
	comp=Z,4.4nm,1.0s						
DAVA	**Damuels**	**26.31**	**177**	*eP*	**P**	**02 51 52.5**	**+3.7**
	comp=Z,13nm,2.1s						
WTTA	**Wattenberg**	**26.37**	**174**	*eP*	**P**	**02 51 53.1**	**+3.7**
	comp=Z,6.5nm,1.2s						
ARSA	**Arzberg**	**26.55**	**168**	*eP*	**P**	**02 51 53.0**	**+2.2**
	comp=Z,2.1nm,0.2s						
FETA	**Feichten**	**26.59**	**176**	*eP*	**P**	**02 51 56.6**	**+5.2**
	comp=Z,5.3nm,1.6s						
DAVOX	**Davos/Dischmat**	**26.81**	**177**	LR	LR	03 01 39.4	
	comp=Z,95nm,20.7s,baz=16,slow=35						
BELG	**Belogornoye**	**26.85**	**120**	P	**P**	**02 51 53.7**	**+0.2**
	comp=Z,9.3nm,0.7s,baz=257,slow=4.2,SNR=6.8						
	comp=Z,9.3nm,0.7s						
BELG	**Belogornoye**	**26.85**	**120**	*iP*	**P**	**02 51 53.8**	**+0.4**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ABTA	**Abfaltersbach**	**26.91**	**173**	*eP*	**P**	**02 51 58.9**	**+4.7**
	comp=Z,4.0nm,1.3s

KURBB PcP **PcP** **02 55 43.0 +0.2**
comp=Z,0.2nm,0.4s,baz=324,slow=4.6,SNR=2.5
comp=Z,1.3nm,0.9s
GNI **Garni** **37.72 131** P **P** **02 53 29.5 +0.8**
comp=Z,2.3nm,0.4s,baz=76,slow=10.0,SNR=3.8
comp=Z,2.3nm,0.4s
GNI **Garni** **37.72 131** *ce*P **P** **02 53 30.0 +1.2**
GNI pmax pmax
comp=Z,26nm,2.5s
KEST **Kesra** **37.84 178** LR LR 03 10 22.9
comp=Z,40nm,18.6s,baz=222,slow=38
BILL **Bilibino** **38.00 13** *e*P **P** **02 53 30.3 -0.4**
BILL *e* 02 55 00.1
BILL *e* 02 55 46.9
BILL pmax pmax
comp=Z,5.0nm,1.1s
BMAR **Burnt Mountain** **38.19 343** P **P** **02 53 32.7 +0.4**
EPYK **Eagle Plains** **38.47 338** P **P** **02 53 34.6 -0.1**
YKA **Yellowknife Ar** **39.00 322** P **P** **02 53 38.7 -0.4**
comp=Z,1.5nm,0.8s,baz=17,slow=9.1,SNR=2.0
comp=Z,1.5nm,0.8s
YAK **Yakutsk** **39.26 39** LR LR 03 11 10.8
comp=Z,53nm,19.9s,baz=90,slow=38
BOD **Bodaibo** **39.89 53** *e*P **P** **02 53 46.1 -0.4**
BOD pmax pmax
comp=Z,10.0nm,2.0s
PRP **Porcupine Dome** **40.14 343** P **P** **02 53 49.6 +0.9**
I26K **Coal Creek Min** **40.15 342** P **P** **02 53 50.1 +1.5**
I26K IAmb IAmb 02 54 01.2
comp=Z,12nm,1.2s
MDM **Murphy Dome** **40.91 345** P **P** **02 53 55.5 +0.5**
MDM IAmb IAmb 02 54 07.5
comp=Z,8.5nm,1.2s
IL31 **40.99 344** P **P** **02 53 56.3 +0.7**
ILAR **Eielson Array** **40.99 344** P **P** **02 53 56.6 +1.0**
comp=Z,1.7nm,0.9s,baz=4.8,slow=6.9,SNR=19
ILAR PcP **PcP** **02 55 55.4 0.0**
comp=Z,0.6nm,0.6s,baz=337,slow=3.5,SNR=5.9
comp=Z,1.7nm,0.9s
ILAR **Eielson Array** **40.99 344** P **P** **02 53 56.7 +1.1**
ILAR **Eielson Array** **40.99 344** *e*P **P** **02 53 57.1 +1.5**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
J25K **Salcha River,** **41.02 343** P **P** **02 53 57.0 +1.1**
CCB **Clear Creek Bu** **41.18 344** P **P** **02 53 58.2 +1.1**
K27K **Chicken** **41.30 341** P **P** **02 53 59.1 +0.9**
K27K IAmb IAmb 02 54 10.5
comp=Z,8.0nm,1.1s
MKAR **Makanchi Array** **41.46 87** P **P** **02 54 00.8 +1.1**
comp=Z,3.3nm,1.2s,baz=324,slow=7.9,SNR=6.9
comp=Z,3.3nm,1.2s
MKAR **Makanchi Array** **41.46 87** *e*P **P** **02 54 01.7 +2.0**
MKAR pmax pmax
comp=Z,3.0nm,1.2s
KKAR **Karatay Array** **41.49 101** P **P** **02 54 01.4 +1.4**
KKAR **Karatay Array** **41.49 101** P **P** **02 54 01.4 +1.4**
SEY **Seymchan** **41.77 24** P **P** **02 54 02.9 +0.9**
comp=Z,4.3nm,0.8s,baz=345,slow=4.5,SNR=8.5
comp=Z,4.3nm,0.8s
SEY **Seymchan** **41.77 24** *ce*P **P** **02 54 02.6 +0.6**
SEY pmax pmax
comp=Z,5.0nm,0.9s
DOT **Dot Lake** **41.85 342** P **P** **02 54 04.0 +1.2**
BCAR **Beaver Creek A** **42.22 340** P **P** **02 54 06.9 +1.2**
L27K **Beaver Creek,** **42.22 340** P **P** **02 54 07.0 +1.3**
L27K IAmb IAmb 02 54 18.3
comp=Z,7.4nm,1.2s
MOY **Mondy** **42.23 68** *e*P **P** **02 54 09.7 +3.6**
DHY **Denali Highway** **42.70 344** P **P** **02 54 10.6 +0.8**
GEYT **Alibeck** **42.98 117** P **P** **02 54 14.0 +1.8**
comp=Z,2.4nm,0.8s,baz=252,slow=8.2,SNR=2.1
comp=Z,2.4nm,0.8s
MA2 **Magadan** **44.84 26** LR LR 03 12 00.8
comp=Z,24nm,19.7s,baz=294,slow=34
SADO **Sadowa** **46.94 283** LR LR 03 13 20.9
comp=Z,129nm,18.8s,baz=17,slow=35
SONM **Songino Array** **47.16 65** P **P** **02 54 46.9 +1.5**
comp=Z,0.6nm,0.5s,baz=329,slow=7.1,SNR=6.4
SONM PcP **PcP** **02 56 16.1 -0.7**
comp=Z,0.4nm,0.5s,baz=330,slow=8.3,SNR=2.3
comp=Z,0.6nm,0.5s
SONM **Songino Array** **47.16 65** *e*P **P** **02 54 47.1 +1.7**
SONM pmax pmax
comp=Z,1.0nm,0.5s
ULN **Ulaanbaatar** **47.30 65** *ce*P **P** **02 54 48.1 +1.6**
ULN pmax pmax
comp=Z,9.0nm,1.7s
NIL **Nilore** **51.07 103** P **P** **02 55 14.3 -1.1**
NIL pmax pmax
comp=Z,11nm,0.9s
PETK **Petropavlovsk-** **52.00 23** LR LR 03 17 54.2
comp=Z,45nm,18.1s,baz=11,slow=36
ECSD **EROS Data Cent** **52.57 298** P **P** **02 55 26.2 -0.2**
MSO **Missoula** **53.64 314** P **P** **02 55 34.5 +0.1**
MSO IAmb IAmb 02 55 45.3
comp=Z,7.6nm,1.2s
IMW **Indian Meadow** **55.80 310** P **P** **02 55 50.0 -0.3**
IMW IAmb IAmb 02 55 52.2
comp=Z,3.7nm,0.9s
K22A **Casper** **55.99 306** P **P** **02 55 50.6 -0.9**
BMO **Blue Mountains** **56.22 316** P **P** **02 55 53.2 +0.1**
BMO IAmb IAmb 02 56 04.4
comp=Z,4.3nm,1.2s
BMO **Blue Mountains** **56.22 316** P **P** **02 55 53.2 +0.1**
BMO pmax pmax
comp=Z,4.0nm,1.3s
BW06 **Boulder Array** **56.57 309** P **P** **02 55 55.2 -0.5**
BW06 IAmb IAmb 02 55 56.5
comp=Z,7.4nm,1.5s
PDAR **Pinedale Array** **56.57 309** P **P** **02 55 55.2 -0.5**
comp=Z,0.3nm,0.3s,baz=46,slow=4.3,SNR=4.5
comp=Z,0.3nm,0.3s
USRK **Ussuriysk Ar.** **56.58 46** P **P** **02 55 55.7 +0.2**
comp=Z,1.3nm,0.6s,baz=318,slow=2.6,SNR=4.9
comp=Z,1.3nm,0.6s
HLID **Hailey** **56.86 313** P **P** **02 55 57.8 +0.1**
HLID IAmb IAmb 02 56 10.2
comp=Z,3.5nm,1.1s
O20A **White River Ci** **58.78 306** P **P** **02 56 11.6 +0.3**
TORD **Torodi Ar. Bea** **60.44 187** P **P** **02 56 21.4 -1.3**
comp=Z,1.8nm,0.9s,baz=4.4,slow=5.8,SNR=8.9
comp=Z,1.8nm,0.9s
MTPU **Mount Pierson** **61.67 309** P **P** **02 56 31.3 0.0**
MTPU IAmb IAmb 02 56 46.0
comp=Z,6.7nm,1.5s
KSRS **Korea Array** **62.17 51** LR LR 03 26 45.5
comp=Z,30nm,18.1s,baz=180,slow=39
CCUT **Cedar City** **62.40 310** P **P** **02 56 36.2 +0.2**
CCUT IAmb IAmb 02 56 41.5
comp=Z,4.6nm,1.2s
NVAR **Mina Array Bea** **62.60 315** P **P** **02 56 38.3 +0.9**
comp=Z,0.5nm,0.6s,baz=20,slow=4.4,SNR=4.9
comp=Z,0.5nm,0.6s
TJN **Taejon** **63.08 52** *ce*P **P** **02 56 42.0 +1.7**
ANMO **Albuquerque** **63.31 303** *ce*P **P** **02 56 42.6 +0.5**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
MJAR **Matsushiro Arr** **65.20 43** P **P** **02 56 54.9 +0.6**
comp=Z,0.7nm,0.3s,baz=344,slow=7.9,SNR=4.5
comp=Z,0.7nm,0.3s
TXAR **Lajitas Array** **67.98 299** P **P** **02 57 12.4 +0.2**
comp=Z,0.3nm,0.8s,baz=46,slow=7.2,SNR=3.2
comp=Z,0.3nm,0.8s
CMIG **Matias Romero** **77.35 287** LR LR 03 35 05.6
comp=Z,15nm,18.1s,baz=34,slow=38
PALK **Pallekele** **78.18 105** LR LR 03 35 04.1
comp=Z,64nm,20.0s,baz=60,slow=38
SDV **Santo Domingo** **78.30 262** LR LR 03 28 56.8
comp=Z,22nm,21.2s,baz=42,slow=33
ROSC **El Rosal** **83.20 264** LR LR 03 34 59.9
comp=Z,36nm,18.1s,baz=61,slow=35
OTAV **Otavalo** **88.76 267** P **P** **02 59 08.8 +1.4**
OTAV pmax pmax
comp=Z,9.0nm,1.5s
WRA **Warramunga Arr** **118.97 60** PKP **PKPdf** **03 04 59.6 -1.9**
comp=Z,0.5nm,1.0s,baz=6.8,slow=1.7,SNR=1.2
ASAR **Alice Springs** **122.43 62** PKP **PKPdf** **03 05 07.6 -0.5**
comp=Z,0.4nm,0.6s,baz=15,slow=2.0,SNR=2.3

IDC ***09*** *02:47:35.8±1.8, 73°.41N×8°.14E, h0km, mb3.5/4, mbtmp3.6/6, ML3.5/2, MS3.4/3, Error ellipse: s-maj=50.9km s-min=17.9km az=84.0*
ISC 09 02:47:37.1±1.4, 73°.5N±0°.1×8°.4E±0°.3, h10km, n8, σ0s98/6, mb3.4/4, MS3.3/3, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SPITS	**Spitsbergen Ar**	**5.12**	**19**	P	n	**Pn**	**02 48 54.0**	**+0.3**
	baz=209,slow=11							
	7.0nm,0.3s							
HFS	**Hagfors**	**13.55**	**169**	Pn		**Pn**	**02 50 48.5**	**-0.7**
	0.2nm,0.3s,baz=348,slow=12,SNR=1.8							
	2.6nm,0.8s							
AKASG	**Malin Array Be**	**24.56**	**147**	P		**P**	**02 52 57.3**	**+0.7**
	0.6nm,0.4s,baz=340,slow=9.5,SNR=2.1							
	0.6nm,0.4s							
ESDC	**Sonseca Array**	**34.40**	**197**	LR		LR	03 06 43.9	
	comp=Z,34nm,18.3s,baz=352,slow=33							
BRTR	**Keskin Array B**	**35.95**	**146**	P		**P**	**02 54 38.6**	**+1.0**
	0.5nm,0.7s,baz=333,slow=8.7,SNR=2.5							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**36.83**	**89**	P		**P**	**02 54 43.9**	**-0.9**
	0.6nm,1.0s,baz=338,slow=10,SNR=4.0							
	0.6nm,1.0s							
ILAR	**Eielson Array**	**41.04**	**344**	P		**P**	**02 55 19.6**	**-0.3**
	0.5nm,1.0s,baz=18,slow=9.5,SNR=1.7							
ILAR						LR	LR	03 13 22.8
	comp=Z,45nm,19.4s,baz=22,slow=38							
	0.5nm,1.0s							
MMAI	**Mount Meron Ar**	**42.79**	**146**	LR		LR	LR	03 13 36.9
	comp=Z,87nm,19.2s,baz=110,slow=36							

LDG 09 02:49:47.8±0.2, 45°.36N×6°.78E, h2km, Md1.4/4, Error ellipse: s-maj=7.4km s-min=2.6km az=95.0, France

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LPG	**La Plagne**	**0.14**	**353**	*e*Pg		Pg	02 49 51.0	+0.5
LPG				*e*Sg		Sg	02 49 52.8	+0.4
	0.9nm,0.3s							
LPL	**La Plagne**	**0.16**	**349**	*e*Pg		Pg	02 49 51.5	+0.6
LPL				*e*Sg		Sg	02 49 52.9	-0.1
	0.3nm,0.2s							
MBDF	**Montbardon**	**0.64**	**180**	*e*Pg		Pg	02 50 00.0	0.0
MBDF				*e*Sg		Sg	02 50 07.5	-0.7
	0.3nm,0.2s							
ORIF	**Oris-en-Rattie**	**0.78**	**235**	*e*Pg		Pg	02 50 02.8	+0.2
ORIF				*e*Sg		Sg	02 50 11.7	-1.0
	0.4nm,0.2s							

NAO ***09*** *03:19:27.8±2.1, 72°.29N×2°.25E, ML3.4*
IDC ***09*** *03:19:29.2±0.9, 72°.44N×2°.87E, h0km, mb3.6/9, mbtmp3.6/14, ML2.9/5, MS3.5/47, Error ellipse: s-maj=18.8km s-min=14.1km az=50.0*
BER ***09*** *03:19:33.9±3.1, 72°.55N×3°.26E, h10km, ML3.4(NAO), Confirmed Earthquake*
ISC 09 03:19:31.9±1.0, 72°.40N±0°.06×3°.60E±0°.10, h10km, n83, σ1s72/47, mb3.4/9, MS3.5/41, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LOF	**Lofoten**	**5.45**	**137**	*e*P		**Pn**	**03 20 54.8**	**+1.8**
LOF				IAML			03 22 03.0	
	comp=Z,5.9nm,0.8s							
TRO	**Tromso**	**5.71**	**112**	*e*P		**Pn**	**03 20 58.0**	**+1.4**
TRO				*e*S		**Sn**	**03 21 59.7**	**-2.4**
TRO				IAML			03 22 03.1	
	comp=Z,5.4nm,0.6s							
STEI	**Steigen**	**5.98**	**133**	*e*P		**Pn**	**03 21 02.0**	**+1.8**
STEI				*e*S		**Sn**	**03 22 07.7**	**-1.0**
STEI				IAML			03 22 14.6	
	comp=Z,5.1nm,0.4s							
JETT	**Jettan, Norway**	**6.18**	**109**	*e*P		**Pn**	**03 21 04.9**	**+1.8**
JETT				*e*S		**Sn**	**03 22 10.2**	**-3.5**
BRBA	**Barentsburg A**	**6.29**	**21**	Pn		**Pn**	**03 21 06.3**	**+1.9**
BRBA	**Barentsburg A**	**6.29**	**21**	Pn		**Pn**	**03 21 06.3**	**+1.9**
FAUS	**Fauske**	**6.44**	**136**	*e*P		**Pn**	**03 21 08.1**	**+1.6**
FAUS				IAML			03 22 18.0	
	comp=Z,3.1nm,0.7s							
HAMF	**Hammerfest**	**6.61**	**96**	Pn		**Pn**	**03 21 09.5**	**+0.6**
HAMF	**Hammerfest**	**6.61**	**96**	*e*P		**Pn**	**03 21 09.7**	**+0.8**
KIF	**Kilpisjarvi**	**6.62**	**113**	Pn		**Pn**	**03 21 10.8**	**+1.7**
KIF	**Kilpisjarvi**	**6.62**	**113**	Pn		**Pn**	**03 21 10.8**	**+1.7**
SPA0	**Spitsbergen Ar**	**6.63**	**23**	Pn		**Pn**	**03 21 09.3**	**0.0**
	baz=205,slow=22							
SPA0	**Spitsbergen Ar**	**6.63**	**23**	*e*P		**Pn**	**03 21 09.4**	**+0.2**
SPITS	**Spitsbergen Ar**	**6.63**	**23**	Pn		**Pn**	**03 21 08.0**	**-1.2**
	baz=202,slow=15							
SPITS				Sn		**Sn**	**03 22 21.2**	**-3.6**
	baz=128,slow=9.3							
	comp=Z,1.1nm,0.3s							
KONS	**Konsvik**	**6.80**	**146**	*e*P		**Pn**	**03 21 12.5**	**+1.0**
KONS				*e*S		**Sn**	**03 22 24.1**	**-4.6**
KONS				IAML			03 22 34.5	
	comp=Z,3.6nm,0.7s							
KBS	**Kingsbay**	**6.87**	**14**	Pn		**Pn**	**03 21 12.9**	**+0.4**
KBS	**Kingsbay**	**6.87**	**14**	*e*P		**Pn**	**03 21 10.8**	**-1.6**
KBS				*e*			03 21 12.9	
KBS				*e*S		Sn	03 22 17.6	-13
KBS				IAML			03 22 21.8	
	comp=Z,2.2nm,0.5s							
DBG	**Daneborg**	**7.07**	**297**	Pn		Pn	03 21 06.2	-9.1
DBG	**Daneborg**	**7.07**	**297**	*e*P		Pn	03 21 06.9	-8.4
MOR8	**Moi Rana**	**7.33**	**143**	*e*P		**Pn**	**03 21 19.2**	**+0.5**
MOR8				*e*S		**Sn**	**03 22 38.0**	**-3.9**
MOR8				IAML			03 22 42.7	
	comp=Z,5.3nm,0.7s							
ARA0	**ARCESS Array S**	**7.69**	**101**	Pn		**Pn**	**03 21 25.3**	**+1.6**
	baz=299,slow=12							
ARA0				Sn		**Sn**	**03 22 51.2**	**+0.5**
	baz=311,slow=22							
ARA0	**ARCESS Array S**	**7.69**	**101**	*e*P		**Pn**	**03 21 25.5**	**+1.8**
ARA0				Sn		**Sn**	**03 22 51.2**	**+0.5**
	baz=311,slow=22							
ARCES	**ARCESS Array B**	**7.69**	**101**	Pn		**Pn**	**03 21 25.2**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=304,slow=12,SNR=25							
ARCES				Sn		**Sn**	**03 22 51.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=311,slow=22,SNR=2.1							
ARCES				LR		LR	03 23 20.0	
	comp=Z,63nm,21.1s,baz=300,slow=29							
	comp=Z,1.7nm,0.4s							
HEF	**Hetta**	**7.81**	**111**	*e*P		**Pn**	**03 21 27.4**	**+2.0**
KEV	**Kevo**	**8.02**	**98**	*e*P		**Pn**	**03 21 29.5**	**+1.3**
SCO	**Scoresbysund**	**8.34**	**269**	*i* P		Pn	03 21 25.0	-7.5
NSS	**Namsos**	**8.47**	**155**	*e*P		**Pn**	**03 21 36.4**	**+2.0**
NOA	**NORSAR Array B**	**11.78**	**162**	Pn		**Pn**	**03 22 20.8**	**+1.0**
	baz=340,slow=15,SNR=2.4							
NOA				LR		LR	03 26 31.2	
	comp=Z,180nm,19.9s,baz=340,slow=36							
	comp=Z,1.4nm,0.9s							
BORG	**Borgarnes**	**11.80**	**242**	LR		LR	03 25 43.2	
	comp=Z,132nm,18.7s,baz=44,slow=32							
HFS	**Hagfors**	**12.94**	**157**	Pn		**Pn**	**03 22 35.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=354,slow=10,SNR=7.3							
	comp=Z,2.7nm,0.7s							
HFS	**Hagfors**	**12.94**	**157**	Pn		**Pn**	**03 22 36.4**	**+0.9**
	baz=350,slow=14							
HFS	**Hagfors**	**12.94**	**157**	Pn		**Pn**	**03 22 36.4**	**+0.9**
	baz=350,slow=14							
FIA0	**FINESS Array S**	**13.95**	**130**	Pn		**Pn**	**03 22 49.3**	**0.0**
	baz=338,slow=16							
FIA0	**FINESS Array S**	**13.95**	**130**	Pn		**Pn**	**03 22 49.3**	**0.0**
	baz=338,slow=16							
FINES	**FINESS Array B**	**13.95**	**130**	Pn		**Pn**	**03 22 49.4**	**0.0**
	comp=Z,0.1nm,0.3s,baz=333,slow=15,SNR=7.7							
FINES				LR		LR	03 27 53.4	
	comp=Z,361nm,18.4s,baz=341,slow=36							
	comp=Z,4.2nm,0.8s							
EKA	**Eskdalemuir Ar**	**17.37**	**193**	LR		LR	03 28 06.6	
	comp=Z,82nm,21.7s,baz=4.5,slow=30							
KLMR	**Klimovskoe**	**17.96**	**111**	*e*Pn		**Pn**	**03 23 40.5**	**-0.8**
KLMR				AMP			03 23 59.6	
	comp=Z,24nm,1.5s							
SFJD	**Kangerlussuaq**	**18.94**	**281**	LR		LR	03 30 01.1	
	comp=Z,182nm,21.8s,baz=38,slow=34							
OBN	**Obninsk**	**22.13**	**124**	LR		LR	03 32 49.7	
	comp=Z,75nm,19.6s,baz=359,slow=36							
KIRV	**Kirov**	**22.70**	**103**	LR		LR	03 33 05.3	
	comp=Z,135nm,21.6s,baz=322,slow=36							
VRAC	**Vranov**	**23.90**	**159**	LR		LR	03 34 04.5	
	comp=Z,40nm,19.5s,baz=346,slow=36							
GERES	**GERESS Array B**	**24.07**	**163**	P		**P**	**03 24 48.4**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=354,slow=11,SNR=6.7							
	comp=Z,0.8nm,0.8s							
AKASG	**Malin Array Be**	**24.55**	**139**	P		**P**	**03 24 52.1**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=338,slow=10.0,SNR=5.7							
AKASG				LR		LR	03 34 15.4	
	comp=Z,196nm,20.4s,baz=350,slow=36							
	comp=Z,2.3nm,0.8s							

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**24.99**	**322**	LR		LR	03 34 29.6	
	comp=Z,139nm,19.3s,baz=16,slow=36							
DAVOX	**Davos/Dischmat**	**25.86**	**170**	LR		LR	03 34 55.6	
	comp=Z,144nm,18.3s,baz=82,slow=36							
FRB	**Frobisher Bay**	**26.53**	**289**	LR		LR	03 34 08.3	
	comp=Z,70nm,19.7s,baz=28,slow=33							
ARU	**Arti**	**27.24**	**96**	P		**P**	**03 25 14.5**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=348,slow=12,SNR=1.3							
ARU				LR		LR	03 35 23.2	
	comp=Z,72nm,20.9s,baz=313,slow=35							
	comp=Z,1.7nm,0.3s							
BELG	**Belogornoye**	**27.52**	**113**	LR		LR	03 36 03.6	
	comp=Z,128nm,20.8s,baz=341,slow=36							
MLR	**Muntele Rosu**	**28.95**	**146**	LR		LR	03 37 30.4	
	comp=Z,209nm,19.2s,baz=342,slow=37							
AKTO	**Aktyubinsk**	**32.27**	**103**	LR		LR	03 39 21.9	
	comp=Z,78nm,21.0s,baz=339,slow=37							
ESDC	**Sonseca Array**	**33.02**	**191**	LR		LR	03 40 02.3	
	comp=Z,28nm,18.2s,baz=27,slow=37							
SCHQ	**Schefferville**	**33.29**	**277**	LR		LR	03 37 25.8	
	comp=Z,72nm,20.9s,baz=70,slow=33							
BVAR	**Borovoye Array**	**33.74**	**88**	LR		LR	03 40 56.1	
	comp=Z,28nm,19.4s,baz=207,slow=38							
KVAR	**Kislovodsk Arr**	**33.96**	**125**	LR		LR	03 40 24.4	
	comp=Z,173nm,18.0s,baz=275,slow=37							
KBZ	**Khabaz**	**34.23**	**125**	LR		LR	03 40 21.0	
	comp=Z,189nm,18.6s,baz=12,slow=36							
BRTR	**Keskin Array B**	**35.95**	**139**	P		**P**	**03 26 34.0**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=316,slow=6.0,SNR=2.3							
BRTR				LR		LR	03 42 15.8	
	comp=Z,90nm,18.4s,baz=348,slow=38							
	comp=Z,0.4nm,0.7s							
INK	**Inuvik**	**36.73**	**335**	LR		LR	03 42 20.8	
	comp=Z,42nm,19.5s,baz=26,slow=38							
ZALV	**Zalesovo Beam**	**37.27**	**75**	LR		LR	03 44 17.5	
	comp=Z,32nm,21.7s,baz=339,slow=40							
GNI	**Garni**	**38.05**	**125**	LR		LR	03 42 42.7	
	comp=Z,84nm,21.4s,baz=338,slow=36							
KURBB	**Kurchatov Arra**	**38.30**	**83**	LR		LR	03 44 29.8	
	comp=Z,41nm,20.6s,baz=247,slow=39							
YKA	**Yellowknife Ar**	**39.02**	**319**	LR		LR	03 42 48.6	
	comp=Z,100nm,19.4s,baz=14,slow=36							
ILAR	**Eielson Array**	**41.65**	**341**	P		P	03 27 16.6	-3.1
	comp=Z,0.5nm,0.7s,baz=10,slow=5.6,SNR=3.5							
	comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**42.85**	**82**	P		**P**	**03 27 30.6**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=316,slow=8.1,SNR=2.3							
MKAR				LR		LR	03 49 14.3	
	comp=Z,37nm,19.0s,baz=318,slow=42							
	comp=Z,0.3nm,0.5s							
GEYT	**Alibeck**	**43.72**	**111**	LR		LR	03 47 50.3	
	comp=Z,83nm,18.7s,baz=319,slow=39							
AAK	**Ala-Archa**	**44.24**	**92**	LR		LR	03 46 41.2	
	comp=Z,72nm,18.9s,baz=325,slow=37							
DLBC	**Dease Lake**	**45.59**	**328**	LR		LR	03 47 56.6	
	comp=Z,153nm,18.2s,baz=340,slow=38							
SADO	**Sadowa**	**45.90**	**280**	LR		LR	03 45 54.6	
	comp=Z,49nm,18.1s,baz=13,slow=35							
EIL	**Elat**	**45.95**	**141**	LR		LR	03 47 36.1	
	comp=Z,42nm,20.8s,baz=271,slow=37							
BBB	**Bella Bella**	**51.24**	**324**	LR		LR	03 51 11.3	
	comp=Z,43nm,18.4s,baz=98,slow=37							
NEW	**Newport**	**52.78**	**314**	LR		LR	03 50 52.4	
	comp=Z,51nm,18.7s,baz=37,slow=36							
TKL	**Tuckaleechee C**	**55.65**	**280**	LR		LR	03 51 49.2	
	comp=Z,36nm,18.9s,baz=21,slow=35							
PDAR	**Pinedale Array**	**56.19**	**305**	P		P	03 29 08.9	-2.8
	comp=Z,0.1nm,0.4s,baz=58,slow=7.5,SNR=2.7							
	comp=Z,0.1nm,0.4s							
TORD	**Torodi Ar. Bea**	**59.24**	**182**	P		**P**	**03 29 32.4**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=0.2,slow=6.7,SNR=5.7							
	comp=Z,0.6nm,0.6s							
ELK	**Elko**	**59.48**	**309**	LR		LR	03 53 48.5	
	comp=Z,38nm,19.0s,baz=291,slow=35							
YBH	**Yreka Blue Hor**	**60.21**	**316**	LR		LR	03 54 27.0	
	comp=Z,54nm,18.6s,baz=2.5,slow=35							
ANMO	**Albuquerque**	**62.78**	**300**	LR		LR	03 57 00.5	
	comp=Z,70nm,19.4s,baz=44,slow=36							
PFO	**Pinyon Flats O**	**66.57**	**308**	LR		LR	03 59 42.5	
	comp=Z,35nm,19.6s,baz=58,slow=36							
SJG	**San Juan**	**66.77**	**256**	LR		LR	03 54 23.9	
	comp=Z,21nm,21.3s,baz=68,slow=32							
TXAR	**Lajitas Array**	**67.33**	**295**	P		P	03 30 24.0	-2.7
	comp=Z,0.4nm,0.9s,baz=36,slow=6.5,SNR=3.6							
TXAR				LR		LR	03 59 13.3	
	comp=Z,41nm,18.8s,baz=5.5,slow=36							
	comp=Z,0.4nm,0.9s							
LPIG	**La Paz**	**74.09**	**300**	LR		LR	04 03 15.6	
	comp=Z,16nm,18.3s,baz=28,slow=36							
CMIG	**Matias Romero**	**76.39**	**283**	LR		LR	04 07 19.7	
	comp=Z,18nm,19.0s,baz=65,slow=38							
PALK	**Pallekele**	**79.21**	**100**	LR		LR	04 09 03.7	
	comp=Z,50nm,18.1s,baz=148,slow=37							
GUMO	**Guam**	**90.48**	**37**	LR		LR	04 12 50.8	
	comp=Z,27nm,21.6s,baz=208,slow=35							

NIED ***09*** *03:24:08.8, 31°.07N×129°.04E, h15km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr=1.76; Mθθ3.19; Mφφ=1.43; Mrθ=0.40; Mθφ1.55; Mφr1.93; Fault plane solution: M0 3.73000×10^14 NP1: φs109.00000°, δ59.00000°, λ-33.00000°. NP2: φs217.00000°, δ62.00000°, λ-144.00000°.*
JMA 09 03:24:08.8±0.3, 31°.1N±0°.5×129°.9E±°, h15km±2km, MV3.5/24, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.84**	**43**	*e*P		Pg	03 24 24.4	-0.7
JKC	**Kuchinoerabu**	**1.16**	**121**	*e*P		Pn	03 24 30.2	-0.4
JKC				*e*S		Sb	03 24 45.4	-0.2
JSU	**Suzuyama**	**1.29**	**70**	*e*P		Pn	03 24 32.4	0.0
JNN	**Nakanoshima**	**1.42**	**149**	*e*P		Pn	03 24 34.1	0.0
JYAK	**Yakushimahirau**	**1.51**	**123**	*e*P		Pn	03 24 34.7	-0.7
JFU	**Fukue jima 2**	**1.60**	**351**	*e*P		Pn	03 24 37.2	+0.5
JTN	**Tanegashima 3**	**1.72**	**103**	*e*P		Pn	03 24 38.5	+0.2

IDC ***09*** *03:47:57.2±1.0, 23°.23S×169°.58E, h0km, mb4.1/9, mbtmp4.1/10, ML3.8/1, MS3.3/7, Error ellipse: s-maj=32.2km s-min=23.8km az=152.0*
NOU ***09*** *03:47:58.6, 22°.96S×169°.64E, h0km, mb5.0/16, Southeast of Loyalty Islands*
NEIC ***09*** *03:47:59.4±1.3, 23°.04S±0°.09×169°.7E±0°.1, h18km±8km, mb4.7/10, Error ellipse: s-maj=16.7km

URZ	**Urewera**	**16.43**	**159**	LR	LR	03 57 10.4		
	comp=Z,61nm,21.9s,baz=30,slow=34							
ARMA	**Armidale**	**17.67**	**242**	P	**P**	**03 52 05.8**	**-0.3**	
	4.9nm,0.6s							
CMWZ	**Cape Campbell**	**19.01**	**169**	P	**P**	**03 52 18.4**	**-2.2**	
KHZ	**Kahutara**	**19.56**	**171**	P	**Pn**	**03 52 28.0**	**+0.1**	
	40nm,2.0s							
RPZ	**Rata Peaks**	**20.62**	**177**	LR	LR	03 59 29.7		
	comp=Z,49nm,18.7s,baz=354,slow=34							
CMSA	**Cobar Meteorol**	**22.87**	**243**	P	**P**	**03 53 03.9**	**+1.6**	
	14nm,1.4s							
PMG	**Port Moresby**	**25.46**	**299**	LR	LR	04 02 55.9		
	comp=Z,78nm,18.6s,baz=146,slow=35							
STKA	**Stephens Creek**	**26.34**	**244**	P	**P**	**03 53 32.6**	**-2.1**	
	3.3nm,0.7s,baz=105,slow=13,SNR=4.0							
	3.3nm,0.7s							
WR0	**Warramunga Arr**	**32.77**	**269**	P	**P**	**03 54 31.2**	**-0.8**	
WR0				IAmb	IAmb	03 54 56.7		
	comp=Z,11nm,1.5s							
ASAR	**Alice Springs**	**32.77**	**262**	P	**P**	**03 54 32.0**	**0.0**	
	comp=Z,6.4nm,0.9s,baz=89,slow=9.7,SNR=34							
	comp=Z,6.4nm,0.9s							
WB0	**Warramunga Arr**	**32.94**	**269**	P	**P**	**03 54 32.9**	**-0.6**	
WB0				IAmb	IAmb	03 54 51.8		
	comp=Z,20nm,1.5s							
WB2	**Warramunga Arr**	**32.95**	**269**	P	**P**	**03 54 32.2**	**-1.3**	
WB2				IAmb	IAmb	03 54 55.5		
	comp=Z,17nm,1.5s							
WRA	**Warramunga Arr**	**32.96**	**269**	P	**P**	**03 54 32.5**	**-1.2**	
	comp=Z,0.7nm,0.4s,baz=98,slow=8.3,SNR=27							
	comp=Z,0.7nm,0.4s							
WRA	**Warramunga Arr**	**32.96**	**269**	P	**P**	**03 54 32.5**	**-1.2**	
FORT	**Forrest**	**37.70**	**249**	P	**P**	**03 55 14.2**	**-0.2**	
FITZ	**Fitzroy Crossi**	**41.39**	**268**	P	**P**	**03 55 44.4**	**-0.8**	
PSA00	**Pilbara Seismi**	**45.92**	**262**	P	**P**	**03 56 21.0**	**-0.7**	
PSA00				IAmb	IAmb	03 56 22.3		
	comp=Z,6.8nm,1.1s							
PSA00	**Pilbara Seismi**	**45.92**	**262**	P	**P**	**03 56 21.7**	**0.0**	
PSA00				IAmb	IAmb	03 56 32.1		
	comp=Z,42nm,1.5s							
MBWA	**Marble Bar**	**46.11**	**262**	P	**P**	**03 56 22.9**	**-0.3**	
MBWA				IAmb	IAmb	03 56 24.0		
	comp=Z,13nm,0.6s							
VNDA	**Vanda**	**54.63**	**182**	P	**P**	**03 57 25.5**	**-1.3**	
	comp=Z,0.2nm,0.5s,baz=284,slow=3.9,SNR=2.1							
	comp=Z,0.2nm,0.5s							
PETK	**Petropavlovsk-**	**76.57**	**353**	P	**P**	**03 59 49.4**	**+0.8**	
	comp=Z,3.4nm,0.8s,baz=146,slow=10,SNR=2.4							
	comp=Z,3.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**80.44**	**295**	P	**P**	**04 00 12.1**	**+1.3**	
	comp=Z,1.1nm,0.3s,baz=132,slow=4.4,SNR=6.4							
	comp=Z,1.1nm,0.3s							
MA2	**Magadan**	**83.80**	**350**	LR	LR	04 30 32.5		
	comp=Z,23nm,20.4s,baz=144,slow=30							
TROLL	**Troll, Antarti**	**84.76**	**184**	P	**P**	**04 00 33.0**	**+0.4**	
SNAA	**Sanae**	**85.37**	**182**	P	**P**	**04 00 35.8**	**+0.2**	
SNAA	**Sanae**	**85.37**	**182**	P	**P**	**04 00 35.2**	**-0.3**	
SNAA				IAmb	IAmb	04 00 36.5		
	comp=Z,4.8nm,0.9s							
VNA3	**Neumayer Olymp**	**85.94**	**180**	P	**P**	**04 00 38.5**	**+0.1**	
VNA2	**Neumayer--Watz**	**86.24**	**181**	P	**P**	**04 00 40.2**	**+0.4**	
	baz=172,slow=4.9							
VNA1	**Neumayer--Stat**	**86.52**	**181**	P	**P**	**04 00 41.6**	**+0.4**	
SONM	**Songino Array**	**90.50**	**323**	P	**P**	**04 01 00.9**	**+0.4**	
	comp=Z,1.2nm,0.8s,baz=163,slow=3.9,SNR=5.2							
	comp=Z,1.2nm,0.8s							
YAK	**Yakutsk**	**90.63**	**342**	LR	LR	04 36 32.1		
	comp=Z,24nm,19.8s,baz=194,slow=32							
NVAR	**Mina Array Bea**	**91.04**	**48**	P	**P**	**04 01 05.0**	**+1.7**	
	comp=Z,1.1nm,0.8s,baz=233,slow=8.5,SNR=5.0							
	comp=Z,1.1nm,0.8s							
ILAR	**Eielson Array**	**93.76**	**17**	P	**P**	**04 01 14.4**	**-0.6**	
	comp=Z,0.3nm,0.6s,baz=230,slow=5.3,SNR=2.8							
	comp=Z,0.3nm,0.6s							
AKASG	**Malin Array Be**	**138.78**	**322**	PKP	**PKPdf**	**04 07 24.7**	**+0.2**	
	comp=Z,0.3nm,0.4s,baz=56,slow=1.7,SNR=1.9							
BRTR	**Keskin Array B**	**139.39**	**305**	PKhKP	PKPpre	04 07 19.4		
	comp=Z,0.2nm,0.5s,baz=188,slow=11,SNR=1.6							
BRTR				PKP	**PKPdf**	**04 07 27.0**	**+0.8**	
	comp=Z,0.9nm,0.9s,baz=342,slow=3.2,SNR=3.7							
MORC	**Moravsky Berou**	**145.53**	**328**	*e*PKP	**PKPab**	**04 07 38.4**	**+1.4**	
OSTC	**Ostas**	**145.65**	**330**	*e*PKP	**PKPab**	**04 07 38.6**	**+1.2**	
CHVC	**Chvalec**	**145.70**	**330**	*e*PKP	**PKPab**	**04 07 38.8**	**+1.2**	
KRLC	**Kraliky**	**145.70**	**329**	*e*PKP	**PKPab**	**04 07 38.7**	**+1.0**	
DPC	**Dobruska-Polom**	**145.74**	**329**	*e*PKP	**PKPab**	**04 07 38.8**	**+1.0**	
UPC	**Upice**	**145.77**	**330**	*e*PKP	**PKPab**	**04 07 39.0**	**+1.2**	
JAVC	**Velka Javorina**	**146.05**	**326**	*e*PKP	**PKiKP**	**04 07 41.4**	**-0.4**	
VRAC	**Vranov**	**146.30**	**328**	*e*PKP	**PKiKP**	**04 07 41.0**	**-1.2**	
KRUC	**Moravsky**	**146.56**	**328**	*e*PKP	**PKPab**	**04 07 41.6**	**+0.7**	
PRU	**Pruhonice**	**146.81**	**330**	*e*PKP	**PKPab**	**04 07 41.9**	**+0.1**	
RONA	**Rosalia, Austr**	**147.50**	**326**	*i* P	**PKPab**	**04 07 43.9**	**-0.8**	
	comp=Z,4.6nm,0.6s,SNR=5.4							
CONA	**Conrad Observa**	**147.57**	**326**	*e*P	**PKPab**	**04 07 44.4**	**-0.7**	
	comp=Z,2.4nm,0.7s							
CKRC	**Cesky Krumlov**	**147.74**	**329**	*e*PKP	**PKiKP**	**04 07 44.8**	**-0.4**	
KHC	**Kasperske Hory**	**147.86**	**330**	*e*PKP	**PKiKP**	**04 07 44.9**	**-0.6**	
GERES	**GERESS Array B**	**148.01**	**329**	PKPbc	**PKiKP**	**04 07 45.1**	**-0.7**	
	comp=Z,1.3nm,0.7s,baz=64,slow=3.1,SNR=13							
ARSA	**Arzberg**	**148.19**	**326**	*e*P	**PKPbc**	**04 07 45.0**	**+0.5**	
	comp=Z,1.2nm,0.5s							
MOA	**Molln**	**148.43**	**328**	*e*P	**PKiKP**	**04 07 45.9**	**-0.8**	
	comp=Z,2.4nm,0.6s							
SOKA	**Soboth**	**148.82**	**325**	*e*P	**PKPbc**	**04 07 45.5**	**-0.6**	
	comp=Z,2.3nm,0.6s							
KBA	**Koelnbreinsper**	**149.41**	**327**	*e*P	**PKPbc**	**04 07 47.6**	**-0.2**	
	comp=Z,3.5nm,0.7s							
MYKA	**Terra Mystica**	**149.57**	**326**	*e*P	**PKPbc**	**04 07 48.4**	**+0.4**	
	comp=Z,3.4nm,0.5s							
ABTA	**Abfaltersbach**	**150.05**	**328**	*i* P	**PKPbc**	**04 07 49.5**	**+0.3**	
	comp=Z,4.3nm,0.6s,SNR=5.6							
WTTA	**Wattenberg**	**150.11**	**329**	*e*P	**PKiKP**	**04 07 50.0**	**-0.3**	
	comp=Z,5.6nm,0.8s							
MOTA	**Moosalm**	**150.30**	**330**	*i* P	**PKiKP**	**04 07 50.5**	**-0.2**	
	comp=Z,6.2nm,0.7s,SNR=4.5							
SQTA	**Sankt Quirin**	**150.34**	**330**	*i* P	**PKiKP**	**04 07 50.9**	**+0.2**	
	comp=Z,6.2nm,0.6s,SNR=4.4							
RETA	**Reutte**	**150.35**	**330**	*e*P	**PKiKP**	**04 07 51.0**	**+0.3**	
	comp=Z,2.1nm,0.5s							
FETA	**Feichten**	**150.71**	**330**	*e*P	**PKiKP**	**04 07 52.0**	**+0.4**	
	comp=Z,7.2nm,1.0s							
DAVA	**Damuels**	**150.90**	**331**	*e*P	**PKPbc**	**04 07 50.4**	**-1.0**	
	comp=Z,2.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**164.90**	**231**	PKPab	**PKPab**	**04 09 00.1**	**+0.5**	
	comp=Z,0.3nm,0.6s,baz=122,slow=3.9,SNR=4.5							

*INET **09** 03:53:58.4±0.6, 9.68N×83.74W, h15km±2km, MW2.8*
*UPA **09** 03:53:58.1±0.5, 9.60N×83.86W, h9km±1km, MW3.3*
*UCR **09** 03:53:59.1±1.4, 9.65N×83.81W, h18km±2km, MW3.6*

ISC 09 03:53:58.9±0.9, 9.65N±0.04×83.82W±0.04, h26km±5km, n46, σ071/62, 1C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CDM	**Cerro de Muert**	**0.11**	**148**	*e*P		**Pb**	**03 54 03.8**	**-0.5**
CDM				*e*S		**Sb**	**03 54 07.7**	**-0.2**
CDM	**Cerro de Muert**	**0.11**	**148**	*e*P		**Pb**	**03 54 03.8**	**-0.5**
RIMA	**Rio Macho**	**0.12**	**342**	*e*P		**Pb**	**03 54 03.6**	**-0.5**
RIMA				*e*S		**Sb**	**03 54 07.4**	**-0.2**
RIMA	**Rio Macho**	**0.12**	**342**	*e*P		**Pb**	**03 54 03.6**	**-0.5**
LCR2	**La Lucha 2**	**0.20**	**297**	*e*P		**Pn**	**03 54 05.7**	**-0.7**
LCR2				*e*S		**Sb**	**03 54 10.0**	**+1.0**
PEZE	**Perez Zeledon,**	**0.30**	**151**	*e*P		**Pb**	**03 54 05.6**	**-0.5**
PEZE	**Perez Zeledon,**	**0.30**	**151**	*e*P		**Pb**	**03 54 05.6**	**-0.5**
PEZE				*e*S		**Sb**	**03 54 10.6**	**-0.4**
EDDO	**Dominical**	**0.40**	**186**	*e*P		**Pb**	**03 54 07.3**	**-0.2**
HDC	**Heredia**	**0.45**	**321**	*e*P		**Pb**	**03 54 08.1**	**-0.4**
HDC	**Heredia**	**0.45**	**321**	*e*P		**Pb**	**03 54 08.4**	**-0.1**
HDC				*e*S		**Sb**	**03 54 15.4**	**+0.4**
SRBA	**San Rafael, Bu**	**0.62**	**132**	*e*P		**Pb**	**03 54 10.1**	**-1.2**
DRK0	**Durika**	**0.69**	**124**	*e*P		**Pb**	**03 54 12.4**	**0.0**
DRK0				*e*S		**Sb**	**03 54 22.6**	**+0.9**
EDBA	**Buenos Aires**	**0.73**	**132**	*e*P		**Pb**	**03 54 11.9**	**-1.0**
EDPN	**Palmar Norte**	**0.77**	**152**	*e*P		**Pb**	**03 54 13.5**	**-0.2**
SRA1	**San Ramn**	**0.78**	**304**	*e*P		**Pb**	**03 54 13.0**	**-0.9**
JACO	**JACO, Garabito**	**0.82**	**271**	*e*P		**Pb**	**03 54 13.5**	**-1.1**
LAFE	**Finca La Fe, P**	**1.08**	**278**	*e*P		**Pn**	**03 54 18.2**	**-0.2**
LAFE	**Finca La Fe, P**	**1.08**	**278**	*e*P		**Pn**	**03 54 18.3**	**-0.2**
FORC	**Fortuna**	**1.16**	**314**	*e*P		**Pn**	**03 54 19.7**	**+0.2**
ARE1	**Arenal 1**	**1.19**	**313**	*i* P		**Pn**	**03 54 20.3**	**+0.4**
CEDE	**Laguna Cedeo**	**1.20**	**314**	*e*P		**Pn**	**03 54 20.3**	**+0.2**
CEDE				*e*S		**Sb**	**03 54 37.2**	**+1.1**
COVE	**Coope Vega, Sa**	**1.21**	**332**	*e*P		**Pn**	**03 54 19.8**	**-0.3**
JTS	**Las Juntas de**	**1.28**	**300**	*e*P		**Pn**	**03 54 21.0**	**-0.2**
JTS	**Las Juntas de**	**1.28**	**300**	*e*P		**Pn**	**03 54 21.0**	**-0.2**
JTS				*e*S		**Sb**	**03 54 38.6**	**+0.2**
MLIR3	**Monte Lirio, C**	**1.30**	**131**	*e*P		**Pn**	**03 54 21.3**	**-0.2**
MLIR3				*e*S		**Sb**	**03 54 39.3**	**+0.1**
CNI2	**El Empalme, Bo**	**1.35**	**99**	*e*P		**Pn**	**03 54 21.7**	**-0.4**
CNI2				*e*S		**Sn**	**03 54 39.5**	**+0.3**
BRU2	**Volcan**	**1.41**	**127**	*e*P		**Pn**	**03 54 23.1**	**+0.1**
BRU2				*e*S		**Sb**	**03 54 42.4**	**+0.3**
CDITO	**Canoas**	**1.42**	**139**	*e*P		**Pn**	**03 54 22.9**	**-0.2**
CDITO				*e*S		**Sn**	**03 54 41.8**	**+0.8**
BC3P	**Paso Ancho**	**1.46**	**125**	*e*P		**Pn**	**03 54 24.1**	**+0.4**
BC3P				*e*S		**Sb**	**03 54 43.6**	**-0.1**
ACAL	**Aguas Claras**	**1.54**	**309**	||*i* P		**Pn**	**03 54 25.8**	**+1.0**
VERA	**Finca Concepci**	**1.58**	**319**	*e*P		**Pn**	**03 54 25.7**	**+0.5**
BCO2	**Palmira**	**1.58**	**126**	*e*P		**Pn**	**03 54 25.6**	**+0.2**
BCO2				||*e*S		**Sb**	**03 54 46.7**	**-0.5**
LNBQ3	**Los Naranjos,**	**1.61**	**122**	*e*P		**Pn**	**03 54 26.5**	**+0.7**
LNBQ3				*e*S		**Sn**	**03 54 47.2**	**+1.4**
PTAR3	**Potrerillos Ar**	**1.62**	**126**	*e*P		**Pn**	**03 54 26.0**	**+0.1**
PTAR3				*e*S		**Sb**	**03 54 47.6**	**-0.7**
CUI	**Cuipilapa**	**1.66**	**307**	||*e*P		**Pn**	**03 54 27.4**	**+1.1**
INDI	**Punta indio, G**	**1.67**	**278**	*e*P		**Pn**	**03 54 26.7**	**+0.3**
COLC	**Colonia**	**1.69**	**307**	*e*P		**Pn**	**03 54 28.0**	**+1.2**
DUNO	**Dulce Nombre,**	**1.70**	**285**	*e*P		**Pn**	**03 54 27.6**	**+0.7**
HORNC	**Hornillas**	**1.70**	**309**	*e*P		**Pn**	**03 54 28.2**	**+1.2**
VMAR	**Armenia, Volca**	**1.72**	**312**	*e*P		**Pn**	**03 54 28.4**	**+1.2**
ORTG	**Ortega, Santa**	**1.76**	**294**	*e*P		**Pn**	**03 54 28.2**	**+0.4**
SAJU	**San Juanillo,**	**1.90**	**283**	*e*P		**Pn**	**03 54 30.1**	**+0.4**
BUEV	**Buena Vista**	**1.93**	**306**	*e*P		**Pb**	**03 54 32.1**	**-1.4**
HZTE	**Horizontes, Gu**	**2.04**	**301**	*e*P		**Pb**	**03 54 33.8**	**-1.5**
HZTE	**Horizontes, Gu**	**2.04**	**301**	*e*P		**Pb**	**03 54 34.1**	**-1.2**
ACON	**Acoyapa**	**2.66**	**330**	*e*P		**Pn**	**03 54 39.3**	**-0.8**

*IDC **09** 04:23:33.6±0.6, 0.11S×78.30W, h0km, mb4.1/14, mbtmp4.2/17, ML3.9/3, MS3.5/15, Error ellipse: s-maj=22.1km s-min=13.6km az=57.0*
*NEIC **09** 04:23:35.3±2.0, 0.18S±0.04×78.32W±0.09, h9km±4km, mb4.6/113, Mwr4.4/20, Error ellipse: s-maj=12.8km s-min=5.3km az=85.0*
*IGQ **09** 04:23:35±0.1, 0.2S±0.8×7.8W±°, h6km*
*NEIC **09** 04:23:35.3, 0.18S×78.33W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 1.85; Mθθ -2.33; Mϕϕ 0.48; Mrθ 0.25; Mrϕ 2.58; Mθϕ 3.09; Fault plane solution: Mϕ 4.56000×10^15 NP1:ϕ±338.27000°, δ72.00000°, λ133.57000°. NP2:ϕ±86.27000°, δ46.45000°, λ25.24000°. Principal axes: T 4.8278, Plg45.0000°, Azm292.0000°; N -0.5818, Plg41.0000°, Azm142.0000°; P -4.2460, Plg16.0000°, Azm38.0000°;*

ISC 09 04:23:35.7±0.7, 0.14S±0.01×78.34W±0.02, h15km±4km, n309, σ1§42/317, mb4.6/62, MS3.5/12, 1D, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
AV11	**Acelerografo,**	**0.08**	**333**	P		**Pg**	**04 23 39.0**	**-0.1**
AV11				S		**Sg**	**04 23 42.0**	**+0.7**
CRPG	**Carapungo - Pi**	**0.12**	**288**	P		**Pg**	**04 23 39.0**	**-0.7**
JBPC	**Jardin Botanic**	**0.16**	**254**	P		**Pg**	**04 23 39.0**	**-1.1**
PRAM	**Casa Patricio**	**0.16**	**269**	P		**Pg**	**04 23 39.0**	**-1.1**
CIRC	**Crculo Milita**	**0.16**	**251**	P		**Pg**	**04 23 39.0**	**-1.1**
DELA	**Administracion**	**0.16**	**280**	P		**Pg**	**04 23 39.0**	**-1.2**
CIVI	**Edificio de In**	**0.17**	**246**	P		**Pg**	**04 23 39.0**	**-1.3**
CIVI				S		**Sg**	**04 23 43.0**	**-0.3**
EPNL	**EPN Laboratori**	**0.17**	**246**	P		**Pg**	**04 23 39.0**	**-1.3**
EPNL				S		**Sg**	**04 23 43.0**	**-0.3**
SADP	**Ecuador-Quito-**	**0.18**	**320**	P		**Pg**	**04 23 40.0**	**-0.4**
SADP				S		**Sg**	**04 23 43.0**	**-0.4**
ROQE	**Tereno de la P**	**0.21**	**250**	P		**Pg**	**04 23 39.0**	**-1.8**
VIFL	**Administracin**	**0.22**	**241**	P		**Pb**	**04 23 41.0**	**-0.6**
PULU	**Pululahua**	**0.23**	**314**	Pg		**Pg**	**04 23 40.3**	**-0.9**
PULU				Sg		**Sg**	**04 23 43.8**	**-1.1**
PULU	**Pululahua**	**0.23**	**314**	P		**Pg**	**04 23 40.0**	**-1.2**
PULU				S		**Sg**	**04 23 44.0**	**-0.9**
LILI	**Casa Paps Lil**	**0.23**	**237**	P		**Pg**	**04 23 40.0**	**-1.2**
YANA	**Yana**	**0.24**	**276**	P		**Pg**	**04 23 40.0**	**-1.3**
ZALD	**Colegio Gonzal**	**0.24**	**239**	P		**Pg**	**04 23 40.0**	**-1.3**
LLOA	**Lloa**	**0.24**	**248**	P		**Pg**	**04 23 40.0**	**-1.4**
QUIB	**Administracin**	**0.26**	**234**	P		**Pg**	**04 23 40.0**	**-1.6**
GGPC	**Guagua Pichinc**	**0.26**	**262**	P		**Pg**	**04 23 40.0**	**-1.8**
TERV	**Terraza Guagua**	**0.27**	**263**	P		**Pg**	**04 23 40.0**	**-1.9**
PINO	**Pino**	**0.27**	**267**	P		**Pg**	**04 23 40.0**	**-1.9**
APR1	**Acelerografo,**	**0.29**	**289**	P		**Pg**	**04 23 41.0**	**-1.2**
HPAL	**Hacienda Las P**	**0.33**	**257**	P		**Pg**	**04 23 41.0**	**-1.7**
ANTI	**Antisana**	**0.35**	**150**	P		**Pb**	**04 23 43.0**	**-1.0**
CAYR	**Refugio Cayamb**	**0.36**	**65**	P		**Pb**	**04 23 44.0**	**-0.2**
ANTG	**Antisana-Guama**	**0.37**	**167**	P		**Pb**	**04 23 43.0**	**-1.3**
AOTA	**Otavalo**	**0.39**	**12**	P		**Pg**	**04 23 43.0**	**-0.8**
ANTS	**Antisana-Sarah**	**0.39**	**155**	P		**Pb**	**04 23 43.0**	**-1.7**
OTAV	**Otavalo**	**0.39**	**343**	Pg		**Pg**	**04 23 43.1**	**-0.8**
OTAV				Sg		**Sg**	**04 23 48.9**	**-0.6**
OTAV	**Otavalo**	**0.39**	**343**	P		**Pg**	**04 23 43.0**	**-0.9**
CAYA	**Cayambe**	**0.41**	**58**	P		**Pb**	**04 23 44.0**	**-0.9**
ANTM	**Antisana-La Mi**	**0.41**	**164**	P		**Pg**	**04 23 43.0**	**-1.2**
PITA	**Cotopaxi Volc**	**0.42**	**193**	P		**Pn**	**04 23 50.0**	**+2.3**
CUSW	**Cuicocha Oeste**	**0.43**	**358**	P		**Pg**	**04 23 44.0**	**-0.5**
IMBA	**Imbabura, San**	**0.44**	**18**	Pg		**Pb**	**04 23 44.7**	**-0.7**
IMBA				Sg		**Sb**	**04 23 52.1**	**+0.1**
IMBA	**Imbabura, San**	**0.44**	**18**	P		**Pb**	**04 23 45.0**	**-0.4**
CUIC	**Cuicocha-Domo**	**0.44**	**357**	P		**Pg**	**04 23 44.0**	**-0.8**
CUSE	**Cuicocha Este**	**0.45**	**352**	*e*P		**Pg**	**04 23 44.6**	**-0.3**
CUSE				*e*S		**Sb**	**04 23 51.6**	**-0.7**
CUSE	**Cuicocha Este**	**0.45**	**352**	P		**Pg**	**04 23 44.0**	**-0.9**
AMAC	**Ecuador-Machac**	**0.47**	**212**	P		**Pg**	**04 23 44.0**	**-1.2**
COTA	**Cotacachi**	**0.47**	**360**	P		**Pg**	**04 23 44.0**	**-1.4**
AAT1	**Ecuador-Atunta**	**0.48**	**14**	P		**Pb**	**04 23 46.0**	**-0.1**
VC1	**Cotopaxi 1**	**0.50**	**188**	P		**Pg**	**04 23 45.0**	**-0.9**
NAS2	**Nasa**	**0.52**	**195**	P		**Pb**	**04 23 46.0**	**-0.8**
BVC2	**Cotopaxi Volca**	**0.52**	**188**	P		**Pg**	**04 23 45.0**	**-1.2**
SUCR	**Mariscal Sucre**	**0.52**	**198**	P		**Pg**	**04 23 45.0**	**-1.2**
ISUC	**Cotopaxi Ecuad**	**0.52**	**198**	P		**Pb**	**04 23 46.0**	**-0.9**
BTAM	**Cotopaxi Volca**	**0.53**	**187**	P		**Pb**	**04 23 46.0**	**-1.1**
BREF	**Cotopaxi Volca**	**0.53**	**191**	P		**Pb**	**04 23 46.0**	**-1.2**
BNAS	**Cotopaxi Volca**	**0.55**	**195**	P		**Pg**	**04 23 46.0**	**-0.7**
TAMB	**Tambo**	**0.55**	**183**	P		**Pb**	**04 23 46.0**	**-1.4**
CAMI	**Rancho Maria**	**0.56**	**198**	P		**Pg**	**04 23 46.0**	**-0.9**
YAHU	**Yahuarcocha**	**0.57**	**27**	P		**Pb**	**04 23 47.0**	**-0.7**
URCU	**Urcuqui**	**0.58**	**8**	P		**Pb**	**04 23 47.0**	**-0.9**
BMOR	**Cotopaxi Volca**	**0.60**	**192**	P		**Pg**	**04 23 46.0**	**-1.7**
SLOR	**San Lorenzo -**	**0.61**	**195**	Pg		**Pb**	**04 23 47.3**	**-1.0**
SLOR				Sg		**Sg**	**04 23 55.0**	**-0.9**
SLOR	**San Lorenzo -**	**0.61**	**195**	P		**Pg**	**04 23 47.0**	**-0.8**
PAC1	**Pacto, Paraso**	**0.61**	**312**	||P		**Pg**	**04 23 46.6**	**-1.3**
PAC1				*e*S		**Sg**	**04 23 53.4**	**-2.6**
PAC1	**Pacto, Paraso**	**0.61**	**312**	P		**Pg**	**04 23 46.0**	**-1.8**
PAST	**Pastocalle**	**0.63**	**209**	P		**Pg**	**04 23 47.0**	**-1.2**
SRAM	**San Ramn-Vol**	**0.65**	**201**	P		**Pb**	**04 23 48.0**	**-0.9**
AV05	**Acelerografo,**	**0.65**	**95**	P		**Pb**	**04 23 48.0**	**-0.8**
VCES	**Cotopaxi**	**0.66**	**185**	P		**Pg**	**04 23 47.0**	**-1.8**
APR2	**Miler**	**0.67**	**289**	P		**Pg**	**04 23 47.0**	**-1.9**
ILLI	**Illinizas Sur**	**0.69**	**215**	P		**Pg**	**04 23 48.0**	**-1.4**
ASDO	**Santo Domingo**	**0.80**	**261**	P		**Pg**	**04 23 47.0**	**-4.3**
ALAT	**Latacunga**	**0.83**	**200**	P		**Pg**	**04 23 51.0**	**-0.9**
APSY	**Ecuador-Napo A**	**0.83**	**175**	P		**Pb**	**04 23 51.0**	**-1.1**
PIAT	**Ana Tenorio**	**0.85**	**175**	P		**Pg**	**04 23 50.0**	**-2.4**
ALIT	**Ecuador-Imbabu**	**0.93**	**358**	P		**Pg**	**04 23 52.0**	**-1.8**
BV15	**Puerto Quito-O**	**0.94**	**289**	P		**Pg**	**04 23 52.0**	**-1.9**
LNGL	**El Angel-Carch**	**0.94**	**21**	P		**Pg**	**04 23 53.0**	**-1.0**
BONI	**La Bonita**	**1.00**	**54**	P		**Pb**	**04 23 54.0**	**-0.9**
ARDO	**Archidona, Ten**	**1.00**	**148**	P		**Pb**	**04 23 54.0**	**-0.8**
CHL1	**Volcn Chiles**	**1.01**	**23**	P		**Pb**	**04 23 55.0**	**-0.2**
TULM	**Tulcn-Chalpat**	**1.01**	**33**	P		**Pn**	**04 23 55.1**	**-0.7**
TULM	**Tulcn-Chalpat**	**1.01**	**33**	P		**Pn**	**04 23 55.0**	**-0.8**
ECEN	**Cerro Negro**	**1.03**	**21**	P		**Pb**	**04 23 55.0**	**-0.5**
CHL2	**Volcn Chiles**	**1.03**	**24**	P		**Pb**	**04 23 55.0**	**-0.5**
CASC	**Dorado de Casc**	**1.03**	**74**	P		**Pn**	**04 23 56.0**	**+0.2**
AV03	**Acelerografo,**	**1.03**	**79**	P		**Pn**	**04 23 55.0**	**-0.7**
ATUL	**Tulcn**	**1.10**	**34**	P		**Pb**	**04 23 56.0**	**-0.5**
CMBC	**Cumbal**	**1.19**	**25**	P		**Pn**	**04 23 59.0**	**+0.8**
AV18	**Acelerografo,**	**1.23**	**292**	P		**Pn**	**04 23 58.0**	**-0.3**
BRUN	**Tungurahua Vol**	**1.27**	**183**	P		**Pn**	**04 23 58.0**	**-1.2**
POND	**Pondoa**	**1.28**	**185**	P		**Pn**	**04 23 58.0**	**-1.3**
JUI6	**Juive**	**1.28**	**186**	P		**Pn**	**04 23 58.0**	**-1.3**
RETU	**Refugio**	**1.30**	**185**	P		**Pn**	**04 23 59.0**	**-0.9**
BBIL	**Ulba Tungurahu**	**1.31**	**187**	P		**Pg**	**04 24 00.0**	**-1.0**
BIL2	**Estacion Bilba**	**1.31**	**187**	P		**Pg**	**04 24 00.0**	**-1.1**
APUY	**Puyo**	**1.35**	**165**	P		**Pg**	**04 24 01.0**	**-0.8**
BMAS	**Trigal station**	**1.36**	**186**	P		**Pn**	**04 23 59.0**	**-1.5**
ARRY	**Arrayan**	**1.36**	**185**	P		**Pn**	**04 23 59.0**	**-1.5**
IGUA	**Igualata**	**1.37**	**193**	P		**Pn**	**04 24 00.0**	**-0.8**
PUYO	**Puyo, Santa Ro**	**1.38**	**167**	P		**Pg**	**04 24 01.0**	**-1.3**
PORT	**Chimborazo Vol**	**1.38**	**198**			**Pn**	**04 24 00.7**	**-0.3**
PORT	**Chimborazo Vol**	**1.38**	**198**	P		**Pn**	**04 24 00.0**	**-1.0**
APS1	**Acelerografo,**	**1.44**	**80**	P		**Pg**	**04 24 03.0**	**-0.4**
MAG1	**Magdalena**	**1.44**	**273**	P		**Pn**	**04 24 01.0**	**-0.3**
CHSH	**Refugio Sur-Vo**	**1.45**	**202**			**Pn**	**04 24 01.7**	**-0.2**
CHSH	**Refugio Sur-Vo**	**1.45**	**202**	P		**Pb**	**04 24 02.0**	**-0.7**
AV21	**Acelerografo,**	**1.45**	**303**	P		**Pn**	**04 24 01.0**	**-0.4**
TAMH	**Tambohuasha Ch**	**1.46**	**198**	P		**Pn**	**04 24 02.0**	**0.0**
FLF1	**Flavio Alfaro-**	**1.52**	**262**	P		**Pn**	**04 24 02.0**	**-0.4**
GCUF	**Volcan Galeras

LCAR IAmb IAmb 04 30 53.7
comp=Z,13nm,1.0s
TXAR Lajitas Array 38.00 323 P P 04 30 51.8 -1.6
comp=Z,0.4nm,0.8s,baz=126,slow=4.6,SNR=2.8
comp=Z,0.4nm,0.8s
FCAR Ozark Folk Cen 38.08 342 P P 04 30 53.1 -0.7
HHAR Hobbs 39.03 340 P P 04 31 02.0 0.0
MGMO Mountain Grove 39.29 342 P P 04 31 03.3 -0.8
U38A Gravette 39.33 339 P P 04 31 04.4 0.0
FVM French Village 39.54 345 P P 04 31 06.0 -0.1
FVM IAmb IAmb 04 31 07.0
comp=Z,32nm,1.5s
CCM Cathedral Cave 39.83 344 P P 04 31 07.9 -0.6
CCM IAmb IAmb 04 31 14.9
comp=Z,16nm,1.4s
SSPA Standing Stone 40.59 1 P P 04 31 13.0 -1.8
MSTX Muleshoe 40.95 328 P P 04 31 17.2 -0.8
MSTX IAmb IAmb 04 31 32.5
comp=Z,14nm,1.0s
ELIS Ellis County 41.02 334 P P 04 31 18.3 -0.1
ELIS IAmb IAmb 04 31 21.8
comp=Z,8.4nm,0.5s
PLCA Paso Flores 41.02 171 P P 04 31 18.9 +0.6
comp=Z,5.4nm,1.0s,baz=356,slow=11,SNR=9.7
PLCA LR LR 04 46 57.2
comp=Z,78nm,18.3s,baz=231,slow=34
comp=Z,5.4nm,1.0s
PLCA Paso Flores 41.02 171 P P 04 31 16.1 -2.3
PLCA IAmb IAmb 04 31 28.9
comp=Z,12nm,1.2s
M57A Sunshine Farm, 41.30 1 P P 04 31 20.3 -0.3
M57A IAmb IAmb 04 31 23.3
comp=Z,8.9nm,0.8s
HDIL Hopedale 41.72 347 P P 04 31 22.6 -1.5
HDIL IAmb IAmb 04 31 23.9
comp=Z,11nm,0.6s
RCBR Riachuelo 42.73 98 LR LR 04 50 46.2
comp=Z,162nm,19.3s,baz=78,slow=38
121A Cookes Peak, D 42.76 322 P P 04 31 32.6 -0.2
121A IAmb IAmb 04 31 45.8
comp=Z,14nm,1.4s
CRNM Carthage 43.13 325 P P 04 31 35.5 -0.3
J56A Wolcott 43.25 2 P P 04 31 34.3 -2.1
J56A IAmb IAmb 04 31 38.1
comp=Z,10nm,0.8s
ACCN Adirondack Com 43.53 5 P P 04 31 38.6 -0.1
J59A Piesco 43.55 4 P P 04 31 38.8 -0.2
J59A IAmb IAmb 04 31 41.6
comp=Z,11nm,1.1s
ANMO Albuquerque 43.69 326 LR LR 04 50 43.4
comp=Z,24nm,19.1s,baz=131,slow=37
ANMO Albuquerque 43.69 326 P P 04 31 40.6 +0.2
SCIA State Center 43.96 344 P P 04 31 41.7 -0.5
JFWS Jewell Farm 44.18 347 P P 04 31 41.0 -3.0
T25A Trinidad 44.25 330 P P 04 31 44.8 -0.1
DELO Deloro Mine 44.47 1 P P 04 31 46.8 +0.6
TUC Tucson 44.50 320 P P 04 31 46.7 -0.1
SADO Sadowa 44.72 359 LR LR 04 51 17.0
comp=Z,37nm,19.2s,baz=127,slow=37
SADO Sadowa 44.72 359 P P 04 31 47.6 -0.6
SADO IAmb IAmb 04 31 50.0
comp=Z,7.8nm,0.8s
I42A Draeger Farm, 44.85 349 P P 04 31 48.1 -1.2
I42A IAmb IAmb 04 31 55.1
comp=Z,7.8nm,0.8s
FRNY Flat Rock 44.98 5 P P 04 31 51.0 +0.7
FRNY IAmb IAmb 04 31 53.1
comp=Z,7.4nm,0.9s
SDCO Great Sand Dun 45.27 329 P P 04 31 52.8 -0.3
SDCO IAmb IAmb 04 31 56.7
comp=Z,7.7nm,1.0s
W18A Petrified Fore 45.71 323 P P 04 31 55.6 -0.9
OGNE Ogallala 46.21 335 P P 04 32 00.2 0.0
X16A Lo Mia Camp, P 46.28 321 P P 04 32 00.8 -0.2
ECSD EROS Data Cent 46.64 342 P P 04 32 02.3 -1.2
ECSD IAmb IAmb 04 32 05.7
comp=Z,11nm,1.5s
WUAZ Wupatki 46.97 323 P P 04 32 06.8 +0.5
WUAZ IAmb IAmb 04 32 10.1
comp=Z,7.1nm,1.1s
PV15 Paradox Valley 47.28 327 P P 04 32 08.7 -0.1
PV15 IAmb IAmb 04 32 12.4
comp=Z,10nm,1.3s
PV13 Radium Mtn., P 47.33 327 P P 04 32 08.2 -1.0
PV13 IAmb IAmb 04 32 13.0
comp=Z,6.6nm,0.9s
PV11 David Mesa, Pa 47.46 327 P P 04 32 10.2 -0.1
PV11 IAmb IAmb 04 32 21.9
comp=Z,7.7nm,1.0s
PHWY Pilot Hill 48.01 332 P P 04 32 14.2 -0.4
PHWY IAmb IAmb 04 32 24.0
comp=Z,2.7nm,0.7s
W13A Hualapai Mount 48.26 320 P P 04 32 15.8 -0.7
SRU San Rafael Swe 48.94 327 P P 04 32 20.8 -0.8
SRU IAmb IAmb 04 32 24.6
comp=Z,4.8nm,1.0s
RWWY Rawlins 49.14 331 P P 04 32 23.1 -0.1
RWWY IAmb IAmb 04 32 26.2
comp=Z,11nm,1.1s
P17A Butcher Ranch, 49.31 327 P P 04 32 24.3 -0.1
P17A IAmb IAmb 04 32 27.5
comp=Z,6.8nm,1.3s
SZCU Shurtz Canyon 49.37 323 P P 04 32 24.4 -0.6
RSSD Black Hills 49.67 336 P P 04 32 27.3 +0.1
RSSD IAmb IAmb 04 32 30.3
comp=Z,7.3nm,0.8s
QSM Queen of Sheba 50.72 319 P P 04 32 34.7 -0.3
DUG Dugway, Tooele 50.96 326 P P 04 32 37.1 +0.2
SPR3 Spring Creek 3 51.03 324 P P 04 32 38.6 +0.9
SPR3 IAmb IAmb 04 32 41.3
comp=Z,2.7nm,1.0s
PDAR Pinedale Array 51.09 331 P P 04 32 38.5 +0.5
comp=Z,1.3nm,0.9s,baz=132,slow=8.8,SNR=9.7
PDAR PcP PcP 04 33 53.8 +0.1
comp=Z,0.4nm,0.5s,baz=134,slow=4.3,SNR=2.1
PDAR LR LR 04 55 42.9
comp=Z,44nm,18.5s,baz=128,slow=38
comp=Z,1.3nm,0.9s
HWUT Hardware Ranch 51.27 328 P P 04 32 40.1 +0.8
HWUT IAmb IAmb 04 32 49.7
comp=Z,11nm,1.5s
BGU Big Grassy Mou 51.58 327 P P 04 32 41.9 +0.3
REDW Red Top Meadow 52.17 330 P P 04 32 46.1 +0.1
REDW IAmb IAmb 04 32 48.6
comp=Z,7.6nm,1.2s
LOHW Long Hollow 52.23 331 P P 04 32 46.9 +0.4
MOOW Moose Ponds 52.40 331 P P 04 32 47.1 -0.7
IMW Indian Meadow 52.61 331 P P 04 32 48.3 -1.0
RLMT Red Lodge 52.73 333 P P 04 32 52.0 +1.9
NV11 Mina Array Sit 53.01 321 P P 04 32 54.0 +1.7
NV11 IAmb IAmb 04 32 55.8
comp=Z,11nm,1.4s
OMMB Old Mammoth Mi 53.07 320 P P 04 32 53.7 +0.8
OMMB IAmb IAmb 04 32 56.9
comp=Z,9.4nm,1.3s
NVAR Mina Array Bea 53.10 321 P P 04 32 54.8 +1.8
comp=Z,2.3nm,0.8s,baz=126,slow=7.3,SNR=14
NVAR PcP PcP 04 34 02.4 +1.1
comp=Z,0.3nm,0.5s,baz=134,slow=5.2,SNR=1.3
comp=Z,2.3nm,0.8s
NVAR Mina Array Bea 53.10 321 P P 04 32 54.1 +1.1
GCMT Greycliff 53.42 333 P P 04 32 56.5 +1.4
QLMT Earthquake Lak 53.53 331 P P 04 32 57.6 +1.5
BMN Battle Mountai 53.66 323 P P 04 32 58.8 +1.8
BMN IAmb IAmb 04 33 07.2
comp=Z,4.4nm,0.9s
HLID Hailey 54.14 328 P P 04 33 01.7 +1.2
BOZ Bozeman (W) 54.19 332 P P 04 33 02.5 +1.7
MFID Camas Ranch 54.80 327 P P 04 33 06.5 +1.3
HRY Holter Researc 55.11 332 P P 04 33 08.6 +1.2
EGMT Eagleton 55.18 335 P P 04 33 08.7 +0.8
MSO Missoula 56.19 331 P P 04 33 14.9 -0.2
MSO IAmb IAmb 04 33 17.8
comp=Z,9.9nm,1.1s
JTMT Jette 57.01 332 P P 04 33 21.7 +0.8
JTMT IAmb IAmb 04 33 23.9
comp=Z,5.9nm,1.0s
F10A Beach Ranch, E 57.25 329 P P 04 33 23.1 +0.5
F10A IAmb IAmb 04 33 36.4
comp=Z,4.2nm,0.9s
I07A Izee 57.26 326 P P 04 33 23.6 +0.7
G08A Pilot Rock 57.72 327 P P 04 33 25.6 -0.5
YBH Yreka Blue Hor 57.77 322 LR LR 05 00 13.7
comp=Z,21nm,18.4s,baz=132,slow=38
WALA Waterton Lakes 57.78 333 P P 04 33 27.7 +1.3
WALA IAmb IAmb 04 33 34.7
comp=Z,5.8nm,0.9s
PINE Pine Mountain 57.91 325 P P 04 33 29.2 +1.7
J04D Umpqua Nationa 58.27 324 P P 04 33 30.8 +0.8
NEW Newport 58.73 331 LR LR 05 00 01.7
comp=Z,23nm,19.9s,baz=119,slow=37
NEW Newport 58.73 331 P P 04 33 34.5 +1.5
NEW IAmb IAmb 04 33 35.3
comp=Z,8.1nm,1.1s
HOOD Mount Hood Mea 59.23 326 P P 04 33 38.4 +1.8
LTY Liberty 59.89 328 P P 04 33 42.9 +1.9
LTY IAmb IAmb 04 33 44.0
comp=Z,6.9nm,1.0s
B08A Colville Reser 59.90 330 P P 04 33 43.0 +2.0
B08A IAmb IAmb 04 33 43.0
comp=Z,3.8nm,0.8s
D05A Enumclaw 60.55 327 P P 04 33 47.0 +1.6
LLLB Lillooet 62.62 330 P P 04 34 01.6 +2.1
YKA Yellowknife Ar 68.15 343 P P 04 34 34.4 -0.5
comp=Z,1.7nm,0.8s,baz=134,slow=6.3,SNR=2.5
comp=Z,1.7nm,0.8s
SMAI San Martin Ant 68.30 175 P P 04 34 36.7 +1.0
DBIC Dimbokro 73.61 83 P P 04 35 09.1 -0.1
comp=Z,5.3nm,0.9s,baz=300,slow=5.3,SNR=4.2
comp=Z,5.3nm,0.9s
DAWY Dawson 77.84 337 P P 04 35 33.1 +0.7
DAWY IAmb IAmb 04 35 37.3
comp=Z,3.5nm,0.7s
INK Inuvik 77.88 342 LR LR 05 11 33.0
comp=Z,28nm,19.9s,baz=116,slow=37
INK Inuvik 77.88 342 P P 04 35 33.7 +1.3
I29M Ogilvie Camp, 78.02 338 P P 04 35 34.9 +1.5
ESDC Sonseca Array 78.09 49 P P 04 35 34.8 +0.4
comp=Z,1.2nm,0.8s,baz=264,slow=5.7,SNR=7.9
comp=Z,1.2nm,0.8s
BCAR Beaver Creek A 78.38 335 P P 04 35 37.0 +1.6
TORD Torodi Ar. Bea 80.32 77 P P 04 35 46.3 -0.7
comp=Z,0.4nm,0.6s,baz=281,slow=5.9,SNR=8.8
comp=Z,0.4nm,0.6s
BELA Belgrano 2 81.07 171 P P 04 35 51.8 +2.1
BELA IAmb IAmb 04 35 57.1
comp=Z,8.8nm,1.1s
ILAR Eielson Array 81.11 336 P P 04 35 50.2 +0.1
comp=Z,1.7nm,0.9s,baz=116,slow=3.5,SNR=6.0
comp=Z,1.7nm,0.9s
BMAR Burnt Mountain 81.19 339 P P 04 35 51.9 +1.4
VNA3 Neumayer Olymp 83.11 162 P P 04 36 01.6 +1.0
VNA3 Neumayer Olymp 83.11 162 PcP PcP 04 36 07.1 +2.0
COLD Coldfoot 83.17 338 P P 04 36 02.9 +2.0
COLD IAmb IAmb 04 36 09.8
comp=Z,4.6nm,1.0s
VNA1 Neumayer--Stat 83.34 162 P P 04 36 03.1 +1.5
VNA1 Neumayer--Stat 83.34 162 PcP PcP 04 36 08.8 +2.7
VNA2 Neumayer--Watz 83.70 162 P P 04 36 04.4 +0.9
baz=299,slow=4.3
VNA2 Neumayer--Watz 83.70 162 PcP PcP 04 36 09.0 +1.2
VNA2 Neumayer--Watz 83.70 162 SKKPdf SKKPdf 04 57 45.1 -3.5
SNAA Sanae 85.32 162 P P 04 36 12.7 +0.9
SNAA Sanae 85.32 162 PcP PcP 04 36 17.3 +2.4
SNAA Sanae 85.32 162 P P 04 36 12.2 +0.4
TROLL Troll, Antarti 87.04 162 P P 04 36 21.6 +1.2
TROLL Troll, Antarti 87.04 162 PcP PcP 04 36 26.1 +3.6
TROLL S S 04 46 58.2 -0.5
ECH Echery 87.09 42 P P 04 36 21.6 +0.6
QSPA South Pole Qui 89.91 180 P P 04 36 34.0 -0.1
ZALV Zalesovo Beam 124.59 12 PKP PKPdf 04 42 33.9 -0.7
comp=Z,0.7nm,0.4s,baz=316,slow=6.2,SNR=4.0
KURBB Kurchatov Arra 125.99 18 PKP PKPdf 04 42 37.5 +0.2
comp=Z,1.1nm,0.7s,baz=326,slow=2.4,SNR=10
MKAR Makanchi Array 130.54 17 PKP PKPdf 04 42 46.6 +0.4
comp=Z,1.0nm,0.7s,baz=303,slow=6.8,SNR=7.7
SONM Songino Array 132.32 356 PKP PKPdf 04 42 49.5 -0.2
comp=Z,0.9nm,1.0s,baz=48,slow=2.2,SNR=5.1
KSRS Korea Array 135.66 330 PKP PKPdf 04 42 56.2 +0.2
comp=Z,1.0nm,0.5s,baz=344,slow=2.1,SNR=5.9
ASAR Alice Springs 140.76 231 PKhKP PKPpre 04 42 58.4
comp=Z,0.5nm,0.5s,baz=126,slow=3.6,SNR=5.1
ASAR PKP PKPdf 04 43 06.2 +0.3
comp=Z,0.9nm,0.6s,baz=122,slow=1.7,SNR=7.2
WRA Warramunga Arr 142.28 236 PKhKP PKPpre 04 43 02.4
comp=Z,1.0nm,0.9s,baz=117,slow=2.5,SNR=6.4
WRA PKP PKPdf 04 43 08.8 +0.2
comp=Z,0.8nm,0.6s,baz=110,slow=2.6,SNR=18
LZH Lanzhou 144.18 357 *e*PKP **PKiKP 04 43 14.0 -1.3**
LZH pPKP sPKPdf 04 43 18.9 -1.1
PZH PanZhiHua 153.79 360 PKPbc PKPdf 04 43 27.3 -0.1
CMAR Chiang Mai Arr 161.60 8 PKP PKPdf 04 43 37.2 +0.1
comp=Z,0.8nm,0.3s,baz=326,slow=2.2,SNR=1.8
CMAR PKPab PKPab 04 44 21.8 +0.2
comp=Z,1.1nm,0.4s,baz=331,slow=5.0,SNR=4.8

PAS ***09*** *04:24:56.6±1.2,36.032N±0.009×117.771W±0.009, h2km±7km, ML2.8/119, ML2.4/58(NEIC), Error ellipse: s-maj=1.5km s-min=0.7km az=218.0*
ANF ***09*** *04:24:56.2±0.1,36.03N×117.78W, h10km±1km, ML2.8/28, ML2.8/28, Error ellipse: s-maj=1.0km s-min=0.9km az=68.0*
NEIC ***09*** *04:24:56.6±1.8,36.045N±0.009×117.79W±0.01, h12km±4km, Error ellipse: s-maj=1.5km s-min=0.8km az=220.0*
IDC ***09*** *04:24:59.5±1.0,36.42N×116.32W, h0km, mb3.8/1, mbtmp3.0/4, ML3.3/3, Error ellipse: s-maj=20.8km s-min=9.3km az=81.0*

ISC 09 04:24:56.8±0.8,36.03N±0.01×117.77W±0.01,h13km±4km, n91,σ0.72/122, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time h m s	Res ISC
WCSM	**Coso Springs S**	**0.01**	**162**			**Pg**	**04 24 57.6**	**-1.6**
WVPM	**Volcano Peak E**	**0.09**	**206**			**Pb**	**04 25 00.1**	**+0.3**
WRVM	**Rose V. Centra**	**0.10**	**257**			**Pb**	**04 25 00.3**	**-0.4**
MFS	**McCloud Flat S**	**0.11**	**321**			**Pg**	**04 25 00.9**	**+0.8**
WNMM	**Nine Mile Cany**	**0.22**	**211**			**Pg**	**04 25 01.0**	**-0.6**
MPMC	**Manual Prospec**	**0.23**	**83**	P		**Pg**	**04 25 01.3**	**-0.6**
	baz=264,SNR=1000							
MPMC				S		**Sg**	**04 25 04.7**	**-0.6**
	baz=264							
CLC	**China Lake**	**0.26**	**147**			**Pg**	**04 25 01.6**	**-0.6**
CLC						**Sg**	**04 25 05.7**	**-0.2**
SRTC	**Snort**	**0.34**	**177**			**Pg**	**04 25 03.8**	**+0.1**
SRTC						**Sb**	**04 25 09.5**	**-0.6**
WLHM	**Little Horse**	**0.46**	**286**			**Sg**	**04 25 11.3**	**-0.8**
CWC	**Cottonwood Cre**	**0.48**	**328**			**Pg**	**04 25 05.8**	**-0.6**
CWC						**Sg**	**04 25 12.6**	**-0.2**
CWC	**Cottonwood Cre**	**0.48**	**328**	P		**Pg**	**04 25 05.8**	**-0.6**
	baz=148							
CWC				S		**Sg**	**04 25 12.5**	**-0.3**
	baz=148							
WORM	**Onyx Ranch**	**0.51**	**229**			**Pg**	**04 25 06.3**	**-0.6**
WORM						**Sg**	**04 25 13.2**	**-0.5**
CGO	**Cerro Gordo**	**0.52**	**357**			**Pg**	**04 25 06.6**	**-0.5**
LRMC	**Laurel Mtn Rad**	**0.56**	**173**			**Pg**	**04 25 07.4**	**-0.3**
LRMC						**Sg**	**04 25 15.4**	**+0.3**
LRMC	**Laurel Mtn Rad**	**0.56**	**173**	P		**Pg**	**04 25 07.4**	**-0.3**
	baz=353,SNR=28							
LRMC				S		**Sg**	**04 25 15.2**	**+0.1**
	baz=353							
WBSM	**Bird Springs**	**0.58**	**212**			**Pg**	**04 25 07.7**	**-0.5**
WBSM						**Sg**	**04 25 15.6**	**-0.2**
WHFM	**Hanning Flat**	**0.58**	**235**			**Pg**	**04 25 07.7**	**-0.5**
WHFM						**Sg**	**04 25 15.6**	**-0.3**
CCCA	**Chr Cany lake**	**0.60**	**147**			**Pg**	**04 25 08.6**	**0.0**
CCCA						**Sb**	**04 25 17.5**	**-0.2**
ISA	**Isabella, Lake**	**0.68**	**238**			**Pg**	**04 25 09.6**	**-0.5**
ISA				IAML			04 25 19.1	
	comp=E,411nm,0.3s							
ISA	**Isabella, Lake**	**0.68**	**238**	P		**Pg**	**04 25 09.6**	**-0.5**
	baz=57,SNR=69							
ISA				S		**Sg**	**04 25 18.8**	**-0.2**
	baz=57							
WASM	**Alta Sierra Ca**	**0.70**	**246**			**Pg**	**04 25 10.0**	**-0.5**
WASM						**Sg**	**04 25 19.9**	**+0.1**
QSM	**Queen of Sheba**	**0.73**	**95**			**Pg**	**04 25 10.6**	**-0.5**
QSM						**Sg**	**04 25 20.8**	**+0.1**
QSM	**Queen of Sheba**	**0.73**	**95**	IAML			04 25 25.0	
	comp=E,256nm,0.5s							
QSM				IAML			04 25 25.3	
	comp=N,271nm,0.3s							
DTP	**Desert Tortois**	**0.76**	**185**			**Pg**	**04 25 11.0**	**-0.6**
SPG2	**Springville 2**	**0.82**	**282**			**Pg**	**04 25 11.8**	**-1.0**
SPG2						**Sg**	**04 25 22.7**	**-0.9**
FURC	**Furnace Creek,**	**0.85**	**59**			**Pb**	**04 25 13.2**	**-0.3**
FURC						**Sb**	**04 25 25.5**	**+0.7**
FURC	**Furnace Creek,**	**0.85**	**59**	P		**Pb**	**04 25 13.2**	**-0.3**
	baz=240,SNR=103							
FURC				S		**Sb**	**04 25 25.1**	**+0.3**
	baz=240							
CCAC	**Calif City Air**	**0.90**	**193**			**Pg**	**04 25 13.7**	**-0.5**
CCAC	**Calif City Air**	**0.90**	**193**	Pg		**Pg**	**04 25 13.6**	**-0.6**
CCAC	**Calif City Air**	**0.90**	**193**	IAML			04 25 29.9	
	comp=E,156nm,0.8s							
GWY	**Greenwater Val**	**0.90**	**80**			**Pg**	**04 25 14.0**	**-0.3**
GWY				IAML			04 25 31.6	
	comp=N,195nm,0.6s							
GRAC	**Grapevine Rang**	**1.02**	**18**			**Pg**	**04 25 15.9**	**-0.6**
GRAC	**Grapevine Rang**	**1.02**	**18**	P		**Pg**	**04 25 15.8**	**-0.6**
	baz=199,SNR=7.8							
GRAC				S		**Sb**	**04 25 30.0**	**+0.4**
	baz=199							
GSC	**Goldstone, Bar**	**1.07**	**133**			**Pg**	**04 25 16.6**	**-0.8**
GSC				IAML			04 25 33.4	
	comp=N,86nm,0.7s							
GSC				IAML			04 25 34.4	
	comp=E,179nm,0.8s							
GSC	**Goldstone, Bar**	**1.07**	**133**	P		**Pg**	**04 25 16.7**	**-0.8**
	baz=313,SNR=68							
GSC				S		**Sg**	**04 25 31.3**	**-0.1**
	baz=313							
VES	**Vestal, Richgr**	**1.08**	**260**			**Pb**	**04 25 17.3**	**-0.1**
VES						**Sb**	**04 25 31.9**	**+0.3**
VES	**Vestal, Richgr**	**1.08**	**260**	P		**Pb**	**04 25 17.0**	**-0.4**
	baz=79,SNR=53							
VES				S		**Sb**	**04 25 31.8**	**+0.3**
	baz=79							
TIN	**Tinemaha, Big**	**1.09**	**340**	P		**Pn**	**04 25 17.6**	**-0.3**
	baz=160,SNR=11							
TIN				S		**Sn**	**04 25 32.4**	**-0.5**
	baz=160							
TEJ	**El Tejon**	**1.10**	**223**			**Pb**	**04 25 17.1**	**-0.6**
SGV	**South Grapevin**	**1.12**	**32**			**Pb**	**04 25 18.0**	**-0.2**
EDW2	**Edwards Air Fo**	**1.16**	**189**			**Pg**	**04 25 19.2**	**0.0**
EDW2	**Edwards Air Fo**	**1.16**	**189**	P		**Pb**	**04 25 18.1**	**-0.7**
	baz=8.9,SNR=28							
EDW2				S		**Sb**	**04 25 33.5**	**-0.3**
	baz=8.9							
HYS	**Haystack Butte**	**1.18**	**172**			**Pg**	**04 25 19.4**	**-0.1**
HYS						**Sb**	**04 25 34.5**	**+0.2**
LCH	**Last Change Ra**	**1.20**	**5**			**Pg**	**04 25 19.5**	**-0.5**
LCH				IAML			04 25 39.7	
	comp=E,72nm,0.8s							
TPO	**Tropico Hills**	**1.21**	**198**			**Pn**	**04 25 19.3**	**-0.2**
SHOC	**Shoshone, Teco**	**1.22**	**96**	P		**Pn**	**04 25 19.3**	**-0.3**
	baz=277,SNR=31							
ARVC	**Arvin**	**1.25**	**224**			**Pn**	**04 25 20.3**	**+0.3**
ARVC	**Arvin**	**1.25**	**224**	P		**Pn**	**04 25 19.8**	**-0.2**
	baz=43,SNR=35							
ARVC				S		**Sg**	**04 25 36.9**	**-0.2**
	baz=43							
AMDNV	**Amargosa**	**1.27**	**70**			**Pn**	**04 25 20.4**	**0.0**
RRX	**Edison Barstow**	**1.31**	**151**	Pg		**Pb**	**04 25 21.8**	**+0.4**
	baz=332							
VOG	**Valley Oaks Go**	**1.34**	**283**	S		**Sg**	**04 25 39.7**	**-0.2**
	baz=102							
TPNV	**Topopah Spring**	**1.53**	**53**			**Pb**	**04 25 24.6**	**-0.5**
TPNV				IAML			04 25 50.1	
	comp=E,53nm,0.6s							
TPNV				IAML			04 25 52.5	
	comp=E,68nm,0.6s							
TPNV	**Topopah Spring**	**1.53**	**53**	Pb		**Pb**	**04 25 24.7**	**-0.5**
	baz=234,SNR=53							
TPNV				S		**Sg**	**04 25 45.3**	**-0.8**
	baz=234							
TUQ	**Turquoise Moun**	**1.61**	**111**	P		**Pn**	**04 25 25.0**	**-0.1**
	baz=292,SNR=8.5							
TUQ				Sg		**Sg**	**04 25 49.7**	**+0.9**
	baz=292							
HEC	**Hector,Ludlow**	**1.68**	**135**	Pb		**Pb**	**04 25 27.2**	**-0.3**
	baz=316							
HEC				Sb		**Sg**	**04 25 50.1**	**-0.7**
	baz=316							
BCW	**Bitter Crk WRg**	**1.73**	**231**			**Pb**	**04 25 27.9**	**-0.6**
BFSC	**Mount Baldy Ra**	**1.79**	**177**	Sb		**Sb**	**04 25 53.0**	**+1.0**
	baz=357							
MLAC	**Mammoth, Mammo**	**1.81**	**332**	Pb		**Pb**	**04 25 30.1**	**+0.1**
	baz=152							
MLAC				Sb		**Sg**	**04 25 54.5**	**-0.7**
	baz=152							
DECC	**Green Verdugo**	**1.83**	**195**	Pg		**Pg**	**04 25 31.8**	**-0.2**
	baz=14							
DECC				Sb		**Sb**	**04 25 54.7**	**+1.6**
	baz=14							
OMMB	**Old Mammoth Mi**	**1.86**	**328**			**Pn**	**04 25 29.7**	**+0.9**
OMMB				IAML			04 25 58.7	
	comp=N,26nm,0.3s							
OMMB				IAML			04 26 02.2	
	comp=E,25nm,0.7s							
PASC	**Pasadena Art C**	**1.89**	**191**	Pn		**Pn**	**04 25 29.8**	**+1.0**
PASC				IAML			04 26 02.5	
	comp=E,24nm,0.5s							
BBRC	**Big Bear Solar**	**1.90**	**158**	Pg		**Pg**	**04 25 32.8**	**-0.4**
	baz=339							
BBRC				Sb		**Sg**	**04 25 57.6**	**-0.2**
	baz=339							
MDPB	**Devils Postpil**	**1.91**	**327**			**Pb**	**04 25 31.6**	**-0.1**
MDPB				IAML			04 25 59.8	
	comp=E,52nm,0.3s							
MDPB				IAML			04 26 03.4	
	comp=N,50nm,0.4s							
SMMC	**Simmler**	**1.95**	**249**	Pg		**Pb**	**04 25 31.6**	**-0.6**
	baz=68							
PKM	**Mcpherson Peak**	**2.02**	**236**	Sb		**Sb**	**04 25 59.9**	**+1.2**
	baz=55							
PAGB	**Antelope Grade**	**2.04**	**262**			**Pb**	**04 25 33.0**	**-0.7**
TPH	**Tonopah**	**2.09**	**12**			**Pn**	**04 25 32.1**	**+0.4**
GMRC	**Granite Mounta**	**2.12**	**125**			**Pn**	**04 25 31.5**	**-0.7**
GMRC	**Granite Mounta**	**2.12**	**125**	P		**Pn**	**04 25 31.5**	**-0.7**
	baz=307,SNR=11							
GMRC				Sb		**Sg**	**04 26 03.8**	**-1.3**
	baz=307							
SHPR	**Sheep Range**	**2.16**	**77**			**Pn**	**04 25 33.1**	**+0.4**
LHV	**Little Huntoon**	**2.29**	**345**	Pn		**Pn**	**04 25 35.4**	**+1.0**
LHV				IAML			04 26 24.2	
	comp=E,20nm,0.9s							
LHV				IAML			04 26 25.8	
	comp=N,16nm,0.7s							
ELS	**Elsinore Mount**	**2.39**	**173**	Pn		**Pn**	**04 25 36.5**	**+0.7**
ELS				IAML			04 26 18.6	
	comp=E,13nm,1.2s							
NV11	**Mina Array Sit**	**2.42**	**353**	Pn		**Pn**	**04 25 37.3**	**+1.1**
NVAR	**Mina Array Bea**	**2.43**	**350**	Pn		**Pg**	**04 25 42.0**	**-1.5**
	comp=E,2.2nm,0.3s,baz=146,slow=38,SNR=25							
NVAR				Sn		**Sg**	**04 26 14.0**	**-1.0**
	comp=E,1.6nm,0.3s,baz=189,slow=17,SNR=1.9							
	comp=E,2.0nm,0.3s							
MURC	**Murrieta**	**2.47**	**169**	Sb		**Sg**	**04 26 14.4**	**-1.8**
	baz=349							
BELC	**Belle Mtn. Jos**	**2.49**	**144**	Sb		**Sg**	**04 26 15.1**	**-1.8**
	baz=325							
PRN	**Pahroc Range**	**2.58**	**57**			**Pn**	**04 25 39.5**	**+1.1**
PRN				IAML			04 26 27.4	
	comp=E,32nm,0.8s							
PRN				IAML			04 26 34.8	
	comp=N,23nm,0.7s							
PFO	**Pinyon Flats O**	**2.64**	**156**	Pn		**Pb**	**04 25 44.9**	**+0.8**
	comp=N,1.4nm,0.3s,baz=335,slow=17,SNR=20							
PFO				Sn		**Sg**	**04 26 21.1**	**-0.6**
	comp=N,2.9nm,0.3s,baz=22,slow=5.4,SNR=8.5							
	comp=N,5.2nm,0.5s							
PFO	**Pinyon Flats O**	**2.64**	**156**	Pn		**Pn**	**04 25 39.9**	**+0.6**
PFO				IAML			04 26 25.7	
	comp=N,12nm,1.0s							
PFO	**Pinyon Flats O**	**2.64**	**156**	Pg		**Pg**	**04 25 46.1**	**-1.4**
	baz=336							
CIS	**Catalina Islan**	**2.68**	**192**	Pg		**Pg**	**04 25 47.0**	**-1.1**
	baz=11							
R11A	**Troy Canyon, C**	**2.90**	**36**	Pg		**Pg**	**04 25 51.1**	**-1.3**
	baz=218							
KVN	**Kaiserville**	**3.03**	**355**			**Pn**	**04 25 45.1**	**+0.5**
YERR	**Yerington**	**3.17**	**339**	Pn		**Pn**	**04 25 47.4**	**+0.8**
YERR				IAML			04 27 26.6	
	comp=N,7.3nm,0.9s							
YERR				IAML			04 27 27.2	
	comp=E,11nm,0.8s							
W13A	**Hualapai Mount**	**3.30**	**105**	Pn		**Pn**	**04 25 48.8**	**+0.4**
W13A				IAML			04 26 47.4	
	comp=N,5.9nm,0.5s							
LCMT	**Little Creek M**

CCUT					IAML		04 26 30.3	
	comp=N,4.5nm,3.8s							
CCUT					IAML		04 27 08.4	
	comp=E,3.7nm,3.0s							
PSUT	**Pine Spring**	**4.00**	**50**	Pn	**Pn**	**04 25 59.2**	**+1.2**	
PSUT					IAML	04 27 06.6		
	comp=E,6.3nm,0.7s							
PSUT					IAML	04 27 12.9		
	comp=N,7.7nm,1.0s							
WUAZ	**Wupatki**	**5.22**	**94**	Pn	**Pn**	**04 26 15.5**	**+0.6**	
PDAR	**Pinedale Array**	**9.25**	**41**	Pn	Pn	04 27 01.6	-8.6	
	comp=N,0.1nm,0.3s,baz=209,slow=9.2,SNR=1.3							
	comp=N,0.1nm,0.4s							
YKA	**Yellowknife Ar**	**26.56**	**3**	P	**P**	**04 30 35.9**	**+1.7**	
	comp=N,1.1nm,0.7s,baz=197,slow=8.3,SNR=2.7							
	comp=N,1.1nm,0.7s							

*NNC **09** 04:30:56.2±12.0, 37˚.41N×70˚.41E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=103.6km s-min=84.5km az=155.0*
*IDC **09** 04:31:01.5±6.2, 37˚.28N×71˚.98E, h75km±55km, mb3.7/4, mbtmp3.9/9, ML3.3/5, MS3.5/3, Error ellipse: s-maj=55.7km s-min=39.2km az=142.0*

ISC 09 04:30:57.0±1.7, 37˚.5N±0˚.1×71˚.5E±0˚.1, h10km, n16, σ2§12/16, mb4.0/4, MS3.4/3, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
AAK	**Ala-Archa**	**5.67**	**23**	P		**Pn**	**04 32 23.2**	**+1.8**
	0.9nm,0.3s,baz=173,slow=5.3,SNR=2.2							
AAK				S		**Sn**	**04 33 29.5**	**+2.8**
	2.6nm,0.3s,baz=162,slow=16,SNR=1.7							
	2.7nm,0.4s							
KK31	**Karatay Array**	**5.68**	**353**	Pn		**Pn**	**04 32 22.6**	**+1.1**
	2.0nm,0.3s,baz=179,slow=13,SNR=34							
KK31					⇓Sn	**Sn**	**04 33 27.8**	**+1.1**
	5.7nm,0.5s							
KK31					⇓Lg	Lg	04 33 51.2	
	8.0nm,0.7s,baz=169,slow=30,SNR=4.1							
TKM2	**Tokmak 2**	**6.30**	**29**	⇑Pn		**Pn**	**04 32 32.2**	**+2.0**
	5.5nm,0.5s							
TKM2					⇑Sn	**Sb**	**04 34 00.7**	**-1.8**
	2.1nm,0.6s							
MKAR	**Makanchi Array**	**12.30**	**37**	P		**Pn**	**04 33 52.3**	**+0.1**
	0.2nm,0.3s,baz=226,slow=15,SNR=17							
	1.9nm,0.7s							
KURBB	**Kurchatov Arra**	**14.09**	**19**	P		**Pn**	**04 34 16.1**	**-0.5**
	baz=215,slow=13,SNR=2.6							
	0.3nm,0.6s							
AB31	**Akbulak array**	**14.44**	**328**	P		**Pn**	**04 34 17.4**	**-4.0**
	0.5nm,0.4s,baz=156,slow=10,SNR=22							
AKTO	**Aktyubinsk**	**16.15**	**328**	P		**P**	**04 34 47.0**	**-0.2**
	0.5nm,0.3s,baz=130,slow=12,SNR=13							
	4.3nm,0.7s							
AKTO	**Aktyubinsk**	**16.15**	**328**	⇑P		**Pn**	**04 34 45.5**	**+1.6**
	5.9nm,0.8s							
ZALV	**Zalesovo Beam**	**18.89**	**25**	P		**P**	**04 35 15.2**	**-2.2**
	0.6nm,0.3s,baz=217,slow=9.9,SNR=6.7							
	2.2nm,0.5s							
ARU	**Arti**	**20.85**	**340**	LR		LR	04 43 25.9	
	comp=Z,76nm,18.9s,baz=261,slow=35							
KVAR	**Kislovodsk Arr**	**22.68**	**296**	P		**P**	**04 36 02.3**	**+3.7**
	1.4nm,0.3s,baz=90,slow=9.1,SNR=2.2							
	1.4nm,0.3s							
FINES	**FINESS Array B**	**36.90**	**325**	P		**P**	**04 38 05.3**	**-0.2**
	3.4nm,1.0s,baz=118,slow=12,SNR=4.1							
	3.4nm,1.0s							
HFS	**Hagfors**	**42.54**	**321**	P		**P**	**04 38 52.2**	**-0.3**
	6.8nm,1.0s,baz=86,slow=7.5,SNR=5.8							
	6.8nm,1.0s							
USRK	**Ussuriysk Ar.**	**45.38**	**62**	LR		LR	05 01 41.4	
	comp=Z,38nm,18.0s,baz=168,slow=41							
TORD	**Torodi Ar. Bea**	**66.11**	**268**	P		**P**	**04 41 44.0**	**-0.7**
	0.3nm,0.6s,baz=35,slow=5.1,SNR=2.1							
	0.3nm,0.6s							
BOSA	**Boshof**	**78.72**	**220**	LR		LR	05 20 56.0	
	comp=Z,44nm,18.9s,baz=196,slow=38							

*MDD **09** 04:37:30.4±0.4, 37˚.11N×5˚.44W, h11km, mb_Lg1.9/13, Error ellipse: s-maj=3.6km s-min=2.0km az=4.0*
*CNRM **09** 04:37:33.0, 36˚.75N×5˚.62W, h138km, ml3.1*

ISC 09 04:37:30.6±1.0, 37˚.04N±0˚.03×5˚.42W±0˚.02, h27km±11km, n22, σ1§40/40, Spain

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
ESPR	**Espera**	**0.39**	**244**	Pg		**Pb**	**04 37 38.8**	**-0.3**
ESPR				Sg		**Sb**	**04 37 43.9**	**-1.0**
ESPR				*i* Vmb_Lg			04 37 47.8	
EMIJ	**Mijas**	**0.70**	**132**	Pg		**Pb**	**04 37 44.0**	**-0.3**
EMIJ				Sg		**Sn**	**04 37 55.1**	**+0.4**
EMIJ				*i* Vmb_Lg			04 37 59.3	
ECAB	**El Cabril**	**1.03**	**0**	Pg		**Pn**	**04 37 48.2**	**-1.2**
ECAB				Sg		**Sn**	**04 38 01.7**	**-1.2**
ECAB				*i* Vmb_Lg			04 38 03.8	
EGOR	**Sierra Gorda,**	**1.05**	**86**	Pg		**Pn**	**04 37 49.6**	**0.0**
EGOR				Sg		**Sb**	**04 38 05.0**	**+1.3**
EGOR				*i* Vmb_Lg			04 38 10.2	
EMIN	**Mina Concepcio**	**1.23**	**306**	Pg		**Pn**	**04 37 51.2**	**-0.9**
EMIN				Sg		**Sb**	**04 38 08.8**	**+0.1**
EMIN				*i* Vmb_Lg			04 38 11.7	
EADA	**Adamuz**	**1.31**	**30**	Pg		**Pn**	**04 37 53.4**	**+0.2**
EADA				Sg		**Sn**	**04 38 09.4**	**-0.4**
EADA				*i* Vmb_Lg			04 38 11.5	
ELGU	**Los Guajares,**	**1.45**	**96**	Pn		**Pn**	**04 37 54.7**	**-0.4**
ELGU				Sn		**Sn**	**04 38 13.5**	**+0.3**
ELGU				*i* Vmb_Lg			04 38 19.1	
PBAR	**Barrancos**	**1.71**	**312**	*e*Pn		**Pn**	**04 37 59.1**	**+0.5**
EGRO	**El Granado**	**1.72**	**287**	Pn		**Pn**	**04 37 56.7**	**-2.0**
EGRO				Sn		**Sn**	**04 38 16.8**	**-2.9**
EGRO				Sg		**Sb**	**04 38 22.2**	**-0.4**
EGRO				*i* Vmb_Lg			04 38 30.5	
PVAQ	**Vaqueiros**	**1.87**	**282**	P		**Pb**	**04 38 04.7**	**+0.6**
PVAQ				S		**Sb**	**04 38 29.8**	**+2.8**
PVAQ	**Vaqueiros**	**1.87**	**282**	*e*Pn		**Pn**	**04 38 01.6**	**+0.8**
EQES	**Quesada**	**2.02**	**67**	Pn		**Pn**	**04 38 03.0**	**+0.1**
EQES				Sn		**Sn**	**04 38 27.7**	**+0.3**
EQES				Sg		**Sb**	**04 38 32.4**	**+1.0**
EQES				*i* Vmb_Lg			04 38 36.7	
EBAD	**Badajoz**	**2.13**	**324**	Pn		**Pn**	**04 38 03.3**	**-1.0**
EBAD				Sn		**Sn**	**04 38 28.8**	**-1.1**
EBAD				*i* Vmb_Lg			04 38 31.6	
PESTR	**Estremoz**	**2.50**	**317**	P		**Pb**	**04 38 14.5**	**-0.4**
PESTR				S		**Sb**	**04 38 49.3**	**+4.0**
PAB	**San Pablo**	**2.64**	**18**	Sn		**Sn**	**04 38 41.0**	**-1.7**
PAB				Sg		**Sb**	**04 38 49.0**	**-0.3**
PAB				*i* Vmb_Lg			04 38 50.6	
PTEO	**Sao Teotonio**	**2.68**	**282**	*e*Sn		**Sn**	**04 38 45.3**	**+1.8**
PNCL	**Nicolau / Gran**	**2.69**	**294**	*e*Pn		**Pn**	**04 38 12.3**	**+0.2**
PFVI	**Vila Bisbo**	**2.73**	**273**	*e*Sn		**Sn**	**04 38 45.4**	**+0.8**
PMRV	**Marv??o**	**2.85**	**328**	*e*Pn		**Pn**	**04 38 14.5**	**+0.3**
ZHG	**ZHG**	**3.72**	**196**	P		**Pn**	**04 38 26.8**	**+0.5**
ZHG				S		**Sn**	**04 39 09.9**	**+0.6**
MD31	**MD31**	**4.20**	**172**	P		**Pn**	**04 38 34.0**	**+1.1**
MD31				S		**Sn**	**04 39 18.9**	**-2.2**
MDT	**Midelt**	**4.27**	**171**	P		**Pn**	**04 38 32.7**	**-1.1**
MDT				S		**Sn**	**04 39 20.1**	**-2.7**

*BUC **09** 04:56:54.8±0.4, 45˚.70N×26˚.65E, h136km±3km, ml3.5/18, Error ellipse: s-maj=2.5km s-min=2.0km az=7.0*

ISC 09 04:56:54.0±1.5, 45.71N±0˚.04×26.63E±0˚.03, h143km±8km, n50, σ0§59/85, 59C-24D, Romania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
PLOR	**Plostina**	**0.15**	**5**	⇓P		**Pn**	**04 57 13.7**	**+0.2**
PLOR				⇓S		**Sn**	**04 57 26.8**	**-1.5**
PLOR	**Plostina**	**0.15**	**5**	⇑P		**Pn**	**04 57 13.7**	**+0.2**
PLOR				⇑S		**Sn**	**04 57 26.8**	**-1.5**
VRI	**Vrincioaia**	**0.17**	**22**	⇑P		**Pn**	**04 57 13.9**	**+0.4**
VRI				⇓S		**Sn**	**04 57 28.3**	**0.0**
VRI	**Vrincioaia**	**0.17**	**22**	⇑P		**Pn**	**04 57 13.9**	**+0.4**
VRI				⇓S		**Sn**	**04 57 28.3**	**0.0**
COVR	**Voineasa-Covas**	**0.33**	**295**	⇑P		**Pn**	**04 57 13.7**	**-0.2**
COVR				⇑S		**Sn**	**04 57 28.7**	**-0.4**
COVR	**Voineasa-Covas**	**0.33**	**295**	⇑P		**Pn**	**04 57 13.7**	**-0.2**
COVR				⇑S		**Sn**	**04 57 28.7**	**-0.4**
NEHR	**Nehoiu**	**0.36**	**221**	⇑P		**Pn**	**04 57 14.4**	**+0.3**
NEHR				⇑S		**Sn**	**04 57 29.4**	**+0.2**
NEHR	**Nehoiu**	**0.36**	**221**	⇑P		**Pn**	**04 57 14.4**	**+0.3**
NEHR				⇑S		**Sn**	**04 57 29.4**	**+0.2**
MLR	**Muntele Rosu**	**0.53**	**246**	⇓P		**Pn**	**04 57 15.0**	**+0.1**
MLR				⇓S		**Sn**	**04 57 30.9**	**+0.1**
MLR	**Muntele Rosu**	**0.53**	**246**	⇓P		**Pn**	**04 57 15.0**	**+0.1**
MLR				⇓S		**Sn**	**04 57 30.9**	**+0.1**
ISR	**Istrita**	**0.59**	**186**	⇑P		**Pn**	**04 57 15.8**	**+0.6**
ISR				⇑S		**Sn**	**04 57 30.2**	**-1.0**
ISR	**Istrita**	**0.59**	**186**	⇑P		**Pn**	**04 57 15.8**	**+0.6**
ISR				⇑S		**Sn**	**04 57 30.2**	**-1.0**
SECR		**0.78**	**211**	⇑P		**Pn**	**04 57 17.1**	**+0.7**
SECR		**0.78**	**211**	⇑P		**Pn**	**04 57 17.1**	**+0.7**
IZVR	**Izvoarele**	**0.81**	**101**	⇓S		**Sn**	**04 57 33.7**	**0.0**
IZVR	**Izvoarele**	**0.81**	**101**	⇓S		**Sn**	**04 57 33.7**	**0.0**
PLAR	**PLOIESTI**	**0.90**	**209**	⇓S		**Sn**	**04 57 35.3**	**+0.4**
PLAR	**PLOIESTI**	**0.90**	**209**	⇓S		**Sn**	**04 57 35.3**	**+0.4**
DOPR	**Dopca**	**0.91**	**287**	⇑P		**Pn**	**04 57 17.3**	**-0.1**
DOPR				⇓S		**Sn**	**04 57 35.0**	**-0.2**
DOPR	**Dopca**	**0.91**	**287**	⇓P		**Pn**	**04 57 17.3**	**-0.1**
DOPR				⇓S		**Sn**	**04 57 35.0**	**-0.2**
VLDR	**Vladesti**	**1.02**	**82**	⇑P		**Pn**	**04 57 19.2**	**+0.9**
VLDR				⇑S		**Sn**	**04 57 37.2**	**+0.4**
VLDR	**Vladesti**	**1.02**	**82**	⇑P		**Pn**	**04 57 19.2**	**+0.9**
VLDR				⇑S		**Sn**	**04 57 37.2**	**+0.4**
SULR		**1.06**	**195**	⇑P		**Pn**	**04 57 19.2**	**+0.5**
SULR				⇓S		**Sn**	**04 57 37.7**	**+0.3**
SULR		**1.06**	**195**	⇑P		**Pn**	**04 57 19.2**	**+0.5**
SULR				⇓S		**Sn**	**04 57 37.7**	**+0.3**
VOIR		**1.14**	**257**	⇑P		**Pn**	**04 57 19.0**	**-0.5**
VOIR				⇑S		**Sn**	**04 57 38.6**	**-0.4**
VOIR		**1.14**	**257**	⇑P		**Pn**	**04 57 19.0**	**-0.5**
VOIR				⇑S		**Sn**	**04 57 38.6**	**-0.4**
CFR	**Carcaliu**	**1.18**	**116**	⇓P		**Pn**	**04 57 20.3**	**+0.5**
CFR				⇓S		**Sn**	**04 57 39.0**	**-0.5**
CFR	**Carcaliu**	**1.18**	**116**	⇓P		**Pn**	**04 57 20.3**	**+0.5**
CFR				⇓S		**Sn**	**04 57 39.0**	**-0.5**
VASR	**Vaslui**	**1.23**	**40**	⇑S		**Sn**	**04 57 40.1**	**-0.3**
BIZ	**Bicaz**	**1.29**	**344**	⇑P		**Pn**	**04 57 21.8**	**+0.9**
BIZ				⇑S		**Sn**	**04 57 41.5**	**+0.1**
BIZ	**Bicaz**	**1.29**	**344**	⇑P		**Pn**	**04 57 21.8**	**+0.9**
BIZ				⇑S		**Sn**	**04 57 41.5**	**+0.1**
HARR	**Harsova**	**1.37**	**137**	⇑P		**Pn**	**04 57 22.1**	**+0.4**
HARR	**Harsova**	**1.37**	**137**	⇑P		**Pn**	**04 57 22.1**	**+0.4**
TPGR	**Topolog**	**1.52**	**123**	⇓P		**Pn**	**04 57 23.4**	**+0.1**
TPGR				⇓S		**Sn**	**04 57 45.0**	**-0.7**
TPGR	**Topolog**	**1.52**	**123**	⇓P		**Pn**	**04 57 23.4**	**+0.1**
TPGR				⇓S		**Sn**	**04 57 45.0**	**-0.7**
TLBR	**Topalu**	**1.53**	**139**	⇓S		**Sn**	**04 57 45.3**	**-0.5**
TLBR	**Topalu**	**1.53**	**139**	⇓S		**Sn**	**04 57 45.3**	**-0.5**
TLCR		**1.62**	**108**	⇑S		**Sn**	**04 57 47.4**	**-0.1**
TLCR		**1.62**	**108**	⇑S		**Sn**	**04 57 47.4**	**-0.1**
HUMR	**Humele**	**1.66**	**225**	⇑S		**Sn**	**04 57 47.5**	**-0.9**
HUMR	**Humele**	**1.66**	**225**	⇑S		**Sn**	**04 57 47.5**	**-0.9**
TIRR	**Tirgusor**	**1.77**	**134**	⇑P		**Pn**	**04 57 26.5**	**+0.4**
TIRR				⇑S		**Sn**	**04 57 49.4**	**-1.2**
TIRR	**Tirgusor**	**1.77**	**134**	⇑P		**Pn**	**04 57 26.5**	**+0.4**
TIRR				⇑S		**Sn**	**04 57 49.4**	**-1.2**
ICOR	**Ion Corvin**	**1.79**	**152**	⇓P		**Pn**	**04 57 27.1**	**+0.7**
ICOR				⇓S		**Sn**	**04 57 50.7**	**-0.3**
ICOR	**Ion Corvin**	**1.79**	**152**	⇓P		**Pn**	**04 57 27.1**	**+0.7**
ICOR				⇓S		**Sn**	**04 57 50.7**	**-0.3**
MILM	**Milestii Mici**	**1.94**	**50**	*e*P		**Pn**	**04 57 28.0**	**0.0**
MILM				*i* S		**Sn**	**04 57 53.0**	**-1.0**
	50nm,0.3s							
MILM	**Milestii Mici**	**1.94**	**50**	⇑P		**Pn**	**04 57 28.3**	**+0.3**
MILM				⇑S		**Sn**	**04 57 53.0**	**-1.0**
MILM	**Milestii Mici**	**1.94**	**50**	⇑P		**Pn**	**04 57 28.3**	**+0.3**
MILM				⇑S		**Sn**	**04 57 53.0**	**-1.0**
GZR	**Gura Zlata**	**2.73**	**265**	⇓P		**Pn**	**04 57 37.6**	**-0.1**
GZR				⇓S		**Sn**	**04 58 11.9**	**+0.5**
GZR	**Gura Zlata**	**2.73**	**265**	⇓P		**Pn**	**04 57 37.6**	**-0.1**
GZR				⇓S		**Sn**	**04 58 11.9**	**+0.5**

*INET **09** 05:10:35.2±0.5, 12˚.27N×87˚.63W, h27km±10km, MW3.3*
*SNET **09** 05:10:35.7±0.5, 12˚.33N×87˚.88W, h18km±5km, ML2.0*

ISC 09 05:10:33.9±2.2, 12˚.2N±0˚.1×87˚.70W±0˚.07, h35km, n13, σ0§49/18, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
CSGN	**Cosiguina Volc**	**0.79**	**10**	*e*P		**Pn**	**05 10 48.5**	**-0.1**
CRIN	**San Cristobal**	**0.81**	**52**	*e*P		**Pn**	**05 10 49.2**	**+0.3**
CRIN				*e*S		**Sn**	**05 11 00.9**	**+1.1**
TEL3	**Telica 3**	**0.92**	**66**	*e*P		**Pn**	**05 10 50.1**	**-0.3**
TELN	**Telica**	**0.94**	**64**	*e*P		**Pn**	**05 10 50.6**	**-0.2**
CNCH	**Conchagua**	**1.08**	**353**	*e*P		**Pn**	**05 10 52.9**	**+0.2**
CNCH				*e*S		**Sn**	**05 11 06.6**	**-0.1**
COPN	**Copaltepe**	**1.08**	**91**	*e*P		**Pn**	**05 10 52.8**	**+0.1**
LCND	**La Caada**	**1.12**	**351**	*e*S		**Sn**	**05 11 07.0**	**-0.5**
LCND				*e*S		**Sn**	**05 11 07.1**	**-0.4**
LCND				*e*S		**Sn**	**05 11 07.1**	**-0.4**
MOMN	**Momotombo**	**1.16**	**79**	*e*P		**Pn**	**05 10 53.5**	**-0.2**
PACA	**Pacayal**	**1.41**	**335**	*e*P		**Pn**	**05 10 57.4**	**+0.2**
PACA				*e*S		**Sn**	**05 11 14.5**	**-0.1**
COEB	**Comit de Eme**	**1.53**	**328**	*e*P		**Pn**	**05 10 59.7**	**+0.8**
COEB				IAML			05 11 23.4	
	comp=Z,420nm,0.2s							
PQSS	**Presa 15 de Se**	**1.65**	**330**	*e*P		**Pn**	**05 11 00.9**	**+0.5**
PQSS				IAML			05 11 22.7	
	comp=Z,15nm,0.1s							
RCON	**San Juan de Ri**	**1.98**	**49**	*e*P		**Pn**	**05 11 05.0**	**-0.2**
JAYA	**Jayaque - finc**	**2.24**	**311**	*e*S		**Sn**	**05 11 34.3**	**-0.9**

*NEIC **09** 05:12:09.1±0.8, 53˚.86N±0˚.05×163˚.94W±0˚.08, h26km±4km, Error ellipse: s-maj=8.5km s-min=4.7km az=134.0*

AEIC 09 05:12:09.4±1.3, 53˚.89N±0˚.06×163˚.91W±0˚.08, h26km±5km, ML2.8/36, MLB3.0/8(NEIC), Error ellipse: s-maj=10.4km s-min=5.2km az=151.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
WESE	**West Dahl East**	**0.71**	**326**			Pb	05 12 23.5	+0.2
BRPK	**Brown Peak**	**0.77**	**7**			Pb	05 12 23.8	-0.4
WESP	**Westdahl Peak**	**0.78**	**322**			Pb	05 12 24.3	0.0
WESP						Sn	05 12 35.3	-0.2
WESN	**West Dahl Nort**	**0.79**	**330**			Pn	05 12 24.8	-0.2
WECS	**Westdahl Cape**	**0.82**	**322**			Pb	05 12 25.1	-0.1
WECS						Sn	05 12 36.8	0.0
SSLS	**Shishaldin Sou**	**0.83**	**356**			Pb	05 12 25.0	-0.3
SSLS						Sn	05 12 37.3	+0.3
ISLZ	**Isanotski Laza**	**0.85**	**8**			Pb	05 12 24.9	-0.7
ISLZ						Sb	05 12 37.0	+0.3
SSLA	**Shishaldin**	**0.90**	**352**			Pb	05 12 25.8	-0.6
SSLN	**Shishaldin Nor**	**0.93**	**357**			Pb	05 12 27.0	+0.1
ISNN	**Isanotski Nort**	**0.95**	**4**			Pb	05 12 27.4	+0.1
ISNN						Sn	05 12 40.0	+0.1
AKSA	**Akutan Strait**	**1.09**	**284**			Pn	05 12 28.6	-0.3
AKSA	**Akutan Strait**	**1.09**	**284**			Pn	05 12 28.4	-0.5
AKSA						Sn	05 12 43.1	0.0
AKUT	**Akutan**	**1.13**	**284**			Pn	05 12 29.3	-0.2
AKUT						Sb	05 12 44.5	0.0
AKUT	**Akutan**	**1.13**	**284**	IAML			05 12 50.3	
	comp=E,188nm,0.6s							
AKUT				IAML			05 12 50.6	
	comp=N,293nm,0.4s							
AKBBA	**Akutan Broad B**	**1.22**	**281**			Pn	05 12 30.3	-0.4
AKLV	**Akutan Long Va**	**1.24**	**284**			Pn	05 12 30.9	-0.2
AKMO	**Akutan Morgan**	**1.26**	**280**			Pn	05 12 31.1	-0.2
AKGG	**Akutan Green G**	**1.27**	**285**			Pn	05 12 30.7	-0.7
UNV	**Unalaska Valle**	**1.54**	**270**			Pn	05 12 34.4	-0.7
DT1	**Dutton Round H**	**1.55**	**37**			Pn	05 12 34.9	-0.4
MTBL	**Makushin Table**	**1.64**	**274**			Pn	05 12 36.6	-0.1
MNAT	**Makushin Natee**	**1.64**	**271**			Pn	05 12 36.1	-0.5
MSW	**Makushin Switc**	**1.70**	**272**			Pn	05 12 37.1	-0.3
MGOD	**Makushin Gods**	**1.76**	**268**			Pn	05 12 37.6	-0.7
MCIR	**Makushin Cirqu**	**1.77**	**273**			Pn	05 12 38.5	+0.2
MAPS	**Pakushin South**	**1.80**	**269**			Pn	05 12 38.6	-0.1
S12K	**Black Hills**	**2.11**	**30**			Pn	05 12 43.7	+0.6
SDPT	**Sand Point**	**2.48**	**52**			Pn	05 12 48.5	+0.5
SDPT	**Sand Point**	**2.48**	**52**	IAML			05 13 25.8	
	comp=N,91nm,0.7s							
CNBA	**Chernabura Isl**	**2.69**	**68**	Pn		Pn	05 12 51.3	+0.3
NIKH	**Nikolski High**	**3.10**	**255**	Pn		Pn	05 12 55.8	-0.8
CHGN	**Chignik**	**3.98**	**50**	Pn		Pn	05 13 09.7	+1.1
CHGN				IAML			05 14 07.4	
	comp=N,24nm,0.3s							
OHAK	**Old Harbor**	**6.89**	**57**	Pn		Pn	05 13 48.0	-0.6
KDAK	**Kodiak Island**	**7.47**	**54**	Pn		Pn	05 13 56.5	-0.1
O18K	**Koktuh Hills**	**7.64**	**35**	Pn		Pn	05 13 57.0	-2.0

*IDC **09** 05:19:38.9±8.2, 44˚.19N×146˚.70E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=316.0km s-min=30.5km az=5.0*
*MOS **09** 05:19:49.0±1.1, 43˚.95N×146˚.71E, h76km, mb4.3/1, Error ellipse: s-maj=28.1km s-min=26.0km az=43.5*
*SKHL **09** 05:19:50.5±0.7, 43˚.90N×146˚.80E, h96km±4km, mb4.8/2, msha5.6/2*
*JMA **09** 05:19:50.8±0.3, 44˚.N±1˚×14˚.7E±˚, h90km±4km, MV3.6/32, NEAR KUNASHIRI ISLAND*

ISC 09 05:19:49.9±0.9, 43˚.91N±0˚.06×146˚.85E±0˚.05, h94km±6km, n37, σ0§97/51, mb3.4/5, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
SHO	**Shikotan**	**0.04**	**196**	*d* iPN		**Pn**	**05 20 03.6**	**+0.5**
SHO				*i* S		**Sn**	**05 20 13.0**	**+0.1**
SHO				pmax	pmax			
	comp=N,118nm,0.1s							
SHO				pmax	pmax			
	comp=E,119nm,0.1s							
SHO				pmax	pmax			
	comp=Z,758nm,0.1s							
SHO				smax	smax			
	comp=N,4µm,0.2s							
SHO				smax	smax			
	comp=E,8µm,0.2s							
SHO	**Shikotan**	**0.04**	**196**	*i* P		**Pn**	**05 20 03.7**	**+0.6**
SHO				AMB	AMB		05 20 03.9	
	comp=E,460nm,0.3s							
SHO				*e*S		**Sn**	**05 20 13.0**	**+0.1**
SHO				A	A		05 20 13.4	
	comp=E,3µm,0.3s							
SHO				A	A		05 20 13.4	
	comp=E,8µm,0.3s							
YUK	**Yuzh-Kuril'sk**	**0.72**	**280**	*c* iPN		**Pn**	**05 20 07.1**	**+0.1**
YUK				*i* S		**Sn**	**05 20 19.3**	**-0.5**
YUK				pmax	pmax			
	comp=N,298nm,0.2s							
YUK				pmax	pmax			
	comp=Z,2µm,0.2s							
YUK				smax	smax			
	comp=N,1µm,0.1s							
YUK				smax	smax			
	comp=E,2µm,0.2s							
YUK	**Yuzh-Kuril'sk**	**0.72**	**280**	*i* P		**Pn**	**05 20 07.1**	**+0.1**
YUK				AMB	AMB		05 20 07.7	
	comp=E,2µm,0.3s							
YUK				*i* S		**Sn**	**05 20 19.6**	**-0.2**
YUK				A	A		05 20 20.1	
	comp=E,1µm,0.3s							
YUK				A	A		05 20 20.1	
	comp=E,1µm,0.3s							
NEM2	**Nemuro 2**	**0.97**	**236**	*e*P		**Pn**	**05 20 10.0**	**+0.4**
NEM2				*e*S		**Sn**	**05 20 24.0**	**-0.3**
NMR	**Nemuro--Hokkai**	**0.98**	**237**	⇑*i*PN		**Pn**	**05 20 10.0**	**+0.4**
NMR				*i* S		**Sn**	**05 20 24.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.98**	**237**	*i* P		**Pn**	**05 20 10.0**	**+0.4**
NMR				*i* S		**Sn**	**05 20 24.0**	**-0.4**
RUSJ	**Misakicho**	**1.17**	**280**	⇑*i*PN		**Pn**	**05 20 12.3**	**+0.5**
RUSJ				*i* S		**Sn**	**05 20 31.1**	**+2.7**
JRA	**Rausu**	**1.25**	**272**	*e*P		**Pn**	**05 20 13.3**	**+0.6**
JRA				*e*S		**Sn**	**05 20 30.2**	**+0.2**
JNSB	**Nemuroshibetsu**	**1.34**	**265**	*e*P		**Pn**	**05 20 14.9**	**+1.0**
JNSB				*e*S		**Sn**	**05 20 33.4**	**+1.4**
JKHN	**Kushirohamanak**	**1.48**	**237**	*e*P		**Pn**	**05 20 16.3**	**+0.7**
JKHN				*e*S		**Sn**	**05 20 35.3**	**+0.2**
KUR	**Kuril'sk**	**1.51**	**29**	PN		**Pn**	**05 20 16.5**	**+0.5**
KUR				*i* S		**Sn**	**05 20 36.3**	**+0.6**
KUR				smax	smax			
	comp=N,811nm,0.2s							
KUR				smax	smax			
	comp=E,341nm,0.2s							
KUR	**Kuril'sk**	**1.51**	**29**	*e*P		**Pn**	**05 20 16.5**	**+0.5

1.6nm,0.7s
MKAR Makanchi Array 13.34 36 P **P** **05 30 55.4 -0.4**
0.2nm,0.3s,baz=213,slow=12,SNR=3.6
ZALV Zalesovo Beam 19.93 25 P **P** **05 32 09.7 +2.0**
0.9nm,0.5s,baz=207,slow=11,SNR=3.6
0.9nm,0.5s
WRA Warramunga Arr 82.17 122 P **P** **05 39 49.5 -0.5**
0.7nm,1.1s,baz=327,slow=5.0,SNR=5.0
0.7nm,1.1s

*HVO **09** 05:45:24.2±0.9, 19°.431N±0°.008×155°.615W±0°.008, h3km±2km, ML2.9/29, ML2.6/46(NEIC), Error ellipse: s-maj=1.2km s-min=1.1km az=166.0*
NEIC 09 05:45:24.9±0.7, 19°.414N±0°.009×155°.594W±0°.003, h2km±5km, Error ellipse: s-maj=1.3km s-min=0.3km az=186.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWH	**Moku'aweowe**	**0.07**	**358**		Sg	05 45 27.8	+0.1
MWH	**Moku'aweowe**	**0.07**	**358**	Pg	Pg	05 45 26.2	-0.3
MWH	comp=N,472nm,0.2s			IAML		05 45 26.7	
MWH	comp=E,443nm,0.1s			IAML		05 45 26.9	
MLOA	**Mauna Loa Obse**	**0.12**	**8**		Pg	05 45 27.3	-0.1
MLOA					Sg	05 45 29.2	0.0
MLOA	**Mauna Loa Obse**	**0.12**	**8**	IAML		05 45 29.9	
MLOA	comp=E,4µm,0.8s			IAML		05 45 30.0	
AIN	**Ainahou**	**0.14**	**108**		Pg	05 45 28.2	+0.7
AIN					Sg	05 45 31.1	+1.7
AIN	**Ainahou**	**0.14**	**108**	IAML		05 45 31.6	
AIN	comp=E,4µm,0.3s comp=N,5µm,0.4s			IAML		05 45 32.7	
ALEP	**Alea Permanent**	**0.14**	**340**		Pg	05 45 27.4	-0.2
ALEP					Sg	05 45 29.9	+0.4
KHU	**Kahuku**	**0.17**	**187**		Pg	05 45 28.3	+0.1
KHU					Sg	05 45 31.3	+0.8
KHU	**Kahuku**	**0.17**	**187**	IAML		05 45 32.1	
KHU	comp=E,907nm,0.2s comp=N,1µm,0.5s			IAML		05 45 34.3	
MLH	**Mauna Loa**	**0.21**	**68**		Pg	05 45 29.4	+0.3
MLH	**Mauna Loa**	**0.21**	**68**	IAML		05 45 33.7	
MLH	comp=N,2µm,0.4s comp=E,2µm,0.5s			IAML		05 45 33.8	
HMH	**Humu'ula Sheep**	**0.21**	**29**		Pg	05 45 29.1	-0.1
HMH					Sg	05 45 32.6	+0.6
HMH	**Humu'ula Sheep**	**0.21**	**29**	IAML		05 45 33.5	
HMH	comp=E,510nm,0.6s comp=N,373nm,0.6s			IAML		05 45 34.9	
HTC	**Hot Caves**	**0.26**	**133**		Pg	05 45 30.0	+0.2
WRMHI	**West Rim**	**0.28**	**91**		Pg	05 45 30.4	+0.2
WRMHI					Sg	05 45 34.7	+0.9
WRMHI	**West Rim**	**0.28**	**91**	IAML		05 45 36.0	
WRMHI	comp=N,2µm,0.4s comp=E,5µm,0.4s			IAML		05 45 39.7	
SDHHI	**Sand Hill**	**0.28**	**95**		Pg	05 45 30.5	+0.2
SDHHI					Sg	05 45 34.4	+0.3
SDHHI	**Sand Hill**	**0.28**	**95**	IAML		05 45 37.5	
SDHHI	comp=E,1µm,0.6s comp=N,2µm,0.3s			IAML		05 45 39.5	
UWE	**Uwekahuna**	**0.28**	**88**		Pg	05 45 30.6	+0.2
UWE					Sg	05 45 34.1	0.0
OBL	**Observatory Le**	**0.29**	**89**		Pg	05 45 30.6	+0.1
OBL	**Observatory Le**	**0.29**	**89**	IAML		05 45 38.7	
OBL	comp=E,2µm,0.6s comp=N,3µm,0.5s			IAML		05 45 39.2	
HLP	**Hilina Pali**	**0.29**	**113**		Pg	05 45 30.8	+0.3
HLP	**Hilina Pali**	**0.29**	**113**	IAML		05 45 38.1	
HLP	comp=N,1µm,0.5s comp=E,2µm,0.8s			IAML		05 45 41.6	
NPH	**North Pit**	**0.29**	**90**	Pg	Pg	05 45 30.4	-0.2
UWB	**Uwekahuna B**	**0.30**	**88**		Pg	05 45 30.7	0.0
UWB	**Uwekahuna B**	**0.30**	**88**	IAML		05 45 38.7	
UWB	comp=N,517nm,0.7s comp=E,514nm,0.8s			IAML		05 45 41.2	
RIM	**Rim**	**0.30**	**93**		Pg	05 45 30.8	+0.1
RIM					Sg	05 45 35.4	+0.7
RIM	**Rim**	**0.30**	**93**	IAML		05 45 40.3	
RIM	comp=E,769nm,0.4s comp=N,918nm,0.6s			IAML		05 45 40.9	
RSD	**Rainshed**	**0.30**	**81**		Pg	05 45 30.9	+0.2
RSD					Sg	05 45 35.5	+0.8
SBLHI	**Steaming Bluff**	**0.31**	**87**		Pg	05 45 30.8	0.0
SBLHI	**Steaming Bluff**	**0.31**	**87**	IAML		05 45 39.7	
SBLHI	comp=N,897nm,0.3s comp=E,1µm,0.8s			IAML		05 45 42.2	
KKO	**Keanakako`i**	**0.31**	**93**		Pg	05 45 30.9	+0.1
KKO	**Keanakako`i**	**0.31**	**93**	IAML		05 45 36.7	
KKO	comp=N,978nm,0.8s comp=E,858nm,0.5s			IAML		05 45 39.9	
HATHI	**Halema'uma'u T**	**0.31**	**88**		Pg	05 45 30.9	0.0
HATHI					Sg	05 45 35.6	+0.6
HATHI	**Halema'uma'u T**	**0.31**	**88**	IAML		05 45 42.2	
BYL	**Byron's Ledge**	**0.32**	**90**		Pg	05 45 31.1	+0.1
BYL					Sg	05 45 35.3	+0.2
BYL	**Byron's Ledge**	**0.32**	**90**	IAML		05 45 39.2	
BYL	comp=E,604nm,0.4s comp=N,918nm,0.5s			IAML		05 45 42.2	
CPH	**Captain Cook**	**0.32**	**284**		Pg	05 45 30.9	-0.1
KHLU	**Kahalu`u**	**0.33**	**302**		Pg	05 45 31.3	0.0
KHLU					Sg	05 45 37.2	+1.5
KHLU	**Kahalu`u**	**0.33**	**302**	IAML		05 45 37.5	
KHLU	comp=N,895nm,0.5s comp=E,1µm,0.5s			IAML		05 45 37.5	
POHA	**Pohakuloa**	**0.35**	**10**		Sg	05 45 31.4	-4.8
POHA	**Pohakuloa**	**0.35**	**10**	Pg	Pg	05 45 31.2	-0.4
POHA	comp=E,754nm,0.3s			IAML		05 45 40.6	
POHA	comp=E,702nm,0.5s			IAML		05 45 41.1	
HUH	**Hualalai**	**0.35**	**320**		Pg	05 45 32.2	+0.5
HUH	**Hualalai**	**0.35**	**320**	IAML		05 45 38.5	
HUH	comp=E,591nm,0.6s comp=N,773nm,0.5s			IAML		05 45 39.4	
PUH	**Pauahi**	**0.36**	**96**		Pg	05 45 31.6	-0.2
PUH					Sg	05 45 36.8	+0.3
PUH	**Pauahi**	**0.36**	**96**	IAML		05 45 41.8	
PUH	comp=E,438nm,0.6s comp=N,516nm,0.4s			IAML		05 45 43.2	
KNHH	**Kane Nui o Ham**	**0.40**	**95**		Pg	05 45 32.3	-0.3
STCH	**Steam Cracks**	**0.44**	**94**		Pg	05 45 33.5	+0.1
STCH	**Steam Cracks**	**0.44**	**94**	IAML		05 45 41.3	
STCH	comp=N,5.3nm,0.2s comp=E,3.5nm,0.3s			IAML		05 45 49.0	

*IDC **09** 05:52:30.5±2.9, 22°.52S×173°.82W, h57km±29km, mb3.2/4, mbtmp3.8/6, ML5.3/2, MS3.4/2, Error ellipse: s-maj=43.3km s-min=22.3km az=164.0*
ISC 09 05:52:29.1±0.9, 22°.5S±0°.2×173°.7W±0°.1, h35km, n8, σ1§66/7, mb3.5/4, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.71**	**208**	P	**Pn**	**05 54 19.7**	**+0.9**
MSVF	**Nonsavu**	**9.05**	**300**	P	**Pn**	**05 54 38.9**	**+1.6**
	53nm,0.3s,baz=302,slow=23,SNR=2.0 1.0nm,0.3s,baz=164,slow=15,SNR=4.4 14nm,0.7s						
RAR	**Rarotonga**	**13.03**	**87**	P	**Pn**	**05 55 32.4**	**+0.6**
	6.9nm,0.5s,baz=276,slow=14,SNR=7.3						
DZM	**Mont Dzumac**	**18.34**	**268**	LR	LR	06 02 47.2	
	comp=Z,88nm,18.3s,baz=29,slow=34						
ASAR	**Alice Springs**	**47.95**	**258**	P	**P**	**06 01 03.1**	**-1.5**
	0.7nm,0.6s,baz=97,slow=8.6,SNR=5.4 0.7nm,0.6s						
WRA	**Warramunga Arr**	**48.27**	**263**	P	**P**	**06 01 04.9**	**-2.2**
	0.2nm,0.4s,baz=98,slow=8.1,SNR=9.0						
WRA	comp=Z,43nm,18.5s,baz=226,slow=35 0.2nm,0.4s			LR	LR	06 20 44.9	
NVAR	**Mina Array Bea**	**79.83**	**41**	P	**P**	**06 04 33.5**	**-0.7**
	0.1nm,0.3s,baz=223,slow=9.2,SNR=1.6 0.1nm,0.3s						
TXAR	**Lajitas Array**	**84.85**	**56**	P	**P**	**06 05 00.6**	**+0.1**
	0.2nm,0.7s,baz=213,slow=6.0,SNR=2.4 0.2nm,0.7s						

*SOME **09** 05:57:45.0, 38°.27N×75°.73E, h10km*
*NNC **09** 05:57:50.5±2.1, 38°.62N×76°.20E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=14.8km s-min=10.6km az=154.0*
ISC 09 05:57:53.6±3.2, 38°.7N±0°.1×76°.02E±0°.07, h10km, n24, σ2§10/37, 1C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	**Kastek**	**4.32**	**359**	*eP*	**Pb**	**05 59 09.4**	**-0.2**
KST	8.2nm,0.4s 26nm,0.6s			*eS*	**Sg**	**06 00 09.7**	**-2.5**
KST	**Kastek**	**4.32**	**359**	Pg	**Pb**	**05 59 09.4**	**-0.2**
KST	8.2nm,0.4s 26nm,0.6s			Lg	Lg	06 00 09.7	
MTBS	**Maitube**	**4.42**	**4**	*eP*	**Pb**	**05 59 11.2**	**-0.1**
MTBS	5.0nm,0.4s 5.0nm,0.1s			*eS*	**Sg**	**06 00 12.7**	**-2.7**
MTBS	**Maitube**	**4.42**	**4**	Pg	**Pb**	**05 59 11.2**	**-0.1**
MTBS	5.0nm,0.4s 5.0nm,0.1s			Lg	Lg	06 00 12.7	
MDOK	**Medeo**	**4.51**	**10**	*eP*	**Pb**	**05 59 14.2**	**+1.3**
MDOK	8.9nm,0.4s 9.2nm,0.6s			*eS*	**Sg**	**06 00 17.8**	**-0.5**
MDOK	**Medeo**	**4.51**	**10**	Pg	**Pb**	**05 59 14.2**	**+1.3**
MDOK	8.9nm,0.4s 6.5nm,0.5s			⇑Pg	**Pb**	**05 59 14.6**	**+1.8**
MDOK	23nm,1.1s			Lg	Lg	06 00 15.7	
MDOK	9.2nm,0.6s			Lg	Lg	06 00 17.8	
MRKS	**Merke**	**4.55**	**333**	*eP*	**Pb**	**05 59 10.5**	**-3.0**
MRKS	1.2nm,0.2s 4.3nm,0.5s			*eS*	**Sb**	**06 00 11.6**	**+3.3**
SATY	**Saty**	**4.70**	**22**	*eP*	**Pb**	**05 59 17.0**	**+0.9**
SATY	9.5nm,0.5s 9.0nm,0.5s			*eS*	**Sg**	**06 00 22.6**	**-1.7**
SATY	**Saty**	**4.70**	**22**	Pg	**Pb**	**05 59 17.0**	**+0.9**
SATY	9.5nm,0.5s 9.0nm,0.5s			Lg	Lg	06 00 22.6	
UZB	**Uzunbulak**	**4.97**	**26**	*eP*	**Pb**	**05 59 21.8**	**+1.0**
UZB	2.7nm,0.4s 6.1nm,0.9s			*eS*	**Sg**	**06 00 31.1**	**-2.2**
UZB	**Uzunbulak**	**4.97**	**26**	Pg	**Pb**	**05 59 21.8**	**+1.0**
UZB	2.7nm,0.4s 6.1nm,0.9s			Lg	Lg	06 00 31.4	
KRBS	**Karabastau**	**4.98**	**357**	*eP*	**Pb**	**05 59 23.4**	**+2.5**
KRBS	6.6nm,0.4s 3.9nm,0.4s			*eS*	**Sg**	**06 00 33.6**	**+0.2**
KRBS	**Karabastau**	**4.98**	**357**	Pg	**Pb**	**05 59 23.4**	**+2.5**
KRBS	6.6nm,0.4s 3.9nm,0.4s			Lg	Lg	06 00 33.6	
KTBS	**Karatobe**	**5.01**	**6**	*eP*	**Pb**	**05 59 23.6**	**+2.2**
KTBS	4.5nm,0.5s 14nm,0.5s			*eS*	**Sg**	**06 00 34.0**	**-0.5**
KTBS	**Karatobe**	**5.01**	**6**	Pg	**Pb**	**05 59 23.6**	**+2.2**
KTBS	4.5nm,0.5s 14nm,0.5s			Lg	Lg	06 00 34.0	
KURS	**Kuram**	**5.03**	**18**	*eP*	**Pb**	**05 59 23.6**	**+1.8**
KURS	6.0nm,0.6s 10nm,0.8s			*eS*	**Sg**	**06 00 34.0**	**-1.1**
KURS	**Kuram**	**5.03**	**18**	Pg	**Pb**	**05 59 23.6**	**+1.8**
KURS	6.0nm,0.6s 10nm,0.8s			Lg	Lg	06 00 34.0	
SHLS	**Shalkode**	**5.14**	**29**	*eP*	**Pg**	**05 59 28.3**	**-3.7**
SHLS	8.4nm,0.4s 20nm,0.7s			*eS*	**Sg**	**06 00 42.1**	**+3.4**
KUU	**Kurty**	**5.17**	**3**	*eP*	**Pb**	**05 59 25.3**	**+1.2**
KUU	4.1nm,0.4s 9.3nm,0.7s			*eS*	**Sg**	**06 00 37.0**	**-2.7**
KUU	**Kurty**	**5.17**	**3**	Pg	**Pb**	**05 59 25.3**	**+1.2**
KUU	4.1nm,0.4s 9.3nm,0.7s			Lg	Lg	06 00 37.0	
PDGK	**Podgornoye**	**5.30**	**29**	Pg	**Pb**	**05 59 27.1**	**+0.7**
PDGK	3.0nm,0.4s 4.2nm,0.5s			Lg	Lg	06 00 39.9	
ARXS	**Arharly**	**5.65**	**13**	*eP*	**Pb**	**05 59 34.8**	**+2.5**
ARXS	4.3nm,0.4s 10nm,0.6s			*eS*	**Sg**	**06 00 53.3**	**-1.7**
ARXS	**Arharly**	**5.65**	**13**	Pg	**Pb**	**05 59 34.8**	**+2.5**
ARXS	4.3nm,0.4s 10nm,0.6s			Lg	Lg	06 00 53.3	
KK31	**Karatay Array**	**6.05**	**318**	⇓Pn	Pn	05 59 27.8	+4.8
	0.7nm,0.4s,baz=138,slow=13,SNR=8.6						
KK31	1.5nm,0.5s,baz=145,slow=26			⇓Sn	**Sn**	**06 00 36.4**	**+4.1**

*IDC **09** 06:15:09.3±0.8, 57°.30S×25°.87W, h0km, mb4.1/6, mbtmp4.1/7, ML3.9/1, MS3.3/3, Error ellipse: s-maj=35.2km s-min=20.9km az=63.0*
*NEIC **09** 06:15:18.5±1.7, 57°.4S±0°.1×26°.1W±0°.3, h69km±9km, mb4.3/13, Error ellipse: s-maj=24.0km s-min=16.6km az=52.0*
ISC 09 06:15:17.6±0.6, 57°.37S±0°.10×26°.0W±0°.1, h65km, n39, σ0§80/31, mb4.3/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.66**	**293**	Pn	**Pn**	**06 16 52.8**	**0.0**
VNA1	**Neumayer--Stat**	**15.32**	**157**	P	**Pn**	**06 18 48.7**	**-0.9**
VNA3	**Neumayer Olymp**	**15.53**	**160**	P	**Pn**	**06 18 51.2**	**-1.0**
VNA3				S	Sn	06 21 27.9	-15
VNA2	**Neumayer--Watz**	**15.72**	**157**	P	**Pn**	**06 18 54.4**	**-0.3**
	baz=318,slow=13						
SNAA	**Sanae**	**17.27**	**155**	P	**P**	**06 19 14.7**	**0.0**
SNAA	**Sanae**	**17.27**	**155**	P	**Pn**	**06 19 13.1**	**-1.0**
	0.4nm,0.3s,baz=330,slow=18,SNR=16 1.0nm,0.4s						
SNAA	**Sanae**	**17.27**	**155**	P	**P**	**06 19 14.1**	**-0.5**
TROLL	**Troll, Antarti**	**18.77**	**153**	P	**P**	**06 19 30.6**	**-0.6**
BELA	**Belgrano 2**	**20.81**	**185**	P	**P**	**06 19 52.7**	**-0.5**
SMAI	**San Martin Ant**	**21.21**	**223**	P	**P**	**06 19 58.3**	**+0.8**
SMAI	comp=Z,7.1nm,0.5s			IAmb	IAmb	06 19 59.9	
TRQA	**Tornquist**	**30.45**	**294**	P	**P**	**06 21 22.4**	**-1.4**
PLTB	**Pedras Altas**	**31.86**	**312**	P	**P**	**06 21 36.1**	**-0.2**
PLTB	comp=Z,7.5nm,1.5s			IAmb	IAmb	06 21 58.6	
QSPA	**South Pole Qui**	**32.88**	**180**	P	**P**	**06 21 45.7**	**+0.6**
CPUP	**Villa Florida**	**38.17**	**311**	P	**P**	**06 22 29.1**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=152,slow=11,SNR=3.6 comp=Z,0.6nm,0.5s						
SUR	**Sutherland**	**40.39**	**72**	LR	LR	06 35 04.3	
	comp=Z,35nm,21.1s,baz=151,slow=30						
BDFB	**Brasilia**	**44.83**	**329**	P	**P**	**06 23 26.5**	**+1.2**
	comp=Z,1.3nm,0.5s,baz=127,slow=4.5,SNR=5.4 comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**45.28**	**182**	P	**P**	**06 23 29.2**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=184,slow=6.5,SNR=24 comp=Z,2.3nm,0.6s						
VNDA	**Vanda**	**45.28**	**182**	P	**P**	**06 23 29.2**	**+1.2**
VNDA	comp=Z,2.6nm,0.7s			IAmb	IAmb	06 23 29.9	
BOSA	**Boshof**	**45.69**	**73**	LR	LR	06 37 57.5	
	comp=Z,39nm,18.9s,baz=190,slow=30						
PTLB	**Pontes e Lacer**	**48.70**	**315**	P	**P**	**06 23 55.4**	**+0.2**
PTLB	comp=Z,5.8nm,1.5s			IAmb	IAmb	06 24 00.4	
LBTB	**Lobatse**	**48.80**	**71**	LR	LR	06 40 13.1	
	comp=Z,40nm,19.9s,baz=208,slow=31						
SIV	**San Ignacio**	**48.96**	**313**	P	**P**	**06 23 57.8**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=145,slow=12,SNR=4.5 comp=Z,1.1nm,0.5s						
H10S2	**ASCENSION HYDR**	**49.09**	**15**	T	T	07 16 47.7	
	baz=189,slow=74,SNR=5.0						
H10S3	**ASCENSION HYDR**	**49.10**	**15**	T	T	07 16 51.7	
	baz=31,slow=74,SNR=16						
H10N1	**ASCENSION HYDR**	**50.21**	**15**	T	T	07 19 03.3	
	baz=191,slow=71,SNR=4.8						
H10N3	**ASCENSION HYDR**	**50.22**	**15**	T	T	07 19 00.0	
	baz=191,slow=71,SNR=21						
H10N2	**ASCENSION HYDR**	**50.23**	**15**	T	T	07 19 03.0	
	baz=191,slow=71,SNR=14						
LPAZ	**La Paz**	**51.67**	**305**	P	**P**	**06 24 18.8**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=145,slow=5.9,SNR=21 comp=Z,3.3nm,0.6s						
LPAZ	**La Paz**	**51.67**	**305**	P	**P**	**06 24 19.1**	**+0.6**
BOAV	**Boa Vista**	**65.72**	**322**	P	**P**	**06 25 54.8**	**-0.6**
BOAV	comp=Z,5.3nm,0.8s			IAmb	IAmb	06 25 56.0	
MCRA	**Macar, Loja**	**67.57**	**299**	P	**P**	**06 26 06.9**	**-0.3**
MCRA	comp=Z,7.7nm,1.4s			IAmb	IAmb	06 26 19.4	
TOA0	**Torodi Ar. Sit**	**73.90**	**28**	P	**P**	**06 26 45.7**	**+0.3**
TOA0	comp=Z,8.7nm,1.4s			IAmb	IAmb	06 26 58.7	
TORD	**Torodi Ar. Bea**	**73.90**	**28**	P	**P**	**06 26 46.0**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=200,slow=6.6,SNR=21 comp=Z,1.3nm,0.5s						
BIRV	**Birongo**	**75.24**	**319**	P	**P**	**06 26 53.9**	**+0.6**
PDAR	**Pinedale Array**	**121.59**	**301**	PKP	**PKPdf**	**06 34 02.2**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=128,slow=5.9,SNR=2.3						
NVAR	**Mina Array Bea**	**122.50**	**291**	PKP	**PKiKP**	**06 34 06.5**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=123,slow=3.3,SNR=2.2						
FINES	**FINESS Array B**	**125.25**	**28**	PKP	**PKPdf**	**06 34 09.0**	**-0.2**
	comp=Z,5.5nm,1.0s,baz=212,slow=4.9,SNR=1.8						
SONM	**Songino Array**	**150.14**	**88**	PKPbc	**PKPbc**	**06 34 59.6**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=223,slow=3.7,SNR=5.2						
ILAR	**Eielson Array**	**151.47**	**310**	PKPbc	**PKPbc**	**06 35 02.3**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=144,slow=4.3,SNR=29						

*NNC **09** 06:15:16.1±3.7, 54°.09N×86°.48E, h0km, mb3.4, mpv2.7, Error ellipse: s-maj=30.2km s-min=16.8km az=23.0, Suspected Mining explosion.*
*IDC **09** 06:15:18.1±2.5, 54°.11N×86°.40E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=19.7km s-min=12.3km az=61.0*
ISC 09 06:15:19.1±4.3, 54°.0N±0°.2×86°.3E±0°.2, h0km, n8, σ1§52/10, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.87**	**264**	*i*		06 20 42.9	
	0.1nm,0.9s,baz=81,slow=314,SNR=9.6						
ZAA0	**Zalesovo Array**	**0.87**	**264**	⇑P	**Pg**	**06 15 33.7**	**-2.0**
	0.3nm,0.5s						
ZAA0	8.3nm,1.1s			⇑S	**Sb**	**06 15 49.2**	**0.0**
ZALV	**Zalesovo Beam**	**0.87**	**264**	Pg	**Pg**	**06 15 35.0**	**-0.7**
	1.4nm,0.3s,baz=76,slow=16,SNR=16						
ZALV	3.2nm,0.3s,baz=79,slow=29,SNR=19			Lg	Lg	06 15 49.8	
KURK	**Kurchatov**	**5.75**	**238**	⇑Pn	**Pn**	**06 16 47.3**	**+1.6**
	0.9nm,0.6s						
KURK	3.4nm,0.9s			⇑Lg	Lg	06 18 21.2	
KURBB	**Kurchatov Arra**	**5.86**	**237**	Pn	**Pn**	**06 16 48.4**	**+1.3**
	0.2nm,0.3s,baz=54,slow=13,SNR=5.8						
KURBB	0.1nm,0.3s,baz=60,slow=32,SNR=4.6 1.2nm,0.4s			Lg	Lg	06 18 28.9	
KURBB	**Kurchatov Arra**	**5.86**	**237**	⇓Pn	**Pn**	**06 16 47.6**	**+0.5**
	2.6nm,0.6s						
KURBB	1.3nm,0.4s			⇓Sn	**Sn**	**06 17 56.6**	**+1.7**
KURBB	4.7nm,0.7s			⇓Lg	Lg	06 18 27.5	
MK31	**Makanchi Array**	**7.69**	**201**	⇑Pn	**Pn**	**06 17 12.8**	**+0.4**
	0.3nm,0.6s,baz=21,slow=13,SNR=6.7						
MK31	0.1nm,0.3s,baz=19,slow=26			⇓Sn	**Sn**	**06 18 38.6**	**-1.5**
MK31	1.0nm,0.8s,baz=22,slow=26,SNR=3.5			⇑Lg	Lg	06 19 17.2	
MKAR	**Makanchi Array**	**7.69**	**201**	Pn	**Pn**	**06 17 13.6**	**+1.2**
	0.1nm,0.3s,baz=24,slow=12,SNR=6.3						
MKAR	baz=21,slow=25,SNR=3.2 0.2nm,0.3s			Lg	Lg	06 19 22.6	

*IDC **09** 06:24:54.2±1.2, 8°.10N×82°.96W, h0km, mb3.7/7, mbtmp3.8/9, ML3.9/2, MS3.2/6, Error ellipse: s-maj=40.0km s-min=23.7km az=49.0*
*UPA **09** 06:24:55.0±1.2, 8°.32N×82°.94W, h0km±4km, MW4.2*
*INET **09** 06:24:57.3±0.2, 8°.26N×83°.00W, h15km±3km, MW3.7*
*UCR **09** 06:24:57.0±2.2, 8°.37N×82°.98W, h5km, MW4.5, mb4.5(NEIC)*
*NEIC **09** 06:24:58.2±2.7, 8°.46N±0°.05×82°.97W±0°.07, h12km±6km, mb4.5/35, Mwr4.6(UCR), Error ellipse: s-maj=10.0km s-min=6.7km az=65.0*
ISC 09 06:24:56.7±1.1, 8°.32N±0°.04×82°.97W±0°.03, h12km±6km, n117, σ1§27/118, mb4.5/26, MS3.2/6, 5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.09**	**358**	*eP*	**Pg**	**06 24 59.0**	**-0.4**
CDITO	**Canoas**	**0.27**	**21**	Pg	**Pg**	**06 25 01.7**	**-0.6**
CDITO	**Canoas**	**0.27**	**21**	*eP*	**Pg**	**06 25 01.7**	**-0.6**
CDITO	**Canoas**	**0.27**	**21**	*i P*	**Pg**	**06 25 01.7**	**-0.6**
CDITO				*eS*	**Sg**	**06 25 06.2**	**+0.1**
PTJ1	**Puerto Jimnez**	**0.39**	**303**	*eP*	**Pg**	**06 25 03.7**	**-0.8**
MLIR3	**Monte Lirio, C**	**0.49**	**17**	⇓*i P*	**Pg**	**06 25 05.2**	**-1.2**
MLIR3				*eS*	**Sb**	**06 25 14.6**	**-0.1**
EDSV	**San Vito**	**0.50**	**360**	*eP*	**Pg**	**06 25 06.0**	**-0.5**
EDSV				*eS*	**Sb**	**06 25 15.0**	**+0.2**
DVD	**David**	**0.53**	**77**	*eP*	**Pg**	**06 25 05.9**	**-1.1**
DVD				*eS*	**Sg**	**06 25 13.9**	**-0.1**
BRU2	**Volcan**	**0.55**	**30**	Pg	**Pg**	**06 25 06.8**	**-0.6**
BRU2	**Volcan**	**0.55**	**30**	*eP*	**Pg**	**06 25 06.8**	**-0.6**
BRU2				*eS*	**Sb**	**06 25 16.1**	**-0.2**
BRU2	**Volcan**	**0.55**	**30**	⇓*i P*	**Pg**	**06 25 06.8**	**-0.6**
BRU2				*eS*	**Sb**	**06 25 16.4**	**+0.1**
BCO2	**Palmira**	**0.59**	**48**	⇓*i P*	**Pg**	**06 25 07.5**	**-0.8**
BCO2				*eS*	**Sb**	**06 25 17.5**	**0.0**
PTAR3	**Potrerillos Ar**	**0.60**	**52**	⇓*eP*	**Pg**	**06 25 07.5**	**-0.9**
PTAR3				*eS*	**Sb**	**06 25 17.1**	**-0.6**
CHIR3	**Chiriqui UPA,**	**0.64**	**83**	⇓*eP*	**Pg**	**06 25 07.6**	**-1.5**
CHIR3				*eS*	**Sg**	**06 25 17.6**	**0.0**
LNBQ3	**Los Naranjos,**	**0.70**	**48**	*eP*	**Pg**	**06 25 08.8**	**-1.6**
LNBQ3				*eS*	**Sb**	**06 25 21.0**	**+0.2**
DRK0	**Durika**	**0.98**	**344**	Pg	**Pg**	**06 25 14.5**	**-1.1**
DRK0	**Durika**	**0.98**	**344**	*eP*	**Pg**	**06 25 14.5**	**-1.1**
DRK0				*eS*	**Sn**	**06 25 30.0**	**-0.3**
SRBA	**San Rafael, Bu**	**0.99**	**337**	Pg	**Pg**	**06 25 13.4**	**-2.4**
SRBA	**San Rafael, Bu**	**0.99**	**337**	*eP*	**Pg**	**06 25 13.5**	**-2.3**
REME3	**Remedios, Chir**	**1.13**	**95**	*eP*	**Pg**	**06 25 15.8**	**-2.7**
REME3				*eS*	**Sg**	**06 25 31.9**	**-1.3**
CNI2	**El Empalme, Bo**	**1.21**	**24**	*eP*	**Pg**	**06 25 17.3**	**-2.6**
CNI2				*eS*	**Sg**	**06 25 34.1**	**-1.5**
PEZE	**Perez Zeledon,**	**1.27**	**327**		**Pg**	**06 25 18.4**	**-2.7**
PEZE	**Perez Zeledon,**	**1.27**	**327**	*eP*	**Pg**	**06 25 17.8**	**-3.3**
**EDD

HDC3	Heredia 3	2.02	326	*e*P		Pn	06 25 31.6	+0.8
HDC	Heredia	2.02	326			Pn	06 25 30.6	-0.1
HDC	Heredia	2.02	326	*e*P		Pn	06 25 31.0	+0.2
HDC	Heredia	2.02	326	*e*P		Pn	06 25 30.9	+0.2
HDC				*e*S		Sn	06 25 57.0	+1.0
JACO	JACO, Garabito	2.14	309			Pn	06 25 30.7	-1.6
CACAO	El Cacao, Vera	2.30	115	*e*P		Pn	06 25 34.1	-0.4
CACAO				*e*S		Sn	06 26 04.2	+1.3
SRA1	San Ramn	2.30	320	*e*P		Pn	06 25 35.1	+0.4
LAFE	Finca La Fe, P	2.42	308	*e*P		Pn	06 25 34.9	-1.2
PNME	Penonome	2.62	86	*e*P		Pn	06 25 38.7	-0.2
PNME				*e*S		Sn	06 26 12.2	+1.5
FORC	Fortuna	2.71	322	*e*P		Pn	06 25 42.2	+2.0
AZU	Azuero	2.72	101	*e*P		Pn	06 25 40.6	+0.3
AZU	Azuero	2.72	101	*e*P		Pn	06 25 40.5	+0.2
AZU				*e*S		Sn	06 26 13.2	0.0
ARE1	Arenal 1	2.74	321	*e*P		Pn	06 25 42.5	+1.9
CEDE	Laguna Cedeo	2.75	322	*e*P		Pn	06 25 42.2	+1.4
JTS	Las Juntas de	2.77	315	Pn		Pn	06 25 40.7	-0.3
JTS	Las Juntas de	2.77	315	*e*P		Pn	06 25 40.6	-0.4
COVE	Coope Vega, Sa	2.77	329			Pn	06 25 41.8	+0.8
COVE	Coope Vega, Sa	2.77	329	*e*P		Pn	06 25 41.3	+0.3
INDI	Punta indio, G	2.94	302	*e*P		Pn	06 25 42.0	-1.2
DUNO	Dulce Nombre,	3.04	305			Pn	06 25 44.0	-0.8
DUNO	Dulce Nombre,	3.04	305	*e*P		Pn	06 25 43.6	-1.1
VERA	Finca Concepci	3.14	324	*e*P		Pn	06 25 47.8	+1.8
CUI	Cuipilapa	3.18	317	*e*P		Pn	06 25 47.4	+0.8
ORTG	Ortega, Santa	3.19	310	Pn		Pn	06 25 46.8	0.0
COLC	Colonia	3.21	317	*e*P		Pn	06 25 48.9	+1.8
BCIP	Isla Barro Col	3.21	75	Pn		Pn	06 25 46.4	-0.6
BCIP	Isla Barro Col	3.21	75	*e*P		Pn	06 25 46.4	-0.6
BCIP				*e*S		Sn	06 26 24.6	-0.7
BCIP	Isla Barro Col	3.21	75	*e*P		Pn	06 25 46.3	-0.8
HORNC	Hornillas	3.23	318	*e*P		Pn	06 25 48.3	+0.9
GUAB	Guayabo de Bag	3.26	317	*e*P		Pn	06 25 49.4	+1.7
GPS2	Hotel Rincn d	3.37	316	*e*P		Pn	06 25 50.6	+1.3
BUEV	Buena Vista	3.44	316	*e*P		Pn	06 25 51.4	+1.1
GB1A	Borinquen Arri	3.45	316	*e*P		Pn	06 25 51.7	+1.3
UPA	Univ. de Panam	3.46	79	*e*P		Pn	06 25 50.5	+0.1
UPA				*e*S		Sn	06 26 30.9	-0.5
HZTE	Horizontes, Gu	3.52	313			Pn	06 25 52.2	+1.0
ESPN	Las Esperanzas	4.07	341			Pn	06 25 57.4	-1.5
ACON	Acoyapa	4.23	329			Pn	06 26 01.2	+0.2
BOAB	BOACO BROADBAN	4.89	327			Pn	06 26 10.8	+0.7
MATN	Matagalpa	5.43	328	Pn		Pn	06 26 19.0	+1.4
CNGN	Cerro Negro	5.54	319	Pn		Pn	06 26 21.6	+2.4
CRIN	San Cristobal	5.92	318			Pn	06 26 25.2	+0.8
TGUH	Tegucigalpa,Un	7.09	324	Pn		Pn	06 26 41.1	+0.5
ESQI	Esquipulas	8.80	315	Pn		Pn	06 27 05.3	+1.3
SLOR	San Lorenzo -	10.03	153			Pn	06 27 24.4	+3.1
PORT	Chimborazo Vol	10.58	157			Pn	06 27 31.8	+3.0
MTDJ	Mount Denham	11.18	28	Pn		Pn	06 27 36.4	-0.1
CMIG	Matias Romero 0.3nm,0.3s,baz=117,slow=9.1,SNR=7.9 1.7nm,0.5s	14.52	308	Pn		Pn	06 28 23.4	+1.2
SJG	San Juan 0.5nm,0.3s,baz=228,slow=12,SNR=2.5 5.9nm,0.6s	19.03	58	P		Pn	06 29 20.6	+1.1
344A	Westbrook Farm	24.13	344	P		P	06 30 13.6	+0.9
342A	Flagon Creek P	24.54	340	P		P	06 30 17.3	+0.9
342A				IAmb		IAmb	06 30 19.1	
	comp=Z,12nm,0.8s							
GOGA	Godfrey	24.98	359	IAmb		IAmb	06 30 24.4	
	comp=Z,8.1nm,0.8s							
Z47A	Carrollton	25.20	350	P		P	06 30 22.7	+0.3
Z47A				IAmb		IAmb	06 30 26.1	
	comp=Z,9.5nm,0.7s							
Y52A	Lilburn	25.44	358	IAmb		IAmb	06 30 29.6	
	comp=Z,9.3nm,0.8s							
TKL	Tuckaleechee C	27.22	359	LR		LR	06 40 02.4	
	comp=Z,28nm,21.6s,baz=216,slow=33							
WHAR	Wooly Hollow	28.17	344	IAmb		IAmb	06 30 49.3	
	comp=Z,8.0nm,0.7s							
TXAR	Lajitas Array	28.55	320	P		P	06 30 55.1	+2.4
	comp=Z,0.1nm,0.6s,baz=142,slow=10,SNR=3.0 comp=Z,0.1nm,0.6s							
TUL1	Leonard	29.86	339	P		P	06 31 03.7	-0.4
R49A	Shelbyville	29.91	357	IAmb		IAmb	06 31 05.3	
	comp=Z,7.1nm,0.7s							
MGMO	Mountain Grove	29.92	345	IAmb		IAmb	06 31 05.1	
	comp=Z,5.3nm,0.7s							
OK031	S. Brethren Rd	30.28	337	P		P	06 31 07.3	-0.6
OK031				IAmb		IAmb	06 31 10.1	
	comp=Z,8.1nm,0.7s							
CCM	Cathedral Cave	30.54	347	P		P	06 31 09.2	-0.9
CCM				IAmb		IAmb	06 31 12.4	
	comp=Z,5.5nm,0.7s							
Q51A	Peebles	30.58	359	IAmb		IAmb	06 31 12.2	
	comp=Z,9.0nm,0.8s							
P38A	Dawn	32.58	345	IAmb		IAmb	06 31 28.3	
	comp=Z,4.5nm,0.7s							
K38A	Parkersburg	35.26	347	IAmb		IAmb	06 31 50.8	
	comp=Z,8.8nm,0.8s							
SADO	Sadowa	36.47	5	LR		LR	06 46 34.4	
	comp=Z,34nm,19.4s,baz=195,slow=36							
SPMN	Marine on St.	37.74	349	IAmb		IAmb	06 32 13.6	
	comp=Z,7.1nm,0.9s							
F36A	Milaca	38.50	348	IAmb		IAmb	06 32 18.4	
	comp=Z,13nm,1.5s							
PDAR	Pinedale Array	41.50	330	P		P	06 32 43.4	-0.8
	comp=Z,0.3nm,0.5s,baz=128,slow=9.6,SNR=4.4 comp=Z,0.3nm,0.5s							
IMW	Indian Meadow	43.02	330	P		P	06 32 56.3	-0.3
RPN	Rapa Nui	43.52	215	LR		LR	06 46 26.1	
	comp=Z,50nm,20.8s,baz=178,slow=30							
NVAR	Mina Array Bea	43.69	319	P		P	06 33 03.8	+1.7
	comp=Z,0.4nm,0.6s,baz=126,slow=5.8,SNR=3.7 comp=Z,0.4nm,0.6s							
PLCA	Paso Flores	50.13	168	P		P	06 33 50.1	-1.9
	comp=Z,1.5nm,0.9s,baz=355,slow=10,SNR=3.7 comp=Z,1.5nm,0.9s							
FRB	Frobisher Bay	56.29	8	LR		LR	06 58 29.5	
	comp=Z,10nm,18.8s,baz=181,slow=36							
YKA	Yellowknife Ar	58.77	343	P		P	06 34 56.3	+1.8
	comp=Z,2.3nm,0.7s,baz=138,slow=6.8,SNR=5.8 comp=Z,2.3nm,0.7s							
SFJD	Kangerlussuaq	62.56	14	LR		LR	07 04 16.4	
	comp=Z,16nm,18.4s,baz=154,slow=38							
L27K	Beaver Creek,	68.83	335	P		P	06 36 00.9	-0.1
L27K				IAmb		IAmb	06 36 05.0	
	comp=Z,3.9nm,1.1s							
DOT	Dot Lake	70.00	335	IAmb		IAmb	06 36 13.2	
	comp=Z,3.0nm,0.7s							
J25K	Salcha River,	70.89	336	IAmb		IAmb	06 36 17.9	
	comp=Z,2.6nm,0.7s							
HDA	Harding Lake	71.46	336	P		P	06 36 17.0	+0.1
HDA				IAmb		IAmb	06 36 20.8	
	comp=Z,4.3nm,0.7s							
ILAR	Eielson Array	71.56	336	P		P	06 36 16.7	-0.8
	comp=Z,1.4nm,0.6s,baz=114,slow=3.5,SNR=9.3 comp=Z,1.4nm,0.6s							
I23K	Minto, Yukon-K	72.68	336	IAmb		IAmb	06 36 29.8	
	comp=Z,2.6nm,0.7s							
MLY	Manley	73.20	336	P		P	06 36 26.9	-0.5
TORD	Torodi Ar. Bea	82.99	78	P		P	06 37 21.7	-0.9
	comp=Z,0.7nm,0.7s,baz=270,slow=4.4,SNR=3.5 comp=Z,0.7nm,0.7s							
VRAC	Vranov	89.94	40	LR		LR	07 15 42.6	
	comp=Z,25nm,18.3s,baz=332,slow=34							
ASAR	Alice Springs	141.56	242	PKP		PKPdf	06 44 27.4	-1.5
	comp=Z,0.4nm,0.7s,baz=112,slow=2.2,SNR=4.6							
WRA	Warramunga Arr	142.11	248	PKP		PKPdf	06 44 28.7	-1.2
	comp=Z,0.5nm,0.9s,baz=96,slow=2.5,SNR=4.8							
PZH	PanZhiHua	145.09	353	PKPbc		PKPbc	06 44 34.9	+0.4

NOU 09 07:04:30.2, 14°82′S×167°43′E, h89km, MLv4.4/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	2.98	166	P	Pn	07 05 15.6	+0.2
YATNC	Mamie plateau,	7.22	184	P	Pn	07 06 12.1	-1.0
DZM	Mont Dzumac	7.27	187	P	Pn	07 06 14.0	+0.1
NOUC	Port Laguerre	7.32	188	P	Pn	07 06 15.3	+0.8

*IDC **09** 07:29:15.0±1.4, 26°.62N×54°.78E, h0km, mb3.7/12, mbtmp3.7/14, ML3.5/2, MS3.2/3, Error ellipse: s-maj=29.5km s-min=21.3km az=7.0*
*DSN **09** 07:29:17.4±1.5, 26°.92N×55°.08E, h10km, ML3.7/11, Error ellipse: s-maj=20.5km s-min=6.8km az=19.0*
*TEH **09** 07:29:17.5, 26°.65N×54°.87E, h21km, ML4.2*
*OMAN **09** 07:29:18.8±0.1, 26°.80N×54°.98E, h21km, mb5.1/3, ml3.9/22, Error ellipse: s-maj=3.0km s-min=1.3km az=359.0*
*SGS **09** 07:29:22.2, 26°.68N×54°.61E, h5km, Ml3.5*

ISC 09 07:29:19.3±1.1, 26°.60N±0°.03×54°.81E±0°.03, h31km±9km, n114, σ1°54/123, mb3.6/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	1.14	340	*e*Pg	Pb	07 29 40.0	-0.5
SHME	Shamm	1.31	114	*e*Pn	Pb	07 29 41.8	-1.5
SHME	Shamm SNR=97	1.31	114	P	Pb	07 29 42.1	-1.2
SHME				S	Sb	07 29 59.0	-0.8
	SNR=8.2						
SHME	Shamm SNR=97	1.31	114	*e*P	Pb	07 29 41.5	-1.8
SHME				S	Sb	07 29 59.6	-0.2
UMQ	Umm Al-Quwin	1.31	144	*e*Pn	Pb	07 29 43.7	+0.4
UMQ	Umm Al-Quwin SNR=7.3	1.31	144	P	Pb	07 29 43.9	+0.6
UMQ				S	Sb	07 30 01.7	+1.9
	SNR=6.3						
UMQ	Umm Al-Quwin SNR=9.8	1.31	144	*e*P	Pb	07 29 43.4	+0.1
GENO	Geno	1.45	56	*e*Pg	Pb	07 29 44.3	-1.5
GENO				*e*		07 30 12.8	
	comp=Z,29μm,0.4s						
ESRB	Sir Abu	1.47	201	*e*Pn	Pb	07 29 45.8	-0.2
BANOM	Banah	1.49	116	*e*Pn	Pb	07 29 44.7	-1.7
BANOM	Banah SNR=74	1.49	116	P	Pb	07 29 45.8	-0.6
BANOM				S	Sb	07 30 04.6	-0.4
	SNR=17						
BANOM	Banah SNR=75	1.49	116	*e*P	Pb	07 29 44.4	-2.1
LMD1	Lamerd	1.65	297	*e*Sg	Sb	07 30 13.3	+3.9
MASF	Masafi SNR=36	1.72	135	P	Pb	07 29 49.8	-0.5
MASF				S	Sb	07 30 11.3	-0.3
	SNR=13						
MSFE	Esma-Masafi	1.73	135	*e*Pn	Pb	07 29 49.4	-1.0
MSFE	Esma-Masafi SNR=37	1.73	135	*e*P	Pb	07 29 49.8	-0.6
IBND	Bandar-abas	1.76	61	*e*Pg	Pb	07 29 50.9	0.0
IBND				*e*		07 30 20.5	
	comp=Z,30μm,0.9s						
NAZ	Nazwa, Dubai	1.77	154	*e*Pn	Pb	07 29 50.5	-0.7
NAZ	Nazwa, Dubai SNR=30	1.77	154	P	Pb	07 29 50.5	-0.7
NAZ				S	Sb	07 30 13.6	+0.5
NAZ	Nazwa, Dubai SNR=14	1.77	154	*e*P	Pb	07 29 50.5	-0.7
MDH	Madha	1.86	134	*e*Pn	Pb	07 29 51.7	-0.9
MDH	Madha SNR=14	1.86	134	P	Pb	07 29 52.0	-0.6
MDH				S	Sb	07 30 14.2	-1.3
MDH	Madha SNR=13	1.86	134	*e*P	Pb	07 29 51.5	-1.1
FAQ	Al Faqa, Dubai	1.97	159	*e*Pn	Pb	07 29 55.1	+0.5
FAQ	Al Faqa, Dubai	1.97	159	P	Pb	07 29 53.2	-1.4
FAQ	Al Faqa, Dubai	1.97	159	P	Pb	07 29 55.2	+0.6
ASUD	Al Ashush, Dub	2.02	167	*e*Pn	Pb	07 29 55.3	0.0
ASUD	Al Ashush, Dub SNR=16	2.02	167	P	Pb	07 29 54.3	-1.0
ASUD				S	Sb	07 30 20.5	+0.5
ASUD	Al Ashush, Dub SNR=16	2.02	167	*e*P	Pb	07 29 56.0	+0.7
AJN	Ajban	2.03	176	*e*Pn	Pb	07 29 56.5	+0.9
AJN	Ajban	2.03	176	P	Pb	07 29 54.9	-0.6
UOSS	Minazif	2.07	142	*e*Pn	Pb	07 29 53.8	-2.4
UOSS	Minazif	2.07	142	P	Pb	07 29 54.8	-1.4
UOSS				S	Sb	07 30 20.4	-1.1
UOSS	Minazif SNR=7.8	2.07	142	*e*P	Pb	07 29 54.2	-2.0
HATD	Hatta, Dubai	2.13	146	*e*Pn	Pb	07 29 55.3	-1.9
HATD	Hatta, Dubai SNR=18	2.13	146	P	Pb	07 29 56.2	-1.0
HATD	Hatta, Dubai SNR=18	2.13	146	*e*P	Pb	07 29 55.6	-1.6
JHRM	Jahrom	2.19	330	*e*Pn	Pb	07 29 56.3	-2.1
JHRM				*e*		07 30 04.4	
	comp=Z,16μm,0.4s						
ASHO	Ashiyiah	2.21	149	*e*Pn	Pb	07 29 55.7	-3.0
ASHO	Ashiyiah SNR=18	2.21	149	P	Pb	07 29 55.8	-2.8
ASHO	Ashiyiah SNR=27	2.21	149	*e*P	Pb	07 29 56.5	-2.2
JRN	Qarnain Island	2.42	227	*e*Pn	Pb	07 29 59.9	-2.2
JRN	Qarnain Island	2.42	227	P	Pb	07 30 00.2	-1.9
QIR1	Qir	2.44	320	*e*Pn	Pb	07 29 58.7	-3.9
QIR1				*e*		07 30 60.0	
	comp=Z,16μm,0.5s						
ALNE	Al Ain	2.67	161	*e*Pn	Pb	07 30 03.7	-2.7
ALNE	Al Ain SNR=8.0	2.67	161	P	Pb	07 30 03.9	-2.5
JASK	Jask - Hormozg	2.84	104	*e*Pn	Pn	07 30 02.9	+0.4
JASK				*e*		07 30 54.6	
	comp=Z,6μm,0.7s						
JASK	Jask - Hormozg	2.84	104	P	Pn	07 30 02.6	+0.2
KHNJ	Kahnooj	2.90	62	*e*Pn	Pn	07 30 03.6	+0.2
SOHO	SOHO	2.90	147	*e*Pn	Pb	07 30 08.3	-2.1
SOHO	SOHO	2.90	147	P	Pn	07 30 05.1	+1.7
SOHO	SOHO	2.90	147	P	Pn	07 30 05.0	+1.6
GHWR	Ruwais	3.15	214	P	Pb	07 30 10.7	-3.9
NGRK	Negar Kerman	3.48	29	*e*Pn	Pn	07 30 12.8	+1.2
NGRK				*e*		07 30 54.8	
	comp=Z,4μm,0.2s						
ARQ	Araqi SNR=18	3.60	154	P	Pn	07 30 15.0	+2.0
HOQ	Hoqain	3.76	142	*e*Pn	Pn	07 30 17.2	+2.0
MZR	Muzera SNR=6.6	3.78	199	P	Pn	07 30 19.6	+4.2
KRBR	Kerman	3.78	27	*e*Pn	Pn	07 30 17.7	+1.9
TVBK	TV Kerman	3.79	27	*e*Pn	Pn	07 30 16.9	+1.0
TVBK				*e*		07 31 07.4	
	comp=Z,5μm,0.3s						
KHGB	Koh Gabri	4.04	21	*e*Pn	Pn	07 30 20.4	+1.2
KHGB				*e*		07 31 10.6	
	comp=Z,1μm,0.3s						
CHMN	Cheshme madani	4.04	36	*e*Pn	Pn	07 30 19.7	+0.3
CHMN				*e*		07 31 10.3	
	comp=Z,2μm,0.3s						
KBAM	BAM	4.09	51	*e*Pn	Pn	07 30 20.3	+0.4
KBAM				*e*		07 31 16.0	
	comp=Z,2μm,0.4s						
BIDO	Bidbid	4.29	135	P	Pn	07 30 23.3	+0.9
BSY	Bisya	4.41	150	P	Pn	07 30 25.8	+1.7
SMDO	Samad SNR=5.1	4.59	139	P	Pn	07 30 28.2	+1.5
IMEH	Mehriz	4.78	358	*e*Pn	Pn	07 30 31.5	+2.1
WSAR	Wadi Sarin	4.81	133	Pn	Pn	07 30 29.1	-0.6
	comp=Z,1.7nm,0.3s,baz=318,slow=12,SNR=10						
WSAR				Sn	Sn	07 31 24.0	-0.5
	comp=Z,3.5nm,0.3s,baz=77,slow=20,SNR=7.4 comp=Z,6.1nm,0.4s						
WSAR	Wadi Sarin	4.81	133	P	Pn	07 30 30.9	+1.2
IBAF	Bafgh	5.02	7	*e*Pn	Pn	07 30 33.8	+1.2
JMDO	Jabal Madar SNR=6.3	5.17	144	P	Pn	07 30 38.0	+3.4
CHBR	Chabahar	5.19	100	*e*Pn	Pn	07 30 37.0	+2.1
KLNJ	Kolanjah	5.23	328	*e*Pn	Pn	07 30 36.2	+0.6
ISAD	Sadrabad	5.39	350	*e*Pn	Pn	07 30 40.0	+2.2
WBK	Wadi Bani Khal	5.48	135	*e*Pn	Pn	07 30 39.8	+0.9
WBK	Wadi Bani Khal	5.48	135	P	Pn	07 30 39.9	+1.0
NHRD	Haradh	5.56	252	P	Pn	07 30 41.9	+2.0
NHRD	Haradh	5.56	252	S	Sn	07 31 41.2	-1.5
IRAM	Ramesheh	5.61	338	*e*Pn	Pn	07 30 42.2	+1.4
YZKH	Yazd	5.78	358	*e*Pn	Pn	07 30 44.8	+1.8
NGCH	Negor - Chabah	5.82	101	P	Pn	07 30 43.8	+0.3
NGCH				S	Sn	07 31 47.9	-1.3
ZHSF	Zahedan	6.06	59	*e*Pn	Pn	07 30 48.7	+1.7
JLN	Jalan Bani Buh	6.10	136	P	Pn	07 30 48.3	+1.0
IBRJ	Brojen	6.13	330	*e*Pn	Pn	07 30 49.2	+1.1
MHTO	MHTO SNR=34	6.29	152	P	Pn	07 30 51.0	+1.0
NASN	Na'in	6.42	345	*e*Pn	Pn	07 30 53.3	+1.2
BSRN	Basiran	6.54	34	*e*Pn	Pn	07 30 55.5	+2.0
TPRV	Parvadeh(Tabas	6.61	14	*e*Pn	Pn	07 30 55.5	+1.0
IZEF	Zefreh	6.64	342	*e*Pn	Pn	07 30 55.0	0.0
SRVN	Saravan	6.81	82	*e*Pn	Pn	07 30 58.5	+1.2
IPIR	Pirpir	6.96	332	*e*Pn	Pn	07 31 00.6	+1.2
AMIS	Naft Sefid	6.99	318	*e*Pn	Pn	07 31 01.1	+1.5
QYSM	Um Kedad	7.18	282	P	Pn	07 31 02.8	+0.6
IKLH	Kolahrood	7.26	338	*e*Pn	Pn	07 31 04.7	+1.2
TKDS	Koohdasht(Taba	7.27	15	*e*Pn	Pn	07 31 04.3	+0.7
TABS	Tabas	7.31	15	*e*Pn	Pn	07 31 05.8	+1.8
TNSJ	Nastanj	7.50	12	*e*Pn	Pn	07 31 07.4	+0.7
SHRT	Shahrakht	8.47	33	*e*Pn	Pn	07 31 21.9	+1.9
SHRO	Shahrood	9.42	6	*e*Pn	Pn	07 31 35.0	+2.0
IKOM	Komasi	9.84	322	*e*Pn	Pn	07 31 39.2	+0.5
GNI	Garni	15.90	331	LR	LR	07 40 34.9	
	comp=Z,44nm,18.1s,baz=175,slow=43						
KBZ	Khabaz	19.64	334	P	Pn	07 33 45.4	-1.5
	comp=Z,0.1nm,0.3s,baz=180,slow=8.1,SNR=2.7 comp=Z,1.6nm,0.8s						
BRTR	Keskin Array B	21.97	312	P	P	07 34 11.2	+0.5
	comp=Z,2.0nm,0.8s,baz=131,slow=13,SNR=8.8 comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	22.68	40	LR	LR	07 44 14.9	
	comp=Z,25nm,19.1s,baz=282,slow=40						
AKTO	Aktyubinsk	23.93	5	P	P	07 34 30.1	-0.3
	comp=Z,0.8nm,0.3s,baz=149,slow=19,SNR=7.4 comp=Z,0.8nm,0.3s						
MKAR	Makanchi Array	29.62	40	P	P	07 35 22.1	+0.4
	comp=Z,0.3nm,0.5s,baz=230,slow=7.1,SNR=4.6 comp=Z,0.3nm,0.5s						
KURBB	Kurchatov Arra	30.07	31	P	P	07 35 26.3	+0.7
	comp=Z,0.7nm,0.8s,baz=231,slow=8.7,SNR=7.8 comp=Z,0.7nm,0.8s						
AKASG	Malin Array Be	31.00	328	P	P	07 35 33.9	+0.1
	comp=Z,0.4nm,0.4s,baz=134,slow=8.8,SNR=5.3 comp=Z,0.4nm,0.4s						
ZALV	Zalesovo Beam	35.16	31	P	P	07 36 10.2	0.0
	comp=Z,2.7nm,0.4s,baz=244,slow=8.2,SNR=13 comp=Z,2.7nm,0.4s						
FINES	FINESS Array B	39.84	339	P	P	07 36 49.1	-0.5
	comp=Z,2.4nm,0.8s,baz=133,slow=8.4,SNR=4.9						
FINES				LR	LR	07 55 37.1	
	comp=Z,99nm,18.4s,baz=200,slow=40 comp=Z,2.4nm,0.8s						
NOA	NORSAR Array B	45.20	332	P	P	07 37 32.4	-0.9
	comp=Z,0.3nm,0.4s,baz=119,slow=8.1,SNR=1.5 comp=Z,0.3nm,0.4s						
SONM	Songino Array	45.26	48	P	P	07 37 35.4	+1.4
	comp=Z,0.5nm,0.6s,baz=235,slow=5.1,SNR=2.2 comp=Z,0.5nm,0.6s						
ARCES	ARCESS Array B	46.25	346	P	P	07 37 41.5	+0.1
	comp=Z,1.3nm,0.8s,baz=175,slow=34,SNR=1.7 comp=Z,1.3nm,0.8s						
TORD	Torodi Ar. Bea	51.38	266	P	P	07 38 21.8	+0.3
	comp=Z,0.5nm,0.5s,baz=61,slow=7.4,SNR=4.4 comp=Z,0.5nm,0.5s						
ILAR	Eielson Array	87.38	9	P	P	07 42 02.9	-0.2
	comp=Z,0.4nm,0.8s,baz=338,slow=7.1,SNR=4.4 comp=Z,0.4nm,0.8s						

IDC 09 07:29:29.4±2.9, 53°.97N×86°.75E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=23.6km s-min=14.6km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.14	270	*i*		07 35 13.3	
	baz=89,slow=321,SNR=18						
ZALV	Zalesovo Beam	1.14	270	Pg	Pg	07 29 51.0	-0.3
ZALV	0.8nm,0.3s,baz=90,slow=16,SNR=7.6			Lg	Lg	07 30 06.3	
	1.7nm,0.3s,baz=91,slow=27,SNR=14						
ZALV				Rg	Rg	07 30 11.8	
	11nm,0.9s,baz=96,slow=40,SNR=8.4						
KURBB	Kurchatov Arra	6.06	240	Pn	Pn	07 31 01.0	+0.9
	0.1nm,0.3s,baz=55,slow=14,SNR=5.4						
KURBB				Lg	Lg	07 32 44.7	
	baz=63,slow=36,SNR=4.0 0.8nm,0.5s						
MKAR	Makanchi Array	7.73	203	Pn	Pn	07 31 23.8	+0.6
	0.1nm,0.3s,baz=26,slow=14,SNR=4.0						
MKAR				Lg	Lg	07 33 38.8	
	0.1nm,0.3s,baz=18,slow=29,SNR=3.7 0.2nm,0.4s						

*IDC **09** 07:41:06.2±2.9, 24°.53S×179°.99W, h473km±31km, mb3.3/8, mbtmp4.1/9, Error ellipse: s-maj=27.1km s-min=23.5km az=136.0*
*NEIC **09** 07:41:08.4±1.0, 24°.7S±0°.2×179°.9W±0°.2, h498km±12km, mb4.2/15, Error ellipse: s-maj=32.6km s-min=21.9km az=70.0*

ISC 09 07:41:08.7±0.7, 24°.6S±0°.1×180°.0E±0°.2, h500km, n30, σ0°99/31, mb4.1/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	12.97	186	P	P	07 43 59.0	+1.7
URZ	Urewera	13.81	190	P	P	07 44 03.9	-2.2
	3.3nm,0.5s,baz=63,slow=2.1,SNR=6.1						
URZ	Urewera	13.81	190	P	P	07 44 05.2	-0.9
BKZ	Black Stump Fm	14.79	191	P	P	07 44 16.1	-0.5
BFZ	Birch Farm	16.31	190	P	P	07 44 30.7	-1.7
QRZ	Quartz Range	17.31	199	P	P	07 44 42.1	-0.4
LTZ	Lake Taylor	19.19	197	P	P	07 44 59.1	-0.7
LTZ				IAmb

NEIC ***09*** *07:44:08.4±1.0, 47.3°N±0.2×147.0°E±0.2, h360km±8km, mb4.0/12, Error ellipse: s-maj=26.8km s-min=17.3km az=183.0*

ISC 09 07:44:07.4±0.6, 47.36°N±0.05°×147.17°E±0.07°, h350km, n45, σ1s18/50, mb3.8/20, 1C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.18**	**167**	*eP*	**Pn**	**07 45 00.3**	**+0.2**
KUR				AMB	AMB	07 45 00.9	
	190nm,0.4s						
KUR				*eS*	**S**	**07 45 41.3**	**-1.0**
KUR				A	A	07 45 43.9	
	20nm,0.3s						
KUR				A	A	07 45 43.9	
	10.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**3.04**	**264**	Pn	**Pn**	**07 45 08.5**	**+1.5**
YSS	**Yuzh-Sakhalins**	**3.04**	**264**	*eP*	**Pn**	**07 45 08.7**	**+1.6**
YSS				AMB	AMB	07 45 09.2	
	160nm,0.4s						
YSS				*eS*	**S**	**07 45 57.7**	**+2.6**
YSS				A	A	07 45 58.0	
	20nm,0.3s						
YSS				A	A	07 45 58.0	
	30nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.45**	**196**	*eP*	**Pn**	**07 45 13.0**	**+2.0**
YUK				AMB	AMB	07 45 14.8	
	120nm,0.5s						
YUK				*eS*	**S**	**07 46 04.2**	**+2.0**
YUK				A	A	07 46 05.2	
	240nm,0.7s						
YUK				A	A	07 46 05.2	
	460nm,0.7s						
NMR	**Nemuro--Hokkai**	**4.12**	**195**	*eP*	**Pn**	**07 45 20.3**	**+2.6**
NMR				*eS*	**S**	**07 46 15.2**	**+0.8**
TYV	**Tymovskoe**	**4.59**	**321**	*eP*	**Pn**	**07 45 24.4**	**+2.0**
TYV				AMB	AMB	07 45 25.2	
	10.0nm,0.5s						
TYV				*eS*	**S**	**07 46 23.6**	**+0.6**
AKK	**Akkeshi**	**4.65**	**202**	*eP*	**Pn**	**07 45 24.3**	**+1.1**
AKK				*eS*	**S**	**07 46 26.3**	**+1.8**
ERM	**Erimo**	**6.07**	**210**	Pn	**Pn**	**07 45 36.9**	**-2.1**
JTM	**Tenmabayashi**	**7.91**	**216**	Pn	Pn	07 45 56.9	-3.6
PETK	**Petropavlovsk-**	**8.86**	**46**	P	**P**	**07 46 13.4**	**-0.6**
	2.4nm,0.7s,baz=209,slow=12,SNR=2.4						
MJAR	**Matsushiro Arr**	**12.70**	**215**	P	**P**	**07 46 56.7**	**0.0**
	3.4nm,0.5s,baz=21,slow=11,SNR=6.3						
KSRS	**Korea Array**	**17.28**	**242**	P	**P**	**07 47 45.9**	**-0.7**
	1.9nm,0.5s,baz=50,slow=10,SNR=6.8						
SONM	**Songino Array**	**27.28**	**286**	P	**P**	**07 49 20.5**	**-0.4**
	0.5nm,0.5s,baz=98,slow=10,SNR=2.5						
	0.5nm,0.5s						
GTA	**Gaotai**	**34.87**	**275**	⇑P	**P**	**07 50 27.0**	**+0.2**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,63nm,4.7s						
GTA				LR	LR		
	comp=N,120nm,18.9s						
GTA				LR	LR		
	comp=E,570nm,18.2s						
GTA				LR	LR		
	comp=Z,200nm,18.9s						
J20K	**Nowinta River**	**35.50**	**40**	P	**P**	**07 50 32.9**	**+1.2**
J20K				IAmb	IAmb	07 50 50.1	
	comp=Z,4.5nm,1.5s						
IMAR	**Indian Mountai**	**35.70**	**37**	P	**P**	**07 50 34.8**	**+1.5**
H21K	**Melozitna Rive**	**36.08**	**38**	P	**P**	**07 50 36.9**	**+0.4**
GOMU	**GeErMu**	**39.91**	**273**	P	**P**	**07 51 08.3**	**-0.7**
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,95nm,4.8s						
BERG	**Berg Lake**	**40.81**	**45**	P	**P**	**07 51 15.0**	**-0.6**
BERG				IAmb	IAmb	07 51 15.7	
	comp=Z,22nm,0.4s						
MK31	**Makanchi Array**	**43.02**	**294**	P	**P**	**07 51 32.5**	**-1.0**
MKAR	**Makanchi Array**	**43.02**	**294**	P	**P**	**07 51 32.8**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=72,slow=6.8,SNR=17						
	comp=Z,1.3nm,0.5s						
KURK	**Kurchatov**	**43.60**	**301**	P	**P**	**07 51 37.0**	**-1.0**
KURK				IAmb	IAmb	07 51 38.0	
	comp=Z,2.6nm,0.6s						
KURBB	**Kurchatov Arra**	**43.69**	**301**	P	**P**	**07 51 37.8**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=71,slow=8.7,SNR=11						
	comp=Z,1.8nm,0.6s						
BOOM	**Boomskoye usch**	**49.06**	**292**	P	**P**	**07 52 20.1**	**-0.2**
BOOM				IAmb	IAmb	07 52 21.8	
	comp=Z,2.9nm,0.7s						
KKAR	**Karatay Array**	**52.11**	**295**	P	**P**	**07 52 41.5**	**-1.2**
GAR	**Garm**	**54.54**	**291**	P	**P**	**07 52 60.0**	**-0.4**
GAR				IAmb	IAmb	07 53 00.5	
	comp=Z,14nm,0.8s						
ABKAR	**Akbulak array**	**54.86**	**307**	P	**P**	**07 53 01.6**	**-0.7**
CHGR	**Chuyangaron**	**55.48**	**292**	P	**P**	**07 53 06.3**	**-0.7**
FINES	**FINESS Array B**	**61.68**	**332**	P	**P**	**07 53 48.0**	**-0.8**
	comp=Z,4.2nm,0.6s,baz=54,slow=9.7,SNR=10						
	comp=Z,4.2nm,0.6s						
FINES	**FINESS Array B**	**61.68**	**332**	P	**P**	**07 53 47.8**	**-0.9**
GEYT	**Alibeck**	**62.76**	**297**	P	**P**	**07 53 55.9**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=28,slow=6.7,SNR=3.8						
	comp=Z,2.8nm,0.5s						
NVAR	**Mina Array Bea**	**65.68**	**59**	P	**P**	**07 54 16.6**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=291,slow=5.5,SNR=3.3						
	comp=Z,0.4nm,0.7s						
NC405	**NORSAR Array S**	**66.06**	**338**	P	**P**	**07 54 16.3**	**-0.8**
NB2	**NORSAR Subarra**	**66.25**	**338**	P	**P**	**07 54 17.3**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**66.25**	**338**	P	**P**	**07 54 17.5**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=32,slow=6.7,SNR=8.0						
	comp=Z,1.0nm,0.5s						
KBZ	**Khabaz**	**67.44**	**310**	P	**P**	**07 54 26.1**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=104,slow=4.8,SNR=3.8						
	comp=Z,1.7nm,0.7s						
PDAR	**Pinedale Array**	**67.59**	**51**	P	**P**	**07 54 28.4**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=285,slow=0.7,SNR=7.9						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**67.59**	**51**	P	**P**	**07 54 28.1**	**+0.8**
AKASG	**Malin Array Be**	**68.69**	**323**	P	**P**	**07 54 32.3**	**-1.3**
	comp=Z,1.4nm,0.4s,baz=39,slow=6.8,SNR=8.6						
	comp=Z,1.4nm,0.4s						
BUR08	**Bucovina Ar. S**	**72.73**	**323**	P	**P**	**07 54 57.6**	**-0.3**
BUR08				IAmb	IAmb	07 54 58.0	
	comp=Z,1.9nm,0.7s						
BRTR	**Keskin Array B**	**75.08**	**313**	P	**P**	**07 55 11.3**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=46,slow=6.2,SNR=2.3						
	comp=Z,0.5nm,0.5s						
TX31	**Lajitas Ar. Si**	**80.64**	**57**	P	**P**	**07 55 42.9**	**+0.8**
TX32	**Lajitas Array**	**80.64**	**57**	P	**P**	**07 55 42.7**	**+0.6**
TXAR	**Lajitas Array**	**80.64**	**57**	P	**P**	**07 55 43.2**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=283,slow=4.0,SNR=17						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**80.64**	**57**	P	**P**	**07 55 42.9**	**+0.8**

IDC ***09*** *07:54:10.7±0.7, 50.59°N×85.71°E, h0km, mb4.0/13, mbtmp4.1/20, ML3.5/7, MS3.4/9, Error ellipse: s-maj=14.7km s-min=10.3km az=120.0*

MOS ***09*** *07:54:11.3±1.6, 50.50°N×85.42°E, h12km, mb4.7/5, Error ellipse: s-maj=6.7km s-min=4.3km az=73.4*

ASRS ***09*** *07:54:12.4±0.2, 50.7°N±0.9°×85.7°E±0.9°, h9km, MLh4.5/15, Error ellipse: s-maj=2.1km s-min=1.8km az=50.5, confirmed*

NNC ***09*** *07:54:13.8±1.6, 50.54°N×85.27E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=15.8km s-min=10.9km az=112.0*

NEIC ***09*** *07:54:17.3±1.3, 50.57°N±0.06°×85.5°E±0.1, h50km±5km, mb4.6/34, Error ellipse: s-maj=12.0km s-min=9.1km az=72.0*

ISC 09 07:54:11.5±0.8, 50.57°N±0.02°×85.56°E±0.02, h4km±5km, n201, σ1s90/270, mb4.5/33, MS3.6/6, 14C-9D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UKR	**Ust'-Kan**	**0.61**	**306**	PG	**Pb**	**07 54 24.9**	**0.0**
UKR				S	**Sb**	**07 54 33.5**	**-0.4**
UKR	**Ust'-Kan**	**0.61**	**306**	⇓Pg	**Pb**	**07 54 25.0**	**0.0**
UKR				Sg	**Sb**	**07 54 33.5**	**-0.4**
CHBI	**Chibit, Altay**	**1.27**	**101**	PG	**Pn**	**07 54 36.7**	**+0.5**
CHBI				S	**Sg**	**07 54 53.0**	**+0.6**
CHBI	**Chibit, Altay**	**1.27**	**101**	Pg	**Pn**	**07 54 36.9**	**+0.7**
CHBI				Sg	**Sg**	**07 54 53.0**	**+0.6**
AKAR	**Aktash**	**1.34**	**100**	PG	**Pn**	**07 54 37.0**	**-0.2**
AKAR				S	**Sg**	**07 54 54.7**	**+0.1**
AKAR	**Aktash**	**1.34**	**100**	Pg	**Pn**	**07 54 37.1**	**-0.2**
AKAR				Sg	**Sg**	**07 54 54.8**	**+0.1**
DGZ	**Jazzator, Alta**	**1.49**	**125**	Pg	**Pn**	**07 54 39.2**	**0.0**
DGZ				Sg	**Sb**	**07 54 58.1**	**-1.1**
ULGR	**Ulagan, Altay**	**1.53**	**87**	PN	**Pg**	**07 54 41.7**	**+0.8**
ULGR				S	**Sg**	**07 55 02.2**	**+1.4**
ULGR	**Ulagan, Altay**	**1.53**	**87**	Pg	**Pg**	**07 54 41.7**	**+0.8**
ULGR				Sg	**Sg**	**07 55 02.2**	**+1.4**
ARTR	**Artybash**	**1.64**	**41**	PN	**Pg**	**07 54 43.6**	**+0.7**
ARTR				S	**Sg**	**07 55 05.7**	**+1.6**
ARTR	**Artybash**	**1.64**	**41**	Pg	**Pg**	**07 54 43.6**	**+0.7**
ARTR				Sg	**Sg**	**07 55 05.8**	**+1.6**
CUR	**Chagan-Uzun**	**1.85**	**104**	PN	**Pb**	**07 54 46.3**	**+0.3**
CUR				S	**Sg**	**07 55 11.9**	**+0.9**
CUR	**Chagan-Uzun**	**1.85**	**104**	Pg	**Pb**	**07 54 46.4**	**+0.3**
CUR				Sg	**Sg**	**07 55 12.0**	**+0.9**
TASR	**Tashtagol**	**2.62**	**33**	PN	**Pg**	**07 55 01.2**	**-0.5**
TASR				S	**Sg**	**07 55 35.9**	**+0.1**
TASR	**Tashtagol**	**2.62**	**33**	Pg	**Pg**	**07 55 01.3**	**-0.5**
TASR				Sg	**Sg**	**07 55 35.9**	**+0.1**
ELT	**Eltsovka**	**2.73**	**9**	PN	**Pg**	**07 55 03.6**	**-0.1**
ELT				S	**Sg**	**07 55 39.4**	**+0.4**
ELT	**Eltsovka**	**2.73**	**9**	Pn	**Pb**	**07 54 59.0**	**-1.8**
ELT				Pg	**Pg**	**07 55 03.6**	**-0.1**
ELT				Sg	**Sg**	**07 55 39.5**	**+0.4**
ZSN	**Zaisan**	**3.16**	**189**	*i* PN	**Pn**	**07 55 04.0**	**+2.0**
ZSN	**Zaisan**	**3.16**	**189**	*i* Pn	**Pn**	**07 55 04.1**	**+2.0**
	baz=188						
SEM	**Semipalatinsk**	**3.39**	**269**	*e*PN	**Pn**	**07 55 06.5**	**+1.1**
SEM	**Semipalatinsk**	**3.39**	**269**	*e*Pn	**Pn**	**07 55 06.5**	**+1.1**
	baz=270						
ZAA0	**Zalesovo Array**	**3.41**	**353**	Pn	**Pn**	**07 55 07.3**	**+1.9**
ZAA0	**Zalesovo Array**	**3.41**	**353**	⇑Pn	**Pn**	**07 55 07.2**	**+1.9**
	6.9nm,0.7s						
ZAA0				⇑Pg	**Pg**	**07 55 18.1**	**+1.2**
	24nm,0.8s						
ZAA0				⇑Lg	Lg	07 55 59.5	
	115nm,0.8s						
ZALV	**Zalesovo Beam**	**3.41**	**353**	Pn	**Pn**	**07 55 06.7**	**+1.2**
	12nm,0.3s,baz=174,slow=14,SNR=183						
ZALV				Sn	**Sn**	**07 55 47.7**	**+1.4**
	21nm,0.3s,baz=172,slow=22,SNR=8.6						
ZALV				Lg	Lg	07 56 00.1	
	65nm,0.3s,baz=164,slow=28,SNR=20						
	36nm,0.3s						
ZALV	**Zalesovo Beam**	**3.41**	**353**		**Pn**	**07 55 07.3**	**+1.9**
ZALV	**Zalesovo Beam**	**3.41**	**353**	PN	**Pn**	**07 55 07.3**	**+1.9**
VCHU	**Verkh-Chumysh,**	**3.43**	**9**	PN	**Pb**	**07 55 14.7**	**+1.9**
VCHU				S	**Sg**	**07 56 00.8**	**-0.8**
VCHU	**Verkh-Chumysh,**	**3.43**	**9**	Pn	**Pn**	**07 55 09.6**	**+3.8**
VCHU				Sg	**Sg**	**07 56 01.6**	**-0.1**
BJR1	**Bachatsky 1, K**	**3.68**	**4**	PN	**Pg**	**07 55 12.3**	**+3.1**
BJR1				S	**Sg**	**07 56 09.2**	**-0.5**
BJR1	**Bachatsky 1, K**	**3.68**	**4**	Pn	**Pn**	**07 55 12.4**	**+3.1**
BJR1				Pg	**Pg**	**07 55 22.2**	**+0.2**
BJR1				Sg	**Sg**	**07 56 09.2**	**-0.5**
KOTO	**Kotino, Kuzbas**	**3.71**	**13**	Pn	**Pn**	**07 55 12.9**	**+3.3**
KOTO				Pg	**Pg**	**07 55 23.2**	**+0.6**
KOTO				Sg	**Sg**	**07 56 09.9**	**-0.9**
LUZB	**Luzhba, Kemero**	**3.72**	**32**	PN	**Pn**	**07 55 13.5**	**+3.9**
LUZB				S	**Sg**	**07 56 07.9**	**-2.9**
LUZB	**Luzhba, Kemero**	**3.72**	**32**	Pn	**Pn**	**07 55 13.5**	**+3.9**
LUZB				Pg	**Pg**	**07 55 23.5**	**+0.8**
LUZB				Sg	**Sg**	**07 56 08.0**	**-2.9**
BJR2	**Bachatsky-2, K**	**3.73**	**5**	PN	**Pn**	**07 55 13.9**	**+4.1**
BJR2	**Bachatsky-2, K**	**3.73**	**5**	Pn	**Pn**	**07 55 14.0**	**+4.1**
BJR2				Sg	**Sg**	**07 56 13.0**	**+1.8**
SALR	**Pechorkino, Sa**	**3.85**	**1**	PN	**Pn**	**07 55 13.8**	**+2.3**
SALR				P	**Pg**	**07 55 25.5**	**+0.3**
SALR	**Pechorkino, Sa**	**3.85**	**1**	Pn	**Pg**	**07 55 13.9**	**+2.3**
SALR				Pg	**Pg**	**07 55 25.6**	**+0.3**
SALR				Sg	**Sg**	**07 56 16.1**	**+1.0**
POMOR	**Pomortsevo, Ku**	**3.88**	**8**	PN	**Pb**	**07 55 16.7**	**-3.8**
POMOR	**Pomortsevo, Ku**	**3.88**	**8**	Pn	**Pb**	**07 55 16.7**	**-3.8**
POMOR				Sg	**Sg**	**07 56 19.1**	**+2.9**
DJO	**Djoy, Khakassi**	**4.16**	**56**	PN	**Pg**	**07 55 29.8**	**-1.4**
DJO				S	**Sg**	**07 56 21.6**	**-3.4**
DJO	**Djoy, Khakassi**	**4.16**	**56**	Pg	**Pg**	**07 55 29.8**	**-1.4**
DJO				Sg	**Sg**	**07 56 21.7**	**-3.4**
KHAR	**Kharino, NSO,**	**4.22**	**344**	PN	**Pn**	**07 55 17.0**	**+0.5**
KHAR				PG	**Pg**	**07 55 30.3**	**-2.0**
KHAR				S	**Sn**	**07 56 07.4**	**+1.2**
KHAR	**Kharino, NSO,**	**4.22**	**344**	Pn	**Pn**	**07 55 17.1**	**+0.5**
KHAR				Pg	**Pg**	**07 55 30.4**	**-2.0**
KHAR				S	**Sn**	**07 56 07.4**	**+1.2**
KHAR				Sg	**Sg**	**07 56 07.4**	**+0.6**
DJOS	**Djoyskaya Sosn**	**4.26**	**56**	Sg	**Sg**	**07 56 26.0**	**-2.3**
CERR	**Cheremushki**	**4.30**	**56**	Pg	**Pg**	**07 55 33.1**	**-0.7**
CERR				Sg	**Sg**	**07 56 27.8**	**-1.7**
MK31	**Makanchi Array**	**4.36**	**211**	Pn	**Pn**	**07 55 21.0**	**+2.5**
MK31	**Makanchi Array**	**4.36**	**211**	*d* PN	**Pn**	**07 55 20.8**	**+2.3**
MK31	**Makanchi Array**	**4.36**	**211**	⇓Pn	**Pn**	**07 55 21.0**	**+2.5**
	40nm,0.6s,baz=33,slow=12,SNR=635						
MK31				⇑Lg	Lg	07 56 28.2	
	249nm,0.6s,baz=38,slow=28,SNR=6.8						
MKAR	**Makanchi Array**	**4.36**	**211**	Pn	**Pn**	**07 55 21.0**	**+2.5**
	11nm,0.3s,baz=36,slow=13,SNR=688						
MKAR				Sn	**Sn**	**07 56 12.1**	**+2.3**
	12nm,0.3s,baz=33,slow=29,SNR=7.4						
MKAR				Lg	Lg	07 56 26.9	
	22nm,0.3s,baz=21,slow=27,SNR=9.3						
MKAR				LR	LR	07 57 08.2	
	comp=Z,225nm,18.8s,baz=83,slow=40						
	62nm,0.6s						
MKAR	**Makanchi Array**	**4.36**	**211**	Pn	**Pn**	**07 55 21.0**	**+2.5**
MKAR	**Makanchi Array**	**4.36**	**211**	Pn	**Pn**	**07 55 21.1**	**+2.5**
MKAR	**Makanchi Array**	**4.36**	**211**	S	**Sn**	**07 56 10.8**	**+1.0**
MKAR				Sg	**Sg**	**07 56 27.9**	**-3.5**
KURK	**Kurchatov**	**4.42**	**275**	Pn	**Pn**	**07 55 21.1**	**+1.9**
KURK	**Kurchatov**	**4.42**	**275**	*c* PN	**Pn**	**07 55 20.8**	**+1.6**
KURK	**Kurchatov**	**4.42**	**275**	⇑Pn	**Pn**	**07 55 20.8**	**+1.6**
	20nm,0.6s						
KURK				⇑Sn	**Sn**	**07 56 10.9**	**-0.2**
	49nm,0.5s						
KURK				⇓Lg	Lg	07 56 30.3	
	188nm,0.6s						
KURK	**Kurchatov**	**4.42**	**275**	Pn	**Pn**	**07 55 20.9**	**+1.7**
KURK				S	**Sn**	**07 56 10.7**	**-0.3**
KURK				Sg	**Sg**	**07 56 30.0**	**-3.3**
MAKZ	**Makanchi**	**4.45**	**214**		**Pn**	**07 55 21.5**	**+1.7**
MAKZ	**Makanchi**	**4.45**	**214**	PN	**Pn**	**07 55 21.1**	**+2.3**
MAKZ	**Makanchi**	**4.45**	**214**	⇑Pn	**Pn**	**07 55 22.1**	**+2.3**
	26nm,0.6s						
MAKZ				⇓Lg	Lg	07 56 27.6	
	298nm,1.0s						
MAKZ	**Makanchi**	**4.45**	**214**	Pn	**Pn**	**07 55 22.4**	**+2.6**
MAKZ				S	**Sn**	**07 56 16.3**	**+4.3**
KURBB	**Kurchatov Arra**	**4.47**	**273**	Pn	**Pn**	**07 55 21.9**	**+1.8**
	2.5nm,0.3s,baz=87,slow=15,SNR=337						
KURBB				Lg	Lg	07 56 29.1	
	4.3nm,0.3s,baz=217,slow=22,SNR=3.2						
	31nm,0.4s						
KURBB	**Kurchatov Arra**	**4.47**	**273**	⇑Pn	**Pn**	**07 55 21.8**	**+1.8**
	59nm,0.5s						
KURBB				⇑Sn	**Sn**	**07 56 13.9**	**+1.3**
	146nm,0.6s						
KURBB				⇓Lg	Lg	07 56 32.4	
	637nm,0.8s						
NVS	**Novosibirsk**	**4.50**	**343**	Pn	**Pn**	**07 55 20.9**	**+0.5**
NVS				Pg	**Pg**	**07 55 37.7**	**0.0**
NVS				S	**Sn**	**07 56 12.4**	**+1.0**
NVS				Sg	**Sg**	**07 56 36.0**	**+0.1**
NVSII	**Novosibirsk**	**4.50**	**343**	PN	**Pn**	**07 55 20.9**	**+0.5**
NVSII				PG	**Pg**	**07 55 36.8**	**-0.8**
NVSII				S	**Sn**	**07 56 12.8**	**-0.3**
NVSII	**Novosibirsk**	**4.50**	**343**	Pn	**Pn**	**07 55 21.0**	**+0.5**
NVSII				Pg	**Pg**	**07 55 36.9**	**-0.8**
NVSII				S	**Sn**	**07 56 12.9**	**-0.3**
NVSII				Sg	**Sg**	**07 56 35.5**	**-0.5**
KEM	**Kemerovo**	**4.79**	**4**	PN	**Pg**	**07 55 41.0**	**-2.2**
KEM				S	**Sg**	**07 56 43.6**	**-1.6**
KEM	**Kemerovo**	**4.79**	**4**	Pg	**Pg**	**07 55 41.2**	**-2.0**
KEM				Sg	**Sg**	**07 56 43.7**	**-1.6**
ABNR	**Abakan**	**4.80**	**47**	PN	**Pb**	**07 55 38.9**	**+2.8**
ABNR				S	**Sg**	**07 56 42.0**	**-3.6**
ABNR	**Abakan**	**4.80**	**47**	Sg	**Sg**	**07 56 42.0**	**-3.6**
ABNR	**Abakan**	**4.80**	**47**	Pg	**Pb**	**07 55 38.9**	**+2.8**
SHRR	**Shira**	**4.83**	**34**	*i* PN	**Pb**	**07 55 40.2**	**+3.6**
SHRR				*i* S	**Sg**	**07 56 43.1**	**-3.3**
HVS	**Khovu-Aksy**	**5.19**	**81**	*i* PN	**Pb**	**07 55 47.3**	**+4.4**
HVS				*i* S	**Sg**	**07 56 55.2**	**-3.0**
ARDR	**Aradan**	**5.30**	**65**	Pg	**Pg**	**07 55 49.8**	**-3.3**
ARDR				Sg	**Sg**	**07 56 59.3**	**-2.5**
KZLR	**Kyzyl**	**5.71**	**75**	*i* PN	**Pb**	**07 56 56.5**	**+4.8**
KZLR				*i* S	**Sg**	**07 57 11.4**	**-3.5**
KZLR	**Kyzyl**	**5.71**	**75**	Sg	**Sg**	**07 57 09.2**	**-5.7**
ERNS	**Erzin**	**6.14**	**89**	PN	**Pn**	**07 55 42.7**	**-0.4**
ERNS				PG	**Pg**	**07 56 05.2**	**-3.9**
ERNS				SG	**Sg**	**07 57 23.0**	**-5.7**
ERNS	**Erzin**	**6.14**	**89**	Pn	**Pn**	**07 55 42.8**	**-0.4**
ERNS				Pg	**Pg**	**07 56 05.3**	**-3.9**
ERNS				Sg	**Sg**	**07 57 23.1**	**-5.7**
ORY	**Orie**	**7.29**	**49**	Sg	**Sg**	**07 58 02.3**	**-3.2**
TDK	**Taldyqorghan**	**7.36**	**224**	*e*P	**Pn**	**07 56 01.0**	**+1.3**
TDK	**Taldyqorghan**	**7.36**	**224**	*e*Pn	**Pn**	**07 56 01.1**	**+1.3**
	baz=224						
GZLN	**Zheleznogorsk**	**7.60**	**37**	Sg	**Sg**	**07 58 13.1**	**-2.3**
KNGR	**Kungurtug, Tuv**	**7.62**	**85**	Pg	**Pg**	**07 56 33.4**	**-3.9**
KNGR				Sg	**Sg**	**07 58 18.6**	**+2.7**
ARXS	**Arharly**	**8.24**	**222**	*e*P	**Pn**	**07 56 12.5**	**+0.6**
BRZS	**Berezniki**	**8.27**	**271**	*e*P	**Pn**	**07 56 11.5**	**-0.7**
BRZS	**Berezniki**	**8.27**	**271**	*e*Pn	**Pn**	**07 56 11.5**	**-0.7**
	baz=271						
PDGK	**Podgornoye**	**8.35**	**212**	P	**Pn**	**07 56 13.0**	**-0.4**
PDGK	**Podgornoye**	**8.35**	**212**	⇓Pn	**Pn**	**07 56 13.0**	**-0.4**
	9.2nm,0.6s						
PDGK				⇑Lg	Lg	07 58 29.0	
	101nm,1.1s						
SHLS	**Shalkode**	**8.51**	**212**	*e*P	**Pn**	**07 56 13.8**	**-1.8**
SHLS	**Shalkode**	**8.51**	**212**	*e*Pn	**Pn**	**07 56 13.9**	**-1.8**
	baz=210						
UZB	**Uzynbulak**	**8.67**	**214**	*e*P	**Pn**	**07 56 18.1**	**+0.3**
UZB	**Uzynbulak**	**8.67**	**214**	*e*Pn	**Pn**	**07 56 18.2**	**+0.3**
	baz=214						
OTUK	**Ortayu**	**8.93**	**260**	P	**Pn**	**07 56 20.6**	**-0.6**
OTUK						07 57 56.0	
OTUK	**Ortayu**	**8.93**	**260**	⇑Pn	**Pn**	**07 56 20.6**	**-0.6**
	9.6nm,0.6s						
OTUK				⇓Sn	**Sn**	**07 57 56.1**	**-6.1**
	7.9nm,0.6s						
OTUK				⇑Lg	Lg	07 58 49.7	
	77nm,1.0s						
SATY	**Saty**	**8.97**	**216**	*e*P	**Pn**	**07 56 21.0**	**-0.9**
SATY	**Saty**	**8.97**	**216**	*e*Pn	**Pn**	**07 56 21.0**	**-0.9**
	baz=216						
KUU	**Kurty**	**9.16**	**227**	*e*P	**Pn**	**07 56 23.6**	**-0.8**
KUU	**Kurty**	**9.16**	**227**	*e*Pn	**Pn**	**07 56 23.6**	**-0.8**
	baz=227						
MDOK	**Medeo**	**9.42**	**221**	*e*P	**Pn**	**07 56 27.1**	**-1.0**
MDOK	**Medeo**	**9.42**	**221**	*e*Pn	**Pn**	**07 56 27.1**	**-1.0**
	baz=221						
PRZ	**Przheval'sk**	**9.47**	**214**	S	**Sn**	**07 58 13.4**	**-2.4**
BTLS	**Baital**	**9.51**	**239**	*e*P	**Pn**	**07 56 28.0**	**-1.2**
BTLS	**Baital**	**9.51**	**239**	*e*Pn	**Pn**	**07 56 28.0**	**-1.2**
	baz=239						
BVA0	**Borovoye Array**	**9.71**	**290**	P	**Pn**	**07 56 30.4**	**-1.5**
BVA0	**Borovoye Array**	**9.71**	**290**	⇓Pn	**Pn**	**07 56 30.4**	**-1.5**
	7.8nm,0.9s						
MOY	**Mondy**	**9.77**	**78**	Sg		07 59 26.3	
BRVK	**Borovoye**	**9.78**	**291**	Pn	**Pn**	**07 56 33.0**	**+0.2**
BRVK	**Borovoye**	**9.78**	**291**	*i* P	**Pn**	**07 56 32.8**	**0.0**
BRVK	**Borovoye**	**9.78**	**291**	Pn	**Pn**	**07 56 32.4**	**-0.4**
BRVK				S	**Sn**	**07 58 18.1**	**-4.9**
BOOM	**Boomskoye usch**	**10.45**	**223**	Pn	**Pn**	**07 56 43.5**	**+1.3**
BOOM	**Boomskoye usch**	**10.45**	**223**	P	**Pn**	**07 56 43.5**	**+1.3**
AAK	**Ala-Archa**	**10.99**	**228**	Lg	Lg	07 59 56.3	
	1.2nm,0.3s,baz=316,slow=22,SNR=6.8						
AAK				LR	LR	08 01 11.2	
	comp=Z,77nm,19.2s,baz=33,slow=38						
AAK	**Ala-Archa**	**10.99**	**228**	*i* P	**Pn**	**07 56 49.9**	**+0.4**
KK31	**Karatay Array**	**12.71**	**240**	Pn	**Pn**	**07 57 12.3**	**-0.7**
KK31	**Karatay Array**	**12.71**	**240**	P	**Pn**	**07 57 12.3**	**-0.7**
KK31	**Kar

CIMO					IAmb	IAmb	08 02 43.2		
	comp=Z,4.4nm,0.7s								
EKA	**Eskdalemuir Ar**	**50.18**	**312**		LR	LR	08 26 34.0		
	comp=Z,111nm,18.2s,baz=0.0,slow=39								
TOLK	**Toolik Lake Re**	**54.32**	**22**		P	**P**	**08 03 38.2**	**-0.3**	
TOLK					IAmb	IAmb	08 03 39.5		
	comp=Z,8.7nm,1.2s								
COLD	**Coldfoot**	**55.26**	**23**		P	**P**	**08 03 45.5**	**+0.3**	
COLD					IAmb	IAmb	08 03 46.5		
	comp=Z,3.6nm,0.6s								
IMAR	**Indian Mountai**	**55.27**	**25**		P	**P**	**08 03 45.0**	**-0.4**	
BMAR	**Burnt Mountain**	**56.44**	**21**		P	**P**	**08 03 54.4**	**+0.6**	
H23K	**Yukon River**	**56.51**	**24**		P	**P**	**08 03 54.5**	**+0.3**	
H23K					IAmb	IAmb	08 03 55.6		
	comp=Z,3.6nm,0.9s								
I23K	**Minto, Yukon-K**	**57.09**	**24**		P	**P**	**08 03 59.3**	**+0.9**	
I23K					IAmb	IAmb	08 03 59.8		
	comp=Z,3.0nm,0.8s								
PRP	**Porcupine Dome**	**57.77**	**23**		P	**P**	**08 04 03.6**	**+0.3**	
PRP					IAmb	IAmb	08 04 04.9		
	comp=Z,4.0nm,0.6s								
CCB	**Clear Creek Bu**	**57.90**	**24**		P	**P**	**08 04 03.8**	**-0.2**	
KTH	**Kantishna Hill**	**57.92**	**26**		P	**P**	**08 04 03.8**	**-0.5**	
INK	**Inuvik**	**57.92**	**16**		P	**P**	**08 04 04.8**	**+0.7**	
	comp=Z,4.9nm,0.9s,baz=333,slow=8.2,SNR=11								
	comp=Z,4.9nm,0.9s								
INK	**Inuvik**	**57.92**	**16**		P	**P**	**08 04 04.5**	**+0.4**	
INK					IAmb	IAmb	08 04 05.5		
	comp=Z,5.2nm,0.9s								
IL31		**58.03**	**24**		P	**P**	**08 04 04.8**	**-0.2**	
IL31					IAmb	IAmb	08 04 05.7		
	comp=Z,3.6nm,0.8s								
ILAR	**Eielson Array**	**58.03**	**24**		P	**P**	**08 04 04.9**	**-0.1**	
	comp=Z,3.0nm,0.8s,baz=314,slow=4.7,SNR=27								
	comp=Z,3.0nm,0.8s								
ILAR	**Eielson Array**	**58.03**	**24**		P	**P**	**08 04 04.3**	**-0.7**	
I26K	**Coal Creek Min**	**58.51**	**22**		P	**P**	**08 04 08.5**	**+0.2**	
I26K					IAmb	IAmb	08 04 09.9		
	comp=Z,4.2nm,0.9s								
J26L	**Joseph Creek**	**59.08**	**22**		P	**P**	**08 04 12.1**	**-0.4**	
DHY	**Denali Highway**	**59.27**	**25**		P	**P**	**08 04 13.1**	**-0.8**	
DHY					IAmb	IAmb	08 04 14.4		
	comp=Z,3.2nm,0.8s								
RIDG	**Independent Ri**	**59.39**	**23**		IAmb	IAmb	08 04 14.6		
	comp=Z,5.5nm,0.8s								
RIDG					P	**P**	**08 04 14.7**	**+0.1**	
I29M	**Ogilvie Camp,**	**59.56**	**20**		P	**P**	**08 04 15.7**	**+0.1**	
DOT	**Dot Lake**	**59.67**	**23**		P	**P**	**08 04 16.5**	**+0.1**	
DOT					IAmb	IAmb	08 04 38.3		
	comp=Z,5.5nm,1.4s								
PAX	**Paxson**	**59.87**	**24**		P	**P**	**08 04 17.7**	**-0.2**	
PAX					IAmb	IAmb	08 04 18.1		
	comp=Z,5.2nm,1.4s								
PAX	**Paxson**	**59.87**	**24**		P	**P**	**08 04 17.7**	**-0.2**	
PAX					pmax	pmax			
	comp=Z,5.0nm,1.4s								
SCM	**Sheep Creek Mo**	**60.30**	**26**		P	**P**	**08 04 20.6**	**-0.1**	
SCM	**Sheep Creek Mo**	**60.30**	**26**		P	**P**	**08 04 20.7**	**-0.1**	
SCM					pmax	pmax			
	comp=Z,8.0nm,0.6s								
M24K	**Tolsona, Glenn**	**60.39**	**25**		P	**P**	**08 04 22.1**	**+0.7**	
ESDC	**Sonseca Array**	**60.40**	**297**		P	**P**	**08 04 22.2**	**+0.4**	
	comp=Z,1.7nm,0.7s,baz=40,slow=6.6,SNR=14								
	comp=Z,1.7nm,0.7s								
L27K	**Beaver Creek,**	**60.71**	**23**		P	**P**	**08 04 24.5**	**+0.9**	
BCAR	**Beaver Creek A**	**60.72**	**23**		P	**P**	**08 04 24.1**	**+0.5**	
M27K	**Edge Creek, AK**	**61.30**	**23**		P	**P**	**08 04 28.2**	**+0.5**	
M27K					IAmb	IAmb	08 04 29.5		
	comp=Z,5.0nm,0.9s								
FID	**Port Fidalgo**	**61.42**	**26**		P	**P**	**08 04 28.0**	**-0.4**	
YAH	**Yahtse**	**63.03**	**24**		P	**P**	**08 04 38.9**	**-0.5**	
TABL	**Table Mountain**	**63.12**	**24**		P	**P**	**08 04 39.2**	**-0.9**	
TORD	**Torodi Ar. Bea**	**76.08**	**274**		P	**P**	**08 05 59.5**	**-0.9**	
	comp=Z,1.0nm,0.7s,baz=26,slow=5.5,SNR=7.2								
	comp=Z,1.0nm,0.7s								
FITZ	**Fitzroy Crossi**	**76.93**	**141**		P	**P**	**08 06 03.9**	**-1.0**	
FITZ					IAmb	IAmb	08 06 25.9		
	comp=Z,11nm,1.5s								
WRAB	**Tennant Creek**	**82.29**	**134**		P	**P**	**08 06 33.2**	**-0.9**	
WRAB	**Tennant Creek**	**82.29**	**134**		P	**P**	**08 06 33.2**	**-0.9**	
WRAB					pmax	pmax			
	comp=Z,21nm,1.5s								
WRA	**Warramunga Arr**	**82.30**	**134**		P	**P**	**08 06 32.7**	**-1.4**	
	comp=Z,0.6nm,0.7s,baz=342,slow=5.3,SNR=2.2								
WRA					LR	LR	08 45 09.2		
	comp=Z,39nm,18.0s,baz=204,slow=37								
	comp=Z,0.6nm,0.7s								
WB2	**Warramunga Arr**	**82.30**	**134**		P	**P**	**08 06 32.4**	**-1.8**	
WB2					IAmb	IAmb	08 06 38.7		
	comp=Z,13nm,1.4s								
WR0	**Warramunga Arr**	**82.40**	**134**		P	**P**	**08 06 32.9**	**-1.8**	
ASAR	**Alice Springs**	**85.35**	**137**		P	**P**	**08 06 48.3**	**-1.4**	
	comp=Z,0.9nm,0.7s,baz=332,slow=5.2,SNR=8.1								
	comp=Z,0.9nm,0.7s								
PDAR	**Pinedale Array**	**86.11**	**11**		P	**P**	**08 06 52.8**	**-0.9**	
	comp=Z,0.4nm,0.5s,baz=4.1,slow=2.1,SNR=5.0								
	comp=Z,0.4nm,0.5s								
NVAR	**Mina Array Bea**	**88.92**	**19**		P	**P**	**08 07 06.8**	**-0.5**	
	comp=Z,0.7nm,0.8s,baz=340,slow=5.0,SNR=4.0								
	comp=Z,0.7nm,0.8s								
ANMO	**Albuquerque**	**94.19**	**10**		LR	LR	08 55 22.9		
	comp=Z,14nm,18.8s,baz=40,slow=39								

*ATH **09** 08:04:06.9, 41.92N×20.07E, h10km±31km, ML3.1/3, Error ellipse: s-maj=31.6km s-min=2.6km az=0.0*
*RHSSO **09** 08:04:08.9±0.7, 41.58N×20.38E, h4km±3km, ML3.6/14*
*THE **09** 08:04:09.7, 41.85N×20.12E, h0km±1km, ML2.9/11, Error ellipse: s-maj=2.8km s-min=0.8km az=336.0*
*TIR **09** 08:04:10.7, 41.74N×20.16E, h0km±2km, Md3.2, Ml3.4*
*BEO **09** 08:04:11.5±0.3, 41.71N×20.32E, h8km±2km, ML2.9/18*
*PDG **09** 08:04:11.1±0.3, 41.73N×20.27E, h11km, MD3.3/6, ML3.3/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

ISC 09 08:04:12.2±0.9, **41.72N**±0.01×**20.23E**±0.02, **h14**km±7km, **n158**, σ1s**14**/250, **39C-14D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.16**	**104**	P		**Pg**		**08 04 15.8**	**-0.4**
PHP				S		**Sb**		**08 04 19.6**	**-0.7**
	60μm,0.1s								
PHP	**Peshkopia**	**0.16**	**104**	P		**Pg**		**08 04 15.9**	**-0.4**
	baz=105								
PHP				S		**Sb**		**08 04 19.6**	**-0.7**
	baz=105								
TIR	**Tirane**	**0.47**	**216**	P		**Pg**		**08 04 20.5**	**-0.9**
TIR	**Tirane**	**0.47**	**216**	P		**Pg**		**08 04 20.2**	**-1.2**
TIR				S		**Sg**		**08 04 27.5**	**-0.2**
	1μm,0.4s								
TIR	**Tirane**	**0.47**	**216**	*e*Pg		**Pg**		**08 04 20.3**	**-1.2**
TIR				*e*Sg		**Sb**		**08 04 28.5**	**-0.4**
TIR	**Tirane**	**0.47**	**216**	P		**Pg**		**08 04 20.4**	**-1.1**
	baz=210								
TIR				S		**Sg**		**08 04 27.8**	**+0.1**
	baz=210								
BCI	**Bajram Curri**	**0.65**	**349**	P		**Pg**		**08 04 24.1**	**-0.9**
	baz=354								
BCI				S		**Sg**		**08 04 33.4**	**-0.3**
	baz=354								
BCI				AMP					
	comp=E,7.0nm,1.0s,baz=354								
ULC	**Ulcinj**	**0.78**	**288**	⇑*i*Pg		**Pg**		**08 04 25.8**	**-1.5**
ULC				*i* Sg		**Sb**		**08 04 38.3**	**+0.4**
ULC	**Ulcinj**	**0.78**	**288**	⇑*i*Pg		**Pg**		**08 04 25.8**	**-1.5**
ULC				*e*Sg		**Sb**		**08 04 38.0**	**+0.1**
PVY	**Plav**	**0.89**	**347**	⇑*i*Pg		**Pb**		**08 04 28.0**	**-1.6**
PVY				*i* Sg		**Sb**		**08 04 42.2**	**+0.8**
PVY	**Plav**	**0.89**	**347**	⇓*i*Pg		**Pb**		**08 04 28.4**	**-1.2**
PVY				*e*Sg		**Sn**		**08 04 43.3**	**0.0**
DRME	**Dracevica, Mon**	**0.91**	**301**	⇑*i*Pg		**Pb**		**08 04 27.9**	**-1.8**
DRME				*e*Sg		**Sn**		**08 04 43.4**	**0.0**
DRME	**Dracevica, Mon**	**0.91**	**301**	⇑*i*Pg		**Pb**		**08 04 28.1**	**-1.6**
DRME				*i* Sg		**Sn**		**08 04 43.0**	**-0.4**
DRME	**Dracevica, Mon**	**0.91**	**301**	⇓*i*Pg		**Pb**		**08 04 28.3**	**-1.4**
DRME				*e*Sg		**Sn**		**08 04 42.6**	**-0.8**
PDG	**Podgorica**	**1.01**	**315**	⇑⇑P		**Pb**		**08 04 29.8**	**-1.8**
PDG	**Podgorica**	**1.01**	**315**	⇑*i*Pg		**Pb**		**08 04 29.7**	**-1.8**
PDG				*e*Sg		**Sn**		**08 04 47.2**	**+1.2**
PDG	**Podgorica**	**1.01**	**315**	*e*Pg		**Pb**		**08 04 29.9**	**-1.6**
PDG				*e*Sg		**Sg**		**08 04 45.2**	**+0.2**
TTG	**Podgorica**	**1.01**	**315**	⇑*i*Pg		**Pb**		**08 04 30.0**	**-1.6**
TTG				*i* Sg		**Sn**		**08 04 46.8**	**+0.8**
TTG	**Podgorica**	**1.01**	**315**	⇓*i*Pg		**Pb**		**08 04 30.5**	**-1.0**
TTG				*e*Sg		**Sn**		**08 04 47.0**	**+1.0**
BUM	**Brajici-Budva**	**1.15**	**301**	⇑*i*Pg		**Pn**		**08 04 32.9**	**-1.0**
BUM				*i* Sg		**Sg**		**08 04 51.3**	**+1.9**
BUM	**Brajici-Budva**	**1.15**	**301**	⇓*i*Pg		**Pn**		**08 04 33.0**	**-1.0**
BUM				*e*Sg		**Sg**		**08 04 51.1**	**+1.7**
IVA	**Berane**	**1.18**	**348**	⇓*i*Pg		**Pn**		**08 04 32.9**	**-1.4**
IVA				*i* Sg		**Sg**		**08 04 51.8**	**+1.6**
IVA	**Berane**	**1.18**	**348**	⇑*i*Pg		**Pn**		**08 04 33.3**	**-1.0**
IVA				*e*Sg		**Sg**		**08 04 51.9**	**+1.7**
KBN	**Korca**	**1.18**	**159**	P		**Pb**		**08 04 34.1**	**-0.3**
KBN				S		**Sg**		**08 04 54.3**	**+4.1**
	comp=E,685nm,0.8s								
KBN	**Korca**	**1.18**	**159**	P		**Pg**		**08 04 34.8**	**-0.1**
	baz=156								
KBN				S		**Sg**		**08 04 51.2**	**+0.9**
	baz=156								
KOME	**Kolasin**	**1.25**	**335**	⇑*i*Pg		**Pn**		**08 04 34.6**	**-0.7**
KOME				*i* Sg		**Sg**		**08 04 54.2**	**+1.7**
KOME	**Kolasin**	**1.25**	**335**	⇓*i*Pg		**Pn**		**08 04 34.8**	**-0.5**
KOME				*e*Sg		**Sg**		**08 04 55.1**	**+2.6**
CEME	**Cevo**	**1.28**	**311**	⇓*i*Pg		**Pn**		**08 04 34.9**	**-0.8**
CEME				*i* Sg		**Sg**		**08 04 55.8**	**+2.3**
CEME	**Cevo**	**1.28**	**311**	⇑*i*Pg		**Pn**		**08 04 34.9**	**-0.8**
CEME				*e*Sg		**Sg**		**08 04 55.4**	**+1.9**
NKME	**Niksic**	**1.41**	**318**	⇓*i*Pg		**Pn**		**08 04 37.4**	**-0.1**
NKME				*i* Sg		**Sg**		**08 04 59.8**	**+2.1**
NKME	**Niksic**	**1.41**	**318**	⇓*i*Pg		**Pn**		**08 04 37.1**	**-0.4**
NKME				*e*Sg		**Sg**		**08 04 59.9**	**+2.2**
NKY	**Niksic**	**1.43**	**320**	⇓*i*Pg		**Pn**		**08 04 38.0**	**+0.3**
NKY				*i* Sg		**Sg**		**08 05 00.0**	**+1.8**
NKY	**Niksic**	**1.43**	**320**	⇓*i*Pg		**Pn**		**08 04 38.1**	**+0.3**
NKY				*e*Sg		**Sg**		**08 05 00.7**	**+2.5**
NEST	**Nestorio**	**1.45**	**154**	P		**Pn**		**08 04 38.0**	**-0.1**
NEST				S		**Sg**		**08 05 00.5**	**+1.7**
	comp=E,300nm,0.4s								
NEST	**Nestorio**	**1.45**	**154**	P		**Pn**		**08 04 38.0**	**-0.1**
NEST				S		**Sg**		**08 04 60.0**	**+1.2**
NEST				AML		AML		08 05 03.1	
	comp=E,865μm,0.6s								
NEST				AML		AML		08 05 11.1	
	comp=N,893μm,0.7s								
HCY	**Herceg Novi**	**1.48**	**300**	⇑*i*Pn		**Pn**		**08 04 38.5**	**+0.1**
HCY				*e*Sn		**Sg**		**08 05 00.2**	**+0.2**
HCY	**Herceg Novi**	**1.48**	**300**	⇑*i*Pg		**Pn**		**08 04 38.5**	**+0.1**
HCY				*i* Sg		**Sg**		**08 05 01.3**	**+1.3**
HCY	**Herceg Novi**	**1.48**	**300**	⇑*i*Pg		**Pn**		**08 04 38.5**	**+0.1**
HCY				*e*Sg		**Sg**		**08 05 01.5**	**+1.5**
SJES	**Sjenica**	**1.55**	**353**	*e*Pg		**Pb**		**08 04 40.0**	**-0.8**
SJES				*e*Sg		**Sb**		**08 05 00.9**	**+0.6**
PRVS	**Prvonek**	**1.58**	**60**	*e*Pg		**Pn**		**08 04 39.6**	**-0.3**
PRVS				*e*Sg		**Sb**		**08 05 00.3**	**-0.8**
LSK	**Leskovik**	**1.60**	**170**	P		**Pn**		**08 04 40.1**	**0.0**
LSK				S		**Sg**		**08 05 04.6**	**+1.0**
	comp=N,538nm,0.6s								
LSK	**Leskovik**	**1.60**	**170**	P		**Pg**		**08 04 42.0**	**-0.9**
	baz=168								
LSK				S		**Sg**		**08 05 07.1**	**+3.5**
	baz=168								
LSK				AMP					
	comp=E,1.7nm,1.0s,baz=168								
BARS	**Barje**	**1.61**	**47**	*e*Pn		**Pn**		**08 04 39.8**	**-0.4**
SELS	**Selova**	**1.63**	**23**	*e*Pn		**Pn**		**08 04 40.2**	**-0.4**
SELS				*e*Sn		**Sn**		**08 05 01.0**	**-0.4**
PENT	**Pentalofos**	**1.67**	**155**	P		**Pn**		**08 04 41.6**	**+0.5**
TREB	**Trebinje**	**1.71**	**306**	⇑*i*Pn		**Pn**		**08 04 42.2**	**+0.6**
TREB				*e*Sn		**Sg**		**08 05 06.6**	**-0.8**
TREB	**Trebinje**	**1.71**	**306**	*e*Pn		**Pb**		**08 04 42.6**	**-0.9**
TREB				*e*Sn		**Sb**		**08 05 06.9**	**+1.0**
BRY	**Bratogost**	**1.72**	**314**	⇑*i*Pn		**Pn**		**08 04 42.3**	**+0.4**
BRY				*e*Sn		**Sb**		**08 05 06.0**	**+0.8**
BRY	**Bratogost**	**1.72**	**314**	⇓*i*Pn		**Pb**		**08 04 42.7**	**-1.0**
BRY				*i* Sn		**Sg**		**08 05 07.1**	**-0.5**
BRY	**Bratogost**	**1.72**	**314**	⇑*i*Pn		**Pb**		**08 04 42.9**	**-0.8**
BRY				*e*Sn		**Sg**		**08 05 08.6**	**+1.0**
PLE	**Pljevlja**	**1.72**	**339**	⇓*i*Pn		**Pb**		**08 04 42.9**	**-0.8**
PLE				*i* Sn		**Sg**		**08 05 06.6**	**-1.1**
PLE	**Pljevlja**	**1.72**	**339**	⇑*i*Pn		**Pg**		**08 04 44.6**	**-0.7**
PLE				*e*Sn		**Sg**		**08 05 08.4**	**+0.7**
UPM	**Unac-Piva**	**1.77**	**327**	⇑*i*Pn		**Pn**		**08 04 43.2**	**+0.5**
UPM				*e*Sn		**Sg**		**08 05 08.3**	**-1.1**
UPM	**Unac-Piva**	**1.77**	**327**	⇑*i*Pn		**Pn**		**08 04 42.9**	**+0.2**
UPM				*i* Sn		**Sg**		**08 05 08.3**	**-1.1**
UPM	**Unac-Piva**	**1.77**	**327**	⇑*i*Pn		**Pb**		**08 04 44.9**	**+0.3**
UPM				*e*Sn		**Sg**		**08 05 08.8**	**-0.6**
GRG	**Griva**	**1.81**	**114**	P		**Pn**		**08 04 42.6**	**-0.3**
GRG				S		**Sg**		**08 05 09.3**	**-1.0**
	comp=E,338nm,0.8s								
GRG	**Griva**	**1.81**	**114**	P		**Pn**		**08 04 42.9**	**0.0**
GRG				S		**Sb**		**08 05 08.4**	**+0.9**
GRG				AML		AML		08 05 11.7	
	comp=N,655μm,0.7s								
GRG				AML		AML		08 05 14.0	
	comp=E,738μm,0.7s								
DBRK	**Dubrovnik**	**1.81**	**302**	*e*Pn		**Pn**		**08 04 42.4**	**-0.6**
KZN	**Kozani**	**1.83**	**140**	P		**Pn**		**08 04 43.7**	**+0.3**
KZN				S		**Sg**		**08 05 10.3**	**-0.9**
	comp=E,278nm,0.7s								
KZN	**Kozani**	**1.83**	**140**	P		**Pn**		**08 04 43.3**	**-0.1**
KZN				S		**Sg**		**08 05 10.2**	**-0.9**
KZN				AML		AML		08 05 13.0	
	comp=E,640μm,0.7s								
KZN				AML		AML		08 05 14.3	
	comp=N,466μm,0.8s								
BOSS	**Bosilegrad**	**1.84**	**64**	*e*Pn		**Pn**		**08 04 43.0**	**-0.4**
BOSS				*e*Sn		**Sn**		**08 05 04.6**	**-2.0**
SRN	**Sarande**	**1.85**	**185**	P		**Pb**		**08 04 44.4**	**-1.4**
SRN				S		**Sg**		**08 05 10.0**	**-1.7**
	comp=N,138nm,0.7s								
SRN	**Sarande**	**1.85**	**185**	P		**Pg**		**08 04 48.1**	**+0.4**
	baz=184								
IVAS	**Ivanjica**	**1.85**	**358**	*e*Pn		**Pn**		**08 04 43.5**	**-0.1**
IVAS				*e*Sn		**Sb**		**08 05 07.8**	**-1.2**
RUDO	**Rudo**	**2.00**	**342**	*e*Pn		**Pn**		**08 04 45.9**	**+0.3**
RUDO				*e*Sn		**Sb**		**08 05 12.9**	**-0.2**
RUDO	**Rudo**	**2.00**	**342**	*e*Pn		**Pn**		**08 04 46.3**	**+0.7**
KEK	**Kerkira**	**2.04**	**189**	P		**Pn**		**08 04 46.5**	**+0.5**
KEK				S		**Sb**		**08 05 14.5**	**+0.4**
	comp=N,120nm,0.7s								
KEK	**Kerkira**	**2.04**	**189**	P		**Pn**		**08 04 46.4**	**+0.3**
KEK				S		**Sb**		**08 05 14.2**	**+0.1**
KNT	**Kendrikon**	**2.08**	**105**	P		**Pn**		**08 04 46.1**	**-0.6**
KNT				S		**Sb**		**08 05 15.3**	**-0.2**
	comp=N,120nm,0.7s								
KNT	**Kendrikon**	**2.08**	**105**	P		**Pn**		**08 04 46.3**	**-0.4**
KKB	**Krupnik**	**2.14**	**85**	*i* P		**Pn**		**08 04 48.1**	**+0.6**
IGT	**Igoumenitsa**	**2.19**	**178**	P		**Pn**		**08 04 49.2**	**+1.0**
IGT				S		**Sb**		**08 05 19.2**	**+0.6**
	comp=N,110nm,0.6s								
IGT	**Igoumenitsa**	**2.19**	**178**	P		**Pn**		**08 04 49.0**	**+0.8**
GRUS	**Gruza**	**2.19**	**9**	*e*Pn		**Pn**		**08 04 48.8**	**+0.6**
BOVS	**Bovan**	**2.20**	**29**	⇑⇑P		**Pn**		**08 04 48.3**	**0.0**
BOVS	**Bovan**	**2.20**	**29**	*e*Pn		**Pn**		**08 04 48.1**	**-0.2**
BOVS				*e*Sn		**Sn**		**08 05 14.7**	**-0.6**
STON	**Ston**	**2.20**	**302**	*e*Pn		**Pn**		**08 04 47.9**	**-0.4**
STON				*e*Sn		**Sb**		**08 05 18.1**	**-0.4**
STON	**Ston**	**2.20**	**302**	*e*Pn		**Pn**		**08 04 47.5**	**-0.8**
STON	**Ston**	**2.20**	**302**	*e*Pn		**Pn**		**08 04 47.8**	**-0.5**
BBLS	**Lazići**	**2.23**	**344**	*e*Pn		**Pn**		**08 04 49.0**	**+0.2**
BBLS				*e*Sn		**Sb**		**08 05 19.0**	**-0.7**
BBLS	**Lazići**	**2.23**	**344**	*e*Pn		**Pn**		**08 04 49.9**	**+1.1**
ZAPS	**Zavoj**	**2.36**	**48**	*e*Pn		**Pn**		**08 04 50.5**	**0.0**
DIVS	**Divibare**	**2.38**	**356**	⇑*i*Pn		**Pn**		**08 04 50.8**	**-0.1**
DIVS				*e*Sn		**Sb**		**08 05 22.3**	**-1.9**
DIVS	**Divibare**	**2.38**	**356**	*e*Pn		**Pn**		**08 04 51.3**	**+0.4**
DIVS				*e*Sn		**Sn**		**08 05 21.0**	**+1.1**
VTS	**Vitosha**	**2.41**	**67**	⇑⇑P		**Pn**		**08 04 51.5**	**+0.2**
VTS	**Vitosha**	**2.41**	**67**	*i* P		**Pn**		**08 04 48.4**	**-2.9**
THL	**Klokotos Trika**	**2.55**	**147**	P		**Pn**		**08 04 54.1**	**+1.0**
THL				S		**Sb**		**08 05 27.0**	**-1.9**
THL	**Klokotos Trika**	**2.55**	**147**	P		**Pn**		**08 04 54.8**	**+1.7**
ZAGS	**Zajecar**	**2.56**	**35**	*e*Pn		**Pn**		**08 04 53.1**	**-0.1**
BLKB	**Belogradchik**	**2.62**	**43**	⇑⇑P		**Pn**		**08 04 54.6**	**+0.5**
MMB	**Musomiste**	**2.62**	**92**	*i* P		**Pb**		**08 04 59.1**	**+0.1**
LSTV	**Lastovo**	**2.69**	**294**	*e*Pn		**Pn**		**08 04 54.2**	**-0.8**
MAKA	**Makarska**	**2.84**	**304**	*e*Pn		**Pn**		**08 04 57.6**	**+0.5**
MATE	**Matera**	**2.87**	**249**	⇑⇑P		**Pn**		**08 04 56.9**	**-0.6**
TEKS	**Tekeris**	**2.87**	**350**	*e*Pn		**Pn**		**08 04 58.7**	**+1.1**
KUBS	**Kucevo**	**2.89**	**21**	*e*Pn		**Pn**		**08 04 57.0**	**-0.8**
RICI	**Ricice**	**2.89**	**309**	*e*Pn		**Pn**		**08 04 58.3**	**+0.4**
MPEP	**Malo Peshtene**	**3.06**	**57**	*e*P		**Pb**		**08 05 06.9**	**+0.4**
MDVR	**Moldovita**	**3.24**	**19**	⇑⇑P		**Pn**		**08 05 03.6**	**+0.8**
SRKY	**Kupres RS**	**3.25**	**317**	*e*Pn		**Pn**		**08 05 03.7**	**+0.8**
SRKY				*e*Sn		**Sn**		**08 05 44.4**	**+3.0**
RZN	**Rozhen**	**3.36**	**89**	*i* P		**Pn**		**08 05 05.1**	**+0.7**
DJES	**Djerdap**	**3.38**	**29**	⇑⇑P		**Pn**		**08 05 04.6**	**0.0**
FRGS	**Fruska Gora**	**3.45**	**355**	⇑⇑P		**Pn**		**08 05 05.9**	**+0.4**
FRGS	**Fruska Gora**	**3.45**	**355**	*e*Pn		**Pn**		**08 05 05.7**	**+0.2**
FRGS				*e*Sn		**Sn**		**08 05 47.9**	**+1.8**
FRGS	**Fruska Gora**	**3.45**	**355**	*e*Pn		**Pn**		**08 05 05.9**	**+0.4**
HERR	**Herculane**	**3.54**	**26**	⇑⇑P		**Pn**		**08 05 06.7**	**0.0**
MGRS	**Mrkonjic Grad**	**3.54**	**320**	*e*Pn		**Pn**		**08 05 07.4**	**+0.6**
MGRS				*e*Sn		**Sn**		**08 05 50.4**	**+1.9**
KIJV	**Kijevo**	**3.62**	**310**	*e*Pn		**Pn**		**08 05 09.0**	**+1.2**
TIP	**Timpagrande**	**3.67**	**227**	⇓⇓P		**Pn**		**08 05 08.4**	**-0.2**
BLY	**Banja Luka**	**3.75**	**325**	*e*Pn		**Pn**		**08 05 10.0**	**+0.3**
BLY				*e*Sn		**Sn**		**08 05 55.9**	**+2.2**
MORI	**Morici**	**3.96**	**304**	*e*Pn		**Pn**		**08 05 13.9**	**+1.5**
BZS	**Buzias**	**4.02**	**14**	⇑⇑P		**Pn**		**08 05 14.0**	**+0.7**
A051A	**Mrakovica**	**4.08**	**325**	*e*Pn		**Pn**		**08 05 14.4**	**+0.1**
A051A				*e*Sn		**Sn**		**08 06 03.0**	**+1.1**
GZR	**Gura Zlata**	**4.11**	**26**	⇑⇑P		**Pn**		**08 05 14.9**	**+0.2**
UDBI	**Udbina**	**4.31**	**312**	*e*Pn		**Pn**		**08 05 19.2**	**+1.8**
DUGI	**Dugi Otok**	**4.43**	**303**	*e*Pn		**Pn**		**08 05 19.4**	**+0.4**
A251A	**Rujevac**	**4.46**	**321**	*e*Pn		**Pn**		**08 05 20.6**	**+1.2**
VIRC	**Vir**	**4.58**	**306**	*e*Pn		**Pn**		**08 05 21.5**	**+0.5**
PLIT	**Plitvice**	**4.61**	**315**	*e*Pn		**Pn**		**08 05 22.9**	**+1.5**
KOVH	**Kovagototos**	**4.63**	**341**	P		**Pn**		**08 05 22.9**	**+1.3**
KOVH				S		**Sn**		**08 06 15.6**	**+0.5**
MORH	**Mrgy, Hungar**	**4.63**	**346**	⇑⇑P		**Pn**		**08 05 22.2**	**+0.4**
MORH	**Mrgy, Hungar**	**4.63**	**346**	P		**Pn**		**08 05 22.1**	**+0.4**
MORH				S		**Sn**		**08 06 14.5**	**-0.8**
MOSL	**Moslavina**	**4.63**	**328**	*e*Pn		**Pn**		**08 05 22.4**	**+0.6**
SIRR	**Siria**	**4.66**	**12**	⇑⇑P		**Pn**		**08 05 22.2**	**+0.1**
RABC	**Rab**	**5.00**	**309**	*e*Pn		**Pn**		**08 05

BARS				*e*Sn		**Sb**	**08 20 37.0**	**-0.1**
TREB	**Trebinje**	**1.71**	**306**	*e*Pn		**Pn**	**08 20 17.4**	**+0.4**
TREB				*e*Sn		**Sb**	**08 20 39.7**	**-0.5**
BRY	**Bratogost**	**1.71**	**313**	⇑*i*Pn		**Pn**	**08 20 17.1**	**-0.1**
BRY				*i* Sn		**Sg**	**08 20 41.6**	**-0.5**
UPM	**Unac-Piva**	**1.76**	**327**	⇓*i*Pn		**Pb**	**08 20 19.5**	**-0.2**
UPM				*i* Sn		**Sg**	**08 20 43.1**	**-0.7**
DBRK	**Dubrovnik**	**1.81**	**302**	*e*Pn		**Pn**	**08 20 18.5**	**+0.1**
DBRK				Sn		**Sb**	**08 20 43.4**	**+0.3**
IVAS	**Ivanjica**	**1.84**	**358**	*e*Pn		**Pn**	**08 20 19.1**	**+0.1**
IVAS				*e*Sn		**Sn**	**08 20 43.2**	**+0.8**
RUDO	**Rudo**	**1.98**	**342**	*e*Pn		**Pn**	**08 20 21.5**	**+0.6**
STON	**Ston**	**2.19**	**302**	*e*Pn		**Pn**	**08 20 24.6**	**+0.9**
STON	**Ston**	**2.19**	**302**	*e*Pn		**Pn**	**08 20 23.2**	**-0.5**
BBLS	**Lazići**	**2.21**	**344**	*e*Pn		**Pn**	**08 20 23.6**	**-0.5**
DIVS	**Divibare**	**2.37**	**356**	*e*Pn		**Pn**	**08 20 26.1**	**-0.1**
DIVS				*e*Sn		**Sn**	**08 20 55.5**	**+0.1**
LSTV	**Lastovo**	**2.68**	**294**	*e*Pn		**Pn**	**08 20 31.2**	**+0.7**
MAKA	**Makarska**	**2.83**	**304**	*e*Pn		**Pn**	**08 20 33.7**	**+1.2**
RICI	**Ricice**	**2.88**	**309**	*e*Pn		**Pn**	**08 20 34.0**	**+0.8**
KIJV	**Kijevo**	**3.61**	**310**	*e*Pn		**Pn**	**08 20 44.0**	**+0.8**
KIJV					Sn	**Sn**	**08 21 27.9**	**+1.9**
MORI	**Morici**	**3.95**	**304**	*e*Pn		**Pn**	**08 20 48.7**	**+0.9**
DUGI	**Dugi Otok**	**4.42**	**302**	*e*Pn		**Pn**	**08 20 54.8**	**+0.4**
VIRC	**Vir**	**4.57**	**306**	*e*Pn		**Pn**	**08 20 56.4**	**0.0**
NVLJ	**Novalja**	**4.83**	**308**	*e*Pn		**Pn**	**08 20 60.0**	**0.0**

*NEIC **09** 08:22:48.9±1.4, 12°.8S±0°.1×166°.7E±0°.2, h111km±12km, mb4.5/7, Error ellipse: s-maj=24.9km s-min=17.3km az=89.0*
*IDC **09** 08:22:49.8±5.5, 13°.01S×166°.74E, h135km±50km, mb3.6/7, mbtmp4.0/8, Error ellipse: s-maj=31.9km s-min=27.3km az=25.0*
ISC 09 08:22:46.5±0.9, **12°.82S**±0°.08×**166°.8E**±0°.1, **h100**km, **n27,** σ1**s58/28, mb4.3**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.53**	**296**	Pn	**Pn**	**08 24 34.4**	**+0.8**
KOUNC	**Koumac, New Ca**	**8.05**	**197**		**Pn**	**08 24 42.9**	**+2.2**
YATNC	**Mamie plateau,**	**9.19**	**179**	P	**Pn**	**08 24 56.6**	**+0.5**
DZM	**Mont Dzumac**	**9.20**	**182**	P	**Pn**	**08 24 57.3**	**+0.9**
	7.9nm,0.4s,baz=218,slow=21,SNR=32						
DZM				S	**Sn**	**08 26 37.0**	**-1.3**
	8.3nm,0.7s,baz=146,slow=23,SNR=8.2						
DZM	**Mont Dzumac**	**9.20**	**182**		**Pn**	**08 24 58.0**	**+1.6**
DZM	**Mont Dzumac**	**9.20**	**182**	P	**Pn**	**08 24 58.2**	**+1.8**
NOUC	**Port Laguerre**	**9.24**	**183**	P	**Pn**	**08 24 59.1**	**+2.3**
ONTNC	**Ouen Toro**	**9.44**	**182**	Pn	**Pn**	**08 25 01.4**	**+1.9**
ONTNC	**Ouen Toro**	**9.44**	**182**	P	**Pn**	**08 25 02.1**	**+2.6**
OUENC	**Ouen Island, N**	**9.54**	**180**	Pn	**Pn**	**08 25 03.0**	**+2.1**
OUENC	**Ouen Island, N**	**9.54**	**180**	P	**Pn**	**08 25 02.9**	**+2.0**
PINNC	**Pines Island,**	**9.76**	**176**	Pn	**Pn**	**08 25 06.4**	**+2.6**
EIDS	**Eidsvold**	**19.38**	**228**	P	**P**	**08 27 05.3**	**+0.9**
URZ	**Urewera**	**26.94**	**162**	P	**P**	**08 28 17.6**	**-0.9**
	13nm,1.1s,baz=62,slow=12,SNR=2.1						
	13nm,1.1s						
WB0	**Warramunga Arr**	**31.83**	**253**	P	**P**	**08 29 00.6**	**-1.4**
WB0				IAmb	IAmb	08 29 12.7	
	comp=Z,16nm,1.5s						
WRAB	**Tennant Creek**	**31.89**	**253**	P	**P**	**08 29 00.9**	**-1.7**
WRAB				IAmb	IAmb	08 29 31.0	
	comp=Z,9.7nm,1.4s						
WB2	**Warramunga Arr**	**31.89**	**253**	P	**P**	**08 29 01.2**	**-1.4**
WB2				IAmb	IAmb	08 29 34.9	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**31.90**	**253**	P	**P**	**08 29 01.2**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=85,slow=8.7,SNR=6.8						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**32.98**	**246**	P	**P**	**08 29 11.2**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=69,slow=9.9,SNR=16						
	comp=Z,1.2nm,0.7s						
KNRA	**Kununurra**	**36.95**	**261**	P	**P**	**08 29 45.7**	**-0.5**
KNRA				IAmb	IAmb	08 29 58.7	
	comp=Z,9.3nm,1.1s						
MBWA	**Marble Bar**	**45.64**	**253**	P	**P**	**08 30 57.3**	**0.0**
MBWA				IAmb	IAmb	08 31 34.3	
	comp=Z,19nm,1.4s						
JNU	**Nakatsue**	**57.12**	**324**	P	**P**	**08 32 22.3**	**-0.5**
VNDA	**Vanda**	**64.75**	**181**	P	**P**	**08 33 11.8**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=31,slow=5.9,SNR=2.7						
	comp=Z,0.5nm,0.8s						
SONM	**Songino Array**	**80.70**	**324**	P	**P**	**08 34 48.7**	**0.0**
	comp=Z,0.7nm,0.9s,baz=116,slow=3.4,SNR=2.2						
	comp=Z,0.7nm,0.9s						
IMAR	**Indian Mountai**	**83.86**	**15**	P	**P**	**08 35 06.2**	**+1.7**
ILAR	**Eielson Array**	**84.87**	**18**	P	**P**	**08 35 09.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=239,slow=5.9,SNR=6.6						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**95.52**	**317**	P	**P**	**08 36 00.3**	**0.0**
	comp=Z,0.7nm,0.7s,baz=91,slow=6.3,SNR=6.6						
	comp=Z,0.7nm,0.7s						

*IDC **09** 08:35:58.2±1.9, 32°.32S×69°.58W, h0km, mb3.6/2, mbtmp3.7/5, ML3.8/3, MS3.3/2, Error ellipse: s-maj=54.8km s-min=43.4km az=74.0*
*GUC **09** 08:36:14.2±0.8, 31°.66S×69°.77W, h138km±5km, ML3.9*
*NEIC **09** 08:36:14.3±1.5, 31°.67S±0°.06×69°.51W±0°.08, h129km±7km, mb4.0/2, Md3.7(SJA), Error ellipse: s-maj=10.4km s-min=8.3km az=96.0*
ISC 09 08:36:14.8±0.8, **31°.66S**±0°.03×**69°.59W**±0°.07, **h126**km±8km, **n47,** σ1**s09/64, mb3.5/3, 7C-8D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.78**	**82**	Pn	**Pn**	**08 36 33.9**	**-1.5**
CO03	**El Pedregal**	**1.25**	**311**		**Pn**	**08 36 40.5**	**+0.5**
CO03	**El Pedregal**	**1.25**	**311**	⇑*i*P	**Pn**	**08 36 40.3**	**+0.4**
CO03				*i* S	**Sn**	**08 36 59.7**	**+0.7**
CO03				IAML		08 37 01.0	
	comp=E,3µm,0.3s						
CO02	**Combarbal**	**1.29**	**290**	⇑*i*P	**Pn**	**08 36 40.7**	**+0.3**
CO02				*i* S	**Sn**	**08 37 00.6**	**+0.8**
VA03	**San Esteban**	**1.37**	**216**		**Pn**	**08 36 41.6**	**+0.3**
VA03	**San Esteban**	**1.37**	**216**	⇓*i*P	**Pn**	**08 36 41.6**	**+0.3**
VA03				*i* S	**Sn**	**08 37 02.1**	**+0.6**
VA03				IAML		08 37 03.8	
	comp=N,2µm,0.3s						
VA06	**Catapilco**	**1.71**	**238**	*i* P	**Pn**	**08 36 44.4**	**-0.6**
VA06				*i* S	**Sn**	**08 37 07.2**	**-0.8**
VA06				IAML		08 37 17.4	
	comp=N,1µm,0.4s						
CO01	**Juntas del Tor**	**1.73**	**345**		**Pn**	**08 36 46.9**	**+1.4**
CO01	**Juntas del Tor**	**1.73**	**345**	⇑*i*P	**Pn**	**08 36 46.7**	**+1.2**
CO01				*i* S	**Sn**	**08 37 10.8**	**+1.8**
PEL	**Peldehue**	**1.75**	**212**		**Pn**	**08 36 45.9**	**+0.4**
PEL	**Peldehue**	**1.75**	**212**	⇓*i*P	**Pn**	**08 36 45.5**	**0.0**
PEL				*i* S	**Sn**	**08 37 09.3**	**+0.2**
PEL				IAML		08 37 10.7	
	comp=N,956nm,0.3s						
FCH	**Farellones**	**1.77**	**199**	⇓*i*P	**Pn**	**08 36 46.7**	**+0.7**
FCH				*i* S	**Sn**	**08 37 11.7**	**+1.8**
FCH				IAML		08 37 16.5	
	comp=E,751nm,0.2s						
ROCH	**El Roble**	**1.78**	**222**	⇓*i*P	**Pn**	**08 36 45.9**	**-0.2**
ROCH				*i* S	**Sn**	**08 37 10.0**	**0.0**
ROCH				IAML		08 37 13.5	
	comp=N,1µm,0.2s						
ROC1	**El Roble**	**1.79**	**222**		**Pn**	**08 36 45.8**	**-0.4**
GO04	**Tololo Observa**	**1.81**	**325**		**Pn**	**08 36 46.3**	**-0.2**
GO04	**Tololo Observa**	**1.81**	**325**	⇑*i*P	**Pn**	**08 36 46.3**	**-0.2**
GO04				*i* S	**Sn**	**08 37 10.9**	**+0.3**
MT05	**Renca**	**1.99**	**209**	Pn	**Pn**	**08 36 48.6**	**+0.2**
MT05	**Renca**	**1.99**	**209**	⇓*i*P	**Pn**	**08 36 48.6**	**+0.2**
MT05				*i* S	**Sn**	**08 37 14.4**	**+0.3**
MT03	**Universidad Ad**	**1.99**	**203**	⇓*i*P	**Pn**	**08 36 49.0**	**+0.4**
MT03				*i* S	**Sn**	**08 37 15.6**	**+1.2**
MT03				IAML		08 37 18.2	
	comp=E,1µm,0.3s						
CO06	**Fray Jorge**	**2.01**	**299**	⇑*i*P	**Pn**	**08 36 48.0**	**-0.7**
CO06				*i* S	**Sn**	**08 37 13.3**	**-1.2**
CO06				IAML		08 37 22.8	
	comp=N,555nm,0.2s						
MT02	**Curacav**	**2.07**	**219**	*i* P	**Pn**	**08 36 48.6**	**-0.8**
MT02				*i* S	**Sn**	**08 37 15.2**	**-0.6**
CO05	**La Serena**	**2.24**	**320**	⇑*i*P	**Pn**	**08 36 51.0**	**-0.5**
CO05				*i* S	**Sn**	**08 37 18.7**	**-1.0**
CO05				IAML		08 37 20.7	
	comp=N,1µm,0.3s						
LMEL	**Las Melosas**	**2.25**	**193**		**Pn**	**08 36 52.2**	**+0.4**
LMEL	**Las Melosas**	**2.25**	**193**	⇓*i*P	**Pn**	**08 36 52.1**	**+0.4**
LMEL				*i* S	**Sn**	**08 37 21.2**	**+1.1**
LMEL				IAML		08 37 28.7	
	comp=N,335nm,0.1s						
MT09	**Talagante**	**2.42**	**209**		**Pn**	**08 36 53.6**	**-0.4**
MT09	**Talagante**	**2.42**	**209**	*i* P	**Pn**	**08 36 53.1**	**-0.8**
MT09				*i* S	**Sn**	**08 37 23.2**	**-0.8**
MT09				IAML		08 37 27.4	
	comp=E,594nm,0.3s						
MT01	**Popeta**	**2.61**	**212**	⇓*i*P	**Pn**	**08 36 55.0**	**-1.2**
MT01				*i* S	**Sn**	**08 37 26.0**	**-2.1**
MT01				IAML		08 37 28.8	
	comp=E,290nm,0.2s						
VA05	**Santo Domingo**	**2.63**	**220**	*e*P	**Pn**	**08 36 55.2**	**-1.2**
VA05				*e*S	**Sn**	**08 37 27.4**	**-1.1**
VA05				IAML		08 37 31.5	
	comp=N,597nm,0.3s						
LCO	**Las Campanas**	**2.81**	**340**	Pn	**Pn**	**08 36 58.8**	**-0.2**
LCO	**Las Campanas**	**2.81**	**340**	⇑*i*P	**Pn**	**08 36 58.6**	**-0.4**
LCO				*i* S	**Sn**	**08 37 32.5**	**-0.6**
BO01	**Tunca**	**3.00**	**204**	Pn	**Pn**	**08 37 00.7**	**-0.6**
BO01	**Tunca**	**3.00**	**204**	*e*P	**Pn**	**08 36 59.9**	**-1.4**
BO01				IAML		08 37 37.3	
	comp=E,119nm,0.2s						
AC04	**Llanos de Chal**	**3.67**	**339**	Pn	**Pn**	**08 37 09.4**	**-0.7**
ML02	**Panimavida**	**4.37**	**200**	Pn	**Pn**	**08 37 17.8**	**-1.6**
AC02	**Maricunga**	**4.82**	**5**	Pn	**Pn**	**08 37 25.7**	**-0.2**
TRQA	**Tornquist**	**8.93**	**138**	Pn	**Pn**	**08 38 18.8**	**-1.9**
LVC	**Limon Verde**	**9.03**	**4**	Pn	**Pn**	**08 38 19.0**	**-3.5**
	comp=E,0.4nm,0.3s,baz=205,slow=8.1,SNR=1.5						
	comp=E,1.2nm,0.4s						
LVC	**Limon Verde**	**9.03**	**4**	Pn	**Pn**	**08 38 20.1**	**-2.4**
LPAZ	**La Paz**	**15.36**	**5**	Pn	**P**	**08 39 46.6**	**-0.7**
	comp=E,0.1nm,0.3s,baz=165,slow=7.3,SNR=5.3						
	comp=E,0.9nm,0.6s						
LPAZ	**La Paz**	**15.36**	**5**	P	**P**	**08 39 46.4**	**-0.9**
LPAZ				IAmb	IAmb	08 40 23.4	
	comp=Z,5.1nm,1.4s						
SIV	**San Ignacio**	**17.42**	**28**	P	**Pn**	**08 40 09.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=215,slow=10.0,SNR=12						
	comp=Z,2.1nm,0.4s						
BDFB	**Brasilia**	**25.31**	**56**	LR	LR	08 51 55.0	
	comp=Z,103nm,22.0s,baz=178,slow=37						
SNAA	**Sanae**	**52.99**	**159**	P	**P**	**08 45 18.8**	**+0.7**
SNAA				IAmb	IAmb	08 46 00.6	
	comp=Z,5.5nm,1.4s						
TXAR	**Lajitas Array**	**68.76**	**328**	P	**P**	**08 47 07.6**	**+2.4**
	comp=Z,0.3nm,0.6s,baz=156,slow=9.2,SNR=4.3						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.46**	**69**	P	**P**	**08 48 18.9**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=239,slow=4.0,SNR=5.0						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**82.65**	**332**	LR	LR	09 24 19.2	
	comp=Z,11nm,18.6s,baz=70,slow=35						
ZALV	**Zalesovo Beam**	**151.15**	**32**	PKPbc	**PKiKP**	**08 55 54.1**	**+1.0**
	comp=Z,3.4nm,0.5s,baz=314,slow=2.6,SNR=16						

IDC 09 08:36:53.2±54.0, **15°.31S**×**176°.70W**, **h0**km, **mb4.2**/3, **mbtmp4.2**/3, **Error ellipse: s-maj=1006.0km s-min=171.3km az=76.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.34**	**239**	P	P	08 44 41.3	+0.3
	5.2nm,1.0s,baz=63,slow=6.8,SNR=2.6						
	5.2nm,1.0s						
WRA	**Warramunga Arr**	**46.76**	**257**	P	P	08 45 24.8	0.0
	0.4nm,0.4s,baz=92,slow=7.4,SNR=25						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**47.11**	**252**	P	P	08 45 26.9	-0.5
	3.9nm,0.5s,baz=89,slow=7.9,SNR=74						
	3.9nm,0.5s						

IDC 09 08:42:28.9±12.0, **15°.05S**×**164°.65E**, **h0**km, **mb3.8**/3, **mbtmp3.8**/4, **ML3.3**/1, **Error ellipse: s-maj=210.0km s-min=34.5km az=49.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.19**	**167**	Pn	Pn	08 44 15.4	-0.1
	0.5nm,0.3s,baz=136,slow=18,SNR=7.5						
DZM				Sn	Sn	08 45 39.3	+1.4
	0.3nm,0.3s,baz=115,slow=18,SNR=1.2						
	5.5nm,0.9s						
STKA	**Stephens Creek**	**26.89**	**227**	P	P	08 48 11.5	-0.2
	1.5nm,0.4s,baz=48,slow=10.0,SNR=9.4						
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**29.29**	**256**	P	P	08 48 33.5	+0.1
	0.3nm,0.5s,baz=85,slow=9.3,SNR=9.7						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**30.20**	**249**	P	P	08 48 41.5	+0.1
	0.5nm,0.5s,baz=79,slow=9.3,SNR=10						
	0.5nm,0.5s						

IDC 09 08:44:20.1±2.7, **53°.60N**×**87°.02E**, **h0**km, **mbtmp2.7**/2, **ML2.9**/1, **Error ellipse: s-maj=24.6km s-min=16.3km az=74.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**286**	*i*		08 51 12.4	
	baz=105,slow=322,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.35**	**286**	Pg	Pg	08 44 44.7	-1.3
	0.6nm,0.3s,baz=99,slow=18,SNR=13						
ZALV				Lg	Lg	08 45 03.0	
	1.1nm,0.3s,baz=105,slow=28,SNR=10						
KURBB	**Kurchatov Arra**	**6.02**	**244**	Pn	Pn	08 45 52.4	+2.1
	0.4nm,0.5s,baz=61,slow=13,SNR=1.9						
KURBB				Lg	Lg	08 47 31.3	
	baz=62,slow=33,SNR=1.8						
MKAR	**Makanchi Array**	**7.46**	**206**	Pn	Pn	08 46 10.6	+0.4
	0.2nm,0.3s,baz=27,slow=13,SNR=3.0						
	0.3nm,0.5s						

*IDC **09** 08:57:28.4±1.5, 13°.03N×120°.83E, h0km, mb3.6/4, mbtmp3.6/4, MS3.0/8, Error ellipse: s-maj=64.1km s-min=23.3km az=57.0*
*MAN **09** 08:57:28, 13°.05N×120°.57E, h1km, Ms3.2*
ISC 09 08:57:28.4±1.3, **13°.00N**±0°.03×**120°.54E**±0°.04, **h4**km±10km, **n26,** σ1**s59/31, mb3.5/4, MS2.8/5, 2C-13D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.78**	**339**	⇓*e*P	**Pg**	**08 57 43.1**	**-0.2**
LUBP				*e*S	**Sn**	**08 57 56.9**	**-1.4**
SJMP	**San Jose**	**0.78**	**133**	⇓*e*P	**Pg**	**08 57 42.7**	**-0.6**
SJMP				*e*S	**Sg**	**08 57 54.6**	**+1.0**
BUSP	**Coron**	**1.05**	**198**	⇓*e*P	**Pb**	**08 57 46.5**	**-2.5**
BUSP				*e*S	**Sg**	**08 58 01.8**	**-0.2**
TGY	**Tagaytay City**	**1.16**	**20**	⇑*e*P	**Pn**	**08 57 51.8**	**+0.4**
TGY				*e*S	**Sn**	**08 58 07.5**	**-0.2**
MACP	**Maragondon, Ca**	**1.27**	**8**	⇓*e*P	**Pn**	**08 57 52.1**	**-0.7**
MACP				*e*S	**Sn**	**08 58 10.4**	**+0.2**
BOAC	**Boac**	**1.35**	**70**	⇓*e*P	**Pn**	**08 57 53.4**	**-0.6**
BOAC				*e*S	**Sg**	**08 58 14.8**	**+3.0**
LQP	**Lukban**	**1.47**	**41**	⇓*e*P	**Pn**	**08 57 55.3**	**-0.6**
LQP				*e*S	**Sn**	**08 58 11.3**	**-4.3**
QVP	**Quezon City--P**	**1.67**	**16**	⇓*e*P	**Pb**	**08 57 59.4**	**-0.4**
QVP				*e*S	**Sg**	**08 58 23.5**	**+1.3**
GQP	**Guinayangan**	**2.06**	**64**	⇑*e*P	**Pb**	**08 58 04.8**	**-1.6**
GQP				*e*S	**Sg**	**08 58 34.6**	**-0.1**
AUQP	**San Andres**	**2.11**	**81**	⇓*e*P	**Pb**	**08 58 06.0**	**-1.2**
AUQP				*e*S	**Sg**	**08 58 37.0**	**+0.9**
CUYO	**Cuyo Island**	**2.19**	**168**	⇓*e*P	**Pn**	**08 58 07.1**	**+1.6**
CUYO				*e*S	**Sb**	**08 58 35.3**	**-0.7**
JCNP	**Jose Panganiba**	**2.46**	**58**	⇓*e*P	**Pn**	**08 58 09.0**	**-0.3**
JCNP				*e*S	**Sn**	**08 58 39.8**	**+0.1**
RCP	**Roxas**	**2.59**	**123**	⇓*e*P	**Pb**	**08 58 15.1**	**-0.3**
BALP	**Baler**	**2.90**	**20**	⇓*e*P	**Pb**	**08 58 18.4**	**-2.4**
SMPP	**San Manuel, Pa**	**3.13**	**3**	⇓*e*P	**Pn**	**08 58 18.4**	**-0.2**
DAV	**Davao City (W)**	**7.71**	**139**	LR	LR	09 02 31.1	
	comp=Z,148nm,18.5s,baz=104,slow=40						
SIJI	**Sorong**	**17.41**	**142**	LR	LR	09 07 53.8	
	comp=Z,61nm,18.7s,baz=354,slow=36						
KAPI	**Kappang**	**17.91**	**183**	LR	LR	09 07 53.7	
	comp=Z,47nm,20.3s,baz=332,slow=35						
CMAR	**Chiang Mai Arr**	**21.47**	**287**	P	**P**	**09 02 21.7**	**+3.6**
	1.1nm,0.3s,baz=107,slow=8.3,SNR=6.3						
	1.1nm,0.3s						
JCJ	**Chichijima**	**24.64**	**52**	LR	LR	09 13 30.2	
	comp=Z,18nm,18.1s,baz=86,slow=39						
KSRS	**Korea Array**	**25.23**	**14**	LR	LR	09 13 37.2	
	comp=Z,26nm,19.7s,baz=240,slow=39						
USRK	**Ussuriysk Ar.**	**32.61**	**15**	LR	LR	09 17 48.0	
	comp=Z,19nm,20.2s,baz=105,slow=38						
WRA	**Warramunga Arr**	**35.44**	**157**	P	**P**	**09 04 25.7**	**-0.2**
	0.5nm,0.6s,baz=333,slow=9.8,SNR=7.2						
	0.5nm,0.6s						
SONM	**Songino Array**	**36.68**	**344**	P	**P**	**09 04 37.3**	**+0.9**
	0.5nm,0.6s,baz=160,slow=8.9,SNR=1.8						
SONM					LR	LR	09 21 07.7
	comp=Z,32nm,18.2s,baz=84,slow=39						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**38.72**	**160**	P	**P**	**09 04 53.9**	**+0.1**
	0.4nm,0.5s,baz=339,slow=7.2,SNR=11						
	0.4nm,0.5s						
NRIK	**Noril'sk**	**60.05**	**347**	LR	LR	09 34 57.0	
	comp=Z,30nm,18.3s,baz=250,slow=37						

*TAP **09** 08:59:22.9, 24°.56N×122°.32E, h74km, ML3.5, C*
*JMA **09** 08:59:22.7±0.2, 24°.5N±1°.0×122°.3E±0°.4, h75km±2km, MV2.6/10, TAIWAN REGION*
ISC 09 08:59:23.7±1.3, **24°.53N**±0°.03×**122°.33E**±0°.02, **h66**km±8km, **n83,** σ0**s83**/142, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.45**	**281**	P	**Pn**	**08 59 35.5**	**-0.1**
	baz=280						
TWC				*e*S	**Sn**	**08 59 44.2**	**-0.1**
	baz=280						
EGS		**0.48**	**311**	*e*P	**Pn**	**08 59 36.0**	**+0.1**
	baz=302						
EGS				*e*S	**Sn**	**08 59 45.3**	**+0.5**
	baz=302						
EWUT	**Wuta**	**0.51**	**261**	*e*P	**Pn**	**08 59 35.4**	**-0.9**
	baz=260						
EWUT				*e*S	**Sn**	**08 59 45.8**	**+0.4**
	baz=260						
ENA	**Nanau**	**0.55**	**260**	*e*P	**Pn**	**08 59 36.8**	**+0.2**
	baz=253						
ENA				*e*S	**Sn**	**08 59 47.3**	**+1.2**
	baz=253						
NTC	**Toucheng**	**0.56**	**306**	P	**Pn**	**08 59 36.5**	**-0.2**
	baz=308						
NTC				S	**Sn**	**08 59 46.1**	**-0.1**
	baz=308						
JYNG	**Yonagunijimaku**	**0.57**	**98**	*i* P	**Pn**	**08 59 37.1**	**+0.3**
JYNG				S	**Sn**	**08 59 47.3**	**+0.9**
NDS	**Dongshan**	**0.57**	**281**	*e*P	**Pn**	**08 59 35.8**	**-1.1**
	baz=280						
NDS				*e*S	**Sn**	**08 59 46.6**	**+0.1**
	baz=280						
TWB1	**Santiao Chiao**	**0.57**	**327**	*e*P	**Pn**	**08 59 36.4**	**-0.4**
	baz=320						
TWB1				*e*S	**Sn**	**08 59 46.3**	**-0.2**
	baz=320						
ILA	**Ilan**	**0.58**	**294**	*e*P	**Pn**	**08 59 37.1**	**+0.1**
	baz=294						
ILA				*e*S	**Sn**	**08 59 47.6**	**+1.0**
	baz=294						
YOJ	**Yonaguni jima**	**0.62**	**96**	*e*P	**Pn**	**08 59 37.6**	**+0.2**
	baz=98						
YOJ				*e*S	**Sn**	**08 59 48.1**	**+0.6**
	baz=98						
YOJ	**Yonaguni jima**	**0.62**	**96**	*i* P	**Pn**	**08 59 37.7**	**+0.2**
YOJ				S	**Sn**	**08 59 48.1**	**+0.6**
TWE	**Neicheng**	**0.63**	**288**	*e*P	**Pn**	**08 59 37.7**	**+0.1**
	baz=288						
TIPB	**Shuangxi**	**0.64**	**314**	*e*P	**Pn**	**08 59 37.3**	**-0.4**
	baz=312						
TIPB				S	**Sn**	**08 59 47.6**	**-0.3**
	baz=312						
SXI1	**Grass Mountain**	**0.70**	**324**	P	**Pn**	**08 59 38.1**	**-0.3**
	baz=323						
SXI1				S	**Sn**	**08 59 48.8**	**-0.4**
	baz=323						
ENTT	**Nioudou**	**0.70**	**279**	*e*P	**Pn**	**08 59 37.7**	**-0.6**
	baz=278						
FUSB	**Fushanzhiwuyua**	**0.71**	**289**	P	**Pn**	**08 59 38.6**	**0.0**
	baz=292						
FUSB				*e*S	**Sn**	**08 59 49.1**	**-0.3**
	baz=292						
LATG	**Datong**	**0.73**	**271**	*e*P	**Pn**	**08 59 39.0**	**+0.2**
	baz=268						
LATG				*e*S	**Sn**	**08 59 50.6**	**+0.8**
	baz=268						
NWF	**Wu-fen Shan**	**0.74**	**317**	P	**Pn**	**08 59 38.5**	**-0.3**
	baz=309						
NWF				*e*S	**Sn**	**08 59 49.5**	**-0.4**
	baz=309						
ETL	**Fush Village**	**0.74**	**240**	*e*P	**Pn**	**08 59 38.6**	**-0.2**
	baz=238						
NDT	**Datong Townshi**	**0.75

TWT	**Tachien**	**1.09**	**256**	*e*P		**Pn**	08 59 43.8	+0.5
	baz=249							
TWT				e*S*		**Sn**	08 59 58.1	+0.3
	baz=249							
TDCB	**Techi**	**1.10**	**256**	P		**Pn**	08 59 43.6	+0.1
	baz=248							
TDCB				S		**Sn**	08 59 58.0	-0.2
	baz=248							
NFF	**Wufeng Townshi**	**1.11**	**276**	*e*P		**Pn**	08 59 42.6	-0.8
	baz=282							
NFF				e*S*		**Sn**	08 59 57.4	-0.7
	baz=282							
NCU	**National Centr**	**1.13**	**293**	e*S*		**Sn**	08 59 59.3	+0.8
	baz=291							
NCUH	**Zhongli**	**1.13**	**293**	*e*P		**Pn**	08 59 43.7	+0.1
	baz=291							
NCUH				e*S*		**Sn**	08 59 58.6	+0.1
	baz=291							
CHGB	**Renai**	**1.15**	**246**	P		**Pn**	08 59 44.2	0.0
	baz=237							
CHGB				e*S*		**Sn**	08 59 59.5	+0.1
	baz=237							
OWD	**Renai**	**1.20**	**242**	P		**Pn**	08 59 44.4	-0.3
	baz=234							
OWD				e*S*		**Sn**	08 59 59.5	-0.9
	baz=234							
LIOB	**Emei**	**1.20**	**276**	*e*P		**Pn**	08 59 44.7	+0.1
	baz=274							
LIOB				e*S*		**Sn**	09 00 00.6	+0.3
	baz=274							
NSTT	**Nanjuang**	**1.21**	**275**	*e*P		**Pn**	08 59 45.1	+0.3
	baz=273							
NSTT				e*S*		**Sn**	09 00 00.5	0.0
	baz=273							
WUSB	**Renai**	**1.23**	**244**	*e*P		**Pn**	08 59 45.1	0.0
	baz=237							
WUSB				e*S*		**Sn**	09 00 01.2	+0.2
	baz=237							
WHP	**Taichung City**	**1.29**	**259**	*e*P		**Pn**	08 59 46.8	+1.0
	baz=253							
WHP				e*S*		**Sn**	09 00 03.6	+1.3
	baz=253							
IRIF	**Iriomote-Funau**	**1.29**	**98**	*i* P		**Pn**	08 59 45.4	-0.3
IRIF				e*S*		**Sn**	09 00 02.2	0.0
HGSD	**Ruisui**	**1.32**	**219**	*e*P		**Pn**	08 59 45.6	-0.6
	baz=214							
HGSD				e*S*		**Sn**	09 00 03.7	+0.6
	baz=214							
VWDT	**VWDT**	**1.33**	**235**	*e*P		**Pn**	08 59 46.3	0.0
	baz=229							
EHY	**Hungye**	**1.37**	**222**	*e*P		**Pn**	08 59 45.7	-1.1
	baz=212							
EHY				e*S*		**Sn**	09 00 02.4	-1.9
	baz=212							
WCS	**Beigang Elemen**	**1.38**	**250**	e*S*		**Sn**	09 00 04.5	+0.2
	baz=248							
HATJ	**Hateruma jima**	**1.43**	**109**	e*S*		**Sn**	09 00 05.9	+0.4
NSY	**Sanyi**	**1.43**	**266**	e*S*		**Sn**	09 00 06.7	+1.0
	baz=264							
SMLT	**Sun Moon Lake**	**1.46**	**244**	*e*P		**Pn**	08 59 49.0	+0.9
	baz=237							
SMLT				e*S*		**Sn**	09 00 08.4	+2.0
	baz=237							
SSLB	**Suanglung**	**1.46**	**240**	*e*P		**Pn**	08 59 48.4	+0.4
	baz=234							
SSLB				e*S*		**Sn**	09 00 06.9	+0.6
	baz=234							
YULB	**Yu-li**	**1.47**	**220**	*e*P		**Pn**	08 59 47.0	-1.2
	baz=218							
YULB				e*S*		**Sn**	09 00 04.8	-1.9
	baz=218							
TYC	**Yuchr**	**1.48**	**246**	*e*P		**Pn**	08 59 48.8	+0.5
	baz=238							
TYC				e*S*		**Sn**	09 00 08.2	+1.4
	baz=238							
EYUL	**Yuli**	**1.50**	**218**	*e*P		**Pn**	08 59 48.7	+0.2
	baz=226							
TWF1	**Yuli**	**1.50**	**219**	*e*P		**Pn**	08 59 47.8	-0.8
	baz=225							
TWF1				e*S*		**Sn**	09 00 07.6	+0.2
	baz=225							
JKRS	**Kuro-shima**	**1.56**	**100**	P		**Pn**	08 59 49.6	+0.3
JKRS				S		**Sn**	09 00 09.2	+0.5
WHYT	**Xinyi Township**	**1.58**	**239**	e*S*		**Sn**	09 00 10.7	+1.4
	baz=235							
FULB	**Fuli**	**1.63**	**216**	*e*P		**Pn**	08 59 50.8	+0.5
	baz=207							
FULB				e*S*		**Sn**	09 00 09.4	-1.0
	baz=207							
YUS	**Yu-Shan**	**1.63**	**231**	*e*P		**Pn**	08 59 50.7	0.0
	baz=229							
JIJ	**Ishigaki jima**	**1.66**	**95**	P		**Pn**	08 59 50.3	-0.4
JIJ				S		**Sn**	09 00 10.4	-0.7
ALS	**Alishan**	**1.72**	**234**	*e*P		**Pn**	08 59 52.8	+0.9
	baz=225							
ALS				e*S*		**Sn**	09 00 13.4	+0.4
	baz=225							
EDH	**Donghe**	**1.81**	**211**	*e*P		**Pn**	08 59 51.5	-1.2
	baz=204							
EDH				e*S*		**Sn**	09 00 12.5	-2.2
	baz=204							
WDLH	**Douliu**	**1.84**	**243**	e*S*		**Sn**	09 00 17.1	+1.7
	baz=253							
WRL	**Guolierlin Hig**	**1.89**	**251**	e*S*		**Sn**	09 00 15.1	-1.5
	baz=259							
LONT	**Longtian**	**1.95**	**215**	*e*P		**Pn**	08 59 53.4	-1.2
	baz=213							
STYH	**Taoyuan**	**1.96**	**227**	e*S*		**Sn**	09 00 17.7	-0.7
	baz=218							
CHN4	**Tsaushan**	**1.98**	**234**	e*S*		**Sn**	09 00 19.9	+1.2
	baz=232							
TPUB	**Ta-pu**	**1.98**	**232**	e*S*		**Sn**	09 00 20.6	+1.7
	baz=223							
STYT	**Tauyuan**	**1.98**	**227**	*e*P		**Pn**	08 59 55.2	+0.2
	baz=218							
STYT				e*S*		**Sn**	09 00 18.9	0.0
	baz=218							
LDUT	**Ludao**	**2.01**	**203**	e*S*		**Sn**	09 00 17.2	-2.3
	baz=202							
CHY	**Chiayi**	**2.02**	**240**	e*S*		**Sn**	09 00 22.8	+2.9
	baz=250							
WTP	**Ta-pu**	**2.02**	**231**	e*S*		**Sn**	09 00 21.9	+2.0
	baz=230							
TWK	**Hsinying**	**2.10**	**234**	e*S*		**Sn**	09 00 23.6	+1.7
	baz=232							
CHN1	**Nanshi**	**2.12**	**231**	e*S*		**Sn**	09 00 24.2	+1.8
	baz=229							
JTJ	**Tarama**	**2.16**	**87**	P		**Pn**	08 59 57.8	+0.3
JTJ				e*S*		**Sn**	09 00 22.9	-0.3

*GCG **09** 09:00:22.5±1.1, 12.°91N×92.°10W, h50km±255km, MD4.1*
*IDC **09** 09:00:28.8±14.0, 13.°80N×91.°40W, h0km, mb3.5/4, mbtmp3.5/5, ML3.7/1, MS2.9/1, Error ellipse: s-maj=235.5km s-min=60.3km az=164.0*

ISC 09 09:00:26.1±2.9, 13.°2N±0.°3×92.°0W±0.°1, h10km, n10, σ2s13/10, mb3.4/4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**1.55**	**14**	*e*P	**Pn**	**09 00 52.5**	**-1.5**
FUG	**Fuego 3**	**1.65**	**41**	*e*P	**Pn**	**09 00 54.0**	**-1.4**
FUG				e*S*	**Sn**	**09 01 18.6**	**+1.9**
PCG	**Pacaya**	**1.77**	**48**	*e*P	**Pn**	**09 00 55.2**	**-1.9**
NBG	**Las Nubes**	**2.09**	**49**	*e*P	**Pn**	**09 01 00.4**	**-1.0**
MRL	**Marmol**	**2.89**	**50**	*e*P	**Pn**	**09 01 14.3**	**+1.7**
TXAR	**Lajitas Array**	**19.38**	**328**	P	**Pn**	**09 04 55.3**	**+1.9**
	baz=151,slow=13,SNR=6.5 0.8nm,0.8s						
TKL	**Tuckaleechee C**	**23.55**	**17**	P	**P**	**09 05 34.0**	**-2.8**
	4.2nm,0.8s,baz=180,slow=12,SNR=3.3						
TKL				LR	LR	09 14 27.3	
	comp=Z,33nm,20.9s,baz=316,slow=37 4.2nm,0.8s						
ANMO	**Albuquerque**	**25.31**	**331**	P	**P**	**09 05 55.6**	**+2.3**
	0.6nm,0.7s,baz=118,slow=7.8,SNR=2.1 0.6nm,0.7s						
PDAR	**Pinedale Array**	**33.16**	**336**	P	**P**	**09 07 02.7**	**-0.3**
	0.3nm,0.9s,baz=140,slow=7.1,SNR=2.0 0.3nm,0.9s						
NVAR	**Mina Array Bea**	**34.31**	**322**	P	P	09 07 16.8	+3.6
	0.4nm,0.7s,baz=123,slow=9.8,SNR=3.8 0.4nm,0.7s						

*AEIC **09** 09:03:09.8±1.2, 53.°0N±0.°2×172.°9W±0.°1, h228km±8km, ML2.7/27, mb3.8/13(NEIC), Error ellipse: s-maj=36.3km s-min=7.2km az=165.0*

NEIC 09 09:03:09.1±1.0, 52.°9N±0.°2×172.°8W±0.°1, h230km±9km, Error ellipse: s-maj=32.6km s-min=8.2km az=167.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSE	**Korovin Southe**	**0.95**	**234**		Pn	09 03 41.6	-0.1
KOFP	**Korovin Flat P**	**1.01**	**232**		Pn	09 03 42.3	+0.2
ATKA	**Atka Island**	**1.11**	**231**		Pn	09 03 42.3	-0.3
ATKA					S	09 04 07.7	-1.0
CLES	**Cleveland East**	**1.76**	**92**	Pn	Pn	09 03 47.4	-0.2
CLCO	**Concord Point,**	**1.87**	**92**		Pn	09 03 48.8	+0.2
GSTR	**Great Sitkin T**	**2.15**	**249**	Pn	Pn	09 03 50.9	-0.5
GSMY	**Great Sitkin M**	**2.17**	**248**		Pn	09 03 51.2	-0.4
GSTD	**Great Sitkin T**	**2.22**	**249**		Pn	09 03 51.6	-0.5
GSCK	**Great Sitkin C**	**2.25**	**248**		Pn	09 03 51.9	-0.4
NIKH	**Nikolski High**	**2.39**	**87**		Pn	09 03 53.3	-0.3
NIKH					S	09 04 27.7	-0.9
ADK	**Adak**	**2.59**	**248**		S	09 04 30.6	-1.8
ADK	**Adak**	**2.59**	**248**	Pn	Pn	09 03 55.5	-0.3
OKNC	**Okmok New Cone**	**2.87**	**77**		Pn	09 03 59.1	+0.4
KIWB	**Kanaga Island**	**2.87**	**250**		Pn	09 03 58.9	+0.1
KIKV	**Kanaga Island**	**2.87**	**251**		Pn	09 03 59.0	+0.1
KIMD	**Kanaga Island**	**2.95**	**249**		Pn	09 03 59.5	-0.2
TAFP	**Tanaga Falls P**	**3.33**	**254**		Pn	09 04 04.2	+0.1
TASE	**Tanaga Southea**	**3.39**	**254**		Pn	09 04 04.8	+0.1
MAPS	**Pakushin South**	**3.62**	**73**		Pn	09 04 07.8	+0.4
MAPS					S	09 04 52.8	-0.7
MGOD	**Makushin Gods**	**3.66**	**74**		Pn	09 04 08.1	+0.2
MNAT	**Makushin Natee**	**3.79**	**73**		Pn	09 04 10.1	+0.7
GANE	**Gareloi Northe**	**3.82**	**256**		Pn	09 04 09.8	0.0
UNV	**Unalaska Valle**	**3.88**	**74**		Pn	09 04 10.5	0.0
UNV	**Unalaska Valle**	**3.88**	**74**		S	09 04 58.0	-0.9
AKUT	**Akutan**	**4.37**	**71**	Pn	Pn	09 04 16.8	+0.5
CERAA	**Semis' Rag'd T**	**4.71**	**261**		Pn	09 04 20.6	0.0
AMKA	**Amchitka**	**5.10**	**256**		Pn	09 04 25.0	-0.4
CNBA	**Chernabura Isl**	**8.04**	**71**	Pn	Pn	09 05 01.9	-0.8
CHGN	**Chignik**	**9.01**	**62**	Pn	Pn	09 05 13.7	-1.4
OHAK	**Old Harbor**	**11.98**	**61**	Pn	Pn	09 05 50.2	-2.4
CNPM	**China Poot**	**13.66**	**52**		P	09 06 14.9	-0.1
DHY	**Denali Highway**	**16.76**	**43**	P	Pn	09 06 50.3	-0.6
DHY				IAmb	IAmb	09 07 23.4	
	comp=Z,4.0nm,1.2s						
I23K	**Minto, Yukon-K**	**17.06**	**35**	P	Pn	09 06 53.8	-0.3
I23K				IAmb	IAmb	09 07 08.3	
	comp=Z,5.9nm,1.5s						
CCB	**Clear Creek Bu**	**17.34**	**38**	P	Pn	09 06 57.1	-0.3
PAX	**Paxson**	**17.51**	**44**	P	Pn	09 06 58.7	-0.9
IL31		**17.75**	**38**	P	Pn	09 07 01.4	-0.8
IL31				IAmb	IAmb	09 07 36.7	
	comp=Z,4.3nm,1.4s						
H24K	**Noodor Dome**	**17.96**	**34**	P	P	09 07 02.6	+0.5
H24K				IAmb	IAmb	09 07 11.1	
	comp=Z,5.9nm,1.5s						
RIDG	**Independent Ri**	**18.08**	**42**	P	P	09 07 03.4	-0.1
RIDG				IAmb	IAmb	09 07 25.2	
	comp=Z,5.5nm,1.1s						
J25K	**Salcha River,**	**18.25**	**39**	P	P	09 07 05.8	+0.5
J25K				IAmb	IAmb	09 07 45.7	
	comp=Z,4.3nm,1.3s						
DOT	**Dot Lake**	**18.36**	**43**	P	P	09 07 06.5	0.0
YAH	**Yahtse**	**18.49**	**54**	P	P	09 07 08.0	-0.1
SCRK	**Sand Creek**	**18.52**	**42**	P	P	09 07 08.1	-0.2
SCRK				IAmb	IAmb	09 07 08.8	
	comp=Z,2.7nm,0.6s						
GRNC	**Granite Creek**	**18.56**	**53**	P	P	09 07 06.9	-1.9
LOGN	**Logan Glacier**	**18.94**	**53**	P	P	09 07 10.5	-2.4

*IDC **09** 09:04:02.3±2.5, 53.°51N×87.°74E, h0km, mbtmp3.8/2, ML3.4/2, Error ellipse: s-maj=21.8km s-min=14.4km az=64.0*
*NNC **09** 09:04:03.4±1.8, 53.°44N×87.°55E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=13.8km s-min=7.9km az=63.0, Suspected Mining explosion.*

ISC 09 09:04:03.1±3.5, 53.°6N±0.°1×87.°6E±0.°2, h0km, n8, σ0s64/13, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.68**	**285**	*i*		09 15 30.0	
	0.3nm,1.1s,baz=100,slow=316,SNR=5.8						
ZAA0	**Zalesovo Array**	**1.68**	**285**	⇑P	**Pn**	**09 04 33.4**	**-0.3**
	2.7nm,0.5s						
ZAA0				⇑S	**Sg**	**09 04 57.6**	**+0.6**
	19nm,0.6s						
ZALV	**Zalesovo Beam**	**1.68**	**285**	Pn	**Pn**	**09 04 33.6**	**-0.1**
	8.3nm,0.3s,baz=103,slow=15,SNR=53						
ZALV				Lg	Lg	09 04 59.2	
	30nm,0.3s,baz=106,slow=25,SNR=20						
KURK	**Kurchatov**	**6.19**	**246**	⇑Pn	**Pn**	**09 05 35.2**	**-0.5**
	3.7nm,0.5s						
KURK				⇑Sn	**Sn**	**09 06 46.5**	**-0.6**
	3.7nm,0.5s						
KURK				⇑Lg	Lg	09 07 20.4	
	19nm,0.7s						
KURBB	**Kurchatov Arra**	**6.29**	**246**	Pn	**Pn**	**09 05 38.2**	**+1.2**
	0.9nm,0.3s,baz=62,slow=14,SNR=37						
KURBB				Sn	**Sn**	**09 06 49.5**	**0.0**
	0.3nm,0.3s,baz=70,slow=27,SNR=5.0						
KURBB				Lg	Lg	09 07 24.6	
	0.4nm,0.3s,baz=63,slow=32,SNR=6.9 9.4nm,0.5s						
KURBB	**Kurchatov Arra**	**6.29**	**246**	⇑Pn	**Pn**	**09 05 37.1**	**0.0**
	13nm,0.5s						
KURBB				⇓Sn	**Sn**	**09 06 49.1**	**-0.4**
	29nm,0.7s						
KURBB				⇓Lg	Lg	09 07 19.9	
	37nm,0.6s						
MK31	**Makanchi Array**	**7.56**	**209**	⇑Pn	**Pn**	**09 05 54.7**	**+0.2**
	1.0nm,0.5s,baz=28,slow=13,SNR=25						
MK31				⇓Sn	**Sn**	**09 07 20.2**	**-0.6**
	6.4nm,0.8s,baz=29,slow=25,SNR=5.9						
MK31				Lg	Lg	09 08 03.2	
	14nm,0.8s,baz=47,slow=34,SNR=4.8						
MKAR	**Makanchi Array**	**7.56**	**209**	Pn	**Pn**	**09 05 55.1**	**+0.7**
	0.6nm,0.3s,baz=32,slow=13,SNR=16						
MKAR				Sn	**Sn**	**09 07 20.1**	**-0.8**
	0.6nm,0.3s,baz=26,slow=26,SNR=10						
MKAR				Lg	Lg	09 08 03.5	
	1.0nm,0.3s,baz=23,slow=28,SNR=7.8 1.8nm,0.6s						

*SLM **09** 09:05:39.8±0.9, 36.°80N±0.°01×89.°48W±0.°04, h4km±7km, Md2.8/50, mb_Lg2.8/96(NEIC), Error ellipse: s-maj=5.3km s-min=1.9km az=100.0*
*ANF **09** 09:05:39.8±0.3, 36.°78N×89.°48W, h4km, ML3.3/20, Error ellipse: s-maj=3.1km s-min=3.0km az=21.0*
*NEIC **09** 09:05:39.7±0.8, 36.°807N±0.°007×89.°48W±0.°05, h7km±7km, Error ellipse: s-maj=5.6km s-min=1.0km az=87.0*

ISC 09 09:05:39.8±0.8, 36.°80N±0.°02×89.°47W±0.°02, h10km±6km, n137, σ0s74/122, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HENM	**Henderson Moun**	**0.09**	**181**		**Pg**	**09 05 41.5**	**-0.6**
CHRM	**Charleston**	**0.10**	**60**		**Pg**	**09 05 42.2**	**-0.1**
MATM	**Matthews**	**0.11**	**256**		**Pg**	**09 05 42.3**	**-0.2**
EPRM	**East Prairie**	**0.12**	**133**		**Pg**	**09 05 42.4**	**-0.3**
EPRM					**Sg**	**09 05 44.6**	**0.0**
KEWM	**Kewanee**	**0.14**	**224**		**Pg**	**09 05 42.7**	**-0.2**
SJMO	**Saint John's B**	**0.17**	**182**		**Pg**	**09 05 43.1**	**-0.3**
SJMO					**Sg**	**09 05 45.9**	**0.0**
NMMO	**New Madrid**	**0.22**	**197**		**Pg**	**09 05 44.4**	**+0.1**
NMMO					**Sg**	**09 05 47.6**	**+0.2**
COKM	**Charter Oak**	**0.23**	**246**		**Pg**	**09 05 44.2**	**-0.2**
CATM	**Catron**	**0.24**	**217**		**Pg**	**09 05 44.4**	**-0.2**
CATM					**Sg**	**09 05 48.0**	**+0.2**
NMEM	**New Madrid Sch**	**0.24**	**202**		**Pg**	**09 05 44.6**	**-0.1**
NMEM					**Sg**	**09 05 48.2**	**+0.2**
PARMO	**Parma**	**0.27**	**239**		**Pg**	**09 05 44.8**	**-0.3**
WALK	**Watson Lake**	**0.27**	**193**		**Pg**	**09 05 45.1**	**0.0**
WALK					**Sg**	**09 05 49.1**	**+0.3**
GUAMO	**Guam**	**0.31**	**287**		**Pg**	**09 05 45.9**	**0.0**
GUAMO					**Sg**	**09 05 50.5**	**+0.4**
MARMO	**Marston**	**0.32**	**211**		**Pg**	**09 05 45.9**	**-0.1**
HICK	**Hickman**	**0.32**	**143**		**Pg**	**09 05 46.0**	**-0.2**
PENMO	**Penman**	**0.37**	**200**		**Pg**	**09 05 46.9**	**-0.2**
PGVM	**Portageville**	**0.40**	**212**		**Pg**	**09 05 47.4**	**-0.2**
MLDM	**Malden**	**0.40**	**244**		**Pg**	**09 05 47.4**	**-0.3**
PPLM	**Point Pleasant**	**0.41**	**193**		**Pg**	**09 05 47.6**	**-0.2**
FLPT	**Flippin**	**0.41**	**163**		**Pg**	**09 05 47.7**	**-0.1**
POBM	**Portage Bay**	**0.42**	**202**		**Pg**	**09 05 47.8**	**-0.2**
PVMO	**Portageville**	**0.43**	**206**	Pg	**Pg**	**09 05 47.6**	**-0.5**
BRNM	**Bernie**	**0.43**	**260**		**Pg**	**09 05 47.9**	**-0.3**
FMKY	**Fulgham**	**0.47**	**107**		**Pg**	**09 05 48.8**	**-0.1**
WADM	**Wardell**	**0.51**	**211**		**Pg**	**09 05 49.4**	**-0.2**
BETM	**Bethany**	**0.51**	**248**		**Pg**	**09 05 49.4**	**-0.3**
CGM3	**Cape Girardeau**	**0.52**	**343**		**Pg**	**09 05 49.8**	**-0.1**
GLAT	**Glass**	**0.55**	**165**		**Pg**	**09 05 50.3**	**-0.2**
UTMT	**University of**	**0.67**	**133**		**Pg**	**09 05 52.1**	**-0.6**
T45B	**Paducah**	**0.69**	**72**	P	**Pg**	**09 05 52.7**	**-0.4**
	baz=252,SNR=28						
T45B				S	**Sg**	**09 06 02.6**	**+0.3**
	baz=252						
T45A	**Paducah**	**0.70**	**71**		**Pg**	**09 05 52.8**	**-0.4**
T45A				IAmb_Lg		09 06 03.6	
	comp=Z,114nm,0.8s						
LNXT	**Lenox**	**0.70**	**181**		**Pg**	**09 05 53.0**	**-0.2**
PBMO	**Poplar Bluff**	**0.77**	**269**		**Pg**	**09 05 53.8**	**-0.9**
PBMO	**Poplar Bluff**	**0.77**	**269**	S	**Sg**	**09 06 03.9**	**-0.8**
	baz=88						
HALT	**Halls**	**0.90**	**173**		**Pg**	**09 05 56.4**	**-0.6**
S44A	**Carbondale**	**0.91**	**11**		**Pg**	**09 05 56.7**	**-0.5**
S44A	**Carbondale**	**0.91**	**11**	P	**Pg**	**09 05 56.8**	**-0.5**
	baz=191,SNR=46						
SIUC	**Southern Illin**	**0.93**	**12**		**Pg**	**09 05 56.8**	**-1.0**
GNAR	**Gosnell**	**0.94**	**208**		**Pg**	**09 05 57.4**	**-0.6**
LPAR	**Lepanto**	**1.37**	**210**		**Pn**	**09 06 04.9**	**-0.1**
FVM	**French Village**	**1.41**	**327**		**Pn**	**09 06 05.2**	**-0.3**
FVM	**French Village**	**1.41**	**327**	P	**Pn**	**09 06 05.1**	**-0.4**
	baz=147,SNR=48						
FVM				S	**Sb**	**09 06 23.6**	**-0.5**
	baz=147						
WVT	**Waverly**	**1.48**	**116**		**Pn**	**09 06 06.3**	**-0.2**
WVT	**Waverly**	**1.48**	**116**	P	**Pn**	**09 06 06.2**	**-0.2**
	baz=297,SNR=44						
WVT				S	**Sn**	**09 06 25.4**	**-0.5**
	baz=297						
LCAR	**Lake Charles**	**1.54**	**242**		**Pn**	**09 06 07.3**	**-0.1**
LCAR	**Lake Charles**	**1.54**	**242**	P	**Pn**	**09 06 07.2**	**-0.1**
	baz=61						
HBAR	**Harrisburg**	**1.57**	**218**		**Pn**	**09 06 08.2**	**+0.5**
HBAR	**Harrisburg**	**1.57**	**218**	P	**Pn**	**09 06 08.1**	**+0.4**
	baz=37						
HBAR				S	**Sb**	**09 06 29.5**	**+0.7**
	baz=37						
W45A	**Hickory Valley**	**1.66**	**172**		**Pn**	**09 06 09.2**	**+0.2**
W45A	**Hickory Valley**	**1.66**	**172**	P	**Pn**	**09 06 08.8**	**-0.2**
	baz=352						
W45A				S	**Sb**	**09 06 31.6**	**+0.2**
	baz=352						
EBZ	**Ebenezer Churc**	**1.66**	**177**		**Pb**	**09 06 10.0**	**-0.4**
USIN	**University of**	**1.85**	**50**		**Pn**	**09 06 11.8**	**+0.2**
USIN				IAmb_Lg		09 06 38.7	
	comp=Z,56nm,1.1s						
CCM	**Cathedral Cave**	**1.89**	**312**		**Pn**	**09 06 13.2**	**+1.1**
CCM	**Cathedral Cave**	**1.89**	**312**	P	**Pn**	**09 06 13.2**	**+1.1**
	baz=131,SNR=60						
CCM				S	**Sb**	**09 06 38.1**	**+0.1**
	baz=131						
T47A	**Sharon Grove**	**1.90**	**84**		**Pn**	**09 06 12.9**	**+0.6**
T47A	**Sharon Grove**	**1.90**	**84**	P	**Pn**	**09 06 13.6**	**+1.2**
	baz=265,SNR=98						
T47A				S	**Sb**	**09 06 38.9**	**+0.4**
	baz=265						
SLM	**Saint Louis**	**1.93**	**342**		**Pn**	**09 06 12.3**	**-0.4**
SLM	**Saint Louis**	**1.93**	**342**	P	**Pb**	**09 06 14.7**	**-0.4**
	baz=162						
SLM				S	**Sb**	**09 06 39.7**	**+0.5**
	baz=162						
Q44A	**Meyer Farm, Va**	**2.13**	**10**		**Pn**	**09 06 16.0**	**+0.5**
Q44A	**Meyer Farm, Va**	**2.13**	**10**	P	**Pb**	**09 06 17.6**	**-0.8**
	baz=190,SNR=24						
Q44A				S	**Sb**	**09 06 44.2**	**-0.8**
	baz=190						
PLAL	**Pickwick Lake**	**2.14**	**148**		**Pn**	**09 06 15.3**	**-0.3**
PWLA	**Pickwick Lake**	**2.15**	**147**		**Pn**	**09 06 15.4**	**-0.2**
OLIL	**Olney**	**2.21**	**29**		**Pn**	**09 06 16.9**	**+0.3**
OLIL				IAmb_Lg		09 06 55.4	
	comp=Z,30nm,0.9s						
OLIL	**Olney**	**2.21**	**29**	S	**Sb**	**09 06 48.4**	**+1.0**
	baz=210						
MGMO	**Mountain Grove**	**2.27**	**280**		**Pn**	**09 06 18.1**	**+0.7**
MGMO				IAmb_Lg		09 06 53.4	
	comp=Z,35nm,0.8s						
OXF	**Oxford**	**2.29**	**179**	Pn	**Pn**	**09 06 17.6**	**0.0**
OXF	**Oxford**	**2.29**	**179**	P	**Pn**	**09 06 19.2**	**+1.6**
	baz=359,SNR=9.2						
FCAR	**Ozark Folk Cen**	**2.33**	**248**		**Pn**	**09 06 18.8**	**+0.6**
FCAR				IAmb_Lg		09 06 54.0	
	comp=Z,36nm,0.8s						
V48A	**Smith Brothers**	**2.39**	**116**		**Pn**	**09 06 19.8**	**+0.8**
CLTN	**Cedars of Leba**	**2.63**	**105**		**Pn**	**09 06 23.6**	**+1.3**
CLTN				IAmb_Lg		09 07 06.8	
	comp=Z,33nm,0.9s						
R40A	**Maddies Statio**	**2.68**	**305**		Pn	09 06 17.7	-5.2
R40A	**Maddies Statio**	**2.68**	**305**	P	**Pn**	**09 06 24.4**	**+1.4**
	baz=123,SNR=11						
WHAR	**Wooly Hollow**	**2.74**	**237**		**Pn**	**09 06 25.1**	**+1.3**
WHAR				IAmb_Lg		09 07 08.8	
	comp=Z,45nm,1.1s						
P43A	**Skaggs, Pawnee**	**2.84**	**359**		**Pn**	**09 06 26.4**	**+1.3**
P43A	**Skaggs, Pawnee**	**2.84**	**359**	P	**Pn**	**09 06 27.7**	**+2.5**
	baz=179,SNR=13						
Y45A	**Yeager Farm, C**	**2.93**	**181**		**Pn**	**09 06 27.2**	**+0.8**
Y45A				IAmb_

P38A	**Dawn**	**4.26**	**313**	P	**Pn**	**09 06 45.5**	**+0.7**
	baz=130,SNR=16						
LRAL	**Lakeview Retre**	**4.27**	**151**	Pn	**Pn**	**09 06 44.6**	**-0.3**
R50A	**Paris**	**4.34**	**69**	IAmb_Lg		09 07 56.4	
	comp=Z,28nm,1.1s						
143A	**Socs Landing,**	**4.39**	**202**	IAmb_Lg		09 08 10.5	
	comp=Z,21nm,0.8s						
RLO	**Rose Lookout**	**4.52**	**264**	IAmb_Lg		09 08 01.0	
	comp=Z,9.2nm,0.7s						
TKL	**Tuckaleechee C**	**4.74**	**102**	IAmb_Lg		09 08 08.5	
	comp=Z,23nm,0.8s						
W52A	**Murphy**	**4.81**	**109**	Pn	**Pn**	**09 06 52.1**	**-0.2**
W52A				IAmb_Lg		09 08 09.5	
	comp=Z,16nm,0.7s						
N47A	**Urbana**	**5.03**	**35**	IAmb_Lg		09 08 25.3	
	comp=Z,18nm,0.8s						
TUL1	**Leonard**	**5.18**	**262**	IAmb_Lg		09 08 27.0	
	comp=Z,22nm,1.2s						
L42A	**Oliver, Polo**	**5.20**	**358**	IAmb_Lg		09 08 23.9	
	comp=Z,23nm,0.9s						
O49A	**Covington**	**5.26**	**48**	IAmb_Lg		09 08 41.3	
	comp=Z,13nm,0.8s						
Y52A	**Lilburn**	**5.30**	**122**	IAmb_Lg		09 08 27.3	
	comp=Z,14nm,0.8s						
Q51A	**Peebles**	**5.33**	**64**	IAmb_Lg		09 08 28.2	
	comp=Z,15nm,0.8s						
L40A	**Anamosa**	**5.43**	**346**	Pn	**Pn**	**09 07 01.7**	**+0.9**
L40A				IAmb_Lg		09 08 31.2	
	comp=Z,14nm,0.8s						
V53A	**Saluda**	**5.50**	**100**	IAmb_Lg		09 08 37.8	
	comp=Z,16nm,0.8s						
BG3	**Lake Jocassee**	**5.61**	**107**	IAmb_Lg		09 08 41.2	
	comp=Z,16nm,0.8s						
152A	**Waverly Hall**	**5.68**	**135**	IAmb_Lg		09 08 53.9	
	comp=Z,15nm,1.1s						
Z38A	**Mt. Pleasant**	**5.74**	**234**	IAmb_Lg		09 08 37.7	
	comp=Z,21nm,0.9s						
DEOK	**Depew**	**5.75**	**263**	IAmb_Lg		09 08 51.3	
	comp=Z,13nm,0.9s						
QUOK	**Quay**	**5.87**	**266**	IAmb_Lg		09 08 57.5	
	comp=Z,12nm,0.7s						
SCIA	**State Center**	**5.87**	**332**	IAmb_Lg		09 08 58.0	
	comp=Z,13nm,0.9s						
OK034	**N. Norfolk Rd.**	**5.90**	**264**	IAmb_Lg		09 08 55.9	
	comp=Z,11nm,0.7s						
OK030	**Cody Creek RV**	**5.97**	**264**	IAmb_Lg		09 09 05.8	
	comp=Z,13nm,0.9s						
OK031	**S. Brethren Rd**	**6.01**	**264**	IAmb_Lg		09 08 55.0	
	comp=Z,12nm,0.8s						
Q52A	**Bidwell**	**6.09**	**67**	IAmb_Lg		09 09 02.1	
	comp=Z,12nm,0.8s						
R53A	**Hurricane**	**6.16**	**73**	IAmb_Lg		09 09 01.9	
	comp=Z,13nm,0.7s						
BLOK	**Blackwell**	**6.22**	**272**	IAmb_Lg		09 08 58.4	
	comp=Z,35nm,1.1s						
PAULI	**Pauline**	**6.53**	**105**	IAmb_Lg		09 09 06.4	
	comp=Z,10nm,0.8s						
I40A	**Norwalk**	**7.14**	**353**	IAmb_Lg		09 09 38.4	
	comp=Z,10nm,1.1s						
U56A	**King**	**7.33**	**91**	IAmb_Lg		09 09 27.7	
	comp=Z,9.6nm,0.9s						
OK038	**West end E0370**	**7.46**	**270**	IAmb_Lg		09 09 40.8	
	comp=Z,14nm,0.9s						
O54A	**Avella**	**7.89**	**62**	IAmb_Lg		09 09 49.7	
	comp=Z,9.8nm,1.0s						

*SGS **09** 09:08:54.5,28˚.42N×32˚.66E,h17km,Ml3.7*
*GII **09** 09:08:58.3±0.3,28˚.62N×32˚.68E,h60km,mb4.2/4,*
Mb3.9/6,Mm3.8/3
*HLW **09** 09:09:00.3,28˚.54N×33˚.07E,h17km±1km,Md3.4,Ml4.2*

ISC 09 09:08:58.4±1.3,28˚.60N±0˚.03×32˚.99E±0˚.03,h8km±11km, n42,σ0s81/51,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRDS	**Abu Rudays**	**0.29**	**67**	P	**Pb**	**09 09 06.5**	**+0.5**
	baz=49						
GRB	**Gharib**	**0.37**	**209**	P	**Pb**	**09 09 08.2**	**+0.8**
	baz=224						
TR2	**Tor 2**	**0.68**	**108**	P	**Pg**	**09 09 12.2**	**+0.7**
	baz=105						
ZNM	**Zenema**	**0.78**	**352**	S	**Sn**	**09 09 27.5**	**-0.3**
	baz=349						
ZAF	**Zafarana**	**0.79**	**330**	P	**Pn**	**09 09 16.2**	**+0.3**
	baz=329						
ZAF				S	**Sn**	**09 09 28.4**	**+0.5**
	baz=329						
HKAT	**Jabal Katrina**	**0.88**	**95**	P	**Pg**	**09 09 15.6**	**+0.2**
	baz=91						
HKAT				S	**Sg**	**09 09 26.3**	**-0.6**
	baz=91						
SUZ	**Suez**	**1.25**	**354**	P	**Pg**	**09 09 23.0**	**+0.6**
	baz=351						
HDHB	**Dhahab**	**1.43**	**85**	P	**Pn**	**09 09 24.1**	**-0.7**
	baz=82						
HHRG	**Al Ghardaqah**	**1.46**	**160**	P	**Pb**	**09 09 26.1**	**+0.1**
	baz=162						
GLL	**Jalalah**	**1.49**	**311**	P	**Pg**	**09 09 27.1**	**0.0**
	baz=312						
NBNS	**Bani Suef**	**1.49**	**271**	P	**Pg**	**09 09 26.8**	**-0.3**
	baz=274						
NUB	**Nuweibaa**	**1.51**	**73**	P	**Pn**	**09 09 24.8**	**-1.1**
	baz=71						
HHAG	**Hagoal**	**1.56**	**330**	P	**Pb**	**09 09 27.7**	**+0.1**
	baz=330						
RSHS		**1.61**	**100**	P	**Pn**	**09 09 25.9**	**-1.4**
RSHS		**1.61**	**100**	S	**Sn**	**09 09 49.0**	**+0.7**
HSAF	**As Saff**	**1.62**	**309**	P	**Pb**	**09 09 28.9**	**+0.2**
	baz=310						
HBST	**Basata**	**1.65**	**68**	P	**Pn**	**09 09 27.6**	**-0.1**
	baz=64						
TAYS	**Tayyib Ism**	**1.65**	**91**	P	**Pn**	**09 09 26.4**	**-1.4**
TAYS	**Tayyib Ism**	**1.65**	**91**	S	**Sn**	**09 09 50.2**	**+1.0**
KOT	**Kottamia**	**1.67**	**323**	P	**Pb**	**09 09 29.3**	**-0.2**
	baz=323						
ASUT		**1.74**	**227**	P	**Pn**	**09 09 29.0**	**0.0**
	baz=230						
HAQS	**Haql**	**1.75**	**75**	P	**Pn**	**09 09 28.2**	**-1.0**
HAQS	**Haql**	**1.75**	**75**	S	**Sb**	**09 09 54.0**	**+1.0**
BDAS	**Al Bad`**	**1.86**	**95**	P	**Pn**	**09 09 29.5**	**-1.2**
JMOS	**Jabal al Moall**	**1.94**	**72**	P	**Pn**	**09 09 31.3**	**-0.5**
HQLS		**1.94**	**68**	P	**Pn**	**09 09 31.5**	**-0.4**
EIL	**Elat**	**2.02**	**58**	Pn	**Pn**	**09 09 32.6**	**-0.2**
EIL				Sn	**Sb**	**09 10 00.0**	**-0.7**
AYUS	**`Aynunah**	**2.05**	**101**	P	**Pn**	**09 09 31.9**	**-1.3**
KRABS	**KRABS**	**2.05**	**103**	P	**Pn**	**09 09 31.8**	**-1.5**
MBRI	**Mt Berech**	**2.06**	**54**	Pn	**Pn**	**09 09 33.5**	**0.0**
MBRI				Sn	**Sb**	**09 10 01.9**	**-0.1**
KRMI	**Paran Flat**	**2.14**	**45**	Pn	**Pn**	**09 09 34.3**	**-0.2**
KRMI				Sn	**Sn**	**09 10 02.1**	**+0.7**
HRFI	**Mount Harif**	**2.29**	**51**	Pn	**Pn**	**09 09 37.3**	**+0.7**
HRFI				Sn	**Sn**	**09 10 06.5**	**+1.5**
PRNI	**Paran**	**2.48**	**45**	Pn	**Pn**	**09 09 39.2**	**0.0**
PRNI				Sn	**Sn**	**09 10 10.5**	**+0.9**
KZIT	**Kziot**	**2.60**	**28**	Pn	**Pn**	**09 09 40.0**	**-0.9**
ZFRI	**Zfri**	**2.73**	**44**	Pn	**Pn**	**09 09 42.5**	**0.0**
ZFRI				Sn	**Sn**	**09 10 16.0**	**+0.3**
YTIR	**Yattir**	**3.31**	**33**	Pn	**Pn**	**09 09 50.2**	**-0.6**
DSI	**Dead Sea**	**3.61**	**34**	Pn	**Pn**	**09 09 55.0**	**+0.2**
SLTI	**Sal'it**	**4.04**	**25**	Pn	**Pn**	**09 09 59.3**	**-1.3**
HMDT	**Nahal Hemdat**	**4.25**	**30**	Pn	**Pn**	**09 10 02.8**	**-0.7**
MMLI	**Mount Malkishu**	**4.36**	**28**	Pn	**Pn**	**09 10 04.1**	**-1.0**
MMLI				Sn	**Sn**	**09 10 54.8**	**-1.4**
HAGS	**Hagol**	**4.56**	**157**	P	**Pn**	**09 10 07.3**	**-0.6**
	baz=157						
MMA0B	**Mount Meron ar**	**4.87**	**25**	Pn	**Pn**	**09 10 10.9**	**-1.2**

IDC 09 09:20:19.1±3.0,53˚.41N×87˚.31E,h0km,mbtmp2.9/2, ML2.7/2,Error ellipse: s-maj=29.9km s-min=14.9km az=61.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.58**	**291**	Pg	Pn	09 20 46.0	-2.2
	1.4nm,0.3s,baz=109,slow=16,SNR=9.9						
ZALV				Lg	Lg	09 21 10.2	
	3.1nm,0.3s,baz=114,slow=26,SNR=11						
I46RU	**ZALESOVO INFRA**	**1.58**	**291**	*i*		09 30 12.2	
	baz=109,slow=320,SNR=24						
KURBB	**Kurchatov Arra**	**6.09**	**246**	Pn	Pn	09 21 50.7	+0.4
	0.1nm,0.3s,baz=63,slow=14,SNR=5.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.36**	**208**	Pn	Pn	09 22 09.3	+1.6
	0.2nm,0.3s,baz=28,slow=15,SNR=11						
	0.3nm,0.3s						

RSNC 09 09:21:12.1±1.1,6˚.81N×73˚.18W,h145km±4km,ML3.2, Mw3.5,3C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**182**	*i*P	Pn	09 21 31.7	-0.5
BARC				*e*S	Sn	09 21 47.1	-0.2
BARC				*i*		09 21 49.5	
	comp=Z,401nm,0.5s						
BRRC	**Barranca, Sant**	**0.61**	**299**	*i*P	Pn	09 21 33.5	0.0
BRRC				*e*S	Sn	09 21 50.2	+0.4
BRRC				*i*		09 21 53.7	
	comp=Z,298nm,0.3s						
PAMC	**Pamplona, Colo**	**0.71**	**42**	*e*P	Pn	09 21 34.7	-0.1
PAMC				*e*S	Sn	09 21 51.6	-0.3
PAMC				*i*		09 21 53.9	
	comp=Z,262nm,0.5s						
RUSC	**La Rusia**	**0.91**	**174**	*i*P	Pn	09 21 35.6	-0.7
RUSC				*e*S	Sn	09 21 53.5	-1.1
RUSC				*i*		09 21 55.6	
	comp=Z,173nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.30**	**258**	*e*P	Pn	09 21 38.0	-1.2
PTBC				*e*S	Sn	09 21 58.8	-1.2
PTBC				*i*		09 22 06.7	
	comp=Z,210nm,0.4s						
TAMC	**Tame, Arauca**	**1.42**	**105**	*i*P	Pn	09 21 40.1	-0.4
TAMC				*e*S	Sn	09 22 02.0	-0.3
TAMC				*i*		09 22 02.5	
	comp=Z,88nm,0.3s						
SPBC	**San Pablo de B**	**1.45**	**218**	*e*P	Pn	09 21 40.4	-0.5
SPBC				*e*S	Sn	09 22 02.7	-0.2
SPBC				*i*		09 22 09.0	
	comp=Z,353nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.80**	**292**	*e*P	Pn	09 21 43.9	-0.8
ZARC						09 22 20.0	
	comp=Z,192nm,0.4s						
NORC	**Norcasia**	**2.09**	**234**	*e*P	Pn	09 21 47.4	-0.7
NORC				*e*S	Sn	09 22 14.7	-0.9
NORC				*i*		09 22 23.6	
	comp=Z,160nm,0.1s						
CHIC	**Chingaza**	**2.23**	**194**	*e*P	Pn	09 21 49.8	-0.4
CHIC				*e*S	Sn	09 22 19.5	+0.2
CHIC				*i*		09 22 22.5	
	comp=Z,69nm,0.4s						
ROSC	**El Rosal**	**2.26**	**210**	*e*P	Pn	09 21 51.4	+0.9
ROSC				*e*S	Sn	09 22 21.7	+1.8
ROSC				*i*		09 22 27.8	
	comp=Z,121nm,0.3s						
HELC	**Santa Helena**	**2.42**	**255**	*e*P	Pn	09 21 52.7	+0.4
HELC				*e*S	Sn	09 22 22.9	-0.3
HELC				*i*		09 22 31.0	
	comp=Z,91nm,0.6s						
UREC	**San Jos de Ur**	**2.52**	**292**	*e*P	Pn	09 21 51.2	-2.0
UREC				*e*S	Sn	09 22 22.8	-2.2
UREC				*i*		09 22 36.2	
	comp=Z,89nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.69**	**234**	*e*P	Pn	09 21 55.9	+0.1
GUY2C				*e*		09 21 55.9	
GUY2C				*e*S	Sn	09 22 29.1	-0.2
GUY2C				*i*		09 22 36.9	
	comp=Z,86nm,0.6s						
VILC	**Villavicencio,**	**2.73**	**191**	*e*P	Pn	09 21 55.3	-0.6
VILC				*e*S	Sn	09 22 29.8	-0.1
VILC				*i*		09 22 38.7	
	comp=Z,91nm,0.5s						
SOCV	**Socops**	**2.73**	**57**	*e*P	Pn	09 21 54.6	-1.2
SOCV				*e*S	Sn	09 22 25.9	-3.7
LL1C	**La Loma 1 Cana**	**2.74**	**352**	*e*P	Pn	09 21 57.1	+1.1
LL1C				*e*S	Sn	09 22 31.6	+1.6
LL1C				*i*		09 22 35.3	
	comp=Z,258nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.91**	**358**	*e*P	Pn	09 21 56.3	-1.9
LL6C				*e*S	Sn	09 22 30.5	-3.3
LL6C				*i*		09 22 41.9	
	comp=Z,35nm,0.4s						
CBOC	**Ciudad Bolivar**	**2.97**	**252**	*e*P	Pn	09 21 59.3	+0.2
CBOC				*e*S	Sn	09 22 33.7	-1.7
CBOC				*i*		09 22 52.4	
	comp=Z,37nm,0.7s						
ANIL	**Santa Ana**	**3.19**	**224**	*i* P	Pn	09 22 02.0	0.0
ANIL				*e*S	Sn	09 22 41.0	+0.3
ARGC	**Ariguani, Magd**	**3.21**	**341**	*e*P	Pn	09 22 00.8	-1.2
ARGC				*e*S	Sn	09 22 40.5	-0.2
ARGC				*i*		09 22 52.1	
	comp=Z,34nm,0.3s						
PRAC	**Prado**	**3.51**	**209**	*e*P	Pn	09 22 05.1	-0.9
PRAC				*e*S	Sn	09 22 46.0	-1.7
PRAC				*i*		09 22 55.5	
	comp=Z,53nm,0.4s						
PLMC	**San Jos del P**	**3.62**	**239**	*e*P	Pn	09 22 07.5	+0.1
PLMC				*e*S	Sn	09 22 51.1	+0.9
PLMC				*i*		09 22 53.6	
	comp=Z,25nm,0.2s						
SJCC	**San Jacinto, C**	**3.66**	**327**	*e*P	Pn	09 22 05.3	-2.5
SJCC				*e*S	Sn	09 22 46.9	-4.1
SJCC				*i*		09 22 54.6	
	comp=Z,29nm,0.3s						
LCBC	**Los crdobas,**	**3.76**	**303**	*e*P	Pn	09 22 08.2	-1.0
CRJC	**Cerrejon, Guaj**	**4.20**	**4**	*e*P	Pn	09 22 12.1	-2.9
CRJC				*e*S	Sn	09 22 59.2	-4.6
CRJC				*i*		09 23 06.5	
	comp=Z,35nm,0.2s						
YOTC	**Yotoco, Valle**	**4.22**	**229**	*e*P	Pn	09 22 12.8	-2.5
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	Pn	09 22 14.2	-1.6
GUVC				*e*S	Sn	09 23 01.2	-4.1
GUVC				*i*		09 23 07.0	
	comp=Z,33nm,0.3s						
MACC	**Macarena, Meta**	**4.68**	**188**	*e*P	Pn	09 22 18.8	-2.5
MACC				*e*S	Sn	09 23 09.7	-5.4
MACC				*i*		09 23 17.2	
	comp=Z,20nm,0.8s						
GARC	**Garzon, Huila**	**5.14**	**207**	*e*P	Pn	09 22 25.9	-1.7
GARC				*e*S	Sn	09 23 19.0	-7.4
GARC				*i*		09 23 30.5	
	comp=Z,18nm,0.2s						

*THE **09** 09:37:25.8,34˚.15N×25˚.85E,h0km±2km,ML3.2/5,Error ellipse: s-maj=5.6km s-min=1.1km az=146.0*
*IDC **09** 09:37:26.0±1.2,34˚.23N×25˚.69E,h0km,mb3.9/4, mbtmp3.8/8,ML3.8/3,Error ellipse: s-maj=22.2km s-min=19.7km az=45.0*
*ATH **09** 09:37:26.2,34˚.14N×25˚.75E,h12km±3km,ML3.4/5,Error ellipse: s-maj=4.2km s-min=1.9km az=142.0*
*ISK **09** 09:37:27.8,34˚.23N×25˚.70E,h75km,ML3.3/14*

ISC 09 09:37:27.0±1.8,34˚.25N±0˚.07×25˚.75E±0˚.04,h6km±11km, n36,σ0s82/49,mb3.8/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.77**	**359**	P	**Pb**	**09 37 42.5**	**-0.2**
FRMA				S	**Sn**	**09 37 55.8**	**-0.4**
	1µm,0.4s						
FRMA	**Ierapetra Chan**	**0.77**	**359**	P	**Pb**	**09 37 42.9**	**+0.1**
FRMA				S	**Sn**	**09 37 55.6**	**-0.6**
FRMA				AML	AML	09 37 57.8	
	comp=E,7665µm,0.3s						
FRMA				AML	AML	09 38 02.8	
	comp=N,6318µm,0.6s						
ZKR	**Zakros**	**0.94**	**24**	P	**Pb**	**09 37 45.6**	**-0.2**
ZKR				S	**Sn**	**09 38 00.8**	**+0.1**
	comp=N,2µm,0.3s						
ZKR	**Zakros**	**0.94**	**24**	PG	**Pb**	**09 37 46.0**	**+0.2**
ZKR				SG	**Sn**	**09 38 01.1**	**+0.4**
ZKR	**Zakros**	**0.94**	**24**	P	**Pb**	**09 37 45.7**	**-0.2**
ZKR				S	**Sn**	**09 38 00.6**	**-0.1**
ZKR				AML	AML	09 38 02.2	
	comp=E,4253µm,0.3s						
ZKR				AML	AML	09 38 03.3	
	comp=N,2356µm,0.3s						
STIA	**Sitia Lasithi**	**0.99**	**16**	P	**Pb**	**09 37 46.4**	**-0.2**
STIA				S	**Sn**	**09 38 02.5**	**+0.7**
STIA	**Sitia Lasithi**	**0.99**	**16**	P	**Pb**	**09 37 46.4**	**-0.2**
STIA				S	**Sn**	**09 38 01.4**	**-0.4**
STIA				AML	AML	09 38 08.6	
	comp=N,2792µm,0.5s						
STIA				AML	AML	09 38 09.6	
	comp=E,2828µm,0.5s						
TMBK	**Timbaki Herakl**	**1.16**	**316**	P	**Pg**	**09 37 48.9**	**-0.3**
TMBK				S	**Sb**	**09 38 04.7**	**0.0**
TMBK				AML	AML	09 38 12.3	
	comp=N,4663µm,0.5s						
TMBK				AML	AML	09 38 15.6	
	comp=E,3710µm,0.5s						
HRKL	**Herakleio**	**1.19**	**333**	PN	**Pg**	**09 37 49.7**	**-0.1**
IDI	**Anoyia**	**1.26**	**326**	Pn	**Pg**	**09 37 50.3**	**-0.8**
	comp=E,9.0nm,0.3s,baz=318,slow=23,SNR=36						
IDI				Sn	**Sn**	**09 38 10.7**	**+2.2**
	comp=E,38nm,0.3s,baz=32,slow=23,SNR=6.9						
IDI	**Anoyia**	**1.26**	**326**	P	**Pg**	**09 37 50.0**	**-1.1**
IDI				S	**Sn**	**09 38 10.6**	**+2.1**
	comp=E,450nm,0.5s						
IDI	**Anoyia**	**1.26**	**326**	PN	**Pg**	**09 37 50.5**	**-0.6**
IDI	**Anoyia**	**1.26**	**326**	P	**Pg**	**09 37 50.0**	**-1.1**
GVDS	**Gavdos**	**1.50**	**294**	P	**Pn**	**09 37 54.3**	**-0.1**
GVDS				S	**Sg**	**09 38 17.2**	**+2.1**
	comp=E,870nm,0.3s						
GVD	**Gavdhos**	**1.50**	**294**	P	**Pn**	**09 37 54.5**	**+0.1**
GVD				S	**Sg**	**09 38 16.1**	**+1.0**
	comp=E,982nm,0.4s						
GVD	**Gavdhos**	**1.50**	**294**	PN	**Pn**	**09 37 53.5**	**-0.9**
GVD	**Gavdhos**	**1.50**	**294**	P	**Pn**	**09 37 54.6**	**+0.1**
GVD				S	**Sg**	**09 38 14.8**	**-0.3**
GVD				AML	AML	09 38 20.6	
	comp=E,2146µm,0.4s						
GVD				AML	AML	09 38 26.5	
	comp=N,1775µm,0.4s						
KARP	**Karpathos**	**1.74**	**41**	PN	**Pn**	**09 37 57.9**	**+0.1**
IMMV	**Iera Moni Meta**	**1.90**	**310**	PN	**Pn**	**09 37 59.1**	**-0.8**
KNDR	**Palaiochora Ch**	**1.97**	**301**	PN	**Pn**	**09 38 00.6**	**-0.3**
SANT	**Santorini**	**2.13**	**354**	PN	**Pn**	**09 38 02.8**	**-0.4**
ARG	**Arkhangelos**	**2.76**	**44**	PN	**Pn**	**09 38 12.1**	**+0.3**
APE	**Apeiranthos**	**2.82**	**356**	PN	**Pn**	**09 38 12.5**	**-0.2**
DAT	**Datca**	**2.89**	**30**	PN	**Pn**	**09 38 13.9**	**+0.2**
BODT	**Bodrum**	**3.08**	**24**	PN	**Pn**	**09 38 16.5**	**+0.3**
DALY	**Dalyan (Mula)**	**3.49**	**42**	PN	**Pn**	**09 38 22.4**	**+0.6**
YER	**Yerkesik**	**3.54**	**35**	PN	**Pn**	**09 38 23.1**	**+0.5**
AKAS	**Kas**	**3.72**	**57**	PN	**Pn**	**09 38 25.5**	**+0.4**
EIL	**Elat**	**9.05**	**118**	Pn	**Pn**	**09 39 38.3**	**+0.1**
	comp=N,0.7nm,0.3s,baz=347,slow=4.8,SNR=8.5						
	comp=N,2.0nm,0.3s						
KBZ	**Khabaz**	**16.32**	**49**	Pn	**P**	**09 41 21.4**	**+1.7**
	comp=N,0.2nm,0.3s,baz=224,slow=4.9,SNR=4.9						
	comp=N,2.5nm,0.9s						
AKASG	**Malin Array Be**	**16.64**	**8**	Pn	**Pn**	**09 41 20.9**	**+0.3**
	comp=N,0.8nm,0.3s,baz=197,slow=11,SNR=4.0						
	comp=N,0.4nm,0.4s						
GERES	**GERESS Array B**	**17.12**	**332**	P	**P**	**09 41 28.2**	**-0.4**
	comp=N,0.4nm,0.2s,baz=165,slow=12,SNR=1.6						
TORD	**Torodi Ar. Bea**	**30.30**	**232**	P	**P**	**09 43 38.9**	**-0.3**
	comp=N,0.7nm,0.5s,baz=32,slow=8.9,SNR=17						
	comp=N,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**35.34**	**360**	P	**P**	**09 44 20.9**	**-1.8**
	comp=N,1.9nm,0.8s,baz=168,slow=8.5,SNR=5.3						
	comp=N,1.9nm,0.8s						
MKAR	**Makanchi Array**	**43.87**	**56**	P	**P**	**09 45 35.2**	**+1.0**
	comp=N,1.2nm,0.6s,baz=275,slow=7.0,SNR=12						
	comp=N,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**45.29**	**46**	P	**P**	**09 45 44.8**	**-0.5**
	comp=N,0.4nm,0.4s,baz=284,slow=12,SNR=2.1						
	comp=N,0.4nm,0.4s						

IDC 09 09:37:41.7±1.9,0˚.09N×28˚.61W,h0km,mb3.8/2, mbtmp3.8/2,MS3.5/38,Error ellipse: s-maj=176.1km s-min=31.7km az=156.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.36**	**231**	LR	LR	09 42 56.9	
	comp=Z,468nm,18.6s,baz=166,slow=34						
H10N3	**ASCENSION HYDR16.12**	**120**		T	T	09 58 44.3	
	baz=300,slow=74,SNR=329						
H10N2	**ASCENSION HYDR16.14**	**119**		T	T	09 58 43.1	
	baz=300,slow=74,SNR=267						
H10N1	**ASCENSION HYDR16.14**	**120**		T	T	09 58 44.2	
	baz=300,slow=74,SNR=353						
H10S3	**ASCENSION HYDR16.54**	**123**		T	T	09 59 15.2	
	baz=301,slow=74,SNR=109						
H10S2	**ASCENSION HYDR16.56**	**123**		T	T	09 59 16.5	
	baz=279,slow=74,SNR=38						
MDP	**Montagnes des**	**24.51**	**282**	LR	LR	09 50 19.4	
	comp=Z,43nm,21.3s,baz=73,slow=31						
DBIC	**Dimbokro**	**24.58**	**74**	LR	LR	09 50 51.0	
	comp=Z,135nm,19.6s,baz=271,slow=32						
BDFB	**Brasilia**	**24.73**	**230**	LR	LR	09 52 07.7	
	comp=Z,223nm,18.3s,baz=318,slow=35						
TORD	**Torodi Ar. Bea**	**32.72**	**65**	P	P	09 44 16.4	0.0
	1.0nm,0.8s,baz=251,slow=9.2,SNR=3.9						
TORD				LR	LR	09 55 42.0	
	comp=Z,96nm,21.6s,baz=218,slow=33						
	1.0nm,0.8s						
SIV	**San Ignacio**	**35.80**	**242**	LR	LR	09 59 03.1	
	comp=Z,235nm,19.1s,baz=114,slow=36						
CPUP	**Villa Florida**	**38.15**	**224**	LR	LR	10 00 17.3	
	comp=Z,288nm,19.4s,baz=45,slow=36						
MDT	**Mixlt**	**39.64**	**32**	LR	LR	10 00 54.0	
	comp=Z,53nm,18.3s,baz=241,slow=35						
LPAZ	**La Paz**	**42.23**	**245**	P	P	09 45 37.7	-0.1
	1.3nm,0.8s,baz=59,slow=5.9,SNR=5.5						
LPAZ				LR	LR	10 02 49.9	
	comp=Z,149nm,19.5s,baz=90,slow=36						
	1.3nm,0.8s						
LVC	**Limon Verde**	**45.24**	**237**	LR	LR	10 03 49.7	
	comp=Z,93nm,18.7s,baz=15,slow=35						
ESDC	**Sonseca Array**	**45.38**	**27**	LR	LR	10 02 31.6	
	comp=Z,22nm,19.1s,baz=279,slow=33						
ROSC	**El Rosal**	**45.90**	**277**	LR	LR	10 03 16.7	
	comp=Z,56nm,19.6s,baz=106,slow=33						
NNA	**Nana**	**49.35**	**254**	LR	LR	10 06 52.3	
	comp=Z,31nm,20.6s,baz=66,slow=36						
KEST	**Kesra**	**50.03**	**41**	LR	LR	10 08 19.1	
	comp=Z,

Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KECS	**Kecovo**	**0.23**	**242**	Pg	Pg	09 43 11.6	-0.9
	comp=Z,2.7nm,SNR=38						
KECS				Lg	Lg	09 43 15.4	
KECS	**Kecovo**	**0.23**	**242**	*e*Pg	Pg	09 43 11.6	-0.9
KECS				*e*SG	Sg	09 43 15.5	0.0
KECS				*e*LG	Lg	09 43 17.9	
CRVS	**Cervenica-Dubn**	**0.55**	**55**	Pb	Pg	09 43 18.7	+0.1
	SNR=2.3						
CRVS				Lg	Lg	09 43 26.9	
CRVS	**Cervenica-Dubn**	**0.55**	**55**	*e*Pg	Pg	09 43 18.9	+0.2
CRVS				*e*SG	Sg	09 43 26.8	+1.0
CRVS				*e*LG	Lg	09 43 27.4	
PSZ	**Piszkesteto**	**0.90**	**222**	Pb	Pg	09 43 25.1	-0.3
	comp=Z,0.1nm,SNR=2.5						
PSZ				Lg	Lg	09 43 37.7	
PSZ	**Piszkesteto**	**0.90**	**222**	P	Pg	09 43 25.1	-0.3
PSZ				S	Sg	09 43 37.7	+0.7
LANS	**Liptovska Anna**	**1.03**	**303**	*e*PG	Pg	09 43 27.5	-0.6
LANS				*e*SG	Sg	09 43 41.3	-0.2
LANS				*e*LG	Lg	09 43 50.6	
KOLS	**Kolonicke sedl**	**1.04**	**70**	Pg	Pg	09 43 26.8	-1.4
	comp=Z,11nm,SNR=6.9						
KOLS				Lg	Lg	09 43 43.7	
KOLS	**Kolonicke sedl**	**1.04**	**70**	*e*SG	Sn	09 43 44.7	-0.7
A336A	**Medovarce**	**1.24**	**254**	Sn	Sn	09 43 50.5	+0.2
VYHS	**Vyhne**	**1.30**	**266**	Pg	Pg	09 43 32.2	-0.9
	SNR=1.4						
VYHS				Sn	Sg	09 43 49.9	-0.1
VYHS	**Vyhne**	**1.30**	**266**	*e*PG	Pg	09 43 32.1	-1.0
VYHS				*e*SG	Sg	09 43 49.7	-0.2
VYHS				*e*LG	Lg	09 43 54.8	

*ISK **09** 09:53:39.8, 38°.20N×26°.70E, h7km, ML2.6/11*
*DDA **09** 09:53:40.3±0.0, 38°.19N×26°.70E, h7km±3km, ML2.2*
ISC 09 09:53:40.4±0.9**, 38°.20N**±0°.03×**26°.70E**±0°.03**, h10**km±7km**, n21**, σ0°66/34**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEYE	**Izmir, Urla-Ze**	**0.16**	**284**	P	**Pg**	**09 53 44.1**	**+0.2**
ZEYE				*i* AML	AML	09 53 47.0	
	comp=N,2μm,0.2s						
ZEYE				*i* AML	AML	09 53 47.0	
	comp=E,2μm,0.1s						
ZEYE				S	**Sg**	**09 53 47.2**	**+0.9**
URLA	**Izmir**	**0.18**	**333**	PG	**Pg**	**09 53 43.6**	**-0.7**
URLA				SG	**Sg**	**09 53 47.4**	**+0.5**
URLA	**Izmir**	**0.18**	**333**	P	**Pg**	**09 53 43.5**	**-0.7**
URLA				S	**Sg**	**09 53 46.8**	**-0.1**
URLA				*i* AML	AML	09 53 47.0	
	comp=N,514nm,0.3s						
URLA				*i* AML	AML	09 53 47.0	
	comp=E,942nm,0.6s						
DGB	**zmir**	**0.21**	**135**	P	**Pg**	**09 53 44.6**	**-0.1**
DGB				S	**Sg**	**09 53 47.7**	**+0.1**
BLCB	**Balcova**	**0.33**	**56**	PG	**Pg**	**09 53 46.7**	**-0.2**
BLCB				SG	**Sg**	**09 53 51.8**	**+0.5**
FOCM	**Foa**	**0.51**	**3**	PG	**Pg**	**09 53 50.2**	**-0.2**
FOCM				SG	**Sg**	**09 53 57.8**	**+0.7**
CHOS	**Chios island**	**0.54**	**290**	PG	**Pg**	**09 53 50.9**	**0.0**
CHOS				SG	**Sb**	**09 53 58.9**	**-0.9**
GCAM	**G?zelcaml?**	**0.66**	**139**	PG	**Pg**	**09 53 52.7**	**-0.3**
GCAM	**G?zelcaml?**	**0.66**	**139**	P	**Pg**	**09 53 52.9**	**-0.1**
GCAM				S	**Sb**	**09 54 01.9**	**-1.1**
GCAM				*i* AML	AML	09 54 04.0	
	comp=E,160nm,0.3s						
GCAM				*i* AML	AML	09 54 05.0	
	comp=N,166nm,0.3s						
ZEDA	**zmir-Bergama**	**0.82**	**21**	P	**Pg**	**09 53 55.6**	**-0.6**
ZEDA				S	**Sb**	**09 54 08.3**	**+0.5**
ZEDA				*i* AML	AML	09 54 10.0	
	comp=N,80nm,0.5s						
DDIM	**Aydin, Didim**	**0.86**	**150**	P	**Pb**	**09 53 57.2**	**-0.1**
DDIM				S	**Sb**	**09 54 08.6**	**-0.2**
DDIM				*i* AML	AML	09 54 10.0	
	comp=N,68nm,0.6s						
DDIM				*i* AML	AML	09 54 10.0	
	comp=E,68nm,0.5s						
DKL	**Dikili**	**0.89**	**11**	PG	**Pb**	**09 53 57.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**105**	PG	**Pg**	**09 53 58.8**	**-0.4**
AYDN	**Tasoluk**	**1.08**	**120**	P	**Pb**	**09 54 01.1**	**0.0**
AYDN				S	**Sb**	**09 54 15.0**	**-0.4**
AYVA	**Ayvalik**	**1.11**	**360**	P	**Pn**	**09 54 01.9**	**0.0**
AYVA				S	**Sn**	**09 54 17.8**	**+0.6**
AYVA				*i* AML	AML	09 54 19.0	
	comp=N,54nm,0.6s						
AYVA				*i* AML	AML	09 54 19.0	
	comp=E,37nm,0.7s						
SIGR	**SIGRI**	**1.21**	**327**	PN	**Pb**	**09 54 03.3**	**0.0**
BUHA	**Balikesir, Bur**	**1.33**	**13**	P	**Pb**	**09 54 05.6**	**+0.1**
BUHA				S	**Sn**	**09 54 23.8**	**+1.0**
BUHA				*i* AML	AML	09 54 27.0	
	comp=E,45nm,0.5s						
BUHA				*i* AML	AML	09 54 27.0	
	comp=N,26nm,0.3s						
KOCA	**Canakkale, Ayv**	**1.37**	**342**	P	**Pn**	**09 54 03.3**	**-2.3**
APE	**Apeiranthos**	**1.46**	**220**	PN	**Pn**	**09 54 07.1**	**+0.3**
KULA	**Kula-Manisa**	**1.57**	**78**	PN	**Pn**	**09 54 08.8**	**+0.4**
EZN	**Ezine**	**1.65**	**350**	PN	**Pn**	**09 54 09.9**	**+0.5**

*IDC **09** 09:59:39.2±2.0, 64°.71N×30°.15E, h0km, mbtmp2.9/2, ML1.7/2, Error ellipse: s-maj=34.2km s-min=10.2km az=110.0*
*UPP **09** 09:59:51.7±2.9, 64°.76N×28°.05E, h0km, ML1.6, Suspected explosion*
ISC 09 09:59:44.8±2.8**, 64°.72N**±0°.10×**29°.2E**±0°.2**, h10**km**, n12**, σ2s44/9**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BURU	**Burvik**	**3.35**	**271**	P	**Pn**	**10 00 38.5**	**+1.5**
BURU				S	**Sn**	**10 01 13.4**	**-3.4**
FINES	**FINESS Array B**	**3.57**	**204**	Pn	Pn	10 00 38.4	-1.8
	0.1nm,0.3s,baz=35,slow=14,SNR=2.1						
FINES				Sn	**Sn**	**10 01 20.1**	**-2.3**
	0.3nm,0.3s,baz=35,slow=22,SNR=1.6						
FINES				Lg	Lg	10 01 38.0	
	1.2nm,0.3s,baz=32,slow=28,SNR=7.8						
	4.4nm,1.0s						
ODEU	**Stanfors**	**3.65**	**269**	P	**Pn**	**10 00 43.0**	**+1.7**
HARU	**Harads**	**3.71**	**297**	P	**Pn**	**10 00 43.9**	**+1.9**
UMAU	**Umeaa**	**3.79**	**261**	P	**Pn**	**10 00 44.6**	**+1.6**
LILU	**Lilltraesk**	**3.99**	**282**	P	**Pn**	**10 00 47.8**	**+1.9**
SVAU	**Svanoeiden**	**4.13**	**271**	P	**Pn**	**10 00 49.9**	**+2.1**
HEF	**Hetta**	**4.30**	**332**	*e*P	**Pn**	**10 00 50.2**	**0.0**
ARA0	**ARCESS Array S**	**5.04**	**345**	*e*	Pn	10 00 56.6	-3.7
ARCES	**ARCESS Array B**	**5.04**	**345**	Pn	Pn	10 00 55.7	-4.6
	0.2nm,0.3s,baz=151,slow=13,SNR=25						
ARCES				Lg	Lg	10 02 17.4	
	0.5nm,0.3s,baz=150,slow=35,SNR=3.4						
	1.0nm,0.4s						
KEV	**Kevo**	**5.13**	**352**	*e*	Pn	10 00 56.3	-5.2
I37NO	**I37NO**	**6.02**	**321**	*i*		10 36 50.0	
	baz=129,slow=323,SNR=3.5						

IDC 09 10:05:41.0±3.0**, 3°.31N×96°.34E, h0**km**, mb3.6**/3**, mbtmp3.5**/4**, ML2.7**/1**, Error ellipse: s-maj=92.7km s-min=25.1km az=50.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.63**	**101**	Pn	Pn	10 06 25.8	+1.0
	1.5nm,0.3s,baz=304,slow=11,SNR=2.8						
	4.8nm,0.4s						
H08S2	**Diego Garcia H**	**26.16**	**245**	T	T	10 37 52.6	
	baz=68,slow=76,SNR=3.9						
H08S3	**Diego Garcia H**	**26.16**	**245**	T	T	10 37 52.7	
	baz=68,slow=76,SNR=3.8						
H08S1	**Diego Garcia H**	**26.18**	**245**	T	T	10 37 53.9	
	baz=68,slow=76,SNR=4.4						
WRA	**Warramunga Arr**	**43.89**	**123**	P	P	10 13 49.3	-0.4
	0.4nm,0.9s,baz=303,slow=9.0,SNR=3.0						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**45.00**	**346**	P	P	10 13 58.4	+0.1
	0.6nm,0.4s,baz=163,slow=9.1,SNR=11						
	0.6nm,0.4s						
SONM	**Songino Array**	**45.20**	**10**	P	P	10 13 59.4	-0.5
	0.4nm,0.4s,baz=197,slow=9.0,SNR=4.2						
	0.4nm,0.4s						

*MOS **09** 10:11:52.4±0.0, 42°.80N×45°.66E, h31km, MPVA3.7*
*NORS **09** 10:11:52.2±0.0, 42°.64N×45°.71E, h38km, MPVA3.8*
*DRS **09** 10:11:55.1±0.0, 42°.82N×45°.48E, h22km*
ISC 09 10:11:54.4±1.1**, 42°.81N**±0°.04×**45°.67E**±0°.02**, h34**km±3km**, n21, σ0°99/39, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.37**	**66**	*i* Pg	**Pb**	**10 12 03.0**	**-0.2**
DVE				*e*Sg	**Sn**	**10 12 10.0**	**+0.8**
KMGR	**Komgaron**	**0.64**	**293**	*i* Pg	**Pb**	**10 12 07.4**	**+0.1**
KMGR				*e*Sg	**Sn**	**10 12 17.9**	**+1.8**
DLMR	**Dylym**	**0.76**	**69**	*e*Pg	**Pn**	**10 12 08.5**	**-0.2**
DLMR				*e*Sg	**Sb**	**10 12 19.7**	**+0.5**
VLKR	**Vladikavkaz**	**0.77**	**289**	*e*Pg	**Pn**	**10 12 08.5**	**-0.3**
VLKR				*e*Sg	**Sb**	**10 12 21.1**	**+1.6**
PNSH	**Pansheti**	**0.79**	**258**	P	**Pn**	**10 12 08.5**	**-0.8**
PNSH				S	**Sn**	**10 12 19.5**	**-0.6**
XNZR	**Khunzakh**	**0.81**	**109**	*e*Pg	**Pn**	**10 12 09.6**	**0.0**
XNZR				*e*Sg	**Sb**	**10 12 21.0**	**+0.1**
UNCR	**Uncukul**	**0.84**	**96**	*e*Pg	**Pb**	**10 12 10.1**	**-0.5**
UNCR				*e*Sg	**Sb**	**10 12 21.7**	**+0.2**
DBC	**Dubki**	**0.88**	**76**	*e*Pg	**Pn**	**10 12 10.3**	**-0.2**
DBC				*e*Sg	**Sb**	**10 12 23.5**	**+0.7**
KRNR	**Karanay**	**0.91**	**88**	*e*Pg	**Pb**	**10 12 11.4**	**-0.4**
KRNR				*e*Sg	**Sb**	**10 12 23.9**	**+0.1**
ARKR	**Arakani**	**1.00**	**101**	*e*Pg	**Pn**	**10 12 12.4**	**+0.3**
ARKR				*e*Sg	**Sb**	**10 12 26.3**	**+0.1**
LACR	**Lac**	**1.01**	**272**	*e*Pg	**Pn**	**10 12 11.3**	**-0.9**
LACR				*e*Sg	**Sn**	**10 12 25.4**	**0.0**
LGD	**Lagodekhi**	**1.06**	**156**	P	**Pb**	**10 12 13.4**	**-0.9**
LGD				S	**Sb**	**10 12 27.1**	**-0.7**
BUJR	**Buynaksk**	**1.06**	**88**	*e*Pg	**Pb**	**10 12 13.6**	**-0.6**
BUJR				*e*Sg	**Sb**	**10 12 28.2**	**+0.3**
KORR	**Kora**	**1.21**	**284**	*e*Pg	**Pn**	**10 12 13.7**	**-1.3**
KORR				*e*Sg	**Sn**	**10 12 30.7**	**+0.5**
KMKR	**Kumukh**	**1.26**	**122**	*e*Pg	**Pb**	**10 12 16.8**	**-0.9**
KMKR				*e*Sg	**Sb**	**10 12 33.8**	**+0.2**
DGRG	**David-gareji**	**1.37**	**189**	P	**Pb**	**10 12 18.7**	**-0.9**
PRTR	**Priterechnaya**	**1.38**	**314**	*e*Pg	**Pn**	**10 12 16.6**	**-0.7**
PRTR				*e*Sg	**Sb**	**10 12 37.0**	**0.0**
DDFL	**Dedoflistskaro**	**1.40**	**166**	P	**Pb**	**10 12 23.0**	**+3.0**
DIGR	**Digorskoe uzhe**	**1.54**	**274**	*e*Pg	**Pn**	**10 12 19.4**	**-0.2**
DIGR				*e*Sg	**Sn**	**10 12 39.7**	**+1.2**
KBZ	**Khabaz**	**2.22**	**295**	*e*Pg	**Pn**	**10 12 29.5**	**+0.7**
KBZ				*e*Sg	**Sn**	**10 12 52.3**	**-2.8**
KIV	**Kislovodsk**	**2.46**	**299**	*e*Pn	**Pn**	**10 12 32.2**	**+0.1**

*NEIC **09** 10:19:40.5±1.4, 0°.53N±0°.05×122°.27E±0°.03, h98km±7km, mb4.7/49, Error ellipse: s-maj=8.1km s-min=1.8km az=155.0*
*DJA **09** 10:19:40.3±0.1, 1°.N±2°×12°.2E±°, h93km±2km, M4.6/42, mB5.1/16, mb4.7/42, MLv5.0/24, Mw(mB)4.4/16*
*IDC **09** 10:19:41.2±0.8, 0°.54N×122°.35E, h116km±6km, mb4.0/18, mbtmp4.4/21, MS3.1/9, Error ellipse: s-maj=15.9km s-min=8.3km az=67.0*
ISC 09 10:19:41.0±0.5**, 0°.58N**±0°.04×**122°.27E**±0°.05**, h110**km±4km**, n193, σ1s25/212, mb4.6/54, 2C-2D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.34**	**252**	P	**Pn**	**10 19 55.1**	**-1.8**
MRSI				S	**Sn**	**10 20 05.8**	**-3.1**
GTOI	**Gorontalo**	**0.75**	**86**	P	**Pn**	**10 19 57.1**	**-2.6**
TOLI2	**Tolitoli**	**1.57**	**290**	Pn	**Pn**	**10 20 06.9**	**-1.8**
APSI	**Ampana**	**1.61**	**203**	P	**Pn**	**10 20 08.7**	**-0.4**
APSI				S	**Sn**	**10 20 29.9**	**-0.6**
LUWI	**Luwuk**	**1.69**	**163**		**Pn**	**10 20 09.4**	**-0.8**
LUWI	**Luwuk**	**1.69**	**163**	P	**Pn**	**10 20 10.1**	**-0.1**
LUWI				S	**Sn**	**10 20 33.0**	**+0.7**
LUWI	**Luwuk**	**1.69**	**163**	P	**Pn**	**10 20 11.4**	**+1.2**
KMSI	**Cibinong**	**1.71**	**90**	P	**Pn**	**10 20 10.3**	**-0.1**
KMSI				S	**Sn**	**10 20 32.6**	**-0.2**
MPSI	**Mapaga**	**2.38**	**264**	P	**Pn**	**10 20 18.6**	**-0.3**
TTSI	**Tana Toraja**	**4.35**	**214**	P	**Pn**	**10 20 45.5**	**+0.3**
SGSI	**Sangihe**	**4.49**	**47**	P	**Pn**	**10 20 45.4**	**-1.6**
SANI	**Sanana**	**4.55**	**125**	P	**Pn**	**10 20 45.6**	**-2.2**
SGKI	**Sangatta, Kali**	**4.79**	**257**	P	**Pn**	**10 20 48.5**	**-2.6**
TNTI	**Ternate**	**5.10**	**88**	Pn	**Pn**	**10 20 55.1**	**-0.2**
TNTI	**Ternate**	**5.10**	**88**	P	**Pn**	**10 20 54.7**	**-0.6**
	0.5nm71nm,0.6s						
TNTI	**Ternate**	**5.10**	**88**	P	**Pn**	**10 20 56.0**	**+0.7**
SMKI	**Samarinda**	**5.16**	**259**	P	**Pn**	**10 20 55.9**	**-0.1**
	3.9nm152nm,0.8s						
SPSI	**Sidrap Palu**	**5.16**	**209**	P	**Pn**	**10 20 56.3**	**+0.3**
	1.6nm5μm330nm,0.5s						
SPSI				S	**Pn**	**10 20 56.9**	**+0.9**
	1.6nm5μm330nm,0.5s						
LBMI	**Labuha**	**5.37**	**103**	P	**Pn**	**10 20 57.8**	**-1.2**
	2.0nm1μm188nm,0.8s						
BKB	**Balikpapan**	**5.67**	**251**		**Pn**	**10 21 01.9**	**-1.1**
BKB	**Balikpapan**	**5.67**	**251**	P	**Pn**	**10 21 02.2**	**-0.8**
	2.6nm4μm248nm,0.9s						
BKB	**Balikpapan**	**5.67**	**251**	P	**Pn**	**10 21 03.2**	**+0.2**
MYLDM	**Lahad Datu**	**5.92**	**321**	Pn	**Pn**	**10 21 06.9**	**+0.6**
BBSI	**Bau Bau**	**6.04**	**177**	P	**Pn**	**10 21 08.8**	**+0.9**
	0.2nm550nm37nm,0.7s						
GSPH	**General Santos**	**6.09**	**26**	*e*P	**Pn**	**10 21 08.0**	**-0.8**
KAPI	**Kappang**	**6.10**	**204**	P	**Pn**	**10 21 08.7**	**-0.1**
	54nm,0.4s,baz=22,slow=2.5,SNR=16						
KAPI					LR	LR	10 23 58.5
	comp=Z,108nm,20.7s,baz=60,slow=42						
KAPI	**Kappang**	**6.10**	**204**	Pn	**Pn**	**10 21 06.8**	**-2.0**
KAPI	**Kappang**	**6.10**	**204**	P	**Pn**	**10 21 09.3**	**+0.5**
NLAI	**Namlea**	**6.14**	**128**	P	**Pn**	**10 21 09.6**	**+0.2**
	1.5nm2μm95nm,0.8s						
BKSI	**Bulukumba**	**6.24**	**200**	P	**Pn**	**10 21 10.4**	**-0.3**
	0.3nm870nm94nm,0.7s						
ZCP	**Zamboanga City**	**6.31**	**358**	*e*P	**Pn**	**10 21 07.2**	**-4.4**
ZCP				*e*S	**Sn**	**10 22 18.6**	**-3.8**
BSSI	**Bau Bau, Buton**	**6.91**	**195**	P	**Pn**	**10 21 20.6**	**+0.8**
	0.2nm644nm59nm,0.7s						
KCP	**Kidapawan**	**6.98**	**24**	*i* P	**Pn**	**10 21 24.0**	**+3.2**
KCP				*i* S	**Sn**	**10 22 39.0**	**+0.3**
AAI	**Ambon**	**7.29**	**126**	P	**Pn**	**10 21 25.7**	**+0.8**
	0.4nm140nm,0.7s						
KKM	**Kota Kinabalu**	**8.12**	**312**	Pn	**Pn**	**10 21 35.1**	**-1.2**
KKM	**Kota Kinabalu**	**8.12**	**312**	P	**Pn**	**10 21 38.5**	**+2.2**
BBKI	**Banjar Baru**	**8.44**	**242**	P	**Pn**	**10 21 40.9**	**+0.4**
	26nm,0.8s						
SIJI	**Sorong**	**9.12**	**99**	P	**Pn**	**10 21 49.6**	**-0.2**
	16nm,0.7s,baz=261,slow=6.6,SNR=6.4						
MMRI	**Maumere**	**9.16**	**180**	Pn	**Pn**	**10 21 47.4**	**-2.8**
MMRI	**Maumere**	**9.16**	**180**	P	**Pn**	**10 21 50.4**	**+0.1**
	58nm,0.6s						
EDFI	**Ende, Flores**	**9.29**	**184**	P	**Pn**	**10 21 51.6**	**-0.6**
	14nm,0.6s						
SBUM	**Sibu**	**10.21**	**281**	Pn	**Pn**	**10 22 03.4**	**-1.2**
PLAI	**Plampang**	**10.36**	**205**	P	**Pn**	**10 22 06.0**	**-0.6**
FAKI	**Fak Fak**	**10.57**	**109**	Pn	**Pn**	**10 22 08.2**	**-1.3**
STKI	**Sintang**	**10.80**	**267**	P	**Pn**	**10 22 12.6**	**0.0**
SRBI	**Singaraja**	**11.12**	**219**	P	**Pn**	**10 22 17.7**	**+0.9**
	48nm,0.8s						
KMMI	**Kalianget**	**11.23**	**227**	P	**Pn**	**10 22 19.5**	**+1.2**
	52nm,1.1s						
KSM	**Kuching**	**11.99**	**274**	Pn	**Pn**	**10 22 27.5**	**-0.9**
JAGI	**Jajag, Banyuwa**	**12.09**	**222**	Pn	**Pn**	**10 22 28.5**	**-1.3**
JAGI	**Jajag, Banyuwa**	**12.09**	**222**	P	**Pn**	**10 22 30.0**	**+0.2**
GMJI	**Gumukmas**	**12.44**	**225**	P	**P**	**10 22 45.5**	**+3.8**
PWJI	**Pagerwojo**	**13.48**	**230**	P	**Pn**	**10 22 49.3**	**+1.3**
	85nm,1.2s						
PCJI	**Pacitan**	**14.08**	**232**	P	**Pn**	**10 22 57.0**	**+1.3**
	67nm,1.7s						
MTN	**Manton Dam**	**15.98**	**147**	P	**Pn**	**10 23 20.2**	**+0.5**
	baz=16,SNR=3.5						
MTN	**Manton Dam**	**15.98**	**147**		**P**	**10 23 21.1**	**+0.1**
SMPI	**Sarmi**	**16.64**	**99**	P	**P**	**10 23 28.6**	**+0.2**
	9.6nm,0.9s						
CBJI	**Citeko**	**16.89**	**245**	P	**P**	**10 23 32.3**	**+1.2**
DBJI	**Dramaga**	**17.03**	**245**	P	**P**	**10 23 34.0**	**+1.3**
	81nm,0.7s						
KNRA	**Kununurra**	**17.38**	**159**	P	**Pn**	**10 23 37.2**	**+0.3**
	baz=17,SNR=12						
KNRA	**Kununurra**	**17.38**	**159**		**P**	**10 23 35.3**	**-1.2**
KNRA	**Kununurra**	**17.38**	**159**	P	**Pn**	**10 23 37.3**	**+0.4**
MYKOM	**Kota Tinggi**	**18.45**	**274**	P	**Pn**	**10 23 49.4**	**-0.3**
MYKOM				IAmb	IAmb	10 23 51.5	
	comp=Z,29nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.86**	**170**	P	**P**	**10 23 52.8**	**+0.1**
	comp=Z,30nm,0.6s,baz=0.5,slow=7.7,SNR=98						
FITZ				LR	LR	10 32 51.8	
	comp=Z,39nm,18.9s,baz=36,slow=42						
FITZ	**Fitzroy Crossi**	**18.86**	**170**	P	**P**	**10 23 52.8**	**+0.1**
	baz=19,SNR=65						
FITZ	**Fitzroy Crossi**	**18.86**	**170**	P	**P**	**10 23 52.7**	**+0.1**
FITZ				IAmb	IAmb	10 23 53.8	
	comp=Z,31nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.86**	**170**	P	**P**	**10 23 52.8**	**+0.1**
IPM	**Ipoh**	**21.57**	**281**	P	**P**	**10 24 21.7**	**-0.3**
IPM				IAmb	IAmb	10 24 24.7	
	comp=Z,23nm,0.7s						
MBWA	**Marble Bar**	**21.75**	**186**	P	**P**	**10 24 22.5**	**-1.4**
MBWA				IAmb	IAmb	10 24 24.0	
	comp=Z,27nm,0.7s						
MBWA	**Marble Bar**	**21.75**	**186**	P	**P**	**10 24 23.8**	**0.0**
PPI	**Padang Panjang**	**21.89**	**267**	P	**P**	**10 24 26.0**	**+0.5**
	comp=Z,46nm,1.4s						
KULM	**Kulim**	**22.08**	**283**	P	**P**	**10 24 26.5**	**-0.9**
KULM				IAmb	IAmb	10 24 30.6	
	comp=Z,58nm,1.5s						
PSA00	**Pilbara Seismi**	**22.15**	**186**	P	**P**	**10 24 26.8**	**-1.2**
PSA00				IAmb	IAmb	10 24 27.8	
	comp=Z,21nm,0.5s						
PSA00	**Pilbara Seismi**	**22.15**	**186**	P	**P**	**10 24 27.5**	**-0.5**
TPUB	**Ta-pu**	**22.64**	**356**	P	**P**	**10 24 33.3**	**+0.3**
TPUB				IAmb	IAmb	10 24 38.8	
	comp=Z,37nm,0.7s						
YULB	**Yu-li**	**22.69**	**358**	P	**P**	**10 24 34.0**	**+0.4**
SSLB	**Suanglung**	**23.10**	**357**	P	**P**	**10 24 38.1**	**+0.5**
SSLB				IAmb	IAmb	10 24 42.3	
	comp=Z,16nm,0.7s						
RPSI	**Rantau Prapat**	**23.43**	**275**	P	**P**	**10 24 40.9**	**+0.2**
PSI	**Prapat**	**23.43**	**276**	P	**P**	**10 24 40.9**	**0.0**
	comp=Z,20nm,0.7s,baz=61,slow=5.9,SNR=8.5						
PSI				LR	LR	10 34 19.1	
	comp=Z,102nm,18.1s,baz=64,slow=37						
	comp=Z,20nm,0.7s						
WB0	**Warramunga Arr**	**23.46**	**150**	P	**P**	**10 24 39.5**	**-1.4**
WB0				IAmb	IAmb	10 25 17.9	
	comp=Z,33nm,1.3s						
WRAB	**Tennant Creek**	**23.58**	**151**	P	**P**	**10 24 41.1**	**-0.8**
WRAB	**Tennant Creek**	**23.58**	**151**	P	**P**	**10 24 42.7**	**+0.7**
WRA	**Warramunga Arr**	**23.58**	**151**	P	**P**	**10 24 40.9**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=334,slow=8.8,SNR=80						
WRA				pP	**pP**	**10 25 05.2**	**+0.7**
	comp=Z,5.8nm,0.6s,baz=329,slow=10,SNR=6.6						
WRA				PcP	**PcP**	**10 28 23.5**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=331,slow=2.0,SNR=8.9						
WRA				ScP	**ScP**	**10 31 51.5**	**-1.1**
	comp=Z,2.2nm,0.9s,baz=341,slow=3.0,SNR=11						
WRA				LR	LR	10 34 25.9	
	comp=Z,70nm,18.2s,baz=186,slow=38						
	comp=Z,2.8nm,0.7s						
WRA	**Warramunga Arr**	**23.58**	**151**	P	**P**	**10 24 41.2**	**-0.8**
WB2	**Warramunga Arr**	**23.59**	**151**	P	**P**	**10 24 41.4**	**-0.6**
	baz=24						
WB2	**Warramunga Arr**	**23.59**	**151**	P	**P**	**10 24 41.2**	**-0.8**
WR0	**Warramunga Arr**	**23.70**	**150**	P	**P**	**10 24 41.6**	**-1.4**
WR0				IAmb	IAmb	10 25 20.2	
	comp=Z,18nm,0.8s						
TSI	**Tuntungan**	**23.86**	**277**	P	**P**	**10 24 45.4**	**+0.8**
	comp=Z,7μmcomp=Z,219nm,0.8s						
GIRL	**Giralia**	**24.37**	**198**	P	**P**	**10 24 48.8**	**-0.3**
	baz=24,SNR=5.9						
GIRL	**Giralia**	**24.37**	**198**	P	**P**	**10 24 49.3**	**+0.2**
KCSI	**Kotacane, Aceh**	**24.65**	**277**	P	**P**	**10 24 51.4**	**-0.4**
	comp=Z,1μmcomp=Z,75nm,0.8s						
GSI	**Gunungsitoli**	**24.70**	**272**	P	**P**	**10 24 51.5**	**-0.7**
GSI	**Gunungsitoli**	**24.70**	**272**	P	**P**	**10 24 51.4**	**-0.7**
	comp=Z,126nm,0.6s						
GSI	**Gunungsitoli**	**24.70**	**272**	P	**P**	**10 24 52.1**	**-0.1**
COEN	**Coen**	**25.25**	**126**	P	**P**	**10 24 57.0**	**-0.1**
COEN	**Coen**	**25.25**	**126**	P	**P**	**10 24 57.5**	**+0.3**
GUMO	**Guam**	**25.84**	**59**	LR	LR	10 34 47.4	
	comp=Z,22nm,20.3s,baz=211,slow=35						
WRKA	**Warakurna**	**26.13**	**168**	P	**P**	**10 25 04.6**	**-0.5**
	baz=26,SNR=25						
WRKA	**Warakurna**	**26.13**	**168**	P	**P**	**10 25 04.7**	**-0.3**
AS31	**Alice Springs**	**26.62**	**156**	P	**P**	**10 25 09.3**	**-0.2**
**AS

comp=Z,4.0nm,0.8s,baz=190,slow=9.2,SNR=11
comp=Z,4.0nm,0.8s

LZH	**Lanzhou**	**39.25**	**336**	*eP*	**P**	**10 26 56.8**	**-2.3**
LZH				pP	sP	10 27 36.1	-0.4
LZH				pmax	pmax		

comp=Z,10.0nm,1.2s

LZH				LR	LR			

comp=N,260nm,10.0s

LZH				LR	LR			

comp=E,370nm,9.5s

LZH				LR	LR			

comp=Z,280nm,12.7s

HHC	**Hu-ho-hao-te**	**41.24**	**348**	*eP*	**P**	**10 27 17.8**	**+2.4**
HHC				pmax	pmax			

comp=Z,12nm,0.6s

HHC				pmax	pmax			

comp=Z,170nm,6.2s

PALK	**Pallekele**	**41.97**	**280**	P	**P**	**10 27 22.0**	**+0.3**
PALK				LR	LR	10 45 08.6		

comp=Z,12nm,0.9s,baz=204,slow=10,SNR=6.1
comp=Z,57nm,19.7s,baz=208,slow=36
comp=Z,12nm,0.9s

GTA	**Gaotai**	**43.75**	**335**	*eP*	**P**	**10 27 38.2**	**+2.4**
GTA				pP	pP	10 28 01.0	0.0
GTA				sP	sP	10 28 12.7	-0.6
GTA				pmax	pmax			

comp=Z,5.0nm,1.0s

GTA				pmax	pmax			

comp=Z,32nm,4.4s

GTA				LR	LR			

comp=N,120nm,19.3s

GTA				LR	LR			

comp=E,480nm,17.4s

GTA				LR	LR			

comp=Z,200nm,17.4s

USRK	**Ussuriysk Ar.**	**44.28**	**10**	P	**P**	**10 27 39.5**	**-0.2**

comp=Z,3.4nm,0.8s,baz=200,slow=7.6,SNR=12
comp=Z,3.4nm,0.8s

USRK	**Ussuriysk Ar.**	**44.28**	**10**	P	**P**	**10 27 39.3**	**-0.4**
MDJ	**Mudanjiang**	**44.33**	**7**	P	**P**	**10 27 40.0**	**-0.1**
MDJ				pP	pP	10 28 06.1	+0.7
MDJ				sP	sP	10 28 18.8	+1.0
MDJ				PcS	**PcS**	**10 33 12.5**	**-3.2**
MDJ				S	**S**	**10 34 10.6**	**+4.6**
MDJ				sS	sS	10 34 54.5	+4.6
MDJ				ScS	**ScS**	**10 37 25.3**	**-1.9**
MDJ				pmax	pmax			

comp=Z,10.0nm,0.8s

MDJ				pmax	pmax			

comp=Z,76nm,5.2s

ULN	**Ulaanbaatar**	**48.91**	**346**	P	**P**	**10 28 17.5**	**+1.4**
SONM	**Songino Array**	**49.04**	**346**	P	**P**	**10 28 17.8**	**+0.7**

comp=Z,2.6nm,0.8s,baz=166,slow=8.7,SNR=14

SONM				pP	**pP**	**10 28 44.2**	**+1.5**

comp=Z,4.2nm,0.7s,baz=163,slow=8.4,SNR=8.5
comp=Z,2.6nm,0.8s

SONM	**Songino Array**	**49.04**	**346**	P	**P**	**10 28 17.9**	**+0.9**
WMQ	**Urumqi**	**52.92**	**329**	*eP*	**P**	**10 28 46.6**	**+0.6**
WMQ				PcP	**PcP**	**10 29 56.7**	**+3.1**
WMQ				pmax	pmax			

comp=Z,17nm,0.9s

NIL	**Nilore**	**56.45**	**311**	P	**P**	**10 29 12.3**	**+0.6**
KSH	**Kashi**	**57.26**	**318**	P	**P**	**10 29 19.9**	**+2.5**
KSH				pmax	pmax			

comp=Z,17nm,0.8s

MK31	**Makanchi Array**	**57.74**	**329**	P	**P**	**10 29 21.2**	**+0.7**
MK31				IAmb	IAmb	10 29 56.7		

comp=Z,3.3nm,0.7s

MKAR	**Makanchi Array**	**57.74**	**329**	P	**P**	**10 29 21.2**	**+0.7**

comp=Z,1.8nm,0.4s,baz=125,slow=8.5,SNR=26

MKAR				pP	**pP**	**10 29 47.3**	**+0.1**

comp=Z,1.7nm,0.5s,baz=121,slow=8.7,SNR=2.7
comp=Z,1.8nm,0.4s

MKAR	**Makanchi Array**	**57.74**	**329**	P	**P**	**10 29 20.9**	**+0.4**
MAKZ	**Makanchi**	**57.91**	**328**	P	**P**	**10 29 21.8**	**+0.1**
MAKZ				IAmb	IAmb	10 29 57.8		

comp=Z,4.4nm,0.7s

BOOM	**Boomskoye usch**	**58.83**	**321**	P	**P**	**10 29 29.9**	**+1.5**
BOOM				IAmb	IAmb	10 29 31.7		

comp=Z,4.8nm,0.7s

AAK	**Ala-Archa**	**59.82**	**321**	P	**P**	**10 29 37.0**	**+1.9**
KBL	**Kabul**	**60.01**	**310**	P	**P**	**10 29 37.2**	**+0.5**
PETK	**Petropavlovsk-**	**60.05**	**24**	P	**P**	**10 29 35.6**	**-0.7**

comp=Z,2.4nm,0.5s,baz=190,slow=0.9,SNR=3.7
comp=Z,2.4nm,0.5s

PETK	**Petropavlovsk-**	**60.05**	**24**	P	**P**	**10 29 35.8**	**-0.6**
GAR	**Garm**	**60.88**	**315**	P	**P**	**10 29 43.1**	**+0.7**
BTK	**Batken**	**61.00**	**317**	P	**P**	**10 29 43.8**	**+0.6**
BTK				IAmb	IAmb	10 29 45.4		

comp=Z,11nm,0.8s

ZALV	**Zalesovo Beam**	**61.48**	**336**	P	**P**	**10 29 45.7**	**-0.3**

comp=Z,2.5nm,0.8s,baz=125,slow=6.4,SNR=8.7
comp=Z,2.5nm,0.8s

ZALV	**Zalesovo Beam**	**61.48**	**336**	P	**P**	**10 29 45.5**	**-0.5**
CHGR	**Chuyangaron**	**61.56**	**315**	P	**P**	**10 29 47.5**	**+0.5**
KURBB	**Kurchatov Arra**	**62.10**	**330**	P	**P**	**10 29 50.2**	**0.0**

baz=131,slow=5.9

KURK	**Kurchatov**	**62.11**	**330**	P	**P**	**10 29 50.7**	**+0.4**
KURK				IAmb	IAmb	10 29 54.3		

comp=Z,12nm,0.8s

KK31	**Karatay Array**	**62.60**	**320**	P	**P**	**10 29 54.7**	**+1.0**
KK31				IAmb	IAmb	10 29 56.0		

comp=Z,6.3nm,0.8s

KKAR	**Karatay Array**	**62.60**	**320**	P	**P**	**10 29 54.8**	**+1.0**
KKAR				IAmb	IAmb	10 29 56.0		

comp=Z,6.3nm,0.8s

HRA	**Herat**	**65.24**	**308**	P	**P**	**10 30 11.2**	**-0.2**
HRA				IAmb	IAmb	10 30 12.5		

comp=Z,9.9nm,0.8s

BRVK	**Borovoye**	**67.68**	**329**	P	**P**	**10 30 26.7**	**+0.4**
BRVK				IAmb	IAmb	10 30 27.3		

comp=Z,12nm,1.2s

GEYT	**Alibeck**	**69.45**	**311**	P	**P**	**10 30 38.2**	**+0.4**

comp=Z,10nm,0.7s,baz=140,slow=6.6,SNR=12
comp=Z,10nm,0.7s

GEYT	**Alibeck**	**69.45**	**311**	P	**P**	**10 30 38.5**	**+0.8**
GEYT				IAmb	IAmb	10 30 39.2		

comp=Z,14nm,0.8s

GYA0B	**ALIBECK ARRAY**	**69.45**	**311**	P	**P**	**10 30 38.5**	**+0.7**
GYA0B				IAmb	IAmb	10 30 39.2		

comp=Z,12nm,0.8s

ABKAR	**Akbulak array**	**71.82**	**322**	P	**P**	**10 30 51.7**	**-0.1**
ABKAR				IAmb	IAmb	10 30 52.5		

comp=Z,5.4nm,0.8s

VNDA	**Vanda**	**80.92**	**172**	P	**P**	**10 31 41.9**	**-0.8**

comp=Z,0.9nm,0.5s,baz=326,slow=5.7,SNR=9.3
comp=Z,0.9nm,0.5s

VNDA	**Vanda**	**80.92**	**172**	P	**P**	**10 31 43.0**	**+0.3**
GEVA	**Gevas**	**81.17**	**309**	P	**P**	**10 31 45.6**	**+0.5**
KBZ	**Khabaz**	**81.91**	**314**	P	**P**	**10 31 48.0**	**-0.6**

comp=Z,2.5nm,0.7s,baz=138,slow=2.7,SNR=7.7
comp=Z,2.5nm,0.7s

GURO	**Guroymak-BITLI**	**82.00**	**309**	P	**P**	**10 31 50.0**	**+0.7**
GURO				IAmb	IAmb	10 31 51.2		

comp=Z,9.5nm,0.9s

KMBO	**Kilima Mbogo**	**85.03**	**269**	P	**P**	**10 32 04.8**	**-0.7**

comp=Z,1.2nm,0.4s,baz=56,slow=10.0,SNR=3.8
comp=Z,1.2nm,0.4s

KLMR	**Klimovskoe**	**85.95**	**331**	*eP*	**P**	**10 32 06.4**	**-2.3**
KLMR				AMP		10 32 08.3		

comp=Z,8.0nm,0.7s

BRTR	**Keskin Array B**	**88.57**	**310**	P	**P**	**10 32 20.6**	**-1.5**

comp=Z,1.8nm,0.8s,baz=116,slow=5.6,SNR=8.9
comp=Z,1.8nm,0.8s

BRTR	**Keskin Array B**	**88.57**	**310**	P	**P**	**10 32 20.7**	**-1.3**
BMAR	**Burnt Mountain**	**90.68**	**23**	P	**P**	**10 32 31.7**	**+0.6**
FIA1	**FINESS Array S**	**92.46**	**331**	P	**P**	**10 32 40.8**	**+1.4**
FINES	**FINESS Array B**	**92.46**	**331**	P	**P**	**10 32 40.9**	**+1.5**
TORD	**Torodi Ar. Bea**	**119.55**	**285**	PKP	**PKPdf**	**10 38 17.4**	**-1.5**

comp=Z,1.3nm,0.3s,baz=68,slow=1.9,SNR=30

DBIC	**Dimbokro**	**126.75**	**279**	PKP	**PKPdf**	**10 38 32.3**	**-0.6**

comp=Z,3.2nm,0.6s,baz=236,slow=2.2,SNR=4.1

TXAR	**Lajitas Array**	**127.04**	**52**	PKP	**PKiKP**	**10 38 33.6**	**-0.1**

comp=Z,0.2nm,0.7s,baz=338,slow=1.3,SNR=5.1

PLCA	**Paso Flores**	**138.38**	**165**	PKP	**PKPdf**	**10 38 54.5**	**+0.4**

comp=Z,1.6nm,1.0s,baz=245,slow=8.4,SNR=3.3

CPUP	**Villa Florida**	**154.40**	**181**	PKPbc	**PKPbc**	**10 39 28.5**	**-0.9**

comp=Z,1.4nm,0.7s,baz=104,slow=4.6,SNR=4.0

IDC 09 10:24:28.3±2.9, 9.52S×160.24E, h152km±11km, mb3.2/3, mbtmp3.6/3, Error ellipse: s-maj=123.7km s-min=28.2km az=137.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.30**	**286**	P	Pn	10 24 49.9	+0.9

66nm,0.4s,baz=235,slow=4.0,SNR=7.3

HNR				S	Sn	10 25 06.1	+1.3	

321nm,0.3s,baz=26,slow=22,SNR=26

WRA	**Warramunga Arr**	**27.07**	**245**	P	P	10 29 56.8	-0.1	

0.4nm,0.6s,baz=73,slow=9.2,SNR=2.2
0.4nm,0.6s

ASAR	**Alice Springs**	**28.82**	**238**	P	P	10 30 12.6	+0.1	

0.4nm,0.3s,baz=65,slow=10,SNR=5.5
0.4nm,0.3s

ILAR	**Eielson Array**	**83.87**	**20**	P	P	10 36 40.5	-0.1	

0.2nm,0.5s,baz=242,slow=5.3,SNR=4.9
0.2nm,0.5s

*AEIC **09** 10:25:49.4±1.1, 52.3N±0.2×173.7W±0.1, h175km±4km, ML2.5/29, mb3.7/9(NEIC), Error ellipse: s-maj=30.6km s-min=7.6km az=167.0*

NEIC 09 10:25:48.0±1.3, 52.4N±0.2×173.7W±0.1, h180km±6km, Error ellipse: s-maj=32.6km s-min=7.7km az=167.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOSE	**Korovin Southe**	**0.21**	**264**		Pn	10 26 12.1	+0.1
KOFP	**Korovin Flat P**	**0.25**	**249**		Pn	10 26 12.1	+0.1
KOKL	**Mount Kliuchef**	**0.30**	**262**		Pn	10 26 12.5	+0.3
ATKA	**Atka Island**	**0.34**	**241**		Pn	10 26 11.9	-0.3
ATKA					Sn	10 26 30.3	-0.4
GSTR	**Great Sitkin T**	**1.47**	**260**		Pn	10 26 19.6	0.0
GSMY	**Great Sitkin M**	**1.48**	**258**		Pn	10 26 19.4	-0.3
GSTD	**Great Sitkin T**	**1.53**	**259**		Pn	10 26 19.9	-0.4
GSTD					Sn	10 26 43.8	-1.4
GSSP	**Great Sitkin S**	**1.54**	**261**		Pn	10 26 20.1	-0.2
GSCK	**Great Sitkin C**	**1.55**	**258**		Pn	10 26 20.4	0.0
ADK	**Adak**	**1.89**	**256**		Pn	10 26 23.9	+0.1
ADK					Sn	10 26 50.7	-0.9
KINC	**Kanaga Island**	**2.15**	**260**		Pn	10 26 26.7	0.0
KIWB	**Kanaga Island**	**2.18**	**258**		Pn	10 26 27.4	+0.4
KIKV	**Kanaga Island**	**2.19**	**258**		Pn	10 26 27.8	+0.7
KICM	**Kanaga Island**	**2.19**	**260**		Pn	10 26 27.0	-0.2
KIMD	**Kanaga Island**	**2.26**	**256**		Pn	10 26 28.3	+0.4
KIMD					Sn	10 26 58.1	-0.6
CLCO	**Concord Point,**	**2.47**	**79**		Pn	10 26 30.6	+0.4
TAPA	**Tanaga Point A**	**2.59**	**259**		Pn	10 26 31.9	+0.2
TAFP	**Tanaga Falls P**	**2.67**	**262**		Pn	10 26 32.9	+0.2
TAFP					Sn	10 27 06.7	-0.7
TASE	**Tanaga Southea**	**2.72**	**260**		Pn	10 26 33.6	+0.3
NIKH	**Nikolski High**	**3.02**	**77**		Pn	10 26 36.5	-0.3
NIKH	**Nikolski High**	**3.02**	**77**		Sn	10 27 12.8	-2.0
GANE	**Gareloi Northe**	**3.17**	**262**		Pn	10 26 39.1	+0.4
MAPS	**Pakushin South**	**4.33**	**68**		Pn	10 26 53.9	+0.7
AMKA	**Amchitka**	**4.44**	**260**		Pn	10 26 54.6	0.0
UNV	**Unalaska Valle**	**4.59**	**68**		Pn	10 26 57.4	+0.9
KDAK	**Kodiak Island**	**13.24**	**57**	Pn	Pn	10 28 50.0	+1.1
L19K	**White Mountain**	**14.11**	**38**	Pn	Pn	10 28 59.3	-0.5
IL31		**18.52**	**38**	P	P	10 29 49.5	-0.9
H24K	**Noodor Dome**	**18.72**	**34**	P	P	10 29 53.6	+0.9
H24K				IAmb	IAmb	10 30 07.9		

comp=Z,5.1nm,1.4s

RIDG	**Independent Ri**	**18.85**	**42**	P	P	10 29 52.4	-1.8	
RIDG				IAmb	IAmb	10 29 57.3		

comp=Z,4.1nm,1.3s

J25K	**Salcha River,**	**19.02**	**39**	P	P	10 29 55.1	-0.9	
J25K				IAmb	IAmb	10 30 38.5		

comp=Z,4.6nm,1.4s

SCRK	**Sand Creek**	**19.30**	**41**	P	P	10 29 58.0	-1.0	
SCRK				IAmb	IAmb	10 29 58.7		

comp=Z,2.3nm,0.7s

J26L	**Joseph Creek**	**19.68**	**40**	P	P	10 30 02.1	-1.0	
J26L				IAmb	IAmb	10 30 03.0		

comp=Z,1.8nm,0.6s

K27K	**Chicken**	**20.10**	**42**	P	P	10 30 07.9	+0.4	
MA2	**Magadan**	**20.93**	**304**	P	P	10 30 16.6	+0.2	
CBB	**Campbell River**	**29.94**	**75**	P	P	10 31 38.1	-0.8	

*IDC **09** 10:40:59.6±1.4, 24.36N×126.39E, h0km, mb3.9/8, mbtmp3.9/9, ML2.9/1, MS2.9/2, Error ellipse: s-maj=83.0km s-min=17.4km az=68.0*

*NEIC **09** 10:40:59.3±1.9, 24.15N±0.04×126.47E±0.08, h10km±1km, mb4.1/3, Error ellipse: s-maj=12.7km s-min=6.6km az=259.0*

*JMA **09** 10:41:02.3±0.2, 24.2N×12.2°×12.6E±0.1°, h89km±2km, MV3.5/26, NEAR MIYAKOJIMA ISLAND*

*NIED **09** 10:41:02.3, 24.36N×126.43E, h89km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.84; Mθθ-0.74; Mφφ-0.10; Mrθ0.22; Mθφ-0.80; Mφr0.20; Fault plane solution: Mo1.11000×10^15 NP1: φ243.00000°, δ38.00000°, λ99.00000°. NP2:φ51.00000°, δ53.00000°, λ83.00000°.*

ISC 09 10:40:59.4±2.0, 24.23N×0.07×126.53E±0.04, h11km±12km, n48, σ1.958/57, mb4.0/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.16**	**297**	P	**Pn**	**10 41 22.3**	**+0.7**
JMJ2	**Miyako jima3**	**1.21**	**295**	P	**Pg**	**10 41 23.0**	**+0.3**
JIKM	**Ikemajima**	**1.36**	**301**	P	**Pg**	**10 41 24.9**	**-0.7**
JIRB	**Irabujima**	**1.38**	**296**	*i* P	**Pb**	**10 41 24.9**	**-0.3**
JTJ	**Tarama**	**1.72**	**284**	*i* P	**Pn**	**10 41 29.7**	**+0.4**
JKE	**Kume jima 2**	**2.10**	**6**	*i* P	**Pn**	**10 41 34.9**	**+0.3**
JKE				*eS*	**Sn**	**10 41 59.0**	**-1.7**
JIJ	**Ishigaki jima**	**2.19**	**274**	P	**Pn**	**10 41 36.1**	**+0.4**
JIJ				*eS*	**Sn**	**10 42 01.3**	**-1.5**
JJT3	**Tamagusuku3**	**2.22**	**30**	P	**Pn**	**10 41 37.2**	**+1.0**
JJT3				*eS*	**Sn**	**10 42 02.4**	**-1.2**
JKRS	**Kuro-shima**	**2.31**	**271**	P	**Pn**	**10 41 38.1**	**+0.8**
JKRS				*eS*	**Sn**	**10 42 04.4**	**-1.3**
JAGN	**Aguni-jima**	**2.44**	**15**	P	**Pn**	**10 41 39.9**	**+0.7**
HATJ	**Hateruma jima**	**2.50**	**267**	P	**Pn**	**10 41 40.2**	**+0.2**
HATJ				*eS*	**Sn**	**10 42 06.8**	**-3.7**
IRIF	**Iriomote-Funau**	**2.56**	**273**	P	**Pn**	**10 41 41.2**	**+0.3**
IRIF				*eS*	**Sn**	**10 42 10.7**	**-1.4**
JNTH	**Nagotoyohara**	**2.65**	**30**	*eP*	**Pn**	**10 41 42.8**	**+0.7**
JNTH				*eS*	**Sn**	**10 42 12.3**	**-1.9**
JOW	**Kunigami**	**3.03**	**31**		**Pn**	**10 41 48.8**	**+1.3**
JOW	**Kunigami**	**3.03**	**31**	P	**Pn**	**10 41 48.6**	**+1.3**
JIH	**Iheya**	**3.08**	**25**	*eP*	**Pn**	**10 41 49.1**	**+1.1**
YOJ	**Yonaguni jima**	**3.22**	**275**	Pn	**Pn**	**10 41 49.7**	**-0.3**
YOJ	**Yonaguni jima**	**3.22**	**275**	P	**Pn**	**10 41 50.0**	**+0.1**
JYRO	**Yoronjima**	**3.28**	**31**	P	**Pn**	**10 41 52.3**	**+1.6**
JYNG	**Yonagunijimaku**	**3.28**	**275**	*eP*	**Pn**	**10 41 50.8**	**0.0**
JOKE	**Okinoerabujima**	**3.62**	**30**	P	**Pn**	**10 41 56.7**	**+1.2**
JOKE				*eS*	**Sn**	**10 42 37.2**	**-1.0**
JTK	**Tokunoshima**	**4.16**	**31**	P	**Pn**	**10 42 03.5**	**+0.7**
NACB	**Ninganchiao**	**4.51**	**270**		**Pn**	**10 42 07.1**	**-0.6**
JMZ	**Minamidaito 2**	**4.54**	**69**	P	**Pn**	**10 42 07.8**	**-0.2**
JMZ				*eS*	**Sn**	**10 42 55.8**	**-5.0**
JKDJ	**Kitadaitoujima**	**4.64**	**67**	P	**Pn**	**10 42 09.4**	**-0.1**
JKDJ				S	**Sn**	**10 42 59.0**	**-4.5**
TATO	**Taipei**	**4.65**	**280**	Pn	**Pn**	**10 42 09.0**	**-0.7**
YHNB	**Yeheng**	**4.72**	**276**		**Pn**	**10 42 10.7**	**0.0**
YULB	**Yu-li**	**4.87**	**261**		**Pn**	**10 42 11.3**	**-1.3**
SSLB	**Suanglung**	**5.12**	**266**		**Pn**	**10 42 15.0**	**-1.2**
TPUB	**Ta-pu**	**5.49**	**262**		**Pn**	**10 42 21.2**	**+0.1**
KNMB	**Chin-men Tao**	**7.43**	**273**	Pn	**Pn**	**10 42 46.9**	**-0.9**
JMN	**Monobe**	**11.44**	**32**	Pn	**Pn**	**10 43 42.7**	**-0.1**
KSRS	**Korea Array**	**13.24**	**5**	Pn	**Pn**	**10 44 06.6**	**-0.7**

0.1nm,0.3s,baz=180,slow=12,SNR=3.2

KSRS				LR	LR	10 50 01.4		

comp=Z,68nm,18.3s,baz=180,slow=41
1.0nm,0.8s

GUMO	**Guam**	**20.29**	**118**	LR	LR	10 53 00.8		

comp=Z,20nm,19.6s,baz=234,slow=35

SONM	**Songino Array**	**28.47**	**331**	P	**P**	**10 46 55.7**	**+1.1**

1.2nm,0.4s,baz=144,slow=9.3,SNR=8.7
1.2nm,0.4s

KNRA	**Kununurra**	**39.72**	**177**	P	**P**	**10 48 30.2**	**-1.8**
KNRA				IAmb	IAmb	10 48 59.3		

comp=Z,13nm,1.4s

MK31	**Makanchi Array**	**41.77**	**314**	P	**P**	**10 48 47.7**	**-1.1**
MK31				IAmb	IAmb	10 48 50.9		

comp=Z,2.4nm,1.2s

MKAR	**Makanchi Array**	**41.77**	**314**	P	**P**	**10 48 47.9**	**-0.9**

comp=Z,0.6nm,0.5s,baz=96,slow=11,SNR=6.1
comp=Z,0.6nm,0.5s

MKAR	**Makanchi Array**	**41.77**	**314**	P	**P**	**10 48 47.0**	**-1.8**
ZAA0	**Zalesovo Array**	**42.95**	**325**	P	**P**	**10 48 56.9**	**-1.4**
ZAA0				IAmb	IAmb	10 48 59.3		

comp=Z,2.2nm,0.6s

ZALV	**Zalesovo Beam**	**42.95**	**325**	P	**P**	**10 48 57.9**	**-0.4**

comp=Z,1.9nm,0.5s,baz=110,slow=7.4,SNR=9.3
comp=Z,1.9nm,0.5s

ZALV	**Zalesovo Beam**	**42.95**	**325**	P	**P**	**10 48 56.3**	**-1.9**
WRA	**Warramunga Arr**	**44.56**	**170**	P	**P**	**10 49 13.7**	**+2.1**

comp=Z,1.5nm,0.6s,baz=351,slow=8.7,SNR=19
comp=Z,1.5nm,0.6s

KURBB	**Kurchatov Arra**	**45.28**	**318**	P	**P**	**10 49 17.6**	**+0.7**

comp=Z,0.8nm,0.5s,baz=108,slow=8.0,SNR=9.3
comp=Z,0.8nm,0.5s

ASAR	**Alice Springs**	**48.14**	**171**	P	**P**	**10 49 43.6**	**+3.9**

comp=Z,0.4nm,0.6s,baz=353,slow=13,SNR=9.9
comp=Z,0.4nm,0.6s

ABKAR	**Akbulak array**	**56.91**	**314**	P	**P**	**10 50 44.6**	**+0.2**
AKASG	**Malin Array Be**	**76.05**	**319**	P	**P**	**10 52 47.5**	**+0.6**

comp=Z,0.3nm,0.3s,baz=55,slow=6.4,SNR=5.3
comp=Z,0.3nm,0.3s

BRTR	**Keskin Array B**	**77.04**	**308**	P	**P**	**10 52 54.8**	**+1.8**

comp=Z,1.8nm,0.9s,baz=85,slow=5.3,SNR=6.8
comp=Z,1.8nm,0.9s

*NEIC **09** 10:45:17.1±2.2, 5.94S±0.06×78.77W±0.08, h10km±1km, mb4.7/148, Mwr4.3/10, ML4.4(ARE), Error ellipse: s-maj=13.9km s-min=9.4km az=240.0*

*NEIC **09** 10:45:17.3, 5.95S×78.81W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr2.80; Mθθ0.19; Mφφ-2.99; Mrθ0.63; Mθφ1.63; Mφr-2.47; Fault plane solution: Mo4.19000×10^15 NP1:φ327.68000°, δ26.63000°, λ75.49000°. NP2:φ163.82000°, δ64.29000°, λ97.16000°. Principal axes: T 3.7049, Plg70.0000°, Azm89.0000°; N 0.8374, Plg6.0000°, Azm341.0000°; P -4.5423, Plg19.0000°, Azm248.0000°;*

*IDC **09** 10:45:18.0±0.5, 5.78S×78.70W, h0km, mb4.2/16, mbtmp4.2/18, ML4.2/2, MS3.3/14 Error ellipse: s-maj=29.1km s-min=9.6km az=67.0*

*ARE **09** 10:45:19±2.2, 5.89S±0.03×78.88W±0.08, h14km±4km, Error ellipse: s-maj=10.8km s-min=4.6km az=84.0*

ISC 09 10:45:18.1±0.4, 5.87S±0.05×78.74W±0.07, h10km, n404, σ1.972/382, mb4.6/85, MS3.3/11, 1C-2D, Northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.31**	**165**	Pg	**Pg**	**10 45 44.5**	**+1.3**

126nm,0.3s,baz=13,slow=7.6,SNR=1281

ATAH				Lg	Lg	10 46 02.1		

148nm,0.3s,baz=49,slow=21,SNR=14

MCRA	**Macar, Loja**	**1.92**	**321**		**Pb**	**10 45 52.3**	**-0.8**
MCRA	**Macar, Loja**	**1.92**	**321**	*eP*	**Pn**	**10 45 50.1**	**-0.8**
ARNL	**Arenillas**	**2.66**	**330**		**Pn**	**10 46 01.6**	**+0.6**
BOSC	**San Juan Bosco**	**2.71**	**5**		**Pn**	**10 46 01.6**	**-0.2**
CHSH	**Refugio Sur-Vo**	**4.35**	**358**	Pn	Pn	10 46 29.6	+4.9
PORT	**Chimborazo Vol**	**4.

comp=Z,132nm,18.1s,baz=296,slow=40
comp=Z,1.2nm,0.4s
HATO Hato, Curacao 20.40 28 P **P** **10 49 54.1 -1.2**
PTLB Pontes e Lacer 21.47 118 P **P** **10 50 05.1 -1.8**
PTLB IAmb IAmb 10 50 43.9
comp=Z,5.7nm,0.8s
MTDJ Mount Denham 23.97 3 P **P** **10 50 32.0 -0.9**
AOPR Arecibo Observ 26.81 26 P **P** **10 50 55.2 -3.5**
SJG San Juan 26.87 27 LR LR 11 03 18.4
comp=Z,62nm,19.0s,baz=217,slow=40
CBYP Canovanas 27.15 28 P **P** **10 51 00.1 -1.6**
CBYP IAmb IAmb 10 51 17.5
comp=Z,18nm,0.9s
TDBA Terre de Bas, 27.43 38 P **P** **10 51 03.0 -1.2**
CMIG Matias Romero 27.84 325 LR LR 11 00 30.6
comp=Z,27nm,20.3s,baz=184,slow=33
MDP Montagnes des 28.25 68 LR LR 11 03 20.4
comp=Z,60nm,18.6s,baz=212,slow=38
CPUP Villa Florida 28.84 137 LR LR 11 04 02.3
comp=Z,81nm,21.3s,baz=308,slow=39
PLCA Paso Flores 35.48 169 P **P** **10 52 17.4 +2.4**
comp=Z,1.4nm,0.8s,baz=4.8,slow=12,SNR=2.2
comp=Z,1.4nm,0.8s
RPN Rapa Nui 35.98 231 LR LR 11 03 48.7
comp=Z,54nm,21.7s,baz=272,slow=31
GOGA Godfrey 39.32 354 P **P** **10 52 47.7 +0.3**
baz=173
LRAL Lakeview Retre 39.47 349 P **P** **10 52 49.4 +0.6**
baz=167
NATX Nacogdoches 40.38 339 P **P** **10 52 55.7 -0.6**
NATX IAmb IAmb 10 53 38.6
comp=Z,16nm,0.8s
FPAL Fort Paine 40.71 351 P **P** **10 52 58.8 -0.3**
Y45A Yeager Farm, C 40.82 346 P **P** **10 52 57.2 -2.7**
Y45A IAmb IAmb 10 53 02.7
comp=Z,21nm,1.1s
X48A Hartselle 40.86 349 P **P** **10 52 58.4 -1.8**
237A Washetta, Mont 41.02 338 P **P** **10 52 58.9 -2.7**
237A IAmb IAmb 10 53 04.8
comp=Z,14nm,0.8s
W50A Signal Mountai 41.31 352 P **P** **10 53 03.7 -0.3**
TKL Tuckaleechee C 41.57 354 LR LR 11 10 54.1
comp=Z,25nm,18.4s,baz=158,slow=37
V48A Smith Brothers 42.08 350 P **P** **10 53 09.4 -0.8**
V48A IAmb IAmb 10 53 11.3
comp=Z,20nm,1.4s
TX31 Lajitas Ar. Si 42.42 327 P **P** **10 53 12.3 -0.9**
TX32 Lajitas Array 42.42 327 P **P** **10 53 12.4 -0.8**
TXAR Lajitas Array 42.42 327 P **P** **10 53 15.2 +2.0**
comp=Z,0.3nm,0.5s,baz=151,slow=9.4,SNR=13
TXAR PcP **PcP** **10 55 08.0 +1.6**
comp=Z,0.8nm,0.6s,baz=156,slow=6.8,SNR=9.3
comp=Z,0.3nm,0.5s
TXAR Lajitas Array 42.42 327 P **P** **10 53 12.4 -0.8**
MIAR Mount Ida 42.57 342 P **P** **10 53 13.8 -0.4**
MIAR Mount Ida 42.57 342 P **P** **10 53 15.4 +1.2**
baz=158
RCBR Riachuelo 42.61 92 LR LR 11 11 59.5
comp=Z,62nm,21.1s,baz=316,slow=38
WVT Waverly 42.64 349 P **P** **10 53 14.2 -0.6**
WVT Waverly 42.64 349 P **P** **10 53 13.9 -0.9**
baz=167
T57A Hurt 42.64 359 P **P** **10 53 14.7 -0.1**
T57A IAmb IAmb 10 53 16.5
comp=Z,6.6nm,0.6s
WHAR Wooly Hollow 42.88 344 P **P** **10 53 17.2 +0.5**
WHAR IAmb IAmb 10 53 27.7
comp=Z,20nm,1.4s
ABTX Abilene, Hawle 43.13 334 P **P** **10 53 20.4 +1.5**
baz=149
X37A Clayton 43.19 340 **P** **10 53 20.0 +0.7**
X37A IAmb IAmb 10 53 22.4
comp=Z,12nm,0.9s
LCAR Lake Charles 43.31 345 P **P** **10 53 18.5 -1.7**
LCAR IAmb IAmb 10 53 21.4
comp=Z,6.7nm,0.8s
LOOK Love County 43.31 337 **P** **10 53 18.6 -1.7**
LOOK IAmb IAmb 10 53 32.8
comp=Z,11nm,0.9s
PBMO Poplar Bluff 43.81 346 P **P** **10 53 22.8 -1.5**
HHAR Hobbs 44.28 342 P **P** **10 53 26.9 -1.2**
HHAR IAmb IAmb 10 53 30.1
comp=Z,8.3nm,0.8s
S44A Carbondale 44.43 348 P **P** **10 53 27.2 -2.0**
S44A IAmb IAmb 10 53 31.8
comp=Z,20nm,1.5s
SIUC Southern Illin 44.44 348 P **P** **10 53 27.6 -1.7**
SIUC IAmb IAmb 10 53 29.6
comp=Z,6.6nm,0.8s
FNO Franklin 44.52 338 **P** **10 53 28.6 -1.4**
TUL1 Leonard 44.53 340 P **P** **10 53 31.2 +1.1**
baz=156
U38A Gravette 44.56 342 P **P** **10 53 27.8 -2.5**
U38A IAmb IAmb 10 53 32.4
comp=Z,6.8nm,0.8s
WMOK Wichita Mounta 44.59 336 **P** **10 53 29.8 -0.8**
MGMO Mountain Grove 44.62 345 P **P** **10 53 29.4 -1.5**
MGMO IAmb IAmb 10 53 32.3
comp=Z,9.2nm,0.9s
CCM Cathedral Cave 45.22 346 P **P** **10 53 35.0 -0.5**
CCM IAmb IAmb 10 53 37.6
comp=Z,3.8nm,0.6s
CCM Cathedral Cave 45.22 346 P **P** **10 53 35.9 +0.4**
baz=162
S39A Bolivar 45.41 344 P **P** **10 53 35.1 -2.0**
MSTX Muleshoe 45.68 332 P **P** **10 53 37.0 -2.4**
MSTX IAmb IAmb 10 53 42.6
comp=Z,7.0nm,0.8s
MSTX Muleshoe 45.68 332 P **P** **10 53 40.9 +1.5**
baz=146
T35A Sooner Cattle 45.69 340 **P** **10 53 37.3 -2.0**
T35A IAmb IAmb 10 53 41.8
comp=Z,14nm,1.2s
R40A Maddies Statio 45.70 345 P **P** **10 53 36.7 -2.6**
R40A IAmb IAmb 10 53 53.6
comp=Z,8.3nm,1.4s
O53A New Philadelph 45.94 357 P **P** **10 53 41.1 -0.1**
baz=177
ACSO Alum Creek Sta 46.04 355 P **P** **10 53 42.8 +0.8**
baz=174
KAN13 South Haven SW 46.11 339 **P** **10 53 40.4 -2.2**
KAN13 IAmb IAmb 10 53 44.8
comp=Z,12nm,1.1s
U32A Winter Ranch, 46.12 337 **P** **10 53 40.4 -2.3**
O48B Farmland 46.27 353 P **P** **10 53 43.8 0.0**
baz=171
SSPA Standing Stone 46.28 1 P **P** **10 53 44.7 +0.9**
baz=181
KAN01 Argonia South 46.34 339 **P** **10 53 42.3 -2.1**
KAN01 IAmb IAmb 10 53 46.6
comp=Z,9.6nm,1.1s
121A Cookes Peak, D 47.13 326 P **P** **10 53 48.4 -2.5**
121A IAmb IAmb 10 53 54.6
comp=Z,10.0nm,1.2s
121A Cookes Peak, D 47.13 326 P **P** **10 53 52.9 +2.0**
baz=139
CRNM Carthage 47.64 328 P **P** **10 53 53.8 -1.1**
KSU1 Kansas State U 47.70 341 P **P** **10 53 53.8 -1.2**
KSU1 Kansas State U 47.70 341 P **P** **10 53 55.9 +0.9**
baz=156
L56A Greenwood 47.78 1 P **P** **10 53 54.0 -1.6**
L56A IAmb IAmb 10 54 00.4
comp=Z,5.7nm,0.8s
SBM South Baldy 47.90 328 P **P** **10 53 55.1 -2.0**
BINY Binghamton 47.90 3 P **P** **10 53 57.8 +1.3**
baz=184
LENM Lemitar 47.93 328 P **P** **10 53 56.0 -1.2**
WVNY West Valley, N 48.04 0 P **P** **10 53 57.2 -0.4**
WVNY IAmb IAmb 10 53 59.4
comp=Z,5.6nm,0.8s
ANMO Albuquerque 48.27 329 P **P** **10 54 01.4 +1.7**
comp=Z,8.0nm,0.7s,baz=146,slow=9.0,SNR=52
comp=Z,8.0nm,0.7s
ANMO Albuquerque 48.27 329 P **P** **10 53 58.5 -1.2**
ANMO Albuquerque 48.27 329 P **P** **10 54 01.8 +2.1**
baz=142
N38A Joes South For 48.30 345 P **P** **10 53 58.3 -1.3**
CBKS Cedar Bluff 48.53 338 P **P** **10 54 03.0 +1.6**
baz=152
HRV Adam Dziewonsk 48.59 7 P **P** **10 54 03.2 +1.4**
baz=190
TUC Tucson 48.70 323 P **P** **10 54 04.6 +1.7**
baz=136
T25A Trinidad 49.04 333 P **P** **10 54 03.5 -2.1**
T25A IAmb IAmb 10 54 08.7
comp=Z,6.1nm,1.0s
T25A Trinidad 49.04 333 P **P** **10 54 07.4 +1.7**
baz=145,SNR=5.5
J47A Sunmer 49.18 354 P **P** **10 54 05.5 -0.8**
J59A Piesco 49.25 4 P **P** **10 54 05.5 -1.4**
J59A IAmb IAmb 10 54 08.4
comp=Z,4.8nm,0.8s
SDCO Great Sand Dun 50.04 332 P **P** **10 54 14.7 +1.4**
SDCO IAmb IAmb 10 54 16.1
comp=Z,9.5nm,1.2s
SDCO Great Sand Dun 50.04 332 P **P** **10 54 15.1 +1.8**
baz=144
W18A Petrified Fore 50.14 327 P **P** **10 54 16.2 +2.2**
baz=138
L34A Svendsen Farm, 50.25 343 P **P** **10 54 13.7 -0.9**
LBNH Lisbon 50.25 6 P **P** **10 54 16.2 +1.8**
baz=189
I42A Draeger Farm, 50.37 350 P **P** **10 54 12.8 -2.6**
I42A IAmb IAmb 10 54 15.8
comp=Z,8.6nm,0.8s
LONY Lake Ozonia 50.39 4 P **P** **10 54 17.2 +1.6**
baz=185
X16A Lo Mia Camp, P 50.58 325 P **P** **10 54 15.6 -1.8**
H43A Windswept, Lux 50.76 352 P **P** **10 54 17.9 -0.4**
WUAZ Wupatki 51.34 326 P **P** **10 54 22.0 -1.0**
WUAZ Wupatki 51.34 326 P **P** **10 54 25.5 +2.5**
baz=137,SNR=11
K31A O'Neill 51.58 341 P **P** **10 54 23.3 -1.2**
PKME Peaks-Kenny Pk 51.60 9 P **P** **10 54 26.2 +1.6**
baz=192
ISCO Idaho Springs 51.76 334 P **P** **10 54 27.6 +1.3**
baz=145
PV15 Paradox Valley 51.94 330 P **P** **10 54 26.4 -1.2**
PV15 IAmb IAmb 10 54 30.6
comp=Z,12nm,0.9s
ECSD EROS Data Cent 51.95 344 P **P** **10 54 25.5 -1.7**
ECSD IAmb IAmb 10 54 28.4
comp=Z,8.9nm,0.8s
ECSD EROS Data Cent 51.95 344 P **P** **10 54 27.5 +0.3**
baz=157,SNR=8.4
PV13 Radium Mtn., P 51.96 330 P **P** **10 54 25.0 -2.7**
PV13 IAmb IAmb 10 54 30.4
comp=Z,9.0nm,0.7s
PDMCI Parker Dam,Lak 52.10 323 P **P** **10 54 31.4 +2.9**
baz=133
PV11 David Mesa, Pa 52.10 330 P **P** **10 54 27.7 -1.0**
PV11 IAmb IAmb 10 54 32.1
comp=Z,6.0nm,1.0s
SPMN Marine on St. 52.40 347 P **P** **10 54 31.8 +1.3**
baz=162
BC3 Big Chuckawall 52.47 321 P **P** **10 54 33.6 +2.2**
baz=132
W13A Hualapai Mount 52.49 323 P **P** **10 54 29.6 -2.1**
IRM Iron Mountain 52.61 322 P **P** **10 54 35.2 +2.8**
baz=132
N23A Red Feather La 52.80 334 P **P** **10 54 35.0 +1.1**
baz=145
BELC Belle Mtn. Jos 53.04 321 P **P** **10 54 37.4 +1.8**
baz=131
O20A White River Ci 53.23 332 P **P** **10 54 38.6 +1.6**
baz=142
LATQ La Tuque 53.28 5 P **P** **10 54 36.3 -0.7**
SUSD Miller 53.28 342 P **P** **10 54 38.2 +1.0**
baz=155
GMRC Granite Mounta 53.34 322 P **P** **10 54 40.1 +2.2**
baz=132
LCMT Little Creek M 53.46 326 P **P** **10 54 37.0 -1.7**
Q16A Castle Valley 53.73 329 P **P** **10 54 38.8 -2.0**
HEC Hector,Ludlow 53.79 322 P **P** **10 54 43.4 +2.2**
baz=131
F33A 5 Mile Ranch, 53.81 345 P **P** **10 54 39.1 -1.8**
F33A IAmb IAmb 10 54 41.6
comp=Z,5.7nm,0.7s
CCUT Cedar City 53.91 326 P **P** **10 54 39.1 -3.0**
CCUT IAmb IAmb 10 54 45.9
comp=Z,5.2nm,0.9s
TUQ Turquoise Moun 53.94 322 P **P** **10 54 44.3 +2.1**
baz=132
MVU Marysvale 53.97 328 P **P** **10 54 41.4 -1.2**
RDMU Red Mountain 54.20 331 P **P** **10 54 42.4 -1.8**
RDMU IAmb IAmb 10 54 46.4
comp=Z,6.6nm,0.7s
SHPR Sheep Range 54.21 324 P **P** **10 54 42.5 -1.8**
SHPR IAmb IAmb 10 54 47.6
comp=Z,5.1nm,1.1s
GSC Goldstone, Bar 54.39 322 P **P** **10 54 43.6 -2.0**
GSC IAmb IAmb 10 54 48.9
comp=Z,5.9nm,0.9s
GSC Goldstone, Bar 54.39 322 P **P** **10 54 47.7 +2.2**
baz=131
RSSD Black Hills 54.74 338 P **P** **10 54 49.5 +1.5**
baz=149
EDW2 Edwards Air Fo 54.86 320 P **P** **10 54 51.4 +2.5**
baz=130
QSM Queen of Sheba 54.87 322 P **P** **10 54 46.9 -1.9**
QSM IAmb IAmb 10 54 51.8
comp=Z,5.3nm,1.0s
TPNV Topopah Spring 55.15 324 P **P** **10 54 49.9 -1.2**
TPNV IAmb IAmb 10 54 55.9
comp=Z,4.6nm,0.9s
TPNV Topopah Spring 55.15 324 P **P** **10 54 53.7 +2.7**
baz=133
FURC Furnace Creek, 55.19 323 P **P** **10 54 53.4 +2.2**
baz=132
MPMC Manual Prospec 55.31 322 P **P** **10 54 54.2 +1.9**
baz=131
CTU Camp Tracy 55.36 330 P **P** **10 54 50.4 -2.2**
CTU IAmb IAmb 10 54 55.1
comp=Z,2.7nm,0.6s
SPR3 Spring Creek 3 55.48 327 P **P** **10 54 50.8 -2.8**
SPR3 IAmb IAmb 10 54 56.2
comp=Z,4.7nm,1.0s
DUG Dugway, Tooele 55.53 329 P **P** **10 54 55.6 +1.9**
baz=138
ISA Isabella, Lake 55.66 321 P **P** **10 54 56.7 +2.0**
baz=130
R11A Troy Canyon, C 55.72 325 P **P** **10 54 57.6 +2.4**
baz=134
E28A Huff 55.74 342 P **P** **10 54 54.1 -0.9**
GRAC Grapevine Rang 55.85 323 P **P** **10 54 58.5 +2.5**
baz=132
BW06 Boulder Array 55.91 333 P **P** **10 54 57.4 +0.9**
baz=142
PDAR Pinedale Array 55.91 333 P **P** **10 54 57.4 +0.8**
comp=Z,0.8nm,0.5s,baz=123,slow=8.7,SNR=11
PDAR PcP **PcP** **10 55 55.5 +0.3**
comp=Z,1.0nm,0.5s,baz=132,slow=6.5,SNR=6.6
PDAR LR LR 11 19 13.6
comp=Z,13nm,18.6s,baz=121,slow=36
comp=Z,0.8nm,0.5s
PDAR Pinedale Array 55.91 333 P **P** **10 54 55.1 -1.5**
CWC Cottonwood Cre 55.92 322 P **P** **10 54 58.6 +2.0**
baz=130
HWUT Hardware Ranch 55.96 331 P **P** **10 54 55.1 -1.8**
AGMN Agassiz Nation 55.99 346 P **P** **10 54 55.6 -1.1**
AGMN Agassiz Nation 55.99 346 P **P** **10 54 57.6 +0.8**
baz=159
VES Vestal, Richgr 56.16 321 P **P** **10 55 00.2 +2.1**
baz=129
TPH Tonopah 56.48 324 P **P** **10 54 59.1 -1.5**
MDND Maddock 56.56 343 P **P** **10 55 01.8 +1.0**
baz=155
LOHW Long Hollow 57.05 333 P **P** **10 55 03.9 -0.7**
TPAW Teton Pass 57.11 332 P **P** **10 55 03.3 -1.8**
ELK Elko 57.21 327 P **P** **10 55 07.4 +1.6**
comp=Z,2.1nm,0.6s,baz=140,slow=7.4,SNR=12
comp=Z,2.1nm,0.6s
ELK Elko 57.21 327 P **P** **10 55 05.0 -0.8**
OMMB Old Mammoth Mi 57.24 322 P **P** **10 55 04.7 -1.4**
OMMB IAmb IAmb 10 55 09.7
comp=Z,7.5nm,1.0s
FXWY Fox Creek 57.26 333 P **P** **10 55 04.1 -2.1**
NVAR Mina Array Bea 57.35 324 P **P** **10 55 09.2 +2.3**
comp=Z,2.9nm,0.7s,baz=129,slow=7.6,SNR=37
comp=Z,2.9nm,0.7s
NVAR Mina Array Bea 57.35 324 P **P** **10 55 07.4 +0.6**
LHV Little Huntoon 57.35 323 P **P** **10 55 06.0 -0.5**
LHV IAmb IAmb 10 55 09.6
comp=Z,5.0nm,0.8s
IMW Indian Meadow 57.42 333 P **P** **10 55 05.9 -1.5**
RLMT Red Lodge 57.66 335 P **P** **10 55 10.1 +1.2**
baz=143
LAO LASA Array 57.73 338 P **P** **10 55 10.9 +1.7**
baz=147
YERR Yerington 58.27 323 P **P** **10 55 13.7 +0.4**
YERR IAmb IAmb 10 55 15.8
comp=Z,4.1nm,0.7s
GCMT Greycliff 58.36 335 P **P** **10 55 14.5 +0.8**
DGMT Dagmar 58.53 340 P **P** **10 55 15.9 +1.2**
baz=150
VCNR Virginia City 58.71 324 P **P** **10 55 13.8 -2.6**
VCNR IAmb IAmb 10 55 19.4
comp=Z,6.5nm,0.9s
HLID Hailey 58.82 330 P **P** **10 55 15.1 -1.9**
HLID Hailey 58.82 330 P **P** **10 55 18.4 +1.5**
baz=137
PAHR Pah Rah Range 58.82 324 P **P** **10 55 15.0 -2.1**
PAHR IAmb IAmb 10 55 20.1
comp=Z,8.4nm,1.3s
MCMT McKenzie Canyo 59.02 332 P **P** **10 55 16.3 -2.2**
BOZ Bozeman (W) 59.05 334 P **P** **10 55 18.8 +0.2**
BOZ IAmb IAmb 10 55 20.8
comp=Z,3.5nm,0.9s
BOZ Bozeman (W) 59.05 334 P **P** **10 55 19.6 +1.1**
baz=141
EGMT Eagleton 60.19 337 P **P** **10 55 27.5 +1.2**
baz=144
WVOR Wild Horse Val 60.21 327 P **P** **10 55 26.1 -0.5**
WVOR IAmb IAmb 10 55 28.9
comp=Z,6.7nm,1.2s
MOD Modoc Plateau 60.78 325 P **P** **10 55 28.7 -1.8**
MOD IAmb IAmb 10 55 32.5
comp=Z,4.5nm,0.9s
MSO Missoula 61.03 333 P **P** **10 55 30.6 -1.5**
MSO IAmb IAmb 10 55 34.4
comp=Z,4.2nm,0.8s
MSO Missoula 61.03 333 P **P** **10 55 33.5 +1.4**
baz=139
BMO Blue Mountains 61.19 330 P **P** **10 55 31.8 -1.3**
K05A Summer Lake 61.65 326 P **P** **10 55 34.2 -2.3**
F10A Beach Ranch, E 61.95 331 P **P** **10 55 37.3 -0.9**
F10A IAmb IAmb 10 55 47.6
comp=Z,3.3nm,0.7s
YBH Yreka Blue Hor 62.06 324 P **P** **10 55 39.7 +0.6**
comp=Z,3.8nm,0.7s,baz=105,slow=4.2,SNR=16
YBH LR LR 11 20 48.5
comp=Z,19nm,18.2s,baz=107,slow=34
comp=Z,3.8nm,0.7s
YBH Yreka Blue Hor 62.06 324 P **P** **10 55 39.1 0.0**
YBH IAmb IAmb 10 55 40.3
comp=Z,5.6nm,0.8s
K04D Chiloquin, OR 62.07 325 P **P** **10 55 40.7 +1.6**
baz=130
L04D Klamath Falls 62.13 325 P **P** **10 55 40.9 +1.3**
baz=129
J05D Fort Rock, OR 62.20 326 P **P** **10 55 41.7 +1.6**
baz=131
PINE Pine Mountain 62.38 327 P **P** **10 55 38.6 -2.6**
PINE IAmb IAmb 10 55 53.3
comp=Z,8.4nm,1.3s
J04D Umpqua Nationa 62.66 326 P **P** **10 55 44.8 +1.5**
baz=130
WALA Waterton Lakes 62.71 335 P **P** **10 55 42.7 -0.6**
WALA IAmb IAmb 10 55 45.6
comp=Z,4.8nm,0.7s
L02F Cave Junction 62.80 324 P **P** **10 55 45.5 +1.6**
baz=128
I05D Terrebonne, OR 62.95 327 P **P** **10 55 46.8 +1.9**
baz=131
I04A Tendick Farm, 63.19 326 P **P** **10 55 47.6 +1.0**
baz=130
K02D Willamette Mer 63.21 324 P **P** **10 55 48.5 +1.7**
baz=128
G05D Wamic, OR 63.53 328 P **P** **10 55 50.6 +1.8**
baz=131
NEW Newport 63.54 332 P **P** **10 55 49.5 +0.8**
comp=Z,2.1nm,0.5s,baz=101,slow=6.5,SNR=6.1
comp=Z,2.1nm,0.5s
NEW Newport 63.54 332 P **P** **10 55 47.1 -1.7**
NEW IAmb IAmb 10 55 50.7
comp=Z,2.7nm,0.7s
NEW Newport 63.54 332 P **P** **10 55 49.9 +1.1**
baz=136
I03D Drain, OR 63.65 325 P **P** **10 55 51.0 +1.5**
baz=129
G03D McMinnville, O 64.56 327 P **P** **10 55 57.7 +2.3**
baz=130
YKA Yellowknife Ar 73.48 344 P **P** **10 56 50.3 -0.2**
comp=Z,2.4nm,0.7s,baz=134,slow=6.5,SNR=3.5
comp=Z,2.4nm,0.7s
LIC Lamto 74.55 82⇓*i* P 10 57 02.2 +4.4
comp=Z,2.9nm,0.2s
TIC Toumodi 74.61 81⇑*i* P **P** **10 57 00.0 +1.8**
comp=Z,1.4nm,0.2s
DBIC Dimbokro 74.78 81 P **P** **10 57 00.5 +1.3**
comp=Z,2.9nm,0.6s,baz=256,slow=4.3,SNR=4.7
comp=Z,2.9nm,0.6s
KIC Kosan Boka 74.85 82⇓*i* P **P** **10 57 01.2 +1.6**
comp=Z,5.3nm,0.4s
T35M Bob Quinn 75.28 334 P **P** **10 57 03.1 +1.9**
baz=126
DLBC Dease Lake 76.06 335 P **P** **10 57 07.5 +1.9**
comp=Z,3.2nm,0.7s,baz=73,slow=3.5,SNR=11
comp=Z,3.2nm,0.7s
DLBC Dease Lake 76.06 335 P **P** **10 57 07.4 +1.7**
baz=127
R33M Jennings River 77.02 335 P **P** **10 57 12.8 +1.6**
baz=126
VNA3 Neumayer Olymp 77.82 162 P **P** **10 57 17.3 +2.0**
P33M Teslin, Yukon 78.26 336 P **P** **10 57 19.5 +1.5**
baz=125
SNAA Sanae 80.04 162 P **P** **10 57 29.0 +1.4**
SNAA Sanae 80.04 162 P **P** **10 57 28.2 +0.6**
SNAA IAmb IAmb 10 57 43.1
comp=Z,6.7nm,1.2s
N30M Aishikik Lake 80.70 336 P **P** **10 57 33.0 +1.7**
baz=121
YUK6 Outpost Mounta 80.97 335 P **P** **10 57 34.6 +1.6**
baz=120
BCPM Bancas Point 81.04 334 P **P** **10 57 31.0 -2.0**
C36M Paulatuk 81.19 345 P **P** **10 57 34.3 +0.8**
baz=134
TROLL Troll, Antarti 81.75 162 P **P** **10 57 38.0 +1.1**
M29M Somme Creek 81.76 336 P **P** **10 57 38.7 +1.8**
baz=120
TORD Torodi Ar. Bea 82.06 76 P **P** **10 57 40.2 +0.8**
comp=Z,0.9nm,0.6s,baz=284,slow=6.3,SNR=12
comp=Z,0.9nm,0.6s
DAWY Dawson 82.92 337 P **P** **10 57 44.0 +1.1**
baz=119
M27K Edge Creek, AK 83.12 335 P **P** **10 57 44.2 +0.1**
M27K IAmb IAmb 10 57 46.5
comp=Z,6.5nm,1.1s
M27K Edge Creek, AK 83.12 335 P **P** **10 57 45.3 +1.2**
baz=117
EPYK Eagle Plains 83.12 340 P **P** **10 57 43.9 0.0**
EPYK Eagle Plains 83.12 340 P **P** **10 57 45.1 +1.2**
baz=122
I29M Ogilvie Camp, 83.16 339 P **P** **10 57 44.9 +0.8**
I29M IAmb IAmb 10 57 46.3
comp=Z,5.9nm,1.0s
I29M Ogilvie Camp, 83.16 339 P **P** **10 57 45.0 +0.8**
baz=120
INK Inuvik 83.16 342 P **P** **10 57 45.2 +1.3**
comp=Z,6.4nm,1.0s,baz=92,slow=7.7,SNR=6.8
comp=Z,6.4nm,1.0s
INK Inuvik 83.16 342 P **P** **10 57 43.2 -0.8**
INK Inuvik 83.16 342 P **P** **10 57 45.0 +1.1**
baz=125
BCAR Beaver Creek A 83.40 336 P **P** **10 57 45.3 -0.1**
L27K Beaver Creek, 83.41 336 P **P** **10 57 46.4 +1.0**
L27K IAmb IAmb 10 57 54.0
comp=Z,3.8nm,0.8s
L27K Beaver Creek, 83.41 336 P **P** **10 57 47.1 +1.6**
baz=117
K27K Chicken 83.95 337 P **P** **10 57 49.8 +1.7**
baz=117
L26K Log Cabin Wild 84.02 336 P **P** **10 57 50.2 +1.6**
baz=115
QSPA South Pole Qui 84.22 180 P **P** **10 57 49.8 +0.1**
QSPA IAmb IAmb 10 58 06.4
comp=Z,6.1nm,1.1s
I27K Kandik River 84.49 338 P **P** **10 57 51.9 +0.9**
baz=117
DOT Dot Lake 84.58 336 P **P** **10 57 50.6 -0.8**
DOT IAmb IAmb 10 57 53.4
comp=Z,3.1nm,1.0s
SCRK Sand Creek 84.68 336 P **P** **10 57 51.6 -0.5**
SCRK IAmb IAmb 10 57 59.0
comp=Z,5.3nm,1.2s
SCRK Sand Creek 84.68 336 P **P** **10 57 53.0 +1.0**
baz=115
J26L Joseph Creek 84.74 337 P **P** **10 57 50.0 -2.2**
J26L Joseph Creek 84.74 337 P **P** **10 57 53.5 +1.2**

baz=115
H27K Steamboat Moun 84.75 339 P **P** **10 57 53.5 +1.3**
baz=117
PAX Paxson 84.88 335 P **P** **10 57 51.7 -1.3**
PAX Paxson 84.88 335 P **P** **10 57 53.4 +0.4**
baz=114
I26K Coal Creek Min 84.93 338 P **P** **10 57 51.9 -1.2**
I26K IAmb IAmb 10 57 54.8
comp=Z,3.1nm,0.8s
I26K Coal Creek Min 84.93 338 P **P** **10 57 53.7 +0.6**
baz=116
RIDG Independent Ri 84.93 336 P **P** **10 57 54.2 +1.0**
baz=114
G27K Doyon Strip 85.06 339 P **P** **10 57 54.4 +0.6**
baz=117,SNR=6.3
J25K Salcha River, 85.50 337 P **P** **10 57 55.2 -0.8**
J25K Salcha River, 85.50 337 P **P** **10 57 56.8 +0.8**
baz=114,SNR=9.5
E27K Coleen River 85.67 341 P **P** **10 57 57.6 +0.9**
baz=117
SML Sawmill 85.67 333 P **P** **10 57 57.8 +0.8**
baz=111
WAT6 Susitna Watana 85.69 334 P **P** **10 57 57.8 +0.6**
baz=111
G26K Porcupine Rive 85.87 339 P **P** **10 57 58.6 +0.8**
baz=115
PRP Porcupine Dome 85.92 337 P **P** **10 57 59.2 +1.0**
baz=114
BRSE Bradley Lake S 86.09 331 P **P** **10 58 00.6 +1.6**
baz=108
ILAR Eielson Array 86.16 337 P **P** **10 58 00.1 +0.8**
comp=Z,1.3nm,0.7s,baz=119,slow=3.9,SNR=10
comp=Z,1.3nm,0.7s
ILAR Eielson Array 86.16 337 P **P** **10 57 59.3 +0.1**
F26K Sheenjek River 86.32 340 P **P** **10 58 01.5 +1.5**
baz=115,SNR=5.5
H25K Birch Creek 86.33 338 P **P** **10 58 01.7 +1.7**
baz=113
BMAR Burnt Mountain 86.36 339 P **P** **10 58 01.6 +1.4**
G25K Bearman Lake 86.63 338 P **P** **10 58 03.3 +1.8**
baz=113
MDM Murphy Dome 86.76 336 P **P** **10 58 03.5 +1.3**
MDM IAmb IAmb 10 58 04.2
comp=Z,6.2nm,1.0s
F25K Christian Rive 86.80 339 P **P** **10 58 04.2 +1.8**
baz=114
H24K Noodor Dome 86.94 337 P **P** **10 58 02.6 -0.5**
H24K IAmb IAmb 10 58 05.5
comp=Z,6.2nm,0.9s
H24K Noodor Dome 86.94 337 P **P** **10 58 04.2 +1.0**
baz=111,SNR=6.4
NEA2 Nenana 86.97 336 P **P** **10 58 04.2 +1.0**
NEA2 IAmb IAmb 10 58 05.0
comp=Z,5.7nm,0.8s
NEA2 Nenana 86.97 336 P **P** **10 58 04.0 +0.8**
baz=110,SNR=5.9
E25K Arctic Village 86.98 340 P **P** **10 58 05.2 +2.0**
baz=114,SNR=5.8
C27K Jago River 87.00 341 P **P** **10 58 04.7 +1.4**
baz=116
G24K Hadweenzic Riv 87.11 338 P **P** **10 58 05.5 +1.6**
baz=112,SNR=5.8
SKT Skwentna 87.16 333 P **P** **10 58 04.9 +0.7**
SKT Skwentna 87.16 333 P **P** **10 58 05.4 +1.1**
baz=108
I23K Minto, Yukon-K 87.28 336 P **P** **10 58 05.3 +0.7**
I23K IAmb IAmb 10 58 06.7
comp=Z,4.2nm,0.7s
I23K Minto, Yukon-K 87.28 336 P **P** **10 58 05.7 +1.0**
baz=110,SNR=5.2
C26K Camden Bay 87.50 342 P **P** **10 58 06.4 +0.7**
baz=114
F24K Squaw Lake 87.57 339 P **P** **10 58 07.4 +1.3**
baz=112
H23K Yukon River 87.58 337 P **P** **10 58 07.1 +0.9**
baz=110
BPAW Bear Paw Mtn. 87.59 335 P **P** **10 58 06.8 +0.5**
BPAW Bear Paw Mtn. 87.59 335 P **P** **10 58 07.0 +0.7**
baz=108
D25K Kavik River 87.73 341 P **P** **10 58 08.2 +1.3**
baz=113,SNR=7.9
PPLA Purkeypile 87.73 334 P **P** **10 58 06.7 -0.4**
PPLA Purkeypile 87.73 334 P **P** **10 58 07.8 +0.7**
baz=107
MLY Manley 87.79 336 P **P** **10 58 08.3 +1.1**
MLY Manley 87.79 336 P **P** **10 58 07.9 +0.7**
baz=109,SNR=7.3
CAST Castle Rocks 87.84 334 P **P** **10 58 08.0 +0.5**
CAST Castle Rocks 87.84 334 P **P** **10 58 08.0 +0.5**
baz=108
M20K Styx River 87.86 333 P **P** **10 58 08.2 +0.5**
baz=106
E24K Your Creek 87.98 339 P **P** **10 58 09.7 +1.6**
baz=111
G23K Bananza Creek 88.06 338 P **P** **10 58 10.3 +1.8**
baz=110,SNR=9.9
COLD Coldfoot 88.30 338 P **P** **10 58 07.5 -2.1**
COLD Coldfoot 88.30 338 P **P** **10 58 11.4 +1.9**
baz=109,SNR=12
H22K Ishtalitna Cre 88.32 337 P **P** **10 58 10.6 +0.9**
baz=108
I21K Tanana 88.34 336 P **P** **10 58 10.4 +0.7**
baz=108
L20K Farewell, AK 88.36 333 P **P** **10 58 10.3 +0.3**
baz=106
D24K Happy Valley 88.48 340 P **P** **10 58 11.6 +1.2**
baz=111
TOLK Toolik Lake Re 88.56 340 P **P** **10 58 12.1 +1.3**
baz=110
C24K Franklin Bluff 88.64 341 P **P** **10 58 13.0 +2.0**
baz=111
K20K Telida 88.68 334 P **P** **10 58 12.1 +0.7**
baz=106
L19K White Mountain 88.72 333 P **P** **10 58 12.2 +0.6**
baz=105
Q16K King Salmon 88.73 329 P **P** **10 58 12.8 +1.1**
baz=103
H21K Melozitna Rive 88.81 337 P **P** **10 58 12.7 +0.7**
H21K IAmb IAmb 10 58 16.9
comp=Z,7.0nm,1.5s
H21K Melozitna Rive 88.81 337 P **P** **10 58 12.5 +0.5**
baz=107
N18K Kilae Creek 88.82 331 P **P** **10 58 12.9 +0.7**
N18K Kilae Creek 88.82 331 P **P** **10 58 12.6 +0.4**
baz=104
J20K Nowinta River 88.94 335 P **P** **10 58 11.8 -0.8**
J20K IAmb IAmb 10 58 14.2
comp=Z,3.6nm,0.9s
J20K Nowinta River 88.94 335 P **P** **10 58 13.4 +0.8**
baz=106
D23K Nanushuk River 89.05 340 P **P** **10 58 14.9 +1.9**
baz=109,SNR=5.2
F22K John River 89.12 338 P **P** **10 58 15.2 +1.8**
baz=108,SNR=5.7
O17K Koliganek Bris 89.20 330 P **P** **10 58 15.4 +1.5**
baz=103
IMAR Indian Mountai 89.27 337 P **P** **10 58 14.1 -0.1**
C23K Itkillik River 89.31 341 P **P** **10 58 15.8 +1.6**
baz=109
G21K Allakaket 89.33 337 P **P** **10 58 16.1 +1.7**
baz=106
F21K Alatna River 89.52 338 P **P** **10 58 17.1 +1.8**
baz=106
O16K Kokwok River B 89.65 330 P **P** **10 58 18.7 +2.7**
baz=102
GCSA Galena City Sc 90.23 335 P **P** **10 58 20.2 +1.6**
baz=103,SNR=5.8
VNDA Vanda 90.41 191 P **P** **10 58 19.8 +0.5**
comp=Z,0.5nm,0.7s,baz=78,slow=2.8,SNR=3.7
comp=Z,0.5nm,0.7s
ANM Nome 93.80 334 P **P** **10 58 36.7 +1.5**
baz=96
ZALV Zalesovo Beam 130.23 13 PKP **PKiKP** **11 04 29.6 +0.3**
comp=Z,0.7nm,0.3s,baz=222,slow=2.0,SNR=6.7
MKAR Makanchi Array 136.07 19 PKP **PKiKP** **11 04 40.1 -1.3**
comp=Z,0.8nm,0.8s,baz=0.0,slow=1.7,SNR=4.8
ASAR Alice Springs 136.68 226 PKhKP PKPpre 11 04 32.9
comp=Z,0.3nm,0.6s,baz=126,slow=2.9,SNR=5.3
ASAR PKP **PKiKP** **11 04 42.5 -1.0**
comp=Z,1.5nm,0.7s,baz=106,slow=2.1,SNR=16
WRA Warramunga Arr 138.57 231 PKhKP PKPpre 11 04 37.9
comp=Z,0.6nm,0.7s,baz=123,slow=1.6,SNR=8.3
WRA PKP **PKiKP** **11 04 46.0 -1.3**
comp=Z,1.8nm,0.7s,baz=124,slow=1.9,SNR=7.2
KSRS Korea Array 140.26 326 PKP **PKiKP** **11 04 51.3 +1.1**
comp=Z,1.1nm,0.7s,baz=75,slow=1.3,SNR=6.6
GTA Gaotai 146.58 2 *e*PKPbc **PKPab** **11 05 01.3 -0.1**

GTA pPKP sPKPab 11 05 11.4 +5.1
GTA sPKP 11 05 15.9
GTA LR LR
comp=N,140nm,15.6s
GTA LR LR
comp=E,600nm,17.8s
GTA LR LR
comp=Z,97nm,17.1s
PZH PanZhiHua 159.47 359 PKP **PKPdf** **11 05 17.4 -0.6**

RSNC 09 11:04:50.0±0.8, 6.84N×73.09W, h145km±6km, ML1.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**200**	*e*P	Pn	11 05 09.7	-0.5
BARC				*e*S	Sn	11 05 24.9	-0.6
BARC				*i*		11 05 26.2	
	comp=Z,7.8nm,0.2s						
BARC	**Barichara**	**0.26**	**200**	*e*P	Pn	11 05 09.7	-0.5
BARC				*e*S	Sn	11 05 24.7	-0.7
BARC				*i*		11 05 27.2	
	comp=Z,8.2nm,0.2s						
BRRC	**Barranca, Sant**	**0.67**	**294**	*e*P	Pn	11 05 11.6	-0.2
BRRC				*e*S	Sn	11 05 28.5	+0.1
BRRC				*i*		11 05 32.1	
	comp=Z,8.7nm,0.2s						
BRRC	**Barranca, Sant**	**0.67**	**294**	*e*P	Pn	11 05 11.6	-0.2
BRRC				*e*S	Sn	11 05 28.6	+0.3
BRRC				*i*		11 05 32.1	
	comp=Z,9.5nm,0.2s						
RUSC	**La Rusia**	**0.94**	**179**	*e*P	Pn	11 05 12.4	-1.9
RUSC				*e*S	Sn	11 05 32.5	-0.5
RUSC				*i*		11 05 34.2	
	comp=Z,9.0nm,0.3s						
RUSC	**La Rusia**	**0.94**	**179**	*e*P	Pn	11 05 13.7	-0.7
RUSC				*e*S	Sn	11 05 32.8	-0.1
RUSC				*i*		11 05 34.2	
	comp=Z,8.5nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.87**	**290**	*e*P	Pn	11 05 22.3	-1.0
ZARC				*e*S	Sn	11 05 48.7	-0.1
ZARC				*i*		11 05 52.8	
	comp=Z,3.6nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.87**	**290**	*e*P	Pn	11 05 22.3	-1.0
ZARC				*e*S	Sn	11 05 48.3	-0.6
ZARC				*i*		11 05 53.1	
	comp=Z,3.4nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.77**	**235**	*e*P	Pn	11 05 35.4	+0.6
GUY2C				*e*S	Sn	11 06 10.2	+1.0
GUY2C				*i*		11 06 16.1	
	comp=Z,2.7nm,0.5s						
GUY2C	**Guyana, Caldas**	**2.77**	**235**	*e*P	Pn	11 05 35.1	+0.4
GUY2C				*e*S	Sn	11 06 08.7	-0.5
GUY2C				*i*		11 06 15.9	
	comp=Z,2.5nm,0.5s						

*NEIC **09** 11:27:39.5±2.0, 0.16N±0.05×123.71E±0.07, h138km±4km, mb4.9/147, Error ellipse: s-maj=9.4km s-min=7.1km az=87.0*
*IDC **09** 11:27:40.2±1.1, 0.16N×123.59E, h145km±9km, mb4.5/27, mbtmp4.9/31,MS3.2/10, Error ellipse: s-maj=11.9km s-min=7.9km az=87.0*
*DJA **09** 11:27:40.1±0.1, 0.1°N±1°×12°4E±°, h140km±1km, M4.8/53, mb4.9/53, mB5.3/24, MLv5.3/29, Mw(mB)4.7/24, MwMwp4.4/1, Mwp4.8/1*
*BJI **09** 11:27:40.0±0.0, 0.10N×123.80E, h130km, mb5.0/57, mB4.9/29*
*GCMT **09** 11:27:40.5±0.4, 0.04N±0.02×123.80E±0.03, h172km±5km, MW4.9/76, Moment Tensor Solution. s9,c9; s76,c102; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.78±.13; Mθθ -0.97±.16; Mφφ 0.19±.19; Mrθ 1.79±.10; Mθφ 1.37±.12; Mφr 0.63±.10; Best double couple: Mo 2.49800×10^16 NP1 :φs 84.00000°, δ 78.00000°, λ 53.00000°. NP2: φs 340.00000°, δ 39.00000°, λ 161.00000°. Principal axes: T 2.6020, Plg44.0000°, Azm318.0000°; N -0.2060, Plg37.0000°, Azm93.0000°; P -2.3950, Plg24.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 11:27:40.1±0.4, 0.08N±0.03×123.76E±0.04, h148km±3km, h148km:pP-P, n532, s1825/569, mb4.9/118, 17C-6D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.54**	**24**	P	**Pn**	**11 28 02.1**	**+0.8**
KMSI				S	**Sn**	**11 28 19.2**	**+1.7**
GTOI	**Gorontalo**	**0.93**	**306**	P	**Pn**	**11 28 05.9**	**+1.9**
GTOI				S	**Sn**	**11 28 25.3**	**+3.0**
LUWI	**Luwuk**	**1.49**	**221**	Pn	**Pn**	**11 28 09.0**	**-0.4**
LUWI	**Luwuk**	**1.49**	**221**	P	**Pn**	**11 28 08.6**	**-0.8**
LUWI				S	**Sn**	**11 28 29.2**	**-2.6**
LUWI	**Luwuk**	**1.49**	**221**	P	**Pn**	**11 28 09.1**	**-0.3**
MRSI	**Marisa**	**1.86**	**282**	P	**Pn**	**11 28 13.3**	**-0.2**
MRSI				S	**Sn**	**11 28 36.7**	**-2.3**
APSI	**Ampana**	**2.33**	**245**	P	**Pn**	**11 28 19.0**	**0.0**
APSI				S	**Sn**	**11 28 47.3**	**-1.7**
SANI	**Sanana**	**3.07**	**134**	P	**Pn**	**11 28 26.3**	**-2.0**
SANI				S	**Sn**	**11 28 57.1**	**-8.5**
SANI	**Sanana**	**3.07**	**134**	P	**Pn**	**11 28 26.5**	**-1.8**
TOLI2	**Tolitoli**	**3.15**	**289**	Pn	**Pn**	**11 28 28.5**	**-0.8**
TOLI2	**Tolitoli**	**3.15**	**289**	P	**Pn**	**11 28 29.9**	**+0.6**
TNTI	**Ternate**	**3.67**	**79**	P	**Pn**	**11 28 35.1**	**-0.9**
TNTI	**Ternate**	**3.67**	**79**	P	**Pn**	**11 28 35.9**	**-0.1**
TNTI				S	**Sn**	**11 29 17.1**	**-2.2**
TNTI	**Ternate**	**3.67**	**79**	P	**Pn**	**11 28 36.6**	**+0.6**
LBMI	**Labuha**	**3.81**	**101**	P	**Pn**	**11 28 37.2**	**-0.6**
LBMI				S	**Sn**	**11 29 19.9**	**-2.7**
MPSI	**Mapaga**	**3.87**	**274**	P	**Pn**	**11 28 38.7**	**+0.1**
SGSI	**Sangihe**	**3.99**	**26**	P	**Pn**	**11 28 39.9**	**-0.3**
NLAI	**Namlea**	**4.69**	**135**	P	**Pn**	**11 28 49.4**	**0.0**
TTSI	**Tana Toraja**	**5.02**	**232**	P	**Pn**	**11 28 54.4**	**+0.7**
	6.6nm8μm1μm,0.9s						
BBSI	**Bau Bau**	**5.66**	**192**	P	**Pn**	**11 29 02.4**	**+0.1**
	0.2nm462nm30nm,0.6s						
SPSI	**Sidrap Palu**	**5.66**	**225**	P	**Pn**	**11 29 02.7**	**+0.4**
	2.5nm2μm6μm406nm,0.8s						
AAI	**Ambon**	**5.80**	**130**	P	**Pn**	**11 29 04.3**	**+0.1**
	2.4nm7μm511nm,0.5s						
MSAI	**Masohi**	**6.19**	**123**	P	**Pn**	**11 29 09.5**	**+0.2**
	0.7nm2μm176nm,0.9s						
KAPI	**Kappang**	**6.46**	**218**	P	**Pn**	**11 29 13.6**	**+0.7**
	120nm,0.5s,baz=351,slow=5.5,SNR=41						
KAPI				S	**Sn**	**11 30 23.8**	**-1.7**
	165nm,0.4s,baz=181,slow=19,SNR=9.1						
KAPI				LR	LR	11 32 10.5	
	comp=Z,262nm,18.8s,baz=22,slow=42						
KAPI	**Kappang**	**6.46**	**218**	Pn	**Pn**	**11 29 12.6**	**-0.3**
KAPI	**Kappang**	**6.46**	**218**	P	**Pn**	**11 29 13.9**	**+1.0**
BKSI	**Bulukumba**	**6.48**	**214**	P	**Pn**	**11 29 13.3**	**0.0**
	1.2nm2μm167nm,0.8s						
BKB	**Balikpapan**	**6.99**	**259**	Pn	**Pn**	**11 29 18.0**	**-2.1**
BKB	**Balikpapan**	**6.99**	**259**	P	**Pn**	**11 29 19.9**	**-0.2**
	1.1nm334nm,0.8s						
BSSI	**Bau Bau, Buton**	**6.99**	**208**	P	**Pn**	**11 29 20.8**	**+0.7**
	1.6nm3μm309nm,0.6s						
KCP	**Kidapawan**	**7.01**	**11**	↑*i*P	Pn	11 29 25.3	+4.9
MYLDM	**Lahad Datu**	**7.29**	**314**	Pn	**Pn**	**11 29 21.4**	**-2.8**
SIJI	**Sorong**	**7.56**	**97**	P	**Pn**	**11 29 28.8**	**+1.0**
	64nm,0.6s,baz=312,slow=9.7,SNR=28						
BNDI	**Bandanaira**	**7.66**	**127**	P	**Pn**	**11 29 29.3**	**+0.3**
	1.9nm534nm,1.2s						
BNDI	**Bandanaira**	**7.66**	**127**	P	**Pn**	**11 29 28.8**	**-0.1**
PAGZ	**Pagadian**	**7.72**	**357**	↑*i*P	**Pn**	**11 29 33.1**	**+3.3**
BUKP	**Musuan**	**7.85**	**9**	↓*i*P	**Pn**	**11 29 36.0**	**+4.3**
MMRI	**Maumere**	**8.79**	**190**	P	**Pn**	**11 29 44.6**	**+0.4**
	93nm,0.8s						
MTKI	**Muara Teweh, K**	**8.92**	**263**	P	**Pn**	**11 29 47.1**	**+1.2**
FAKI	**Fak Fak**	**8.99**	**109**	Pn	**Pn**	**11 29 44.7**	**-2.2**
FAKI	**Fak Fak**	**8.99**	**109**	P	**Pn**	**11 29 46.0**	**-0.8**
	68nm,0.6s						
FAKI	**Fak Fak**	**8.99**	**109**	P	**Pn**	**11 29 46.1**	**-0.8**
EDFI	**Ende, Flores**	**9.01**	**193**	P	**Pn**	**11 29 47.6**	**+0.4**
	448nm40nm,0.9s						
KKM	**Kota Kinabalu**	**9.58**	**308**	Pn	**Pn**	**11 29 52.5**	**-2.2**
BBKI	**Banjar Baru**	**9.59**	**248**	P	**Pn**	**11 29 55.8**	**+1.1**
	30nm,0.7s						
BATI	**Baumata**	**10.22**	**181**	P	**Pn**	**11 30 05.8**	**+2.6**
	43nm,0.5s,baz=357,slow=4.5,SNR=4.6						
BATI	**Baumata**	**10.22**	**181**	P	**Pn**	**11 30 03.7**	**+0.5**
	1μm142nm,0.7s						
WBSI	**Waikabubak, Su**	**10.60**	**204**	P	**Pn**	**11 30 08.7**	**+0.6**
	126nm,0.9s						
PLAI	**Plampang**	**10.67**	**214**	P	**Pn**	**11 30 09.9**	**+0.8**
	1μm121nm,0.8s						
PLAI	**Plampang**	**10.67**	**214**	P	**Pn**	**11 30 10.1**	**+1.0**
TWSI	**Taliwang, Sumb**	**11.12**	**218**	P	**Pn**	**11 30 15.9**	**+0.8**
	54nm,1.1s						
SRBI	**Singaraja**	**11.77**	**226**	P	**Pn**	**11 30 24.5**	**+1.0**
	72nm,0.8s						
SBUM	**Sibu**	**11.77**	**282**	Pn	**Pn**	**11 30 22.1**	**-1.5**
KMMI	**Kalianget**	**12.07**	**234**	P	**Pn**	**11 30 29.0**	**+1.6**
	146nm,0.8s						
DNP	**Denpasar**	**12.18**	**224**	P	**P**	**11 30 39.8**	**+4.6**
STKI	**Sintang**	**12.28**	**270**	P	**Pn**	**11 30 31.8**	**+1.6**
	13μm28nm,0.5s						
ABJI	**Asem Bagus**	**12.31**	**230**	P	**Pn**	**11 30 31.6**	**+1.1**
	91nm,1.0s						
JAGI	**Jajag, Banyuwa**	**12.80**	**228**	Pn	**Pn**	**11 30 36.0**	**-0.9**
JAGI	**Jajag, Banyuwa**	**12.80**	**228**	P	**Pn**	**11 30 38.0**	**+1.1**
	190nm,1.1s						
GMJI	**Gumukmas**	**13.21**	**231**	P	**Pn**	**11 30 43.4**	**+1.2**
	145nm,0.9s						
KSM	**Kuching**	**13.52**	**276**	Pn	**Pn**	**11 30 44.6**	**-1.5**
LQP	**Lukban**	**14.11**	**351**	↓*e*P	**P**	**11 30 56.3**	**-0.6**
NGJI	**Ngawi**	**14.33**	**239**	P	P	11 31 05.7	+6.6
PWJI	**Pagerwojo**	**14.38**	**236**	P	**Pn**	**11 30 58.0**	**+1.0**
	56nm,0.5s						
MTN	**Manton Dam**	**14.78**	**151**	Pn	**Pn**	**11 31 01.2**	**-0.8**
PCJI	**Pacitan**	**15.00**	**236**	P	**P**	**11 31 06.1**	**-0.4**
	187nm,0.7s						
SMPI	**Sarmi**	**15.09**	**98**	P	**P**	**11 31 07.1**	**-0.5**
	9.4nm,1.0s						
KNRA	**Kununurra**	**16.42**	**163**		**P**	**11 31 22.4**	**+0.1**
KNRA	**Kununurra**	**16.42**	**163**	P	**P**	**11 31 23.1**	**+0.8**
APYP	**Conner**	**17.84**	**352**	↓*i*P	**Pn**	**11 31 40.0**	**+0.8**
CBJI	**Citeko**	**18.07**	**249**	P	Pn	11 31 53.8	+12
FITZ	**Fitzroy Crossi**	**18.16**	**174**	P	**Pn**	**11 31 42.5**	**-0.5**
	35nm,0.4s,baz=4.1,slow=7.9,SNR=171						
FITZ				ScP	**ScP**	**11 39 30.0**	**-0.1**
	0.9nm,0.6s,baz=243,slow=2.4,SNR=6.5						
FITZ	**Fitzroy Crossi**	**18.16**	**174**	P	**P**	**11 31 41.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**18.16**	**174**	P	**P**	**11 31 42.2**	**+0.8**
TPRI	**Tanjung Pinang**	**19.25**	**273**	P	**Pn**	**11 31 55.5**	**-0.4**
	4μm96nm,0.7s						
MYKOM	**Kota Tinggi**	**19.98**	**275**	P	**P**	**11 31 59.9**	**-1.3**
MBWA	**Marble Bar**	**21.48**	**190**	P	**P**	**11 32 17.5**	**+0.3**
MBWA	**Marble Bar**	**21.48**	**190**	P	**P**	**11 32 17.2**	**+0.1**
PSA00	**Pilbara Seismi**	**21.86**	**190**	P	**P**	**11 32 21.0**	**-0.2**
PSA00				IAmb	IAmb	11 32 22.9	
	comp=Z,48nm,0.7s						
PSA00	**Pilbara Seismi**	**21.86**	**190**	P	**P**	**11 32 21.8**	**+0.6**
WB0	**Warramunga Arr**	**22.31**	**153**	P	**P**	**11 32 25.6**	**-0.1**
WB0				IAmb	IAmb	11 32 52.5	
	comp=Z,34nm,0.9s						
WRAB	**Tennant Creek**	**22.44**	**153**	P	**P**	**11 32 26.4**	**-0.6**
WRAB	**Tennant Creek**	**22.44**	**153**	P	**P**	**11 32 27.1**	**+0.2**
WRA	**Warramunga Arr**	**22.44**	**153**	P	**P**	**11 32 27.0**	**0.0**
	comp=Z,16nm,0.4s,baz=334,slow=10,SNR=343						
WRA				S	**S**	**11 36 20.0**	**-2.6**
	comp=Z,6.6nm,0.9s,baz=334,slow=16,SNR=5.2						
WRA				ScP	**ScP**	**11 39 40.4**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=334,slow=2.8,SNR=9.7						
	comp=Z,16nm,0.4s						
WRA	**Warramunga Arr**	**22.44**	**153**	P	**P**	**11 32 25.8**	**-1.2**
WB2	**Warramunga Arr**	**22.45**	**153**	P	**P**	**11 32 26.4**	**-0.6**
WR0	**Warramunga Arr**	**22.55**	**153**	P	**P**	**11 32 27.4**	**-0.5**
WR0				IAmb	IAmb	11 32 31.2	
	comp=Z,58nm,1.1s						
IPM	**Ipoh**	**23.13**	**281**	P	**P**	**11 32 31.7**	**-1.8**
IPM				IAmb	IAmb	11 32 35.7	
	comp=Z,37nm,0.9s						
QIZ	**Qiongzhong**	**23.26**	**325**	P	**P**	**11 32 33.5**	**-1.1**
QIZ				IAmb	IAmb	11 32 37.0	
	comp=Z,39nm,1.0s						
QIZ	**Qiongzhong**	**23.26**	**325**	P	**P**	**11 32 36.0**	**+1.4**
QIZ				S	**S**	**11 36 38.2**	**+2.4**
QIZ				sS	**sS**	**11 37 25.9**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,33nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,140nm,5.5s						
TPUB	**Ta-pu**	**23.28**	**353**	P	**P**	**11 32 32.8**	**-1.9**
TPUB	**Ta-pu**	**23.28**	**353**	P	**P**	**11 32 36.3**	**+1.6**
YULB	**Yu-li**	**23.29**	**354**	P	**P**	**11 32 32.1**	**-2.7**
YULB				IAmb	IAmb	11 32 41.1	
	comp=Z,31nm,0.8s						
KULM	**Kulim**	**23.65**	**283**	P	**P**	**11 32 36.8**	**-1.5**
SSLB	**Suanglung**	**23.72**	**354**	P	**P**	**11 32 36.5**	**-2.3**
SSLB				IAmb	IAmb	11 32 42.2	
	comp=Z,63nm,1.1s						
SSLB	**Suanglung**	**23.72**	**354**	P	**P**	**11 32 39.8**	**+1.0**
COEN	**Coen**	**23.75**	**127**	P	**P**	**11 32 37.5**	**-1.7**
COEN				IAmb	IAmb	11 33 12.6	
	comp=Z,19nm,0.7s						
COEN	**Coen**	**23.75**	**127**	P	**P**	**11 32 40.3**	**+1.2**
GIRL	**Giralia**	**24.42**	**202**	P	**P**	**11 32 46.5**	**+1.4**
YHNB	**Yeheng**	**24.55**	**355**	P	**P**	**11 32 45.6**	**-0.7**
YHNB				IAmb	IAmb	11 32 52.1	
	comp=Z,22nm,0.7s						
YHNB	**Yeheng**	**24.55**	**355**	P	**P**	**11 32 47.1**	**+0.8**
RPSI	**Rantau Prapat**	**24.96**	**276**	P	**P**	**11 32 47.6**	**-2.5**
RPSI	**Rantau Prapat**	**24.96**	**276**	P	**P**	**11 32 50.3**	**+0.1**
PSI	**Prapat**	**24.97**	**276**	P	**P**	**11 32 50.3**	**-0.1**
	comp=Z,15nm,0.8s,baz=58,slow=2.8,SNR=9.8						
	comp=Z,15nm,0.8s						
QZH	**Quanzhou**	**25.21**	**349**	↑*i*P	**P**	**11 32 54.4**	**+2.1**
QZH				pmax	pmax		
	comp=Z,45nm,0.7s						
WRKA	**Warakurna**	**25.36**	**170**	P	**P**	**11 32 54.6**	**+1.0**
AS31	**Alice Springs**	**25.58**	**158**	P	**P**	**11 32 56.0**	**+0.3**
ASAR	**Alice Springs**	**25.58**	**158**	P	**P**	**11 32 56.8**	**+1.1**
	comp=Z,10nm,0.4s,baz=332,slow=7.0,SNR=186						
ASAR				PcP	**PcP**	**11 36 24.2**	**+1.2**
	comp=Z,2.2nm,0.5s,baz=354,slow=2.3,SNR=5.2						
ASAR				ScP	**ScP**	**11 39 49.2**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=333,slow=2.1,SNR=16						
	comp=Z,10nm,0.4s						
ASAR	**Alice Springs**	**25.58**	**158**	P	**P**	**11 32 56.1**	**+0.5**
QIS	**Mount Isa**	**25.71**	**144**	P	**P**	**11 32 58.6**	**+1.7**
JOW	**Kunigami**	**26.95**	**9**	LR	LR	11 43 41.4	
	comp=Z,45nm,21.0s,baz=84,slow=36						
MEEK	**Meekatharra**	**27.03**	**190**	P	**P**	**11 33 08.9**	**+0.3**
MTSU	**Mount Surprise**	**27.13**	**133**	P	**P**	**11 33 11.6**	**+1.9**
MORW	**Morawa**	**29.91**	**194**	P	**P**	**11 33 33.7**	**-0.4**
MORW				IAmb	IAmb	11 33 35.4	
	comp=Z,32nm,0.9s						
MORW	**Morawa**	**29.91**	**194**	P	**P**	**11 33 34.5**	**+0.3**
OOD	**Oodnadatta**	**29.99**	**159**	P	**P**	**11 33 36.0**	**+1.2**
CRAI	**Chiangrai**	**30.41**	**313**	P	**P**	**11 33 38.1**	**-0.6**
CRAI				IAmb	IAmb	11 33 41.5	
	comp=Z,30nm,1.7s						
CM31	**Chiang Mai Arr**	**30.46**	**308**	P	**P**	**11 33 37.7**	**-1.4**
CM31				IAmb	IAmb	11 33 42.6	
	comp=Z,51nm,1.4s						
CMAR	**Chiang Mai Arr**	**30.46**	**308**	P	**P**	**11 33 40.6**	**+1.5**
	comp=Z,6.8nm,0.6s,baz=131,slow=7.1,SNR=37						
CMAR				PcP	**PcP**	**11 36 36.5**	**+1.3**
	comp=Z,3.6nm,0.6s,baz=151,slow=1.5,SNR=13						
CMAR				ScP	**ScP**	**11 40 05.0**	**+1.0**
	comp=Z,1.6nm,0.3s,baz=128,slow=2.5,SNR=7.0						
CMAR				LR	LR	11 46 44.1	
	comp=Z,30nm,19.7s,baz=145,slow=38						
CMAR	**Chiang Mai Arr**	**30.46**	**308**	P	**P**	**11 33 38.1**	**-1.0**
C

JCJ Chichijima 32.17 32 P **P** **11 33 53.6 -0.5**
JCJ Chichijima 32.17 32 P **P** **11 33 55.3 +1.3**
MUN Mundaring 32.68 192 P **P** **11 33 59.0 +0.6**
ENH Enshi 32.95 337 P **P** **11 34 02.2 +1.4**
ENH IAmb IAmb 11 34 03.7
comp=Z,37nm,1.0s
LCRK Leigh Creek 33.33 157 P **P** **11 34 05.3 +1.2**
NWAO Narrogin (SRO) 33.41 190 P **P** **11 34 03.8 -0.9**
NWAO Narrogin (SRO) 33.41 190 P **P** **11 34 06.0 +1.3**
PZH PanZhiHua 33.76 323 P **P** **11 34 09.5 +1.5**
PZH pmax pmax
comp=Z,20nm,0.7s
PZH pmax pmax
comp=Z,150nm,4.9s
BBOO Buckleboo 34.71 162 P **P** **11 34 17.4 +1.4**
BBOO Buckleboo 34.71 162 P **P** **11 34 17.5 +1.5**
JMN Monobe 34.79 15 P **P** **11 34 16.1 -0.6**
RK1H Rockhampton Ha 34.91 134 P **P** **11 34 19.2 +1.4**
RKGY Rocky Gully 35.09 190 P **P** **11 34 21.6 +2.4**
JHS Saijyo 35.82 13 P **P** **11 34 25.9 +0.4**
JHS IAmb IAmb 11 34 29.9
comp=Z,38nm,1.1s
STKA Stephens Creek 35.99 154 P **P** **11 34 28.4 +1.4**
comp=Z,31nm,0.6s,baz=330,slow=8.8,SNR=84
STKA ScP **ScP** **11 40 23.4 +0.3**
comp=Z,6.9nm,0.8s,baz=315,slow=2.9,SNR=6.0
comp=Z,31nm,0.6s
STKA Stephens Creek 35.99 154 P **P** **11 34 28.1 +1.2**
STKA Stephens Creek 35.99 154 P **P** **11 34 28.7 +1.8**
CD2 Chengdu 36.06 330 P **P** **11 34 28.7 +1.1**
HTT Hallett 36.26 158 P **P** **11 34 31.7 +2.4**
XAN Xi'an 36.53 339 P **P** **11 34 31.9 +0.3**
XAN pmax pmax
comp=Z,26nm,1.1s
XAN LR LR
comp=Z,200nm,14.4s
XAN LR LR
comp=Z,290nm,17.9s
XAN LR LR
comp=Z,200nm,16.5s
KSCHJ Chungju 36.81 6 P **P** **11 34 33.1 -0.7**
KSCHJ IAmb IAmb 11 34 38.0
comp=Z,12nm,0.7s
INU Inuyama 37.20 18 P **P** **11 34 36.9 -0.2**
INU IAmb IAmb 11 34 38.5
comp=Z,46nm,1.2s
INU Inuyama 37.20 18 P **P** **11 34 37.9 +0.8**
INU Inuyama 37.20 18 P **P** **11 34 36.9 -0.2**
INU pP **pP** **11 35 05.6 -3.2**
KSAR Wonju Array Be 37.37 5 P **P** **11 34 35.6 -2.9**
KSRS Korea Array 37.38 5 P **P** **11 34 39.1 +0.6**
comp=Z,6.4nm,0.8s,baz=182,slow=9.7,SNR=27
KSRS PcP **PcP** **11 36 55.8 +1.3**
comp=Z,2.7nm,0.9s,baz=192,slow=4.3,SNR=7.5
KSRS ScP **ScP** **11 40 27.4 -0.7**
comp=Z,1.3nm,0.8s,baz=184,slow=2.5,SNR=5.0
comp=Z,6.4nm,0.8s
KS19 Wonju Array Si 37.43 5 P **P** **11 34 37.6 -1.4**
KS19 IAmb IAmb 11 34 59.4
comp=Z,52nm,1.9s
JGF Kuroka 37.54 18 P **P** **11 34 38.6 -1.4**
JGF IAmb IAmb 11 34 42.0
comp=Z,25nm,0.7s
TWOA Tennyson Woods 37.58 160 P **P** **11 34 42.0 +1.7**
CMSA Cobar Meteorol 37.69 149 P **P** **11 34 43.8 +2.5**
HNS HongShan 38.06 348 ⇑P **P** **11 34 45.3 +1.0**
HNS pmax pmax
comp=Z,31nm,1.1s
MAJO Matsushiro 38.67 19 P **P** **11 34 49.1 -0.4**
MAJO Matsushiro 38.67 19 P **P** **11 34 49.4 -0.1**
MAJO Matsushiro 38.67 19 ⇑P **P** **11 34 48.4 -1.1**
MAJO pP **pP** **11 35 19.8 -1.4**
MJAR Matsushiro Arr 38.67 19 P **P** **11 34 49.3 -0.2**
comp=Z,21nm,0.7s,baz=184,slow=9.1,SNR=68
comp=Z,21nm,0.7s
TIY Taiyuan 38.88 346 ⇓P **P** **11 34 52.6 +1.4**
JYT Yasato 39.07 21 P **P** **11 34 50.5 -2.3**
JYT IAmb IAmb 11 34 54.1
comp=Z,33nm,1.1s
JSD Sado 40.06 18 P **P** **11 35 00.5 -0.5**
JSD IAmb IAmb 11 35 01.6
comp=Z,29nm,0.8s
ARMA Armidale 40.28 141 P **P** **11 35 03.5 +0.5**
ARMA IAmb IAmb 11 35 06.3
comp=Z,12nm,0.7s
ARMA Armidale 40.28 141 P **P** **11 35 04.7 +1.7**
ARPS Mount Arapiles 40.32 157 P **P** **11 35 04.4 +1.3**
LZH Lanzhou 40.32 335 *eP* **P** **11 35 05.6 +2.3**
LZH pP pP 11 35 34.7 -1.1
LZH pmax pmax
comp=Z,24nm,1.2s
BJT Baijiatuau 40.34 351 P **P** **11 35 01.6 -1.7**
BJT IAmb IAmb 11 35 05.6
comp=Z,26nm,1.3s
JMM Marumori 40.75 21 P **P** **11 35 08.0 +1.5**
MGCD Mangrove Creek 41.94 145 P **P** **11 35 18.5 +2.1**
HHC Hu-ho-hao-te 42.06 346 *eP* **P** **11 35 19.5 +2.1**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,280nm,5.2s
CAN Canberra 42.37 149 P **P** **11 35 20.3 +0.4**
CAN IAmb IAmb 11 35 23.8
comp=Z,27nm,0.7s
CAN Canberra 42.37 149 P **P** **11 35 20.9 +1.0**
CAN Canberra 42.37 149 P **P** **11 35 22.2 +2.3**
CAN pP **pwP** **11 35 58.5 +3.4**
CNB Canberra Magne 42.55 148 P **P** **11 35 23.6 +2.2**
LSA Lhasa 42.81 316 P **P** **11 35 25.1 +1.1**
LSA IAmb IAmb 11 35 27.7
comp=Z,22nm,0.7s
LSA Lhasa 42.81 316 P **P** **11 35 25.4 +1.3**
CN2 Changchun 43.55 2 *eP* **P** **11 35 29.7 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
TAPN Taplejung 43.96 311 *eP* **P** **11 35 33.9 +0.8**
comp=Z,60nm,0.8s
XLT XiLinHaoTe 44.16 352 *eP* **P** **11 35 34.7 +0.5**
XLT pmax pmax
comp=Z,15nm,1.1s
XLT pmax pmax
comp=Z,140nm,4.3s
USA0B Ussuriysk Arra 44.53 8 P **P** **11 35 37.0 0.0**
USRK Ussuriysk Ar. 44.53 8 P **P** **11 35 37.6 +0.6**
comp=Z,26nm,0.6s,baz=190,slow=7.8,SNR=48
USRK LR LR 11 55 12.6
comp=Z,15nm,19.5s,baz=133,slow=37
comp=Z,26nm,0.6s
USRK Ussuriysk Ar. 44.53 8 P **P** **11 35 37.1 +0.1**
RAMN Ramite 44.60 310 *eP* **P** **11 35 39.2 +1.0**
comp=Z,67nm,0.5s
MDJ Mudanjiang 44.64 6 P **P** **11 35 37.9 0.0**
MDJ IAmb IAmb 11 35 42.5
comp=Z,35nm,0.7s
MDJ Mudanjiang 44.64 6 P **P** **11 35 38.4 +0.5**
MDJ pP pP 11 36 09.6 -1.3
MDJ ScP **ScP** **11 40 56.5 -0.1**
MDJ PcS **PcS** **11 41 12.0 +0.4**
MDJ S **S** **11 42 06.1 +3.2**
MDJ sS sS 11 42 59.9 +1.1
MDJ pmax pmax
comp=Z,22nm,1.0s
MDJ pmax pmax
comp=Z,120nm,3.5s
MDJ Mudanjiang 44.64 6 P **P** **11 35 37.6 -0.3**
GTA Gaotai 44.85 334 *eP* **P** **11 35 41.3 +1.5**
GTA pP pP 11 36 13.0 +0.1
GTA sP sP 11 36 30.6 +1.1
GTA PcP **PcP** **11 37 20.2 +1.1**
GTA pmax pmax
comp=Z,21nm,0.7s
GTA pmax pmax
comp=Z,68nm,5.8s
GTA LR LR
comp=Z,160nm,20.4s
GTA LR LR
comp=Z,940nm,20.4s
GTA LR LR
comp=Z,97nm,16.7s
GOMU GeErMu 44.87 326 P **P** **11 35 41.4 +1.1**
GOMU pmax pmax
comp=Z,10.0nm,1.1s
GOMU pmax pmax
comp=Z,110nm,5.9s
JIRN Jiri 45.27 310 *eP* **P** **11 35 44.1 +0.5**
comp=Z,43nm,0.5s
GUN Gumba 45.64 311 *eP* **P** **11 35 47.0 +0.5**
comp=Z,68nm,0.6s
PKI Pulchoki 45.83 310 *eP* **P** **11 35 48.0 +0.1**
comp=Z,15nm,0.4s
PKIN Phulchoki 45.84 310 *eP* **P** **11 35 47.9 -0.1**
comp=Z,16nm,0.4s
GKN Gorkha 46.63 310 *eP* **P** **11 35 54.2 +0.2**
comp=Z,38nm,0.5s
DANN Dangsing 47.48 310 *eP* **P** **11 36 01.0 +0.3**
comp=Z,120nm,0.8s
HYBB Hyderabad (bro 47.70 294 *eP* **P** **11 36 00.8 -1.5**
HIA Hailar 49.12 357 P **P** **11 36 12.4 -0.2**
HIA IAmb IAmb 11 36 13.2
comp=Z,11nm,0.7s
KLR Kul'dur 49.44 7 P **P** **11 36 14.8 -0.2**
comp=Z,9.2nm,0.5s,baz=205,slow=5.1,SNR=50
KLR LR LR 11 57 20.4
comp=Z,23nm,21.7s,baz=174,slow=36
comp=Z,9.2nm,0.5s
YSS Yuzh-Sakhalins 49.55 17 P **P** **11 36 15.2 -0.7**
YSS IAmb IAmb 11 36 18.5
comp=Z,18nm,0.8s
ULN Ulaanbaatar 49.76 345 P **P** **11 36 17.5 -0.2**
ULN Ulaanbaatar 49.76 345 P **P** **11 36 16.9 -0.8**
SONM Songino Array 49.90 345 P **P** **11 36 18.5 -0.2**
comp=Z,8.2nm,0.7s,baz=159,slow=8.9,SNR=44
SONM PcP **PcP** **11 37 36.9 0.0**
comp=Z,3.0nm,0.9s,baz=153,slow=4.2,SNR=4.1
comp=Z,8.2nm,0.7s
SONM Songino Array 49.90 345 P **P** **11 36 18.1 -0.6**
WMQ Urumqi 54.12 328 *eP* **P** **11 36 51.2 +1.3**
WMQ pmax pmax
comp=Z,29nm,1.1s
NIL Nilore 57.91 311 P **P** **11 37 16.2 -0.8**
NIL IAmb IAmb 11 37 16.7
comp=Z,13nm,0.6s
NIL Nilore 57.91 311 P **P** **11 37 15.8 -1.2**
ZSN Zaisan 58.04 330 *eP* **P** **11 37 17.0 -0.7**
baz=330
SHLS Shalkode 58.35 323 *eP* **P** **11 37 17.1 -2.9**
comp=Z,8.8nm,1.1s,baz=323
UZB Uzynbulak 58.61 323 *eP* **P** **11 37 21.3 -0.5**
baz=323
KSH Kashi 58.62 318 P **P** **11 37 23.3 +1.3**
KSH PcP **sP** **11 38 12.3 -0.9**
KSH pmax pmax
comp=Z,7.0nm,0.7s
SATY Saty 58.93 322 *eP* **P** **11 37 23.3 -0.8**
comp=Z,14nm,0.8s,baz=323
MK31 Makanchi Array 58.94 328 P **P** **11 37 23.4 -0.5**
MKAR Makanchi Array 58.94 328 P **P** **11 37 23.9 0.0**
comp=Z,24nm,0.6s,baz=122,slow=8.3,SNR=109
MKAR PcP **PcP** **11 38 11.1 -0.4**
comp=Z,12nm,0.6s,baz=172,slow=3.0,SNR=18
MKAR LR LR 12 03 47.1
comp=Z,21nm,21.2s,baz=136,slow=37
comp=Z,24nm,0.6s
MKAR Makanchi Array 58.94 328 P **P** **11 37 23.7 -0.2**
MAKZ Makanchi 59.12 328 P **P** **11 37 23.6 -1.5**
MAKZ IAmb IAmb 11 37 26.5
comp=Z,15nm,0.7s
MAKZ Makanchi 59.12 328 P **P** **11 37 24.2 -0.9**
MAKZ sP **PcP** **11 38 11.6 -0.6**
NRN Naryn 59.57 320 P **P** **11 37 26.9 -1.9**
MDOK Medeo 59.82 322 *eP* **P** **11 37 29.5 -0.7**
baz=322
PETK Petropavlovsk- 59.91 23 P **P** **11 37 31.5 +1.1**
comp=Z,12nm,0.6s,baz=204,slow=4.3,SNR=21
comp=Z,12nm,0.6s
PETK Petropavlovsk- 59.91 23 P **P** **11 37 30.2 -0.2**
TDK Taldyqorghan 60.03 324 *eP* **P** **11 37 30.3 -1.1**
comp=Z,11nm,0.4s,baz=324
RPZ Rata Peaks 60.61 142 P **P** **11 37 36.8 +1.5**
KUU Kurty 60.65 322 *eP* **P** **11 37 34.4 -1.2**
comp=Z,18nm,0.8s,baz=322
AAK Ala-Archa 61.15 320 P **P** **11 37 37.7 -1.5**
comp=Z,4.7nm,0.5s,baz=137,slow=3.3,SNR=6.8
AAK PcP **PcP** **11 38 20.1 -0.5**
baz=169,slow=2.7
AAK LR LR 12 06 01.2
comp=Z,21nm,19.8s,baz=122,slow=38
comp=Z,4.7nm,0.5s
AAK Ala-Archa 61.15 320 P **P** **11 37 37.9 -1.3**
AAK IAmb IAmb 11 38 21.8
comp=Z,8.2nm,0.8s
KBL Kabul 61.47 310 P **P** **11 37 40.9 -0.7**
SGDS Sogindy 61.48 321 *eP* **P** **11 37 40.1 -1.2**
baz=321
YAK Yakutsk 61.95 3 LR LR 12 05 55.4
comp=Z,12nm,18.4s,baz=242,slow=37
YAK Yakutsk 61.95 3 P **P** **11 37 44.0 +0.1**
YAK Yakutsk 61.95 3 P **P** **11 37 44.0 +0.1**
GAR Garm 62.29 315 P **P** **11 37 45.6 -1.3**
BTK Batken 62.39 316 P **P** **11 37 47.0 -0.5**
ZAA0 Zalesovo Array 62.55 335 P **P** **11 37 46.4 -1.7**
ZAA0 IAmb IAmb 11 37 49.1
comp=Z,10nm,0.8s
ZALV Zalesovo Beam 62.55 335 P **P** **11 37 47.0 -1.2**
comp=Z,9.1nm,0.8s,baz=130,slow=4.6,SNR=30
ZALV PcP **pP** **11 38 24.6 +1.1**
comp=Z,2.2nm,0.6s,baz=116,slow=3.4,SNR=3.8
comp=Z,9.1nm,0.8s
ZALV Zalesovo Beam 62.55 335 P **P** **11 37 46.3 -1.9**
MA2 Magadan 62.95 15 P **P** **11 37 50.6 -0.1**
MA2 Magadan 62.95 15 P **P** **11 37 50.9 +0.2**
MA2 pP **PcP** **11 38 28.4 +1.0**
CHGR Chuyangaron 62.97 314 P **P** **11 37 50.2 -1.2**
CHGR IAmb IAmb 11 37 50.8
comp=Z,16nm,0.7s
KURBB Kurchatov Arra 63.27 330 P **P** **11 37 52.3 -0.7**
comp=Z,29nm,0.8s,baz=130,slow=6.0,SNR=87
KURBB PcP **pP** **11 38 28.3 0.0**
comp=Z,7.1nm,0.6s,baz=120,slow=3.9,SNR=9.2
comp=Z,29nm,0.8s
KURK Kurchatov 63.29 330 P **P** **11 37 52.2 -0.8**
KURK Kurchatov 63.29 330 P **P** **11 37 51.7 -1.3**
IUG Iuzhnay 63.84 318 *eP* **P** **11 37 55.5 -1.5**
baz=318
KK31 Karatay Array 63.95 319 P **P** **11 37 56.6 -1.0**
KKAR Karatay Array 63.95 319 P **P** **11 37 56.2 -1.4**
BRZS Berezniki 66.00 327 *eP* **P** **11 38 09.0 -1.7**
comp=Z,9.0nm,1.0s,baz=327
CASY Casey 66.89 186 P **P** **11 38 16.8 +0.8**
CASY IAmb IAmb 11 38 49.6
comp=Z,28nm,1.6s
CASY Casey 66.89 186 P **P** **11 38 15.7 -0.2**
CASY pP **pwP** **11 38 56.2 +2.7**
WSAR Wadi Sarin 67.21 295 P **P** **11 38 17.0 -1.9**
comp=Z,7.1nm,0.7s,baz=127,slow=7.8,SNR=4.2
comp=Z,7.1nm,0.7s
BRVK Borovoye 68.88 329 P **P** **11 38 27.4 -1.3**
BRVK IAmb IAmb 11 38 30.4
comp=Z,13nm,0.9s
GEYT Alibeck 70.91 310 P **P** **11 38 41.0 -0.5**
comp=Z,3.1nm,0.5s,baz=168,slow=7.6,SNR=5.1
comp=Z,3.1nm,0.5s
GEYT Alibeck 70.91 310 P **P** **11 38 40.7 -0.8**
GYA0B ALIBECK ARRAY 70.91 310 P **P** **11 38 41.0 -0.5**
ABKAR Akbulak array 73.13 322 P **P** **11 38 53.1 -1.3**
NRIK Noril'sk 73.28 347 P **P** **11 38 54.6 -0.3**
comp=Z,10.0nm,0.6s,baz=136,slow=6.6,SNR=16
comp=Z,10.0nm,0.6s
NRIK Noril'sk 73.28 347 P **P** **11 38 54.3 -0.6**
NRIK IAmb IAmb 11 38 55.4
comp=Z,12nm,0.7s
AKTO Aktyubinsk 74.70 323 LR LR 12 14 59.6
comp=Z,24nm,19.6s,baz=102,slow=38
ARU Arti 76.45 329 P **P** **11 39 11.9 -1.5**
ARU IAmb IAmb 11 39 12.7
comp=Z,16nm,0.7s
NIKH Nikolski High 76.48 35 P **P** **11 39 14.5 +0.9**
baz=252
OPO Ambohidratompo 77.30 251 P **P** **11 39 19.6 +0.5**
comp=Z,5.0nm,0.7s,baz=76,slow=9.1,SNR=7.1
comp=Z,5.0nm,0.7s
VOI Vohitsoka 77.94 248 P **P** **11 39 22.7 +0.1**
VOI IAmb IAmb 11 39 23.5
comp=Z,25nm,0.7s
UNV Unalaska Valle 78.09 35 P **P** **11 39 23.2 +0.7**
baz=254
AKUT Akutan 78.58 34 P **P** **11 39 26.0 +0.7**
AKUT IAmb IAmb 11 39 26.9
comp=Z,25nm,0.7s
GAMB Gambell 78.91 24 P **P** **11 39 27.8 +1.0**
baz=247
RAYN Ar Rayn 79.20 294 P **P** **11 39 27.0 -2.4**
VNDA Vanda 80.22 172 P **P** **11 39 35.0 +1.3**
comp=Z,1.7nm,0.6s,baz=316,slow=7.3,SNR=23
comp=Z,1.7nm,0.6s
VNDA Vanda 80.22 172 P **P** **11 39 35.2 +1.4**
ANM Nome 81.79 24 P **P** **11 39 43.3 +1.1**
baz=253
SDPT Sand Point 81.86 34 P **P** **11 39 43.6 +0.9**
SDPT Sand Point 81.86 34 P **P** **11 39 43.4 +0.7**
baz=258
CHNA Chernabura Isl 82.25 35 P **P** **11 39 45.7 +0.9**
baz=259
S14K Fog Glacier 82.55 33 P **P** **11 39 47.4 +0.9**
baz=259
GEVA Gevas 82.65 308 P **P** **11 39 47.2 -0.3**
ONI Oni 82.80 313 P **P** **11 39 48.3 +0.2**
KARS Kars 82.87 311 P **P** **11 39 48.7 +0.1**
KBZ Khabaz 83.33 314 P **P** **11 39 49.0 -1.6**
comp=Z,4.8nm,0.7s,baz=93,slow=4.9,SNR=12
comp=Z,4.8nm,0.7s
GURO Guroymak-BITLI 83.47 309 P **P** **11 39 51.8 +0.1**
GURO IAmb IAmb 11 39 52.7
comp=Z,18nm,0.6s
N16K Nishlik Lake 83.76 29 P **P** **11 39 53.9 +1.4**
baz=259,SNR=16
P16K Nushagak River 83.88 31 P **P** **11 39 54.1 +1.0**
baz=260
O16K Kokwok River B 83.93 30 P **P** **11 39 54.9 +1.5**
baz=260,SNR=12
BCA Borcka 84.04 312 ⇑P **P** **11 39 52.6 -1.8**
MARD Mardin 84.36 307 P **P** **11 39 55.7 -0.5**
MARD IAmb IAmb 11 39 56.4
comp=Z,15nm,0.6s
O17K Koliganek Bris 84.46 30 P **P** **11 39 57.3 +1.3**
baz=261
R17K Ugashik Creek 84.49 32 P **P** **11 39 56.9 +0.7**
baz=262,SNR=6.0
Q16K King Salmon 84.51 31 P **P** **11 39 56.5 +0.3**
baz=261
N18K Kilae Creek 85.19 29 P **P** **11 40 00.6 +0.9**
baz=262
GCSA Galena City Sc 85.38 25 P **P** **11 40 01.8 +1.3**
baz=260,SNR=16
O18K Koktuh Hills 85.42 30 P **P** **11 40 01.6 +0.8**
O18K IAmb IAmb 11 40 02.6
comp=Z,14nm,1.0s
O18K Koktuh Hills 85.42 30 P **P** **11 40 02.0 +1.2**
baz=262
TTA Tatalina 85.47 27 P **P** **11 40 02.2 +1.1**
baz=261
SII Sitkinak Islan 85.54 33 P **P** **11 40 03.0 +1.5**
baz=263
L19K White Mountain 85.90 28 P **P** **11 40 02.9 -0.3**
L19K White Mountain 85.90 28 P **P** **11 40 04.3 +1.1**
baz=262,SNR=5.2
N19K Bonanza Creek 85.90 29 P **P** **11 40 02.8 -0.5**
N19K IAmb IAmb 11 40 05.7
comp=Z,11nm,0.9s
N19K Bonanza Creek 85.90 29 P **P** **11 40 04.4 +1.1**
baz=263
M19K Big River Lodg 86.08 28 P **P** **11 40 05.4 +1.3**
baz=263
OHAK Old Harbor 86.10 33 P **P** **11 40 05.4 +1.2**
OHAK IAmb IAmb 11 40 06.4
comp=Z,16nm,0.9s
OHAK Old Harbor 86.10 33 P **P** **11 40 05.3 +1.1**
baz=264
L20K Farewell, AK 86.39 27 P **P** **11 40 06.7 +1.1**
baz=263,SNR=5.3
K20K Telida 86.40 27 P **P** **11 40 06.8 +1.1**
K20K IAmb IAmb 11 40 07.9
comp=Z,26nm,1.8s
K20K Telida 86.40 27 P **P** **11 40 06.6 +1.0**
baz=263
J20K Nowinta River 86.47 26 P **P** **11 40 06.9 +1.0**
J20K Nowinta River 86.47 26 P **P** **11 40 07.1 +1.2**
baz=263
KMBO Kilima Mbogo 86.51 269 P **P** **11 40 08.0 +0.5**
comp=Z,3.1nm,0.5s,baz=65,slow=7.3,SNR=7.0
comp=Z,3.1nm,0.5s
KDAK Kodiak Island 86.54 32 P **P** **11 40 07.2 +0.9**
baz=265
M20K Styx River 86.67 28 P **P** **11 40 06.8 -0.2**
M20K Styx River 86.67 28 P **P** **11 40 08.1 +1.0**
baz=264
Q20K Shuyak Island 86.71 31 P **P** **11 40 08.7 +1.5**
baz=265
IMAR Indian Mountai 86.86 24 P **P** **11 40 08.6 +0.8**
G21K Allakaket 87.02 23 P **P** **11 40 09.6 +1.1**
baz=263
SPCR Spurr Chakacha 87.04 29 P **P** **11 40 09.1 +0.3**
baz=265
F21K Alatna River 87.11 23 P **P** **11 40 09.9 +0.9**
baz=263
KLMR Klimovskoe 87.11 331 *eP* **P** **11 40 06.9 -2.2**
KLMR AMP 11 40 09.4
comp=Z,23nm,0.6s
H21K Melozitna Rive 87.21 24 P **P** **11 40 10.0 +0.5**
H21K Melozitna Rive 87.21 24 P **P** **11 40 10.4 +1.0**
baz=264,SNR=5.4
CHUM Lake Minchumin 87.24 26 P **P** **11 40 10.7 +1.0**
baz=265
CAST Castle Rocks 87.30 27 P **P** **11 40 10.3 +0.3**
CAST Castle Rocks 87.30 27 P **P** **11 40 11.0 +1.0**
baz=265
CNPM China Poot 87.38 31 P **P** **11 40 11.1 +0.6**
I21K Tanana 87.50 25 P **P** **11 40 11.9 +1.0**
I21K Tanana 87.50 25 P **P** **11 40 11.9 +1.0**
baz=265,SNR=6.6
F22K John River 87.64 23 P **P** **11 40 12.3 +0.8**
baz=265
H22K Ishtalitna Cre 87.82 24 P **P** **11 40 13.5 +1.1**
baz=265,SNR=10
E22K Anaktuvuk Pass 87.84 22 P **P** **11 40 13.5 +1.0**
baz=265
BPAW Bear Paw Mtn. 87.84 26 P **P** **11 40 13.2 +0.7**
baz=266
MLY Manley 88.02 25 P **P** **11 40 14.1 +0.6**
MLY Manley 88.02 25 P **P** **11 40 14.0 +0.6**
baz=266,SNR=10
RC01 Rabbit Creek A 88.23 29 P **P** **11 40 14.6 +0.2**
baz=267
BNN Bunyan 88.32 309 P **P** **11 40 14.3 -1.2**
D23K Nanushuk River 88.32 21 P **P** **11 40 15.5 +0.8**
baz=266
COLD Coldfoot 88.38 23 P **P** **11 40 16.1 +1.1**
COLD IAmb IAmb 11 40 16.9
comp=Z,7.6nm,0.6s
COLD Coldfoot 88.38 23 P **P** **11 40 15.7 +0.7**
baz=266,SNR=11
LODK Lodwar 88.40 273 P **P** **11 40 14.9 -1.4**
C23K Itkillik River 88.41 20 P **P** **11 40 15.9 +0.9**
baz=266
G23K Bananza Creek 88.42 23 P **P** **11 40 15.8 +0.5**
baz=267,SNR=19
PMR Palmer 88.55 29 P **P** **11 40 16.1 +0.3**
baz=268
H23K Yukon River 88.56 24 P **P** **11 40 15.4 -0.5**
H23K IAmb IAmb 11 40 18.1
comp=Z,8.6nm,0.8s
H23K Yukon River 88.56 24 P **P** **11 40 16.9 +1.0**
baz=267,SNR=12
I23K Minto, Yukon-K 88.61 25 P **P** **11 40 16.4 +0.4**
I23K IAmb IAmb 11 40 17.9
comp=Z,27nm,1.5s
I23K Minto, Yukon-K 88.61 25 P **P** **11 40 16.8 +0.8**
baz=267,SNR=7.4
TOLK Toolik Lake Re 88.70 21 P **P** **11 40 16.2 -0.3**
TOLK Toolik Lake Re 88.70 21 P **P** **11 40 17.1 +0.6**
baz=267
NEA2 Nenana 88.70 26 P **P** **11 40 15.8 -0.8**
NEA2 Nenana 88.70 26 P **P** **11 40 17.4 +0.8**
baz=268
MCK McKinley 88.73 26 P **P** **11 40 16.3 -0.4**
MCK IAmb IAmb 11 40 17.6
comp=Z,8.2nm,0.9s
MCK McKinley 88.73 26 P **P** **11 40 16.9 +0.2**
baz=268
RND Reindeer 88.75 27 P **P** **11 40 15.9 -1.0**
RND IAmb IAmb 11 40 17.5
comp=Z,7.4nm,0.8s
KNK Knik Glacier 88.86 29 P **P** **11 40 16.0 -1.4**
KNK IAmb IAmb 11 40 19.6
comp=Z,12nm,0.9s
KNK Knik Glacier 88.86 29 P **P** **11 40 18.1 +0.7**
baz=268
WAT1 Susitna Watana 88.86 27 P **P** **11 40 17.8 +0.4**

baz=268
PWL Port Wells 88.90 29 P P 11 40 17.2 -0.4
PWL IAmb IAmb 11 40 19.5
comp=Z,17nm,1.3s
PWL Port Wells 88.90 29 P P 11 40 18.0 +0.4
baz=268
SML Sawmill 88.93 28 P P 11 40 18.1 +0.3
baz=268
D24K Happy Valley 89.00 21 P P 11 40 18.3 +0.5
baz=268
C24K Franklin Bluff 89.06 20 P P 11 40 18.5 +0.4
baz=268
MDM Murphy Dome 89.08 25 P P 11 40 18.7 +0.3
MDM IAmb IAmb 11 40 36.6
comp=Z,20nm,2.0s
E24K Your Creek 89.08 22 P P 11 40 18.8 +0.5
baz=268
M23K Glacier View 89.22 28 P P 11 40 19.5 +0.4
baz=269
WAT6 Susitna Watana 89.23 28 P P 11 40 19.6 +0.3
baz=269,SNR=5.7
H24K Noodor Dome 89.25 24 P P 11 40 19.5 +0.3
H24K IAmb IAmb 11 40 21.5
comp=Z,19nm,1.6s
H24K Noodor Dome 89.25 24 P P 11 40 20.0 +0.8
baz=269,SNR=5.8
CCB Clear Creek Bu 89.25 25 P P 11 40 18.4 -0.7
F24K Squaw Lake 89.29 23 P P 11 40 20.2 +0.9
baz=268
P23K Montague Islan 89.34 30 P P 11 40 20.1 +0.5
baz=269
DHY Denali Highway 89.41 27 P P 11 40 19.4 -0.7
DHY Denali Highway 89.41 27 P P 11 40 20.3 +0.2
baz=269,SNR=5.8
G24K Hadweenzic Riv 89.43 23 P P 11 40 20.6 +0.7
baz=269,SNR=11
HDA Harding Lake 89.62 26 P P 11 40 20.0 -0.9
HDA Harding Lake 89.62 26 P P 11 40 21.5 +0.7
baz=269
IL31 89.65 25 P P 11 40 20.2 -0.7
ILAR Eielson Array 89.65 25 P P 11 40 20.3 -0.7
comp=Z,1.3nm,0.6s,baz=246,slow=5.0,SNR=27
comp=Z,1.3nm,0.6s
ILAR Eielson Array 89.65 25 P P 11 40 20.0 -1.0
D25K Kavik River 89.87 21 P P 11 40 22.7 +0.7
baz=270
M24K Tolsona, Glenn 89.96 28 P P 11 40 23.6 +1.1
baz=270
G25K Bearman Lake 89.98 23 P P 11 40 23.7 +1.2
baz=270
BR131 Keskin Array S 90.04 310 P P 11 40 20.8 -2.8
BRTR Keskin Array B 90.04 310 P P 11 40 22.4 -1.2
comp=Z,2.3nm,0.8s,baz=130,slow=5.5,SNR=12
comp=Z,2.3nm,0.8s
BRTR Keskin Array B 90.04 310 P P 11 40 21.6 -2.0
KLU Klutina 90.08 29 P P 11 40 23.8 +0.6
baz=270
H25K Birch Creek 90.09 24 P P 11 40 24.2 +1.3
baz=270
K24K Donnelly Dome 90.13 26 P P 11 40 23.5 +0.2
baz=270
F25K Christian Rive 90.15 23 P P 11 40 23.8 +0.5
baz=271,SNR=5.7
E25K Arctic Village 90.17 22 P P 11 40 24.3 +0.9
baz=271,SNR=8.2
PAX Paxson 90.28 27 P P 11 40 22.5 -1.6
PAX Paxson 90.28 27 P P 11 40 24.6 +0.5
baz=271
J25K Salcha River, 90.30 26 P P 11 40 24.1 0.0
baz=271
FYU Fort Yukon 90.33 24 P P 11 40 25.6 +1.5
FYU IAmb IAmb 11 40 26.5
comp=Z,25nm,1.4s
HARP HAARP 90.43 28 P P 11 40 25.2 +0.5
baz=271
RIDG Independent Ri 90.55 26 P P 11 40 25.2 0.0
RIDG IAmb IAmb 11 40 26.4
comp=Z,8.5nm,0.9s
RIDG Independent Ri 90.55 26 P P 11 40 25.5 +0.2
baz=271,SNR=5.6
BMAR Burnt Mountain 90.56 23 P P 11 40 24.8 -0.5
N25K Chitina, Valde 90.71 29 P P 11 40 25.1 -1.0
N25K IAmb IAmb 11 40 28.1
comp=Z,6.4nm,0.9s
N25K Chitina, Valde 90.71 29 P P 11 40 26.7 +0.6
baz=272
F26K Sheenjek River 90.72 22 P P 11 40 26.8 +0.8
baz=272,SNR=5.1
BMRM Bremner River 90.72 29 P P 11 40 26.8 +0.6
baz=272
C27K Jago River 90.81 20 P P 11 40 26.9 +0.7
baz=272
G26K Porcupine Rive 90.89 23 P P 11 40 27.9 +1.2
baz=272,SNR=6.4
SCRK Sand Creek 90.92 26 P P 11 40 27.6 +0.5
baz=272
MENT Mentasta 91.08 27 P P 11 40 28.1 +0.4
MENT IAmb IAmb 11 40 29.4
comp=Z,5.0nm,0.6s
J26L Joseph Creek 91.08 26 P P 11 40 27.6 -0.2
J26L Joseph Creek 91.08 26 P P 11 40 28.1 +0.3
baz=272,SNR=8.2
GLB Gilahina Butte 91.09 29 P P 11 40 27.8 -0.1
I26K Coal Creek Min 91.22 25 P P 11 40 27.4 -0.9
I26K IAmb IAmb 11 40 31.3
comp=Z,15nm,1.3s
I26K Coal Creek Min 91.22 25 P P 11 40 28.9 +0.7
baz=273
L26K Log Cabin Wild 91.24 27 P P 11 40 27.5 -0.9
L26K IAmb IAmb 11 40 29.9
comp=Z,12nm,1.6s
L26K Log Cabin Wild 91.24 27 P P 11 40 29.1 +0.6
baz=273
M26K Nabesna, AK 91.44 28 P P 11 40 29.2 -0.2
M26K IAmb IAmb 11 40 31.4
comp=Z,13nm,1.6s
M26K Nabesna, AK 91.44 28 P P 11 40 30.0 +0.5
baz=273
CRQE Cirque 91.47 29 P P 11 40 30.2 +0.5
baz=273
E27K Coleen River 91.66 22 P P 11 40 30.6 +0.3
baz=274,SNR=10.0
G27K Doyon Strip 91.74 23 P P 11 40 31.3 +0.6
baz=274,SNR=8.9
K27K Chicken 91.76 26 P P 11 40 31.5 +0.8
K27K IAmb IAmb 11 40 34.4
comp=Z,13nm,1.1s
K27K Chicken 91.76 26 P P 11 40 32.0 +1.2
baz=274
H27K Steamboat Moun 91.83 24 P P 11 40 32.5 +1.3
baz=274
I27K Kandik River 91.84 24 P P 11 40 32.1 +0.9
baz=274
L27K Beaver Creek, 91.93 27 P P 11 40 31.4 -0.3
L27K IAmb IAmb 11 40 34.0
comp=Z,26nm,1.8s
L27K Beaver Creek, 91.93 27 P P 11 40 32.6 +0.9
baz=274
BCAR Beaver Creek A 91.95 27 P P 11 40 31.6 -0.2
M27K Edge Creek, AK 91.96 28 P P 11 40 32.5 +0.5
baz=274
CTG Chitna Glacier 92.31 29 P P 11 40 34.3 +0.6
baz=274
CTGM Chitina Glacie 92.32 29 P P 11 40 35.2 +1.6
ARCES ARCESS Array B 92.82 340 P P 11 40 34.0 -1.6
comp=Z,5.0nm,0.6s,baz=84,slow=6.1,SNR=20
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 92.82 340 P P 11 40 34.2 -1.4
AKASG Malin Array Be 92.82 321 P P 11 40 34.1 -1.8
comp=Z,2.4nm,0.6s,baz=66,slow=5.0,SNR=15
comp=Z,2.4nm,0.6s
AKASG Malin Array Be 92.82 321 P P 11 40 34.2 -1.8
AKBB Malin Array Si 92.82 321 P P 11 40 34.3 -1.6
AKBB IAmb IAmb 11 40 35.6
comp=Z,5.3nm,0.6s
AK05 Malin Array Si 92.84 321 P P 11 40 34.6 -1.5
AK05 IAmb IAmb 11 40 35.0
comp=Z,7.3nm,0.7s
O28M Mount Upton 92.89 29 P P 11 40 36.8 +0.3
baz=275
DAWY Dawson 92.93 26 P P 11 40 37.0 +0.7
DAWY IAmb IAmb 11 40 38.4
comp=Z,5.6nm,0.9s
DAWY Dawson 92.93 26 P P 11 40 37.0 +0.7
baz=276
I29M Ogilvie Camp, 93.24 25 P P 11 40 38.5 +0.8
I29M Ogilvie Camp, 93.24 25 P P 11 40 38.2 +0.5
baz=277,SNR=16
MNK Minsk 93.36 324 *i* P **P 11 40 37.2 -1.1**
comp=E,3.0nm,0.9s
MNK *i* P **P 11 40 37.2 -1.1**
MNK *i* P **P 11 40 37.2 -1.1**
comp=Z,23nm,0.7s,baz=85
MNK *i* pP **pP 11 41 12.9 -3.1**
MNK *i* sP **sP 11 41 31.2 -0.3**
MNK *i* PP **PP 11 44 20.9 -3.3**
MNK *i* PPP PPP 11 46 26.6
MNK *i* S **SKSac 11 50 58.0 -0.7**
MNK *i* SP **SP 11 52 44.8 -1.9**
MNK *i* PS **PS 11 53 01.2 -4.5**
MNK *i* SS SS 11 58 07.2 +14
MNK *i* SSS SSS 12 01 34.6
MNK *i* LRM MLR 12 18 19.7
comp=E,45nm,17.6s
MNK *i* LRM MLR 12 18 19.7
MNK *i* LRM MLR 12 18 19.7
comp=Z,325nm,17.6s
SPB2 Spitsbergen Ar 93.45 349 P P 11 40 37.2 -1.1
M29M Somme Creek 93.53 27 P P 11 40 40.2 +1.0
baz=277
SORM Soroca 93.56 318 ⇑P **P 11 40 36.7 -2.7**
YUK4 Talbot Arm 93.58 29 P P 11 40 40.1 +0.6
baz=277
FINES FINESS Array B 93.61 332 P P 11 40 37.6 -1.7
comp=Z,2.2nm,0.6s,baz=72,slow=4.1,SNR=18
comp=Z,2.2nm,0.6s
EPYK Eagle Plains 93.75 23 P P 11 40 39.9 -0.1
EPYK Eagle Plains 93.75 23 P P 11 40 40.4 +0.4
baz=279,SNR=9.9
NACGM Naroch 93.95 325⇓ *e*P **P 11 40 40.5 -0.6**
baz=84
HYT Haines Junctio 94.19 29 P P 11 40 43.2 +0.9
HYT IAmb IAmb 11 40 44.6
comp=Z,8.3nm,0.9s
HYT Haines Junctio 94.19 29 P P 11 40 43.0 +0.8
baz=278
P29M Windy Craggy 94.24 30 P P 11 40 43.0 +0.7
baz=277
N30M Aishikik Lake 94.31 28 P P 11 40 43.2 +0.6
baz=278
MAYO Mayo, Yukon 94.53 26 P P 11 40 44.3 +0.7
P30M Million Dollar 94.56 30 P P 11 40 44.3 +0.5
baz=278
INK Inuvik 94.62 21 P P 11 40 43.0 -0.8
INK IAmb IAmb 11 40 44.8
comp=Z,9.5nm,1.3s
INK Inuvik 94.62 21 P P 11 40 44.1 +0.3
baz=282
TESR Tescani 94.84 317 ⇑P **P 11 40 42.9 -2.5**
VRI Vrincioaia 94.85 316 ⇑P **P 11 40 43.6 -1.8**
O30N Mendenhall 94.89 29 P P 11 40 45.7 +0.4
baz=279
PLOR Plostina 94.90 316 ⇑P **P 11 40 44.0 -1.7**
N31M Braeburn, Yuko 94.92 28 P P 11 40 46.7 +1.2
N31M Braeburn, Yuko 94.92 28 P P 11 40 45.9 +0.4
baz=279
MATP Matopo 94.96 250 P P 11 40 46.0 -0.7
comp=Z,10nm,0.5s,baz=109,slow=3.7,SNR=42
comp=Z,10nm,0.5s
BIZ Bicz 95.18 317 ⇑P **P 11 40 44.9 -2.0**
LSZ Lusaka 95.40 255 P P 11 40 48.3 -0.4
MLR Muntele Rosu 95.43 316 ⇑P **P 11 40 46.4 -1.9**
MLR Muntele Rosu 95.43 316 LR LR 12 29 14.9
comp=Z,30nm,18.9s,baz=24,slow=39
MLR Muntele Rosu 95.43 316 P P 11 40 47.1 -1.1
MLR IAmb IAmb 11 40 48.2
comp=Z,6.0nm,0.8s
M31M Drury Creek, Y 95.45 27 P P 11 40 48.2 +0.4
M31M IAmb IAmb 11 40 49.4
comp=Z,3.2nm,0.7s
M31M Drury Creek, Y 95.45 27 P P 11 40 48.3 +0.5
baz=281
SKAG Skagway 95.47 30 P P 11 40 49.2 +1.3
SKAG Skagway 95.47 30 P P 11 40 48.6 +0.6
baz=280
PABE Paberze 95.48 326 P P 11 40 47.1 -1.0
WHY Whitehorse 95.49 29 P P 11 40 49.3 +1.1
WHY Whitehorse 95.49 29 P P 11 40 49.0 +0.8
baz=280
BURAR Bucovina Array 95.71 318 ⇑P **P 11 40 47.2 -2.3**
BURAR Bucovina Array 95.71 318 P P 11 40 48.7 -0.8
BUR08 Bucovina Ar. S 95.72 318 P P 11 40 48.6 -0.9
BUR08 IAmb IAmb 11 40 49.5
comp=Z,6.1nm,0.7s
FARO Faro, Yukon 95.92 27 P P 11 40 51.4 +1.4
P32M Atlin 96.26 30 P P 11 40 52.3 +0.7
baz=281
P33M Teslin, Yukon 96.58 29 P P 11 40 53.9 +0.8
baz=282
DRGR 97.51 317 ⇑P **P 11 40 55.8 -1.7**
GZR Gura Zlata 97.66 316 ⇑P **P 11 40 56.2 -2.0**
R33M Jennings River 97.67 30 P Pdif 11 40 58.8 +0.6
baz=283
SIRR Siria 98.30 317 ⇑P **P 11 40 58.9 -2.1**
DLBC Dease Lake 98.37 31 P Pdif 11 41 01.8 +0.7
baz=284
MDVR Moldovita 98.49 315 ⇑P **P 11 41 00.4 -1.5**
NOA NORSAR Array B 100.68 333 P Pdif 11 41 09.5 -1.8
comp=Z,0.9nm,0.8s,baz=72,slow=4.5,SNR=3.3
J05D Fort Rock, OR 107.92 44 P PKiKP 11 45 51.5 +0.8
baz=288
NVAR Mina Array Bea 111.53 48 PKiKP PKiKP 11 45 59.9 +2.2
comp=Z,0.5nm,0.7s,baz=190,slow=0.5,SNR=4.9
HLID Hailey 112.48 42 P PKiKP 11 45 59.8 +0.5
baz=293
BOZ Bozeman (W) 113.44 39 P PKiKP 11 46 01.6 +0.6
baz=296
EGMT Eagleton 113.46 36 P PKiKP 11 46 01.3 +0.4
baz=299
TPNV Topopah Spring 113.55 49 P PKiKP 11 46 01.7 +0.2
baz=289
TPFO Pinon Flats 114.44 53 P PKPdf 11 46 03.0 -0.3
baz=288
GMRC Granite Mounta 114.70 51 P PKPdf 11 46 04.4 +0.6
baz=289
DUG Dugway, Tooele 114.90 45 P PKPdf 11 46 04.7 +0.7
baz=293
LAO LASA Array 116.21 36 P PKiKP 11 46 07.4 +1.2
baz=302
WUAZ Wupatki 117.74 49 P PKiKP 11 46 10.5 +0.9
baz=292
O20A White River Ci 118.10 43 P PKiKP 11 46 10.8 +0.5
baz=297
RSSD Black Hills 118.87 38 PKPdf PKPdf 11 46 11.1 -0.5
RSSD Black Hills 118.87 38 P PKiKP 11 46 12.5 +0.8
baz=302
MVCO Mesa Verde 119.20 46 P PKiKP 11 46 13.1 +0.5
baz=295
SDCO Great Sand Dun 121.09 45 P PKiKP 11 46 16.4 +0.1
baz=298
TORD Torodi Ar. Bea 121.12 285 PKP PKPdf 11 46 16.4 -0.1
comp=Z,3.7nm,0.5s,baz=63,slow=2.0,SNR=64
TORD SKP **SKPdf 11 49 38.0 -0.3**
comp=Z,0.9nm,0.8s,baz=80,slow=1.5,SNR=4.3
121A Cookes Peak, D 121.64 51 P PKiKP 11 46 17.7 +0.3
baz=293
ANMO Albuquerque 121.66 48 PKPdf PKPdf 11 46 15.3 -1.9
ANMO Albuquerque 121.66 48 P PKiKP 11 46 18.4 +1.1
baz=296
T25A Trinidad 122.14 45 P PKiKP 11 46 18.6 +0.3
baz=298
ECSD EROS Data Cent 123.45 34 PKPdf PKiKP 11 46 21.1 +0.7
ECSD EROS Data Cent 123.45 34 P PKiKP 11 46 20.5 +0.1
baz=309
BGNE Belgrade 123.97 37 P PKiKP 11 46 21.9 +0.3
baz=306
SPMN Marine on St. 124.51 31 P PKiKP 11 46 22.5 +0.1
baz=314
SCHQ Schefferville 124.58 7 PKP PKiKP 11 46 22.8 +0.5
comp=Z,0.9nm,0.3s,baz=300,slow=8.1,SNR=4.4
MSTX Muleshoe 124.81 47 P PKiKP 11 46 23.9 +0.3
baz=298
TXAR Lajitas Array 126.16 53 PKP PKiKP 11 46 27.6 +1.2
comp=Z,0.8nm,0.9s,baz=226,slow=0.9,SNR=9.1
KSU1 Kansas State U 126.29 39 P PKPdf 11 46 25.8 +0.1
baz=307
JCT Junction City 128.67 50 P PKiKP 11 46 31.3 +0.1
baz=298
TUL1 Leonard 128.69 41 P PKiKP 11 46 31.5 +0.5
baz=306
S39A Bolivar 129.20 38 PKPdf PKiKP 11 46 32.0 0.0
CCM Cathedral Cave 130.22 36 P PKiKP 11 46 33.9 -0.1
baz=312
MIAR Mount Ida 130.96 42 P PKiKP 11 46 36.2 +0.6
baz=307
M53A WI Miller and 133.12 25 P PKiKP 11 46 40.1 +0.2
baz=326
WVT Waverly 133.53 36 P PKiKP 11 46 40.8 0.0
baz=314
OXF Oxford 133.66 39 P PKiKP 11 46 40.9 -0.2
baz=311
P52A Corning 133.93 28 P PKiKP 11 46 41.3 -0.3
baz=323
BINY Binghamton 134.30 21 P PKiKP 11 46 42.6 +0.4
baz=332
TZTN Tazewell 135.62 32 P PKiKP 11 46 45.1 0.0
baz=319
GOGA Godfrey 137.98 35 P PKiKP 11 46 49.8 -0.1
baz=317
MATN Matagalpa 147.85 65 PKPbc PKiKP 11 47 10.5 -0.3
PLTB Pedras Altas 148.39 184 PKiKP 11 47 11.3 -0.1
ITQB Itaqui 150.57 179 PKPbc PKiKP 11 47 17.2 +1.3
CPUP Villa Florida 153.88 178 PKP PKPdf 11 47 16.0 +1.3
comp=Z,1.7nm,0.9s,baz=104,slow=3.1,SNR=3.4
CPUP PKPbc **PKiKP 11 47 23.2 +0.4**
comp=Z,1.1nm,0.4s,baz=162,slow=2.9,SNR=4.0
LPAZ La Paz 160.08 144 PKP PKPdf 11 47 25.6 +2.0
comp=Z,0.8nm,0.6s,baz=135,slow=4.3,SNR=5.5

IDC 09 11:31:34.2±4.8, 23°.30S×82°.46E, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=358.8km s-min=30.6km az=175.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**18.27**	**327**	T	T	11 55 15.0	
	baz=151,slow=74,SNR=20						
H08S1	**Diego Carcia H**	**18.28**	**327**	T	T	11 55 17.8	
	baz=151,slow=74,SNR=17						
H08S3	**Diego Garcia H**	**18.29**	**327**	T	T	11 55 15.7	
	baz=151,slow=74,SNR=29						
H01W3	**Cape Leeuwin H**	**29.87**	**120**	T	T	12 08 26.6	
	baz=284,slow=74,SNR=4.8						
H01W2	**Cape Leeuwin H**	**29.88**	**120**	T	T	12 08 27.6	
	baz=284,slow=74,SNR=6.4						
H01W1	**Cape Leeuwin H**	**29.89**	**120**	T	T	12 08 28.7	
	baz=284,slow=74,SNR=5.7						
ASAR	**Alice Springs**	**46.97**	**101**	P	P	11 40 07.0	-0.4
	2.0nm,0.8s,baz=264,slow=7.6,SNR=7.9						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**48.15**	**96**	P	P	11 40 16.6	+0.2
	1.8nm,0.8s,baz=261,slow=7.6,SNR=6.9						
	1.8nm,0.8s						
BOSA	**Boshof**	**51.30**	**251**	P	P	11 40 40.4	-0.1
	2.3nm,0.8s,baz=114,slow=10.0,SNR=3.5						
	2.3nm,0.8s						

*DNK **09** 11:47:11.6±0.5, 59°.47N×13°.28E, h0km, ML2.9(UPP), Explosion*
*UPP **09** 11:47:11.1±0.1, 59°.47N×13°.29E, h0km, ML2.9, Explosion*
*BER **09** 11:47:11.4±1.9, 59°.23N×13°.82E, h30km±138km, ML1.6*
ISC 09 11:47:10.4±0.8, 59°.45N±0'.04×13°.35E±0'.02, h0km, n21, σ0°46/36, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FINU	**Finntorp**	**0.45**	**264**	P	**Pg**	**11 47 19.2**	**+0.2**
FINU				S	**Sg**	**11 47 24.9**	**+0.2**
FINU	**Finntorp**	**0.45**	**264**	P	**Pg**	**11 47 19.2**	**+0.2**
FINU				S	**Sg**	**11 47 24.9**	**+0.2**
UDD	**Uddeholm**	**0.65**	**11**	P	**Pg**	**11 47 23.3**	**+0.4**
UDD				S	**Sg**	**11 47 31.9**	**+0.7**
NRAU	**Nora**	**0.87**	**82**	P	**Pb**	**11 47 28.0**	**-0.3**
NRAU				S	**Sb**	**11 47 40.1**	**-0.4**
NRAU	**Nora**	**0.87**	**82**	P	**Pb**	**11 47 28.0**	**-0.3**
NRAU				S	**Sb**	**11 47 40.1**	**-0.4**
ASKU	**Askersund**	**0.95**	**126**	P	**Pb**	**11 47 29.4**	**-0.3**
ASKU	**Askersund**	**0.95**	**126**	P	**Pb**	**11 47 29.4**	**-0.3**
STRU	**Stroemstad**	**1.19**	**250**	*e*P	**Pg**	**11 47 33.2**	**0.0**
STRU				*e*S	**Sg**	**11 47 48.9**	**+0.3**
NC602	**NORSAR Array S**	**1.57**	**326**	*e*P	**Pn**	**11 47 39.7**	**+0.1**
NC602				*e*S	**Sg**	**11 48 00.7**	**-0.1**
NC602				IAML		11 48 04.0	
	comp=Z,9.5nm,0.6s						
ESKU	**Eskilstuna**	**1.57**	**97**	P	**Pg**	**11 47 40.8**	**+0.3**
ESKU	**Eskilstuna**	**1.57**	**97**	P	**Pg**	**11 47 40.8**	**+0.3**
NAO01	**NORSAR Array S**	**1.86**	**320**	*e*P	**Pb**	**11 47 44.8**	**-0.5**
NAO01				IAML	**Sg**	**11 48 09.6**	**-0.5**
	comp=Z,16nm,0.6s						
NAO01				*e*S	**Sg**	**11 48 09.7**	**-0.5**
NB201	**NORSAR Array S**	**1.90**	**328**	*e*P	**Pn**	**11 47 44.2**	**+0.1**
NB201				*e*S	**Sb**	**11 48 10.3**	**+0.1**
NB201				IAML		11 48 11.5	
	comp=Z,5.6nm,0.5s						
KONO	**Kongsberg**	**1.92**	**277**	*e*P	**Pb**	**11 47 45.6**	**-0.6**
KONO				IAML		11 48 12.3	
	comp=Z,5.3nm,0.5s						
BACU	**Backbrunna**	**1.95**	**77**	P	**Pb**	**11 47 46.6**	**-0.1**
BACU				S	**Sg**	**11 48 12.4**	**-0.6**
BACU	**Backbrunna**	**1.95**	**77**	P	**Pb**	**11 47 46.6**	**-0.1**
BACU				S	**Sg**	**11 48 12.4**	**-0.6**
NC303	**NORSAR Array S**	**2.03**	**332**	*e*P	**Pn**	**11 47 46.4**	**+0.6**
NC303				*e*S	**Sb**	**11 48 13.0**	**-1.0**
NC303				IAML		11 48 14.8	
	comp=Z,6.3nm,0.5s						
NBO00	**NORSAR Array S**	**2.04**	**322**	*e*P	**Pn**	**11 47 46.0**	**0.0**
NBO00				*e*S	**Sn**	**11 48 12.6**	**+0.5**
NBO00				IAML		11 48 14.9	
	comp=Z,8.0nm,0.6s						
OSTU	**Oestervaala**	**2.06**	**66**	P	**Pb**	**11 47 48.1**	**-0.5**
OSTU	**Oestervaala**	**2.06**	**66**	P	**Pb**	**11 47 48.1**	**-0.5**
NC204	**NORSAR Array S**	**2.23**	**326**	*e*P	**Pb**	**11 47 51.0**	**-0.6**
NC204				*e*S	**Sn**	**11 48 18.1**	**+1.1**
NC204				IAML		11 48 22.8	
	comp=Z,5.7nm,0.6s						

*IDC **09** 11:49:33.5±1.0, 2°.92S×129°.81E, h0km, mb3.9/6, mbtmp3.9/9, ML3.8/3, MS2.6/2, Error ellipse: s-maj=32.0km s-min=18.2km az=84.0*
*DJA **09** 11:49:37.2±1.1, 3°.5±4°×13°.0E±°, h11km±10km, M4.0/11, mb4.5/4, mB5.2/2, MLv3.8/11, Mw(mB)4.6/2*
ISC 09 11:49:37.6±0.8, 2.90S±0°.07×129.79E±0°.07, h25km, n19, σ1°22/19, mb3.9/6, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.97**	**243**	P	**Pb**	**11 49 56.6**	**+0.9**
BNDI	**Bandanaira**	**1.61**	**176**	P	**Pb**	**11 50 07.9**	**+1.2**
AAI	**Ambon**	**1.77**	**244**	P	**Pb**	**11 50 08.5**	**-0.9**
FAKI	**Fak Fak**	**2.46**	**90**	P	**Pn**	**11 50 16.8**	**+0.7**
SIJI	**Sorong**	**2.50**	**36**	Pn	**Pn**	**11 50 16.5**	**-0.2**
	21nm,0.3s,baz=57,slow=11,SNR=52						
SIJI				Sn	**Sn**	**11 50 46.9**	**+0.4**
	28nm,0.3s,baz=24,slow=22,SNR=11						
SIJI				LR	LR	11 51 26.9	
	comp=Z,49nm,18.8s,baz=84,slow=45						
	44nm,0.3s						
NLAI	**Namlea**	**2.71**	**263**	P	**Pn**	**11 50 21.2**	**+1.7**
LBMI	**Labuha**	**3.21**	**314**	P	**Pn**	**11 50 26.0**	**-0.5**
SANI	**Sanana**	**3.89**	**283**	P	**Pn**	**11 50 35.1**	**-0.7**
GTOI	**Gorontalo**	**7.63**	**297**	P	**Pn**	**11 51 29.7**	**+2.4**
	0.0nm7.3nm,0.8s						
APSI	**Ampana**	**8.37**	**284**	P	**Pn**	**11 51 37.2**	**-0.2**
KAPI	**Kappang**	**10.23**	**258**	LR	LR	11 56 37.8	
	comp=Z,82nm,18.9s,baz=79,slow=41						
FITZ	**Fitzroy Crossi**	**15.64**	**195**	Pn	**Pn**	**11 53 15.1**	**-1.4**
	0.1nm,0.3s,baz=25,slow=16,SNR=2.8						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**17.51**	**166**	P	**Pn**	**11 53 37.5**	**-2.7**
	0.6nm,0.3s,baz=355,slow=12,SNR=31						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**21.02**	**169**	P	**P**	**11 54 19.7**	**+0.1**
	11nm,0.7s,baz=351,slow=11,SNR=144						
	11nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.05**	**306**	P	**P**	**11 56 46.8**	**+0.9**
	0.5nm,0.3s,baz=126,slow=6.6,SNR=5.4						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**64.72**	**326**	P	**P**	**12 00 13.3**	**-0.5**
	0.5nm,0.7s,baz=133,slow=7.1,SNR=4.8						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**67.85**	**333**	P	**P**	**12 00 33.2**	**-0.3**
	0.5nm,0.3s,baz=99,slow=9.2,SNR=4.5						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**68.94**	**328**	P	**P**	**12 00 40.5**	**0.0**
	1.1nm,0.8s,baz=128,slow=5.8,SNR=8.6						

	1.1nm,0.8s									
VNDA	**Vanda**		**76.51**	**173**	P		**P**		**12 01 25.1**	**0.0**
	0.3nm,0.6s,baz=318,slow=6.4,SNR=2.3									
	0.3nm,0.6s									

*IDC **09** 12:00:00.1±5.4,29°.52S×178°.38W,h0km,mb3.7/2, mbtmp3.7/2,Error ellipse: s-maj=301.5km s-min=77.9km az=166.0*

ISC 09 12:00:32.8±1.6,**30°.1S**±0°.1×**179°.5W**±0°.2,**h300**km,**n73,** σ1§**90**/87,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.63**	**60**	P	Pn	12 01 17.9	+1.1
GLKZ				S	**S**	**12 01 51.6**	**-0.3**
RIZ	**Raoul Island**	**1.63**	**59**	P	Pn	12 01 19.7	+2.9
RIZ				S	S	12 01 53.4	+1.4
MXZ	**Matakaoa Point**	**7.67**	**193**	P	**Pn**	**12 02 23.5**	**+1.3**
MXZ				S	**S**	**12 03 49.7**	**-1.2**
WCZ	**Waipu Caves**	**7.77**	**220**	P	Pn	12 02 33.3	+10
WMGZ	**Waiomatatini S**	**7.90**	**192**	P	**Pn**	**12 02 25.8**	**+0.8**
HAZ	**Te Kaha**	**7.97**	**196**	P	**Pn**	**12 02 27.6**	**+1.7**
HAZ				S	**S**	**12 03 58.5**	**+0.9**
PKGZ	**Pakihiroa**	**8.03**	**194**	P	**Pn**	**12 02 28.2**	**+1.5**
PKGZ				S	**S**	**12 03 58.6**	**-0.5**
PUZ	**Puketiti**	**8.17**	**192**	P	**Pn**	**12 02 28.9**	**+0.5**
PUZ				S	**S**	**12 04 00.5**	**-1.8**
RUGZ	**Raukumara Rang**	**8.19**	**196**	P	**Pn**	**12 02 31.0**	**+2.2**
RUGZ				S	**S**	**12 04 02.1**	**-0.8**
TWGZ	**Tauwhareparae**	**8.33**	**194**	P	**P**	**12 02 32.6**	**+2.2**
TWGZ				S	**S**	**12 04 07.2**	**+1.5**
TGRZ	**Tauranga**	**8.38**	**203**	P		12 02 39.0	
MWZ	**Matawai**	**8.58**	**196**	P	**P**	**12 02 34.2**	**-4.4**
MWZ				S	**S**	**12 04 11.6**	**+0.2**
CNGZ	**Carnagh Statio**	**8.58**	**192**	P	**P**	**12 02 35.2**	**-3.5**
TKGZ	**Te Karaka**	**8.61**	**194**	P	**Pn**	**12 02 33.9**	**+0.2**
TKGZ				S	**S**	**12 04 11.0**	**-1.0**
URZ	**Urewera**	**8.61**	**198**	P	**P**	**12 02 34.9**	**-4.0**
URZ				S	**S**	**12 04 12.1**	**0.0**
RAGZ	**Rawiri**	**8.76**	**196**	P	**P**	**12 02 41.1**	**+0.4**
RAGZ				S	**S**	**12 04 16.7**	**+1.1**
RRRZ	**Republican Roa**	**8.86**	**201**	P	**P**	**12 02 41.1**	**-0.7**
RIGZ	**Rimuhau**	**8.88**	**194**	P	**P**	**12 02 39.6**	**-2.5**
RIGZ				S	**S**	**12 04 15.4**	**-2.9**
MUGZ	**Murupara**	**8.91**	**199**	P	**P**	**12 02 40.0**	**-2.3**
MUGZ				S	**S**	**12 04 19.6**	**+0.8**
HSRZ	**Hossack Road**	**8.92**	**202**	P	P	12 02 45.4	+3.1
HRRZ	**Handcock Road**	**8.98**	**202**	P	**P**	**12 02 44.7**	**+1.6**
PRRZ	**Plateau Road**	**9.04**	**201**	P	**P**	**12 02 45.2**	**+1.5**
SNGZ	**Shannon Statio**	**9.05**	**196**	P	**P**	**12 02 39.7**	**-4.2**
SNGZ				S	**S**	**12 04 21.1**	**-0.9**
ALRZ	**Allen Road**	**9.11**	**201**	P	**P**	**12 02 45.6**	**+1.0**
WPRZ	**Whakapapatarin**	**9.13**	**202**	P	**P**	**12 02 47.1**	**+2.3**
TLZ	**Tolley Road**	**9.18**	**205**	P	P	12 02 49.5	+4.2
KNZ	**Kokohu**	**9.21**	**194**	P	**Pn**	**12 02 40.9**	**-0.1**
KNZ				S	**S**	**12 04 22.3**	**-3.1**
KUTZ	**Kaahu Road**	**9.22**	**203**	P	P	12 02 49.1	+3.4
RAHZ	**Arahi**	**9.24**	**197**	P	**Pn**	**12 02 41.2**	**-0.2**
RAHZ				S	**S**	**12 04 26.9**	**+0.6**
MTHZ	**Maungataniwha**	**9.24**	**198**	P	**P**	**12 02 42.0**	**-4.0**
MTHZ				S	**S**	**12 04 25.9**	**-0.5**
MHGZ	**Mahia Peninsul**	**9.29**	**192**	P	**Pn**	**12 02 41.8**	**-0.3**
WHHZ	**Waihua**	**9.36**	**196**	P	**P**	**12 02 47.0**	**-0.2**
WHHZ				S	**S**	**12 04 28.9**	**0.0**
NMHZ	**Naumai**	**9.48**	**198**	P	**P**	**12 02 45.2**	**-3.5**
NMHZ				S	**S**	**12 04 31.6**	**-0.2**
RATZ	**Rangitukua**	**9.57**	**203**	P	**P**	**12 02 52.2**	**+2.5**
ARHZ	**Aropaoanui**	**9.59**	**196**	P	**P**	**12 02 48.3**	**-1.5**
ARHZ				S	**S**	**12 04 33.5**	**-0.7**
BKZ	**Black Stump Fm**	**9.63**	**199**	P	**P**	**12 02 46.8**	**-3.5**
BKZ				S	**S**	**12 04 35.2**	**0.0**
NTVZ	**North Tongarir**	**9.82**	**202**	P	**P**	**12 02 52.0**	**-0.5**
TMVZ	**Te Maari**	**9.82**	**202**	P	**P**	**12 02 53.9**	**+1.3**
MCHZ	**McNeill Hill**	**9.84**	**197**	P	**P**	**12 02 49.4**	**-3.2**
MCHZ				S	**S**	**12 04 38.9**	**-0.9**
ETVZ	**East Tongariro**	**9.84**	**202**	P	**P**	**12 02 54.5**	**+1.8**
WTVZ	**West Tongariro**	**9.86**	**203**	P	**P**	**12 02 54.1**	**+1.1**
NNVZ	**North Ngauruho**	**9.87**	**203**	P	**P**	**12 02 54.9**	**+1.8**
TWVZ	**Taurewa**	**9.87**	**203**	P	**P**	**12 02 53.8**	**+0.7**
SNVZ	**South Ngauruho**	**9.91**	**202**	P	**P**	**12 02 53.6**	**+0.1**
NGZ	**Ngauruhoe**	**9.91**	**203**	P	**P**	**12 02 54.6**	**+1.0**
TUVZ	**Tukino**	**9.98**	**202**	P	**P**	**12 02 54.1**	**-0.2**
FWVZ	**Far West T-bar**	**10.00**	**203**	P	**P**	**12 02 54.7**	**+0.1**
WHVZ	**Whangaehu Hut**	**10.01**	**202**	P	**P**	**12 02 54.5**	**-0.3**
TRVZ	**Turoa**	**10.04**	**202**	P	**P**	**12 02 56.5**	**+1.4**
BHHZ	**Black Hill Sta**	**10.05**	**200**	P	**P**	**12 02 53.1**	**-1.9**
BHHZ				S	**S**	**12 04 44.2**	**-0.6**
MOVZ	**Moawhango**	**10.07**	**201**	P	**P**	**12 02 54.2**	**-1.1**
PKVZ	**Pokaka**	**10.10**	**203**	P	**P**	**12 02 56.5**	**+0.9**
KAHZ	**Kahuranaki**	**10.12**	**196**	P	**P**	**12 02 52.5**	**-3.3**
KAHZ				S	**S**	**12 04 46.3**	**0.0**
MTVZ	**Mangateitei**	**10.14**	**203**	P	**P**	**12 02 57.0**	**+0.9**
PXZ	**Pawanui**	**10.35**	**196**	P	**Pn**	**12 02 54.4**	**-0.7**
PNHZ	**Pukenui**	**10.41**	**198**	P	**P**	**12 02 56.5**	**-2.5**
WPHZ	**Waipukurau**	**10.48**	**197**	P	**P**	**12 02 58.4**	**-1.4**
LREZ	**Lake Rotokare**	**10.59**	**206**	P	P	12 03 05.3	+4.3
TSZ	**Takapari Road**	**10.61**	**199**	P	**P**	**12 03 00.5**	**-0.7**
PRHZ	**Porangahau**	**10.63**	**196**	P	**P**	**12 02 58.1**	**-3.3**
DVHZ	**Dannevirke**	**10.78**	**198**	P	**P**	**12 03 02.5**	**-0.5**
ANWZ	**Angora Road**	**10.85**	**196**	P	**P**	**12 03 03.9**	**+0.1**
POWZ	**Post Office Ro**	**10.97**	**199**	P	**P**	**12 03 05.8**	**+0.6**
PRWZ	**Pori Road**	**11.07**	**198**	P	**P**	**12 03 06.6**	**+0.4**
BFZ	**Birch Farm**	**11.12**	**197**	P	**P**	**12 03 04.4**	**-2.3**
TIWZ	**Tintock**	**11.30**	**198**	P	**P**	**12 03 08.2**	**-0.6**
CPWZ	**Castlepoint**	**11.34**	**197**	P	**P**	**12 03 11.2**	**+1.9**
HOWZ	**Holdsworth Sta**	**11.51**	**199**	P	**P**	**12 03 10.9**	**-0.3**
TRWZ	**Traveller**	**11.93**	**198**	P	**P**	**12 03 17.3**	**+1.5**
CTZ	**Chatham Island**	**13.82**	**171**	P	Pn	12 03 49.6	+13
CTZ				S	**S**	**12 06 15.7**	**+6.6**
ASAR	**Alice Springs**	**41.80**	**267**	P	P	12 07 59.5	+5.6
	0.3nm,0.5s,baz=98,slow=7.8,SNR=4.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**42.76**	**273**	P	P	12 08 07.7	+6.1
	0.6nm,0.3s,baz=110,slow=8.2,SNR=45						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**144.39**	**339**	PKP	**PKiKP**	**12 19 36.6**	**+0.3**
	1.5nm,0.4s,baz=64,slow=2.8,SNR=14						

*ASRS **09** 12:01:03.0±0.2,50°.4N±1°.0×8°.8E±°,h9km,MLh3.8/9,Error ellipse: s-maj=2.4km s-min=2.1km az=99.5,confirmed*
*NNC **09** 12:01:06.4±1.1,50°.34N×87°.25E,h0km,mb3.4,mpv3.0, Error ellipse: s-maj=10.2km s-min=4.6km az=102.0*

ISC 09 12:01:05.2±0.8,**50°.38N**±0°.03×**87°.57E**±0°.02,**h11**km±5km, **n31,** σ2§**18**/56,**7C-5D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.07**	**151**	⇓Pg	**Pg**	**12 01 06.8**	**-0.8**
AKAR				Sg	**Sg**	**12 01 08.8**	**-0.5**
CHBI	**Chibit, Altay**	**0.08**	**215**	⇓Pg	**Pg**	**12 01 07.4**	**-0.3**
CHBI				Sg	**Sg**	**12 01 09.2**	**-0.3**
ULGR	**Ulagan, Altay**	**0.35**	**45**	⇓Pg	**Pb**	**12 01 13.8**	**+0.3**
ULGR				Sg	**Sb**	**12 01 20.2**	**+1.0**
CUR	**Chagan-Uzun**	**0.57**	**119**	⇑Pg	**Pg**	**12 01 13.8**	**-2.5**
CUR				Sg	**Sg**	**12 01 21.3**	**-2.6**
UKR	**Ust'-Kan**	**1.87**	**289**	Pg	**Pb**	**12 01 38.9**	**-0.5**
UKR				Sg	**Sg**	**12 02 04.7**	**-0.5**
TASR	**Tashtagol**	**2.40**	**4**	Pg	**Pb**	**12 01 48.7**	**+0.4**
TASR				Sg	**Sg**	**12 02 22.6**	**+0.5**
ELT	**Eltsovka**	**3.00**	**345**	Pg	**Pb**	**12 01 56.9**	**-1.9**
ELT				Sg	**Sg**	**12 02 41.0**	**-0.7**
DJO	**Djoy, Khakassi**	**3.31**	**42**	Pg	**Pb**	**12 02 06.2**	**+2.2**
DJO				Sg	**Sg**	**12 02 49.7**	**-1.8**
LUZB	**Luzhba, Kemero**	**3.39**	**13**	Pg	**Pg**	**12 02 07.6**	**-2.5**
LUZB				Sg	**Sg**	**12 02 54.6**	**+0.6**
DJOS	**Djoyskaya Sosn**	**3.40**	**43**	Sg	**Sg**	**12 02 52.5**	**-1.8**
CERR	**Cheremushki**	**3.45**	**43**	Pg	**Pg**	**12 02 11.3**	**+0.1**
CERR				Sg	**Sg**	**12 02 55.1**	**-0.8**
VCHU	**Verkh-Chumysh,**	**3.65**	**349**	Sg	**Sg**	**12 03 03.7**	**+1.3**
ZAA0	**Zalesovo Array**	**3.96**	**336**	⇑Pn	**Pn**	**12 02 07.6**	**+1.7**
	0.3nm,0.3s						
ZAA0				Sn	**Sn**	**12 02 54.8**	**+2.5**
	0.7nm,0.3s						
ZAA0				Lg	Lg	12 03 12.9	
	1.2nm,0.3s						
BJR2	**Bachatsky-2, K**	**4.01**	**348**	Sg	**Sg**	**12 03 15.1**	**+1.2**
POMOR	**Pomortsevo, Ku**	**4.09**	**351**	Sg	**Sg**	**12 03 17.1**	**+0.8**
ABNR	**Abakan**	**4.11**	**34**	Sg	**Sg**	**12 03 13.8**	**-3.4**
SALR	**Pechorkino, Sa**	**4.21**	**345**	Pn	**Pn**	**12 02 10.5**	**+1.3**
SALR				Pg	**Pb**	**12 02 21.6**	**+2.5**
SALR				Sg	**Sg**	**12 03 22.6**	**+2.4**
KZLR	**Kyzyl**	**4.54**	**70**	S	**Sn**	**12 03 00.6**	**-6.1**
KZLR				Sg	**Sg**	**12 03 29.7**	**-1.2**
ERNS	**Erzin**	**4.86**	**88**	Pn	**Pn**	**12 02 18.5**	**+0.1**
ERNS				Pg	**Pb**	**12 02 30.8**	**+0.4**
ERNS				Sg	**Sb**	**12 03 34.5**	**+5.6**
KHAR	**Kharino, NSO,**	**4.89**	**332**	Sg	**Sg**	**12 03 39.7**	**-2.3**
MK31	**Makanchi Array**	**5.01**	**226**	⇑Pn	**Pn**	**12 02 21.0**	**+0.6**
	0.3nm,0.2s,baz=47,slow=12,SNR=86						
MK31				⇓Sn	**Sn**	**12 03 18.9**	**+0.5**
	2.1nm,0.3s,baz=52,slow=19,SNR=11						
MK31				⇑Lg	Lg	12 03 38.9	
	5.3nm,0.5s,baz=46,slow=32,SNR=7.9						
MKAR	**Makanchi Array**	**5.01**	**226**	Pn	**Pn**	**12 02 21.0**	**+0.6**
MKAR	**Makanchi Array**	**5.01**	**226**	S	**Sn**	**12 03 18.6**	**+0.3**
MKAR				Sg	**Sg**	**12 03 40.6**	**-5.5**
MAKZ	**Makanchi**	**5.15**	**228**	Pn	**Pn**	**12 02 23.1**	**+0.8**
	2.2nm,0.6s						
MAKZ				Sn	**Sn**	**12 03 20.7**	**-1.0**
	9.1nm,0.7s						
MAKZ				Lg	Lg	12 03 42.3	
	5.3nm,0.4s						
MAKZ	**Makanchi**	**5.15**	**228**	Pn	**Pn**	**12 02 22.9**	**+0.6**
MAKZ				S	**Sn**	**12 03 21.1**	**-0.6**
MAKZ				Sg	**Sb**	**12 03 42.4**	**+5.2**
BSTK	**Bystrovka, Nov**	**5.16**	**326**	Sg	**Sg**	**12 03 50.8**	**+0.1**
NVS	**Novosibirsk**	**5.19**	**331**	Pg	**Pg**	**12 02 40.9**	**-3.7**
NVS				Sg	**Sg**	**12 03 51.1**	**-0.7**
NVSII	**Novosibirsk**	**5.19**	**331**	Pg	**Pg**	**12 02 40.5**	**-4.1**
NVSII				Sg	**Sg**	**12 03 50.8**	**-0.9**
KURK	**Kurchatov**	**5.72**	**277**	⇑Pn	**Pn**	**12 02 29.9**	**-0.1**
	0.8nm,0.4s						
KURK				⇓Sn	**Sn**	**12 03 34.6**	**-1.0**
	2.1nm,0.5s						
KURK				Lg	Lg	12 04 01.6	
	13nm,0.5s						
KURK	**Kurchatov**	**5.72**	**277**	Pn	**Pn**	**12 02 30.0**	**0.0**
KURBB	**Kurchatov Arra**	**5.78**	**276**	Pn	**Pn**	**12 02 30.9**	**+0.1**
	1.6nm,0.3s						
KURBB				⇑Sn	**Sn**	**12 03 37.2**	**+0.2**
	7.5nm,0.6s						
KURBB				⇑Lg	Lg	12 04 03.9	
	28nm,0.6s						

*IDC **09** 12:01:46.8±7.0,49°.00N×151°.73E,h297km±72km,mb2.9/5, mbtmp3.6/6,Error ellipse: s-maj=36.9km s-min=21.2km az=159.0*

ISC 09 12:01:47.1±1.2,**49°.0N**±0°.2×**151°.7E**±0°.1,**h300**km,**n6,** σ0§**53**/6,**mb3.0**/5,**Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**13.09**	**278**	P	**P**	**12 04 43.0**	**+0.2**
	1.5nm,0.3s,baz=82,slow=13,SNR=8.1						
ILAR	**Eielson Array**	**35.40**	**41**	P	**P**	**12 08 14.1**	**-0.5**
	0.2nm,0.4s,baz=284,slow=8.0,SNR=5.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**45.10**	**295**	P	**P**	**12 09 33.8**	**-0.1**
	0.4nm,0.5s,baz=68,slow=8.4,SNR=4.7						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**45.45**	**301**	P	**P**	**12 09 36.4**	**-0.1**
	0.9nm,0.6s,baz=68,slow=8.5,SNR=6.2						
	0.9nm,0.6s						
PDAR	**Pinedale Array**	**64.17**	**54**	P	**P**	**12 11 50.9**	**+0.7**
	0.4nm,0.7s,baz=298,slow=1.9,SNR=1.6						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**70.37**	**197**	P	**P**	**12 12 28.5**	**-0.2**
	0.2nm,0.8s,baz=16,slow=6.8,SNR=2.0						
	0.2nm,0.8s						

*IDC **09** 12:12:44.9±0.9,46°.88N×155°.81E,h0km,mb3.9/7, mbtmp3.8/8,ML2.7/1,Error ellipse: s-maj=31.7km s-min=20.9km az=126.0*
*NEIC **09** 12:12:49±2.1,47°.10N±0°.09×155°.9E±0°.2,h10km±1km, mb4.1/13,Error ellipse: s-maj=23.7km s-min=7.2km az=129.0*

ISC 09 12:12:47.6±0.9,**47°.0N**±0°.1×**156°.0E**±0°.1,**h10**km,**n32,** σ1§**28**/29,**mb4.0**/13,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEA0B	**Petropavlovsk-**	**6.19**	**10**	Pn	**Pn**	**12 14 18.1**	**-0.8**
PETK	**Petropavlovsk-**	**6.19**	**10**	Pn	**Pn**	**12 14 18.4**	**-0.6**
	0.8nm,0.3s,baz=178,slow=10,SNR=2.7						
	2.0nm,0.4s						
YSS	**Yuzh-Sakhalins**	**9.05**	**274**	Pn	**Pn**	**12 14 57.8**	**-0.3**
JTM	**Tenmabayashi**	**12.42**	**245**	Pn	**Pn**	**12 15 46.5**	**+2.1**
H11S1	**WAKE ISLAND Hy**	**29.77**	**159**	T	T	12 50 06.6	
	baz=345,slow=76,SNR=9.0						
H11S3	**WAKE ISLAND Hy**	**29.78**	**159**	T	T	12 50 08.7	
	baz=345,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**29.79**	**159**	T	T	12 50 06.5	
	baz=345,slow=76,SNR=11						
H21K	**Melozitna Rive**	**32.71**	**37**	P	**P**	**12 19 21.6**	**+1.8**
H21K				IAmb	IAmb	12 19 22.9	
	comp=Z,3.8nm,1.3s						
H24K	**Nood'or Dome**	**34.75**	**37**	P	**P**	**12 19 38.9**	**+1.3**
ILAR	**Eielson Array**	**35.10**	**39**	P	**P**	**12 19 39.9**	**-0.8**
	comp=Z,1.0nm,1.2s,baz=256,slow=7.3,SNR=3.4						
	comp=Z,1.0nm,1.2s						
BMAR	**Burnt Mountain**	**36.19**	**34**	P	**P**	**12 19 51.2**	**+1.3**
K27K	**Chicken**	**37.20**	**40**	P	**P**	**12 19 59.6**	**+1.0**
K27K				IAmb	IAmb	12 20 00.4	
	comp=Z,3.5nm,1.1s						
L27K	**Beaver Creek,**	**37.37**	**42**	P	**P**	**12 20 01.4**	**+1.3**
BCAR	**Beaver Creek A**	**37.39**	**42**	P	**P**	**12 20 01.7**	**+1.4**
EGAK	**Eagle**	**37.56**	**39**	P	**P**	**12 20 01.3**	**-0.2**
EGAK				IAmb	IAmb	12 20 01.9	
	comp=Z,2.4nm,0.8s						
EPYK	**Eagle Plains**	**39.29**	**36**	P	**P**	**12 20 17.4**	**+1.2**
HYT	**Haines Junctio**	**39.70**	**45**	P	**P**	**12 20 21.0**	**+1.2**
HYT				IAmb	IAmb	12 20 21.7	
	comp=Z,2.3nm,0.8s						
INK	**Inuvik**	**40.36**	**33**	P	**P**	**12 20 26.0**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=289,slow=5.6,SNR=20						
	comp=Z,2.5nm,0.5s						
INK	**Inuvik**	**40.36**	**33**	P	**P**	**12 20 25.8**	**+0.9**
INK				IAmb	IAmb	12 20 26.4	
	comp=Z,2.7nm,0.6s						
ZALV	**Zalesovo Beam**	**44.04**	**306**	P	**P**	**12 20 53.1**	**-2.0**
	comp=Z,0.7nm,0.5s,baz=70,slow=6.0,SNR=3.6						
	comp=Z,0.7nm,0.5s						
MK31	**Makanchi Array**	**48.55**	**298**	P	**P**	**12 21 31.2**	**+0.4**
MKAR	**Makanchi Array**	**48.55**	**298**	P	**P**	**12 21 30.0**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=63,slow=8.9,SNR=3.7						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**48.55**	**298**	P	**P**	**12 21 30.5**	**-0.3**
MAKZ	**Makanchi**	**48.73**	**299**	P	**P**	**12 21 34.1**	**+1.9**
KURK	**Kurchatov**	**48.84**	**305**	P	**P**	**12 21 32.4**	**-0.5**
KURK				IAmb	IAmb	12 21 33.7	
	comp=Z,2.6nm,0.7s						
ABKAR	**Akbulak array**	**59.75**	**311**	P	**P**	**12 22 53.4**	**+1.1**
WRA	**Warramunga Arr**	**69.45**	**202**	P	**P**	**12 23 53.6**	**-2.3**
	comp=Z,0.9nm,0.8s,baz=18,slow=6.8,SNR=4.6						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**73.13**	**201**	P	**P**	**12 24 16.0**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=12,slow=6.0,SNR=5.0						
	comp=Z,0.7nm,0.7s						
TX31	**Lajitas Ar. Si**	**75.63**	**62**	P	**P**	**12 24 33.1**	**+0.2**
TX32	**Lajitas Array**	**75.63**	**62**	P	**P**	**12 24 33.2**	**+0.3**
TX32				IAmb	IAmb	12 24 34.0	
	comp=Z,2.3nm,1.0s						
TXAR	**Lajitas Array**	**75.63**	**62**	P	**P**	**12 24 33.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=302,slow=4.7,SNR=19						
	comp=Z,1.4nm,0.7s						
TXAR	**Lajitas Array**	**75.63**	**62**	P	**P**	**12 24 33.2**	**+0.2**

*SOME **09** 12:15:38.8,41°.12N×80°.17E,h0km*
*NNC **09** 12:15:40.7±4.6,40°.99N×80°.06E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=37.8km s-min=30.4km az=71.0*

ISC 09 12:15:43.4±3.0,**41°.1N**±0°.1×**80°.04E**±0°.09,**h10**km,**n12,** σ1§**80**/19,**1C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.10**	**348**	*eP*	**Pn**	**12 16 19.0**	**+0.3**
	11nm,0.2s						
SHLS				*eS*	**Sb**	**12 16 48.1**	**+0.3**
	21nm,0.2s						
SHLS	**Shalkode**	**2.10**	**348**	Pg	**Pb**	**12 16 20.2**	**-1.4**
	11nm,0.2s						
SHLS				Lg	Lg	12 16 50.1	
	21nm,0.2s						
UZB	**Uzynbulak**	**2.18**	**340**	*eP*	**Pb**	**12 16 21.6**	**-1.5**
	2.9nm,0.2s						
UZB				*eS*	**Sg**	**12 16 52.4**	**-1.0**
	4.0nm,0.2s						
UZB	**Uzynbulak**	**2.18**	**340**	Pg	**Pb**	**12 16 21.6**	**-1.5**
	2.9nm,0.2s						
UZB				Lg	Lg	12 16 52.4	
	4.0nm,0.2s						
PDGK	**Podgornoye**	**2.27**	**350**	Pg	**Pb**	**12 16 23.3**	**-1.1**
	2.5nm,0.3s						
PDGK				Lg	Lg	12 16 55.8	
	4.2nm,0.4s						
PDGK	**Podgornoye**	**2.27**	**350**	⇓Pn	**Pb**	**12 16 22.4**	**-2.0**
	1.6nm,0.3s						
PDGK				⇑Sn	**Sg**	**12 16 55.5**	**-0.7**
	6.0nm,0.5s						
SATY	**Saty**	**2.31**	**329**	*eP*	**Pb**	**12 16 23.3**	**-1.8**
	4.7nm,0.2s						
SATY				*eS*	**Sb**	**12 16 55.5**	**+1.8**
	15nm,0.3s						
SATY	**Saty**	**2.31**	**329**	Pg	**Pb**	**12 16 23.3**	**-1.8**
	4.7nm,0.2s						
SATY				Lg	Lg	12 16 55.5	
	15nm,0.3s						
KTMS	**Ketmen**	**2.36**	**6**	*eP*	**Pb**	**12 16 23.3**	**-2.7**
	5.9nm,0.3s						
KTMS				*eS*	**Sb**	**12 16 55.5**	**+0.3**
	7.0nm,0.3s						
KTMS	**Ketmen**	**2.36**	**6**	Pg	**Pb**	**12 16 23.3**	**-2.7**
	5.9nm,0.3s						
KTMS				Lg	Lg	12 16 55.5	
	7.0nm,0.3s						
KURS	**Kuram**	**2.76**	**330**	*eP*	**Pb**	**12 16 32.5**	**-0.4**
	4.3nm,0.4s						
KURS				*eS*	**Sg**	**12 17 10.8**	**-1.2**
	4.9nm,0.3s						
MK31	**Makanchi Array**	**5.92**	**15**	Pn	**Pn**	**12 17 12.4**	**+1.3**
	0.2nm,0.2s,baz=193,slow=15,SNR=40						
MK31				⇓Sn	**Sn**	**12 18 22.4**	**+3.4**
	0.2nm,0.3s,baz=244,slow=22						

*IDC **09** 12:25:21.7±12.0,6°.29S×129°.90E,h113km±121km, mb3.9/2,mbtmp4.2/4,ML3.9/2,Error ellipse: s-maj=164.6km s-min=38.7km az=62.0*

ISC 09 12:25:24.7±1.0,**6°.3S**±0°.1×**130°.5E**±0°.2,**h150**km,**n14,** σ1§**70**/14,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.82**	**342**	P	**Pn**	**12 25 55.7**	**-2.0**
MTN	**Manton Dam**	**6.57**	**174**	P	**Pn**	**12 27 01.2**	**+2.2**
KDU	**Kakadu**	**6.68**	**163**	P	**Pn**	**12 27 00.8**	**+0.3**
KNRA	**Kununurra**	**9.50**	**190**	P	**Pn**	**12 27 38.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**12.67**	**201**	S	Sn	12 30 29.9	-10
	4.8nm,0.7s,baz=25,slow=17,SNR=2.1						
FITZ	**Fitzroy Crossi**	**12.67**	**201**	P	**Pn**	**12 28 19.3**	**-0.4**
WRAB	**Tennant Creek**	**14.10**	**165**	P	**Pn**	**12 28 37.4**	**-0.6**
WRA	**Warramunga Arr**	**14.11**	**165**	P	**Pn**	**12 28 36.9**	**-1.1**
	0.4nm,0.3s,baz=344,slow=12,SNR=16						
WRA				S	Sn	12 31 06.9	-7.6
	2.7nm,0.4s,baz=334,slow=21,SNR=14						
	0.8nm,0.5s						
COEN	**Coen**	**14.66**	**122**	P	**P**	**12 28 47.1**	**-0.1**
QIS	**Mount Isa**	**16.75**	**149**	P	**Pn**	**12 29 12.5**	**+1.9**
ASAR	**Alice Springs**	**17.62**	**170**	P	**Pn**	**12 29 22.4**	**+1.3**
	1.1nm,0.3s,baz=348,slow=8.9,SNR=77						
ASAR				S	**S**	**12 32 32.0**	**-3.4**
	1.9nm,0.6s,baz=355,slow=25,SNR=5.4						
	5.4nm,0.6s						
OOD	**Oodnadatta**	**21.98**	**168**	P	**P**	**12 30 08.0**	**+1.3**
STKA	**Stephens Creek**	**27.52**	**159**	P	**P**	**12 30 58.9**	**+1.5**
	0.9nm,0.3s,baz=324,slow=14,SNR=4.3						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**67.87**	**326**	P	**P**	**12 36 06.2**	**-0.6**
	1.8nm,0.4s,baz=132,slow=8.4,SNR=18						
	1.8nm,0.4s						

*HEL **09** 12:30:43.6±0.

ISC 09 12:55:39.7±0.8, 36°30N±0.02×120°82W±0.02, h17km±5km, n240, σ1°15/248, Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMPB	**Monarch Peak**	**0.08**	**172**		**Pg**	**12 55 42.2**	**-0.9**
PMPB	**Monarch Peak**	**0.08**	**172**		**Sg**	**12 55 44.7**	**-0.7**
PMPB	**Monarch Peak**	**0.08**	**172**	IAML		12 55 43.2	
	comp=E,8μm,0.3s						
PMPB				IAML		12 55 43.2	
	comp=N,14μm,0.4s						
LRC	**Lone Oak Road**	**0.19**	**255**		**Pg**	**12 55 45.8**	**+1.4**
PJUM	**Juniper Ridge**	**0.19**	**111**		**Pg**	**12 55 44.0**	**-0.5**
PPTM	**Peach Tree Val**	**0.20**	**158**		**Pg**	**12 55 44.2**	**-0.3**
LRV	**Little Rabbit**	**0.21**	**308**		**Pg**	**12 55 44.8**	**+0.2**
PSAM	**San Ardo**	**0.28**	**192**		**Pg**	**12 55 45.5**	**-0.2**
PSMM	**Smith Mountain**	**0.29**	**141**		**Pg**	**12 55 45.8**	**-0.2**
BBNM	**San Benito**	**0.30**	**316**		**Pb**	**12 55 46.6**	**-0.1**
BBGB	**Big Mountain B**	**0.34**	**328**		**Pb**	**12 55 47.2**	**-0.1**
BBGB					**Sb**	**12 55 52.9**	**+0.5**
BPIM	**Pinnacles**	**0.34**	**305**		**Pg**	**12 55 46.8**	**-0.2**
PCCM	**Crazy Canyon**	**0.35**	**234**		**Pb**	**12 55 47.2**	**-0.2**
PHPM	**Hope Ranch**	**0.36**	**152**		**Pg**	**12 55 46.8**	**-0.3**
BMSM	**Mercy Hot Spri**	**0.36**	**3**		**Pg**	**12 55 47.7**	**+0.4**
PDRM	**Domengine Ranc**	**0.36**	**83**		**Pg**	**12 55 47.5**	**+0.3**
BSGM	**Shirttail Gulc**	**0.37**	**289**		**Pg**	**12 55 47.2**	**-0.2**
PARM	**Anticline Ridg**	**0.39**	**97**		**Pg**	**12 55 47.9**	**+0.2**
BAVM	**Antelope Valle**	**0.39**	**334**		**Pg**	**12 55 47.8**	**0.0**
BVL	**Bear Valley**	**0.41**	**313**		**Pg**	**12 55 48.2**	**+0.1**
PKD	**Bear Valley Ra**	**0.41**	**147**		**Pg**	**12 55 47.8**	**-0.3**
PKD					**Sg**	**12 55 54.2**	**+0.4**
PVCM	**Vineyard Canyo**	**0.44**	**148**		**Pg**	**12 55 48.4**	**-0.2**
PSTM	**Stockdale Moun**	**0.44**	**146**		**Pg**	**12 55 48.3**	**-0.3**
PPO	**Portuguese Can**	**0.46**	**159**		**Pg**	**12 55 49.1**	**-0.2**
BSMM	**Soledad Missio**	**0.50**	**280**		**Pg**	**12 55 49.7**	**0.0**
PWMM	**Westland Maint**	**0.51**	**74**		**Pb**	**12 55 50.5**	**+0.4**
PHSB	**Hesperia Broad**	**0.51**	**202**		**Pb**	**12 55 49.9**	**-0.3**
PHSB					**Sb**	**12 55 57.8**	**+0.6**
PANM	**San Antonio Re**	**0.52**	**188**		**Pg**	**12 55 50.1**	**0.0**
BLRM	**Lewis Ranch**	**0.52**	**315**		**Pb**	**12 55 50.4**	**0.0**
BJCM	**Johnson Can.**	**0.53**	**299**		**Pg**	**12 55 50.0**	**-0.2**
CTM	**Castle Mountai**	**0.53**	**133**		**Pb**	**12 55 50.9**	**+0.2**
PHFM	**Heflinger Ranc**	**0.53**	**141**		**Pg**	**12 55 50.3**	**+0.1**
PWKM	**Work Ranch**	**0.54**	**153**		**Pg**	**12 55 50.5**	**0.0**
SCZ	**Santa Cruz**	**0.56**	**303**		**Pg**	**12 55 50.5**	**-0.4**
SCZ					**Sb**	**12 55 59.5**	**+0.6**
PAPM	**Alder Peak**	**0.58**	**229**		**Pb**	**12 55 51.4**	**-0.1**
PCMM	**Cholame Hills**	**0.59**	**146**		**Pg**	**12 55 51.4**	**0.0**
GHC	**Gold Hill**	**0.59**	**141**		**Pg**	**12 55 51.3**	**-0.2**
HAST	**Hastings Reser**	**0.60**	**279**		**Pg**	**12 55 51.4**	**-0.2**
BCWM	**Chews Ridge**	**0.61**	**271**		**Pg**	**12 55 51.7**	**0.0**
PSRM	**Scobie Ranch**	**0.61**	**135**		**Pg**	**12 55 51.8**	**0.0**
PKEM	**Kettleman Hill**	**0.62**	**112**		**Pb**	**12 55 52.3**	**+0.3**
BSLM	**Silva Ranch**	**0.64**	**318**		**Pb**	**12 55 53.1**	**+0.7**
PKLM	**Kerr Lake**	**0.65**	**143**		**Pg**	**12 55 52.3**	**-0.1**
PSNM	**Stone Corral**	**0.66**	**140**		**Pg**	**12 55 52.5**	**-0.2**
RAMR	**Ramage Ranch**	**0.66**	**184**		**Pg**	**12 55 52.5**	**-0.2**
PHCM	**Hearst Castle**	**0.67**	**204**		**Pb**	**12 55 52.9**	**-0.1**
PMCM	**McMillan Canyo**	**0.67**	**148**		**Pg**	**12 55 52.0**	**-1.0**
BSRM	**Salinas Radio**	**0.68**	**303**		**Pg**	**12 55 52.7**	**-0.4**
BAPM	**Anderson Peak**	**0.68**	**260**		**Pb**	**12 55 53.2**	**+0.1**
PMRM	**Maxey Ranch**	**0.69**	**137**		**Pg**	**12 55 53.0**	**-0.3**
SAO	**San Andreas Ge**	**0.69**	**313**	Pg	**Pg**	**12 55 52.5**	**-0.7**
SAO					**Pb**	**12 55 52.9**	**-0.5**
TCHL	**Shandon**	**0.69**	**151**		**Pg**	**12 55 53.3**	**0.0**
TCAS	**Cass Winery, P**	**0.71**	**163**		**Pg**	**12 55 53.6**	**-0.1**
PAGB	**Antelope Grade**	**0.73**	**141**		**Pg**	**12 55 53.7**	**-0.2**
PAGB	**Antelope Grade**	**0.73**	**141**	IAML		12 56 08.3	
	comp=E,1μm,0.7s						
PAGB				IAML		12 56 10.6	
	comp=N,932nm,0.8s						
THIS	**South End of C**	**0.74**	**140**		**Pg**	**12 55 53.5**	**-0.7**
HSFM	**Saint Francis**	**0.76**	**313**		**Pg**	**12 55 54.3**	**-0.1**
TRAM	**Private Proper**	**0.76**	**144**		**Pg**	**12 55 54.3**	**-0.2**
BLDC	**Black Mountain**	**0.76**	**186**		**Pg**	**12 55 54.4**	**-0.2**
BLDC	**Black Mountain**	**0.76**	**186**		**Pg**	**12 55 54.4**	**-0.2**
PCBM	**Cambria**	**0.80**	**194**		**Pb**	**12 55 55.3**	**+0.2**
PTRM	**Twissleman Ran**	**0.81**	**142**		**Pg**	**12 55 55.1**	**-0.2**
PACP	**Pacheco Peak**	**0.81**	**332**		**Pb**	**12 55 55.6**	**+0.3**
HBTM	**San Juan Bauti**	**0.81**	**313**		**Pb**	**12 55 55.9**	**+0.6**
HFEM	**San Felipe**	**0.83**	**326**		**Pg**	**12 55 55.6**	**-0.3**
OCR	**O'Connell Ranc**	**0.83**	**318**		**Pb**	**12 55 56.0**	**+0.3**
ARDC	**Alexander Ranc**	**0.84**	**189**		**Pb**	**12 55 55.9**	**+0.1**
TSCN	**Private Proper**	**0.84**	**153**		**Pg**	**12 55 55.9**	**-0.1**
SLD	**San Luis Dam**	**0.84**	**337**		**Pg**	**12 55 56.0**	**-0.1**
HTUM	**Tustin Road**	**0.85**	**309**		**Pg**	**12 55 55.7**	**-0.6**
ANZ	**Anzar Road**	**0.86**	**314**		**Pg**	**12 55 56.1**	**-0.3**
HERM	**Elkhorn Road**	**0.88**	**305**		**Pg**	**12 55 56.5**	**-0.3**
PTAM	**Tassajara Cree**	**0.90**	**174**		**Pg**	**12 55 56.8**	**-0.5**
CSR	**Chase Ranch**	**0.91**	**317**		**Pg**	**12 55 56.8**	**-0.5**
SCKWR	**San Luis Creek**	**0.91**	**347**		**Pb**	**12 55 57.8**	**+0.7**
HCOM	**Corn Cob Canyo**	**0.93**	**310**		**Pg**	**12 55 57.1**	**-0.6**
TSCS	**Shell Creek So**	**0.93**	**156**		**Pg**	**12 55 57.0**	**-0.8**
HMOM	**Monterey**	**0.94**	**289**		**Pg**	**12 55 57.2**	**-0.8**
GHS	**Gilroy Hot Spr**	**0.95**	**328**		**Pg**	**12 55 57.7**	**-0.4**
EFD	**Emergency Oper**	**0.97**	**176**		**Pg**	**12 55 58.0**	**-0.5**
LSDC	**Los Osos Digit**	**0.99**	**181**		**Pb**	**12 55 59.4**	**+1.0**
JELB	**Ellicott, Sant**	**1.03**	**308**		**Pg**	**12 55 58.7**	**-0.9**
VPDC	**Valencia Peak**	**1.05**	**182**		**Pg**	**12 55 59.7**	**-0.4**
DPD	**Davis Peak**	**1.06**	**178**		**Pg**	**12 55 59.5**	**-0.7**
DCD	**Diablo Creek**	**1.08**	**181**		**Pg**	**12 55 59.4**	**-1.2**
CADM	**Anderson Res.**	**1.08**	**323**		**Pg**	**12 55 59.8**	**-0.8**
YEG	**Yeguas Mountai**	**1.10**	**141**		**Pg**	**12 56 00.7**	**-0.3**
JTGM	**Trout Gulch Ro**	**1.12**	**311**		**Pg**	**12 56 00.8**	**-0.7**
JLAB	**Laurel Hill**	**1.13**	**320**		**Pg**	**12 56 00.4**	**-1.2**
CMPM	**Mikes Peak**	**1.14**	**339**		**Pg**	**12 56 00.9**	**-0.8**
JHLM	**Holstrom Ranch**	**1.15**	**315**		**Pg**	**12 56 00.4**	**-1.6**
VOG	**Valley Oaks Go**	**1.16**	**88**		**Pg**	**12 55 59.7**	**-2.3**
VOG	**Valley Oaks Go**	**1.16**	**88**	P	**Pg**	**12 55 59.7**	**-2.3**
	baz=269,SNR=8.0						
VOG				S	**Sg**	**12 56 13.8**	**-3.4**
	baz=269						
CCOB	**Coe Ranch Numb**	**1.18**	**325**		**Pg**	**12 56 01.3**	**-1.2**
SMMC	**Simmler**	**1.18**	**146**		**Pg**	**12 56 02.1**	**-0.5**
SMMC	**Simmler**	**1.18**	**146**	P	**Pg**	**12 56 01.2**	**-1.4**
	baz=327,SNR=12						
SMMC				S	**Sg**	**12 56 15.7**	**-2.4**
	baz=327						
JRGM	**Rodeo Gulch Ro**	**1.19**	**309**		**Pg**	**12 56 00.7**	**-1.8**
ARN	**Arnold Ranch**	**1.20**	**332**		**Pg**	**12 56 01.4**	**-1.4**
MHC	**Mount Hamilton**	**1.24**	**328**		**Pg**	**12 56 02.0**	**-1.6**
BCH	**Branch Mountai**	**1.26**	**152**		**Pg**	**12 56 02.5**	**-1.5**
CARC	**Carrizo Plain**	**1.26**	**141**		**Pg**	**12 56 02.3**	**-1.7**
RCTC	**Rector, Farmer**	**1.27**	**89**		**Pn**	**12 56 01.9**	**-0.7**
CMMM	**Mount Mocho**	**1.28**	**335**		**Pg**	**12 56 02.6**	**-1.8**
COSM	**Mount Oso**	**1.29**	**340**		**Pg**	**12 56 03.4**	**-1.2**
JJOM	**Saint Joseph's**	**1.30**	**315**		**Pn**	**12 56 02.7**	**-0.4**
CMLM	**Mount Lewis**	**1.36**	**331**		**Pn**	**12 56 03.8**	**-0.2**
JBNB	**Ben Lomond Mou**	**1.36**	**308**		**Pn**	**12 56 03.3**	**-0.6**
CRGC	**Crocker Grade**	**1.38**	**139**		**Pn**	**12 56 04.4**	**+0.2**
MRHM	**Rocky Hill**	**1.40**	**90**		**Pn**	**12 56 03.2**	**-1.2**
CALM	**Calaveras Res.**	**1.40**	**326**		**Pn**	**12 56 04.3**	**-0.1**
JSGM	**Saratoga Golf**	**1.40**	**315**		**Pn**	**12 56 04.7**	**+0.3**
PMLM	**Mount Lospe**	**1.41**	**173**		**Pn**	**12 56 04.7**	**+0.2**
JSJM	**St Joseph**	**1.46**	**316**		**Pn**	**12 56 05.3**	**+0.1**
VES	**Vestal, Richgr**	**1.47**	**107**		**Pn**	**12 56 04.5**	**-0.9**
VES	**Vestal, Richgr**	**1.47**	**107**	P	**Pn**	**12 56 05.0**	**-0.4**
	baz=289						
JJRM	**Joaquin Road**	**1.53**	**314**		**Pn**	**12 56 06.3**	**+0.1**
JFP	**Foothills Park**	**1.53**	**314**		**Pn**	**12 56 06.2**	**-0.1**
JSFB	**Stanford Teles**	**1.55**	**316**		**Pn**	**12 56 06.7**	**+0.1**
CVLM	**Vallecito**	**1.56**	**329**		**Pn**	**12 56 07.0**	**+0.4**
KCC	**Kaiser Creek**	**1.58**	**49**		**Pn**	**12 56 07.3**	**+0.3**
JRSC	**Jasper Ridge**	**1.59**	**315**		**Pn**	**12 56 06.9**	**-0.2**
CNIC	**Niles Canyon**	**1.60**	**325**		**Pn**	**12 56 07.5**	**-0.2**
BGH	**Bear Gulch**	**1.61**	**311**		**Pn**	**12 56 07.3**	**0.0**
PKM	**Mcpherson Peak**	**1.62**	**150**		**Pn**	**12 56 08.3**	**+0.6**
PKM	**Mcpherson Peak**	**1.62**	**150**	P	**Pn**	**12 56 07.8**	**+0.1**
	baz=331,SNR=17						
JHPM	**Huddart Park**	**1.65**	**314**		**Pn**	**12 56 08.1**	**+0.2**
SPG2	**Springville 2**	**1.66**	**93**		**Pn**	**12 56 07.3**	**-0.7**
MCUB	**Copperopolis B**	**1.69**	**5**		**Pn**	**12 56 07.7**	**-0.7**
FIGC	**Figueroa Mtn.**	**1.70**	**156**		**Pn**	**12 56 09.0**	**+0.3**
JCHM	**Cahill Ridge**	**1.75**	**315**		**Pn**	**12 56 09.4**	**+0.1**
CLCB	**Lake Chabot**	**1.75**	**326**		**Pn**	**12 56 09.1**	**-0.2**
CSLM	**San Leandro Hi**	**1.77**	**324**		**Pn**	**12 56 09.5**	**0.0**
BCW	**Bitter Crk WRg**	**1.77**	**139**		**Pn**	**12 56 10.3**	**+0.7**
BCW				IAML		12 56 48.7	
	comp=N,317nm,1.1s						
BCW				IAML		12 56 52.9	
	comp=E,330nm,0.8s						
CMB	**Columbia Colle**	**1.77**	**11**		**Pn**	**12 56 09.4**	**-0.2**
CMB	**Columbia Colle**	**1.77**	**11**		**Pn**	**12 56 09.6**	**0.0**
CMB				IAML		12 56 33.2	
	comp=E,142nm,0.6s						
CMB				IAML		12 56 37.5	
	comp=N,119nm,0.5s						
BGC	**Bolinger Road**	**1.82**	**327**		**Pn**	**12 56 11.2**	**+1.0**
BDM	**Black Diamond**	**1.86**	**333**		**Pn**	**12 56 11.5**	**+0.7**
JSBM	**San Bruno Moun**	**1.87**	**318**		**Pn**	**12 56 10.7**	**-0.2**
SYP	**Santa Ynez Pea**	**1.89**	**159**		**Pn**	**12 56 11.8**	**+0.4**
MRDM	**Red Cones**	**1.92**	**47**		**Pn**	**12 56 12.8**	**+1.0**
MDPB	**Devils Postpil**	**1.93**	**46**		**Pn**	**12 56 12.9**	**+1.0**
MMPM	**Mammoth Pass**	**1.94**	**47**		**Pn**	**12 56 13.5**	**+1.3**
BKS	**Berkeley--Byer**	**1.94**	**325**		**Pn**	**12 56 12.0**	**0.0**
CVPM	**Vollmer Peak**	**1.94**	**325**		**Pn**	**12 56 12.2**	**+0.3**
MINS	**Minaret Summit**	**1.95**	**45**		**Pn**	**12 56 13.4**	**+1.1**
MMSM	**Mammoth Summit**	**1.95**	**46**		**Pn**	**12 56 13.7**	**+1.2**
OMMB	**Old Mammoth Mi**	**1.96**	**47**		**Pn**	**12 56 13.5**	**+1.1**
MLIM	**Lincoln Peak**	**1.97**	**47**		**Pn**	**12 56 14.6**	**+2.0**
MDYM	**Dry Creek**	**1.98**	**46**		**Pn**	**12 56 14.5**	**+1.7**
ARVC	**Arvin**	**1.99**	**125**		**Pn**	**12 56 13.3**	**+0.7**
ARVC	**Arvin**	**1.99**	**125**	P	**Pn**	**12 56 13.3**	**+0.7**
	baz=307						
ISA	**Isabella, Lake**	**2.00**	**108**		**Pn**	**12 56 12.6**	**-0.2**
ISA	**Isabella, Lake**	**2.00**	**108**	Pn	**Pn**	**12 56 12.3**	**-0.4**
ISA	**Isabella, Lake**	**2.00**	**108**	IAML		12 56 46.2	
	comp=N,138nm,0.6s						
ISA				IAML		12 56 46.4	
	comp=E,164nm,0.8s						
ISA	**Isabella, Lake**	**2.00**	**108**	P	**Pn**	**12 56 12.4**	**-0.4**
	baz=289,SNR=69						
ISA				Sb	**Sn**	**12 56 38.5**	**+1.1**
	baz=289						
MDCM	**Deadman Creek**	**2.00**	**45**		**Pn**	**12 56 14.3**	**+1.3**
MMLB	**Mammoth Lakes**	**2.00**	**47**		**Pn**	**12 56 14.2**	**+1.2**
MLCM	**Laurel Creek C**	**2.01**	**49**		**Pn**	**12 56 14.8**	**+1.6**
MGPM	**Gravel Pit**	**2.03**	**48**		**Pn**	**12 56 15.2**	**+1.9**
WLHM	**Little Horse**	**2.03**	**93**		**Pn**	**12 56 14.1**	**+0.7**
TEJ	**El Tejon**	**2.03**	**121**		**Pn**	**12 56 12.8**	**-0.3**
MEMM	**East Mammoth H**	**2.03**	**47**		**Pn**	**12 56 15.4**	**+2.0**
MCBM	**Casa Benchmark**	**2.04**	**48**		**Pn**	**12 56 15.6**	**+2.0**
MCSM	**Casa Diablo Ho**	**2.04**	**48**		**Pn**	**12 56 15.6**	**+2.0**
MCVM	**Convict Lake**	**2.05**	**50**		**Pn**	**12 56 15.2**	**+1.6**
RCCR	**Rock Creek Can**	**2.06**	**54**		**Pn**	**12 56 15.0**	**+1.2**
SBC	**Santa Barbara**	**2.06**	**154**	P	**Pn**	**12 56 14.5**	**+1.0**
	baz=335						
MLAC	**Mammoth, Mammo**	**2.07**	**49**		**Pn**	**12 56 15.9**	**+2.0**
MLAC	**Mammoth, Mammo**	**2.07**	**49**	P	**Pn**	**12 56 15.6**	**+1.7**
	baz=230,SNR=79						
MLAC				S	**Sn**	**12 56 41.4**	**+2.0**
	baz=230						
MDRNC	**Doe Ridge**	**2.08**	**49**		**Pn**	**12 56 15.9**	**+1.9**
MTUM	**Tungsten Hills**	**2.09**	**59**		**Pn**	**12 56 15.7**	**+1.5**
LUL	**Lundy Lake**	**2.19**	**36**		**Pn**	**12 56 17.0**	**+1.5**
ORC	**Owens River**	**2.19**	**52**		**Pn**	**12 56 17.4**	**+1.9**
TIN	**Tinemaha, Big**	**2.21**	**69**		**Pn**	**12 56 17.6**	**+1.9**
TIN	**Tinemaha, Big**	**2.21**	**69**	P	**Pn**	**12 56 17.0**	**+1.3**
	baz=251,SNR=41						
TIN				Sb	**Sn**	**12 56 46.3**	**+3.5**
	baz=251						
CWC	**Cottonwood Cre**	**2.21**	**85**		**Pn**	**12 56 17.4**	**+1.6**
CWC	**Cottonwood Cre**	**2.21**	**85**	P	**Pn**	**12 56 16.9**	**+1.2**
	baz=267						
CWC				Sb	**Sn**	**12 56 45.3**	**+2.4**
	baz=267						
MFBM	**Five Bridges**	**2.22**	**59**		**Pn**	**12 56 18.2**	**+2.3**
MCDM	**Chidago Canyon**	**2.28**	**56**		**Pn**	**12 56 19.0**	**+2.4**
BENR	**Benton**	**2.29**	**51**		**Pn**	**12 56 19.1**	**+2.2**
SNT	**Sears Point**	**2.29**	**326**		**Pn**	**12 56 16.8**	**+0.1**
POCCA	**Poleta Canyon**	**2.30**	**62**		**Pn**	**12 56 19.1**	**+2.1**
MRCM	**Red Rock Canyo**	**2.31**	**53**		**Pn**	**12 56 19.4**	**+2.3**
NOLM	**Olema**	**2.35**	**318**		**Pn**	**12 56 15.7**	**-1.8**
MLNR	**Milner Canyon**	**2.37**	**56**		**Pn**	**12 56 19.9**	**+2.0**
WNMM	**Nine Mile Cany**	**2.40**	**100**		**Pn**	**12 56 20.2**	**+2.1**
NAPC	**Atlas Peak**	**2.43**	**332**		**Pn**	**12 56 20.0**	**+1.3**
CVS	**Carmenet Viney**	**2.43**	**328**		**Pn**	**12 56 19.3**	**+0.7**
CGO	**Cerro Gordo**	**2.44**	**83**		**Pn**	**12 56 20.9**	**+1.8**
MCCM	**Marconi Confer**	**2.48**	**319**		**Pn**	**12 56 19.3**	**+0.1**
MCCM	**Marconi Confer**	**2.48**	**319**		**Pn**	**12 56 19.9**	**+0.7**
MCCM				IAML		12 57 11.8	
	comp=E,93nm,1.0s						
MCCM				IAML		12 57 25.0	
	comp=N,102nm,2.4s						
CCAC	**Calif City Air**	**2.55**	**116**		**Pn**	**12 56 20.7**	**+0.4**
CCAC				IAML		12 57 08.2	
	comp=N,124nm,1.0s						
CCAC				IAML		12 57 26.6	
	comp=E,117nm,1.2s						
NTYM	**Taylor**	**2.56**	**325**		**Pn**	**12 56 20.6**	**+0.3**
NBPM	**Berryessa Peak**	**2.61**	**336**		**Pn**	**12 56 22.1**	**+1.0**
LHV	**Little Huntoon**	**2.69**	**43**		**Pn**	**12 56 24.4**	**+2.3**
EDW2	**Edwards Air Fo**	**2.70**	**121**	P	**Pn**	**12 56 23.3**	**+1.0**
	baz=303						
MPMC	**Manual Prospec**	**2.70**	**94**	P	**Pn**	**12 56 24.1**	**+1.6**
	baz=276,SNR=60						
LCH	**Last Change Ra**	**2.71**	**69**		**Pn**	**12 56 23.6**	**+1.0**
LCH				IAML		12 57 08.8	
	comp=E,115nm,0.6s						
LCH				IAML		12 57 10.0	
	comp=N,82nm,0.6s						
EMB	**Emerald Bay**	**2.73**	**12**		**Pn**	**12 56 24.0**	**+1.0**
EMB				IAML		12 57 06.0	
	comp=E,111nm,0.6s						
GRAC	**Grapevine Rang**	**2.86**	**75**	Pn	**Pn**	**12 56 26.0**	**+1.4**
GRAC				IAML		12 57 15.6	
	comp=E,140nm,0.9s						
GRAC				IAML		12 57 23.8	
	comp=N,106nm,0.7s						
NVAR	**Mina Array Bea**	**2.92**	**42**		**Pn**	**12 56 28.2**	**+2.6**
PNTR	**Pine Nut**	**2.95**	**19**		**Pn**	**12 56 27.1**	**+1.1**
PNTR				IAML		12 57 32.2	
	comp=N,130nm,1.0s						
RYN	**Ryan**	**2.96**	**37**	Pn	**Pn**	**12 56 27.2**	**+1.1**
RYN				IAML		12 57 11.1	
	comp=N,52nm,0.3s						
RYN				IAML		12 57 23.1	
	comp=E,67nm,1.2s						
YERR	**Yerington**	**2.96**	**24**		**Pn**	**12 56 27.6**	**+1.4**
YERR				IAML		12 57 16.2	
	comp=N,111nm,0.7s						
NV11	**Mina Array Sit**	**3.01**	**44**		**Pn**	**12 56 28.8**	**+2.1**
NV11				IAML		12 57 19.7	
	comp=N,44nm,1.2s						
NV11				IAML		12 57 28.7	
	comp=E,38nm,1.1s						
PASC	**Pasadena Art C**	**3.02**	**134**	Pn	**Pn**	**12 56 26.9**	**+0.2**
MPK	**Martis Peak**	**3.06**	**11**		**Pn**	**12 56 28.2**	**+0.7**
VCNR	**Virginia City**	**3.13**	**17**		**Pn**	**12 56 29.7**	**+1.2**
VCNR				IAML		12 57 23.7	
	comp=E,102nm,0.7s						
QSM	**Queen of Sheba**	**3.21**	**95**		**Pn**	**12 56 31.1**	**+1.8**
QSM				IAML		12 57 25.8	
	comp=N,31nm,1.4s						
ORV	**Oroville**	**3.30**	**351**	Pn	**Pn**	**12 56 30.9**	**+0.4**
ORV				IAML		12 57 32.3	
	comp=E,37nm,0.8s						
GWY	**Greenwater Val**	**3.35**	**91**	Pn	**Pn**	**12 56 30.9**	**-0.6**
GWY				IAML		12 57 35.7	
	comp=E,35nm,0.7s						
TPH	**Tonopah**	**3.38**	**57**		**Pn**	**12 56 33.3**	**+1.5**
GSC	**Goldstone, Bar**	**3.41**	**106**		**Pn**	**12 56 33.3**	**+1.2**
GSC				IAML		12 57 28.7	
	comp=E,42nm,1.2s						
GSC				IAML		12 57 31.5	
	comp=N,40nm,0.9s						
KVN	**Kaiserville**	**3.50**	**37**	Pn	**Pn**	**12 56 34.2**	**+0.8**
KVN				IAML		12 57 32.8	
	comp=N,39nm,0.8s						
KVN				IAML		12 57 33.7	
	comp=E,38nm,0.7s						
CIS	**Catalina Islan**	**3.50**	**145**	P	**Pn**	**12 56 33.1**	**-0.2**
	baz=327						
CIS				S	**Sn**	**12 57 13.9**	**-0.4**
	baz=327						
PAHR	**Pah Rah Range**	**3.59**	**18**	Pn	**Pb**	**12 56 40.2**	**-2.6**
PAHR				IAML		12 57 48.0	
	comp=E,36nm,1.1s						
PAHR				IAML		12 57 48.0	
	comp=N,30nm,1.2s						
TPNV	**Topopah Spring**	**3.73**	**79**		**Pn**	**12 56 38.7**	**+2.0**
TPNV				IAML		12 57 46.7	
	comp=N,34nm,0.8s						
TPNV				IAML		12 57 48.0	
	comp=N,36nm,1.2s						
TPNV	**Topopah Spring**	**3.73**	**79**	P	**Pn**	**12 56 37.9**	**+1.2**
	baz=261						
ELS	**Elsinore Mount**	**3.84**	**133**	Pn	**Pn**	**12 56 39.8**	**+1.8**
HEC	**Hector,Ludlow**	**3.93**	**111**	P	**Pn**	**12 56 39.2**	**-0.1**
	baz=293						
TUQ	**Turquoise Moun**	**4.06**	**101**	P	**Pn**	**12 56 40.7**	**-0.5**
	baz=284						
S11A	**Rachel**	**4.28**	**70**	Pn	Pn	12 56 49.5	+5.3
GMRC	**Granite Mounta**	**4.47**	**108**	P	**Pn**	**12 56 46.7**	**0.0**
	baz=291,SNR=5.5						
PFO	**Pinyon Flats O**	**4.47**	**126**		**Pn**	**12 56 47.7**	**+0.9**
PFO	**Pinyon Flats O**	**4.47**	**126**	P	**Pn**	**12 56 46.6**	**-0.1**
	baz=308						
PMD	**Palm Desert**	**4.50**	**125**	Pn	**Pn**	**12 56 48.1**	**+1.0**
PMD				IAML		12 57 31.5	
	comp=E,6.3nm,2.3s						
PMD				IAML		12 58 26.1	
	comp=N,6.3nm,2.1s						
BELC	**Belle Mtn. Jos**	**4.56**	**119**	P	**Pn**	**12 56 48.3**	**+0.3**
	baz=302						
SHPR	**Sheep Range**	**4.57**	**86**	Pn	**Pn**	**12 56 50.9**	**+2.8**
R11A	**Troy Canyon, C**	**4.64**	**62**	Pn	**Pn**	**12 56 52.6**	**+3.4**
R11A	**Troy Canyon, C**	**4.64**	**62**	Pb	**Pb**	**12 57 01.8**	**+1.0**
	baz=245						
PRN	**Pahroc Range**	**4.75**	**75**		**Pn**	**12 56 52.1**	**+1.4**
PRN				IAML		12 58 23.9	
	comp=N,22nm,0.8s						
PRN				IAML		12 58 24.3	
	comp=E,26nm,0.9s						
BMN	**Battle Mountai**	**5.00**	**33**	Pn	**Pn**	**12 56 54.2**	**+0.1**
BMN				IAML		12 58 17.2	
	comp=N,8.7nm,0.7s						
CBX	**Cerro Bola**	**5.25**	**138**	Pn	**Pn**	**12 56 59.1**	**+1.6**
MOD	**Modoc Plateau**	**5.61**	**4**	Pn	**Pn**	**12 57 00.1**	**-2.4**
W13A	**Hualapai Mount**	**5.76**	**100**	Pn	**Pn**	**12 57 02.4**	**-2.3**
SPR3	**Spring Creek 3**	**5.81**	**60**	Pn	**Pn**	**12 57 03.3**	**-2.1**
PSUT	**Pine Spring**	**5.97**	**66**	Pn	**Pn**	**12 57 07.7**	**+0.2**
LCMT	**Little Creek M**	**6.13**	**81**	Pn	**Pn**	**12 57 07.8**	**-1.8**
ELK	**Elko**	**6.23**	**43**	Pn	**Pn**	**12 57 10.7**	**-0.4**
U15A	**North Rim**	**6.88**	**86**	Pn	**Pn**	**12 57 21.9**	**+1.9**

*NNC **09** 13:05:30.2±0.3, 50.02N×78.82E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=6.1km s-min=1.7km az=72.0, Suspected Mining explosion.*

*IDC **09** 13:05:31.9±1.0, 50.07N×78.72E, h0km, mbtmp3.2/2, ML2.7/2, Error ellipse: s-maj=15.2km s-min=6.1km az=67.0*

ISC 09 13:05:30.2±1.0, 50.06N±0.04×78.43E±0.08, h0km, n17, σ0°72/28, 14C-11D, Eastern Kazakhstan

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UCH Uchtor 2.64 11 *e*PN **Pn** **13 07 21.2 -3.7**
UCH *e*S **Sb** **13 08 02.8 +0.6**
UCH Uchtor 2.64 11⇓ *e*P **Pb** **13 07 28.0 -1.3**
baz=13
UCH ⇓*e*S **Sb** **13 08 02.8 +0.6**
baz=13
TRKS Terek-Say 2.78 314 *e*PN **Pn** **13 07 27.1 +0.6**
TRKS *e*S **Sn** **13 08 01.4 +0.9**
TRKS Terek-Say 2.78 314⇑ *e*P **Pn** **13 07 27.1 +0.6**
baz=16
TRKS ⇑*e*S **Sn** **13 08 01.4 +0.9**
baz=16
GAR Garm 2.78 258 **Pn** **13 07 23.8 -2.8**
GAR Garm 2.78 258⇓ *e*PN **Pn** **13 07 26.5 -0.1**
GAR *e*S **Sn** **13 08 00.3 -0.3**
GAR Garm 2.78 258⇓ *e*P **Pn** **13 07 26.5 -0.1**
baz=59
GAR ⇓*e*S **Sn** **13 08 00.3 -0.3**
baz=59
EKS2 Erkin-Say 3.02 360 P **Pb** **13 07 34.6 -0.9**
SNR=9.5
EKS2 Erkin-Say 3.02 360⇓ *e*PN **Pn** **13 07 32.5 +2.7**
EKS2 *e*S **Sb** **13 08 11.2 -1.6**
EKS2 Erkin-Say 3.02 360⇑ *e*P **Pn** **13 07 32.5 +2.7**
baz=1.0
EKS2 ⇑*e*S **Sb** **13 08 11.2 -1.6**
baz=1.0
AAK Ala-Archa 3.04 10 Pn **Pb** **13 07 35.2 -0.7**
comp=E,11nm,0.3s,baz=178,slow=11,SNR=18
AAK Sn **Sg** **13 08 18.2 -0.7**
comp=E,12nm,0.3s,baz=341,slow=20,SNR=10
comp=E,27nm,0.5s
AAK Ala-Archa 3.04 10 P **Pb** **13 07 36.2 +0.3**
SNR=18
AAK Ala-Archa 3.04 10 Pn **Pn** **13 07 31.6 +1.4**
AAK Ala-Archa 3.04 10 *i* PN **Pb** **13 07 34.5 -1.4**
AAK Ala-Archa 3.04 10⇓ *e*P **Pb** **13 07 33.2 -2.7**
baz=11
AAK ⇓*e*S **Sb** **13 08 12.2 -1.2**
baz=11
KBK Karagaybulak 3.14 16 P **Pb** **13 07 38.1 +0.6**
SNR=18
KBK Karagaybulak 3.14 16⇓ *e*PN **Pb** **13 07 34.6 -2.9**
KBK *e*S **Sb** **13 08 14.4 -1.8**
KBK Karagaybulak 3.14 16⇓ *e*P **Pb** **13 07 34.6 -2.9**
baz=17
KBK ⇓*e*S **Sb** **13 08 14.4 -1.8**
baz=17
MRKS Merke 3.14 352 *e*P **Pg** **13 07 40.6 -0.7**
comp=E,19nm,0.3s
MRKS *e*S **Sg** **13 08 24.3 +2.4**
comp=E,335nm,0.3s
ULHL Ulahol 3.19 34 P **Pg** **13 07 42.3 0.0**
SNR=30
ULHL Ulahol 3.19 34 *e*PN **Pb** **13 07 35.8 -2.7**
ULHL *e*S **Sb** **13 08 16.2 -1.5**
ULHL Ulahol 3.19 34⇑ *e*P **Pb** **13 07 35.8 -2.7**
baz=35
ULHL ⇑*e*S **Sb** **13 08 16.2 -1.5**
baz=35
FRU1 Bishkek 3.23 11 *e*PN **Pb** **13 07 36.0 -3.1**
FRU1 *e*S **Sb** **13 08 17.0 -1.7**
FRU1 Bishkek 3.23 11⇑ *e*P **Pb** **13 07 36.0 -3.1**
baz=12
FRU1 ⇑*e*S **Sb** **13 08 17.0 -1.7**
baz=12
BOOM Boomskoye usch 3.27 29 **Pn** **13 07 35.7 +2.4**
BOOM Boomskoye usch 3.27 29⇓ *e*PN **Pb** **13 07 36.6 -3.3**
BOOM *e*S **Sb** **13 08 18.1 -2.0**
BOOM Boomskoye usch 3.27 29⇓ *e*P **Pb** **13 07 36.6 -3.3**
baz=29
BOOM ⇓*e*S **Sb** **13 08 18.1 -2.0**
baz=29
CHMS Chumysh 3.43 12 *i* PN **Pb** **13 07 40.6 -1.9**
CHMS pmax pmax
comp=Z,9.0nm,0.5s
CHMS Chumysh 3.43 12 ⇑Pn **Pb** **13 07 40.7 -1.9**
comp=Z,8.7nm,0.5s
CHMS ⇑Pg **Pg** **13 07 48.4 +1.4**
comp=Z,18nm,0.5s
CHMS ⇑Lg Lg 13 08 33.9
comp=Z,183nm,0.9s
CHMS Chumysh 3.43 12⇑ *e*P **Pn** **13 07 38.7 +3.3**
baz=13
CHMS ⇑*e*S **Sb** **13 08 21.1 -3.4**
baz=13
TKM2 Tokmak 2 3.54 22 P **Pb** **13 07 44.6 +0.1**
SNR=7.7
TKM2 Tokmak 2 3.54 22 *i* PN **Pb** **13 07 42.1 -2.4**
TKM2 pmax pmax
comp=Z,11nm,0.7s
TKM2 Tokmak 2 3.54 22 ⇑Pn **Pb** **13 07 42.2 -2.4**
comp=Z,11nm,0.7s
TKM2 ⇑Pg **Pg** **13 07 50.1 +1.0**
comp=Z,42nm,0.9s
TKM2 ⇓Lg Lg 13 08 38.6
comp=Z,82nm,0.6s
TKM2 Tokmak 2 3.54 22⇑ *e*P **Pn** **13 07 40.4 +3.3**
baz=23
TKM2 ⇑*e*S **Sb** **13 08 24.6 -3.4**
baz=23
USP Ospenovka 3.66 8 P **Pg** **13 07 50.9 -0.5**
SNR=8.8
USP Ospenovka 3.66 8 *e*PN **Pn** **13 07 41.6 +3.0**
USP *e*S **Sb** **13 08 26.7 -4.5**
USP Ospenovka 3.66 8⇑ *e*P **Pn** **13 07 41.6 +3.0**
baz=9.0
USP ⇑*e*S **Sb** **13 08 26.7 -4.5**
baz=9.0
CHGR Chuyangaron 3.75 256 **Pn** **13 07 38.6 -1.2**
CHGR Chuyangaron 3.75 256 PN **Pn** **13 07 38.6 -1.2**
CHGR Chuyangaron 3.75 256⇓ *e*P **Pn** **13 07 39.8 0.0**
baz=57
CHGR ⇓*e*S **Sn** **13 08 23.1 -1.2**
baz=57
DZA Taraz 3.75 331 *e*PN **Pb** **13 07 50.1 +2.2**
DZA *e* 13 08 39.5
DZA Taraz 3.75 331 *e*P **Pg** **13 07 51.7 -1.4**
comp=Z,103nm,0.1s
DZA *e*S **Sg** **13 08 43.2 +1.6**
comp=Z,314nm,0.3s
DZA Taraz 3.75 331 *e*Pg **Pb** **13 07 50.1 +2.2**
baz=336
DZA *e*Lg Lg 13 08 39.6
baz=336
KST Kastek 3.77 25 *e*P **Pg** **13 07 51.8 -1.6**
comp=Z,14nm,0.3s
KST *e*S **Sg** **13 08 44.5 +2.3**
comp=Z,102nm,0.7s
KST Kastek 3.77 25 Pg **Pg** **13 07 53.0 -0.4**
comp=Z,14nm,0.3s
KST Lg Lg 13 08 44.5
comp=Z,102nm,0.7s
IUG luzhnay 3.81 312 *e*PN **Pn** **13 07 43.3 +2.7**
IUG *e* 13 07 55.2
IUG luzhnay 3.81 312 *e*P **Pb** **13 07 51.0 +2.1**
comp=Z,635nm,0.6s
IUG *e*S **Sg** **13 08 43.2 -0.3**
comp=Z,176nm,0.7s
IUG luzhnay 3.81 312 *e*Pn **Pn** **13 07 43.4 +2.7**
baz=316
IUG *e*Pg **Pg** **13 07 55.2 +1.1**
baz=316
IUG *e*Lg Lg 13 08 41.7
baz=316
IUG luzhnay 3.81 312 Pg **Pg** **13 07 52.2 -1.9**
comp=Z,2µm,0.7s
IUG Lg Lg 13 08 43.2
comp=Z,176nm,0.7s
TAS Tashkent 3.83 298 *e*PN **Pn** **13 07 42.0 +1.1**
TAS *e*S **Sn** **13 08 27.3 +0.9**
TAS Tashkent 3.83 298⇑ *e*P **Pn** **13 07 42.0 +1.1**
baz=0.0
TAS ⇑*e*S **Sn** **13 08 27.3 +0.9**
baz=0.0
SGDS Sogindy 3.86 9 *e*PN **Pn** **13 07 41.4 +0.1**
SGDS *e* 13 07 53.8
SGDS *e* 13 08 47.0
SGDS Sogindy 3.86 9 *e*P **Pg** **13 07 53.8 -1.4**
comp=Z,18nm,0.5s
SGDS *e*S **Sg** **13 08 46.8 +1.6**
comp=Z,69nm,0.9s
SGDS Sogindy 3.86 9 *e*Pn **Pn** **13 07 41.5 +0.1**
baz=14
SGDS *e*Pg **Pg** **13 07 53.9 -1.4**
baz=14
SGDS *e*Lg Lg 13 08 47.1
baz=14
SGDS Sogindy 3.86 9 Pg **Pg** **13 07 53.8 -1.4**
comp=Z,18nm,0.5s
SGDS Lg Lg 13 08 45.8
comp=Z,69nm,0.9s
MTBS Maitube 4.01 29 *e*P **Pg** **13 07 56.5 -1.5**
comp=Z,22nm,0.6s
MTBS *e*S **Sg** **13 08 52.3 +2.5**
comp=Z,45nm,0.4s
MTBS Maitube 4.01 29 Pg **Pg** **13 07 57.6 -0.4**
comp=Z,22nm,0.6s
MTBS Lg Lg 13 08 52.3
comp=Z,45nm,0.4s
CHM Chimkent 4.16 311 *e*P **Pg** **13 08 00.6 -0.3**
comp=Z,4.9nm,0.2s
CHM *e*S **Sg** **13 08 59.3 +4.4**
comp=Z,400nm,0.5s
KK31 Karatay Array 4.26 325 Pn **Pn** **13 07 47.1 +0.3**
KK31 Karatay Array 4.26 325 *i* PN **Pn** **13 07 49.9 +3.2**
KK31 Karatay Array 4.26 325 Pn **Pn** **13 07 49.9 +3.2**
comp=Z,2.6nm,0.3s,baz=134,slow=13,SNR=47
KK31 ⇓Pg **Pg** **13 08 02.4 -0.4**
comp=Z,20nm,0.7s,baz=143,slow=16,SNR=8.2
KK31 ⇓Lg Lg 13 08 56.0
comp=Z,66nm,0.7s,baz=133,slow=28,SNR=5.9
KKAR Karatay Array 4.26 325 *e*PN **Pn** **13 07 48.9 +2.1**
KKAR *e*S **Sn** **13 08 38.8 +1.9**
KKAR Karatay Array 4.26 325⇑ *e*P **Pn** **13 07 48.9 +2.1**
baz=27
KKAR ⇑*e*S **Sn** **13 08 38.8 +1.9**
baz=27
AAA Alma-Ata 4.26 32 *e*PN **Pg** **13 08 03.5 +0.6**
AAA *e* 13 09 02.2
AAA Alma-Ata 4.26 32 *e*P **Pg** **13 08 02.5 -0.4**
comp=Z,20nm,0.1s
AAA *e*S **Sg** **13 09 01.4 +3.3**
comp=Z,126nm,0.6s
AAA Alma-Ata 4.26 32 *e*Pg **Pg** **13 08 03.5 +0.6**
baz=36
AAA *e*Lg Lg 13 09 02.2
baz=36
MDOK Medeo 4.28 34 PN **Pb** **13 07 53.3 -3.7**
MDOK 13 08 01.7
MDOK Medeo 4.28 34 *e*P **Pg** **13 08 01.6 -1.6**
comp=Z,19nm,0.8s
MDOK *e*S **Sg** **13 09 00.6 +1.9**
comp=Z,76nm,0.8s
MDOK Medeo 4.28 34 *e*Pn **Pb** **13 07 52.9 -4.2**
baz=37
MDOK *e*Pg **Pg** **13 08 03.0 -0.2**
baz=37
MDOK *e*Lg Lg 13 09 01.1
baz=37
MDOK Medeo 4.28 34 ⇑Pn **Pn** **13 07 51.8 +4.6**
comp=Z,5.0nm,0.6s
MDOK Pg **Pg** **13 08 02.4 -0.8**
comp=Z,19nm,0.8s
MDOK ⇓Pg **Pg** **13 08 02.8 -0.4**
comp=Z,35nm,0.9s
MDOK ⇓Lg Lg 13 09 00.1
comp=Z,57nm,0.8s
MDOK Lg Lg 13 09 00.6
comp=Z,76nm,0.8s
KRBS Karabastau 4.29 18 *e*P **Pg** **13 08 01.9 -1.5**
comp=Z,21nm,0.6s
KRBS *e*S **Sg** **13 09 00.1 +1.2**
comp=Z,39nm,0.8s
KRBS Karabastau 4.29 18 Pg **Pg** **13 08 01.9 -1.5**
comp=Z,21nm,0.6s
KRBS Lg Lg 13 09 00.2
comp=Z,39nm,0.8s
KNDC Almaty 4.29 33 ⇑Pg **Pg** **13 08 05.6 +2.2**
comp=Z,82nm,0.8s
KNDC ⇓Lg Lg 13 09 02.4
comp=Z,418nm,1.1s
KTBS Karatobe 4.60 27 *e*P **Pg** **13 08 07.7 -1.7**
comp=Z,19nm,0.4s
KTBS *e*S **Sg** **13 09 11.5 +2.4**
comp=Z,86nm,0.6s
KTBS Karatobe 4.60 27 Pg **Pg** **13 08 08.7 -0.6**
comp=Z,19nm,0.4s
KTBS Lg Lg 13 09 11.5
comp=Z,86nm,0.6s
KUU Kurty 4.65 23 *e*PN **Pn** **13 07 55.8 +3.7**
KUU *e* 13 08 08.6
KUU *e* 13 09 11.4
KUU Kurty 4.65 23 *e*P **Pg** **13 08 07.6 -2.7**
comp=Z,2.7nm,0.1s
KUU *e*S **Sg** **13 09 11.0 +0.4**
comp=Z,37nm,0.5s
KUU Kurty 4.65 23 *e*Pn **Pn** **13 07 55.9 +3.7**
baz=27
KUU *e*Pg **Pg** **13 08 08.6 -1.7**
baz=27
KUU *e*Lg Lg 13 09 11.4
baz=27
KUU Kurty 4.65 23 Pg **Pg** **13 08 08.5 -1.8**
comp=Z,2.7nm,0.1s
KUU Lg Lg 13 09 11.0
comp=Z,37nm,0.5s
SATY Saty 4.86 44 *e*PN **Pn** **13 07 59.4 +4.3**
SATY *e* 13 08 13.5
SATY Saty 4.86 44 *e*P **Pg** **13 08 13.6 -0.8**
comp=Z,25nm,0.8s
SATY *e*S **Sg** **13 09 20.6 +3.3**
comp=Z,48nm,1.0s
SATY Saty 4.86 44 *e*Pn **Pn** **13 07 59.5 +4.3**
baz=46
SATY *e*Pg **Pg** **13 08 13.6 -0.8**
baz=46
SATY *e*Lg Lg 13 09 21.6
baz=46
SATY Saty 4.86 44 Pg **Pg** **13 08 14.1 -0.3**
comp=Z,25nm,0.8s
SATY Lg Lg 13 09 20.6
comp=Z,48nm,1.0s
KURS Kuram 5.05 39 *e*P **Pg** **13 08 17.0 -0.9**
comp=Z,22nm,0.9s
KURS *e*S **Sg** **13 09 26.7 +3.4**
comp=Z,21nm,0.9s
KURS Kuram 5.05 39 Pg **Pg** **13 08 17.6 -0.3**
comp=Z,22nm,0.9s
KURS Lg Lg 13 09 26.7
comp=Z,21nm,0.9s
UZB Uzynbulak 5.26 46 *e*PN **Pn** **13 08 05.1 +4.5**
UZB *e* 13 08 22.2
UZB Uzynbulak 5.26 46 *e*P **Pg** **13 08 20.3 -1.6**
comp=Z,7.9nm,0.7s
UZB *e*S **Sg** **13 09 32.1 +2.1**
comp=Z,17nm,0.6s
UZB Uzynbulak 5.26 46 *e*Pn **Pn** **13 08 05.1 +4.5**
baz=48
UZB *e*Pg **Pg** **13 08 22.3 +0.4**
baz=48
UZB *e*Lg Lg 13 09 33.6
baz=48
UZB Uzynbulak 5.26 46 Pg **Pg** **13 08 21.9 0.0**
comp=Z,7.9nm,0.7s
BTLS Baital 5.40 2 *e*P **Pg** **13 08 20.5 -4.2**
comp=Z,11nm,0.4s
BTLS *e*S **Sg** **13 09 32.7 -1.9**
comp=Z,23nm,0.6s
BTLS Baital 5.40 2 *e*Pg **Pg** **13 08 21.9 -2.8**
baz=5.3
BTLS *e*Lg Lg 13 09 34.2
baz=5.3
BTLS Baital 5.40 2 Lg Lg 13 09 32.3
comp=Z,23nm,0.6s
ARXS Arharly 5.46 32 *e*PN **Pb** **13 08 19.3 +2.1**
ARXS Arharly 5.46 32 *e*P **Pg** **13 08 23.9 -1.9**
comp=Z,27nm,0.6s
ARXS *e*S **Sg** **13 09 37.6 +0.9**
comp=Z,48nm,0.6s
ARXS Arharly 5.46 32 Pg **Pg** **13 08 24.0 -1.9**
comp=Z,27nm,0.6s
ARXS Lg Lg 13 09 37.6
comp=Z,48nm,0.6s
SHLS Shalkode 5.51 49 *e*PN Pn 13 08 09.9 +5.8
SHLS *e* 13 08 30.1
SHLS Shalkode 5.51 49 *e*P **Pg** **13 08 30.0 +3.1**
comp=Z,9.7nm,0.7s
SHLS *e*S Sg 13 09 48.5 +10
comp=Z,16nm,0.5s
SHLS Shalkode 5.51 49 *e*Pn Pn 13 08 09.9 +5.8
baz=52
SHLS *e*Pg **Pg** **13 08 30.2 +3.4**
baz=52
SHLS *e*Lg Lg 13 09 50.4
baz=52
SHLS Shalkode 5.51 49 Pg **Pg** **13 08 30.0 +3.1**
comp=Z,9.7nm,0.7s
SHLS Lg Lg 13 09 48.5
comp=Z,16nm,0.5s
PDGK Podgornoye 5.64 47 PN **Pn** **13 08 10.2 +4.4**
PDGK PG **Pg** **13 08 30.4 +1.2**
PDGK Podgornoye 5.64 47 Pg **Pg** **13 08 28.5 -0.6**
comp=Z,4.7nm,1.1s
PDGK Lg Lg 13 09 45.4
comp=Z,11nm,0.8s
PDGK Podgornoye 5.64 47 ⇑Pn **Pn** **13 08 10.2 +4.4**
comp=Z,2.3nm,0.4s
PDGK ⇓Pg **Pg** **13 08 30.4 +1.2**
comp=Z,12nm,0.9s
PDGK ⇑Lg Lg 13 09 45.5
comp=Z,35nm,0.9s
NIL Nilore 5.99 184 **Pn** **13 08 10.9 +0.3**
NIL Nilore 5.99 184 PN **Pn** **13 08 10.9 +0.3**
KTMS Ketmen 6.21 50 *e*P **Pg** **13 08 39.3 -0.8**
comp=Z,2.6nm,0.7s
KTMS *e*S **Sg** **13 10 04.8 +4.3**
comp=Z,5.3nm,0.5s
TDK Taldyqorghan 6.35 31 *e*P **Pg** **13 08 42.0 -0.8**
comp=Z,71nm,0.5s
TDK *e*S **Sg** **13 10 08.9 +3.9**
comp=Z,68nm,0.9s
TDK Taldyqorghan 6.35 31 Pg **Pg** **13 08 42.5 -0.3**
comp=Z,71nm,0.5s
TDK Lg Lg 13 10 08.9
comp=Z,68nm,0.9s
DJR Jarkent 6.47 42 *e*P **Pg** **13 08 41.7 -3.3**
comp=Z,5.2nm,0.5s
DJR *e*S **Sg** **13 10 08.9 +0.1**
comp=Z,14nm,0.7s
DJR Jarkent 6.47 42 Pg **Pg** **13 08 42.2 -2.8**
comp=Z,5.2nm,0.5s
DJR Lg Lg 13 10 08.9
comp=Z,14nm,0.7s
SMLA Simla 8.92 161 *e*P Pn 13 09 02.1 +11
SMLA *e*S **Sn** **13 10 29.4 -2.2**
MK31 Makanchi Array 9.45 38 *i* P Pn 13 09 04.6 +6.6
MKAR Makanchi Array 9.45 38 Pn Pn 13 09 03.7 +5.7
comp=Z,1.2nm,0.8s,baz=220,slow=8.8,SNR=2.0
MKAR LR LR 13 12 33.5
comp=Z,10nm,20.5s,baz=240,slow=36
BRZS Berezniki 10.38 356 *e*P **Pn** **13 09 12.1 +1.5**
BRZS Berezniki 10.38 356 *e*Pn **Pn** **13 09 12.2 +1.5**
baz=358
WMQ Urumqi 11.18 64 *e*P **Pn** **13 09 24.7 +2.9**
WMQ pP 13 09 30.6
WMQ sP 13 09 34.1
WMQ S **Sn** **13 11 29.4 +2.2**
WMQ pmax pmax
comp=Z,39nm,0.9s
BVA0 Borovoye Array 13.60 351 ⇑P **P** **13 10 05.7 +1.9**
comp=Z,2.2nm,0.5s,baz=164,slow=9.4,SNR=5.1
BRVK Borovoye 13.64 351 Pn **Pn** **13 09 55.1 -0.1**
BRVK Borovoye 13.64 351 *i* P **Pn** **13 09 54.9 -0.3**
AB31 Akbulak array 13.79 319 P **Pn** **13 09 56.1 -1.0**
AB31 Akbulak array 13.79 319 ⇓P **Pn** **13 09 56.2 -1.0**
comp=Z,0.9nm,0.5s
ABKAR Akbulak array 13.79 319 Pn **Pn** **13 09 56.5 -0.7**
AKTO Aktyubinsk 15.50 319 Pn **Pn** **13 10 19.4 -0.9**
comp=Z,0.2nm,0.3s,baz=122,slow=14,SNR=9.8
AKTO LR LR 13 16 46.0
comp=Z,34nm,18.8s,baz=118,slow=39
comp=Z,1.6nm,0.6s
AKTO Aktyubinsk 15.50 319 ⇑P **Pn** **13 10 18.3 -2.0**
comp=Z,3.4nm,0.8s
ZALV Zalesovo Beam 16.15 24 Pn **P** **13 10 31.2 -0.8**
comp=Z,0.1nm,0.3s,baz=224,slow=8.3,SNR=5.6
ZALV LR LR 13 16 04.9
comp=Z,26nm,18.0s,baz=4.0,slow=34
comp=Z,1.1nm,0.6s
ZALV Zalesovo Beam 16.15 24 *i* P **P** **13 10 33.5 +1.5**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
GOMU GeErMu 16.92 95 P **P** **13 10 40.8 -0.3**
GOMU pP sP 13 10 46.6 +1.9
GOMU sP pP 13 10 50.4 +6.8
GOMU pmax pmax
comp=Z,2.0nm,0.9s
GOMU pmax pmax
comp=Z,46nm,5.8s
ARU Arti 19.58 334 LR LR 13 19 58.5
comp=Z,15nm,19.3s,baz=84,slow=40
ARU Arti 19.58 334 *d* P **P** **13 11 10.0 +0.2**
ARU S **S** **13 14 52.9 +1.8**
ARU pmax pmax
comp=Z,19nm,3.1s
GTA Gaotai 20.04 82 *e*P Pn 13 11 20.2 +3.3
GTA pP sP 13 11 28.6 +10
GTA pmax pmax
comp=Z,3.0nm,0.7s
BELG Belogornoye 22.07 314 *i* P **P** **13 11 34.1 -2.7**
BELG pmax pmax
comp=Z,2.0nm,0.7s
HYBB Hyderabad (bro 22.52 168 *e*P **P** **13 11 41.3 -0.6**
KIV Kislovodsk 23.53 291 *e*P **P** **13 11 48.0 -4.2**
KIV pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 24.78 60 P **P** **13 12 05.9 +1.9**
comp=Z,0.6nm,0.8s,baz=251,slow=9.0,SNR=3.6
comp=Z,0.6nm,0.8s
ULN Ulaanbaatar 25.23 60 *i* P **P** **13 12 08.9 +0.9**
ULN pmax pmax
comp=Z,5.0nm,2.1s
PZH PanZhiHua 26.70 111 P **P** **13 12 24.3 +2.8**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,3.8s
HHC Hu-ho-hao-te 28.70 75 *e*P **P** **13 12 40.6 +1.3**
HHC pmax pmax
comp=Z,19nm,0.7s
HHC pmax pmax
comp=Z,120nm,5.5s
CMAR Chiang Mai Arr 30.29 127 LR LR 13 26 57.1
comp=Z,20nm,18.3s,baz=130,slow=40
BRTR Keskin Array B 30.74 283 P **P** **13 12 58.3 +0.9**
comp=Z,0.6nm,0.5s,baz=61,slow=12,SNR=3.7
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 32.85 305 P **P** **13 13 14.7 -0.9**
comp=Z,0.3nm,0.4s,baz=82,slow=7.8,SNR=4.4
comp=Z,0.3nm,0.4s
FINES FINESS Array B 36.22 323 P **P** **13 13 45.1 +0.5**
comp=Z,6.3nm,1.0s,baz=109,slow=9.5,SNR=6.8
comp=Z,6.3nm,1.0s
ZEA Zeya 38.34 50 *e*P **P** **13 14 01.4 -1.3**
ARCES ARCESS Array B 39.16 335 P **P** **13 14 10.1 +0.6**
comp=Z,0.7nm,0.5s,baz=107,slow=8.1,SNR=11
comp=Z,0.7nm,0.5s
ARCES ARCESS Array B 39.16 335 P **P** **13 14 08.4 -1.1**
ARCES IAmb IAmb 13 14 29.3
comp=Z,16nm,1.4s
KLR Kul'dur 41.54 57 *i* P **P** **13 14 30.8 +1.4**
KLR pmax pmax
comp=Z,10.0nm,3.7s
GERES GERESS Array B 43.01 303 P **P** **13 14 41.7 +0.2**
comp=Z,0.4nm,0.5s,baz=76,slow=8.2,SNR=3.7
comp=Z,0.4nm,0.5s
NOA NORSAR Array B 43.28 321 P **P** **13 14 43.7 +0.3**
comp=Z,0.7nm,0.6s,baz=97,slow=7.2,SNR=2.0
comp=Z,0.7nm,0.6s
TOLK Toolik Lake Re 67.32 16 P **P** **13 17 37.4 +0.7**
TOLK IAmb IAmb 13 17 50.6
comp=Z,5.1nm,1.2s
TOA0 Torodi Ar. Sit 68.00 269 P **P** **13 17 39.4 -2.3**
TOA0 IAmb IAmb 13 17 39.9
comp=Z,6.5nm,1.4s
TORD Torodi Ar. Bea 68.00 269 P **P** **13 17 39.9 -1.8**
comp=Z,0.6nm,0.5s,baz=58,slow=5.4,SNR=8.1
comp=Z,0.6nm,0.5s
COLD Coldfoot 68.34 17 P **P** **13 17 43.6 +0.6**
IMAR Indian Mountai 68.50 19 P **P** **13 17 44.3 +0.3**
BMAR Burnt Mountain 69.36 15 P **P** **13 17 50.4 +1.0**
INK Inuvik 70.44 10 P **P** **13 17 56.6 +0.7**
INK IAmb IAmb 13 18 36.7
comp=Z,6.6nm,1.3s
INK Inuvik 70.44 10 P **P** **13 17 56.7 +0.7**
INK pmax pmax
comp=Z,7.0nm,1.3s
MDM Murphy Dome 70.68 18 P **P** **13 17 58.5 +1.0**
MDM IAmb IAmb 13 18 25.9

comp=Z,3.0nm,1.3s
ILAR Eielson Array 71.15 17 P **P** 13 17 59.6 **-0.8**
comp=Z,0.4nm,0.7s,baz=318,slow=5.1,SNR=5.1
comp=Z,0.4nm,0.7s
ILAR Eielson Array 71.15 17 P **P** **13 18 00.6 +0.3**
ILAR Eielson Array 71.15 17 P **P** **13 18 00.6 +0.3**
MCK McKinley 71.54 19 P **P** **13 18 03.2 +0.4**
MCK IAmb IAmb 13 18 14.2
comp=Z,8.7nm,1.4s
MCK McKinley 71.54 19 P **P** **13 18 03.2 +0.4**
MCK pmax pmax
comp=Z,9.0nm,1.4s
J26L Joseph Creek 72.11 16 P **P** **13 18 06.7 +0.4**
SCM Sheep Creek Mo 73.54 19 P **P** **13 18 15.3 +0.5**
SCM Sheep Creek Mo 73.54 19 P **P** **13 18 15.3 +0.5**
SCM pmax pmax
comp=Z,14nm,1.3s
PSA00 Pilbara Seismi 74.53 136 P **P** **13 18 21.3 +0.3**
PSA00 IAmb IAmb 13 18 41.9
comp=Z,4.8nm,1.2s
WB0 Warramunga Arr 81.74 124 P **P** **13 19 01.5 +0.5**
WRA Warramunga Arr 81.84 124 P **P** **13 19 00.8 -0.8**
comp=Z,0.4nm,0.6s,baz=323,slow=5.4,SNR=8.0
comp=Z,0.4nm,0.6s
WRA Warramunga Arr 81.84 124 P **P** **13 19 02.2 +0.7**
WRA Warramunga Arr 81.84 124 *i* P **P** **13 19 02.5 +1.0**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WB2 Warramunga Arr 81.84 124 P **P** **13 19 01.2 -0.4**
KRVT Keravat (AS076 83.69 101 P **P** **13 19 11.4 0.0**
comp=Z,16nm,0.4s,baz=339,slow=2.6,SNR=4.3
ASAR Alice Springs 84.30 127 P **P** **13 19 13.8 -0.4**
comp=Z,0.4nm,0.7s,baz=314,slow=6.1,SNR=5.1
comp=Z,0.4nm,0.7s

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*NEIC **09** 13:21:03.7±2.2, 4.92N±0.07×82.72W±0.08, h5km±5km, mb4.6/63, Error ellipse: s-maj=12.9km s-min=9.0km az=64.0*
*IDC **09** 13:21:04.3±0.8, 4.75N×82.73W, h0km, mb4.3/14, mbtmp4.3/17, ML3.2/3, MS3.7/43, Error ellipse: s-maj=25.6km s-min=15.0km az=48.0*
*GCMT **09** 13:21:09.7±0.3, 4.92N±0.01×82.64W±0.02, h21km±1km, MW4.8/95, Moment Tensor Solution. s21,c23; s95,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.01±.11; $M_{\theta\theta}$=0.29±.09; $M_{\phi\phi}$=-0.27±.10; $M_{r\theta}$=0.39±.17; $M_{\theta\phi}$=2.25±.08; $M_{\phi r}$=0.17±.14; Best double couple: M_o=2.30500×10^{16} NP1:ϕ_s=94.00000°, δ86.00000°, λ9.00000°. NP2: ϕ_s=3.00000°, δ81.00000°, λ176.00000°. Principal axes: T 2.3420, Plg10.0000°, Azm319.0000°; N -0.0730, Plg80.0000°, Azm119.0000°; P -2.2680, Plg3.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*SNET **09** 13:21:16.2±0.5, 7.15N×81.07W, h35km±999km, ML5.5*
*UCR **09** 13:21:17.0±1.4, 5.95N×82.74W, h5km, ML4.4, MW4.4, mb4.6(NEIC)*

ISC 09 13:21:05.5±0.4,**4.96N**±0.06×**82.67W**±0.07,**h12**km,**n399,** σ1**9**&**62**/365,**mb4.6**/44,**MS3.7**/38,**1C**,**South of Panama**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MAPC	**Malpelo**	**1.43**	**132**	*eP*			Pn	13 21 25.5	-5.7
CACAO	**El Cacao, Vera**	**2.98**	**37**	*eP*			**Pn**	**13 21 50.1**	**-2.4**
CDITO	**Canoas**	**3.60**	**357**	Pn			**Pn**	**13 21 59.1**	**-2.0**
AZU	**Azuero**	**3.69**	**40**	*eP*			**Pn**	**13 22 01.6**	**-0.7**
BRU2	**Volcan**	**3.81**	**360**				**Pn**	**13 22 02.2**	**-2.0**
BRU2	**Volcan**	**3.81**	**360**	*eP*			**Pn**	**13 22 02.5**	**-1.7**
EDSV	**San Vito**	**3.85**	**356**	*eP*			**Pn**	**13 22 03.1**	**-1.5**
EDPN	**Palmar Norte**	**4.05**	**349**	*eP*			**Pn**	**13 22 05.9**	**-1.5**
EDBA	**Buenos Aires**	**4.22**	**352**	*eP*			**Pn**	**13 22 08.8**	**-0.9**
SRBA	**San Rafael, Bu**	**4.30**	**351**	Pn			**Pn**	**13 22 08.8**	**-2.1**
DRKO	**Durika**	**4.32**	**352**	Pn			**Pn**	**13 22 09.3**	**-1.8**
EDDO	**Dominical**	**4.43**	**345**	*eP*			**Pn**	**13 22 10.9**	**-1.6**
PEZE	**Perez Zeledon,**	**4.51**	**347**				**Pn**	**13 22 11.8**	**-1.9**
PEZE	**Perez Zeledon,**	**4.51**	**347**	*eP*			**Pn**	**13 22 12.6**	**-1.1**
CDM	**Cerro de Muert**	**4.69**	**347**	*eP*			**Pn**	**13 22 15.0**	**-1.6**
GR1C	**Gorgona, Isla**	**4.90**	**113**	*eP*			**Pn**	**13 22 14.8**	**-4.2**
RIMA	**Rio Macho**	**4.92**	**346**				**Pn**	**13 22 17.4**	**-2.0**
RIMA	**Rio Macho**	**4.92**	**346**	*eP*			**Pn**	**13 22 18.2**	**-1.3**
LCR2	**La Lucha 2**	**4.93**	**345**	*eP*			**Pn**	**13 22 19.4**	**-0.3**
BCIP	**Isla Barro Col**	**5.04**	**34**	Pn			**Pn**	**13 22 20.5**	**-0.4**
BCIP	**Isla Barro Col**	**5.04**	**34**	*eP*			**Pn**	**13 22 20.6**	**-0.4**
UPA	**Univ. de Panam**	**5.07**	**38**	*eP*			**Pn**	**13 22 20.6**	**-0.8**
JACO	**JACO, Garabito**	**5.07**	**337**				**Pn**	**13 22 19.3**	**-2.1**
JACO	**JACO, Garabito**	**5.07**	**337**	*eP*			**Pn**	**13 22 19.5**	**-1.9**
CVTR	**Volcan Turrial**	**5.14**	**348**	Pn			**Pn**	**13 22 21.4**	**-1.3**
HDC	**Heredia**	**5.21**	**344**				**Pn**	**13 22 21.7**	**-1.7**
HDC	**Heredia**	**5.21**	**344**	*eP*			**Pn**	**13 22 21.5**	**-1.9**
LAFE	**Finca La Fe, P**	**5.30**	**335**	*eP*			**Pn**	**13 22 22.9**	**-1.7**
PTAC	**Punta Ardita,**	**5.30**	**66**	*eP*			**Pn**	**13 22 24.7**	**+0.1**
MALC	**Bahia Malaga**	**5.40**	**100**	*eP*			**Pn**	**13 22 25.5**	**-0.5**
JTS	**Las Juntas de**	**5.76**	**337**	Pn			**Pn**	**13 22 29.1**	**-1.8**
JTS	**Las Juntas de**	**5.76**	**337**	*c iP*			**Pn**	**13 22 28.6**	**-2.3**
JTS	**Las Juntas de**	**5.76**	**337**	*eP*			**Pn**	**13 22 29.6**	**-1.3**
JTS	**Las Juntas de**	**5.76**	**337**	*eP*			**Pn**	**13 22 29.3**	**-1.6**
DUNO	**Dulce Nombre,**	**5.80**	**331**				**Pn**	**13 22 29.8**	**-1.7**
FORC	**Fortuna**	**5.82**	**340**	*eP*			**Pn**	**13 22 31.6**	**-0.1**
CEDE	**Laguna Cedeo**	**5.85**	**340**	*eP*			**Pn**	**13 22 32.4**	**+0.3**
FLF1	**Flavio Alfaro-**	**5.99**	**152**	*eP*			**Pn**	**13 22 34.5**	**+0.5**
ORTG	**Ortega, Santa**	**6.04**	**333**	Pn			**Pn**	**13 22 32.6**	**-2.1**
ACAL	**Aguas Claras**	**6.11**	**338**	*eP*			**Pn**	**13 22 35.6**	**0.0**
BBAC	**Balboa, Cauca**	**6.15**	**118**	*eP*			**Pn**	**13 22 32.9**	**-3.5**
COLC	**Colonia**	**6.20**	**336**	*eP*			**Pn**	**13 22 36.4**	**-0.5**
HORNC	**Hornillas**	**6.23**	**337**	*eP*			**Pn**	**13 22 36.9**	**-0.6**
GUAB	**Guayabo de Bag**	**6.25**	**336**	*eP*			**Pn**	**13 22 38.3**	**+0.6**
VERA	**Finca Concepci**	**6.25**	**340**	*eP*			**Pn**	**13 22 37.2**	**-0.3**
VMAR	**Armenia, Volca**	**6.30**	**338**	*eP*			**Pn**	**13 22 38.5**	**+0.1**
OTAV	**Otavalo**	**6.31**	**138**	Pn			**Pn**	**13 22 36.6**	**-2.2**
OTAV	**Otavalo**	**6.31**	**138**	*eP*			**Pn**	**13 22 37.0**	**-1.8**
GPS2	**Hotel Rincn d**	**6.34**	**335**	*eP*			**Pn**	**13 22 40.0**	**+1.1**
PLMC	**San Jos del P**	**6.37**	**90**	*eP*			**Pn**	**13 22 37.0**	**-2.3**
YOTC	**Yotoco, Valle**	**6.38**	**98**	*eP*			**Pn**	**13 22 37.8**	**-1.7**
BUEV	**Buena Vista**	**6.40**	**335**	*eP*			**Pn**	**13 22 39.8**	**+0.1**
HZTE	**Horizontes, Gu**	**6.41**	**333**				**Pn**	**13 22 38.1**	**-1.7**
HZTE	**Horizontes, Gu**	**6.41**	**333**	*eP*			**Pn**	**13 22 38.8**	**-1.0**
GB1A	**Borinquen Arri**	**6.42**	**335**	*eP*			**Pn**	**13 22 39.8**	**-0.2**
PULU	**Pululahua**	**6.43**	**140**	Pn			**Pn**	**13 22 38.4**	**-2.0**
TULM	**Tulcn-Chalpat**	**6.45**	**131**				**Pn**	**13 22 40.1**	**-0.6**
POPC	**Popayan, Colom**	**6.45**	**112**	*eP*			**Pn**	**13 22 38.6**	**-1.9**
IMBA	**Imbabura, San**	**6.45**	**136**				**Pn**	**13 22 38.4**	**-2.3**
GCUF	**Volcan Galeras**	**6.48**	**125**	*eP*			**Pn**	**13 22 41.1**	**-0.1**
CRUC	**La Cruz**	**6.63**	**120**	*eP*			**Pn**	**13 22 42.7**	**-0.4**
CBOC	**Ciudad Bolivar**	**6.69**	**82**	*eP*			**Pn**	**13 22 43.6**	**-0.3**
SLOR	**San Lorenzo -**	**7.02**	**143**				**Pn**	**13 22 47.0**	**-1.7**
HELC	**Santa Helena**	**7.21**	**80**	*eP*			**Pn**	**13 22 52.6**	**+1.4**
GUY2C	**Guyana, Caldas**	**7.28**	**88**	*eP*			**Pn**	**13 22 52.6**	**+0.4**
LCBC	**Los crdobas,**	**7.36**	**58**	*eP*			**Pn**	**13 22 56.7**	**+3.9**
ESPN	**Las Esperanzas**	**7.37**	**347**	Pn			**Pn**	**13 22 51.4**	**-1.5**
ACON	**Acoyapa**	**7.39**	**341**				**Pn**	**13 22 51.2**	**-2.0**
ACON	**Acoyapa**	**7.39**	**341**	*eP*			**Pn**	**13 22 51.8**	**-1.5**
ACON	**Acoyapa**	**7.39**	**341**	*eP*			**Pn**	**13 22 52.6**	**-0.6**
PORT	**Chimborazo Vol**	**7.47**	**148**				**Pn**	**13 22 52.7**	**-2.2**
BETC	**Betania**	**7.56**	**107**	*eP*			**Pn**	**13 22 55.9**	**+0.2**
UREC	**San Jos de Ur**	**7.62**	**68**	*eP*			**Pn**	**13 22 56.7**	**+0.3**
GARC	**Garzon, Huila**	**7.68**	**111**	*eP*			**Pn**	**13 22 56.7**	**-0.7**
FLOC	**Florencia**	**7.77**	**115**	*eP*			**Pn**	**13 22 58.4**	**-0.1**
NORC	**Norcasia**	**7.79**	**85**	*eP*			**Pn**	**13 22 59.2**	**+0.3**
PRAC	**Prado**	**7.86**	**99**	*eP*			**Pn**	**13 23 00.0**	**+0.2**
BOAB	**BOACO BROADBAN**	**8.01**	**339**				**Pn**	**13 23 00.8**	**-0.9**
ZARC	**Zaragoza, Cauc**	**8.17**	**72**	*eP*			**Pn**	**13 23 04.9**	**+1.0**
ROSC	**El Rosal**	**8.32**	**90**	Pn			**Pn**	**13 23 08.3**	**+1.9**
ROSC	3.1nm,0.3s,baz=159,slow=17,SNR=5.0				LR		LR	13 26 19.5	
	comp=Z,278nm,19.4s,baz=44,slow=38 13nm,0.3s								
ROSC	**El Rosal**	**8.32**	**90**	Pn			**Pn**	**13 23 05.4**	**-1.0**
ROSC	**El Rosal**	**8.32**	**90**	*eP*			**Pn**	**13 23 09.9**	**+3.4**
PTBC	**PUERTO BERRIO,**	**8.32**	**79**	*eP*			**Pn**	**13 23 08.2**	**+2.1**
SPBC	**San Pablo de B**	**8.59**	**85**	*eP*			**Pn**	**13 23 11.5**	**+1.7**
CRIN	**San Cristobal**	**8.82**	**331**	*eP*			Pn	13 23 05.8	-7.2
ARNL	**Arenillas**	**8.84**	**163**				**Pn**	**13 23 10.6**	**-2.6**
SJCC	**San Jacinto, C**	**8.90**	**56**	*eP*			**Pn**	**13 23 16.4**	**+2.4**
CHIC	**Chingaza**	**8.92**	**92**	*eP*			**Pn**	**13 23 15.6**	**+1.0**
VILC	**Villavicencio,**	**8.99**	**95**	*eP*			**Pn**	**13 23 17.3**	**+1.9**
BOSC	**San Juan Bosco**	**9.07**	**153**				**Pn**	**13 23 15.2**	**-1.3**
PTLC	**Puerto Leguiza**	**9.19**	**121**	*eP*			**Pn**	**13 23 18.9**	**+0.9**
MACC	**Macarena, Meta**	**9.24**	**107**	*eP*			**Pn**	**13 23 19.7**	**+1.0**
PAYG	**Puerto Ayora**	**9.44**	**234**	*eP*			**Pn**	**13 23 23.8**	**+2.4**
BARC	**Barichara**	**9.58**	**80**	*eP*			**Pn**	**13 23 24.7**	**+1.1**
RUSC	**La Rusia**	**9.59**	**84**	*eP*			Pn	13 23 36.2	+12
MCRA	**Macar, Loja**	**9.65**	**164**	Pn			**Pn**	**13 23 21.0**	**-3.4**
ARGC	**Ariguani, Magd**	**9.67**	**59**	*eP*			**Pn**	**13 23 27.1**	**+2.6**
CNCH	**Conchagua**	**9.71**	**329**	*eP*			**Pn**	**13 23 25.1**	**-0.1**
CNCH					IAML			13 23 29.6	
	comp=Z,275nm,0.2s								
CNCH					*eS*		**Sn**	**13 25 06.7**	**-7.6**
CNCH	**Conchagua**	**9.71**	**329**	*eP*			**Pn**	**13 23 25.1**	**-0.1**
CNCH					IAML			13 23 29.6	
	comp=Z,275nm,0.2s								
CNCH					*eS*		**Sn**	**13 25 06.7**	**-7.6**
LCND	**La Caada**	**9.77**	**329**	*eP*			**Pn**	**13 23 26.0**	**+0.1**
LCND	**La Caada**	**9.77**	**329**	*eP*			**Pn**	**13 23 26.0**	**+0.1**
TGUH	**Tegucigalpa,Un**	**10.11**	**334**	Pn			**Pn**	**13 23 29.1**	**-1.6**
TGUH	**Tegucigalpa,Un**	**10.11**	**334**	*eP*			**Pn**	**13 23 34.5**	**+3.8**
PACA	**Pacayal**	**10.13**	**327**	*eP*			**Pn**	**13 23 32.3**	**+1.3**
PACA					*eS*		**Sn**	**13 25 19.2**	**-5.4**
PACA	**Pacayal**	**10.13**	**327**	*eP*			**Pn**	**13 23 32.3**	**+1.3**
PACA					*eS*		**Sn**	**13 25 19.2**	**-5.4**
SMRC	**Santa Marta, M**	**10.39**	**53**	*eP*			**Pn**	**13 23 38.6**	**+4.2**
LL6C	**La Loma 6 Bece**	**10.46**	**62**	*eP*			**Pn**	**13 23 37.8**	**+2.4**
SCLA	**Alcaldia de Sa**	**10.54**	**326**	*eP*			**Pn**	**13 23 39.3**	**+2.7**
SCLA					*eS*		**Sn**	**13 25 29.8**	**-4.9**
SCLA	**Alcaldia de Sa**	**10.54**	**326**	*eP*			**Pn**	**13 23 39.3**	**+2.7**
SCLA					*eS*		**Sn**	**13 25 29.8**	**-4.9**
COEG	**Centro de Oper**	**10.56**	**325**	*eP*			**Pn**	**13 23 39.8**	**+3.0**
COEG					IAML			13 23 43.8	
	comp=Z,117nm,0.3s								
COEG	**Centro de Oper**	**10.56**	**325**	*eP*			**Pn**	**13 23 39.8**	**+3.0**
COEG					IAML			13 23 43.8	
	comp=Z,117nm,0.3s								
SJTE	**Alcalda de S**	**10.63**	**324**	*eP*			**Pn**	**13 23 40.7**	**+2.9**
SJTE	**Alcalda de S**	**10.63**	**324**	*eP*			**Pn**	**13 23 40.7**	**+2.9**
LFRS	**El Faro**	**10.67**	**324**	*eP*			**Pn**	**13 23 41.5**	**+3.1**
LFRS	**El Faro**	**10.67**	**324**	*eP*			**Pn**	**13 23 41.5**	**+3.1**
PAVA	**Las Pavas**	**10.67**	**325**	*eP*			**Pn**	**13 23 41.1**	**+2.7**
PAVA					IAML			13 23 43.9	
	comp=Z,129nm,0.2s								
PAVA	**Las Pavas**	**10.67**	**325**	*eP*			**Pn**	**13 23 41.1**	**+2.7**
PAVA					IAML			13 23 43.9	
	comp=Z,129nm,0.2s								
P5NO	**Presa 5 de nov**	**10.79**	**327**	*eP*			**Pn**	**13 23 41.8**	**+1.8**
PMON	**Piamonte**	**10.89**	**323**	*eP*			**Pn**	**13 23 44.9**	**+3.6**
PMON	**Piamonte**	**10.89**	**323**	*eP*			**Pn**	**13 23 44.9**	**+3.6**
JAYA	**Jayaque - finc**	**10.92**	**323**	*eP*			**Pn**	**13 23 45.3**	**+3.4**
JAYA	**Jayaque - finc**	**10.92**	**323**	*eP*			**Pn**	**13 23 45.3**	**+3.4**
NUBE	**Las Nubes**	**11.32**	**322**	*eP*			**Pn**	**13 23 50.7**	**+3.5**
NUBE	**Las Nubes**	**11.32**	**322**	*eP*			**Pn**	**13 23 50.7**	**+3.5**
CRJC	**Cerrejon, Guaj**	**11.41**	**58**	*eP*			**Pn**	**13 23 47.7**	**-0.8**
SOCV	**Socops**	**12.19**	**74**	*eP*			**Pn**	**13 24 00.0**	**+0.9**
URIC	**Uribia, Colomb**	**12.51**	**57**	*eP*			**Pn**	**13 24 02.5**	**-1.0**
SDV	**Santo Domingo**	**12.57**	**71**	Pn			**Pn**	**13 24 06.4**	**+2.0**
	comp=Z,2.2nm,0.3s,baz=251,slow=11,SNR=7.3								
SDV					LR		LR	13 28 41.9	
	comp=Z,257nm,19.2s,baz=240,slow=36 comp=Z,8.0nm,0.4s								
SDV	**Santo Domingo**	**12.57**	**71**	Pn			**Pn**	**13 24 02.3**	**-2.1**
ATAH	**Atahualpa**	**12.75**	**160**	Pn			**Pn**	**13 24 08.0**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=0.2,slow=9.5,SNR=7.0								
ATAH					LR		LR	13 28 37.8	
	comp=Z,1μm,19.8s,baz=335,slow=36								
DABV	**Dabajuro**	**13.31**	**63**	*eP*			**Pn**	**13 24 14.8**	**+0.4**
BAUV	**El Baul**	**15.05**	**74**	Pn			**Pn**	**13 24 36.5**	**-1.6**
CMIG	**Matias Romero**	**16.99**	**316**	P			**P**	**13 25 05.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=137,slow=13,SNR=10								
CMIG					LR		LR	13 30 36.8	
	comp=Z,315nm,19.4s,baz=132,slow=34 comp=Z,5.9nm,1.0s								
NNA	**Nana**	**17.80**	**161**		LR		LR	13 31 31.2	
	comp=Z,220nm,20.7s,baz=318,slow=36								
SDDR	**Presa de Saban**	**17.82**	**38**	*eP*			**P**	**13 25 14.8**	**+0.5**
OBIP	**Obispado Ponce**	**20.39**	**49**	P			**P**	**13 25 40.6**	**-1.8**
OBIP					IAmb		IAmb	13 25 58.9	
	comp=Z,42nm,1.2s								
AOPR	**Arecibo Observ**	**20.47**	**48**	P			**P**	**13 25 41.9**	**-1.4**
SJG	**San Juan**	**20.78**	**50**	P			Pn	13 25 48.7	-0.3
	comp=Z,24nm,0.7s,baz=234,slow=7.9,SNR=8.6								
SJG					LR		LR	13 32 21.9	
	comp=Z,127nm,21.6s,baz=251,slow=32 comp=Z,24nm,0.7s								
PDPR	**Patillas Dam,**	**20.82**	**50**	P			**P**	**13 25 44.8**	**-2.3**
PDPR					IAmb		IAmb	13 25 52.7	
	comp=Z,27nm,1.1s								
GCPR	**Guaynabo City**	**20.95**	**49**				**P**	**13 25 49.4**	**+1.0**
CBYP	**Canovanas**	**21.10**	**50**				**P**	**13 25 50.9**	**+0.8**
CBYP					IAmb		IAmb	13 25 52.0	
	comp=Z,48nm,1.2s								
ETMB	**Extrema**	**22.01**	**132**	P			**P**	**13 25 57.6**	**-2.3**
ETMB					IAmb		IAmb	13 26 01.7	
	comp=Z,36nm,1.1s								
BOAV	**Boa Vista**	**22.25**	**96**	P			**P**	**13 26 01.0**	**-1.5**
BOAV					IAmb		IAmb	13 26 04.9	
	comp=Z,8.3nm,1.1s								
SAML	**Samuel**	**23.84**	**125**	P			**P**	**13 26 16.2**	**-2.6**
SAML					IAmb		IAmb	13 26 18.9	
	comp=Z,24nm,1.1s								
LPAZ	**La Paz**	**25.55**	**146**	P			**P**	**13 26 34.6**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=327,slow=6.9,SNR=9.6								
LPAZ					LR		LR	13 37 46.5	
	comp=Z,374nm,20.1s,baz=296,slow=39 comp=Z,3.6nm,0.8s								
LPAZ	**La Paz**	**25.55**	**146**	P			**P**	**13 26 34.4**	**-0.6**
LPAZ	**La Paz**	**25.55**	**146**	*eP*			**P**	**13 26 34.4**	**-0.6**
GO01	**Chusmiza**	**27.83**	**152**	P			**P**	**13 26 52.5**	**-3.0**
GO01					IAmb		IAmb	13 27 24.6	
	comp=Z,14nm,1.4s								
LRAL	**Lakeview Retre**	**28.22**	**352**	P			**P**	**13 26 58.3**	**0.0**
	baz=171								
PATCX	**Punta Patache**	**28.41**	**155**	P			**P**	**13 26 58.7**	**-1.5**
Z47A	**Carrollton**	**28.55**	**351**	P			**P**	**13 27 00.7**	**-0.5**
SIV	**San Ignacio**	**29.84**	**135**	P			**P**	**13 27 11.8**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=327,slow=11,SNR=4.4								
SIV					LR		LR	13 39 26.9	
	comp=Z,638nm,18.1s,baz=294,slow=37 comp=Z,1.2nm,0.3s								
BG3	**Lake Jocassee**	**29.89**	**360**	P			**P**	**13 27 12.0**	**-1.1**
BG3					IAmb		IAmb	13 27 17.1	
	comp=Z,10nm,1.0s								
LVC	**Limon Verde**	**30.53**	**154**	LR			LR	13 39 36.8	
	comp=Z,81nm,18.8s,baz=336,slow=37								
TKL	**Tuckaleechee C**	**30.57**	**358**	LR			LR	13 39 16.4	
	comp=Z,136nm,20.1s,baz=178,slow=36								
H06E1	**SOCORRO T-PHAS**	**30.80**	**299**	T			T	13 59 40.0	
	SNR=15								
V58A	**Windy Hill, Pi**	**30.86**	**6**	P			**P**	**13 27 21.0**	**-0.7**
V58A					IAmb		IAmb	13 27 25.6	
	comp=Z,9.8nm,0.8s								
PTLB	**Pontes e Lacer**	**30.89**	**131**	P			**P**	**13 27 20.7**	**-1.5**
PTLB					IAmb		IAmb	13 27 22.2	
	comp=Z,7.6nm,1.1s								
MIAR	**Mount Ida**	**31.13**	**342**	P			**P**	**13 27 23.3**	**-0.8**
	baz=159								
TXAR	**Lajitas Array**	**31.34**	**323**	P			**P**	**13 27 28.2**	**+2.1**
	comp=Z,1.3nm,1.0s,baz=134,slow=9.0,SNR=8.1								
TXAR					LR		LR	13 40 07.2	
	comp=Z,76nm,20.8s,baz=136,slow=36 comp=Z,1.3nm,1.0s								
WVT	**Waverly**	**31.38**	**352**	P			**P**	**13 27 25.5**	**-0.8**
WVT					IAmb		IAmb	13 27 28.7	
	comp=Z,9.8nm,0.9s								
WVT	**Waverly**	**31.38**	**352**	P			**P**	**13 27 25.8**	**-0.4**
	baz=170								
TZTN	**Tazewell**	**31.45**	**359**	P			**P**	**13 27 27.4**	**+0.6**
	baz=178								
U49A	**Red Boiling Sp**	**31.53**	**355**	P			**P**	**13 27 27.9**	**+0.3**
U49A					IAmb		IAmb	13 27 28.6	
	comp=Z,14nm,1.2s								
LCAR	**Lake Charles**	**31.93**	**347**	P			**P**	**13 27 30.0**	**-1.1**
FCAR	**Ozark Folk Cen**	**31.99**	**345**	P			**P**	**13 27 30.6**	**-1.0**
FCAR					IAmb		IAmb	13 27 32.0	
	comp=Z,6.5nm,1.0s								
S51A	**Beattyville**	**32.54**	**359**	P			**P**	**13 27 34.5**	**-1.9**
LPIG	**La Paz**	**32.70**	**308**	LR			LR	13 38 22.1	
	comp=Z,108nm,21.4s,baz=178,slow=32								
CGM3	**Cape Girardeau**	**32.82**	**350**	P			**P**	**13 27 37.9**	**-1.0**
CGM3					IAmb		IAmb	13 27 39.4	
	comp=Z,18nm,1.1s								
S44A	**Carbondale**	**33.13**	**350**	P			**P**	**13 27 39.8**	**-1.8**
WMOK	**Wichita Mounta**	**33.17**	**335**	P			**P**	**13 27 41.1**	**-1.0**
MGMO	**Mountain Grove**	**33.23**	**346**	P			**P**	**13 27 42.1**	**-0.4**
MGMO					IAmb		IAmb	13 27 43.2	
	comp=Z,13nm,1.1s								
CCM	**Cathedral Cave**	**33.86**	**348**	P			**P**	**13 27 45.7**	**-2.2**
CCM	**Cathedral Cave**	**33.86**	**348**	P			**P**	**13 27 46.7**	**-1.3**
	baz=165								
N41A	**Harden Midland**	**36.34**	**349**	P			**P**	**13 28 08.0**	**-1.4**
SBM	**South Baldy**	**36.76**	**325**	P			**P**	**13 28 12.9**	**-0.6**
ANMO	**Albuquerque**	**37.07**	**327**	LR			LR	13 44 40.9	
	comp=Z,88nm,20.7s,baz=136,slow=38								
ANMO	**Albuquerque**	**37.07**	**327**	P			**P**	**13 28 17.7**	**+1.8**
	baz=138								
BINY	**Binghamton**	**37.56**	**8**	P			**P**	**13 28 20.4**	**+0.7**
	baz=191								
T25A	**Trinidad**	**37.70**	**331**	P			**P**	**13 28 20.7**	**-0.5**
T25A	**Trinidad**	**37.70**	**331**	P			**P**	**13 28 22.4**	**+1.2**
	baz=143								
TUC	**Tucson**	**37.83**	**319**	P			**P**	**13 28 23.9**	**+1.6**
	baz=130								
SDCO	**Great Sand Dun**	**38.72**	**331**	P			**P**	**13 28 31.9**	**+2.1**
	baz=142								
J58A	**Remsen**	**38.80**	**9**	P			**P**	**13 28 29.1**	**-1.0**
J58A					IAmb		IAmb	13 28 34.5	
	comp=Z,15nm,1.1s								
J59A	**Piesco**	**39.02**	**9**	P			**P**	**13 28 31.2**	**-0.8**
W18A	**Petrified Fore**	**39.06**	**324**	P			**P**	**13 28 35.4**	**+2.8**
	baz=134,SNR=6.6								
I42A	**Draeger Farm,**	**39.16**	**353**	P			**P**	**13 28 31.5**	**-1.6**
I42A					IAmb		IAmb	13 28 33.0	
	comp=Z,19nm,1.2s								
Q24A	**Divide**	**39.51**	**332**	P			**P**	**13 28 37.4**	**+0.9**
	baz=143								
CPUP	**Villa Florida**	**39.63**	**143**	LR			LR	13 48 14.6	
	comp=Z,160nm,18.3s,baz=330,slow=41								
SADO	**Sadowa**	**39.77**	**4**	LR			LR	13 44 55.0	
	comp=Z,98nm,18.7s,baz=196,slow=36								
MVCO	**Mesa Verde**	**39.85**	**327**	P			**P**	**13 28 38.7**	**-0.6**
MVCO					IAmb		IAmb	13 28 43.4	
	comp=Z,28nm,1.4s								
MVCO	**Mesa Verde**	**39.85**	**327**	P			**P**	**13 28 40.6**	**+1.3**
	baz=138								
BDFB	**Brasilia**	**39.95**	**121**	LR			LR	13 45 46.6	
	comp=Z,189nm,18.4s,baz=311,slow=37								
LBNH	**Lisbon**	**40.25**	**12**	P			**P**	**13 28 45.7**	**+3.5**
	baz=197								
WUAZ	**Wupatki**	**40.31**	**323**	P	

SCHQ Schefferville 51.35 12 P **P** **13 30 11.8 +2.1**
comp=Z,10nm,1.0s,baz=130,slow=7.7,SNR=5.2
SCHQ LR LR 13 51 24.8
comp=Z,33nm,21.9s,baz=212,slow=35
comp=Z,10nm,1.0s
J04D Umpqua Nationa 51.62 324 P **P** **13 30 12.4 +0.2**
baz=126
I05D Terrebonne, OR 51.83 325 P **P** **13 30 14.2 +0.7**
baz=128
I04A Tendick Farm, 52.12 324 P **P** **13 30 15.5 -0.3**
baz=126
NEW Newport 52.20 331 LR LR 13 53 34.4
comp=Z,78nm,19.5s,baz=134,slow=37
NEW Newport 52.20 331 P **P** **13 30 16.9 +0.6**
baz=135
K02D Willamette Mer 52.24 322 P **P** **13 30 17.1 +0.5**
baz=124
J01E Myrtle Point 52.66 323 P **P** **13 30 21.0 +1.3**
baz=124
I02E Swisshome, OR 53.15 324 P **P** **13 30 24.1 +0.9**
baz=125
FRB Frobisher Bay 59.56 7 LR LR 13 57 21.7
comp=Z,55nm,18.5s,baz=196,slow=36
BBB Bella Bella 60.13 330 LR LR 13 58 57.0
comp=Z,37nm,18.3s,baz=163,slow=38
YKA Yellowknife Ar 62.05 344 P **P** **13 31 28.3 +2.6**
comp=Z,5.5nm,1.0s,baz=140,slow=6.3,SNR=5.3
YKA LR LR 13 58 15.0
comp=Z,48nm,21.8s,baz=346,slow=36
comp=Z,5.5nm,1.0s
DLBC Dease Lake 64.66 335 LR LR 14 02 45.4
comp=Z,86nm,19.1s,baz=106,slow=39
DLBC Dease Lake 64.66 335 P **P** **13 31 43.0 -0.1**
baz=126
R33M Jennings River 65.61 335 P **P** **13 31 49.4 0.0**
baz=125
P33M Teslin, Yukon 66.85 335 P **P** **13 31 57.4 +0.2**
baz=124
WHY Whitehorse 67.95 335 P **P** **13 32 04.4 +0.1**
baz=122
O30N Mendenhall 68.52 335 P **P** **13 32 08.2 +0.5**
baz=121
P30M Million Dollar 68.56 334 P **P** **13 32 07.5 -0.5**
baz=120
M31M Drury Creek, Y 68.58 337 P **P** **13 32 08.0 0.0**
baz=123
P29M Windy Craggy 68.66 333 P **P** **13 32 08.5 -0.1**
baz=119
N31M Braeburn, Yuko 68.76 336 P **P** **13 32 09.0 -0.1**
baz=121
HYT Haines Junctio 69.14 335 P **P** **13 32 11.2 -0.5**
baz=120
N30M Aishikik Lake 69.28 335 P **P** **13 32 12.3 -0.2**
baz=120
RES Resolute Bay 70.03 357 LR LR 14 03 40.3
comp=Z,86nm,18.7s,baz=68,slow=36
M29M Somme Creek 70.33 336 P **P** **13 32 18.2 -0.8**
baz=119
DAWY Dawson 71.49 337 P **P** **13 32 25.2 -0.6**
DAWY IAmb IAmb 13 32 30.1
comp=Z,3.8nm,0.9s
DAWY Dawson 71.49 337 P **P** **13 32 25.7 -0.1**
baz=119
M27K Edge Creek, AK 71.71 335 P **P** **13 32 27.5 +0.1**
baz=116
I29M Ogilvie Camp, 71.72 339 P **P** **13 32 26.7 -0.6**
baz=120
INK Inuvik 71.73 342 LR LR 14 06 26.0
comp=Z,94nm,18.7s,baz=112,slow=38
INK Inuvik 71.73 342 P **P** **13 32 26.4 -0.8**
INK Inuvik 71.73 342 P **P** **13 32 27.4 +0.3**
baz=126
MCARA McCarthy VSAT 71.79 334 P **P** **13 32 27.1 -0.6**
baz=114
BCAR Beaver Creek A 71.98 336 P **P** **13 32 28.1 -0.8**
L27K Beaver Creek, 72.00 336 P **P** **13 32 28.4 -0.6**
L27K IAmb IAmb 13 32 34.1
comp=Z,6.8nm,0.9s
L27K Beaver Creek, 72.00 336 P **P** **13 32 29.1 +0.2**
baz=116,SNR=6.5
M26K Nabesna, AK 72.20 335 P **P** **13 32 30.0 -0.2**
baz=115
BMRM Bremner River 72.33 333 P **P** **13 32 30.3 -0.6**
baz=113
K27K Chicken 72.52 337 P **P** **13 32 32.1 +0.1**
baz=116
I27K Kandik River 73.05 338 P **P** **13 32 36.1 +0.9**
baz=117
KLU Klutina 73.11 333 P **P** **13 32 36.0 +0.3**
baz=112
SCRK Sand Creek 73.26 336 P **P** **13 32 36.4 -0.1**
baz=114
H27K Steamboat Moun 73.30 339 P **P** **13 32 37.2 +0.5**
baz=117
J26L Joseph Creek 73.31 337 P **P** **13 32 36.9 +0.1**
J26L IAmb IAmb 13 32 41.4
comp=Z,6.9nm,0.9s
J26L Joseph Creek 73.31 337 P **P** **13 32 37.2 +0.3**
baz=115,SNR=12
PAX Paxson 73.47 335 P **P** **13 32 37.8 0.0**
baz=112
I26K Coal Creek Min 73.49 338 P **P** **13 32 38.0 +0.2**
baz=115
BORG Borgarnes 73.59 23 LR LR 13 59 45.2
comp=Z,42nm,21.9s,baz=205,slow=31
G27K Doyon Strip 73.61 339 P **P** **13 32 38.2 -0.2**
baz=117
K24K Donnelly Dome 73.92 336 P **P** **13 32 40.1 -0.3**
baz=112
PWL Port Wells 73.99 332 P **P** **13 32 41.1 +0.3**
baz=109
M23K Glacier View 74.03 333 P **P** **13 32 41.3 +0.3**
baz=110
J25K Salcha River, 74.07 337 P **P** **13 32 41.1 -0.1**
J25K IAmb IAmb 13 32 45.8
comp=Z,4.1nm,0.8s
J25K Salcha River, 74.07 337 P **P** **13 32 41.2 -0.1**
baz=113,SNR=5.5
E27K Coleen River 74.23 341 P **P** **13 32 42.6 +0.6**
baz=118
KNK Knik Glacier 74.23 333 P **P** **13 32 42.4 +0.2**
baz=109
WAT6 Susitna Watana 74.30 334 P **P** **13 32 43.5 +0.7**
baz=110,SNR=6.7
DHY Denali Highway 74.32 335 P **P** **13 32 42.7 -0.1**
baz=111
G26K Porcupine Rive 74.43 339 P **P** **13 32 43.1 0.0**
baz=115
PRP Porcupine Dome 74.48 337 P **P** **13 32 43.7 -0.1**
baz=113
HDA Harding Lake 74.62 336 P **P** **13 32 44.4 0.0**
baz=112,SNR=5.5
IL31 74.73 336 P **P** **13 32 44.2 -0.7**
ILAR Eielson Array 74.73 336 P **P** **13 32 45.8 +0.8**
comp=Z,2.7nm,0.9s,baz=120,slow=4.1,SNR=20
ILAR LR LR 14 08 38.3
comp=Z,38nm,19.0s,baz=96,slow=38
comp=Z,2.7nm,0.9s
ILAR Eielson Array 74.73 336 P **P** **13 32 44.5 -0.6**
F26K Sheenjek River 74.87 340 P **P** **13 32 46.3 +0.4**
baz=115
H25K Birch Creek 74.89 338 P **P** **13 32 46.5 +0.6**
baz=113
BMAR Burnt Mountain 74.91 339 P **P** **13 32 45.5 -0.6**
POKR Poker Plat Res 75.08 337 P **P** **13 32 46.8 -0.2**
baz=111
G25K Bearman Lake 75.19 338 P **P** **13 32 48.2 +0.6**
baz=113,SNR=6.2
MCK McKinley 75.21 335 P **P** **13 32 48.3 +0.5**
baz=110
MDM Murphy Dome 75.34 336 P **P** **13 32 48.1 -0.4**
MDM IAmb IAmb 13 33 03.4
comp=Z,6.1nm,1.2s
F25K Christian Rive 75.35 339 P **P** **13 32 49.0 +0.4**
baz=114
H24K Noodor Dome 75.51 337 P **P** **13 32 49.6 0.0**
H24K IAmb IAmb 13 32 53.6
comp=Z,5.7nm,0.9s
H24K Noodor Dome 75.51 337 P **P** **13 32 50.0 +0.5**
baz=111,SNR=7.5
E25K Arctic Village 75.54 340 P **P** **13 32 50.0 +0.3**
baz=114,SNR=5.2
NEA2 Nenana 75.55 336 P **P** **13 32 50.4 +0.7**
baz=110
G24K Hadweenzic Riv 75.67 338 P **P** **13 32 51.3 +0.9**
baz=112,SNR=9.5
I23K Minto, Yukon-K 75.85 336 P **P** **13 32 50.9 -0.5**
baz=109

Q19K Cape Douglas, 76.00 330 P **P** **13 32 51.9 -0.6**
baz=104
C26K Camden Bay 76.06 342 P **P** **13 32 52.3 -0.2**
baz=115
F24K Squaw Lake 76.12 339 P **P** **13 32 52.4 -0.6**
baz=111
H23K Yukon River 76.15 337 P **P** **13 32 52.7 -0.5**
baz=109
D25K Kavik River 76.29 341 P **P** **13 32 53.8 -0.1**
baz=113
PPLA Purkeypile 76.35 334 P **P** **13 32 53.8 -0.6**
baz=106
MLY Manley 76.37 336 P **P** **13 32 52.7 -1.7**
MLY IAmb IAmb 13 32 58.0
comp=Z,6.2nm,1.2s
MLY Manley 76.37 336 P **P** **13 32 54.3 -0.2**
baz=108
CAST Castle Rocks 76.45 334 P **P** **13 32 54.1 -0.8**
CAST IAmb IAmb 13 32 58.5
comp=Z,4.8nm,0.9s
CAST Castle Rocks 76.45 334 P **P** **13 32 54.6 -0.4**
baz=106
M20K Styx River 76.50 333 P **P** **13 32 55.3 0.0**
baz=105
E24K Your Creek 76.53 339 P **P** **13 32 55.4 +0.1**
baz=111
G23K Bananza Creek 76.62 338 P **P** **13 32 56.3 +0.4**
baz=109,SNR=6.7
COLD Coldfoot 76.86 338 P **P** **13 32 57.4 +0.3**
COLD IAmb IAmb 13 33 02.4
comp=Z,6.8nm,1.0s
COLD Coldfoot 76.86 338 P **P** **13 32 58.0 +0.9**
baz=109,SNR=5.8
H22K Ishtalitna Cre 76.89 337 P **P** **13 32 57.2 -0.2**
baz=108
I21K Tanana 76.91 336 P **P** **13 32 57.3 -0.1**
I21K IAmb IAmb 13 33 01.4
comp=Z,4.7nm,1.0s
I21K Tanana 76.91 336 P **P** **13 32 58.2 +0.8**
baz=107
L20K Farewell, AK 76.99 333 P **P** **13 32 58.6 +0.6**
baz=105
M19K Big River Lodg 77.08 333 P **P** **13 32 58.2 -0.3**
baz=104
C24K Franklin Bluff 77.20 341 P **P** **13 32 59.9 +1.0**
baz=111
K20K Telida 77.30 334 P **P** **13 33 00.1 +0.4**
baz=105
L19K White Mountain 77.36 333 P **P** **13 33 00.2 +0.2**
baz=104
H21K Melozitna Rive 77.38 336 P **P** **13 33 00.3 +0.2**
baz=106
P17K Kvichak River 77.47 330 P **P** **13 33 00.7 0.0**
baz=102
N18K Kilae Creek 77.51 331 P **P** **13 33 00.9 0.0**
baz=102
J20K Nowinta River 77.54 335 P **P** **13 33 00.6 -0.3**
J20K IAmb IAmb 13 33 04.8
comp=Z,6.3nm,1.1s
J20K Nowinta River 77.54 335 P **P** **13 33 01.2 +0.2**
baz=105
D23K Nanushuk River 77.60 340 P **P** **13 33 02.0 +0.7**
baz=109
F22K John River 77.67 338 P **P** **13 33 01.9 +0.2**
baz=107
G21K Allakaket 77.89 337 P **P** **13 33 03.0 +0.1**
baz=106
O17K Koliganek Bris 77.91 330 P **P** **13 33 02.6 -0.5**
baz=101
TTA Tatalina 78.05 333 P **P** **13 33 03.2 -0.8**
baz=103
F21K Alatna River 78.08 338 P **P** **13 33 04.7 +0.8**
baz=106,SNR=6.1
ESDC Sonseca Array 78.16 51 P **P** **13 33 07.8 +2.7**
comp=Z,2.6nm,1.0s,baz=273,slow=4.6,SNR=8.0
ESDC LR LR 14 04 07.0
comp=Z,29nm,18.1s,baz=257,slow=33
comp=Z,2.6nm,1.0s
GCSA Galena City Sc 78.82 335 P **P** **13 33 07.6 -0.4**
baz=102
EKA Eskdalemuir Ar 79.98 35 P **P** **13 33 15.6 +1.0**
comp=Z,3.8nm,0.9s,baz=262,slow=5.8,SNR=4.3
EKA LR LR 14 07 23.1
comp=Z,26nm,18.3s,baz=250,slow=35
comp=Z,3.8nm,0.9s
TORD Torodi Ar. Bea 83.42 77 P **P** **13 33 34.9 +1.3**
comp=Z,0.3nm,0.6s,baz=291,slow=6.1,SNR=2.5
comp=Z,0.3nm,0.6s
NOA NORSAR Array B 87.59 29 LR LR 14 08 16.0
comp=Z,13nm,21.9s,baz=265,slow=32
DAVOX Davos/Dischmat 88.17 43 LR LR 14 06 17.3
comp=Z,55nm,20.4s,baz=263,slow=31
HFS Hagfors 88.91 30 LR LR 14 08 49.3
comp=Z,68nm,20.1s,baz=279,slow=32
GERES GERESS Array B 90.49 41 P **P** **13 34 09.4 +1.9**
comp=Z,0.3nm,0.2s,baz=215,slow=4.4,SNR=3.7
GERES LR LR 14 08 19.4
comp=Z,75nm,21.0s,baz=63,slow=31
comp=Z,0.3nm,0.2s
SNAA Sanae 91.48 162 LR LR 14 14 13.8
comp=Z,16nm,19.6s,baz=277,slow=35
VRAC Vranov 92.30 40 LR LR 14 13 50.9
comp=Z,31nm,18.3s,baz=307,slow=34
FINES FINESS Array B 94.51 27 LR LR 14 13 41.6
comp=Z,20nm,20.4s,baz=257,slow=33
MLR Muntele Rosu 99.36 43 LR LR 14 18 17.3
comp=Z,22nm,18.5s,baz=289,slow=34
H11N3 WAKE ISLAND Hyl 107.38 292 T T 15 35 30.2
baz=79,slow=75,SNR=44
H11N2 WAKE ISLAND Hyl 107.39 292 T T 15 35 30.9
baz=79,slow=75,SNR=14
H11N1 WAKE ISLAND Hyl 107.39 292 T T 15 35 31.5
baz=79,slow=75,SNR=30
H11S2 WAKE ISLAND Hyl 107.81 291 T T 15 36 05.1
baz=77,slow=75,SNR=4.8
H11S1 WAKE ISLAND Hyl 107.82 291 T T 15 36 04.1
baz=77,slow=75,SNR=4.0
H11S3 WAKE ISLAND Hyl 107.83 291 T T 15 36 07.3
baz=77,slow=75,SNR=3.7
MKAR Makanchi Array 126.78 13 PKP **PKPdf** **13 40 09.6 +0.2**
comp=Z,0.7nm,0.9s,baz=0.0,slow=2.4,SNR=4.2
SONM Songino Array 126.83 352 PKP **PKiKP** **13 40 11.5 +1.4**
comp=Z,0.5nm,0.5s,baz=60,slow=3.5,SNR=2.8
KSRS Korea Array 129.09 329 PKP **PKiKP** **13 40 15.2 +0.6**
comp=Z,0.4nm,0.6s,baz=120,slow=4.5,SNR=4.9
WMQ Urumqi 130.67 9 *e*P **PKPdf** **13 40 17.0 +0.1**
HHC Hu-ho-hao-te 132.58 345 *e*P **PKPdf** **13 40 19.6 -1.1**
NJ2 Nanjing 137.87 332 *e*P **PKPdf** **13 40 30.3 -0.3**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
LZH Lanzhou 138.72 352 *e*PKP PKPpre 13 40 23.0
GOMU GeErMu 138.99 3 PKP **PKiKP** **13 40 34.3 -1.0**
GOMU pPKP sPKPdf 13 40 37.3 +0.1
GOMU sPKP 13 40 40.1
GOMU AMB AMB
comp=Z,50nm,4.6s
WRA Warramunga Arr 141.04 244 PKhKP PKPpre 13 40 31.6
comp=Z,0.5nm,0.8s,baz=115,slow=2.6,SNR=5.1
PZH PanZhiHua 148.43 352 PKPbc **PKPdf** **13 40 47.0 -2.5**
CMAR Chiang Mai Arr 156.68 356 PKP **PKPdf** **13 41 03.0 +1.3**
comp=Z,0.4nm,0.4s,baz=270,slow=1.8,SNR=5.0

*IDC **09** 13:39:27.3±6.8,20°.40S×69°.28W,h78km±50km,mb3.1/2, mbtmp3.7/4, ML3.9/2,MS3.5/1, Error ellipse: s-maj=57.2km s-min=33.5km az=44.0*
*GUC **09** 13:39:32.8±0.8,20°.00S×69°.12W,h94km±4km, ML3.9*
ISC 09 13:39:32.3±0.9,**20°.00S**±0°.04×**69°.22W**±0°.08,**h95**km±8km, **n22**,σ1**°96**/29,**1C-2D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GO01	**Chusmiza**	**0.33**	**5**	*i*/*i*P		**Pn**	**13 39 47.1**	**0.0**
GO01				*e*S		**Sn**	**13 39 58.4**	**+0.3**
GO01				IAML			13 40 00.2	
	comp=N,13μm,0.1s							
TA02	**Huaiquique**	**0.90**	**252**	*e*P		**Pn**	**13 39 51.7**	**+0.5**
TA02				*e*S		**Sn**	**13 40 07.4**	**+2.0**
TA01	**Diego Aracena**	**1.06**	**238**	*i*/*i*P		**Pn**	**13 39 53.3**	**+0.2**
TA01				*e*S		**Sn**	**13 40 09.4**	**+0.8**
PB01	**IPOC Station P**	**1.07**	**193**	*i*/*i*P		**Pn**	**13 39 53.4**	**+0.1**
PB01				*e*S		**Sn**	**13 40 09.6**	**+0.6**
PB01				IAML			13 40 11.6	
	comp=N,2μm,0.3s							
PATCX	**Punta Patache**	**1.20**	**227**	*i* P		**Pn**	**13 39 55.0**	**+0.3**
PATCX				*e*S		**Sn**	**13 40 12.7**	**+1.0**
PATCX				IAML			13 40 17.7	
	comp=N,1μm,0.2s							
PB02	**IPOC Station P**	**1.46**	**206**	*e*P		**Pn**	**13 39 58.2**	**+0.2**
PB02				*e*S		**Sn**	**13 40 18.1**	**+0.8**
PB02				IAML			13 40 24.1	
	comp=E,3μm,0.2s							
PB16	**IPOC Station P**	**1.68**	**351**	*e*P		**Pn**	**13 40 02.2**	**+1.1**
PB16				*e*S		**Sn**	**13 40 25.3**	**+2.4**
PB12	**IPOC Station P**	**1.73**	**323**	*e*P		**Pn**	**13 40 01.4**	**+0.1**
PB12				IAML			13 40 32.3	
	comp=E,2μm,0.1s							
PB09	**IPOC Station P**	**1.79**	**181**	*e*P		**Pn**	**13 40 02.8**	**+0.6**
PB09				*e*S		**Sn**	**13 40 26.7**	**+1.9**
PB07	**IPOC Station P**	**1.83**	**200**	*e*P		**Pn**	**13 40 02.9**	**+0.2**
PB07				*e*S		**Sn**	**13 40 26.9**	**+1.2**
PB07				IAML			13 40 33.2	
	comp=E,1μm,0.6s							
PB04	**IPOC Station P**	**2.48**	**200**	*e*P		**Pn**	**13 40 12.2**	**+0.9**
PB04				*e*S		**Sn**	**13 40 46.1**	**+5.1**
PB04				IAML			13 40 51.4	
	comp=N,781nm,0.7s							
LVC	**Limon Verde**	**2.62**	**174**	*e*P		**Pn**	**13 40 15.0**	**+1.8**
PB06	**IPOC Station P**	**2.71**	**187**	*e*P		**Pn**	**13 40 15.0**	**+0.7**
PB06				IAML			13 40 55.3	
	comp=N,463nm,0.4s							
PB15	**IPOC Station P**	**3.20**	**184**	*e*P		**Pn**	**13 40 21.4**	**+0.5**
LPAZ	**La Paz**	**3.83**	**16**	P		**Pn**	**13 40 31.9**	**+2.1**
	comp=N,2.7nm,0.3s,baz=183,slow=7.7,SNR=41							
LPAZ				S		**Sn**	**13 41 19.0**	**+4.9**
	comp=N,3.5nm,0.6s,baz=304,slow=23,SNR=3.9							
	comp=N,11nm,0.5s							
SIV	**San Ignacio**	**8.72**	**64**	P		**Pn**	**13 41 32.2**	**-3.5**
	comp=N,0.2nm,0.3s,baz=252,slow=10.0,SNR=44							
	comp=N,12nm,0.6s							
H03N1	**Juan Fernandez**	**15.93**	**211**	T		T	13 58 25.0	
	baz=32,SNR=10							
H03N2	**Juan Fernandez**	**15.94**	**211**	T		T	13 58 27.5	
	baz=32,SNR=10.0							
H03N3	**Juan Fernandez**	**15.95**	**211**	T		T	13 58 23.6	
	baz=32							
PLCA	**Paso Flores**	**20.70**	**183**	LR		LR	13 51 41.2	
	comp=N,144nm,21.6s,baz=24,slow=36							
TXAR	**Lajitas Array**	**59.24**	**325**	P		**P**	**13 49 22.2**	**-1.8**
	comp=N,0.1nm,0.6s,baz=150,slow=7.3,SNR=2.9							
	comp=N,0.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**77.13**	**71**	P		**P**	**13 51 14.5**	**-1.5**
	comp=N,0.4nm,0.4s,baz=251,slow=5.6,SNR=7.8							
	comp=N,0.4nm,0.4s							

*WEL **09** 13:42:59.3±2.4,32°S±4°×17°9W±1°,h1km±23km,M5.2/36, mB5.6/31,ML5.5/37,MLv5.5/36,Mw(mB)5.1/31,Error ellipse: s-maj=0.0km s-min=0.0km az=108.5*
*MOS **09** 13:43:00.8±0.8,31°.60S×179°.80W,h230km,mb5.2/25, Error ellipse: s-maj=10.5km s-min=8.2km az=102.7*
*NEIC **09** 13:43:01.9±1.4,31°.64S±0°.08×179°.79W±0°.09, h227km±4km,mb5.0/120,Error ellipse: s-maj=14.5km s-min=7.6km az=138.0*
*GCMT **09** 13:43:03.0±0.3,31°.73S±0°.02×179°.66W±0°.02, h240km±1km,MW5.2/107,Moment Tensor Solution. s65,c83; s107,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.07±.18; $M_{\theta\theta}$-0.24±.21; $M_{\phi\phi}$3.31±.20; $M_{r\theta}$-4.35±.17; $M_{r\phi}$0.69±.19; $M_{\theta\phi}$-4.46±.17; Best double couple: $M_0$7.01900×10^{16} NP1:$\phi_1$39.00000°,δ78.00000°, λ-76.00000°. NP2:$\phi_2$170.00000°,δ18.00000°, λ-138.00000°. Principal axes: T 6.7420, Plg31.0000°, Azm118.0000°; N 0.5570, Plg14.0000°, Azm216.0000°; P -7.2970, Plg55.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **09** 13:43:04.5±1.0,31°.57S×179°.80W,h253km,8km,mb4.6/19, mbtmp5.2/21 Error ellipse: s-maj=10.2km s-min=9.3km az=26.0*
ISC 09 13:43:01.4±0.4,**31°.79S**±0°.04×**179°.57W**±0°.05, **h236**km±3km,**h234**km:**pP-P**,**n899**,σ1**°68**/964,**mb5.0**/111, **32C-44D**,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.90**	**30**	P		**Pn**	**13 43 51.0**	**-0.9**
GLKZ				S		**S**	**13 44 28.5**	**-3.1**
RAO	**Raoul Island**	**2.91**	**30**	P		**Pn**	**13 43 50.2**	**-1.8**
	177nm,0.3s,baz=100,slow=18,SNR=2.2							
RAO				S		**S**	**13 44 27.7**	**-4.1**
	953nm,0.4s,baz=73,slow=21,SNR=15							
RAO	**Raoul Island**	**2.91**	**30**			**Pn**	**13 43 50.0**	**-2.1**
RAO	**Raoul Island**	**2.91**	**30**	P		**Pn**	**13 43 50.0**	**-2.1**
RIZ	**Raoul Island**	**2.91**	**30**	P		**Pn**	**13 43 48.2**	**-3.8**
RIZ				S		**S**	**13 44 32.1**	**+0.3**
MXZ	**Matakaoa Point**	**6.02**	**196**	Pn		**Pn**	**13 44 26.4**	**-3.0**
MXZ	**Matakaoa Point**	**6.02**	**196**	P		**Pn**	**13 44 25.6**	**-3.8**
MXZ				S		**S**	**13 45 35.8**	**-3.8**
GRZ	**Great Barrier**	**6.07**	**222**	P		**Pn**	**13 44 32.7**	**+2.7**
WMGZ	**Waiomatatini S**	**6.24**	**195**	P		**Pn**	**13 44 30.7**	**-1.5**
WMGZ				S		**S**	**13 45 41.7**	**-3.0**
KUZ	**Kuaotunu**	**6.29**	**217**	P		**Pn**	**13 44 35.7**	**+2.8**
HAZ	**Te Kaha**	**6.34**	**199**	P		**Pn**	**13 44 31.6**	**-1.8**
HAZ				S		**S**	**13 45 45.4**	**-1.5**
PKGZ	**Pakihiroa**	**6.38**	**197**	P		**Pn**	**13 44 31.5**	**-2.5**
PKGZ				S		**S**	**13 45 44.6**	**-3.5**
PUZ	**Puketiti**	**6.51**	**195**	P		**Pn**	**13 44 32.8**	**-2.9**
PUZ				S		**S**	**13 45 47.9**	**-3.1**
WCZ	**Waipu Caves**	**6.54**	**229**	P		**Pn**	**13 44 39.4**	**+3.5**
RUGZ	**Raukumara Rang**	**6.56**	**199**	P		**Pn**	**13 44 35.6**	**-0.8**
RUGZ				S		**S**	**13 45 47.3**	**-4.9**
OUZ	**Omahuta**	**6.65**	**237**	P		**Pn**	**13 44 39.1**	**+1.6**
TWGZ	**Tauwhareparae**	**6.68**	**197**	P		**Pn**	**13 44 35.4**	**-2.5**
TWGZ				S		**S**	**13 45 52.3**	**-2.6**
WHRZ	**Whale Island**	**6.68**	**204**	P		**Pn**	**13 44 41.1**	**+3.2**
MKAZ	**Moumakai**	**6.86**	**218**	P		**Pn**	**13 44 42.3**	**+2.3**
MARZ	**Manawahe**	**6.91**	**205**	P		**Pn**	**13 44 42.8**	**+2.2**
MARZ				S		**S**	**13 46 02.3**	**+2.2**
CNGZ	**Carnagh Statio**	**6.92**	**195**	P		**Pn**	**13 44 38.6**	**-2.3**
RVAZ	**Riverhead Bore**	**6.94**	**223**	P		**Pn**	**13 44 45.6**	**+4.6**
MWZ	**Matawai**	**6.95**	**199**	P		**Pn**	**13 44 38.3**	**-2.9**
MWZ				S		**S**	**13 45 56.9**	**-4.2**
TKGZ	**Te Karaka**	**6.96**	**197**	P		**Pn**	**13 44 39.0**	**-3.4**
TKGZ				S		**S**	**13 45 57.9**	**-3.4**
EDRZ	**Edgecumbe**	**6.99**	**205**	P		**Pn**	**13 44 44.7**	**+2.9**
EDRZ				S		**S**	**13 46 03.6**	**+1.5**
URZ	**Urewera**	**7.00**	**202**	P		**Pn**	**13 44 40.3**	**-1.5**
	24nm,0.4s,baz=246,slow=3.7,SNR=35							
URZ				S		**S**	**13 45 58.1**	**-4.1**
	142nm,0.5s,baz=50,slow=8.4,SNR=3.7							
URZ	**Urewera**	**7.00**	**202**			**Pn**	**13 44 39.2**	**-2.7**
URZ	**Urewera**	**7.00**	**202**	P		**Pn**	**13 44 39.5**	**-2.4**
URZ				S		**S**	**13 45 58.9**	**-3.4**
WTAZ	**Waiatarua**	**7.05**	**222**	P		**Pn**	**13 44 46.1**	**+3.5**
OMRZ	**Omania**	**7.13**	**207**	P		**Pn**	**13 44 41.0**	**-2.5**
RAGZ	**Rawiri**	**7.13**	**199**	P		**Pn**	**13 44 40.7**	**-2.8**
RAGZ				S		**S**	**13 46 00.2**	**-5.2**
TOZ	**Tahuroa Road**	**7.18**	**213**	P		**Pn**	**13 44 44.2**	**+0.1**
TARZ	**Mount Tarawera**	**7.19**	**206**	P		**Pn**	**13 44 46.8**	**+2.4**
RIGZ	**Rimuhau**	**7.24**	**197**	P		**Pn**	**13 44 41.0**	**-3.9**
RIGZ				S		**S**	**13 46 02.9**	**-4.9**
HLRZ	**Highlands Stat**	**7.26**	**206**	P		**Pn**	**13 44 48.5**	**+3.3**
RRRZ	**Republican Roa**	**7.28**	**205**	P		**Pn**	**13 44 45.7**	**+0.3**
MUGZ	**Murupara**	**7.31**	**203**	P		**Pn**	**13 44 44.5**	**-1.3**
MUGZ				S		**S**	**13 46 07.6**	**-1.9**
HSRZ	**Hossack Road**	**7.35**	**207**	P		**Pn**	**13 44 49.1**	**+2.8**
HRRZ	**Handcock Road**	**7.41**	**206**	P		**Pn**	**13 44 47.0**	**-0.1**
SNGZ	**Shannon Statio**	**7.42**	**199**	P		**Pn**	**13 44 42.2**	**-2.9**
SNGZ				S		**S**	**13 46 06.6**	**-5.4**
GRRZ	**Galatos Road**	**7.44**	**207**	P		**Pn**	**13 44 50.9**	**+3.4**
PRRZ	**Plateau Road**	**7.46**	**205**	P		**Pn**	**13 44 45.8**	**-2.0**
ALRZ	**Allen Road**	**7.54**	**205**	P		**Pn**	**13 44 47.6**	**-1.1**
KNZ	**Kokohu**	**7.56**	**197**	P		**Pn**	**13 44 45.3**	**-3.6**
KNZ				S		**S**	**13 46 07.7**	**-7.4**
WPRZ	**Whakapapatarin**	**7.57**	**206**	P		**Pn**	**13 44 51.0**	**+1.9**
MHGZ	**Mahia Peninsul**	**7.63**	**195**	P		**Pn**	**13 44 46.1**	**-3.7**
MHGZ				S		S	13 46 07.0	-10
MTHZ	**Maungataniwha**	**7.63**	**202**	P		**Pn**	**13 44 46.8**	**-3.1**
TLZ	**Tolley Road**	**7.66**	**210**	P		**Pn**	**13 44 54.1**	**+3.8**
WHTZ	**Whakaora**	**7.77**	**207**	P		**Pn**	**13 44 54.2**	**+2.5**
NMHZ	**Naumai**	**7.87**	**201**	P		**Pn**	**13 44 49.4**	**-3.5**
ARHZ	**Aropaoanui**	**7.96**	**200**	P		**Pn**	**13 44 51.4**	**-2.7**
BKZ	**Black Stump Fm**	**8.03**	**202**			**Pn**	**13 44 51.0**	**-4.0**
BKZ	**Black Stump Fm**	**8.03**	**202**	P		**Pn**	**13 44 51.1**	**-3.8**
RITZ	**Rihia Road**	**8.08**	**206**	P		**Pn**	**13 44 56.3**	**+0.7**
HIZ	**Hauiti**	**8.11**	**213**			**Pn**	**13 44 56.0**	**0.0**
KATZ	**Kakaramea**	**8.14**	**207**	P		**Pn**	**13 44 58.9**	**+2.3**

MCHZ McNeill Hill 8.22 201 P **Pn** 13 44 53.1 -4.2
MCHZ S **S** 13 46 25.7 -4.9
KWHZ Kaweka Forest 8.28 202 P **Pn** 13 44 54.6 -3.6
WTVZ West Tongariro 8.30 207 P **Pn** 13 44 59.9 +1.4
CKHZ Cape Kidnapper 8.31 198 P **Pn** 13 44 57.7 -0.8
CKHZ S **S** 13 46 25.8 -6.8
NNVZ North Ngauruho 8.31 207 P **Pn** 13 44 58.8 +0.1
OTVZ Oturere 8.32 207 P **Pn** 13 44 55.4 -3.4
TWVZ Taurewa 8.32 208 P **Pn** 13 44 59.0 +0.1
SNVZ South Ngauruho 8.35 207 P **Pn** 13 44 55.9 -3.2
SNVZ S **S** 13 46 31.4 -2.4
NGZ Ngauruhoe 8.35 207 P **Pn** 13 44 59.0 -0.2
TUVZ Tukino 8.41 206 P **Pn** 13 44 59.8 -0.2
TUVZ S **S** 13 46 32.8 -2.5
FWVZ Far West T-bar 8.44 207 P **Pn** 13 44 57.8 -2.6
FWVZ S **S** 13 46 33.8 -2.3
WHVZ Whangaehu Hut 8.45 206 P **Pn** 13 44 58.6 -1.9
DRZ Dome Shelter 8.45 207 P **Pn** 13 45 03.2 +2.5
TRVZ Turoa 8.48 207 P **Pn** 13 45 01.6 +0.7
MOVZ Moawhango 8.50 205 P **Pn** 13 44 58.3 -2.7
PKVZ Pokaka 8.55 208 P **Pn** 13 45 00.7 -0.9
MTVZ Mangateitei 8.58 207 P **Pn** 13 45 02.5 +0.3
PXZ Pawanui 8.71 198 P **Pn** 13 44 58.9 -4.8
PXZ S **S** 13 46 34.4 -7.8
PNHZ Pukenui 8.80 202 P Pn 13 44 59.9 -5.0
MHEZ Mangahewa 8.81 213 P Pn 13 45 09.5 +4.6
WPHZ Waipukurau 8.87 200 P **Pn** 13 45 02.3 -3.4
DREZ Durham Road 8.96 213 P **Pn** 13 45 10.9 +4.1
PRHZ Porangahau 9.00 199 P **Pn** 13 45 02.8 -4.5
TSZ Takapari Road 9.01 202 P **Pn** 13 45 03.5 -3.9
DVHZ Dannevirke 9.16 201 P Pn 13 45 04.4 -5.0
ANWZ Angora Road 9.22 199 P **Pn** 13 45 09.6 -0.5
NMEZ Namu Road 9.29 213 P **Pn** 13 45 14.9 -3.6
OHWZ Ohakea 9.36 205 P **Pn** 13 45 11.2 -0.7
POWZ Post Office Ro 9.37 202 P **Pn** 13 45 10.1 -2.0
PRWZ Pori Road 9.46 201 P **Pn** 13 45 10.4 -2.7
BFZ Birch Farm 9.49 200 Pn Pn 13 45 08.3 -5.3
BFZ Birch Farm 9.49 200 P Pn 13 45 07.9 -5.7
CPWZ Castlepoint 9.72 199 P **Pn** 13 45 15.1 -1.3
MSWZ Moikau Station 10.47 202 Pn 13 45 18.7 -7.3
PLWZ Palliser 10.60 202 Pn **Pn** 13 45 23.1 -4.7
TUWZ Tuamarina 10.94 207 Pn 13 45 24.9 -6.9
NNZ Nelson 10.98 209 **Pn** 13 45 29.8 -2.6
QRZ Quartz Range 11.04 213 **Pn** 13 45 30.8 -2.4
CMWZ Cape Campbell 11.11 205 Pn **Pn** 13 45 30.4 -3.8
CMWZ Cape Campbell 11.11 205 P **Pn** 13 45 32.4 -1.7
BSWZ Blackbirch Sta 11.21 206 P **Pn** 13 45 32.4 -2.9
THZ Tophouse 11.63 209 Pn Pn 13 45 35.9 -4.8
KHZ Kahutara 11.94 205 Pn Pn 13 45 37.7 -6.8
LTZ Lake Taylor 12.74 208 Pn 13 45 49.4 -5.3
OXZ Oxford 13.29 208 P Pn 13 45 54.0 -7.2
MQZ McQueen's Vall 13.38 205 Pn 13 45 55.3 -7.1
RPZ Rata Peaks 14.01 209 P **Pn** **13 46 06.3 -3.8**
19nm,0.4s,baz=33,slow=1.7,SNR=37
RPZ S S 13 48 32.3 -13
41nm,0.5s,baz=284,slow=22,SNR=14
MSVF Nonsavu 14.16 351 P **Pn** **13 46 12.2 0.0**
192nm,0.8s,baz=162,slow=8.5,SNR=69
MSVF Nonsavu 14.16 351 P **Pn** **13 46 12.1 -0.1**
MSVF Nonsavu 14.16 351 *i* P **Pn** **13 46 11.5 -0.7**
MARNC Mare, Loyalty 15.10 310 P **P** **13 46 20.4 -2.9**
OUENC Ouen Island, N 15.27 304 P **Pn** **13 46 26.0 +0.5**
ONTNC Ouen Toro 15.62 304 P **Pn** **13 46 29.8 +0.1**
DZM Mont Dzumac 15.78 304 P **Pn** **13 46 32.5 +0.8**
152nm,1.0s,baz=115,slow=10,SNR=42
DZM Mont Dzumac 15.78 304 *e*LR LR 13 50 12.1
comp=Z,994nm,23.7s
DZM Mont Dzumac 15.78 304 P **P** **13 46 31.1 +0.3**
MLZ Mavora Lakes 16.60 212 P **P** **13 46 36.5 -3.0**
WHZ Wether Hill Ro 17.08 211 P **P** **13 46 41.4 -3.4**
LHI Lord Howe Isla 18.19 265 P **P** **13 46 58.6 +1.5**
baz=18,SNR=9.0
KOUNC Koumac, New Ca 18.29 304 P **P** **13 46 56.9 -1.3**
AFI Afiamalu 19.18 24 P **P** **13 47 07.2 -0.6**
39nm,0.5s,baz=85,slow=1.5,SNR=10
AFI S **S** 13 50 23.3 -9.3
26nm,0.8s,baz=41,slow=20,SNR=1.7
AFI Afiamalu 19.18 24 P **P** **13 47 06.8 -1.0**
ARMA Armidale 24.67 266 P **P** **13 48 02.9 +1.8**
baz=25,SNR=4.8
ARMA Armidale 24.67 266 P **P** **13 48 02.8 +1.7**
ARMA IAmb IAmb 13 48 04.1
comp=Z,28nm,0.8s
MGCD Mangrove Creek 24.74 259 P **P** **13 48 03.3 +1.8**
baz=25,SNR=13
CNB Canberra Magne 26.07 254 P **P** **13 48 13.9 +0.3**
baz=26,SNR=12
MILA Mila 26.26 250 P **P** **13 48 17.1 +1.9**
baz=26,SNR=4.1
CAN Canberra 26.37 254 P **P** **13 48 17.8 +1.6**
CAN IAmb IAmb 13 48 19.1
comp=Z,38nm,1.1s
CAN Canberra 26.37 254 P **P** **13 48 17.8 +1.6**
CAN pmax pmax
comp=Z,38nm,1.1s
EIDS Eidsvold 26.50 277 P **P** **13 48 17.9 +0.5**
baz=27,SNR=15
EIDS Eidsvold 26.50 277 P **P** **13 48 17.6 +0.1**
EIDS IAmb IAmb 13 49 11.8
comp=Z,69nm,1.0s
RMQ Roma 28.11 273 P **P** **13 48 33.4 +1.7**
baz=28,SNR=46
TOO Toolangi 29.19 249 P **P** **13 48 43.2 +2.1**
baz=29,SNR=11
TOO Toolangi 29.19 249 P **P** **13 48 42.8 +1.6**
TOO IAmb IAmb 13 48 44.4
comp=Z,37nm,1.1s
TOO Toolangi 29.19 249 P **P** **13 48 42.8 +1.6**
TOO pmax pmax
comp=Z,37nm,1.1s
HNR Honiara 29.26 315 P **P** **13 48 39.7 -2.2**
comp=Z,126nm,0.7s,baz=196,slow=3.3,SNR=5.1
comp=Z,126nm,0.7s
HNR Honiara 29.26 315 P **P** **13 48 39.4 -2.5**
CMSA Cobar Meteorol 29.50 261 P **P** **13 48 45.6 +1.7**
baz=30,SNR=48
PAE Paea 30.54 70 *e*T T 14 20 44.7
comp=Z,3.9nm,0.3s
PPT2 Papeete2 30.58 70 *e*S **S** **13 53 41.9 +3.9**
comp=Z,77nm,24.5s
PPT2 *e*LR LR 13 57 15.2
comp=Z,68nm,22.0s
PPT2 Papeete2 30.58 70 *e*T T 14 20 57.0
comp=Z,5.8nm,0.3s
QLP Quilpie 31.93 270 P **P** **13 49 05.4 +0.2**
baz=32,SNR=23
ARPS Mount Arapiles 32.12 250 P **P** **13 49 08.3 +1.5**
baz=32,SNR=6.5
CTA Charters Tower 32.74 282 P **P** **13 49 13.3 +1.0**
CTA pmax pmax
comp=Z,121nm,0.7s
CTAO Charters Tower 32.74 282 P **P** **13 49 12.8 +0.4**
CTAO Charters Tower 32.74 282 P **P** **13 49 12.8 +0.4**
CTAO pmax pmax
comp=Z,79nm,0.7s
CTAO Charters Tower 32.74 282 P **P** **13 49 11.4 -1.0**
CTAO pP **pwP** **13 50 05.8 +2.6**
STKA Stephens Creek 32.88 259 P **P** **13 49 14.7 +1.2**
comp=Z,63nm,0.8s,baz=102,slow=11,SNR=126
comp=Z,63nm,0.8s
STKA Stephens Creek 32.88 259 P **P** **13 49 14.6 +1.1**
baz=33,SNR=99
STKA Stephens Creek 32.88 259 P **P** **13 49 14.3 +0.9**
STKA Stephens Creek 32.88 259 *i* P **P** **13 49 13.3 -0.1**
VAH Vaihoa 33.44 68 *e*T T 14 23 50.7
comp=Z,14nm,0.3s
TARA Tarawa 33.73 346 P **P** **13 49 19.5 -1.4**
HTT Hallett 34.84 256 P **P** **13 49 31.1 +0.8**
baz=35,SNR=28
MTSU Mount Surprise 35.28 284 P **P** **13 49 34.7 +0.5**
baz=35,SNR=115
BBOO Buckleboo 37.31 256 P **P** **13 49 51.0 -0.3**
baz=37,SNR=72
BBOO Buckleboo 37.31 256 P **P** **13 49 50.9 -0.3**
PMG Port Moresby 38.03 299 P **P** **13 49 57.5 +0.1**
comp=Z,109nm,0.8s,baz=97,slow=5.0,SNR=22
comp=Z,109nm,0.8s
QIS Mount Isa 38.11 277 P **P** **13 49 57.7 -0.3**
baz=38,SNR=28
KRVT Keravat (AS076 38.18 310 P **P** **13 49 58.1 -0.5**
comp=Z,560nm,0.9s,baz=158,slow=0.9,SNR=30
COEN Coen 38.40 289 P **P** **13 50 00.7 +0.2**
baz=38,SNR=88
COEN Coen 38.40 289 P **P** **13 50 00.5 0.0**

AS31 Alice Springs 41.72 269 P **P** **13 50 26.9 -0.7**
ASAR Alice Springs 41.72 269 P **P** **13 50 27.4 -0.2**
comp=Z,213nm,0.6s,baz=107,slow=7.5,SNR=2333
ASAR ScP **ScP** **13 55 44.2 -2.8**
comp=Z,2.2nm,0.6s,baz=116,slow=4.1,SNR=4.8
ASAR Alice Springs 41.72 269 P **P** **13 50 27.0 -0.6**
DRV Dumont d'Urvil 42.34 203 P **P** **13 50 31.5 -0.5**
DRV pP **pP** **13 51 19.7 -0.8**
WB2 Warramunga Arr 42.82 275 P **P** **13 50 35.7 -0.8**
baz=43
WB2 Warramunga Arr 42.82 275 P **P** **13 50 35.6 -1.0**
WRAB Tennant Creek 42.83 275 P **P** **13 50 35.5 -1.1**
WRAB Tennant Creek 42.83 275 *ce*P **P** **13 50 35.5 -1.1**
WRAB pmax pmax
comp=Z,256nm,0.6s
WRAB Tennant Creek 42.83 275 P **P** **13 50 33.5 -3.1**
WRA Warramunga Arr 42.83 274 P **P** **13 50 36.2 -0.5**
comp=Z,368nm,0.6s,baz=115,slow=7.5,SNR=2226
WRA ScP **ScP** **13 55 48.7 -2.8**
comp=Z,3.5nm,0.9s,baz=112,slow=4.3,SNR=5.9
WRA S **S** **13 56 39.2 -3.8**
comp=Z,4.3nm,1.0s,baz=113,slow=14,SNR=4.9
WRA Warramunga Arr 42.83 274 P **P** **13 50 35.6 -1.1**
WRA IAmb IAmb 13 50 37.0
comp=Z,36nm,0.7s
WB0 Warramunga Arr 42.86 275 P **P** **13 50 35.9 -1.0**
FORT Forrest 44.40 257 P **P** **13 50 48.7 -0.3**
baz=44,SNR=15
FORT Forrest 44.40 257 P **P** **13 50 48.3 -0.7**
FORT IAmb IAmb 13 50 53.1
comp=Z,72nm,0.7s
WRKA Warakurna 45.99 265 P **P** **13 51 00.0 -1.5**
baz=46,SNR=159
SBA Scott Base 46.56 184 P **P** **13 51 08.6 +3.5**
SBA Scott Base 46.56 184 P **P** **13 51 08.6 +3.5**
SBA pmax pmax
comp=Z,20nm,0.7s
SBA Scott Base 46.56 184 P **P** **13 51 07.9 +2.8**
SBA pP **pwP** **13 52 00.1 +5.2**
VNDA Vanda 46.58 185 P **P** **13 51 07.8 +2.5**
comp=Z,0.9nm,0.6s,baz=10,slow=7.9,SNR=8.3
VNDA ScP **ScP** **13 56 04.5 -1.5**
comp=Z,2.5nm,0.8s,baz=358,slow=6.5,SNR=9.6
VNDA Vanda 46.58 185 P **P** **13 51 07.1 +1.7**
VNDA Vanda 46.58 185 P **P** **13 51 07.0 +1.7**
GENI Genyem 47.72 299 P **P** **13 51 13.7 -1.3**
comp=Z,152nm,1.3s
KDU Kakadu 47.86 282 P **P** **13 51 14.7 -1.3**
baz=48,SNR=83
MTN Manton Dam 48.90 281 P **P** **13 51 22.9 -1.0**
baz=49,SNR=82
MTN Manton Dam 48.90 281 P **P** **13 51 22.6 -1.3**
SMPI Sarmi 49.21 299 P **P** **13 51 25.0 -1.3**
comp=Z,17nm,2.0s
KNRA Kununurra 49.49 276 P **P** **13 51 28.0 -0.4**
baz=50,SNR=201
KNRA Kununurra 49.49 276 P **P** **13 51 27.8 -0.6**
FITZ Fitzroy Crossi 51.03 272 P **P** **13 51 39.5 -0.4**
comp=Z,48nm,0.6s,baz=142,slow=5.3,SNR=158
comp=Z,48nm,0.6s
FITZ Fitzroy Crossi 51.03 272 P **P** **13 51 39.3 -0.6**
baz=51,SNR=113
FITZ Fitzroy Crossi 51.03 272 P **P** **13 51 39.5 -0.4**
FITZ IAmb IAmb 13 51 40.5
comp=Z,66nm,0.8s
CCD Concordia, Ant 51.24 196 P **P** **13 51 40.8 -0.4**
CASY Casey 53.28 208 P **P** **13 51 54.2 -1.5**
CASY Casey 53.28 208 P **P** **13 51 54.5 -1.2**
CASY x x 13 52 07.4
MEEK Meekatharra 53.58 259 P **P** **13 51 57.1 -1.4**
baz=54,SNR=6.1
FAKI Fak Fak 53.59 292 P **P** **13 51 56.9 -1.8**
FAKI IAmb IAmb 13 51 58.2
comp=Z,88nm,1.0s
FAKI Fak Fak 53.59 292 P **P** **13 51 57.0 -1.7**
comp=Z,1µmcomp=Z,92nm,1.0s
PSA00 Pilbara Seismi 54.48 265 P **P** **13 52 03.1 -2.0**
PSA00 Pilbara Seismi 54.48 265 P **P** **13 52 02.9 -2.2**
PSA00 IAmb IAmb 13 52 03.8
comp=Z,15nm,1.2s
MBWA Marble Bar 54.75 265 P **P** **13 52 05.3 -1.7**
MBWA IAmb IAmb 13 52 06.4
comp=Z,32nm,0.9s
MBWA Marble Bar 54.75 265 P **P** **13 52 04.3 -2.7**
MBWA pP **pwP** **13 53 00.9 -1.2**
MORW Morawa 54.86 255 P **P** **13 52 06.7 -0.9**
baz=55,SNR=3.3
SIJI Sorong 55.62 294 P **P** **13 52 12.4 -0.9**
comp=Z,32nm,0.9s,baz=86,slow=4.6,SNR=16
comp=Z,32nm,0.9s
HMH Humu'ula Sheep 56.08 28 P **P** **13 52 16.9 +0.3**
BATI Baumata 56.52 279 P **P** **13 52 20.6 +0.9**
comp=Z,48nm,0.6s,baz=183,slow=2.5,SNR=11
comp=Z,48nm,0.6s
BATI Baumata 56.52 279 P **P** **13 52 20.9 +1.3**
comp=Z,47nm,0.8s
QSPA South Pole Qui 58.32 180 P **P** **13 52 35.0 +3.4**
comp=Z,97nm,0.6s,baz=5.0,slow=0.7,SNR=506
comp=Z,97nm,0.6s
QSPA South Pole Qui 58.32 180 P **P** **13 52 32.6 +1.0**
QSPA pP **PcP** **13 53 20.9 +1.1**
MMRI Maumere 58.53 280 P **P** **13 52 33.7 0.0**
comp=Z,1µmcomp=Z,89nm,1.1s
LBMI Labuha 58.73 291 P **P** **13 52 36.5 +1.5**
GIRL Giralia 58.79 261 P **P** **13 52 35.1 -0.1**
baz=59,SNR=3.7
GIRL Giralia 58.79 261 P **P** **13 52 35.2 -0.1**
EDFI Ende, Flores 58.93 279 P **P** **13 52 36.0 -0.5**
comp=Z,18nm,0.7s
SANI Sanana 59.10 289 P **P** **13 52 37.2 -0.3**
comp=Z,43nm,1.2s
PLAI Plampang 62.19 277 P **P** **13 53 01.7 +3.3**
TWSI Taliwang, Sumb 62.99 277 P **P** **13 53 03.8 +0.1**
comp=Z,34nm,1.1s
SPSI Sidrap Palu 63.11 283 P **P** **13 53 05.3 +0.9**
comp=Z,18nm,0.7s
APSI Ampana 63.28 287 P **P** **13 53 06.5 +0.9**
comp=Z,24nm,1.5s
TTSI Tana Toraja 63.58 284 P **P** **13 53 06.8 -0.7**
comp=Z,15nm,0.8s
MRSI Marisa 63.85 288 P **P** **13 53 10.1 +0.8**
comp=Z,830nmcomp=Z,19nm,0.7s
TOLI2 Tolitoli 65.16 288 P **P** **13 53 15.1 -2.6**
TOLI2 IAmb IAmb 13 53 19.7
comp=Z,14nm,0.7s
MPSI Mapaga 65.43 287 P **P** **13 53 17.9 -1.5**
comp=Z,650nmcomp=Z,38nm,0.8s
BBKI Banjar Baru 67.50 280 P **P** **13 53 34.9 +2.3**
BELA Belgrano 2 68.59 173 P **P** **13 53 39.4 +1.1**
BELA IAmb IAmb 13 53 42.6
comp=Z,22nm,1.0s
SMAI San Martin Ant 68.64 158 P **P** **13 53 42.2 +3.5**
SMAI IAmb IAmb 13 53 43.6
comp=Z,24nm,0.9s
MAW Mawson 70.53 201 P **P** **13 53 51.0 +0.7**
comp=Z,2.2nm,0.9s,baz=139,slow=9.3,SNR=2.7
MAW Mawson 70.53 201 P **P** **13 53 51.0 +0.7**
STKI Sintang 72.23 281 P **P** **13 54 01.5 +0.2**
SBUM Sibu 72.93 284 P **P** **13 54 04.4 -1.0**
KSM Kuching 73.97 282 P **P** **13 54 10.1 -1.5**
TROLL Troll, Antarti 76.47 181 P **P** **13 54 26.4 +1.4**
TROLL S **S** **14 03 56.5 +6.0**
SNAA Sanae 76.80 179 P **P** **13 54 28.1 +1.3**
SNAA S **S** **14 03 54.1 +0.3**
SNAA Sanae 76.80 179 P **P** **13 54 27.9 +1.2**
SNAA IAmb IAmb 13 54 29.6
comp=Z,68nm,1.1s
SNAA Sanae 76.80 179 *ce*P **P** **13 54 28.0 +1.3**
SNAA pmax pmax
comp=Z,59nm,1.0s
VNA3 Neumayer Olymp 77.00 177 P **P** **13 54 29.3 +1.5**
VNA3 S **S** **14 03 55.7 -0.2**
NVL N'lazarevskaya 77.41 184 *e*P **P** **13 54 30.3 +0.3**
NVL pmax pmax
comp=Z,24nm,0.8s
VNA2 Neumayer--Watz 77.42 177 P **P** **13 54 31.8 +1.7**
baz=173,slow=5.6
VNA2 S **S** **14 04 01.0 +0.6**
JYT Yasato 77.46 328 P **P** **13 54 29.5 -1.2**
JYT IAmb IAmb 13 54 31.4
comp=Z,46nm,0.9s
VNA1 Neumayer--Stat 77.66 177 P **P** **13 54 33.1 +1.8**
INU Inuyama 78.25 325 P **P** **13 54 33.8 -1.2**
INU IAmb IAmb 13 54 34.7
comp=Z,24nm,0.9s

JGF Kuroka 78.28 325 P **P** **13 54 33.7 -1.6**
MJAR Matsushiro Arr 78.64 326 P **P** **13 54 35.4 -1.7**
comp=Z,11nm,1.0s,baz=161,slow=5.9,SNR=11
comp=Z,11nm,1.0s
MAJO Matsushiro 78.64 326 P **P** **13 54 35.5 -1.7**
MAJO IAmb IAmb 13 54 36.7
comp=Z,24nm,1.1s
MAJO Matsushiro 78.64 326 P **P** **13 54 35.5 -1.7**
MAJO pmax pmax
comp=Z,25nm,1.1s
JSU Suzuyama 78.75 318 P **P** **13 54 36.5 -1.4**
JSU IAmb IAmb 13 54 38.3
comp=Z,15nm,0.8s
YULB Yu-li 78.79 306 P **P** **13 54 35.5 -2.8**
YULB IAmb IAmb 13 56 16.9
comp=Z,38nm,1.7s
TPUB Ta-pu 79.19 306 P **P** **13 54 37.7 -2.7**
TPUB IAmb IAmb 13 54 40.8
comp=Z,34nm,1.1s
JSD Sado 79.83 327 P **P** **13 54 42.6 -0.9**
JSD IAmb IAmb 13 55 59.9
comp=Z,42nm,1.1s
JHS Saijyo 79.94 322 P **P** **13 54 43.5 -0.8**
JHS IAmb IAmb 13 54 44.5
comp=Z,50nm,1.0s
LL02 Futaleuf 80.33 135 P **P** **13 54 48.4 +2.0**
LL02 IAmb IAmb 13 54 50.3
comp=Z,20nm,0.8s
ORCD Orcadas 80.70 159 P **P** **13 54 50.4 +2.5**
JTM Tenmabayashi 80.87 331 P **P** **13 54 48.9 -0.1**
JTU Tsushima 81.58 320 P **P** **13 54 51.4 -1.5**
EFI East Falkland 82.35 148 P **P** **13 54 59.1 +2.3**
EFI East Falkland 82.35 148 P **P** **13 54 59.1 +2.3**
EFI pmax pmax
comp=Z,228nm,1.6s
PLCA Paso Flores 82.54 134 P **P** **13 55 01.6 +3.5**
comp=Z,14nm,0.9s,baz=234,slow=5.1,SNR=43
comp=Z,14nm,0.9s
PLCA Paso Flores 82.54 134 P **P** **13 55 00.7 +2.6**
PLCA IAmb IAmb 13 55 02.3
comp=Z,22nm,1.0s
GO06 Curarrehue 82.63 132 P **P** **13 55 01.9 +3.3**
KIWB Kanaga Island 83.31 2 P **P** **13 55 02.0 +0.7**
ADK Adak 83.36 2 P **P** **13 55 01.5 -0.1**
ADK Adak 83.36 2 P **P** **13 55 01.5 -0.1**
ADK pmax pmax
comp=Z,293nm,1.8s
GSTR Great Sitkin T 83.58 2 P **P** **13 55 03.0 +0.2**
TJN Taejon 84.07 320 P **P** **13 55 05.1 -0.5**
TJN Taejon 84.07 320 *ce*P **P** **13 55 04.4 -1.2**
KSRS Korea Array 84.55 321 P **P** **13 55 08.1 +0.1**
comp=Z,9.3nm,0.9s,baz=141,slow=5.8,SNR=16
comp=Z,9.3nm,0.9s
KSAR Wonju Array Be 84.56 321 P **P** **13 55 07.2 -0.8**
KSAR Wonju Array Be 84.56 321 P **P** **13 55 07.3 -0.8**
GSI Gunungsitoli 84.60 275 P **P** **13 55 08.0 -0.9**
KS19 Wonju Array Si 84.61 321 P **P** **13 55 07.7 -0.6**
KS19 IAmb IAmb 13 57 16.2
comp=Z,22nm,1.4s
SKR Severo-Kuril's 84.89 345 *ce*P **P** **13 55 05.2 -4.1**
NIKH Nikolski High 84.92 6 P **P** **13 55 09.8 +0.3**
NIKH Nikolski High 84.92 6 P **P** **13 55 09.3 -0.1**
baz=189
YSS Yuzh-Sakhalins 85.42 335 P **P** **13 55 12.2 +0.2**
YSS Yuzh-Sakhalins 85.42 335 *eP* **P** **13 55 12.5 +0.4**
YSS *eS* **S** **14 05 25.0 +2.4**
YSS pmax pmax
comp=Z,400nm,4.0s
YSS pmax pmax
comp=Z,80nm,0.7s
UBPT Khong Chiam 85.64 291 P **P** **13 55 13.4 -0.5**
UNV Unalaska Valle 86.03 8 P **P** **13 55 15.4 +0.5**
UNV IAmb IAmb 13 55 16.1
comp=Z,17nm,1.1s
UNV Unalaska Valle 86.03 8 P **P** **13 55 14.9 0.0**
baz=191
MT01 Popeta 86.10 128 P **P** **13 55 18.0 +2.0**
MT01 IAmb IAmb 13 55 19.5
comp=Z,24nm,0.9s
NJ2 Nanjing 86.14 312 *eP* **P** **13 55 16.0 0.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
MT09 Talagante 86.32 128 P **P** **13 55 18.7 +1.4**
MT09 IAmb IAmb 13 58 01.4
comp=Z,82nm,1.6s
PET Petropavlovsk 86.57 347 P **P** **13 55 17.8 +0.3**
PET IAmb IAmb 13 58 30.7
comp=Z,62nm,1.2s
MSHR Mys Shultsa 86.74 326 *i* P **P** **13 55 17.2 -1.4**
MSHR pmax pmax
comp=Z,11nm,1.0s
CIS Catalina Islan 86.77 47 P **P** **13 55 18.9 -0.1**
baz=228
PEA0B Petropavlovsk- 86.83 347 P **P** **13 55 19.3 +0.5**
PEA0B Petropavlovsk- 86.83 347 P **P** **13 55 19.3 +0.5**
PEA0B pmax pmax
comp=Z,99nm,1.3s
PETK Petropavlovsk- 86.83 347 P **P** **13 55 19.2 +0.3**
comp=Z,38nm,0.9s,baz=121,slow=6.8,SNR=38
PETK PKiKP **PKiKP** **14 00 22.9 -0.2**
comp=Z,2.2nm,0.9s,baz=163,slow=1.5,SNR=4.4
comp=Z,38nm,0.9s
PETK Petropavlovsk- 86.83 347 P **P** **13 55 18.7 -0.1**
PKM Mcpherson Peak 86.90 45 P **P** **13 55 20.4 +0.5**
baz=228
SMMC Simmler 87.08 45 P **P** **13 55 21.3 +0.8**
baz=227
USRK Ussuriysk Ar. 87.59 327 P **P** **13 55 23.0 +0.4**
comp=Z,12nm,0.8s,baz=136,slow=3.3,SNR=20
comp=Z,12nm,0.8s
USRK Ussuriysk Ar. 87.59 327 P **P** **13 55 22.4 -0.2**
USRK Ussuriysk Ar. 87.59 327 P **P** **13 55 23.0 +0.4**
ARVC Arvin 87.66 46 P **P** **13 55 23.7 +0.5**
baz=228
MURC Murrieta 87.66 48 P **P** **13 55 23.9 +0.6**
baz=229
MONP2 Monument Peak 87.69 49 P **P** **13 55 24.4 +0.7**
baz=230,SNR=5.9
IKP In-Ko-Pah, Jac 87.74 49 P **P** **13 55 24.1 +0.3**
baz=230
BFSC Mount Baldy Ra 87.79 47 P **P** **13 55 24.2 +0.2**
baz=229,SNR=7.8
CNBA Chernabura Isl 87.96 11 P **P** **13 55 25.4 +1.3**
CHNA Chernabura Isl 87.97 11 P **P** **13 55 24.7 +0.6**
baz=197
EDW2 Edwards Air Fo 88.01 46 P **P** **13 55 25.5 +0.5**
baz=229,SNR=11
SWSC Sam W. Stewart 88.13 49 P **P** **13 55 26.1 +0.7**
baz=230
TPFO Pinon Flats 88.14 48 P **P** **13 55 26.3 +0.6**
baz=230,SNR=6.6
PFO Pinyon Flats O 88.14 48 P **P** **13 55 27.8 +2.2**
comp=Z,6.3nm,0.8s,baz=281,slow=4.2,SNR=10
comp=Z,6.3nm,0.8s
PFO Pinyon Flats O 88.14 48 P **P** **13 55 27.0 +1.3**
PFO Pinyon Flats O 88.14 48 *i* P **P** **13 55 26.7 +1.0**
PFO pmax pmax
comp=Z,18nm,0.9s
PFO Pinyon Flats O 88.14 48 P **P** **13 55 26.4 +0.7**
baz=230
PMD Palm Desert 88.21 48 P **P** **13 55 27.7 +1.9**
PMD IAmb IAmb 13 55 30.8
comp=Z,9.7nm,0.9s
ISA Isabella, Lake 88.23 45 P **P** **13 55 26.5 +0.5**
baz=228,SNR=13
SDPT Sand Point 88.32 11 P **P** **13 55 26.9 +1.2**
SDPT Sand Point 88.32 11 P **P** **13 55 25.5 -0.2**
baz=196
S12K Black Hills 88.42 10 P **P** **13 55 26.7 +0.4**
baz=195
LRMC Laurel Mtn Rad 88.59 46 P **P** **13 55 27.6 -0.1**
baz=229
BELC Belle Mtn. Jos 88.68 48 P **P** **13 55 28.1 -0.1**
baz=230,SNR=16
TYV Tymovskoe 88.80 337 *eP* **P** **13 55 29.6 +1.5**
TYV *eS* **S** **14 05 54.4 -0.2**
TYV pmax pmax
comp=Z,67nm,0.9s
TYV pmax pmax
comp=Z,100nm,2.9s
TYV smax smax
comp=N,300nm,3.5s
TYV smax smax
comp=E,200nm,3.5s
BC3 Big Chuckawall 88.80 49 P **P** **13 55 28.9 +0.2**
baz=230,SNR=7.0

GLA **Glamis** 88.82 49 P **P** 13 55 29.4 +0.6
GLA IAmb IAmb 13 55 34.9
comp=Z,24nm,0.8s
GLA **Glamis** 88.82 49 P **P** 13 55 29.4 +0.6
GLA pmax pmax
comp=Z,24nm,0.9s
GLA **Glamis** 88.82 49 P **P** 13 55 29.2 +0.5
baz=230
SPIA **Saint Paul Isl** 88.97 5 P **P** 13 55 29.6 +0.9
baz=188
CWC **Cottonwood Cre** 88.99 45 P **P** 13 55 30.1 +0.5
baz=229
HEC **Hector,Ludlow** 89.00 47 P **P** 13 55 30.4 +0.8
baz=230,SNR=8.9
GSC **Goldstone, Bar** 89.02 47 P **P** 13 55 30.2 +0.5
baz=229,SNR=8.5
MDJ **Mudanjiang** 89.02 326 P **P** 13 55 29.3 -0.1
MDJ IAmb IAmb 13 55 31.3
comp=Z,21nm,1.2s
MDJ **Mudanjiang** 89.02 326 P **P** 13 55 29.5 +0.1
MDJ pP pP 13 56 25.2 -0.4
MDJ sP sP 13 56 48.3 -1.5
MDJ S **S** 14 05 58.4 +1.4
MDJ sS sS 14 07 35.5 -0.3
MDJ pmax pmax
comp=Z,13nm,0.8s
MDJ pmax pmax
comp=Z,170nm,3.5s
MPMC **Manual Prospec** 89.09 46 P **P** 13 55 30.8 +0.6
baz=229
OMMB **Old Mammoth Mi** 89.22 44 P **P** 13 55 32.2 +1.3
IRM **Iron Mountain** 89.32 48 P **P** 13 55 32.2 +1.1
baz=230,SNR=10
MLAC **Mammoth, Mammo** 89.33 44 P **P** 13 55 31.9 +0.6
baz=228
S14K **Fog Glacier** 89.37 11 P **P** 13 55 32.3 +1.5
baz=197
GMRC **Granite Mounta** 89.40 48 P **P** 13 55 32.2 +0.6
baz=230
TRQA **Tornquist** 89.40 136 P **P** 13 55 33.5 +1.9
TRQA **Tornquist** 89.40 136 P **P** 13 55 33.5 +1.9
TRQA pmax pmax
comp=Z,12nm,1.1s
QSM **Queen of Sheba** 89.41 46 P **P** 13 55 32.7 +1.2
CHGN **Chignik** 89.58 12 P **P** 13 55 32.6 +1.0
CHGN **Chignik** 89.58 12 P **P** 13 55 33.5 +1.9
baz=198
GWY **Greenwater Val** 89.68 46 P **P** 13 55 34.4 +1.5
SHOC **Shoshone, Teco** 89.73 46 P **P** 13 55 33.9 +1.0
baz=230
FURC **Furnace Creek,** 89.74 46 P **P** 13 55 33.8 +0.9
baz=229
MPK **Martis Peak** 89.75 42 P **P** 13 55 34.3 +1.0
MPK IAmb IAmb 13 55 38.1
comp=Z,17nm,0.9s
LCH **Last Change Ra** 89.77 45 P **P** 13 55 34.4 +1.2
L02F **Cave Junction** 89.77 38 P **P** 13 55 34.5 +1.6
baz=225
GRAC **Grapevine Rang** 89.78 45 P **P** 13 55 34.2 +1.0
baz=229,SNR=8.9
PNTR **Pine Nut** 89.86 42 P **P** 13 55 34.0 +0.2
PNTR IAmb IAmb 13 55 37.9
comp=Z,15nm,1.0s
LHV **Little Huntoon** 89.94 44 P **P** 13 55 35.4 +1.6
YBH **Yreka Blue Hor** 89.96 39 P **P** 13 55 35.3 +1.4
YBH IAmb IAmb 13 55 38.8
comp=Z,24nm,1.4s
YBH **Yreka Blue Hor** 89.96 39 P **P** 13 55 35.3 +1.4
YBH pmax pmax
comp=Z,24nm,1.4s
YERR **Yerington** 90.00 43 P **P** 13 55 35.4 +1.1
PDMCI **Parker Dam,Lak** 90.06 49 P **P** 13 55 35.7 +1.2
baz=231
K02D **Willamette Mer** 90.13 38 P **P** 13 55 35.7 +1.0
baz=225,SNR=6.1
NVAR **Mina Array Bea** 90.17 44 P **P** 13 55 37.4 +2.2
comp=Z,7.0nm,0.9s,baz=224,slow=6.6,SNR=32
comp=Z,7.0nm,0.9s
NVAR **Mina Array Bea** 90.17 44 P **P** 13 55 36.6 +1.5
NV11 **Mina Array Sit** 90.26 44 P **P** 13 55 36.9 +1.4
J01E **Myrtle Point** 90.33 37 P **P** 13 55 37.0 +1.5
baz=225
PAHR **Pah Rah Range** 90.40 42 P **P** 13 55 37.4 +1.3
TPNV **Topopah Spring** 90.43 46 P **P** 13 55 37.2 +0.8
baz=230,SNR=7.9
HUMO **Hull Mountain** 90.44 38 P **P** 13 55 38.5 +2.4
HUMO IAmb IAmb 13 55 40.7
comp=Z,47nm,1.6s
CN2 **Changchun** 90.45 324 *e*P **P** 13 55 35.9 -0.1
CN2 pmax pmax
comp=Z,40nm,0.9s
L04D **Klamath Falls** 90.51 39 P **P** 13 55 37.6 +1.0
baz=226,SNR=6.5
TPH **Tonopah** 90.58 44 P **P** 13 55 38.3 +1.2
TPH **Tonopah** 90.58 44 P **P** 13 55 38.3 +1.2
TPH pmax pmax
comp=Z,48nm,0.8s
KVN **Kaiserville** 90.70 43 P **P** 13 55 38.9 +1.3
KVN IAmb IAmb 13 55 41.4
comp=Z,9.4nm,0.7s
KVN **Kaiserville** 90.70 43 P **P** 13 55 38.9 +1.3
KVN pmax pmax
comp=Z,9.0nm,0.7s
GRNR **Gornyy** 90.92 334 ⇓ *i*P **P** 13 55 38.8 +0.7
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=E,90nm,14.0s
GRNR MLR MLR
comp=Z,90nm,13.0s
I03D **Drain, OR** 91.00 37 P **P** 13 55 39.6 +1.1
baz=225
TUC **Tucson** 91.03 52 P **P** 13 55 40.7 +1.6
TUC IAmb IAmb 13 55 45.6
comp=Z,20nm,1.7s
TUC **Tucson** 91.03 52 P **P** 13 55 40.7 +1.6
TUC pmax pmax
comp=Z,20nm,1.7s
TUC **Tucson** 91.03 52 P **P** 13 55 39.6 +0.4
baz=233
GYA **Guiyang** 91.08 301 ⇑ *i*P **P** 13 55 41.0 +1.4
GYA pmax pmax
comp=Z,24nm,0.9s
S11A **Rachel** 91.18 45 P **P** 13 55 41.0 +1.2
R17K **Ugashik Creek** 91.20 12 P **P** 13 55 39.9 +0.7
baz=200
ENH **Enshi** 91.28 305 P **P** 13 55 39.6 -0.7
ENH IAmb IAmb 13 55 42.2
comp=Z,28nm,0.8s
J04D **Umpqua Nationa** 91.33 38 P **P** 13 55 42.1 +1.7
J04D **Umpqua Nationa** 91.33 38 P **P** 13 55 41.4 +1.0
baz=226,SNR=13
MOD **Modoc Plateau** 91.37 40 P **P** 13 55 42.0 +1.4
MOD IAmb IAmb 13 55 44.4
comp=Z,14nm,0.7s
OHAK **Old Harbor** 91.41 14 P **P** 13 55 41.4 +1.3
OHAK IAmb IAmb 13 55 42.8
comp=Z,19nm,0.8s
OHAK **Old Harbor** 91.41 14 P **P** 13 55 41.4 +1.3
baz=202
PRN **Pahroc Range** 91.46 46 P **P** 13 55 42.4 +1.3
I04A **Tendick Farm,** 91.56 37 P **P** 13 55 42.3 +1.1
baz=226,SNR=9.2
KLR **Kul'dur** 91.57 330 P **P** 13 55 41.5 +0.4
comp=Z,5.7nm,0.9s,baz=132,slow=2.1,SNR=13
comp=Z,5.7nm,0.9s
KLR **Kul'dur** 91.57 330 *ce*P **P** 13 55 39.9 -1.2
KLR pmax pmax
comp=Z,12nm,1.2s
K05A **Summer Lake** 91.62 39 P **P** 13 55 43.6 +1.8
K05A IAmb IAmb 13 55 46.0
comp=Z,25nm,0.9s
R11A **Troy Canyon, C** 91.73 45 P **P** 13 55 43.2 +0.8
R11A **Troy Canyon, C** 91.73 45 P **P** 13 55 42.6 +0.3
baz=230
J05D **Fort Rock, OR** 91.82 38 P **P** 13 55 43.4 +0.8
baz=227,SNR=14
LYN **LuoYang** 91.85 310 *e*P **P** 13 55 43.8 +1.1
LYN pmax pmax
comp=Z,20nm,0.6s
LYN pmax pmax
comp=Z,90nm,7.5s
KDAK **Kodiak Island** 92.08 14 P **P** 13 55 43.8 +0.6
baz=203
BMN **Battle Mountai** 92.12 43 P **P** 13 55 45.4 +1.3
BMN IAmb IAmb 13 55 48.0
comp=Z,9.4nm,0.8s
BMN **Battle Mountai** 92.12 43 P **P** 13 55 45.4 +1.3
BMN pmax pmax
comp=Z,9.0nm,0.8s
Q16K **King Salmon** 92.14 12 P **P** 13 55 44.2 +0.8
baz=200
H04A **Detroit Lake** 92.29 37 P **P** 13 55 45.8 +1.2
H04A IAmb IAmb 13 55 48.0
comp=Z,10.0nm,0.8s
PINE **Pine Mountain** 92.32 38 P **P** 13 55 46.4 +1.4
I05D **Terrebonne, OR** 92.49 38 P **P** 13 55 46.1 +0.6
baz=227,SNR=6.3
CCUT **Cedar City** 92.59 47 P **P** 13 55 48.4 +2.0
CCUT IAmb IAmb 13 55 50.7
comp=Z,19nm,1.9s
WUAZ **Wupatki** 92.59 49 P **P** 13 55 45.4 -1.0
baz=232
CMAR **Chiang Mai Arr** 92.60 290 P **P** 13 55 47.0 +0.4
comp=Z,1.4nm,0.7s,baz=138,slow=3.1,SNR=6.1
CMAR PP **PP** 13 59 30.1 -1.7
comp=Z,6.7nm,1.1s,baz=132,slow=6.5,SNR=16
comp=Z,1.4nm,0.7s
P17K **Kvichak River** 92.67 12 P **P** 13 55 45.9 +0.1
baz=200
O16K **Kokwok River B** 92.77 11 P **P** 13 55 46.6 +0.3
baz=198
PSUT **Pine Spring** 92.90 46 P **P** 13 55 49.6 +1.8
SPR3 **Spring Creek 3** 92.91 45 P **P** 13 55 48.8 +0.9
SPR3 IAmb IAmb 13 55 52.3
comp=Z,9.3nm,1.5s
Q19K **Cape Douglas,** 92.93 13 P **P** 13 55 47.1 0.0
baz=202
O17K **Koliganek Bris** 93.10 11 P **P** 13 55 47.7 -0.2
baz=199
I07A **Izee** 93.28 39 P **P** 13 55 50.8 +1.6
I07A IAmb IAmb 13 55 53.3
comp=Z,10nm,1.0s
J08A **Circle Bar Ran** 93.35 40 P **P** 13 55 50.7 +1.1
J08A IAmb IAmb 13 55 53.5
comp=Z,15nm,1.2s
ELK **Elko** 93.47 43 P **P** 13 55 51.2 +0.8
ELK **Elko** 93.47 43 P **P** 13 55 51.2 +0.8
ELK pmax pmax
comp=Z,4.0nm,0.8s
O18K **Koktuh Hills** 93.50 12 P **P** 13 55 50.4 +0.6
O18K **Koktuh Hills** 93.50 12 P **P** 13 55 49.4 -0.4
baz=201
N16K **Nishlik Lake** 93.50 10 P **P** 13 55 49.5 -0.3
baz=198
XAN **Xi'an** 93.89 308 P **P** 13 55 55.7 +3.5
XAN pmax pmax
comp=Z,12nm,0.8s
CNPM **China Poot** 93.96 14 P **P** 13 55 53.0 +1.2
CNPM IAmb IAmb 13 55 55.9
comp=Z,17nm,1.0s
O19K **Port Alsworth** 93.98 12 P **P** 13 55 52.3 +0.4
O19K IAmb IAmb 13 55 54.3
comp=Z,19nm,0.8s
O19K **Port Alsworth** 93.98 12 P **P** 13 55 52.4 +0.4
baz=202
ILSW **Iliamna Southw** 94.00 13 P **P** 13 55 52.6 +0.4
ILSW IAmb IAmb 13 55 53.8
comp=Z,16nm,0.9s
N18K **Kilae Creek** 94.16 11 P **P** 13 55 52.5 -0.3
baz=200
TXAR **Lajitas Array** 94.27 58 P **P** 13 55 55.8 +1.7
comp=Z,0.4nm,0.9s,baz=199,slow=3.4,SNR=4.3
NNA **Nana** 94.32 107 *ce*P **P** 13 55 51.0 -3.8
NNA pmax pmax
comp=Z,61nm,1.5s
N19K **Bonanza Creek** 94.53 12 P **P** 13 55 54.2 -0.4
baz=201
PZH **PanZhiHua** 94.76 298 P **P** 13 56 00.4 +3.9
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,3.9s
LTY **Liberty** 94.83 36 P **P** 13 55 57.7 +1.4
MFID **Camas Ranch** 94.85 41 P **P** 13 55 57.7 +1.2
MFID IAmb IAmb 13 56 00.2
comp=Z,5.9nm,0.8s
GAMB **Gambell** 95.45 4 P **P** 13 55 58.2 -0.3
baz=187
M19K **Big River Lodg** 95.56 12 P **P** 13 55 59.3 +0.1
baz=202
HVU **Hansel Valley** 95.57 44 P **P** 13 56 00.7 +0.8
HVU IAmb IAmb 13 56 03.8
comp=Z,5.9nm,0.8s
HVU **Hansel Valley** 95.57 44 P **P** 13 56 00.7 +0.8
HVU pmax pmax
comp=Z,6.0nm,0.8s
D08A **Wollman Farm,** 95.58 37 P **P** 13 56 00.5 +1.0
D08A IAmb IAmb 13 56 04.0
comp=Z,5.8nm,0.8s
CD2 **Chengdu** 95.70 303 *e*P **P** 13 56 00.4 -0.2
HLID **Hailey** 95.74 42 P **P** 13 56 00.9 +0.2
baz=231
L19K **White Mountain** 95.75 11 P **P** 13 56 00.7 +0.7
L19K IAmb IAmb 13 56 02.5
comp=Z,16nm,1.1s
L19K **White Mountain** 95.75 11 P **P** 13 56 00.1 +0.1
baz=201
PWL **Port Wells** 95.79 15 P **P** 13 56 00.6 +0.4
baz=206
PLID **Pearl Lake** 95.83 40 P **P** 13 56 02.0 +0.9
PLID IAmb IAmb 13 56 05.7
comp=Z,9.8nm,1.2s
GLI **Glacier Island** 96.08 15 P **P** 13 56 01.7 +0.2
baz=208
EYAK **Cordova Ski Ar** 96.09 16 P **P** 13 56 01.7 +0.2
baz=209
L20K **Farewell, AK** 96.19 12 P **P** 13 56 01.7 -0.3
baz=202
M22K **Willow** 96.22 14 P **P** 13 56 01.7 -0.4
baz=205
HHC **Hu-ho-hao-te** 96.24 315 *e*P **P** 13 56 04.2 +1.3
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.5s
KNK **Knik Glacier** 96.26 14 P **P** 13 56 02.5 +0.2
baz=206
TTA **Tatalina** 96.26 11 P **P** 13 56 02.3 -0.1
baz=200
PMR **Palmer** 96.28 14 P **P** 13 56 02.7 +0.4
baz=206
BMRM **Bremner River** 96.73 16 P **P** 13 56 04.8 +0.2
baz=210
ZEA **Zeya** 96.81 331 *e*P **P** 13 56 06.6 +1.7
SCM **Sheep Creek Mo** 96.88 15 P **P** 13 56 05.4 +0.2
baz=207
KLU **Klutina** 96.89 16 P **P** 13 56 05.3 +0.1
baz=209
CRQE **Cirque** 96.92 17 P **P** 13 56 06.3 +0.8
baz=211
K20K **Telida** 96.98 11 P **P** 13 56 05.7 +0.2
K20K IAmb IAmb 13 56 07.5
comp=Z,6.2nm,1.1s
K20K **Telida** 96.98 11 P **P** 13 56 06.1 +0.6
baz=202
SEY **Seymchan** 97.03 347 P **P** 13 56 05.4 -0.3
comp=Z,3.8nm,0.8s,baz=144,slow=6.0,SNR=14
comp=Z,3.8nm,0.8s
SEY **Seymchan** 97.03 347 *i* P **P** 13 56 03.0 -2.7
SEY pmax pmax
comp=Z,19nm,2.6s
PINM **Pinnacle** 97.10 19 P Pdif 13 56 07.0 +0.7
baz=213
N25K **Chitina, Valde** 97.29 16 P Pdif 13 56 07.6 +0.5
baz=210
CAST **Castle Rocks** 97.38 12 P **P** 13 56 06.7 -0.6
CAST IAmb IAmb 13 56 08.0
comp=Z,4.8nm,0.8s
CAST **Castle Rocks** 97.38 12 P **P** 13 56 07.5 +0.1
baz=204
WAT6 **Susitna Watana** 97.46 14 P **P** 13 56 07.7 -0.2
baz=207
MCARA **McCarthy VSAT** 97.48 17 P **P** 13 56 07.8 0.0
baz=211
CTG **Chitna Glacier** 97.55 18 P **P** 13 56 07.8 -0.5
baz=212
O28M **Mount Upton** 97.69 18 P **P** 13 56 09.0 -0.1
baz=213
J20K **Nowinta River** 97.73 11 P Pdif 13 56 09.2 +0.4
baz=202
TRF **Thorofare Moun** 97.73 13 P **P** 13 56 08.7 -0.4
TRF IAmb IAmb 13 56 13.6
comp=Z,7.5nm,0.7s
TRF **Thorofare Moun** 97.73 13 P Pdif 13 56 09.5 +0.4
baz=205
PDAR **Pinedale Array** 98.07 44 P Pdif 13 56 12.2 +1.0
comp=Z,0.7nm,0.6s,baz=226,slow=5.2,SNR=7.8
PDAR PKiKP **PKiKP** 14 00 46.6 +3.6
comp=Z,0.5nm,0.5s,baz=194,slow=2.6,SNR=2.7
comp=Z,0.7nm,0.6s
MCK **McKinley** 98.25 13 P Pdif 13 56 11.9 +0.7
baz=206
PAX **Paxson** 98.29 15 P **P** 13 56 12.2 +0.7
baz=209
YUK6 **Outpost Mounta** 98.33 19 P **P** 13 56 12.3 +0.4
baz=215
M26K **Nabesna, AK** 98.36 16 P **P** 13 56 12.3 +0.5
baz=211
HYT **Haines Junctio** 98.47 19 P **P** 13 56 12.9 +0.5
baz=215
LZH **Lanzhou** 98.48 307 *e*P P 13 56 19.4 +6.3
LZH pmax pmax
comp=Z,15nm,1.0s
BOZ **Bozeman (W)** 98.56 41 P **P** 13 56 13.9 +0.6
baz=233
M27K **Edge Creek, AK** 98.60 17 P **P** 13 56 14.3 +1.3
M27K IAmb IAmb 13 56 19.6
comp=Z,18nm,1.6s
M27K **Edge Creek, AK** 98.60 17 P **P** 13 56 13.8 +0.8
baz=212
BVCY **Beaver Creek** 98.90 17 P **P** 13 56 15.3 +1.1
baz=213
K24K **Donnelly Dome** 98.96 14 P **P** 13 56 15.4 +1.0
baz=209
I21K **Tanana** 99.02 11 P **Pdif** 13 56 15.2 +0.6
baz=204
MLY **Manley** 99.09 12 P **Pdif** 13 56 15.5 +0.5
baz=205
WHY **Whitehorse** 99.10 21 P **Pdif** 13 56 15.6 +0.4
baz=218
RIDG **Independent Ri** 99.10 15 P **Pdif** 13 56 15.6 +0.5
baz=210
L27K **Beaver Creek,** 99.21 16 P **Pdif** 13 56 16.1 +0.5
baz=212
HDA **Harding Lake** 99.25 14 Pdif **Pdif** 13 56 17.1 +1.5
HDA IAmb IAmb 13 56 20.9
comp=Z,4.0nm,0.6s
HDA **Harding Lake** 99.25 14 P **Pdif** 13 56 15.9 +0.2
baz=208
COLA **College** 99.49 13 *i* P **Pdif** 13 56 16.8 +0.2
COLA pmax pmax
comp=Z,9.0nm,1.9s
SCRK **Sand Creek** 99.50 15 P **Pdif** 13 56 17.0 +0.1
baz=210
ILAR **Eielson Array** 99.58 14 P **Pdif** 13 56 17.6 +0.4
comp=Z,1.5nm,0.7s,baz=213,slow=5.4,SNR=16
ILAR PP **PP** 14 00 21.5 -3.3
comp=Z,1.0nm,0.9s,baz=229,slow=6.6,SNR=4.5
ILAR PKiKP **PKiKP** 14 00 45.6 +0.9
comp=Z,2.8nm,0.7s,baz=287,slow=2.5,SNR=19
ILAR PKKPbc **PKKPbc** 14 12 38.5 -1.9
comp=Z,0.3nm,0.5s,baz=27,slow=2.8,SNR=7.4
comp=Z,1.5nm,0.7s
J25K **Salcha River,** 99.76 14 P **Pdif** 13 56 18.1 +0.1
baz=209
H22K **Ishtalita Cre** 99.77 11 P **Pdif** 13 56 18.4 +0.4
baz=204
J26L **Joseph Creek** 100.05 15 P **Pdif** 13 56 19.7 +0.4
baz=211
BILL **Bilibino** 100.09 355 *e*P **Pdif** 13 56 20.2 +0.9
BILL *e**PP pP 13 57 16.1 0.0
BILL *e**SP sP 13 57 41.0 +0.8
BILL pmax pmax
comp=Z,23nm,2.1s
PRP **Porcupine Dome** 100.52 14 P **Pdif** 13 56 21.7 +0.3
baz=209
DAWY **Dawson** 100.65 17 P **Pdif** 13 56 23.2 +1.3
baz=214
F21K **Alatna River** 100.67 10 P **Pdif** 13 56 23.5 +1.5
baz=203
I26K **Coal Creek Min** 100.83 15 P **Pdif** 13 56 24.2 +1.6
baz=211
G24K **Hadweenzic Riv** 101.19 12 P **Pdif** 13 56 24.5 +0.3
baz=208
F24K **Squaw Lake** 101.85 12 P **Pdif** 13 56 27.4 +0.3
baz=207
G26K **Porcupine Rive** 102.12 14 P **Pdif** 13 56 28.8 +0.5
baz=211
RSSD **Black Hills** 102.15 46 P **Pdif** 13 56 29.6 +0.2
baz=238
GTA **Gaotai** 102.94 308 ⇓ P **Pdif** 13 56 36.8 +3.9
GTA LR LR
comp=Z,74nm,18.5s
GTA LR LR
comp=Z,220nm,20.4s
GTA LR LR
comp=Z,51nm,17.1s
SONM **Songino Array** 103.28 318 P **Pdif** 13 56 33.1 -1.1
comp=Z,0.3nm,0.5s,baz=123,slow=5.3,SNR=2.5
SONM PKKPbc **PKKPbc** 14 12 29.5 +0.3
comp=Z,0.9nm,0.5s,baz=286,slow=2.3,SNR=5.7
C23K **Itkillik River** 103.50 10 P **Pdif** 13 56 34.9 +0.6
baz=205
D25K **Kavik River** 103.71 12 P **Pdif** 13 56 35.9 +0.5
baz=209
GOMU **GeErMu** 104.81 303 Pdif **Pdif** 13 56 37.4 -4.1
GOMU AMB AMB
comp=Z,50nm,6.3s
INK **Inuvik** 105.48 16 PKiKP **PKiKP** 14 00 55.9 +0.6
comp=Z,3.4nm,0.7s,baz=165,slow=2.1,SNR=11
INK **Inuvik** 105.48 16 P **PKiKP** 14 00 55.4 +0.1
baz=220
ECSD **EROS Data Cent** 106.59 49 P **PKiKP** 14 00 57.5 -0.6
baz=242
MDND **Maddock** 106.71 44 P **PKiKP** 14 00 57.9 -0.4
baz=241
YKA **Yellowknife Ar** 107.28 26 PKiKP **PKiKP** 14 00 59.5 +0.7
comp=Z,3.2nm,0.7s,baz=261,slow=1.5,SNR=7.2
OXF **Oxford** 107.32 60 P **PKiKP** 14 00 59.2 -0.5
baz=243
WVT **Waverly** 109.19 59 P **PKiKP** 14 01 02.7 -0.5
baz=244
JFWS **Jewell Farm** 110.38 52 P **PKiKP** 14 01 05.0 -0.3
baz=245
EYMN **Ely** 111.65 46 P **PKiKP** 14 01 07.3 -0.3
baz=246
TZTN **Tazewell** 112.50 60 P **PKiKP** 14 01 09.5 -0.1
baz=247
O48B **Farmland** 112.81 56 P **PKiKP** 14 01 10.4 +0.4
baz=247
P49A **Miami Univ. Ec** 112.84 57 P **PKiKP** 14 01 10.6 +0.5
baz=247
WMQ **Urumqi** 113.03 308 *e*PKP **PKiKP** 14 01 11.5 +1.1
SUR **Sutherland** 113.33 199 PKiKP **PKiKP** 14 01 12.2 +0.6
comp=Z,3.4nm,0.5s,baz=121,slow=0.9,SNR=18
ACSO **Alum Creek Sta** 114.34 57 P **PKiKP** 14 01 14.1 +1.2
baz=248
P52A **Corning** 114.72 57 P **PKiKP** 14 01 14.8 +1.2
baz=248
BLA **Blacksburg** 115.08 60 P **PKiKP** 14 01 15.4 +0.9
baz=248
BOSA **Boshof** 115.45 204 PKP **PKPdf** 14 01 16.4 +0.7
comp=Z,2.1nm,0.5s,baz=137,slow=2.5,SNR=11
BOSA PKKPbc **PKKPbc** 14 11 49.3 -0.4
comp=Z,0.9nm,0.5s,baz=356,slow=2.9,SNR=5.6
BOSA PKKPab **PKKPab** 14 11 56.7 -2.1
comp=Z,4.8nm,0.8s,baz=343,slow=3.4,SNR=12
O53A **New Philadelph** 115.60 57 P **PKiKP** 14 01 16.1 +0.7
baz=249
N53A **Lisbon** 116.07 57 **PKiKP** 14 01 17.2 +0.9
ZSN **Zaisan** 116.17 311 *e*PKiKP **PKPdf** 14 01 15.7 -0.5
ZSN **Zaisan** 116.17 311 *e*PKP **PKPdf** 14 01 15.7 -0.5
baz=311
O54A **Avella** 116.18 57 **PKiKP** 14 01 17.4 +1.0
M53A **WI Miller and** 116.40 56 P **PKiKP** 14 01 17.1 +0.3
baz=250
ERPA **Erie** 117.11 56 P **PKiKP** 14 01 18.8 +0.6
baz=251
MK31 **Makanchi Array** 117.63 310 PKPdf **PKPdf** 14 01 18.0 -1.1
MK31 **Makanchi Array** 117.63 310 *i* PKiKP **PKPdf** 14 01 18.1 -1.0
MKAR **Makanchi Array** 117.63 310 PKP **PKPdf** 14 01 18.7 -0.4
comp=Z,6.8nm,0.6s,baz=195,slow=1.4,SNR=44
MKAR PP **pPKPdf** 14 02 25.4 +7.2
comp=Z,0.7nm,0.5s,baz=123,slow=4.3,SNR=1.7
MKAR SKP **SKPdf** 14 04 30.6 -1.2
comp=Z,2.5nm,0.8s,baz=98,slow=2.5,SNR=6.8
MKAR PKKPbc **PKKPab** 14 11 43.8 +0.2
comp=Z,0.3nm,0.4s,baz=281,slow=3.5,SNR=5.7
MKAR **Makanchi Array** 117.63 310 PKPdf **PKPdf** 14 01 17.7 -1.4
M55A **Ridgway** 117.77 57 **PKiKP** 14 01 20.2 +0.7

MAKZ	Makanchi	117.84	310		PKIKP	PKPdf	14 01 18.4	-1.1	
SSPA	Standing Stone	118.12	58		P	PKiKP	14 01 20.5	+0.3	
	baz=251								
ZAA0	Zalesovo Array	118.17	318		PKPdf	PKPdf	14 01 18.6	-1.2	
ZALV	Zalesovo Beam	118.17	318		PKP	PKPdf	14 01 19.1	-0.7	
	comp=Z,5.8nm,0.4s,baz=121,slow=2.3,SNR=36								
ZALV	Zalesovo Beam	118.17	318		PKPdf	PKPdf	14 01 18.4	-1.4	
SHLS	Shalkode	118.42	305	*e*	PKIKP	PKPdf	14 01 19.8	-1.0	
SHLS	Shalkode	118.42	305	*e*	PKP	PKPdf	14 01 19.9	-1.0	
	baz=305								
PDGK	Podgornoye	118.45	305		PKIKP	PKPdf	14 01 20.1	-0.8	
SADO	Sadowa	118.54	53		PKPdf	PKiKP	14 01 21.6	+0.7	
UZB	Uzynbulak	118.72	305	*e*	PKIKP	PKPdf	14 01 20.7	-0.7	
UZB	Uzynbulak	118.72	305	*e*	PKP	PKPdf	14 01 20.7	-0.7	
	baz=305								
L56A	Greenwood	118.83	56			PKiKP	14 01 22.8	+1.2	
M57A	Sunshine Farm,	118.89	57			PKiKP	14 01 22.7	+1.0	
M57A	Sunshine Farm,	118.89	57		P	PKiKP	14 01 23.1	+1.4	
	baz=252								
M57A					P	PKiKP	14 01 23.1	+1.4	
	baz=252								
PRZ	Przheval'sk	118.95	304		PKPdf	PKiKP	14 01 22.4	+0.3	
PRZ	Przheval'sk	118.95	304		PKIKP	PKiKP	14 01 22.4	+0.3	
RES	Resolute Bay	118.97	18			PKiKP	14 01 21.0	+0.2	
RES	Resolute Bay	118.97	18		PKIKP	PKiKP	14 01 21.0	+0.2	
N58A	Sunbury	119.03	58			PKiKP	14 01 22.8	+0.8	
N58A	Sunbury	119.03	58		P	PKiKP	14 01 23.3	+1.4	
	baz=252								
N58A					P	PKiKP	14 01 23.3	+1.4	
	baz=252								
SATY	Saty	119.12	305	*e*	PKIKP	PKPdf	14 01 21.8	-0.4	
SATY	Saty	119.12	305	*e*	PKP	PKPdf	14 01 21.8	-0.4	
	baz=305								
TDK	Taldyqorghan	119.69	307	*e*	PKIKP	PKPdf	14 01 22.1	-1.0	
TDK	Taldyqorghan	119.69	307	*e*	PKP	PKPdf	14 01 22.1	-1.0	
	baz=307								
KSH	Kashi	119.78	300		PKP	PKiKP	14 01 24.4	+0.7	
LUPA	Lehigh Univers	119.93	58			PKiKP	14 01 24.5	+0.8	
KSPA	Keystone Colle	119.93	57			PKiKP	14 01 25.0	+1.3	
KSPA	Keystone Colle	119.93	57		P	PKiKP	14 01 25.3	+1.6	
	baz=253								
SEM	Semipalatinsk	119.95	313	*e*	PKIKP	PKPdf	14 01 22.1	-1.5	
SEM	Semipalatinsk	119.95	313	*e*	PKP	PKPdf	14 01 22.2	-1.5	
	baz=313								
BINY	Binghamton	119.97	56			PKiKP	14 01 24.8	+1.0	
BINY	Binghamton	119.97	56		P	PKiKP	14 01 25.4	+1.6	
	baz=253								
BINY	Binghamton	119.97	56		P	PKiKP	14 01 24.1	+0.3	
	baz=253								
MDOK	Medeo	120.10	305	*e*	PKIKP	PKPdf	14 01 23.4	-0.7	
MDOK	Medeo	120.10	305	*e*	PKP	PKPdf	14 01 23.4	-0.7	
	baz=305								
AAA	Alma-Ata	120.21	305	*e*	PKIKP	PKPdf	14 01 23.6	-0.6	
AAA	Alma-Ata	120.21	305	*e*	PKP	PKPdf	14 01 23.6	-0.6	
	baz=305								
J57A	Williamstown	120.31	55			PKiKP	14 01 25.4	+1.0	
J57A	Williamstown	120.31	55		P	PKiKP	14 01 26.0	+1.6	
	baz=254,SNR=8.0								
J57A					P	PKiKP	14 01 26.0	+1.6	
	baz=254,SNR=8.0								
NRN	Naryn	120.34	302		PKPdf	PKiKP	14 01 25.1	+0.1	
NRN	Naryn	120.34	302		PKIKP	PKiKP	14 01 25.1	+0.1	
NRIK	Noril'sk	120.35	336		PKP	PKPdf	14 01 23.3	-0.3	
	comp=Z,13nm,0.5s,baz=100,slow=2.4,SNR=14								
NRIK	Noril'sk	120.35	336	*i*	PKIKP	PKPdf	14 01 22.9	-0.7	
ULHL	Ulahol	120.41	303		P	PKPdf	14 01 24.5	-0.3	
	SNR=10								
VLDQ	Val d'Or	120.59	50		PKPdf	PKiKP	14 01 25.1	+0.3	
L59A	Walton	120.63	57			PKiKP	14 01 25.6	+0.5	
BOOM	Boomskoye usch	120.69	304			PKPdf	14 01 24.8	-0.5	
BOOM	Boomskoye usch	120.69	304		PKIKP	PKPdf	14 01 24.8	-0.5	
WCNY	West Carthage	120.71	55		P	PKiKP	14 01 26.5	+1.3	
	baz=254,SNR=10.0								
J58A	Remsen	120.79	55			PKiKP	14 01 26.2	+0.8	
J58A	Remsen	120.79	55		P	PKiKP	14 01 26.9	+1.5	
	baz=254,SNR=8.0								
J58A					P	PKiKP	14 01 26.9	+1.5	
	baz=254,SNR=8.0								
KUU	Kurty	120.80	305	*e*	PKIKP	PKPdf	14 01 24.3	-0.9	
KUU	Kurty	120.80	305	*e*	PKP	PKPdf	14 01 24.4	-0.9	
	baz=305								
KURK	Kurchatov	121.03	313			PKPdf	14 01 24.8	-0.6	
KURK	Kurchatov	121.03	313	*i*	PKIKP	PKPdf	14 01 24.0	-1.4	
TKM2	Tokmak 2	121.06	304		P	PKPdf	14 01 25.4	-0.7	
	SNR=28								
TKM2	Tokmak 2	121.06	304		PKIKP	PKPdf	14 01 24.6	-1.4	
KURBB	Kurchatov Arra	121.06	313		PKP	PKPdf	14 01 24.7	-0.8	
	comp=Z,18nm,0.5s,baz=111,slow=1.9,SNR=118								
PAL	Palisades	121.11	58		P	PKiKP	14 01 26.4	+0.3	
	baz=254								
J59A	Piesco	121.37	55			PKiKP	14 01 27.5	+1.0	
J59A	Piesco	121.37	55		P	PKiKP	14 01 27.9	+1.4	
	baz=255,SNR=5.3								
J59A					P	PKiKP	14 01 27.9	+1.4	
	baz=255,SNR=5.3								
KBK	Karagaybulak	121.44	304		P	PKPdf	14 01 26.3	-0.4	
	SNR=8.8								
KSCT	Kent School, K	121.62	58			PKiKP	14 01 27.9	+0.9	
LONY	Lake Ozonia	121.62	54			PKiKP	14 01 27.4	+0.5	
LONY	Lake Ozonia	121.62	54		P	PKPdf	14 01 26.6	-0.2	
	baz=255								
EUNU	Eureka	121.63	12		PKPdf	PKPdf	14 01 26.1	+0.2	
CHMS	Chumysh	121.67	304		P	PKPdf	14 01 26.4	-0.6	
	SNR=14								
NCB	Newcomb	121.70	55			PKiKP	14 01 28.4	+1.2	
NCB	Newcomb	121.70	55		P	PKiKP	14 01 28.7	+1.6	
	baz=255,SNR=13								
BMNY	Brushton-Moira	121.73	54		P	PKiKP	14 01 28.2	+1.1	
	baz=255,SNR=5.4								
AAK	Ala-Archa	121.76	303		PKP	PKPdf	14 01 27.5	+0.2	
	comp=Z,8.0nm,0.5s,baz=142,slow=5.9,SNR=10								
AAK	Ala-Archa	121.76	303		P	PKPdf	14 01 27.2	-0.2	
	SNR=5.6								
AAK	Ala-Archa	121.76	303			PKPdf	14 01 26.8	-0.5	
AAK	Ala-Archa	121.76	303	*c*	*i* PKIKP	PKPdf	14 01 27.1	-0.2	
AAK					pmax	pmax			
	comp=Z,8.0nm,0.6s								
SGDS	Sogindy	121.88	304	*e*	PKIKP	PKPdf	14 01 26.8	-0.6	
SGDS	Sogindy	121.88	304	*e*	PKP	PKPdf	14 01 26.8	-0.6	
	baz=304								
USP	Ospenovka	121.92	304		P	PKPdf	14 01 27.3	-0.2	
	SNR=9.8								
AML	Almayashu	122.19	303		P	PKPdf	14 01 28.5	0.0	
	SNR=25								
EKS2	Erkin-Say	122.28	303		P	PKPdf	14 01 28.5	+0.2	
	SNR=8.6								
UCCT	U. Connecticut	122.54	58		PKPdf	PKiKP	14 01 29.9	+1.0	
QUA2	Belchertown	122.58	57			PKiKP	14 01 30.0	+1.1	
BTLS	Baital	122.69	306	*e*	PKIKP	PKPdf	14 01 28.3	-0.5	
BTLS	Baital	122.69	306	*e*	PKP	PKPdf	14 01 28.4	-0.5	
	baz=306								
J61A	Chester	122.71	56			PKiKP	14 01 30.4	+1.3	
HRV	Adam Dziewonsk	123.21	57		P	PKiKP	14 01 30.9	+0.8	
	baz=256								
LBNH	Lisbon	123.37	55			PKiKP	14 01 31.4	+1.0	
LBNH	Lisbon	123.37	55		PKIKP	PKiKP	14 01 31.4	+1.0	
LBNH	Lisbon	123.37	55		P	PKiKP	14 01 30.5	+0.1	
	baz=257								
KBL	Kabul	123.52	293			PKPdf	14 01 30.7	-0.4	
KBL	Kabul	123.52	293		PKIKP	PKPdf	14 01 30.7	-0.4	
I62A	Tamworth	123.70	56			PKiKP	14 01 32.3	+1.2	
BTK	Batken	123.74	300			PKPdf	14 01 30.7	-0.4	
BTK	Batken	123.74	300		PKIKP	PKPdf	14 01 30.7	-0.4	
GAR	Garm	123.83	298			PKPdf	14 01 31.5	+0.1	
H62A	Milan	123.98	55		PKPdf	PKiKP	14 01 33.0	+1.4	
H62A	Milan	123.98	55		P	PKiKP	14 01 33.7	+2.1	
	baz=257,SNR=6.0								
H62A					P	PKiKP	14 01 33.7	+2.1	
	baz=257,SNR=6.0								
DZA	Taraz	124.08	303	*e*	PKIKP	PKPdf	14 01 30.4	-1.2	
DZA	Taraz	124.08	303	*e*	PKP	PKPdf	14 01 30.4	-1.2	
	baz=303								
I63A	Otisfield	124.27	56			PKiKP	14 01 33.6	+1.4	
I63A	Otisfield	124.27	56		P	PKiKP	14 01 34.2	+2.0	
	baz=257,SNR=5.8								
I63A					P	PKiKP	14 01 34.2	+2.0	
	baz=257,SNR=5.8								
OTUK	Ortayu	124.52	310		PKIKP	PKPdf	14 01 31.8	-0.5	
G62A	West of Eustis	124.56	54		PKPdf	PKPdf	14 01 32.5	+0.1	
G62A	West of Eustis	124.56	54		P	PKiKP	14 01 34.4	+1.7	
	baz=258,SNR=14								
G62A					P	PKiKP	14 01 34.4	+1.7	
	baz=258,SNR=14								
BRZS	Berezniki	124.61	312	*e*	PKIKP	PKPdf	14 01 31.5	-0.9	
BRZS	Berezniki	124.61	312	*e*	PKP	PKPdf	14 01 31.5	-0.9	
	baz=312								
CHGR	Chuyangaron	124.61	298			PKPdf	14 01 33.1	+0.3	
CHGR	Chuyangaron	124.61	298		PKIKP	PKPdf	14 01 33.1	+0.3	
KK31	Karatay Array	124.71	303		PKPdf	PKPdf	14 01 32.2	-0.6	
KK31	Karatay Array	124.71	303	*i*	PKIKP	PKPdf	14 01 32.1	-0.7	
KKAR	Karatay Array	124.71	303			PKPdf	14 01 32.1	-0.7	
KKAR	Karatay Array	124.71	303		PKPdf	PKPdf	14 01 32.0	-0.7	
KKAR	Karatay Array	124.71	303		PKIKP	PKPdf	14 01 32.1	-0.7	
IUG	luzhnay	124.84	302	*e*	PKIKP	PKPdf	14 01 32.5	-0.6	
IUG	luzhnay	124.84	302	*e*	PKP	PKPdf	14 01 32.6	-0.6	
	baz=302								
WVL	Waterville	125.03	55			PKiKP	14 01 34.1	+0.4	
WVL	Waterville	125.03	55		P	PKiKP	14 01 35.1	+1.5	
	baz=258,SNR=8.6								
LMQ	La Malbaie	125.15	51			PKPdf	14 01 33.5	0.0	
PKME	Peaks-Kenny Pk	125.42	54			PKiKP	14 01 34.7	+0.3	
PKME	Peaks-Kenny Pk	125.42	54		P	PKiKP	14 01 36.3	+1.9	
	baz=259,SNR=19								
PKME	Peaks-Kenny Pk	125.42	54		P	PKiKP	14 01 34.8	+0.3	
	baz=259								
TULEG	Thule	125.48	16			PKiKP	14 01 33.7	+0.1	
E62A	Clayton Lake	125.52	53			PKiKP	14 01 35.0	+0.4	
E62A	Clayton Lake	125.52	53		P	PKiKP	14 01 35.5	+0.9	
	baz=260								
E62A					P	PKiKP	14 01 35.5	+0.9	
	baz=260								
F63A	Nahmakanta, Br	125.64	54		P	PKiKP	14 01 35.4	+0.5	
	baz=259,SNR=9.1								
F63A					P	PKiKP	14 01 35.4	+0.5	
	baz=259,SNR=9.1								
LSZ	Lusaka	126.16	214		PKP	PKiKP	14 01 37.8	+0.8	
	comp=Z,2.5nm,0.4s,baz=91,slow=1.0,SNR=5.1								
F64A	Sherman	126.19	54			PKiKP	14 01 36.8	+0.9	
F64A	Sherman	126.19	54		P	PKiKP	14 01 37.4	+1.5	
	baz=260,SNR=8.7								
F64A					P	PKiKP	14 01 37.4	+1.5	
	baz=260,SNR=8.7								
E63A	Oxbow	126.24	53		P	PKiKP	14 01 37.0	+1.0	
	baz=260,SNR=11								
E63A					P	PKiKP	14 01 37.0	+1.0	
	baz=260,SNR=11								
BVA0	Borovoye Array	126.45	315		PKIKP	PKPdf	14 01 34.7	-1.1	
BRVK	Borovoye	126.52	315			PKPdf	14 01 35.5	-0.4	
BRVK	Borovoye	126.52	315	*i*	PKIKP	PKPdf	14 01 35.7	-0.2	
BRVK					pmax	pmax			
	comp=Z,23nm,1.0s								
PQI	Presque Isle	126.55	53			PKPdf	14 01 36.1	0.0	
G65A	Princeton	126.61	55		P	PKiKP	14 01 38.4	+1.6	
	baz=260,SNR=13								
G65A					P	PKiKP	14 01 38.4	+1.6	
	baz=260,SNR=13								
GGN	Saint George	127.10	55			PKiKP	14 01 38.5	+0.8	
BATG	Bathurst New B	127.97	52		PKPdf	PKiKP	14 01 39.9	+0.4	
SCHQ	Schefferville	128.17	43		PKP	PKPdf	14 01 38.9	-0.2	
	comp=Z,8.0nm,0.4s,baz=323,slow=2.4,SNR=20								
SCHQ	Schefferville	128.17	43			PKiKP	14 01 39.8	+0.1	
LMN	Caledonia Moun	128.63	54			PKiKP	14 01 41.2	+0.4	
GBN	Guysborough	130.86	55			PKiKP	14 01 45.9	+0.6	
KMBO	Kilima Mbogo	132.17	234		SKPbc	SKPbc	14 04 49.6	-2.7	
	comp=Z,7.2nm,0.8s,baz=72,slow=2.6,SNR=16								
KBS	Kingsbay	132.51	357	*e*		PKPpre	14 01 39.1		
AB31	Akbulak array	132.78	310	*i*	PKIKP	PKPdf	14 01 47.5	-0.4	
GEYT	Alibeck	132.91	294		PKP	PKPdf	14 01 49.3	+0.7	
	comp=Z,8.7nm,0.7s,baz=190,slow=2.6,SNR=11								
GEYT					SKPbc	SKPbc	14 04 51.6	-2.2	
	comp=Z,18nm,0.9s,baz=207,slow=5.0,SNR=14								
GEYT	Alibeck	132.91	294		PKPdf	PKPdf	14 01 48.3	-0.2	
SPA0	Spitsbergen Ar	132.99	356		IAmb	IAmb	14 01 49.8		
	comp=Z,46nm,0.9s								
SPB2	Spitsbergen Ar	132.99	356			PKPdf	14 01 47.9	+0.4	
ARU	Arti	133.29	320		PKP	PKPdf	14 01 49.0	+0.4	
	comp=Z,26nm,0.5s,baz=113,slow=0.7,SNR=32								
ARU					SKPbc	SKPbc	14 04 52.4	-2.0	
	comp=Z,20nm,0.7s,baz=102,slow=1.8,SNR=22								
ARU	Arti	133.29	320			PKPdf	14 01 48.5	-0.1	
ARU	Arti	133.29	320	*i*	PKIKP	PKPdf	14 01 47.6	-1.0	
ARU							14 04 18.3		
ARU					SS	SS	14 21 40.8	-3.1	
AKTO	Aktyubinsk	134.02	311		PKP	PKPdf	14 01 50.5	+0.3	
	comp=Z,13nm,0.7s,baz=101,slow=2.1,SNR=34								
AKTO					SKPbc	SKPbc	14 04 54.5	-2.6	
	comp=Z,7.9nm,0.9s,baz=81,slow=4.6,SNR=15								
MBAR	Mbarara	136.86	228		SKPbc	SKPbc	14 05 04.0	-3.2	
	comp=Z,2.9nm,0.2s,baz=165,slow=1.8,SNR=7.6								
MBAR	Mbarara	136.86	228		PKIKP	PKPdf	14 01 55.2	-1.7	
KIRV	Kirov	137.67	324	*i*	PKIKP	PKPdf	14 01 56.6	-0.1	
PRGR	Permogore	138.35	329	*e*	PKIKP	PKPdf	14 01 56.5	-1.3	
HAMF	Hammerfest	139.04	348	*e*	PKPdf	PKPdf	14 01 59.7	+0.9	
HAMF						IAmb	IAmb	14 02 01.5	
	comp=Z,24nm,0.8s								
ARA0	ARCESS Array S	139.65	347	*e*	PKPdf	PKPdf	14 02 00.8	+0.7	
ARCES	ARCESS Array B	139.65	347		PKhKP	PKPpre	14 01 53.2		
	comp=Z,3.0nm,0.5s,baz=39,slow=2.5,SNR=22								
ARCES					PKP	PKPdf	14 02 00.2	+0.1	
	comp=Z,14nm,0.6s,baz=45,slow=2.7,SNR=14								
ARCES					SKPbc	SKPbc	14 05 11.7	-1.4	
	comp=Z,4.5nm,0.6s,baz=28,slow=2.9,SNR=6.2								
KLMR	Klimovskoe	141.33	330	*e*	PKHKP	PKPpre	14 01 55.4		
KLMR					*e*		14 05 14.3		
KLMR					pmax	pmax			
	comp=Z,19nm,0.8s								
KLMR	Klimovskoe	141.33	330	*e*	PKPdf	PKPpre	14 01 55.5		
KLMR					AMP		14 02 06.6		
	comp=Z,19nm,0.8s								
KLMR				*e*	SKP		14 05 14.4		
STEI	Steigen	142.80	351	*e*	P	PKPdf	14 02 02.6	-3.1	
FAUS	Fauske	143.31	350	*e*		PKPbc	14 02 04.3	-0.1	
ZEI	Tsey	144.07	300	*e*	PKIKP	PKPab	14 02 07.0	-0.3	
ZEI					pmax	pmax			
	comp=Z,19nm,0.5s								
VRH	Novokhopyorsk	144.10	315	*e*	PKIKP	PKPab	14 02 07.0	+0.2	
VRH					pmax	pmax			
	comp=Z,40nm,0.6s								
ONI	Oni	144.41	300		PKPdf	PKPbc	14 02 08.9	+0.4	
ONI	Oni	144.41	300		PKIKP	PKPbc	14 02 08.9	+0.3	
KONS	Konsvik	144.43	351	*e*	PKPbc	PKPab	14 02 07.6	+0.1	
GOF	Gofitskoye	144.49	304	⇑	*e* PKIKP	PKPab	14 02 08.3	-0.2	
GOF					pmax	pmax			
	comp=Z,202nm,0.9s								
MOR8	Moi Rana	144.56	350	*e*	PKPbc	PKPab	14 02 07.0	-1.1	
KBZ	Khabaz	144.74	302		PKP	PKPbc	14 02 08.8	-0.6	
	comp=Z,60nm,1.0s,baz=111,slow=3.6,SNR=70								
KBZ	Khabaz	144.74	302	*i*	PKHKP	PKPpre	14 02 06.9		
GEVA	Gevas	144.74	293			PKPbc	14 02 09.1	-0.8	
KIV	Kislovodsk	144.87	302	⇑	P	PKPab	14 02 10.3	+0.2	
KIV	Kislovodsk	144.87	302			PKPbc	14 02 09.7	-0.3	
KIV	Kislovodsk	144.87	302	*e*	PKIKP	PKPbc	14 02 09.9	-0.1	
KIV					pmax	pmax			
	comp=Z,42nm,1.1s								
LPSR	Galich'ya Gora	145.28	318	*e*	PKIKP	PKPdf	14 02 10.6	+0.1	
LPSR					pmax	pmax			
	comp=Z,360nm,0.8s								
VORR	Voronezh	145.45	317	*e*	PKP2	PKPdf	14 02 11.1	+0.3	
VORR					*e*		14 05 28.3		
VORR					pmax	pmax			
	comp=Z,450nm,0.6s								
OBN	Obninsk	145.51	323			PKPdf	14 02 10.9	+0.1	
OBN	Obninsk	145.51	323	*e*	PKIKP	PKPdf	14 02 10.0	-0.8	
OBN					pmax	pmax			
	comp=Z,157nm,0.9s								
GURO	Guroymak-BITLI	145.56	293		PKPdf	PKPdf	14 02 11.7	+0.1	
VSR	Storozhevoye	145.63	316	*e*	PKIKP	PKPdf	14 02 11.2	+0.1	
VSR					pmax	pmax			
	comp=Z,220nm,0.8s								
BCA	Borcka	145.84	298	⇑	P	PKPdf	14 02 12.1	+0.2	
FIA1	FINESS Array S	145.96	338			PKPdf	14 02 12.1	+0.8	
FINES	FINESS Array B	145.96	338		PKPbc	PKPbc	14 02 12.4	-0.1	
	comp=Z,113nm,0.5s,baz=51,slow=3.9,SNR=571								
FINES					SKPbc	SKPbc	14 05 26.8	-1.9	
	comp=Z,6.1nm,0.7s,baz=71,slow=3.8,SNR=3.5								
FINES	FINESS Array B	145.96	338		PKPdf	PKPdf	14 02 11.8	+0.4	
NSS	Namsos	146.46	351	*e*		PKPbc	14 02 13.5	-0.5	
MARD	Mardin	146.50	291			PKPbc	14 02 15.3	+0.2	
SOC	Sochi	147.05	302	*i*	PKIKP	PKPdf	14 02 14.9	+1.1	
SOC					*e*	PPP	14 08 58.7		
KTUT	Trabzon	147.26	297	⇑	P	PKPbc	14 02 17.5	+0.5	
MEF	Metsahovi	147.43	338	*e*	P	PKPbc	14 02 16.8	+0.1	
RAF	Rauma	147.58	341	*e*	P	PKPdf	14 02 15.7	+1.6	
TBLU	Trondheim	147.91	352	*e*	P	PKPbc	14 02 16.9	-1.0	
VSU	Vasula	147.91	334	*e*	P	PKPbc	14 02 18.3	+0.3	
ANN	Anapa	148.47	305	*i*	PKP2	PKPbc	14 02 19.6	-0.3	
ANN					*e*	SS	14 24 43.3	+2.6	
ANN					pmax	pmax			
	comp=Z,136nm,0.8s								
MTSE	Matsula	148.77	336		*e* P	PKPbc	14 02 20.7	+0.5	
MOL	Molde	148.87	354		*e* PKPbc	PKPbc	14 02 19.9	-0.4	
DOMB	Dombas	149.22	352		*e* PKPbc	PKPbc	14 02 21.1	-0.3	
AKN	Aaknes	149.31	354		*e* PKPbc	PKPbc	14 02 22.2	+0.7	
NC303	NORSAR Array S	149.70	350			PKPdf	14 02 18.4	+0.9	
NC303					PKPbc	PKPbc	14 02 22.5	0.0	
NC405	NORSAR Array S	149.75	349			PKPbc	14 02 22.6	0.0	
NB201	NORSAR Array S	149.88	349			PKPbc	14 02 22.8	-0.1	
NB2	NORSAR Subarra	149.90	350		PKP	PKPbc	14 02 22.6	-0.4	
	comp=Z,173nm,1.4s,baz=17,slow=2.6								
NB2	NORSAR Subarra	149.90	350		PKP	PKPbc	14 02 22.6	-0.4	
	baz=17,slow=2.6								
NOA	NORSAR Array B	149.90	350		PKP	PKPdf	14 02 18.9	+1.0	
	comp=Z,21nm,0.6s,baz=16,slow=4.1,SNR=22								
NOA					PKPbc	PKPbc	14 02 23.2	+0.2	
	comp=Z,21nm,0.5s,baz=16,slow=4.1,SNR=72								
NBO00	NORSAR Array S	149.97	350			PKPbc	14 02 23.2	0.0	
FOO	Floro	150.03	356	*e*	PKPbc	PKPbc	14 02 23.7	+0.5	
MNK	Minsk	150.07	327	*i*	PKP2	PKiKP	14 02 24.4	+0.2	
MNK					*i*		14 06 00.2		
MNK					*i* PPP	PPP	14 09 31.1		
MNK					pmax	pmax			
	comp=E,6.0nm,1.2s								
MNK					pmax	pmax			
	comp=Z,196nm,1.1s								
MNK	Minsk	150.07	327	*i*	PKP	PKiKP	14 02 24.5	+0.2	
	comp=E,6.0nm,1.2s								
MNK					*i* PKP	PKiKP	14 02 24.5	+0.2	
MNK					*i* PKP	PKiKP	14 02 24.5	+0.2	
	comp=Z,196nm,1.1s,baz=52								
MNK					*i* pPKP	pPKPdf	14 03 18.1	+0.3	
MNK					*i* sPKP		14 03 43.8		
MNK					*i* SKP		14 05 38.4		
MNK					*i* PKS	PP	14 06 00.2	-0.1	
MNK					*i* PP	PP	14 06 07.8	+7.5	
MNK					*i* PPP	PPP	14 09 31.1		
MNK					*i* SKKS		14 18 06.8		
MNK					*i* SPP	SPP	14 23 05.3		
MNK					*i* PPS	PPS	14 23 09.6		
MNK					*i* SS	SS	14 25 06.4	+9.0	
MNK					*i* SSS	SSS	14 30 49.7		
NAO01	NORSAR Array S	150.13	350			PKPbc	14 02 24.0	+0.5	
NAO01	NORSAR Array S	150.13	350		*e* P	PKiKP	14 02 24.2	-0.1	
NC602	NORSAR Array S	150.13	349			PKPbc	14 02 23.3	-0.2	
NC602	NORSAR Array S	150.13	349		*e*	PKPbc	14 02 23.4	-0.2	
ISAL	Salakas	150.15	330		*e* P	PKiKP	14 02 25.1	+0.6	
IIGN	Ignalina	150.26	330		*e* P	PKiKP	14 02 25.1	+0.4	
NACGM	Naroch	150.31	329	⇓	*e* PKP	PKPbc	14 02 23.5	-0.6	
HYA	Hoyanger	150.37	354		*e* PKPbc	PKiKP	14 02 25.1	+0.4	
BNN	Bunyan	150.39	294			PKPbc	14 02 23.6	-1.5	
DIKM	Dikmen	150.57	299	⇓	P	PKPbc	14 02 25.5

BRG				Amp			14 02 32.6		
	comp=Z,11nm,1.5s								
BRG	**Berggiesshubel**	**158.47 336**	*i* P		**PKPab**	**14 03 06.0**	**-0.1**		
BRG				Amp			14 03 07.5		
	comp=Z,45nm,1.5s								
BRG	**Berggiesshubel**	**158.47 336**	*e*PKIKP		**PKPdf**	**14 02 30.2**	**+0.1**		
BRG				pmax	pmax				
	comp=Z,11nm,1.5s								
PVCC	**Panska Ves**	**158.53 335**	*e*PKP2		**PKPab**	**14 03 06.9**	**+0.4**		
PVCC	**Panska Ves**	**158.53 335**	*e*P		**PKPab**	**14 03 06.9**	**+0.4**		
BZS	**Buzias**	**158.55 316**	⇓P		**PKPab**	**14 03 07.3**	**+0.6**		
BZS	**Buzias**	**158.55 316**	⇓PKP2		**PKPab**	**14 03 07.3**	**+0.6**		
JAVC	**Velka Javorina**	**158.56 328**	*e*PKP		**PKPdf**	**14 02 31.1**	**+0.7**		
JAVC			*e*			14 03 07.1			
VRAC	**Vranov**	**158.70 330**	⇓P		**PKPab**	**14 03 07.2**	**-0.1**		
VRAC	**Vranov**	**158.70 330**	⇓PKP2		**PKPab**	**14 03 07.2**	**-0.1**		
VRAC	**Vranov**	**158.70 330**	*e*PKP		**PKPdf**	**14 02 30.2**	**-0.3**		
VRAC			*e*			14 03 06.6			
BLKB	**Belogradchik**	**158.88 310**	⇑P		**PKPab**	**14 03 09.4**	**+1.0**		
MDVR	**Moldovita**	**158.93 314**	⇓P		**PKPab**	**14 03 09.5**	**+1.0**		
VTS	**Vitosha**	**158.93 307**	⇑P		**PKPab**	**14 03 09.7**	**+1.0**		
VTS	**Vitosha**	**158.93 307**	⇑PKP2		**PKPab**	**14 03 09.7**	**+1.0**		
KRUC	**Moravsky**	**158.97 330**	*e*PKP		**PKPdf**	**14 02 30.3**	**-0.5**		
KRUC			*e*			14 03 07.5			
PRU	**Pruhonice**	**158.99 334**	*e*PKP2		**PKPab**	**14 03 08.6**	**+0.1**		
PRU	**Pruhonice**	**158.99 334**	*e*P		**PKPab**	**14 03 08.6**	**+0.1**		
MODS	**Modra-Piesok**	**159.09 327**	*e*PKP2		**PKPab**	**14 03 09.7**	**+0.7**		
BOVS	**Bovan**	**159.50 311**	⇓P		**PKPab**	**14 03 11.5**	**+0.5**		
FRGS	**Fruska Gora**	**159.86 317**	⇓P		**PKPab**	**14 03 13.1**	**+0.6**		
CKRC	**Cesky Krumlov**	**160.02 332**	⇑*e*PKP		**PKPdf**	**14 02 32.1**	**+0.1**		
CKRC	**Cesky Krumlov**	**160.02 332**	*e*P		**PKPab**	**14 03 12.6**	**-0.5**		
RONA	**Rosalia, Austr**	**160.03 327**	*e*P		**PKPdf**	**14 02 31.7**	**-0.4**		
	comp=Z,2.9nm,0.6s								
RONA			*e*P		**PKPab**	**14 03 13.7**	**+0.5**		
	comp=Z,18nm,1.2s								
KHC	**Kasperske Hory**	**160.05 334**	*e*PKIKP		**PKPdf**	**14 02 28.0**	**-4.1**		
KHC	**Kasperske Hory**	**160.05 334**	⇑*e*PKP		**PKPdf**	**14 02 28.0**	**-4.1**		
KHC	**Kasperske Hory**	**160.05 334**	*e*P		**PKPab**	**14 03 08.5**	**-4.7**		
CONA	**Conrad Observa**	**160.06 328**	*e*P		**PKPdf**	**14 02 31.6**	**-0.6**		
	comp=Z,5.2nm,1.3s								
CONA			*e*P		**PKPab**	**14 03 13.1**	**-0.2**		
	comp=Z,11nm,1.1s,SNR=5.6								
GERES	**GERESS Array B**	**160.24 333**	PKP		**PKPdf**	**14 02 32.5**	**+0.1**		
	comp=Z,1.4nm,0.7s,baz=112,slow=1.4,SNR=14								
GERES			PKPab		**PKPab**	**14 03 13.9**	**-0.2**		
	comp=Z,4.9nm,0.8s,baz=42,slow=4.2,SNR=15								
ARSA	**Arzberg**	**160.72 328**	*e*P		**PKPab**	**14 03 15.4**	**-0.8**		
	comp=Z,4.8nm,0.7s								
MEM	**Membach**	**160.75 349**	*d*PKP		**PKPab**	**14 03 16.7**	**+0.6**		
BTNL	**Ternell**	**160.75 349**	*d*PKP		**PKPab**	**14 03 15.8**	**-0.3**		
MOA	**Molln**	**160.81 331**	*e*P		**PKPab**	**14 03 16.1**	**-0.4**		
	comp=Z,6.9nm,0.9s								
BHOU	**Houvegnez**	**161.00 349**	*d*PKP		**PKPab**	**14 03 17.2**	**0.0**		
BCLA	**Clavier**	**161.04 350**	*d*PKP		**PKPab**	**14 03 17.0**	**-0.3**		
SNF	**Seneffe**	**161.08 352**	*d*PKP		**PKPab**	**14 03 17.7**	**+0.2**		
BIOA	**Bad Ischl, Aus**	**161.19 331**	*e*P		**PKPab**	**14 03 18.7**	**+0.4**		
	comp=Z,5.6nm,0.9s								
BMRD	**Maredsous**	**161.23 351**	*d*PKP		**PKPab**	**14 03 18.2**	**0.0**		
GROS	**Grobnik**	**161.31 326**	*e*PKPdf		**PKPdf**	**14 02 32.7**	**-0.8**		
RCHB	**Rochefort**	**161.31 350**	*d*PKP		**PKPab**	**14 03 18.3**	**-0.2**		
SOKA	**Soboth**	**161.37 327**	*e*P		**PKPdf**	**14 02 32.8**	**-0.8**		
	comp=Z,5.3nm,1.2s								
SOKA			*e*P		**PKPab**	**14 03 19.5**	**+0.4**		
	comp=Z,14nm,1.6s								
TORD	**Torodi Ar. Bea**	**161.41 184**	PKP		**PKPdf**	**14 02 35.1**	**+0.6**		
	comp=Z,10nm,1.0s,baz=354,slow=0.5,SNR=36								
TORD			PKPab		**PKPab**	**14 03 20.3**	**+0.6**		
	comp=Z,12nm,0.6s,baz=180,slow=3.7,SNR=23								
DOU	**Dourbes**	**161.45 352**	*d*PKP		**PKPab**	**14 03 18.9**	**-0.2**		
WLF	**Walferdange**	**161.64 348**	*d*PKP		**PKPab**	**14 03 19.7**	**-0.3**		
PDG	**Podgorica**	**161.65 311**	⇑P		**PKPab**	**14 03 21.5**	**+1.1**		
KBA	**Koelnbreinsper**	**161.80 331**	*e*P		**PKPdf**	**14 02 33.6**	**-0.6**		
	comp=Z,3.9nm,0.9s								
LJU	**Ljubljana**	**162.07 327**	*e*PKPdf		**PKPdf**	**14 02 34.0**	**-0.3**		
GBAS	**Gorenja Brezov**	**162.19 326**	*e*PKPdf		**PKPdf**	**14 02 33.9**	**-0.6**		
KOWA	**Kowa**	**162.31 166**			**PKPdf**	**14 02 35.2**	**-0.1**		
WTTA	**Wattenberg**	**162.32 334**	*e*P		**PKPdf**	**14 02 34.2**	**-0.5**		
	comp=Z,6.6nm,1.0s								
ABTA	**Abfaltersbach**	**162.41 332**	*e*P		**PKPdf**	**14 02 34.1**	**-0.6**		
	comp=Z,6.3nm,1.0s								
ABTA			*e*P		**PKPab**	**14 03 23.3**	**-0.4**		
	comp=Z,5.9nm,1.0s								
BFO	**Black Forest**	**162.43 342**			**PKPab**	**14 03 22.9**	**-0.7**		
BFO	**Black Forest**	**162.43 342**	PKP2		**PKPab**	**14 03 22.9**	**-0.7**		
RETA	**Reutte**	**162.45 336**	*e*P		**PKPab**	**14 03 23.6**	**-0.2**		
	comp=Z,30nm,1.6s,SNR=7.1								
MOTA	**Moosalm**	**162.45 335**	*e*P		**PKPdf**	**14 02 34.4**	**-0.4**		
	comp=Z,10nm,1.2s								
MOTA			*e*P		**PKPab**	**14 03 23.4**	**-0.4**		
	comp=Z,16nm,0.8s,SNR=7.1								
SQTA	**Sankt Quirin**	**162.52 335**	*e*P		**PKPdf**	**14 02 34.4**	**-0.5**		
	comp=Z,3.5nm,0.7s								
SQTA			*e*P		**PKPab**	**14 03 23.7**	**-0.4**		
	comp=Z,9.0nm,0.7s								
FETA	**Feichten**	**162.86 335**	*e*P		**PKPdf**	**14 02 34.8**	**-0.5**		
	comp=Z,12nm,1.5s								
FETA			*e*P		**PKPab**	**14 03 25.2**	**-0.5**		
	comp=Z,9.8nm,1.0s,SNR=6.9								
DAVA	**Damuels**	**162.92 338**	*e*P		**PKPdf**	**14 02 34.7**	**-0.6**		
	comp=Z,3.8nm,0.6s								
DAVA			*e*P		**PKPab**	**14 03 25.8**	**-0.1**		
	comp=Z,6.7nm,0.6s,SNR=6.2								
TIP	**Timpagrande**	**164.81 304**	⇓P		**PKPab**	**14 03 35.6**	**+1.1**		
PMOZ	**Porto Moniz, M**	**165.06 81**	*e*PKPab		**PKPab**	**14 03 40.5**	**+4.6**		
POLO	**Lamas de Olo**	**168.38 32**	*e*PKPab		**PKPab**	**14 03 51.8**	**+1.6**		
PVIS	**Viseu**	**168.85 35**	*e*PKPab		**PKPab**	**14 03 53.9**	**+1.7**		
PCBR	**Castelo Branco**	**169.72 36**	*e*PKPdf		**PKPdf**	**14 02 42.7**	**+2.2**		
PCBR	**Castelo Branco**	**169.72 36**	*e*PKPab		**PKPab**	**14 03 56.9**	**+0.9**		
PNCL	**Nicolau / Gran**	**170.32 47**	*e*PKPdf		**PKPdf**	**14 02 43.5**	**+2.6**		
PBEJ	**Beja**	**170.78 45**	*e*PKPdf		**PKPdf**	**14 02 43.7**	**+2.5**		
PBAR	**Barrancos**	**171.16 42**	*e*PKPdf		**PKPdf**	**14 02 43.7**	**+2.3**		
PAB	**San Pablo**	**171.34 25**			**PKPdf**	**14 02 43.0**	**+1.5**		
PAB	**San Pablo**	**171.34 25**	PKIKP		**PKPdf**	**14 02 43.1**	**+1.5**		
ESBB	**Sonseca Array**	**171.36 23**			**PKPdf**	**14 02 42.5**	**+1.0**		
ESDC	**Sonseca Array**	**171.36 23**	PKP		**PKPdf**	**14 02 42.6**	**+1.0**		
	comp=Z,3.3nm,0.9s,baz=334,slow=2.1,SNR=16								
ESDC			PKPab		**PKPab**	**14 04 03.7**	**+0.4**		
	comp=Z,4.0nm,0.9s,baz=328,slow=3.9,SNR=12								
ESDC	**Sonseca Array**	**171.36 23**			**PKPdf**	**14 02 42.4**	**+0.8**		
ESDC					**sPKPdf**	**14 04 04.2**	**-0.8**		
KEST	**Kesra**	**171.60 300**	PKP		**PKPdf**	**14 02 41.5**	**-0.3**		
	comp=Z,4.2nm,0.7s,baz=180,slow=7.1,SNR=3.5								

*NEIC **09** 13:46:50.3±0.7,30.14S±0.08×177.7W±0.2, h35km±2km, mb4.5/10, Error ellipse: s-maj=33.4km s-min=11.9km az=75.0*
*IDC **09** 13:46:52.2±4.2,30.02S×177.78W, h52km±39km, mb4.1/3, mbtmp4.4/3, Error ellipse: s-maj=53.2km s-min=29.3km az=168.0*

ISC 09 13:46:50.1±1.2, 30.16S±0.08×177.7W±0.2, h35km, n17, σ0.86/19, mb4.4/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**0.93**	**348**	P		**Pn**	**13 47 06.9**	**+0.3**
	1μm,0.2s,baz=174,slow=22,SNR=13							
RAO				S		**Sn**	**13 47 18.9**	**+0.2**
	4μm,0.3s,baz=354,slow=23,SNR=18							
RAO	**Raoul Island**	**0.93**	**348**	Pn		**Pn**	**13 47 06.8**	**+0.1**
RAO				Sn		**Sn**	**13 47 18.2**	**-0.6**
CTAO	**Charters Tower**	**34.03**	**279**	P		**P**	**13 53 32.1**	**+1.2**
STKA	**Stephens Creek**	**34.79**	**257**	P		**P**	**13 53 38.2**	**+0.8**
	2.8nm,0.5s,baz=90,slow=14,SNR=3.4 2.8nm,0.5s							
STKA	**Stephens Creek**	**34.79**	**257**	P		**P**	**13 53 38.0**	**+0.5**
AS31	**Alice Springs**	**43.39**	**267**	P		**P**	**13 54 48.2**	**-1.3**
ASAR	**Alice Springs**	**43.39**	**267**	P		**P**	**13 54 49.1**	**-0.4**
	1.2nm,0.4s,baz=102,slow=6.8,SNR=2.6 1.2nm,0.4s							
ASAR	**Alice Springs**	**43.39**	**267**	P		**P**	**13 54 48.6**	**-0.9**
WR0	**Warramunga Arr**	**44.18**	**272**	P		**P**	**13 54 54.5**	**-1.3**
WR0				IAmb		IAmb	13 55 19.3	
	comp=Z,6.9nm,0.9s							
WB2	**Warramunga Arr**	**44.35**	**272**	P		**P**	**13 54 56.5**	**-0.7**
WB2				IAmb		IAmb	13 54 59.1	
	comp=Z,19nm,1.4s							
WRAB	**Tennant Creek**	**44.35**	**272**	P		**P**	**13 54 56.5**	**-0.7**
WRAB				IAmb		IAmb	13 55 29.4	
	comp=Z,6.2nm,0.9s							
WRA	**Warramunga Arr**	**44.36**	**272**	P		**P**	**13 54 56.6**	**-0.7**
	comp=Z,2.7nm,0.3s,baz=110,slow=8.2,SNR=10.0 comp=Z,2.7nm,0.3s							
WB0	**Warramunga Arr**	**44.38**	**272**	P		**P**	**13 54 56.9**	**-0.5**
WB0				IAmb		IAmb	13 55 35.4	
	comp=Z,11nm,1.2s							
CASY	**Casey**	**55.47**	**208**	P		**P**	**13 56 19.6**	**-1.3**
CASY				IAmb		IAmb	13 56 21.5	
	comp=Z,4.1nm,1.0s							
QSPA	**South Pole Qui**	**59.95**	**180**	P		**P**	**13 56 52.8**	**+0.2**
BELA	**Belgrano 2**	**69.98**	**172**	P		**P**	**13 57 58.5**	**+1.0**
BELA				IAmb		IAmb	13 58 20.6	
	comp=Z,3.3nm,1.1s							
FINES	**FINESS Array B**	**145.01**	**340**	PKP		**PKPab**	**14 06 21.5**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=25,slow=3.7,SNR=1.8							

*IDC **09** 13:48:59.3±2.0, 32.67N×130.71E, h0km, mb3.7/4, mbtmp3.7/7, ML3.0/3, MS2.9/5, Error ellipse: s-maj=39.6km s-min=27.1km az=34.0*
*NIED **09** 13:48:59.4, 32.73N×130.80E, h5km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr=0.05; Mθθ=0.49; Mφφ=-0.44; Mrθ=-0.52; Mrφ=0.44; Mθφ=0.62; Fault plane solution: M0=1.01000×10^15 NP1: φs=298.00000°, δ=38.00000°, λ=-2.00000°. NP2: φs=29.00000°, δ=89.00000°, λ=-128.00000°.*
*JMA **09** 13:48:59.4±0.0, 32.73N±0.08×130.8E±0.1, h5km, MV3.8/20, NW KUMAMOTO PREF*
JMA Felt IV J1 at NW KUMAMOTO PREF .

ISC 09 13:49:00.5±1.1, 32.70N±0.08×130.7E±0.1, h5km±9km, n12, σ0.88/13, mb3.7/4, MS3.1/3, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIU3	**Izumi3**	**0.16**	**159**	*i* P		**Pg**	**13 49 03.2**	**-0.5**
JIU3				S		**Sg**	**13 49 06.1**	**+0.2**
JTA	**Tamana**	**0.32**	**326**	*i* P		**Pg**	**13 49 06.0**	**-0.8**
JTA				S		**Sg**	**13 49 10.8**	**-0.2**
JTZ	**Takazaki**	**0.85**	**160**	*i* P		**Pg**	**13 49 16.4**	**-0.4**
KSRS	**Korea Array**	**5.28**	**335**	Pn		**Pn**	**13 50 20.4**	**+0.4**
	0.5nm,0.3s,baz=148,slow=14,SNR=5.3							
KSRS				Pg		**Pb**	**13 50 34.8**	**+1.5**
	0.7nm,0.3s,baz=149,slow=16,SNR=11							
KSRS				LR		LR	13 51 45.0	
	comp=Z,20nm,19.7s,baz=165,slow=31							
KSRS				Lg		Lg	13 51 46.2	
	1.0nm,0.3s,baz=158,slow=30,SNR=5.7 0.7nm,0.3s							
MJAR	**Matsushiro Arr**	**7.25**	**56**	Pn		**Pn**	**13 50 47.5**	**+0.3**
	0.2nm,0.3s,baz=244,slow=14,SNR=9.0							
MJAR				LR		LR	13 54 04.0	
	comp=Z,101nm,21.3s,baz=224,slow=42 1.2nm,0.4s							
KLR	**Kul'dur**	**16.53**	**2**	Pn		**P**	**13 52 55.2**	**-0.5**
	0.1nm,0.3s,baz=121,slow=7.5,SNR=3.9 3.3nm,0.8s							
SONM	**Songino Array**	**23.82**	**317**	P		**P**	**13 54 15.7**	**+1.2**
	0.6nm,0.5s,baz=118,slow=8.3,SNR=2.9							
SONM				LR		LR	14 04 49.5	
	comp=Z,45nm,20.0s,baz=122,slow=40 0.6nm,0.5s							
AKTO	**Aktyubinsk**	**55.01**	**312**	LR		LR	14 23 50.5	
	comp=Z,32nm,19.3s,baz=320,slow=38							
ILAR	**Eielson Array**	**57.74**	**30**	P		**P**	**13 58 51.6**	**-0.4**
	0.3nm,0.7s,baz=278,slow=6.3,SNR=3.7 0.3nm,0.7s							
FINES	**FINESS Array B**	**68.35**	**330**	P		**P**	**14 00 02.5**	**-0.1**
	4.0nm,0.9s,baz=84,slow=5.9,SNR=4.6 4.0nm,0.9s							
AKASG	**Malin Array Be**	**72.07**	**319**	P		**P**	**14 00 24.4**	**-1.2**
	0.4nm,0.4s,baz=56,slow=6.3,SNR=3.8 0.4nm,0.4s							
EKA	**Eskdalemuir Ar**	**83.85**	**336**	LR		LR	14 46 25.2	
	comp=Z,7.8nm,19.4s,baz=274,slow=41							

*IDC **09** 13:57:01.3±1.7, 25.73S×69.40E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=56.0km s-min=31.0km az=79.0*
*NEIC **09** 13:57:02.3±1.6, 25.75S±0.1×69.2E±0.2, h10km±1km, mb4.5/7, Error ellipse: s-maj=30.2km s-min=7.2km az=311.0*

ISC 09 13:57:04.1±0.8, 25.7S±0.1×69.4E±0.3, h21km, n22, σ0.95/16, mb4.2/9, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H08S1	**Diego Carcia H**	**18.20**	**10**	T		T	14 19 56.7	
	baz=190,slow=76,SNR=57							
H08S2	**Diego Garcia H**	**18.21**	**10**	T		T	14 20 00.4	
	baz=190,slow=76,SNR=63							
H08S3	**Diego Garcia H**	**18.22**	**10**	T		T	14 19 58.7	
	baz=190,slow=76,SNR=68							
H01W2	**Cape Leeuwin H**	**39.44**	**114**	T		T	14 46 29.1	
	baz=270,slow=75,SNR=37							
H01W3	**Cape Leeuwin H**	**39.44**	**114**	T		T	14 46 29.3	
	baz=270,slow=75,SNR=42							
H01W1	**Cape Leeuwin H**	**39.45**	**114**	T		T	14 46 30.3	
	baz=270,slow=75,SNR=50							
MAW	**Mawson**	**42.10**	**184**	P		**P**	**14 04 55.6**	**+1.4**
CMAR	**Chiang Mai Arr**	**52.48**	**36**	P		**P**	**14 06 14.0**	**-1.6**
ASAR	**Alice Springs**	**58.13**	**103**	P		**P**	**14 06 56.9**	**+0.4**
	1.1nm,0.7s,baz=250,slow=6.0,SNR=12 1.1nm,0.7s							
ASAR	**Alice Springs**	**58.13**	**103**	P		**P**	**14 06 56.5**	**-0.1**
WRA	**Warramunga Arr**	**59.63**	**99**	P		**P**	**14 07 07.3**	**+0.3**
	1.0nm,0.8s,baz=257,slow=6.7,SNR=4.9 1.0nm,0.8s							
WR0	**Warramunga Arr**	**59.81**	**99**	P		**P**	**14 07 08.3**	**+0.1**
WR0				IAmb		IAmb	14 07 27.1	
	comp=Z,7.2nm,1.4s							
SNAA	**Sanae**	**60.23**	**200**	P		**P**	**14 07 09.2**	**-1.2**
SNAA				IAmb		IAmb	14 07 44.4	
	comp=Z,2.2nm,0.8s							
QSPA	**South Pole Qui**	**64.42**	**180**	P		**P**	**14 07 37.1**	**-1.5**
QSPA				IAmb		IAmb	14 08 04.9	
	comp=Z,3.1nm,0.7s							
VNDA	**Vanda**	**65.63**	**166**	P		**P**	**14 07 46.5**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=275,slow=6.4,SNR=8.5 comp=Z,1.3nm,0.8s							
VNDA	**Vanda**	**65.63**	**166**	P		**P**	**14 07 46.2**	**+0.1**
VNDA				IAmb		IAmb	14 07 47.1	
	comp=Z,1.8nm,0.9s							
SBA	**Scott Base**	**66.60**	**167**	P		**P**	**14 07 53.1**	**+0.8**
SBA				IAmb		IAmb	14 07 59.1	
	comp=Z,5.7nm,1.4s							
BELA	**Belgrano 2**	**67.94**	**193**	P		**P**	**14 08 01.1**	**+0.3**
MKAR	**Makanchi Array**	**73.10**	**9**	P		**P**	**14 08 33.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=189,slow=6.8,SNR=4.7 comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**73.10**	**9**	P		**P**	**14 08 32.2**	**-0.3**
ABKAR	**Akbulak array**	**75.10**	**354**	P		**P**	**14 08 44.6**	**+0.5**
SONM	**Songino Array**	**80.42**	**24**	P		**P**	**14 09 15.3**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=227,slow=4.0,SNR=3.6 comp=Z,0.6nm,0.8s							

*VAO **09** 13:57:17.6±0.4, 23.25S×69.56W, h89km, mb4.2*
*GUC **09** 13:57:19.7±0.9, 23.24S×69.41W, h74km±4km, ML4.4*
*NEIC **09** 13:57:19.5±1.4, 23.25S±0.05×69.40W±0.05, h75km±4km, Error ellipse: s-maj=7.3km s-min=6.5km az=130.0*
*IDC **09** 13:57:20.0±0.9, 23.27S×69.23W, h79km±5km, mb3.5/3, mbtmp4.0/6, MS2.5/2, Error ellipse: s-maj=29.2km s-min=13.5km az=104.0*

ISC 09 13:57:18.8±0.5, 23.28S±0.03×69.40W±0.04, h77km±4km, n89, σ1.23/106, mb4.1/7, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB15	**IPOC Station P**	**0.10**	**320**			**Pn**	**13 57 30.2**	**-0.1**
PB15	**IPOC Station P**	**0.10**	**320**	⇑*i*P		**Pn**	**13 57 30.9**	**+0.7**
PB15				*i* S		**Sn**	**13 57 39.3**	**+0.7**
PB06	**IPOC Station P**	**0.60**	**345**			**Pn**	**13 57 33.8**	**+0.4**
PB06	**IPOC Station P**	**0.60**	**345**	⇓*i*P		**Pn**	**13 57 34.2**	**+0.8**
PB06				*i* S		**Sn**	**13 57 45.1**	**+1.0**
PB06				IAML			13 57 45.7	
	comp=N,18μm,0.2s							
LVC	**Limon Verde**	**0.81**	**34**	P		**Pn**	**13 57 36.7**	**+0.8**
	comp=N,1μm,0.4s,baz=161,slow=5.8,SNR=3614							
LVC				S		**Sn**	**13 57 49.4**	**+0.9**
	comp=N,5μm,0.3s,baz=294,slow=20,SNR=31							
LVC	**Limon Verde**	**0.81**	**34**			**Pn**	**13 57 36.4**	**+0.6**
LVC	**Limon Verde**	**0.81**	**34**	*e*P		**Pn**	**13 57 36.0**	**+0.1**
LVC				*e*S		**Sn**	**13 57 48.5**	**+0.1**
LVC	**Limon Verde**	**0.81**	**34**	*e*P		**Pn**	**13 57 36.6**	**+0.8**
PB10	**IPOC Station P**	**1.08**	**258**	Pn		**Pn**	**13 57 39.9**	**+1.2**
PB10	**IPOC Station P**	**1.08**	**258**	⇑*i*P		**Pn**	**13 57 39.8**	**+1.2**
PB10				*e*S		**Sn**	**13 57 54.9**	**+1.3**
PB10				IAML			13 58 00.8	
	comp=N,9μm,0.3s							
PB04	**IPOC Station P**	**1.17**	**324**			**Pn**	**13 57 40.8**	**+0.8**
PB04	**IPOC Station P**	**1.17**	**324**	*e*P		**Pn**	**13 57 40.8**	**+0.8**
PB04				*e*S		**Sn**	**13 57 56.9**	**+1.0**
PB04				IAML			13 58 03.9	
	comp=E,10μm,0.3s							
AF01	**San Pedro de A**	**1.17**	**74**			**Pn**	**13 57 41.5**	**+1.4**
AF01	**San Pedro de A**	**1.17**	**74**	⇓*i*P		**Pn**	**13 57 41.6**	**+1.4**
AF01				*e*S		**Sn**	**13 57 58.4**	**+2.3**
PB09	**IPOC Station P**	**1.49**	**6**			**Pn**	**13 57 45.8**	**+1.7**
PB09	**IPOC Station P**	**1.49**	**6**	*e*P		**Pn**	**13 57 45.9**	**+1.9**
PB09				*e*S		**Sn**	**13 58 04.5**	**+1.5**
PB09				IAML			13 58 14.8	
	comp=E,5μm,0.6s							
PB07	**IPOC Station P**	**1.61**	**344**	Pn		**Pn**	**13 57 46.6**	**+0.9**
PB07	**IPOC Station P**	**1.61**	**344**	*e*P		**Pn**	**13 57 47.0**	**+1.3**
PB07				*e*S		**Sn**	**13 58 07.3**	**+1.3**
PB07				IAML			13 58 15.3	
	comp=E,4μm,0.2s							
PB14	**IPOC Station P**	**1.62**	**214**	Pn		**Pn**	**13 57 47.1**	**+1.2**
PB14	**IPOC Station P**	**1.62**	**214**	*e*P		**Pn**	**13 57 47.1**	**+1.2**
PB14				*e*S		**Sn**	**13 58 07.9**	**+1.6**
GO02	**Mina Guanaco**	**1.88**	**185**	Pn		**Pn**	**13 57 50.2**	**+0.9**
GO02	**Mina Guanaco**	**1.88**	**185**	⇑*i*P		**Pn**	**13 57 50.2**	**+0.9**
GO02				IAML			13 58 16.6	
	comp=N,4μm,0.3s							
PB02	**IPOC Station P**	**2.01**	**347**	*e*P		**Pn**	**13 57 52.0**	**+1.2**
PB02				*e*S		**Sn**	**13 58 15.8**	**+0.6**
PB02				IAML			13 58 26.9	
	comp=E,6μm,0.3s							
PB01	**IPOC Station P**	**2.23**	**358**	*e*P		**Pn**	**13 57 55.0**	**+1.2**
PB01				*e*S		**Sn**	**13 58 22.5**	**+1.9**
PB01				IAML			13 58 27.9	
	comp=E,5μm,0.4s							
PATCX	**Punta Patache**	**2.55**	**344**	*e*P		**Pn**	**13 57 58.3**	**+0.2**
PATCX				IAML			13 58 43.1	
	comp=N,2μm,0.4s							
TA01	**Diego Aracena**	**2.80**	**345**	Pn		**Pn**	**13 58 00.5**	**-0.9**
TA01	**Diego Aracena**	**2.80**	**345**	*e*P		**Pn**	**13 58 01.2**	**-0.2**
TA01				*e*S		**Sn**	**13 58 36.8**	**+2.6**
AC01	**Pan de Azucar**	**3.05**	**201**	Pn		**Pn**	**13 58 04.1**	**-0.7**
AC01	**Pan de Azucar**	**3.05**	**201**	*e*P		**Pn**	**13 58 04.0**	**-0.9**
TA02	**Huaiquique**	**3.07**	**347**	*e*P		**Pn**	**13 58 01.1**	**-4.0**
AC02	**Maricunga**	**3.54**	**176**	Pn		**Pn**	**13 58 13.1**	**+1.2**
AC02	**Maricunga**	**3.54**	**176**	*e*P		**Pn**	**13 58 13.8**	**+1.8**
GO03	**Copiap**	**4.36**	**190**			**Pn**	**13 58 21.5**	**-1.1**
GO03	**Copiap**	**4.36**	**190**	*e*P		**Pn**	**13 58 21.5**	**-1.1**
AC04	**Llanos de Chal**	**5.13**	**197**	Pn		**Pn**	**13 58 29.7**	**-3.4**
CO01	**Juntas del Tor**	**6.70**	**185**	Pn		**Pn**	**13 58 53.5**	**-1.3**
LPAZ	**La Paz**	**7.06**	**10**	P		**Pn**	**13 59 02.1**	**+2.0**
	comp=N,7.4nm,0.5s,baz=204,slow=7.0,SNR=39							
LPAZ				LR		LR	14 01 35.8	
	comp=N,22nm,20.9s,baz=255,slow=36							
LPAZ	**La Paz**	**7.06**	**10**	Pn		**Pn**	**13 58 58.5**	**-1.6**
MT09	**Talagante**	**10.55**	**187**	Pn		**Pn**	**13 59 48.6**	**+1.5**
SIV	**San Ignacio**	**10.68**	**49**

baz=265
TWD eS Sn 13 58 36.7 -0.7
baz=265
NACB Ninganchiao 0.61 278 P Pb 13 58 27.9 +0.8
baz=274
NACB eS Sn 13 58 36.8 -0.7
baz=274
TWC Suao 0.63 324 P Pb 13 58 26.8 -0.7
baz=322
TWC eS Sb 13 58 34.6 -1.3
baz=322
ETLH Xiulin Townshi 0.71 279 P Pb 13 58 29.4 +0.6
baz=276
ETLH eS Sn 13 58 39.7 -0.6
baz=276
JYNG Yonagunijimaku 0.72 61 P Pb 13 58 29.1 +0.2
JYNG S Sb 13 58 38.2 -0.2
NDS Dongshan 0.73 318 P Pb 13 58 28.0 -1.0
baz=315
NDS S Sb 13 58 37.3 -1.2
baz=315
YOJ Yonaguni jima 0.78 62 eP Pb 13 58 29.6 -0.4
baz=63
YOJ eS Sb 13 58 40.3 +0.2
baz=63
YOJ Yonaguni jima 0.78 62 P Pb 13 58 30.3 +0.4
YOJ eS Sb 13 58 40.1 0.0
LATG Datong 0.80 304 P Pb 13 58 30.6 +0.4
baz=301
LATG S Sn 13 58 42.2 -0.1
baz=301
ESL Shilin 0.80 250 eP Pb 13 58 30.1 -0.1
baz=247
ESL eS Sb 13 58 41.3 +0.6
baz=247
ILA Ilan 0.81 326 eS Sb 13 58 41.4 +0.4
baz=323
TWE Neicheng 0.82 320 P Pb 13 58 30.6 -0.1
baz=318
TWE S Sb 13 58 42.2 +0.9
baz=318
ENTT Nioudou 0.83 311 P Pb 13 58 30.1 -0.7
baz=308
ENTT S Sb 13 58 40.9 -0.6
baz=308
NDT Datong Townshi 0.84 307 eP Pb 13 58 30.4 -0.6
baz=304
NDT eS Sb 13 58 42.5 +0.6
baz=304
NTC Toucheng 0.85 333 eP Pb 13 58 30.8 -0.3
baz=331
NTC eS Sb 13 58 42.5 +0.5
baz=331
NNSB Datong 0.86 293 eP Pb 13 58 31.6 +0.2
baz=290
NNSB eS Sn 13 58 43.9 -0.1
baz=290
EGFH Guangfu 0.87 241 eS Sb 13 58 43.4 +0.8
baz=238
NNS Nan Shan 0.87 293 eP Pb 13 58 31.0 -0.6
baz=290
NNS eS Sb 13 58 43.5 +0.6
baz=290
FUSB Fushanzhiwuyua 0.90 318 P Pb 13 58 32.4 +0.4
baz=315
FUSB eS Sb 13 58 44.5 +1.0
baz=315
WHF Hehuan Shan 0.90 273 eP Pb 13 58 32.1 -0.2
baz=270
WHF eS Sb 13 58 44.2 +0.2
baz=270
FUSS Fushou 0.93 280 eP Pb 13 58 32.6 -0.1
baz=277
FUSS eS Sb 13 58 45.2 +0.5
baz=277
TWB1 Santiao Chiao 0.94 345 eP Pb 13 58 32.1 -0.5
baz=344
TWB1 eS Sb 13 58 44.7 0.0
baz=344
TIPB Shuangxi 0.96 336 P Pb 13 58 33.0 +0.1
baz=334
TIPB eS Sb 13 58 45.7 +0.5
baz=334
NWLT Wulai 0.96 315 eP Pn 13 58 33.6 +0.3
baz=313
NWLT eS Sb 13 58 46.2 +0.8
baz=313
HGSD Ruisui 0.97 232 eP Pb 13 58 31.9 -1.1
baz=230
HGSD eS Sb 13 58 45.3 -0.1
baz=230
YHNB Yeheng 0.98 306 *i* P Pb 13 58 33.6 +0.2
baz=303
YHNB eS Sb 13 58 46.7 +0.7
baz=303
CHGB Renai 0.99 268 eP Pb 13 58 33.6 0.0
baz=266
CHGB eS Sb 13 58 46.6 +0.4
baz=266
OWD Renai 0.99 262 eP Pb 13 58 33.5 -0.2
baz=260
OWD eS Sb 13 58 46.2 -0.1
baz=260
TWT Tachien 1.00 279 eP Pb 13 58 34.1 +0.4
baz=276
TWT eS Sb 13 58 47.2 +0.8
baz=276
NSK Sanguang 1.00 306 P Pb 13 58 33.0 -0.7
baz=303
NSK eS Sb 13 58 46.8 +0.3
baz=303
TDCB Techi 1.01 279 eP Pb 13 58 34.0 +0.1
baz=276
TDCB eS Sb 13 58 47.5 +0.6
baz=276
EHY Hungye 1.03 236 eS Sb 13 58 46.8 -0.6
baz=233
WUSB Renai 1.04 265 eP Pb 13 58 34.5 0.0
baz=262
WUSB eS Sb 13 58 48.2 +0.5
baz=262
SXI1 Grass Mountain 1.05 341 eP Pb 13 58 34.4 -0.2
baz=339
SXI1 eS Sn 13 58 49.5 +0.8
baz=339
NWF Wu-fen Shan 1.06 336 eP Pb 13 58 34.6 -0.2
baz=335
NWF eS Sb 13 58 48.3 0.0
baz=335
VWDT VWDT 1.07 252 eP Pn 13 58 34.8 0.0
baz=249
VWDT eS Sb 13 58 48.5 +0.1
baz=249
YULB Yu-li 1.12 232 eP Pn 13 58 34.2 -1.3
baz=230
YULB eS Sb 13 58 49.5 -0.4
baz=230
EYUL Yuli 1.13 229 eP Pb 13 58 36.1 +0.2
baz=227
EYUL eS Sn 13 58 51.1 +0.5
baz=227
NFF Wufeng Townshi 1.17 298 eP Pn 13 58 36.0 -0.2
baz=295
NFF eS Sb 13 58 51.0 -0.3
baz=295
WHP Taichung City 1.21 279 eP Pn 13 58 36.5 -0.2
baz=277
WHP eS Sb 13 58 52.7 +0.3
baz=277
YM01 YM01 1.22 329 eP Pn 13 58 36.8 -0.1
baz=328
YM01 eS Sb 13 58 52.1 -0.6
baz=328
SSLB Suanglung 1.23 256 eP Pn 13 58 35.9 -1.1
baz=254
SSLB eS Sb 13 58 52.3 -0.7
baz=254
WCS Beigang Elemen 1.23 269 eP Pn 13 58 36.0 -0.9
baz=266
WCS eS Sn 13 58 52.4 -0.4
baz=266
FULB Fuli 1.25 225 eP Pn 13 58 36.1 -1.2
baz=223
FULB eS Sn 13 58 52.4 -1.1
baz=223
LIOB Emei 1.25 296 eP Pb 13 58 38.4 +0.4
baz=294
LIOB eS Sn 13 58 53.9 +0.3
baz=294
SMLT Sun Moon Lake 1.25 261 eP Pn 13 58 36.5 -0.9
baz=258
SMLT eS Sn 13 58 53.0 -0.7
baz=258
NSTT Nanjuang 1.26 295 eP Pb 13 58 38.9 +0.8
baz=293
NSTT eS Sn 13 58 53.4 -0.3
baz=293
TYC Yuchr 1.29 262 eP Pn 13 58 38.1 +0.3
baz=260
TYC eS Sn 13 58 54.6 +0.2
baz=260
YUS Yu-Shan 1.33 243 eP Pn 13 58 39.2 +0.4
baz=241
YUS eS Sn 13 58 56.0 -0.2
baz=241
IRIF Iriomote-Funau 1.37 80 P Pb 13 58 39.5 -0.5
IRIF S Sb 13 58 57.0 0.0
EDH Donghe 1.42 218 eS Sn 13 58 56.5 -1.0
baz=217
HATJ Hateruma jima 1.42 91 eS Sb 13 58 58.6 +0.2
ALS Alishan 1.45 247 eP Pn 13 58 40.4 +0.2
baz=244
ALS eS Sn 13 58 58.9 +0.2
baz=244
ELDTW Lidau 1.45 232 eP Pn 13 58 40.1 0.0
baz=230
ELDTW eS Sn 13 58 59.0 +0.5
baz=230
LDUT Ludao 1.59 207 eP Pn 13 58 42.3 +0.5
baz=206
LDUT eS Sn 13 59 01.9 +0.2
baz=206
JKRS Kuro-shima 1.61 85 P Pb 13 58 43.6 -0.5
JKRS eS Sb 13 59 03.8 -0.2
WDLH Douliu 1.62 256 eP Pn 13 58 42.5 +0.2
baz=254
WDLH eS Sn 13 59 03.3 +0.7
baz=254
STYH Taoyuan 1.64 236 eP Pn 13 58 43.0 +0.5
baz=235
STYH eS Sn 13 59 03.2 +0.3
baz=235
TPUB Ta-pu 1.69 242 eP Pn 13 58 43.8 +0.5
baz=241
TPUB eS Sn 13 59 05.3 +1.1
baz=241
WTP Ta-pu 1.72 241 eP Pn 13 58 44.0 +0.2
baz=239
WTP eS Sn 13 59 06.0 +0.8
baz=239
JIJ Ishigaki jima 1.75 81 P Pn 13 58 44.8 +0.8
JIJ eS Sn 13 59 05.9 +0.2
WTK Tuku 1.75 257 eS Sn 13 59 06.6 +0.7
baz=255
TWK Hsinying 1.82 243 eP Pn 13 58 45.3 +0.2
baz=241
TWK eS Sn 13 59 07.8 +0.3
baz=241
CHN1 Nanshi 1.82 241 eP Pn 13 58 45.5 +0.3
baz=239
CHN1 eS Sb 13 59 09.3 -0.8
baz=239
SGST Jiashian 1.83 237 eS Sn 13 59 08.8 +1.0
baz=235
TSMG Majia 2.02 227 eP Pn 13 58 48.6 +0.7
baz=226
TSMG eS Sn 13 59 13.5 +1.0
baz=226

IDC 09 14:03:19.6±3.6, 19°.05S×177°.99W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=197.4km s-min=31.0km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.83**	**261**	P	P	14 11 35.9	0.0
	0.2nm,0.3s,baz=97,slow=7.8,SNR=15						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**44.88**	**255**	P	P	14 11 36.0	-0.2
	0.7nm,0.8s,baz=91,slow=7.8,SNR=11						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**86.91**	**13**	P	P	14 16 05.8	-0.1
	0.2nm,0.5s,baz=199,slow=5.3,SNR=2.4						
	0.2nm,0.5s						
PDAR	**Pinedale Array**	**87.90**	**43**	P	P	14 16 11.6	0.0
	0.3nm,0.6s,baz=224,slow=5.0,SNR=2.2						
	0.3nm,0.6s						

*NEIC **09** 14:04:50.7±0.8, 4°.62N±0°.06×94°.67E±0°.07, h20km±5km, mb4.5/25, Error ellipse: s-maj=11.2km s-min=7.0km az=130.0*
*DJA **09** 14:04:52.2±1.2, 5°N±5°×9°5E±°, h30km±14km, M4.7/8, mb4.7/6, mB4.8/2, MLv4.7/8, Mw(mB)4.0/2*
*IDC **09** 14:04:54.5±0.6, 4°.75N×94°.85E, h55km±4km, mb3.8/15, mbtmp4.1/17, MS3.4/9, Error ellipse: s-maj=20.1km s-min=10.0km az=36.0*
ISC 09 14:04:52.3±0.5, 4°.63N±0°.06×94°.66E±0°.05, h33km, n89, σ1§46/91, mb4.4/36, MS3.5/8, 1C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.35**	**75**		**Pn**	**14 05 28.1**	**-0.5**
LHMI	**Lhok Sumawe**	**2.35**	**75**	P	**Pn**	**14 05 28.2**	**-0.5**
LHMI				S	**Sn**	**14 05 56.2**	**-0.2**
KCSI	**Kotacane, Aceh**	**3.29**	**109**	P	**Pn**	**14 05 43.1**	**+1.6**
KCSI				S	**Sn**	**14 06 20.2**	**+0.6**
TSI	**Tuntungan**	**4.05**	**106**	P	**Pn**	**14 05 52.7**	**+0.7**
GSI	**Gunungsitoli**	**4.40**	**139**	Pn	**Pn**	**14 05 55.9**	**-0.9**
GSI	**Gunungsitoli**	**4.40**	**139**	P	**Pn**	**14 05 56.1**	**-0.7**
PSI	**Prapat**	**4.62**	**113**	P	**Pn**	**14 06 00.5**	**+0.5**
	22nm,0.3s,baz=303,slow=9.2,SNR=20						
PSI				S	**Sn**	**14 06 54.3**	**+1.7**
	86nm,0.6s,baz=231,slow=16,SNR=9.3						
PSI				LR	LR	14 08 10.2	
	comp=Z,424nm,20.7s,baz=275,slow=43						
RPSI	**Rantau Prapat**	**4.67**	**114**	Pn	**Pn**	**14 06 00.0**	**-0.4**
RPSI	**Rantau Prapat**	**4.67**	**114**		**Pn**	**14 06 00.5**	**+0.1**
RPSI					**Sn**	**14 06 54.3**	**+0.8**
KULM	**Kulim**	**6.00**	**83**	Pn	**Pn**	**14 06 17.8**	**-1.1**
SRIT	**Nakonsritamara**	**6.29**	**51**	Pn	**Pn**	**14 06 22.2**	**-0.7**
IPM	**Ipoh**	**6.34**	**91**	Pn	**Pn**	**14 06 22.7**	**-0.8**
SISI	**Saibi**	**7.38**	**143**	P	**Pn**	**14 06 35.7**	**-2.2**
	0.2nm36nm,1.2s						
MNAI	**Manna**	**12.18**	**137**	Pn	**Pn**	**14 07 42.4**	**-1.2**
MNAI	**Manna**	**12.18**	**137**	P	**Pn**	**14 07 41.6**	**-2.0**
	407nm,1.2s						
PALK	**Pallekele**	**14.13**	**281**	P	**Pn**	**14 08 12.5**	**+2.2**
	8.2nm,1.1s,baz=201,slow=17,SNR=2.0						
PALK				S	**Sn**	**14 10 40.0**	**-6.2**
	16nm,0.4s,baz=287,slow=17,SNR=9.9						
PALK				LR	LR	14 12 52.5	
	comp=Z,153nm,21.1s,baz=233,slow=34						
CMAR	**Chiang Mai Arr**	**14.37**	**17**	P	**Pn**	**14 08 15.7**	**+2.2**
	5.8nm,0.6s,baz=210,slow=12,SNR=36						
CMAR				LR	LR	14 13 10.6	
	comp=Z,113nm,21.7s,baz=190,slow=35						
CMAR	**Chiang Mai Arr**	**14.37**	**17**	P	**P**	**14 08 19.2**	**-0.9**
CHTO	**Chiang Mai**	**14.71**	**16**		**P**	**14 08 22.6**	**-1.3**
KSM	**Kuching**	**15.93**	**101**	P	**P**	**14 08 37.5**	**+0.1**
PCHI	**Peechi**	**19.07**	**289**	eP	Pn	14 09 22.5	+9.3
PCHI				eS	Sn	14 12 35.7	-10
HYBB	**Hyderabad (bro**	**20.26**	**310**	eP	**P**	**14 09 25.0**	**-0.2**
QIZ	**Qiongzhong**	**20.60**	**45**	P	**P**	**14 09 30.0**	**+1.2**
QIZ				S	**S**	**14 13 19.5**	**+2.0**
QIZ				LR	LR		
	comp=N,140nm,17.2s						
QIZ				LR	LR		
	comp=E,140nm,16.1s						
QIZ				LR	LR		
	comp=Z,130nm,19.0s						
KMI	**Kunming**	**21.81**	**20**	⇓P	**P**	**14 09 44.3**	**+2.3**
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
PZH	**PanZhiHua**	**22.78**	**17**	P	**P**	**14 09 53.1**	**+0.8**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.4s						
MYLDM	**Lahad Datu**	**23.75**	**88**	P	**P**	**14 10 02.3**	**+0.4**
MYLDM				IAmb	IAmb	14 10 39.5	
	comp=Z,31nm,1.3s						
H08S2	**Diego Garcia H**	**25.26**	**241**	T	T	14 36 22.6	
	baz=61,slow=75,SNR=748						
H08S3	**Diego Garcia H**	**25.26**	**241**	T	T	14 36 22.6	
	baz=61,slow=75,SNR=757						
H08S1	**Diego Garcia H**	**25.27**	**241**	T	T	14 36 23.8	
	baz=61,slow=75,SNR=423						
KAPI	**Kappang**	**26.83**	**111**	P	**P**	**14 10 29.2**	**-0.7**
KAPI				IAmb	IAmb	14 10 31.1	
	comp=Z,9.5nm,0.9s						
XAN	**Xi'an**	**32.13**	**23**	P	**P**	**14 11 14.5**	**-2.3**
XAN				pP	pP	14 11 18.9	-6.7
XAN				pmax	pmax		
	comp=Z,22nm,0.7s						
LZH	**Lanzhou**	**32.43**	**14**	eP	**P**	**14 11 19.5**	**-0.1**
LZH				pP	pP	14 11 26.5	-1.8
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
GTA	**Gaotai**	**34.94**	**7**	⇓P	**P**	**14 11 39.9**	**-1.4**
GTA				pP	pP	14 11 52.1	+1.9
GTA				sP	sP	14 11 57.6	+3.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,46nm,4.4s						
GTA				LR	LR		
	comp=N,58nm,14.2s						
GTA				LR	LR		
	comp=E,130nm,14.9s						
GTA				LR	LR		
	comp=Z,94nm,16.7s						
NJ2	**Nanjing**	**35.47**	**37**	eP	**P**	**14 11 45.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	**HongShan**	**37.42**	**27**	⇑P	**P**	**14 12 01.2**	**-1.2**
HNS				pmax	pmax		
	comp=Z,31nm,0.7s						
TIA	**Tai'an**	**37.62**	**30**	P	**P**	**14 12 02.7**	**-1.4**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**37.99**	**127**	P	**P**	**14 12 06.2**	**-1.3**
FITZ				IAmb	IAmb	14 12 19.7	
	comp=Z,3.9nm,0.7s						
JOW	**Kunigami**	**38.95**	**52**	P	**P**	**14 12 14.2**	**-1.3**
JOW				IAmb	IAmb	14 12 58.1	
	comp=Z,34nm,1.1s						
HHC	**Hu-ho-hao-te**	**39.13**	**20**	eP	**P**	**14 12 18.7**	**+1.8**
HHC				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,6.1s						
KNRA	**Kununurra**	**39.32**	**122**	P	**P**	**14 12 16.5**	**-2.2**
KNRA				IAmb	IAmb	14 12 44.0	
	comp=Z,7.6nm,0.9s						
WMQ	**Urumqi**	**39.52**	**352**	eP	**P**	**14 12 21.8**	**+1.8**
BOOM	**Boomskoye usch**	**41.22**	**339**	P	**P**	**14 12 35.6**	**+1.4**
BOOM				IAmb	IAmb	14 12 50.7	
	comp=Z,6.5nm,0.8s						
BTK	**Batken**	**41.31**	**332**	P	**P**	**14 12 35.9**	**+0.9**
BTK				IAmb	IAmb	14 12 55.7	
	comp=Z,15nm,1.4s						
MK31	**Makanchi Array**	**43.35**	**348**	P	**P**	**14 12 50.8**	**-0.6**
MKAR	**Makanchi Array**	**43.35**	**348**	P	**P**	**14 12 51.2**	**-0.2**
	comp=Z,2.7nm,0.4s,baz=171,slow=7.6,SNR=42						
MKAR				pP	**sP**	**14 13 05.8**	**+1.7**
	comp=Z,1.8nm,0.4s,baz=167,slow=8.0,SNR=6.1						
	comp=Z,2.7nm,0.4s						
MKAR	**Makanchi Array**	**43.35**	**348**	P	**P**	**14 12 50.8**	**-0.6**
H01W3	**Cape Leeuwin H**	**43.37**	**156**	T	T	14 59 57.7	
	baz=331,slow=76,SNR=7.8						
H01W2	**Cape Leeuwin H**	**43.38**	**156**	T	T	14 59 48.3	
	baz=331,slow=76,SNR=8.2						
H01W1	**Cape Leeuwin H**	**43.38**	**156**	T	T	14 59 33.5	
	baz=331,slow=76,SNR=6.1						
MAKZ	**Makanchi**	**43.43**	**347**	P	**P**	**14 12 51.3**	**-0.8**
MAKZ				IAmb	IAmb	14 12 52.4	
	comp=Z,5.4nm,0.5s						
KKAR	**Karatay Array**	**43.89**	**334**	P	**P**	**14 12 56.4**	**+0.7**
SONM	**Songino Array**	**44.21**	**11**	P	**P**	**14 12 56.8**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=185,slow=9.1,SNR=4.3						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**44.21**	**11**	P	**P**	**14 12 57.0**	**-1.4**
KSRS	**Korea Array**	**44.62**	**38**	P	**P**	**14 12 59.0**	**-2.6**
	comp=Z,1.3nm,0.7s,baz=217,slow=9.5,SNR=12						
	comp=Z,1.3nm,0.7s						
WB0	**Warramunga Arr**	**45.97**	**123**	P	**P**	**14 13 11.6**	**-1.0**
WRA	**Warramunga Arr**	**46.01**	**123**	P	**P**	**14 13 11.6**	**-1.4**
	comp=Z,2.3nm,0.6s,baz=302,slow=9.1,SNR=36						
	comp=Z,2.3nm,0.6s						
WRA	**Warramunga Arr**	**46.01**	**123**	P	**P**	**14 13 11.9**	**-1.1**
WRAB	**Tennant Creek**	**46.01**	**123**	P	**P**	**14 13 12.0**	**-1.0**
WB2	**Warramunga Arr**	**46.02**	**123**	P	**P**	**14 13 11.9**	**-1.1**
WR0	**Warramunga Arr**	**46.18**	**123**	P	**P**	**14 13 13.5**	**-0.8**
GEYT	**Alibeck**	**46.98**	**320**	P	**P**	**14 13 18.6**	**-1.8**
	comp=Z,2.0nm,0.5s,baz=150,slow=7.8,SNR=1.9						
GEYT				pP	**sP**	**14 13 36.4**	**+3.3**
	comp=Z,5.3nm,0.5s,baz=145,slow=11,SNR=4.9						
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**47.48**	**128**	P	**P**	**14 13 23.3**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=300,slow=7.5,SNR=24						
ASAR				LR	LR	14 35 25.3	
	comp=Z,47nm,18.3s,baz=236,slow=39						
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	**47.48**	**128**	P	**P**	**14 13 23.9**	**-0.5**
AS31	**Alice Springs**	**47.48**	**128**	P	**P**	**14 13 23.9**	**-0.6**
KURK	**Kurchatov**	**47.87**	**346**	P	**P**	**14 13 26.7**	**-0.3**
KURK				IAmb	IAmb	14 13 57.0	
	comp=Z,3.8nm,0.8s						
ZAA0	**Zalesovo Array**	**49.82**	**352**	P	**P**	**14 13 40.6**	**-1.3**
ZAA0				IAmb	IAmb	14 13 42.3	
	comp=Z,3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**49.82**	**352**	P	**P**	**14 13 41.5**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=176,slow=6.3,SNR=16						
ZALV				pP	**sP**	**14 13 55.8**	**+1.1**
	comp=Z,4.0nm,0.5s,baz=177,slow=6.6,SNR=9.6						
	comp=Z,1.8nm,0.3s						
ZALV	**Zalesovo Beam**	**49.82**	**352**	P	**P**	**14 13 40.6**	**-1.3**
GUMO	**Guam**	**50.28**	**76**	LR	LR	14 34 50.9	
	comp=Z,30nm,21.7s,baz=228,slow=36						
MJAR	**Matsushiro Arr**	**51.00**	**46**	LR	LR	14 36 51.1	
	comp=Z,40nm,18.1s,baz=14,slow=38						
BRVK	**Borovoye**	**52.27**	**342**	P	**P**	**14 14 00.0**	**-0.4**
BRVK				IAmb	IAmb	14 14 15.1	
	comp=Z,6.0nm,0.7s						
ABKAR	**Akbulak array**	**53.32**	**332**	P	**P**	**14 14 08.4**	**+0.3**
ABKAR				IAmb	IAmb	14 14 23.9	
	comp=Z,3.5nm,0.8s						
ABKAR	**Akbulak array**	**53.32**	**332**	P	**P**	**14 14 08.1**	**0.0**
KMBO	**Kilima Mbogo**	**57.64**	**266**	P	**P**	**14 14 43.0**	**+2.8**
	comp=Z,1.1nm,0.4s,baz=49,slow=9.3,SNR=4.9						
	comp=Z,1.1nm,0.4s						
KBZ	**Khabaz**	**59.84**	**319**	P	**P**	**14 14 54.4**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=76,slow=9.6,SNR=2.9						
	comp=Z,1.7nm,0.8s						
MBAR	**Mbarara**	**64.07**	**267**	LR	LR	14 40 25.4	
	comp=Z,33nm,18.8s,baz=62,slow=33						
BR131	**Keskin Array S**	**64.95**	**312**	P	**P**	**14 15 28.9**	**-0.3**
BR131				IAmb	IAmb	14 15 33.9	
	comp=Z,11nm,1.4s						
BRTR	**Keskin Array B**	**64.95**	**312**	P	**P**	**14 15 28.9**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=136,slow=6.8,SNR=7.9						
BRTR				pP	**sP**	**14 15 44.1**	**+2.0**
	comp=Z,1.4nm,0.6s,baz=123,slow=6.0,SNR=4.8						
	comp=Z,1.7nm,0.8s						
LSZ	**Lusaka**	**68.72**	**252**	LR	LR	14 41 54.7	
	comp=Z,41nm,19.9s,baz=158,slow=32						
PET	**Petropavlovsk**	**70.86**	**35**	P	**P**	**14 16 06.2**	**+0.4**
AKASG	**Malin Array Be**	**71.02**	**322**	P	**P**	**14 16 05.5**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=86,slow=6.0,SNR=5.1						
	comp=Z,0.4nm,0.4s						
LBTB	**Lobatse**	**73.18**	**242**	LR	LR	14 46 48.5	
	comp=Z,39nm,18.1s,baz=94,slow=34						
BOSA	**Boshof**	**74.33**	**239**	P	**P**	**14 16 27.9**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=104,slow=12,SNR=3.4						
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**75.81**	**333**	P	**P**	**14 16 33.9**	**-0.9**
	comp=Z,2.0nm,0.9s,baz=104,slow=4.0,SNR=6.7						
FINES				pP	**PcP**	**14 16 48.3**	**+1.0**
	comp=Z,6.2nm,0.8s,baz=108,slow=5.2,SNR=3.8						
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**78.48**	**340**	P	**P**	**14 16 49.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=94,slow=6.3,SNR=11						
ARCES				pP	**pwP**	**14 17 02.7**	**0.0**
	comp=Z,1.3nm,0.4s,baz=94,slow=6.2,SNR=2.8						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	**78.48**	**340**	P	**P**	**14 16 50.0**	**+0.3**
GERES	**GERESS Array B**	**80.58**	**319**	P	**P**	**14 17 02.2**	**+0.5**

comp=Z,1.1nm,0.7s,baz=84,slow=5.5,SNR=9.9
GERES pP **pwP** 14 17 17.4 +2.6
comp=Z,2.2nm,0.8s,baz=104,slow=5.6,SNR=6.6
comp=Z,1.1nm,0.7s
TXAR Lajitas Array 141.92 26 PKP **PKPdf** 14 24 22.0 +0.3
comp=Z,0.2nm,0.8s,baz=311,slow=1.9,SNR=3.6
TXAR pPKP **sPKPdf** 14 24 38.0 +2.8
comp=Z,0.2nm,0.6s,baz=318,slow=3.6,SNR=2.6
CPUP Villa Florida 145.60 228 PKPbc **PKPdf** 14 24 27.2 -0.8
comp=Z,1.2nm,0.4s,baz=54,slow=0.9,SNR=4.3

*IDC **09** 14:25:54.1±1.2, 12°.35N×88°.58W, h0km, mb3.9/7, mbtmp3.9/8, ML3.6/1, MS3.2/3, Error ellipse: s-maj=42.4km s-min=23.5km az=52.0*
*SNET **09** 14:25:58.5±0.9, 12°.41N×89°.17W, h10km, ML4.5*
*UCR **09** 14:25:58.7±0.9, 12°.41N×89°.17W, h10km, ML4.4, mb4.6(NEIC)*
*INET **09** 14:26:01.7±2.1, 12°.49N×89°.10W, h15km±18km, MW3.8*
*NEIC **09** 14:26:02.5±1.8, 12°.60N±0°.08×88°.92W±0°.09, h35km±2km, mb4.6/72, Md4.5(SNET), Error ellipse: s-maj=18.5km s-min=9.3km az=228.0*
*GCG **09** 14:26:05.8±0.5, 12°.69N×89°.77W, h152km±27km, MD4.5*
ISC 09 14:26:02.6±1.3, 12°.52N±0°.06×89°.11W±0°.04, h46km±11km, n176, σ1°36/201, mb4.5/41, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SJTE	**Alcalda de S**	**1.10**	**5**	*eP*		**Pn**		**14 26 20.3**	**-1.4**
SJTE				*eS*		**Sn**		**14 26 37.6**	**+1.9**
SJTE	**Alcalda de S**	**1.10**	**5**	*eP*		**Pn**		**14 26 20.3**	**-1.4**
SJTE				*eS*		**Sn**		**14 26 37.6**	**+1.9**
LFRS	**El Faro**	**1.10**	**3**	*iP*		**Pn**		**14 26 20.7**	**-1.0**
LFRS	**El Faro**	**1.10**	**3**	*iP*		**Pn**		**14 26 20.7**	**-1.0**
COEG	**Centro de Oper**	**1.12**	**12**	*eP*		**Pn**		**14 26 20.5**	**-1.4**
COEG	**Centro de Oper**	**1.12**	**12**	*eP*		**Pn**		**14 26 20.5**	**-1.4**
COEB	**Comit de Eme**	**1.13**	**30**	*eP*		**Pn**		**14 26 21.1**	**-1.0**
COEB				*eS*		**Sn**		**14 26 38.6**	**+2.1**
COEB	**Comit de Eme**	**1.13**	**30**	*eP*		**Pn**		**14 26 21.1**	**-1.0**
COEB				*eS*		**Sn**		**14 26 38.6**	**+2.1**
SNET	**Serv Nac Est T**	**1.17**	**354**		Pn	**Pn**		**14 26 21.4**	**-1.2**
SNET	**Serv Nac Est T**	**1.17**	**354**	*eP*		**Pn**		**14 26 21.5**	**-1.1**
SNET				*eS*		**Sn**		**14 26 39.2**	**+1.8**
SNET	**Serv Nac Est T**	**1.17**	**354**	*eP*		**Pn**		**14 26 21.5**	**-1.1**
SNET				*eS*		**Sn**		**14 26 39.2**	**+1.8**
JAYA	**Jayaque - finc**	**1.18**	**344**	*eP*		**Pn**		**14 26 21.6**	**-1.2**
JAYA				*eS*		**Sn**		**14 26 38.6**	**+0.8**
JAYA				IAML				14 26 41.3	
	comp=Z,5μm,0.3s								
JAYA	**Jayaque - finc**	**1.18**	**344**	*eP*		**Pn**		**14 26 21.6**	**-1.2**
JAYA				*eS*		**Sn**		**14 26 38.6**	**+0.8**
JAYA				IAML				14 26 41.3	
	comp=Z,5μm,0.3s								
UEES	**Universidad Ev**	**1.20**	**354**	*eP*		**Pn**		**14 26 22.1**	**-0.9**
UEES	**Universidad Ev**	**1.20**	**354**	*eP*		**Pn**		**14 26 22.1**	**-0.9**
PAVA	**Las Pavas**	**1.20**	**8**	*eP*		**Pn**		**14 26 22.1**	**-1.0**
PAVA				*eS*		**Sn**		**14 26 40.8**	**+2.5**
PAVA	**Las Pavas**	**1.20**	**8**	*eP*		**Pn**		**14 26 22.1**	**-1.0**
PAVA				*eS*		**Sn**		**14 26 40.8**	**+2.5**
LBRS	**Las Brisas**	**1.22**	**3**	*eP*		**Pn**		**14 26 22.7**	**-0.5**
LBRS	**Las Brisas**	**1.22**	**3**	*eP*		**Pn**		**14 26 22.7**	**-0.5**
PACA	**Pacayal**	**1.22**	**39**	*eP*		**Pn**		**14 26 22.6**	**-0.7**
PACA				IAML				14 26 47.9	
	comp=Z,17μm,0.3s								
PACA	**Pacayal**	**1.22**	**39**	*eP*		**Pn**		**14 26 22.6**	**-0.7**
PACA				IAML				14 26 47.9	
	comp=Z,17μm,0.3s								
VSM	**San Miguel**	**1.22**	**42**	*eP*		**Pn**		**14 26 22.8**	**-0.7**
VSM	**San Miguel**	**1.22**	**42**	*eP*		**Pn**		**14 26 22.8**	**-0.7**
BOQS	**Boqueron**	**1.22**	**352**	*eP*		**Pn**		**14 26 22.6**	**-0.8**
BOQS	**Boqueron**	**1.22**	**352**	*eP*		**Pn**		**14 26 22.6**	**-0.8**
LFU	**La Fuente**	**1.23**	**360**	*eP*		**Pn**		**14 26 22.8**	**-0.6**
LFU	**La Fuente**	**1.23**	**360**	*eP*		**Pn**		**14 26 22.8**	**-0.6**
PQSS	**Presa 15 de Se**	**1.23**	**26**	*eP*		**Pn**		**14 26 23.0**	**-0.3**
PQSS				*eS*		**Sn**		**14 26 41.1**	**+2.4**
PQSS	**Presa 15 de Se**	**1.23**	**26**	*eP*		**Pn**		**14 26 23.0**	**-0.3**
PQSS				*eS*		**Sn**		**14 26 41.1**	**+2.4**
SCLA	**Alcaldia de Sa**	**1.24**	**18**	*eP*		**Pn**		**14 26 22.6**	**-0.8**
SCLA	**Alcaldia de Sa**	**1.24**	**18**	*eP*		**Pn**		**14 26 22.6**	**-0.8**
CEDA	**San Andres**	**1.31**	**348**	*eP*		**Pn**		**14 26 23.0**	**-1.5**
CEDA	**San Andres**	**1.31**	**348**	*eP*		**Pn**		**14 26 23.0**	**-1.5**
CEVE	**Cerro Verde**	**1.40**	**339**	*eP*		**Pn**		**14 26 24.6**	**-1.2**
CEVE				IAML				14 26 55.4	
	comp=Z,6μm,0.4s								
CEVE	**Cerro Verde**	**1.40**	**339**	*eP*		**Pn**		**14 26 24.6**	**-1.2**
CEVE				IAML				14 26 55.4	
	comp=Z,6μm,0.4s								
SNJE	**San Jose**	**1.43**	**340**	*eP*		**Pn**		**14 26 25.3**	**-0.9**
SNJE	**San Jose**	**1.43**	**340**	*eP*		**Pn**		**14 26 25.3**	**-0.9**
LCND	**La Caada**	**1.43**	**56**	*eP*		**Pn**		**14 26 25.4**	**-0.7**
LCND				*eS*		**Sn**		**14 26 46.5**	**+2.8**
LCND	**La Caada**	**1.43**	**56**	*eP*		**Pn**		**14 26 25.4**	**-0.7**
LCND				*eS*		**Sn**		**14 26 46.5**	**+2.8**
CNCH	**Conchagua**	**1.46**	**59**	*eP*		**Pn**		**14 26 26.2**	**-0.4**
CNCH	**Conchagua**	**1.46**	**59**	*eP*		**Pn**		**14 26 26.2**	**-0.4**
P5NO	**Presa 5 de nov**	**1.50**	**13**	*eP*		**Pn**		**14 26 26.6**	**-0.4**
NUBE	**Las Nubes**	**1.52**	**335**	*eP*		**Pn**		**14 26 26.1**	**-1.4**
NUBE				*eS*		**Sn**		**14 26 47.4**	**+1.2**
NUBE	**Las Nubes**	**1.52**	**335**	*eP*		**Pn**		**14 26 26.1**	**-1.4**
NUBE				*eS*		**Sn**		**14 26 47.4**	**+1.2**
CAHU	**Cacacuatique**	**1.52**	**35**	*eP*		**Pn**		**14 26 27.7**	**+0.1**
CAHU	**Cacacuatique**	**1.52**	**35**	*eP*		**Pn**		**14 26 27.7**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.64**	**337**	*eP*		**Pn**		**14 26 28.7**	**-0.2**
SLOZ				*eS*		**Sn**		**14 26 52.1**	**+3.3**
CRIN	**San Cristobal**	**2.02**	**85**			**Pn**		**14 26 33.6**	**-0.6**
CRIN	**San Cristobal**	**2.02**	**85**	*eP*		**Pn**		**14 26 33.8**	**-0.5**
CRIN				*eS*		**Sn**		**14 26 57.3**	**-1.1**
ESQI	**Esquipulas**	**2.04**	**354**		Pn	**Pn**		**14 26 34.8**	**+0.2**
ESQI	**Esquipulas**	**2.04**	**354**	*eP*		**Pn**		**14 26 34.9**	**+0.3**
CNGN	**Cerro Negro**	**2.36**	**90**			**Pn**		**14 26 36.9**	**-2.0**
TGUH	**Tegucigalpa,Un**	**2.36**	**49**			**Pn**		**14 26 37.4**	**-1.5**
TGUH	**Tegucigalpa,Un**	**2.36**	**49**	*eP*		**Pn**		**14 26 38.8**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.36**	**49**	*eP*		**Pn**		**14 26 38.8**	**-0.1**
PCG	**Pacaya**	**2.37**	**322**	*eP*		**Pn**		**14 26 42.3**	**+3.2**
NBG	**Las Nubes**	**2.38**	**330**	*eP*		**Pn**		**14 26 42.2**	**+2.8**
COPN	**Copaltepe**	**2.49**	**97**	*eP*		**Pn**		**14 26 39.4**	**-1.2**
MOMN	**Momotombo**	**2.52**	**92**	*eP*		**Pn**		**14 26 40.2**	**-0.8**
MOMN				*eS*		**Sn**		**14 27 10.3**	**-0.2**
FUG	**Fuego 3**	**2.55**	**319**	*eP*		**Pn**		**14 26 42.3**	**+0.6**
FUG				*eS*		**Sn**		**14 27 11.1**	**-0.5**
MRL	**Marmol**	**2.61**	**348**	*eP*		**Pn**		**14 26 44.5**	**+2.0**
MRL				*eS*		**Sn**		**14 27 18.8**	**+5.7**
APYN	**Apoyeque**	**2.71**	**96**	*eP*		**Pn**		**14 26 42.1**	**-1.6**
APYN				*eS*		**Sn**		**14 27 13.2**	**-2.2**
HUEN		**2.88**	**93**	*eP*		**Pn**		**14 26 45.4**	**-0.5**
HUEN				*eS*		**Sn**		**14 27 21.8**	**+1.7**
RCON	**San Juan de Ri**	**3.04**	**71**	*eP*		**Pn**		**14 26 48.5**	**+0.2**
MATN	**Matagalpa**	**3.14**	**82**			**Pn**		**14 26 48.5**	**-1.1**
MATN	**Matagalpa**	**3.14**	**82**	*eP*		**Pn**		**14 26 48.9**	**-0.7**
STG3	**Santiaguito 3,**	**3.24**	**313**	*eP*		**Pn**		**14 26 51.7**	**+0.6**
STG3				*eS*		**Sn**		**14 27 25.1**	**-3.4**
BOAB	**BOACO BROADBAN**	**3.37**	**91**			**Pn**		**14 26 51.0**	**-1.7**
BOAB	**BOACO BROADBAN**	**3.37**	**91**	*eP*		**Pn**		**14 26 51.8**	**-0.8**
BOAB				*eS*		**Sn**		**14 27 32.4**	**+1.0**
HZTE	**Horizontes, Gu**	**3.88**	**117**			**Pn**		**14 27 00.2**	**+0.5**
ACON	**Acoyapa**	**3.89**	**98**		Pn	**Pn**		**14 26 58.8**	**-1.0**
ORTG	**Ortega, Santa**	**4.17**	**120**		Pn	**Pn**		**14 27 04.2**	**+0.4**
PETF	**Flores**	**4.43**	**351**		Pn	**Pn**		**14 27 09.2**	**+1.8**
JTS	**Las Juntas de**	**4.64**	**118**			**Pn**		**14 27 11.0**	**+0.8**
JACO	**JACO, Garabito**	**5.21**	**123**			**Pn**		**14 27 19.5**	**+1.5**
CVTR	**Volcan Turrial**	**5.81**	**115**		Pn	**Pn**		**14 27 24.8**	**-1.8**
RIMA	**Rio Macho**	**5.83**	**117**			**Pn**		**14 27 27.8**	**+1.1**
SRBA	**San Rafael, Bu**	**6.52**	**119**		Pn	**Pn**		**14 27 36.8**	**+0.6**
DRK0	**Durika**	**6.61**	**119**		Pn	**Pn**		**14 27 38.0**	**+0.7**
CMIG	**Matias Romero**	**7.20**	**310**		Pn	**Pn**		**14 27 46.0**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=132,slow=11,SNR=5.9								
CMIG					Sn	**Sn**		**14 29 01.8**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=56,slow=15,SNR=1.2								
	comp=Z,1.5nm,0.3s								
BRU2	**Volcan**	**7.32**	**120**			**Pn**		**14 27 47.3**	**+0.2**
SOR	**Soroa**	**11.76**	**29**		Pn	**Pn**		**14 28 46.8**	**-0.9**
SDV	**Santo Domingo**	**18.51**	**99**		LR	LR		14 39 16.6	
	comp=Z,35nm,18.5s,baz=275,slow=45								
JCT	**Junction City**	**20.43**	**333**		P	**P**		**14 30 36.0**	**-0.2**
JCT					IAmb	IAmb		14 30 37.0	
	comp=Z,12nm,0.7s								
BAUV	**El Baul**	**21.00**	**98**		P	**P**		**14 30 39.7**	**-2.7**
Y49A	**Blount Mountai**	**21.39**	**6**		P	**P**		**14 30 46.6**	**+0.3**
GOGA	**Godfrey**	**21.43**	**13**		P	**P**		**14 30 44.1**	**-2.6**
TXAR	**Lajitas Array**	**21.52**	**323**		P	**P**		**14 30 49.7**	**+1.8**
	comp=Z,6.5nm,0.6s,baz=146,slow=11,SNR=94								
	comp=Z,6.5nm,0.6s								
TXAR	**Lajitas Array**	**21.52**	**323**		P	**P**		**14 30 49.5**	**+1.6**
TX31	**Lajitas Ar. Si**	**21.52**	**323**		P	**P**		**14 30 49.7**	**+1.8**
TX31					IAmb	IAmb		14 30 50.7	
	comp=Z,19nm,0.7s								
TX32	**Lajitas Array**	**21.52**	**323**		P	**P**		**14 30 49.2**	**+1.3**
MIAR	**Mount Ida**	**22.30**	**350**		P	**P**		**14 30 56.8**	**+0.7**
MIAR					IAmb	IAmb		14 30 59.1	
	comp=Z,18nm,0.8s								
LOOK	**Love County**	**22.61**	**342**		P	**P**		**14 30 59.6**	**+0.2**
LOOK					IAmb	IAmb		14 31 00.4	
	comp=Z,12nm,0.7s								
X37A	**Clayton**	**22.70**	**347**		P	**P**		**14 31 01.4**	**+1.0**
WHAR	**Wooly Hollow**	**22.86**	**353**		P	**P**		**14 31 01.1**	**-0.8**
X34A	**Smith Ranch, M**	**23.37**	**342**		P	**P**		**14 31 07.7**	**+0.6**
X34A					IAmb	IAmb		14 31 09.1	
	comp=Z,21nm,0.6s								
FCAR	**Ozark Folk Cen**	**23.43**	**354**		P	**P**		**14 31 08.1**	**+0.5**
FCAR					IAmb	IAmb		14 31 09.6	
	comp=Z,17nm,0.7s								
LCAR	**Lake Charles**	**23.52**	**356**		P	**P**		**14 31 08.8**	**+0.3**
TKL	**Tuckaleechee C**	**23.54**	**11**		P	**P**		**14 31 08.0**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=185,slow=14,SNR=6.5								
TKL					LR	LR		14 39 46.9	
	comp=Z,56nm,21.8s,baz=204,slow=35								
	comp=Z,3.9nm,0.6s								
TKL	**Tuckaleechee C**	**23.54**	**11**		P	**P**		**14 31 09.2**	**+0.4**
CLTN	**Cedars of Leba**	**23.61**	**6**		P	**P**		**14 31 08.4**	**-0.9**
HHAR	**Hobbs**	**24.06**	**350**		P	**P**		**14 31 14.0**	**+0.4**
U49A	**Red Boiling Sp**	**24.08**	**7**		P	**P**		**14 31 14.1**	**+0.3**
RLO	**Rose Lookout**	**24.14**	**348**		P	**P**		**14 31 14.4**	**+0.1**
RLO					IAmb	IAmb		14 31 15.5	
	comp=Z,15nm,0.7s								
PBMO	**Poplar Bluff**	**24.19**	**357**		P	**P**		**14 31 14.0**	**-0.7**
PBMO					IAmb	IAmb		14 31 15.2	
	comp=Z,11nm,0.8s								
OK030	**Cody Creek RV**	**24.32**	**345**		P	**P**		**14 31 15.1**	**-0.8**
OK031	**S. Brethren Rd**	**24.36**	**345**		P	**P**		**14 31 15.5**	**-0.7**
OK029	**Liberty Lake**	**24.37**	**343**		P	**P**		**14 31 16.2**	**-0.3**
OK029					IAmb	IAmb		14 31 17.0	
	comp=Z,18nm,0.6s								
OK034	**N. Norfolk Rd.**	**24.38**	**345**		P	**P**		**14 31 15.8**	**-0.6**
T47A	**Sharon Grove**	**24.43**	**4**		P	**P**		**14 31 15.8**	**-1.1**
T47A					IAmb	IAmb		14 31 17.3	
	comp=Z,10nm,0.8s								
QUOK	**Quay**	**24.53**	**345**		P	**P**		**14 31 17.2**	**-0.6**
QUOK					IAmb	IAmb		14 31 18.2	
	comp=Z,26nm,0.7s								
MGMO	**Mountain Grove**	**24.70**	**354**		P	**P**		**14 31 19.6**	**+0.2**
MSTX	**Muleshoe**	**24.72**	**332**		P	**P**		**14 31 19.3**	**-0.4**
AMTX	**Amarillo**	**25.02**	**335**		P	**P**		**14 31 22.7**	**+0.3**
AMTX					IAmb	IAmb		14 31 23.4	
	comp=Z,7.8nm,0.6s								
S44A	**Carbondale**	**25.07**	**360**		P	**P**		**14 31 23.1**	**+0.4**
S44A					IAmb	IAmb		14 31 27.2	
	comp=Z,10nm,0.7s								
FVM	**French Village**	**25.39**	**358**		P	**P**		**14 31 24.6**	**-1.0**
GC02	**Grant County #**	**25.47**	**344**		P	**P**		**14 31 26.1**	**-0.3**
CCM	**Cathedral Cave**	**25.51**	**356**		P	**P**		**14 31 25.9**	**-0.8**
KAN13	**South Haven SW**	**25.52**	**344**		P	**P**		**14 31 26.3**	**-0.5**
KAN13					IAmb	IAmb		14 31 26.8	
	comp=Z,17nm,0.7s								
NOKA	**Waynoka**	**25.59**	**341**		P	**P**		**14 31 27.9**	**+0.4**
NOKA					IAmb	IAmb		14 31 29.2	
	comp=Z,17nm,0.6s								
KAN01	**Argonia South**	**25.73**	**344**		P	**P**		**14 31 28.3**	**-0.4**
R40A	**Maddies Statio**	**25.82**	**354**		P	**P**		**14 31 29.1**	**-0.4**
R40A					IAmb	IAmb		14 31 32.7	
	comp=Z,12nm,0.8s								
KAN06	**Argonia West S**	**25.85**	**344**		P	**P**		**14 31 29.6**	**-0.2**
KAN06					IAmb	IAmb		14 31 30.3	
	comp=Z,12nm,0.6s								
KAN08	**Anthony NE Sta**	**25.86**	**344**		P	**P**		**14 31 29.5**	**-0.4**
KAN08					IAmb	IAmb		14 31 30.4	
	comp=Z,18nm,0.7s								
Q44A	**Meyer Farm, Va**	**26.28**	**0**		P	**P**		**14 31 33.8**	**+0.2**
Q44A					IAmb	IAmb		14 31 37.7	
	comp=Z,18nm,1.4s								
CRNM	**Carthage**	**26.70**	**326**		P	**P**		**14 31 40.0**	**+2.2**
BNM	**Barren Site**	**26.79**	**326**		P	**P**		**14 31 40.0**	**+1.3**
LENM	**Lemitar**	**26.99**	**326**		P	**P**		**14 31 43.1**	**+2.7**
P40A	**Paris**	**27.03**	**355**		P	**P**		**14 31 39.6**	**-0.8**
P40A					IAmb	IAmb		14 31 40.5	
	comp=Z,11nm,0.7s								
R32A	**Long Quarter,**	**27.18**	**343**		P	**P**		**14 31 41.8**	**0.0**
R32A					IAmb	IAmb		14 31 45.1	
	comp=Z,7.8nm,0.6s								
T25A	**Trinidad**	**28.09**	**333**		P	**P**		**14 31 51.5**	**+1.2**
N33A	**J Bar K, Exete**	**29.05**	**347**		P	**P**		**14 31 58.4**	**-0.1**
L40A	**Anamosa**	**29.49**	**357**		P	**P**		**14 32 01.6**	**-0.7**
L40A					IAmb	IAmb		14 32 03.0	
	comp=Z,16nm,0.8s								
I42A	**Draeger Farm,**	**31.26**	**0**		P	**P**		**14 32 16.6**	**-1.4**
I42A					IAmb	IAmb		14 32 18.4	
	comp=Z,11nm,0.7s								
I37A	**Lemond, Waseca**	**31.60**	**354**		P	**P**		**14 32 20.1**	**-0.9**
I37A					IAmb	IAmb		14 32 21.0	
	comp=Z,10nm,0.8s								
L59A	**Walton**	**32.00**	**20**		P	**P**		**14 32 23.3**	**-1.3**
L59A					IAmb	IAmb		14 32 51.9	
	comp=Z,8.2nm,1.2s								
G45A	**Suttons Bay**	**32.55**	**5**		P	**P**		**14 32 29.1**	**-0.1**
SPMN	**Marine on St.**	**32.75**	**355**		P	**P**		**14 32 29.7**	**-1.3**
SZCU	**Shurtz Canyon**	**32.91**	**324**		P	**P**		**14 32 34.0**	**+1.3**
SZCU					IAmb	IAmb		14 32 44.4	
	comp=Z,10.0nm,0.9s								
SADO	**Sadowa**	**33.26**	**13**		P	**P**		**14 32 33.8**	**-1.6**
SADO					IAmb	IAmb		14 32 40.2	
	comp=Z,8.2nm,1.1s								
RSSD	**Black Hills**	**34.01**	**341**		P	**P**		**14 32 42.9**	**+0.6**
FRNY	**Flat Rock**	**34.84**	**19**		P	**P**		**14 32 48.5**	**-0.6**
PDAR	**Pinedale Array**	**34.97**	**333**		P	**P**		**14 32 50.6**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=143,slow=7.9,SNR=1.7								
PDAR					PcP	**PcP**		**14 35 23.3**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=147,slow=5.2,SNR=5.4								
	comp=Z,0.3nm,0.5s								
EYMN	**Ely**	**35.38**	**357**		P	**P**		**14 32 51.9**	**-1.8**
REDW	**Red Top Meadow**	**36.01**	**333**		P	**P**		**14 32 59.7**	**+0.1**
REDW					IAmb	IAmb		14 33 04.5	
	comp=Z,4.0nm,0.7s								
AGMN	**Agassiz Nation**	**36.11**	**352**		P	**P**		**14 32 58.8**	**-1.3**
NVAR	**Mina Array Bea**	**36.60**	**320**		P	**P**		**14 33 06.1**	**+1.5**
	comp=Z,0.9nm,0.9s,baz=122,slow=8.9,SNR=5.7								
NVAR					PcP	**PcP**		**14 35 28.7**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=143,slow=3.6,SNR=6.1								
	comp=Z,0.9nm,0.9s								
NVAR	**Mina Array Bea**	**36.60**	**320**		P	**P**		**14 33 06.7**	**+2.1**
LAO	**LASA Array**	**37.00**	**340**		P	**P**		**14 33 08.0**	**+0.3**
MCMT	**McKenzie Canyo**	**38.06**	**332**		P	**P**		**14 33 18.8**	**+1.9**
DLMT	**Dillon**	**38.36**	**333**		P	**P**		**14 33 20.9**	**+1.6**
LMN	**Caledonia Moun**	**39.10**	**27**		P	**P**		**14 33 24.9**	**-0.5**
LMN					IAmb	IAmb		14 33 27.5	
	comp=Z,21nm,1.4s								
EGMT	**Eagleton**	**39.37**	**338**		P	**P**		**14 33 28.3**	**+0.6**
EGMT					IAmb	IAmb		14 33 31.2	
	comp=Z,12nm,1.4s								
SIV	**San Ignacio**	**39.64**	**135**		P	P		14 33 22.5	-7.8
	comp=Z,0.6nm,0.3s,baz=286,slow=15,SNR=2.3								
	comp=Z,0.6nm,0.3s								
BATG	**Bathurst New B**	**39.69**	**25**		P	**P**		**14 33 28.5**	**-1.7**
BATG					IAmb	IAmb		14 33 49.4	
	comp=Z,17nm,1.4s								
RPN	**Rapa Nui**	**44.03**	**206**		LR	LR		14 47 14.5	
	comp=Z,62nm,19.9s,baz=246,slow=29								
SCHQ	**Schefferville**	**45.70**	**18**		P	**P**		**14 34 15.9**	**-3.0**
	comp=Z,6.1nm,0.7s,baz=246,slow=11,SNR=5.4								
	comp=Z,6.1nm,0.7s								
SCHQ	**Schefferville**	**45.70**	**18**		P	**P**		**14 34 17.0**	**-1.8**
SCHQ					IAmb	IAmb		14 34 23.4	
	comp=Z,7.0nm,0.9s								
BI05	**Punta Hualpn**	**51.24**	**164**		P	**P**		**14 35 02.5**	**+0.8**
RES	**Resolute Bay**	**62.24**	**358**		P	**P**		**14 36 18.3**	**-0.9**
RES					IAmb	IAmb		14 36 51.3	
	comp=Z,11nm,1.4s								
BCAR	**Beaver Creek A**	**62.52**	**336**		P	**P**		**14 36 22.4**	**+1.0**
J26L	**Joseph Creek**	**63.91**	**337**		P	**P**		**14 36 31.7**	**+1.2**
HLK	**Haleakala**	**64.47**	**287**		P	**P**		**14 36 37.2**	**+2.0**
SML	**Sawmill**	**64.73**	**333**		P	**P**		**14 36 37.2**	**+1.2**
SML					IAmb	IAmb		14 36 42.5	
	comp=Z,5.6nm,1.0s								
ILAR	**Eielson Array**	**65.31**	**336**		P	**P**		**14 36 38.4**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=134,slow=5.6,SNR=2.8								
	comp=Z,0.3nm,0.8s								
BMAR	**Burnt Mountain**	**65.65**	**340**		P	**P**		**14 36 41.9**	**+0.1**
N18K	**Kilae Creek**	**67.86**	**331**		P	**P**		**14 36 56.6**	**+0.7**
N18K					IAmb	IAmb		14 36 59.9	
	comp=Z,7.5nm,1.2s								
J20K	**Nowinta River**	**68.03**	**335**		P	**P**		**14 36 58.1**	**+1.1**
J20K					IAmb	IAmb		14 37 38.9	
	comp=Z,7.2nm,1.5s								
CHGN	**Chignik**	**68.21**	**326**		P	**P**		**14 36 58.6**	**+0.4**
PVAQ	**Vaqueiros**	**75.72**	**54**		P	**P**		**14 37 42.7**	**-0.9**
ESBB	**Sonseca Array**	**78.43**	**52**		P	**P**		**14 37 57.9**	**-1.0**
ESBB					IAmb	IAmb		14 38 12.1	
	comp=Z,9.1nm,1.4s								
ARCES	**ARCESS Array B**	**86.65**	**19**		P	**P**		**14 38 40.4**	**-0.6**
ARCES					IAmb	IAmb		14 39 00.7	
	comp=Z,9.0nm,1.4s								
WRA	**Warramunga Arr**	**137.73**	**254**		PKP	**PKPdf**		**14 45 22.3**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=88,slow=2.6,SNR=1.8								
ASAR	**Alice Springs**	**137.78**	**249**		PKP	**PKPdf**		**14 45 22.4**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=100,slow=3.3,SNR=1.6								
PZH	**PanZhiHua**	**139.81**	**345**		PKP	**PKPdf**		**14 45 26.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**148.21**	**345**		PKPbc	**PKPdf**		**14 45 43.1**	**+1.9**
	comp=Z,2.4nm,0.7s,baz=347,slow=3.6,SNR=14								

*IDC **09** 14:39:08.9±0.8, 50°.21N×130°.25W, h0km, mb4.0/13, mbtmp4.0/22, ML3.8/8, MS3.7/53, Error ellipse: s-maj=16.9km s-min=9.9km az=50.0*
*PGC **09** 14:39:08.2±1.3, 50°.08N×130°.27W, h10km, MLSn3.6/32, Mw4.7, 213km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region*
*NEIC **09** 14:39:11.4±1.4, 50°.40N±0°.07×129°.85W±0°.09, h5km±5km, mb4.3/83, Mwr4.3/49, Mwr4.7(OTT), Error ellipse: s-maj=10.0km s-min=7.4km az=207.0*
*NEIC **09** 14:39:11.5, 50°.40N×129°.85W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.04; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$2.96; $M_{r\theta}$0.40; $M_{\theta\phi}$1.15; $M_{\phi r}$2.03; Fault plane solution: $M_0$3.53000×10^{15} NP1:ϕ_s23.01000°, δ26.44000°, λ-78.84000°. NP2:ϕ_s190.59000°, δ64.09000°, λ-95.50000°. Principal axes: T 3.9797, Plg19.0000°, Azm285.0000°; N -1.2239, Plg5.0000°, Azm193.0000°; P -2.7558, Plg70.0000°, Azm89.0000°;

H04D	Lebanon	7.56 137		Pn	14 41 03.4	+2.5
H04D	Lebanon	7.56 137	P	Pn	14 41 03.2	+2.3
	baz=320					
H04A	Detroit Lake	7.69 134	Pn	Pn	14 41 04.7	+2.1
G05D	Wamic, OR	7.71 127	P	Pn	14 41 04.9	+2.0
	baz=312					
NBC4	NorthernBC 4	7.82 42	Pn	Pn	14 41 06.8	+2.3
NBC4			Sn	Sn	14 42 35.0	+1.6
HAWA	Hanford	7.97 115	Pn	Pn	14 41 07.7	+1.2
D08A	Wollman Farm,	8.00 109	Pn	Pn	14 41 07.2	+0.3
F07A	Phinny Hill Vi	8.03 119		Pn	14 41 09.0	+1.7
C09A	Chrisman Ranch	8.09 103	Pn	Pn	14 41 08.7	+0.6
BDMTA	Bald Mountain	8.14 52	Pn	Pn	14 41 11.9	+3.0
DLBC	Dease Lake	8.19 360	Pn	Pn	14 41 11.2	+1.7
	0.6nm,0.3s,baz=201,slow=13,SNR=22					
DLBC			Lg	Lg	14 43 29.2	
	baz=116,slow=26					
DLBC			LR	LR	14 44 10.4	
	comp=Z,549nm,19.1s,baz=200,slow=36					
	7.2nm,0.6s					
DLBC	Dease Lake	8.19 360	Pn	Pn	14 41 11.6	+2.1
DLBC	Dease Lake	8.19 360	P	Pn	14 41 11.4	+1.9
	baz=181,SNR=8.5					
NBC5	NorthernBC 5	8.45 28	Pn	Pn	14 41 15.5	+2.3
WTMTA	White Mountain	8.46 46	Pn	Pn	14 41 16.2	+2.9
NEW	Newport	8.65 98	Pn	Pn	14 41 16.1	+0.2
	0.6nm,0.3s,baz=292,slow=13,SNR=9.2					
NEW			Lg	Lg	14 43 48.1	
	0.5nm,0.3s,baz=146,slow=7.9,SNR=1.8					
NEW			LR	LR	14 44 36.4	
	comp=Z,1μm,18.2s,baz=288,slow=37					
	6.8nm,0.8s					
NEW	Newport	8.65 98	Pn	Pn	14 41 16.4	+0.5
NEW	Newport	8.65 98	P	Pn	14 41 16.4	+0.5
	baz=287					
J04D	Umpqua Nationa	8.86 139		Pn	14 41 22.0	+3.0
J04D	Umpqua Nationa	8.86 139	P	Pn	14 41 22.9	+4.0
	baz=324					
PINE	Pine Mountain	8.95 133	Pn	Pn	14 41 22.4	+2.4
HUMO	Hull Mountain	9.06 145		Pn	14 41 23.3	+1.8
R33M	Jennings River	9.17 357	P	Pn	14 41 25.2	+2.2
	baz=177					
J05D	Fort Rock, OR	9.21 136	P	Pn	14 41 26.2	+2.6
	baz=321,SNR=6.6					
I07A	Izee	9.44 127	Pn	Pn	14 41 28.1	+1.3
SKAG	Skagway	9.71 344	Pn	Pn	14 41 30.1	-0.2
SKAG	Skagway	9.71 344	P	Pn	14 41 30.9	+0.6
	baz=161					
K05A	Summer Lake	9.80 137		Pn	14 41 35.3	+3.5
PLBC	Pleasant Camp	9.91 341	P	Pn	14 41 33.4	+0.4
	baz=157					
YBH	Yreka Blue Hor	9.92 147	Pn	Pn	14 41 35.6	+2.3
	0.1nm,0.3s,baz=326,slow=17,SNR=1.6					
YBH			LR	LR	14 44 55.5	
	comp=Z,678nm,18.0s,baz=329,slow=35					
	1.9nm,0.7s					
P33M	Teslin, Yukon	10.10 352	Pn	Pn	14 41 37.8	+2.1
P33M	Teslin, Yukon	10.10 352	P	Pn	14 41 35.6	0.0
	baz=171					
BMO	Blue Mountains	10.14 117		Pn	14 41 36.7	+0.4
NBC2	NorthernBC 2	10.45 21	Pn	Pn	14 41 44.7	+4.2
J08A	Circle Bar Ran	10.48 127		Pn	14 41 42.1	+1.1
JTMT	Jette	10.63 98	Pn	Pn	14 41 43.3	+0.3
MOD	Modoc Plateau	10.73 138		Pn	14 41 47.2	+2.8
PLID	Pearl Lake	10.76 113		Pn	14 41 46.5	+1.6
WHY	Whitehorse	10.78 347		Pn	14 41 46.8	+1.8
WHY	Whitehorse	10.78 347	Pn	Pn	14 41 47.1	+2.2
WHY	Whitehorse	10.78 347	P	Pn	14 41 45.2	+0.2
	baz=164					
O30N	Mendenhall	11.08 344	P	Pn	14 41 50.1	+1.1
	baz=160					
MSO	Missoula	11.18 102	Pn	Pn	14 41 50.7	+0.2
MSO	Missoula	11.18 102	P	Pn	14 41 50.6	0.0
	baz=293					
MFID	Camas Ranch	11.86 120	Pn	Pn	14 42 01.7	+1.8
M31M	Drury Creek, Y	12.21 350	P	Pn	14 42 05.0	+0.5
	baz=168					
CTG	Chitna Glacier	12.47 334	P	Pn	14 42 09.8	+1.7
	baz=145					
LRM	Limekiln Ridge	12.55 104	Pn	Pn	14 42 09.9	+0.5
HLID	Hailey	12.57 116	Pn	Pn	14 42 11.1	+1.4
HLID	Hailey	12.57 116	P	Pn	14 42 11.4	+1.7
	baz=307					
DLMT	Dillon	12.67 106		Pn	14 42 11.2	+0.3
MCMT	McKenzie Canyo	12.79 109		Pn	14 42 12.7	+0.1
PAHR	Pah Rah Range	12.94 141		Pn	14 42 16.8	+2.1
MPK	Martis Peak	13.04 143		Pn	14 42 17.9	+1.8
M29M	Somme Creek	13.06 342	P	Pn	14 42 18.5	+2.3
	baz=156					
RAGM	Ragged Mountai	13.11 326	Pn	Pn	14 42 16.7	-0.1
BOZ	Bozeman (W)	13.16 104		Pn	14 42 18.5	+0.8
BOZ	Bozeman (W)	13.16 104	P	Pn	14 42 16.3	-1.3
	baz=296					
BMN	Battle Mountai	13.30 133		Pn	14 42 21.9	+2.4
EGMT	Eagleton	13.44 92	P	Pn	14 42 20.4	-0.9
	baz=286,SNR=5.8					
YERR	Yerington	13.61 142	Pn	Pn	14 42 26.0	+2.1
M27K	Edge Creek, AK	13.77 336		Pn	14 42 26.9	+1.1
M27K	Edge Creek, AK	13.77 336	P	Pn	14 42 27.9	+2.1
	baz=147					
KVN	Kaiserville	14.03 139	Pn	Pn	14 42 31.5	+2.0
ELK	Elko	14.03 127	Pn	Pn	14 42 31.2	+1.5
	baz=310,slow=12					
ELK	Elko	14.03 127		Pn	14 42 32.1	+2.4
M26K	Nabesna, AK	14.10 335	P	Pn	14 42 32.1	+1.8
	baz=145					
YNR	Norris Junctio	14.17 106		Pn	14 42 32.5	+0.9
BCAR	Beaver Creek A	14.34 338	Pn	Pn	14 42 33.7	+0.1
L27K	Beaver Creek,	14.35 338		Pn	14 42 33.9	+0.2
L27K	Beaver Creek,	14.35 338	P	Pn	14 42 35.4	+1.7
	baz=149					
NVAR	Mina Array Bea	14.47 140	Pn	Pn	14 42 37.4	+1.8
	0.9nm,0.7s,baz=320,slow=11,SNR=5.0					
FXWY	Fox Creek	14.53 110		Pn	14 42 36.4	-0.1
LHV	Little Huntoon	14.54 141	Pn	Pn	14 42 38.1	+1.8
TPAW	Teton Pass	14.66 110	Pn	Pn	14 42 38.5	+0.2
DAWY	Dawson	14.72 344	P	P	14 42 42.2	-2.8
	baz=156					
PWL	Port Wells	14.78 323	P	Pn	14 42 42.3	+2.7
	baz=129					
SNOW	Snow King Moun	14.79 110	P	P	14 42 47.4	+1.2
RLMT	Red Lodge	14.86 102	P	Pn	14 42 40.7	-0.1
	baz=297,SNR=10					
YKA	Yellowknife Ar	14.87 29	Pn	Pn	14 42 40.4	-0.3
	0.2nm,0.3s,baz=220,slow=12,SNR=6.3					
YKA			LR	LR	14 48 52.4	
	comp=Z,236nm,18.6s,baz=248,slow=39					
	7.9nm,0.9s					
OMMB	Old Mammoth Mi	14.90 144	P	P	14 42 47.8	+0.3
KDAK	Kodiak Island	15.21 308	P	Pn	14 42 47.4	+2.1
	baz=111					
PAX	Paxson	15.26 332	P	Pn	14 42 46.9	+0.9
	baz=140					
SML	Sawmill	15.38 326	P	P	14 42 51.3	-1.1
	baz=131					
OHAK	Old Harbor	15.39 306	P	Pn	14 42 46.7	-1.0
	baz=108					
HWUT	Hardware Ranch	15.44 117	Pn	Pn	14 42 49.6	+1.0
HWUT			IAmb	IAmb	14 42 58.5	
	comp=Z,29nm,1.4s					
SCRK	Sand Creek	15.65 337	P	Pn	14 42 53.5	+2.3
	baz=146					
RIDG	Independent Ri	15.68 335	P	P	14 42 54.9	-0.8
	baz=143					
TIN	Tinemaha, Big	15.68 143	P	P	14 42 56.9	+1.0
	baz=330					
WAT6	Susitna Watana	15.69 329	P	Pn	14 42 53.4	+1.6
	baz=135					
EGAK	Eagle	15.70 342	Pn	Pn	14 42 52.4	+0.7
DUG	Dugway, Tooele	15.71 123	Pn	Pn	14 42 53.1	+1.0
DUG			IAmb	IAmb	14 43 04.1	
	comp=Z,44nm,1.1s					
DUG	Dugway, Tooele	15.71 123	P	Pn	14 42 53.6	+1.6
	baz=315,SNR=20					
R11A	Troy Canyon, C	15.72 134		Pn	14 42 52.9	+0.5
R11A	Troy Canyon, C	15.72 134	P	Pn	14 42 53.5	+1.2
	baz=323,SNR=8.3					
I29M	Ogilvie Camp,	15.75 347	P	P	14 42 55.3	-1.1
	baz=161,SNR=5.9					
LCH	Last Change Ra	15.76 141	P	P	14 42 58.3	+1.5
LCH			IAmb	IAmb	14 43 04.6	
	comp=Z,22nm,1.0s					
SPR3	Spring Creek 3	15.81 129	P	P	14 42 59.2	+1.6
SPR3			IAmb	IAmb	14 43 09.5	
	comp=Z,25nm,1.5s					
BW06	Boulder Array	15.91 110	P	Pn	14 42 57.1	+2.3
	baz=304,SNR=26					
PDAR	Pinedale Array	15.91 110	Pn	P	14 42 57.8	-0.8
	comp=Z,0.1nm,0.3s,baz=311,slow=9.4,SNR=25					
PDAR			LR	LR	14 49 11.8	
	comp=Z,274nm,19.0s,baz=310,slow=38					
	comp=Z,11nm,0.9s					
DHY	Denali Highway	15.92 330	P	P	14 42 59.6	+1.1
DHY	Denali Highway	15.92 330	P	P	14 42 58.9	+0.4
	baz=137,SNR=7.7					
J26L	Joseph Creek	15.98 338	P	P	14 42 58.2	-0.9
	baz=148,SNR=5.9					
K24K	Donnelly Dome	15.99 334	P	P	14 42 58.3	-0.8
	baz=142					
GRAC	Grapevine Rang	16.07 141	P	Pn	14 42 59.0	+2.2
	baz=329,SNR=21					
Q19K	Cape Douglas,	16.14 312	P	P	14 43 02.0	+1.2
	baz=113					
JLU	Jordanelle	16.17 120	Pn	Pn	14 42 58.7	+0.5
JLU			IAmb	IAmb	14 43 07.3	
	comp=Z,24nm,1.2s					
NLU	North Lily Min	16.27 122	Pn	Pn	14 42 58.2	-1.3
NLU			IAmb	IAmb	14 43 07.4	
	comp=Z,20nm,0.9s					
CWC	Cottonwood Cre	16.28 144	P	Pn	14 43 02.6	+3.1
	baz=331					
SPU	Mount Spurr	16.45 320	Pn	Pn	14 43 02.1	+0.6
EPYK	Eagle Plains	16.52 350	P	P	14 43 04.6	-0.4
	baz=165					
J25K	Salcha River,	16.52 336	P	P	14 43 04.9	-0.1
	baz=144					
I27K	Kandik River	16.52 343	P	P	14 43 06.0	+1.0
	baz=154					
I26K	Coal Creek Min	16.57 340	P	P	14 43 05.6	0.0
	baz=150					
TPNV	Topopah Spring	16.58 138	P	Pn	14 43 05.2	+1.8
	baz=327,SNR=15					
SKT	Skwentna	16.68 323	P	P	14 43 06.7	-0.1
	baz=126					
PRN	Pahroc Range	16.73 135	Pn	Pn	14 43 06.0	+0.8
HDA	Harding Lake	16.79 334	P	P	14 43 09.1	+1.2
	baz=140					
ISA	Isabella, Lake	16.82 146	P	P	14 43 09.9	+1.4
	baz=333					
MPMC	Manual Prospec	16.84 143	P	Pn	14 43 09.5	+2.8
	baz=331					
DGMT	Dagmar	16.87 86	Pn	Pn	14 43 07.2	+0.3
DGMT			IAmb	IAmb	14 43 18.5	
	comp=Z,20nm,0.9s					
DGMT	Dagmar	16.87 86	P	Pn	14 43 05.9	-1.0
	baz=285					
MCK	McKinley	16.89 330	P	P	14 43 09.9	+0.9
	baz=135					
O19K	Port Alsworth	16.97 315	P	P	14 43 11.1	+1.2
	baz=116					
ILAR	Eielson Array	17.05 335	P	P	14 43 10.8	0.0
	comp=Z,1.6nm,0.8s,baz=152,slow=11,SNR=21					
ILAR			LR	LR	14 49 11.6	
	comp=Z,168nm,18.2s,baz=156,slow=35					
GWY	Greenwater Val	17.06 141	Pn	Pn	14 43 11.0	+1.6
H27K	Steamboat Moun	17.07 344	P	P	14 43 11.5	+0.5
	baz=155					
TRF	Thorofare Moun	17.14 328	P	P	14 43 13.9	+1.9
	baz=132					
QSM	Queen of Sheba	17.17 141	P	P	14 43 14.7	+2.4
QSM			IAmb	IAmb	14 43 21.1	
	comp=Z,19nm,1.0s					
TMUT	Trail Mountain	17.21 122	P	P	14 43 13.6	+0.5
O18K	Koktuh Hills	17.23 313	P	P	14 43 14.2	+1.3
	baz=114					
MVU	Marysvale	17.26 126		Pn	14 43 13.6	+1.5
M20K	Styx River	17.26 321	P	P	14 43 14.9	+1.6
	baz=123					
MSU	Marysvale	17.27 126	Pn	Pn	14 43 13.3	+1.1
LRMC	Laurel Mtn Rad	17.28 144	P	P	14 43 15.2	+1.5
	baz=332					
PRP	Porcupine Dome	17.29 338	P	P	14 43 15.3	+1.6
	baz=146,SNR=7.7					
N19K	Bonanza Creek	17.31 317		P	14 43 15.0	+1.2
N19K	Bonanza Creek	17.31 317	P	Pn	14 43 13.6	+1.3
	baz=118					
P17A	Butcher Ranch,	17.34 121		Pn	14 43 14.1	+1.1
CCUT	Cedar City	17.41 131	P	P	14 43 16.7	+1.4
SHPR	Sheep Range	17.43 136	Pn	Pn	14 43 15.0	+1.0
PPLA	Purkeypile	17.47 325	P	P	14 43 17.0	+1.4
	baz=127					
Q16A	Castle Valley	17.50 123		Pn	14 43 16.8	+1.8
Q16A			IAmb	IAmb	14 43 24.8	
	comp=Z,58nm,1.5s					
P18A	Preston Nutter	17.51 120	P	Pn	14 43 16.7	+1.6
P18A			IAmb	IAmb	14 43 25.1	
	comp=Z,26nm,1.2s					
SZCU	Shurtz Canyon	17.52 130		Pn	14 43 16.6	+1.4
SZCU			IAmb	IAmb	14 43 23.6	
	comp=Z,37nm,1.3s					
NEA2	Nenana	17.54 332	Pn	Pn	14 43 14.3	-0.7
NEA2	Nenana	17.54 332	P	P	14 43 16.8	+0.6
	baz=137					
P17K	Kvichak River	17.59 311	P	P	14 43 18.8	+2.1
	baz=10					
G27K	Doyon Strip	17.62 345	P	P	14 43 18.1	+1.0
	baz=155,SNR=7.5					
SRU	San Rafael Swe	17.72 122		Pn	14 43 18.7	+1.1
SRU			IAmb	IAmb	14 43 27.4	
	comp=Z,46nm,1.2s					
CAST	Castle Rocks	17.75 326	P	P	14 43 20.9	+2.3
	baz=128					
GSC	Goldstone, Bar	17.77 142	P	P	14 43 21.1	+2.0
	baz=331					
M19K	Big River Lodg	17.79 320		Pn	14 43 18.8	+0.7
BPAW	Bear Paw Mtn.	17.80 329	Pn	Pn	14 43 17.7	-0.6
BPAW	Bear Paw Mtn.	17.80 329	P	Pn	14 43 18.6	+0.3
	baz=132					
K22A	Casper	17.82 106	P	P	14 43 20.0	+0.4
K22A			IAmb	IAmb	14 43 24.4	
	comp=Z,40nm,1.4s					
K22A	Casper	17.82 106	P	Pn	14 43 19.0	+0.2
	baz=303,SNR=5.9					
N18K	Kilae Creek	17.88 316	Pn	Pn	14 43 19.2	0.0
N18K			IAmb	IAmb	14 43 23.1	
	comp=Z,27nm,1.4s					
N18K	Kilae Creek	17.88 316	P	Pn	14 43 19.9	+0.6
	baz=115					
L20K	Farewell, AK	17.88 322	P	P	14 43 21.1	+1.1
	baz=123					
LCMT	Little Creek M	17.90 131		Pn	14 43 21.2	+1.4
LCMT			IAmb	IAmb	14 43 29.2	
	comp=Z,17nm,1.0s					
SVW2	Sparrevohn	17.91 317	P	Pn	14 43 20.2	+0.5
SVW2			IAmb	IAmb	14 43 26.6	
	comp=Z,24nm,1.2s					
H25K	Birch Creek	17.98 339	P	P	14 43 21.2	+0.1
	baz=146					
I23K	Minto, Yukon-K	18.03 333	P	Pn	14 43 19.7	-1.3
	baz=137					
O17K	Koliganek Bris	18.09 312	P	P	14 43 23.4	+1.0
	baz=111					
CHUM	Lake Minchumin	18.11 327	P	P	14 43 24.9	+2.4
	baz=129,SNR=8.9					
L19K	White Mountain	18.11 321	P	P	14 43 24.1	+1.5
	baz=121					
G26K	Porcupine Rive	18.13 342	P	P	14 43 23.7	+1.1
	baz=151					
H24K	Noodor Dome	18.14 336	P	P	14 43 24.7	+1.8
	baz=142					
INK	Inuvik	18.18 356	P	P	14 43 24.6	+1.4
	comp=Z,0.2nm,0.3s,baz=158,slow=13,SNR=4.5					
INK			LR	LR	14 49 53.3	
	comp=Z,179nm,20.0s,baz=182,slow=35					
	comp=Z,3.6nm,0.8s					
INK	Inuvik	18.18 356	P	Pn	14 43 22.3	-0.6
	baz=173					
O20A	White River Ci	18.31 115	P	Pn	14 43 25.9	+1.0
O20A			IAmb	IAmb	14 43 32.8	
	comp=Z,38nm,1.4s					
O20A	White River Ci	18.31 115	P	Pn	14 43 24.2	-0.7
	baz=310					
MLY	Manley	18.36 331	P	P	14 43 26.0	+0.8
MLY	Manley	18.36 331	P	Pn	14 43 25.5	+0.4
	baz=135,SNR=10.0					
HEC	Hector,Ludlow	18.37 142	P	P	14 43 27.9	+2.2
	baz=331,SNR=8.5					
K20K	Telida	18.43 324	P	P	14 43 26.8	+0.8
K20K	Telida	18.43 324	P	P	14 43 28.6	+2.5
	baz=125,SNR=8.0					
G25K	Bearman Lake	18.45 340	P	P	14 43 28.1	+1.9
	baz=146					
O16K	Kokwok River B	18.52 311	P	Pn	14 43 28.2	+1.2
	baz=109					
RSSD	Black Hills	18.63 99		P	14 43 28.1	-0.5
RSSD	Black Hills	18.63 99	P	Pn	14 43 29.7	+0.9
	baz=298					
GMRC	Granite Mounta	18.68 140	P	P	14 43 30.6	+1.5
	baz=330,SNR=9.1					
BMAR	Burnt Mountain	18.70 342		P	14 43 28.7	-0.4
G24K	Hadweenzic Riv	18.72 338	P	Pn	14 43 31.7	+2.1
	baz=144					
U15A	North Rim	18.83 131	P	P	14 43 32.3	+1.4
U15A			IAmb	IAmb	14 43 41.0	
	comp=Z,38nm,1.5s					
I21K	Tanana	18.84 331	P	Pn	14 43 31.5	+0.5
I21K	Tanana	18.84 331	P	Pn	14 43 32.2	+1.2
	baz=133,SNR=11					
F26K	Sheenjek River	18.85 343	P	Pn	14 43 33.1	+1.9
	baz=152					
E27K	Coleen River	18.87 347	P	Pn	14 43 32.4	+1.1
	baz=157					
J20K	Nowinta River	18.93 326	P	P	14 43 32.1	+0.6
J20K	Nowinta River	18.93 326	P	Pn	14 43 34.1	+2.0
	baz=127,SNR=5.9					
TTA	Tatalina	18.95 322	P	P	14 43 32.7	+0.9
	baz=121					
ELS	Elsinore Mount	19.01 146	P	P	14 43 34.6	+1.9
PV23	Carpenter Ridg	19.02 120	P	P	14 43 33.9	+0.9
PV23			IAmb	IAmb	14 43 49.3	
	comp=Z,24nm,0.9s					
F25K	Christian Rive	19.05 342	P	Pn	14 43 34.8	+1.2
	baz=149,SNR=6.0					
PV10	Paradox Valley	19.06 121	P	P	14 43 34.7	+1.3
N16K	Nishlik Lake	19.12 313	P	Pn	14 43 35.6	+1.2
	baz=110					
H22K	Ishtalitna Cre	19.15 333	P	Pn	14 43 36.0	+1.3
	baz=135,SNR=7.4					
W13A	Hualapai Mount	19.17 136	P	P	14 43 36.0	+1.4
N23A	Red Feather La	19.19 110		P	14 43 34.9	0.0
N23A			IAmb	IAmb	14 43 43.2	
	comp=Z,35nm,1.5s					
N23A	Red Feather La	19.19 110	P	P	14 43 35.2	+0.3
	baz=307					
PV11	David Mesa, Pa	19.20 120	P	P	14 43 35.9	+1.0
BELC	Belle Mtn. Jos	19.23 142	P	Pn	14 43 38.8	+2.8
	baz=331					
PV07	Paradox Valley	19.23 120	P	P	14 43 36.1	+0.9
PV07			IAmb	IAmb	14 43 41.1	
	comp=Z,15nm,0.9s					
PHWY	Pilot Hill	19.24 108	P	P	14 43 35.8	+0.4
PHWY			IAmb	IAmb	14 43 39.1	
	comp=Z,28nm,1.4s					
PV13	Radium Mtn., P	19.33 121	P	P	14 43 37.5	+1.1
PV13			IAmb	IAmb	14 43 43.5	
	comp=Z,38nm,1.0s					
G23K	Bananza Creek	19.37 336	P	Pn	14 43 38.6	+1.2
	baz=139					
PV15	Paradox Valley	19.39 120	P	P	14 43 37.7	+0.7
PV15			IAmb	IAmb	14 43 44.7	
	comp=Z,18nm,0.9s					
PFO	Pinyon Flats O	19.39 144	P	P	14 43 37.8	+0.9
	comp=Z,0.1nm,0.3s,baz=310,slow=4.0,SNR=3.7					
PFO			LR	LR	14 51 08.0	
	comp=Z,115nm,19.7s,baz=320,slow=37					
	comp=Z,1.8nm,0.7s					
PFO	Pinyon Flats O	19.39 144	P	P	14 43 38.5	+1.5
PFO	Pinyon Flats O	19.39 144	P	P	14 43 38.4	+1.5
	baz=332					
TPFO	Pinon Flats	19.40 144	P	P	14 43 38.7	+1.7
	baz=332					
H21K	Melozitna Rive	19.42 331	P	P	14 43 37.7	+0.8
H21K			IAmb	IAmb	14 43 46.5	
	comp=Z,12nm,0.9s					
H21K	Melozitna Rive	19.42 331	P	Pn	14 43 39.3	+1.3
	baz=132,SNR=8.1					
IRM	Iron Mountain	19.43 140	P	P	14 43 39.3	+2.0
	baz=330					
F24K	Squaw Lake	19.48 339	P	Pn	14 43 42.0	+3.3
	baz=144					
E25K	Arctic Village	19.49 342	P	Pn	14 43 39.9	+1.0
	baz=150					
SMCO	Snowmass	19.67 115	P	P	14 43 40.7	+0.4
SMCO			IAmb	IAmb	14 43 49.0	
	comp=Z,21nm,1.1s					
PDMCI	Parker Dam,Lak	19.73 138	P	P	14 43 42.2	+1.7
	baz=328					
BC3	Big Chuckawall	19.75 142	P	Pn	14 43 43.5	+1.3
	baz=331					
COLD	Coldfoot	19.80 337	P	Pn	14 43 44.7	+2.2
	baz=140					
IMAR	Indian Mountai	19.93 331	P	Pn	14 43 43.9	-0.1
MDND	Maddock	20.00 85	P	P	14 43 44.2	+0.9
	baz=288					
WUAZ	Wupatki	20.00 130	P	P	14 43 43.6	0.0
WUAZ			IAmb	IAmb	14 43 53.2	
	comp=Z,22nm,1.2s					
WUAZ	Wupatki	20.00 130	P	P	14 43 44.8	+1.2
	baz=323					
MONP2	Monument Peak	20.05 145	P	P	14 43 45.7	+1.5
	baz=333					
E24K	Your Creek	20.06 340	P	Pn	14 43 46.7	+1.0
	baz=144					
ISCO	Idaho Springs	20.07 112	P	P	14 43 44.4	-0.1
ISCO			IAmb	IAmb	14 44 02.1	
	comp=Z,25nm,1.5s					
ISCO	Idaho Springs	20.07 112	P	P	14 43 45.8	+1.3
	baz=309					
MVCO	Mesa Verde	20.19 122	P	P	14 43 46.2	+0.4
MVCO	Mesa Verde	20.19 122	P	P	14 43 46.8	+1.1
	baz=316,SNR=12					
G21K	Allakaket	20.21 332	P	Pn	14 43 47.1	-0.2
	baz=133					
GCSA	Galena City Sc	20.23 326	P	Pn	14 43 48.8	+1.2
	baz=124					
IKP	In-Ko-Pah, Jac	20.38 144	P	Pn	14 43 50.9	+1.2
	baz=333,SNR=5.8					
YUH	Yuha Desert	20.46 144	P	P	14 43 50.4	+2.0
YUH			IAmb	IAmb	14 43 54.5	
	comp=Z,14nm,1.4s					
C27K	Jago River	20.50 346	P	Pn	14 43 50.6	-0.2
	baz=155					
GLA	Glamis	20.53 141	P	P	14 43 50.2	+1.0
	baz=331					
F22K	John River	20.53 336	P	Pn	14 43 50.9	-0.2
	baz=137,SNR=6.7					
D25K	Kavik River	20.68 344	P	Pn	14 43 53.8	+1.0
	baz=150					
F21K	Alatna River	20.68 334	P	Pn	14 43 52.7	-0.2
	baz=134,SNR=7.0					
TOLK	Toolik Lake Re	20.76 340		Pn	14 43 53.3	-0.5
TOLK			IAmb	IAmb	14 44 19.5	
	comp=Z,15nm,1.1s					
TOLK	Toolik Lake Re	20.76 340	P	Pn	14 43 53.7	-0.1
	baz=143					
X16A	Lo Mia Camp, P	20.86 132	P	P	14 43 53.9	+1.0
X16A			IAmb	IAmb	14 44 03.6	
	comp=Z,12nm,1.0s					
W18A	Petrified Fore	21.13 128	P	P	14 43 57.3	+1.4
W18A	Petrified Fore	21.13 128	P	P	14 43 58.1	+2.2
	baz=321,SNR=6.1					
D23K	Nanushuk River	21.26 339	P	P	14 43 59.9	+3.0
	baz=142					
X18A	Snowflake	21.49 129	P	P	14 44 01.3	+1.5
SDCO	Great Sand Dun	21.49 116	P	P	14 44 00.7	+0.8
SDCO			IAmb	IAmb	14 44 06.2	
	comp=Z,14nm,1.0s					
SDCO	Great Sand Dun	21.49 116	P	P	14 44 01.3	+1.4
	baz=313,SNR=34					
OGNE	Ogallala	21.56 105	P	P	14 44 01.5	+1.2
OGNE	Ogallala	21.56 105	P	P	14 44 02.0	+1.7
	baz=304					
C23K	Itkillik River	21.94 341	P	P	14 44 07.0	+3.0
	baz=143					
AGMN	Agassiz N

ANMO Albuquerque 22.98 123 P **P** **14 44 17.3 +1.6**
comp=Z,7.5nm,0.9s,baz=306,slow=7.6,SNR=11
ANMO LR LR 14 53 07.8
comp=Z,116nm,19.5s,baz=314,slow=36
comp=Z,7.5nm,0.9s
ANMO Albuquerque 22.98 123 P **P** **14 44 15.9 +0.3**
ANMO IAmb IAmb 14 44 22.9
comp=Z,9.9nm,1.0s
ANMO Albuquerque 22.98 123 P **P** **14 44 17.1 +1.5**
baz=318
LENM Lemitar 23.30 125 P **P** **14 44 18.7 -0.2**
BNM Barren Site 23.49 124 P **P** **14 44 19.7 -1.2**
ECSD EROS Data Cent 23.54 93 P **P** **14 44 20.9 -0.2**
ECSD EROS Data Cent 23.54 93 P **P** **14 44 21.2 +0.1**
baz=298,SNR=13
CRNM Carthage 23.59 125 P **P** **14 44 22.0 +0.2**
121A Cookes Peak, D 24.17 129 P **P** **14 44 27.6 +0.3**
121A IAmb IAmb 14 44 41.0
comp=Z,16nm,1.1s
121A Cookes Peak, D 24.17 129 P **P** **14 44 28.5 +1.1**
baz=323
CBKS Cedar Bluff 24.24 107 P **P** **14 44 27.7 -0.1**
CBKS Cedar Bluff 24.24 107 P **P** **14 44 28.7 +0.8**
baz=308
F36A Milaca 24.60 86 P **P** **14 44 31.7 +0.7**
EYMN Ely 25.12 80 P **P** **14 44 35.6 -0.2**
EYMN IAmb IAmb 14 44 46.7
comp=Z,11nm,0.9s
EYMN Ely 25.12 80 P **P** **14 44 35.0 -0.7**
baz=290
AMTX Amarillo 25.70 116 P **P** **14 44 41.0 -0.1**
AMTX Amarillo 25.70 116 P **P** **14 44 42.6 +1.4**
baz=315
MSTX Muleshoe 25.73 119 P **P** **14 44 42.7 +1.2**
baz=317
KSU1 Kansas State U 26.01 103 P **P** **14 44 46.9 +3.0**
baz=306
T35A Sooner Cattle 27.42 106 P **P** **14 44 56.0 -0.6**
WMOK Wichita Mounta 27.50 112 P **P** **14 44 57.5 +0.2**
WMOK IAmb IAmb 14 45 04.2
comp=Z,9.7nm,0.9s
WMOK Wichita Mounta 27.50 112 P **P** **14 44 58.9 +1.6**
baz=314
RES Resolute Bay 28.50 19 LR LR 14 56 14.3
comp=Z,114nm,18.9s,baz=302,slow=36
TX31 Lajitas Ar. Si 28.83 127 P **P** **14 45 10.3 +1.0**
TX32 Lajitas Array 28.83 127 P **P** **14 45 10.4 +1.1**
TX32 IAmb IAmb 14 45 17.3
comp=Z,7.0nm,1.2s
TXAR Lajitas Array 28.83 127 P **P** **14 45 10.8 +1.5**
comp=Z,1.9nm,0.9s,baz=327,slow=6.6,SNR=14
TXAR LR LR 14 57 18.7
comp=Z,170nm,20.5s,baz=316,slow=38
comp=Z,1.9nm,0.9s
TXAR Lajitas Array 28.83 127 P **P** **14 45 10.6 +1.3**
X37A Clayton 29.65 109 P **P** **14 45 17.1 +0.7**
MIAR Mount Ida 30.77 107 P **P** **14 45 27.1 +0.7**
MIAR IAmb IAmb 14 45 33.7
comp=Z,7.4nm,0.9s
FCAR Ozark Folk Cen 30.80 103 P **P** **14 45 27.1 +0.6**
P49A Miami Univ. Ec 33.34 91 P **P** **14 45 49.4 +0.5**
baz=304
WVT Waverly 33.35 99 P **P** **14 45 48.9 -0.1**
baz=308
OXF Oxford 33.38 102 P **P** **14 45 49.4 +0.2**
baz=310
SHEM Shemya Is, Ala 34.15 296 LR LR 14 57 10.8
comp=Z,112nm,18.2s,baz=288,slow=32
SADO Sadowa 34.22 79 LR LR 15 00 06.3
comp=Z,480nm,18.7s,baz=350,slow=37
FRB Frobisher Bay 34.58 43 LR LR 15 00 24.5
comp=Z,75nm,21.7s,baz=360,slow=37
Q52A Bidwell 35.23 90 P **P** **14 46 06.0 +0.8**
TKL Tuckaleechee C 36.23 96 LR LR 15 01 24.7
comp=Z,392nm,18.5s,baz=318,slow=37
R55A Marlinton 37.00 89 P **P** **14 46 21.5 +1.0**
SCHQ Schefferville 37.52 58 LR LR 15 02 23.6
comp=Z,184nm,18.0s,baz=298,slow=37
SFJD Kangerlussuaq 41.26 36 LR LR 15 04 20.9
comp=Z,127nm,19.2s,baz=287,slow=36
SEY Seymchan 41.85 318 P **P** **14 47 00.8 +0.2**
comp=Z,5.2nm,1.1s,baz=89,slow=9.2,SNR=4.9
comp=Z,5.2nm,1.1s
PETK Petropavlovsk- 43.16 303 P **P** **14 47 10.6 -0.8**
comp=Z,6.5nm,0.9s,baz=83,slow=12,SNR=5.0
PETK LR LR 15 02 54.6
comp=Z,54nm,20.3s,baz=73,slow=33
comp=Z,6.5nm,0.9s
CMIG Matias Romero 43.44 127 LR LR 15 07 32.6
comp=Z,40nm,18.1s,baz=345,slow=39
MA2 Magadan 43.85 314 LR LR 15 04 07.0
comp=Z,104nm,22.0s,baz=79,slow=34
SPITS Spitsbergen Ar 50.19 9 LR LR 15 10 31.4
comp=Z,47nm,19.1s,baz=284,slow=37
YAK Yakutsk 51.53 324 LR LR 15 11 33.8
comp=Z,74nm,18.6s,baz=89,slow=38
BORG Borgarnes 52.80 31 LR LR 15 10 48.3
comp=Z,64nm,18.3s,baz=317,slow=36
H11N2 WAKE ISLAND Hy 57.94 262 T T 15 51 37.2
baz=42,slow=75,SNR=150
H11N3 WAKE ISLAND Hy 57.94 262 T T 15 51 47.0
baz=42,slow=75,SNR=161
H11N1 WAKE ISLAND Hy 57.96 262 T T 15 51 38.4
baz=42,slow=75,SNR=107
KLR Kul'dur 58.76 311 LR LR 15 13 26.3
comp=Z,68nm,20.9s,baz=53,slow=35
H11S1 WAKE ISLAND Hy 58.97 262 T T 15 53 01.2
baz=40,slow=74,SNR=13
H11S2 WAKE ISLAND Hy 58.98 262 T T 15 52 59.7
baz=40,slow=74,SNR=12
H11S3 WAKE ISLAND Hy 58.98 262 T T 15 53 00.9
baz=40,slow=74,SNR=6.7
SJG San Juan 59.60 98 LR LR 15 17 26.9
comp=Z,35nm,18.3s,baz=226,slow=38
SDV Santo Domingo 63.84 109 LR LR 15 20 38.4
comp=Z,46nm,19.4s,baz=333,slow=39
MJAR Matsushiro Arr 64.00 296 LR LR 15 13 09.1
comp=Z,33nm,21.8s,baz=51,slow=32
NOA NORSAR Array B 64.76 20 LR LR 15 18 05.3
comp=Z,49nm,18.7s,baz=345,slow=36
ROSC El Rosal 64.86 115 LR LR 15 24 52.9
comp=Z,17nm,18.8s,baz=236,slow=42
HFS Hagfors 66.10 19 LR LR 15 17 25.1
comp=Z,75nm,20.9s,baz=335,slow=35
FINES FINESS Array B 67.00 12 P **P** **14 50 03.8 +0.4**
comp=Z,4.7nm,1.0s,baz=4.9,slow=4.9,SNR=1.9
comp=Z,4.7nm,1.0s
JCJ Chichijima 68.33 287 LR LR 15 12 41.7
comp=Z,41nm,21.8s,baz=73,slow=30
PPT Papeete 69.71 200 LR LR 15 13 40.3
comp=Z,32nm,20.5s,baz=1.5,slow=30
SONM Songino Array 70.89 324 P **P** **14 50 28.0 -0.1**
comp=Z,0.3nm,0.5s,baz=43,slow=2.6,SNR=4.3
SONM LR LR 15 21 20.8
comp=Z,75nm,21.5s,baz=26,slow=36
comp=Z,0.3nm,0.5s
KIRV Kirov 71.51 0 LR LR 15 24 18.1
comp=Z,28nm,21.8s,baz=341,slow=38
ZALV Zalesovo Beam 72.12 339 P **P** **14 50 33.8 -1.3**
comp=Z,1.4nm,0.7s,baz=17,slow=4.3,SNR=7.5
ZALV LR LR 15 24 36.9
comp=Z,30nm,20.8s,baz=23,slow=38
comp=Z,1.4nm,0.7s
ZALV Zalesovo Beam 72.12 339 P **P** **14 50 34.4 -0.7**
ARU Arti 73.44 355 LR LR 15 26 16.0
comp=Z,25nm,18.0s,baz=3.5,slow=38
GERES GERESS Array B 76.46 24 P **P** **14 50 59.4 -1.3**
comp=Z,0.2nm,0.3s,baz=23,slow=7.8,SNR=1.7
comp=Z,0.2nm,0.3s
KURK Kurchatov 76.48 342 P **P** **14 51 01.4 +0.8**
KURK IAmb IAmb 14 51 05.5
comp=Z,2.4nm,0.8s
KURBB Kurchatov Arra 76.58 342 P **P** **14 50 59.7 -1.5**
comp=Z,1.5nm,0.8s,baz=20,slow=5.3,SNR=5.8
comp=Z,1.5nm,0.8s
VRAC Vranov 76.75 22 LR LR 15 25 11.6
comp=Z,53nm,18.3s,baz=338,slow=36
DAVOX Davos/Dischmat 77.30 27 LR LR 15 25 23.3
comp=Z,46nm,19.2s,baz=266,slow=36
BELG Belogornoye 77.70 1 LR LR 15 31 18.0
comp=Z,26nm,18.1s,baz=164,slow=40
AKASG Malin Array Be 77.86 13 P **P** **14 51 06.8 -1.6**
comp=Z,0.2nm,0.3s,baz=344,slow=5.6,SNR=4.8
AKASG LR LR 15 26 18.1
comp=Z,44nm,18.5s,baz=10.0,slow=36
comp=Z,0.2nm,0.3s
MDP Montagnes des 78.01 96 LR LR 15 29 56.7
comp=Z,42nm,18.2s,baz=62,slow=39

ESDC Sonseca Array 78.68 40 P **P** **14 51 15.3 +2.1**
comp=Z,1.0nm,0.9s,baz=318,slow=7.2,SNR=3.6
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 79.37 338 P **P** **14 51 15.9 -0.9**
comp=Z,0.9nm,0.8s,baz=23,slow=4.3,SNR=6.9
MKAR LR LR 15 30 33.0
comp=Z,38nm,19.1s,baz=62,slow=39
comp=Z,0.9nm,0.8s
MKAR Makanchi Array 79.37 338 P **P** **14 51 15.3 -1.5**
MAKZ Makanchi 79.43 338 P **P** **14 51 17.2 0.0**
AKTO Aktyubinsk 79.45 355 P **P** **14 51 16.5 -0.6**
comp=Z,0.4nm,0.4s,baz=32,slow=3.4,SNR=5.2
AKTO LR LR 15 29 50.1
comp=Z,24nm,18.8s,baz=359,slow=38
comp=Z,0.4nm,0.4s
ABKAR Akbulak array 80.49 353 P **P** **14 51 22.2 -0.6**
MLR Muntele Rosu 82.36 17 LR LR 15 29 05.7
comp=Z,70nm,18.6s,baz=329,slow=36
AAK Ala-Archa 85.03 342 LR LR 15 34 52.5
comp=Z,29nm,18.5s,baz=16,slow=39
KBZ Khabaz 86.18 5 LR LR 15 32 05.4
comp=Z,16nm,21.8s,baz=360,slow=37
BRTR Keskin Array B 89.24 13 LR LR 15 35 05.8
comp=Z,28nm,18.1s,baz=358,slow=38
IDI Anoyia 91.97 20 LR LR 15 36 38.4
comp=Z,25nm,19.2s,baz=96,slow=38
PMG Port Moresby 92.62 259 LR LR 15 30 37.3
comp=Z,41nm,18.1s,baz=88,slow=33
RCBR Riachuelo 97.06 91 LR LR 15 33 05.6
comp=Z,63nm,19.5s,baz=132,slow=33
CMAR Chiang Mai Arr 99.14 314 LR LR 15 40 51.6
comp=Z,28nm,18.2s,baz=175,slow=37
CPUP Villa Florida 99.60 120 LR LR 15 43 22.2
comp=Z,42nm,18.9s,baz=214,slow=39

*NNC **09** 14:52:39.0±0.7, 47°.51N×81°.85E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=4.1km s-min=3.6km az=179.0*
*SOME **09** 14:52:39.8, 47°.57N×81°.35E, h5km*
*ASRS **09** 14:52:50.3±0.8, 48°N±3°×8°2E±°, h4km, MLh3.5/7, Error ellipse: s-maj=7.3km s-min=5.6km az=59.9, confirmed*
ISC 09 14:52:34.7±1.0, 47°.60N±0°.03×81°.74E±0°.03, h13km±10km, n54, σ1s62/82, 8C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi**	**0.81**	**168**	⇑P	**Pn**	**14 52 53.0**	**+1.2**
MAKZ	4.9nm,0.1s			⇑S	**Sn**	**14 53 03.1**	**-0.6**
	2.7nm,0.1s						
MAKZ	**Makanchi**	**0.81**	**168**	⇓Pg	**Pn**	**14 52 53.1**	**+1.2**
MAKZ				Sg	**Sb**	**14 53 02.7**	**+1.2**
MK31	**Makanchi Array**	**0.89**	**155**	P	**Pn**	**14 52 54.4**	**+1.3**
	3.4nm,0.1s,baz=340,slow=16,SNR=1789						
MK31				⇑S	**Sb**	**14 53 05.5**	**+1.6**
	5.3nm,0.1s,baz=340,slow=28,SNR=20						
MKAR	**Makanchi Array**	**0.89**	**155**	Pg	**Pn**	**14 52 54.4**	**+1.4**
MKAR				Sg	**Sb**	**14 53 05.4**	**+1.5**
ZSN	**Zaisan**	**2.13**	**93**	*eP*	**Pg**	**14 53 18.2**	**+2.7**
	6.6nm,0.3s						
ZSN				*eS*	**Sg**	**14 53 46.2**	**+3.1**
	54nm,0.4s						
SEM	**Semipalatinsk**	**2.98**	**341**	*eP*	**Pg**	**14 53 34.7**	**+2.9**
	5.5nm,0.1s						
SEM				*eS*	**Sg**	**14 54 13.8**	**+3.5**
	82nm,0.3s						
TDK	**Taldyqorghan**	**3.47**	**223**	*eP*	**Pg**	**14 53 42.9**	**+1.6**
	20nm,0.4s						
TDK				*eS*	**Sg**	**14 54 28.0**	**+1.7**
	95nm,0.4s						
DJR	**Jarkent**	**3.54**	**203**	*eP*	**Pg**	**14 53 43.6**	**+1.1**
	1.5nm,0.2s						
DJR				*eS*	**Sg**	**14 54 29.9**	**+1.7**
	21nm,0.4s						
DJR	**Jarkent**	**3.54**	**203**	Pg	**Pg**	**14 53 43.6**	**+1.1**
	1.5nm,0.2s						
DJR				Lg	Lg	14 54 30.0	
	21nm,0.4s						
KURBB	**Kurchatov Arra**	**3.69**	**326**	⇑Pg	Pg	14 53 50.4	+5.0
	3.2nm,0.4s						
KURBB				⇓Lg	Lg	14 54 38.7	
	70nm,0.5s						
KNOS	**Konyrlen**	**3.70**	**210**	*eP*	**Pg**	**14 53 45.5**	**-0.1**
	2.7nm,0.1s						
KNOS				*eS*	**Sg**	**14 54 33.0**	**-0.4**
	22nm,0.4s						
KNOS	**Konyrlen**	**3.70**	**210**	Pg	**Pg**	**14 53 45.5**	**-0.1**
	2.7nm,0.1s						
KNOS				Lg	Lg	14 54 33.0	
	22nm,0.4s						
KURK	**Kurchatov**	**3.73**	**328**	⇑Pg	Pg	14 53 51.2	+5.1
	1.3nm,0.3s						
KURK				⇑Lg	Lg	14 54 38.3	
	34nm,0.5s						
KURK	**Kurchatov**	**3.73**	**328**	Pn	**Pb**	**14 53 38.4**	**-2.0**
KURK				Pg	**Pg**	**14 53 48.4**	**+2.2**
KURK				Sg	**Sg**	**14 54 39.6**	**+5.2**
UKR	**Ust'-Kan**	**3.89**	**30**	Pn	**Pb**	**14 53 42.2**	**-1.0**
UKR				Sg	**Sg**	**14 54 42.1**	**+2.5**
BLB	**Baldybastay**	**4.18**	**214**	*eP*	**Pg**	**14 53 55.1**	**+0.5**
BLB				*eS*	**Sg**	**14 54 50.0**	**+1.2**
BLB	**Baldybastay**	**4.18**	**214**	Pg	**Pg**	**14 53 55.2**	**+0.5**
BLB				Lg	Lg	14 54 50.0	
KTMS	**Ketmen**	**4.26**	**194**	*eP*	**Pg**	**14 53 55.1**	**-1.3**
	0.5nm,0.2s						
KTMS				*eS*	**Sg**	**14 54 49.4**	**-2.3**
	4.8nm,0.2s						
KTMS	**Ketmen**	**4.26**	**194**	Pg	**Pg**	**14 53 55.1**	**-1.3**
KTMS				Lg	Lg	14 54 49.4	
ARXS	**Arharly**	**4.35**	**220**	*eP*	**Pg**	**14 53 58.1**	**+0.1**
ARXS				*eS*	**Sg**	**14 54 54.7**	**+0.5**
ARXS	**Arharly**	**4.35**	**220**	Pg	**Pg**	**14 53 58.1**	**+0.1**
ARXS				Lg	Lg	14 54 54.7	
PDGK	**Podgornoye**	**4.55**	**201**	Pg	**Pg**	**14 54 00.5**	**-1.4**
	0.5nm,0.2s						
PDGK				Lg	Lg	14 54 58.3	
	7.0nm,0.6s						
PDGK	**Podgornoye**	**4.55**	**201**	⇑Lg	Lg	14 54 57.9	
	7.8nm,0.5s						
CHBI	**Chibit, Altay**	**4.67**	**52**	Pg	**Pg**	**14 54 03.3**	**-0.8**
CHBI				Sg	**Sg**	**14 55 03.7**	**-0.9**
SHLS	**Shalkode**	**4.72**	**201**	*eP*	**Pg**	**14 54 03.8**	**-1.3**
	3.2nm,0.3s						
SHLS				*eS*	**Sg**	**14 55 04.1**	**-2.2**
	9.4nm,0.5s						
SHLS	**Shalkode**	**4.72**	**201**	Pg	**Pg**	**14 54 03.8**	**-1.3**
	3.2nm,0.3s						
SHLS				Lg	Lg	14 55 04.1	
	9.4nm,0.5s						
AKAR	**Aktash**	**4.74**	**53**	Pn	**Pb**	**14 53 55.5**	**-2.2**
AKAR				S	**Sn**	**14 54 41.6**	**+0.8**
AKAR				Sg	**Sg**	**14 55 07.7**	**+0.9**
KURS	**Kuram**	**4.81**	**213**	*eP*	**Pg**	**14 54 07.0**	**+0.1**
	3.7nm,0.4s						
KURS				*eS*	**Sg**	**14 55 09.6**	**+0.4**
	9.1nm,0.4s						
KURS	**Kuram**	**4.81**	**213**	Pg	**Pg**	**14 54 07.0**	**+0.1**
	3.7nm,0.4s						
KURS				Lg	Lg	14 55 09.6	
	9.1nm,0.4s						
UZB	**Uzynbulak**	**4.84**	**204**	*eP*	**Pg**	**14 54 07.6**	**+0.1**
	0.6nm,0.1s						
UZB				*eS*	**Sg**	**14 55 10.6**	**+0.4**
	8.3nm,0.3s						
UZB	**Uzynbulak**	**4.84**	**204**	Pg	**Pg**	**14 54 07.6**	**+0.1**
UZB				Lg	Lg	14 55 10.6	
CUR	**Chagan-Uzun**	**5.03**	**58**	Pn	**Pb**	**14 54 00.1**	**-2.7**
CUR				Sg	**Sg**	**14 55 15.4**	**-0.9**
ULGR	**Ulagan, Altay**	**5.09**	**51**	Pn	**Pb**	**14 54 01.2**	**-2.4**
ULGR				S	**Sn**	**14 54 50.2**	**+0.8**
ULGR				Sg	**Sg**	**14 55 17.8**	**-0.1**
SATY	**Saty**	**5.11**	**209**	*eP*	**Pg**	**14 54 11.7**	**-0.9**
	1.3nm,0.1s						
SATY				*eS*	**Sg**	**14 55 17.6**	**-1.2**
	11nm,0.2s						
SATY	**Saty**	**5.11**	**209**	Pg	**Pg**	**14 54 11.7**	**-0.9**
	1.3nm,0.1s						
SATY				Lg	Lg	14 55 17.6	
	11nm,0.2s						
KUU	**Kurty**	**5.29**	**228**	*eP*	**Pg**	**14 54 15.2**	**-0.8**
	2.2nm,0.1s						
KUU				*eS*	**Sg**	**14 55 23.4**	**-1.1**
	27nm,0.6s						
MDOK	**Medeo**	**5.53**	**218**	*eP*	**Pg**	**14 54 19.8**	**-0.8**
MDOK	1.6nm,0.2s						
				eS	**Sg**	**14 55 31.3**	**-0.8**
	13nm,0.6s						
MDOK	**Medeo**	**5.53**	**218**	Pg	**Pg**	**14 54 19.8**	**-0.8**
MDOK				Lg	Lg	14 55 30.6	
	6.1nm,0.6s						
MDOK				Lg	Lg	14 55 31.3	
ARTR	**Artybash**	**5.53**	**38**	S	**Sn**	**14 54 58.1**	**-2.2**
ARTR				Sg	**Sg**	**14 55 31.7**	**-0.6**
MTBS	**Maitube**	**5.82**	**222**	*eP*	**Pg**	**14 54 25.0**	**-1.2**
	2.9nm,0.1s						
MTBS				*eS*	**Sg**	**14 55 40.4**	**-1.3**
	11nm,0.3s						
MTBS	**Maitube**	**5.82**	**222**	Pg	**Pg**	**14 54 25.0**	**-1.2**
	2.9nm,0.1s						
MTBS				Lg	Lg	14 55 40.4	
	11nm,0.3s						
KST	**Kastek**	**6.11**	**224**	*eP*	**Pg**	**14 54 30.0**	**-1.6**
	0.7nm,0.2s						
KST				*eS*	**Sg**	**14 55 49.3**	**-1.4**
	4.6nm,0.6s						
KST	**Kastek**	**6.11**	**224**	Pg	**Pg**	**14 54 30.0**	**-1.6**
	0.7nm,0.2s						
KST				Lg	Lg	14 55 49.3	
	4.6nm,0.6s						
OTUK	**Ortayu**	**6.35**	**279**	⇑Lg	Lg	14 55 59.3	
	3.5nm,0.5s						
ELT	**Eltsovka**	**6.36**	**25**	Sg	**Sg**	**14 56 00.5**	**+1.9**
BRZS	**Berezniki**	**6.44**	**295**	*eP*	**Pg**	**14 54 36.7**	**-1.3**
BRZS				*eS*	**Sg**	**14 56 01.1**	**-0.2**
BRZS	**Berezniki**	**6.44**	**295**	Pg	**Pg**	**14 54 36.7**	**-1.3**
BRZS				Lg	Lg	14 56 01.1	
TASR	**Tashtagol**	**6.50**	**35**	Sg	**Sg**	**14 56 03.7**	**+0.5**
BJR2	**Bachatsky-2, K**	**7.24**	**21**	Sg	**Sg**	**14 56 27.8**	**+0.8**
SALR	**Pechorkino, Sa**	**7.27**	**19**	Sg	**Sg**	**14 56 27.6**	**-0.3**
NVS	**Novosibirsk**	**7.31**	**7**	Pg	**Pg**	**14 54 50.9**	**-3.7**
NVS				Sg	**Sg**	**14 56 29.5**	**+0.3**
NVSII	**Novosibirsk**	**7.32**	**7**	Pg	Pg	14 54 49.1	-5.5
NVSII				Sg	**Sg**	**14 56 30.2**	**+0.9**
LUZB	**Luzhba, Kemero**	**7.59**	**34**	Sg	**Sg**	**14 56 35.2**	**-2.8**
DJO	**Djoy, Khakassi**	**7.99**	**46**	Sg	**Sg**	**14 56 52.0**	**+1.0**

*IDC **09** 15:08:52.5±2.1, 2°.21N×126°.87E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=120.3km s-min=26.6km az=69.0*
*DJA **09** 15:09:01.2±0.6, 2°.1N±3°×12°7E±°, h53km±30km, M3.7/12, mb4.1/2, mB5.3/1, MLv3.5/12, Mw(mB)4.8/1*
ISC 09 15:09:00.5±1.2, 2°.12N±0°.08×126°.86E±0°.10, h63km, n13, σ1s15/14, mb3.5/3, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**159**	P	**Pn**	**15 09 24.6**	**+0.2**
TNTI				S	**Sn**	**15 09 42.3**	**0.0**
SGSI	**Sangihe**	**2.05**	**320**	P	**Pn**	**15 09 32.5**	**-0.2**
LBMI	**Labuha**	**2.81**	**167**	P	**Pn**	**15 09 43.6**	**+0.5**
KMSI	**Cibinong**	**3.26**	**242**	P	**Pn**	**15 09 50.5**	**+1.3**
GTOI	**Gorontalo**	**4.12**	**249**	P	**Pn**	**15 10 02.6**	**+1.7**
SANI	**Sanana**	**4.23**	**192**	P	**Pn**	**15 10 01.7**	**-0.8**
LUWI	**Luwuk**	**5.15**	**233**	P	**Pn**	**15 10 14.7**	**-0.4**
MRSI	**Marisa**	**5.18**	**252**	P	**Pn**	**15 10 16.1**	**+0.6**
	0.1nm18nm,1.0s						
APSI	**Ampana**	**6.01**	**240**	P	**Pn**	**15 10 24.1**	**-2.8**
FITZ	**Fitzroy Crossi**	**20.12**	**183**	P	**P**	**15 13 30.0**	**+0.5**
	2.4nm,1.1s,baz=15,slow=12,SNR=2.0						
	2.4nm,1.1s						
WRA	**Warramunga Arr**	**23.12**	**162**	P	**P**	**15 14 01.8**	**+0.4**
	1.0nm,0.5s,baz=340,slow=11,SNR=26						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.53**	**165**	P	**P**	**15 14 32.2**	**-0.3**
	0.4nm,1.0s,baz=346,slow=8.2,SNR=13						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**15 18 53.2**	**-0.2**
	0.2nm,0.4s,baz=116,slow=6.6,SNR=3.0						
	0.2nm,0.4s						

*BJI **09** 15:34:03.1±0.0, 17°.99N×145°.89E, h115km, mb4.4/10, mB4.8/9*
*IDC **09** 15:34:05.7±0.5, 18°.35N×145°.98E, h140km±4km, mb3.9/23, mbtmp4.4/26, MS2.9/7, Error ellipse: s-maj=15.2km s-min=7.0km az=99.0*
*NEIC **09** 15:34:05.7±1.3, 18°.34N±0°.08×146°.1E±0°.1, h129km±5km, mb4.8/85, Error ellipse: s-maj=18.0km s-min=11.7km az=96.0*
ISC 09 15:34:05.8±0.5, 18°.38N±0°.04×146°.02E±0°.07, h136km±4km, h137km: pP-P, n313, σ0s97/316, mb4.7/70, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.89**	**193**	P	**Pn**	**15 35 18.6**	**+0.9**
	171nm,0.3s,baz=120,slow=2.4,SNR=40						
GUMO				S	**Sn**	**15 36 12.7**	**-0.8**
	283nm,0.4s,baz=32,slow=22,SNR=9.8						
GUMO	**Guam**	**4.89**	**193**	Pn	**Pn**	**15 35 17.8**	**+0.1**
GUMO	**Guam**	**4.89**	**193**	P	**Pn**	**15 35 18.6**	**+0.9**
JCJ	**Chichijima**	**9.37**	**338**	P	**Pn**	**15 36 17.0**	**-0.5**
	35nm,0.7s,baz=354,slow=19,SNR=7.0						
JCJ				S	**Sn**	**15 37 54.6**	**-6.6**
	23nm,0.5s,baz=267,slow=20,SNR=1.7						
PATS	**Pohnpei**	**16.59**	**132**		**Pn**	**15 37 49.5**	**-1.1**
PATS	**Pohnpei**	**16.59**	**132**	P	**P**	**15 37 50.8**	**+0.2**
JGF	**Kuroka**	**18.79**	**338**		**P**	**15 38 15.6**	**+0.9**
MJAR	**Matsushiro Arr**	**19.36**	**341**	P	**P**	**15 38 20.1**	**-0.7**
	1.2nm,0.6s,baz=170,slow=10,SNR=2.7						
MJAR				LR	LR	15 45 49.8	
	comp=Z,20nm,18.2s,baz=143,slow=36						
H11S3	**WAKE ISLAND Hy 19.61**	**86**		T	T	15 59 35.0	
	baz=275,slow=74,SNR=23						
H11S1	**WAKE ISLAND Hy 19.62**	**86**		T	T	15 59 33.6	
	baz=275,slow=74,SNR=32						
H11S2	**WAKE ISLAND Hy 19.62**	**86**		T	T	15 59 34.2	
	baz=275,slow=74,SNR=31						
H11N1	**WAKE ISLAND Hy 19.77**	**83**		T	T	15 59 48.9	
	baz=266,slow=74,SNR=26						
H11N2	**WAKE ISLAND Hy 19.78**	**83**		T	T	15 59 44.6	
	baz=266,slow=74,SNR=22						
H11N3	**WAKE ISLAND Hy 19.79**	**83**		T	T	15 59 48.3	
	baz=266,slow=74,SNR=24						
MANU	**Manus Island**	**20.34**	**176**	P	**P**	**15 38 29.3**	**-2.2**
JTM	**Tennabayashi**	**22.73**	**350**	P	**P**	**15 38 56.6**	**+0.4**
SIJI	**Sorong**	**24.01**	**219**	P	**P**	**15 39 08.9**	**+0.7**
	22nm,0.6s,baz=24,slow=9.9,SNR=17						
	22nm,0.6s						
KSRS	**Korea Array**	**24.75**	**324**	P	**P**	**15 39 14.1**	**-0.6**
	0.5nm,0.7s,baz=146,slow=9.1,SNR=2.8						
KSRS				LR	LR	15 48 20.0	
	comp=Z,9.6nm,21.3s,baz=205,slow=34						
FAKI	**Fak Fak**	**25.14**	**214**	P	**P**	**15 39 17.5**	**-1.0**
FAKI	**Fak Fak**	**25.14**	**214**	P	**P**	**15 39 19.1**	**+0.6**
PMG	**Port Moresby**	**27.64**	**178**	P	**P**	**15 39 39.3**	**-1.5**
	43nm,0.8s,baz=348,slow=6.1,SNR=8.3						
LUWI	**Luwuk**	**29.93**	**232**	P	**P**	**15 40 01.4**	**+0.2**
TOLI2	**Tolitoli**	**30.14**	**238**	P	**P**	**15 40 03.5**	**+0.4**
TOLI2				IAmb	IAmb	15 40 05.0	
	comp=Z,7.4nm,0.7s						
HNR	**Honiara**	**30.87**	**152**	LR	LR	15 52 23.9	
	comp=Z,39nm,18.8s,baz=244,slow=36						
COEN	**Coen**	**32.26**	**185**	P	**P**	**15 40 20.8**	**-0.8**
COEN				IAmb	IAmb	15 40 23.8	
	comp=Z,18nm,1.0s						
COEN	**Coen**	**32.26**	**185**	P	**P**	**15 40 21.0**	**-0.6**
KLR	**Kul'dur**	**32.86**	**343**	P	**P**	**15 40 26.0**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=131,slow=6.9,SNR=9.2						
	comp=Z,2.2nm,0.6s						
KDU	**Kakadu**	**33.64**	**204**	P	**P**	**15 40 32.9**	**-0.7**
MTN	**Manton Dam**	**34.33**	**206**	P	**P**	**15 40 38.7**	**-0.9**
MTN				IAmb	IAmb	15 40 39.9	
	comp=Z,16nm,0.5s						
MTN	**Manton Dam**	**34.33**	**206**	P	**P**	**15 40 39.3**	**-0.3**
MMRI	**Maumere**	**35.66**	**223**	P	**P**	**15 40 51.7**	**+0.6**
PEA0B	**Petropavlovsk-**	**35.83**	**12**	P	**P**	**15

comp=Z,200nm,5.5s
KNRA **Kununurra** 37.88 208 P P 15 41 09.9 +0.1
KNRA **Kununurra** 37.88 208 P P 15 41 09.7 0.0
CTAO **Charters Tower** 38.23 180 P P 15 41 12.6 -0.1
QIS **Mount Isa** 39.21 190 P P 15 41 20.3 -0.6
WB0 **Warramunga Arr** 39.59 197 P P 15 41 23.5 -0.5
WR0 **Warramunga Arr** 39.74 197 P P 15 41 24.5 -0.7
WRAB **Tennant Creek** 39.76 197 P P 15 41 24.9 -0.6
WRAB IAmb IAmb 15 41 28.2
comp=Z,12nm,0.7s
WRAB **Tennant Creek** 39.76 197 P P 15 41 25.0 -0.5
WRAB **Tennant Creek** 39.76 197 P P 15 41 24.4 -1.1
WRAB pP pP 15 41 54.2 -0.7
WB2 **Warramunga Arr** 39.77 197 P P 15 41 24.9 -0.6
WB2 IAmb IAmb 15 41 28.8
comp=Z,14nm,0.7s
WRA **Warramunga Arr** 39.78 197 P P 15 41 24.7 -0.8
comp=Z,10nm,0.7s,baz=24,slow=9.8,SNR=79
WRA ScP ScP 15 47 03.6 -2.0
comp=Z,1.0nm,0.8s,baz=21,slow=4.0,SNR=4.6
comp=Z,10nm,0.7s
WRA **Warramunga Arr** 39.78 197 P P 15 41 24.4 -1.1
SHEM **Shemya Is, Ala** 40.68 26 LR LR 15 56 22.2
comp=Z,32nm,20.0s,baz=251,slow=33
MA2 **Magadan** 41.28 4 LR LR 16 03 25.2
comp=Z,8.7nm,18.1s,baz=164,slow=43
FITZ **Fitzroy Crossi** 41.42 210 P P 15 41 39.1 0.0
comp=Z,7.0nm,0.6s,baz=50,slow=11,SNR=7.2
comp=Z,7.0nm,0.6s
PZH **PanZhiHua** 41.55 289 P P 15 41 42.4 +2.1
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,110nm,4.7s
KOUNC **Koumac, New Ca** 42.64 154 P P 15 41 49.5 +0.6
AS31 **Alice Springs** 43.44 196 P P 15 41 54.6 -0.8
ASAR **Alice Springs** 43.44 196 P P 15 41 54.5 -0.9
comp=Z,2.7nm,0.6s,baz=6.1,slow=5.5,SNR=77
comp=Z,2.7nm,0.6s
ASAR **Alice Springs** 43.44 196 P P 15 41 54.6 -0.7
SONM **Songino Array** 43.58 321 P P 15 41 55.7 -0.7
comp=Z,0.3nm,0.5s,baz=142,slow=8.5,SNR=2.8
EIDS **Eidsvold** 43.77 173 P P 15 41 57.6 -0.3
EIDS IAmb IAmb 15 42 03.2
comp=Z,28nm,1.8s
CMAR **Chiang Mai Arr** 44.56 278 P P 15 42 05.6 +1.1
comp=Z,0.5nm,0.3s,baz=63,slow=25,SNR=1.9
comp=Z,0.5nm,0.3s
RMQ **Roma** 44.68 177 P P 15 42 04.6 -0.6
SEY **Seymchan** 44.73 4 P P 15 42 06.2 +1.1
comp=Z,2.4nm,0.7s,baz=178,slow=7.6,SNR=11
comp=Z,2.4nm,0.7s
DZM **Mont Dzumac** 44.90 153 P P 15 42 07.4 +0.4
DZM IAmb IAmb 15 42 08.3
comp=Z,29nm,0.9s
DZM **Mont Dzumac** 44.90 153 P P 15 42 07.5 +0.4
GTA **Gaotai** 44.98 308 eP P 15 42 09.8 +2.1
GTA pmax pmax
comp=Z,4.0nm,0.6s
YAK **Yakutsk** 45.09 349 P P 15 42 07.9 0.0
comp=Z,5.2nm,0.6s,baz=158,slow=1.2,SNR=7.1
YAK pP pP 15 42 38.4 +0.4
comp=Z,6.2nm,0.7s,baz=353,slow=2.7,SNR=4.4
comp=Z,5.2nm,0.6s
YAK **Yakutsk** 45.09 349 P P 15 42 07.5 -0.4
YAK IAmb IAmb 15 42 40.3
comp=Z,14nm,0.7s
YAK **Yakutsk** 45.09 349 P P 15 42 08.1 +0.1
YAK pP pP 15 42 38.6 +0.6
OUENC **Ouen Island, N** 45.38 152 P P 15 42 11.0 +0.2
OUENC **Ouen Island, N** 45.38 152 P P 15 42 11.7 +1.0
INKA **Innaminka** 46.14 186 P P 15 42 15.8 -0.8
OOD **Oodnadatta** 46.98 193 P P 15 42 22.7 -0.5
MBWA **Marble Bar** 46.99 214 P P 15 42 23.8 +0.4
MBWA IAmb IAmb 15 43 08.6
comp=Z,19nm,0.7s
MBWA **Marble Bar** 46.99 214 P P 15 42 23.9 +0.4
MBWA pP sP 15 43 07.6 -0.7
PSA00 **Pilbara Seismi** 47.26 214 P P 15 42 25.8 +0.3
PSA00 IAmb IAmb 15 42 39.4
comp=Z,57nm,1.6s
ARMA **Armidale** 48.82 174 P P 15 42 37.0 -0.4
ARMA IAmb IAmb 15 42 38.1
comp=Z,31nm,1.4s
ARMA **Armidale** 48.82 174 P P 15 42 37.2 -0.3
NIKH **Nikolski High** 49.09 35 P P 15 42 38.8 -0.4
NIKH IAmb IAmb 15 43 35.8
comp=Z,36nm,1.3s
CMSA **Cobar Meteorol** 49.64 180 P P 15 42 42.8 -0.7
MULG **Mulgathing** 49.74 194 P P 15 42 43.9 -0.4
STKA **Stephens Creek** 50.15 185 P P 15 42 46.0 -1.4
comp=Z,2.7nm,0.4s,baz=8.5,slow=7.3,SNR=24
comp=Z,2.7nm,0.4s
STKA **Stephens Creek** 50.15 185 P P 15 42 46.6 -0.9
GSI **Gunungsitoli** 50.45 256 P P 15 42 50.5 +0.5
UNV **Unalaska Valle** 50.74 34 P P 15 42 51.9 +0.3
baz=244
BBOO **Buckleboo** 51.79 191 P P 15 42 58.8 -0.9
BBOO **Buckleboo** 51.79 191 P P 15 42 59.9 +0.3
FORT **Forrest** 51.84 200 P P 15 42 59.3 -0.8
FORT **Forrest** 51.84 200 P P 15 43 01.1 +1.0
HTT **Hallett** 51.97 188 P P 15 43 00.6 -0.4
CAN **Canberra** 53.48 177 P P 15 43 11.7 -0.4
CAN IAmb IAmb 15 43 13.4
comp=Z,31nm,1.2s
CAN **Canberra** 53.48 177 P P 15 43 12.7 +0.6
CAN **Canberra** 53.48 177 P P 15 43 11.4 -0.7
CNB **Canberra Magne** 53.50 177 P P 15 43 12.5 +0.3
SDPT **Sand Point** 54.55 34 P P 15 43 19.6 0.0
SDPT **Sand Point** 54.55 34 P P 15 43 19.8 +0.2
baz=249
WMQ **Urumqi** 54.75 311 eP P 15 43 24.7 +3.4
ARPS **Mount Arapiles** 55.00 184 P P 15 43 22.7 -0.3
MORW **Morawa** 55.35 212 P P 15 43 25.5 -0.2
MORW **Morawa** 55.35 212 P P 15 43 25.9 +0.2
S14K **Fog Glacier** 55.37 33 P P 15 43 25.7 +0.1
baz=250
TOO **Toolangi** 55.66 181 P P 15 43 27.9 +0.2
CHGN **Chignik** 55.97 34 P P 15 43 30.0 +0.3
CHGN **Chignik** 55.97 34 P P 15 43 29.4 -0.3
baz=251
BLDU **Ballidu** 56.29 210 P P 15 43 32.5 +0.1
ANM **Nome** 56.36 23 P P 15 43 32.7 +0.3
baz=239
O16K **Kokwok River B** 57.26 30 P P 15 43 38.9 +0.1
baz=249
N16K **Nishlik Lake** 57.27 29 P P 15 43 39.2 +0.3
baz=248
R17K **Ugashik Creek** 57.45 33 P P 15 43 40.1 -0.1
baz=252
MUN **Mundaring** 57.66 210 P P 15 43 42.9 +0.9
O17K **Koliganek Bris** 57.80 30 P P 15 43 42.9 +0.3
baz=250
NWAO **Narrogin (SRO)** 57.97 209 P P 15 43 43.2 -1.0
SII **Sitkinak Islan** 58.29 34 P P 15 43 46.5 +0.4
SII **Sitkinak Islan** 58.29 34 P P 15 43 46.5 +0.4
baz=255
ZALV **Zalesovo Beam** 58.45 323 P P 15 43 46.0 -1.2
comp=Z,0.9nm,0.5s,baz=103,slow=8.6,SNR=4.9
comp=Z,0.9nm,0.5s
N18K **Kilae Creek** 58.67 29 P P 15 43 49.9 +1.2
N18K IAmb IAmb 15 43 51.0
comp=Z,7.8nm,1.1s
N18K **Kilae Creek** 58.67 29 P P 15 43 49.5 +0.8
baz=251
O18K **Koktuh Hills** 58.73 30 P P 15 43 49.8 +0.7
O18K IAmb IAmb 15 43 51.2
comp=Z,9.6nm,0.8s
O18K **Koktuh Hills** 58.73 30 P P 15 43 51.1 +2.0
baz=252
MKAR **Makanchi Array** 58.90 314 P P 15 43 50.1 -0.4
comp=Z,0.3nm,0.6s,baz=90,slow=10,SNR=4.4
comp=Z,0.3nm,0.6s
OHAK **Old Harbor** 58.94 34 P P 15 43 51.3 +0.7
OHAK **Old Harbor** 58.94 34 P P 15 43 49.7 -0.8
baz=255
N19K **Bonanza Creek** 59.37 29 P P 15 43 53.5 -0.1
N19K IAmb IAmb 15 43 56.0
comp=Z,7.8nm,0.9s
N19K **Bonanza Creek** 59.37 29 P P 15 43 54.6 +1.0
baz=252
TTA **Tatalina** 59.39 27 P P 15 43 54.2 +0.5
baz=249
KDAK **Kodiak Island** 59.45 33 P P 15 43 53.9 -0.1
KDAK **Kodiak Island** 59.45 33 P P 15 43 54.0 -0.1
baz=255
KDAK **Kodiak Island** 59.45 33 P P 15 43 52.0 -2.0
KDAK pP pP 15 44 20.4 -4.9
L19K **White Mountain** 59.64 28 P P 15 43 55.2 -0.2
baz=251
M19K **Big River Lodg** 59.75 28 P P 15 43 56.6 +0.5
baz=251
Q20K **Shuyak Island** 59.76 32 P P 15 43 56.6 +0.5
baz=255
L20K **Farewell, AK** 60.16 28 P P 15 43 59.4 +0.5
baz=252
M20K **Styx River** 60.31 28 P P 15 44 00.6 +0.5
M20K IAmb IAmb 15 44 02.5
comp=Z,13nm,1.4s
M20K **Styx River** 60.31 28 P P 15 44 00.7 +0.6
baz=253
K20K **Telida** 60.37 27 P P 15 44 01.5 +1.3
K20K IAmb IAmb 15 44 02.8
comp=Z,6.8nm,1.0s
K20K **Telida** 60.37 27 P P 15 44 00.5 +0.2
baz=251
CNPM **China Poot** 60.57 31 P P 15 44 01.8 +0.1
CNPM IAmb IAmb 15 44 03.2
comp=Z,25nm,1.0s
J20K **Nowinta River** 60.60 26 P P 15 44 02.2 +0.4
J20K IAmb IAmb 15 44 04.7
comp=Z,15nm,1.2s
J20K **Nowinta River** 60.60 26 P P 15 44 02.1 +0.3
baz=250,SNR=10.0
BRSE **Bradley Lake S** 60.87 31 P P 15 44 03.9 +0.2
baz=256
PPLA **Purkeypile** 61.03 27 P P 15 44 05.4 +0.4
PPLA IAmb IAmb 15 45 43.8
comp=Z,14nm,1.3s
CAST **Castle Rocks** 61.23 27 P P 15 44 06.3 +0.1
CAST IAmb IAmb 15 44 08.1
comp=Z,10.0nm,0.9s
CAST **Castle Rocks** 61.23 27 P P 15 44 06.4 +0.2
baz=253,SNR=6.4
CHUM **Lake Minchumin** 61.27 26 P P 15 44 07.2 +0.8
baz=252
IMAR **Indian Mountai** 61.38 24 P P 15 44 07.7 +0.7
SEW **Seward** 61.58 31 P P 15 44 08.7 +0.3
SEW IAmb IAmb 15 44 09.7
comp=Z,16nm,1.0s
SEW **Seward** 61.58 31 P P 15 44 09.4 +0.9
baz=257
H21K **Melozitna Rive** 61.64 24 P P 15 44 09.5 +0.7
baz=251
M22K **Willow** 61.66 29 P P 15 44 08.2 -0.7
baz=256
G21K **Allakaket** 61.66 23 P P 15 44 09.4 +0.5
baz=250
RC01 **Rabbit Creek A** 61.67 30 P P 15 44 09.6 +0.5
baz=256
KTH **Kantishna Hill** 61.77 27 P P 15 44 10.2 +0.4
KTH IAmb IAmb 15 44 11.4
comp=Z,17nm,1.0s
I21K **Tanana** 61.81 25 P P 15 44 11.0 +1.1
I21K IAmb IAmb 15 44 12.9
comp=Z,6.6nm,1.2s
I21K **Tanana** 61.81 25 P P 15 44 10.2 +0.3
baz=252
BPAW **Bear Paw Mtn.** 61.90 26 P P 15 44 11.4 +0.8
BPAW IAmb IAmb 15 44 12.5
comp=Z,11nm,0.9s
BPAW **Bear Paw Mtn.** 61.90 26 P P 15 44 11.1 +0.5
baz=254
F21K **Alatna River** 61.91 23 P P 15 44 11.3 +0.7
baz=249
NRIK **Noril'sk** 62.01 340 P P 15 44 11.0 -0.2
comp=Z,2.0nm,0.6s,baz=103,slow=2.0,SNR=4.0
comp=Z,2.0nm,0.6s
TRF **Thorofare Moun** 62.02 27 P P 15 44 11.6 0.0
TRF IAmb IAmb 15 44 12.7
comp=Z,12nm,1.0s
TRF **Thorofare Moun** 62.02 27 P P 15 44 11.3 -0.3
baz=254,SNR=6.4
MLY **Manley** 62.27 25 P P 15 44 13.7 +0.6
MLY IAmb IAmb 15 44 15.0
comp=Z,5.9nm,1.0s
MLY **Manley** 62.27 25 P P 15 44 12.5 -0.5
baz=253,SNR=8.1
H22K **Ishtalitna Cre** 62.27 24 P P 15 44 13.0 -0.1
baz=252
PWL **Port Wells** 62.29 30 P P 15 44 13.7 +0.5
PWL IAmb IAmb 15 44 14.7
comp=Z,15nm,1.0s
PWL **Port Wells** 62.29 30 P P 15 44 13.2 0.0
baz=258,SNR=5.7
F22K **John River** 62.48 22 P P 15 44 14.5 +0.1
baz=251,SNR=8.7
SML **Sawmill** 62.49 29 P P 15 44 15.3 +0.7
SML IAmb IAmb 15 44 16.1
comp=Z,18nm,0.9s
SML **Sawmill** 62.49 29 P P 15 44 14.9 +0.3
baz=257,SNR=6.6
WAT1 **Susitna Watana** 62.63 28 P P 15 44 15.2 -0.3
baz=256
M23K **Glacier View** 62.77 29 P P 15 44 16.6 +0.2
baz=258
NEA2 **Nenana** 62.84 26 P P 15 44 16.9 +0.1
NEA2 **Nenana** 62.84 26 P P 15 44 17.3 +0.5
baz=255
I23K **Minto, Yukon-K** 62.86 25 P P 15 44 17.5 +0.6
I23K **Minto, Yukon-K** 62.86 25 P P 15 44 17.6 +0.7
baz=254
WAT6 **Susitna Watana** 62.94 28 P P 15 44 17.3 -0.4
baz=257,SNR=7.2
SCM **Sheep Creek Mo** 62.97 29 P P 15 44 18.6 +0.8
SCM IAmb IAmb 15 44 19.6
comp=Z,19nm,1.0s
SCM **Sheep Creek Mo** 62.97 29 P P 15 44 18.2 +0.4
baz=258,SNR=5.3
H23K **Yukon River** 62.97 25 P P 15 44 18.7 +1.0
H23K **Yukon River** 62.97 25 P P 15 44 18.4 +0.8
baz=254,SNR=5.3
Q23K **Middleton Isla** 62.99 32 P P 15 44 17.8 -0.1
baz=260
G23K **Bananza Creek** 63.04 24 P P 15 44 18.3 +0.2
baz=253
COLD **Coldfoot** 63.12 23 P P 15 44 19.4 +0.8
COLD **Coldfoot** 63.12 23 P P 15 44 19.4 +0.8
baz=253
DHY **Denali Highway** 63.21 28 P P 15 44 20.1 +0.6
baz=257
WRH **Wood River Hil** 63.22 26 P P 15 44 19.2 -0.1
MDM **Murphy Dome** 63.28 26 P P 15 44 20.7 +1.0
EYAK **Cordova Ski Ar** 63.48 31 P P 15 44 21.4 +0.3
baz=260
D23K **Nanushuk River** 63.49 21 P P 15 44 21.6 +0.5
baz=251
KLU **Klutina** 63.56 30 P P 15 44 22.9 +1.3
baz=260
H24K **Noodor Dome** 63.64 25 P P 15 44 22.9 +0.7
H24K IAmb IAmb 15 45 11.3
comp=Z,8.3nm,1.5s
H24K **Noodor Dome** 63.64 25 P P 15 44 22.5 +0.4
baz=256
TOLK **Toolik Lake Re** 63.77 22 P P 15 44 24.0 +1.1
TOLK IAmb IAmb 15 44 24.8
comp=Z,5.2nm,0.6s
TOLK **Toolik Lake Re** 63.77 22 P P 15 44 23.5 +0.5
baz=253
C23K **Itkillik River** 63.79 20 P P 15 44 23.7 +0.8
baz=251
IL31 63.79 26 P P 15 44 22.2 -0.8
ILAR **Eielson Array** 63.79 26 P P 15 44 22.4 -0.7
comp=Z,2.4nm,0.8s,baz=260,slow=5.1,SNR=25
ILAR pP pP 15 44 56.0 +1.3
comp=Z,1.5nm,0.8s,baz=258,slow=5.6,SNR=4.2
comp=Z,2.4nm,0.8s
ILAR **Eielson Array** 63.79 26 P P 15 44 22.4 -0.6
QRZ **Quartz Range** 63.85 158 P P 15 44 24.0 +0.4
QRZ **Quartz Range** 63.85 158 P P 15 44 24.1 +0.4
HYBB **Hyderabad (bro** 63.85 281 eP P 15 44 24.2 -0.1
BKZ **Black Stump Fm** 63.95 154 P P 15 44 23.6 -0.9
BKZ **Black Stump Fm** 63.95 154 P P 15 44 24.4 -0.1
E24K **Your Creek** 63.99 22 P P 15 44 24.8 +0.4
baz=254
G24K **Hadweenzic Riv** 64.01 24 P P 15 44 25.4 +1.0
baz=256
KAIM **Kayak Island** 64.03 32 P P 15 44 24.6 -0.1
baz=262
PAX **Paxson** 64.04 28 P P 15 44 25.4 +0.6
PAX IAmb IAmb 15 44 26.4
comp=Z,11nm,1.4s
PAX **Paxson** 64.04 28 P P 15 44 24.7 -0.1
baz=259
F24K **Squaw Lake** 64.06 23 P P 15 44 25.4 +0.6
baz=255
HARP **HAARP** 64.08 29 P P 15 44 26.0 +1.1
baz=260
BMRM **Bremner River** 64.10 30 P P 15 44 25.5 +0.3
baz=261
D24K **Happy Valley** 64.18 21 P P 15 44 27.1 +1.6
baz=253
N25K **Chitina, Valde** 64.20 30 P P 15 44 26.1 +0.2
baz=261
C24K **Franklin Bluff** 64.39 21 P P 15 44 27.9 +1.0
baz=253
J25K **Salcha River,** 64.39 26 P P 15 44 26.6 -0.5
J25K IAmb IAmb 15 45 01.3
comp=Z,12nm,1.8s
J25K **Salcha River,** 64.39 26 P P 15 44 26.2 -0.9
baz=259
RIDG **Independent Ri** 64.45 27 P P 15 44 27.9 +0.4
baz=260
NNZ **Nelson** 64.50 157 P P 15 44 28.4 +0.5
PRP **Porcupine Dome** 64.51 25 P P 15 44 27.8 -0.1
baz=258
H25K **Birch Creek** 64.56 25 P P 15 44 28.3 +0.4
baz=257
G25K **Bearman Lake** 64.56 24 P P 15 44 28.7 +0.7
baz=257
CRQE **Cirque** 64.80 31 P P 15 44 30.1 +0.3
baz=262
THZ **Tophouse** 64.81 158 P P 15 44 30.1 +0.1
SCRK **Sand Creek** 64.87 27 P P 15 44 30.6 +0.3
SCRK IAmb IAmb 15 44 31.7
comp=Z,6.4nm,1.1s
SCRK **Sand Creek** 64.87 27 P P 15 44 30.2 -0.1
baz=260,SNR=6.1
MCARA **McCarthy VSAT** 64.92 30 P P 15 44 31.5 +1.0
baz=262
F25K **Christian Rive** 64.92 23 P P 15 44 31.6 +1.1
baz=257,SNR=5.2
L26K **Log Cabin Wild** 65.00 28 P P 15 44 31.8 +0.8
baz=261
E25K **Arctic Village** 65.06 23 P P 15 44 32.2 +0.9
baz=257
D25K **Kavik River** 65.07 21 P P 15 44 31.8 +0.4
baz=255
M26K **Nabesna, AK** 65.07 29 P P 15 44 32.1 +0.6
baz=262
BFZ **Birch Farm** 65.14 155 P P 15 44 31.7 -0.4
BFZ **Birch Farm** 65.14 155 P P 15 44 32.1 0.0
J26L **Joseph Creek** 65.14 27 P P 15 44 31.8 -0.2
baz=260,SNR=5.8
BMAR **Burnt Mountain** 65.28 23 P P 15 44 34.3 +1.6
G26K **Porcupine Rive** 65.49 24 P P 15 44 34.8 +0.8
baz=259
F26K **Sheenjek River** 65.50 23 P P 15 44 35.0 +0.9
baz=258,SNR=6.0
M27K **Edge Creek, AK** 65.58 29 P P 15 44 34.8 -0.1
M27K IAmb IAmb 15 45 10.5
comp=Z,15nm,1.6s
M27K **Edge Creek, AK** 65.58 29 P P 15 44 35.3 +0.4
baz=263
KHZ **Kahutara** 65.61 158 P P 15 44 34.1 -0.9
L27K **Beaver Creek,** 65.69 28 P P 15 44 36.1 +0.6
L27K **Beaver Creek,** 65.69 28 P P 15 44 35.5 0.0
baz=263
BCAR **Beaver Creek A** 65.71 28 P P 15 44 36.3 +0.7
K27K **Chicken** 65.71 27 P P 15 44 36.4 +0.9
baz=262
RPZ **Rata Peaks** 65.92 160 P P 15 44 34.8 -2.3
comp=Z,17nm,0.8s,baz=170,slow=12
comp=Z,17nm,0.8s
RPZ **Rata Peaks** 65.92 160 P P 15 44 36.7 -0.4
BVCY **Beaver Creek** 66.06 29 P P 15 44 38.2 +0.4
baz=264
YUK3 **Moose Creek** 66.18 30 P P 15 44 39.1 +0.2
baz=264
O28M **Mount Upton** 66.22 31 P P 15 44 39.4 +0.2
baz=265
H27K **Steamboat Moun** 66.26 25 P P 15 44 39.3 +0.2
baz=262
DAWY **Dawson** 66.89 27 P P 15 44 44.7 +1.6
baz=264
O29M **Mount Kennedy** 66.98 32 P P 15 44 44.8 +1.0
baz=267
WHZ **Wether Hill Ro** 66.99 164 P P 15 44 42.7 -1.1
WHZ IAmb IAmb 15 45 07.3
comp=Z,30nm,1.3s
YUK4 **Talbot Arm** 67.01 30 P P 15 44 45.4 +1.3
baz=266
YUK6 **Outpost Mounta** 67.12 31 P P 15 44 45.9 +1.1
baz=267
M29M **Somme Creek** 67.17 29 P P 15 44 45.0 0.0
baz=266
P29M **Windy Craggy** 67.37 32 P P 15 44 47.7 +1.5
baz=268
I29M **Ogilvie Camp,** 67.47 26 P P 15 44 47.6 +0.9
baz=265
HYT **Haines Junctio** 67.54 31 P P 15 44 48.5 +1.1
HYT IAmb IAmb 15 44 50.0
comp=Z,10nm,0.9s
HYT **Haines Junctio** 67.54 31 P P 15 44 47.7 +0.4
baz=267
N30M **Aishikik Lake** 67.77 30 P P 15 44 48.8 +0.1
baz=268
P30M **Million Dollar** 67.78 32 P P 15 44 49.5 +0.7
baz=268
PLBC **Pleasant Camp** 68.06 33 P P 15 44 51.2 +0.8
baz=269
EPYK **Eagle Plains** 68.20 25 P P 15 44 52.4 +1.1
baz=266
O30N **Mendenhall** 68.23 31 P P 15 44 52.4 +0.8
baz=269
N31M **Braeburn, Yuko** 68.39 30 P P 15 44 53.1 +0.5
baz=269
SIT **Sitka** 68.61 35 P P 15 44 55.1 +1.2
baz=271
WHY **Whitehorse** 68.82 31 P P 15 44 55.8 +0.5
baz=270
M31M **Drury Creek, Y** 69.06 30 P P 15 44 57.0 +0.4
M31M IAmb IAmb 15 45 36.0
comp=Z,11nm,1.6s
M31M **Drury Creek, Y** 69.06 30 P P 15 44 57.2 +0.6
baz=270
INK **Inuvik** 69.54 23 P P 15 44 59.3 -0.1
comp=Z,1.2nm,0.3s,baz=280,slow=3.6,SNR=3.7
comp=Z,1.2nm,0.3s
INK **Inuvik** 69.54 23 P P 15 44 60.0 +0.6
baz=268
P33M **Teslin, Yukon** 69.85 32 P P 15 45 01.9 +0.3
baz=272
R33M **Jennings River** 70.82 33 P P 15 45 07.9 +0.3
baz=274
DLBC **Dease Lake** 71.38 34 P P 15 45 12.0 +1.1
comp=Z,3.1nm,0.7s,baz=268,slow=7.3,SNR=8.3
comp=Z,3.1nm,0.7s
DLBC **Dease Lake** 71.38 34 P P 15 45 11.3 +0.3
baz=275
ABKAR **Akbulak array** 73.78 317 P P 15 45 24.3 -0.9
YKA **Yellowknife Ar** 78.12 28 P P 15 45 49.7 +0.2
comp=Z,1.6nm,0.6s,baz=288,slow=5.5,SNR=2.5
comp=Z,1.6nm,0.6s
J04D **Umpqua Nationa** 78.97 48 P P 15 45 56.0 +1.1
baz=285
G05D **Wamic, OR** 79.01 46 P P 15 45 55.3 +0.6
baz=285
L04D **Klamath Falls** 79.09 49 P P 15 45 56.2 +0.7
baz=285
B08A **Colville Reser** 79.50 43 P P 15 45 58.3 +0.9
J05D **Fort Rock, OR** 79.57 48 P P 15 45 59.2 +1.2
baz=283
NEW **Newport** 80.94 42 P P 15 46 05.3 +0.1
comp=Z,3.6nm,0.6s,baz=279,slow=6.5,SNR=5.9
comp=Z,3.6nm,0.6s
NEW **Newport** 80.94 42 P P 15 46 06.3 +1.1
baz=287
BEKR **Beckworth** 81.14 51 P P 15 46 07.2 +0.6
ARCES **ARCESS Array B** 82.89 342 P P 15 46 14.4 -0.5
comp=Z,1.6nm,0.8s,baz=69,slow=6.9,SNR=9.2
ARCES pP pP 15 46 49.5 +1.2
comp=Z,2.5nm,0.7s,baz=69,slow=6.6,SNR=2.8
comp=Z,1.6nm,0.8s
PKM **Mcpherson Peak** 83.00 56 P P 15 46 17.6 +1.2
baz=287
KVN **Kaiserville** 83.05 51 P P 15 46 17.1 +0.5
NVAR **Mina Array Bea** 83.09 52 P P 15 46 17.9 +1.1
comp=Z,3.5nm,0.7s,baz=268,slow=5.9,SNR=29
NVAR pP pP 15 46 52.0 +2.0

comp=Z,2.1nm,0.8s,baz=270,slow=5.7,SNR=4.5
comp=Z,3.5nm,0.7s
NVAR Mina Array Bea 83.09 52 P **P** **15 46 17.6 +0.7**
NV11 Mina Array Sit 83.20 52 P **P** **15 46 17.6 +0.3**
NV11 IAmb IAmb 15 46 19.7
comp=Z,8.7nm,1.3s
HLID Hailey 84.23 46 P **P** **15 46 23.4 +1.0**
baz=290
GRAC Grapevine Rang 84.24 53 P **P** **15 46 23.4 +0.9**
baz=289
EDW2 Edwards Air Fo 84.43 55 P **P** **15 46 24.3 +0.8**
baz=288
MPMC Manual Prospec 84.45 54 P **P** **15 46 24.4 +0.6**
baz=289
ELK Elko 84.59 49 P **P** **15 46 25.2 +0.8**
GWY Greenwater Val 85.03 54 P **P** **15 46 26.5 -0.1**
TPNV Topopah Spring 85.11 53 P **P** **15 46 28.0 +1.0**
baz=289
R11A Troy Canyon, C 85.14 51 P **P** **15 46 28.0 +0.9**
baz=290
GSC Goldstone, Bar 85.22 55 P **P** **15 46 28.4 +0.9**
baz=289
BOZ Bozeman (W) 85.37 43 P **P** **15 46 28.7 +0.6**
BOZ Bozeman (W) 85.37 43 P **P** **15 46 29.2 +1.0**
baz=292
EGMT Eagleton 85.66 41 P **P** **15 46 30.3 +0.9**
baz=293
TPFO Pinon Flats 86.05 56 P **P** **15 46 32.3 +0.6**
baz=289
MONP2 Monument Peak 86.31 57 P **P** **15 46 33.7 +0.6**
baz=289
PSUT Pine Spring 86.35 51 P **P** **15 46 33.5 +0.3**
DUG Dugway, Tooele 86.52 49 P **P** **15 46 34.5 +0.7**
baz=291
GNI Garni 86.62 311 LR LR 16 26 48.9
comp=Z,16nm,20.5s,baz=111,slow=36
FINES FINESS Array B 87.30 335 P **P** **15 46 35.0 -2.0**
comp=Z,2.3nm,0.6s,baz=63,slow=5.1,SNR=13
FINES pP **pP** **15 47 11.0 -0.1**
comp=Z,7.5nm,1.1s,baz=66,slow=4.9,SNR=1.7
comp=Z,2.3nm,0.6s
PDAR Pinedale Array 87.83 46 P **P** **15 46 39.9 -0.3**
comp=Z,0.1nm,0.3s,baz=317,slow=6.4,SNR=1.9
PDAR pP **pP** **15 47 15.6 +1.9**
comp=Z,0.7nm,0.7s,baz=270,slow=3.0,SNR=3.5
comp=Z,0.1nm,0.3s
SDCO Great Sand Dun 92.72 49 P **P** **15 47 02.1 -1.1**
baz=296
TORD Torodi Ar. Bea 132.89 309 PKP **PKPdf** **15 53 04.5 -1.3**
comp=Z,0.4nm,0.7s,baz=23,slow=1.2,SNR=2.2
TORD SKPbc **SKPbc** **15 56 16.4 -4.6**
comp=Z,1.7nm,0.9s,baz=43,slow=2.5,SNR=6.9
PLCA Paso Flores 141.56 133 PKhKP PKPpre 15 53 16.3
comp=Z,1.3nm,0.8s,baz=274,slow=5.4,SNR=4.2
LPAZ La Paz 147.36 92 PKPbc **PKPbc** **15 53 34.6 -0.5**
comp=Z,3.8nm,0.8s,baz=312,slow=3.1,SNR=11

*IDC **09** 15:37:34.6±0.8, 8.°44S×115.°62E, h0km, mb3.9/9, mbtmp4.1/14, ML4.0/4, MS3.4/16, Error ellipse: s-maj=26.8km s-min=15.4km az=56.0*
*DJA **09** 15:37:36.5±0.2, 8.°5S×111.°6E±.°, h10km±2km, M4.5/28, mb4.7/12, mB5.0/8, MLv4.7/28, Mw(mB)4.4/8*
*NEIC **09** 15:37:37.1±1.6, 8.°41S±0.°08×115.°64E±0.°05, h19km±6km, mb4.3/10, Error ellipse: s-maj=12.0km s-min=6.8km az=158.0*
ISC 09 15:37:35.5±1.6, 8.°35S±0.°05×115.°66E±0.°03, h9km±11km, n73, σ1°s33/77, mb4.1/12, MS3.3/15, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.52**	**301**	P	**Pb**	**15 37 46.5**	**-0.2**
SRBI				S	**Sb**	**15 37 53.7**	**-0.7**
DNP	**Denpasar**	**0.55**	**234**	P	**Pn**	**15 37 49.4**	**-0.1**
DNP				S	**Sb**	**15 37 56.1**	**+0.7**
IGBI	**Denpasar**	**0.69**	**228**	P	**Pn**	**15 37 51.3**	**-0.1**
TWSI	**Taliwang, Sumb**	**1.27**	**108**	P	**Pn**	**15 38 00.1**	**+0.7**
TWSI				S	**Sg**	**15 38 17.8**	**+1.5**
JAGI	**Jajag, Banyuwa**	**1.50**	**265**	Pn	**Pn**	**15 38 03.0**	**+0.4**
JAGI	**Jajag, Banyuwa**	**1.50**	**265**	P	**Pn**	**15 38 02.8**	**+0.2**
JAGI				S	**Sg**	**15 38 23.5**	**-0.2**
ABJI	**Asem Bagus**	**1.52**	**291**	P	**Pb**	**15 38 03.3**	**-0.5**
ABJI				S	**Sg**	**15 38 23.7**	**-0.6**
KMMI	**Kalianget**	**2.12**	**307**	P	**Pn**	**15 38 11.2**	**+0.1**
KMMI				S	**Sn**	**15 38 38.1**	**+0.5**
BLJI	**Banyuglugur**	**2.13**	**286**	P	**Pn**	**15 38 12.5**	**+1.2**
BLJI				S	**Sb**	**15 38 40.0**	**-0.9**
PLAI	**Plampang**	**2.14**	**103**	P	**Pn**	**15 38 12.9**	**+1.4**
PLAI				S	**Sn**	**15 38 39.5**	**+1.2**
GMJI	**Gumukmas**	**2.20**	**272**	P	**Pn**	**15 38 13.0**	**+0.8**
GMJI				S	**Sb**	**15 38 40.6**	**-2.1**
PWJI	**Pagerwojo**	**3.83**	**275**	P	**Pn**	**15 38 35.6**	**+0.9**
PWJI				S	**Sn**	**15 39 22.6**	**+2.7**
BWJI	**Bawean**	**3.88**	**310**	P	**Pn**	**15 38 33.8**	**-1.6**
BWJI				S	**Sn**	**15 39 20.5**	**-0.6**
WBSI	**Waikabubak, Su**	**3.90**	**109**	P	**Pn**	**15 38 36.6**	**+0.9**
TBJI	**Tambak Boyo**	**4.08**	**292**	P	**Pn**	**15 38 38.6**	**+0.5**
NGJI	**Ngawi**	**4.28**	**283**	P	**Pn**	**15 38 43.1**	**+2.3**
PCJI	**Pacitan**	**4.44**	**272**	P	**Pn**	**15 38 43.9**	**+0.8**
BBKI	**Banjar Baru**	**4.92**	**350**	P	**Pn**	**15 38 48.3**	**-1.4**
UGM	**Wanagama**	**5.11**	**275**	Pn	**Pn**	**15 38 53.5**	**+1.2**
UGM	**Wanagama**	**5.11**	**275**	P	**Pn**	**15 38 54.2**	**+1.9**
	1.7nm155nm,0.8s						
BASI	**Baing, Sumba**	**5.20**	**111**	P	**Pn**	**15 38 56.4**	**+2.9**
	0.7nm108nm,1.0s						
KAPI	**Kappang**	**5.24**	**51**	Pn	**Pn**	**15 38 53.5**	**-0.6**
	26nm,0.3s,baz=242,slow=2.7,SNR=20						
KAPI				Sn	**Sn**	**15 39 51.7**	**-3.0**
	16nm,0.3s,baz=53,slow=23,SNR=8.5						
KAPI				Lg	Lg	15 40 24.8	
	5.8nm,0.3s,baz=82,slow=23,SNR=1.2						
	70nm,0.3s						
KAPI	**Kappang**	**5.24**	**51**	Pn	**Pn**	**15 38 53.2**	**-0.9**
BSSI	**Bau Bau, Buton**	**5.27**	**66**	P	**Pn**	**15 38 53.6**	**-0.9**
	0.9nm3µm138nm,0.5s						
SMRI	**Semarang**	**5.33**	**284**	P	**Pn**	**15 38 56.9**	**+1.5**
	0.8nm103nm,0.8s						
BKSI	**Bulukumba**	**5.36**	**56**	P	**Pn**	**15 38 54.7**	**-0.9**
	0.7nm2µm134nm,0.6s						
SPSI	**Sidrap Palu**	**5.97**	**43**	P	**Pn**	**15 39 03.9**	**-0.2**
	0.3nm626nm31nm,0.7s						
EDFI	**Ende, Flores**	**5.98**	**94**	P	**Pn**	**15 39 04.8**	**+0.5**
	0.1nm500nm22nm,0.7s						
MMRI	**Maumere**	**6.51**	**93**	P	**Pn**	**15 39 12.7**	**+1.1**
	0.4nm2µm95nm,1.1s						
TTSI	**Tana Toraja**	**6.70**	**38**	P	**Pn**	**15 39 14.4**	**+0.3**
	0.3nm1µm31nm,0.6s						
BBSI	**Bau Bau**	**7.42**	**68**	P	**Pn**	**15 39 25.0**	**+0.9**
	0.0nm6.8nm,0.7s						
BATI	**Baumata**	**8.11**	**104**	Pn	**Pn**	**15 39 35.5**	**+1.9**
	1.7nm,0.3s,baz=306,slow=8.7,SNR=2.0						
	9.1nm,0.3s						
BATI	**Baumata**	**8.11**	**104**	P	**Pn**	**15 39 33.8**	**+0.2**
LUWI	**Luwuk**	**10.14**	**45**	Pn	**Pn**	**15 40 02.2**	**+0.8**
MBWA	**Marble Bar**	**13.33**	**163**	Pn	**Pn**	**15 40 42.8**	**-2.2**
FITZ	**Fitzroy Crossi**	**13.71**	**136**	Pn	**Pn**	**15 40 49.6**	**-0.6**
	0.5nm,0.3s,baz=337,slow=13,SNR=13						
FITZ				Sn	**Sn**	**15 43 17.5**	**-5.4**
	0.1nm,0.3s,baz=192,slow=17,SNR=1.8						
FITZ				LR	LR	15 47 22.9	
	comp=Z,88nm,18.0s,baz=313,slow=43						
	5.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**13.71**	**136**	Pn	**Pn**	**15 40 49.3**	**-1.0**
PSA00	**Pilbara Seismi**	**13.75**	**163**	Pn	**Pn**	**15 40 48.9**	**-1.9**
GIRL	**Giralia**	**14.28**	**185**	Pn	**Pn**	**15 40 57.8**	**-0.2**
KNRA	**Kununurra**	**14.73**	**121**	Pn	**Pn**	**15 41 05.4**	**-0.9**
SIJI	**Sorong**	**17.23**	**65**	P	**P**	**15 41 38.4**	**+0.2**
	0.2nm,0.3s,baz=253,slow=20,SNR=4.2						
	9.8nm,0.9s						
FAKI	**Fak Fak**	**17.36**	**73**	Pn	**Pn**	**15 41 36.7**	**-1.6**
FAKI				IAmb	IAmb	15 42 10.3	
	comp=Z,22nm,1.0s						
RPSI	**Rantau Prapat**	**19.98**	**303**	P	**P**	**15 42 08.6**	**+0.3**
PSI	**Prapat**	**20.03**	**303**	P	**P**	**15 42 08.6**	**-0.5**
	comp=Z,6.2nm,0.9s,baz=116,slow=14,SNR=3.5						
GSI	**Gunungsitoli**	**20.42**	**297**	P	**P**	**15 42 12.7**	**-0.5**
GSI				IAmb	IAmb	15 42 26.3	
	comp=Z,25nm,1.2s						
WB0	**Warramunga Arr**	**21.39**	**124**	P	**P**	**15 42 23.1**	**-0.6**
WB0				IAmb	IAmb	15 42 44.7	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**21.44**	**124**	P	**P**	**15 42 23.7**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=300,slow=12,SNR=6.8						
WRA				LR	LR	15 50 36.2	
	comp=Z,92nm,20.7s,baz=183,slow=36						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**21.44**	**124**	P	**P**	**15 42 23.0**	**-1.2**
WRAB	**Tennant Creek**	**21.44**	**124**	P	**P**	**15 42 23.7**	**-0.5**
WR0	**Warramunga Arr**	**21.61**	**124**	P	**P**	**15 42 26.4**	**+0.3**
WR0				IAmb	IAmb	15 42 45.8	
	comp=Z,15nm,0.9s						
AS31	**Alice Springs**	**23.18**	**133**	P	**P**	**15 42 41.9**	**-0.8**
ASAR	**Alice Springs**	**23.18**	**133**	P	**P**	**15 42 42.9**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=306,slow=9.3,SNR=18						
ASAR				LR	LR	15 51 55.3	
	comp=Z,98nm,18.2s,baz=314,slow=37						
	comp=Z,5.5nm,0.8s						
ASAR	**Alice Springs**	**23.18**	**133**	P	**P**	**15 42 41.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**31.33**	**328**	P	**P**	**15 43 58.9**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=152,slow=7.8,SNR=2.1						
CMAR				LR	LR	15 58 46.0	
	comp=Z,102nm,18.1s,baz=135,slow=40						
	comp=Z,0.3nm,0.3s						
STKA	**Stephens Creek**	**33.60**	**138**	P	**P**	**15 44 17.1**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=298,slow=15,SNR=1.7						
STKA				LR	LR	15 58 06.2	
	comp=Z,44nm,18.4s,baz=8.7,slow=37						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**33.60**	**138**	P	**P**	**15 44 17.0**	**+0.7**
STKA				IAmb	IAmb	15 44 52.0	
	comp=Z,2.6nm,1.1s						
PALK	**Pallekele**	**38.15**	**293**	LR	LR	16 01 45.7	
	comp=Z,102nm,18.1s,baz=221,slow=38						
JCJ	**Chichijima**	**43.62**	**35**	LR	LR	16 05 27.1	
	comp=Z,19nm,20.5s,baz=84,slow=38						
KSRS	**Korea Array**	**46.99**	**13**	P	**P**	**15 46 09.2**	**+2.3**
	comp=Z,1.0nm,0.9s,baz=189,slow=4.8,SNR=4.3						
KSRS				LR	LR	16 08 11.5	
	comp=Z,18nm,19.4s,baz=210,slow=39						
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**56.54**	**353**	P	**P**	**15 47 18.3**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=171,slow=8.1,SNR=8.3						
SONM				LR	LR	16 12 45.8	
	comp=Z,25nm,18.4s,baz=193,slow=37						
	comp=Z,1.3nm,0.7s						
SONM	**Songino Array**	**56.54**	**353**	P	**P**	**15 47 18.3**	**-0.1**
SONM				IAmb	IAmb	15 47 29.3	
	comp=Z,3.2nm,1.0s						
KLR	**Kul'dur**	**59.05**	**12**	LR	LR	16 19 36.9	
	comp=Z,23nm,18.7s,baz=214,slow=43						
MKAR	**Makanchi Array**	**62.42**	**335**	P	**P**	**15 47 59.8**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=146,slow=16,SNR=3.5						
	comp=Z,0.5nm,0.5s						
WSAR	**Wadi Sarin**	**63.98**	**301**	LR	LR	16 14 59.9	
	comp=Z,28nm,21.5s,baz=122,slow=35						
ZALV	**Zalesovo Beam**	**67.31**	**341**	P	P	15 48 36.8	+6.3
	comp=Z,0.7nm,0.6s,baz=151,slow=6.6,SNR=2.3						
ZALV				LR	LR	16 20 37.3	
	comp=Z,19nm,18.5s,baz=94,slow=38						
VNDA	**Vanda**	**73.15**	**171**	P	**P**	**15 49 06.3**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=329,slow=8.9,SNR=5.1						
	comp=Z,1.0nm,0.9s						
AKTO	**Aktyubinsk**	**76.84**	**326**	LR	LR	16 28 42.8	
	comp=Z,21nm,21.6s,baz=126,slow=40						
ARU	**Arti**	**79.71**	**332**	LR	LR	16 30 06.2	
	comp=Z,34nm,18.3s,baz=144,slow=40						
QSPA	**South Pole Qui**	**81.64**	**180**	P	**P**	**15 49 54.1**	**+0.1**
	comp=Z,8.8nm,1.1s,baz=328,slow=4.7,SNR=4.0						
	comp=Z,2.8nm,1.1s						
QSPA	**South Pole Qui**	**81.64**	**180**	P	**P**	**15 49 54.1**	**+0.1**
SNAA	**Sanae**	**90.72**	**196**	LR	LR	16 24 07.9	
	comp=Z,37nm,20.3s,baz=246,slow=31						
FINES	**FINESS Array B**	**97.07**	**331**	LR	LR	16 41 12.5	
	comp=Z,46nm,18.4s,baz=70,slow=39						
CPUP	**Villa Florida**	**144.86**	**191**	PKP	**PKPab**	**15 57 12.7**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=178,slow=6.6,SNR=11						

*IDC **09** 16:01:12.1±0.8, 7.°90S×124.°89E, h0km, mb4.0/7, mbtmp4.1/10, ML3.9/3, MS3.0/4, Error ellipse: s-maj=28.7km s-min=15.9km az=65.0*
*NEIC **09** 16:01:13.8±2.3, 7.°83S±0.°07×124.°80E±0.°09, h10km±1km, mb4.2/9, Error ellipse: s-maj=16.1km s-min=11.2km az=77.0*
*DJA **09** 16:01:14.5±0.2, 8.°5S±2.°×127.°5E±.°, h10km, M4.2/17, mb4.4/11, mB4.9/3, MLv4.2/17, Mw(mB)4.2/3*
ISC 09 16:01:13.3±0.6, 8.°14S±0.°04×124.°73E±0.°06, h10km, n48, σ1°s94/53, mb4.0/9, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.31**	**207**	Pn	**Pb**	**16 01 55.8**	**+0.6**
	217nm,0.3s,baz=34,slow=7.6,SNR=195						
BATI				Sn	**Sg**	**16 02 29.4**	**+1.8**
	71nm,0.3s,baz=322,slow=16,SNR=9.3						
	537nm,0.4s						
BATI	**Baumata**	**2.31**	**207**	P	**Pb**	**16 01 55.1**	**0.0**
BATI				S	**Sg**	**16 02 26.5**	**-1.1**
MMRI	**Maumere**	**2.51**	**258**		**Pn**	**16 01 53.6**	**-0.6**
MMRI	**Maumere**	**2.51**	**258**	P	**Pn**	**16 01 54.6**	**+0.4**
EDFI	**Ende, Flores**	**3.06**	**258**	P	**Pn**	**16 02 02.4**	**+0.5**
BBSI	**Bau Bau**	**3.39**	**321**	P	**Pn**	**16 02 05.3**	**-1.0**
BASI	**Baing, Sumba**	**4.59**	**243**	P	**Pn**	**16 02 25.1**	**+2.3**
BSSI	**Bau Bau, Buton**	**4.64**	**295**	P	**Pn**	**16 02 22.9**	**-0.7**
BKSI	**Bulukumba**	**5.36**	**301**	P	**Pn**	**16 02 32.3**	**-1.1**
	0.1nm16nm,0.7s						
NLAI	**Namlea**	**5.41**	**26**	P	**Pn**	**16 02 34.1**	**0.0**
	0.1nm25nm,0.8s						
WBSI	**Waikabubak, Su**	**5.48**	**254**	P	**Pn**	**16 02 36.0**	**+0.9**
	0.2nm42nm,1.3s						
KAPI	**Kappang**	**5.83**	**302**	Pn	**Pn**	**16 02 41.8**	**+1.9**
	0.5nm,0.3s,baz=140,slow=16,SNR=1.4						
KAPI				Sn	**Sn**	**16 03 47.8**	**+0.9**
	0.4nm,0.3s,baz=143,slow=20,SNR=1.1						
	3.0nm,0.4s						
KAPI	**Kappang**	**5.83**	**302**	Pn	**Pn**	**16 02 38.6**	**-1.4**
SANI	**Sanana**	**6.17**	**12**	P	**Pn**	**16 02 44.7**	**+0.1**
	0.1nm1µm24nm,0.5s						
PLAI	**Plampang**	**6.91**	**264**	P	**Pn**	**16 02 54.9**	**+0.2**
	0.2nm47nm,0.6s						
TTSI	**Tana Toraja**	**7.03**	**316**	P	**Pn**	**16 02 56.5**	**+0.1**
	0.1nm1µm9.2nm,0.7s						
LUWI	**Luwuk**	**7.31**	**344**	Pn	**Pn**	**16 02 56.5**	**-3.7**
LUWI	**Luwuk**	**7.31**	**344**	P	**Pn**	**16 02 58.9**	**-1.3**
	0.2nm604nm40nm,0.9s						
TWSI	**Taliwang, Sumb**	**7.78**	**265**	P	**Pn**	**16 03 05.9**	**-0.8**
	0.1nm12nm,0.8s						
MTN	**Manton Dam**	**7.85**	**127**		**Pn**	**16 03 09.4**	**+1.8**
LBMI	**Labuha**	**7.95**	**21**	P	**Pn**	**16 03 09.6**	**+0.6**
	0.1nm11nm,1.6s						
KNRA	**Kununurra**	**8.47**	**153**		**Pn**	**16 03 18.1**	**+1.9**
FITZ	**Fitzroy Crossi**	**9.94**	**175**	Pn	**Pn**	**16 03 36.8**	**+0.4**
	1.1nm,0.3s,baz=358,slow=7.7,SNR=88						
FITZ				Sn	**Sn**	**16 05 22.7**	**-5.4**
	1.2nm,0.3s,baz=15,slow=20,SNR=7.4						
FITZ				LR	LR	16 08 14.2	
	comp=Z,81nm,21.9s,baz=10.0,slow=42						
FITZ	**Fitzroy Crossi**	**9.94**	**175**		**Pn**	**16 03 36.6**	**+0.2**
MBWA	**Marble Bar**	**13.82**	**200**	Pn	**Pn**	**16 04 28.8**	**-0.6**
WB0	**Warramunga Arr**	**14.88**	**142**	Pn	**Pn**	**16 04 42.1**	**-1.8**
WB0				IAmb	IAmb	16 04 58.1	
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**14.98**	**143**	Pn	**Pn**	**16 04 43.3**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=315,slow=14,SNR=48						
WRA				Sn	**Sn**	**16 07 26.7**	**-4.8**
	comp=Z,0.5nm,0.3s,baz=308,slow=22,SNR=6.8						
WRA	**Warramunga Arr**	**14.98**	**143**	Pn	**Pn**	**16 04 43.0**	**-2.4**
WRAB	**Tennant Creek**	**14.98**	**143**	Pn	**Pn**	**16 04 43.1**	**-2.2**
WRAB				IAmb	IAmb	16 04 50.3	
	comp=Z,6.8nm,0.7s						
LEM	**Lembang**	**17.01**	**273**	LR	LR	16 13 14.1	
	comp=Z,62nm,20.0s,baz=234,slow=42						
AS31	**Alice Springs**	**17.77**	**151**	Pn	**Pn**	**16 05 21.7**	**+0.7**
ASAR	**Alice Springs**	**17.77**	**151**	P	**Pn**	**16 05 21.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=323,slow=11,SNR=24						
ASAR				S	**Sn**	**16 08 32.4**	**-6.9**
	comp=Z,0.9nm,0.7s,baz=316,slow=20,SNR=4.5						
ASAR				LR	LR	16 12 42.1	
	comp=Z,99nm,22.0s,baz=292,slow=38						
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**17.77**	**151**	Pn	**Pn**	**16 05 21.8**	**+0.8**
KRVT	**Keravat (AS076**	**27.40**	**84**	P	**P**	**16 06 58.0**	**-1.3**
	comp=Z,22nm,0.6s,baz=190,slow=3.9,SNR=3.7						
STKA	**Stephens Creek**	**28.36**	**149**	P	**P**	**16 07 10.1**	**+2.3**
	comp=Z,1.5nm,0.6s,baz=326,slow=9.6,SNR=7.4						
	comp=Z,1.5nm,0.6s						
STKA	**Stephens Creek**	**28.36**	**149**	P	**P**	**16 07 10.3**	**+2.5**
STKA				IAmb	IAmb	16 07 15.8	
	comp=Z,3.0nm,1.3s						
EIDS	**Eidsvold**	**30.40**	**127**	P	**P**	**16 07 27.1**	**+1.2**
CMAR	**Chiang Mai Arr**	**36.68**	**316**	P	**P**	**16 08 20.1**	**-0.6**
CMAR				LR	LR	16 24 58.4	
	comp=Z,17nm,18.6s,baz=195,slow=39						
	comp=Z,1.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**52.50**	**7**	P	**P**	**16 10 25.9**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=187,slow=9.7,SNR=2.9						
	comp=Z,0.9nm,0.5s						
SONM	**Songino Array**	**58.04**	**346**	P	**P**	**16 11 05.6**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=142,slow=5.1,SNR=4.1						
	comp=Z,0.6nm,0.9s						
MK31	**Makanchi Array**	**66.43**	**330**	P	**P**	**16 12 02.1**	**-0.7**
MK31				IAmb	IAmb	16 12 03.2	
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**66.43**	**330**	P	**P**	**16 12 02.5**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=132,slow=7.7,SNR=45						
	comp=Z,3.5nm,0.6s						
MKAR	**Makanchi Array**	**66.43**	**330**	P	**P**	**16 12 02.1**	**-0.7**
ZALV	**Zalesovo Beam**	**70.39**	**336**	P	**P**	**16 12 26.1**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=136,slow=4.9,SNR=8.9						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**70.39**	**336**	P	**P**	**16 12 26.3**	**-1.1**
KURK	**Kurchatov**	**70.86**	**331**	P	**P**	**16 12 29.8**	**-0.6**
VNDA	**Vanda**	**72.00**	**172**	P	**P**	**16 12 38.2**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=318,slow=8.2,SNR=8.5						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	**72.00**	**172**	P	**P**	**16 12 38.3**	**+1.4**
VNDA				IAmb	IAmb	16 13 02.5	
	comp=Z,3.7nm,1.5s						

*IDC **09** 16:07:29.1±1.4, 18.°30S×174.°56W, h0km, mb3.7/4, mbtmp3.8/5, ML3.9/1, MS3.2/7, Error ellipse: s-maj=59.2km s-min=24.8km az=135.0*
ISC 09 16:07:36.6±1.6, 18.°3S±0.°2×173.°9W±0.°3, h100km, n12, σ0°s74/6, mb3.7/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.82**	**26**	P	**Pn**	**16 08 47.4**	**+0.4**
	4.1nm,0.3s,baz=247,slow=13,SNR=6.4						
AFI				Sn	**Sn**	**16 09 41.0**	**-0.7**
	0.2nm,0.3s,baz=240,slow=20,SNR=1.4						
AFI				LR	LR	16 10 27.1	
	comp=Z,180nm,20.1s,baz=37,slow=35						
	48nm,0.9s						
MSVF	**Nonsavu**	**7.67**	**273**	LR	LR	16 11 02.2	
	comp=Z,235nm,19.9s,baz=64,slow=30						
DZM	**Mont Dzumac**	**18.81**	**255**	LR	LR	16 18 21.6	
	comp=Z,79nm,18.3s,baz=9.0,slow=36						
URZ	**Urewera**	**21.38**	**200**	P	**P**	**16 12 15.7**	**-0.3**
	11nm,0.9s,baz=4.8,slow=12,SNR=2.5						
	11nm,0.9s						
WRA	**Warramunga Arr**	**48.76**	**259**	P	**P**	**16 16 11.2**	**-0.6**
	1.2nm,1.1s,baz=96,slow=7.3,SNR=3.8						
	1.2nm,1.1s						
ASAR	**Alice Springs**	**48.80**	**254**	P	**P**	**16 16 12.2**	**+0.1**
	0.6nm,0.6s,baz=86,slow=8.5,SNR=18						
	0.6nm,0.6s						
NVAR	**Mina Array Bea**	**76.80**	**42**	P	P	16 19 25.6	+7.9
	0.2nm,0.5s,baz=229,slow=8.2,SNR=2.2						
	0.2nm,0.5s						
KSRS	**Korea Array**	**77.89**	**316**	LR	LR	16 49 09.5	
	comp=Z,8.9nm,19.3s,baz=245,slow=32						
TXAR	**Lajitas Array**	**82.63**	**56**	LR	LR	16 47 53.2	
	comp=Z,16nm,20.8s,baz=176,slow=29						
KLR	**Kul'dur**	**82.68**	**328**	LR	LR	16 49 20.3	
	comp=Z,21nm,21.4s,baz=163,slow=30						
PDAR	**Pinedale Array**	**84.74**	**42**	LR	LR	16 50 10.7	
	comp=Z,16nm,19.3s,baz=145,slow=30						
BRTR	**Keskin Array B**	**148.02**	**318**	PKPbc	**PKPab**	**16 27 14.6**	**+0.7**
	1.4nm,0.9s,baz=0.0,slow=1.4,SNR=5.2						

*IDC **09** 16:07:56.0±0.8, 6.°73N×72.°96W, h164km±10km, mb2.6/1, mbtmp3.8/3, Error ellipse: s-maj=46.2km s-min=7.9km az=132.0*
*RSNC **09** 16:07:57.3±1.1, 6.°79N×73.°16W, h147km±4km, ML3.6, Mw3.8*
ISC 09 16:07:55.2±0.9, 6.°82N±0.°03×73.°13W±0.°04, h159km±6km, n36, σ1°s45/69, 3C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**194**	↓*i*P	**Pn**	**16 08 17.0**	**0.0**
BARC				*e*S	**Sn**	**16 08 32.2**	**-1.4**
BARC				*i*		16 08 34.8	
	comp=Z,2µm,0.3s						
BRRC	**Barranca, Sant**	**0.65**	**296**	↑*i*P	**Pn**	**16 08 18.8**	**+0.4**
BRRC				*e*S	**Sn**	**16 08 35.9**	**-0.2**
BRRC				*i*		16 08 40.0	
	comp=Z,715nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**39**	↑*i*P	**Pn**	**16 08 19.8**	**+0.7**
PAMC				*e*S	**Sn**	**16 08 37.0**	**-0.3**
PAMC				*i*		16 08 40.3	
	comp=Z,498nm,0.4s						
RUSC	**La Rusia**	**0.92**	**177**

SDV	**Santo Domingo**	**3.21**	**50**	P		**Pn**	**16 08 46.4**	**+0.6**
	comp=Z,96nm,0.3s,baz=238,slow=13,SNR=59							
SDV				S		**Sn**	**16 09 25.0**	**-0.1**
	comp=Z,52nm,0.4s,baz=253,slow=19,SNR=15							
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P		**Pn**	**16 08 47.0**	**+1.3**
ARGC				*e*S		**Sn**	**16 09 26.8**	**+1.8**
ARGC				*i*			16 09 35.2	
	comp=Z,60nm,0.3s							
ANIL	**Santa Ana**	**3.24**	**225**	*e*P		**Pn**	**16 08 48.3**	**+2.1**
ANIL				*e*S		**Sn**	**16 09 27.0**	**+1.2**
PRAC	**Prado**	**3.55**	**210**	*e*P		**Pn**	**16 08 50.9**	**+0.9**
PRAC				*e*S		**Sn**	**16 09 32.5**	**0.0**
PRAC				*i*			16 09 41.7	
	comp=Z,195nm,0.3s							
PLMC	**San Jos del P**	**3.67**	**239**	*e*P		**Pn**	**16 08 52.5**	**+0.9**
PLMC				*e*S		**Sn**	**16 09 34.9**	**-0.5**
PLMC				*i*			16 09 38.9	
	comp=Z,60nm,0.2s							
SJCC	**San Jacinto, C**	**3.67**	**327**	*e*P		**Pn**	**16 08 50.9**	**-0.7**
SJCC				*e*S		**Sn**	**16 09 32.1**	**-3.4**
SJCC				*i*			16 09 36.4	
	comp=Z,61nm,0.3s							
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*e*P		**Pn**	**16 08 57.3**	**-0.9**
CRJC				*e*S		**Sn**	**16 09 44.7**	**-2.6**
CRJC				*i*			16 09 46.8	
	comp=Z,83nm,0.2s							
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P		**Pn**	**16 08 59.4**	**+0.1**
YOTC				*e*S		**Sn**	**16 09 48.8**	**-0.5**
SMRC	**Santa Marta, M**	**4.45**	**346**	*e*P		**Pn**	**16 09 02.1**	**+0.5**
SMRC				*e*S		**Sn**	**16 09 50.1**	**-3.4**
SMRC				*i*			16 09 54.3	
	comp=Z,52nm,0.2s							
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P		**Pn**	**16 09 04.0**	**-0.9**
MACC				*e*S		**Sn**	**16 09 54.9**	**-4.4**
MACC				*i*			16 10 07.4	
	comp=Z,47nm,0.5s							
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P		**Pn**	**16 09 11.2**	**-0.2**
GARC				*e*S		**Sn**	**16 10 08.4**	**-2.4**
GARC				*i*			16 10 09.8	
	comp=Z,60nm,0.3s							
POPC	**Popayan, Colom**	**5.53**	**220**	*e*P		**Pn**	**16 09 16.6**	**+0.5**
POPC				*e*S		**Sn**	**16 10 15.5**	**-3.8**
TXAR	**Lajitas Array**	**36.46**	**312**	P		**P**	**16 14 46.9**	**+1.7**
	comp=Z,0.2nm,0.8s,baz=124,slow=9.2,SNR=1.7							
	comp=Z,0.2nm,0.8s							
ASAR	**Alice Springs**	**149.10**	**234**	PKPbc		**PKiKP**	**16 27 25.5**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=122,slow=3.6,SNR=8.2							
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc		**PKiKP**	**16 27 28.7**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=108,slow=2.8,SNR=9.7							

IDC 09 16:29:57.8±4.9, 2°.68S×152°.29E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=77.9km s-min=43.6km az=14.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.64**	**189**	Pn		Pb	16 30 28.6	-0.3
	89nm,0.3s,baz=18,slow=20,SNR=303							
KRVT				Sn		Sn	16 30 41.6	-8.2
	198nm,0.3s,baz=53,slow=20,SNR=12							
DZM	**Mont Dzumac**	**23.68**	**146**	P		P	16 35 11.2	-0.3
	4.8nm,0.9s,baz=325,slow=19,SNR=1.6							
	4.8nm,0.9s							
WRA	**Warramunga Arr**	**24.53**	**224**	P		P	16 35 18.7	-0.6
	0.3nm,0.6s,baz=50,slow=9.5,SNR=6.4							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**27.42**	**219**	P		P	16 35 46.2	+0.7
	0.6nm,1.0s,baz=50,slow=9.0,SNR=5.7							
	0.6nm,1.0s							
STKA	**Stephens Creek**	**30.74**	**198**	P		P	16 36 14.4	-0.5
	1.1nm,0.5s,baz=11,slow=10,SNR=1.6							
	1.1nm,0.5s							

*TEH **09** 17:34:54.7, 35°.36N×46°.33E, h6km, ML3.0*
*ISN **09** 17:34:58.8±1.2, 35°.34N×46°.27E, h10km±999km, ML2.4*
ISC 09 17:34:55.0±0.9, 35°.38N±0°.03×46°.32E±0°.04, h10km, n23, σ1§40/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.68**	**175**	*e*Pg		**Pb**	**17 35 08.5**	**-0.5**
ILIN	**Lien**	**0.70**	**131**	*e*Sg		**Sb**	**17 35 19.1**	**-0.1**
ILIN				*e*Pg		**Pg**	**17 35 08.3**	**-0.3**
SNGE	**Sanandaj**	**0.89**	**108**	*e*Pg		**Pg**	**17 35 11.2**	**-1.0**
IGHG	**Ghaleghazi**	**1.06**	**169**	*e*Pg		**Pn**	**17 35 16.6**	**+0.4**
IGHG				*e*			17 35 33.2	
	comp=Z,2μm,0.6s							
KER	**Kermanshah**	**1.20**	**146**	*e*Pg		**Pn**	**17 35 18.9**	**+1.0**
KCHF	**Cheshme Sefid,**	**1.25**	**151**	*e*Pg		**Pg**	**17 35 19.9**	**+0.9**
KCHF				*e*			17 35 39.3	
	comp=Z,3μm,0.3s							
MAHB	**Mahabad**	**1.47**	**341**	*e*Pn		**Pb**	**17 35 23.0**	**+0.4**
IKOM	**Komasi**	**1.55**	**140**	*e*Pn		**Pg**	**17 35 24.8**	**0.0**
IKOM				*e*			17 35 55.4	
	comp=Z,2μm,0.6s							
IBZA	**Bozab**	**1.56**	**125**	*e*Pn		**Pg**	**17 35 24.3**	**-0.6**
IHSH	**Hashtrud**	**2.07**	**21**	*e*Pn		**Pb**	**17 35 33.4**	**+0.5**
IDOB	**Doab**	**2.21**	**135**	*e*Pn		**Pg**	**17 35 35.7**	**-1.6**
IKFM	**Kafar-mosalman**	**2.24**	**145**	*e*Pn		**Pb**	**17 35 36.0**	**+0.5**
IKFM				*e*			17 36 11.1	
	comp=Z,1μm,0.6s							
IBDR	**Badra**	**2.28**	**188**	*e*Pg		**Pg**	**17 35 39.0**	**+0.2**
	baz=7.0							
IBDR				*e*Sg		**Sg**	**17 36 09.0**	**+0.6**
IBDR				AML		AML	17 36 22.4	
	comp=N,26nm,0.4s							
IBDR				AML		AML	17 36 27.4	
	comp=E,33nm,0.4s							
IAZR	**Azarshahr**	**2.31**	**353**	*e*Pn		**Pb**	**17 35 37.0**	**0.0**
IAZR				*e*			17 36 16.9	
	comp=Z,1μm,0.8s							
ZNJK	**Zanjan**	**2.31**	**55**	*e*Pg		**Pb**	**17 35 36.6**	**-0.4**
BHD	**Baghdad**	**2.64**	**218**	*e*Pg		**Pg**	**17 35 44.0**	**-1.6**
BHD				*e*Sg		**Sg**	**17 36 18.0**	**-1.9**
ISRB	**Sarab**	**2.67**	**24**	*e*Pn		**Pb**	**17 35 41.8**	**-1.3**
QABG	**Abgarm-Qazvin**	**2.69**	**82**	*e*Pn		**Pb**	**17 35 42.4**	**-0.9**
IRAZ	**Razeghan**	**2.95**	**88**	*e*Pn		**Pb**	**17 35 45.9**	**-1.9**
ISHB	**Shabestar**	**2.96**	**349**	*e*Pn		**Pb**	**17 35 45.7**	**-2.2**
ISHB				*e*			17 36 35.4	
	comp=Z,268nm,0.3s							
ASAO	**Ashtian**	**3.16**	**104**	*e*Pn		**Pb**	**17 35 51.9**	**+0.6**
GIDE	**GILAN DEYLAMAN**	**3.29**	**61**	*e*Pn		**Pg**	**17 35 56.0**	**-2.1**
GRMI	**Germi**	**3.65**	**20**	*e*Pn		**Pn**	**17 35 55.6**	**+4.0**

*IDC **09** 17:47:53.6±0.9, 30°.60N×132°.82E, h0km, mb3.7/11, mbtmp3.7/14, ML2.9/3, MS3.1/3, Error ellipse: s-maj=29.4km s-min=20.1km az=73.0*
*JMA **09** 17:47:56.4±0.2, 30°.6N±0°.7×132°.8E±0°.9, h68km, MV3.4/35, SHIKOKU BASIN*
ISC 09 17:47:55.3±0.8, 30°.67N±0°.06×132°.81E±0°.06, h10km, n34, σ1§28/38, mb3.6/11, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNAR	**Kushima--Naru**	**1.57**	**303**	*i* P		**Pn**	**17 48 23.6**	**+0.3**
JNAR				S		**Sn**	**17 48 43.2**	**-0.4**
JTN	**Tanegashima 3**	**1.57**	**270**	P		**Pn**	**17 48 22.7**	**-0.6**
JTN				S		**Sn**	**17 48 42.4**	**-1.3**
JNKG	**Nichinankitago**	**1.58**	**309**	P		**Pn**	**17 48 23.7**	**+0.4**
JNKG				S		**Sn**	**17 48 43.2**	**-0.5**
JMTN	**Minamitane**	**1.67**	**261**	P		**Pn**	**17 48 24.2**	**-0.3**
JMTN				S		**Sn**	**17 48 44.7**	**-1.3**
JTSR	**Tashiro 2**	**1.69**	**287**	P		**Pn**	**17 48 24.8**	**-0.1**
JTZ	**Takazaki**	**1.92**	**310**	P		**Pn**	**17 48 28.2**	**+0.2**
JTZ				S		**Sn**	**17 48 51.1**	**-1.1**
JTO	**Tosashimizu**	**2.18**	**360**	*i* P		**Pn**	**17 48 30.8**	**-0.9**
JTO				S		**Sn**	**17 48 54.1**	**-4.7**
JNN	**Nakanoshima**	**2.67**	**253**	P		**Pn**	**17 48 37.6**	**-0.7**
JNN				S		**Sn**	**17 49 08.2**	**-2.5**
JSJ	**Shimokoshiki**	**2.83**	**292**	P		**Pn**	**17 48 40.0**	**-0.6**
JSJ				S		**Sn**	**17 49 12.9**	**-1.9**
JNA	**Nagahama**	**2.89**	**355**	*i* P		**Pn**	**17 48 41.6**	**+0.2**
JMN	**Monobe**	**3.18**	**16**	P		**Pn**	**17 48 45.5**	**0.0**
JAI	**Aioi**	**3.41**	**24**	P		**Pn**	**17 48 48.1**	**-0.5**
JTAJ	**Takarajima**	**3.47**	**245**	*e*P		**Pn**	**17 48 50.3**	**+0.9**
JTAJ				*e*S		**Sn**	**17 49 29.4**	**-1.2**
JTNC	**Tanabenakahech**	**3.94**	**36**	P		**Pn**	**17 48 56.1**	**+0.3**
JAMN	**Amaminishikomi**	**3.98**	**234**	P		**Pn**	**17 48 56.6**	**+0.2**
MJAR	**Matsushiro Arr**	**7.39**	**36**	Pn		**Pn**	**17 49 43.6**	**+0.4**
	0.1nm,0.3s,baz=201,slow=11,SNR=6.1							
	0.9nm,0.4s							

KSRS	**Korea Array**	**7.89**	**330**	Pn		**Pn**	**17 49 51.0**	**+1.0**
	0.1nm,0.3s,baz=148,slow=15,SNR=2.2							
KSRS				LR		LR	17 52 57.6	
	comp=Z,26nm,20.8s,baz=175,slow=38							
	0.4nm,0.5s							
KLR	**Kul'dur**	**18.56**	**358**	P		**P**	**17 52 13.4**	**+1.3**
	0.1nm,0.3s,baz=186,slow=6.9,SNR=4.4							
	1.3nm,0.8s							
SONM	**Songino Array**	**26.50**	**318**	P		**P**	**17 53 33.2**	**+0.3**
	0.1nm,0.3s,baz=140,slow=11,SNR=1.9							
	0.1nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**32.59**	**101**	T		T	18 28 43.4	
	baz=296,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**32.60**	**101**	T		T	18 28 42.8	
	baz=296,slow=75,SNR=10							
H11N3	**WAKE ISLAND Hy**	**32.61**	**101**	T		T	18 28 43.9	
	baz=296,slow=75,SNR=14							
MKAR	**Makanchi Array**	**41.82**	**307**	P		**P**	**17 55 46.5**	**+1.2**
	0.6nm,0.9s,baz=94,slow=9.1,SNR=3.6							
	0.6nm,0.9s							
KURBB	**Kurchatov Arra**	**44.63**	**313**	P		**P**	**17 56 08.1**	**+0.4**
	0.6nm,0.7s,baz=100,slow=9.2,SNR=4.2							
	0.6nm,0.7s							
WRA	**Warramunga Arr**	**50.34**	**178**	P		**P**	**17 56 49.8**	**-2.6**
	0.6nm,0.9s,baz=356,slow=9.0,SNR=2.1							
	0.6nm,0.9s							
ASAR	**Alice Springs**	**54.04**	**179**	P		**P**	**17 57 21.0**	**+1.1**
	0.4nm,0.7s,baz=16,slow=12,SNR=4.2							
	0.4nm,0.7s							
ARU	**Arti**	**56.50**	**320**	P		**P**	**17 57 36.9**	**-0.4**
	0.9nm,0.3s,baz=78,slow=4.1,SNR=5.4							
	0.9nm,0.3s							
ILAR	**Eielson Array**	**58.62**	**30**	P		**P**	**17 57 52.4**	**+0.3**
	0.2nm,0.6s,baz=286,slow=6.5,SNR=2.6							
	0.2nm,0.6s							
KBZ	**Khabaz**	**69.48**	**309**	P		**P**	**17 59 05.1**	**+1.3**
	2.0nm,0.8s,baz=154,slow=3.7,SNR=4.3							
	2.0nm,0.8s							
FINES	**FINESS Array B**	**70.98**	**331**	P		**P**	**17 59 12.1**	**-0.6**
	4.6nm,0.9s,baz=76,slow=5.9,SNR=11							
	4.6nm,0.9s							
AKASG	**Malin Array Be**	**74.75**	**320**	P		**P**	**17 59 35.5**	**+0.2**
	0.7nm,0.4s,baz=55,slow=6.1,SNR=7.0							
	0.7nm,0.4s							
BRTR	**Keskin Array B**	**77.45**	**309**	LR		LR	18 37 12.2	
	comp=Z,44nm,19.4s,baz=220,slow=38							
NVAR	**Mina Array Bea**	**84.54**	**48**	P		**P**	**18 00 29.7**	**+0.6**
	0.4nm,0.6s,baz=305,slow=3.6,SNR=2.6							
	0.4nm,0.6s							
LPIG	**La Paz**	**98.62**	**56**	LR		LR	18 38 46.5	
	comp=Z,14nm,19.4s,baz=194,slow=31							

*SJA **09** 17:56:07.8±0.7, 31°.74S×72°.62W, h11km±8km, ML4.8, MW4.5*
*VAO **09** 17:56:12.5±0.3, 31°.71S×72°.25W, h10km, mb4.6*
*IDC **09** 17:56:12.7±0.6, 31°.73S×71°.90W, h0km, mb4.4/11, mbtmp4.3/15, ML4.3/4, MS3.9/21, Error ellipse: s-maj=23.0km s-min=17.7km az=89.0*
*NEIC **09** 17:56:13.5±2.0, 31°.73S±0°.03×72°.21W±0°.07, h18km±3km, mb4.7/31, Mwr4.5/73, ML4.5(GUC), Error ellipse: s-maj=8.4km s-min=3.7km az=94.0*
*GUC **09** 17:56:14.4±0.6, 31°.74S×72°.03W, h39km±3km, ML4.6*
*NEIC **09** 17:56:15, 31°.74S×72°.18W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr6.23; Mθθ0.26; Mφφ-6.48; Mrθ0.13; Mθφ0.47; Mφr0.32; Fault plane solution: Mo6.39000×10^15^ NP1:φs174.60000°, δ43.62000°, λ87.92000°. NP2:φs357.46000°, δ46.42000°, λ91.98000°. Principal axes: T 6.2401, Plg88.0000°, Azm312.0000°; N 0.2841, Plg1.0000°, Azm176.0000°; P -6.5242, Plg1.0000°, Azm86.0000°;*
ISC 09 17:56:11.5±1.5, 31°.71S±0°.02×72°.24W±0°.04, h2km±9km, n248, σ1§82/290, mb4.7/24, MS4.0/18, 13C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO06	**Fray Jorge**	**1.16**	**27**	Pn		**Pn**	**17 56 34.6**	**-0.1**
CO06	**Fray Jorge**	**1.16**	**27**	*e*P		**Pn**	**17 56 34.8**	**+0.1**
CO06				*i* S		**Sg**	**17 56 52.6**	**+4.0**
CO06				IAML			17 56 57.4	
	comp=N,13μm,0.5s							
VA06	**Catapilco**	**1.17**	**137**	Pn		**Pn**	**17 56 33.8**	**-1.0**
VA06				Sn		**Sb**	**17 56 48.4**	**-1.6**
VA06	**Catapilco**	**1.17**	**137**	*i*P		**Pn**	**17 56 33.8**	**-1.0**
VA06				*i* S		**Sb**	**17 56 48.1**	**-1.9**
VA06				IAML			17 56 54.1	
	comp=E,41μm,0.3s							
CO02	**Combarbal**	**1.18**	**65**			**Pn**	**17 56 34.1**	**-1.0**
CO02				Sn		**Sb**	**17 56 47.9**	**-2.5**
CO02	**Combarbal**	**1.18**	**65**	*i*P		**Pn**	**17 56 34.1**	**-1.0**
CO02				*i* S		**Sb**	**17 56 48.8**	**-1.5**
CO02				IAML			17 56 50.3	
	comp=E,44μm,0.6s							
CO02	**Combarbal**	**1.18**	**65**	*e*P		**Pn**	**17 56 34.0**	**-1.1**
CO02				IAML			17 56 57.8	
	comp=Z,9μm,0.6s							
VA01	**Torpederas**	**1.40**	**159**			**Pn**	**17 56 37.6**	**-0.5**
VA01				Sn		**Sn**	**17 56 53.5**	**-3.7**
VA01	**Torpederas**	**1.40**	**159**	*e*P		**Pb**	**17 56 38.3**	**-0.1**
VA01				*i* S		**Sn**	**17 56 54.0**	**-3.1**
VA01	**Torpederas**	**1.40**	**159**	*e*P		**Pn**	**17 56 37.4**	**-0.6**
CO03	**El Pedregal**	**1.59**	**57**			**Pn**	**17 56 40.7**	**0.0**
CO03				Sn		**Sn**	**17 57 00.8**	**-1.2**
CO03	**El Pedregal**	**1.59**	**57**	*i*P		**Pn**	**17 56 40.8**	**0.0**
CO03				*i* S		**Sn**	**17 57 00.4**	**-1.5**
CO03				IAML			17 57 03.8	
	comp=E,9μm,0.3s							
CO03	**El Pedregal**	**1.59**	**57**	*e*P		**Pn**	**17 56 37.4**	**-3.3**
CO03				*e*P		**Pb**	**17 56 41.0**	**-0.6**
CO03				IAML			17 57 11.2	
	comp=Z,5μm,0.9s							
ROCH	**El Roble**	**1.63**	**141**	*i*P		**Pn**	**17 56 41.1**	**-0.4**
ROCH				*i* S		**Sb**	**17 57 02.1**	**-1.6**
ROCH				IAML			17 57 09.2	
	comp=N,24μm,0.6s							
ROC1	**El Roble**	**1.64**	**141**			**Pn**	**17 56 40.9**	**-0.6**
ROC1				Sn		**Sn**	**17 57 00.8**	**-2.5**
ROC1	**El Roble**	**1.64**	**141**	*e*P		**Pn**	**17 56 37.4**	**-4.1**
ROC1				*e*P		**Pn**	**17 56 41.0**	**-0.6**
VA03	**San Esteban**	**1.78**	**127**			**Pn**	**17 56 43.0**	**-0.3**
VA03				Sn		**Sn**	**17 57 02.9**	**-3.7**
VA03	**San Esteban**	**1.78**	**127**	*i*P		**Pn**	**17 56 43.2**	**-0.1**
VA03				*i* S		**Sn**	**17 57 04.8**	**-1.8**
VA03				IAML			17 57 11.2	
	comp=N,15μm,0.3s							
VA03	**San Esteban**	**1.78**	**127**	*e*P		**Pn**	**17 56 43.0**	**-0.3**
VA03				*e*P		**Pb**	**17 56 43.3**	**-1.5**
VA03				*e*S		**Sn**	**17 57 01.4**	**-5.2**
VA03				IAML			17 57 14.5	
	comp=Z,8μm,0.7s							
MT02	**Curacav**	**1.81**	**149**			**Pn**	**17 56 43.5**	**-0.1**
MT02				Sn		**Sn**	**17 57 02.1**	**-5.0**
MT02	**Curacav**	**1.81**	**149**	*i* P		**Pn**	**17 56 43.6**	**-0.1**
MT02				*i* S		**Sn**	**17 57 06.3**	**-0.8**
MT02	**Curacav**	**1.81**	**149**	*e*P		**Pn**	**17 56 43.0**	**-0.6**
MT02				IAML			17 57 13.2	
	comp=Z,5μm,0.8s							
PEL	**Peldehue**	**1.94**	**138**			**Pn**	**17 56 45.1**	**-0.5**
PEL				Sn		**Sn**	**17 57 06.8**	**-3.8**
PEL	**Peldehue**	**1.94**	**138**	*i*P		**Pn**	**17 56 45.6**	**+0.1**
PEL				*i* S		**Sn**	**17 57 09.9**	**-0.7**
PEL				IAML			17 57 18.3	
	comp=N,8μm,0.3s							
PEL	**Peldehue**	**1.94**	**138**	*e*P		**Pn**	**17 56 46.0**	**+0.4**
PEL				*e*S		**Sn**	**17 57 05.9**	**-4.7**
GO04	**Tololo Observa**	**1.97**	**39**			**Pn**	**17 56 46.3**	**+0.1**
GO04	**Tololo Observa**	**1.97**	**39**	*i*P		**Pn**	**17 56 46.4**	**+0.3**
GO04				*i* S		**Sb**	**17 57 12.6**	**-0.8**
GO04	**Tololo Observa**	**1.97**	**39**	*e*P		**Pn**	**17 56 46.5**	**+0.4**
GO04				*e*S		**Sn**	**17 57 08.9**	**-2.6**
CO05	**La Serena**	**1.98**	**26**			**Pn**	**17 56 46.1**	**+0.1**
CO05	**La Serena**	**1.98**	**26**	*e*P		**Pn**	**17 56 47.3**	**+1.2**
CO05				*i* S		**Sb**	**17 57 12.6**	**-0.8**
CO05				IAML			17 57 20.8	
	comp=N,7μm,0.5s							
VA05	**Santo Domingo**	**2.01**	**165**			**Pn**	**17 56 46.0**	**-0.4**
VA05	**Santo Domingo**	**2.01**	**165**	*e*P		**Pn**	**17 56 46.7**	**+0.3**
VA05				*i* S		**Sg**	**17 57 17.1**	**+1.0**
VA05				IAML			17 57 24.3	
	comp=N,11μm,0.4s							
MT05	**Renca**	**2.10**	**143**	Pn		**Pn**	**17 56 47.4**	**-0.4**
MT05	**Renca**	**2.10**	**143**	*i*P		**Pn**	**17 56 48.2**	**+0.4**
MT05				*i* S		**Sn**	**17 57 14.1**	**-0.5**
MT05				IAML			17 57 21.0	
	comp=E,9μm,0.4s							
MT05	**Renca**	**2.10**	**143**	*e*P		**Pn**	**17 56 48.0**	**+0.2**
MT05				*e*S		**Sn**	**17 57 12.4**	**-2.2**
MT05				IAML			17 57 21.5	
	comp=Z,6μm,0.9s							
MT03	**Universidad Ad**	**2.30**	**141**			**Pn**	**17 56 50.6**	**0.0**
MT03	**Universidad Ad**	**2.30**	**141**	*e*P		**Pn**	**17 56 50.8**	**+0.3**
MT03				*i* S		**Sn**	**17 57 18.7**	**-0.8**
MT03				IAML			17 57 28.1	
	comp=E,7μm,0.5s							
MT03	**Universidad Ad**	**2.30**	**141**	*e*P		**Pn**	**17 56 51.0**	**+0.4**
MT03				*e*S		**Sb**	**17 57 22.4**	**-0.4**
MT03				IAML			17 57 32.9	
	comp=Z,6μm,0.6s							
MT01	**Popeta**	**2.31**	**159**			**Pn**	**17 56 50.4**	**-0.1**
MT01	**Popeta**	**2.31**	**159**	*e*P		**Pn**	**17 56 50.9**	**+0.4**
MT01				*i* S		**Sn**	**17 57 15.3**	**-4.2**
MT01				IAML			17 57 32.0	
	comp=N,3μm,0.6s							
MT01	**Popeta**	**2.31**	**159**	*e*P		**Pn**	**17 56 51.0**	**+0.5**
MT01				*e*S		**Sb**	**17 57 20.4**	**-2.3**
MT01				IAML			17 57 33.3	
	comp=Z,2μm,0.6s							
FCH	**Farellones**	**2.31**	**135**	*i*P		**Pn**	**17 56 51.3**	**+0.5**
FCH				*i* S		**Sn**	**17 57 19.6**	**-0.4**
FCH				IAML			17 57 26.1	
	comp=E,3μm,0.3s							
MT09	**Talagante**	**2.32**	**153**			**Pn**	**17 56 50.8**	**0.0**
MT09	**Talagante**	**2.32**	**153**	*e*P		**Pn**	**17 56 51.6**	**+0.8**
MT09				*i* S		**Sn**	**17 57 19.2**	**-0.7**
MT09				IAML			17 57 29.9	
	comp=E,5μm,0.5s							
RTLS	**Leoncito**	**2.51**	**93**	*e*P		**Pb**	**17 56 56.0**	**-1.5**
RTLS				*e*S		**Sn**	**17 57 23.9**	**-1.0**
RTLS				IAML			17 57 29.1	
	comp=Z,6μm,0.5s							
CO01	**Juntas del Tor**	**2.53**	**47**			**Pn**	**17 56 54.0**	**+0.2**
CO01	**Juntas del Tor**	**2.53**	**47**	*i*P		**Pn**	**17 56 55.2**	**+1.4**
CO01				*i* S		**Sb**	**17 57 28.9**	**-0.5**
CO01				IAML			17 57 34.5	
	comp=N,4μm,0.5s							
CO01	**Juntas del Tor**	**2.53**	**47**	*e*P		**Pn**	**17 56 55.0**	**+1.2**
CO01				*e*S		**Sn**	**17 57 25.4**	**+0.1**
CO01				IAML			17 57 33.4	
	comp=Z,3μm,1.1s							
LMEL	**Las Melosas**	**2.74**	**142**			**Pn**	**17 56 56.8**	**+0.2**
LMEL	**Las Melosas**	**2.74**	**142**	*e*P		**Pn**	**17 56 57.4**	**+0.8**
LMEL				*i* S		**Sn**	**17 57 30.2**	**-0.2**
LMEL				IAML			17 57 43.3	
	comp=N,3μm,0.5s							
BO03	**Pichilemu**	**2.79**	**175**	*e*P		**Pn**	**17 56 57.4**	**+0.3**
BO03				*i* S		**Sn**	**17 57 27.4**	**-3.9**
AROD	**Rodeo**	**2.83**	**58**	*e*P		**Pb**	**17 57 01.0**	**-2.0**
AROD				*e*S		**Sb**	**17 57 39.5**	**+1.3**
BO01	**Tunca**	**2.85**	**160**	Pn		**Pn**	**17 56 58.0**	**+0.1**
BO01	**Tunca**	**2.85**	**160**	*e*P		**Pn**	**17 56 58.6**	**+0.7**
BO01				*e*S		**Sg**	**17 57 41.0**	**-1.9**
BO01				IAML			17 57 48.8	
	comp=N,1μm,0.6s							
BO01	**Tunca**	**2.85**	**160**	*e*P		**Pn**	**17 56 58.0**	**+0.1**
BO01				*e*S		**Sb**	**17 57 36.9**	**-1.4**
BO01				IAML			17 57 46.4	
	comp=Z,2μm,0.8s							
ACCO	**Cerro Coronel**	**2.94**	**68**	*e*P		**Pb**	**17 57 02.7**	**-2.2**
ACCO				*e*S		**Sb**	**17 57 44.2**	**+2.7**
LCO	**Las Campanas**	**3.00**	**27**			**Pn**	**17 57 00.8**	**+0.4**
LCO	**Las Campanas**	**3.00**	**27**	*e*P		**Pn**	**17 57 01.0**	**+0.7**
ASAL	**Salagasta**	**3.02**	**108**	*e*P		**Pb**	**17 57 04.0**	**-2.0**
ASAL				*e*S		**Sg**	**17 57 56.2**	**+7.7**
ARCO	**CERRO ARCO**	**3.02**	**113**	*e*P		**Pb**	**17 57 04.0**	**-2.1**
ARCO				IAML			17 57 56.8	
	comp=Z,2μm,0.6s							
ZON	**Zonda**	**3.04**	**88**			**Pn**	**17 57 02.6**	**+1.9**
ZON	**Zonda**	**3.04**	**88**	*e*P		**Pb**	**17 57 04.0**	**-2.4**
ZON				*e*S		**Sb**	**17 57 43.9**	**-0.2**
ZON				IAML			17 57 49.5	
	comp=Z,2μm,1.2s							
**ACD

LVC	**Limon Verde**	**9.54**	**19**	Pn		**Pn**	**17 58 28.9**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=162,slow=14,SNR=3.1							
LVC				Sn		**Sn**	**18 00 12.4**	**-5.8**
	baz=250,slow=6.6							
LVC				LR		LR	18 02 13.8	
	comp=Z,549nm,19.4s,baz=199,slow=38							
	comp=Z,1.0nm,0.3s							
LVC	**Limon Verde**	**9.54**	**19**	Pn		**Pn**	**17 58 26.6**	**-3.6**
LVC	**Limon Verde**	**9.54**	**19**	*eP*		**Pn**	**17 58 28.8**	**-1.3**
PB07	**IPOC Station P**	**10.16**	**13**			Pn	17 58 32.2	-6.4
PB09	**IPOC Station P**	**10.23**	**16**			Pn	17 58 34.1	-5.5
TRQA	**Tornquist**	**10.54**	**130**	Pn		**Pn**	**17 58 41.6**	**-1.9**
TRQA	**Tornquist**	**10.54**	**130**	*eP*		**Pn**	**17 58 44.4**	**+0.9**
PB02	**IPOC Station P**	**10.56**	**12**			**Pn**	**17 58 42.5**	**-1.5**
PB01	**IPOC Station P**	**10.91**	**14**	Pn		**Pn**	**17 58 45.6**	**-3.1**
PATCX	**Punta Patache**	**11.01**	**10**	Pn		**Pn**	**17 58 48.5**	**-1.5**
TA01	**Diego Aracena**	**11.25**	**10**	Pn		**Pn**	**17 58 51.7**	**-1.6**
LPA	**La Plata**	**12.39**	**109**	*eP*		**Pn**	**17 59 07.0**	**-1.8**
LPA				sP			17 59 17.1	
LPA				PPP		PPP	17 59 22.7	
LPA				PP		**PbPb**	**17 59 43.7**	**-5.1**
LPA				S		**Sn**	**18 01 26.5**	**-1.0**
LPA				sS			18 01 32.8	
LPA				SS		**SnSn**	**18 01 42.2**	**+2.7**
LPA				SSS		SSS	18 02 31.0	
LPA				SCS		**ScS**	**18 12 03.0**	**+2.7**
LPA				PKIKP		**PKiKP**	**18 12 54.7**	**+6.9**
LPA				SKIKP			18 16 13.5	
LPA				PKIKS			18 16 22.5	
LPA				SKIKS			18 19 45.4	
ITQB	**Itaqui**	**13.60**	**85**			**Pn**	**17 59 24.0**	**-1.4**
ITQB	**Itaqui**	**13.60**	**85**	*eP*		**Pn**	**17 59 26.3**	**+0.9**
CPUP	**Villa Florida**	**14.10**	**71**	Pn		**Pn**	**17 59 33.0**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=240,slow=11,SNR=6.1							
CPUP				Sn		**Sn**	**18 02 09.6**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=204,slow=12,SNR=4.6							
CPUP				Lg		Lg	18 03 33.1	
	comp=Z,0.3nm,0.3s,baz=352,slow=19,SNR=1.7							
CPUP	**Villa Florida**	**14.10**	**71**			**Pn**	**17 59 29.7**	**-2.6**
CPUP	**Villa Florida**	**14.10**	**71**	*eP*		**Pn**	**17 59 31.9**	**-0.4**
PB18	**Visviri**	**14.28**	**11**	P		**Pn**	**17 59 37.1**	**+1.9**
UNIS	**Unistalda (Bra**	**15.05**	**84**	*eP*		**Pn**	**17 59 45.4**	**+0.2**
LPAZ	**La Paz**	**15.80**	**15**	Pn		**Pn**	**17 59 57.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=187,slow=6.5,SNR=15							
	comp=Z,4.9nm,0.8s							
LPAZ	**La Paz**	**15.80**	**15**			**Pn**	**17 59 52.8**	**-3.0**
PLTB	**Pedras Altas**	**15.86**	**95**	P		**Pn**	**17 59 52.4**	**-3.5**
PLTB	**Pedras Altas**	**15.86**	**95**	*eP*		**Pn**	**17 59 55.4**	**-0.5**
ANTJ	**Antonio Joao (**	**17.40**	**60**	*eP*		**P**	**18 00 16.1**	**-0.8**
MCR1	**Marechal Candi**	**17.60**	**70**	*eP*		**P**	**18 00 19.1**	**0.0**
FRBT	**Francisco Belt**	**17.74**	**76**	*eP*		**P**	**18 00 20.7**	**+0.1**
ITAB	**Concordia**	**18.07**	**81**	P		**Pn**	**18 00 18.3**	**-5.4**
ITAB				IAmb		IAmb	18 00 45.9	
	comp=Z,40nm,1.1s							
ITAB	**Concordia**	**18.07**	**81**	*eP*		**P**	**18 00 24.6**	**+0.5**
CNLB	**Canela**	**18.58**	**88**	*eP*		**Pn**	**18 00 29.8**	**-0.3**
SIV	**San Ignacio**	**18.66**	**36**	P		**Pn**	**18 00 31.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=222,slow=11,SNR=17							
SIV				LR		LR	18 08 53.9	
	comp=Z,441nm,18.4s,baz=123,slow=41							
	comp=Z,1.9nm,0.3s							
PTGB	**Pitanga**	**19.08**	**74**	*eP*		**P**	**18 00 35.3**	**-0.2**
PTLB	**Pontes e Lacer**	**20.12**	**39**			**P**	**18 00 44.5**	**-2.3**
PTLB				IAmb		IAmb	18 00 52.6	
	comp=Z,17nm,1.2s							
PTLB	**Pontes e Lacer**	**20.12**	**39**	*eP*		**P**	**18 00 47.5**	**+0.7**
TER01	**Tubaro-SC**	**20.24**	**87**	*eP*		**P**	**18 00 47.2**	**-0.8**
PCMB	**Pacaembu**	**21.25**	**67**	*eP*		**P**	**18 00 57.9**	**-1.1**
TIJ01	**Guaruva-PR**	**21.37**	**79**	*eP*		**P**	**18 01 00.6**	**+0.3**
VILB	**Vilhena**	**21.71**	**33**	P		**P**	**18 01 03.0**	**-0.9**
VILB				IAmb		IAmb	18 01 07.8	
	comp=Z,24nm,0.8s							
VILB	**Vilhena**	**21.71**	**33**	*eP*		**P**	**18 01 04.1**	**+0.1**
FRTB	**Fartura**	**21.74**	**73**	*eP*		**P**	**18 01 03.6**	**-0.7**
SALV	**Santo Antonio**	**21.79**	**48**	*eP*		**P**	**18 01 04.1**	**-0.7**
ETMB	**Extrema**	**22.49**	**16**	P		**P**	**18 01 13.1**	**+0.7**
ETMB				IAmb		IAmb	18 01 15.2	
	comp=Z,28nm,1.0s							
ETMB	**Extrema**	**22.49**	**16**	*eP*		**P**	**18 01 13.1**	**+0.7**
EFI	**East Falkland**	**22.51**	**157**	P		**P**	**18 01 12.8**	**+0.6**
ITRB	**Iturama**	**23.01**	**64**	*eP*		**P**	**18 01 16.6**	**-1.2**
PET01	**Itanhaem-SP**	**23.22**	**78**	*eP*		**P**	**18 01 20.2**	**+0.3**
BB19B	**Bebedouro**	**23.69**	**69**	*eP*		**P**	**18 01 24.6**	**-0.2**
VAO	**Valinhos**	**24.02**	**75**	*eP*		**P**	**18 01 27.4**	**-0.6**
SAML	**Samuel**	**24.16**	**22**	P		**P**	**18 01 28.6**	**-0.6**
PDRB	**Porto dos Gac**	**24.60**	**39**	*eP*		**P**	**18 01 33.3**	**+0.1**
IPMB	**Ipameri, GO**	**25.66**	**64**	*eP*		**P**	**18 01 41.6**	**-1.3**
CLDB	**Colider**	**25.71**	**40**	*eP*		**P**	**18 01 43.1**	**-0.2**
PMNB	**Patos De Minas**	**26.71**	**67**	*eP*		**P**	**18 01 51.8**	**-0.6**
BDFB	**Brasilia**	**27.26**	**60**	P		**P**	**18 01 56.3**	**-1.1**
	comp=Z,15nm,0.8s,baz=226,slow=9.3,SNR=15							
BDFB				LR		LR	18 14 24.1	
	comp=Z,407nm,20.9s,baz=249,slow=40							
	comp=Z,15nm,0.8s							
BDFB	**Brasilia**	**27.26**	**60**	P		**P**	**18 01 55.0**	**-2.4**
BDFB				IAmb		IAmb	18 01 57.9	
	comp=Z,30nm,1.2s							
BDFB	**Brasilia**	**27.26**	**60**	*eP*		**P**	**18 01 57.2**	**-0.2**
SNDB	**Serra Nova Dou**	**27.54**	**49**	*eP*		**P**	**18 01 59.9**	**+0.1**
DUB01	**Friburgo-RJ**	**28.23**	**78**	*eP*		**P**	**18 02 05.5**	**-0.5**
CAM01	**Campos-RJ**	**28.94**	**78**	*eP*		**P**	**18 02 12.3**	**0.0**
BOSC	**San Juan Bosco**	**29.01**	**347**	P		**P**	**18 02 10.6**	**-2.5**
BOSC				IAmb		IAmb	18 02 26.0	
	comp=Z,11nm,0.5s							
DIAM	**Diamantina, MG**	**29.03**	**69**	*eP*		**P**	**18 02 13.5**	**+0.2**
NPGB	**Novo Progresso**	**29.17**	**36**	*eP*		**P**	**18 02 13.9**	**-0.4**
MC01	**Montes Claros**	**29.71**	**66**	*eP*		**P**	**18 02 18.5**	**-0.6**
JANB	**Januaria**	**30.40**	**63**	*eP*		**P**	**18 02 24.9**	**-0.4**
MACA	**Manacapuru-AM**	**30.41**	**23**	*eP*		**P**	**18 02 26.2**	**+0.9**
SJMB	**Sao Joao De Ma**	**30.82**	**73**	*eP*		**P**	**18 02 28.3**	**-0.7**
ITTB	**Itaituba**	**31.31**	**33**	*eP*		**P**	**18 02 32.7**	**-0.6**
SDBA	**SAO DESIDERIO**	**31.65**	**59**	*eP*		**P**	**18 02 35.6**	**-0.7**
NAN01	**Guarapari, ES**	**32.13**	**72**	*eP*		**P**	**18 02 38.9**	**-1.5**
SMTB	**Santa Maria do**	**32.27**	**51**	*eP*		**P**	**18 02 42.0**	**+0.3**
RPN	**Rapa Nui**	**32.53**	**268**	LR		LR	18 12 18.2	
	comp=Z,302nm,19.1s,baz=124,slow=29							
PRPB	**Parauapebas**	**32.95**	**44**	*eP*		**P**	**18 02 47.1**	**-0.6**
PMSA	**Palmer Station**	**33.48**	**174**	LR		LR	18 15 41.6	
	comp=Z,208nm,20.7s,baz=326,slow=35							
CMC01	**Camacan, BA**	**33.96**	**69**	*eP*		**P**	**18 02 56.3**	**-0.2**
MALB	**Monte Alegre**	**34.20**	**33**	*eP*		**P**	**18 02 58.5**	**0.0**
GDU01	**Guandu, BA**	**34.86**	**67**	*eP*		**P**	**18 03 03.9**	**-0.4**
BOAV	**Boa Vista**	**35.70**	**20**	P		**P**	**18 03 11.0**	**-0.5**
BOAV				IAmb		IAmb	18 03 12.9	
	comp=Z,7.5nm,0.9s							
BOAV	**Boa Vista**	**35.70**	**20**	*eP*		**P**	**18 03 11.8**	**+0.4**
MCPB	**Macapa, AP**	**36.56**	**35**	*eP*		**P**	**18 03 19.1**	**+0.2**
NBLA	**Lagarto - SE**	**37.89**	**65**	*eP*		**P**	**18 03 28.9**	**-1.4**
NBLN	**Anadia - AL**	**39.88**	**65**	*eP*		**P**	**18 03 45.8**	**-1.1**
BAUV	**El Baul**	**40.62**	**6**	P		**P**	**18 03 53.2**	**+0.3**
BAUV				IAmb		IAmb	18 03 55.1	
	comp=Z,24nm,1.1s							
BCIP	**Isla Barro Col**	**41.29**	**349**	P		**P**	**18 03 58.5**	**+0.1**
RCBR	**Riachuelo**	**42.63**	**61**	LR		LR	18 23 56.2	
	comp=Z,222nm,18.9s,baz=340,slow=39							
BELA	**Belgrano 2**	**49.16**	**170**	P		**P**	**18 05 01.5**	**+1.2**
BELA				IAmb		IAmb	18 05 03.2	
	comp=Z,10nm,1.1s							
SJG	**San Juan**	**49.88**	**8**	LR		LR	18 28 30.7	
	comp=Z,77nm,18.3s,baz=132,slow=39							
VNA3	**Neumayer Olymp**	**51.54**	**158**	P		**P**	**18 05 19.9**	**+1.5**
VNA1	**Neumayer--Stat**	**51.85**	**158**	P		**P**	**18 05 22.6**	**+1.9**
VNA2	**Neumayer--Watz**	**52.19**	**158**	P		**P**	**18 05 24.7**	**+1.5**
	baz=280,slow=8.0							
SNAA	**Sanae**	**53.77**	**158**	P		**P**	**18 05 36.3**	**+1.4**
SNAA	**Sanae**	**53.77**	**158**	LR		LR	18 28 03.2	
	comp=Z,116nm,18.2s,baz=299,slow=36							
SNAA	**Sanae**	**53.77**	**158**	P		**P**	**18 05 35.7**	**+0.7**
TROLL	**Troll, Antarti**	**55.48**	**159**	P		**P**	**18 05 48.9**	**+1.5**
QSPA	**South Pole Qui**	**58.52**	**180**	LR		LR	18 30 43.4	
	comp=Z,44nm,20.4s,baz=156,slow=35							
QSPA	**South Pole Qui**	**58.52**	**180**			**P**	**18 06 10.8**	**+1.7**
QSPA				IAmb		IAmb	18 06 11.9	
	comp=Z,8.7nm,0.8s							
SHEL	**Horse Pasture**	**61.97**	**92**	P		**P**	**18 06 32.7**	**-0.7**
VNDA	**Vanda**	**66.31**	**191**	P		**P**	**18 07 03.9**	**+3.0**
	comp=Z,0.8nm,1.0s,baz=106,slow=4.1,SNR=3.7							
	comp=Z,0.8nm,1.0s							
TXAR	**Lajitas Array**	**67.66**	**331**	P		**P**	**18 07 12.2**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=146,slow=8.3,SNR=8.3							
	comp=Z,0.6nm,0.7s							
TXAR	**Lajitas Array**	**67.66**	**331**	P		**P**	**18 07 09.2**	**-0.9**
TX31	**Lajitas Ar. Si**	**67.66**	**331**	P		**P**	**18 07 10.2**	**0.0**
TX31				IAmb		IAmb	18 07 23.2	
	comp=Z,6.0nm,0.8s							
TX32	**Lajitas Array**	**67.66**	**331**	P		**P**	**18 07 10.3**	**+0.1**
CPCT	**Cooper Cave**	**67.80**	**349**	P		**P**	**18 07 09.8**	**-0.9**
BBTS	**Babate**	**70.54**	**58**	LR		LR	18 38 01.7	
	comp=Z,124nm,18.6s,baz=168,slow=36							
MSTX	**Muleshoe**	**71.39**	**334**	P		**P**	**18 07 33.4**	**+0.3**
S39A	**Bolivar**	**71.80**	**343**	P		**P**	**18 07 34.2**	**-1.2**
S39A				IAmb		IAmb	18 07 55.3	
	comp=Z,8.2nm,1.3s							
R40A	**Maddies Statio**	**72.10**	**344**	P		**P**	**18 07 34.8**	**-2.4**
DBIC	**Dimbokro**	**74.62**	**72**	P		**P**	**18 07 52.6**	**0.0**
	comp=Z,9.9nm,0.8s,baz=250,slow=6.7,SNR=8.1							
DBIC				LR		LR	18 37 17.5	
	comp=Z,98nm,21.3s,baz=203,slow=33							
	comp=Z,9.9nm,0.8s							
MAW	**Mawson**	**75.42**	**164**	P		**P**	**18 07 56.8**	**+0.5**
	comp=Z,8.5nm,1.2s,baz=236,slow=9.2,SNR=4.5							
MAW				LR		LR	18 40 50.1	
	comp=Z,109nm,18.9s,baz=230,slow=36							
	comp=Z,8.5nm,1.2s							
SUR	**Sutherland**	**76.09**	**119**	LR		LR	18 38 41.2	
	comp=Z,60nm,19.9s,baz=215,slow=34							
RAR	**Rarotonga**	**77.15**	**253**	LR		LR	18 32 17.2	
	comp=Z,34nm,21.1s,baz=98,slow=28							
F64A	**Sherman**	**77.29**	**3**	P		**P**	**18 08 06.8**	**-0.3**
F64A				IAmb		IAmb	18 08 10.6	
	comp=Z,10nm,0.9s							
TSUM	**Tsumeb**	**80.01**	**106**	LR		LR	18 39 27.5	
	comp=Z,115nm,18.8s,baz=188,slow=32							
TSUM	**Tsumeb**	**80.01**	**106**	P		**P**	**18 08 20.8**	**-2.2**
TSUM				IAmb		IAmb	18 08 24.6	
	comp=Z,4.9nm,0.9s							
BOSA	**Boshof**	**81.29**	**118**	P		**P**	**18 08 29.8**	**+0.1**
	comp=Z,8.7nm,0.9s,baz=194,slow=7.1,SNR=12							
BOSA				LR		LR	18 41 22.5	
	comp=Z,72nm,19.0s,baz=202,slow=33							
	comp=Z,8.7nm,0.9s							
BOSA	**Boshof**	**81.29**	**118**	P		**P**	**18 08 29.2**	**-0.6**
PDAR	**Pinedale Array**	**81.65**	**333**	P		**P**	**18 08 33.5**	**+2.3**
	comp=Z,0.3nm,0.4s,baz=144,slow=7.8,SNR=2.1							
	comp=Z,0.3nm,0.4s							
NVAR	**Mina Array Bea**	**81.91**	**325**	P		**P**	**18 08 35.8**	**+3.1**
	comp=Z,1.5nm,0.7s,baz=152,slow=5.9,SNR=11							
	comp=Z,1.5nm,0.7s							
HVU	**Hansel Valley**	**82.11**	**331**	P		**P**	**18 08 32.0**	**-1.6**
KVN	**Kaiserville**	**82.30**	**326**	P		**P**	**18 08 32.1**	**-2.6**
KVN				IAmb		IAmb	18 08 38.1	
	comp=Z,4.4nm,1.1s							
ELK	**Elko**	**82.33**	**328**	P		**P**	**18 08 37.5**	**+2.7**
	comp=Z,1.9nm,0.8s,baz=174,slow=3.7,SNR=9.3							
	comp=Z,1.9nm,0.8s							
ELK	**Elko**	**82.33**	**328**			**P**	**18 08 32.6**	**-2.3**
LBTB	**Lobatse**	**83.43**	**115**	LR		LR	18 43 45.3	
	comp=Z,94nm,18.9s,baz=216,slow=34							
TOA0	**Torodi Ar. Sit**	**83.60**	**70**	P		**P**	**18 08 40.3**	**-1.5**
TORD	**Torodi Ar. Bea**	**83.60**	**70**	P		**P**	**18 08 42.2**	**+0.5**
	comp=Z,9.5nm,0.8s,baz=256,slow=4.8,SNR=45							
	comp=Z,9.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**83.60**	**70**	P		**P**	**18 08 40.0**	**-1.8**
HLID	**Hailey**	**84.26**	**331**	P		**P**	**18 08 42.7**	**-2.0**
HLID				IAmb		IAmb	18 08 58.2	
	comp=Z,2.9nm,1.0s							
MDT	**Midelt**	**90.52**	**51**	LR		LR	18 48 58.2	
	comp=Z,48nm,19.5s,baz=38,slow=35							
LSZ	**Lusaka**	**90.69**	**108**	LR		LR	18 47 21.9	
	comp=Z,115nm,18.7s,baz=198,slow=34							
ESDC	**Sonseca Array**	**95.12**	**46**	P		**P**	**18 09 37.0**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=243,slow=0.3,SNR=2.5							
ESDC				LR		LR	18 50 08.8	
	comp=Z,63nm,19.0s,baz=192,slow=34							
	comp=Z,0.5nm,0.7s							
ASAR	**Alice Springs**	**119.52**	**208**	PKP		**PKiKP**	**18 15 03.9**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=150,slow=1.8,SNR=1.6							
ASAR				PKKPbc		**PKKPbc**	**18 25 15.2**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=331,slow=2.9,SNR=4.0							
AKASG	**Malin Array Be**	**120.76**	**46**	PKP		**PKiKP**	**18 15 05.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=269,slow=0.9,SNR=1.5							
FINES	**FINESS Array B**	**121.20**	**34**	PKP		**PKiKP**	**18 15 06.7**	**+1.3**
	comp=Z,8.1nm,1.1s,baz=220,slow=3.6,SNR=2.8							
WRA	**Warramunga Arr**	**122.66**	**210**	PKP		**PKiKP**	**18 15 09.9**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=164,slow=1.9,SNR=9.4							
H11S2	**WAKE ISLAND Hy**	**125.60**	**271**	T		T	20 34 04.8	
	baz=116,slow=74,SNR=55							
H11S1	**WAKE ISLAND Hy**	**125.61**	**271**	T		T	20 34 05.6	
	baz=116,slow=74,SNR=30							
H11S3	**WAKE ISLAND Hy**	**125.61**	**271**	T		T	20 34 09.4	
	baz=116,slow=74,SNR=32							
H11N3	**WAKE ISLAND Hy**	**125.95**	**272**	T		T	20 34 28.3	
	baz=117,slow=75,SNR=17							
H11N1	**WAKE ISLAND Hy**	**125.97**	**272**	T		T	20 34 32.7	
	baz=117,slow=75,SNR=5.6							
H11N2	**WAKE ISLAND Hy**	**125.97**	**272**	T		T	20 34 29.6	
	baz=117,slow=75,SNR=27							
ZALV	**Zalesovo Beam**	**152.36**	**30**	PKPbc		**PKiKP**	**18 16 09.8**	**+1.0**
	comp=Z,8.7nm,0.5s,baz=303,slow=3.1,SNR=42							
ZALV				PKPab		**PKPab**	**18 16 19.1**	**+0.5**
	comp=Z,9.7nm,0.5s,baz=303,slow=3.6,SNR=13							
MKAR	**Makanchi Array**	**155.33**	**45**	PKPbc		PKPbc	18 16 15.3	
	comp=Z,0.7nm,0.7s,baz=322,slow=2.7,SNR=6.0							
MKAR				PKPab		**PKPab**	**18 16 32.1**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=303,slow=1.1,SNR=12							
SONM	**Songino Array**	**163.86**	**3**	PKPab		**PKPab**	**18 17 10.2**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=336,slow=3.2,SNR=5.6							
CMAR	**Chiang Mai Arr**	**164.59**	**147**	PKP		**PKPdf**	**18 16 18.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=234,slow=3.0,SNR=4.2							
PZH	**PanZhiHua**	**172.61**	**133**	PKP		**PKPdf**	**18 16 20.8**	**-1.9**

IDC 09 18:41:11.6±10.0, 19.75N×146.27E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=374.9km s-min=33.1km az=78.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**19.33**	**90**	T	T	19 03 31.4	
	baz=279						
H11S1	**WAKE ISLAND Hy**	**19.34**	**90**	T	T	19 03 38.6	
	baz=279						
H11S2	**WAKE ISLAND Hy**	**19.35**	**90**	T	T	19 03 36.7	
	baz=279						
H11N1	**WAKE ISLAND Hy**	**19.41**	**87**	T	T	19 03 32.0	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**19.41**	**87**	T	T	19 03 44.8	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**19.43**	**87**	T	T	19 03 42.4	
	baz=274						
WRA	**Warramunga Arr**	**41.14**	**197**	P	P	18 48 58.0	+0.3
	0.8nm,0.9s,baz=19,slow=8.6,SNR=6.0						
	0.8nm,0.9s						
SONM	**Songino Array**	**42.68**	**320**	P	P	18 49 10.1	-0.1
	0.4nm,0.7s,baz=127,slow=6.6,SNR=3.2						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**44.81**	**196**	P	P	18 49 26.7	-0.7
	0.5nm,0.8s,baz=16,slow=7.0,SNR=3.2						
	0.5nm,0.8s						

IDC 09 18:41:40.2±11.0, 14.82S×172.43W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=522.7km s-min=41.1km az=138.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**50.89**	**256**	P	P	18 50 43.5	0.0
	0.6nm,1.2s,baz=91,slow=8.2,SNR=1.3						
	0.6nm,1.2s						
ASAR	**Alice Springs**	**51.18**	**251**	P	P	18 50 45.5	-0.2
	0.2nm,0.5s,baz=88,slow=7.6,SNR=5.1						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**81.70**	**11**	P	P	18 54 00.1	0.0
	0.4nm,0.8s,baz=215,slow=4.4,SNR=3.5						
	0.4nm,0.8s						

*IDC **09** 19:32:07.5±0.9, 5.80N×126.25E, h134km±7km, mb3.5/12, mbtmp3.9/13, Error ellipse: s-maj=34.5km s-min=10.9km az=69.0*

*NEIC **09** 19:32:07.4±2.9, 5.70N±0.04×126.2E±0.1, h129km±7km, mb4.3/39, Error ellipse: s-maj=16.4km s-min=3.8km az=75.0*

*DJA **09** 19:32:08.4±1.0, 6.1N±3.1×12.6E±.1, h35km±17km, M4.4/14, mb4.5/13, mB5.0/6, MLv4.5/14, Mw(mB)4.3/6*

*MAN **09** 19:32:18, 6.49N×125.65E, h15km, Ms3.5*

ISC 09 19:32:06.2±0.7, 5.70N±0.04×126.20E±0.05, h122km±6km, n86, σ1§44/104, mb4.2/31, 11D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.63**	**309**	*eP*	**Pn**	**19 32 24.3**	**-0.8**
DDMP				*eS*	**Sn**	**19 32 38.0**	**-1.6**
MATI	**Mati**	**1.24**	**3**	*eP*	**Pn**	**19 32 29.9**	**-0.9**
MATI				*eS*	**Sn**	**19 32 49.9**	**+0.4**
GSPH	**General Santos**	**1.30**	**287**	*iP*	**Pn**	**19 32 30.4**	**-1.3**
GSPH				*iS*	**Sn**	**19 32 49.0**	**-1.9**
DAV	**Davao City (W)**	**1.49**	**336**	P	**Pn**	**19 32 34.6**	**+1.0**
	448nm,0.3s,baz=246,slow=4.0,SNR=18						
DAV				S	**Sn**	**19 32 56.3**	**+1.8**
	612nm,0.3s,baz=178,slow=20,SNR=7.0						
DAV	**Davao City (W)**	**1.49**	**336**		**Pn**	**19 32 34.4**	**+0.7**
DAV				Sn	**Sn**	**19 32 56.2**	**+1.6**
KCP	**Kidapawan**	**1.70**	**320**	*iP*	**Pn**	**19 32 37.3**	**+1.2**
KCP				*iS*	**Sn**	**19 33 01.2**	**+2.1**
SKMP	**Bagumbayan, Su**	**1.84**	**296**	*eP*	**Pn**	**19 32 37.5**	**-0.2**
SKMP				*eS*	**Sn**	**19 33 02.3**	**+0.4**
SGSI	**Sangihe**	**2.11**	**199**	P	**Pn**	**19 32 43.0**	**+1.8**
CTBH	**Cotabato--PC H**	**2.46**	**308**	*eP*	**Pn**	**19 32 45.2**	**-0.3**
CTBH				*iS*	Sn	19 33 06.0	-10
BIPH	**Bislig**	**2.47**	**4**	*eP*	**Pn**	**19 32 45.1**	**-0.5**
BIPH				*eS*	**Sn**	**19 33 15.7**	**-0.3**
BUTP	**Butuan**	**3.30**	**350**	*eP*	**Pn**	**19 32 57.7**	**+1.3**
BUTP				*eS*	Sn	19 33 42.5	+7.2
PAGZ	**Pagadian**	**3.52**	**307**	*eP*	**Pn**	**19 32 60.0**	**+0.6**
PAGZ				*eS*	Sn	19 33 27.1	-13
GLSP	**General Luna,**	**4.05**	**359**	*eP*	**Pn**	**19 33 06.9**	**+0.4**
GLSP				*eS*	**Sn**	**19 33 54.0**	**+0.7**
ZCP	**Zamboanga City**	**4.28**	**287**	*eP*	**Pn**	**19 33 10.0**	**+0.5**
ZCP				*eS*	**Sn**	**19 33 56.7**	**-2.0**
TNTI	**Ternate**	**5.04**	**167**		**Pn**	**19 33 19.9**	**+0.2**
TNTI				Sn	**Sn**	**19 34 15.6**	**-1.3**
TNTI	**Ternate**	**5.04**	**167**	P	**Pn**	**19 33 20.0**	**+0.3**
TNTI				S	**Sn**	**19 34 14.8**	**-2.0**
KMSI	**Cibinong**	**5.56**	**204**	P	**Pn**	**19 33 28.0**	**+1.3**
	0.2nm53nm,0.9s						
GTOI	**Gorontalo**	**5.96**	**212**	P	**Pn**	**19 33 33.9**	**+1.8**
	0.1nm21nm,0.7s						
LBMI	**Labuha**	**6.43**	**168**	P	**Pn**	**19 33 39.5**	**+1.0**
	0.4nm2µm81nm,0.5s						
LBMI				S	**Sn**	**19 34 48.3**	**-2.3**
	0.4nm2µm81nm,0.5s						
MRSI	**Marisa**	**6.71**	**219**	P	**Pn**	**19 33 45.5**	**+3.2**
	0.2nm544nm44nm,0.7s						
TOLI2	**Tolitoli**	**7.08**	**230**		**Pn**	**19 33 48.0**	**+0.9**
LUWI	**Luwuk**	**7.52**	**207**	Pn	**Pn**	**19 33 55.6**	**+2.3**
LUWI	**Luwuk**	**7.52**	**207**	P	**Pn**	**19 33 56.7**	**+3.4**
	0.2nm38nm,0.8s						
MYLDM	**Lahad Datu**	**7.68**	**266**	Pn	**Pn**	**19 33 57.8**	**+2.4**
SANI	**Sanana**	**7.70**	**182**	P	**Pn**	**19 33 54.1**	**-1.6**
	0.5nm3µm94nm,0.7s			

IMAR	**Indian Mountai**	**80.77**	**24**	P	**P**	**19 44 07.3**	**+1.4**		
I21K	**Tanana**	**81.42**	**25**	P	**P**	**19 44 11.2**	**+2.0**		
I21K				IAmb	IAmb	19 44 12.7			
	comp=Z,2.2nm,0.8s								
BPAW	**Bear Paw Mtn.**	**81.76**	**26**	P	**P**	**19 44 12.5**	**+1.3**		
MLY	**Manley**	**81.93**	**25**	P	**P**	**19 44 13.2**	**+1.1**		
MLY				IAmb	IAmb	19 44 14.9			
	comp=Z,3.4nm,1.2s								
H24K	**Noodor Dome**	**83.16**	**24**	P	**P**	**19 44 19.0**	**+0.6**		
H24K				IAmb	IAmb	19 44 28.0			
	comp=Z,4.9nm,1.5s								
ILAR	**Eielson Array**	**83.56**	**26**	P	**P**	**19 44 20.1**	**-0.3**		
	comp=Z,0.3nm,0.4s,baz=259,slow=4.4,SNR=5.6								
	comp=Z,0.3nm,0.4s								
KLU	**Klutina**	**84.01**	**29**	P	P	19 44 29.2	+6.3		
KLU				IAmb	IAmb	19 44 29.9			
	comp=Z,5.6nm,0.7s								
J25K	**Salcha River,**	**84.21**	**26**	P	**P**	**19 44 24.1**	**+0.3**		
BMAR	**Burnt Mountain**	**84.47**	**23**	P	**P**	**19 44 27.5**	**+2.4**		
VNDA	**Vanda**	**85.44**	**173**	P	**P**	**19 44 30.9**	**+1.3**		
	comp=Z,0.4nm,0.6s,baz=318,slow=7.4,SNR=8.1								
	comp=Z,0.4nm,0.6s								
ARCES	**ARCESS Array B**	**88.43**	**340**	P	**P**	**19 44 43.6**	**-0.7**		
	comp=Z,1.7nm,0.6s,baz=76,slow=5.6,SNR=8.7								
	comp=Z,1.7nm,0.6s								
FINES	**FINESS Array B**	**89.86**	**332**	P	**P**	**19 44 49.4**	**-1.7**		
	comp=Z,1.1nm,0.5s,baz=46,slow=8.2,SNR=7.2								
	comp=Z,1.1nm,0.5s								
TORD	**Torodi Ar. Bea**	**121.79**	**289**	PKP	**PKPdf**	**19 50 45.5**	**-1.4**		
	comp=Z,0.5nm,0.3s,baz=58,slow=1.7,SNR=11								

IDC ***09*** *19:38:49.7±2.9, 44.00N×105.25W, h0km, mbtmp3.2/3, ML3.5/3, Error ellipse: s-maj=40.1km s-min=22.1km az=170.0*

NEIC ***09*** *19:38:52.3±2.2, 43.61N±0.05×105.23W±0.06, h0km±2km, ML3.4/59, Error ellipse: s-maj=9.7km s-min=6.3km az=321.0*

ISC 09 19:38:52.5±1.1**, 43°59N**±0.05**×105°18W**±0.06**, h0**km**, n64,** σ1**§33/61, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.98**	**57**	Pg	**Pg**	**19 39 11.4**	**+0.2**
K22A	**Casper**	**1.36**	**227**		**Pg**	**19 39 17.1**	**-1.5**
PHWY	**Pilot Hill**	**2.30**	**185**		**Pn**	**19 39 31.7**	**-0.2**
PHWY				IAML		19 40 17.7	
	167nm,0.7s						
RWWY	**Rawlins**	**2.42**	**219**		**Pn**	**19 39 33.3**	**-0.2**
RWWY				IAML		19 40 17.7	
	324nm,0.8s						
N23A	**Red Feather La**	**2.76**	**192**		**Pn**	**19 39 38.7**	**+0.5**
N23A				IAML		19 40 25.2	
	comp=N,187nm,0.7s						
N23A				IAML		19 40 26.9	
	comp=E,172nm,0.7s						
LAO	**LASA Array**	**3.18**	**347**	Pn	**Pn**	**19 39 44.0**	**+0.2**
LAO				IAML		19 40 51.3	
	comp=E,208nm,0.8s						
RLMT	**Red Lodge**	**3.31**	**299**		**Pn**	**19 39 45.2**	**-0.5**
RLMT				IAML		19 40 46.9	
	comp=E,62nm,0.8s						
RLMT				IAML		19 40 49.4	
	comp=E,89nm,0.8s						
BW06	**Boulder Array**	**3.31**	**257**		**Pn**	**19 39 45.9**	**+0.2**
PD31	**Pinedale Array**	**3.31**	**257**		**Pn**	**19 39 45.1**	**-0.6**
PDAR	**Pinedale Array**	**3.31**	**257**	Pn	**Pn**	**19 39 45.9**	**+0.2**
	comp=E,2.0nm,0.3s,baz=78,slow=17,SNR=28						
PDAR				Pg	**Pg**	**19 39 55.0**	**-0.8**
	comp=E,11nm,0.3s,baz=76,slow=19,SNR=34						
PDAR				Lg	Lg	19 40 33.7	
	comp=E,3.2nm,0.3s,baz=52,slow=34,SNR=2.2						
	comp=E,3.1nm,0.3s						
PDAR	**Pinedale Array**	**3.31**	**257**		**Pn**	**19 39 45.2**	**-0.5**
OGNE	**Ogallala**	**3.53**	**138**		**Pn**	**19 39 49.5**	**+0.9**
ISCO	**Idaho Springs**	**3.81**	**185**		**Pn**	**19 39 53.1**	**+0.5**
ISCO				IAML		19 40 59.5	
	comp=E,39nm,0.8s						
ISCO				IAML		19 42 02.2	
	comp=E,51nm,3.9s						
GCMT	**Greycliff**	**3.88**	**306**		**Pn**	**19 39 53.5**	**0.0**
LOHW	**Long Hollow**	**3.94**	**272**		**Pn**	**19 39 54.2**	**-0.1**
FLWY	**Flagg Ranch**	**4.02**	**279**		**Pn**	**19 39 54.6**	**-0.9**
FLWY				IAML		19 41 03.2	
	comp=E,53nm,3.2s						
FLWY				IAML		19 42 13.6	
	comp=E,45nm,4.5s						
MOOW	**Moose Ponds**	**4.04**	**274**		**Pn**	**19 39 52.8**	**-2.9**
SNOW	**Snow King Moun**	**4.06**	**270**		**Pn**	**19 39 57.0**	**+1.0**
SNOW				IAML		19 41 21.0	
	comp=E,68nm,1.1s						
SNOW				IAML		19 41 23.6	
	comp=E,73nm,1.0s						
YNR	**Norris Junctio**	**4.11**	**288**		**Pn**	**19 39 56.6**	**-0.1**
REDW	**Red Top Meadow**	**4.13**	**269**		**Pn**	**19 39 57.7**	**+0.6**
REDW				IAML		19 41 13.4	
	comp=E,74nm,0.8s						
O20A	**White River Ci**	**4.14**	**215**		**Pn**	**19 39 56.8**	**-0.4**
O20A				IAML		19 41 19.7	
	comp=E,54nm,0.8s						
O20A				IAML		19 41 50.4	
	comp=N,70nm,2.5s						
IMW	**Indian Meadow**	**4.18**	**276**		**Pn**	**19 39 58.3**	**+0.5**
IMW				IAML		19 40 24.8	
	comp=N,50nm,0.6s						
IMW				IAML		19 41 22.6	
	comp=N,35nm,0.8s						
TPAW	**Teton Pass**	**4.20**	**271**		**Pn**	**19 39 57.7**	**-0.3**
TPAW				IAML		19 41 27.3	
	comp=N,56nm,0.8s						
TPAW				IAML		19 41 38.3	
	comp=N,33nm,1.1s						
FXWY	**Fox Creek**	**4.25**	**273**		**Pn**	**19 39 58.8**	**+0.2**
E28A	**Huff**	**4.36**	**45**		**Pn**	**19 39 59.7**	**-0.2**
AHID	**Auburn Hatcher**	**4.41**	**261**		**Pn**	**19 39 59.6**	**-1.2**
AHID				IAML		19 41 23.0	
	comp=N,47nm,0.8s						
AHID				IAML		19 41 37.7	
	comp=N,42nm,0.9s						
RDMU	**Red Mountain**	**4.45**	**229**		**Pn**	**19 40 00.4**	**-0.9**
RDMU				IAML		19 41 22.3	
	comp=N,34nm,1.1s						
RDMU				IAML		19 41 25.2	
	comp=E,50nm,1.0s						
Q24A	**Divide**	**4.63**	**180**		**Pn**	**19 40 04.3**	**+0.4**
Q24A				IAML		19 41 28.1	
	comp=E,38nm,1.0s						
Q24A				IAML		19 42 34.3	
	comp=N,32nm,3.9s						
K31A	**O'Neill**	**4.80**	**99**		**Pg**	**19 40 23.4**	**-1.1**
DGMT	**Dagmar**	**4.92**	**8**		**Pn**	**19 40 08.2**	**+0.5**
KSCO	**Kaye Shedlock'**	**4.97**	**156**		**Pn**	**19 40 08.3**	**-0.1**
BOZ	**Bozeman (W)**	**5.02**	**296**		**Pn**	**19 40 07.1**	**-2.1**
BOZ				IAML		19 41 40.3	
	comp=N,19nm,0.8s						
BOZ				IAML		19 42 14.0	
	comp=N,19nm,4.8s						
HWUT	**Hardware Ranch**	**5.11**	**249**		**Pn**	**19 40 07.0**	**-3.5**
HWUT				IAML		19 41 47.4	
	comp=N,34nm,0.9s						
HWUT				IAML		19 41 55.9	
	comp=N,34nm,1.1s						
TCUT	**Toone Canyon**	**5.24**	**244**	Pn	**Pn**	**19 40 10.6**	**-1.6**
EGMT	**Eagleton**	**5.46**	**326**		**Pn**	**19 40 13.4**	**-1.7**
P18A	**Preston Nutter**	**5.49**	**225**		**Pn**	**19 40 15.0**	**-0.7**
JLU	**Jordanelle**	**5.54**	**239**		**Pn**	**19 40 14.4**	**-2.0**
DLMT	**Dillon**	**5.59**	**291**		**Pn**	**19 40 16.3**	**-0.7**
BGNE	**Belgrade**	**5.64**	**110**		**Pn**	**19 40 19.1**	**+1.6**
LRM	**Limekiln Ridge**	**5.64**	**296**		**Pn**	**19 40 16.8**	**-1.0**
HRY	**Holter Researc**	**5.64**	**306**		**Pn**	**19 40 17.0**	**-0.6**
MCMT	**McKenzie Canyo**	**5.65**	**285**		**Pn**	**19 40 18.6**	**+0.7**
PV07	**Paradox Valley**	**5.78**	**208**		**Pn**	**19 40 19.1**	**-0.6**
PV15	**Paradox Valley**	**5.81**	**207**		**Pn**	**19 40 18.5**	**-1.6**
SDCO	**Great Sand Dun**	**5.85**	**182**		**Pn**	**19 40 16.6**	**-4.0**
P17A	**Butcher Ranch,**	**5.86**	**227**		**Pn**	**19 40 19.4**	**-1.3**
HVU	**Hansel Valley**	**5.88**	**255**		**Pn**	**19 40 18.6**	**-2.4**
PV23	**Carpenter Ridg**	**5.90**	**211**		**Pn**	**19 40 18.6**	**-2.8**
PV10	**Paradox Valley**	**5.97**	**211**		**Pn**	**19 40 21.9**	**-0.5**
SRU	**San Rafael Swe**	**6.02**	**224**		**Pn**	**19 40 22.0**	**-0.9**
PV13	**Radium Mtn., P**	**6.09**	**208**		**Pn**	**19 40 23.4**	**-0.6**
ECSD	**EROS Data Cent**	**6.22**	**86**		**Pn**	**19 40 25.7**	**+0.2**
TMUT	**Trail Mountain**	**6.24**	**229**		**Pn**	**19 40 25.2**	**-0.9**
NLU	**North Lily Min**	**6.31**	**237**		**Pn**	**19 40 26.4**	**-0.5**
BGU	**Big Grassy Mou**	**6.41**	**248**		**Pn**	**19 40 27.3**	**-0.9**
T25A	**Trinidad**	**6.47**	**175**		**Pn**	**19 40 28.2**	**-1.0**
DUG	**Dugway, Tooele**	**6.63**	**242**		**Pn**	**19 40 30.8**	**-0.5**
ELK	**Elko**	**8.00**	**253**	Pn	**Pn**	**19 40 50.6**	**+0.5**
	comp=N,0.2nm,0.3s,baz=63,slow=9.0,SNR=2.8						
ELK				Lg	Lg	19 43 02.5	
	comp=N,0.1nm,0.3s,baz=41,slow=9.3,SNR=1.4						
	comp=N,0.5nm,0.4s						
ANMO	**Albuquerque**	**8.69**	**187**	Pg	**Pg**	**19 41 41.4**	**+2.4**
	comp=N,0.1nm,0.3s,baz=11,slow=16,SNR=2.0						
I10CA	**LAC DU BONNET**	**9.10**	**40**	*i*		20 28 20.0	
	baz=224,slow=316,SNR=7.0						
NEW	**Newport**	**9.54**	**303**	Lg	Lg	19 43 43.8	
	comp=N,0.4nm,0.3s,baz=62,slow=19,SNR=1.6						
I56US	**NEWPORT INFRAS**	**9.54**	**303**	*i*		20 31 45.0	
	comp=N,0.1nm,1.4s,baz=116,slow=309,SNR=6.0						
NVAR	**Mina Array Bea**	**11.17**	**247**	Pn	**Pn**	**19 41 36.0**	**+2.4**
	comp=N,0.1nm,0.3s,baz=66,slow=10,SNR=4.8						
	comp=N,0.6nm,0.7s						
TXAR	**Lajitas Array**	**14.28**	**175**	Pg	Pg	19 43 19.5	
	comp=N,0.1nm,0.3s,baz=353,slow=19,SNR=2.4						
TXAR				Lg	Lg	19 46 25.0	
	comp=N,0.1nm,0.3s,baz=344,slow=32,SNR=1.8						

PRU ***09*** *19:52:53.0±0.0, 41.94N×14.73E, h0km*

ROM ***09*** *19:52:53.7±0.1, 41.783N±0.004×14.881E±0.006, h21km, ML3.7/87, Mw3.5, Error ellipse: s-maj=0.6km s-min=0.2km az=40.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.21; Mθθ=0.60; Mϕϕ=-0.38; Mrθ=1.02; Mθϕ=-1.94; Mϕr=0.32; Fault plane solution: M₀=2.27815×10¹⁴ NP1:ϕs=171.00000°, δ=62.00000°, λ=-7.00000°. NP2:ϕs=264.00000°, δ=84.00000°, λ=-152.00000°.*

PDG ***09*** *19:52:53.8±0.7, 41.76N×14.90E, h19km, ML3.7/14 Error ellipse: s-maj=0.6km s-min=0.6km az=90.0*

IDC ***09*** *19:52:53.8±1.2, 42.00N×14.85E, h0km, mb3.5/3, mbtmp3.8/9, ML4.0/4, MS2.6/1, Error ellipse: s-maj=34.5km s-min=15.1km az=97.0*

LDG ***09*** *19:52:54.6±0.1, 41.71N×14.72E, h22km, Ml3.5/22, Error ellipse: s-maj=6.3km s-min=3.1km az=46.0*

ISC 09 19:52:54.3±0.6**, 41°79N**±0.02×**14°83E**±0.02**, h21**km±1km**, n273, σ2§14/319, 25C-31D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CIGN	**Sant'Elia a Pi**	**0.14**	**158**	⇑P	**Pb**	**19 52 58.2**	**-2.2**
CIGN				S	**Sb**	**19 53 01.5**	**-3.2**
CIGN				AML	AML		
	comp=N,51200μm,0.5s						
CIGN				AML	AML		
	comp=E,33600μm,0.4s						
TRIV	**Trivento**	**0.21**	**265**	⇓P	**Pb**	**19 53 00.1**	**-0.2**
TRIV				S	**Sb**	**19 53 04.9**	**+0.5**
TRIV				AML	AML		
	comp=N,61650μm,0.7s						
TRIV				AML	AML		
	comp=E,31750μm,0.5s						
TRIV				AML	AML		
	comp=E,30300μm,1.1s						
TRIV				AML	AML		
	comp=N,68700μm,0.6s						
FRES	**Fresagrandinar**	**0.22**	**327**	⇓P	**Pb**	**19 52 59.8**	**-0.4**
FRES				S	**Sb**	**19 53 04.6**	**+0.2**
FRES				AML	AML		
	comp=N,24600μm,0.3s						
FRES				AML	AML		
	comp=E,32550μm,0.4s						
MELA	**Melanico ??? S**	**0.23**	**110**	⇓P	**Pb**	**19 52 59.0**	**-1.2**
MELA				S	**Sb**	**19 53 03.1**	**-1.3**
MELA				AML	AML		
	comp=E,95200μm,0.4s						
MELA				AML	AML		
	comp=N,97300μm,0.3s						
MELA				AML	AML		
MELA				AML	AML		
GATE	**Gambatesa**	**0.28**	**168**	⇑P	**Pb**	**19 53 01.0**	**+0.2**
GATE				AML	AML		
	comp=E,26350μm,0.6s						
GATE				AML	AML		
	comp=N,30300μm,0.5s						
GATE				AML	AML		
	comp=N,30300μm,0.5s						
GATE				AML	AML		
	comp=N,31000μm,0.5s						
GATE				AML	AML		
	comp=E,13300μm,0.6s						
BSSO	**Busso**	**0.30**	**217**	⇑P	**Pb**	**19 53 01.2**	**+0.2**
BSSO				S	**Sb**	**19 53 07.4**	**+1.7**
BSSO				AML	AML		
	comp=E,16650μm,0.4s						
BSSO				AML	AML		
	comp=N,15600μm,0.3s						
BSSO				AML	AML		
	comp=N,15650μm,0.3s						
BSSO				AML	AML		
	comp=E,16600μm,0.4s						
BSSO				AML	AML		
	comp=N,6940μm,0.3s						
BSSO				AML	AML		
	comp=E,6970μm,0.4s						
SACR	**S. Croce Del S**	**0.40**	**194**	⇑P	**Pb**	**19 53 02.3**	**-0.3**
SACR				S	**Sb**	**19 53 09.2**	**+1.0**
SACR				AML	AML		
	comp=E,11950μm,0.5s						
SACR				AML	AML		
	comp=N,8270μm,0.5s						
MIDA	**Miranda**	**0.46**	**252**	⇑P	**Pb**	**19 53 03.4**	**-0.2**
MIDA				S	**Sb**	**19 53 10.9**	**+1.0**
MIDA				AML	AML		
	comp=E,22100μm,0.5s						
MIDA				AML	AML		
	comp=N,30200μm,0.5s						
MIDA				AML	AML		
	comp=E,25650μm,0.5s						
MIDA				AML	AML		
	comp=N,30250μm,0.5s						
MIDA				AML	AML		
	comp=N,31550μm,0.5s						
MIDA				AML	AML		
	comp=E,22050μm,0.5s						
PTRJ	**Pietraroja**	**0.48**	**209**	⇑P	**Pb**	**19 53 03.4**	**-0.7**
PTRJ				AML	AML		
	comp=E,9935μm,0.5s						
PTRJ				AML	AML		
	comp=N,5920μm,1.0s						
PTRJ				AML	AML		
	comp=E,11450μm,0.5s						
PTRJ				AML	AML		
	comp=N,6595μm,1.0s						
PTRJ				AML	AML		
	comp=E,9925μm,0.5s						
PTRJ				AML	AML		
	comp=N,6590μm,1.0s						
MOCO	**Biccari - m.te**	**0.48**	**150**	⇓P	**Pb**	**19 53 03.5**	**-0.5**
MOCO				S	**Sb**	**19 53 09.8**	**-0.9**
MOCO				AML	AML		
	comp=E,4635μm,0.5s						
MOCO				AML	AML		
	comp=N,2665μm,0.5s						
MOCO				AML	AML		
	comp=E,4870μm,0.5s						
MOCO				AML	AML		
	comp=N,2580μm,0.4s						
MOCO				AML	AML		
	comp=E,4640μm,0.5s						
RNI2	**Rionero Sannit**	**0.52**	**261**	P	**Pb**	**19 53 04.4**	**-0.3**
RNI2				S	**Sn**	**19 53 13.4**	**-1.3**
RNI2				AML	AML		
	comp=N,21100μm,0.3s						
RNI2				AML	AML		
	comp=N,23500μm,0.3s						
RNI2				AML	AML		
	comp=E,20200μm,1.6s						
RNI2				AML	AML		
	comp=E,19550μm,0.3s						
RNI2				AML	AML		
	comp=N,21150μm,0.3s						
SGG	**Gregorio Mates**	**0.53**	**221**	⇑P	**Pb**	**19 53 04.2**	**-0.7**
SGG				S	**Sn**	**19 53 13.7**	**-1.2**
SGG				AML	AML		
	comp=E,15nm,0.4s						
SGG				AML	AML		
	comp=N,18nm,0.6s						
SGG				AML	AML		
	comp=N,18nm,0.6s						
SGG				AML	AML		
	comp=E,4930μm,0.4s						
SGG				AML	AML		
	comp=E,15nm,0.4s						
SGG				AML	AML		
	comp=N,5785μm,0.6s						
APRC	**Apricena**	**0.53**	**93**	P	**Pb**	**19 53 03.2**	**-1.7**
APRC				S	**Sb**	**19 53 11.3**	**-1.0**
APRC				AML	AML		
	comp=E,34400μm,0.3s						
APRC				AML	AML		
	comp=N,30400μm,0.3s						
APRC				AML	AML		
	comp=E,34350μm,0.3s						
LPEL	**Lama dei Peligi**	**0.55**	**298**	⇓P	**Pb**	**19 53 05.1**	**-0.2**
LPEL				S	**Sn**	**19 53 14.2**	**-1.3**
LPEL				AML	AML		
	comp=E,16500μm,1.3s						
LPEL				AML	AML		
	comp=N,18000μm,1.4s						
PSB1	**Pescosannita**	**0.56**	**182**	⇑P	**Pb**	**19 53 04.8**	**-0.8**
PSB1				S	**Sb**	**19 53 13.4**	**+0.2**
PSB1				AML	AML		
	comp=E,5480μm,0.6s						
PSB1				AML	AML		
	comp=N,4735μm,0.5s						
PSB1				AML	AML		
	comp=E,5485μm,0.6s						
PSB1				AML	AML		
	comp=E,5730μm,0.6s						
PSB1				AML	AML		
	comp=N,4380μm,0.5s						
CAFR	**Castel Frentan**	**0.57**	**321**	P	**Pb**	**19 53 05.7**	**0.0**
CAFR				AML	AML		
	comp=N,17800μm,0.7s						
CAFR				AML	AML		
	comp=E,116μm,0.2s						
VAGA	**Valle Agricola**	**0.58**	**231**	⇑P	**Pb**	**19 53 05.3**	**-0.6**
VAGA				AML	AML		
	comp=E,7305μm,1.4s						
VAGA				AML	AML		
	comp=N,10315μm,0.3s						
VAGA				AML	AML		
	comp=E,7690μm,1.5s						
VAGA				AML	AML		
	comp=N,10850μm,0.3s						
VAGA				AML	AML		
	comp=E,7310μm,1.4s						
VAGA				AML	AML		
	comp=N,10320μm,0.3s						
TREM	**Isole Tremiti**	**0.61**	**56**	P	**Pb**	**19 53 04.7**	**-1.5**
TREM				AML	AML		
	comp=N,45200μm,0.4s						
TREM				AML	AML		
	comp=E,40800μm,0.7s						
VITU	**Vitulano (BN)**	**0.62**	**194**	⇑P	**Pb**	**19 53 05.6**	**-1.0**
VITU				AML	AML		
	comp=E,3435μm,0.4s						
VITU				AML	AML		
	comp=N,12400μm,0.5s						
VITU				AML	AML		
	comp=N,12900μm,0.5s						
VITU				AML	AML		
	comp=E,3430μm,0.4s						
VITU				AML	AML		
	comp=E,15150μm,0.5s						
BIOG	**Biogem**	**0.63**	**159**	P	**Pb**	**19 53 06.7**	**+0.1**
BIOG				AML	AML		
	comp=E,13450μm,0.6s						
BIOG				AML	AML		
	comp=N,15000μm,0.6s						
BIOG				AML	AML		
	comp=E,17500μm,0.6s						
BIOG				AML	AML		
	comp=N,15000μm,0.6s						
BIOG				AML	AML		
	comp=N,13650μm,0.5s						
BIOG				AML	AML		
	comp=E,13450μm,0.7s						
CERA	**Filignano**	**0.64**	**253**	P	**Pb**	**19 53 06.2**	**-0.6**
CERA				AML	AML		
	comp=E,9690μm,0.6s						
CERA				AML	AML		
	comp=E,10125μm,0.6s						
CERA				AML	AML		
	comp=N,11230μm,0.6s						
CERA				AML	AML		
	comp=N,10835μm,0.6s						
CERA				AML	AML		
	comp=E,9645μm,0.6s						
MRB1	**Monte Rocchett**	**0.67**	**171**	P	**Pb**	**19 53 06.7**	**-0.6**
MRB1				AML	AML		
	comp=E,8275μm,0.5s						
MRB1				AML	AML		
	comp=N,11680μm,0.5s						
MRB1				AML	AML		
	comp=N,12345μm,0.5s						
MRB1				AML	AML		
	comp=N,11695μm,0.5s						
MRB1				AML	AML		
	comp=E,8470μm,0.5s						
SGRT	**San Giovanni R**	**0.68**	**92**	P	**Pb**	**19 53 06.4**	**-1.2**
SGRT				S	**Sb**	**19 53 16.1**	**-0.5**
SGRT				AML	AML		
	comp=N,17450μm,0.3s						
SGRT				AML	AML		
	comp=E,31250μm,0.4s						
INTR	**Introdacqua**	**0.73**	**288**	⇓P	**Pb**	**19 53 07.7**	**-0.6**
INTR				S	**Sn**	**19 53 19.1**	**-0.9**
INTR				AML	AML		
	comp=E,5765μm,0.6s						
INTR				AML	AML		
	comp=N,13850μm,0.6s						
SGTA	**Sant Agata di**	**0.76**	**148**	P	**Pb**	**19 53 07.7**	**-1.2**
SGTA				S	**Sb**	**19 53 19.4**	**+0.5**
SGTA				AML	AML		
	comp=N,7475μm,0.5s						
SGTA				AML	AML		
	comp=N,7470μm,0.5s						
SGTA				AML	AML		
	comp=N,7670μm,0.5s						
SGTA				AML	AML		
	comp=E,13200μm,0.6s						
SGTA				AML	AML		
	comp=E,13750μm,0.6s						
PIGN	**Pignataro Magg**	**0.77**	**220**	P	**Pb**	**19 53 08.2**	**-0.7**
PIGN				AML	AML		
	comp=E,2455μm,0.3s						
PIGN				AML	AML		
	comp=N,4385μm,0.4s						
PIGN				AML	AML		
	comp=E,2485μm,0.3s						
PIGN				AML	AML		
	comp=N,4155μm,0.4s						
PIGN				AML	AML		
	comp=E,2455μm,0.3s						
PIGN				AML	AML		
	comp=N,4390μm,0.4s						
PAOL	**Paolisi**	**0.78**	**195**	P	**Pb**	**19 53 08.0**	**-1.1**
PAOL				AML	AML		
	comp=E,4810μm,1.3s						
PAOL				AML	AML		
	comp=N,4920μm,0.4s						
PAOL				AML	AML		
	comp=E,4810μm,1.3s						
PAOL				AML	AML		
	comp=N,4920μm,0.4s						
PAOL				AML	AML		
	comp=N,5190μm,0.4s						
PAOL				AML	AML		
	comp=E,4930μm,1.3s						
MSAG	**Monte S. Angel**	**0.81**	**95**	P	**Pb**	**19 53 08.6**	**-1.1**
MSAG				S	**Sb**	**19 53 20.2**	**+0.1**
MSAG				AML	AML		
	comp=E,14550μm,0.6s						
MSAG				AML	AML		
	comp=N,33500μm,0.4s						
MSAG				AML	AML		
	comp=E,16350μm,0.6s						
MSAG				AML	AML		
	comp=E,14600μm,0.6s						
MSAG				AML	AML		
	comp=N,32300μm,0.4s						
CAFE	**Carife**	**0.82**	**158**	P	**Pb**	**19 53 08.7**	**-1.1**
CAFE				AML	AML		
	comp=E,8045μm,0.5s						

CAFE AML AML
comp=N,10900µm,0.4s
CAFE AML AML
comp=E,8345µm,0.4s
CAFE AML AML
comp=E,8045µm,0.4s
CAFE AML AML
comp=N,11400µm,0.4s
POFI Posta Fibreno 0.84 266 P **Pb** 19 53 09.5 -0.7
POFI S **Sn** 19 53 22.2 -0.6
POFI AML AML
comp=N,2935µm,0.4s
POFI AML AML
comp=N,3185µm,0.6s
POFI AML AML
comp=E,5005µm,0.6s
POFI AML AML
comp=E,5350µm,0.6s
T0110 Collepietro 0.90 300 ⇓P **Pb** 19 53 10.6 -0.6
T0110 AML AML
comp=E,7050µm,0.6s
T0110 AML AML
comp=N,6590µm,0.7s
SNAL S. Angelo Dei 0.91 162 P **Pb** 19 53 09.8 -1.5
SNAL AML AML
comp=E,6875µm,0.6s
SNAL AML AML
comp=N,8320µm,0.9s
SNAL AML AML
comp=N,8100µm,0.9s
SNAL AML AML
comp=E,6395µm,0.6s
VVLD Villa Vallelon 0.91 276 ⇓P **Pb** 19 53 10.4 -0.9
VVLD AML AML
comp=E,5335µm,0.7s
VVLD AML AML
comp=N,4470µm,0.7s
LRP Arpino 0.94 262 P **Pb** 19 53 11.2 -0.7
LRP AML AML
comp=E,3795µm,1.0s
LRP AML AML
comp=N,3180µm,0.9s
MODR Mondragone 0.96 229 P **Pb** 19 53 12.2 0.0
MODR AML AML
comp=E,3665µm,0.7s
MODR AML AML
comp=N,4080µm,0.5s
LIK San Giovanni I 1.00 254 P **Pn** 19 53 14.4 +1.4
LIK AML AML
comp=E,11215µm,0.4s
LIK AML AML
comp=N,13350µm,0.8s
VVDG Vesuvio Valle 1.00 198 P **Pn** 19 53 13.3 +0.1
VVDG AML AML
comp=N,4730µm,0.3s
VVDG AML AML
comp=E,3015µm,0.5s
VBKN Vesuvio Bunker 1.00 198 P **Pn** 19 53 13.3 +0.1
VBKN AML AML
comp=N,10225µm,0.4s
VBKN AML AML
comp=E,8195µm,0.5s
CRTO Cratere Ovest, 1.01 198 P **Pn** 19 53 13.5 +0.2
CRTO AML AML
CRTO AML AML
VULT Monte Vulture 1.02 144 P **Pb** 19 53 11.8 -1.4
VULT AML AML
comp=E,10090µm,0.4s
VULT AML AML
comp=E,10095µm,0.4s
VULT AML AML
comp=E,10775µm,0.4s
VULT AML AML
comp=N,11750µm,0.5s
VULT AML AML
comp=N,11300µm,0.5s
VARP Vesuvio Array 1.02 198 P **Pn** 19 53 13.6 +0.2
VTIR Vesuvio Tirone 1.03 198 P **Pb** 19 53 13.4 +0.1
VTIR AML AML
comp=E,2460µm,0.5s
VTIR AML AML
comp=N,1905µm,0.4s
MCRV Calabrutti - M 1.03 166 P **Pb** 19 53 12.1 -1.5
MCRV AML AML
comp=N,4355µm,1.2s
MCRV AML AML
comp=E,5090µm,0.5s
FAGN Fagnano 1.05 298 P **Pb** 19 53 12.7 -1.0
FAGN AML AML
comp=N,9100µm,0.5s
FAGN AML AML
comp=E,6945µm,0.5s
PTQR Pietraquaria 1.09 283 P **Pn** 19 53 13.6 -0.9
PTQR AML AML
comp=N,2090µm,1.1s
PTQR AML AML
comp=E,1815µm,1.1s
GUAR Guarcino 1.14 271 P **Pn** 19 53 14.2 -0.8
GUAR AML AML
comp=N,2750µm,0.9s
GUAR AML AML
comp=E,2495µm,1.2s
GIGS Gran Sasso 1.15 306 P **Pn** 19 53 14.8 -0.5
GIGS AML AML
comp=E,825µm,1.5s
GIGS AML AML
comp=N,648µm,1.2s
PALZ Palazzo San Ge 1.20 134 ⇓P **Pn** 19 53 15.2 -0.6
PALZ AML AML
comp=N,8870µm,0.6s
PALZ AML AML
comp=E,10045µm,0.9s
AQU L'Aquila 1.21 298 P **Pn** 19 53 15.7 -0.3
AQU AML AML
comp=N,1970µm,1.1s
AQU AML AML
comp=N,1880µm,1.1s
AQU AML AML
comp=E,1665µm,1.3s
AQU AML AML
comp=E,1690µm,0.5s
TRTR Tortoreto Alta 1.23 327 P **Pb** 19 53 18.3 +1.5
TRTR AML AML
comp=N,15650µm,1.3s
TRTR AML AML
comp=E,13550µm,0.5s
TERO Teramo 1.24 313 P **Pn** 19 53 16.0 -0.4
MRVN Minervino Murg 1.25 125 ⇓P **Pn** 19 53 15.7 -0.9
MRVN AML AML
comp=N,1885µm,0.8s
MRVN AML AML
comp=E,2205µm,1.5s
CAMP Campotosto 1.30 306 P **Pn** 19 53 16.9 -0.4
CAMP AML AML
comp=E,1092µm,1.1s
CAMP AML AML
comp=N,1465µm,0.4s
ACER Acerenza 1.30 140 ⇓P **Pn** 19 53 16.7 -0.6
ACER AML AML
comp=N,4750µm,0.5s
ACER AML AML
comp=E,4645µm,0.4s
ACER AML AML
comp=N,5025µm,0.5s
ACER AML AML
comp=E,4955µm,0.4s
CDRU Civita di Ruta 1.34 165 ⇓P **Pn** 19 53 18.1 +0.2
CDRU AML AML
comp=N,1265µm,0.4s
CDRU AML AML
comp=E,2065µm,1.2s
FIAM Fiamignano 1.37 291 P **Pn** 19 53 18.4 +0.2
FIAM AML AML
comp=N,1560µm,0.7s
FIAM AML AML
comp=E,2325µm,0.6s
CERT Cerreto 1.39 277 P **Pn** 19 53 18.0 -0.5
CERT AML AML
comp=E,2145µm,0.5s
CERT AML AML
comp=N,2120µm,0.4s
RM33 Pellescritta (1.40 301 P **Pn** 19 53 18.7 0.0
RM33 AML AML
comp=E,1480µm,0.8s
RM33 AML AML
comp=N,1230µm,0.3s
OFFI Offida 1.43 324 P **Pb** 19 53 21.0 +0.8

LATB Latina 1.43 259 P **Pn** 19 53 19.1 +0.1
LATB AML AML
comp=N,530µm,0.8s
LATB AML AML
comp=E,760µm,1.0s
VENT Ventotene 1.45 227 P **Pn** 19 53 19.4 +0.1
VENT AML AML
comp=E,2300µm,0.4s
VENT AML AML
comp=N,2415µm,1.5s
CMPR Campora 1.51 166 P **Pn** 19 53 20.0 -0.1
CMPR AML AML
comp=E,2865µm,0.5s
CMPR AML AML
comp=N,1385µm,0.6s
LNSS Leonessa 1.56 302 P **Pb** 19 53 22.5 0.0
LNSS AML AML
comp=E,2150µm,1.2s
LNSS AML AML
comp=N,1570µm,0.5s
PTRP Pietrapertosa 1.57 143 P **Pn** 19 53 21.0 +0.1
PTRP AML AML
comp=E,2305µm,0.6s
PTRP AML AML
comp=N,2295µm,0.4s
CADA Capodarco di F 1.61 331 P **Pb** 19 53 23.4 +0.1
MCEL Monticello 1.63 153 P **Pn** 19 53 21.2 -0.6
MCEL AML AML
comp=N,1520µm,0.5s
MCEL AML AML
comp=E,1115µm,0.6s
MCEL AML AML
comp=N,1480µm,0.6s
MCEL AML AML
comp=E,1075µm,0.6s
NRCA Norcia 1.65 310 P **Pb** 19 53 23.4 -0.6
NRCA AML AML
comp=N,1775µm,0.7s
NRCA AML AML
comp=E,1390µm,0.8s
MTSN Montesano sull 1.67 155 P **Pn** 19 53 21.9 -0.5
MTSN AML AML
comp=E,1390µm,0.6s
MTSN AML AML
comp=N,1070µm,1.3s
GUMA Gualdo di Mace 1.69 319 P **Pb** 19 53 24.2 -0.5
GUMA AML AML
comp=N,5715µm,0.4s
GUMA AML AML
comp=E,7730µm,0.5s
GUMA AML AML
comp=E,9285µm,0.5s
GUMA AML AML
comp=N,5910µm,0.4s
MIGL Miglionico 1.69 134 P **Pn** 19 53 22.2 -0.4
MIGL AML AML
comp=N,6970µm,0.9s
MIGL AML AML
comp=E,5425µm,0.5s
MGR Morigerati 1.74 161 P **Pn** 19 53 23.2 0.0
MGR AML AML
comp=E,1215µm,0.5s
MGR AML AML
comp=E,1260µm,0.5s
MGR AML AML
comp=N,1375µm,0.5s
MGR AML AML
comp=N,1365µm,0.5s
SIRI Monte Sirino - 1.78 154 P **Pn** 19 53 23.4 -0.5
SIRI AML AML
comp=N,1160µm,1.4s
SIRI AML AML
comp=N,1180µm,1.4s
SIRI AML AML
comp=E,1150µm,0.9s
SIRI AML AML
comp=E,1106µm,0.9s
SRES S.Oreste - Sor 1.79 285 AML AML
comp=E,414µm,1.1s
SRES AML AML
comp=N,410µm,0.7s
FDMO Fiordimonte 1.80 315 P **Pn** 19 53 25.4 +1.3
MATE Matera 1.81 128 ⇓P **Pn** 19 53 23.7 -0.5
MATE ⇓S Sb 19 53 58.7 +10
MATE Matera 1.81 128 P **Pn** 19 53 23.7 -0.5
MATE AML AML
comp=N,3360µm,0.5s
MATE AML AML
comp=E,1540µm,0.5s
LSTV Lastovo 1.81 57 *e*Pn **Pn** 19 53 23.6 -0.7
SCHR S. Chirico Rap 1.84 149 P **Pn** 19 53 24.1 -0.6
SCHR AML AML
comp=E,510µm,0.6s
SCHR AML AML
comp=N,630µm,0.8s
CRAC Craco 1.87 139 P **Pn** 19 53 24.8 -0.2
CRAC AML AML
comp=N,2545µm,0.4s
CRAC AML AML
comp=E,2790µm,0.4s
CESI CESI - Serrava 1.88 311 P **Pb** 19 53 27.0 -0.9
CESI AML AML
comp=N,1650µm,0.5s
CESI AML AML
comp=E,1785µm,0.8s
LTRZ Laterza 1.91 128 ⇓P **Pn** 19 53 25.1 -0.5
CUC Castrocucco 1.94 157 P **Pn** 19 53 26.2 +0.2
CUC AML AML
comp=N,652µm,0.7s
CUC AML AML
comp=N,792µm,0.7s
CUC AML AML
comp=E,1200µm,0.8s
CUC AML AML
comp=E,963µm,0.8s
NOCI Noci 1.95 120 ⇓P **Pn** 19 53 25.6 -0.6
NOCI AML AML
comp=E,2370µm,0.4s
NOCI AML AML
comp=N,3600µm,0.4s
CING Cingoli 2.00 323 AML AML
comp=N,1200µm,0.9s
CING AML AML
comp=E,1410µm,1.2s
ASSB Assisi San Ben 2.04 309 AML AML
comp=N,832µm,0.7s
ASSB AML AML
comp=E,844µm,1.2s
ATCC AVT- Casa Cast 2.14 311 P **Pb** 19 53 30.7 -1.6
ATCC AML AML
comp=E,1470µm,0.9s
ATCC AML AML
comp=N,1380µm,0.5s
MAKA Makarska 2.20 46 *e*Pn **Pn** 19 53 29.1 -0.5
ARVD Arcevia 2.21 321 P **Pn** 19 53 30.7 +1.0
ARVD AML AML
comp=N,492µm,1.6s
ARVD AML AML
comp=E,558µm,1.2s
ATFO Monte Foce - G 2.30 314 AML AML
comp=E,940µm,0.9s
ATFO AML AML
comp=N,703µm,0.5s
MGAB Montegabbione 2.31 300 P **Pn** 19 53 32.7 +1.6
MGAB AML AML
comp=E,582µm,1.3s
MGAB AML AML
comp=N,570µm,0.9s
MGAB AML AML
comp=E,608µm,1.2s
MGAB AML AML
comp=N,582µm,0.9s
ATTE AVT- Monte Tez 2.31 308 P **Pn** 19 53 33.1 +1.9
ATTE AML AML
comp=E,428µm,0.8s
ATTE AML AML
comp=N,430µm,0.9s
STON Ston 2.38 62 *e*Pn **Pn** 19 53 30.4 -1.7
STON Ston 2.38 62 *e*Pn **Pn** 19 53 30.2 -1.9
STON Sn **Sn** 19 54 00.1 -0.6
STON Ston 2.38 62 P **Pn** 19 53 30.6 -1.5
STON AML AML
comp=E,682µm,0.8s
STON AML AML
comp=N,887µm,0.7s
ATVO AVT- Monte Val 2.40 312 P **Pb** 19 53 34.8 -2.0

ATVO AML AML
comp=E,520µm,1.6s
ATVO AML AML
comp=N,519µm,1.3s
RICI Ricice 2.41 44 *i* Pn **Pn** 19 53 32.3 -0.2
CET2 Cetraro 2.41 159 P **Pn** 19 53 32.3 -0.2
CET2 AML AML
comp=E,1505µm,0.9s
CET2 AML AML
comp=N,1015µm,0.5s
FSSB Fossombrone 2.43 322 P **Pn** 19 53 33.7 +0.9
FSSB AML AML
comp=N,1410µm,0.4s
FSSB AML AML
comp=E,1365µm,0.4s
PIEI Pieia 2.44 317 P **Pn** 19 53 34.2 +1.4
PIEI AML AML
comp=N,408µm,0.5s
PIEI AML AML
comp=E,524µm,0.3s
ATPI Pietralunga - 2.45 314 P **Pn** 19 53 35.4 +2.3
ATPI AML AML
comp=E,578µm,0.5s
ATPI AML AML
comp=N,510µm,0.6s
BADI Badiali 2.57 313 P **Pb** 19 53 37.6 -2.0
PESA Pesaro 2.60 326 AML AML
comp=E,1170µm,1.2s
PESA AML AML
comp=N,925µm,1.1s
DBRK Dubrovnik 2.61 69 *e*Pn **Pn** 19 53 34.0 -1.3
CAFI Castiglion Fio 2.62 307 AML AML
comp=E,336µm,0.8s
CAFI AML AML
comp=N,214µm,1.6s
PARC Parchiule 2.67 315 P **Pn** 19 53 38.4 +2.3
PARC AML AML
comp=E,430µm,0.7s
PARC AML AML
comp=N,345µm,0.7s
TREB Trebinje 2.77 69 *e*Pn **Pn** 19 53 37.0 -0.4
NVLJ Novalja 2.77 1 *e*Pn **Pn** 19 53 36.9 -0.5
HCY Herceg Novi 2.80 75 *e*Pn **Pn** 19 53 38.0 +0.2
HCY Herceg Novi 2.80 75 ⇑*i*Pn **Pn** 19 53 38.1 +0.2
HCY *i* Sn **Sn** 19 54 12.6 +1.6
UDBI Udbina 2.82 14 *e*Pn **Pn** 19 53 39.0 +0.8
SRKY Kupres RS 2.85 36 *e*Pn **Pn** 19 53 39.5 +0.9
RABC Rab 2.96 359 *e*Pn **Pn** 19 53 39.8 -0.2
BRY Bratogost 2.96 67 *e*Pn **Pn** 19 53 41.1 +0.9
BRY Bratogost 2.96 67 ⇓*i*Pn **Pn** 19 53 40.2 0.0
BRY *i* Sn **Sn** 19 54 16.2 +1.0
TIP Timpagrande 2.99 150 ⇑P **Pn** 19 53 39.1 -1.4
ASQU Asqua 3.01 313 P **Pn** 19 53 42.5 +1.8
ASQU AML AML
comp=E,246µm,0.8s
ASQU AML AML
comp=N,222µm,1.1s
SFI Santa Sofia 3.05 315 P **Pn** 19 53 43.8 +2.5
BUM Brajici-Budva 3.07 79 ⇓*i*Pn **Pn** 19 53 42.0 +0.5
BUM *i* Sn **Sn** 19 54 18.7 +1.1
SERS Sersale 3.09 152 AML AML
comp=E,150µm,1.1s
SERS AML AML
comp=N,131µm,0.7s
MGRS Mrkonjic Grad 3.10 31 *e*Pn **Pn** 19 53 43.6 +1.6
CEME Cevo 3.13 75 ⇓*i*Pn **Pn** 19 53 42.8 +0.4
CEME *i* Sn **Sn** 19 54 19.8 +0.6
PLIT Plitvice 3.14 10 *e*Pn **Pn** 19 53 42.7 +0.2
RUFI Rufina 3.19 311 P **Pn** 19 53 45.2 +2.0
RUFI AML AML
comp=E,163µm,1.6s
RUFI AML AML
comp=N,160µm,1.6s
NKME Niksic 3.21 71 ⇓*i*Pn **Pn** 19 53 44.0 +0.5
NKME *i* Sn **Sn** 19 54 22.3 +1.2
BRJN Brijuni 3.22 346 *e*Pn **Pn** 19 53 43.1 -0.4
BRJN Brijuni 3.22 346 P **Pn** 19 53 43.2 -0.4
LMD Lutirano 3.24 316 AML AML
comp=E,184µm,0.9s
LMD AML AML
comp=N,172µm,0.4s
NKY Niksic 3.25 70 ⇓*i*Pn **Pn** 19 53 44.8 +0.7
NKY *i* Sn **Sn** 19 54 23.6 +1.4
DRME Dracevica, Mon 3.27 82 *e*Pn **Pn** 19 53 44.5 +0.3
DRME Dracevica, Mon 3.27 82 ⇓*i*Pn **Pn** 19 53 44.8 +0.6
DRME *i* Sn **Sn** 19 54 23.2 +0.7
ULC Ulcinj 3.30 85 ⇓*i*Pn **Pn** 19 53 44.9 +0.2
ULC *i* Sn **Sn** 19 54 24.4 +1.1
UPM Unac-Piva 3.33 63 *e*Pn **Pn** 19 53 45.8 +0.5
UPM Unac-Piva 3.33 63 ⇑*i*Pn **Pn** 19 53 45.7 +0.5
UPM *i* Sn **Sn** 19 54 25.6 +1.4
PDG Podgorica 3.35 77 ⇓P **Pn** 19 53 46.1 +0.7
PDG Podgorica 3.35 77 *e*Pn **Pn** 19 53 45.2 -0.2
PDG Podgorica 3.35 77 P **Pn** 19 53 46.1 +0.7
PDG AML AML
comp=N,560µm,0.6s
PDG AML AML
comp=N,440µm,0.6s
PDG AML AML
comp=E,554µm,0.6s
PDG AML AML
comp=E,410µm,0.6s
TTG Podgorica 3.35 77 ⇑*i*Pn **Pn** 19 53 45.8 +0.4
TTG *i* Sn **Sn** 19 54 25.2 +0.7
BRIS BRISIGHELLA 3.40 315 AML AML
comp=E,166µm,0.9s
BRIS AML AML
comp=N,299µm,1.5s
BLY Banja Luka 3.42 29 *e*Pn **Pn** 19 53 47.3 +0.9
BLY Banja Luka 3.42 29 P **Pn** 19 53 47.8 +1.4
PRIJ Prijedor 3.47 23 *e*Pn **Pb** 19 53 54.9 -0.1
RIY Rijeka 3.55 356 *e*Pn **Pn** 19 53 48.4 +0.4
A051A Mrakovica 3.56 24 *e*Pn **Pn** 19 53 48.8 +0.5
KOME Kolasin 3.63 71 ⇓*i*Pn **Pn** 19 53 50.6 +1.3
KOME *i* Sn **Sn** 19 54 32.5 +0.9
PLE Pljevlja 3.70 64 ⇑*i*Pn **Pn** 19 53 51.2 +0.9
PLE *i* Sn **Sn** 19 54 34.4 +1.1
BOJS Bojanci 3.73 5 *i* Pn **Pn** 19 53 51.1 +0.5
BOJS *e*Sn **Sn** 19 54 34.6 +0.8
BOJS IAML 19 54 42.5
comp=Z,43nm,0.2s
BOJS Bojanci 3.73 5 P **Pn** 19 53 51.0 +0.5
SKDS Skadanscina 3.81 351 *e*Pn **Pn** 19 53 51.4 -0.3
SKDS *e*Sn **Sn** 19 54 35.8 0.0
SKDS IAML 19 54 42.3
comp=Z,45nm,0.2s
RUDO Rudo 3.81 60 *e*Pn **Pn** 19 53 51.9 +0.2
A052A Srbac 3.85 30 *e*Pn **Pn** 19 53 51.3 -0.9
OZLJ Ozalj 3.85 7 *e*Pn **Pn** 19 53 53.4 +1.1
CSLB Castelbuono 3.89 189 AML AML
comp=E,32µm,1.3s
CSLB AML AML
comp=N,42µm,1.0s
PVY Plav 3.89 76 ⇑*i*Pn **Pn** 19 53 53.4 +0.4
PVY *i* Sn **Sn** 19 54 38.5 +0.4
IVA Berane 3.90 72 ⇑*i*Pn **Pn** 19 53 54.2 +1.1
IVA *i* Sn **Sn** 19 54 38.7 +0.4
BBLS Lazići 3.95 57 *e*Pn **Pn** 19 53 53.7 0.0
CEY Cerknica 3.96 356 *e*Pn **Pn** 19 53 57.4 +3.6
VISS Visnje 4.01 0 *e*Pn **Pn** 19 53 54.8 +0.3
VISS *e*Sn **Sn** 19 54 41.2 +0.3
VISS IAML 19 55 18.1
comp=Z,105nm,0.5s
MOSL Moslavina 4.07 19 *e*Pn **Pn** 19 53 55.1 -0.2
EQUI Equi 4.18 306 AML AML
comp=N,38µm,1.3s
EQUI AML AML
comp=E,34µm,0.3s
PTJ Puntijarka 4.20 11 *e*Pn **Pn** 19 53 56.6 -0.5
SABO M.te Sabotino 4.29 348 P **Pn** 19 53 58.0 -0.2
SABO AML AML
comp=E,1580µm,1.0s
SABO AML AML
comp=E,411µm,1.0s
SABO AML AML
comp=N,2375µm,0.9s
SABO AML AML
comp=N,558µm,0.9s
VOJS Vojsko 4.30 351 *e*Pn **Pn** 19 53 58.7 +0.2
VOJS *e*Sn **Sn** 19 54 47.1 -0.9
VOJS IAML 19 54 52.1
comp=Z,17nm,0.1s
VAE Valguarnera 4.32 184 Pn Pb 19 54 04.5 -5.0
comp=Z,4.7nm,0.5s,baz=34,slow=18,SNR=2.1

PGF	**Pioggiola**	**4.40**	**282**	*e*Pn	**Pn**	**19 53 57.3**	**-2.6**
PGF	**Pioggiola**	**4.40**	**282**	*e*P	**Pn**	**19 54 01.4**	**+1.5**
PGF				*e*Sn	**Sn**	**19 54 44.5**	**-6.1**
	comp=Z,2.3nm,0.3s						
DIVS	**Divibare**	**4.43**	**57**	*e*Pn	**Pn**	**19 53 59.4**	**-1.0**
KALN	**Kalnik**	**4.50**	**15**	*e*Pn	**Pn**	**19 54 00.5**	**-0.7**
CGRP	**Cima Grappa**	**4.64**	**333**	P	**Pn**	**19 54 03.2**	**-0.1**
MSSA	**Maissana**	**4.64**	**305**	P	**Pn**	**19 54 05.6**	**+2.3**
OBKA	**Obir**	**4.72**	**358**	*e*Pn	**Pn**	**19 54 04.6**	**+0.2**
OBKA	**Obir**	**4.72**	**358**	*i* Pn	**Pn**	**19 54 04.3**	**-0.1**
	comp=Z,1.2nm,0.1s,SNR=16						
OBKA				*e*Sn	**Sn**	**19 54 58.0**	**-0.5**
	comp=Z,25nm,0.3s						
KOGS	**Kog**	**4.77**	**12**	P	**Pn**	**19 54 04.6**	**-0.3**
CIMO	**Cimolais**	**4.84**	**340**	P	**Pn**	**19 54 05.3**	**-0.6**
CTI	**Castel Tesino**	**4.84**	**333**	P	**Pn**	**19 54 05.2**	**-0.7**
ACOM	**Acomizza, Ital**	**4.85**	**349**	P	**Pn**	**19 54 06.7**	**+0.4**
SOKA	**Soboth**	**4.89**	**2**	*i* Pn	**Pn**	**19 54 06.4**	**-0.2**
	comp=Z,1.3nm,0.3s,SNR=12						
SOKA				*e*Sn	**Sn**	**19 55 00.3**	**-2.3**
	comp=Z,13nm,0.6s						
KOVH	**Kovagotottos**	**4.90**	**28**	P	**Pn**	**19 54 10.0**	**+3.3**
MYKA	**Terra Mystica**	**4.92**	**350**	*e*Pn	**Pn**	**19 54 07.5**	**+0.5**
	comp=Z,1.5nm,0.2s						
SALO	**Salr**	**4.94**	**322**	P	**Pn**	**19 54 07.6**	**+0.3**
FRGS	**Fruska Gora**	**4.95**	**45**	⇑P	Pn	19 54 02.2	-5.2
ZOU	**Zoufplan**	**4.95**	**345**	P	**Pn**	**19 54 07.5**	**-0.1**
LUSI	**Trento, Gardas**	**5.03**	**327**	P	**Pn**	**19 54 08.2**	**-0.3**
GAGG	**Gaggia**	**5.13**	**328**	P	**Pn**	**19 54 10.3**	**+0.4**
MORH	**Mrgy, Hungar**	**5.21**	**31**	⇑P	Pn	19 54 04.7	-6.2
MORH	**Mrgy, Hungar**	**5.21**	**31**	P	**Pn**	**19 54 13.9**	**+3.0**
ABTA	**Abfaltersbach**	**5.23**	**342**	*e*Pn	**Pn**	**19 54 11.3**	**0.0**
	comp=Z,0.7nm,0.1s						
ABTA				*e*Sn	**Sn**	**19 55 08.5**	**-2.5**
	comp=Z,6.7nm,0.2s						
KOSI	**Kohlern**	**5.29**	**333**	P	**Pn**	**19 54 12.3**	**+0.1**
BOVS	**Bovan**	**5.39**	**68**	⇑P	**Pn**	**19 54 14.3**	**+0.9**
KBA	**Koelnbreinsper**	**5.40**	**349**	*e*Sn	**Sn**	**19 55 12.9**	**-2.3**
	comp=Z,8.5nm,0.5s						
ARSA	**Arzberg**	**5.49**	**5**	*e*Pn	**Pn**	**19 54 14.2**	**-0.5**
	comp=Z,3.0nm,0.4s						
ARSA				*e*Sn	**Sn**	**19 55 15.3**	**-1.8**
	comp=Z,11nm,0.4s						
MPLH	**Magyarpolny**	**5.72**	**19**	P	**Pn**	**19 54 18.2**	**+0.2**
SBF	**Sospel**	**5.82**	**293**	*e*P	**Pn**	**19 54 21.1**	**+1.7**
SBF				*e*Sn	**Sn**	**19 55 19.4**	**-6.2**
	comp=Z,13nm,0.5s						
MDVR	**Moldovita**	**5.84**	**57**	⇓P	**Pn**	**19 54 19.8**	**+0.1**
EGYH	**Egyhazaskeszo**	**5.91**	**17**	P	**Pn**	**19 54 24.4**	**+3.9**
WTTA	**Wattenberg**	**5.93**	**338**	*e*Pn	**Pn**	**19 54 22.8**	**+1.7**
	comp=Z,1.9nm,0.2s,SNR=7.1						
BIOA	**Bad Ischl, Aus**	**5.96**	**352**	*e*Pn	**Pn**	**19 54 21.8**	**+0.5**
	comp=Z,3.0nm,0.3s						
BIOA				*e*Sn	**Sn**	**19 55 28.5**	**-0.4**
	comp=Z,13nm,0.3s						
FETA	**Feichten**	**6.00**	**332**	*e*Pn	**Pn**	**19 54 24.3**	**+2.4**
	comp=Z,3.0nm,0.2s,SNR=11						
RONA	**Rosalia, Austr**	**6.00**	**9**	*e*Pn	**Pn**	**19 54 21.6**	**-0.2**
	comp=Z,1.0nm,0.2s						
WATA	**Walderalm**	**6.01**	**338**	*e*Pn	**Pn**	**19 54 24.1**	**+2.0**
	comp=Z,2.6nm,0.2s,SNR=6.4						
SQTA	**Sankt Quirin**	**6.02**	**336**	*i* Pn	**Pn**	**19 54 24.6**	**+2.5**
	comp=Z,3.7nm,0.2s,SNR=9.9						
SOP	**Sopron**	**6.02**	**11**	P	**Pn**	**19 54 25.1**	**+3.0**
BLKB	**Belogradchik**	**6.06**	**70**	⇓P	**Pn**	**19 54 24.2**	**+1.5**
MOA	**Molln**	**6.08**	**356**	*e*Pn	**Pn**	**19 54 19.7**	**-3.2**
	comp=Z,4.0nm,0.4s,SNR=14						
MOA				*e*Sn	**Sn**	**19 55 30.3**	**-1.4**
	comp=Z,11nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.13**	**326**	Pn	**Pn**	**19 54 24.8**	**+1.1**
	comp=Z,3.7nm,0.3s,baz=141,slow=9.9,SNR=65						
DAVOX				Sn	**Sn**	**19 55 28.7**	**-4.5**
	comp=Z,0.6nm,0.3s,baz=161,slow=20,SNR=1.4						
DAVOX				LR	LR	19 57 15.4	
	comp=Z,48nm,19.0s,baz=118,slow=44						
	comp=Z,21nm,0.6s						
MOTA	**Moosalm**	**6.16**	**336**	*e*Pn	**Pn**	**19 54 26.0**	**+1.8**
	comp=Z,1.4nm,0.2s						
MOTA				*e*Sn	**Sn**	**19 55 33.7**	**-0.3**
	comp=Z,10nm,0.3s						
CONA	**Conrad Observa**	**6.18**	**6**	*i* Pn	**Pn**	**19 54 23.8**	**-0.5**
	comp=Z,2.7nm,0.2s,SNR=8.0						
CONA				*e*Sn	**Sn**	**19 55 31.9**	**-2.6**
	comp=Z,10nm,0.4s						
BZS	**Buzias**	**6.23**	**50**	⇓P	**Pn**	**19 54 21.2**	**-3.7**
VTS	**Vitosha**	**6.29**	**80**	⇑P	**Pn**	**19 54 27.0**	**+1.0**
HERR	**Herculane**	**6.33**	**58**	⇑P	**Pn**	**19 54 27.0**	**+0.7**
LMR	**La Mourre**	**6.34**	**287**	*e*P	**Pn**	**19 54 27.9**	**+1.5**
LMR				*e*Sn	**Sn**	**19 55 30.7**	**-7.4**
	comp=Z,1.3nm,0.4s						
SRO	**Srobarova**	**6.51**	**21**	*e*PN	**Pn**	**19 54 29.9**	**+1.1**
DAVA	**Damuels**	**6.54**	**329**	*e*Pn	**Pn**	**19 54 32.6**	**+3.3**
	comp=Z,6.2nm,0.5s,SNR=12						
MBDF	**Montbardon**	**6.58**	**299**	*e*Pn	**Pn**	**19 54 27.0**	**-2.9**
MBDF	**Montbardon**	**6.58**	**299**	*e*P	**Pn**	**19 54 32.2**	**+2.3**
MBDF				*e*Sn	**Sn**	**19 55 37.0**	**-7.3**
	comp=Z,8.8nm,0.6s						
ZST	**Bratislava**	**6.61**	**13**	*e*PN	**Pn**	**19 54 34.0**	**+3.9**
ZST				*e*SN	**Sn**	**19 55 39.9**	**-4.8**
SIRR	**Siria**	**6.65**	**45**	⇑P	**Pn**	**19 54 26.9**	**-3.8**
GZR	**Gura Zlata**	**6.80**	**55**	⇑P	**Pn**	**19 54 33.2**	**+0.3**
MODS	**Modra-Piesok**	**6.81**	**14**	*e*PN	**Pn**	**19 54 34.2**	**+1.3**
MODS				*e*SN	**Sn**	**19 55 45.5**	**-4.2**
LPG	**La Plagne**	**6.94**	**305**	*e*Pn	**Pn**	**19 54 33.1**	**-1.8**
LPG	**La Plagne**	**6.94**	**305**	*e*P	**Pn**	**19 54 37.8**	**+2.9**
LPG				*e*Sn	**Sn**	**19 55 45.3**	**-8.0**
	comp=Z,9.9nm,0.5s						
LPL	**La Plagne**	**6.96**	**305**	*e*Pn	**Pn**	**19 54 33.0**	**-2.1**
LPL	**La Plagne**	**6.96**	**305**	*e*P	**Pn**	**19 54 37.4**	**+2.3**
LPL				*e*Sn	**Sn**	**19 55 45.9**	**-7.8**
	comp=Z,11nm,0.5s						
CKRC	**Cesky Krumlov**	**7.04**	**357**	*e*PN	**Pn**	**19 54 35.4**	**-0.7**
CKRC				*e*SN	**Sn**	**19 55 51.8**	**-3.7**
GERES	**GERESS Array B**	**7.10**	**354**	Pn	**Pn**	**19 54 36.5**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=166,slow=13,SNR=25						
GERES				Sn	**Sn**	**19 55 51.3**	**-5.8**
	comp=Z,2.7nm,0.3s,baz=163,slow=24,SNR=13						
	comp=Z,2.1nm,0.4s						
PSZ	**Piszkesteto**	**7.11**	**29**	⇑P	Pn	19 54 45.7	+8.7
SMRF	**Simiane la Rot**	**7.14**	**291**	*e*P	**Pn**	**19 54 39.5**	**+2.0**
ORIF	**Oris-en-Rattie**	**7.24**	**299**	*e*Pn	**Pn**	**19 54 36.3**	**-2.5**
ORIF	**Oris-en-Rattie**	**7.24**	**299**	*e*P	**Pn**	**19 54 41.6**	**+2.8**
ORIF				*e*Sn	**Sn**	**19 55 52.5**	**-7.9**
	comp=Z,2.7nm,0.5s						
VYHS	**Vyhne**	**7.28**	**21**	*e*PN	**Pn**	**19 54 39.5**	**+0.2**
VYHS				*e*SN	**Sn**	**19 55 56.5**	**-4.8**
KRUC	**Moravsky**	**7.36**	**8**	*e*PN	**Pn**	**19 54 39.2**	**-1.2**
KRUC				*e*SN	**Sn**	**19 55 58.9**	**-4.3**
KHC	**Kasperske Hory**	**7.40**	**354**	*e*PN	**Pn**	**19 54 40.5**	**-0.5**
KHC				*e*PG	Pb	19 55 08.5	+6.7
KEST	**Kesra**	**7.41**	**217**	Pn	**Pn**	**19 54 45.2**	**+4.0**
	comp=Z,3.8nm,0.3s,baz=307,slow=5.7,SNR=49						
	comp=Z,12nm,0.5s						
VRAC	**Vranov**	**7.62**	**9**	Pn	**Pn**	**19 54 45.0**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=185,slow=13,SNR=3.2						
VRAC				Sn	Sn	19 55 58.5	-11
	comp=Z,0.4nm,0.3s,baz=77,slow=22,SNR=1.2						
	comp=Z,1.6nm,0.3s						
VRAC	**Vranov**	**7.62**	**9**	*e*PN	**Pn**	**19 54 43.3**	**-0.7**
CABF	**La Chapelle**	**7.92**	**310**	*e*Pn	**Pn**	**19 54 45.1**	**-3.1**
CABF	**La Chapelle**	**7.92**	**310**	*e*P	**Pn**	**19 54 50.1**	**+1.9**
CABF				*e*Sn	**Sn**	**19 56 08.8**	**-8.4**
	comp=Z,16nm,0.8s						
PRU	**Pruhonice**	**8.21**	**359**	*e*SN	**Sn**	**19 56 18.2**	**-5.8**
MORC	**Moravsky Berou**	**8.21**	**12**	*e*SN	**Sn**	**19 56 21.4**	**-2.9**
VOIR		**8.26**	**60**	⇓P	**Pn**	**19 54 52.7**	**-0.1**
HINF	**Hinteralfeld**	**8.28**	**319**	*e*Pn	**Pn**	**19 54 51.2**	**-1.8**
HINF	**Hinteralfeld**	**8.28**	**319**	*e*P	**Pn**	**19 54 55.2**	**+2.2**
HINF				*e*Sn	**Sn**	**19 56 18.4**	**-7.5**
	comp=Z,16nm,0.3s						
KRLC	**Kraliky**	**8.40**	**9**	*e*SN	**Sn**	**19 56 25.0**	**-3.9**
CDF	**Champ du Feu**	**8.51**	**324**	*e*Pn	**Pn**	**19 54 52.8**	**-3.5**
CDF	**Champ du Feu**	**8.51**	**324**	*e*P	**Pn**	**19 54 57.9**	**+1.6**
CDF				*e*Sn	Sn	19 56 22.6	-9.0
	comp=Z,7.7nm,0.3s						
HAU	**Haudompre**	**8.65**	**319**	*e*Pn	**Pn**	**19 54 56.7**	**-1.5**
HAU	**Haudompre**	**8.65**	**319**	*e*P	**Pn**	**19 55 00.6**	**+2.4**
HAU				*e*Sn	Sn	19 56 26.1	-9.0
	comp=Z,17nm,0.3s						
MLR	**Muntele Rosu**	**8.87**	**62**	⇓P	**Pn**	**19 55 01.1**	**-0.1**
MLR	**Muntele Rosu**	**8.87**	**62**	Pn	**Pn**	**19 54 57.4**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=282,slow=23,SNR=1.6						
OZUR		**9.00**	**58**	⇓P	Pn	19 55 12.1	+9.2
SMF	**Signal de Mont**	**9.27**	**305**	*e*Pn	**Pn**	**19 55 02.9**	**-3.7**
SMF	**Signal de Mont**	**9.27**	**305**	*e*P	**Pn**	**19 55 08.9**	**+2.3**
SMF				*e*Sn	Sn	19 56 40.8	-9.3
	comp=Z,1.9nm,0.3s						
PAGF	**Fort de Pagny**	**9.33**	**320**	*e*P	**Pn**	**19 55 10.7**	**+3.2**
	baz=140						
PAGF				*e*Sn	Sn	19 56 42.3	-9.4
	comp=Z,13nm,0.6s						
SFTF	**Sexfontaines**	**9.45**	**316**	*e*P	**Pn**	**19 55 12.5**	**+3.5**
	baz=135						
SFTF				*e*Sn	Sn	19 56 45.0	-10
	comp=Z,7.8nm,0.4s						
LOR	**Lormes**	**9.56**	**309**	*e*Pn	**Pn**	**19 55 07.1**	**-3.5**
	baz=129						
LOR	**Lormes**	**9.56**	**309**	*e*P	**Pn**	**19 55 13.1**	**+2.5**
LOR				*e*Sn	Sn	19 56 47.7	-10
	comp=Z,8.6nm,0.5s						
AVF	**Avril sur Loir**	**9.63**	**305**	*e*Pn	**Pn**	**19 55 08.2**	**-3.3**
AVF	**Avril sur Loir**	**9.63**	**305**	*e*P	**Pn**	**19 55 13.3**	**+1.8**
AVF				*e*Sn	Sn	19 56 49.6	-9.4
	comp=Z,1.4nm,0.4s						
MEZF	**Maizieres J'vi**	**9.63**	**318**	*e*P	**Pn**	**19 55 14.8**	**+3.3**
	baz=139						
MEZF				*e*Sn	Sn	19 56 49.2	-10
	comp=Z,3.7nm,0.3s						
SSF	**Saint Saulge**	**9.66**	**307**	*e*Pn	**Pn**	**19 55 08.6**	**-3.4**
SSF	**Saint Saulge**	**9.66**	**307**	*e*P	**Pn**	**19 55 14.2**	**+2.2**
SSF				*e*Sn	Sn	19 56 50.1	-10
	comp=Z,1.9nm,0.3s						
SAVF	**Savonnieres en**	**9.67**	**318**	*e*P	**Pn**	**19 55 16.1**	**+4.0**
	baz=140						
SAVF				*e*Sn	Sn	19 56 50.4	-10
	comp=Z,7.7nm,0.5s						
CAF	**Calviac**	**9.82**	**293**	*e*P	**Pn**	**19 55 16.8**	**+2.7**
BGF	**Bois d'Agland**	**9.84**	**303**	*e*Pn	**Pn**	**19 55 11.3**	**-3.2**
BGF	**Bois d'Agland**	**9.84**	**303**	*e*P	**Pn**	**19 55 17.0**	**+2.5**
TCF	**Toulx Ste Croi**	**10.14**	**301**	*e*P	**Pn**	**19 55 21.0**	**+2.4**
IDI	**Anoyia**	**10.20**	**126**	Pn	**Pn**	**19 55 18.7**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=136,slow=23,SNR=9.3						
IDI				Sn	**Sn**	**19 57 06.6**	**-6.6**
	comp=Z,0.4nm,0.3s,baz=314,slow=18,SNR=1.6						
QUIF	**Quistinic**	**14.15**	**302**	*e*Pn	**Pn**	**19 56 09.6**	**-3.7**
BRTR	**Keskin Array B**	**14.40**	**92**	Pn	**P**	**19 56 25.2**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=313,slow=9.5,SNR=5.3						
EKA	**Eskdalemuir Ar**	**17.97**	**325**	P	**P**	**19 57 05.6**	**+2.7**
	comp=Z,1.3nm,0.7s,baz=139,slow=14,SNR=2.2						
HFS	**Hagfors**	**18.38**	**358**	P	**Pn**	**19 57 09.1**	**+1.5**
	comp=Z,7.9nm,1.1s,baz=189,slow=12,SNR=2.6						
FINES	**FINESS Array B**	**20.83**	**15**	P	**P**	**19 57 34.8**	**+0.7**
	comp=Z,6.1nm,1.1s,baz=186,slow=11,SNR=2.3						
	comp=Z,6.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**30.74**	**206**	P	**P**	**19 59 12.2**	**+4.1**
	comp=Z,0.3nm,0.7s,baz=32,slow=8.5,SNR=2.0						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**47.21**	**60**	P	**P**	**20 01 27.0**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=271,slow=8.6,SNR=6.3						
	comp=Z,0.3nm,0.5s						

MOS ***09*** *20:23:32.9±1.1,56.°02N×113.°96E,h5km,mb3.9/1,Error ellipse: s-maj=10.8km s-min=6.9km az=72.7*
IDC ***09*** *20:23:34.7±0.8,55.°92N×113.°80E,h0km,mb3.6/8, mbtmp3.7/13,ML4.1/3,MS3.0/12,Error ellipse: s-maj=20.8km s-min=12.4km az=143.0*
BYKL ***09*** *20:23:34.8±0.2,56.°07N×113.°93E,h7km±3km*
ISC 09 20:23:35.1±0.5,56.°05N±0.°02×113.°89E±0.°02,h10km,n72, **σ2s90/116,mb3.7/7,MS3.0/6,6C-5D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.20**	**290**	*e*PG		**Pg**	**20 23 38.7**	**-0.6**
SVKR				*e*			20 23 41.9	
SVKR				pmax	pmax			
	comp=Z,5μm,0.9s							
SVKR				smax	smax			
	comp=N,45μm,1.3s							
SVKR	**Severomuysk**	**0.20**	**290**	⇑*i*Pg		**Pg**	**20 23 38.7**	**-0.6**
SVKR				Pmax			20 23 39.2	
	comp=N,5μm,0.5s							
SVKR				*e*Sg		**Sg**	**20 23 42.3**	**+0.1**
SVKR				Smax			20 23 46.5	
	comp=N,54μm,0.9s							
UKT	**Uakit**	**0.58**	**195**	⇑*i*PG		**Pg**	**20 23 45.3**	**-1.0**
UKT				*e*			20 23 52.8	
UKT				pmax	pmax			
	comp=Z,422nm,0.7s							
UKT				smax	smax			
	comp=E,2μm,0.9s							
UKT	**Uakit**	**0.58**	**195**	⇑*i*Pg		**Pg**	**20 23 45.3**	**-1.0**
UKT				Pmax			20 23 47.1	
	comp=E,460nm,0.6s							
UKT				*e*Sg		**Sg**	**20 23 53.4**	**-0.6**
UKT				Smax			20 23 56.9	
	comp=E,3μm,1.1s							
KMO	**Kumora**	**1.52**	**265**	⇓*i*PG		**Pn**	**20 24 02.3**	**0.0**
KMO				*e*			20 24 21.2	
KMO				pmax	pmax			
	comp=Z,1μm,0.4s							
KMO				smax	smax			
	comp=N,6μm,1.0s							
KMO	**Kumora**	**1.52**	**265**	⇓*i*Pg		**Pn**	**20 24 02.3**	**0.0**
KMO				*e*Pb		**Pb**	**20 24 03.6**	**+0.2**
KMO				max			20 24 03.9	
	comp=N,1μm,0.5s							
KMO				*e*			20 24 04.8	
KMO				*e*Sg		**Sb**	**20 24 22.8**	**+0.1**
KMO				*e*			20 24 25.7	
KMO				Smax			20 24 26.9	
	comp=N,6μm,1.2s							
BOD	**Bodaibo**	**1.78**	**2**	⇑*i*PN		**Pn**	**20 24 05.9**	**+0.1**
BOD				*e*			20 24 28.1	
BOD				pmax	pmax			
	comp=Z,304nm,0.5s							
BOD				smax	smax			
	comp=E,1μm,1.3s							
BOD	**Bodaibo**	**1.78**	**2**	*e*Pn		**Pn**	**20 24 05.9**	**+0.1**
BOD				*e*Pg		**Pb**	**20 24 06.3**	**-1.4**
BOD				Pmax			20 24 06.5	
	comp=E,460nm,1.1s							
BOD				*e*			20 24 09.3	
BOD				*e*Sg		**Sb**	**20 24 28.9**	**-1.1**
BOD				Smax			20 24 31.3	
	comp=E,2μm,1.5s							
YLYR	**Ulyunkhan**	**1.95**	**234**	*e*Pn		**Pn**	**20 24 09.5**	**+1.3**
YLYR				*e*Pg		**Pb**	**20 24 10.3**	**-0.3**
YLYR				Pmax			20 24 13.0	
	comp=E,551nm,1.4s							
YLYR				*e*Sg		**Sb**	**20 24 36.7**	**+1.7**
YLYR				Smax			20 24 39.0	
	comp=E,1μm,0.9s							
NIZ	**Nizh Angarsk**	**2.47**	**265**	⇑*i*PN		**Pn**	**20 24 16.2**	**+0.9**
NIZ				*e*			20 24 19.6	
NIZ				*e*			20 24 48.8	
NIZ				pmax	pmax			
	comp=Z,96nm,0.5s							
NIZ				smax	smax			
	comp=N,2μm,0.9s							
NIZ	**Nizh Angarsk**	**2.47**	**265**	⇑*i*Pn		**Pn**	**20 24 16.2**	**+0.9**
NIZ				*e*Pg		**Pb**	**20 24 20.2**	**+0.8**
NIZ				Pmax			20 24 22.9	
	comp=N,203nm,1.7s							
NIZ				*e*Sg		**Sg**	**20 24 52.7**	**-1.5**
NIZ				Smax			20 24 54.0	
	comp=N,2μm,0.9s							
SYVR	**Suvo**	**3.29**	**225**	*e*PN		**Pn**	**20 24 27.5**	**+0.9**
SYVR				*e*			20 24 33.1	
SYVR				*e*			20 25 14.2	
SYVR				pmax	pmax			
	comp=Z,110nm,0.6s							
SYVR				smax	smax			
	comp=N,550nm,0.8s							
SYVR	**Suvo**	**3.29**	**225**	*e*Pn		**Pn**	**20 24 27.4**	**+0.9**
SYVR				*e*Pg		**Pb**	**20 24 33.7**	**+0.3**
SYVR				*e*PgPg		**PbPb**	**20 24 37.5**	**+0.9**
SYVR				max			20 24 38.2	
	comp=N,155nm,1.5s							
SYVR				*e*Sn		**Sn**	**20 25 06.5**	**+0.8**
SYVR				*e*Sg		**Sb**	**20 25 17.3**	**+3.8**
SYVR				Smax			20 25 18.2	
	comp=N,599nm,0.9s							
VTMR	**Vitim**	**3.48**	**349**	*e*Pn		**Pn**	**20 24 28.7**	**-0.4**
VTMR				*e*			20 24 38.3	
VTMR				*e*Sn		**Sn**	**20 25 09.9**	**-0.4**
VTMR				*e*Sg		**Sb**	**20 25 21.3**	**+2.4**
KHNR	**Khani**	**3.49**	**73**	*e*Pg		**Pb**	**20 24 36.7**	**-0.1**
KHNR				*e*Sg		**Sg**	**20 25 22.5**	**-4.4**
TUP	**Tupik**	**3.83**	**113**	⇓*i*PN		**Pn**	**20 24 33.8**	**-0.3**
TUP				*e*			20 24 43.1	
TUP				*e*S		**Sn**	**20 25 17.7**	**-1.4**
TUP				*e*			20 25 32.3	
TUP				pmax	pmax			
	comp=Z,108nm,0.6s							
TUP				smax	smax			
	comp=E,1μm,0.7s							
TUP	**Tupik**	**3.83**	**113**	⇓*i*Pn		**Pn**	**20 24 33.8**	**-0.3**
TUP				*e*			20 24 35.5	
TUP				*e*Pg		**Pb**	**20 24 43.4**	**+0.7**
TUP				Pmax			20 24 46.6	
	comp=E,107nm,0.8s							
TUP				*e*Sn		**Sn**	**20 25 18.0**	**-1.1**
TUP				*e*Sg		**Sb**	**20 25 32.4**	**+3.3**
TUP				*e*SgSg		**Sg**	**20 25 37.7**	**-0.3**
TUP				max			20 25 38.5	
	comp=E,1μm,0.8s							
CIT	**Chita**	**4.04**	**183**	*e*PN		**Pn**	**20 24 38.5**	**+1.5**
CIT				*e*			20 24 48.3	
CIT				*e*S		**Sn**	**20 25 25.9**	**+1.6**
CIT				*e*			20 25 39.0	
CIT				pmax	pmax			
	comp=Z,70nm,0.9s							
CIT				smax	smax			
	comp=E,461nm,1.5s							
CIT	**Chita**	**4.04**	**183**	*e*Pn		**Pn**	**20 24 38.0**	**+1.0**
CIT				*e*Pg		**Pb**	**20 24 47.8**	**+1.5**
CIT				Pmax			20 24 50.3	
	comp=E,69nm,0.7s							
CIT				*e*Sn		**Sn**	**20 25 23.2**	**-1.1**
CIT				*e*Sg		**Sg**	**20 25 40.5**	**-4.2**
CIT				Smax			20 25 43.6	
	comp=E,463nm,1.3s							
MXMB	**Maximikha**	**4.09**	**229**	*e*Pn		**Pn**	**20 24 38.1**	**+0.5**
MXMB				*e*Pg		**Pb**	**20 24 49.1**	**+2.0**
MXMB				*e*Sg		**Sg**	**20 25 42.7**	**-3.6**
YKLR	**Yuktali**	**4.36**	**80**	*e*Pn		**Pn**	**20 24 41.1**	**-0.1**
YKLR				*e*Pg		**Pb**	**20 24 51.7**	**+0.1**
YKLR				*e*Sg		**Sg**	**20 25 49.2**	**-5.6**
OGRR	**Ongureny**	**4.37**	**239**	*e*PN		**Pn**	**20 24 44.4**	**+3.0**
OGRR				*e*			20 24 55.6	
OGRR				*e*			20 25 50.8	
OGRR				pmax	pmax			
	comp=Z,69nm,1.4s							
OGRR				smax	smax			
	comp=E,293nm,1.7s							
OGRR	**Ongureny**	**4.37**	**239**	*e*Pn		**Pn**	**20 24 44.4**	**+3.0**
OGRR				*e*Pg		**Pb**	**20 24 54.0**	**+2.2**
OGRR				*e*			20 24 56.3	
OGRR				max			20 24 59.0	
	comp=E,77nm,1.7s							
OGRR				*e*Sg		**Sg**	**20 25 51.5**	**-3.6**
OGRR				Smax			20 25 58.4	
	comp=E,293nm,1.2s							
KELR	**Kotokel**	**4.73**	**228**	*e*Pg		**Pb**	**20 25 00.1**	**+2.1**
KELR				*e*Sg		**Sg**	**20 26 02.6**	**-4.2**
ZRHB	**Zarechye**	**5.28**	**231**	*e*Sg		**Sg**	**20 26 18.8**	**-5.5**
ZRHB				Smax			20 26 50.1	
	comp=E,830nm,1.2s							
TRG	**Tyrgan**	**5.50**	**236**	*e*PN		**Pn**	**20 24 56.5**	**-0.5**
TRG				*e*			20 25 13.0	
TRG				*e*S		**Sn**	**20 25 59.0**	**-1.3**
TRG				*e*			20 26 24.0	
TRG				pmax	pmax			
	comp=Z,41nm,1.7s							
TRG				smax	smax			
	comp=E,128nm,0.8s							
TRG	**Tyrgan**	**5.50**	**236**	*e*Pn		**Pn**	**20 24 58.8**	**+1.8**
TRG				*e*Pg		**Pb**	**20 25 14.0**	**+2.8**
TRG				Pmax			20 25 15.2	
	comp=E,25nm,1.2s							
TRG				*e*			20 25 19.1	
TRG				*e*Sg		**Sg**	**20 26 27.2**	**-4.3**
TRG				Smax			20 26 44.5	
	comp=E,128nm,1.1s							
FFNB	**Fofonovo**	**5.80**	**229**	*e*Pg		**Pb**	**20 25 20.3**	**+4.0**
FFNB				*e*Sg		**Sg**	**20 26 35.0**	**-6.2**
KAB	**Kabansk**	**5.85**	**230**	*e*P

ZAK				*e*				20 28 00.0	
ZAK					pmax	pmax			
	comp=Z,11nm,1.4s								
ZAK					smax	smax			
	comp=N,87nm,1.3s								
ZAK	**Zakamensk**	**8.53**	**233**	*e*Pn		**Pn**		**20 25 40.4**	**+1.9**
ZAK				*e*Pg		Pg		20 26 09.0	-9.1
ZAK					Pmax			20 26 11.1	
	comp=N,11nm,1.9s								
ZAK				*e*Sg		**Sg**		**20 28 00.5**	**-7.9**
ZAK					Smax			20 28 16.2	
	comp=N,88nm,1.2s								
MOY	**Mondy**	**8.79**	**245**	*e*PN		**Pn**		**20 25 43.2**	**+1.0**
MOY				*e*				20 26 13.7	
MOY				*e*				20 28 08.7	
MOY					pmax	pmax			
	comp=Z,16nm,0.9s								
MOY					smax	smax			
	comp=E,199nm,1.1s								
MOY	**Mondy**	**8.79**	**245**	*e*Pn		**Pn**		**20 25 44.0**	**+1.8**
MOY					max			20 25 59.4	
	comp=E,20nm,1.5s								
MOY				*e*Sn		**Sn**		**20 27 17.1**	**-4.3**
MOY				*e*Sg		Sg		20 28 07.2	-10
MOY					Smax			20 28 26.6	
	comp=E,201nm,1.8s								
ORL	**Orlik**	**8.95**	**253**	*e*PN		**Pn**		**20 25 45.4**	**+1.0**
ORL				*e*				20 26 15.3	
ORL				*e*S		**Sn**		**20 27 23.3**	**-2.0**
ORL				*e*				20 28 10.4	
ORL					pmax	pmax			
	comp=Z,19nm,0.7s								
ORL					smax	smax			
	comp=N,160nm,1.6s								
ORL	**Orlik**	**8.95**	**253**	*e*Pn		**Pn**		**20 25 45.5**	**+1.0**
ORL					max			20 26 06.0	
	comp=N,15nm,1.2s								
ORL				*e*Sn		**Sn**		**20 27 23.6**	**-1.7**
ORL				*e*Sg		Sg		20 28 13.0	-9.1
ORL					Smax			20 28 18.7	
	comp=N,160nm,1.5s								
SONM	**Songino Array**	**9.43**	**212**	Pn		**Pn**		**20 25 50.0**	**-1.0**
	comp=N,0.3nm,0.3s,baz=114,slow=42,SNR=1.0								
SONM					Lg	Lg		20 28 28.3	
	comp=N,1.6nm,0.3s,baz=17,slow=26,SNR=8.6								
SONM	**Songino Array**	**9.43**	**212**	P		**Pn**		**20 25 50.0**	**-1.0**
YAK	**Yakutsk**	**10.09**	**47**	Pn		**Pn**		**20 25 59.7**	**0.0**
	comp=N,0.1nm,0.3s,baz=273,slow=0.7,SNR=3.1								
YAK					Sn	**Sn**		**20 27 48.0**	**-4.8**
	comp=N,0.1nm,0.3s,baz=285,slow=17,SNR=1.6								
YAK					Lg	Lg		20 28 41.9	
	comp=N,0.1nm,0.3s,baz=322,slow=23,SNR=10								
YAK					LR	LR		20 30 00.3	
	comp=N,47nm,19.9s,baz=266,slow=38								
	comp=N,2.2nm,0.4s								
KLR	**Kul'dur**	**12.79**	**115**	Pn		**Pn**		**20 26 36.6**	**-0.2**
	comp=N,0.4nm,0.3s,baz=307,slow=16,SNR=7.4								
KLR					Lg	Lg		20 30 14.4	
	comp=N,0.4nm,0.3s,baz=44,slow=15,SNR=8.1								
KLR					LR	LR		20 32 25.5	
	comp=N,40nm,18.3s,baz=334,slow=42								
	comp=N,1.7nm,0.5s								
USRK	**Ussuriysk Ar.**	**16.53**	**128**	Lg		Lg		20 32 12.9	
	comp=N,0.3nm,0.3s,baz=324,slow=27,SNR=5.7								
USRK					LR	LR		20 34 11.2	
	comp=N,31nm,19.2s,baz=106,slow=39								
ZALV	**Zalesovo Beam**	**16.76**	**275**	Pn		**Pn**		**20 27 29.5**	**-0.1**
	comp=N,0.8nm,0.7s,baz=61,slow=11,SNR=2.1								
ZALV					Lg	Lg		20 32 19.4	
	baz=310,slow=18								
ZALV					LR	LR		20 34 15.6	
	comp=N,29nm,19.5s,baz=64,slow=38								
NRIK	**Noril'sk**	**17.76**	**329**	P		**P**		**20 27 42.9**	**+0.1**
	comp=N,0.5nm,0.3s,baz=188,slow=9.1,SNR=4.0								
NRIK					Lg	Lg		20 32 54.4	
	comp=N,0.1nm,0.3s,baz=194,slow=14,SNR=1.2								
NRIK					LR	LR		20 35 04.4	
	comp=N,90nm,21.9s,baz=78,slow=39								
	comp=N,2.7nm,0.6s								
MA2	**Magadan**	**19.78**	**64**	LR		LR		20 34 54.5	
	comp=N,23nm,18.9s,baz=340,slow=34								
SEY	**Seymchan**	**20.45**	**55**	P		Pn		20 28 13.9	-0.5
	comp=N,0.8nm,0.6s,baz=168,slow=20,SNR=2.7								
	comp=N,0.8nm,0.6s								
SEY	**Seymchan**	**20.45**	**55**	P		Pn		20 28 14.0	-0.4
KSRS	**Korea Array**	**20.86**	**147**	LR		LR		20 36 10.1	
	comp=N,18nm,21.0s,baz=105,slow=36								
KURK	**Kurchatov**	**21.54**	**271**	P		**P**		**20 28 25.8**	**+1.7**
MKAR	**Makanchi Array**	**21.60**	**258**	P		**P**		**20 28 25.5**	**+0.7**
	comp=N,1.3nm,0.7s,baz=54,slow=8.7,SNR=16								
MKAR					LR	LR		20 37 14.3	
	comp=N,43nm,21.1s,baz=59,slow=38								
	comp=N,1.3nm,0.7s								
KURBB	**Kurchatov Arra**	**21.63**	**270**	P		**P**		**20 28 25.8**	**+0.7**
	comp=N,4.1nm,0.7s,baz=64,slow=11,SNR=18								
	comp=N,4.1nm,0.7s								
ARU	**Arti**	**30.05**	**294**	LR		LR		20 42 44.8	
	comp=N,20nm,18.6s,baz=62,slow=38								
ARCES	**ARCESS Array B**	**38.70**	**326**	LR		LR		20 53 39.0	
	comp=N,25nm,18.2s,baz=18,slow=46								
FINES	**FINESS Array B**	**42.59**	**315**	P		**P**		**20 31 33.0**	**+2.3**
	comp=N,7.3nm,1.1s,baz=47,slow=10,SNR=4.1								
	comp=N,7.3nm,1.1s								
FINES	**FINESS Array B**	**42.59**	**315**	P		**P**		**20 31 33.0**	**+2.3**
ILAR	**Eielson Array**	**44.82**	**37**	P		**P**		**20 31 49.5**	**+0.9**
	comp=N,0.2nm,0.6s,baz=293,slow=9.7,SNR=2.9								
	comp=N,0.2nm,0.6s								
KBZ	**Khabaz**	**45.36**	**286**	LR		LR		20 53 34.3	
	comp=N,29nm,18.3s,baz=359,slow=40								
ATD	**Arta Tunnel**	**69.94**	**261**	LR		LR		21 11 02.3	
	comp=N,58nm,18.1s,baz=199,slow=41								
ESDC	**Sonseca Array**	**71.09**	**314**	P		**P**		**20 34 54.2**	**+0.9**
	comp=N,0.7nm,0.8s,baz=26,slow=5.4,SNR=2.6								
	comp=N,0.7nm,0.8s								
WRA	**Warramunga Arr**	**77.65**	**160**	P		**P**		**20 35 32.7**	**+1.3**
	comp=N,0.4nm,0.6s,baz=352,slow=6.0,SNR=5.3								
	comp=N,0.4nm,0.6s								
ASAR	**Alice Springs**	**81.20**	**161**	P		**P**		**20 35 51.3**	**+0.6**
	comp=N,0.4nm,0.9s,baz=358,slow=6.5,SNR=4.4								
	comp=N,0.4nm,0.9s								

IDC ***09*** *21:07:11.7±1.2, 37.20N×137.21E, h263km±10km, mb3.0/1, mbtmp3.7/4, Error ellipse: s-maj=42.5km s-min=18.8km az=57.0*

JMA ***09*** *21:07:12.9±0.2, 37.0N±0.7×137.7E±, h263km±1km, MV3.0/32, TOYAMA BAY REGION*

ISC 09 21:07:11.5±1.0, 37.04N±0.07×137.16E±0.08, h268km±9km, n19, σ1§35/28, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JSZ	**Suzu**	**0.44**	**22**	*e*P		**Pn**	**21 07 47.0**	**+0.9**
JSZ				*e*S		**S**	**21 08 13.9**	**+0.3**
MAT	**Matsushiro**	**0.98**	**120**	P		**Pn**	**21 07 49.4**	**+1.0**
MAT				*e*S		**S**	**21 08 17.4**	**0.0**
MJAR	**Matsushiro Arr**	**0.98**	**120**	P		**Pn**	**21 07 47.1**	**-1.3**
	17nm,0.7s,baz=312,slow=5.3,SNR=26							
MJAR				S		**S**	**21 08 18.2**	**+0.8**
	3.8nm,0.6s,baz=69,slow=26,SNR=6.3							
JSD	**Sado**	**1.33**	**41**	P		**Pn**	**21 07 51.4**	**+1.2**
JSD				*e*S		**S**	**21 08 20.8**	**-0.1**
JYTA	**Yamagatataniai**	**1.48**	**193**	*e*P		**Pn**	**21 07 52.3**	**+0.9**
JYTA				*e*S		**S**	**21 08 23.2**	**+0.2**
JRY	**Ryogami san**	**1.74**	**125**	*e*P		**Pn**	**21 07 54.3**	**+0.9**
JRY				*e*S		**S**	**21 08 25.3**	**-1.2**
JNS	**Sasagawa**	**1.89**	**65**	*e*P		**Pn**	**21 07 55.7**	**+1.2**
JYN	**Shimob**	**1.90**	**143**	*e*S		**S**	**21 08 29.6**	**+0.6**
JAG	**Ashikaga**	**1.94**	**108**	P		**Pn**	**21 07 55.4**	**+0.4**
JAG				*e*S		**S**	**21 08 28.8**	**-0.6**
JAW	**Awa shima**	**2.18**	**49**	*e*P		**Pn**	**21 07 58.3**	**+1.4**
JWT	**Wachi**	**2.25**	**220**	*e*P		**Pn**	**21 07 58.5**	**+0.7**
JWT				*e*S		**S**	**21 08 33.0**	**-1.5**
JOD2	**Odawara 2**	**2.36**	**138**	*e*P		**Pn**	**21 07 59.7**	**+0.9**
JFT	**Otama**	**2.58**	**78**	*e*P		**Pn**	**21 08 02.1**	**+1.3**
JIE	**Ise**	**2.67**	**188**	P		**Pn**	**21 08 03.3**	**+1.6**
JIE				*e*S		**S**	**21 08 41.6**	**+0.1**
KSRS	**Korea Array**	**7.38**	**276**	P		**Pn**	**21 08 58.2**	**+1.2**
	0.9nm,0.6s,baz=99,slow=14,SNR=7.3							
USRK	**Ussuriysk Ar.**	**8.16**	**333**	P		**Pn**	**21 09 05.5**	**-1.2**
	4.5nm,0.7s,baz=148,slow=13,SNR=6.3							
JCJ	**Chichijima**	**10.79**	**155**	P		**Pn**	**21 09 35.8**	**-4.0**
	53nm,1.0s,baz=143,slow=21,SNR=1.8							
JCJ				S		S	21 11 28.9	-12
	28nm,0.8s,baz=93,slow=23,SNR=1.3							
KLR	**Kul'dur**	**12.80**	**344**	P		**Pn**	**21 10 03.2**	**-1.1**
	3.3nm,0.5s,baz=159,slow=11,SNR=16							
WRA	**Warramunga Arr**	**56.73**	**183**	P		**P**	**21 16 29.6**	**+1.8**
	0.7nm,0.9s,baz=0.3,slow=7.5,SNR=7.1							
	0.7nm,0.9s							

TUL ***09*** *21:46:34.3±0.7, 36.21N±0.03×97.58W±0.06, h7km±6km, ML3.7, mb3.6/5(NEIC), Error ellipse: s-maj=7.3km s-min=1.9km az=64.0*

ANF ***09*** *21:46:34.0±0.5, 36.22N×97.57W, h3km±4km, ML4.8/16, Error ellipse: s-maj=3.0km s-min=2.9km az=6.0*

NEIC ***09*** *21:46:35.0±0.6, 36.21N±0.03×97.58W±0.06, h4km±7km, Error ellipse: s-maj=7.6km s-min=2.2km az=63.0*

IDC ***09*** *21:46:35.2±1.0, 36.33N×97.83W, h0km, mb3.2/1, mbtmp3.3/6, ML3.8/4, MS3.0/8, Error ellipse: s-maj=18.1km s-min=11.5km az=154.0*

NEIC ***09*** *21:46:42.0±0.7, 36.22N±0.03×97.56W±0.05, h4km±9km, Error ellipse: s-maj=7.1km s-min=2.3km az=51.0*

NEIC ***09*** *21:46:42, 36.22N×97.57W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr=0.14; Mθθ=4.32; Mϕϕ=-4.18; Mrθ=-3.48; Mrϕ=5.48; Mθϕ=-0.04; Fault plane solution: M0 7.76000×10^14 NP1:ϕs289.59000°, δ84.73000°, λ24.58000°. NP2:ϕs197.19000°, δ65.53000°, λ174.21000°. Principal axes: T 8.2092, Plg21.0000°, Azm156.0000°; N -0.9888, Plg65.0000°, Azm301.0000°; P -7.2204, Plg13.0000°, Azm61.0000°;*

ISC 09 21:46:33.8±0.5, 36.24N±0.01×97.55W±0.02, h1km±4km, n261, σ1§67/174, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.44**	**308**			**Pg**	**21 46 43.0**	**+0.7**
CROK	**Carrier**	**0.44**	**308**	Pg		**Pn**	**21 46 49.4**	**+2.1**
CROK				Sg		**Sb**	**21 46 56.5**	**+4.9**
OK029	**Liberty Lake**	**0.45**	**170**	Pg		**Pg**	**21 46 42.8**	**+0.4**
OK029	**Liberty Lake**	**0.45**	**170**	Pg		**Pn**	**21 46 49.9**	**+2.6**
OK029				Sg		**Sb**	**21 46 55.8**	**+4.2**
BCOK	**Bluff Creek, N**	**0.58**	**185**	Pg		**Pg**	**21 46 45.1**	**+0.2**
BCOK	**Bluff Creek, N**	**0.58**	**185**	Pg		**Pn**	**21 46 52.2**	**+3.0**
BCOK				Sg		**Sn**	**21 46 59.6**	**+0.2**
BLOK	**Blackwell**	**0.59**	**27**	Pg		**Pg**	**21 46 46.2**	**+1.1**
OK031	**S. Brethren Rd**	**0.64**	**116**	Pg		**Pg**	**21 46 46.8**	**+0.7**
OK031	**S. Brethren Rd**	**0.64**	**116**	Pg		**Pn**	**21 46 53.8**	**+3.8**
OK031				Sg		**Sn**	**21 47 02.7**	**+1.8**
OK005	**Luther M Schoo**	**0.65**	**153**			**Pg**	**21 46 46.6**	**+0.4**
OK009	**Oakdale Elemen**	**0.66**	**171**			**Pg**	**21 46 45.9**	**-0.5**
GC02	**Grant County #**	**0.66**	**338**	Pg		**Pg**	**21 46 47.2**	**+0.7**
GC02	**Grant County #**	**0.66**	**338**	Pg		**Pn**	**21 46 54.4**	**+4.0**
OK025	**Westminster Rd**	**0.68**	**165**	Pg		**Pg**	**21 46 47.0**	**+0.3**
OK025	**Westminster Rd**	**0.68**	**165**	Pg		**Pn**	**21 46 54.0**	**+3.5**
QUOK	**Quay**	**0.69**	**95**	Pg		**Pg**	**21 46 47.7**	**+0.8**
QUOK	**Quay**	**0.69**	**95**	Pg		**Pn**	**21 46 54.8**	**+4.1**
OK030	**Cody Creek RV**	**0.69**	**116**	Pg		**Pg**	**21 46 47.8**	**+0.7**
OK030	**Cody Creek RV**	**0.69**	**116**	Pg		**Pn**	**21 46 54.8**	**+4.1**
OK034	**N. Norfolk Rd.**	**0.71**	**108**	Pg		**Pg**	**21 46 48.2**	**+0.7**
OK034	**N. Norfolk Rd.**	**0.71**	**108**	Pg		**Pn**	**21 46 55.3**	**+4.2**
OK032	**Salt Plains WL**	**0.78**	**317**			**Pg**	**21 46 49.1**	**+0.4**
OK032	**Salt Plains WL**	**0.78**	**317**	Pg		Pn	21 46 56.3	+4.3
KAN13	**South Haven SW**	**0.78**	**4**	Pg		**Pg**	**21 46 49.5**	**+0.8**
KAN13	**South Haven SW**	**0.78**	**4**	Pg		Pn	21 46 56.9	+4.9
KAN14	**Manchester OK**	**0.79**	**335**			**Pg**	**21 46 49.5**	**+0.6**
KAN14	**Manchester OK**	**0.79**	**335**	Pg		Pn	21 46 56.7	+4.5
KAN17	**Caldwell West**	**0.82**	**348**	Pg		**Pg**	**21 46 50.3**	**+0.7**
KAN17	**Caldwell West**	**0.82**	**348**	Pg		Pn	21 46 57.3	+4.7
OKCSW	**OKLAHOMA CITY**	**0.83**	**174**			**Pg**	**21 46 49.9**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**0.83**	**174**	Pg		Pn	21 46 57.1	+4.4
KAN05	**Bluff City Nor**	**0.91**	**344**			**Pg**	**21 46 51.8**	**+0.6**
KAN05	**Bluff City Nor**	**0.91**	**344**	Pg		Pn	21 46 58.8	+5.0
KAN01	**Argonia South**	**0.93**	**350**	Pg		**Pg**	**21 46 52.2**	**+0.6**
KAN01	**Argonia South**	**0.93**	**350**	Pg		Pn	21 46 59.3	+5.3
DEOK	**Depew**	**0.94**	**114**	Pg		**Pg**	**21 46 52.0**	**+0.2**
DEOK	**Depew**	**0.94**	**114**	Pg		Pn	21 46 58.7	+4.6
FNO	**Franklin**	**0.98**	**173**			**Pg**	**21 46 52.5**	**-0.2**
FNO	**Franklin**	**0.98**	**173**	Pg		Pn	21 46 59.6	+4.9
KAN10	**Anthony SW Sta**	**0.99**	**334**			**Pg**	**21 46 53.0**	**+0.3**
KAN10	**Anthony SW Sta**	**0.99**	**334**	Pg		Pn	21 47 00.2	+5.3
OK038	**West end E0370**	**0.99**	**284**			**Pg**	**21 46 52.7**	**-0.1**
KS20	**Mayfield South**	**0.99**	**360**	Pg		**Pg**	**21 46 53.3**	**+0.5**
KAN06	**Argonia West S**	**1.04**	**346**			**Pg**	**21 46 54.2**	**+0.4**
KAN06	**Argonia West S**	**1.04**	**346**	Pg		Pn	21 47 01.3	+5.7
KAN08	**Anthony NE Sta**	**1.04**	**341**			**Pg**	**21 46 54.3**	**+0.4**
KAN08	**Anthony NE Sta**	**1.04**	**341**	Pg		Pn	21 47 01.3	+5.7
OK035	**E0210 Rd and N**	**1.05**	**297**	Pg		**Pg**	**21 46 53.8**	**-0.1**
OK035	**E0210 Rd and N**	**1.05**	**297**	Pg		Pn	21 47 00.9	+5.3
OK035				IAmb_Lg			21 47 13.9	
	comp=Z,543nm,0.8s							
KS21	**Milan North St**	**1.05**	**355**			**Pg**	**21 46 54.5**	**+0.5**
KS21	**Milan North St**	**1.05**	**355**	Pg		Pn	21 47 01.4	+5.7
KAN16	**Harper SW Stat**	**1.07**	**337**			**Pg**	**21 46 54.6**	**+0.3**
KAN16	**Harper SW Stat**	**1.07**	**337**	Pg		Pn	21 47 01.6	+5.6
T35A	**Sooner Cattle**	**1.08**	**51**	Pg		**Pb**	**21 46 55.1**	**-0.2**
T35B	**Sooner Cattle**	**1.08**	**51**	P		**Pb**	**21 46 55.1**	**-0.2**
	baz=231							
CSTR	**Hydro, Custer**	**1.09**	**238**			**Pg**	**21 46 54.3**	**-0.5**
CSTR	**Hydro, Custer**	**1.09**	**238**	Pg		Pn	21 47 01.6	+5.2
KAN12	**Harper NE Stat**	**1.12**	**341**	Pg		**Pb**	**21 46 55.5**	**-0.5**
U32A	**Winter Ranch,**	**1.18**	**277**			**Pb**	**21 46 55.9**	**-1.1**
U32A	**Winter Ranch,**	**1.18**	**277**	Pg		Pn	21 47 02.9	+5.4
U32A				IAmb_Lg			21 47 18.1	
	comp=Z,277nm,0.8s							
U32A	**Winter Ranch,**	**1.18**	**277**	P		**Pb**	**21 46 55.9**	**-1.1**
	baz=98,SNR=40							
NOKA	**Waynoka**	**1.18**	**290**	Pg		**Pb**	**21 46 56.0**	**-1.0**
TUL1	**Leonard**	**1.46**	**102**			**Pn**	**21 47 00.8**	**-0.5**
TUL1	**Leonard**	**1.46**	**102**			Pg	21 47 07.8	+6.0
TUL1	**Leonard**	**1.46**	**102**	P		**Pn**	**21 47 00.8**	**-0.5**
	baz=282,SNR=71							
TUL1				S		**Sn**	**21 47 21.0**	**-0.1**
	baz=282							
TUL1	**Leonard**	**1.46**	**102**	P		**Pn**	**21 47 00.8**	**-0.5**
	baz=282,SNR=27							
TUL1				S		**Sn**	**21 47 21.2**	**+0.1**
	baz=282							
ELIS	**Ellis County**	**1.52**	**264**			Pg	21 47 08.8	+5.8
ELIS				IAmb_Lg			21 47 28.1	
	comp=Z,279nm,0.7s							
WMOK	**Wichita Mounta**	**1.80**	**214**			**Pn**	**21 47 05.5**	**-0.5**
WMOK	**Wichita Mounta**	**1.80**	**214**	Pn		**Pg**	**21 47 12.4**	**+4.1**
WMOK	**Wichita Mounta**	**1.80**	**214**	P		**Pn**	**21 47 05.7**	**-0.4**
	baz=33,SNR=81							
WMOK	**Wichita Mounta**	**1.80**	**214**	P		**Pn**	**21 47 05.6**	**-0.4**
	baz=33,SNR=52							
WMOK				S		**Sb**	**21 47 29.8**	**-0.9**
	baz=33							
RLO	**Rose Lookout**	**2.05**	**91**	Pn		**Pn**	**21 47 10.1**	**+0.7**
LOOK	**Love County**	**2.26**	**172**	Pn		**Pn**	**21 47 12.7**	**+0.4**
LOOK	**Love County**	**2.26**	**172**	Pn		**Pg**	**21 47 19.6**	**+2.5**
LOOK				IAmb_Lg			21 47 58.1	
	comp=Z,725nm,0.9s							
R32A	**Long Quarter,**	**2.37**	**337**			**Pn**	**21 47 13.4**	**-0.5**
R32A	**Long Quarter,**	**2.37**	**337**	P		**Pn**	**21 47 14.4**	**+0.5**
	baz=157,SNR=31							
X37A	**Clayton**	**2.42**	**132**			**Pn**	**21 47 15.1**	**+0.6**
X37A	**Clayton**	**2.42**	**132**	IAmb_Lg			21 48 01.0	
	comp=Z,764nm,0.7s							
X37A	**Clayton**	**2.42**	**132**	P		**Pn**	**21 47 15.1**	**+0.6**
	baz=313,SNR=12							
U38A	**Gravette**	**2.56**	**85**			**Pn**	**21 47 17.2**	**+0.7**
U38A	**Gravette**	**2.56**	**85**	Pn		**Pb**	**21 47 22.5**	**+1.9**
U38A	**Gravette**	**2.56**	**85**	P		**Pn**	**21 47 17.4**	**+0.9**
	baz=266							
Z35A	**Perchaven, San**	**2.91**	**175**			**Pn**	**21 47 21.3**	**+0.1**
Z35A	**Perchaven, San**	**2.91**	**175**	P		**Pn**	**21 47 21.6**	**+0.3**
	baz=355,SNR=31							
HHAR	**Hobbs**	**2.92**	**88**			**Pn**	**21 47 22.0**	**+0.6**
HHAR	**Hobbs**	**2.92**	**88**	IAmb_Lg			21 48 20.3	
	comp=Z,654nm,0.8s							
KSU1	**Kansas State U**	**2.96**	**14**	Pn		**Pn**	**21 47 22.7**	**+0.8**
KSU1	**Kansas State U**	**2.96**	**14**	Pn		**Pb**	**21 47 29.5**	**+2.2**
KSU1				IAmb_Lg			21 48 22.6	
	comp=Z,599nm,0.9s							
KSU1	**Kansas State U**	**2.96**	**14**	Pb		**Pb**	**21 47 26.0**	**-1.3**
	baz=195							
CBKS	**Cedar Bluff**	**3.10**	**327**			**Pn**	**21 47 24.4**	**+0.4**
CBKS	**Cedar Bluff**	**3.10**	**327**	Sb		**Sg**	**21 48 11.4**	**-2.2**
	baz=146							
CBKS	**Cedar Bluff**	**3.10**	**327**	Pg		**Pb**	**21 47 31.8**	**+2.0**
	baz=146							
AMTX	**Amarillo**	**3.63**	**249**			**Pn**	**21 47 30.9**	**-0.3**
AMTX	**Amarillo**	**3.63**	**249**	Pn		**Pb**	**21 47 38.3**	**-0.5**
AMTX				IAmb_Lg			21 48 35.2	
	comp=Z,212nm,0.8s							
AMTX	**Amarillo**	**3.63**	**249**	Pb		**Pb**	**21 47 37.8**	**-1.0**
	baz=67							
Z38A	**Mt. Pleasant**	**3.64**	**144**			**Pn**	**21 47 31.1**	**-0.3**
Z38A	**Mt. Pleasant**	**3.64**	**144**	Pn		**Pb**	**21 47 38.5**	**-0.5**
Z38A				IAmb_Lg			21 48 44.5	
	comp=Z,854nm,0.8s							
MIAR	**Mount Ida**	**3.66**	**116**	Pn		**Pn**	**21 47 32.3**	**+0.8**
MIAR	**Mount Ida**	**3.66**	**116**	P		**Pn**	**21 47 31.9**	**+0.4**
	baz=298,SNR=14							
MIAR	**Mount Ida**	**3.66**	**116**	P		**Pn**	**21 47 32.2**	**+0.6**
	baz=298,SNR=20							
MIAR				S		**Sn**	**21 48 16.6**	**+1.2**
	baz=298							
S39A	**Bolivar**	**3.69**	**66**			**Pn**	**21 47 32.6**	**+0.6**
S39A	**Bolivar**	**3.69**	**66**	Pn		**Pb**	**21 47 39.9**	**+0.2**
S39A				IAmb_Lg			21 48 45.6	
	comp=Z,465nm,0.8s							
S39A	**Bolivar**	**3.69**	**66**	P		**Pn**	**21 47 32.5**	**+0.6**
	baz=248,SNR=57							
ABTX	**Abilene, Hawle**	**4.00**	**206**			**Pb**	**21 47 44.2**	**-0.9**
ABTX				IAmb_Lg			21 48 48.9	
	comp=Z,436nm,0.8s							
ABTX	**Abilene, Hawle**	**4.00**	**206**	Pb		**Pb**	**21 47 44.6**	**-0.5**
	baz=25							
WHTX	**Lake Whitney,**	**4.24**	**179**	Pn		**Pn**	**21 47 38.9**	**-0.5**
WHTX	**Lake Whitney,**	**4.24**	**179**			**Pb**	**21 47 46.8**	**-2.3**
WHTX				IAmb_Lg			21 49 01.3	
	comp=Z,317nm,1.3s							
WHTX	**Lake Whitney,**	**4.24**	**179**	P		**Pn**	**21 47 39.1**	**-0.3**
	baz=359,SNR=11							
WHTX	**Lake Whitney,**	**4.24**	**179**	P		**Pn**	**21 47 39.0**	**-0.5**
	baz=359,SNR=17							
MGMO	**Mountain Grove**	**4.34**	**76**			**Pn**	**21 47 40.8**	**-0.2**
MGMO	**Mountain Grove**	**4.34**	**76**	Pn		**Pb**	**21 47 49.5**	**-1.4**
WHAR	**Wooly Hollow**	**4.38**	**101**			**Pb**	**21 47 48.7**	**-2.9**
WHAR				IAmb_Lg			21 49 11.8	
	comp=Z,474nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.41**	**93**			**Pn**	**21 47 43.1**	**+1.3**
FCAR	**Ozark Folk Cen**	**4.41**	**93**	IAmb_Lg			21 49 02.0	
	comp=Z,543nm,0.7s							
WLAR	**White Oak Lake**	**4.44**	**124**			**Pb**	**21 47 49.5**	**-3.1**
WLAR				IAmb_Lg			21 49 07.8	
	comp=Z,663nm,0.7s							
237A	**Washetta, Mont**	**4.46**	**161**			**Pn**	**21 47 41.9**	**-0.7**
237A	**Washetta, Mont**	**4.46**	**161**	Pn		**Pb**	**21 47 49.2**	**-3.8**
237A				IAmb_Lg			21 49 11.6	
	comp=Z,242nm,0.9s							
237A	**Washetta, Mont**	**4.46**	**161**	P		**Pn**	**21 47 42.0**	**-0.6**
	baz=341							
UALR	**University of**	**4.49**	**107**			**Pn**	**21 47 43.7**	**+0.7**
UALR	**University of**	**4.49**	**107**	IAmb_Lg			21 49 03.5	
	comp=Z,578nm,0.7s							
N33A	**J Bar K, Exete**	**4.50**	**1**	Pn		**Pn**	**21 47 42.3**	**-0.8**
N33A	**J Bar K, Exete**	**4.50**	**1**	Pn		**Pb**	**21 47 50.2**	**-3.3**
N33A				IAmb_Lg			21 49 09.8	
	comp=Z,589nm,1.0s							
P38A	**Dawn**	**4.64**	**42**	Pn		**Pn**	**21 47 45.6**	**+0.6**
P38A	**Dawn**	**4.64**	**42**	IAmb_Lg			21 49 13.3	
	comp=Z,517nm,0.7s							
R40A	**Maddies Statio**	**4.69**	**62**			**Pn**	**21 47 46.0**	**+0.4**
R40A	**Maddies Statio**	**4.69**

comp=Z,428nm,0.8s
OXF Oxford 6.87 102 Pn 21 48 21.8 +6.1
OXF IAmb_Lg 21 50 27.5
comp=Z,464nm,0.8s
GDL2 Guadalupe Moun 6.93 236 Pn 21 48 22.6 +5.9
Y45A Yeager Farm, C 6.98 107 Pn Pn 21 48 23.5 +6.4
Y45A IAmb_Lg 21 50 28.1
comp=Z,327nm,0.7s
P43A Skaggs, Pawnee 7.20 59 Pn **Pn 21 48 19.7 -0.4**
P43A Skaggs, Pawnee 7.20 59 Pn Pn 21 48 27.6 +7.5
P43A IAmb_Lg 21 50 37.7
comp=Z,350nm,0.8s
Q44A Meyer Farm, Va 7.28 66 Pn **Pn 21 48 21.9 +0.6**
Q44A Meyer Farm, Va 7.28 66 Pn 21 48 28.2 +6.9
Q44A IAmb_Lg 21 50 42.2
comp=Z,426nm,1.0s
ISCO Idaho Springs 7.29 302 Pn **Pn 21 48 22.2 +0.5**
ISCO Idaho Springs 7.29 302 IAmb_Lg 21 50 48.2
comp=Z,172nm,1.1s
ANMO Albuquerque 7.37 263 Pn **Pn 21 48 23.1 +0.4**
comp=Z,0.3nm,0.3s,baz=74,slow=19,SNR=1.3
ANMO Pg Pg 21 48 50.5 -4.5
comp=Z,1.3nm,0.3s,baz=85,slow=18,SNR=9.1
ANMO Lg Lg 21 50 25.7
comp=Z,3.4nm,0.3s,baz=158,slow=13,SNR=4.3
K38A Parkersburg 7.39 29 Pn 21 48 30.1 +7.2
ECSD EROS Data Cent 7.52 5 Pn **Pn 21 48 23.6 -1.1**
ECSD EROS Data Cent 7.52 5 P **Pn 21 48 23.3 -1.3**
baz=186,SNR=5.4
HDIL Hopedale 7.79 54 **Pn 21 48 28.4 +0.1**
HDIL Hopedale 7.79 54 P **Pn 21 48 27.6 -0.7**
baz=239
PLAL Pickwick Lake 7.82 96 Pn 21 48 35.9 +7.2
PLAL IAmb_Lg 21 50 51.0
comp=Z,187nm,0.9s
146A Union 7.88 115 IAmb_Lg 21 51 09.8
comp=Z,269nm,1.0s
OLIL Olney 7.92 69 Pn 21 48 36.8 +6.8
OLIL IAmb_Lg 21 51 05.4
comp=Z,369nm,1.1s
Y22D IRIS PASSCAL I 7.97 257 IAmb_Lg 21 51 08.7
comp=Z,334nm,0.9s
PHWY Pilot Hill 7.98 312 **Pn 21 48 29.5 -1.6**
833A Chaparral WMA, 8.04 192 IAmb_Lg 21 51 03.0
comp=Z,197nm,0.9s
N23A Red Feather La 8.05 308 IAmb_Lg 21 51 09.5
comp=Z,222nm,0.8s
O44A Mansfield 8.15 59 Pn 21 48 40.0 +6.8
O44A IAmb_Lg 21 51 08.9
comp=Z,239nm,0.7s
SUSD Miller 8.27 353 IAmb_Lg 21 51 10.3
comp=Z,240nm,0.9s
I37A Lemond, Waseca 8.39 21 IAmb_Lg 21 51 15.8
comp=Z,224nm,0.9s
L42A Oliver, Polo 8.41 44 Pn **Pn 21 48 37.2 +0.5**
L42A Oliver, Polo 8.41 44 IAmb_Lg 21 51 10.7
comp=Z,168nm,0.8s
TX31 Lajitas Ar. Si 8.59 219 **Pn 21 48 38.5 -1.0**
TX32 Lajitas Array 8.59 219 **Pn 21 48 38.7 -0.7**
TXAR Lajitas Array 8.59 219 Pn **Pn 21 48 38.1 -1.4**
comp=Z,0.2nm,0.3s,baz=45,slow=11,SNR=13
TXAR Pg Pg 21 49 13.9 -4.4
comp=Z,2.7nm,0.3s,baz=37,slow=14,SNR=7.3
TXAR Lg Lg 21 50 58.1
comp=Z,3.2nm,0.3s,baz=26,slow=21,SNR=3.9
TXAR LR LR 21 52 24.8
comp=Z,103nm,19.5s,baz=122,slow=41
comp=Z,0.3nm,0.4s
TXAR Lajitas Array 8.59 219 Pn 21 48 45.1 +5.7
JFWS Jewell Farm 8.73 38 IAmb_Lg 21 51 24.9
comp=Z,217nm,0.7s
M44A Midewin, Midew 9.03 52 Pn Pn 21 48 51.4 +6.1
SFIN Lafayette 9.20 60 Pn 21 48 54.6 +7.0
I40A Norwalk 9.31 33 Pn Pn 21 48 54.8 +5.7
I40A IAmb_Lg 21 51 34.6
comp=Z,126nm,0.7s
HQIL Hanson Quary C 9.37 51 IAmb_Lg 21 51 48.5
comp=Z,155nm,0.9s
U49A Red Boiling Sp 9.50 85 Pn 21 48 57.5 +5.8
K43A Burlington 9.62 45 Pn Pn 21 48 58.8 +5.5
K43A IAmb_Lg 21 52 00.4
comp=Z,181nm,0.8s
F33A 5 Mile Ranch, 9.64 5 IAmb_Lg 21 51 49.0
comp=Z,114nm,0.9s
SPMN Marine on St. 9.67 20 IAmb_Lg 21 52 01.6
comp=Z,190nm,1.1s
F36A Milaca 10.08 16 Pn 21 49 05.8 +6.1
I42A Draeger Farm, 10.11 38 Pn Pn 21 49 05.7 +5.6
P18A Preston Nutter 10.58 292 Pn Pn 21 49 13.1 +6.2
G40A Rib Lake 10.60 29 Pn 21 49 12.7 +5.9
H43A Windswept, Lux 11.10 39 Pn Pn 21 49 18.8 +5.2
O49A Covington 11.12 65 Pn Pn 21 49 19.3 +5.4
TKL Tuckaleechee C 11.19 89 Pn Pn 21 49 20.1 +5.3
comp=Z,0.5nm,0.3s,baz=290,slow=8.9,SNR=1.9
TKL Lg Lg 21 52 26.3
comp=Z,4.3nm,0.3s,baz=352,slow=21,SNR=5.5
comp=Z,0.9nm,0.3s
TKL Tuckaleechee C 11.19 89 Pn Pn 21 49 20.5 +5.7
PD31 Pinedale Array 11.33 309 Pn 21 49 22.6 +5.6
PDAR Pinedale Array 11.33 309 Pn **Pn 21 49 15.9 -1.2**
comp=Z,0.1nm,0.3s,baz=118,slow=13,SNR=3.0
PDAR Pg 21 50 03.0
comp=Z,0.7nm,0.3s,baz=117,slow=16,SNR=5.5
PDAR Lg Lg 21 52 24.7
comp=Z,1.6nm,0.3s,baz=115,slow=28,SNR=7.7
PDAR LR LR 21 54 29.8
comp=Z,32nm,21.8s,baz=127,slow=43
comp=Z,0.2nm,0.4s
L48A N Adams 11.67 57 Pn 21 49 26.5 +5.0
ACSO Alum Creek Sta 12.13 66 Pn 21 49 32.5 +4.7
M50A Fremont 12.43 61 Pn Pn 21 49 36.9 +5.0
EYMN Ely 12.53 19 Pn **Pn 21 49 37.1 +3.9**
G45A Suttons Bay 12.60 42 Pn **Pn 21 49 38.7 +4.6**
N51A Ashland 12.76 64 **Pn 21 49 35.6 -0.8**
N51A Ashland 12.76 64 Pn Pn 21 49 41.6 +5.3
E43A Lone Tree Farm 12.86 35 Pn **Pn 21 49 36.7 -0.9**
O52A Adamsville 12.96 68 Pn Pn 21 49 46.3 +5.2
Q54A Coxs Mills 13.54 73 **P 21 49 52.2 -4.1**
I49A Point Hope 13.64 51 Pn **Pn 21 49 51.7 +3.4**
M52A Chesterland 13.68 62 Pn **Pn 21 49 52.6 +3.7**
M53A WI Miller and 14.14 63 Pn **Pn 21 49 53.7 -1.5**
T57A Hurt 14.72 82 **P 21 50 08.6 -0.9**
Q56A Snyder Ridge, 14.82 74 **P 21 50 08.3 -2.3**
S57A Dark Hollow, R 14.94 79 Pn **P 21 50 11.1 -0.9**
M55A Ridgway 15.53 65 Pn **P 21 50 17.3 -1.2**
PFO Pinyon Flats O 15.73 266 LR LR 21 56 38.4
comp=Z,38nm,21.9s,baz=52,slow=39
JSRW J. Sargeant Re 15.79 79 **P 21 50 25.2 +3.9**
WVNY West Valley, N 15.89 61 Pn **Pn 21 50 17.4 -1.3**
WVNY IAmb IAmb 21 50 21.3
comp=Z,3.8nm,0.5s
SSPA Standing Stone 16.02 68 Pn **Pn 21 50 19.4 -0.9**
SSPA IAmb IAmb 21 50 21.3
comp=Z,5.8nm,1.1s
SSPA Standing Stone 16.02 68 Pn **P 21 50 23.5 -0.4**
SSPA IAmb IAmb 21 50 48.0
comp=Z,14nm,1.3s
T59A Double "B" Far 16.08 81 Pn **P 21 50 25.9 +1.4**
MEDO Medina 16.23 59 **Pn 21 50 23.4 +0.4**
LPIG La Paz 16.35 226 LR LR 21 56 10.8
comp=Z,45nm,20.1s,baz=196,slow=35
SADO Sadowa 16.37 53 Pn **Pn 21 50 23.1 -1.6**
comp=Z,0.3nm,0.3s,baz=269,slow=11,SNR=1.7
SADO Lg Lg 21 55 02.9
comp=Z,1.4nm,0.3s,baz=270,slow=20,SNR=3.6
SADO LR LR 21 56 59.4
comp=Z,66nm,19.9s,baz=240,slow=38
comp=Z,1.3nm,0.4s
SADO Sadowa 16.37 53 Pn **Pn 21 50 23.8 -0.9**
SADO Sadowa 16.37 53 Pn **P 21 50 30.8 +3.1**
SADO IAmb IAmb 21 50 58.3
comp=Z,9.7nm,1.1s
M57A Sunshine Farm, 16.71 66 Pn **Pn 21 50 27.3 -1.9**
M57A Sunshine Farm, 16.71 66 Pn **P 21 50 33.7 +2.1**
M57A IAmb IAmb 21 51 15.0
comp=Z,6.8nm,0.7s
N58A Sunbury 16.93 68 Pn **Pn 21 50 28.4 -3.5**
N58A IAmb IAmb 21 50 30.5
comp=Z,3.3nm,1.0s
N58A Sunbury 16.93 68 Pn **P 21 50 35.1 +1.2**
N58A IAmb IAmb 21 50 43.8
comp=Z,12nm,1.4s
DELO Deloro Mine 17.26 55 **Pn 21 50 35.6 -0.5**
L59A Walton 18.41 64 P **P 21 50 46.8 -3.6**
CMIG Matias Romero 19.22 172 LR LR 22 02 01.9
comp=Z,23nm,18.1s,baz=72,slow=48
SCHQ Schefferville 28.10 39 LR LR 22 04 34.6
comp=Z,44nm,20.2s,baz=19,slow=38
ILAR Eielson Array 40.75 330 P **P 21 54 16.4 +0.4**
comp=Z,0.3nm,0.7s,baz=106,slow=7.0,SNR=2.4
comp=Z,0.3nm,0.7s
ATAH Atahualpa 46.74 153 LR LR 22 15 14.6
comp=Z,36nm,18.2s,baz=344,slow=37

*NEIC **09** 21:54:26.1,36°.22N×97°.58W,h5km,Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr0.00; Mθθ4.77; Mϕϕ-4.77; Mrθ0.00; Mrϕ5.68; Mθϕ0.00; Fault plane solution: M₀7.41000×10¹³ NP1:ϕ₁110.00000°, δ90.00000°, λ0.00000°. NP2:ϕ₂20.00000°, δ90.00000°, λ180.00000°. Principal axes: T 7.4172, Plg0.0000°, Azm335.0000°; N 0.0000, Plg90.0000°, Azm0.0000°; P -7.4172, Plg0.0000°, Azm65.0000°;*
*ANF **09** 21:54:26.1±0.5,36°.22N×97°.57W,h5km±3km,ML4.1/16 Error ellipse: s-maj=2.4km s-min=2.1km az=169.0*
*NEIC **09** 21:54:26.8±0.5,36°.21N±0°.01×97°.57W±0°.02,h4km±7km, Error ellipse: s-maj=2.4km s-min=2.1km az=105.0*
*TUL **09** 21:54:26.1±0.6,36°.21N±0°.02×97°.57W±0°.02,h6km±7km, ML3.7,mb_Lg3.5/91(NEIC),Mwr3.2/12(SLM), Error ellipse: s-maj=2.2km s-min=2.0km az=188.0*

ISC 09 21:54:26.3±1.1,36°.22N±0°.02×97°.57W±0°.02,h7km±10km, n128,σ0§49/112,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.43**	**167**	Pg	**Pg**	**21 54 34.6**	**-0.1**
OK029				Sg	**Sg**	**21 54 40.6**	**+0.3**
CROK	**Carrier**	**0.44**	**311**	Pg	**Pg**	**21 54 34.9**	**+0.1**
CROK				Sg	**Sg**	**21 54 41.3**	**+0.7**
BCOK	**Bluff Creek, N**	**0.56**	**183**	Pg	**Pg**	**21 54 37.0**	**-0.1**
BCOK				Sg	**Sg**	**21 54 44.7**	**+0.3**
BLOK	**Blackwell**	**0.61**	**28**	Pg	**Pg**	**21 54 38.2**	**0.0**
OK005	**Luther M Schoo**	**0.64**	**151**	Pg	**Pg**	**21 54 38.5**	**-0.1**
OK009	**Oakdale Elemen**	**0.65**	**169**	Pg	**Pg**	**21 54 38.5**	**-0.2**
OK031	**S. Brethren Rd**	**0.65**	**114**	Pg	**Pg**	**21 54 38.6**	**-0.2**
OK025	**Westminster Rd**	**0.66**	**163**	Pg	**Pg**	**21 54 38.9**	**-0.2**
GC02	**Grant County #**	**0.68**	**340**	Pg	**Pg**	**21 54 39.1**	**-0.2**
OK030	**Cody Creek RV**	**0.70**	**114**	Pg	**Pg**	**21 54 39.6**	**-0.2**
QUOK	**Quay**	**0.70**	**93**	Pg	**Pg**	**21 54 39.6**	**-0.2**
OK034	**N. Norfolk Rd.**	**0.73**	**106**	Pg	**Pg**	**21 54 40.1**	**-0.2**
OK032	**Salt Plains WL**	**0.78**	**319**	Pg	**Pg**	**21 54 40.9**	**-0.4**
KAN13	**South Haven SW**	**0.80**	**5**	Pg	**Pg**	**21 54 41.4**	**-0.3**
KAN14	**Manchester OK**	**0.80**	**337**		**Pg**	**21 54 41.5**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**0.82**	**172**	Pg	**Pg**	**21 54 41.6**	**-0.4**
KAN17	**Caldwell West**	**0.84**	**349**	Pg	**Pg**	**21 54 42.2**	**-0.3**
KAN05	**Bluff City Nor**	**0.92**	**345**		**Pg**	**21 54 43.7**	**-0.4**
DEOK	**Depew**	**0.95**	**113**	Pg	**Pg**	**21 54 43.8**	**-0.7**
KAN01	**Argonia South**	**0.95**	**351**	Pg	**Pg**	**21 54 44.1**	**-0.4**
FNO	**Franklin**	**0.97**	**172**	Pg	**Pg**	**21 54 44.2**	**-0.7**
OK038	**West end E0370**	**0.98**	**286**		**Pg**	**21 54 44.6**	**-0.5**
KAN10	**Anthony SW Sta**	**1.00**	**335**	Pg	**Pg**	**21 54 45.0**	**-0.6**
KS20	**Mayfield South**	**1.01**	**1**	Pg	**Pg**	**21 54 45.3**	**-0.5**
OK035	**E0210 Rd and N**	**1.04**	**299**	Pg	**Pg**	**21 54 45.7**	**-0.6**
KAN06	**Argonia West S**	**1.05**	**348**		**Pg**	**21 54 46.1**	**-0.5**
KAN08	**Anthony NE Sta**	**1.06**	**343**	Pg	**Pg**	**21 54 46.2**	**-0.5**
CSTR	**Hydro, Custer**	**1.07**	**238**	Pg	**Pg**	**21 54 46.2**	**-0.6**
KS21	**Milan North St**	**1.07**	**356**	Pg	**Pg**	**21 54 46.4**	**-0.6**
KAN16	**Harper SW Stat**	**1.08**	**339**	Pg	**Pg**	**21 54 46.6**	**-0.6**
T35A	**Sooner Cattle**	**1.10**	**50**	Pg	**Pg**	**21 54 46.9**	**-0.6**
T35B	**Sooner Cattle** baz=231,SNR=750	**1.10**	**50**	P	**Pg**	**21 54 46.8**	**-0.7**
KAN12	**Harper NE Stat**	**1.13**	**343**	Pg	**Pg**	**21 54 47.5**	**-0.6**
U32A	**Winter Ranch,**	**1.17**	**278**	Pg	**Pg**	**21 54 47.8**	**-0.9**
U32A	**Winter Ranch,** baz=98	**1.17**	**278**	S	**Sb**	**21 55 04.4**	**+0.3**
NOKA	**Waynoka**	**1.17**	**291**		**Pg**	**21 54 48.1**	**-0.7**
TUL1	**Leonard**	**1.48**	**101**		**Pn**	**21 54 52.7**	**-0.7**
TUL1	**Leonard** baz=282,SNR=116	**1.48**	**101**	P	**Pn**	**21 54 52.6**	**-0.7**
TUL1	baz=282			S	**Sn**	**21 55 12.8**	**0.0**
ELIS	**Ellis County**	**1.50**	**265**		**Pn**	**21 54 54.0**	**+0.3**
X34A	**Smith Ranch, M**	**1.63**	**188**		**Pn**	**21 54 56.0**	**+0.7**
WMOK	**Wichita Mounta**	**1.77**	**214**	Pn	**Pn**	**21 54 57.6**	**+0.2**
WMOK	**Wichita Mounta** baz=33,SNR=184	**1.77**	**214**	P	**Pn**	**21 54 57.5**	**+0.1**
WMOK	baz=33			S	**Sb**	**21 55 21.6**	**-0.1**
RLO	**Rose Lookout**	**2.06**	**91**	Pn	**Pn**	**21 55 01.6**	**+0.2**
LOOK	**Love County**	**2.24**	**172**	Pn	**Pn**	**21 55 04.5**	**+0.7**
LOOK	comp=Z,134nm,0.9s			IAmb_Lg		21 55 42.8	
R32A	**Long Quarter,**	**2.38**	**338**		**Pn**	**21 55 06.0**	**+0.2**
R32A	**Long Quarter,** baz=157,SNR=59	**2.38**	**338**	P	**Pn**	**21 55 06.3**	**+0.5**
R32A	baz=157			S	**Sn**	**21 55 36.2**	**+1.0**
X37A	**Clayton**	**2.42**	**131**	Pn	**Pn**	**21 55 07.0**	**+0.7**
X37A	comp=Z,183nm,0.8s			IAmb_Lg		21 55 49.8	
X37A	**Clayton** baz=313,SNR=36	**2.42**	**131**	P	**Pn**	**21 55 07.0**	**+0.7**
U38A	**Gravette**	**2.58**	**84**	Pn	**Pn**	**21 55 08.9**	**+0.4**
Z35A	**Perchaven, San**	**2.89**	**175**		**Pn**	**21 55 12.1**	**-0.7**
Z35A	**Perchaven, San** baz=355,SNR=32	**2.89**	**175**	P	**Pn**	**21 55 13.5**	**+0.7**
HHAR	**Hobbs**	**2.94**	**88**	Pn	**Pn**	**21 55 13.4**	**+0.1**
HHAR	comp=Z,95nm,0.7s			IAmb_Lg		21 56 05.0	
HHAR	**Hobbs** baz=270	**2.94**	**88**	P	**Pn**	**21 55 13.5**	**+0.1**
KSU1	**Kansas State U**	**2.98**	**15**		**Pn**	**21 55 14.6**	**+0.6**
KSU1	comp=Z,122nm,0.7s			IAmb_Lg		21 56 04.8	
KSU1	**Kansas State U** baz=195	**2.98**	**15**	P	**Pn**	**21 55 14.4**	**+0.4**
CBKS	**Cedar Bluff**	**3.11**	**327**		**Pn**	**21 55 16.0**	**+0.2**
AMTX	**Amarillo**	**3.60**	**250**		**Pn**	**21 55 23.2**	**+0.5**
Z38A	**Mt. Pleasant**	**3.64**	**143**		**Pn**	**21 55 23.4**	**+0.3**
Z38A	comp=Z,152nm,0.8s			IAmb_Lg		21 56 31.0	
Z38A	**Mt. Pleasant** baz=325	**3.64**	**143**	P	**Pn**	**21 55 23.3**	**+0.3**
MIAR	**Mount Ida**	**3.67**	**116**	Pn	**Pn**	**21 55 24.3**	**+0.9**
MIAR	comp=Z,94nm,0.8s			IAmb_Lg		21 56 30.6	
MIAR	**Mount Ida** baz=298,SNR=26	**3.67**	**116**	P	**Pn**	**21 55 24.3**	**+0.9**
S39A	**Bolivar**	**3.71**	**65**	Pn	**Pn**	**21 55 24.3**	**+0.3**
S39A	comp=Z,101nm,0.8s			IAmb_Lg		21 56 30.3	
S39A	**Bolivar** baz=248,SNR=30	**3.71**	**65**	P	**Pn**	**21 55 24.4**	**+0.3**
ABTX	**Abilene, Hawle**	**3.97**	**206**		**Pn**	**21 55 27.3**	**-0.4**
ABTX	comp=Z,112nm,1.0s			IAmb_Lg		21 56 37.1	
WHTX	**Lake Whitney,**	**4.22**	**179**		**Pn**	**21 55 31.1**	**+0.1**
WHTX	**Lake Whitney,** baz=359,SNR=18	**4.22**	**179**	P	**Pn**	**21 55 31.0**	**+0.1**
MGMO	**Mountain Grove**	**4.36**	**76**	Pn	**Pn**	**21 55 33.2**	**+0.2**
MGMO	comp=Z,69nm,0.8s			IAmb_Lg		21 56 46.1	
WHAR	**Wooly Hollow**	**4.40**	**101**	Pn	**Pn**	**21 55 33.4**	**-0.1**
WHAR	comp=Z,85nm,0.9s			IAmb_Lg		21 56 49.0	
FCAR	**Ozark Folk Cen**	**4.43**	**93**	Pn	**Pn**	**21 55 34.1**	**+0.2**
FCAR	comp=Z,73nm,0.7s			IAmb_Lg		21 56 49.0	
WLAR	**White Oak Lake** comp=Z,109nm,0.7s	**4.45**	**123**	IAmb_Lg		21 56 56.1	
237A	**Washetta, Mont**	**4.45**	**160**		**Pn**	**21 55 33.9**	**-0.4**
237A	**Washetta, Mont** baz=341,SNR=6.0	**4.45**	**160**	P	**Pn**	**21 55 33.8**	**-0.4**
UALR	**University of**	**4.50**	**107**	Pn	**Pn**	**21 55 35.6**	**+0.6**
N33A	**J Bar K, Exete**	**4.52**	**1**	Pn	**Pn**	**21 55 34.7**	**-0.4**
N33A	comp=Z,102nm,0.8s			IAmb_Lg		21 57 02.2	
P38A	**Dawn**	**4.67**	**42**		**Pn**	**21 55 36.9**	**-0.3**
P38A	comp=Z,122nm,0.9s			IAmb_Lg		21 56 56.3	
R40A	**Maddies Statio**	**4.71**	**62**	Pn	**Pn**	**21 55 38.0**	**+0.2**
R40A	**Maddies Statio** baz=245,SNR=30	**4.71**	**62**	P	**Pn**	**21 55 37.9**	**+0.2**
MSTX	**Muleshoe**	**4.82**	**244**		**Pn**	**21 55 39.3**	**-0.1**
KSCO	**Kaye Shedlock'**	**4.89**	**306**		**Pn**	**21 55 40.7**	**+0.4**
Z41A	**Richland Creek**	**4.91**	**126**	Pn	**Pn**	**21 55 40.1**	**-0.4**
Z41A				IAmb_Lg		21 57 14.2	
Z41A	**Richland Creek** baz=308	**4.91**	**126**	P	**Pn**	**21 55 40.7**	**+0.1**
Z41A	baz=308			P	**Pn**	**21 55 40.7**	**+0.1**
LCAR	**Lake Charles**	**5.20**	**90**	Pn	**Pn**	**21 55 44.5**	**0.0**
BGNE	**Belgrade**	**5.20**	**355**		**Pn**	**21 55 43.2**	**-1.4**
BGNE	**Belgrade** baz=175	**5.20**	**355**	P	**Pn**	**21 55 44.3**	**-0.3**
CCM	**Cathedral Cave**	**5.38**	**68**	Pn	**Pn**	**21 55 47.0**	**+0.1**
CCM	comp=Z,48nm,0.8s			IAmb_Lg		21 57 25.3	
435B	**Jarrell**	**5.42**	**180**	Pn	**Pn**	**21 55 47.2**	**-0.3**
435B	comp=Z,66nm,0.8s			IAmb_Lg		21 57 19.7	
P40A	**Paris**	**5.48**	**51**	Pn	**Pn**	**21 55 48.9**	**+0.5**
P40A	comp=Z,80nm,0.8s			IAmb_Lg		21 57 26.0	
T25A	**Trinidad**	**5.57**	**282**	Pn	**Pn**	**21 55 49.5**	**-0.4**
N38A	**Joes South For**	**5.70**	**35**	Pn	**Pn**	**21 55 51.2**	**-0.1**
PBMO	**Poplar Bluff** comp=Z,85nm,0.7s	**5.78**	**82**	IAmb_Lg		21 57 33.2	
OGNE	**Ogallala**	**5.87**	**325**	Pn	**Pn**	**21 55 53.2**	**-0.6**
OGNE	comp=Z,76nm,0.8s			IAmb_Lg		21 57 43.5	
FVM	**French Village**	**5.98**	**71**	Pn	**Pn**	**21 55 55.0**	**-0.3**
FVM	**French Village** baz=255,SNR=6.7	**5.98**	**71**	P	**Pn**	**21 55 55.1**	**-0.1**
JCT	**Junction City**	**6.02**	**199**	Pn	**Pn**	**21 55 55.8**	**0.0**
CPRX	**Cap Rock**	**6.08**	**240**	Pn	**Pn**	**21 55 56.8**	**0.0**
143A	**Socs Landing,** comp=Z,75nm,0.8s	**6.18**	**123**	IAmb_Lg		21 57 47.6	
SLM	**Saint Louis** comp=Z,45nm,0.7s	**6.32**	**65**	IAmb_Lg		21 57 59.1	
CGM3	**Cape Girardeau** comp=Z,59nm,1.1s	**6.45**	**78**	IAmb_Lg		21 57 51.6	
K31A	**O'Neill**	**6.46**	**352**	Pn	**Pn**	**21 56 01.9**	**0.0**
SDCO	**Great Sand Dun** comp=Z,41nm,1.0s	**6.53**	**286**	IAmb_Lg		21 58 01.4	
Q24A	**Divide**	**6.61**	**297**		**Pn**	**21 56 03.6**	**-0.6**
SCIA	**State Center**	**6.62**	**29**	Pn	**Pn**	**21 56 04.2**	**+0.3**
S44A	**Carbondale**	**6.82**	**75**	Pn	**Pn**	**21 56 06.4**	**-0.4**
S44A	comp=Z,57nm,0.8s			IAmb_Lg		21 58 07.0	
S44A	**Carbondale** baz=260,SNR=6.6	**6.82**	**75**	P	**Pn**	**21 56 07.4**	**+0.6**
SIUC	**Southern Illin** comp=Z,63nm,0.8s	**6.85**	**75**	IAmb_Lg		21 58 01.6	
OXF	**Oxford** comp=Z,78nm,1.0s	**6.88**	**102**	IAmb_Lg		21 58 08.7	
W45A	**Hickory Valley** comp=Z,68nm,0.8s	**6.91**	**96**	IAmb_Lg		21 58 08.2	
N41A	**Harden Midland**	**6.92**	**48**	Pn	**Pn**	**21 56 08.6**	**+0.5**
N41A	comp=Z,69nm,0.8s			IAmb_Lg		21 58 09.6	
Y45A	**Yeager Farm, C** comp=Z,53nm,0.7s	**6.99**	**107**	IAmb_Lg		21 58 13.2	
P43A	**Skaggs, Pawnee**	**7.22**	**59**	Pn	**Pn**	**21 56 11.6**	**-0.6**
P43A	comp=Z,58nm,0.7s			IAmb_Lg		21 58 26.7	
Q44A	**Meyer Farm, Va**	**7.30**	**66**	Pn	**Pn**	**21 56 13.0**	**-0.4**
Q44A	comp=Z,62nm,0.9s			IAmb_Lg		21 58 25.6	
K38A	**Parkersburg**	**7.42**	**29**	Pn	**Pn**	**21 56 14.8**	**-0.1**
ECSD	**EROS Data Cent**	**7.54**	**5**	Pn	**Pn**	**21 56 15.0**	**-1.7**
L40A	**Anamosa**	**7.64**	**38**	Pn	**Pn**	**21 56 17.8**	**-0.2**
L40A	comp=Z,62nm,1.0s			IAmb_Lg		21 58 33.7	
HDIL	**Hopedale**	**7.81**	**54**	Pn	**Pn**	**21 56 19.8**	**-0.6**
OLIL	**Olney** comp=Z,60nm,1.1s	**7.94**	**69**	IAmb_Lg		21 58 54.7	
PHWY	**Pilot Hill** comp=Z,39nm,1.0s	**7.98**	**312**	IAmb_Lg		21 58 48.5	
833A	**Chaparral WMA,** comp=Z,35nm,0.9s	**8.02**	**192**	IAmb_Lg		21 58 47.8	
N23A	**Red Feather La** comp=Z,45nm,0.8s	**8.05**	**308**	IAmb_Lg		21 58 55.0	
USIN	**University of** comp=Z,36nm,0.7s	**8.11**	**75**	IAmb_Lg		21 58 58.0	
O44A	**Mansfield** comp=Z,55nm,0.7s	**8.18**	**59**	IAmb_Lg		21 58 52.3	
SUSD	**Miller** comp=Z,46nm,0.8s	**8.29**	**353**	IAmb_Lg		21 58 55.0	
L42A	**Oliver, Polo** comp=Z,36nm,0.9s	**8.43**	**44**	IAmb_Lg		21 58 54.9	
JFWS	**Jewell Farm** comp=Z,42nm,0.7s	**8.76**	**38**	IAmb_Lg		21 59 23.5	
I40A	**Norwalk** comp=Z,26nm,0.9s	**9.33**	**33**	IAmb_Lg		21 59 19.7	
K22A	**Casper** comp=Z,47nm,1.0s	**9.44**	**316**	IAmb_Lg		21 59 51.0	
K43A	**Burlington** comp=Z,33nm,0.7s	**9.64**	**45**	IAmb_Lg		21 59 45.2	
SPMN	**Marine on St.** comp=Z,23nm,0.8s	**9.70**	**20**	IAmb_Lg		21 59 33.1	

*KNET **09** 22:01:10.9±1.8,41°.29N×75°.72E,h0km,ml2.6,Error ellipse: s-maj=16.6km s-min=5.0km az=157.0*
*KRNET **09** 22:01:13.3±0.1,41°.41N×75°.67E,h35km,mb2.5*

ISC 09 22:01:12.8±3.1,41°.4N±0°.1×75°.68E±0°.07,h15km±11km, n20,σ0§37/27,19C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol** 7.9nm,0.2s,SNR=54	**0.94**	**27**	⇓P	**Pb**	**22 01 30.6**	**-0.3**
ULHL	**Ulahol** 7.9nm,0.2s,SNR=54	**0.94**	**27**	⇓P	**Pb**	**22 01 30.6**	**-0.3**
ULHL	**Ulahol** baz=27	**0.94**	**27**	⇓*i*P	**Pb**	**22 01 30.4**	**-0.5**
ULHL	baz=27			⇓*i*S	**Sb**	**22 01 44.0**	**+0.8**
BOOM	**Boomskoye usch** baz=11	**1.10**	**10**	⇑*i*P	**Pb**	**22 01 33.7**	**+0.1**
BOOM	baz=11			⇑*i*S	**Sg**	**22 01 48.7**	**+0.3**
ARLS	**Aral** baz=94	**1.11**	**294**	⇑*i*P	**Pb**	**22 01 33.5**	**-0.3**
ARLS	baz=94			⇑*i*S	**Sg**	**22 01 48.4**	**-0.4**
KBK	**Karagaybulak** 9.4nm,0.1s,SNR=30	**1.36**	**337**	⇑P	**Pg**	**22 01 39.2**	**+0.2**
KBK	**Karagaybulak** 9.4nm,0.1s,SNR=30	**1.36**	**337**	⇑P	**Pg**	**22 01 39.2**	**+0.2**
KBK	**Karagaybulak** baz=37	**1.36**	**337**	⇓*i*P	**Pn**	**22 01 37.8**	**+0.4**
KBK	baz=37			⇓*i*S	**Sn**	**22 01 55.2**	**0.0**
AAK	**Ala-Archa** baz=25	**1.51**	**325**	⇑*i*P	**Pn**	**22 01 39.6**	**+0.2**
AAK	baz=25			⇑*i*S	**Sn**	**22 01 58.2**	**-0.7**
TKM2	**Tokmak 2** 6.8nm,0.2s,SNR=7.6	**1.51**	**358**	⇑P	**Pg**	**22 01 41.8**	**-0.1**
TKM2	**Tokmak 2** 6.8nm,0.2s,SNR=7.6	**1.51**	**358**	⇑P	**Pg**	**22 01 41.8**	**-0.1**
TKM2	**Tokmak 2** baz=58	**1.51**	**358**	⇑*e*P	**Pn**	**22 01 39.7**	**+0.2**
TKM2	baz=58			⇑*i*S	**Sn**	**22 01 58.6**	**-0.4**
AML	**Almayashu** 3.3nm,0.2s,SNR=9.6	**1.65**	**297**	⇑P	**Pb**	**22 01 43.3**	**+0.2**
AML	**Almayashu** 3.3nm,0.2s,SNR=9.6	**1.65**	**297**	⇑P	**Pb**	**22 01 43.3**	**+0.2**
CHMS	**Chumysh** 6.0nm,0.2s,SNR=6.7	**1.73**	**337**	⇓P	**Pg**	**22 01 45.8**	**-0.2**
CHMS	**Chumysh** 6.0nm,0.2s,SNR=6.7	**1.73**	**337**	⇓P	**Pg**	**22 01 45.8**	**-0.2**

n34,σ1°57/62, 19C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol** baz=36	**0.85**	**30**	⇓*iP*	**Pg**	**22 01 51.0**	**+1.1**
ULHL	baz=36			⇓*iS*	**Sg**	**22 02 01.6**	**+0.7**
BOOM	**Boomskoye usch** baz=15	**1.00**	**12**	⇑*iP*	**Pb**	**22 01 53.1**	**-0.6**
BOOM	baz=15			⇑*iS*	**Sg**	**22 02 05.8**	**+0.1**
ARLS	**Aral** baz=85	**1.07**	**290**	⇓*iP*	**Pb**	**22 01 54.7**	**-0.2**
ARLS	baz=85			⇓*iS*	**Sg**	**22 02 08.3**	**+0.4**
KBK	**Karagaybulak** baz=35	**1.26**	**335**	⇑*iP*	**Pn**	**22 01 57.7**	**-0.7**
KBK	baz=35			⇑*iS*	**Sg**	**22 02 13.9**	**-0.3**
TKM2	**Tokmak 2** 12nm,0.1s	**1.41**	**358**	⇑Pg	**Pn**	**22 01 57.8**	**-2.7**
TKM2	25nm,0.2s			⇑Lg	Lg	22 02 20.1	
TKM2	**Tokmak 2** baz=59	**1.41**	**358**	⇑*iP*	**Pb**	**22 02 00.2**	**-0.5**
TKM2	baz=59			⇑*iS*	**Sg**	**22 02 18.4**	**-0.5**
AAK	**Ala-Archa** baz=21	**1.42**	**323**	⇑*iP*	**Pb**	**22 02 00.7**	**-0.3**
AAK	baz=21			⇑*iS*	**Sg**	**22 02 18.9**	**-0.5**
KST	**Kastek** 6.1nm,0.3s	**1.54**	**8**	*eP*	**Pn**	**22 02 00.1**	**-2.1**
KST	43nm,0.2s			*eS*	**Sg**	**22 02 24.9**	**+1.6**
CHMS	**Chumysh** 13nm,0.2s	**1.63**	**336**	⇑Pg	**Pn**	**22 02 01.7**	**-1.7**
CHMS	19nm,0.2s			⇑Lg	Lg	22 02 26.7	
CHMS	**Chumysh** baz=35	**1.63**	**336**	⇑*iP*	**Pb**	**22 02 04.4**	**-0.1**
CHMS	baz=35			⇑*iS*	**Sg**	**22 02 24.9**	**-1.2**
MTBS	**Maitube** 4.0nm,0.2s	**1.71**	**19**	*eP*	**Pn**	**22 02 03.1**	**-1.4**
MTBS	22nm,0.3s			*eS*	**Sg**	**22 02 30.0**	**+1.4**
EKS2	**Erkin-Say** baz=8.0	**1.82**	**310**	⇑*iP*	**Pb**	**22 02 07.6**	**0.0**
EKS2	baz=8.0			⇑*iS*	**Sg**	**22 02 30.8**	**-1.2**
AAA	**Alma-Ata** 20nm,0.3s	**1.93**	**28**	*eP*	**Pn**	**22 02 06.5**	**-1.0**
AAA	45nm,0.1s			*eS*	**Sg**	**22 02 35.8**	**+0.1**
MDOK	**Medeo** 12nm,0.3s	**1.94**	**31**	*eP*	**Pn**	**22 02 06.6**	**-1.1**
MDOK	14nm,0.3s			*eS*	**Sg**	**22 02 35.5**	**-0.5**
MDOK	**Medeo** 7.0nm,0.2s	**1.94**	**31**	Pn	**Pn**	**22 02 06.8**	**-0.9**
MDOK	7.7nm,0.2s			⇑Lg	Lg	22 02 35.7	
USP	**Ospenovka** baz=34	**1.96**	**334**	⇓*iP*	**Pb**	**22 02 09.9**	**-0.1**
USP	baz=34			⇓*iS*	**Sg**	**22 02 35.0**	**-1.4**
KOTS	**Kotyrbulak** 6.2nm,0.2s	**2.03**	**31**	*eP*	**Pn**	**22 02 08.2**	**-0.7**
KOTS	63nm,0.3s			*eS*	**Sg**	**22 02 38.8**	**+0.1**
SGDS	**Sogindy** 36nm,0.3s	**2.08**	**339**	*eP*	**Pn**	**22 02 10.1**	**+0.5**
SGDS	45nm,0.4s			*eS*	**Sg**	**22 02 41.0**	**+0.4**
KRBS	**Karabastau** 24nm,0.3s	**2.18**	**0**	*eP*	**Pb**	**22 02 12.0**	**-1.8**
KRBS	95nm,0.5s			*eS*	**Sg**	**22 02 45.2**	**+1.5**
MRKS	**Merke** 1.4nm,0.2s	**2.19**	**305**	*eP*	**Pn**	**22 02 11.0**	**-0.2**
MRKS	6.5nm,0.2s			*eS*	**Sg**	**22 02 42.5**	**-1.6**
KTBS	**Karatobe** 14nm,0.3s	**2.32**	**18**	*eP*	**Pn**	**22 02 13.8**	**+1.0**
KTBS	114nm,0.3s			*eS*	**Sg**	**22 02 48.1**	**0.0**
KUU	**Kurty** 9.4nm,0.4s	**2.43**	**12**	*eP*	**Pn**	**22 02 15.7**	**+1.4**
KUU	58nm,0.5s			*eS*	**Sg**	**22 02 51.5**	**-0.2**
SATY	**Saty** 2.5nm,0.2s	**2.55**	**52**	*eP*	**Pn**	**22 02 16.1**	**0.0**
SATY	15nm,0.2s			*eS*	**Sb**	**22 02 51.9**	**-0.2**
UZB	**Uzynbulak** 1.2nm,0.3s	**2.98**	**56**	*eP*	**Pn**	**22 02 22.9**	**+1.0**
UZB	10nm,0.3s			*eS*	**Sb**	**22 03 03.4**	**-0.8**
ARXS	**Arharly** 1.8nm,0.1s	**3.13**	**30**	*eP*	**Pb**	**22 02 27.7**	**-2.3**
ARXS	35nm,0.4s			*eS*	**Sg**	**22 03 11.8**	**-2.4**
SHLS	**Shalkode** 1.4nm,0.2s	**3.26**	**58**	*eP*	**Pb**	**22 02 32.4**	**+0.2**
SHLS	12nm,0.5s			*eS*	**Sg**	**22 03 19.7**	**+1.5**
BLB	**Baldybastay** 2.8nm,0.2s	**3.31**	**38**	*eP*	**Pb**	**22 02 30.0**	**-3.0**
BLB	13nm,0.3s			*eS*	**Sb**	**22 03 15.6**	**+1.8**
PDGK	**Podgornoye** 2.9nm,0.3s	**3.36**	**56**	⇑Lg	Lg	22 03 15.5	
BTLS	**Baital** 1.8nm,0.4s	**3.72**	**342**	*eP*	**Pb**	**22 02 38.8**	**-1.2**
BTLS	5.9nm,0.3s			*eS*	**Sg**	**22 03 30.8**	**-2.2**
KNOS	**Konyrlen** 4.4nm,0.6s	**3.84**	**41**	*eP*	**Pb**	**22 02 40.0**	**-2.1**
KNOS	7.7nm,0.3s			*eS*	**Sb**	**22 03 32.5**	**+3.5**
KTMS	**Ketmen** 0.5nm,0.2s	**3.97**	**59**	*eP*	**Pb**	**22 02 41.3**	**-3.0**
KTMS	2.2nm,0.2s			*eS*	**Sb**	**22 03 35.3**	**+2.6**
DJR	**Jarkent** 1.0nm,0.2s	**4.13**	**46**	*eP*	**Pb**	**22 02 44.4**	**-2.7**
DJR	4.9nm,0.4s			*eS*	**Sb**	**22 03 40.2**	**+2.7**
KK31	**Karatay Array** 0.4nm,0.2s,baz=128,slow=15,SNR=4.0	**4.14**	**294**	⇑Pg	**Pb**	**22 02 49.3**	**+2.1**
KK31	1.6nm,0.2s,baz=118,slow=27,SNR=3.2			Lg	Lg	22 03 42.9	
IUG	**Iuzhnay** 35nm,0.5s	**4.26**	**280**	*eP*	**Pb**	**22 02 46.0**	**-3.3**
IUG	8.4nm,0.4s			*eS*	**Sb**	**22 03 42.7**	**+1.5**

*IDC **09** 22:30:20.1±1.0, 38°.55N×90°.67E, h0km, mb3.7/6, mbtmp3.8/10, ML3.6/4, MS2.7/5, Error ellipse: s-maj=41.4km s-min=15.2km az=51.0*
*NNC **09** 22:30:28.3±5.1, 39°.19N×90°.08E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=54.3km s-min=38.7km az=25.0*

ISC 09 22:30:20.5±0.9, 39°.01N±0°.09×90°.9E±0°.1, h10km, n18, σ2°.23/22, mb3.8/7, 3C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye** 5.0nm,0.6s	**9.63**	**300**	⇓Pn	**Pn**	**22 32 40.0**	**+0.7**
PDGK	8.7nm,0.8s			⇑Pg		22 33 05.7	
PDGK	11nm,0.5s			⇑Sn	**Sn**	**22 34 24.2**	**-3.4**
PDGK	32nm,0.8s			⇓Lg	Lg	22 35 11.8	
MK31	**Makanchi Array** 1.9nm,0.3s,baz=138,slow=13,SNR=82	**10.02**	**324**	Pn	**Pn**	**22 32 46.9**	**+2.4**
MK31	6.3nm,0.6s,baz=136,slow=25,SNR=5.4			⇓Sn	**Sn**	**22 34 35.3**	**-1.6**
MKAR	**Makanchi Array** 0.8nm,0.3s,baz=146,slow=13,SNR=23	**10.02**	**324**	Pn	**Pn**	**22 32 47.2**	**+2.7**
MKAR	1.0nm,0.3s,baz=135,slow=26,SNR=6.4			Sn	**Sn**	**22 34 36.8**	**-0.2**
MKAR	0.2nm,0.3s,baz=135,slow=26,SNR=3.6			Lg	Lg	22 35 43.0	
MKAR	comp=Z,28nm,20.2s,baz=122,slow=36 1.1nm,0.3s			LR	LR	22 36 28.7	
MAKZ	**Makanchi** 2.3nm,0.6s	**10.18**	**323**	⇑Pn	**Pn**	**22 32 48.7**	**+2.1**
MAKZ	4.7nm,0.6s			⇓Sn	**Sn**	**22 34 38.2**	**-2.5**
AAK	**Ala-Archa** 0.6nm,0.3s,baz=268,slow=5.6,SNR=1.6	**12.95**	**291**	Pn	**Pn**	**22 33 26.7**	**+2.0**
AAK	0.6nm,0.3s,baz=233,slow=5.7,SNR=1.8			Lg	Lg	22 37 11.6	
AAK	comp=Z,45nm,18.5s,baz=116,slow=43 1.4nm,0.3s			LR	LR	22 39 36.7	
SONM	**Songino Array** 0.5nm,0.3s,baz=235,slow=15,SNR=9.7	**14.28**	**47**	Pn	**P**	**22 33 49.7**	**-0.4**
SONM	0.1nm,0.3s,baz=225,slow=33,SNR=3.6			Lg	Lg	22 37 54.6	
SONM	comp=Z,22nm,18.9s,baz=232,slow=40 0.7nm,0.3s			LR	LR	22 40 01.1	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=136,slow=13,SNR=18	**14.54**	**327**	Pn	**Pn**	**22 33 47.1**	**+1.0**
KURBB	baz=156,slow=14,SNR=1.4			Sn	**Sn**	**22 36 23.9**	**-3.3**
KURBB	baz=128,slow=28 1.6nm,0.7s			Lg	Lg	22 38 08.8	
KURBB	**Kurchatov Arra** 3.4nm,0.9s	**14.54**	**327**	⇓Pn	**Pn**	**22 33 47.9**	**+1.7**
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=158,slow=14,SNR=2.2	**15.51**	**346**	Pn	**P**	**22 34 02.0**	**-1.6**
ZALV	0.1nm,0.3s,baz=151,slow=23,SNR=1.6			Sn	**Sn**	**22 36 48.4**	**-2.6**
ZALV	0.1nm,0.3s,baz=183,slow=23,SNR=1.3			Lg	Lg	22 38 36.1	
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,baz=339,slow=9.7,SNR=1.9 1.2nm,0.3s	**21.64**	**159**	P	**P**	**22 35 08.2**	**-2.8**
AKTO	**Aktyubinsk** 0.5nm,0.5s,baz=90,slow=15,SNR=1.5	**25.80**	**307**	P	**P**	**22 35 50.9**	**-0.7**
ARU	**Arti** comp=Z,22nm,18.1s,baz=94,slow=40	**27.51**	**320**	LR	LR	22 48 37.3	
KSRS	**Korea Array** comp=Z,10nm,21.1s,baz=220,slow=40	**28.99**	**81**	LR	LR	22 49 34.0	
FINES	**FINESS Array B** 1.8nm,0.9s,baz=163,slow=15,SNR=3.5 1.8nm,0.9s	**44.85**	**322**	P	**P**	**22 38 38.3**	**+3.9**
NOA	**NORSAR Array B** 1.2nm,0.9s,baz=77,slow=8.0,SNR=1.7 1.2nm,0.9s	**52.01**	**323**	P	**P**	**22 39 31.9**	**+2.1**
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=323,slow=6.4,SNR=2.2 0.4nm,0.8s	**71.35**	**137**	P	**P**	**22 41 40.4**	**-0.3**
ASAR	**Alice Springs** 0.7nm,0.8s,baz=328,slow=6.6,SNR=4.9 0.7nm,0.8s	**74.20**	**139**	P	**P**	**22 41 57.9**	**+0.3**
TORD	**Torodi Ar. Bea** 0.3nm,0.8s,baz=57,slow=5.1,SNR=1.7 0.3nm,0.8s	**81.25**	**280**	P	**P**	**22 42 37.3**	**+0.2**

*NEIC **09** 23:09:06.0±2.6, 8°.03S±0°.09×73°.94W±0°.08, h182km±10km, mb4.2/1, Error ellipse: s-maj=13.5km s-min=10.0km az=150.0*
*IDC **09** 23:09:05.6±0.8, 7°.98S×73°.83W, h182km±6km, mb3.4/5, mbtmp3.9/10, Error ellipse: s-maj=21.5km s-min=17.2km az=59.0*
*VAO **09** 23:09:08.9±1.9, 8°.12S×73°.70W, h178km±5km, mbR3.9*

ISC 09 23:09:05.9±0.5, 8°.01S±0°.07×74°.00W±0°.06, h200km, n43, σ1°.80/48, mb3.6/6, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.31**	**78**		**Pn**	**23 09 37.3**	**-0.8**
CZSB	**Cruzeiro do Su**	**1.31**	**78**	*eP*	**Pn**	**23 09 37.3**	**-0.8**
ATAH	**Atahualpa** 32nm,0.3s,baz=198,slow=13,SNR=6.4	**4.44**	**281**	P	**Pn**	**23 10 13.4**	**-0.3**
ATAH	52nm,0.4s,baz=51,slow=13,SNR=5.3			S	**Sn**	**23 11 05.4**	**-1.4**
NNA	**Nana** 6.4nm,0.3s,baz=0.0,slow=5.1,SNR=2.3	**4.84**	**215**	P	**Pn**	**23 10 18.4**	**0.0**
NNA	28nm,0.3s,baz=287,slow=16,SNR=8.1			S	**Sn**	**23 11 12.6**	**-2.9**
NNA	**Nana**	**4.84**	**215**	Pn	**Pn**	**23 10 18.9**	**+0.5**
BOSC	**San Juan Bosco**	**6.58**	**317**	Pn	**Pn**	**23 10 37.2**	**-3.8**
MCRA	**Macar, Loja**	**6.94**	**301**	Pn	**Pn**	**23 10 42.2**	**-3.3**
ARNL	**Arenillas**	**7.49**	**306**		**Pn**	**23 10 52.3**	**-0.3**
ETMB	**Extrema**	**7.90**	**104**	Pn	**Pn**	**23 10 55.2**	**-2.7**
ETMB	**Extrema**	**7.90**	**104**	*eP*	**Pn**	**23 10 55.1**	**-2.7**
PORT	**Chimborazo Vol**	**8.06**	**324**	Pn	**Pn**	**23 11 01.5**	**+0.9**
CHSH	**Refugio Sur-Vo**	**8.09**	**323**	Pn	**Pn**	**23 11 00.6**	**-0.4**
SLOR	**San Lorenzo -**	**8.51**	**328**	Pn	**Pn**	**23 11 06.7**	**+0.3**
OTAV	**Otavalo**	**9.32**	**331**	Pn	**Pn**	**23 11 17.3**	**+0.4**
LPAZ	**La Paz** 1.5nm,0.4s,baz=241,slow=6.6,SNR=5.5	**10.03**	**146**	P	**Pn**	**23 11 23.7**	**-2.4**
LPAZ	**La Paz**	**10.03**	**146**	Pn	**Pn**	**23 11 23.9**	**-2.2**
LPAZ	**La Paz**	**10.03**	**146**	*eP*	**Pn**	**23 11 25.6**	**-0.6**
SAML	**Samuel**	**10.74**	**96**		**Pn**	**23 11 31.8**	**-3.0**
PB16	**IPOC Station P**	**11.15**	**157**	Pn	**Pn**	**23 11 40.6**	**0.0**
SIV	**San Ignacio** 2.0nm,0.3s,baz=297,slow=8.8,SNR=13	**14.92**	**123**	P	**Pn**	**23 12 26.5**	**-0.8**
LVC	**Limon Verde** 2.0nm,0.5s,baz=350,slow=9.3,SNR=2.3	**15.32**	**162**	P	**Pn**	**23 12 31.9**	**-0.5**
PTLB	**Pontes e Lacer**	**16.31**	**118**	*eP*	**Pn**	**23 12 45.1**	**+1.0**
PDRB	**Porto dos Gac**	**17.39**	**103**	*eP*	**Pn**	**23 12 57.6**	**+0.7**
CLDB	**Colider**	**18.18**	**100**	*eP*	**Pn**	**23 13 05.6**	**-0.6**
NPGB	**Novo Progresso**	**18.51**	**88**	*eP*	**Pn**	**23 13 08.7**	**-1.4**
ITTB	**Itaituba**	**18.52**	**80**	*eP*	**Pn**	**23 13 09.2**	**-1.0**
SNDB	**Serra Nova Dou**	**22.70**	**102**	*eP*	**P**	**23 13 53.1**	**+2.3**
IPMB	**Ipameri, GO**	**26.98**	**114**	*eP*	**P**	**23 14 30.5**	**+1.1**
PLCA	**Paso Flores** 1.4nm,0.8s,baz=341,slow=9.0,SNR=5.1 1.4nm,0.8s	**32.73**	**175**	P	**P**	**23 15 21.2**	**+1.4**
PLCA	**Paso Flores**	**32.73**	**175**	P	**P**	**23 15 21.5**	**+1.7**
PLCA	comp=Z,8.6nm,1.5s			IAmb	IAmb	23 15 32.9	
GDU01	**Guandu, BA**	**34.26**	**103**	*eP*	**P**	**23 15 34.5**	**+1.2**
NBAN	**Anadia - AL**	**37.30**	**95**	*eP*	**P**	**23 16 00.8**	**+1.6**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.4s,baz=146,slow=9.8,SNR=3.1 comp=Z,0.1nm,0.4s	**46.85**	**324**	P	**P**	**23 17 18.3**	**+2.1**
TXAR	**Lajitas Array**	**46.85**	**324**	P	**P**	**23 17 19.2**	**+3.0**
PDAR	**Pinedale Array** comp=Z,13nm,0.5s,baz=120,slow=5.3,SNR=2.3	**60.02**	**330**	pP	pP	23 19 37.2	-0.7
DBIC	**Dinokro** comp=Z,3.3nm,0.8s,baz=269,slow=5.3,SNR=1.7 comp=Z,3.3nm,0.8s	**70.47**	**80**	P	**P**	**23 19 59.6**	**+0.3**
SNAA	**Sanae** comp=Z,0.9nm,0.5s,baz=285,slow=8.1,SNR=16	**76.55**	**162**	P	**P**	**23 20 36.3**	**+2.4**
SNAA	comp=Z,1.2nm,0.8s,baz=240,slow=7.5,SNR=3.4 comp=Z,0.9nm,0.5s			pP	**pP**	**23 21 18.9**	**-3.0**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.6s,baz=262,slow=4.6,SNR=2.7	**78.05**	**75**	P	**P**	**23 20 42.0**	**-1.1**
TORD	comp=Z,0.6nm,1.0s,baz=246,slow=6.3,SNR=1.1 comp=Z,0.4nm,0.6s			pP	**pP**	**23 21 28.6**	**-2.7**
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.2s,baz=318,slow=3.9,SNR=1.9	**131.11**	**16**	PKP	**PKiKP**	**23 27 55.5**	**+0.8**
ZALV	comp=Z,0.5nm,0.3s,baz=343,slow=4.5,SNR=3.3			pPKP	**pPKPdf**	**23 28 43.5**	**-2.3**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.7s,baz=316,slow=3.1,SNR=2.4	**136.35**	**24**	PKP	**PKiKP**	**23 28 05.8**	**+0.1**
MKAR	comp=Z,0.4nm,0.7s,baz=344,slow=2.0,SNR=3.4			pPKP	**pPKPdf**	**23 28 53.5**	**-2.5**
ASAR	**Alice Springs** comp=Z,0.3nm,0.6s,baz=113,slow=2.1,SNR=2.0	**138.35**	**220**	PKP	**PKiKP**	**23 28 10.5**	**0.0**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.9s,baz=194,slow=2.1,SNR=6.0	**140.63**	**225**	PKhKP	PKPpre	23 28 09.3	
WRA	comp=Z,0.6nm,0.4s,baz=121,slow=2.2,SNR=10			PKP	**PKiKP**	**23 28 14.7**	**-0.5**
WRA	comp=Z,0.4nm,0.7s,baz=124,slow=2.1,SNR=1.7			pPKP	pPKPdf	23 29 02.7	-1.9
KSRS	**Korea Array** comp=Z,0.9nm,0.4s,baz=25,slow=4.3,SNR=3.0	**144.59**	**329**	PKP	**PKPdf**	**23 28 20.3**	**+1.3**

*IDC **09** 23:30:47.9±2.9, 28°.02S×177°.24W, h72km±23km, mb3.6/5, mbtmp3.8/5, Error ellipse: s-maj=28.5km s-min=27.7km az=78.0*
*NEIC **09** 23:30:47.8±1.1, 28°.1S±0°.1×177°.3W±0°.2, h68km±9km, mb4.5/9, Error ellipse: s-maj=27.0km s-min=5.0km az=129.0*

ISC 09 23:30:44.4±0.6, 27°.83S±0°.10×177°.2W±0°.2, h49km, n37, σ0°.78/31, mb4.3/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island** 1μm,0.2s,baz=96,slow=7.0,SNR=34	**1.55**	**204**	P	**Pn**	**23 31 10.5**	**+0.9**
RAO	5μm,0.3s,baz=100,slow=24,SNR=49			S	**Sn**	**23 31 28.5**	**0.0**
RAO	**Raoul Island**	**1.55**	**204**		**Pn**	**23 31 10.3**	**+0.7**
NIUE	**Niue**	**10.97**	**39**	Pn	Pn	23 33 24.8	+6.0
AFI	**Afiamalu**	**14.74**	**21**	P	**P**	**23 34 13.9**	**-1.3**
BSWZ	**Blackbirch Sta**	**15.66**	**205**	P	**Pn**	**23 34 20.4**	**-1.3**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=95,slow=7.6,SNR=4.8 0.5nm,0.6s	**44.01**	**264**	P	**P**	**23 38 48.5**	**+1.2**
WR0	**Warramunga Arr**	**44.59**	**269**	P	**P**	**23 38 51.4**	**-0.5**
WR0	comp=Z,7.2nm,1.4s			lAmb	lAmb	23 39 11.5	
WB2	**Warramunga Arr** comp=Z,13nm,1.4s	**44.76**	**269**	P	**P**	**23 38 53.7**	**+0.3**
WB2	comp=Z,3.3nm,0.4s,baz=105,slow=7.9,SNR=11 comp=Z,0.3nm,0.4s			lAmb	lAmb	23 39 16.4	
WRA	**Warramunga Arr**	**44.77**	**269**	P	**P**	**23 38 54.0**	**+0.6**
WRA	**Warramunga Arr**	**44.77**	**269**	P	**P**	**23 38 53.3**	**-0.1**
WB0	**Warramunga Arr**	**44.78**	**269**	P	**P**	**23 38 53.9**	**+0.3**
WB0	comp=Z,12nm,1.4s			lAmb	lAmb	23 39 01.8	
FORT	**Forrest**	**47.43**	**253**	P	**P**	**23 39 13.7**	**-0.5**
CASY	**Casey**	**57.73**	**207**	P	**P**	**23 40 29.6**	**-0.2**
QSPA	**South Pole Qui** comp=Z,3.5nm,0.7s,baz=322,slow=0.5,SNR=13 comp=Z,3.5nm,0.7s	**62.27**	**180**	P	**P**	**23 41 01.1**	**0.0**
QSPA	**South Pole Qui**	**62.27**	**180**	P	**P**	**23 41 01.6**	**+0.5**
QSPA	comp=Z,4.4nm,0.8s			lAmb	lAmb	23 41 02.6	
BELA	**Belgrano 2**	**72.23**	**172**	P	**P**	**23 42 03.0**	**-0.8**
TROLL	**Troll, Antarti**	**80.43**	**180**	P	**P**	**23 42 50.5**	**-0.1**
SNAA	**Sanae**	**80.69**	**178**	P	**P**	**23 42 51.9**	**0.0**
SNAA	**Sanae**	**80.69**	**178**	P	**P**	**23 42 51.0**	**-0.9**
SNAA	comp=Z,3.6nm,1.0s			lAmb	lAmb	23 43 10.9	
VNA3	**Neumayer Olymp**	**80.81**	**176**	P	**P**	**23 42 52.5**	**0.0**
VNA2	**Neumayer--Watz** baz=181,slow=2.8	**81.25**	**177**	P	**P**	**23 42 55.2**	**+0.4**
H03S2	**Juan Fernandez** baz=240	**81.30**	**124**	T	T	01 12 51.7	
H03S1	**Juan Fernandez** baz=240	**81.31**	**124**	T	T	01 12 54.5	
H03S3	**Juan Fernandez** baz=240	**81.31**	**124**	T	T	01 12 54.2	
H03N3	**Juan Fernandez** baz=244,slow=73,SNR=4.7	**81.47**	**123**	T	T	01 13 21.3	
H03N2	**Juan Fernandez** baz=244,slow=73,SNR=6.0	**81.47**	**123**	T	T	01 13 04.9	
VNA1	**Neumayer--Stat**	**81.48**	**176**	P	**P**	**23 42 56.3**	**+0.3**
H03N1	**Juan Fernandez** baz=244,slow=73,SNR=4.9	**81.49**	**123**	T	T	01 13 05.4	
NVAR	**Mina Array Bea** comp=Z,0.7nm,0.7s,baz=225,slow=8.7,SNR=6.1 comp=Z,0.7nm,0.7s	**85.88**	**42**	P	**P**	**23 43 21.2**	**+2.0**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.4s,baz=232,slow=4.4,SNR=1.9 comp=Z,0.2nm,0.4s	**93.79**	**43**	P	**P**	**23 43 58.0**	**+1.6**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=121,slow=0.9,SNR=2.3	**116.64**	**311**	PKP	**PKPdf**	**23 49 22.3**	**-0.6**
FINES	**FINESS Array B** comp=Z,1.3nm,0.5s,baz=46,slow=4.4,SNR=8.9	**142.96**	**342**	PKhKP	PKPpre	23 50 09.0	
NB2	**NORSAR Subarra** comp=Z,1.0nm,0.5s,baz=14,slow=3.0	**146.31**	**353**	PKP	**PKPab**	**23 50 20.1**	**+0.1**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.5s,baz=59,slow=1.5,SNR=5.3	**146.31**	**353**	PKPbc	**PKPab**	**23 50 19.7**	**-0.2**
AKASG	**Malin Array Be** comp=Z,1.4nm,0.6s,baz=45,slow=3.4,SNR=8.7	**149.63**	**326**	PKPbc	**PKiKP**	**23 50 28.9**	**-0.4**
BRTR	**Keskin Array B** comp=Z,0.4nm,0.4s,baz=77,slow=3.1,SNR=2.6	**151.89**	**303**	PKPbc	**PKiKP**	**23 50 34.6**	**+0.2**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.7s,baz=211,slow=4.7,SNR=1.9	**165.35**	**176**	PKP	**PKPdf**	**23 50 44.2**	**+0.1**
TORD	comp=Z,0.3nm,0.5s,baz=194,slow=4.0,SNR=11			PKPab	**PKPab**	**23 51 41.0**	**-0.8**

BUC 09 23:43:04.6±0.2, 45°.14N×25°.64E, h45km±3km, ml2.0/17, 54C-34D, Error ellipse: s-maj=1.4km s-min=1.2km az=44.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SECR		**0.32**	**109**	⇑P	Pn	23 43 12.8	-0.6
SECR				⇑S	Sn	23 43 19.7	0.0
SECR		**0.32**	**109**	⇑P	Pn	23 43 12.8	-0.6
SECR				⇑S	Sn	23 43 19.7	0.0
PLAR	**PLOIESTI**	**0.35**	**130**	⇓P	Pn	23 43 13.4	-0.4
PLAR				⇑S	Sn	23 43 21.3	+1.0
PLAR	**PLOIESTI**	**0.35**	**130**	⇓P	Pn	23 43 13.4	-0.4
PLAR				⇑S	Sn	23 43 21.3	+1.0
MLR	**Muntele Rosu**	**0.41**	**31**	⇓P	Pn	23 43 13.8	-0.8
MLR				⇓S	Sn	23 43 22.2	+0.6
MLR	**Muntele Rosu**	**0.41**	**31**	⇓P	Pn	23 43 13.8	-0.8
MLR				⇓S	Sn	23 43 22.2	+0.6
VOIR		**0.51**	**305**	⇓P	Pn	23 43 15.6	-0.2
VOIR				⇑S	Sn	23 43 24.5	+0.8
VOIR		**0.51**	**305**	⇓P	Pn	23 43 15.6	-0.2
VOIR				⇑S	Sn	23 43 24.5	+0.8
NEHR	**Nehoiu**	**0.54**	**58**	⇑P	Pn	23 43 15.7	-0.4
NEHR				⇑S	Sn	23 43 24.6	+0.3
NEHR	**Nehoiu**	**0.54**	**58**	⇑P	Pn	23 43 15.7	-0.4
NEHR				⇑S	Sn	23 43 24.6	+0.3
SULR		**0.64**	**137**	⇑P	Pn	23 43 16.8	-0.4
SULR				⇑S	Sn	23 43 27.0	+0.7
SULR		**0.64**	**137**	⇑P	Pn	23 43 16.8	-0.4
SULR				⇑S	Sn	23 43 27.0	+0.7
ISR	**Istrita**	**0.64**	**92**	⇓P	Pn	23 43 17.2	-0.2
ISR				⇓S	Sn	23 43 27.8	+1.2
ISR	**Istrita**	**0.64**	**92**	⇓P	Pn	23 43 17.2	-0.2
ISR				⇓S	Sn	23 43 27.8	+1.2
ARR	**Arges**	**0.75**	**288**	⇓P	Pn	23 43 19.1	+0.2
ARR				⇑S	Sn	23 43 30.5	+1.3
ARR	**Arges**	**0.75**	**288**	⇓P	Pn	23 43 19.1	+0.2
ARR				⇑S	Sn	23 43 30.5	+1.3
HUMR	**Humele**	**0.77**	**218**	⇑S	Sn	23 43 31.0	+1.3
HUMR	**Humele**	**0.77**	**218**	⇑S	Sn	23 43 31.0	+1.3
COVR	**Voineasa-Covas**	**0.81**	**29**	⇑P	Pn	23 43 19.2	-0.4
COVR				⇑S	Sn	23 43 30.0	-0.5
COVR	**Voineasa-Covas**	**0.81**	**29**	⇑P	Pn	23 43 19.2	-0.4
COVR				⇑S	Sn	23 43 30.0	-0.5
BUC1	**Bucharest**	**0.84**	**161**	⇑S	Sn	23 43 31.6	+0.4
BUC1	**Bucharest**	**0.84**	**161**	⇑S	Sn	23 43 31.6	+0.4
DOPR	**Dopca**	**0.84**	**348**	⇓P	Pn	23 43 20.0	-0.2
DOPR				⇑S	Sn	23 43 32.8	+1.4
DOPR	**Dopca**	**0.84**	**348**	⇓P	Pn	23 43 20.0	-0.2
DOPR				S	Sn	23 43 32.8	+1.4
SGRR	**Singureni**	**0.95**	**165**	⇑P	Pn	23 43 21.5	0.0
SGRR				⇑S	Sn	23 43 33.8	-0.1
**SGR

GZR	**Gura Zlata**	**2.04**	**278**	⇑P		Pn	23 43 36.4	-0.1	
GZR	**Gura Zlata**	**2.04**	**278**	⇑P		Pn	23 43 36.4	-0.1	
CJR	**Cluj-Napoca**	**2.12**	**318**	⇑P		Pn	23 43 37.9	+0.3	
CJR				⇑S		Sn	23 44 02.8	0.0	
CJR	**Cluj-Napoca**	**2.12**	**318**	⇑P		Pn	23 43 37.9	+0.3	
CJR				⇑S		Sn	23 44 02.8	0.0	
BURAR	**Bucovina Array**	**2.49**	**353**	⇑P		Pn	23 43 43.1	+0.3	
BURAR				⇑S		Sn	23 44 12.3	+0.4	
BURAR	**Bucovina Array**	**2.49**	**353**	⇑P		Pn	23 43 43.1	+0.3	
BURAR				⇑S		Sn	23 44 12.3	+0.4	
DRGR		**2.63**	**310**	⇓P		Pn	23 43 44.2	-0.3	
DRGR				⇑S		Sn	23 44 15.3	+0.1	
DRGR		**2.63**	**310**	⇓P		Pn	23 43 44.2	-0.3	
DRGR				⇑S		Sn	23 44 15.3	+0.1	
BZS	**Buzias**	**2.88**	**281**	⇓S		Sn	23 44 21.5	+0.2	
BZS	**Buzias**	**2.88**	**281**	⇓S		Sn	23 44 21.5	+0.2	

BUC 09 23:44:45.1±0.2,**45°19N**×**25°59E,h32**km±1km,**ml0.8**/5,
24C-24D,Error ellipse: s-maj=1.7km s-min=1.5km az=157.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SECR		**0.37**	**114**	⇑P	Pn	23 44 54.1	0.0
SECR				⇑S	Sb	23 44 59.9	+0.3
SECR		**0.37**	**114**	⇑P	Pn	23 44 54.1	0.0
SECR				⇑S	Sb	23 44 59.9	+0.3
MLR	**Muntele Rosu**	**0.39**	**39**	⇓P	Pb	23 44 53.1	-1.1
MLR				⇑S	Sb	23 45 00.7	+0.3
MLR	**Muntele Rosu**	**0.39**	**39**	⇓P	Pb	23 44 53.1	-1.1
MLR				⇑S	Sb	23 45 00.7	+0.3
PLAR	**PLOIESTI**	**0.41**	**131**	⇓S	Sn	23 45 01.0	-0.2
PLAR	**PLOIESTI**	**0.41**	**131**	⇓S	Sn	23 45 01.0	-0.2
VOIR		**0.46**	**303**	⇑P	Pb	23 44 54.5	-0.6
VOIR				⇓S	Sn	23 45 03.2	+0.5
VOIR		**0.46**	**303**	⇑P	Pb	23 44 54.5	-0.6
VOIR				⇓S	Sn	23 45 03.2	+0.5
NEHR	**Nehoiu**	**0.55**	**64**	⇓P	Pn	23 44 56.9	+0.2
NEHR				⇑S	Sn	23 45 04.9	0.0
NEHR	**Nehoiu**	**0.55**	**64**	⇓P	Pn	23 44 56.9	+0.2
NEHR				⇑S	Sn	23 45 04.9	0.0
ISR	**Istrita**	**0.68**	**95**	⇓P	Pb	23 44 58.4	0.0
ISR				⇓S	Sn	23 45 08.8	+0.9
ISR	**Istrita**	**0.68**	**95**	⇓P	Pn	23 44 58.4	0.0
ISR				⇓S	Sn	23 45 08.8	+0.9
ARR	**Arges**	**0.70**	**285**	⇑P	Pb	23 44 59.2	+0.2
ARR				⇓S	Sn	23 45 09.6	+1.1
ARR	**Arges**	**0.70**	**285**	⇑P	Pb	23 44 59.2	+0.2
ARR				⇓S	Sn	23 45 09.6	+1.1
COVR	**Voineasa-Covas**	**0.79**	**33**	⇓P	Pb	23 45 00.3	-0.1
COVR				⇓S	Sb	23 45 11.4	+0.6
COVR	**Voineasa-Covas**	**0.79**	**33**	⇓P	Pb	23 45 00.3	-0.1
COVR				⇓S	Sb	23 45 11.4	+0.6
HUMR	**Humele**	**0.79**	**214**	⇑S	Sn	23 45 10.2	-0.4
HUMR	**Humele**	**0.79**	**214**	⇑S	Sn	23 45 10.2	-0.4
DOPR	**Dopca**	**0.80**	**350**	⇓P	Pn	23 44 59.2	-0.9
DOPR				⇓S	Sb	23 45 11.3	+0.3
DOPR	**Dopca**	**0.80**	**350**	⇓P	Pn	23 44 59.2	-0.9
DOPR				⇓S	Sb	23 45 11.3	+0.3
PLOR	**Plostina**	**1.00**	**48**	⇑P	Pn	23 45 03.1	+0.2
PLOR				⇑S	Sb	23 45 16.4	-0.4
PLOR	**Plostina**	**1.00**	**48**	⇑P	Pn	23 45 03.1	+0.2
PLOR				⇑S	Sb	23 45 16.4	-0.4
VRI	**Vrincioaia**	**1.05**	**49**	⇓P	Pn	23 45 03.7	+0.2
VRI				⇑S	Sb	23 45 17.7	-0.5
VRI	**Vrincioaia**	**1.05**	**49**	⇓P	Pn	23 45 03.7	+0.2
VRI				⇑S	Sb	23 45 17.7	-0.5
COPA	**Copaceanca**	**1.08**	**194**	⇑P	Pn	23 45 04.1	+0.1
COPA				⇓S	Sb	23 45 18.7	-0.4
COPA	**Copaceanca**	**1.08**	**194**	⇑P	Pn	23 45 04.1	+0.1
COPA				⇓S	Sb	23 45 18.7	-0.4

KRSC 10 00:14:10.8±1.3,**51°25N**×**157°69E,h138**km±11km,**ML3.5,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.59**	**292**	*e*P	Pn	00 14 32.5	+1.2
KDTR	**Khodutka, Kamc**	**0.61**	**23**	*e*P	Pn	00 14 33.1	+1.7
KDTR				*e*S	Sn	00 14 47.9	+0.8
SKR	**Severo-Kuril's**	**1.15**	**241**	*e*P	Pn	00 14 36.7	+0.9
SKR				*e*S	Sn	00 14 55.3	+0.6
MTVR	**Mutnovka**	**1.27**	**14**	*e*P	Pn	00 14 39.2	+2.0
MTVR				*e*S	Sn	00 14 59.0	+1.6
RUS	**Russkaya**	**1.29**	**23**	*e*P	Pn	00 14 38.6	+1.4
RUS				*e*S	Sn	00 14 58.1	+0.7
GRL	**Gorelyy**	**1.32**	**10**	*e*P	Pn	00 14 39.5	+1.8
GRL				*e*S	Sn	00 14 59.9	+1.6
KRMR	**Karymshinskiy**	**1.61**	**10**	*e*P	Pn	00 14 40.8	+0.2
KRMR				*e*S	Sn	00 15 04.4	+1.0
APC	**Apacha**	**1.71**	**349**	*e*P	Pn	00 14 42.1	+0.3
PET	**Petropavlovsk**	**1.87**	**18**	*e*S	Sn	00 15 09.9	+1.1
DALK	**Dalny**	**1.90**	**20**	*e*P	Pn	00 14 45.6	+1.6
DALK				*e*S	Sn	00 15 10.1	+0.7
UGLR	**Uglovaya**	**2.08**	**19**	*e*P	Pn	00 14 48.4	+2.1
UGLR				*e*S	Sn	00 15 15.0	+1.5
AVH	**Avacha**	**2.12**	**17**	*e*P	Pn	00 14 49.1	+2.4
AVH				*e*S	Sn	00 15 15.7	+1.4
KOK	**Koryaka**	**2.13**	**15**	*e*P	Pn	00 14 49.1	+2.3
KRER	**Koryakskii**	**2.16**	**17**	*e*P	Pn	00 14 49.4	+2.1
KRER				*e*S	Sn	00 15 16.9	+1.6
SDLR	**Sedlovina**	**2.16**	**19**	*e*P	Pn	00 14 49.0	+1.8
KRX	**Arik**	**2.19**	**15**	*e*P	Pn	00 14 49.5	+1.9
KRX				*e*S	Sn	00 15 17.2	+1.2
GNL	**Ganaly**	**2.45**	**3**	*e*P	Pn	00 14 51.9	+1.1
MKZ	**Mys Kozlova**	**4.12**	**35**	*e*P	Pn	00 15 13.3	+1.1
MKZ				*e*S	Sn	00 15 58.1	-1.7
KBTR	**Krutoberegovo**	**5.82**	**29**	*e*P	Pn	00 15 37.4	+2.5

*IDC **10** 00:15:56.0±0.6,8°.18S×117°.73E,h0km,mb4.1/11, mbtmp4.1/15,ML4.0/4,MS3.4/8,Error ellipse: s-maj=26.1km s-min=13.2km az=64.0*
*DJA **10** 00:15:58.4±0.2,8°.2S×11°.8E±°,h10km,M4.7/22,mB5.8/3, mb4.6/9,MLv4.6/22,Mw(mB)5.3/3.*
*NEIC **10** 00:16:01.3±2.8,8°.16S±0°.04×117°.83E±0°.08,h36km±8km, mb4.5/18,Error ellipse: s-maj=12.2km s-min=4.9km az=97.0*
ISC 10 00:16:00.9±0.4,**8°.17S**±0°.04×**117°.83E**±0°.04,**h35**km,**n92,**
σ1s**20**/96,**mb4.4**/15,**MS3.4/3,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.66**	**184**	P	**Pn**	**00 16 12.1**	**-1.6**
PLAI				S	**Sn**	**00 16 21.5**	**-1.3**
PLAI	**Plampang**	**0.66**	**184**	P	**Pn**	**00 16 12.1**	**-1.6**
TWSI	**Taliwang, Sumb**	**1.09**	**239**	P	**Pn**	**00 16 18.8**	**-0.9**
TWSI				S	**Sn**	**00 16 33.8**	**+0.2**
WBSI	**Waikabubak, Su**	**2.13**	**134**	P	**Pn**	**00 16 34.3**	**+0.3**
WBSI				S	**Sn**	**00 17 01.7**	**+2.5**
SRBI	**Singaraja**	**2.59**	**272**	P	**Pn**	**00 16 39.3**	**-1.0**
DNP	**Denpasar**	**2.64**	**259**	P	**Pn**	**00 16 42.4**	**+1.4**
IGBI	**Denpasar**	**2.73**	**256**	P	**Pn**	**00 16 42.6**	**+0.4**
IGBI				S	**Sn**	**00 17 17.7**	**+3.6**
BSSI	**Bau Bau, Buton**	**3.32**	**53**	P	**Pn**	**00 16 50.2**	**-0.2**
BASI	**Baing, Sumba**	**3.39**	**127**	P	**Pn**	**00 16 52.3**	**+0.9**
ABJI	**Asem Bagus**	**3.58**	**276**	P	**Pn**	**00 16 55.1**	**+1.2**
BKSI	**Bulukumba**	**3.63**	**39**	P	**Pn**	**00 16 54.4**	**-0.3**
BKSI				S	**Sn**	**00 17 36.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**3.65**	**265**	Pn	**Pn**	**00 16 54.4**	**-0.5**
JAGI	**Jajag, Banyuwa**	**3.65**	**265**	P	**Pn**	**00 16 54.5**	**-0.5**
JAGI	**Jajag, Banyuwa**	**3.65**	**265**	P	**Pn**	**00 16 54.9**	**0.0**
KAPI	**Kappang**	**3.67**	**31**	Pn	**Pn**	**00 16 55.0**	**-0.2**
KAPI	20nm,0.3s,baz=194,slow=4.4,SNR=70			Sn	**Sn**	**00 17 35.8**	**-1.5**
KAPI	29nm,0.3s,baz=219,slow=20,SNR=3.3			LR	LR	00 18 36.8	
EDFI	comp=Z,522nm,18.9s,baz=185,slow=43 51nm,0.3s **Ende, Flores**	**3.86**	**99**	P	**Pn**	**00 16 58.3**	**+0.4**
KMMI	**Kalianget**	**3.99**	**286**	P	**Pn**	**00 17 00.2**	**+0.7**
BLJI	**Banyuglugur**	**4.21**	**275**	P	**Pn**	**00 17 03.5**	**+0.8**
GMJI	**Gumukmas**	**4.34**	**268**	P	**Pn**	**00 17 04.5**	**+0.1**
MMRI	**Maumere**	**4.39**	**96**		**Pn**	**00 17 05.0**	**-0.1**
MMRI	**Maumere**	**4.39**	**96**	P	**Pn**	**00 17 05.3**	**+0.2**
TTSI	**Tana Toraja**	**5.46**	**21**	P	**Pn**	**00 17 19.3**	**-0.5**
PWJI	3.6nm7μm54nm,0.7s **Pagerwojo**	**5.97**	**271**	P	**Pn**	**00 17 26.3**	**-0.5**
	0.3nm56nm,1.4s						
BATI	**Baumata**	**6.11**	**110**	Pn	**Pn**	**00 17 30.7**	**+2.0**
BATI	6.9nm,0.3s,baz=211,slow=2.7,SNR=2.4			Sn	**Sn**	**00 18 42.1**	**+4.7**
BATI	2.5nm,0.3s,baz=318,slow=18,SNR=1.3			LR	LR	00 20 16.3	
BATI	comp=Z,530nm,18.8s,baz=359,slow=42 19nm,0.4s **Baumata**	**6.11**	**110**	P	**Pn**	**00 17 29.8**	**+1.1**
PCJI	0.1nm39nm,0.6s **Pacitan**	**6.58**	**269**	P	**Pn**	**00 17 34.3**	**-1.0**
UGM	0.5nm50nm,1.4s **Wanagama**	**7.24**	**272**	P	**Pn**	**00 17 44.8**	**+0.5**
UGM	1.0nm128nm,2.0s **Wanagama**	**7.24**	**272**	P	**Pn**	**00 17 43.7**	**-0.6**
APSI	**Ampana**	**8.15**	**28**	P	**Pn**	**00 17 56.7**	**-0.1**
LUWI	20nm,1.1s **Luwuk**	**8.62**	**35**	Pn	**Pn**	**00 18 03.2**	**0.0**
MPSI	**Mapaga**	**8.70**	**14**	P	**Pn**	**00 18 04.8**	**+0.5**
LEM	**Lembang**	**10.21**	**277**	LR	LR	00 22 30.8	
FITZ	comp=Z,134nm,20.8s,baz=82,slow=39 **Fitzroy Crossi**	**12.46**	**143**	Pn	**Pn**	**00 18 55.0**	**-0.8**
FITZ	0.3nm,0.3s,baz=328,slow=9.8,SNR=5.3			Sn	**Sn**	**00 21 10.3**	**-3.1**
FITZ	0.6nm,0.3s,baz=208,slow=14,SNR=4.3			LR	LR	00 24 28.4	
FITZ	comp=Z,136nm,18.6s,baz=300,slow=41 1.7nm,0.5s **Fitzroy Crossi**	**12.46**	**143**	Pn	**Pn**	**00 18 54.5**	**-1.3**
KNRA	**Kununurra**	**13.04**	**126**	Pn	**Pn**	**00 19 01.9**	**-1.8**
KNRA	**Kununurra**	**13.04**	**126**	P	**Pn**	**00 19 02.3**	**-1.4**
MBWA	**Marble Bar**	**13.04**	**172**	Pn	**Pn**	**00 19 02.8**	**-1.0**
MBWA	**Marble Bar**	**13.04**	**172**	P	**Pn**	**00 19 03.9**	**+0.1**
PSA00	**Pilbara Seismi**	**13.47**	**172**	Pn	**Pn**	**00 19 08.0**	**-1.6**
PSA00	**Pilbara Seismi**	**13.47**	**172**	P	**Pn**	**00 19 10.1**	**+0.5**
MTN	**Manton Dam**	**13.88**	**111**	Pn	**Pn**	**00 19 13.3**	**-1.9**
MTN	**Manton Dam**	**13.88**	**111**	P	**Pn**	**00 19 13.7**	**-1.5**
GIRL	**Giralia**	**14.80**	**193**	Pn	**Pn**	**00 19 27.2**	**-0.4**
GIRL	**Giralia**	**14.80**	**193**	P	**Pn**	**00 19 28.7**	**+1.0**
FAKI	**Fak Fak**	**15.27**	**71**	Pn	**Pn**	**00 19 32.3**	**-1.7**
FAKI	comp=Z,34nm,1.1s			IAmb	IAmb	00 19 51.2	
MEEK	**Meekatharra**	**18.38**	**178**	P	**Pn**	**00 20 14.1**	**+1.0**
WRKA	**Warakurna**	**19.52**	**150**	P	**Pn**	**00 20 26.9**	**0.0**
WB0	**Warramunga Arr**	**19.76**	**127**	P	**P**	**00 20 27.3**	**-0.7**
WB0	comp=Z,9.4nm,0.8s			IAmb	IAmb	00 20 33.9	
WRA	**Warramunga Arr**	**19.81**	**128**	P	**P**	**00 20 27.9**	**-0.7**
WRA	comp=Z,0.4nm,0.3s,baz=303,slow=13,SNR=24			LR	LR	00 28 55.1	
WRA	comp=Z,124nm,18.2s,baz=250,slow=39 comp=Z,2.0nm,0.6s **Warramunga Arr**	**19.81**	**128**	P	**P**	**00 20 27.7**	**-1.0**
WRAB	**Tennant Creek**	**19.82**	**128**	P	**P**	**00 20 28.3**	**-0.4**
WB2	**Warramunga Arr**	**19.82**	**128**	P	**P**	**00 20 27.4**	**-1.4**
WR0	**Warramunga Arr**	**19.98**	**128**	P	**P**	**00 20 30.0**	**-0.4**
WR0	comp=Z,14nm,0.8s			IAmb	IAmb	00 20 36.2	
MORW	**Morawa**	**20.86**	**184**	P	Pn	00 20 42.6	+0.1
MORW	comp=Z,44nm,1.5s			IAmb	IAmb	00 20 59.6	
MORW	**Morawa**	**20.86**	**184**	P	Pn	00 20 41.7	-0.8
AS31	**Alice Springs**	**21.79**	**137**	P	**P**	**00 20 49.2**	**-0.8**
ASAR	**Alice Springs**	**21.79**	**137**	P	**P**	**00 20 50.4**	**+0.4**
ASAR	comp=Z,14nm,0.8s,baz=312,slow=8.8,SNR=45 comp=Z,14nm,0.8s **Alice Springs**	**21.79**	**137**	P	**P**	**00 20 51.1**	**+1.1**
KLBR	**Kellerberrin**	**23.30**	**180**	P	**P**	**00 21 05.9**	**+0.1**
FORT	**Forrest**	**24.44**	**158**	P	**P**	**00 21 17.3**	**+0.8**
NWAO	**Narrogin (SRO)**	**24.64**	**181**	P	**P**	**00 21 18.4**	**+0.1**
COEN	**Coen**	**25.52**	**105**	P	**P**	**00 21 26.7**	**+0.2**
COEN	comp=Z,12nm,0.9s			IAmb	IAmb	00 21 27.5	
OOD	**Oodnadatta**	**25.81**	**141**	P	**P**	**00 21 29.3**	**+0.4**
MULG	**Mulgathing**	**26.74**	**147**	P	**P**	**00 21 38.0**	**+0.7**
BBOO	**Buckleboo**	**29.78**	**148**	P	**P**	**00 22 04.3**	**-0.1**
BBOO	**Buckleboo**	**29.78**	**148**	P	**P**	**00 22 05.1**	**+0.7**
STKA	**Stephens Creek**	**32.33**	**140**	P	**P**	**00 22 27.4**	**+0.5**
STKA	comp=Z,5.0nm,0.7s,baz=326,slow=11,SNR=8.5			LR	LR	00 38 28.9	
STKA	comp=Z,71nm,20.1s,baz=212,slow=42 comp=Z,5.0nm,0.7s **Stephens Creek**	**32.33**	**140**	P	**P**	**00 22 26.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**32.36**	**325**	P	**P**	**00 22 28.4**	**+1.1**
TOO	comp=Z,0.8nm,0.4s,baz=153,slow=6.7,SNR=5.8 comp=Z,0.8nm,0.4s **Toolangi**	**38.52**	**144**	P	**P**	**00 23 21.6**	**+1.5**
TOO	comp=Z,26nm,1.4s			IAmb	IAmb	00 23 29.6	
JHS	**Saijyo**	**45.30**	**18**	P	**P**	**00 24 14.7**	**-0.7**
JHS	comp=Z,24nm,1.5s			IAmb	IAmb	00 24 28.9	
KSRS	**Korea Array**	**46.36**	**11**	P	**P**	**00 24 24.7**	**+1.0**
JSD	comp=Z,0.7nm,0.6s,baz=189,slow=9.8,SNR=1.5 comp=Z,0.7nm,0.6s **Sado**	**49.77**	**21**	P	**P**	**00 24 51.2**	**+1.2**
USRK	**Ussuriysk Ar.**	**53.68**	**13**	P	**P**	**00 25 19.2**	**+0.1**
SONM	comp=Z,2.0nm,0.8s,baz=214,slow=7.0,SNR=2.7 comp=Z,2.0nm,0.8s **Songino Array**	**56.67**	**351**	P	**P**	**00 25 42.2**	**+1.3**
SONM	comp=Z,2.6nm,0.7s,baz=167,slow=9.1,SNR=15 comp=Z,2.6nm,0.7s			IAmb	IAmb	00 25 50.3	
SONM	comp=Z,4.5nm,1.0s **Songino Array**	**56.67**	**351**	P	**P**	**00 25 41.4**	**+0.6**
LBZ	**Lake Benmore**	**57.86**	**138**	P	**P**	**00 25 49.4**	**+0.1**
MKAR	**Makanchi Array**	**63.20**	**333**	P	**P**	**00 26 25.9**	**+0.3**
MKAR	comp=Z,1.1nm,0.7s,baz=135,slow=7.6,SNR=7.6			LR	LR	00 55 24.1	
MKAR	comp=Z,23nm,19.1s,baz=102,slow=38 comp=Z,1.1nm,0.7s **Makanchi Array**	**63.20**	**333**	P	**P**	**00 26 25.2**	**-0.3**
KURBB	**Kurchatov Arra**	**67.72**	**334**	P	**P**	**00 26 53.8**	**-0.8**
ZALV	comp=Z,0.1nm,0.2s,baz=139,slow=5.8,SNR=1.3 comp=Z,0.1nm,0.2s **Zalesovo Beam**	**67.86**	**340**	P	**P**	**00 26 54.5**	**-1.0**
ZALV	comp=Z,1.6nm,0.7s,baz=136,slow=3.8,SNR=6.3 comp=Z,1.6nm,0.7s **Zalesovo Beam**	**67.86**	**340**	P	**P**	**00 26 53.3**	**-2.2**
MAW	**Mawson**	**69.62**	**200**	P	**P**	**00 27 07.0**	**+0.8**
MAW	comp=Z,3.5nm,0.7s,baz=40,slow=3.6,SNR=6.3 comp=Z,3.5nm,0.7s **Mawson**	**69.62**	**200**	P	**P**	**00 27 07.7**	**+1.4**
VNDA	**Vanda**	**72.98**	**171**	P	**P**	**00 27 27.4**	**+0.9**
VNDA	comp=Z,0.6nm,0.7s,baz=305,slow=5.7,SNR=3.9 comp=Z,0.6nm,0.7s **Vanda**	**72.98**	**171**	P	**P**	**00 27 26.9**	**+0.5**
VNDA	comp=Z,4.4nm,1.5s			IAmb	IAmb	00 27 45.7	
ABKAR	**Akbulak array**	**76.22**	**325**	P	**P**	**00 27 44.0**	**-1.7**
ARU	**Arti**	**80.58**	**331**	LR	LR	01 09 10.7	
QSPA	comp=Z,17nm,18.8s,baz=154,slow=40 **South Pole Qui**	**81.82**	**180**	P	**P**	**00 28 16.6**	**+0.3**
QSPA	comp=Z,8.5nm,1.5s			IAmb	IAmb	00 28 59.9	
TORD	**Torodi Ar. Bea**	**117.17**	**281**	PKP	**PKPdf**	**00 34 41.5**	**-1.9**
CPUP	comp=Z,0.4nm,0.8s,baz=20,slow=1.4,SNR=2.4 **Villa Florida**	**145.38**	**188**	PKPbc	**PKPab**	**00 35 36.2**	**+0.3**
LPAZ	comp=Z,1.3nm,0.6s,baz=164,slow=1.9,SNR=5.3 **La Paz**	**154.99**	**166**	PKPab	**PKPab**	**00 36 17.6**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=179,slow=4.6,SNR=4.0						

*IDC **10** 00:17:43.1±1.4,2°.82S×118°.04E,h0km,mb4.0/6, mbtmp4.0/6,Error ellipse: s-maj=214.9km s-min=18.6km az=57.0*
ISC 10 00:17:49.0±1.4,**2°.2S**±0°.9×**11°.9E**±°,**h35**km,**n6,**σ0s**53/8,**
mb4.1/6,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.11**	**141**	P	**P**	**00 22 52.4**	**+0.4**
WRA	4.7nm,0.8s,baz=314,slow=11,SNR=10			PcP	**PcP**	**00 26 39.5**	**-0.8**
ASAR	0.2nm,0.8s,baz=312,slow=2.4,SNR=1.0 4.7nm,0.8s **Alice Springs**	**25.72**	**147**	P	**P**	**00 23 16.1**	**-0.2**
ASAR	1.2nm,0.6s,baz=337,slow=11,SNR=3.8			PcP	**PcP**	**00 26 45.7**	**-0.3**
STKA	0.6nm,0.6s,baz=352,slow=1.9,SNR=2.3 1.2nm,0.6s **Stephens Creek**	**36.36**	**147**	P	**P**	**00 24 50.1**	**+0.2**
MKAR	4.6nm,0.7s,baz=328,slow=9.5,SNR=4.5 4.6nm,0.7s **Makanchi Array**	**58.52**	**331**	P	**P**	**00 27 42.5**	**+0.6**
	1.1nm,0.7s,baz=148,slow=7.5,SNR=5.2 1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**62.79**	**338**	P	**P**	**00 28 10.6**	**-0.2**
KURBB	1.1nm,0.6s,baz=126,slow=7.3,SNR=2.7 1.1nm,0.6s **Kurchatov Arra**	**62.98**	**332**	P	**P**	**00 28 12.2**	**+0.1**
	0.6nm,0.6s,baz=140,slow=5.7,SNR=4.7 0.6nm,0.6s						

*AZER **10** 00:26:19.1±2.1,35°.07N×46°.26E,h3km±112km,Error ellipse: s-maj=366.0km s-min=23.9km az=9.0*
*ISN **10** 00:26:22.7±0.5,35°.33N×46°.21E,h10km±111km,ML3.4*
*TEH **10** 00:26:23.0,35°.34N×46°.30E,h6km,ML3.4*
ISC 10 00:26:23.2±0.8,**35°.37N**±0°.02×**46°.24E**±0°.04,**h10**km,**n57,**
σ2s**54**/69,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.68**	**169**	*e*Pg	**Pb**	**00 26 37.1**	**-0.1**
IDHR				*e*Sg	**Sb**	**00 26 47.1**	**+0.4**
ILIN	**Lien**	**0.74**	**127**	*e*Pg	**Pg**	**00 26 36.7**	**-0.9**
ILIN				*e*Sg	**Sb**	**00 26 47.2**	**-1.5**
ILIN	comp=Z,17μm,0.4s			*e*		00 26 52.3	
SNGE	**Sanandaj**	**0.95**	**106**	*e*Pg	**Pg**	**00 26 39.5**	**-2.0**
IGHG	**Ghaleghazi**	**1.07**	**165**	*e*Pg	**Pn**	**00 26 44.6**	**+0.1**
IGHG	comp=Z,13μm,0.6s			*e*		00 27 01.4	
KER	**Kermanshah**	**1.23**	**143**	*e*Pg	**Pn**	**00 26 46.6**	**+0.1**
KCHF	**Cheshme Sefid,**	**1.27**	**148**	*e*Pg	**Pg**	**00 26 47.6**	**-0.1**
KCHF				*e*Sg	**Sn**	**00 27 04.8**	**+0.3**
KCHF	comp=Z,13μm,0.6s			*e*		00 27 06.8	
MAHB	**Mahabad**	**1.46**	**343**	*e*Pn	**Pb**	**00 26 51.0**	**+0.4**
IKOM	**Komasi**	**1.58**	**138**	*e*Pn	**Pg**	**00 26 52.4**	**-1.2**
IKOM	comp=Z,13μm,0.6s			*e*		00 27 23.6	
IBZA	**Bozab**	**1.61**	**123**	*e*Pn	**Pb**	**00 26 52.3**	**-0.8**
IHSH	**Hashtrud**	**2.11**	**23**	*e*Pn	**Pb**	**00 27 01.7**	**0.0**
IHSH	comp=Z,3μm,0.6s			*e*		00 27 34.8	
IDOB	**Doab**	**2.25**	**134**	*e*Pn	**Pb**	**00 27 03.5**	**-0.5**
IDOB	comp=Z,4μm,1.4s			*e*		00 27 59.7	
HSAM	**Samen**	**2.26**	**120**	*e*Pn	**Pb**	**00 27 03.9**	**-0.4**
IBDR	**Badra**	**2.26**	**186**	*e*Pn	**Pb**	**00 27 03.0**	**-1.1**
IBDR				*e*Sn	**Sb**	**00 27 32.0**	**-0.2**
IBDR	comp=E,222nm,0.5s			AML	AML	00 27 54.0	
IKFM	**Kafar-mosalman**	**2.27**	**144**	*e*Pn	**Pb**	**00 27 04.3**	**+0.1**
ZNJK	**Zanjan**	**2.38**	**56**	*e*Pn	**Pb**	**00 27 05.9**	**-0.3**
IBST	**Bostanabad**	**2.39**	**13**	*e*Pn	**Pb**	**00 27 05.6**	**-0.9**
IBST	comp=Z,1μm,0.4s			*e*		00 27 52.4	
HAGD	**Aghdareh**	**2.44**	**102**	*e*Pn	**Pb**	**00 27 06.3**	**-1.1**
BHD	**Baghdad**	**2.59**	**217**	*e*Pn	**Pn**	**00 27 07.0**	**+1.8**
BHD				*e*Sn	**Sb**	**00 27 40.0**	**-1.7**
BHD	comp=E,270nm,0.6s			AML	AML	00 28 05.7	
ISRB	**Sarab**	**2.71**	**25**	*e*Pn	**Pb**	**00 27 10.0**	**-1.9**
ISRB	comp=Z,802nm,0.3s			*e*		00 27 57.8	
QABG	**Abgarm-Qazvin**	**2.75**	**82**	*e*Pn	**Pb**	**00 27 10.2**	**-2.4**
QABG	comp=Z,1μm,1.1s			*e*		00 27 51.2	
ITBZ	**Tabriz**	**2.86**	**359**	*e*Pn	**Pb**	**00 27 12.2**	**-2.3**
ISHB	**Shabestar**	**2.96**	**351**	*e*Pn	**Pn**	**00 27 12.7**	**+2.3**
ISHB	comp=Z,2μm,0.4s			*e*		00 28 04.1	
IHRS	**Heris**	**3.02**	**12**	*e*Pn	**Pb**	**00 27 14.4**	**-2.8**
IHRS	comp=Z,2μm,1.0s			*e*		00 28 14.6	
IRAZ	**Razeghan**	**3.02**	**88**	*e*Pn	**Pb**	**00 27 13.9**	**-3.3**
IRAZ	comp=Z,1μm,0.5s			*e*		00 27 22.3	
TVRZ	**Varzaqan**	**3.15**	**6**	*e*Pn	**Pb**	**00 27 17.2**	**-2.2**
JIR1	**Jirandeh**	**3.19**	**64**	*e*Pn	**Pb**	**00 27 17.4**	**-2.6**
ASAO	**Ashtian**	**3.22**	**104**	*e*Pn	**Pb**	**00 27 17.8**	**-2.8**
GIDE	**GILAN DEYLAMAN**	**3.36**	**61**	*e*Pn	**Pb**	**00 27 19.3**	**-3.6**
IMRD	**Marand**	**3.37**	**353**	*e*		00 28 24.0	
KHMZ	comp=Z,2μm,0.8s **Khomeyn**	**3.48**	**117**	*e*Pn	**Pb**	**00 27 21.4**	**-3.6**
ORD	**Ordubad**	**3.56**	**357**	P	**Pb**	**00 27 24.3**	**-2.0**
ORD	SNR=25			S	**Sg**	**00 28 14.9**	**-2.7**
LHJ2	**Lahijan - Gila**	**3.58**	**59**	*e*Pn	**Pn**	**00 27 21.4**	**+2.7**
RAFI	**Al-Rafai**	**3.63**	**182**	*e*Pn	**Pn**	**00 27 22.0**	**+2.5**

n29,σ1°47/30, mb3.9/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.87**	**43**	P	**Pn**	**01 46 23.5**	**-0.6**
	93nm,0.4s,baz=170,slow=1.1,SNR=15						
AFI				S	**Sn**	**01 47 05.7**	**-4.8**
	125nm,0.3s,baz=24,slow=23,SNR=13						
AFI	**Afiamalu**	**3.87**	**43**	P	**Pn**	**01 46 24.2**	**+0.1**
AFI	**Afiamalu**	**3.87**	**43**	P	**Pn**	**01 46 24.3**	**+0.1**
NIUE	**Niue**	**4.92**	**118**	Pn	**Pn**	**01 46 36.4**	**-1.1**
NIUE	**Niue**	**4.92**	**118**	P	**Pn**	**01 46 36.8**	**-0.8**
TAVE	**Taveuni**	**5.18**	**271**	P	Pn	01 46 46.4	+5.4
MARNC	**Mare, Loyalty**	**17.16**	**251**	Pn	**Pn**	**01 49 14.8**	**+0.3**
URZ	**Urewera**	**22.64**	**197**	P	**P**	**01 50 09.7**	**-1.6**
URZ				IAmb	IAmb	01 50 39.8	
	comp=Z,72nm,1.5s						
LHI	**Lord Howe Isla**	**28.14**	**234**	P	**P**	**01 50 59.6**	**-1.4**
WKZ	**Wanaka**	**31.22**	**203**	P	**P**	**01 51 28.6**	**+0.6**
WKZ				IAmb	IAmb	01 51 53.7	
	comp=Z,36nm,1.3s						
WB2	**Warramunga Arr**	**48.50**	**258**	P	**P**	**01 53 49.4**	**-1.2**
WB2				IAmb	IAmb	01 54 11.6	
	comp=Z,9.5nm,1.4s						
WRA	**Warramunga Arr**	**48.52**	**258**	P	**P**	**01 53 49.7**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=95,slow=7.5,SNR=6.8						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**48.52**	**258**	P	**P**	**01 53 50.1**	**-0.7**
AS31	**Alice Springs**	**48.69**	**253**	P	**P**	**01 53 50.4**	**-1.7**
ASAR	**Alice Springs**	**48.69**	**253**	P	**P**	**01 53 51.6**	**-0.5**
	comp=Z,3.3nm,0.5s,baz=88,slow=8.5,SNR=34						
ASAR				PcP	**PcP**	**01 55 14.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=97,slow=5.2,SNR=1.9						
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**48.69**	**253**	P	**P**	**01 53 50.8**	**-1.3**
VNDA	**Vanda**	**61.91**	**186**	P	**P**	**01 55 26.8**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=34,slow=8.6,SNR=3.8						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**61.91**	**186**	P	**P**	**01 55 27.0**	**+1.3**
VNDA				IAmb	IAmb	01 55 45.8	
	comp=Z,2.9nm,1.5s						
MBWA	**Marble Bar**	**61.97**	**255**	P	**P**	**01 55 25.0**	**-2.0**
QSPA	**South Pole Qui**	**73.28**	**180**	P	**P**	**01 56 37.9**	**+0.7**
QSPA				IAmb	IAmb	01 56 38.2	
	comp=Z,3.5nm,1.0s						
YBH	**Yreka Blue Hor**	**75.32**	**37**	P	**P**	**01 56 50.8**	**+1.6**
YBH				IAmb	IAmb	01 57 33.6	
	comp=Z,11nm,1.5s						
NVAR	**Mina Array Bea**	**76.05**	**42**	P	**P**	**01 56 54.8**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=233,slow=7.9,SNR=5.3						
	comp=Z,0.7nm,0.7s						
TXAR	**Lajitas Array**	**82.25**	**56**	P	**P**	**01 57 29.6**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=231,slow=5.3,SNR=3.2						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**83.98**	**42**	P	**P**	**01 57 37.2**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=224,slow=4.1,SNR=4.7						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**83.99**	**12**	P	**P**	**01 57 36.3**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=223,slow=5.7,SNR=2.9						
	comp=Z,0.3nm,0.7s						
CLL	**Collm**	**145.03**	**352**	*e*PKPbc	**PKPdf**	**02 04 42.0**	**+0.5**
BRTR	**Keskin Array B**	**146.52**	**319**	PKPbc	**PKPab**	**02 04 47.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=154,slow=3.0,SNR=6.4						
GERES	**GERESS Array B**	**147.32**	**350**	PKPbc	**PKPbc**	**02 04 48.1**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=76,slow=4.1,SNR=3.7						
DAVOX	**Davos/Dischmat**	**149.86**	**354**	PKPbc	**PKiKP**	**02 04 56.6**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=109,slow=4.8,SNR=6.4						

*NEIC **10** 02:21:34.1±3.0, 43.9°N±0.1°×129.4°W±0.2, h10km±2km, ML3.3/40, Error ellipse: s-maj=24.1km s-min=17.9km az=238.0*
*IDC **10** 02:21:37.9±2.6, 45.19°N×128.02°W, h0km, mb2.7/2, mbtmp2.9/5, ML3.2/3, MS2.6/5, Error ellipse: s-maj=64.6km s-min=23.7km az=51.0*
*ANF **10** 02:21:37.4±1.3, 43.69°N×129.03°W, h10km, ML3.2/1, Error ellipse: s-maj=16.8km s-min=12.5km az=3.0*

ISC 10 02:21:33.6±1.9, 43.89°N±0.09°×129.3°W±0.1, h10km, n50, σ2s06/42, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.77**	**104**	Pn	**Pn**	**02 22 31.7**	**-0.1**
KEBM				IAML		02 24 43.1	
	comp=N,49nm,2.5s						
KEBM				IAML		02 24 51.2	
	comp=E,59nm,2.5s						
I02E	**Swisshome, OR**	**3.94**	**85**	Pn	**Pn**	**02 22 35.9**	**+1.7**
I02E				IAML		02 24 52.9	
	comp=E,47nm,2.9s						
I02E				IAML		02 25 05.9	
	comp=N,34nm,2.7s						
I02E	**Swisshome, OR**	**3.94**	**85**	P	**Pn**	**02 22 35.5**	**+1.3**
	baz=268,SNR=22						
I02E				S	**Sn**	**02 23 20.1**	**-0.4**
	baz=268						
J01E	**Myrtle Point**	**3.98**	**99**	Pn	**Pn**	**02 22 34.4**	**-0.2**
J01E	**Myrtle Point**	**3.98**	**99**	P	**Pn**	**02 22 34.9**	**+0.2**
	baz=282,SNR=8.5						
HEBO	**Mount Hebo**	**4.18**	**70**	Pn	**Pn**	**02 22 38.9**	**+1.4**
K02D	**Willamette Mer**	**4.29**	**104**	P	**Pn**	**02 22 39.2**	**+0.2**
	baz=288,SNR=9.9						
K02D				S	**Sn**	**02 23 28.4**	**-0.7**
	baz=288						
I03D	**Drain, OR**	**4.32**	**91**	P	**Pn**	**02 22 40.3**	**+1.0**
	baz=274,SNR=84						
I03D				S	**Sn**	**02 23 29.6**	**-0.1**
	baz=274						
COR	**Corvallis**	**4.37**	**79**	Pn	**Pn**	**02 22 40.9**	**+0.9**
COR				IAML		02 23 13.1	
	comp=N,28nm,2.0s						
COR				IAML		02 23 54.9	
	comp=N,30nm,2.7s						
DBO	**Dodson Butte**	**4.48**	**98**	Pn	**Pn**	**02 22 41.1**	**-0.5**
DBO				IAML		02 24 14.0	
	comp=E,22nm,3.1s						
G03D	**McMinnville, O**	**4.51**	**71**	Pn	**Pn**	**02 22 42.4**	**+0.3**
G03D				IAML		02 24 32.5	
	comp=N,36nm,3.2s						
G03D				IAML		02 25 04.6	
	comp=E,28nm,3.3s						
G03D	**McMinnville, O**	**4.51**	**71**	P	**Pn**	**02 22 43.9**	**+1.9**
	baz=255,SNR=9.5						
BUCK	**Buck Mountain**	**4.57**	**84**	Pn	**Pn**	**02 22 44.1**	**+1.3**
BUCK				IAML		02 24 04.9	
	comp=N,31nm,3.4s						
BUCK				IAML		02 24 12.8	
	comp=E,33nm,3.5s						
RADR	**Rader Ridge**	**4.64**	**55**	Pn	**Pn**	**02 22 44.1**	**+0.2**
RADR				IAML		02 23 37.0	
	comp=N,40nm,2.3s						
RADR				IAML		02 24 52.1	
	comp=E,33nm,2.0s						
H04D	**Lebanon**	**4.76**	**80**	Pn	**Pn**	**02 22 48.3**	**+2.8**
H04D				IAML		02 23 52.7	
	comp=E,26nm,3.2s						
H04D				IAML		02 24 08.9	
	comp=N,26nm,2.8s						
HUMO	**Hull Mountain**	**4.81**	**103**	Pn	**Pn**	**02 22 48.3**	**+2.1**
E03A	**Lebam**	**4.85**	**55**	Pn	**Pn**	**02 22 46.3**	**-0.2**
E03A				IAML		02 23 50.4	
	comp=N,23nm,2.7s						
E03A				IAML		02 25 06.7	
	comp=E,24nm,2.6s						
WISH	**Wishkah**	**5.05**	**48**	Pn	**Pn**	**02 22 49.7**	**+0.3**
H04A	**Detroit Lake**	**5.17**	**79**	Pn	**Pn**	**02 22 54.0**	**+2.9**
NLWA	**Neilton Lookou**	**5.17**	**46**	Pn	**Pn**	**02 22 51.8**	**+0.7**
C03A	**Quillayute Air**	**5.23**	**38**	Pn	**Pn**	**02 22 52.8**	**+1.0**
J04D	**Umpqua Nationa**	**5.27**	**95**	Pn	**Pn**	**02 22 55.7**	**+3.0**
F04A	**Amboy**	**5.30**	**65**	Pn	**Pn**	**02 22 54.7**	**+1.9**
F04A				IAML		02 26 25.4	
	comp=E,14nm,3.4s						
YBH	**Yreka Blue Hor**	**5.31**	**112**	Pn	Pn	02 22 59.4	+6.3
	comp=E,0.1nm,0.3s,baz=268,slow=6.6,SNR=5.0						
YBH				Sn	**Sn**	**02 23 49.0**	**-5.3**
	comp=E,0.1nm,0.3s,baz=155,slow=3.6,SNR=1.4						
YBH				LR	LR	02 24 31.6	
	comp=E,35nm,18.9s,baz=310,slow=34						
	comp=E,3.2nm,0.8s						
L04D	**Klamath Falls**	**5.40**	**106**	Pn	**Pn**	**02 22 57.5**	**+3.2**
HOOD	**Mount Hood Mea**	**5.65**	**73**	Pn	**Pn**	**02 23 00.0**	**+2.3**
OZB	**Mount Ozzard**	**5.71**	**26**	Pn	**Pn**	**02 22 60.0**	**+1.5**
B04A	**Port Angeles**	**5.80**	**42**	Pn	**Pn**	**02 23 01.0**	**+1.3**
PINE	**Pine Mountain**	**6.05**	**88**	Pn	**Pn**	**02 23 05.4**	**+2.1**
CLRS	**Cowichan Lake**	**6.09**	**34**	Pn	**Pn**	**02 23 04.6**	**+1.0**
K05A	**Summer Lake**	**6.25**	**98**	Pn	**Pn**	**02 23 08.6**	**+2.6**
PGC	**Sidney**	**6.25**	**38**	Pn	**Pn**	**02 23 06.0**	**+0.2**
CBB	**Campbell River**	**6.71**	**22**	Pn	**Pn**	**02 23 14.8**	**+2.7**
I07A	**Izee**	**7.07**	**85**	Pn	**Pn**	**02 23 18.7**	**+1.4**
G08A	**Pilot Rock**	**7.52**	**76**	Pn	**Pn**	**02 23 24.4**	**+1.0**
G08A	**Circle Bar Ran**	**7.88**	**90**	Pn	Pn	02 23 35.0	+6.6
LLLB	**Lillooet**	**8.40**	**34**	Pn	**Pn**	**02 23 37.6**	**+2.2**
NEW	**Newport**	**9.53**	**58**	LR	LR	02 26 38.3	
	comp=E,33nm,21.6s,baz=238,slow=37						
NVAR	**Mina Array Bea**	**9.93**	**120**	Pn	Pn	02 24 01.9	+5.4
	comp=E,0.1nm,0.3s,baz=283,slow=13,SNR=1.7						
	comp=E,0.3nm,0.7s						
ELK	**Elko**	**10.88**	**102**	LR	LR	02 27 25.3	
	comp=E,28nm,18.2s,baz=348,slow=34						
PFO	**Pinyon Flats O**	**14.33**	**131**	LR	LR	02 30 07.9	
	comp=E,42nm,19.5s,baz=338,slow=35						
PDAR	**Pinedale Array**	**14.42**	**88**	Pn	**Pn**	**02 24 55.4**	**-2.6**
	comp=E,0.1nm,0.3s,baz=285,slow=14,SNR=1.5						
PDAR				LR	LR	02 30 02.8	
	comp=E,43nm,19.5s,baz=268,slow=37						
	comp=E,0.1nm,0.4s						
ILAR	**Eielson Array**	**23.13**	**341**	P	**P**	**02 26 35.7**	**-3.9**
	comp=E,0.1nm,0.5s,baz=133,slow=9.1,SNR=1.0						
	comp=E,0.1nm,0.5s						
TXAR	**Lajitas Array**	**25.06**	**117**	P	**P**	**02 27 02.8**	**+4.5**
	comp=E,0.2nm,0.7s,baz=309,slow=7.9,SNR=3.6						
	comp=E,0.2nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**57.82**	**267**	T	T	03 34 05.6	
	baz=49,slow=75,SNR=791						
H11N2	**WAKE ISLAND Hy**	**57.82**	**267**	T	T	03 34 07.8	
	baz=49,slow=75,SNR=459						
H11N1	**WAKE ISLAND Hy**	**57.84**	**267**	T	T	03 34 07.3	
	baz=49,slow=75,SNR=430						
H11S1	**WAKE ISLAND Hy**	**58.75**	**266**	T	T	03 35 20.1	
	baz=49,slow=75,SNR=129						
H11S2	**WAKE ISLAND Hy**	**58.76**	**266**	T	T	03 35 19.1	
	baz=49,slow=75,SNR=130						
H11S3	**WAKE ISLAND Hy**	**58.77**	**266**	T	T	03 35 23.7	
	baz=49,slow=75,SNR=138						

*IDC **10** 02:27:44.9±1.1, 35.61°N×28.44°E, h0km, mb3.6/4, mbtmp3.4/10, ML3.3/6, Error ellipse: s-maj=22.3km s-min=15.4km az=180.0*
*ATH **10** 02:27:45.4, 35.85°N×28.40°E, h30km±6km, ML3.2/5, Error ellipse: s-maj=6.2km s-min=1.7km az=328.0*
*NIC **10** 02:27:45.9±0.0, 35.85°N×28.36°E, h0km±1km, Ml3.6/6*
*DDA **10** 02:27:45.8±0.0, 35.77°N×28.15°E, h21km±1km, MW3.5*
*ISK **10** 02:27:46.3, 35.81°N×28.21°E, h8km, ML3.3/30*
*THE **10** 02:27:46.5, 35.84°N×28.29°E, h2km±5km, ML3.3/4, Error ellipse: s-maj=10.9km s-min=1.4km az=104.0*
*GII **10** 02:27:50.2±0.0, 35.49°N×28.48°E, h5km, MD3.7/1*

ISC 10 02:27:45.9±1.1, 35.78N±0.02×28.30E±0.02, h6km±8km, n92, σ1°40/136, mb3.5/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**342**	P	**Pg**	**02 27 54.6**	**-0.1**
ARG				S	**Sg**	**02 28 01.3**	**+0.6**
	3μm,0.4s						
ARG	**Arkhangelos**	**0.45**	**342**	PG	**Pg**	**02 27 54.6**	**-0.1**
ARG				SG	**Sg**	**02 28 01.7**	**+0.6**
ARG	**Arkhangelos**	**0.45**	**342**	P	**Pg**	**02 27 54.7**	**-0.1**
ARG				S	**Sg**	**02 28 01.7**	**+1.1**
ARG	**Arkhangelos**	**0.45**	**342**	P	**Pg**	**02 27 54.6**	**-0.1**
ARG				S	**Sg**	**02 28 01.1**	**+0.4**
ARG				AML	AML	02 28 05.2	
	comp=E,8752μm,0.3s						
ARG				AML	AML	02 28 07.0	
	comp=N,5246μm,0.5s						
KARP	**Karpathos**	**0.96**	**256**	P	**Pg**	**02 28 04.0**	**-0.3**
KARP				S	**Sb**	**02 28 19.6**	**+1.7**
	comp=N,1μm,0.9s						
KARP	**Karpathos**	**0.96**	**256**	PG	**Pg**	**02 28 04.2**	**-0.1**
KARP				SG	**Sg**	**02 28 16.7**	**0.0**
KARP	**Karpathos**	**0.96**	**256**	S	**Sn**	**02 28 22.4**	**+2.5**
KARP	**Karpathos**	**0.96**	**256**	P	**Pg**	**02 28 04.2**	**-0.1**
KARP				S	**Sg**	**02 28 18.4**	**+1.6**
KARP				AML	AML	02 28 26.0	
	comp=N,2653μm,0.5s						
KARP				AML	AML	02 28 28.3	
	comp=E,1706μm,0.5s						
TURN	**Turunc**	**0.99**	**357**	PG	**Pb**	**02 28 04.9**	**-0.6**
TURN	**Turunc**	**0.99**	**357**	P	**Pg**	**02 28 04.6**	**-0.3**
TURN				S	**Sn**	**02 28 23.6**	**+2.9**
FETY	**Fethiye**	**1.06**	**36**	PN	**Pb**	**02 28 06.0**	**-0.7**
FETY				SN	**Sn**	**02 28 23.6**	**+1.1**
FETY	**Fethiye**	**1.06**	**36**	P	**Pg**	**02 28 06.1**	**-0.7**
FETY				S	**Sn**	**02 28 23.2**	**+0.8**
DALY	**Dalyan (Mula)**	**1.07**	**15**	PG	**Pn**	**02 28 07.3**	**-0.2**
DAT	**Datca**	**1.11**	**328**	PG	**Pg**	**02 28 06.6**	**-0.7**
DAT	**Datca**	**1.11**	**328**	P	**Pg**	**02 28 06.5**	**-0.7**
DAT				S	**Sg**	**02 28 21.6**	**-0.1**
AKAS	**Kas**	**1.15**	**67**	PN	**Pn**	**02 28 09.2**	**+0.5**
AKAS	**Kas**	**1.15**	**67**	P	**Pn**	**02 28 08.9**	**+0.2**
AKAS				S	**Sn**	**02 28 28.5**	**+3.7**
NIS1	**Nisyros Isl.**	**1.22**	**312**	P	**Pg**	**02 28 08.6**	**-0.8**
NIS1				S	**Sg**	**02 28 24.9**	**-0.3**
	comp=E,3μm,0.6s						
NIS1	**Nisyros Isl.**	**1.22**	**312**	P	**Pg**	**02 28 08.4**	**-1.0**
NIS1				S	**Sg**	**02 28 24.3**	**-0.9**
NIS1				AML	AML	02 28 30.9	
	comp=E,5375μm,0.7s						
NIS1				AML	AML	02 28 32.3	
	comp=N,6904μm,0.5s						
YER	**Yerkesik**	**1.35**	**359**	PN	**Pg**	**02 28 11.6**	**-0.2**
DEMR	**Demre-Antalya**	**1.38**	**70**	PN	**Pg**	**02 28 13.5**	**+1.1**
CAME	**Cameli-Denizli**	**1.41**	**35**	PN	**Pg**	**02 28 13.4**	**+0.4**
KOSK	**Kos Island**	**1.44**	**313**	PN	**Pn**	**02 28 12.2**	**-0.3**
KOSK	**Kos Island**	**1.44**	**313**	P	**Pn**	**02 28 11.4**	**-1.1**
BDRM	**Kayabasi**	**1.45**	**332**	P	**Pn**	**02 28 12.6**	**-0.2**
BDRM				S	**Sb**	**02 28 31.9**	**-0.3**
MULA	**Mugla, Merkez-**	**1.47**	**1**	P	**Pg**	**02 28 13.8**	**-0.3**
MULA				S	**Sg**	**02 28 37.3**	**+4.1**
BODT	**Bodrum**	**1.50**	**328**	PN	**Pn**	**02 28 13.4**	**-0.1**
CAEL	**Denizli, Camel**	**1.57**	**31**	P	**Pg**	**02 28 16.3**	**+0.2**
CAEL				S	**Sg**	**02 28 38.4**	**+2.0**
ELL	**Elmali**	**1.62**	**53**	PN	**Pg**	**02 28 16.5**	**-0.5**
ELL	**Elmali**	**1.62**	**53**	S	**Sg**	**02 28 36.9**	**-1.1**
TAVA	**DENIZLI_Tavas**	**1.75**	**16**	P	**Pg**	**02 28 18.7**	**-0.8**
TAVA				S	**Sg**	**02 28 44.1**	**+1.9**
GOLH	**Golhisar**	**1.77**	**35**	P	**Pg**	**02 28 19.7**	**-0.2**
GOLH				S	**Sg**	**02 28 42.6**	**-0.3**
ZKR	**Zakros**	**1.83**	**249**	PN	**Pn**	**02 28 18.0**	**+0.1**
ZKR	**Zakros**	**1.83**	**249**	P	**Pn**	**02 28 19.4**	**+1.5**
ZKR				S	**Sg**	**02 28 45.5**	**+0.9**
ZKR				AML	AML	02 28 50.0	
	comp=N,0.4nm,0.9s						
ZKR				AML	AML	02 28 50.0	
	comp=N,0.4nm,0.9s						
ZKR				AML	AML	02 28 51.4	
	comp=N,0.9nm,1.0s						
ZKR				AML	AML	02 28 51.4	
	comp=N,0.9nm,1.0s						
ZKR	**Zakros**	**1.83**	**249**	P	**Pn**	**02 28 19.5**	**+1.6**
ZKR				S	**Sb**	**02 28 43.9**	**+1.0**
ZKR				AML	AML	02 28 51.6	
	comp=N,372μm,0.8s						
ZKR				AML	AML	02 28 53.5	
	comp=E,725μm,0.8s						
APMY	**Acipayam-Deniz**	**1.87**	**25**	PN	**Pb**	**02 28 19.6**	**-0.9**
DDIM	**Aydin, Didim**	**1.88**	**333**	P	**Pn**	**02 28 18.6**	**+0.1**
DDIM				S	**Sb**	**02 28 43.6**	**-0.6**
STIA	**Sitia Lasithi**	**1.89**	**253**	P	**Pn**	**02 28 20.6**	**+1.8**
AYDN	**Tasoluk**	**1.90**	**350**	P	**Pb**	**02 28 20.0**	**-1.1**
AYDN				S	**Sg**	**02 28 45.8**	**-1.4**
KORT	**Korkueli**	**2.05**	**53**	PN	**Pb**	**02 28 22.7**	**-1.0**
GCAM	**G?zelcami?**	**2.10**	**336**	PN	**Pn**	**02 28 21.9**	**+0.4**
GCAM	**G?zelcami?**	**2.10**	**336**	P	**Pn**	**02 28 22.0**	**+0.4**
GCAM				S	**Sb**	**02 28 49.4**	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**2.18**	**351**	PN	**Pn**	**02 28 23.3**	**+0.4**
ANTB	**Antalya**	**2.20**	**59**	PN	**Pb**	**02 28 25.4**	**-0.8**
SMG	**Samos**	**2.25**	**329**	P	**Pn**	**02 28 23.4**	**-0.4**
SMG				S	**Sn**	**02 28 49.8**	**-2.1**
	comp=E,298nm,0.3s						
SMG	**Samos**	**2.25**	**329**	P	**Pn**	**02 28 23.7**	**-0.1**
SMG				S	**Sn**	**02 28 53.2**	**+1.3**
SMG				AML	AML	02 28 54.8	
	comp=N,553μm,0.3s						
SMG				AML	AML	02 28 55.2	
	comp=E,640μm,0.4s						
SANT	**Santorini**	**2.38**	**285**	PN	**Pn**	**02 28 25.2**	**-0.3**
THR6	**Thira Island,**	**2.42**	**285**	P	**Pn**	**02 28 25.7**	**-0.3**
THR3	**Thira Island,**	**2.43**	**286**	P	**Pn**	**02 28 26.1**	**-0.1**
BCK	**Bucak**	**2.49**	**47**	PN	**Pb**	**02 28 28.9**	**-2.2**
DGB	**zmir**	**2.53**	**334**	P	**Pn**	**02 28 27.3**	**-0.3**
DGB				S	**Sn**	**02 28 58.5**	**-0.3**
BASM	**Basmaki-Afyon**	**2.55**	**33**	PN	**Pn**	**02 28 29.2**	**+1.3**
APE	**Apeiranthos**	**2.58**	**301**	PN	**Pn**	**02 28 28.4**	**+0.2**
KULA	**Kula-Manisa**	**2.74**	**6**	PN	**Pn**	**02 28 31.7**	**+1.2**
SUTC	**Sutluce-Ispart**	**2.75**	**51**	PN	**Pb**	**02 28 32.8**	**-2.8**
BLCB	**Balcova**	**2.79**	**339**	PN	**Pn**	**02 28 31.6**	**+0.5**
IDI	**Anoyia**	**2.82**	**261**	Pn	**Pn**	**02 28 31.9**	**+0.2**
	comp=E,3.5nm,0.3s,baz=83,slow=14,SNR=18						
IDI				Sn	**Sn**	**02 29 04.8**	**-1.3**
	comp=E,4.2nm,0.3s,baz=270,slow=22,SNR=4.4						
	comp=E,7.9nm,0.3s						
IDI	**Anoyia**	**2.82**	**261**	PN	**Pn**	**02 28 31.9**	**+0.2**
URLA	**Izmir**	**2.91**	**333**	PN	**Pn**	**02 28 32.5**	**-0.3**
CHOS	**Chios island**	**3.16**	**326**	P	**Pn**	**02 28 37.0**	**+0.7**
SHUT	**Suhut-Afyon**	**3.30**	**32**	PN	**Pn**	**02 28 39.6**	**+1.4**
OSC1	**CSNet OBS 1**	**3.35**	**132**	P	**Pn**	**02 28 39.4**	**+0.6**
AKMS	**Akamas**	**3.38**	**102**	P	**Pn**	**02 28 40.2**	**+0.9**
AKMS				AML	AML	02 29 21.5	
	comp=E,0.5nm,0.5s						
AKMS				AML	AML	02 29 21.5	
	comp=E,0.5nm,0.5s						
AKMS				S	**Sn**	**02 29 22.1**	**+2.3**
AKMS				AML	AML	02 29 24.3	
	comp=E,0.4nm,0.6s						
AKMS				AML	AML	02 29 24.3	
	comp=E,0.4nm,0.6s						
DKL	**Dikili**	**3.46**	**342**	PN	**Pn**	**02 28 41.1**	**+0.7**
ALFC	**Alefka**	**3.56**	**99**	P	**Pn**	**02 28 42.7**	**+0.8**
ALFC				S	**Sn**	**02 29 26.7**	**+2.4**
ALFC				AML	AML	02 29 27.5	
	comp=E,0.3nm,0.5s						
ALFC				AML	AML	02 29 27.5	
	comp=E,0.3nm,0.5s						
ALFC				AML	AML	02 29 28.4	
	comp=E,0.3nm,0.4s						
ALFC				AML	AML	02 29 28.4	
	comp=E,0.3nm,0.4s						
NATA	**Nata**	**3.63**	**105**	P	**Pn**	**02 28 43.7**	**+1.0**
NATA				AML	AML	02 29 30.6	
	comp=E,1.2nm,0.6s						
NATA				AML	AML	02 29 34.4	
	comp=E,0.9nm,0.6s						
SZAC	**Souni**	**3.89**	**104**	P	**Pn**	**02 28 47.1**	**+0.8**
SZAC				AML	AML	02 29 37.1	
	comp=E,0.4nm,0.5s						
SZAC				AML	AML	02 29 39.5	
	comp=E,0.4nm,0.4s						
ASGA	**Asgata**	**4.17**	**102**	P	**Pn**	**02 28 50.7**	**+0.6**
ASGA				AML	AML	02 29 43.5	
	comp=E,0.2nm,0.3s						
ASGA				AML	AML	02 29 45.9	
	comp=E,0.3nm,0.4s						
CSS	**Mathiatis**	**4.19**	**100**	P	**Pn**	**02 28 51.3**	**+0.8**
CSS	**Mathiatis**	**4.19**	**100**	Pn	**Pn**	**02 28 51.5**	**+1.1**
OSC2	**CSNet OBS 4**	**4.25**	**128**	P	**Pn**	**02 28 51.6**	**+0.4**
MVOU	**Mavrovouni**	**4.42**	**98**	P	**Pn**	**02 28 54.0**	**+0.4**
BRTR	**Keskin Array B**	**5.78**	**45**	Pn	**Pn**	**02 29 13.5**	**+1.1**
	comp=E,0.2nm,0.3s,baz=221,slow=15,SNR=9.5						
BRTR				Sn	**Sn**	**02 30 18.9**	**-0.1**
	comp=E,0.3nm,0.3s,baz=214,slow=26,SNR=7.0						
	comp=E,0.9nm,0.5s						
MMA0B	**Mount Meron ar**	**6.49**	**113**	Pn	**Pn**	**02 29 24.4**	**+2.4**
MMA0B				Sn	**Sn**	**02 30 35.6**	**-0.8**
MMAI	**Mount Meron Ar**	**6.49**	**113**	Pn	**Pn**	**02 29 19.4**	**-2.6**
	comp=E,3.0nm,0.3s,baz=296,slow=14,SNR=7.9						
MMAI				Sn	**Sn**	**02 30 35.4**	**-1.0**
	comp=E,3.4nm,0.3s,baz=306,slow=18,SNR=2.6						
	comp=E,0.8nm,0.2s						
GEM	**Giv'at Ha'Em**	**6.60**	**111**	Pn	**Pn**	**02 29 25.2**	**+1.7**
GEM				Sn	**Sn**	**02 30 38.1**	**-0.9**
NATI	**Neve Ativ**	**6.63**	**110**	Pn	**Pn**	**02 29 24.7**	**+0.8**
NATI				Sn	**Sn**	**02 30 39.5**	**-0.3**
SALP	**Salfit**	**6.82**	**121**	Pn	**Pn**	**02 29 27.6**	**+1.0**
SALP				Sn	**Sn**	**02 30 42.9**	**-1.7**
KZIT	**Kziot**	**7.05**	**132**	Pn	**Pn**	**02 29 30.3**	**+0.6**
KZIT				Sn	**Sn**	**02 30 47.9**	**-2.2**
YTIR	**Yattir**	**7.20**	**126**	Pn	**Pn**	**02 29 32.5**	**+0.7**
YTIR				Sn	**Sn**	**02 30 52.4**	**-1.5**
DSI	**Dead Sea**	**7.24**	**123**	Pn	**Pn**	**02 29 33.4**	**+1.1**
PRNI	**Paran**	**7.81**	**132**	Pn	**Pn**	**02 29 40.3**	**+0.2**
PRNI				Sn	**Sn**	**02 31 06.0**	**-2.9**
KRMI	**Paran Flat**	**7.81**

comp=E,18μm,0.4s
CO02 Combarbal 1.05 40 *e*P Pb **02 34 08.4 0.0**
CO02 P Pn **02 34 09.0 -0.1**
CO02 eS Sg **02 34 22.5 +1.1**
CO02 IAML 02 34 23.8
comp=Z,4μm,0.4s
ROCH El Roble 1.16 146 *e*P Pn **02 34 10.9 +0.3**
ROCH eS Sg **02 34 25.8 +1.1**
ROCH IAML 02 34 29.5
comp=N,2μm,0.3s
ROC1 El Roble 1.16 146 *e*P Pb **02 34 08.4 -1.8**
ROC1 eP Pn **02 34 10.9 +0.2**
VA03 San Esteban 1.28 126 *e*P Pb **02 34 12.3 +0.1**
VA03 eS Sb **02 34 28.2 -0.9**
VA03 IAML 02 34 31.5
comp=E,4μm,0.4s
VA03 San Esteban 1.28 126 *e*P Pn **02 34 08.4 -3.9**
VA03 eP Pb **02 34 12.6 +0.3**
VA03 eS Sb **02 34 28.9 -0.3**
VA03 IAML 02 34 32.1
comp=Z,2μm,0.7s
CO06 Fray Jorge 1.35 6⇓ *e*P Pg **02 34 14.1 +0.8**
CO06 eS Sg **02 34 31.7 +0.9**
CO06 IAML 02 34 35.3
comp=E,2μm,0.4s
MT02 Curacav 1.35 156 *e*P Pg **02 34 14.1 +0.6**
MT02 eS Sn **02 34 31.1 -0.4**
MT02 Curacav 1.35 156 *e*P Pg **02 34 14.0 +0.5**
MT02 eP Pb **02 34 14.4 +1.0**
MT02 eS Sg **02 34 31.4 +0.3**
PEL Peldehue 1.46 141 *e*P Pb **02 34 15.4 +0.2**
PEL eS Sn **02 34 33.3 -0.9**
PEL IAML 02 34 35.6
comp=N,1μm,0.3s
PEL Peldehue 1.46 141 *e*P Pb **02 34 15.5 +0.2**
PEL eS Sn **02 34 34.2 0.0**
CO03 El Pedregal 1.50 39⇓ *i* P Pb **02 34 16.2 +0.2**
CO03 eS Sn **02 34 34.6 -0.7**
CO03 IAML 02 34 37.9
comp=E,4μm,0.2s
CO03 El Pedregal 1.50 39 *e*P Pn **02 34 10.9 -4.4**
CO03 eP Pg **02 34 16.5 +0.2**
CO03 eS Sn **02 34 35.4 0.0**
CO03 IAML 02 34 37.7
comp=Z,2μm,0.4s
MT05 Renca 1.63 147 *e*P Pb **02 34 18.6 +0.4**
MT05 eS Sn **02 34 37.5 -1.0**
MT05 IAML 02 34 44.4
comp=E,2μm,0.3s
MT05 Renca 1.63 147 *e*P Pg **02 34 18.8 0.0**
MT05 eS Sg **02 34 41.4 +1.4**
VA05 Santo Domingo 1.64 175 *e*P Pg **02 34 18.8 -0.2**
VA05 eS Sg **02 34 40.1 -0.2**
VA05 IAML 02 34 45.5
comp=E,2μm,0.2s
FCH Farellones 1.82 136 *e*P Pb **02 34 21.0 -0.4**
FCH eS Sn **02 34 43.3 -0.1**
FCH IAML 02 34 45.3
comp=N,805nm,0.3s
MT03 Universidad Ad 1.82 144⇑ *e*P Pb **02 34 21.4 0.0**
MT03 eS Sn **02 34 43.6 +0.4**
MT03 IAML 02 34 47.3
comp=N,2μm,0.2s
MT03 Universidad Ad 1.82 144 *e*P Pb **02 34 21.6 +0.1**
MT03 eS Sb **02 34 44.6 -0.1**
MT03 IAML 02 34 46.6
comp=Z,846nm,0.2s
MT09 Talagante 1.88 159 *e*P Pb **02 34 22.8 +0.3**
MT09 eS Sb **02 34 46.3 0.0**
MT09 IAML 02 34 53.2
comp=N,638nm,0.4s
MT01 Popeta 1.90 166 *e*P Pb **02 34 22.2 -0.5**
MT01 eS Sb **02 34 45.2 -1.5**
MT01 IAML 02 34 53.1
comp=E,610nm,0.3s
MT01 Popeta 1.90 166 *e*P Pb **02 34 22.0 -0.7**
MT01 eS Sg **02 34 48.9 +0.4**
GO04 Tololo Observa 2.02 25 *e*P Pb **02 34 24.0 -1.0**
GO04 eS Sb **02 34 49.8 -0.8**
GO04 Tololo Observa 2.02 25 *e*P Pb **02 34 24.3 -0.7**
GO04 eS Sg **02 34 52.5 -0.1**
RTLS Leoncito 2.13 85 *e*P Pb **02 34 27.3 +0.5**
RTLS eS Sb **02 34 55.0 +1.3**
RTLS IAML 02 34 56.0
comp=Z,1μm,0.5s
CO05 La Serena 2.15 13 *e*P Pb **02 34 26.5 -0.4**
CO05 eS Sb **02 34 52.6 -1.2**
CO05 IAML 02 35 02.6
comp=E,1μm,0.3s
LMEL Las Melosas 2.26 144⇑ *e*P Pb **02 34 27.9 -1.1**
LMEL eS Sn **02 34 54.6 +0.5**
LMEL IAML 02 35 03.5
comp=N,680nm,0.2s
BO01 Tunca 2.44 166 *e*P Pb **02 34 30.0 -1.9**
BO01 eS Sn **02 34 59.4 +1.0**
CO01 Juntas del Tor 2.50 36 *e*P Pb **02 34 32.4 -0.7**
CO01 eS Sn **02 35 01.1 +0.9**
CO01 IAML 02 35 07.3
comp=N,1μm,0.4s
CO01 Juntas del Tor 2.50 36 *e*P Pb **02 34 31.8 -1.3**
CO01 eS Sb **02 35 03.6 -0.7**
CO01 IAML 02 35 05.6
comp=Z,683nm,0.6s
ARCO CERRO ARCO 2.55 110 *e*P Pb **02 34 34.8 +0.9**
ARCO eP Pg **02 34 35.0 -1.4**
ARCO eS Sn **02 35 03.4 +2.1**
ARCO IAML 02 35 09.0
comp=Z,524nm,2.3s
ASAL Salagasta 2.56 104 *e*P Pb **02 34 35.0 +0.9**
ASAL eP Pg **02 34 35.4 -1.3**
ASAL eS Sb **02 35 05.9 -0.1**
ZON Zonda 2.69 81 *e*P Pb **02 34 36.0 -0.2**
ZON eP Pg **02 34 36.5 -2.6**
ZON eS Sn **02 35 06.9 +2.3**
AROD Rodeo 2.71 48 *e*P Pb **02 34 30.9 -1.2**
AROD eP Pb **02 34 36.0 -0.7**
AROD eS Sb **02 35 12.3 +1.9**
AAGR Agrelo 2.71 114 *e*P Pn **02 34 31.4 -0.6**
AAGR eP Pb **02 34 36.9 +0.2**
AAGR eS Sg **02 35 14.4 -0.4**
AAGR IAML 02 35 21.2
comp=Z,371nm,1.7s
ACCO Cerro Coronel 2.73 59 *e*P Pb **02 34 36.5 -0.6**
ACCO eS Sb **02 35 13.8 +2.7**
ACCO eS Sg **02 35 14.4 -0.9**
BO02 Sierra Bellavi 2.89 163 *e*P Pn **02 34 36.0 +1.6**
BO02 eP Pb **02 34 36.6 -3.1**
BO02 eS Sn **02 35 11.9 +2.2**
BO02 IAML 02 35 22.1
comp=Z,466nm,0.9s
RTLL Cerro Villicun 2.91 77 *e*P Pb **02 34 39.0 -0.9**
RTLL eS Sn **02 35 11.4 +1.4**
ACDV Cuesta del Vie 2.94 52 eS Sb **02 35 19.5 +2.7**
ACDV IAML 02 35 24.0
comp=Z,272nm,0.8s
GO05 Huala 2.99 182 *e*P Pn **02 34 36.4 +0.7**
GO05 eS Sb **02 35 19.9 +1.8**
LCO Las Campanas 3.14 18 *e*P Pn **02 34 39.4 +1.4**
LCO eS Sn **02 35 16.4 +0.4**
AC04 Llanos de Chal 3.85 9 *e*P Pn **02 34 48.2 +0.7**
APLL PUNTA DE LOS L 4.79 72 eS Sn **02 35 59.4 +3.0**
ACLC CERRO LA CRUZ 4.90 59 IAML 02 36 10.6
comp=Z,232nm,1.0s
H03N1 Juan Fernandez 6.17 255 T T 02 41 59.8
baz=82,slow=73,SNR=3819
H03N3 Juan Fernandez 6.18 255 T T 02 41 55.4
baz=82,slow=73,SNR=4965
H03N2 Juan Fernandez 6.19 255 T T 02 41 54.7
baz=82,slow=73,SNR=3911
H03S3 Juan Fernandez 6.25 251 T T 02 42 03.8
baz=66
H03S1 Juan Fernandez 6.26 251 T T 02 42 02.3
baz=66
H03S2 Juan Fernandez 6.27 251 T T 02 42 00.6
baz=66
PLCA Paso Flores 8.75 174 P Pn **02 35 56.9 +2.0**
comp=Z,0.1nm,0.3s,baz=332,slow=12,SNR=3.3
PLCA LR LR 02 39 48.6
comp=Z,110nm,19.7s,baz=272,slow=40
comp=Z,0.7nm,0.7s
LVC Limon Verde 9.71 16 P Pn 02 36 15.9 +7.6
comp=Z,1.4nm,0.3s,baz=218,slow=8.4,SNR=2.3
LVC S Sn **02 37 58.7 +0.6**
comp=Z,2.2nm,0.4s,baz=318,slow=14,SNR=2.0
CPUP Villa Florida 13.84 70 P Pn **02 37 06.4 +2.0**
comp=Z,0.3nm,0.3s,baz=252,slow=11,SNR=3.5
CPUP S Sn **02 39 41.8 +3.3**
comp=Z,2.2nm,0.7s,baz=357,slow=18,SNR=1.8
CPUP LR LR 02 42 49.4
comp=Z,87nm,18.8s,baz=220,slow=38
comp=Z,0.7nm,0.3s
LPAZ La Paz 16.01 13 P Pn **02 37 34.9 +0.8**
comp=Z,0.1nm,0.3s,baz=214,slow=11,SNR=1.9
comp=Z,0.4nm,0.4s
SIV San Ignacio 18.70 34 P P **02 38 06.1 -0.8**
baz=183,slow=18,SNR=1.2
SIV LR LR 02 45 24.5
comp=Z,48nm,20.4s,baz=296,slow=37
comp=Z,0.5nm,0.2s
BDFB Brasilia 27.08 59 P P **02 39 29.8 -1.6**
comp=Z,2.4nm,0.8s,baz=192,slow=9.3,SNR=2.5
comp=Z,2.4nm,0.8s
RCBR Riachuelo 42.44 60 LR LR 03 00 32.4
comp=Z,65nm,21.2s,baz=318,slow=38
TORD Torodi Ar. Bea 83.34 70 P P **02 46 14.7 -1.4**
comp=Z,1.3nm,0.9s,baz=224,slow=4.8,SNR=5.3
comp=Z,1.3nm,0.9s
H11S2 WAKE ISLAND Hyl 25.99 270 T T 05 11 49.0
baz=117,slow=75,SNR=11
H11S1 WAKE ISLAND Hyl 26.00 270 T T 05 11 50.0
baz=117,slow=75,SNR=11
H11S3 WAKE ISLAND Hyl 26.01 270 T T 05 11 49.6
baz=117,slow=75,SNR=7.5
H11N3 WAKE ISLAND Hyl 26.35 272 T T 05 12 14.3
baz=117,slow=75,SNR=12
H11N1 WAKE ISLAND Hyl 26.37 272 T T 05 12 15.3
baz=117,slow=75,SNR=5.8
H11N2 WAKE ISLAND Hyl 26.37 272 T T 05 12 15.6
baz=117,slow=75,SNR=21
ZALV Zalesovo Beam 152.43 30 PKPbc **PKPbc 02 53 40.7 -3.6**
comp=Z,0.5nm,0.4s,baz=299,slow=1.5,SNR=2.4

VIE 10 02:37:34.2±0.2, 47.25N×10.46E, h12km, ml1.2/6, Error ellipse: s-maj=1.8km s-min=1.5km az=31.0 9 km E of Holzgau, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETA	**Feichten**	**0.29**	**140**	*i* Pg	Pg	02 37 40.5	+0.3
	0.6nm,0.1s						
FETA				*e*Sg	Sg	02 37 44.9	+0.7
	2.3nm,0.1s						
RETA	**Reutte**	**0.32**	**41**	*e*Pg	Pg	02 37 40.5	-0.2
	0.4nm,0.1s						
RETA				*e*Sg	Sg	02 37 45.6	+0.5
	2.6nm,0.1s						
DAVA	**Damuels**	**0.39**	**276**	*e*Pg	Pg	02 37 42.0	0.0
	0.2nm,0.1s						
DAVA				Sg	Sb	02 37 48.7	-0.5
	5.2nm,0.2s						
MOTA	**Moosalm**	**0.45**	**77**	*e*Pg	Pg	02 37 42.7	-0.4
	0.5nm,0.1s						
MOTA				*e*Sg	Sg	02 37 50.0	+0.8
	2.1nm,0.1s						
SQTA	**Sankt Quirin**	**0.51**	**92**	*e*Pg	Pg	02 37 43.6	-0.7
	0.7nm,0.1s						
SQTA				*e*Sg	Sb	02 37 52.3	-0.4
	1.1nm,0.1s						
WATA	**Walderalm**	**0.77**	**83**	*e*Pg	Pg	02 37 48.7	-0.4
	0.2nm,0.2s						

*VIE **10** 02:38:04.7±0.2, 46.40N×12.94E, h12km, mb2.7/22, ml3.1/22, Error ellipse: s-maj=2.1km s-min=1.2km az=12.0 6 km W of Tolmezzo*
*LDG **10** 02:38:05.0±0.1, 46.42N×12.92E, h6km, Ml2.9/11, Error ellipse: s-maj=4.3km s-min=2.9km az=15.0*
*ROM **10** 02:38:05.3±0.1, 46.391N±0.005×12.967E±0.006, h8km, ML3.0/25, Error ellipse: s-maj=0.5km s-min=0.5km az=43.0*
*PRU **10** 02:38:06.9±0.0, 46.45N×12.97E, h5km*
*STR **10** 02:38:07.3±1.4, 46°N±15"×1°3E±°, h0km, MLv3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=176.8, preliminary*
*BGR **10** 02:38:08.5±0.3, 46.45N×12.97E, h10km, ML3.1/28, Error ellipse: s-maj=3.3km s-min=2.2km az=1.0*

ISC 10 02:38:05.4±0.7, 46°39N±0.01×12°949E±0.010, h13km±3km, n240, σ1§42/383, 11C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUSE	**Fusea**	**0.04**	**59**	*e*Sg	Sg	**02 38 09.3**	**-0.3**
FUSE	**Fusea**	**0.04**	**59**	P	Pg	**02 38 07.7**	**-0.3**
FUSE				S	Sg	**02 38 09.4**	**-0.2**
FUSE	**Fusea**	**0.04**	**59**⇑	*e*Pg	Pg	**02 38 07.7**	**-0.3**
CLUD	**Cludinico**	**0.08**	**324**	*e*Sg	Sg	**02 38 09.7**	**-0.5**
CLUD	**Cludinico**	**0.08**	**324**	P	Pg	**02 38 07.9**	**-0.4**
CLUD				S	Sg	**02 38 09.8**	**-0.5**
CLUD				AML	AML		
	comp=E,5710μm,0.4s						
CLUD				AML	AML		
	comp=N,4380μm,0.1s						
CLUD				AML	AML		
	comp=N,4710μm,0.1s						
CLUD				AML	AML		
	comp=E,5830μm,0.4s						
CLUD				AML	AML		
	comp=N,4375μm,0.1s						
CLUD	**Cludinico**	**0.08**	**324**⇓	*e*Pg	Pg	**02 38 07.9**	**-0.4**
BOO	**Bordano**	**0.13**	**125**	*e*Sg	Sg	**02 38 10.9**	**-0.2**
BOO	**Bordano**	**0.13**	**125**	P	Pg	**02 38 08.5**	**-0.2**
BOO				S	Sg	**02 38 10.9**	**-0.2**
BOO	**Bordano**	**0.13**	**125**⇑	*e*Pg	Pg	**02 38 08.5**	**-0.2**
MPRI	**Monte Prat**	**0.15**	**170**	*e*Sg	Sg	**02 38 11.6**	**-0.2**
MPRI	**Monte Prat**	**0.15**	**170**	P	Pg	**02 38 08.9**	**-0.3**
MPRI				S	Sg	**02 38 11.7**	**-0.1**
MPRI				AML	AML		
	comp=E,4925μm,0.5s						
MPRI				AML	AML		
	comp=E,6440μm,0.5s						
MPRI				AML	AML		
	comp=N,5875μm,1.4s						
MPRI				AML	AML		
	comp=E,4930μm,0.5s						
MPRI				AML	AML		
	comp=N,4590μm,1.3s						
MPRI	**Monte Prat**	**0.15**	**170**⇑	*e*Pg	Pg	**02 38 08.9**	**-0.3**
ZOU	**Zoufplan**	**0.17**	**6**	*e*Sg	Sg	**02 38 12.5**	**+0.2**
ZOU	**Zoufplan**	**0.17**	**6**	P	Pg	**02 38 09.4**	**0.0**
ZOU				S	Sg	**02 38 12.6**	**+0.2**
ZOU				AML	AML		
	comp=E,15350μm,0.2s						
ZOU				AML	AML		
	comp=N,12320μm,0.3s						
ZOU				AML	AML		
	comp=E,15300μm,0.2s						
ZOU				AML	AML		
	comp=N,12305μm,0.3s						
ZOU				AML	AML		
	comp=E,15450μm,0.2s						
ZOU				AML	AML		
	comp=N,12520μm,0.3s						
ZOU				AML	AML		
	comp=N,12310μm,0.3s						
ZOU	**Zoufplan**	**0.17**	**6**⇓	*e*Pg	Pg	**02 38 09.4**	**0.0**
PLRO	**Paularo**	**0.21**	**41**	*e*Sg	Sg	**02 38 13.7**	**+0.4**
PLRO	**Paularo**	**0.21**	**41**	P	Pg	**02 38 10.2**	**+0.1**
PLRO				S	Sg	**02 38 13.8**	**+0.4**
PLRO	**Paularo**	**0.21**	**41**⇑	*e*Pg	Pg	**02 38 10.1**	**0.0**
STAL	**STALIGIAL**	**0.21**	**231**	P	Pg	**02 38 09.6**	**-0.5**
STAL				S	Sg	**02 38 13.6**	**+0.3**
STAL				AML	AML		
	comp=N,8075μm,0.2s						
STAL				AML	AML		
	comp=E,8835μm,0.2s						
STAL				AML	AML		
	comp=E,8405μm,0.2s						
STAL				AML	AML		
	comp=N,8070μm,0.2s						
STAL				AML	AML		
	comp=N,6565μm,0.6s						
STAL				AML	AML		
	comp=E,8400μm,0.2s						
FVI	**Forni Avoltri**	**0.23**	**330**	P	Pg	**02 38 10.3**	**-0.2**
FVI				S	Sg	**02 38 13.9**	**-0.1**
CSMI	**Casera Mimoias**	**0.24**	**300**⇓	*e*Pg	Pg	**02 38 10.3**	**-0.3**
CSMI				*e*Sg	Sg	**02 38 14.0**	**-0.2**
BAD	**Bernadia**	**0.26**	**127**⇑	*e*Pg	Pg	**02 38 10.5**	**-0.3**
BAD				*e*Sg	Sg	**02 38 15.0**	**+0.5**
BAD	**Bernadia**	**0.26**	**127**	P	Pg	**02 38 10.5**	**-0.3**
BAD				S	Sg	**02 38 15.0**	**+0.5**
VINO	**Villanova**	**0.27**	**120**⇑	*e*Pg	Pg	**02 38 10.6**	**-0.4**
VINO				*e*Sg	Sg	**02 38 15.2**	**+0.4**
VINO	**Villanova**	**0.27**	**120**	P	Pg	**02 38 10.6**	**-0.4**
VINO				S	Sg	**02 38 15.0**	**+0.2**
PTCC	**Patocco-Chiusa**	**0.28**	**87**	P	Pg	**02 38 11.0**	**-0.2**
PTCC				S	Sb	**02 38 15.8**	**-1.1**
PTCC				AML	AML		
	comp=N,3145μm,1.3s						
PTCC				AML	AML		
	comp=E,3485μm,0.6s						
MLNI	**Malnisio**	**0.34**	**224**	*e*Sg	Sg	**02 38 17.4**	**+0.5**
MLNI	**Malnisio**	**0.34**	**224**⇑	*e*Pg	Pg	**02 38 11.8**	**-0.5**
CIMO	**Cimolais**	**0.36**	**257**	*e*Pg	Pg	**02 38 12.0**	**-0.6**
CIMO				*e*Sg	Sg	**02 38 17.6**	**0.0**
CIMO	**Cimolais**	**0.36**	**257**	P	Pg	**02 38 12.1**	**-0.6**
CIMO				S	Sg	**02 38 17.2**	**-0.4**
CIMO				AML	AML		
	comp=N,1145μm,0.4s						
CIMO				AML	AML		
	comp=E,743μm,0.3s						
CIMO				AML	AML		
	comp=N,1150μm,0.4s						
CIMO				AML	AML		
	comp=N,1135μm,0.4s						
CIMO				AML	AML		
	comp=E,744μm,0.4s						
COLI	**Coloredo**	**0.40**	**131**⇑	*e*Pg	Pg	**02 38 13.0**	**-0.3**
COLI				*e*Sg	Sb	**02 38 19.6**	**-0.5**
LSR	**Lussari**	**0.41**	**78**⇑	*e*Pg	Pg	**02 38 13.3**	**-0.2**
LSR				*e*Sg	Sb	**02 38 20.1**	**-0.6**
ROBS	**Robic**	**0.42**	**111**	*e*Pg	Pg	**02 38 12.9**	**-0.7**
ROBS				*e*Sg	Sg	**02 38 19.2**	**-0.1**
ROBS				IAML		02 38 24.2	
	comp=Z,151nm,0.2s						
ACOM	**Acomizza, Ital**	**0.42**	**68**⇑	*e*Pg	Pg	**02 38 13.7**	**-0.1**
ACOM				*e*Sg	Sb	**02 38 20.7**	**-0.4**
ACOM	**Acomizza, Ital**	**0.42**	**68**	P	Pg	**02 38 13.7**	**-0.1**
ACOM				S	Sb	**02 38 20.5**	**-0.5**
ACOM				AML	AML		
	comp=N,2900μm,0.5s						
ACOM				AML	AML		
	comp=E,2590μm,0.2s						
ACOM				AML	AML		
	comp=E,2450μm,0.2s						
ACOM				AML	AML		
	comp=N,2780μm,0.5s						
CSO	**Casso**	**0.45**	**255**⇑	*e*Pg	Pg	**02 38 13.6**	**-0.7**
CSO				*e*Sg	Sg	**02 38 20.5**	**+0.2**
ABTA	**Abfaltersbach**	**0.47**	**320**	*i* Pg	Pg	**02 38 14.5**	**-0.2**
	comp=N,25nm,0.1s,SNR=71						
ABTA				*e*Sg	Sg	**02 38 20.6**	**-0.2**
	comp=N,126nm,0.1s						
TLI	**Talmassons**	**0.48**	**167**	*e*Pg	Pg	**02 38 14.7**	**-0.2**
CAE	**Caneva**	**0.53**	**223**	*e*Pg	Pg	**02 38 15.4**	**-0.3**
CAE				*e*Sg	Sb	**02 38 23.7**	**-0.3**
CAE	**Caneva**	**0.53**	**223**	P	Pg	**02 38 15.2**	**-0.4**
CAE				S	Sb	**02 38 23.9**	**-0.1**
DRE	**Drenchia**	**0.53**	**114**	*e*Pg	Pg	**02 38 15.4**	**-0.4**
DRE	**Drenchia**	**0.53**	**114**	P	Pg	**02 38 15.0**	**-0.8**
DRE				S	Sb	**02 38 23.6**	**-0.5**
MYKA	**Terra Mystica**	**0.53**	**63**	*e*Pg	Pg	**02 38 15.7**	**-0.2**
	comp=N,25nm,0.3s,SNR=20						
FRE8	**Fregona**	**0.56**	**228**	P	Pg	**02 38 16.0**	**-0.3**
CADS	**Cadrg**	**0.57**	**106**	*e*Pg	Pg	**02 38 15.5**	**-1.0**
CADS				*i* Sg	Sb	**02 38 24.9**	**-0.3**
CADS				IAML		02 38 27.3	
	comp=Z,160nm,0.2s						
A300A	**Muzzana del Tu**	**0.59**	**168**	P	Pn	**02 38 19.6**	**+0.3**
A300A				S	Sb	**02 38 26.5**	**+0.9**
SABO	**M.te Sabotino**	**0.61**	**132**	*e*Pg	Pg	**02 38 17.0**	**-0.3**
SABO	**M.te Sabotino**	**0.61**	**132**	P	Pg	**02 38 17.1**	**-0.3**
SABO				S	Sb	**02 38 27.4**	**+1.0**
SABO				AML	AML		
	comp=E,6910μm,0.4s						
SABO				AML	AML		
	comp=N,1790μm,0.7s						
SABO				AML	AML		
	comp=E,6905μm,0.4s						
SABO				AML	AML		
	comp=N,6810μm,0.7s						
SABO				AML	AML		
	comp=E,1560μm,0.4s						
AGOR	**Agordo**	**0.63**	**260**	*e*Pg	Pg	**02 38 17.9**	**+0.2**
AGOR	**Agordo**	**0.63**	**260**	P	Pg	**02 38 17.7**	**-0.1**
AGOR				S	Sb	**02 38 27.4**	**+0.3**
AGOR				AML	AML		
	comp=E,985μm,0.4s						
AGOR				AML	AML		
	comp=N,847μm,0.3s						
AGOR				AML	AML		
	comp=E,982μm,0.4s						
AGOR				AML	AML		
	comp=N,847μm,0.3s						
AGOR				AML	AML		
	comp=N,663μm,0.4s						
AGOR				AML	AML		
	comp=E,986μm,0.4s						
AGOR				AML	AML		
	comp=E,798μm,0.4s						
FAU	**Forcella Aurin**	**0.69**	**257**	*e*Pg	Pg	**02 38 18.9**	**+0.1**
VARN	**Col Varnada, M**	**0.71**	**236**	*e*Pg	Pg	**02 38 19.0**	**-0.2**
VARN	**Col Varnada, M**	**0.71**	**236**	P	Pg	**02 38 19.5**	**+0.4**
VARN				S	Sb	**02 38 30.2**	**+1.0**
VARN				AML	AML		
	comp=E,972μm,0.5s						
VARN				AML	AML		
	comp=N,618μm,0.4s						
GORS	**Gorjuse**	**0.73**	**96**	*i* Pg	Pg	**02 38 18.3**	**-1.2**
GORS				*i* Sg	Sb	**02 38 30.8**	**+0.9**
GORS				IAML		02 38 32.2	
	comp=Z,84nm,0.2s						
KBA	**Koelnbreinsper**	**0.74**	**21**	*e*Pg	Pg	**02 38 19.7**	**0.0**
	comp=Z,7.3nm,0.1s,SNR=30						
KBA				*e*Sg	Sg	**02 38 29.6**	**+0.1**
	comp=Z,51nm,0.2s						
KBA	**Koelnbreinsper**	**0.74**	**21**	*e*Pg	Pg	**02 38 19.9**	**+0.2**
KBA				*e*Sg	Sg	**02 38 29.8**	**+0.3**
VOJS	**Vojsko**	**0.74**	**119**	*i* Pg	Pg	**02 38 18.6**	**-1.2**
VOJS				*e*Sg	Sb	**02 38 30.7**	**+0.5**
VOJS				IAML		02 38 31.7	
	comp=Z,131nm,0.2s						
ED06	**Collalto TV**	**0.74**	**224**	*e*Pg	Pg	**02 38 19.6**	**-0.2**
A301A	**Isiata (VE)**	**0.81**	**197**	P	Pn	**02 38 22.3**	**0.0**
RISI	**Rein**	**0.82**	**313**	P	Pg	**02 38 20.9**	**-0.3**
RISI				S	Sg	**02 38 32.2**	**+0.2**
RISI				AML	AML		
	comp=E,2565μm,0.2s						
RISI				AML	AML		
	comp=N,2465μm,1.2s						
MTLO	**Montello**	**0.83**	**226**	*e*Pg	Pg	**02 38 20.9**	**-0.5**
TRI	**Trieste**	**0.89**	**140**	*e*Pg	Pb	**02 38 22.8**	**+0.2**
BRES	**Bressanone**	**0.89**	**290**	P	Pg	**02 38 22.4**	**-0.3**
JAVS	**Javornik**	**0.92**	**122**	*e*Pg	Pg	**02 38 21.6**	**-1.6**
JAVS				*e*Sg	Sb	**02 38 36.4**	**+1.0**
JAVS				IAML		02 38 40.5	
	comp=Z,98nm,0.2s						
ASOL	**Asolo**	**0.94**	**231**	P	Pb	**02 38 24.4**	**+0.9**
CGRP	**Cima Grappa**	**0.95**	**238**	P	Pg	**02 38 23.7**	**0.0**
CGRP				AML	AML		
	comp=N,648μm,0.4s						
CGRP				AML	AML		
	comp=E,824μm,0.8s						
CGRP				AML	AML		
	comp=N,648μm,0.4s						
CRNS	**Crni Vrh**	**0.96**	**108**	*e*Pg	Pg	**02 38 22.6**	**-1.3**
CRNS				*i* Sg	Sn	**02 38 38.5**	**+0.4**
CRNS				IAML		02 38 42.7	
	comp=Z,59nm,0.1s						
CTI	**Castel Tesino**	**0.97**	**250**	P	Pg	**02 38 24.0**	**0.0**
CTI				AML	AML		
	comp=E,1555μm,1.6s						
CTI				AML	AML		
	comp=N,1165μm,0.3s						
A302A	**Resana (TV)**	**1.02**	**222**	P	Pn	**02 38 26.3**	**+1.0**
MOZS	**Mozjanca**	**1.04**	**95**	*i* Pg	Pb	**02 38 25.4**	**+0.2**
MOZS				*e*Sg	Sn	**02 38 41.8**	**+1.7**
MOZS				IAML		02 38 44.1	
	comp=Z,34nm,0.1s						
KOSI	**Kohlern**	**1.09**	**274**	P	Pg	**02 38 26.0**	**-0.4**
KOSI				S	Sg	**02 38 41.0**	**+0.4**
KOSI				AML	AML		

	comp=N,493µm,0.5s								
KOSI					AML	AML			
	comp=E,441µm,1.4s								
OBKA	**Obir**	**1.11**	**83**	*e*Pg		**Pg**	**02 38 26.0**	**-0.8**	
	comp=E,2.8nm,0.2s								
OBKA	**Obir**	**1.11**	**83**	*e*Pg		**Pg**	**02 38 26.1**	**-0.8**	
OBKA				*e*Sg		**Sn**	**02 38 42.9**	**+1.0**	
SKDS	**Skadanscina**	**1.13**	**138**	*e*Pg		**Pg**	**02 38 26.5**	**-0.6**	
SKDS				*e*Sg		**Sn**	**02 38 44.1**	**+2.0**	
SKDS				IAML			02 38 46.0		
	comp=Z,161nm,0.2s								
BOSI	**Bolzano**	**1.13**	**276**	P		**Pn**	**02 38 27.7**	**+0.8**	
GBAS	**Gorenja Brezov**	**1.13**	**113**	*i* Pg		**Pg**	**02 38 26.1**	**-1.2**	
GBAS				*i* Sg		**Sn**	**02 38 43.8**	**+1.5**	
GBAS				IAML			02 38 45.8		
	comp=Z,261nm,0.4s								
LJU	**Ljubljana**	**1.15**	**107**	*e*Pg		**Pb**	**02 38 27.2**	**+0.2**	
LJU				*i* Sg		**Sn**	**02 38 43.9**	**+1.2**	
LJU				IAML			02 38 46.3		
	comp=Z,84nm,0.2s								
LJU	**Ljubljana**	**1.15**	**107**	P		**Pg**	**02 38 26.5**	**-1.0**	
LJU				S		**Sn**	**02 38 46.0**	**+3.3**	
ROSI	**Rosskopf**	**1.19**	**297**	P		**Pg**	**02 38 27.6**	**-0.6**	
ROSI				AML		AML			
	comp=N,501µm,0.4s								
ROSI				AML		AML			
	comp=E,494µm,0.4s								
APPI	**Appiano**	**1.19**	**275**	P		**Pg**	**02 38 27.8**	**-0.5**	
CEY	**Cerknica**	**1.22**	**122**	*e*Pg		**Pb**	**02 38 27.1**	**-1.2**	
CEY				*e*Sg		**Sn**	**02 38 45.7**	**+1.3**	
CEY				IAML			02 38 49.4		
	comp=Z,106nm,0.2s								
VNDS	**Vrh nad Dolski**	**1.25**	**103**	*e*Pg		**Pb**	**02 38 28.1**	**-0.7**	
VNDS				*e*Sg		**Sn**	**02 38 46.8**	**+1.6**	
VNDS				IAML			02 38 49.5		
	comp=Z,86nm,0.3s								
WTTA	**Wattenberg**	**1.25**	**315**	*e*Pg		**Pn**	**02 38 29.0**	**+0.3**	
	comp=Z,86nm,0.3s								
WTTA				*e*Sg		**Sg**	**02 38 44.9**	**-1.0**	
	comp=Z,236nm,0.6s								
WTTA	**Wattenberg**	**1.25**	**315**	P		**Pn**	**02 38 28.9**	**+0.3**	
WTTA				AML		AML			
	comp=E,862µm,0.7s								
WTTA				AML		AML			
	comp=N,672µm,0.8s								
WTTA	**Wattenberg**	**1.25**	**315**	*e*Pn		**Pn**	**02 38 29.1**	**+0.3**	
WTTA				*e*Sg		**Sg**	**02 38 45.1**	**-0.8**	
KNDS	**Knezji Dol**	**1.32**	**130**	*e*Pg		**Pn**	**02 38 29.7**	**+0.2**	
KNDS				*e*Sg		**Sn**	**02 38 49.6**	**+2.6**	
DOSS	**Dosso del Somm**	**1.33**	**248**	P		**Pn**	**02 38 30.4**	**+0.7**	
DOSS				S		**Sn**	**02 38 48.8**	**+1.5**	
DOSS				AML		AML			
	comp=E,914µm,1.2s								
DOSS				AML		AML			
	comp=N,760µm,0.4s								
DOSS				AML		AML			
	comp=E,916µm,1.2s								
DOSS				AML		AML			
	comp=N,922µm,1.2s								
DOSS				AML		AML			
	comp=E,778µm,0.3s								
DOSS				AML		AML			
	comp=N,760µm,0.4s								
WATA	**Walderalm**	**1.33**	**316**	*e*Pg		**Pn**	**02 38 30.2**	**+0.4**	
	comp=N,19nm,0.2s,SNR=38								
WATA				Sg		**Sb**	**02 38 47.3**	**0.0**	
	comp=N,66nm,0.3s								
RJOB	**Jochberg**	**1.35**	**356**	*e*Pn		**Pn**	**02 38 30.7**	**+0.8**	
RJOB				*e*Sg		**Sg**	**02 38 49.4**	**+0.6**	
TEOL	**Teolo**	**1.37**	**221**	P		**Pn**	**02 38 30.4**	**+0.4**	
TEOL				S		**Sg**	**02 38 50.0**	**+0.7**	
BIOA	**Bad Ischl, Aus**	**1.38**	**20**	*e*Pg		**Pg**	**02 38 31.9**	**0.0**	
	comp=N,33nm,0.3s,SNR=20								
BIOA				Sg		**Sg**	**02 38 51.1**	**+1.2**	
	comp=N,118nm,0.4s								
ZOVE	**Zovencedo**	**1.39**	**228**	P		**Pn**	**02 38 30.9**	**+0.5**	
ZOVE				S		**Sg**	**02 38 50.8**	**+0.8**	
GAGG	**Gaggia**	**1.42**	**258**	P		**Pb**	**02 38 32.0**	**+0.3**	
GAGG				S		**Sg**	**02 38 51.0**	**+0.1**	
GAGG				AML		AML			
	comp=E,712µm,1.4s								
GAGG				AML		AML			
	comp=N,742µm,0.7s								
GAGG				AML		AML			
	comp=E,787µm,0.7s								
GAGG				AML		AML			
	comp=N,753µm,1.4s								
MARN	**Marana (Italy)**	**1.43**	**239**	P		**Pn**	**02 38 31.7**	**+0.7**	
MARN				S		**Sb**	**02 38 51.0**	**+1.1**	
VISS	**Visnje**	**1.44**	**113**	*e*Pn		**Pb**	**02 38 32.1**	**+0.1**	
VISS				*e*Sn		**Sg**	**02 38 52.2**	**+0.4**	
SQTA	**Sankt Quirin**	**1.45**	**305**	*e*Pg		**Pn**	**02 38 32.5**	**+1.1**	
	comp=N,83nm,0.3s,SNR=45								
SQTA				Sg		**Sn**	**02 38 51.5**	**+1.1**	
	comp=N,38nm,0.2s								
LUSI	**Trento, Gardas**	**1.46**	**253**	P		**Pb**	**02 38 32.6**	**+0.2**	
LUSI				S		**Sg**	**02 38 52.2**	**-0.2**	
LUSI				AML		AML			
	comp=N,998µm,0.3s								
LUSI				AML		AML			
	comp=E,582µm,0.3s								
PDKS	**Podkum**	**1.46**	**102**	*i* Pn		**Pb**	**02 38 32.3**	**-0.1**	
PDKS				*e*Sn		**Sg**	**02 38 52.1**	**-0.3**	
SOKA	**Soboth**	**1.47**	**78**	*e*Pg		**Pn**	**02 38 32.1**	**+0.5**	
	comp=E,6.1nm,0.2s,SNR=9.1								
SOKA				Sg		**Sg**	**02 38 53.2**	**+0.6**	
	comp=E,13nm,0.3s								
ROVR	**Rover Verones**	**1.51**	**241**	P		**Pn**	**02 38 32.7**	**+0.6**	
ROVR				S		**Sb**	**02 38 53.4**	**+1.2**	
ROVR				AML		AML			
	comp=N,352µm,0.3s								
ROVR				AML		AML			
	comp=E,220µm,0.8s								
RIY	**Rijeka**	**1.51**	**134**	*e*Pn		**Pn**	**02 38 32.8**	**+0.7**	
RIY				Sn		**Sg**	**02 38 53.8**	**-0.3**	
TREG	**Tregnago**	**1.52**	**236**	P		**Pn**	**02 38 33.0**	**+0.8**	
GBRS	**Gornja Briga**	**1.56**	**123**	*i* Pn		**Pb**	**02 38 34.1**	**+0.1**	
GBRS				*i* Sn		**Sg**	**02 38 56.2**	**+0.7**	
GBRS				IAML			02 38 58.2		
	comp=Z,145nm,0.2s								
MOTA	**Moosalm**	**1.58**	**308**	*e*Pg		**Pb**	**02 38 34.7**	**+0.2**	
	comp=Z,10nm,0.2s,SNR=26								
MOTA				Sg		**Sb**	**02 38 55.8**	**+1.2**	
	comp=Z,38nm,0.2s								
BRJN	**Brijuni**	**1.59**	**159**	*e*Pn		**Pn**	**02 38 33.9**	**+0.8**	
BRJN	**Brijuni**	**1.59**	**159**	⇓P		**Pb**	**02 38 34.3**	**-0.2**	
BRJN				S		**Sg**	**02 38 57.0**	**+0.5**	
SMRN	**Sveta Marina**	**1.60**	**148**	*e*Pn		**Pn**	**02 38 33.7**	**+0.5**	
SMRN				Sn		**Sb**	**02 38 55.7**	**+0.9**	
FETA	**Feichten**	**1.65**	**293**	*e*Pg		**Pb**	**02 38 35.9**	**+0.2**	
	comp=Z,16nm,0.3s,SNR=21								
FETA				Sg		**Sb**	**02 38 57.8**	**+1.3**	
	comp=Z,40nm,0.5s								
MOSI	**Grossmontoni**	**1.67**	**279**	P		**Pb**	**02 38 36.5**	**+0.4**	
MOSI				AML		AML			
	comp=E,679µm,0.8s								
MOSI				AML		AML			
	comp=N,1125µm,0.5s								
PART	**Garmisch-Parte**	**1.67**	**312**	*e*Pn		**Pg**	**02 38 37.7**	**+0.2**	
PART				*e*Sg		**Sg**	**02 39 02.0**	**+2.8**	
ZUGS	**Zugspitze, Sch**	**1.69**	**308**	*e*Pn		**Pb**	**02 38 37.1**	**+0.5**	
ZUGS				*e*Sg		**Sg**	**02 39 01.8**	**+1.8**	
LEGS	**Legarje**	**1.71**	**104**	*i* Pn		**Pn**	**02 38 35.7**	**+0.9**	
LEGS				*e*Sn		**Sg**	**02 38 59.1**	**-1.1**	
MOA	**Molln**	**1.71**	**31**	*e*Pg		**Pb**	**02 38 37.2**	**+0.5**	
	comp=N,4.8nm,0.2s								
MOA				*e*Sg		**Sg**	**02 39 01.6**	**+1.2**	
	comp=N,21nm,0.3s								
MOA	**Molln**	**1.71**	**31**	*e*Pn		**Pb**	**02 38 37.3**	**+0.6**	
MOA				*e*Sg		**Sg**	**02 39 01.7**	**+1.2**	
MABI	**Malga Bissina**	**1.72**	**260**	P		**Pb**	**02 38 37.3**	**+0.4**	
MABI				AML		AML			
	comp=E,170µm,1.4s								
MABI				AML		AML			
	comp=N,239µm,0.4s								
DOBS	**Dobrina**	**1.77**	**97**	*e*Pn		**Pn**	**02 38 36.5**	**+1.0**	
DOBS				*i* Sn		**Sb**	**02 38 59.8**	**+0.2**	
DOBS				IAML			02 39 00.1		
	comp=Z,10.0nm,0.1s								
BRMO	**Bormio**	**1.78**	**274**	P		**Pb**	**02 38 38.0**	**+0.1**	
BRMO				AML		AML			
	comp=N,140µm,0.6s								
BRMO				AML		AML			
	comp=E,178µm,0.4s								
CESS	**Cesta pri Krsk**	**1.80**	**103**	*i* Pn		**Pn**	**02 38 37.0**	**+1.0**	
CESS				*e*Sn		**Sb**	**02 39 00.6**	**+0.1**	
CRES	**Cresnjev**	**1.83**	**107**	*e*Pn		**Pn**	**02 38 37.5**	**+0.9**	
CRES				*i* Sn		**Sb**	**02 39 01.1**	**-0.5**	
CRES				IAML			02 39 11.4		
	comp=Z,26nm,0.2s								
BOJS	**Bojanci**	**1.84**	**118**	*i* Pn		**Pn**	**02 38 36.3**	**-0.3**	
BOJS				*e*Sn		**Sb**	**02 39 01.9**	**+0.3**	
BOJS				IAML			02 39 05.5		
	comp=Z,36nm,0.2s								
BOJS	**Bojanci**	**1.84**	**118**	P		**Pn**	**02 38 37.8**	**+1.3**	
BOJS				S		**Sb**	**02 39 02.7**	**+1.1**	
RETA	**Reutte**	**1.86**	**307**	*e*Pg		**Pb**	**02 38 39.7**	**+0.5**	
	comp=Z,43nm,0.5s								
RETA				Sg		**Sg**	**02 39 05.8**	**+0.8**	
	comp=Z,29nm,0.3s								
SALO	**Salr**	**1.86**	**246**	P		**Pb**	**02 38 39.2**	**0.0**	
SALO				AML		AML			
	comp=E,352µm,1.4s								
SALO				AML		AML			
	comp=N,442µm,0.4s								
A250A	**Rusevo Krmpots**	**1.90**	**133**	*e*Pn		**Pn**	**02 38 37.8**	**+0.4**	
GOLS	**Golise**	**1.90**	**101**	*e*Pn		**Pn**	**02 38 38.5**	**+1.0**	
OZLJ	**Ozalj**	**1.92**	**113**	*e*Pn		**Pn**	**02 38 38.9**	**+1.2**	
GCIS	**Gornji Cirnik**	**1.94**	**105**	*e*Pn		**Pn**	**02 38 38.9**	**+1.0**	
ARSA	**Arzberg**	**1.96**	**63**	Pn		**Pn**	**02 38 38.7**	**+0.4**	
	comp=N,1.3nm,0.2s								
ARSA				Sg		**Sg**	**02 39 10.1**	**+1.6**	
	comp=N,6.0nm,0.4s								
ARSA	**Arzberg**	**1.96**	**63**	P		**Pb**	**02 38 40.0**	**-0.9**	
ARSA	**Arzberg**	**1.96**	**63**	*e*Pn		**Pb**	**02 38 40.2**	**-0.7**	
ARSA				*e*Sg		**Sg**	**02 39 10.1**	**+1.6**	
OBER	**Oberstdorf**	**2.08**	**300**	*e*Pn		**Pb**	**02 38 43.0**	**0.0**	
OBER				*e*Sg		**Sg**	**02 39 12.9**	**+0.5**	
RABC	**Rab**	**2.09**	**141**	*e*Pn		**Pn**	**02 38 40.0**	**0.0**	
FUR	**Furstenfeldbru**	**2.11**	**328**	*e*Pn		**Pn**	**02 38 42.5**	**-0.9**	
FUR				*e*Sg		**Sg**	**02 39 13.8**	**+0.7**	
DAVOX	**Davos/Dischmat**	**2.15**	**281**	P		**Pb**	**02 38 43.6**	**-0.7**	
NVLJ	**Novalja**	**2.27**	**143**	*e*Pn		**Pn**	**02 38 42.9**	**+0.3**	
KOGS	**Kog**	**2.28**	**87**	P		**Pn**	**02 38 42.8**	**+0.1**	
DAVA	**Damuels**	**2.29**	**294**	*e*Pg		**Pb**	**02 38 45.9**	**-0.6**	
	comp=N,2.6nm,0.2s								
DAVA				Sg		**Sg**	**02 39 18.6**	**-0.3**	
	comp=N,86nm,0.4s								
DAVA	**Damuels**	**2.29**	**294**	*e*Pn		**Pb**	**02 38 46.0**	**-0.6**	
DAVA				*e*Sg		**Sg**	**02 39 19.2**	**+0.3**	
UBR	**Ueberruh**	**2.33**	**305**	*e*Pn		**Pb**	**02 38 46.1**	**-1.2**	
UBR				*e*Sg		**Sg**	**02 39 20.9**	**+0.6**	
PLIT	**Plitvice**	**2.41**	**128**	*e*Pn		**Pn**	**02 38 45.4**	**+0.9**	
GEC2	**GERESS Array S**	**2.51**	**11**	*e*Pn		**Pn**	**02 38 47.2**	**+1.3**	
GEC2				*e*Sg		**Sg**	**02 39 25.4**	**-0.5**	
CONA	**Conrad Observa**	**2.51**	**51**	*e*Pn		**Pn**	**02 38 48.0**	**+2.1**	
	comp=N,1.1nm,0.2s								
CONA				Sn		**Sb**	**02 39 19.6**	**-1.5**	
	comp=N,2.6nm,0.2s								
VIRC	**Vir**	**2.57**	**144**	*e*Pn		**Pn**	**02 38 46.7**	**+0.1**	
CKRC	**Cesky Krumlov**	**2.60**	**20**	*e*PN		**Pn**	**02 38 48.6**	**+1.6**	
CKRC				*e*SN		**Sn**	**02 39 20.9**	**+2.5**	
CKRC				*e*SG		**Sg**	**02 39 27.3**	**-1.5**	
	comp=N,42nm,0.6s								
CPGN	**Carpegna, Ital**	**2.63**	**190**	P		**Pn**	**02 38 49.6**	**+2.0**	
CPGN				AML		AML			
	comp=N,1885µm,1.6s								
CPGN				AML		AML			
	comp=E,2390µm,0.9s								
RONA	**Rosalia, Austr**	**2.64**	**59**	Pn		**Pn**	**02 38 48.9**	**+1.3**	
	comp=E,0.7nm,0.1s								
A251A	**Rujevac**	**2.64**	**117**	*e*Pn		**Pn**	**02 38 48.6**	**+1.0**	
UDBI	**Udbina**	**2.72**	**132**	*e*Pn		**Pn**	**02 38 49.6**	**+0.8**	
WET	**Wettzell**	**2.75**	**359**	*e*Pn		**Pn**	**02 38 50.4**	**+1.3**	
WET				*e*Pg		**Pg**	**02 38 57.4**	**-0.7**	
WET				*e*Sn		**Sn**	**02 39 23.3**	**+1.0**	
WET				*e*Sg		**Sg**	**02 39 33.1**	**-0.7**	
KHC	**Kasperske Hory**	**2.77**	**9**	*e*PN		**Pn**	**02 38 50.8**	**+1.3**	
KHC				*e*PG		**Pg**	**02 38 57.0**	**-1.5**	
KHC				*e*SN		**Sn**	**02 39 24.8**	**+2.0**	
KHC				*e*SG		**Sg**	**02 39 33.6**	**-0.8**	
	comp=E,33nm,0.4s								
NORI	**Noerdlinger Ri**	**2.81**	**327**	*e*Pn		**Pn**	**02 38 51.0**	**+1.0**	
NORI				*e*Sn		**Sn**	**02 39 25.7**	**+2.0**	
NORI				*e*Sg		**Sg**	**02 39 34.2**	**-1.4**	
DUGI	**Dugi Otok**	**2.83**	**147**	*e*Pn		**Pn**	**02 38 50.5**	**+0.3**	
EL6	**Elcito**	**3.06**	**178**	P		**Pn**	**02 38 53.7**	**+0.2**	
EL6				AML		AML			
	comp=E,226µm,1.6s								
EL6				AML		AML			
	comp=N,216µm,1.5s								
GUT	**Gutenstein**	**3.10**	**304**	P		**Pn**	**02 38 55.8**	**+1.7**	
GUT	**Gutenstein**	**3.10**	**304**	S		**Sg**	**02 39 43.7**	**-1.4**	
ZUR	**Degenried**	**3.15**	**290**	P		**Pn**	**02 38 56.7**	**+2.0**	
ZUR	**Degenried**	**3.15**	**290**	S		**Sg**	**02 39 45.6**	**-0.9**	
MORI	**Morici**	**3.19**	**141**	*e*Pn		**Pn**	**02 38 55.3**	**+0.2**	
SLE	**Schleitheim**	**3.34**	**296**	P		**Pn**	**02 38 58.8**	**+1.5**	
FDMO	**Fiordimonte**	**3.36**	**178**	P		**Pn**	**02 38 57.4**	**-0.1**	
FDMO				AML		AML			
	comp=E,40µm,0.5s								
FDMO				AML		AML			
	comp=N,34µm,1.3s								
TREC	**Trest**	**3.37**	**30**	*e*PN		**Pn**	**02 38 58.7**	**+1.1**	
TREC				*e*SN		**Sn**	**02 39 38.6**	**+1.1**	
KIJV	**Kijevo**	**3.42**	**133**	*e*Pn		**Pn**	**02 38 59.0**	**+0.7**	
STU	**Stuttgart**	**3.48**	**314**	*e*Pn		**Pn**	**02 39 01.0**	**+1.8**	
STU				*e*Pg		**Pg**	**02 39 13.5**	**+1.5**	
GRF	**Grafenberg Arr**	**3.50**	**341**	*e*Pg		**Pg**	**02 39 11.9**	**-0.4**	
GRF				*e*Sg		**Sg**	**02 39 57.6**	**0.0**	
SULZ	**Cheisacher**	**3.50**	**291**	P		**Pn**	**02 39 01.5**	**+2.1**	
KRUC	**Moravsky**	**3.54**	**40**	*e*PN		**Pn**	**02 39 00.5**	**+0.5**	
KRUC				*e*SN		**Sn**	**02 39 42.1**	**+0.4**	
MODS	**Modra-Piesok**	**3.55**	**54**	*e*PN		**Pn**	**02 39 02.9**	**+2.8**	
FELD	**Feldberg im Sc**	**3.69**	**296**	P		**Pn**	**02 39 03.5**	**+1.4**	
BFO	**Black Forest**	**3.69**	**303**	*e*Pn		**Pn**	**02 39 03.9**	**+1.9**	
BFO				*e*Sn		**Sn**	**02 39 45.4**	**0.0**	
BFO				*e*Sg		**Sg**	**02 40 04.7**	**+0.9**	
BALST	**Balsthal**	**3.73**	**287**	P		**Pn**	**02 39 04.4**	**+1.8**	
PRU	**Pruhonice**	**3.75**	**16**	*e*SN		**Sn**	**02 39 47.5**	**+0.6**	
PRU				*e*SG		**Sg**	**02 40 04.2**	**-1.6**	
	comp=N,22nm,0.8s								
KIZ	**Kirchzarten**	**3.77**	**296**	P		**Pn**	**02 39 04.7**	**+1.5**	
VRAC	**Vranov**	**3.81**	**39**	*e*PN		**Pn**	**02 39 03.6**	**-0.1**	
VRAC				*e*SN		**Sn**	**02 39 48.1**	**-0.3**	
OPP	**Oppenau**	**3.86**	**305**	P		**Pn**	**02 39 06.1**	**+1.8**	
WERN	**Wernitzgruen**	**3.92**	**355**	*e*Pg		**Pg**	**02 39 20.4**	**0.0**	
WERN				*e*Sn		**Sn**	**02 39 51.3**	**+0.3**	
WERN				*e*Sg		**Sg**	**02 40 09.6**	**-1.4**	
VOGT	**Vogtsburg - To**	**3.97**	**297**	P		**Pn**	**02 39 07.7**	**+1.8**	
GUNZ	**Gunzen**	**4.00**	**354**	*e*Pn		**Pn**	**02 39 07.5**	**+1.2**	
GUNZ				*e*Pg		**Pg**	**02 39 21.0**	**-0.9**	
GUNZ				*e*Sn		**Sn**	**02 39 53.0**	**+0.1**	
GUNZ				*e*Sg		**Sg**	**02 40 12.8**	**-0.7**	
TANN	**Tannenbergstha**	**4.04**	**356**	*e*Pn		**Pn**	**02 39 08.1**	**+1.2**	
TANN				*e*Pg		**Pg**	**02 39 22.2**	**-0.5**	
TANN				*e*Sg		**Sg**	**02 40 14.4**	**-0.6**	
BOURR	**Bourrignon**	**4.05**	**286**	P		**Pn**	**02 39 08.7**	**+1.7**	
WERD	**Werda**	**4.08**	**354**	*e*Pn		**Pn**	**02 39 08.9**	**+1.5**	
WERD				*e*Pg		**Pg**	**02 39 23.1**	**-0.3**	
WERD				*e*Sg		**Sg**	**02 40 14.9**	**-1.4**	
PLN	**Plauen**	**4.13**	**353**	*e*Pn		**Pn**	**02 39 08.9**	**+0.8**	
PLN				*e*Pg		**Pg**	**02 39 23.9**	**-0.6**	
RICI	**Ricice**	**4.15**	**133**	*e*Pn		**Pn**	**02 39 09.1**	**+0.8**	
PVCC	**Panska Ves**	**4.28**	**14**	*e*SG		**Sg**	**02 40 20.8**	**-1.8**	
	comp=N,30nm,0.5s								
ECH	**Echery**	**4.34**	**297**	P		**Pn**	**02 39 12.2**	**+1.2**	
ECH				S		**Sn**	**02 40 02.9**	**+1.4**	
MOX	**Moxa**	**4.35**	**349**	*e*Pn		**Pn**	**02 39 11.8**	**+0.8**	
MOX				*e*Sn		**Sn**	**02 40 00.3**	**-1.2**	
MOX				*e*Sg		**Sg**	**02 40 22.9**	**-1.9**	
CDF	**Champ du Feu**	**4.35**	**300**	*e*P		**Pn**	**02 39 12.8**	**+1.6**	
HINF	**Hinteralfeld**	**4.40**	**291**	*e*P		**Pn**	**02 39 13.3**	**+1.5**	
HINF				*e*Sn		**Sn**	**02 39 58.5**	**-4.4**	
	comp=N,15nm,0.3s								
CHMF	**Charmoille**	**4.41**	**283**	P		**Pn**	**02 39 13.5**	**+1.5**	
CHMF				S		**Sn**	**02 40 04.9**	**+1.8**	
LPG	**La Plagne**	**4.42**	**261**	*e*P		**Pn**	**02 39 14.9**	**+2.7**	
LPG				*e*Sn		**Sn**	**02 39 59.5**	**-4.1**	
	comp=N,8.0nm,0.7s								
LPL	**La Plagne**	**4.42**	**261**	*e*Pn		**Pn**	**02 39 11.5**	**-0.8**	
LPL	**La Plagne**	**4.42**	**261**	*e*P		**Pn**	**02 39 14.7**	**+2.4**	
LPL				*e*Sn		**Sn**	**02 39 59.5**	**-4.2**	
	comp=N,5.0nm,0.5s								
BRANT	**Les Verrieres**	**4.49**	**279**	P		**Pn**	**02 39 14.8**	**+1.7**	
RONF	**Ronchamp**	**4.50**	**289**	P		**Pn**	**02 39 14.6**	**+1.4**	
VYHS	**Vyhne**	**4.51**	**60**	*e*PN		**Pn**	**02 39 15.4**	**+2.1**	
VYHS				*e*SN		**Sn**	**02 40 03.3**	**-2.4**	
BRG	**Berggiesshubel**	**4.53**	**8**	Pn		**Pn**	**02 39 14.6**	**+1.0**	
BRG				Amp			02 39 16.4		
	comp=Z,5.1nm,0.3s								
BRG	**Berggiesshubel**	**4.53**	**8**	Pg		**Pg**	**02 39 31.7**	**-0.4**	
BRG				Sn		**Sn**	**02 40 06.1**	**0.0**	
BRG				Sg		**Sg**	**02 40 28.5**	**-2.3**	
BRG				Amp			02 40 37.1		
	comp=Z,11nm,0.7s								
BRG	**Berggiesshubel**	**4.53**	**8**	*e*Pn		**Pn**	**02 39 14.6**	**+1.0**	
BRG				*e*Sg		**Sg**	**02 40 29.1**	**-1.7**	
FBE	**Freiberg**	**4.54**	**3**	*e*Pn		**Pn**	**02 39 15.0**	**+1.3**	
FBE				*e*Pg		**Pg**	**02 39 31.5**	**-0.8**	
FBE				*e*Sg		**Sg**	**02 40 29.9**	**-1.1**	
DPC	**Dobruska-Polom**	**4.55**	**28**	*e*SG		**Sg**	**02 40 29.1**	**-2.4**	
	comp=Z,13nm,0.9s								
LSTV	**Lastovo**	**4.59**	**141**	*e*Pn		**Pn**	**02 39 14.4**	**0.0**	
GIMEL	**St. Georges /**	**4.62**	**274**	S		**Sn**	**02 40 11.3**	**+2.9**	
GIMEL	**St. Georges /**	**4.62**	**274**	P		**Pn**	**02 39 16.6**	**+1.7**	
MBDF	**Montbardon**	**4.65**	**251**	*e*P		**Pn**	**02 39 17.5**	**+2.2**	
MBDF				*e*Sn		**Sn**	**02 40 04.9**	**-4.3**	
	comp=Z,15nm,0.9s								
SBF	**Sospel**	**4.65**	**239**	*e*P		**Pn**	**02 39 17.9**	**+2.6**	
BOUC	**Bouclans**	**4.67**	**283**	P		**Pn**	**02 39 16.9**	**+1.4**	
BOUC				S		**Sn**	**02 40 10.7**	**+1.1**	
CABF	**La Chapelle**	**4.74**	**275**	*e*P		**Pn**	**02 39 18.3**	**+1.7**	
HAU	**Haudompre**	**4.78**	**292**	*e*Pn		**Pn**	**02 39 15.2**	**-1.8**	
HAU	**Haudompre**	**4.78**	**292**	*e*P		**Pn**	**02 39 18.5**	**+1.5**	
HAU				*e*Sn		**Sn**	**02 40 07.0**	**-5.2**	
	comp=Z,12nm,0.4s								
UBBA	**Unterbreizbach**	**4.84**	**337**	*e*Pn		**Pn**	**02 39 19.7**	**+1.9**	
UBBA				*e*Sg		**Sg**	**02 40 38.5**	**-2.2**	
RIVEL	**MONT RIVEL**	**4.86**	**277**	P		**Pn**	**02 39 19.7**	**+1.6**	
TNS	**Taunus Mts**	**4.87**	**324**	*e*Pn		**Pn**	**02 39 20.4**	**+2.1**	
STON	**Ston**	**4.89**	**134**	*i* Pn		**Pn**	**02 39 17.6**	**-0.8**	
STON	**Ston**	**4.89**	**134**	P		**Pn**	**02 39 17.8**	**-0.6**	
STON				S		**Sn**	**02 40 14.4**	**-0.4**	
CLL	**Collm**	**4.92**	**0**	*i* Pn		**Pn**	**02 39 19.9**	**+1.0**	
	comp=Z,7.0nm,0.4s								
CLL				*e*Sn		Sn	02 40 06.0	-10	
CLL				*i* Sg		**Sg**	**02 40 41.4**	**-1.7**	
	comp=Z,34nm,1.4s								
CLL	**Collm**	**4.92**	**0**	*e*Pn		**Pn**	**02 39 20.1**	**+1.2**	
CLL				*e*Sg		**Sg**	**02 40 41.5**	**-1.7**	
ABH	**Alteburg**	**5.03**	**316**	P		**Pn**	**02 39 22.1**	**+1.7**	
SGG	**Gregorio Mates**	**5.11**	**168**	P		**Pb**	**02 39 31.4**	**-3.2**	
PTRJ	**Pietraroja**	**5.16**	**167**	P		**Pn**	**02 39 24.5**	**+2.2**	
ORIF	**Oris-en-Rattie**	**5.17**	**256**	*e*Pn		**Pn**	**02 39 20.9**	**-1.6**	
ORIF	**Oris-en-Rattie**	**5.17**	**256**	*e*P		**Pn**	**02 39 25.0**	**+2.5**	
ORIF				*e*Sn		**Sn**	**02 40 17.2**	**-4.8**	
	comp=Z,25nm,1.2s								
PAGF	**Fort de Pagny**	**5.35**	**296**	*e*P		**Pn**	**02 39 27.2**	**+2.3**	
LMR	**La Mourre**	**5.50**	**239**	*e*P		**Pn**	**02 39 29.0**	**+2.1**	
LMR				*e*Sn		**Sn**	**02 40 25.8**	**-4.2**	
	comp=Z,0.2nm,0.2s

GDXM IAML 02 57 33.0
comp=E,63µm,0.9s
MNRC McLaughlin Min 0.49 148 Pg 02 57 28.2 -1.1
GCRM Castle Rock Sp 0.52 175 Pg 02 57 28.5 -1.5
NMTM Middletown 0.55 153 Pg 02 57 29.4 -1.1
GCVM Cloverdale 0.56 200 Pg 02 57 29.6 -1.1
GAXM Alexander Vall 0.58 179 Pg 02 57 29.6 -1.5
KFPM Farley Peak 0.61 304 Pg 02 57 28.7 -3.0
GTC Three Chop Rid 0.62 280 Pg 02 57 29.2 -2.5
GSSM Skaggs Springs 0.62 198 Pg 02 57 30.5 -1.3
GROM Round Mountain 0.63 7 Pg 02 57 29.3 -2.7
GDCM Dry Creek 0.64 215 Pg 02 57 31.0 -1.2
GHOM Hamilton Openi 0.65 248 Pg 02 57 30.3 -2.0
NHSM Mount Saint He 0.65 169 Pg 02 57 31.0 -1.4
GNAM Navarro Ridge 0.68 262 Pg 02 57 30.6 -2.3
KBNM Bluenose Ridge 0.68 331 Pg 02 57 30.1 -2.9
OSUM Sutter Buttes 0.71 92 Pg 02 57 31.4 -2.1
GGUM Gualala 0.72 233 Pg 02 57 31.9 -1.6
KCPM Cahto Peak 0.74 302 Pg 02 57 31.5 -2.6
KCPM IAML 02 57 50.5
comp=N,108µm,1.2s
MAC Mark West Spri 0.74 177 Pg 02 57 32.4 -1.7
KIPM Iron Peak 0.75 313 Pg 02 57 31.4 -2.8
SUTB Sutter Butte 0.77 95 Pg 02 57 31.8 -2.8
NBPM Berryessa Peak 0.77 144 Pg 02 57 33.2 -1.3
FTR Fort Ross 0.83 202 Pb 02 57 33.5 -2.1
NDHM Dunnigan Hills 0.85 128 Pb 02 57 34.4 -1.5
NTYM Taylor 0.91 175 Pb 02 57 34.7 -2.1
NAPC Atlas Peak 0.94 155 Pb 02 57 35.0 -2.5
OGOM Van Goodin Ran 0.96 68 Pb 02 57 34.4 -3.4
CVS Carmenet Viney 0.98 166 Pb 02 57 35.3 -2.8
PAM Palermo 0.98 81 Pb 02 57 35.0 -3.0
OHCM Honcut 1.00 87 Pb 02 57 35.1 -3.2
OWYM Wyandotte 1.01 81 Pb 02 57 35.2 -3.3
ORV Oroville 1.02 75 Pb 02 57 35.2 -3.5
ORV Oroville 1.02 75 P Pb 02 57 35.2 -3.5
LBPM Beegum Peak 1.03 355 Pb 02 57 36.6 -2.3
LTCM Tuscan Springs 1.04 28 Pb 02 57 36.0 -3.1
NBRB Beebe Ranch Br 1.05 171 Pb 02 57 36.4 -2.8
NGVM 1.10 157 Pb 02 57 37.3 -2.8
SNT Sears Point 1.14 167 Pb 02 57 37.3 -3.5
KPPM Pickett Peak 1.15 337 Pb 02 57 38.8 -2.2
MCCM Marconi Confer 1.15 184 Pn 02 57 38.0 -2.9
KMRM Mail Ridge 1.18 322 Pn Pn 02 57 38.0 -3.3
NOLM Olema 1.25 181 Pn 02 57 39.4 -2.9
NLHM Lake Herman 1.27 157 Pn 02 57 40.0 -2.5
LCMM Colby Mountain 1.28 48 Pn 02 57 40.1 -2.9
NPRM Point Reyes 1.31 189 Pn 02 57 40.3 -2.8
HERB Hercules 1.34 163 Pn 02 57 41.2 -2.3
HMR Hamilton Ranch 1.37 146 Pn 02 57 42.4 -1.5
CPMM Point Molate 1.37 168 Pn 02 57 41.3 -2.6
CPIM Pinole Ridge 1.37 161 Pn 02 57 41.4 -2.6
KCRM Chalk Rock 1.39 325 Pn 02 57 41.1 -3.2
CTAM Taylor 1.40 155 Pn 02 57 42.2 -2.0
KSMM Slide Mountain 1.40 310 Pn 02 57 40.8 -3.7
KHBM Hayfork Bally 1.41 346 Pn 02 57 42.3 -2.3
CVPM Vollmer Peak 1.47 163 Pn 02 57 42.5 -2.9
VAK Adit at Lawren 1.47 164 Pn 02 57 42.4 -2.9
BL67 Building 67, L 1.47 164 Pn 02 57 42.8 -2.6
BRK Berkeley--Havi 1.47 164 Pn 02 57 42.8 -2.5
BKS Berkeley--Byer 1.48 163 Pn 02 57 42.4 -3.0
BDM Black Diamond 1.51 152 Pn 02 57 43.0 -2.9
CYBM Yerba Buena Is 1.52 168 Pn 02 57 43.7 -2.1
JPPM Presidio of Sa 1.52 171 Pn 02 57 43.2 -2.6
KMPM Mount Pierce 1.53 318 Pn 02 57 43.2 -3.0
KMPM IAML 02 58 30.8
comp=N,28µm,1.2s
KMPM IAML 02 58 31.8
comp=E,29µm,1.4s
CRPB Russellman Par 1.54 154 Pn 02 57 44.0 -2.2
LRDM Redding Peak 1.54 40 Pn 02 57 43.9 -2.4
SMCB Saint Mary's C 1.54 160 Pn 02 57 43.8 -2.5
LMEM Manzanita Entr 1.55 36 Pn 02 57 44.0 -2.5
CRHM Round Hill Res 1.56 157 Pn 02 57 44.4 -2.1
BGC Bolinger Road 1.58 159 Pn 02 57 44.2 -2.6
FARB Farallon Islan 1.60 187 Pn 02 57 43.1 -4.0
LGPM Granite Peak 1.62 358 Pn 02 57 45.7 -1.7
JSBM San Bruno Moun 1.64 170 Pn 02 57 44.7 -2.9
CSLM San Leandro Hi 1.65 162 Pn 02 57 44.9 -2.9
CLCB Lake Chabot 1.65 160 Pn 02 57 44.9 -2.9
JMGM Milagra Ridge 1.67 172 Pn 02 57 45.5 -2.6
KCTM Capetown 1.69 315 Pn 02 57 46.1 -2.2
CBSNC Byron Hot Spri 1.72 149 Pn 02 57 46.8 -1.9
CDOM Doolan Road 1.73 155 Pn 02 57 46.8 -2.0
JCPM Coyote Point 1.74 168 Pn 02 57 46.8 -2.2
KHMM Horse Mountain 1.74 335 Pn 02 57 46.7 -2.5
KHMM IAML 02 58 36.3
comp=E,15µm,1.4s
KHMM IAML 02 58 39.6
comp=N,23µm,2.0s
LBKM Bonanza King 1.79 3 Pn 02 57 47.5 -2.3
CNIC Niles Canyon 1.80 159 Pn 02 57 47.3 -2.5
JCC Jacoby Creek, 1.80 328 Pn 02 57 46.9 -2.9
JCC IAML 02 58 33.0
comp=N,14µm,1.7s
JCC IAML 02 58 38.3
comp=E,16µm,1.7s
JCHM Cahill Ridge 1.80 170 Pn 02 57 47.4 -2.5
CVLM Vallecito 1.82 156 Pn 02 57 48.0 -2.1
HATC Hat Creek Radi 1.82 33 Pn 02 57 48.4 -1.8
WENL Wente Vineyard 1.85 154 Pn 02 57 48.8 -1.7
JHPM Huddart Park 1.88 169 Pn 02 57 48.8 -2.2
DONR Donner Summit 1.90 88 Pn 02 57 50.1 -1.4
JRSC Jasper Ridge 1.93 167 Pn 02 57 48.8 -2.9
JSFB Stanford Teles 1.94 166 Pn 02 57 49.5 -2.3
BEKR Beckworth 1.95 72 Pn Pn 02 57 50.3 -1.7
BEKR IAML 02 58 20.7
comp=N,10µm,0.8s
BEKR IAML 02 58 34.5
comp=E,8µm,0.9s
TNK Tinkers Knob 1.97 90 Pn 02 57 51.6 -0.8
JFP Foothills Park 1.98 167 Pn 02 57 49.6 -2.8
CALM Calaveras Res. 1.99 157 Pn 02 57 50.5 -2.0
KBF Kyburz Flat 1.99 83 Pn 02 57 52.6 -0.1
JJRM Joaquin Road 2.00 167 Pn 02 57 49.8 -2.7
CMLM Mount Lewis 2.02 154 Pn 02 57 51.0 -1.9
JSJM St Joseph 2.03 165 Pn 02 57 51.0 -2.0
JBMM Black Mountain 2.03 166 Pn 02 57 50.5 -2.6
MOJC McCloud 2.04 14 Pn 02 57 51.2 -2.0
KOMM Orleans Mounta 2.05 345 Pn 02 57 51.4 -2.0
BMRR Black Mountain 2.08 66 Pn 02 57 52.6 -1.2
JSGM Saratoga Golf 2.09 164 Pn 02 57 51.4 -2.4
CMMM Mount Mocho 2.09 151 Pn 02 57 51.7 -2.3
COSM Mount Oso 2.09 148 Pn 02 57 51.5 -2.5
KRPM Rodgers 2.09 333 Pn 02 57 51.5 -2.4
KRPM IAML 02 58 46.4
comp=E,15µm,2.2s
EMB Emerald Bay 2.10 98 Pn 02 57 53.0 -1.1
EMB IAML 02 58 29.0
comp=E,9µm,1.0s
EMB IAML 02 58 39.3
comp=N,12µm,1.4s
LTIM Timbered Crate 2.12 27 Pn 02 57 52.6 -1.8
MPK Martis Peak 2.13 89 Pn 02 57 52.4 -2.1
VPK Verdi Peak 2.13 84 Pn 02 57 51.7 -2.9
MCUB Copperopolis B 2.14 127 Pn 02 57 52.1 -2.4
LBFM Black Fox Moun 2.16 18 Pn 02 57 52.9 -2.1
ARN Arnold Ranch 2.17 153 Pn 02 57 53.1 -1.9
JJOM Saint Joseph's 2.18 163 Pn 02 57 52.6 -2.4
PEAR Peavine Mounta 2.20 81 Pn 02 57 55.1 -0.4
JBNB Ben Lomond Mou 2.22 167 Pn 02 57 49.4 -6.3
JBNB Pb 02 57 56.0 -3.3
LMPM Military Pass 2.24 12 Pn 02 57 54.9 -1.2
CMPM Mikes Peak 2.25 149 Pn 02 57 55.1 -0.9
CMB Columbia Colle 2.25 123 Pn 02 57 54.4 -1.7
CMB Columbia Colle 2.25 123 P Pn 02 57 54.4 -1.7
AMC Almaden 2.25 161 Pn 02 57 53.8 -2.3
JHLM Holstrom Ranch 2.30 161 Pn 02 57 54.1 -2.7
JRGM Rodeo Gulch Ro 2.34 164 Pn 02 57 54.8 -2.5
LHEM Herd Peak 2.37 10 Pn 02 57 57.0 -0.9
LGMM Garner Mountai 2.41 17 Pn 02 57 57.0 -1.3
VCNR Virginia City 2.42 89 Pn 02 57 57.7 -0.8
VCNR IAML 02 58 47.3
comp=E,10µm,1.2s
VCNR IAML 02 58 52.5
comp=N,8µm,1.2s
YBH Yreka Blue Hor 2.44 1 Pn Pn 02 57 58.1 -0.6
comp=N,25nm,0.3s,baz=192,slow=8.1,SNR=133
YBH Lg Lg 02 58 31.2
comp=N,68nm,0.3s,baz=100,slow=11,SNR=3.1
comp=N,1µm,0.8s

YBH Yreka Blue Hor 2.44 1 Pn 02 57 57.7 -1.0
YBH IAML 02 58 41.9
comp=E,6µm,1.2s
YBH Yreka Blue Hor 2.44 1 P Pn 02 57 57.7 -1.0
PNTR Pine Nut 2.47 94 Pn Pn 02 57 58.6 -0.7
CSR Chase Ranch 2.51 158 Pn 02 57 57.3 -2.4
HPCM Pacheco Lake 2.52 152 Pn 02 57 58.4 -1.4
SLD San Luis Dam 2.53 151 Pn 02 57 58.2 -1.7
HTUM Tustin Road 2.62 160 Pn 02 57 58.1 -3.0
KTRM Thompson Ridge 2.65 350 Pb 02 58 04.6 -2.0
PAHR Pah Rah Range 2.65 80 Pn 02 58 00.5 -1.2
PAHR IAML 02 58 51.0
comp=E,5µm,1.1s
PAHR IAML 02 58 51.5
comp=N,9µm,1.6s
MYLM Yosemite Lake 2.66 135 Pn 02 58 00.2 -1.4
KSXB Camp Six Broad 2.67 342 Pn 02 58 00.1 -1.8
KSXB IAML 02 59 12.5
comp=N,5µm,1.3s
KSXB IAML 02 59 16.1
comp=E,5µm,3.1s
HSFM Saint Francis 2.67 158 Pn 02 57 59.7 -2.2
SAO San Andreas Ge 2.73 157 Pn Pn 02 58 00.1 -2.6
SAO San Andreas Ge 2.73 157 P Pn 02 58 00.1 -2.6
YERR Yerington 2.76 95 Pn 02 58 02.3 -0.9
YERR IAML 02 59 00.4
comp=E,8µm,0.9s
YERR IAML 02 59 04.8
comp=N,7µm,1.3s
BCGM Cienega Road 2.82 156 Pn 02 58 04.4 +0.6
BPCNC Pine Canyon 2.86 161 Pn 02 58 02.1 -2.3
L02F Cave Junction 2.89 348 P Pn 02 58 02.9 -2.0
baz=168
SCZ Santa Cruz 2.90 158 Pn 02 58 01.9 -3.1
PLTX Planet X, Gerl 2.90 60 Pn 02 58 03.7 -1.4
PLTX IAML 02 59 04.9
comp=N,18µm,1.2s
PLTX IAML 02 59 08.4
comp=E,32µm,1.2s
L04D Klamath Falls 2.94 7 Pn 02 58 05.0 -0.7
L04D IAML 02 59 09.7
comp=E,6µm,1.6s
L04D IAML 02 59 13.6
comp=N,4µm,1.3s
L04D Klamath Falls 2.94 7 P Pn 02 58 04.6 -1.1
baz=188,SNR=584
L04D S Sn 02 58 42.4 +1.8
baz=188
BJCM Johnson Can. 2.95 158 Pn 02 58 03.0 -2.6
BAVM Antelope Valle 2.98 152 Pn 02 58 03.7 -2.4
BBGB Big Mountain B 3.04 153 Pn 02 58 05.1 -1.8
BBGB IAML 02 59 42.7
comp=E,5µm,1.6s
BBGB IAML 03 00 00.5
comp=N,5µm,1.4s
HAST Hastings Reser 3.06 161 Pn 02 58 04.3 -2.8
BBNM San Benito 3.09 154 Pn 02 58 06.2 -1.4
BSMM Soledad Missio 3.09 160 Pn 02 58 05.4 -2.3
KBO Bosley Butte 3.12 340 Pn 02 58 06.3 -1.8
LRV Little Rabbit 3.18 154 Pn 02 58 07.5 -1.4
MOD Modoc Plateau 3.21 35 Pn 02 58 08.0 -1.4
MOD IAML 02 59 25.5
comp=E,3µm,1.7s
HUMO Hull Mountain 3.31 358 Pn 02 58 10.1 -0.6
HUMO IAML 02 59 07.5
comp=E,2µm,1.2s
HUMO Hull Mountain 3.31 358 Pb 02 58 16.1 -1.7
MDPB Devils Postpil 3.34 119 Pn 02 58 11.0 -0.3
MDPB IAML 02 59 22.0
comp=N,4µm,1.2s
MDPB IAML 02 59 27.2
comp=E,3µm,1.5s
MRDM Red Cones 3.37 119 Pn 02 58 12.1 +0.4
RYN Ryan 3.38 100 Pn 02 58 10.6 -1.0
RYN IAML 02 59 38.1
comp=E,2µm,1.3s
MMLB Mammoth Lakes 3.39 118 Pn 02 58 12.3 +0.3
OMMB Old Mammoth Mi 3.40 118 Pn 02 58 12.1 -0.1
K04D Chiloquin, OR 3.42 13 P Pn 02 58 11.3 -0.9
baz=194,SNR=93
K04D S Sn 02 58 54.1 +1.8
baz=194
PMPB Monarch Peak 3.45 152 Pn 02 58 11.1 -1.4
PMPB IAML 02 59 41.6
comp=N,2µm,2.0s
PMPB IAML 03 00 09.2
comp=E,3µm,1.9s
K02D Willamette Mer 3.46 349 P Pn 02 58 11.4 -1.4
baz=169,SNR=45
LHV Little Huntoon 3.49 106 Pn 02 58 12.7 -0.4
MLAC Mammoth, Mammo 3.51 117 P Pn 02 58 13.3 -0.2
baz=300
NVAR Mina Array Bea 3.59 103 Pn Pn 02 58 14.6 -0.1
comp=E,24nm,0.3s,baz=275,slow=15,SNR=258
NVAR Lg Lg 02 59 14.3
comp=E,50nm,0.3s,baz=273,slow=27,SNR=4.2
comp=E,187nm,0.8s
NVAR Mina Array Bea 3.59 103 Pn 02 58 13.8 -0.9
ORC Owens River 3.63 116 Pn 02 58 16.6 +1.3
KVN Kaiserville 3.64 92 Pn 02 58 13.8 -1.5
KVN IAML 02 59 35.8
comp=N,2µm,1.6s
KVN Kaiserville 3.64 92 P Pn 02 58 13.8 -1.5
BENR Benton 3.65 114 Pn 02 58 16.0 +0.5
PSMM Smith Mountain 3.65 151 Pn 02 58 14.6 -0.8
NV11 Mina Array Sit 3.70 102 Pn 02 58 14.9 -1.2
NV11 IAML 02 59 33.3
comp=N,3µm,1.3s
NV11 IAML 02 59 36.4
comp=E,2µm,1.9s
K05A Summer Lake 3.71 22 Pn 02 58 16.3 0.0
K05A IAML 02 59 24.9
comp=N,2µm,1.7s
K05A IAML 02 59 51.1
comp=E,3µm,1.8s
WMD 3.74 118 Pb 02 58 21.2 -3.9
KEBM Edson Butte 3.77 342 Pn 02 58 15.6 -1.3
DBO Dodson Butte 3.84 355 Pn 02 58 17.8 -0.1
DBO IAML 02 59 31.5
comp=E,3µm,3.0s
DBO IAML 02 59 39.8
comp=N,3µm,2.0s
J01E Myrtle Point 3.96 348 Pn 02 58 19.7 +0.2
J01E IAML 02 59 43.6
comp=N,3µm,1.5s
J01E Myrtle Point 3.96 348 P Pn 02 58 18.4 -1.1
baz=167,SNR=8.1
J04D Umpqua Nationa 3.97 7 Pn 02 58 19.7 -0.2
J04D Umpqua Nationa 3.97 7 P Pn 02 58 19.8 -0.1
baz=188,SNR=132
VOG Valley Oaks Go 4.00 137 P Pn 02 58 18.9 -1.2
baz=319
VOG S Sn 02 59 07.7 +1.1
baz=319
PAGB Antelope Grade 4.08 150 Pn 02 58 20.4 -0.9
J05D Fort Rock, OR 4.15 16 P Pn 02 58 21.6 -0.7
baz=197,SNR=58
TIN Tinemaha, Big 4.22 121 P Pn 02 58 23.2 0.0
baz=304
Q09A Carvers 4.37 94 Pn 02 58 24.8 -0.6
BMN Battle Mountai 4.42 73 Pn 02 58 24.3 -1.7
BMN IAML 03 00 00.6
comp=N,1µm,2.0s
BMN Battle Mountai 4.42 73 P Pn 02 58 24.3 -1.7
I03D Drain, OR 4.42 355 P Pn 02 58 24.6 -1.2
baz=174
WVOR Wild Horse Val 4.43 44 Pn 02 58 25.6 -0.6
WVOR IAML 02 59 55.0
comp=N,1µm,2.2s
WVOR IAML 03 00 30.9
comp=N,973nm,2.2s
WVOR Wild Horse Val 4.43 44 P Pn 02 58 25.6 -0.6
I04A Tendick Farm, 4.50 3 P Pn 02 58 24.7 -2.3
baz=184,SNR=288
I04A S Sn 02 59 18.2 -0.9
baz=184
TPH Tonopah 4.51 104 Pn 02 58 26.6 -0.7
TPH Tonopah 4.51 104 P Pn 02 58 26.6 -0.7
VES Vestal, Richgr 4.52 139 P Pn 02 58 25.4 -1.8
baz=321
LCH Last Change Ra 4.53 115 Pn 02 58 27.3 -0.2
SMMC Simmler 4.55 150 P Pn 02 58 25.9 -1.7
baz=332
CARC Carrizo Plain 4.61 149 Pn 02 58 27.6 -0.9
CWC Cottonwood Cre 4.68 126 P Pn 02 58 28.6 -1.0

baz=309
PINE Pine Mountain 4.70 16 Pn 02 58 30.2 +0.3
PINE IAML 02 59 12.7
comp=N,752nm,1.2s
PINE IAML 03 00 25.6
comp=E,952nm,2.2s
GRAC Grapevine Rang 4.84 117 P Pn 02 58 30.5 -1.2
baz=300
I02E Swisshome, OR 4.88 351 Pn 02 58 31.9 -0.1
I02E IAML 03 00 14.1
comp=N,2µm,1.9s
I02E Swisshome, OR 4.88 351 P Pn 02 58 31.4 -0.6
baz=170,SNR=16
I02E S Sn 02 59 27.8 -0.3
baz=170
BUCK Buck Mountain 4.90 358 Pn 02 58 33.0 +0.5
BUCK IAML 03 00 07.9
comp=N,2µm,1.9s
ISA Isabella, Lake 4.98 135 Pn 02 58 33.2 -0.5
ISA IAML 03 00 16.1
comp=E,1µm,1.8s
ISA Isabella, Lake 4.98 135 P Pn 02 58 33.2 -0.5
ISA Isabella, Lake 4.98 135 P Pn 02 58 33.0 -0.6
baz=318
ISA S Sn 02 59 32.9 +2.0
baz=318
PKM Mcpherson Peak 4.99 151 P Pn 02 58 31.8 -2.1
baz=333
BCW Bitter Crk WRg 5.11 147 Pn 02 58 34.4 -1.0
BCW IAML 03 00 58.6
comp=N,1µm,1.6s
I05D Terrebonne, OR 5.15 12 P Pn 02 58 33.8 -2.1
baz=193
J08A Circle Bar Ran 5.19 37 Pn 02 58 36.0 -0.6
J08A IAML 03 00 32.5
comp=E,648nm,2.7s
TEJ El Tejon 5.20 140 Pn 02 58 36.5 -0.1
ARVC Arvin 5.21 142 P Pn 02 58 36.2 -0.6
baz=324
H04D Lebanon 5.22 0 P Pn 02 58 36.2 -0.7
baz=181,SNR=91
H04D S Sn 02 59 36.8 +0.1
baz=181
MPMC Manual Prospec 5.29 126 P Pn 02 58 37.1 -0.9
baz=310
I07A Izee 5.37 26 Pn Pn 02 58 40.0 +0.9
H04A Detroit Lake 5.40 4 Pn 02 58 39.1 -0.2
SBC Santa Barbara 5.43 152 P Pn 02 58 39.4 -0.3
baz=334
SBC S Sn 02 59 44.4 +2.6
baz=334
CCAC Calif City Air 5.61 136 Pn 02 58 41.7 -0.6
TPNV Topopah Spring 5.65 112 P Pn 02 58 41.6 -1.3
baz=297
R11A Troy Canyon, C 5.69 97 Pn 02 58 42.0 -1.4
R11A Troy Canyon, C 5.69 97 P Pn 02 58 42.3 -1.2
baz=282
GWY Greenwater Val 5.75 121 Pn Pn 02 58 42.4 -1.9
EDW2 Edwards Air Fo 5.83 138 P Pn 02 58 44.5 -0.8
baz=321
SCZ2 Santa Cruz Isl 5.86 154 P Pn 02 58 45.1 -0.5
baz=336
G03D McMinnville, O 5.92 357 Pn Pn 02 58 45.0 -1.5
G03D McMinnville, O 5.92 357 P Pn 02 58 45.8 -0.6
baz=176,SNR=21
ELK Elko 5.96 74 Pn Pn 02 58 46.7 -0.5
comp=E,0.6nm,0.3s,baz=264,slow=12,SNR=35
ELK Sn Sn 02 59 52.1 -3.1
comp=E,1.5nm,0.3s,baz=272,slow=18,SNR=3.1
ELK Lg Lg 03 00 19.5
comp=E,2.9nm,0.3s,baz=41,slow=12,SNR=1.7
comp=E,13nm,0.7s
ELK Elko 5.96 74 Pn 02 58 46.3 -0.9
ELK Elko 5.96 74 P Pn 02 58 46.3 -0.9
G05D Wamic, OR 6.04 10 P Pn 02 58 48.1 0.0
baz=191,SNR=121
HOOD Mount Hood Mea 6.08 7 Pn Pn 02 58 47.5 -1.2
DECC Green Verdugo 6.16 143 P Pn 02 58 49.2 -0.6
baz=326
GSC Goldstone, Bar 6.20 128 Pn 02 58 49.3 -1.1
GSC Goldstone, Bar 6.20 128 P Pn 02 58 49.3 -1.1
GSC Goldstone, Bar 6.20 128 P Pn 02 58 50.2 -0.2
baz=312
PASC Pasadena Art C 6.30 143 Pn 02 58 50.3 -1.4
PRN Pahroc Range 6.35 105 Pn Pn 02 58 52.2 -0.3
RRX Edison Barstow 6.38 132 P Pn 02 58 52.1 -0.7
baz=316
BFSC Mount Baldy Ra 6.50 139 P Pn 02 58 52.5 -2.1
baz=322
SPR3 Spring Creek 3 6.57 90 Pn 02 58 55.7 +0.1
G08A Pilot Rock 6.62 24 Pn Pn 02 58 53.7 -2.5
MFID Camas Ranch 6.65 50 Pn 02 58 56.3 -0.3
HEC Hector,Ludlow 6.80 129 P Pn 02 58 58.0 -0.7
baz=313
CIS Catalina Islan 6.85 148 P Pn 02 58 57.9 -1.4
baz=330
BBRC Big Bear Solar 6.87 135 P Pn 02 58 58.6 -1.1
baz=319
F07A Phinny Hill Vi 6.92 17 Pn Pn 02 58 58.5 -1.6
PSUT Pine Spring 6.99 93 Pn 02 59 00.5 -0.9
ELS Elsinore Mount 7.09 141 Pn 02 59 01.4 -1.2
SCI2 San Clemente I 7.17 150 P Pn 02 59 02.3 -1.3
baz=333
MURC Murrieta 7.24 140 P Pn 02 59 03.9 -0.8
baz=323
GMRC Granite Mounta 7.25 126 P Pn 02 59 03.6 -1.2
baz=311
HAWA Hanford 7.48 17 Pn Pn 02 59 08.5 +0.6
BELC Belle Mtn. Jos 7.58 132 P Pn 02 59 08.7 -0.8
baz=316
HLID Hailey 7.59 53 P Pn 02 59 08.3 -1.2
baz=289
PFO Pinyon Flats O 7.62 136 Pn Pn 02 59 09.2 -0.6
comp=E,2.0nm,0.3s,baz=314,slow=9.4,SNR=22
PFO Pg Pb 02 59 23.8 -7.4
comp=E,1.6nm,0.3s,baz=312,slow=8.8,SNR=14
PFO Sn Sn 03 00 38.7 +2.9
baz=318,slow=15
PFO Lg Lg 03 01 06.6
comp=E,0.4nm,0.3s,baz=237,slow=21,SNR=6.9
PFO LR LR 03 02 44.6
comp=E,9µm,18.1s,baz=316,slow=43
comp=E,7.2nm,0.6s
PFO Pinyon Flats O 7.62 136 Pn 02 59 08.8 -1.1
PFO Pinyon Flats O 7.62 136 i P Pn 02 59 08.9 -1.0
PFO Pinyon Flats O 7.62 136 P Pn 02 59 08.9 -1.0
baz=320
TPFO Pinon Flats 7.62 136 P Pn 02 59 09.3 -0.7
baz=320
PMD Palm Desert 7.63 136 Pn 02 59 09.1 -0.9
DUG Dugway, Tooele 7.72 80 Pn Pn 02 59 11.6 +0.2
DUG Dugway, Tooele 7.72 80 P Pn 02 59 11.6 +0.2
DUG Dugway, Tooele 7.72 80 P Pn 02 59 10.6 -0.7
baz=267
109C Camp Elliot, M 7.87 143 Pn 02 59 12.0 -1.2
IRM Iron Mountain 7.98 128 P Pn 02 59 16.0 +1.2
baz=312
BC3 Big Chuckawall 8.15 131 P Pn 02 59 17.7 +0.5
baz=316
MONP2 Monument Peak 8.20 139 P Pn 02 59 17.2 -0.7
baz=323
BAR Barrett 8.24 141 Pn Pn 02 59 16.6 -1.8
TKX Tecate 8.37 141 Pn 02 59 18.8 -1.3
SWSC Sam W. Stewart 8.48 136 P Pn 02 59 20.5 -1.1
baz=320
IKP In-Ko-Pah, Jac 8.55 139 P Pn 02 59 22.0 -0.6
baz=323
CBX Cerro Bola 8.55 143 Pn Pn 02 59 21.5 -1.2
BLYC Blythe 8.64 127 Pn Pn 02 59 23.6 -0.2
U15A North Rim 8.77 106 Pn Pn 02 59 24.3 -1.5
GLA Glamis 8.94 132 P Pn 02 59 27.8 -0.3
baz=317
C09A Chrisman Ranch 9.11 20 Pn Pn 02 59 28.8 -1.3
P17A Butcher Ranch, 9.32 85 Pn Pn 02 59 35.8 +2.5
B08A Colville Reser 9.39 14 Pn Pn 02 59 34.8 +0.7
CLRS Cowichan Lake 9.57 355 Pn Pn 02 59 33.7 -2.8
WUAZ Wupatki 9.82 109 Pn Pn 02 58 38.7 -1.4
WUAZ Wupatki 9.82 109 P Pn 02 59 39.1 -1.0
baz=296
NEW Newport 9.85 23 Pn Pn 02 59 42.8 +2.4
comp=E,0.5nm,0.3s,baz=198,slow=14,SNR=20
NEW Lg Lg 03 02 14.7
baz=305,slow=23
comp=E,15nm,0.8s
NEW Newport 9.85 23 Pn Pn 02 59 41.0 +0.6
NEW Newport 9.85 23 P Pn 02 59 41.0 +0.6

NEW	**Newport**	**9.85**	**23**	P	**Pn**	**02 59 39.3**	**-1.0**		
	baz=207								
MSO	**Missoula**	**9.92**	**38**	Pn	**Pn**	**02 59 40.4**	**-1.0**		
MSO	**Missoula**	**9.92**	**38**	P	**Pn**	**02 59 40.1**	**-1.2**		
	baz=224								
LRM	**Limekiln Ridge**	**10.02**	**46**	Pn	**Pn**	**02 59 41.0**	**-1.9**		
QLMT	**Earthquake Lak**	**10.08**	**53**	Pn	**Pn**	**02 59 42.0**	**-1.7**		
BOZ	**Bozeman (W)**	**10.36**	**49**	P	**Pn**	**02 59 46.7**	**-0.8**		
	baz=237								
BW06	**Boulder Array**	**10.57**	**67**	P	**Pn**	**02 59 50.5**	**+0.1**		
	baz=255								
PDAR	**Pinedale Array**	**10.57**	**67**	Pn	**Pn**	**02 59 53.0**	**+2.6**		
	comp=E,0.1nm,0.3s,baz=252,slow=12,SNR=34								
PDAR				Lg	Lg	03 03 00.1			
	comp=E,0.1nm,0.3s,baz=240,slow=33,SNR=1.4								
PDAR				LR	LR	03 04 57.1			
	comp=E,585nm,19.6s,baz=258,slow=44								
	comp=E,8.5nm,1.0s								
PDAR	**Pinedale Array**	**10.57**	**67**	Pn	**Pn**	**02 59 48.5**	**-1.9**		
CBB	**Campbell River**	**10.89**	**351**	Pn	**Pn**	**02 59 54.2**	**-0.4**		
W18A	**Petrified Fore**	**11.20**	**108**	P	**Pn**	**03 00 00.0**	**+1.0**		
	baz=296								
O20A	**White River Ci**	**11.22**	**81**	P	**Pn**	**02 59 58.7**	**-0.7**		
	baz=271								
LLLB	**Lillooet**	**11.33**	**3**	Pn	**Pn**	**02 59 59.2**	**-1.5**		
MVCO	**Mesa Verde**	**11.41**	**96**	Pn	**Pn**	**03 00 01.4**	**-0.6**		
MVCO	**Mesa Verde**	**11.41**	**96**	P	**Pn**	**03 00 03.1**	**+1.1**		
	baz=285								
RLMT	**Red Lodge**	**11.58**	**55**	P	**Pn**	**03 00 05.3**	**+1.1**		
	baz=245								
WALA	**Waterton Lakes**	**11.64**	**30**		**Pn**	**03 00 05.0**	**0.0**		
TUC	**Tucson**	**11.96**	**122**	P	**Pn**	**03 00 10.5**	**+1.2**		
	baz=309								
K22A	**Casper**	**12.73**	**70**	P	**Pn**	**03 00 22.1**	**+2.2**		
	baz=260,SNR=22								
K22A	**Casper**	**12.73**	**70**	P	**Pn**	**03 00 21.0**	**+1.1**		
	baz=260								
N23A	**Red Feather La**	**12.99**	**78**	Pn	**Pn**	**03 00 22.2**	**-1.3**		
N23A	**Red Feather La**	**12.99**	**78**	P	**Pn**	**03 00 21.4**	**-2.1**		
	baz=269								
ISCO	**Idaho Springs**	**13.26**	**82**	Pn	**Pn**	**03 00 26.4**	**-0.8**		
ISCO	**Idaho Springs**	**13.26**	**82**	P	**Pn**	**03 00 26.4**	**-0.8**		
ISCO	**Idaho Springs**	**13.26**	**82**	P	**Pn**	**03 00 30.6**	**+3.3**		
	baz=274,SNR=34								
ISCO	**Idaho Springs**	**13.26**	**82**	P	**Pn**	**03 00 24.7**	**-2.5**		
	baz=274								
BBB	**Bella Bella**	**13.41**	**346**	Pn	**Pn**	**03 00 30.0**	**+1.0**		
	comp=E,0.2nm,0.3s,baz=147,slow=12,SNR=2.2								
BBB				LR	LR	03 05 34.3			
	comp=E,2μm,19.8s,baz=169,slow=37								
	comp=E,22nm,1.2s								
SDCO	**Great Sand Dun**	**13.61**	**91**		**Pn**	**03 00 30.9**	**-1.2**		
SDCO	**Great Sand Dun**	**13.61**	**91**	P	**Pn**	**03 00 36.0**	**+3.9**		
	baz=282,SNR=30								
SDCO	**Great Sand Dun**	**13.61**	**91**	P	**Pn**	**03 00 29.9**	**-2.1**		
	baz=282								
Q24A	**Divide**	**13.69**	**86**	P	**Pn**	**03 00 32.0**	**-1.1**		
	baz=277								
ANMO	**Albuquerque**	**13.72**	**103**	Pn	**Pn**	**03 00 37.2**	**+3.7**		
	baz=286,slow=12,SNR=2.9								
ANMO				Lg	Lg	03 04 19.4			
	comp=E,0.1nm,0.3s,baz=100,slow=13,SNR=1.3								
ANMO	**Albuquerque**	**13.72**	**103**	*ceP*	**P**	**03 00 37.8**	**-4.3**		
ANMO				pmax	pmax				
	comp=Z,18nm,1.7s								
ANMO	**Albuquerque**	**13.72**	**103**	P	**P**	**03 00 38.2**	**-3.9**		
	baz=293,SNR=11								
ANMO	**Albuquerque**	**13.72**	**103**	P	**Pn**	**03 00 33.9**	**+0.4**		
	baz=293								
Y22D	**IRIS PASSCAL I**	**13.74**	**107**	P	**Pn**	**03 00 33.5**	**-0.3**		
	baz=297								
Y22A	**Socorro**	**13.77**	**108**	P	**P**	**03 00 41.2**	**-1.4**		
	baz=298								
121A	**Cookes Peak, D**	**13.88**	**114**	P	**P**	**03 00 42.0**	**-2.0**		
	baz=304								
121A	**Cookes Peak, D**	**13.88**	**114**	P	**Pn**	**03 00 36.2**	**+0.5**		
	baz=304								
LAO	**LASA Array**	**14.17**	**53**		**Pn**	**03 00 35.9**	**-3.6**		
HG4B	**Hotspring**	**14.25**	**339**	Pn	**Pn**	**03 00 36.2**	**-4.3**		
T25A	**Trinidad**	**14.60**	**93**	P	**Pn**	**03 00 45.7**	**+0.3**		
	baz=284								
RSSD	**Black Hills**	**14.79**	**65**	Pn	**Pn**	**03 00 45.2**	**-2.9**		
RSSD	**Black Hills**	**14.79**	**65**	P	**Pn**	**03 00 45.2**	**-2.9**		
GRNB	**Grenville Isla**	**15.36**	**344**	Pn	**Pn**	**03 00 51.1**	**-4.2**		
KSCO	**Kaye Shedlock'**	**15.63**	**85**	P	**P**	**03 01 04.0**	**+0.7**		
	baz=278,SNR=15								
KSCO	**Kaye Shedlock'**	**15.63**	**85**	P	**Pn**	**03 00 59.1**	**-0.1**		
	baz=278								
OGNE	**Ogallala**	**15.95**	**77**	Pn	**Pn**	**03 01 01.8**	**-1.4**		
OGNE				IAmb	IAmb	03 01 07.3			
	comp=Z,122nm,1.2s								
OGNE	**Ogallala**	**15.95**	**77**	P	**Pn**	**03 01 04.0**	**+0.8**		
	baz=271,SNR=11								
OGNE	**Ogallala**	**15.95**	**77**	P	**Pn**	**03 01 03.3**	**+0.1**		
	baz=271								
DGMT	**Dagmar**	**16.20**	**49**	P	**Pn**	**03 01 06.3**	**0.0**		
GDL2	**Guadalupe Moun**	**16.52**	**110**	P	**Pn**	**03 01 11.5**	**+0.9**		
MSTX	**Muleshoe**	**16.90**	**102**	P	**P**	**03 01 16.1**	**-1.2**		
MSTX	**Muleshoe**	**16.90**	**102**	P	**P**	**03 01 18.9**	**+1.6**		
	baz=294,SNR=9.9								
MSTX				S	S	03 04 43.8	+11		
	baz=294								
MSTX	**Muleshoe**	**16.90**	**102**	P	**Pn**	**03 01 14.1**	**-1.3**		
	baz=294								
AMTX	**Amarillo**	**17.39**	**98**	Pn	**Pn**	**03 01 19.1**	**-2.3**		
AMTX	**Amarillo**	**17.39**	**98**	P	**P**	**03 01 26.8**	**+4.2**		
	baz=291,SNR=8.5								
AMTX	**Amarillo**	**17.39**	**98**	P	**Pn**	**03 01 21.6**	**+0.2**		
	baz=291								
E28A	**Huff**	**17.69**	**59**	P	**P**	**03 01 28.1**	**+2.2**		
	baz=254								
CBKS	**Cedar Bluff**	**17.89**	**84**	P	**Pn**	**03 01 27.3**	**-0.3**		
CBKS	**Cedar Bluff**	**17.89**	**84**	P	**Pn**	**03 01 27.3**	**-0.3**		
CBKS				pmax	pmax				
	comp=Z,57nm,1.0s								
CBKS	**Cedar Bluff**	**17.89**	**84**	P	**P**	**03 01 30.1**	**+1.9**		
	baz=279,SNR=6.0								
CBKS				S	**S**	**03 04 58.4**	**+5.3**		
	baz=279								
CBKS	**Cedar Bluff**	**17.89**	**84**	P	**Pn**	**03 01 26.4**	**-1.2**		
	baz=279								
T35M	**Bob Quinn**	**18.37**	**347**	P	**P**	**03 01 31.7**	**-1.6**		
	baz=161								
LPIG	**La Paz**	**18.46**	**141**	LR	LR	03 09 02.1			
	comp=Z,6μm,18.4s,baz=330,slow=38								
TX31	**Lajitas Ar. Si**	**18.61**	**116**	P	**Pn**	**03 01 39.0**	**+2.4**		
	baz=308,SNR=27								
TX31				S	S	03 05 18.5	+11		
	baz=308								
TXAR	**Lajitas Array**	**18.61**	**116**	P	**Pn**	**03 01 38.0**	**+1.4**		
	comp=Z,0.3nm,0.3s,baz=298,slow=8.9,SNR=35								
TXAR				PcP	**PcP**	**03 06 04.6**	**-0.2**		
	comp=Z,0.3nm,0.8s,baz=5.7,slow=0.9,SNR=1.4								
TXAR				LR	LR	03 09 48.0			
	comp=Z,1μm,21.9s,baz=294,slow=40								
	comp=Z,12nm,1.1s								
TXAR	**Lajitas Array**	**18.61**	**116**	P	**Pn**	**03 01 37.0**	**+0.4**		
TXAR	**Lajitas Array**	**18.61**	**116**	P	**Pn**	**03 01 37.0**	**+0.4**		
R32A	**Long Quarter,**	**18.75**	**85**	P	**Pn**	**03 01 39.9**	**+1.8**		
	baz=280,SNR=10								
R32A				S	**S**	**03 05 18.0**	**+7.5**		
	baz=280								
MDND	**Maddock**	**18.78**	**55**	P	**Pn**	**03 01 38.4**	**0.0**		
	baz=252								
BGNE	**Belgrade**	**18.87**	**76**	P	**P**	**03 01 37.8**	**-1.2**		
BGNE				IAmb	IAmb	03 01 48.4			
	comp=Z,131nm,1.3s								
BGNE	**Belgrade**	**18.87**	**76**	P	**P**	**03 01 37.7**	**-1.2**		
	baz=272								
U32A	**Winter Ranch,**	**18.99**	**91**	P	**Pn**	**03 01 43.5**	**+2.5**		
	baz=286								
N33B	**J Bar K, Exete**	**19.43**	**78**	P	**Pn**	**03 01 47.9**	**+1.6**		
	baz=274,SNR=6.6								
WMOK	**Wichita Mounta**	**19.67**	**96**	P	**P**	**03 01 48.0**	**+0.3**		
	baz=291,SNR=19								
WMOK				S	**S**	**03 05 22.0**	**-7.0**		
	baz=291								
WMOK	**Wichita Mounta**	**19.67**	**96**	P	**P**	**03 01 47.6**	**-0.1**		
	baz=291								
DLBC	**Dease Lake**	**19.72**	**349**	P	**P**	**03 01 47.0**	**-1.2**		
	comp=Z,0.1nm,0.3s,baz=324,slow=21,SNR=2.6								
DLBC				LR	LR	03 10 00.6			
	comp=Z,3μm,19.1s,baz=168,slow=39								
	comp=Z,1.4nm,0.6s								
DLBC	**Dease Lake**	**19.72**	**349**	P	**P**	**03 01 48.6**	**+0.4**		
DLBC	**Dease Lake**	**19.72**	**349**	P	**P**	**03 01 48.5**	**+0.3**		
	baz=163								
ABTX	**Abilene, Hawle**	**19.84**	**102**	P	**P**	**03 01 48.0**	**-1.6**		
ABTX				IAmb	IAmb	03 01 56.4			
	comp=Z,133nm,1.3s								
ABTX	**Abilene, Hawle**	**19.84**	**102**	P	**Pn**	**03 01 51.4**	**+0.2**		
	baz=296,SNR=15								
ABTX				S	**Sn**	**03 05 38.6**	**+4.7**		
	baz=296								
ABTX	**Abilene, Hawle**	**19.84**	**102**	P	**P**	**03 01 49.0**	**-0.6**		
	baz=296								
KS20	**Mayfield South**	**19.89**	**88**	P	**P**	**03 01 49.1**	**-1.0**		
KS20				IAmb	IAmb	03 02 00.9			
	comp=Z,41nm,1.0s								
ECSD	**EROS Data Cent**	**20.05**	**69**	P	**P**	**03 01 48.1**	**-3.7**		
ECSD				IAmb	IAmb	03 01 53.9			
	comp=Z,47nm,0.9s								
ECSD	**EROS Data Cent**	**20.05**	**69**	IAMs_20	IAMs_20	03 09 45.5			
	comp=Z,2μm,22.0s								
ECSD	**EROS Data Cent**	**20.05**	**69**	P	**P**	**03 01 48.7**	**-3.1**		
	baz=266,SNR=36								
ECSD	**EROS Data Cent**	**20.05**	**69**	P	**P**	**03 01 49.5**	**-2.3**		
	baz=266								
L34A	**Svendsen Farm,**	**20.18**	**74**	P	**P**	**03 01 50.3**	**-3.0**		
L34A	**Svendsen Farm,**	**20.18**	**74**	P	**P**	**03 01 52.1**	**-1.2**		
	baz=271,SNR=7.2								
KSU1	**Kansas State U**	**20.26**	**82**	P	**P**	**03 01 54.7**	**+0.6**		
KSU1	**Kansas State U**	**20.26**	**82**	P	Pn	03 01 58.3	+2.3		
	baz=279,SNR=40								
KSU1				S	Sn	03 05 48.3	+4.5		
	baz=279								
KSU1	**Kansas State U**	**20.26**	**82**	P	**P**	**03 01 54.1**	**+0.1**		
	baz=279								
D32A	**Dogwood Acres,**	**20.28**	**59**	P	**P**	**03 01 51.2**	**-3.0**		
D32A				IAmb	IAmb	03 02 00.2			
	comp=Z,34nm,0.5s								
OK029	**Liberty Lake**	**20.35**	**92**	IAMs_20	IAMs_20	03 09 45.9			
	comp=Z,2μm,21.0s								
JIS	**Juneau Island**	**20.42**	**342**	IAMs_20	IAMs_20	03 08 50.3			
	comp=Z,2μm,20.0s								
OK025	**Wewoka Ser Rd**	**20.51**	**92**	IAMs_20	IAMs_20	03 10 39.1			
	comp=Z,2μm,18.0s								
F33A	**5 Mile Ranch,**	**20.51**	**63**	P	**P**	**03 01 53.0**	**-3.8**		
	baz=261,SNR=23								
FNO	**Franklin**	**20.56**	**93**		**P**	**03 01 56.2**	**-1.2**		
FNO				IAmb	IAmb	03 02 09.1			
	comp=Z,134nm,1.9s								
JCT	**Junction City**	**20.75**	**108**	IAMs_20	IAMs_20	03 10 51.6			
	comp=Z,3μm,18.0s								
JCT	**Junction City**	**20.75**	**108**	P	Pn	03 02 03.8	+1.9		
	baz=302,SNR=10								
JCT				S	Sn	03 06 00.6	+4.9		
	baz=302								
JCT	**Junction City**	**20.75**	**108**	P	**P**	**03 01 59.6**	**+0.1**		
	baz=302								
T35B	**Sooner Cattle**	**20.78**	**88**	P	Pn	03 02 02.2	0.0		
	baz=285,SNR=10.0								
R33M	**Jennings River**	**20.79**	**348**	P	**P**	**03 01 58.3**	**-1.4**		
	baz=162								
OK034	**N. Norfolk Rd.**	**20.87**	**91**	IAMs_20	IAMs_20	03 10 25.5			
	comp=Z,3μm,18.0s								
AGMN	**Agassiz Nation**	**21.32**	**56**	P	**P**	**03 02 03.0**	**-2.4**		
AGMN	**Agassiz Nation**	**21.32**	**56**	P	**P**	**03 02 05.5**	**0.0**		
	baz=255,SNR=10								
AGMN	**Agassiz Nation**	**21.32**	**56**	P	**P**	**03 02 04.4**	**-1.0**		
	baz=255								
Z35A	**Perchaven, San**	**21.37**	**98**	P	**P**	**03 02 06.9**	**+0.8**		
	baz=294								
P32M	**Alin**	**21.47**	**345**	P	**P**	**03 02 06.7**	**-0.3**		
	baz=156								
TUL1	**Leonard**	**21.61**	**90**	IAMs_20	IAMs_20	03 10 50.2			
	comp=Z,2μm,18.0s								
TUL1	**Leonard**	**21.61**	**90**	P	**P**	**03 02 09.1**	**+0.4**		
	baz=287								
WHTX	**Lake Whitney,**	**21.78**	**102**	P	**P**	**03 02 09.0**	**-1.5**		
WHTX				IAmb	IAmb	03 02 19.8			
	comp=Z,61nm,0.9s								
WHTX	**Lake Whitney,**	**21.78**	**102**	P	**P**	**03 02 09.5**	**-1.1**		
	baz=297,SNR=15								
WHTX	**Lake Whitney,**	**21.78**	**102**	P	**P**	**03 02 09.8**	**-0.7**		
	baz=297								
P33M	**Teslin, Yukon**	**21.87**	**346**	P	**P**	**03 02 09.2**	**-2.2**		
P33M				IAMs_20	IAMs_20	03 12 01.6			
	comp=Z,1μm,20.0s								
P33M	**Teslin, Yukon**	**21.87**	**346**	P	**P**	**03 02 10.4**	**-1.0**		
	baz=159								
PLBC	**Pleasant Camp**	**21.95**	**341**	P	**P**	**03 02 09.9**	**-2.2**		
	baz=151								
833A	**Chaparral WMA,**	**22.23**	**112**	P	**P**	**03 02 15.0**	**-0.4**		
	baz=306								
435B	**Jarrell**	**22.25**	**105**	S	Sn	03 06 31.6	-0.1		
	baz=300								
435B	**Jarrell**	**22.25**	**105**	P	**P**	**03 02 14.1**	**-1.5**		
	baz=300								
I37B	**Waseca**	**22.38**	**68**	P	**P**	**03 02 14.7**	**-2.3**		
	baz=268								
F36A	**Milaca**	**22.43**	**63**	P	**P**	**03 02 15.2**	**-2.3**		
	baz=264								
P29M	**Windy Craggy**	**22.46**	**340**	P	**P**	**03 02 17.2**	**-0.4**		
P29M				IAmb	IAmb	03 02 25.6			
	comp=Z,42nm,1.1s								
P29M				IAMs_20	IAMs_20	03 09 36.1			
	comp=Z,2μm,21.0s								
P29M	**Windy Craggy**	**22.46**	**340**	P	**P**	**03 02 16.2**	**-1.4**		
	baz=148								
P38A	**Dawn**	**22.54**	**80**	P	**P**	**03 02 19.8**	**+1.2**		
	baz=279,SNR=16								
SCIA	**State Center**	**22.54**	**74**	P	**P**	**03 02 16.2**	**-2.4**		
SCIA				IAmb	IAmb	03 02 37.5			
	comp=Z,53nm,1.1s								
P30M	**Million Dollar**	**22.68**	**341**	P	**P**	**03 02 19.3**	**-0.7**		
	baz=150								
WHY	**Whitehorse**	**22.69**	**344**	P	**P**	**03 02 16.6**	**-3.5**		
	baz=155								
B35A	**Bob, Littlefor**	**22.71**	**57**	P	**P**	**03 02 18.0**	**-2.4**		
	baz=257								
K38A	**Parkersburg**	**22.84**	**72**	P	**P**	**03 02 18.8**	**-3.0**		
K38A	**Parkersburg**	**22.84**	**72**	P	**P**	**03 02 19.6**	**-2.2**		
	baz=272								
SPMN	**Marine on St.**	**22.88**	**65**	P	**P**	**03 02 20.2**	**-1.9**		
SPMN	**Marine on St.**	**22.88**	**65**	P	**P**	**03 02 19.9**	**-2.2**		
	baz=266								
SPMN	**Marine on St.**	**22.88**	**65**	P	**P**	**03 02 19.4**	**-2.7**		
	baz=266								
PNL	**Peninsula**	**22.95**	**338**	P	**P**	**03 02 19.7**	**-3.0**		
	baz=145								
237A	**Wheheta, Mont**	**23.03**	**100**	P	**P**	**03 02 23.0**	**-0.8**		
	baz=296,SNR=6.1								
O30N	**Mendenhall**	**23.05**	**343**	P	**P**	**03 02 21.4**	**-2.5**		
	baz=153								
S39A	**Bolivar**	**23.06**	**85**	P	**P**	**03 02 23.3**	**-0.8**		
S39A				IAmb	IAmb	03 02 44.3			
	comp=Z,55nm,1.5s								
O29M	**Mount Kennedy**	**23.25**	**340**	P	**P**	**03 02 23.5**	**-2.5**		
	baz=148								
BCPM	**Bancas Point**	**23.25**	**338**	IAMs_20	IAMs_20	03 09 57.1			
	comp=Z,1μm,19.0s								
HYT	**Haines Junctio**	**23.43**	**342**	P	**P**	**03 02 25.9**	**-1.8**		
HYT	**Haines Junctio**	**23.43**	**342**	P	**P**	**03 02 25.9**	**-1.8**		
	baz=150								
PINM	**Pinnacle**	**23.55**	**338**	P	**P**	**03 02 28.2**	**-0.7**		
	baz=144								
N31M	**Braeburn, Yuko**	**23.62**	**344**	P	**P**	**03 02 27.6**	**-1.9**		
N31M				IAmb	IAmb	03 02 39.0			
	comp=Z,34nm,1.1s								
N31M				IAMs_20	IAMs_20	03 10 53.9			
	comp=Z,1μm,19.0s								
N31M	**Braeburn, Yuko**	**23.62**	**344**	P	**P**	**03 02 29.2**	**-0.4**		
	baz=154								
P40A	**Paris**	**23.68**	**80**	P	**P**	**03 02 27.5**	**-2.8**		
P40A				IAmb	IAmb	03 02 36.6			
	comp=Z,33nm,0.9s								
P40A	**Paris**	**23.68**	**80**	P	**P**	**03 02 28.4**	**-1.9**		
	baz=279,SNR=17								
YUK6	**Outpost Mounta**	**23.74**	**341**	P	**P**	**03 02 28.8**	**-2.2**		
	baz=149								
R40A	**Maddies Statio**	**23.75**	**83**	P	**P**	**03 02 30.2**	**-0.7**		
R40A	**Maddies Statio**	**23.75**	**83**	P	**P**	**03 02 29.6**	**-1.3**		
	baz=282								
YKA	**Yellowknife Ar**	**23.75**	**9**	P	**P**	**03 02 28.9**	**-1.8**		
	comp=Z,2.9nm,0.8s,baz=195,slow=9.3,SNR=7.6								
YKA				LR	LR	03 12 19.0			
	comp=Z,1μm,21.4s,baz=180,slow=38								
	comp=Z,2.9nm,0.8s								
YKA	**Yellowknife Ar**	**23.75**	**9**	P	**P**	**03 02 28.3**	**-2.4**		
YKA	**Yellowknife Ar**	**23.75**	**9**	P	**P**	**03 02 28.3**	**-2.4**		
KVTX	**Kingsville**	**23.76**	**112**	IAMs_20	IAMs_20	03 11 28.4			
	comp=Z,2μm,18.0s								
MIAR	**Mount Ida**	**23.76**	**92**	P	**P**	**03 02 30.0**	**-1.1**		
	baz=290								
MIAR	**Mount Ida**	**23.76**	**92**	P	**P**	**03 02 30.1**	**-1.1**		
	baz=290								
FARO	**Faro, Yukon**	**23.86**	**348**	P	**P**	**03 02 29.7**	**-2.0**		
E38A	**The Farm, Brul**	**23.88**	**62**	P	**P**	**03 02 30.5**	**-1.6**		
	baz=264								
N30M	**Aishikik Lake**	**23.89**	**343**	P	**P**	**03 02 29.3**	**-2.8**		
	baz=152								
HKT	**Hockley**	**23.98**	**105**	P	**P**	**03 02 31.9**	**-1.1**		
HKT	**Hockley**	**23.98**	**105**	IAMs_20	IAMs_20	03 12 22.7			
	comp=Z,1μm,21.0s								
HKT	**Hockley**	**23.98**	**105**	P	**P**	**03 02 31.9**	**-1.1**		
HKT				pmax	pmax				
	comp=Z,221nm,1.9s								
HKT				MLR	MLR				
	comp=Z,1μm,21.0s								
M31M	**Drury Creek, Y**	**24.01**	**347**	IAMs_20	IAMs_20	03 11 00.1			
	comp=Z,2μm,22.0s								
M31M	**Drury Creek, Y**	**24.01**	**347**	P	**P**	**03 02 33.5**	**+0.3**		
	baz=158								
NATX	**Nacogdoches**	**24.02**	**100**	P	**P**	**03 02 32.6**	**-0.9**		
	baz=296								
L40A	**Anamosa**	**24.02**	**73**	P	**P**	**03 02 31.8**	**-1.7**		
L40A	**Anamosa**	**24.02**	**73**	P	**P**	**03 02 34.2**	**+0.7**		
	baz=274								
O28M	**Mount Upton**	**24.09**	**339**	P	**P**	**03 02 33.1**	**-1.1**		
	baz=145								
EYMN	**Ely**	**24.10**	**59**	IAMs_20	IAMs_20	03 10 56.6			
	comp=Z,1μm,19.0s								
EYMN	**Ely**	**24.10**	**59**	P	**P**	**03 02 31.9**	**-2.3**		
	baz=261								
MESA	**MESA**	**24.13**	**336**	IAMs_20	IAMs_20	03 10 07.2			
	comp=Z,1μm,20.0s								
YUK4	**Talbot Arm**	**24.16**	**341**	P	**P**	**03 02 34.5**	**-0.3**		
	baz=149								
YAH	**Yahtse**	**24.21**	**337**	IAMs_20	IAMs_20	03 10 00.4			
	comp=Z,1μm,21.0s								
LOGN	**Logan Glacier**	**24.36**	**338**	IAMs_20	IAMs_20	03 10 21.4			
	comp=Z,1μm,22.0s								
WLAR	**White Oak Lake**	**24.43**	**94**	P	**P**	**03 02 35.6**	**-1.7**		
WLAR				IAmb	IAmb	03 02 50.6			
	comp=Z,59nm,1.5s								
FCAR	**Ozark Folk Cen**	**24.46**	**88**	P	**P**	**03 02 36.4**	**-1.2**		
CTG	**Chitna Glacier**	**24.57**	**338**	P	**P**	**03 02 36.2**	**-2.3**		
	baz=144								
ISLE	**Juniper Island**	**24.58**	**337**	IAMs_20	IAMs_20	03 10 00.2			
	comp=Z,1μm,22.0s								
CCM	**Cathedral Cave**	**24.58**	**83**	P	**P**	**03 02 35.7**	**-3.0**		
CCM	**Cathedral Cave**	**24.58**	**83**	P	**P**	**03 02 35.7**	**-3.0**		
CCM				pmax	pmax				
	comp=Z,21nm,1.2s								
CCM				MLR	MLR				
	comp=Z,700nm,20.0s								
CCM	**Cathedral Cave**	**24.58**	**83**	P	**P**	**03 02 36.7**	**-1.9**		
	baz=283								
WAX	**Waxell Ridge**	**24.62**	**336**	IAMs_20	IAMs_20	03 10 10.3			
	comp=Z,1μm,22.0s								
JFWS	**Jewell Farm**	**24.69**	**71**	P	**P**	**03 02 38.1**	**-1.5**		
JFWS				IAmb	IAmb	03 02 45.0			
	comp=Z,49nm,1.4s								
JFWS	**Jewell Farm**	**24.69**	**71**	P	**P**	**03 02 38.1**	**-1.5**		
JFWS				pmax	pmax				
	comp=Z,49nm,1.4s								
JFWS				MLR	MLR				
	comp=Z,800nm,22.0s								
JFWS	**Jewell Farm**	**24.69**	**71**	P	**P**	**03 02 38.9**	**-0.6**		
	baz=273,SNR=6.2								
JFWS	**Jewell Farm**	**24.69**	**71**	P	**P**	**03 02 37.6**	**-2.0**		
	baz=273								
KAIM	**Kayak Island**	**24.75**	**334**	IAMs_20	IAMs_20	03 09 45.6			
	comp=Z,1μm,21.0s								
HMT	**Hamilton**	**25.00**	**334**	IAMs_20	IAMs_20	03 11 20.2			
	comp=Z,1μm,18.0s								
M29M	**Somme Creek**	**25.07**	**343**	P	**P**	**03 02 42.3**	**-0.6**		
	baz=150								
LCAR	**Lake Charles**	**25.16**	**87**	P	**P**	**03 02 42.3**	**-1.6**		
MCARA	**McCarthy VSAT**	**25.40**	**337**	IAMs_20	IAMs_20	03 10 38.9			
	comp=Z,1μm,22.0s								
BMRM	**Bremner River**	**25.58**	**335**	P	**P**	**03 02 46.9**	**-0.7**		
	baz=138								
EYAK	**Cordova Ski Ar**	**25.66**	**334**	P	**P**	**03 02 48.2**	**+0.1**		
	baz=136								
M27K	**Edge Creek, AK**	**25.85**	**340**	IAMs_20	IAMs_

comp=Z,1µm,21.0s
PAX Paxson 27.36 337 P **P** 03 03 03.8 +0.2
baz=139
SML Sawmill 27.43 334 P **P** 03 03 03.7 -0.5
baz=133
RC01 Rabbit Creek A 27.46 331 IAms_20 IAms_20 03 11 30.3
comp=Z,1µm,22.0s
RC01 Rabbit Creek A 27.46 331 P **P** 03 03 02.3 -2.1
baz=130
PMR Palmer 27.57 333 P **P** 03 03 05.6 +0.2
baz=132
I29M Ogilvie Camp, 27.62 346 P **P** 03 03 03.8 -2.0
I29M IAmb IAmb 03 03 14.9
comp=Z,56nm,1.9s
I29M IAMs_20 IAMs_20 03 13 23.5
comp=Z,1µm,21.0s
I29M Ogilvie Camp, 27.62 346 P **P** 03 03 06.4 +0.6
baz=153
FIS Fire Island 27.67 331 IAMs_20 IAMs_20 03 11 56.9
comp=Z,1µm,20.0s
EGAK Eagle 27.69 343 IAMs_20 IAMs_20 03 13 24.9
comp=Z,2µm,18.0s
EGAK Eagle 27.69 343 P **P** 03 03 06.8 +0.4
baz=148
WVT Waverly 27.72 85 IAMs_20 IAMs_20 03 14 27.8
comp=Z,1µm,18.0s
WVT Waverly 27.72 85 P **P** 03 03 06.6 -0.4
baz=287
SCRK Sand Creek 27.73 340 P **P** 03 03 04.0 -3.0
SCRK IAMs_20 IAMs_20 03 12 43.4
comp=Z,1µm,20.0s
SCRK Sand Creek 27.73 340 P **P** 03 03 07.2 +0.3
baz=143
RIDG Independent Ri 27.77 339 IAMs_20 IAMs_20 03 12 31.6
comp=Z,2µm,22.0s
RIDG Independent Ri 27.77 339 P **P** 03 03 05.1 -2.2
baz=141
WAT6 Susitna Watana 27.78 335 P **P** 03 03 05.6 -1.9
baz=135
Q19K Cape Douglas, 27.78 325 IAMs_20 IAMs_20 03 11 45.9
comp=Z,1µm,20.0s
PLAL Pickwick Lake 27.89 88 IAMs_20 IAMs_20 03 14 51.3
comp=Z,2µm,20.0s
P19K Oil Pt 27.99 327 P **P** 03 03 07.7 -1.5
P19K IAmb IAmb 03 03 16.1
comp=Z,26nm,0.8s
P19K IAMs_20 IAMs_20 03 12 34.4
comp=Z,995nm,18.0s
P19K Oil Pt 27.99 327 P **P** 03 03 08.2 -1.1
baz=123
DHY Denali Highway 28.02 336 P **P** 03 03 07.7 -1.9
baz=137
M22K Willow 28.03 332 P **P** 03 03 10.0 +0.5
baz=131
J26L Joseph Creek 28.04 341 P **P** 03 03 07.6 -2.1
J26L IAmb IAmb 03 03 18.0
comp=Z,18nm,0.9s
J26L IAMs_20 IAMs_20 03 13 03.7
comp=Z,1µm,20.0s
J26L Joseph Creek 28.04 341 P **P** 03 03 09.4 -0.3
baz=144
SUA Susitna One 28.07 331 P **P** 03 03 10.3 +0.3
baz=129
K24K Donnelly Dome 28.09 338 P **P** 03 03 10.1 0.0
baz=140
WAT1 Susitna Watana 28.22 335 P **P** 03 03 12.2 +0.9
baz=134
EPYK Eagle Plains 28.26 348 IAMs_20 IAMs_20 03 14 09.5
comp=Z,1µm,22.0s
EPYK Eagle Plains 28.26 348 P **P** 03 03 11.8 +0.2
baz=157
I27K Kandik River 28.50 344 P **P** 03 03 14.3 +0.6
baz=148
I26K Coal Creek Min 28.60 342 IAMs_20 IAMs_20 03 13 33.9
comp=Z,2µm,19.0s
I26K Coal Creek Min 28.60 342 P **P** 03 03 14.4 -0.2
baz=146
J25K Salcha River, 28.60 340 P **P** 03 03 13.4 -1.3
J25K IAmb IAmb 03 03 23.5
comp=Z,35nm,1.1s
J25K IAMs_20 IAMs_20 03 13 08.5
comp=Z,1µm,20.0s
J25K Salcha River, 28.60 340 P **P** 03 03 14.6 -0.1
baz=142
GLMI Grayling 28.67 66 IAMs_20 IAMs_20 03 14 00.6
comp=Z,1µm,19.0s
SKT Skwentna 28.69 332 P **P** 03 03 14.7 -0.7
baz=129
RND Reindeer 28.73 336 IAMs_20 IAMs_20 03 13 48.8
comp=Z,1µm,18.0s
O19K Port Alsworth 28.75 327 IAMs_20 IAMs_20 03 12 38.4
comp=Z,1µm,20.0s
O19K Port Alsworth 28.75 327 P **P** 03 03 14.9 -1.0
baz=122
HDA Harding Lake 28.88 338 P **P** 03 03 15.9 -1.2
baz=139
CHGN Chignik 28.93 318 P **P** 03 03 17.9 +0.3
baz=111
MCK McKinley 28.98 336 IAMs_20 IAMs_20 03 13 57.6
comp=Z,906nm,20.0s
MCK McKinley 28.98 336 P **P** 03 03 18.7 +0.7
baz=135
H27K Steamboat Moun 29.02 344 P **P** 03 03 17.5 -0.9
baz=149
Q16K King Salmon 29.03 323 P **P** 03 03 18.5 +0.2
baz=117
IL31 29.14 339 P **P** 03 03 17.9 -1.4
IL31 IAmb IAmb 03 03 28.4
comp=Z,47nm,1.4s
ILAR Eielson Array 29.14 339 P **P** 03 03 19.4 +0.1
comp=Z,6.0nm,1.0s,baz=154,slow=7.7,SNR=26
ILAR PcP **PcP** 03 06 26.7 +0.2
comp=Z,0.9nm,0.9s,baz=172,slow=2.4,SNR=3.2
ILAR LR LR 03 13 35.2
comp=Z,996nm,21.9s,baz=132,slow=34
comp=Z,6.0nm,1.0s
ILAR Eielson Array 29.14 339 P **P** 03 03 18.1 -1.2
ILAR Eielson Array 29.14 339 P **P** 03 03 18.1 -1.2
N19K Bonanza Creek 29.15 328 P **P** 03 03 19.3 -0.3
N19K IAmb IAmb 03 03 29.6
comp=Z,34nm,1.1s
N19K IAMs_20 IAMs_20 03 13 02.0
comp=Z,969nm,20.0s
N19K Bonanza Creek 29.15 328 P **P** 03 03 19.3 -0.3
baz=123
P17K Kvichak River 29.17 324 P **P** 03 03 20.3 +0.6
baz=118
TRF Thorofare Moun 29.22 335 IAMs_20 IAMs_20 03 12 54.9
comp=Z,992nm,22.0s
TRF Thorofare Moun 29.22 335 P **P** 03 03 20.9 +0.6
baz=133
M20K Styx River 29.23 331 IAMs_20 IAMs_20 03 12 36.5
comp=Z,1µm,22.0s
M20K Styx River 29.23 331 P **P** 03 03 19.4 -0.8
baz=127
P49A Miami Univ. Ec 29.26 77 IAMs_20 IAMs_20 03 14 20.4
comp=Z,1µm,18.0s
WRH Wood River Hil 29.26 338 P **P** 03 03 19.9 -0.5
CCB Clear Creek Bu 29.31 338 P **P** 03 03 20.4 -0.4
CCB IAMs_20 IAMs_20 03 13 17.1
comp=Z,960nm,22.0s
PRP Porcupine Dome 29.36 341 IAMs_20 IAMs_20 03 13 45.5
comp=Z,1µm,21.0s
PRP Porcupine Dome 29.36 341 P **P** 03 03 20.6 -0.8
baz=142
LRAL Lakeview Retre 29.41 91 P **P** 03 03 20.7 -1.4
LRAL IAmb IAmb 03 03 26.6
comp=Z,55nm,2.0s
LRAL Lakeview Retre 29.41 91 P **P** 03 03 21.1 -1.0
baz=293
COLA College 29.49 338 IAMs_20 IAMs_20 03 17 15.0
comp=Z,863nm,18.0s
COLA College 29.49 338 *i* P **P** 03 03 26.0 +3.6
COLA pmax pmax
comp=Z,17nm,1.2s
TCOL CIGO, UAF Yank 29.49 338 P **P** 03 03 23.4 +1.0
baz=138
KTH Kantishna Hill 29.50 335 IAMs_20 IAMs_20 03 13 02.3
comp=Z,1µm,21.0s
PPLA Purkeypile 29.51 333 P **P** 03 03 22.1 -0.7
PPLA Purkeypile 29.51 333 P **P** 03 03 22.5 -0.3
baz=129
G27K Doyon Strip 29.55 345 P **P** 03 03 22.1 -0.9
baz=149
POKR Poker Plat Res 29.55 339 P **P** 03 03 22.3 -0.7
POKR IAmb IAmb 03 03 33.6
comp=Z,29nm,0.9s
POKR IAMs_20 IAMs_20 03 13 25.7
comp=Z,1µm,22.0s
POKR Poker Plat Res 29.55 339 P **P** 03 03 22.6 -0.5
baz=139
NEA2 Nenana 29.64 337 P **P** 03 03 23.0 -0.8
NEA2 IAmb IAmb 03 03 30.3
comp=Z,23nm,1.0s
NEA2 IAMs_20 IAMs_20 03 15 34.9
comp=Z,1µm,18.0s
NEA2 Nenana 29.64 337 P **P** 03 03 24.2 +0.4
baz=136
INK Inuvik 29.66 352 P **P** 03 03 23.9 +0.1
comp=Z,11nm,0.9s,baz=137,slow=7.8,SNR=5.1
INK LR LR 03 16 47.5
comp=Z,2µm,18.6s,baz=160,slow=40
comp=Z,11nm,0.9s
INK Inuvik 29.66 352 P **P** 03 03 23.5 -0.4
INK IAmb IAmb 03 03 30.6
comp=Z,35nm,1.2s
INK Inuvik 29.66 352 P **P** 03 03 23.5 -0.4
INK pmax pmax
comp=Z,35nm,1.2s
INK Inuvik 29.66 352 P **P** 03 03 23.8 -0.1
baz=163
N18K Kilae Creek 29.66 327 IAMs_20 IAMs_20 03 13 26.6
comp=Z,1µm,19.0s
N18K Kilae Creek 29.66 327 P **P** 03 03 24.3 +0.2
baz=121
M19K Big River Lodg 29.73 330 IAMs_20 IAMs_20 03 13 03.2
comp=Z,942nm,21.0s
M19K Big River Lodg 29.73 330 P **P** 03 03 24.6 +0.1
baz=125
O17K Koliganek Bris 29.74 325 P **P** 03 03 24.8 +0.1
baz=118
SVW2 Sparrevohn 29.75 328 P **P** 03 03 23.8 -1.0
SVW2 IAmb IAmb 03 03 34.6
comp=Z,29nm,1.1s
CAST Castle Rocks 29.81 334 IAMs_20 IAMs_20 03 13 12.3
comp=Z,971nm,21.0s
CAST Castle Rocks 29.81 334 P **P** 03 03 24.1 -1.2
baz=130
L20K Farewell, AK 29.87 331 P **P** 03 03 25.3 -0.6
baz=126
BPAW Bear Paw Mtn. 29.89 335 P **P** 03 03 25.1 -0.9
baz=133
H25K Birch Creek 30.03 342 P **P** 03 03 27.2 +0.1
baz=143
L19K White Mountain 30.06 330 IAMs_20 IAMs_20 03 13 14.2
comp=Z,1µm,22.0s
L19K White Mountain 30.06 330 P **P** 03 03 27.0 -0.6
baz=125
O16K Kokwok River B 30.11 324 P **P** 03 03 27.1 -0.8
baz=117
G26K Porcupine Rive 30.11 344 P **P** 03 03 27.9 0.0
baz=146
C36M Paulatuk 30.12 359 IAMs_20 IAMs_20 03 17 11.8
comp=Z,951nm,21.0s
C36M Paulatuk 30.12 359 P **P** 03 03 28.0 0.0
baz=178
FYU Fort Yukon 30.13 342 IAMs_20 IAMs_20 03 14 31.8
comp=Z,1µm,19.0s
I23K Minto, Yukon-K 30.13 338 P **P** 03 03 27.3 -0.7
I23K IAmb IAmb 03 03 34.8
comp=Z,28nm,1.1s
I23K Minto, Yukon-K 30.13 338 P **P** 03 03 28.0 0.0
baz=136
H24K Noodor Dome 30.22 340 P **P** 03 03 27.2 -1.8
H24K IAMs_20 IAMs_20 03 13 48.4
comp=Z,1µm,22.0s
H24K Noodor Dome 30.22 340 P **P** 03 03 29.9 +0.9
baz=139
ACSO Alum Creek Sta 30.43 75 IAMs_20 IAMs_20 03 16 40.2
comp=Z,1µm,19.0s
MLY Manley 30.46 337 P **P** 03 03 29.3 -1.8
MLY IAmb IAmb 03 03 37.2
comp=Z,19nm,1.2s
MLY IAMs_20 IAMs_20 03 16 02.5
comp=Z,840nm,18.0s
MLY Manley 30.46 337 P **P** 03 03 31.7 +0.6
baz=134
K20K Telida 30.46 332 P **P** 03 03 30.1 -1.0
K20K Telida 30.46 332 P **P** 03 03 30.3 -0.8
baz=127
G25K Bearman Lake 30.49 342 P **P** 03 03 31.8 +0.5
baz=143
H23K Yukon River 30.67 339 P **P** 03 03 32.9 -0.1
baz=137
BMAR Burnt Mountain 30.69 344 P **P** 03 03 32.5 -0.6
E27K Coleen River 30.73 346 P **P** 03 03 34.6 +1.2
baz=151
G24K Hadweenzic Riv 30.78 341 P **P** 03 03 34.1 +0.2
baz=141
N16K Nishlik Lake 30.81 325 P **P** 03 03 34.4 +0.3
baz=117
F26K Sheenjek River 30.81 344 P **P** 03 03 34.4 +0.2
baz=146
TZTN Tazewell 30.90 83 IAMs_20 IAMs_20 03 16 06.0
comp=Z,988nm,18.0s
TTA Tatalina 30.93 331 P **P** 03 03 35.0 -0.3
TTA IAmb IAmb 03 03 41.7
comp=Z,27nm,0.9s
TTA Tatalina 30.93 331 P **P** 03 03 35.0 -0.3
TTA pmax pmax
comp=Z,27nm,0.9s
TTA Tatalina 30.93 331 P **P** 03 03 34.8 -0.5
baz=124
I21K Tanana 30.94 336 P **P** 03 03 34.6 -0.7
I21K Tanana 30.94 336 P **P** 03 03 35.9 +0.7
baz=133
J20K Nowinta River 31.00 334 P **P** 03 03 34.5 -1.2
J20K IAmb IAmb 03 03 45.0
comp=Z,33nm,1.1s
J20K Nowinta River 31.00 334 P **P** 03 03 35.2 -0.5
baz=128
TKL Tuckaleechee C 31.00 84 LR LR 03 15 36.0
comp=Z,798nm,18.4s,baz=290,slow=36
F25K Christian Rive 31.06 343 P **P** 03 03 37.2 +0.9
baz=144
H22K Ishtalitna Cre 31.25 338 P **P** 03 03 38.4 +0.4
baz=134
G23K Bananza Creek 31.46 340 P **P** 03 03 38.9 -1.0
baz=137
E25K Arctic Village 31.47 344 P **P** 03 03 40.2 +0.2
baz=145
H21K Melozitna Rive 31.52 337 P **P** 03 03 39.7 -0.7
H21K Melozitna Rive 31.52 337 P **P** 03 03 40.4 +0.1
baz=132
F24K Squaw Lake 31.52 342 P **P** 03 03 40.8 +0.4
baz=141
O53A New Philadelph 31.75 75 IAMs_20 IAMs_20 03 15 51.2
comp=Z,873nm,18.0s
GOGA Godfrey 32.01 88 IAMs_20 IAMs_20 03 17 11.5
comp=Z,1µm,20.0s
GOGA Godfrey 32.01 88 P **P** 03 03 44.1 -1.0
baz=292
IMAR Indian Mountai 32.03 337 P **P** 03 03 44.6 -0.2
E24K Your Creek 32.10 342 P **P** 03 03 45.6 +0.1
baz=141
GCSA Galena City Sc 32.29 333 P **P** 03 03 45.0 -2.0
baz=126
G21K Allakaket 32.31 337 P **P** 03 03 47.3 0.0
baz=132
C27K Jago River 32.37 346 P **P** 03 03 45.8 -2.0
baz=149
SADO Sadowa 32.56 66 LR LR 03 16 40.2
comp=Z,801nm,20.6s,baz=326,slow=36
F22K John River 32.62 339 P **P** 03 03 48.9 -1.1
baz=135
D25K Kavik River 32.63 345 P **P** 03 03 49.8 -0.3
baz=145
F21K Alatna River 32.78 338 P **P** 03 03 49.6 -1.8
baz=133
A36M Sachs Harbour 32.79 359 IAMs_20 IAMs_20 03 17 56.3
comp=Z,666nm,18.0s
TOLK Toolik Lake Re 32.79 342 P **P** 03 03 51.4 -0.2
TOLK IAMs_20 IAMs_20 03 16 35.3
comp=Z,1µm,19.0s
TOLK Toolik Lake Re 32.79 342 P **P** 03 03 50.1 -1.4
baz=140
UNV Unalaska Valle 32.83 311 P **P** 03 03 51.5 -0.4
baz=98
C26K Camden Bay 32.84 346 P **P** 03 03 53.0 +1.2
baz=147
CMIG Matias Romero 32.84 124 LR LR 03 18 49.0
comp=Z,3µm,18.1s,baz=290,slow=39
E22K Anaktuvuk Pass 32.97 340 P **P** 03 03 53.1 0.0
baz=136
D24K Happy Valley 33.02 343 P **P** 03 03 54.8 +1.4
baz=141
BLA Blacksburg 33.10 80 IAMs_20 IAMs_20 03 17 40.3
comp=Z,1µm,18.0s
D23K Nanushuk River 33.30 342 P **P** 03 03 57.0 +1.1
baz=139
C24K Franklin Bluff 33.44 344 P **P** 03 03 58.0 +0.9
baz=142
VLDQ Val d'Or 33.51 60 P **P** 03 03 55.3 -2.6
VLDQ IAmb IAmb 03 03 59.6
comp=Z,29nm,1.3s
C23K Itkillik River 33.95 343 P **P** 03 04 01.9 +0.4
baz=140
NHSC New Hope 34.68 87 IAMs_20 IAMs_20 03 18 43.0
comp=Z,1µm,19.0s
BINY Binghamton 35.22 70 IAMs_20 IAMs_20 03 18 37.0
comp=Z,1µm,22.0s
ANM Nome 35.36 330 P **P** 03 04 12.9 -0.9
ANM IAmb IAmb 03 04 24.2
comp=Z,34nm,1.2s
ANM IAMs_20 IAMs_20 03 16 51.1
comp=Z,718nm,21.0s
ANM Nome 35.36 330 P **P** 03 04 12.9 -0.9
ANM pmax pmax
comp=Z,34nm,1.2s
CNNC Cliffs of the 35.67 82 IAMs_20 IAMs_20 03 17 48.2
comp=Z,724nm,20.0s
A21K Barrow 36.41 342 IAMs_20 IAMs_20 03 19 12.9
comp=Z,911nm,21.0s
TRY Troy 36.80 68 IAMs_20 IAMs_20 03 18 39.7
comp=Z,694nm,21.0s
PAL Palisades 37.00 71 IAMs_20 IAMs_20 03 19 38.2
comp=Z,706nm,18.0s
VT1 Waterbury 37.15 66 IAMs_20 IAMs_20 03 18 06.9
comp=Z,729nm,20.0s
WSPT Westport, CT 37.38 71 IAMs_20 IAMs_20 03 17 46.4
comp=Z,665nm,22.0s
HNH Hanover 37.59 67 IAMs_20 IAMs_20 03 18 21.7
comp=Z,708nm,20.0s
YLE Yale 37.64 70 IAMs_20 IAMs_20 03 19 33.3
comp=Z,762nm,18.0s
GAMB Gambell 37.67 327 IAMs_20 IAMs_20 03 18 54.2
comp=Z,924nm,18.0s
LBNH Lisbon 37.75 66 IAMs_20 IAMs_20 03 18 23.8
comp=Z,898nm,21.0s
RES Resolute Bay 37.78 12 P **P** 03 04 33.1 -1.2
comp=Z,13nm,1.1s,baz=218,slow=9.9,SNR=23
RES LR LR 03 20 09.8
comp=Z,714nm,19.8s,baz=230,slow=36
comp=Z,13nm,1.1s
QUA2 Belchertown 37.84 69 IAMs_20 IAMs_20 03 19 34.4
comp=Z,688nm,19.0s
ESQI Esquipulas 38.31 121 P **P** 03 04 37.4 -2.2
BRYW Bryant College 38.51 69 IAMs_20 IAMs_20 03 19 45.2
comp=Z,639nm,21.0s
WES Weston 38.56 68 IAMs_20 IAMs_20 03 20 46.4
comp=Z,1µm,22.0s
WVL Waterville 39.28 65 IAMs_20 IAMs_20 03 20 11.2
comp=Z,947nm,20.0s
FRB Frobisher Bay 39.94 34 LR LR 03 20 16.2
comp=Z,755nm,21.1s,baz=261,slow=35
SCHQ Schefferville 40.01 48 P **P** 03 04 54.2 +1.0
comp=Z,8.1nm,0.8s,baz=289,slow=8.7,SNR=6.4
SCHQ LR LR 03 22 08.3
comp=Z,883nm,18.3s,baz=276,slow=37
comp=Z,8.1nm,0.8s
SCHQ Schefferville 40.01 48 P **P** 03 04 50.8 -2.4
SCHQ IAmb IAmb 03 05 03.7
comp=Z,56nm,1.5s
PQI Presque Isle 40.03 61 IAMs_20 IAMs_20 03 21 31.9
comp=Z,799nm,18.0s
TGUH Tegucigalpa,Un 40.06 119 P **P** 03 04 53.6 -0.6
TGUH IAmb IAmb 03 05 08.6
comp=Z,43nm,1.1s
EMMW East Machias 40.79 64 IAMs_20 IAMs_20 03 20 39.2
comp=Z,789nm,19.0s
MATN Matagalpa 41.78 119 P **P** 03 05 07.8 -0.6
MATN IAmb IAmb 03 05 16.4
comp=Z,18nm,0.9s
JTS Las Juntas de 44.34 120 IAMs_20 IAMs_20 03 24 02.7
comp=Z,636nm,21.0s
SHEM Shemya Is, Ala 44.44 309 LR LR 03 21 25.6
comp=Z,104nm,19.8s,baz=280,slow=33
BBSR BB Station 46.89 80 IAMs_20 IAMs_20 03 23 51.4
comp=Z,450nm,21.0s
BILL Bilibino 47.18 331 P **P** 03 05 48.7 -2.1
BILL IAmb IAmb 03 05 56.1
comp=Z,18nm,1.0s
BILL IAMs_20 IAMs_20 03 25 01.8
comp=Z,468nm,19.0s
BILL Bilibino 47.18 331 *e*P **P** 03 05 53.4 +2.6
BILL pmax pmax
comp=Z,20nm,1.0s
TAOE Nuku Hiva Isla 50.55 202 *e*LR LR 03 20 42.4
comp=Z,344nm,24.5s
SJG San Juan 53.06 96 LR LR 03 32 43.1
comp=Z,212nm,18.2s,baz=292,slow=40
CBOC Ciudad Bolivar 53.64 116 *e*P **P** 03 06 44.5 +4.0
SEY Seymchan 53.65 326 P **P** 03 06 38.7 -1.0
comp=Z,1.7nm,0.4s,baz=334,slow=23,SNR=4.5
comp=Z,1.7nm,0.4s
SEY Seymchan 53.65 326 *i* P **P** 03 06 40.0 +0.3
SEY pmax pmax
comp=Z,16nm,1.1s
PEA0B Petropavlovsk- 53.97 313 P **P** 03 06 39.6 -2.6
PEA0B Petropavlovsk- 53.97 313 *c*e**P** **P** 03 06 42.5 +0.3
PETK Petropavlovsk- 53.97 313 P **P** 03 06 42.4 +0.2
comp=Z,5.5nm,0.8s,baz=92,slow=10,SNR=4.4
PETK LR LR 03 27 06.1
comp=Z,69nm,21.5s,baz=68,slow=33
comp=Z,5.5nm,0.8s
PETK Petropavlovsk- 53.97 313 P **P** 03 06 40.2 -2.1
PETK Petropavlovsk- 53.97 313 P **P** 03 06 40.2 -2.1
PLMC San Jos del P 54.13 117 *e*P **P** 03 06 47.4 +3.4
PTBC PUERTO BERRIO, 54.26 114 *e*P **P** 03 06 47.2 +2.3
GUY2C Guyana, Caldas 54.54 116 *e*P **P** 03 06 51.2 +3.7
NORC Norcasia 54.65 115 *e*P **P** 03 06 50.2 +2.4
BARC Barichara 55.13 113 *e*P **P** 03 06 55.0 +3.6
SPBC San Pablo de B 55.15 114 *e*P **P** 03 06 53.2 +1.8
SDV Santo Domingo 55.43 109 LR LR 03 33 53.0
comp=Z,341nm,20.5s,baz=302,slow=40
SDV Santo Domingo 55.43 109 P **P** 03 06 52.2 -1.3
SDV IAmb IAmb 03 07 00.7
comp=Z,23nm,1.0s
SDV Santo Domingo 55.43 109 IAMs_20 IAMs_20 03 33 09.4
comp=Z,402nm,20.0s
MA2 Magadan 55.44 322 P **P** 03 06 52.3 -0.5
comp=Z,3.2nm,0.3s,baz=86,slow=12,SNR=2.4
MA2 LR LR 03 30 15.9
comp=Z,378nm,18.3s,baz=64,slow=36
comp=Z,3.2nm,0.3s
MA2 Magadan 55.44 322 P **P** 03 06 50.9 -1.9
MA2 Magadan 55.44 322 *c*e**P** **P** 03 06 53.8 +1.0
MA2 pmax pmax
comp=Z,43nm,1.3s
SMRT St. Maarten 55.47 94 IAMs_20 IAMs_20 03 32 07.1
comp=Z,395nm,18.0s
ROSC El Rosal 55.55 115 P **P** 03 06 56.5 +1.9
comp=Z,5.4nm,0.3s,baz=154,slow=17,SNR=1.2
ROSC LR LR 03 34 10.1
comp=Z,352nm,18.5s,baz=31,slow=40
comp=Z,5.4nm,0.3s
POPC Popayan, Colom 55.57 119 *e*P **P** 03 06 54.5 -0.1
SOCV Socops 55.67 109 *e*P **P** 03 06 58.7 +3.7
SEUS St. Eustatius 55.87 95 IAMs_20 IAMs_20 03 30 16.7
comp=Z,376nm,20.0s
OTAV Otavalo 56.10 123 P **P** 03 06 56.0 -2.6
OTAV Otavalo 56.10 123 IAMs_20 IAMs_20 03 28 42.4
comp=Z,366nm,20.0s
OTAV Otavalo 56.10 123 P **P** 03 06 56.0 -2.6
OTAV pmax pmax
comp=Z,27nm,1.1s
CHIC Chingaza 56.11 115 *e*P **P** 03 07 01.3 +2.6
PORT Chimborazo Vol 57.18 124 P **P** 03 07 03.1 -3.4
BAUV El Baul 57.31 107 P **P** 03 07 03.5 -3.3
MCRA Macar, Loja 58.68 128 P **P** 03 07 14.7 -1.7
MCRA IAmb IAmb 03 07 25.8
comp=Z,19nm,1.0s
PMOR Pomariorio Ree 58.89 209 *e*T T 04 10 10.7
comp=Z,3.7nm,0.3s
KBS Kingsbay 59.12 9 P **P** 03 07 17.5 -1.0
KBS Kingsbay 59.12 9 *c*e**P** **P** 03 07 21.2 +2.7
KBS pmax pmax
comp=Z,60nm,1.7s
GRGR Grenville 60.11 99 IAMs_20 IAMs_20 03 36 16.3
comp=Z,346nm,18.0s
SPITS Spitsbergen Ar 60.25 9 P **P** 03 07 25.4 -1.0
comp=Z,16nm,0.8s,baz=304,slow=9.0,SNR=5.0
SPITS LR LR 03 33 17.5

comp=Z,833nm,19.0s,baz=289,slow=36
comp=Z,16nm,0.8s
JMIC Jan Mayen 60.57 20 LR LR 03 35 10.8
comp=Z,550nm,19.0s,baz=284,slow=38
ATAH Atahualpa 61.80 128 LR LR 03 33 23.4
comp=Z,384nm,18.0s,baz=320,slow=35
PPT Papeete 61.87 209 LR LR 03 30 23.7
comp=Z,131nm,18.1s,baz=9.0,slow=32
PPT2 Papeete2 61.89 209 *e*S **S** **03 15 59.1 -2.3**
comp=Z,110nm,28.8s
PPT2 *e*LR LR 03 25 57.7
comp=Z,283nm,28.5s
PPT2 *e*LR LR 03 25 57.7
comp=Z,304nm,25.5s
H11N3 WAKE ISLAND Hy 62.76 274 T T 04 15 14.5
baz=55,slow=74,SNR=726
H11N2 WAKE ISLAND Hy 62.76 274 T T 04 15 14.7
baz=55,slow=74,SNR=409
H11N1 WAKE ISLAND Hy 62.78 274 T T 04 15 08.4
baz=55,slow=74,SNR=630
YAK Yakutsk 63.52 330 P **P** **03 07 48.7 +0.3**
comp=Z,9.4nm,0.3s,baz=16,slow=5.8,SNR=1.9
YAK LR LR 03 33 50.1
comp=Z,207nm,21.0s,baz=88,slow=35
comp=Z,9.4nm,0.3s
YAK Yakutsk 63.52 330 IAMs_20 IAMs_20 03 35 25.4
comp=Z,425nm,19.0s
YAK Yakutsk 63.52 330 *e*P **P** **03 07 52.1 +3.6**
YAK *e**PP **sP** **03 07 58.0 +1.6**
YAK *e* 03 08 29.2
YAK *e* 03 10 05.4
YAK *e*PPP PPP 03 11 39.8
YAK *e*S **S** **03 16 25.3 +4.6**
YAK *e**SS **sS** **03 16 36.6 +6.2**
YAK *e* 03 17 42.2
YAK *e*SS **SS** **03 20 31.4 +4.3**
YAK *e*SSS SSS 03 23 26.3
YAK pmax pmax
comp=Z,26nm,0.8s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=Z,97nm,3.8s
YAK pmax pmax
comp=N,72nm,4.1s
YAK pmax pmax
comp=E,60nm,3.6s
YAK smax smax
comp=E,25nm,2.3s
YAK smax smax
comp=N,35nm,2.5s
YAK MLR MLR
comp=Z,349nm,16.0s
YAK MLR MLR
comp=N,275nm,18.0s
YAK MLR MLR
comp=E,200nm,18.0s
H11S1 WAKE ISLAND Hy 63.61 273 T T 04 16 12.0
baz=54,slow=74,SNR=2099
H11S2 WAKE ISLAND Hy 63.62 273 T T 04 16 12.5
baz=54,slow=74,SNR=1101
H11S3 WAKE ISLAND Hy 63.63 273 T T 04 16 13.3
baz=54,slow=74,SNR=744
YSS Yuzh-Sakhalins 65.29 311 *e*P **P** **03 08 01.6 +1.3**
YSS *e*S **S** **03 16 45.9 +2.8**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=Z,300nm,16.0s
CZSB Cruzeiro do Su 65.83 124 P **P** **03 08 03.1 -1.1**
CZSB IAmb IAmb 03 08 29.2
comp=Z,18nm,0.7s
NNA Nana 66.55 130 LR LR 03 34 57.3
comp=Z,164nm,20.1s,baz=320,slow=34
BOAV Boa Vista 67.22 106 P **P** **03 08 12.7 -0.4**
BOAV IAmb IAmb 03 08 19.9
comp=Z,17nm,1.0s
RPN Rapa Nui 67.26 167 LR LR 03 30 31.6
comp=Z,230nm,20.6s,baz=4.0,slow=30
ARCES ARCESS Array B 69.00 11 P **P** **03 08 24.1 +0.5**
ARCES LR LR 03 40 42.1
comp=Z,313nm,18.2s,baz=330,slow=38
comp=Z,9.5nm,0.9s
NRIK Noril'sk 69.39 349 P **P** **03 08 25.9 0.0**
comp=Z,6.8nm,0.8s,baz=350,slow=1.5,SNR=2.6
NRIK LR LR 03 42 10.6
comp=Z,214nm,18.6s,baz=20,slow=39
comp=Z,6.8nm,0.8s
NRIK Noril'sk 69.39 349 *i* P **P** **03 08 25.9 0.0**
NRIK pmax pmax
comp=Z,12nm,0.9s
RAR Rarotonga 69.43 217 LR LR 03 30 42.5
comp=Z,83nm,21.7s,baz=13,slow=29
ZEA Zeya 69.52 323 *e*P **P** **03 08 31.1 +4.1**
ZEA *e*S **S** **03 17 40.6 +6.8**
ZEA pmax pmax
comp=Z,10.0nm,0.5s
ZEA smax smax
comp=N,100nm,13.9s
AFI Afiamalu 69.90 231 LR LR 03 35 02.7
comp=N,118nm,18.1s,baz=53,slow=32
KLR Kul'dur 70.09 318 P **P** **03 08 30.7 +0.1**
comp=N,0.7nm,0.6s,baz=76,slow=8.7,SNR=2.5
KLR LR LR 03 39 36.5
comp=N,112nm,18.4s,baz=46,slow=36
comp=N,0.7nm,0.6s
KLR Kul'dur 70.09 318 *i* P **P** **03 08 30.5 -0.1**
KLR pmax pmax
comp=Z,6.0nm,1.2s
MACA Manacapuru-AM 70.84 111 P **P** **03 08 33.4 -2.2**
MACA IAmb IAmb 03 08 43.7
comp=Z,16nm,0.7s
MDP Montagnes des 71.43 99 LR LR 03 43 42.9
comp=Z,214nm,21.0s,baz=300,slow=39
ETMB Extrema 71.66 120 P **P** **03 08 39.1 -1.5**
ETMB IAmb IAmb 03 08 46.0
comp=Z,23nm,1.0s
LVZ Lovozero 71.78 9 P **P** **03 08 41.2 +0.7**
LVZ Lovozero 71.78 9*c**e*P **P** **03 08 43.0 +2.4**
LVZ pmax pmax
comp=Z,73nm,1.7s
BOD Bodaibo 72.22 332 *e*P **P** **03 08 46.6 +3.2**
BOD pmax pmax
comp=Z,23nm,1.1s
EKA Eskdalemuir Ar 72.63 31 P **P** **03 08 49.0 +3.2**
MSF Maaselka 72.87 12 P **P** **03 08 49.2 +2.1**
MSF pmax pmax
comp=Z,42nm,1.0s
USRK Ussuriysk Ar. 73.05 313 P **P** **03 08 47.4 -1.1**
comp=Z,2.0nm,0.8s,baz=69,slow=4.8,SNR=3.0
comp=Z,2.0nm,0.8s
USRK Ussuriysk Ar. 73.05 313 P **P** **03 08 46.1 -2.4**
USRK Ussuriysk Ar. 73.05 313 P **P** **03 08 46.1 -2.4**
SAML Samuel 73.10 117 P **P** **03 08 47.0 -2.2**
SAML Samuel 73.10 117 P **P** **03 08 47.0 -2.2**
SAML pmax pmax
comp=Z,10.0nm,1.2s
NB2 NORSAR Subarra 73.22 21 P **P** **03 08 52.3 +3.0**
comp=Z,13nm,0.9s,baz=324,slow=6.2
NOA NORSAR Array B 73.22 21 P **P** **03 08 50.9 +1.6**
comp=Z,7.6nm,0.8s,baz=324,slow=6.0,SNR=16
NOA LR LR 03 40 22.7
comp=Z,387nm,21.5s,baz=315,slow=35
comp=Z,7.6nm,0.8s
MAJO Matsushiro 73.98 304 *i* P **P** **03 08 53.2 -1.0**
MAJO pmax pmax
comp=Z,32nm,2.3s
MJAR Matsushiro Arr 73.98 304 P **P** **03 08 53.9 -0.3**
comp=Z,1.7nm,0.8s,baz=24,slow=5.4,SNR=2.2
MJAR LR LR 03 35 25.3
comp=Z,79nm,21.9s,baz=51,slow=31
comp=Z,1.7nm,0.8s
BNX BinXian 74.58 317 ⇑P **P** **03 09 01.2 +3.8**
BNX pP **sP** **03 09 07.6 +2.2**
BNX sP **PcP** **03 09 10.7 -1.1**
BNX PP **PP** **03 11 50.8 +7.2**
BNX pmax pmax
comp=Z,5.0nm,0.7s
BNX pmax pmax
comp=Z,75nm,4.3s
BNX LR LR
comp=Z,170nm,4.9s
BNX LR LR
comp=Z,100nm,10.6s
BNX LR LR
comp=Z,140nm,17.3s
HFS Hagfors 74.66 21 LR LR 03 42 37.4
comp=Z,458nm,20.8s,baz=326,slow=36
JHJ Hachijo jima 2 75.01 301 LR LR 03 33 52.5
comp=Z,98nm,21.6s,baz=91,slow=29
LPAZ La Paz 75.20 126 P **P** **03 09 01.4 -0.6**
comp=Z,4.4nm,0.7s,baz=43,slow=12,SNR=4.4
LPAZ LR LR 03 41 31.6
comp=Z,204nm,20.3s,baz=325,slow=35
comp=Z,4.4nm,0.7s
LPAZ La Paz 75.20 126 P **P** **03 09 00.8 -1.3**
LPAZ La Paz 75.20 126 P **P** **03 09 00.8 -1.3**
LPAZ pmax pmax
comp=Z,9.0nm,1.0s
HIA Hailar 76.00 323 IAMs_20 IAMs_20 03 43 18.6
comp=Z,218nm,19.0s
FIA1 FINESS Array S 76.46 15 P **P** **03 09 06.2 -1.7**
FINES FINESS Array B 76.46 15 P **P** **03 09 06.8 -1.1**
comp=Z,10.0nm,0.9s,baz=128,slow=16,SNR=3.4
FINES LR LR 03 42 27.6
comp=Z,357nm,20.8s,baz=352,slow=36
comp=Z,10.0nm,0.9s
FINES FINESS Array B 76.46 15 *i* P **P** **03 09 11.8 +3.9**
FINES pmax pmax
comp=Z,15nm,0.9s
CN2 Changchun 76.91 316 *e*P **P** **03 09 15.0 +4.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
JCJ Chichijima 77.00 294 LR LR 03 36 33.8
comp=Z,163nm,19.9s,baz=121,slow=31
MEF Metsahovi 77.23 16 *e*P **P** **03 09 11.0 -1.3**
LDF La Druitiere 78.83 35 *e*P **P** **03 09 24.8 +3.4**
LDF pmax pmax
comp=Z,92nm,2.2s
PRGR Permogore 78.98 6 *e*P **P** **03 09 25.4 +3.5**
KLMR Klimovskoe 79.16 9 *e*P **P** **03 09 23.6 +0.7**
KLMR *e*S **S** **03 19 18.1 -3.4**
KLMR pmax pmax
comp=Z,31nm,1.4s
KLMR Klimovskoe 79.16 9 *e*P **P** **03 09 23.7 +0.8**
KLMR AMP 03 09 33.2
comp=Z,31nm,1.4s
KLMR *e*S **S** **03 19 18.2 -3.3**
KLMR *e*S **S** **03 19 18.2 -3.3**
KLMR LQ LQ 03 36 29.9
KLMR LQ LQ 03 36 29.9
KLMR LR LR 03 39 34.1
MSVF Nonsavu 79.17 236 LR LR 03 36 06.2
comp=Z,111nm,21.1s,baz=4.4,slow=29
LVC Limon Verde 79.53 131 LR LR 03 39 23.0
comp=Z,107nm,20.4s,baz=326,slow=32
SIV San Ignacio 79.56 121 LR LR 03 46 41.8
comp=Z,251nm,18.0s,baz=315,slow=37
BMRD Maredsous 79.58 31 *d*PcP **PcP** **03 09 29.9 -3.5**
DOU Dourbes 79.67 31 *d*PcP **PcP** **03 09 30.3 -3.5**
BSTI Sart Tilman 79.68 31 *d*PcP **PcP** **03 09 30.8 -3.0**
KSRS Korea Array 79.76 310 P **P** **03 09 26.3 -0.3**
comp=Z,1.1nm,0.6s,baz=63,slow=4.9,SNR=4.6
KSRS LR LR 03 42 23.8
comp=Z,24nm,20.4s,baz=35,slow=34
comp=Z,1.1nm,0.6s
KS19 Wonju Array Si 79.76 310 P **P** **03 09 24.2 -2.6**
KS19 IAmb IAmb 03 09 37.6
comp=Z,10.0nm,0.9s
KSAR Wonju Array Be 79.79 310 P **P** **03 09 24.6 -2.2**
KSAR Wonju Array Be 79.79 310 P **P** **03 09 24.7 -2.2**
MEM Membach 79.83 30 *d*PcP **PcP** **03 09 31.4 -3.1**
RCHB Rochefort 79.88 31 *d*PcP **PcP** **03 09 31.2 -3.4**
BTNL Ternell 79.90 30 *d*PcP **PcP** **03 09 31.5 -3.3**
BHOU Houvegnez 80.03 30 *d*PcP **PcP** **03 09 32.4 -3.0**
MFF Saint Martin d 80.31 36 *e*P **P** **03 09 32.9 +3.4**
MFF pmax pmax
comp=Z,8.0nm,0.9s
PTLB Pontes e Lacer 80.48 119 P **P** **03 09 29.8 -1.0**
PTLB IAmb IAmb 03 09 37.4
comp=Z,16nm,1.2s
WLF Walferdange 80.64 31 *d*PcP **PcP** **03 09 36.2 -1.8**
VSVD Vaisvydziai 80.96 18 *e*P **P** **03 09 31.8 -1.0**
PABE Paberze 81.40 18 *e*P **P** **03 09 33.8 -1.3**
LOR Lormes 81.57 34 *e*P **P** **03 09 39.7 +3.4**
LOR pmax pmax
comp=Z,20nm,1.0s
SSF Saint Saulge 81.58 34 *e*P **P** **03 09 39.6 +3.3**
SSF pmax pmax
comp=Z,15nm,1.0s
TCF Toulx Ste Croi 81.61 35 *e*P **P** **03 09 39.5 +3.0**
TCF pmax pmax
comp=Z,18nm,1.0s
XLT XiLinHaoTe 81.62 321 ⇓*i*P P 03 09 41.5 +4.8
XLT pP sP 03 09 46.2 +1.5
XLT S **S** **03 19 50.4 +2.2**
XLT sS ScS 03 20 02.4 -3.1
XLT pmax pmax
comp=Z,13nm,1.1s
XLT pmax pmax
comp=Z,120nm,5.7s
XLT LR LR
comp=Z,280nm,15.6s
XLT LR LR
comp=Z,190nm,16.3s
BGF Bois d'Agland 81.68 35 *e*P **P** **03 09 39.9 +3.1**
BGF pmax pmax
comp=Z,17nm,0.8s
MOY Mondy 81.69 334 *e*P P 03 09 42.3 +5.3
MOY pmax pmax
comp=Z,23nm,1.6s
AVF Avril sur Loir 81.72 34 *e*P **P** **03 09 40.0 +3.0**
AVF pmax pmax
comp=Z,11nm,0.8s
CLL Collm 81.84 26 *i* P **P** **03 09 41.4 +3.9**
CLL pmax pmax
comp=Z,11nm,1.1s
CLL MLR MLR
comp=Z,500nm,20.7s
CLL Collm 81.84 26 *i* pP **P** **03 09 41.4 +3.9**
comp=Z,11nm,1.1s
CLL *i* x x 03 09 46.6
comp=Z,17nm,1.7s
CLL *e*PS **PnS** **03 20 38.0 -0.3**
CLL LmV 03 45 00.0
comp=Z,500nm,20.7s
ISAL Salakas 81.85 17 *e*P **P** **03 09 36.3 -1.2**
LFF La Frestale 81.97 37 *e*P **P** **03 09 41.7 +3.4**
LFF pmax pmax
comp=Z,10.0nm,0.8s
HAU Haudompre 82.03 32 *e*P **P** **03 09 42.1 +3.4**
HAU pmax pmax
comp=Z,8.0nm,0.9s
RJF Les Rejaudoux 82.05 36 *e*P **P** **03 09 41.8 +3.0**
RJF pmax pmax
comp=Z,10.0nm,0.9s
SMF Signal de Mont 82.05 34 *e*P **P** **03 09 41.7 +2.9**
SMF pmax pmax
comp=Z,12nm,1.0s
CDF Champ du Feu 82.08 31 *e*P **P** **03 09 42.5 +3.5**
CDF pmax pmax
comp=Z,7.0nm,0.8s
KIRV Kirov 82.26 4 LR LR 03 51 27.4
comp=Z,323nm,18.5s,baz=347,slow=40
HINF Hinteralfeld 82.39 32 *e*P **P** **03 09 43.8 +3.2**
HINF pmax pmax
comp=Z,8.0nm,0.9s
BRG Berggiesshubel 82.52 26 *i* P **P** **03 09 45.5 +4.3**
BRG Amp 03 09 46.8
comp=Z,12nm,0.9s
BRG *e*x x 03 09 53.4
BRG Amp 03 09 55.6
comp=Z,7.4nm,0.9s
BRG Amp 03 46 10.0
comp=Z,0.6nm,17.8s
BRG Amp 03 46 16.0
comp=N,0.3nm,18.1s
BRG Amp 03 46 26.0
comp=E,0.1nm,24.2s
BRG Berggiesshubel 82.52 26 *i* P **P** **03 09 45.4 +4.3**
BRG *e* 03 09 53.3
BRG pmax pmax
comp=Z,13nm,0.9s
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG MLR MLR
comp=Z,562nm,17.8s
BRG MLR MLR
comp=N,348nm,18.1s
BRG MLR MLR
comp=E,147nm,24.2s
GRA1 Grafenberg Arr 82.55 28 P **P** **03 09 40.2 -1.2**
GRA1 IAmb IAmb 03 09 47.3
comp=Z,17nm,1.0s
GRF Grafenberg Arr 82.55 28 P **P** **03 09 40.2 -1.2**
GRF pmax pmax
comp=Z,17nm,1.0s
GRF MLR MLR
comp=Z,600nm,18.0s
ULN Ulaanbaatar 82.58 329 P **P** **03 09 40.5 -1.3**
ULN Ulaanbaatar 82.58 329 *i* P **P** **03 09 40.6 -1.1**
ULN pmax pmax
comp=Z,8.0nm,0.9s
CAF Calviac 82.58 36 *e*P **P** **03 09 44.6 +2.9**
CAF pmax pmax
comp=Z,14nm,0.9s
NACGM Naroch 82.61 17⇑*e*P P 03 09 46.2 +4.7
baz=337
SONM Songino Array 82.86 329 P **P** **03 09 42.6 -0.5**
comp=Z,1.1nm,0.9s,baz=26,slow=3.8,SNR=4.5
SONM LR LR 03 46 09.8
comp=Z,289nm,21.3s,baz=28,slow=35
comp=Z,1.1nm,0.9s
SONM Songino Array 82.86 329 P **P** **03 09 40.9 -2.3**
SONM IAmb IAmb 03 09 52.4
comp=Z,14nm,1.4s
SONM Songino Array 82.86 329 P **P** **03 09 40.9 -2.3**
SONM pmax pmax
comp=Z,14nm,1.4s
PVCC Panska Ves 83.03 26 *e*P **P** **03 09 48.0 +4.2**
PVCC MLR MLR
comp=Z,600nm,23.3s
PVCC Panska Ves 83.03 26 *e*P **P** **03 09 48.0 +4.2**
PVCC AMS AMS 03 46 00.0
comp=Z,600nm,23.3s
MNK Minsk 83.23 17 *i* P **P** **03 09 46.9 +2.2**
MNK *i* 03 12 56.6
MNK *i* PPP PPP 03 14 47.8
MNK *i* S **S** **03 20 04.0 -0.1**
MNK *i* SS **SS** **03 25 29.0 +1.8**
MNK *i* SSS SSS 03 28 54.1
MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,39nm,0.9s
MNK MLR MLR
comp=Z,305nm,19.0s
MNK MLR MLR
comp=E,36nm,19.0s
MNK MLR MLR
comp=N,22nm,18.0s
MNK Minsk 83.23 17 *i* P **P** **03 09 47.0 +2.2**
comp=E,1.0nm,0.7s
MNK *i* P **P** **03 09 47.0 +2.2**
comp=N,8.0nm,0.9s
MNK *i* P **P** **03 09 47.0 +2.2**
comp=Z,39nm,0.9s,baz=338
MNK *i* PP **PP** **03 12 56.7 +1.4**
MNK *i* PPP PPP 03 14 47.9
MNK *i* S **S** **03 20 04.0 -0.1**
MNK *i* SS **SS** **03 25 29.0 +1.8**
MNK *i* SSS SSS 03 28 54.1
MNK *i* LQ LQ 03 39 14.8
MNK *i* LR LR 03 42 24.9
MNK *i* LRM MLR 03 47 27.9
comp=Z,305nm,19.3s
MNK *i* LRM MLR 03 47 33.0
comp=E,36nm,19.4s
MNK *i* LRM MLR 03 48 17.2
comp=N,22nm,18.1s
GUMO Guam 83.33 282 LR LR 03 39 05.7
comp=N,110nm,21.0s,baz=91,slow=30
CHVC Chvalec 83.47 25 AMS AMS 03 47 50.0
PRU Pruhonice 83.48 26 *e*P **P** **03 09 50.2 +4.1**
PRU MLR MLR
comp=Z,500nm,17.3s
PRU Pruhonice 83.48 26 *e*P **P** **03 09 50.2 +4.1**
PRU AMS AMS 03 46 30.0
comp=Z,500nm,17.3s
UPC Upice 83.53 25 AMS AMS 03 47 50.0
comp=Z,500nm,19.3s
ESDC Sonseca Array 83.54 43 P **P** **03 09 45.7 -1.0**
comp=Z,3.1nm,0.7s,baz=318,slow=5.1,SNR=13
ESDC LR LR 03 44 36.4
comp=Z,289nm,19.0s,baz=304,slow=34
comp=Z,3.1nm,0.7s
OSTC Ostas 83.55 25 *e*P **P** **03 09 48.9 +2.4**
OSTC AMS AMS 03 48 10.0
comp=Z,500nm,18.0s
KNGR Kungurtug, Tuv 83.75 336 *i* P **P** **03 09 46.7 -0.9**
KNGR pmax pmax
comp=Z,26nm,1.1s
DPC Dobruska-Polom 83.76 25 *e*P **P** **03 09 51.5 +3.8**
DPC MLR MLR
comp=Z,500nm,16.5s
DPC Dobruska-Polom 83.76 25 *e*P **P** **03 09 51.5 +3.8**
DPC AMS AMS 03 48 10.0
comp=Z,500nm,16.5s
KHC Kasperske Hory 83.87 27 *e*P **P** **03 09 52.6 +4.4**
KHC MLR MLR
comp=Z,500nm,16.2s
KHC Kasperske Hory 83.87 27 *e*P **P** **03 09 52.6 +4.4**
KHC AMS AMS 03 47 00.0
comp=Z,500nm,16.2s
MOS Moscow 83.87 11 *e*P **P** **03 09 50.2 +2.2**
DAVA Damuels 84.03 30 *e*P **P** **03 09 51.5 +2.3**
comp=Z,7.9nm,1.2s
ZAA0 Zalesovo Array 84.13 344 P **P** **03 09 48.3 -1.0**
ZALV Zalesovo Beam 84.13 344 P **P** **03 09 48.5 -0.8**
comp=Z,2.4nm,0.7s,baz=22,slow=4.8,SNR=9.2
ZALV LR LR 03 50 37.1
comp=Z,369nm,18.6s,baz=16,slow=38
comp=Z,2.4nm,0.7s
ZALV Zalesovo Beam 84.13 344 P **P** **03 09 48.0 -1.4**
ZALV Zalesovo Beam 84.13 344 P **P** **03 09 48.0 -1.4**
KRLC Kraliky 84.15 25 *e*P **P** **03 09 51.0 +1.4**
KRLC MLR MLR
comp=Z,400nm,16.1s
KRLC Kraliky 84.15 25 *e*P **P** **03 09 51.0 +1.4**
KRLC AMS AMS 03 47 30.0
comp=Z,400nm,16.1s
GERES GERESS Array B 84.15 27 P **P** **03 09 48.9 -0.8**
comp=Z,1.4nm,1.0s,baz=326,slow=4.7,SNR=2.3
GERES LR LR 03 50 44.3
comp=Z,164nm,18.6s,baz=333,slow=38
comp=Z,1.4nm,1.0s
GERES GERESS Array B 84.15 27 P **P** **03 09 47.1 -2.6**
GERES GERESS Array B 84.15 27 P **P** **03 09 47.1 -2.6**
RETA Reutte 84.20 30 *e*P **P** **03 09 54.4 +4.4**
comp=Z,17nm,1.1s,SNR=6.7
OBN Obninsk 84.31 12 P **P** **03 09 50.5 +0.3**
comp=Z,2.1nm,0.5s,baz=95,slow=13,SNR=5.0
OBN LR LR 03 47 28.4
comp=Z,109nm,20.4s,baz=354,slow=36
comp=Z,2.1nm,0.5s
OBN Obninsk 84.31 12 P **P** **03 09 49.2 -1.0**
OBN Obninsk 84.31 12⇑*e*P **P** **03 09 53.9 +3.7**
OBN *e* 03 13 10.8
OBN *e*PPP PPP 03 15 01.9
OBN *e*S **S** **03 20 17.5 +2.6**
OBN pmax pmax
comp=Z,25nm,1.0s
OBN MLR MLR
comp=Z,415nm,20.0s
CKRC Cesky Krumlov 84.39 27 *e*P **P** **03 09 54.7 +3.9**
CKRC AMS AMS 03 47 10.0
comp=Z,500nm,17.8s
TREC Trest 84.39 26 AMS AMS 03 48 00.0
comp=Z,600nm,18.8s
DAVOX Davos/Dischmat 84.44 31 LR LR 03 50 47.1
comp=Z,427nm,18.6s,baz=318,slow=38
MOTA Moosalm 84.45 30 *i* P **P** **03 09 55.7 +4.4**
comp=Z,11nm,0.9s,SNR=5.3
FETA Feichten 84.57 30 *e*P **P** **03 09 56.4 +4.4**
comp=Z,24nm,1.0s,SNR=9.3
SQTA Sankt Quirin 84.59 30 *e*P P 03 09 57.0 +5.0
comp=Z,23nm,1.0s,SNR=9.9
ARU Arti 84.64 359 P **P** **03 09 51.9 0.0**
comp=Z,1.3nm,0.3s,baz=110,slow=23,SNR=1.5
ARU LR LR 03 52 52.4
comp=Z,346nm,18.3s,baz=340,slow=39
comp=Z,1.3nm,0.3s
ARU Arti 84.64 359*d**i*P **P** **03 09 54.4 +2.5**

ARU 03 13 06.7
ARU S **S** **03 20 17.6 -0.5**
ARU pmax pmax
comp=Z,11nm,1.5s
WATA Walderalm 84.64 29 *eP* **P** **03 09 56.8 +4.5**
comp=Z,20nm,1.0s,SNR=6.6
MORC Moravsky Berou 84.66 25 *eP* **P** **03 09 56.5 +4.3**
WTTA Wattenberg 84.72 29 *eP* **P** **03 09 57.2 +4.5**
comp=Z,13nm,0.9s,SNR=5.9
VRAC Vranov 84.75 25 LR LR 03 48 59.5
comp=Z,515nm,18.8s,baz=328,slow=37
VRAC Vranov 84.75 25 *eP* **P** **03 09 57.0 +4.4**
OKC Ostrava-Krasne 84.80 24 *eP* **P** **03 09 57.3 +4.5**
OKC MLR MLR
comp=Z,400nm,16.4s
OKC Ostrava-Krasne 84.80 24 *eP* **P** **03 09 57.3 +4.5**
OKC AMS AMS 03 51 10.0
comp=Z,400nm,16.4s
KRUC Moravsky 84.90 26 *eP* **P** **03 09 57.5 +4.1**
OJC Ojcow 84.98 23 *eP* **P** **03 09 57.2 +3.5**
OJC Ojcow 84.98 23 P **P** **03 09 51.5 -2.2**
OJC IAmb IAmb 03 09 58.5
comp=Z,12nm,0.9s
OJC Ojcow 84.98 23 P **P** **03 09 51.5 -2.2**
OJC pmax pmax
comp=Z,12nm,0.9s
BIOA Bad Ischl, Aus 85.10 28 *eP* P 03 09 59.9 +5.4
comp=Z,11nm,1.1s
ABTA Abfaltersbach 85.48 29 *eP* **P** **03 10 00.4 +4.0**
comp=Z,16nm,1.0s
JAVC Velka Javorina 85.50 25 *eP* P 03 10 01.8 +5.4
KBA Koelnbreinsper 85.51 28 *eP* **P** **03 10 01.1 +4.4**
comp=Z,7.0nm,0.8s
CONA Conrad Observa 85.69 26 *eP* **P** **03 10 01.8 +4.3**
comp=Z,11nm,1.0s,SNR=6.0
SMOL Smolenice 85.72 25 *eP* P 03 10 02.5 +5.0
MODS Modra-Piesok 85.79 25 *eP* P 03 10 02.8 +5.0
MODS pmax pmax
comp=Z,46nm,1.0s
MODS Modra-Piesok 85.79 25 *eP* P 03 10 02.8 +5.0
LANS Liptovska Anna 85.82 24 *eP* P 03 10 03.3 +5.3
LANS pmax pmax
comp=Z,7.0nm,0.9s
LANS Liptovska Anna 85.82 24 *eP* P 03 10 03.3 +5.3
NIE Niedzica 85.84 23 *eP* P 03 10 03.1 +5.0
MYKA Terra Mystica 86.00 28 *eP* **P** **03 10 03.1 +4.1**
comp=Z,4.0nm,0.9s
RONA Rosalia, Austr 86.04 26 *i* P **P** **03 10 03.1 +4.0**
comp=Z,8.1nm,1.1s
HHC Hu-ho-hao-te 86.11 322 *eP* **P** **03 09 56.4 -3.3**
HHC pmax pmax
comp=Z,22nm,1.1s
HHC pmax pmax
comp=Z,210nm,4.9s
HHC LR LR
comp=Z,380nm,20.5s
HHC LR LR
comp=Z,290nm,18.3s
HHC LR LR
comp=Z,440nm,20.3s
ARSA Arzberg 86.15 27 *eP* **P** **03 10 03.8 +4.1**
comp=Z,12nm,0.9s,SNR=5.5
VYHS Vyhne 86.19 24 *eP* **P** **03 10 04.2 +4.4**
VYHS pmax pmax
comp=Z,8.0nm,1.0s
VYHS Vyhne 86.19 24 *eP* **P** **03 10 04.2 +4.4**
HNR Honiara 86.22 255 LR LR 03 49 25.1
comp=Z,51nm,18.1s,baz=55,slow=36
OBKA Obir 86.44 28 *eP* **P** **03 10 05.0 +3.8**
comp=Z,20nm,0.8s
SOKA Soboth 86.47 28 *eP* **P** **03 10 04.9 +3.6**
comp=Z,13nm,0.9s,SNR=5.8
ZON Zonda 86.55 136 P **P** **03 09 59.5 -2.2**
ZON IAmb IAmb 03 10 09.7
comp=Z,14nm,1.0s
ZON Zonda 86.55 136 P **P** **03 09 59.5 -2.2**
ZON pmax pmax
comp=Z,14nm,1.0s
SRO Srobarova 86.62 25 *eP* P 03 10 07.5 +5.6
SRO Srobarova 86.62 25 *eP* P 03 10 07.5 +5.6
CRVS Cervenica-Dubn 86.65 23 *eP* **P** **03 10 06.5 +4.4**
CRVS Cervenica-Dubn 86.65 23 *eP* **P** **03 10 06.5 +4.4**
SRO2 Moca 86.69 25 *eP* P 03 10 06.9 +4.7
SRO2 Moca 86.69 25 *eP* P 03 10 06.9 +4.7
KOLS Kolonicke sedl 86.86 22 *eP* P 03 10 08.8 +5.7
KOLS pmax pmax
comp=Z,4.0nm,0.8s
KOLS Kolonicke sedl 86.86 22 *eP* P 03 10 08.8 +5.7
MPLH Magyarpolny 86.92 26 P **P** **03 10 07.7 +4.3**
PSZ Piszkesteto 87.04 24 P **P** **03 10 01.4 -2.7**
PSZ IAmb IAmb 03 10 12.3
comp=Z,11nm,1.0s
PSZ Piszkesteto 87.04 24 P **P** **03 10 01.4 -2.7**
PSZ pmax pmax
comp=Z,11nm,1.0s
PSZ MLR MLR
comp=Z,400nm,18.0s
PSZ Piszkesteto 87.04 24 P P 03 10 08.6 +4.6
AKASG Malin Array Be 87.07 17 P **P** **03 10 04.0 -0.1**
comp=Z,3.1nm,0.9s,baz=339,slow=4.0,SNR=9.5
AKASG LR LR 03 49 50.5
comp=Z,366nm,18.5s,baz=340,slow=36
comp=Z,3.1nm,0.9s
AKASG Malin Array Be 87.07 17 *i* P **P** **03 10 07.4 +3.4**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKBB Malin Array Si 87.07 17 *i* P **P** **03 10 04.4 +0.4**
AKBB pmax pmax
comp=Z,13nm,1.5s
LPSR Galich'ya Gora 87.11 11 *eP* **P** **03 10 06.9 +2.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
UZH Uzhgorod 87.14 22 *eP* P 03 10 11.6 +7.2
UZH *i* 03 10 17.8
HNS HongShan 87.18 318 ⇓P P 03 10 10.2 +5.4
HNS pmax pmax
comp=Z,12nm,1.0s
HNS LR LR
comp=Z,230nm,14.8s
HNS LR LR
comp=Z,230nm,17.5s
BRVK Borovoye 87.33 352 P **P** **03 10 04.3 -1.0**
BRVK IAmb IAmb 03 10 11.9
comp=Z,14nm,1.1s
BRVK Borovoye 87.33 352 *i* P **P** **03 10 07.7 +2.4**
BRVK pmax pmax
comp=Z,18nm,1.2s
VORR Voronezh 88.05 11 *eP* P 03 10 15.4 +6.7
MORH Mrgy, Hungar 88.12 26 P **P** **03 10 10.7 +1.5**
BDFB Brasilia 88.42 112 P **P** **03 10 10.3 -0.8**
comp=Z,0.8nm,0.5s,baz=54,slow=20,SNR=1.6
BDFB LR LR 03 54 55.7
comp=Z,254nm,18.3s,baz=21,slow=39
comp=Z,0.8nm,0.5s
KURK Kurchatov 88.42 347 P **P** **03 10 08.2 -2.3**
KURK IAmb IAmb 03 10 15.6
comp=Z,9.8nm,0.9s
KURK IAMs_20 IAMs_20 03 52 17.4
comp=Z,252nm,20.0s
KURK Kurchatov 88.42 347 *i* P **P** **03 10 09.1 -1.4**
KURK pmax pmax
comp=Z,15nm,1.1s
VSR Storozhevoye 88.49 11 *eP* **P** **03 10 14.5 +3.7**
VSR pmax pmax
comp=Z,4.0nm,0.6s
KURBB Kurchatov Arra 88.53 347 P **P** **03 10 10.2 -0.8**
comp=Z,3.1nm,0.9s,baz=16,slow=4.7,SNR=14
KURBB LR LR 03 53 03.7
comp=Z,190nm,21.8s,baz=335,slow=38
comp=Z,3.1nm,0.9s
NJ2 Nanjing 88.86 312 *eP* **P** **03 10 17.0 +4.1**
NJ2 pmax pmax
comp=Z,13nm,0.5s
BURAR Bucovina Array 88.89 21 P **P** **03 10 11.1 -1.9**
CPUP Villa Florida 89.36 125 P **P** **03 10 16.6 +1.5**
comp=Z,2.1nm,0.8s,baz=276,slow=1.9,SNR=4.8
CPUP LR LR 03 49 37.1
comp=Z,126nm,21.0s,baz=335,slow=35
comp=Z,2.1nm,0.8s
DZM Mont Dzumac 89.93 241 LR LR 03 42 35.0
comp=Z,84nm,19.9s,baz=28,slow=30
DZM Mont Dzumac 89.93 241 *e*LR LR 03 38 55.9
comp=Z,238nm,33.5s
AKTO Aktyubinsk 90.65 359 P **P** **03 10 20.8 -0.2**
comp=Z,3.7nm,1.1s,baz=175,slow=2.2,SNR=4.2
AKTO LR LR 03 53 00.2
comp=Z,325nm,21.5s,baz=354,slow=37
comp=Z,3.7nm,1.1s
MLR Muntele Rosu 91.04 21 LR LR 03 53 44.0
comp=Z,710nm,18.3s,baz=343,slow=37
RCBR Riachuelo 91.23 96 LR LR 03 58 08.4
comp=Z,204nm,18.8s,baz=116,slow=40
MK31 Makanchi Array 91.41 343 P **P** **03 10 22.8 -1.9**
MK31 IAmb IAmb 03 10 31.6
comp=Z,11nm,1.4s
MK31 Makanchi Array 91.41 343 P **P** **03 10 22.8 -1.9**
MK31 pmax pmax
comp=Z,11nm,1.4s
MKAR Makanchi Array 91.41 343 P **P** **03 10 23.2 -1.4**
comp=Z,0.5nm,0.7s,baz=46,slow=5.2,SNR=12
MKAR LR LR 03 56 28.5
comp=Z,206nm,18.8s,baz=30,slow=39
comp=Z,0.5nm,0.7s
MKAR Makanchi Array 91.41 343 P **P** **03 10 22.0 -2.7**
MKAR Makanchi Array 91.41 343 P **P** **03 10 22.0 -2.7**
MAKZ Makanchi 91.47 343 P **P** **03 10 22.6 -2.3**
MAKZ Makanchi 91.47 343 P **P** **03 10 22.6 -2.3**
MAKZ pmax pmax
comp=Z,12nm,0.9s
MAKZ MLR MLR
comp=Z,200nm,19.0s
ABKAR Akbulak array 91.80 358 P **P** **03 10 23.7 -2.6**
GTA Gaotai 92.51 328 *eP* P 03 10 35.0 +5.0
GTA pP sP 03 10 41.1 +3.0
GTA sP pP 03 10 44.6 +8.7
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,66nm,6.2s
GTA LR LR
comp=Z,250nm,20.7s
GTA LR LR
comp=Z,250nm,18.2s
GTA LR LR
comp=Z,380nm,20.0s
XAN Xi'an 92.75 319 P **P** **03 10 30.1 -1.0**
XAN pP pP 03 10 34.6 -2.5
XAN pmax pmax
comp=Z,16nm,0.9s
XAN LR LR
comp=Z,140nm,21.3s
XAN LR LR
comp=Z,250nm,21.3s
XAN LR LR
comp=Z,250nm,16.5s
PLCA Paso Flores 92.79 143 LR LR 03 46 52.1
comp=Z,344nm,18.0s,baz=320,slow=32
WMQ Urumqi 92.80 338 *eP* **P** **03 10 31.3 +0.1**
KEST Kesra 93.25 37 LR LR 03 52 09.5
comp=Z,260nm,19.4s,baz=257,slow=35
LZH Lanzhou 93.55 324 *eP* P 03 10 40.0 +5.1
LZH sP sP 03 10 48.2 +5.2
LZH pmax pmax
comp=Z,18nm,1.0s
LZH LR LR
comp=Z,450nm,15.1s
LZH LR LR
comp=Z,270nm,13.9s
LZH LR LR
comp=Z,570nm,16.7s
SIM Simferopol' 93.59 16 P **P** **03 10 32.9 -1.8**
SIM SP SP 03 22 56.7 +2.0
CEL Celeste 94.00 31 IAMs_20 IAMs_20 03 57 12.2
comp=Z,229nm,19.0s
VAE Valguarnera 94.05 33 LR LR 03 51 40.9
comp=Z,126nm,18.8s,baz=4.0,slow=35
URZ Urewera 94.85 223 LR LR 03 48 30.0
comp=Z,61nm,18.4s,baz=32,slow=32
SOC Sochi 96.00 13 *i* P **P** **03 10 45.6 -0.1**
SOC *e* 03 14 35.4
SOC *e*S **SKSac** **03 21 21.3 -0.1**
SOC *e*SS **SS** **03 28 36.0 +3.8**
SOC *e*SSS SSS 03 32 15.5
SOC MLR MLR
comp=Z,226nm,19.0s
KIV Kislovodsk 96.09 11 *eP* P 03 10 51.4 +5.1
KIV *e* 03 21 27.3
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,150nm,20.0s
KVAR Kislovodsk Arr 96.10 11 LR LR 03 54 41.7
comp=Z,237nm,21.1s,baz=270,slow=36
KBZ Khabaz 96.35 10 P **P** **03 10 49.6 +2.3**
comp=Z,3.2nm,1.0s,baz=251,slow=1.7,SNR=7.8
KBZ LR LR 03 55 28.5
comp=Z,208nm,20.0s,baz=342,slow=36
KBZ Khabaz 96.35 10*e*P **P** **03 10 49.4 +2.1**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
AAK Ala-Archa 96.96 347 LR LR 04 00 05.0
comp=Z,221nm,18.6s,baz=6.5,slow=39
AAK Ala-Archa 96.96 347 P **P** **03 10 47.9 -2.4**
AAK IAmb IAmb 03 11 01.2
comp=Z,4.7nm,1.1s
AAK Ala-Archa 96.96 347 *i* P **P** **03 10 49.6 -0.7**
AAK pmax pmax
comp=Z,22nm,4.0s
MAK Makhachkala 97.65 7 *eP* P 03 10 45.7 -7.5
MAK pmax pmax
comp=Z,25nm,0.5s
CD2 Chengdu 97.84 321 *eP* **P** **03 10 49.8 -4.6**
BRTR Keskin Array B 98.45 18 P Pdif 03 10 57.9 +0.8
comp=Z,1.2nm,1.0s,baz=338,slow=3.1,SNR=4.0
BRTR LR LR 03 59 38.5
comp=Z,230nm,18.1s,baz=355,slow=38
comp=Z,1.2nm,1.0s
IDI Anoyia 100.00 26 LR LR 04 00 41.0
comp=Z,108nm,18.7s,baz=316,slow=38
TNTI Ternate 104.78 283 IAMs_20 IAMs_20 03 48 45.0
comp=Z,127nm,20.0s
LUWI Luwuk 109.43 285 IAMs_20 IAMs_20 03 48 25.9
comp=Z,136nm,21.0s
ASAR Alice Springs 114.57 259 PKP **PKiKP** **03 15 58.9 -0.2**
comp=Z,0.8nm,0.8s,baz=75,slow=2.5,SNR=2.0
VNDA Vanda 124.96 195 PKP **PKPdf** **03 16 16.9 -0.4**
comp=Z,0.5nm,0.7s,baz=308,slow=4.8,SNR=2.8
TROLL Troll, Antarti 137.64 158 PKP **PKiKP** **03 16 49.0 +5.5**
MAW Mawson 151.47 185 PKPbc **PKiKP** **03 17 11.3 -0.5**
comp=Z,1.8nm,0.7s,baz=79,slow=14,SNR=1.9
BOSA Boshof 151.55 78 PKPbc **PKiKP** **03 17 13.2 -0.3**
comp=Z,7.6nm,1.0s,baz=332,slow=4.2,SNR=4.0

*NOU **10** 02:59:13.0,38.69S×178.73E,h8km,mb4.0/6,Off E. Coast of N. Island, N.Z.*
*WEL **10** 02:59:22.3±0.5,39°S±3'×17°8E±', h27km±5km,M3.8/13, ML4.1/13,MLv3.8/13,Error ellipse: s-maj=0.0km s-min=0.0km az=118.3*
ISC 10 02:59:20.9±1.2,38.66S±0.03×178.11E±0.04,h28km±10km, n92,σ1ᵍ08/103,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**0.19**	**23**	P	**Pn**	**02 59 29.7**	**+1.8**
RIGZ	**Rimuhau**	**0.28**	**260**	P	**Pn**	**02 59 29.8**	**+0.6**
RIGZ				S	**Sn**	**02 59 36.2**	**+1.7**
TKGZ	**Te Karaka**	**0.30**	**317**	P	**Pn**	**02 59 28.8**	**-0.7**
TKGZ				S	**Sb**	**02 59 33.9**	**+0.8**
TWGZ	**Tauwhareparae**	**0.49**	**348**	P	**Pn**	**02 59 32.1**	**-0.1**
TWGZ				S	**Sn**	**02 59 40.2**	**+0.4**
KNZ	**Kokohu**	**0.50**	**223**	P	**Pn**	**02 59 33.4**	**+1.2**
MHGZ	**Mahia Peninsul**	**0.52**	**198**	P	**Pn**	**02 59 34.8**	**+2.3**
MWZ	**Matawai**	**0.56**	**305**	P	**Pb**	**02 59 32.3**	**0.0**
MWZ				S	**Sb**	**02 59 39.9**	**-0.2**
RAGZ	**Rawiri**	**0.57**	**286**	P	**Pn**	**02 59 32.9**	**-0.3**
RAGZ				S	**Sb**	**02 59 41.0**	**+0.7**
PUZ	**Puketiti**	**0.60**	**11**	P	**Pn**	**02 59 33.9**	**+0.3**
PUZ				S	**Sn**	**02 59 42.9**	**+0.5**
SNGZ	**Shannon Statio**	**0.61**	**258**	P	**Pn**	**02 59 34.4**	**+0.5**
SNGZ				S	**Sn**	**02 59 43.9**	**+1.1**
PKGZ	**Pakihiroa**	**0.77**	**358**	P	**Pn**	**02 59 36.3**	**+0.3**
PKGZ				S	**Sn**	**02 59 47.1**	**+0.5**
RUGZ	**Raukumara Rang**	**0.77**	**334**	P	**Pb**	**02 59 35.4**	**-0.5**
RUGZ				S	**Sb**	**02 59 44.9**	**-1.2**
WHHZ	**Waihua**	**0.80**	**238**	P	**Pn**	**02 59 37.3**	**+1.0**
RAHZ	**Arahi**	**0.84**	**252**	P	**Pn**	**02 59 37.6**	**+0.7**
WMGZ	**Waiomatatini S**	**0.87**	**16**	P	**Pn**	**02 59 37.9**	**+0.6**
URZ	**Urewera**	**0.88**	**297**	P	**Pn**	**02 59 37.0**	**-0.4**
URZ				S	**Sb**	**02 59 49.1**	**+0.1**
URZ	**Urewera**	**0.88**	**297**	P	**Pn**	**02 59 37.2**	**-0.2**
HAZ	**Te Kaha**	**0.94**	**344**	P	**Pb**	**02 59 38.1**	**-0.5**
HAZ				S	**Sn**	**02 59 50.7**	**+0.1**
MTHZ	**Maungataniwha**	**1.01**	**259**	P	**Pb**	**02 59 39.8**	**-0.1**
ARHZ	**Aropaoanui**	**1.06**	**235**	P	**Pb**	**02 59 40.8**	**+0.2**
MUGZ	**Murupara**	**1.07**	**279**	P	**Pn**	**02 59 40.4**	**+0.4**
MXZ	**Matakaoa Point**	**1.11**	**8**	P	**Pb**	**02 59 41.0**	**-0.4**
NMHZ	**Naumai**	**1.11**	**246**	P	**Pb**	**02 59 41.4**	**-0.1**
WHRZ	**Whale Island**	**1.20**	**312**	P	**Pb**	**02 59 42.8**	**-0.2**
EDRZ	**Edgecumbe**	**1.21**	**297**	P	**Pn**	**02 59 42.5**	**+0.4**
CKHZ	**Cape Kidnapper**	**1.28**	**219**	P	**Pb**	**02 59 43.7**	**-0.7**
RRRZ	**Republican Roa**	**1.29**	**284**	P	**Pn**	**02 59 43.6**	**+0.4**
MARZ	**Manawahe**	**1.31**	**300**	P	**Pn**	**02 59 43.5**	**0.0**
TARZ	**Mount Tarawera**	**1.33**	**288**	P	**Pn**	**02 59 44.5**	**+0.8**
MRHZ	**Matea Rd**	**1.34**	**262**	P	**Pb**	**02 59 44.8**	**-0.6**
WIZ	**White Island**	**1.34**	**327**	P	**Pb**	**02 59 44.5**	**-1.0**
PRRZ	**Plateau Road**	**1.36**	**276**	P	**Pb**	**02 59 45.3**	**-0.4**
BKZ	**Black Stump Fm**	**1.36**	**248**	P	**Pn**	**02 59 44.7**	**+0.6**
BKZ	**Black Stump Fm**	**1.36**	**248**	P	**Pb**	**02 59 45.2**	**-0.6**
ALRZ	**Allen Road**	**1.39**	**273**	P	**Pb**	**02 59 46.0**	**-0.2**
HLRZ	**Highlands Stat**	**1.44**	**286**	P	**Pn**	**02 59 46.0**	**+0.9**
HRRZ	**Handcock Road**	**1.46**	**280**	P	**Pn**	**02 59 46.4**	**+1.0**
OPRZ	**Ohinepanea**	**1.47**	**303**	P	**Pn**	**02 59 45.0**	**-0.5**
OMRZ	**Omania**	**1.47**	**291**	P	**Pn**	**02 59 45.9**	**+0.2**
KAHZ	**Kahuranaki**	**1.48**	**220**	P	**Pn**	**02 59 46.4**	**+0.6**
HSRZ	**Hossack Road**	**1.50**	**283**	P	**Pn**	**02 59 47.2**	**+1.1**
KWHZ	**Kaweka Forest**	**1.52**	**239**	P	**Pn**	**02 59 47.0**	**+0.7**
WPRZ	**Whakapapatarin**	**1.53**	**275**	P	**Pb**	**02 59 47.9**	**-0.8**
GRRZ	**Galatos Road**	**1.60**	**281**	P	**Pn**	**02 59 48.6**	**+1.2**
KARZ	**Kaharoa**	**1.60**	**293**	P	**Pn**	**02 59 47.4**	**+0.1**
NGRZ	**Ngongotaha**	**1.61**	**290**	P	**Pn**	**02 59 48.2**	**+0.7**
RITZ	**Rihia Road**	**1.79**	**259**	P	**Pb**	**02 59 52.6**	**-0.5**
BHHZ	**Black Hill Sta**	**1.80**	**242**	P	**Pn**	**02 59 50.7**	**+0.6**
WPHZ	**Waipukurau**	**1.91**	**222**	P	**Pn**	**02 59 51.7**	**+0.1**
KATZ	**Kakaramea**	**1.91**	**260**	P	**Pb**	**02 59 54.4**	**-0.8**
ETVZ	**East Tongariro**	**1.93**	**255**	P	**Pn**	**02 59 53.5**	**+1.5**
TMVZ	**Te Maari**	**1.93**	**256**	P	**Pn**	**02 59 53.6**	**+1.6**
PNHZ	**Pukenui**	**1.94**	**229**	P	**Pn**	**02 59 51.9**	**-0.2**
NTVZ	**North Tongarir**	**1.95**	**256**	P	**Pn**	**02 59 53.4**	**+1.1**
PRHZ	**Porangahau**	**1.97**	**215**	P	**Pn**	**02 59 51.9**	**-0.5**
OTVZ	**Oturere**	**1.97**	**254**	P	**Pn**	**02 59 54.1**	**+1.5**
KRVZ	**Karewarewa**	**1.98**	**257**	P	**Pn**	**02 59 53.9**	**+1.2**
MOVZ	**Moawhango**	**1.98**	**247**	P	**Pn**	**02 59 53.2**	**+0.6**
SNVZ	**South Ngauruho**	**2.00**	**254**	P	**Pn**	**02 59 54.1**	**+1.1**
NNVZ	**North Ngauruho**	**2.00**	**256**	P	**Pb**	**02 59 55.6**	**-1.1**
TUVZ	**Tukino**	**2.01**	**252**	P	**Pb**	**02 59 56.2**	**-0.7**
WTVZ	**West Tongariro**	**2.02**	**256**	P	**Pn**	**02 59 54.8**	**+1.6**
NGZ	**Ngauruhoe**	**2.02**	**254**	P	**Pn**	**02 59 54.9**	**+1.6**
WHVZ	**Whangaehu Hut**	**2.06**	**252**	P	**Pn**	**02 59 54.8**	**+0.9**
FWVZ	**Far West T-bar**	**2.08**	**253**	P	**Pn**	**02 59 56.1**	**-2.0**
TWVZ	**Taurewa**	**2.13**	**258**	P	**Pn**	**02 59 56.1**	**+1.4**
TSZ	**Takapari Road**	**2.17**	**229**	P	**Pn**	**02 59 54.9**	**-0.4**
DVHZ	**Dannevirke**	**2.22**	**222**	P	**Pn**	**02 59 55.4**	**-0.5**
PKVZ	**Pokaka**	**2.25**	**253**	P	**Pn**	**02 59 57.8**	**+1.6**
TOZ	**Tahuroa Road**	**2.25**	**293**	P	**Pn**	**02 59 56.0**	**-0.3**
BFZ	**Birch Farm**	**2.48**	**215**	P	**Pn**	**02 59 58.4**	**-1.1**
BFZ	**Birch Farm**	**2.48**	**215**	P	**Pn**	**02 59 58.8**	**-0.7**
POWZ	**Post Office Ro**	**2.50**	**226**	P	**Pn**	**02 59 59.5**	**-0.3**
PRWZ	**Pori Road**	**2.51**	**220**	P	**Pn**	**02 59 59.5**	**-0.4**
HIZ	**Hauiti**	**2.56**	**272**	P	**Pn**	**03 00 01.7**	**+1.2**
HIZ	**Hauiti**	**2.56**	**272**	P	**Pn**	**03 00 01.7**	**+1.2**
WAZ	**Wanganui**	**2.66**	**245**	P	**Pn**	**03 00 03.8**	**+1.8**
TIWZ	**Tintock**	**2.72**	**218**	P	**Pn**	**03 00 02.0**	**-0.8**
MRZ	**Mangatainoka R**	**2.80**	**224**	P	**Pn**	**03 00 02.6**	**-1.2**
MKAZ	**Moumakai**	**2.80**	**303**	P	**Pn**	**03 00 03.8**	**-0.1**
TMWZ	**Te Maipa**	**2.98**	**214**	P	**Pn**	**03 00 04.9**	**-1.5**
HOWZ	**Holdsworth Sta**	**3.00**	**221**	P	**Pn**	**03 00 05.2**	**-1.5**
OGWZ	**Otaki Gorge**	**3.13**	**226**	P	**Pn**	**03 00 06.8**	**-1.5**
NEZ	**North Egmont**	**3.19**	**258**	P	**Pn**	**03 00 11.9**	**+2.7**
KHEZ	**Kahui Hut**	**3.25**	**257**	P	**Pn**	**03 00 12.4**	**+2.2**
PKE	**Pukeiti**	**3.26**	**259**	P	**Pn**	**03 00 12.4**	**+2.2**
KIW	**Kapiti Island**	**3.31**	**227**	P	**Pn**	**03 00 09.3**	**-1.4**
TRWZ	**Traveller**	**3.31**	**213**	P	**Pn**	**03 00 09.3**	**-1.5**
DUWZ	**D'Urville Isla**	**3.87**	**235**	P	**Pn**	**03 00 17.2**	**-1.5**
QRZ	**Quartz Range**	**4.82**	**242**	P	**Pn**	**03 00 29.8**	**-1.7**
KHZ	**Kahutara**	**5.12**	**221**	P	**Pn**	**03 00 33.3**	**-2.4**
CTZ	**Chatham Island**	**6.44**	**144**	P	**Pn**	**03 00 56.1**	**+2.3**

*IDC **10** 03:00:27.4±0.6,34°23N×86°20E,h0km,mb4.1/20, mbtmp4.1/25,ML3.8/5,MS3.7/22,Error ellipse: s-maj=17.3km s-min=13.8km az=28.0*
*BJI **10** 03:00:31.2±0.0,34°31N×86°30E,h6km,mb4.4/17, mB4.5/11,Ms4.2/16,Ms7 4.0/16*
*NEIC **10** 03:00:32.8±1.8,34°39N±0°10×86°1E±0°1,h30km±6km, mb4.3/17,Error ellipse: s-maj=16.5km s-min=10.7km az=221.0*
ISC 10 03:00:30.0±0.4,34°48N±0°05×86°27E±0°05,h10km,n89, σ1ᵍ89/75,mb4.1/23,MS3.6/21,1C-1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.31**	**138**	Pn	**Pn**	**03 02 02.6**	**-1.0**
LSA	**Lhasa**	**6.31**	**138**	Pg	**Pb**	**03 02 18.5**	**-1.7**
LSA				Sg	**Sg**	**03 03 51.9**	**-0.7**
LSA				LR	LR		
	comp=N,380nm,5.3s						
LSA				LR	LR		
	comp=E,330nm,5.3s						
LSA				LR	LR		
	comp=Z,450nm,6.1s						
DANN	**Dangsing**	**6.47**	**200**	*e*P	**Pn**	**03 02 08.0**	**+2.4**
	28nm,0.4s						
GUN	**Gumba**	**6.55**	**183**	*e*P	**Pn**	**03 02 09.6**	**+2.8**
	34nm,0.4s						
GKN	**Gorkha**	**6.60**	**193**	*e*P	**Pn**	**03 02 10.1**	**+2.8**
	27nm,0.6s						
KKN	**Kakani**	**6.72**	**188**	*e*P	**Pn**	**03 02 12.1**	**+3.1**
	9.9nm,0.5s						
JIRN	**Jiri**	**6.79**	**181**	*e*P	**Pn**	**03 02 13.5**	**+3.4**
	62nm,0.4s						
DMN	**Daman**	**6.92**	**189**	*e*P	**Pn**	**03 02 15.3**	**+3.6**
	48nm,0.5s						
PKIN	**Phulchoki**	**6.92**	**186**	*e*P	**Pn**	**03 02 15.0**	**+3.3**
	62nm,0.5s						
PKI	**Pulchoki**	**6.92**	**186**	*e*P	**Pn**	**03 02 15.1**	**+3.2**
	31nm,0.5s						
GOMU	**GeErMu**	**7.19**	**74**	Pn	Pn	03 02 22.1	+6.5
GOMU				Sn	**Sn**	**03 03 42.4**	**+4.9**
GOMU				LR	LR		
	comp=N,2μm,7.9s						
GOMU				LR	LR		
	comp=E,1μm,9.5s						
GOMU				LR	LR		
	comp=Z,1μm,9.1s						
TAPN	**Taplejung**	**7.21**	**170**	*e*P	**Pn**	**03 02 17.4**	**+1.6**
	26nm,0.3s						
RAMN	**Ramite**	**7.51**	**178**	*e*P	**Pn**	**03 02 22.4**	**+2.6**
	15nm,0.4s						
ODAN	**Odare**	**7.65**	**172**	*e*P	**Pn**	**03 02 23.7**	**+1.9**
WMQ	**Urumqi**	**9.40**	**6**	*e*P	**Pn**	**03 02 46.0**	**+0.5**
WMQ				LR	LR		
	comp=N,410nm,14.3s						
WMQ				LR	LR		
	comp=E,800nm,12.5s						
WMQ				LR	LR		
	comp=Z,170nm,17.7s						
PRZ	**Przheval'sk**	**10.10**	**325**	Pn	**Pn**	**03 02 54.6**	**-0.6**
NRN	**Naryn**	**10.67**	**314**	Pn	**Pn**	**03 03 02.6**	**-0.7**
NIL	**Nilore**	**10.83**	**269**	Pn	**Pn**	**03 03 03.4**	**-1.8**
BOOM	**Boomskoye usch**	**11.38**	**318**	Pn	**Pn**	**03 03 13.2**	**+0.5**
GTA	**Gaotai**	**11.90**	**62**	*e*P	Pn	03 03 27.1	+7.2
GTA				sP		03 03 37.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,58nm,4.0s						
GTA				LR	LR		
	comp=Z,840nm,14.2s						
GTA				LR	LR		
	comp=Z,290nm,16.7s						
GTA				LR	LR		
	comp=Z,430nm,16.0s						
AAK	**Ala-Archa**	**12.29**	**315**	Pn	**Pn**	**03 03 26.9**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=133,slow=15,SNR=1.4						
AAK				LR	LR	03 07 59.2	
	comp=Z,53nm,19.8s,baz=125,slow=36						
	comp=Z,1.2nm,0.3s						
AAK	**Ala-Archa**	**12.29**	**315**	Pn	**Pn**	**03 03 26.5**	**+1.2**
MK31	**Makanchi Array**	**12.67**	**347**	Pn	**Pn**	**03 03 31.2**	**+1.0**
MKAR	**Makanchi Array**	**12.67**	**347**	Pn	**Pn**	**03 03 31.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=158,slow=15,SNR=25						
	comp=Z,2.5nm,0.7s						

MAKZ Makanchi 12.74 347 Pn 03 03 32.2 +1.0
KBL Kabul 14.21 275 Pn **Pn 03 03 49.1 -2.5**
PZH PanZhiHua 15.51 117 P Pn 03 04 04.1 -4.9
PZH S **Sn 03 06 57.5 -3.5**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,80nm,4.4s
PZH LR LR
comp=N,250nm,6.6s
PZH LR LR
comp=E,190nm,7.5s
PZH LR LR
comp=Z,320nm,7.3s
KMI Kunming 17.04 119 ⇑P **Pn 03 04 32.2 +3.5**
KMI pmax pmax
comp=Z,11nm,0.8s
KMI LR LR
comp=Z,200nm,10.7s
KMI LR LR
comp=Z,270nm,7.3s
KMI LR LR
comp=Z,190nm,8.7s
KURBB Kurchatov Arra 17.10 343 P **Pn 03 04 30.2 +1.2**
comp=Z,0.1nm,0.3s,baz=160,slow=11,SNR=40
comp=Z,11nm,0.8s
KURK Kurchatov 17.16 343 Pn **Pn 03 04 29.0 -0.8**
KURK IAmb IAmb 03 04 36.0
comp=Z,13nm,0.8s
HYBB Hyderabad (bro 18.34 204 *e*P **Pn 03 04 43.8 -0.8**
HYBB *e*S **Sn 03 08 10.8 +1.3**
XAN Xi'an 18.73 85 P **P 03 04 47.1 -1.8**
XAN pP Pn 03 04 51.3 +2.0
XAN S **Sn 03 08 15.6 -3.2**
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN LR LR
comp=N,1μm,16.9s
XAN LR LR
comp=E,540nm,15.7s
XAN LR LR
comp=Z,390nm,13.5s
CHTO Chiang Mai 19.25 141 P **P 03 04 52.7 -2.0**
CHTO IAmb IAmb 03 05 01.9
comp=Z,15nm,0.5s
ZAA0 Zalesovo Array 19.50 357 P **P 03 04 58.5 +1.5**
ZALV Zalesovo Beam 19.50 357 P **P 03 04 58.9 +1.9**
comp=Z,0.5nm,0.3s,baz=174,slow=11,SNR=16
ZALV LR LR 03 13 38.3
comp=Z,199nm,18.0s,baz=184,slow=40
comp=Z,5.0nm,0.7s
ZALV Zalesovo Beam 19.50 357 P **P 03 04 58.0 +0.9**
CM31 Chiang Mai Arr 19.54 142 P **P 03 05 00.1 +2.3**
CMAR Chiang Mai Arr 19.54 142 P **P 03 04 56.1 -1.7**
comp=Z,0.7nm,0.3s,baz=324,slow=10,SNR=1.6
CMAR LR LR 03 13 29.0
comp=Z,110nm,19.3s,baz=325,slow=40
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 19.54 142 P **P 03 04 58.0 +0.1**
HRA Herat 19.82 277 P **P 03 04 59.2 -1.8**
SONM Songino Array 20.11 42 P **P 03 05 06.8 +2.8**
comp=Z,5.8nm,0.9s,baz=233,slow=12,SNR=20
SONM LR LR 03 13 47.7
comp=Z,230nm,20.0s,baz=240,slow=39
comp=Z,5.8nm,0.9s
SONM Songino Array 20.11 42 P **P 03 05 06.5 +2.4**
SONM IAmb IAmb 03 05 13.4
comp=Z,11nm,1.2s
ULN Ulaanbaatar 20.50 43 P **P 03 05 10.4 +2.1**
ULN IAmb IAmb 03 05 13.3
comp=Z,8.7nm,0.8s
HHC Hu-ho-hao-te 20.97 65 *e*P **P 03 05 15.2 +1.8**
HHC pmax pmax
comp=Z,40nm,1.0s
HHC pmax pmax
comp=Z,340nm,5.2s
HHC LR LR
comp=Z,2μm,16.0s
HHC LR LR
comp=Z,520nm,12.2s
HHC LR LR
comp=Z,880nm,18.3s
BRVK Borovoye 21.78 333 P **P 03 05 22.7 +0.8**
GEYT Alibeck 22.94 287 P **P 03 05 33.3 -1.2**
comp=Z,1.5nm,0.5s,baz=83,slow=17,SNR=1.8
GEYT LR LR 03 16 26.6
comp=Z,402nm,20.2s,baz=100,slow=42
comp=Z,1.5nm,0.5s
GEYT Alibeck 22.94 287 P **P 03 05 32.3 -2.1**
HNS HongShan 23.17 75 ⇓P **P 03 05 33.7 -3.0**
HNS S S 03 09 31.3 -17
HNS LR LR
comp=N,380nm,15.5s
HNS LR LR
comp=Z,200nm,12.0s
BJT Baijiatuan 24.37 68 P **P 03 05 48.6 +0.3**
BJT IAmb IAmb 03 05 50.9
comp=Z,6.3nm,0.6s
ABKAR Akbulak array 24.38 315 P **P 03 05 48.8 +0.5**
UBPT Khong Chiam 25.77 133 P **P 03 06 01.2 +0.1**
UBPT IAmb IAmb 03 06 04.0
comp=Z,13nm,0.9s
AKTO Aktyubinsk 26.03 316 P **P 03 06 04.1 +0.9**
comp=Z,2.6nm,0.9s,baz=111,slow=8.7,SNR=11
AKTO LR LR 03 17 53.9
comp=Z,96nm,18.1s,baz=124,slow=40
comp=Z,2.6nm,0.9s
WSAR Wadi Sarin 26.59 252 LR LR 03 18 09.1
comp=Z,79nm,19.6s,baz=116,slow=40
PALK Pallekele 27.55 192 LR LR 03 17 40.2
comp=Z,85nm,18.0s,baz=126,slow=38
ARU Arti 28.98 328 LR LR 03 19 32.8
comp=Z,153nm,19.0s,baz=150,slow=39
BELG Belogornoye 32.79 315 LR LR 03 22 12.7
comp=Z,47nm,20.4s,baz=131,slow=40
GNI Garni 33.29 292 LR LR 03 23 29.6
comp=Z,61nm,21.7s,baz=100,slow=42
PSI Prapat 33.65 157 LR LR 03 22 35.0
comp=Z,96nm,19.1s,baz=308,slow=40
KSRS Korea Array 33.65 73 P **P 03 07 11.6 +0.7**
comp=Z,2.8nm,0.6s,baz=277,slow=9.1,SNR=15
KSRS LR LR 03 21 09.0
comp=Z,43nm,18.4s,baz=80,slow=37
comp=Z,2.8nm,0.6s
KIRV Kirov 34.29 326 LR LR 03 22 48.3
comp=Z,105nm,19.6s,baz=124,slow=39
NRIK Noril'sk 34.92 1 P **P 03 07 23.1 +1.5**
comp=Z,18nm,0.6s,baz=166,slow=6.7,SNR=14
comp=Z,18nm,0.6s
NRIK Noril'sk 34.92 1 P **P 03 07 21.9 +0.3**
USRK Ussuriysk Ar. 36.26 61 P **P 03 07 34.6 +1.3**
comp=Z,1.3nm,0.6s,baz=257,slow=3.7,SNR=2.0
comp=Z,1.3nm,0.6s
KLR Kul'dur 36.37 52 P **P 03 07 35.2 +1.0**
comp=Z,1.8nm,0.8s,baz=265,slow=9.8,SNR=6.8
comp=Z,1.8nm,0.8s
YAK Yakutsk 38.75 31 P P 03 07 52.7 -1.5
MJAR Matsushiro Arr 41.91 72 P P 03 08 19.3 -1.5
comp=Z,1.2nm,0.4s,baz=285,slow=7.4,SNR=2.8
comp=Z,1.2nm,0.4s
MMAI Mount Meron Ar 41.96 283 LR LR 03 28 25.2
comp=Z,47nm,19.3s,baz=244,slow=40
EIL Elat 43.38 278 LR LR 03 30 00.0
comp=Z,94nm,20.7s,baz=81,slow=41
AKBB Malin Array Si 43.90 310 P **P 03 08 35.9 -0.7**
AKBB IAmb IAmb 03 08 39.6
comp=Z,8.1nm,1.4s
AK05 Malin Array Si 43.91 310 P **P 03 08 35.5 -1.2**
AK05 IAmb IAmb 03 08 44.5
comp=Z,5.9nm,1.1s
LVZ Lovozero 44.30 335 P **P 03 08 40.1 +0.4**
LVZ IAmb IAmb 03 08 45.8
comp=Z,33nm,0.9s
ATD Arta Tunnel 45.58 251 LR LR 03 29 04.5
comp=Z,49nm,18.2s,baz=206,slow=38
FINES FINESS Array B 45.25 325 P **P 03 08 55.6 +0.4**
comp=Z,1.6nm,0.8s,baz=136,slow=11,SNR=1.8
comp=Z,1.6nm,0.8s
SEY Seymchan 49.15 34 P **P 03 09 17.2 -0.4**
comp=Z,1.3nm,0.3s,baz=266,slow=14,SNR=2.4
comp=Z,1.3nm,0.3s
KAPI Kappang 50.39 134 LR LR 03 33 34.2
comp=Z,77nm,19.4s,baz=9.0,slow=40
NOA NORSAR Array B 53.42 324 P **P 03 09 49.5 -0.3**
comp=Z,1.5nm,0.8s,baz=84,slow=7.4,SNR=3.4
comp=Z,1.5nm,0.8s
ESDC Sonseca Array 69.17 304 P **P 03 11 36.3 -0.5**
comp=Z,1.4nm,0.8s,baz=50,slow=7.6,SNR=6.4
comp=Z,1.4nm,0.8s
WRA Warramunga Arr 70.83 132 P P 03 11 44.8 -2.3
comp=Z,0.9nm,0.6s,baz=324,slow=6.4,SNR=9.2
comp=Z,0.9nm,0.6s
PMG Port Moresby 72.23 115 LR LR 03 46 46.3
comp=Z,221nm,20.5s,baz=54,slow=38
ILAR Eielson Array 72.73 21 P **P 03 11 57.4 -0.6**
comp=Z,1.1nm,0.8s,baz=310,slow=4.8,SNR=12
ILAR LR LR 03 45 33.2
comp=Z,84nm,19.2s,baz=72,slow=37
comp=Z,1.1nm,0.8s
INK Inuvik 73.32 14 P **P 03 12 01.3 0.0**
comp=Z,2.9nm,0.9s,baz=39,slow=12,SNR=3.5
comp=Z,2.9nm,0.9s
ASAR Alice Springs 73.41 135 P **P 03 12 00.8 -1.7**
comp=Z,0.8nm,0.6s,baz=320,slow=6.1,SNR=7.6
comp=Z,0.8nm,0.6s
ASAR Alice Springs 73.41 135 P **P 03 12 00.8 -1.7**
TORD Torodi Ar. Bea 78.26 278 P **P 03 12 29.5 -1.0**
comp=Z,1.1nm,0.7s,baz=50,slow=4.8,SNR=6.8
comp=Z,1.1nm,0.7s
YKA Yellowknife Ar 81.92 10 P **P 03 12 49.0 -0.4**
comp=Z,1.1nm,0.6s,baz=333,slow=5.6,SNR=2.8
comp=Z,1.1nm,0.6s
STKA Stephens Creek 84.04 135 LR LR 03 56 43.8
comp=Z,134nm,18.8s,baz=31,slow=40
BOSA Boshof 85.21 231 P **P 03 13 05.2 -1.7**
comp=Z,2.0nm,0.8s,baz=7.5,slow=3.5,SNR=4.3
comp=Z,2.0nm,0.8s
DBIC Dimbokro 87.20 276 P **P 03 13 16.5 -0.5**
comp=Z,5.8nm,0.9s,baz=33,slow=2.2,SNR=3.6
DBIC LR LR 03 55 31.1
comp=Z,256nm,20.7s,baz=318,slow=38
comp=Z,5.8nm,0.9s
TXAR Lajitas Array 115.84 10 PKP **PKiKP 03 19 12.9 -0.5**
comp=Z,0.1nm,0.5s,baz=259,slow=1.3,SNR=2.3

*IDC **10** 03:12:07.2±2.9, 30°.37S×177°.42W, h0km, mb3.8/2, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=63.7km s-min=28.3km az=101.0*
*NEIC **10** 03:12:12.9±1.0, 30°.3S±0°.1×177°.5W±0°.2, h35km±2km, mb4.8/8, Error ellipse: s-maj=33.0km s-min=12.5km az=67.0*
ISC 10 03:12:12.8±1.4, 30°.34S±0°.07×177°.7W±0°.2, h35km, n20, σ1°56/17, mb4.8/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.10**	**351**	Pn	**Pn**	**03 12 31.7**	**0.0**
	123nm,0.3s,baz=112,slow=19,SNR=7.9						
RAO				Sn	**Sn**	**03 12 42.9**	**-2.8**
	580nm,0.3s,baz=74,slow=20,SNR=4.4						
RAO	**Raoul Island**	**1.10**	**351**	Pn	**Pn**	**03 12 31.8**	**0.0**
RAO				Sn	**Sn**	**03 12 45.2**	**-0.5**
URZ	**Urewera**	**8.98**	**207**	Pn	**Pn**	**03 14 19.7**	**-0.2**
	0.3nm,0.3s,baz=2.7,slow=14,SNR=1.2						
URZ				Sn	**Sn**	**03 15 56.4**	**-3.3**
	0.6nm,0.3s,baz=359,slow=23,SNR=1.5						
	5.0nm,0.7s						
LHI	**Lord Howe Isla**	**19.95**	**261**	P	**P**	**03 16 42.7**	**+0.9**
LHI				IAmb	IAmb	03 16 49.7	
	comp=Z,49nm,1.1s						
ASAR	**Alice Springs**	**43.35**	**267**	P	**P**	**03 20 13.0**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=100,slow=7.8,SNR=6.1						
	comp=Z,0.4nm,0.5s						
WR0	**Warramunga Arr**	**44.16**	**272**	P	**P**	**03 20 19.6**	**+1.2**
WR0				IAmb	IAmb	03 21 04.4	
	comp=Z,30nm,1.6s						
WB2	**Warramunga Arr**	**44.33**	**272**	P	**P**	**03 20 21.6**	**+1.9**
WRA	**Warramunga Arr**	**44.34**	**272**	P	**P**	**03 20 21.6**	**+1.8**
	comp=Z,0.8nm,0.4s,baz=110,slow=8.0,SNR=37						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**44.34**	**272**	P	**P**	**03 20 20.8**	**+1.0**
WB0	**Warramunga Arr**	**44.36**	**272**	P	**P**	**03 20 21.2**	**+1.2**
WB0				IAmb	IAmb	03 20 55.0	
	comp=Z,30nm,1.8s						
FITZ	**Fitzroy Crossi**	**52.60**	**270**	P	**P**	**03 21 23.8**	**+0.4**
FITZ				IAmb	IAmb	03 23 18.7	
	comp=Z,26nm,1.9s						
CASY	**Casey**	**55.30**	**208**	P	**P**	**03 21 43.6**	**+1.1**
QSPA	**South Pole Qui**	**59.77**	**180**	P	**P**	**03 22 14.1**	**0.0**
H03S2	**Juan Fernandez**	**80.29**	**123**	T	T	04 53 35.2	
	baz=238						
H03S1	**Juan Fernandez**	**80.30**	**123**	T	T	04 53 35.5	
	baz=238						
H03S3	**Juan Fernandez**	**80.31**	**123**	T	T	04 53 34.2	
	baz=238						
H03N3	**Juan Fernandez**	**80.48**	**123**	T	T	04 53 48.8	
	baz=244						
H03N2	**Juan Fernandez**	**80.48**	**123**	T	T	04 53 47.0	
	baz=244,slow=74						
H03N1	**Juan Fernandez**	**80.50**	**123**	T	T	04 53 47.0	
	baz=244,slow=74						
FINES	**FINESS Array B**	**145.18**	**340**	PKPbc	**PKPbc**	**03 31 44.8**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=46,slow=4.0,SNR=11						

*NEIC **10** 03:12:16.6±1.1, 60°.06N±0°.04×153°.27W±0°.08, h128km±4km, Error ellipse: s-maj=5.8km s-min=5.0km az=85.0*
*ANF **10** 03:12:16.8±0.1, 60°.05N×153°.24W, h123km±2km, ML3.6/70, Error ellipse: s-maj=1.6km s-min=1.4km az=146.0*
*AEIC **10** 03:12:17.7±1.3, 60°.04N±0°.04×153°.28W±0°.08, h125km±4km, ML3.4/202, ML3.5/126(NEIC), Error ellipse: s-maj=5.8km s-min=5.1km az=93.0*
ISC 10 03:12:16.4±1.3, 60°.04N±0°.04×153°.25W±0°.03, h130km±6km, n363, σ0°66/357, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILSW	**Iliamna Southw**	**0.08**	**134**		**Pn**	**03 12 33.8**	**-0.3**
ILSW					**Sn**	**03 12 46.9**	**-0.6**
IVE	**Iliamna Volcan**	**0.12**	**99**		**Pn**	**03 12 34.0**	**-0.1**
IVE					**Sn**	**03 12 47.4**	**-0.2**
O20K	**Slope Mountain**	**0.32**	**81**		**Pn**	**03 12 34.9**	**+0.3**
O20K					**Sn**	**03 12 48.7**	**+0.3**
O20K	**Slope Mountain**	**0.32**	**81**	P	**Pn**	**03 12 34.9**	**+0.3**
	baz=263,SNR=31						
O20K				S	**Sn**	**03 12 48.6**	**+0.2**
	baz=263						
OPT	**Oil Point**	**0.39**	**178**		**Pn**	**03 12 35.2**	**+0.4**
P19K	**Oil Pt**	**0.39**	**178**		**Pn**	**03 12 35.0**	**+0.2**
P19K	**Oil Pt**	**0.39**	**178**		**Sn**	**03 12 49.3**	**+0.4**
P19K	**Oil Pt**	**0.39**	**178**	IAML		03 12 36.5	
	comp=N,548nm,0.2s						
P19K	**Oil Pt**	**0.39**	**178**	P	**Pn**	**03 12 35.2**	**+0.3**
	baz=356,SNR=165						
P19K				S	**Sn**	**03 12 49.2**	**+0.4**
	baz=356						
RED	**Redoubt Volcan**	**0.45**	**32**		**Pn**	**03 12 35.2**	**0.0**
RED					**Sn**	**03 12 49.1**	**-0.4**
RSO	**Redoubt South**	**0.49**	**30**		**Pn**	**03 12 35.7**	**+0.1**
RDWB	**Redoubt West**	**0.50**	**24**		**Pn**	**03 12 35.5**	**0.0**
RDWB					**Sn**	**03 12 49.5**	**-0.6**
NCT	**North Crescent**	**0.55**	**17**		**Pn**	**03 12 35.9**	**+0.1**
O19K	**Port Alsworth**	**0.56**	**287**		**Pn**	**03 12 35.6**	**-0.1**
O19K	**Port Alsworth**	**0.56**	**287**		**Sn**	**03 12 49.4**	**-0.9**
O19K	**Port Alsworth**	**0.56**	**287**	IAML		03 12 36.4	
	comp=E,573nm,0.4s						
O19K				IAML		03 12 39.5	
	comp=N,312nm,0.4s						
O19K	**Port Alsworth**	**0.56**	**287**	P	**Pn**	**03 12 35.6**	**-0.1**
	baz=106						
O19K				S	**Sn**	**03 12 49.7**	**-0.6**
	baz=106						
RDJH	**Redoubt Jeurge**	**0.60**	**22**		**Pn**	**03 12 36.3**	**+0.1**
RDJH					**Sn**	**03 12 50.9**	**-0.3**
DFR	**Drift River**	**0.62**	**27**		**Pn**	**03 12 36.2**	**0.0**
AUL	**Augustine Lava**	**0.66**	**188**		**Pn**	**03 12 36.9**	**+0.4**
AUL					**Sn**	**03 12 52.3**	**+0.8**
AU22	**Augustine Moun**	**0.67**	**185**		**Pn**	**03 12 36.7**	**+0.3**
AU22					**Sn**	**03 12 51.9**	**+0.3**
AUH	**Augustine H**	**0.68**	**188**		**Pn**	**03 12 37.3**	**+0.7**
AUCH	**Augustine Cone**	**0.68**	**188**		**Pn**	**03 12 36.9**	**+0.2**
AUQ	**Augustine Qik'**	**0.69**	**187**		**Pn**	**03 12 37.0**	**+0.4**
HOM	**Homer**	**0.90**	**114**		**Pn**	**03 12 38.9**	**+0.7**
HOM					**Sn**	**03 12 55.4**	**+0.6**
HOM	**Homer**	**0.90**	**114**	P	**Pn**	**03 12 38.9**	**+0.7**
	baz=296,SNR=5.5						
HOM				S	**Sn**	**03 12 55.7**	**+0.9**
	baz=296						
N19K	**Bonanza Creek**	**0.99**	**322**		**Pn**	**03 12 39.1**	**-0.1**
N19K					**Sn**	**03 12 55.8**	**-0.8**
N19K	**Bonanza Creek**	**0.99**	**322**	P	**Pn**	**03 12 39.3**	**+0.1**
	baz=142,SNR=58						
N19K				S	**Sn**	**03 12 55.6**	**-1.0**
	baz=142						
Q19K	**Cape Douglas,**	**1.13**	**190**		**Pn**	**03 12 40.6**	**+0.1**
Q19K	**Cape Douglas,**	**1.13**	**190**	IAML		03 12 46.4	
	comp=N,627nm,0.7s						
Q19K				IAML		03 13 05.5	
	comp=E,402nm,0.8s						
Q19K	**Cape Douglas,**	**1.13**	**190**	P	**Pn**	**03 12 40.6**	**+0.1**
	baz=9.3,SNR=196						
Q19K				S	**Sn**	**03 12 59.1**	**+0.3**
	baz=9.3						
CNPM	**China Poot**	**1.14**	**116**		**Pn**	**03 12 40.9**	**+0.3**
CNPM	**China Poot**	**1.14**	**116**	IAML		03 12 59.5	
	comp=N,2μm,0.3s						
BRLK	**Bradley Lake**	**1.22**	**102**		**Pn**	**03 12 42.1**	**+0.7**
BRLK	**Bradley Lake**	**1.22**	**102**	IAML		03 13 01.0	
	comp=N,2μm,0.3s						
CKL	**Chakachamna La**	**1.25**	**21**		**Pn**	**03 12 42.3**	**+0.6**
CAPN	**Captain Cook N**	**1.27**	**54**		**Pn**	**03 12 43.8**	**+1.9**
CAPN	**Captain Cook N**	**1.27**	**54**	IAML		03 13 06.2	
	comp=E,1μm,0.6s						
CAPN				IAML		03 13 06.3	
	comp=N,1μm,0.5s						
CAPN	**Captain Cook N**	**1.27**	**54**	P	**Pn**	**03 12 43.8**	**+1.9**
	baz=236						
SPCR	**Spurr Chakacha**	**1.28**	**23**		**Pn**	**03 12 42.4**	**+0.4**
SPCR	**Spurr Chakacha**	**1.28**	**23**	P	**Pn**	**03 12 42.4**	**+0.4**
	baz=205,SNR=40						
SPWE	**Spurr West**	**1.29**	**15**		**Pn**	**03 12 42.9**	**+0.7**
SPU	**Mount Spurr**	**1.29**	**27**		**Pn**	**03 12 42.5**	**+0.3**
BRSE	**Bradley Lake S**	**1.30**	**102**		**Pn**	**03 12 42.5**	**+0.3**
BRSE	**Bradley Lake S**	**1.30**	**102**	P	**Pn**	**03 12 42.5**	**+0.3**
	baz=284,SNR=32						
BRSE				S	**Sn**	**03 13 01.3**	**-0.6**
	baz=284						
CKN	**Chakachatna No**	**1.30**	**23**		**Pn**	**03 12 43.0**	**+0.7**
SPCN	**Chakachatna No**	**1.30**	**23**		**Pn**	**03 12 42.9**	**+0.6**
SPNN	**North Nagishla**	**1.36**	**11**		**Pn**	**03 12 43.4**	**+0.3**
SPNN					**Sn**	**03 13 03.8**	**+0.4**
SPCG	**Spurr Capps Gl**	**1.40**	**25**		**Pn**	**03 12 43.9**	**+0.5**
N18K	**Kilae Creek**	**1.46**	**297**		**Pn**	**03 12 43.9**	**-0.1**
N18K	**Kilae Creek**	**1.46**	**297**	P	**Pn**	**03 12 43.8**	**-0.1**
	baz=115,SNR=13						
N18K				S	**Sn**	**03 13 04.0**	**-1.0**
	baz=115						
Q20K	**Shuyak Island**	**1.50**	**163**	P	**Pn**	**03 12 44.6**	**+0.3**
	baz=343,SNR=101						
Q20K				S	**Sn**	**03 13 05.9**	**+0.2**
	baz=343						
SYI	**Shuyak Island**	**1.50**	**162**		**Pn**	**03 12 44.5**	**+0.2**
KAPH	**Katmai Pasha**	**1.55**	**202**		**Pn**	**03 12 45.6**	**+0.5**
SVW2	**Sparrevohn**	**1.57**	**314**		**Pn**	**03 12 44.9**	**-0.2**
SLKM	**Skilak Lake**	**1.58**	**71**		**Pn**	**03 12 45.0**	**-0.3**
STLK	**Strandline Lak**	**1.62**	**25**		**Pn**	**03 12 46.4**	**+0.6**
KAHC	**Katmai Hardscr**	**1.66**	**214**		**Pn**	**03 12 46.5**	**+0.2**
KAHG	**Katmai Hook Gl**	**1.68**	**204**		**Pn**	**03 12 47.2**	**+0.6**
O22K	**Cooper Landing**	**1.81**	**74**		**Pn**	**03 12 48.2**	**+0.2**
O22K	**Cooper Landing**	**1.81**	**74**	P	**Pn**	**03 12 48.2**	**+0.2**
	baz=258,SNR=57						
O22K				S	**Sn**	**03 13 11.3**	**-0.9**
	baz=258						
P17K	**Kvichak River**	**1.83**	**244**		**Pn**	**03 12 48.8**	**+0.7**
P17K	**Kvichak River**	**1.83**	**244**	P	**Pn**	**03 12 48.8**	**+0.7**
	baz=61,SNR=47						
P17K				S	**Sn**	**03 13 12.8**	**+0.4**
	baz=61						
M20K	**Styx River**	**1.85**	**2**		**Pn**	**03 12 49.1**	**+0.6**
M20K	**Styx River**	**1.85**	**2**	P	**Pn**	**03 12 49.1**	**+0.6**
	baz=182						
M20K				S	**Sn**	**03 13 12.8**	**-0.5**
	baz=182						
SUA	**Susitna One**	**1.89**	**40**		**Pn**	**03 12 49.6**	**+0.6**
SUA	**Susitna One**	**1.89**	**40**	IAML		03 13 17.0	
	comp=E,511nm,0.4s						
SUA				IAML		03 13 17.2	
	comp=N,285nm,0.7s						
SUA	**Susitna One**	**1.89**	**40**	P	**Pn**	**03 12 49.6**	**+0.6**
	baz=222						
SEW	**Seward**	**1.91**	**86**		**Pn**	**03 12 48.8**	**-0.3**
SEW	**Seward**	**1.91**	**86**	P	**Pn**	**03 12 49.0**	**-0.1**
	baz=270,SNR=28						
SEW				S	**Sn**	**03 13 13.0**	**-1.2**
	baz=270						
O17K	**Koliganek Bris**	**1.95**	**264**		**Pn**	**03 12 50.2**	**+0.6**
O17K	**Koliganek Bris**	**1.95**	**264**	P	**Pn**	**03 12 50.2**	**+0.6**
	baz=80,SNR=58						
O17K				S	**Sn**	**03 13 14.9**	**-0.2**
	baz=80						
M19K	**Big River Lodg**	**1.96**	**344**		**Pn**	**03 12 49.9**	**+0.2**
M19K	**Big River Lodg**	**1.96**	**344**	P	**Pn**	**03 12 49.9**	**+0.2**
	baz=163,SNR=17						
M19K				S	**Sn**	**03 13 14.6**	**-0.7**
	baz=163						
KAKN	**Katmai Knife C**	**1.98**	**209**		**Pn**	**03 12 50.5**	**+0.4**
KCG	**Knife Ck. Glac**	**1.98**	**210**		**Pn**	**03 12 50.7**	**+0.6**
RC01	**Rabbit Creek A**	**2.03**	**57**		**Pn**	**03 12 50.6**	**0.0**
RC01	**Rabbit Creek A**	**2.03**	**57**	P	**Pn**	**03 12 50.7**	**0.0**
	baz=240,SNR=60						
RC01				S	**Sn**	**03 13 16.0**	**-0.9**
	baz=240						
KELA	**Mount Kelaz**	**2.05**	**220**		**Pn**	**03 12 50.8**	**-0.2**
SKT	**Skwentna**	**2.12**	**23**		**Pn**	**03 12 52.2**	**+0.4**
SKT	**Skwentna**	**2.12**	**23**	IAML		03 13 23.0	
	comp=E,161nm,0.3s						
SKT				IAML		03 13 23.2	
	comp=N,150nm,0.4s						
SKT	**Skwentna**	**2.12**	**23**	P	**Pn**	**03 12 52.1**	**+0.4**
	baz=204						
SKT				S	**Sn**	**03 13 19.4**	**+0.4**
	baz=204						
Q16K	**King Salmon**	**2.21**	**233**	P	**Pn**	**03 12 53.1**	**+0.3**
	baz=50						
KDAK	**Kodiak Island**	**2.29**	**171**		**Pn**	**03 12 52.8**	**-0.9**
KDAK	**Kodiak Island**	**2.29**	**171**	IAML		03 13 23.0	
	comp=N,170nm,0.5s						
KDAK				IAML		03 13 23.4	
	comp=N,145nm,0.3s						
KDAK	**Kodiak Island**	**2.29**	**171**	P	**Pn**	**03 12 52.9**	**-0.9**
	baz=351						
L19K	**White Mountain**	**2.29**	**341**		**Pn**	**03 12 53.8**	**0.0**
L19K	**White Mountain**	**2.29**	**341**	IAML		03 13 22.6	
	comp=N,51nm,0.8s						
L19K				IAML		03 13 23.0	
	comp=E,50nm,0.9s						
L19K	**White Mountain**	**2.29**	**341**	P	**Pn**	**03 12 53.8**	**0.0**
	baz=160,SNR=26						
L19K				S	**Sn**	**03 13 21.7**	**-0.9**
	baz=160						
M22K	**Willow**	**2.31**	**40**		**Pn**	**03 12 54.5**	**+0.6**
M22K	**Willow**	**2.31**	**40**	P	**Pn**	**03 12 54.4**	**+0.4**
	baz=223,SNR=14						
M22K				S	**Sn**	**03 13 23.4**	**+0.6**
	baz=223						
L20K	**Farewell, AK**	**2.47**	**353**		**Pn**	**03 12 56.5**	**+0.4**
L20K	**Farewell, AK**	**2.47**	**353**	P	**Pn**	**03 12 56.6**	**+0.4**
	baz=173,SNR=20						
L20K				S	**Sn**	**03 13 26.5**	**-0.3**
	baz=173						
O16K	**Kokwok River B**	**2.48**	**262**		**Pn**	**03 12 57.0**	**+0.8**
O16K	**Kokwok River B**	**2.48**	**262**	P	**Pn**	**03 12 57.0**	**+0.8**
	baz=78,SNR=7.8						
O16K				S	**Sn**	**03 13 26.9**	**0.0**
	baz=78						
PMR	**Palmer**	**2.55**	**51**		**Pn**	**03 12 56.3**	**-0.8**
PMR	**Palmer**	**2.55**	**51**	IAML		03 13 27.6	
	comp=E,147nm,0.5s						
PMR				IAML		03 13 28.1	
	comp=N,148nm,0.2s						
PMR	**Palmer**	**2.55**	**51**	P	**Pn**	**03 12 56.2**	**-0.9**
	baz=234,SNR=15						
PWL	**Port Wells**	**2.57**	**69**		**Pn**	**03 12 56.5**	**-1.0**
PWL	**Port Wells**	**2.57**	**69**	IAML		03 13 27.8	
	comp=E,355nm,0.3s						
PWL				IAML		03 13 29.6	
	comp=N,379nm,0.5s						
PWL	**Port Wells**	**2.57**	**69**	P	**Pn**	**03 12 56.4**	**-1.0**
	baz=254,SNR=21						
P16K	**Nushagak River**	**2.62**	**249**		**Pn**	**03 12 58.4**	**+0.5**
P16K	**Nushagak River**	**2.62**	**249**	P	**Pn**	**03 12 58.8**	**+0.9**
	baz=65						
KNK	**Knik Glacier**	**2.73**	**58**		**Pn**	**03 12 58.8**	**-0.7**
KNK	**Knik Glacier**	**2.73**	**58**	IAML		03 13 32.4	
	comp=E,258nm,0.4s						
KNK				IAML		03 13 32.9	

	comp=N,301nm,0.5s							
KNK	**Knik Glacier**	2.73	58	P		Pn	03 12 58.7	-0.7
	baz=242,SNR=10							
GHO	**Glory Hole Cre**	2.74	49			Pn	03 12 58.9	-0.7
GHO	**Glory Hole Cre**	2.74	49	IAML			03 13 38.6	
	comp=E,238nm,0.6s							
GHO				IAML			03 13 40.2	
	comp=N,240nm,0.5s							
CUT	**Chulitna**	2.78	30			Pn	03 12 59.8	-0.2
CUT	**Chulitna**	2.78	30	P		Pn	03 13 00.3	+0.3
	baz=213							
N16K	**Nishlik Lake**	2.79	281			Pn	03 13 01.0	+0.9
N16K	**Nishlik Lake**	2.79	281	P		Pn	03 13 01.1	+1.0
	baz=97							
OHAK	**Old Harbor**	2.82	180			Pn	03 12 59.2	-1.3
OHAK	**Old Harbor**	2.82	180	IAML			03 13 35.4	
	comp=E,78nm,0.3s							
OHAK				IAML			03 13 35.5	
	comp=N,93nm,0.3s							
OHAK	**Old Harbor**	2.82	180	P		Pn	03 12 59.3	-1.3
	baz=0.1,SNR=30							
PLK3	**Peulik 3**	2.83	215			Pn	03 13 01.7	+1.0
PLK1	**Peulik 1**	2.84	219			Pn	03 13 01.7	+0.9
R17K	**Ugashik Creek**	2.90	215			Pn	03 13 02.5	+0.8
R17K	**Ugashik Creek**	2.90	215	P		Pn	03 13 02.6	+1.0
	baz=32,SNR=41							
PPLA	**Purkeypile**	2.92	10			Pn	03 13 03.3	+1.4
PPLA	**Purkeypile**	2.92	10	P		Pn	03 13 03.4	+1.4
	baz=191,SNR=12							
P23K	**Montague Islan**	2.94	88			Pn	03 13 02.2	+0.1
P23K	**Montague Islan**	2.94	88	P		Pn	03 13 02.2	+0.1
	baz=273,SNR=32							
SML	**Sawmill**	2.99	51			Pn	03 13 01.9	-0.9
SML	**Sawmill**	2.99	51	IAML			03 13 40.1	
	comp=N,174nm,0.8s							
SML				IAML			03 13 45.0	
	comp=E,95nm,0.6s							
SML	**Sawmill**	2.99	51	P		Pn	03 13 01.9	-0.9
	baz=236,SNR=13							
GLI	**Glacier Island**	3.17	72			Pn	03 13 03.7	-1.4
GLI	**Glacier Island**	3.17	72	IAML			03 13 41.5	
	comp=E,180nm,0.4s							
GLI				IAML			03 13 43.4	
	comp=N,175nm,0.4s							
GLI	**Glacier Island**	3.17	72	P		Pn	03 13 05.2	+0.2
	baz=257							
TT01	**Tatalina**	3.17	336			Pn	03 13 05.0	-0.1
TTA	**Tatalina**	3.19	337			Pn	03 13 05.1	-0.3
TTA	**Tatalina**	3.19	337	P		Pn	03 13 05.1	-0.3
	baz=154,SNR=15							
M23K	**Glacier View**	3.22	54			Pn	03 13 05.2	-0.7
M23K	**Glacier View**	3.22	54	P		Pn	03 13 05.1	-0.7
	baz=240,SNR=45							
K20K	**Telida**	3.36	354			Pn	03 13 07.9	+0.4
K20K	**Telida**	3.36	354	P		Pn	03 13 07.8	+0.3
	baz=173,SNR=37							
HIN	**Hinchinbrook I**	3.39	81			Pn	03 13 06.9	-1.1
HIN	**Hinchinbrook I**	3.39	81	IAML			03 13 48.4	
	comp=E,120nm,0.5s							
HIN				IAML			03 13 51.2	
	comp=N,141nm,0.6s							
SCM	**Sheep Creek Mo**	3.41	55			Pn	03 13 07.5	-0.7
SCM	**Sheep Creek Mo**	3.41	55	IAML			03 13 50.7	
	comp=E,129nm,0.2s							
SCM				IAML			03 13 53.9	
	comp=N,128nm,0.6s							
SCM	**Sheep Creek Mo**	3.41	55	P		Pn	03 13 07.7	-0.6
	baz=241,SNR=14							
FID	**Port Fidalgo**	3.44	75			Pn	03 13 06.7	-1.9
FID	**Port Fidalgo**	3.44	75	IAML			03 13 47.9	
	comp=E,151nm,0.2s							
CAST	**Castle Rocks**	3.44	9			Pn	03 13 09.2	+0.5
CAST	**Castle Rocks**	3.44	9	P		Pn	03 13 09.1	+0.5
	baz=190,SNR=29							
JPK	**Jack Peak**	3.44	70			Pn	03 13 07.4	-1.3
WAT7	**Susitna Watana**	3.52	35			Pn	03 13 10.0	+0.3
SII	**Sitkinak Islan**	3.52	188			Pn	03 13 08.6	-1.2
SII	**Sitkinak Islan**	3.52	188	IAML			03 13 49.9	
	comp=N,170nm,0.3s							
SII				IAML			03 13 55.4	
	comp=E,145nm,0.7s							
SII	**Sitkinak Islan**	3.52	188	P		Pn	03 13 08.4	-1.3
	baz=7.4,SNR=7.4							
Q23K	**Middleton Isla**	3.55	97			Pn	03 13 09.9	-0.1
Q23K	**Middleton Isla**	3.55	97	IAML			03 13 54.6	
	comp=N,147nm,0.4s							
Q23K				IAML			03 13 57.8	
	comp=E,109nm,1.0s							
Q23K	**Middleton Isla**	3.55	97	P		Pn	03 13 10.1	+0.1
	baz=283							
MID	**Middleton Isla**	3.55	97			Pn	03 13 09.8	-0.2
MID	**Middleton Isla**	3.55	97	IAML			03 13 54.6	
	comp=N,152nm,0.4s							
MID				IAML			03 13 57.8	
	comp=E,113nm,0.8s							
WAT1	**Susitna Watana**	3.60	37			Pn	03 13 11.0	+0.3
WAT1	**Susitna Watana**	3.60	37	P		Pn	03 13 10.7	0.0
	baz=221							
WAT6	**Susitna Watana**	3.69	44			Pn	03 13 11.5	-0.5
WAT6	**Susitna Watana**	3.69	44	P		Pn	03 13 11.7	-0.3
	baz=229,SNR=11							
KTH	**Kantishna Hill**	3.70	16			Pn	03 13 12.2	+0.1
KTH	**Kantishna Hill**	3.70	16	IAML			03 13 56.9	
	comp=E,66nm,0.6s							
KTH				IAML			03 13 57.2	
	comp=N,66nm,0.5s							
TRF	**Thorofare Moun**	3.71	21			Pn	03 13 12.4	+0.2
TRF	**Thorofare Moun**	3.71	21	IAML			03 13 55.4	
	comp=N,108nm,0.6s							
TRF				IAML			03 13 57.2	
	comp=E,80nm,0.5s							
TRF	**Thorofare Moun**	3.71	21	P		Pn	03 13 12.4	+0.2
	baz=204,SNR=38							
EYAK	**Cordova Ski Ar**	3.77	79			Pn	03 13 12.9	0.0
EYAK	**Cordova Ski Ar**	3.77	79	P		Pn	03 13 12.9	0.0
	baz=266,SNR=7.6							
DIV	**Divide**	3.85	70			Pn	03 13 13.1	-1.0
KLU	**Klutina**	3.88	65			Pn	03 13 13.6	-0.8
KLU	**Klutina**	3.88	65	P		Pn	03 13 13.7	-0.8
	baz=251,SNR=17							
CHUM	**Lake Minchumin**	3.89	6			Pn	03 13 14.8	+0.3
CHUM	**Lake Minchumin**	3.89	6	P		Pn	03 13 14.7	+0.3
	baz=187							
RND	**Reindeer**	3.98	30			Pn	03 13 15.7	0.0
RND	**Reindeer**	3.98	30	IAML			03 14 01.1	
	comp=N,38nm,0.2s							
RND				IAML			03 14 01.5	
	comp=E,65nm,0.4s							
M24K	**Tolsona, Glenn**	4.02	56			Pn	03 13 16.1	-0.2
M24K	**Tolsona, Glenn**	4.02	56	IAML			03 14 04.5	
	comp=N,107nm,0.8s							
M24K	**Tolsona, Glenn**	4.02	56	P		Pn	03 13 16.1	-0.2
	baz=242,SNR=15							
DHY	**Denali Highway**	4.15	40			Pn	03 13 17.9	-0.1
DHY	**Denali Highway**	4.15	40	P		Pn	03 13 17.8	-0.3
	baz=225,SNR=11							
J20K	**Nowinta River**	4.18	355			Pn	03 13 18.8	+0.5
J20K	**Nowinta River**	4.18	355	P		Pn	03 13 18.6	+0.3
	baz=174,SNR=51							
BPAW	**Bear Paw Mtn.**	4.21	14			Pn	03 13 18.5	-0.4
BPAW	**Bear Paw Mtn.**	4.21	14	IAML			03 14 05.5	
	comp=N,36nm,0.5s							
BPAW				IAML			03 14 07.8	
	comp=E,26nm,0.5s							
BPAW	**Bear Paw Mtn.**	4.21	14	P		Pn	03 13 18.7	-0.2
	baz=196,SNR=30							
MCK	**McKinley**	4.23	27			Pn	03 13 19.5	+0.4
MCK	**McKinley**	4.23	27	IAML			03 14 07.1	
	comp=E,54nm,0.4s							
MCK				IAML			03 14 07.7	
	comp=N,51nm,0.5s							
MCK	**McKinley**	4.23	27	P		Pn	03 13 19.5	+0.4
	baz=211,SNR=8.1							
GOAT	**Goat Mountain**	4.28	79			Pn	03 13 19.7	0.0
RAGM	**Ragged Mountai**	4.29	82			Pn	03 13 20.1	+0.1
BMRM	**Bremner River**	4.38	74			Pn	03 13 20.5	-0.6
BMRM	**Bremner River**	4.38	74	P		Pn	03 13 20.7	-0.3
	baz=262,SNR=10							
CHIR	**Chirikof Islan**	4.41	198			Pn	03 13 20.1	-1.3
CHIR	**Chirikof Islan**	4.41	198	IAML			03 14 09.2	
	comp=N,61nm,0.5s							
CHIR				IAML			03 14 10.2	
	comp=E,45nm,0.3s							
CHIR	**Chirikof Islan**	4.41	198	P		Pn	03 13 20.1	-1.3
	baz=15							
KAIM	**Kayak Island**	4.44	88			Pn	03 13 22.1	+0.3
KAIM	**Kayak Island**	4.44	88	IAML			03 14 20.3	
	comp=E,90nm,0.4s							
KAIM	**Kayak Island**	4.44	88	P		Pn	03 13 22.3	+0.5
	baz=275							
HMT	**Hamilton**	4.50	82	Pn		Pn	03 13 22.6	0.0
N25K	**Chitina, Valde**	4.52	66			Pn	03 13 22.3	-0.7
N25K	**Chitina, Valde**	4.52	66	IAML			03 14 15.8	
	comp=N,70nm,0.4s							
N25K				IAML			03 14 17.6	
	comp=E,39nm,0.3s							
N25K	**Chitina, Valde**	4.52	66	P		Pn	03 13 22.3	-0.7
	baz=254,SNR=15							
HARP	**HAARP**	4.58	55	P		Pn	03 13 23.3	-0.4
	baz=242							
NICHA	**Nichawak Mount**	4.65	84			Pn	03 13 24.7	0.0
PAX	**Paxson**	4.75	48			Pn	03 13 25.9	-0.1
PAX	**Paxson**	4.75	48	P		Pn	03 13 26.1	+0.1
	baz=235,SNR=7.4							
SUCK	**Suckling Hills**	4.75	85			Pn	03 13 26.1	+0.1
SUCK	**Suckling Hills**	4.75	85	IAML			03 14 44.4	
	comp=N,52nm,2.2s							
SUCK				IAML			03 15 13.5	
	comp=E,42nm,2.7s							
WACK	**Wrangell Chich**	4.76	62			Pn	03 13 25.9	-0.5
BERG	**Berg Lake**	4.78	82			Pn	03 13 26.1	-0.2
WASW	**Wrangell South**	4.81	63			Pn	03 13 26.6	-0.5
GLB	**Gilahina Butte**	4.84	69			Pn	03 13 26.7	-0.6
GLB	**Gilahina Butte**	4.84	69	IAML			03 14 23.7	
	comp=N,46nm,0.3s							
GLB				IAML			03 14 23.8	
	comp=E,27nm,0.4s							
GRIN	**Grindle Hills**	4.97	83			Pn	03 13 29.1	+0.2
NEA2	**Nenana**	4.97	21			Pn	03 13 28.9	0.0
NEA2	**Nenana**	4.97	21	IAML			03 14 24.8	
	comp=E,17nm,0.6s							
NEA2				IAML			03 14 25.5	
	comp=N,17nm,0.7s							
NEA2	**Nenana**	4.97	21	P		Pn	03 13 29.0	0.0
	baz=205,SNR=57							
BGLC	**Bering Glacier**	4.99	85	P		Pn	03 13 30.6	+1.4
	baz=273							
GCSA	**Galena City Sc**	5.02	342	P		Pn	03 13 29.4	-0.1
	baz=159							
WRH	**Wood River Hil**	5.06	26			Pn	03 13 29.6	-0.6
WRH	**Wood River Hil**	5.06	26	IAML			03 14 30.9	
	comp=E,21nm,0.6s							
WRH				IAML			03 14 32.7	
	comp=N,21nm,0.6s							
CRQM	**Cirque**	5.07	77			Pn	03 13 30.7	+0.3
CRQE	**Cirque**	5.09	78	P		Pn	03 13 30.7	+0.1
	baz=236,SNR=6.8							
MLY	**Manley**	5.15	12			Pn	03 13 31.1	-0.2
MLY	**Manley**	5.15	12	P		Pn	03 13 31.0	-0.3
	baz=194,SNR=45							
K24K	**Donnelly Dome**	5.17	40			Pn	03 13 33.0	+1.4
K24K	**Donnelly Dome**	5.17	40	P		Pn	03 13 32.3	+0.7
	baz=226,SNR=12							
I21K	**Tanana**	5.20	6			Pn	03 13 32.0	+0.2
I21K	**Tanana**	5.20	6	P		Pn	03 13 31.8	-0.1
	baz=187,SNR=31							
MCARA	**McCarthy VSAT**	5.20	71			Pn	03 13 32.6	+0.5
MCARA	**McCarthy VSAT**	5.20	71	P		Pn	03 13 32.5	+0.5
	baz=260							
SNH	**Sunshine Point**	5.21	84			Pn	03 13 32.6	+0.4
SNH	**Sunshine Point**	5.21	84	IAML			03 14 34.6	
	comp=N,39nm,1.1s							
SNH				IAML			03 14 57.3	
	comp=E,34nm,1.9s							
CCB	**Clear Creek Bu**	5.28	26			Pn	03 13 32.5	-0.5
CCB	**Clear Creek Bu**	5.28	26	IAML			03 14 34.3	
	comp=N,19nm,0.2s							
CCB				IAML			03 14 34.7	
	comp=E,24nm,0.6s							
HDA	**Harding Lake**	5.29	31			Pn	03 13 32.8	-0.3
HDA	**Harding Lake**	5.29	31	P		Pn	03 13 32.8	-0.3
	baz=217,SNR=26							
PS08	**TAPS Pump Stn8**	5.43	31			Pn	03 13 34.7	-0.3
I23K	**Minto, Yukon-K**	5.44	18			Pn	03 13 35.7	+0.6
I23K	**Minto, Yukon-K**	5.44	18	P		Pn	03 13 35.7	+0.6
	baz=201,SNR=108							
PTPK	**Patty Peak**	5.44	73			Pn	03 13 35.5	+0.1
RIDG	**Independent Ri**	5.44	43			Pn	03 13 35.5	+0.3
RIDG	**Independent Ri**	5.44	43	P		Pn	03 13 35.7	+0.5
	baz=231							
ISLE	**Juniper Island**	5.46	79			Pn	03 13 35.8	+0.2
MDM	**Murphy Dome**	5.46	23			Pn	03 13 35.2	-0.2
TCOL	**CIGO, UAF Yank**	5.46	25			Pn	03 13 35.4	0.0
TCOL	**CIGO, UAF Yank**	5.46	25	P		Pn	03 13 35.3	-0.2
	baz=210,SNR=15							
COLA	**College**	5.46	25			Pn	03 13 35.1	-0.3
COLA	**College**	5.46	25	P		Pn	03 13 35.4	-0.1
	baz=210							
BALM	**Baldy**	5.48	75			Pn	03 13 36.0	+0.2
M26K	**Nabesna, AK**	5.49	60			Pn	03 13 36.3	+0.3
M26K	**Nabesna, AK**	5.49	60	P		Pn	03 13 36.5	+0.6
	baz=249,SNR=12							
BAGL	**Bagley Icefiel**	5.58	80			Pn	03 13 37.7	+0.7
IL31		5.60	29			Pn	03 13 36.8	-0.4
ILAR	**Eielson Array**	5.60	29			Pn	03 13 36.6	-0.7
H21K	**Melozitna Rive**	5.65	2			Pn	03 13 38.0	0.0
H21K	**Melozitna Rive**	5.65	2	P		Pn	03 13 38.2	+0.2
	baz=182,SNR=28							
MESA	**MESA**	5.66	84			Pn	03 13 38.7	+0.4
MESA	**MESA**	5.66	84	P		Pn	03 13 38.9	+0.6
	baz=274,SNR=6.8							
GRNC	**Granite Creek**	5.75	78			Pn	03 13 40.0	+0.5
YAH	**Yahtse**	5.75	82			Pn	03 13 40.2	+0.6
POKR	**Poker Flat Res**	5.76	25			Pn	03 13 39.3	-0.2
POKR	**Poker Flat Res**	5.76	25	P		Pn	03 13 39.2	-0.2
	baz=211,SNR=17							
J25K	**Salcha River,**	5.88	35			Pn	03 13 40.9	-0.2
J25K	**Salcha River,**	5.88	35	P		Pn	03 13 41.0	-0.1
	baz=222,SNR=22							
SCRK	**Sand Creek**	5.89	44			Pn	03 13 40.9	-0.4
SCRK	**Sand Creek**	5.89	44	P		Pn	03 13 41.1	-0.2
	baz=232							
H22K	**Ishtalitna Cre**	5.94	7			Pn	03 13 42.1	+0.2
H22K	**Ishtalitna Cre**	5.94	7	P		Pn	03 13 42.2	+0.2
	baz=189,SNR=13							
CTG	**Chena Glacier**	5.96	76	P		Pn	03 13 43.0	+0.7
	baz=266,SNR=9.9							
CTGM	**Chitina Glacie**	5.96	76			Pn	03 13 43.2	+0.8
M27K	**Edge Creek, AK**	5.97	62			Pn	03 13 42.9	+0.4
M27K	**Edge Creek, AK**	5.97	62	P		Pn	03 13 42.6	+0.2
	baz=252,SNR=8.3							
IM03		5.97	358			Pn	03 13 42.8	+0.5
IMAR	**Indian Mountai**	5.97	358	Pn		Pn	03 13 42.9	+0.6
TABL	**Table Mountain**	6.05	81			Pn	03 13 44.1	+0.5
H23K	**Yukon River**	6.05	15			Pn	03 13 44.0	+0.5
H23K	**Yukon River**	6.05	15	P		Pn	03 13 43.9	+0.5
	baz=198,SNR=63							
PS06	**TAPS Pump Stn6**	6.06	14			Pn	03 13 44.2	+0.8
CHX	**Chaix Hills**	6.08	84			Pn	03 13 44.9	+1.0
LOGN	**Logan Glacier**	6.12	77			Pn	03 13 45.1	+0.6
SAMH	**Samovar Hills**	6.24	84			Pn	03 13 46.7	+0.6
L27K	**Beaver Creek,**	6.25	56			Pn	03 13 46.0	0.0
L27K	**Beaver Creek,**	6.25	56	P		Pn	03 13 45.8	-0.2
	baz=246							
BC03		6.26	56			Pn	03 13 46.1	-0.1
YUK2	**White River**	6.30	68			Pn	03 13 47.2	+0.3
H24K	**Noodor Dome**	6.32	21			Pn	03 13 46.7	-0.3
H24K	**Noodor Dome**	6.32	21	P		Pn	03 13 46.5	-0.4
	baz=205,SNR=13							
J26L	**Joseph Creek**	6.36	41			Pn	03 13 47.3	-0.3
J26L	**Joseph Creek**	6.36	41	P		Pn	03 13 47.2	-0.4
	baz=230,SNR=20							
YUK3	**Moose Creek**	6.48	69			Pn	03 13 50.3	+0.9
YUK3	**Moose Creek**	6.48	69	P		Pn	03 13 49.8	+0.4
	baz=260,SNR=14							
G21K	**Allakaket**	6.51	359			Pn	03 13 49.9	+0.5
G21K	**Allakaket**	6.51	359	P		Pn	03 13 50.0	+0.5
	baz=179,SNR=9.1							
PCA	**Pinnacle**	6.51	84			Pn	03 13 50.1	+0.6
PINM	**Pinnacle**	6.51	84	P		Pn	03 13 50.2	+0.5
	baz=275							
O28M	**Mount Upton**	6.51	78			Pn	03 13 51.2	+1.3
O28M	**Mount Upton**	6.51	78	P		Pn	03 13 50.9	+1.0
	baz=269,SNR=31							
PRP	**Porcupine Dome**	6.54	29			Pn	03 13 49.8	-0.3
PRP	**Porcupine Dome**	6.54	29	P		Pn	03 13 49.9	-0.2
	baz=216,SNR=21							
K27K	**Chicken**	6.61	48	P		Pn	03 13 51.1	+0.2
	baz=238							
BCPM	**Bancas Point**	6.83	85			Pn	03 13 55.1	+1.2
G23K	**Bananza Creek**	6.86	11			Pn	03 13 54.8	+0.6
G23K	**Bananza Creek**	6.86	11	P		Pn	03 13 54.5	+0.3
	baz=194,SNR=63							
PNL	**Peninsula**	6.99	87			Pn	03 13 56.4	+0.3
PNL	**Peninsula**	6.99	87	P		Pn	03 13 56.2	+0.2
	baz=279,SNR=12							
I26K	**Coal Creek Min**	7.04	37			Pn	03 13 55.9	-0.7
I26K	**Coal Creek Min**	7.04	37	P		Pn	03 13 55.9	-0.7
	baz=226							
H25K	**Birch Creek**	7.10	25	P		Pn	03 13 57.2	-0.2
	baz=212							
G24K	**Hadweenzic Riv**	7.17	19			Pn	03 13 57.9	-0.6
G24K	**Hadweenzic Riv**	7.17	19	P		Pn	03 13 57.7	-0.7
	baz=204,SNR=16							
F21K	**Alatna River**	7.22	359			Pn	03 13 58.4	-0.6
F21K	**Alatna River**	7.22	359	P		Pn	03 13 59.9	+0.9
	baz=179,SNR=7.5							
YUK4	**Talbot Arm**	7.29	73	P		Pn	03 14 01.2	+1.0
	baz=266							
O29M	**Mount Kennedy**	7.33	82	P		Pn	03 14 02.2	+1.5
	baz=274							
COLD	**Coldfoot**	7.35	9			Pn	03 14 01.4	+0.6
COLD	**Coldfoot**	7.35	9	P		Pn	03 14 01.3	+0.6
	baz=192,SNR=11							
EGAK	**Eagle**	7.35	45	P		Pn	03 14 00.4	-0.4
	baz=235							
YUK6	**Outpost Mounta**	7.41	77			Pn	03 14 02.0	+0.1
YUK6	**Outpost Mounta**	7.41	77	P		Pn	03 14 02.7	+0.8
	baz=270							
G25K	**Bearman Lake**	7.47	22	P		Pn	03 14 02.4	-0.1
	baz=258							
F22K	**John River**	7.52	3			Pn	03 14 03.6	+0.6
F22K	**John River**	7.52	3	P		Pn	03 14 03.5	+0.4
	baz=184							
M29M	**Somme Creek**	7.53	65			Pn	03 14 03.6	+0.2
M29M	**Somme Creek**	7.53	65	P		Pn	03 14 03.9	+0.5
	baz=258							
DAWY	**Dawson**	7.66	52			Pn	03 14 05.1	0.0
DAWY	**Dawson**	7.66	52	P		Pn	03 14 05.3	+0.2
	baz=244							
I27K	**Kandik River**	7.71	39			Pn	03 14 05.0	-0.7
I27K	**Kandik River**	7.71	39	P		Pn	03 14 05.2	-0.6
	baz=229							
P29M	**Windy Craggy**	7.83	86			Pn	03 14 09.2	+1.9
P29M	**Windy Craggy**	7.83	86	P		Pn	03 14 09.1	+1.7
	baz=280,SNR=14							
HYT	**Haines Junctio**	7.83	77	P		Pn	03 14 07.7	+0.2
	baz=271							
F24K	**Squaw Lake**	7.88	15			Pn	03 14 08.5	+0.6
F24K	**Squaw Lake**	7.88	15	P		Pn	03 14 08.3	+0.4
	baz=200,SNR=11							
N30M	**Aishikik Lake**	8.04	73			Pn	03 14 10.5	+0.2
N30M	**Aishikik Lake**	8.04	73	P		Pn	03 14 09.6	-0.7
	baz=267							
G26K	**Porcupine Rive**	8.12	27			Pn	03 14 10.1	-1.0
G26K	**Porcupine Rive**	8.12	27	P		Pn	03 14 09.7	-1.4
	baz=216							
P30M	**Million Dollar**	8.15	82	P		Pn	03 14 12.5	+0.8
	baz=276							
E22K	**Anaktuvuk Pass**	8.16	4	P		Pn	03 14 12.5	+0.8
	baz=185							
H27K	**Steamboat Moun**	8.16	35	P		Pn	03 14 10.8	-1.0
	baz=226							
F25K	**Christian Rive**	8.29	21			Pn	03 14 12.8	-0.7
F25K	**Christian Rive**	8.29	21	P		Pn	03 14 12.6	-0.9
	baz=208							
E24K	**Your Creek**	8.33	12	P		Pn	03 14 13.9	-0.2
	baz=197							
BM03	**Burnt Mountain**	8.34	24			Pn	03 14 13.2	-1.0
BM01	**Burnt Mountain**	8.38	24			Pn	03 14 13.9	-0.7
O30N	**Mendenhall**	8.53	78	P		Pn	03 14 17.2	+0.5
	baz=273							
G27K	**Doyon Strip**	8.54	32	P		Pn	03 14 15.5	-1.4
	baz=223							
PLBC	**Pleasant Camp**	8.55	87			Pn	03 14 17.5	+0.5
PLBC	**Pleasant Camp**	8.55	87	P		Pn	03 14 18.2	+1.3
	baz=281,SNR=8.1							
F26K	**Sheenjek River**	8.66	24	P		Pn	03 14 17.0	-1.5
	baz=212							
E25K	**Arctic Village**	8.78	19			Pn	03 14 19.6	-0.4
E25K	**Arctic Village**	8.78	19	P		Pn	03 14 19.2	-0.8
	baz=206,SNR=7.2							
TOLK	**Toolik Lake Re**	8.78	9			Pn	03 14 20.9	+0.7
TOLK	**Toolik Lake Re**	8.78	9	P		Pn	03 14 20.8	+0.7
	baz=192,SNR=6.8							
D23K	**Nanushuk River**	9.03	6	P		Pn	03 14 23.6	+0.1
	baz=188							
WHY	**Whitehorse**	9.13	78	P		Pn	03 14 25.9	+1.1
	baz=274							
D24K	**Happy Valley**	9.35	10	P		Pn	03 14 28.1	+0.4
	baz=194							
D25K	**Kavik River**	9.77	15	P		Pn	03 14 33.0	-0.4
	baz=201							
SIT	**Sitka**	9.83	100	P		Pn	03 14 35.1	+0.9
	baz=295							
P32M	**Atlin**	9.85	84	P		Pn	03 14 36.1	+1.6
	baz=281							
C23K	**Itkillik River

baz=188,slow=76,SNR=12
AS31 Alice Springs 30.55 243 P **P** 03 23 09.8 -0.5
ASAR Alice Springs 30.55 243 P **P** 03 23 09.6 -0.6
comp=Z,3.1nm,0.6s,baz=63,slow=10,SNR=41
ASAR PcP **PcP** 03 26 08.5 -0.6
comp=Z,0.5nm,0.8s,baz=70,slow=3.9,SNR=1.8
comp=Z,3.1nm,0.6s
H11N1 WAKE ISLAND Hy 31.14 6 T T 03 56 10.2
baz=187,slow=76,SNR=18
H11N3 WAKE ISLAND Hy 31.15 6 T T 03 56 10.5
baz=187,slow=76,SNR=14
H11N2 WAKE ISLAND Hy 31.16 6 T T 03 56 17.3
baz=187,slow=76,SNR=9.9
KNRA Kununurra 33.90 259 P **P** 03 23 39.4 -0.2
KNRA IAmb IAmb 03 24 12.2
comp=Z,6.1nm,0.9s
FITZ Fitzroy Crossi 37.04 255 P **P** 03 24 06.6 -0.1
comp=Z,2.3nm,0.6s,baz=73,slow=7.8,SNR=11
comp=Z,2.3nm,0.6s
FITZ Fitzroy Crossi 37.04 255 P **P** 03 24 06.7 +0.1
FITZ IAmb IAmb 03 24 10.2
comp=Z,3.3nm,0.8s
PSA00 Pilbara Seismi 42.82 251 P **P** 03 24 55.2 +0.6
PSA00 IAmb IAmb 03 25 14.8
comp=Z,13nm,1.5s
PSA00 Pilbara Seismi 42.82 251 P **P** 03 24 54.4 -0.3
PSA00 IAmb IAmb 03 24 54.9
comp=Z,19nm,1.2s
MBWA Marble Bar 42.88 251 P **P** 03 24 54.6 -0.6
KSRS Korea Array 58.92 327 P **P** 03 26 55.2 -0.4
comp=Z,0.8nm,0.5s,baz=129,slow=6.3,SNR=4.4
comp=Z,0.8nm,0.5s
USRK Ussuriysk Ar. 62.29 335 P **P** 03 27 19.0 +0.5
comp=Z,1.7nm,0.6s,baz=152,slow=5.1,SNR=5.6
comp=Z,1.7nm,0.6s
VNDA Vanda 66.08 180 P **P** 03 27 44.7 +1.8
comp=Z,1.9nm,1.1s,baz=329,slow=8.5,SNR=6.9
comp=Z,1.9nm,1.1s
VNDA Vanda 66.08 180 P **P** 03 27 43.1 +0.2
VNDA IAmb IAmb 03 27 48.4
comp=Z,4.7nm,1.2s
OHAK Old Harbor 77.14 23 P **P** 03 28 49.7 0.0
SONM Songino Array 77.63 325 P **P** 03 28 53.5 +0.6
comp=Z,0.9nm,0.8s,baz=139,slow=5.6,SNR=4.2
comp=Z,0.9nm,0.8s
Q19K Cape Douglas, 78.25 21 P **P** 03 28 55.7 -0.3
QSPA South Pole Qui 78.57 180 P **P** 03 28 59.2 +1.3
QSPA IAmb IAmb 03 29 11.2
comp=Z,5.6nm,1.1s
ILAR Eielson Array 84.63 19 P **P** 03 29 29.1 -0.6
comp=Z,0.3nm,0.5s,baz=237,slow=4.8,SNR=5.3
comp=Z,0.3nm,0.5s
NVAR Mina Array Bea 88.05 50 P **P** 03 29 47.3 -0.1
comp=Z,0.2nm,0.4s,baz=235,slow=3.2,SNR=3.1
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 92.23 317 P **P** 03 30 06.2 -0.2
comp=Z,0.6nm,0.6s,baz=99,slow=6.3,SNR=6.8
comp=Z,0.6nm,0.6s
BOSA Boshof 123.23 225 PKP **PKPdf** 03 35 55.1 +0.9
comp=Z,1.1nm,0.6s,baz=76,slow=2.0,SNR=5.2

IDC ***10*** *03:23:12.2±1.9, 0°.00S×123°.26E, h146km±18km, mb3.7/14, mbtmp4.2/16, Error ellipse: s-maj=19.0km s-min=10.1km az=83.0*
NEIC ***10*** *03:23:12.3±0.9, 0°.02S±0°.08×123°.28E±0°.05, h140km±8km, mb4.4/17, Error ellipse: s-maj=12.3km s-min=5.5km az=153.0*
DJA ***10*** *03:23:13.8±0.3, 0°.5S±3°×12°.3E±°, h132km±5km, M4.3/13, mb4.3/3, mB4.8/2, MLv4.3/13, Mw(mB)4.0/2*
ISC 10 03:23:13.2±0.4, 0°.09S±0°.05×123°.30E±0°.07, h157km, n75,
σ1s 33/83, mb4.2/23, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KMSI	**Cibinong**	**0.95**	**46**	P		**Pn**	**03 23 38.6**	**+0.3**
LUWI	**Luwuk**	**1.08**	**209**			**Pn**	**03 23 37.3**	**-2.1**
LUWI				Sn		**Sn**	**03 23 55.1**	**-4.1**
LUWI	**Luwuk**	**1.08**	**209**	P		**Pn**	**03 23 37.7**	**-1.7**
LUWI				S		**Sn**	**03 23 55.7**	**-3.8**
LUWI	**Luwuk**	**1.08**	**209**	P		**Pn**	**03 23 37.9**	**-1.5**
MRSI	**Marisa**	**1.47**	**292**	P		**Pn**	**03 23 40.3**	**-2.7**
APSI	**Ampana**	**1.84**	**244**	P		**Pn**	**03 23 45.3**	**-1.7**
TOLI2	**Tolitoli**	**2.78**	**295**			**Pn**	**03 23 56.1**	**-2.0**
SANI	**Sanana**	**3.32**	**126**	P		**Pn**	**03 24 03.6**	**-1.4**
SANI	**Sanana**	**3.32**	**126**	P		**Pn**	**03 24 03.8**	**-1.2**
MPSI	**Mapaga**	**3.42**	**277**	P		**Pn**	**03 24 05.8**	**-0.5**
TNTI	**Ternate**	**4.16**	**78**	P		**Pn**	**03 24 15.3**	**-0.5**
TTSI	**Tana Toraja**	**4.55**	**230**	P		**Pn**	**03 24 19.6**	**-1.3**
NLAI	**Namlea**	**4.93**	**130**	P		**Pn**	**03 24 26.6**	**+0.8**
SPSI	**Sidrap Palu**	**5.22**	**222**	P		**Pn**	**03 24 31.0**	**+1.3**
	0.2nm910nm34nm,0.6s							
KAPI	**Kappang**	**6.04**	**216**	P		**Pn**	**03 24 40.1**	**-0.5**
	18nm,0.3s,baz=95,slow=15,SNR=7.0							
KAPI				S		**Sn**	**03 25 47.9**	**-1.1**
	17nm,0.6s,baz=48,slow=22,SNR=1.1							
KAPI	**Kappang**	**6.04**	**216**	Pn		**Pn**	**03 24 41.0**	**+0.4**
MYLDM	**Lahad Datu**	**7.09**	**318**			**Pn**	**03 24 57.9**	**+3.3**
KKM	**Kota Kinabalu**	**9.33**	**311**	P		**Pn**	**03 25 27.0**	**+2.5**
FAKI	**Fak Fak**	**9.38**	**108**	Pn		**Pn**	**03 25 25.3**	**+0.2**
FAKI	**Fak Fak**	**9.38**	**108**	P		**Pn**	**03 25 24.9**	**-0.2**
FAKI	**Fak Fak**	**9.38**	**108**	P		**Pn**	**03 25 25.5**	**+0.4**
KNRA	**Kununurra**	**16.41**	**161**	P		**P**	**03 26 53.8**	**-0.8**
KNRA				IAmb		IAmb	03 27 10.8	
	comp=Z,9.9nm,0.8s							
FITZ	**Fitzroy Crossi**	**18.05**	**173**	P		**P**	**03 27 13.8**	**+1.2**
	comp=Z,3.8nm,0.5s,baz=6.0,slow=5.8,SNR=29							
FITZ	**Fitzroy Crossi**	**18.05**	**173**	P		**P**	**03 27 13.7**	**+1.0**
FITZ	**Fitzroy Crossi**	**18.05**	**173**	P		**P**	**03 27 14.2**	**+1.6**
MBWA	**Marble Bar**	**21.23**	**189**	P		**P**	**03 27 47.4**	**+0.4**
MBWA				IAmb		IAmb	03 27 47.8	
	comp=Z,25nm,1.4s							
PSA00	**Pilbara Seismi**	**21.62**	**189**	P		**P**	**03 27 51.4**	**+0.3**
PSA00				IAmb		IAmb	03 28 33.8	
	comp=Z,32nm,1.4s							
PSA00	**Pilbara Seismi**	**21.62**	**189**	P		**P**	**03 27 51.1**	**0.0**
PSA00				IAmb		IAmb	03 28 27.0	
	comp=Z,6.7nm,1.4s							
WB0	**Warramunga Arr**	**22.38**	**152**	P		**P**	**03 27 59.5**	**+0.7**
WB0				IAmb		IAmb	03 28 00.9	
	comp=Z,5.6nm,0.6s							
WRAB	**Tennant Creek**	**22.50**	**152**	P		**P**	**03 28 01.1**	**+1.2**
WRA	**Warramunga Arr**	**22.50**	**152**	P		**P**	**03 28 00.7**	**+0.8**
	comp=Z,3.1nm,0.4s,baz=332,slow=10,SNR=114							
WRA				PcP		**PcP**	**03 31 48.6**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=332,slow=2.2,SNR=4.8							
WRA				ScP		**ScP**	**03 35 12.1**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=332,slow=2.4,SNR=1.5							
	comp=Z,3.1nm,0.4s							
WRA	**Warramunga Arr**	**22.50**	**152**	P		**P**	**03 27 59.0**	**-1.0**
WB2	**Warramunga Arr**	**22.51**	**152**	P		**P**	**03 28 01.1**	**+1.1**
WB2				IAmb		IAmb	03 28 02.3	
	comp=Z,5.8nm,0.6s							
WR0	**Warramunga Arr**	**22.61**	**152**	P		**P**	**03 28 01.8**	**+0.8**
WR0				IAmb		IAmb	03 28 04.8	
	comp=Z,14nm,0.6s							
TPUB	**Ta-pu**	**23.39**	**354**	P		**P**	**03 28 09.0**	**+0.9**
COEN	**Coen**	**24.03**	**126**	P		**P**	**03 28 14.2**	**+0.2**
COEN				IAmb		IAmb	03 28 15.5	
	comp=Z,12nm,1.1s							
COEN	**Coen**	**24.03**	**126**	P		**P**	**03 28 15.6**	**+1.7**
WRKA	**Warakurna**	**25.27**	**169**	P		**P**	**03 28 26.5**	**+1.3**
ASAR	**Alice Springs**	**25.60**	**157**	P		**P**	**03 28 29.3**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=338,slow=12,SNR=8.0							
ASAR				PcP		**PcP**	**03 31 55.4**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=356,slow=2.1,SNR=14							
	comp=Z,0.4nm,0.3s							
QIS	**Mount Isa**	**25.86**	**143**	P		**P**	**03 28 32.4**	**+1.9**
MEEK	**Meekatharra**	**26.78**	**189**	P		**P**	**03 28 39.2**	**+0.5**
MORW	**Morawa**	**29.64**	**193**	P		**P**	**03 29 04.2**	**+0.2**
MORW	**Morawa**	**29.64**	**193**	P		**P**	**03 29 04.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**30.20**	**309**	P		**P**	**03 29 09.6**	**+0.5**
	comp=Z,3.4nm,0.3s,baz=129,slow=8.3,SNR=7.4							
	comp=Z,3.4nm,0.3s							
BLDU	**Ballidu**	**31.00**	**191**	P		**P**	**03 29 16.1**	**+0.1**
MULG	**Mulgathing**	**31.73**	**162**	P		**P**	**03 29 23.7**	**+1.3**
JCJ	**Chichijima**	**32.56**	**32**	P		**P**	**03 29 28.8**	**-0.9**
	comp=Z,71nm,0.5s,baz=259,slow=5.2,SNR=8.2							
JCJ	**Chichijima**	**32.56**	**32**	P		**P**	**03 29 28.9**	**-0.9**
STKA	**Stephens Creek**	**36.05**	**153**	P		**P**	**03 30 00.2**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=306,slow=7.0,SNR=2.9							
	comp=Z,1.5nm,0.4s							
HTT	**Hallett**	**36.28**	**158**	P		**P**	**03 30 03.4**	**+1.7**
KSRS	**Korea Array**	**37.60**	**6**	P		**P**	**03 30 11.1**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=181,slow=11,SNR=2.4							
	comp=Z,0.6nm,0.4s							
KS19	**Wonju Array Si**	**37.64**	**6**	P		**P**	**03 30 12.7**	**-0.4**
KS19				IAmb		IAmb	03 30 18.4	
	comp=Z,12nm,1.4s							
CMSA	**Cobar Meteorol**	**37.79**	**148**	P		**P**	**03 30 16.0**	**+1.6**
MJAR	**Matsushiro Arr**	**38.98**	**19**	P		**P**	**03 30 22.9**	**-1.4**
	comp=Z,3.4nm,0.6s,baz=182,slow=9.8,SNR=16							
	comp=Z,3.4nm,0.6s							
CAN	**Canberra**	**42.46**	**148**	P		**P**	**03 30 55.3**	**+2.4**
RAMN	**Ramite**	**44.35**	**310**	*eP*		**P**	**03 31 09.2**	**+0.8**
	comp=Z,20nm,0.5s							
USRK	**Ussuriysk Ar.**	**44.77**	**9**	P		**P**	**03 31 10.7**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=205,slow=5.4,SNR=6.7							
	comp=Z,2.7nm,0.6s							
JIRN	**Jiri**	**45.03**	**311**	*eP*		**P**	**03 31 14.9**	**+1.0**
	comp=Z,14nm,0.4s							
GUN	**Gumba**	**45.40**	**311**	*eP*		**P**	**03 31 18.1**	**+1.3**
	comp=Z,27nm,0.6s							
PKIN	**Phulchoki**	**45.59**	**310**	*eP*		**P**	**03 31 18.7**	**+0.5**
	comp=Z,3.4nm,0.3s							
GKN	**Gorkha**	**46.39**	**310**	*eP*		**P**	**03 31 25.2**	**+0.9**
	comp=Z,14nm,0.4s							
DANN	**Dangsing**	**47.23**	**310**	*eP*		**P**	**03 31 32.1**	**+1.1**
	comp=Z,30nm,0.6s							
SONM	**Songino Array**	**49.94**	**345**	P		**P**	**03 31 51.0**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=162,slow=9.4,SNR=9.3							
SONM				PcP		**PcP**	**03 33 08.8**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=184,slow=2.6,SNR=1.8							
	comp=Z,2.5nm,0.7s							
MK31	**Makanchi Array**	**58.84**	**328**	P		**P**	**03 32 55.0**	**-0.3**
MKAR	**Makanchi Array**	**58.84**	**328**	P		**P**	**03 32 54.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=119,slow=9.2,SNR=14							
MKAR				PcP		**PcP**	**03 33 41.8**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=126,slow=4.1,SNR=5.6							
	comp=Z,0.7nm,0.3s							
PETK	**Petropavlovsk-**	**60.25**	**23**	P		**P**	**03 33 05.1**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=201,slow=7.9,SNR=4.3							
	comp=Z,2.5nm,0.7s							
KBL	**Kabul**	**61.22**	**310**	P		**P**	**03 33 11.9**	**-0.1**
URZ	**Urewera**	**62.24**	**134**	P		**P**	**03 33 19.5**	**+0.9**
	comp=Z,16nm,0.9s,baz=6.6,slow=13,SNR=2.9							
	comp=Z,16nm,0.9s							
KURK	**Kurchatov**	**63.20**	**330**	P		**P**	**03 33 23.7**	**-0.9**
KURK				IAmb		IAmb	03 33 24.2	
	comp=Z,3.4nm,0.6s							
ABKAR	**Akbulak array**	**72.98**	**322**	P		**P**	**03 34 24.2**	**-1.4**
VNDA	**Vanda**	**80.12**	**172**	P		**P**	**03 35 05.7**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=314,slow=5.6,SNR=9.2							
	comp=Z,1.2nm,0.7s							
BRTR	**Keskin Array B**	**89.79**	**310**	P		**P**	**03 35 53.8**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=152,slow=4.3,SNR=1.8							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**90.00**	**25**	P		**P**	**03 35 53.8**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=264,slow=5.5,SNR=2.4							
	comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**120.72**	**285**	PKP		**PKPdf**	**03 41 46.5**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=84,slow=1.6,SNR=7.6							
TXAR	**Lajitas Array**	**126.63**	**53**	PKP		**PKPdf**	**03 41 59.6**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=221,slow=1.2,SNR=3.8							

NCEDC ***10*** *03:24:19.5±1.0, 39°.33N±0°.02×122°.80W±0°.03, h16km±5km, ML2.7/18, ML2.7/66(NEIC), Error ellipse: s-maj=3.0km s-min=2.4km az=75.0*
NEIC 10 03:24:19.3±1.5, 39°.34N±0°.01×122°.74W±0°.02, h12km±3km,
Error ellipse: s-maj=2.1km s-min=1.8km az=82.0,
Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GTSM	**Trough Springs**	**0.11**	**103**			Pb	03 24 23.1	-0.4
GBMM	**Baldy Mountain**	**0.27**	**135**			Pg	03 24 25.6	+0.5
GBMM						Sb	03 24 30.4	-0.5
GCK	**Clark Valley**	**0.32**	**49**			Pb	03 24 27.6	+0.7
GHLM	**Highland Sprin**	**0.36**	**216**			Pg	03 24 26.6	-0.1
GRTM	**Round Top Moun**	**0.40**	**172**			Pg	03 24 27.6	+0.3
KRKM	**Rackout Spring**	**0.41**	**304**			Pg	03 24 27.1	-0.4
HOPS	**Hopland Field**	**0.43**	**217**			Pg	03 24 27.7	-0.1
HOPS						Sb	03 24 35.0	-0.2
HOPS	**Hopland Field**	**0.43**	**217**	IAML			03 24 35.4	
	comp=N,2μm,0.9s							
HOPS				IAML			03 24 35.5	
	comp=E,2μm,0.8s							
GVV	**Valley View**	**0.44**	**7**			Pb	03 24 28.9	-0.3
GWRM	**Wonder Ranch**	**0.45**	**254**			Pg	03 24 28.1	-0.2
GSGM	**Seigler Mounta**	**0.47**	**177**			Pb	03 24 29.1	-0.4
GPMM	**Pine Mountain**	**0.51**	**198**			Pg	03 24 29.8	+0.4
MNRC	**McLaughlin Min**	**0.51**	**153**			Pb	03 24 30.6	+0.3
GBGM	**Boggs Mountain**	**0.52**	**175**			Pb	03 24 30.1	-0.4
GDXM	**Geysers**	**0.53**	**184**			Pg	03 24 30.0	+0.3
GDXM	**Geysers**	**0.53**	**184**	IAML			03 24 33.8	
	comp=E,260nm,0.6s							
GDXM				IAML			03 24 43.9	
	comp=N,190nm,0.8s							
GCRM	**Castle Rock Sp**	**0.56**	**178**			Pb	03 24 30.9	-0.2
NMTM	**Middletown**	**0.58**	**156**			Pb	03 24 31.3	-0.1
GROM	**Round Mountain**	**0.58**	**5**			Pb	03 24 31.3	-0.3
GCVM	**Cloverdale**	**0.60**	**201**			Pg	03 24 31.4	+0.3
KFPM	**Farley Peak**	**0.61**	**300**			Pg	03 24 30.8	-0.4
GAXM	**Alexander Vall**	**0.62**	**181**			Pb	03 24 31.9	-0.3
GTC	**Three Chop Rid**	**0.63**	**276**			Pg	03 24 31.3	-0.4
KBNM	**Bluenose Ridge**	**0.66**	**328**			Pg	03 24 32.2	+0.1
GSSM	**Skaggs Springs**	**0.67**	**198**			Pg	03 24 32.4	+0.1
GHOM	**Hamilton Openi**	**0.69**	**245**			Pg	03 24 32.3	-0.4
NHSM	**Mount Saint He**	**0.69**	**172**			Pg	03 24 32.8	+0.1
OSUM	**Sutter Buttes**	**0.69**	**95**			Pb	03 24 33.1	-0.2
GNAM	**Navarro Ridge**	**0.70**	**259**			Pg	03 24 32.5	-0.5
KCPM	**Cahto Peak**	**0.74**	**299**			Pg	03 24 33.6	-0.1
KIPM	**Iron Peak**	**0.74**	**310**			Pg	03 24 33.4	-0.3
SUTB	**Sutter Butte**	**0.75**	**98**			Pg	03 24 33.5	-0.4
GGUM	**Gualala**	**0.76**	**231**			Pb	03 24 34.5	0.0
MAC	**Mark West Spri**	**0.79**	**179**			Pg	03 24 34.2	-0.3
NBPM	**Berryessa Peak**	**0.79**	**147**			Pb	03 24 35.0	0.0
NDHM	**Dunnigan Hills**	**0.86**	**131**			Pb	03 24 36.1	-0.1
FTR	**Fort Ross**	**0.88**	**202**			Pg	03 24 35.3	-0.9
OGOM	**Van Goodin Ran**	**0.93**	**70**			Pg	03 24 36.2	-1.1
PAM	**Palermo**	**0.95**	**83**			Pg	03 24 37.3	-0.4
NAPC	**Atlas Peak**	**0.97**	**157**			Pg	03 24 37.0	-1.1
OHCM	**Honcut**	**0.98**	**90**			Pg	03 24 37.2	-1.0
OWYM	**Wyandotte**	**0.98**	**83**			Pg	03 24 36.9	-1.3
LBPM	**Beegum Peak**	**0.99**	**354**			Pb	03 24 38.6	+0.2
ORV	**Oroville**	**0.99**	**77**			Pg	03 24 37.0	-1.4
LTCM	**Tuscan Springs**	**0.99**	**29**			Pb	03 24 38.0	-0.5
CVS	**Carmenet Viney**	**1.01**	**167**			Pg	03 24 39.0	+0.1
KPPM	**Pickett Peak**	**1.11**	**335**			Pn	03 24 41.1	+0.1
KMRM	**Mail Ridge**	**1.16**	**320**			Pb	03 24 40.5	-0.8
KMRM	**Mail Ridge**	**1.16**	**320**	IAML			03 25 08.0	
	comp=N,197nm,1.1s							
KMRM				IAML			03 25 10.1	
	comp=E,315nm,1.0s							
SNT	**Sears Point**	**1.17**	**169**			Pb	03 24 39.3	-2.2
MCCM	**Marconi Confer**	**1.20**	**185**			Pn	03 24 39.3	-2.5
MCCM	**Marconi Confer**	**1.20**	**185**	IAML			03 25 03.0	
	comp=N,96nm,2.0s							
LCMM	**Colby Mountain**	**1.24**	**49**			Pn	03 24 41.9	-0.8
KHBM	**Hayfork Bally**	**1.37**	**345**			Pg	03 24 45.5	-0.3
LRDM	**Redding Peak**	**1.50**	**41**			Pn	03 24 46.2	+0.1
KMPM	**Mount Pierce**	**1.51**	**316**			Pn	03 24 45.5	-0.8
KMPM				IAML			03 25 27.9	
	comp=E,138nm,1.4s							
KMPM				IAML			03 25 34.4	
	comp=N,147nm,1.9s							
LGPM	**Granite Peak**	**1.58**	**358**			Pb	03 24 47.9	-0.6
KHMM	**Horse Mountain**	**1.71**	**334**			Pn	03 24 48.3	-0.8
KHMM				IAML			03 25 28.6	
	comp=N,78nm,1.4s							
KHMM				IAML			03 25 28.0	
	comp=E,70nm,1.2s							
LBKM	**Bonanza King**	**1.75**	**2**			Pb	03 24 51.0	-0.4
DONR	**Donner Summit**	**1.88**	**89**			Pn	03 24 52.5	+1.0
BEKR	**Beckworth**	**1.92**	**73**			Pn	03 24 52.9	+0.9
BEKR	**Beckworth**	**1.92**	**73**	IAML			03 25 19.3	
BEKR	comp=E,101nm,0.5s			IAML			03 25 30.5	
	comp=N,75nm,0.8s							
TNK	**Tinkers Knob**	**1.95**	**91**			Pn	03 24 53.5	+1.0
KBF	**Kyburz Flat**	**1.97**	**84**			Pb	03 24 54.2	-1.0
BMRR	**Black Mountain**	**2.04**	**67**			Pn	03 24 54.8	+1.0
EMB	**Emerald Bay**	**2.08**	**99**			Pn	03 24 55.4	+1.1
VPK	**Verdi Peak**	**2.10**	**85**			Pn	03 24 56.2	-1.3
MPK	**Martis Peak**	**2.10**	**90**			Pn	03 24 54.3	-0.3
LBFM	**Black Fox Moun**	**2.11**	**18**			Pn	03 24 55.2	+0.5
PEAR	**Peavine Mounta**	**2.17**	**82**			Pb	03 24 57.1	-1.6
CMB	**Columbia Colle**	**2.26**	**124**			Pn	03 24 56.4	-0.1
LGMM	**Garner Mountai**	**2.36**	**17**			Pn	03 24 59.1	+1.0
YBH	**Yreka Blue Hor**	**2.39**	**1**	Pn		Pn	03 24 57.8	-0.6
VCNR	**Virginia City**	**2.40**	**90**			Pn	03 24 58.5	-0.2
VCNR				IAML			03 25 48.9	
	comp=N,51nm,0.8s							
VCNR				IAML			03 25 50.1	
	comp=E,46nm,0.8s							
PNTR	**Pine Nut**	**2.45**	**95**			Pn	03 25 01.4	+2.0
PAHR	**Pah Rah Range**	**2.62**	**81**			Pn	03 25 01.7	+0.1
PAHR				IAML			03 25 42.0	
	comp=E,25nm,0.9s							
PAHR				IAML			03 25 53.5	
	comp=N,34nm,1.6s							
YERR	**Yerington**	**2.75**	**96**			Pn	03 25 03.4	0.0
YERR				IAML			03 25 47.1	
	comp=N,28nm,0.8s							
BCGM	**Cienega Road**	**2.85**	**157**			Pb	03 25 10.4	+0.3
L04D	**Klamath Falls**	**2.90**	**6**			Pn	03 25 04.8	-0.7
L04D				IAML			03 26 09.9	
	comp=N,24nm,1.9s							
L04D				IAML			03 26 10.5	
	comp=E,32nm,1.6s							
MOD	**Modoc Plateau**	**3.17**	**35**			Pn	03 25 08.9	-0.2
MOD				IAML			03 26 19.3	
	comp=N,13nm,0.9s							
MOD				IAML			03 26 26.6	
	comp=E,13nm,1.7s							
HUMO	**Hull Mountain**	**3.27**	**357**	Pn		Pn	03 25 12.3	+1.8
HUMO				IAML			03 26 22.1	
	comp=E,14nm,2.9s							
MDPB	**Devils Postpil**	**3.34**	**119**	Pn		Pn	03 25 11.3	-0.3
MDPB				IAML			03 26 11.7	
	comp=E,16nm,0.8s							
MDPB				IAML			03 26 29.1	
	comp=N,18nm,0.8s							
RYN	**Ryan**	**3.36**	**101**			Pn	03 25 11.8	-0.1
OMMB	**Old Mammoth Mi**	**3.40**	**119**	Pn		Pn	03 25 12.2	-0.4
LHV	**Little Huntoon**	**3.48**	**107**	Pn		Pn	03 25 13.5	+0.2
LHV				IAML			03 26 31.8	
	comp=E,20nm,1.1s							
LHV				IAML			03 26 31.9	
	comp=N,20nm,1.2s							
NVAR	**Mina Array Bea**	**3.58**	**103**	Pn		Pn	03 25 14.8	-0.1
KVN	**Kaiserville**	**3.62**	**93**	Pn		Pn	03 25 15.2	-0.2
K05A	**Summer Lake**	**3.66**	**22**	Pn		Pn	03 25 15.7	-0.3
K05A				IAML			03 26 22.1	
	comp=N,14nm,3.1s							
K05A				IAML			03 27 26.5	
	comp=E,16nm,3.0s							
NV11	**Mina Array Sit**	**3.69**	**103**	Pn		Pn	03 25 16.2	-0.2
NV11				IAML			03 26 35.0	
	comp=N,11nm,1.2s							
NV11				IAML			03 26 37.7	
	comp=E,11nm,4.3s							
DBO	**Dodson Butte**	**3.80**	**354**	Pn		Pn	03 25 17.2	-0.6
DBO				IAML			03 26 28.9	
	comp=E,21nm,3.8s							
DBO				IAML			03 27 31.6	
	comp=N,21nm,3.1s							
J04D	**Umpqua Nationa**	**3.93**	**7**	Pn		Pn	03 25 19.0	-0.6
PMCM	**McMillan Canyo**	**4.07**	**152**			Pb	03 25 31.6	+0.6
WVOR	**Wild Horse Val**	**4.39**	**44**	Pn		Pn	03 25 25.8	-0.1
WVOR				IAML			03 27 02.9	
	comp=N,6.2nm,2.9s							
WVOR				IAML			03 27 29.1	
	comp=N,7.1nm,3.6s							

INET ***10*** *03:25:28.0±0.6, 12°.28N×87°.75W, h15km±7km, MW3.7*
SNET ***10*** *03:25:29.7±0.8, 12°.42N×87°.81W, h31km±30km, ML3.4*
ISC 10 03:25:27.7±1.8, 12°.31N±0°.09×87°.77W±0°.05, h29km±13km,
n26, σ1s 01/33, 2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CSGN	**Cosiguina Volc**	**0.69**	**17**	*eP*		**Pb**	**03 25 41.8**	**+0.5**
CRIN	**San Cristobal**	**0.80**	**61**	*eP*		**Pb**	**03 25 43.9**	**+0.7**
CRIN				*eS*		**Sn**	**03 25 55.3**	**+1.1**
CNCH	**Conchagua**	**0.96**	**356**	*eP*		**Pb**	**03 25 45.7**	**-0.2**
CNCH				*eS*		**Sn**	**03 25 58.6**	**+0.5**
TELN	**Telica**	**0.96**	**72**	*eP*		**Pb**	**03 25 45.5**	**-

KARP					AML	AML	03 29 16.6	
	comp=E,10202μm,0.5s							
TURN	**Turunc**	**1.00**	**358**	PG	**Pb**		**03 28 52.6**	**-1.8**
TURN	**Turunc**	**1.00**	**358**	P	**Pb**		**03 28 52.6**	**-1.8**
TURN				S	**Sn**		**03 29 08.7**	**-0.8**
FETY	**Fethiye**	**1.08**	**37**	PG	**Pb**		**03 28 54.4**	**-1.4**
FETY				SG	**Sn**		**03 29 11.1**	**-0.4**
FETY	**Fethiye**	**1.08**	**37**	P	**Pb**		**03 28 54.9**	**-0.8**
FETY				S	**Sn**		**03 29 15.1**	**+3.5**
DALY	**Dalyan (Mula)**	**1.08**	**16**	PG	**Pb**		**03 28 54.9**	**-0.9**
DAT	**Datca**	**1.11**	**329**	PG	**Pb**		**03 28 54.8**	**-1.6**
DAT				SG	**Sb**		**03 29 09.1**	**-2.0**
DAT	**Datca**	**1.11**	**329**	P	**Pb**		**03 28 54.7**	**-1.6**
DAT				S	**Sb**		**03 29 09.6**	**-1.5**
AKAS	**Kas**	**1.17**	**67**	PN	**Pg**		**03 28 57.5**	**+0.3**
AKAS	**Kas**	**1.17**	**67**	P	**Pg**		**03 28 57.4**	**+0.3**
AKAS				S	**Sn**		**03 29 16.1**	**+2.2**
NIS1	**Nisyros Isl.**	**1.22**	**313**	P	**Pn**		**03 28 56.4**	**-1.8**
NIS1				S	**Sn**		**03 29 14.4**	**-0.6**
	comp=E,10μm,0.6s							
NIS1	**Nisyros Isl.**	**1.22**	**313**	P	**Pn**		**03 28 56.7**	**-1.5**
NIS1				S	**Sb**		**03 29 12.7**	**-1.3**
NIS1				AML	AML		03 29 20.6	
	comp=N,23552μm,0.5s							
NIS1				AML	AML		03 29 21.3	
	comp=E,15930μm,0.8s							
NISR	**Nisiros**	**1.25**	**312**	P	**Pn**		**03 28 57.8**	**-0.9**
NISR				S	**Sb**		**03 29 14.3**	**-0.7**
NISR				AML	AML		03 29 20.7	
	comp=N,5442μm,0.7s							
NISR				AML	AML		03 29 20.9	
	comp=E,8644μm,1.0s							
YER	**Yerkesik**	**1.36**	**0**	PN	**Pb**		**03 29 00.2**	**-0.4**
DEMR	**Demre-Antalya**	**1.40**	**70**	PN	**Pg**		**03 29 01.9**	**+0.3**
CAME	**Cameli-Denizli**	**1.43**	**35**	PN	**Pb**		**03 29 01.6**	**-0.2**
KOSK	**Kos Island**	**1.44**	**313**	PN	**Pn**		**03 29 00.8**	**-0.4**
KOSK	**Kos Island**	**1.44**	**313**	P	**Pn**		**03 29 00.8**	**-0.4**
KOSK				S	**Sn**		**03 29 19.3**	**-1.0**
KOSK				AML	AML		03 29 24.5	
	comp=N,5233μm,0.5s							
KOSK				AML	AML		03 29 28.0	
	comp=E,4939μm,0.5s							
BDRM	**Kayabasi**	**1.46**	**333**	P	**Pn**		**03 29 00.8**	**-0.7**
BDRM				S	**Sn**		**03 29 19.2**	**-1.6**
MULA	**Mugla, Merkez-**	**1.48**	**1**	P	**Pb**		**03 29 02.2**	**-0.5**
MULA				S	**Sg**		**03 29 24.3**	**+1.9**
BODT	**Bodrum**	**1.50**	**329**	PN	**Pn**		**03 29 00.8**	**-1.4**
CAEL	**Denizli, Camel**	**1.59**	**32**	P	**Pg**		**03 29 04.7**	**-0.5**
ELL	**Elmali**	**1.64**	**53**	PN	**Pb**		**03 29 05.1**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.76**	**17**	P	**Pb**		**03 29 07.1**	**-0.4**
TAVA				S	**Sg**		**03 29 34.0**	**+2.5**
GOLH	**Golhisar**	**1.79**	**35**	P	**Pb**		**03 29 08.1**	**+0.2**
GOLH				S	**Sg**		**03 29 32.8**	**+0.5**
ZKR	**Zakros**	**1.81**	**249**	P	**Pn**		**03 29 07.5**	**+1.1**
ZKR				S	**Sb**		**03 29 31.0**	**-0.1**
	comp=E,1μm,0.8s							
ZKR	**Zakros**	**1.81**	**249**	PN	**Pn**		**03 29 06.9**	**+0.5**
ZKR	**Zakros**	**1.81**	**249**	P	**Pb**		**03 29 07.9**	**-0.3**
ZKR				AML	AML		03 29 38.8	
	comp=E,1.7nm,0.7s							
ZKR				AML	AML		03 29 39.9	
	comp=E,3.4nm,0.9s							
ZKR	**Zakros**	**1.81**	**249**	P	**Pb**		**03 29 07.9**	**-0.3**
ZKR				S	**Sb**		**03 29 31.2**	**+0.1**
ZKR				AML	AML		03 29 40.0	
	comp=N,1750μm,0.7s							
ZKR				AML	AML		03 29 41.0	
	comp=E,3549μm,0.9s							
STIA	**Sitia Lasithi**	**1.88**	**253**	P	**Pb**		**03 29 08.8**	**-0.6**
STIA				S	**Sb**		**03 29 33.0**	**0.0**
STIA				AML	AML		03 29 43.3	
	comp=N,2776μm,0.8s							
STIA				AML	AML		03 29 47.3	
	comp=E,3238μm,0.8s							
DDIM	**Aydin, Didim**	**1.88**	**334**	P	**Pn**		**03 29 07.0**	**-0.3**
DDIM				S	**Sb**		**03 29 31.9**	**-1.1**
APMY	**Acipayam-Deniz**	**1.88**	**26**	PN	**Pn**		**03 29 07.8**	**+0.3**
AYDN	**Tasoluk**	**1.91**	**350**	P	**Pn**		**03 29 08.3**	**+0.5**
AYDN				S	**Sb**		**03 29 32.4**	**-1.7**
KORT	**Korkueli**	**2.07**	**53**	PN	**Pb**		**03 29 11.3**	**-1.5**
GCAM	**G?zelcaml?**	**2.10**	**337**	PN	**Pn**		**03 29 10.5**	**+0.2**
GCAM	**G?zelcaml?**	**2.10**	**337**	P	**Pn**		**03 29 10.2**	**-0.1**
GCAM				S	**Sn**		**03 29 37.1**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**2.19**	**352**	PN	**Pn**		**03 29 11.7**	**0.0**
FRMA	**Ierapetra Chan**	**2.21**	**251**	P	**Pn**		**03 29 12.5**	**+0.6**
FRMA				S	**Sn**		**03 29 40.1**	**+0.5**
FRMA				AML	AML		03 29 52.8	
	comp=E,3092μm,0.9s							
FRMA				AML	AML		03 29 56.9	
	comp=N,2126μm,0.6s							
ANTB	**Antalya**	**2.22**	**59**	PN	**Pb**		**03 29 13.3**	**-1.9**
SMG	**Samos**	**2.25**	**329**	P	**Pn**		**03 29 11.5**	**-1.0**
SMG				S	**Sn**		**03 29 39.7**	**-0.8**
	comp=N,795nm,0.4s							
SMG	**Samos**	**2.25**	**329**	P	**Pn**		**03 29 12.3**	**-0.1**
THR8	**Santorini-Mono**	**2.36**	**286**	P	**Pn**		**03 29 13.3**	**-0.5**
SANT	**Santorini**	**2.36**	**285**	PN	**Pn**		**03 29 14.2**	**+0.2**
THR6	**Thira Island,**	**2.41**	**285**	P	**Pn**		**03 29 14.3**	**-0.3**
THR3	**Thira Island,**	**2.42**	**286**	P	**Pn**		**03 29 14.0**	**-0.7**
CMBO	**Columbo, Santo**	**2.43**	**287**	P	**Pn**		**03 29 14.5**	**-0.4**
CMBO				S	**Sn**		**03 29 44.3**	**-0.5**
	comp=N,928nm,0.5s							
THR9	**Santorini-Faro**	**2.44**	**285**	P	**Pn**		**03 29 15.1**	**+0.1**
BCK	**Bucak**	**2.51**	**47**	PN	**Pn**		**03 29 17.3**	**+1.3**
DGB	**zmir**	**2.54**	**334**	P	**Pn**		**03 29 15.6**	**-0.8**
DGB				S	**Sn**		**03 29 45.5**	**-1.9**
APE	**Apeiranthos**	**2.57**	**301**	PN	**Pn**		**03 29 16.8**	**0.0**
APE	**Apeiranthos**	**2.57**	**301**	Pn	**Pn**		**03 29 17.9**	**+1.1**
BASM	**Basmaki-Afyon**	**2.57**	**33**	PN	**Pn**		**03 29 17.5**	**+0.6**
HRKL	**Herakleio**	**2.63**	**261**	PN	**Pn**		**03 29 18.5**	**+0.8**
IACM	**Heraklion**	**2.66**	**261**	P	**Pn**		**03 29 18.6**	**+0.6**
MANT	**Manisa**	**2.72**	**5**	P	**Pn**		**03 29 20.9**	**+1.8**
KULA	**Kula-Manisa**	**2.75**	**6**	PN	**Pn**		**03 29 19.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.77**	**51**	PN	**Pn**		**03 29 21.0**	**+1.3**
BLCB	**Balcova**	**2.79**	**340**	PN	**Pn**		**03 29 20.1**	**+0.3**
IDI	**Anoyia**	**2.81**	**261**	Pn	**Pn**		**03 29 20.5**	**+0.4**
	comp=N,10.0nm,0.3s,baz=68,slow=14,SNR=42							
IDI				Sn	**Sn**		**03 29 54.5**	**+0.2**
	comp=N,14nm,0.3s,baz=22,slow=19,SNR=4.7							
	comp=N,30nm,0.3s							
IDI	**Anoyia**	**2.81**	**261**	P	**Pn**		**03 29 19.9**	**-0.2**
IDI				S	**Sn**		**03 29 55.0**	**+0.7**
	comp=N,232nm,0.4s							
IDI	**Anoyia**	**2.81**	**261**	PN	**Pn**		**03 29 20.9**	**+0.8**
ZEYE	**Izmir, Urla-Ze**	**2.84**	**330**	P	**Pn**		**03 29 19.9**	**-0.6**
ZEYE				S	**Sn**		**03 29 53.9**	**-1.1**
URLA	**Izmir**	**2.91**	**333**	PN	**Pn**		**03 29 19.9**	**-1.7**
URLA	**Izmir**	**2.91**	**333**	P	**Pn**		**03 29 19.9**	**-1.7**
URLA				S	**Sn**		**03 29 55.9**	**-1.0**
SIVA	**Sivas**	**2.93**	**256**	P	**Pn**		**03 29 23.3**	**+1.5**
SIVA				S	**Sn**		**03 29 58.0**	**+0.7**
AKHS	**Akhisar**	**3.12**	**353**	P	**Pn**		**03 29 24.2**	**-0.2**
SHUT	**Suhut-Afyon**	**3.31**	**32**	PN	**Pn**		**03 29 28.4**	**+1.2**
OSC1	**CSNet OBS 1**	**3.35**	**132**	P	**Pn**		**03 29 27.7**	**+0.1**
OSC1				S	**Sn**		**03 30 09.8**	**+2.2**
GEDZ	**Gediz**	**3.39**	**15**	PN	**Pn**		**03 29 29.1**	**+1.0**
AKMS	**Akamas**	**3.40**	**102**	P	**Pn**		**03 29 28.4**	**+0.2**
AKMS				AML	AML		03 29 33.4	
	comp=N,1.0nm,0.6s							
AKMS				AML	AML		03 29 33.4	
	comp=N,1.0nm,0.6s							
AKMS				S	**Sn**		**03 30 08.5**	**-0.3**
AKMS				AML	AML		03 30 12.7	
	comp=N,1.0nm,0.4s							
AKMS				AML	AML		03 30 12.7	
	comp=N,1.0nm,0.4s							
DKL	**Dikili**	**3.47**	**342**	PN	**Pn**		**03 29 29.6**	**+0.4**
IMMV	**Iera Moni Meta**	**3.52**	**266**	P	**Pn**		**03 29 30.1**	**+0.3**
ALFC	**Alefka**	**3.58**	**99**	P	**Pn**		**03 29 31.1**	**+0.4**
ALFC				AML	AML		03 29 35.6	
	comp=N,1.1nm,0.7s							
ALFC				AML	AML		03 29 35.8	
	comp=N,1.1nm,0.3s							
NATA	**Nata**	**3.65**	**105**	P	**Pn**		**03 29 32.0**	**+0.3**
NATA				S	**Sn**		**03 30 14.6**	**-0.3**
NATA				AML	AML		03 30 19.6	
	comp=N,3.0nm,0.4s							
NATA				AML	AML		03 30 19.6	
	comp=N,3.0nm,0.4s							
NATA				AML	AML		03 30 22.7	
	comp=N,2.1nm,0.7s							
NATA				AML	AML		03 30 22.7	
	comp=N,2.1nm,0.7s							

SZAC	**Souni**	**3.90**	**104**	P	**Pn**		**03 29 35.6**	**+0.5**
SZAC				AML	AML		03 30 23.0	
	comp=N,0.7nm,0.6s							
SZAC				AML	AML		03 30 24.7	
	comp=N,1.0nm,0.7s							
ASGA	**Asgata**	**4.18**	**102**	P	**Pn**		**03 29 39.1**	**+0.1**
ASGA				AML	AML		03 30 30.6	
	comp=N,0.5nm,0.4s							
ASGA				AML	AML		03 30 31.0	
	comp=N,0.5nm,0.4s							
CSS	**Mathiatis**	**4.21**	**100**	P	**Pn**		**03 29 39.2**	**-0.1**
CSS	**Mathiatis**	**4.21**	**100**	Pn	**Pn**		**03 29 39.3**	**-0.1**
OSC2	**CSNet OBS 4**	**4.25**	**128**	P	**Pn**		**03 29 40.0**	**+0.1**
VLI	**Veliai**	**4.42**	**284**	P	**Pn**		**03 29 42.7**	**+0.4**
MVOU	**Mavrovouni**	**4.44**	**98**	P	**Pn**		**03 29 41.8**	**-0.7**
MATC	**Matruh**	**4.50**	**192**	P	**Pn**		**03 29 43.8**	**+0.4**
	baz=193							
SLUM	**Salum**	**4.98**	**212**	P	**Pn**		**03 29 50.4**	**+0.5**
	baz=213							
SLUM				S	**Sn**		**03 30 44.3**	**-3.4**
	baz=213							
BRTR	**Keskin Array B**	**5.79**	**46**	Pn	**Pn**		**03 30 01.2**	**-0.1**
	comp=N,0.4nm,0.3s,baz=218,slow=14,SNR=13							
BRTR				Sn	**Sn**		**03 31 08.8**	**+0.7**
	comp=N,0.6nm,0.3s,baz=213,slow=26,SNR=7.5							
	comp=N,2.1nm,0.6s							
HNTI	**Hanita**	**6.30**	**113**	Pn	**Pn**		**03 30 08.3**	**+0.2**
HWQ	**Hawqa**	**6.46**	**101**	*eP*	**Pn**		**03 30 10.0**	**-0.5**
MMAI	**Mount Meron Ar**	**6.50**	**113**	Pn	**Pn**		**03 30 09.7**	**-1.1**
	comp=N,5.6nm,0.3s,baz=324,slow=12,SNR=17							
MMAI				Sn	**Sn**		**03 31 23.0**	**-2.3**
	comp=N,5.9nm,0.3s,baz=304,slow=20,SNR=2.7							
	comp=N,5.5nm,0.4s							
GEM	**Giv'at Ha'Em**	**6.61**	**111**	Pn	**Pn**		**03 30 12.0**	**-0.3**
GEM				Sn	**Sn**		**03 31 25.3**	**-2.7**
RCY	**Rachaya**	**6.63**	**108**	*eP*	**Pn**		**03 30 13.0**	**+0.2**
GLL	**Jalalah**	**6.82**	**154**	P	**Pn**		**03 30 14.8**	**-0.5**
	baz=154							
SALP	**Salfit**	**6.83**	**121**	Pn	**Pn**		**03 30 14.0**	**-1.4**
SWA2		**6.94**	**201**	P	**Pn**		**03 30 17.5**	**+0.7**
	baz=202							
HMDT	**Nahal Hemdat**	**6.96**	**118**	Pn	**Pn**		**03 30 17.0**	**-0.2**
HMDT				Sn	**Sn**		**03 31 34.5**	**-2.2**
SUZ	**Suez**	**7.05**	**146**	P	**Pn**		**03 30 18.7**	**+0.3**
	baz=146							
KZIT	**Kziot**	**7.05**	**132**	Pn	**Pn**		**03 30 18.5**	**+0.1**
KZIT				Sn	**Sn**		**03 31 35.3**	**-3.6**
YTIR	**Yattir**	**7.20**	**126**	Pn	**Pn**		**03 30 20.2**	**-0.4**
DSI	**Dead Sea**	**7.25**	**123**	Pn	**Pn**		**03 30 21.3**	**+0.1**
NBNS	**Bani Suef**	**7.57**	**159**	P	**Pn**		**03 30 25.9**	**+0.3**
	baz=160							
PRNI	**Paran**	**7.81**	**132**	Pn	**Pn**		**03 30 28.4**	**-0.5**
PRNI				Sn	**Sn**		**03 31 54.1**	**-3.5**
KRMI	**Paran Flat**	**7.82**	**134**	Pn	**Pn**		**03 30 28.6**	**-0.4**
KRMI				Sn	**Sn**		**03 31 53.9**	**-3.9**
ASF	**Jabal al Asfar**	**8.01**	**114**	Pn	**Pn**		**03 30 30.1**	**-1.5**
	comp=N,0.4nm,0.3s,baz=334,slow=8.4,SNR=3.6							
ASF				Sn	**Sn**		**03 31 59.4**	**-3.1**
	comp=N,0.2nm,0.3s,baz=215,slow=19,SNR=1.5							
	comp=N,2.1nm,0.4s							
HRFI	**Mount Harif**	**8.06**	**133**	Pn	**Pn**		**03 30 33.4**	**+1.1**
HRFI				Sn	**Sn**		**03 32 00.6**	**-3.1**
MBRI	**Mt Berech**	**8.17**	**135**	Pn	**Pn**		**03 30 34.0**	**+0.2**
EIL	**Elat**	**8.28**	**135**	Pn	**Pn**		**03 30 34.1**	**-1.2**
	comp=N,2.2nm,0.3s,baz=0.0,slow=11,SNR=10							
EIL				Sn	**Sn**		**03 32 02.3**	**-6.8**
	comp=N,1.5nm,0.3s,baz=328,slow=15,SNR=2.2							
	comp=N,5.7nm,0.4s							
EIL	**Elat**	**8.28**	**135**	Pn	**Pn**		**03 30 35.1**	**-0.2**
HBST	**Basata**	**8.51**	**138**	P	**Pn**		**03 30 38.0**	**-0.4**
	baz=139							
HFRF	**Wahat Farafira**	**8.60**	**180**	P	**Pn**		**03 30 39.6**	**0.0**
	baz=181							
NUB	**Nuweibaa**	**8.61**	**140**	P	**Pn**		**03 30 39.5**	**-0.3**
	baz=140							
TR2	**Tor 2**	**8.69**	**146**	P	**Pn**		**03 30 41.0**	**+0.1**
	baz=147							
HKAT	**Jabal Katrina**	**8.70**	**145**	P	**Pn**		**03 30 40.6**	**-0.7**
	baz=145							
MLR	**Muntele Rosu**	**9.87**	**350**	Pn	**Pn**		**03 30 58.8**	**+1.7**
	comp=N,0.1nm,0.3s,baz=267,slow=8.2,SNR=2.1							
	comp=N,1.4nm,0.8s							
KBA	**Koelnbreinsper**	**15.88**	**320**	*eP*	**P**		**03 32 28.7**	**+6.1**
	comp=N,7.3nm,1.0s							
GERES	**GERESS Array B**	**16.90**	**325**	Pn	**Pn**		**03 32 31.8**	**+0.1**
	comp=N,0.2nm,0.3s,baz=134,slow=13,SNR=2.4							
	comp=N,0.2nm,0.5s							
WATA	**Walderalm**	**16.98**	**318**	*eP*	**P**		**03 32 41.2**	**+6.4**
	comp=N,8.1nm,0.9s							
MOTA	**Moosalm**	**17.25**	**317**	*eP*	**P**		**03 32 42.4**	**+4.7**
	comp=N,8.3nm,1.4s							
FETA	**Feichten**	**17.27**	**316**	*eP*	**P**		**03 32 44.5**	**+6.5**
	comp=N,9.3nm,0.9s							
DAVOX	**Davos/Dischmat**	**17.62**	**314**	P	**P**		**03 32 43.1**	**+1.2**
	comp=N,0.2nm,0.3s,baz=156,slow=18,SNR=2.0							
	comp=N,0.7nm,0.4s							
ESDC	**Sonseca Array**	**25.72**	**288**	P	**P**		**03 34 06.7**	**+1.0**
	comp=N,2.5nm,0.8s,baz=83,slow=9.4,SNR=8.5							
	comp=N,2.5nm,0.8s							
AKTO	**Aktubinsk**	**25.97**	**46**	P	**P**		**03 34 07.0**	**-0.9**
	comp=N,2.5nm,0.7s,baz=246,slow=9.7,SNR=10							
	comp=N,2.5nm,0.7s							
HFS	**Hagfors**	**26.14**	**343**	P	**P**		**03 34 08.2**	**-1.1**
	comp=N,5.5nm,0.9s,baz=165,slow=18,SNR=3.1							
	comp=N,5.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**32.87**	**233**	P	**P**		**03 35 08.2**	**-1.2**
	comp=N,0.7nm,0.4s,baz=36,slow=8.5,SNR=14							
	comp=N,0.7nm,0.4s							
ARCES	**ARCESS Array B**	**33.85**	**358**	P	**P**		**03 35 18.6**	**+1.1**
	comp=N,1.5nm,0.8s,baz=172,slow=7.1,SNR=1.7							
	comp=N,1.5nm,0.8s							
MKAR	**Makanchi Array**	**41.30**	**57**	P	**P**		**03 36 20.9**	**+0.1**
	comp=N,1.1nm,0.6s,baz=280,slow=5.3,SNR=9.1							
	comp=N,1.1nm,0.6s							
ZALV	**Zalesovo Beam**	**42.74**	**47**	P	**P**		**03 36 30.4**	**-2.0**
	comp=N,0.5nm,0.3s,baz=295,slow=10,SNR=1.7							
	comp=N,0.5nm,0.3s							

WEL 10 04:06:51.4±1.6, 37°S±12′×17°9E±1°2, h47km±8km, M3.3/9, ML3.1/9, MLv3.3/9, Error ellipse: s-maj=0.0km s-min=0.0km az=40.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.18**	**245**	P	Pn	04 07 00.6	+1.3
MXZ				S	Sn	04 07 07.8	+2.9
WMGZ	**Waiomatatini S**	**0.34**	**193**	P	Pn	04 07 02.3	+1.6
WMGZ				S	Sn	04 07 11.1	+3.8
PKGZ	**Pakihiroa**	**0.53**	**221**	P	Pn	04 07 03.6	+0.7
PKGZ				S	Sn	04 07 12.5	+1.3
PUZ	**Puketiti**	**0.62**	**199**	P	Pn	04 07 04.7	+0.7
PUZ				S	Sn	04 07 14.8	+1.7
HAZ	**Te Kaha**	**0.64**	**245**	P	Pn	04 07 05.3	+1.0
HAZ				S	Sn	04 07 15.4	+1.9
TWGZ	**Tauwhareparae**	**0.81**	**211**	P	Pn	04 07 07.3	+0.7
TWGZ				S	Sn	04 07 19.6	+2.0
RUGZ	**Raukumara Rang**	**0.82**	**234**	P	Pn	04 07 07.5	+0.7
RUGZ				S	Sn	04 07 19.7	+1.8
MWZ	**Matawai**	**1.15**	**222**	P	Pn	04 07 11.4	+0.2
RAGZ	**Rawiri**	**1.33**	**220**	P	Pn	04 07 13.9	+0.2
URZ	**Urewera**	**1.35**	**235**	P	Pn	04 07 13.7	-0.1
RIGZ	**Rimuhau**	**1.35**	**206**	P	Pn	04 07 13.5	-0.5
MTHZ	**Maungataniwha**	**1.90**	**224**	P	Pn	04 07 21.3	-0.1
NMHZ	**Naumai**	**2.10**	**219**	P	Pn	04 07 23.9	-0.2
ARHZ	**Aropaoanui**	**2.14**	**213**	P	Pn	04 07 23.8	-0.8
BKZ	**Black Stump Fm**	**2.31**	**223**	P	Pn	04 07 24.2	-2.9
KWHZ	**Kaweka Forest**	**2.54**	**220**	P	Pn	04 07 28.8	-1.4
KAHZ	**Kahuranaki**	**2.64**	**209**	P	Pn	04 07 29.8	-1.7
TMVZ	**Te Maari**	**2.74**	**233**	P	Pn	04 07 32.0	-1.1
OTVZ	**Oturere**	**2.80**	**232**	P	Pn	04 07 32.7	-1.1

*BJI **10** 04:06:55.9±0.0, 5.°49N×125.°80E, h136km, mb5.1/78, mB5.2/55*

*MOS **10** 04:06:57.7±1.1, 5.°56N×125.°50E, h141km, mb5.3/52, Error ellipse: s-maj=8.9km s-min=4.2km az=111.5*

*NEIC **10** 04:06:59.0±2.0, 5.°57N±0.°06×125.°72E±0.°09, h127km±4km, mb5.4/228, Mwb5.2/8, Error ellipse: s-maj=12.4km s-min=8.1km az=80.0*

*GCMT **10** 04:06:58.0±0.1, 5.°59N±0.°01×125.°74E±0.°01, h137km, MW5.3/150, Moment Tensor Solution. s117,c183; s150,c277; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.09±.02; Mθθ0.29±.02; Mϕϕ-0.37±.02; Mrθ0.99±.01; Mθϕ0.62±.02; Mϕr-0.24±.01; Best double couple: M0 1.24000×10^17 NP1:ϕs106.00000°, δ88.00000°, λ55.00000°. NP2:ϕs12.00000°, δ35.00000°, λ176.00000°. Principal axes: T 1.2430, Plg38.0000°, Azm345.0000°; N -0.0050, Plg35.0000°, Azm107.0000°; P -1.2380, Plg33.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **10** 04:06:58.7±0.3, 6.°N±2.°×12.°6E±.°, h130km±2km, M5.4/108, mb5.6/108, mB5.9/80, MLv6.0/15, Mw(mB)5.5/80, MwMwp5.0/15, Mwp5.2/15*

*NEIC **10** 04:06:59.5, 5.°59N×125.°71E, h122km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr-0.31; Mθθ0.09; Mϕϕ0.22; Mrθ9.33; Mθϕ-0.49; Mϕr-0.20; Fault plane solution: M0 9.35000×10^16 NP1:ϕs271.35000°, δ89.34000°, λ-93.00000°. NP2:ϕs168.99000°, δ3.07000°, λ-12.37000°. Principal axes: T 9.2459, Plg44.0000°, Azm4.0000°; N 0.2020, Plg3.0000°, Azm271.0000°; P -9.4478, Plg46.0000°, Azm178.0000°;*

*IDC **10** 04:06:59.6±0.5, 5.°62N×125.°55E, h140km±3km, mb4.8/41, mbtmp5.2/42, MS3.9/51 Error ellipse: s-maj=10.1km s-min=5.9km az=80.0*

*KLM **10** 04:07:00, 5.°33N×126.°06E, h112km, mb5.5*

ISC 10 04:06:58.9±0.3, 5.°58N±0.°02×125.°66E±0.°03, h138km±1km, h139km:pP-P, n1075, σ1s57/1175, mb5.4/270, 43C-27D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.53**	**6**	↓*eP*	**Pn**	**04 07 18.2**	**-0.9**
DDMP				*i* S	**Sn**	**04 07 32.3**	**-2.1**
GSPH	**General Santos**	**0.87**	**306**	↓*eP*	**Pn**	**04 07 20.3**	**-1.3**
GSPH				*i* S	**Sn**	**04 07 37.0**	**-1.8**
SKMP	**Bagumbayan, Su**	**1.45**	**310**	↓*eP*	**Pn**	**04 07 27.3**	**+0.2**
SKMP				*i* S	**Sn**	**04 07 49.0**	**+0.4**
MATI	**Mati**	**1.48**	**24**	↓*eP*	**Pn**	**04 07 26.1**	**-1.3**
MATI				*i* S	**Sn**	**04 07 53.6**	**+4.4**
DAV	**Davao City (W)**	**1.48**	**357**	P	**Pn**	**04 07 28.0**	**+0.5**
	3μm,0.3s,baz=160,slow=1.4,SNR=123						
DAV				S	**Sn**	**04 07 50.1**	**+0.8**
	23μm,0.3s,baz=35,slow=21,SNR=8.9						
DAV	**Davao City (W)**	**1.48**	**357**	P	**Pn**	**04 07 28.4**	**+0.9**
KCP	**Kidapawan**	**1.53**	**338**	↓*eP*	**Pn**	**04 07 27.8**	**-0.2**
KCP				*i* S	**Sn**	**04 07 47.4**	**-2.8**
SGSI	**Sangihe**	**1.88**	**184**	P	**Pn**	**04 07 31.8**	**-0.2**
CTBH	**Cotabato--PC H**	**2.15**	**319**	↑*eP*	**Pn**	**04 07 35.5**	**+0.3**
CTBH				*i* S	**Sn**	**04 08 02.2**	**-0.9**
BUKP	**Musuan**	**2.36**	**345**	↑*eP*	**Pn**	**04 07 37.9**	**0.0**
BUKP				*eS*	**Sn**	**04 08 09.7**	**+1.9**
BIPH	**Bislig**	**2.68**	**15**	↓*eP*	**Pn**	**04 07 41.8**	**+0.1**
BIPH				*eS*	**Sn**	**04 08 15.0**	**+0.2**
PAGZ	**Pagadian**	**3.19**	**315**	↓*eP*	**Pn**	**04 07 48.9**	**+0.5**
PAGZ				*i* S	**Sn**	**04 08 28.5**	**+1.9**
BUTP	**Butuan**	**3.37**	**359**	↓*eP*	**Pn**	**04 07 52.2**	**+1.6**
BUTP				*i* S	**Sn**	**04 08 35.4**	**+4.7**
DCPH	**Dipolog City**	**3.76**	**323**	↓*eP*	**Pn**	**04 07 59.4**	**+3.6**
SCPH	**Surigao**	**4.18**	**358**	*eP*	**Pn**	**04 08 01.9**	**+0.6**
SCPH				*eS*	**Sn**	**04 08 43.1**	**-6.7**
GLSP	**General Luna,**	**4.20**	**6**	↓*eP*	**Pn**	**04 08 02.6**	**+1.0**
GLSP				*i* S	**Sn**	**04 08 51.0**	**+0.6**
SNPH	**Sibulan**	**4.45**	**327**	↑*eP*	**Pn**	**04 08 06.5**	**+1.7**
SNPH				*eS*	**Sn**	**04 08 59.5**	**+3.4**
TBP	**Tagbilaran**	**4.46**	**337**	↑*iP*	**Pn**	**04 08 05.7**	**+0.8**
TBP				*i* S	**Sn**	**04 08 59.6**	**+3.3**
MSLP	**Maasin**	**4.59**	**350**	↑*eP*	**Pn**	**04 08 06.8**	**0.0**
LLP	**Lapu-Lapu**	**5.00**

SAUI **Saumlaki** 14.60 157 Pn 04 10 19.5 +0.5
SAUI **Saumlaki** 14.60 157 P Pn 04 10 16.0 -3.0
comp=Z,21µmcomp=Z,2µm,0.6s
EDFI **Ende, Flores** 14.77 196 P Pn 04 10 21.1 -0.2
comp=Z,3µmcomp=Z,312nm,0.8s
SMPI **Sarmi** 15.05 120 P Pn 04 10 23.5 -1.1
comp=Z,5µmcomp=Z,41nm,1.0s
STKI **Sintang** 15.18 249 P P 04 10 30.0 +1.9
comp=Z,13µmcomp=Z,225nm,1.6s
BATI **Baumata** 15.81 187 P P 04 10 35.6 +0.6
comp=Z,1µm,0.6s,baz=350,slow=1.8,SNR=62
BATI S Sn 04 13 30.2 +0.3
comp=Z,123nm,0.9s,baz=209,slow=22,SNR=2.1
BATI **Baumata** 15.81 187 P P 04 10 34.9 -0.1
comp=Z,9µmcomp=Z,995nm,0.8s
KSM **Kuching** 15.85 256 P P 04 10 37.7 +2.2
PBKI **Pangkalan Bun** 16.22 240 P P 04 10 42.0 +2.4
comp=Z,675nm,1.2s
PLAI **Plampang** 16.33 209 P P 04 10 41.3 +0.5
comp=Z,13µmcomp=Z,2µm,1.4s
PLAI **Plampang** 16.33 209 P P 04 10 42.4 +1.6
comp=Z,2µm,1.2s
WBSI **Waikabubak, Su** 16.36 202 P Pn 04 10 40.0 -0.8
comp=Z,6µmcomp=Z,583nm,1.2s
BASI **Baing, Sumba** 16.49 198 P Pn 04 10 42.3 -0.1
comp=Z,5µmcomp=Z,334nm,0.9s
GENI **Genyem** 16.61 119 P Pn 04 10 42.6 -1.3
comp=Z,4µmcomp=Z,359nm,1.0s
TWSI **Taliwang, Sumb** 16.70 212 P Pn 04 10 46.7 +1.8
comp=Z,5µmcomp=Z,288nm,0.9s
SRBI **Singaraja** 17.11 218 P Pn 04 10 50.4 +0.5
comp=Z,5µmcomp=Z,398nm,1.2s
KMMI **Kalianget** 17.13 223 P Pn 04 10 51.7 +1.5
comp=Z,9µmcomp=Z,922nm,1.0s
BWJI **Bawean** 17.25 229 P Pn 04 10 54.1 +2.6
comp=Z,3µmcomp=Z,14µmcomp=Z,1µm,1.3s
ABJI **Asem Bagus** 17.50 221 P Pn 04 10 56.5 +1.9
comp=Z,3µmcomp=Z,224nm,1.3s
DNP **Denpasar** 17.58 216 P Pn 04 10 58.2 +2.6
DNP pmax pmax
comp=Z,2µm,1.6s
DNP **Denpasar** 17.58 216 P Pn 04 10 57.7 +2.1
comp=Z,34µmcomp=Z,2µm,1.6s
IGBI **Denpasar** 17.73 216 P Pn 04 10 56.9 -0.5
comp=Z,6µmcomp=Z,512nm,1.4s
BLJI **Banyuglugur** 17.89 222 P Pn 04 10 59.3 +0.1
comp=Z,2µmcomp=Z,149nm,1.0s
JAGI **Jajag, Banyuwa** 18.07 220 P Pn 04 11 00.9 -0.5
JAGI **Jajag, Banyuwa** 18.07 220 P Pn 04 11 00.9 -0.5
comp=Z,5µmcomp=Z,372nm,0.9s
JAGI **Jajag, Banyuwa** 18.07 220 P Pn 04 11 03.0 +1.6
comp=Z,414nm,1.1s
YULB **Yu-li** 18.20 347 P P 04 10 59.4 -1.9
TPUB **Ta-pu** 18.27 345 P P 04 11 01.6 -0.5
GMJI **Gumukmas** 18.38 222 P Pn 04 11 05.0 0.0
comp=Z,4µmcomp=Z,486nm,1.3s
TBJI **Tambak Boyo** 18.48 226 P Pn 04 11 08.1 +1.8
comp=Z,11µmcomp=Z,895nm,1.2s
SSLB **Suanglung** 18.66 346 P P 04 11 04.7 -1.7
SSLB **Suanglung** 18.66 346 P P 04 11 05.9 -0.5
NACB **Ninganchiao** 18.90 348 P P 04 11 08.0 -0.9
YOJ **Yonaguni jima** 18.95 353 P P 04 11 10.1 +0.7
YOJ **Yonaguni jima** 18.95 353 P P 04 11 10.1 +0.7
YOJ **Yonaguni jima** 18.95 353 P Pn 04 11 11.9 +0.3
MTN **Manton Dam** 19.09 163 P P 04 11 11.5 +0.4
baz=19,SNR=80
MTN **Manton Dam** 19.09 163 P P 04 11 11.5 +0.4
MTN **Manton Dam** 19.09 163 P P 04 11 11.2 +0.1
comp=Z,404nm,0.7s
JMJ **Miyako jima 2** 19.13 359 P Pn 04 11 13.5 -0.2
NGJI **Ngawi** 19.13 228 P Pn 04 11 14.6 +0.7
comp=Z,8µmcomp=Z,772nm,1.0s
PWJI **Pagerwojo** 19.33 226 P Pn 04 11 15.5 -0.6
comp=Z,5µmcomp=Z,501nm,1.0s
KDU **Kakadu** 19.37 160 P P 04 11 14.8 +0.8
baz=19,SNR=55
KDU **Kakadu** 19.37 160 P P 04 11 14.3 +0.2
comp=Z,833nm,1.0s
YHNB **Yeheng** 19.42 348 P P 04 11 14.3 -0.4
YHNB **Yeheng** 19.42 348 P P 04 11 15.1 +0.4
TPI **Tanjungpandan** 19.80 246 P Pn 04 11 21.2 -0.5
comp=Z,2µmcomp=Z,202nm,1.0s
PCJI **Pacitan** 19.89 227 P Pn 04 11 21.9 -0.9
comp=Z,271nm,1.2s
KNMB **Chin-men Tao** 20.04 340 P Pn 04 11 23.2 -1.1
UGM **Wanagama** 20.19 229 P Pn 04 11 25.3 -1.0
UGM **Wanagama** 20.19 229 P Pn 04 11 25.4 -0.9
comp=Z,557nm,1.4s
YOGI **Yogyakarta** 20.30 229 P Pn 04 11 26.3 -1.2
comp=Z,445nm,1.4s
QIZ **Qiongzhong** 20.41 312 ⇑P P 04 11 26.1 +0.9
QIZ S S 04 15 07.8 +1.4
QIZ sS sS 04 15 50.0 +2.8
QIZ pmax pmax
comp=Z,100nm,1.3s
QIZ pmax pmax
comp=Z,530nm,4.2s
QZH **Quanzhou** 20.41 341 ⇑*i*P P 04 11 24.7 -0.5
QZH pP pP 04 11 52.8 +2.4
QZH sP sP 04 12 10.1 +2.3
QZH S S 04 15 07.6 +1.2
QZH pmax pmax
comp=Z,48nm,0.9s
QZH LR LR
comp=Z,570nm,16.1s
QZH LR LR
comp=Z,800nm,18.5s
GUMO **Guam** 20.53 66 LR LR 04 18 06.6
comp=Z,628nm,21.1s,baz=241,slow=32
PPBI **Pangkal Pinang** 20.96 249 P P 04 11 32.9 +1.7
comp=Z,15µmcomp=Z,225nm,1.3s
JCJI **Jatiwangi** 21.09 236 P P 04 11 37.0 +4.3
comp=Z,12µmcomp=Z,409nm,1.4s
JOW **Kunigami** 21.28 6 LR LR 04 22 01.0
comp=Z,96nm,18.2s,baz=203,slow=42
JOW **Kunigami** 21.28 6 P P 04 11 35.2 +0.6
JOW **Kunigami** 21.28 6 P P 04 11 36.5 +1.9
KNRA **Kununurra** 21.34 172 P P 04 11 35.3 +0.1
baz=21,SNR=538
KNRA **Kununurra** 21.34 172 P P 04 11 35.7 +0.4
TPRI **Tanjung Pinang** 21.59 258 P P 04 11 39.8 +1.7
comp=Z,26µmcomp=Z,127nm,0.5s
LEM **Lembang** 21.82 236 P P 04 11 41.9 +1.3
comp=Z,260nm,1.1s,baz=86,slow=8.8,SNR=33
comp=Z,260nm,1.1s
LEM **Lembang** 21.82 236 P P 04 11 42.7 +2.1
comp=Z,2µmcomp=Z,5µmcomp=Z,248nm,1.9s
DSRI **Dabo** 21.89 255 P P 04 11 43.0 +1.8
comp=Z,4µmcomp=Z,245nm,1.4s
CBJI **Citeko** 22.24 238 P P 04 11 47.3 +2.6
comp=Z,283nm,0.6s
TNG **Tangerang** 22.28 239 P P 04 11 50.7 +5.6
DBJI **Dramaga** 22.39 238 P P 04 11 47.4 +1.2
comp=Z,424nm,1.3s
CNJI **Cibinong** 22.49 236 P P 04 11 47.9 +0.8
comp=Z,4µmcomp=Z,305nm,0.9s
PMBI **Palembang** 22.51 248 P P 04 11 49.3 +2.0
PMBI **Palembang** 22.51 248 P P 04 11 50.2 +2.9
comp=Z,46µmcomp=Z,1µm,1.0s
PMBI **Palembang** 22.51 248 P P 04 11 49.9 +2.6
SBJI **Serang** 22.70 239 P P 04 11 49.3 +0.2
comp=Z,8µmcomp=Z,283nm,0.8s
SKJI **Sukabumi** 22.80 237 P P 04 11 52.3 +2.2
comp=Z,241nm,0.7s
BLSI **Bandar Lampung** 23.10 242 P P 04 11 55.6 +2.7
comp=Z,8µmcomp=Z,796nm,1.2s
JMBI **JAMBI** 23.13 253 P P 04 11 57.2 +4.0
comp=Z,5µmcomp=Z,604nm,0.8s
KLI **Kotabumi** 23.22 244 P P 04 11 56.9 +2.9
comp=Z,13µmcomp=Z,1µm,0.9s
FITZ **Fitzroy Crossi** 23.53 180 P P 04 11 56.8 +0.1
comp=Z,272nm,0.5s,baz=3.9,slow=8.4,SNR=1213
FITZ pP pP 04 12 23.6 -0.1
comp=Z,93nm,0.8s,baz=1.6,slow=8.7,SNR=2.8
FITZ S S 04 15 59.1 -1.3
comp=Z,35nm,1.0s,baz=105,slow=20,SNR=4.0
comp=Z,272nm,0.5s
FITZ **Fitzroy Crossi** 23.53 180 P P 04 11 56.9 +0.2
baz=24,SNR=907
FITZ **Fitzroy Crossi** 23.53 180 P P 04 11 57.8 +1.1
KASI **Kota Agung** 23.83 243 P P 04 12 01.3 +1.7
comp=Z,5µmcomp=Z,538nm,1.1s
LWLI **Liwa** 24.00 244 P P 04 12 03.7 +2.5
comp=Z,10µmcomp=Z,691nm,1.4s
GULI **GuiLin** 24.48 325 ⇑P P 04 12 09.1 +3.8
GULI pmax pmax
comp=Z,40nm,1.2s
GULI LR LR
comp=Z,590nm,15.7s
GULI LR LR
comp=Z,560nm,14.1s
GULI LR LR
comp=Z,670nm,16.3s
IPM **Ipoh** 24.56 269 P P 04 12 07.3 +1.0
IPM IAmb IAmb 04 12 10.1
comp=Z,199nm,1.5s
IPM **Ipoh** 24.56 269 P P 04 12 08.8 +2.5
comp=Z,94nm,1.3s
MNAI **Manna** 24.73 247 P P 04 12 08.8 +1.0
MNAI **Manna** 24.73 247 P P 04 12 12.0 +4.2
comp=Z,11µmcomp=Z,913nm,1.5s
MNAI **Manna** 24.73 247 P P 04 12 10.7 +2.9
KSI **Kapahiang** 24.80 249 P P 04 12 12.1 +3.7
comp=Z,424nm,1.1s
KULM **Kulim** 24.90 271 P P 04 12 10.6 +1.3
KULM IAmb IAmb 04 12 13.4
comp=Z,157nm,1.4s
KULM **Kulim** 24.90 271 P P 04 12 12.0 +2.7
MASI **Maura Aman, Be** 24.94 250 P P 04 12 14.9 +5.2
comp=Z,9µmcomp=Z,864nm,1.1s
BKNI **Bangkinang** 25.13 259 P P 04 12 12.6 +1.2
BKNI **Bangkinang** 25.13 259 P P 04 12 13.4 +2.0
comp=Z,6µmcomp=Z,385nm,1.0s
BKNI **Bangkinang** 25.13 259 P P 04 12 14.2 +2.8
KRJI **Kerinci** 25.34 253 P P 04 12 16.2 +2.8
comp=Z,245nm,1.0s
SSE **Sheshan** 25.73 351 P P 04 12 18.3 +1.7
SSE S S 04 16 40.7 +5.4
SSE pmax pmax
comp=Z,57nm,1.2s
SSE pmax pmax
comp=Z,270nm,4.6s
SSE LR LR
comp=Z,190nm,21.2s
SSE LR LR
comp=Z,140nm,20.8s
PPI **Padang Panjang** 25.93 257 P P 04 12 20.2 +1.6
COEN **Coen** 26.06 138 P P 04 12 20.2 +0.5
baz=26,SNR=48
COEN **Coen** 26.06 138 P P 04 12 19.8 +0.1
COEN IAmb IAmb 04 12 22.1
comp=Z,176nm,1.6s
COEN **Coen** 26.06 138 P P 04 12 19.7 0.0
comp=Z,51nm,0.7s
PMG **Port Moresby** 26.09 125 P P 04 12 20.5 +0.5
comp=Z,19nm,0.5s,baz=272,slow=8.8,SNR=5.2
comp=Z,19nm,0.5s
JSU **Suzuyama** 26.18 9 P P 04 12 20.4 -0.3
JSU IAmb IAmb 04 12 24.3
comp=Z,204nm,1.1s
JCJ **Chichijima** 26.57 35 P P 04 12 23.0 -1.1
comp=Z,462nm,0.4s,baz=241,slow=4.0,SNR=61
JCJ **Chichijima** 26.57 35 P P 04 12 23.1 -1.1
JCJ **Chichijima** 26.57 35 P P 04 12 23.1 -1.1
WB0 **Warramunga Arr** 26.61 161 P P 04 12 23.9 -0.7
WB0 IAmb IAmb 04 12 28.9
comp=Z,146nm,1.0s
WRAB **Tennant Creek** 26.75 162 P P 04 12 25.3 -0.6
WRAB IAmb IAmb 04 12 57.0
comp=Z,160nm,1.1s
WRAB **Tennant Creek** 26.75 162 *ce*P P 04 12 25.6 -0.3
WRAB pmax pmax
comp=Z,100nm,1.0s
WRAB **Tennant Creek** 26.75 162 P P 04 12 25.8 -0.1
WRA **Warramunga Arr** 26.76 162 P P 04 12 25.7 -0.3
comp=Z,70nm,1.0s,baz=341,slow=10,SNR=95
WRA S S 04 16 47.3 -4.5
comp=Z,29nm,1.1s,baz=334,slow=15,SNR=8.0
WRA ScP ScP 04 19 13.0 -0.2
comp=Z,16nm,0.9s,baz=337,slow=3.6,SNR=8.6
WRA ScS ScS 04 23 00.5 -3.8
comp=Z,1.3nm,0.8s,baz=352,slow=5.7,SNR=2.9
comp=Z,70nm,1.0s
WRA **Warramunga Arr** 26.76 162 P P 04 12 25.0 -1.0
WB2 **Warramunga Arr** 26.76 162 P P 04 12 25.6 -0.4
baz=27
WB2 **Warramunga Arr** 26.76 162 IAmb IAmb 04 12 57.1
comp=Z,154nm,1.1s
PSI **Prapat** 26.80 265 P P 04 12 27.9 +1.4
comp=Z,30nm,0.9s,baz=101,slow=4.0,SNR=15
PSI ScP ScP 04 19 12.0 -1.7
comp=Z,24nm,0.9s,baz=176,slow=3.7,SNR=9.8
comp=Z,30nm,0.9s
PSI **Prapat** 26.80 265 P P 04 12 28.0 +1.4
PSI **Prapat** 26.80 265 P P 04 12 28.8 +2.2
comp=Z,47nm,1.2s
RPSI **Rantau Prapat** 26.82 265 P P 04 12 27.2 +0.6
WR0 **Warramunga Arr** 26.84 161 P P 04 12 25.8 -0.9
WR0 IAmb IAmb 04 12 57.9
comp=Z,118nm,0.9s
NJ2 **Nanjing** 27.10 347 ⇓P P 04 12 29.5 +0.7
NJ2 pP pP 04 12 53.1 -5.1
NJ2 SS SS 04 18 24.1 -33
NJ2 pmax pmax
comp=Z,25nm,0.9s
NJ2 pmax pmax
comp=Z,580nm,9.5s
NJ2 LR LR
comp=Z,380nm,14.7s
NJ2 LR LR
comp=Z,340nm,10.9s
NJ2 LR LR
comp=Z,600nm,18.0s
MBWA **Marble Bar** 27.20 192 P P 04 12 29.7 -0.1
MBWA **Marble Bar** 27.20 192 P P 04 12 30.4 +0.5
SISI **Saibi** 27.41 256 P P 04 12 32.6 +0.7
comp=Z,2µmcomp=Z,201nm,1.3s
GYA **Guiyang** 27.57 321 ⇑*i*P P 04 12 34.1 +0.8
GYA pP pP 04 13 05.1 +2.2
GYA PcP PcP 04 15 49.4 +1.6
GYA S S 04 17 05.7 +1.0
GYA ScP ScP 04 19 15.2 -0.6
GYA ScS ScS 04 23 06.2 -1.8
GYA pmax pmax
comp=Z,22nm,1.0s
GYA pmax pmax
comp=Z,280nm,3.9s
GYA LR LR
comp=Z,570nm,12.0s
GYA LR LR
comp=Z,640nm,14.1s
GYA LR LR
comp=Z,940nm,15.4s
PSA00 **Pilbara Seismi** 27.58 192 P P 04 12 33.8 +0.6
KCSI **Kotacane, Aceh** 27.87 267 P P 04 12 36.8 +0.8
comp=Z,72nm,1.4s
KRVT **Keravat (AS076** 28.10 110 LR LR 04 22 37.9
comp=Z,377nm,19.1s,baz=82,slow=33
GSI **Gunungsitoli** 28.35 262 P P 04 12 40.5 +0.3
GSI **Gunungsitoli** 28.35 262 P P 04 12 41.1 +0.9
comp=Z,196nm,1.2s
GSI **Gunungsitoli** 28.35 262 P P 04 12 41.6 +1.4
ENH **Enshi** 28.90 330 IAmb IAmb 04 12 46.4
comp=Z,121nm,1.4s
JTU **Tsushima** 29.01 6 P P 04 12 46.0 +0.2
JTU IAmb IAmb 04 12 47.7
comp=Z,121nm,1.2s
JMN **Monobe** 29.03 14 P P 04 12 46.9 +0.8
JMN IAmb IAmb 04 12 48.5
comp=Z,125nm,0.9s
CM31 **Chiang Mai Arr** 29.04 298 P 04 12 46.9 +0.5
CMAR **Chiang Mai Arr** 29.04 298 P P 04 12 46.9 +0.5
comp=Z,7.8nm,1.0s,baz=120,slow=7.3,SNR=20
CMAR ScP ScP 04 19 20.9 +0.5
comp=Z,28nm,1.0s,baz=130,slow=1.5,SNR=42
comp=Z,7.8nm,1.0s
CMAR **Chiang Mai Arr** 29.04 298 P P 04 12 47.1 +0.8
CMAR **Chiang Mai Arr** 29.04 298 P P 04 12 47.1 +0.8
CHTO **Chiang Mai** 29.18 299 P P 04 12 48.6 +1.0
CHTO **Chiang Mai** 29.18 299 P P 04 12 48.6 +1.0
CHTO pmax pmax
comp=Z,17nm,1.0s
CHTO **Chiang Mai** 29.18 299 P P 04 12 50.0 +2.5
KMI **Kunming** 29.33 314 ⇑P P 04 12 50.6 +1.5
KMI pP pP 04 13 18.2 -0.6
KMI sP sP 04 13 32.1 -2.7
KMI S S 04 17 31.9 -0.8
KMI sS sS 04 18 24.9 +0.9
KMI ScP ScP 04 19 21.7 +0.2
KMI pmax pmax
comp=Z,24nm,1.4s
KMI pmax pmax
comp=Z,110nm,3.5s
KMI LR LR
comp=Z,330nm,18.8s
KMI LR LR
comp=Z,310nm,14.8s
KMI LR LR
comp=Z,440nm,16.2s
QIS **Mount Isa** 29.36 153 P P 04 12 49.4 +0.2
baz=29,SNR=112
QIS **Mount Isa** 29.36 153 P P 04 12 49.2 0.0
comp=Z,106nm,0.7s
KSBUS **Busan** 29.70 6 P P 04 12 52.5 +0.6
KSBUS IAmb IAmb 04 12 54.6
comp=Z,135nm,0.8s
NAWB **Namwon** 29.74 3 P P 04 12 53.1 +0.8
MTSU **Mount Surprise** 29.90 142 P P 04 12 54.9 +1.0
baz=30,SNR=28
MTSU **Mount Surprise** 29.90 142 P P 04 12 55.0 +1.0
JHS **Saijyo** 30.08 12 P P 04 12 55.0 -0.3
JHS IAmb IAmb 04 13 05.1
comp=Z,85nm,0.9s
AS31 **Alice Springs** 30.16 165 P P 04 12 56.2 0.0
ASAR **Alice Springs** 30.16 165 P P 04 12 56.1 0.0
comp=Z,34nm,0.4s,baz=342,slow=7.2,SNR=426
ASAR PcP PcP 04 15 55.0 +0.8
comp=Z,11nm,0.5s,baz=342,slow=1.4,SNR=5.4
ASAR S S 04 17 43.2 -2.0
comp=Z,10nm,0.9s,baz=352,slow=14,SNR=5.2
ASAR ScP ScP 04 19 23.9 0.0
comp=Z,27nm,0.8s,baz=348,slow=2.9,SNR=25
ASAR ScS ScS 04 23 17.5 -2.4
comp=Z,1.7nm,0.7s,baz=292,slow=10.0,SNR=6.5
ASAR LR LR 04 26 34.0
comp=Z,245nm,18.2s,baz=352,slow=39
comp=Z,34nm,0.4s
GIRL **Giralia** 30.19 201 P P 04 12 57.5 +1.1
baz=30,SNR=16
GIRL **Giralia** 30.19 201 P P 04 12 56.8 +0.4
GIRL **Giralia** 30.19 201 P P 04 12 58.4 +2.0
JHJ **Hachijo jima 2** 30.40 24 LR LR 04 25 35.3
comp=Z,272nm,19.4s,baz=336,slow=37
WRKA **Warakurna** 30.54 175 P P 04 12 60.0 +0.5
baz=31,SNR=347
WRKA **Warakurna** 30.54 175 P P 04 13 00.5 +1.0
TJN **Taejon** 30.69 3 P P 04 13 01.4 +0.8
TJN **Taejon** 30.69 3 *ce*P P 04 13 00.7 +0.1
TJN **Taejon** 30.69 3 P P 04 13 01.2 +0.6
comp=Z,303nm,0.9s
PZH **PanZhiHua** 30.89 315 P P 04 13 04.5 +1.8
PZH pP pP 04 13 34.2 +1.8
PZH S S 04 17 55.5 -1.3
PZH sS sS 04 18 52.7 +4.5
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,120nm,4.1s
PZH LR LR
comp=Z,1µm,23.5s
PZH LR LR
comp=Z,1µm,24.0s
PZH LR LR
comp=Z,2µm,28.4s
LYN **LuoYang** 31.31 339 ⇑*i*P P 04 13 05.6 -0.5
LYN PP PP 04 14 17.2 -2.4
LYN S S 04 18 01.7 -1.2
LYN ScP ScP 04 19 27.1 -0.3
LYN ScS ScS 04 23 25.7 +0.6
LYN pmax pmax
comp=Z,30nm,0.9s
INU **Inuyama** 31.42 18 P P 04 13 07.6 +0.5
comp=Z,231nm,0.8s
INU **Inuyama** 31.42 18 P P 04 13 06.7 -0.4
INU pP pP 04 13 33.3 -2.9
TIA **Tai'an** 31.48 347 *e*P P 04 13 06.7 -0.9
TIA S S 04 18 01.6 -3.9
TIA pmax pmax
comp=Z,25nm,0.8s
TIA LR LR
comp=Z,270nm,17.2s
TIA LR LR
comp=Z,380nm,9.8s
JGF **Kuroka** 31.76 18 P P 04 13 09.8 -0.4
JGF IAmb IAmb 04 13 12.5
comp=Z,40nm,0.8s
INCN **Inchon** 31.77 1 P P 04 13 10.6 +0.5
INCN IAmb IAmb 04 13 12.2
comp=Z,72nm,0.8s
INCN **Inchon** 31.77 1 P P 04 13 10.6 +0.5
INCN pmax pmax
comp=Z,72nm,0.8s
INCN **Inchon** 31.77 1 P P 04 13 11.1 +1.0
comp=Z,107nm,1.0s
KSAR **Wonju Array Be** 31.78 3 P P 04 13 10.8 +0.6
KSAR **Wonju Array Be** 31.78 3 P P 04 13 10.8 +0.6
KSRS **Korea Array** 31.80 3 P P 04 13 11.2 +1.0
comp=Z,80nm,0.8s,baz=184,slow=10,SNR=363
KSRS ScP ScP 04 19 29.6 +0.6
comp=Z,6.2nm,0.8s,baz=190,slow=3.6,SNR=16
comp=Z,80nm,0.8s
KS19 **Wonju Array Si** 31.84 3 P P 04 13 11.0 +0.3
XAN **Xi'an** 32.30 333 P P 04 13 14.1 -0.7
XAN pP pP 04 13 44.2 -0.5
XAN sP sP 04 14 00.1 -0.6
XAN PP PnPn 04 14 25.7 -1.3
XAN S S 04 18 15.9 -2.5
XAN sS sS 04 19 12.1 +2.1
XAN ScP ScP 04 19 30.3 -0.6
XAN PcS PcS 04 19 45.1 +0.1
XAN SS SnSn 04 20 26.3 -0.6
XAN ScS ScS 04 23 28.2 -2.1
XAN pmax pmax
comp=Z,73nm,1.3s
XAN pmax pmax
comp=Z,250nm,3.6s
XAN LR LR
comp=Z,380nm,16.5s
XAN LR LR
comp=Z,400nm,16.9s
XAN LR LR
comp=Z,570nm,16.9s
CD2 **Chengdu** 32.53 323 P P 04 13 17.3 +0.4
CD2 pP pP 04 13 47.3 +0.4
CD2 sP sP 04 14 03.7 +0.9
CD2 PP PP 04 14 33.3 0.0
CD2 S S 04 18 24.7 +2.5
CD2 sS sS 04 19 16.2 +2.5
CD2 pmax pmax
comp=Z,100nm,1.2s
CD2 pmax pmax
comp=Z,400nm,2.9s
CD2 LR LR
comp=Z,830nm,15.2s
CD2 LR LR
comp=Z,770nm,15.2s
CD2 LR LR
comp=Z,570nm,16.2s
CTA **Charters Tower** 32.57 142 P P 04 13 18.4 +1.1
CTAO **Charters Tower** 32.57 142 P P 04 13 17.4 +0.1
CTAO IAmb IAmb 04 13 20.1
comp=Z,56nm,0.8s
CTAO **Charters Tower** 32.57 142 P P 04 13 17.4 +0.1
CTAO pmax pmax
comp=Z,56nm,0.8s
CTAO **Charters Tower** 32.57 142 P P 04 13 18.3 +1.0
SEHB **SEOHWA** 32.63 4 P P 04 13 18.8 +1.2
SEHB IAmb IAmb 04 13 21.9
comp=Z,90nm,0.9s
MEEK **Meekatharra** 32.74 192 P P 04 13 18.8 0.0
baz=33,SNR=96
MEEK **Meekatharra** 32.74 192 P P 04 13 19.2 +0.4
MAJO **Matsushiro** 32.90 19 P P 04 13 19.3 -0.7
MAJO IAmb IAmb 04 13 21.7
comp=Z,83nm,0.9s
MAJO **Matsushiro** 32.90 19 *c*P P 04 13 18.2 -1.8
MAJO pmax pmax
comp=Z,293nm,2.2s
MAJO **Matsushiro** 32.90 19 P P 04 13 19.7 -0.3
MJAR **Matsushiro Arr** 32.90 19 P P 04 13 18.0 -2.0
comp=Z,38nm,0.8s,baz=177,slow=9.5,SNR=62
MJAR ScP ScP 04 19 33.8 +0.9
comp=Z,6.0nm,0.9s,baz=163,slow=4.8,SNR=7.6
MJAR LR LR 04 26 46.9
comp=Z,248nm,19.6s,baz=194,slow=36
HNS **HongShan** 33.21 344 ⇑P P 04 13 22.3 -0.4
HNS sP sP 04 14 09.9 +1.5
HNS PP PP 04 14 39.8 -0.8

HNS S **S** **04 18 32.9 +0.5**
HNS sS **sS** **04 19 24.5 +0.4**
HNS SS **SnSn** **04 20 47.1 -1.7**
HNS pmax pmax
comp=Z,44nm,1.3s
HNS LR LR
comp=Z,370nm,14.4s
HNS LR LR
comp=Z,260nm,16.5s
HNS LR LR
comp=Z,300nm,18.0s
JYT **Yasato** **33.30 22** P **P** **04 13 21.4 -2.1**
JYT IAmb IAmb 04 13 22.6
comp=Z,71nm,0.9s
DL2 **Dalian** **33.38 354** P **P** **04 13 24.5 +0.4**
DL2 pP **pP** **04 13 53.8 -0.1**
DL2 sP **sP** **04 14 11.2 +1.4**
DL2 S **S** **04 18 36.1 +1.2**
DL2 ScP **ScP** **04 19 35.7 +1.3**
DL2 ScS **ScS** **04 23 36.9 +1.4**
DL2 pmax pmax
comp=Z,66nm,1.0s
JSD **Sado** **34.28 18** P **P** **04 13 31.3 -0.7**
OOD **Oodnadatta** **34.56 164** P **P** **04 13 35.4 +1.0**
JMM **Marumori** **34.97 21** P **P** **04 13 38.2 +0.4**
BJT **Baijiatuau** **35.34 347** IAmb IAmb 04 13 42.0
comp=Z,53nm,0.9s
BJI **Beijing** **35.36 347** P **P** **04 13 40.6 -0.5**
BJI pP **pP** **04 14 09.9 -1.3**
BJI sP **sP** **04 14 23.7 -3.3**
BJI PP **PP** **04 15 04.2 -0.1**
BJI PcP **PcP** **04 16 10.4 +2.1**
BJI ScP **ScP** **04 19 42.1 +0.7**
BJI sS **sS** **04 19 58.1 +0.8**
BJI pmax pmax
comp=Z,59nm,1.0s
MORW **Morawa** **35.67 195** P **P** **04 13 44.0 0.0**
baz=36,SNR=98
MORW **Morawa** **35.67 195** P **P** **04 13 44.3 +0.4**
INKA **Innaminka** **36.19 157** P **P** **04 13 49.0 +0.6**
comp=Z,246nm,1.2s
FORT **Forrest** **36.22 177** P **P** **04 13 49.1 +0.5**
baz=36,SNR=197
FORT **Forrest** **36.22 177** P **P** **04 13 50.0 +1.4**
LZH **Lanzhou** **36.38 330**⇑ *i*P **P** **04 13 50.9 +0.8**
LZH pP pP 04 14 22.4 +2.0
LZH sP sP 04 14 37.4 +1.2
LZH S **S** **04 19 19.5 -1.9**
LZH ScP **ScP** **04 19 46.2 +0.6**
LZH sS sS 04 20 11.3 -2.2
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,520nm,5.0s
LZH LR LR
comp=Z,640nm,14.1s
LZH LR LR
comp=Z,660nm,13.6s
LZH LR LR
comp=Z,700nm,16.0s
MULG **Mulgathing** **36.55 168** P **P** **04 13 51.7 +0.3**
comp=Z,181nm,0.8s
QLP **Quilpie** **36.69 151** P **P** **04 13 52.9 +0.2**
baz=37,SNR=19
QLP **Quilpie** **36.69 151** P **P** **04 13 52.7 +0.1**
comp=Z,154nm,0.8s
BLDU **Ballidu** **36.99 193** P **P** **04 13 55.3 +0.1**
baz=37,SNR=143
BLDU **Ballidu** **36.99 193** P **P** **04 13 55.6 +0.4**
MSHR **Mys Shultsa** **37.17 7** *ce*P **P** **04 13 57.9 +1.4**
MSHR pmax pmax
comp=Z,115nm,1.0s
HNR **Honiara** **37.28 113** LR LR 04 27 30.3
comp=Z,187nm,21.4s,baz=292,slow=33
HHC **Hu-ho-hao-te** **37.32 342** *e*P **P** **04 13 58.2 +0.2**
HHC sP sP 04 14 47.7 +3.5
HHC PP **PP** **04 15 25.9 -0.1**
HHC S **S** **04 19 34.6 -0.9**
HHC sS sS 04 20 34.3 +6.5
HHC pmax pmax
comp=Z,58nm,1.0s
HHC pmax pmax
comp=Z,180nm,4.4s
BTO **Baotou** **37.59 340** *e*P **P** **04 13 59.9 -0.4**
BTO S **S** **04 19 39.7 +0.1**
BTO LR LR
comp=Z,1μm,22.6s
BTO LR LR
comp=Z,990nm,11.0s
RK1H **Rockhampton Ha** **37.64 141** P **P** **04 14 01.7 +1.0**
comp=Z,84nm,0.8s
JTM **Tenmabayashi** **37.68 19** P **P** **04 14 01.6 +0.8**
JTM IAmb IAmb 04 14 04.5
comp=Z,129nm,1.2s
KLBR **Kellerberrin** **37.72 191** P **P** **04 14 01.7 +0.4**
baz=38,SNR=39
KLBR **Kellerberrin** **37.72 191** P **P** **04 14 02.3 +1.0**
LCRK **Leigh Creek** **37.79 162** P **P** **04 14 02.4 +0.5**
comp=Z,332nm,1.0s
CN2 **Changchun** **38.07 360** *e*P **P** **04 14 03.9 -0.2**
CN2 pP pP 04 14 35.1 +0.9
CN2 PP **PnPn** **04 15 40.1 +3.0**
CN2 S **S** **04 19 46.0 -0.4**
CN2 pmax pmax
comp=Z,30nm,1.0s
MUN **Mundaring** **38.42 193** P **P** **04 14 07.6 +0.5**
baz=39,SNR=46
MUN **Mundaring** **38.42 193** P **P** **04 14 08.0 +0.9**
USA0B **Ussuriysk Arra** **38.87 7** IAmb IAmb 04 14 13.2
comp=Z,47nm,0.9s
USRK **Ussuriysk Ar.** **38.87 7** P **P** **04 14 11.8 +1.0**
comp=Z,108nm,0.8s,baz=193,slow=7.4,SNR=139
USRK ScP **ScP** **04 19 55.1 +0.6**
comp=Z,3.8nm,0.8s,baz=204,slow=1.9,SNR=6.6
USRK LR LR 04 30 16.3
comp=Z,91nm,21.8s,baz=231,slow=36
comp=Z,108nm,0.8s
USRK **Ussuriysk Ar.** **38.87 7** P **P** **04 14 11.9 +1.2**
USRK ScP **ScP** **04 19 55.0 +0.5**
RMQ **Roma** **38.95 146** P **P** **04 14 12.3 +0.6**
baz=39,SNR=4.9
RMQ **Roma** **38.95 146** P **P** **04 14 12.6 +0.9**
comp=Z,21nm,0.7s
MDJ **Mudanjiang** **39.03 4** P **P** **04 14 13.4 +1.3**
MDJ S **S** **04 20 03.7 +2.8**
MDJ pmax pmax
comp=Z,400nm,1.0s
MDJ pmax pmax
comp=Z,760nm,5.6s
MDJ LR LR
comp=Z,300nm,15.2s
MDJ LR LR
comp=Z,180nm,5.5s
MDJ LR LR
comp=Z,500nm,24.5s
MDJ **Mudanjiang** **39.03 4** P **P** **04 14 11.6 -0.5**
XLT **XiLinHaoTe** **39.09 349**⇑ *i*P **P** **04 14 12.5 -0.2**
XLT sP sP 04 15 04.3 +5.2
XLT PP **PP** **04 15 45.1 -0.1**
XLT S **S** **04 20 02.4 +0.5**
XLT pmax pmax
comp=Z,40nm,1.2s
XLT pmax pmax
comp=Z,170nm,5.5s
XLT LR LR
comp=Z,420nm,15.5s
XLT LR LR
comp=Z,210nm,14.7s
NWAO **Narrogin (SRO)** **39.12 191** P **P** **04 14 11.5 -1.5**
NWAO **Narrogin (SRO)** **39.12 191** P **P** **04 14 11.5 -1.5**
NWAO pmax pmax
comp=Z,243nm,0.9s
NWAO **Narrogin (SRO)** **39.12 191** P **P** **04 14 13.9 +0.9**
comp=Z,376nm,0.9s
NWAO **Narrogin (SRO)** **39.12 191** P **P** **04 14 11.3 -1.7**
BBOO **Buckleboo** **39.44 166** P **P** **04 14 16.4 +0.8**
baz=40,SNR=432
BBOO **Buckleboo** **39.44 166** P **P** **04 14 15.7 +0.1**
comp=Z,665nm,0.6s
EIDS **Eidsvold** **39.46 142** P **P** **04 14 16.2 +0.4**
baz=39,SNR=13
EIDS **Eidsvold** **39.46 142** P **P** **04 14 16.3 +0.4**
EIDS IAmb IAmb 04 14 17.3
comp=Z,61nm,0.9s
EIDS **Eidsvold** **39.46 142** P **P** **04 14 15.9 0.0**
comp=Z,75nm,0.9s
ERM **Erimo** **39.48 21** P **P** **04 14 16.7 +0.8**
ERM IAmb IAmb 04 14 39.1
comp=Z,65nm,1.0s
ERM **Erimo** **39.48 21** *i* P **P** **04 14 17.8 +1.9**
ERM pmax pmax
comp=Z,82nm,1.1s
ERM **Erimo** **39.48 21** P **P** **04 14 16.9 +1.0**
JEW **Eniwo** **39.66 18** P **P** **04 14 17.8 +0.5**
WHYH **Whyalla** **40.03 164** P **P** **04 14 21.4 +0.9**
comp=Z,331nm,0.8s
BNX **BinXian** **40.03 2**⇑ P **P** **04 14 20.5 +0.1**
BNX pP **pP** **04 14 51.7 +1.2**
BNX sP **sP** **04 15 07.8 +1.8**
BNX PP **PP** **04 15 57.7 +2.4**
BNX S **S** **04 20 16.2 +0.4**
BNX sS **sS** **04 21 09.7 +1.2**
BNX pmax pmax
comp=Z,84nm,1.2s
BNX pmax pmax
comp=Z,450nm,6.0s
BNX LR LR
comp=Z,200nm,9.8s
BNX LR LR
comp=Z,340nm,13.9s
BNX LR LR
comp=Z,170nm,10.6s
STKA **Stephens Creek** **40.23 159** P **P** **04 14 23.4 +1.3**
comp=Z,184nm,0.8s,baz=331,slow=8.6,SNR=225
STKA ScP **ScP** **04 20 00.7 +0.7**
comp=Z,43nm,0.8s,baz=340,slow=6.3,SNR=19
comp=Z,184nm,0.8s
STKA **Stephens Creek** **40.23 159** P **P** **04 14 23.0 +0.9**
baz=40,SNR=139
STKA **Stephens Creek** **40.23 159** P **P** **04 14 22.7 +0.5**
STKA IAmb IAmb 04 14 24.3
comp=Z,39nm,0.8s
STKA **Stephens Creek** **40.23 159** *d* *i*P **P** **04 14 22.8 +0.7**
STKA **Stephens Creek** **40.23 159** P **P** **04 14 23.2 +1.1**
comp=Z,54nm,0.8s
LSA **Lhasa** **40.43 311** P **P** **04 14 25.7 +1.2**
LSA pmax pmax
comp=Z,34nm,1.4s
TEY **Ternei** **40.45 12**⇑ *i*P **P** **04 14 24.9 +1.1**
TEY pmax pmax
comp=N,40nm,1.0s
TEY pmax pmax
comp=Z,60nm,1.0s
TEY pmax pmax
comp=E,10.0nm,1.0s
HTT **Hallett** **40.78 163** P **P** **04 14 28.2 +1.4**
baz=41,SNR=45
HTT **Hallett** **40.78 163** P **P** **04 14 28.5 +1.7**
comp=E,106nm,1.4s
RKGY **Rocky Gully** **40.80 191** P **P** **04 14 28.8 +2.0**
baz=41,SNR=52
RKGY **Rocky Gully** **40.80 191** P **P** **04 14 28.3 +1.5**
comp=E,987nm,0.8s
GTA **Gaotai** **40.97 329**⇑ P **P** **04 14 28.7 +0.3**
GTA pP pP 04 15 00.5 +1.3
GTA sP sP 04 15 18.1 +3.2
GTA ScP **ScP** **04 20 03.6 +0.5**
GTA S **S** **04 20 28.2 -2.1**
GTA ScS **ScS** **04 24 16.2 -2.6**
GTA pmax pmax
comp=E,24nm,1.1s
GTA pmax pmax
comp=E,220nm,4.7s
GTA LR LR
comp=E,250nm,19.3s
GTA LR LR
comp=E,340nm,18.2s
GTA LR LR
comp=E,390nm,20.0s
CMSA **Cobar Meteorol** **41.57 154** P **P** **04 14 34.0 +0.9**
baz=42,SNR=113
CMSA **Cobar Meteorol** **41.57 154** P **P** **04 14 33.8 +0.7**
comp=E,88nm,0.7s
GOMU **GeErMu** **41.58 321** P **P** **04 14 34.5 +0.8**
GOMU S **S** **04 20 31.4 -8.5**
GOMU pmax pmax
comp=E,30nm,1.2s
GOMU pmax pmax
comp=E,120nm,4.7s
GOMU LR LR
comp=E,220nm,13.7s
GOMU LR LR
comp=E,280nm,15.5s
GOMU LR LR
comp=E,230nm,15.3s
H11S3 **WAKE ISLAND Hy** **42.01 69** T T 04 59 04.2
baz=249,SNR=27
H11S1 **WAKE ISLAND Hy** **42.03 69** T T 04 59 20.9
baz=249,SNR=17
H11S2 **WAKE ISLAND Hy** **42.03 69** T T 04 58 56.6
baz=249,SNR=21
TAPN **Taplejung** **42.08 305** *e*P **ScP** **04 20 07.0 -0.9**
comp=E,94nm,1.0s
TWOA **Tennyson Woods** **42.19 164** P **P** **04 14 40.0 +1.9**
comp=E,399nm,0.7s
H11N1 **WAKE ISLAND Hy** **42.48 67** T T 05 00 50.6
baz=255,slow=75,SNR=30
H11N2 **WAKE ISLAND Hy** **42.48 67** T T 05 00 52.3
baz=255,slow=75,SNR=13
H11N3 **WAKE ISLAND Hy** **42.49 67** T T 05 00 48.9
baz=255,slow=75,SNR=11
RAMN **Ramite** **42.83 304** *e*P **ScP** **04 20 09.7 -1.2**
comp=E,82nm,1.0s
JIRN **Jiri** **43.44 305** *e*P **ScP** **04 20 12.3 -1.2**
comp=E,79nm,1.0s
ARMA **Armidale** **43.59 147** P **P** **04 14 50.9 +1.3**
baz=44,SNR=28
ARMA **Armidale** **43.59 147** P **P** **04 14 49.6 0.0**
ARMA IAmb IAmb 04 14 52.2
comp=Z,64nm,0.9s
ARMA **Armidale** **43.59 147** P **P** **04 14 51.1 +1.5**
comp=Z,86nm,0.9s
YSS **Yuzh-Sakhalins** **43.78 17** P **P** **04 14 50.3 -0.5**
YSS IAmb IAmb 04 14 54.0
comp=Z,59nm,0.8s
YSS **Yuzh-Sakhalins** **43.78 17** *ce*P **P** **04 14 51.4 +0.7**
YSS *e* 04 16 35.4
YSS *e*S **S** **04 21 12.4 +1.6**
YSS pmax pmax
comp=Z,80nm,0.8s
YSS pmax pmax
comp=Z,300nm,4.3s
YSS **Yuzh-Sakhalins** **43.78 17** P **P** **04 14 51.9 +1.2**
comp=Z,72nm,0.8s
GUN **Gumba** **43.79 305** *e*P **P** **04 14 52.8 +1.2**
comp=Z,109nm,0.7s
GUN **Gumba** **43.79 305** *e*P **ScP** **04 20 13.4 -1.5**
comp=Z,68nm,0.8s
KLR **Kul'dur** **43.80 6** P **P** **04 14 50.6 -0.3**
comp=Z,53nm,1.0s,baz=204,slow=6.0,SNR=110
KLR ScP **ScP** **04 20 13.7 -0.3**
comp=Z,6.9nm,0.8s,baz=272,slow=2.3,SNR=7.6
KLR LR LR 04 34 10.6
comp=Z,147nm,20.3s,baz=200,slow=37
comp=Z,53nm,1.0s
KLR **Kul'dur** **43.80 6** *ce*P **P** **04 14 51.4 +0.5**
KLR pmax pmax
comp=Z,160nm,1.7s
HIA **Hailar** **43.82 354** IAmb IAmb 04 14 52.9
comp=Z,168nm,1.6s
PKI **Pulchoki** **44.04 304** *e*P **P** **04 14 54.1 +0.5**
PKI **Pulchoki** **44.04 304** *e*P **ScP** **04 20 14.4 -1.5**
comp=Z,179nm,1.0s
PKIN **Phulchoki** **44.06 304** *e*P **P** **04 14 54.2 +0.5**
PKIN **Phulchoki** **44.06 304** *e*P **ScP** **04 20 14.5 -1.4**
comp=Z,118nm,0.8s
KKN **Kakani** **44.23 305** *e*P **P** **04 14 55.0 0.0**
DMN **Daman** **44.31 304** *e*P **P** **04 14 56.5 +0.9**
comp=Z,6.1nm,0.2s
DMN **Daman** **44.31 304** *e*P **ScP** **04 20 15.6 -1.3**
comp=Z,184nm,1.0s
ARPS **Mount Arapiles** **44.76 161** P **P** **04 15 00.3 +1.5**
baz=45,SNR=37
ARPS **Mount Arapiles** **44.76 161** P **P** **04 15 00.3 +1.5**
comp=Z,322nm,0.7s
GKN **Gorkha** **44.84 305** *e*P **P** **04 15 00.3 +0.6**
comp=Z,9.1nm,0.3s
GKN **Gorkha** **44.84 305** *e*P **ScP** **04 20 17.1 -1.9**
comp=Z,108nm,0.9s
ULN **Ulaanbaatar** **45.04 342** P **P** **04 15 00.7 -0.3**
ULN **Ulaanbaatar** **45.04 342** *ce*P **P** **04 15 01.0 0.0**
ULN pmax pmax
comp=Z,44nm,1.0s
ULN **Ulaanbaatar** **45.04 342** P **P** **04 14 59.4 -1.7**
ULN x x 04 15 09.8
ULN pP **pP** **04 15 25.4 -6.9**
SONM **Songino Array** **45.22 342** P **P** **04 15 02.3 -0.1**
comp=Z,13nm,0.9s,baz=156,slow=8.0,SNR=22
SONM PcP **PcP** **04 16 41.1 +1.0**
comp=Z,13nm,0.9s,baz=159,slow=3.9,SNR=7.4
SONM ScP **ScP** **04 20 19.5 -0.5**
comp=Z,7.3nm,0.9s,baz=172,slow=4.6,SNR=12
SONM LR LR 04 35 30.1
comp=Z,185nm,18.3s,baz=158,slow=38
comp=Z,13nm,0.9s
SONM **Songino Array** **45.22 342** P **P** **04 15 02.4 0.0**
SONM **Songino Array** **45.22 342** P **P** **04 15 02.4 0.0**
SONM pmax pmax
comp=Z,26nm,1.1s
MGCD **Mangrove Creek** **45.51 150** P **P** **04 15 07.2 +2.5**
baz=46,SNR=6.9
MGCD **Mangrove Creek** **45.51 150** P **P** **04 15 07.0 +2.3**
comp=Z,31nm,0.9s
UGL **Uglegorsk** **45.53 15** *e*P **P** **04 15 06.6 +2.0**
UGL pmax pmax
comp=Z,170nm,1.0s
DANN **Dangsing** **45.69 305** *e*P **P** **04 15 07.3 +0.7**
comp=Z,18nm,0.3s
DANN **Dangsing** **45.69 305** *e*P **ScP** **04 20 20.7 -2.0**
comp=Z,88nm,0.9s
SYDH **Sydney Hard Ro** **45.77 150** P **P** **04 15 08.7 +2.0**
GRNR **Gornyy** **45.93 9**⇑ *i*P **P** **04 15 09.2 +1.4**
GRNR pmax pmax
comp=Z,40nm,1.3s
GRNR MLR MLR
comp=E,100nm,16.0s
GRNR MLR MLR
comp=Z,180nm,15.0s
BRAT **Ballarat** **46.16 160** P **P** **04 15 12.2 +2.5**
comp=Z,76nm,0.8s
CAN **Canberra** **46.23 153** P **P** **04 15 11.9 +1.5**
CAN **Canberra** **46.23 153** P **P** **04 15 11.9 +1.5**
CAN pmax pmax
comp=Z,193nm,0.7s
CAN **Canberra** **46.23 153** P **P** **04 15 12.0 +1.5**
CAN **Canberra** **46.23 153** P **P** **04 15 11.8 +1.5**
CAN pP **pwP** **04 15 47.5 +3.0**
CNB **Canberra Magne** **46.39 153** P **P** **04 15 13.8 +2.1**
baz=46,SNR=34
CNB **Canberra Magne** **46.39 153** P **P** **04 15 14.2 +2.5**
TOO **Toolangi** **46.74 158** P **P** **04 15 16.9 +2.6**
baz=47,SNR=54
TOO **Toolangi** **46.74 158** P **P** **04 15 13.4 -0.9**
TOO **Toolangi** **46.74 158** P **P** **04 15 13.4 -0.9**
TOO pmax pmax
comp=Z,452nm,1.7s
TOO **Toolangi** **46.74 158** P **P** **04 15 15.9 +1.6**
GEXS **Deakin Univers** **46.87 160** P **P** **04 15 17.6 +2.4**
TYV **Tymovskoe** **47.32 15** *e*P **P** **04 15 20.1 +1.6**
TYV *e*S **S** **04 22 05.2 +3.6**
TYV pmax pmax
comp=Z,28nm,1.6s
TYV pmax pmax
comp=Z,800nm,7.4s
TYV smax smax
comp=N,200nm,7.9s
TYV smax smax
comp=E,500nm,7.9s
HYB **Hyderabad** **47.51 288** *e*P **P** **04 15 22.0 +1.4**
HYBB **Hyderabad (bro** **47.51 288** *e*P **P** **04 15 22.1 +1.5**
HYBB *es*P **sP** **04 16 05.5 -2.2**
HYBB *e*PcP **PcP** **04 16 49.2 +0.5**
HYBB *e*PP **PP** **04 17 13.7 +0.5**
HYBB *e*S **S** **04 22 07.4 +2.0**
MILA **Mila** **47.76 154** P **P** **04 15 24.4 +2.2**
baz=48,SNR=4.7
ZEA **Zeya** **48.03 1** *ce*P **P** **04 15 24.3 +0.3**
ZEA *e* 04 17 20.4
ZEA *e*S **S** **04 22 16.4 +4.9**
ZEA pmax pmax
comp=N,60nm,0.9s
ZEA pmax pmax
comp=Z,110nm,0.9s
ZEA pmax pmax
comp=Z,100nm,1.2s
ZEA pmax pmax
comp=Z,300nm,4.0s
ZEA smax smax
comp=N,100nm,4.8s
ZAK **Zakamensk** **48.44 341** *e*P **P** **04 15 25.4 -1.9**
ZAK pmax pmax
comp=Z,11nm,2.0s
DZM **Mont Dzumac** **48.47 126** LR LR 04 37 15.9
comp=Z,94nm,18.8s,baz=12,slow=37
DZM **Mont Dzumac** **48.47 126** *e*P **P** **04 15 29.3 +1.3**
comp=Z,50nm,0.7s
DZM *ep*P **pP** **04 15 58.0 -0.5**
comp=Z,76nm,1.1s
DZM **Mont Dzumac** **48.47 126** *e*LR LR 04 29 24.2
comp=Z,369nm,30.0s
DZM **Mont Dzumac** **48.47 126** P **P** **04 15 28.9 +0.9**
DZM IAmb IAmb 04 15 30.2
comp=Z,31nm,0.6s
DZM **Mont Dzumac** **48.47 126** P **P** **04 15 29.0 +1.0**
comp=Z,53nm,0.8s
YATNC **Mamie plateau,** **48.83 126** P **P** **04 15 31.1 +0.5**
OUENC **Ouen Island, N** **48.96 126** P **P** **04 15 32.9 +1.3**
OUENC **Ouen Island, N** **48.96 126** P **P** **04 15 33.1 +1.5**
comp=Z,28nm,0.8s
PCHI **Peechi** **49.03 279** *e*P **P** **04 15 34.0 +1.7**
PCHI *e*S **S** **04 22 27.2 +0.4**
MARNC **Mare, Loyalty** **49.48 124** P **P** **04 15 36.0 +0.4**
MOY **Mondy** **50.29 340** *e*P **P** **04 15 41.7 +0.3**
MOY pmax pmax
comp=Z,71nm,2.0s
WMQ **Urumqi** **50.61 325** *e*P **P** **04 15 44.5 +0.6**
WMQ pP pP 04 16 15.1 -0.6
WMQ pmax pmax
comp=Z,90nm,1.5s
WMQ pmax pmax
comp=Z,850nm,4.5s
WMQ LR LR
comp=Z,850nm,19.1s
WMQ LR LR
comp=Z,340nm,17.7s
WMQ LR LR
comp=Z,470nm,21.9s
GLAD **Gladstone** **50.67 158** P **P** **04 15 46.3 +2.1**
comp=Z,131nm,0.7s
KNGR **Kungurtug, Tuv** **50.68 337** *i* P **P** **04 15 42.4 -1.9**
KNGR pmax pmax
comp=Z,26nm,1.0s
MOO **Moorlands** **51.65 160** P **P** **04 15 54.0 +2.5**
baz=52,SNR=4.4
MOO **Moorlands** **51.65 160** P **P** **04 15 54.1 +2.6**
TAU **Tasmania Unive** **52.11 160** P **P** **04 15 56.2 +1.3**
TAU IAmb IAmb 04 15 58.2
comp=Z,54nm,1.0s
TAU **Tasmania Unive** **52.11 160** P **P** **04 15 56.2 +1.3**
TAU pmax pmax
comp=Z,54nm,1.0s
BOD **Bodaibo** **52.90 352** *e*P **P** **04 16 00.8 +0.3**
BOD pmax pmax
comp=Z,86nm,1.7s
PEA0B **Petropavlovsk-** **54.15 23** P **P** **04 16 11.1 +1.4**
PEA0B **Petropavlovsk-** **54.15 23** P **P** **04 16 11.1 +1.4**
PEA0B pmax pmax
comp=Z,121nm,1.0s
PETK **Petropavlovsk-** **54.15 23** P **P** **04 16 10.6 +0.9**
comp=Z,77nm,1.0s,baz=208,slow=8.4,SNR=74
PETK ScP **ScP** **04 20 58.5 +0.5**
comp=Z,1.9nm,0.7s,baz=183,slow=7.4,SNR=3.8
comp=Z,77nm,1.0s
PETK **Petropavlovsk-** **54.15 23** P **P** **04 16 10.9 +1.3**
PETK **Petropavlovsk-** **54.15 23** P **P** **04 16 11.0 +1.3**
ZSN **Zaisan** **54.38 327** *e*P **P** **04 16 10.1 -1.4**
ZSN pmax pmax
comp=Z,10.0nm,1.0s
ZSN **Zaisan** **54.38 327** *e*P **P** **04 16 10.2 -1.4**
comp=Z,10nm,1.0s,baz=327
ZSN *i* S **S** **04 23 39.7 +0.5**
baz=327
PET **Petropavlovsk** **54.46 24** P **P** **04 16 12.7 +0.8**
PET **Petropavlovsk** **54.46 24** *e*P **P** **04 16 12.2 +0.3**
PET *e**PP **pP** **04 16 40.5 -3.1**
PET *e*S **S** **04 23 39.8 -0.1**
PET pmax pmax
comp=Z,600nm,5.3s

PET pmax pmax
comp=Z,131nm,1.3s
PET pmax pmax
comp=Z,300nm,10.4s
PET MLR MLR
comp=Z,400nm,20.0s
PET Petropavlovsk 54.46 24 P **P 04 16 13.6 +1.7**
comp=Z,381nm,1.1s
SHLS Shalkode 55.25 320 *e*P **P 04 16 15.4 -2.6**
SHLS pmax pmax
comp=Z,32nm,1.2s
SHLS Shalkode 55.25 320 *e*P **P 04 16 15.5 -2.6**
comp=Z,32nm,1.2s,baz=320
MK31 Makanchi Array 55.44 325 P **P 04 16 19.0 -0.1**
MK31 IAmb IAmb 04 16 20.1
comp=Z,44nm,0.9s
MK31 Makanchi Array 55.44 325*c i*P **P 04 16 18.5 -0.7**
MKAR Makanchi Array 55.44 325 P **P 04 16 18.4 -0.8**
comp=Z,34nm,0.7s,baz=122,slow=8.7,SNR=185
MKAR ScP **ScP 04 21 01.4 -2.4**
comp=Z,7.5nm,0.7s,baz=122,slow=4.6,SNR=8.2
MKAR LR LR 04 42 19.7
comp=Z,130nm,20.8s,baz=110,slow=38
MKAR PKP2bc **P'P'ab 04 46 51.2 -5.2**
comp=Z,1.5nm,1.2s,baz=242,slow=3.1,SNR=3.8
comp=Z,34nm,0.7s
UZB Uzynbulak 55.53 320 *e*P **P 04 16 19.2 -0.8**
UZB pmax pmax
comp=Z,13nm,1.1s
UZB Uzynbulak 55.53 320 *e*P **P 04 16 19.3 -0.8**
comp=Z,13nm,1.1s,baz=320
MAKZ Makanchi 55.63 325 P **P 04 16 20.5 0.0**
MAKZ IAmb IAmb 04 16 21.4
comp=Z,66nm,0.9s
MAKZ Makanchi 55.63 325 P **P 04 16 20.5 0.0**
MAKZ pmax pmax
comp=Z,66nm,1.0s
NIL Nilore 55.96 307 P **P 04 16 23.8 +0.7**
NIL IAmb IAmb 04 16 26.4
comp=Z,51nm,0.9s
NIL Nilore 55.96 307 P **P 04 16 23.8 +0.7**
NIL pmax pmax
comp=Z,51nm,1.0s
NIL Nilore 55.96 307 P **P 04 16 23.1 -0.1**
NIL x x 04 16 34.1
NIL pP **pP 04 16 56.5 +0.8**
KSH Kashi 55.99 315 P **P 04 16 25.4 +2.0**
KSH ScP **ScP 04 21 06.6 0.0**
KSH S **S 04 24 04.3 +3.2**
KSH pmax pmax
comp=Z,29nm,1.1s
KSH LR LR
comp=Z,170nm,15.8s
KSH LR LR
comp=Z,210nm,15.1s
KSH LR LR
comp=Z,250nm,16.8s
YAK Yakutsk 56.41 2 P **P 04 16 26.2 +0.5**
comp=Z,323nm,0.8s,baz=184,slow=1.8,SNR=89
YAK LR LR 04 40 08.3
comp=Z,95nm,21.9s,baz=266,slow=35
YAK Yakutsk 56.41 2 P **P 04 16 26.6 +0.9**
YAK Yakutsk 56.41 2*c i*P **P 04 16 26.5 +0.9**
YAK *e* 04 17 20.1
YAK *e* 04 18 32.1
YAK *e*PPP PPP 04 19 50.5
YAK *e*S **S 04 24 07.8 +2.3**
YAK *e* 04 25 58.4
YAK pmax pmax
comp=Z,781nm,0.9s
YAK pmax pmax
comp=N,291nm,1.1s
YAK pmax pmax
comp=E,78nm,1.1s
YAK pmax pmax
comp=Z,44nm,1.3s
YAK pmax pmax
comp=N,82nm,1.8s
YAK pmax pmax
comp=E,32nm,1.3s
YAK smax smax
comp=N,173nm,1.8s
YAK smax smax
comp=E,60nm,1.7s
YAK Yakutsk 56.41 2 P **P 04 16 25.5 -0.2**
MSVF Nonsavu 56.66 115 P **P 04 16 29.8 +1.5**
comp=E,7.6nm,0.8s,baz=169,slow=8.1,SNR=3.7
comp=E,7.6nm,0.8s
ARXS Arharly 56.80 320 *e*P **P 04 16 27.8 -1.1**
TDK Taldyqorghan 56.81 321 *e*P **P 04 16 28.0 -0.9**
TDK pmax pmax
comp=Z,56nm,0.9s
TDK Taldyqorghan 56.81 321 *e*P **P 04 16 28.1 -0.9**
comp=Z,56nm,0.9s,baz=322
MDOK Medeo 56.82 319 *e*P **P 04 16 28.5 -0.6**
MDOK *e*S **S 04 24 11.1 -0.8**
MDOK Medeo 56.82 319 *e*P **P 04 16 28.6 -0.6**
baz=319
MDOK *e*S **S 04 24 11.1 -0.8**
baz=319
AAA Alma-Ata 56.92 319 *e*P **P 04 16 29.2 -0.6**
AAA pmax pmax
comp=Z,69nm,1.2s
AAA Alma-Ata 56.92 319 *e*P **P 04 16 29.3 -0.6**
comp=Z,69nm,1.2s,baz=319
ULHL Ulahol 56.94 318 P **P 04 16 30.3 +0.1**
SNR=28
MA2 Magadan 57.19 15 LR LR 04 44 15.2
comp=Z,80nm,18.0s,baz=220,slow=39
MA2 Magadan 57.19 15 P **P 04 16 32.4 +1.0**
MA2 IAmb IAmb 04 16 33.3
comp=Z,59nm,1.0s
MA2 Magadan 57.19 15*ce*P **P 04 16 32.3 +1.0**
MA2 pmax pmax
comp=Z,178nm,1.7s
MA2 Magadan 57.19 15 P **P 04 16 32.7 +1.4**
comp=Z,105nm,1.5s
KUU Kurty 57.60 320 *e*P **P 04 16 33.5 -1.0**
KUU *e*S **S 04 24 19.2 -2.7**
KUU Kurty 57.60 320 *e*P **P 04 16 33.6 -1.0**
baz=320
KUU *e*S **S 04 24 19.3 -2.7**
baz=320
TKM2 Tokmak 2 57.66 318 P **P 04 16 35.4 +0.1**
SNR=24
KBK Karagaybulak 57.98 318 P **P 04 16 38.3 +0.9**
SNR=13
UCH Uchtor 58.10 317 P **P 04 16 39.7 +1.1**
SNR=7.0
CHMS Chumysh 58.26 318 P **P 04 16 39.4 +0.3**
SNR=7.5
AAK Ala-Archa 58.28 317 P **P 04 16 38.9 -0.5**
comp=Z,12nm,0.8s,baz=121,slow=6.9,SNR=18
AAK ScP **ScP 04 21 14.3 -2.4**
comp=Z,2.1nm,0.4s,baz=208,slow=7.7,SNR=3.5
AAK LR LR 04 44 45.7
comp=Z,130nm,19.8s,baz=108,slow=39
comp=Z,12nm,0.8s
AAK Ala-Archa 58.28 317 P **P 04 16 39.7 +0.2**
AAK Ala-Archa 58.28 317*ce*P **P 04 16 39.5 0.0**
AAK pmax pmax
comp=Z,36nm,1.7s
ZALV Zalesovo Beam 58.47 333 P **P 04 16 39.0 -1.3**
comp=Z,6.3nm,0.5s,baz=116,slow=6.8,SNR=21
ZALV LR LR 04 44 30.5
comp=Z,125nm,19.1s,baz=130,slow=39
ZALV PKP2bc **P'P'ab 04 46 37.4 -5.9**
comp=Z,3.6nm,0.9s,baz=289,slow=4.4,SNR=6.9
comp=Z,6.3nm,0.5s
ZALV Zalesovo Beam 58.47 333 P **P 04 16 39.0 -1.3**
SGDS Sogindy 58.53 318 *e*P **P 04 16 39.4 -1.6**
SGDS pmax pmax
comp=Z,17nm,1.7s
SGDS Sogindy 58.53 318 *e*P **P 04 16 39.4 -1.6**
comp=Z,17nm,1.7s,baz=318
USP Ospenovka 58.54 318 P **P 04 16 41.0 -0.1**
SNR=34
SEM Semipalatinsk 58.58 328 *e*P **P 04 16 39.5 -1.9**
SEM Semipalatinsk 58.58 328 *e*P **P 04 16 39.5 -1.9**
baz=328
AML Almayashu 58.62 317 P **P 04 16 43.0 +0.9**
SNR=32
EKS2 Erkin-Say 58.77 317 P **P 04 16 43.8 +0.9**
SNR=23
KBL Kabul 59.56 307 P **P 04 16 48.5 0.0**
KBL Kabul 59.56 307 P **P 04 16 48.5 0.0**

KBL pmax pmax
comp=Z,16nm,1.0s
BTLS Baital 59.58 320 *e*P **P 04 16 46.5 -1.7**
BTLS pmax pmax
comp=Z,15nm,0.9s
BTLS Baital 59.58 320 *e*P **P 04 16 46.5 -1.7**
comp=Z,15nm,0.9s,baz=320
KURBB Kurchatov Arra 59.62 327 P **P 04 16 46.4 -1.9**
comp=Z,41nm,0.8s,baz=124,slow=6.2,SNR=127
KURBB S **S 04 24 47.4 -0.2**
comp=Z,0.7nm,0.2s,baz=134,slow=11,SNR=4.1
KURBB PKP2bc **P'P'ab 04 46 34.2 -4.6**
comp=Z,0.1nm,0.3s,baz=180,slow=5.4,SNR=1.7
comp=Z,41nm,0.8s
KURK Kurchatov 59.62 327*ce*P **P 04 16 47.4 -0.9**
KURK pmax pmax
comp=Z,128nm,1.3s
KURK Kurchatov 59.62 327 P **P 04 16 45.9 -2.4**
KURK pP **pP 04 17 13.6 -7.5**
GAR Garm 59.90 312 P **P 04 16 50.5 -0.1**
SEY Seymchan 60.49 14*ce*P **P 04 16 55.9 +1.9**
SEY pmax pmax
comp=Z,150nm,1.7s
DZA Taraz 60.52 317 *e*P **P 04 16 53.7 -1.0**
DZA *e*S **S 04 24 58.9 -0.8**
DZA pmax pmax
comp=Z,20nm,1.1s
DZA Taraz 60.52 317 *e*P **P 04 16 53.8 -1.0**
comp=Z,20nm,1.1s,baz=317
DZA *e*S **S 04 24 58.9 -0.8**
baz=317
CHGR Chuyangaron 60.65 311 P **P 04 16 55.7 0.0**
CHGR IAmb IAmb 04 16 57.8
comp=Z,52nm,1.1s
CHGR Chuyangaron 60.65 311 P **P 04 16 55.7 0.0**
CHGR pmax pmax
comp=Z,52nm,1.1s
IUG luzhnay 61.16 316 *e*P **P 04 16 57.5 -1.6**
IUG luzhnay 61.16 316 *e*P **P 04 16 57.5 -1.6**
baz=316
KK31 Karatay Array 61.16 317 P **P 04 16 58.8 -0.2**
KK31 IAmb IAmb 04 16 59.8
comp=Z,35nm,1.0s
KK31 Karatay Array 61.16 317 P **P 04 16 58.8 -0.2**
KK31 pmax pmax
comp=Z,35nm,1.0s
KKAR Karatay Array 61.16 317 P **P 04 16 58.6 -0.4**
KKAR Karatay Array 61.16 317 P **P 04 16 58.6 -0.4**
TAS Tashkent 61.40 314 P **P 04 17 00.5 -0.1**
TAS Tashkent 61.40 314 P **P 04 17 00.5 -0.1**
TAS pmax pmax
comp=Z,85nm,0.4s
SHEM Shemya Is, Ala 61.43 31 LR LR 04 39 47.8
comp=Z,78nm,20.9s,baz=266,slow=32
BRZS Berezniki 62.57 324 *e*P **P 04 17 06.7 -1.5**
BRZS pmax pmax
comp=Z,24nm,1.1s
BRZS Berezniki 62.57 324 *e*P **P 04 17 06.8 -1.5**
comp=Z,24nm,1.1s,baz=325
DCZ Deep Cove 62.87 148 P **P 04 17 10.7 +0.5**
QRZ Quartz Range 63.03 142 P **P 04 17 13.2 +1.8**
QRZ Quartz Range 63.03 142 P **P 04 17 12.6 +1.2**
DSZ Denniston Nort 63.13 143 P **P 04 17 13.6 +1.5**
HIZ Hauiti 63.23 138 P **P 04 17 13.3 +0.5**
WVZ Waitaha Valley 63.30 144 P **P 04 17 14.4 +1.3**
MRNZ Matariki Terra 63.50 142 P **P 04 17 15.5 +1.0**
NNZ Nelson 63.78 142 P **P 04 17 16.5 +0.1**
THZ Tophouse 63.80 142 P **P 04 17 17.3 +0.7**
RPZ Rata Peaks 63.88 145 LR LR 04 43 59.7
comp=Z,185nm,21.0s,baz=298,slow=35
RPZ Rata Peaks 63.88 145 P **P 04 17 17.8 +0.9**
RPZ IAmb IAmb 04 17 19.0
comp=Z,40nm,0.6s
DUWZ D'Urville Isla 63.89 141 P **P 04 17 18.5 +1.4**
LTZ Lake Taylor 64.02 143 P **P 04 17 19.3 +1.4**
ARCZ Arundel 64.09 145 P **P 04 17 19.3 +1.0**
OXZ Oxford 64.21 144 P **P 04 17 20.1 +1.0**
RAO Raoul Island 64.27 126 LR LR 04 44 37.9
comp=Z,43nm,18.6s,baz=355,slow=35
ODZ Otahua Downs 64.47 146 P **P 04 17 22.1 +1.4**
comp=Z,36nm,0.7s
KIW Kapiti Island 64.54 140 P **P 04 17 22.3 +1.0**
KHZ Kahutara 64.57 143 P **P 04 17 21.8 +0.4**
KHZ Kahutara 64.57 143 P **P 04 17 21.3 -0.1**
comp=Z,61nm,0.6s
URZ Urewera 64.61 137 P **P 04 17 22.0 +0.3**
comp=Z,15nm,0.6s,baz=46,slow=0.9,SNR=10
URZ LR LR 04 44 58.4
comp=Z,137nm,20.1s,baz=15,slow=35
comp=Z,15nm,0.6s
SNZO South Karori 64.66 141 P **P 04 17 21.6 -0.4**
comp=Z,93nm,0.6s
BKZ Black Stump Fm 64.66 138 P **P 04 17 23.1 +1.0**
BKZ IAmb IAmb 04 17 23.7
comp=Z,37nm,0.8s
BKZ Black Stump Fm 64.66 138 P **P 04 17 23.2 +1.0**
comp=Z,209nm,0.9s
HRA Herat 65.00 305 P **P 04 17 24.8 +0.1**
AFI Afiamalu 65.02 108 LR LR 04 41 26.8
comp=Z,115nm,21.9s,baz=282,slow=32
BRVK Borovoye 65.27 327 P **P 04 17 25.5 -0.3**
BRVK IAmb IAmb 04 17 26.4
comp=Z,57nm,1.1s
BRVK Borovoye 65.27 327*ce*P **P 04 17 24.4 -1.4**
BRVK pmax pmax
comp=Z,74nm,1.3s
BRVK Borovoye 65.27 327 P **P 04 17 23.7 -2.2**
BRVK pP **PcP 04 17 51.3 -5.8**
BFZ Birch Farm 65.30 140 P **P 04 17 26.2 0.0**
BFZ IAmb IAmb 04 17 29.5
comp=Z,40nm,1.1s
BFZ Birch Farm 65.30 140 P **P 04 17 26.4 +0.2**
comp=Z,31nm,0.6s
KIWB Kanaga Island 65.78 35 P **P 04 17 29.7 +0.6**
TIXI Tiksi 66.02 1 S **S 04 26 04.1 -2.8**
comp=Z,0.1nm,0.4s,baz=92,slow=24,SNR=9.1
ADK Adak 66.06 35 P **P 04 17 31.4 +0.6**
ADK IAmb IAmb 04 17 32.6
comp=Z,86nm,1.1s
ADK Adak 66.06 35 P **P 04 17 31.4 +0.6**
ADK pmax pmax
comp=Z,86nm,1.1s
BILL Bilibino 68.06 15 P **P 04 17 43.4 +0.2**
BILL IAmb IAmb 04 17 45.0
comp=Z,69nm,1.4s
NRIK Noril'sk 68.39 346 P **P 04 17 45.0 -0.2**
comp=Z,71nm,0.9s,baz=134,slow=6.3,SNR=52
NRIK S **S 04 26 33.0 -2.3**
comp=Z,1.3nm,0.2s,baz=351,slow=20,SNR=14
NRIK LR LR 04 48 45.0
comp=Z,263nm,19.7s,baz=137,slow=37
comp=Z,71nm,0.9s
NRIK Noril'sk 68.39 346 P **P 04 17 44.9 -0.4**
NRIK IAmb IAmb 04 17 46.1
comp=Z,94nm,1.0s
NRIK Noril'sk 68.39 346*ce*P **P 04 17 44.8 -0.5**
NRIK pmax pmax
comp=Z,110nm,1.0s
GEYT Alibeck 68.91 308 P **P 04 17 49.8 +0.6**
comp=Z,11nm,1.0s,baz=131,slow=4.1,SNR=8.2
comp=Z,11nm,1.0s
GEYT Alibeck 68.91 308 P **P 04 17 49.4 +0.2**
GYA0B ALIBECK ARRAY 68.91 308 P **P 04 17 49.1 -0.1**
ABKAR Akbulak array 70.05 321 P **P 04 17 55.3 -0.6**
ABKAR Akbulak array 70.05 321 P **P 04 17 55.3 -0.6**
ABKAR IAmb IAmb 04 17 56.3
comp=Z,17nm,0.8s
NIKH Nikolski High 70.93 36 P **P 04 18 01.0 -0.1**
NIKH IAmb IAmb 04 18 03.8
comp=Z,134nm,1.4s
NIKH Nikolski High 70.93 36 P **P 04 18 01.3 +0.2**
baz=253,SNR=7.7
SPIA Saint Paul Isl 71.47 31 P **P 04 18 05.3 +1.0**
baz=251
AKTO Aktyubinsk 71.56 321 P **P 04 18 04.7 -0.3**
comp=Z,12nm,0.7s,baz=93,slow=7.3,SNR=24
AKTO S **S 04 27 08.8 -4.1**
comp=Z,0.9nm,0.5s,baz=342,slow=22,SNR=15
AKTO LR LR 04 52 34.0
comp=Z,178nm,18.5s,baz=115,slow=38
comp=Z,12nm,0.7s
CASY Casey 72.52 186 P **P 04 18 11.1 +0.9**
UNV Unalaska Valle 72.53 35 P **P 04 18 10.7 +0.1**
UNV IAmb IAmb 04 18 12.3
comp=Z,88nm,1.0s
UNV Unalaska Valle 72.53 35 P **P 04 18 10.8 +0.1**

baz=255,SNR=9.6
ARU Arti 72.81 328 P **P 04 18 11.3 -1.0**
comp=Z,18nm,0.5s,baz=102,slow=3.7,SNR=28
ARU LR LR 04 53 00.9
comp=Z,100nm,18.2s,baz=122,slow=38
comp=Z,18nm,0.5s
ARU Arti 72.81 328 P **P 04 18 11.2 -1.2**
ARU Arti 72.81 328*c i*P **P 04 18 10.8 -1.5**
ARU S **S 04 27 28.9 +1.9**
ARU SS **SS 04 32 03.9 -5.8**
ARU pmax pmax
comp=Z,17nm,0.6s
AKUT Akutan 73.02 35 P **P 04 18 13.6 0.0**
GAMB Gambell 73.16 24 IAmb IAmb 04 18 16.6
comp=Z,63nm,1.0s
GAMB Gambell 73.16 24 P **P 04 18 15.4 +1.3**
baz=247
KIP Kipapa 75.27 69*ce*P **P 04 18 29.5 +2.2**
KIP pmax pmax
comp=Z,171nm,1.7s
TNA Tin City 75.32 23 P **P 04 18 27.3 +0.7**
baz=250
S12K Black Hills 75.46 34 P **P 04 18 27.6 -0.1**
baz=258
ANM Nome 76.03 25 P **P 04 18 31.7 +0.9**
baz=253
SDPT Sand Point 76.28 34 P **P 04 18 32.4 +0.1**
baz=260,SNR=11
CHNA Chernabura Isl 76.69 35 P **P 04 18 35.4 +0.7**
baz=261
S14K Fog Glacier 76.95 34 P **P 04 18 35.9 -0.3**
baz=260
CHGN Chignik 77.58 34 IAmb IAmb 04 18 41.0
comp=Z,104nm,1.0s
CHGN Chignik 77.58 34 P **P 04 18 39.7 +0.2**
baz=261,SNR=13
RAR Rarotonga 77.74 113 LR LR 04 47 52.4
comp=Z,76nm,21.4s,baz=274,slow=32
N16K Nishlik Lake 78.07 29 P **P 04 18 43.7 +1.4**
baz=260,SNR=40
KIRV Kirov 78.10 329 P **P 04 18 41.7 -0.7**
comp=Z,50nm,0.8s,baz=86,slow=0.6,SNR=17
KIRV LR LR 04 57 36.7
comp=Z,133nm,18.3s,baz=98,slow=39
comp=Z,50nm,0.8s
KIRV Kirov 78.10 329*ce*P **P 04 18 41.3 -1.1**
R16K Pilot Point 78.22 32 P **P 04 18 43.6 +0.5**
baz=262
P16K Nushagak River 78.22 31 P **P 04 18 44.2 +1.1**
baz=261
O16K Kokwok River B 78.26 30 P **P 04 18 44.5 +1.2**
baz=261
BELG Belogornoye 78.30 322 P **P 04 18 42.9 -0.7**
comp=Z,12nm,0.4s,baz=350,slow=3.0,SNR=7.8
comp=Z,12nm,0.4s
BELG Belogornoye 78.30 322 *i*P **P 04 18 42.0 -1.6**
BELG pmax pmax
comp=Z,7.0nm,1.0s
RAYN Ar Rayn 78.78 293 P **P 04 18 47.4 +0.4**
RAYN Ar Rayn 78.78 293 P **P 04 18 47.4 +0.4**
RAYN pmax pmax
comp=Z,10.0nm,1.0s
O17K Koliganek Bris 78.79 30 P **P 04 18 47.7 +1.5**
baz=262,SNR=25
Q16K King Salmon 78.86 31 P **P 04 18 46.9 +0.4**
baz=262
R17K Ugashik Creek 78.86 32 P **P 04 18 47.1 +0.4**
baz=263,SNR=17
P17K Kvichak River 79.04 31 P **P 04 18 48.5 +1.0**
baz=262,SNR=19
CHIR Chirikof Islan 79.07 34 P **P 04 18 49.2 +1.4**
baz=264,SNR=7.3
GNI Garni 79.49 310 LR LR 04 58 25.6
comp=Z,160nm,21.1s,baz=200,slow=39
N18K Kilae Creek 79.51 29 P **P 04 18 51.6 +1.5**
baz=263,SNR=14
GCSA Galena City Sc 79.64 25 P **P 04 18 51.9 +1.2**
baz=261,SNR=35
TTA Tatalina 79.75 27 P **P 04 18 52.7 +1.2**
baz=262,SNR=24
SII Sitkinak Islan 79.94 34 P **P 04 18 53.4 +0.9**
baz=265,SNR=5.2
L19K White Mountain 80.19 28 IAmb IAmb 04 18 56.7
comp=Z,91nm,1.1s
L19K White Mountain 80.19 28 P **P 04 18 55.3 +1.6**
baz=263,SNR=55
ZEI Tsey 80.19 312 *e*P **P 04 18 54.3 -0.1**
ZEI pmax pmax
comp=Z,15nm,1.3s
N19K Bonanza Creek 80.21 29 IAmb IAmb 04 18 57.0
comp=Z,158nm,1.4s
N19K Bonanza Creek 80.21 29 P **P 04 18 55.7 +1.7**
baz=264,SNR=35
O19K Port Alsworth 80.22 30 IAmb IAmb 04 18 56.4
comp=Z,67nm,1.1s
O19K Port Alsworth 80.22 30 P **P 04 18 54.8 +0.9**
baz=264
M19K Big River Lodg 80.37 28 IAmb IAmb 04 18 57.9
comp=Z,58nm,1.1s
M19K Big River Lodg 80.37 28 P **P 04 18 56.3 +1.6**
baz=264,SNR=26
PRGR Permogore 80.38 332 *e*P **P 04 18 52.9 -1.8**
PRGR *e*S **S 04 28 42.7 -6.4**
Q19K Cape Douglas, 80.44 31 IAmb IAmb 04 18 56.4
comp=Z,71nm,0.8s
Q19K Cape Douglas, 80.44 31 P **P 04 18 55.0 -0.2**
baz=265,SNR=14
OHAK Old Harbor 80.49 33 IAmb IAmb 04 18 57.7
comp=Z,72nm,0.9s
OHAK Old Harbor 80.49 33 P **P 04 18 56.5 +1.1**
baz=265,SNR=25
ONI Oni 80.52 312 P **P 04 18 55.7 -0.3**
L20K Farewell, AK 80.67 28 P **P 04 18 58.1 +1.7**
baz=264,SNR=34
K20K Telida 80.68 27 IAmb IAmb 04 18 59.5
comp=Z,92nm,1.1s
K20K Telida 80.68 27 P **P 04 18 58.2 +1.9**
baz=264,SNR=72
P19K Oil Pt 80.72 31 P **P 04 18 56.5 -0.2**
baz=265
J20K Nowinta River 80.73 26 IAmb IAmb 04 18 59.8
comp=Z,100nm,1.2s
J20K Nowinta River 80.73 26 P **P 04 18 58.3 +1.7**
baz=264,SNR=70
ILSW Iliamna Southw 80.79 30 IAmb IAmb 04 18 58.2
comp=Z,31nm,1.0s
OPO Ambohidratompo 80.90 250 P **P 04 18 57.8 -0.9**
comp=Z,3.4nm,0.5s,baz=31,slow=2.8,SNR=5.1
comp=Z,3.4nm,0.5s
KDAK Kodiak Island 80.91 32 P **P 04 18 58.1 +0.5**
KDAK IAmb IAmb 04 18 59.9
comp=Z,67nm,0.8s
KDAK Kodiak Island 80.91 32 P **P 04 18 58.2 +0.5**
KDAK pmax pmax
comp=Z,67nm,0.9s
KDAK Kodiak Island 80.91 32 P **P 04 18 58.6 +0.9**
baz=266
KBZ Khabaz 80.94 313 P **P 04 18 59.0 +0.8**
comp=Z,3.4nm,0.9s,baz=90,slow=3.6,SNR=7.9
comp=Z,3.4nm,0.9s
KBZ Khabaz 80.94 313*ce*P **P 04 18 57.3 -0.8**
KBZ pmax pmax
comp=Z,11nm,1.4s
M20K Styx River 80.96 28 IAmb IAmb 04 19 01.0
comp=Z,91nm,0.9s
M20K Styx River 80.96 28 P **P 04 18 59.8 +1.8**
baz=265
RSO Redoubt South 81.02 30 P **P 04 18 59.2 +0.7**
O20K Slope Mountain 81.06 30 P **P 04 18 58.6 +0.1**
baz=266
Q20K Shuyak Island 81.07 32 P **P 04 18 59.3 +0.8**
baz=266,SNR=8.8
KIV Kislovodsk 81.10 313 P **P 04 18 59.6 +0.5**
KIV Kislovodsk 81.10 313 *e*P **P 04 18 59.9 +0.8**
KIV pmax pmax
comp=Z,8.0nm,1.0s
IMAR Indian Mountai 81.10 24 P **P 04 18 59.7 +1.1**
G21K Allakaket 81.26 24 P **P 04 19 01.0 +1.6**
baz=264,SNR=97
F21K Alatna River 81.34 23 P **P 04 19 00.8 +1.0**
baz=264,SNR=21
N20K Mount Spurr 81.35 29 P **P 04 19 00.5 +0.5**
baz=266
SPCR Spurr Chakacha 81.35 29 P **P 04 19 00.7 +0.7**
baz=266
H21K Melozitna Rive 81.45 24 IAmb IAmb 04 19 03.4
comp=Z,64nm,1.1s
H21K Melozitna Rive 81.45 24 P **P 04 19 02.0 +1.6**

baz=264,SNR=63
PPLA **Purkeypile** 81.48 27 IAmb IAmb 04 19 03.3
comp=Z,113nm,1.4s
PPLA **Purkeypile** 81.48 27 P **P** **04 19 01.9 +1.1**
baz=266,SNR=17
CHUM **Lake Minchumin** 81.51 26 P **P** **04 19 02.2 +1.6**
baz=265,SNR=6.2
CAST **Castle Rocks** 81.57 27 IAmb IAmb 04 19 03.6
comp=Z,90nm,1.0s
CAST **Castle Rocks** 81.57 27 P **P** **04 19 02.1 +1.0**
baz=266,SNR=50
GURO **Guroymak-BITLI** 81.57 308 P **P** **04 19 02.6 +0.8**
CNPM **China Poot** 81.72 31 IAmb IAmb 04 19 03.5
comp=Z,77nm,0.8s
I21K **Tanana** 81.75 25 P **P** **04 19 03.4 +1.4**
I21K IAmb IAmb 04 19 05.0
comp=Z,73nm,1.0s
I21K **Tanana** 81.75 25 P **P** **04 19 03.6 +1.7**
baz=265,SNR=63
VOI **Vohitsoka** 81.80 247 P **P** **04 19 02.9 -0.3**
VOI **Vohitsoka** 81.80 247 P **P** **04 19 04.1 +0.9**
CAPN **Captain Cook N** 81.83 29 P **P** **04 19 03.8 +1.3**
baz=267
F22K **John River** 81.87 23 P **P** **04 19 04.3 +1.7**
baz=265
VRH **Novokhopyorsk** 81.88 321 *e*P **P** **04 19 01.8 -1.1**
VRH pmax pmax
comp=Z,10.0nm,0.7s
BRLK **Bradley Lake** 81.91 31 IAmb IAmb 04 19 04.3
comp=Z,67nm,0.7s
BRSE **Bradley Lake S** 81.98 31 P **P** **04 19 03.6 +0.3**
baz=267,SNR=20
H22K **Ishtalitna Cre** 82.06 24 P **P** **04 19 05.6 +2.0**
baz=266,SNR=38
SUA **Susitna One** 82.07 29 IAmb IAmb 04 19 05.4
comp=Z,106nm,1.0s
SUA **Susitna One** 82.07 29 P **P** **04 19 04.0 +0.1**
baz=267
E22K **Anaktuvuk Pass** 82.07 22 P **P** **04 19 05.0 +1.4**
baz=265
G22K **Bettles** 82.09 23 P **P** **04 19 04.9 +1.2**
baz=266
KTH **Kantishna Hill** 82.10 27 IAmb IAmb 04 19 06.8
comp=Z,122nm,1.2s
BPAW **Bear Paw Mtn.** 82.11 26 P **P** **04 19 05.0 +1.1**
baz=266,SNR=120
FOMA **Nahampoana Res** 82.14 244 P **P** **04 19 05.3 +0.5**
FOMA IAmb IAmb 04 19 53.3
comp=Z,74nm,1.2s
MLY **Manley** 82.27 25 IAmb IAmb 04 19 07.5
comp=Z,130nm,1.3s
MLY **Manley** 82.27 25 P **P** **04 19 06.0 +1.3**
baz=266,SNR=120
CUT **Chulitna** 82.34 28 P **P** **04 19 05.2 +0.2**
baz=267,SNR=7.7
M22K **Willow** 82.38 29 P **P** **04 19 05.4 +0.2**
baz=268,SNR=30
TRF **Thorofare Moun** 82.38 27 IAmb IAmb 04 19 07.4
comp=Z,108nm,1.1s
TRF **Thorofare Moun** 82.38 27 P **P** **04 19 06.0 +0.5**
baz=267,SNR=51
O22K **Cooper Landing** 82.52 30 P **P** **04 19 06.5 +0.4**
baz=268,SNR=12
RC01 **Rabbit Creek A** 82.54 29 IAmb IAmb 04 19 07.8
comp=Z,114nm,1.1s
RC01 **Rabbit Creek A** 82.54 29 P **P** **04 19 06.5 +0.3**
baz=268,SNR=17
D23K **Nanushuk River** 82.55 21 P **P** **04 19 07.9 +1.9**
baz=266,SNR=28
ZFI **Zemlya Franca-** 82.61 351 *e*P **P** **04 19 06.2 0.0**
COLD **Coldfoot** 82.62 23 IAmb IAmb 04 19 09.7
comp=Z,169nm,1.6s
COLD **Coldfoot** 82.62 23 P **P** **04 19 08.0 +1.6**
baz=267,SNR=36
C23K **Itkillik River** 82.63 20 P **P** **04 19 08.0 +1.5**
baz=266,SNR=24
SEW **Seward** 82.65 30 P **P** **04 19 07.3 +0.6**
baz=268,SNR=19
G23K **Bananza Creek** 82.66 24 P **P** **04 19 08.4 +1.7**
baz=267,SNR=61
H23K **Yukon River** 82.81 24 P **P** **04 19 09.3 +1.8**
baz=268,SNR=86
PMR **Palmer** 82.84 29 P **P** **04 19 08.1 +0.4**
baz=268,SNR=55
I23K **Minto, Yukon-K** 82.86 25 P **P** **04 19 09.1 +1.4**
baz=268,SNR=130
TOLK **Toolik Lake Re** 82.93 22 P **P** **04 19 09.8 +1.7**
baz=267,SNR=32
GHO **Glory Hole Cre** 82.95 29 IAmb IAmb 04 19 10.3
comp=Z,62nm,1.1s
NEA2 **Nenana** 82.96 26 P **P** **04 19 08.5 +0.2**
baz=268,SNR=51
MCK **McKinley** 83.00 27 P **P** **04 19 09.0 +0.5**
baz=268,SNR=54
RND **Reindeer** 83.02 27 P **P** **04 19 09.5 +0.8**
RND IAmb IAmb 04 19 10.2
comp=Z,69nm,0.9s
RND **Reindeer** 83.02 27 P **P** **04 19 09.5 +0.8**
RND pmax pmax
comp=Z,69nm,0.9s
WAT1 **Susitna Watana** 83.15 27 P **P** **04 19 09.8 +0.4**
baz=269
KNK **Knik Glacier** 83.16 29 P **P** **04 19 10.5 +1.1**
baz=269,SNR=37
PWL **Port Wells** 83.22 29 P **P** **04 19 10.3 +0.7**
baz=269,SNR=29
D24K **Happy Valley** 83.22 21 P **P** **04 19 11.1 +1.6**
baz=268
SML **Sawmill** 83.23 28 P **P** **04 19 10.6 +0.9**
baz=269,SNR=45
SOC **Sochi** 83.25 313 *e*P **P** **04 19 08.0 -2.2**
SOC *e* 04 22 17.8
SOC *e*S **S** **04 29 17.6 -1.7**
SOC *e*SS **SS** **04 34 42.0 -5.0**
SOC *e*SSS SSS 04 38 13.6
KLMR **Klimovskoe** 83.28 331 *e*P **P** **04 19 07.0 -2.9**
KLMR *e* 04 22 20.5
KLMR pmax pmax
comp=Z,59nm,1.2s
KLMR **Klimovskoe** 83.28 331 *e*P **P** **04 19 07.1 -2.9**
KLMR AMP 04 19 10.1
comp=Z,59nm,1.2s
KLMR *e*PP **PP** **04 22 20.6 -2.6**
C24K **Franklin Bluff** 83.29 20 P **P** **04 19 11.5 +1.7**
baz=268,SNR=21
E24K **Your Creek** 83.31 22 P **P** **04 19 11.7 +1.7**
baz=268
MDM **Murphy Dome** 83.33 25 IAmb IAmb 04 19 12.3
comp=Z,46nm,0.9s
VORR **Voronezh** 83.46 321 *e*P **P** **04 19 11.4 +0.3**
VORR pmax pmax
comp=Z,80nm,0.4s
TCOL **CIGO, UAF Yank** 83.49 25 IAmb IAmb 04 19 13.5
comp=Z,62nm,1.1s
TCOL **CIGO, UAF Yank** 83.49 25 P **P** **04 19 10.7 -0.2**
baz=269
VSR **Storozhevoye** 83.49 321 *e*P **P** **04 19 09.4 -1.8**
VSR pmax pmax
comp=Z,10.0nm,1.3s
COLA **College** 83.49 25 P **P** **04 19 11.0 +0.1**
COLA IAmb IAmb 04 19 13.5
comp=Z,59nm,1.1s
COLA **College** 83.49 25 *c* *i*P **P** **04 19 10.7 -0.2**
COLA pmax pmax
comp=Z,42nm,0.9s
COLA **College** 83.49 25 P **P** **04 19 11.1 +0.2**
baz=269
H24K **Noodor Dome** 83.50 24 IAmb IAmb 04 19 15.0
comp=Z,89nm,1.0s
H24K **Noodor Dome** 83.50 24 P **P** **04 19 12.7 +1.6**
baz=269,SNR=77
CCB **Clear Creek Bu** 83.51 26 IAmb IAmb 04 19 12.4
comp=Z,103nm,1.2s
WAT6 **Susitna Watana** 83.52 28 P **P** **04 19 12.0 +0.6**
baz=270,SNR=76
M23K **Glacier View** 83.52 29 P **P** **04 19 11.8 +0.6**
baz=270,SNR=19
F24K **Squaw Lake** 83.52 23 P **P** **04 19 13.0 +1.9**
baz=269,SNR=58
LPSR **Galich'ya Gora** 83.62 322 *e*P **P** **04 19 10.9 -1.0**
LPSR pmax pmax
comp=Z,20nm,0.9s
G24K **Hadweenzic Riv** 83.67 24 P **P** **04 19 13.4 +1.5**
baz=269,SNR=86
POKR **Poker Plat Res** 83.67 25 IAmb IAmb 04 19 14.9
comp=Z,42nm,0.9s
POKR **Poker Plat Res** 83.67 25 P **P** **04 19 11.4 -0.6**
baz=270,SNR=5.8
P23K **Montague Islan** 83.67 30 P **P** **04 19 13.0 +1.1**
baz=270,SNR=23
DHY **Denali Highway** 83.69 27 P **P** **04 19 12.4 +0.1**
baz=270,SNR=25
SCM **Sheep Creek Mo** 83.71 28 P **P** **04 19 13.2 +0.9**
baz=270,SNR=26
GLI **Glacier Island** 83.82 29 P **P** **04 19 13.5 +0.7**
baz=270,SNR=11
HDA **Harding Lake** 83.88 26 IAmb IAmb 04 19 14.3
comp=Z,67nm,0.8s
HDA **Harding Lake** 83.88 26 P **P** **04 19 12.8 -0.1**
baz=270,SNR=53
ILAR **Eielson Array** 83.90 26 P **P** **04 19 12.3 -0.8**
comp=Z,22nm,0.9s,baz=237,slow=4.3,SNR=129
ILAR PKKPbc **PKKPbc** **04 37 28.0 -2.6**
comp=Z,0.3nm,0.4s,baz=123,slow=1.6,SNR=6.7
ILAR LR LR 04 56 02.6
comp=Z,48nm,22.0s,baz=250,slow=35
comp=Z,22nm,0.9s
D25K **Kavik River** 84.10 21 P **P** **04 19 15.4 +1.4**
baz=270
FID **Port Fidalgo** 84.12 30 IAmb IAmb 04 19 16.4
comp=Z,77nm,0.8s
G25K **Bearman Lake** 84.22 23 P **P** **04 19 16.7 +2.1**
baz=270,SNR=29
M24K **Tolsona, Glenn** 84.25 28 P **P** **04 19 16.5 +1.5**
baz=271,SNR=21
MOS **Moscow** 84.32 325 *e*P **P** **04 19 12.9 -2.4**
MOS *e*S **S** **04 29 25.0 -4.5**
MOS pmax pmax
comp=Z,35nm,0.8s
H25K **Birch Creek** 84.34 24 P **P** **04 19 17.0 +1.8**
baz=271
KLU **Klutina** 84.38 29 P **P** **04 19 16.5 +0.8**
baz=271,SNR=16
F25K **Christian Rive** 84.38 23 P **P** **04 19 17.3 +1.8**
baz=271,SNR=42
K24K **Donnelly Dome** 84.40 26 P **P** **04 19 16.1 +0.4**
baz=271,SNR=36
E25K **Arctic Village** 84.40 22 P **P** **04 19 17.5 +1.9**
baz=271,SNR=55
PRP **Porcupine Dome** 84.47 25 P **P** **04 19 15.4 -0.7**
baz=271,SNR=12
EYAK **Cordova Ski Ar** 84.49 30 IAmb IAmb 04 19 18.7
comp=Z,74nm,1.2s
EYAK **Cordova Ski Ar** 84.49 30 P **P** **04 19 17.3 +1.2**
baz=271,SNR=11
PAX **Paxson** 84.56 27 IAmb IAmb 04 19 18.8
comp=Z,48nm,1.1s
PAX **Paxson** 84.56 27 P **P** **04 19 17.4 +0.9**
baz=272,SNR=34
J25K **Salcha River,** 84.56 26 P **P** **04 19 16.3 -0.2**
baz=271,SNR=52
C26K **Camden Bay** 84.60 20 P **P** **04 19 18.4 +1.9**
baz=271,SNR=19
HARP **HAARP** 84.72 28 P **P** **04 19 18.5 +1.2**
baz=272
RIDG **Independent Ri** 84.81 27 IAmb IAmb 04 19 55.9
comp=Z,101nm,1.2s
RIDG **Independent Ri** 84.81 27 P **P** **04 19 18.5 +0.7**
baz=272,SNR=46
ANN **Anapa** 84.85 314 *e*P **P** **04 19 16.6 -1.6**
ANN *e* 04 20 06.8
ANN *e*S **S** **04 29 30.0 -5.2**
ANN *e*SS **SS** **04 35 08.7 -1.8**
ANN pmax pmax
comp=Z,33nm,0.9s
OBN **Obninsk** 84.94 325 P **P** **04 19 17.8 -0.6**
comp=Z,3.7nm,0.4s,baz=74,slow=6.1,SNR=10
OBN LR LR 04 59 56.8
comp=Z,22nm,19.5s,baz=79,slow=37
comp=Z,3.7nm,0.4s
OBN **Obninsk** 84.94 325 *de*P **P** **04 19 17.8 -0.6**
OBN *e* 04 22 32.2
OBN *i*S **S** **04 29 34.3 -1.4**
OBN pmax pmax
comp=Z,48nm,1.0s
F26K **Sheenjek River** 84.95 23 P **P** **04 19 19.8 +1.5**
baz=272,SNR=32
N25K **Chitina, Valde** 85.01 29 P **P** **04 19 19.8 +1.0**
baz=272,SNR=21
RAGM **Ragged Mountai** 85.03 30 IAmb IAmb 04 19 22.2
comp=Z,85nm,1.2s
C27K **Jago River** 85.03 21 P **P** **04 19 20.5 +1.8**
baz=272
BMRM **Bremner River** 85.04 29 IAmb IAmb 04 19 58.2
comp=Z,84nm,1.3s
BMRM **Bremner River** 85.04 29 P **P** **04 19 19.5 +0.6**
baz=272,SNR=13
MAW **Mawson** 85.11 200 P **P** **04 19 20.3 +1.3**
comp=Z,37nm,0.9s,baz=61,slow=5.7,SNR=45
MAW LR LR 04 53 36.0
comp=Z,58nm,21.5s,baz=43,slow=33
comp=Z,37nm,0.9s
MAW **Mawson** 85.11 200 P **P** **04 19 20.1 +1.2**
baz=85,SNR=16
MAW **Mawson** 85.11 200 P **P** **04 19 20.2 +1.2**
G26K **Porcupine Rive** 85.13 23 P **P** **04 19 21.0 +1.8**
baz=273,SNR=46
KAIM **Kayak Island** 85.18 30 P **P** **04 19 21.0 +1.4**
baz=273,SNR=9.2
SCRK **Sand Creek** 85.19 26 P **P** **04 19 20.4 +0.7**
baz=273,SNR=26
HMT **Hamilton** 85.23 30 IAmb IAmb 04 19 58.8
comp=Z,44nm,0.9s
J26L **Joseph Creek** 85.34 26 P **P** **04 19 20.7 +0.3**
baz=273,SNR=47
VNDA **Vanda** 85.38 173 P **P** **04 19 20.8 +0.6**
comp=Z,7.2nm,0.5s,baz=317,slow=6.4,SNR=101
VNDA pP **pP** **04 19 54.9 +0.2**
comp=Z,9.9nm,0.8s,baz=298,slow=5.8,SNR=5.1
VNDA S **S** **04 29 36.7 -2.4**
comp=Z,0.4nm,0.8s,baz=167,slow=18,SNR=2.1
VNDA LR LR 04 56 47.8
comp=Z,72nm,19.6s,baz=299,slow=35
comp=Z,7.2nm,0.5s
VNDA **Vanda** 85.38 173 P **P** **04 19 21.2 +1.0**
VNDA **Vanda** 85.38 173 P **P** **04 19 21.2 +1.0**
VNDA pmax pmax
comp=Z,18nm,1.0s
GLB **Gilahina Butte** 85.40 29 IAmb IAmb 04 19 59.4
comp=Z,110nm,1.6s
I26K **Coal Creek Min** 85.47 25 IAmb IAmb 04 19 22.9
comp=Z,56nm,1.0s
I26K **Coal Creek Min** 85.47 25 P **P** **04 19 21.2 +0.3**
baz=273
BERG **Berg Lake** 85.51 30 IAmb IAmb 04 19 24.6
comp=Z,90nm,1.2s
L26K **Log Cabin Wild** 85.52 27 P **P** **04 19 21.7 +0.5**
baz=273,SNR=8.9
M26K **Nabesna, AK** 85.72 28 P **P** **04 19 22.9 +0.6**
baz=274,SNR=8.4
CRQM **Cirque** 85.76 29 IAmb IAmb 04 20 02.2
comp=Z,43nm,1.2s
MCARA **McCarthy VSAT** 85.78 29 P **P** **04 19 22.9 +0.4**
baz=274
CRQE **Cirque** 85.79 29 P **P** **04 19 22.9 +0.1**
baz=274
E27K **Coleen River** 85.89 22 P **P** **04 19 24.2 +1.2**
baz=274,SNR=11
TGL **Tana Glacier** 85.92 29 IAmb IAmb 04 20 02.1
comp=Z,57nm,1.3s
WAX **Waxell Ridge** 85.93 30 IAmb IAmb 04 20 02.5
comp=Z,40nm,0.8s
SNH **Sunshine Point** 85.95 30 P **P** **04 19 24.4 +1.0**
SNH IAmb IAmb 04 19 27.3
comp=Z,115nm,1.5s
G27K **Doyon Strip** 85.97 23 P **P** **04 19 24.7 +1.3**
baz=275,SNR=27
ASF **Jabal al Asfar** 86.02 302 P **P** **04 19 25.3 +0.8**
comp=Z,4.0nm,0.7s,baz=301,slow=4.3,SNR=5.2
comp=Z,4.0nm,0.7s
K27K **Chicken** 86.02 26 IAmb IAmb 04 20 03.4
comp=Z,88nm,1.4s
K27K **Chicken** 86.02 26 P **P** **04 19 25.2 +1.5**
baz=274
H27K **Steamboat Moun** 86.07 24 P **P** **04 19 25.3 +1.4**
baz=275
I27K **Kandik River** 86.09 25 P **P** **04 19 25.5 +1.4**
baz=275
L27K **Beaver Creek,** 86.21 27 P **P** **04 19 26.0 +1.3**
baz=275,SNR=18
M27K **Edge Creek, AK** 86.25 28 P **P** **04 19 25.7 +0.7**
baz=275,SNR=7.1
SBA **Scott Base** 86.30 172 P **P** **04 19 25.2 +0.5**
SBA **Scott Base** 86.30 172 P **P** **04 19 25.2 +0.5**
SBA pmax pmax
comp=Z,40nm,1.6s
EGAK **Eagle** 86.36 25 P **P** **04 19 25.8 +0.5**
baz=275
MESA **MESA** 86.39 30 P **P** **04 19 26.7 +0.9**
baz=275
GRNC **Granite Creek** 86.44 29 IAmb IAmb 04 20 06.1
comp=Z,47nm,1.2s
YAH **Yahtse** 86.48 30 IAmb IAmb 04 20 06.4
comp=Z,70nm,1.4s
CTG **Chitna Glacier** 86.62 29 P **P** **04 19 28.0 +1.1**
baz=275
CTGM **Chitina Glacie** 86.63 29 IAmb IAmb 04 19 31.8
comp=Z,35nm,0.8s
PPT **Papeete** 86.69 108 LR LR 04 52 14.4
comp=Z,38nm,20.2s,baz=283,slow=31
PPT2 **Papeete2** 86.70 108 *e*LR LR 04 47 07.3
comp=Z,152nm,27.8s
BVCY **Beaver Creek** 86.71 28 P **P** **04 19 28.3 +1.1**
baz=276,SNR=8.2
TABL **Table Mountain** 86.77 30 IAmb IAmb 04 19 31.7
comp=Z,37nm,0.9s
YUK3 **Moose Creek** 86.97 28 P **P** **04 19 29.2 +0.5**
baz=276
DAWY **Dawson** 87.19 26 P **P** **04 19 29.9 +0.5**
baz=277
O28M **Mount Upton** 87.20 29 P **P** **04 19 30.7 +0.8**
baz=276
MMAI **Mount Meron Ar** 87.21 303 LR LR 05 03 26.5
comp=Z,58nm,18.9s,baz=232,slow=39
PINM **Pinnacle** 87.25 30 P **P** **04 19 30.8 +1.0**
baz=276
I29M **Ogilvie Camp,** 87.49 25 IAmb IAmb 04 19 33.1
comp=Z,34nm,1.0s
I29M **Ogilvie Camp,** 87.49 25 P **P** **04 19 31.0 +0.2**
baz=278
PNL **Peninsula** 87.73 30 P **P** **04 19 32.8 +0.7**
baz=277
M29M **Somme Creek** 87.82 28 P **P** **04 19 33.6 +1.1**
baz=278
YUK4 **Talbot Arm** 87.88 29 P **P** **04 19 34.1 +1.1**
baz=278,SNR=7.4
EPYK **Eagle Plains** 87.98 24 IAmb IAmb 04 19 35.1
comp=Z,60nm,1.0s
EPYK **Eagle Plains** 87.98 24 P **P** **04 19 33.5 +0.3**
baz=279
BR131 **Keskin Array S** 88.03 310 *i*P **P** **04 19 33.1 -1.0**
BRTR **Keskin Array B** 88.03 310 P **P** **04 19 33.9 -0.2**
comp=Z,2.6nm,0.8s,baz=119,slow=4.8,SNR=13
BRTR LR LR 05 02 51.6
comp=Z,172nm,21.5s,baz=111,slow=38
comp=Z,2.6nm,0.8s
O29M **Mount Kennedy** 88.05 30 P **P** **04 19 34.7 +1.0**
baz=278
YUK6 **Outpost Mounta** 88.07 29 P **P** **04 19 34.7 +0.8**
baz=278
ARA0 **ARCESS Array S** 88.36 340 *e*P **P** **04 19 33.6 -1.2**
ARA0 IAmb IAmb 04 19 34.9
comp=Z,35nm,1.0s
ARCES **ARCESS Array B** 88.36 340 P **P** **04 19 33.5 -1.3**
comp=Z,18nm,0.8s,baz=83,slow=5.9,SNR=22
ARCES PKiKP **PKiKP** **04 24 35.1 +0.1**
comp=Z,0.5nm,0.4s,baz=112,slow=3.3,SNR=5.1
ARCES PKKPbc **PKKPdf** **04 37 15.7 +2.0**
comp=Z,3.1nm,0.9s,baz=254,slow=3.5,SNR=12
ARCES LR LR 05 04 09.8
comp=Z,58nm,18.1s,baz=67,slow=39
comp=Z,18nm,0.8s
ARCES **ARCESS Array B** 88.36 340 IAmb IAmb 04 19 35.2
comp=Z,31nm,1.0s
SPB2 **Spitsbergen Ar** 88.47 349 IAmb IAmb 04 19 35.7
comp=Z,70nm,1.2s
SPA0 **Spitsbergen Ar** 88.47 349 *e*P **P** **04 19 35.3 +0.1**
SPA0 IAmb IAmb 04 19 35.4
comp=Z,63nm,1.2s
SPA0 **Spitsbergen Ar** 88.47 349 *e*P **P** **04 19 34.7 -0.6**
SPITS **Spitsbergen Ar** 88.47 349 LR LR 05 05 02.3
comp=Z,64nm,18.1s,baz=18,slow=39
SPITS **Spitsbergen Ar** 88.47 349 P **P** **04 19 34.6 -0.6**
SPITS pmax pmax
comp=Z,1.0nm,0.3s
HYT **Haines Junctio** 88.50 29 P **P** **04 19 36.7 +0.8**
baz=279,SNR=20
KMBO **Kilima Mbogo** 88.52 269 LR LR 04 53 53.3
comp=Z,47nm,21.9s,baz=92,slow=32
P29M **Windy Craggy** 88.57 30 IAmb IAmb 04 19 39.0
comp=Z,32nm,1.1s
P29M **Windy Craggy** 88.57 30 P **P** **04 19 36.5 +0.5**
baz=278
N30M **Aishikik Lake** 88.61 28 P **P** **04 19 37.2 +1.0**
baz=279,SNR=20
MAYO **Mayo, Yukon** 88.80 26 IAmb IAmb 04 19 43.2
comp=Z,38nm,1.0s
INK **Inuvik** 88.84 21 P **P** **04 19 37.1 +0.1**
comp=Z,24nm,1.0s,baz=285,slow=5.2,SNR=18
INK PKKPbc **PKKPdf** **04 37 14.2 +1.4**
comp=Z,1.0nm,0.5s,baz=87,slow=4.0,SNR=5.5
INK LR LR 05 01 36.4
comp=Z,45nm,21.0s,baz=311,slow=37
comp=Z,24nm,1.0s
INK **Inuvik** 88.84 21 IAmb IAmb 04 19 38.3
comp=Z,33nm,1.1s
INK **Inuvik** 88.84 21 P **P** **04 19 37.0 0.0**
baz=282
P30M **Million Dollar** 88.88 30 P **P** **04 19 38.6 +1.0**
baz=279
O30N **Mendenhall** 89.20 29 P **P** **04 19 39.9 +0.9**
baz=280,SNR=7.8
N31M **Braeburn, Yuko** 89.22 28 IAmb IAmb 04 19 41.8
comp=Z,42nm,1.0s
N31M **Braeburn, Yuko** 89.22 28 P **P** **04 19 40.1 +1.0**
baz=280,SNR=20
PLBC **Pleasant Camp** 89.28 30 P **P** **04 19 40.0 +0.6**
baz=280
FINES **FINESS Array B** 89.71 332 P **P** **04 19 40.3 -1.0**
comp=Z,9.2nm,0.7s,baz=62,slow=4.4,SNR=33
FINES LR LR 05 02 25.0
comp=Z,63nm,18.2s,baz=84,slow=37
comp=Z,9.2nm,0.7s
M31M **Drury Creek, Y** 89.73 28 P **P** **04 19 41.8 +0.4**
baz=281
AKASG **Malin Array Be** 89.80 321 P **P** **04 19 41.3 -0.6**
comp=Z,0.6nm,0.4s,baz=68,slow=4.1,SNR=7.4
WHY **Whitehorse** 89.80 29 IAmb IAmb 04 19 44.1
comp=Z,36nm,0.9s
WHY **Whitehorse** 89.80 29 P **P** **04 19 43.0 +1.1**
baz=281,SNR=21
SKAG **Skagway** 89.81 30 P **P** **04 19 42.8 +1.0**
baz=280
MNK **Minsk** 90.01 325 *i*P **P** **04 19 43.6 +0.8**
MNK *i* 04 23 17.2
MNK *i* PPP PPP 04 25 14.6
MNK *i*S **SKSac** **04 30 03.3 +2.6**
MNK *i*SS **SS** **04 36 27.4 +2.4**
MNK *i*SSS SSS 04 40 04.1
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=N,9.0nm,0.9s
MNK pmax pmax
comp=Z,23nm,0.9s
MNK MLR MLR
comp=Z,107nm,22.0s
MNK MLR MLR
comp=E,11nm,20.0s
MNK MLR MLR
comp=N,8.0nm,12.0s
MNK **Minsk** 90.01 325 *i*P **P** **04 19 43.6 +0.8**
comp=E,3.0nm,0.9s
MNK *i*P **P** **04 19 43.6 +0.8**
comp=N,9.0nm,0.9s
MNK *i*P **P** **04 19 43.6 +0.8**
comp=Z,23nm,0.9s,baz=261
MNK *i*pP **pP** **04 20 12.3 -5.8**
MNK *i*PP **PP** **04 23 17.3 -0.2**
MNK *i*PPP PPP 04 25 14.7
MNK *i*S **SKSac** **04 30 03.4 +2.6**
MNK *i*sS pS 04 30 55.4 -14
MNK *i*SS **SS** **04 36 27.4 +2.4**
MNK *i*SSS SSS 04 40 04.1
MNK *i*LRM MLR 05 00 59.4
comp=Z,107nm,22.4s
MNK *i*LRM MLR 05 01 22.4
comp=E,11nm,19.8s
MNK *i*LRM MLR 05 01 26.8
comp=N,8.0nm,12.1s
JETT **Jettan, Norway** 90.09 340 *e*P **P** **04 19 42.0 -1.0**
JETT IAmb IAmb 04 19 42.9
comp=Z,37nm,0.9s

FARO Faro, Yukon 90.20 27 IAmb IAmb 04 19 45.6
comp=Z,48nm,0.8s
SIT Sitka 90.25 33 P **P** **04 19 44.8 +0.9**
baz=280
A36M Sachs Harbour 90.55 17 P **P** **04 19 45.2 +0.2**
baz=290
N32M Quiet Lake 90.56 28 P **P** **04 19 46.1 +0.8**
baz=282
TRO Tromso 90.56 340 *e*P **P** **04 19 43.8 -1.2**
NACGM Naroch 90.57 325 *e*P **P** **04 19 46.0 +0.6**
baz=79
P32M Atlin 90.59 30 P **P** **04 19 46.4 +0.9**
baz=282
P33M Teslin, Yukon 90.89 29 P **P** **04 19 47.7 +0.8**
baz=283,SNR=7.5
NOR Nord 91.17 355 *i* P **P** **04 19 46.5 -1.2**
NOR IAmb IAmb 04 19 48.4
comp=Z,42nm,0.9s
CRAG Craig 91.77 34 P **P** **04 19 52.0 +1.1**
baz=282
C36M Paulatuk 91.84 19 P **P** **04 19 51.1 +0.1**
baz=291
WRAK Wrangell Islan 91.99 33 IAmb IAmb 04 19 54.1
comp=Z,28nm,1.1s
WRAK Wrangell Islan 91.99 33 P **P** **04 19 52.8 +0.8**
baz=283,SNR=6.2
R33M Jennings River 92.00 30 P **P** **04 19 52.6 +0.4**
baz=284,SNR=12
STEI Steigen 92.40 339 *e*P **P** **04 19 52.1 -1.4**
STEI IAmb IAmb 04 19 53.4
comp=Z,18nm,1.0s
FAUS Fauske 92.58 339 *e*P **P** **04 19 52.4 -2.1**
FAUS IAmb IAmb 04 19 59.2
comp=Z,20nm,1.0s
DLBC Dease Lake 92.71 31 P **P** **04 19 55.4 0.0**
comp=Z,16nm,1.0s,baz=272,slow=4.6,SNR=20
DLBC pP **pwP** **04 20 32.4 -1.2**
comp=Z,4.5nm,0.9s,baz=194,slow=9.2,SNR=2.5
DLBC LR LR 04 56 17.4
comp=Z,53nm,21.1s,baz=270,slow=32
comp=Z,16nm,1.0s
DLBC Dease Lake 92.71 31 IAmb IAmb 04 19 57.8
comp=Z,22nm,1.1s
DLBC Dease Lake 92.71 31 P **P** **04 19 56.0 +0.6**
baz=285,SNR=13
MLR Muntele Rosu 92.84 316 LR LR 05 07 41.4
comp=Z,154nm,20.2s,baz=67,slow=39
T35M Bob Quinn 92.97 32 P **P** **04 19 57.4 +0.9**
baz=285,SNR=5.1
UZH Uzhgorod 94.61 320 *e*P **P** **04 20 04.9 +0.7**
MBAR Mbarara 94.96 270 LR LR 05 03 33.3
comp=Z,50nm,18.2s,baz=66,slow=36
TAOE Nuku Hiva Isla 94.97 98 *e*LR LR 04 50 56.7
comp=Z,228nm,24.3s
CRVS Cervenica-Dubn 95.08 320 *e*P **P** **04 20 07.0 +0.6**
CRVS pmax pmax
comp=Z,12nm,1.1s
CRVS Cervenica-Dubn 95.08 320 *e*P **P** **04 20 07.0 +0.6**
DAG Danmarks Havn 95.29 352 P **P** **04 20 05.8 -0.9**
DAG Danmarks Havn 95.29 352 *i* P **P** **04 20 04.9 -1.8**
DAG IAmb IAmb 04 20 06.7
comp=Z,73nm,1.0s
BBB Bella Bella 95.46 36 LR LR 05 00 50.3
comp=Z,43nm,19.4s,baz=285,slow=34
QSPA South Pole Qui 95.47 180 LR LR 05 05 43.4
comp=Z,60nm,18.7s,baz=323,slow=37
QSPA South Pole Qui 95.47 180 P **P** **04 20 09.1 +1.2**
QSPA IAmb IAmb 04 20 43.7
comp=Z,19nm,1.2s
IDI Anoyia 95.54 306 LR LR 05 11 20.2
comp=Z,44nm,18.2s,baz=91,slow=40
HFS Hagfors 95.90 332 LR LR 05 06 18.8
comp=Z,134nm,19.8s,baz=65,slow=37
RES Resolute Bay 96.19 10 P **P** **04 20 11.6 +0.7**
comp=Z,15nm,0.9s,baz=350,slow=5.0,SNR=13
RES LR LR 05 03 38.6
comp=Z,35nm,21.6s,baz=330,slow=35
comp=Z,15nm,0.9s
RES Resolute Bay 96.19 10 IAmb IAmb 04 20 12.3
comp=Z,21nm,1.0s
NB2 NORSAR Subarra 96.67 334 P **P** **04 20 11.5 -1.9**
comp=Z,24nm,1.4s,baz=66,slow=4.4
NB2 NORSAR Subarra 96.67 334 P **P** **04 20 12.5 -0.9**
NB2 pmax pmax
comp=Z,1.0nm,0.8s
NB2 NORSAR Subarra 96.67 334 P **P** **04 20 11.5 -1.9**
baz=66,slow=4.4
NOA NORSAR Array B 96.67 334 P **P** **04 20 11.7 -1.7**
comp=Z,5.9nm,0.9s,baz=66,slow=4.6,SNR=13
NOA LR LR 05 08 32.9
comp=Z,127nm,19.1s,baz=60,slow=38
comp=Z,5.9nm,0.9s
DBG Daneborg 97.55 351 *i* P **P** **04 20 15.7 -1.3**
DBG IAmb IAmb 04 20 17.9
comp=Z,23nm,0.9s
JMIC Jan Mayen 97.82 346 LR LR 05 08 35.9
comp=Z,27nm,20.6s,baz=36,slow=38
VRAC Vranov 98.04 321 LR LR 05 09 28.8
comp=Z,45nm,18.1s,baz=71,slow=38
YKA Yellowknife Ar 98.26 24 P Pdif 04 20 21.1 +0.6
comp=Z,10nm,0.8s,baz=298,slow=4.7,SNR=17
YKA pP pwP 04 20 57.4 -0.8
comp=Z,4.7nm,0.9s,baz=304,slow=5.2,SNR=3.8
YKA PKKPbc **PKKPbc** **04 36 50.7 -3.4**
comp=Z,1.4nm,0.5s,baz=121,slow=3.4,SNR=7.1
comp=Z,10nm,0.8s
LSZ Lusaka 98.64 255 LR LR 05 03 04.4
comp=Z,53nm,19.9s,baz=146,slow=34
BRG Berggiesshubel 99.13 323 *e*P **Pdif** **04 20 25.6 +1.0**
BRG Amp 04 20 27.6
comp=Z,4.9nm,0.8s
BRG Berggiesshubel 99.13 323 *e*P **Pdif** **04 20 25.5 +1.0**
BRG pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 99.53 324 *e*P **Pdif** **04 20 26.0 -0.3**
CLL Collm 99.53 324 *e*Pdif **Pdif** **04 20 30.0 +3.7**
CLL *e*Sdif **S** **04 31 46.0 -1.2**
CLL L L 05 08 00.0
comp=Z,100nm,21.3s
GERES GERESS Array B 99.98 322 P **Pdif** **04 20 29.2 +0.6**
comp=Z,0.5nm,0.7s,baz=68,slow=7.4,SNR=4.5
GERES PP **PP** **04 24 36.9 +1.9**
comp=Z,0.3nm,0.6s,baz=72,slow=8.6,SNR=3.9
comp=Z,0.5nm,0.7s
I04A Tendick Farm, 101.69 43 P **Pdif** **04 20 36.5 +0.3**
baz=290
J04D Umpqua Nationa 102.08 44 P **Pdif** **04 20 38.3 +0.2**
baz=290
YBH Yreka Blue Hor 102.16 45 PP **PP** **04 24 49.7 -1.9**
comp=Z,2.3nm,0.6s,baz=71,slow=11,SNR=7.9
L04D Klamath Falls 102.28 45 P **Pdif** **04 20 38.8 -0.3**
baz=289
J05D Fort Rock, OR 102.67 44 P **Pdif** **04 20 40.4 -0.3**
baz=290
NEW Newport 103.44 38 Pdiff **Pdif** **04 20 44.9 +1.1**
comp=Z,1.1nm,0.4s,baz=249,slow=12,SNR=5.2
NEW Newport 103.44 38 P **Pdif** **04 20 44.3 +0.4**
baz=294
NVAR Mina Array Bea 106.46 47 Pdiff **Pdif** **04 20 59.1 +1.3**
comp=Z,1.2nm,0.8s,baz=285,slow=4.8,SNR=6.9
NVAR PKIKP **PKiKP** **04 25 09.4 +1.3**
comp=Z,1.1nm,0.8s,baz=270,slow=1.7,SNR=4.4
NVAR PP **PP** **04 25 23.6 -0.2**
comp=Z,2.3nm,0.8s,baz=279,slow=7.6,SNR=6.0
ELK Elko 107.76 44 PP **PP** **04 25 30.7 -2.5**
comp=Z,3.3nm,1.0s,baz=325,slow=5.6,SNR=5.5
MPMC Manual Prospec 107.92 49 P **PKiKP** **04 25 12.4 +1.5**
baz=291
EDW2 Edwards Air Fo 107.95 51 P **PKiKP** **04 25 12.6 +1.7**
baz=290
BFSC Mount Baldy Ra 108.43 51 P **PKiKP** **04 25 12.8 +0.9**
baz=290
R11A Troy Canyon, C 108.47 47 P **PKiKP** **04 25 13.1 +1.2**
baz=293
GSC Goldstone, Bar 108.71 50 P **PKiKP** **04 25 13.6 +1.3**
baz=291
GMRC Granite Mounta 109.78 50 P **PKiKP** **04 25 16.1 +1.7**
baz=292
IRM Iron Mountain 110.40 51 P **PKiKP** **04 25 16.9 +1.5**
baz=292
PDAR Pinedale Array 110.66 40 PKiKP **PKiKP** **04 25 17.8 +1.9**
comp=Z,0.4nm,0.7s,baz=129,slow=2.1,SNR=3.8
PDAR PP **PP** **04 25 53.6 -0.4**
comp=Z,1.6nm,1.0s,baz=323,slow=2.2,SNR=4.3
PDAR PKKPbc **PKKPbc** **04 36 13.8 -2.7**
comp=Z,0.4nm,0.5s,baz=122,slow=5.6,SNR=5.6
K22A Casper 112.65 39 P **PKiKP** **04 25 19.3 -0.3**
baz=302
WUAZ Wupatki 112.70 48 P **PKiKP** **04 25 21.0 +1.1**
baz=295
O20A White River Ci 112.81 42 P **PKiKP** **04 25 21.0 +0.9**
baz=299
IVI Ivigtut 113.24 357 *i* P **Pdif** **04 21 19.1 -8.0**
RSSD Black Hills 113.37 37 P **PKiKP** **04 25 21.8 +0.8**
baz=304
MVCO Mesa Verde 114.03 45 P **PKiKP** **04 25 23.8 +1.3**
baz=298
W18A Petrified Fore 114.08 48 P **PKiKP** **04 25 23.7 +1.0**
baz=296
ISCO Idaho Springs 114.72 41 P PKPdf 04 25 24.4 +0.5
baz=301
ESDC Sonseca Array 115.37 319 PP **PP** **04 26 26.8 -0.5**
comp=Z,1.7nm,1.1s,baz=44,slow=7.6,SNR=5.0
Q24A Divide 115.46 42 P **PKPdf** **04 25 26.3 +0.9**
baz=301
SDCO Great Sand Dun 115.85 43 **PKPdf** **04 25 25.7 -0.4**
SDCO Great Sand Dun 115.85 43 P **PKiKP** **04 25 27.2 +1.2**
baz=301
ANMO Albuquerque 116.55 46 PKP **PKiKP** **04 25 28.2 +0.8**
comp=Z,3.4nm,0.9s,baz=207,slow=3.1,SNR=14
ANMO PP **PP** **04 26 35.8 -0.1**
comp=Z,1.6nm,1.0s,baz=314,slow=11,SNR=3.6
ANMO SKP **SKPdf** **04 28 51.2 +1.0**
comp=Z,2.4nm,0.8s,baz=194,slow=2.5,SNR=8.2
ANMO Albuquerque 116.55 46 PKPdf **PKPdf** **04 25 26.6 -0.8**
ANMO Albuquerque 116.55 46 *c* PKiKP **PKiKP** **04 25 28.7 +1.3**
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO Albuquerque 116.55 46 P **PKiKP** **04 25 29.1 +1.7**
baz=299,SNR=8.8
ANMO Albuquerque 116.55 46 P **PKiKP** **04 25 28.6 +1.3**
baz=299
Y22A Socorro 116.66 48 P **PKiKP** **04 25 29.4 +1.8**
baz=298,SNR=5.8
121A Cookes Peak, D 116.69 49 P **PKiKP** **04 25 29.4 +1.7**
baz=297
121A Cookes Peak, D 116.69 49 P **PKiKP** **04 25 28.2 +0.5**
baz=297
T25A Trinidad 116.90 43 P **PKiKP** **04 25 28.8 +0.8**
baz=301
EYMN Ely 117.51 27 P **PKiKP** **04 25 28.9 +0.3**
baz=317
ECSD EROS Data Cent 117.86 33 PKPdf **PKiKP** **04 25 29.4 0.0**
ECSD EROS Data Cent 117.86 33 P **PKPdf** **04 25 29.1 -0.3**
baz=311
ECSD EROS Data Cent 117.86 33 P **PKPdf** **04 25 29.0 -0.3**
baz=311
E38A The Farm, Brul 118.46 28 P **PKiKP** **04 25 30.7 +0.2**
baz=317
BGNE Belgrade 118.47 36 P **PKiKP** **04 25 30.8 +0.1**
baz=308
BGNE Belgrade 118.47 36 P **PKPdf** **04 25 30.2 -0.5**
baz=308
SPMN Marine on St. 118.85 30 P **PKPdf** **04 25 31.1 -0.1**
baz=315
SCHQ Schefferville 118.91 8 PKP **PKPdf** **04 25 30.8 -0.3**
comp=Z,1.5nm,0.3s,baz=17,slow=3.8,SNR=6.1
SCHQ PP **PP** **04 26 50.0 -0.8**
comp=Z,7.0nm,0.9s,baz=318,slow=2.6,SNR=3.6
MDT Midelt 119.32 313 PKP **PKiKP** **04 25 33.0 +0.3**
comp=Z,0.8nm,0.7s,baz=308,slow=9.4,SNR=3.9
I37B Waseca 119.39 31 P **PKiKP** **04 25 32.9 +0.5**
baz=314
MSTX Muleshoe 119.68 46 P **PKiKP** **04 25 34.7 +1.3**
baz=301,SNR=6.0
MSTX Muleshoe 119.68 46 P **PKiKP** **04 25 33.5 +0.1**
baz=301
R32A Long Quarter, 119.94 39 P **PKiKP** **04 25 34.5 +0.8**
baz=307,SNR=7.1
COWI Conover 119.96 27 P **PKiKP** **04 25 33.9 +0.5**
baz=319
G40A Rib Lake 120.08 29 P **PKiKP** **04 25 33.8 +0.1**
baz=318
KSU1 Kansas State U 120.83 38 P **PKiKP** **04 25 36.0 +0.7**
baz=309
KSU1 Kansas State U 120.83 38 P **PKiKP** **04 25 35.4 0.0**
baz=309
U32A Winter Ranch, 120.95 41 P **PKiKP** **04 25 36.3 +0.5**
baz=305
TX31 Lajitas Ar. Si 121.29 51 P **PKiKP** **04 25 37.3 +0.6**
baz=298
TXAR Lajitas Array 121.29 51 PKP **PKiKP** **04 25 37.5 +0.8**
comp=Z,3.3nm,0.8s,baz=210,slow=1.1,SNR=32
TXAR PP **PP** **04 27 07.3 -1.3**
comp=Z,1.4nm,1.0s,baz=275,slow=6.2,SNR=4.0
TXAR SKP **SKPdf** **04 28 59.9 +0.6**
comp=Z,1.8nm,0.9s,baz=248,slow=1.3,SNR=5.2
TXAR PKKPbc **PKKPbc** **04 35 36.9 -2.0**
comp=Z,0.4nm,0.8s,baz=145,slow=3.3,SNR=4.5
TXAR SKKPbc **SKKPbc** **04 39 14.2 +0.1**
comp=Z,0.9nm,1.1s,baz=164,slow=5.1,SNR=3.9
TOA0 Torodi Ar. Sit 121.32 289 PKPdf **PKiKP** **04 25 37.2 +0.2**
TORD Torodi Ar. Bea 121.32 289 PKP **PKPdf** **04 25 36.9 +0.1**
comp=Z,3.6nm,0.7s,baz=69,slow=2.2,SNR=56
TORD SKP **SKPdf** **04 28 58.5 -1.1**
comp=Z,6.8nm,0.9s,baz=34,slow=1.8,SNR=10
TORD PKKPbc **PKKPab** **04 35 39.9 +0.2**
comp=Z,1.2nm,0.8s,baz=261,slow=3.2,SNR=5.9
TORD SKKPbc **SKKPbc** **04 39 15.8 +2.2**
comp=Z,2.0nm,0.9s,baz=284,slow=3.0,SNR=7.8
I42A Dreger Farm, 121.72 29 P **PKPdf** **04 25 36.7 -0.1**
baz=318
JFWS Jewell Farm 121.79 30 P **PKPdf** **04 25 36.7 -0.2**
baz=317
JFWS Jewell Farm 121.79 30 P **PKPdf** **04 25 36.7 -0.2**
baz=317
H43A Windswept, Lux 121.82 28 P **PKiKP** **04 25 37.8 +0.6**
baz=320
E46A Sault Ste Mari 121.83 24 P **PKPdf** **04 25 36.9 -0.1**
baz=324
L40A Anamosa 121.90 32 P **PKPdf** **04 25 36.8 -0.4**
baz=315
WMOK Wichita Mounta 122.04 43 P **PKiKP** **04 25 38.0 +0.1**
baz=305
WMOK Wichita Mounta 122.04 43 P **PKiKP** **04 25 37.9 +0.1**
baz=305
T35B Sooner Cattle 122.24 40 P **PKiKP** **04 25 38.7 +0.4**
baz=308
P38A Dawn 122.31 35 P **PKPdf** **04 25 37.9 -0.1**
baz=312
ABTX Abilene, Hawle 122.61 45 P **PKiKP** **04 25 39.3 +0.2**
baz=303
K43A Burlington 122.89 29 P **PKiKP** **04 25 39.5 +0.2**
baz=318
P40A Paris 123.22 34 P **PKiKP** **04 25 40.0 0.0**
baz=313
TUL1 Leonard 123.31 40 P **PKiKP** **04 25 40.8 +0.5**
baz=308
L44A Lake County Fo 123.49 30 P **PKiKP** **04 25 40.4 -0.1**
baz=319
JCT Junction City 123.64 48 P **PKiKP** **04 25 41.6 +0.4**
baz=302
JCT Junction City 123.64 48 P **PKPdf** **04 25 41.0 +0.1**
baz=302,SNR=18
S39A Bolivar 123.71 37 P **PKiKP** **04 25 41.2 +0.2**
baz=311,SNR=20
U38A Gravette 123.87 39 P **PKPdf** **04 25 41.2 +0.1**
baz=310
R40A Maddies Statio 123.93 36 P **PKiKP** **04 25 41.7 +0.2**
baz=312,SNR=16
HDIL Hopedale 123.99 32 P **PKiKP** **04 25 41.6 +0.1**
baz=317
HDIL Hopedale 123.99 32 P **PKPdf** **04 25 40.9 -0.3**
baz=317
M44A Midewin, Midew 124.02 30 P **PKPdf** **04 25 41.4 +0.2**
baz=318
J47A Sumner 124.12 27 P **PKPdf** **04 25 41.5 0.0**
baz=322
J47A P **PKPdf** **04 25 41.5 0.0**
baz=322
HHAR Hobbs 124.25 39 P **PKPdf** **04 25 41.7 -0.2**
baz=310
X37A Clayton 124.39 41 P **PKiKP** **04 25 42.7 +0.1**
baz=308
WHTX Lake Whitney, 124.50 45 P **PKPdf** **04 25 42.7 +0.2**
baz=304
P43A Skaggs, Pawnee 124.53 33 P **PKiKP** **04 25 42.8 +0.2**
baz=316
CCM Cathedral Cave 124.68 35 PKPdf **PKiKP** **04 25 43.0 0.0**
CCM Cathedral Cave 124.68 35 PKIKP **PKiKP** **04 25 43.0 0.0**
CCM Cathedral Cave 124.68 35 P **PKiKP** **04 25 43.3 +0.2**
baz=313,SNR=5.8
CCM Cathedral Cave 124.68 35 P **PKiKP** **04 25 43.2 +0.2**
baz=313
833A Chaparral WMA, 125.05 50 P **PKiKP** **04 25 45.2 +1.2**
baz=301
833A Chaparral WMA, 125.05 50 P **PKiKP** **04 25 44.0 0.0**
baz=301
435B Jarrell 125.09 46 P **PKiKP** **04 25 44.4 +0.4**
baz=304
SADO Sadowa 125.16 21 PKP **PKPdf** **04 25 43.5 +0.1**
comp=Z,13nm,1.1s,baz=20,slow=1.6,SNR=6.1
FVM French Village 125.20 35 P **PKiKP** **04 25 44.0 -0.1**
baz=314
L48A N Adams 125.32 27 P **PKPdf** **04 25 43.5 -0.3**
baz=322
L48A P **PKPdf** **04 25 43.5 -0.3**
baz=322
N47A Urbana 125.56 29 P **PKPdf** **04 25 44.3 0.0**
baz=320
N47A P **PKPdf** **04 25 44.3 0.0**
baz=320
MIAR Mount Ida 125.58 40 P **PKiKP** **04 25 46.1 +1.2**
baz=309,SNR=17
MIAR Mount Ida 125.58 40 P **PKiKP** **04 25 46.1 +1.2**
baz=309,SNR=17
OLIL Olney 125.95 32 P **PKiKP** **04 25 46.1 +0.6**
baz=317,SNR=8.0
S44A Carbondale 126.06 34 P **PKiKP** **04 25 46.1 +0.3**
baz=315
O48B Farmland 126.30 29 P **PKPdf** **04 25 45.6 -0.1**
baz=321
O48B Farmland 126.30 29 P **PKiKP** **04 25 46.1 -0.1**
baz=321,SNR=6.5
BMNY Brushton-Moira 126.64 18 P **PKiKP** **04 25 47.3 +0.6**
baz=335,SNR=6.2
O49A Covington 126.75 29 P **PKiKP** **04 25 47.5 +0.4**
baz=322,SNR=9.2
O49A P **PKiKP** **04 25 47.5 +0.4**
baz=322,SNR=9.2
P48A Milroy 126.78 30 P **PKiKP** **04 25 47.0 -0.1**
baz=320,SNR=6.3
P48A P **PKiKP** **04 25 47.0 -0.1**
baz=320,SNR=6.3
LONY Lake Ozonia 126.82 18 P **PKPdf** **04 25 46.7 +0.2**
baz=334
Z41A Richland Creek 126.89 41 P **PKPdf** **04 25 46.7 -0.3**
baz=309
FRNY Flat Rock 126.92 17 P **PKiKP** **04 25 47.0 -0.2**
baz=336
WCNY West Carthage 127.05 19 P **PKiKP** **04 25 47.5 0.0**
baz=333
P49A Miami Univ. Ec 127.07 29 P **PKiKP** **04 25 47.7 0.0**
baz=321,SNR=5.5
P49A Miami Univ. Ec 127.07 29 P **PKiKP** **04 25 47.7 0.0**
baz=321,SNR=5.5
ACSO Alum Creek Sta 127.35 27 P **PKiKP** **04 25 48.5 +0.3**
baz=323
ACSO Alum Creek Sta 127.35 27 P **PKiKP** **04 25 48.2 0.0**
baz=323
M53A WI Miller and 127.37 25 P **PKPdf** **04 25 47.4 -0.4**
baz=326
NCB Newcomb 127.52 18 P **PKiKP** **04 25 49.0 +0.5**
baz=335,SNR=5.6
PKME Peaks-Kenny Pk 127.64 13 P **PKPdf** **04 25 48.3 +0.2**
baz=341
J58A Remsen 127.73 19 P **PKiKP** **04 25 49.5 +0.6**
baz=333,SNR=8.5
J58A P **PKiKP** **04 25 49.5 +0.6**
baz=333,SNR=8.5
N53A Lisbon 127.83 25 P **PKiKP** **04 25 49.6 +0.4**
baz=326
N53A P **PKiKP** **04 25 49.6 +0.4**
baz=326
K57A Scipio Center 127.87 21 P **PKiKP** **04 25 49.5 +0.2**
baz=332,SNR=8.0
J59A Piesco 127.89 19 P **PKiKP** **04 25 49.6 +0.3**
baz=334,SNR=10
J59A P **PKiKP** **04 25 49.6 +0.3**
baz=334,SNR=10
MCVT Middlebury Col 127.90 17 P **PKiKP** **04 25 49.8 +0.6**
baz=336
P51A Williamsport 127.91 28 P **PKiKP** **04 25 49.2 -0.1**
baz=323
P51A P **PKiKP** **04 25 49.2 -0.1**
baz=323
LBNH Lisbon 127.94 16 P **PKiKP** **04 25 49.5 +0.2**
baz=338
O52A Adamsville 127.96 27 P **PKiKP** **04 25 49.5 +0.1**
baz=324,SNR=5.7
O52A P **PKiKP** **04 25 49.5 +0.1**
baz=324,SNR=5.7
WVT Waverly 127.98 35 PKPdf **PKPdf** **04 25 48.9 -0.1**
WVT Waverly 127.98 35 PKIKP **PKPdf** **04 25 48.9 -0.1**
WVT Waverly 127.98 35 P **PKiKP** **04 25 50.2 +0.6**
baz=316,SNR=6.5
WVT Waverly 127.98 35 P **PKPdf** **04 25 49.2 +0.2**
baz=316
L56A Greenwood 128.01 22 P **PKiKP** **04 25 49.7 +0.1**
baz=330,SNR=6.2
L56A P **PKiKP** **04 25 49.7 +0.1**
baz=330,SNR=6.2
G65A Princeton 128.08 12 P **PKiKP** **04 25 49.5 0.0**
baz=343
G65A P **PKiKP** **04 25 49.5 0.0**
baz=343
O53A New Philadelph 128.13 26 P **PKPdf** **04 25 49.2 0.0**
baz=325
Q51A Peebles 128.13 29 P **PKiKP** **04 25 50.2 +0.4**
baz=322,SNR=5.1
Q51A P **PKiKP** **04 25 50.2 +0.4**
baz=322,SNR=5.1
OXF Oxford 128.19 37 P **PKPdf** **04 25 49.4 -0.1**
baz=313
P52A Corning 128.22 27 P **PKPdf** **04 25 49.4 0.0**
baz=324
WVL Waterville 128.22 14 P **PKiKP** **04 25 50.2 +0.3**
baz=340
R50A Paris 128.24 30 P **PKPdf** **04 25 49.8 +0.3**
baz=321
R50A P **PKPdf** **04 25 49.8 +0.3**
baz=321
PSDB Penn State Uni 128.42 23 P **PKiKP** **04 25 50.7 +0.3**
baz=328
UPAO U. Pittsburgh 128.44 25 P **PKiKP** **04 25 50.4 0.0**
baz=327
BINY Binghamton 128.52 21 P **PKiKP** **04 25 50.4 -0.2**
baz=332
O54A Avella 128.54 25 P **PKiKP** **04 25 51.6 +1.0**
baz=326,SNR=7.5
O54A P **PKiKP** **04 25 51.6 +1.0**
baz=326,SNR=7.5
P53A Whipple 128.67 27 P **PKiKP** **04 25 51.8 +0.9**
baz=325,SNR=7.7
P53A P **PKiKP** **04 25 51.8 +0.9**
baz=325,SNR=7.7
U49A Red Boiling Sp 128.82 33 P **PKiKP** **04 25 51.8 +0.4**
baz=318,SNR=7.9
M57A Sunshine Farm, 128.86 22 P **PKiKP** **04 25 52.1 +0.9**
baz=330,SNR=7.3
M57A P **PKiKP** **04 25 52.1 +0.9**
baz=330,SNR=7.3
T50A Nancy 128.94 31 P **PKiKP** **04 25 51.4 -0.2**
baz=320
T50A P **PKiKP** **04 25 51.4 -0.2**
baz=320
S51A Beattyville 129.10 30 P **PKiKP** **04 25 52.4 +0.6**
baz=321,SNR=6.6
S51A P **PKiKP** **04 25 52.4 +0.6**
baz=321,SNR=6.6
DBIC Dimbokro 129.14 283 SKPbc SKPab 04 28 59.1 -0.5
comp=Z,28nm,0.8s,baz=72,slow=4.2,SNR=17
SSPA Standing Stone 129.18 23 PKPdf **PKPdf** **04 25 51.4 +0.2**
SSPA Standing Stone 129.18 23 P **PKiKP** **04 25 52.6 +0.7**
baz=329,SNR=8.0
SSPA Standing Stone 129.18 23 P **PKiKP** **04 25 51.9 0.0**
baz=329
Q54A Coxs Mills 129.33 27 P **PKiKP** **04 25 52.3 +0.1**
baz=325
Q54A P **PKiKP** **04 25 52.3 +0.1**
baz=325
N58A Sunbury 129.45 22 P **PKiKP** **04 25 53.0 +0.6**
baz=331,SNR=6.7
N58A P **PKiKP** **04 25 53.0 +0.6**
baz=331,SNR=6.7
USHA Ushuaia 129.59 169 SKPbc SKPbc 04 29 00.9 0.0
comp=Z,24nm,0.9s,baz=228,slow=1.9,SNR=4.9
HRV Adam Dziewonsk 129.64 17 P **PKiKP** **04 25 52.8 0.0**
baz=338
TZTN Tazewell 129.97 31 P **PKPdf** **04 25 52.7 -0.1**
baz=321
P57A Homestead Farm 130.12 24 P **PKiKP** **04 25 54.4 +0.6**
baz=328
P57A P **PKiKP** **04 25 54.4 +0.6**

	baz=328							
V51A	**Loudon**	**130.12**	**32**	P		**PKiKP**	**04 25 54.9**	**+1.0**
	baz=319							
PAL	**Palisades**	**130.29**	**19**	P		**PKPdf**	**04 25 53.5**	**+0.3**
	baz=334							
TKL	**Tuckaleechee C**	**130.53**	**32**	PKP		**PKiKP**	**04 25 54.4**	**-0.3**
	comp=Z,7.3nm,0.6s,baz=146,slow=5.1,SNR=17							
TKL				SKPbc		**SKPab**	**04 29 05.4**	**+0.4**
	comp=Z,52nm,0.9s,baz=171,slow=0.8,SNR=33							
TKL	**Tuckaleechee C**	**130.53**	**32**	P		**PKiKP**	**04 25 54.5**	**-0.3**
	baz=320							
PANJ	**Princeton**	**130.58**	**20**	P		**PKiKP**	**04 25 55.7**	**+1.0**
	baz=333							
LRAL	**Lakeview Retre**	**130.66**	**37**	P		**PKiKP**	**04 25 54.9**	**-0.1**
	baz=315							
W52A	**Murphy**	**130.88**	**32**	P		**PKiKP**	**04 25 55.7**	**+0.2**
	baz=320							
BLA	**Blacksburg**	**130.96**	**28**	P		**PKiKP**	**04 25 55.5**	**-0.2**
	baz=325							
CBN	**Corbin Frederi**	**131.47**	**24**	P		**PKiKP**	**04 25 56.6**	**+0.1**
	baz=329							
BRAL	**Brewton**	**131.92**	**39**	P		**PKiKP**	**04 25 57.8**	**+0.1**
	baz=314							
KMSC	**Kings Mountain**	**132.19**	**30**	P		**PKPdf**	**04 25 57.1**	**+0.1**
	baz=322							
GOGA	**Godfrey**	**132.40**	**33**	P		**PKiKP**	**04 25 58.2**	**-0.4**
	baz=319							
TIGA	**Tifton**	**133.80**	**35**	P		**PKPdf**	**04 26 00.8**	**+0.7**
	baz=318							
PLCA	**Paso Flores**	**142.10**	**160**	PKhKP		PKPpre	04 26 10.0	
	comp=Z,3.0nm,0.6s,baz=218,slow=5.1,SNR=19							
PLCA				SKPbc		**SKPbc**	**04 29 40.7**	**+0.5**
	comp=Z,11nm,0.9s,baz=214,slow=4.2,SNR=12							
BOAB	**BOACO BROADBAN**	**144.08**	**60**			**PKPdf**	**04 26 18.9**	**-0.4**
TRQA	**Tornquist**	**146.93**	**169**	PKPbc		**PKPbc**	**04 26 26.4**	**+0.7**
TRQA	**Tornquist**	**146.93**	**169**	PKP2		**PKPbc**	**04 26 26.4**	**+0.7**
BOOT	**Tunca**	**147.40**	**154**	PKPdf		**PKPdf**	**04 26 25.3**	**+0.8**
SJG	**San Juan**	**153.73**	**26**	PKPbc		**PKPbc**	**04 26 42.6**	**0.0**
	comp=Z,6.7nm,0.6s,baz=211,slow=12,SNR=2.3							
SJG				PKPab		**PKPab**	**04 26 55.9**	**+0.2**
	comp=Z,19nm,0.7s,baz=52,slow=4.2,SNR=6.2							
PDPR	**Patillas Dam,**	**153.87**	**26**			**PKPbc**	**04 26 42.8**	**-0.1**
PLTB	**Pedras Altas**	**153.94**	**181**			**PKPbc**	**04 26 42.7**	**-0.1**
OTAV	**Otavalo**	**155.24**	**77**			**PKPdf**	**04 26 45.2**	**+7.7**
OTAV	**Otavalo**	**155.24**	**77**	PKIKP		**PKPdf**	**04 26 45.2**	**+7.7**
ATAH	**Atahualpa**	**156.04**	**95**	PKP		**PKPdf**	**04 26 39.6**	**+1.1**
	comp=Z,5.6nm,1.0s,baz=202,slow=0.5,SNR=5.2							
ATAH				PKPab		**PKPab**	**04 27 09.5**	**+2.9**
	comp=Z,11nm,1.0s,baz=312,slow=1.4,SNR=4.9							
ROSC	**El Rosal**	**157.52**	**63**	PKP		**PKPdf**	**04 26 40.4**	**0.0**
	comp=Z,7.5nm,0.4s,baz=196,slow=1.7,SNR=5.3							
ROSC				PKPab		**pPKPdf**	**04 27 15.0**	**-1.4**
	comp=Z,5.8nm,0.4s,baz=127,slow=15,SNR=4.1							
SDV	**Santo Domingo**	**158.31**	**49**	PKP		**PKPdf**	**04 26 42.0**	**+0.9**
	comp=Z,15nm,0.5s,baz=299,slow=4.0,SNR=5.3							
SDV				PKPab		**PKPab**	**04 27 16.1**	**+0.2**
	comp=Z,22nm,0.8s,baz=344,slow=2.7,SNR=4.4							
CPUP	**Villa Florida**	**159.17**	**172**	PKP		**PKPdf**	**04 26 42.5**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=82,slow=4.7,SNR=3.3							
CPUP				PKPab		**PKPab**	**04 27 19.2**	**+0.4**
	comp=Z,11nm,0.9s,baz=191,slow=4.3,SNR=16							
LPAZ	**La Paz**	**162.79**	**129**	PKP		**PKPdf**	**04 26 48.0**	**+1.6**
	comp=Z,8.3nm,1.2s,baz=270,slow=4.6,SNR=9.2							
LPAZ				PKPab		**sPKPdf**	**04 27 38.2**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=207,slow=7.6,SNR=5.0							
SIV	**San Ignacio**	**167.72**	**148**	PKP		**PKPdf**	**04 26 49.3**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=185,slow=1.6,SNR=8.8							
SIV				PKPab		**PKPab**	**04 27 57.8**	**+1.1**
	comp=Z,4.8nm,0.7s,baz=202,slow=3.6,SNR=11							
BDFB	**Brasilia**	**168.23**	**211**	PKPab		**PKPab**	**04 27 59.8**	**+0.7**
	comp=Z,7.1nm,0.7s,baz=145,slow=3.9,SNR=9.1							
BDFB	**Brasilia**	**168.23**	**211**	PKPab		**PKPab**	**04 28 00.0**	**+0.9**
MDP	**Montagnes des**	**169.26**	**351**	PKPab		**PKPab**	**04 28 03.5**	**+0.1**
	comp=Z,28nm,0.9s,baz=14,slow=4.6,SNR=9.6							

WEL ***10*** *04:07:04.9±0.9, 37°S±5°×17°7E±°, h215km±8km, M3.6/44, MLv3.6/44, Error ellipse: s-maj=0.0km s-min=0.0km az=53.3*
NOU ***10*** *04:07:05.4, 37°.26S×176°.77E, h227km, mb3.9/8, North Island, New Zealand*
ISC 10 04:06:60.0±2.7, 37°.1S±0°.1×177°.0E±0°.1, h262km±13km, n140, σ1s56/148, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.85**	**207**	P	**Pn**	**04 07 36.3**	**+0.8**
HAZ	**Te Kaha**	**0.90**	**139**	P	**Pn**	**04 07 35.7**	**0.0**
MARZ	**Manawahe**	**0.95**	**198**	P	**Pn**	**04 07 37.3**	**+1.4**
RUGZ	**Raukumara Rang**	**1.02**	**150**	P	**Pn**	**04 07 36.3**	**-0.2**
KUZ	**Kuaotunu**	**1.11**	**287**	P	**Pn**	**04 07 36.2**	**-0.6**
MXZ	**Matakaoa Point**	**1.12**	**116**	P	**Pn**	**04 07 37.1**	**+0.3**
PKGZ	**Pakihiroa**	**1.15**	**135**	P	**Pn**	**04 07 38.1**	**+0.9**
URZ	**Urewera**	**1.18**	**177**	P	**Pn**	**04 07 37.8**	**+0.6**
URZ	**Urewera**	**1.18**	**177**	P	**Pn**	**04 07 37.9**	**+0.7**
TARZ	**Mount Tarawera**	**1.23**	**200**	P	**Pn**	**04 07 39.3**	**+1.6**
MWZ	**Matawai**	**1.31**	**163**	P	**Pn**	**04 07 39.2**	**+1.1**
WMGZ	**Waiomatatini S**	**1.32**	**124**	P	**Pn**	**04 07 39.1**	**+1.0**
RRRZ	**Republican Roa**	**1.32**	**198**	P	**Pn**	**04 07 39.4**	**+1.3**
TWGZ	**Tauwhareparae**	**1.32**	**146**	P	**Pn**	**04 07 39.9**	**+1.7**
TWGZ				S	**S**	**04 08 07.6**	**-0.8**
HSRZ	**Hossack Road**	**1.38**	**207**	P	**Pn**	**04 07 41.3**	**+2.8**
PUZ	**Puketiti**	**1.38**	**136**	P	**Pn**	**04 07 39.6**	**+1.1**
PUZ				S	**S**	**04 08 05.8**	**-3.3**
TOZ	**Tahuroa Road**	**1.39**	**242**	P	**Pn**	**04 07 39.8**	**+1.2**
MUGZ	**Murupara**	**1.41**	**189**	P	**Pn**	**04 07 39.6**	**+0.9**
HRRZ	**Handcock Road**	**1.44**	**204**	P	**Pn**	**04 07 40.6**	**+1.6**
RAGZ	**Rawiri**	**1.44**	**168**	P	**Pn**	**04 07 40.3**	**+1.3**
TKGZ	**Te Karaka**	**1.50**	**155**	P	**Pn**	**04 07 40.8**	**+1.5**
TKGZ				S	**S**	**04 08 08.8**	**-1.7**
MKAZ	**Moumakai**	**1.50**	**269**	P	**Pn**	**04 07 39.9**	**+0.5**
PRRZ	**Plateau Road**	**1.51**	**200**	P	**Pn**	**04 07 40.9**	**+1.5**
GRZ	**Great Barrier**	**1.52**	**303**	P	**Pn**	**04 07 38.6**	**-0.9**
ALRZ	**Allen Road**	**1.58**	**200**	P	**Pn**	**04 07 41.6**	**+1.6**
CNGZ	**Carnagh Statio**	**1.68**	**147**	P	**Pn**	**04 07 42.9**	**+2.2**
SNGZ	**Shannon Statio**	**1.71**	**172**	P	**Pn**	**04 07 42.6**	**+1.6**
SNGZ				S	**S**	**04 08 11.9**	**-1.6**
RIGZ	**Rimuhau**	**1.72**	**161**	P	**Pn**	**04 07 43.0**	**+2.0**
RIGZ				S	**S**	**04 08 12.3**	**-1.3**
TLZ	**Tolley Road**	**1.73**	**223**	P	**Pn**	**04 07 43.4**	**+2.3**
MBAZ	**Motutapu North**	**1.75**	**280**	P	**Pn**	**04 07 41.7**	**+0.5**
MTHZ	**Maungataniwha**	**1.78**	**185**	P	**Pn**	**04 07 42.8**	**+1.2**
MTHZ				S	**S**	**04 08 12.7**	**-1.7**
MRHZ	**Matea Rd**	**1.82**	**196**	P	**Pn**	**04 07 43.2**	**+1.4**
RAHZ	**Arahi**	**1.83**	**179**	P	**Pn**	**04 07 43.8**	**+1.8**
RAHZ				S	**S**	**04 08 14.3**	**-0.9**
ABAZ	**Army Bay**	**1.84**	**284**	P	**Pn**	**04 07 42.5**	**+0.5**
AWAZ	**Awhitu Peninsu**	**1.92**	**270**	P	**Pn**	**04 07 43.3**	**+0.6**
WTAZ	**Waiatarua**	**1.98**	**270**	P	**Pn**	**04 07 43.9**	**+0.7**
WHHZ	**Waihua**	**2.00**	**176**	P	**Pn**	**04 07 45.3**	**+2.0**
KNZ	**Kokohu**	**2.00**	**166**	P	**Pn**	**04 07 44.9**	**+1.5**
KNZ				S	**S**	**04 08 15.1**	**-2.7**
NMHZ	**Naumai**	**2.02**	**185**	P	**Pn**	**04 07 45.6**	**+2.0**
RATZ	**Rangitukua**	**2.04**	**209**	P	**Pn**	**04 07 45.7**	**+1.9**
RITZ	**Rihia Road**	**2.11**	**206**	P	**Pn**	**04 07 46.3**	**+1.9**
BKZ	**Black Stump Fm**	**2.13**	**192**	P	**Pn**	**04 07 45.7**	**+1.1**
BKZ	**Black Stump Fm**	**2.13**	**192**	P	**Pn**	**04 07 45.8**	**+1.3**
KATZ	**Kakaramea**	**2.17**	**209**	P	**Pn**	**04 07 47.7**	**+2.7**
MHGZ	**Mahia Peninsul**	**2.18**	**162**	P	**Pn**	**04 07 47.3**	**+2.3**
ARHZ	**Aropaoanui**	**2.18**	**181**	P	**Pn**	**04 07 46.9**	**+2.0**
HIZ	**Hauiti**	**2.25**	**230**	P	**Pn**	**04 07 48.5**	**+2.9**
NTVZ	**North Tongarir**	**2.28**	**208**	P	**Pn**	**04 07 48.1**	**+2.0**
TMVZ	**Te Maari**	**2.29**	**207**	P	**Pn**	**04 07 47.9**	**+1.8**
KRVZ	**Karewarewa**	**2.29**	**208**	P	**Pn**	**04 07 48.0**	**+1.9**
ETVZ	**East Tongariro**	**2.30**	**207**	P	**Pn**	**04 07 48.1**	**+1.8**
WTVZ	**West Tongariro**	**2.33**	**209**	P	**Pn**	**04 07 48.3**	**+1.8**
NNVZ	**North Ngauruho**	**2.34**	**208**	P	**Pn**	**04 07 48.6**	**+2.0**
OTVZ	**Oturere**	**2.34**	**207**	P	**Pn**	**04 07 48.6**	**+1.9**
TWVZ	**Taurewa**	**2.35**	**212**	P	**Pn**	**04 07 48.5**	**+1.8**
SNVZ	**South Ngauruho**	**2.38**	**207**	P	**Pn**	**04 07 48.9**	**+1.9**
NGZ	**Ngauruhoe**	**2.38**	**208**	P	**Pn**	**04 07 49.3**	**+2.3**
KWHZ	**Kaweka Forest**	**2.39**	**192**	P	**Pn**	**04 07 48.7**	**+1.7**
WCZ	**Waipu Caves**	**2.45**	**297**	P	**Pn**	**04 07 47.5**	**-0.1**
FWVZ	**Far West T-bar**	**2.47**	**208**	P	**Pn**	**04 07 49.9**	**+1.9**
WHVZ	**Whangaehu Hut**	**2.48**	**207**	P	**Pn**	**04 07 49.7**	**+1.6**
DRZ	**Dome Shelter**	**2.48**	**208**	P	**Pn**	**04 07 50.3**	**+2.2**
BHHZ	**Black Hill Sta**	**2.52**	**197**	P	**Pn**	**04 07 49.6**	**+1.3**
MOVZ	**Moawhango**	**2.53**	**203**	P	**Pn**	**04 07 49.6**	**+1.1**
CKHZ	**Cape Kidnapper**	**2.57**	**179**	P	**Pn**	**04 07 50.7**	**+2.0**
PKVZ	**Pokaka**	**2.58**	**211**	P	**Pn**	**04 07 50.8**	**+1.9**
MTVZ	**Mangateitei**	**2.61**	**208**	P	**Pn**	**04 07 51.0**	**+1.8**
KAHZ	**Kahuranaki**	**2.71**	**183**	P	**Pn**	**04 07 52.1**	**+1.9**
VRZ	**Vera Road**	**2.72**	**221**	P	**Pn**	**04 07 53.0**	**+2.9**
PNHZ	**Pukenui**	**2.90**	**193**	P	**Pn**	**04 07 53.4**	**+1.2**
PXZ	**Pawanui**	**2.95**	**183**	P	**Pn**	**04 07 54.0**	**+1.5**
WPHZ	**Waipukurau**	**3.02**	**189**	P	**Pn**	**04 07 54.6**	**+1.4**
TSZ	**Takapari Road**	**3.09**	**196**	P	**Pn**	**04 07 55.5**	**+1.4**
WAZ	**Wanganui**	**3.12**	**211**	P	**Pn**	**04 07 56.4**	**+2.1**
LREZ	**Lake Rotokare**	**3.15**	**220**	P	**Pn**	**04 07 57.8**	**+3.1**
NEZ	**North Egmont**	**3.19**	**226**	P	**Pn**	**04 07 59.4**	**+4.2**
PRHZ	**Porangahau**	**3.20**	**186**	P	**Pn**	**04 07 56.7**	**+1.5**
PKE	**Pukeiti**	**3.20**	**228**	P	**Pn**	**04 07 58.9**	**+3.6**
KHEZ	**Kahui Hut**	**3.25**	**226**	P	**Pn**	**04 07 59.6**	**+3.7**
DVHZ	**Dannevirke**	**3.29**	**192**	P	**Pn**	**04 07 57.2**	**+1.0**
OUZ	**Omahuta**	**3.35**	**303**	P	**Pn**	**04 07 57.4**	**+0.5**
OHWZ	**Ohakea**	**3.40**	**203**	P	**Pn**	**04 07 59.5**	**+2.1**
ANWZ	**Angora Road**	**3.40**	**187**	P	**Pn**	**04 07 59.1**	**+1.6**
POWZ	**Post Office Ro**	**3.45**	**196**	P	**Pn**	**04 07 59.2**	**+1.2**
PRWZ	**Pori Road**	**3.57**	**193**	P	**Pn**	**04 08 00.9**	**+1.6**
BFZ	**Birch Farm**	**3.65**	**190**	P	**Pn**	**04 08 01.3**	**+1.1**
BFZ	**Birch Farm**	**3.65**	**190**	P	**Pn**	**04 08 01.7**	**+1.5**
MRZ	**Mangatainoka R**	**3.75**	**197**	P	**Pn**	**04 08 02.2**	**+0.9**
TIWZ	**Tintock**	**3.80**	**193**	P	**Pn**	**04 08 01.6**	**-0.3**
CPWZ	**Castlepoint**	**3.88**	**189**	P	**Pn**	**04 08 04.3**	**+1.5**
HOWZ	**Holdsworth Sta**	**3.99**	**197**	P	**Pn**	**04 08 04.7**	**+0.6**
OGWZ	**Otaki Gorge**	**4.00**	**201**	P	**Pn**	**04 08 05.2**	**+0.9**
TMWZ	**Te Maipa**	**4.12**	**192**	P	**Pn**	**04 08 06.6**	**+1.0**
KIW	**Kapiti Island**	**4.12**	**203**	P	**Pn**	**04 08 06.3**	**+0.7**
MTW	**Mount Morrison**	**4.24**	**196**	P	**Pn**	**04 08 07.5**	**+0.4**
CAW	**Cannon Point**	**4.30**	**200**	P	**Pn**	**04 08 08.3**	**+0.5**
TRWZ	**Traveller**	**4.44**	**193**	P	**Pn**	**04 08 10.1**	**+0.8**
DUWZ	**D'Urville Isla**	**4.44**	**212**	P	**Pn**	**04 08 10.0**	**+0.7**
PAWZ	**Paruwai Farm**	**4.47**	**196**	P	**Pn**	**04 08 10.1**	**+0.3**
MSWZ	**Moikau Station**	**4.55**	**197**	P	**Pn**	**04 08 11.0**	**+0.4**
WELZ	**Wellington**	**4.55**	**202**	P	**Pn**	**04 08 11.4**	**+0.7**
SNZO	**South Karori**	**4.60**	**203**	P	**Pn**	**04 08 12.0**	**+0.8**
TCW	**Tory Channel**	**4.65**	**207**	P	**Pn**	**04 08 12.5**	**+0.7**
PLWZ	**Palliser**	**4.69**	**197**	P	**Pn**	**04 08 12.7**	**+0.4**
TUWZ	**Tuamarina**	**4.96**	**208**	P	**Pn**	**04 08 16.2**	**+0.7**
NNZ	**Nelson**	**5.02**	**213**	P	**Pn**	**04 08 16.5**	**+0.3**
TKNZ	**Takaka Hill**	**5.07**	**218**	P	**Pn**	**04 08 17.1**	**+0.2**
QRZ	**Quartz Range**	**5.13**	**222**	P	**Pn**	**04 08 17.9**	**+0.3**
QRZ	**Quartz Range**	**5.13**	**222**	P	**Pn**	**04 08 18.7**	**+1.1**
CMWZ	**Cape Campbell**	**5.15**	**204**	P	**Pn**	**04 08 19.6**	**+1.7**
BSWZ	**Blackbirch Sta**	**5.24**	**207**	P	**Pn**	**04 08 19.9**	**+1.0**
MRNZ	**Matariki Terra**	**5.45**	**216**	P	**Pn**	**04 08 21.7**	**+0.3**
THZ	**Tophouse**	**5.67**	**213**	P	**Pn**	**04 08 25.0**	**+0.9**
KHZ	**Kahutara**	**5.97**	**206**	P	**Pn**	**04 08 28.9**	**+1.0**
KHZ	**Kahutara**	**5.97**	**206**	P	**Pn**	**04 08 29.1**	**+1.3**
DSZ	**Denniston Nort**	**6.17**	**219**	P	**Pn**	**04 08 30.3**	**-0.1**
GVZ	**Greta Valley S**	**6.63**	**206**	P	**Pn**	**04 08 36.8**	**+0.8**
LTZ	**Lake Taylor**	**6.77**	**211**	P	**Pn**	**04 08 38.1**	**+0.3**
AMCZ	**Amberley**	**6.95**	**208**	P	**Pn**	**04 08 40.8**	**+0.8**
INZ	**Inchbonnie**	**7.09**	**216**	P	**Pn**	**04 08 43.5**	**+1.7**
OKCZ	**Okains Bay**	**7.30**	**203**	P	**Pn**	**04 08 45.6**	**+1.2**
OXZ	**Oxford**	**7.32**	**210**	P	**Pn**	**04 08 44.8**	**+0.2**
MQZ	**McQueen's Vall**	**7.42**	**205**	P	**Pn**	**04 08 45.8**	**0.0**
AKCZ	**Akaroa Harbour**	**7.48**	**204**	P	**Pn**	**04 08 47.6**	**+1.0**
RACZ	**Rakaia**	**7.62**	**208**	P	**Pn**	**04 08 48.5**	**+0.1**
WVZ	**Waitaha Valley**	**7.69**	**217**	P	**Pn**	**04 08 50.3**	**+1.1**
WACZ	**Wakanui South**	**7.92**	**208**	P	**Pn**	**04 08 53.0**	**+1.0**
RPZ	**Rata Peaks**	**8.05**	**213**	P	**Pn**	**04 08 54.7**	**+0.9**
RPZ	**Rata Peaks**	**8.05**	**213**	P	**Pn**	**04 08 55.7**	**+1.9**
GCSZ	**Gaunt Creek Bo**	**8.07**	**217**	P	**Pn**	**04 08 55.2**	**+1.1**
ARCZ	**Arundel**	**8.18**	**211**	P	**Pn**	**04 08 56.5**	**+1.0**
FOZ	**Fox Glacier**	**8.48**	**218**	P	**Pn**	**04 08 59.7**	**+0.5**
TMZ	**Timaru**	**8.61**	**210**	P	**Pn**	**04 09 01.6**	**+0.7**
LBZ	**Lake Benmore**	**8.96**	**213**	P	**Pn**	**04 09 06.2**	**+1.0**
ODZ	**Otahua Downs**	**9.30**	**209**	P	**Pn**	**04 09 11.5**	**+1.9**
ODZ	**Otahua Downs**	**9.30**	**209**	P	**Pn**	**04 09 12.1**	**+2.6**
JCZ	**Jackson Bay**	**9.39**	**219**	P	**Pn**	**04 09 10.7**	**0.0**
WKZ	**Wanaka**	**9.83**	**216**	P	**Pn**	**04 09 16.6**	**+0.5**
EAZ	**Earnscleugh**	**10.01**	**213**	P	**Pn**	**04 09 19.2**	**+0.8**
MLZ	**Mavora Lakes**	**10.65**	**216**	P	**Pn**	**04 09 28.1**	**+1.6**

IDC 10 04:12:59.6±3.7, 55°.37N×86°.19E, h0km, mbtmp2.6/2, ML2.0/1, Error ellipse: s-maj=28.8km s-min=23.7km az=26.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**210**	*i*		04 22 40.0	
	0.1nm,1.0s,baz=24,slow=316,SNR=44						
ZALV	**Zalesovo Beam**	**1.63**	**210**	Pg	Pn	04 13 28.0	-1.6
	2.9nm,0.3s,baz=30,slow=18,SNR=23						
ZALV				Lg	Lg	04 13 51.4	
	1.4nm,0.3s,baz=29,slow=27,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.63**	**227**	Pn	Pn	04 14 38.6	+0.4
	baz=40,slow=14,SNR=2.1						
KURBB				Lg	Lg	04 16 33.1	
	baz=48,slow=32,SNR=5.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**8.93**	**198**	Pn	Pn	04 15 09.9	+0.1
	0.1nm,0.4s,baz=31,slow=15,SNR=2.2						

ISN ***10*** *04:16:27.5±0.7, 35°.34N×46°.25E, h6km±144km, ML3.3*
TEH ***10*** *04:16:29.5, 35°.35N×46°.34E, h6km, ML3.3*
AZER ***10*** *04:16:32.5±3.3, 35°.13N×46°.93E, h14km±777km, Error ellipse: s-maj=1476.0km s-min=33.7km az=1.0*
ISC 10 04:16:29.6±0.8, 35°.36N±0°.02×46°.30E±0°.04, h10km, n41, σ1s96/50, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.66**	**174**	*e*Pg	**Pb**	**04 16 43.0**	**-0.4**
IDHR				*e*Sg	**Sb**	**04 16 53.5**	**+0.8**
IDHR				*e*		04 16 55.7	
	comp=Z,35μm,0.2s						
ILIN	**Lien**	**0.70**	**129**	*e*Pg	**Pb**	**04 16 43.0**	**-1.1**
ILIN				*e*Sg	**Sb**	**04 16 53.7**	**-0.2**
ILIN				*e*		04 16 58.8	
	comp=Z,16μm,0.2s						
SNGE	**Sanandaj**	**0.90**	**107**	*e*Pg	**Pg**	**04 16 46.1**	**-0.9**
IGHG	**Ghaleghazi**	**1.05**	**168**	*e*Pg	**Pn**	**04 16 50.6**	**-0.1**
IGHG				*e*Sg	**Sn**	**04 17 06.6**	**+1.1**
IGHG				*e*		04 17 13.0	
	comp=Z,12μm,0.7s						
KER	**Kermanshah**	**1.19**	**145**	*e*Pg	**Pn**	**04 16 52.8**	**+0.3**
KER				*e*		04 16 16.7	
	comp=Z,10μm,0.4s						
KCHF	**Cheshme Sefid,**	**1.24**	**150**	*e*Pg	**Pg**	**04 16 54.1**	**+0.6**
KCHF				*e*		04 17 15.3	
	comp=Z,11μm,0.5s						
MAHB	**Mahabad**	**1.48**	**341**	*e*Pg	**Pb**	**04 16 57.8**	**+0.4**
MAHB				*e*		04 17 23.3	
	comp=Z,8μm,0.6s						
IKOM	**Komasi**	**1.55**	**139**	*e*Pg	**Pg**	**04 16 58.8**	**-0.5**
IKOM				*e*		04 17 31.3	
	comp=Z,10μm,0.7s						
IBZA	**Bozab**	**1.56**	**124**	*e*Pn	**Pg**	**04 16 59.2**	**-0.4**
IBZA				*e*		04 17 34.3	
	comp=Z,5μm,0.5s						
IHSH	**Hashtrud**	**2.09**	**22**	*e*			
	comp=Z,0.0nm,0.0s						
IHSH				*e*Pn	**Pb**	**04 17 08.4**	**+0.6**
IDOB	**Doab**	**2.21**	**135**	*e*Pn	**Pb**	**04 17 10.1**	**+0.4**
IDOB				*e*		04 17 51.0	
	comp=Z,2μm,0.7s						
HSAM	**Samen**	**2.22**	**120**	*e*Pn	**Pg**	**04 17 10.4**	**-1.7**
IKFM	**Kafar-mosalman**	**2.23**	**145**	*e*Pn	**Pg**	**04 17 11.0**	**-1.5**
IBDR	**Badra**	**2.27**	**188**	*e*Pn	**Pn**	**04 17 08.0**	**+0.9**
IBDR				*e*Sn	**Sb**	**04 17 37.0**	**-1.7**
IBDR				AML	AML	04 17 58.0	
	comp=N,140nm,0.5s						
IBDR				AML	AML	04 18 00.5	
	comp=E,179nm,0.1s						
ZNJK	**Zanjan**	**2.34**	**55**	*e*Pn	**Pb**	**04 17 11.8**	**-0.2**
HAGD	**Aghdareh**	**2.39**	**102**	*e*Pn	**Pb**	**04 17 13.1**	**+0.2**
HAGD				*e*		04 17 55.5	
	comp=Z,1μm,0.6s						
BHD	**Baghdad**	**2.62**	**218**	*e*Pn	**Pn**	**04 17 12.0**	**0.0**
BHD				*e*Sn	**Sn**	**04 17 45.5**	**+1.7**
BHD				AML	AML	04 17 56.9	
	comp=E,339nm,0.3s						
ISRB	**Sarab**	**2.70**	**24**	*e*Pn	**Pb**	**04 17 16.9**	**-1.2**
ISRB				*e*		04 18 07.5	
	comp=Z,623nm,0.6s						
QABG	**Abgarm-Qazvin**	**2.70**	**82**	*e*Pn	**Pb**	**04 17 15.8**	**-2.4**
ITBZ	**Tabriz**	**2.87**	**358**	*e*		04 18 05.7	
	comp=Z,762nm,0.5s						
IRAZ	**Razeghan**	**2.97**	**88**	*e*Pn	**Pb**	**04 17 20.4**	**-2.3**
IRAZ				*e*		04 18 18.4	
	comp=Z,880nm,0.7s						
ISHB	**Shabestar**	**2.97**	**350**	*e*Pn	**Pb**	**04 17 21.6**	**-1.1**
ISHB				*e*		04 18 09.8	
	comp=Z,1μm,0.5s						
IHRS	**Heris**	**3.01**	**11**	*e*Pn	**Pb**	**04 17 20.9**	**-2.6**
IHRS				*e*		04 18 20.9	
	comp=Z,1μm,1.1s						
ASAO	**Ashtian**	**3.17**	**104**	*e*Pn	**Pb**	**04 17 24.1**	**-2.1**
GIDE	**GILAN DEYLAMAN**	**3.31**	**61**	*e*Pn	**Pb**	**04 17 25.3**	**-3.3**
KHMZ	**Khomeyn**	**3.43**	**117**	*e*Pn	**Pb**	**04 17 27.8**	**-2.8**
ORD	**Ordubad**	**3.57**	**356**	P	**Pg**	**04 17 36.7**	**-1.3**
ORD				S	**Sg**	**04 18 23.1**	**-1.2**
RAFI	**Al-Rafai**	**3.63**	**182**	*e*Pn	**Pn**	**04 17 27.0**	**+1.1**
RAFI				*e*Sn	**Sn**	**04 18 10.0**	**+1.2**
RAFI				AML	AML	04 18 13.6	
	comp=E,234nm,0.3s						
LRK	**Lerik**	**3.66**	**26**	P	**Pb**	**04 17 33.0**	**-1.5**
LRK				S	**Sb**	**04 18 18.5**	**-0.6**
GRMI	**Germi**	**3.67**	**20**	*e*Pn	**Pn**	**04 17 30.2**	**+3.6**
GRMI				*e*		04 18 43.8	
	comp=Z,99nm,0.9s						
NAX	**Nakhchivan**	**3.86**	**351**	P	**Pg**	**04 17 41.4**	**-2.2**
NAX				S	**Sg**	**04 18 33.3**	**-0.2**
YRD	**Yardimli**	**3.87**	**23**	P	**Pb**	**04 17 35.5**	**-2.7**
YRD				S	**Sb**	**04 18 26.0**	**+0.8**
IQOM	**Qom**	**3.95**	**96**	*e*Pn	**Pn**	**04 17 32.1**	**+1.6**
CHTH	**Charan**	**3.97**	**81**	*e*Pn	Pb	04 17 34.8	-5.0
SBZ	**Shahbuz**	**4.07**	**352**	P	**Pb**	**04 17 43.8**	**+2.3**
SBZ				S	**Sg**	**04 18 37.3**	**-3.1**
AMIS	**Naft Sefid**	**4.45**	**145**	*e*Pn	**Pn**	**04 17 40.3**	**+3.1**
QAMS	**Qamsar**	**4.51**	**110**	*e*Pn	**Pn**	**04 17 41.2**	**+3.0**
DAMV	**Damavand**	**4.64**	**85**	*e*Pn	**Pn**	**04 17 44.1**	**+4.1

FSK	**Fiskardo**	**0.87**	**241**	P	**Pg**	04 52 08.4	+0.3
FSK				S	**Sb**	04 52 20.6	+0.4
AXAR	**Agios Charalam**	**0.89**	**97**	P	**Pg**	04 52 08.0	-0.3
AXAR	**Agios Charalam**	**0.89**	**97**	P	**Pg**	04 52 08.0	-0.3
KLV	**Kalavryta, Ach**	**0.97**	**150**	P	**Pg**	04 52 09.9	0.0
KLV				S	**Sg**	04 52 22.5	-0.1
KLV				AML	AML	04 52 27.8	
	comp=E,75µm,0.4s						
KLV				AML	AML	04 52 29.0	
	comp=N,67µm,0.5s						
IGT	**Igoumenitsa**	**1.14**	**305**	P	**Pb**	04 52 13.1	0.0
ATAL	**Atalanti**	**1.18**	**99**	P	**Pb**	04 52 12.6	-1.1
NEO	**Neokhori**	**1.38**	**72**	P	**Pn**	04 52 16.4	-0.2
LIT	**Litokhoron**	**1.42**	**31**	P	**Pn**	04 52 16.0	-1.1

VIE ***10*** *04:52:47.2±0.2,46°.39N×12°.94E,h12km,mb2.7/22, ml3.3/22,Error ellipse: s-maj=2.2km s-min=1.1km az=20.0 6 km WSW of Tolmezzo*
ROM ***10*** *04:52:47.9±0.1,46°.388N±0°.004×12°.965E±0°.006, h8km,ML3.1/43,Error ellipse: s-maj=0.4km s-min=0.4km az=148.0*
LDG ***10*** *04:52:49.9±0.2,46°.37N×13°.07E,h11km,Ml3.1/7,Error ellipse: s-maj=4.3km s-min=4.0km az=151.0*
PRU ***10*** *04:52:49.6±0.0,46°.45N×12°.97E,h5km*
BGR ***10*** *04:52:50.8±0.3,46°.43N×12°.98E,h10km,ML3.0/21,Error ellipse: s-maj=5.6km s-min=3.3km az=2.0*
STR ***10*** *04:53:07.1±3.3,47°.N±6°×1°1E±2°9,h10km,MLv3.2/15*
ISC 10 04:52:48.2±0.7,46°.39N±0°.01×12°.950E±0°.009,h13km±3km, n246,σ1§13/403,15C-6D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSE	**Fusea**	**0.04**	**53**	⇑*e*Pg	**Pg**	**04 52 50.3**	**-0.3**
FUSE				*e*Sg	**Sg**	**04 52 52.1**	**-0.2**
FUSE	**Fusea**	**0.04**	**53**	P	**Pg**	**04 52 50.3**	**-0.3**
FUSE				S	**Sg**	**04 52 52.1**	**-0.2**
CLUD	**Cludinico**	**0.08**	**326**	⇑*e*Pg	**Pg**	**04 52 50.6**	**-0.4**
CLUD				*e*Sg	**Sg**	**04 52 52.5**	**-0.6**
CLUD	**Cludinico**	**0.08**	**326**	P	**Pg**	**04 52 50.6**	**-0.4**
CLUD				S	**Sg**	**04 52 52.5**	**-0.6**
CLUD				AML	AML		
	comp=E,25350µm,0.6s						
CLUD				AML	AML		
	comp=N,8765µm,0.2s						
CLUD				AML	AML		
	comp=E,26300µm,0.6s						
CLUD				AML	AML		
	comp=N,9745µm,0.6s						
BOO	**Bordano**	**0.12**	**123**	⇑*e*Pg	**Pg**	**04 52 51.2**	**-0.3**
BOO				*e*Sg	**Sg**	**04 52 53.7**	**-0.1**
BOO	**Bordano**	**0.12**	**123**	P	**Pg**	**04 52 51.2**	**-0.3**
BOO				S	**Sg**	**04 52 53.7**	**-0.1**
MPRI	**Monte Prat**	**0.15**	**170**	⇑*e*Pg	**Pg**	**04 52 51.6**	**-0.2**
MPRI				*e*Sg	**Sg**	**04 52 54.5**	**+0.1**
MPRI	**Monte Prat**	**0.15**	**170**	P	**Pg**	**04 52 51.6**	**-0.2**
MPRI				S	**Sg**	**04 52 54.5**	**+0.1**
MPRI				AML	AML		
	comp=E,6385µm,0.2s						
MPRI				AML	AML		
	comp=N,6065µm,0.2s						
MPRI				AML	AML		
	comp=E,8310µm,0.3s						
MPRI				AML	AML		
	comp=N,7830µm,0.5s						
MPRI				AML	AML		
	comp=E,6390µm,0.2s						
ZOU	**Zoufplan**	**0.17**	**5**	⇑*e*Pg	**Pg**	**04 52 52.1**	**-0.2**
ZOU				*e*Sg	**Sg**	**04 52 55.2**	**+0.1**
ZOU	**Zoufplan**	**0.17**	**5**	P	**Pg**	**04 52 52.1**	**-0.2**
ZOU				S	**Sg**	**04 52 55.3**	**+0.1**
ZOU				AML	AML		
	comp=E,13650µm,1.3s						
ZOU				AML	AML		
	comp=E,13600µm,1.3s						
ZOU				AML	AML		
	comp=N,6310µm,1.4s						
ZOU				AML	AML		
	comp=N,6205µm,1.2s						
STAL	**STALIGIAL**	**0.21**	**233**	P	**Pg**	**04 52 52.2**	**-0.6**
STAL				S	**Sg**	**04 52 56.2**	**+0.2**
STAL				AML	AML		
	comp=N,19250µm,0.3s						
STAL				AML	AML		
	comp=E,16250µm,0.3s						
STAL				AML	AML		
	comp=E,15950µm,0.4s						
STAL				AML	AML		
	comp=N,19300µm,0.3s						
STAL				AML	AML		
	comp=E,16200µm,0.3s						
STAL				AML	AML		
	comp=N,15900µm,1.5s						
PLRO	**Paularo**	**0.21**	**40**	⇑*e*Pg	**Pg**	**04 52 52.7**	**-0.2**
PLRO				*e*Sg	**Sg**	**04 52 56.6**	**+0.4**
PLRO	**Paularo**	**0.21**	**40**	P	**Pg**	**04 52 52.7**	**-0.2**
PLRO				S	**Sg**	**04 52 56.6**	**+0.4**
FVI	**Forni Avoltri**	**0.24**	**331**	P	**Pg**	**04 52 53.0**	**-0.3**
FVI				S	**Sg**	**04 52 56.8**	**-0.1**
CSMI	**Casera Mimoias**	**0.24**	**301**	⇓*e*Pg	**Pg**	**04 52 53.0**	**-0.4**
CSMI				*e*Sg	**Sg**	**04 52 56.7**	**-0.3**
BAD	**Bernadia**	**0.25**	**126**	⇑*e*Pg	**Pg**	**04 52 53.2**	**-0.3**
BAD				*e*Sg	**Sg**	**04 52 57.7**	**+0.6**
BAD	**Bernadia**	**0.25**	**126**	P	**Pg**	**04 52 53.2**	**-0.3**
BAD				S	**Sg**	**04 52 57.8**	**+0.6**
VINO	**Villanova**	**0.26**	**120**	⇑*e*Pg	**Pg**	**04 52 53.3**	**-0.4**
VINO				*e*Sg	**Sg**	**04 52 57.8**	**+0.3**
PTCC	**Patocco-Chiusa**	**0.28**	**86**	P	**Pg**	**04 52 53.8**	**-0.2**
PTCC				S	**Sg**	**04 52 58.6**	**+0.7**
PTCC				AML	AML		
	comp=E,7810µm,0.3s						
PTCC				AML	AML		
	comp=N,6895µm,0.2s						
MLNI	**Malnisio**	**0.34**	**225**	*e*Pg	**Pg**	**04 52 54.5**	**-0.5**
CIMO	**Cimolais**	**0.36**	**258**	⇓*e*Pg	**Pg**	**04 52 54.6**	**-0.8**
CIMO				*e*Sg	**Sg**	**04 52 59.9**	**-0.5**
CIMO	**Cimolais**	**0.36**	**258**	P	**Pg**	**04 52 54.8**	**-0.7**
CIMO				S	**Sg**	**04 52 59.9**	**-0.5**
CIMO				AML	AML		
	comp=E,2430µm,0.3s						
CIMO				AML	AML		
	comp=E,2440µm,0.3s						
CIMO				AML	AML		
	comp=N,5810µm,0.5s						
CIMO				AML	AML		
	comp=N,5885µm,0.5s						
CIMO				AML	AML		
	comp=E,2425µm,0.3s						
COLI	**Coloredo**	**0.39**	**130**	⇑*e*Pg	**Pg**	**04 52 55.7**	**-0.3**
COLI				*e*Sg	**Sb**	**04 53 02.2**	**-0.7**
LSR	**Lussari**	**0.41**	**77**	⇑*e*Pg	**Pg**	**04 52 56.1**	**-0.3**
LSR				*e*Sg	**Sg**	**04 53 02.7**	**+0.7**
ROBS	**Robic**	**0.41**	**110**	*i* Pg	**Pg**	**04 52 55.6**	**-0.8**
ROBS				*i* Sg	**Sg**	**04 53 01.9**	**0.0**
ROBS				IAML		04 53 02.4	
	comp=Z,80nm,0.1s						
ACOM	**Acomizza, Ital**	**0.42**	**67**	⇑*e*Pg	**Pg**	**04 52 56.4**	**-0.2**
ACOM				*e*Sg	**Sb**	**04 53 03.4**	**-0.6**
ACOM	**Acomizza, Ital**	**0.42**	**67**	P	**Pg**	**04 52 56.4**	**-0.2**
ACOM				S	**Sb**	**04 53 03.3**	**-0.6**
ACOM				AML	AML		
	comp=E,6145µm,0.7s						
ACOM				AML	AML		
	comp=N,6590µm,0.5s						
ACOM				AML	AML		
	comp=N,6605µm,0.5s						
ACOM				AML	AML		
	comp=E,5970µm,0.7s						
ACOM				AML	AML		
	comp=N,6595µm,0.5s						
ACOM				AML	AML		
	comp=E,6150µm,0.7s						
CSO	**Casso**	**0.45**	**255**	⇓*e*Pg	**Pg**	**04 52 56.2**	**-0.9**
CSO				*e*Sg	**Sg**	**04 53 03.3**	**+0.2**
ABTA	**Abfaltersbach**	**0.47**	**320**	*e*Pg	**Pg**	**04 52 57.1**	**-0.3**
	comp=E,30nm,0.1s,SNR=54						
ABTA				*e*Sg	**Sg**	**04 53 03.2**	**-0.6**
	comp=E,105nm,0.1s						
TLI	**Talmassons**	**0.48**	**167**	*e*Pg	**Pg**	**04 52 57.3**	**-0.3**
CAE	**Caneva**	**0.52**	**223**	⇑*e*Pg	**Pg**	**04 52 58.1**	**-0.3**
CAE				*e*Sg	**Sb**	**04 53 06.1**	**-0.6**
CAE	**Caneva**	**0.52**	**223**	P	**Pg**	**04 52 58.0**	**-0.4**
CAE				S	**Sb**	**04 53 06.4**	**-0.4**
DRE	**Drenchia**	**0.53**	**114**	*e*Pg	**Pg**	**04 52 58.0**	**-0.5**
DRE	**Drenchia**	**0.53**	**114**	P	**Pg**	**04 52 57.7**	**-0.9**
DRE				S	**Sb**	**04 53 06.4**	**-0.5**
MYKA	**Terra Mystica**	**0.54**	**63**	*e*Pg	**Pg**	**04 52 58.3**	**-0.4**
	comp=E,33nm,0.2s,SNR=37						
MYKA				*e*Sg	**Sg**	**04 53 05.0**	**-0.8**
	comp=E,149nm,0.3s						
AFL	**Alpe Faloria**	**0.55**	**285**	*e*Pg	**Pg**	**04 52 58.8**	**-0.2**
FRE8	**Fregona**	**0.56**	**228**	P	**Pg**	**04 52 58.8**	**-0.3**
FRE8				S	**Sb**	**04 53 08.1**	**+0.4**
CADS	**Cadrg**	**0.57**	**106**	*i* Pg	**Pg**	**04 52 58.2**	**-1.1**
CADS				*i* Sg	**Sb**	**04 53 07.8**	**-0.3**
CADS				IAML		04 53 10.5	
	comp=Z,251nm,0.2s						
SABO	**M.te Sabotino**	**0.61**	**132**	*e*Pg	**Pg**	**04 52 59.6**	**-0.5**
SABO	**M.te Sabotino**	**0.61**	**132**	P	**Pg**	**04 52 59.6**	**-0.5**
SABO				S	**Sb**	**04 53 10.4**	**+1.2**
SABO				AML	AML		
	comp=E,8205µm,0.5s						
SABO				AML	AML		
	comp=N,8250µm,0.4s						
SABO				AML	AML		
	comp=N,2115µm,0.4s						
SABO				AML	AML		
	comp=E,1965µm,0.5s						
SABO				AML	AML		
	comp=N,8245µm,0.4s						
AGOR	**Agordo**	**0.63**	**261**	*e*Pg	**Pg**	**04 53 00.4**	**-0.2**
AGOR	**Agordo**	**0.63**	**261**	P	**Pg**	**04 53 00.3**	**-0.2**
AGOR				S	**Sb**	**04 53 09.9**	**0.0**
AGOR				AML	AML		
	comp=N,3545µm,0.4s						
AGOR				AML	AML		
	comp=E,3020µm,0.5s						
AGOR				AML	AML		
	comp=N,3540µm,0.4s						
AGOR				AML	AML		
	comp=E,3015µm,0.5s						
AGOR				AML	AML		
	comp=N,2820µm,0.4s						
AGOR				AML	AML		
	comp=N,3545µm,0.4s						
AGOR				AML	AML		
	comp=E,2355µm,0.5s						
FAU	**Forcella Aurin**	**0.69**	**257**	*e*Pg	**Pg**	**04 53 00.6**	**-1.0**
VARN	**Col Varnada, M**	**0.71**	**236**	*e*Pg	**Pg**	**04 53 01.0**	**-0.9**
VARN	**Col Varnada, M**	**0.71**	**236**	P	**Pg**	**04 53 00.6**	**-1.3**
VARN				S	**Sb**	**04 53 12.7**	**+0.6**
VARN				AML	AML		
	comp=E,2340µm,0.3s						
VARN				AML	AML		
	comp=E,2335µm,0.3s						
VARN				AML	AML		
	comp=N,1415µm,0.4s						
VARN				AML	AML		
	comp=E,2260µm,0.3s						
VARN				AML	AML		
	comp=N,1440µm,0.4s						
GORS	**Gorjuse**	**0.73**	**95**	*i* Pg	**Pg**	**04 53 01.0**	**-1.3**
GORS				*e*Sg	**Sb**	**04 53 12.7**	**0.0**
GORS				IAML		04 53 15.3	
	comp=Z,103nm,0.1s						
VOJS	**Vojsko**	**0.74**	**118**	*i* Pg	**Pg**	**04 53 01.4**	**-1.2**
VOJS				*e*Sg	**Sb**	**04 53 13.8**	**+0.7**
VOJS				IAML		04 53 20.2	
	comp=Z,102nm,0.1s						
ED06	**Collalto TV**	**0.74**	**224**	*e*Pg	**Pg**	**04 53 02.2**	**-0.3**
KBA	**Koelnbreinsper**	**0.74**	**21**	*e*Pg	**Pg**	**04 53 02.2**	**-0.5**
	comp=Z,6.7nm,0.1s,SNR=16						
KBA				*e*Sg	**Sg**	**04 53 12.3**	**-0.1**
	comp=Z,66nm,0.2s						
KBA	**Koelnbreinsper**	**0.74**	**21**	*e*Pg	**Pg**	**04 53 02.5**	**-0.2**
KBA				*e*Sg	**Sg**	**04 53 12.4**	**-0.1**
CRND	**Cornuda**	**0.82**	**228**	P	**Pb**	**04 53 04.4**	**+0.1**
CRND				S	**Sn**	**04 53 18.2**	**+0.7**
RISI	**Rein**	**0.82**	**313**	P	**Pg**	**04 53 03.7**	**-0.5**
RISI				S	**Sg**	**04 53 14.8**	**-0.1**
RISI				AML	AML		
	comp=E,2105µm,0.2s						
RISI				AML	AML		
	comp=N,3130µm,0.3s						
MTLO	**Montello**	**0.83**	**226**	*e*Pg	**Pg**	**04 53 03.7**	**-0.5**
TRI	**Trieste**	**0.88**	**140**	*e*Pg	**Pb**	**04 53 05.4**	**+0.1**
BRES	**Bressanone**	**0.90**	**291**	P	**Pg**	**04 53 04.9**	**-0.6**
BRES				S	**Sb**	**04 53 18.0**	**+0.3**
JAVS	**Javornik**	**0.92**	**122**	*e*Pg	**Pg**	**04 53 04.2**	**-1.7**
JAVS				*i* Sg	**Sb**	**04 53 19.1**	**+0.9**
JAVS				IAML		04 53 23.1	
	comp=Z,132nm,0.1s						
ASOL	**Asolo**	**0.94**	**232**	P	**Pb**	**04 53 06.5**	**+0.2**
ASOL				S	**Sn**	**04 53 21.6**	**+1.3**
CGRP	**Cima Grappa**	**0.95**	**238**	P	**Pg**	**04 53 06.1**	**-0.4**
CGRP				S	**Sn**	**04 53 21.9**	**+1.0**
CGRP				AML	AML		
	comp=E,1175µm,0.5s						
CGRP				AML	AML		
	comp=N,858µm,0.5s						
CGRP				AML	AML		
	comp=E,1215µm,0.5s						
CGRP				AML	AML		
	comp=N,866µm,0.3s						
CRNS	**Crni Vrh**	**0.96**	**108**	*e*Pg	**Pg**	**04 53 05.3**	**-1.4**
CRNS				*i* Sg	**Sn**	**04 53 21.6**	**+0.6**
CRNS				IAML		04 53 25.2	
	comp=Z,142nm,0.1s						
CTI	**Castel Tesino**	**0.96**	**250**	P	**Pg**	**04 53 06.0**	**-0.8**
CTI				S	**Sn**	**04 53 21.6**	**+0.4**
CTI				AML	AML		
	comp=E,2770µm,1.1s						
CTI				AML	AML		
	comp=N,2895µm,0.5s						
MOZS	**Mozjanca**	**1.04**	**95**	*e*Pg	**Pb**	**04 53 07.5**	**-0.6**
MOZS				*e*Sg	**Sn**	**04 53 24.2**	**+1.2**
MOZS				IAML		04 53 28.7	
	comp=Z,71nm,0.1s						
KOSI	**Kohlern**	**1.09**	**275**	P	**Pb**	**04 53 08.7**	**-0.3**
KOSI				S	**Sg**	**04 53 23.4**	**-0.1**
KOSI				AML	AML		
	comp=E,788µm,1.4s						
KOSI				AML	AML		
	comp=N,568µm,1.5s						
OBKA	**Obir**	**1.11**	**83**	*e*Pg	**Pb**	**04 53 08.5**	**-0.8**
	comp=N,6.2nm,0.1s,SNR=12						
OBKA				Sg	**Sn**	**04 53 24.8**	**-0.1**
	comp=N,222nm,0.6s						
OBKA	**Obir**	**1.11**	**83**	*e*Pg	**Pb**	**04 53 08.9**	**-0.4**
OBKA				*e*Sg	**Sn**	**04 53 25.1**	**+0.3**
SKDS	**Skadanscina**	**1.12**	**138**	*e*Pg	**Pb**	**04 53 08.7**	**-0.8**
SKDS				*i* Sg	**Sn**	**04 53 26.1**	**+1.2**
SKDS				IAML		04 53 27.5	
	comp=Z,7.5nm,0.0s						
GBAS	**Gorenja Brezov**	**1.13**	**113**	*e*Pg	**Pb**	**04 53 08.6**	**-1.0**
GBAS				*e*Sg	**Sn**	**04 53 26.6**	**+1.4**
GBAS				IAML		04 53 29.6	
	comp=Z,5.5nm,0.1s						
BOSI	**Bolzano**	**1.13**	**276**	⇑P	**Pn**	**04 53 09.8**	**+0.1**
BOSI				AML	AML		
	comp=N,1750µm,1.5s						
BOSI				AML	AML		
	comp=E,1165µm,0.6s						
LJU	**Ljubljana**	**1.15**	**107**	*e*Pg	**Pb**	**04 53 10.0**	**+0.1**
LJU				*e*Sg	**Sn**	**04 53 26.7**	**+1.1**
LJU				IAML		04 53 31.0	
	comp=Z,221nm,0.2s						
ROSI	**Rosskopf**	**1.19**	**298**	P	**Pb**	**04 53 10.5**	**-0.3**
ROSI				S	**Sg**	**04 53 26.6**	**0.0**
APPI	**Appiano**	**1.19**	**275**	P	**Pb**	**04 53 10.6**	**-0.1**
APPI				S	**Sb**	**04 53 26.4**	**+0.2**
APPI				AML	AML		
	comp=E,662µm,1.3s						
APPI				AML	AML		
	comp=E,662µm,1.3s						
APPI				AML	AML		
	comp=N,908µm,0.4s						
CEY	**Cerknica**	**1.22**	**122**	*e*Pg	**Pn**	**04 53 09.8**	**-1.1**
CEY				*e*Sg	**Sn**	**04 53 29.5**	**+2.2**
CEY				IAML		04 53 31.2	
	comp=Z,138nm,0.2s						
VNDS	**Vrh nad Dolski**	**1.25**	**103**	*e*Pg	**Pn**	**04 53 10.9**	**-0.5**
VNDS				*e*Sg	**Sg**	**04 53 29.5**	**+1.1**
VNDS				IAML		04 53 32.3	
	comp=Z,108nm,0.2s						
WTTA	**Wattenberg**	**1.26**	**315**	*e*Pg	**Pn**	**04 53 11.7**	**+0.1**
	comp=Z,2.1nm,0.1s,SNR=86						
WTTA				Sg	**Sb**	**04 53 27.5**	**-0.6**
	comp=Z,270nm,0.6s						
WTTA	**Wattenberg**	**1.26**	**315**	P	**Pn**	**04 53 11.7**	**+0.1**
WTTA				S	**Sb**	**04 53 28.0**	**-0.1**
WTTA	**Wattenberg**	**1.26**	**315**	*e*Pn	**Pb**	**04 53 11.9**	**+0.1**
WTTA				*e*Sg	**Sb**	**04 53 28.2**	**+0.1**
KNDS	**Knezji Dol**	**1.32**	**130**	*e*Pg	**Pn**	**04 53 12.2**	**-0.1**
KNDS				*e*Sg	**Sg**	**04 53 32.2**	**+1.6**
KNDS				IAML		04 53 33.7	
	comp=Z,86nm,0.1s						
DOSS	**Dosso del Somm**	**1.33**	**248**	P	**Pn**	**04 53 12.8**	**+0.3**
DOSS				S	**Sg**	**04 53 31.6**	**+0.7**
DOSS				AML	AML		
	comp=N,1465µm,0.4s						
DOSS				AML	AML		
	comp=N,1470µm,0.4s						
DOSS				AML	AML		
	comp=N,1945µm,0.5s						
DOSS				AML	AML		
	comp=E,1860µm,0.5s						
DOSS				AML	AML		
	comp=E,1495µm,0.5s						
WATA	**Walderalm**	**1.34**	**316**	*e*Pg	**Pb**	**04 53 13.3**	**+0.1**
	comp=E,13nm,0.1s,SNR=51						
WATA				*e*Sg	**Sb**	**04 53 29.8**	**-0.5**
	comp=E,74nm,0.3s						
RJOB	**Jochberg**	**1.35**	**356**	*e*Pn	**Pb**	**04 53 13.6**	**+0.1**
RJOB				*e*Sg	**Sg**	**04 53 32.7**	**+0.8**
TEOL	**Teolo**	**1.36**	**221**	P	**Pn**	**04 53 13.0**	**+0.1**
TEOL				S	**Sg**	**04 53 32.4**	**+0.4**
ZOVE	**Zovencedo**	**1.38**	**228**	P	**Pn**	**04 53 13.3**	**+0.1**
ZOVE				S	**Sg**	**04 53 33.1**	**+0.4**
BIOA	**Bad Ischl, Aus**	**1.39**	**20**	*e*Pg	**Pb**	**04 53 14.2**	**+0.2**
	comp=E,22nm,0.3s,SNR=18						
BIOA				Sg	**Sg**	**04 53 34.2**	**+1.3**
	comp=E,153nm,0.5s						
GAGG	**Gaggia**	**1.42**	**258**	P	**Pb**	**04 53 14.7**	**+0.2**
GAGG				S	**Sg**	**04 53 34.8**	**+1.1**
GAGG				AML	AML		
	comp=E,935µm,0.8s						
GAGG				AML	AML		
	comp=N,1210µm,0.4s						
GAGG				AML	AML		
	comp=E,1290µm,0.5s						
GAGG				AML	AML		
	comp=N,1214µm,0.4s						
GAGG				AML	AML		
	comp=N,958µm,0.7s						
GAGG				AML	AML		
	comp=E,933µm,0.8s						
MARN	**Marana (Italy)**	**1.43**	**239**	P	**Pn**	**04 53 14.1**	**+0.3**
MARN				S	**Sg**	**04 53 34.4**	**+0.3**
VISS	**Visnje**	**1.44**	**113**	*e*Pn	**Pb**	**04 53 14.8**	**-0.1**
VISS				*e*Sn	**Sg**	**04 53 35.0**	**+0.5**
VISS				IAML		04 53 36.7	
	comp=Z,116nm,0.2s						
LUSI	**Trento, Gardas**	**1.46**	**254**	P	**Pb**	**04 53 15.0**	**-0.2**
LUSI				S	**Sg**	**04 53 36.1**	**+0.9**
LUSI				AML	AML		
	comp=E,1288µm,0.2s						
LUSI				AML	AML		
	comp=N,1880µm,1.2s						
SQTA	**Sankt Quirin**	**1.46**	**305**	*e*Pg	**Pb**	**04 53 15.2**	**0.0**
	comp=N,49nm,0.2s,SNR=37						
PDKS	**Podkum**	**1.46**	**102**	*i* Pn	**Pb**	**04 53 14.9**	**-0.3**
PDKS				*e*Sn	**Sg**	**04 53 35.1**	**0.0**
PDKS				IAML		04 53 39.1	
	comp=Z,55nm,0.1s						
SOKA	**Soboth**	**1.47**	**78**	*e*Pg	**Pn**	**04 53 14.9**	**+0.5**
	comp=Z,21nm,0.2s,SNR=10						
SOKA				Sg	**Sg**	**04 53 35.6**	**+0.2**
	comp=Z,28nm,0.2s						
ROVR	**Rover Verones**	**1.50**	**241**	P	**Pn**	**04 53 15.2**	**+0.2**
ROVR				S	**Sg**	**04 53 36.4**	**-0.2**
ROVR				AML	AML		
	comp=E,1095µm,0.4s						
ROVR				AML	AML		
	comp=E,390µm,0.4s						
ROVR				AML	AML		
	comp=N,980µm,0.2s						
ROVR				AML	AML		
	comp=E,1098µm,0.4s						
ROVR				AML	AML		
	comp=N,2335µm,0.2s						
RIY	**Rijeka**	**1.51**	**134**	*e*Pn	**Pn**	**04 53 15.6**	**+0.7**
RIY				Sn	**Sg**	**04 53 36.4**	**-0.3**
TREG	**Tregnago**	**1.52**	**236**	P	**Pn**	**04 53 15.2**	**+0.2**
TREG				S	**Sg**	**04 53 37.2**	**+0.2**
VARA	**Varagna**	**1.54**	**249**	P	**Pn**	**04 53 16.1**	**+0.6**
VARA				S	**Sg**	**04 53 37.8**	**+0.2**
GBRS	**Gornja Briga**	**1.56**	**123**	*e*Pn	**Pb**	**04 53 16.8**	**-0.1**
GBRS				*e*Sn	**Sg**	**04 53 38.6**	**+0.4**
GBRS				IAML		04 53 41.2	
	comp=Z,194nm,0.2s						
CARE	**Lago del Cares**	**1.56**	**272**	P	**Pb**	**04 53 17.2**	**+0.1**
CARE				S	**Sg**	**04 53 38.7**	**+0.2**
BRJN	**Brijuni**	**1.58**	**159**	*e*Pn	**Pn**	**04 53 16.7**	**+0.8**
BRJN	**Brijuni**	**1.58**	**159**	P	**Pn**	**04 53 16.8**	**+0.8**
BRJN				S	**Sg**	**04 53 39.1**	**0.0**
MOTA	**Moosalm**	**1.59**	**308**	*e*Pg	**Pb**	**04 53 17.5**	**0.0**
	comp=Z,29nm,0.2s,SNR=18						
MOTA				Sg	**Sg**	**04 53 38.5**	**-0.8**
	comp=Z,36nm,0.3s						
SMRN	**Sveta Marina**	**1.59**	**148**	*e*Pn	**Pn**	**04 53 16.4**	**+0.3**
BALD	**Monte Baldo**	**1.64**	**245**	P	**Pn**	**04 53 17.4**	**+0.4**
BALD				S	**Sg**	**04 53 41.3**	**+0.2**
FETA	**Feichten**	**1.66**	**293**	*e*Pg	**Pb**	**04 53 18.8**	**+0.2**
	comp=Z,14nm,0.3s,SNR=19						
FETA				Sg	**Sg**	**04 53 40.8**	**-0.6**
	comp=Z,25nm,0.4s						
RONC	**Roncone**	**1.67**	**257**	P	**Pb**	**04 53 19.0**	**+0.1**
RONC				S	**Sg**	**04 53 41.7**	**-0.1**
MOSI	**Grossmontoni**	**1.67**	**279**	P	**Pb**	**04 53 19.2**	**+0.2**
MOSI				S	**Sg**	**04 53 41.9**	**-0.1**
MOSI				AML	AML		
	comp=E,1060µm,0.5s						
MOSI				AML	AML		
	comp=E,1065µm,0.5s						
MOSI				AML	AML		
	comp=N,1495µm,0.5s						
PART	**Garmisch-Parte**	**1.68**	**312**	*e*Pn	**Pg**	**04 53 20.1**	**-0.3**
PART				*e*Sg	**Sg**	**04 53 43.4**	**+1.2**
ZUGS	**Zugspitze, Sch**	**1.70**	**308**	*e*Pn	**Pb**	**04 53 20.1**	**+0.6**
ZUGS				*e*Sg	**Sg**	**04 53 44.4**	**+1.5**
LEGS	**Legarje**	**1.70**	**104**	*e*Pn	**Pn**	**04 53 18.0**	**+0.4**
LEGS				*e*Sn	**Sb**	**04 53 41.3**	**+0.6**
MOA	**Molln**	**1.72**	**31**	*e*Pg	**Pb**	**04 53 19.8**	**+0.2**
	comp=N,9.0nm,0.3s						
MOA				Sg	**Sg**	**04 53 43.5**	**+0.1**
	comp=N,30nm,0.3s						
MOA	**Molln**	**1.72**	**31**	*e*Pn	**Pb**	**04 53 19.9**	**+0.2**
MOA				*e*Sg	**Sg**	**04 53 43.2**	**-0.2**
ZEN8	**San Zeno di Mo**	**1.72**	**245**	P	**Pn**	**04 53 18.3**	**+0.5**
ZEN8				S	**Sg**	**04 53 43.0**	**-0.4**
MABI	**Malga Bissina**	**1.72**	**260**	P	**Pb**	**04 53 19.2**	**-0.7**
MABI				S	**Sg**	**04 53 43.7**	**0.0**
MABI				AML	AML		
	comp=N,482µm,0.4s						
MABI				AML	AML		
	comp=E,256µm,0.7s						
DOBS	**Dobrina**	**1.76**	**97**	*e*Pn	**Pn**	**04 53 19.0**	**+0.6**
DOBS				*e*

SALO	**Salr**	**1.86**	**246**	P		**Pn**	**04 53 20.5**	**+0.7**
SALO				AML		AML			
	comp=N,676µm,1.1s								
SALO				AML		AML			
	comp=E,460µm,0.8s								
RETA	**Reutte**	**1.86**	**307**	*e*Pg		**Pb**	**04 53 22.4**	**+0.3**
	comp=E,19nm,0.2s,SNR=46								
RETA				*e*Sg		**Sg**	**04 53 49.7**	**+1.8**
	comp=E,43nm,0.3s								
A250A	**Rusevo Krmpots**	**1.89**	**133**	*e*Pn		**Pn**	**04 53 20.7**	**+0.5**
GOLS	**Golise**	**1.90**	**100**	*e*Pn		**Pn**	**04 53 20.8**	**+0.5**
GOLS				IAML			04 53 54.6		
	comp=Z,47nm,0.3s								
OZLJ	**Ozalj**	**1.92**	**113**	*e*Pn		**Pn**	**04 53 21.3**	**+0.8**
GCIS	**Gornji Cirnik**	**1.93**	**105**	*i* Pn		**Pn**	**04 53 21.5**	**+0.7**
GCIS				IAML			04 53 53.5		
	comp=Z,31nm,0.2s								
ARSA	**Arzberg**	**1.97**	**63**	*e*Pg		**Pn**	**04 53 22.2**	**+1.0**
	comp=Z,5.3nm,0.3s								
ARSA				Sg		**Sg**	**04 53 50.8**	**-0.6**
	comp=Z,19nm,0.4s								
ARSA	**Arzberg**	**1.97**	**63**	P		**Pn**	**04 53 22.0**	**+0.7**
ARSA				S		**Sg**	**04 53 50.1**	**-1.3**
ARSA				AML		AML			
	comp=E,74µm,0.7s								
ARSA				AML		AML			
	comp=N,52µm,0.5s								
ARSA	**Arzberg**	**1.97**	**63**	*e*Pn		**Pn**	**04 53 22.3**	**+1.0**
ARSA				*e*Sg		**Sg**	**04 53 51.4**	**0.0**
BERNI	**Berninapass**	**2.03**	**272**	P		**Pb**	**04 53 24.1**	**-0.9**
BERNI				S		**Sg**	**04 53 51.8**	**-1.5**
BERNI				AML		AML			
	comp=E,148µm,0.6s								
BERNI				AML		AML			
	comp=N,187µm,1.0s								
ZONE	**Zone**	**2.07**	**253**	⇓P		**Pn**	**04 53 23.7**	**+1.0**
ZONE				AML		AML			
	comp=E,478µm,0.3s								
ZONE				AML		AML			
	comp=N,609µm,1.6s								
RABC	**Rab**	**2.08**	**141**	*e*Pn		**Pn**	**04 53 23.2**	**+0.4**
OBER	**Oberstdorf**	**2.09**	**300**	*e*Pn		**Pb**	**04 53 25.7**	**-0.2**
OBER				*e*Sg		**Sg**	**04 53 55.4**	**+0.2**
FUR	**Furstenfeldbru**	**2.11**	**328**	*e*Pn		**Pb**	**04 53 25.9**	**-0.5**
FUR				*e*Pg		**Pg**	**04 53 30.2**	**+1.5**
PTJ	**Puntijarka**	**2.15**	**102**	*e*Pn		**Pn**	**04 53 24.1**	**+0.3**
DAVOX	**Davos/Dischmat**	**2.15**	**282**	P		**Pb**	**04 53 26.4**	**-0.7**
DAVOX				S		**Sb**	**04 53 55.1**	**+1.3**
DAVOX				AML		AML			
	comp=E,134µm,0.3s								
DAVOX				AML		AML			
	comp=N,194µm,0.5s								
ZAG	**Zagreb**	**2.19**	**104**	⇑P		**Pg**	**04 53 34.0**	**+4.0**
MTRZ	**Monterenzio**	**2.27**	**208**	P		**Pb**	**04 53 28.4**	**-0.6**
NVLJ	**Novalja**	**2.27**	**143**	*e*Pn		**Pn**	**04 53 25.6**	**+0.2**
KOGS	**Kog**	**2.28**	**87**	*e*Pn		**Pn**	**04 53 25.6**	**+0.1**
KOGS	**Kog**	**2.28**	**87**	P		**Pn**	**04 53 25.8**	**+0.2**
DAVA	**Damuels**	**2.29**	**294**	*e*Pg		**Pb**	**04 53 28.5**	**-1.0**
	comp=N,12nm,0.2s,SNR=18								
DAVA				Sg		**Sg**	**04 54 00.7**	**-1.1**
	comp=N,108nm,0.5s								
DAVA	**Damuels**	**2.29**	**294**	*e*Pn		**Pb**	**04 53 28.6**	**-0.9**
DAVA				*e*Sg		**Sg**	**04 54 01.0**	**-0.8**
UBR	**Ueberruh**	**2.33**	**305**	*e*Pn		**Pb**	**04 53 28.8**	**-1.4**
UBR				*e*Sg		**Sg**	**04 54 03.5**	**+0.3**
PLIT	**Plitvice**	**2.41**	**128**	*e*Pn		**Pn**	**04 53 28.0**	**+0.7**
LMD	**Lutirano**	**2.47**	**201**	P		**Pn**	**04 53 27.8**	**-0.4**
LMD				S		**Sn**	**04 53 59.0**	**+0.7**
LMD				AML		AML			
	comp=E,71µm,0.5s								
LMD				AML		AML			
	comp=N,84µm,0.6s								
GEC2	**GERESS Array S**	**2.51**	**11**	*e*Pn		**Pn**	**04 53 30.2**	**+1.3**
GEC2				*e*Pg		**Pg**	**04 53 34.9**	**-1.4**
GEC2				*e*Sn		**Sn**	**04 54 01.8**	**+2.4**
GEC2				*e*Sg		**Sg**	**04 54 08.5**	**-0.3**
CONA	**Conrad Observa**	**2.52**	**51**	*e*Pn		**Pn**	**04 53 30.1**	**+1.3**
	comp=N,0.8nm,0.2s								
PLONS	**Plons/SG**	**2.54**	**286**	P		**Pb**	**04 53 31.9**	**-1.8**
PLONS				AML		AML			
	comp=N,80µm,1.3s								
PLONS				AML		AML			
	comp=E,54µm,1.6s								
FNVD	**Fontana Vidola**	**2.57**	**211**	P		**Pn**	**04 53 30.0**	**+0.4**
VIRC	**Vir**	**2.57**	**144**	*e*Pn		**Pn**	**04 53 29.7**	**+0.2**
SEI	**Scarperia**	**2.59**	**206**	P		**Pn**	**04 53 30.4**	**+0.5**
SEI				AML		AML			
	comp=N,186µm,0.4s								
SEI				AML		AML			
	comp=E,122µm,0.4s								
CKRC	**Cesky Krumlov**	**2.60**	**20**	*e*PN		**Pn**	**04 53 31.3**	**+1.3**
CKRC				*e*SN		**Sn**	**04 54 03.8**	**+2.3**
CKRC				*e*SG		**Sg**	**04 54 10.2**	**-1.5**
	comp=E,34nm,0.3s								
SFI	**Santa Sofia**	**2.60**	**198**	P		**Pn**	**04 53 29.6**	**-0.3**
SFI				S		**Sn**	**04 54 02.6**	**+1.2**
RONA	**Rosalia, Austr**	**2.64**	**59**	*e*Pn		**Pn**	**04 53 31.5**	**+1.0**
	comp=E,3.3nm,0.1s								
RONA				Sn		**Sn**	**04 54 03.6**	**+1.2**
	comp=E,9.9nm,0.4s								
ASQU	**Asqua**	**2.72**	**198**	P		**Pn**	**04 53 31.4**	**-0.2**
ASQU				S		**Sn**	**04 54 07.0**	**+2.6**
MTCR	**Monte La Croce**	**2.73**	**211**	P		**Pn**	**04 53 32.2**	**+0.3**
MTCR				S		**Sn**	**04 54 07.4**	**+2.5**
MTCR				AML		AML			
	comp=N,78µm,1.6s								
MTCR				AML		AML			
	comp=E,89µm,1.3s								
RUFI	**Rufina**	**2.74**	**202**	P		**Pn**	**04 53 32.5**	**+0.6**
MUGIO	**Muggio**	**2.76**	**262**	P		**Pn**	**04 53 34.7**	**+2.6**
MUGIO				AML		AML			
	comp=N,114µm,0.6s								
MUGIO				AML		AML			
	comp=E,98µm,0.6s								
WET	**Wettzell**	**2.76**	**359**	*e*Pn		**Pn**	**04 53 33.2**	**+1.0**
WET				*e*Pg		**Pg**	**04 53 40.5**	**-0.6**
WET				*e*Sn		**Sn**	**04 54 06.2**	**+0.8**
WET				*e*Sg		**Sg**	**04 54 16.2**	**-0.6**
MPPT	**Montemurlo**	**2.76**	**209**	P		**Pn**	**04 53 33.2**	**+1.0**
MPPT				S		**Sn**	**04 54 07.8**	**+2.3**
KHC	**Kasperske Hory**	**2.78**	**9**	*e*PN		**Pn**	**04 53 33.6**	**+1.2**
KHC				*e*PG		**Pb**	**04 53 39.5**	**+1.8**
KHC				*e*SN		**Sn**	**04 54 07.4**	**+1.6**
KHC				*e*SG		**Sg**	**04 54 17.3**	**-0.1**
	comp=E,23nm,0.6s								
POPM	**Popiglio**	**2.81**	**214**	⇓P		**Pn**	**04 53 34.6**	**+1.8**
POPM				AML		AML			
	comp=E,90µm,0.7s								
POPM				AML		AML			
	comp=N,104µm,1.1s								
NORI	**Noerdlinger Ri**	**2.82**	**327**	*e*Pn		**Pn**	**04 53 34.5**	**+1.6**
NORI				*e*Sn		**Sn**	**04 54 08.0**	**+1.2**
NORI				*e*Sg		**Sg**	**04 54 17.6**	**-1.0**
DUGI	**Dugi Otok**	**2.82**	**147**	*e*Pn		**Pn**	**04 53 33.0**	**0.0**
PIEI	**Pieia**	**2.87**	**186**	P		**Pn**	**04 53 33.6**	**0.0**
PIEI				S		**Sn**	**04 54 08.3**	**+0.3**
PIEI				AML		AML			
	comp=E,96µm,0.2s								
PIEI				AML		AML			
	comp=N,47µm,0.6s								
CARD	**Cardoso**	**2.94**	**217**	P		**Pn**	**04 53 35.0**	**+0.4**
CARD				S		**Sn**	**04 54 12.0**	**+2.4**
MMUR	**Monte Murano**	**2.95**	**179**	S		**Sn**	**04 54 05.0**	**-5.0**
ATPI	**Pietralunga -**	**2.96**	**188**	⇓P		**Pn**	**04 53 37.2**	**+2.3**
FUSIO	**Fusio**	**2.97**	**273**	P		**Pb**	**04 53 38.4**	**-2.6**
FUSIO				AML		AML			
	comp=E,69µm,0.6s								
FUSIO				AML		AML			
	comp=N,78µm,0.9s								
MAIM	**Mastiano**	**3.02**	**216**	P		**Pn**	**04 53 35.8**	**0.0**
MAIM				S		**Sn**	**04 54 13.5**	**+1.7**
ATVO	**AVT- Monte Val**	**3.03**	**188**	P		**Pn**	**04 53 37.2**	**+1.3**
ATVO				S		**Sn**	**04 54 12.9**	**+0.8**
ATVO				AML		AML			
	comp=N,64µm,0.8s								
ATVO				AML		AML			
	comp=E,56µm,1.2s								
PP3	**Marolino**	**3.05**	**171**	P		**Pn**	**04 53 35.0**	**-1.0**
PP3				AML		AML			
	comp=E,255µm,1.4s								
PP3				AML		AML			
	comp=N,172µm,0.5s								
OSSC	**Osservatorio P**	**3.11**	**204**	P		**Pn**	**04 53 36.9**	**-0.1**
OSSC				S		**Sn**	**04 54 13.9**	**-0.1**
OSSC				AML		AML			
	comp=E,53µm,0.7s								
OSSC				AML		AML			
	comp=N,45µm,0.6s								
GORR	**Gorreto**	**3.13**	**237**	P		**Pn**	**04 53 38.3**	**+1.1**
GORR				S		**Sn**	**04 54 15.8**	**+1.4**
GORR				AML		AML			
	comp=N,91µm,0.6s								
GORR				AML		AML			
	comp=E,83µm,0.5s								
BNALP	**Bannalp**	**3.15**	**280**	P		**Pn**	**04 53 40.1**	**+2.4**
BNALP				AML		AML			
	comp=N,76µm,0.7s								
BNALP				AML		AML			
	comp=E,58µm,0.7s								
MORI	**Morici**	**3.19**	**141**	*e*Pn		**Pn**	**04 53 38.1**	**+0.1**
SLE	**Schleitheim**	**3.34**	**296**	P		**Pn**	**04 53 41.6**	**+1.4**
BLY	**Banja Luka**	**3.40**	**117**	P		**Pb**	**04 53 48.4**	**+0.2**
RNCA	**Ronca, Sant'Ol**	**3.41**	**237**	P		**Pb**	**04 53 45.0**	**-3.4**
RNCA				S		**Sn**	**04 54 25.0**	**+3.7**
KIJV	**Kijevo**	**3.41**	**133**	*e*Pn		**Pn**	**04 53 41.9**	**+0.8**
GRF	**Grafenberg Arr**	**3.50**	**341**	*e*Sg		**Sg**	**04 54 42.1**	**+1.5**
SULZ	**Cheisacher**	**3.50**	**291**	P		**Pn**	**04 53 44.4**	**+2.0**
KRUC	**Moravsky**	**3.54**	**40**	*e*PN		**Pn**	**04 53 43.2**	**+0.3**
KRUC				*e*SN		**Sn**	**04 54 25.0**	**+0.3**
MODS	**Modra-Piesok**	**3.55**	**54**	*e*PN		**Pn**	**04 53 44.6**	**+1.6**
MODS				*e*PG		**Pg**	**04 53 53.8**	**-2.3**
MODS				*e*SG		**Sg**	**04 54 39.0**	**-3.1**
EMBD	**Embd, Matterta**	**3.55**	**269**	P		**Pn**	**04 53 46.4**	**+3.3**
PCP	**Piancastagn**	**3.61**	**241**	P		**Pn**	**04 53 45.0**	**+1.2**
PCP				AML		AML			
	comp=N,56µm,1.6s								
PCP				AML		AML			
	comp=E,46µm,0.5s								
ARCI	**Arcidosso**	**3.69**	**197**	P		**Pb**	**04 53 52.1**	**-1.2**
BFO	**Black Forest**	**3.69**	**303**	*e*Pn		**Pn**	**04 53 46.6**	**+1.6**
BFO				*e*Sg		**Sg**	**04 54 47.9**	**+1.1**
BALST	**Balsthal**	**3.73**	**287**	P		**Pn**	**04 53 47.0**	**+1.5**
PRU	**Pruhonice**	**3.76**	**16**	*e*SN		**Sn**	**04 54 30.0**	**+0.1**
PRU				*e*SG		**Sg**	**04 54 45.5**	**-3.3**
	comp=E,16nm,0.5s								
KIZ	**Kirchzarten**	**3.77**	**296**	P		**Pn**	**04 53 47.3**	**+1.2**
TERO	**Teramo**	**3.79**	**173**	P		**Pn**	**04 53 46.7**	**+0.3**
TERO				AML		AML			
	comp=N,35µm,0.6s								
TERO				AML		AML			
	comp=E,31µm,1.3s								
WERN	**Wernitzgruen**	**3.92**	**355**	*e*Pg		**Pg**	**04 54 03.0**	**-0.3**
WERN				*e*Sn		**Sn**	**04 54 34.3**	**+0.3**
CANO	**Canova, Maglio**	**3.98**	**238**	P		**Pn**	**04 53 48.8**	**-0.1**
CANO				AML		AML			
	comp=N,69µm,0.4s								
CANO				AML		AML			
	comp=E,119µm,1.1s								
GUNZ	**Gunzen**	**4.00**	**354**	*e*Pg		**Pg**	**04 54 04.1**	**-0.7**
GUNZ				*e*Sn		**Sn**	**04 54 35.2**	**-0.7**
BOURR	**Bourrignon**	**4.05**	**286**	P		**Pn**	**04 53 51.3**	**+1.4**
RICI	**Ricice**	**4.14**	**133**	*e*Pn		**Pn**	**04 53 51.2**	**0.0**
MAKA	**Makarska**	**4.24**	**136**	*e*Pn		**Pn**	**04 53 52.5**	**+0.1**
PVCC	**Panska Ves**	**4.28**	**14**	*e*SG		**Sg**	**04 55 03.9**	**-1.7**
	comp=E,26nm,0.6s								
WLS	**Welschbruch**	**4.31**	**300**	P		**Pn**	**04 53 54.9**	**+1.5**
IMI	**Imperia**	**4.35**	**237**	S		**Sn**	**04 54 46.0**	**+1.3**
MOX	**Moxa**	**4.35**	**349**	*e*Pn		**Pn**	**04 53 54.6**	**+0.6**
MOX				*e*Sn		**Sn**	**04 54 42.8**	**-1.8**
MOX				*e*Sg		**Sg**	**04 55 06.7**	**-1.1**
CDF	**Champ du Feu**	**4.35**	**300**	*e*Pn		**Pn**	**04 53 55.0**	**+0.9**
CDF				*e*Sn		**Sn**	**04 54 46.3**	**+1.6**
	comp=E,4.9nm,0.4s								
HINF	**Hinteralfeld**	**4.40**	**291**	*e*Pn		**Pn**	**04 53 55.6**	**+0.9**
HINF				*e*Sn		**Sn**	**04 54 45.7**	**-0.2**
	comp=E,10nm,0.2s								
CHMF	**Charmoille**	**4.41**	**284**	P		**Pn**	**04 53 55.9**	**+1.1**
LPG	**La Plagne**	**4.42**	**261**	*e*Pn		**Pn**	**04 53 57.4**	**+2.3**
LPL	**La Plagne**	**4.42**	**261**	*e*Pn		**Pn**	**04 53 58.1**	**+2.9**
LPEL	**Lama dei Pelig**	**4.43**	**168**	P		**Pb**	**04 54 04.7**	**-1.1**
RONF	**Ronchamp**	**4.51**	**289**	P		**Pn**	**04 53 57.4**	**+1.2**
VYHS	**Vyhne**	**4.52**	**60**	*e*PN		**Pn**	**04 53 55.9**	**-0.4**
BRG	**Berggiesshubel**	**4.54**	**8**	Pg		**Pg**	**04 54 12.7**	**-2.3**
BRG				Amp			04 54 13.8		
	comp=Z,3.5nm,0.6s								
BRG	**Berggiesshubel**	**4.54**	**8**	Sn		**Sn**	**04 54 48.5**	**-0.7**
BRG				Sg		**Sg**	**04 55 10.7**	**-3.0**
BRG				Amp			04 55 17.3		
	comp=Z,8.6nm,0.6s								
DPC	**Dobruska-Polom**	**4.56**	**28**	*e*SG		**Sg**	**04 55 12.0**	**-2.4**
	comp=Z,11nm,0.5s								
LSTV	**Lastovo**	**4.58**	**141**	*e*Pn		**Pn**	**04 53 57.0**	**-0.2**
GIMEL	**St. Georges /**	**4.62**	**274**	P		**Pn**	**04 53 54.7**	**-3.1**
VIVA	**Pratoni del Vi**	**4.64**	**182**	P		**Pn**	**04 53 59.9**	**+1.9**
MBDF	**Montbardon**	**4.65**	**251**	*e*Pn		**Pn**	**04 53 57.4**	**-0.8**
SBF	**Sospel**	**4.65**	**239**	*e*Pn		**Pn**	**04 53 58.6**	**+0.5**
SBF				*e*Sn		**Sn**	**04 54 51.6**	**-0.4**
	comp=Z,5.8nm,0.2s								
BOUC	**Bouclans**	**4.67**	**283**	P		**Pn**	**04 53 59.7**	**+1.2**
CABF	**La Chapelle**	**4.74**	**275**	*e*Pn		**Pn**	**04 54 00.7**	**+1.2**
HAU	**Haudompre**	**4.78**	**292**	*e*Pn		**Pn**	**04 54 00.9**	**+0.9**
HAU	**Haudompre**	**4.78**	**292**	*e*Pg		**Pg**	**04 54 18.0**	**-1.7**
HAU				*e*Sn		**Sn**	**04 54 54.9**	**-0.3**
	comp=Z,27nm,0.5s								
RIVEL	**MONT RIVEL**	**4.86**	**277**	P		**Pn**	**04 54 02.5**	**+1.4**
TNS	**Taunus Mts**	**4.87**	**324**	*e*Pn		**Pn**	**04 54 03.0**	**+1.8**
STON	**Ston**	**4.88**	**134**	⇑P		**Pn**	**04 54 00.6**	**-0.7**
LATB	**Latina**	**4.89**	**180**	S		**Sn**	**04 54 54.0**	**-3.9**
OGAG	**Argentiere**	**4.91**	**249**	P		**Pn**	**04 54 06.0**	**+4.2**
CLL	**Collm**	**4.92**	**0**	*e*(Pn)		**Pn**	**04 54 04.0**	**+2.1**
CLL				*i* Sn		**Sn**	**04 54 58.2**	**-0.5**
CLL				*i* Sg		**Sg**	**04 55 25.3**	**-0.9**
	comp=Z,13nm,0.9s								
APRC	**Apricena**	**4.99**	**157**	P		**Pn**	**04 54 02.0**	**-0.8**
OGSM	**Saint Maurice**	**5.11**	**264**	P		**Pn**	**04 54 06.4**	**+1.9**
OG35	**Corcelles**	**5.13**	**269**	P		**Pn**	**04 54 06.1**	**+1.3**
SACR	**S. Croce Del S**	**5.15**	**165**	S		**Sn**	**04 55 05.0**	**+0.7**
GRN	**Grenoble**	**5.17**	**260**	P		**Pn**	**04 54 08.3**	**+3.0**
ORIF	**Oris-en-Rattie**	**5.17**	**256**	*e*Pn		**Pn**	**04 54 06.4**	**+1.1**
ORIF				*e*Sn		**Sn**	**04 55 04.5**	**-0.4**
	comp=Z,6.2nm,0.5s								
ORIF	**Oris-en-Rattie**	**5.17**	**256**	P		**Pn**	**04 54 08.4**	**+3.1**
PAGF	**Fort de Pagny**	**5.36**	**296**	*e*Pn		**Pn**	**04 54 09.8**	**+2.0**
LMR	**La Mourre**	**5.50**	**239**	*e*Pn		**Pn**	**04 54 09.4**	**-0.4**
LMR				*e*Sn		**Sn**	**04 55 11.6**	**-1.3**
	comp=Z,2.0nm,0.3s								
WLF	**Walferdange**	**5.62**	**308**	*e*Pn		**Pn**	**04 54 14.5**	**+3.2**
KASTN	**Kahler Asten**	**5.67**	**330**	*e*Pn		**Pn**	**04 54 13.8**	**+1.7**
VIVF	**Saint-Julien-l**	**6.00**	**258**	*e*Pn		**Pn**	**04 54 17.3**	**+0.6**
SMF	**Signal de Mont**	**6.29**	**276**	*e*Pn		**Pn**	**04 54 21.3**	**+0.6**
LOR	**Lormes**	**6.30**	**281**	*e*Pn		**Pn**	**04 54 21.3**	**+0.5**
	baz=102								
LOR				*e*Sn		**Sn**	**04 55 31.5**	**-1.1**
	comp=Z,2.7nm,0.3s								
SSF	**Saint Saulge**	**6.53**	**279**	*e*Pn		**Pn**	**04 54 24.8**	**+0.9**
AVF	**Avril sur Loir**	**6.63**	**277**	*e*Pn		**Pn**	**04 54 26.1**	**+0.9**
BAIF	**Baives**	**6.90**	**305**	*e*Pn		**Pn**	**04 54 29.5**	**+0.6**
BGF	**Bois d'Agland**	**6.98**	**275**	*e*Pn		**Pn**	**04 54 30.9**	**+0.8**
TCF	**Toulx Ste Croi**	**7.44**	**273**	*e*Pn		**Pn**	**04 54 37.1**	**+0.7**

AZER ***10*** *04:54:58.7±0.9, 34°.81N×46°.37E, h10km, Error ellipse: s-maj=21.8km s-min=17.3km az=253.0*
TEH ***10*** *04:55:04.6, 35°.35N×46°.25E, h6km, ML4.4*
ISN ***10*** *04:55:04.6±0.9, 35°.35N×46°.29E, h10km±184km, ML4.0*
IDC ***10*** *04:55:05.8±0.7, 35°.32N×46°.25E, h0km, mb4.1/17, mbtmp4.1/28, ML4.1/7, MS3.4/19, Error ellipse: s-maj=14.8km s-min=12.0km az=177.0*
NEIC ***10*** *04:55:06.3±2.1, 35°.13N±0°.04×46°.13E±0°.08, h10km±1km, Error ellipse: s-maj=13.5km s-min=3.0km az=239.0*
GII ***10*** *04:55:12.4±0.0, 35°.28N×46°.33E, h2km*
ISC 10 04:55:06.1±0.4,**35°.18N**±0°.02×**46°.19E**±0°.03,**h10km**,**n251**, σ2s**18**/253,**mb4.2**/29,**MS3.3**/15,**15C-6D,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
IDHR	**Dehrash**	**0.51**	**161**	*e*Pg		**Pn**	**04 55 19.1**		**-0.5**
IDHR				*e*			04 55 31.4		
	comp=Z,7µm,0.2s								
ILIN	**Lien**	**0.69**	**112**	*e*Pg		**Pg**	**04 55 19.1**		**-0.4**
ILIN				*e*Sg		**Sb**	**04 55 31.4**		**+1.3**
ILIN				*e*			04 55 34.8		
	comp=Z,47µm,0.7s								
IGHG	**Ghaleghazi**	**0.91**	**160**	*e*Pn		**Pn**	**04 55 26.5**		**+1.4**
IGHG				*e*			04 55 58.2		
	comp=Z,36µm,0.8s								
SNGE	**Sanandaj**	**0.96**	**95**	*e*Pg		**Pg**	**04 55 22.3**		**-2.2**
KER	**Kermanshah**	**1.11**	**135**	*e*Pg		**Pn**	**04 55 28.4**		**+0.5**
KER				*e*			04 55 49.3		
	comp=Z,53µm,0.6s								
KCHF	**Cheshme Sefid,**	**1.15**	**142**	*e*Pg		**Pn**	**04 55 29.5**		**+1.1**
KCHF				*e*			04 55 52.9		
	comp=Z,91µm,0.7s								
IKOM	**Komasi**	**1.48**	**132**	*e*Pn		**Pg**	**04 55 34.6**		**0.0**
IBZA	**Bozab**	**1.55**	**117**	*e*Pn		**Pb**	**04 55 35.1**		**0.0**
IBZA				*e*			04 56 06.3		
	comp=Z,62µm,0.6s								
MAHB	**Mahabad**	**1.63**	**346**	*e*Pn		**Pn**	**04 55 32.8**		**-2.2**
MAHB				*e*			04 56 04.2		
	comp=Z,11µm,0.5s								
IBDR	**Badra**	**2.08**	**186**	*e*Pn		**Pg**	**04 55 45.0**		**-0.9**
IBDR				*e*Sn		**Sg**	**04 56 14.0**		**+1.1**
IBDR				AML		AML	04 56 34.4		
	comp=N,962nm,0.4s								
IBDR				AML		AML	04 56 34.6		
	comp=E,1µm,0.6s								
IDOB	**Doab**	**2.16**	**130**	*e*Pn		**Pb**	**04 55 45.4**		**+0.1**
IDOB				*e*			04 56 27.3		
	comp=Z,28µm,0.9s								
HSAM	**Samen**	**2.21**	**115**	*e*Pn		**Pb**	**04 55 45.9**		**-0.5**
IHSH	**Hashtrud**	**2.29**	**22**	*e*Pn		**Pn**	**04 55 43.7**		**-0.5**
IHSH				*e*			04 56 32.4		
	comp=Z,16µm,0.7s								
BHD	**Baghdad**	**2.42**	**219**	*e*Pn		**Pb**	**04 55 50.0**		**+0.2**
BHD				*e*Sn		**Sg**	**04 56 23.0**		**-1.0**
BHD				AML		AML	04 56 36.6		
	comp=E,1µm,0.6s								
HAGD	**Aghdareh**	**2.45**	**98**	*e*Pn		**Pn**	**04 55 48.2**		**+1.8**
HAGD				*e*			04 56 27.0		
	comp=Z,16µm,0.6s								
IAZR	**Azarshahr**	**2.50**	**356**	*e*Pn		**Pn**	**04 55 47.9**		**+0.9**
ZNJK	**Zanjan**	**2.51**	**53**	*e*Pn		**Pn**	**04 55 47.3**		**+0.1**
IBST	**Bostanabad**	**2.58**	**13**	*e*Pn		**Pn**	**04 55 47.5**		**-0.6**
ISRB	**Sarab**	**2.90**	**24**	*e*Pn		**Pn**	**04 55 52.3**		**-0.2**
ISRB				*e*			04 56 44.7		
	comp=Z,7µm,0.5s								
CUKT	**Cukurca**	**2.93**	**315**	*e*P		**Pn**	**04 55 53.3**		**+0.4**
ITBZ	**Tabriz**	**3.04**	**359**	*e*Pn		**Pn**	**04 55 54.1**		**-0.4**
IRAZ	**Razeghan**	**3.07**	**85**	*e*Pn		**Pn**	**04 55 56.0**		**+1.1**
ISHB	**Shabestar**	**3.13**	**352**	*e*Pn		**Pn**	**04 55 55.2**		**-0.5**
ISHB				*e*			04 56 59.2		
	comp=Z,11µm,0.7s								
IHRS	**Heris**	**3.20**	**12**	*e*Pn		**Pn**	**04 55 56.9**		**+0.2**
IHRS				*e*			04 56 51.6		
	comp=Z,8µm,0.7s								
ASAO	**Ashtian**	**3.22**	**100**	*e*Pn		**Pn**	**04 56 00.7**		**+3.7**
JIR1	**Jirandeh**	**3.31**	**62**	*e*Pn		**Pn**	**04 55 58.0**		**-0.1**
KHMZ	**Khomeyn**	**3.44**	**114**	*e*Pn		**Pn**	**04 56 03.9**		**+4.0**
RAFI	**Al-Rafai**	**3.45**	**181**	*e*Pn		**Pb**	**04 56 04.0**		**-3.3**
RAFI				*e*Sn		**Sb**	**04 56 48.0**		**-1.3**
RAFI				AML		AML	04 57 23.1		
	comp=E,640nm,0.5s								
GIDE	**GILAN DEYLAMAN**	**3.48**	**59**	*e*Pn		**Pn**	**04 56 00.5**		**0.0**
IMRD	**Marand**	**3.54**	**354**	*e*Pn		**Pn**	**04 56 01.5**		**+0.1**
ORD	**Ordubad**	**3.74**	**358**	P		**Pn**	**04 56 05.5**		**+1.5**
	SNR=78								
ORD				S		**Sb**	**04 56 59.0**		**+1.3**
QALM	**Alamut, Qazvin**	**3.83**	**70**	*e*Pn		**Pn**	**04 56 05.8**		**+0.4**
LRK	**Lerik**	**3.86**	**26**	P		**Pn**	**04 56 07.0**		**+1.3**
	SNR=38								
LRK				S		**Sb**	**04 56 58.4**		**-2.9**
GRMI	**Germi**	**3.87**	**20**	*e*Pn		**Pn**	**04 56 05.8**		**0.0**
ASTR	**Astara**	**3.97**	**31**	P		**Pn**	**04 56 08.0**		**+1.0**
	SNR=22								
ASTR

comp=Z,4.2nm,0.3s,baz=60,slow=7.7,SNR=20
ASF Lg Lg 04 59 24.4
comp=Z,1.1nm,0.3s,baz=82,slow=20,SNR=4.0
comp=Z,7.7nm,0.3s
MRVT Maraveh tapeh 8.36 70 *e*Pn **Pn 04 57 09.9 +2.5**
KBZ Khabaz 8.90 344 Pn **Pn 04 57 18.2 +3.5**
comp=Z,3.2nm,0.8s,baz=153,slow=9.6,SNR=8.9
TPRV Parvadeh(Tabas 8.97 101 *e*Pn **Pn 04 57 18.4 +2.6**
TABS Tabas 9.16 96 *e*Pn **Pn 04 57 20.9 +2.4**
KVAR Kislovodsk Arr 9.16 344 LR LR 05 00 30.1
comp=Z,491nm,20.1s,baz=78,slow=36
TKDS Koohdasht(Taba 9.17 97 *e*Pn **Pn 04 57 20.4 +1.8**
MMAI Mount Meron Ar 9.20 259 Pn **Pn 04 57 21.1 +2.1**
comp=Z,1.0nm,0.3s,baz=95,slow=16,SNR=2.5
MMAI Lg Lg 05 00 00.5
comp=Z,2.2nm,0.3s,baz=86,slow=22,SNR=3.7
comp=Z,0.8nm,0.3s
HMDT Nahal Hemdat 9.35 255 Pn Pn 04 57 30.7 +10
SALP Salfit 9.68 254 Pn Pn 04 57 36.3 +11
GEYT Alibeck 9.98 71 Pn **Pn 04 57 31.2 +1.6**
comp=Z,0.8nm,0.3s,baz=260,slow=15,SNR=6.8
comp=Z,8.2nm,0.8s
GEYT Alibeck 9.98 71 Pn **Pn 04 57 30.6 +0.9**
GYA0B ALIBECK ARRAY 9.98 71 **Pn 04 57 30.9 +1.3**
SHMA Al-Shehemyia 10.17 155 P **Pn 04 57 33.4 +1.3**
SHMA S **Sn 04 59 24.8 -1.4**
KRBR Kerman 10.32 117 *e*Pn **Pn 04 57 36.1 +1.6**
ZFRI Zfri 10.34 247 Pn Pn 04 57 45.7 +11
PRNI Paran 10.57 246 Pn Pn 04 57 46.9 +9.2
HRFI Mount Harif 10.71 244 Pn Pn 04 57 48.2 +8.7
KRMI Paran Flat 10.90 246 Pn Pn 04 57 51.4 +9.2
MBRI Mt Berech 10.93 244 Pn Pn 04 57 53.5 +11
BRTR Keskin Array B 10.95 298 Pn **Pn 04 57 47.5 +4.5**
comp=Z,2.9nm,0.8s,baz=120,slow=12,SNR=14
EIL Elat 10.96 243 Lg Lg 05 00 58.4
comp=Z,0.5nm,0.3s,baz=153,slow=8.8,SNR=3.8
EIL Elat 10.96 243 Pn Pn 04 57 53.2 +10
BSRN Basiran 11.26 103 *e*Pn **Pn 04 57 49.0 +1.8**
RAYN Ar Rayn 11.63 183 Pn **Pn 04 57 52.8 +0.5**
RAYN Ar Rayn 11.63 183 Pn **Pn 04 57 53.3 +1.0**
JRN Qarnain Island 11.72 149 P **Pn 04 57 53.4 +0.1**
JRN P **Pn 04 57 53.4 +0.1**
JRN S **Sn 04 59 59.8 -4.5**
JRN S **Sn 04 59 59.8 -4.5**
SHRT Shahrakht 11.75 93 *e*Pn **Pn 04 57 55.5 +1.6**
SHME Shamm 12.50 134 P **Pn 04 58 04.2 +0.2**
SNR=11
SHME S **Sn 05 00 17.8 -5.5**
SHME Shamm 12.50 134 *i* Pn **Pn 04 58 03.6 -0.4**
SNR=11
BANOM Banah 12.69 134 P **Pn 04 58 06.3 -0.4**
SNR=14
BANOM S **Sn 05 00 22.5 -5.5**
BANOM Banah 12.69 134 *i* Pn **Pn 04 58 06.2 -0.4**
SNR=14
MASF Masafi 13.03 136 P **Pn 04 58 11.2 -0.1**
SNR=13
MSFE Esma-Masafi 13.04 136 *i* Pn **Pn 04 58 10.8 -0.6**
SNR=13
NAZ Nazwa, Dubai 13.05 139 *i* Pn **Pn 04 58 10.1 -1.4**
SNR=10
MDH Madha 13.16 136 P **Pn 04 58 12.9 -0.2**
SNR=12
MDH S **Sn 05 00 33.6 -6.0**
MDH Madha 13.16 136 *i* Pn **Pn 04 58 12.2 -0.9**
SNR=12
ASUD Al Ashush, Dub 13.17 141 *i* Pn **Pn 04 58 13.5 +0.3**
SNR=5.7
FAQ Al Faqa, Dubai 13.21 139 *i* Pn **Pn 04 58 13.6 -0.1**
SNR=6.3
UOSS Minazif 13.38 137 Pn **Pn 04 58 16.4 +0.3**
UOSS Minazif 13.38 137 P **Pn 04 58 16.5 +0.3**
UOSS S **Sn 05 00 39.6 -5.4**
UOSS Minazif 13.38 137 Pn **Pn 04 58 12.3 -3.8**
HATD Hatta, Dubai 13.44 138 P **Pn 04 58 17.1 +0.2**
HATD S **Sn 05 00 40.3 -6.0**
HATD Hatta, Dubai 13.44 138 Pn **Pn 04 58 16.7 -0.2**
ASHO Ashiyiah 13.51 138 P **Pn 04 58 18.0 +0.1**
SNR=12
ASHO S **Sn 05 00 41.3 -6.8**
ASHO Ashiyiah 13.51 138 *i* Pn **Pn 04 58 17.1 -0.8**
SNR=12
ZHSF Zahedan 13.52 110 *e*Pn **Pn 04 58 21.5 +3.4**
JASK Jask - Hormozg 13.69 130 P **Pn 04 58 19.8 -0.5**
ALNE Al Ain 13.85 141 P **Pn 04 58 22.7 +0.1**
SOHO SOHO 14.21 138 P **Pn 04 58 27.3 -0.1**
SOHO S **Sn 05 00 59.2 -5.8**
SOHO SOHO 14.21 138 *i* Pn **Pn 04 58 26.1 -1.2**
SNR=6.0
ARQ Araqi 14.84 140 P **Pn 04 58 36.2 +0.1**
ARQ S **Sn 05 01 15.3 -5.3**
HOQ Hoqain 15.07 137 P **Pn 04 58 38.7 -0.5**
SMDO Samad 15.90 136 P **Pn 04 58 49.3 -0.8**
SNR=5.7
WSAR Wadi Sarin 16.10 134 Pn **Pn 04 58 51.5 -1.0**
comp=Z,2.0nm,0.3s,baz=343,slow=7.8,SNR=12
WSAR Sn **Sn 05 01 43.4 -7.7**
comp=Z,0.9nm,0.3s,baz=157,slow=17,SNR=10
WSAR LR LR 05 06 28.1
comp=Z,92nm,19.6s,baz=340,slow=42
JMDO Jabal Madar 16.48 138 P **Pn 04 58 56.4 -1.0**
WBK Wadi Bani Khal 16.78 135 P **Pn 04 59 00.9 -0.4**
HARR Harsova 16.88 310 ⇑P **P 04 59 04.0 -0.4**
BELG Belogornoye 17.24 3 P **Pn 04 59 05.5 -1.3**
comp=Z,1.7nm,0.3s,baz=166,slow=11,SNR=4.1
BELG LR LR 05 07 43.8
comp=Z,129nm,18.2s,baz=150,slow=44
comp=Z,15nm,0.8s
ABKAR Akbulak array 17.33 32 **Pn 04 59 07.4 -0.5**
ABKAR Akbulak array 17.33 32 **Pn 04 59 07.7 -0.3**
ABKAR IAmb IAmb 04 59 12.7
comp=Z,4.8nm,1.2s
JLN Jalan Bani Buh 17.39 135 P **Pn 04 59 08.3 -0.6**
IDI Anoyia 17.40 277 P **P 04 59 12.0 +1.6**
comp=Z,1.7nm,0.3s,baz=78,slow=12,SNR=10
comp=Z,10nm,0.9s
AKTO Aktyubinsk 17.51 26 P **Pn 04 59 08.1 -2.0**
comp=Z,0.5nm,0.3s,baz=203,slow=12,SNR=10
comp=Z,2.3nm,0.3s
MHTO MHTO 17.53 141 P **Pn 04 59 10.8 +0.2**
DQM DQM 18.20 144 P **P 04 59 19.3 +0.1**
MLR Muntele Rosu 18.50 310 ⇑P **Pn 04 59 23.5 +0.9**
MLR Muntele Rosu 18.50 310 P **Pn 04 59 23.5 +0.9**
comp=Z,1.4nm,0.5s,baz=90,slow=20,SNR=2.1
ABTO Aybut 18.86 159 P **Pn 04 59 27.0 +0.1**
RBK Rabkut 19.00 156 P **Pn 04 59 29.1 +0.4**
RBK P **P 04 59 29.3 +1.3**
VOIR 19.04 309 ⇓P **Pn 04 59 30.6 +1.5**
DOPR Dopca 19.06 311 ⇑P **Pn 04 59 30.3 +1.0**
DMTO DMTO 19.07 154 P **Pn 04 59 29.6 +0.2**
SNR=10
BIZ Bicaz 19.10 314 ⇑P **Pn 04 59 33.2 +3.5**
ARR Arges 19.28 308 ⇑P **Pn 04 59 32.3 +0.4**
VTS Vitosha 19.31 299 ⇓P **Pn 04 59 32.2 -0.2**
GAR Garm 19.61 72 P **P 04 59 33.6 -1.1**
ITM Ithomi 19.67 283 P **P 04 59 35.3 +0.1**
ITM IAmb IAmb 04 59 53.0
comp=Z,17nm,0.8s
AKASG Malin Array Be 19.79 327 P **P 04 59 35.4 -1.0**
comp=Z,0.4nm,0.3s,baz=131,slow=12,SNR=8.9
AKASG LR LR 05 07 43.3
comp=Z,106nm,21.5s,baz=117,slow=38
comp=Z,2.1nm,0.8s
BURAR Bucovina Array 19.97 315 ⇑P **Pn 04 59 40.0 -0.1**
BURAR Bucovina Array 19.97 315 P **P 04 59 37.7 -0.8**
BLKB Belogradchik 19.98 302 ⇓P **Pn 04 59 40.2 -0.1**
BUR08 Bucovina Ar. S 19.99 315 P **P 04 59 38.2 -0.6**
DJES Djerdap 20.41 305 ⇑P Pn 04 59 45.3 0.0
KK31 Karatay Array 20.41 60 P **P 04 59 43.9 +0.6**
KK31 IAmb IAmb 04 59 57.6
comp=Z,14nm,1.1s
KKAR Karatay Array 20.41 60 **P 04 59 44.0 +0.7**
KKAR Karatay Array 20.41 60 P **P 04 59 45.1 +1.8**
KKAR IAmb IAmb 04 59 57.6
comp=Z,14nm,1.1s
GZR Gura Zlata 20.50 307 ⇑P Pn 04 59 45.6 -0.7
HERR Herculane 20.55 305 ⇓P **P 04 59 45.9 +1.1**
BOVS Bovan 20.66 301 ⇑P Pn 04 59 47.2 -0.9
KBN Korca 20.73 293 P **P 04 59 46.5 -0.3**
MDVR Moldovita 20.99 305 ⇑P Pn 04 59 51.6 -0.5
OBN Obninsk 21.02 344 **P 04 59 48.2 -1.4**
comp=Z,4.5nm,0.4s,baz=336,slow=23,SNR=4.9
comp=Z,4.5nm,0.4s
DRGR 21.09 310 ⇑P **P 04 59 52.0 +1.3**

BZS Buzias 21.34 307 ⇑P **P 04 59 55.2 +2.0**
SIRR Siria 21.55 308 ⇓P **P 04 59 57.3 +1.8**
DIVS Divibare 21.98 302 P **P 04 59 58.0 -2.2**
DIVS IAmb IAmb 05 00 29.4
comp=Z,5.4nm,1.0s
KOLS Kolonicke sedl 22.33 315 *e*P **P 05 00 05.6 +1.7**
CRVS Cervenica-Dubn 22.79 315 *e*P **P 05 00 11.3 +2.6**
ARU Arti 22.86 18 P **P 05 00 08.8 -0.7**
comp=Z,3.0nm,0.3s,baz=234,slow=11,SNR=8.7
ARU LR LR 05 11 25.0
comp=Z,54nm,18.0s,baz=221,slow=43
comp=Z,3.0nm,0.3s
ARU Arti 22.86 18 P **P 05 00 08.7 -0.7**
ARU IAmb IAmb 05 00 13.4
comp=Z,14nm,1.1s
AAK Ala-Archa 23.18 63 LR LR 05 11 45.9
comp=Z,45nm,19.0s,baz=266,slow=43
PSZ Piszkesteto 23.30 311 ⇑P **P 05 00 14.9 +0.8**
PSZ Piszkesteto 23.30 311 P **P 05 00 13.1 -1.0**
PSZ IAmb IAmb 05 00 25.0
comp=Z,7.0nm,0.9s
MORH Mrgy, Hungar 23.49 306 P **P 05 00 17.5 +1.6**
TIP Timpagrande 23.73 288 ⇑P **P 05 00 18.7 +0.3**
ATD Arta Tunnel 23.74 188 LR LR 05 09 52.5
comp=Z,70nm,18.0s,baz=164,slow=37
CSKK Cskako 24.12 309 P **P 05 00 22.8 +0.8**
VYHS Vyhne 24.18 312 *e*P **P 05 00 24.2 +1.7**
CUC Castrocucco 24.48 290 P **P 05 00 25.3 -0.1**
JAVC Velka Javorina 25.03 312 *e*P **P 05 00 33.6 +3.3**
MODS Modra-Piesok 25.09 311 *e*P **P 05 00 36.1 +5.3**
MORC Moravsky Berou 25.47 314 ⇑P **P 05 00 37.0 +2.8**
MORC Moravsky Berou 25.47 314 P **P 05 00 33.9 -0.4**
MORC IAmb IAmb 05 00 40.0
comp=Z,11nm,1.4s
MORC Moravsky Berou 25.47 314 *e*P **P 05 00 36.5 +2.2**
RONA Rosalia, Austr 25.49 309 *e*P **P 05 00 34.7 +0.3**
comp=Z,5.5nm,0.6s
CONA Conrad Observa 25.84 309 *e*P **P 05 00 38.4 +0.7**
comp=Z,7.4nm,0.9s
VRAC Vranov 25.86 312 ⇓P **P 05 00 41.0 +3.3**
VRAC Vranov 25.86 312 P **P 05 00 39.4 +1.7**
comp=Z,3.1nm,0.7s,baz=111,slow=11,SNR=3.4
comp=Z,3.1nm,0.7s
VRAC Vranov 25.86 312 *e*P **P 05 00 39.0 +1.3**
KRUC Moravsky 25.89 312 *e*P **P 05 00 39.4 +1.4**
KRLC Kraliky 26.04 314 *e*P **P 05 00 41.6 +2.1**
DPC Dobruska-Polom 26.42 314 *e*P **P 05 00 43.8 +0.9**
GERES GERESS Array B 27.49 310 P **P 05 00 53.4 +0.8**
comp=Z,0.5nm,0.4s,baz=115,slow=9.0,SNR=5.6
comp=Z,0.5nm,0.4s
KURBB Kurchatov Arra 28.00 47 P **P 05 00 57.3 +0.4**
comp=Z,1.3nm,0.9s,baz=254,slow=9.7,SNR=4.9
KURBB LR LR 05 13 07.3
comp=Z,50nm,20.2s,baz=152,slow=39
comp=Z,1.3nm,0.9s
SQTA Sankt Quirin 28.69 306 *e*P **P 05 01 03.6 +0.2**
comp=Z,3.9nm,0.4s
CLL Collm 28.73 314 *e*P **P 05 01 04.0 +0.5**
MOTA Moosalm 28.79 306 *e*P **P 05 01 04.5 +0.3**
comp=Z,1.4nm,0.4s
FETA Feichten 28.97 305 *e*P **P 05 01 06.2 +0.4**
comp=Z,3.0nm,0.6s
RETA Reutte 29.05 306 *e*P **P 05 01 06.9 +0.5**
comp=Z,2.1nm,0.4s
FINES FINESS Array B 29.23 340 P **P 05 01 07.7 -0.1**
comp=Z,4.2nm,0.9s,baz=137,slow=11,SNR=7.5
FINES LR LR 05 13 56.6
comp=Z,56nm,20.5s,baz=66,slow=39
comp=Z,4.2nm,0.9s
MK31 Makanchi Array 29.37 56 P **P 05 01 08.7 -0.6**
MKAR Makanchi Array 29.37 56 P **P 05 01 09.9 +0.7**
comp=Z,2.2nm,0.9s,baz=258,slow=6.1,SNR=13
MKAR LR LR 05 14 15.6
comp=Z,53nm,19.5s,baz=274,slow=39
comp=Z,2.2nm,0.9s
DAVOX Davos/Dischmat 29.50 304 P **P 05 01 11.0 +0.3**
comp=Z,1.9nm,0.4s,baz=180,slow=10,SNR=3.0
comp=Z,1.9nm,0.4s
DAVA Damuels 29.59 305 *e*P **P 05 01 11.5 +0.1**
comp=Z,4.2nm,0.4s
BNI Bardonecchia 31.50 300 P **P 05 01 26.6 -1.7**
HFS Hagfors 32.61 330 P **P 05 01 37.6 0.0**
comp=Z,4.4nm,0.7s,baz=128,slow=9.7,SNR=2.7
comp=Z,4.4nm,0.7s
ZALV Zalesovo Beam 32.77 43 P **P 05 01 39.0 0.0**
comp=Z,2.3nm,0.7s,baz=280,slow=8.6,SNR=7.5
ZALV LR LR 05 17 26.7
comp=Z,92nm,18.2s,baz=199,slow=41
comp=Z,2.3nm,0.7s
NOA NORSAR Array B 34.13 330 LR LR 05 17 01.7
comp=Z,79nm,18.4s,baz=70,slow=39
ARCES ARCESS Array B 36.25 348 P **P 05 02 08.7 -0.3**
comp=Z,1.6nm,0.9s,baz=150,slow=8.0,SNR=5.6
comp=Z,1.6nm,0.9s
TAM Tamanrasset 37.40 262 P **P 05 02 18.3 -1.2**
TAM IAmb IAmb 05 02 23.3
comp=Z,11nm,1.3s
ESDC Sonseca Array 39.66 292 P **P 05 02 39.1 +0.9**
comp=Z,1.7nm,0.8s,baz=69,slow=9.1,SNR=7.7
comp=Z,1.7nm,0.8s
PALK Pallekele 42.12 123 LR LR 05 20 39.2
comp=Z,48nm,19.1s,baz=62,slow=36
TORD Torodi Ar. Bea 45.66 253 P **P 05 03 29.1 +1.9**
comp=Z,1.4nm,1.0s,baz=44,slow=8.7,SNR=5.3
comp=Z,1.4nm,1.0s
TORD Torodi Ar. Bea 45.66 253 P **P 05 03 25.2 -1.9**
TORD IAmb IAmb 05 03 45.2
comp=Z,4.1nm,1.3s
CMAR Chiang Mai Arr 49.38 95 P **P 05 03 56.3 +0.2**
comp=Z,1.7nm,0.3s,baz=297,slow=8.3,SNR=11
CMAR LR LR 05 30 21.5
comp=Z,29nm,18.2s,baz=315,slow=43
comp=Z,1.7nm,0.3s
XAN Xi'an 50.86 72 P **P 05 04 03.3 -3.9**
XAN pP pP 05 04 09.6 -1.3
XAN pmax pmax
comp=Z,5.0nm,1.2s
YAK Yakutsk 56.66 34 LR LR 05 32 22.9
comp=Z,39nm,20.8s,baz=144,slow=40
PSI Prapat 58.45 111 LR LR 05 31 25.0
comp=Z,25nm,19.4s,baz=310,slow=37
BBTS Babate 59.49 267 LR LR 05 34 12.8
comp=Z,48nm,19.7s,baz=68,slow=39
SFJD Kangerlussuaq 60.71 333 LR LR 05 31 01.1
comp=Z,50nm,20.4s,baz=63,slow=36
KLR Kul'dur 61.66 48 P **P 05 05 26.1 +2.1**
comp=Z,0.5nm,0.4s,baz=276,slow=3.9,SNR=3.6
comp=Z,0.5nm,0.4s
KSRS Korea Array 63.83 61 P **P 05 05 38.4 -0.3**
comp=Z,3.2nm,0.7s,baz=287,slow=7.3,SNR=15
comp=Z,3.2nm,0.7s
BOSA Boshof 66.46 200 P **P 05 05 57.9 +2.1**
comp=Z,1.8nm,0.6s,baz=7.8,slow=6.3,SNR=8.4
comp=Z,1.8nm,0.6s
RCBR Riachuelo 86.88 261 LR LR 05 50 36.6
comp=Z,37nm,18.6s,baz=136,slow=38

IDC 10 05:36:06.2±11.0, 18°.59N×144°.87E, h288km±116km, mb3.1/2, mbtmp3.8/3, MS2.6/1, Error ellipse: s-maj=133.0km s-min=22.2km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.97**	**180**	S	S	05 38 07.9	-17
	37nm,0.3s,baz=3.7,slow=19,SNR=1.8						
JHJ	**Hachijo jima 2**	**15.18**	**343**	LR	LR	05 45 01.7	
	comp=Z,21nm,20.4s,baz=10,slow=35						
MJAR	**Matsushiro Arr**	**18.83**	**343**	P	P	05 40 05.3	-0.1
	0.8nm,0.3s,baz=161,slow=9.1,SNR=1.8						
WRA	**Warramunga Arr**	**39.66**	**196**	P	P	05 43 10.6	-0.4
	1.4nm,0.6s,baz=13,slow=8.5,SNR=39						
WRA				PcP	PcP	05 45 12.3	+0.6
	0.4nm,0.4s,baz=15,slow=3.5,SNR=3.5						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**43.34**	**195**	P	P	05 43 40.8	+0.1
	0.3nm,0.3s,baz=9.8,slow=7.3,SNR=7.1						
	0.3nm,0.3s						
LPAZ	**La Paz**	**148.45**	**91**	PKPbc	PKPbc	05 55 19.6	-1.1
	0.5nm,0.5s,baz=266,slow=5.4,SNR=4.8						

*NIED **10** 05:50:56.0, 36°.43N×140°.66E, h53km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-0.01; Mθθ0.66; Mφφ-0.64; Mrθ0.60; Mφθ-0.24; Mφr1.48; Fault plane solution: M₀1.66000×10¹⁴ NP1: φs135.00000°, δ15.00000°, λ17.00000°. NP2:φs29.00000°, δ86.00000°, λ104.00000°.*

JMA 10 05:50:56.0±0.1, 36°.4N±0°.2×140°.7E±0°.5, h53km, MV3.7/38, 5D, NORTHERN IBARAKI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.10**	**212**	P	Pn	05 51 04.3	+0.1
JHYU				S	Sn	05 51 10.0	0.0
JHO	**Hitachi**	**0.19**	**339**	P	Pn	05 51 04.7	0.0
JHO				S	Sn	05 51 10.6	-0.3
JYT	**Yasato**	**0.42**	**242**	⇓P	Pn	05 51 06.7	+0.1
JYT				⇓S	Sn	05 51 14.0	-0.2
JIHU	**Itakohorinouch**	**0.47**	**193**	P	Pn	05 51 07.5	+0.3
JIHU				S	Sn	05 51 16.1	+0.9
ONAJ	**Iwakimizuishiy**	**0.68**	**10**	P	Pn	05 51 09.0	-0.7
ONAJ				S	Sn	05 51 18.6	-1.0
JSB	**Shiboa**	**0.80**	**312**	⇓P	Pn	05 51 11.4	+0.2
JFK	**Kawauchi**	**0.95**	**11**	P	Pn	05 51 12.4	-0.8
JFK				*e*S	Sn	05 51 24.2	-1.7
JAG	**Ashikaga**	**0.97**	**270**	P	Pn	05 51 13.6	+0.2
JAG				*e*S	Sn	05 51 26.1	-0.1
JFT	**Otama**	**1.12**	**347**	*i* P	Pn	05 51 15.6	+0.2
JFT				*e*S	Sn	05 51 29.9	+0.1
JKT	**Katashina**	**1.18**	**287**	⇓P	Pn	05 51 16.9	+0.5
JKT				⇓S	Sn	05 51 32.4	+1.0
JFY	**Yanaizu**	**1.24**	**322**	*e*P	Pn	05 51 17.5	+0.5

*KRNET **10** 06:06:05.7±0.1, 39°.12N×74°.16E, mb3.1*
*SOME **10** 06:06:18.2, 39°.77N×73°.97E, h5km*
ISC 10 06:06:07.4±2.1, 39°.2N±0°.1×74°.15E±0°.07, h10km, n10, σ3°.26/20, 6C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**2.67**	**3**	⇑*e*P	**Pn**	**06 06 51.3**	**+0.6**
	baz=3.0						
ARLS				⇑*i*S	**Sn**	**06 07 24.6**	**+1.5**
	baz=3.0						
GAR	**Garm**	**2.99**	**268**	⇑*i*P	**Pn**	**06 06 54.9**	**-0.1**
	baz=69						
GAR				⇑*i*S	**Sn**	**06 07 30.8**	**-0.2**
	baz=69						
UCH	**Uchtor**	**3.04**	**5**	⇑*i*P	**Pn**	**06 06 56.9**	**+0.8**
	baz=5.0						
UCH				⇑*i*S	**Sn**	**06 07 34.3**	**+1.5**
	baz=5.0						
MRKS	**Merke**	**3.62**	**349**	*e*P	**Pb**	**06 07 12.7**	**+1.1**
	2.7nm,0.1s						
MRKS				*e*S	**Sb**	**06 07 51.8**	**-3.7**
	11nm,0.2s						
KST	**Kastek**	**4.08**	**19**	*e*P	**Pg**	**06 07 26.1**	**+0.4**
	2.6nm,0.2s						
KST				*e*S	**Sg**	**06 08 14.7**	**-3.8**
	7.6nm,0.7s						
IUG	**Iuzhnay**	**4.30**	**315**	*e*P	**Pg**	**06 07 28.8**	**-1.1**
	112nm,0.2s						
IUG				*e*S	**Sb**	**06 08 19.3**	**+4.0**
	13nm,0.2s						
KRBS	**Karabastau**	**4.64**	**14**	*e*P	**Pg**	**06 07 34.0**	**-2.4**
	1.4nm,0.3s						
KRBS				*e*S	**Sb**	**06 08 28.8**	**+3.8**
	2.6nm,0.4s						
KTBS	**Karatobe**	**4.90**	**22**	*e*P	**Pg**	**06 07 38.6**	**-2.6**
	0.6nm,0.2s						
KTBS				*e*S	**Sb**	**06 08 37.1**	**+4.7**
	3.6nm,0.2s						
KUU	**Kurty**	**4.97**	**19**	*e*P	**Pg**	**06 07 41.0**	**-1.6**
	0.6nm,0.1s						
KUU				*e*S	**Sb**	**06 08 40.7**	**+6.3**
	3.7nm,0.4s						
ARXS	**Arharly**	**5.72**	**28**	*e*P	**Pg**	**06 07 55.5**	**-1.5**
	1.5nm,0.3s						
ARXS				*e*S	**Sg**	**06 09 05.1**	**-5.9**
	2.8nm,0.3s						

WEL 10 06:14:30.2±1.1, 31°S±23'×17°9W±6'.4, h277km±25km, M4.5/4, mB4.6/3, ML4.8/7, MLv4.6/4, Mw(mB)3.9/3, Error ellipse: s-maj=0.1km s-min=0.0km az=109.7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.15**	**40**	P	Pn	06 15 14.3	-1.9
GLKZ				S	S	06 15 54.0	+1.3
WMGZ	**Waiomatatini S**	**7.09**	**194**	P	Pn	06 16 14.6	+2.4
WMGZ				S	S	06 17 37.0	+2.5
HAZ	**Te Kaha**	**7.18**	**198**	P	Pn	06 16 13.1	-0.2
HAZ				S	S	06 17 37.7	+1.3
PKGZ	**Pakihiroa**	**7.23**	**195**	P	Pn	06 16 15.9	+1.8
PKGZ				S	S	06 17 39.3	+1.5
PUZ	**Puketiti**	**7.37**	**194**	P	Pn	06 16 18.0	+2.3
PUZ				S	S	06 17 34.9	-5.9
RUGZ	**Raukumara Rang**	**7.40**	**198**	P	Pn	06 16 16.7	+0.5
CNGZ	**Carnagh Statio**	**7.77**	**193**	P	Pn	06 16 22.2	+1.6
MWZ	**Matawai**	**7.79**	**198**	P	Pn	06 16 17.2	-3.7
MWZ				S	S	06 17 50.0	-0.4
URZ	**Urewera**	**7.83**	**200**	P	Pn	06 16 20.3	-1.1
URZ				S	S	06 17 52.8	+1.5
RIGZ	**Rimuhau**	**8.08**	**195**	P	Pn	06 16 23.5	-1.1
RIGZ				S	S	06 17 56.9	-0.1
MUGZ	**Murupara**	**8.14**	**201**	P	Pn	06 16 24.8	-0.4
RAHZ	**Arahi**	**8.45**	**198**	P	Pn	06 16 29.1	0.0

*TUL **10** 06:36:53.3±0.7, 36°.21N±0°.01×97°.56W±0°.01, h5km±6km, ML3.2, mb_Lg3.2/96(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=201.0*
*ANF **10** 06:36:53.1±0.4, 36°.23N×97°.57W, h4km±3km, ML3.9/14, Error ellipse: s-maj=2.6km s-min=1.9km az=161.0*
*NEIC **10** 06:36:53.4±0.6, 36°.22N±0°.01×97°.57W±0°.01, h7km±6km, Error ellipse: s-maj=1.6km s-min=1.2km az=205.0*
ISC 10 06:36:53.6±1.1, 36°.21N±0°.02×97°.56W±0°.02, h6km±10km, n109, σ0°.54/87, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.42**	**168**		**Pg**	**06 37 01.9**	**+0.1**
CROK	**Carrier**	**0.45**	**311**		**Pg**	**06 37 02.4**	**+0.1**
CROK				Sg	**Sg**	**06 37 08.2**	**0.0**
BCOK	**Bluff Creek, N**	**0.56**	**184**		**Pg**	**06 37 04.3**	**0.0**
BCOK				Sg	**Sg**	**06 37 12.0**	**+0.4**
BLOK	**Blackwell**	**0.61**	**27**		**Pg**	**06 37 05.5**	**0.0**
BLOK				Sg	**Sg**	**06 37 13.9**	**+0.4**
OK009	**Oakdale Elemen**	**0.64**	**170**		**Pg**	**06 37 05.3**	**-0.6**
OK031	**S. Brethren Rd**	**0.64**	**114**		**Pg**	**06 37 05.9**	**-0.1**
OK031				Sg	**Sg**	**06 37 14.5**	**+0.2**
OK025	**Westminster Rd**	**0.66**	**164**		**Pg**	**06 37 06.2**	**0.0**
OK025				Sg	**Sg**	**06 37 15.7**	**+0.9**
GC02	**Grant County #**	**0.68**	**339**		**Pg**	**06 37 06.5**	**-0.2**
OK030	**Cody Creek RV**	**0.69**	**114**		**Pg**	**06 37 06.8**	**-0.1**
QUOK	**Quay**	**0.69**	**93**		**Pg**	**06 37 06.8**	**-0.1**
OK034	**N. Norfolk Rd.**	**0.72**	**106**		**Pg**	**06 37 07.3**	**-0.1**
OK032	**Salt Plains WL**	**0.79**	**319**		**Pg**	**06 37 08.5**	**-0.3**
KAN13	**South Haven SW**	**0.80**	**5**		**Pg**	**06 37 08.8**	**-0.2**
KAN14	**Manchester OK**	**0.81**	**337**		**Pg**	**06 37 09.0**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.81**	**173**		**Pg**	**06 37 08.9**	**-0.3**
KAN17	**Caldwell West**	**0.84**	**349**		**Pg**	**06 37 09.6**	**-0.3**
KAN05	**Bluff City Nor**	**0.93**	**344**		**Pg**	**06 37 11.2**	**-0.3**
DEOK	**Depew**	**0.94**	**113**		**Pg**	**06 37 11.0**	**-0.6**
KAN01	**Argonia South**	**0.95**	**350**		**Pg**	**06 37 11.6**	**-0.3**
FNO	**Franklin**	**0.96**	**172**		**Pg**	**06 37 11.7**	**-0.4**
FNO				Sg	**Sg**	**06 37 24.5**	**-0.1**
OK038	**West end E0370**	**0.99**	**286**		**Pg**	**06 37 12.2**	**-0.4**
KAN10	**Anthony SW Sta**	**1.00**	**335**		**Pg**	**06 37 12.4**	**-0.5**
KS20	**Mayfield South**	**1.01**	**0**		**Pg**	**06 37 12.7**	**-0.4**
OK035	**E0210 Rd and N**	**1.05**	**298**		**Pg**	**06 37 13.4**	**-0.4**
KAN06	**Argonia West S**	**1.06**	**347**		**Pg**	**06 37 13.5**	**-0.5**
KAN08	**Anthony NE Sta**	**1.06**	**342**		**Pg**	**06 37 13.6**	**-0.4**
KS21	**Milan North St**	**1.07**	**356**		**Pg**	**06 37 14.0**	**-0.3**
KS21				Sg	**Sg**	**06 37 27.6**	**-0.6**
CSTR	**Hydro, Custer**	**1.08**	**239**		**Pg**	**06 37 13.6**	**-0.6**
KAN16	**Harper SW Stat**	**1.09**	**338**	Pn	**Pg**	**06 37 14.0**	**-0.5**
T35A	**Sooner Cattle**	**1.10**	**50**		**Pg**	**06 37 14.1**	**-0.6**
T35B	**Sooner Cattle**	**1.10**	**50**	P	**Pg**	**06 37 14.1**	**-0.6**
	baz=231,SNR=405						
T35B			

	baz=98,SNR=35							
U32A				S	**Sb**	**06 37 31.5**	**-0.3**	
	baz=98							
NOKA	**Waynoka**	**1.18**	**291**		**Pg**	**06 37 15.8**	**-0.5**	
TUL1	**Leonard**	**1.47**	**101**		**Pn**	**06 37 20.3**	**-0.3**	
TUL1				Sn	**Sb**	**06 37 40.1**	**0.0**	
TUL1	**Leonard**	**1.47**	**101**	P	**Pn**	**06 37 19.8**	**-0.8**	
	baz=282,SNR=168							
TUL1				S	**Sn**	**06 37 39.8**	**-0.2**	
	baz=282							
ELIS	**Ellis County**	**1.51**	**265**	Pn	**Pn**	**06 37 21.3**	**0.0**	
X34A	**Smith Ranch, M**	**1.62**	**188**	Sn	**Sg**	**06 37 45.5**	**-0.3**	
WMOK	**Wichita Mounta**	**1.78**	**214**		**Pn**	**06 37 24.8**	**-0.1**	
WMOK				IAmb_Lg		06 37 50.2		
	comp=Z,80nm,0.8s							
WMOK	**Wichita Mounta**	**1.78**	**214**	P	**Pn**	**06 37 24.9**	**-0.1**	
	baz=34,SNR=201							
WMOK				S	**Sb**	**06 37 48.9**	**-0.2**	
	baz=34							
RLO	**Rose Lookout**	**2.05**	**91**	Pn	**Pn**	**06 37 29.7**	**+1.1**	
LOOK	**Love County**	**2.24**	**172**	Pn	**Pn**	**06 37 32.0**	**+0.8**	
LOOK				IAmb_Lg		06 38 09.5		
	comp=Z,102nm,1.0s							
R32A	**Long Quarter,**	**2.39**	**338**		**Pn**	**06 37 34.6**	**+1.3**	
R32A	**Long Quarter,**	**2.39**	**338**	S	**Sn**	**06 38 03.8**	**+0.9**	
	baz=157							
X37A	**Clayton**	**2.41**	**132**		**Pn**	**06 37 34.2**	**+0.6**	
X37A	**Clayton**	**2.41**	**132**	P	**Pn**	**06 37 34.1**	**+0.5**	
	baz=313,SNR=131							
U38A	**Gravette**	**2.58**	**84**		**Pn**	**06 37 36.8**	**+1.0**	
Z35A	**Perchaven, San**	**2.89**	**175**	Pn	**Pn**	**06 37 41.0**	**+0.9**	
HHAR	**Hobbs**	**2.93**	**88**		**Pn**	**06 37 41.0**	**+0.3**	
KSU1	**Kansas State U**	**2.98**	**14**		**Pn**	**06 37 42.1**	**+0.6**	
CBKS	**Cedar Bluff**	**3.12**	**327**	Pn	**Pn**	**06 37 44.3**	**+0.9**	
AMTX	**Amarillo**	**3.61**	**250**		**Pn**	**06 37 52.2**	**+2.1**	
AMTX				IAmb_Lg		06 38 53.4		
	comp=Z,58nm,0.9s							
Z38A	**Mt. Pleasant**	**3.63**	**143**		**Pn**	**06 37 50.5**	**+0.2**	
Z38A				IAmb_Lg		06 38 56.1		
	comp=Z,58nm,0.8s							
Z38A	**Mt. Pleasant**	**3.63**	**143**	P	**Pn**	**06 37 50.8**	**+0.5**	
	baz=325							
MIAR	**Mount Ida**	**3.66**	**116**		**Pn**	**06 37 51.2**	**+0.5**	
MIAR				IAmb_Lg		06 38 58.3		
	comp=Z,38nm,0.8s							
MIAR	**Mount Ida**	**3.66**	**116**	P	**Pn**	**06 37 51.2**	**+0.5**	
	baz=298,SNR=41							
S39A	**Bolivar**	**3.70**	**65**		**Pn**	**06 37 52.0**	**+0.6**	
S39A				IAmb_Lg		06 38 57.6		
	comp=Z,47nm,0.8s							
S39A	**Bolivar**	**3.70**	**65**	P	**Pn**	**06 37 51.6**	**+0.3**	
	baz=248,SNR=27							
ABTX	**Abilene, Hawle**	**3.97**	**206**	IAmb_Lg		06 39 00.2		
	comp=Z,44nm,0.9s							
WHTX	**Lake Whitney,**	**4.21**	**179**	Pn	**Pn**	**06 37 58.4**	**+0.1**	
WHTX	**Lake Whitney,**	**4.21**	**179**	P	**Pn**	**06 37 58.3**	**0.0**	
	baz=359,SNR=8.8							
MGMO	**Mountain Grove**	**4.36**	**76**		**Pn**	**06 38 00.7**	**+0.4**	
MGMO				IAmb_Lg		06 39 13.2		
	comp=Z,53nm,0.8s							
WHAR	**Wooly Hollow**	**4.39**	**101**	Pn	**Pn**	**06 38 01.2**	**+0.5**	
WHAR				IAmb_Lg		06 39 20.3		
	comp=Z,34nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.42**	**93**	Pn	**Pn**	**06 38 01.5**	**+0.4**	
FCAR				IAmb_Lg		06 39 16.2		
	comp=Z,46nm,0.8s							
WLAR	**White Oak Lake**	**4.44**	**123**	Pn	**Pn**	**06 38 01.7**	**+0.2**	
WLAR				IAmb_Lg		06 39 19.7		
	comp=Z,49nm,0.7s							
237A	**Washetta, Mont**	**4.45**	**160**	Pn	**Pn**	**06 38 01.1**	**-0.5**	
237A	**Washetta, Mont**	**4.45**	**160**	P	**Pn**	**06 38 01.1**	**-0.5**	
	baz=341							
UALR	**University of**	**4.49**	**107**	IAmb_Lg		06 39 15.4		
	comp=Z,40nm,0.7s							
N33A	**J Bar K, Exete**	**4.52**	**1**	Pn	**Pn**	**06 38 02.4**	**-0.2**	
N33A				IAmb_Lg		06 39 21.0		
	comp=Z,49nm,0.8s							
P38A	**Dawn**	**4.66**	**42**	IAmb_Lg		06 39 23.2		
	comp=Z,45nm,0.7s							
R40A	**Maddies Statio**	**4.71**	**62**		**Pn**	**06 38 05.0**	**0.0**	
R40A				IAmb_Lg		06 39 22.3		
	comp=Z,34nm,0.8s							
R40A	**Maddies Statio**	**4.71**	**62**	P	**Pn**	**06 38 05.2**	**+0.1**	
	baz=245,SNR=11							
Z41A	**Richland Creek**	**4.90**	**126**	P	**Pn**	**06 38 07.8**	**0.0**	
	baz=308							
Z41A				P	**Pn**	**06 38 07.8**	**0.0**	
	baz=308							
LCAR	**Lake Charles**	**5.19**	**90**	IAmb_Lg		06 39 40.2		
	comp=Z,29nm,0.8s							
BGNE	**Belgrade**	**5.21**	**355**		**Pn**	**06 38 11.7**	**-0.4**	
BGNE	**Belgrade**	**5.21**	**355**	P	**Pn**	**06 38 11.8**	**-0.2**	
	baz=175,SNR=8.9							
CCM	**Cathedral Cave**	**5.37**	**68**	IAmb_Lg		06 39 50.4		
	comp=Z,24nm,0.8s							
435B	**Jarrell**	**5.42**	**180**	IAmb_Lg		06 39 51.2		
	comp=Z,47nm,0.9s							
P40A	**Paris**	**5.48**	**51**	IAmb_Lg		06 39 53.2		
	comp=Z,39nm,0.8s							
T25A	**Trinidad**	**5.58**	**282**	IAmb_Lg		06 39 55.5		
	comp=Z,51nm,0.8s							
PBMO	**Poplar Bluff**	**5.77**	**82**	IAmb_Lg		06 39 57.1		
	comp=Z,41nm,0.7s							
OGNE	**Ogallala**	**5.88**	**325**	IAmb_Lg		06 40 05.4		
	comp=Z,25nm,0.8s							
143A	**Socs Landing,**	**6.17**	**123**	IAmb_Lg		06 40 21.0		
	comp=Z,38nm,0.8s							
SLM	**Saint Louis**	**6.31**	**65**	IAmb_Lg		06 40 14.2		
	comp=Z,38nm,0.8s							
CGM3	**Cape Girardeau**	**6.44**	**78**	IAmb_Lg		06 40 28.0		
	comp=Z,20nm,0.8s							
Q24A	**Divide**	**6.62**	**297**	IAmb_Lg		06 40 34.1		
	comp=Z,36nm,1.0s							
S44A	**Carbondale**	**6.81**	**75**	IAmb_Lg		06 40 30.6		
	comp=Z,39nm,0.7s							
SIUC	**Southern Illin**	**6.85**	**75**	IAmb_Lg		06 40 38.4		
	comp=Z,36nm,0.7s							
W45A	**Hickory Valley**	**6.90**	**96**	IAmb_Lg		06 40 35.8		
	comp=Z,36nm,0.7s							
N41A	**Harden Midland**	**6.91**	**48**	IAmb_Lg		06 40 39.7		
	comp=Z,34nm,0.8s							
Y45A	**Yeager Farm, C**	**6.98**	**107**	IAmb_Lg		06 40 50.5		
	comp=Z,36nm,1.1s							
P43A	**Skaggs, Pawnee**	**7.22**	**59**	IAmb_Lg		06 40 43.5		
	comp=Z,35nm,0.9s							
Q44A	**Meyer Farm, Va**	**7.30**	**66**	IAmb_Lg		06 40 51.3		
	comp=Z,29nm,0.9s							
735A	**Kenedy**	**7.34**	**182**	IAmb_Lg		06 40 55.5		
	comp=Z,19nm,0.9s							
ECSD	**EROS Data Cent**	**7.55**	**5**	P	**Pn**	**06 38 43.2**	**-1.0**	
	baz=186,SNR=8.7							
L40A	**Anamosa**	**7.64**	**38**	IAmb_Lg		06 41 00.5		
	comp=Z,34nm,1.3s							
HDIL	**Hopedale**	**7.81**	**54**	IAmb_Lg		06 41 07.5		
	comp=Z,33nm,0.7s							
OLIL	**Olney**	**7.93**	**69**	IAmb_Lg		06 41 08.1		
	comp=Z,22nm,0.8s							
PHWY	**Pilot Hill**	**7.99**	**312**	IAmb_Lg		06 41 16.0		
	comp=Z,16nm,1.0s							
833A	**Chaparral WMA,**	**8.02**	**192**	IAmb_Lg		06 41 22.4		
	comp=Z,19nm,0.7s							
N23A	**Red Feather La**	**8.06**	**308**	IAmb_Lg		06 41 23.2		
	comp=Z,15nm,0.8s							
O44A	**Mansfield**	**8.17**	**58**	IAmb_Lg		06 41 16.8		
	comp=Z,20nm,0.7s							
SUSD	**Miller**	**8.29**	**353**	IAmb_Lg		06 41 18.1		
	comp=Z,24nm,0.8s							
L42A	**Oliver, Polo**	**8.43**	**44**	IAmb_Lg		06 41 23.0		
	comp=Z,19nm,0.8s							
JFWS	**Jewell Farm**	**8.75**	**38**	IAmb_Lg		06 41 50.8		
	comp=Z,16nm,0.8s							
M44A	**Midewin, Midew**	**9.05**	**52**	IAmb_Lg		06 42 01.9		
	comp=Z,14nm,0.9s							
I40A	**Norwalk**	**9.33**	**33**	IAmb_Lg		06 41 57.6		
	comp=Z,21nm,1.3s							
K22A	**Casper**	**9.45**	**316**	IAmb_Lg		06 42 10.8		
	comp=Z,16nm,1.0s							

*SJA **10** 06:43:35.8±0.8,31°.96S×71°.70W,h7km±4km,ML4.5, MW4.1*
*VAO **10** 06:43:38.5±0.4,32°.05S×71°.52W,h29km,mb4.6*
*NEIC **10** 06:43:38.5,31°.96S×71°.71W,h36km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.43; $M_{\theta\theta}$0.28; $M_{\phi\phi}$2.15; $M_{r\theta}$0.54; $M_{\theta\phi}$1.17; $M_{\phi r}$1.66; Fault plane solution: M_o3.12000×10^{15} NP1:ϕ_s201.02000°,δ62.10000°, λ-94.83000°. NP2:ϕ_s31.25000°,δ28.28000°,λ-80.97000°. Principal axes: T 3.2432, Plg17.0000°, Azm295.0000°; N -0.2683, Plg4.0000°, Azm203.0000°; P -2.9749, Plg72.0000°, Azm100.0000°;*
*IDC **10** 06:43:39.7±0.6,31°.97S×71°.44W,h29km±4km,mb4.3/10, mbtmp4.4/15,ML4.3/5,MS3.6/28 Error ellipse: s-maj=20.1km s-min=14.3km az=95.0*
*GUC **10** 06:43:39.2±0.8,31°.97S×71°.54W,h25km±3km,ML4.5*
*NEIC **10** 06:43:40.1±1.8,31°.96S±0°.04×71°.66W±0°.07,h32km±4km, mb4.6/22,Mwr4.3/47,Mwr4.5(GUC),Error ellipse: s-maj=9.1km s-min=5.3km az=95.0*

ISC 10 06:43:39.1±0.6,31°.96S±0°.02×71°.66W±0°.04,h29km±4km, n210,σ1§42/225,mb4.6/24,MS3.7/24,16C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.67**	**153**			**Pn**	**06 43 52.0**	**-0.6**
VA06	**Catapilco**	**0.67**	**153**	*e*	P	**Pn**	**06 43 51.8**	**-0.9**
VA06					*e*S	**Sb**	**06 43 59.3**	**-2.1**
VA06					IAML		06 44 03.9	
	comp=E,63μm,0.5s							
CO02	**Combarbal**	**0.94**	**37**			**Pn**	**06 43 56.4**	**-0.1**
CO02	**Combarbal**	**0.94**	**37**	↑ *i*	P	**Pn**	**06 43 56.1**	**-0.4**
CO02					*e*S	**Sn**	**06 44 07.3**	**-1.6**
CO02					IAML		06 44 09.1	
	comp=E,58μm,0.2s							
CO02	**Combarbal**	**0.94**	**37**	*e*	P	**Pn**	**06 43 54.6**	**-1.9**
CO02					*e*S	**Sn**	**06 44 08.8**	**-0.2**
CO02					IAML		06 44 12.1	
	comp=Z,15μm,0.3s							
VA01	**Torpederas**	**1.06**	**180**			**Pn**	**06 43 58.5**	**+0.5**
VA01	**Torpederas**	**1.06**	**180**	*e*	P	**Pn**	**06 43 58.4**	**+0.4**
VA01					*e*S	**Sn**	**06 44 12.3**	**+0.5**
VA01	**Torpederas**	**1.06**	**180**	*e*	P	**Pn**	**06 43 54.6**	**-3.4**
VA01					*e*P	**Pb**	**06 43 57.3**	**-1.6**
VA01					*e*S	**Sn**	**06 44 12.8**	**+1.0**
ROCH	**El Roble**	**1.15**	**152**	↑ *i*	P	**Pn**	**06 43 59.0**	**-0.5**
ROCH					*e*S	**Sn**	**06 44 13.8**	**-0.5**
ROCH					IAML		06 44 18.1	
	comp=N,19μm,0.4s							
ROC1	**El Roble**	**1.15**	**152**			**Pn**	**06 43 59.3**	**-0.2**
ROC1	**El Roble**	**1.15**	**152**	*e*	P	Pn	06 43 54.6	-4.9
ROC1					*e*P	**Pb**	**06 43 59.0**	**-1.6**
ROC1					*e*S	**Sn**	**06 44 14.4**	**0.0**
VA03	**San Esteban**	**1.23**	**131**			**Pn**	**06 44 00.2**	**-0.3**
VA03	**San Esteban**	**1.23**	**131**	↑ *i*	P	**Pn**	**06 43 60.0**	**-0.5**
VA03					*e*S	**Sn**	**06 44 15.1**	**-1.1**
VA03					IAML		06 44 18.1	
	comp=E,25μm,0.3s							
VA03	**San Esteban**	**1.23**	**131**	*e*	P	Pn	06 43 54.6	-5.9
VA03					*e*P	**Pn**	**06 44 00.0**	**-0.5**
VA03					*e*S	**Sb**	**06 44 17.8**	**+0.3**
VA03					IAML		06 44 19.3	
	comp=Z,12μm,0.9s							
CO06	**Fray Jorge**	**1.28**	**1**	Pn		**Pn**	**06 44 02.0**	**+1.0**
CO06	**Fray Jorge**	**1.28**	**1**	*e*	P	**Pn**	**06 44 01.8**	**+0.7**
CO06					*e*S	**Sn**	**06 44 18.7**	**+1.4**
CO06					IAML		06 44 21.4	
	comp=N,11μm,0.3s							
MT02	**Curacav**	**1.37**	**161**			**Pn**	**06 44 02.4**	**+0.1**
MT02	**Curacav**	**1.37**	**161**	↑ *e*	P	**Pn**	**06 44 02.2**	**-0.1**
MT02					*e*S	**Sn**	**06 44 19.7**	**+0.2**
MT02	**Curacav**	**1.37**	**161**	*e*	P	**Pn**	**06 44 02.2**	**-0.1**
MT02					*e*S	**Sb**	**06 44 21.6**	**+0.3**
CO03	**El Pedregal**	**1.39**	**37**			**Pn**	**06 44 03.2**	**+0.6**
CO03	**El Pedregal**	**1.39**	**37**	↑ *e*	P	**Pn**	**06 44 03.1**	**+0.4**
CO03					*e*S	**Sn**	**06 44 20.6**	**+0.5**
CO03					IAML		06 44 22.7	
	comp=E,12μm,0.1s							
CO03	**El Pedregal**	**1.39**	**37**	*e*	P	Pn	06 43 57.6	-5.1
CO03					*e*P	**Pn**	**06 44 03.0**	**+0.4**
CO03					*e*S	**Sn**	**06 44 21.3**	**+1.2**
CO03					IAML		06 44 23.1	
	comp=Z,6μm,0.8s							
PEL	**Peldehue**	**1.44**	**145**			**Pn**	**06 44 03.4**	**+0.1**
PEL	**Peldehue**	**1.44**	**145**	↑ *i*	P	**Pn**	**06 44 03.4**	**+0.1**
PEL					*e*S	**Sn**	**06 44 21.2**	**0.0**
PEL					IAML		06 44 23.4	
	comp=N,10μm,0.7s							
PEL	**Peldehue**	**1.44**	**145**	*e*	P	**Pn**	**06 44 03.5**	**+0.2**
PEL					*e*S	**Sn**	**06 44 22.9**	**+1.6**
MT05	**Renca**	**1.62**	**152**	Pn		**Pn**	**06 44 06.4**	**+0.6**
MT05	**Renca**	**1.62**	**152**	↑ *e*	P	**Pn**	**06 44 06.3**	**+0.4**
MT05					*e*S	**Sn**	**06 44 26.3**	**+0.5**
MT05					IAML		06 44 38.5	
	comp=E,11μm,0.4s							
MT05	**Renca**	**1.62**	**152**	*e*	P	**Pn**	**06 44 06.7**	**+0.8**
MT05					*e*S	**Sb**	**06 44 30.1**	**+1.4**
MT05					IAML		06 44 35.7	
	comp=Z,4μm,0.8s							
VA05	**Santo Domingo**	**1.69**	**179**			**Pn**	**06 44 07.5**	**+0.8**
VA05	**Santo Domingo**	**1.69**	**179**	*e*	P	**Pn**	**06 44 07.5**	**+0.8**
VA05					*e*S	**Sn**	**06 44 29.3**	**+1.9**
VA05					IAML		06 44 39.0	
	comp=E,8μm,0.4s							
FCH	**Farellones**	**1.79**	**140**	↑ *e*	P	**Pn**	**06 44 08.9**	**+0.6**
FCH					*e*S	**Sn**	**06 44 30.4**	**+0.2**
FCH					IAML		06 44 32.4	
	comp=E,4μm,0.5s							
MT03	**Universidad Ad**	**1.81**	**148**			**Pn**	**06 44 09.5**	**+1.0**
MT03	**Universidad Ad**	**1.81**	**148**	↑ *i*	P	**Pn**	**06 44 09.3**	**+0.9**
MT03					*e*S	**Sn**	**06 44 31.5**	**+1.1**
MT03					IAML		06 44 41.9	
	comp=E,9μm,0.3s							
MT03	**Universidad Ad**	**1.81**	**148**	*e*	P	**Pn**	**06 44 09.7**	**+1.2**
MT03					*e*S	**Sn**	**06 44 32.9**	**+2.4**
MT03					IAML		06 44 44.2	
	comp=Z,6μm,0.5s							
MT09	**Talagante**	**1.90**	**163**			**Pn**	**06 44 10.8**	**+1.1**
MT09	**Talagante**	**1.90**	**163**	*e*	P	**Pn**	**06 44 10.5**	**+0.8**
MT09					*e*S	**Sn**	**06 44 34.0**	**+1.3**
MT09					IAML		06 44 43.4	
	comp=E,5μm,0.6s							
GO04	**Tololo Observa**	**1.93**	**23**			**Pn**	**06 44 11.8**	**+1.6**
GO04	**Tololo Observa**	**1.93**	**23**	↑ *e*	P	**Pn**	**06 44 11.5**	**+1.3**
GO04					*e*S	**Sn**	**06 44 36.0**	**+2.4**
GO04	**Tololo Observa**	**1.93**	**23**	*e*	P	**Pn**	**06 44 11.8**	**+1.6**
GO04					*e*S	**Sb**	**06 44 38.0**	**+0.5**
MT01	**Popeta**	**1.93**	**170**			**Pn**	**06 44 11.0**	**+1.0**
MT01	**Popeta**	**1.93**	**170**	↓ *e*	P	**Pn**	**06 44 11.1**	**+1.1**
MT01					*e*S	**Sn**	**06 44 35.7**	**+2.4**
MT01					IAML		06 44 41.6	
	comp=E,3μm,0.4s							
MT01	**Popeta**	**1.93**	**170**	*e*	P	**Pn**	**06 44 11.3**	**+1.3**
MT01					*e*S	**Sb**	**06 44 38.3**	**+0.9**
MT01					IAML		06 44 41.8	
	comp=Z,3μm,0.5s							
CO05	**La Serena**	**2.07**	**10**			**Pn**	**06 44 13.3**	**+1.4**
CO05	**La Serena**	**2.07**	**10**	↑ *i*	P	**Pn**	**06 44 13.0**	**+1.1**
CO05					*e*S	**Sb**	**06 44 40.2**	**-1.0**
CO05					IAML		06 44 53.0	
	comp=E,5μm,0.5s							
LMEL	**Las Melosas**	**2.25**	**147**			**Pn**	**06 44 15.9**	**+1.3**
LMEL	**Las Melosas**	**2.25**	**147**	↑ *e*	P	**Pn**	**06 44 15.8**	**+1.3**
LMEL					*e*S	**Sn**	**06 44 43.8**	**+2.5**
LMEL					IAML		06 44 48.5	
	comp=N,5μm,0.1s							
CO01	**Juntas del Tor**	**2.39**	**35**			**Pn**	**06 44 18.7**	**+2.2**
CO01	**Juntas del Tor**	**2.39**	**35**	*e*	P	**Pn**	**06 44 18.8**	**+2.2**
CO01					*e*S	**Sn**	**06 44 47.7**	**+2.7**
CO01					IAML		06 44 51.5	
	comp=E,2μm,0.2s							
ARCO	**CERRO ARCO**	**2.47**	**112**	*e*	P	**Pn**	**06 44 19.7**	**+2.2**
ARCO					*e*P	**Pb**	**06 44 21.3**	**-1.6**
ARCO					*e*S	**Sb**	**06 44 56.9**	**+3.9**
ARCO					IAML		06 44 58.3	
	comp=Z,3μm,0.7s							
ASAL	**Salagasta**	**2.47**	**105**	*e*	P	**Pn**	**06 44 20.3**	**+2.8**
ASAL					*e*P	**Pb**	**06 44 21.6**	**-1.4**
ASAL					*e*S	**Sb**	**06 44 53.6**	**+0.6**
BO01	**Tunca**	**2.47**	**169**	Pn		**Pn**	**06 44 18.7**	**+1.2**
BO01	**Tunca**	**2.47**	**169**	*e*	P	**Pn**	**06 44 18.5**	**+1.1**
BO01					*e*S	**Sn**	**06 44 49.6**	**+2.9**
BO03	**Pichilemu**	**2.54**	**186**	↓ *i*	P	**Pn**	**06 44 18.6**	**+0.1**
ZON	**Zonda**	**2.57**	**82**			**Pn**	**06 44 22.1**	**+3.2**
ZON	**Zonda**	**2.57**	**82**	*e*	P	**Pn**	**06 44 20.7**	**+1.8**
ZON					*e*S	**Sb**	**06 44 57.6**	**+1.8**
ZON					IAML		06 45 02.8	
	comp=Z,1μm,0.6s							

ACCO	**Cerro Coronel**	**2.61**	**59**	*e*	P	**Pn**	**06 44 22.4**	**+2.8**
AAGR	**Agrelo**	**2.64**	**116**	*e*	P	**Pn**	**06 44 22.3**	**+2.4**
AAGR					*e*S	**Sb**	**06 45 01.5**	**+3.6**
BO02	**Sierra Bellavi**	**2.92**	**166**	Pn		**Pn**	**06 44 25.2**	**+1.5**
BO02	**Sierra Bellavi**	**2.92**	**166**	*e*	P	**Pn**	**06 44 24.9**	**+1.3**
BO02					*e*S	**Sn**	**06 45 00.9**	**+3.1**
BO02					IAML		06 45 13.0	
	comp=N,3μm,0.5s							
GO05	**Huala**	**3.05**	**184**	*e*	P	**Pn**	**06 44 25.5**	**0.0**
GO05					*e*S	**Sn**	**06 44 59.5**	**-1.5**
GO05					IAML		06 45 24.3	
	comp=E,935nm,0.8s							
LCO	**Las Campanas**	**3.05**	**16**	Pn		**Pn**	**06 44 27.0**	**+1.3**
LCO	**Las Campanas**	**3.05**	**16**	↑ *e*	P	**Pn**	**06 44 26.9**	**+1.3**
LCO					*e*S	**Sn**	**06 45 02.8**	**+1.4**
AC05	**El Transito**	**3.33**	**21**	*e*	P	**Pn**	**06 44 31.5**	**+2.1**
AC05					*e*S	**Sn**	**06 45 10.3**	**+2.2**
AC05					IAML		06 45 28.3	
	comp=E,2μm,0.6s							
AC04	**Llanos de Chal**	**3.78**	**8**	Pn		**Pn**	**06 44 35.8**	**+0.4**
AC04	**Llanos de Chal**	**3.78**	**8**	*e*	P	**Pn**	**06 44 35.7**	**+0.4**
ML02	**Panimavida**	**3.80**	**177**	Pn		**Pn**	**06 44 36.6**	**+0.9**
ML02	**Panimavida**	**3.80**	**177**	*e*	P	**Pn**	**06 44 36.5**	**+0.8**
GO03	**Copiap**	**4.52**	**16**	*e*	P	**Pn**	**06 44 46.6**	**+0.9**
AC01	**Pan de Azucar**	**5.87**	**9**	Pn		**Pn**	**06 45 02.5**	**-1.6**
VA04	**Juan Fernndez**	**6.27**	**253**	Pn		**Pn**	**06 45 10.5**	**+0.9**
H03N1	**Juan Fernandez**	**6.29**	**254**	T		T	06 51 49.3	
	baz=81,slow=73,SNR=6321							
H03N3	**Juan Fernandez**	**6.30**	**254**	T		T	06 51 50.0	
	baz=81,slow=73,SNR=4371							
H03N2	**Juan Fernandez**	**6.31**	**255**	T		T	06 51 49.5	
	baz=81,slow=73,SNR=5740							
H03S3	**Juan Fernandez**	**6.38**	**251**	T		T	06 51 53.2	
	baz=94,SNR=65							
H03S1	**Juan Fernandez**	**6.38**	**251**	T		T	06 51 51.8	
	baz=94,SNR=48							
H03S2	**Juan Fernandez**	**6.39**	**251**	T		T	06 51 52.8	
	baz=94,SNR=76							
PLCA	**Paso Flores**	**8.80**	**174**	Pn		**Pn**	**06 45 44.6**	**+0.2**
	comp=E,1.3nm,0.3s,baz=337,slow=11,SNR=64							
PLCA					LR	LR	06 49 05.5	
	comp=E,324nm,19.2s,baz=344,slow=37 comp=E,3.9nm,0.4s							
LVC	**Limon Verde**	**9.63**	**15**	Pn		**Pn**	**06 45 56.5**	**+0.4**
	comp=E,11nm,0.3s,baz=140,slow=8.4,SNR=142							
LVC					LR	LR	06 49 28.6	
	comp=E,234nm,20.8s,baz=217,slow=36 comp=E,25nm,0.3s							
LVC	**Limon Verde**	**9.63**	**15**	Pn		**Pn**	**06 45 56.7**	**+0.6**
LVC	**Limon Verde**	**9.63**	**15**	*e*	P	**Pn**	**06 45 56.5**	**+0.4**
TRQA	**Tornquist**	**10.00**	**130**	Pn		**Pn**	**06 46 01.2**	**+0.4**
PB07	**IPOC Station P**	**10.31**	**9**	Pn		**Pn**	**06 46 04.0**	**-1.3**
ITQB	**Itaqui**	**13.12**	**84**	Pn		**Pn**	**06 46 41.2**	**-2.2**
ITQB	**Itaqui**	**13.12**	**84**	*e*	P	**Pn**	**06 46 41.3**	**-2.2**
PB16	**IPOC Station P**	**13.71**	**9**			**Pn**	**06 46 50.8**	**-1.2**
CPUP	**Villa Florida**	**13.72**	**70**	Pn		**Pn**	**06 46 48.2**	**-3.5**
	comp=E,0.4nm,0.3s,baz=240,slow=11,SNR=14 comp=E,5.2nm,0.8s							
CPUP	**Villa Florida**	**13.72**	**70**	Pn		**Pn**	**06 46 49.2**	**-2.4**
RODS	**Rosario do Sul**	**14.19**	**88**	*e*	P	**Pn**	**06 46 54.6**	**-3.5**
UNIS	**Unistalda (Bra**	**14.59**	**83**	*e*	P	**Pn**	**06 47 01.7**	**-1.8**
PLTB	**Pedras Altas**	**15.35**	**94**	Pn		**Pn**	**06 47 10.0**	**-3.7**
PLTB	**Pedras Altas**	**15.35**	**94**	*e*	P	**Pn**	**06 47 10.4**	**-3.3**
CPSB	**Cacapava Do Su**	**15.67**	**89**	*e*	P	**Pn**	**06 47 14.7**	**-3.2**
LPAZ	**La Paz**	**15.93**	**12**	Pn		**Pn**	**06 47 21.8**	**-0.1**
	comp=E,0.2nm,0.3s,baz=191,slow=5.9,SNR=10							
LPAZ					LR	LR	06 54 55.3	
	comp=E,142nm,21.5s,baz=171,slow=42 comp=E,2.1nm,0.8s							
LPAZ	**La Paz**	**15.93**	**12**	Pn		**Pn**	**06 47 23.3**	**+1.4**
LPAZ	**La Paz**	**15.93**	**12**	*e*	P	**Pn**	**06 47 21.2**	**-0.6**
CRSM	**Crissiumal (Br**	**15.93**	**78**	*e*	P	**Pn**	**06 47 20.6**	**-0.7**
ALGR	**Alto Alegre (B**	**16.38**	**84**	*e*	P	**Pn**	**06 47 26.0**	**-1.1**
ANTJ	**

comp=Z,61nm,20.5s,baz=136,slow=38
MDP Montagnes des 41.07 30 LR LR 07 08 49.8
comp=Z,66nm,18.1s,baz=206,slow=37
RCBR Riachuelo 42.32 60 LR LR 07 09 45.5
comp=Z,102nm,20.7s,baz=324,slow=37
BELA Belgrano 2 48.83 170 P **P** **06 52 22.5 +1.1**
BELA IAmb IAmb 06 52 23.6
comp=Z,6.6nm,0.7s
SJG San Juan 50.06 7 LR LR 07 13 23.1
comp=Z,18nm,21.8s,baz=180,slow=36
VNA3 Neumayer Olymp 51.13 158 P **P** **06 52 39.6 +0.7**
VNA1 Neumayer--Stat 51.43 158 P **P** **06 52 41.6 +0.6**
VNA2 Neumayer--Watz 51.77 158 P **P** **06 52 44.4 +0.7**
baz=283,slow=8.2
SNAA Sanae 53.35 158 P **P** **06 52 55.9 +0.5**
SNAA Sanae 53.35 158 P **P** **06 52 56.2 +0.7**
CMIG Matias Romero 53.62 332 LR LR 07 10 42.2
comp=Z,38nm,20.4s,baz=170,slow=30
TROLL Troll, Antarti 55.06 159 P **P** **06 53 08.6 +0.6**
QSPA South Pole Qui 58.27 180 P **P** **06 53 32.0 +1.2**
VNDA Vanda 66.16 191 P **P** **06 54 24.7 +1.4**
comp=Z,0.8nm,0.9s,baz=130,slow=3.2,SNR=5.1
comp=Z,0.8nm,0.9s
LPIG La Paz 66.88 322 LR LR 07 15 44.9
comp=Z,24nm,18.8s,baz=178,slow=29
TXAR Lajitas Array 68.12 330 P **P** **06 54 37.8 +1.3**
comp=Z,0.4nm,0.7s,baz=156,slow=9.4,SNR=6.6
TXAR pP **pP** **06 54 46.5 +1.1**
comp=Z,0.6nm,0.6s,baz=142,slow=7.4,SNR=8.0
TXAR LR LR 07 19 44.5
comp=Z,42nm,20.2s,baz=144,slow=32
comp=Z,0.4nm,0.7s
TX31 Lajitas Ar. Si 68.12 330 IAmb IAmb 06 54 47.0
comp=Z,5.6nm,0.9s
TKL Tuckaleechee C 68.22 349 LR LR 07 25 45.2
comp=Z,12nm,18.2s,baz=150,slow=37
WVT Waverly 69.41 346 P **P** **06 54 44.7 +0.5**
WVT IAmb IAmb 06 54 55.0
comp=Z,5.9nm,0.7s
LCAR Lake Charles 70.10 343 P **P** **06 54 48.5 +0.1**
LCAR IAmb IAmb 06 55 02.2
comp=Z,4.0nm,0.7s
MSTX Muleshoe 71.83 333 P **P** **06 54 59.1 -0.1**
MSTX IAmb IAmb 06 55 09.6
comp=Z,7.0nm,0.8s
P40A Paris 73.61 344 IAmb IAmb 06 55 19.7
comp=Z,7.0nm,1.0s
LIC Lamto 73.83 72⇑*iP* **P** **06 55 10.8 -0.6**
comp=Z,22nm,0.6s
TIC Toumodi 74.08 71⇑*iP* **P** **06 55 12.2 -0.7**
comp=Z,8.0nm,0.6s
KIC Kosan Boka 74.14 72⇑*iP* **P** **06 55 12.7 -0.5**
comp=Z,20nm,0.6s
ANMO Albuquerque 74.16 331 LR LR 07 23 21.0
comp=Z,50nm,20.2s,baz=154,slow=32
DBIC Dimbokro 74.23 72 P **P** **06 55 13.4 -0.3**
comp=Z,14nm,0.7s,baz=245,slow=6.2,SNR=17
comp=Z,14nm,0.7s
MAW Mawson 75.04 164 P **P** **06 55 17.9 +0.4**
comp=Z,4.3nm,0.9s,baz=205,slow=7.5,SNR=4.7
comp=Z,4.3nm,0.9s
SUR Sutherland 75.54 119 LR LR 07 23 32.6
comp=Z,38nm,21.5s,baz=156,slow=32
PFO Pinyon Flats O 77.70 323 LR LR 07 23 35.2
comp=Z,43nm,18.9s,baz=146,slow=31
ECSD EROS Data Cent 78.71 342 P **P** **06 55 39.1 +0.7**
ECSD IAmb IAmb 06 55 48.2
comp=Z,4.1nm,0.8s
KOWA Kowa 79.50 66 P **P** **06 55 43.1 -0.2**
BOSA Boshof 80.73 118 P **P** **06 55 49.4 -0.8**
comp=Z,5.8nm,0.8s,baz=220,slow=5.0,SNR=9.8
BOSA LR LR 07 25 52.5
comp=Z,39nm,19.1s,baz=191,slow=31
comp=Z,5.8nm,0.8s
PDAR Pinedale Array 82.09 333 P **P** **06 55 59.0 +2.2**
comp=Z,0.1nm,0.5s,baz=145,slow=3.3,SNR=2.1
PDAR pP **pP** **06 56 06.6 +0.6**
comp=Z,0.3nm,0.7s,baz=114,slow=6.6,SNR=2.7
PDAR LR LR 07 29 03.4
comp=Z,30nm,19.7s,baz=144,slow=33
NVAR Mina Array Bea 82.40 325 P **P** **06 56 00.6 +2.0**
comp=Z,0.2nm,0.5s,baz=161,slow=5.7,SNR=2.7
NVAR pP **pP** **06 56 08.8 +1.1**
comp=Z,1.0nm,0.7s,baz=156,slow=5.2,SNR=7.6
comp=Z,0.2nm,0.5s
ELK Elko 82.80 328 LR LR 07 27 49.3
comp=Z,31nm,21.3s,baz=142,slow=32
LBTB Lobatse 82.87 115 LR LR 07 28 23.3
comp=Z,66nm,21.3s,baz=208,slow=32
TORD Torodi Ar. Bea 83.21 70 P **P** **06 56 02.5 -0.6**
comp=Z,8.8nm,0.7s,baz=260,slow=4.6,SNR=47
TORD sP **sP** **06 56 16.6 +0.8**
comp=Z,8.2nm,0.7s,baz=275,slow=6.2,SNR=13
comp=Z,8.8nm,0.7s
NEW Newport 89.63 332 LR LR 07 33 56.4
comp=Z,30nm,18.0s,baz=168,slow=34
LSZ Lusaka 90.14 108 LR LR 07 34 32.4
comp=Z,44nm,18.9s,baz=172,slow=34
AFI Afiamalu 91.10 253 LR LR 07 30 51.8
comp=Z,32nm,18.2s,baz=126,slow=31
ASAR Alice Springs 119.53 207 PKP **PKPdf** **07 02 26.0 -0.6**
comp=Z,0.5nm,0.6s,baz=132,slow=2.3,SNR=6.1
BRTR Keskin Array B 120.55 60 PKP **PKPdf** **07 02 27.4 -0.6**
comp=Z,1.1nm,0.7s,baz=194,slow=4.6,SNR=4.6
AKASG Malin Array Be 120.57 46 PKP **PKPdf** **07 02 26.8 -0.7**
comp=Z,0.8nm,0.6s,baz=260,slow=2.6,SNR=5.4
WRA Warramunga Arr 122.69 209 PKP **PKPdf** **07 02 31.8 -0.9**
comp=Z,1.4nm,0.7s,baz=154,slow=1.7,SNR=29
H11S2 WAKE ISLAND Hy 126.10 270 T T 09 21 37.1
baz=117,slow=75,SNR=151
H11S1 WAKE ISLAND Hy 126.11 270 T T 09 21 38.6
baz=117,slow=75,SNR=134
H11S3 WAKE ISLAND Hy 126.12 270 T T 09 21 39.0
baz=117,slow=75,SNR=108
H11N3 WAKE ISLAND Hy 126.46 272 T T 09 22 00.4
baz=117,slow=75,SNR=127
H11N1 WAKE ISLAND Hy 126.47 272 T T 09 22 01.7
baz=117,slow=75,SNR=37
H11N2 WAKE ISLAND Hy 126.48 272 T T 09 22 01.5
baz=117,slow=75,SNR=344
ZALV Zalesovo Beam 152.32 31 PKPbc **PKPbc** **07 03 32.0 +0.4**
comp=Z,14nm,0.6s,baz=301,slow=3.7,SNR=42
ZALV PKPab **PKPab** **07 03 41.6 -0.1**
comp=Z,6.8nm,0.6s,baz=309,slow=3.3,SNR=9.9
KSH Kashi 152.77 65 PKPbc **PKPbc** **07 03 33.8 +0.5**
KSH sPKP 07 03 43.6
MKAR Makanchi Array 155.15 46 PKP **PKPdf** **07 03 28.6 -0.6**
comp=Z,0.6nm,0.7s,baz=20,slow=3.9,SNR=5.5
MKAR PKPbc **pPKPdf** **07 03 37.5 -1.3**
comp=Z,1.5nm,0.6s,baz=327,slow=2.0,SNR=14
MKAR PKPab **PKPab** **07 03 53.9 -0.2**
comp=Z,1.9nm,0.7s,baz=316,slow=3.3,SNR=10

*IDC **10** 06:46:13.5±3.3,68.17N×136.24W,h0km,mb2.9/1, mbtmp3.0/3,ML2.9/2,Error ellipse: s-maj=54.5km s-min=17.7km az=172.0*
*PGC **10** 06:46:17.7±2.7,68.05N×136.12W,h20km,ML2.9/3,98km Wnw of Fort McPherson, Nt Northern Yukon Territory, Canada*
ISC 10 06:46:13.7±0.9,68.02N±0.05×136.17W±0.05,h10km,n13, σ2.37/23,Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
INK	**Inuvik**	**1.03**	**73**	P	**Pn**	**06 46 35.8**	**+1.7**
INK				S	**Sb**	**06 46 49.0**	**+1.9**
EPYK	**Eagle Plains**	**1.67**	**188**	Pn	**Pg**	**06 46 45.9**	**+0.1**
EPYK				Sn	**Sb**	**06 47 06.9**	**+1.2**
I29M	**Ogilvie Camp,**	**2.81**	**199**	Pn	**Pb**	**06 47 02.5**	**-1.4**
I29M				Sn	**Sb**	**06 47 36.6**	**-1.6**
DAWY	**Dawson**	**4.18**	**200**	Pn	**Pn**	**06 47 19.9**	**+2.3**
DAWY				Sn	**Sn**	**06 48 06.9**	**+0.4**
C36M	**Paulatuk**	**4.61**	**68**	Pn	**Pn**	**06 47 25.7**	**+2.3**
C36M				Sn	**Sn**	**06 48 14.5**	**-2.3**
ILAR	**Eielson Array**	**5.40**	**238**	Pn	**Pn**	**06 47 35.5**	**+1.4**
	0.1nm,0.3s,baz=45,slow=13,SNR=7.6						
ILAR				Sn	**Sn**	**06 48 37.5**	**+1.2**
	0.3nm,0.3s,baz=46,slow=26,SNR=5.5						
ILAR				Lg	Lg	06 49 06.5	
	0.3nm,0.3s,baz=48,slow=31,SNR=3.3						
	0.4nm,0.4s						
COLD	**Coldfoot**	**5.42**	**268**	Pn	**Pn**	**06 47 35.8**	**+1.4**
COLD				Sn	**Sn**	**06 48 34.5**	**-2.2**
DOT	**Dot Lake**	**5.45**	**220**	Pn	**Pn**	**06 47 37.0**	**+2.0**
DOT				Sn	**Sn**	**06 48 37.2**	**-0.6**
A36M	**Sachs Harbour**	**5.46**	**38**	Pn	**Pn**	**06 47 36.9**	**+1.9**
A36M				Sn	**Sn**	**06 48 35.9**	**-1.8**
N31M	**Braeburn, Yuko**	**6.57**	**178**	Pn	**Pn**	**06 47 53.0**	**+2.7**
KUKN	**Kugluktuk,NWT**	**7.93**	**82**	Sn	**Sn**	**06 49 32.7**	**-5.9**
YKA	**Yellowknife Ar**	**10.56**	**111**	Pn	**Pn**	**06 48 45.9**	**+1.1**
	0.1nm,0.3s,baz=309,slow=13,SNR=1.4						
YKA				Sn	**Sn**	**06 50 38.6**	**-4.4**
	0.3nm,0.3s,baz=314,slow=22,SNR=5.6						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**43.22**	**137**	P	**P**	**06 54 15.4**	**+0.6**
	0.1nm,0.7s,baz=351,slow=11,SNR=1.6						
	0.1nm,0.7s						

*IDC **10** 06:46:45.5±1.9,6.98S×155.74E,h0km,mb3.8/6, mbtmp3.8/6,MS3.2/2,Error ellipse: s-maj=67.3km s-min=28.9km az=127.0*
ISC 10 06:46:52.7±1.8,7.05S±0.3×155.7E±0.4,h50km,n8,σ0.40/8, mb3.6/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.73**	**254**	LR	LR	06 51 52.8	
	comp=Z,101nm,19.8s,baz=86,slow=35						
WRA	**Warramunga Arr**	**24.33**	**236**	P	**P**	**06 52 06.8**	**+0.8**
	0.9nm,0.5s,baz=59,slow=9.2,SNR=16						
WRA				PcP	**PcP**	**06 55 44.7**	**-0.2**
	0.4nm,0.9s,baz=65,slow=2.8,SNR=4.7						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**26.63**	**229**	P	**P**	**06 52 26.8**	**-0.1**
	0.3nm,0.5s,baz=58,slow=9.8,SNR=4.2						
	0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**31.23**	**247**	P	**P**	**06 53 07.8**	**0.0**
	1.2nm,0.7s,baz=64,slow=9.5,SNR=1.9						
	1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.39**	**295**	P	**P**	**06 57 04.2**	**0.0**
	1.7nm,0.3s,baz=128,slow=5.5,SNR=5.3						
	1.3s						
ILAR	**Eielson Array**	**83.18**	**21**	P	**P**	**06 59 13.4**	**+0.1**
	0.2nm,0.4s,baz=231,slow=5.4,SNR=2.5						
ILAR				LR	LR	07 34 20.0	
	comp=Z,16nm,19.4s,baz=262,slow=34						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**83.87**	**319**	P	**P**	**06 59 17.2**	**0.0**
	0.4nm,0.6s,baz=93,slow=5.8,SNR=3.4						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**153.67**	**285**	PKPbc	**PKPbc**	**07 06 47.0**	**-0.2**
	0.2nm,0.5s,baz=69,slow=2.6,SNR=1.9						

*IDC **10** 06:56:26.8±0.6,31.01S×59.30E,h0km,mb4.0/12, mbtmp4.1/13,ML4.3/1,MS3.6/22,Error ellipse: s-maj=20.8km s-min=18.1km az=55.0*
*NEIC **10** 06:56:28.9±1.8,30.85S±0.1×59.53E±0.1,h10km±1km, mb4.4/8,Error ellipse: s-maj=21.3km s-min=20.4km az=16.0*
ISC 10 06:56:28.3±0.6,30.95S±0.1×59.54E±0.1,h10km,n46, σ1.20/25,mb4.2/13,MS3.6/22,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**10.18**	**341**	Pn	**Pn**	**06 58 51.8**	**-2.9**
FOMA	**Nahampoana Res**	**12.40**	**295**	Pn	**Pn**	**06 59 23.8**	**-1.2**
VOI	**Vohitsoka**	**14.34**	**305**		**Pn**	**06 59 52.2**	**+0.5**
ABPO	**Ambohimpanom**	**16.10**	**314**	Pn	**Pn**	**07 00 15.3**	**+0.3**
OPO	**Ambohidratompo**	**16.46**	**315**	Pn	**Pn**	**07 00 20.1**	**+0.4**
	0.1nm,0.3s,baz=139,slow=11,SNR=8.8						
OPO				Sn	Sn	07 03 11.5	-11
	0.1nm,0.3s,baz=284,slow=20,SNR=2.8						
	5.5nm,0.7s						
H08S1	**Diego Carcia H**	**26.16**	**31**	T	T	07 29 19.3	
	baz=206,slow=75,SNR=12						
H08S2	**Diego Garcia H**	**26.16**	**31**	T	T	07 29 22.6	
	baz=206,slow=75,SNR=16						
H08S3	**Diego Garcia H**	**26.18**	**31**	T	T	07 29 20.9	
	baz=206,slow=75,SNR=17						
LSZ	**Lusaka**	**32.45**	**291**	P	**P**	**07 02 58.9**	**-0.1**
	3.5nm,0.7s,baz=144,slow=10,SNR=5.8						
LSZ				LR	LR	07 15 20.0	
	comp=Z,56nm,18.9s,baz=160,slow=35						
	3.5nm,0.7s						
KMBO	**Kilima Mbogo**	**36.23**	**320**	LR	LR	07 15 06.3	
	comp=Z,104nm,21.8s,baz=96,slow=31						
MAW	**Mawson**	**36.84**	**178**	LR	LR	07 14 44.7	
	comp=Z,142nm,20.6s,baz=305,slow=30						
TSUM	**Tsumeb**	**39.37**	**277**	P	**P**	**07 03 58.9**	**+0.5**
	2.8nm,0.9s,baz=342,slow=22,SNR=3.0						
	2.8nm,0.9s						
TSUM	**Tsumeb**	**39.37**	**277**	P	**P**	**07 03 58.8**	**+0.4**
TSUM				IAmb	IAmb	07 04 09.9	
	comp=Z,7.1nm,1.1s						
MBAR	**Mbarara**	**40.51**	**313**	LR	LR	07 19 30.1	
	comp=Z,111nm,21.6s,baz=126,slow=34						
PALK	**Pallekele**	**43.08**	**32**	LR	LR	07 18 49.2	
	comp=Z,48nm,18.7s,baz=328,slow=31						
H01W2	**Cape Leeuwin H**	**45.71**	**110**	T	T	07 53 54.8	
	baz=258,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	**45.72**	**110**	T	T	07 53 24.6	
	baz=258,slow=75,SNR=23						
H01W1	**Cape Leeuwin H**	**45.73**	**110**	T	T	07 53 47.7	
	baz=258,slow=75,SNR=28						
SNAA	**Sanae**	**52.33**	**201**	P	**P**	**07 05 39.1**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=77,slow=7.4,SNR=8.8						
SNAA				LR	LR	07 23 09.4	
	comp=Z,81nm,20.9s,baz=128,slow=31						
	comp=Z,2.4nm,0.9s						
SNAA	**Sanae**	**52.33**	**201**	P	**P**	**07 05 39.9**	**-0.1**
SNAA				IAmb	IAmb	07 05 49.5	
	comp=Z,5.3nm,1.1s						
WSAR	**Wadi Sarin**	**53.79**	**359**	LR	LR	07 23 48.5	
	comp=Z,30nm,21.0s,baz=220,slow=30						
QSPA	**South Pole Qui**	**59.31**	**180**	P	**P**	**07 06 29.4**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=248,slow=1.3,SNR=11						
	comp=Z,3.8nm,0.8s						
QSPA	**South Pole Qui**	**59.31**	**180**	P	**P**	**07 06 30.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**62.07**	**43**	P	**P**	**07 06 50.3**	**+0.9**
	comp=Z,3.3nm,0.6s,baz=232,slow=7.4,SNR=15						
CMAR				LR	LR	07 28 49.5	
	comp=Z,29nm,22.0s,baz=225,slow=31						
	comp=Z,3.3nm,0.6s						
VNDA	**Vanda**	**62.77**	**166**	P	**P**	**07 06 52.2**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=266,slow=6.4,SNR=8.1						
VNDA				LR	LR	07 31 49.2	
	comp=Z,31nm,18.9s,baz=240,slow=34						
	comp=Z,1.2nm,0.9s						
VNDA	**Vanda**	**62.77**	**166**	P	**P**	**07 06 53.5**	**+0.2**
VNDA				IAmb	IAmb	07 06 56.5	
	comp=Z,5.8nm,1.3s						
EIL	**Elat**	**64.52**	**337**	LR	LR	07 31 35.1	
	comp=Z,39nm,19.8s,baz=269,slow=33						
KNRA	**Kununurra**	**64.64**	**94**	P	**P**	**07 07 05.8**	**-0.8**
ASAR	**Alice Springs**	**65.56**	**104**	P	**P**	**07 07 12.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=236,slow=6.2,SNR=6.1						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**67.51**	**100**	P	**P**	**07 07 25.2**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=248,slow=5.3,SNR=6.8						
WRA				LR	LR	07 32 12.7	
	comp=Z,30nm,21.2s,baz=199,slow=32						
	comp=Z,0.9nm,0.7s						
WB2	**Warramunga Arr**	**67.52**	**100**	P	**P**	**07 07 25.5**	**+0.4**
WRAB	**Tennant Creek**	**67.52**	**100**	P	**P**	**07 07 25.4**	**+0.3**
WRAB				IAmb	IAmb	07 07 25.8	
	comp=Z,3.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**70.56**	**299**	P	**P**	**07 07 43.5**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=120,slow=5.1,SNR=4.4						
TORD				LR	LR	07 39 03.5	
	comp=Z,79nm,18.2s,baz=210,slow=36						
	comp=Z,1.0nm,0.8s						
GNI	**Garni**	**71.94**	**348**	LR	LR	07 37 48.0	
	comp=Z,38nm,20.0s,baz=187,slow=34						
IDI	**Anoyia**	**73.35**	**331**	LR	LR	07 40 33.5	
	comp=Z,28nm,20.1s,baz=156,slow=36						
BRTR	**Keskin Array B**	**74.17**	**340**	P	**P**	**07 08 05.5**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=148,slow=7.3,SNR=4.2						
BRTR				LR	LR	07 37 39.7	
	comp=Z,26nm,20.7s,baz=178,slow=33						
	comp=Z,1.2nm,0.9s						
KBZ	**Khabaz**	**75.74**	**348**	LR	LR	07 40 27.1	
	comp=Z,50nm,20.1s,baz=125,slow=35						
MKAR	**Makanchi Array**	**80.02**	**16**	P	**P**	**07 08 40.3**	**+2.6**
	comp=Z,0.6nm,0.8s,baz=224,slow=4.4,SNR=3.9						
	comp=Z,0.6nm,0.8s						
AKTO	**Aktyubinsk**	**80.94**	**359**	LR	LR	07 43 28.5	
	comp=Z,19nm,18.0s,baz=142,slow=35						
KEST	**Kesra**	**81.20**	**321**	LR	LR	07 46 00.0	
	comp=Z,89nm,18.4s,baz=232,slow=37						
BBTS	**Babate**	**85.72**	**290**	LR	LR	07 46 42.2	
	comp=Z,29nm,18.3s,baz=118,slow=35						
ZALV	**Zalesovo Beam**	**87.29**	**15**	P	**P**	**07 09 16.4**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=195,slow=4.6,SNR=4.1						
	comp=Z,0.5nm,0.4s						
MDT	**Midelt**	**87.55**	**311**	LR	LR	07 49 47.5	
	comp=Z,62nm,18.6s,baz=186,slow=36						
ESDC	**Sonseca Array**	**91.51**	**316**	LR	LR	07 51 17.7	
	comp=Z,32nm,18.8s,baz=150,slow=36						
NOA	**NORSAR Array B**	**99.58**	**338**	LR	LR	07 55 05.5	
	comp=Z,9.6nm,19.3s,baz=35,slow=35						
ILAR	**Eielson Array**	**142.34**	**18**	PKP	**PKPdf**	**07 15 57.9**	**-2.5**
	comp=Z,0.3nm,0.7s,baz=310,slow=4.2,SNR=2.3						

*NIED **10** 07:25:55.3,31.76N×131.92E,h27km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.10; Mθθ-1.05; Mϕϕ-2.05; Mrθ0.03; Mrϕ-1.23; Mθϕ1.17; Fault plane solution: M₀3.21000×10¹⁵ NP1: ϕs223.00000°,δ37.00000°,λ106.00000°. NP2: ϕs24.00000°,δ55.00000°,λ79.00000°.*
*JMA **10** 07:25:55.3±0.1,31.18N±0.2×131.19E±0.6,h27km±1km, MD4.2/39,MV4.1/39,HYUGANADA REGION*
JMA Felt I J1 at HYUGANADA REGION .
*IDC **10** 07:25:56.2±0.8,31.78N×131.65E,h34km±6km,mb3.8/14, mbtmp3.9/17,ML3.2/3,MS3.7/21,Error ellipse: s-maj=20.7km s-min=14.2km az=64.0*
*NEIC **10** 07:25:58.4±2.3,31.81N±0.03×131.72E±0.07,h48km±9km, mb4.3/9,Error ellipse: s-maj=8.8km s-min=3.3km az=78.0*
ISC 10 07:25:56.1±0.8,31.78N±0.04×131.81E±0.04,h34km±2km, n81,σ1.31/59,mb4.2/19,MS3.7/19,6D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKG	**Nichinankitago**	**0.39**	**253**	⇓*eP*	**Pb**	**07 26 04.6**	**-0.5**
JNKG				⇓*eS*	**Sb**	**07 26 11.4**	**+0.1**
JNKG	**Nichinankitago**	**0.39**	**253**	A	A	07 26 04.6	
	comp=E,18nm,2.1s,comp=E,28nm,0.8s						
JNAR	**Kushima--Naru**	**0.53**	**241**	⇓*eP*	**Pn**	**07 26 07.2**	**0.0**
JNAR				⇓*eS*	**Sn**	**07 26 15.7**	**+0.8**
JNAR	**Kushima--Naru**	**0.53**	**241**	A	A	07 26 07.2	
	comp=E,17nm,1.3s,comp=E,18nm,1.7s						
JTSN	**Tsuno**	**0.53**	**331**	⇓*eP*	**Pb**	**07 26 06.9**	**-0.4**
JTSN				⇓*eS*	**Sn**	**07 26 15.0**	**-0.1**
JTSN	**Tsuno**	**0.53**	**331**	A	A	07 26 06.9	
	comp=N,7.0nm,0.7s						
JTZ	**Takazaki**	**0.63**	**281**	*eP*	**Pb**	**07 26 09.1**	**+0.3**
JTZ				*eS*	**Sb**	**07 26 18.6**	**+1.0**
JTZ	**Takazaki**	**0.63**	**281**	A	A	07 26 09.1	
	comp=E,17nm,0.7s,comp=E,33nm,0.7s						
JHHC	**Hyugahichiya**	**0.68**	**347**	*eP*	**Pn**	**07 26 09.1**	**-0.2**
JHHC				*eS*	**Sb**	**07 26 18.8**	**-0.1**
JHHC	**Hyugahichiya**	**0.68**	**347**	A	A	07 26 09.1	
	comp=E,12nm,0.5s,comp=E,8.0nm,0.8s						
JKIT	**Kitakata**	**0.90**	**340**	A	A	07 26 12.7	
	comp=E,19nm,1.0s,comp=E,14nm,0.5s						
JTSR	**Tashiro 2**	**0.98**	**231**	A	A	07 26 14.0	
	comp=E,15nm,0.4s,comp=E,17nm,0.8s						
JZO	**Okuchi**	**1.09**	**289**	*eP*	**Pb**	**07 26 16.1**	**-0.5**
JZO				*eS*	**Sb**	**07 26 31.1**	**+0.6**
JZO	**Okuchi**	**1.09**	**289**	A	A	07 26 16.1	
	comp=E,9.0nm,0.7s,comp=E,11nm,1.2s						
JIU3	**Izumi3**	**1.14**	**312**	*eP*	**Pb**	**07 26 17.2**	**-0.2**
JIU3				*eS*	**Sb**	**07 26 32.6**	**+0.7**
JIU3	**Izumi3**	**1.14**	**312**	A	A	07 26 17.2	
	comp=E,7.0nm,2.0s,comp=E,12nm,1.1s						
JSU	**Suzuyama**	**1.19**	**257**		**Pb**	**07 26 17.6**	**-0.6**
JSU	**Suzuyama**	**1.19**	**257**	A	A	07 26 17.7	
	comp=E,3.0nm,1.6s,comp=E,3.0nm,1.0s						
JUS	**Usuki**	**1.28**	**358**	A	A	07 26 18.3	
	comp=E,10.0nm,1.2s,comp=E,6.0nm,1.0s						
JTN	**Tanegashima 3**	**1.33**	**213**	*iP*	**Pn**	**07 26 18.7**	**+0.4**
JTO	**Tosashimizu**	**1.36**	**38**	*eP*	**Pn**	**07 26 17.4**	**-1.4**
JTO				*eS*	**Sn**	**07 26 33.4**	**-2.3**
JNU	**Nakatsue**	**1.55**	**330**	A	A	07 26 22.9	
	comp=E,9.0nm,1.5s,comp=E,6.0nm,1.2s						
JHD	**Hondo**	**1.58**	**296**	A	A	07 26 23.6	
	comp=E,6.0nm,1.6s,comp=E,4.0nm,1.6s						
JTA	**Tamana**	**1.60**	**318**	A	A	07 26 23.8	
	comp=E,6.0nm,1.6s,comp=E,6.0nm,1.7s						
JMN	**Monobe**	**2.61**	**41**		**Pn**	**07 26 37.3**	**+1.3**
JHS	**Saijyo**	**3.39**	**18**		**Pn**	**07 26 49.4**	**+2.8**
JTU	**Tsushima**	**3.40**	**324**		**Pn**	**07 26 48.4**	**+1.6**
KSBUS	**Busan**	**4.13**	**328**	Pn	**Pn**	**07 26 57.3**	**+0.6**
NAWB	**Nanwon**	**5.17**	**316**		**Pn**	**07 27 12.9**	**+1.8**
INU	**Inuyama**	**5.62**	**49**		**Pn**	**07 27 19.6**	**+2.4**
JOW	**Kunigami**	**5.82**	**213**	Pn	**Pn**	**07 27 21.2**	**+1.2**
KSCHJ	**Chungju**	**5.99**	**329**	Pn	**Pn**	**07 27 24.5**	**+2.2**
KSRS	**Korea Array**	**6.50**	**332**	Pn	**Pn**	**07 27 29.7**	**+0.3**
	0.3nm,0.3s,baz=148,slow=15,SNR=2.4						
KSRS				Lg	Lg	07 29 24.0	
	0.3nm,0.3s,baz=152,slow=28,SNR=4.5						
KSRS				LR	LR	07 30 21.4	
	comp=Z,514nm,19.2s,baz=150,slow=41						
	0.6nm,0.3s						
SEHB	**SEOHWA**	**7.10**	**337**	Pn	**Pn**	**07 27 39.9**	**+2.2**
MJAR	**Matsushiro Arr**	**7.12**	**46**	Pn	**Pn**	**07 27 41.0**	**+3.2**
	0.1nm,0.3s,baz=217,slow=14,SNR=2.1						
	0.7nm,0.3s						
KLR	**Kul'dur**	**17.43**	**360**	P	**P**	**07 29 58.0**	**+0.6**
	0.5nm,0.3s,baz=174,slow=7.3,SNR=10.0						
KLR				LR	LR	07 36 40.1	
	comp=Z,100nm,18.1s,baz=177,slow=37						
	3.2nm,0.7s						
ULN	**Ulaanbaatar**	**24.74**	**318**	P	**P**	**07 31 13.7**	**-0.8**
SONM	**Songino Array**	**25.10**	**317**	P	**P**	**07 31 17.7**	**-0.1**
	4.7nm,0.7s,baz=129,slow=9.9,SNR=14						
SONM				LR	LR	07 42 44.2	
	comp=Z,250nm,18.5s,baz=120,slow=40						
	4.7nm,0.7s						
SONM	**Songino Array**	**25.10**	**317**	P	**P**	**07 31 17.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**32.45**	**254**	P	**P**	**07 32 23.3**	**0.0**
	1.4nm,0.3s,baz=64,slow=6.5,SNR=4.1						
CMAR				LR	LR	07 47 13.6	
	comp=Z,67nm,19.9s,baz=80,slow=40						
	1.4nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**33.66**	**102**	T	T

ILAR	**Eielson Array**	**58.08**	**30**	P		**P**	**07 35 43.6**	**-2.1**
BMAR	**Burnt Mountain**	**58.66**	**27**	P		**P**	**07 35 51.5**	**+1.8**
DOT	**Dot Lake**	**59.48**	**31**	P		**P**	**07 35 57.0**	**+1.5**
DOT				IAmb		IAmb	07 36 12.8	
	comp=Z,2.8nm,0.9s							
N25K	**Chitina, Valde**	**59.62**	**33**	P		**P**	**07 35 58.1**	**+1.6**
BCAR	**Beaver Creek A**	**60.60**	**31**	P		**P**	**07 36 04.7**	**+1.5**
M27K	**Edge Creek, AK**	**60.71**	**32**	P		**P**	**07 36 05.6**	**+1.6**
I29M	**Ogilvie Camp,**	**61.54**	**28**	P		**P**	**07 36 10.6**	**+1.2**
I29M				IAmb		IAmb	07 36 14.2	
	comp=Z,2.5nm,1.1s							
BELG	**Belogornoye**	**62.16**	**316**	LR		LR	08 04 32.0	
	comp=Z,47nm,18.9s,baz=127,slow=37							
STKA	**Stephens Creek**	**63.99**	**171**	P		**P**	**07 36 25.9**	**-0.1**
	comp=Z,4.3nm,0.9s,baz=326,slow=7.3,SNR=2.5							
	comp=Z,4.3nm,0.9s							
ARCES	**ARCESS Array B**	**66.01**	**338**	LR		LR	08 09 49.3	
	comp=Z,44nm,19.4s,baz=88,slow=40							
KBZ	**Khabaz**	**68.12**	**309**	P		**P**	**07 36 52.1**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=17,slow=5.2,SNR=5.6							
KBZ				LR		LR	08 11 09.2	
	comp=Z,76nm,18.2s,baz=20,slow=40							
	comp=Z,1.8nm,0.6s							
GNI	**Garni**	**68.29**	**305**	LR		LR	08 10 45.2	
	comp=Z,39nm,18.3s,baz=206,slow=39							
FINES	**FINESS Array B**	**69.59**	**330**	P		**P**	**07 37 01.1**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=67,slow=5.0,SNR=8.7							
FINES				pP		**pP**	**07 37 10.7**	**-1.3**
	comp=Z,1.5nm,0.5s,baz=73,slow=5.9,SNR=1.4							
FINES				LR		LR	08 10 42.6	
	comp=Z,73nm,18.1s,baz=74,slow=39							
	comp=Z,1.1nm,0.5s							
AKASG	**Malin Array Be**	**73.35**	**320**	P		**P**	**07 37 22.9**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=57,slow=6.4,SNR=5.0							
AKASG				LR		LR	08 12 24.6	
	comp=Z,91nm,18.0s,baz=48,slow=38							
	comp=Z,0.6nm,0.3s							
NOA	**NORSAR Array B**	**75.71**	**334**	LR		LR	08 14 07.2	
	comp=Z,41nm,20.4s,baz=30,slow=38							
MLR	**Muntele Rosu**	**77.95**	**316**	LR		LR	08 15 26.6	
	comp=Z,78nm,19.5s,baz=44,slow=38							
VRAC	**Vranov**	**80.86**	**323**	LR		LR	08 18 56.0	
	comp=Z,71nm,18.3s,baz=52,slow=39							
NVAR	**Mina Array Bea**	**84.44**	**48**	P		**P**	**07 38 26.8**	**+1.1**
NVAR				pP		**pP**	**07 38 37.2**	**+1.1**
	comp=Z,2.0nm,0.3s,baz=290,slow=7.6,SNR=4.0							
	comp=Z,0.8nm,0.7s,baz=303,slow=4.5,SNR=5.9							
	comp=Z,0.2nm,0.3s							
DAVOX	**Davos/Dischmat**	**85.92**	**324**	LR		LR	08 21 57.8	
	comp=Z,186nm,18.0s,baz=83,slow=39							
PDAR	**Pinedale Array**	**86.90**	**40**	P		**P**	**07 38 38.0**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=268,slow=4.3,SNR=3.8							
PDAR				pP		**pP**	**07 38 49.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=300,slow=2.9,SNR=3.7							
	comp=Z,0.8nm,1.0s							
ESDC	**Sonseca Array**	**97.92**	**327**	LR		LR	08 29 46.0	
	comp=Z,68nm,18.5s,baz=358,slow=39							

IDC 10 07:34:01.0±3.3, 54°.22N×87°.26E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=30.2km s-min=20.8km az=38.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**260**	*i*			07 42 40.0	
	baz=81,slow=316,SNR=6.9							
ZALV	**Zalesovo Beam**	**1.46**	**260**	Pg		Pn	07 34 26.4	-2.2
	0.5nm,0.3s,baz=81,slow=17,SNR=5.6							
ZALV				Lg		Lg	07 34 47.8	
	1.1nm,0.3s,baz=85,slow=28,SNR=6.6							
KURBB	**Kurchatov Arra**	**6.44**	**240**	Pn		Pn	07 35 37.3	+0.3
	0.1nm,0.3s,baz=52,slow=14,SNR=5.7							
KURBB				Lg		Lg	07 37 27.1	
	baz=52,slow=30							
	0.5nm,0.3s							
MKAR	**Makanchi Array**	**8.08**	**205**	Pn		Pn	07 36 01.2	+1.7
	0.1nm,0.3s,baz=20,slow=10,SNR=4.4							
	0.1nm,0.3s							

IDC 10 07:37:43.1±3.4, 54°.25N×87°.40E, h0km, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=29.8km s-min=18.9km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.55**	**260**	*i*			07 46 20.0	
	0.1nm,0.9s,baz=80,slow=317,SNR=8.7							
ZALV	**Zalesovo Beam**	**1.55**	**260**	Pg		Pn	07 38 09.5	-2.5
	0.6nm,0.3s,baz=80,slow=17,SNR=10							
ZALV				Lg		Lg	07 38 33.3	
	0.8nm,0.3s,baz=79,slow=30,SNR=7.8							
KURBB	**Kurchatov Arra**	**6.53**	**240**	Pn		Pn	07 39 20.8	+0.5
	0.1nm,0.3s,baz=57,slow=14,SNR=4.4							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**8.14**	**206**	Pn		Pn	07 39 44.1	+1.6
	0.1nm,0.3s,baz=25,slow=15,SNR=5.2							
MKAR				Lg		Lg	07 42 02.3	
	0.1nm,0.3s,baz=23,slow=27,SNR=4.1							
	0.2nm,0.4s							

*IDC **10** 07:39:19.3±5.8, 36°.34N×71°.33E, h143km±51km, mb3.5/6, mbtmp3.9/11, Error ellipse: s-maj=43.6km s-min=20.0km az=34.0*
*SOME **10** 07:39:20.0, 37°.97N×72°.33E, h10km*
*NNC **10** 07:39:29.1±5.2, 37°.18N×71°.10E, h175km±80km, mb2.9, mpv3.9, Error ellipse: s-maj=47.9km s-min=26.9km az=15.0*

ISC 10 07:39:21.0±1.1, 36°.62N±0°.09×71°.28E±0°.09, h150km, n28, σ1§86/36, mb3.6/6, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
IUG	**luzhnay**	**5.60**	**350**	*e*P		**Pn**	**07 40 45.1**	**+2.6**
IUG	226nm,0.1s			*e*S		**Sn**	**07 41 46.9**	**+0.8**
	161nm,0.3s							
AML	**Almayashu**	**5.81**	**18**	P		**Pn**	**07 40 47.2**	**+1.7**
	SNR=21							
UCH	**Uchtor**	**6.13**	**23**	P		**Pn**	**07 40 52.9**	**+3.1**
	SNR=11							
DZA	**Taraz**	**6.26**	**0**	*e*P		**Pn**	**07 40 52.2**	**+1.0**
DZA	62nm,0.1s			*e*S		**Sn**	**07 41 58.3**	**-3.5**
	115nm,0.1s							
MRKS	**Merke**	**6.30**	**13**	*e*P		**Pn**	**07 40 50.5**	**-1.2**
MRKS	2.6nm,0.1s			*e*S		Sn	07 41 55.6	-7.0
	7.0nm,0.2s							
EKS2	**Erkin-Say**	**6.33**	**17**	P		**Pn**	**07 40 53.6**	**+1.4**
	SNR=8.3							
AAK	**Ala-Archa**	**6.50**	**21**	P		**Pn**	**07 40 55.6**	**+1.1**
AAK	15nm,0.4s,baz=183,slow=6.3,SNR=12			S		**Sn**	**07 42 06.0**	**-1.6**
	7.6nm,0.5s,baz=28,slow=22,SNR=8.9							
AAK	**Ala-Archa**	**6.50**	**21**	P		**Pn**	**07 40 57.9**	**+3.5**
	SNR=9.3							
KK31	**Karatay Array**	**6.50**	**355**	P		**Pn**	**07 40 56.2**	**+1.8**
	3.2nm,0.4s,baz=182,slow=15,SNR=27							
KK31				⇑S		**Sn**	**07 42 04.1**	**-3.4**
	35nm,0.8s,baz=37,slow=32,SNR=4.5							
ULHL	**Ulahol**	**6.80**	**33**	P		**Pn**	**07 41 00.3**	**+1.8**
	SNR=5.5							
CHMS	**Chumysh**	**6.91**	**22**	P		**Pn**	**07 41 01.4**	**+1.6**
	SNR=7.2							
CHMS	**Chumysh**	**6.91**	**22**	⇓P		**Pn**	**07 41 01.1**	**+1.3**
	5.1nm,0.3s							
CHMS				⇓S		**Sn**	**07 42 15.6**	**-1.5**
	5.5nm,0.5s							
TKM2	**Tokmak 2**	**7.11**	**27**	P		**Pn**	**07 41 03.8**	**+1.1**
	SNR=7.6							
TKM2	**Tokmak 2**	**7.11**	**27**	⇑P		**Pn**	**07 41 03.8**	**+1.1**
	3.4nm,0.5s							
TKM2				⇑S		**Sn**	**07 42 21.2**	**-1.3**
	7.6nm,0.7s							
KST	**Kastek**	**7.35**	**28**	*e*P		**Pn**	**07 41 08.0**	**+2.1**
	2.2nm,0.3s							
KST				*e*S		**Sn**	**07 42 25.4**	**-2.7**
	13nm,0.3s							
MK31	**Makanchi Array**	**13.06**	**35**	P		**P**	**07 42 26.3**	**+0.7**
	0.7nm,0.4s,baz=215,slow=10,SNR=10							
MKAR	**Makanchi Array**	**13.06**	**35**	P		**Pn**	**07 42 23.6**	**+2.7**
	0.5nm,0.3s,baz=217,slow=9.0,SNR=12							
KURBB	**Kurchatov Arra**	**14.94**	**18**	P		**P**	**07 42 46.9**	**+0.6**
	1.2nm,0.6s,baz=208,slow=10,SNR=6.2							
AB31	**Akbulak array**	**15.09**	**330**	P		**Pn**	**07 42 46.8**	**+0.5**
	0.4nm,0.3s,baz=151,slow=12,SNR=26							
AB31				⇑S		Sn	07 45 24.8	-9.1
	0.9nm,0.6s,baz=151,slow=24,SNR=4.9							
AKTO	**Aktyubinsk**	**16.79**	**329**	P		**Pn**	**07 43 08.2**	**+1.0**
	2.7nm,0.5s,baz=137,slow=9.5,SNR=13							
AKTO				S		**S**	**07 46 12.8**	**-0.9**
	1.7nm,0.8s,baz=358,slow=19,SNR=4.8							
ZALV	**Zalesovo Beam**	**19.71**	**24**	P		**P**	**07 43 39.1**	**+0.5**
	2.4nm,0.3s,baz=211,slow=9.9,SNR=9.3							
FINES	**FINESS Array B**	**37.51**	**326**	P		**P**	**07 46 21.1**	**+1.2**
	19nm,1.3s,baz=120,slow=9.6,SNR=7.8							
	19nm,1.3s							
ARCES	**ARCESS Array B**	**41.12**	**337**	P		**P**	**07 46 50.9**	**+1.1**
	2.0nm,0.7s,baz=111,slow=9.2,SNR=9.4							
	2.0nm,0.7s							
NB2	**NORSAR Subarra**	**44.42**	**323**	P		**P**	**07 47 17.0**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=94,slow=7.9							
NOA	**NORSAR Array B**	**44.42**	**323**	P		**P**	**07 47 17.3**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=97,slow=7.2,SNR=4.3							
	comp=Z,0.7nm,0.4s							
TORD	**Torodi Ar. Bea**	**65.95**	**269**	P		**P**	**07 49 50.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=51,slow=6.7,SNR=1.3							
	comp=Z,0.2nm,0.5s							
WRA	**Warramunga Arr**	**81.86**	**122**	P		**P**	**07 51 22.1**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=325,slow=4.9,SNR=6.2							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**84.14**	**125**	P		**P**	**07 51 33.3**	**-2.1**
	comp=Z,0.8nm,1.0s,baz=316,slow=6.0,SNR=5.1							
	comp=Z,0.8nm,1.0s							

*NEIC **10** 08:07:05.9±2.0, 13°.80N±0°.06×120°.80E±0°.09, h73km±6km, mb4.6/53, Error ellipse: s-maj=15.5km s-min=2.6km az=123.0*
*IDC **10** 08:07:08.6±0.6, 13°.68N×120°.89E, h116km±3km, mb3.9/25, mbtmp4.3/25, MS2.8/1, Error ellipse: s-maj=16.2km s-min=11.2km az=75.0*
*MAN **10** 08:07:09, 13°.72N×120°.56E, h83km, Ms4.3*
ISC 10 08:07:08.4±0.5, 13°.71N±0°.03×120°.58E±0°.04, h102km±4km, n119, σ1§56/122, mb4.4/53, 5C-16D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**0.33**	**275**	⇑*i*P		**Pn**	**08 07 23.5**	**+0.2**
LUBP				*e*S		**Sn**	**08 07 34.5**	**0.0**
PGP	**Puerto Galera**	**0.42**	**119**	⇑*e*P		**Pn**	**08 07 23.3**	**-0.5**
PGP				*i* S		**Sn**	**08 07 34.6**	**-0.9**
TGY	**Tagaytay City**	**0.52**	**41**	P		**Pn**	**08 07 25.8**	**+1.2**
TGY				S		**Sn**	**08 07 40.5**	**+3.7**
TGY	**Tagaytay City**	**0.52**	**41**	⇓*e*P		**Pn**	**08 07 25.0**	**+0.4**
TGY				*i* S		**Sn**	**08 07 37.2**	**+0.4**
MACP	**Maragondon, Ca**	**0.57**	**14**	⇓*e*P		**Pn**	**08 07 24.7**	**-0.2**
MACP				*i* S		**Sn**	**08 07 36.1**	**-1.1**
QVP	**Quezon City--P**	**1.00**	**24**	⇓*e*P		**Pn**	**08 07 29.7**	**+0.8**
QVP				*i* S		**Sn**	**08 07 46.1**	**+1.7**
LQP	**Lukban**	**1.01**	**67**	⇑*i*P		**Pn**	**08 07 30.1**	**+0.8**
LQP				*i* S		**Sn**	**08 07 46.5**	**+1.4**
BOAC	**Boac**	**1.25**	**101**	⇓*e*P		**Pn**	**08 07 32.4**	**+0.6**
BOAC				*i* S		**Sn**	**08 07 49.4**	**-0.1**
SJMP	**San Jose**	**1.35**	**157**	⇓*e*P		**Pn**	**08 07 33.9**	**+1.0**
SJMP				*i* S		**Sn**	**08 07 51.5**	**+0.1**
BUSP	**Coron**	**1.73**	**192**	⇓*e*P		**Pn**	**08 07 37.9**	**+0.2**
BUSP				*i* S		**Sn**	**08 07 59.7**	**-0.2**
GQP	**Guinayangan**	**1.82**	**84**	⇓*e*P		**Pn**	**08 07 40.1**	**+1.4**
GQP				*e*S		**Sn**	**08 08 04.6**	**+2.6**
PCPH	**Palayan**	**1.91**	**15**	⇓*e*P		**Pn**	**08 07 39.8**	**-0.1**
PCPH				*e*S		**Sn**	**08 08 04.3**	**+0.4**
AUQP	**San Andres**	**2.07**	**100**	⇓*e*P		**Pn**	**08 07 44.9**	**+2.9**
SCZP	**Santa Cruz**	**2.15**	**343**	⇓*e*P		**Pn**	**08 07 43.3**	**+0.3**
SCZP				*i* S		**Sn**	**08 08 12.1**	**+2.5**
BALP	**Baler**	**2.24**	**25**	⇓*e*P		**Pn**	**08 07 45.6**	**+1.5**
BALP				*i* S		**Sn**	**08 08 15.3**	**+3.7**
SMPP	**San Manuel, Pa**	**2.43**	**2**	⇓*e*P		**Pn**	**08 07 46.7**	**0.0**
SMPP				*i* S		**Sn**	**08 08 15.4**	**-0.6**
BOLP	**Bolinao**	**2.73**	**346**	⇓*e*P		**Pn**	**08 07 51.1**	**+0.4**
BOLP				*i* S		**Sn**	**08 08 22.3**	**-0.9**
SAMP	**Sagada Mountai**	**3.37**	**5**	⇓*e*P		**Pn**	**08 08 00.0**	**+0.9**
SAMP				*i* S		**Sn**	**08 08 41.3**	**+3.0**
CAUP	**Cauayan**	**3.44**	**20**	⇓*e*P		**Pn**	**08 08 02.7**	**+2.7**
CAUP				*i* S		Sn	08 08 49.7	+10
PVCP	**Virac**	**3.48**	**91**	⇓*e*P		**Pn**	**08 08 02.1**	**+1.5**
DAV	**Davao City (W)**	**8.23**	**143**	LR		LR	08 12 53.5	
	comp=Z,64nm,18.5s,baz=48,slow=43							
MYLDM	**Lahad Datu**	**8.72**	**194**	Pn		**Pn**	**08 09 13.0**	**+1.3**
YULB	**Yu-li**	**9.66**	**4**	Pn		**Pn**	**08 09 14.9**	**-4.5**
QIZ	**Qiongzhong**	**11.58**	**299**	Pn		**Pn**	**08 09 49.9**	**-0.6**
SBUM	**Sibu**	**13.91**	**217**	P		**P**	**08 10 29.3**	**+3.4**
JSU	**Suzuyama**	**19.90**	**25**	P		**P**	**08 11 30.6**	**-1.3**
JSU				IAmb		IAmb	08 11 36.4	
	comp=Z,25nm,1.0s							
KMI	**Kunming**	**20.27**	**307**	⇑P		Pn	08 11 39.5	+0.5
KMI				pmax		pmax		
	comp=Z,13nm,0.9s							
CRAI	**Chiangrai**	**20.38**	**291**	P		Pn	08 11 40.0	-0.1
CM31	**Chiang Mai Arr**	**21.31**	**286**	P		**P**	**08 11 49.8**	**+2.6**
CMAR	**Chiang Mai Ar**	**21.31**	**286**	P		**P**	**08 11 50.0**	**+2.8**
	comp=Z,7.0nm,0.7s,baz=94,slow=7.0,SNR=26							
	comp=Z,7.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**21.31**	**286**	P		**P**	**08 11 49.3**	**+2.1**
CHTO	**Chiang Mai**	**21.37**	**287**	P		**P**	**08 11 49.5**	**+1.7**
XAN	**Xi'an**	**22.84**	**334**	P		**P**	**08 12 02.9**	**-0.1**
XAN				pmax		pmax		
	comp=Z,16nm,0.7s							
JMN	**Monobe**	**23.31**	**29**	P		**P**	**08 12 05.8**	**-1.7**
JMN				IAmb		IAmb	08 12 09.4	
	comp=Z,41nm,1.0s							
PSI	**Prapat**	**23.98**	**245**	P		**P**	**08 12 14.8**	**+1.0**
	comp=Z,12nm,0.9s,baz=46,slow=2.5,SNR=6.0							
	comp=Z,12nm,0.9s							
JHS	**Saijyo**	**24.03**	**26**	P		**P**	**08 12 12.1**	**-1.9**
RPSI	**Rantau Prapat**	**24.03**	**245**	P		**P**	**08 12 15.2**	**+1.1**
RPSI				IAmb		IAmb	08 12 17.6	
	comp=Z,18nm,1.0s							
RPSI	**Rantau Prapat**	**24.03**	**245**	P		**P**	**08 12 14.8**	**+0.7**
HNS	**HongShan**	**24.17**	**349**	⇑P		**P**	**08 12 15.1**	**0.0**
HNS				pmax		pmax		
	comp=Z,16nm,0.9s							
KSRS	**Korea Array**	**24.54**	**14**	P		**P**	**08 12 16.8**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=203,slow=8.0,SNR=6.4							
	comp=Z,1.4nm,0.8s							
MJAR	**Matsushiro Arr**	**27.68**	**32**	P		**P**	**08 12 42.8**	**-4.1**
	comp=Z,0.8nm,0.5s,baz=196,slow=3.2,SNR=1.8							
	comp=Z,0.8nm,0.5s							
USRK	**Ussuriysk Ar.**	**31.92**	**16**	P		**P**	**08 13 20.9**	**-3.3**
	comp=Z,2.7nm,0.7s,baz=120,slow=16,SNR=2.9							
	comp=Z,2.7nm,0.7s							
GOMU	**GeErMu**	**32.18**	**319**	P		**P**	**08 13 29.1**	**+2.1**
GOMU				pmax		pmax		
	comp=Z,4.0nm,0.8s							
GOMU				pmax		pmax		
	comp=Z,36nm,4.4s							
ODAN	**Odare**	**33.65**	**298**	*e*P		**P**	**08 13 41.2**	**+1.3**
	comp=Z,33nm,0.8s							
RAMN	**Ramite**	**34.36**	**298**	*e*P		**P**	**08 13 47.4**	**+1.4**
	comp=Z,83nm,0.9s							
JIRN	**Jiri**	**34.90**	**299**	*e*P		**P**	**08 13 52.2**	**+1.4**
	comp=Z,57nm,0.5s							
GUN	**Gumba**	**35.24**	**299**	*e*P		**P**	**08 13 54.7**	**+1.1**
	comp=Z,63nm,0.5s							
PKI	**Pulchoki**	**35.55**	**298**	*e*P		**P**	**08 13 56.9**	**+0.6**
	comp=Z,36nm,0.6s							
PKIN	**Phulchoki**	**35.56**	**298**	*e*P		**P**	**08 13 56.7**	**+0.4**
	comp=Z,30nm,0.5s							
KKN	**Kakani**	**35.72**	**299**	*e*P		**P**	**08 13 58.4**	**+0.8**
DMN	**Daman**	**35.81**	**298**	*e*P		**P**	**08 13 59.6**	**+1.1**
ULN	**Ulaanbaatar**	**35.87**	**344**	P		**P**	**08 13 57.9**	**-0.6**
ULN				IAmb		IAmb	08 14 00.8	
	comp=Z,7.8nm,1.1s							
WB0	**Warramunga Arr**	**35.94**	**157**	P		**P**	**08 13 57.4**	**-1.9**
WB0				IAmb		IAmb	08 14 22.4	
	comp=Z,8.3nm,1.0s							
SONM	**Songino Array**	**36.02**	**344**	P		**P**	**08 13 59.9**	**+0.1**
	comp=Z,5.0nm,0.5s,baz=159,slow=9.7,SNR=17							
	comp=Z,5.0nm,0.5s							
SONM	**Songino Array**	**36.02**	**344**	P		**P**	**08 13 59.5**	**-0.3**
SONM				IAmb		IAmb	08 14 02.0	
	comp=Z,7.1nm,1.0s							
WRAB	**Tennant Creek**	**36.07**	**158**	P		**P**	**08 13 58.5**	**-1.8**
WRAB				IAmb		IAmb	08 14 23.2	
	comp=Z,5.0nm,0.9s							
WRA	**Warramunga Arr**	**36.08**	**158**	P		**P**	**08 13 58.0**	**-2.4**
	comp=Z,0.9nm,0.6s,baz=323,slow=12,SNR=16							
WRA				pP		**pP**	**08 14 23.1**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=336,slow=9.6,SNR=12							
	comp=Z,0.9nm,0.6s							
WRA	**Warramunga Arr**	**36.08**	**158**	P		**P**	**08 13 59.2**	**-1.2**
WB2	**Warramunga Arr**	**36.08**	**158**	P		**P**	**08 13 58.7**	**-1.7**
WB2				IAmb		IAmb	08 14 24.5	
	comp=Z,6.7nm,0.8s							
WR0	**Warramunga Arr**	**36.17**	**157**	P		**P**	**08 14 00.0**	**-1.2**
WR0				IAmb		IAmb	08 14 04.1	
	comp=Z,10nm,1.3s							
GKN	**Gorkha**	**36.32**	**299**	*e*P		**P**	**08 14 03.3**	**+0.6**
KLR	**Kul'dur**	**36.60**	**12**	P		**P**	**08 14 04.3**	**-0.2**
	comp=Z,4.5nm,0.9s,baz=237,slow=6.7,SNR=11							
	comp=Z,4.5nm,0.9s							
DANN	**Dangsing**	**37.16**	**299**	*e*P		**P**	**08 14 10.5**	**+0.6**
ASAR	**Alice Springs**	**39.36**	**161**	P		**P**	**08 14 26.1**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=336,slow=6.7,SNR=9.4							
ASAR				pP		**pP**	**08 14 51.0**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=336,slow=6.6,SNR=12							
	comp=Z,0.4nm,0.4s							
MORW	**Morawa**	**42.75**	**186**	P		**P**	**08 14 55.6**	**-0.1**
MORW				IAmb		IAmb	08 14 55.9	
	comp=Z,13nm,1.0s							
MK31	**Makanchi Array**	**45.96**	**324**	P		**P**	**08 15 21.3**	**+0.1**
MK31				IAmb		IAmb	08 15 23.2	
	comp=Z,8.1nm,0.8s							
MKAR	**Makanchi Array**	**45.96**	**324**	P		**P**	**08 15 22.3**	**+1.1**
	comp=Z,6.3nm,0.6s,baz=136,slow=9.5,SNR=39							
	comp=Z,6.3nm,0.6s							
KSH	**Kashi**	**46.81**	**312**	P		**P**	**08 15 32.1**	**+4.0**
KSH				pmax		pmax		
	comp=Z,8.0nm,0.7s							
ULHL	**Ulahol**	**47.63**	**315**	P		**P**	**08 15 36.4**	**+1.8**
	SNR=18							
TKM2	**Tokmak 2**	**48.34**	**316**	P		**P**	**08 15 41.5**	**+1.5**
	SNR=11							
KBK	**Karagaybulak**	**48.68**	**315**	P		**P**	**08 15 44.5**	**+2.0**
	SNR=7.8							
AAK	**Ala-Archa**	**48.98**	**315**	P		**P**	**08 15 45.5**	**+0.7**
	comp=Z,2.3nm,0.4s,baz=149,slow=7.1,SNR=5.8							
	comp=Z,2.3nm,0.4s							
ZALV	**Zalesovo Beam**	**49.00**	**333**	P		**P**	**08 15 44.3**	**-0.2**
	comp=Z,5.9nm,0.5s,baz=125,slow=6.6,SNR=18							
	comp=Z,5.9nm,0.5s							
ZALV	**Zalesovo Beam**	**49.00**	**333**	P		**P**	**08 15 44.5**	**0.0**
USP	**Ospenovka**	**49.21**	**316**	P		**P**	**08 15 47.7**	**+1.3**
	SNR=7.6							
AML	**Almayashu**	**49.35**	**314**	P		**P**	**08 15 49.5**	**+1.6**
	SNR=6.1							
EKS2	**Erkin-Say**	**49.48**	**315**	P		**P**	**08 15 50.4**	**+1.8**
	SNR=6.4							
STKA	**Stephens Creek**	**49.60**	**156**	P		**P**	**08 15 47.4**	**-2.0**
	comp=Z,4.5nm,1.0s,baz=308,slow=17,SNR=4.7							
	comp=Z,4.5nm,1.0s							
KURBB	**Kurchatov Arra**	**50.12**	**326**	P		**P**	**08 15 54.0**	**+0.9**
	comp=Z,19nm,0.9s,baz=126,slow=7.7,SNR=68							
	comp=Z,19nm,0.9s							
KURK	**Kurchatov**	**50.12**	**326**	P		**P**	**08 15 54.1**	**+1.0**
GAR	**Garm**	**50.83**	**309**	P		**P**	**08 16 00.1**	**+1.3**
KK31	**Karatay Array**	**51.89**	**314**	P		**P**	**08 16 07.3**	**+0.8**
KKAR	**Karatay Array**	**51.89**	**314**	P		**P**	**08 16 07.5**	**+0.9**
KKAR	**Karatay Array**	**51.89**	**314**	IAmb		IAmb	08 16 08.2	
	comp=Z,9.3nm,0.8s							
SEY	**Seymchan**	**54.04**	**17**	P		**P**	**08 16 21.1**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=262,slow=8.0,SNR=5.3							
	comp=Z,1.3nm,0.6s							
BRVK	**Borovoye**	**55.77**	**326**	P		**P**	**08 16 35.2**	**+0.6**
NRIK	**Noril'sk**	**59.38**	**347**	P		**P**	**08 16 59.2**	**-0.4**
	comp=Z,7.8nm,0.7s,baz=132,slow=6.0,SNR=11							
	comp=Z,7.8nm,0.7s							
GEYT	**Alibeck**	**60.04**	**306**	P		**P**	**08 17 04.9**	**+0.1**
	comp=Z,13nm,0.8s,baz=145,slow=5.4,SNR=11							
	comp=Z,13nm,0.8s							
GEYT	**Alibeck**	**60.04**	**306**	P		**P**	**08 17 06.5**	**+1.7**
ARU	**Arti**	**63.31**	**327**	P		**P**	**08 17 25.6**	**-0.8**
RAYN	**Ar Rayn

NWF	**Wu-fen Shan**	**0.20**	**112**	*e*P	Pg	08 08 25.9 +0.9
	baz=112					
NWF				*e*S	Sg	08 08 29.5 +1.8
	baz=112					
SXI1	**Grass Mountain**	**0.27**	**101**	*e*P	Pb	08 08 27.9 -0.2
	baz=101					
SXI1				*e*S	Sb	08 08 32.2 -0.7
	baz=101					
TIPB	**Shuangxi**	**0.28**	**128**	*e*P	Pb	08 08 27.9 -0.4
	baz=128					
TIPB				*e*S	Sb	08 08 31.8 -1.3
	baz=128					
FUSB	**Fushanzhiwuyua**	**0.39**	**179**	*e*P	Pb	08 08 29.3 -0.7
	baz=179					
FUSB				*e*S	Sg	08 08 34.5 +0.9
	baz=179					
YHNB	**Yeheng**	**0.51**	**202**	*e*P	Pb	08 08 31.8 -0.3
	baz=201					

MAN ***10*** *08:17:42,5˚.53N×125˚.30E,h51km,Ms5.3*
BJI ***10*** *08:17:44.0±0.0,5˚.70N×125˚.40E,h70km,mb4.7/37, mB4.9/23,Ms4.2/16,Ms7 4.0/21*
GCMT ***10*** *08:17:44.3±0.3,5˚.80N±0˚.02×125˚.14E±0˚.03,h82km±4km, MW5.0/60,Moment Tensor Solution. s24,c26; s60,c75; Duration: 0 Moment tensor: Scale 1016Nm; Mrr1.35±.17; Mθθ0.74±.14; Mϕϕ -2.09±.17; Mrθ0.97±.12; Mrϕ3.11±.14; Mθϕ0.04±.16; Best double couple: M0 3.63700×1016 NP1:ϕs106.00000°,δ76.00000°,λ22.00000°. NP2: ϕs10.00000°,δ68.00000°,λ165.00000°. Principal axes: T 3.1370, Plg25.0000°, Azm329.0000°; N 0.9980, Plg64.0000°, Azm136.0000°; P -4.1370, Plg5.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***10*** *08:17:45.1±0.7,5˚.64N×125˚.26E,h74km±5km,mb4.0/19, mbtmp4.3/20,MS3.6/27 Error ellipse: s-maj=17.5km s-min=7.0km az=94.0*
NEIC ***10*** *08:17:46.4±1.3,5˚.67N±0˚.06×125˚.31E±0˚.09,h74km±7km, mb4.7/75,Error ellipse: s-maj=13.4km s-min=8.7km az=90.0*
DJA ***10*** *08:17:46.0±0.4,6˚N±4˚×12˚5E±˚,h53km±5km,M5.0/30, mb5.1/30,mB5.4/17,MLv5.5/12,Mw(mB)4.8/17, MwMwp4.5/2,Mwp4.9/2*
ISC 10 08:17:45.2±0.5,5.67N±0.04×125.34E±0.04,h68km±4km, n325,σ1§26/298,mb4.7/75,7C-8D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.57**	**40**	⇓	*e*P		**Pn**	**08 17 57.4**	**-1.2**
DDMP					*i* S		**Sn**	**08 18 08.0**	**-0.4**
GSPH	**General Santos**	**0.57**	**317**	⇑	*i*P		**Pn**	**08 17 55.4**	**-3.4**
GSPH					*i* S		**Sn**	**08 18 04.4**	**-4.2**
SKMP	**Bagumbayan, Su**	**1.16**	**317**	⇓	*e*P		**Pn**	**08 18 04.6**	**-1.1**
SKMP					*i* S		**Sn**	**08 18 19.4**	**-1.5**
KCP	**Kidapawan**	**1.36**	**349**	⇑	*i*P		**Pn**	**08 18 07.5**	**-0.8**
KCP					*i* S		**Sn**	**08 18 26.1**	**+0.5**
DAV	**Davao City (W)**	**1.41**	**10**		P		**Pn**	**08 18 09.1**	**+0.1**
	2μm,0.3s,baz=228,slow=4.1,SNR=26								
DAV					S		**Sn**	**08 18 28.5**	**+1.6**
	5μm,0.4s,baz=62,slow=23,SNR=31								
DAV	**Davao City (W)**	**1.41**	**10**				**Pn**	**08 18 10.2**	**+1.2**
DAV	**Davao City (W)**	**1.41**	**10**		P		**Pn**	**08 18 10.4**	**+1.4**
MATI	**Mati**	**1.56**	**36**	⇓	*e*P		**Pn**	**08 18 08.8**	**-2.2**
MATI					*i* S		**Sn**	**08 18 29.3**	**-1.1**
SGSI	**Sangihe**	**1.98**	**175**		P		**Pn**	**08 18 16.1**	**-0.5**
BUKP	**Musuan**	**2.21**	**353**	⇑	*e*P		**Pn**	**08 18 19.9**	**0.0**
BUKP					*e*S		**Sn**	**08 18 19.9**	**0.0**
BIPH	**Bislig**	**2.70**	**22**	⇑	*e*P		**Pn**	**08 18 25.2**	**-1.1**
BIPH					*i* S		**Sn**	**08 18 59.0**	**+1.2**
PAGZ	**Pagadian**	**2.91**	**318**	⇑	*i*P		**Pn**	**08 18 27.8**	**-1.4**
PAGZ					*e*S		**Sn**	**08 19 02.4**	**-0.7**
BUTP	**Butuan**	**3.29**	**5**	⇓	*e*P		**Pn**	**08 18 34.2**	**-0.2**
BUTP					*i* S		**Sn**	**08 19 06.4**	**-6.0**
ZCP	**Zamboanga City**	**3.48**	**291**	⇑	*i*P		**Pn**	**08 18 36.0**	**-0.9**
ZCP					*i* S		**Sn**	**08 19 13.7**	**-3.4**
DCPH	**Dipolog City**	**3.50**	**326**	⇓	*e*P		**Pn**	**08 18 39.4**	**+2.0**
SCPH	**Surigao**	**4.09**	**2**		*e*P		Pn	08 18 50.8	+5.4
GLSP	**General Luna,**	**4.16**	**11**	⇓	*e*P		**Pn**	**08 18 46.0**	**-0.4**
GLSP					*i* S		**Sn**	**08 19 29.6**	**-4.2**
SNPH	**Sibulan**	**4.21**	**330**		*e*P		Pn	08 18 54.5	+7.5
SNPH					*e*S		Sn	08 19 50.2	+15
TBP	**Tagbilaran**	**4.26**	**340**		*e*P		Pn	08 18 42.9	-4.8
LLP	**Lapu-Lapu**	**4.82**	**344**		*e*P		**Pn**	**08 18 55.4**	**+0.2**
LLP					*e*S		Sn	08 19 59.8	+10
KMSI	**Cibinong**	**5.24**	**195**		P		**Pn**	**08 19 01.6**	**+0.6**
	5.6nm7μm572nm,0.7s								
TNTI	**Ternate**	**5.27**	**157**		Pn		**Pn**	**08 19 01.6**	**+0.2**
TNTI	**Ternate**	**5.27**	**157**		P		**Pn**	**08 19 01.5**	**+0.1**
	1.1nm3μm306nm,0.8s								
TNTI	**Ternate**	**5.27**	**157**		P		**Pn**	**08 19 02.6**	**+1.2**
	308nm,0.8s								
GTOI	**Gorontalo**	**5.51**	**205**		P		**Pn**	**08 19 03.3**	**-1.5**
	3.3nm15μm787nm,0.6s								
MRSI	**Marisa**	**6.17**	**213**		P		**Pn**	**08 19 12.7**	**-1.1**
	5.1nm14μm881nm,0.7s								
TOLI2	**Tolitoli**	**6.42**	**225**		Pn		**Pn**	**08 19 14.1**	**-3.0**
LBMI	**Labuha**	**6.62**	**161**		P		**Pn**	**08 19 20.3**	**+0.3**
	1.2nm2μm2μm154nm,0.8s								
MYLDM	**Lahad Datu**	**6.83**	**266**		Pn		**Pn**	**08 19 23.6**	**+0.8**
LUWI	**Luwuk**	**7.14**	**201**		Pn		**Pn**	**08 19 29.0**	**+1.9**
LUWI	**Luwuk**	**7.14**	**201**		P		**Pn**	**08 19 28.8**	**+1.7**
	3.8nm10μm511nm,0.9s								
LUWI	**Luwuk**	**7.14**	**201**		P		**Pn**	**08 19 29.0**	**+1.9**
	512nm,1.0s								
APSI	**Ampana**	**7.50**	**210**		P		**Pn**	**08 19 34.1**	**+2.1**
	1.3nm3μm169nm,0.4s								
SANI	**Sanana**	**7.69**	**175**		P		**Pn**	**08 19 32.8**	**-1.8**
	0.6nm2μm149nm,0.6s								
SANI	**Sanana**	**7.69**	**175**		P		**Pn**	**08 19 32.9**	**-1.7**
	142nm,0.8s								
SIJI	**Sorong**	**8.79**	**137**		P		**Pn**	**08 19 49.6**	**0.0**
	17nm,0.3s,baz=336,slow=22,SNR=6.5								
NLAI	**Namlea**	**9.02**	**169**		P		**Pn**	**08 19 52.1**	**-0.7**
	2μm143nm,0.7s								
LQP	**Lukban**	**9.19**	**336**	⇓	*e*P		**Pn**	**08 19 59.8**	**+4.5**
AAI	**Ambon**	**9.72**	**163**		P		**Pn**	**08 20 02.2**	**-0.2**
	154nm,0.6s								
TTSI	**Tana Toraja**	**10.26**	**213**		P		**Pn**	**08 20 10.7**	**+0.9**
	51nm,0.5s								
FAKI	**Fak Fak**	**10.97**	**141**		Pn		**Pn**	**08 20 20.5**	**+1.1**
FAKI	**Fak Fak**	**10.97**	**141**		P		**Pn**	**08 20 19.6**	**+0.1**
	78nm,1.0s								
SPSI	**Sidrap Palu**	**11.07**	**210**		P		**Pn**	**08 20 23.5**	**+2.7**
	30nm,0.5s								
KAPI	**Kappang**	**11.99**	**208**		P		**Pn**	**08 20 35.2**	**+1.8**
	56nm,1.3s								
BAKI	**Biak**	**12.73**	**122**		P		**Pn**	**08 20 45.5**	**+2.0**
	1μm83nm,0.9s								
SBUM	**Sibu**	**13.47**	**257**		Pn		**Pn**	**08 20 55.8**	**+2.3**
BBKI	**Banjar Baru**	**13.86**	**229**		P		**P**	**08 21 01.3**	**-3.5**
	64nm,0.9s								
KSM	**Kuching**	**15.57**	**255**		P		**P**	**08 21 23.8**	**+0.1**
KSM	**Kuching**	**15.57**	**255**		P		**P**	**08 21 26.7**	**+3.0**
	24nm,1.4s								
BATI	**Baumata**	**15.86**	**186**		LR		LR	08 28 10.2	
	comp=Z,186nm,21.1s,baz=282,slow=40								
SRBI	**Singaraja**	**16.99**	**217**		P		**P**	**08 21 41.3**	**+1.8**
	1μm91nm,1.3s								
JAGI	**Jajag, Banyuwa**	**17.94**	**219**		P		**Pn**	**08 21 53.0**	**+2.8**
JAGI	**Jajag, Banyuwa**	**17.94**	**219**		P		**Pn**	**08 21 53.9**	**+3.7**
	97nm,1.1s								
JAGI	**Jajag, Banyuwa**	**17.94**	**219**		P		**Pn**	**08 21 54.4**	**+4.2**
	95nm,1.1s								
YULB	**Yu-li**	**18.05**	**348**		P		**P**	**08 21 49.5**	**-1.6**
TPUB	**Ta-pu**	**18.11**	**346**		P		**P**	**08 21 50.6**	**-1.2**
TPUB					IAmb		IAmb	08 21 59.0	
	comp=Z,46nm,1.2s								
SSLB	**Suanglung**	**18.50**	**347**		P		**P**	**08 21 55.2**	**-0.9**
MTN	**Manton Dam**	**19.27**	**163**		P		**Pn**	**08 22 04.8**	**-1.3**
	baz=19,SNR=12								
MTN	**Manton Dam**	**19.27**	**163**		P		**P**	**08 22 03.8**	**-0.7**
MTN					IAmb		IAmb	08 22 32.3	
	comp=Z,38nm,1.1s								
MTN	**Manton Dam**	**19.27**	**163**		P		**Pn**	**08 22 05.3**	**-0.9**
	comp=Z,48nm,0.9s								
KDU	**Kakadu**	**19.56**	**159**		P		**P**	**08 22 07.3**	**-0.4**
	baz=20,SNR=4.2								
KDU	**Kakadu**	**19.56**	**159**		P		**Pn**	**08 22 08.4**	**-1.2**
	comp=Z,36nm,0.7s								
QIZ	**Qiongzhong**	**20.11**	**313**		P		**P**	**08 22 14.0**	**+0.3**
QIZ					IAmb		IAmb	08 22 19.7	
	comp=Z,40nm,1.2s								
QIZ	**Qiongzhong**	**20.11**	**313**		P		Pn	08 22 15.4	-0.7
QIZ					sP		sP	08 22 38.0	+1.1
QIZ					S		**S**	**08 25 57.1**	**+1.1**
QIZ					pmax		pmax		
	comp=Z,21nm,1.2s								
QIZ					pmax		pmax		
	comp=Z,210nm,7.5s								
QIZ	**Qiongzhong**	**20.11**	**313**		P		Pn	08 22 18.9	+2.8
	comp=Z,32nm,1.3s								
GUMO	**Guam**	**20.79**	**66**		LR		LR	08 29 18.2	
	comp=Z,113nm,21.6s,baz=236,slow=33								
JOW	**Kunigami**	**21.23**	**7**		LR		LR	08 30 36.8	
	comp=Z,133nm,21.0s,baz=74,slow=36								
KNRA	**Kununurra**	**21.48**	**171**		P		**P**	**08 22 27.9**	**-0.4**
	baz=22,SNR=19								
KNRA	**Kununurra**	**21.48**	**171**		P		**P**	**08 22 28.2**	**-0.1**
KNRA	**Kununurra**	**21.48**	**171**		P		**P**	**08 22 28.7**	**+0.4**
	comp=Z,70nm,0.8s								
LEM	**Lembang**	**21.61**	**235**		P		**P**	**08 22 30.0**	**0.0**
	comp=Z,23nm,0.5s,baz=309,slow=22,SNR=1.4								
	comp=Z,23nm,0.5s								
UBPT	**Khong Chiam**	**21.73**	**298**		P		**P**	**08 22 31.0**	**-0.1**
CBJI	**Citeko**	**22.02**	**237**		P		**P**	**08 22 38.3**	**+4.1**
	comp=Z,134nm,1.0s								
DBJI	**Dramaga**	**22.17**	**237**		P		**P**	**08 22 38.9**	**+3.0**
	comp=Z,62nm,0.7s								
FITZ	**Fitzroy Crossi**	**23.62**	**179**		P		**P**	**08 22 49.5**	**-0.8**
	comp=Z,3.5nm,0.4s,baz=7.8,slow=11,SNR=34								
	comp=Z,3.5nm,0.4s								
FITZ	**Fitzroy Crossi**	**23.62**	**179**		P		**P**	**08 22 50.2**	**-0.1**
	baz=24,SNR=9.7								
FITZ	**Fitzroy Crossi**	**23.62**	**179**		P		**P**	**08 22 50.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**23.62**	**179**		P		**P**	**08 22 51.9**	**+1.6**
	comp=Z,42nm,1.1s								
COEN	**Coen**	**26.33**	**138**		P		**P**	**08 23 15.2**	**+0.1**
COEN					IAmb		IAmb	08 23 32.7	
	comp=Z,30nm,1.3s								
PMG	**Port Moresby**	**26.40**	**124**		LR		LR	08 34 35.7	
	comp=Z,93nm,19.0s,baz=249,slow=38								
PSI	**Prapat**	**26.50**	**265**		LR		LR	08 35 53.6	
	comp=Z,86nm,18.8s,baz=55,slow=41								
WB0	**Warramunga Arr**	**26.80**	**161**		P		**P**	**08 23 18.8**	**-0.4**
WB0					IAmb		IAmb	08 23 35.4	
	comp=Z,41nm,1.1s								
WRAB	**Tennant Creek**	**26.94**	**161**		P		**P**	**08 23 20.0**	**-0.5**
WRAB					IAmb		IAmb	08 24 01.9	
	comp=Z,44nm,1.3s								
WRAB	**Tennant Creek**	**26.94**	**161**		P		**P**	**08 23 20.6**	**+0.2**
	comp=Z,25nm,1.1s								
NJ2	**Nanjing**	**26.94**	**348**		*e*P		**P**	**08 23 23.4**	**+3.1**
NJ2					pmax		pmax		
	comp=Z,13nm,0.5s								
WRA	**Warramunga Arr**	**26.95**	**161**		P		**P**	**08 23 20.0**	**-0.5**
	comp=Z,5.9nm,0.8s,baz=332,slow=11,SNR=56								
WRA					pP		**pP**	**08 23 35.8**	**-0.3**
	comp=Z,14nm,0.8s,baz=339,slow=11,SNR=12								
WRA					LR		LR	08 34 43.5	
	comp=Z,68nm,21.4s,baz=355,slow=38								
	comp=Z,5.9nm,0.8s								
WB2	**Warramunga Arr**	**26.95**	**161**		P		**P**	**08 23 20.6**	**0.0**
	baz=27								
WB2	**Warramunga Arr**	**26.95**	**161**		P		**P**	**08 23 18.7**	**-1.8**
WB2					IAmb		IAmb	08 23 59.9	
	comp=Z,25nm,0.8s								
WC3	**Warramunga Arr**	**26.97**	**161**		P		**P**	**08 23 20.7**	**0.0**
	baz=27								
WR0	**Warramunga Arr**	**27.03**	**161**		IAmb		IAmb	08 23 42.8	
	comp=Z,23nm,1.1s								
MBWA	**Marble Bar**	**27.22**	**192**		P		**P**	**08 23 25.0**	**+2.1**
	comp=Z,15nm,0.9s								
PSA00	**Pilbara Seismi**	**27.60**	**191**		P		**P**	**08 23 25.8**	**-0.5**
PSA00							**pP**	**08 23 39.4**	**-1.9**
PSA00					IAmb		IAmb	08 23 49.9	
	comp=Z,20nm,1.1s								
PSA00	**Pilbara Seismi**	**27.60**	**191**		P		**P**	**08 23 26.8**	**+0.5**
	comp=Z,22nm,1.2s								
KRVT	**Keravat (AS076**	**28.43**	**110**		LR		LR	08 32 52.9	
	comp=Z,139nm,21.0s,baz=69,slow=32								
CMAR	**Chiang Mai Arr**	**28.72**	**299**		P		**P**	**08 23 36.4**	**0.0**
	comp=Z,1.7nm,0.5s,baz=110,slow=7.6,SNR=10								
CMAR					LR		LR	08 37 31.2	
	comp=Z,54nm,18.1s,baz=120,slow=41								
	comp=Z,1.7nm,0.5s								
KMI	**Kunming**	**29.04**	**314**	⇑	P		**P**	**08 23 41.8**	**+2.4**
KMI					pP		pP	08 24 00.5	+4.7
KMI					pmax		pmax		
	comp=Z,8.0nm,0.5s								
KMI					LR		LR		
	comp=Z,150nm,21.7s								
KMI					LR		LR		
	comp=Z,220nm,22.1s								
KMI					LR		LR		
	comp=Z,270nm,27.0s								
QIS	**Mount Isa**	**29.59**	**152**		P		**P**	**08 23 44.3**	**+0.3**
	baz=30,SNR=4.9								
QIS	**Mount Isa**	**29.59**	**152**		P		**P**	**08 23 45.2**	**+1.1**
	comp=Z,10nm,0.7s								
AS31	**Alice Springs**	**30.33**	**164**		P		**P**	**08 23 50.4**	**-0.2**
ASAR	**Alice Springs**	**30.33**	**164**		P		**P**	**08 23 50.6**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=339,slow=6.9,SNR=23								
ASAR					ScP		**ScP**	**08 30 24.6**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=343,slow=3.1,SNR=5.1								
ASAR					LR		LR	08 36 35.4	
	comp=Z,115nm,18.6s,baz=347,slow=37								
	comp=Z,1.3nm,0.4s								
ASAR	**Alice Springs**	**30.33**	**164**		P		**P**	**08 23 49.3**	**-1.3**
PZH	**PanZhiHua**	**30.60**	**315**		P		**P**	**08 23 54.8**	**+1.7**
PZH					S		**S**	**08 28 50.2**	**-0.4**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.7s								
PZH					pmax		pmax		
	comp=Z,120nm,4.7s								
PZH					LR		LR		
	comp=Z,530nm,27.0s								
PZH					LR		LR		
	comp=Z,530nm,25.0s								
PZH					LR		LR		
	comp=Z,870nm,27.9s								
WRKA	**Warakurna**	**30.66**	**175**		P		**P**	**08 23 54.0**	**+0.6**
	baz=31,SNR=9.3								
KSRS	**Korea Array**	**31.73**	**4**		P		**P**	**08 24 02.0**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=181,slow=9.6,SNR=21								
KSRS					PcP		**PcP**	**08 26 52.5**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=205,slow=2.5,SNR=5.7								
KSRS					ScP		**ScP**	**08 30 29.5**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=177,slow=3.1,SNR=7.0								
KSRS					LR		LR	08 38 51.5	
	comp=Z,89nm,19.9s,baz=190,slow=40								
	comp=Z,2.8nm,0.7s								
XAN	**Xi'an**	**32.08**	**334**		P		**P**	**08 24 05.2**	**-0.7**
XAN					pP		pP	08 24 22.4	+0.1
XAN					pmax		pmax		
	comp=Z,26nm,0.7s								
XAN					LR		LR		
	comp=Z,230nm,21.3s								
XAN					LR		LR		
	comp=Z,150nm,20.6s								
XAN					LR		LR		
	comp=Z,210nm,19.2s								
CD2	**Chengdu**	**32.27**	**324**		P		**P**	**08 24 08.4**	**+0.7**
CD2					pP		pP	08 24 25.4	+1.4
CD2					sP		sP	08 24 34.5	+2.5
CD2					S		**S**	**08 29 18.0**	**+1.5**
CD2					pmax		pmax		
	comp=Z,20nm,0.9s								
CD2					LR		LR		
	comp=Z,450nm,17.2s								
CD2					LR		LR		
	comp=Z,490nm,18.1s								
CD2					LR		LR		
	comp=Z,290nm,16.2s								
MJAR	**Matsushiro Arr**	**32.91**	**19**		P		**P**	**08 24 11.8**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=163,slow=9.0,SNR=4.1								
MJAR					LR		LR	08 36 56.4	
	comp=Z,60nm,21.8s,baz=224,slow=35								
	comp=Z,0.8nm,0.5s								
HNS	**HongShan**	**33.04**	**344**	⇓	P		P	08 24 25.9	+12
HNS					pmax		pmax		
	comp=Z,6.0nm,1.0s								
OOD	**Oodnadatta**	**34.73**	**164**		P		**P**	**08 24 29.5**	**+0.5**
	comp=Z,31nm,0.8s								
JMM	**Marumori**	**35.00**	**22**				**P**	**08 24 30.7**	**-0.5**
LZH	**Lanzhou**	**36.14**	**330**		*e*P		**P**	**08 24 42.4**	**+1.2**
LZH					pP		pP	08 24 58.5	+0.7
LZH					sP		sP	08 25 07.5	+1.7
LZH					pmax		pmax		
	comp=Z,15nm,1.0s								
LZH					LR		LR		
	comp=Z,290nm,10.7s								
LZH					LR		LR		
	comp=Z,220nm,9.6s								
LZH					LR		LR		
	comp=Z,320nm,11.2s								
HHC	**Hu-ho-hao-te**	**37.14**	**343**		*e*P		**P**	**08 24 49.7**	**+0.1**
HHC					pmax		pmax		
	comp=Z,17nm,0.9s								
HHC					pmax		pmax		
	comp=Z,110nm,4.3s								
HHC					LR		LR		
	comp=Z,370nm,19.2s								
HHC					LR		LR		
	comp=Z,280nm,18.6s								
HHC					LR		LR		
	comp=Z,560nm,20.2s								
HNR	**Honiara**	**37.61**	**113**		LR		LR	08 39 39.8	
	comp=Z,44nm,21.6s,baz=292,slow=35								
RK1H	**Rockhampton Ha**	**37.91**	**141**		P		**P**	**08 24 57.0**	**+0.8**
	comp=Z,12nm,1.0s								
USRK	**Ussuriysk Ar.**	**38.82**	**8**		P		**P**	**08 25 03.8**	**+0.3**
	comp=Z,4.8nm,0.8s,baz=201,slow=6.2,SNR=6.7								
USRK					PcP		**PcP**	**08 27 12.2**	**-1.3**
	comp=Z,2.1nm,0.5s,baz=221,slow=1.5,SNR=4.5								
	comp=Z,4.8nm,0.8s								
XLT	**XiLinHaoTe**	**38.94**	**349**		*e*P		**P**	**08 25 02.7**	**-2.0**
XLT					pmax		pmax		
	comp=Z,5.0nm,1.1s								
XLT					pmax		pmax		
	comp=Z,94nm,5.1s								
BBOO	**Buckleboo**	**39.60**	**166**		P		**P**	**08 25 10.6**	**+0.5**
	baz=40,SNR=12								
EIDS	**Eidsvold**	**39.72**	**142**		P		**P**	**08 25 11.8**	**+0.5**
	comp=Z,21nm,1.0s								
WHYH	**Whyalla**	**40.20**	**164**		P		**P**	**08 25 15.9**	**+0.8**
	comp=Z,39nm,1.0s								
STKA	**Stephens Creek**	**40.42**	**158**		P		**P**	**08 25 17.6**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=353,slow=10.0,SNR=7.1								
STKA					LR		LR	08 42 18.2	
	comp=Z,92nm,19.0s,baz=12,slow=36								
	comp=Z,2.7nm,0.5s								
STKA	**Stephens Creek**	**40.42**	**158**		P		**P**	**08 25 17.7**	**+0.7**
	baz=41,SNR=4.4								
STKA	**Stephens Creek**	**40.42**	**158**		P		**P**	**08 25 17.7**	**+0.7**
STKA	**Stephens Creek**	**40.42**	**158**		P		**P**	**08 25 17.8**	**+0.7**
	comp=Z,4.8nm,0.9s								
GTA	**Gaotai**	**40.73**	**329**		*e*P		**P**	**08 25 20.5**	**+0.8**
GTA					pP		pP	08 25 37.3	+0.8
GTA					sP		sP	08 25 46.5	+2.1
GTA					pmax		pmax		
	comp=Z,4.0nm,0.9s								
GTA					pmax		pmax		
	comp=Z,40nm,4.7s								
GTA					LR		LR		
	comp=Z,91nm,17.5s								
GTA					LR		LR		
	comp=Z,120nm,17.1s								
GTA					LR		LR		
	comp=Z,110nm,19.3s								
HTT	**Hallett**	**40.96**	**163**		P		**P**	**08 25 21.9**	**+0.5**
	baz=41,SNR=4.6								
GOMU	**GeErMu**	**41.32**	**322**		P		**P**	**08 25 24.4**	**-0.4**
GOMU					pmax		pmax		
	comp=Z,2.0nm,0.4s								
GOMU					pmax		pmax		
	comp=Z,91nm,4.3s								
GOMU					LR		LR		
	comp=Z,140nm,17.7s								
GOMU					LR		LR		
	comp=Z,140nm,15.3s								
GOMU					LR		LR		
	comp=Z,170nm,16.0s								
H11S3	**WAKE ISLAND Hy**	**42.27**	**69**		T		T	09 10 41.3	
	baz=257,slow=74,SNR=12								
H11S1	**WAKE ISLAND Hy**	**42.29**	**69**		T		T	09 10 42.7	
	baz=257,slow=74,SNR=21								
H11S2	**WAKE ISLAND Hy**	**42.73**	**69**		T		T	09 10 41.4	
	baz=257,slow=74,SNR=33								
H11N1	**WAKE ISLAND Hy**	**42.73**	**67**		T		T	09 11 49.9	
	baz=254,slow=75,SNR=11								
H11N2	**WAKE ISLAND Hy**	**42.74**	**67**		T		T	09 11 38.5	
	baz=254,slow=75,SNR=7.1								
H11N3	**WAKE ISLAND Hy**	**42.75**	**67**		T		T	09 11 50.3	
	baz=254,slow=75,SNR=11								
KLR	**Kul'dur**	**43.75**	**6**		P		**P**	**08 25 43.3**	**-0.5**
	comp=Z,3.9nm,0.6s,baz=220,slow=4.9,SNR=13								
KLR					PcP		**PcP**	**08 27 29.3**	**-0.3**
	comp=Z,3.6nm,0.7s,baz=192,slow=4.4,SNR=5.6								
	comp=Z,3.9nm,0.6s								
ARMA	**Armidale**	**43.84**	**146**		P		**P**	**08 25 45.5**	**+0.6**
ARMA					IAmb		IAmb	08 26 07.3	
	comp=Z,11nm,0.9s								
ARMA	**Armidale**	**43.84**	**146**		P		**P**	**08 25 46.4**	**+1.4**
	comp=Z,20nm,1.9s								
SONM	**Songino Array**	**45.04**	**342**		P		**P**	**08 25 53.3**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=153,slow=13,SNR=2.1								
SONM					LR		LR	08 45 42.6	
	comp=Z,131nm,21.4s,baz=160,slow=37								
	comp=Z,0.5nm,0.5s

TTA	Tatalina	79.81	27	P	P	08 29 46.9 +0.8
	baz=262					
O18K	Koktuh Hills	79.83	30	IAmb	IAmb	08 30 10.3
	comp=Z,8.0nm,0.9s					
O18K	Koktuh Hills	79.83	30	P	P	08 29 47.3 +1.1
	baz=264					
SII	Sitkinak Islan	80.05	34	P	P	08 29 48.3 +0.8
	baz=265					
L19K	White Mountain	80.25	28	P	P	08 29 48.8 +0.3
	baz=264					
N19K	Bonanza Creek	80.28	29	P	P	08 29 49.3 +0.6
N19K				IAmb	IAmb	08 29 51.4
	comp=Z,7.5nm,0.8s					
N19K	Bonanza Creek	80.28	29	P	P	08 29 49.5 +0.8
	baz=264,SNR=5.3					
M19K	Big River Lodg	80.44	28	P	P	08 29 50.0 +0.6
	baz=264					
Q19K	Cape Douglas,	80.53	31	P	P	08 29 49.8 -0.2
	baz=265					
OHAK	Old Harbor	80.59	33	P	P	08 29 50.4 +0.1
	baz=266					
L20K	Farewell, AK	80.74	28	P	P	08 29 52.0 +0.9
	baz=264,SNR=5.3					
K20K	Telida	80.74	27	P	P	08 29 52.1 +1.1
	baz=264,SNR=7.4					
J20K	Nowinta River	80.79	26	IAmb	IAmb	08 29 53.8
	comp=Z,7.6nm,0.8s					
J20K	Nowinta River	80.79	26	P	P	08 29 52.0 +0.8
	baz=264,SNR=9.7					
KDAK	Kodiak Island	81.01	32	P	P	08 29 52.6 +0.1
KDAK				IAmb	IAmb	08 30 01.2
	comp=Z,10.0nm,1.1s					
KDAK	Kodiak Island	81.01	32	P	P	08 29 52.8 +0.3
	baz=266					
M20K	Styx River	81.03	28	P	P	08 29 52.5 -0.2
M20K				IAmb	IAmb	08 29 55.3
	comp=Z,8.0nm,0.8s					
M20K	Styx River	81.03	28	P	P	08 29 53.5 +0.8
	baz=265,SNR=8.1					
Q20K	Shuyak Island	81.16	32	P	P	08 29 53.2 -0.1
	baz=266					
G21K	Allakaket	81.30	24	P	P	08 29 54.5 +0.5
	baz=264,SNR=14					
F21K	Alatna River	81.39	23	P	P	08 29 55.5 +1.1
	baz=264					
H21K	Melozitna Rive	81.50	25	IAmb	IAmb	08 29 57.3
	comp=Z,10.0nm,1.1s					
H21K	Melozitna Rive	81.50	25	P	P	08 29 56.2 +1.1
	baz=265,SNR=8.5					
PPLA	Purkeypile	81.55	27	IAmb	IAmb	08 29 57.0
	comp=Z,5.4nm,0.6s					
PPLA	Purkeypile	81.55	27	P	P	08 29 56.2 +0.7
	baz=266					
CAST	Castle Rocks	81.64	27	IAmb	IAmb	08 29 57.7
	comp=Z,9.0nm,0.9s					
CAST	Castle Rocks	81.64	27	P	P	08 29 56.2 +0.4
	baz=266,SNR=8.4					
I21K	Tanana	81.81	25	IAmb	IAmb	08 29 59.0
	comp=Z,8.7nm,0.9s					
I21K	Tanana	81.81	25	P	P	08 29 57.7 +1.1
	baz=266,SNR=13					
CAPN	Captain Cook N	81.91	30	P	P	08 29 58.0 +0.8
	baz=267					
F22K	John River	81.91	23	P	P	08 29 57.6 +0.4
	baz=265					
BRLK	Bradley Lake	82.00	31	P	P	08 29 57.5 -0.3
BRLK				IAmb	IAmb	08 30 23.6
	comp=Z,16nm,1.1s					
BRSE	Bradley Lake S	82.07	31	P	P	08 29 58.4 +0.3
	baz=268					
E22K	Anaktuvuk Pass	82.10	22	P	P	08 29 59.2 +1.0
	baz=266					
H22K	Ishtalitna Cre	82.11	24	P	P	08 29 58.7 +0.5
	baz=266,SNR=8.9					
BPAW	Bear Paw Mtn.	82.17	26	P	P	08 29 59.1 +0.6
BPAW	Bear Paw Mtn.	82.17	26	P	P	08 29 59.0 +0.4
	baz=267,SNR=9.5					
MLY	Manley	82.32	25	IAmb	IAmb	08 30 01.4
	comp=Z,8.1nm,0.7s					
MLY	Manley	82.32	25	P	P	08 29 59.9 +0.5
	baz=267,SNR=16					
TRF	Thorofare Moun	82.44	27	IAmb	IAmb	08 30 08.1
	comp=Z,15nm,1.3s					
TRF	Thorofare Moun	82.44	27	P	P	08 30 00.3 +0.1
	baz=268,SNR=5.4					
M22K	Willow	82.45	29	P	P	08 29 59.9 -0.1
	baz=268					
D23K	Nanushuk River	82.58	21	P	P	08 30 01.6 +1.0
	baz=266					
RC01	Rabbit Creek A	82.61	29	P	P	08 30 00.7 -0.2
	baz=268					
C23K	Itkillik River	82.66	20	P	P	08 30 01.6 +0.6
	baz=266,SNR=7.4					
COLD	Coldfoot	82.66	23	P	P	08 30 01.4 +0.3
COLD	Coldfoot	82.66	23	P	P	08 30 01.9 +0.8
	baz=267,SNR=7.2					
G23K	Bananza Creek	82.70	24	P	P	08 30 01.8 +0.4
	baz=267,SNR=7.9					
SEW	Seward	82.73	30	P	P	08 30 01.9 +0.4
	baz=269					
H23K	Yukon River	82.86	24	P	P	08 30 02.7 +0.5
	baz=268					
I23K	Minto, Yukon-K	82.91	25	P	P	08 30 02.7 +0.4
	baz=268,SNR=24					
PMR	Palmer	82.92	29	P	P	08 30 02.6 +0.1
PMR				IAmb	IAmb	08 30 25.7
	comp=Z,10nm,1.2s					
PMR	Palmer	82.92	29	P	P	08 30 02.8 +0.3
	baz=269					
TOLK	Toolik Lake Re	82.96	22	IAmb	IAmb	08 30 04.8
	comp=Z,7.4nm,0.7s					
TOLK	Toolik Lake Re	82.96	22	P	P	08 30 02.8 +0.1
	baz=268,SNR=7.3					
NEA2	Nenana	83.02	26	P	P	08 30 03.0 +0.1
	baz=268,SNR=7.3					
MCK	McKinley	83.06	27	P	P	08 30 02.6 -0.6
MCK	McKinley	83.06	27	P	P	08 30 02.8 -0.4
	baz=269,SNR=7.9					
WAT1	Susitna Watana	83.21	27	P	P	08 30 03.6 -0.4
	baz=269					
KNK	Knik Glacier	83.24	29	P	P	08 30 04.3 +0.1
	baz=269					
D24K	Happy Valley	83.25	21	P	P	08 30 04.6 +0.5
	baz=268					
PWL	Port Wells	83.29	29	P	P	08 30 04.6 +0.1
	baz=270					
SML	Sawmill	83.30	29	P	P	08 30 04.7 +0.2
	baz=270					
C24K	Franklin Bluff	83.31	20	P	P	08 30 05.1 +0.8
	baz=268					
E24K	Your Creek	83.35	22	P	P	08 30 05.5 +0.9
	baz=269,SNR=6.2					
MDM	Murphy Dome	83.39	25	IAmb	IAmb	08 30 06.5
	comp=Z,5.1nm,0.7s					
WRH	Wood River Hil	83.44	26	IAmb	IAmb	08 30 06.3
	comp=Z,17nm,1.3s					
TCOL	CIGO, UAF Yank	83.54	25	IAmb	IAmb	08 30 07.7
	comp=Z,6.6nm,0.7s					
TCOL	CIGO, UAF Yank	83.54	25	P	P	08 30 05.7 +0.1
	baz=270					
H24K	Noodor Dome	83.55	24	P	P	08 30 06.4 +0.7
H24K				IAmb	IAmb	08 30 09.2
	comp=Z,13nm,1.1s					
H24K	Noodor Dome	83.55	24	P	P	08 30 06.0 +0.3
	baz=269,SNR=12					
COLA	College	83.55	25	P	P	08 30 06.8 +1.1
COLA				IAmb	IAmb	08 30 07.7
	comp=Z,6.5nm,0.7s					
COLA	College	83.55	25	P	P	08 30 05.6 0.0
	baz=270					
F24K	Squaw Lake	83.56	23	P	P	08 30 06.0 +0.3
	baz=269					
WAT6	Susitna Watana	83.59	28	P	P	08 30 05.6 -0.5
	baz=270,SNR=9.6					
M23K	Glacier View	83.59	29	P	P	08 30 05.7 -0.2
	baz=270					
G24K	Hadweenzic Riv	83.72	24	P	P	08 30 07.1 +0.5
	baz=270,SNR=8.9					
DHY	Denali Highway	83.75	27	P	P	08 30 07.2 +0.3
	baz=270,SNR=8.1					
P23K	Montague Islan	83.76	30	P	P	08 30 07.6 +0.8
	baz=270					
SCM	Sheep Creek Mo	83.78	28	P	P	08 30 07.6 +0.6
	baz=270					
GLI	Glacier Island	83.90	29	P	P	08 30 08.1 +0.6
	baz=271					
HDA	Harding Lake	83.94	26	P	P	08 30 06.3 -1.3
HDA	Harding Lake	83.94	26	P	P	08 30 07.0 -0.6
	baz=270,SNR=12					
IL31		83.96	26	IAmb	IAmb	08 30 08.6
	comp=Z,6.3nm,0.6s					
ILAR	Eielson Array	83.96	26	P	P	08 30 06.5 -1.3
	comp=Z,3.6nm,0.5s,baz=246,slow=4.8,SNR=72					
	comp=Z,3.6nm,0.5s					
ILAR	Eielson Array	83.96	26	P	P	08 30 06.0 -1.8
D25K	Kavik River	84.13	21	P	P	08 30 08.8 +0.2
	baz=270,SNR=6.6					
G25K	Bearman Lake	84.26	23	P	P	08 30 10.5 +1.3
	baz=271,SNR=5.4					
H25K	Birch Creek	84.38	24	P	P	08 30 11.1 +1.3
	baz=271					
F25K	Christian River	84.42	23	P	P	08 30 11.3 +1.2
	baz=271,SNR=5.8					
E25K	Arctic Village	84.44	22	P	P	08 30 10.9 +0.7
	baz=271,SNR=8.7					
KLU	Klutina	84.46	29	P	P	08 30 10.9 +0.5
	baz=272					
K24K	Donnelly Dome	84.46	26	P	P	08 30 10.1 -0.2
	baz=272,SNR=5.8					
EYAK	Cordova Ski Ar	84.57	30	P	P	08 30 10.9 0.0
	baz=272					
FYU	Fort Yukon	84.61	24	P	P	08 30 11.3 +0.3
J25K	Salcha River,	84.62	26	IAmb	IAmb	08 30 11.6
	comp=Z,5.0nm,0.6s					
J25K	Salcha River,	84.62	26	P	P	08 30 10.5 -0.7
	baz=272,SNR=9.7					
PAX	Paxson	84.62	27	IAmb	IAmb	08 30 13.1
	comp=Z,12nm,1.5s					
PAX	Paxson	84.62	27	P	P	08 30 11.7 +0.5
	baz=272					
C26K	Camden Bay	84.63	20	P	P	08 30 11.8 +0.7
	baz=272					
BMAR	Burnt Mountain	84.84	23	P	P	08 30 12.7 +0.5
RIDG	Independent Ri	84.88	27	P	P	08 30 12.3 -0.2
	baz=272					
F26K	Sheenjek River	84.99	23	P	P	08 30 12.8 -0.2
	baz=273					
C27K	Jago River	85.06	21	P	P	08 30 14.6 +1.4
	baz=273,SNR=6.7					
N25K	Chitina, Valde	85.09	29	P	P	08 30 13.9 +0.3
	baz=273					
G26K	Porcupine Rive	85.17	23	P	P	08 30 14.7 +0.9
	baz=273,SNR=11					
SCRK	Sand Creek	85.25	26	IAmb	IAmb	08 30 34.0
	comp=Z,8.9nm,1.2s					
SCRK	Sand Creek	85.25	26	P	P	08 30 14.6 +0.2
	baz=273					
J26L	Joseph Creek	85.40	26	P	P	08 30 15.7 +0.6
	baz=273					
VNDA	Vanda	85.51	173	P	P	08 30 13.5 -1.8
	comp=Z,0.6nm,1.0s,baz=337,slow=7.7,SNR=2.0					
VNDA				LR	LR	09 09 59.0
	comp=Z,34nm,18.0s,baz=284,slow=37					
	comp=Z,0.6nm,1.0s					
I26K	Coal Creek Min	85.52	25	IAmb	IAmb	08 30 17.1
	comp=Z,7.1nm,0.8s					
I26K	Coal Creek Min	85.52	25	P	P	08 30 16.3 +0.7
	baz=274					
E27K	Coleen River	85.92	22	P	P	08 30 18.2 +0.6
	baz=275					
G27K	Doyon Strip	86.02	23	P	P	08 30 18.9 +0.8
	baz=275					
K27K	Chicken	86.08	26	IAmb	IAmb	08 30 48.0
	comp=Z,12nm,1.1s					
K27K	Chicken	86.08	26	P	P	08 30 19.5 +1.1
	baz=275					
H27K	Steamboat Moun	86.12	24	P	P	08 30 19.3 +0.6
	baz=275					
I27K	Kandik River	86.14	25	P	P	08 30 19.4 +0.6
	baz=275					
L27K	Beaver Creek,	86.28	27	P	P	08 30 19.9 +0.4
L27K				IAmb	IAmb	08 30 49.2
	comp=Z,11nm,1.4s					
L27K	Beaver Creek,	86.28	27	P	P	08 30 20.6 +1.1
	baz=275					
EGAK	Eagle	86.41	25	IAmb	IAmb	08 30 21.8
	comp=Z,6.8nm,1.2s					
CTG	Chitna Glacier	86.70	29	P	P	08 30 22.4 +0.7
	baz=276					
DAWY	Dawson	87.25	26	P	P	08 30 24.7 +0.5
DAWY	Dawson	87.25	26	P	P	08 30 24.6 +0.5
	baz=277					
O28M	Mount Upton	87.28	29	P	P	08 30 25.2 +0.5
	baz=277					
PINM	Pinnacle	87.33	30	P	P	08 30 24.0 -0.7
	baz=277					
I29M	Ogilvie Camp,	87.54	25	IAmb	IAmb	08 30 57.0
	comp=Z,7.4nm,1.3s					
I29M	Ogilvie Camp,	87.54	25	P	P	08 30 25.4 -0.1
	baz=278					
M29M	Somme Creek	87.89	28	P	P	08 30 27.7 +0.4
	baz=278					
EPYK	Eagle Plains	88.03	24	P	P	08 30 27.8 0.0
	baz=280					
ARCES	ARCESS Array B	88.16	340	P	P	08 30 27.9 -0.5
	comp=Z,3.3nm,1.0s,baz=81,slow=5.8,SNR=1.5					
ARCES				LR	LR	09 14 15.3
	comp=Z,39nm,19.2s,baz=70,slow=38					
	comp=Z,3.3nm,1.0s					
HYT	Haines Junctio	88.58	29	P	P	08 30 31.4 +0.7
	baz=279					
N30M	Aishikik Lake	88.68	28	P	P	08 30 31.5 +0.4
	baz=279					
N31M	Braeburn, Yuko	89.29	28	P	P	08 30 34.6 +0.7
	baz=280					
FINES	FINESS Array B	89.48	332	P	P	08 30 31.9 -2.8
	comp=Z,2.1nm,0.9s,baz=40,slow=3.2,SNR=3.8					
	comp=Z,2.1nm,0.9s					
N32M	Quiet Lake	90.63	28	P	P	08 30 40.6 +0.4
	baz=283					
R33M	Jennings River	92.08	30	P	P	08 30 47.5 +0.5
	baz=285					
KWP	Kalwaria Pacla	93.84	321	P	P	08 30 57.5 +2.3
QSPA	South Pole Qui	95.56	180	LR	LR	09 15 19.7
	comp=Z,22nm,18.5s,baz=280,slow=36					
HFS	Hagfors	95.67	332	LR	LR	09 17 59.0
	comp=Z,86nm,19.2s,baz=82,slow=38					
NOA	NORSAR Array B	96.45	333	LR	LR	09 18 31.3
	comp=Z,51nm,21.9s,baz=70,slow=38					
JMIC	Jan Mayen	97.66	346	LR	LR	09 20 08.1
	comp=Z,25nm,20.4s,baz=41,slow=38					
TXAR	Lajitas Array	121.48	51	PKP	PKPdf	08 36 31.2 -0.7
	comp=Z,0.2nm,0.6s,baz=259,slow=1.3,SNR=6.5					
JFWS	Jewell Farm	121.87	30	P	PKPdf	08 36 30.9 -1.1
	baz=317					
CCM	Cathedral Cave	124.79	35	P	PKPdf	08 36 36.7 -1.1
	baz=314					
MIAR	Mount Ida	125.72	40	P	PKPdf	08 36 39.0 -0.7
	baz=310					
ERPA	Erie	127.13	24	P	PKPdf	08 36 41.9 -0.3
	baz=328					
P49A	Miami Univ. Ec	127.15	29	P	PKPdf	08 36 41.8 -0.5
	baz=321					
ACSO	Alum Creek Sta	127.41	27	P	PKPdf	08 36 41.3 -1.4
	baz=324					
M53A	WI Miller and	127.43	25	P	PKPdf	08 36 42.2 -0.5
	baz=327					
WVT	Waverly	128.08	34	P	PKPdf	08 36 43.4 -0.7
	baz=316					
BINY	Binghamton	128.55	20	P	PKiKP	08 36 44.8 -0.7
	baz=333					
SSPA	Standing Stone	129.22	23	P	PKiKP	08 36 46.3 -0.6
	baz=330					
PAL	Palisades	130.31	19	P	PKiKP	08 36 48.2 -0.8
	baz=335					
LRAL	Lakeview Retre	130.77	36	P	PKPdf	08 36 49.3 0.0
	baz=316					
KMSC	Kings Mountain	132.27	30	P	PKPdf	08 36 51.7 -0.4
	baz=323					
NHSC	New Hope	134.46	30	P	PKPdf	08 36 56.1 -0.2
	baz=323					

*SJA **10** 08:20:16.0±0.7, 32.07S×71.40W, h83km±5km, ML4.8, MW4.4*

*GUC **10** 08:20:17.8±0.9, 32.08S×71.25W, h86km±5km, ML4.9*

*NEIC **10** 08:20:18.3±1.4, 32.08S±0.04×71.26W±0.07, h84km±4km, mb4.8/248, Mwr4.5/48, Mwr4.8(GUC), Error ellipse: s-maj=8.6km s-min=6.1km az=83.0*

*NEIC **10** 08:20:18.3, 32.08S×71.27W, h88km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.09; $M_{\theta\theta}$1.00; $M_{\phi\phi}$5.09; $M_{r\theta}$-1.84; $M_{\theta\phi}$2.48; $M_{r\phi}$-1.93; Fault plane solution: M_o6.73000×10^{15} NP1:ϕ_s197.86000°, δ34.30000°, λ-102.13000°. NP2:ϕ_s32.44000°, δ56.56000°, λ-81.84000°. Principal axes: T 6.7591, Plg11.0000°, Azm117.0000°; N -0.0672, Plg7.0000°, Azm208.0000°; P -6.6918, Plg77.0000°, Azm329.0000°;*

*IDC **10** 08:20:18.1±0.6, 32.07S×71.01W, h82km±4km, mb4.3/11, mbtmp4.5/16, MS3.2/13 Error ellipse: s-maj=17.3km s-min=12.5km az=80.0*

*VAO **10** 08:20:18.3±0.5, 32.06S×71.11W, h85km, mb4.5*

ISC 10 08:20:17.5±0.3, 32.06S±0.02×71.27W±0.04, h82km±3km, h82km:pP-P, n543, σ1▽39/494, mb4.8/132, 7C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	Catapilco	0.50	183	Pn	Pn	08 20 32.2	+0.7
VA06	Catapilco	0.50	183	*i* P	Pn	08 20 32.0	+0.5
VA06				*e*S	Sn	08 20 42.6	+0.7
VA06				IAML		08 20 42.8	
	comp=N,107μm,0.2s						
CO02	Combarbal	0.88	15		Pn	08 20 36.2	+0.7
CO02	Combarbal	0.88	15	↑ *i* P	Pn	08 20 36.0	+0.5
CO02				*e*S	Sn	08 20 49.5	+0.6
CO02				IAML		08 20 54.5	
	comp=E,67μm,0.3s						
CO02	Combarbal	0.88	15	*e*P	Pn	08 20 35.8	+0.3
CO02				*e*S	Sn	08 20 49.9	+1.0
CO02				IAML		08 20 54.4	
	comp=Z,16μm,0.3s						
VA03	San Esteban	0.93	139		Pn	08 20 36.4	+0.4
VA03	San Esteban	0.93	139	*i* P	Pn	08 20 36.2	+0.2
VA03				*e*S	Sn	08 20 49.7	-0.1
VA03				IAML		08 20 50.9	
	comp=E,125μm,0.4s						
VA03	San Esteban	0.93	139	*e*P	Pn	08 20 34.0	-2.0
VA03				*e*S	Sn	08 20 48.8	-1.0
VA03				IAML		08 20 50.7	
	comp=Z,71μm,0.1s						
ROCH	El Roble	0.94	167	*i* P	Pn	08 20 36.4	+0.2
ROCH				*e*S	Sn	08 20 49.9	-0.2
ROCH				IAML		08 20 51.2	
	comp=E,63μm,0.3s						
ROC1	El Roble	0.94	167		Pn	08 20 36.8	+0.6
ROC1	El Roble	0.94	167	*e*P	Pn	08 20 36.3	0.0
VA01	Torpederas	1.01	198		Pn	08 20 37.3	+0.5
VA01	Torpederas	1.01	198	*i* P	Pn	08 20 37.3	+0.5
VA01				*e*S	Sn	08 20 51.5	+0.3
VA01				*e*S	Sn	08 20 51.7	+0.5
VA01	Torpederas	1.01	198	*e*P	Pn	08 20 37.0	+0.1
VA01				*e*S	Sn	08 20 50.5	-0.7
VA01				IAML		08 20 51.9	
	comp=Z,10μm,0.2s						
PEL	Peldehue	1.19	156		Pn	08 20 39.3	+0.2
MT02	Curacav	1.20	175		Pn	08 20 39.2	+0.1
MT02	Curacav	1.20	175	↓ *i* P	Pn	08 20 39.4	+0.2
MT02				*e*S	Sn	08 20 55.1	-0.4
MT02				IAML		08 20 56.5	
	comp=E,27μm,0.3s						
MT02	Curacav	1.20	175	*e*P	Pn	08 20 39.0	-0.2
MT02				*e*S	Sn	08 20 54.2	-1.2
MT02				IAML		08 20 56.4	
	comp=Z,18μm,0.2s						
CO03	El Pedregal	1.31	22		Pn	08 20 41.7	+1.0
CO03	El Pedregal	1.31	22	↑ *i* P	Pn	08 20 41.5	+0.8
CO03				*e*S	Sn	08 20 58.9	+0.8
CO03				IAML		08 21 00.9	
	comp=E,35μm,0.3s						
CO03	El Pedregal	1.31	22	*e*P	Pn	08 20 41.0	+0.3
CO03				*e*S	Sn	08 20 59.5	+1.5
CO03				IAML		08 21 00.5	
	comp=Z,21μm,0.4s						
MT05	Renca	1.40	161	Pn	Pn	08 20 42.3	+0.5
MT05	Renca	1.40	161	↓ *i* P	Pn	08 20 42.1	+0.3
MT05				*e*S	Sn	08 20 59.9	-0.1
MT05				IAML		08 21 01.0	
	comp=E,31μm,0.2s						
MT05	Renca	1.40	161	*e*P	Pn	08 20 42.0	+0.3
MT05				*e*S	Sn	08 21 00.7	+0.7
MT05				IAML		08 21 03.9	
	comp=Z,10μm,0.7s						
CO06	Fray Jorge	1.42	347	Pn	Pn	08 20 42.9	+1.0
CO06	Fray Jorge	1.42	347	↑ *i* P	Pn	08 20 42.8	+0.9
CO06				*e*S	Sn	08 21 00.5	+0.3
CO06				IAML		08 21 06.2	
	comp=E,11μm,0.5s						
FCH	Farellones	1.51	147	*i* P	Pn	08 20 43.9	+0.5
FCH				*e*S	Sn	08 21 03.6	+0.8
FCH				IAML		08 21 05.8	
	comp=N,11μm,0.2s						
MT03	Universidad Ad	1.57	156		Pn	08 20 44.5	+0.6
MT03	Universidad Ad	1.57	156	*i* P	Pn	08 20 44.4	+0.4
MT03				*e*S	Sn	08 21 04.3	+0.4
MT03				IAML		08 21 07.0	
	comp=E,34μm,0.2s						
MT03	Universidad Ad	1.57	156	*e*P	Pn	08 20 44.4	+0.4
MT03				*e*S	Sn	08 21 04.3	+0.4
MT03				IAML		08 21 07.5	
	comp=Z,13μm,0.2s						
VA05	Santo Domingo	1.62	190		Pn	08 20 45.0	+0.5
VA05	Santo Domingo	1.62	190	*i* P	Pn	08 20 44.7	+0.2
VA05				*e*S	Sn	08 21 04.5	-0.4
VA05				IAML		08 21 07.7	
	comp=E,18μm,0.2s						
RTLS	Leoncito	1.70	82	*e*P	Pn	08 20 47.0	+1.2
RTLS				IAML		08 21 13.8	
	comp=Z,3μm,0.8s						
MT09	Talagante	1.73	172		Pn	08 20 47.0	+0.9
MT09	Talagante	1.73	172	↓ *i* P	Pn	08 20 46.5	+0.4
MT09				*e*S	Sn	08 21 07.6	-0.1
MT09				IAML		08 21 09.2	
	comp=N,18μm,0.2s						
MT01	Popeta	1.80	179		Pn	08 20 47.3	+0.5
MT01	Popeta	1.80	179	*i* P	Pn	08 20 47.1	+0.2
MT01				*e*S	Sn	08 21 08.2	-0.9
MT01				IAML		08 21 10.9	
	comp=E,9μm,0.5s						
MT01	Popeta	1.80	179	*e*P	Pn	08 20 47.0	+0.2
MT01				*e*P	Pn	08 20 47.0	+0.2
MT01				*e*S	Sn	08 21 08.5	-0.6
MT01				IAML		08 21 11.7	
	comp=Z,7μm,0.5s						
GO04	Tololo Observa	1.92	12		Pn	08 20 49.5	+0.7
GO04	Tololo Observa	1.92	12	*e*P	Pn	08 20 49.3	+0.5
GO04				*e*S	Sn	08 21 13.3	+0.9
LMEL	Las Melosas	2.00	154		Pn	08 20 50.6	+1.0
LMEL	Las Melosas	2.00	154	↑ *i* P	Pn	08 20 50.5	+0.9
LMEL				*e*S	Sn	08 21 14.6	+0.6
ARCO	CERRO ARCO	2.12	112	*e*P	Pn	08 20 53.0	+1.7
ARCO				*e*S	Sn	08 21 21.9	+4.9
ASAL	Salagasta	2.13	105	*e*P	Pn	08 20 53.0	+1.7
ASAL				*e*S	Sn	08 21 21.0	+4.0
CO05	La Serena	2.13	1		Pn	08 20 51.9	+0.7
CO05	La Serena	2.13	1	*i* P	Pn	08 20 51.8	+0.5
ZON	Zonda	2.27	78	Pn	Pn	08 20 54.5	+1.4
ZON	Zonda	2.27	78	*e*P	Pn	08 20 54.6	+1.5
ZON				*e*S	Sn	08 21 24.2	+4.0
AAGR	Agrelo	2.30	117	*e*P	Pn	08 20 55.0	+1.4
AAGR				*e*P	Pn	08 20 55.9	+2.3
CO01	Juntas del Tor	2.31	26	*i* P	Pn	08 20 54.9	+1.0
CO01	Juntas del Tor	2.31	26	*e*P	Pn	08 20 55.0	+1.1
CO01				*e*S	Sn	08 21 16.9	-4.7
RTCV	Cerro Valdivia	2.33	86	*e*P	Pn	08 20 50.0	-3.9
RTCV				*e*P	Pn	08 20 55.9	+2.0
RTCV				*e*S	Sn	08 21 24.5	+2.8
BO01	Tunca	2.33	176	Pn	Pn	08 20 53.9	0.0
BO01	Tunca	2.33	176	*e*P	Pn	08 20 53.9	0.0
BO01				*e*S	Sn	08 21 21.8	+0.1
BO01				IAML		08 21 23.1	
	comp=Z,2μm,0.5s						
ACCO	Cerro Coronel	2.39	53	*e*P	Pn	08 20 57.0	+2.0
ACCO				*e*P	Pn	08 20 57.0	+2.0
AROD	Rodeo	2.44	40	*e*P	Pn

GO05 eS **Sn** **08 21 34.8 -3.0**
LCO Las Campanas 3.08 9 Pn **Pn** **08 21 04.6 +0.3**
LCO Las Campanas 3.08 9 eP **Pn** **08 21 04.0 -0.2**
AC05 El Transito 3.33 15 **Pn** **08 21 08.2 +0.8**
AC05 El Transito 3.33 15 eP **Pn** **08 21 08.0 +0.5**
AC05 eS Sn 08 21 58.0 +12
AC05 IAML 08 22 06.0
comp=Z,2µm,0.7s
AVFE Valle Fertil 3.55 68 eS **Sn** **08 21 47.0 -4.3**
AVFE IAML 08 21 53.5
comp=Z,713nm,0.6s
RFA San Rafael 3.58 140 eP **Pn** **08 21 11.7 +0.8**
RFA eS Sn 08 22 10.8 +19
ML02 Panimavida 3.70 182 Pn **Pn** **08 21 12.2 -0.1**
AC04 Llanos de Chal 3.85 3 Pn **Pn** **08 21 14.5 0.0**
VCA Vinchina 4.24 39 eS Sn 08 21 56.7 -12
APLL PUNTA DE LOS L 4.39 69 eP **Pn** **08 21 21.3 -0.5**
AC01 Pan de Azucar 5.92 6 Pn **Pn** **08 21 40.5 -2.2**
VA04 Juan Fernndez 6.55 254 **Pn** **08 21 51.8 +0.5**
H03N1 Juan Fernandez 6.58 256 T T 08 28 36.7
baz=85,slow=73,SNR=373
H03N3 Juan Fernandez 6.60 256 T T 08 28 35.1
baz=85,slow=73,SNR=417
H03N2 Juan Fernandez 6.60 256 T T 08 28 43.1
baz=85,slow=73,SNR=403
H03S3 Juan Fernandez 6.66 253 T T 08 28 28.0
baz=80,SNR=124
H03S1 Juan Fernandez 6.66 252 T T 08 28 23.4
baz=80,SNR=111
H03S2 Juan Fernandez 6.67 253 T T 08 28 24.0
baz=80,SNR=141
PLCA Paso Flores 8.68 176 P **Pn** **08 22 19.6 -0.6**
comp=Z,6.8nm,0.4s,baz=345,slow=11,SNR=92
PLCA LR LR 08 25 45.6
comp=Z,161nm,21.7s,baz=356,slow=38
PLCA Paso Flores 8.68 176 **Pn** **08 22 19.1 -1.1**
PLCA Paso Flores 8.68 176 eP **Pn** **08 22 20.3 +0.1**
LVC Limon Verde 9.64 13 P **Pn** **08 22 34.1 +0.3**
comp=Z,2.6nm,0.5s,baz=176,slow=7.6,SNR=5.6
LVC Limon Verde 9.64 13 eP **Pn** **08 22 33.9 +0.1**
TRQA Tornquist 9.68 131 **Pn** **08 22 32.2 -1.8**
TRQA Tornquist 9.68 131 eP **Pn** **08 22 34.5 +0.6**
GO07 Milladeo Hill, 11.20 189 **Pn** **08 22 51.2 -3.3**
ITQB Itaqui 12.81 83 **Pn** **08 23 11.9 -4.5**
CPUP Villa Florida 13.44 68 P **Pn** **08 23 21.0 -3.9**
comp=Z,3.0nm,1.0s,baz=244,slow=11,SNR=6.7
CPUP LR LR 08 29 01.9
comp=Z,114nm,19.8s,baz=241,slow=40
CPUP Villa Florida 13.44 68 Pn **Pn** **08 23 21.3 -3.6**
PB16 IPOC Station P 13.76 7 Pn **Pn** **08 23 27.4 -2.1**
PLTB Pedras Altas 15.01 94 Pn **Pn** **08 23 41.3 -3.9**
CRSM Crissiumal (Br 15.63 78 eP **Pn** **08 23 52.8 -0.3**
LPAZ La Paz 15.96 11 P **Pn** **08 23 57.7 -0.1**
comp=Z,6.2nm,0.9s,baz=176,slow=9.2,SNR=20
LPAZ La Paz 15.96 11 P **Pn** **08 23 58.8 +1.0**
LPAZ La Paz 15.96 11 eP **Pn** **08 23 58.8 +1.0**
ALGR Alto Alegre (B 16.07 83 eP **Pn** **08 23 55.4 -3.2**
ANTJ Antonio Joao (16.87 57 eP **Pn** **08 24 05.8 -2.8**
MCR1 Marechal Candi 16.95 68 eP **Pn** **08 24 09.7 +0.1**
FRBT Francisco Belt 17.03 74 eP **Pn** **08 24 08.5 -2.1**
ITAB Concordia 17.31 79 eP **P** **08 24 14.2 +0.1**
CNLB Canela 17.77 86 eP **P** **08 24 19.0 -0.3**
AQDB Aquidauana 18.09 54 P **P** **08 24 22.6 -0.2**
AQDB Aquidauana 18.09 54 eP **Pn** **08 24 23.2 -0.2**
PTGB Pitanga 18.40 71 eP **P** **08 24 26.5 +0.3**
SIV San Ignacio 18.49 32 P **P** **08 24 25.8 -1.5**
comp=Z,11nm,0.7s,baz=207,slow=11,SNR=43
SIV LR LR 08 31 31.2
comp=Z,34nm,20.5s,baz=252,slow=37
TRCB Terra Rica 18.92 65 **PcP** **08 28 51.2 -3.7**
TER01 Tubaro-SC 19.43 85 eP **P** **08 24 37.2 -0.2**
PTLB Pontes e Lacer 19.89 37 P **P** **08 24 42.7 +0.3**
PTLB IAmb IAmb 08 24 43.8
comp=Z,13nm,0.9s
PTLB Pontes e Lacer 19.89 37 eP **P** **08 24 42.8 +0.4**
PCMB Pacaembu 20.64 65 eP **P** **08 24 49.2 -1.3**
FRTB Fartura 21.06 71 eP **P** **08 24 53.9 -1.2**
SALV Santo Antonio 21.43 45 eP **P** **08 24 58.1 -0.9**
VILB Vilhena 21.56 31 P **P** **08 25 00.1 -0.4**
VILB IAmb IAmb 08 25 02.7
comp=Z,28nm,0.8s
VILB Vilhena 21.56 31 eP **P** **08 24 60.0 -0.5**
ITRB Iturama 22.43 62 eP **P** **08 25 10.2 +0.4**
PET01 Itanhaem-SP 22.49 76 eP **P** **08 25 09.2 -1.1**
ETMB Extrema 22.62 13 P **P** **08 25 12.6 +0.8**
ETMB IAmb IAmb 08 25 14.3
comp=Z,31nm,0.7s
ETMB Extrema 22.62 13 eP **P** **08 25 12.4 +0.6**
USHA Ushuaia 22.85 176 P **P** **08 25 13.8 +0.1**
comp=Z,15nm,1.0s,baz=261,slow=19,SNR=2.2
comp=Z,15nm,1.0s
BB19B Bebedouro 23.05 67 eP **P** **08 25 15.3 -0.8**
RCLB Rio Claro- Sao 23.14 71 eP **P** **08 25 16.2 -0.8**
VAO Valinhos 23.32 73 eP **P** **08 25 17.8 -0.9**
CZSB Cruzeiro do Su 24.25 357 P **P** **08 25 26.6 -0.3**
CZSB IAmb IAmb 08 25 30.2
comp=Z,34nm,0.8s
CZSB Cruzeiro do Su 24.25 357 eP **P** **08 25 28.4 +1.5**
PDRB Porto dos Gac 24.36 37 eP **P** **08 25 27.6 -0.4**
IPMB Ipameri, GO 25.09 62 eP **P** **08 25 33.2 -1.4**
CLDB Colider 25.47 38 eP **P** **08 25 38.2 +0.1**
ATAH Atahualpa 25.67 343 LR LR 08 34 31.4
comp=Z,22nm,18.2s,baz=320,slow=33
BSCB Bom Sucesso 26.07 72 eP **P** **08 25 42.5 -1.1**
PMNB Patos De Minas 26.10 65 eP **P** **08 25 42.8 -1.1**
VAS01 Vassouras-RJ 26.54 75 eP **P** **08 25 46.1 -1.6**
BDFB Brasilia 26.73 58 P **P** **08 25 48.7 -0.9**
comp=Z,14nm,0.9s,baz=218,slow=9.2,SNR=16
BDFB LR LR 08 38 43.6
comp=Z,59nm,20.8s,baz=325,slow=42
comp=Z,14nm,0.9s
BDFB Brasilia 26.73 58 P **P** **08 25 48.8 -0.8**
BDFB Brasilia 26.73 58 eP **P** **08 25 48.8 -0.8**
SNDB Serra Nova Dou 27.16 47 eP **P** **08 25 52.8 -0.5**
DIAM Diamantina, MG 28.39 68 eP **P** **08 26 04.4 0.0**
NPGB Novo Progresso 28.97 34 eP **P** **08 26 08.1 -1.4**
JANB Januaria 29.82 62 eP **P** **08 26 16.1 -1.0**
SDBA SAO DESIDERIO 31.13 57 eP **P** **08 26 27.7 -0.9**
ITTB Itaituba 31.16 31 eP **P** **08 26 27.8 -1.0**
NAN01 Guarapari, ES 31.45 71 eP **P** **08 26 30.3 -1.0**
SMTB Santa Maria do 31.87 49 eP **P** **08 26 34.6 -0.4**
PRPB Parauapebas 32.63 42 eP **P** **08 26 40.7 -1.0**
MALB Monte Alegre 34.05 31 eP **P** **08 26 53.2 -0.8**
GDU01 Guandu, BA 34.25 65 eP **P** **08 26 55.3 -0.4**
BOAV Boa Vista 35.75 19 P **P** **08 27 08.1 -0.6**
BOAV IAmb IAmb 08 27 09.4
comp=Z,13nm,0.8s
BOAV pP **pP** **08 27 27.9 -0.4**
BOAV Boa Vista 35.75 19 eP **P** **08 27 08.9 +0.2**
MCPB Macapa, AP 36.38 34 eP **P** **08 27 13.6 -0.5**
NBLA Lagarto - SE 37.30 63 eP **P** **08 27 20.4 -1.5**
NBAN Anadia - AL 39.29 63 eP **P** **08 27 37.3 -1.3**
BAUV El Baul 40.89 5 P **P** **08 27 50.5 -1.2**
MDP Montagnes des 40.99 29 LR LR 08 46 44.0
comp=Z,44nm,20.3s,baz=233,slow=39
RCBR Riachuelo 42.09 59 LR LR 08 46 38.1
comp=Z,45nm,18.6s,baz=319,slow=38
BELA Belgrano 2 48.67 170 **P** **08 28 54.2 +1.3**
BELA IAmb IAmb 08 28 55.2
comp=Z,7.4nm,0.8s
ABD La Joyeuse, An 49.16 12 P **P** **08 28 55.7 -1.5**
SJG San Juan 50.13 6 LR LR 08 52 46.2
comp=Z,10nm,18.6s,baz=184,slow=39
VNA3 Neumayer Olymp 50.91 158 P **P** **08 29 10.5 +0.5**
VNA3 Neumayer Olymp 50.91 158 pP pP 08 29 30.8 +0.4
VNA1 Neumayer--Stat 51.21 158 P **P** **08 29 13.0 +0.9**
VNA1 Neumayer--Stat 51.21 158 pP pP 08 29 34.2 +1.7
VNA2 Neumayer--Watz 51.55 158 P **P** **08 29 15.2 +0.5**
baz=277,slow=7.7
VNA2 Neumayer--Watz 51.55 158 pP pP 08 29 34.5 -0.7
SNAA Sanae 53.14 158 P **P** **08 29 27.2 +0.7**
SNAA Sanae 53.14 158 pP **pP** **08 29 47.4 +0.4**
SNAA x **PcP** **08 30 33.9 +0.3**
SNAA Sanae 53.14 158 P **P** **08 29 27.2 +0.7**
comp=Z,11nm,0.7s,baz=272,slow=7.3,SNR=90
comp=Z,11nm,0.7s
SNAA Sanae 53.14 158 P **P** **08 29 26.9 +0.4**
CMIG Matias Romero 53.86 332 P **P** **08 29 33.0 +0.7**
comp=Z,2.3nm,0.8s,baz=104,slow=4.7,SNR=4.1
CMIG LR LR 08 49 15.3
comp=Z,16nm,18.2s,baz=148,slow=32
comp=Z,2.3nm,0.8s
TEIG Tepich 54.48 340 P **P** **08 29 37.1 +0.3**

TEIG pP **pP** **08 29 57.1 -0.2**
TEIG sP **sP** **08 30 07.4 +0.9**
TROLL Troll, Antarti 54.85 159 P **P** **08 29 39.6 +0.5**
QSPA South Pole Qui 58.17 180 P **P** **08 30 03.8 +1.1**
comp=Z,5.7nm,0.8s,baz=138,slow=5.1,SNR=13
comp=Z,5.7nm,0.8s
QSPA South Pole Qui 58.17 180 P **P** **08 30 04.0 +1.3**
QSPA South Pole Qui 58.17 180 P **P** **08 30 03.0 +0.3**
QSPA x x 08 30 11.7
QSPA pP **pP** **08 30 23.4 -0.1**
QSPA sP **sP** **08 30 33.7 +1.0**
833A Chaparral WMA, 65.74 333 P **P** **08 30 55.9 +2.3**
baz=154,SNR=11
833A Chaparral WMA, 65.74 333 P **P** **08 30 55.6 +2.0**
baz=154,SNR=11
344A Westbrook Farm 65.80 342 P **P** **08 30 56.0 +2.1**
baz=162
GOGA Godfrey 66.13 349 P **P** **08 30 55.9 -0.1**
baz=169
LRAL Lakeview Retre 66.43 346 P **P** **08 30 58.4 +0.5**
baz=166
VBMS Vicksburg 66.47 342 P **P** **08 30 59.5 +1.4**
baz=162
Y52A Lilburn 66.67 348 IAmb IAmb 08 31 00.8
comp=Z,8.4nm,0.8s
Y52A Lilburn 66.67 348 P **P** **08 30 59.8 +0.4**
baz=168
Y52A P **P** **08 30 59.8 +0.4**
baz=168
Z47A Carrollton 66.82 345 P **P** **08 31 01.6 +1.3**
baz=165
143A Socs Landing, 67.16 342 P **P** **08 31 04.5 +1.9**
baz=162,SNR=7.7
NATX Nacogdoches 67.22 338 P **P** **08 31 04.6 +1.7**
baz=159
435B Jarrell 67.29 336 P **P** **08 31 05.1 +1.7**
baz=156
X51A Calhoun 67.49 348 P **P** **08 31 05.8 +1.2**
baz=168,SNR=7.7
X51A P **P** **08 31 05.8 +1.2**
baz=168,SNR=7.7
KMSC Kings Mountain 67.51 351 P **P** **08 31 05.4 +0.7**
baz=171
KMSC Kings Mountain 67.51 351 P **P** **08 31 05.9 +1.1**
baz=171
BG3 Lake Jocassee 67.59 350 IAmb IAmb 08 31 06.9
comp=Z,11nm,1.1s
Y45A Yeager Farm, C 67.80 344 P **P** **08 31 07.9 +1.4**
baz=163,SNR=9.7
X48A Hartselle 67.80 346 pP pP 08 31 28.6 +0.7
X48A Hartselle 67.80 346 P **P** **08 31 07.5 +0.9**
baz=166,SNR=9.4
JCT Junction City 67.83 334 P **P** **08 31 05.3 -1.5**
JCT IAmb IAmb 08 31 09.5
comp=Z,14nm,0.8s
JCT Junction City 67.83 334 P **P** **08 31 08.8 +1.9**
baz=154,SNR=9.3
JCT Junction City 67.83 334 P **P** **08 31 08.3 +1.4**
baz=154,SNR=9.3
W52A Murphy 67.85 349 P **P** **08 31 07.7 +0.7**
baz=168
Z41A Richland Creek 68.07 341 P **P** **08 31 09.7 +1.4**
baz=160
W50A Signal Mountai 68.19 348 P **P** **08 31 09.9 +0.8**
baz=167,SNR=6.9
V55A Taylorsville 68.20 351 IAmb IAmb 08 31 10.2
comp=Z,8.7nm,0.8s
V55A Taylorsville 68.20 351 P **P** **08 31 09.8 +0.8**
baz=171
V55A P **P** **08 31 09.8 +0.8**
baz=171
V53A Saluda 68.24 350 P **P** **08 31 10.1 +0.8**
baz=170
V53A P **P** **08 31 10.1 +0.8**
baz=170
CPCT Cooper Cave 68.30 348 IAmb IAmb 08 31 11.1
comp=Z,12nm,0.9s
SWET Sewanee 68.33 347 pP 08 31 32.7 +1.4
WHTX Lake Whitney, 68.35 336 IAmb IAmb 08 31 12.3
comp=Z,15nm,0.8s
WHTX Lake Whitney, 68.35 336 P **P** **08 31 11.5 +1.4**
baz=156,SNR=5.9
WHTX Lake Whitney, 68.35 336 P **P** **08 31 11.3 +1.2**
baz=156,SNR=5.9
TX31 Lajitas Ar. Si 68.37 330 IAmb IAmb 08 31 12.7
comp=Z,13nm,0.8s
TX31 Lajitas Ar. Si 68.37 330 P **P** **08 31 12.1 +1.7**
baz=151,SNR=16
TXAR Lajitas Array 68.37 330 P **P** **08 31 12.1 +1.7**
comp=Z,3.5nm,0.6s,baz=153,slow=8.4,SNR=69
comp=Z,3.5nm,0.6s
TKL Tuckaleechee C 68.38 349 P **P** **08 31 10.4 +0.2**
baz=169
OXF Oxford 68.38 344 pP pP 08 31 32.8 +1.2
OXF Oxford 68.38 344 P **P** **08 31 10.9 +0.8**
baz=164,SNR=14
OXF Oxford 68.38 344 P **P** **08 31 10.6 +0.4**
baz=164,SNR=14
V52A Sevierville 68.53 349 IAmb IAmb 08 31 12.2
comp=Z,9.3nm,0.8s
V52A Sevierville 68.53 349 P **P** **08 31 11.5 +0.5**
baz=169
PLAL Pickwick Lake 68.53 345 P **P** **08 31 10.8 -0.4**
PLAL IAmb IAmb 08 31 12.4
comp=Z,9.3nm,0.8s
U56A King 68.58 352 P **P** **08 31 12.5 +1.0**
baz=172
U56A P **P** **08 31 12.5 +1.0**
baz=172
V51A Loudon 68.61 349 IAmb IAmb 08 31 12.4
comp=Z,8.5nm,0.8s
V51A Loudon 68.61 349 P **P** **08 31 12.0 +0.4**
baz=168
Z38A Mt. Pleasant 68.72 339 P **P** **08 31 14.2 +1.9**
baz=159
T59A Double "B" Far 68.92 355 IAmb IAmb 08 31 15.5
comp=Z,13nm,1.1s
T59A Double "B" Far 68.92 355 P **P** **08 31 14.1 +0.7**
baz=174
T59A P **P** **08 31 14.1 +0.7**
baz=174
U54A Nelsons Funny 68.94 351 IAmb IAmb 08 31 14.5
comp=Z,10nm,0.7s
U54A Nelsons Funny 68.94 351 P **P** **08 31 14.3 +0.6**
baz=170
U54A P **P** **08 31 14.3 +0.6**
baz=170
W45A Hickory Valley 68.95 344 P **P** **08 31 14.8 +1.1**
baz=164,SNR=5.3
CLTN Cedars of Leba 69.25 347 IAmb IAmb 08 31 17.1
comp=Z,10.0nm,0.7s
MIAR Mount Ida 69.50 340 IAmb IAmb 08 31 19.0
comp=Z,20nm,1.4s
MIAR Mount Ida 69.50 340 P **P** **08 31 18.2 +1.1**
baz=160,SNR=6.9
MIAR Mount Ida 69.50 340 P **P** **08 31 17.9 +0.8**
baz=160,SNR=6.9
Z35A Perchaven, San 69.50 337 P **P** **08 31 18.9 +1.7**
baz=157,SNR=6.5
U49A Red Boiling Sp 69.56 348 P **P** **08 31 17.2 -0.2**
baz=167
WVT Waverly 69.59 346 P **P** **08 31 18.2 +0.6**
WVT pP **PcP** **08 31 40.0 -0.1**
WVT Waverly 69.59 346 P **P** **08 31 18.3 +0.6**
baz=165,SNR=32
WVT Waverly 69.59 346 P **P** **08 31 18.3 +0.6**
baz=165
WVT Waverly 69.59 346 P **P** **08 31 16.9 -0.7**
WVT pP **pP** **08 31 39.4 +0.3**
ABTX Abilene, Hawle 69.69 335 IAmb IAmb 08 31 20.8
comp=Z,15nm,0.8s
ABTX Abilene, Hawle 69.69 335 P **P** **08 31 20.0 +1.5**
baz=155,SNR=7.9
ABTX Abilene, Hawle 69.69 335 P **P** **08 31 19.7 +1.3**
baz=155,SNR=7.9
S57A Dark Hollow, R 69.83 354 IAmb IAmb 08 31 20.9
comp=Z,7.5nm,0.7s
S57A Dark Hollow, R 69.83 354 P **P** **08 31 19.7 +0.6**
baz=173
S57A P **P** **08 31 19.7 +0.6**
baz=173
WHAR Woolly Hollow 69.84 342 IAmb IAmb 08 31 21.1
comp=Z,15nm,1.1s
R58B Mineral 69.94 354 IAmb IAmb 08 31 22.0
comp=Z,12nm,1.2s
R58B Mineral 69.94 354 P **P** **08 31 21.3 +1.6**
baz=174
R58B P **P** **08 31 21.3 +1.6**
baz=174
S54A Dingess, Beckl 70.13 352 P **P** **08 31 21.0 +0.1**
baz=171
S54A P **P** **08 31 21.0 +0.1**
baz=171
T47A Sharon Grove 70.27 347 IAmb IAmb 08 31 23.0
comp=Z,11nm,0.8s
T47A Sharon Grove 70.27 347 P **P** **08 31 22.0 +0.2**
baz=166
S51A Beattyville 70.29 350 P **P** **08 31 22.3 +0.4**
baz=169
S51A P **P** **08 31 22.3 +0.4**
baz=169
LCAR Lake Charles 70.29 343 pP 08 31 44.7 +1.3
LCAR Lake Charles 70.29 343 P **P** **08 31 22.6 +0.7**
baz=162,SNR=27
FCAR Ozark Folk Cen 70.37 342 IAmb IAmb 08 31 23.9
comp=Z,10nm,0.7s
R55A Marlinton 70.47 353 IAmb IAmb 08 31 25.2
comp=Z,10nm,0.8s
PBMO Poplar Bluff 70.79 344 P **P** **08 31 25.8 +0.8**
baz=163,SNR=15
X34A Smith Ranch, M 70.86 337 IAmb IAmb 08 31 27.7
comp=Z,15nm,0.7s
CGM3 Cape Girardeau 71.11 345 IAmb IAmb 08 31 28.3
comp=Z,7.0nm,1.0s
Q56A Snyder Ridge, 71.12 353 P **P** **08 31 28.0 +1.1**
baz=173
Q56A P **P** **08 31 28.0 +1.1**
baz=173
HHAR Hobbs 71.22 341 IAmb IAmb 08 31 29.3
comp=Z,18nm,0.9s
HHAR pP 08 31 50.3 +1.1
HHAR Hobbs 71.22 341 P **P** **08 31 28.5 +0.8**
baz=160
WMOK Wichita Mounta 71.30 336 P **P** **08 31 28.5 +0.4**
baz=156
Q52A Bidwell 71.40 351 IAmb IAmb 08 31 30.3
comp=Z,11nm,0.9s
Q52A Bidwell 71.40 351 P **P** **08 31 28.9 +0.3**
baz=170
Q52A P **P** **08 31 28.9 +0.3**
baz=170
TUL1 Leonard 71.42 339 P **P** **08 31 29.3 +0.5**
TUL1 Leonard 71.42 339 P **P** **08 31 29.7 +0.9**
baz=158,SNR=8.8
TUL1 Leonard 71.42 339 P **P** **08 31 29.6 +0.8**
baz=158,SNR=8.8
RLO Rose Lookout 71.43 340 IAmb IAmb 08 31 30.5
comp=Z,12nm,0.8s
P57A Homestead Farm 71.46 354 IAmb IAmb 08 31 31.4
comp=Z,14nm,0.8s
P57A Homestead Farm 71.46 354 P **P** **08 31 30.3 +1.4**
baz=174
P57A P **P** **08 31 30.3 +1.4**
baz=174
U38A Gravette 71.50 340 P **P** **08 31 30.1 +0.8**
baz=160
MGMO Mountain Grove 71.60 342 IAmb IAmb 08 31 31.7
comp=Z,12nm,1.0s
Q51A Peebles 71.61 350 IAmb IAmb 08 31 31.6
comp=Z,12nm,0.9s
Q51A Peebles 71.61 350 P **P** **08 31 30.2 +0.3**
baz=169
Q51A P **P** **08 31 30.2 +0.3**
baz=169
OK030 Cody Creek RV 71.74 338 IAmb IAmb 08 31 32.3
comp=Z,14nm,0.7s
OK034 N. Norfolk Rd. 71.79 338 IAmb IAmb 08 31 32.7
comp=Z,15nm,0.9s
OK029 Liberty Lake 71.83 338 IAmb IAmb 08 31 33.0
comp=Z,14nm,0.8s
FVM French Village 71.94 344 P **P** **08 31 32.8 +0.9**
baz=163,SNR=14
QUOK Quay 71.94 339 IAmb IAmb 08 31 33.7
comp=Z,14nm,0.8s
P51A Williamsport 72.02 350 IAmb IAmb 08 31 33.3
comp=Z,10nm,0.7s
P52A Corning 72.04 351 IAmb IAmb 08 31 33.5
comp=Z,14nm,0.9s
P52A Corning 72.04 351 P **P** **08 31 32.3 -0.1**
baz=170
MSTX Muleshoe 72.07 333 P **P** **08 31 33.3 +0.4**
MSTX IAmb IAmb 08 31 35.0
comp=Z,14nm,0.8s
MSTX Muleshoe 72.07 333 P **P** **08 31 34.2 +1.3**
baz=152,SNR=10
MSTX Muleshoe 72.07 333 P **P** **08 31 33.9 +1.0**
baz=152,SNR=10
OLIL Olney 72.15 346 IAmb IAmb 08 31 34.0
comp=Z,27nm,1.3s
CCM Cathedral Cave 72.20 344 P **P** **08 31 34.0 +0.6**
CCM pP **pP** **08 31 56.1 +1.1**
CCM Cathedral Cave 72.20 344 P **P** **08 31 34.1 +0.7**
baz=162,SNR=20
CCM Cathedral Cave 72.20 344 P **P** **08 31 34.0 +0.6**
baz=162
BLO Bloomington 72.27 348 IAmb IAmb 08 31 34.6
comp=Z,11nm,0.8s
P49A Miami Univ. Ec 72.32 349 IAmb IAmb 08 31 34.4
comp=Z,9.7nm,0.6s
P49A Miami Univ. Ec 72.32 349 P **P** **08 31 33.9 -0.2**
baz=168
P49A Miami Univ. Ec 72.32 349 P **P** **08 31 33.9 -0.2**
baz=168
P48A Milroy 72.36 349 IAmb IAmb 08 31 35.0
comp=Z,26nm,1.2s
P48A Milroy 72.36 349 P **P** **08 31 34.5 +0.2**
baz=168,SNR=7.2
P48A P **P** **08 31 34.5 +0.2**
baz=168,SNR=7.2
S39A Bolivar 72.38 342 IAmb IAmb 08 31 36.4
comp=Z,26nm,1.3s
S39A Bolivar 72.38 342 P **P** **08 31 34.7 +0.2**
baz=161,SNR=15
AMTX Amarillo 72.47 334 IAmb IAmb 08 31 37.6
comp=Z,23nm,1.2s
AMTX Amarillo 72.47 334 P **P** **08 31 36.6 +1.4**
baz=153,SNR=5.4
AMTX Amarillo 72.47 334 P **P** **08 31 35.9 +0.7**
baz=153
O53A New Philadelph 72.53 352 P **P** **08 31 35.6 +0.2**
baz=171
T35A Sooner Cattle 72.57 339 IAmb IAmb 08 31 37.7
comp=Z,14nm,0.9s
T35B Sooner Cattle 72.57 339 P **P** **08 31 37.0 +1.3**
baz=158,SNR=7.0
SSPA Standing Stone 72.59 355 P **P** **08 31 36.5 +0.8**
baz=174
UPAO U. Pittsburgh 72.63 353 P **P** **08 31 36.4 +0.5**
baz=172
CROK Carrier 72.65 338 IAmb IAmb 08 31 38.0
comp=Z,14nm,0.8s
R40A Maddies Statio 72.67 343 P **P** **08 31 37.2 +0.9**
baz=162,SNR=28
ELIS Ellis County 72.72 336 IAmb IAmb 08 31 39.1
comp=Z,35nm,1.4s
ACSO Alum Creek Sta 72.74 351 P **P** **08 31 37.3 +0.7**
baz=170,SNR=8.0
ACSO Alum Creek Sta 72.74 351 P **P** **08 31 36.7 +0.1**
baz=170,SNR=8.0
P46A Rosedale 72.83 347 IAmb IAmb 08 31 37.9
comp=Z,19nm,1.1s
121A Cookes Peak, D 72.92 328 IAmb IAmb 08 31 41.6
comp=Z,19nm,1.1s
121A Cookes Peak, D 72.92 328 P **P** **08 31 40.2 +2.1**
baz=148,SNR=16
121A Cookes Peak, D 72.92 328 P **P** **08 31 40.3 +2.3**
baz=148,SNR=16
O48B Farmland 73.09 349 P **P** **08 31 38.6 -0.1**
baz=168,SNR=7.4
O48B Farmland 73.09 349 P **P** **08 31 38.8 +0.1**
baz=168,SNR=7.4
PSWB Penn State Wil 73.13 356 P **P** **08 31 39.9 +1.0**
baz=176
KAN01 Argonia South 73.17 338 IAmb IAmb 08 31 41.4
comp=Z,19nm,0.9s
P43A Skaggs, Pawnee 73.32 345 P **P** **08 31 40.6 +0.6**
baz=164
M55A Ridgway 73.49 354 IAmb IAmb 08 31 42.6
comp=Z,20nm,1.1s
M55A Ridgway 73.49 354 P **P** **08 31 40.9 -0.1**
baz=173,SNR=6.1
M55A P **P** **08 31 40.9 -0.1**
baz=173,SNR=6.1
LIC Lamto 73.55 72⇑*iP* **P** **08 31 41.8 -0.2**
comp=Z,12nm,0.4s
SFIN Lafayette 73.55 347 P **P** **08 31 41.0 -0.3**

baz=166
SFIN Lafayette 73.55 347 P **P** 08 31 40.9 -0.4
baz=166
N49A Columbus Grove 73.59 350 P **P** 08 31 42.0 +0.5
baz=169,SNR=6.3
N49A P **P** 08 31 42.0 +0.5
baz=169,SNR=6.3
O44A Mansfield 73.59 346 P **P** 08 31 41.6 0.0
baz=165
Y22A Socorro 73.75 330 P **P** 08 31 44.9 +2.0
baz=149
N47A Urbana 73.79 349 P **P** 08 31 42.7 -0.1
baz=167,SNR=7.1
N47A P **P** 08 31 42.7 -0.1
baz=167,SNR=7.1
P40A Paris 73.79 343 P **P** 08 31 43.5 +0.7
baz=162,SNR=25
TIC Toumodi 73.80 71⇑ *i*P **P** 08 31 43.4 -0.1
comp=Z,2.8nm,0.2s
KIC Kosan Boka 73.86 72⇑ *i*P **P** 08 31 43.7 -0.1
comp=Z,13nm,0.5s
M50A Fremont 73.90 351 P **P** 08 31 43.8 +0.4
baz=170
M50A P **P** 08 31 43.8 +0.4
baz=170
DBIC Dimbokro 73.95 71 P **P** 08 31 43.9 -0.4
comp=Z,12nm,0.7s,baz=247,slow=6.0,SNR=11
DBIC LR LR 08 59 46.6
comp=Z,8.2nm,21.7s,baz=150,slow=32
comp=Z,12nm,0.7s
L59A Walton 73.97 357 IAmb IAmb 08 31 45.5
comp=Z,9.6nm,0.9s
L59A Walton 73.97 357 P **P** 08 31 45.3 +1.5
baz=177
L59A P **P** 08 31 45.3 +1.5
baz=177
BINY Binghamton 74.02 356 P **P** 08 31 45.7 +1.6
baz=176
L56A Greenwood 74.06 355 IAmb IAmb 08 31 46.1
comp=Z,21nm,1.1s
TUC Tucson 74.12 326 P **P** 08 31 45.8 +0.9
baz=146
HDIL Hopedale 74.15 346 P **P** 08 31 45.3 +0.5
baz=164,SNR=5.6
HDIL Hopedale 74.15 346 P **P** 08 31 45.1 +0.2
baz=164,SNR=5.6
ERPA Erie 74.25 353 P **P** 08 31 45.4 0.0
baz=172
P38A Dawn 74.25 342 IAmb IAmb 08 31 46.9
comp=Z,18nm,0.9s
P38A Dawn 74.25 342 P **P** 08 31 46.2 +0.7
baz=161,SNR=8.6
ANMO Albuquerque 74.40 331 P **P** 08 31 47.2 +0.4
ANMO Albuquerque 74.40 331 P **P** 08 31 48.5 +1.8
baz=150,SNR=10
ANMO Albuquerque 74.40 331 P **P** 08 31 48.6 +1.9
baz=150
WVNY West Valley, N 74.41 354 IAmb IAmb 08 31 48.3
comp=Z,16nm,0.8s
WVNY West Valley, N 74.41 354 P **P** 08 31 47.4 +1.1
baz=174
KSU1 Kansas State U 74.61 340 IAmb IAmb 08 31 49.0
comp=Z,12nm,0.7s
KSU1 Kansas State U 74.61 340 P **P** 08 31 48.3 +0.7
baz=158
KSU1 Kansas State U 74.61 340 P **P** 08 31 47.9 +0.3
baz=158
R32A Long Quarter, 74.63 338 IAmb IAmb 08 31 50.0
comp=Z,10nm,0.8s
R32A Long Quarter, 74.63 338 P **P** 08 31 49.2 +1.5
baz=156
N41A Harden Midland 74.64 345 P **P** 08 31 47.9 +0.2
baz=163,SNR=8.9
M44A Midewin, Midew 74.70 347 IAmb IAmb 08 31 49.0
comp=Z,19nm,0.9s
214A Organ Pipe Nat 74.81 324 P **P** 08 31 51.1 +2.2
baz=144
MAW Mawson 74.85 163 pP **pP** 08 32 08.0 -2.3
comp=Z,3.7nm,0.6s,baz=157,slow=5.6,SNR=4.9
MAW LR LR 09 04 04.5
comp=Z,40nm,19.3s,baz=354,slow=35
HQIL Hanson Quary C 75.07 347 IAmb IAmb 08 31 50.7
comp=Z,18nm,0.6s
K50A Casco 75.20 351 P **P** 08 31 51.0 +0.2
baz=170
K50A P **P** 08 31 51.0 +0.2
baz=170
SUR Sutherland 75.20 119 P **P** 08 31 51.4 -0.2
baz=228,slow=12
N38A Joes South For 75.28 343 P **P** 08 31 52.2 +0.8
baz=161,SNR=5.3
T25A Trinidad 75.49 333 P **P** 08 31 55.2 +2.3
baz=152,SNR=11
L42A Oliver, Polo 75.62 346 IAmb IAmb 08 31 54.5
comp=Z,17nm,1.1s
L42A Oliver, Polo 75.62 346 P **P** 08 31 53.4 +0.1
baz=164,SNR=6.0
LBNH Lisbon 75.94 360 P **P** 08 31 56.3 +1.3
baz=179
J47A Sumner 75.95 350 IAmb IAmb 08 31 56.0
comp=Z,14nm,0.8s
J47A Sumner 75.95 350 P **P** 08 31 54.8 -0.3
baz=168
J47A P **P** 08 31 54.8 -0.3
baz=168
W18A Petrified Fore 75.97 328 P **P** 08 31 57.5 +1.8
baz=147
N35A Tabor 75.97 341 P **P** 08 31 56.1 +0.8
baz=159,SNR=9.7
L40A Anamosa 76.01 345 pP 08 32 17.8 +0.5
L40A Anamosa 76.01 345 P **P** 08 31 56.0 +0.5
baz=163,SNR=17
K43A Burlington 76.03 347 IAmb IAmb 08 31 57.8
comp=Z,12nm,1.0s
X16A Lo Mia Camp, P 76.16 327 IAmb IAmb 08 32 00.2
comp=Z,14nm,1.0s
SCIA State Center 76.33 343 P **P** 08 31 58.1 +0.8
baz=161
LONY Lake Ozonia 76.37 358 P **P** 08 31 59.6 +2.1
baz=177
SDCO Great Sand Dun 76.44 333 IAmb IAmb 08 32 01.3
comp=Z,8.7nm,0.7s
SDCO Great Sand Dun 76.44 333 P **P** 08 32 00.5 +2.1
baz=151,SNR=21
SDCO Great Sand Dun 76.44 333 P **P** 08 32 00.2 +1.8
baz=151,SNR=21
KSCO Kaye Shedlock' 76.48 335 IAmb IAmb 08 32 01.4
comp=Z,13nm,0.8s
KSCO Kaye Shedlock' 76.48 335 P **P** 08 31 60.0 +1.5
baz=153
JFWS Jewell Farm 76.61 346 IAmb IAmb 08 32 00.4
comp=Z,18nm,1.1s
JFWS Jewell Farm 76.61 346 P **P** 08 31 59.6 +0.7
baz=164,SNR=5.7
JFWS Jewell Farm 76.61 346 P **P** 08 31 59.4 +0.4
baz=164,SNR=5.7
G62A West of Eustis 76.92 1 P **P** 08 32 01.9 +1.3
G62A IAmb IAmb 08 32 03.0
comp=Z,11nm,0.9s
G62A West of Eustis 76.92 1 P **P** 08 32 02.0 +1.4
baz=181
G62A P **P** 08 32 02.0 +1.4
baz=181
K38A Parkersburg 76.92 344 IAmb IAmb 08 32 01.6
comp=Z,11nm,0.7s
K38A Parkersburg 76.92 344 P **P** 08 32 01.1 +0.4
baz=161
WUAZ Wupatki 77.04 327 IAmb IAmb 08 32 05.2
comp=Z,11nm,1.0s
WUAZ Wupatki 77.04 327 P **P** 08 32 03.8 +2.1
baz=146,SNR=6.7
IKP In-Ko-Pah, Jac 77.04 322 P **P** 08 32 04.0 +2.4
baz=142
BLYC Blythe 77.11 324 IAmb IAmb 08 32 05.4
comp=Z,10nm,0.8s
SWSC Sam W. Stewart 77.11 323 P **P** 08 32 03.5 +1.6
baz=142
MVCO Mesa Verde 77.19 330 IAmb IAmb 08 32 05.6
comp=Z,12nm,0.9s
MVCO Mesa Verde 77.19 330 P **P** 08 32 04.4 +1.8
baz=148,SNR=10
BGNE Belgrade 77.19 340 P **P** 08 32 03.6 +1.3
baz=157
BGNE Belgrade 77.19 340 P **P** 08 32 03.2 +1.0
baz=157
L34A Svendsen Farm, 77.20 341 P **P** 08 32 02.8 +0.5
baz=158
I42A Draeger Farm, 77.29 347 IAmb IAmb 08 32 04.1
comp=Z,13nm,0.8s
I42A Draeger Farm, 77.29 347 P **P** 08 32 03.4 +0.7
baz=165
Q24A Divide 77.36 334 P **P** 08 32 05.5 +1.9
baz=151,SNR=17
MONP2 Monument Peak 77.39 322 P **P** 08 32 06.1 +2.3
baz=142
BC3 Big Chuckawall 77.50 323 P **P** 08 32 06.6 +2.4
baz=143,SNR=9.0
F64A Sherman 77.60 2 P **P** 08 32 05.7 +1.4
baz=182
F64A P **P** 08 32 05.7 +1.4
baz=182
IRM Iron Mountain 77.74 324 P **P** 08 32 07.9 +2.4
baz=143,SNR=6.0
W13A Hualapai Mount 77.88 325 IAmb IAmb 08 32 09.8
comp=Z,7.8nm,0.8s
PMD Palm Desert 77.96 323 IAmb IAmb 08 32 10.3
comp=Z,18nm,1.4s
NEE2 Needles Airpor 77.97 325 P **P** 08 32 08.7 +2.0
baz=144
TPFO Pinon Flats 77.97 323 P **P** 08 32 09.1 +2.2
baz=142,SNR=7.6
PFO Pinyon Flats O 77.97 323 P **P** 08 32 09.9 +3.0
PFO IAmb IAmb 08 32 10.6
comp=Z,13nm,1.0s
PFO Pinyon Flats O 77.97 323 P **P** 08 32 09.0 +2.1
baz=142,SNR=8.5
BELC Belle Mtn. Jos 78.05 323 P **P** 08 32 09.3 +2.0
baz=142
PV13 Radium Mtn., P 78.13 331 IAmb IAmb 08 32 10.6
comp=Z,14nm,0.9s
ISCO Idaho Springs 78.27 334 P **P** 08 32 10.6 +2.0
baz=151,SNR=9.7
ISCO Idaho Springs 78.27 334 P **P** 08 32 10.1 +1.4
baz=151,SNR=9.7
E62A Clayton Lake 78.33 1 P **P** 08 32 09.4 +1.0
baz=182
E62A P **P** 08 32 09.4 +1.0
baz=182
MURC Murrieta 78.35 322 P **P** 08 32 11.3 +2.5
baz=142,SNR=6.4
I37B Waseca 78.36 344 P **P** 08 32 09.1 +0.5
baz=161
PV10 Paradox Valley 78.41 331 IAmb IAmb 08 32 11.6
comp=Z,12nm,0.8s
PV23 Carpenter Ridg 78.46 331 IAmb IAmb 08 32 12.4
comp=Z,12nm,1.1s
K31A O'Neill 78.49 340 P **P** 08 32 11.0 +1.6
baz=156,SNR=7.9
GMRC Granite Mounta 78.50 324 P **P** 08 32 12.2 +2.4
baz=143,SNR=13
ELS Elsinore Mount 78.50 322 IAmb IAmb 08 32 13.2
comp=Z,9.6nm,0.8s
BBRC Big Bear Solar 78.72 323 P **P** 08 32 13.6 +2.5
baz=142
HEC Hector,Ludlow 78.87 324 P **P** 08 32 14.2 +2.4
baz=142,SNR=5.6
ECSD EROS Data Cent 78.91 342 P **P** 08 32 12.5 +0.8
ECSD pP **pP** 08 32 33.9 +0.3
ECSD EROS Data Cent 78.91 342 P **P** 08 32 12.5 +0.8
baz=158,SNR=18
ECSD EROS Data Cent 78.91 342 P **P** 08 32 12.4 +0.8
baz=158,SNR=18
KNB Kanab 78.93 327 IAmb IAmb 08 32 15.7
comp=Z,10nm,0.9s
BFSC Mount Baldy Ra 79.08 322 P **P** 08 32 15.1 +2.1
baz=141,SNR=6.7
TSUM Tsumeb 79.12 106 pP pP 08 32 36.5 +0.5
TUQ Turquoise Moun 79.14 324 P **P** 08 32 15.5 +2.1
baz=143,SNR=9.0
KOWA Kowa 79.25 65 P **P** 08 32 14.2 0.0
KOWA IAmb IAmb 08 32 14.9
comp=Z,13nm,0.7s
N23A Red Feather La 79.35 334 P **P** 08 32 16.2 +1.7
baz=151,SNR=5.2
SPMN Marine on St. 79.37 345 P **P** 08 32 14.4 +0.2
baz=162
SPMN Marine on St. 79.37 345 P **P** 08 32 14.0 -0.1
baz=162
DECC Green Verdugo 79.45 322 P **P** 08 32 17.1 +2.2
baz=141
GSC Goldstone, Bar 79.48 324 P **P** 08 32 17.2 +2.1
baz=142,SNR=6.0
PHWY Pilot Hill 79.52 334 IAmb IAmb 08 32 18.0
comp=Z,8.6nm,0.8s
O20A White River Ci 79.58 332 IAmb IAmb 08 32 18.4
comp=Z,7.7nm,0.7s
O20A White River Ci 79.58 332 P **P** 08 32 17.4 +1.7
baz=149,SNR=7.2
CCUT Cedar City 79.62 327 P **P** 08 32 17.3 +1.3
CCUT IAmb IAmb 08 32 19.7
comp=Z,9.9nm,0.9s
CCUT **pP** 08 32 40.0 +2.2
SRU San Rafael Swe 79.65 330 IAmb IAmb 08 32 18.5
comp=Z,13nm,0.7s
SHOC Shoshone, Teco 79.69 324 P **P** 08 32 17.8 +1.7
baz=142
EDW2 Edwards Air Fo 79.76 323 P **P** 08 32 18.5 +2.0
baz=141,SNR=8.1
Q16A Castle Valley 79.77 329 IAmb IAmb 08 32 19.7
comp=Z,9.2nm,0.8s
P18A Preston Nutter 79.97 330 IAmb IAmb 08 32 20.8
comp=Z,16nm,0.8s
CCAC Calif City Air 79.98 323 IAmb IAmb 08 32 21.0
comp=Z,16nm,0.8s
P17A Butcher Ranch, 80.05 330 IAmb IAmb 08 32 20.7
comp=Z,18nm,1.3s
LRMC Laurel Mtn Rad 80.06 323 P **P** 08 32 20.3 +2.0
baz=142
F36A Milaca 80.14 344 IAmb IAmb 08 32 19.3
comp=Z,13nm,0.9s
F36A Milaca 80.14 344 P **P** 08 32 18.4 +0.1
baz=161,SNR=6.3
D41A Chassel 80.28 348 P **P** 08 32 20.1 +1.1
baz=165
PRN Pahroc Range 80.29 326 IAmb IAmb 08 32 23.1
comp=Z,14nm,0.9s
SBC Santa Barbara 80.32 321 P **P** 08 32 21.3 +1.8
baz=140
BOSA Boshof 80.40 118 P **P** 08 32 19.4 -1.1
comp=Z,4.8nm,0.9s,baz=221,slow=3.1,SNR=5.9
comp=Z,4.8nm,0.9s
MPMC Manual Prospec 80.42 324 P **P** 08 32 22.2 +1.9
baz=142
FURC Furnace Creek, 80.42 324 P **P** 08 32 22.0 +2.0
baz=142
RDMU Red Mountain 80.48 331 IAmb IAmb 08 32 22.9
comp=Z,15nm,0.8s
TPNV Topopah Spring 80.50 325 P **P** 08 32 23.0 +2.3
baz=143,SNR=5.2
RWWY Rawlins 80.51 334 IAmb IAmb 08 32 23.4
comp=Z,18nm,1.1s
ISA Isabella, Lake 80.61 323 IAmb IAmb 08 32 24.7
comp=Z,9.2nm,0.9s
ISA Isabella, Lake 80.61 323 P **P** 08 32 23.4 +2.3
baz=141,SNR=6.4
PKM Mcpherson Peak 80.72 321 P **P** 08 32 24.3 +2.4
baz=140
CWC Cottonwood Cre 81.01 323 P **P** 08 32 25.2 +1.8
baz=141
VES Vestal, Richgr 81.06 322 P **P** 08 32 25.7 +2.2
baz=141,SNR=5.0
K22A Casper 81.09 334 IAmb IAmb 08 32 26.3
comp=Z,21nm,1.2s
K22A Casper 81.09 334 P **P** 08 32 25.5 +1.9
baz=150,SNR=5.5
K22A Casper 81.09 334 P **P** 08 32 25.0 +1.3
baz=150,SNR=5.5
SMMC Simmler 81.14 322 P **P** 08 32 26.2 +2.2
baz=140
SPR3 Spring Creek 3 81.24 327 IAmb IAmb 08 32 27.4
comp=Z,7.1nm,0.9s
SPR3 pP 08 32 48.4 +1.8
R11A Troy Canyon, C 81.30 326 pP 08 32 49.1 +2.2
R11A Troy Canyon, C 81.30 326 P **P** 08 32 26.8 +1.9
baz=143,SNR=12
RSSD Black Hills 81.50 337 P **P** 08 32 26.8 +0.9
RSSD IAmb IAmb 08 32 28.0
comp=Z,12nm,1.1s
RSSD Black Hills 81.50 337 P **P** 08 32 27.3 +1.4
baz=152,SNR=7.8
RSSD Black Hills 81.50 337 P **P** 08 32 27.0 +1.1
baz=152
DUG Dugway, Tooele 81.53 329 P **P** 08 32 27.7 +1.7
baz=145,SNR=6.9
EYMN Ely 81.69 346 P **P** 08 32 27.7 +1.3
baz=163
HWUT Hardware Ranch 82.17 331 IAmb IAmb 08 32 31.5
comp=Z,9.4nm,0.7s
MLAC Mammoth, Mammo 82.32 324 P **P** 08 32 32.4 +2.1
baz=141,SNR=5.2
BW06 Boulder Array 82.33 333 P **P** 08 32 30.7 +0.4
baz=148
PDAR Pinedale Array 82.33 333 P **P** 08 32 31.2 +1.0
comp=Z,1.5nm,0.7s,baz=132,slow=5.7,SNR=17
comp=Z,1.5nm,0.7s
LBTB Lobatse 82.53 115 LR LR 09 06 08.9
comp=Z,22nm,21.0s,baz=170,slow=33
B35A Bob, Littlefor 82.55 345 IAmb IAmb 08 32 32.0
comp=Z,14nm,0.8s
LHV Little Huntoon 82.63 324 IAmb IAmb 08 32 35.1
comp=Z,9.3nm,0.8s
NVAR Mina Array Bea 82.67 325 P **P** 08 32 34.2 +2.1
comp=Z,5.4nm,0.8s,baz=154,slow=5.9,SNR=37
NVAR pP **pP** 08 32 56.0 +1.8
comp=Z,1.9nm,0.7s,baz=145,slow=6.9,SNR=5.1
comp=Z,5.4nm,0.8s
HVU Hansel Valley 82.82 330 IAmb IAmb 08 32 34.7
comp=Z,9.1nm,0.7s
TOA0 Torodi Ar. Sit 82.94 70 P **P** 08 32 33.7 -0.1
TOA0 IAmb IAmb 08 32 34.5
comp=Z,15nm,0.8s
TORD Torodi Ar. Bea 82.94 70 P **P** 08 32 33.6 -0.2
comp=Z,14nm,0.8s,baz=264,slow=4.9,SNR=60
TORD pP **pP** 08 32 55.3 -0.7
comp=Z,2.9nm,0.7s,baz=282,slow=6.6,SNR=3.4
comp=Z,14nm,0.8s
TORD Torodi Ar. Bea 82.94 70 **P** 08 32 33.6 -0.2
AGMN Agassiz Nation 82.97 344 IAmb IAmb 08 32 34.5
comp=Z,12nm,0.7s
AGMN Agassiz Nation 82.97 344 P **P** 08 32 33.8 +0.6
baz=159
AGMN Agassiz Nation 82.97 344 P **P** 08 32 33.6 +0.4
baz=159
ELK Elko 83.06 328 IAmb IAmb 08 32 36.5
comp=Z,7.4nm,0.8s
MDND Maddock 83.51 341 P **P** 08 32 36.7 +0.8
baz=156
YERR Yerington 83.56 324 IAmb IAmb 08 32 40.0
comp=Z,7.8nm,0.8s
FLWY Flagg Ranch 83.89 333 IAmb IAmb 08 32 40.7
comp=Z,20nm,1.4s
H17A Grant Village 84.11 333 P **P** 08 32 40.5 +1.1
baz=147
PAHR Pah Rah Range 84.19 325 IAmb IAmb 08 32 43.0
comp=Z,13nm,1.2s
RLMT Red Lodge 84.22 334 IAmb IAmb 08 32 41.9
comp=Z,7.5nm,0.5s
RLMT Red Lodge 84.22 334 P **P** 08 32 40.9 +1.0
baz=148,SNR=9.5
YMR Madison River 84.49 333 IAmb IAmb 08 32 44.2
comp=Z,18nm,1.1s
LAO LASA Array 84.50 337 P **P** 08 32 41.5 +0.4
baz=151
LAO LASA Array 84.50 337 P **P** 08 32 41.9 +0.8
baz=151
HLID Hailey 84.97 330 P **P** 08 32 45.1 +1.4
baz=144,SNR=11
DGMT Dagmar 85.41 339 P **P** 08 32 46.9 +1.3
baz=152
DGMT Dagmar 85.41 339 P **P** 08 32 46.7 +1.1
baz=152,SNR=7.3
BOZ Bozeman (W) 85.52 333 P **P** 08 32 47.0 +0.7
baz=147,SNR=6.1
DLMT Dillon 85.70 332 IAmb IAmb 08 32 49.8
comp=Z,13nm,1.2s
MOD Modoc Plateau 86.33 326 IAmb IAmb 08 32 53.0
comp=Z,5.5nm,0.8s
J08A Circle Bar Ran 86.60 328 pP 08 33 15.8 +2.0
EGMT Eagleton 86.87 335 P **P** 08 32 53.4 +0.6
baz=148
PLID Pearl Lake 86.88 330 IAmb IAmb 08 32 55.5
comp=Z,12nm,0.9s
I07A Izee 87.63 327 IAmb IAmb 08 32 59.4
comp=Z,9.8nm,1.0s
J05D Fort Rock, OR 87.82 326 P **P** 08 32 59.4 +1.8
baz=140,SNR=5.2
PINE Pine Mountain 88.07 326 pP 08 33 22.7 +1.6
F10A Beach Ranch, E 88.10 330 IAmb IAmb 08 33 00.8
comp=Z,9.2nm,1.4s
K02D Willamette Mer 88.56 324 P **P** 08 33 02.9 +1.8
baz=138
I05D Terrebonne, OR 88.67 327 P **P** 08 33 03.1 +1.6
baz=140
I04A Tendick Farm, 88.77 326 P **P** 08 33 03.1 +1.2
baz=139
WALA Waterton Lakes 89.26 334 IAmb IAmb 08 33 06.2
comp=Z,7.5nm,1.1s
HAWA Hanford 89.43 329 IAmb IAmb 08 33 07.5
comp=Z,11nm,1.1s
D08A Wollman Farm, 89.68 330 IAmb IAmb 08 33 08.1
comp=Z,4.3nm,0.8s
NEW Newport 89.88 331 LR LR 09 10 53.8
comp=Z,22nm,18.6s,baz=342,slow=34
C09A Chrisman Ranch 89.99 330 IAmb IAmb 08 33 09.5
comp=Z,7.7nm,0.8s
MBAR Mbarara 99.85 97 pP 08 34 13.0 -3.2
ASAR Alice Springs 119.59 207 PKP **PKPdf** 08 38 56.9 -1.5
comp=Z,1.0nm,0.7s,baz=136,slow=1.9,SNR=12
BRTR Keskin Array B 120.31 60 PKP **PKPdf** 08 38 58.0 -1.3
comp=Z,1.0nm,0.7s,baz=227,slow=5.6,SNR=4.1
AKASG Malin Array Be 120.40 46 PKP **PKPdf** 08 38 57.8 -1.1
comp=Z,0.2nm,0.3s,baz=297,slow=1.4,SNR=4.1
MNK Minsk 120.52 42 *i* PKP **PKPdf** 08 38 57.4 -1.6
comp=E,2.0nm,0.8s
MNK *i* PKP **PKPdf** 08 38 57.4 -1.6
comp=N,5.0nm,0.8s
MNK *i* PKP **PKPdf** 08 38 57.4 -1.6
comp=Z,6.0nm,0.7s,baz=77
MNK *i* pPKP **pPKPdf** 08 39 22.4 +0.1
MNK *i* PP **PP** 08 40 28.6 +1.0
MNK *i* PPP PPP 08 43 03.4
MNK *i* SKS **SKSdf** 08 46 01.0 -2.3
MNK *i* SS **SS** 08 56 56.0 +5.4
MNK *i* SSS SSS 09 01 25.5
MNK *i* LR LR 09 29 11.5
MNK *i* LRM MLR 09 30 56.2
comp=N,13nm,15.3s
MNK *i* LRM MLR 09 31 07.1
comp=Z,44nm,20.4s
MNK *i* LRM MLR 09 31 59.5
comp=E,287nm,21.7s
ARCES ARCESS Array B 121.99 24 PKP **PKPdf** 08 39 00.8 -0.6
comp=E,2.6nm,0.9s,baz=17,slow=1.3,SNR=3.8
WRA Warramunga Arr 122.77 209 PKP **PKPdf** 08 39 04.0 -0.5
comp=E,2.6nm,0.6s,baz=158,slow=1.7,SNR=54
WRA pPKP **pPKPdf** 08 39 27.4 -0.5
comp=E,1.4nm,0.7s,baz=171,slow=1.6,SNR=5.5
H11S2 WAKE ISLAND Hyl 126.43 270 T T 10 58 33.2
baz=118,slow=75,SNR=284
H11S1 WAKE ISLAND Hyl 126.44 270 T T 10 58 36.0
baz=118,slow=75,SNR=353
H11S3 WAKE ISLAND Hyl 126.45 270 T T 10 58 35.8
baz=118,slow=75,SNR=280
H11N3 WAKE ISLAND Hyl 126.79 272 T T 10 58 52.9
baz=117,slow=75,SNR=64
H11N1 WAKE ISLAND Hyl 126.81 272 T T 10 59 03.6
baz=117,slow=75,SNR=22
H11N2 WAKE ISLAND Hyl 126.81 272 T T 10 58 54.2
baz=117,slow=75,SNR=114
KLMR Klimovskoe 127.45 35 *e*PKPdf **PKPdf** 08 39 11.0 -1.1
KLMR AMP 08 39 13.1
comp=Z,11nm,1.0s
HYBB Hyderabad (bro 149.09 111 *e*PKiKP **PKPbc** 08 39 57.2 +0.3
AAK Ala-Archa 150.99 59 PKPbc **PKiKP** 08 40 01.8 +0.3
comp=Z,16nm,0.7s,baz=214,slow=2.2,SNR=14
KURBB Kurchatov Arra 151.00 41 PKPbc **PKiKP** 08 40 00.9 -0.1
comp=Z,13nm,0.6s,baz=300,slow=2.9,SNR=60
KURBB pPKPbc **pPKPbc** 08 40 22.8 -0.9
comp=Z,4.1nm,0.8s,baz=300,slow=3.1,SNR=5.1
ZALV Zalesovo Beam 152.24 31 PKPbc **PKiKP** 08 40 03.4 0.0
comp=Z,26nm,0.5s,baz=303,slow=3.5,SNR=61
ZALV pPKPbc **pPKPbc** 08 40 26.4 0.0
comp=Z,6.9nm,0.5s,baz=285,slow=3.2,SNR=5.3
MKAR Makanchi Array 154.98 46 PKPbc **PKiKP** 08 40 09.7 +0.2
comp=Z,2.4nm,0.8s,baz=270,slow=3.6,SNR=10.0
MKAR PKPab **PKPab** 08 40 25.4 +0.1
comp=Z,3.3nm,0.6s,baz=292,slow=4.2,SNR=15
KSRS Korea Array 163.34 294 PKPab **PKPab** 08 41 03.5 +1.7
comp=Z,1.2nm,0.9s,baz=92,slow=3.5,SNR=6.3
SONM Songino Array 164.14 6 PKPab **PKPab** 08 41 05.7 +0.7
comp=Z,0.7nm,0.6s,baz=321,slow=1.9,SNR=3.7
PZH PanZhiHua 171.76 130 PKP **PKPdf** 08 40 17.1 0.0
CD2 Chengdu 175.60 104 *e*PKP **PKPdf** 08 40 17.6 -0.6

*IDC **10** 08:56:34.6±0.6,34˚.27N×86˚.27E,h0km,mb4.1/16, mbtmp4.1/20,ML3.7/4,MS3.5/19,Error ellipse: s-maj=19.8km s-min=13.2km az=34.0*
*NEIC **10** 08:56:40.7±1.9,34˚.5N±0˚.1×86˚.1E±0˚.1,h30km±7km, mb4.1/14,Error ellipse: s-maj=16.6km s-min=9.9km az=209.0*

ISC 10 08:56:37.1±0.5,**34˚.46N**±0˚.05×**86˚.26E**±0˚.05,**h10**km,**n69,** σ1§**55**/60,**mb4.1**/15,**MS3.6**/16,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.31**	**138**	Pn		**Pn**		**08 58 14.5**	**+3.9**
DANN	**Dangsing** 49nm,0.5s	**6.46**	**200**	*e*P		**Pn**		**08 58 14.9**	**+2.4**
GUN	**Gumba** 40nm,0.4s	**6.54**	**183**	*e*P		**Pn**		**08 58 15.9**	**+2.2**
KKN	**Kakani**	**6.71**	**187**	*e*P		**Pn**		**08 58 17.8**	**+1.9**
JIRN	**Jiri** 62nm,0.4s	**6.78**	**181**	*e*P		**Pn**		**08 58 18.6**	**+1.5**
DMN	**Daman** 42nm,0.4s	**6.91**	**189**	*e*P		**Pn**		**08 58 20.7**	**+2.1**
PKIN	**Phulchoki** 62nm,0.5s	**6.91**	**186**	*e*P		**Pn**		**08 58 20.6**	**+1.9**
PKI	**Pulchoki** 42nm,0.5s	**6.91**	**186**	*e*P		**Pn**		**08 58 20.6**	**+1.8**
TAPN	**Taplejung** 52nm,0.5s	**7.20**	**170**	*e*P		**Pn**		**08 58 22.5**	**-0.2**
RAMN	**Ramite** 53nm,0.2s	**7.50**	**178**	*e*P		**Pn**		**08 58 28.0**	**+1.3**
ODAN	**Odare**	**7.64**	**172**	*e*P		**Pn**		**08 58 28.3**	**-0.4**
SMLA	**Simla**	**8.34**	**249**	*ex*		**Pg**		**08 59 15.4**	**-1.5**
SMLA				*i* x		x		09 01 30.1	
BHK	**Bhakra**	**8.81**	**253**	*i* x		**Sg**		**09 01 25.7**	**+5.8**
NIL	**Nilore**	**10.82**	**269**	Pn		**Pn**		**08 59 11.9**	**-0.2**
MK31	**Makanchi Array**	**12.68**	**347**			**Pn**		**08 59 38.7**	**+1.2**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=161,slow=15,SNR=15 3.8nm,0.8s	**12.68**	**347**	Pn		**Pn**		**08 59 37.8**	**+0.4**
MKAR	**Makanchi Array**	**12.68**	**347**			**Pn**		**08 59 38.3**	**+0.9**
KBL	**Kabul**	**14.20**	**275**			**Pn**		**08 59 55.5**	**-2.9**
CHGR	**Chuyangaron**	**14.36**	**292**	Pn		**Pn**		**08 59 58.2**	**-2.4**
KKAR	**Karatay Array**	**14.99**	**310**	Pn		**Pn**		**09 00 08.6**	**-0.4**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=160,slow=11,SNR=37	**17.11**	**343**	P		**Pn**		**09 00 37.0**	**+0.8**
KURBB					LR	LR		09 08 09.3	
	comp=Z,67nm,20.4s,baz=156,slow=40 11nm,0.8s								
KURK	**Kurchatov**	**17.17**	**343**	Pn		**Pn**		**09 00 36.7**	**-0.3**
KURK						**P**		**09 00 38.6**	**0.0**
KURK					IAmb	IAmb		09 00 42.7	
	comp=Z,15nm,0.9s								
HYBB	**Hyderabad (bro**	**18.32**	**204**	*e*Pn		**P**		**09 00 52.0**	**+0.5**
HYBB				*e*Sn		**Sn**		**09 04 14.8**	**-1.4**
CRAI	**Chiangrai**	**18.90**	**135**	P		**Pn**		**09 00 59.2**	**+0.7**
CRAI					IAmb	IAmb		09 01 05.8	
	comp=Z,8.3nm,0.9s								
CHTO	**Chiang Mai**	**19.25**	**141**	P		**Pn**		**09 01 03.5**	**+0.8**
CHTO					IAmb	IAmb		09 01 07.8	
	comp=Z,8.4nm,0.7s								
ZAA0	**Zalesovo Array**	**19.51**	**357**	P		**P**		**09 01 04.9**	**+0.6**
ZAA0					IAmb	IAmb		09 01 06.4	
	comp=Z,13nm,1.2s								
ZALV	**Zalesovo Beam**	**19.51**	**357**	P		**Pn**		**09 01 05.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=179,slow=8.9,SNR=16								
ZALV					LR	LR		09 09 22.3	
	comp=Z,142nm,18.7s,baz=228,slow=39 comp=Z,3.6nm,0.6s								
ZALV	**Zalesovo Beam**	**19.51**	**357**	P		**P**		**09 01 05.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**19.54**	**141**	P		**P**		**09 01 03.5**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=329,slow=12,SNR=13								
CMAR					LR	LR		09 09 33.8	
	comp=Z,87nm,18.4s,baz=320,slow=40 comp=Z,2.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**19.54**	**141**	P		**P**		**09 01 04.7**	**-0.3**
HRA	**Herat**	**19.80**	**277**	P		**P**		**09 01 06.0**	**-1.9**
ENH	**Enshi**	**20.05**	**96**	P		**P**		**09 01 11.8**	**+1.4**
ENH					IAmb	IAmb		09 01 17.8	
	comp=Z,17nm,1.2s								
SONM	**Songino Array**	**20.13**	**42**	P		**P**		**09 01 12.6**	**+1.3**
	comp=Z,8.4nm,0.9s,baz=231,slow=12,SNR=31								
SONM					LR	LR		09 09 54.6	
	comp=Z,232nm,19.0s,baz=218,slow=40 comp=Z,8.4nm,0.9s								
SONM	**Songino Array**	**20.13**	**42**	P		Pn		09 01 13.2	+0.1
SONM					IAmb	IAmb		09 01 19.2	
	comp=Z,13nm,1.0s								
ULN	**Ulaanbaatar**	**20.52**	**43**	P		**P**		**09 01 16.6**	**+1.1**
BRVK	**Borovoye**	**21.79**	**333**	P		**P**		**09 01 30.8**	**+1.8**
GEYT	**Alibeck**	**22.93**	**287**	P		**P**		**09 01 41.6**	**+0.2**
	comp=Z,2.8nm,0.6s,baz=222,slow=13,SNR=2.7								
GEYT					LR	LR		09 12 33.9	
	comp=Z,348nm,20.0s,baz=103,slow=42 comp=Z,2.8nm,0.6s								
GEYT	**Alibeck**	**22.93**	**287**	P		**P**		**09 01 42.4**	**+1.0**
ABKAR	**Akbulak array**	**24.38**	**315**	P		**P**		**09 01 55.1**	**-0.3**
ABKAR	**Akbulak array**	**24.38**	**315**	P		**P**		**09 01 55.4**	**0.0**
ABKAR					IAmb	IAmb		09 01 59.1	
	comp=Z,3.7nm,1.0s								
UBPT	**Khong Chiam**	**25.77**	**133**	P		**P**		**09 02 07.0**	**-1.2**
AKTO	**Aktyubinsk**	**26.03**	**316**	P		**P**		**09 02 10.8**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=127,slow=10,SNR=5.7								
AKTO					LR	LR		09 14 20.0	
	comp=Z,63nm,21.3s,baz=117,slow=41 comp=Z,3.5nm,0.9s								
ARU	**Arti**	**28.98**	**328**	LR		LR		09 15 32.9	
	comp=Z,78nm,20.9s,baz=138,slow=39								
GNI	**Garni**	**33.28**	**292**	LR		LR		09 19 12.2	
	comp=Z,56nm,18.4s,baz=102,slow=41								
KSAR	**Wonju Array Be**	**33.63**	**73**	P		**P**		**09 03 18.0**	**+0.1**
PSI	**Prapat**	**33.64**	**157**	LR		LR		09 18 52.3	
	comp=Z,98nm,18.1s,baz=330,slow=40								
KSRS	**Korea Array**	**33.66**	**73**	P		**P**		**09 03 16.9**	**-1.2**
	comp=Z,3.6nm,0.7s,baz=275,slow=9.2,SNR=24 comp=Z,3.6nm,0.7s								
KIRV	**Kirov**	**34.29**	**326**	LR		LR		09 18 47.0	
	comp=Z,62nm,21.3s,baz=122,slow=39								
KBZ	**Khabaz**	**34.56**	**299**	LR		LR		09 21 04.1	
	comp=Z,63nm,18.9s,baz=84,slow=42								
NRIK	**Noril'sk**	**34.94**	**1**	P		**P**		**09 03 30.3**	**+1.6**
	comp=Z,21nm,0.8s,baz=167,slow=6.9,SNR=27 comp=Z,21nm,0.8s								
NRIK	**Noril'sk**	**34.94**	**1**	P		**P**		**09 03 29.9**	**+1.2**
USRK	**Ussuriysk Ar.**	**36.28**	**61**	P		**P**		**09 03 41.2**	**+0.6**
BRTR	**Keskin Array B**	**41.80**	**293**	P		**P**		**09 04 28.4**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=64,slow=6.6,SNR=2.7 comp=Z,0.9nm,0.9s								
MJAR	**Matsushiro Arr**	**41.92**	**72**	P		**P**		**09 04 27.7**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=283,slow=6.7,SNR=4.8 comp=Z,1.5nm,0.4s								
EIL	**Elat**	**43.37**	**278**	LR		LR		09 23 43.2	
	comp=Z,97nm,21.7s,baz=90,slow=38								
AKASG	**Malin Array Be**	**43.89**	**310**	P		**P**		**09 04 43.3**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=76,slow=7.7,SNR=2.8								
AKASG					LR	LR		09 26 38.8	
	comp=Z,56nm,20.6s,baz=80,slow=41 comp=Z,0.3nm,0.4s								
MLR	**Muntele Rosu**	**46.51**	**303**	LR		LR		09 28 17.3	
	comp=Z,79nm,18.2s,baz=72,slow=41								
VRAC	**Vranov**	**52.13**	**309**	LR		LR		09 31 12.6	
	comp=Z,30nm,19.5s,baz=75,slow=40								
NOA	**NORSAR Array B**	**53.42**	**324**	P		**P**		**09 05 56.2**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=66,slow=6.7,SNR=2.1								
NOA					LR	LR		09 30 25.2	
	comp=Z,59nm,18.9s,baz=70,slow=38 comp=Z,1.9nm,0.9s								
GERES	**GERESS Array B**	**54.09**	**309**	P		**P**		**09 06 02.3**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=77,slow=7.0,SNR=6.4 comp=Z,1.8nm,1.0s								
DAVOX	**Davos/Dischmat**	**57.12**	**307**	LR		LR		09 33 24.7	
	comp=Z,61nm,22.0s,baz=85,slow=39								
ESDC	**Sonseca Array**	**69.16**	**304**	P		**P**		**09 07 43.8**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=64,slow=5.8,SNR=7.6 comp=Z,1.4nm,0.8s								
WRA	**Warramunga Arr**	**70.83**	**132**	P		**P**		**09 07 52.6**	**-1.6**
	comp=Z,1.5nm,0.6s,baz=326,slow=6.6,SNR=23 comp=Z,1.5nm,0.6s								
ILAR	**Eielson Array**	**72.75**	**21**	P		**P**		**09 08 04.3**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=325,slow=5.4,SNR=11 comp=Z,1.1nm,0.7s								
ASAR	**Alice Springs**	**73.41**	**135**	P		**P**		**09 08 08.0**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=322,slow=6.3,SNR=18 comp=Z,1.3nm,0.7s								
TORD	**Torodi Ar. Bea**	**78.25**	**278**	P		**P**		**09 08 36.0**	**-1.6**
	comp=Z,1.2nm,0.8s,baz=57,slow=5.2,SNR=7.2 comp=Z,1.2nm,0.8s								
BOSA	**Boshof**	**85.19**	**231**	LR		LR		09 45 19.2	
	comp=Z,27nm,18.3s,baz=174,slow=34								
DBIC	**Dimbokro**	**87.19**	**276**	P		**P**		**09 09 23.1**	**-0.9**
	comp=Z,7.3nm,0.9s,baz=99,slow=3.3,SNR=4.0								
DBIC					LR	LR		09 51 10.1	
	comp=Z,57nm,18.2s,baz=94,slow=38 comp=Z,7.3nm,0.9s								
TXAR	**Lajitas Array**	**115.86**	**10**	PKP		**PKiKP**		**09 15 19.5**	**-0.9**
	comp=Z,0.1nm,0.7s,baz=326,slow=0.5,SNR=3.5								

*BJI **10** 09:04:17.9±0.0,24˚.97N×141˚.85E,h6km,mb4.5/25, mB4.8/20,Ms4.4/3,Ms7 4.2/3*
*MOS **10** 09:04:18.8±0.8,25˚.01N×141˚.84E,h21km,mb4.9/36,Error ellipse: s-maj=11.1km s-min=5.2km az=105.8*
*NEIC **10** 09:04:19.7±1.3,25˚.08N±0˚.06×141˚.88E±0˚.10,h10km±1km, mb4.8/197,Error ellipse: s-maj=17.1km s-min=6.3km az=120.0*
*JMA **10** 09:04:23.4±0.0,25˚.2N±0˚.4×14˚.2E±˚,h65km±1km, MD4.7/17,MV5.1/17,IOTO ISLANDS REGION*
JMA Felt I J1 at IOTO ISLANDS REGION .
*IDC **10** 09:04:25.3±1.6,25˚.00N×141˚.80E,h62km±14km,mb4.2/28, mbtmp4.5/31,MS3.5/19,Error ellipse: s-maj=15.4km s-min=10.2km az=92.0*

ISC 10 09:04:22.5±0.3,**24˚.99N**±0˚.04×**141˚.89E**±0˚.06,**h35**km,**n494,** σ0§**95**/428,**mb4.7**/145,**MS3.7**/20,**12C,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.66**	**9**	*e*P		**Pn**		**09 04 47.8**	**-1.3**
JHH2	**Haha-jima-NKT2**	**1.66**	**9**	A		A		09 04 47.8	
	comp=E,60nm,0.5s,comp=E,31nm,0.5s								
CBIJ	**Chichi jima**	**2.11**	**7**	P		**Pn**		**09 04 54.3**	**-1.1**
CBIJ	**Chichi jima**	**2.11**	**7**	A		A		09 04 54.3	
	comp=E,9.0nm,0.5s,comp=E,9.0nm,4.1s								
JCJ	**Chichijima** 3μm,0.4s,baz=181,slow=6.2,SNR=231	**2.11**	**7**	P		**Pn**		**09 04 57.5**	**+2.0**
JCJ					S	**Sn**		**09 05 24.8**	**+4.3**
	1μm,0.4s,baz=274,slow=23,SNR=5.7								
JCJ					LR	LR		09 05 50.9	
	comp=Z,2μm,20.0s,baz=200,slow=40								
JCJ	**Chichijima**	**2.11**	**7**	Pn		**Pn**		**09 04 53.8**	**-1.6**
JHJ	**Hachijo jima 2**	**8.30**	**348**	LR		LR		09 09 46.1	
	comp=Z,407nm,18.0s,baz=155,slow=39								
BSO3	**Boso 3**	**9.85**	**353**	*e*P		**Pn**		**09 06 42.3**	**+0.9**
JHU	**Hanno**	**11.05**	**349**	*e*P		**Pn**		**09 06 58.0**	**-0.1**
INU	**Inuyama**	**11.15**	**339**	Pn		**Pn**		**09 06 57.8**	**-1.6**
JMN	**Mounobe**	**11.16**	**323**	Pn		**Pn**		**09 06 57.9**	**-1.7**
JGF	**Kuroka**	**11.27**	**341**	Pn		**Pn**		**09 06 58.7**	**-2.5**
JYT	**Yasato**	**11.29**	**353**	Pn		**Pn**		**09 07 01.6**	**+0.2**
JAG	**Ashikaga**	**11.59**	**350**	*e*P		**Pn**		**09 07 04.6**	**-0.8**
JHO	**Hitachi**	**11.64**	**355**	*e*P		**Pn**		**09 07 06.2**	**+0.1**
GUMO	**Guam** 72nm,0.8s,baz=326,slow=3.6,SNR=3.1	**11.69**	**166**	P		**Pn**		**09 07 09.1**	**+2.3**
GUMO					LR	LR		09 10 55.8	
	comp=Z,346nm,20.6s,baz=348,slow=33								
MJAR	**Matsushiro Arr** 3.4nm,0.6s,baz=150,slow=12,SNR=10	**11.94**	**346**	P		**Pn**		**09 07 11.1**	**+0.8**
MJAR					LR	LR		09 11 39.5	
	comp=Z,417nm,20.2s,baz=164,slow=36								
MAJO	**Matsushiro**	**11.94**	**346**	Pn		**Pn**		**09 07 07.7**	**-2.6**
MAJO	**Matsushiro**	**11.94**	**346**	*i* P		**Pn**		**09 07 09.0**	**-1.3**
JOW	**Kunigami**	**12.39**	**281**	LR		LR		09 11 48.1	
	comp=Z,92nm,18.6s,baz=58,slow=36								
JOW	**Kunigami**	**12.39**	**281**	Pn		**Pn**		**09 07 15.5**	**-0.9**
JHS	**Saijyo**	**12.53**	**325**	Pn		**Pn**		**09 07 18.0**	**-0.4**
JMM	**Marumori**	**12.87**	**356**	Pn		**Pn**		**09 07 21.4**	**-1.5**
JSD	**Sado**	**13.37**	**348**	Pn		**Pn**		**09 07 28.1**	**-1.7**
JTM	**Tenmabayashi**	**15.77**	**358**	Pn		**Pn**		**09 08 01.5**	**-0.4**
JTM					IAmb	IAmb		09 08 08.0	
	comp=Z,55nm,1.0s								
ERM	**Erimo**	**17.01**	**3**	Pn		**Pn**		**09 08 15.8**	**-1.8**
ERM	**Erimo**	**17.01**	**3**	P		**Pn**		**09 08 15.8**	**-1.8**
ERM					pmax	pmax			
	comp=Z,40nm,0.8s								
YOJ	**Yonaguni jima**	**17.16**	**272**	P		**Pn**		**09 08 17.6**	**-2.0**
YOJ					IAmb	IAmb		09 08 28.7	
	comp=Z,117nm,1.4s								
YOJ	**Yonaguni jima**	**17.16**	**272**	P		**Pn**		**09 08 17.6**	**-2.0**
YOJ					pmax	pmax			
	comp=Z,117nm,1.4s								
KSRS	**Korea Array**	**17.21**	**320**	P		**P**		**09 08 20.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=157,slow=10,SNR=1.9								
KSAR	**Wonju Array Be**	**17.22**	**319**	P		**Pn**		**09 08 18.9**	**-1.4**
KSAR	**Wonju Array Be**	**17.22**	**319**	P		**Pn**		**09 08 18.9**	**-1.4**
JEW	**Eniwo**	**17.81**	**359**			**Pn**		**09 08 25.9**	**-1.6**
YULB	**Yu-li**	**18.85**	**269**	P		**P**		**09 08 39.5**	**-0.2**
USA0B	**Ussuriysk Arra**	**20.79**	**340**	P		**P**		**09 08 57.0**	**-3.6**
USA0B	**Ussuriysk Arra**	**20.79**	**340**	P		**P**		**09 08 57.0**	**-3.6**
USA0B					pmax	pmax			
	comp=Z,7.0nm,0.8s								
USRK	**Ussuriysk Ar.**	**20.79**	**340**	P		**P**		**09 08 59.4**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=193,slow=12,SNR=2.8								
USRK					LR	LR		09 17 06.8	
	comp=Z,202nm,18.9s,baz=244,slow=37 comp=Z,2.8nm,0.8s								
USRK	**Ussuriysk Ar.**	**20.79**	**340**	P		**P**		**09 08 57.2**	**-3.4**
NJ2	**Nanjing**	**21.40**	**294**	*e*P		**P**		**09 09 07.9**	**+0.6**
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
YSS	**Yuzh-Sakhalins**	**21.93**	**2**	P		**P**		**09 09 10.8**	**-1.9**
YSS					IAmb	IAmb		09 09 24.5	
	comp=Z,25nm,0.7s								
YSS	**Yuzh-Sakhalins**	**21.93**	**2**	*e*P		**P**		**09 09 12.3**	**-0.5**
YSS				*e*S		**S**		**09 13 06.0**	**-6.9**
YSS					pmax	pmax			
	comp=Z,30nm,0.8s								
YSS					smax	smax			
	comp=N,200nm,6.9s								
YSS					MLR	MLR			
	comp=Z,200nm,15.0s								
DAV	**Davao City (W)**	**23.68**	**224**	LR		LR		09 16 54.8	
	comp=Z,159nm,21.9s,baz=349,slow=32								
H11N1	**WAKE ISLAND Hy** baz=283,slow=74,SNR=13	**23.70**	**98**	T		T		09 34 54.5	
H11N2	**WAKE ISLAND Hy** baz=111,slow=74,SNR=12	**23.70**	**98**	T		T		09 35 00.3	
H11N3	**WAKE ISLAND Hy** SNR=15	**23.72**	**98**	T		T		09 33 50.0	
H11S3	**WAKE ISLAND Hy** baz=289,slow=74,SNR=38	**23.91**	**101**	T		T		09 35 17.7	
H11S1	**WAKE ISLAND Hy** baz=289,slow=74,SNR=33	**23.91**	**101**	T		T		09 35 12.5	
H11S2	**WAKE ISLAND Hy** baz=289,slow=74,SNR=44	**23.92**	**101**	T		T		09 35 06.6	
TIA	**Tai'an**	**24.00**	**304**	*e*P		**P**		**09 09 33.9**	**-0.1**
TIA					pmax	pmax			
	comp=Z,12nm,0.9s								
KLR	**Kul'dur**	**25.46**	**344**	P		**P**		**09 09 46.6**	**-0.5**
	comp=Z,8.9nm,0.7s,baz=168,slow=6.9,SNR=26 comp=Z,8.9nm,0.7s								
KLR	**Kul'dur**	**25.46**	**344**	*ce*P		**P**		**09 09 47.2**	**+0.1**
KLR					pmax	pmax			
	comp=Z,12nm,1.0s								
TYV	**Tymovskoe**	**25.84**	**1**	*e*P		**P**		**09 09 50.7**	**+0.2**
TYV					pmax	pmax			
	comp=Z,9.0nm,0.8s								
TYV					pmax	pmax			
	comp=Z,200nm,4.9s								
GRNR	**Gornyy**	**26.08**	**352**	*i*P		**P**		**09 09 53.5**	**+0.8**
GRNR					pmax	pmax			
	comp=Z,4.0nm,0.6s								
GRNR					MLR	MLR			
	comp=E,120nm,13.0s								
GRNR					MLR	MLR			
	comp=N,120nm,14.0s								
GRNR					MLR	MLR			
	comp=Z,170nm,11.0s								
SIJI	**Sorong**	**27.69**	**203**	LR		LR		09 18 32.0	
	comp=Z,205nm,20.6s,baz=157,slow=31								
HHC	**Hu-ho-hao-te**	**29.77**	**310**	*e*P		**P**		**09 10 28.4**	**+2.4**
HHC					pmax	pmax			
	comp=Z,27nm,0.9s								
HHC					pmax	pmax			
	comp=Z,560nm,8.0s								
XAN	**Xi'an**	**29.96**	**295**	P		**P**		**09 10 28.5**	**+0.8**
XAN					pP	pP		09 10 32.3	-4.7
XAN					pmax	pmax			
	comp=Z,7.0nm,0.8s								
ZEA	**Zeya**	**30.73**	**343**	*e*P		**P**		**09 10 34.0**	**-0.1**
ZEA				*e*				09 15 39.2	
ZEA					pmax	pmax			
	comp=Z,10.0nm,1.0s								
PMG	**Port Moresby**	**34.57**	**171**	LR		LR		09 24 36.8	
	comp=Z,120nm,19.0s,baz=284,slow=35								
MA2	**Magadan** comp=Z,3.5nm,0.5s,baz=177,slow=10,SNR=3.8 comp=Z,3.5nm,0.5s	**35.12**	**8**	P		**P**		**09 11 12.7**	**+0.3**
ULN	**Ulaanbaatar**	**35.69**	**319**	P		**P**		**09 11 17.0**	**-0.7**
ULN	**Ulaanbaatar**	**35.69**	**319**	P		**P**		**09 11 17.0**	**-0.7**
ULN					pmax	pmax			
	comp=Z,7.0nm,1.3s								
SONM	**Songino Array** comp=Z,1.4nm,0.8s,baz=107,slow=8.2,SNR=4.8 comp=Z,1.4nm,0.8s	**36.07**	**318**	P		**P**		**09 11 20.2**	**-0.7**
SONM	**Songino Array**	**36.07**	**318**	P		**P**		**09 11 19.8**	**-1.1**
PZH	**PanZhiHua**	**36.09**	**281**	P		**P**		**09 11 22.9**	**+1.6**
PZH					pmax	pmax			
	comp=Z,10.0nm,0.5s								
PZH					pmax	pmax			
	comp=Z,70nm,4.1s								
YAK	**Yakutsk**	**37.94**	**351**	P		**P**		**09 11 36.3**	**-0.1**
YAK	**Yakutsk**	**37.94**	**351**	*ce*P		**P**		**09 11 35.8**	**-0.5**
YAK					pmax	pmax			
	comp=Z,31nm,1.0s								
CRAI	**Chiangrai**	**38.51**	**272**	P		**P**		**09 11 41.7**	**0.0**
SEY	**Seymchan** comp=Z,3.8nm,0.7s,baz=187,slow=8.2,SNR=18 comp=Z,3.8nm,0.7s	**38.58**	**8**	P		**P**		**09 11 41.8**	**+0.1**
COEN	**Coen**	**38.73**	**178**	P		**P**		**09 11 44.1**	**+0.6**
MTN	**Manton Dam**	**39.04**	**197**	P		**P**		**09 11 44.4**	**-1.7**
CMAR	**Chiang Mai Arr** comp=Z,1.5nm,0.3s,baz=63,slow=7.7,SNR=9.9	**40.29**	**269**	P		**P**		**09 11 57.5**	**+0.8**
CMAR					LR	LR		09 27 54.0	
	comp=Z,15nm,21.6s,baz=205,slow=35 comp=Z,1.5nm,0.3s								
CMAR	**Chiang Mai Arr**	**40.29**	**269**	*ce*P		**P**		**09 11 58.0**	**+1.4**
CMAR					pmax	pmax			
	comp=Z,2.0nm,0.3s								
GOMU	**GeErMu**	**41.67**	**297**	P		**P**		**09 12 09.9**	**+1.7**
GOMU					pP	pP		09 12 13.0	-4.7
GOMU					sP	pwP		09 12 15.1	-6.1
GOMU					pmax	pmax			
	comp=Z,4.0nm,0.5s								
GOMU					pmax	pmax			
	comp=Z,91nm,4.9s								
KNRA	**Kununurra**	**42.40**	**199**	P		**P**		**09 12 14.4**	**+0.7**
JAGI	**Jajag, Banyuwa**	**42.85**	**223**	P		**P**		**09 12 18.2**	**+0.7**
CTAO	**Charters Tower**	**45.01**	**174**	P		**P**		**09 12 34.4**	**-0.4**
CTAO	**Charters Tower**	**45.01**	**174**	P		**P**		**09 12 34.4**	**-0.4**
CTAO					pmax	pmax			
	comp=Z,5.0nm,1.0s								
WB0	**Warramunga Arr**	**45.08**	**190**	P		**P**		**09 12 35.3**	**0.0**
WB0					IAmb	IAmb		09 12 36.2	
	comp=Z,14nm,0.8s								
WR0	**Warramunga Arr**	**45.25**	**190**	P		**P**		**09 12 36.8**	**+0.1**
WRAB	**Tennant Creek**	**45.25**	**190**	P		**P**		**09 12 36.8**	**+0.1**
WRAB	**Tennant Creek**	**45.25**	**190**	*ce*P		**P**		**09 12 36.9**	**+0.2**
WRAB					pmax	pmax			
	comp=Z,37nm,1.3s								
WB2	**Warramunga Arr**	**45.26**	**190**	P		**P**		**09 12 37.0**	**+0.2**
WRA	**Warramunga Arr** comp=Z,18nm,0.7s,baz=11,slow=8.5,SNR=158	**45.26**	**190**	P		**P**		**09 12 36.7**	**-0.1**
WRA					LR	LR		09 30 08.6	
	comp=Z,100nm,21.1s,baz=20,slow=34 comp=Z,18nm,0.7s								
WRA	**Warramunga Arr**	**45.26**	**190**	P		**P**		**09 12 36.5**	**-0.3**
BILL	**Bilibino**	**45.56**	**13**	*e*P		**P**		**09 12 38.9**	**+0.3**
BILL					pmax	pmax			
	comp=Z,22nm,2.5s								
FITZ	**Fitzroy Crossi** comp=Z,25nm,19.9s,baz=14,slow=36	**45.66**	**202**	LR		LR		09 31 35.5	
FITZ	**Fitzroy Crossi**	**45.66**	**202**	P		**P**		**09 12 40.1**	**+0.2**
SPIA	**Saint Paul Isl** baz=247	**46.85**	**34**	P		**P**		**09 12 47.9**	**-0.9**
TIXI	**Tiksi** comp=Z,6.2nm,0.5s,baz=270,slow=20,SNR=5.8 comp=Z,6.2nm,0.5s	**47.27**	**354**	P		**P**		**09 12 51.2**	**-0.7**
TIXI	**Tiksi**	**47.27**	**354**	P		**P**		**09 12 51.6**	**-0.3**
TIXI					IAmb	IAmb		09 12 53.2	
	comp=Z,7.7nm,0.6s								
TIXI	**Tiksi**	**47.27**	**354**	*i* P		**P**		**09 12 52.7**	**+0.8**
TIXI					pmax	pmax			
	comp=Z,10.0nm,1.1s								
WMQ	**Urumqi**	**47.61**	**307**	*e*P		**P**		**09 12 57.9**	**+2.8**
UNV	**Unalaska Valle** baz=254	**47.75**	**39**	P		**P**		**09 12 55.0**	**-0.9**
AKUT	**Akutan**	**48.25**	**39**	P		**P**		**09 12 59.7**	**-0.1**
AS31	**Alice Springs**	**48.98**	**190**	P		**P**		**09 13 05.5**	**-0.3**
**

OHAK **Old Harbor** 55.77 37 P P 09 13 55.5 -0.2
OHAK IAmb IAmb 09 14 18.9
comp=Z,12nm,1.2s
Q19K **Cape Douglas,** 55.80 34 P P 09 13 55.7 -0.3
baz=262
ARMA **Armidale** 55.88 170 P P 09 13 58.2 +1.3
ARMA IAmb IAmb 09 14 10.5
comp=Z,18nm,1.5s
M19K **Big River Lodg** 55.93 31 P P 09 13 56.8 0.0
baz=259
KDAK **Kodiak Island** 56.21 36 P P 09 13 58.4 -0.4
KDAK **Kodiak Island** 56.21 36 P P 09 13 58.4 -0.4
KDAK pmax pmax
comp=Z,6.0nm,0.9s
KDAK **Kodiak Island** 56.21 36 P P 09 13 58.5 -0.4
baz=264
L20K **Farewell, AK** 56.27 30 P P 09 13 58.9 -0.4
baz=259
K20K **Telida** 56.35 29 P P 09 14 01.2 +1.4
K20K IAmb IAmb 09 14 02.0
comp=Z,14nm,1.4s
K20K **Telida** 56.35 29 P P 09 13 59.5 -0.3
baz=258,SNR=6.3
Q20K **Shuyak Island** 56.41 35 P P 09 14 00.1 -0.1
baz=263
J20K **Nowinta River** 56.49 28 P P 09 14 02.2 +1.4
J20K IAmb IAmb 09 14 03.5
comp=Z,19nm,1.4s
J20K **Nowinta River** 56.49 28 P P 09 14 00.4 -0.4
baz=258,SNR=9.6
M20K **Styx River** 56.51 31 P P 09 14 00.8 -0.3
baz=260
STKA **Stephens Creek** 56.55 180 P P 09 14 01.1 -0.4
comp=Z,2.4nm,0.4s,baz=5.7,slow=6.0,SNR=12
comp=Z,2.4nm,0.4s
STKA **Stephens Creek** 56.55 180 P P 09 14 01.4 -0.1
STKA **Stephens Creek** 56.55 180 P P 09 14 01.4 -0.1
STKA pmax pmax
comp=Z,2.0nm,1.1s
FORT **Forrest** 57.01 194 P P 09 14 05.4 +0.6
CNPM **China Poot** 57.11 34 P P 09 14 05.2 0.0
CNPM IAmb IAmb 09 14 05.6
comp=Z,18nm,1.2s
PPLA **Purkeypile** 57.11 30 P P 09 14 05.0 -0.4
baz=261
CHUM **Lake Minchumin** 57.22 29 P P 09 14 06.0 +0.1
baz=260
CAST **Castle Rocks** 57.24 29 P P 09 14 07.3 +1.1
CAST **Castle Rocks** 57.24 29 P P 09 14 06.1 -0.1
baz=260,SNR=5.7
AAK **Ala-Archa** 57.25 306 *i* P P 09 14 06.7 0.0
AAK pmax pmax
comp=Z,2.0nm,0.9s
G21K **Allakaket** 57.26 25 P P 09 14 06.2 0.0
baz=257
CAPN **Captain Cook N** 57.29 32 P P 09 14 07.1 +0.6
baz=263
H21K **Melozitna Rive** 57.35 27 P P 09 14 07.2 +0.3
H21K IAmb IAmb 09 14 09.2
comp=Z,9.8nm,1.1s
H21K **Melozitna Rive** 57.35 27 P P 09 14 06.7 -0.2
baz=258,SNR=10
BRSE **Bradley Lake S** 57.38 34 P P 09 14 06.6 -0.6
baz=264
F21K **Alatna River** 57.43 25 P P 09 14 07.3 -0.1
baz=257
I21K **Tanana** 57.60 27 IAmb IAmb 09 14 10.9
comp=Z,14nm,1.4s
I21K **Tanana** 57.60 27 P P 09 14 07.5 -1.0
baz=259,SNR=7.2
BPAW **Bear Paw Mtn.** 57.84 29 P P 09 14 10.1 -0.2
baz=261
H22K **Ishtalitna Cre** 57.98 26 P P 09 14 11.1 -0.2
baz=260,SNR=7.4
F22K **John River** 57.98 24 P P 09 14 11.6 +0.3
baz=258
TRF **Thorofare Moun** 58.05 29 P P 09 14 11.0 -1.0
baz=262
SEW **Seward** 58.06 33 P P 09 14 11.1 -0.8
baz=265
MLY **Manley** 58.09 27 IAmb IAmb 09 14 14.1
comp=Z,11nm,1.4s
MLY **Manley** 58.09 27 P P 09 14 11.8 -0.4
baz=261,SNR=5.7
G22K **Bettles** 58.12 25 P P 09 14 12.7 +0.5
baz=259
E22K **Anaktuvuk Pass** 58.25 24 P P 09 14 12.8 -0.4
baz=258
G23K **Bananza Creek** 58.66 26 P P 09 14 15.9 -0.2
baz=260,SNR=13
COLD **Coldfoot** 58.68 25 IAmb IAmb 09 14 18.4
comp=Z,8.1nm,1.0s
COLD **Coldfoot** 58.68 25 P P 09 14 15.6 -0.6
baz=260,SNR=8.8
RND **Reindeer** 58.68 30 P P 09 14 16.0 -0.3
RND **Reindeer** 58.68 30 P P 09 14 16.0 -0.3
RND pmax pmax
comp=Z,8.0nm,1.3s
MCK **McKinley** 58.68 29 P P 09 14 17.0 +0.7
MCK IAmb IAmb 09 14 17.1
comp=Z,7.5nm,1.0s
MCK **McKinley** 58.68 29 P P 09 14 17.0 +0.7
MCK pmax pmax
comp=Z,7.0nm,1.0s
MCK **McKinley** 58.68 29 P P 09 14 16.1 -0.1
baz=263
I23K **Minto, Yukon-K** 58.69 27 P P 09 14 16.2 0.0
baz=262,SNR=6.2
H23K **Yukon River** 58.71 27 P P 09 14 16.4 0.0
baz=261,SNR=6.3
NEA2 **Nenana** 58.73 28 P P 09 14 16.0 -0.5
baz=262,SNR=6.7
WAT1 **Susitna Watana** 58.75 30 P P 09 14 16.5 -0.3
baz=264
D23K **Nanushuk River** 58.83 23 P P 09 14 17.1 -0.1
baz=258,SNR=7.9
C23K **Itkillik River** 59.04 22 P P 09 14 18.2 -0.4
baz=258,SNR=5.2
P23K **Montague Islan** 59.08 34 P P 09 14 18.4 -0.6
baz=267
HYBB **Hyderabad (bro** 59.08 276 *e* P P 09 14 19.8 0.0
WAT6 **Susitna Watana** 59.10 31 P P 09 14 18.7 -0.7
baz=265
MDM **Murphy Dome** 59.13 28 P P 09 14 20.3 +0.9
MDM IAmb IAmb 09 14 21.0
comp=Z,12nm,1.4s
WRH **Wood River Hil** 59.14 28 P P 09 14 19.8 +0.4
TOLK **Toolik Lake Re** 59.17 23 P P 09 14 20.0 +0.4
baz=260
SCM **Sheep Creek Mo** 59.23 31 P P 09 14 20.4 +0.2
baz=266
GLI **Glacier Island** 59.28 33 P P 09 14 20.5 +0.1
baz=266
TCOL **CIGO, UAF Yank** 59.28 28 P P 09 14 20.9 +0.5
baz=263
COLA **College** 59.29 28 P P 09 14 20.9 +0.5
baz=263
H24K **Noodor Dome** 59.39 27 IAmb IAmb 09 14 22.7
comp=Z,4.3nm,0.7s
H24K **Noodor Dome** 59.39 27 P P 09 14 21.0 -0.1
baz=263,SNR=8.0
E24K **Your Creek** 59.47 24 P P 09 14 21.7 0.0
baz=261,SNR=7.0
AFI **Afiamalu** 59.47 125 LR LR 09 35 28.0
comp=Z,52nm,19.3s,baz=334,slow=31
POKR **Poker Plat Res** 59.49 28 P P 09 14 22.2 +0.4
baz=264
D24K **Happy Valley** 59.52 23 P P 09 14 22.2 +0.3
baz=260
F24K **Squaw Lake** 59.61 25 P P 09 14 22.8 +0.2
baz=262,SNR=5.9
HDA **Harding Lake** 59.62 28 P P 09 14 23.0 +0.3
HDA IAmb IAmb 09 14 23.0
comp=Z,6.1nm,0.9s
HDA **Harding Lake** 59.62 28 P P 09 14 22.7 -0.1
baz=265
G24K **Hadweenzic Riv** 59.66 26 P P 09 14 22.8 -0.2
baz=263,SNR=7.3
C24K **Franklin Bluff** 59.67 22 P P 09 14 22.5 -0.4
baz=260
IL31 59.69 28 P P 09 14 22.9 -0.2
ILAR **Eielson Array** 59.69 28 P P 09 14 22.4 -0.7
comp=Z,7.2nm,0.9s,baz=260,slow=5.6,SNR=50
ILAR LR LR 09 37 04.5
comp=Z,27nm,21.6s,baz=302,slow=33
comp=Z,7.2nm,0.9s
KLU **Klutina** 59.88 32 P P 09 14 24.9 +0.2
baz=267
EYAK **Cordova Ski Ar** 59.93 33 P P 09 14 25.2 +0.3
baz=268
K24K **Donnelly Dome** 60.09 29 P P 09 14 25.7 -0.3
baz=266
KK31 **Karatay Array** 60.11 307 P P 09 14 26.9 +0.5
KK31 IAmb IAmb 09 14 27.2
comp=Z,5.7nm,0.7s
KK31 **Karatay Array** 60.11 307 P P 09 14 26.9 +0.5
KK31 pmax pmax
comp=Z,6.0nm,0.7s
KKAR **Karatay Array** 60.11 307 P P 09 14 26.9 +0.5
KKAR IAmb IAmb 09 14 27.2
comp=Z,5.7nm,0.7s
KKAR **Karatay Array** 60.11 307 P P 09 14 26.9 +0.5
KKAR pmax pmax
comp=Z,6.0nm,0.7s
PAX **Paxson** 60.17 30 IAmb IAmb 09 14 50.8
comp=Z,11nm,1.4s
PAX **Paxson** 60.17 30 P P 09 14 26.1 -0.6
baz=267
G25K **Bearman Lake** 60.21 26 P P 09 14 26.1 -0.6
baz=264
H25K **Birch Creek** 60.27 26 P P 09 14 26.8 -0.3
baz=264
J25K **Salcha River,** 60.32 28 P P 09 14 27.4 -0.2
J25K **Salcha River,** 60.32 28 P P 09 14 26.9 -0.6
baz=266,SNR=5.6
PRP **Porcupine Dome** 60.33 27 P P 09 14 26.7 -1.0
baz=265
D25K **Kavik River** 60.41 23 P P 09 14 28.1 -0.1
baz=262,SNR=9.4
F25K **Christian Rive** 60.47 25 P P 09 14 28.6 0.0
baz=264,SNR=7.6
RIDG **Independent Ri** 60.49 29 IAmb IAmb 09 14 29.7
comp=Z,12nm,1.0s
RIDG **Independent Ri** 60.49 29 P P 09 14 28.7 -0.1
baz=267,SNR=6.6
BMRM **Bremner River** 60.50 33 P P 09 14 29.2 +0.4
baz=269
E25K **Arctic Village** 60.56 24 P P 09 14 29.7 +0.6
baz=264,SNR=6.7
KAIM **Kayak Island** 60.58 34 P P 09 14 29.3 0.0
baz=269
DOT **Dot Lake** 60.84 29 P P 09 14 31.0 -0.1
DOT IAmb IAmb 09 14 32.1
comp=Z,10.0nm,0.8s
BMAR **Burnt Mountain** 60.87 25 P P 09 14 31.4 +0.1
SCRK **Sand Creek** 60.89 29 P P 09 14 31.5 0.0
SCRK **Sand Creek** 60.89 29 P P 09 14 31.3 -0.2
baz=268,SNR=22
C26K **Camden Bay** 61.00 22 P P 09 14 32.4 +0.4
baz=263
F26K **Sheenjek River** 61.05 25 P P 09 14 32.9 +0.4
baz=265,SNR=7.2
J26L **Joseph Creek** 61.09 28 P P 09 14 33.0 +0.2
J26L **Joseph Creek** 61.09 28 P P 09 14 32.9 0.0
baz=268,SNR=21
G26K **Porcupine Rive** 61.14 26 P P 09 14 33.6 +0.6
baz=266
L26K **Log Cabin Wild** 61.14 30 IAmb IAmb 09 14 34.3
comp=Z,4.8nm,0.7s
L26K **Log Cabin Wild** 61.14 30 P P 09 14 33.2 +0.1
baz=269
MCARA **McCarthy VSAT** 61.27 32 P P 09 14 34.0 0.0
baz=270
M26K **Nabesna, AK** 61.29 31 P P 09 14 34.1 -0.1
baz=269
C27K **Jago River** 61.38 23 P P 09 14 34.9 +0.2
baz=265
K27K **Chicken** 61.73 29 P P 09 14 37.1 0.0
baz=269
M27K **Edge Creek, AK** 61.81 31 IAmb IAmb 09 14 39.2
comp=Z,4.7nm,0.8s
M27K **Edge Creek, AK** 61.81 31 P P 09 14 38.2 +0.4
baz=270
L27K **Beaver Creek,** 61.84 30 P P 09 14 38.2 +0.3
L27K IAmb IAmb 09 14 39.4
comp=Z,4.7nm,0.8s
L27K **Beaver Creek,** 61.84 30 P P 09 14 38.5 +0.7
baz=270,SNR=7.5
BCAR **Beaver Creek A** 61.85 30 P P 09 14 38.5 +0.4
I27K **Kandik River** 61.95 27 P P 09 14 38.9 +0.3
baz=269
G27K **Doyon Strip** 61.97 26 P P 09 14 39.4 +0.7
baz=268
H27K **Steamboat Moun** 62.01 27 P P 09 14 39.3 +0.3
baz=269
E27K **Coleen River** 62.05 24 P P 09 14 39.5 +0.3
baz=267
EGAK **Eagle** 62.14 28 IAmb IAmb 09 14 42.9
comp=Z,4.2nm,0.8s
EGAK **Eagle** 62.14 28 P P 09 14 39.8 0.0
baz=270
YUK3 **Moose Creek** 62.49 32 P P 09 14 42.4 -0.1
baz=272
O28M **Mount Upton** 62.66 33 P P 09 14 43.8 +0.1
baz=273
PINM **Pinnacle** 62.66 33 P P 09 14 44.0 +0.5
baz=273
KBL **Kabul** 62.73 297 P P 09 14 44.7 +0.1
KBL IAmb IAmb 09 14 46.1
comp=Z,6.8nm,1.0s
KBL **Kabul** 62.73 297 P P 09 14 44.7 +0.1
KBL pmax pmax
comp=Z,7.0nm,1.0s
DAWY **Dawson** 62.91 29 P P 09 14 46.2 +1.2
DAWY IAmb IAmb 09 14 46.7
comp=Z,5.9nm,0.9s
DAWY **Dawson** 62.91 29 P P 09 14 45.6 +0.5
baz=272,SNR=7.5
I29M **Ogilvie Camp,** 63.34 27 IAmb IAmb 09 14 49.4
comp=Z,8.1nm,0.9s
I29M **Ogilvie Camp,** 63.34 27 P P 09 14 48.6 +0.8
baz=272,SNR=6.7
YUK4 **Talbot Arm** 63.38 32 P P 09 14 49.1 +0.7
baz=274,SNR=5.9
M29M **Somme Creek** 63.40 31 P P 09 14 49.4 +1.0
baz=273
O29M **Mount Kennedy** 63.49 33 P P 09 14 49.4 +0.4
baz=274
YUK6 **Outpost Mounta** 63.55 32 P P 09 14 49.9 +0.3
baz=274
EPYK **Eagle Plains** 63.95 26 P P 09 14 52.4 +0.6
baz=273,SNR=12
P29M **Windy Craggy** 63.96 34 P P 09 14 52.9 +0.8
baz=275
HYT **Haines Junctio** 63.97 33 IAmb IAmb 09 14 54.3
comp=Z,10nm,1.0s
HYT **Haines Junctio** 63.97 33 P P 09 14 52.6 +0.4
baz=275,SNR=5.7
N30M **Aishikik Lake** 64.12 32 P P 09 14 53.3 +0.2
baz=275
P30M **Million Dollar** 64.31 33 P P 09 14 54.4 +0.1
baz=276
O30N **Mendenhall** 64.67 33 P P 09 14 56.7 0.0
baz=276
PLBC **Pleasant Camp** 64.68 34 P P 09 14 57.2 +0.5
baz=276,SNR=5.1
N31M **Braeburn, Yuko** 64.74 32 IAmb IAmb 09 14 59.1
comp=Z,7.4nm,0.8s
N31M **Braeburn, Yuko** 64.74 32 P P 09 14 57.2 0.0
baz=276
INK **Inuvik** 65.05 24 P P 09 14 59.0 +0.1
comp=Z,4.9nm,0.6s,baz=297,slow=5.6,SNR=14
comp=Z,4.9nm,0.6s
INK **Inuvik** 65.05 24 P P 09 14 59.1 +0.1
INK IAmb IAmb 09 14 59.4
comp=Z,5.3nm,0.6s
INK **Inuvik** 65.05 24 P P 09 14 59.0 +0.1
baz=275
WHY **Whitehorse** 65.27 33 IAmb IAmb 09 15 02.4
comp=Z,6.2nm,0.8s
WHY **Whitehorse** 65.27 33 P P 09 15 00.8 +0.1
baz=277
M31M **Drury Creek, Y** 65.32 31 P P 09 15 01.4 +0.6
M31M IAmb IAmb 09 15 02.3
comp=Z,6.0nm,0.8s
M31M **Drury Creek, Y** 65.32 31 P P 09 15 01.0 +0.2
baz=277,SNR=6.0
SIT **Sitka** 65.54 37 P P 09 15 02.2 0.0
baz=278
ARU **Arti** 65.92 323 P P 09 15 04.7 -0.1
comp=Z,12nm,0.4s,baz=80,slow=4.8,SNR=14
comp=Z,12nm,0.4s
ARU **Arti** 65.92 323 P P 09 15 05.3 +0.5
ARU **Arti** 65.92 323 *c i* P P 09 15 05.1 +0.3
ARU S S 09 23 54.6 +5.1
ARU SS SS 09 28 06.3 +1.9
ARU pmax pmax
comp=Z,10.0nm,0.5s
P33M **Teslin, Yukon** 66.35 33 IAmb IAmb 09 15 09.3
comp=Z,6.5nm,1.1s
P33M **Teslin, Yukon** 66.35 33 P P 09 15 07.6 +0.1
baz=279
ABKAR **Akbulak array** 66.38 315 P P 09 15 07.8 0.0
ABKAR **Akbulak array** 66.38 315 IAmb IAmb 09 15 22.1
comp=Z,13nm,1.0s
A36M **Sachs Harbour** 67.35 20 P P 09 15 13.7 +0.2
baz=281
AKTO **Aktyubinsk** 67.36 316 P P 09 15 12.5 -1.5
comp=Z,5.0nm,0.7s,baz=133,slow=10,SNR=5.7
comp=Z,5.0nm,0.7s
R33M **Jennings River** 67.41 34 P P 09 15 14.5 +0.1
baz=281
DLBC **Dease Lake** 68.08 35 P P 09 15 19.9 +1.3
DLBC IAmb IAmb 09 15 20.9
comp=Z,13nm,1.3s
DLBC **Dease Lake** 68.08 35 P P 09 15 18.8 +0.2
baz=282,SNR=5.3
C36M **Paulatuk** 68.28 22 P P 09 15 19.7 +0.2
C36M **Paulatuk** 68.28 22 P P 09 15 19.5 0.0
baz=283
T35M **Bob Quinn** 68.28 36 P P 09 15 19.6 -0.1
baz=283
KIRV **Kirov** 70.28 326 *ce* P P 09 15 31.7 -0.3
BBB **Bella Bella** 70.67 41 LR LR 09 40 57.0
comp=Z,26nm,21.1s,baz=275,slow=31
OZB **Mount Ozzard** 73.22 43 P P 09 15 51.2 +1.1
YKA **Yellowknife Ar** 74.12 28 P P 09 15 54.8 -0.2
comp=Z,5.4nm,0.8s,baz=285,slow=5.3,SNR=7.9
comp=Z,5.4nm,0.8s
RES **Resolute Bay** 74.16 13 P P 09 15 55.6 +0.6
RES IAmb IAmb 09 16 02.3
comp=Z,12nm,1.3s
RES **Resolute Bay** 74.16 13 P P 09 15 55.6 +0.6
RES pmax pmax
comp=Z,12nm,1.3s
NLWA **Neilton Lookou** 74.77 45 P P 09 16 00.5 +1.4
NLWA IAmb IAmb 09 16 01.3
comp=Z,9.7nm,0.9s
KEV **Kevo** 74.87 341 P P 09 15 59.1 -0.1
KEV **Kevo** 74.87 341 P P 09 15 59.1 -0.1
KEV pmax pmax
comp=Z,43nm,1.3s
E03A **Lebam** 75.27 45 P P 09 16 02.8 +0.9
E03A IAmb IAmb 09 16 03.8
comp=Z,12nm,0.8s
ARCES **ARCESS Array B** 75.43 341 P P 09 16 02.4 0.0
comp=Z,5.0nm,0.6s,baz=71,slow=8.2,SNR=33
comp=Z,5.0nm,0.6s
ARCES **ARCESS Array B** 75.43 341 P P 09 16 02.9 +0.4
ARCES IAmb IAmb 09 16 05.1
comp=Z,11nm,1.2s
ARCES **ARCESS Array B** 75.43 341 P P 09 16 02.9 +0.4
ARCES pmax pmax
comp=Z,11nm,1.2s
I02E **Swisshome, OR** 75.95 48 P P 09 16 06.0 +0.2
baz=291
MSF **Maaselka** 76.20 337 P P 09 16 06.9 0.0
MSF pmax pmax
comp=Z,18nm,2.5s
J01E **Myrtle Point** 76.24 49 P P 09 16 07.6 0.0
baz=291
SGF **Sodankyl** 76.25 339 P P 09 16 07.1 0.0
SGF pmax pmax
comp=Z,14nm,0.6s
I03D **Drain, OR** 76.44 48 P P 09 16 09.1 +0.5
baz=292
K02D **Willamette Mer** 76.59 49 P P 09 16 09.7 0.0
baz=292
DBO **Dodson Butte** 76.72 49 P P 09 16 10.9 +0.5
DBO IAmb IAmb 09 16 12.1
comp=Z,8.3nm,1.1s
H04A **Detroit Lake** 76.85 47 P P 09 16 11.4 +0.4
H04A IAmb IAmb 09 16 12.4
comp=Z,9.0nm,0.9s
LTY **Liberty** 76.85 44 IAmb IAmb 09 16 12.2
comp=Z,12nm,1.3s
HOOD **Mount Hood Mea** 76.96 46 IAmb IAmb 09 16 13.4
comp=Z,14nm,1.1s
TULEG **Thule** 76.96 7 P P 09 16 11.4 +0.4
I04A **Tendick Farm,** 77.03 48 P P 09 16 12.6 +0.5
baz=292,SNR=6.5
G05D **Wamic, OR** 77.21 46 P P 09 16 13.6 +0.6
baz=293
B08A **Colville Reser** 77.25 43 P P 09 16 14.0 +0.7
B08A IAmb IAmb 09 16 14.5
comp=Z,7.6nm,0.8s
J04D **Umpqua Nationa** 77.44 48 P P 09 16 14.6 0.0
baz=292,SNR=6.9
L04D **Klamath Falls** 77.70 49 P P 09 16 16.7 +0.7
L04D **Klamath Falls** 77.70 49 P P 09 16 16.2 +0.2
baz=293
OUL **Oulu** 77.75 337 P P 09 16 15.3 -0.3
OUL pmax pmax
comp=Z,19nm,2.7s
K04D **Chiloquin, OR** 77.92 49 P P 09 16 17.4 +0.2
baz=293
PINE **Pine Mountain** 78.01 47 P P 09 16 18.2 +0.4
J05D **Fort Rock, OR** 78.02 48 P P 09 16 18.0 +0.3
baz=293,SNR=9.5
D08A **Wollman Farm,** 78.03 44 P P 09 16 17.1 -0.5
D08A IAmb IAmb 09 16 18.9
comp=Z,7.4nm,1.0s
C09A **Chrisman Ranch** 78.13 43 IAmb IAmb 09 16 19.5
comp=Z,20nm,1.5s
VORR **Voronezh** 78.19 322 *e* P P 09 16 18.7 +0.4
VORR pmax pmax
comp=Z,50nm,0.4s
NEW **Newport** 78.64 42 IAmb IAmb 09 16 22.3
comp=Z,9.6nm,1.1s
NEW **Newport** 78.64 42 P P 09 16 21.2 +0.2
NEW pmax pmax
comp=Z,9.0nm,1.1s
NEW **Newport** 78.64 42 P P 09 16 21.5 +0.5
baz=295,SNR=8.6
G08A **Pilot Rock** 78.72 45 IAmb IAmb 09 16 23.1
comp=Z,10nm,1.5s
E09A **Wood Farm, Sta** 78.73 44 IAmb IAmb 09 16 23.0
comp=Z,6.4nm,0.8s
PPT2 **Papeete2** 79.02 115 *e* LR LR 09 40 55.0
comp=Z,74nm,28.8s
PMOR **Pomariorio Ree** 79.12 112 *e* T T 10 42 20.4
comp=Z,2.3nm,0.2s
KBZ **Khabaz** 79.24 313 P P 09 16 23.9 -0.4
comp=Z,7.9nm,0.8s,baz=89,slow=3.7,SNR=18
comp=Z,7.9nm,0.8s
KBZ **Khabaz** 79.24 313 *ce* P P 09 16 23.8 -0.4
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KIV **Kislovodsk** 79.29 313 *e* P P 09 16 24.3 -0.4
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,43nm,19.0s
ONI **Oni** 79.34 312 P P 09 16 26.1 +1.3
ONI **Oni** 79.34 312 P P 09 16 26.2 +1.3
ONI pmax pmax
comp=Z,7.0nm,1.2s
FINES **FINESS Array B** 79.71 334 P P 09 16 25.5 -1.0
comp=Z,7.9nm,0.5s,baz=70,slow=5.2,SNR=60
comp=Z,7.9nm,0.5s
J08A **Circle Bar Ran** 79.83 47 IAmb IAmb 09 16 29.2
comp=Z,13nm,1.3s
BMO **Blue Mountains** 79.96 45 IAmb IAmb 09 16 29.7
comp=Z,6.9nm,0.8s
BEKR **Beckworth** 79.98 51 IAmb IAmb 09 16 29.6
comp=Z,10.0nm,0.8s
WALA **Waterton Lakes** 80.21 40 IAmb IAmb 09 16 31.3
comp=Z,7.7nm,0.7s
JTMT **Jette** 80.58 42 P P 09 16 32.5 +0.9
JTMT IAmb IAmb 09 16 33.1
comp=Z,9.1nm,0.8s
CMB **Columbia Colle** 80.71 52 P P 09 16 32.6 +0.2
CMB IAmb IAmb 09 16 33.5
comp=Z,6.4nm,0.8s
CMB **Columbia Colle** 80.71 52 P P 09 16 32.6 +0.2
CMB pmax pmax
comp=Z,6.0nm,0.8s
PNTR **Pine Nut** 80.84 51 P P 09 16 34.0 +0.7
YERR **Yerington** 81.13 51 IAmb IAmb 09 16 35.6
comp=Z,5.2nm,0.7s
MSO **Missoula** 81.21 42 P P 09 16 34.9 0.0
baz=297

MFID	Camas Ranch	81.55	46	IAmb	IAmb	09 16 38.3	
	comp=Z,9.1nm,0.8s						
LHV	Little Huntoon	81.97	52	IAmb	IAmb	09 16 40.8	
	comp=Z,6.7nm,1.0s						
NVAR	Mina Array Bea	82.03	51	P	P	09 16 39.4	-0.2
	comp=Z,3.3nm,0.7s,baz=298,slow=5.5,SNR=30						
	comp=Z,3.3nm,0.7s						
HLID	Hailey	82.40	45	P	P	09 16 41.4	0.0
	baz=297,SNR=7.0						
PKM	Mcpherson Peak	82.44	55	P	P	09 16 41.6	-0.2
	baz=295						
HRY	Holter Researc	82.54	42	P	P	09 16 42.7	+0.7
VES	Vestal, Richgr	82.58	54	P	P	09 16 42.1	-0.1
	baz=296						
LRM	Limekiln Ridge	82.59	43	P	P	09 16 43.2	+0.8
MNK	Minsk	82.76	328	*i* P	P	09 16 41.7	-1.0
MNK				*i*		09 19 51.4	
MNK				*i* PPP	PPP	09 21 42.5	
MNK				*i* S	S	09 26 58.8	+0.6
MNK				*i* SS	SS	09 32 23.6	+3.6
MNK				*i* SSS	SSS	09 35 52.1	
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,25nm,0.7s						
MNK				MLR	MLR		
	comp=N,19nm,15.0s						
MNK				MLR	MLR		
	comp=E,6.0nm,17.0s						
MNK				MLR	MLR		
	comp=Z,106nm,22.0s						
MNK	Minsk	82.76	328	*i* P	P	09 16 41.8	-1.0
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	09 16 41.8	-1.0
	comp=N,8.0nm,0.9s						
MNK				*i* P	P	09 16 41.8	-1.0
	comp=Z,25nm,0.7s,baz=58						
MNK				*i* PP	PP	09 19 51.4	-1.0
MNK				*i* PPP	PPP	09 21 42.6	
MNK				*i* S	S	09 26 58.8	+0.6
MNK				*i* SS	SS	09 32 23.6	+3.6
MNK				*i* SSS	SSS	09 35 52.2	
MNK				*i* LR	LR	09 53 37.9	
MNK				*i* LRM	MLR	09 55 11.4	
	comp=N,19nm,14.7s						
MNK				*i* LRM	MLR	09 55 15.0	
	comp=E,6.0nm,16.6s						
MNK				*i* LRM	MLR	09 55 43.8	
	comp=Z,106nm,22.4s						
ELK	Elko	83.14	48	IAmb	IAmb	09 16 46.2	
	comp=Z,3.2nm,0.7s						
BOZ	Bozeman (W)	83.20	43	IAmb	IAmb	09 16 46.7	
	comp=Z,4.2nm,0.7s						
BOZ	Bozeman (W)	83.20	43	P	P	09 16 45.2	-0.3
	baz=299,SNR=9.7						
SNCC	San Nicolas Is	83.36	57	P	P	09 16 46.3	0.0
	baz=296						
LRMC	Laurel Mtn Rad	83.76	54	P	P	09 16 48.1	-0.4
	baz=296						
EDW2	Edwards Air Fo	83.80	54	P	P	09 16 48.9	+0.3
	baz=296						
YHL	Hebgen Lake	83.84	43	IAmb	IAmb	09 16 50.9	
	comp=Z,7.8nm,0.8s						
FURC	Furnace Creek,	83.92	53	P	P	09 16 49.6	+0.5
	baz=297						
R11A	Troy Canyon, C	83.98	51	IAmb	IAmb	09 16 51.1	
	comp=Z,7.6nm,1.4s						
R11A	Troy Canyon, C	83.98	51	P	P	09 16 49.4	-0.3
	baz=297,SNR=8.6						
FMP	Fort Macarthur	84.08	56	P	P	09 16 50.0	0.0
	baz=296						
TPNV	Topopah Spring	84.15	52	IAmb	IAmb	09 16 51.0	
	comp=Z,5.0nm,0.8s						
TPNV	Topopah Spring	84.15	52	P	P	09 16 50.4	-0.1
	baz=297						
AKASG	Malin Array Be	84.15	324	P	P	09 16 48.6	-1.3
	comp=Z,3.7nm,0.6s,baz=52,slow=5.4,SNR=15						
	comp=Z,3.7nm,0.6s						
AKBB	Malin Array Si	84.15	324	P	P	09 16 48.8	-1.2
AKBB				IAmb	IAmb	09 17 03.0	
	comp=Z,6.9nm,0.8s						
AKBB	Malin Array Si	84.15	324	*ce*P	P	09 16 48.0	-2.0
H17A	Grant Village	84.44	43	P	P	09 16 52.4	+0.4
	baz=300,SNR=6.7						
GSC	Goldstone, Bar	84.48	54	P	P	09 16 52.4	+0.2
	baz=297						
FXWY	Fox Creek	84.53	44	IAmb	IAmb	09 16 54.4	
	comp=Z,8.3nm,1.2s						
RRX	Edison Barstow	84.53	54	P	P	09 16 52.4	+0.1
	baz=297						
SPR3	Spring Creek 3	84.56	49	IAmb	IAmb	09 16 54.3	
	comp=Z,6.1nm,1.3s						
SHOC	Shoshone, Teco	84.60	53	P	P	09 16 52.7	+0.1
	baz=297						
TPAW	Teton Pass	84.65	44	IAmb	IAmb	09 16 53.9	
	comp=Z,6.4nm,0.8s						
MOOW	Moose Ponds	84.65	44	IAmb	IAmb	09 16 54.3	
	comp=Z,3.6nm,0.7s						
SNOW	Snow King Moun	84.79	44	IAmb	IAmb	09 16 55.5	
	comp=Z,3.7nm,0.6s						
PRN	Pahroc Range	84.79	51	IAmb	IAmb	09 16 55.1	
	comp=Z,6.0nm,1.1s						
RLMT	Red Lodge	84.88	42	P	P	09 16 54.3	+0.2
	baz=300,SNR=15						
MURC	Murrieta	84.95	55	P	P	09 16 54.3	-0.2
	baz=297						
DUG	Dugway, Tooele	85.03	48	IAmb	IAmb	09 16 56.1	
	comp=Z,6.4nm,0.8s						
DUG	Dugway, Tooele	85.03	48	P	P	09 16 55.0	+0.1
DUG				pmax	pmax		
	comp=Z,11nm,1.2s						
DUG	Dugway, Tooele	85.03	48	P	P	09 16 54.4	-0.4
	baz=299,SNR=7.9						
HEC	Hector,Ludlow	85.04	54	P	P	09 16 54.4	-0.6
	baz=297						
TUQ	Turquoise Moun	85.06	53	P	P	09 16 54.7	-0.4
	baz=297,SNR=5.9						
PSUT	Pine Spring	85.10	50	IAmb	IAmb	09 16 56.4	
	comp=Z,4.5nm,0.9s						
SHPR	Sheep Range	85.13	52	IAmb	IAmb	09 16 56.9	
	comp=Z,4.5nm,0.9s						
HWUT	Hardware Ranch	85.18	46	IAmb	IAmb	09 16 57.0	
	comp=Z,6.6nm,0.8s						
NC405	NORSAR Array S	85.24	338	P	P	09 16 54.5	-0.8
109C	Camp Elliot, M	85.34	56	P	P	09 16 56.3	-0.1
	baz=297						
NB2	NORSAR Subarra	85.46	338	P	P	09 16 55.5	-0.9
	comp=Z,1.8nm,0.6s,baz=47,slow=5.1						
NOA	NORSAR Array B	85.46	338	P	P	09 16 55.8	-0.7
	comp=Z,2.4nm,0.6s,baz=47,slow=4.7,SNR=8.4						
	comp=Z,2.4nm,0.6s						
PFO	Pinyon Flats O	85.50	55	P	P	09 16 57.3	-0.1
	baz=297						
TPFO	Pinon Flats	85.50	55	P	P	09 16 57.0	-0.4
	baz=297						
GMRC	Granite Mounta	85.56	54	P	P	09 16 57.8	+0.2
	baz=297						
NORES	NORESS Array B	85.57	338	P	P	09 16 56.7	-0.2
NLU	North Lily Min	85.64	48	IAmb	IAmb	09 16 59.1	
	comp=Z,4.4nm,0.8s						
BELC	Belle Mtn. Jos	85.66	55	P	P	09 16 57.6	-0.5
	baz=297						
JLU	Jordanelle	85.74	47	IAmb	IAmb	09 16 59.3	
	comp=Z,5.1nm,0.7s						
RAYN	Ar Rayn	85.75	294	P	P	09 16 57.9	-0.7
RAYN				IAmb	IAmb	09 16 59.8	
	comp=Z,6.2nm,1.0s						
RAYN	Ar Rayn	85.75	294	P	P	09 16 57.9	-0.7
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MONP2	Monument Peak	85.85	56	P	P	09 16 59.2	0.0
	baz=297						
LAO	LASA Array	85.88	40	P	P	09 16 59.0	+0.1
LAO	LASA Array	85.88	40	P	P	09 16 59.0	+0.1
	baz=302,SNR=5.8						
BW06	Boulder Array	85.89	44	P	P	09 16 59.2	0.0
	baz=300,SNR=5.2						
PDAR	Pinedale Array	85.89	44	P	P	09 16 59.1	-0.2
	comp=Z,2.5nm,0.8s,baz=265,slow=3.4,SNR=21						
	comp=Z,2.5nm,0.8s						
MPU	Maple Canyon	85.91	48	IAmb	IAmb	09 17 00.4	
	comp=Z,4.4nm,0.8s						
CCUT	Cedar City	85.91	50	IAmb	IAmb	09 17 00.9	
	comp=Z,7.9nm,1.5s						
DGMT	Dagmar	86.06	38	P	P	09 16 59.4	-0.3
	baz=304						
IKP	In-Ko-Pah, Jac	86.20	56	P	P	09 17 00.5	-0.2
	baz=297						
IRM	Iron Mountain	86.22	54	P	P	09 17 00.4	-0.4
	baz=298						
BC3	Big Chuckawall	86.22	55	P	P	09 17 00.4	-0.5
	baz=298						
LCMT	Little Creek M	86.25	51	IAmb	IAmb	09 17 02.3	
	comp=Z,4.5nm,0.8s						
YUH	Yuha Desert	86.34	56	IAmb	IAmb	09 17 02.3	
	comp=Z,6.1nm,1.1s						
MTPU	Mount Pierson	86.49	50	IAmb	IAmb	09 17 04.0	
	comp=Z,7.2nm,1.4s						
Q16A	Castle Valley	86.76	48	IAmb	IAmb	09 17 05.8	
	comp=Z,5.8nm,0.8s						
P17A	Butcher Ranch,	86.77	48	IAmb	IAmb	09 17 04.8	
	comp=Z,5.9nm,0.8s						
PDMCI	Parker Dam,Lak	86.89	54	P	P	09 17 03.8	-0.2
	baz=298						
GLA	Glamis	86.97	55	P	P	09 17 04.1	-0.4
	baz=298						
RDMU	Red Mountain	87.00	46	IAmb	IAmb	09 17 05.9	
	comp=Z,7.3nm,0.8s						
SRU	San Rafael Swe	87.10	48	IAmb	IAmb	09 17 06.1	
	comp=Z,6.2nm,1.0s						
U15A	North Rim	87.20	51	IAmb	IAmb	09 17 07.2	
	comp=Z,5.1nm,0.9s						
BRTR	Keskin Array B	87.23	313	P	P	09 17 05.1	-0.7
	comp=Z,1.4nm,0.7s,baz=110,slow=3.6,SNR=7.4						
	comp=Z,1.4nm,0.7s						
BRTR	Keskin Array B	87.23	313	P	P	09 17 05.4	-0.3
BRTR	Keskin Array B	87.23	313	*ce*P	P	09 17 05.0	-0.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
K22A	Casper	87.86	43	P	P	09 17 08.2	-0.6
	baz=302						
BUR08	Bucovina Ar. S	88.05	323	P	P	09 17 09.2	-0.2
BUR08				IAmb	IAmb	09 17 10.1	
	comp=Z,4.2nm,1.1s						
BURAR	Bucovina Array	88.06	323	P	P	09 17 09.2	-0.3
BURAR	Bucovina Array	88.06	323	P	P	09 17 09.2	-0.3
BURAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
O20A	White River Ci	88.09	46	P	P	09 17 09.9	-0.1
	baz=302						
WUAZ	Wupatki	88.30	51	IAmb	IAmb	09 17 12.4	
	comp=Z,5.2nm,1.1s						
WUAZ	Wupatki	88.30	51	P	P	09 17 11.3	+0.3
	baz=300						
RSSD	Black Hills	88.58	41	P	P	09 17 12.2	0.0
	baz=304						
PV13	Radium Mtn., P	88.73	48	IAmb	IAmb	09 17 14.1	
	comp=Z,6.7nm,1.0s						
214A	Organ Pipe Nat	88.99	55	P	P	09 17 14.4	+0.3
	baz=299						
N23A	Red Feather La	89.17	45	P	P	09 17 15.4	+0.3
	baz=303						
CRVS	Cervenica-Dubn	89.28	325	*e*P	P	09 17 16.0	+0.9
CRVS	Cervenica-Dubn	89.28	325	*e*P	P	09 17 16.0	+0.9
MVCO	Mesa Verde	89.44	49	P	P	09 17 16.2	-0.2
	baz=301						
W18A	Petrified Fore	89.65	51	P	P	09 17 17.7	+0.3
	baz=301						
ISCO	Idaho Springs	89.98	45	P	P	09 17 19.3	+0.3
	baz=303						
TUC	Tucson	90.31	54	P	P	09 17 20.2	-0.1
	baz=300						
AGMN	Agassiz Nation	90.61	34	P	P	09 17 21.1	-0.2
	baz=310						
Q24A	Divide	90.74	46	P	P	09 17 22.6	+0.1
	baz=303						
VYHS	Vyhne	90.89	326	*e*P	P	09 17 22.6	0.0
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	90.89	326	*e*P	P	09 17 22.6	0.0
SDCO	Great Sand Dun	91.17	47	P	P	09 17 24.5	0.0
	baz=303						
VRAC	Vranov	91.46	328	P	P	09 17 24.7	-0.6
VRAC				pmax	pmax		
	comp=Z,7.0nm,2.8s						
OGNE	Ogallala	91.60	43	P	P	09 17 26.3	+0.1
	baz=306						
ANMO	Albuquerque	92.04	50	P	P	09 17 28.2	-0.3
ANMO				IAmb	IAmb	09 17 29.9	
	comp=Z,4.5nm,0.8s						
ANMO	Albuquerque	92.04	50	*ce*P	P	09 17 28.3	-0.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANMO	Albuquerque	92.04	50	P	P	09 17 29.0	+0.6
	baz=303						
T25A	Trinidad	92.23	47	P	P	09 17 29.5	+0.2
	baz=304						
KSCO	Kaye Shedlock'	92.34	45	P	P	09 17 29.8	+0.1
	baz=305						
121A	Cookes Peak, D	92.38	52	P	P	09 17 30.7	+0.6
	baz=302						
ECSD	EROS Data Cent	93.11	38	P	P	09 17 32.6	-0.4
	baz=309						
GERES	GERESS Array B	93.16	329	P	P	09 17 32.5	-0.8
	comp=Z,0.3nm,0.2s,baz=57,slow=4.9,SNR=5.1						
	comp=Z,0.3nm,0.2s						
SPMN	Marine on St.	94.21	35	P	P	09 17 38.5	+0.5
	baz=312						
LPIG	La Paz	94.76	61	LR	LR	09 52 03.2	
	comp=Z,25nm,21.8s,baz=10.0,slow=30						
SCHQ	Schefferville	96.76	16	LR	LR	10 05 13.0	
	comp=Z,24nm,20.2s,baz=82,slow=38						
TXAR	Lajitas Array	97.08	53	P	Pdif	09 17 52.4	+0.7
	comp=Z,0.5nm,0.6s,baz=305,slow=3.5,SNR=11						
TXAR				LR	LR	09 53 21.0	
	comp=Z,30nm,21.5s,baz=325,slow=30						
	comp=Z,0.5nm,0.6s						
TZTN	Tazewell	105.29	36	P	Pdif	09 18 28.3	+0.3
	baz=318						
LRAL	Lakeview Retre	105.86	41	P	PKiKP	09 22 44.0	+1.1
	baz=315						
PAL	Palisades	106.41	27	P	PKiKP	09 22 44.8	+1.1
	baz=326						
BLA	Blacksburg	106.43	34	P	PKiKP	09 22 44.5	+0.5
	baz=321						
TORD	Torodi Ar. Bea	125.74	310	PKP	PKPdf	09 23 19.8	-1.5
	comp=Z,1.3nm,0.9s,baz=11,slow=2.2,SNR=4.7						
TROLL	Troll, Antarti	127.83	195	PKPdf	PKiKP	09 23 24.1	-0.2
SNAA	Sanae	129.27	194	PKPdf	PKPdf	09 23 25.8	-0.6
VNA2	Neumayer--Watz	130.79	193	PKPdf	PKPdf	09 23 26.8	-2.4
VNA1	Neumayer--Stat	131.18	193	PKPdf	PKPdf	09 23 26.7	-3.3
PLCA	Paso Flores	148.77	128	PKPbc	PKPbc	09 24 05.8	-0.7
	comp=Z,5.4nm,0.8s,baz=242,slow=2.8,SNR=21						
LPAZ	La Paz	150.66	79	PKPbc	PKPbc	09 24 12.1	-0.3
	comp=Z,9.5nm,0.8s,baz=43,slow=3.0,SNR=30						

ISK 10 09:06:27.4, 37°.14N×27°.86E, h0km, ML1.6/3, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.34	91	PG	Pb	09 06 35.3	-1.0
YER				SG	Sb	09 06 40.9	-1.4
BODT	Bodrum	0.45	260	PG	Pg	09 06 36.9	+0.9
BODT				SG	Sb	09 06 44.6	-0.8
AYDB	Zeytinkoy-Aydi	0.81	2	PG	Pb	09 06 44.0	-0.4

DDA 10 09:07:17.2±0.0, 38°.47N×29°.15E, h7km±2km, ML1.1, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USAK	Uak-Merkez	0.27	337	P	Pg	09 07 22.3	-0.2
USAK				*i* AML	AML	09 07 26.0	
	comp=E,38nm,0.9s						
USAK				S	Sg	09 07 27.0	+0.9
PASA	Karahalli, USA	0.29	114	P	Pg	09 07 23.3	+0.4
PASA				S	Sg	09 07 28.1	+1.3
MANT	Manisa	0.47	273	P	Pg	09 07 26.5	+0.2
MANT				S	Sb	09 07 33.9	-1.1

IDC ***10*** *09:07:17.6±1.0, 31°.26N×140°.30E, h0km, mb4.0/9, mbtmp3.9/9, Error ellipse: s-maj=34.3km s-min=29.1km az=84.0*

JMA ***10*** *09:07:24.9±0.3, 31°.N±1°×14°.1E±°, h78km±2km, MV4.1/72, NEAR TORISHIMA IS*

ISC 10 09:07:30.3±0.9, 31°.39N±0°.08×140°.57E±0°.08, h100km, n38, σ1§46/42, mb3.7/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.27	328	*e*P	Pn	09 07 51.5	-2.4
JAOM				*e*S	Sn	09 08 11.3	-0.3
JHCJ	Hachijojimakas	1.80	339	P	Pn	09 07 58.8	-1.5
JHJ2	Mitsune	1.83	340	P	Pn	09 07 59.2	-1.5
JMKN	Mikurajimanish	2.63	342	P	Pn	09 08 10.8	-0.3
JKO	Kozu shima	3.04	337	P	Pn	09 08 16.5	0.0
BSO1	Boso 1	3.27	6	P	Pn	09 08 17.8	-1.5
BSO3	Boso 3	3.41	359	P	Pn	09 08 19.8	-1.4
TK02	Tokai 2	3.48	318	P	Pn	09 08 22.3	0.0
TK02				*e*S	Sn	09 09 04.1	+1.6
BSO4	Boso 4	3.60	357	*e*P	Pn	09 08 23.1	-0.8
TTO1	TONANKAI O.B.S	3.89	306	P	Pn	09 08 27.2	-0.6
JOD2	Odawara 2	4.06	343	P	Pn	09 08 30.9	+0.6
HMMJ	Hamamatsu 2	4.20	326	P	Pn	09 08 32.1	-0.1
JIE	Ise	4.42	314	P	Pn	09 08 34.4	-0.7
JYN	Shimob	4.43	338	*e*P	Pn	09 08 37.1	+1.7
JNY	Yasuok	4.56	331	P	Pn	09 08 37.9	+0.8
JHU	Hanno	4.58	347	P	Pn	09 08 37.1	-0.2
JHU				*e*S	Sn	09 09 30.2	+0.9
JKN2	Miekihoku	4.60	309	P	Pn	09 08 36.5	-1.0
JKN2				S	Sn	09 09 28.1	-1.7
JAO	Obara	4.76	325	*e*P	Pn	09 08 40.1	+0.3
JRY	Ryogami san	4.82	344	P	Pn	09 08 40.7	+0.1
JTNC	Tanabenakahech	4.83	301	P	Pn	09 08 39.6	-1.2
JYT	Yasato	4.84	356	P	Pn	09 08 40.8	0.0
JYT				*e*S	Sn	09 09 36.7	+1.1
JAG	Ashikaga	5.11	350	P	Pn	09 08 42.7	-1.8
JAG				*e*S	Sn	09 09 41.4	-0.8
JHO	Hitachi	5.21	0	P	Pn	09 08 44.6	-1.3
JHO				*e*S	Sn	09 09 39.1	-5.5
JYTA	Yamagatataniai	5.28	324	*e*P	Pn	09 08 46.8	+0.1
H11S3	WAKE ISLAND Hy	26.86	112	T	T	09 41 45.1	
	baz=304,slow=75,SNR=8.5						
H11S1	WAKE ISLAND Hy	26.86	112	T	T	09 41 42.6	
	baz=304,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	26.88	112	T	T	09 41 51.2	
	baz=304,slow=75,SNR=9.9						
MKAR	Makanchi Array	46.72	307	P	P	09 15 48.8	-0.4
	0.3nm,0.5s,baz=100,slow=7.5,SNR=1.5						
	0.3nm,0.5s						
WRA	Warramunga Arr	51.39	188	P	P	09 16 22.9	-2.0
	0.1nm,0.3s,baz=1.7,slow=7.5,SNR=5.2						
	0.1nm,0.3s						
INK	Inuvik	59.75	25	P	P	09 17 24.8	+0.6
	1.0nm,0.5s,baz=301,slow=10,SNR=4.9						
	1.0nm,0.5s						
ARCES	ARCESS Array B	69.04	340	P	P	09 18 24.6	-0.2
	6.5nm,1.0s,baz=54,slow=7.7,SNR=6.8						
	6.5nm,1.0s						
FINES	FINESS Array B	73.49	333	P	P	09 18 51.6	-0.1
	1.8nm,0.4s,baz=70,slow=5.2,SNR=9.3						
	1.8nm,0.4s						
NVAR	Mina Array Bea	78.98	52	P	P	09 19 25.6	+2.1
	0.3nm,0.5s,baz=300,slow=7.2,SNR=2.7						
	0.3nm,0.5s						
NB2	NORSAR Subarra	79.11	337	P	P	09 19 23.5	-0.1
	comp=Z,0.6nm,0.5s,baz=43,slow=5.3						
NOA	NORSAR Array B	79.11	337	P	P	09 19 23.6	0.0
	comp=Z,0.8nm,0.5s,baz=58,slow=8.0,SNR=3.8						
	comp=Z,0.8nm,0.5s						
PDAR	Pinedale Array	82.15	44	P	P	09 19 42.2	+1.7
	comp=Z,0.2nm,0.5s,baz=272,slow=2.3,SNR=2.8						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	94.13	52	P	P	09 20 40.3	+2.1
	comp=Z,1.0nm,0.6s,baz=296,slow=3.0,SNR=14						
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	120.69	312	PKP	PKPdf	09 26 10.5	-0.7
	comp=Z,0.2nm,0.5s,baz=36,slow=2.1,SNR=1.4						

IDC ***10*** *09:09:54.8±8.5, 31°.48S×179°.82E, h329km±94km, mb3.2/2, mbtmp4.1/3, Error ellipse: s-maj=98.0km s-min=38.3km az=3.0*

WEL ***10*** *09:10:03.3±0.6, 32°.S±7°×178°.0W±1°.8, h341km±10km, M3.9/24, mB4.5/18, ML4.9/35, MLv4.6/24, Mw(mB)3.7/18, Error ellipse: s-maj=0.0km s-min=0.0km az=109.9*

ISC 10 09:09:60.0±1.0, 31°.77S±0°.08×179°.8E±0°.1, h363km, n56, σ1§97/70, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.18	39	P	Pn	09 11 03.3	+1.3
GLKZ				S	S	09 11 51.7	-0.2
MXZ	Matakaoa Point	5.91	192	P	Pn	09 11 32.5	+2.5
MXZ				S	S	09 12 41.6	-1.7
WMGZ	Waiomatatini S	6.14	190	P	Pn	09 11 35.9	+3.2
WMGZ				S	S	09 12 47.9	-0.2
WCZ	Waipu Caves	6.15	226	P	Pn	09 11 36.9	+4.0
HAZ	Te Kaha	6.20	195	P	Pn	09 11 35.1	+1.8
HAZ				S	S	09 12 48.2	-1.0
PKGZ	Pakihiroa	6.27	193	P	Pn	09 11 37.0	+2.8
PKGZ				S	S	09 12 46.0	-4.8
PUZ	Puketiti	6.41	191	P	Pn	09 11 38.6	+2.8
PUZ				S	S	09 12 52.1	-1.7
RUGZ	Raukumara Rang	6.42	195	P	Pn	09 11 36.4	+0.4
RUGZ				S	S	09 12 50.8	-3.4
TWGZ	Tauwhareparae	6.56	193	P	Pn	09 11 37.7	+0.2
TWGZ				S	S	09 12 58.4	+1.4
OPRZ	Ohinepanea	6.62	203	P	P	09 11 41.9	+2.5
MWZ	Matawai	6.81	195	P	Pn	09 11 40.5	+0.2
MWZ				S	S	09 13 00.4	-1.7
CNGZ	Carnagh Statio	6.82	191	P	Pn	09 11 40.6	+0.1
URZ	Urewera	6.84	198	P	Pn	09 11 39.7	-0.9
	18nm,0.4s,baz=266,slow=3.4,SNR=39						
URZ				S	S	09 12 59.4	-3.2
	19nm,0.3s,baz=64,slow=21,SNR=15						
URZ	Urewera	6.84	198	P	Pn	09 11 40.3	-0.3
URZ				S	S	09 13 00.8	-1.9
TKGZ	Te Karaka	6.84	193	P	Pn	09 11 42.1	+1.4
TKGZ				S	S	09 13 01.3	-1.5
KARZ	Kaharoa	6.88	204	P	P	09 11 45.0	+2.6
RAGZ	Rawiri	6.99	196	P	Pn	09 11 44.5	+2.0
RRRZ	Republican Roa	7.08	201	P	P	09 11 48.0	+3.2
RIGZ	Rimuhau	7.12	193	P	Pn	09 11 41.0	-2.9
RIGZ				S	S	09 13 06.8	-1.9
MUGZ	Murupara	7.14	200	P	Pn	09 11 46.1	+1.9
MUGZ				S	S	09 13 08.5	-0.5
HSRZ	Hossack Road	7.15	203	P	P	09 11 48.4	+2.9
HRRZ	Handcock Road	7.21	203	P	P	09 11 49.1	+3.0
ALRZ	Allen Road	7.34	202	P	Pn	09 11 48.4	+1.9
KNZ	Kokohu	7.44	193	P	Pn	09 11 49.5	+1.9
RAHZ	Arahi	7.47	197	P	Pn	09 11 49.3	+1.3
RAHZ				S	S	09 13 13.4	-2.7
MTHZ	Maungataniwha	7.47	198	P	Pn	09 11 49.7	+1.7
MHGZ	Mahia Peninsul	7.53	191	P	Pn	09 11 50.9	+2.3
MRHZ	Matea R

AEIC ***10*** *09:23:38.1±1.4,53.3°N±0.1°×169.1°W±0.2°,h300km±5km, ML2.7/25,mb3.6/5(NEIC),Error ellipse: s-maj=20.7km s-min=12.2km az=152.0*

NEIC 10 09:23:37.3±1.3,53.3°N±0.1°×169.2°W±0.2°,h301km±7km, Error ellipse: s-maj=20.4km s-min=12.7km az=150.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.33**	**148**		S	09 24 45.3	-0.9
NIKH	**Nikolski High**	**0.33**	**148**		Pn	09 24 15.8	+0.2
CLCO	**Concord Point,**	**0.58**	**217**		Pn	09 24 16.6	+0.4
CLCO					S	09 24 47.2	0.0
OKWR	**Okmok West Rim**	**0.59**	**71**		Pn	09 24 16.1	-0.2
OKSO	**Okmok South**	**0.60**	**79**		Pn	09 24 16.5	+0.3
OKTU	**Okmok Mt. Tuli**	**0.68**	**78**		Pn	09 24 16.4	0.0
MAPS	**Pakushin South**	**1.43**	**66**		Pn	09 24 19.7	-0.3
MGOD	**Makushin Gods**	**1.46**	**67**		Pn	09 24 20.1	-0.1
MSW	**Makushin Switc**	**1.56**	**64**		Pn	09 24 20.3	-0.5
MNAT	**Makushin Natee**	**1.60**	**66**		Pn	09 24 21.1	0.0
MNAT					S	09 24 55.7	-0.3
UNV	**Unalaska Valle**	**1.69**	**68**		S	09 24 57.0	+0.1
UNV	**Unalaska Valle**	**1.69**	**68**		Pn	09 24 21.2	-0.4
AKRB	**Akutan Reef Bi**	**2.03**	**63**		Pn	09 24 24.4	+0.2
AKRB					S	09 25 01.1	-0.6
AKMO	**Akutan Morgan**	**2.05**	**64**		Pn	09 24 24.7	+0.4
ZRO	**Akutan Zero**	**2.06**	**65**		Pn	09 24 25.1	+0.5
AHB	**Akutan Harbor**	**2.16**	**65**		Pn	09 24 25.9	+0.6
AKUT	**Akutan**	**2.19**	**65**	Pn	Pn	09 24 25.6	0.0
AKSA	**Akutan Strait**	**2.23**	**65**		Pn	09 24 26.2	+0.3
WECS	**Westdahl Cape**	**2.89**	**62**		Pn	09 24 32.2	+0.3
SPIA	**Saint Paul Isl**	**3.99**	**351**		Pn	09 24 43.9	+0.7
AMKA	**Amchitka**	**7.33**	**260**	Pn	Pn	09 25 18.9	-3.6
CHIR	**Chirikof Islan**	**8.28**	**66**	Pn	Pn	09 25 33.9	-0.2
OHAK	**Old Harbor**	**9.89**	**60**	Pn	Pn	09 25 51.5	-2.2
KDAK	**Kodiak Island**	**10.42**	**58**	Pn	Pn	09 25 58.5	-1.8
SVW2	**Sparrevohn**	**10.75**	**38**	P	P	09 26 10.6	+3.6
J25K	**Salcha River,**	**16.61**	**37**	P	P	09 27 09.4	-2.2
J25K				IAmb	IAmb	09 27 34.7	
	comp=Z,3.9nm,1.4s						
SCRK	**Sand Creek**	**16.81**	**40**	P	P	09 27 12.8	-1.0
J26L	**Joseph Creek**	**17.22**	**39**	P	P	09 27 16.6	-1.7
J26L				IAmb	IAmb	09 27 17.3	
	comp=Z,1.7nm,0.8s						
TOLK	**Toolik Lake Re**	**17.98**	**23**	P	P	09 27 23.9	-2.4
EGAK	**Eagle**	**18.27**	**40**	P	P	09 27 28.8	-0.6
EGAK				IAmb	IAmb	09 27 30.2	
	comp=Z,2.3nm,0.8s						
BMAR	**Burnt Mountain**	**18.50**	**30**	P	P	09 27 33.1	+1.3

JMA ***10*** *09:30:31.2±0.1,24.1°N±0.9×122.2°E±0.2,h32km±2km, MV2.8/11,TAIWAN REGION*
TAP ***10*** *09:30:31.1,24.21°N×122.23°E,h24km,ML3.3,D*

ISC 10 09:30:30.8±1.1,24.17°N±0.02°×122.25°E±0.02°,h24km±12km, n77,σ0.975/145,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.48**	**287**	*e*P	**Pb**	**09 30 41.3**	**+0.6**
	baz=288						
EWUT	**Wuta**	**0.51**	**303**	*i* P	**Pb**	**09 30 40.1**	**-1.0**
	baz=304						
EWUT				*i* S	**Sb**	**09 30 47.4**	**-0.7**
	baz=304						
ENA	**Nanau**	**0.53**	**300**	*i* P	**Pb**	**09 30 41.5**	**0.0**
	baz=300						
ENA				S	**Sb**	**09 30 48.5**	**-0.2**
	baz=300						
ETL	**Fush Village**	**0.57**	**269**	P	**Pn**	**09 30 44.1**	**+0.6**
	baz=247						
ETL				*e*S	**Sn**	**09 30 52.7**	**+0.5**
	baz=247						
TWC	**Suao**	**0.57**	**321**	*i* P	**Pb**	**09 30 41.6**	**-0.6**
	baz=318						
TWC				*i* S	**Sb**	**09 30 48.1**	**-1.8**
	baz=318						
NACB	**Ninganchiao**	**0.59**	**271**	P	**Pb**	**09 30 43.2**	**+0.6**
	baz=249						
NACB				S	**Sn**	**09 30 52.7**	**0.0**
	baz=249						
TWD	**Chiawan**	**0.60**	**262**	P	**Pn**	**09 30 43.8**	**0.0**
	baz=240						
TWD				*i* S	**Sn**	**09 30 52.1**	**-0.8**
	baz=240						
TEYL	**Yanliau Villag**	**0.66**	**244**	*e*P	**Pb**	**09 30 43.2**	**-0.5**
	baz=227						
TEYL				S	**Sn**	**09 30 54.5**	**+0.2**
	baz=227						
NDS	**Dongshan**	**0.67**	**314**	*i* P	**Pb**	**09 30 43.1**	**-0.8**
	baz=311						
NDS				S	**Sb**	**09 30 52.7**	**-0.1**
	baz=311						
ETLH	**Xiulin Townshi**	**0.70**	**274**	P	**Pb**	**09 30 44.6**	**+0.2**
	baz=268						
ETLH				S	**Sn**	**09 30 55.8**	**+0.3**
	baz=268						
JYNG	**Yonagunijimaku**	**0.70**	**66**	P	**Pb**	**09 30 44.7**	**+0.4**
JYNG				S	**Sb**	**09 30 53.9**	**+0.3**
EGS		**0.73**	**337**	*i* P	**Pb**	**09 30 45.2**	**+0.3**
	baz=328						
EGS				*i* S	**Sb**	**09 30 54.9**	**+0.3**
	baz=328						
ILA	**Ilan**	**0.75**	**323**	*i* S	**Sn**	**09 30 56.1**	**-0.4**
	baz=321						
LATG	**Datong**	**0.75**	**299**	P	**Pb**	**09 30 45.7**	**+0.3**
	baz=302						
LATG				S	**Sn**	**09 30 57.3**	**+0.5**
	baz=302						
YOJ	**Yonaguni jima**	**0.76**	**67**	P	**Pb**	**09 30 45.5**	**+0.2**
	baz=70						
YOJ				S	**Sb**	**09 30 56.0**	**+0.7**
	baz=70						
YOJ	**Yonaguni jima**	**0.76**	**67**	P	**Pb**	**09 30 45.7**	**+0.4**
YOJ				S	**Sb**	**09 30 55.5**	**+0.3**
TWE	**Neicheng**	**0.76**	**316**	*i* P	**Pb**	**09 30 45.4**	**-0.1**
	baz=314						
TWE				*i* S	**Sb**	**09 30 55.9**	**+0.5**
	baz=314						
ENTT	**Nioudou**	**0.78**	**307**	*i* P	**Pb**	**09 30 45.0**	**-0.8**
	baz=310						
ENTT				*i* S	**Sb**	**09 30 56.2**	**+0.3**
	baz=310						
NTC	**Toucheng**	**0.78**	**331**	*e*P	**Pn**	**09 30 46.2**	**-0.2**
	baz=342						
NTC				S	**Sb**	**09 30 56.1**	**+0.1**
	baz=342						
NDT	**Datong Townshi**	**0.80**	**303**	P	**Pb**	**09 30 45.4**	**-0.7**
	baz=306						
NDT				S	**Sb**	**09 30 56.7**	**+0.3**
	baz=306						
ESL	**Shilin**	**0.82**	**245**	P	**Pb**	**09 30 46.0**	**-0.4**
	baz=230						
ESL				S	**Sn**	**09 30 57.9**	**-0.5**
	baz=230						
NNSB	**Datong**	**0.83**	**289**	P	**Pb**	**09 30 46.8**	**+0.2**
	baz=284						
NNSB				S	**Sn**	**09 30 58.1**	**-0.7**
	baz=284						
NNS	**Nan Shan**	**0.84**	**289**	*i* P	**Pb**	**09 30 46.5**	**-0.4**
	baz=285						
NNS				S	**Sb**	**09 30 57.6**	**-0.2**
	baz=285						
FUSB	**Fushanzhiwuyua**	**0.84**	**315**	P	**Pn**	**09 30 47.1**	**-0.2**
	baz=312						
FUSB				S	**Sb**	**09 30 58.0**	**+0.3**
	baz=312						
TWB1	**Santiao Chiao**	**0.87**	**344**	*i* P	**Pn**	**09 30 47.1**	**-0.5**
	baz=344						
TWB1				*i* S	**Sb**	**09 30 58.5**	**0.0**
	baz=344						
TIPB	**Shuangxi**	**0.89**	**335**	*i* P	**Pb**	**09 30 47.8**	**+0.2**
	baz=333						
TIPB				S	**Sb**	**09 30 58.2**	**-0.8**
	baz=333						
WHF	**Hehuan Shan**	**0.90**	**269**	*i* P	**Pb**	**09 30 48.3**	**+0.4**
	baz=264						
WHF				*i* S	**Sb**	**09 30 59.9**	**+0.2**
	baz=264						
EGFH	**Guangfu**	**0.90**	**237**	*e*P	**Pn**	**09 30 47.7**	**-0.3**
	baz=220						
EGFH				*e*S	**Sn**	**09 31 00.2**	**0.0**
	baz=220						
NWLT	**Wulai**	**0.91**	**312**	*i* P	**Pb**	**09 30 49.2**	**+1.2**
	baz=309						
NWLT				*i* S	**Sb**	**09 30 59.9**	**+0.2**
	baz=309						
YHNB	**Yeheng**	**0.94**	**303**	P	**Pb**	**09 30 49.2**	**+0.7**
	baz=285						
YHNB				S	**Sb**	**09 30 59.9**	**-0.6**
	baz=285						
NSK	**Sanguang**	**0.95**	**302**	*i* P	**Pn**	**09 30 47.6**	**-1.3**
	baz=283						
NSK				*i* S	**Sb**	**09 31 00.6**	**-0.5**
	baz=283						
TWT	**Tachien**	**0.98**	**275**	P	**Pn**	**09 30 49.3**	**0.0**
	baz=271						
TWT				S	**Sn**	**09 31 02.8**	**+0.2**
	baz=271						
CHGB	**Renai**	**0.98**	**264**	P	**Pb**	**09 30 49.7**	**+0.3**
	baz=246						
CHGB				S	**Sb**	**09 31 03.7**	**+1.7**
	baz=246						
SXI1	**Grass Mountain**	**0.98**	**340**	P	**Pn**	**09 30 48.7**	**-0.6**
	baz=352						
SXI1				S	**Sn**	**09 31 01.7**	**-0.8**
	baz=352						
NWF	**Wu-fen Shan**	**0.99**	**335**	*i* P	**Pn**	**09 30 49.0**	**-0.4**
	baz=333						
NWF				*i* S	**Sb**	**09 31 02.8**	**+0.6**
	baz=333						
TDCB	**Techi**	**1.00**	**275**	*e*P	**Pn**	**09 30 48.2**	**-1.3**
	baz=271						
TDCB				*e*S	**Sn**	**09 31 02.3**	**-0.6**
	baz=271						
OWD	**Renai**	**1.00**	**258**	P	**Pn**	**09 30 49.3**	**-0.2**
	baz=254						
OWD				*e*S	**Sn**	**09 31 02.1**	**-0.9**
	baz=254						
HGSD	**Ruisui**	**1.01**	**228**	*e*P	**Pn**	**09 30 48.5**	**-0.9**
	baz=214						
HGSD				S	**Sn**	**09 31 00.8**	**-2.2**
	baz=214						
TWA	**Mucha**	**1.01**	**324**	*e*P	**Pb**	**09 30 50.1**	**+0.4**
	baz=328						
TWA				S	**Sb**	**09 31 04.0**	**+1.4**
	baz=328						
NHDH	**Xindian Distri**	**1.03**	**321**	*e*P	**Pb**	**09 30 50.5**	**+0.5**
	baz=333						
WUSB	**Renai**	**1.04**	**261**	P	**Pn**	**09 30 50.2**	**+0.1**
	baz=256						
WUSB				S	**Sb**	**09 31 04.0**	**+0.3**
	baz=256						
EHY	**Hungye**	**1.07**	**232**	P	**Pn**	**09 30 49.5**	**-0.8**
	baz=228						
EHY				S	**Sb**	**09 31 04.7**	**+0.4**
	baz=228						
VWDT	**VWDT**	**1.09**	**248**	*e*P	**Pn**	**09 30 49.4**	**-1.2**
	baz=231						
VWDT				*e*S	**Sn**	**09 31 04.7**	**-0.3**
	baz=231						
NFF	**Wufeng Townshi**	**1.13**	**295**	P	**Pn**	**09 30 51.2**	**0.0**
	baz=291						
NFF				S	**Sn**	**09 31 04.9**	**-1.2**
	baz=291						
YM01	**YM01**	**1.15**	**328**	P	**Pb**	**09 30 52.0**	**-0.1**
	baz=326						
YM01				*e*S	**Sn**	**09 31 05.3**	**-1.3**
	baz=326						
YULB	**Yu-li**	**1.16**	**229**	P	**Pn**	**09 30 50.7**	**-1.0**
	baz=240						
EYUL	**Yuli**	**1.18**	**226**	*e*P	**Pn**	**09 30 50.8**	**-1.1**
	baz=239						
EYUL				*e*S	**Sn**	**09 31 07.3**	**+0.2**
	baz=239						
WHP	**Taichung City**	**1.19**	**276**	P	**Pb**	**09 30 53.3**	**+0.5**
	baz=271						
WHP				S	**Sb**	**09 31 09.6**	**+1.7**
	baz=271						
TWS1	**Kuangyinshan**	**1.20**	**321**	P	**Pb**	**09 30 53.4**	**+0.6**
	baz=331						
TWS1				S	**Sb**	**09 31 09.3**	**+1.4**
	baz=331						
LIOB	**Emei**	**1.22**	**293**	*i* P	**Pb**	**09 30 53.4**	**+0.2**
	baz=290						
LIOB				S	**Sb**	**09 31 10.7**	**+2.1**
	baz=290						
WCS	**Beigang Elemen**	**1.22**	**265**	*e*P	**Pn**	**09 30 52.4**	**0.0**
	baz=250						
WCS				*e*S	**Sb**	**09 31 09.7**	**+1.0**
	baz=250						
NSTT	**Nanjuang**	**1.23**	**292**	P	**Pb**	**09 30 53.5**	**+0.2**
	baz=289						
NSTT				S	**Sb**	**09 31 09.6**	**+0.8**
	baz=289						
NTST	**Danshui**	**1.23**	**324**	*e*S	**Sb**	**09 31 08.7**	**-0.2**
	baz=333						
SSLB	**Suanglung**	**1.24**	**253**	*e*P	**Pn**	**09 30 52.2**	**-0.5**
	baz=249						
SSLB				*e*S	**Sn**	**09 31 08.2**	**-0.5**
	baz=249						
NCUH	**Zhongli**	**1.25**	**310**	*e*P	**Pb**	**09 30 54.0**	**+0.2**
	baz=306						
NCUH				*e*S	**Sb**	**09 31 10.4**	**+0.9**
	baz=306						
SMLT	**Sun Moon Lake**	**1.26**	**257**	P	**Pn**	**09 30 53.2**	**+0.1**
	baz=253						
SMLT				S	**Sn**	**09 31 09.4**	**0.0**
	baz=253						
TYC	**Yuchr**	**1.30**	**259**	P	**Pn**	**09 30 53.4**	**0.0**
	baz=255						
TYC				*e*S	**Sb**	**09 31 10.8**	**+0.1**
	baz=255						
FULB	**Fuli**	**1.30**	**222**	*e*P	**Pn**	**09 30 52.5**	**-1.0**
	baz=205						
FULB				S	**Sb**	**09 31 11.7**	**+0.8**
	baz=205						
TWQ1	**Liyutan**	**1.36**	**278**	*e*P	**Pb**	**09 30 56.1**	**+0.6**
	baz=273						
TWQ1				*e*S	**Sb**	**09 31 13.9**	**+1.4**
	baz=273						
YUS	**Yu-Shan**	**1.36**	**241**	P	**Pn**	**09 30 54.9**	**+0.1**
	baz=237						
YUS				S	**Sn**	**09 31 11.7**	**-0.7**
	baz=237						
IRIF	**Iriomote-Funau**	**1.37**	**83**	P	**Pn**	**09 30 54.6**	**+0.2**
IRIF				S	**Sn**	**09 31 11.8**	**0.0**
NSY	**Sanyi**	**1.38**	**281**	*e*P	**Pb**	**09 30 56.4**	**+0.5**
	baz=276						
NSY				*e*S	**Sb**	**09 31 15.6**	**+2.5**
	baz=276						
HATJ	**Hateruma jima**	**1.43**	**94**	*e*S	**Sn**	**09 31 14.2**	**+0.8**
WJS	**Zhushan**	**1.43**	**256**	*e*P	**Pn**	**09 30 55.7**	**+0.3**
	baz=253						
WJS				*e*S	**Sb**	**09 31 15.1**	**+0.5**
	baz=253						
WNT	**Mingjian**	**1.46**	**259**	*e*S	**Sb**	**09 31 16.6**	**+1.2**
	baz=255						
PCYT	**Pengchaiyu**	**1.47**	**354**	P	**Pn**	**09 30 55.3**	**-0.5**
	baz=340						
EDH	**Donghe**	**1.47**	**216**	*e*P	**Pn**	**09 30 54.8**	**-1.1**
	baz=203						
EDH				*e*S	**Sn**	**09 31 13.2**	**-1.1**
	baz=203						
ALS	**Alishan**	**1.47**	**244**	P	**Pb**	**09 30 57.3**	**-0.3**
	baz=240						
ALS				S	**Sn**	**09 31 15.4**	**+0.6**
	baz=240						
ELDTW	**Lidau**	**1.49**	**229**	P	**Pn**	**09 30 55.7**	**-0.6**
	baz=226						
ELDTW				*e*S	**Sn**	**09 31 13.4**	**-1.5**
	baz=226						
JKRS	**Kuro-shima**	**1.61**	**87**	P	**Pb**	**09 30 59.1**	**-0.8**
JKRS				S	**Sb**	**09 31 19.2**	**-0.6**
STYH	**Taoyuan**	**1.67**	**234**	*e*P	**Pn**	**09 30 58.3**	**-0.3**
	baz=220						
STYH				*e*S	**Sn**	**09 31 18.9**	**-0.5**
	baz=220						
TPUB	**Ta-pu**	**1.71**	**240**	*e*P	**Pn**	**09 31 00.3**	**+1.1**
	baz=236						
TPUB				*e*S	**Sn**	**09 31 21.4**	**+1.0**
	baz=236						
JIJ	**Ishigaki jima**	**1.74**	**83**	P	**Pn**	**09 31 00.1**	**+0.5**
JIJ				*e*S	**Sn**	**09 31 20.2**	**-0.9**
WTP	**Ta-pu**	**1.75**	**239**	*e*P	**Pb**	**09 31 02.7**	**+0.3**
	baz=235						
WTP				*e*S	**Sb**	**09 31 23.8**	**-0.2**
	baz=235						
TWK	**Hsinying**	**1.84**	**241**	*e*P	**Pb**	**09 31 03.8**	**-0.1**
	baz=237						
TWK				*e*S	**Sb**	**09 31 26.4**	**-0.1**
	baz=237						
JISG	**Ishigakijimahi**	**1.93**	**77**	*e*P	**Pn**	**09 31 02.5**	**+0.3**
JTJ	**Tarama**	**2.29**	**78**	*e*P	**Pn**	**09 31 08.1**	**+1.0**
JTJ				S	**Sn**	**09 31 34.6**	**0.0**

IDC ***10*** *09:35:33.0±0.6,34.26°N×86.13°E,h0km,mb4.1/19, mbtmp4.1/24,ML3.5/4,MS3.1/11,Error ellipse: s-maj=18.8km s-min=12.2km az=35.0*
BJI ***10*** *09:35:35.0±0.0,34.37°N×86.25°E,h5km,mb4.3/23, mB4.5/13,Ms3.8/20,Ms7 3.5/20*
NEIC ***10*** *09:35:35.7±1.4,34.4°N±0.1°×86.1°E±0.1°,h10km±1km, mb4.4/20,Error ellipse: s-maj=18.4km s-min=15.6km az=216.0*
MOS ***10*** *09:35:39.9±1.5,34.37°N×86.07°E,h25km,mb4.5/18,Error ellipse: s-maj=10.1km s-min=6.0km az=124.7*

ISC 10 09:35:35.7±0.4,34.37°N±0.05°×86.10°E±0.04°,h10km,n129, σ1.955/132,mb4.3/40,MS3.3/9,13C-2D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**6.32**	**199**	*e*P	**Pn**	**09 37 11.4**	**+2.1**
	28nm,0.5s						
LSA	**Lhasa**	**6.33**	**136**		Pn	09 37 14.5	+4.9
LSA	**Lhasa**	**6.33**	**136**	P	Pn	09 37 13.9	+4.4
LSA				S	**Sg**	**09 38 57.7**	**-1.3**
LSA				LR	LR		
	comp=N,470nm,5.7s						
LSA				LR	LR		
	comp=E,120nm,6.1s						
LSA				LR	LR		
	comp=Z,250nm,7.1s						
LSA	**Lhasa**	**6.33**	**136**	P	Pn	09 37 14.5	+5.0
GUN	**Gumba**	**6.44**	**182**	*e*P	**Pn**	**09 37 13.5**	**+2.6**
	comp=Z,63nm,0.6s						
GKN	**Gorkha**	**6.46**	**192**	*e*P	**Pn**	**09 37 14.4**	**+3.3**
	comp=Z,19nm,0.5s						
KKN	**Kakani**	**6.59**	**186**	*e*P	**Pn**	**09 37 16.1**	**+3.1**
	comp=Z,21nm,0.6s						
JIRN	**Jiri**	**6.69**	**179**	*e*P	**Pn**	**09 37 16.6**	**+2.2**
	comp=Z,42nm,0.4s						
DMN	**Daman**	**6.79**	**187**	*e*P	**Pn**	**09 37 18.6**	**+2.9**
	comp=Z,20nm,0.4s						
PKIN	**Phulchoki**	**6.79**	**185**	*e*P	**Pn**	**09 37 18.4**	**+2.6**
	comp=Z,34nm,0.5s						
PKI	**Pulchoki**	**6.80**	**185**	*e*P	**Pn**	**09 37 19.0**	**+3.1**
	comp=Z,30nm,0.4s						
TAPN	**Taplejung**	**7.13**	**168**	*e*P	**Pn**	**09 37 22.1**	**+1.7**
	comp=Z,52nm,0.4s						
GOMU	**GeErMu**	**7.36**	**73**	Pn	**Pn**	**09 37 26.5**	**+2.9**
GOMU				Sn	**Sn**	**09 38 49.2**	**+1.8**
GOMU				LR	LR		
	comp=Z,520nm,7.9s						
GOMU				LR	LR		
	comp=Z,250nm,8.4s						
GOMU				LR	LR		
	comp=Z,270nm,9.3s						
RAMN	**Ramite**	**7.41**	**177**	*e*P	**Pn**	**09 37 26.7**	**+2.6**
	comp=Z,25nm,0.5s						
ODAN	**Odare**	**7.56**	**171**	*e*P	**Pn**	**09 37 27.7**	**+1.4**
WMQ	**Urumqi**	**9.52**	**7**	*e*P	**Pn**	**09 37 52.5**	**-0.5**
WMQ				smax	smax		
	comp=Z,39nm,0.9s						
WMQ				smax	smax		
	comp=Z,37nm,1.3s						
KSH	**Kashi**	**9.59**	**305**	P	Pn	09 37 59.3	+5.3
KSH				pP		09 38 01.8	
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSH				LR	LR		
	comp=Z,410nm,15.1s						
KSH				LR	LR		
	comp=Z,390nm,14.4s						
KSH				LR	LR		
	comp=Z,350nm,13.4s						
NIL	**Nilore**	**10.69**	**270**		**Pn**	**09 38 09.5**	**+0.6**
NIL	**Nilore**	**10.69**	**270**	P	**Pn**	**09 38 09.5**	**+0.6**
AAK	**Ala-Archa**	**12.27**	**316**	Pn	**Pn**	**09 38 32.2**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=296,slow=5.0,SNR=2.0						
AAK				LR	LR	09 44 26.0	
	comp=Z,29nm,21.2s,baz=122,slow=43 comp=Z,2.1nm,0.4s						
AAK	**Ala-Archa**	**12.27**	**316**	Pn	**Pn**	**09 38 31.5**	**+0.8**
AAK	**Ala-Archa**	**12.27**	**316**	*e*P	**Pn**	**09 38 33.3**	**+2.6**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	**Makanchi Array**	**12.74**	**348**	Pn	**Pn**	**09 38 36.4**	**-0.6**
MK31	**Makanchi Array**	**12.74**	**348**	*i* P	**Pn**	**09 38 38.4**	**+1.4**
MKAR	**Makanchi Array**	**12.74**	**348**	Pn	**Pn**	**09 38 36.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=166,slow=15,SNR=17						
MKAR				LR	LR	09 44 27.4	
	comp=Z,64nm,19.3s,baz=142,slow=42 comp=Z,2.9nm,0.7s						
GAR	**Garm**	**13.48**	**295**	Pn	**Pn**	**09 38 47.2**	**+0.1**
KBL	**Kabul**	**14.08**	**276**	Pn	**Pn**	**09 38 54.0**	**-1.4**
KBL	**Kabul**	**14.08**	**276**	P	**Pn**	**09 38 54.0**	**-1.4**
CHGR	**Chuyangaron**	**14.28**	**292**		**Pn**	**09 38 58.0**	**-0.1**
CHGR	**Chuyangaron**	**14.28**	**292**	P	**Pn**	**09 38 58.0**	**-0.1**
LZH	**Lanzhou**	**14.61**	**78**	*e*P	**P**	**09 39 09.2**	**+0.1**
LZH				pP	Pn	09 39 12.9	+10
LZH				sP		09 39 15.0	
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
KK31	**Karatay Array**	**14.95**	**310**	Pn	**Pn**	**09 39 07.6**	**+0.5**
KK31	**Karatay Array**	**14.95**	**310**	P	**Pn**	**09 39 07.6**	**+0.5**
KKAR	**Karatay Array**	**14.95**	**310**	Pn	**Pn**	**09 39 06.5**	**-0.5**
KKAR	**Karatay Array**	**14.95**	**310**	P	**Pn**	**09 39 06.6**	**-0.5**
PZH	**PanZhiHua**	**15.59**	**116**	P	**Pn**	**09 39 14.4**	**-1.4**
PZH				S	**Sn**	**09 42 13.5**	**+4.8**
PZH				pmax	pmax		
	comp=Z,20nm,0.8s						
PZH				pmax	pmax		
	comp=Z,110nm,5.5s						
PZH				LR	LR		
	comp=Z,230nm,13.9s						
PZH				LR	LR		
	comp=Z,260nm,12.9s						
PZH				LR	LR		
	comp=Z,260nm,12.9s						
KURBB	**Kurchatov Arra**	**17.16**	**343**	P	**Pn**	**09 39 35.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=160,slow=11,SNR=26 comp=Z,16nm,0.8s						
KURK	**Kurchatov**	**17.23**	**344**	P	**Pn**	**09 39 36.5**	**+0.2**
KURK				lAmb	lAmb	09 39 40.7	
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	**17.23**	**344**	P	**Pn**	**09 39 36.5**	**+0.2**
KURK				pmax	pmax		
	comp=Z,20nm,0.9s						
HYBB	**Hyderabad (bro**	**18.18**	**204**	*e*P	P	09 39 56.7	+8.1
HYBB				*e*S	S	09 43 32.0	+15
XAN	**Xi'an**	**18.88**	**85**	*e*P	**P**	**09 39 55.5**	**-0.8**
XAN				S	**Sn**	**09 43 27.2**	**-1.0**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=Z,450nm,11.6s						
XAN				LR	LR		
	comp=Z,200nm,11.7s						
XAN				LR	LR		
	comp=Z,170nm,9.4s						
CHTO	**Chiang Mai**	**19.25**	**140**		**P**	**09 39 60.0**	**-0.5**
CHTO	**Chiang Mai**	**19.25**	**140**	P	**P**	**09 40 00.0**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**19.55**	**141**	P	**P**	**09 40 02.5**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=324,slow=12,SNR=16						
CMAR				LR	LR	09 49 20.4	
	comp=Z,18nm,19.5s,baz=330,slow=42						
CMAR	**Chiang Mai Arr**	**19.55**	**141**	P	**P**	**09 40 02.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**19.55**	**141**	P	**P**	**09 40 02.7**	**-0.9**
ZAA0	**Zalesovo Array**	**19.60**	**358**	P	**P**	**09 40 03.2**	**-0.7**
ZALV	**Zalesovo Beam**	**19.60**	**358**	P	**P**	**09 40 03.2**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=183,slow=10,SNR=14					

SONM Songino Array 20.29 42 P P 09 40 12.2 +0.5
SONM Songino Array 20.29 42 P P 09 40 12.2 +0.5
SONM pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 20.68 43 P P 09 40 14.8 -1.1
ULN Ulaanbaatar 20.68 43 *ce*P P 09 40 15.8 -0.1
ULN pmax pmax
comp=Z,18nm,1.7s
HHC Hu-ho-hao-te 21.15 65 *e*P P 09 40 14.3 -6.7
BRVK Borovoye 21.81 334 P P 09 40 27.2 -0.7
BRVK IAmb IAmb 09 40 35.0
comp=Z,10nm,0.8s
BRVK Borovoye 21.81 334 *i* P P 09 40 29.5 +1.6
BRVK pmax pmax
comp=Z,12nm,1.0s
GEYT Alibeck 22.84 287 P P 09 40 39.9 +0.9
comp=Z,2.5nm,0.4s,baz=195,slow=13,SNR=2.2
GEYT LR LR 09 51 17.9
comp=Z,125nm,21.7s,baz=112,slow=41
comp=Z,2.5nm,0.4s
HNS HongShan 23.34 74 ⇓P P 09 40 47.0 +2.9
HNS pmax pmax
comp=Z,13nm,1.1s
HNS LR LR
comp=Z,160nm,11.5s
HNS LR LR
comp=Z,110nm,10.6s
ABKAR Akbulak array 24.36 316 P P 09 40 54.1 +0.3
ABKAR Akbulak array 24.36 316 P P 09 40 53.8 0.0
ABKAR IAmb IAmb 09 40 55.4
comp=Z,7.6nm,0.7s
UBPT Khong Chiam 25.80 133 P P 09 41 06.2 -0.9
AKTO Aktyubinsk 26.01 317 P P 09 41 09.1 +0.3
comp=Z,5.1nm,0.8s,baz=115,slow=9.2,SNR=13
comp=Z,5.1nm,0.8s
NJ2 Nanjing 27.44 86 *e*P P 09 41 18.0 -3.8
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
ARU Arti 28.99 328 *c i*P P 09 41 35.0 -0.4
ARU 09 42 27.1
ARU SS SS 09 47 54.0 -35
ARU pmax pmax
comp=Z,8.0nm,1.7s
BELG Belogornoye 32.76 315 *i* P P 09 42 08.3 -0.4
BELG pmax pmax
comp=Z,3.0nm,0.8s
KSAR Wonju Array Be 33.79 72 P P 09 42 15.2 -2.6
KSAR Wonju Array Be 33.79 72 P P 09 42 15.2 -2.6
KSRS Korea Array 33.82 72 P P 09 42 16.8 -1.3
comp=Z,1.7nm,0.7s,baz=276,slow=6.7,SNR=10
KSRS LR LR 09 57 38.5
comp=Z,27nm,19.2s,baz=285,slow=39
comp=Z,1.7nm,0.7s
ONI Oni 34.08 297 P P 09 42 20.2 -0.2
ONI IAmb IAmb 09 42 27.6
comp=Z,4.1nm,1.1s
ONI Oni 34.08 297 P P 09 42 20.2 -0.2
ONI pmax pmax
comp=Z,4.0nm,1.1s
KIV Kislovodsk 34.65 299 *e*P P 09 42 27.8 +2.5
KIV pmax pmax
comp=Z,8.0nm,1.0s
NRIK Noril'sk 35.03 1 P P 09 42 28.7 +0.5
comp=Z,18nm,0.7s,baz=164,slow=6.1,SNR=15
comp=Z,18nm,0.7s
NRIK Noril'sk 35.03 1 P P 09 42 27.6 -0.7
NRIK Noril'sk 35.03 1 *ce*P P 09 42 28.1 -0.1
NRIK pmax pmax
comp=Z,15nm,0.9s
KLR Kul'dur 36.55 52 *ce*P P 09 42 42.0 +0.5
KLR pmax pmax
comp=Z,4.0nm,1.0s
VORR Voronezh 37.66 312 *e*P P 09 42 51.2 +0.4
OBN Obninsk 39.79 317 ⇓*e*P P 09 43 09.5 +0.8
OBN *e* 09 44 47.0
OBN *e*S **S** **09 49 12.0 -0.6**
OBN *e*SS SnSn 09 52 32.1 +21
OBN pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 41.72 293 P P 09 43 23.4 -1.7
comp=Z,0.3nm,0.4s,baz=129,slow=11,SNR=2.0
comp=Z,0.3nm,0.4s
MJAR Matsushiro Arr 42.08 72 P P 09 43 26.8 -1.1
comp=Z,1.6nm,0.7s,baz=267,slow=7.3,SNR=4.8
MJAR LR LR 10 01 20.2
comp=Z,36nm,18.6s,baz=266,slow=37
comp=Z,1.6nm,0.7s
EIL Elat 43.25 278 LR LR 10 04 11.3
comp=Z,35nm,18.5s,baz=87,slow=40
TIXI Tiksi 43.51 18 *i* P P 09 43 40.3 +1.4
TIXI pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 43.85 310 P P 09 43 41.3 -0.6
comp=Z,0.5nm,0.4s,baz=98,slow=13,SNR=6.9
comp=Z,0.5nm,0.4s
AKBB Malin Array Si 43.85 310 *ce*P P 09 43 43.0 +1.0
MNK Minsk 44.72 315 *i* P P 09 43 49.3 +0.5
MNK *i* 09 45 34.0
MNK *i* PPP PPP 09 46 11.1
MNK *i* S **S** **09 50 27.2 +1.9**
MNK pmax pmax
comp=N,5.0nm,0.7s
MNK pmax pmax
comp=Z,11nm,0.8s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=E,24nm,22.0s
MNK MLR MLR
comp=N,13nm,16.0s
MNK MLR MLR
comp=Z,44nm,16.0s
MNK Minsk 44.72 315 *i* P P 09 43 49.3 +0.5
comp=E,3.0nm,0.9s
MNK *i* P P 09 43 49.3 +0.5
comp=N,5.0nm,0.7s
MNK *i* P P 09 43 49.3 +0.5
comp=Z,11nm,0.8s,baz=272
MNK *i* PP PP 09 45 34.0 +0.9
MNK *i* PPP PPP 09 46 11.2
MNK *i* S S 09 50 27.2 +1.9
MNK *i* SS ScS 09 53 49.5 +3.1
MNK *i* SSS SSS 09 54 43.9
MNK *i* LQ LQ 09 59 18.5
MNK *i* LR LR 10 01 52.5
MNK *i* LRM MLR 10 04 36.2
comp=E,24nm,22.4s
MNK *i* LRM MLR 10 04 51.7
comp=N,13nm,15.9s
MNK *i* LRM MLR 10 05 15.7
comp=Z,44nm,15.9s
FINES FINESS Array B 46.26 325 P P 09 44 00.1 -0.9
comp=Z,1.6nm,0.8s,baz=79,slow=10,SNR=3.9
comp=Z,1.6nm,0.8s
FINES FINESS Array B 46.26 325 P P 09 44 01.2 +0.3
FINES FINESS Array B 46.26 325 *ce*P P 09 44 01.7 +0.8
FINES pmax pmax
comp=Z,3.0nm,0.9s
KEV Kevo 47.57 336 P P 09 44 10.4 -0.7
KEV Kevo 47.57 336 P P 09 44 10.4 -0.7
KEV pmax pmax
comp=Z,29nm,1.2s
MA2 Magadan 48.41 38 LR LR 10 06 19.1
comp=Z,32nm,21.8s,baz=300,slow=38
SEY Seymchan 49.32 34 P P 09 44 24.2 -0.5
comp=Z,1.5nm,0.7s,baz=254,slow=12,SNR=4.4
comp=Z,1.5nm,0.7s
SEY Seymchan 49.32 34 *ce*P P 09 44 23.2 -1.5
SEY pmax pmax
comp=Z,5.0nm,1.7s
NB2 NORSAR Subarra 53.43 324 P P 09 44 55.0 -0.5
comp=Z,1.1nm,0.6s,baz=84,slow=7.4
NOA NORSAR Array B 53.43 324 P P 09 44 54.9 -0.7
comp=Z,1.3nm,0.6s,baz=84,slow=7.4,SNR=5.0
comp=Z,1.3nm,0.6s
GERES GERESS Array B 54.05 309 P P 09 45 01.0 +0.6
comp=Z,1.5nm,0.6s,baz=69,slow=7.4,SNR=11
comp=Z,1.5nm,0.6s
GERES GERESS Array B 54.05 309 P P 09 45 01.2 +0.8
GERES GERESS Array B 54.05 309 P P 09 45 01.2 +0.8
BILL Bilibino 54.99 27 *i* P P 09 45 10.6 +3.8
BILL pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 57.77 243 *ce*P P 09 45 27.7 +0.1
KMBO pmax pmax
comp=Z,1.0nm,0.3s

ESDC Sonseca Array 69.11 304 P P 09 46 41.2 -0.9
comp=Z,2.2nm,0.8s,baz=52,slow=5.9,SNR=10.0
comp=Z,2.2nm,0.8s
WRAB Tennant Creek 70.87 132 *ce*P P 09 46 53.2 +0.2
WRAB pmax pmax
comp=Z,10.0nm,1.7s
WRA Warramunga Arr 70.87 132 P P 09 46 51.1 -2.0
comp=Z,1.5nm,0.6s,baz=326,slow=6.6,SNR=19
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 70.87 132 *i* P P 09 46 52.0 -1.1
WRA pmax pmax
comp=Z,2.0nm,0.6s
WB2 Warramunga Arr 70.88 132 P P 09 46 51.6 -1.5
WB2 IAmb IAmb 09 46 54.5
comp=Z,3.8nm,0.8s
J20K Nowinta River 71.02 24 P P 09 46 53.4 +0.1
J20K IAmb IAmb 09 47 14.6
comp=Z,6.5nm,1.4s
K20K Telida 71.58 24 P P 09 46 57.5 +0.7
ILAR Eielson Array 72.89 21 P P 09 47 03.0 -1.6
comp=Z,1.0nm,0.8s,baz=314,slow=4.3,SNR=6.7
comp=Z,1.0nm,0.8s
ILAR Eielson Array 72.89 21 P P 09 47 03.0 -1.6
ASAR Alice Springs 73.44 135 P P 09 47 06.8 -1.5
comp=Z,1.1nm,0.6s,baz=323,slow=6.2,SNR=12
comp=Z,1.1nm,0.6s
ASAR Alice Springs 73.44 135 P P 09 47 08.3 -0.1
ASAR Alice Springs 73.44 135 P P 09 47 08.3 -0.1
RIDG Independent Ri 74.25 21 P P 09 47 11.7 -1.0
RIDG IAmb IAmb 09 47 34.9
comp=Z,4.1nm,1.1s
BCAR Beaver Creek A 75.66 20 P P 09 47 21.2 +0.4
KDAK Kodiak Island 75.87 28 P P 09 47 21.6 -0.4
KDAK Kodiak Island 75.87 28 P P 09 47 21.6 -0.4
KDAK pmax pmax
comp=Z,11nm,1.4s
TORD Torodi Ar. Bea 78.14 278 P P 09 47 33.8 -1.8
comp=Z,1.7nm,0.8s,baz=40,slow=5.0,SNR=9.8
comp=Z,1.7nm,0.8s
HNR Honiara 82.21 107 LR LR 10 22 45.8
comp=Z,35nm,22.0s,baz=154,slow=34
STKA Stephens Creek 84.07 135 P P 09 48 06.2 -0.5
comp=Z,4.0nm,1.1s,baz=326,slow=7.9,SNR=4.9
comp=Z,4.0nm,1.1s
DBIC Dimbokro 87.07 276 P P 09 48 21.0 -1.0
comp=Z,5.6nm,0.6s,baz=39,slow=5.3,SNR=5.3
comp=Z,5.6nm,0.6s
DBIC Dimbokro 87.07 276 P P 09 48 21.4 -0.7
DBIC Dimbokro 87.07 276 P P 09 48 21.4 -0.7
DBIC pmax pmax
comp=Z,34nm,1.3s
KIC Kosan Boka 87.14 276 ⇑*i*PKP2 P 09 48 22.0 -0.5
comp=Z,7.8nm,0.5s
TIC Toumodi 87.22 276 ⇑*i*PKP2 P 09 48 22.3 -0.5
comp=Z,3.5nm,0.2s
LIC Lamto 87.46 276 ⇑*i*PKP2 P 09 48 23.3 -0.7
comp=Z,8.1nm,0.4s
TXAR Lajitas Array 115.97 9 PKP PKiKP 09 54 17.7 -1.7
comp=Z,0.1nm,0.5s,baz=345,slow=2.1,SNR=2.0

*NEIC **10** 09:40:38.5±0.9,50°.39N±0°.07×177°.24W±0°.07,h10km±2km, mb3.9/27,ML3.7/40(AEIC),Error ellipse: s-maj=12.6km s-min=8.0km az=172.0*
*IDC **10** 09:40:39.2±4.0,50°.42N×176°.40W,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=79.6km s-min=44.2km az=40.0*
*AEIC **10** 09:40:42.0±1.4,50°.30N±0°.10×177°.27W±0°.09,h10km±8km, Error ellipse: s-maj=14.2km s-min=8.6km az=172.0*
ISC 10 09:40:39.6±1.1,50°.3N±0°.1×177°.24W±0°.06,h25km,n74,
σ0s91/77,mb3.6/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**1.43**	**0**				**Pn**	**09 41 03.5**	**-0.5**
KIWB	**Kanaga Island**	**1.52**	**2**				**Pn**	**09 41 04.8**	**-0.4**
TAPA	**Tanaga Point A**	**1.53**	**347**				**Pn**	**09 41 04.9**	**-0.4**
KIKV	**Kanaga Island**	**1.55**	**2**				**Pn**	**09 41 05.3**	**-0.3**
TASE	**Tanaga Southea**	**1.58**	**342**				**Pn**	**09 41 06.0**	**-0.1**
KICM	**Kanaga Island**	**1.59**	**1**				**Pn**	**09 41 06.0**	**-0.1**
ADK	**Adak**	**1.59**	**13**				**Pn**	**09 41 05.2**	**-0.9**
ADK							**Sn**	**09 41 24.6**	**-1.3**
TAFP	**Tanaga Falls P**	**1.64**	**344**				**Pn**	**09 41 06.4**	**-0.4**
TAFP							**Sn**	**09 41 26.4**	**-0.7**
TANO	**Tanaga North**	**1.68**	**341**				**Pn**	**09 41 07.4**	**+0.1**
GALAA	**Gareloi Lava P**	**1.73**	**327**				**Pn**	**09 41 08.1**	**+0.1**
GAEA	**Gareloi East**	**1.73**	**327**				**Pn**	**09 41 08.2**	**+0.1**
GASW	**Gareloi Southw**	**1.77**	**326**				**Pn**	**09 41 08.4**	**-0.2**
GASW							**Sn**	**09 41 29.4**	**-0.9**
GANE	**Gareloi Northe**	**1.77**	**328**				**Pn**	**09 41 08.5**	**-0.1**
GSCK	**Great Sitkin C**	**1.81**	**22**				**Pn**	**09 41 08.8**	**-0.4**
GSTD	**Great Sitkin T**	**1.86**	**21**				**Pn**	**09 41 09.5**	**-0.4**
GSTD							**Sn**	**09 41 31.8**	**-0.8**
GSMY	**Great Sitkin M**	**1.87**	**23**				**Pn**	**09 41 09.6**	**-0.4**
GSTP	**Great Sitkin T**	**1.91**	**22**				**Pn**	**09 41 10.4**	**-0.2**
AMKA	**Amchitka**	**2.43**	**297**				**Pn**	**09 41 16.6**	**-1.0**
CERAA	**Semis' Rag'd T**	**2.50**	**310**				**Pn**	**09 41 18.8**	**+0.2**
CEPE	**Semis' Perret**	**2.55**	**311**				**Pn**	**09 41 19.6**	**+0.3**
CESW	**Semis' Southwe**	**2.55**	**309**				**Pn**	**09 41 19.5**	**+0.2**
KOKL	**Mount Kliuchef**	**2.76**	**43**				**Pn**	**09 41 22.1**	**-0.2**
KOFP	**Korovin Flat P**	**2.77**	**44**				**Pn**	**09 41 22.9**	**+0.5**
KOSE	**Korovin Southe**	**2.84**	**44**				**Pn**	**09 41 24.3**	**+1.0**
LSPA	**Little Sitkin**	**3.10**	**303**				**Pn**	**09 41 27.1**	**+0.3**
LSNW	**Little Sitkin**	**3.13**	**303**				**Pn**	**09 41 26.8**	**-0.5**
CLES	**Cleveland East**	**5.21**	**59**	Pn			**Pn**	**09 41 57.4**	**+1.5**
CLCO	**Concord Point,**	**5.29**	**59**				**Pn**	**09 41 56.8**	**-0.1**
NIKH	**Nikolski High**	**5.85**	**60**				**Pn**	**09 42 05.5**	**+0.9**
OKSO	**Okmok South**	**6.39**	**58**				**Pn**	**09 42 12.7**	**+0.6**
MAPS	**Pakushin South**	**7.24**	**57**				**Pn**	**09 42 24.4**	**+0.7**
MGOD	**Makushin Gods**	**7.27**	**58**				**Pn**	**09 42 24.9**	**+0.7**
MSW	**Makushin Switc**	**7.37**	**57**				**Pn**	**09 42 26.4**	**+0.9**
MNAT	**Makushin Natee**	**7.41**	**57**				**Pn**	**09 42 26.4**	**+0.3**
UNV	**Unalaska Valle**	**7.49**	**58**				**Pn**	**09 42 28.4**	**+1.3**
AKUT	**Akutan**	**8.00**	**57**	Pn			**Pn**	**09 42 36.0**	**+1.9**
SPIA	**Saint Paul Isl**	**8.01**	**28**				**Pn**	**09 42 37.2**	**+3.0**
AKSA	**Akutan Strait**	**8.04**	**57**				**Pn**	**09 42 35.7**	**+1.0**
SDPT	**Sand Point**	**11.30**	**57**	Pn			**Pn**	**09 43 18.6**	**-0.7**
CNBA	**Chernabura Isl**	**11.63**	**61**	Pn			**Pn**	**09 43 22.6**	**-1.3**
CHGN	**Chignik**	**12.72**	**55**	Pn			**Pn**	**09 43 38.6**	**-0.1**
CHIR	**Chirikof Islan**	**14.08**	**59**	Pn			**Pn**	**09 43 57.0**	**-0.2**
OHAK	**Old Harbor**	**15.69**	**55**	Pn			**Pn**	**09 44 17.8**	**-1.0**
OHAK							IAmb	IAmb	09 44 45.3	
comp=Z,12nm,1.2s										
O18K	**Koktuh Hills**	**15.73**	**44**	Pn			**Pn**	**09 44 19.3**	**0.0**
O18K							IAmb	IAmb	09 44 30.5	
comp=Z,7.0nm,1.3s										
PEA0B	**Petropavlovsk-**	**15.75**	**290**				**P**	**09 44 22.6**	**-0.7**
Q19K	**Cape Douglas,**	**16.07**	**49**	Pn			**Pn**	**09 44 23.9**	**+0.3**
KDAK	**Kodiak Island**	**16.21**	**53**	Pn			**Pn**	**09 44 24.7**	**-0.7**
N19K	**Bonanza Creek**	**16.51**	**42**				**Pn**	**09 44 29.2**	**-0.1**
P19K	**Oil Pt**	**16.55**	**47**	Pn			**Pn**	**09 44 29.5**	**-0.2**
P19K							IAmb	IAmb	09 44 40.3	
comp=Z,9.3nm,0.8s										
L19K	**White Mountain**	**17.07**	**37**				**P**	**09 44 38.0**	**+0.1**
L19K							IAmb	IAmb	09 44 54.7	
comp=Z,8.7nm,1.0s										
CNPM	**China Poot**	**17.44**	**48**	Pn			**Pn**	**09 44 41.0**	**+0.1**
CNPM							IAmb	IAmb	09 44 48.9	
comp=Z,11nm,1.2s										
K20K	**Telida**	**18.04**	**35**				**Pn**	**09 44 48.8**	**+0.5**
SEW	**Seward**	**18.49**	**47**	P			**P**	**09 44 52.0**	**-1.4**
SEW							IAmb	IAmb	09 45 09.2	
comp=Z,8.8nm,1.2s										
J20K	**Nowinta River**	**18.50**	**33**	P			**P**	**09 44 54.0**	**+0.4**
RDOG	**Red Dog Mine**	**19.13**	**16**	P			**P**	**09 44 59.6**	**-0.9**
RDOG							IAmb	IAmb	09 45 20.6	
comp=Z,7.4nm,0.8s										
PWL	**Port Wells**	**19.26**	**46**	P			**P**	**09 45 01.8**	**-0.2**
PWL							IAmb	IAmb	09 45 28.8	
comp=Z,8.1nm,1.0s										
KTH	**Kantishna Hill**	**19.33**	**37**	P			**P**	**09 45 02.9**	**+0.1**
HIN	**Hinchinbrook I**	**19.98**	**48**	P			**P**	**09 45 10.4**	**+0.6**
SCM	**Sheep Creek Mo**	**20.06**	**44**	P			Pn	09 45 12.6	0.0
SCM							IAmb	IAmb	09 45 15.9	
comp=Z,7.0nm,1.0s										
RND	**Reindeer**	**20.07**	**39**	P			**P**	**09 45 11.4**	**+0.5**
RND							IAmb	IAmb	09 45 26.0	
comp=Z,3.9nm,0.8s										
FID	**Port Fidalgo**	**20.09**	**47**	P			**P**	**09 45 10.4**	**-0.6**
MCK	**McKinley**	**20.19**	**38**	P			**P**	**09 45 12.0**	**-0.1**
MCK							IAmb	IAmb	09 45 18.1	
comp=Z,4.7nm,0.8s										
MLY	**Manley**	**20.20**	**33**	P			**P**	**09 45 13.1**	**+0.9**
MLY							IAmb	IAmb	09 45 27.9	
comp=Z,5.1nm,0.9s										
DHY	**Denali Highway**	**20.53**	**40**	P			**P**	**09 45 15.6**	**-0.3**
DHY							IAmb	IAmb	09 45 21.8	
comp=Z,5.9nm,0.7s										
M24K	**Tolsona, Glenn**	**20.67**	**43**	P			**P**	**09 45 17.4**	**+0.1**
I23K	**Minto, Yukon-K**	**20.75**	**34**	P			**P**	**09 45 19.5**	**+1.4**
I23K							IAmb	IAmb	09 45 36.0	
comp=Z,3.6nm,0.7s										
WRH	**Wood River Hil**	**20.87**	**36**	P			**P**	**09 45 19.2**	**-0.2**
H23K	**Yukon River**	**21.06**	**32**	P			**P**	**09 45 22.5**	**+1.1**
H23K							IAmb	IAmb	09 45 37.1	
comp=Z,3.5nm,0.8s										
CCB	**Clear Creek Bu**	**21.07**	**36**	P			**P**	**09 45 22.5**	**+1.1**
ILAR	**Eielson Array**	**21.47**	**36**	P			**P**	**09 45 25.9**	**0.0**
comp=Z,0.5nm,0.6s,baz=237,slow=9.8,SNR=8.7										
comp=Z,0.5nm,0.6s										
INK	**Inuvik**	**27.77**	**33**	P			**P**	**09 46 25.5**	**-0.3**
comp=Z,1.5nm,0.9s,baz=241,slow=10,SNR=1.5										
comp=Z,1.5nm,0.9s										
PDAR	**Pinedale Array**	**45.69**	**72**	P			**P**	**09 48 56.0**	**-2.4**
comp=Z,0.3nm,0.6s,baz=281,slow=3.9,SNR=4.2										
comp=Z,0.3nm,0.6s										
TXAR	**Lajitas Array**	**57.83**	**82**	P			**P**	**09 50 29.7**	**+0.6**
comp=Z,0.4nm,0.7s,baz=292,slow=4.8,SNR=4.1										
comp=Z,0.4nm,0.7s										
ARCES	**ARCESS Array B**	**59.29**	**351**	P			**P**	**09 50 41.9**	**+3.4**
comp=Z,3.9nm,1.1s,baz=21,slow=7.8,SNR=3.5										
comp=Z,3.9nm,1.1s										

*IDC **10** 09:44:10.1±2.5,18°.32S×173°.78W,h0km,mb4.2/3, mbtmp4.2/4,ML4.3/1,Error ellipse: s-maj=112.8km s-min=26.2km az=143.0*
*NEIC **10** 09:44:25.4±0.8,17°.22S±0°.04×173°.9W±0°.1,h130km±12km, mb4.4/11,Error ellipse: s-maj=18.2km s-min=4.8km az=76.0*
*NOU **10** 09:45:09.1,13°.16S×171°.62W,h0km,MLv3.0/4,Samoa Islands*
ISC 10 09:44:23.2±0.8,17°.25S±0°.09×174°.1W±0°.1,h100km,n20,
σ1s57/22,mb4.5/10,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.02**	**35**	Pn			**Pn**	**09 45 24.0**	**+1.2**
12nm,0.3s,baz=231,slow=4.0,SNR=16									
AFI				Sn			**Sn**	**09 46 07.2**	**-1.8**
41nm,0.3s,baz=35,slow=24,SNR=14									
25nm,0.3s									
AFI	**Afiamalu**	**4.02**	**35**				**Pn**	**09 45 23.9**	**+1.1**
AFI				Sn			**Sn**	**09 46 07.9**	**-1.1**
AFI	**Afiamalu**	**4.02**	**35**	P			**Pn**	**09 45 23.6**	**+0.8**
NIUE	**Niue**	**4.38**	**115**	Pn			**Pn**	**09 45 28.0**	**+0.4**
URZ	**Urewera**	**22.30**	**198**	P			**P**	**09 49 10.7**	**-1.6**
URZ							IAmb	IAmb	09 49 25.4	
comp=Z,59nm,1.4s										
BKZ	**Black Stump Fm**	**23.32**	**199**	P			**P**	**09 49 22.3**	**-0.2**
BKZ							IAmb	IAmb	09 49 31.5	
comp=Z,19nm,1.3s										
QRZ	**Quartz Range**	**26.16**	**203**	P			**P**	**09 49 51.7**	**+3.4**
BBOO	**Buckleboo**	**47.30**	**241**	P			**P**	**09 52 45.8**	**-1.2**
WR0	**Warramunga Arr**	**48.58**	**258**	P			**P**	**09 52 56.5**	**-0.5**
WR0							IAmb	IAmb	09 53 20.3	
comp=Z,7.7nm,1.2s										
WB0	**Warramunga Arr**	**48.74**	**259**	P			**P**	**09 52 58.0**	**-0.2**
WB0							IAmb	IAmb	09 53 03.8	
comp=Z,8.3nm,1.4s										
WB2	**Warramunga Arr**	**48.76**	**258**	P			**P**	**09 52 58.0**	**-0.3**
WB2							IAmb	IAmb	09 53 20.7	
comp=Z,7.2nm,1.2s										
WRAB	**Tennant Creek**	**48.76**	**258**	P			**P**	**09 52 57.8**	**-0.5**
WRAB							IAmb	IAmb	09 53 05.8	
comp=Z,17nm,1.5s										
WRA	**Warramunga Arr**	**48.77**	**258**	P			**P**	**09 52 57.2**	**-1.3**
comp=Z,0.7nm,0.3s,baz=98,slow=6.9,SNR=54										
comp=Z,0.7nm,0.3s										
WRA	**Warramunga Arr**	**48.77**	**258**	P			**P**	**09 52 57.6**	**-0.9**
AS31	**Alice Springs**	**48.90**	**253**	P			**P**	**09 52 59.3**	**-0.1**
ASAR	**Alice Springs**	**48.90**	**253**	P			**P**	**09 52 59.3**	**-0.1**
comp=Z,5.6nm,0.5s,baz=90,slow=8.1,SNR=107										
comp=Z,5.6nm,0.5s										
ASAR	**Alice Springs**	**48.90**	**253**	P			**P**	**09 52 59.1**	**-0.4**
CMB	**Columbia Colle**	**74.61**	**41**	P			**P**	**09 55 48.8**	**-2.9**
CMB							IAmb	IAmb	09 56 04.6	
comp=Z,3.8nm,1.2s										
PDAR	**Pinedale Array**	**84.10**	**42**	P			**P**	**09 56 46.5**	**+3.1**
comp=Z,0.5nm,0.7s,baz=219,slow=3.5,SNR=5.4										
comp=Z,0.5nm,0.7s										
BRTR	**Keskin Array B**	**147.12**	**319**	PKPbc			**PKPbc**	**10 03 56.5**	**+1.3**
comp=Z,1.4nm,1.1s,baz=41,slow=4.6,SNR=4.0										

*KRNET **10** 09:46:22.4±0.1,39°.41N×73°.75E,mb3.7*
*NNC **10** 09:46:26.8±3.4,39°.57N×73°.59E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=26.2km s-min=13.7km az=175.0*
ISC 10 09:46:28.8±1.7,39°.41N±0°.09×73°.74E±0°.06,h29km,n18,
σ1s17/25,12C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**2.49**	**10**	⇑*i*P			**Pn**	**09 47 06.2**	**-1.3**
baz=10.0									
ARLS				⇑*i*S			**Sn**	**09 47 38.3**	**+1.3**
baz=10.0									
GAR	**Garm**	**2.69**	**262**	⇑*i*P			**Pn**	**09 47 09.1**	**-1.1**
baz=62									
GAR				⇑*i*S			**Sn**	**09 47 43.4**	**+1.5**
baz=62									
ARK	**Arkit**	**2.74**	**331**	⇑*i*P			**Pn**	**09 47 10.0**	**-1.0**
baz=31									
ARK				⇑*i*S			**Sn**	**09 47 44.7**	**+1.5**
baz=31									
TRKS	**Terek-Say**	**2.90**	**318**	⇑*i*P			**Pn**	**09 47 11.4**	**-1.8**
baz=17									
TRKS				⇑*i*S			**Sn**	**09 47 47.0**	**-0.2**
baz=17									
MRKS	**Merke**	**3.35**	**354**	Pg			**Pb**	**09 47 27.9**	**+0.2**
4.7nm,0.6s									
MRKS				Lg			Lg	09 48 13.3	
28nm,0.6s									
BOOM	**Boomskoye usch**	**3.50**	**28**	⇓*e*P			**Pn**	**09 47 20.4**	**-1.0**
baz=28									
BOOM				⇓*i*S			**Sn**	**09 48 02.6**	**+0.6**
baz=28									
TKM2	**Tokmak 2**	**3.78**	**21**	⇓Pn			**Pn**	**09 47 26.0**	**+0.7**
2.3nm,0.6s									
TKM2				⇑Lg			Lg	09 48 24.0	
8.2nm,0.6s									
IUG	**Iuzhnay**	**3.92**	**315**	Pg			**Pn**	**09 47 29.4**	**+2.1**
295nm,0.7s									
IUG				Lg			Lg	09 48 16.2	
44nm,0.9s									
KST	**Kastek**	**4.00**	**24**	Pg			**Pb**	**09 47 37.3**	**-1.3**
4.2nm,0.8s									
KST				Lg			Lg	09 48 29.6	
17nm,0.9s									
MTBS	**Maitube**	**4.23**	**28**	Pg			**Pb**	**09 47 41.9**	**-0.7**
3.3nm,0.3s									
MTBS				Lg			Lg	09 48 37.1	
15nm,0.9s									
KK31	**Karatay Array**	**4.42**	**328**	⇓Pn			**Pn**	**09 47 34.0**	**0.0**
0.5nm,0.2s,baz=135,slow=13,SNR=6.3									
KK31				⇓Sn			**Sn**	**09 48 25.1**	**+0.6**
4.0nm,0.5s,baz=144,slow=24,SNR=4.0									
KK31				⇑Lg			Lg	09 48 38.5	
5.2nm,0.5s,baz=153,slow=30,SNR=3.6									
KKAR	**Karatay Array**	**4.42**	**328**	⇑*e*P			**Pn**	**09 47 33.1**	**-0.8**
baz=28									
KKAR				⇑*i*S			**Sn**	**09 48 24.8**	**+0.4**
baz=28									
MDOK	**Medeo**	**4.50**	**33**	Pg			**Pb**	**09 47 48.0**	**+0.8**
3.1nm,0.5s									
MDOK				Lg			Lg	09 48

ARXS	**Arharly**	**5.69**	**31**	Pg	**Pb**	**09 48 07.7**	**+0.4**
	4.1nm,0.6s						
ARXS				Lg	Lg	09 49 22.0	
	9.0nm,0.8s						
BLB	**Baldybastay**	**5.87**	**36**	Pg	**Pb**	**09 48 11.6**	**+1.1**
	3.5nm,0.9s						
BLB				Lg	Lg	09 49 28.7	
	6.3nm,1.0s						

IDC ***10*** *09:46:46.4±1.0,34˚.23N×86˚.07E, h0km, mb3.8/8, mbtmp3.8/11, ML3.6/3, MS3.2/5, Error ellipse: s-maj=28.3km s-min=19.8km az=47.0*

ISC 10 09:46:48.5±1.0,34˚.3N±0˚.1×86˚.2E±0˚.2,h10km,n15, σ0ᵍ72/10,mb3.8/7,MS3.8/3,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.83**	**348**	Pn	**Pn**	**09 49 50.8**	**-0.1**
	0.1nm,0.3s,baz=161,slow=15,SNR=5.5						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**17.25**	**343**	P	**Pn**	**09 50 49.2**	**-0.2**
	0.1nm,0.3s,baz=160,slow=11,SNR=13						
	4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**19.45**	**141**	P	**P**	**09 51 16.1**	**+0.7**
	0.6nm,0.3s,baz=325,slow=13,SNR=7.4						
CMAR				LR	LR	09 59 51.8	
	comp=Z,22nm,19.0s,baz=200,slow=40						
	0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**19.67**	**358**	LR	LR	09 59 34.9	
	comp=Z,22nm,21.0s,baz=5.5,slow=39						
SONM	**Songino Array**	**20.30**	**42**	P	**P**	**09 51 23.7**	**-0.9**
	1.5nm,0.9s,baz=236,slow=11,SNR=5.1						
	1.5nm,0.9s						
AKTO	**Aktyubinsk**	**26.11**	**317**	P	**P**	**09 52 22.5**	**+0.1**
	2.0nm,0.8s,baz=109,slow=10,SNR=3.9						
	2.0nm,0.8s						
BELG	**Belogornoye**	**32.86**	**315**	LR	LR	10 06 40.2	
	comp=Z,20nm,19.4s,baz=116,slow=36						
KSRS	**Korea Array**	**33.78**	**72**	P	**P**	**09 53 30.9**	**+0.4**
	0.3nm,0.3s,baz=264,slow=7.4,SNR=4.1						
	0.3nm,0.3s						
NRIK	**Noril'sk**	**35.11**	**1**	P	**P**	**09 53 42.8**	**+1.2**
	6.8nm,0.6s,baz=138,slow=5.8,SNR=7.5						
	6.8nm,0.6s						
ESDC	**Sonseca Array**	**69.20**	**304**	P	P	09 57 53.3	-2.2
	0.8nm,0.8s,baz=56,slow=9.1,SNR=4.6						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**70.77**	**132**	P	**P**	**09 58 04.6**	**-0.6**
	0.5nm,0.8s,baz=328,slow=6.5,SNR=5.6						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**72.93**	**21**	P	**P**	**09 58 17.2**	**-0.4**
	0.3nm,0.6s,baz=300,slow=5.0,SNR=4.5						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**73.34**	**135**	LR	LR	10 34 19.6	
	comp=Z,60nm,18.4s,baz=158,slow=39						
TORD	**Torodi Ar. Bea**	**78.21**	**278**	P	**P**	**09 58 48.4**	**-0.3**
	0.5nm,0.5s,baz=48,slow=6.3,SNR=3.5						
	0.5nm,0.5s						
DLBC	**Dease Lake**	**82.78**	**18**	LR	LR	10 42 17.4	
	comp=Z,34nm,18.4s,baz=120,slow=40						

IDC ***10*** *09:50:13.6±3.8,20˚.07S×168˚.52E, h0km, mb4.4/3, mbtmp4.3/4, ML3.6/1, MS3.5/6, Error ellipse: s-maj=90.2km s-min=39.3km az=123.0*

NEIC ***10*** *09:50:15.1±1.3,20˚.23S±0˚.08×168˚.62E±0˚.07, h10km±1km, mb4.5/12, Error ellipse: s-maj=14.5km s-min=9.3km az=149.0*

NOU ***10*** *09:50:15.1,20˚.17S×168˚.87E, h58km, ML4.3/12, Loyalty Islands*

ISC 10 09:50:14.1±1.0,20˚.15S±0˚.06×168˚.6E±0˚.1,h10km,n36, σ0ᵍ86/34,mb4.5/9,MS3.4/4,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.44**	**203**		**Pn**	**09 50 39.5**	**-0.8**
MARNC				Sn	**Sb**	**09 50 56.9**	**-2.5**
MARNC	**Mare, Loyalty**	**1.44**	**203**	P	**Pn**	**09 50 39.7**	**-0.6**
RTV	**Rentapao**	**2.35**	**355**	P	**Pn**	**09 50 52.6**	**-0.2**
DVP	**Devils Point**	**2.45**	**350**	P	**Pn**	**09 50 53.5**	**-0.6**
YATNC	**Mamie plateau,**	**2.50**	**220**	P	**Pn**	**09 50 53.9**	**-1.0**
DZM	**Mont Dzumac**	**2.79**	**226**		**Pn**	**09 50 59.1**	**0.0**
	10.0nm,0.3s,baz=106,slow=10,SNR=364						
DZM				Sn	**Sn**	**09 51 33.0**	**+0.2**
	18nm,0.3s,baz=66,slow=21,SNR=7.9						
	40nm,0.4s						
DZM	**Mont Dzumac**	**2.79**	**226**	*e*Pn	**Pn**	**09 50 58.2**	**-0.8**
DZM				*e*LR	LR	09 51 44.1	
	comp=Z,369nm,24.6s						
DZM	**Mont Dzumac**	**2.79**	**226**		**Pn**	**09 50 59.0**	**0.0**
DZM	**Mont Dzumac**	**2.79**	**226**	P	**Pn**	**09 50 59.3**	**+0.3**
QUENC	**Ouen Island, N**	**2.80**	**216**		**Pn**	**09 50 59.4**	**+0.3**
QUENC	**Ouen Island, N**	**2.80**	**216**	P	**Pn**	**09 50 59.9**	**+0.8**
NOUC	**Port Laguerre**	**2.91**	**228**	P	**Pn**	**09 51 01.9**	**+1.4**
ONTNC	**Ouen Toro**	**2.95**	**223**		**Pn**	**09 51 01.6**	**+0.4**
ONTNC	**Ouen Toro**	**2.95**	**223**	P	**Pn**	**09 51 01.7**	**+0.6**
KOUNC	**Koumac, New Ca**	**4.09**	**264**		**Pn**	**09 51 16.8**	**0.0**
MSVF	**Nonsavu**	**9.24**	**76**	LR	LR	09 55 21.1	
	comp=Z,461nm,19.1s,baz=213,slow=33						
HNR	**Honiara**	**13.55**	**321**	LR	LR	09 58 08.6	
	comp=Z,79nm,19.9s,baz=180,slow=35						
STKA	**Stephens Creek**	**26.88**	**239**	P	**P**	**09 55 57.4**	**+2.1**
	7.3nm,1.2s,baz=57,slow=9.1,SNR=2.9						
STKA				LR	LR	10 06 31.9	
	comp=Z,87nm,18.2s,baz=25,slow=36						
	7.3nm,1.2s						
WR0	**Warramunga Arr**	**31.99**	**264**	P	**P**	**09 56 40.7**	**-0.1**
WB0	**Warramunga Arr**	**32.15**	**265**	P	**P**	**09 56 42.1**	**-0.1**
WB0				IAmb	IAmb	09 56 42.5	
	comp=Z,3.4nm,0.9s						
WB2	**Warramunga Arr**	**32.16**	**264**	P	**P**	**09 56 42.2**	**-0.1**
WRAB	**Tennant Creek**	**32.17**	**264**	P	**P**	**09 56 41.9**	**-0.5**
WRAB				IAmb	IAmb	09 56 46.4	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**32.18**	**264**	P	**P**	**09 56 41.9**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=97,slow=7.9,SNR=31						
WRA				LR	LR	10 08 51.8	
	comp=Z,84nm,18.3s,baz=160,slow=35						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**32.18**	**264**	P	**P**	**09 56 41.8**	**-0.6**
AS31	**Alice Springs**	**32.35**	**257**	P	**P**	**09 56 44.6**	**+0.5**
AS31				IAmb	IAmb	09 56 46.3	
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**32.35**	**257**	P	**P**	**09 56 44.4**	**+0.4**
	comp=Z,9.1nm,0.8s,baz=87,slow=8.9,SNR=71						
ASAR				LR	LR	10 10 39.4	
	comp=Z,110nm,18.9s,baz=162,slow=38						
	comp=Z,9.1nm,0.8s						
ASAR	**Alice Springs**	**32.35**	**257**	P	**P**	**09 56 44.3**	**+0.3**
KNRA	**Kununurra**	**38.13**	**270**	P	**P**	**09 57 33.1**	**-0.6**
KNRA				IAmb	IAmb	09 57 39.2	
	comp=Z,14nm,1.3s						
FAKI	**Fak Fak**	**39.39**	**291**	P	**P**	**09 57 43.1**	**-1.3**
PPT2	**Papeete2**	**39.56**	**93**	*e*LR	LR	10 08 23.7	
FITZ	**Fitzroy Crossi**	**40.58**	**265**	P	**P**	**09 57 54.4**	**+0.1**
VNDA	**Vanda**	**57.51**	**182**	LR	LR	10 20 50.3	
	comp=Z,29nm,20.1s,baz=136,slow=32						
VNDA	**Vanda**	**57.51**	**182**	P	**P**	**10 00 02.4**	**-0.8**
SBA	**Scott Base**	**57.75**	**180**	P	**P**	**10 00 05.5**	**+0.6**
SBA				IAmb	IAmb	10 00 35.4	
	comp=Z,6.1nm,1.2s						
QSPA	**South Pole Qui**	**69.91**	**180**	P	**P**	**10 01 26.5**	**+1.2**
QSPA				IAmb	IAmb	10 01 39.1	
	comp=Z,5.5nm,1.3s						
GERES	**GERESS Array B**	**145.01**	**331**	PKP	**PKPbc**	**10 09 51.6**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=66,slow=2.4,SNR=2.3						

IDC ***10*** *10:23:40.8±0.6,34˚.26N×86˚.21E, h0km, mb4.1/17, mbtmp4.1/21, ML3.8/4, MS3.6/49, Error ellipse: s-maj=18.3km s-min=13.3km az=29.0*

BJI ***10*** *10:23:40.0±0.0,34˚.51N×86˚.37E, h6km, mb4.3/29, mB4.6/13, ML3.6/1, Ms4.2/24, Ms7 3.9/23*

NEIC ***10*** *10:23:42.7±2.0,34˚.41N±0˚.10×86˚.1E±0˚.1, h10km±1km, mb4.4/29, Error ellipse: s-maj=19.8km s-min=13.5km az=225.0*

MOS ***10*** *10:23:42.9±1.2,34˚.36N×86˚.18E, h28km, mb4.7/11, Error ellipse: s-maj=10.0km s-min=6.8km az=112.9*

ISC 10 10:23:42.6±0.4,34˚.44N±0˚.05×86˚.21E±0˚.04,h10km,n149, σ1ᵍ88/120,mb4.3/38,MS3.7/50,6C,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.32**	**137**		**Pb**	**10 25 36.0**	**+3.0**
LSA	**Lhasa**	**6.32**	**137**	Pg	Pb	10 25 27.5	-5.5
LSA				Sg	**Sg**	**10 26 59.8**	**-5.7**
LSA				LR	LR		
	comp=N,840nm,5.7s						
LSA				LR	LR		
	comp=E,600nm,5.7s						
LSA				LR	LR		
	comp=Z,730nm,5.7s						
DANN	**Dangsing**	**6.42**	**200**	*e*P	**Pn**	**10 25 20.0**	**+2.5**
	77nm,0.5s						
GUN	**Gumba**	**6.51**	**183**	*e*P	**Pn**	**10 25 20.7**	**+1.9**
	40nm,0.4s						
GKN	**Gorkha**	**6.56**	**192**	*e*P	**Pn**	**10 25 21.1**	**+1.9**
	44nm,0.7s						
KKN	**Kakani**	**6.68**	**187**	*e*P	**Pn**	**10 25 22.9**	**+2.0**
	23nm,0.6s						
JIRN	**Jiri**	**6.76**	**180**	*e*P	**Pn**	**10 25 23.9**	**+1.7**
	53nm,0.4s						
DMN	**Daman**	**6.87**	**188**	*e*P	**Pn**	**10 25 25.8**	**+2.1**
	39nm,0.4s						
PKIN	**Phulchoki**	**6.88**	**186**	*e*P	**Pn**	**10 25 26.1**	**+2.4**
	83nm,0.6s						
PKI	**Pulchoki**	**6.88**	**186**	*e*P	**Pn**	**10 25 26.4**	**+2.5**
	60nm,0.4s						
TAPN	**Taplejung**	**7.18**	**169**	*e*P	**Pn**	**10 25 29.6**	**+1.6**
	132nm,0.7s						
GOMU	**GeErMu**	**7.25**	**74**	P	**Pn**	**10 25 33.3**	**+4.3**
GOMU				pP	Pn	10 25 37.5	+8.5
GOMU				sP	Pn	10 25 38.7	+10
GOMU				S	**Sn**	**10 26 56.1**	**+4.5**
GOMU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,83nm,4.3s						
GOMU				LR	LR		
	comp=N,2μm,7.7s						
GOMU				LR	LR		
	comp=E,1μm,8.9s						
GOMU				LR	LR		
	comp=Z,1μm,10.3s						
GTK	**Tadong**	**7.39**	**163**	*e*P	**Pn**	**10 25 33.1**	**+2.5**
GTK				*i* x	x	10 28 12.1	
RAMN	**Ramite**	**7.47**	**177**	*e*P	**Pn**	**10 25 33.4**	**+1.5**
ODAN	**Odare**	**7.62**	**172**	*e*P	**Pn**	**10 25 35.7**	**+1.7**
SMLA	**Simla**	**8.30**	**249**	*e*P	**Pn**	**10 25 44.9**	**+2.0**
WMQ	**Urumqi**	**9.44**	**7**	*e*P	**Pn**	**10 25 54.7**	**-4.0**
WMQ				LR	LR		
	comp=Z,550nm,11.3s						
WMQ				LR	LR		
	comp=Z,190nm,11.9s						
KSH	**Kashi**	**9.63**	**305**	P	Pn	10 26 08.2	+6.9
GTA	**Gaotai**	**11.96**	**62**	*e*P	**Pn**	**10 26 35.4**	**+2.1**
GTA				pP		10 26 40.7	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GTA				pmax	pmax		
	comp=Z,66nm,4.4s						
GTA				LR	LR		
	comp=Z,1μm,14.2s						
GTA				LR	LR		
	comp=Z,370nm,16.7s						
GTA				LR	LR		
	comp=Z,390nm,15.3s						
AAK	**Ala-Archa**	**12.28**	**315**	LR	LR	10 31 13.0	
	comp=Z,59nm,20.0s,baz=127,slow=36						
AAK	**Ala-Archa**	**12.28**	**315**	*i* P	**Pn**	**10 26 39.1**	**+1.4**
MK31	**Makanchi Array**	**12.69**	**348**	Pn	**Pn**	**10 26 42.1**	**-1.0**
MK31	**Makanchi Array**	**12.69**	**348**	*i* P	**Pn**	**10 26 44.2**	**+1.1**
MKAR	**Makanchi Array**	**12.69**	**348**	Pn	**Pn**	**10 26 44.4**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=164,slow=15,SNR=25						
MKAR				LR	LR	10 32 38.7	
	comp=Z,126nm,21.7s,baz=168,slow=42						
	comp=Z,4.5nm,0.8s						
MKAR	**Makanchi Array**	**12.69**	**348**	Pn	**Pn**	**10 26 41.6**	**-1.5**
GAR	**Garm**	**13.53**	**294**	Pn	**Pn**	**10 26 54.8**	**+0.1**
KBL	**Kabul**	**14.16**	**275**	Pn	**Pn**	**10 27 01.1**	**-2.3**
KBL	**Kabul**	**14.16**	**275**	P	**Pn**	**10 27 01.1**	**-2.3**
CHGR	**Chuyangaron**	**14.33**	**292**		**Pn**	**10 27 05.6**	**-0.1**
CHGR	**Chuyangaron**	**14.33**	**292**	P	**Pn**	**10 27 05.6**	**-0.1**
LZH	**Lanzhou**	**14.51**	**78**	*e*P	**Pn**	**10 27 09.8**	**+1.7**
LZH				pP	P	10 27 16.0	+1.2
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				LR	LR		
	comp=Z,1μm,12.4s						
LZH				LR	LR		
	comp=Z,210nm,10.1s						
LZH				LR	LR		
	comp=Z,310nm,14.3s						
KKAR	**Karatay Array**	**14.97**	**310**	Pn	**Pn**	**10 27 14.3**	**0.0**
KKAR	**Karatay Array**	**14.97**	**310**	P	**Pn**	**10 27 14.3**	**0.0**
PZH	**PanZhiHua**	**15.54**	**116**	P	**Pn**	**10 27 17.2**	**-4.8**
PZH				S	**Sn**	**10 30 10.3**	**-4.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,70nm,4.9s						
PZH				LR	LR		
	comp=Z,570nm,14.4s						
PZH				LR	LR		
	comp=Z,670nm,15.0s						
PZH				LR	LR		
	comp=Z,1μm,18.1s						
KURBB	**Kurchatov Arra**	**17.12**	**343**	P	**Pn**	**10 27 42.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=160,slow=11,SNR=38						
KURBB				LR	LR	10 35 51.2	
	comp=Z,111nm,18.1s,baz=149,slow=42						
	comp=Z,16nm,0.8s						
KURK	**Kurchatov**	**17.18**	**343**	P	**Pn**	**10 27 42.4**	**-0.2**
KURK				IAmb	IAmb	10 27 47.5	
	comp=Z,35nm,1.2s						
KURK	**Kurchatov**	**17.18**	**343**	P	**Pn**	**10 27 42.5**	**-0.1**
HYBB	**Hyderabad (bro**	**18.28**	**204**	*e*P	P	10 28 03.5	+6.9
HYBB				*e*S	S	10 31 40.1	+14
XAN	**Xi'an**	**18.78**	**85**	P	**P**	**10 28 03.1**	**+1.0**
XAN				pP	pP	10 28 07.4	+1.0
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN				pmax	pmax		
	comp=Z,140nm,4.5s						
XAN				LR	LR		
	comp=Z,1μm,14.2s						
XAN				LR	LR		
	comp=Z,580nm,15.3s						
XAN				LR	LR		
	comp=Z,480nm,13.9s						
CRAI	**Chiangrai**	**18.91**	**135**	P	**P**	**10 28 02.3**	**-1.2**
CHTO	**Chiang Mai**	**19.25**	**141**		**P**	**10 28 05.7**	**-1.5**
CHTO	**Chiang Mai**	**19.25**	**141**	P	**P**	**10 28 05.7**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAA0	**Zalesovo Array**	**19.53**	**358**	P	**P**	**10 28 09.4**	**-0.6**
ZAA0				IAmb	IAmb	10 28 12.2	
	comp=Z,17nm,1.2s						
ZALV	**Zalesovo Beam**	**19.53**	**358**	P	**Pn**	**10 28 11.4**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=181,slow=11,SNR=24						
ZALV				LR	LR	10 36 29.0	
	comp=Z,189nm,18.8s,baz=200,slow=39						
	comp=Z,9.9nm,0.9s						
ZALV	**Zalesovo Beam**	**19.53**	**358**	P	**P**	**10 28 10.2**	**+0.2**
ZALV	**Zalesovo Beam**	**19.53**	**358**	*i* P	**Pn**	**10 28 11.3**	**0.0**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**19.55**	**141**	P	**P**	**10 28 10.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=326,slow=11,SNR=30						
CMAR				LR	LR	10 36 32.2	
	comp=Z,148nm,21.8s,baz=330,slow=40						
	comp=Z,2.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**19.55**	**141**		**P**	**10 28 10.5**	**0.0**
CMAR	**Chiang Mai Arr**	**19.55**	**141**	*i* P	**Pn**	**10 28 14.3**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HRA	**Herat**	**19.77**	**277**	P	**P**	**10 28 12.6**	**-0.5**
HRA				IAmb	IAmb	10 28 23.7	
	comp=Z,17nm,1.3s						
SONM	**Songino Array**	**20.18**	**42**	P	Pn	10 28 19.7	+0.5
	comp=Z,8.3nm,0.9s,baz=231,slow=12,SNR=26						
	comp=Z,8.3nm,0.9s						
SONM	**Songino Array**	**20.18**	**42**		**P**	**10 28 18.2**	**+0.9**
ZAK	**Zakamensk**	**20.24**	**33**	*e*P	**P**	**10 28 19.1**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,12nm,1.6s						
ULN	**Ulaanbaatar**	**20.56**	**43**		**P**	**10 28 21.9**	**+0.4**
ULN				IAmb	IAmb	10 28 24.7	
	comp=Z,24nm,1.2s						
ULN	**Ulaanbaatar**	**20.56**	**43**	*ce*P	**P**	**10 28 22.5**	**+1.0**
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC	**Hu-ho-hao-te**	**21.03**	**65**	*e*P	**P**	**10 28 27.4**	**+0.8**
HHC				pmax	pmax		
	comp=Z,47nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,4.9s						
HHC				LR	LR		
	comp=Z,3μm,16.3s						
HHC				LR	LR		
	comp=Z,570nm,13.3s						
HHC				LR	LR		
	comp=Z,710nm,14.0s						
BRVK	**Borovoye**	**21.79**	**334**	P	**P**	**10 28 34.8**	**+0.3**
BRVK				IAmb	IAmb	10 28 44.7	
	comp=Z,10nm,0.9s						
BRVK	**Borovoye**	**21.79**	**334**	*ce*P	**P**	**10 28 36.5**	**+2.0**
BRVK				pmax	pmax		
	comp=Z,28nm,2.0s						
GEYT	**Alibeck**	**22.90**	**287**	P	**P**	**10 28 50.7**	**+4.1**
	comp=Z,3.4nm,0.7s,baz=24,slow=44,SNR=2.3						
GEYT				LR	LR	10 39 38.0	
	comp=Z,490nm,20.2s,baz=102,slow=42						
HNS	**HongShan**	**23.23**	**74**	⇑P	**P**	**10 28 51.5**	**+1.6**
HNS				S	**S**	**10 32 59.0**	**-2.9**
HNS				pmax	pmax		
	comp=Z,15nm,1.3s						
HNS				LR	LR		
	comp=Z,420nm,15.3s						
HNS				LR	LR		
	comp=Z,270nm,9.4s						
ABKAR	**Akbulak array**	**24.37**	**315**	P	**P**	**10 29 01.5**	**+0.7**
UBPT	**Khong Chiam**	**25.79**	**133**	P	**P**	**10 29 13.1**	**-0.7**
AKTO	**Aktyubinsk**	**26.02**	**316**	P	**P**	**10 29 17.0**	**+1.3**
	comp=Z,3.7nm,0.7s,baz=119,slow=7.8,SNR=12						
AKTO				LR	LR	10 40 55.8	
	comp=Z,74nm,18.8s,baz=115,slow=40						
	comp=Z,3.7nm,0.7s						
WSAR	**Wadi Sarin**	**26.53**	**252**	LR	LR	10 41 10.9	
	comp=Z,80nm,19.2s,baz=104,slow=40						
NJ2	**Nanjing**	**27.34**	**86**	*e*P	**P**	**10 29 26.3**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PALK	**Pallekele**	**27.51**	**192**	LR	LR	10 40 42.5	
	comp=Z,82nm,19.4s,baz=137,slow=37						
ARU	**Arti**	**28.98**	**328**	LR	LR	10 42 34.3	
	comp=Z,181nm,18.4s,baz=126,slow=39						
CN2	**Changchun**	**31.60**	**61**	*e*P	**P**	**10 30 06.0**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
INCN	**Inchon**	**32.69**	**73**	P	**P**	**10 30 15.1**	**0.0**
INCN	**Inchon**	**32.69**	**73**	P	**P**	**10 30 15.1**	**0.0**
INCN				pmax	pmax		
	comp=Z,17nm,0.9s						
BELG	**Belogornoye**	**32.78**	**315**	LR	LR	10 44 34.7	
	comp=Z,82nm,20.4s,baz=142,slow=38						
BELG	**Belogornoye**	**32.78**	**315**	*i* P	**P**	**10 30 17.2**	**+1.6**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GNI	**Garni**	**33.25**	**292**	LR	LR	10 46 18.6	
	comp=Z,69nm,20.1s,baz=104,slow=41						
PSI	**Prapat**	**33.63**	**157**	LR	LR	10 45 36.6	
	comp=Z,101nm,21.1s,baz=313,slow=39						
KS19	**Wonju Array Si**	**33.66**	**73**	P	**P**	**10 30 23.9**	**+0.3**
KS19				IAmb	IAmb	10 30 25.0	
	comp=Z,3.5nm,0.8s						
KSAR	**Wonju Array Be**	**33.68**	**73**	P	**P**	**10 30 23.1**	**-0.6**
KSAR	**Wonju Array Be**	**33.68**	**73**	P	**P**	**10 30 23.1**	**-0.6**
KSRS	**Korea Array**	**33.71**	**73**	P	**P**	**10 30 23.8**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=275,slow=9.7,SNR=20						
	comp=Z,2.5nm,0.7s						
SEHB	**SEOHWA**	**33.87**	**71**	P	**P**	**10 30 25.0**	**-0.3**
SEHB				IAmb	IAmb	10 30 26.5	
	comp=Z,6.1nm,0.8s						
KBZ	**Khabaz**	**34.54**	**299**	LR	LR	10 47 59.7	
	comp=Z,91nm,19.1s,baz=91,slow=42						
ZEA	**Zeya**	**34.60**	**43**	*e*P	**P**	**10 30 28.6**	**-2.9**
ZEA				MLR	MLR		
	comp=E,200nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
KIV	**Kislovodsk**	**34.69**	**299**	*e*P	**P**	**10 30 32.1**	**-0.5**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,45nm,16.0s						
NRIK	**Noril'sk**	**34.96**	**1**	P	**P**	**10 30 36.2**	**+1.8**
	comp=Z,24nm,0.8s,baz=164,slow=6.6,SNR=22						
	comp=Z,24nm,0.8s						
NRIK	**Noril'sk**	**34.96**	**1**	P	**P**	**10 30 35.6**	**+1.2**
USRK	**Ussuriysk Ar.**	**36.32**	**60**	P	**P**	**10 30 47.2**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=249,slow=7.3,SNR=5.3						
	comp=Z,1.5nm,0.6s						
KLR	**Kul'dur**	**36.43**	**52**	P	**P**	**10 30 48.2**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=287,slow=8.7,SNR=8.8						
	comp=Z,2.7nm,0.8s						
JOW	**Kunigami**	**36.78**	**90**	LR	LR	10 46 45.6	
	comp=Z,139nm,20.8s,baz=152,slow=38						
YAK	**Yakutsk**	**38.81**	**31**	LR	LR	10 46 48.3	
	comp=Z,29nm,21.1s,baz=242,slow=36						
OBN	**Obninsk**	**39.80**	**317**	LR	LR	10 49 36.5	
	comp=Z,24nm,19.0s,baz=167,slow=39						
OBN	**Obninsk**	**39.80**	**317**	⇑*e*P	**P**	**10 31 17.2**	**+1.6**
OBN				*e*		10 32 49.0	
OBN				*e*S	**S**	**10 37 10.7**	**-8.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,84nm,21.0s						
SBUM	**Sibu**	**40.01**	**137**	P	**P**	**10 31 17.9**	**+0.2**
SBUM				IAmb	IAmb	10 31 20.2	
	comp=Z,6.7nm,1.2s						
BRTR	**Keskin Array B**	**41.77**	**293**	P	**P**	**10 31 34.1**	**+1.8**
	comp=Z,0.9nm,0.9s,baz=71,slow=14,SNR=2.6						
	comp=Z,0.9nm,0.9s						
MMAI	**Mount Meron Ar**	**41.91**	**283**	LR	LR	10 53 20.6	
	comp=Z,68nm,19.2s,baz=228,slow=42						
MJAR	**Matsushiro Arr**	**41.97**	**72**	P	**P**	**10 31 33.4**	**-0.4**
	comp=Z,2.1

MNK				*i* S	**S**	**10 38 31.2**	**-1.2**		
MNK				*i* SS	**ScS**	**10 41 53.0**	**-0.3**		
MNK				*i* SSS	SSS	10 42 35.6			
MNK				*i* LQ	LQ	10 47 20.9			
MNK				*i* LR	LR	10 50 45.0			
MNK				*i* LRM	MLR	10 52 44.6			
	comp=E,13nm,17.9s								
MNK				*i* LRM	MLR	10 52 54.8			
	comp=N,14nm,16.6s								
MNK				*i* LRM	MLR	10 53 22.3			
	comp=Z,52nm,15.9s								
DAV	**Davao City (W)**	**45.34**	**118**	LR	LR	10 51 55.4			
	comp=Z,87nm,18.3s,baz=219,slow=38								
FINES	**FINESS Array B**	**46.25**	**325**	P	**P**	**10 32 08.1**	**+0.3**		
	comp=Z,1.3nm,0.7s,baz=73,slow=4.8,SNR=1.5								
FINES				LR	LR	10 54 45.4			
	comp=Z,27nm,18.1s,baz=83,slow=40								
	comp=Z,1.3nm,0.7s								
MLR	**Muntele Rosu**	**46.49**	**303**	LR	LR	10 54 34.1			
	comp=Z,74nm,20.6s,baz=70,slow=40								
BUR08	**Bucovina Ar. S**	**46.72**	**306**	P	**P**	**10 32 10.9**	**-0.8**		
ARCES	**ARCESS Array B**	**47.99**	**336**	LR	LR	10 53 39.2			
	comp=Z,66nm,19.7s,baz=90,slow=37								
JCJ	**Chichijima**	**48.14**	**83**	LR	LR	10 53 33.2			
	comp=Z,34nm,18.8s,baz=96,slow=37								
MA2	**Magadan**	**48.30**	**38**	LR	LR	10 54 16.4			
	comp=Z,100nm,19.8s,baz=280,slow=38								
SEY	**Seymchan**	**49.21**	**34**	*ce*P	**P**	**10 32 31.2**	**+0.5**		
SEY				pmax	pmax				
	comp=Z,9.0nm,1.6s								
KAPI	**Kappang**	**50.41**	**134**	LR	LR	10 56 13.5			
	comp=Z,47nm,20.1s,baz=302,slow=39								
VRAC	**Vranov**	**52.12**	**309**	LR	LR	10 59 00.4			
	comp=Z,71nm,18.4s,baz=77,slow=41								
HFS	**Hagfors**	**52.29**	**323**	LR	LR	10 56 52.1			
	comp=Z,107nm,20.9s,baz=96,slow=38								
PETK	**Petropavlovsk-**	**52.60**	**46**	LR	LR	10 56 42.9			
	comp=Z,118nm,19.2s,baz=273,slow=38								
NOA	**NORSAR Array B**	**53.42**	**324**	P	**P**	**10 33 02.4**	**+0.1**		
	comp=Z,0.7nm,0.5s,baz=84,slow=7.2,SNR=3.2								
NOA				LR	LR	10 57 17.5			
	comp=Z,79nm,19.7s,baz=75,slow=38								
	comp=Z,0.7nm,0.5s								
GERES	**GERESS Array B**	**54.07**	**309**	P	**P**	**10 33 08.3**	**+1.0**		
	comp=Z,1.3nm,0.8s,baz=72,slow=6.0,SNR=6.4								
	comp=Z,1.3nm,0.8s								
CUC	**Castrocucco**	**55.01**	**298**	P	**P**	**10 33 12.2**	**-2.0**		
VAE	**Valguarnera**	**56.87**	**296**	LR	LR	11 04 47.1			
	comp=Z,50nm,18.8s,baz=167,slow=43								
DAVOX	**Davos/Dischmat**	**57.10**	**307**	LR	LR	11 00 41.4			
	comp=Z,94nm,20.4s,baz=83,slow=39								
EKA	**Eskdalemuir Ar**	**62.15**	**320**	LR	LR	11 02 27.0			
	comp=Z,104nm,19.0s,baz=44,slow=37								
BORG	**Borgarnes**	**66.31**	**333**	LR	LR	11 02 43.3			
	comp=Z,36nm,19.7s,baz=42,slow=35								
ESDC	**Sonseca Array**	**69.14**	**304**	P	**P**	**10 34 49.1**	**-0.1**		
	comp=Z,1.5nm,0.8s,baz=47,slow=5.2,SNR=7.4								
ESDC				LR	LR	11 07 37.8			
	comp=Z,29nm,18.4s,baz=180,slow=38								
	comp=Z,1.5nm,0.8s								
WRA	**Warramunga Arr**	**70.85**	**132**	P	**P**	**10 34 58.5**	**-1.3**		
	comp=Z,0.9nm,0.6s,baz=326,slow=6.5,SNR=20								
	comp=Z,0.9nm,0.6s								
WRA	**Warramunga Arr**	**70.85**	**132**	*i* P	**P**	**10 35 00.4**	**+0.6**		
WRA				pmax	pmax				
	comp=Z,1.0nm,0.6s								
RES	**Resolute Bay**	**71.15**	**0**	LR	LR	11 07 44.9			
	comp=Z,40nm,20.2s,baz=27,slow=37								
H24K	**Noodor Dome**	**71.73**	**21**	P	**P**	**10 35 05.5**	**+0.9**		
H24K				IAmb	IAmb	10 35 30.7			
	comp=Z,3.7nm,1.4s								
I23K	**Minto, Yukon-K**	**71.78**	**22**	P	**P**	**10 35 05.6**	**+0.9**		
I23K				IAmb	IAmb	10 35 28.5			
	comp=Z,3.0nm,1.2s								
L19K	**White Mountain**	**71.97**	**26**	P	**P**	**10 35 07.3**	**+1.3**		
L19K				IAmb	IAmb	10 35 08.4			
	comp=Z,2.0nm,0.8s								
WRH	**Wood River Hil**	**72.64**	**22**	P	**P**	**10 35 10.7**	**+0.7**		
ILAR	**Eielson Array**	**72.79**	**21**	P	**P**	**10 35 10.7**	**-0.2**		
	comp=Z,1.1nm,0.8s,baz=305,slow=5.1,SNR=12								
ILAR				LR	LR	11 09 56.0			
	comp=Z,56nm,18.6s,baz=278,slow=38								
	comp=Z,1.1nm,0.8s								
N19K	**Bonanza Creek**	**73.00**	**27**	P	**P**	**10 35 12.1**	**-0.2**		
N19K				IAmb	IAmb	10 35 17.8			
	comp=Z,6.3nm,1.2s								
INK	**Inuvik**	**73.36**	**14**	LR	LR	11 11 48.9			
	comp=Z,6.6nm,19.3s,baz=334,slow=39								
ASAR	**Alice Springs**	**73.42**	**135**	P	**P**	**10 35 13.8**	**-1.3**		
	comp=Z,0.9nm,0.8s,baz=323,slow=5.9,SNR=11								
	comp=Z,0.9nm,0.8s								
SFJD	**Kangerlussuaq**	**73.69**	**344**	LR	LR	11 12 38.7			
	comp=Z,34nm,18.3s,baz=48,slow=40								
J26L	**Joseph Creek**	**73.95**	**20**	P	**P**	**10 35 17.9**	**0.0**		
J26L				IAmb	IAmb	10 35 18.6			
	comp=Z,2.3nm,0.7s								
DOT	**Dot Lake**	**74.45**	**21**	P	**P**	**10 35 20.6**	**-0.1**		
BCAR	**Beaver Creek A**	**75.56**	**20**	P	**P**	**10 35 28.3**	**+1.1**		
KDAK	**Kodiak Island**	**75.76**	**28**	P	**P**	**10 35 28.4**	**+0.2**		
KDAK	**Kodiak Island**	**75.76**	**28**	P	**P**	**10 35 28.4**	**+0.2**		
KDAK				pmax	pmax				
	comp=Z,12nm,1.5s								
TORD	**Torodi Ar. Bea**	**78.22**	**278**	P	**P**	**10 35 42.2**	**-0.6**		
	comp=Z,1.1nm,0.7s,baz=42,slow=4.3,SNR=7.4								
	comp=Z,1.1nm,0.7s								
FRB	**Frobisher Bay**	**80.11**	**349**	LR	LR	11 14 07.8			
	comp=Z,44nm,21.8s,baz=17,slow=38								
YKA	**Yellowknife Ar**	**81.96**	**10**	LR	LR	11 14 23.3			
	comp=Z,33nm,20.8s,baz=336,slow=37								
DLBC	**Dease Lake**	**82.64**	**18**	LR	LR	11 15 36.2			
	comp=Z,53nm,18.5s,baz=286,slow=38								
STKA	**Stephens Creek**	**84.06**	**135**	LR	LR	11 22 49.5			
	comp=Z,39nm,18.2s,baz=207,slow=42								
DBIC	**Dimbokro**	**87.15**	**276**	P	**P**	**10 36 29.0**	**-0.3**		
DBIC				LR	LR	11 18 05.2			
	comp=Z,50nm,18.6s,baz=97,slow=37								
	comp=Z,4.0nm,0.6s								
SCHQ	**Schefferville**	**88.11**	**345**	LR	LR	11 20 46.3			
	comp=Z,36nm,20.0s,baz=83,slow=39								
SUR	**Sutherland**	**90.51**	**230**	LR	LR	11 15 53.3			
	comp=Z,26nm,19.7s,baz=78,slow=35								
YBH	**Yreka Blue Hor**	**99.68**	**22**	LR	LR	11 25 49.8			
	comp=Z,20nm,18.9s,baz=2.0,slow=37								
CPUP	**Villa Florida**	**147.66**	**274**	PKPbc	**PKiKP**	**10 43 28.6**	**-1.0**		
	comp=Z,1.4nm,0.7s,baz=90,slow=4.7,SNR=3.4								

*IDC **10** 10:27:25.3±2.4,34°.15N×86°.12E,h0km,mb3.5/3, mbtmp3.6/6,ML2.8/3,Error ellipse: s-maj=59.7km s-min=26.7km az=69.0*

ISC 10 10:27:28.4±1.8,34°.4N±0°.2×86°.3E±0°.3,h10km,n7,σ1$71/7, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.78**	**348**	Pn	**Pn**	**10 30 29.9**	**-0.3**
	baz=173,slow=13,SNR=2.7						
	1.2nm,0.9s						
KURBB	**Kurchatov Arra**	**17.21**	**343**	P	**Pn**	**10 31 30.4**	**+1.6**
	baz=158,slow=11,SNR=8.4						
	3.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**19.46**	**141**	P	**P**	**10 31 57.5**	**+2.1**
	0.6nm,0.4s,baz=326,slow=12,SNR=5.5						
ZALV	**Zalesovo Beam**	**19.61**	**357**	P	**P**	**10 31 56.3**	**-0.5**
	0.1nm,0.3s,baz=180,slow=10,SNR=2.7						
	1.1nm,0.7s						
SONM	**Songino Array**	**20.21**	**42**	P	**P**	**10 32 04.6**	**+1.1**
	1.3nm,0.8s,baz=230,slow=13,SNR=4.2						
	1.3nm,0.8s						
KSRS	**Korea Array**	**33.70**	**72**	P	**P**	**10 34 09.0**	**-0.7**
	0.5nm,0.5s,baz=279,slow=8.1,SNR=2.4						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**70.77**	**132**	P	**P**	**10 38 43.4**	**-1.7**
	0.4nm,0.9s,baz=324,slow=6.4,SNR=7.2						
	0.4nm,0.9s						

IDC 10 10:27:56.2±1.5,30°.91S×59°.36E,h0km,mb3.8/4, mbtmp3.8/5,ML3.9/1,MS3.5/1,Error ellipse: s-maj=41.5km s-min=34.8km az=126.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.51**	**315**	Pn	P	10 31 51.0	-1.2
	baz=125,slow=14,SNR=2.2						
	2.4nm,0.6s						

H08S1	**Diego Carcia H**	**26.19**	**31**	T	T	11 00 50.1	
	baz=205						
H08S2	**Diego Garcia H**	**26.20**	**31**	T	T	11 00 50.8	
	baz=205,slow=74,SNR=3.1						
H08S3	**Diego Garcia H**	**26.21**	**31**	T	T	11 00 49.0	
	baz=205,slow=74,SNR=4.1						
H01W2	**Cape Leeuwin H**	**45.68**	**110**	T	T	11 25 09.7	
	baz=258,slow=74,SNR=7.6						
H01W3	**Cape Leeuwin H**	**45.69**	**110**	T	T	11 25 06.7	
	baz=258,slow=74,SNR=8.7						
H01W1	**Cape Leeuwin H**	**45.70**	**110**	T	T	11 25 05.5	
	baz=258,slow=74,SNR=8.5						
LEM	**Lembang**	**51.05**	**72**	LR	LR	10 54 37.4	
	comp=Z,50nm,19.1s,baz=235,slow=31						
SNAA	**Sanae**	**52.29**	**201**	P	P	10 37 08.7	-0.5
	1.1nm,0.9s,baz=68,slow=11,SNR=3.9						
	1.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**62.10**	**43**	P	P	10 38 18.2	-0.8
	1.0nm,0.4s,baz=236,slow=6.4,SNR=5.8						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**65.54**	**104**	P	P	10 38 41.1	-0.9
	0.6nm,0.9s,baz=236,slow=6.6,SNR=2.2						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**67.49**	**100**	P	P	10 38 56.0	+1.5
	0.9nm,1.0s,baz=225,slow=7.7,SNR=5.7						
	0.9nm,1.0s						

NNC 10 10:54:50.7±3.0,51°.77N×75°.84E,h0km,mb3.6,mpv3.1, 1C-3D,Error ellipse: s-maj=23.5km s-min=19.0km az=19.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.04**	**123**	⇑Pg	Pb	10 55 28.4	-0.3
	5.5nm,0.3s,baz=304,slow=18						
KURBB				⇓Lg	Lg	10 55 55.3	
	25nm,0.5s,baz=306,slow=29						
BVA0	**Borovoye Array**	**3.57**	**293**	⇓Lg	Lg	10 56 43.1	
	3.6nm,0.8s						
MK31	**Makanchi Array**	**6.52**	**137**	⇓Lg	Lg	10 58 09.9	
	0.9nm,0.6s,baz=323,slow=26,SNR=3.2						

IDC 10 11:03:11.4±1.8,4°.43S×150°.89E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=62.7km s-min=11.1km az=165.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.14**	**84**	Pg	Pn	11 03 34.8	+0.1
	58nm,0.3s,baz=250,slow=1.9,SNR=69						
KRVT				Lg	Lg	11 03 47.7	
	316nm,0.3s,baz=156,slow=20,SNR=27						
WRA	**Warramunga Arr**	**22.31**	**225**	P	P	11 08 10.9	+0.1
	0.9nm,0.6s,baz=51,slow=10.0,SNR=17						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**25.18**	**219**	P	P	11 08 37.9	-1.0
	0.7nm,0.7s,baz=51,slow=10,SNR=5.7						
	0.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**28.18**	**239**	P	P	11 09 07.3	+1.4
	1.7nm,1.0s,baz=63,slow=9.0,SNR=1.8						
	1.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**148.38**	**288**	PKPbc	PKPbc	11 22 59.5	-1.5
	0.6nm,0.9s,baz=84,slow=3.3,SNR=4.0						

*NEIC **10** 11:04:49.8±0.8,35°.67N±0°.03×97°.19W±0°.02,h7km±6km, Error ellipse: s-maj=5.6km s-min=0.9km az=149.0*
*ANF **10** 11:04:49.5±0.2,35°.68N×97°.18W,h5km,ML4.6/18, Error ellipse: s-maj=2.3km s-min=2.0km az=128.0*
*TUL **10** 11:04:49.5±0.8,35°.66N±0°.02×97°.18W±0°.02,h5km±6km, ML4.2,mb_Lg4.0/116(NEIC),Mwr3.6/27(SLM), Error ellipse: s-maj=2.9km s-min=1.4km az=150.0*
*NEIC **10** 11:04:49.5,35°.68N×97°.19W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.00; $M_{\theta\theta}$2.41; $M_{\phi\phi}$-2.41; $M_{r\theta}$0.12; $M_{r\phi}$-2.02; $M_{\theta\phi}$-0.25; Fault plane solution: $M_0$3.16000×10^{14} NP1:ϕs155.00000°,δ90.00000°, λ5.00000°. Principal axes: T 3.1566, Plg4.0000°, Azm20.0000°; N 0.0001, Plg85.0000°, Azm155.0000°; P -3.1567, Plg4.0000°, Azm290.0000°;*

ISC 10 11:04:49.2±0.8,35°.66N±0°.02×97°.18W±0°.02,h8km±5km, n140,σ0$77/134,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.01**	**234**	Pg	**Pg**	**11 04 50.6**	**-0.1**
OK005				Sg	**Sg**	**11 04 51.4**	**-0.3**
OK025	**Westminster Rd**	**0.15**	**238**	Pg	**Pg**	**11 04 52.9**	**+0.4**
OK025				Sg	**Sg**	**11 04 55.4**	**+0.7**
OK009	**Oakdale Elemen**	**0.22**	**248**	Pg	**Pg**	**11 04 54.2**	**+0.6**
OK009				Sg	**Sg**	**11 04 57.5**	**+0.9**
OK029	**Liberty Lake**	**0.26**	**301**	Pg	**Pg**	**11 04 54.9**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**0.33**	**220**	Pg	**Pg**	**11 04 56.2**	**+0.4**
OKCSW				Sg	**Sg**	**11 05 01.2**	**+1.0**
BCOK	**Bluff Creek, N**	**0.35**	**269**	Pg	**Pg**	**11 04 56.4**	**+0.3**
BCOK				Sg	**Sg**	**11 05 01.7**	**+1.0**
OK031	**S. Brethren Rd**	**0.40**	**43**	Pg	**Pg**	**11 04 57.7**	**+0.7**
OK031				Sg	**Sg**	**11 05 03.6**	**+1.3**
OK030	**Cody Creek RV**	**0.41**	**50**	Pg	**Pg**	**11 04 58.0**	**+0.7**
OK030				Sg	**Sg**	**11 05 04.1**	**+1.3**
OK011	**Prague**	**0.44**	**114**	Pg	**Pg**	**11 04 58.5**	**+0.8**
FNO	**Franklin**	**0.44**	**204**	Pg	**Pg**	**11 04 58.2**	**+0.4**
OK034	**N. Norfolk Rd.**	**0.51**	**47**	Pg	**Pg**	**11 04 59.7**	**+0.6**
DEOK	**Depew**	**0.58**	**72**	Pg	**Pg**	**11 05 01.0**	**+0.6**
QUOK	**Quay**	**0.64**	**37**	Pg	**Pg**	**11 05 01.9**	**+0.4**
QUOK				IAmb_Lg		11 05 10.7	
	comp=Z,530nm,0.8s						
CROK	**Carrier**	**1.06**	**322**	Pg	**Pg**	**11 05 09.4**	**-0.2**
BLOK	**Blackwell**	**1.10**	**358**	Pg	**Pg**	**11 05 10.0**	**-0.2**
BLOK				IAmb_Lg		11 05 24.6	
	comp=Z,185nm,0.9s						
TUL1	**Leonard**	**1.15**	**77**	Pg	**Pg**	**11 05 10.6**	**-0.8**
TUL1	**Leonard**	**1.15**	**77**	P	**Pg**	**11 05 10.5**	**-0.9**
	baz=259,SNR=217						
TUL1				S	**Sb**	**11 05 26.9**	**+0.4**
	baz=259						
X34A	**Smith Ranch, M**	**1.19**	**207**	Pg	**Pg**	**11 05 11.9**	**-0.1**
CSTR	**Hydro, Custer**	**1.23**	**270**	Pg	**Pb**	**11 05 12.4**	**-0.3**
GC02	**Grant County #**	**1.31**	**335**		**Pn**	**11 05 13.8**	**+0.1**
T35A	**Sooner Cattle**	**1.36**	**23**	Pn	**Pn**	**11 05 14.3**	**-0.2**
T35A				IAmb_Lg		11 05 34.4	
	comp=Z,504nm,0.8s						
T35B	**Sooner Cattle**	**1.36**	**23**	P	**Pn**	**11 05 14.4**	**-0.2**
	baz=204,SNR=620						
T35B				S	**Sg**	**11 05 33.3**	**+0.3**
	baz=204						
KAN13	**South Haven SW**	**1.37**	**350**		**Pn**	**11 05 14.8**	**+0.1**
OK032	**Salt Plains WL**	**1.41**	**324**		**Pn**	**11 05 15.4**	**+0.2**
KAN14	**Manchester OK**	**1.44**	**334**		**Pn**	**11 05 15.9**	**+0.3**
KAN17	**Caldwell West**	**1.46**	**341**		**Pb**	**11 05 16.6**	**0.0**
OK038	**West end E0370**	**1.51**	**303**		**Pn**	**11 05 16.7**	**+0.2**
KAN05	**Bluff City Nor**	**1.55**	**339**		**Pb**	**11 05 18.0**	**-0.1**
KAN01	**Argonia South**	**1.56**	**343**		**Pb**	**11 05 18.0**	**-0.3**
KS20	**Mayfield South**	**1.59**	**349**		**Pb**	**11 05 18.4**	**-0.5**
KS20				IAmb_Lg		11 05 42.0	
	comp=Z,436nm,0.8s						
WMOK	**Wichita Mounta**	**1.60**	**235**	Pn	**Pn**	**11 05 18.2**	**+0.3**
WMOK	**Wichita Mounta**	**1.60**	**235**	P	**Pn**	**11 05 18.1**	**+0.2**
	baz=54,SNR=508						
WMOK				S	**Sb**	**11 05 39.7**	**+0.2**
	baz=54						
OK035	**E0210 Rd and N**	**1.62**	**311**		**Pn**	**11 05 18.6**	**+0.5**
OK035				IAmb_Lg		11 05 41.5	
	comp=Z,404nm,0.9s						
KAN10	**Anthony SW Sta**	**1.64**	**333**		**Pb**	**11 05 19.1**	**-0.5**
U32A	**Winter Ranch,**	**1.64**	**296**		**Pn**	**11 05 19.1**	**+0.7**
U32A	**Winter Ranch,**	**1.64**	**296**	P	**Pn**	**11 05 19.1**	**+0.7**
	baz=115,SNR=99						
U32A				S	**Sb**	**11 05 41.2**	**+0.6**
	baz=115						
KS21	**Milan North St**	**1.67**	**347**	Pn	**Pb**	**11 05 19.7**	**-0.4**
LOOK	**Love County**	**1.67**	**180**		**Pn**	**11 05 19.7**	**+1.0**
LOOK				IAmb_Lg		11 05 43.9	
	comp=Z,448nm,0.9s						
KAN06	**Argonia West S**	**1.67**	**341**		**Pn**	**11 05 19.5**	**+0.7**
KAN06				IAmb_Lg		11 05 44.2	
	comp=Z,642nm,1.1s						
KAN08	**Anthony NE Sta**	**1.69**	**338**		**Pn**	**11 05 19.6**	**+0.6**
KAN08				IAmb_Lg		11 05 44.6	
	comp=Z,573nm,0.9s						
KAN16	**Harper SW Stat**	**1.72**	**336**		**Pb**	**11 05 20.6**	**-0.4**

NOKA	**Waynoka**	**1.72**	**305**		**Pn**	**11 05 20.3**	**+0.8**
NOKA				IAmb_Lg		11 05 44.2	
	comp=Z,232nm,0.9s						
RLO	**Rose Lookout**	**1.82**	**73**	Pn	**Pn**	**11 05 21.6**	**+0.8**
X37A	**Clayton**	**1.83**	**125**	Pn	**Pn**	**11 05 22.0**	**+1.1**
X37A				IAmb_Lg		11 05 48.7	
	comp=Z,680nm,0.9s						
X37A	**Clayton**	**1.83**	**125**	P	**Pn**	**11 05 22.0**	**+1.1**
	baz=307,SNR=226						
X37A				S	**Sb**	**11 05 46.7**	**+0.8**
	baz=307						
Z35A	**Perchaven, San**	**2.33**	**182**		**Pn**	**11 05 28.8**	**+1.0**
Z35A	**Perchaven, San**	**2.33**	**182**	P	**Pn**	**11 05 29.3**	**+1.5**
	baz=1.3,SNR=46						
Z35A				S	**Sb**	**11 05 59.2**	**-1.0**
	baz=1.3						
U38A	**Gravette**	**2.39**	**70**	Pn	**Pn**	**11 05 29.9**	**+1.2**
U38A	**Gravette**	**2.39**	**70**	P	**Pn**	**11 05 30.0**	**+1.4**
	baz=252,SNR=113						
HHAR	**Hobbs**	**2.70**	**76**		**Pn**	**11 05 33.4**	**+0.5**
HHAR				IAmb_Lg		11 06 21.9	
	comp=Z,272nm,0.7s						
HHAR	**Hobbs**	**2.70**	**76**	P	**Pn**	**11 05 34.1**	**+1.2**
	baz=258						
Z38A	**Mt. Pleasant**	**3.00**	**142**		**Pn**	**11 05 37.8**	**+0.7**
Z38A				IAmb_Lg		11 06 33.0	
	comp=Z,453nm,0.8s						
Z38A	**Mt. Pleasant**	**3.00**	**142**	P	**Pn**	**11 05 38.7**	**+1.6**
	baz=324						
R32A	**Long Quarter,**	**3.02**	**336**	P	**Pn**	**11 05 39.7**	**+2.4**
	baz=156						
R32A				S	**Sn**	**11 06 15.3**	**+1.8**
	baz=156						
MIAR	**Mount Ida**	**3.16**	**110**		**Pn**	**11 05 40.3**	**+1.1**
MIAR				IAmb_Lg		11 06 38.3	
	comp=Z,392nm,0.8s						
MIAR	**Mount Ida**	**3.16**	**110**	P	**Pn**	**11 05 40.8**	**+1.6**
	baz=292,SNR=85						
KSU1	**Kansas State U**	**3.46**	**7**	Pn	**Pn**	**11 05 44.0**	**+0.6**
KSU1				IAmb_Lg		11 06 45.2	
	comp=Z,330nm,0.8s						
KSU1	**Kansas State U**	**3.46**	**7**	P	**Pn**	**11 05 44.4**	**+1.0**
	baz=188,SNR=13						
ABTX	**Abilene, Hawle**	**3.66**	**215**		**Pn**	**11 05 46.6**	**+0.5**
ABTX	**Abilene, Hawle**	**3.66**	**215**	P	**Pn**	**11 05 46.9**	**+0.8**
	baz=33,SNR=5.5						
WHTX	**Lake Whitney,**	**3.67**	**184**		**Pn**	**11 05 46.8**	**+0.6**
S39A	**Bolivar**	**3.70**	**56**	Pn	**Pn**	**11 05 47.4**	**+0.7**
S39A				IAmb_Lg		11 06 48.5	
	comp=Z,559nm,0.9s						
S39A	**Bolivar**	**3.70**	**56**	P	**Pn**	**11 05 47.5**	**+0.7**
	baz=238,SNR=35						
CBKS	**Cedar Bluff**	**3.75**	**328**	IAmb_Lg		11 06 56.6	
	comp=Z,308nm,0.9s						
237A	**Washetta, Mont**	**3.83**	**162**		**Pn**	**11 05 49.4**	**+1.1**
237A				IAmb_Lg		11 06 59.5	
	comp=Z,288nm,0.9s						
237A	**Washetta, Mont**	**3.83**	**162**	P	**Pn**	**11 05 49.3**	**+1.0**
	baz=343						
WLAR	**White Oak Lake**	**3.89**	**119**		**Pn**	**11 05 50.0**	**+0.8**
WLAR				IAmb_Lg		11 06 55.7	
	comp=Z,223nm,0.8s						
WHAR	**Wooly Hollow**	**4.01**	**94**		**Pn**	**11 05 51.8**	**+0.9**
WHAR				IAmb_Lg		11 07 02.7	
	comp=Z,424nm,1.0s						
UALR	**University of**	**4.06**	**101**		**Pn**	**11 05 52.9**	**+1.4**
UALR				IAmb_Lg		11 07 02.9	
	comp=Z,508nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.12**	**85**		**Pn**	**11 05 53.0**	**+0.6**
FCAR				IAmb_Lg		11 07 04.5	
	comp=Z,572nm,0.8s						
MGMO	**Mountain Grove**	**4.23**	**68**	IAmb_Lg		11 07 03.8	
	comp=Z,428nm,0.8s						
Z41A	**Richland Creek**	**4.34**	**122**	Pn	**Pn**	**11 05 55.9**	**+0.5**
Z41A	**Richland Creek**	**4.34**	**122**	P	**Pn**	**11 05 55.9**	**+0.5**
	baz=305						
Z41A				P	**Pn**	**11 05 55.9**	**+0.5**
	baz=305						
NATX	**Nacogdoches**	**4.42**	**151**		**Pn**	**11 05 57.3**	**+0.8**
R40A	**Maddies Statio**	**4.72**	**55**		**Pn**	**11 06 01.3**	**+0.5**
R40A				IAmb_Lg		11 07 29.2	
	comp=Z,373nm,0.8s						
R40A	**Maddies Statio**	**4.72**	**55**	P	**Pn**	**11 06 01.4**	**+0.7**
	baz=238,SNR=17						
CCAR	**Cane Creek**	**4.78**	**110**		**Pn**	**11 06 01.9**	**+0.4**
CCAR				IAmb_Lg		11 07 21.5	
	comp=Z,162nm,0.8s						
435B	**Jarrell**	**4.88**	**184**	IAmb_Lg		11 07 31.5	
	comp=Z,119nm,0.7s						
P38A	**Dawn**	**4.90**	**35**		**Pn**	**11 06 03.9**	**+0.7**
P38A				IAmb_Lg		11 07 31.9	
	comp=Z,437nm,0.9s						
P38A	**Dawn**	**4.90**	**35**	P	**Pn**	**11 06 03.9**	**+0.7**
	baz=217,SNR=12						
LCAR	**Lake Charles**	**4.91**	**84

ISCO	**Idaho Springs**	**7.86**	**304**	Pn	**Pn**	**11 06 44.5**	**+0.4**
ISCO				IAmb_Lg		11 09 10.5	
	comp=Z,65nm,1.2s						
L40A	**Anamosa**	**7.90**	**34**		**Pn**	**11 06 44.1**	**-0.2**
L40A				IAmb_Lg		11 09 04.2	
	comp=Z,183nm,0.7s						
HDIL	**Hopedale**	**7.90**	**49**		**Pn**	**11 06 44.4**	**0.0**
Z47A	**Carrollton**	**7.92**	**105**	Pn	**Pn**	**11 06 44.8**	**+0.3**
ECSD	**EROS Data Cent**	**8.07**	**3**	Pn	**Pn**	**11 06 45.6**	**-1.1**
ECSD				IAmb_Lg		11 09 18.6	
	comp=Z,67nm,0.8s						
Y22D	**IRIS PASSCAL I**	**8.16**	**262**	IAmb_Lg		11 09 27.0	
	comp=Z,115nm,1.2s						
O44A	**Mansfield**	**8.21**	**54**	IAmb_Lg		11 09 21.5	
	comp=Z,268nm,0.7s						
T47A	**Sharon Grove**	**8.24**	**78**	Pn	**Pn**	**11 06 49.8**	**+0.8**
TX31	**Lajitas Ar. Si**	**8.36**	**223**		**Pn**	**11 06 51.1**	**+0.3**
TX32	**Lajitas Array**	**8.36**	**223**		**Pn**	**11 06 50.8**	**+0.1**
X48A	**Hartselle**	**8.40**	**95**	Pn	**Pn**	**11 06 51.1**	**0.0**
PHWY	**Pilot Hill**	**8.59**	**313**		**Pn**	**11 06 53.3**	**-0.8**
L42A	**Oliver, Polo**	**8.62**	**41**		**Pn**	**11 06 53.8**	**-0.4**
L42A				IAmb_Lg		11 09 24.0	
	comp=Z,273nm,0.9s						
L42A	**Oliver, Polo**	**8.62**	**41**	P	**Pn**	**11 06 54.3**	**+0.1**
	baz=225,SNR=13						
N23A	**Red Feather La**	**8.65**	**310**	Pn	**Pn**	**11 06 55.1**	**+0.3**
N23A				IAmb_Lg		11 09 30.7	
	comp=Z,122nm,1.0s						
LRAL	**Lakeview Retre**	**8.82**	**104**	Pn	**Pn**	**11 06 57.4**	**+0.5**
I37A	**Lemond, Waseca**	**8.83**	**18**	IAmb_Lg		11 09 41.4	
	comp=Z,158nm,1.1s						
SUSD	**Miller**	**8.88**	**352**	IAmb_Lg		11 09 35.0	
	comp=Z,204nm,1.0s						
JFWS	**Jewell Farm**	**9.01**	**34**	Pn	**Pn**	**11 06 59.6**	**0.0**
JFWS				IAmb_Lg		11 09 47.8	
	comp=Z,148nm,0.7s						
Y49A	**Blount Mountai**	**9.04**	**98**		**Pn**	**11 06 59.7**	**-0.3**
HQIL	**Hanson Quary C**	**9.52**	**47**	IAmb_Lg		11 09 54.2	
	comp=Z,275nm,1.0s						
I40A	**Norwalk**	**9.64**	**30**		**Pn**	**11 07 08.1**	**-0.1**
I40A				IAmb_Lg		11 09 58.7	
	comp=Z,86nm,1.0s						
RSSD	**Black Hills**	**9.95**	**330**	IAmb_Lg		11 10 15.1	
	comp=Z,80nm,1.1s						
F36A	**Milaca**	**10.56**	**14**	Pn	**Pn**	**11 07 19.1**	**-1.6**
G40A	**Rib Lake**	**10.96**	**27**		**Pn**	**11 07 25.3**	**-1.0**
PD31	**Pinedale Array**	**11.93**	**310**		**Pn**	**11 07 38.3**	**-1.4**
COWI	**Conover**	**12.06**	**28**	Pn	**Pn**	**11 07 40.3**	**-1.0**

*IDC **10** 11:05:14.0±3.6, 7.°62N×82.°11W, h0km, mb3.7/3, mbtmp3.7/4, ML3.7/1, MS3.1/4, Error ellipse: s-maj=148.5km s-min=70.6km az=47.0*
*UPA **10** 11:05:24.1±0.9, 8.°33N×82.°79W, h10km±4km, MW4.2*
*UCR **10** 11:05:25.7±1.9, 8.°38N×82.°92W, h5km, MW4.4*
ISC 10 11:05:24.0±0.9,**8.°29N**±0.°04×**82.°83W**±0.°03,**h28**km±6km, **n75**,σ2≥**03**/83,**mb3.6**/3,**7D**,**Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIMO3	**Limones**	**0.19**	**190**	*eP*	**Pb**	**11 05 29.4**	**-0.5**
CDITO	**Canoas**	**0.29**	**352**	*eP*	**Pb**	**11 05 30.1**	**-1.0**
DVD	**David**	**0.41**	**69**	*eP*	**Pb**	**11 05 32.0**	**-0.8**
DVD				*eS*	**Sb**	**11 05 37.2**	**-1.6**
MLIR3	**Monte Lirio, C**	**0.50**	**1**	*eP*	**Pb**	**11 05 33.3**	**-1.2**
MLIR3				*eS*	**Sb**	**11 05 41.5**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.51**	**78**	*i*↓*P*	**Pb**	**11 05 33.6**	**-0.9**
PTAR3	**Potrerillos Ar**	**0.52**	**39**	*eP*	**Pb**	**11 05 34.0**	**-0.8**
PTAR3				*eS*	**Sb**	**11 05 41.2**	**-0.9**
BCO2	**Palmira**	**0.52**	**35**	*i*↓*P*	**Pb**	**11 05 34.0**	**-0.8**
BCO2				*eS*	**Sb**	**11 05 41.8**	**-0.5**
BRU2	**Volcan**	**0.52**	**15**	*i*↓*P*	**Pb**	**11 05 34.0**	**-0.8**
BRU2	**Volcan**	**0.52**	**15**	*i*↓*P*	**Pb**	**11 05 34.0**	**-0.8**
BRU2				*eS*	**Sb**	**11 05 42.1**	**-0.1**
EDSV	**San Vito**	**0.55**	**345**	*eP*	**Pb**	**11 05 34.6**	**-0.6**
EDSV				*eS*	**Sn**	**11 05 43.7**	**-0.6**
BC3P	**Paso Ancho**	**0.57**	**23**	*i*↓*P*	**Pb**	**11 05 34.6**	**-1.0**
BC3P				*eS*	**Sb**	**11 05 43.3**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.63**	**38**	*i*↓*P*	**Pb**	**11 05 35.3**	**-1.3**
LNBQ3				*eS*	**Sb**	**11 05 44.6**	**-0.6**
REME3	**Remedios, Chir**	**0.99**	**93**	*eP*	**Pb**	**11 05 40.9**	**-1.6**
REME3				*eS*	**Sb**	**11 05 54.8**	**-0.5**
SRBA	**San Rafael, Bu**	**1.07**	**331**	*eP*	**Pn**	**11 05 42.2**	**-1.1**
SRBA				*eS*	**Sb**	**11 05 57.0**	**-0.8**
PEZE	**Perez Zeledon,**	**1.37**	**323**	*eP*	**Pn**	**11 05 47.1**	**-0.3**
EDDO	**Dominical**	**1.40**	**313**	*eP*	**Pb**	**11 05 48.7**	**-0.8**
LCR2	**La Lucha 2**	**1.85**	**321**	*eP*	**Pn**	**11 05 55.6**	**+1.5**
HDC	**Heredia**	**2.12**	**323**	*eP*	**Pb**	**11 06 00.2**	**-1.7**
HDC	**Heredia**	**2.12**	**323**	*eP*	**Pb**	**11 06 00.2**	**-1.7**
HDC				*eS*	**Sb**	**11 06 27.7**	**-0.1**
CACAO	**El Cacao, Vera**	**2.17**	**115**	*eP*	**Pn**	**11 05 58.5**	**+0.4**
CACAO	**El Cacao, Vera**	**2.17**	**115**	*eP*	Pn	**11 05 59.2**	**+1.1**
CACAO				*eS*	**Sn**	**11 06 26.1**	**+2.0**
SRA1	**San Ramn**	**2.42**	**318**	*eP*	**Pb**	**11 06 04.4**	**-2.5**
PNME	**Penonome**	**2.49**	**85**	*eP*	**Pn**	**11 06 03.3**	**+0.7**
PNME	**Penonome**	**2.49**	**85**	*eP*	**Pn**	**11 06 08.5**	**+0.1**
PNME				*eS*	**Sb**	**11 06 36.2**	**-2.0**
PNME	**Penonome**	**2.49**	**85**	*eP*	**Pn**	**11 06 03.8**	**+1.2**
PNME				*eS*	**Sn**	**11 06 34.5**	**+2.5**
LAFE	**Finca La Fe, P**	**2.55**	**307**	*eP*	**Pn**	**11 06 05.3**	**+1.8**
AZU	**Azuero**	**2.58**	**101**	*eP*	**Pn**	**11 06 05.6**	**+1.7**
AZU	**Azuero**	**2.58**	**101**	*eP*	**Pn**	**11 06 05.5**	**+1.7**
AZU				*eS*	**Sn**	**11 06 36.2**	**+1.9**
FORC	**Fortuna**	**2.83**	**320**	*eP*	**Pn**	**11 06 09.8**	**+2.5**
ARE1	**Arenal 1**	**2.85**	**319**	*eP*	**Pn**	**11 06 10.4**	**+2.7**
CEDE	**Laguna Cedeo**	**2.86**	**320**	*eP*	**Pn**	**11 06 11.0**	**+3.2**
JTS	**Las Juntas de**	**2.89**	**314**	*eP*	**Pn**	**11 06 08.9**	**+0.8**
JTS	**Las Juntas de**	**2.89**	**314**	*eP*	**Pn**	**11 06 09.0**	**+0.8**
JTS	**Las Juntas de**	**2.89**	**314**	*eP*	**Pn**	**11 06 09.2**	**+1.0**
JTS				*eS*	**Sn**	**11 06 44.1**	**+2.1**
INDI	**Punta indio, G**	**3.07**	**301**	*eP*	**Pn**	**11 06 11.0**	**+0.4**
BCIP	**Isla Barro Col**	**3.09**	**73**	*eP*	**Pn**	**11 06 11.3**	**+0.5**
ACAL	**Aguas Claras**	**3.19**	**317**	*eP*	**Pn**	**11 06 15.8**	**+3.4**
PTEN	**Parque Tenorio**	**3.21**	**319**	*eP*	**Pn**	**11 06 15.6**	**+2.9**
CUI	**Cuipilapa**	**3.29**	**316**	*eP*	**Pn**	**11 06 17.1**	**+3.3**
COLC	**Colonia**	**3.33**	**315**	*eP*	**Pn**	**11 06 17.4**	**+3.2**
UPA	**Univ. de Panam**	**3.33**	**78**	*eP*	**Pn**	**11 06 17.7**	**+3.4**
UPA	**Univ. de Panam**	**3.33**	**78**	*eP*	**Pb**	**11 06 19.9**	**-2.5**
UPA				*eS*	**Sb**	**11 06 59.2**	**-3.3**
HORNC	**Hornillas**	**3.34**	**316**	*eP*	**Pn**	**11 06 17.5**	**+3.1**
SAJU	**San Juanillo,**	**3.35**	**302**	*eP*	**Pn**	**11 06 15.0**	**+0.6**
VMAR	**Armenia, Volca**	**3.38**	**318**	*eP*	**Pn**	**11 06 17.5**	**+2.6**
GPS2	**Hotel Rincn d**	**3.49**	**315**	*eP*	**Pn**	**11 06 19.4**	**+2.9**
LAPC	**Finca la Perla**	**3.56**	**314**	*eP*	**Pn**	**11 06 19.9**	**+2.6**
BUEV	**Buena Vista**	**3.56**	**315**	*eP*	**Pn**	**11 06 20.4**	**+3.0**
ACON	**Acoyapa**	**4.32**	**328**	*eP*	Pn	**11 06 29.8**	**+1.9**
UPD2	**Meteti**	**4.77**	**87**	*i P*	Pn	11 06 40.0	+5.9
PTAC	**Punta Ardita,**	**5.11**	**102**	*eP*	**Pn**	**11 06 37.8**	**-0.8**
CAPC	**Capurgana**	**5.43**	**86**	*eP*	Pb	11 06 51.8	-6.4
CNGN	**Cerro Negro**	**5.66**	**318**	*eP*	**Pn**	**11 06 48.5**	**+2.2**
SOLC	**Bahia Solano**	**5.76**	**110**	*eP*	**Pn**	**11 06 45.6**	**-2.0**
CRIN	**San Cristobal**	**6.04**	**317**	*eP*	**Pn**	**11 06 54.6**	**+3.1**
PLMC	**San Jos del P**	**7.32**	**117**	*eP*	**Pn**	**11 07 10.7**	**+1.5**
SJCC	**San Jacinto, C**	**7.72**	**77**	*i P*	**Pn**	**11 07 15.4**	**+0.7**
ZARC	**Zaragoza, Cauc**	**7.94**	**95**	*eP*	**Pn**	**11 07 18.1**	**+0.6**
GUY2C	**Guyana, Caldas**	**8.02**	**112**	*eP*	**Pn**	**11 07 18.2**	**-0.8**
NORC	**Norcasia**	**8.36**	**108**	*eP*	**Pn**	**11 07 25.5**	**+2.1**
POPC	**Popayan, Colom**	**8.37**	**133**	*eP*	**Pn**	**11 07 26.3**	**+2.5**
PRAC	**Prado**	**9.11**	**119**	*eP*	**Pn**	**11 07 37.8**	**+4.0**
LL6C	**La Loma 6 Bece**	**9.55**	**81**	*eP*	Pn	11 07 45.2	+5.5
CHIC	**Chingaza**	**9.74**	**111**	*eP*	Pn	11 07 48.5	+5.8
VILC	**Villavicencio,**	**9.99**	**114**	↓*eP*	Pn	11 07 52.6	+6.8
SDV	**Santo Domingo**	**12.08**	**86**	LR	LR	11 13 50.2	
	comp=Z,87nm,18.2s,baz=264,slow=45						
CMIG	**Matias Romero**	**14.65**	**308**	Pn	**P**	**11 08 55.7**	**+0.3**
	0.3nm,0.3s,baz=129,slow=16,SNR=6.5 1.7nm,0.6s						
SJG	**San Juan**	**18.93**	**57**	LR	LR	11 16 28.1	
	comp=Z,23nm,18.7s,baz=231,slow=36						
TKL	**Tuckaleechee C**	**27.26**	**358**	LR	LR	11 21 43.1	
	comp=Z,40nm,21.2s,baz=36,slow=35						
ELK	**Elko**	**43.29**	**324**	P	**P**	**11 13 24.6**	**+1.0**
	0.6nm,0.6s,baz=146,slow=7.3,SNR=4.7 0.6nm,0.6s						
NVAR	**Mina Array Bea**	**43.81**	**319**	P	**P**	**11 13 30.5**	**+2.7**
	0.5nm,0.6s,baz=142,slow=6.4,SNR=5.6 0.5nm,0.6s						
FRB	**Frobisher Bay**	**56.30**	**8**	LR	LR	11 39 26.3	
	comp=Z,30nm,18.4s,baz=252,slow=36						
ILAR	**Eielson Array**	**71.64**	**336**	P	**P**	**11 16 42.9**	**+0.1**
	0.8nm,0.8s,baz=104,slow=5.7,SNR=6.4						
ASAR	**Alice Springs**	**141.66**	**242**	PKP	**PKPdf**	**11 24 47.5**	**-6.2**
	0.4nm,0.5s,baz=118,slow=3.8,SNR=9.2						
WRA	**Warramunga Arr**	**142.23**	**248**	PKP	**PKPdf**	**11 24 50.2**	**-4.5**
	0.7nm,0.9s,baz=107,slow=2.5,SNR=5.4						

*IDC **10** 11:30:56.5±5.3, 18.°40N×146.°40E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=358.9km s-min=29.6km az=122.0*
*NEIC **10** 11:31:17.4±0.8, 18.°5N±0.°1×145.°8E±0.°4, h181km±10km, mb4.0/15, Error ellipse: s-maj=53.2km s-min=14.2km az=104.0*
ISC 10 11:31:13.5±1.2,**18.°7N**±0.°2×**145.°2E**±0.°6,**h150**km,**n21**, σ1≥**08**/21,**mb4.1**/11,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.14**	**184**	Pn	**Pn**	**11 32 30.4**	**+1.6**
MTN	**Manton Dam**	**34.32**	**205**	P	**P**	**11 37 45.7**	**-0.1**
KNRA	**Kununurra**	**37.84**	**206**	P	**P**	**11 38 16.2**	**+0.5**
WB0	**Warramunga Arr**	**39.72**	**196**	P	**P**	**11 38 31.0**	**-0.4**
WB0				IAmb	IAmb	11 38 36.5	
	comp=Z,10nm,1.4s						
WR0	**Warramunga Arr**	**39.86**	**196**	P	**P**	**11 38 31.8**	**-0.8**
WR0				IAmb	IAmb	11 38 50.2	
	comp=Z,6.0nm,1.4s						
WRAB	**Tennant Creek**	**39.88**	**196**	P	**P**	**11 38 31.7**	**-1.1**
WRAB				IAmb	IAmb	11 38 36.5	
	comp=Z,4.8nm,1.1s						
WB2	**Warramunga Arr**	**39.89**	**196**	P	**P**	**11 38 32.1**	**-0.8**
WB2				IAmb	IAmb	11 38 33.4	
	comp=Z,2.9nm,0.9s						
WRA	**Warramunga Arr**	**39.90**	**196**	P	**P**	**11 38 32.3**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=23,slow=8.8,SNR=23 comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**39.90**	**196**	P	**P**	**11 38 31.3**	**-1.6**
FITZ	**Fitzroy Crossi**	**41.35**	**209**	P	**P**	**11 38 45.3**	**+0.5**
FITZ				IAmb	IAmb	11 39 18.2	
	comp=Z,6.3nm,1.4s						
AS31	**Alice Springs**	**43.57**	**195**	P	**P**	**11 39 02.4**	**-0.3**
ASAR	**Alice Springs**	**43.57**	**195**	P	**P**	**11 39 02.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=11,slow=6.1,SNR=9.9 comp=Z,0.3nm,0.5s						
BBOO	**Buckleboo**	**52.01**	**190**	P	**P**	**11 40 05.8**	**-1.7**
SDPT	**Sand Point**	**54.70**	**35**	P	**P**	**11 40 26.7**	**-0.2**
CAST	**Castle Rocks**	**61.27**	**27**	P	**P**	**11 41 13.0**	**+0.5**
CAST				IAmb	IAmb	11 41 47.5	
	comp=Z,2.6nm,1.2s						
I21K	**Tanana**	**61.81**	**25**	P	**P**	**11 41 16.5**	**+0.4**
I21K				IAmb	IAmb	11 41 51.7	
	comp=Z,3.7nm,1.4s						
I23K	**Minto, Yukon-K**	**62.87**	**26**	P	**P**	**11 41 23.6**	**+0.5**
TOLK	**Toolik Lake Re**	**63.72**	**22**	P	**P**	**11 41 29.9**	**+1.1**
TOLK				IAmb	IAmb	11 41 31.2	
	comp=Z,6.0nm,1.2s						
BMAR	**Burnt Mountain**	**65.26**	**24**	P	**P**	**11 41 40.1**	**+1.3**
NVAR	**Mina Array Bea**	**83.48**	**52**	P	**P**	**11 43 23.5**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=262,slow=6.3,SNR=5.1 comp=Z,0.5nm,0.6s						
LPAZ	**La Paz**	**148.14**	**91**	PKPbc	**PKPdf**	**11 50 41.6**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=346,slow=4.2,SNR=3.6						

*MOS **10** 12:17:21.6±1.0, 52.°44N×159.°44E, h51km, mb5.0/70, Error ellipse: s-maj=7.8km s-min=3.3km az=94.9*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.
*KRSC **10** 12:17:23.1±1.5, 52.°66N×159.°73E, h51km±15km, ML5.2*
*BJI **10** 12:17:23.4±0.0, 52.°94N×159.°62E, h65km, mb4.4/25, mB4.8/18, Ms4.1/7, Ms7 3.8/7*
*IDC **10** 12:17:25.3±0.5, 52.°82N×159.°39E, h57km±5km, mb4.1/25, mbtmp4.4/27, MS3.5/44, Error ellipse: s-maj=11.2km s-min=9.0km az=167.0*
*NEIC **10** 12:17:26.2±1.7, 52.°82N±0.°10×159.°49E±0.°10, h65km±6km, mb4.7/218, Error ellipse: s-maj=14.0km s-min=8.8km az=180.0*
ISC 10 12:17:24.8±0.5,**52.°73N**±0.°04×**159.°62E**±0.°03,**h56**km±4km, **h55**km:**pP-P**,**n756**,σ1≥**40**/666,**mb4.7**/221,**MS3.7**/50, **32C-14D**,**Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.44**	**34**	PN	**Pn**	**12 17 36.0**	**+0.2**
SPN				S	**Sn**	**12 17 43.8**	**0.0**
SPN	**Mys Shipunski**	**0.44**	**34**	*i P*	**Pn**	**12 17 36.0**	**+0.2**
SPN				*eS*	**Sn**	**12 17 43.8**	**0.0**
NLC	**Nalytchevo**	**0.47**	**340**	PN	**Pn**	**12 17 36.6**	**+0.5**
NLC				S	**Sn**	**12 17 45.2**	**+0.9**
NLC	**Nalytchevo**	**0.47**	**340**	*eP*	**Pn**	**12 17 36.6**	**+0.5**
NLC				*eS*	**Sn**	**12 17 45.2**	**+0.9**
DALK	**Dalny**	**0.60**	**300**	PN	**Pn**	**12 17 37.8**	**+0.2**
DALK				S	**Sn**	**12 17 46.9**	**0.0**
DALK	**Dalny**	**0.60**	**300**	*i P*	**Pn**	**12 17 37.8**	**+0.2**
DALK				*eS*	**Sn**	**12 17 46.9**	**0.0**
PET	**Petropavlovsk**	**0.65**	**297**		**Pn**	**12 17 38.3**	**0.0**
PET				Sn	**Sn**	**12 17 47.7**	**-0.3**
PET	**Petropavlovsk**	**0.65**	**297**	*i* PN	**Pn**	**12 17 38.4**	**+0.2**
PET				*i* S	**Sn**	**12 17 47.7**	**-0.3**
PET				pmax	pmax		
	comp=Z,13μm,0.5s						
PET				smax	smax		
	comp=E,15μm,1.3s						
PET				smax	smax		
	comp=N,11μm,1.2s						
PET				smax	smax		
	comp=E,133μm,1.4s						
PET				smax	smax		
	comp=N,92μm,1.0s						
PET				smax	smax		
	comp=E,104μm,0.7s						
PET				smax	smax		
	comp=N,96μm,0.6s						
PET	**Petropavlovsk**	**0.65**	**297**	*eP*	**Pn**	**12 17 38.4**	**+0.2**
UGLR	**Uglovaya**	**0.68**	**315**	PN	**Pn**	**12 17 39.4**	**+0.7**
UGLR	**Uglovaya**	**0.68**	**315**	*i P*	**Pn**	**12 17 39.4**	**+0.7**
SDLR	**Sedlovina**	**0.70**	**321**	PN	**Pn**	**12 17 39.5**	**+0.5**
SDLR	**Sedlovina**	**0.70**	**321**	*eP*	**Pn**	**12 17 39.5**	**+0.5**
SMAR	**Somma**	**0.73**	**318**	PN	**Pn**	**12 17 39.4**	**0.0**
SMAR	**Somma**	**0.73**	**318**	*eP*	**Pn**	**12 17 39.4**	**0.0**
RUS	**Russkaya**	**0.73**	**247**	PN	**Pn**	**12 17 38.9**	**-0.3**
RUS	**Russkaya**	**0.73**	**247**	*eP*	**Pn**	**12 17 38.9**	**-0.3**
RUS				*eS*	**Sn**	**12 17 49.3**	**-0.5**
AVH	**Avacha**	**0.75**	**316**	PN	**Pn**	**12 17 40.4**	**+0.8**
AVH	**Avacha**	**0.75**	**316**	*eP*	**Pn**	**12 17 40.4**	**+0.8**
KRER	**Koryakskii**	**0.78**	**318**	PN	**Pn**	**12 17 40.8**	**+0.8**
KRER	**Koryakskii**	**0.78**	**318**	*eP*	**Pn**	**12 17 40.8**	**+0.8**
KOK	**Koryaka**	**0.82**	**314**	PN	**Pn**	**12 17 41.2**	**+0.8**
KOK	**Koryaka**	**0.82**	**314**	*eP*	**Pn**	**12 17 41.2**	**+0.8**
KRX	**Arik**	**0.86**	**318**	PN	**Pn**	**12 17 41.6**	**+0.6**
KRX	**Arik**	**0.86**	**318**	*eP*	**Pn**	**12 17 41.6**	**+0.6**
KRMR	**Karymshinskiy**	**0.91**	**277**	PN	**Pn**	**12 17 41.3**	**-0.1**
KRMR				S	**Sn**	**12 17 53.4**	**-0.3**
KRMR	**Karymshinskiy**	**0.91**	**277**	*eP*	**Pn**	**12 17 41.3**	**-0.1**
KRMR				*eS*	**Sn**	**12 17 53.4**	**-0.3**
MTVR	**Mutnovka**	**0.91**	**255**	PN	**Pn**	**12 17 41.8**	**+0.2**
MTVR	**Mutnovka**	**0.91**	**255**	*eP*	**Pn**	**12 17 41.8**	**+0.2**
GRL	**Gorelyy**	**0.96**	**260**	PN	**Pn**	**12 17 43.0**	**+0.8**
GRL	**Gorelyy**	**0.96**	**260**	*eP*	**Pn**	**12 17 43.0**	**+0.8**
ASAK	**Asacha**	**1.10**	**252**	PN	**Pn**	**12 17 44.8**	**+0.7**
ASAK	**Asacha**	**1.10**	**252**	*eP*	**Pn**	**12 17 44.8**	**+0.7**
I44RU	**PETROPAVLOVSK-**	**1.21**	**289**	P	**Pn**	**12 17 46.1**	**+0.6**
	baz=94,slow=19,SNR=3.7						
I44RU				S	**Sn**	**12 18 01.2**	**+0.3**
	baz=83,slow=49						
PEA0B	**Petropavlovsk-**	**1.22**	**289**	Pn	**Pn**	**12 17 46.4**	**+0.7**
PEA0B				Sn	**Sn**	**12 18 01.9**	**+0.8**
PEA0B	**Petropavlovsk-**	**1.22**	**289**	*de*PN	**Pn**	**12 17 46.2**	**+0.6**
PETK	**Petropavlovsk-**	**1.22**	**289**	P	**Pn**	**12 17 45.6**	**0.0**
	comp=N,1μm,0.3s,baz=110,slow=20,SNR=1888						
PETK				S	**Sn**	**12 18 02.3**	**+1.1**
	comp=N,1μm,0.5s,baz=110,slow=19,SNR=5.8						
PETK				LR	LR	12 18 11.5	
	comp=N,722nm,20.5s,baz=139,slow=44						
PETK	**Petropavlovsk-**	**1.22**	**289**	Pn	**Pn**	**12 17 45.4**	**-0.2**
Kll	**Karymskiy**	**1.31**	**356**	PN	**Pn**	**12 17 47.7**	**+0.8**
Kll	**Karymskiy**	**1.31**	**356**	*eP*	**Pn**	**12 17 47.7**	**+0.8**
KDTR	**Khodutka, Kamc**	**1.32**	**226**	PN	**Pn**	**12 17 47.1**	**+0.2**
KDTR	**Khodutka, Kamc**	**1.32**	**226**	*eP*	**Pn**	**12 17 47.1**	**+0.2**
KDTR				*eS*	**Sn**	**12 18 03.5**	**0.0**
GNL	**Ganaly**	**1.40**	**315**	PN	**Pn**	**12 17 49.1**	**+1.0**
GNL	**Ganaly**	**1.40**	**315**	*eP*	**Pn**	**12 17 49.1**	**+1.0**
APC	**Apacha**	**1.50**	**278**	PN	**Pn**	**12 17 50.7**	**+1.3**
APC	**Apacha**	**1.50**	**278**	*i P*	**Pn**	**12 17 50.7**	**+1.3**
APC				*eS*	**Sn**	**12 18 10.1**	**+2.2**
PAU	**Pauzhetka**	**2.14**	**235**	PN	**Pn**	**12 17 59.1**	**+1.0**
PAU	**Pauzhetka**	**2.14**	**235**	*eP*	**Pn**	**12 17 59.1**	**+1.0**
MKZ	**Mys Kozlova**	**2.22**	**34**	PN	**Pn**	**12 17 59.3**	**+0.1**
MKZ	**Mys Kozlova**	**2.22**	**34**	*eP*	**Pn**	**12 17 59.3**	**+0.1**
MKZ				*eS*	**Sn**	**12 18 23.4**	**-2.0**
TUMR	**Tumrok**	**2.58**	**7**	PN	**Pn**	**12 18 06.6**	**+2.4**
TUMR	**Tumrok**	**2.58**	**7**	*eP*	**Pn**	**12 18 06.6**	**+2.4**
SKR	**Severo-Kuril's**	**2.99**	**228**	↓*i* PN	**Pn**	**12 18 11.2**	**+1.5**
SKR				*eS*	Sn	12 18 37.2	-7.0
SKR				pmax	pmax		
	comp=Z,116nm,0.5s						
SKR				smax	smax		
	comp=E,2μm,0.6s						
SKR				smax	smax		
	comp=N,2μm,0.8s						
SKR				MLR	MLR		
	comp=Z,600nm,18.0s						
KMNR	**Kamenistaya**	**3.05**	**7**	PN	**Pn**	**12 18 13.6**	**+2.9**
KMNR	**Kamenistaya**	**3.05**	**7**	*eP*	**Pn**	**12 18 13.6**	**+2.9**
ESO	**Esso**	**3.25**	**351**	PN	**Pn**	**12 18 17.0**	**+3.8**
ESO	**Esso**	**3.25**	**351**	*eP*	**Pn**	**12 18 17.0**	**+3.8**
KIRR	**Kirishev**	**3.26**	**7**	PN	**Pn**	**12 18 16.7**	**+3.2**
KIRR	**Kirishev**	**3.26**	**7**	*eP*	**Pn**	**12 18 16.7**	**+3.2**
KPT	**Kopyto**	**3.26**	**6**	PN	**Pn**	**12 18 16.3**	**+2.8**
KPT	**Kopyto**	**3.26**	**6**	*eP*	**Pn**	**12 18 16.3**	**+2.8**
BZGR	**Bezymyannyi-Gr**	**3.28**	**11**	PN	**Pn**	**12 18 16.5**	**+2.8**
BZGR	**Bezymyannyi-Gr**	**3.28**	**11**	*eP*	**Pn**	**12 18 16.5**	**+2.8**
BZWR	**Bezymyannyi-We**	**3.28**	**9**	PN	**Pn**	**12 18 17.7**	**+3.9**
BZWR	**Bezymyannyi-We**	**3.28**	**9**	*eP*	**Pn**	**12 18 17.7**	**+3.9**
KOZ	**Kozyrevsk**	**3.34**	**2**	PN	**Pn**	**12 18 17.3**	**+2.8**
KOZ	**Kozyrevsk**	**3.34**	**2**	*eP*	**Pn**	**12 18 17.3**	**+2.8**
ZLN	**Zelenaya**	**3.37**	**11**	PN	**Pn**	**12 18 18.9**	**+4.0**
ZLN	**Zelenaya**	**3.37**	**11**	*eP*	**Pn**	**12 18 18.9**	**+4.0**
KRSR	**Krestovskiy**	**3.54**	**9**	PN	**Pn**	**12 18 19.7**	**+2.4**
KRSR	**Krestovskiy**	**3.54**	**9**	*eP*	**Pn**	**12 18 19.7**	**+2.4**
SRDR	**Sredinnyy**	**3.59**	**1**	PN	**Pn**	**12 18 20.0**	**+2.0**
SRDR	**Sredinnyy**	**3.59**	**1**	*eP*	**Pn**	**12 18 20.0**	**+2.0**
KLY	**Klyuchi**	**3.64**	**9**	PN	**Pn**	**12 18 21.5**	**+2.9**
KLY	**Klyuchi**	**3.64**	**9**	*eP*	**Pn**	**12 18 21.5**	**+2.9**
BDR	**Baidarnaya**	**3.96**	**13**	PN	**Pn**	**12 18 26.4**	**+3.4**
BDR	**Baidarnaya**	**3.96**	**13**	*eP*	**Pn**	**12 18 26.4**	**+3.4**
SMKR	**Semkarok**	**4.01**	**15**	PN	**Pn**	**12 18 27.2**	**+3.5**
SMKR	**Semkarok**	**4.01**	**15**	*eP*	**Pn**	**12 18 27.2**	**+3.5**
SRKR	**Sorokina**

comp=Z,26nm,1.0s
MAJO **Matsushiro** **22.09 231** *i* P **P** **12 22 15.0 -0.2**
MAJO pmax pmax
comp=Z,32nm,1.3s
MJAR **Matsushiro Arr** **22.09 231** P **P** **12 22 14.8 -0.3**
comp=Z,16nm,1.1s,baz=33,slow=11,SNR=30
MJAR LR LR 12 31 07.4
comp=Z,71nm,21.8s,baz=29,slow=37
comp=Z,16nm,1.1s
S12K **Black Hills** **22.41 67** P **P** **12 22 17.9 -0.5**
baz=279
TIXI **Tiksi** **23.29 336** P **P** **12 22 25.7 -1.6**
comp=Z,8.5nm,0.8s,baz=270,slow=24,SNR=3.4
TIXI LR LR 12 32 26.2
comp=Z,217nm,19.3s,baz=90,slow=39
comp=Z,8.5nm,0.8s
TIXI **Tiksi** **23.29 336** P **P** **12 22 25.9 -1.3**
TIXI **Tiksi** **23.29 336** *ce*P **P** **12 22 27.4 +0.2**
TIXI pmax pmax
comp=Z,11nm,1.0s
TIXI MLR MLR
comp=Z,217nm,20.0s
SDPT **Sand Point** **23.36 68** P **P** **12 22 27.3 -0.7**
baz=281
INU **Inuyama** **23.62 232** P **P** **12 22 30.3 -0.4**
S14K **Fog Glacier** **23.72 65** P **P** **12 22 32.0 +0.5**
baz=279
N16K **Nishlik Lake** **23.82 55** P **P** **12 22 32.7 +0.4**
baz=270
CHNA **Chernabura Isl** **23.96 69** P **P** **12 22 33.3 -0.2**
baz=282
CNBA **Chernabura Isl** **23.96 69** P **P** **12 22 34.4 +0.9**
CNBA IAmb IAmb 12 22 47.8
comp=Z,31nm,1.0s
O16K **Kokwok River B** **24.18 57** P **P** **12 22 35.5 0.0**
baz=273
CN2 **Changchun** **24.24 262** *e*P **P** **12 22 34.4 -1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
P16K **Nushagak River** **24.26 58** P **P** **12 22 36.3 0.0**
baz=274
R16K **Pilot Point** **24.62 62** P **P** **12 22 38.9 -0.6**
baz=278
O17K **Koliganek Bris** **24.68 56** P **P** **12 22 40.3 +0.3**
baz=273
Q16K **King Salmon** **24.98 59** P **P** **12 22 42.6 -0.2**
baz=276
GCSA **Galena City Sc** **25.00 44** P **P** **12 22 42.7 -0.2**
baz=262
P17K **Kvichak River** **25.05 58** P **P** **12 22 42.4 -1.0**
baz=275
HIA **Hailar** **25.11 278** *i* P **P** **12 22 43.3 -0.8**
HIA pmax pmax
comp=Z,7.0nm,1.1s
TTA **Tatalina** **25.21 49** P **P** **12 22 46.4 +1.4**
TTA IAmb IAmb 12 23 02.3
comp=Z,36nm,1.2s
TTA **Tatalina** **25.21 49** P **P** **12 22 46.4 +1.4**
TTA pmax pmax
comp=Z,36nm,1.2s
TTA **Tatalina** **25.21 49** P **P** **12 22 44.7 -0.3**
baz=267,SNR=9.9
R17K **Ugashik Creek** **25.24 61** P **P** **12 22 45.9 +0.8**
baz=278
N18K **Kilae Creek** **25.24 54** P **P** **12 22 45.8 +0.6**
baz=272,SNR=5.4
O18K **Koktuh Hills** **25.62 56** P **P** **12 22 48.8 +0.1**
baz=274
L19K **White Mountain** **25.72 50** P **P** **12 22 48.4 -1.2**
baz=270
JHS **Saijyo** **25.83 237** P **P** **12 22 51.4 +0.6**
JHS IAmb IAmb 12 22 57.3
comp=Z,25nm,1.0s
N19K **Bonanza Creek** **25.93 54** IAmb IAmb 12 23 08.8
comp=Z,20nm,1.1s
N19K **Bonanza Creek** **25.93 54** P **P** **12 22 51.9 +0.4**
baz=273
M19K **Big River Lodg** **25.94 51** IAmb IAmb 12 23 09.4
comp=Z,22nm,1.1s
M19K **Big River Lodg** **25.94 51** P **P** **12 22 52.5 +1.0**
baz=271
CHIR **Chirikof Islan** **25.97 65** P **P** **12 22 51.4 -0.4**
baz=282
SEHB **SEOHWA** **26.06 249** P **P** **12 22 53.4 +0.6**
BOD **Bodaibo** **26.07 300** *e*P **P** **12 22 51.7 -1.0**
BOD pmax pmax
comp=Z,13nm,2.2s
K20K **Telida** **26.11 48** IAmb IAmb 12 23 08.4
comp=Z,16nm,0.8s
K20K **Telida** **26.11 48** P **P** **12 22 53.0 -0.1**
baz=268,SNR=6.4
J20K **Nowinta River** **26.12 46** IAmb IAmb 12 23 08.3
comp=Z,17nm,0.8s
J20K **Nowinta River** **26.12 46** P **P** **12 22 53.3 +0.2**
baz=266,SNR=10
L20K **Farewell, AK** **26.18 50** P **P** **12 22 53.6 0.0**
baz=270
JMN **Monobe** **26.46 234** P **P** **12 22 57.4 +0.9**
JMN IAmb IAmb 12 23 01.0
comp=Z,36nm,1.2s
IMAR **Indian Mountai** **26.47 42** P **P** **12 22 57.2 +1.0**
Q19K **Cape Douglas,** **26.51 58** P **P** **12 22 57.3 +0.6**
baz=278
M20K **Styx River** **26.54 51** P **P** **12 22 57.1 +0.1**
baz=272
SII **Sitkinak Islan** **26.61 63** P **P** **12 22 57.8 +0.2**
baz=282
G21K **Allakaket** **26.64 41** P **P** **12 22 57.8 0.0**
baz=262
F21K **Alatna River** **26.75 39** P **P** **12 22 58.3 -0.5**
baz=261
KSRS **Korea Array** **26.81 248** P **P** **12 22 59.6 +0.1**
comp=Z,4.7nm,1.0s,baz=42,slow=9.4,SNR=16
KSRS PcP **PcP** **12 26 20.9 -0.1**
comp=Z,1.0nm,0.7s,baz=337,slow=2.7,SNR=4.4
KSRS LR LR 12 32 41.9
comp=Z,97nm,21.6s,baz=40,slow=34
comp=Z,4.7nm,1.0s
H21K **Melozitna Rive** **26.82 43** P **P** **12 22 59.2 -0.2**
baz=265
KSAR **Wonju Array Be** **26.84 248** P **P** **12 22 59.8 0.0**
KSAR **Wonju Array Be** **26.84 248** P **P** **12 22 59.8 0.0**
O20K **Slope Mountain** **26.90 55** P **P** **12 22 59.7 -0.6**
baz=276
CHUM **Lake Minchumin** **26.91 47** P **P** **12 22 59.9 -0.3**
baz=269
PPLA **Purkeypile** **26.96 49** P **P** **12 23 00.1 -0.7**
baz=271
OHAK **Old Harbor** **26.96 61** P **P** **12 23 01.0 +0.2**
baz=281
CAST **Castle Rocks** **27.01 48** P **P** **12 23 02.1 +0.9**
CAST **Castle Rocks** **27.01 48** P **P** **12 23 01.3 +0.1**
baz=270
SPU **Mount Spurr** **27.09 53** P **P** **12 23 02.3 +0.4**
I21K **Tanana** **27.12 44** P **P** **12 23 02.4 +0.4**
baz=266
KDAK **Kodiak Island** **27.23 60** P **P** **12 23 03.1 -0.1**
baz=280
F22K **John River** **27.30 39** P **P** **12 23 03.9 +0.2**
baz=262
H22K **Ishtalitna Cre** **27.42 42** P **P** **12 23 04.1 -0.7**
baz=266
BPAW **Bear Paw Mtn.** **27.50 46** P **P** **12 23 05.5 0.0**
BPAW **Bear Paw Mtn.** **27.50 46** P **P** **12 23 05.6 +0.1**
baz=269
KTH **Kantishna Hill** **27.53 47** P **P** **12 23 06.0 +0.2**
E22K **Anaktuvuk Pass** **27.53 37** P **P** **12 23 06.4 +0.6**
baz=261
MLY **Manley** **27.64 44** P **P** **12 23 07.2 +0.4**
MLY **Manley** **27.64 44** P **P** **12 23 06.5 -0.2**
baz=268,SNR=12
TRF **Thorofare Moun** **27.81 48** P **P** **12 23 09.7 +1.2**
TRF **Thorofare Moun** **27.81 48** P **P** **12 23 08.7 +0.2**
baz=271
CUT **Chulitna** **27.86 50** P **P** **12 23 08.4 -0.2**
baz=273
COLD **Coldfoot** **28.02 40** P **P** **12 23 10.3 +0.2**
COLD **Coldfoot** **28.02 40** P **P** **12 23 09.6 -0.5**
baz=264
G23K **Bananza Creek** **28.04 41** P **P** **12 23 10.0 -0.3**
baz=265

D23K **Nanushuk River** **28.08 36** P **P** **12 23 10.1 -0.6**
baz=260
H23K **Yukon River** **28.17 43** P **P** **12 23 11.5 0.0**
baz=268,SNR=5.9
I23K **Minto, Yukon-K** **28.22 44** P **P** **12 23 12.5 +0.6**
I23K **Minto, Yukon-K** **28.22 44** P **P** **12 23 11.8 -0.1**
baz=269
C23K **Itkillik River** **28.27 34** P **P** **12 23 11.4 -0.8**
baz=259
NEA2 **Nenana** **28.34 45** P **P** **12 23 13.7 +0.7**
NEA2 **Nenana** **28.34 45** P **P** **12 23 12.8 -0.2**
baz=270
MCK **McKinley** **28.41 47** P **P** **12 23 13.7 +0.1**
baz=272
TOLK **Toolik Lake Re** **28.43 37** P **P** **12 23 13.9 +0.1**
TOLK IAmb IAmb 12 23 15.2
comp=Z,11nm,0.6s
TOLK **Toolik Lake Re** **28.43 37** P **P** **12 23 13.7 -0.1**
baz=262,SNR=9.2
PMR **Palmer** **28.45 52** P **P** **12 23 13.7 -0.3**
baz=276
RND **Reindeer** **28.46 48** P **P** **12 23 14.2 0.0**
RND IAmb IAmb 12 23 30.9
comp=Z,20nm,1.4s
RND **Reindeer** **28.46 48** P **P** **12 23 14.2 0.0**
RND pmax pmax
comp=Z,20nm,1.4s
WAT1 **Susitna Watana** **28.63 49** P **P** **12 23 15.4 -0.2**
baz=274
E24K **Your Creek** **28.76 38** P **P** **12 23 16.4 -0.4**
baz=264
WRH **Wood River Hil** **28.77 45** IAmb IAmb 12 23 19.9
comp=Z,14nm,1.0s
D24K **Happy Valley** **28.77 36** P **P** **12 23 17.2 +0.4**
baz=262
KNK **Knik Glacier** **28.80 52** P **P** **12 23 17.2 +0.1**
baz=277
SML **Sawmill** **28.81 51** P **P** **12 23 18.1 +0.8**
SML IAmb IAmb 12 23 33.1
comp=Z,27nm,1.3s
SML **Sawmill** **28.81 51** P **P** **12 23 16.7 -0.6**
baz=276
H24K **Noodor Dome** **28.86 43** P **P** **12 23 16.6 -1.0**
baz=269
TCOL **CIGO, UAF Yank** **28.86 45** P **P** **12 23 17.4 -0.2**
baz=271
COLA **College** **28.86 45** *i* P **P** **12 23 17.5 -0.1**
COLA pmax pmax
comp=Z,6.0nm,1.0s
COLA **College** **28.86 45** P **P** **12 23 17.9 +0.3**
baz=271
CCB **Clear Creek Bu** **28.89 45** P **P** **12 23 18.1 +0.3**
C24K **Franklin Bluff** **28.90 34** P **P** **12 23 17.5 -0.3**
baz=261
PWL **Port Wells** **28.92 53** P **P** **12 23 17.9 -0.3**
baz=278
F24K **Squaw Lake** **28.94 39** P **P** **12 23 18.0 -0.3**
baz=266
POKR **Poker Flat Res** **29.04 44** P **P** **12 23 18.3 -0.9**
baz=271
G24K **Hadweenzic Riv** **29.05 41** P **P** **12 23 18.2 -1.1**
baz=268
M23K **Glacier View** **29.10 51** P **P** **12 23 18.7 -1.1**
baz=276
DHY **Denali Highway** **29.15 48** P **P** **12 23 20.0 -0.3**
baz=274
HDA **Harding Lake** **29.26 46** P **P** **12 23 20.7 -0.4**
baz=272
IL31 **29.28 45** P **P** **12 23 21.2 -0.1**
ILAR **Eielson Array** **29.28 45** P **P** **12 23 21.4 +0.1**
comp=Z,7.0nm,0.8s,baz=263,slow=7.8,SNR=60
ILAR LR LR 12 36 09.0
comp=Z,56nm,19.0s,baz=240,slow=38
comp=Z,7.0nm,0.8s
SCM **Sheep Creek Mo** **29.28 51** P **P** **12 23 20.8 -0.7**
baz=277
G25K **Bearman Lake** **29.60 41** P **P** **12 23 22.8 -1.2**
baz=269
D25K **Kavik River** **29.66 36** P **P** **12 23 24.2 -0.4**
baz=264
H25K **Birch Creek** **29.70 42** P **P** **12 23 25.5 +0.5**
baz=270
M24K **Tolsona, Glenn** **29.79 50** P **P** **12 23 26.1 +0.1**
baz=277
F25K **Christian River** **29.80 39** P **P** **12 23 25.8 -0.2**
baz=268
K24K **Donnelly Dome** **29.81 47** P **P** **12 23 25.6 -0.5**
baz=274
PRP **Porcupine Dome** **29.83 43** IAmb IAmb 12 23 29.0
comp=Z,13nm,0.7s
PRP **Porcupine Dome** **29.83 43** P **P** **12 23 25.9 -0.4**
baz=272,SNR=5.7
E25K **Arctic Village** **29.85 38** P **P** **12 23 26.7 +0.3**
baz=267,SNR=6.4
J25K **Salcha River,** **29.93 45** P **P** **12 23 27.3 +0.1**
baz=274
Q23K **Middleton Isla** **30.13 55** P **P** **12 23 28.2 -0.7**
baz=282
BMAR **Burnt Mountain** **30.20 39** P **P** **12 23 29.8 +0.3**
RIDG **Independent Ri** **30.23 47** P **P** **12 23 28.8 -1.0**
baz=275
C26K **Camden Bay** **30.23 34** P **P** **12 23 29.5 -0.1**
baz=265
HARP **HAARP** **30.23 49** P **P** **12 23 29.8 0.0**
baz=278
F26K **Sheenjek River** **30.38 39** P **P** **12 23 30.6 -0.4**
baz=269
G26K **Porcupine Rive** **30.51 40** P **P** **12 23 33.3 +1.2**
baz=271
SCRK **Sand Creek** **30.59 46** P **P** **12 23 33.1 +0.1**
SCRK **Sand Creek** **30.59 46** P **P** **12 23 32.4 -0.6**
baz=276,SNR=12
N25K **Chitina, Valde** **30.60 51** P **P** **12 23 32.9 -0.3**
baz=279
C27K **Jago River** **30.62 35** P **P** **12 23 32.9 -0.2**
baz=266
BMRM **Bremner River** **30.70 52** P **P** **12 23 33.6 -0.4**
baz=280
J26L **Joseph Creek** **30.72 45** P **P** **12 23 33.8 -0.4**
baz=275
I26K **Coal Creek Min** **30.83 44** P **P** **12 23 35.2 +0.2**
baz=274
L26K **Log Cabin Wild** **30.98 48** P **P** **12 23 36.6 +0.2**
baz=278
M26K **Nabesna, AK** **31.23 49** P **P** **12 23 38.1 -0.5**
baz=279
E27K **Coleen River** **31.34 38** P **P** **12 23 38.8 -0.7**
baz=271
G27K **Doyon Strip** **31.36 41** P **P** **12 23 39.7 +0.1**
baz=273
MCARA **McCarthy VSAT** **31.39 51** P **P** **12 23 39.7 -0.2**
baz=281
K27K **Chicken** **31.42 46** IAmb IAmb 12 23 42.8
comp=Z,10nm,0.8s
K27K **Chicken** **31.42 46** P **P** **12 23 40.1 0.0**
baz=277
H27K **Steamboat Moun** **31.44 42** P **P** **12 23 40.2 -0.2**
baz=274
I27K **Kandik River** **31.45 43** P **P** **12 23 40.8 +0.3**
baz=275
CRQE **Cirque** **31.47 52** P **P** **12 23 41.0 +0.2**
baz=282
L27K **Beaver Creek,** **31.66 48** IAmb IAmb 12 23 45.0
comp=Z,13nm,0.8s
L27K **Beaver Creek,** **31.66 48** P **P** **12 23 43.0 +0.6**
baz=279
BCAR **Beaver Creek A** **31.68 48** P **P** **12 23 44.3 +1.8**
EGAK **Eagle** **31.73 44** IAmb IAmb 12 23 44.5
comp=Z,12nm,0.8s
EGAK **Eagle** **31.73 44** P **P** **12 23 43.0 +0.1**
baz=277
M27K **Edge Creek, AK** **31.75 49** P **P** **12 23 44.3 +1.0**
baz=280
CTG **Chitna Glacier** **32.27 52** P **P** **12 23 47.5 -0.4**
baz=283
YUK3 **Moose Creek** **32.51 50** P **P** **12 23 49.5 -0.5**
baz=282
DAWY **Dawson** **32.58 46** P **P** **12 23 51.6 +1.2**
DAWY **Dawson** **32.58 46** P **P** **12 23 50.0 -0.4**
baz=279,SNR=5.0
I29M **Ogilvie Camp,** **32.85 43** P **P** **12 23 53.4 +0.6**
I29M **Ogilvie Camp,** **32.85 43** P **P** **12 23 53.7 +0.9**
baz=278
O28M **Mount Upton** **32.86 52** P **P** **12 23 53.6 +0.4**
baz=284
PINM **Pinnacle** **32.99 53** P **P** **12 23 53.9 -0.2**
baz=285
M29M **Somme Creek** **33.29 48** P **P** **12 23 56.7 0.0**

baz=282
ULN **Ulaanbaatar** **33.30 283** *ce*P **P** **12 23 55.6 -1.4**
ULN pmax pmax
comp=Z,5.0nm,1.0s
EPYK **Eagle Plains** **33.36 41** P **P** **12 23 58.2 +1.0**
EPYK IAmb IAmb 12 23 58.9
comp=Z,8.4nm,0.9s
EPYK **Eagle Plains** **33.36 41** P **P** **12 23 57.0 -0.2**
baz=278
H11N2 **WAKE ISLAND Hy** **33.42 167** T T 12 59 47.0
baz=352,slow=76,SNR=2038
H11N3 **WAKE ISLAND Hy** **33.43 167** T T 12 59 46.5
baz=352,slow=76,SNR=4033
H11N1 **WAKE ISLAND Hy** **33.44 167** T T 12 59 45.9
baz=352,slow=76,SNR=3930
YUK4 **Talbot Arm** **33.45 50** P **P** **12 23 57.9 -0.4**
baz=284
PNL **Peninsula** **33.52 53** P **P** **12 23 58.1 -0.6**
baz=286
YUK6 **Outpost Mounta** **33.69 51** P **P** **12 23 59.7 -0.6**
baz=285
SONM **Songino Array** **33.70 283** P **P** **12 23 58.8 -1.7**
comp=Z,0.8nm,0.6s,baz=64,slow=6.9,SNR=3.9
SONM PcP **PcP** **12 26 39.5 +0.5**
comp=Z,2.0nm,0.9s,baz=71,slow=1.5,SNR=6.0
SONM LR LR 12 38 43.8
comp=Z,179nm,20.1s,baz=64,slow=38
comp=Z,0.8nm,0.6s
O29M **Mount Kennedy** **33.75 52** P **P** **12 24 00.7 -0.1**
baz=286
HYT **Haines Junctio** **34.12 51** IAmb IAmb 12 24 07.2
comp=Z,7.9nm,1.1s
HYT **Haines Junctio** **34.12 51** P **P** **12 24 04.0 0.0**
baz=286,SNR=5.1
N30M **Aishikik Lake** **34.15 50** P **P** **12 24 04.2 0.0**
baz=285
INK **Inuvik** **34.33 37** P **P** **12 24 06.7 +1.2**
comp=Z,9.5nm,0.5s,baz=291,slow=7.2,SNR=21
INK LR LR 12 39 26.2
comp=Z,55nm,18.6s,baz=312,slow=38
comp=Z,9.5nm,0.5s
INK **Inuvik** **34.33 37** P **P** **12 24 05.9 +0.4**
INK **Inuvik** **34.33 37** P **P** **12 24 05.9 +0.4**
baz=278,SNR=10.0
HHC **Hu-ho-hao-te** **34.35 269** *e*P **P** **12 24 07.8 +1.7**
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,190nm,5.0s
P30M **Million Dollar** **34.58 52** P **P** **12 24 09.4 +1.6**
baz=287
H11S1 **WAKE ISLAND Hy** **34.60 168** T T 13 01 10.6
baz=352,slow=76,SNR=235
H11S3 **WAKE ISLAND Hy** **34.61 168** T T 13 01 11.5
baz=352,slow=76,SNR=372
H11S2 **WAKE ISLAND Hy** **34.62 168** T T 13 01 13.9
baz=352,slow=76,SNR=163
N31M **Braeburn, Yuko** **34.75 50** P **P** **12 24 10.3 +1.0**
baz=286
O30N **Mendenhall** **34.80 51** P **P** **12 24 09.8 0.0**
baz=286
PLBC **Pleasant Camp** **35.06 53** P **P** **12 24 11.0 -0.9**
baz=288
M31M **Drury Creek, Y** **35.20 48** IAmb IAmb 12 24 16.2
comp=Z,10nm,0.9s
M31M **Drury Creek, Y** **35.20 48** P **P** **12 24 13.6 +0.5**
baz=286,SNR=12
WHY **Whitehorse** **35.41 51** P **P** **12 24 15.0 -0.1**
baz=288
SKAG **Skagway** **35.56 53** P **P** **12 24 16.3 +0.2**
baz=289
NJ2 **Nanjing** **35.87 251** *e*P **P** **12 24 18.5 -0.6**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
NRIK **Noril'sk** **36.04 325** LR LR 12 39 54.5
comp=Z,225nm,21.4s,baz=88,slow=38
NRIK **Noril'sk** **36.04 325** *i* P **P** **12 24 19.1 -1.1**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
NRIK MLR MLR
comp=Z,199nm,17.0s
N32M **Quiet Lake** **36.10 49** P **P** **12 24 21.3 +0.4**
baz=288
SIT **Sitka** **36.39 57** P **P** **12 24 23.2 -0.1**
baz=292
P33M **Teslin, Yukon** **36.52 51** IAmb IAmb 12 24 41.2
comp=Z,7.3nm,0.9s
P33M **Teslin, Yukon** **36.52 51** P **P** **12 24 25.2 +0.7**
baz=289,SNR=5.8
A36M **Sachs Harbour** **36.59 30** P **P** **12 24 25.2 +0.4**
baz=280
C36M **Paulatuk** **37.51 34** P **P** **12 24 33.4 +0.7**
baz=284,SNR=6.7
R33M **Jennings River** **37.68 52** P **P** **12 24 36.4 +2.0**
baz=292
WRAK **Wrangell Islan** **38.15 57** P **P** **12 24 40.0 +1.8**
baz=294
DLBC **Dease Lake** **38.49 53** LR LR 12 41 38.4
comp=Z,67nm,20.1s,baz=302,slow=38
DLBC **Dease Lake** **38.49 53** IAmb IAmb 12 25 01.1
comp=Z,6.2nm,0.8s
DLBC **Dease Lake** **38.49 53** P **P** **12 24 42.5 +1.3**
baz=293
XAN **Xi'an** **40.34 263** *e*P P 12 24 47.4 -9.4
XAN pP pP 12 25 04.1 -6.7
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN LR LR
comp=N,160nm,15.1s
XAN LR LR
comp=E,170nm,15.8s
XAN LR LR
comp=Z,170nm,14.7s
GUMO **Guam** **40.78 202** LR LR 12 42 33.8
comp=Z,26nm,19.2s,baz=67,slow=37
LZH **Lanzhou** **42.05 270** *e*P **P** **12 25 15.0 +4.1**
LZH sP sP 12 25 32.4 +1.2
LZH pmax pmax
comp=Z,13nm,1.0s
LZH LR LR
comp=Z,280nm,11.2s
LZH LR LR
comp=Z,220nm,9.3s
LZH LR LR
comp=Z,250nm,12.7s
BBB **Bella Bella** **42.31 61** LR LR 12 42 11.4
comp=Z,40nm,19.9s,baz=302,slow=35
GTA **Gaotai** **42.36 276** *e*P **P** **12 25 12.3 -1.1**
GTA pP pP 12 25 27.2 -0.4
GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,120nm,5.1s
GTA LR LR
comp=Z,85nm,17.1s
GTA LR LR
comp=Z,81nm,17.4s
GTA LR LR
comp=Z,120nm,20.0s
EUNU **Eureka** **42.37 14** P **P** **12 25 13.6 +0.6**
ZAA0 **Zalesovo Array** **42.73 303** P **P** **12 25 13.7 -2.3**
ZALV **Zalesovo Beam** **42.73 303** P **P** **12 25 13.9 -2.1**
comp=Z,1.5nm,0.5s,baz=68,slow=8.2,SNR=9.1
comp=Z,1.5nm,0.5s
ZALV **Zalesovo Beam** **42.73 303** P **P** **12 25 13.7 -2.3**
ZALV **Zalesovo Beam** **42.73 303** *i* P **P** **12 25 13.8 -2.2**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
YKA **Yellowknife Ar** **43.63 42** P **P** **12 25 22.7 -0.5**
comp=Z,6.5nm,0.9s,baz=300,slow=7.9,SNR=5.3
comp=Z,6.5nm,0.9s
YKA **Yellowknife Ar** **43.63 42** *i* P **P** **12 25 24.3 +1.1**
YKA pmax pmax
comp=Z,5.0nm,0.8s
RES **Resolute Bay** **43.77 22** P **P** **12 25 23.8 -0.4**
RES IAmb IAmb 12 25 25.7
comp=Z,8.8nm,0.7s
RES **Resolute Bay** **43.77 22** P **P** **12 25 23.8 -0.4**
RES pmax pmax
comp=Z,9.0nm,0.7s
WMQ **Urumqi** **46.82 289** *e*P **P** **12 25 50.0 +1.2**
WMQ LR LR
comp=Z,620nm,16.1s
WMQ LR LR
comp=Z,100nm,21.3s
GOMU **GeErMu** **47.45 277** P **P** **12 25 54.2 0.0**
GOMU pmax pmax
comp=Z,3.0nm,0.7s

GOMU pmax pmax
comp=Z,110nm,5.9s
KURK Kurchatov 47.68 302 P **P** **12 25 53.1 -2.2**
KURK Kurchatov 47.68 302 P **P** **12 25 53.1 -2.2**
KURK pmax pmax
comp=Z,14nm,1.1s
MK31 Makanchi Array 48.05 296 P **P** **12 25 56.1 -2.1**
MK31 Makanchi Array 48.05 296 *i* P **P** **12 25 57.1 -1.2**
MKAR Makanchi Array 48.05 296 P **P** **12 25 56.1 -2.1**
comp=Z,1.6nm,0.6s,baz=53,slow=7.4,SNR=19
comp=Z,1.6nm,0.6s
MKAR Makanchi Array 48.05 296 P **P** **12 25 55.7 -2.5**
MAKZ Makanchi 48.21 296 P **P** **12 25 56.7 -2.8**
MAKZ Makanchi 48.21 296 P **P** **12 25 56.7 -2.8**
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
G03D McMinnville, O 48.90 66 P **P** **12 26 05.3 +0.5**
baz=308
B08A Colville Reser 49.11 61 P **P** **12 26 07.7 +1.2**
B08A IAmb IAmb 12 26 08.7
comp=Z,7.7nm,0.8s
I02E Swisshome, OR 49.26 68 P **P** **12 26 07.5 -0.1**
baz=309
I03D Drain, OR 49.80 68 P **P** **12 26 12.1 +0.4**
baz=309
J01E Myrtle Point 49.81 69 P **P** **12 26 11.7 0.0**
baz=310
G05D Wamic, OR 49.96 65 P **P** **12 26 14.1 +1.2**
baz=309
C09A Chrisman Ranch 50.02 61 IAmb IAmb 12 26 30.1
comp=Z,4.4nm,0.8s
HAWA Hanford 50.22 63 P **P** **12 26 15.4 +0.6**
HAWA IAmb IAmb 12 26 31.9
comp=Z,6.3nm,1.1s
K02D Willamette Mer 50.26 69 P **P** **12 26 13.9 -1.4**
baz=310
F07A Phinny Hill Vi 50.31 64 P **P** **12 26 17.0 +1.5**
NEW Newport 50.34 60 LR LR 12 46 11.5
comp=Z,23nm,21.9s,baz=306,slow=34
NEW Newport 50.34 60 P **P** **12 26 16.0 +0.3**
NEW IAmb IAmb 12 26 32.1
comp=Z,14nm,1.5s
NEW Newport 50.34 60 P **P** **12 26 16.0 +0.3**
NEW pmax pmax
comp=Z,14nm,1.5s
NEW Newport 50.34 60 P **P** **12 26 15.6 -0.2**
baz=309
BRVK Borovoye 50.42 308 P **P** **12 26 14.0 -2.2**
BRVK IAmb IAmb 12 26 15.3
comp=Z,7.8nm,1.4s
BRVK Borovoye 50.42 308 *ce* P **P** **12 26 14.3 -1.9**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
I05D Terrebonne, OR 50.52 66 P **P** **12 26 17.7 +0.5**
baz=310
L02F Cave Junction 50.68 69 P **P** **12 26 18.0 -0.4**
baz=310
J04D Umpqua Nationa 50.79 67 P **P** **12 26 19.7 +0.3**
baz=310
E09A Wood Farm, Sta 50.89 62 IAmb IAmb 12 26 22.0
comp=Z,9.7nm,0.9s
QIZ Qiongzhong 51.04 248 P **P** **12 26 21.4 +0.2**
PINE Pine Mountain 51.09 66 P **P** **12 26 24.2 +2.5**
PINE IAmb IAmb 12 26 24.8
comp=Z,5.4nm,0.9s
J05D Fort Rock, OR 51.25 67 P **P** **12 26 23.7 +0.9**
baz=310,SNR=7.7
L04D Klamath Falls 51.34 69 P **P** **12 26 23.9 +0.5**
baz=311
YBH Yreka Blue Hor 51.42 69 LR LR 12 45 15.4
comp=Z,27nm,21.2s,baz=319,slow=32
WALA Waterton Lakes 51.50 57 P **P** **12 26 26.0 +1.5**
K05A Summer Lake 51.80 67 P **P** **12 26 29.7 +2.7**
K05A IAmb IAmb 12 26 30.4
comp=Z,7.5nm,1.1s
BMO Blue Mountains 52.40 63 P **P** **12 26 33.0 +1.7**
BMO Blue Mountains 52.40 63 P **P** **12 26 33.0 +1.7**
BMO pmax pmax
comp=Z,3.0nm,0.7s
MOD Modoc Plateau 52.67 68 IAmb IAmb 12 26 36.6
comp=Z,5.9nm,0.8s
MSO Missoula 52.91 59 IAmb IAmb 12 26 52.7
comp=Z,13nm,1.4s
MSO Missoula 52.91 59 P **P** **12 26 35.0 0.0**
baz=311
PLID Pearl Lake 52.95 62 IAmb IAmb 12 26 37.9
comp=Z,5.9nm,0.8s
WVOR Wild Horse Val 53.25 66 P **P** **12 26 39.1 +1.5**
WVOR pmax pmax
comp=Z,3.0nm,1.0s
ARU Arti 53.47 317 LR LR 12 52 43.2
comp=Z,61nm,18.6s,baz=73,slow=40
ARU Arti 53.47 317 *d* P **P** **12 26 35.7 -3.1**
ARU *PP **pP** **12 26 51.2 -2.5**
ARU S **S** **12 34 02.4 -4.5**
ARU pmax pmax
comp=Z,13nm,2.1s
ARCES ARCESS Array B 53.54 342 P **P** **12 26 37.8 -1.4**
comp=Z,4.8nm,0.9s,baz=34,slow=8.8,SNR=3.6
ARCES LR LR 12 55 02.0
comp=Z,31nm,18.1s,baz=340,slow=42
comp=Z,4.8nm,0.9s
BEKR Beckworth 53.99 70 IAmb IAmb 12 26 46.1
comp=Z,7.3nm,0.9s
EGMT Eagleton 54.28 56 P **P** **12 26 43.9 -1.1**
baz=312
PAHR Pah Rah Range 54.66 69 IAmb IAmb 12 26 50.9
comp=Z,7.5nm,0.9s
VCNR Virginia City 54.78 70 IAmb IAmb 12 26 52.2
comp=Z,8.3nm,0.8s
HLID Hailey 54.82 63 P **P** **12 26 49.3 +0.2**
baz=312
BOZ Bozeman (W) 54.93 59 IAmb IAmb 12 26 52.4
comp=Z,4.2nm,0.8s
BOZ Bozeman (W) 54.93 59 P **P** **12 26 50.2 +0.4**
baz=312,SNR=6.4
AAK Ala-Archa 54.98 296 *ce* P **P** **12 26 48.6 -1.6**
AAK pmax pmax
comp=Z,7.0nm,1.7s
CMB Columbia Colle 55.22 71 IAmb IAmb 12 27 09.5
comp=Z,7.6nm,1.2s
YERR Yerington 55.23 70 IAmb IAmb 12 26 55.4
comp=Z,7.3nm,0.9s
BMN Battle Mountai 55.38 67 IAmb IAmb 12 26 56.5
comp=Z,8.9nm,0.8s
YHL Hebgen Lake 55.67 59 IAmb IAmb 12 27 13.1
comp=Z,4.4nm,0.9s
GCMT Greycliff 55.82 58 P **P** **12 26 58.6 +2.4**
KVN Kaiserville 55.83 69 P **P** **12 26 59.1 +2.7**
KVN IAmb IAmb 12 26 59.3
comp=Z,6.2nm,0.7s
KVN Kaiserville 55.83 69 P **P** **12 26 59.1 +2.7**
KVN pmax pmax
comp=Z,6.0nm,0.7s
MSF Maaselka 55.84 338 P **P** **12 26 54.8 -1.0**
MSF pmax pmax
comp=Z,19nm,1.6s
RYN Ryan 55.88 69 IAmb IAmb 12 26 60.0
comp=Z,6.4nm,0.8s
NVAR Mina Array Bea 56.14 70 P **P** **12 27 01.1 +2.4**
comp=Z,4.6nm,0.7s,baz=297,slow=7.4,SNR=45
comp=Z,4.6nm,0.7s
NV11 Mina Array Sit 56.22 69 IAmb IAmb 12 27 17.3
comp=Z,7.0nm,1.2s
MDPB Devils Postpil 56.24 71 IAmb IAmb 12 27 02.9
comp=Z,5.4nm,1.0s
ELK Elko 56.27 66 LR LR 12 48 07.0
comp=Z,30nm,21.8s,baz=338,slow=33
JMIC Jan Mayen 56.29 355 LR LR 12 50 15.2
comp=Z,22nm,19.2s,baz=246,slow=35
H17A Grant Village 56.30 60 IAmb IAmb 12 27 04.1
comp=Z,7.6nm,0.9s
H17A Grant Village 56.30 60 P **P** **12 26 59.8 0.0**
baz=313
FLWY Flagg Ranch 56.44 60 IAmb IAmb 12 27 04.3
comp=Z,5.1nm,0.7s
IMW Indian Meadow 56.45 60 IAmb IAmb 12 27 19.8
comp=Z,11nm,1.4s
RLMT Red Lodge 56.48 58 IAmb IAmb 12 27 04.1
comp=Z,8.2nm,0.9s
RLMT Red Lodge 56.48 58 P **P** **12 27 01.0 0.0**
baz=313
UBPT Khong Chiam 56.52 250 P **P** **12 27 01.4 +0.1**
FXWY Fox Creek 56.58 60 IAmb IAmb 12 27 20.3
comp=Z,4.7nm,0.9s
DGMT Dagmar 56.71 52 P **P** **12 27 01.2 -1.2**
baz=314
KKAR Karatay Array 56.81 299 P **P** **12 27 01.0 -2.1**
KKAR Karatay Array 56.81 299 P **P** **12 27 01.0 -2.1**
LOHW Long Hollow 56.82 60 IAmb IAmb 12 27 21.8
comp=Z,5.7nm,1.1s
LAO LASA Array 56.95 55 P **P** **12 27 04.2 +0.1**
baz=314
TIN Tinemaha, Big 57.13 71 P **P** **12 27 06.9 +1.3**
baz=314
AHID Auburn Hatcher 57.14 61 IAmb IAmb 12 27 08.6
comp=Z,6.8nm,0.9s
SMMC Simmler 57.33 73 P **P** **12 27 07.4 +0.5**
baz=315
LCH Last Change Ra 57.34 70 IAmb IAmb 12 27 25.5
comp=Z,6.3nm,1.1s
VES Vestal, Richgr 57.49 72 P **P** **12 27 09.7 +1.7**
baz=315
CWC Cottonwood Cre 57.65 71 P **P** **12 27 09.8 +0.5**
baz=315
GRAC Grapevine Rang 57.67 70 IAmb IAmb 12 27 12.3
comp=Z,6.2nm,0.8s
GRAC Grapevine Rang 57.67 70 P **P** **12 27 10.4 +1.1**
baz=315
HWUT Hardware Ranch 57.69 63 IAmb IAmb 12 27 12.8
comp=Z,7.4nm,0.8s
PKM Mcpherson Peak 57.73 74 P **P** **12 27 11.0 +1.1**
baz=315
R11A Troy Canyon, C 57.73 68 IAmb IAmb 12 27 12.8
comp=Z,3.6nm,0.8s
R11A Troy Canyon, C 57.73 68 P **P** **12 27 11.0 +1.1**
baz=314,SNR=8.4
ABKAR Akbulak array 57.81 310 P **P** **12 27 07.8 -2.2**
CMAR Chiang Mai Arr 57.82 258 P **P** **12 27 10.8 +0.2**
comp=Z,1.5nm,0.6s,baz=22,slow=6.7,SNR=10
comp=Z,1.5nm,0.6s
CMAR Chiang Mai Arr 57.82 258 *i* P **P** **12 27 11.1 +0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
BW06 Boulder Array 57.95 60 P **P** **12 27 12.2 +0.8**
baz=314,SNR=10
PDAR Pinedale Array 57.95 60 P **P** **12 27 13.2 +1.8**
comp=Z,7.0nm,0.8s,baz=319,slow=3.0,SNR=38
PDAR pP **pP** **12 27 27.6 +1.2**
comp=Z,2.9nm,0.6s,baz=327,slow=2.5,SNR=8.0
comp=Z,7.0nm,0.8s
ISA Isabella, Lake 57.97 72 P **P** **12 27 12.7 +1.3**
baz=315
SPR3 Spring Creek 3 57.98 66 IAmb IAmb 12 27 15.6
comp=Z,8.1nm,0.7s
DUG Dugway, Tooele 57.99 64 IAmb IAmb 12 27 30.5
comp=Z,8.0nm,1.1s
DUG Dugway, Tooele 57.99 64 P **P** **12 27 12.9 +1.3**
DUG pmax pmax
comp=Z,7.0nm,1.2s
DUG Dugway, Tooele 57.99 64 P **P** **12 27 12.2 +0.5**
baz=314
SBC Santa Barbara 58.10 74 P **P** **12 27 12.6 +0.3**
baz=315
MPMC Manual Prospec 58.26 71 P **P** **12 27 15.9 +2.3**
baz=315,SNR=5.5
FURC Furnace Creek, 58.33 70 P **P** **12 27 15.0 +1.2**
baz=315,SNR=10.0
TPNV Topopah Spring 58.34 69 P **P** **12 27 14.8 +0.7**
baz=315,SNR=6.0
SFJD Kangerlussuaq 58.44 13 LR LR 12 53 44.0
comp=Z,38nm,20.1s,baz=344,slow=37
LRMC Laurel Mtn Rad 58.55 72 P **P** **12 27 15.9 +0.3**
baz=315
NLU North Lily Min 58.56 64 IAmb IAmb 12 27 18.8
comp=Z,4.8nm,0.8s
PSUT Pine Spring 58.58 67 IAmb IAmb 12 27 18.8
comp=Z,5.9nm,1.2s
GWY Greenwater Val 58.64 70 IAmb IAmb 12 27 19.1
comp=Z,6.9nm,0.8s
QSM Queen of Sheba 58.68 71 IAmb IAmb 12 27 34.4
comp=Z,7.1nm,1.1s
PRN Pahroc Range 58.70 68 IAmb IAmb 12 27 19.8
comp=Z,6.6nm,0.9s
MPU Maple Canyon 58.76 64 IAmb IAmb 12 27 20.2
comp=Z,4.2nm,0.8s
EDW2 Edwards Air Fo 58.79 72 P **P** **12 27 18.3 +1.1**
baz=316,SNR=5.9
SNCC San Nicolas Is 59.06 75 P **P** **12 27 21.6 +2.6**
baz=316
SHOC Shoshone, Teco 59.06 70 P **P** **12 27 20.1 +1.1**
baz=315
GSC Goldstone, Bar 59.18 71 IAmb IAmb 12 27 22.7
comp=Z,6.1nm,0.9s
GSC Goldstone, Bar 59.18 71 P **P** **12 27 22.1 +2.2**
baz=316,SNR=6.0
MDND Maddock 59.33 50 P **P** **12 27 22.3 +1.6**
baz=316
BFSC Mount Baldy Ra 59.44 73 P **P** **12 27 22.6 +0.8**
baz=316
TMUT Trail Mountain 59.50 64 IAmb IAmb 12 27 25.3
comp=Z,6.0nm,0.7s
CCUT Cedar City 59.54 67 IAmb IAmb 12 27 25.7
comp=Z,4.3nm,0.8s
TUQ Turquoise Moun 59.59 70 P **P** **12 27 24.9 +2.1**
baz=316
K22A Casper 59.62 59 P **P** **12 27 23.3 +0.3**
baz=316
HEC Hector,Ludlow 59.79 71 P **P** **12 27 26.1 +2.1**
baz=316,SNR=8.0
Q16A Castle Valley 59.79 65 IAmb IAmb 12 27 27.3
comp=Z,4.8nm,0.9s
P18A Preston Nutter 59.79 63 IAmb IAmb 12 27 42.4
comp=Z,9.3nm,1.2s
SCI2 San Clemente I 59.83 74 P **P** **12 27 26.5 +2.3**
baz=316
RSSD Black Hills 59.85 56 P **P** **12 27 25.8 +1.2**
RSSD Black Hills 59.85 56 P **P** **12 27 25.8 +1.2**
RSSD pmax pmax
comp=Z,17nm,0.8s
RSSD Black Hills 59.85 56 P **P** **12 27 25.9 +1.4**
baz=316
MTPU Mount Pierson 59.85 66 IAmb IAmb 12 27 51.9
comp=Z,7.6nm,1.4s
BBRC Big Bear Solar 59.85 72 P **P** **12 27 25.9 +1.2**
baz=316
LCMT Little Creek M 59.99 67 IAmb IAmb 12 27 28.9
comp=Z,8.0nm,1.0s
MURC Murrieta 60.17 73 P **P** **12 27 28.4 +1.7**
baz=316
GMRC Granite Mounta 60.21 71 P **P** **12 27 28.3 +1.3**
baz=316,SNR=5.6
FINES FINESS Array B 60.34 336 P **P** **12 27 25.9 -1.4**
comp=Z,3.1nm,0.7s,baz=27,slow=4.7,SNR=8.7
FINES LR LR 12 56 32.3
comp=Z,60nm,20.7s,baz=50,slow=39
comp=Z,3.1nm,0.7s
FINES FINESS Array B 60.34 336 *i* P **P** **12 27 27.0 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.7s
O20A White River Ci 60.51 62 P **P** **12 27 30.7 +1.6**
baz=316
BELC Belle Mtn. Jos 60.58 72 P **P** **12 27 30.1 +0.6**
baz=316,SNR=5.4
PFO Pinyon Flats O 60.59 72 LR LR 12 49 25.7
comp=Z,25nm,21.6s,baz=306,slow=32
PFO Pinyon Flats O 60.59 72 P **P** **12 27 31.3 +1.7**
PFO pmax pmax
comp=Z,6.0nm,1.1s
PFO Pinyon Flats O 60.59 72 P **P** **12 27 30.0 +0.4**
baz=316
TPFO Pinon Flats 60.59 72 P **P** **12 27 29.6 -0.1**
baz=316
PMD Palm Desert 60.61 72 IAmb IAmb 12 27 31.4
comp=Z,3.0nm,0.7s
AGMN Agassiz Nation 60.72 48 P **P** **12 27 29.9 -0.2**
baz=318
109C Camp Elliot, M 60.73 73 P **P** **12 27 31.8 +1.3**
baz=316
BELG Belogornoye 60.81 319 LR LR 12 58 23.1
comp=Z,65nm,20.3s,baz=347,slow=40
BELG Belogornoye 60.81 319 *i* P **P** **12 27 30.2 -0.4**
BELG pmax pmax
comp=Z,3.0nm,0.6s
NEE2 Needles Airpor 60.82 70 P **P** **12 27 31.2 +0.1**
baz=316
IRM Iron Mountain 60.95 71 P **P** **12 27 32.7 +0.7**
baz=316
W13A Hualapai Mount 61.00 69 IAmb IAmb 12 27 35.3
comp=Z,3.6nm,0.9s
MONP2 Monument Peak 61.13 73 P **P** **12 27 35.2 +1.8**
baz=317
BC3 Big Chuckawall 61.14 72 P **P** **12 27 33.7 +0.4**
baz=316
N23A Red Feather La 61.18 60 P **P** **12 27 35.2 +1.5**
baz=316,SNR=5.6
PDMCI Parker Dam,Lak 61.42 70 P **P** **12 27 36.7 +1.6**
baz=317
SWSC Sam W. Stewart 61.45 72 P **P** **12 27 36.7 +1.4**
baz=317
IKP In-Ko-Pah, Jac 61.48 73 P **P** **12 27 36.7 +1.1**
baz=317
PV07 Paradox Valley 61.51 63 IAmb IAmb 12 27 38.5
comp=Z,6.1nm,1.0s
SMCO Snowmass 61.88 62 IAmb IAmb 12 27 54.9
comp=Z,6.1nm,0.9s
HNR Honiara 61.91 180 LR LR 12 51 53.1
comp=Z,51nm,20.6s,baz=92,slow=33
WUAZ Wupatki 62.12 67 P **P** **12 27 41.9 +1.9**
baz=317
ISCO Idaho Springs 62.15 60 P **P** **12 27 42.7 +2.4**
ISCO pmax pmax
comp=Z,11nm,1.2s
ISCO Idaho Springs 62.15 60 P **P** **12 27 41.5 +1.2**
baz=317,SNR=7.3
MVCO Mesa Verde 62.48 64 IAmb IAmb 12 27 45.2
comp=Z,4.6nm,0.8s
MVCO Mesa Verde 62.48 64 P **P** **12 27 44.3 +1.8**
baz=317
OBN Obninsk 62.66 327 ‖ *e* P **P** **12 27 42.9 -0.2**
OBN *i* S **S** **12 36 01.3 -5.5**
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,100nm,23.0s
EYMN Ely 62.92 46 P **P** **12 27 45.7 +0.8**
baz=320
S22A 4UR Ranch, Cre 63.00 63 IAmb IAmb 12 28 03.0
comp=Z,6.6nm,1.0s
S22A 4UR Ranch, Cre 63.00 63 P **P** **12 27 47.0 +1.0**
baz=317
Q24A Divide 63.01 61 IAmb IAmb 12 27 48.8
comp=Z,7.8nm,1.3s
Q24A Divide 63.01 61 P **P** **12 27 47.5 +1.4**
baz=318
W18A Petrified Fore 63.32 67 P **P** **12 27 49.2 +1.2**
baz=317
X18A Snowflake 63.63 67 IAmb IAmb 12 27 53.4
comp=Z,7.3nm,0.9s
SDCO Great Sand Dun 63.71 62 P **P** **12 27 51.3 +0.6**
baz=318
ECSD EROS Data Cent 63.77 52 IAmb IAmb 12 27 52.2
comp=Z,9.3nm,1.0s
ECSD EROS Data Cent 63.77 52 P **P** **12 27 51.7 +1.0**
baz=319,SNR=5.3
NB2 NORSAR Subarra 63.81 343 P **P** **12 27 50.4 -0.2**
comp=Z,7.5nm,1.1s,baz=19,slow=6.9
NOA NORSAR Array B 63.81 343 P **P** **12 27 50.2 -0.4**
comp=Z,1.4nm,0.7s,baz=6.9,slow=7.1,SNR=4.6
NOA LR LR 13 01 16.9
comp=Z,27nm,18.6s,baz=10.0,slow=41
comp=Z,1.4nm,0.7s
214A Organ Pipe Nat 63.90 71 P **P** **12 27 52.4 +0.7**
baz=318
HFS Hagfors 64.21 342 LR LR 13 00 04.9
comp=Z,55nm,18.9s,baz=68,slow=40
KSCO Kaye Shedlock' 64.30 59 P **P** **12 27 54.7 +0.4**
baz=318
SPMN Marine on St. 64.42 48 P **P** **12 27 54.2 -0.7**
baz=320
T25A Trinidad 64.75 61 P **P** **12 27 57.3 -0.1**
baz=318
BGNE Belgrade 64.78 54 P **P** **12 27 57.6 +0.3**
baz=319
TUC Tucson 64.80 69 P **P** **12 27 58.2 +0.7**
baz=318
ANMO Albuquerque 65.26 64 LR LR 12 53 50.0
comp=Z,18nm,21.5s,baz=316,slow=33
ANMO Albuquerque 65.26 64 P **P** **12 28 01.2 +0.5**
ANMO Albuquerque 65.26 64 *ce* P **P** **12 28 02.6 +1.9**
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 65.26 64 P **P** **12 28 01.5 +0.8**
baz=318
KSM Kuching 65.38 236 P **P** **12 28 02.9 +1.5**
MNK Minsk 65.88 332 *i* P P 12 28 10.8 +6.7
MNK *i* *PP sP 12 28 27.0 +1.4
MNK *i* 12 30 35.8
MNK *i* PPP PPP 12 32 10.0
MNK *i* S **S** **12 36 52.9 +6.4**
MNK *i* *SS sS 12 37 20.9 +8.6
MNK *i* SS **SS** **12 41 09.1 +8.1**
MNK pmax pmax
comp=E,2.0nm,0.4s
MNK pmax pmax
comp=Z,11nm,0.7s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=Z,86nm,21.0s
MNK MLR MLR
comp=N,23nm,17.0s
MNK MLR MLR
comp=E,46nm,23.0s
MNK Minsk 65.88 332 *i* P P 12 28 10.8 +6.7
comp=E,2.0nm,0.4s
MNK *i* P P 12 28 10.8 +6.7
comp=N,8.0nm,0.9s
MNK *i* P P 12 28 10.8 +6.7
comp=Z,11nm,0.7s,baz=30
MNK *i* pP sP 12 28 27.1 +1.4
MNK *i* PP **PP** **12 30 35.9 +6.9**
MNK *i* PPP PPP 12 32 10.0
MNK *i* S **S** **12 36 52.9 +6.4**
MNK *i* sS sS 12 37 21.0 +8.6
MNK *i* SS **SS** **12 41 09.2 +8.1**
MNK *i* SSS SSS 12 44 22.3
MNK *i* LQ LQ 12 52 20.2
MNK *i* LR LR 12 56 06.1
MNK *i* LRM MLR 12 59 29.0
comp=Z,86nm,20.6s
MNK *i* LRM MLR 13 00 04.6
comp=N,23nm,17.4s
MNK *i* LRM MLR 13 00 10.4
comp=E,46nm,22.6s
CBKS Cedar Bluff 65.94 57 P **P** **12 28 03.1 -1.7**
baz=319
SCHQ Schefferville 66.11 27 P **P** **12 28 06.2 +0.6**
comp=E,5.1nm,0.8s,baz=356,slow=6.4,SNR=2.7
SCHQ LR LR 13 01 35.5
comp=E,28nm,18.5s,baz=74,slow=40
comp=E,5.1nm,0.8s
121A Cookes Peak, D 66.32 67 P **P** **12 28 08.0 +0.4**
baz=319
319A Douglas 66.34 69 IAmb IAmb 12 28 26.5
comp=Z,12nm,1.0s
SCIA State Center 66.78 51 P **P** **12 28 10.5 +0.4**
baz=321
KSU1 Kansas State U 67.30 55 P **P** **12 28 15.0 +1.6**
baz=320
L40A Anamosa 67.59 50 IAmb IAmb 12 28 29.9
comp=Z,9.0nm,0.9s
IPM Ipoh 67.82 247 P **P** **12 28 16.8 -0.2**
AMTX Amarillo 67.90 61 P **P** **12 28 18.7 +1.3**
baz=320
MSTX Muleshoe 68.00 63 IAmb IAmb 12 28 34.5
comp=Z,14nm,1.1s
MSTX Muleshoe 68.00 63 P **P** **12 28 18.0 -0.1**
baz=320
ELIS Ellis County 68.19 59 IAmb IAmb 12 28 33.6
comp=Z,18nm,0.5s
AKASG Malin Array Be 68.77 329 P **P** **12 28 20.9 -1.6**
comp=Z,2.0nm,0.5s,baz=30,slow=6.1,SNR=17
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 68.77 329 *i* P **P** **12 28 21.1 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 68.77 329 IAmb IAmb 12 28 21.8
comp=Z,9.1nm,1.0s
KIV Kislovodsk 69.50 317 *e* P **P** **12 28 26.8 -0.5**
KIV pmax pmax
comp=Z,8.0nm,1.1s
WMOK Wichita Mounta 69.54 59 IAmb IAmb 12 28 43.3
comp=Z,9.7nm,0.9s
WMOK Wichita Mounta 69.54 59 P **P** **12 28 28.3 +0.8**
WMOK pmax pmax
comp=Z,13nm,1.0s
WMOK Wichita Mounta 69.54 59 P **P** **12 28 26.7 -0.8**
baz=321,SNR=6.2
KBZ Khabaz 69.60 316 P **P** **12 28 27.9 +0.2**
comp=Z,2.3nm,0.7s,baz=74,slow=5.8,SNR=4.2
comp=Z,2.3nm,0.7s

HDIL Hopedale 69.67 49 P P 12 28 28.2 -0.1
baz=323
R40A Maddies Statio 70.06 53 IAmb IAmb 12 28 31.2
comp=Z,7.5nm,0.7s
TUL1 Leonard 70.17 57 P P 12 28 32.1 +0.7
baz=322
U38A Gravette 70.47 55 IAmb IAmb 12 28 34.1
comp=Z,7.5nm,0.9s
SADO Sadowa 70.58 40 LR LR 13 00 22.0
comp=Z,30nm,18.3s,baz=352,slow=36
ABTX Abilene, Hawle 70.71 61 P P 12 28 35.0 +0.2
baz=321
CCM Cathedral Cave 70.74 52 P P 12 28 34.2 -0.6
CCM IAmb IAmb 12 28 50.0
comp=Z,9.9nm,1.1s
CCM Cathedral Cave 70.74 52 P P 12 28 34.2 -0.6
CCM pmax pmax
comp=Z,10.0nm,1.1s
CCM Cathedral Cave 70.74 52 P P 12 28 35.2 +0.4
baz=323
AFI Afiamalu 70.80 151 LR LR 12 53 28.6
comp=Z,53nm,21.1s,baz=40,slow=30
MGMO Mountain Grove 70.95 53 IAmb IAmb 12 28 36.7
comp=Z,5.9nm,0.6s
TX32 Lajitas Array 71.05 66 IAmb IAmb 12 28 39.5
comp=Z,7.9nm,0.8s
TXAR Lajitas Array 71.05 66 P P 12 28 38.5 +1.6
comp=Z,8.2nm,0.8s,baz=298,slow=4.5,SNR=69
TXAR pP **pP 12 28 52.7 +0.6**
comp=Z,3.6nm,0.7s,baz=298,slow=4.9,SNR=12
comp=Z,8.2nm,0.8s
GNI Garni 71.71 313 LR LR 13 02 38.7
comp=Z,48nm,20.5s,baz=65,slow=38
O48B Farmland 71.78 47 P P 12 28 41.1 0.0
baz=325
OJC Ojcow 71.95 334 *e*P **P 12 28 41.0 -0.8**
OJC Ojcow 71.95 334 P **P 12 28 41.4 -0.5**
OJC pmax pmax
comp=Z,12nm,1.0s
FCAR Ozark Folk Cen 72.03 54 IAmb IAmb 12 28 43.3
comp=Z,10nm,0.8s
KSP Ksiaz 72.26 337 *e*P **P 12 28 43.5 -0.3**
KSP Ksiaz 72.26 337 P **P 12 28 43.6 -0.1**
KSP pmax pmax
comp=Z,13nm,1.0s
JCT Junction City 72.29 63 P P 12 28 44.3 0.0
baz=321
MIAR Mount Ida 72.37 56 P P 12 28 45.0 +0.4
MIAR pmax pmax
comp=Z,9.0nm,0.8s
MIAR Mount Ida 72.37 56 P P 12 28 45.4 +0.7
baz=323
WHTX Lake Whitney, 72.37 60 P P 12 28 45.1 +0.4
baz=322
WHAR Wooly Hollow 72.42 55 IAmb IAmb 12 29 01.4
comp=Z,9.6nm,0.9s
KOLS Kolonicke sedl 72.43 332 *e*P **P 12 28 45.0 +0.2**
KOLS pmax pmax
comp=Z,8.0nm,1.1s
KOLS Kolonicke sedl 72.43 332 *e*P **P 12 28 45.0 +0.2**
LONY Lake Ozonia 72.44 37 P P 12 28 44.7 -0.3
baz=329
ERPA Erie 72.45 42 P P 12 28 43.5 -1.6
baz=327
NIE Niedzica 72.54 333 P P 12 28 46.0 +0.5
NIE pmax pmax
comp=Z,4.0nm,1.3s
P49A Miami Univ. Ec 72.57 47 P P 12 28 45.9 +0.1
baz=325
CLL Collm 72.59 339⇑ *i*P **P 12 28 45.2 -0.5**
CLL pmax pmax
comp=Z,26nm,1.0s
CLL Collm 72.59 339⇑ *i*P **P 12 28 45.2 -0.5**
comp=Z,26nm,1.0s
UPC Upice 72.64 337 *e*P **P 12 28 45.9 -0.1**
UPC Upice 72.64 337 *e*P **P 12 28 45.9 -0.1**
UZH Uzhgorod 72.70 332 *i*P **P 12 28 45.2 -1.2**
DPC Dobruska-Polom 72.71 336 *e*P **P 12 28 46.3 -0.2**
DPC Dobruska-Polom 72.71 336 *e*P **P 12 28 46.3 -0.2**
M53A WI Miller and 72.74 43 P P 12 28 46.3 -0.4
baz=327
BURAR Bucovina Array 72.74 330⇑P **P 12 28 46.2 -0.6**
BURAR Bucovina Array 72.74 330 P **P 12 28 46.0 -0.8**
BURAR Bucovina Array 72.74 330 P **P 12 28 46.0 -0.8**
BURAR pmax pmax
comp=Z,4.0nm,0.8s
ACSO Alum Creek Sta 72.76 45 P P 12 28 47.1 +0.2
baz=326
BRG Berggiesshubel 72.78 338 *i*P **P 12 28 46.9 0.0**
BRG Amp 12 28 49.3
comp=Z,7.5nm,0.8s
BRG Amp 13 10 15.0
comp=N,0.1nm,18.2s
BRG Amp 13 10 17.0
comp=E,0.1nm,5.6s
BRG Amp 13 10 19.0
comp=Z,0.1nm,16.0s
BRG Berggiesshubel 72.78 338 *i*P **P 12 28 46.8 0.0**
BRG pmax pmax
comp=Z,8.0nm,0.8s
KRLC Kraliky 72.85 336 *e*P **P 12 28 47.4 +0.1**
KRLC Kraliky 72.85 336 *e*P **P 12 28 47.4 +0.1**
MORC Moravsky Berou 72.94 335⇑P **P 12 28 47.7 -0.1**
MORC Moravsky Berou 72.94 335 P **P 12 28 47.9 +0.1**
MORC pmax pmax
comp=Z,15nm,1.0s
MORC Moravsky Berou 72.94 335 *e*P **P 12 28 47.5 -0.3**
LANS Liptovska Anna 73.01 334 *e*P **P 12 28 49.4 +1.1**
LANS pmax pmax
comp=Z,10.0nm,0.9s
LANS Liptovska Anna 73.01 334 *e*P **P 12 28 49.4 +1.1**
BIZ Bicaz 73.07 329⇑P **P 12 28 47.8 -0.8**
PRU Pruhonice 73.47 337 *e*P **P 12 28 51.1 +0.2**
PRU MLR MLR
comp=Z,100nm,14.3s
PRU Pruhonice 73.47 337 *e*P **P 12 28 51.1 +0.2**
PRU AMS AMS 13 09 30.0
comp=Z,100nm,14.3s
O53A New Philadelph 73.50 44 P P 12 28 51.7 +0.4
baz=327
MOX Moxa 73.51 339 P P 12 28 51.3 +0.1
MOX pmax pmax
comp=Z,14nm,1.3s
VRAC Vranov 73.61 336⇑P **P 12 28 51.6 -0.1**
VRAC Vranov 73.61 336 LR LR 13 05 44.1
comp=Z,54nm,19.5s,baz=54,slow=40
VRAC Vranov 73.61 336 P P 12 28 51.8 0.0
VRAC pmax pmax
comp=Z,14nm,1.2s
VRAC Vranov 73.61 336 *e*P **P 12 28 51.5 -0.3**
P52A Corning 73.62 45 P P 12 28 51.0 -1.0
baz=326
BUG Bochum--Univer 73.62 342 P P 12 28 51.5 -0.2
BUG pmax pmax
comp=Z,24nm,1.1s
LBNH Lisbon 73.74 36 P P 12 28 53.0 +0.4
baz=330
JAVC Velka Javorina 73.75 335 *e*P **P 12 28 53.1 +0.5**
VYHS Vyhne 73.78 334 *e*P **P 12 28 52.9 +0.1**
VYHS pmax pmax
comp=Z,12nm,1.2s
VYHS Vyhne 73.78 334 *e*P **P 12 28 52.9 +0.1**
KRUC Moravsky 73.89 336 P P 12 28 53.6 +0.2
KRUC pmax pmax
comp=Z,16nm,1.1s
KRUC Moravsky 73.89 336 *e*P **P 12 28 53.1 -0.3**
WVT Waverly 73.91 51 P P 12 28 54.2 +0.5
WVT IAmb IAmb 12 28 55.3
comp=Z,7.2nm,0.8s
WVT Waverly 73.91 51 P P 12 28 54.2 +0.5
WVT pmax pmax
comp=Z,7.0nm,0.8s
WVT Waverly 73.91 51 P P 12 28 54.2 +0.5
baz=324
CFR Carcaliu 73.96 327⇑P **P 12 28 52.9 -1.0**
CFR Carcaliu 73.96 327 P **P 12 28 52.4 -1.4**
CFR pmax pmax
comp=Z,8.0nm,1.2s
BINY Binghamton 73.98 40 P P 12 28 54.8 +0.7
baz=329
COVR Voineasa-Covas 74.00 328⇑P **P 12 28 52.9 -1.2**
PSZ Piszkesteto 74.02 333 P P 12 28 54.3 0.0
PSZ pmax pmax
comp=Z,11nm,1.3s
TPGR Topolog 74.15 326⇑P **P 12 28 54.1 -0.9**
833A Chaparral WMA, 74.19 64 P P 12 28 56.1 +0.6
baz=322
DRGR 74.24 331⇑P **P 12 28 55.4 -0.2**
MODS Modra-Piesok 74.30 335 *e*P **P 12 28 57.0 +1.2**
MODS Modra-Piesok 74.30 335 *e*P **P 12 28 57.0 +1.2**
MLR Muntele Rosu 74.40 328⇑P **P 12 28 55.5 -1.2**
MLR Muntele Rosu 74.40 328 LR LR 13 06 18.5
comp=Z,126nm,18.2s,baz=45,slow=40
MLR Muntele Rosu 74.40 328 P **P 12 28 55.4 -1.2**
OXF Oxford 74.46 53 P P 12 28 57.6 +0.7
baz=324
KHC Kasperske Hory 74.50 338 *e*P **P 12 28 57.2 +0.2**
KHC Kasperske Hory 74.50 338 *e*P **P 12 28 57.2 +0.2**
ISR Istrita 74.54 328⇑P **P 12 28 57.2 -0.2**
ISR Istrita 74.54 328 P **P 12 28 57.1 -0.2**
SSPA Standing Stone 74.55 42 P P 12 28 57.5 +0.1
baz=328
TNS Taunus Mts 74.56 341 P P 12 28 58.0 +0.6
TNS pmax pmax
comp=Z,21nm,1.0s
CKRC Cesky Krumlov 74.62 337 *e*P **P 12 28 57.7 0.0**
CLTN Cedars of Leba 74.64 50 IAmb IAmb 12 28 59.5
comp=Z,9.4nm,0.7s
WET Wettzell 74.65 338 P P 12 28 58.2 +0.4
WET pmax pmax
comp=Z,15nm,0.9s
BTNL Ternell 74.65 343 *d*P **P 12 28 57.8 0.0**
comp=Z,21nm,1.0s
MEM Membach 74.65 343 P P 12 28 58.0 +0.3
MEM pmax pmax
comp=Z,54nm,1.0s
MEM Membach 74.65 343 *d*P **P 12 28 58.0 +0.3**
comp=Z,32nm,0.9s
V48A Smith Brothers 74.70 51 IAmb IAmb 12 28 59.6
comp=Z,8.2nm,0.8s
DZM Mont Dzumac 74.72 173 *e*LR LR 12 52 07.0
comp=Z,94nm,28.1s
PLAL Pickwick Lake 74.72 52 IAmb IAmb 12 29 13.7
comp=Z,11nm,1.1s
VOIR 74.74 329⇑P **P 12 28 58.4 -0.1**
VOIR 74.74 329 P **P 12 28 58.6 +0.1**
VOIR pmax pmax
comp=Z,9.0nm,2.1s
GEC2 GERESS Array S 74.74 337 IAmb IAmb 12 28 59.2
comp=Z,7.5nm,0.8s
GERES GERESS Array B 74.74 337 P **P 12 28 58.4 -0.1**
comp=Z,4.0nm,0.7s,baz=40,slow=5.2,SNR=30
comp=Z,4.0nm,0.7s
BSTI Sart Tilman 74.75 343 *d*P **P 12 28 57.8 -0.5**
BHOU Houvegnez 74.89 343 *d*P **P 12 28 59.6 +0.4**
comp=Z,13nm,0.9s
BCLA Clavier 74.95 343 *d*P **P 12 28 59.1 -0.4**
comp=Z,10nm,1.0s
L61B Northampton 75.02 37 P P 12 29 00.3 +0.3
baz=330
CONA Conrad Observa 75.07 336 *i*P **P 12 29 00.8 +0.5**
comp=Z,16nm,1.2s,SNR=6.7
BMRD Maredsous 75.16 344 *d*P **P 12 29 00.6 -0.1**
comp=Z,13nm,1.0s
RONA Rosalia, Austr 75.17 335 *e*P **P 12 29 01.6 +0.7**
comp=Z,13nm,1.4s
RCHB Rochefort 75.22 343 *d*P **P 12 29 01.3 +0.2**
comp=Z,7.5nm,0.0s
MPLH Magyarpolny 75.34 334 P P 12 29 02.5 +0.7
GIVF Givet 75.34 344 *e*P **P 12 29 01.3 -0.5**
GIVF pmax pmax
comp=Z,16nm,1.0s
HRV Adam Dziewonsk 75.38 37 P P 12 29 01.5 -0.6
baz=331
DOU Dourbes 75.39 344 *d*P **P 12 29 02.0 0.0**
comp=Z,6.2nm,0.0s
GZR Cura Zlata 75.48 330⇑P **P 12 29 02.0 -0.8**
BAIF Baives 75.49 344 *e*P **P 12 29 02.3 -0.3**
BAIF pmax pmax
comp=Z,16nm,1.1s
MOA Molln 75.53 337 *e*P **P 12 29 03.1 +0.2**
comp=Z,5.1nm,0.7s
TZTN Tazewell 75.55 48 P P 12 29 02.1 -1.1
baz=326
WRAB Tennant Creek 75.62 204 *c*e**P P 12 29 05.1 +1.5**
WRAB pmax pmax
comp=Z,10.0nm,1.7s
BZS Buzias 75.62 331⇑P **P 12 29 02.7 -0.7**
BZS Buzias 75.62 331 P **P 12 29 03.1 -0.4**
BZS pmax pmax
comp=Z,9.0nm,1.0s
WRA Warramunga Arr 75.63 204 P P 12 29 03.7 0.0
comp=Z,3.6nm,0.8s,baz=19,slow=6.0,SNR=23
WRA pP **pP 12 29 19.6 +0.8**
comp=Z,3.3nm,0.8s,baz=19,slow=6.0,SNR=9.0
comp=Z,3.6nm,0.8s
WRA Warramunga Arr 75.63 204 P P 12 29 04.0 +0.3
WRA Warramunga Arr 75.63 204 P P 12 29 04.0 +0.3
ARSA Arzberg 75.78 336 *e*P **P 12 29 04.8 +0.4**
comp=Z,12nm,1.2s
PAL Palisades 75.80 39 P P 12 29 04.2 -0.4
baz=330
BIOA Bad Ischl, Aus 75.83 337 *e*P **P 12 29 06.1 +1.4**
comp=Z,2.2nm,0.4s
W50A Signal Mountai 75.85 50 IAmb IAmb 12 29 06.1
comp=Z,8.2nm,0.8s
MORH Mrgy, Hungar 75.92 333⇑P **P 12 29 04.5 -0.6**
MORH Mrgy, Hungar 75.92 333 P **P 12 29 04.7 -0.5**
CPCT Cooper Cave 76.01 49 IAmb IAmb 12 29 06.5
comp=Z,7.8nm,0.9s
HERR Herculane 76.05 330⇑P **P 12 29 04.7 -1.2**
TKL Tuckaleechee C 76.18 49 LR LR 13 03 58.8
comp=Z,41nm,19.6s,baz=316,slow=37
KOVH Kovagotottos 76.19 334 P P 12 29 06.0 -0.6
FPAL Fort Paine 76.25 51 IAmb IAmb 12 29 25.3
comp=Z,9.1nm,0.8s
MDVR Moldovita 76.35 331⇓P **P 12 29 06.9 -0.8**
BLA Blacksburg 76.38 45 P P 12 29 07.5 -0.5
baz=327
BFO Black Forest 76.39 341 P P 12 29 07.3 -0.5
BFO IAmb IAmb 12 29 08.7
comp=Z,8.7nm,0.9s
BFO Black Forest 76.39 341 P P 12 29 07.3 -0.5
BFO pmax pmax
comp=Z,9.0nm,0.9s
FITZ Fitzroy Crossi 76.43 213 P P 12 29 08.9 +0.7
comp=Z,6.6nm,1.0s,baz=49,slow=3.1,SNR=7.3
comp=Z,6.6nm,1.0s
SOKA Soboth 76.44 336 *i*P **P 12 29 08.4 +0.2**
comp=Z,9.1nm,0.8s
KBA Koelnbreinsper 76.48 337 P P 12 29 09.4 +0.9
KBA pmax pmax
comp=Z,61nm,0.9s
KBA Koelnbreinsper 76.48 337 *e*P **P 12 29 09.4 +0.9**
comp=Z,52nm,0.9s,SNR=10
CDF Champ du Feu 76.52 341 *e*P **P 12 29 08.2 -0.4**
CDF pmax pmax
comp=Z,16nm,0.9s
FRGS Fruska Gora 76.57 332⇑P **P 12 29 08.4 -0.5**
WATA Walderalm 76.64 338 *i*P **P 12 29 10.0 +0.6**
comp=Z,15nm,1.1s
RETA Reutte 76.68 339 *i*P **P 12 29 09.8 +0.2**
comp=Z,10nm,1.1s
WTTA Wattenberg 76.70 338 P P 12 29 10.4 +0.6
WTTA pmax pmax
comp=Z,17nm,1.1s
WTTA Wattenberg 76.70 338 *e*P **P 12 29 10.4 +0.6**
comp=Z,19nm,1.2s
BRTR Keskin Array B 76.72 320 P P 12 29 09.2 -0.8
comp=Z,1.8nm,0.7s,baz=54,slow=3.2,SNR=8.9
BRTR LR LR 13 07 56.5
comp=Z,49nm,18.2s,baz=94,slow=40
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 76.72 320 *i*P **P 12 29 09.1 -0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
OBKA Obir 76.72 336 *i*P **P 12 29 10.2 +0.4**
comp=Z,11nm,0.7s
ECH Echery 76.73 341 P P 12 29 09.6 -0.1
ECH pmax pmax
comp=Z,97nm,1.1s
MOTA Moosalm 76.74 339 *i*P **P 12 29 10.2 +0.2**
comp=Z,18nm,1.1s,SNR=5.4
LRAL Lakeview Retre 76.83 52 P P 12 29 10.1 -0.4
baz=325
CBN Corbin Frederi 76.83 43 P P 12 29 09.6 -0.8
baz=329
MYKA Terra Mystica 76.83 337 *i*P **P 12 29 11.5 +1.1**
comp=Z,5.6nm,0.8s
SQTA Sankt Quirin 76.84 338 *i*P **P 12 29 11.1 +0.6**
comp=Z,16nm,0.7s
ABTA Abfaltersbach 76.98 337 *i*P **P 12 29 11.3 0.0**
comp=Z,14nm,0.7s,SNR=6.4
DAVA Damuels 77.06 339 *e*P **P 12 29 11.8 +0.1**
comp=Z,9.8nm,0.9s
HAU Haudompre 77.09 342 *e*P **P 12 29 11.3 -0.4**
HAU pmax pmax
comp=Z,14nm,0.9s
FETA Feichten 77.13 339 *e*P **P 12 29 12.7 +0.5**
comp=Z,19nm,0.9s,SNR=7.0
HINF Hinteralfeld 77.17 342 *e*P **P 12 29 11.5 -0.8**
HINF pmax pmax
comp=Z,9.0nm,1.0s
FLN La Foliniere 77.48 347 *e*P **P 12 29 13.2 -0.7**
FLN pmax pmax
comp=Z,30nm,1.2s
DIVS Divibare 77.48 331 IAmb IAmb 12 29 14.2
comp=Z,10nm,1.0s
DAVOX Davos/Dischmat 77.54 339 LR LR 13 09 34.7
comp=Z,36nm,18.9s,baz=86,slow=40
KMSC Kings Mountain 77.71 47 P P 12 29 15.1 -0.3
baz=327
VTS Vitosha 77.84 329⇑P **P 12 29 15.3 -1.0**
VTS Vitosha 77.84 329 IAmb IAmb 12 29 16.5
comp=Z,9.5nm,1.1s
GRR Gorron 77.89 347 *e*P **P 12 29 15.7 -0.5**
GRR pmax pmax
comp=Z,23nm,1.2s
LOR Lormes 78.25 343 *e*P **P 12 29 17.8 -0.4**
LOR pmax pmax
comp=Z,16nm,0.9s
SGMF Saint Gilles 78.25 348 *e*P **P 12 29 20.8 +2.6**
SGMF pmax pmax
comp=Z,43nm,1.4s
ROSF Rostrenen 78.26 348 *e*P **P 12 29 17.8 -0.4**
ROSF pmax pmax
comp=Z,35nm,1.1s
QUIF Quistinic 78.66 348 *e*P **P 12 29 19.9 -0.5**
QUIF pmax pmax
comp=Z,18nm,1.0s
AVF Avril sur Loir 78.80 344 *e*P **P 12 29 21.0 -0.2**
AVF pmax pmax
comp=Z,21nm,1.0s
SMF Signal de Mont 78.86 343 *e*P **P 12 29 21.3 -0.3**
SMF pmax pmax
comp=Z,14nm,1.0s
SRS Serrai 79.08 328 P P 12 29 22.5 -0.4
SRS pmax pmax
comp=Z,17nm,1.1s
BGF Bois d'Agland 79.11 344 *e*P **P 12 29 22.8 -0.1**
BGF pmax pmax
comp=Z,18nm,1.0s
KNT Kendrikon 79.27 328 P P 12 29 23.4 -0.5
KNT pmax pmax
comp=Z,14nm,1.0s
ASAR Alice Springs 79.31 204 P P 12 29 24.9 +0.7
comp=Z,2.6nm,0.8s,baz=12,slow=5.2,SNR=19
ASAR pP **pP 12 29 41.4 +2.1**
comp=Z,2.9nm,0.8s,baz=15,slow=5.2,SNR=8.4
comp=Z,2.6nm,0.8s
LPL La Plagne 79.40 341 *e*P **P 12 29 25.3 +0.5**
LPL pmax pmax
comp=Z,23nm,1.0s
LPG La Plagne 79.42 341 *e*P **P 12 29 25.5 +0.5**
LPG pmax pmax
comp=Z,41nm,1.1s
TCF Toulx Ste Croi 79.48 344 *e*P **P 12 29 24.9 -0.1**
TCF pmax pmax
comp=Z,11nm,1.1s
GRG Griva 79.61 328 P P 12 29 25.3 -0.5
GRG pmax pmax
comp=Z,14nm,1.2s
SSB Saint Sauveur 80.05 342 IAmb IAmb 12 29 29.7
comp=Z,10nm,0.8s
ORIF Oris-en-Rattie 80.14 341 *e*P **P 12 29 29.2 +0.5**
ORIF pmax pmax
comp=Z,19nm,0.9s
CAF Calviac 80.83 344 *e*P **P 12 29 32.9 +0.6**
CAF pmax pmax
comp=Z,33nm,1.5s
PMOR Pomariorio Ree 81.16 129 *e*T T 13 59 20.4
comp=Z,4.8nm,0.2s
PPT Papeete 82.62 132 LR LR 13 01 52.9
comp=Z,48nm,18.5s,baz=344,slow=32
PPT2 Papeete2 82.64 132 *e*LR LR 12 55 46.3
comp=Z,135nm,26.0s
PPT2 *e*LR LR 12 55 48.0
comp=Z,141nm,25.8s
ETSF Etsaut 83.22 345 *e*P **P 12 29 45.3 +0.4**
ETSF pmax pmax
comp=Z,7.0nm,0.9s
IDI Anoyia 83.89 324 LR LR 13 11 35.2
comp=Z,30nm,18.7s,baz=268,slow=39
RAYN Ar Rayn 85.01 303 P P 12 29 52.9 -1.4
RAYN Ar Rayn 85.01 303 P P 12 29 52.9 -1.4
RAYN pmax pmax
comp=Z,15nm,0.8s
CMIG Matias Romero 85.62 68 LR LR 13 06 49.1
comp=Z,19nm,21.1s,baz=310,slow=35
ESDC Sonseca Array 86.87 347 P P 12 30 03.3 +0.1
comp=Z,1.7nm,0.8s,baz=356,slow=5.1,SNR=8.9
ESDC LR LR 13 14 03.5
comp=Z,18nm,18.6s,baz=24,slow=39
comp=Z,1.7nm,0.8s
KEST Kesra 88.17 336 LR LR 13 14 12.2
comp=Z,51nm,18.5s,baz=290,slow=39
ATD Arta Tunnel 96.36 298 LR LR 13 19 51.2
comp=Z,32nm,18.2s,baz=245,slow=39
SJG San Juan 99.10 44 LR LR 13 20 09.8
comp=Z,9.5nm,19.6s,baz=296,slow=38
DBIC Dimbokro 119.37 342 PKP **PKPdf 12 36 07.5 -0.5**
comp=Z,3.5nm,1.0s,baz=269,slow=3.7,SNR=4.2
PLCA Paso Flores 144.29 91 PKP **PKPab 12 36 53.0 +1.1**
comp=Z,10nm,0.9s,baz=298,slow=4.0,SNR=30

*IDC **10** 12:24:37.8±0.9,29°24S×176°27W,h0km,mb4.0/7, mbtmp3.9/7,MS3.3/8,Error ellipse: s-maj=38.7km s-min=20.5km az=161.0*
*NEIC **10** 12:24:39.9±1.1,29°5S±0°.1×176°36W±0°.05,h10km±1km, mb4.6/19,Error ellipse: s-maj=20.1km s-min=5.4km az=347.0*
ISC 10 12:24:39.2±0.7,**29°57S**±0°.09×**176°25W**±0°.07,**h10**km,**n38,**
σ1s53/33,mb4.5/18,MS3.4/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.49**	**282**	Pn		**Pg**		**12 25 07.3**	**-0.4**
	206nm,0.3s,baz=256,slow=23,SNR=7.6								
RAO				Sn		**Sg**		**12 25 30.7**	**+3.7**
	464nm,0.3s,baz=290,slow=23,SNR=6.7								
RAO	**Raoul Island**	**1.49**	**282**			**Pb**		**12 25 05.5**	**-1.4**
URZ	**Urewera**	**10.27**	**211**	Pn		Pn		12 27 02.8	-3.8
	0.6nm,0.3s,baz=268,slow=5.2,SNR=6.3								
URZ				Sn		**Sn**		**12 28 56.8**	**-4.9**
	1.6nm,0.3s,baz=215,slow=22,SNR=11								
URZ	**Urewera**	**10.27**	**211**	Pn		**Pn**		**12 27 07.3**	**+0.8**
MSVF	**Nonsavu**	**12.88**	**335**	LR		LR		12 32 06.3	
	comp=Z,96nm,20.7s,baz=163,slow=36								
RAR	**Rarotonga**	**17.05**	**65**	LR		LR		12 35 13.8	
	comp=Z,116nm,18.8s,baz=270,slow=38								
DZM	**Mont Dzumac**	**17.26**	**292**	LR		LR		12 34 09.2	
	comp=Z,93nm,21.2s,baz=193,slow=33								
PPT	**Papeete**	**27.14**	**70**	LR		LR		12 39 46.2	
	comp=Z,55nm,18.4s,baz=216,slow=34								
AS31	**Alice Springs**	**44.68**	**265**	P		**P**		**12 32 51.7**	**-0.8**
ASAR	**Alice Springs**	**44.68**	**265**	P		**P**		**12 32 51.7**	**-0.8**
	0.6nm,0.7s,baz=102,slow=7.6,SNR=9.1								
ASAR				LR		LR		12 51 24.3	
	comp=Z,51nm,18.6s,baz=141,slow=36								
	0.6nm,0.7s								
WR0	**Warramunga Arr**	**45.41**	**270**	P		**P**		**12 32 57.4**	**-0.9**
WR0						IAmb	IAmb	12 33 00.0	
	comp=Z,11nm,1.4s								
WB2	**Warramunga Arr**	**45.58**	**270**	P		**P**		**12 32 58.3**	**-1.4**
WB2						IAmb	IAmb	12 33 03.7	
	comp=Z,8.9nm,1.4s								
WRAB	**Tennant Creek**	**45.59**	**270**	P		**P**		**12 32 58.8**	**-0.9**
WRAB						IAmb	IAmb	12 33 24.4	
	comp=Z,9.1nm,1.4s								
WRA	**Warramunga Arr**	**45.59**	**270**	P		**P**		**12 32 59.3**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=110,slow=7.8,SNR=14								
WRA				LR		LR		12 50 20.6	
	comp=Z,46nm,19.0s,baz=178,slow=34								
	comp=Z,1.4nm,0.7s								
WRA	**Warramunga Arr**	**45.59**	**270**	P		**P**		**12 32 59.5**	**-0.3**
WB0	**Warramunga Arr**	**45.61**	**271**	P		**P**		**12 32 59.3**	**-0.7**
VNDA	**Vanda**	**49.08**	**186**	P		**P**		**12 33 28.9**	**+2.8**
	comp=Z,0.9nm,0.9s,baz=353,slow=5.5,SNR=5.5								

comp=Z,0.9nm,0.9s
CASY Casey 56.58 208 P **P** **12 34 22.9 +1.2**
GUMO Guam 56.99 313 LR LR 12 57 00.9
comp=Z,14nm,20.1s,baz=147,slow=34
QSPA South Pole Qui 60.54 180 P **P** **12 34 51.4 +1.9**
SHEM Shemya Is, Ala 82.38 354 LR LR 13 08 07.0
comp=Z,38nm,21.6s,baz=139,slow=32
NVAR Mina Array Bea 86.61 42 P **P** **12 37 23.0 0.0**
comp=Z,1.3nm,0.8s,baz=224,slow=8.8,SNR=10
comp=Z,1.3nm,0.8s
PRN Pahroc Range 87.87 44 P **P** **12 37 29.7 +0.6**
PRN IAmb IAmb 12 37 30.8
comp=Z,3.6nm,0.9s
319A Douglas 87.87 52 P **P** **12 37 30.1 +0.9**
319A IAmb IAmb 12 37 50.0
comp=Z,6.6nm,1.2s
X16A Lo Mia Camp, P 88.27 48 P **P** **12 37 31.9 +0.9**
X16A IAmb IAmb 12 37 32.8
comp=Z,3.0nm,1.0s
U15A North Rim 88.96 46 P **P** **12 37 35.2 +0.8**
U15A IAmb IAmb 12 37 36.1
comp=Z,4.7nm,0.9s
WUAZ Wupatki 88.98 48 P **P** **12 37 34.3 -0.1**
WUAZ IAmb IAmb 12 37 35.9
comp=Z,3.2nm,0.9s
TX31 Lajitas Ar. Si 90.67 56 P **P** **12 37 42.3 -0.1**
TX32 Lajitas Array 90.67 56 P **P** **12 37 42.0 -0.4**
TX32 IAmb IAmb 12 37 43.1
comp=Z,3.3nm,1.3s
TXAR Lajitas Array 90.67 56 P **P** **12 37 42.2 -0.1**
comp=Z,1.0nm,1.0s,baz=189,slow=7.5,SNR=8.0
comp=Z,1.0nm,1.0s
O18K Koktuh Hills 90.77 10 P **P** **12 37 41.0 -1.0**
G08A Pilot Rock 90.89 36 P **P** **12 37 42.8 -0.2**
G08A IAmb IAmb 12 37 44.6
comp=Z,7.3nm,1.3s
HLID Hailey 92.19 40 P **P** **12 37 49.5 +0.3**
F10A Beach Ranch, E 92.25 37 P **P** **12 37 48.7 -0.5**
F10A IAmb IAmb 12 37 49.8
comp=Z,3.5nm,0.9s
PDAR Pinedale Array 94.50 43 P **P** **12 37 58.8 -1.1**
comp=Z,0.3nm,0.8s,baz=202,slow=6.8,SNR=2.1
comp=Z,0.3nm,0.8s
ILAR Eielson Array 96.79 12 P **P** **12 38 07.5 -2.0**
comp=Z,0.6nm,0.8s,baz=210,slow=5.1,SNR=5.1
comp=Z,0.6nm,0.8s
FINES FINESS Array B 144.87 342 PKP **PKPab** **12 44 14.0 -0.8**
comp=Z,3.3nm,0.8s,baz=9,9,slow=4.5,SNR=7.3
AKASG Malin Array Be 151.53 325 PKPbc **PKPbc** **12 44 32.1 -1.0**
comp=Z,0.7nm,0.4s,baz=44,slow=2.9,SNR=6.3

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*DJA **10** 12:38:37.6±0.2,9°S×3°×12°2E±°, h72km±7km, M4.1/12, mb4.2/7, mB4.7/2, MLv4.1/12, Mw(mB)3.9/2*
*IDC **10** 12:38:38.2±2.2,9.46S×121.88E, h122km±24km, mb3.9/2, mbtmp4.2/5, MS2.8/2, Error ellipse: s-maj=50.4km s-min=20.1km az=49.0*
ISC 10 12:38:36.6±0.9, 9°26S±0.06×122°05E±0.06, h100km, n20, σ2°99/22, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.62**	**325**	P		**Pn**	**12 38 51.2**	**-2.2**
MMRI	**Maumere**	**0.64**	**17**	P		**Pn**	**12 38 51.6**	**-2.0**
BASI	**Baing, Sumba**	**1.74**	**236**	P		**Pn**	**12 39 06.8**	**+1.0**
BATI	**Baumata**	**1.85**	**121**	P		**Pn**	**12 39 10.4**	**+3.1**
	260nm,0.4s,baz=332,slow=3.3,SNR=36							
BATI				S		**Sn**	**12 39 35.8**	**+5.1**
	235nm,0.4s,baz=265,slow=20,SNR=7.7							
BATI				LR		LR	12 40 07.9	
	comp=Z,136nm,21.4s,baz=113,slow=47							
BATI	**Baumata**	**1.85**	**121**	P		**Pn**	**12 39 10.1**	**+2.8**
WBSI	**Waikabubak, Su**	**2.65**	**261**	P		**Pn**	**12 39 18.4**	**+0.7**
BSSI	**Bau Bau, Buton**	**3.46**	**333**	P		**Pn**	**12 39 29.4**	**+0.9**
PLAI	**Plampang**	**4.24**	**275**	P		**Pn**	**12 39 40.7**	**+1.6**
BKSI	**Bulukumba**	**4.35**	**334**	P		**Pn**	**12 39 41.8**	**+1.2**
KAPI	**Kappang**	**4.79**	**331**	P		**Pn**	**12 39 49.8**	**+3.2**
	59nm,0.7s,baz=170,slow=8.0,SNR=15							
KAPI				LR		LR	12 42 03.3	
	comp=Z,24nm,19.8s,baz=82,slow=42							
TWSI	**Taliwang, Sumb**	**5.13**	**275**	P		**Pn**	**12 39 53.3**	**+2.2**
SPSI	**Sidrap Palu**	**5.72**	**337**	P		**Pn**	**12 39 55.3**	**-3.9**
	0.1nm640nm13nm,0.9s							
JAGI	**Jajag, Banyuwa**	**7.84**	**275**	P		**Pn**	**12 40 26.2**	**-1.8**
	0.3nm37nm,0.8s							
FITZ	**Fitzroy Crossi**	**9.46**	**159**	P		**Pn**	**12 40 50.2**	**+0.3**
	3.7nm,0.4s,baz=359,slow=8.7,SNR=30							
FITZ				S		**Sn**	**12 42 28.1**	**-6.3**
	4.8nm,0.4s,baz=183,slow=8.8,SNR=7.7							
FAKI	**Fak Fak**	**11.93**	**59**	P		**Pn**	**12 41 24.8**	**+1.3**
	23nm,1.4s							
WRA	**Warramunga Arr**	**15.93**	**133**	P		**Pn**	**12 42 15.2**	**0.0**
	1.6nm,0.6s,baz=302,slow=13,SNR=28							
WRA				S		Sn	12 45 02.1	-10
	1.5nm,0.5s,baz=302,slow=22,SNR=8.4							
ASAR	**Alice Springs**	**18.27**	**143**	P		**Pn**	**12 42 46.0**	**+2.4**
	1.1nm,0.5s,baz=322,slow=11,SNR=21							
ASAR				S		**S**	**12 46 01.1**	**-5.4**
	0.7nm,0.6s,baz=315,slow=21,SNR=5.3							
USRK	**Ussuriysk Ar.**	**53.96**	**9**	LR		LR	13 10 59.1	
	comp=Z,36nm,21.7s,baz=48,slow=36							
MKAR	**Makanchi Array**	**66.09**	**331**	P		**P**	**12 49 12.9**	**0.0**
	1.7nm,0.6s,baz=152,slow=6.5,SNR=4.5							
	1.7nm,0.6s							
ZALV	**Zalesovo Beam**	**70.39**	**338**	P		**P**	**12 49 39.4**	**-0.2**
	1.6nm,0.4s,baz=133,slow=5.7,SNR=6.2							
	1.6nm,0.4s							

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*BJI **10** 12:43:58.5±0.0,39°.31N×73°.55E, h15km, mb4.3/26, mB4.6/15, ML4.2/7, Ms3.9/23, Ms7 3.7/22*
*SOME **10** 12:43:58.1,39°.40N×73°.70E, h15km, MS4.3*
*ISU **10** 12:43:58,39°.51N×73°.97E, h15km*
*IDC **10** 12:43:59.3±0.7,39°.32N×73°.71E, h0km, mb4.1/17, mbtmp4.1/22, ML3.3/6, MS3.6/24, Error ellipse: s-maj=14.1km s-min=12.2km az=149.0*
*KRNET **10** 12:43:59.4±0.1,39°.47N×73°.68E, mb4.7*
*NEIC **10** 12:44:03.1±2.1,39°.52N±0°.03×73°.54E±0°.08, h10km±2km, mb4.3/14, Error ellipse: s-maj=11.7km s-min=3.4km az=114.0*
*MOS **10** 12:44:03.8±0.9,39°.49N×73°.68E, h28km, mb4.7/17, Error ellipse: s-maj=6.2km s-min=3.6km az=81.9*
*NNC **10** 12:44:04.6±1.8,39°.63N×73°.80E, h0km, mb4.7, mpv4.4, Error ellipse: s-maj=15.5km s-min=9.7km az=162.0*
ISC 10 12:44:01.9±0.8, 39°52N±0°.03×73°70E±0°.02, h11km±4km, n272, σ2°29/342, mb4.3/39, MS3.6/26, 45C-23D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**325**	⇓*i*P		**Pb**	**12 44 23.4**	**-1.6**
OHH				*e*S		**Sb**	**12 44 40.7**	**-0.2**
OHH	**Osh**	**1.22**	**325**	⇓*i*P		**Pb**	**12 44 23.4**	**-1.6**
	baz=27							
OHH				⇓*e*S		**Sb**	**12 44 40.7**	**-0.2**
	baz=27							
TSTA	**Tashata**	**1.41**	**319**	P		**Pn**	**12 44 27.0**	**-0.5**
TSTA				S		**Sg**	**12 44 47.8**	**+0.5**
DRK	**Karamyk**	**1.47**	**269**	Pn		**Pn**	**12 44 26.3**	**-2.2**
DRK	**Karamyk**	**1.47**	**269**	⇑*i*P		**Pn**	**12 44 26.9**	**-1.6**
	baz=71							
DRK				⇑*e*S		**Sn**	**12 44 47.0**	**-0.9**
	baz=71							
ANR	**Andizhan**	**1.60**	**321**	P		**Pb**	**12 44 31.9**	**+0.4**
ANR				S		**Sg**	**12 44 55.7**	**+2.2**
FRG	**Fergana**	**1.70**	**301**	P		**Pn**	**12 44 31.8**	**+0.3**
FRG				S		**Sg**	**12 44 57.4**	**+0.9**
KSH	**Kashi**	**1.76**	**89**	Pg		Pn	12 44 26.7	-5.7
KSH				Sg		**Sn**	**12 44 47.6**	**-7.2**
KSH				smax		smax		
	comp=N,4μm,1.1s							
KSH				smax		smax		
	comp=E,3μm,1.1s							
NAM	**Namangan**	**2.14**	**314**	P		**Pg**	**12 44 42.6**	**-0.3**
NAM				S		**Sg**	**12 45 13.6**	**+2.9**
BTK	**Batken**	**2.28**	**285**	P		**Pn**	**12 44 41.5**	**+2.0**
BTK				S		**Sg**	**12 45 15.0**	**-0.2**
MINT	**Mingtut**	**2.29**	**295**	P		**Pb**	**12 44 42.9**	**-0.4**
MINT				S		**Sg**	**12 45 16.5**	**+0.9**
AML	**Almayashu**	**2.61**	**360**	P		**Pn**	**12 44 46.6**	**+2.3**
	SNR=257							
AML	**Almayashu**	**2.61**	**360**	⇓*i*PN		**Pn**	**12 44 45.7**	**+1.4**
AML				*e*S		**Sb**	**12 45 19.6**	**-1.5**
ARK	**Arkit**	**2.63**	**330**	*e*PN		**Pn**	**12 44 45.7**	**+1.4**
ARK				*e*S		**Sb**	**12 45 19.6**	**-1.8**
ARK	**Arkit**	**2.63**	**330**	⇑*e*P		**Pn**	**12 44 45.7**	**+1.4**
	baz=31							
ARK				⇑*e*S		**Sb**	**12 45 19.6**	**-1.8**
	baz=31							
ARK	**Arkit**	**2.63**	**330**	P		**Pn**	**12 44 45.8**	**+1.4**
ARK				S		**Sb**	**12 45 22.6**	**+1.2**
GAR	**Garm**	**2.67**	**260**			**Pn**	**12 44 46.2**	**+1.3**
GAR	**Garm**	**2.67**	**260**	*e*PN		**Pn**	**12 44 45.5**	**+0.6**
GAR				*e*S		**Sn**	**12 45 19.0**	**+1.6**
GAR	**Garm**	**2.67**	**260**	⇑*e*P		**Pn**	**12 44 45.5**	**+0.6**
	baz=61							
GAR				⇑*e*S		**Sn**	**12 45 19.0**	**+1.6**
	baz=61							
UCH	**Uchtor**	**2.77**	**13**	P		**Pb**	**12 44 49.9**	**-1.8**
	SNR=19							
UCH	**Uchtor**	**2.77**	**13**	⇓*e*PN		**Pn**	**12 44 48.0**	**+1.4**
UCH				*e*S		**Sn**	**12 45 23.7**	**+3.4**
UCH	**Uchtor**	**2.77**	**13**	⇓*e*P		**Pn**	**12 44 48.0**	**+1.4**
	baz=13							
UCH				⇓*e*S		**Sn**	**12 45 23.7**	**+3.4**
	baz=13							
EKS2	**Erkin-Say**	**3.14**	**1**	P		**Pn**	**12 44 54.4**	**+3.0**
	SNR=43							
EKS2	**Erkin-Say**	**3.14**	**1**	*e*PN		**Pn**	**12 44 52.8**	**+1.4**
EKS2				*e*S		**Sn**	**12 45 31.8**	**+2.9**
EKS2	**Erkin-Say**	**3.14**	**1**	⇑*e*P		**Pn**	**12 44 52.8**	**+1.4**
	baz=1.0							
EKS2				⇑*e*S		**Sn**	**12 45 31.8**	**+2.9**
	baz=1.0							
AAK	**Ala-Archa**	**3.17**	**11**	Pn		**Pb**	**12 44 55.5**	**-2.9**
	22nm,0.3s,baz=177,slow=11,SNR=68							
AAK				Lg		Lg	12 45 39.2	
	22nm,0.3s,baz=231,slow=19,SNR=6.9							
AAK				LR		LR	12 46 22.2	
	comp=Z,976nm,19.8s,baz=220,slow=42							
	98nm,0.6s							
AAK	**Ala-Archa**	**3.17**	**11**	P		**Pn**	**12 44 54.8**	**+3.0**
	SNR=52							
AAK	**Ala-Archa**	**3.17**	**11**	Pn		**Pn**	**12 44 54.1**	**+2.3**
AAK	**Ala-Archa**	**3.17**	**11**	*d*iPN		**Pn**	**12 44 55.0**	**+3.2**
AAK	**Ala-Archa**	**3.17**	**11**	⇓*e*P		**Pn**	**12 44 53.3**	**+1.5**
	baz=11							
AAK				⇓*e*S		**Sn**	**12 45 32.8**	**+3.1**
	baz=11							
MRKS	**Merke**	**3.24**	**354**	*e*P		**Pg**	**12 45 03.5**	**-0.5**
	156nm,0.8s							
MRKS				*e*S		**Sg**	**12 45 51.1**	**+5.1**
	602nm,0.4s							
MRKS	**Merke**	**3.24**	**354**	Pg		**Pg**	**12 45 03.5**	**-0.5**
	156nm,0.8s							
MRKS				Lg		Lg	12 45 51.1	
	430nm,0.8s							
KBK	**Karagaybulak**	**3.27**	**16**	P		**Pn**	**12 44 56.7**	**+3.4**
	SNR=46							
KBK	**Karagaybulak**	**3.27**	**16**	*e*PN		**Pn**	**12 44 54.9**	**+1.7**
KBK				*e*S		**Sn**	**12 45 35.2**	**+3.0**
KBK	**Karagaybulak**	**3.27**	**16**	⇑*e*P		**Pn**	**12 44 54.9**	**+1.7**
	baz=16							
KBK				⇑*e*S		**Sn**	**12 45 35.2**	**+3.0**
	baz=16							
ULHL	**Ulahol**	**3.34**	**34**	P		**Pb**	**12 45 00.3**	**-0.9**
	SNR=8.9							
ULHL	**Ulahol**	**3.34**	**34**	*e*PN		**Pn**	**12 44 55.5**	**+1.4**
ULHL				*e*S		**Sn**	**12 45 36.7**	**+2.8**
ULHL	**Ulahol**	**3.34**	**34**	⇑*e*P		**Pn**	**12 44 55.5**	**+1.4**
	baz=34							
ULHL				⇑*e*S		**Sn**	**12 45 36.7**	**+2.8**
	baz=34							
FRU1	**Bishkek**	**3.36**	**12**	*e*PN		**Pn**	**12 44 56.2**	**+1.8**
FRU1				*e*S		**Sn**	**12 45 37.7**	**+3.4**
FRU1	**Bishkek**	**3.36**	**12**	⇑*e*P		**Pn**	**12 44 56.2**	**+1.8**
	baz=12							
FRU1				⇑*e*S		**Sn**	**12 45 37.7**	**+3.4**
	baz=12							
BOOM	**Boomskoye usch**	**3.42**	**29**	*e*PN		**Pn**	**12 44 56.9**	**+1.7**
BOOM				*e*S		**Sn**	**12 45 38.8**	**+3.0**
BOOM	**Boomskoye usch**	**3.42**	**29**	⇑*e*P		**Pn**	**12 44 56.9**	**+1.7**
	baz=29							
BOOM				⇑*e*S		**Sn**	**12 45 38.8**	**+3.0**
	baz=29							
CHMS	**Chumysh**	**3.57**	**13**	P		**Pn**	**12 45 00.7**	**+3.6**
	SNR=28							
CHMS	**Chumysh**	**3.57**	**13**	*i* PN		**Pn**	**12 45 00.7**	**+3.6**
CHMS					pmax	pmax		
	comp=Z,110nm,0.7s							
CHMS	**Chumysh**	**3.57**	**13**	⇓Pn		**Pn**	**12 44 59.7**	**+2.6**
	comp=Z,110nm,0.7s							
CHMS				⇑Pg		**Pb**	**12 45 07.1**	**+2.2**
	comp=Z,110nm,0.7s							
CHMS				⇑Lg		Lg	12 45 54.0	
	comp=Z,135nm,0.8s							
CHMS	**Chumysh**	**3.57**	**13**	⇑*e*P		**Pn**	**12 44 58.8**	**+1.7**
	baz=13							
CHMS				⇑*e*S		**Sn**	**12 45 42.0**	**+2.8**
	baz=13							
CHGR	**Chuyangaron**	**3.63**	**258**			**Pn**	**12 44 58.7**	**+0.6**
CHGR	**Chuyangaron**	**3.63**	**258**	PN		**Pn**	**12 44 58.7**	**+0.6**
CHGR	**Chuyangaron**	**3.63**	**258**	⇑*e*P		**Pn**	**12 44 58.8**	**+0.6**
	baz=59							
CHGR				⇑*e*S		**Sn**	**12 45 42.0**	**+1.0**
	baz=59							
TKM2	**Tokmak 2**	**3.69**	**22**	P		**Pn**	**12 45 02.0**	**+3.1**
	SNR=37							
TKM2	**Tokmak 2**	**3.69**	**22**	*i* PN		**Pn**	**12 45 00.5**	**+1.5**
TKM2				*e*S		**Sn**	**12 45 45.3**	**+2.8**
TKM2	**Tokmak 2**	**3.69**	**22**	⇑Pn		**Pn**	**12 45 01.7**	**+2.8**
	comp=Z,36nm,0.8s							
TKM2				⇑Pg		**Pb**	**12 45 08.6**	**+1.4**
	comp=Z,150nm,0.9s							
TKM2				⇑Lg		Lg	12 45 55.4	
	comp=Z,137nm,0.7s							
TKM2	**Tokmak 2**	**3.69**	**22**	⇑*i*P		**Pn**	**12 45 00.5**	**+1.5**
	baz=22							
TKM2				⇑*e*S		**Sn**	**12 45 45.3**	**+2.8**
	baz=22							
USP	**Ospenovka**	**3.79**	**9**	P		**Pn**	**12 45 03.2**	**+3.0**
	SNR=15							
USP	**Ospenovka**	**3.79**	**9**	*e*PN		**Pn**	**12 45 02.0**	**+1.8**
USP				*e*S		**Sn**	**12 45 47.8**	**+2.9**
USP	**Ospenovka**	**3.79**	**9**	⇑*e*P		**Pn**	**12 45 02.0**	**+1.8**
	baz=9.0							
USP				⇑*e*S		**Sn**	**12 45 47.8**	**+2.9**
	baz=9.0							
DZA	**Taraz**	**3.81**	**333**	*e*PN		**Pn**	**12 45 01.5**	**+1.0**
DZA	**Taraz**	**3.81**	**333**	*e*Pn		**Pn**	**12 45 01.6**	**+1.0**
	baz=333							
DZA				*e*Pg		**Pg**	**12 45 12.4**	**-2.5**
	baz=333							
IUG	**Iuzhnay**	**3.82**	**315**	*e*PN		**Pn**	**12 45 02.2**	**+1.5**
IUG				*e*			12 45 49.8	
IUG	**Iuzhnay**	**3.82**	**315**	*e*P		**Pg**	**12 45 13.1**	**-2.0**
	comp=Z,2μm,0.7s							
IUG				*e*S		**Sg**	**12 46 07.2**	**+2.6**
	comp=Z,1μm,1.4s							
IUG	**Iuzhnay**	**3.82**	**315**	*e*Pn		**Pn**	**12 45 02.2**	**+1.5**
	baz=314							
IUG				*e*Pg		**Pg**	**12 45 12.5**	**-2.6**
	baz=314							
IUG				*e*Sn		**Sn**	**12 45 49.8**	**+4.1**
	baz=314							
IUG				*e*Lg		Lg	12 46 05.8	
	baz=314							
IUG	**Iuzhnay**	**3.82**	**315**	Pg		**Pg**	**12 45 13.1**	**-2.0**
	comp=Z,2μm,0.7s							
IUG				Lg		Lg	12 46 07.2	
	comp=Z,1μm,1.4s							
KST	**Kastek**	**3.91**	**25**	*e*P		**Pb**	**12 45 11.6**	**+0.6**
	comp=Z,99nm,1.0s							
KST				*e*S		**Sg**	**12 46 04.3**	**-3.2**
	comp=Z,445nm,0.4s							
KST	**Kastek**	**3.91**	**25**	Pg		**Pb**	**12 45 11.6**	**+0.6**
	comp=Z,99nm,1.0s							
KST				Lg		Lg	12 46 04.3	
	comp=Z,274nm,0.9s							
SGDS	**Sogindy**	**3.99**	**10**	*e*PN		**Pn**	**12 45 04.0**	**+1.0**
SGDS	**Sogindy**	**3.99**	**10**	*e*P		**Pb**	**12 45 13.6**	**+1.4**
	comp=Z,114nm,0.9s							
SGDS				*e*S		**Sg**	**12 46 07.9**	**-2.1**
	comp=Z,152nm,1.1s							
SGDS	**Sogindy**	**3.99**	**10**	*e*Pn		**Pn**	**12 45 04.1**	**+1.0**
	baz=10							
SGDS				*e*Pg		**Pb**	**12 45 13.7**	**+1.4**
	baz=10							
SGDS				*e*Lg		Lg	12 46 10.3	
	baz=10							
SGDS	**Sogindy**	**3.99**	**10**	P		**Pg**	**12 45 13.6**	**+1.4**
	comp=Z,114nm,0.9s							
SGDS				Lg		Lg	12 46 07.9	
	comp=Z,152nm,1.1s							
IZV	**Izvestkoviy**	**4.14**	**31**	*e*P		**Pb**	**12 45 17.1**	**+2.3**
	comp=Z,59nm,0.1s							
IZV				*e*S		**Sg**	**12 46 14.5**	**-0.4**
	comp=Z,206nm,0.8s							
IZV	**Izvestkoviy**	**4.14**	**31**	Pg		**Pb**	**12 45 17.1**	**+2.3**
	comp=Z,16nm,0.3s							
IZV				Lg		Lg	12 46 14.5	
	comp=Z,206nm,0.8s							
MTBS	**Maitube**	**4.15**	**29**	*e*P		**Pb**	**12 45 16.6**	**+1.6**
	comp=Z,87nm,1.1s							
MTBS				*e*S		**Sg**	**12 46 13.8**	**-1.4**
	comp=Z,72nm,1.0s							
MTBS	**Maitube**	**4.15**	**29**	Pg		**Pb**	**12 45 16.6**	**+1.6**
	comp=Z,87nm,1.1s							
MTBS				Lg		Lg	12 46 13.8	
	comp=Z,72nm,1.0s							
KK31	**Karatay Array**	**4.31**	**327**	Pn		**Pn**	**12 45 09.0**	**+1.6**
KK31	**Karatay Array**	**4.31**	**327**	PN		**Pn**	**12 45 09.5**	**+2.2**
KK31	**Karatay Array**	**4.31**	**327**	Pn		**Pn**	**12 45 09.6**	**+2.2**
	comp=Z,15nm,0.5s,baz=133,slow=12,SNR=74							
KK31				⇓Lg		Lg	12 46 17.5	
	comp=Z,106nm,0.7s,baz=132,slow=27,SNR=4.4							
KKAR	**Karatay Array**	**4.31**	**327**			**Pn**	**12 45 09.0**	**+1.7**
KKAR	**Karatay Array**	**4.31**	**327**	Pn		**Pn**	**12 45 09.2**	**+1.9**
KKAR	**Karatay Array**	**4.31**	**327**	PN		**Pn**	**12 45 09.0**	**+1.7**
KKAR	**Karatay Array**	**4.31**	**327**	⇓*e*P		**Pn**	**12 45 08.9**	**+1.6**
	baz=28							
KKAR				⇓*e*S		**Sn**	**12 45 59.8**	**+2.2**
	baz=28							
AAA	**Alma-Ata**	**4.41**	**32**	*e*PN		**Pn**	**12 45 11.1**	**+2.4**
AAA	**Alma-Ata**	**4.41**	**32**	*e*P		**Pb**	**12 45 22.2**	**+2.8**
	comp=Z,40nm,0.8s							
AAA				*e*S		**Sg**	**12 46 22.9**	**-0.6**
	comp=Z,384nm,1.1s							
AAA	**Alma-Ata**	**4.41**	**32**	*e*Pn		**Pn**	**12 45 11.1**	**+2.4**
	baz=33							
AAA				*e*Pg		**Pb**	**12 45 22.6**	**+3.3**
	baz=33							
AAA				*e*Lg		Lg	12 46 21.8	
	baz=33							
AAA	**Alma-Ata**	**4.41**	**32**	Pg		**Pb**	**12 45 22.2**	**+2.8**
	comp=Z,40nm,0.8s							
AAA				Lg		Lg	12 46 22.9	
	comp=Z,384nm,1.1s							
KRBS	**Karabastau**	**4.43**	**19**	*e*P		**Pb**	**12 45 21.4**	**+1.8**
	comp=Z,61nm,1.2s							
KRBS				*e*S		**Sg**	**12 46 22.1**	**-2.0**
	comp=Z,82nm,1.0s							
KRBS	**Karabastau**	**4.43**	**19**	Pg		**Pb**	**12 45 21.4**	**+1.8**
	comp=Z,61nm,1.2s							
KRBS				Lg		Lg	12 46 22.1	
	comp=Z,82nm,1.0s							
MDOK	**Medeo**	**4.43**	**34**	PN		**Pn**	**12 45 12.7**	**+3.6**
MDOK	**Medeo**	**4.43**	**34**	*e*P		**Pb**	**12 45 22.1**	**+2.4**
	comp=Z,57nm,0.9s							
MDOK				*e*S		**Sg**	**12 46 22.8**	**-1.2**
	comp=Z,155nm,2.0s							
MDOK	**Medeo**	**4.43**	**34**	*e*Pn		**Pn**	**12 45 09.1**	**0.0**
	baz=34							
MDOK				*e*Pg		**Pg**	**12 45 23.6**	**-3.0**
	baz=34							
MDOK				*e*Lg		Lg	12 46 22.5	
	baz=34							
MDOK	**Medeo**	**4.43**	**34**	⇓Pn		**Pn**	**12 45 12.7**	**+3.6**
	comp=Z,84nm,0.6s							
MDOK				Pg		**Pb**	**12 45 22.1**	**+2.4**
	comp=Z,57nm,0.9s							
MDOK				Lg		Lg	12 46 22.8	
	comp=Z,155nm,2.0s							
MDOK				⇑Lg		Lg	12 46 23.2	
	comp=Z,418nm,1.4s							
KNDC	**Almaty**	**4.44**	**33**	PN		**Pn**	**12 45 12.9**	**+3.8**
KNDC	**Almaty**	**4.44**	**33**	⇑Pn		**Pn**	**12 45 12.9**	**+3.8**
	comp=Z,39nm,0.6s							
KNDC				⇑Pg		**Pb**	**12 45 22.3**	**+2.5**
	comp=Z,320nm,0.8s							
KNDC				⇑Lg		Lg	12 46 24.2	
	comp=Z,1μm,1.0s							
KOTS	**Kotyrbulak**	**4.51**	**34**	*e*P		**Pb**	**12 45 24.0**	**+2.8**
	comp=Z,79nm,1.3s							
KOTS				*e*S		**Sg**	**12 46 25.8**	**-1.0**
	comp=Z,532nm,0.8s							
KOTS	**Kotyrbulak**	**4.51**	**34**	Pg		**Pb**	**12 45 24.0**	**+2.8**
	comp=Z,79nm,1.3s							
KOTS				Lg		Lg	12 46 25.8	
	comp=Z,532nm,0.8s							
PRZ	**Przheval'sk**	**4.63**	**49**	*e*PN		**Pn**	**12 45 13.6**	**+1.7**
PRZ				*e*S		**Sn**	**12 46 07.9**	**+2.2**
PRZ	**Przheval'sk**	**4.63**	**49**	⇑*e*P		**Pn**	**12 45 13.6**	**+1.7**
	baz=48							
PRZ				⇑*e*S		**Sn**	**12 46 07.9**	**+2.2**
	baz=48							
KTBS	**Karatobe**	**4.75**	**27**	*e*P		**Pb**	**12 45 26.8**	**+1.7**
	comp=Z,36nm,1.1s							
KTBS				*e*S		**Sg**	**12 46 31.4**	**-2.9**
	comp=Z,87nm,0.4s							
KTBS	**Karatobe**	**4.75**	**27**	Pg		**Pb**	**12 45 26.8**	**+1.7**
	comp=Z,36nm,1.1s							
KTBS				Lg		Lg	12 46 31.4	
	comp=Z,87nm,0.4s							
KUU	**Kurty**	**4.80**	**23**	*e*PN		**Pn**	**12 45 14.2**	**+0.2**
KUU	**Kurty**	**4.80**	**23**	*e*P		**Pb**	**12 45 27.9**	**+2.0**
	comp=Z,48nm,1.2s							
KUU				*e*S		**Sg**	**12 46 33.2**	**-2.6**
	comp=Z,116nm,1.1s							
KUU	**Kurty**	**4.80**	**23**	*e*Pn		**Pn**	**12 45 14.2**	**+0.2**
	baz=24							
KUU				*e*Pg		**Pb**	**12 45 27.7**	**+1.8**
	baz=24							
KUU				*e*Lg		Lg	12 46 34.1	
	baz=24							
KUU	**Kurty**	**4.80**	**23**	Pg		**

UZB Lg Lg 12 46 53.3
comp=Z,137nm,2.1s
BTLS Baital 5.52 3 *e*PN **Pn 12 45 26.0 +2.0**
BTLS Baital 5.52 3 *e*Pn **Pn 12 45 26.0 +2.0**
baz=2.9
BTLS *e*Pg **Pb 12 45 42.1 +3.8**
baz=2.9
ARXS Arharly 5.61 32 *e*P **Pb 12 45 42.6 +2.8**
comp=Z,42nm,0.6s
ARXS *e*S **Sg 12 46 58.4 -3.6**
comp=Z,176nm,1.7s
ARXS Arharly 5.61 32 Pg **Pb 12 45 42.6 +2.8**
comp=Z,42nm,0.6s
ARXS Lg Lg 12 46 58.4
comp=Z,176nm,1.7s
SHLS Shalkode 5.66 48 *e*PN Pn 12 45 31.5 +5.5
SHLS Shalkode 5.66 48 *e*P **Pg 12 45 47.9 -2.3**
comp=Z,27nm,1.1s
SHLS *e*S **Sg 12 47 06.9 +3.4**
comp=Z,102nm,2.0s
SHLS Shalkode 5.66 48 *e*Pn Pn 12 45 31.5 +5.6
baz=51
SHLS *e*Pg **Pg 12 45 49.5 -0.8**
baz=51
SHLS Shalkode 5.66 48 Pg **Pg 12 45 47.9 -2.3**
comp=Z,27nm,1.1s
SHLS Lg Lg 12 47 06.9
comp=Z,102nm,2.0s
PDGK Podgornoye 5.78 47 PN **Pn 12 45 27.0 -0.7**
PDGK Podgornoye 5.78 47 Pg **Pb 12 45 47.0 +4.2**
comp=Z,14nm,1.1s
PDGK Lg Lg 12 47 05.8
comp=Z,60nm,2.1s
BLB Baldybastay 5.80 36 *e*P **Pb 12 45 47.3 +4.2**
comp=Z,43nm,0.6s
BLB *e*S **Sg 12 47 06.8 -1.3**
comp=Z,176nm,1.2s
BLB Baldybastay 5.80 36 Pg **Pb 12 45 47.3 +4.2**
comp=Z,43nm,0.6s
BLB Lg Lg 12 47 06.8
comp=Z,176nm,1.2s
CHCP Chirah Chowk 5.86 184 P **Pn 12 45 30.3 +1.6**
CEP Cherat 5.86 195 P **Pn 12 45 31.6 +2.8**
CEP S **Sn 12 46 42.0 +5.9**
NIL Nilore 5.87 184 **Pn 12 45 30.5 +1.7**
NIL Nilore 5.87 184 PN **Pn 12 45 30.5 +1.7**
KBL Kabul 6.21 218 Pn **Pn 12 45 34.6 +1.0**
KBL Kabul 6.21 218 PN **Pn 12 45 34.6 +1.0**
KTMS Ketmen 6.35 50 *e*P **Pg 12 45 58.9 -4.6**
comp=Z,7.6nm,0.9s
KTMS *e*S **Sg 12 47 25.9 +0.2**
comp=Z,37nm,1.2s
KTMS Ketmen 6.35 50 Pg **Pg 12 45 58.9 -4.6**
comp=Z,7.6nm,0.9s
KTMS Lg Lg 12 47 25.9
comp=Z,37nm,1.2s
TDK Taldyqorghan 6.50 31 *e*PN **Pn 12 45 36.6 -0.7**
TDK Taldyqorghan 6.50 31 *e*Pn **Pn 12 45 36.7 -0.7**
baz=32
TDK *e*Pg Pb 12 46 00.2 +5.4
baz=32
TDK *e*Lg Lg 12 47 29.5
baz=32
DJR Jarkent 6.62 41 *e*P **Pb 12 46 00.8 +3.9**
comp=Z,8.2nm,0.7s
DJR *e*S **Sg 12 47 29.6 -4.5**
comp=Z,51nm,1.9s
DJR Jarkent 6.62 41 Pg **Pb 12 46 00.8 +3.9**
comp=Z,8.2nm,0.7s
DJR Lg Lg 12 47 29.6
comp=Z,51nm,1.9s
JMU Jammu 6.86 171 *e*P **Pn 12 45 43.1 +0.8**
JMU *e*S **Sn 12 47 01.0 +0.7**
THW Thamme Wali 6.89 194 P **Pn 12 45 44.8 +1.9**
THN Thein Dam 7.26 166 *e*P **Pn 12 45 49.9 +2.1**
THN *e*S **Sn 12 47 10.1 0.0**
BHK Bhakra 8.38 164 *e*P **Pn 12 46 06.3 +3.0**
BHK *e*S **Sn 12 47 35.6 -2.3**
OTUK Ortayu 8.78 354 ⇓Pn **Pn 12 46 09.3 +0.7**
comp=Z,15nm,0.9s
OTUK ⇑Lg Lg 12 48 34.8
comp=Z,34nm,0.9s
SMLA Simla 8.84 160 *e*P **Pn 12 46 12.3 +2.8**
SMLA *e*S **Sn 12 47 45.6 -3.4**
SMLA IAML 12 47 52.0
comp=N,82nm,0.6s
SMLA IAML 12 47 54.3
comp=E,70nm,0.7s
MAKZ Makanchi 9.46 37 **Pn 12 46 20.2 +2.1**
MAKZ Makanchi 9.46 37 P **Pn 12 46 20.2 +2.1**
MAKZ Makanchi 9.46 37 ⇓Pn Pn 12 46 23.8 +5.7
comp=E,5.6nm,1.0s
MAKZ ⇑Pg 12 46 58.2
comp=E,7.4nm,1.2s
MAKZ ⇑Lg Lg 12 48 58.3
comp=E,39nm,2.5s
MK31 Makanchi Array 9.60 38 Pn **Pn 12 46 22.4 +2.4**
MK31 Makanchi Array 9.60 38 *i* P **Pn 12 46 22.7 +2.8**
MK31 Makanchi Array 9.60 38 Pn Pn 12 46 26.4 +6.5
comp=E,3.5nm,0.9s,baz=213,slow=14,SNR=21
MK31 ⇓Pg 12 47 01.7
comp=E,6.1nm,0.8s,baz=225,slow=13,SNR=4.0
MK31 ⇓Lg Lg 12 49 02.5
comp=E,18nm,1.1s,baz=0.0,slow=0.1,SNR=4.8
MKAR Makanchi Array 9.60 38 Pn **Pn 12 46 22.6 +2.6**
comp=E,0.1nm,0.3s,baz=201,slow=16,SNR=4.1
MKAR LR LR 12 50 35.3
comp=E,193nm,18.6s,baz=228,slow=41
MKAR Makanchi Array 9.60 38 **Pn 12 46 22.9 +3.0**
MKAR Makanchi Array 9.60 38 P **Pn 12 46 22.9 +3.0**
BRZS Berezniki 10.49 356 *e*P **Pn 12 46 31.8 -0.2**
BRZS Berezniki 10.49 356 *e*Pn **Pn 12 46 31.8 -0.2**
baz=356
BRZS *e*Lg Lg 12 49 31.1
baz=356
HRA Herat 10.50 244 Pn **Pn 12 46 31.6 -0.8**
WMQ Urumqi 11.32 63 *e*P **Pn 12 46 43.1 -0.4**
WMQ sP 12 46 49.5
WMQ pmax pmax
comp=E,21nm,0.7s
WMQ LR LR
comp=E,360nm,8.1s
WMQ LR LR
comp=E,110nm,14.9s
KURBB Kurchatov Arra 11.61 15 Pn **Pn 12 46 48.4 +1.0**
baz=203,slow=12,SNR=13
KURBB Lg Lg 12 50 11.7
comp=E,0.1nm,0.3s,baz=206,slow=29,SNR=5.8
KURBB LR LR 12 51 34.0
comp=E,405nm,20.5s,baz=149,slow=38
comp=E,3.0nm,0.8s
KURK Kurchatov 11.72 16 P **Pn 12 46 48.4 -0.4**
SEM Semipalatinsk 11.83 21 *e*P **Pn 12 46 50.9 +0.3**
SEM Semipalatinsk 11.83 21 *e*Pn **Pn 12 46 51.0 +0.3**
baz=21
GEYT Alibeck 12.27 267 Pn **Pn 12 46 57.9 +1.3**
comp=E,0.7nm,0.3s,baz=78,slow=14,SNR=5.0
GEYT Sn **Sn 12 49 12.8 -0.5**
comp=E,1.1nm,0.3s,baz=58,slow=46,SNR=1.9
GEYT LR LR 12 52 21.7
comp=E,357nm,20.3s,baz=112,slow=41
GEYT Alibeck 12.27 267 **Pn 12 46 54.7 -1.9**
BRVK Borovoye 13.74 351 **Pn 12 47 15.3 -1.2**
BRVK Borovoye 13.74 351 *ce*P **Pn 12 47 15.4 -1.1**
BRVK pmax pmax
comp=Z,10.0nm,0.8s
AB31 Akbulak array 13.81 319 *i* P **Pn 12 47 15.8 -1.7**
AB31 Akbulak array 13.81 319 ⇑Pn **Pn 12 47 17.6 +0.1**
comp=Z,4.7nm,0.7s,baz=126,slow=14,SNR=49
AB31 ⇓Sn **Sn 12 49 44.0 -6.8**
comp=Z,7.4nm,0.9s,baz=134,slow=25,SNR=4.1
ABKAR Akbulak array 13.81 319 **Pn 12 47 16.0 -1.5**
ABKAR Akbulak array 13.81 319 **Pn 12 47 15.8 -1.6**
DANN Dangsing 13.91 140 *e*P Pn 12 47 13.6 -5.6
comp=Z,12nm,0.3s
JHNI Jhansi 14.59 162 *ex* **Pn 12 47 24.6 -3.7**
GKN Gorkha 14.64 138 *e*P Pn 12 47 21.7 -7.3
comp=Z,9.6nm,0.3s
GUN Gumba 15.37 135 *e*P Pn 12 47 30.6 -8.4
PKIN Phulchoki 15.38 137 *e*P **Pn 12 47 32.2 -6.8**
comp=Z,6.1nm,0.6s
PKI Pulchoki 15.39 137 *e*P **Pn 12 47 32.5 -6.7**
AKTO Aktyubinsk 15.53 320 Pn **Pn 12 47 41.1 +0.5**
comp=Z,0.4nm,0.3s,baz=122,slow=14,SNR=16
comp=Z,12nm,1.1s
AKTO Aktyubinsk 15.53 320 ⇓P **Pn 12 47 40.4 -0.2**
comp=Z,16nm,0.8s
AKTO ⇓S **Sn 12 50 30.5 -2.0**
comp=Z,12nm,1.1s
JIRN Jiri 15.74 135 *e*P Pn 12 47 35.6 -8.2
comp=Z,11nm,0.4s
ZAA0 Zalesovo Array 16.29 24 **Pn 12 47 50.2 -0.2**
ZALV Zalesovo Beam 16.29 24 Pn **Pn 12 47 51.7 +1.3**
comp=Z,0.4nm,0.3s,baz=206,slow=9.7,SNR=25
ZALV LR LR 12 54 24.2
comp=Z,193nm,19.8s,baz=212,slow=38
comp=Z,8.7nm,0.8s
ZALV Zalesovo Beam 16.29 24 Pn **Pn 12 47 50.0 -0.4**
RAMN Ramite 16.52 135 *e*P Pn 12 47 46.3 -7.4
comp=Z,12nm,0.6s
GOMU GeErMu 17.00 95 P **P 12 48 02.6 +0.8**
GOMU pP sP 12 48 06.6 -1.4
GOMU sP pP 12 48 08.0 +2.0
GOMU pmax pmax
comp=Z,5.0nm,0.8s
GOMU LR LR
comp=Z,130nm,12.1s
GOMU LR LR
comp=Z,180nm,13.5s
GOMU LR LR
comp=Z,190nm,14.7s
ARU Arti 19.64 334 P **P 12 48 30.9 +0.6**
baz=192,slow=3.3,SNR=4.5
comp=Z,2.0nm,0.3s
ARU Arti 19.64 334 P **P 12 48 30.7 +0.4**
ARU IAmb IAmb 12 48 48.0
comp=Z,11nm,0.9s
ARU Arti 19.64 334 *d* P **P 12 48 30.6 +0.3**
ARU S **Sn 12 52 13.2 +1.2**
ARU pmax pmax
comp=Z,9.0nm,1.6s
MAK Makhachkala 19.97 288 *e*P **P 12 48 29.1 -4.8**
MAK *e*S **S 12 52 12.3 -6.0**
GTA Gaotai 20.15 82 *e*P **P 12 48 36.8 +0.7**
GTA pP sP 12 48 43.5 +1.1
GTA sP pP 12 48 46.8 +6.4
GTA PP **PnPn 12 48 57.5 +5.2**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,91nm,4.4s
GTA LR LR
comp=Z,160nm,13.5s
GTA LR LR
comp=Z,210nm,15.3s
GTA LR LR
comp=Z,220nm,16.0s
WSAR Wadi Sarin 20.66 223 P **P 12 48 41.7 +0.1**
comp=Z,7.0nm,0.8s,baz=59,slow=12,SNR=3.6
UOSS Minazif 20.68 231 P **P 12 48 41.9 0.0**
UOSS IAmb IAmb 12 49 03.0
comp=Z,8.9nm,1.0s
BELG Belogornoye 22.09 314 P **P 12 48 58.1 +1.4**
comp=Z,18nm,0.8s,baz=63,slow=2.7,SNR=5.5
comp=Z,18nm,0.8s
BELG Belogornoye 22.09 314 *i* P **P 12 48 57.7 +1.0**
BELG pmax pmax
comp=Z,5.0nm,0.9s
GNI Garni 22.21 281 P **P 12 48 59.1 +0.8**
comp=Z,15nm,0.9s,baz=57,slow=17,SNR=1.8
comp=Z,15nm,0.9s
GNI Garni 22.21 281 P **P 12 48 59.8 +1.5**
GNI Garni 22.21 281 P **P 12 48 59.8 +1.5**
GNI pmax pmax
comp=Z,29nm,1.0s
HYBB Hyderabad (bro 22.42 168 *e*P **P 12 49 02.0 +1.4**
HYBB *es*P **sP 12 49 08.0 +0.8**
HYBB *e*S **S 12 53 09.7 +2.9**
ZEI Tsey 22.62 288 *e*P **P 12 49 07.4 +4.7**
ZEI pmax pmax
comp=Z,8.0nm,0.5s
ONI Oni 22.95 287 P **P 12 49 06.3 +0.2**
ONI Oni 22.95 287 P **P 12 49 06.3 +0.2**
ONI pmax pmax
comp=Z,28nm,1.0s
KBZ Khabaz 23.33 290 P **P 12 49 10.1 +0.2**
comp=Z,1.6nm,0.7s,baz=94,slow=11,SNR=2.1
comp=Z,1.6nm,0.7s
KBZ Khabaz 23.33 290 *i* P **P 12 49 10.3 +0.4**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KARS Kars 23.40 283 P **P 12 49 11.4 +0.6**
KARS pmax pmax
comp=Z,114nm,1.3s
KIV Kislovodsk 23.48 291 P **P 12 49 11.1 -0.5**
KIV IAmb IAmb 12 49 32.7
comp=Z,16nm,0.8s
KIV Kislovodsk 23.48 291 *e*P **P 12 49 11.5 0.0**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,72nm,14.0s
LZH Lanzhou 24.01 89 *e*P **P 12 49 21.0 +4.2**
LZH pP sP 12 49 26.6 +3.3
LZH sP pP 12 49 29.6 +8.2
LZH S S 12 53 46.5 +13
LZH pmax pmax
comp=Z,15nm,1.2s
LZH LR LR
comp=N,280nm,13.9s
LZH LR LR
comp=E,290nm,13.7s
LZH LR LR
comp=Z,340nm,15.6s
KIRV Kirov 24.60 329 *ce*P **P 12 49 21.8 +0.1**
SONM Songino Array 24.92 60 P **P 12 49 25.8 +0.9**
SONM LR LR 12 59 25.2
comp=Z,130nm,19.9s,baz=259,slow=37
comp=Z,2.6nm,0.9s
SONM Songino Array 24.92 60 P **P 12 49 26.1 +1.2**
SONM Songino Array 24.92 60 P **P 12 49 26.1 +1.2**
SONM pmax pmax
comp=Z,4.0nm,1.4s
VRH Novokhopyorsk 25.12 308 *e*P **P 12 49 25.5 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.6s
ULN Ulaanbaatar 25.36 60 P **P 12 49 31.4 +2.4**
ULN IAmb IAmb 12 49 48.2
comp=Z,3.7nm,1.1s
ULN Ulaanbaatar 25.36 60 *ce*P **P 12 49 30.4 +1.4**
ULN pmax pmax
comp=Z,19nm,2.5s
VSR Storozhevoye 26.68 307 *e*P **P 12 49 39.7 -0.9**
VSR pmax pmax
comp=Z,6.0nm,0.6s
PZH PanZhiHua 26.74 111 P **P 12 49 45.2 +3.6**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,100nm,5.0s
LPSR Galich'ya Gora 27.15 310 *e*P **P 12 49 44.4 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
XAN Xi'an 28.62 90 *e*P **P 12 50 00.1 +1.9**
XAN pP sP 12 50 04.2 -0.6
XAN pmax pmax
comp=Z,5.0nm,0.8s
XAN LR LR
comp=Z,270nm,17.1s
XAN LR LR
comp=Z,140nm,12.4s
XAN LR LR
comp=Z,260nm,16.2s
HHC Hu-ho-hao-te 28.82 75 *e*P **P 12 50 03.1 +3.1**
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,100nm,4.6s
HHC LR LR
comp=Z,270nm,13.4s
HHC LR LR
comp=Z,360nm,10.2s
HHC LR LR
comp=Z,370nm,14.1s
OBN Obninsk 29.18 315 ⇑*e*P **P 12 50 03.4 +0.5**
OBN *e* 12 50 53.0
OBN *e*SS SS 12 56 46.5 -12
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,76nm,17.0s
KLMR Klimovskoe 30.01 327 *e*P **P 12 50 10.1 -0.1**
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 30.01 327 *e*P **P 12 50 10.1 -0.1**
KLMR AMP 12 50 12.5
comp=Z,15nm,1.2s
BRTR Keskin Array B 30.68 283 P **P 12 50 16.9 +0.4**
comp=Z,3.8nm,0.9s,baz=98,slow=7.6,SNR=7.7
comp=Z,3.8nm,0.9s
BRTR Keskin Array B 30.68 283 P **P 12 50 17.2 +0.6**
BRTR Keskin Array B 30.68 283 P **P 12 50 17.2 +0.6**
NRIK Noril'sk 30.79 10 *ce*P **P 12 50 17.6 +0.6**
NRIK pmax pmax
comp=Z,4.0nm,1.1s
AKASG Malin Array Be 32.84 305 P **P 12 50 35.8 +0.5**
comp=Z,0.3nm,0.3s,baz=80,slow=7.4,SNR=8.7
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 32.84 305 *i* P **P 12 50 36.4 +1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 32.84 305 P **P 12 50 35.3 +0.1**
AKBB IAmb IAmb 12 50 36.5
comp=Z,8.8nm,1.2s
AKBB Malin Array Si 32.84 305 *ce*P **P 12 50 35.4 +0.1**
EIL Elat 33.16 265 LR LR 13 06 55.5
comp=Z,138nm,18.0s,baz=85,slow=42
MNK Minsk 33.98 312 *i* P **P 12 50 44.6 -0.5**
MNK *i* 12 51 57.7
MNK *i* 12 53 22.4
MNK *i* S **S 12 56 10.6 +0.8**
MNK *i* SS **SnSn 12 58 18.2 +2.3**
MNK *i* 13 01 09.2
MNK pmax pmax
comp=Z,13nm,0.6s
MNK pmax pmax
comp=N,7.0nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.6s
MNK MLR MLR
comp=Z,63nm,15.0s
MNK MLR MLR
comp=E,93nm,17.0s
MNK MLR MLR
comp=N,10.0nm,19.0s
MNK Minsk 33.98 312 *i* P **P 12 50 44.7 -0.5**
comp=E,2.0nm,0.6s
MNK *i* P **P 12 50 44.7 -0.5**
comp=N,7.0nm,0.8s
MNK *i* P **P 12 50 44.7 -0.5**
comp=Z,13nm,0.6s,baz=98
MNK *i* PP **PnPn 12 51 57.7 -0.3**
MNK *i* PPP PPP 12 52 09.0
MNK *i* S **S 12 56 10.6 +0.8**
MNK *i* SS **SnSn 12 58 18.2 +2.3**
MNK *i* SSS SSS 12 58 34.0
MNK *i* LR LR 13 04 35.8
MNK *i* LRM MLR 13 05 35.5
comp=Z,63nm,15.2s
MNK *i* LRM MLR 13 05 51.6
comp=E,93nm,17.4s
MNK *i* LRM MLR 13 05 52.9
comp=N,10.0nm,18.7s
MLR Muntele Rosu 35.28 296 P **P 12 50 58.0 +1.3**
MLR pmax pmax
comp=Z,11nm,0.9s
BURAR Bucovina Array 35.55 299 P **P 12 50 58.8 -0.1**
BURAR Bucovina Array 35.55 299 P **P 12 50 58.8 -0.1**
BURAR pmax pmax
comp=Z,2.0nm,1.0s
FINES FINESS Array B 36.26 323 P **P 12 51 04.6 -0.1**
comp=Z,3.2nm,0.6s,baz=123,slow=14,SNR=10
comp=Z,3.2nm,0.6s
NJ2 Nanjing 37.07 87 *e*P **P 12 51 14.1 +2.2**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
ZEA Zeya 38.48 50 *e*P **P 12 51 20.0 -3.6**
ZEA pmax pmax
comp=Z,10.0nm,0.5s
ARCES ARCESS Array B 39.23 336 P **P 12 51 29.7 0.0**
comp=Z,4.3nm,0.7s,baz=50,slow=1.9,SNR=20
ARCES LR LR 13 09 02.2
comp=Z,54nm,18.7s,baz=16,slow=38
comp=Z,4.3nm,0.7s
ARCES ARCESS Array B 39.23 336 P **P 12 51 30.9 +1.2**
ARCES IAmb IAmb 12 51 53.2
comp=Z,15nm,1.4s
ARCES ARCESS Array B 39.23 336 P **P 12 51 30.9 +1.2**
ARCES pmax pmax
comp=Z,15nm,1.4s
DIVS Divibare 39.70 295 P **P 12 51 33.6 -0.5**
DIVS IAmb IAmb 12 51 36.4
comp=Z,6.3nm,1.2s
YAK Yakutsk 40.28 37 LR LR 13 08 44.8
comp=Z,89nm,18.8s,baz=268,slow=37
KLR Kul'dur 41.68 57 P **P 12 51 51.4 +1.1**
comp=Z,1.3nm,0.8s,baz=293,slow=8.9,SNR=3.9
comp=Z,1.3nm,0.8s
TIXI Tiksi 42.17 23 LR LR 13 10 24.8
comp=Z,115nm,19.7s,baz=187,slow=37
GERES GERESS Array B 43.00 303 P **P 12 52 01.4 +0.2**
comp=Z,1.0nm,0.8s,baz=79,slow=7.1,SNR=7.7
comp=Z,1.0nm,0.8s
CLL Collm 43.03 307 *e*P **P 12 52 02.0 +0.8**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 43.03 307 *e*P **P 12 52 02.0 +0.8**
comp=Z,5.0nm,0.9s
CLL LmV 13 11 00.0
comp=Z,100nm,19.5s
NB2 NORSAR Subarra 43.31 321 P **P 12 52 03.9 +0.5**
comp=Z,6.7nm,1.0s,baz=91,slow=8.6
NOA NORSAR Array B 43.31 321 P **P 12 52 03.4 0.0**
comp=Z,2.4nm,0.6s,baz=91,slow=7.9,SNR=13
NOA LR LR 13 10 54.9
comp=Z,29nm,19.2s,baz=85,slow=37
comp=Z,2.4nm,0.6s
SPITS Spitsbergen Ar 45.07 346 LR LR 13 13 30.6
comp=Z,50nm,20.4s,baz=90,slow=39
JOW Kunigami 46.75 89 LR LR 13 14 58.9
comp=Z,56nm,19.5s,baz=126,slow=40
MJAR Matsushiro Arr 49.93 72 LR LR 13 15 25.1
comp=Z,44nm,18.1s,baz=244,slow=38
MA2 Magadan 50.68 40 LR LR 13 15 36.8
comp=Z,57nm,18.6s,baz=267,slow=37
EKA Eskdalemuir Ar 51.64 315 P **P 12 53 09.6 +1.5**
KMBO Kilima Mbogo 52.43 229 LR LR 13 17 21.5
comp=Z,29nm,18.4s,baz=89,slow=38
PETK Petropavlovsk- 56.33 46 LR LR 13 20 51.7
comp=Z,57nm,19.0s,baz=307,slow=39
ESDC Sonseca Array 57.95 297 P **P 12 53 53.5 -0.7**
comp=Z,0.8nm,0.8s,baz=61,slow=6.5,SNR=4.6
comp=Z,0.8nm,0.8s
RES Resolute Bay 65.83 357 LR LR 13 26 15.6
comp=Z,43nm,19.6s,baz=25,slow=38
TORD Torodi Ar. Bea 67.91 269 P **P 12 54 59.7 -1.0**
comp=Z,3.0nm,0.6s,baz=48,slow=5.4,SNR=16
comp=Z,3.0nm,0.6s
ILAR Eielson Array 71.28 17 P **P 12 55 20.1 -0.8**
comp=Z,0.7nm,0.7s,baz=324,slow=4.8,SNR=8.4
ILAR LR LR 13 30 43.8
comp=Z,43nm,20.2s,baz=244,slow=39
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 78.11 4 LR LR 13 34 20.3
comp=Z,38nm,18.1s,baz=26,slow=39
BOSA Boshof 81.42 222 P **P 12 56 17.1 -1.7**
comp=Z,2.7nm,0.9s,baz=352,slow=3.2,SNR=3.9
comp=Z,2.7nm,0.9s
WRA Warramunga Arr 81.84 124 P **P 12 56 19.7 -1.5**
comp=Z,1.5nm,0.6s,baz=328,slow=5.2,SNR=23
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 81.84 124 *i* P **P 12 56 20.5 -0.7**
WRA pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 84.30 127 P **P 12 56 32.6 -1.2**
comp=Z,1.1nm,0.6s,baz=312,slow=5.0,SNR=17
comp=Z,1.1nm,0.6s
NEW Newport 92.07 7 LR LR 13 42 57.2
comp=Z,30nm,19.4s,baz=8.0,slow=38
HNR Honiara 93.05 100 LR LR 13 41 56.6
comp=Z,19nm,18.1s,baz=113,slow=37
PDAR Pinedale Array 98.04 2 LR LR 13 47 40.2
comp=Z,24nm,18.3s,baz=26,slow=39
ELK Elko 99.70 7 LR LR 13 47 54.7
comp=Z,24nm,18.1s,baz=5.5,slow=38
PLCA Paso Flores 152.75 256 PKPbc **PKPbc 13 03 57.0 -1.6**
comp=Z,1.7nm,0.9s,baz=357,slow=4.8,SNR=3.4
PLCA Paso Flores 152.75 256 PKIKP **PKPbc 13 03 57.0 -1.6**

*ANF **10** 13:12:24.1±2.4,39˚.54N×123˚.50W,h8km,ML4.0/10,Error ellipse: s-maj=33.8km s-min=18.4km az=71.0*
*NEIC **10** 13:12:27.9,39˚.99N×122˚.81W,h11km,Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=6.73; Mθθ=0.59; Mφφ=6.14; Mrθ=1.04; Mrφ=3.03; Mθφ=0.30; Fault plane solution: M0=7.21000×10^14^ NP1:φs=16.05000˚,δ=42.73000˚, λ=-101.34000˚. NP2:φs=211.32000˚,δ=48.29000˚, λ=-79.71000˚. Principal axes: T 7.5054, Plg3.0000˚, Azm294.0000˚; N -0.6318, Plg8.0000˚, Azm24.0000˚; P -6.8736, Plg82.0000˚, Azm184.0000˚;*
*IDC **10** 13:12:28.6±2.1,40˚.11N×122˚.80W,h0km,mbtmp3.1/4, ML3.4/4 Error ellipse: s-maj=26.7km s-min=9.7km az=53.0*
*NCEDC **10** 13:12:28.6±2.0,39˚.96N±0˚.01×122˚.79W±0˚.02,h8km±6km, Mwr3.8/4,ML3.6/62(NEIC), Error ellipse: s-maj=2.2km s-min=1.7km az=213.0*
*NEIC **10** 13:12:29.5±2.5,39˚.98N±0˚.02×122˚.81W±0˚.03,h21km±7km, Error ellipse: s-maj=3.8km s-min=1.6km az=59.0*

ISC 10 13:12:28.8±0.8,39˚.96N±0˚.02×122˚.80W±0˚.02,h14km, n117,σ1s34/118,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVV	**Valley View**	**0.21**	**152**		**Pg**	**13 12 33.8**	**+0.2**
KBNM	**Bluenose Ridge**	**0.31**	**257**		**Pg**	**13 12 35.0**	**-0.2**
LBPM	**Beegum Peak**	**0.36**	**350**		**Pg**	**13 12 35.8**	**-0.4**
GCK	**Clark Valley**	**0.50**	**146**		**Pb**	**13 12 40.1**	**+0.7**
KIPM	**Iron Peak**	**0.54**	**254**		**Pb**	**13 12 40.0**	**-0.2**
KPPM	**Pickett Peak**	**0.58**	**312**		**Pg**	**13 12 39.6**	**-0.5**
LTCM	**Tuscan Springs**	**0.58**	**64**		**Pb**	**13 12 40.8**	**+0.1**
KFPM	**Farley Peak**	**0.58**	**236**		**Pb**	**13 12 40.7**	**0.0**
KCPM	**Cahto Peak**	**0.66**	**246**		**Pb**	**13 12 42.4**	**+0.2**
KCPM	**Cahto Peak**	**0.66**	**246**		**Sn**	**13 12 53.1**	**-1.0**
GTSM	**Trough Springs**	**0.67**	**167**		**Pb**	**13 12 42.1**	**-0.1**
KMRM	**Mail Ridge**	**0.74**	**291**		**Pb**	**13 12 43.6**	**+0.1**
KMRM				IAML		13 13 03.1	
	comp=E,5µm,0.7s						
KMRM	**Mail Ridge**	**0.74**	**291**		**Sn**	**13 12 55.2**	**-0.9**
KHBM	**Hayfork Bally**	**0.77**	**336**		**Pg**	**13 12 42.9**	**-0.9**
GTC	**Three Chop Rid**	**0.81**	**226**		**Pb**	**13 12 44.8**	**+0.2**
GWRM	**Wonder Ranch**	**0.84**	**207**		**Pn**	**13 12 45.9**	**-0.5**
GBMM	**Baldy Mountain**	**0.85**	**164**		**Pn**	**13 12 46.0**	**-0.5**
KCRM	**Chalk Rock**	**0.91**	**301**		**Pb**	**13 12 46.7**	**-0.5**
GHLM	**Highland Sprin**	**0.94**	**190**		**Pg**	**13 12 47.1**	**+0.2**
LGPM	**Granite Peak**	**0.95**	**359**		**Pb**	**13 12 46.0**	**-1.1**
OGOM	**Van Goodin Ran**	**0.97**	**108**		**Pb**	**13 12 45.7**	**-1.6**
HOPS	**Hopland Field**	**0.99**	**192**	Pn	**Pg**	**13 12 47.8**	**0.0**
HOPS				IAML		13 13 04.3	
	comp=E,1µm,0.9s						
HOPS				IAML		13 13 04.3	
	comp=N,1µm,0.7s						
GNAM	**Navarro Ridge**	**1.00**	**220**		**Pb**	**13 12 47.4**	**-0.5**
LCMM	**Colby Mountain**	**1.00**	**79**		**Pb**	**13 12 47.0**	**-1.0**
OSUM	**Sutter Buttes**	**1.01**	**133**		**Pb**	**13 12 46.6**	**-1.4**
SUTB	**Sutter Butte**	**1.07**	**133**		**Pb**	**13 12 47.0**	**-2.1**
KSMM	**Slide Mountain**	**1.08**	**282**		**Pb**	**13 12 48.4**	**-0.9**
GHOM	**Hamilton Openi**	**1.08**	**212**		**Pb**	**13 12 48.6**	**-0.6**
ORV	**Oroville**	**1.08**	**112**		**Pb**	**13 12 47.0**	**-2.3**
GSGM	**Seigler Mounta**	**1.09**	**176**		**Pg**	**13 12 51.0**	**+1.1**
LMEM	**Manzanita Entr**	**1.10**	**58**		**Pb**	**13 12 48.9**	**-0.9**
KMPM	**Mount Pierce**	**1.11**	**295**	Pn	**Pb**	**13 12 49.1**	**-0.7**
PAM	**Palermo**	**1.11**	**117**		**Pb**	**13 12 47.8**	**-2.0**
MNRC	**McLaughlin Min**	**1.12**	**165**		**Pn**	**13 12 50.0**	**-0.1**
LBKM	**Bonanza King**	**1.13**	**5**		**Pb**	**13 12 48.8**	**-1.4**
OWYM	**Wyandotte**	**1.14**	**116**		**Pb**	**13 12 48.1**	**-2.0**
LRDM	**Redding Peak**	**1.14**	**64**		**Pb**	**13 12 49.5**	**-0.9**
GBGM	**Boggs Mountain**	**1.15**	**175**		**Pg**	**13 12 52.0**	**+1.0**
GDXM	**Geysers**	**1.15**	**180**		**Pg**	**13 12 51.2**	**+0.2**
KHMM	**Horse Mountain**	**1.16**	**322**	Pn	**Pb**	**13 12 50.1**	**-0.5**
KHMM				IAML		13 13 11.0	
	comp=E,1µm,0.6s						
KHMM				IAML		13 13 15.1	
	comp=N,2µm,0.8s						
NMTM	**Middletown**	**1.19**	**166**		**Pn**	**13 12 50.7**	**-0.2**
GCRM	**Castle Rock Sp**	**1.19**	**177**		**Pg**	**13 12 51.5**	**-0.2**
OHCM	**Honcut**	**1.19**	**121**		**Pn**	**13 12 49.1**	**-2.0**
GCVM	**Cloverdale**	**1.20**	**188**		**Pn**	**13 12 50.8**	**-0.4**
GGUM	**Gualala**	**1.23**	**206**		**Pn**	**13 12 50.7**	**-0.9**
GAXM	**Alexander Vall**	**1.25**	**178**		**Pn**	**13 12 51.6**	**-0.2**
GSSM	**Skaggs Springs**	**1.27**	**187**		**Pn**	**13 12 51.8**	**-0.3**
JCC	**Jacoby Creek,**	**1.27**	**313**		**Pn**	**13 12 51.7**	**-0.4**
JCC				IAML		13 13 25.7	
	comp=E,759nm,0.9s						
KCTM	**Capetown**	**1.28**	**294**		**Pn**	**13 12 52.0**	**-0.2**
NHSM	**Mount Saint He**	**1.31**	**174**		**Pn**	**13 12 52.6**	**-0.2**
HATC	**Hat Creek Radi**	**1.33**	**50**		**Pn**	**13 12 52.8**	**-0.3**
NBPM	**Berryessa Peak**	**1.38**	**160**		**Pn**	**13 12 53.7**	**+0.2**
NDHM	**Dunnigan Hills**	**1.38**	**150**		**Pn**	**13 12 52.6**	**-1.0**
KOMM	**Orleans Mounta**	**1.41**	**340**		**Pn**	**13 12 53.7**	**-0.4**
MAC	**Mark West Spri**	**1.41**	**177**		**Pn**	**13 12 54.0**	**0.0**
LCSM	**College of the**	**1.49**	**12**		**Pb**	**13 12 56.0**	**-0.3**
KRPM	**Rodgers**	**1.52**	**323**		**Pn**	**13 12 55.3**	**-0.2**
KRPM				IAML		13 13 26.5	
	comp=E,1µm,0.7s						
KRPM				IAML		13 13 27.4	
	comp=N,1µm,1.2s						
LBFM	**Black Fox Moun**	**1.55**	**26**		**Pn**	**13 12 55.9**	**-0.3**
LTIM	**Timbered Crate**	**1.57**	**39**		**Pn**	**13 12 56.5**	**+0.1**
NAPC	**Atlas Peak**	**1.58**	**164**		**Pn**	**13 12 57.0**	**+0.5**
LMPM	**Military Pass**	**1.60**	**17**		**Pn**	**13 12 56.9**	**0.0**
CVS	**Carmenet Viney**	**1.64**	**170**		**Pb**	**13 12 58.2**	**-0.5**
LAMM	**Antelope Mount**	**1.65**	**5**		**Pn**	**13 12 58.3**	**+0.8**
LHEM	**Herd Peak**	**1.72**	**15**		**Pn**	**13 12 58.8**	**+0.2**
YBH	**Yreka Blue Hor**	**1.77**	**2**	Pn	**Pn**	**13 12 59.6**	**+0.5**
	comp=N,29nm,0.3s,baz=259,slow=5.6,SNR=115						
YBH				Sn	**Sn**	**13 13 19.6**	**-1.8**
	comp=N,27nm,0.3s,baz=132,slow=22,SNR=10						
YBH	**Yreka Blue Hor**	**1.77**	**2**		**Pn**	**13 12 59.4**	**+0.3**
YBH				IAML		13 13 35.0	
	comp=E,425nm,0.7s						
LGMM	**Garner Mountai**	**1.79**	**24**		**Pn**	**13 13 00.0**	**+0.5**
MCCM	**Marconi Confer**	**1.81**	**182**		**Pn**	**13 12 59.4**	**-0.2**
LMHM	**Little Mount H**	**1.83**	**28**		**Pn**	**13 13 00.5**	**+0.3**
BEKR	**Beckworth**	**1.88**	**92**	Pn	**Pn**	**13 13 01.6**	**+0.9**
BEKR				IAML		13 13 33.2	
	comp=E,576nm,0.6s						
BEKR				IAML		13 13 34.1	
	comp=N,536nm,0.6s						
B040	**Montague**	**1.89**	**9**		**Pn**	**13 13 01.2**	**+0.5**
BMRR	**Black Mountain**	**1.93**	**85**		**Pn**	**13 13 01.9**	**+0.4**
KTRM	**Thompson Ridge**	**1.99**	**348**		**Pn**	**13 13 03.4**	**+1.2**
DONR	**Donner Summit**	**2.01**	**107**		**Pn**	**13 13 03.3**	**+0.8**
KSXB	**Camp Six Broad**	**2.04**	**337**		**Pn**	**13 13 03.2**	**+0.5**
KSXB				IAML		13 13 42.4	
	comp=E,392nm,0.7s						
KSXB				IAML		13 13 48.4	
	comp=N,349nm,0.9s						
TNK	**Tinkers Knob**	**2.10**	**108**		**Pn**	**13 13 03.4**	**-0.4**
BDM	**Black Diamond**	**2.13**	**160**		**Pn**	**13 13 04.3**	**+0.3**
VPK	**Verdi Peak**	**2.19**	**102**		**Pn**	**13 13 06.4**	**+1.4**
PEAR	**Peavine Mounta**	**2.22**	**98**		**Pn**	**13 13 06.3**	**+0.9**
L02F	**Cave Junction**	**2.23**	**345**	P	**Pn**	**13 13 06.3**	**+0.9**
	baz=164,SNR=33						
L02F				S	**Sg**	**13 13 39.0**	**-1.7**
	baz=164						
MPK	**Martis Peak**	**2.24**	**106**		**Pn**	**13 13 06.2**	**+0.4**
CMOB	**Morgan Territo**	**2.29**	**160**		**Pn**	**13 13 07.4**	**+1.2**
L04D	**Klamath Falls**	**2.29**	**9**	P	**Pb**	**13 13 09.0**	**-0.9**
	baz=189,SNR=61						
L04D				S	**Sg**	**13 13 46.1**	**+3.8**
	baz=189						
CLCB	**Lake Chabot**	**2.29**	**165**		**Pn**	**13 13 06.0**	**-0.2**
EMB	**Emerald Bay**	**2.31**	**114**		**Pn**	**13 13 07.1**	**+0.5**
KBO	**Bosley Butte**	**2.49**	**335**		**Pn**	**13 13 10.1**	**+1.0**
KBO				IAML		13 14 02.2	
	comp=N,276nm,1.4s						
KBO				IAML		13 14 02.7	
	comp=E,299nm,1.1s						
VCNR	**Virginia City**	**2.52**	**104**		**Pn**	**13 13 10.5**	**+1.0**
VCNR				IAML		13 14 00.8	
	comp=E,318nm,0.8s						
VCNR				IAML		13 14 01.7	
	comp=N,380nm,0.8s						
PNTR	**Pine Nut**	**2.63**	**108**	Pn	**Pn**	**13 13 12.1**	**+1.1**
CMB	**Columbia Colle**	**2.69**	**135**		**Pn**	**13 13 12.7**	**+0.9**
CMB				IAML		13 13 51.3	
	comp=N,208nm,0.6s						
CMB				IAML		13 13 54.8	
	comp=E,164nm,1.0s						
MOD	**Modoc Plateau**	**2.71**	**44**		**Pn**	**13 13 12.2**	**+0.1**
MOD				IAML		13 14 16.6	
	comp=E,196nm,0.9s						
K04D	**Chiloquin, OR**	**2.78**	**16**	P	**Pb**	**13 13 17.2**	**-1.0**
	baz=197						
K02D	**Willamette Mer**	**2.81**	**347**	P	**Pn**	**13 13 14.1**	**+0.7**
	baz=166,SNR=25						
YERR	**Yerington**	**2.92**	**108**		**Pn**	**13 13 15.9**	**+0.8**
YERR				IAML		13 14 01.9	
	comp=E,371nm,0.8s						
YERR				IAML		13 14 03.5	
	comp=N,250nm,0.7s						
J01E	**Myrtle Point**	**3.31**	**346**	P	**Pn**	**13 13 21.6**	**+1.5**
	baz=165,SNR=5.6						
J01E				S	**Sb**	**13 14 03.4**	**-3.9**
	baz=165						
J04D	**Umpqua Nationa**	**3.32**	**9**	P	**Pn**	**13 13 23.7**	**+3.2**
	baz=189,SNR=34						
J05D	**Fort Rock, OR**	**3.52**	**19**	P	**Pn**	**13 13 26.8**	**+3.6**
	baz=200,SNR=28						
RYN	**Ryan**	**3.58**	**110**		**Pn**	**13 13 25.0**	**+1.0**
RYN				IAML		13 14 26.3	
	comp=N,95nm,1.0s						
RYN				IAML		13 14 31.4	
	comp=E,81nm,0.9s						
MCCR	**Mono Craters**	**3.58**	**123**		**Pb**	**13 13 29.1**	**-2.9**
BBGB	**Big Mountain B**	**3.65**	**157**		**Pn**	**13 13 26.3**	**+1.3**
BBGB				IAML		13 14 36.4	
	comp=E,190nm,0.8s						
BBGB				IAML		13 14 38.3	
	comp=N,223nm,0.9s						
I03D	**Drain, OR**	**3.75**	**354**	Pb	**Pb**	**13 13 35.8**	**+1.0**
	baz=173						
LHV	**Little Huntoon**	**3.75**	**116**		**Pn**	**13 13 28.2**	**+1.9**
LHV				IAML		13 14 33.6	
	comp=E,192nm,0.9s						
LHV				IAML		13 14 34.0	
	comp=N,206nm,0.9s						
OMMB	**Old Mammoth Mi**	**3.78**	**127**		**Pn**	**13 13 27.9**	**+0.9**
OMMB				IAML		13 14 30.6	
	comp=N,81nm,1.1s						
OMMB				IAML		13 14 30.7	
	comp=E,100nm,0.9s						
NVAR	**Mina Array Bea**	**3.81**	**112**	Pn	**Pn**	**13 13 28.6**	**+1.2**
	comp=E,5.5nm,0.3s,baz=286,slow=14,SNR=95						
NVAR				Lg	Lg	13 14 29.0	
	comp=E,3.8nm,0.3s,baz=286,slow=20,SNR=2.0						
	comp=E,5.7nm,0.4s						
NVAR	**Mina Array Bea**	**3.81**	**112**		**Pn**	**13 13 28.1**	**+0.8**
I04A	**Tendick Farm,**	**3.84**	**4**	P	**Pn**	**13 13 30.9**	**+3.4**
	baz=184,SNR=8.7						
BAPM	**Anderson Peak**	**3.89**	**166**		Pn	13 13 23.1	-5.1
NV11	**Mina Array Sit**	**3.92**	**111**		**Pn**	**13 13 29.0**	**+0.3**
NV11				IAML		13 14 36.9	
	comp=N,168nm,1.4s						
NV11				IAML		13 14 38.2	
	comp=E,97nm,1.4s						
BMN	**Battle Mountai**	**4.30**	**82**		**Pn**	**13 13 34.1**	**+0.2**
H04D	**Lebanon**	**4.56**	**1**	P	**Pn**	**13 13 40.9**	**+3.5**
	baz=180						
J08A	**Circle Bar Ran**	**4.69**	**42**		**Pn**	**13 13 39.6**	**+0.3**
TPH	**Tonopah**	**4.74**	**112**		**Pn**	**13 13 40.7**	**+0.7**
GATR	**Gnd/Air Tx Cnt**	**5.70**	**161**		**Pn**	**13 13 48.7**	**-4.3**
ELK	**Elko**	**5.83**	**80**	Pn	Pn	13 13 59.9	+4.9
	comp=E,0.3nm,0.3s,baz=284,slow=9.8,SNR=4.9						
ELK				Lg	Lg	13 15 30.6	
	comp=E,0.3nm,0.3s,baz=240,slow=20,SNR=3.2						
	comp=E,0.7nm,0.3s						
R11A	**Troy Canyon, C**	**5.84**	**104**		**Pn**	**13 13 56.3**	**+1.2**
R11A	**Troy Canyon, C**	**5.84**	**104**	P	**Pn**	**13 13 56.8**	**+1.7**
	baz=288						
PDAR	**Pinedale Array**	**10.34**	**70**	Pn	Pn	13 15 02.0	+5.1
	comp=E,0.1nm,0.3s,baz=256,slow=11,SNR=3.1						
	comp=E,0.4nm,0.5s						
TXAR	**Lajitas Array**	**18.94**	**118**	P	**Pn**	**13 16 54.0**	**+3.8**
	baz=311,slow=7.8,SNR=3.6						
	comp=E,0.5nm,1.0s						

*JMA **10** 13:48:14.2±0.3,27˚.N±2˚×12˚.6E±˚,h209km,MV3.9/31,NW OFF OKINAWAJIMA IS*
*IDC **10** 13:48:17.7±4.2,27˚.24N×125˚.58E,h260km±45km,mb3.2/7, mbtmp3.8/8,Error ellipse: s-maj=37.2km s-min=15.1km az=66.0*

ISC 10 13:48:13.4±0.7,27˚.13N±0˚.07×125˚.68E±0˚.05,h222km±8km, n34,σ1s80/56,mb3.6/7,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.28**	**129**	P	**Pn**	**13 48 48.3**	**+1.0**
JKE				S	**S**	**13 49 14.0**	**+0.3**
JAGN	**Aguni-jima**	**1.50**	**111**	P	**Pn**	**13 48 50.1**	**+1.1**
JAGN				S	**S**	**13 49 16.4**	**-0.3**
JIH	**Iheya**	**2.04**	**92**	P	**Pn**	**13 48 55.2**	**+1.2**
JIH				S	**S**	**13 49 24.4**	**-1.1**
JJT3	**Tamagusuku3**	**2.13**	**117**	P	**Pn**	**13 48 56.9**	**+2.0**
JJT3				S	**S**	**13 49 27.4**	**+0.4**
JNTH	**Nagotoyohara**	**2.18**	**106**	P	**Pn**	**13 48 56.7**	**+1.3**
JNTH				S	**S**	**13 49 26.2**	**-1.8**
JIKM	**Ikemajima**	**2.23**	**190**	P	**Pn**	**13 48 56.2**	**+0.3**
JIKM				S	**S**	**13 49 28.4**	**-0.7**
JIRB	**Irabujima**	**2.34**	**191**	P	**Pn**	**13 48 57.6**	**+0.6**
JIRB				S	**S**	**13 49 29.0**	**-1.9**
JOW	**Kunigami**	**2.34**	**97**	P	**Pn**	**13 48 58.1**	**+1.1**
JOW				S	**S**	**13 49 28.9**	**-2.0**
JOGS	**Gusukube**	**2.37**	**186**	P	**Pn**	**13 48 58.5**	**+1.1**
JOGS				S	**S**	**13 49 30.8**	**-0.9**
JMJ2	**Miyako jima3**	**2.40**	**188**	P	**Pn**	**13 48 58.6**	**+0.9**
JMJ2				S	**S**	**13 49 31.3**	**-0.9**
JYRO	**Yoronjima**	**2.48**	**92**	P	**Pn**	**13 48 59.2**	**+0.8**
JYRO				S	**S**	**13 49 31.2**	**-2.2**
JOKE	**Okinoerabujima**	**2.59**	**84**	P	**Pn**	**13 49 00.3**	**+0.7**
JOKE				S	**S**	**13 49 33.1**	**-2.5**
JTJ	**Tarama**	**2.63**	**200**	P	**Pn**	**13 49 00.6**	**+0.5**
JTJ				S	**S**	**13 49 34.3**	**-2.3**
JISG	**Ishigakijimahi**	**2.82**	**206**	*e*S	**S**	**13 49 37.8**	**-2.5**
JTK	**Tokunoshima**	**2.98**	**77**	P	**Pn**	**13 49 04.3**	**+0.4**
JTK				*e*S	**S**	**13 49 40.5**	**-3.0**
JIJ	**Ishigaki jima**	**3.08**	**207**	P	**Pn**	**13 49 04.7**	**-0.5**
JIJ				S	**S**	**13 49 41.9**	**-3.7**
JKRS	**Kuro-shima**	**3.25**	**208**	P	**Pn**	**13 49 06.8**	**-0.3**
JKRS				*e*S	**S**	**13 49 45.9**	**-3.2**
JAMN	**Amaminishikomi**	**3.29**	**70**	P	**Pn**	**13 49 07.8**	**+0.2**
JAMN				*e*S	**S**	**13 49 47.2**	**-2.7**
YOJ	**Yonaguni jima**	**3.58**	**223**	P	**Pn**	**13 49 11.1**	**+0.1**
YOJ				*e*S	**S**	**13 49 55.1**	**-1.0**
JYNG	**Yonagunijimaku**	**3.63**	**223**	P	**Pn**	**13 49 11.0**	**-0.6**
JYNG				*e*S	**S**	**13 49 55.4**	**-1.8**
JAM	**Amami Oshima**	**3.71**	**69**	*e*P	**Pn**	**13 49 12.6**	**+0.2**
JAM				S	**S**	**13 49 55.9**	**-2.9**
JMZ	**Minamidaito 2**	**5.14**	**103**	P	**Pn**	**13 49 31.8**	**+1.7**
JMZ				S	**S**	**13 50 26.2**	**-4.4**
JKDJ	**Kitadaitoujima**	**5.17**	**102**	P	**Pn**	**13 49 32.4**	**+1.9**
JKDJ				S	**S**	**13 50 27.4**	**-4.0**
JMTN	**Minamitane**	**5.62**	**53**	P	**Pn**	**13 49 37.3**	**+1.2**
JTN	**Tanegashima 3**	**5.83**	**52**	P	**Pn**	**13 49 39.5**	**+0.8**
JSU	**Suzuyama**	**6.03**	**43**	*e*P	**Pn**	**13 49 44.0**	**+2.7**
KSRS	**Korea Array**	**10.47**	**10**	P	**Pn**	**13 50 40.4**	**+2.2**
	1.2nm,0.7s,baz=188,slow=13,SNR=9.0						
SONM	**Songino Array**	**25.58**	**329**	P	**P**	**13 53 22.5**	**+0.3**
	0.7nm,0.5s,baz=138,slow=9.9,SNR=4.1						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**39.23**	**312**	P	**P**	**13 55 19.8**	**-0.5**
	2.0nm,0.5s,baz=99,slow=10,SNR=22						
	2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**40.15**	**323**	P	**P**	**13 55 27.4**	**-0.2**
	2.9nm,0.5s,baz=110,slow=9.3,SNR=10						
	2.9nm,0.5s						
WRA	**Warramunga Arr**	**47.54**	**169**	P	**P**	**13 56 27.1**	**+0.4**
	0.4nm,0.7s,baz=353,slow=8.4,SNR=4.7						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**51.12**	**170**	P	**P**	**13 56 55.9**	**+2.2**
	0.2nm,0.7s,baz=0.4,slow=14,SNR=6.1						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**64.73**	**28**	P	**P**	**13 58 27.7**	**+0.2**
	0.2nm,0.5s,baz=280,slow=7.6,SNR=2.4						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**70.95**	**330**	P	**P**	**13 59 05.4**	**-0.9**
	3.1nm,0.9s,baz=27,slow=2.1,SNR=3.8						
	3.1nm,0.9s						

ZUR 10 13:50:46.6,46˚.43N×8˚.55E,h9km±3km,MLh0.6/4,Error ellipse: s-maj=5.8km s-min=1.2km az=359.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSIO	**Fusio**	**0.08**	**72**	Sg	Sg	13 50 51.1	+0.3
NALPS	**Val Nalps**	**0.21**	**40**	Sg	Sg	13 50 55.1	+0.8
GRIMS	**Grimsel Gerste**	**0.22**	**313**	Pg	Pg	13 50 51.5	+0.3
GRIMS				Sg	Sg	13 50 54.7	+0.4

*IDC **10** 13:50:59.9±3.6,24˚.66S×177˚.18W,h88km±32km,mb3.9/9, mbtmp4.3/11,MS2.9/2,Error ellipse: s-maj=25.6km s-min=17.7km az=135.0*
*NEIC **10** 13:51:03.5±2.5,24˚.7S±0˚.1×176˚.9W±0˚.1,h135km±8km, mb4.4/17,Error ellipse: s-maj=17.7km s-min=15.4km az=121.0*

ISC 10 13:51:00.7±0.5,24˚.66S±0˚.07×177˚.1W±0˚.1,h100km,n58, σ1s43/52,mb4.3/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.63**	**189**	S	**Sn**	**13 53 03.9**	**+2.8**
GLKZ	**Green Lake**	**4.65**	**189**	P	**Pn**	**13 52 08.1**	**-0.5**
GLKZ				S	**Sn**	**13 53 01.8**	**+0.3**
MSVF	**Nonsavu**	**8.25**	**326**	P	Pn	13 53 05.4	+7.7
	21nm,0.9s,baz=138,slow=13,SNR=6.5						
MSVF	**Nonsavu**	**8.25**	**326**		Pn	13 53 07.5	+10
AFI	**Afiamalu**	**11.80**	**26**	P	**Pn**	**13 53 45.3**	**-0.5**
	11nm,0.2s,baz=196,slow=1.8,SNR=18						
AFI				S	Sn	13 55 45.2	-10
	15nm,0.3s,baz=87,slow=19,SNR=2.9						
AFI	**Afiamalu**	**11.80**	**26**	Pn	**Pn**	**13 53 45.9**	**0.0**
HAZ	**Te Kaha**	**13.78**	**197**	P	**Pn**	**13 54 09.3**	**-2.3**
HAZ				S	Sn	13 56 28.9	-14
PUZ	**Puketiti**	**13.95**	**195**	P	**Pn**	**13 54 15.9**	**+1.9**
PUZ				S	Sn	13 56 29.6	-18
TWGZ	**Tauwhareparae**	**14.12**	**196**	P	**Pn**	**13 54 17.2**	**+1.1**
TWGZ				S	Sn	13 56 36.4	-15
MWZ	**Matawai**	**14.39**	**197**	P	**Pn**	**13 54 17.0**	**-2.6**
MWZ				S	Sn	13 56 40.3	-18
URZ	**Urewera**	**14.43**	**199**	P	**Pn**	**13 54 19.3**	**-0.8**
	8.2nm,0.5s,baz=273,slow=3.6,SNR=11						
URZ				S	Sn	13 56 43.0	-16
	8.2nm,0.5s,baz=352,slow=23,SNR=8.0						
URZ	**Urewera**	**14.43**	**199**	Pn	**Pn**	**13 54 20.9**	**+0.8**
URZ	**Urewera**	**14.43**	**199**	P	Pn	13 54 15.3	-4.8
URZ				S	Sn	13 56 40.7	-18
NMHZ	**Naumai**	**15.30**	**198**	P	**Pn**	**13 54 30.8**	**-0.4**
NMHZ				S	Sn	13 57 04.6	-16
DZM	**Mont Dzumac**	**15.35**	**276**	*e*LR	LR	13 57 24.9	
	comp=Z,91nm,26.4s						
HIZ	**Hauiti**	**15.42**	**204**	P	**P**	**13 54 34.3**	**-0.7**
HIZ				S	S	13 57 46.4	+14
BKZ	**Black Stump Fm**	**15.46**	**199**	P	**Pn**	**13 54 30.2**	**-2.9**
BKZ				S	Sn	13 57 06.1	-18
MCHZ	**McNeill Hill**	**15.65**	**198**	P	**Pn**	**13 54 34.1**	**-1.4**
MCHZ				S	Sn	13 57 09.1	-19
OTVZ	**Oturere**	**15.71**	**201**	P	**Pn**	**13 54 33.4**	**-3.1**
SNVZ	**South Ngauruho**	**15.74**	**201**	P	**Pn**	**13 54 34.9**	**-2.0**
KAHZ	**Kahuranaki**	**15.93**	**197**	P	**Pn**	**13 54 36.7**	**-2.4**
KAHZ				S	Sn	13 57 16.7	-19
PXZ	**Pawanui**	**16.16**	**197**	P	**Pn**	**13 54 39.6**	**-2.2**
PXZ				S	Sn	13 57 21.6	-19
RAR	**Rarotonga**	**16.30**	**81**	LR	LR	13 59 46.7	
	comp=Z,46nm,19.0s,baz=262,slow=32						
FOZ	**Fox Glacier**	**21.68**	**207**	P	**P**	**13 55 42.0**	**-1.2**
FOZ				IAmb	IAmb	13 55 46.4	
	comp=Z,12nm,0.6s						
PAE	**Paea**	**26.54**	**80**	*e*T	T	14 22 44.9	
	comp=Z,1.8nm,0.2s						
PPT2	**Papeete2**	**26.57**	**80**	*e*LR	LR	14 02 31.8	
	comp=Z,5nm,26.0s						
PPT2	**Papeete2**	**26.57**	**80**	*e*T	T	14 22 43.9	
	comp=Z,1.4nm,0.3s						
PPT	**Papeete**	**26.57**	**80**	LR	LR	14 05 12.9	
	comp=Z,25nm,18.4s,baz=218,slow=32						
EIDS	**Eidsvold**	**28.83**	**262**	P	**P**	**13 56 51.3**	**+1.7**
EIDS				IAmb	IAmb	13 56 52.0	
	comp=Z,4.0nm,0.8s						
CTAO	**Charters Tower**	**34.15**	**270**	P	**P**	**13 57 37.7**	**+1.3**
CTAO				IAmb	IAmb	13 57 39.3	
	comp=Z,16nm,0.9s						
TOO	**Toolangi**	**34.31**	**239**	P	**P**	**13 57 39.0**	**+1.3**
TOO				IAmb

IGHG	**Ghaleghazi**	**1.14**	**172**	*e*Pg	**Pg**	**14 26 31.0**	**-0.4**
IGHG				*e*Sg	**Sg**	**14 26 46.9**	**+0.7**
IGHG				*e*		14 26 52.9	
	comp=Z,9μm,0.6s						
KER	**Kermanshah**	**1.24**	**149**	*e*Pg	**Pg**	**14 26 33.6**	**+0.3**
KCHF	**Cheshme Sefid,**	**1.30**	**155**	*e*Pg	**Pg**	**14 26 34.4**	**-0.1**
KCHF				*e*Sg	**Sg**	**14 26 51.2**	**-0.2**
KCHF				*e*		14 26 54.3	
	comp=Z,8μm,0.4s						
MAHB	**Mahabad**	**1.41**	**338**	*e*Pn	**Pg**	**14 26 38.2**	**+1.5**
IBZA	**Bozab**	**1.57**	**128**	*e*Pn	**Pb**	**14 26 38.5**	**-0.5**
IKOM	**Komasi**	**1.59**	**143**	*e*Pg	**Pg**	**14 26 40.0**	**0.0**
IKOM				*e*		14 27 11.2	
	comp=Z,8μm,0.6s						
HSAM	**Samen**	**2.22**	**123**	*e*Pn	**Pg**	**14 26 50.8**	**-1.2**
ZNJK	**Zanjan**	**2.23**	**56**	*e*Pn	**Pg**	**14 26 52.2**	**-0.1**
IDOB	**Doab**	**2.23**	**138**	*e*Pn	**Pb**	**14 26 50.7**	**+0.4**
IAZR	**Azarshahr**	**2.24**	**352**	*e*Pn	**Pg**	**14 26 52.1**	**-0.4**
IAZR				*e*		14 27 33.6	
	comp=Z,4μm,0.6s						
IKFM	**Kafar-mosalman**	**2.28**	**147**	*e*Pn	**Pb**	**14 26 51.3**	**+0.4**
IKFM				*e*		14 27 28.4	
	comp=Z,4μm,0.4s						
HAGD	**Aghdareh**	**2.36**	**105**	*e*Pn	**Pb**	**14 26 50.5**	**-1.9**
IBDR	**Badra**	**2.37**	**189**	*e*Pg	**Pb**	**14 26 50.5**	**-1.9**
	baz=10.0						
IBDR				*e*Sg	**Sb**	**14 27 21.0**	**-0.8**
IBDR				AML	AML	14 27 38.1	
	comp=N,87nm,0.6s						
IBDR				AML	AML	14 27 40.4	
	comp=E,99nm,0.5s						
QABG	**Abgarm-Qazvin**	**2.63**	**84**	*e*Pn	**Pb**	**14 26 55.8**	**-1.2**
BHD	**Baghdad**	**2.73**	**218**	*e*Pn	**Pn**	**14 26 55.0**	**+1.3**
BHD				*e*Sn	**Sn**	**14 27 26.0**	**-0.9**
IHRS	**Heris**	**2.91**	**10**	*e*Pn	**Pb**	**14 27 00.7**	**-1.0**
ASAO	**Ashtian**	**3.13**	**106**	*e*Pn	**Pb**	**14 27 04.8**	**-0.8**
GIDE	**GILAN DEYLAMAN**	**3.21**	**62**	*e*Pn	**Pb**	**14 27 06.3**	**-0.7**
KHMZ	**Khomeyn**	**3.42**	**119**	*e*Pn	**Pb**	**14 27 08.3**	**-2.2**
GRMI	**Germi**	**3.56**	**20**	*e*Pn	**Pb**	**14 27 10.1**	**-2.7**
AMIS	**Naft Sefid**	**4.50**	**146**	*e*Pn	**Pn**	**14 27 20.9**	**+2.9**
KRSH	**Karshahi**	**4.97**	**106**	*e*Pn	Pn	14 27 28.6	+3.9

JMA 10 14:29:03.3±0.1, 33°3N±0°2×131°3E±0°2, h11km, MV0.1/15, NORTHERN OITA PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JBEP	**Beppuamama**	**0.10**	**49**	P	Pg	14 29 06.1	0.0
JBEP				*e*S	Sg	14 29 08.0	-0.1
OIT2	**Oita 2**	**0.11**	**86**	*e*S	Sg	14 29 08.3	-0.1

JMA 10 14:29:18.9±0.0, 32°79N±0°08×130°7E±0°1, h10km, MV0.7/32, NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTA	**Tamana**	**0.21**	**329**	*e*S	Sg	14 29 26.5	+0.3
JTA	**Tamana**	**0.21**	**329**	*i* P	Pg	14 29 23.4	+0.2
JTA				*e*S	Sg	14 29 26.5	+0.3
JIU3	**Izumi3**	**0.27**	**151**	P	Pg	14 29 24.4	+0.1
JIU3				*e*S	Sg	14 29 28.4	+0.4

*MOS **10** 14:54:28.5±1.3, 45°.06N×148°.32E, h112km, mb3.9/4, Error ellipse: s-maj=12.3km s-min=9.2km az=60.9*
*SKHL **10** 14:54:28.6±0.4, 45°.00N×148°.40E, h111km±8km, mb4.7/4, msha5.3/4*
*JMA **10** 14:54:29.2±0.5, 45°N±2°×14°8E±°, h104km, MV3.7/15, SE OFF ETOROFU*
*IDC **10** 14:54:31.6±3.2, 45°.19N×148°.01E, h124km±31km, mb3.2/8, mbtmp3.6/12, Error ellipse: s-maj=27.6km s-min=15.5km az=132.0*

ISC 10 14:54:29.4±0.7, 44°98N±0°05×148°33E±0°07, h109km±6km, n56, σ1816/68, mb3.5/11, 2C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.41**	**308**	*c i*PN	**Pn**	**14 54 45.8**	**+0.3**
KUR				*i* S	**Sn**	**14 54 57.4**	**-0.2**
KUR				pmax	pmax		
	comp=N,320nm,0.1s						
KUR				pmax	pmax		
	comp=Z,2μm,0.1s						
KUR				pmax	pmax		
	comp=E,27nm,0.1s						
KUR				smax	smax		
	comp=N,2μm,0.6s						
KUR				smax	smax		
	comp=E,878nm,0.4s						
KUR	**Kuril'sk**	**0.41**	**308**	*i* P	**Pn**	**14 54 45.8**	**+0.3**
KUR				AMB	AMB	14 54 46.0	
	comp=E,210nm,0.2s						
KUR				*i* S	**Sn**	**14 54 57.4**	**-0.2**
KUR				A	A	14 54 57.9	
	comp=E,2μm,0.5s						
KUR				A	A	14 54 57.9	
	comp=E,880nm,0.5s						
SHO	**Shikotan**	**1.55**	**225**	*e*PN	**Pn**	**14 54 56.0**	**-0.6**
SHO				*e*S	**Sn**	**14 55 15.5**	**-1.8**
SHO				pmax	pmax		
	comp=Z,91nm,0.3s						
SHO				pmax	pmax		
	comp=N,28nm,0.4s						
SHO				pmax	pmax		
	comp=E,55nm,0.2s						
SHO				smax	smax		
	comp=N,661nm,0.4s						
SHO				smax	smax		
	comp=E,250nm,0.4s						
SHO	**Shikotan**	**1.55**	**225**	*e*P	**Pn**	**14 54 56.4**	**-0.2**
SHO				AMB	AMB	14 54 59.0	
	comp=E,90nm,0.3s						
SHO				*e*S	**Sn**	**14 55 17.5**	**+0.2**
SHO				A	A	14 55 18.4	
	comp=E,660nm,0.4s						
SHO				A	A	14 55 18.4	
	comp=E,250nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.00**	**243**	⇓*i*PN	**Pn**	**14 55 03.0**	**+0.7**
YUK				*e*S	**Sn**	**14 55 30.0**	**+2.5**
YUK				pmax	pmax		
	comp=Z,197nm,0.2s						
YUK				pmax	pmax		
	comp=E,43nm,0.1s						
YUK				smax	smax		
	comp=N,569nm,0.4s						
YUK				smax	smax		
	comp=E,428nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.00**	**243**	*i* P	**Pn**	**14 55 02.4**	**+0.1**
YUK				AMB	AMB	14 55 05.7	
	comp=E,200nm,0.2s						
YUK				*e*S	**Sn**	**14 55 27.1**	**-0.4**
YUK				A	A	14 55 32.9	
	comp=E,570nm,0.4s						
YUK				A	A	14 55 32.9	
	comp=E,430nm,0.4s						
RUSJ	**Misakicho**	**2.37**	**249**	*e*PN	**Pn**	**14 55 07.4**	**+0.3**
NEM2	**Nemuro 2**	**2.46**	**230**	P	**Pn**	**14 55 07.9**	**-0.4**
NEM2				*e*S	**Sn**	**14 55 37.6**	**-0.5**
NMR	**Nemuro--Hokkai**	**2.47**	**230**	⇓*i*PN	**Pn**	**14 55 07.8**	**-0.5**
NMR				*e*S	**Sn**	**14 55 37.5**	**-0.7**
NMR	**Nemuro--Hokkai**	**2.47**	**230**	*i* P	**Pn**	**14 55 07.9**	**-0.4**
NMR				*e*S	**Sn**	**14 55 37.5**	**-0.7**
JRA	**Rausu**	**2.52**	**247**	P	**Pn**	**14 55 09.7**	**+0.7**
JNK	**Nakash**	**2.94**	**243**	P	**Pn**	**14 55 15.6**	**+1.0**
JNK				*e*S	**Sn**	**14 55 50.7**	**+1.3**
JAK	**Akkeshi**	**3.29**	**234**	*e*P	**Pn**	**14 55 18.9**	**-0.3**
JAK				*e*S	**Sn**	**14 55 57.4**	**-0.1**
JTKR	**Abashiri--Toko**	**3.32**	**254**	*e*P	**Pn**	**14 55 20.6**	**+1.0**
JAR	**Ashorobuto**	**3.69**	**244**	*e*P	**Pn**	**14 55 26.0**	**+1.4**
JAR				*e*S	**Sn**	**14 56 09.6**	**+2.4**
JOB	**Onbets**	**3.85**	**239**	*e*P	**Pn**	**14 55 27.6**	**+0.9**
JOB				*e*S	**Sn**	**14 56 11.2**	**+0.1**
JKK2	**Kamakawa 2**	**4.15**	**256**	*e*P	**Pn**	**14 55 31.8**	**+1.1**
JCH	**Churui**	**4.30**	**238**	*e*P	**Pn**	**14 55 33.0**	**+0.2**
JCH				*e*S	**Sn**	**14 56 21.1**	**-0.8**
YSS	**Yuzh-Sakhalins**	**4.36**	**299**	*e*PN	**Pn**	**14 55 33.5**	**+0.1**
YSS				*e*S	**Sn**	**14 56 21.7**	**-1.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS				smax	smax		
	comp=N,20nm,0.7s						
YSS				smax	smax		
	comp=E,40nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.36**	**299**	*e*P	**Pn**	**14 55 33.5**	**+0.1**
YSS				AMB	AMB	14 55 35.9	
	comp=E,10.0nm,0.5s						
YSS				*e*S	**Sn**	**14 56 21.7**	**-1.5**
YSS				A	A	14 56 25.5	
	comp=E,20nm,0.8s						
YSS				A	A	14 56 25.5	
	comp=E,40nm,0.8s						
JAB	**Ashibetsu**	**4.63**	**254**	*e*P	**Pn**	**14 55 39.2**	**+2.1**
ERM	**Erimo**	**4.79**	**234**	*c i*PN	**Pn**	**14 55 40.4**	**+1.1**
JNBK	**Urakawa-nobuka**	**4.87**	**238**	*e*P	**Pn**	**14 55 39.5**	**-0.8**
JNBK				*e*S	**Sn**	**14 56 33.4**	**-2.2**
JANG	**Nango**	**6.81**	**230**	*e*P	**Pn**	**14 56 04.9**	**-1.8**
JANG				*e*S	Sn	14 57 14.4	-8.4
JTH	**Tanohata**	**6.95**	**226**	*e*P	**Pn**	**14 56 06.6**	**-1.9**
JTH				*e*S	Sn	14 57 18.9	-7.1
PETK	**Petropavlovsk-**	**10.19**	**34**	P	**Pn**	**14 56 52.5**	**+0.1**
	comp=E,2.5nm,0.8s,baz=189,slow=11,SNR=2.8						
MJAR	**Matsushiro Arr**	**11.39**	**226**	P	**Pn**	**14 57 11.2**	**+2.5**
	comp=E,0.5nm,0.5s,baz=49,slow=13,SNR=1.7						
USRK	**Ussuriysk Ar.**	**11.68**	**272**	P	**Pn**	**14 57 12.6**	**+0.1**
	comp=E,2.5nm,0.6s,baz=63,slow=14,SNR=2.4						
KLR	**Kul'dur**	**12.07**	**297**	P	**Pn**	**14 57 18.1**	**+0.5**
	comp=E,0.6nm,0.5s,baz=93,slow=15,SNR=3.7						
KLR	**Kul'dur**	**12.07**	**297**	*i* PN	**Pn**	**14 57 17.6**	**0.0**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	**Kul'dur**	**12.07**	**297**	*e*P	**Pn**	**14 57 17.6**	**0.0**
ZEA	**Zeya**	**16.24**	**310**	*e*P	**Pn**	**14 58 10.8**	**-0.1**
KSRS	**Korea Array**	**17.07**	**251**	P	**P**	**14 58 19.8**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=57,slow=12,SNR=4.5						
KSRS	**Korea Array**	**17.07**	**251**	*e*P	**Pn**	**14 58 23.6**	**+2.4**
YAK	**Yakutsk**	**20.23**	**334**	*i* P	**P**	**14 58 55.3**	**-0.2**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	**Yakutsk**	**20.23**	**334**	*e*P	**P**	**14 58 55.3**	**-0.2**
BILL	**Bilibino**	**24.94**	**16**	⇓*e*P	**P**	**14 59 41.5**	**-0.6**
BILL				*e**PP	**pP**	**15 00 05.2**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL	**Bilibino**	**24.94**	**16**	*e*P	**P**	**14 59 41.5**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**29.52**	**143**	T	T	15 31 29.2	
	baz=333,slow=75,SNR=52						
H11N1	**WAKE ISLAND Hy**	**29.53**	**143**	T	T	15 31 28.2	
	baz=333,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**29.54**	**142**	T	T	15 31 30.9	
	baz=333,slow=75,SNR=54						
H11S1	**WAKE ISLAND Hy**	**30.52**	**144**	T	T	15 32 49.8	
	baz=334,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	**30.53**	**144**	T	T	15 32 48.9	
	baz=334,slow=76,SNR=56						
H11S2	**WAKE ISLAND Hy**	**30.54**	**144**	T	T	15 32 44.1	
	baz=334,slow=76,SNR=69						
NRIK	**Noril'sk**	**38.59**	**330**	*i* P	**P**	**15 01 39.0**	**-2.2**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ILAR	**Eielson Array**	**39.99**	**37**	P	**P**	**15 01 53.5**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=271,slow=9.5,SNR=8.5						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**44.77**	**297**	P	**P**	**15 02 30.6**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=69,slow=9.6,SNR=2.6						
	comp=Z,0.2nm,0.6s						
BELG	**Belogornoye**	**61.58**	**317**	*i* P	**P**	**15 04 36.2**	**+1.4**
BELG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
FINES	**FINESS Array B**	**64.16**	**333**	P	**P**	**15 04 49.6**	**-2.1**
	comp=Z,2.6nm,1.0s,baz=57,slow=5.1,SNR=4.5						
	comp=Z,2.6nm,1.0s						
FINES	**FINESS Array B**	**64.16**	**333**	*e*P	**P**	**15 04 51.6**	**-0.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WRA	**Warramunga Arr**	**65.86**	**194**	P	**P**	**15 05 03.7**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=8.7,slow=6.8,SNR=5.5						
	comp=Z,0.7nm,1.0s						
WRA	**Warramunga Arr**	**65.86**	**194**	*e*P	**P**	**15 05 02.6**	**-0.7**
NVAR	**Mina Array Bea**	**66.21**	**59**	P	**P**	**15 05 06.8**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=297,slow=6.0,SNR=3.9						
	comp=Z,0.3nm,0.5s						
PDAR	**Pinedale Array**	**68.47**	**51**	P	**P**	**15 05 21.2**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=327,slow=7.8,SNR=4.0						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**69.58**	**194**	P	**P**	**15 05 28.3**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=7.9,slow=6.4,SNR=5.1						
	comp=Z,0.2nm,0.7s						
TXAR	**Lajitas Array**	**81.27**	**57**	P	**P**	**15 06 34.9**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=297,slow=4.2,SNR=7.4						
	comp=Z,0.5nm,0.5s						

*DJA **10** 14:58:14.2±0.7, 19°N±6°×14°6E±1°, h140km±4km, M4.8/16, mB5.5/2, mb4.8/16, Mw(mB)5.0/2*
*BJI **10** 14:58:16.4±0.0, 18°.67N×146°.05E, h204km, mb4.5/45, mB4.7/25*
*IDC **10** 14:58:21.1±0.7, 18°.72N×145°.54E, h210km±6km, mb4.1/31, mbtmp4.7/34, Error ellipse: s-maj=12.1km s-min=6.5km az=90.0*
*NEIC **10** 14:58:21.4±1.0, 18°.75N±0°.08×145°.6E±0°.1, h205km±7km, mb4.8/104, Error ellipse: s-maj=14.7km s-min=10.8km az=77.0*

ISC 10 14:58:21.4±0.4, 18°72N±0°04×145°59E±0°07, h211km±3km, h212km:pP-P, n469, σ0988/487, mb4.7/103, 2C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.15**	**188**	P	**Pn**	**14 59 37.6**	**-0.4**
	56nm,0.3s,baz=9.5,slow=12,SNR=15						
GUMO				S	**S**	**15 00 36.3**	**-2.1**
	137nm,0.3s,baz=15,slow=20,SNR=4.3						
GUMO	**Guam**	**5.15**	**188**	Pn	**Pn**	**14 59 37.7**	**-0.3**
GUMO	**Guam**	**5.15**	**188**	P	**Pn**	**14 59 38.0**	**0.0**
JCJ	**Chichijima**	**8.91**	**340**	P	**Pn**	**15 00 25.8**	**-0.6**
	44nm,0.5s,baz=181,slow=8.8,SNR=2.1						
JCJ				S	**S**	**15 01 60.0**	**-6.7**
	143nm,0.6s,baz=204,slow=19,SNR=7.5						
JCJ	**Chichijima**	**8.91**	**340**	Pn	**Pn**	**15 00 23.7**	**-2.7**
JMZ	**Minamidaito 2**	**15.06**	**301**	Pn	**Pn**	**15 01 40.6**	**-3.3**
JHJ2	**Mitsune**	**15.24**	**341**	P	**P**	**15 01 47.7**	**+1.5**
JOW	**Kunigami**	**17.88**	**300**	Pn	**Pn**	**15 02 16.9**	**-0.6**
JOW	**Kunigami**	**17.88**	**300**	P	**Pn**	**15 02 18.1**	**+0.6**
JYT	**Yasato**	**18.08**	**346**		**P**	**15 02 18.4**	**+1.1**
INU	**Inuyama**	**18.23**	**337**	P	**P**	**15 02 18.9**	**0.0**
INU	**Inuyama**	**18.23**	**337**	P	**P**	**15 02 20.0**	**+1.1**
JMN	**Monobe**	**18.25**	**327**		**P**	**15 02 19.4**	**+0.2**
JGF	**Kuroka**	**18.33**	**338**		**P**	**15 02 21.2**	**+1.1**
JSU	**Suzuyama**	**18.68**	**316**	P	**P**	**15 02 23.4**	**-0.5**
MJAR	**Matsushiro Arr**	**18.91**	**341**	P	**P**	**15 02 25.9**	**-0.4**
	14nm,0.6s,baz=171,slow=9.5,SNR=25						
MJAR				S	**S**	**15 05 48.8**	**-1.0**
	1.3nm,0.8s,baz=179,slow=22,SNR=1.8						
MAJO	**Matsushiro**	**18.91**	**341**	P	**P**	**15 02 26.0**	**-0.4**
MAJO	**Matsushiro**	**18.91**	**341**	P	**P**	**15 02 26.8**	**+0.5**
JMM	**Marumori**	**19.54**	**349**	P	**P**	**15 02 34.7**	**+1.7**
JHS	**Saijyo**	**19.64**	**328**	P	**P**	**15 02 34.4**	**+0.3**
H11S3	**WAKE ISLAND Hy**	**19.99**	**87**	T	T	15 23 41.9	
	baz=274,slow=74,SNR=8.7						
H11S1	**WAKE ISLAND Hy**	**20.00**	**87**	T	T	15 23 42.7	
	baz=274,slow=74,SNR=13						
H11S2	**WAKE ISLAND Hy**	**20.01**	**87**	T	T	15 23 43.2	
	baz=274,slow=74,SNR=11						
H11N1	**WAKE ISLAND Hy**	**20.14**	**84**	T	T	15 23 56.9	
	baz=267,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**20.14**	**84**	T	T	15 23 57.4	
	baz=267,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**20.15**	**84**	T	T	15 23 57.7	
	baz=267,slow=74,SNR=12						
JSD	**Sado**	**20.29**	**343**	P	**P**	**15 02 41.3**	**+0.3**
GENI	**Genyem**	**21.84**	**195**	P	**P**	**15 02 57.7**	**+0.4**
	32nm,1.0s						
BAKI	**Biak**	**21.87**	**206**	P	**P**	**15 02 57.5**	**-0.1**
	31nm,1.6s						
YHNB	**Yeheng**	**23.25**	**289**	P	**P**	**15 03 11.1**	**+0.8**
YHNB	**Yeheng**	**23.25**	**289**	P	**P**	**15 03 12.3**	**+2.0**
ERM	**Erimo**	**23.32**	**355**	P	**P**	**15 03 12.3**	**+1.8**
SSLB	**Suanglung**	**23.50**	**287**	P	**P**	**15 03 13.1**	**+0.6**
SSLB	**Suanglung**	**23.50**	**287**	P	**P**	**15 03 12.9**	**+0.4**
SIJI	**Sorong**	**24.02**	**217**	P	**P**	**15 03 16.3**	**-1.0**
	7.3nm,0.8s,baz=58,slow=13,SNR=4.8						
	7.3nm,0.8s						
KSRS	**Korea Array**	**24.24**	**324**	P	**P**	**15 03 18.7**	**-0.3**
	4.2nm,0.6s,baz=144,slow=8.8,SNR=33						
KSRS				pP	**pP**	**15 03 59.6**	**+1.6**
	5.1nm,1.0s,baz=147,slow=10,SNR=3.4						
	4.2nm,0.6s						
KSAR	**Wonju Array Be**	**24.26**	**324**	P	**P**	**15 03 18.6**	**-0.6**
JEW	**Eniwo**	**24.30**	**353**	P	**P**	**15 03 19.4**	**-0.1**
KS19	**Wonju Array Si**	**24.31**	**324**	P	**P**	**15 03 19.1**	**-0.6**
KS19				IAmb	IAmb	15 03 20.8	
	comp=Z,34nm,1.9s						
FAKI	**Fak Fak**	**25.20**	**213**	P	**P**	**15 03 28.6**	**+0.7**
NJ2	**Nanjing**	**27.48**	**304**	*e*P	**P**	**15 03 49.7**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**27.85**	**339**	P	**P**	**15 03 50.6**	**-0.7**
	comp=Z,4.1nm,0.7s,baz=154,slow=11,SNR=7.3						
	comp=Z,4.1nm,0.7s						
PMG	**Port Moresby**	**27.99**	**177**	P	**P**	**15 03 51.4**	**-1.4**
	comp=Z,7.5nm,0.7s,baz=341,slow=12,SNR=1.9						
	comp=Z,7.5nm,0.7s						
YSS	**Yuzh-Sakhalins**	**28.26**	**356**	P	**P**	**15 03 55.0**	**+0.2**
YSS	**Yuzh-Sakhalins**	**28.26**	**356**	P	**P**	**15 03 55.3**	**+0.5**
KLR	**Kul'dur**	**32.42**	**343**	P	**P**	**15 04 30.9**	**-0.5**
	comp=Z,17nm,0.5s,baz=157,slow=9.8,SNR=56						
	comp=Z,17nm,0.5s						
TTSI	**Tana Toraja**	**33.34**	**232**	P	**P**	**15 04 41.7**	**+1.9**
	comp=Z,995nmcomp=Z,18nm,0.9s						
KDU	**Kakadu**	**33.78**	**203**	P	**P**	**15 04 44.3**	**+0.8**
SPSI	**Sidrap Palu**	**33.98**	**231**	P	**P**	**15 04 46.7**	**+1.4**
	comp=Z,16nm,1.0s						
MTN	**Manton Dam**	**34.45**	**206**	P	**P**	**15 04 49.6**	**+0.4**
MTN				IAmb	IAmb	15 04 51.0	
	comp=Z,22nm,1.1s						
MTN	**Manton Dam**	**34.45**	**206**	P	**P**	**15 04 49.4**	**+0.1**
XLT	**XiLinHaoTe**	**35.25**	**322**	⇑*i*P	**P**	**15 04 58.3**	**+2.3**
XLT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XLT				pmax	pmax		
	comp=Z,140nm,5.4s						
PETK	**Petropavlovsk-**	**35.59**	**13**	P	**P**	**15 04 59.0**	**+0.3**
	comp=Z,6.5nm,0.6s,baz=199,slow=9.7,SNR=20						
	comp=Z,6.5nm,0.6s						
HHC	**Hu-ho-hao-te**	**36.52**	**314**	*e*P	**P**	**15 05 07.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.2s						
MTSU	**Mount Surprise**	**36.64**	**182**	P	**P**	**15 05 07.8**	**-0.1**
GYA	**Guiyang**	**36.65**	**289**	⇑P	**P**	**15 05 09.6**	**+1.5**
GYA				pmax	pmax		
	comp=Z,11nm,0.8s						
KNRA	**Kununurra**	**37.98**	**207**	P	**P**	**15 05 19.8**	**+0.6**
KNRA	**Kununurra**	**37.98**	**207**	P	**P**	**15 05 20.0**	**+0.8**
PLAI	**Plampang**	**38.76**	**227**	P	**P**	**15 05 27.0**	**+1.3**
TWSI	**Taliwang, Sumb**	**39.33**	**229**	P	**P**	**15 05 31.0**	**+0.6**
	comp=Z,20nm,0.8s						
QIS	**Mount Isa**	**39.47**	**189**	P	**P**	**15 05 31.3**	**-0.2**
WB0	**Warramunga Arr**	**39.79**	**197**	P	**P**	**15 05 33.7**	**-0.4**
WR0	**Warramunga Arr**	**39.94**	**196**	P	**P**	**15 05 35.4**	**0.0**
WRAB	**Tennant Creek**	**39.96**	**197**	P	**P**	**15 05 35.7**	**+0.1**
WRAB	**Tennant Creek**	**39.96**	**197**	P	**P**	**15 05 35.8**	**+0.2**
WB2	**Warramunga Arr**	**39.97**	**197**	P	**P**	**15 05 35.3**	**-0.3**
WRA	**Warramunga Arr**	**39.98**	**197**	P	**P**	**15 05 35.6**	**-0.1**
	comp=Z,3.2nm,0.5s,baz=17,slow=8.6,SNR=88						
WRA				PcP	**PcP**	**15 07 36.1**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=18,slow=3.6,SNR=13						
WRA				ScP	**ScP**	**15 11 03.2**	**-2.3**
	comp=Z,0.6nm,0.8s,baz=0.4,slow=4.1,SNR=3.7						
	comp=Z,3.2nm,0.5s						
WRA	**Warramunga Arr**	**39.98**	**197**	P	**P**	**15 05 35.5**	**-0.1**
LZH	**Lanzhou**	**40.55**	**304**	*e*P	**P**	**15 05 41.4**	**+0.9**
LZH				pP	pP	15 06 22.3	-1.7
LZH				sP	sP	15 06 45.7	-1.9
LZH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SHEM	**Shemya Is, Ala**	**40.56**	**27**	P	**P**	**15 05 40.8**	**+0.8**
	comp=Z,19nm,0.5s,baz=239,slow=12,SNR=4.8						
	comp=Z,19nm,0.5s						
MA2	**Magadan**	**40.98**	**4**	P	**P**	**15 05 44.1**	**+0.7**
	comp=Z,13nm,0.8s,baz=185,slow=6.6,SNR=10						
	comp=Z,13nm,0.8s						
MA2	**Magadan**	**40.98**	**4**	P	**P**	**15 05 43.5**	**+0.1**
MA2	**Magadan**	**40.98**	**4**	P	**P**	**15 05 44.4**	**+1.0**
PZH	**PanZhiHua**	**41.06**	**289**	P	**P**	**15 05 47.2**	**+2.5**
PZH				pmax	pmax		
	comp=Z,30nm,0.8s						
PZH				pmax	pmax		
	comp=Z,70nm,3.6s						
FITZ	**Fitzroy Crossi**	**41.51**	**209**	P	**P**	**15 05 48.2**	**+0.1**
	comp=Z,7.9nm,0.6s,baz=32,slow=8.2,SNR=87						
	comp=Z,7.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**41.51**	**209**	P	**P**	**15 05 48.2**	**+0.1**
RK1H	**Rockhampton Ha**	**42.12**	**173**	P	**P**	**15 05 52.0**	**-1.0**
ULN	**Ulaanbaatar**	**42.69**	**322**	P	**P**	**15 05 57.4**	**-0.3**
SONM	**Songino Array**	**43.07**	**321**	P	**P**	**15 06 00.5**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=136,slow=9.3,SNR=30						
	comp=Z,4.0nm,0.5s						
AS31	**Alice Springs**	**43.64**	**196**	P	**P**	**15 06 05.4**	**+0.1**
ASAR	**Alice Springs**	**43.64**	**196**	P	**P**	**15 06 05.2**	**-0.1**
	comp=Z,1.9nm,

TIXI Tiksi 53.84 354 P P 15 07 21.1 -1.0
WMQ Urumqi 54.22 311 eP P 15 07 25.6 +0.1
WMQ pmax pmax
comp=Z,29nm,0.9s
SDPT Sand Point 54.51 35 P P 15 07 27.2 0.0
SDPT Sand Point 54.51 35 P P 15 07 27.6 +0.4
baz=250,SNR=15
CHNA Chernabura Isl 54.82 35 P P 15 07 29.8 +0.4
baz=251
S14K Fog Glacier 55.32 34 P P 15 07 33.6 +0.5
baz=250
MORW Morawa 55.42 212 P P 15 07 34.4 +0.3
MORW IAmb IAmb 15 07 35.8
comp=Z,23nm,0.8s
MORW Morawa 55.42 212 P P 15 07 34.6 +0.5
ANM Nome 56.22 23 P P 15 07 40.5 +1.2
baz=239
BLDU Ballidu 56.37 210 P P 15 07 41.0 +0.2
KLBR Kellerberrin 56.71 208 P P 15 07 43.6 +0.4
R16K Pilot Point 56.76 33 P P 15 07 44.2 +1.1
baz=252
P16K Nushagak River 57.03 31 P P 15 07 46.1 +1.1
baz=250
N16K Nishlik Lake 57.17 29 P P 15 07 47.1 +1.0
baz=249,SNR=19
O16K Kokwok River B 57.18 30 P P 15 07 47.0 +1.0
baz=250,SNR=15
R17K Ugashik Creek 57.39 33 P P 15 07 47.3 -0.3
baz=253,SNR=6.9
Q16K King Salmon 57.58 32 P P 15 07 48.4 -0.4
baz=252
O17K Koliganek Bris 57.72 30 P P 15 07 50.8 +1.0
baz=251,SNR=29
MUN Mundaring 57.74 210 P P 15 07 50.9 +0.5
P17K Kvichak River 57.84 31 P P 15 07 50.8 +0.1
baz=252
ZAA0 Zalesovo Array 57.94 323 P P 15 07 50.1 -1.4
ZAA0 IAmb IAmb 15 07 52.8
comp=Z,11nm,0.6s
ZALV Zalesovo Beam 57.94 323 P P 15 07 50.5 -1.0
comp=Z,11nm,0.6s,baz=104,slow=7.6,SNR=39
ZALV pP pP 15 08 37.5 -0.6
comp=Z,1.8nm,0.6s,baz=121,slow=7.1,SNR=2.0
comp=Z,11nm,0.6s
ZALV Zalesovo Beam 57.94 323 P P 15 07 50.7 -0.8
NWAO Narrogin (SRO) 58.07 208 P P 15 07 53.8 +1.2
SII Sitkinak Islan 58.25 34 P P 15 07 54.1 +0.5
SII Sitkinak Islan 58.25 34 P P 15 07 54.7 +1.0
baz=255,SNR=14
SII Sitkinak Islan 58.25 34 P P 15 07 54.9 +1.3
MK31 Makanchi Array 58.38 314 P P 15 07 54.6 -0.1
MKAR Makanchi Array 58.38 314 P P 15 07 54.7 -0.1
comp=Z,7.3nm,0.5s,baz=88,slow=8.3,SNR=92
comp=Z,7.3nm,0.5s
MKAR Makanchi Array 58.38 314 P P 15 07 54.3 -0.5
N18K Kilae Creek 58.58 29 P P 15 07 56.4 +0.6
N18K IAmb IAmb 15 07 58.1
comp=Z,23nm,0.8s
N18K Kilae Creek 58.58 29 P P 15 07 57.0 +1.2
baz=251,SNR=15
MAKZ Makanchi 58.59 314 P P 15 07 55.8 -0.4
MAKZ IAmb IAmb 15 07 57.4
comp=Z,12nm,0.6s
MAKZ Makanchi 58.59 314 P P 15 07 55.5 -0.7
MAKZ pP pP 15 08 42.4 -0.5
O18K Koktuh Hills 58.65 31 P P 15 07 57.2 +0.8
baz=252
SVW2 Sparrevohn 58.86 29 P P 15 07 58.4 +0.6
SVW2 IAmb IAmb 15 07 59.5
comp=Z,15nm,0.6s
OHAK Old Harbor 58.89 34 P P 15 07 58.3 +0.3
OHAK Old Harbor 58.89 34 P P 15 07 58.7 +0.7
baz=256,SNR=12
Q19K Cape Douglas, 59.15 32 P P 15 07 59.1 -0.7
baz=254,SNR=7.1
TTA Tatalina 59.28 27 P P 15 08 01.2 +0.6
TTA IAmb IAmb 15 08 02.4
comp=Z,38nm,1.6s
TTA Tatalina 59.28 27 P P 15 08 01.2 +0.6
baz=250,SNR=14
N19K Bonanza Creek 59.28 30 P P 15 08 01.6 +0.9
N19K Bonanza Creek 59.28 30 P P 15 08 01.8 +1.1
baz=253,SNR=27
KDAK Kodiak Island 59.40 33 P P 15 08 01.8 +0.4
KDAK IAmb IAmb 15 08 02.9
comp=Z,21nm,0.9s
KDAK Kodiak Island 59.40 33 P P 15 08 02.0 +0.6
baz=256
KDAK Kodiak Island 59.40 33 P P 15 08 00.9 -0.5
KDAK pP PcP 15 08 47.1 +0.2
L19K White Mountain 59.53 28 P P 15 08 03.5 +1.1
baz=251,SNR=8.7
P19K Oil Pt 59.55 31 P P 15 08 02.6 +0.1
P19K Oil Pt 59.55 31 P P 15 08 02.5 0.0
baz=254,SNR=9.2
GCSA Galena City Sc 59.57 25 P P 15 08 02.9 +0.4
baz=248
M19K Big River Lodg 59.65 28 P P 15 08 04.1 +0.9
baz=252
Q20K Shuyak Island 59.70 32 P P 15 08 03.6 +0.1
baz=256,SNR=15
L20K Farewell, AK 60.06 28 P P 15 08 06.9 +1.0
baz=252,SNR=8.0
M20K Styx River 60.22 29 P P 15 08 07.9 +0.8
M20K IAmb IAmb 15 08 09.3
comp=Z,13nm,0.8s
M20K Styx River 60.22 29 P P 15 08 08.2 +1.1
baz=253,SNR=14
K20K Telida 60.25 27 P P 15 08 08.2 +0.9
K20K IAmb IAmb 15 08 09.6
comp=Z,29nm,1.1s
K20K Telida 60.25 27 P P 15 08 08.4 +1.2
baz=252,SNR=18
HOM Homer 60.33 31 P P 15 08 07.9 +0.2
baz=256
J20K Nowinta River 60.48 26 P P 15 08 08.9 +0.1
J20K Nowinta River 60.48 26 P P 15 08 10.2 +1.5
baz=251,SNR=25
CNPM China Poot 60.50 32 P P 15 08 08.4 -0.6
BRLK Bradley Lake 60.73 31 P P 15 08 10.0 -0.5
BRSE Bradley Lake S 60.79 31 P P 15 08 10.8 -0.2
baz=257,SNR=9.3
PPLA Purkeypile 60.93 28 P P 15 08 12.5 +0.5
PPLA IAmb IAmb 15 08 14.7
comp=Z,45nm,1.6s
PPLA Purkeypile 60.93 28 P P 15 08 12.7 +0.8
baz=254,SNR=6.7
SKT Skwentna 60.97 29 P P 15 08 12.1 -0.1
baz=255
CAST Castle Rocks 61.12 27 P P 15 08 13.9 +0.8
baz=253,SNR=59
CHUM Lake Minchumin 61.16 27 P P 15 08 14.4 +1.1
baz=253,SNR=13
KURK Kurchatov 61.19 318 P P 15 08 13.2 -0.5
KURK IAmb IAmb 15 08 15.0
comp=Z,11nm,0.8s
IMAR Indian Mountai 61.24 24 P P 15 08 14.0 +0.2
O22K Cooper Landing 61.46 31 P P 15 08 15.2 0.0
O22K Cooper Landing 61.46 31 P P 15 08 15.3 0.0
baz=257,SNR=9.3
H21K Melozitna Rive 61.50 25 P P 15 08 15.7 +0.1
H21K IAmb IAmb 15 08 17.6
comp=Z,30nm,1.2s
H21K Melozitna Rive 61.50 25 P P 15 08 16.6 +1.0
baz=252,SNR=19
SEW Seward 61.51 31 P P 15 08 15.3 -0.3
SEW Seward 61.51 31 P P 15 08 15.7 +0.1
baz=258,SNR=9.8
G21K Allakaket 61.51 23 P P 15 08 16.4 +0.8
baz=250,SNR=16
NRIK Noril'sk 61.56 340 P P 15 08 15.5 -0.4
comp=Z,11nm,0.6s,baz=114,slow=8.2,SNR=13
comp=Z,11nm,0.6s
NRIK Noril'sk 61.56 340 P P 15 08 14.7 -1.2
NRIK IAmb IAmb 15 08 17.2
comp=Z,29nm,1.4s
M22K Willow 61.56 29 P P 15 08 15.7 -0.3
M22K Willow 61.56 29 P P 15 08 15.7 -0.3
baz=256,SNR=13
RC01 Rabbit Creek A 61.59 30 P P 15 08 16.1 -0.1
baz=257,SNR=13
KTH Kantishna Hill 61.66 27 P P 15 08 16.8 0.0
I21K Tanana 61.68 25 P P 15 08 17.5 +0.7
I21K IAmb IAmb 15 08 18.8
comp=Z,26nm,1.1s
I21K Tanana 61.68 25 P P 15 08 17.9 +1.2
baz=253,SNR=24
F21K Alatna River 61.76 23 P P 15 08 17.9 +0.6
baz=250,SNR=11
BPAW Bear Paw Mtn. 61.78 26 P P 15 08 18.0 +0.5
BPAW Bear Paw Mtn. 61.78 26 P P 15 08 18.0 +0.5
baz=254,SNR=51
TRF Thorofare Moun 61.91 27 P P 15 08 18.5 0.0
baz=255,SNR=22
PMR Palmer 61.98 29 P P 15 08 18.5 -0.3
baz=257,SNR=6.0
H22K Ishtalitna Cre 62.14 24 P P 15 08 20.8 +1.0
baz=253,SNR=14
MLY Manley 62.14 25 P P 15 08 20.6 +0.7
baz=254,SNR=56
PWL Port Wells 62.20 30 P P 15 08 20.6 +0.2
baz=258,SNR=8.1
KNK Knik Glacier 62.26 30 P P 15 08 21.0 +0.3
baz=258,SNR=11
F22K John River 62.33 23 P P 15 08 22.3 +1.2
baz=251,SNR=30
SML Sawmill 62.40 29 P P 15 08 21.9 +0.2
baz=258,SNR=29
P23K Montague Islan 62.49 31 P P 15 08 23.0 +0.8
baz=260
WAT1 Susitna Watana 62.53 28 P P 15 08 22.3 -0.2
baz=257
MCK McKinley 62.56 27 P P 15 08 22.4 -0.3
baz=256
E22K Anaktuvuk Pass 62.67 22 P P 15 08 24.4 +1.0
baz=251
M23K Glacier View 62.68 29 P P 15 08 23.6 +0.1
baz=258,SNR=10
NEA2 Nenana 62.72 26 P P 15 08 23.5 -0.2
baz=256,SNR=15
I23K Minto, Yukon-K 62.74 26 P P 15 08 24.3 +0.5
baz=255,SNR=37
KSH Kashi 62.78 305 P P 15 08 27.9 +3.2
KSH pmax pmax
comp=Z,7.0nm,0.9s
GLI Glacier Island 62.80 30 P P 15 08 24.4 +0.1
baz=260
WAT6 Susitna Watana 62.84 29 P P 15 08 24.8 +0.1
baz=258,SNR=20
H23K Yukon River 62.84 25 P P 15 08 25.4 +0.9
baz=255,SNR=29
SCM Sheep Creek Mo 62.88 29 P P 15 08 25.5 +0.6
baz=259,SNR=19
G23K Bananza Creek 62.90 24 P P 15 08 25.9 +1.0
baz=254,SNR=12
COLD Coldfoot 62.98 23 P P 15 08 26.4 +1.1
baz=253,SNR=15
DHY Denali Highway 63.10 28 P P 15 08 26.2 -0.2
baz=258,SNR=13
MDM Murphy Dome 63.16 26 P P 15 08 26.4 -0.2
TCOL CIGO, UAF Yank 63.29 26 P P 15 08 27.4 0.0
TCOL IAmb IAmb 15 08 30.2
comp=Z,17nm,0.8s
TCOL CIGO, UAF Yank 63.29 26 P P 15 08 27.2 -0.1
baz=257
COLA College 63.29 26 P P 15 08 27.1 -0.3
baz=257
COLA College 63.29 26 P P 15 08 27.1 -0.3
D23K Nanushuk River 63.33 21 P P 15 08 29.0 +1.4
baz=252,SNR=9.6
HYBB Hyderabad (bro 63.40 281 eP P 15 08 28.9 -0.1
HYBB esP sP 15 09 38.7 0.0
EYAK Cordova Ski Ar 63.40 31 P P 15 08 29.0 +0.8
baz=261
M24K Tolsona, Glenn 63.46 29 P P 15 08 29.5 +0.8
baz=260
KLU Klutina 63.47 30 P P 15 08 29.6 +0.9
baz=260,SNR=14
H24K Noodor Dome 63.51 25 P P 15 08 29.4 +0.5
H24K Noodor Dome 63.51 25 P P 15 08 29.6 +0.7
baz=256,SNR=20
POKR Poker Plat Res 63.52 26 P P 15 08 28.3 -0.7
baz=257
HDA Harding Lake 63.57 27 P P 15 08 28.3 -1.0
HDA IAmb IAmb 15 08 29.3
comp=Z,14nm,0.8s
HDA Harding Lake 63.57 27 P P 15 08 28.5 -0.8
baz=258,SNR=13
TOLK Toolik Lake Re 63.61 22 P P 15 08 30.6 +1.1
baz=253,SNR=21
C23K Itkillik River 63.62 20 P P 15 08 30.6 +1.1
baz=252,SNR=17
IL31 63.67 26 P P 15 08 28.8 -1.1
IL31 IAmb IAmb 15 08 29.9
comp=Z,22nm,1.0s
ILAR Eielson Array 63.67 26 P P 15 08 28.9 -1.0
comp=Z,15nm,0.8s,baz=247,slow=6.3,SNR=169
comp=Z,15nm,0.8s
E24K Your Creek 63.84 22 P P 15 08 32.1 +1.0
baz=255,SNR=20
G24K Hadweenzic Riv 63.87 24 P P 15 08 32.1 +0.9
baz=256,SNR=12
F24K Squaw Lake 63.92 23 P P 15 08 33.0 +1.5
baz=255,SNR=13
PAX Paxson 63.94 28 P P 15 08 32.1 +0.3
baz=260,SNR=33
K24K Donnelly Dome 63.95 27 P P 15 08 31.8 0.0
baz=259
KAIM Kayak Island 63.97 32 P P 15 08 32.5 +0.6
baz=262
HARP HAARP 63.98 29 P P 15 08 32.7 +0.7
baz=260,SNR=7.7
BMRM Bremner River 64.02 31 P P 15 08 32.9 +0.6
baz=262,SNR=9.6
D24K Happy Valley 64.02 21 P P 15 08 33.5 +1.4
baz=254
N25K Chitina, Valde 64.12 30 P P 15 08 33.8 +0.8
baz=261,SNR=8.7
C24K Franklin Bluff 64.22 21 P P 15 08 34.4 +1.0
baz=254
J25K Salcha River, 64.28 27 P P 15 08 32.9 -1.0
baz=259,SNR=21
QRZ Quartz Range 64.31 158 P P 15 08 34.8 +0.5
RIDG Independent Ri 64.35 28 P P 15 08 34.5 +0.1
baz=260,SNR=26
G25K Bearman Lake 64.42 24 P P 15 08 35.8 +1.0
baz=258,SNR=8.3
H25K Birch Creek 64.42 25 P P 15 08 35.7 +1.0
baz=259
BKZ Black Stump Fm 64.43 154 P P 15 08 34.3 -0.9
CRQE Cirque 64.72 31 P P 15 08 37.4 +0.5
baz=263,SNR=8.6
SCRK Sand Creek 64.76 27 P P 15 08 37.2 0.0
baz=261,SNR=25
F25K Christian Rive 64.77 23 P P 15 08 38.4 +1.3
baz=258,SNR=24
MCARA McCarthy VSAT 64.83 30 P P 15 08 38.3 +0.7
baz=263
L26K Log Cabin Wild 64.90 28 P P 15 08 38.4 +0.5
baz=262,SNR=5.7
D25K Kavik River 64.91 21 P P 15 08 38.9 +1.0
baz=256,SNR=24
E25K Arctic Village 64.92 23 P P 15 08 39.3 +1.3
baz=257,SNR=15
M26K Nabesna, AK 64.98 29 P P 15 08 38.7 +0.2
baz=262,SNR=5.6
J26L Joseph Creek 65.03 27 P P 15 08 39.0 +0.2
baz=261,SNR=45
MESA MESA 65.22 32 P P 15 08 41.4 +1.1
baz=264
I26K Coal Creek Min 65.33 26 P P 15 08 39.8 -0.8
baz=261
G26K Porcupine Rive 65.35 24 P P 15 08 42.0 +1.2
baz=260,SNR=19
F26K Sheenjek River 65.35 23 P P 15 08 42.2 +1.4
baz=259,SNR=29
NIL Nilore 65.44 299 P P 15 08 42.6 +0.6
NIL IAmb IAmb 15 09 36.3
comp=Z,27nm,1.1s
M27K Edge Creek, AK 65.49 29 P P 15 08 42.6 +0.7
baz=264,SNR=8.0
C26K Camden Bay 65.54 21 P P 15 08 43.6 +1.7
baz=257,SNR=6.2
L27K Beaver Creek, 65.59 29 P P 15 08 43.1 +0.7
baz=263,SNR=18
CTG Chitna Glacier 65.60 31 P P 15 08 43.5 +0.9
baz=265,SNR=8.6
K27K Chicken 65.60 27 P P 15 08 43.0 +0.6
baz=263
BFZ Birch Farm 65.61 155 P P 15 08 42.6 -0.1
BCAR Beaver Creek A 65.61 29 P P 15 08 42.8 +0.2
TABL Table Mountain 65.65 31 P P 15 08 43.5 +0.5
C27K Jago River 65.89 21 P P 15 08 45.3 +1.1
baz=258,SNR=7.7
I27K Kandik River 66.01 26 P P 15 08 45.1 +0.1
baz=262
PINM Pinnacle 66.06 32 P P 15 08 46.0 +0.4
baz=266
KHZ Kahutara 66.07 158 P P 15 08 44.1 -1.5
YUK3 Moose Creek 66.09 30 P P 15 08 46.5 +0.6
baz=265
H27K Steamboat Moun 66.13 25 P P 15 08 46.6 +0.8
baz=262
O28M Mount Upton 66.14 31 P P 15 08 47.2 +0.9
baz=266,SNR=14
G27K Doyon Strip 66.16 24 P P 15 08 46.5 +0.6
baz=262,SNR=8.6
E27K Coleen River 66.39 23 P P 15 08 48.0 +0.6
baz=261,SNR=7.6
BRVK Borovoye 66.46 320 P P 15 08 47.6 -0.4
BRVK IAmb IAmb 15 08 49.5
comp=Z,24nm,0.9s
BRVK Borovoye 66.46 320 P P 15 08 47.6 -0.4
BRVK pP pwP 15 09 39.9 -0.9
PNL Peninsula 66.47 32 P P 15 08 48.8 +0.8
baz=267
KK31 Karatay Array 66.68 310 P P 15 08 49.5 -0.2
KKAR Karatay Array 66.68 310 P P 15 08 49.8 +0.1
DAWY Dawson 66.78 28 P P 15 08 50.7 +0.7
baz=265,SNR=14
O29M Mount Kennedy 66.91 32 P P 15 08 52.2 +1.2
baz=267,SNR=8.9
YUK4 Talbot Arm 66.93 31 P P 15 08 52.8 +1.6
baz=267,SNR=20
YUK6 Outpost Mounta 67.05 31 P P 15 08 53.3 +1.4
baz=267,SNR=11
M29M Somme Creek 67.08 29 P P 15 08 53.1 +1.1
baz=267
P29M Windy Craggy 67.31 32 P P 15 08 54.7 +1.4
baz=268
I29M Ogilvie Camp, 67.35 26 P P 15 08 53.5 0.0
I29M IAmb IAmb 15 08 54.4
comp=Z,9.5nm,0.7s
I29M Ogilvie Camp, 67.35 26 P P 15 08 54.2 +0.7
baz=266,SNR=10
HYT Haines Junctio 67.46 31 P P 15 08 55.0 +0.6
HYT Haines Junctio 67.46 31 P P 15 08 55.7 +1.3
baz=268,SNR=20
N30M Aishikik Lake 67.68 30 P P 15 08 56.8 +1.1
baz=268,SNR=15
P30M Million Dollar 67.71 32 P P 15 08 57.4 +1.5
baz=269,SNR=12
PLBC Pleasant Camp 68.00 33 P P 15 08 58.7 +1.0
baz=270,SNR=18
EPYK Eagle Plains 68.08 25 P P 15 08 58.3 +0.3
EPYK IAmb IAmb 15 08 59.5
comp=Z,17nm,0.7s
EPYK Eagle Plains 68.08 25 P P 15 08 58.4 +0.4
baz=266,SNR=13
O30N Mendenhall 68.15 31 P P 15 08 59.3 +0.6
baz=269,SNR=7.4
N31M Braeburn, Yuko 68.31 30 P P 15 08 59.3 -0.3
N31M IAmb IAmb 15 09 01.8
comp=Z,24nm,0.8s
N31M Braeburn, Yuko 68.31 30 P P 15 09 00.7 +1.1
baz=269,SNR=8.7
SKAG Skagway 68.53 33 P P 15 09 02.1 +1.3
baz=271,SNR=5.1
SIT Sitka 68.58 35 P P 15 09 01.9 +0.7
baz=272
WHY Whitehorse 68.75 31 P P 15 09 02.3 -0.1
WHY IAmb IAmb 15 09 04.5
comp=Z,21nm,1.2s
WHY Whitehorse 68.75 31 P P 15 09 03.4 +1.0
baz=270,SNR=7.0
M31M Drury Creek, Y 68.97 30 P P 15 09 04.3 +0.6
baz=270,SNR=8.8
JIS Juneau Island 69.05 34 P P 15 09 05.0 +0.9
P32M Atlin 69.35 32 P P 15 09 07.0 +1.0
baz=272,SNR=6.1
INK Inuvik 69.39 23 P P 15 09 05.7 -0.3
INK IAmb IAmb 15 09 07.0
comp=Z,20nm,0.8s
INK Inuvik 69.39 23 P P 15 09 06.1 +0.1
baz=269,SNR=8.0
N32M Quiet Lake 69.62 31 P P 15 09 08.5 +0.9
baz=272
P33M Teslin, Yukon 69.78 32 P P 15 09 09.5 +0.8
baz=272,SNR=7.0
R33M Jennings River 70.76 33 P P 15 09 15.6 +0.9
baz=274,SNR=8.1
DLBC Dease Lake 71.33 34 P P 15 09 18.6 +0.5
DLBC Dease Lake 71.33 34 P P 15 09 19.3 +1.3
baz=275,SNR=18
T35M Bob Quinn 71.35 35 P P 15 09 19.3 +1.1
baz=276
A36M Sachs Harbour 72.09 19 P P 15 09 22.3 0.0
baz=275
C36M Paulatuk 72.77 22 P P 15 09 25.7 -0.5
C36M Paulatuk 72.77 22 P P 15 09 26.1 -0.1
baz=277,SNR=10
ARU Arti 72.99 325 P P 15 09 27.3 -0.6
ARU IAmb IAmb 15 09 28.8
comp=Z,14nm,0.9s
ABKAR Akbulak array 73.26 317 P P 15 09 28.6 -0.9
ABKAR pP pP 15 10 17.0 -1.3
GEYT Alibeck 76.81 306 P P 15 09 50.5 +0.4
comp=Z,3.1nm,0.9s,baz=109,slow=7.0,SNR=1.9
comp=Z,3.1nm,0.9s
GEYT Alibeck 76.81 306 P P 15 09 50.0 -0.1
NLWA Neilton Lookou 76.82 44 P P 15 09 49.0 -1.0
NLWA IAmb IAmb 15 09 52.5
comp=Z,42nm,1.4s
B04A Port Angeles 76.91 44 P P 15 09 49.6 -0.7
B04A IAmb IAmb 15 09 52.8
comp=Z,20nm,1.0s
E03A Lebam 77.22 45 P P 15 09 53.0 +0.8
E03A IAmb IAmb 15 09 54.3
comp=Z,23nm,1.0s
LLLB Lillooet 77.33 41 P P 15 09 53.2 +0.4
I02E Swisshome, OR 77.61 48 P P 15 09 54.9 +0.5
baz=284
EUNU Eureka 77.72 8 P P 15 09 54.1 -0.3
EUNU IAmb IAmb 15 09 55.6
comp=Z,19nm,0.7s
G03D McMinnville, O 77.74 46 P P 15 09 55.6 +0.5
baz=284
J01E Myrtle Point 77.78 48 P P 15 09 56.0 +0.6
baz=284
YKA Yellowknife Ar 78.02 28 P P 15 09 56.2 0.0
comp=Z,15nm,0.7s,baz=288,slow=5.6,SNR=23
comp=Z,15nm,0.7s
I03D Drain, OR 78.06 48 P P 15 09 57.1 +0.3
baz=284
K02D Willamette Mer 78.08 49 P P 15 09 57.5 +0.4
baz=284
F04A Amboy 78.14 45 P P 15 09 57.8 +0.5
F04A IAmb IAmb 15 09 59.1
comp=Z,17nm,0.7s
H04D Lebanon 78.28 47 P P 15 09 58.9 +0.8
baz=285
L02F Cave Junction 78.30 49 P P 15 09 59.0 +0.8
baz=285
H04A Detroit Lake 78.62 47 P P 15 09 59.5 -0.4
H04A IAmb IAmb 15 10 01.4
comp=Z,14nm,1.0s
I04A Tendick Farm, 78.69 48 P P 15 10 00.6 +0.2
baz=285,SNR=7.4
HOOD Mount Hood Mea 78.82 46 P P 15 10 01.0 -0.1
HOOD IAmb IAmb 15 10 06.6
comp=Z,17nm,1.0s
LTY Liberty 78.96 44 P P 15 10 01.8 0.0
LTY IAmb IAmb 15 10 03.1
comp=Z,12nm,0.7s
YBH Yreka Blue Hor 79.02 50 P P 15 10 02.4 +0.1
J04D Umpqua Nationa 79.05 48 P P 15 10 03.4 +0.8
baz=285,SNR=6.6
G05D Wamic, OR 79.07 46 P P 15 10 03.2 +0.8
baz=286
SPA0 Spitsbergen Ar 79.13 351 eP P 15 10 02.9 +0.7
SPA0 IAmb IAmb 15 10 10.8
comp=Z,77nm,1.2s
L04D Klamath Falls, 79.18 49 P P 15 10 03.9 +0.7
baz=285,SNR=5.2
KBS Kingsbay 79.25 352 eP P 15 10 03.2 +0.5
KBS IAmb IAmb 15 10 09.0
comp=Z,33nm,1.1s
J05D Fort Rock, OR 79.65 48 P P 15 10 06.8 +1.0
baz=286,SNR=22
HAWA Hanford 79.95 44 P P 15 10 07.9 +0.8
HAWA IAmb IAmb 15 10 08.3

comp=Z,12nm,0.6s
MOD Modoc Plateau 80.70 49 P P 15 10 11.7 +0.3
NEW Newport 80.97 42 P P 15 10 12.8 +0.3
baz=288,SNR=6.8
KLMR Klimovskoe 81.39 332 *eP* **P 15 10 13.1 -1.3**
KLMR AMP 15 10 14.3
comp=Z,6.0nm,0.6s
WVOR Wild Horse Val 81.73 48 P P 15 10 16.6 -0.2
VCNR Virginia City 81.94 51 P P 15 10 17.9 -0.1
VCNR IAmb IAmb 15 10 19.6
comp=Z,14nm,0.9s
PAHR Pah Rah Range 82.01 51 P P 15 10 18.3 0.0
ARA0 ARCESS Array S 82.44 342 *eP* **P 15 10 19.6 -0.1**
ARCES ARCESS Array B 82.44 342 P P 15 10 19.2 -0.6
comp=Z,5.4nm,0.6s,baz=71,slow=8.3,SNR=26
comp=Z,5.4nm,0.6s
PKM Mcpherson Peak 83.15 56 P P 15 10 24.8 +0.4
baz=288,SNR=5.0
KVN Kaiserville 83.16 51 P P 15 10 24.2 -0.1
KVN IAmb IAmb 15 10 25.7
comp=Z,18nm,0.7s
NVAR Mina Array Bea 83.20 52 P P 15 10 25.3 +0.7
comp=Z,19nm,0.7s,baz=267,slow=5.9,SNR=146
NVAR pP **pP 15 11 15.0 +0.2**
comp=Z,3.4nm,0.6s,baz=272,slow=5.4,SNR=5.0
NV11 Mina Array Sit 83.31 52 P P 15 10 25.2 +0.1
NV11 IAmb IAmb 15 10 26.6
comp=Z,14nm,0.8s
BMN Battle Mountai 83.36 50 P P 15 10 24.7 -0.5
SBC Santa Barbara 83.37 56 P P 15 10 26.3 +1.2
baz=288
MFID Camas Ranch 83.37 47 P P 15 10 25.0 -0.2
MFID IAmb IAmb 15 10 26.7
comp=Z,15nm,0.8s
MSO Missoula 83.47 43 P P 15 10 25.8 +0.1
baz=290
JETT Jettan, Norway 83.87 343 *eP* **P 15 10 27.1 0.0**
SNCC San Nicolas Is 83.89 57 P P 15 10 27.8 -0.1
baz=288
ISA Isabella, Lake 83.95 55 P P 15 10 27.9 -0.3
baz=289
CWC Cottonwood Cre 84.00 54 P P 15 10 28.6 0.0
baz=289
TRO Tromso 84.22 344 *eP* **P 15 10 28.2 -0.6**
TRO IAmb IAmb 15 10 29.9
comp=Z,288nm,2.1s
HLID Hailey 84.29 46 P P 15 10 30.0 +0.1
HLID Hailey 84.29 46 P P 15 10 30.1 +0.2
baz=290,SNR=11
GRAC Grapevine Rang 84.37 53 P P 15 10 30.2 -0.1
baz=289
DECC Green Verdugo 84.51 56 P P 15 10 31.1 +0.1
baz=289
EDW2 Edwards Air Fo 84.57 55 P P 15 10 31.5 +0.2
baz=289
MPMC Manual Prospec 84.58 54 P P 15 10 31.8 +0.3
baz=289,SNR=10
LRMC Laurel Mtn Rad 84.62 55 P P 15 10 31.7 +0.1
baz=289
LRM Limekiln Ridge 84.79 43 P P 15 10 32.5 0.0
MCMT McKenzie Canyo 84.89 44 P P 15 10 33.0 0.0
FURC Furnace Creek, 84.92 53 P P 15 10 33.4 +0.5
baz=290
TPNV Topopah Spring 85.23 53 P P 15 10 35.2 +0.5
baz=290,SNR=12
R11A Troy Canyon, C 85.25 51 P P 15 10 35.4 +0.6
baz=290,SNR=14
GSC Goldstone, Bar 85.36 54 P P 15 10 35.4 +0.2
baz=290
S11A Rachel 85.37 52 P P 15 10 35.8 +0.4
S11A IAmb IAmb 15 10 36.9
comp=Z,17nm,0.9s
BOZ Bozeman (W) 85.41 43 P P 15 10 35.6 +0.2
baz=292,SNR=12
EGMT Eagleton 85.67 41 P P 15 10 36.4 -0.1
baz=293
HEC Hector,Ludlow 85.88 55 P P 15 10 37.7 -0.1
baz=290
109C Camp Elliot, M 85.93 57 P P 15 10 38.0 0.0
baz=290
YHL Hebgen Lake 85.99 44 P P 15 10 39.0 +0.5
YHL IAmb IAmb 15 10 40.4
comp=Z,18nm,0.8s
TUQ Turquoise Moun 85.99 54 P P 15 10 38.3 -0.2
baz=290,SNR=5.2
KBZ Khabaz 86.06 315 P P 15 10 38.2 -0.2
comp=Z,4.4nm,1.0s,baz=78,slow=1.6,SNR=5.0
comp=Z,4.4nm,1.0s
PFO Pinyon Flats O 86.19 56 P P 15 10 39.3 -0.2
baz=290
TPFO Pinon Flats 86.20 56 P P 15 10 39.3 -0.2
baz=290
STEI Steigen 86.36 343 *eP* **P 15 10 38.5 -0.9**
STEI IAmb IAmb 15 10 39.0
comp=Z,9.2nm,0.6s
YNR Norris Junctio 86.37 44 P P 15 10 41.3 +1.0
YNR IAmb IAmb 15 10 43.1
comp=Z,14nm,1.0s
GMRC Granite Mounta 86.42 55 P P 15 10 40.5 -0.1
baz=290,SNR=5.3
BELC Belle Mtn. Jos 86.42 55 P P 15 10 40.4 -0.2
baz=290
MONP2 Monument Peak 86.47 57 P P 15 10 40.8 -0.2
baz=290
DUG Dugway, Tooele 86.61 49 P P 15 10 41.4 0.0
DUG IAmb IAmb 15 10 42.7
comp=Z,13nm,0.9s
DUG Dugway, Tooele 86.61 49 P P 15 10 41.8 +0.4
baz=292,SNR=9.3
FAUS Fauske 86.73 343 *eP* **P 15 10 40.0 -1.2**
FAUS IAmb IAmb 15 10 41.6
comp=Z,14nm,1.1s
IKP In-Ko-Pah, Jac 86.80 57 P P 15 10 42.6 +0.3
baz=290
FINES FINESS Array B 86.83 335 P P 15 10 39.7 -2.1
comp=Z,4.5nm,0.4s,baz=71,slow=4.7,SNR=42
comp=Z,4.5nm,0.4s
BC3 Big Chuckawall 86.97 56 P P 15 10 43.2 0.0
baz=290,SNR=5.3
IRM Iron Mountain 87.03 55 P P 15 10 43.6 +0.2
baz=291
RLMT Red Lodge 87.13 43 P P 15 10 44.5 +0.6
baz=294
NEE2 Needles Airpor 87.22 54 P P 15 10 44.4 +0.2
baz=291
GLA Glamis 87.67 56 P P 15 10 46.9 +0.4
baz=291
MSU Marysvale 87.69 50 P P 15 10 46.9 +0.2
PDMCI Parker Dam,Lak 87.76 55 P P 15 10 47.5 +0.7
baz=291
BW06 Boulder Array 87.88 45 P P 15 10 47.2 -0.3
baz=294
PDAR Pinedale Array 87.88 45 P P 15 10 47.1 -0.4
comp=Z,1.1nm,0.3s,baz=298,slow=8.1,SNR=19
PDAR pP **pP 15 11 39.4 +1.1**
comp=Z,0.7nm,0.4s,baz=136,slow=1.5,SNR=3.1
comp=Z,1.1nm,0.3s
Q16A Castle Valley 88.26 49 P P 15 10 49.3 -0.1
Q16A IAmb IAmb 15 10 51.1
comp=Z,36nm,1.6s
U15A North Rim 88.39 52 P P 15 10 50.0 -0.1
U15A IAmb IAmb 15 10 51.9
comp=Z,11nm,0.9s
LAO LASA Array 88.41 41 P P 15 10 49.6 -0.1
baz=296
SRU San Rafael Swe 88.65 49 P P 15 10 50.9 -0.3
SRU IAmb IAmb 15 10 51.8
comp=Z,8.0nm,0.7s
WUAZ Wupatki 89.42 53 P P 15 10 55.3 +0.5
WUAZ Wupatki 89.42 53 P P 15 10 55.1 +0.3
baz=293
214A Organ Pipe Nat 89.65 56 P P 15 10 56.3 +0.5
baz=292
MNK Minsk 89.88 329 *i* P **P 15 10 56.2 -0.1**
comp=E,3.0nm,0.8s
MNK *i* P **P 15 10 56.2 -0.1**
comp=N,5.0nm,0.8s
MNK *i* P **P 15 10 56.2 -0.1**
comp=Z,17nm,0.7s,baz=237
MNK *i* pP **pP 15 11 47.8 +0.8**
MNK *i* PP **PP 15 14 31.6 +0.1**
MNK *i* PPP PPP 15 16 29.7
MNK *i* S **SKSac 15 21 05.9 -0.8**
MNK *i* sS **pS 15 22 40.9 +6.1**
MNK *i* SS **SS 15 27 34.1 +2.1**
MNK *i* SSS SSS 15 31 11.8
MNK *i* LRM MLR 15 52 47.8
comp=E,8.0nm,17.4s
MNK *i* LRM MLR 15 52 49.1
comp=Z,40nm,18.7s
MNK *i* LRM MLR 15 52 55.6
comp=N,16nm,18.7s
PV13 Radium Mtn., P 90.26 49 P P 15 10 58.6 -0.1
PV13 IAmb IAmb 15 10 59.6
comp=Z,11nm,0.7s
RSSD Black Hills 90.93 42 P P 15 11 01.1 -0.7
RSSD Black Hills 90.93 42 P P 15 11 01.7 -0.1
baz=297
TUC Tucson 91.11 55 P P 15 11 02.9 +0.3
TUC Tucson 91.11 55 P P 15 11 03.4 +0.8
baz=293
N23A Red Feather La 91.12 46 P P 15 11 03.0 +0.3
baz=296
AKASG Malin Array Be 91.23 325 P P 15 11 02.6 0.0
comp=Z,0.3nm,0.4s,baz=57,slow=4.6,SNR=1.7
comp=Z,0.3nm,0.4s
ISCO Idaho Springs 91.83 47 P P 15 11 05.8 -0.3
baz=296
NOA NORSAR Array B 92.52 340 P P 15 11 06.8 -1.6
comp=Z,0.5nm,0.6s,baz=38,slow=5.0,SNR=1.6
comp=Z,0.5nm,0.6s
SDCO Great Sand Dun 92.81 49 P P 15 11 10.5 -0.1
baz=296
ANMO Albuquerque 93.33 52 P P 15 11 13.0 0.0
ANMO IAmb IAmb 15 11 14.6
comp=Z,10nm,1.4s
ANMO Albuquerque 93.33 52 P P 15 11 13.0 0.0
baz=296
121A Cookes Peak, D 93.34 54 P P 15 11 13.4 +0.4
baz=295
T25A Trinidad 93.85 49 P P 15 11 15.2 -0.1
baz=297
BRTR Keskin Array B 94.03 314 P P 15 11 14.8 -1.1
comp=Z,1.9nm,0.8s,baz=95,slow=4.9,SNR=8.7
comp=Z,1.9nm,0.8s
TXAR Lajitas Array 97.91 56 P Pdif 15 11 33.9 +0.2
comp=Z,0.3nm,0.6s,baz=284,slow=3.6,SNR=3.0
comp=Z,0.3nm,0.6s
TORD Torodi Ar. Bea 132.37 309 PKP PKPdf 15 17 10.6 -0.8
comp=Z,0.3nm,0.6s,baz=51,slow=3.0,SNR=1.6
ROC1 El Roble 144.32 121 *i* P **PKPab 15 17 31.3 -0.3**
RTLS Leoncito 146.02 119 *i* P **PKPab 15 17 37.8 -0.4**
ARCO CERRO ARCO 146.05 121 *i* P **PKPbc 15 17 37.4 +0.3**
AAGR Agrelo 146.06 122 *i* P **PKPab 15 17 37.7 -0.3**
ASAL Salagasta 146.19 121 *i* P **PKPbc 15 17 37.7 +0.2**
AROD Rodeo 146.23 116 *i* P **PKPbc 15 17 38.1 +0.2**
ACCO Cerro Coronel 146.49 117 *i* P **PKPbc 15 17 37.9 -0.8**
ACDV Cuesta del Vie 146.53 117 *i* P **PKPbc 15 17 38.4 -0.2**
VCA Vinchina 147.59 114 *i* P **PKPbc 15 17 41.9 +0.4**
AVFE Valle Fertil 147.82 118 *i* P **PKPbc 15 17 41.5 -0.5**
ACHE Chepes 148.35 119 *i* P **PKPbc 15 17 43.4 -0.1**
ACLC CERRO LA CRUZ 148.53 116 *i* P **PKPbc 15 17 43.5 -0.5**
MRA San Martin 148.76 122 *i* P **PKPbc 15 17 43.9 -0.5**
TCA Tanti 150.00 121 *i* P **PKPbc 15 17 47.1 -0.4**

DDA 10 15:00:15.3±0.0, 37°.93N×26°.87E, h7km±3km, ML1.4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGB	**zmir**	**0.12**	**4**	P	Pg	15 00 18.6	+0.7
DGB				S	Sg	15 00 20.2	+0.4
GCAM	**G?zelcaml?**	**0.37**	**128**	P	Pg	15 00 23.1	+0.6
GCAM				S	Sg	15 00 28.0	+0.8
GCAM				*i* AML	AML	15 00 29.0	
	comp=E,47nm,0.6s						
GCAM				*i* AML	AML	15 00 30.0	
	comp=N,41nm,0.1s						
ZEYE	**Izmir, Urla-Ze**	**0.42**	**317**	P	Pg	15 00 23.9	+0.4
ZEYE				S	Sb	15 00 30.8	-1.0
ZEYE				*i* AML	AML	15 00 31.0	
	comp=N,35nm,0.2s						
ZEYE				*i* AML	AML	15 00 32.0	
	comp=E,25nm,0.4s						
URLA	**Izmir**	**0.48**	**333**	P	Pg	15 00 24.4	-0.3
URLA				S	Sg	15 00 31.7	+0.7
URLA				*i* AML	AML	15 00 34.0	
	comp=E,22nm,0.6s						

ISK 10 15:00:28.6, 37°.33N×28°.26E, h0km, ML2.0/8, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.19**	**175**	PG	Pg	15 00 33.6	+1.4
TURN	**Turunc**	**0.55**	**182**	PG	Pg	15 00 39.5	+0.4
TURN				SG	Sb	15 00 47.9	-1.6
DALY	**Dalyan (Mula)**	**0.59**	**148**	PG	Pb	15 00 41.3	-0.6
AYDB	**Zeytinkoy-Aydi**	**0.69**	**335**	PG	Pg	15 00 42.3	+0.5
BODT	**Bodrum**	**0.81**	**251**	PG	Pg	15 00 44.6	+0.6
BODT				SG	Sb	15 00 56.3	-0.6
DAT	**Datca**	**0.81**	**223**	PG	Pb	15 00 45.5	-0.1
DAT				SG	Sb	15 00 56.5	-0.6
FETY	**Fethiye**	**0.95**	**136**	PG	Pg	15 00 47.1	+0.3
AKAS	**Kas**	**1.53**	**135**	PN	Pn	15 00 56.0	-1.3

*IDC **10** 15:17:00.6±4.5, 35°.98N×71°.20E, h47km±30km, mb3.6/6, mbtmp3.8/11, ML3.7/5, MS3.1/1, Error ellipse: s-maj=50.5km s-min=20.0km az=150.0*
*NNC **10** 15:17:10.8±5.3, 36°.68N×70°.79E, h111km±81km, mb3.4, mpv4.0, Error ellipse: s-maj=39.7km s-min=29.8km az=16.0*

ISC 10 15:17:00.7±0.8, 36°.05N±0°.08×71°.11E±0°.07, h35km, n34, σ2s00/38, mb3.7/5, 10C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.39**	**18**	P	**Pn**	**15 18 36.1**	**+3.4**
	SNR=62						
EKS2	**Erkin-Say**	**6.91**	**17**	P	**Pn**	**15 18 42.8**	**+3.2**
	SNR=14						
KK31	**Karatay Array**	**7.06**	**356**	P	**Pn**	**15 18 44.2**	**+2.8**
	2.0nm,0.2s,baz=176,slow=12,SNR=108						
KK31				⇑S	**Sn**	**15 19 56.8**	**-3.6**
	8.0nm,0.4s,baz=189,slow=25,SNR=11						
AAK	**Ala-Archa**	**7.08**	**21**	P	**Pn**	**15 18 44.2**	**+2.3**
	2.9nm,0.3s,baz=204,slow=9.5,SNR=13						
AAK				S	**Sn**	**15 20 00.2**	**-0.9**
	3.5nm,0.3s,baz=316,slow=21,SNR=10						
	8.1nm,0.3s						
AAK	**Ala-Archa**	**7.08**	**21**	P	**Pn**	**15 18 45.3**	**+3.4**
	SNR=7.3						
CHMS	**Chumysh**	**7.48**	**21**	P	**Pn**	**15 18 50.3**	**+3.0**
	SNR=6.6						
CHMS	**Chumysh**	**7.48**	**21**	⇑P	**Pn**	**15 18 50.1**	**+2.8**
	4.4nm,0.5s						
CHMS				⇑S	**Sn**	**15 20 09.7**	**-1.3**
	17nm,1.1s						
USP	**Ospenovka**	**7.66**	**19**	P	**Pn**	**15 18 52.5**	**+2.7**
	SNR=5.5						
TKM2	**Tokmak 2**	**7.68**	**25**	P	**Pn**	**15 18 53.2**	**+3.0**
	SNR=16						
TKM2	**Tokmak 2**	**7.68**	**25**	⇑P	**Pn**	**15 18 53.0**	**+2.8**
	8.2nm,0.5s						
TKM2				⇑S	**Sn**	**15 20 15.2**	**-0.9**
	3.1nm,0.7s						
GEYT	**Alibeck**	**10.56**	**284**	P	**Pn**	**15 19 31.7**	**+2.1**
	1.1nm,0.3s,baz=107,slow=12,SNR=7.6						
GEYT				S	**Sn**	**15 21 25.1**	**-1.6**
	3.2nm,0.3s,baz=309,slow=17,SNR=6.5						
	2.3nm,0.3s						
DANN	**Dangsing**	**13.17**	**122**	*eP*	**Pn**	**15 20 07.1**	**+1.6**
	7.1nm,0.2s						
MK31	**Makanchi Array**	**13.60**	**34**	⇑P	**Pn**	**15 20 11.0**	**0.0**
	0.2nm,0.3s,baz=237,slow=18,SNR=8.6						
MKAR	**Makanchi Array**	**13.60**	**34**	P	**Pn**	**15 20 10.7**	**-0.4**
	0.1nm,0.3s,baz=219,slow=13,SNR=4.3						
	0.5nm,0.6s						
GKN	**Gorkha**	**13.99**	**121**	*eP*	**Pn**	**15 20 17.2**	**+0.6**
	18nm,0.5s						
DMN	**Daman**	**14.56**	**121**	*eP*	**Pn**	**15 20 24.5**	**+0.1**
	5.8nm,0.3s						
PKIN	**Phulchoki**	**14.78**	**121**	*eP*	**Pn**	**15 20 27.2**	**-0.2**
	8.5nm,0.4s						
PKI	**Pulchoki**	**14.79**	**121**	*eP*	**Pn**	**15 20 27.1**	**-0.6**
	3.5nm,0.3s						
GUN	**Gumba**	**14.92**	**119**	*eP*	**Pn**	**15 20 28.2**	**-1.2**
	19nm,0.5s						
JIRN	**Jiri**	**15.29**	**119**	*eP*	**Pn**	**15 20 32.9**	**-1.4**
	16nm,0.4s						
KURBB	**Kurchatov Arra**	**15.52**	**18**	P	**Pn**	**15 20 38.5**	**+1.8**
	0.2nm,0.3s,baz=206,slow=10,SNR=14						
	1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**15.52**	**18**	⇑P	**Pn**	**15 20 38.7**	**+1.9**
	3.8nm,0.6s						
AB31	**Akbulak array**	**15.52**	**332**	P	**Pn**	**15 20 36.0**	**-0.7**
	0.6nm,0.3s,baz=161,slow=11,SNR=43						
AB31				⇑S	Sn	15 23 14.6	-13
	1.1nm,0.5s,baz=152,slow=22,SNR=7.0						
RAMN	**Ramite**	**16.01**	**120**	*eP*	**Pn**	**15 20 42.0**	**-1.5**
TAPN	**Taplejung**	**16.56**	**117**	*eP*	**Pn**	**15 20 48.6**	**-1.9**
	7.5nm,0.3s						
AKTO	**Aktyubinsk**	**17.21**	**331**	P	**P**	**15 21 00.1**	**+0.5**
	0.5nm,0.3s,baz=137,slow=14,SNR=7.7						
AKTO				S	Sn	15 23 55.3	-13
	1.0nm,0.6s,baz=184,slow=18,SNR=2.6						
	1.3nm,0.3s						
AKTO	**Aktyubinsk**	**17.21**	**331**	⇑P	**Pn**	**15 20 58.9**	**+0.7**
	3.1nm,0.8s						
AKTO				⇑S	Sn	15 23 56.0	-12
	4.2nm,1.2s						
ZALV	**Zalesovo Beam**	**20.28**	**24**	P	**P**	**15 21 31.0**	**-2.1**
	2.9nm,0.3s,baz=213,slow=10,SNR=12						
	2.9nm,0.3s						
EIL	**Elat**	**30.91**	**269**	LR	LR	15 37 24.1	
	comp=Z,37nm,19.2s,baz=76,slow=40						
AKASG	**Malin Array Be**	**33.30**	**309**	P	**P**	**15 23 35.1**	**+0.3**
	0.3nm,0.4s,baz=81,slow=7.0,SNR=5.1						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**37.90**	**326**	P	**P**	**15 24 13.7**	**-0.5**
	1.5nm,0.7s,baz=124,slow=12,SNR=5.2						
	1.5nm,0.7s						
ARCES	**ARCESS Array B**	**41.59**	**338**	P	**P**	**15 24 44.6**	**-0.2**
	1.1nm,0.4s,baz=104,slow=5.1,SNR=13						
	1.1nm,0.4s						
NOA	**NORSAR Array B**	**44.79**	**323**	P	**P**	**15 25 10.6**	**-0.2**
	0.5nm,0.5s,baz=103,slow=7.5,SNR=1.9						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.80**	**269**	P	**P**	**15 27 40.5**	**-2.1**
	0.3nm,0.5s,baz=64,slow=5.3,SNR=5.3						
	0.3nm,0.5s						

*SSNC **10** 15:21:28.7±2.2, 17°.03N×70°.56W, h5km, MW3.0*
*NEIC **10** 15:21:30.8±2.0, 18°.80N±0°.07×69°.32W±0°.03, h81km±11km, ML3.7/36, Error ellipse: s-maj=11.1km s-min=2.4km az=202.0*
*OSPL **10** 15:21:32.0±3.4, 18°.92N×69°.30W, h96km±36km, ML3.4*

ISC 10 15:21:28.8±1.1, 18°.93N±0°.06×69°.35W±0°.03, h103km±10km, n38, σ1s76/52, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.14**	**192**		**Pn**	**15 21 42.1**	**-1.3**
SDD	**Santo Domingo**	**0.71**	**229**		**Pn**	**15 21 45.7**	**-1.0**
SDD				Sn	**Sn**	**15 21 57.4**	**-2.6**
SDD				IAML		15 21 59.7	
	comp=E,3μm,0.2s						
PCDR	**Punta Cana, DR**	**1.00**	**114**	Pn	**Pn**	**15 21 49.1**	**-0.4**
PCDR				Sn	**Sn**	**15 22 04.9**	**-0.2**
PCDR				IAML		15 22 06.5	
	comp=N,1μm,0.4s						
PCDR	**Punta Cana, DR**	**1.00**	**114**	*i* P	**Pn**	**15 21 49.1**	**-0.4**
PCDR				*e*S	**Sn**	**15 22 04.4**	**-0.7**
PCDR				IAML		15 22 08.5	
	comp=Z,939nm,0.1s						
BANI	**BANI**	**1.10**	**241**	Pn	**Pn**	**15 21 50.8**	**+0.1**
SC01	**Santiago de lo**	**1.40**	**291**	Pn	**Pn**	**15 21 57.0**	**+3.0**
SC01				Sn	**Sn**	**15 22 16.0**	**+2.9**
SC01				IAML		15 22 20.4	
	comp=E,828nm,0.3s						
SC01				IAML		15 22 23.3	
	comp=N,1μm,0.3s						
SDDR	**Presa de Saban**	**1.84**	**272**	Pn	**Pn**	**15 22 01.7**	**+2.3**
SDDR				Sn	**Sn**	**15 22 26.6**	**+3.7**
SDDR				IAML		15 22 28.0	
	comp=N,442nm,0.7s						
SDDR				IAML		15 22 30.4	
	comp=N,518nm,0.8s						
SDDR	**Presa de Saban**	**1.84**	**272**	*e*P	**Pn**	**15 22 01.4**	**+1.9**
SDDR				*e*S	**Sn**	**15 22 25.1**	**+2.2**
SDDR	**Presa de Saban**	**1.84**	**272**	*i* P	**Pn**	**15 22 01.8**	**+2.3**
SDDR				*e*S	**Sn**	**15 22 23.4**	**+0.5**
SDDR				IAML		15 22 31.6	
	comp=Z,253nm,0.3s						
LOBA2	**Hotel Casa Bon**	**1.86**	**243**	*i* P	**Pn**	**15 21 60.0**	**+0.2**
LOBA2				*e*S	**Sn**	**15 22 22.6**	**-0.7**
LOBA2				IAML		15 22 22.6	
	comp=Z,134nm,0.6s						
LOPP1	**Punta Rusia, P**	**1.97**	**298**	*e*S	**Sn**	**15 22 27.9**	**+2.0**
AGPR	**Aguadilla, PR**	**2.17**	**102**	Pn	**Pn**	**15 22 04.2**	**+0.5**
AGPR				IAML		15 22 38.5	
	comp=N,616nm,0.2s						
AGPR				IAML		15 22 39.9	
	comp=E,733nm,0.6s						
AGPR	**Aguadilla, PR**	**2.17**	**102**	*i* P	**Pn**	**15 22 04.3**	**+0.6**
AGPR				*e*S	**Sn**	**15 22 31.3**	**+0.9**
AGPR				IAML		15 22 37.0	
	comp=Z,305nm,0.2s						
PRSN	**Puerto Rico Se**	**2.21**	**108**	Pn	**Pn**	**15 22 05.1**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.31**	**113**	Pn	**Pn**	**15 22 06.3**	**+0.7**
MLPR	**Magueyes Islan**	**2.39**	**113**	Pn	**Pn**	**15 22 06.0**	**-0.6**
LOPE2	**Hotel El Peder**	**2.44**	**249**	*i* P	**Pn**	**15 22 09.0**	**+1.7**
LOPE2				*e*S	**Sn**	**15 22 39.7**	**+2.9**
LOPE2				IAML		15 22 47.7	
	comp=Z,144nm,0.5s						
AOPR	**Arecibo Observ**	**2.53**	**103**	Pn	**Pn**	**15 22 08.6**	**+0.2**
EMPR	**Esperanza - Ma**	**2.71**	**99**	Pn	**Pn**	**15 22 13.0**	**+2.2**
EMPR				IAML		15 22 51.8	
	comp=N,477nm,0.4s						
OBIP	**Obispado Ponce**	**2.75**	**108**	Pn	**Pn**	**15 22 11.3**	**0.0**
OBIP				IAML		15 22 52.8	
	comp=N,206nm,0.4s						
PAPH	**Port-au-Prince**	**2.83**	**262**	*i* P	**Pn**	**15 22 14.3**	**+1.9**
ICMP	**Isla Caja de M**	**2.87**	**111**	Pn	**Pn**	**15 22 14.4**	**+1.5**
ICMP				IAML		15 23 07.8	
	comp=E,152nm,0.6s						
GRTK	**Grand Turk**	**3.07**	**327**	Pn	**Pn**	**15 22 15.4**	**-0.1**
GRTK				IAML		15 22 54.0	
	comp=E,328nm,0.2s						
GRTK	**Grand Turk**	**3.07**	**327**	*e*P	**Pn**	**15 22 15.6**	**+0.1**
GRTK	**Grand Turk**	**3.07**	**327**	*i* P	**Pn**	**15 22 15.8**	**+0.3**
GRTK				*e*S	**Sn**	**15 22 51.2**	**-0.3**
GRTK				IAML		15 22 52.5	
	comp=Z,125nm,0.5s						
JAKH	**Jacmel**	**3.08**	**258**	Pn	**Pn**	**15 22 16.9**	**+1.1**
JAKH				IAML		15 22 58.4	
	comp=E,173nm,0.5s						
JAKH				IAML		15 23 17.1	
	comp=N,193nm,1.1s						
SJG	**San Juan**	**3.14**	**105**	Pn	**Pn**	**15 22 18.1**	**+1.6**
SJG				IAML		15 22 59.0	
	comp=N,333nm,0.4s						
SJG				IAML		15 23 01.2	
	comp=N,285nm,0.4s						
GCPR	**Guaynabo City**	**3.16**	**101**	Pn	**Pn**	**15 22 16.8**	**+0.1**
GCPR				IAML		15 22 59.7	
	comp=E,138nm,0.4s						
PDPR	**Patillas Dam,**	**3.28**	**106**	Pn	**Pn**	**15 22 18.9**	**+0.5**
CBYP	**Canovanas**	**3.38**	**101**	Pn	**Pn**	**15 22 19.0**	**-0.8**
CUPR	**Culebra, Puert**	**3.91**	**98**	Pn	**Pn**	**15 22 25.6**	**-1.2**
STVI	**Saint Thomas**	**4.21**	**97**	Pn	**Pn**	**15 22 29.9**	**-0.9**
STVI				IAML		15 23 24.3	
	comp=N,81nm,0.3s						
MASC	**Masc**	**4.77**	**286**	*e*P	**Pn**	**15 22 37.5**	**-0.9**
MASC				*e*S	**Sn**	**15 23 29.0**	**-3.6**
MASC	**Masc**	**4.77**	**286**	*i* P	**Pn**	**15 22 39.6**	**+1.2**
MASC				*e*S	**Sn**	**15 23 29.6**	**-2.9**
MASC				IAML		15 23 38.6	
	comp=Z,11nm,0.5s						
MOAC	**Moa**	**5.56**	**289**	*e*P	**Pn**	**15 22 48.4**	**-0.7**
MOAC				*e*S	**Sn**	**15 23 46.8**	**-4.9**
AUA1	**Aruba**	**6.42**	**186**	Pn	**Pn**	**15 22 59.5**	**-1.3**
BIRV	**Birongo**	**8.92**	**160**	Pn	**Pn**	**15 23 34.5**	**-0.3**
BAUV	**El Baul**	**10.01**	**173**	Pn	**Pn**	**15 23 49.7**	**0.0**

DJA 10 15:38:48.2±0.7, 0°.S±4°×124°.4E±°, h33km±13km, M4.0/12, mb4.6/2, MLv3.8/12, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.73**	**328**	P	Pn	15 39 02.1	-0.1
GTOI	**Gorontalo**	**1.52**	**297**	P	Pb	15 39 15.6	-0.2

GTOI			S	Sb	15 39 36.9	+2.1
LUWI	**Luwuk**	**1.88 238**	P	Pn	15 39 19.5	+1.5
MRSI	**Marisa**	**2.48 282**	P	Pn	15 39 24.5	-1.9
SANI	**Sanana**	**2.56 141**	P	Pn	15 39 25.7	-1.7
APSI	**Ampana**	**2.85 253**	P	Pn	15 39 32.2	+0.8
LBMI	**Labuha**	**3.19 101**	P	Pn	15 39 36.7	+0.7
LBMI			S	Sn	15 40 12.9	0.0
NLAI	**Namlea**	**4.18 139**	P	Pn	15 39 49.5	-0.2
TTSI	**Tana Toraja**	**5.43 237**	P	Pn	15 40 07.9	+0.9

IDC 10 15:46:16.4±1.3, 29°.57S × 178°.24W, h227km ± 12km, mb2.9/2, mbtmp3.7/3, Error ellipse: s-maj=48.4km s-min=25.5km az=111.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.42**	**42**	P	Pn	15 46 47.6	+1.2
	941nm,0.3s,baz=100,slow=7.3,SNR=17						
RAO				S	S	15 47 09.2	-0.5
	240nm,0.2s,baz=126,slow=20,SNR=1.5						
URZ	**Urewera**	**9.49**	**203**	P	Pn	15 48 28.2	-0.4
	9.3nm,1.0s,baz=32,slow=20,SNR=1.3						
URZ				S	S	15 50 14.8	-0.5
	6.9nm,0.9s,baz=238,slow=14,SNR=1.2						
ASAR	**Alice Springs**	**42.95**	**266**	P	P	15 53 53.3	-0.1
	0.3nm,0.4s,baz=101,slow=6.7,SNR=19						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**43.86**	**271**	P	P	15 54 00.5	-0.2
	0.3nm,0.4s,baz=108,slow=8.1,SNR=17						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**144.29**	**340**	PKP	PKPab	16 05 22.8	-0.4
	0.7nm,0.4s,baz=42,slow=2.3,SNR=8.8						

*IDC **10** 16:14:32.4±3.0, 11°.38S × 162°.21E, h40km ± 25km, mb3.4/5, mbtmp3.7/7, ML3.9/2, MS3.0/4, Error ellipse: s-maj=33.6km s-min=15.6km az=60.0*
*NEIC **10** 16:14:32.0±1.7, 11°.53S ± 0°.07 × 162°.1E ± 0°.1, h24km ± 8km, mb4.3/7, Error ellipse: s-maj=21.4km s-min=4.5km az=62.0*

ISC 10 16:14:32.0±0.9, 11°.48S ± 0°.10 × 162°.1E ± 0°.1, h39km, n26, σ1s20/18, mb3.8/9, MS3.1/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.95**	**313**	P	Pn	16 15 18.6	+2.3
	57nm,0.3s,baz=180,slow=9.3,SNR=8.7						
HNR				S	**Sn**	**16 15 50.8**	**+0.2**
	144nm,0.6s,baz=18,slow=8.2,SNR=3.9						
	88nm,0.3s						
HNR	**Honiara**	**2.95**	**313**	Pn	**Pn**	**16 15 16.5**	**+0.1**
KOUNC	**Koumac, New Ca**	**9.26**	**167**	Pn	**Pn**	**16 16 43.1**	**+0.1**
DZM	**Mont Dzumac**	**11.31**	**159**	P	**Pn**	**16 17 12.7**	**+1.5**
	0.3nm,0.3s,baz=324,slow=23,SNR=16						
DZM				S	**Sn**	**16 19 15.5**	**-1.0**
	7.0nm,1.1s,baz=16,slow=23,SNR=1.7						
DZM				LR	LR	16 20 45.0	
	2,94nm,18.5s,baz=347,slow=33						
	5.7nm,1.0s						
MARNC	**Mare, Loyalty**	**11.44**	**151**	Pn	**Pn**	**16 17 13.4**	**+0.5**
CTAO	**Charters Tower**	**17.49**	**239**	Pn	**P**	**16 18 32.4**	**-1.5**
CTAO				IAmb	IAmb	16 18 43.6	
	comp=Z,19nm,1.4s						
WB0	**Warramunga Arr**	**27.91**	**249**	P	**P**	**16 20 16.2**	**-2.5**
WB0				IAmb	IAmb	16 20 17.6	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**27.99**	**249**	P	**P**	**16 20 20.2**	**+0.8**
WRAB				IAmb	IAmb	16 20 23.4	
	comp=Z,8.2nm,1.4s						
WB2	**Warramunga Arr**	**27.99**	**249**	P	**P**	**16 20 20.2**	**+0.8**
WB2				IAmb	IAmb	16 20 44.7	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**28.00**	**249**	P	**P**	**16 20 21.9**	**+2.4**
	comp=Z,0.7nm,1.0s,baz=74,slow=9.5,SNR=4.0						
WRA				LR	LR	16 30 04.5	
	2,43nm,18.4s,baz=204,slow=33						
	comp=Z,0.7nm,1.0s						
AS31	**Alice Springs**	**29.43**	**242**	P	**P**	**16 20 32.1**	**-0.1**
ASAR	**Alice Springs**	**29.44**	**242**	P	**P**	**16 20 33.5**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=66,slow=9.3,SNR=7.5						
	comp=Z,0.4nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**30.12**	**9**	T	T	16 51 35.0	
	baz=188,slow=75,SNR=78						
H11S3	**WAKE ISLAND Hy**	**30.12**	**9**	T	T	16 51 35.2	
	baz=188,slow=75,SNR=71						
H11S1	**WAKE ISLAND Hy**	**30.14**	**9**	T	T	16 51 36.3	
	baz=188,slow=75,SNR=69						
H11N1	**WAKE ISLAND Hy**	**31.35**	**9**	T	T	16 53 02.7	
	baz=188,slow=76,SNR=35						
H11N3	**WAKE ISLAND Hy**	**31.36**	**9**	T	T	16 53 07.0	
	baz=188,slow=76,SNR=42						
H11N2	**WAKE ISLAND Hy**	**31.37**	**9**	T	T	16 53 06.8	
	baz=188,slow=76,SNR=28						
FITZ	**Fitzroy Crossi**	**35.83**	**255**	LR	LR	16 34 21.3	
	comp=Z,38nm,19.2s,baz=139,slow=33						
FITZ	**Fitzroy Crossi**	**35.83**	**255**	P	**P**	**16 21 28.8**	**+0.7**
FITZ				IAmb	IAmb	16 22 03.2	
	comp=Z,6.8nm,1.4s						
KSRS	**Korea Array**	**58.30**	**328**	LR	LR	16 47 42.8	
	comp=Z,4.9nm,20.0s,baz=25,slow=34						
USA0B	**Ussuriysk Arra**	**61.81**	**336**	P	P	16 24 50.0	+3.1
SONM	**Songino Array**	**76.95**	**325**	P	**P**	**16 26 20.4**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=139,slow=7.1,SNR=2.9						
	comp=Z,0.5nm,0.7s						
IMAR	**Indian Mountai**	**83.83**	**17**	P	**P**	**16 26 56.8**	**-0.2**
ILAR	**Eielson Array**	**85.08**	**20**	P	**P**	**16 27 03.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=240,slow=5.5,SNR=3.0						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**91.42**	**317**	P	**P**	**16 27 33.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=93,slow=5.8,SNR=2.7						
	comp=Z,0.3nm,0.7s						

*AZER **10** 16:26:47.4±1.0, 34°.86N × 46°.66E, h10km, Error ellipse: s-maj=18.5km s-min=16.6km az=247.0*
*ISN **10** 16:26:50.7±0.4, 35°.41N × 46°.36E, h10km ± 76km, ML3.3*
*TEH **10** 16:26:51.7, 35°.36N × 46°.32E, h7km, ML3.4*

ISC 10 16:26:52.3±0.8, 35°.38N ± 0°.02 × 46°.30E ± 0°.03, h10km, n43, σ2s45/54, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.68**	**174**	*e*		16 27 19.1	
	comp=Z,23μm,0.3s						
IDHR				*e*Pg	**Pb**	**16 27 05.6**	**-0.8**
ILIN	**Lien**	**0.71**	**130**	*e*Sg	**Sb**	**16 27 15.8**	**-1.1**
ILIN				*e*Pg	**Pg**	**16 27 05.2**	**-0.9**
ILIN				*e*		16 27 20.5	
	comp=Z,26μm,0.3s						
SNGE	**Sanandaj**	**0.91**	**108**	*e*Pg	**Pg**	**16 27 08.0**	**-1.8**
IGHG	**Ghaleghazi**	**1.07**	**168**	*e*Pg	**Pn**	**16 27 12.8**	**-0.8**
IGHG				*e*Sg	**Sn**	**16 27 28.8**	**+0.2**
IGHG				*e*		16 27 35.3	
	comp=Z,16μm,0.9s						
KER	**Kermanshah**	**1.20**	**145**	*e*Pg	**Pg**	**16 27 14.9**	**-0.6**
KER				*e*		16 27 33.6	
	comp=Z,9μm,0.4s						
KCHF	**Cheshme Sefid,**	**1.26**	**151**	*e*Pg	**Pg**	**16 27 16.3**	**-0.2**
KCHF				*e*		16 27 34.8	
	comp=Z,13μm,0.7s						
MAHB	**Mahabad**	**1.47**	**341**	*e*Pn	**Pb**	**16 27 19.8**	**0.0**
MAHB				*e*		16 27 50.7	
	comp=Z,20μm,0.3s						
IKOM	**Komasi**	**1.56**	**140**	*e*Pg	**Pg**	**16 27 21.4**	**-0.9**
IKOM				*e*		16 27 53.5	
	comp=Z,15μm,0.8s						
IBZA	**Bozab**	**1.57**	**125**	*e*Pn	**Pb**	**16 27 20.6**	**-1.0**
IBZA				*e*		16 27 51.2	
	comp=Z,8μm,0.8s						
IDOB	**Doab**	**2.22**	**135**	*e*Pn	**Pb**	**16 27 32.0**	**-0.6**
HSAM	**Samen**	**2.23**	**121**	*e*Pn	**Pb**	**16 27 32.2**	**-0.6**
HSAM				*e*		16 28 11.5	
	comp=Z,61nm,1.0s						
IKFM	**Kafar-mosalman**	**2.25**	**145**	*e*Pn	**Pb**	**16 27 32.7**	**-0.3**
IKFM				*e*		16 28 07.7	
	comp=Z,6μm,0.7s						
IBDR	**Badra**	**2.28**	**188**	*e*Pn	**Pb**	**16 27 32.0**	**-1.5**
IBDR				*e*Sn	**Sb**	**16 28 02.0**	**+0.2**
IBDR				AML	AML	16 28 20.3	
	comp=E,211nm,0.8s						
IBDR				AML	AML	16 28 25.5	
	comp=N,181nm,0.6s						
ZNJK	**Zanjan**	**2.33**	**56**	*e*Pn	**Pb**	**16 27 33.8**	**-0.7**

HAGD	**Aghdareh**	**2.40**	**103**	*e*Pn	**Pb**	**16 27 34.8**	**-0.9**
HAGD				*e*		16 28 12.9	
	comp=Z,2μm,0.8s						
BHD	**Baghdad**	**2.63**	**218**	*e*Pn	**Pb**	**16 27 37.0**	**-2.5**
BHD				*e*Sn	**Sb**	**16 28 11.0**	**-0.9**
BHD				AML	AML	16 28 19.5	
	comp=E,276nm,0.2s						
QABG	**Abgarm-Qazvin**	**2.70**	**82**	*e*Pn	**Pb**	**16 27 37.9**	**-3.0**
ITBZ	**Tabriz**	**2.85**	**358**	*e*Pn	**Pb**	**16 27 40.5**	**-3.0**
ITBZ				*e*		16 28 28.4	
	comp=Z,1μm,0.4s						
IRAZ	**Razeghan**	**2.97**	**88**	*e*Pn	**Pb**	**16 27 42.9**	**-2.5**
ASAO	**Ashtian**	**3.17**	**104**	*e*Pn	**Pb**	**16 27 45.9**	**-3.0**
GIDE	**GILAN DEYLAMAN**	**3.31**	**61**	*e*Pn	**Pb**	**16 27 47.4**	**-3.8**
IMRD	**Marand**	**3.37**	**352**	*e*Pn	**Pb**	**16 27 48.5**	**-3.7**
IMRD				*e*		16 28 51.6	
	comp=Z,2μm,0.6s						
KHMZ	**Khomeyn**	**3.44**	**117**	*e*Pn	**Pb**	**16 27 49.9**	**-3.5**
ORD	**Ordubad**	**3.55**	**356**	P	**Pb**	**16 27 55.3**	**-0.1**
ORD				S	**Sg**	**16 28 46.0**	**-0.4**
RAFI	**Al-Rafai**	**3.65**	**182**	*e*Pn	**Pn**	**16 27 51.0**	**+2.2**
RAFI				*e*Sn	**Sn**	**16 28 35.0**	**+3.2**
RAFI				AML	AML	16 28 51.8	
	comp=E,103nm,0.4s						
LRK	**Lerik**	**3.65**	**26**	P	**Pb**	**16 27 53.2**	**-3.8**
LRK				S	**Sb**	**16 28 44.7**	**+3.3**
GRMI	**Germi**	**3.66**	**20**	*e*Pn	**Pn**	**16 27 51.7**	**+2.6**
QALM	**Alamut, Qazvin**	**3.69**	**72**	*e*Pn	**Pn**	**16 27 52.0**	**+2.4**
NAX	**Nakhchivan**	**3.84**	**351**	P	**Pb**	**16 27 59.8**	**-0.5**
NAX				S	**Sg**	**16 28 53.2**	**-2.6**
YRD	**Yardimli**	**3.86**	**23**	P	**Pb**	**16 27 56.2**	**-4.5**
YRD				S	**Sb**	**16 28 49.2**	**+1.7**
IQOM	**Qom**	**3.95**	**96**	*e*Pn	**Pn**	**16 27 55.5**	**+2.3**
IQOM				*e*		16 28 09.1	
	comp=Z,420nm,0.9s						
CHTH	**Charan**	**3.97**	**81**	*e*Pn	**Pn**	**16 27 56.7**	**+3.2**
SBZ	**Shahbuz**	**4.06**	**352**	P	**Pb**	**16 28 02.8**	**-1.2**
SBZ				S	**Sg**	**16 28 59.4**	**-3.2**
MAKU	**Maku**	**4.17**	**343**	*e*Pn	**Pn**	**16 27 59.2**	**+3.0**
MAKU				*e*		16 29 12.8	
	comp=Z,99nm,0.8s						
AMIS	**Naft Sefid**	**4.46**	**145**	*e*Pn	**Pn**	**16 28 02.4**	**+2.3**
IVRN	**Varamin**	**4.46**	**93**	*e*Pn	**Pn**	**16 28 03.3**	**+3.2**
HYR	**Heyderabad**	**4.49**	**346**	P	**Pb**	**16 28 07.0**	**-4.2**
HYR				S	**Sb**	**16 29 08.1**	**+2.8**
QAMS	**Qamsar**	**4.52**	**110**	*e*Pn	**Pn**	**16 28 03.9**	**+2.9**
DAMV	**Damavand**	**4.64**	**85**	*e*Pn	**Pn**	**16 28 05.9**	**+3.2**
IPIR	**Pirpir**	**4.67**	**124**	*e*Pn	**Pn**	**16 28 06.2**	**+3.1**
ISFB	**Sefidab**	**4.99**	**100**	*e*Pn	**Pn**	**16 28 09.9**	**+2.5**
KRSH	**Karshahi**	**5.01**	**105**	*e*Pn	**Pn**	**16 28 10.5**	**+2.7**
IZEF	**Zefreh**	**5.58**	**115**	*e*Pn	**Pn**	**16 28 19.0**	**+3.3**

*STR **10** 16:30:22.2±2.0, 43°.N±9°.× ±1°.1, h2km, MLv2.5/5, Error ellipse: s-maj=0.0km s-min=0.0km az=124.6, preliminary*
*LDG **10** 16:30:24.5±0.1, 42°.95N × 1°.76W, h2km, Md2.6/1, Ml2.8/13, Error ellipse: s-maj=1.8km s-min=1.5km az=96.0*
*MDD **10** 16:30:24.7±0.3, 42°.91N × 1°.83W, h0km, mb_Lg2.8/12, Error ellipse: s-maj=2.5km s-min=1.5km az=164.0*
*SFS **10** 16:30:24.0, 42°.90N × 1°.83W, ML2.8, IRURTZUN (NAVARRA)*

ISC 10 16:30:22.7±1.1, 43°.03N ± 0°.02 × 1°.87W ± 0°.02, h5km ± 9km, n44, σ1s76/80, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EALK	**Alkurruntz**	**0.33**	**54**	Pg	**Pb**	**16 30 30.4**	**-0.7**
EALK				Sg	**Sb**	**16 30 35.8**	**-1.0**
EALK				*i* Vmb_Lg		16 30 38.5	
EALK	**Alkurruntz**	**0.33**	**54**	Sg	**Sb**	**16 30 36.1**	**-0.6**
EALK	**Alkurruntz**	**0.33**	**54**	Pg	**Pb**	**16 30 30.4**	**-0.7**
EARA	**Aranguren**	**0.33**	**140**	Pg	**Pg**	**16 30 28.2**	**-0.9**
EARA				Sg	**Sg**	**16 30 32.8**	**-0.7**
EARA				*i* Vmb_Lg		16 30 34.2	
EARA	**Aranguren**	**0.33**	**140**	Sg	**Sg**	**16 30 33.0**	**-0.5**
EARA	**Aranguren**	**0.33**	**140**	Pg	**Pg**	**16 30 28.1**	**-1.0**
EORO	**Oroz-Betelu**	**0.43**	**108**	Pg	**Pg**	**16 30 30.7**	**-0.3**
EORO				Sg	**Sg**	**16 30 36.9**	**+0.2**
EORO				*i* Vmb_Lg		16 30 38.9	
SJPF	**Ste Jean**	**0.48**	**79**	*e*Pg	**Pg**	**16 30 32.6**	**+0.7**
SJPF				*e*Sg	**Sg**	**16 30 38.2**	**0.0**
	132nm,0.2s						
OSSF	**Osses**	**0.50**	**62**	Pg	**Pb**	**16 30 33.2**	**-0.8**
OSSF				Sg	**Sb**	**16 30 41.6**	**0.0**
ATE	**Arette**	**0.86**	**86**	Pg	**Pg**	**16 30 39.3**	**+0.1**
ATE				Sg	**Sb**	**16 30 52.2**	**+0.2**
ETSF	**Etsaut**	**0.97**	**97**	*e*Pg	**Pg**	**16 30 40.7**	**-0.6**
ETSF				*e*Sg	**Sg**	**16 30 52.7**	**-1.2**
	106nm,0.4s						
CANF	**Canfranc**	**1.03**	**104**	Pg	**Pg**	**16 30 42.0**	**-0.4**
CANF				Sg	**Sn**	**16 30 59.7**	**+0.9**
CANF				Sn	**Sb**	**16 31 01.3**	**+4.4**
VIEF	**Viey**	**1.40**	**95**	Pn	**Pb**	**16 30 49.1**	**-0.2**
VIEF				Sn	**Sn**	**16 31 09.8**	**+2.0**
ECHI	**Chisagues Biel**	**1.56**	**103**	Pg	**Pg**	**16 30 52.3**	**-0.3**
ECHI				Sg	**Sg**	**16 31 14.8**	**+2.0**
ECHI				*i* Vmb_Lg		16 31 16.7	
ECHI	**Chisagues Biel**	**1.56**	**103**	Pn	**Pg**	**16 30 52.3**	**-0.3**
ECHI				Pg	**Pb**	**16 30 53.0**	**+0.9**
ECHI				Sn	**Sg**	**16 31 14.3**	**+1.5**
EPF	**Esparros**	**1.62**	**89**	*e*Pg	**Pg**	**16 30 53.4**	**-0.3**
EPF				*e*Sg	**Sn**	**16 31 13.3**	**0.0**
	40nm,0.3s						
ESAC	**San Caprasio**	**1.67**	**141**	Pg	**Pb**	**16 30 53.5**	**-0.4**
ESAC				Sg	**Sn**	**16 31 14.0**	**-0.3**
ETOR	**Torete**	**2.21**	**184**	Pn	**Pn**	**16 31 00.3**	**+0.2**
ETOR				Pg	**Pb**	**16 31 04.3**	**+0.9**
ETOR				Sg	**Sb**	**16 31 30.7**	**-0.1**
ETOR				*i* Vmb_Lg		16 31 36.1	
EARI	**Arriondas**	**2.46**	**278**	Pg	**Pb**	**16 31 06.1**	**-1.3**
EARI				Sn	**Sn**	**16 31 36.4**	**+2.5**
ERTA	**Horta de San J**	**2.64**	**141**	Sg	**Sb**	**16 31 44.7**	**+1.5**
ERTA				*i* Vmb_Lg		16 31 51.3	
LFF	**La Frestale**	**2.69**	**44**	*e*Pn	**Pn**	**16 31 07.0**	**+0.5**
LFF	**La Frestale**	**2.69**	**44**	*e*Pg	**Pg**	**16 31 14.1**	**0.0**
LFF				*e*Sn	**Sn**	**16 31 38.3**	**-1.1**
	11nm,0.4s						
EPOB	**Poblet**	**2.76**	**126**	Pn	**Pn**	**16 31 07.0**	**-0.6**
EPOB				Pg	**Pb**	**16 31 13.1**	**+0.6**
EPOB				Sg	**Sg**	**16 31 48.8**	**-2.4**
EPOB				*i* Vmb_Lg		16 32 06.5	
EMOS	**Mosqueruela**	**2.86**	**158**	Pg	**Pg**	**16 31 16.9**	**-0.6**
EMOS				Sg	**Sb**	**16 31 49.5**	**-0.2**
UCM	**Universidad Co**	**2.90**	**201**	P	**Pg**	**16 31 18.4**	**+0.2**
UCM				S	**Sn**	**16 31 47.7**	**+2.8**
GUD	**Guadarrama**	**2.93**	**216**	Pn	**Pn**	**16 31 09.9**	**-0.1**
GUD				Sn	**Sn**	**16 31 43.7**	**-1.9**
GUD				Sg	**Sb**	**16 31 52.9**	**+1.3**
MTLF	**Montolieu**	**3.01**	**83**	*e*P	**Pn**	**16 31 12.9**	**+1.9**
MTLF				*e*Sn	**Sn**	**16 31 43.7**	**-3.7**
	11nm,0.4s						
RJF	**Les Rejaudoux**	**3.34**	**46**	*e*Pn	**Pn**	**16 31 15.7**	**+0.2**
RJF	**Les Rejaudoux**	**3.34**	**46**	*e*P	**Pn**	**16 31 18.7**	**+3.2**
RJF				*e*Sn	**Sn**	**16 31 53.6**	**-1.9**
	8.5nm,0.4s						
CAF	**Calviac**	**3.42**	**55**	*e*Pn	**Pn**	**16 31 16.5**	**-0.1**
CAF				*e*Sn	**Sn**	**16 31 55.1**	**-2.5**
	3.9nm,0.2s						
ECAL	**Calabor**	**3.76**	**255**	Pn	**Pn**	**16 31 22.1**	**+0.8**
ECAL				*i* Vmb_Lg		16 32 30.7	
MFF	**Saint Martin d**	**3.78**	**18**	*e*Pg	**Pg**	**16 31 35.5**	**+0.4**
MFF				*e*Sn	**Sn**	**16 32 05.3**	**-1.1**
	7.8nm,0.5s						
PAB	**San Pablo**	**3.95**	**209**	Sn	**Sn**	**16 32 07.2**	**-3.5**
PAB				*i* Vmb_Lg		16 32 31.5	
MVO	**Moncorvo**	**4.26**	**246**	*e*Pn	**Pn**	**16 31 29.5**	**+1.2**
MVO				*e*Sn	**Sn**	**16 32 18.3**	**-0.2**
MVO				*e*Sg	**Sg**	**16 32 39.2**	**-0.4**
MVO				A	A	16 32 43.4	
	6.9nm,0.9s						
LASF	**Ste Croix**	**4.29**	**74**	*e*Pn	**Pn**	**16 31 29.8**	**+1.1**
LASF	**Ste Croix**	**4.29**	**74**	*e*P	**Pn**	**16 31 32.9**	**+4.2**
LASF				*e*Sn	**Sn**	**16 32 14.9**	**-4.3**
	2.2nm,0.4s						
POLO	**Lamas de Olo**	**4.70**	**251**	*e*Pn	**Pn**	**16 31 36.6**	**+2.3**
PGAV	**Gavieira, Arco**	**4.85**	**260**	*e*Pn	**Pn**	**16 31 38.2**	**+1.8**
QUIF	**Quistinic**	**4.97**	**350**	*e*Pn	**Pn**	**16 31 39.2**	**+1.2**
QUIF				*e*Sn	**Sn**	**16 32 34.8**	**-1.0**
	3.2nm,0.3s						
VIVF	**Saint-Julien-l**	**5.07**	**67**	*e*Pn	**Pn**	**16 31 39.3**	**0.0**
VIVF				*e*Sn	**Sn**	**16 32 33.9**	**-4.3**
	1.0nm,0.2s						
SGMF	**Saint Gilles**	**5.25**	**355**	*e*Pn	**Pn**	**16 31 43.8**	**+2.0**
SGMF				*e*Sn	**Sn**	**16 32 41.1**	**-1.6**
	0.3nm,0.2s						
PMRV	**Marv??o**	**5.50**	**231**	*e*Pn	**Pn**	**16 31 45.1**	**-0.1**
PMRV				*e*Sn	**Sn**	**16 32 44.5**	**-4.3**
ORIF	**Oris-en-Rattie**	**5.91**	**69**	*e*P	**Pn**	**16 31 55.0**	**+4.1**
PESTR	**Estremoz**	**6.00**	**228**	*e*Pn	**Pn**	**16 31 51.4**	**-0.7**

*VIE **10** 16:32:45.5±1.7, 48°.79N × 10°.25E, h0km, mb2.1/5, ml2.5/9, Error ellipse: s-maj=10.9km s-min=7.0km az=124.0 19 km WSW of Noerdlingen Suspected Mining explosion.*
*PRU **10** 16:32:47.8±0.0, 48°.69N × 10°.26E, h0km*

ISC 10 16:32:47.9±1.5, 48°.78N ± 0°.03 × 10°.26E ± 0°.06, h9km ± 11km, n16, σ0s68/30, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RETA	**Reutte**	**1.33**	**165**	*e*Sg	**Sg**	**16 33 31.6**	**+0.8**
	18nm,0.4s						
DAVA	**Damuels**	**1.51**	**190**	*e*Pg	**Pn**	**16 33 15.6**	**+0.3**
	2.2nm,0.2s						
DAVA				*e*Sg	**Sg**	**16 33 36.5**	**-0.1**
	5.4nm,0.2s						
MOTA	**Moosalm**	**1.54**	**158**	*i* Pg	**Pn**	**16 33 16.2**	**+0.5**
	0.7nm,0.1s						
MOTA				*e*Sg	**Sg**	**16 33 37.8**	**+0.3**
	9.1nm,0.3s						
SQTA	**Sankt Quirin**	**1.68**	**157**	*i* Pg	**Pb**	**16 33 19.0**	**-0.1**
	1.4nm,0.1s						
SQTA				*i* Sg	**Sn**	**16 33 39.6**	**+0.3**
	5.7nm,0.2s						
WATA	**Walderalm**	**1.69**	**148**	*i* Pg	**Pb**	**16 33 19.6**	**+0.3**
	1.6nm,0.2s						
WATA				*e*Sg	**Sg**	**16 33 43.0**	**+0.6**
	12nm,0.2s						
WTTA	**Wattenberg**	**1.77**	**148**	*i* Pg	**Pb**	**16 33 20.8**	**0.0**
	0.9nm,0.1s						
WTTA				*e*Sg	**Sg**	**16 33 45.4**	**+0.4**
	11nm,0.3s						
FETA	**Feichten**	**1.79**	**170**	*i* Pg	**Pn**	**16 33 18.1**	**-1.0**
	1.0nm,0.2s						
FETA				*i* Sg	**Sn**	**16 33 41.6**	**-0.3**
	1.7nm,0.2s						
KHC	**Kasperske Hory**	**2.22**	**80**	*e*PN	**Pn**	**16 33 24.9**	**0.0**
KHC				*e*PG	**Pg**	**16 33 29.8**	**-0.6**
KHC				*e*SN	**Sn**	**16 33 53.0**	**+0.6**
KHC				*e*SG	**Sg**	**16 33 58.8**	**-0.3**
	comp=Z,5.8nm,0.4s						
CKRC	**Cesky Krumlov**	**2.68**	**88**	*e*PN	**Pn**	**16 33 31.7**	**+0.5**
CKRC				*e*PG	**Pb**	**16 33 36.6**	**+0.6**
CKRC				*e*SN	**Sn**	**16 34 03.0**	**-0.8**
CKRC				*e*SG	**Sg**	**16 34 14.3**	**+0.4**
	comp=Z,6.1nm,0.6s						
MOA	**Molln**	**2.83**	**108**	Pg	**Pg**	**16 33 41.4**	**-0.8**
	1.2nm,0.1s						
MOA				Sg	**Sg**	**16 34 19.2**	**+0.4**
	0.9nm,0.2s						
PRU	**Pruhonice**	**3.05**	**65**	*e*SG	**Sg**	**16 34 25.5**	**-0.3**
CLL	**Collm**	**3.09**	**34**	*i* Pn	**Pn**	**16 33 35.5**	**-1.3**
CLL				*i* Pg	**Pg**	**16 33 47.2**	**+0.1**
CLL				*e*Sg	**Sg**	**16 34 28.0**	**+0.9**
	comp=Z,5.0nm,0.7s						
BRG	**Berggiesshubel**	**3.18**	**47**	Amp		16 34 40.3	
	comp=Z,3.3nm,0.4s						
BRG	**Berggiesshubel**	**3.18**	**47**	Pg	**Pb**	**16 33 45.9**	**+1.4**
BRG	**Berggiesshubel**	**3.18**	**47**	Sg	**Sg**	**16 34 28.7**	**-1.2**
DPC	**Dobruska-Polom**	**4.25**	**66**	*e*SG	**Sg**	**16 35 04.4**	**+0.1**

*ANF **10** 16:34:53.5±0.3, 35°.70N × 97°.18W, h5km, ML3.4/8, Error ellipse: s-maj=3.3km s-min=2.4km az=152.0*
*TUL **10** 16:34:53.8±0.9, 35°.66N ± 0°.01 × 97°.18W ± 0°.01, h5km ± 3km, ML3.5, mb_Lg3.2/93(NEIC), Error ellipse: s-maj=1.7km s-min=1.3km az=147.0*
*NEIC **10** 16:34:54.4±0.8, 35°.66N ± 0°.01 × 97°.18W ± 0°.01, h5km ± 3km, Error ellipse: s-maj=1.9km s-min=1.4km az=163.0*

ISC 10 16:34:53.8±0.9, 35°.66N ± 0°.02 × 97°.17W ± 0°.02, h7km ± 6km, n106, σ0s75/104, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.01**	**250**	Pg	**Pg**	**16 34 54.9**	**-0.2**
OK005				Sg	**Sg**	**16 34 55.5**	**-0.5**
OK025	**Westminster Rd**	**0.15**	**240**	Pg	**Pg**	**16 34 57.2**	**+0.2**
OK025				Sg	**Sg**	**16 34 59.8**	**+0.6**
OK009	**Oakdale Elemen**	**0.22**	**249**	Pg	**Pg**	**16 34 58.3**	**+0.2**
OK009				Sg	**Sg**	**16 35 01.8**

baz=306
ELIS Ellis County 1.87 283 Pn Pn 16 35 26.8 +0.6
Z35A Perchaven, San 2.32 182 Pn Pn 16 35 32.7 +0.3
Z35A IAmb_Lg 16 36 12.4
comp=Z,133nm,1.2s
U38A Gravette 2.39 70 Pn Pn 16 35 34.0 +0.7
HHAR Hobbs 2.70 76 Pn Pn 16 35 37.8 +0.3
HHAR IAmb_Lg 16 36 25.2
comp=Z,59nm,0.8s
Z38A Mt. Pleasant 3.00 142 Pn Pn 16 35 41.9 +0.2
Z38A IAmb_Lg 16 36 36.5
comp=Z,98nm,1.1s
Z38A Mt. Pleasant 3.00 142 P Pn 16 35 42.5 +0.8
baz=324
R32A Long Quarter, 3.02 336 Pn Pn 16 35 41.1 -0.9
MIAR Mount Ida 3.15 110 Pn Pn 16 35 45.0 +1.2
MIAR IAmb_Lg 16 36 42.7
comp=Z,52nm,0.9s
MIAR Mount Ida 3.15 110 P Pn 16 35 45.1 +1.2
baz=292
KSU1 Kansas State U 3.46 7 IAmb_Lg 16 36 46.6
comp=Z,46nm,0.8s
ABTX Abilene, Hawle 3.66 215 Pn Pn 16 35 50.6 -0.2
ABTX Abilene, Hawle 3.66 215 P Pn 16 35 51.3 +0.5
baz=33
WHTX Lake Whitney, 3.67 184 Pn Pn 16 35 51.7 +0.9
S39A Bolivar 3.70 56 Pn Pn 16 35 52.8 +1.4
S39A IAmb_Lg 16 36 52.5
comp=Z,51nm,0.8s
CBKS Cedar Bluff 3.75 328 IAmb_Lg 16 36 58.6
comp=Z,65nm,1.0s
AMTX Amarillo 3.77 259 IAmb_Lg 16 36 56.0
comp=Z,50nm,0.7s
237A Washetta, Mont 3.82 162 IAmb_Lg 16 37 05.0
comp=Z,50nm,0.8s
WHAR Wooly Hollow 4.00 94 Pn 16 35 56.3 +0.8
UALR University of 4.05 101 IAmb_Lg 16 37 10.9
comp=Z,56nm,0.7s
FCAR Ozark Folk Cen 4.11 85 Pn Pn 16 35 54.8 -2.2
FCAR IAmb_Lg 16 37 08.9
comp=Z,80nm,0.8s
MGMO Mountain Grove 4.23 68 Pn Pn 16 35 58.0 -0.6
MGMO IAmb_Lg 16 37 10.5
comp=Z,66nm,0.8s
R40A Maddies Statio 4.72 55 Pn Pn 16 36 06.6 +1.2
R40A IAmb_Lg 16 37 23.3
comp=Z,33nm,0.8s
435B Jarrell 4.88 184 IAmb_Lg 16 37 35.8
comp=Z,37nm,0.8s
P38A Dawn 4.90 35 Pn Pn 16 36 07.9 +0.1
P38A IAmb_Lg 16 37 40.4
comp=Z,46nm,0.7s
MSTX Muleshoe 4.90 252 IAmb_Lg 16 37 33.2
comp=Z,39nm,1.0s
LCAR Lake Charles 4.91 83 Pn Pn 16 36 07.5 -0.4
LCAR IAmb_Lg 16 37 30.1
comp=Z,34nm,1.1s
N33A J Bar K, Exete 5.08 358 Pn Pn 16 36 10.2 0.0
N33A IAmb_Lg 16 37 35.4
comp=Z,33nm,0.9s
CCM Cathedral Cave 5.32 62 IAmb_Lg 16 37 46.8
comp=Z,36nm,0.7s
KSCO Kaye Shedlock' 5.48 309 Pn Pn 16 36 17.7 +1.7
KSCO IAmb_Lg 16 37 52.8
comp=Z,35nm,1.0s
P40A Paris 5.61 45 IAmb_Lg 16 37 57.8
comp=Z,50nm,0.9s
JCT Junction City 5.62 204 Pn Pn 16 36 17.3 -0.5
JCT IAmb_Lg 16 38 01.5
comp=Z,48nm,0.9s
BGNE Belgrade 5.79 353 IAmb_Lg 16 38 05.9
comp=Z,58nm,0.7s
FVM French Village 5.89 65 Pn Pn 16 36 21.3 -0.1
FVM IAmb_Lg 16 38 16.6
comp=Z,53nm,1.1s
N38A Joes South For 5.99 30 Pn Pn 16 36 22.8 0.0
N38A IAmb_Lg 16 38 12.0
comp=Z,33nm,0.8s
T25A Trinidad 6.02 286 Pn Pn 16 36 24.0 +0.6
T25A IAmb_Lg 16 38 07.7
comp=Z,29nm,0.7s
CGM3 Cape Girardeau 6.27 73 IAmb_Lg 16 38 11.8
comp=Z,39nm,0.8s
SLM Saint Louis 6.29 60 IAmb_Lg 16 38 15.4
comp=Z,43nm,0.7s
HALT Halls 6.37 85 IAmb_Lg 16 38 17.6
comp=Z,54nm,0.7s
OXF Oxford 6.47 98 Pn Pn 16 36 27.6 -1.8
OXF IAmb_Lg 16 38 20.0
comp=Z,24nm,0.8s
OGNE Ogallala 6.51 326 IAmb_Lg 16 38 24.0
comp=Z,46nm,0.7s
W45A Hickory Valley 6.54 92 IAmb_Lg 16 38 28.8
comp=Z,42nm,0.9s
S44A Carbondale 6.68 70 Pn Pn 16 36 32.6 +0.4
SIUC Southern Illin 6.71 70 Pn Pn 16 36 31.6 -1.1
SCIA State Center 6.96 25 Pn Pn 16 36 35.9 -0.2
SCIA IAmb_Lg 16 38 52.0
comp=Z,21nm,0.8s
SDCO Great Sand Dun 7.00 290 Pn Pn 16 36 37.8 +0.7
K31A O'Neill 7.06 350 IAmb_Lg 16 38 50.2
comp=Z,41nm,0.7s
Q24A Divide 7.16 300 Pn Pn 16 36 38.0 -1.2
146A Union 7.37 112 IAmb_Lg 16 38 60.0
comp=Z,24nm,0.8s
833A Chaparral WMA, 7.55 195 Pn Pn 16 36 41.3 -3.0
833A IAmb_Lg 16 39 00.8
comp=Z,18nm,1.1s
WVT Waverly 7.60 84 IAmb_Lg 16 39 00.2
comp=Z,21nm,1.0s
K38A Parkersburg 7.77 25 IAmb_Lg 16 39 08.2
comp=Z,32nm,0.9s
ISCO Idaho Springs 7.86 304 Pn Pn 16 36 49.1 +0.3
L40A Anamosa 7.90 34 Pn Pn 16 36 48.4 -0.6
L40A IAmb_Lg 16 39 07.6
comp=Z,28nm,0.9s
ECSD EROS Data Cent 8.07 3 Pn Pn 16 36 51.3 -0.1
O44A Mansfield 8.21 54 IAmb_Lg 16 39 21.8
comp=Z,37nm,0.9s
TX31 Lajitas Ar. Si 8.36 223 Pn Pn 16 36 55.4 0.0
TXAR Lajitas Array 8.36 223 Pn Pn 16 36 54.7 -0.7
PHWY Pilot Hill 8.60 313 Pn Pn 16 36 59.9 +1.0
PHWY IAmb_Lg 16 39 34.0
comp=Z,14nm,0.9s
L42A Oliver, Polo 8.62 40 Pn Pn 16 36 59.3 +0.3
L42A IAmb_Lg 16 39 28.4
comp=Z,35nm,1.0s
N23A Red Feather La 8.65 310 Pn Pn 16 37 00.2 +0.6
N23A IAmb_Lg 16 39 45.1
comp=Z,18nm,0.8s
I37A Lemond, Waseca 8.83 18 IAmb_Lg 16 39 49.1
comp=Z,17nm,0.9s
JFWS Jewell Farm 9.01 34 IAmb_Lg 16 39 54.9
comp=Z,24nm,0.9s
RSSD Black Hills 9.96 330 IAmb_Lg 16 40 19.3
comp=Z,11nm,0.8s

*TEH **10** 16:47:48.2, 35˚.42N×46˚.28E, h6km, ML3.1*
*ISN **10** 16:47:50.0±1.2, 35˚.46N×46˚.34E, h26km±9km, ML2.6*
ISC 10 16:47:47.5±1.0,**35˚.46N**±0˚.04×**46˚.31E**±0˚.04,**h10km,n20,**
σ1§52/22,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILIN	**Lien**	**0.76**	**135**	*e*Sg		**Sn**	**16 48 15.6**	**-0.6**
ILIN				*e*Pg		**Pb**	**16 48 03.4**	**+0.4**
ILIN				*e*			16 48 18.8	
	comp=Z,6μm,0.4s							
IDHR	**Dehrash**	**0.77**	**175**	*e*			16 48 15.5	
	comp=Z,10μm,0.3s							
IDHR				*e*Pg		**Pb**	**16 48 03.4**	**+0.4**
SNGE	**Sanandaj**	**0.93**	**113**	*e*Pg		**Pg**	**16 48 06.3**	**+0.9**
IGHG	**Ghaleghazi**	**1.15**	**169**	*e*Pg		**Pn**	**16 48 11.5**	**+1.6**
IGHG				*e*			16 48 33.0	
	comp=Z,4μm,0.6s							
KER	**Kermanshah**	**1.27**	**148**	*e*Pg		**Pg**	**16 48 13.0**	**+1.1**
KER				*e*			16 48 37.2	
	comp=Z,3μm,0.3s							
KCHF	**Cheshme Sefid,**	**1.33**	**153**	*e*Pg		**Pg**	**16 48 14.7**	**+1.7**
KCHF				*e*			16 48 36.7	
	comp=Z,3μm,0.6s							
MAHB	**Mahabad**	**1.39**	**340**	*e*Pn		**Pg**	**16 48 16.0**	**+1.8**
MAHB				*e*			16 48 43.6	
	comp=Z,4μm,0.5s							
IBZA	**Bozab**	**1.61**	**127**	*e*Pn		**Pg**	**16 48 19.0**	**+0.5**
IBZA				*e*			16 48 50.2	
	comp=Z,2μm,0.5s							
IKOM	**Komasi**	**1.62**	**142**	*e*Pn		**Pg**	**16 48 19.8**	**+1.2**
IKOM				*e*			16 48 51.6	
	comp=Z,4μm,0.8s							
HSAM	**Samen**	**2.26**	**123**	*e*Pn		**Pb**	**16 48 29.2**	**+0.6**
ZNJK	**Zanjan**	**2.27**	**57**	*e*Pn		**Pg**	**16 48 32.1**	**+1.1**
IKFM	**Kafar-mosalman**	**2.31**	**146**	*e*Pn		**Pb**	**16 48 29.5**	**+0.2**
IKFM				*e*			16 49 08.6	
	comp=Z,2μm,0.7s							
IBDR	**Badra**	**2.37**	**188**	*e*Pg		**Pb**	**16 48 31.0**	**+0.8**
	baz=8.0							
IBDR				*e*Sg		**Sg**	**16 49 03.0**	**-0.6**
IBDR				AML		AML	16 49 10.4	
	comp=E,47nm,0.4s							
IBDR				AML		AML	16 49 19.0	
	comp=N,47nm,0.8s							
QABG	**Abgarm-Qazvin**	**2.68**	**84**	*e*Pn		**Pb**	**16 48 34.8**	**-0.9**
BHD	**Baghdad**	**2.71**	**217**	*e*Pn		**Pb**	**16 48 34.0**	**-2.0**
BHD				*e*Sn		**Sb**	**16 49 06.0**	**-3.3**
ASAO	**Ashtian**	**3.18**	**106**	*e*Pn		**Pb**	**16 48 43.6**	**-0.7**
GIDE	**GILAN DEYLAMAN**	**3.26**	**62**	*e*Pn		**Pb**	**16 48 45.5**	**0.0**
KHMZ	**Khomeyn**	**3.47**	**119**	*e*Pn		**Pb**	**16 48 47.2**	**-1.9**
CHTH	**Charan**	**3.95**	**82**	*e*Pn		**Pb**	**16 48 54.4**	**-2.9**
DAMV	**Damavand**	**4.62**	**86**	*e*Pn		Pn	16 49 03.7	+6.1

*MOS **10** 16:51:41.8±1.2, 52˚.55N×159˚.80E, h44km, mb4.5/5, Error ellipse: s-maj=7.9km s-min=4.6km az=89.3*
*KRSC **10** 16:51:42.1±1.2, 52˚.67N×159˚.73E, h56km±13km, ML4.8*
*NEIC **10** 16:51:45.5±2.0, 52˚.79N±0˚.09×159˚.31E±0˚.08, h63km±5km, mb4.2/45, Error ellipse: s-maj=13.2km s-min=6.4km az=197.0*
*IDC **10** 16:51:47.9±1.1, 52˚.88N×159˚.22E, h87km±8km, mb3.6/19, mbtmp3.9/20, MS2.9/6, Error ellipse: s-maj=17.3km s-min=13.3km az=144.0*
ISC 10 16:51:43.9±0.7,**52˚.72N**±0˚.03×**159˚.63E**±0˚.03,**h55**km±5km,
n185,σ1§50/207,mb4.1/41,MS3.0/5,4C-3D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.45**	**32**	PN		**Pn**	**16 51 55.2**	**+0.2**
SPN				S		**Sn**	**16 52 03.0**	**+0.1**
SPN	**Mys Shipunski**	**0.45**	**32**	*i* P		**Pn**	**16 51 55.2**	**+0.2**
SPN				*e*S		**Sn**	**16 52 03.0**	**+0.1**
NLC	**Nalytchevo**	**0.48**	**339**	PN		**Pn**	**16 51 55.8**	**+0.5**
NLC				S		**Sn**	**16 52 04.4**	**+0.9**
NLC	**Nalytchevo**	**0.48**	**339**	*e*P		**Pn**	**16 51 55.8**	**+0.5**
NLC				*e*S		**Sn**	**16 52 04.4**	**+0.9**
DALK	**Dalny**	**0.61**	**301**	PN		**Pn**	**16 51 57.0**	**+0.2**
DALK				S		**Sn**	**16 52 06.2**	**0.0**
DALK	**Dalny**	**0.61**	**301**	*i* P		**Pn**	**16 51 57.0**	**+0.2**
DALK				*e*S		**Sn**	**16 52 06.2**	**0.0**
PET	**Petropavlovsk**	**0.66**	**297**			**Pn**	**16 51 57.6**	**+0.2**
PET				Sn		**Sn**	**16 52 07.4**	**+0.1**
PET	**Petropavlovsk**	**0.66**	**297**	κ *i*PN		**Pn**	**16 51 57.7**	**+0.3**
PET				*e*S		**Sn**	**16 52 07.3**	**0.0**
PET				pmax	pmax			
	comp=Z,4μm,0.4s							
PET				smax	smax			
	comp=E,25μm,0.7s							
PET				smax	smax			
	comp=E,24μm,0.6s							
PET				smax	smax			
	comp=N,20μm,0.4s							
PET				smax	smax			
	comp=N,21μm,0.5s							
PET	**Petropavlovsk**	**0.66**	**297**	*i* P		**Pn**	**16 51 57.7**	**+0.3**
UGLR	**Uglovaya**	**0.69**	**315**	PN		**Pn**	**16 51 58.7**	**+0.8**
UGLR	**Uglovaya**	**0.69**	**315**	*e*P		**Pn**	**16 51 58.7**	**+0.8**
SDLR	**Sedlovina**	**0.71**	**321**	PN		**Pn**	**16 51 58.8**	**+0.6**
SDLR	**Sedlovina**	**0.71**	**321**	*e*P		**Pn**	**16 51 58.8**	**+0.6**
SMAR	**Somma**	**0.74**	**318**	PN		**Pn**	**16 51 59.1**	**+0.5**
SMAR	**Somma**	**0.74**	**318**	*e*P		**Pn**	**16 51 59.1**	**+0.5**
RUS	**Russkaya**	**0.74**	**247**	PN		**Pn**	**16 51 58.2**	**-0.2**
RUS				S		**Sn**	**16 52 09.1**	**+0.2**
RUS	**Russkaya**	**0.74**	**247**	*i* P		**Pn**	**16 51 58.2**	**-0.2**
RUS				*e*S		**Sn**	**16 52 09.1**	**+0.2**
AVH	**Avacha**	**0.76**	**316**	PN		**Pn**	**16 51 59.8**	**+1.0**
AVH	**Avacha**	**0.76**	**316**	*e*P		**Pn**	**16 51 59.8**	**+1.0**
KRER	**Koryakskii**	**0.79**	**318**	PN		**Pn**	**16 52 00.1**	**+0.9**
KRER	**Koryakskii**	**0.79**	**318**	*e*P		**Pn**	**16 52 00.1**	**+0.9**
KOK	**Koryaka**	**0.83**	**314**	PN		**Pn**	**16 52 00.5**	**+0.9**
KOK	**Koryaka**	**0.83**	**314**	*e*P		**Pn**	**16 52 00.5**	**+0.9**
KRX	**Arik**	**0.87**	**318**	PN		**Pn**	**16 52 00.9**	**+0.7**
KRX	**Arik**	**0.87**	**318**	*e*P		**Pn**	**16 52 00.9**	**+0.7**
MTVR	**Mutnovka**	**0.91**	**255**	PN		**Pn**	**16 52 01.2**	**+0.4**
MTVR	**Mutnovka**	**0.91**	**255**	*e*P		**Pn**	**16 52 01.2**	**+0.4**
KRMR	**Karymshinskiy**	**0.92**	**277**	PN		**Pn**	**16 52 00.8**	**+0.1**
KRMR				S		**Sn**	**16 52 12.7**	**-0.3**
KRMR	**Karymshinskiy**	**0.92**	**277**	*e*P		**Pn**	**16 52 00.8**	**+0.1**
KRMR				*e*S		**Sn**	**16 52 12.7**	**-0.3**
GRL	**Gorelyy**	**0.96**	**260**	PN		**Pn**	**16 52 02.4**	**+1.0**
GRL				S		**Sn**	**16 52 15.5**	**+1.2**
GRL	**Gorelyy**	**0.96**	**260**	*i* P		**Pn**	**16 52 02.4**	**+1.0**
GRL				*e*S		**Sn**	**16 52 15.5**	**+1.2**
ASAK	**Asacha**	**1.11**	**253**	PN		**Pn**	**16 52 04.3**	**+1.0**
ASAK	**Asacha**	**1.11**	**253**	*e*P		**Pn**	**16 52 04.3**	**+1.0**
I44RU	**PETROPAVLOVSK-**	**1.22**	**289**	P		**Pn**	**16 52 05.6**	**+0.8**
	baz=95,slow=19,SNR=21							
I44RU				S		**Sn**	**16 52 21.3**	**+1.0**
	baz=91,slow=18							
PEA0B	**Petropavlovsk-**	**1.23**	**289**			**Pn**	**16 52 05.6**	**+0.7**
PEA0B				Sn		**Sn**	**16 52 21.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**1.23**	**289**	PN		**Pn**	**16 52 05.6**	**+0.7**
PEA0B							16 52 21.5	
PETK	**Petropavlovsk-**	**1.23**	**289**	P		**Pn**	**16 52 05.0**	**+0.1**
	comp=N,2μm,0.3s,baz=108,slow=19							
PETK				S		**Sn**	**16 52 21.9**	**+1.4**
	comp=N,521nm,0.3s,baz=90,slow=13,SNR=9.8							
PETK				LR		LR	16 52 31.0	
	comp=N,104nm,21.1s,baz=124,slow=45							
PETK	**Petropavlovsk-**	**1.23**	**289**			**Pn**	**16 52 04.7**	**-0.2**
PETK				Sn		**Sn**	**16 52 21.2**	**+0.8**
PETK	**Petropavlovsk-**	**1.23**	**289**	PN		**Pn**	**16 52 04.7**	**-0.2**
PETK							16 52 21.3	
KII	**Karymskiy**	**1.32**	**355**	PN		**Pn**	**16 52 07.2**	**+1.0**
KII				S		**Sn**	**16 52 24.4**	**+1.6**
KII	**Karymskiy**	**1.32**	**355**	*e*P		**Pn**	**16 52 07.2**	**+1.0**
KII				*e*S		**Sn**	**16 52 24.4**	**+1.6**
KDTR	**Khodutka, Kamc**	**1.32**	**227**	PN		**Pn**	**16 52 06.6**	**+0.5**
KDTR				S		**Sn**	**16 52 23.2**	**+0.6**
KDTR	**Khodutka, Kamc**	**1.32**	**227**	*e*P		**Pn**	**16 52 06.6**	**+0.5**
KDTR				*e*S		**Sn**	**16 52 23.2**	**+0.6**
GNL	**Ganaly**	**1.41**	**315**	PN		**Pn**	**16 52 08.4**	**+1.1**
GNL				S		**Sn**	**16 52 27.5**	**+2.6**
GNL	**Ganaly**	**1.41**	**315**	*i* P		**Pn**	**16 52 08.4**	**+1.1**
GNL				*e*S		**Sn**	**16 52 27.5**	**+2.6**
APC	**Apacha**	**1.51**	**279**	PN		**Pn**	**16 52 10.0**	**+1.4**
APC				S		**Sn**	**16 52 29.6**	**+2.4**
APC	**Apacha**	**1.51**	**279**	*e*P		**Pn**	**16 52 10.0**	**+1.4**
APC				*e*S		**Sn**	**16 52 29.6**	**+2.4**
PAU	**Pauzhetka**	**2.14**	**235**	PN		**Pn**	**16 52 18.8**	**+1.5**
PAU				S		**Sn**	**16 52 44.6**	**+1.9**
PAU	**Pauzhetka**	**2.14**	**235**	*e*P		**Pn**	**16 52 18.8**	**+1.5**
PAU				*e*S		**Sn**	**16 52 44.6**	**+1.9**
MKZ	**Mys Kozlova**	**2.22**	**33**	PN		**Pn**	**16 52 18.9**	**+0.6**
MKZ				S		**Sn**	**16 52 43.2**	**-1.4**
MKZ	**Mys Kozlova**	**2.22**	**33**	*e*P		**Pn**	**16 52 18.9**	**+0.6**
MKZ				*e*S		**Sn**	**16 52 43.2**	**-1.4**
TUMR	**Tumrok**	**2.58**	**7**	PN		**Pn**	**16 52 26.0**	**+2.6**
TUMR	**Tumrok**	**2.58**	**7**	*e*P		**Pn**	**16 52 26.0**	**+2.6**
SKR	**Severo-Kuril's**	**2.99**	**228**	*e*PN		**Pn**	**16 52 30.3**	**+1.5**
SKR				*i* S		**Sn**	**16 53 03.2**	**-0.2**
SKR				smax	smax			
	comp=N,291nm,0.7s							
SKR				smax	smax			
	comp=E,216nm,0.9s							
SKR	**Severo-Kuril's**	**2.99**	**228**	*e*P		**Pn**	**16 52 29.9**	**+1.1**
SKR				*e*S		**Sn**	**16 53 03.8**	**+0.4**
KMNR	**Kamenistaya**	**3.06**	**6**	PN		**Pn**	**16 52 33.0**	**+3.1**
KMNR	**Kamenistaya**	**3.06**	**6**	*e*P		**Pn**	**16 52 33.0**	**+3.1**
ESO	**Esso**	**3.25**	**351**	PN		**Pn**	**16 52 36.3**	**+3.8**
ESO	**Esso**	**3.25**	**351**	*e*P		**Pn**	**16 52 36.3**	**+3.8**
KOZ	**Kozyrevsk**	**3.35**	**2**	PN		**Pn**	**16 52 35.3**	**+1.6**
KOZ	**Kozyrevsk**	**3.35**	**2**	*e*P		**Pn**	**16 52 35.3**	**+1.6**
SRDR	**Sredinnyy**	**3.60**	**1**	PN		**Pn**	**16 52 39.3**	**+2.0**
SRDR	**Sredinnyy**	**3.60**	**1**	*e*P		**Pn**	**16 52 39.3**	**+2.0**
KLY	**Klyuchi**	**3.65**	**9**	PN		**Pn**	**16 52 41.3**	**+3.5**
KLY	**Klyuchi**	**3.65**	**9**	*e*P		**Pn**	**16 52 41.3**	**+3.5**
KBTR	**Krutoberegovo**	**3.96**	**27**	PN		**Pn**	**16 52 44.6**	**+2.5**
KBTR	**Krutoberegovo**	**3.96**	**27**	*e*P		**Pn**	**16 52 44.6**	**+2.5**
SMKR	**Semkarok**	**4.01**	**15**	PN		**Pn**	**16 52 46.0**	**+3.1**
SMKR	**Semkarok**	**4.01**	**15**	*e*P		**Pn**	**16 52 46.0**	**+3.1**
SRKR	**Sorokina**	**4.04**	**12**	PN		**Pn**	**16 52 45.3**	**+2.0**
SRKR	**Sorokina**	**4.04**	**12**	*e*P		**Pn**	**16 52 45.3**	**+2.0**
BKI	**Bering**	**4.50**	**54**	PN		**Pn**	**16 52 48.7**	**-0.7**
BKI	**Bering**	**4.50**	**54**	*e*P		**Pn**	**16 52 48.7**	**-0.7**
BKI				*e*S		**Sn**	**16 53 37.3**	**-3.0**
MA2	**Magadan**	**8.46**	**328**	LR		LR	16 57 07.6	
	comp=E,70nm,21.6s,baz=132,slow=39							
SMY	**Shemya**	**8.79**	**84**	Pn		**Pn**	**16 53 49.6**	**+1.5**
SMY	**Shemya**	**8.79**	**84**	PN		**Pn**	**16 53 49.6**	**+1.5**
SEY	**Seymchan**	**10.93**	**342**	*i* PN		**Pn**	**16 54 14.2**	**-3.2**
SEY				pmax	pmax			
	comp=Z,12nm,2.8s							
SHO	**Shikotan**	**12.27**	**229**	*e*PN		**Pn**	**16 54 34.2**	**-1.6**
YUK	**Yuzh-Kuril'sk**	**12.60**	**232**	*i* PN		**Pn**	**16 54 42.0**	**+1.7**
ERM	**Erimo**	**15.43**	**233**	Pn		**Pn**	**16 55 15.9**	**-2.0**
ERM				IAmb	IAmb		16 55 27.6	
	comp=Z,20nm,0.9s							
ERM	**Erimo**	**15.43**	**233**	P		**Pn**	**16 55 15.9**	**-2.0**
ERM				pmax	pmax			
	comp=Z,20nm,1.0s							
BILL	**Bilibino**	**15.70**	**9**	P		**P**	**16 55 24.8**	**+0.5**
BILL	**Bilibino**	**15.70**	**9**	*e*P		**Pn**	**16 55 19.1**	**-2.1**
BILL				pmax	pmax			
	comp=Z,2.0nm,1.1s							
BILL				MLR	MLR			
	comp=Z,21nm,13.0s							
JTM	**Tenmabayashi**	**17.38**	**234**	Pn		**Pn**	**16 55 38.5**	**-3.9**
JTM				IAmb	IAmb		16 55 40.7	
	comp=Z,21nm,1.1s							
KLR	**Kul'dur**	**17.85**	**270**	LR		LR	17 02 00.6	
	comp=Z,29nm,21.8s,baz=106,slow=35							
KLR	**Kul'dur**	**17.85**	**270**	*i* P		**P**	**16 55 49.0**	**+0.8**
KLR				pmax	pmax			
	comp=Z,2.0nm,1.2s							
YAK	**Yakutsk**	**18.47**	**312**	P		**P**	**16 55 54.2**	**-0.7**
	comp=Z,3.3nm,0.5s,baz=113,slow=1.8,SNR=7.8							
YAK	**Yakutsk**	**18.47**	**312**	P		**P**	**16 55 55.2**	**+0.3**
YAK				IAmb	IAmb		16 55 56.8	
	comp=Z,8.8nm,0.7s							
YAK	**Yakutsk**	**18.47**	**312**	*e*P		**P**	**16 55 53.6**	**-1.3**
YAK				pmax	pmax			
	comp=Z,10.0nm,0.9s							
YAK				pmax	pmax			
	comp=N,2.0nm,1.2s							
YAK				pmax	pmax			
	comp=E,3.0nm,1.1s							
NIKH	**Nikolski High**	**18.96**	**77**	P		**Pn**	**16 56 05.2**	**+3.7**
JMM	**Marumori**	**19.82**	**229**	P		**P**	**16 56 09.1**	**-0.7**
JMM				IAmb	IAmb		16 56 49.2	
	comp=Z,24nm,1.4s							
JSD	**Sado**	**20.88**	**234**	P		Pn	16 56 22.0	-2.3
JSD				IAmb	IAmb		16 56 22.4	
	comp=Z,10nm,0.8s							
MAJO	**Matsushiro**	**22.09**	**231**	P		**P**	**16 56 34.4**	**+0.1**
MAJO				IAmb	IAmb		16 56 42.2	
	comp=Z,7.2nm,1.0s							
MAJO	**Matsushiro**	**22.09**	**231**	P		**P**	**16 56 34.4**	**+0.1**
MAJO				pmax	pmax			
	comp=Z,7.0nm,1.0s							
MJAR	**Matsushiro Arr**	**22.09**	**231**	P		**P**	**16 56 33.8**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=22,slow=10,SNR=3.8							
	comp=Z,1.1nm,0.5s							
TIXI	**Tiksi**	**23.30**	**336**	P		**P**	**16 56 44.1**	**-2.4**
	comp=Z,4.0nm,0.8s,baz=90,slow=23,SNR=1.9							
	comp=Z,4.0nm,0.8s							
TIXI	**Tiksi**	**23.30**	**336**	P		**P**	**16 56 44.6**	**-1.9**
TIXI				IAmb	IAmb		16 57 01.8	
	comp=Z,7.1nm,1.0s							
TIXI	**Tiksi**	**23.30**	**336**	P		**P**	**16 56 44.6**	**-1.9**
TIXI				pmax	pmax			
	comp=Z,7.0nm,1.0s							
JHS	**Saijyo**	**25.84**	**237**	P		**P**	**16 57 10.3**	**+0.4**
JHS				IAmb	IAmb		16 57 31.1	
	comp=Z,19nm,1.5s							
J20K	**Nowinta River**	**26.12**	**46**	P		**P**	**16 57 14.0**	**+1.7**
IMAR	**Indian Mountai**	**26.47**	**42**	P		**P**	**16 57 16.2**	**+0.9**
ILSW	**Iliamna Southw**	**26.65**	**55**	P		**P**	**16 57 17.1**	**-0.1**
ILSW				IAmb	IAmb		16 57 40.1	
	comp=Z,3.9nm,1.0s							
KSRS	**Korea Array**	**26.82**	**248**	P		**P**	**16 57 17.8**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=43,slow=9.9,SNR=3.0							
	comp=Z,0.9nm,0.8s							
H21K	**Melozitna Rive**	**26.82**	**43**	P		**P**	**16 57 19.8**	**+1.2**
I21K	**Tanana**	**27.12**	**44**	P		**P**	**16 57 22.9**	**+1.6**
MLY	**Manley**	**27.64**	**44**	P		**P**	**16 57 27.5**	**+1.5**
TOLK	**Toolik Lake Re**	**28.43**	**37**	P		**P**	**16 57 32.9**	**-0.1**
TOLK				IAmb	IAmb		16 57 44.5	
	comp=Z,10nm,1.4s							
WRH	**Wood River Hil**	**28.77**	**45**	P		**P**	**16 57 37.5**	**+1.5**
ILAR	**Eielson Array**	**29.28**	**45**	P		**P**	**16 57 41.5**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=264,slow=7.6,SNR=15							
	comp=Z,1.4nm,0.8s							
BMAR	**Burnt Mountain**	**30.21**	**39**	P		**P**	**16 57 49.9**	**+1.2**
SCRK	**Sand Creek**	**30.59**	**46**	P		**P**	**16 57 54.1**	**+1.9**
SCRK				IAmb	IAmb		16 58 13.2	
	comp=Z,4.7nm,1.5s							
N25K	**Chitina, Valde**	**30.60**	**51**	P		**P**	**16 57 53.2**	**+0.9**
N25K				IAmb	IAmb		16 58 11.5	
	comp=Z,5.6nm,1.2s							
K27K	**Chicken**	**31.42**	**46**	P		**P**	**16 58 00.9**	**+1.6**
L27K	**Beaver Creek,**	**31.66**	**48**	P		**P**	**16 58 03.5**	**+2.0**
L27K				IAmb	IAmb		16 58 04.5	
	comp=Z,2.3nm,0.8s							
BCAR	**Beaver Creek A**	**31.68**	**48**	P		**P**	**16 58 03.5**	**+1.8**
EGAK	**Eagle**	**31.73**	**44**	P		**P**	**16 58 02.8**	**+0.8**
EGAK				IAmb	IAmb		16 58 03.2	
	comp=Z,2.7nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**33.41**	**167**	T		T	17 34 15.1	
	baz=352,slow=

ARCES	**ARCESS Array B**	**53.55**	**342**	P		**P**		**17 00 56.5**	**-1.9**
	comp=Z,3.5nm,1.0s,baz=41,slow=7.2,SNR=1.3								
	comp=Z,3.5nm,1.0s								
NVAR	**Mina Array Bea**	**56.13**	**70**	P		**P**		**17 01 20.0**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=294,slow=6.6,SNR=6.5								
	comp=Z,0.8nm,0.7s								
NVAR	**Mina Array Bea**	**56.13**	**70**	P		**P**		**17 01 20.7**	**+2.9**
ABKAR	**Akbulak array**	**57.82**	**310**	P		**P**		**17 01 27.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**57.83**	**258**	P		**P**		**17 01 30.6**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=40,slow=7.1,SNR=1.6								
	comp=Z,0.5nm,0.6s								
PDAR	**Pinedale Array**	**57.95**	**60**	P		**P**		**17 01 32.8**	**+2.2**
	comp=Z,0.8nm,0.5s,baz=329,slow=2.6,SNR=4.9								
	comp=Z,0.8nm,0.5s								
RSSD	**Black Hills**	**59.85**	**56**	P		**P**		**17 01 45.8**	**+2.1**
RSSD				IAmb		IAmb		17 01 46.1	
	comp=Z,2.5nm,0.5s								
RSSD	**Black Hills**	**59.85**	**56**	P		**P**		**17 01 45.8**	**+2.1**
RSSD				pmax		pmax			
	comp=Z,3.0nm,0.5s								
FINES	**FINESS Array B**	**60.35**	**336**	P		**P**		**17 01 45.0**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=30,slow=8.7,SNR=5.9								
	comp=Z,1.3nm,0.6s								
FINES	**FINESS Array B**	**60.35**	**336**	P		**P**		**17 01 45.3**	**-1.2**
FINES	**FINESS Array B**	**60.35**	**336**	*eP*		**P**		**17 01 46.2**	**-0.3**
FINES				pmax		pmax			
	comp=Z,1.0nm,0.6s								
OBN	**Obninsk**	**62.67**	**327**⇑	*eP*		**P**		**17 02 01.9**	**-0.4**
OBN				*e*				17 04 21.0	
OBN				pmax		pmax			
	comp=Z,4.0nm,0.9s								
OBN				MLR		MLR			
	comp=Z,18nm,15.0s								
NC405	**NORSAR Array S**	**63.66**	**343**	P		**P**		**17 02 08.0**	**-0.8**
NOA	**NORSAR Array B**	**63.82**	**343**	P		**P**		**17 02 08.9**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=16,slow=5.1,SNR=1.8								
NOA				LR		LR		17 33 19.7	
	comp=Z,4.9nm,18.8s,baz=240,slow=39								
	comp=Z,0.3nm,0.4s								
AKASG	**Malin Array Be**	**68.78**	**329**	P		**P**		**17 02 40.4**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=31,slow=6.6,SNR=3.6								
	comp=Z,0.6nm,0.4s								
TX31	**Lajitas Ar. Si**	**71.04**	**66**	P		**P**		**17 02 57.6**	**+1.6**
TX31				IAmb		IAmb		17 02 59.0	
	comp=Z,8.0nm,1.1s								
TX32	**Lajitas Array**	**71.04**	**66**	P		**P**		**17 02 58.0**	**+1.9**
TX32				IAmb		IAmb		17 02 59.0	
	comp=Z,2.7nm,1.1s								
TXAR	**Lajitas Array**	**71.04**	**66**	P		**P**		**17 02 57.8**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=302,slow=4.6,SNR=20								
	comp=Z,1.0nm,0.5s								
TXAR	**Lajitas Array**	**71.04**	**66**	P		**P**		**17 02 58.0**	**+1.9**
CLL	**Collm**	**72.60**	**339**⇑	*iP*		**P**		**17 03 04.4**	**-0.5**
CLL				pmax		pmax			
	comp=Z,5.0nm,0.8s								
CLL	**Collm**	**72.60**	**339**⇑	*iP*		**P**		**17 03 04.4**	**-0.5**
	comp=Z,5.0nm,0.8s								
BURAR	**Bucovina Array**	**72.75**	**330**	P		**P**		**17 03 06.3**	**+0.3**
KRLC	**Kraliky**	**72.86**	**336**	*eP*		**P**		**17 03 06.5**	**-0.1**
KRLC	**Kraliky**	**72.86**	**336**	*eP*		**P**		**17 03 06.5**	**-0.1**
MORC	**Moravsky Berou**	**72.95**	**335**	P		**P**		**17 03 06.7**	**-0.4**
MORC	**Moravsky Berou**	**72.95**	**335**	P		**P**		**17 03 06.7**	**-0.4**
MORC				pmax		pmax			
	comp=Z,1.0nm,0.8s								
KHC	**Kasperske Hory**	**74.51**	**338**	*eP*		**P**		**17 03 16.7**	**+0.5**
KHC	**Kasperske Hory**	**74.51**	**338**	*eP*		**P**		**17 03 16.7**	**+0.5**
GERES	**GERESS Array B**	**74.75**	**337**	P		**P**		**17 03 17.0**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=36,slow=7.0,SNR=11								
	comp=Z,1.0nm,0.4s								
GERES	**GERESS Array B**	**74.75**	**337**	P		**P**		**17 03 17.9**	**+0.2**
WB0	**Warramunga Arr**	**75.44**	**205**	P		**P**		**17 03 22.1**	**+0.3**
WRAB	**Tennant Creek**	**75.61**	**205**	P		**P**		**17 03 22.1**	**-0.6**
WRAB				IAmb		IAmb		17 03 37.4	
	comp=Z,7.0nm,1.4s								
WRAB	**Tennant Creek**	**75.61**	**205**	P		**P**		**17 03 22.1**	**-0.6**
WRAB				pmax		pmax			
	comp=Z,7.0nm,1.4s								
WB2	**Warramunga Arr**	**75.62**	**204**	P		**P**		**17 03 22.3**	**-0.5**
WRA	**Warramunga Arr**	**75.62**	**205**	P		**P**		**17 03 23.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=18,slow=6.0,SNR=8.8								
	comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**75.62**	**205**	P		**P**		**17 03 23.3**	**+0.4**
BRTR	**Keskin Array B**	**76.72**	**320**	P		**P**		**17 03 28.1**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=26,slow=3.5,SNR=2.7								
	comp=Z,0.4nm,0.6s								
PRED	**Cave del Predi**	**77.03**	**337**	P		**P**		**17 03 30.2**	**-0.5**
CIMO	**Cimolais**	**77.42**	**337**	P		**P**		**17 03 32.2**	**-0.6**
CIMO				IAmb		IAmb		17 03 34.5	
	comp=Z,6.6nm,1.4s								
DIVS	**Divibare**	**77.49**	**331**	P		**P**		**17 03 32.4**	**-0.9**
DIVS				IAmb		IAmb		17 04 02.8	
	comp=Z,5.8nm,1.4s								
CTI	**Castel Tesino**	**77.85**	**338**	P		**P**		**17 03 34.8**	**-0.5**
CTI	**Castel Tesino**	**77.85**	**338**	P		**P**		**17 03 34.8**	**-0.5**
CTI				pmax		pmax			
	comp=Z,10.0nm,1.3s								
ASAR	**Alice Springs**	**79.30**	**204**	P		**P**		**17 03 44.4**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=16,slow=5.1,SNR=19								
	comp=Z,0.4nm,0.5s								
RAYN	**Ar Rayn**	**85.02**	**303**	P		**P**		**17 04 12.2**	**-1.2**
RAYN	**Ar Rayn**	**85.02**	**303**	P		**P**		**17 04 12.3**	**-1.2**
RAYN				pmax		pmax			
	comp=Z,4.0nm,0.7s								
VAE	**Valguarnera**	**85.21**	**333**	LR		LR		17 45 28.0	
	comp=Z,15nm,22.0s,baz=257,slow=38								
ESDC	**Sonseca Array**	**86.88**	**347**	P		**P**		**17 04 22.3**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=2.9,slow=4.7,SNR=2.3								
	comp=Z,0.5nm,0.6s								
PLCA	**Paso Flores**	**144.29**	**91**	PKP		PKPbc		17 11 12.2	+0.7
	comp=Z,1.3nm,0.6s,baz=277,slow=3.9,SNR=7.6								

RSNC 10 17:02:25.6±1.2, 6°83N×73°16W, h148km±5km, ML3.3, Mw3.7, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**187**⇑	*iP*	Pn	17 02 45.6	-0.4
BARC				*eS*	Sn	17 03 00.6	-1.0
BARC				*i*		17 03 02.9	
	comp=Z,741nm,0.3s						
BRRC	**Barranca, Sant**	**0.62**	**296**⇑	*iP*	Pn	17 02 47.4	0.0
BRRC				*eS*	Sn	17 03 04.2	+0.2
BRRC				*i*		17 03 08.6	
	comp=Z,267nm,0.1s						
PAMC	**Pamplona, Colo**	**0.68**	**42**	*eP*	Pn	17 02 48.5	+0.1
PAMC				*eS*	Sn	17 03 05.4	-0.2
PAMC				*i*		17 03 07.8	
	comp=Z,676nm,0.5s						
RUSC	**La Rusia**	**0.94**	**176**	*eP*	Pn	17 02 49.6	-0.7
RUSC				*eS*	Sn	17 03 08.4	-0.6
RUSC				*i*		17 03 09.5	
	comp=Z,394nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.32**	**257**	*eP*	Pn	17 02 52.0	-1.3
PTBC				*eS*	Sn	17 03 13.3	-1.0
PTBC				*i*		17 03 15.3	
	comp=Z,181nm,0.1s						
TAMC	**Tame, Arauca**	**1.41**	**106**⇓	*iP*	Pn	17 02 54.0	-0.2
TAMC				*eS*	Sn	17 03 15.9	-0.1
TAMC				*i*		17 03 16.8	
	comp=Z,73nm,0.3s						
SPBC	**San Pablo de B**	**1.48**	**218**	*eP*	Pn	17 02 54.5	-0.5
SPBC				*eS*	Sn	17 03 16.9	-0.6
SPBC				*i*		17 03 19.4	
	comp=Z,350nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.81**	**291**	*eP*	Pn	17 02 58.1	-0.4
ZARC				*eS*	Sn	17 03 23.6	-0.1
ZARC				*i*		17 03 32.6	
	comp=Z,172nm,0.2s						
NORC	**Norcasia**	**2.12**	**234**	*eP*	Pn	17 03 01.7	-0.4
NORC				*eS*	Sn	17 03 29.4	-0.8
NORC				*i*		17 03 35.4	
	comp=Z,236nm,0.2s						
CHIC	**Chingaza**	**2.26**	**195**	*eP*	Pn	17 03 03.8	-0.4
CHIC				*eS*	Sn	17 03 33.1	-0.7
CHIC				*i*		17 03 36.4	
	comp=Z,140nm,0.4s						
ROSC	**El Rosal**	**2.29**	**210**	*eP*	Pn	17 03 05.1	+0.6
ROSC				*eS*	Sn	17 03 34.8	+0.3
ROSC				*i*		17 03 43.9	
	comp=Z,223nm,0.3s						
HELC	**Santa Helena**	**2.44**	**255**	*eP*	Pn	17 03 06.3	0.0
HELC				*eS*	Sn	17 03 36.9	-0.7
HELC				*i*		17 03 44.5	
	comp=Z,139nm,0.4s						
UREC	**San Jos de Ur**	**2.53**	**291**	*eP*	Pn	17 03 06.3	-0.7
UREC				*eS*	Sn	17 03 37.9	-1.1
UREC				*i*		17 03 48.4	
	comp=Z,124nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.72**	**234**	*eP*	Pn	17 03 09.7	-0.1
GUY2C				*eS*	Sn	17 03 43.1	-0.7
GUY2C				*i*		17 03 51.8	
	comp=Z,171nm,0.3s						
VILC	**Villavicencio,**	**2.75**	**191**	*eP*	Pn	17 03 09.3	-0.6
VILC				*eS*	Sn	17 03 43.8	-0.4
VILC				*i*		17 03 46.5	
	comp=Z,175nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.81**	**159**⇑	*iP*	Pn	17 03 08.8	-1.7
PTGC				*eS*	Sn	17 03 42.0	-3.2
PTGC				*i*		17 03 47.1	
	comp=Z,182nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.89**	**358**	*eP*	Pn	17 03 10.8	-0.7
LL6C				*eS*	Sn	17 03 44.2	-2.8
LL6C				*i*		17 03 51.7	
	comp=Z,54nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.00**	**251**	*eP*	Pn	17 03 13.3	+0.3
CBOC				*eS*	Sn	17 03 50.1	+0.4
CBOC				*i*		17 04 06.8	
	comp=Z,42nm,0.4s						
ARGC	**Ariguani, Magd**	**3.19**	**340**	*eP*	Pn	17 03 16.7	+1.3
ARGC				*eS*	Sn	17 03 54.3	+0.3
ARGC				*i*		17 04 05.9	
	comp=Z,45nm,0.3s						
PRAC	**Prado**	**3.54**	**209**	*eP*	Pn	17 03 19.0	-1.0
PRAC				*eS*	Sn	17 04 01.4	-0.7
PRAC				*i*		17 04 07.8	
	comp=Z,84nm,0.2s						
SJCC	**San Jacinto, C**	**3.65**	**327**	*eP*	Pn	17 03 19.9	-1.4
SJCC				*eS*	Sn	17 04 00.9	-3.5
SJCC				*i*		17 04 08.0	
	comp=Z,36nm,0.5s						
PLMC	**San Jos del P**	**3.65**	**239**	*eP*	Pn	17 03 21.2	-0.1
PLMC				*eS*	Sn	17 04 03.5	-1.2
PLMC				*i*		17 04 08.2	
	comp=Z,44nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.17**	**4**	*eP*	Pn	17 03 26.1	-2.1
CRJC				*eS*	Sn	17 04 13.5	-3.4
CRJC				*i*		17 04 18.1	
	comp=Z,59nm,0.2s						
YOTC	**Yotoco, Valle**	**4.25**	**228**	*eP*	Pn	17 03 28.7	-0.6
YOTC				*eS*	Sn	17 04 18.9	+0.2
YOTC				*i*		17 04 29.9	
	comp=Z,10nm,0.4s						
SMRC	**Santa Marta, M**	**4.43**	**346**	*eP*	Pn	17 03 31.1	-0.4
SMRC				*eS*	Sn	17 04 18.4	-4.4
SMRC				*i*		17 04 22.1	
	comp=Z,42nm,0.2s						
CAPC	**Capurgana**	**4.53**	**294**	*eP*	Pn	17 03 30.5	-2.3
CAPC				*eS*	Sn	17 04 20.9	-4.2
CAPC				*i*		17 04 23.7	
	comp=Z,20nm,0.1s						
MACC	**Macarena, Meta**	**4.71**	**188**	*eP*	Pn	17 03 32.5	-2.7
MACC				*eS*	Sn	17 04 24.6	-4.8
MACC				*i*		17 04 28.0	
	comp=Z,23nm,0.4s						
GARC	**Garzon, Huila**	**5.17**	**207**	*eP*	Pn	17 03 39.6	-1.9
GARC				*eS*	Sn	17 04 35.6	-5.1
GARC				*i*		17 04 42.0	
	comp=Z,39nm,0.3s						
FLOC	**Florencia**	**5.78**	**206**	*eP*	Pn	17 03 48.6	-0.8
FLOC				*eS*	Sn	17 04 53.4	-1.6
FLOC				*i*		17 05 33.9	
	comp=Z,4.8nm,0.4s						

*IDC **10** 17:11:35.6±1.7, 17°68S×178°75W, h582km±16km, mb3.6/7, mbtmp4.5/9, Error ellipse: s-maj=63.0km s-min=14.1km az=149.0*
*NEIC **10** 17:11:35.1±1.4, 17°9S±0°1×178°6W±0°1, h582km±9km, mb4.2/58, Error ellipse: s-maj=22.5km s-min=17.6km az=141.0*

ISC 10 17:11:34.9±0.6, 17°8S±0°2×178°7W±0°1, h579km, n83, σ0s71/86, mb4.1/37, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.13**	**271**	P	**P**	**17 12 54.2**	**+1.1**
	93nm,0.8s,baz=108,slow=13,SNR=41						
MSVF	**Nonsavu**	**3.13**	**271**	P	**P**	**17 12 53.9**	**+0.7**
MARNC	**Mare, Loyalty**	**13.04**	**252**	P	**P**	**17 14 23.4**	**-0.9**
DZM	**Mont Dzumac**	**14.62**	**251**	P	**P**	**17 14 41.3**	**+1.1**
	16nm,0.6s,baz=83,slow=19,SNR=17						
DZM	**Mont Dzumac**	**14.62**	**251**	P	**P**	**17 14 41.6**	**+1.4**
KOUNC	**Koumac, New Ca**	**16.33**	**258**	P	**P**	**17 14 56.8**	**+0.6**
EIDS	**Eidsvold**	**29.06**	**250**	P	**P**	**17 16 49.2**	**-0.6**
ARMA	**Armidale**	**29.77**	**240**	P	**P**	**17 16 56.1**	**+0.2**
CTAO	**Charters Tower**	**33.21**	**260**	P	**P**	**17 17 25.2**	**-0.1**
COEN	**Coen**	**36.85**	**270**	P	**P**	**17 17 55.4**	**-0.1**
TOO	**Toolangi**	**37.03**	**231**	P	**P**	**17 17 56.8**	**+0.2**
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**17 18 08.7**	**+0.4**
	17nm,0.5s,baz=86,slow=9.9,SNR=72						
	17nm,0.5s						
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**17 18 09.0**	**+0.7**
STKA				IAmb	IAmb	17 18 09.9	
	comp=Z,5.6nm,1.1s						
BBOO	**Buckleboo**	**43.23**	**241**	P	**P**	**17 18 45.9**	**-0.2**
WR0	**Warramunga Arr**	**44.21**	**259**	P	**P**	**17 18 53.2**	**-0.7**
WR0				IAmb	IAmb	17 19 00.8	
	comp=Z,9.7nm,1.2s						
WB0	**Warramunga Arr**	**44.37**	**260**	P	**P**	**17 18 54.3**	**-0.8**
WB2	**Warramunga Arr**	**44.39**	**259**	P	**P**	**17 18 54.7**	**-0.6**
WRAB	**Tennant Creek**	**44.39**	**259**	P	**P**	**17 18 54.4**	**-0.9**
WRAB				IAmb	IAmb	17 18 55.6	
	comp=Z,11nm,0.7s						
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**17 18 54.7**	**-0.7**
	comp=Z,10nm,0.7s,baz=96,slow=7.1,SNR=286						
WRA				PcP	**PcP**	**17 20 26.3**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=98,slow=3.1,SNR=3.8						
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**	**17 18 53.8**	**-1.5**
AS31	**Alice Springs**	**44.57**	**254**	P	**P**	**17 18 56.6**	**-0.1**
ASAR	**Alice Springs**	**44.57**	**254**	P	**P**	**17 18 56.8**	**+0.1**
	comp=Z,81nm,0.6s,baz=88,slow=8.2,SNR=2324						
ASAR				PcP	**PcP**	**17 20 26.8**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=102,slow=4.1,SNR=4.3						
ASAR				ScP	**ScP**	**17 23 25.0**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=96,slow=4.7,SNR=2.7						
ASAR	**Alice Springs**	**44.57**	**254**	P	**P**	**17 18 56.4**	**-0.3**
MTN	**Manton Dam**	**48.55**	**268**	P	**P**	**17 19 26.1**	**-0.6**
FORT	**Forrest**	**49.82**	**245**	P	**P**	**17 19 34.3**	**-1.4**
KNRA	**Kununurra**	**50.25**	**264**	P	**P**	**17 19 38.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**52.80**	**261**	P	**P**	**17 19 57.7**	**+0.2**
PSA00	**Pilbara Seismi**	**57.69**	**255**	P	**P**	**17 20 30.7**	**-0.7**
PSA00	**Pilbara Seismi**	**57.69**	**255**	P	**P**	**17 20 30.6**	**-0.8**
PSA00				IAmb	IAmb	17 20 31.8	
	comp=Z,13nm,0.7s						
MBWA	**Marble Bar**	**57.85**	**256**	P	**P**	**17 20 31.8**	**-0.7**
MBWA				IAmb	IAmb	17 20 32.5	
	comp=Z,7.8nm,0.6s						
QSPA	**South Pole Qui**	**72.22**	**180**	P	**P**	**17 22 01.8**	**-0.1**
KSM	**Kuching**	**72.43**	**277**	P	**P**	**17 22 04.5**	**+0.6**
KSM				IAmb	IAmb	17 22 05.8	
	comp=Z,12nm,0.8s						
SII	**Sitkinak Islan**	**76.91**	**14**	P	**P**	**17 22 27.4**	**-0.6**
ISA	**Isabella, Lake**	**77.94**	**46**	P	**P**	**17 22 34.2**	**0.0**
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	**17 22 42.7**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=225,slow=9.0,SNR=15						
	comp=Z,1.9nm,0.7s						
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	**17 22 42.3**	**-0.4**
O18K	**Koktuh Hills**	**79.73**	**12**	P	**P**	**17 22 42.0**	**-1.0**
O18K				IAmb	IAmb	17 22 43.3	
	comp=Z,11nm,0.9s						
J04D	**Umpqua Nationa**	**79.87**	**38**	P	**P**	**17 22 45.0**	**+0.6**
J04D				IAmb	IAmb	17 22 46.0	
	comp=Z,11nm,0.8s						
MOD	**Modoc Plateau**	**80.19**	**40**	P	**P**	**17 22 46.2**	**+0.3**
MOD				IAmb	IAmb	17 22 47.1	
	comp=Z,3.8nm,0.7s						
ILSW	**Illiamna Southw**	**80.26**	**13**	P	**P**	**17 22 44.6**	**-1.2**
ILSW				IAmb	IAmb	17 22 45.7	
	comp=Z,8.4nm,0.8s						
K05A	**Summer Lake**	**80.30**	**39**	P	**P**	**17 22 46.8**	**+0.2**
K05A				IAmb	IAmb	17 22 48.1	
	comp=Z,8.1nm,1.1s						
PINE	**Pine Mountain**	**80.88**	**38**	P	**P**	**17 22 50.0**	**+0.4**
PINE				IAmb	IAmb	17 22 51.1	
	comp=Z,6.1nm,0.9s						
PRN	**Pahroc Range**	**81.20**	**46**	P	**P**	**17 22 52.1**	**+0.8**
PRN				IAmb	IAmb	17 22 52.5	
	comp=Z,3.6nm,0.7s						
BMN	**Battle Mountai**	**81.32**	**43**	P	**P**	**17 22 52.0**	**+0.1**
BMN				IAmb	IAmb	17 22 52.6	
	comp=Z,3.4nm,0.7s						
WVOR	**Wild Horse Val**	**81.51**	**40**	P	**P**	**17 22 53.0**	**+0.3**
I07A	**Izee**	**81.90**	**39**	P	**P**	**17 22 55.0**	**+0.3**
I07A				IAmb	IAmb	17 22 56.0	
	comp=Z,3.8nm,0.8s						
J08A	**Circle Bar Ran**	**82.12**	**40**	P	**P**	**17 22 56.7**	**+0.9**
J08A				IAmb	IAmb	17 22 57.0	
	comp=Z,7.2nm,1.2s						
X16A	**Lo Mia Camp, P**	**82.32**	**50**	P	**P**	**17 22 57.9**	**+0.7**
PSUT	**Pine Spring**	**82.58**	**46**	P	**P**	**17 22 58.3**	**-0.1**
U15A	**North Rim**	**82.65**	**48**	P	**P**	**17 22 59.2**	**+0.3**
U15A				IAmb	IAmb	17 23 00.5	
	comp=Z,4.0nm,0.7s						
ELK	**Elko**	**82.77**	**43**	P	**P**	**17 22 59.0**	**-0.3**
GHO	**Glory Hole Cre**	**82.79**	**14**	P	**P**	**17 22 58.0**	**-0.7**
GHO				IAmb	IAmb	17 22 58.9	
	comp=Z,6.4nm,0.6s						
G08A	**Pilot Rock**	**82.90**	**38**	P	**P**	**17 22 59.8**	**+0.1**
K20K	**Telida**	**83.17**	**11**	P	**P**	**17 23 00.4**	**-0.1**
K20K				IAmb	IAmb	17 23 01.1	
	comp=Z,3.9nm,0.8s						
SCM	**Sheep Creek Mo**	**83.21**	**14**	P	**P**	**17 23 00.1**	**-0.7**
SCM				IAmb	IAmb	17 23 01.1	
	comp=Z,5.9nm,0.6s						
N25K	**Chitina, Valde**	**83.69**	**16**	P	**P**	**17 23 02.9**	**-0.3**
N25K				IAmb	IAmb	17 23 03.6	
	comp=Z,5.9nm,0.8s						
D08A	**Wollman Farm,**	**83.91**	**36**	P	**P**	**17 23 04.5**	**0.0**
D08A				IAmb	IAmb	17 23 05.6	
	comp=Z,3.2nm,1.0s						
E09A	**Wood Farm, Sta**	**84.05**	**37**	P	**P**	**17 23 04.6**	**-0.6**
E09A				IAmb	IAmb	17 23 05.9	
	comp=Z,5.9nm,1.3s						
RND	**Reindeer**	**84.25**	**13**	P	**P**	**17 23 05.0**	**-0.8**
RND				IAmb	IAmb	17 23 06.1	
	comp=Z,4.4nm,0.6s						
F10A	**Beach Ranch, E**	**84.29**	**38**	P	**P**	**17 23 06.2**	**-0.3**
F10A				IAmb	IAmb	17 23 07.3	
	comp=Z,4.3nm,1.0s						
HLID	**Hailey**	**84.73**	**41**	P	**P**	**17 23 08.7**	**-0.2**
CCB	**Clear Creek Bu**	**85.56**	**13**	IAmb	IAmb	17 23 11.3	
	comp=Z,2.3nm,0.6s						
CCB				P	**P**	**17 23 11.4**	**-0.7**
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**17 23 12.5**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=222,slow=5.1,SNR=18						
	comp=Z,0.8nm,0.4s						
TX31	**Lajitas Ar. Si**	**86.16**	**58**	P	**P**	**17 23 16.8**	**+0.9**
TX31				IAmb	IAmb	17 23 17.5	
	comp=Z,9.8nm,0.9s						
TX32	**Lajitas Array**	**86.16**	**58**	P	**P**	**17 23 16.8**	**+0.9**
TX32				IAmb	IAmb	17 23 17.5	
	comp=Z,3.4nm,0.9s						
TXAR	**Lajitas Array**	**86.16**	**58**	P	**P**	**17 23 16.8**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=218,slow=6.2,SNR=28						
	comp=Z,2.2nm,0.8s						
TXAR	**Lajitas Array**	**86.16**	**58**	P	**P**	**17 23 16.6**	**+0.6**
ANMO	**Albuquerque**	**86.24**	**52**	P	**P**	**17 23 15.3**	**-1.0**
MCMT	**McKenzie Canyo**	**86.34**	**41**	P	**P**	**17 23 17.3**	**+0.7**
J26L	**Joseph Creek**	**86.39**	**14**	P	**P**	**17 23 15.8**	**-0.4**
J26L				IAmb	IAmb	17 23 16.6	
	comp=Z,1.6nm,0.6s						
HHC	**Hu-ho-hao-te**	**87.04**	**315**	*eP*	**P**	**17 23 20.9**	**+1.1**
HHC				pmax	pmax		
	comp=Z,41nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,4.9s						
PD31	**Pinedale Array**	**87.47**	**44**	P	**P**	**17 23 21.0**	**-1.0**
PD31				IAmb	IAmb	17 23 22.1	
	comp=Z,1.5nm,0.6s						
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	**17 23 21.9**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=210,slow=2.8,SNR=7.9						
	comp=Z,1.3nm,0.5s						
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	**17 23 21.1**	**-0.8**
CMAR	**Chiang Mai Air**	**88.62**	**290**	P	**P**	**17 23 29.1**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=116,slow=3.7,SNR=6.0						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**88.62**	**290**	P	**P**	**17 23 27.0**	**-0.6**
TROLL	**Troll, Antarti**	**90.38**	**180**	P	**P**	**17 23 35.5**	**+0.6**
VNA3	**Neumayer Olymp**	**90.83**	**176**	P	**P**	**17 23 36.2**	**-0.6**
VNA1	**Neumayer--Stat**	**91.50**	**177**	P	**P**	**17 23 40.4**	**+0.6**
MKAR	**Makanchi Array**	**108.90**	**314**	PKiKP	**PKiKP**	**17 28 57.5**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=226,slow=3.7,SNR=5.0						
LODK	**Lodwar**	**143.71**	**251**		**PKPdf**	**17 30 05.5**	**-0.2**
BRTR	**Keskin Array B**	**144.55**	**315**	PKP	**PKPdf**	**17 30 06.0**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=

CO06 Fray Jorge 0.12 290 ⇑*iP* **Pn 17 37 15.1 +0.6**
CO06 *i* S **Sn 17 37 20.8 +1.2**
CO06 IAML 17 37 21.4
comp=N,144μm,0.4s
CO02 Combarbal 0.65 139 Pn 17 37 19.3 -0.9
CO02 **Sn 17 37 28.5 -1.0**
CO02 Combarbal 0.65 139 ⇓*iP* **Pn 17 37 19.6 -0.6**
CO02 *i* S **Sn 17 37 28.5 -1.0**
CO02 IAML 17 37 29.5
comp=N,85μm,0.1s
CO02 Combarbal 0.65 139 *eP* **Pn 17 37 19.0 -1.2**
CO02 *e*S **Sn 17 37 29.0 -0.5**
CO02 IAML 17 37 31.2
comp=Z,11μm,0.7s
CO03 El Pedregal 0.71 100 Pn 17 37 20.2 -0.8
CO03 **Sn 17 37 29.2 -1.7**
CO03 El Pedregal 0.71 100 ⇓*iP* **Pn 17 37 20.5 -0.5**
CO03 *e*S **Sn 17 37 29.2 -1.7**
CO03 El Pedregal 0.71 100 *eP* **Pn 17 37 20.0 -1.0**
CO03 *e*S **Sn 17 37 30.9 0.0**
CO03 IAML 17 37 33.8
comp=Z,10μm,0.9s
CO05 La Serena 0.83 16 Pn 17 37 23.2 +0.7
CO05 **Sn 17 37 34.7 +1.1**
CO05 La Serena 0.83 16 *i* P **Pn 17 37 23.2 +0.7**
CO05 *e*S **Sn 17 37 33.4 -0.2**
CO05 IAML 17 37 40.7
comp=E,34μm,0.3s
CO01 Juntas del Tor 1.42 59 Pn 17 37 31.9 +1.1
CO01 Sn **Sn 17 37 47.4 -1.1**
CO01 Juntas del Tor 1.42 59 ⇓*iP* **Pn 17 37 31.9 +1.1**
CO01 *e*S **Sn 17 37 49.9 +1.4**
CO01 Juntas del Tor 1.42 59 *eP* **Pn 17 37 31.8 +0.9**
CO01 *e*P **Pn 17 37 32.0 +1.1**
CO01 *e*S **Sn 17 37 51.0 +2.5**
CO01 IAML 17 37 53.3
comp=Z,2μm,0.6s
AROD Rodeo 1.83 73 *e*P **Pn 17 37 39.3 +2.7**
AROD *e*S **Sn 17 37 57.8 -1.0**
LCO Las Campanas 1.84 22 Pn **Pn 17 37 37.5 +1.0**
LCO Las Campanas 1.84 22 ⇓*iP* **Pn 17 37 37.6 +1.0**
LCO *i* S **Sn 17 38 01.0 +2.3**
LCO Las Campanas 1.84 22 *eP* **Pn 17 37 37.0 +0.4**
VA06 Catapilco 1.85 175 Pn 17 37 36.3 -0.1
VA06 Catapilco 1.85 175 *e*P **Pn 17 37 36.4 -0.1**
VA06 *e*S **Sn 17 38 00.1 +1.5**
VA06 IAML 17 38 12.7
comp=N,4μm,0.5s
ACCO Cerro Coronel 2.10 87 *e*P **Pn 17 37 43.0 +2.7**
ACCO *e*P **Pn 17 37 43.2 +3.0**
ACDV Cuesta del Vie 2.13 76 *e*P **Pn 17 37 43.0 +2.5**
ACDV *e*S Sn 17 38 24.3 +19
ACDV IAML 17 38 29.5
comp=Z,1μm,1.1s
AC05 El Transito 2.16 30 Pn 17 37 42.5 +1.6
AC05 El Transito 2.16 30 ⇓*iP* **Pn 17 37 42.8 +2.0**
AC05 *e*S **Sn 17 38 09.7 +3.2**
AC05 IAML 17 38 13.9
comp=E,5μm,0.4s
AC05 El Transito 2.16 30 *eP* **Pn 17 37 42.8 +2.0**
AC05 *e*P **Pn 17 37 43.0 +2.1**
AC05 *e*S **Sn 17 38 10.8 +4.3**
AC05 IAML 17 38 12.9
comp=Z,3μm,1.1s
RTLS Leoncito 2.17 120 *eP* **Pn 17 37 43.8 +2.5**
RTLS IAML 17 38 18.0
comp=Z,1μm,0.4s
VA03 San Esteban 2.19 159 Pn 17 37 41.8 +0.5
VA03 San Esteban 2.19 159 *e*P **Pn 17 37 42.2 +0.8**
VA03 *e*S **Sn 17 38 09.0 +1.7**
VA03 IAML 17 38 21.1
comp=E,4μm,0.4s
VA03 San Esteban 2.19 159 *eP* **Pn 17 37 42.0 +0.7**
VA03 IAML 17 38 26.4
comp=Z,2μm,0.8s
ROCH El Roble 2.29 170 *eP* **Pn 17 37 42.9 +0.2**
ROCH *i* P **Pn 17 37 43.0 +0.2**
ROCH *e*S **Sn 17 38 11.0 +1.3**
ROCH *e*S **Sn 17 38 14.2 +4.5**
ROCH IAML 17 38 26.5
comp=N,3μm,0.7s
ROC1 El Roble 2.29 170 Pn 17 37 42.7 -0.1
ROC1 El Roble 2.29 170 *e*P **Pn 17 37 43.0 +0.2**
ROC1 *e*S **Sn 17 38 13.5 +3.7**
VA01 Torpederas 2.30 183 Pn 17 37 42.4 -0.3
PEL Peldehue 2.52 164 Pn 17 37 45.4 -0.3
PEL Peldehue 2.52 164 *e*P **Pn 17 37 46.5 +0.8**
PEL *e*S **Sn 17 38 17.6 +2.4**
PEL IAML 17 38 31.1
comp=N,2μm,0.6s
PEL Peldehue 2.52 164 *eP* **Pn 17 37 46.6 +0.8**
PEL *e*P **Pn 17 37 47.0 +1.3**
PEL *e*S **Sn 17 38 21.8 +6.6**
AC04 Llanos de Chal 2.53 9 Pn **Pn 17 37 47.0 +1.1**
AC04 Llanos de Chal 2.53 9 *e*P **Pn 17 37 47.0 +1.1**
AC04 *e*S **Sn 17 38 17.4 +1.9**
AC04 IAML 17 38 31.9
comp=E,3μm,0.2s
AC04 Llanos de Chal 2.53 9 *eP* **Pn 17 37 47.0 +1.1**
AC04 *e*S **Sn 17 38 10.8 -4.7**
AC04 *e*S **Sn 17 38 16.8 +1.3**
AC04 IAML 17 38 35.8
comp=Z,2μm,0.7s
MT02 Curacav 2.55 173 Pn **Pn 17 37 46.2 0.0**
MT02 Curacav 2.55 173 *e*P **Pn 17 37 46.2 0.0**
MT02 *e*S **Sn 17 38 17.3 +1.3**
MT02 Curacav 2.55 173 *e*P **Pn 17 37 46.0 -0.2**
MT02 *e*S **Sn 17 38 21.3 +5.3**
MT02 IAML 17 38 30.3
comp=Z,1μm,0.8s
ZON Zonda 2.56 110 Pn **Pn 17 37 45.9 -0.4**
ZON Zonda 2.56 110 *e*P **Pn 17 37 49.0 +2.7**
ZON IAML 17 38 40.4
comp=Z,2μm,0.7s
RTLL Cerro Villicun 2.67 104 *eP* **Pn 17 37 50.0 +2.2**
RTLL *e*S **Sn 17 38 20.8 +1.9**
MT05 Renca 2.74 167 Pn **Pn 17 37 48.5 -0.4**
MT05 Renca 2.74 167 *e*P **Pn 17 37 49.7 +0.9**
MT05 *e*S **Sn 17 38 24.4 +3.6**
MT05 IAML 17 38 36.8
comp=E,4μm,0.3s
MT05 Renca 2.74 167 *eP* **Pn 17 37 50.0 +1.2**
MT05 *e*S **Sn 17 38 24.8 +4.0**
MT05 IAML 17 38 47.9
comp=Z,1μm,1.6s
RTCV Cerro Valdivia 2.78 115 *eP* **Pn 17 37 48.8 -0.5**
RTCV *e*P **Pn 17 37 53.0 +3.7**
RTCV *e*S Sn 17 38 43.7 +22
FCH Farellones 2.80 159 *eP* **Pn 17 37 51.4 +1.6**
FCH *e*S **Sn 17 38 24.8 +2.3**
FCH IAML 17 38 47.4
comp=E,927nm,0.8s
MT03 Universidad Ad 2.89 163 Pn 17 37 50.3 -0.7
MT03 Universidad Ad 2.89 163 *eP* **Pn 17 37 51.8 +0.9**
MT03 IAML 17 38 40.8
comp=E,2μm,0.5s
MT03 Universidad Ad 2.89 163 *eP* **Pn 17 37 52.4 +1.5**
MT03 *e*P **Pn 17 37 53.0 +2.1**
MT03 *e*S **Sn 17 38 29.3 +4.8**
MT03 IAML 17 38 51.2
comp=Z,1μm,0.8s
VA05 Santo Domingo 2.93 182 Pn 17 37 50.8 -0.6
VA05 Santo Domingo 2.93 182 *eP* **Pn 17 37 50.7 -0.6**
VA05 IAML 17 38 38.5
comp=N,1μm,0.4s
ASAL Salagasta 2.94 130 *eP* **Pn 17 37 54.0 +2.4**
ASAL *e*S Sn 17 38 37.1 +11
ARCO CERRO ARCO 3.04 135 *eP* **Pn 17 37 55.5 +2.5**
ARCO *e*S Sn 17 38 44.6 +16
ARCO IAML 17 38 53.2
comp=Z,1μm,1.6s
MT09 Talagante 3.08 172 Pn 17 37 53.4 -0.1
MT09 Talagante 3.08 172 *eP* **Pn 17 37 54.3 +0.7**
MT09 IAML 17 38 50.3
comp=N,1μm,0.3s
MT01 Popeta 3.14 176 Pn 17 37 54.1 -0.3
MT01 Popeta 3.14 176 *eP* **Pn 17 37 54.3 -0.1**
MT01 IAML 17 38 52.8
comp=N,748nm,0.6s
MT01 Popeta 3.14 176 *eP* **Pn 17 37 54.0 -0.3**
MT01 *e*P **Pn 17 37 54.2 -0.1**
MT01 *e*S **Sn 17 38 31.8 +1.2**

MT01 IAML 17 39 02.5
comp=Z,524nm,0.8s
AAGR Agrelo 3.28 137 *eP* **Pn 17 38 00.0 +3.8**
GO03 Copiap 3.30 20 Pn 17 37 57.9 +1.3
GO03 Copiap 3.30 20 *e*P **Pn 17 37 57.9 +1.3**
GO03 Copiap 3.30 20 *eP* **Pn 17 37 58.0 +1.4**
GO03 *e*S **Sn 17 38 38.8 +4.2**
LMEL Las Melosas 3.31 161 Pn 17 37 55.8 -0.9
LMEL Las Melosas 3.31 161 *eP* **Pn 17 37 58.3 +1.6**
LMEL *i* S **Sn 17 38 37.8 +2.9**
LMEL IAML 17 38 53.8
comp=N,768nm,0.4s
VCA Vinchina 3.48 56 *eP* **Pn 17 37 57.8 -1.3**
VCA *e*S Sn 17 38 48.8 +10
VCA IAML 17 38 57.0
comp=Z,3μm,0.6s
AVFE Valle Fertil 3.48 90 *e*S Sn 17 38 48.5 +9.5
AVFE IAML 17 38 50.4
comp=Z,762nm,0.7s
BO01 Tunca 3.68 175 Pn **Pn 17 38 01.4 -0.2**
BO01 Tunca 3.68 175 *e*P **Pn 17 38 01.6 -0.1**
BO01 Tunca 3.68 175 *eP* **Pn 17 37 57.8 -3.9**
BO01 IAML 17 39 04.8
comp=Z,384nm,1.5s
BO03 Pichilemu 3.79 186 *eP* **Pn 17 38 01.6 -1.5**
BO02 Sierra Bellavi 4.11 172 Pn **Pn 17 38 07.4 -0.2**
BO02 Sierra Bellavi 4.11 172 *e*P **Pn 17 38 07.8 +0.2**
BO02 Sierra Bellavi 4.11 172 *eP* **Pn 17 38 08.3 +0.7**
BO02 *e*S **Sn 17 39 00.8 +6.4**
ACLC CERRO LA CRUZ 4.15 73 *eP* **Pn 17 38 10.6 +2.4**
ACLC IAML 17 39 25.3
comp=Z,450nm,0.5s
GO05 Huala 4.30 185 Pn 17 38 08.5 -1.6
GO05 Huala 4.30 185 *eP* **Pn 17 38 08.6 -1.6**
AC02 Maricunga 4.39 29 Pn **Pn 17 38 11.9 0.0**
AC02 Maricunga 4.39 29 *eP* **Pn 17 38 12.2 +0.4**
AC01 Pan de Azucar 4.62 10 Pn **Pn 17 38 13.7 -1.0**
AC01 Pan de Azucar 4.62 10 *eP* **Pn 17 38 13.8 -0.8**
ML02 Panimavida 5.03 179 Pn **Pn 17 38 18.5 -1.7**
ML02 Panimavida 5.03 179 *eP* **Pn 17 38 20.5 +0.3**
GO02 Mina Guanaco 5.79 17 Pn **Pn 17 38 31.0 +0.1**
H03N1 Juan Fernandez 6.85 245 T T 17 45 43.9
baz=71,slow=72,SNR=2689
VA04 Juan Fernndez 6.86 243 Pn **Pn 17 38 43.5 -1.8**
H03N3 Juan Fernandez 6.87 245 T T 17 45 51.8
baz=71,slow=72,SNR=2279
H03N2 Juan Fernandez 6.87 245 T T 17 45 42.6
baz=71,slow=72,SNR=2804
H03S3 Juan Fernandez 7.00 242 T T 17 45 58.5
baz=84,SNR=16
H03S1 Juan Fernandez 7.00 242 T T 17 45 56.6
baz=84,SNR=6.4
H03S2 Juan Fernandez 7.02 242 T T 17 46 02.2
baz=84,SNR=9.3
PB15 IPOC Station P 7.70 14 Pn 17 38 56.9 -0.1
LVC Limon Verde 8.40 17 P **Pn 17 39 06.4 -0.4**
comp=Z,2.1nm,0.2s,baz=248,slow=18,SNR=18
LVC S **Sn 17 40 39.4 -1.1**
comp=Z,61nm,0.8s,baz=170,slow=22,SNR=2.7
LVC LR LR 17 42 14.5
comp=Z,272nm,21.5s,baz=210,slow=37
LVC Limon Verde 8.40 17 Pn **Pn 17 39 06.5 -0.2**
LVC Limon Verde 8.40 17 *eP* **Pn 17 39 06.6 -0.2**
GO06 Curarrehue 8.85 180 Pn **Pn 17 39 11.7 -1.0**
PB07 IPOC Station P 9.07 10 Pn **Pn 17 39 16.2 +0.4**
PLCA Paso Flores 10.02 176 *eP* **Pn 17 39 26.3 -2.4**
LL04 Puerto Octay 10.20 184 Pn 17 39 28.8 -2.2
TRQA Tornquist 10.74 136 Pn 17 39 37.5 -1.0
ITQB Itaqui 12.91 89 Pn **Pn 17 40 05.7 -2.4**
ITQB Itaqui 12.91 89 *eP* **Pn 17 40 07.5 -0.6**
CPUP Villa Florida 13.20 74 P **Pn 17 40 09.8 -2.3**
comp=Z,1.6nm,0.6s,baz=212,slow=18,SNR=2.2
CPUP S **Sn 17 42 37.5 0.0**
comp=Z,13nm,0.9s,baz=216,slow=17,SNR=2.5
CPUP LR LR 17 45 55.9
comp=Z,218nm,19.7s,baz=250,slow=40
CPUP Villa Florida 13.20 74 *eP* **Pn 17 40 11.0 -1.1**
UNIS Unistalda (Bra 14.35 88 *eP* **Pn 17 40 25.9 -1.8**
LPAZ La Paz 14.69 13 P **Pn 17 40 33.6 +0.8**
comp=Z,9.1nm,0.8s,baz=188,slow=6.8,SNR=33
LPAZ La Paz 14.69 13 Pn **Pn 17 40 34.5 +1.6**
LPAZ La Paz 14.69 13 *eP* **Pn 17 40 34.8 +1.9**
CPSB Cacapava Do Su 15.56 93 *eP* **Pn 17 40 41.7 -1.9**
CRSM Crissiumal (Br 15.59 82 *eP* **Pn 17 40 43.0 -1.1**
ALGR Alto Alegre (B 16.16 88 *eP* **Pn 17 40 50.5 -0.6**
ANTJ Antonio Joao (16.36 62 *eP* **Pn 17 40 54.6 -0.6**
MCR1 Marechal Candi 16.68 72 *eP* **Pn 17 40 57.8 -0.1**
FRBT Francisco Belt 16.90 78 *eP* **Pn 17 40 59.6 -1.1**
ITAB Concordia 17.30 83 *eP* **Pn 17 41 05.9 +0.4**
SIV San Ignacio 17.49 35 P **Pn 17 41 08.0 -0.1**
comp=Z,9.0nm,0.7s,baz=213,slow=9.8,SNR=29
SIV LR LR 17 49 22.4
comp=Z,99nm,18.2s,baz=208,slow=42
AQDB Aquidauana 17.50 58 *eP* **Pn 17 41 07.4 -0.8**
PTGB Pitanga 18.21 76 *eP* **Pn 17 41 17.0 +0.2**
PTLB Pontes e Lacer 18.96 39 P 17 41 24.4 -0.5
PTLB IAmb IAmb 17 41 42.4
comp=Z,22nm,1.0s
PTLB Pontes e Lacer 18.96 39 *eP* **P 17 41 25.0 +0.2**
NNA Nana 19.29 344 LR LR 17 47 18.4
comp=Z,96nm,20.1s,baz=182,slow=32
TER01 Tubaro-SC 19.57 89 *eP* **P 17 41 31.4 -0.1**
PCMB Pacaembu 20.28 68 *eP* **P 17 41 39.4 +0.1**
VILB Vilhena 20.53 33 P 17 41 40.8 -1.2
VILB IAmb IAmb 17 41 58.3
comp=Z,21nm,0.8s
VILB Vilhena 20.53 33 *eP* **P 17 41 41.1 -0.9**
SALV Santo Antonio 20.66 48 *eP* **P 17 41 43.4 +0.1**
C2SB Chapadao do Su 20.67 59 *eP* **P 17 41 43.3 -0.2**
ETMB Extrema 21.37 14 P 17 41 51.3 +0.3
ETMB IAmb IAmb 17 42 13.2
comp=Z,19nm,0.9s
ETMB Extrema 21.37 14 *eP* **P 17 41 52.3 +1.3**
ITRB Iturama 22.01 65 *eP* **P 17 41 57.0 -0.9**
BB19B Bebedouro 22.75 70 *eP* **P 17 42 05.9 0.0**
SAML Samuel 23.01 21 P **P 17 42 08.5 0.0**
VAO Valinhos 23.16 77 *eP* **P 17 42 08.4 -1.7**
PDRB Porto dos Gac 23.43 39 *eP* **P 17 42 12.7 0.0**
USHA Ushuaia 24.20 176 P **P 17 42 20.1 +0.6**
comp=Z,12nm,0.7s,baz=322,slow=8.3,SNR=3.5
comp=Z,12nm,0.7s
ATAH Athualpa 24.34 343 LR LR 17 50 42.3
comp=Z,54nm,18.4s,baz=166,slow=33
CLDB Colider 24.55 40 *eP* **P 17 42 22.5 -0.5**
BDFB Brasilia 26.21 60 P **P 17 42 37.0 -1.2**
comp=Z,14nm,0.8s,baz=231,slow=8.6,SNR=14
comp=Z,14nm,0.8s
BDFB Brasilia 26.21 60 P **P 17 42 37.5 -0.7**
BDFB IAmb IAmb 17 42 37.9
comp=Z,14nm,0.8s
BDFB Brasilia 26.21 60 *eP* **P 17 42 37.9 -0.3**
SNDB Serra Nova Dou 26.41 49 *eP* **P 17 42 40.9 +1.0**
NPGB Novo Progresso 27.99 36 *eP* **P 17 42 53.6 -0.5**
JANB Jaguariaiva 29.39 64 *eP* **P 17 43 06.3 -0.3**
SJMB Sao Joao De Ma 29.93 74 *eP* **P 17 43 10.7 -0.6**
ITTB Itaituba 30.13 33 *eP* **P 17 43 11.8 -1.2**
SDBA SAO DESIDERIO 30.59 59 *eP* **P 17 43 17.0 -0.1**
NAN01 Guarapari, ES 31.22 73 *eP* **P 17 43 21.8 -0.9**
GDU01 Guandu, BA 33.89 67 *eP* **P 17 43 45.0 -1.0**
BOAV Boa Vista 34.55 20 P **P 17 43 51.2 -0.5**
BOAV IAmb IAmb 17 43 52.7
comp=Z,7.3nm,0.8s
BOAV Boa Vista 34.55 20 *eP* **P 17 43 51.8 0.0**
MCPB Macapa, AP 35.39 35 *eP* **P 17 43 58.7 -0.3**
BAUV El Baul 39.57 5 P **P 17 44 34.1 -0.2**
MDP Montagnes des 39.92 30 LR LR 18 03 13.2
comp=Z,76nm,19.1s,baz=236,slow=39
RCBR Riachuelo 41.59 61 LR LR 18 03 21.9
comp=Z,71nm,19.7s,baz=324,slow=38
OBIP Obispado Ponce 48.71 6 P **P 17 45 45.8 -1.5**
CMIG Matias Romero 52.59 331 LR LR 18 04 55.5
comp=Z,29nm,18.4s,baz=197,slow=32
SNAA Sanae 54.46 159 P **P 17 46 29.3 -0.6**
SNAA Sanae 54.46 159 PcP **PcP 17 47 32.3 -0.6**
SNAA Sanae 54.46 159 P **P 17 46 29.1 -0.8**
comp=Z,4.1nm,0.8s,baz=280,slow=6.4,SNR=16
SNAA pP **pP 17 46 41.8 -0.7**
comp=Z,2.8nm,0.9s,baz=268,slow=9.3,SNR=4.3
comp=Z,4.1nm,0.8s
SNAA Sanae 54.46 159 P **P 17 46 28.8 -1.1**
SNAA IAmb IAmb 17 46 30.4
comp=Z,5.5nm,0.9s
TROLL Troll, Antarti 56.17 159 P **P 17 46 42.6 +0.3**

TROLL Troll, Antarti 56.17 159 PcP **PcP 17 47 39.8 +0.2**
QSPA South Pole Qui 59.51 180 P **P 17 47 05.9 +0.1**
comp=Z,3.3nm,0.8s,baz=154,slow=3.2,SNR=13
QSPA pP **pP 17 47 19.1 +0.6**
comp=Z,2.7nm,0.6s,baz=164,slow=1.9,SNR=7.3
comp=Z,3.3nm,0.8s
QSPA South Pole Qui 59.51 180 P **P 17 47 05.9 +0.1**
QSPA IAmb IAmb 17 47 46.6
comp=Z,5.3nm,0.9s
833A Chaparral WMA, 64.46 333 P **P 17 47 40.4 +1.2**
X48A Hartselle 66.46 346 P **P 17 47 52.1 +0.1**
X48A IAmb IAmb 17 47 53.1
comp=Z,7.9nm,0.9s
CPCT Cooper Cave 66.95 348 P **P 17 47 55.1 0.0**
CPCT IAmb IAmb 17 47 56.5
comp=Z,8.5nm,0.8s
TKL Tuckaleechee C 67.03 349 P **P 17 47 55.5 -0.1**
TKL IAmb IAmb 17 47 57.5
comp=Z,5.5nm,0.8s
TXAR Lajitas Array 67.12 330 P **P 17 47 58.0 +1.6**
comp=Z,1.6nm,0.7s,baz=150,slow=8.1,SNR=21
TXAR pP **pP 17 48 10.1 +0.7**
comp=Z,0.6nm,0.7s,baz=144,slow=4.7,SNR=4.6
comp=Z,1.6nm,0.7s
TX31 Lajitas Ar. Si 67.12 330 P **P 17 47 57.4 +1.0**
TX31 IAmb IAmb 17 47 58.9
comp=Z,5.5nm,0.8s
TX32 Lajitas Array 67.12 330 P **P 17 47 57.1 +0.6**
V52A Sevierville 67.18 349 P **P 17 47 56.6 0.0**
VNDA Vanda 67.40 191 P **P 17 47 58.2 +0.6**
comp=Z,0.6nm,0.7s,baz=60,slow=3.5,SNR=4.0
comp=Z,0.6nm,0.7s
U54A Nelsons Funny 67.58 351 P **P 17 47 59.5 +0.3**
V48A Smith Brothers 67.66 347 P **P 17 47 60.0 +0.4**
CLTN Cedars of Leba 67.90 347 P **P 17 48 01.7 +0.6**
WVT Waverly 68.24 346 P **P 17 48 03.9 +0.7**
WVT IAmb IAmb 17 48 04.6
comp=Z,10nm,1.0s
R58B Mineral 68.59 355 P **P 17 48 06.5 +1.1**
R58B IAmb IAmb 17 48 07.6
comp=Z,7.3nm,0.9s
T47A Sharon Grove 68.92 347 P **P 17 48 08.6 +1.1**
T47A IAmb IAmb 17 48 08.8
comp=Z,12nm,1.0s
LCAR Lake Charles 68.95 343 P **P 17 48 08.2 +0.6**
LCAR IAmb IAmb 17 48 09.4
comp=Z,8.7nm,0.7s
PBMO Poplar Bluff 69.45 344 P **P 17 48 11.0 +0.3**
PBMO IAmb IAmb 17 48 12.1
comp=Z,9.5nm,0.8s
MEH Mehetia 69.78 261 *e*T T 19 04 21.3
comp=Z,11nm,0.2s
HHAR Hobbs 69.90 341 P **P 17 48 14.2 +0.6**
HHAR IAmb IAmb 17 48 15.1
comp=Z,9.4nm,0.8s
MSTX Muleshoe 70.79 333 P **P 17 48 20.2 +1.0**
MSTX IAmb IAmb 17 48 21.0
comp=Z,7.2nm,0.8s
CCM Cathedral Cave 70.86 344 P **P 17 48 20.3 +0.9**
S39A Bolivar 71.05 342 P **P 17 48 21.2 +0.7**
S39A IAmb IAmb 17 48 22.2
comp=Z,7.6nm,0.9s
PPT2 Papeete2 71.19 260 *e*LR LR 18 10 07.7
comp=Z,29nm,24.5s
PPT Papeete 71.20 260 LR LR 18 13 19.4
comp=Z,25nm,19.2s,baz=142,slow=30
R40A Maddies Statio 71.34 343 P **P 17 48 22.9 +0.7**
ACSO Alum Creek Sta 71.39 351 P **P 17 48 23.0 +0.5**
P40A Paris 72.46 343 P **P 17 48 29.7 +0.8**
LENM Lemitar 72.70 330 P **P 17 48 32.4 +1.7**
P38A Dawn 72.92 342 P **P 17 48 32.0 +0.3**
P38A IAmb IAmb 17 48 33.4
comp=Z,8.0nm,0.8s
LIC Lamto 73.32 72 ⇓*iP* **P 17 48 34.5 -0.2**
comp=Z,20nm,0.5s
TIC Toumodi 73.56 72 ⇓*iP* **P 17 48 36.0 -0.1**
comp=Z,4.8nm,0.3s
KIC Kosan Boka 73.63 72 ⇓*iP* **P 17 48 36.5 0.0**
comp=Z,11nm,0.6s
DBIC Dimbokro 73.71 72 P **P 17 48 36.6 -0.3**
comp=Z,11nm,0.8s,baz=242,slow=5.5,SNR=8.5
DBIC pP **pP 17 48 49.6 -0.3**
comp=Z,4.2nm,0.7s,baz=243,slow=6.4,SNR=2.3
comp=Z,11nm,0.8s
T25A Trinidad 74.20 333 P **P 17 48 41.3 +1.7**
T25A IAmb IAmb 17 48 42.6
comp=Z,6.9nm,0.9s
L40A Anamosa 74.67 345 P **P 17 48 42.0 +0.1**
X16A Lo Mia Camp, P 74.94 327 P **P 17 48 45.9 +2.1**
SDCO Great Sand Dun 75.16 333 P **P 17 48 46.2 +1.0**
FRNY Flat Rock 75.22 358 P **P 17 48 45.1 +0.2**
FRNY IAmb IAmb 17 48 46.4
comp=Z,9.2nm,1.1s
SUR Sutherland 76.02 119 P **P 17 48 50.5 +0.1**
comp=Z,3.1nm,0.7s,baz=211,slow=5.9,SNR=1.9
SUR LR LR 18 19 00.0
comp=Z,15nm,18.4s,baz=190,slow=33
comp=Z,3.1nm,0.7s
MAW Mawson 76.19 164 P **P 17 48 50.4 0.0**
comp=Z,3.4nm,0.8s,baz=240,slow=4.1,SNR=6.4
MAW LR LR 18 23 10.7
comp=Z,58nm,18.3s,baz=274,slow=36
comp=Z,3.4nm,0.8s
PFO Pinyon Flats O 76.79 323 LR LR 18 15 24.5
comp=Z,30nm,19.7s,baz=142,slow=30
SMCO Snowmass 76.98 332 P **P 17 48 57.0 +1.3**
SMCO IAmb IAmb 17 48 59.2
comp=Z,6.4nm,1.0s
U15A North Rim 76.98 327 P **P 17 48 56.4 +0.9**
ISCO Idaho Springs 76.98 334 P **P 17 48 55.2 -0.3**
E62A Clayton Lake 77.00 1 P **P 17 48 55.4 +0.3**
E62A IAmb IAmb 17 49 15.4
comp=Z,10nm,1.0s
I37A Lemond, Waseca 77.02 344 P **P 17 48 55.1 -0.1**
ECSD EROS Data Cent 77.58 342 P **P 17 48 58.8 +0.4**
CCUT Cedar City 78.39 327 P **P 17 49 03.6 +0.2**
Q16A Castle Valley 78.52 329 P **P 17 49 04.0 0.0**
P18A Preston Nutter 78.71 330 P **P 17 49 06.7 +1.6**
P18A IAmb IAmb 17 49 07.8
comp=Z,5.0nm,0.9s
P17A Butcher Ranch, 78.79 330 P **P 17 49 05.1 -0.3**
F36A Milaca 78.80 345 P **P 17 49 04.8 -0.2**
F36A IAmb IAmb 17 49 06.0
comp=Z,5.7nm,0.8s
GWY Greenwater Val 78.91 324 P **P 17 49 07.3 +1.1**
GWY IAmb IAmb 17 49 35.6
comp=Z,3.7nm,0.6s
D41A Chassel 78.94 348 P **P 17 49 06.3 +0.5**
ISA Isabella, Lake 79.43 323 P **P 17 49 10.0 +1.1**
TSUM Tsumeb 79.68 106 P **P 17 49 10.8 0.0**
comp=Z,7.4nm,1.0s,baz=203,slow=5.8,SNR=8.3
TSUM LR LR 18 19 59.2
comp=Z,43nm,18.8s,baz=166,slow=32
comp=Z,7.4nm,1.0s
TSUM Tsumeb 79.68 106 P **P 17 49 10.8 0.0**
TSUM IAmb IAmb 17 49 11.9
comp=Z,8.1nm,0.9s
HWUT Hardware Ranch 80.91 331 P **P 17 49 17.4 +0.5**
PDAR Pinedale Array 81.06 333 P **P 17 49 18.4 +0.7**
comp=Z,0.5nm,0.5s,baz=134,slow=6.4,SNR=3.7
comp=Z,0.5nm,0.5s
BOSA Boshof 81.19 118 P **P 17 49 17.8 -1.0**
comp=Z,5.1nm,0.9s,baz=216,slow=4.0,SNR=8.6
BOSA pP **pP 17 49 32.5 +0.5**
comp=Z,1.5nm,0.7s,baz=233,slow=2.2,SNR=1.9
BOSA LR LR 18 20 50.5
comp=Z,24nm,20.1s,baz=190,slow=32
comp=Z,5.1nm,0.9s
BOSA Boshof 81.19 118 P **P 17 49 18.8 -0.1**
BOSA IAmb IAmb 17 49 19.2
comp=Z,7.9nm,1.0s
HVU Hansel Valley 81.56 330 P **P 17 49 21.0 +0.7**
ELK Elko 81.82 328 LR LR 18 20 53.3
comp=Z,26nm,21.0s,baz=66,slow=32
TOA0 Torodi Ar. Sit 82.66 70 P **P 17 49 26.0 -0.4**
TOA0 IAmb IAmb 17 49 27.1
comp=Z,5.8nm,0.8s
TORD Torodi Ar. Bea 82.66 70 P **P 17 49 26.0 -0.5**
comp=Z,3.6nm,0.7s,baz=262,slow=5.5,SNR=15
TORD pP **pP 17 49 40.3 +0.6**
comp=Z,3.6nm,0.7s,baz=277,slow=6.2,SNR=8.0
comp=Z,3.6nm,0.7s
TORD Torodi Ar. Bea 82.66 70 P **P 17 49 26.0 -0.5**
TORD IAmb IAmb 17 49 27.1
comp=Z,4.8nm,0.9s
LBTB Lobatse 83.27 115 P **P 17 49 28.6 -1.1**

	comp=Z,8.0nm,0.8s,baz=236,slow=6.0,SNR=14								
LBTB					pP		**pP**	17 49 44.3	**+1.4**
	comp=Z,3.1nm,0.7s,baz=230,slow=4.8,SNR=3.2								
LBTB					LR		LR	18 21 38.2	
	comp=Z,38nm,18.4s,baz=196,slow=32								
	comp=Z,8.0nm,0.8s								
LBTB	**Lobatse**	**83.27**	**115**	P		**P**		**17 49 28.8**	**-0.9**
LBTB				IAmb		IAmb		17 49 30.4	
	comp=Z,8.7nm,0.8s								
LSZ	**Lusaka**	**90.39**	**108**	LR		LR		18 29 06.6	
	comp=Z,42nm,18.6s,baz=156,slow=35								
ESDC	**Sonseca Array**	**93.97**	**46**	LR		LR		18 31 40.1	
	comp=Z,19nm,18.1s,baz=255,slow=35								
DZM	**Mont Dzumac**	**103.54**	**234**	*e*LR		LR		18 25 07.2	
	comp=Z,65nm,24.1s								
H11S2	**WAKE ISLAND Hyl**	**26.22**	**271**	T		T		20 14 48.9	
	baz=116,slow=75,SNR=124								
H11S1	**WAKE ISLAND Hyl**	**26.23**	**271**	T		T		20 14 49.9	
	baz=116,slow=75,SNR=141								
H11S3	**WAKE ISLAND Hyl**	**26.23**	**271**	T		T		20 14 50.2	
	baz=116,slow=75,SNR=138								
ZALV	**Zalesovo Beam**	**151.18**	**30**	PKPbc		**PKPbc**		**17 56 55.2**	**0.0**
	comp=Z,11nm,0.7s,baz=297,slow=3.2,SNR=49								
ZALV				pPKPbc		**pPKPbc**		**17 57 09.5**	**+0.6**
	comp=Z,4.9nm,0.6s,baz=303,slow=3.1,SNR=8.5								
MKAR	**Makanchi Array**	**154.18**	**44**	PKPbc		**PKPbc**		**17 57 01.1**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=315,slow=2.0,SNR=8.2								
MKAR				pPKPbc		**pPKPbc**		**17 57 15.5**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=287,slow=5.8,SNR=7.7								
SONM	**Songino Array**	**162.83**	**5**	PKPab		**PKPab**		**17 57 54.3**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=350,slow=7.6,SNR=2.8								
CMAR	**Chiang Mai Arr**	**165.03**	**142**	PKPab		**PKPab**		**17 58 03.0**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=224,slow=6.1,SNR=5.8								
PZH	**PanZhiHua**	**172.73**	**124**	PKP		**PKPdf**		**17 57 11.6**	**-0.4**

IDC 10 17:41:38.1±3.1, 30°81S×60°11E, h0km, mb3.7/3, mbtmp3.7/4, ML3.6/1, MS3.3/9, Error ellipse: s-maj=96.2km s-min=39.6km az=44.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.90**	**313**	Pn	Pn	17 45 36.3	0.0
	baz=145,slow=20,SNR=1.8						
OPO				LR	LR	17 50 19.3	
	comp=Z,46nm,20.8s,baz=24,slow=31						
	2.3nm,0.7s						
H08S1	**Diego Carcia H**	**25.78**	**29**	T	T	18 11 57.1	
	baz=204,slow=76,SNR=19						
H08S2	**Diego Garcia H**	**25.79**	**29**	T	T	18 11 57.1	
	baz=204,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**25.80**	**29**	T	T	18 11 57.1	
	baz=204,slow=76,SNR=22						
LBTB	**Lobatse**	**30.96**	**272**	LR	LR	17 57 57.8	
	comp=Z,24nm,18.8s,baz=142,slow=32						
H01W2	**Cape Leeuwin H**	**45.11**	**110**	T	T	18 37 36.3	
	baz=261,slow=75,SNR=30						
H01W3	**Cape Leeuwin H**	**45.12**	**110**	T	T	18 37 35.4	
	baz=261,slow=75,SNR=31						
H01W1	**Cape Leeuwin H**	**45.13**	**110**	T	T	18 37 36.2	
	baz=261,slow=75,SNR=27						
ATD	**Arta Tunnel**	**45.24**	**336**	LR	LR	18 05 54.0	
	comp=Z,49nm,18.2s,baz=272,slow=32						
WSAR	**Wadi Sarin**	**53.76**	**358**	LR	LR	18 09 20.5	
	comp=Z,23nm,18.4s,baz=156,slow=31						
CMAR	**Chiang Mai Arr**	**61.59**	**43**	P	P	17 51 57.5	0.0
	0.8nm,0.8s,baz=222,slow=6.1,SNR=4.7						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**64.94**	**104**	P	P	17 52 20.1	+0.2
	0.5nm,0.8s,baz=245,slow=6.2,SNR=12						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**66.87**	**100**	P	P	17 52 32.0	-0.4
	0.9nm,1.0s,baz=244,slow=5.0,SNR=3.6						
	0.9nm,1.0s						
GEYT	**Alibeck**	**68.41**	**358**	LR	LR	18 19 53.6	
	comp=Z,25nm,18.3s,baz=147,slow=34						
GNI	**Garni**	**72.02**	**348**	LR	LR	18 22 26.1	
	comp=Z,17nm,21.0s,baz=115,slow=34						
KBZ	**Khabaz**	**75.83**	**347**	LR	LR	18 23 44.7	
	comp=Z,26nm,21.8s,baz=178,slow=33						
DAVOX	**Davos/Dischmat**	**89.54**	**328**	LR	LR	18 37 06.3	
	comp=Z,17nm,19.0s,baz=260,slow=37						
DZM	**Mont Dzumac**	**91.95**	**117**	LR	LR	18 27 26.0	
	comp=Z,30nm,21.8s,baz=39,slow=30						

*IDC **10** 17:45:52.7±1.5, 17°.2S×179°.18W, h560km±15km, mb3.3/13, mbtmp4.3/14, Error ellipse: s-maj=18.5km s-min=15.0km az=75.0*
*NEIC **10** 17:45:52.9±2.0, 17°.1S±0°.1×179°.0W±0°.1, h571km±10km, mb4.5/32, Error ellipse: s-maj=21.1km s-min=16.9km az=193.0*
ISC 10 17:45:51.6±0.6, 17°.2S±0°.1×179°.12W±0°.09, h550km, n49, σ1s38/50, mb4.3/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.76**	**258**	P	P	**17 47 08.4**	**+3.1**
	76nm,0.5s,baz=114,slow=22,SNR=68						
NIUE	**Niue**	**8.94**	**104**	P	P	**17 48 00.2**	**+1.4**
OUZ	**Omahuta**	**19.10**	**198**	P	P	**17 49 42.7**	**+3.4**
OUZ				IAmb	IAmb	17 49 43.4	
	comp=Z,29nm,1.0s						
URZ	**Urewera**	**21.25**	**188**	P	P	**17 49 56.3**	**-2.5**
	comp=Z,15nm,0.8s,baz=15,slow=20,SNR=3.7						
URZ	**Urewera**	**21.25**	**188**	P	P	**17 49 56.4**	**-2.5**
BKZ	**Black Stump Fm**	**22.23**	**189**	P	P	**17 50 06.0**	**-1.7**
BKZ				IAmb	IAmb	17 50 13.2	
	comp=Z,26nm,1.5s						
QRZ	**Quartz Range**	**24.64**	**195**	P	P	**17 50 29.3**	**+0.3**
THZ	**Tophouse**	**25.43**	**194**	P	P	**17 50 35.5**	**-0.5**
THZ				IAmb	IAmb	17 50 54.2	
	comp=Z,31nm,1.3s						
KHZ	**Kahutara**	**25.92**	**193**	P	P	**17 50 38.2**	**-2.0**
LTZ	**Lake Taylor**	**26.55**	**194**	P	P	**17 50 44.0**	**-1.8**
LTZ				IAmb	IAmb	17 50 45.7	
	comp=Z,10.0nm,0.9s						
RPZ	**Rata Peaks**	**27.72**	**195**	P	P	**17 50 54.5**	**-1.6**
	comp=Z,7.4nm,1.0s,baz=44,slow=7.5,SNR=6.0						
	comp=Z,7.4nm,1.0s						
RPZ	**Rata Peaks**	**27.72**	**195**	P	P	**17 50 54.2**	**-1.9**
RPZ				IAmb	IAmb	17 51 27.1	
	comp=Z,34nm,1.3s						
FOZ	**Fox Glacier**	**27.89**	**197**	P	P	**17 50 55.8**	**-1.7**
FOZ				IAmb	IAmb	17 50 58.3	
	comp=Z,14nm,0.6s						
LBZ	**Lake Benmore**	**28.57**	**196**	P	P	**17 51 01.1**	**-2.4**
LBZ				IAmb	IAmb	17 51 38.2	
	comp=Z,19nm,1.2s						
ODZ	**Otahua Downs**	**29.07**	**195**	P	P	17 51 04.8	-3.0
WKZ	**Wanaka**	**29.30**	**197**	P	P	**17 51 08.1**	**-1.8**
MLZ	**Mavora Lakes**	**30.06**	**198**	P	P	**17 51 16.5**	**+0.1**
MLZ				IAmb	IAmb	17 51 25.6	
	comp=Z,34nm,1.2s						
WHZ	**Wether Hill Ro**	**30.59**	**198**	P	P	**17 51 20.6**	**-0.3**
CTA	**Charters Tower**	**32.90**	**259**	P	P	**17 51 40.8**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=66,slow=10.0,SNR=1.8						
	comp=Z,2.4nm,0.6s						
CTAO	**Charters Tower**	**32.90**	**259**	P	P	**17 51 41.2**	**+0.1**
CTAO				IAmb	IAmb	17 52 08.3	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**38.39**	**240**	P	P	**17 52 26.6**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=85,slow=6.5,SNR=5.8						
	comp=Z,0.9nm,0.6s						
STKA	**Stephens Creek**	**38.39**	**240**	P	P	**17 52 26.7**	**+0.3**
WB0	**Warramunga Arr**	**44.06**	**259**	P	P	**17 53 10.5**	**-0.9**
WB2	**Warramunga Arr**	**44.09**	**259**	P	P	**17 53 09.8**	**-1.8**
WB2				IAmb	IAmb	17 53 35.2	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**44.09**	**259**	P	P	**17 53 10.6**	**-1.0**
WRA	**Warramunga Arr**	**44.10**	**259**	P	P	**17 53 10.8**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=93,slow=8.2,SNR=13						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**44.10**	**259**	P	P	**17 53 10.2**	**-1.6**
AS31	**Alice Springs**	**44.34**	**254**	P	P	**17 53 13.3**	**-0.2**
AS31				IAmb	IAmb	17 53 13.8	
	comp=Z,2.9nm,0.4s						
ASAR	**Alice Springs**	**44.34**	**254**	P	P	**17 53 13.2**	**-0.4**
	comp=Z,5.9nm,0.5s,baz=87,slow=8.1,SNR=132						
ASAR				PcP	**PcP**	**17 54 45.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=94,slow=3.4,SNR=2.8						
ASAR				ScP	**ScP**	**17 57 46.6**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=89,slow=4.6,SNR=6.4						
	comp=Z,5.9nm,0.5s						
ASAR	**Alice Springs**	**44.34**	**254**	P	P	**17 53 13.0**	**-0.6**
PTCN	**Pitcairn Islan**	**46.19**	**108**	P	P	**17 53 25.6**	**-2.1**
FAKI	**Fak Fak**	**49.77**	**281**	P	P	**17 53 54.6**	**+0.1**
FAKI				IAmb	IAmb	17 53 59.7	
	comp=Z,43nm,1.5s						
KNRA	**Kununurra**	**49.89**	**264**	P	P	**17 53 56.3**	**+1.0**
KNRA				IAmb	IAmb	17 54 26.8	
	comp=Z,16nm,1.5s						
SIJI	**Sorong**	**51.41**	**283**	P	P	**17 54 06.7**	**+0.3**
	comp=Z,16nm,0.6s,baz=114,slow=7.6,SNR=14						
	comp=Z,16nm,0.6s						
MORW	**Morawa**	**60.15**	**246**	P	P	**17 55 06.7**	**0.0**
SBA	**Scott Base**	**61.09**	**183**	P	P	**17 55 13.8**	**+1.7**
VNDA	**Vanda**	**61.10**	**185**	P	P	**17 55 12.9**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=358,slow=7.7,SNR=8.4						
	comp=Z,0.8nm,0.5s						
VNDA	**Vanda**	**61.10**	**185**	P	P	**17 55 13.1**	**+1.0**
JAGI	**Jajag, Banyuwa**	**65.38**	**268**	P	P	**17 55 38.9**	**-1.7**
MJAR	**Matsushiro Arr**	**66.93**	**324**	P	P	**17 55 49.0**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=119,slow=9.7,SNR=7.6						
	comp=Z,2.2nm,0.7s						
JSD	**Sado**	**67.96**	**325**	P	P	**17 55 56.0**	**-0.1**
JSD				IAmb	IAmb	17 56 33.1	
	comp=Z,16nm,1.5s						
QSPA	**South Pole Qui**	**72.86**	**180**	P	P	**17 56 25.0**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=27,slow=1.0,SNR=41						
	comp=Z,6.0nm,0.8s						
QSPA	**South Pole Qui**	**72.86**	**180**	P	P	**17 56 25.0**	**+0.3**
QSPA				IAmb	IAmb	17 56 25.9	
	comp=Z,7.0nm,0.9s						
NVAR	**Mina Array Bea**	**79.38**	**44**	P	P	**17 57 02.1**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=216,slow=7.6,SNR=2.5						
	comp=Z,0.3nm,0.5s						
SEY	**Seymchan**	**82.93**	**347**	P	P	**17 57 18.0**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=158,slow=11,SNR=5.0						
	comp=Z,1.6nm,0.6s						
BELA	**Belgrano 2**	**82.96**	**173**	P	P	**17 57 18.2**	**-0.5**
BELA				IAmb	IAmb	17 57 19.0	
	comp=Z,8.4nm,0.8s						
MAW	**Mawson**	**84.30**	**200**	P	P	**17 57 25.7**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=127,slow=7.7,SNR=9.7						
	comp=Z,3.1nm,0.6s						
MAW	**Mawson**	**84.30**	**200**	P	P	**17 57 25.9**	**+0.5**
PDAR	**Pinedale Array**	**87.30**	**44**	P	P	**17 57 40.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=224,slow=2.5,SNR=1.8						
	comp=Z,0.3nm,0.3s						

*IDC **10** 17:48:51.1±1.7, 6°.90S×129°.50E, h157km±24km, mb3.0/1, mbtmp3.5/6, Error ellipse: s-maj=35.5km s-min=15.0km az=102.0*
ISC 10 17:48:49.0±0.9, 7°.14S±0°.06×129°.7E±0°.1, h139km, n6, σ3s33/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.43**	**14**	P	**Pn**	**17 50 22.6**	**+1.1**
	1.7nm,0.3s,baz=198,slow=22,SNR=16						
SIJI				S	**Sn**	**17 51 30.8**	**-2.9**
	4.8nm,0.2s,baz=230,slow=22,SNR=13						
BATI	**Baumata**	**6.67**	**242**	P	**Pn**	**17 50 27.1**	**+2.5**
	5.3nm,0.3s,baz=83,slow=8.1,SNR=1.7						
BATI				S	**Sn**	**17 51 37.2**	**-2.3**
	15nm,0.8s,baz=112,slow=22,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.58**	**199**	P	**Pn**	**17 51 32.5**	**+2.3**
	0.4nm,0.3s,baz=14,slow=11,SNR=9.4						
FITZ				S	**Sn**	**17 53 33.4**	**-4.7**
	1.3nm,0.4s,baz=286,slow=22,SNR=6.3						
WRA	**Warramunga Arr**	**13.51**	**161**	P	**P**	**17 52 00.9**	**+1.3**
	0.2nm,0.3s,baz=339,slow=13,SNR=9.5						
WRA				S	**Sn**	**17 54 20.4**	**-4.3**
	0.3nm,0.4s,baz=335,slow=22,SNR=2.2						
ASAR	**Alice Springs**	**16.93**	**167**	P	**Pn**	**17 52 41.4**	**+3.6**
	0.3nm,0.4s,baz=341,slow=9.3,SNR=16						
ASAR				S	**Sn**	**17 55 44.8**	**-2.1**
	0.3nm,0.9s,baz=341,slow=25,SNR=2.0						
MKAR	**Makanchi Array**	**68.16**	**327**	P	**P**	**17 59 32.5**	**-1.7**
	0.2nm,0.4s,baz=111,slow=7.5,SNR=4.4						
	0.2nm,0.4s						

*MOS **10** 18:07:47.9±0.9, 52°.58N×159°.81E, h44km, mb4.2/3, Error ellipse: s-maj=10.5km s-min=6.0km az=102.3*
*KRSC **10** 18:07:49.2±0.6, 52°.67N×159°.61E, h43km±8km, ML4.6*
*IDC **10** 18:07:52.6±1.4, 52°.93N×159°.12E, h80km±11km, mb3.4/11, mbtmp3.8/11, MS2.7/2, Error ellipse: s-maj=22.7km s-min=17.5km az=145.0*
ISC 10 18:07:49.0±0.8, 52°.69N±0°.03×159°.55E±0°.04, h48km±7km, n78, σ2s29/105, mb3.7/11, 1C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.50**	**346**	PN	**Pn**	**18 08 01.1**	**+1.1**
NLC				S	**Sn**	**18 08 09.7**	**+1.8**
NLC	**Nalytchevo**	**0.50**	**346**	P	**Pn**	**18 08 01.1**	**+1.1**
NLC				S	**Sn**	**18 08 09.7**	**+1.8**
SPN	**Mys Shipunski**	**0.50**	**35**	PN	**Pn**	**18 08 00.6**	**+0.5**
SPN				S	**Sn**	**18 08 08.4**	**+0.4**
SPN	**Mys Shipunski**	**0.50**	**35**	P	**Pn**	**18 08 00.6**	**+0.5**
SPN				S	**Sn**	**18 08 08.4**	**+0.4**
DALK	**Dalny**	**0.59**	**306**	PN	**Pn**	**18 08 02.5**	**+1.3**
DALK				S	**Sn**	**18 08 11.5**	**+1.6**
DALK	**Dalny**	**0.59**	**306**	*e*P	**Pn**	**18 08 02.5**	**+1.3**
DALK				*e*S	**Sn**	**18 08 11.5**	**+1.6**
PET	**Petropavlovsk**	**0.64**	**302**	*k i*PN	**Pn**	**18 08 03.1**	**+1.3**
PET				*e*S	**Sn**	**18 08 12.7**	**+1.7**
PET				pmax	pmax		
	comp=Z,1μm,0.3s						
PET				smax	smax		
	comp=E,11μm,0.6s						
PET				smax	smax		
	comp=N,10μm,0.6s						
UGLR	**Uglovaya**	**0.68**	**320**	PN	**Pn**	**18 08 04.1**	**+1.6**
UGLR				S	**Sn**	**18 08 14.7**	**+2.5**
UGLR	**Uglovaya**	**0.68**	**320**	P	**Pn**	**18 08 04.1**	**+1.6**
UGLR				S	**Sn**	**18 08 14.7**	**+2.5**
RUS	**Russkaya**	**0.68**	**248**	PN	**Pn**	**18 08 03.6**	**+1.3**
RUS				S	**Sn**	**18 08 14.1**	**+2.1**
RUS	**Russkaya**	**0.68**	**248**	P	**Pn**	**18 08 03.6**	**+1.3**
RUS				S	**Sn**	**18 08 14.1**	**+2.1**
SDLR	**Sedlovina**	**0.71**	**326**	PN	**Pn**	**18 08 04.2**	**+1.3**
SDLR				S	**Sn**	**18 08 15.0**	**+2.0**
SDLR	**Sedlovina**	**0.71**	**326**	P	**Pn**	**18 08 04.2**	**+1.3**
SDLR				S	**Sn**	**18 08 15.0**	**+2.0**
SMAR	**Somma**	**0.73**	**322**	PN	**Pn**	**18 08 04.6**	**+1.4**
SMAR	**Somma**	**0.73**	**322**	P	**Pn**	**18 08 04.6**	**+1.4**
AVH	**Avacha**	**0.76**	**320**	PN	**Pn**	**18 08 05.3**	**+1.9**
AVH				S	**Sn**	**18 08 16.9**	**+3.0**
AVH	**Avacha**	**0.76**	**320**	*e*P	**Pn**	**18 08 05.3**	**+1.9**
AVH				*e*S	**Sn**	**18 08 16.9**	**+3.0**
KRER	**Koryakskii**	**0.78**	**322**	PN	**Pn**	**18 08 05.6**	**+1.7**
KRER				S	**Sn**	**18 08 17.2**	**+2.5**
KRER	**Koryakskii**	**0.78**	**322**	*e*P	**Pn**	**18 08 05.6**	**+1.7**
KRER				*e*S	**Sn**	**18 08 17.2**	**+2.5**
KOK	**Koryaka**	**0.82**	**318**	PN	**Pn**	**18 08 06.1**	**+1.8**
KOK				S	**Sn**	**18 08 17.8**	**+2.4**
KOK	**Koryaka**	**0.82**	**318**	*e*P	**Pn**	**18 08 06.1**	**+1.8**
KOK				S	**Sn**	**18 08 17.8**	**+2.4**
MTVR	**Mutnovka**	**0.86**	**257**	PN	**Pn**	**18 08 06.6**	**+1.8**
MTVR				S	**Sn**	**18 08 18.4**	**+2.0**
MTVR	**Mutnovka**	**0.86**	**257**	P	**Pn**	**18 08 06.6**	**+1.8**
MTVR				S	**Sn**	**18 08 18.4**	**+2.0**
KRX	**Arik**	**0.86**	**321**	PN	**Pn**	**18 08 06.4**	**+1.5**
KRX				S	**Sn**	**18 08 18.7**	**+2.2**
KRX	**Arik**	**0.86**	**321**	*e*P	**Pn**	**18 08 06.4**	**+1.5**
KRX				*e*S	**Sn**	**18 08 18.7**	**+2.2**
KRMR	**Karymshinskiy**	**0.87**	**280**	PN	**Pn**	**18 08 06.2**	**+1.3**
KRMR				S	**Sn**	**18 08 18.0**	**+1.5**
KRMR	**Karymshinskiy**	**0.87**	**280**	*e*P	**Pn**	**18 08 06.2**	**+1.3**
KRMR				*e*S	**Sn**	**18 08 18.0**	**+1.5**
GRL	**Gorelyy**	**0.91**	**262**	PN	**Pn**	**18 08 07.8**	**+2.3**
GRL				S	**Sn**	**18 08 20.5**	**+2.9**
GRL	**Gorelyy**	**0.91**	**262**	*e*P	**Pn**	**18 08 07.8**	**+2.3**
GRL				*e*S	**Sn**	**18 08 20.5**	**+2.9**
ASAK	**Asacha**	**1.05**	**254**	PN	**Pn**	**18 08 09.8**	**+2.4**
ASAK	**Asacha**	**1.05**	**254**	*e*P	**Pn**	**18 08 09.8**	**+2.4**
PEA0B	**Petropavlovsk-**	**1.19**	**291**	*d i*PN	**Pn**	**18 08 11.0**	**+1.7**
PETK	**Petropavlovsk-**	**1.19**	**291**	P	**Pn**	**18 08 10.5**	**+1.2**
	comp=N,719nm,0.3s,baz=101,slow=19,SNR=6097						
PETK				S	**Sn**	**18 08 24.1**	**-0.3**
	comp=N,140nm,0.3s,baz=102,slow=21,SNR=5.5						
KDTR	**Khodutka, Kamc**	**1.26**	**226**	PN	**Pn**	**18 08 11.7**	**+1.5**
KDTR				S	**Sn**	**18 08 27.9**	**+1.9**
KDTR	**Khodutka, Kamc**	**1.26**	**226**	*e*P	**Pn**	**18 08 11.7**	**+1.5**
KDTR				*e*S	**Sn**	**18 08 27.9**	**+1.9**
GNL	**Ganaly**	**1.39**	**317**	PN	**Pn**	**18 08 14.1**	**+2.0**
GNL				S	**Sn**	**18 08 32.0**	**+2.6**
GNL	**Ganaly**	**1.39**	**317**	P	**Pn**	**18 08 14.1**	**+2.0**
GNL				S	**Sn**	**18 08 32.0**	**+2.6**
APC	**Apacha**	**1.47**	**280**	PN	**Pn**	**18 08 15.6**	**+2.6**
APC				S	**Sn**	**18 08 34.4**	**+3.4**
APC	**Apacha**	**1.47**	**280**	*e*P	**Pn**	**18 08 15.6**	**+2.6**
APC				S	**Sn**	**18 08 34.4**	**+3.4**
PAU	**Pauzhetka**	**2.08**	**235**	PN	**Pn**	**18 08 24.2**	**+2.8**
PAU				S	**Sn**	**18 08 49.9**	**+3.8**
PAU	**Pauzhetka**	**2.08**	**235**	P	**Pn**	**18 08 24.2**	**+2.8**
PAU				S	**Sn**	**18 08 49.9**	**+3.8**
TUMR	**Tumrok**	**2.62**	**8**	PN	**Pn**	**18 08 31.3**	**+2.4**
TUMR	**Tumrok**	**2.62**	**8**	P	**Pn**	**18 08 31.3**	**+2.4**
SKR	**Severo-Kuril's**	**2.93**	**228**	*e*PN	Pn	18 08 52.8	+20
SKR				*e*S	**Sn**	**18 09 09.8**	**+2.9**
SKR				pmax	pmax		
	comp=Z,37nm,0.4s						
SKR				smax	smax		
	comp=E,250nm,0.8s						
SKR				smax	smax		
	comp=N,146nm,0.7s						
SKR	**Severo-Kuril's**	**2.93**	**228**	S	**Sn**	**18 09 10.0**	**+3.1**
KMNR	**Kamenistaya**	**3.10**	**7**	PN	**Pn**	**18 08 38.8**	**+3.4**
KMNR	**Kamenistaya**	**3.10**	**7**	*e*P	**Pn**	**18 08 38.8**	**+3.4**
ESO	**Esso**	**3.28**	**352**	PN	**Pn**	**18 08 41.8**	**+4.0**
ESO	**Esso**	**3.28**	**352**	*e*P	**Pn**	**18 08 41.8**	**+4.0**
SRDR	**Sredinnyy**	**3.64**	**2**	PN	**Pn**	**18 08 46.2**	**+3.4**
SRDR	**Sredinnyy**	**3.64**	**2**	P	**Pn**	**18 08 46.2**	**+3.4**
KLY	**Klyuchi**	**3.69**	**10**	PN	Pn	18 08 48.1	+4.7
KLY	**Klyuchi**	**3.69**	**10**	P	Pn	18 08 48.1	+4.7
KBG	**Krutoberegovo**	**4.02**	**26**	S	**Sn**	**18 09 41.0**	**+7.3**
MA2	**Magadan**	**8.46**	**328**	LR	LR	18 13 24.3	
	comp=N,38nm,20.6s,baz=150,slow=41						
BILL	**Bilibino**	**15.74**	**9**	*e*P	**Pn**	**18 11 26.5**	**-0.6**
BILL				*e*S	**S**	**18 14 32.3**	**-0.7**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,14nm,12.0s						
KLR	**Kul'dur**	**17.80**	**270**	LR	LR	18 18 49.5	
	comp=Z,40nm,18.3s,baz=62,slow=37						
YAK	**Yakutsk**	**18.46**	**312**	*i* P	**P**	**18 11 57.0**	**-3.4**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	**Matsushiro Arr**	**22.04**	**231**	P	**P**	**18 12 40.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=21,slow=11,SNR=4.3						
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**29.34**	**45**	P	**P**	**18 13 47.3**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=269,slow=8.5,SNR=9.1						
	comp=Z,0.8nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.39**	**167**	T	T	18 50 07.5	
	baz=352,slow=74						
H11N3	**WAKE ISLAND Hy**	**33.40**	**167**	T	T	18 50 08.7	
	baz=352,slow=74						
H11N1	**WAKE ISLAND Hy**	**33.41**	**167**	T	T	18 50 04.2	
	baz=352						
H11S1	**WAKE ISLAND Hy**	**34.57**	**168**	T	T	18 51 36.3	
	baz=352,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**34.58**	**168**	T	T	18 51 39.4	
	baz=352,slow=76,SNR=58						
H11S2	**WAKE ISLAND Hy**	**34.59**	**168**	T	T	18 51 35.5	
	baz=352,slow=76,SNR=18						
ZALV	**Zalesovo Beam**	**42.72**	**303**	P	**P**	**18 15 37.5**	**-3.5**
	comp=Z,0.3nm,0.3s,baz=60,slow=10,SNR=2.2						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**48.03**	**296**	P	**P**	**18 16 21.1**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=56,slow=6.4,SNR=10						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**58.01**	**60**	P	**P**	**18 17 37.7**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=338,slow=1.5,SNR=4.7						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**60.36**	**336**	P	**P**	**18 17 50.0**	**-2.5**
	comp=Z,3.8nm,1.1s,baz=38,slow=7.0,SNR=3.8						
	comp=Z,3.8nm,1.1s						
FINES	**FINESS Array B**	**60.36**	**336**	*e*P	**P**	**18 17 51.1**	**-1.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKASG	**Malin Array Be**	**68.79**	**329**	P	**P**	**18 18 45.2**	**-2.4**
	comp=Z,0.5nm,0.4s,baz=29,slow=7.0,SNR=3.5						
	comp=Z,0.5nm,0.4s						
TXAR	**

BDI			S	**Sb**	**18 30 02.4**	**-0.4**
SARO	**Sassorosso**	**0.53 247**	P	**Pb**	**18 29 56.1**	**-0.9**
SARO			S	**Sb**	**18 30 03.9**	**-0.4**
VLC	**Villacollemand**	**0.55 245**	P	**Pb**	**18 29 56.6**	**-0.6**
VLC	**Villacollemand**	**0.55 245**	P	**Pb**	**18 29 56.6**	**-0.6**
CARD	**Cardoso**	**0.57 230**	P	**Pb**	**18 29 56.6**	**-0.9**
CARD			S	**Sb**	**18 30 04.7**	**-0.5**
CARD	**Cardoso**	**0.57 230**	P	**Pb**	**18 29 56.6**	**-0.9**
CARD			S	**Sb**	**18 30 04.7**	**-0.5**
MAIM	**Mastiano**	**0.64 222**	P	**Pb**	**18 29 58.5**	**-0.2**
MAIM			S	**Sb**	**18 30 07.1**	**-0.2**
GRAM	**Graiana**	**0.73 278**	P	**Pn**	**18 30 00.9**	**-0.2**
PII	**Pisa**	**0.78 211**	P	**Pb**	**18 30 01.0**	**-0.1**
PII	**Pisa**	**0.78 211**	P	**Pb**	**18 30 01.0**	**-0.1**
CSNT	**Castellina Chi**	**0.93 171**	AML	AML		
	comp=E,49μm,1.6s					
CSNT			AML	AML		
	comp=N,55μm,0.8s					
TEOL	**Teolo**	**1.05 23**	P	**Pb**	**18 30 06.5**	**+0.7**
MSSA	**Maissana**	**1.12 267**	P	**Pb**	**18 30 08.4**	**+1.4**
SALO	**Salr**	**1.29 342**	P	**Pb**	**18 30 11.1**	**+1.3**
VOBA	**Vobarno**	**1.31 342**	P	**Pn**	**18 30 06.4**	**-2.6**
CTI	**Castel Tesino**	**1.70 13**	P	**Pb**	**18 30 16.0**	**-0.9**
CTI			S	**Sn**	**18 30 37.0**	**+1.5**
CTI			AML	AML		
	comp=N,54μm,0.2s					
CTI			AML	AML		
	comp=E,48μm,0.7s					
CIMO	**Cimolais**	**2.14 26**	⇓P	**Pn**	**18 30 18.2**	**-2.2**
CIMO			AML	AML		
	comp=E,28μm,1.6s					
CIMO			AML	AML		
	comp=N,32μm,1.5s					
NRCA	**Norcia**	**2.15 136**	⇑P	**Pb**	**18 30 25.4**	**+1.0**
NRCA			AML	AML		
	comp=E,203μm,0.1s					
NRCA			AML	AML		
	comp=N,212μm,0.9s					
PGF	**Pioggiola**	**2.39 220**	*e*Pn	**Pn**	**18 30 24.4**	**+0.5**
PGF			*e*Sn	**Sn**	**18 30 53.3**	**+0.9**
	comp=N,16nm,0.6s					
SBF	**Sospel**	**2.68 260**	*e*Pn	**Pn**	**18 30 28.9**	**+1.1**
SBF			*e*Sn	**Sn**	**18 31 00.0**	**+0.5**
	comp=N,16nm,0.5s					
LAV9	**Lanuvio**	**2.96 156**	S	**Sb**	**18 31 14.0**	**0.0**
MBDF	**Montbardon**	**3.10 278**	*e*Pn	**Pn**	**18 30 35.3**	**+1.6**
LPG	**La Plagne**	**3.27 291**	*e*Pn	**Pn**	**18 30 36.5**	**+0.4**
LPL	**La Plagne**	**3.28 292**	*e*Pn	**Pn**	**18 30 37.1**	**+0.8**
LMR	**La Mourre**	**3.47 254**	*e*Pn	**Pn**	**18 30 39.4**	**+0.8**
LMR			*e*Sn	**Sn**	**18 31 18.8**	**-0.2**
	comp=N,3.7nm,0.5s					
SMRF	**Simiane la Rot**	**3.98 266**	*e*Sn	**Sn**	**18 31 30.6**	**-1.0**
	comp=N,0.6nm,0.2s					
HINF	**Hinteralfeld**	**4.51 321**	*e*Pn	**Pn**	**18 30 53.5**	**+0.5**
CDF	**Champ du Feu**	**4.80 328**	*e*Pn	**Pn**	**18 30 57.8**	**+0.8**
CDF			*e*Sn	**Sn**	**18 31 49.9**	**-2.0**

NEIC ***10*** *18:38:08.6±0.9,21.°73N±0.°10×143.°5E±0.°5, h248km±15km, mb4.0/13, Error ellipse: s-maj=66.6km s-min=3.1km az=78.0*

IDC ***10*** *18:38:14.8±2.2,22.°03N×142.°88E, h268km±20km, mb3.4/15, mbtmp4.0/17, Error ellipse: s-maj=25.5km s-min=10.9km az=81.0*

ISC 10 18:38:12.0±1.0, 22.°06N±0.°09×143.°1E±0.°2, h250km, n37, σ1$08/38, mb3.8/20, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.09**	**351**	P	**Pn**	**18 39 30.2**	**+1.3**
	50nm,0.6s,baz=126,slow=19,SNR=7.5						
JCJ				S	**S**	**18 40 27.1**	**-3.1**
	59nm,0.3s,baz=111,slow=23,SNR=10						
JCJ	**Chichijima**	**5.09**	**351**	Pn	**Pn**	**18 39 30.1**	**+1.3**
JCJ				Sn	**S**	**18 40 28.8**	**-1.4**
MJAR	**Matsushiro Arr**	**15.05**	**345**	P	**P**	**18 41 33.9**	**+1.5**
	0.7nm,0.4s,baz=114,slow=11,SNR=5.0						
JHS	**Saijyo**	**15.59**	**328**	P	**P**	**18 41 40.2**	**+1.8**
JMM	**Marumori**	**15.88**	**353**		**Pn**	**18 41 43.7**	**+1.1**
JSD	**Sado**	**16.47**	**346**	P	**P**	**18 41 46.8**	**-1.1**
KSRS	**Korea Array**	**20.19**	**323**	P	**P**	**18 42 30.1**	**+2.1**
	6.3nm,0.7s,baz=144,slow=10,SNR=41						
	6.3nm,0.7s						
KSAR	**Wonju Array Be**	**20.21**	**323**	P	**P**	**18 42 29.3**	**+1.1**
KS19	**Wonju Array Si**	**20.26**	**323**	P	**P**	**18 42 29.9**	**+1.2**
KS19				IAmb	IAmb	18 42 31.6	
	comp=E,6.0nm,0.8s						
SONM	**Songino Array**	**39.02**	**320**	P	**P**	**18 45 15.0**	**+0.3**
	comp=E,1.3nm,0.5s,baz=126,slow=7.4,SNR=11						
	comp=E,1.3nm,0.5s						
WRA	**Warramunga Arr**	**42.61**	**192**	P	P	18 45 44.5	+0.4
	comp=E,1.0nm,0.5s,baz=15,slow=9.0,SNR=22						
	comp=E,1.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**43.42**	**205**	P	**P**	**18 45 50.6**	**+0.2**
	comp=E,1.5nm,0.8s,baz=19,slow=9.0,SNR=7.3						
	comp=E,1.5nm,0.8s						
ASAR	**Alice Springs**	**46.32**	**192**	P	P	18 46 13.5	+0.2
	comp=E,0.3nm,0.6s,baz=12,slow=8.2,SNR=9.8						
	comp=E,0.3nm,0.6s						
ZAA0	**Zalesovo Array**	**53.89**	**322**	P	**P**	**18 47 08.9**	**-0.7**
ZAA0				IAmb	IAmb	18 47 10.2	
	comp=E,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**53.89**	**322**	P	**P**	**18 47 09.6**	**0.0**
	comp=E,1.7nm,0.4s,baz=104,slow=7.3,SNR=12						
ZALV				PcP	**PcP**	**18 48 11.0**	**-0.6**
	comp=E,0.7nm,0.5s,baz=110,slow=3.9,SNR=3.9						
	comp=E,1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**53.89**	**322**	P	**P**	**18 47 09.4**	**-0.2**
MK31	**Makanchi Array**	**54.41**	**312**	P	**P**	**18 47 13.3**	**-0.2**
MKAR	**Makanchi Array**	**54.41**	**312**	P	**P**	**18 47 13.6**	**+0.1**
	comp=E,0.9nm,0.6s,baz=97,slow=9.9,SNR=10						
MKAR				PcP	**PcP**	**18 48 13.0**	**-0.8**
	comp=E,0.4nm,0.6s,baz=85,slow=4.2,SNR=4.2						
	comp=E,0.9nm,0.6s						
MKAR	**Makanchi Array**	**54.41**	**312**	P	**P**	**18 47 13.3**	**-0.2**
MAKZ	**Makanchi**	**54.63**	**312**	P	**P**	**18 47 15.3**	**+0.2**
KURK	**Kurchatov**	**57.17**	**317**	P	**P**	**18 47 32.5**	**-0.4**
KURK				IAmb	IAmb	18 47 33.6	
	comp=E,2.3nm,0.8s						
ILAR	**Eielson Array**	**61.75**	**27**	P	**P**	**18 48 05.3**	**+1.5**
	comp=E,2.0nm,0.6s,baz=269,slow=5.4,SNR=2.4						
	comp=E,2.0nm,0.6s						
BRVK	**Borovoye**	**62.42**	**319**	P	**P**	**18 48 08.7**	**+0.2**
BRVK				IAmb	IAmb	18 48 09.7	
	comp=E,1.8nm,0.7s						
KK31	**Karatay Array**	**62.79**	**308**	P	**P**	**18 48 10.9**	**-0.3**
KK31				IAmb	IAmb	18 48 12.1	
	comp=E,2.4nm,0.9s						
KKAR	**Karatay Array**	**62.79**	**308**	P	**P**	**18 48 11.2**	**0.0**
KKAR	**Karatay Array**	**62.79**	**308**	P	**P**	**18 48 11.1**	**-0.1**
KKAR				IAmb	IAmb	18 48 12.1	
	comp=E,2.4nm,0.9s						
ARU	**Arti**	**68.94**	**324**	P	**P**	**18 48 49.0**	**-1.0**
ARU				IAmb	IAmb	18 48 50.8	
	comp=E,3.8nm,0.8s						
ABKAR	**Akbulak array**	**69.25**	**316**	P	**P**	**18 48 51.2**	**-0.8**
ARCES	**ARCESS Array B**	**78.56**	**341**	P	**P**	**18 49 46.4**	**+0.9**
	comp=E,6.0nm,1.0s,baz=72,slow=8.6,SNR=6.1						
	comp=E,6.0nm,1.0s						
KBZ	**Khabaz**	**82.08**	**314**	P	**P**	**18 50 05.0**	**+0.3**
	comp=E,3.9nm,0.9s,baz=95,slow=3.0,SNR=8.2						
	comp=E,3.9nm,0.9s						
FINES	**FINESS Array B**	**82.83**	**334**	P	**P**	**18 50 07.8**	**-0.4**
	comp=E,3.6nm,0.4s,baz=66,slow=5.0,SNR=45						
	comp=E,3.6nm,0.4s						
NVAR	**Mina Array Bea**	**82.97**	**51**	P	P	18 50 13.0	+3.3
	comp=E,0.4nm,0.6s,baz=268,slow=2.7,SNR=1.9						
	comp=E,0.4nm,0.6s						
AKASG	**Malin Array Be**	**87.18**	**324**	P	**P**	**18 50 29.0**	**-0.9**
	comp=E,0.3nm,0.4s,baz=52,slow=1.5,SNR=2.2						
	comp=E,0.3nm,0.4s						
NOA	**NORSAR Array B**	**88.59**	**339**	P	**P**	**18 50 35.6**	**-0.9**
	comp=E,0.6nm,0.6s,baz=46,slow=4.8,SNR=2.6						
	comp=E,0.6nm,0.6s						
BRTR	**Keskin Array B**	**90.05**	**313**	P	**P**	**18 50 43.2**	**-0.6**
	comp=E,0.5nm,0.7s,baz=54,slow=7.3,SNR=2.9						
	comp=E,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**128.47**	**309**	PKP	**PKiKP**	**18 56 50.6**	**-0.1**
	comp=E,0.2nm,0.4s,baz=43,slow=0.6,SNR=1.8						
PLCA	**Paso Flores**	**146.04**	**131**	PKPbc	**PKiKP**	**18 57 24.4**	**-1.3**
	comp=E,1.1nm,0.6s,baz=226,slow=3.7,SNR=6.0						

MOS ***10*** *18:44:13.7±0.8,42.°40N×142.°26E, h125km, mb4.2/11, Error ellipse: s-maj=9.8km s-min=7.2km az=78.6*

NIED ***10*** *18:44:14.4,42.°44N×142.°17E, h126km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.37; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-4.88; $M_{r\theta}$3.69; $M_{r\phi}$5.15; $M_{\theta\phi}$0.42; Fault plane solution: $M_0$8.15000×10^{14} NP1: ϕ_s357.00000°, δ48.00000°, λ138.00000°. NP2: ϕ_s118.00000°, δ61.00000°, λ51.00000°.*

JMA ***10*** *18:44:14.4±0.2,42.°4N±0.°8×142.°2E±0.°9, h126km±1km, MD4.0/40, MV4.0/40, HIDAKA REGION*

JMA Felt I J1 at HIDAKA REGION .

SKHL ***10*** *18:44:14.3±0.3,42.°30N×142.°40E, h124km±2km, mb5.5/4, msha5.6/4*

IDC ***10*** *18:44:15.0±2.1,42.°47N×142.°16E, h116km±19km, mb3.6/19, mbtmp4.0/24, MS3.0/1, Error ellipse: s-maj=15.7km s-min=14.7km az=117.0*

ISC 10 18:44:15.1±0.5, 42.°41N±0.°04×142.°24E±0.°03, h122km±4km, n107, σ1$31/123, mb4.1/29, 8C-29D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSHD	**Hidakashinhida**	**0.17**	**89**	P	**Pn**	**18 44 32.1**	**+0.3**
JSHD				*e*S	**Sn**	**18 44 45.5**	**+1.1**
JSHD	**Hidakashinhida**	**0.17**	**89**	A	A	18 44 32.1	
	comp=E,6.0nm,0.9s,comp=E,6.0nm,1.1s						
JIAM	**Iburiatsuma**	**0.32**	**313**	P	**Pn**	**18 44 32.4**	**+0.2**
JIAM				*e*S	**Sn**	**18 44 46.0**	**+0.7**
JIAM	**Iburiatsuma**	**0.32**	**313**	A	A	18 44 32.4	
	comp=E,22nm,0.3s,comp=E,34nm,0.4s						
JBT2	**Biratori 2**	**0.38**	**14**	*e*P	**Pn**	**18 44 32.5**	**-0.1**
JBT2				*e*S	**Sn**	**18 44 45.5**	**-0.3**
JBT2	**Biratori 2**	**0.38**	**14**	A	A	18 44 32.5	
	comp=E,6.0nm,1.1s,comp=E,7.0nm,2.0s						
JNBK	**Urakawa-nobuka**	**0.40**	**108**	P	**Pn**	**18 44 33.0**	**+0.4**
JNBK				*e*S	**Sn**	**18 44 46.9**	**+1.0**
JNBK	**Urakawa-nobuka**	**0.40**	**108**	A	A	18 44 33.0	
	comp=E,17nm,1.1s,comp=E,13nm,0.5s						
JEW	**Eniwo**	**0.72**	**307**	P	**Pn**	**18 44 34.2**	**-0.6**
JEW				*e*S	**Sn**	**18 44 48.3**	**-1.3**
JEW	**Eniwo**	**0.72**	**307**	A	A	18 44 34.2	
	comp=E,9.0nm,1.0s,comp=E,6.0nm,0.8s						
JEM	**Erimo**	**0.79**	**119**	P	**Pn**	**18 44 35.8**	**+0.5**
ERM	**Erimo**	**0.79**	**119**	*ce*PN	**Pn**	**18 44 35.6**	**+0.3**
ERM				pmax	pmax		
	comp=E,1μm,1.0s						
JFR	**Furan**	**0.80**	**19**	⇓P	**Pn**	**18 44 35.0**	**-0.5**
JFR				⇓*e*S	**Sn**	**18 44 49.6**	**-1.2**
JFR	**Furan**	**0.80**	**19**	A	A	18 44 35.0	
	comp=E,2.0nm,1.5s,comp=E,6.0nm,1.0s						
JCH	**Churui**	**0.86**	**76**	⇓P	**Pn**	**18 44 36.0**	**+0.1**
JCH				⇓*e*S	**Sn**	**18 44 50.8**	**-0.9**
JCH	**Churui**	**0.86**	**76**	A	A	18 44 36.0	
	comp=E,8.0nm,0.4s,comp=E,9.0nm,0.7s						
JNB	**Noboribetsu**	**0.89**	**274**	P	**Pn**	**18 44 35.0**	**-1.1**
JNB				*e*S	**Sn**	**18 44 50.2**	**-1.9**
JNB	**Noboribetsu**	**0.89**	**274**	A	A	18 44 35.0	
	comp=E,8.0nm,0.9s,comp=E,7.0nm,0.2s						
JKB	**Kayabe**	**1.03**	**240**	⇓P	**Pn**	**18 44 36.6**	**-1.0**
JKB				⇓*e*S	**Sn**	**18 44 52.5**	**-2.0**
JKB	**Kayabe**	**1.03**	**240**	A	A	18 44 36.6	
	comp=E,13nm,0.4s,comp=E,10.0nm,0.2s						
JISS	**Ishikarishitsu**	**1.06**	**326**	P	**Pn**	**18 44 37.1**	**-0.6**
JISS				*e*S	**Sn**	**18 44 53.8**	**-1.2**
JOB	**Onbets**	**1.28**	**67**	A	A	18 44 40.4	
	comp=E,13nm,0.4s,comp=E,14nm,0.7s						
JAHD	**Aomorihigashid**	**1.32**	**211**	A	A	18 44 40.5	
	comp=E,20nm,0.4s,comp=E,12nm,0.3s						
JOT	**Ohata**	**1.35**	**221**	⇓P	**Pn**	**18 44 40.2**	**-0.7**
JOT				⇓*e*S	**Sn**	**18 44 59.0**	**-1.6**
JOT	**Ohata**	**1.35**	**221**	A	A	18 44 40.2	
	comp=E,8.0nm,0.9s,comp=E,4.0nm,0.6s						
JHR	**Hokuryu**	**1.39**	**345**	P	**Pn**	**18 44 41.1**	**-0.1**
JHR				*e*S	**Sn**	**18 45 01.1**	**-0.2**
JAR	**Ashorobuto**	**1.44**	**51**	⇓P	**Pn**	**18 44 41.5**	**-0.4**
JAR				⇓*e*S	**Sn**	**18 45 00.9**	**-1.3**
JAR	**Ashorobuto**	**1.44**	**51**	A	A	18 44 41.5	
	comp=E,12nm,0.5s,comp=E,14nm,0.4s						
JKK2	**Kamakawa 2**	**1.51**	**14**	⇓P	**Pn**	**18 44 42.6**	**-0.1**
JKK2				⇓*e*S	**Sn**	**18 45 02.9**	**-0.9**
JOMM	**Oshimamatsumae**	**1.88**	**243**	⇓P	**Pn**	**18 44 46.9**	**-0.2**
JOMM				⇓*e*S	**Sn**	**18 45 11.1**	**-0.4**
JAK	**Akkeshi**	**1.91**	**71**	⇓P	**Pn**	**18 44 46.9**	**-0.5**
JAK				⇓*e*S	**Sn**	**18 45 10.3**	**-1.8**
JSI2	**Shiura 2**	**1.92**	**226**	A	A	18 44 47.3	
	comp=E,6.0nm,0.9s,comp=E,3.0nm,1.4s						
JTKR	**Abashiri--Toko**	**1.98**	**37**	⇓P	**Pn**	**18 44 48.5**	**+0.2**
JTKR				⇓*e*S	**Sn**	**18 45 13.4**	**-0.4**
JSS	**Shosan**	**2.01**	**352**	⇓P	**Pn**	**18 44 49.0**	**+0.3**
JSS				⇓*e*S	**Sn**	**18 45 14.6**	**+0.1**
JOSM	**Okushiri--Mats**	**2.08**	**262**	⇓P	**Pn**	**18 44 48.9**	**-0.6**
JOSM				⇓*e*S	**Sn**	**18 45 15.5**	**-0.4**
JKEN	**Kujiedanarisaw**	**2.23**	**190**	A	A	18 44 51.7	
	comp=E,8.0nm,1.1s,comp=E,9.0nm,0.8s						
NMR	**Nemuro--Hokkai**	**2.74**	**68**	⇓*i*PN	**Pn**	**18 44 56.9**	**-1.0**
NMR				*e*S	**Sn**	**18 45 27.4**	**-3.6**
NMR	**Nemuro--Hokkai**	**2.74**	**68**	*i* P	**Pn**	**18 44 56.9**	**-1.0**
NMR				*e*S	**Sn**	**18 45 27.4**	**-3.6**
RUSJ	**Misakicho**	**2.78**	**51**	⇓*i*PN	**Pn**	**18 44 59.0**	**+0.6**
RUSJ				*e*S	**Sn**	**18 45 36.8**	**+4.9**
YUK	**Yuzh-Kuril'sk**	**3.11**	**57**	*e*PN	**Pn**	**18 45 02.0**	**-0.8**
YUK				*e*S	**Sn**	**18 45 38.9**	**-0.7**
YUK				pmax	pmax		
	comp=Z,856nm,0.3s						
YUK				pmax	pmax		
	comp=N,76nm,0.1s						
YUK				pmax	pmax		
	comp=E,175nm,0.4s						
YUK				smax	smax		
	comp=E,988nm,0.6s						
YUK				smax	smax		
	comp=N,512nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.11**	**57**	*e*P	**Pn**	**18 45 02.0**	**-0.8**
YUK				AMB	AMB	18 45 04.2	
	comp=N,860nm,0.3s						
YUK				*e*S	**Sn**	**18 45 38.9**	**-0.7**
YUK				A	A	18 45 45.6	
	comp=N,510nm,0.5s						
YUK				A	A	18 45 45.6	
	comp=N,990nm,0.5s						
SHO	**Shikotan**	**3.67**	**65**	*d i*PN	**Pn**	**18 45 09.0**	**-1.1**
SHO				*e*S	**Sn**	**18 45 49.3**	**-3.5**
SHO				pmax	pmax		
	comp=Z,354nm,0.2s						
SHO				pmax	pmax		
	comp=N,137nm,0.1s						
SHO				pmax	pmax		
	comp=E,184nm,0.1s						
SHO				smax	smax		
	comp=N,145nm,0.2s						
SHO				smax	smax		
	comp=E,467nm,0.2s						
SHO	**Shikotan**	**3.67**	**65**	*i* P	**Pn**	**18 45 09.3**	**-0.8**
SHO				AMB	AMB	18 45 10.0	
	comp=E,350nm,0.2s						
SHO				*e*S	**Sn**	**18 45 49.6**	**-3.2**
SHO				A	A	18 45 54.0	
	comp=E,150nm,0.2s						
SHO				A	A	18 45 54.0	
	comp=E,470nm,0.2s						
YSS	**Yuzh-Sakhalins**	**4.56**	**4**	*ce*PN	**Pn**	**18 45 22.4**	**+0.4**
YSS				*e*S	**Sn**	**18 46 13.3**	**-0.8**
YSS				pmax	pmax		
	comp=Z,80nm,0.6s						
YSS				smax	smax		
	comp=N,40nm,1.1s						
YSS				smax	smax		
	comp=E,20nm,1.1s						
YSS	**Yuzh-Sakhalins**	**4.56**	**4**	*e*P	**Pn**	**18 45 22.4**	**+0.4**
YSS				AMB	AMB	18 45 23.1	
	comp=E,80nm,0.6s						
YSS				*e*S	**Sn**	**18 46 12.8**	**-1.3**
YSS				A	A	18 46 14.7	
	comp=E,40nm,0.5s						
YSS				A	A	18 46 14.7	
	comp=E,20nm,0.5s						
KUR	**Kuril'sk**	**4.96**	**53**	*e*PN	**Pn**	**18 45 27.8**	**+0.4**
KUR				*e*S	**Sn**	**18 46 25.9**	**+2.3**
KUR				pmax	pmax		
	comp=Z,84nm,0.4s						
KUR				pmax	pmax		
	comp=E,22nm,0.3s						
KUR				pmax	pmax		
	comp=N,22nm,0.5s						
KUR				smax	smax		
	comp=N,76nm,0.3s						
KUR				smax	smax		
	comp=E,37nm,0.4s						
KUR	**Kuril'sk**	**4.96**	**53**	*e*P	**Pn**	**18 45 27.7**	**+0.4**
KUR				AMB	AMB	18 45 40.4	
	comp=E,80nm,0.4s						
KUR				*e*S	**Sn**	**18 46 23.8**	**+0.2**
KUR				A	A	18 46 32.9	
	comp=E,80nm,0.4s						
KUR				A	A	18 46 32.9	
	comp=E,40nm,0.4s						
MAJO	**Matsushiro**	**6.63**	**209**	*d* PN	**Pn**	**18 45 49.9**	**-0.1**
MJAR	**Matsushiro Arr**	**6.63**	**209**	P	**Pn**	**18 45 49.0**	**-1.0**
	comp=E,14nm,0.6s,baz=24,slow=15,SNR=37						
USRK	**Ussuriysk Ar.**	**7.69**	**287**	P	**Pn**	**18 46 05.0**	**+0.9**
	comp=E,4.6nm,0.6s,baz=98,slow=14,SNR=6.9						
KLR	**Kul'dur**	**10.00**	**317**	P	**Pn**	**18 46 35.8**	**+0.4**
	comp=E,4.3nm,0.9s,baz=126,slow=12,SNR=9.8						
KLR	**Kul'dur**	**10.00**	**317**	⇑*e*PN	**Pn**	**18 46 35.9**	**+0.6**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KLR	**Kul'dur**	**10.00**	**317**	*e*P	**Pn**	**18 46 35.9**	**+0.6**
KSRS	**Korea Array**	**12.05**	**251**	P	**Pn**	**18 47 02.9**	**+0.2**
	comp=E,4.3nm,0.9s,baz=61,slow=12,SNR=24						
PETK	**Petropavlovsk-**	**14.89**	**39**	P	**Pn**	**18 47 38.4**	**-0.8**
	comp=E,2.0nm,0.7s,baz=215,slow=12,SNR=2.0						
ZEA	**Zeya**	**15.09**	**324**	*e*P	**Pn**	**18 47 41.8**	**+0.1**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA	**Zeya**	**15.09**	**324**	*e*P	**Pn**	**18 47 41.8**	**+0.1**
YAK	**Yakutsk**	**21.03**	**343**	*e*P	**P**	**18 48 45.9**	**-2.8**
YAK				pmax	pmax		
	comp=E,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
NJ2	**Nanjing**	**21.23**	**249**	*e*P	**P**	**18 48 49.2**	**-2.0**
NJ2				pmax	pmax		
	comp=E,10.0nm,0.5s						
SEY	**Seymchan**	**21.41**	**13**	P	**P**	**18 48 51.7**	**-1.1**
	comp=E,1.3nm,0.5s,baz=194,slow=9.8,SNR=10.0						
	comp=E,1.3nm,0.5s						
SONM	**Songino Array**	**25.71**	**295**	P	**P**	**18 49 32.7**	**-1.2**
	comp=E,1.4nm,0.8s,baz=97,slow=9.3,SNR=5.7						
	comp=E,1.4nm,0.8s						
BILL	**Bilibino**	**28.72**	**19**	⇑*e*P	**P**	**18 50 00.6**	**+0.2**
BILL				*e**PP	**pP**	**18 50 27.3**	**+0.4**
BILL				*e*		18 50 56.3	
BILL				*e*S	**S**	**18 54 33.8**	**-6.4**
BILL				pmax	pmax		
	comp=E,2.0nm,0.9s						
BILL	**Bilibino**	**28.72**	**19**	*e*P	**P**	**18 50 00.6**	**+0.2**
TIXI	**Tiksi**	**30.05**	**352**	LR	LR	19 02 53.4	
	comp=E,28nm,18.0s,baz=346,slow=37						
TIXI	**Tiksi**	**30.05**	**352**	*i* P	**P**	**18 50 12.3**	**+0.2**
TIXI				pmax	pmax		
	comp=E,4.0nm,0.9s						
TIXI	**Tiksi**	**30.05**	**352**	*e*P	**P**	**18 50 12.3**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**30.74**	**130**	T	T	19 23 10.2	
	baz=321,slow=75						
H11N1	**WAKE ISLAND Hy**	**30.75**	**130**	T	T	19 23 11.1	
	baz=321,slow=75						
H11N3	**WAKE ISLAND Hy**	**30.75**	**130**	T	T	19 23 11.7	
	baz=321,slow=75						
H11S1	**WAKE ISLAND Hy**	**31.60**	**131**	T	T	19 25 04.9	
	baz=324,slow=76						
H11S3	**WAKE ISLAND Hy**	**31.61**	**131**	T	T	19 25 11.8	
	baz=324,slow=76						
H11S2	**WAKE ISLAND Hy**	**31.62**	**131**	T	T	19 22 41.9	
	baz=324,slow=76						
GTA	**Gaotai**	**31.96**	**279**	*e*P	**P**	**18 50 30.2**	**+0.8**
GTA				pmax	pmax		
	comp=E,3.0nm,0.9s						
GOMU	**GeErMu**	**36.83**	**276**	P	**P**	**18 51 11.8**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,96nm,5.4s						
ZALV	**Zalesovo Beam**	**38.95**	**308**	P	**P**	**18 51 29.1**	**+0.4**
	comp=E,5.3nm,0.6s,baz=89,slow=8.6,SNR=28						
ZALV				PcP	**PcP**	**18 53 37.1**	**+0.3**
	comp=E,1.3nm,0.5s,baz=76,slow=1.9,SNR=7.3						
	comp=E,5.3nm,0.6s						
MK31	**Makanchi Array**	**42.01**	**297**	*c i*P	**P**	**18 51 54.0**	**-0.1**
MKAR	**Makanchi Array**	**42.01**	**297**	P	**P**	**18 51 54.1**	**0.0**
	comp=E,3.7nm,0.8s,baz=85,slow=9.4,SNR=23						
MKAR				PcP	**PcP**	**18 53 47.3**	**+0.4**
	comp=E,0.5nm,0.3s,baz=77,slow=5.5,SNR=9.7						
	comp=E,3.7nm,0.8s						
MKAR	**Makanchi Array**	**42.01**	**297**	*i* P	**P**	**18 51 54.0**	**-0.1**
MKAR				pmax	pmax		
	comp=E,4.0nm,0.8s						
MKAR	**Makanchi Array**	**42.01**	**297**	*e*P	**P**	**18 51 54.0**	**-0.1**
ILAR	**Eielson Array**	**44.68**	**35**	P	**P**	**18 52 15.7**	**+0.4**
	comp=E,0.5nm,0.7s,baz=253,slow=4.6,SNR=8.4						
	comp=E,0.5nm,0.7s						
BRVK	**Borovoye**	**47.61**	**309**	*ce*P	**P**	**18 52 38.8**	**+0.5**
BRVK				pmax	pmax		
	comp=E,3.0nm,0.9s						
BRVK	**Borovoye**	**47.61**	**309**	*e*P	**P**	**18 52 38.8**	**+0.5**
**AA

WEL ***10*** *18:51:54.9, 42°S×4°×17°5E, h61km, 9km, M2.8/33, ML3.1/43, MLv2.8/33, Error ellipse: s-maj=0.0km s-min=0.0km az=110.4*

NOU ***10*** *18:51:55.1, 41°71S×174°65E, h33km, MLv3.5/8, Cook Strait, New Zealand*

ISC 10 18:51:55.4±1.6, **41°68S**±0°04×**174°60E**±0°04, **h50**km, **n72**, σ0.91/72, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.29**	**256**	P	**Pn**	**18 52 03.3**	**+2.9**
SNZO	**South Karori**	**0.38**	**13**	P	**Pn**	**18 52 05.5**	**+0.3**
WEL	**Wellington**	**0.41**	**18**	P	**Pn**	**18 52 06.1**	**+0.5**
PLWZ	**Palliser**	**0.51**	**78**	P	**Pn**	**18 52 08.0**	**+1.3**
TCW	**Tory Channel**	**0.53**	**333**	P	**Pn**	**18 52 06.4**	**-0.5**
BSWZ	**Blackbirch Sta**	**0.54**	**266**	P	**Pn**	**18 52 07.4**	**+0.3**
TUWZ	**Tuamarina**	**0.55**	**297**	P	**Pn**	**18 52 06.6**	**-0.6**
MSWZ	**Moikau Station**	**0.56**	**62**	P	**Pn**	**18 52 08.2**	**+0.9**
CAW	**Cannon Point**	**0.67**	**32**	P	**Pn**	**18 52 08.9**	**+0.2**
PAWZ	**Paruwai Farm**	**0.69**	**65**	P	**Pn**	**18 52 09.6**	**+0.6**
KIW	**Kapiti Island**	**0.85**	**16**	P	**Pn**	**18 52 11.0**	**-0.1**
MTW	**Mount Morrison**	**0.86**	**53**	P	**Pn**	**18 52 11.3**	**+0.1**
TRWZ	**Traveller**	**0.87**	**72**	P	**Pn**	**18 52 12.1**	**+0.8**
OGWZ	**Otaki Gorge**	**0.96**	**27**	P	**Pn**	**18 52 12.4**	**-0.1**
DUWZ	**D'Urville Isla**	**1.01**	**330**	P	**Pn**	**18 52 12.6**	**-0.6**
NNZ	**Nelson**	**1.02**	**296**	P	**Pn**	**18 52 12.7**	**-0.7**
HOWZ	**Holdsworth Sta**	**1.04**	**42**	P	**Pn**	**18 52 13.4**	**-0.3**
KHZ	**Kahutara**	**1.08**	**227**	P	**Pn**	**18 52 14.9**	**+0.7**
KHZ	**Kahutara**	**1.08**	**227**	P	**Pn**	**18 52 14.8**	**+0.7**
TMWZ	**Te Maipa**	**1.13**	**60**	P	**Pn**	**18 52 14.9**	**0.0**
MRZ	**Mangatainoka R**	**1.26**	**36**	P	**Pn**	**18 52 16.2**	**-0.4**
THZ	**Tophouse**	**1.27**	**266**	P	**Pn**	**18 52 16.2**	**-0.5**
TIWZ	**Tintock**	**1.33**	**48**	P	**Pn**	**18 52 17.0**	**-0.5**
TKNZ	**Takaka Hill**	**1.39**	**297**	P	**Pn**	**18 52 17.7**	**-0.7**
MRNZ	**Matariki Terra**	**1.41**	**281**	P	**Pn**	**18 52 18.1**	**-0.5**
PRWZ	**Pori Road**	**1.53**	**43**	P	**Pn**	**18 52 19.7**	**-0.5**
POWZ	**Post Office Ro**	**1.56**	**35**	P	**Pn**	**18 52 20.1**	**-0.6**
BFZ	**Birch Farm**	**1.59**	**52**	P	**Pn**	**18 52 20.2**	**-1.0**
BFZ	**Birch Farm**	**1.59**	**52**	P	**Pn**	**18 52 20.3**	**-0.9**
GVZ	**Greta Valley S**	**1.73**	**221**	P	**Pn**	**18 52 23.4**	**+0.3**
QRZ	**Quartz Range**	**1.78**	**298**	P	**Pn**	**18 52 23.2**	**-0.4**
QRZ	**Quartz Range**	**1.78**	**298**	P	**Pn**	**18 52 24.0**	**+0.4**
DVHZ	**Dannevirke**	**1.82**	**41**	P	**Pn**	**18 52 23.1**	**-1.2**
ANWZ	**Angora Road**	**1.87**	**50**	P	**Pn**	**18 52 23.9**	**-1.1**
TSZ	**Takapari Road**	**1.92**	**33**	P	**Pn**	**18 52 24.7**	**-0.9**
WAZ	**Wanganui**	**1.94**	**9**	P	**Pn**	**18 52 28.2**	**+2.3**
LTZ	**Lake Taylor**	**2.05**	**237**	P	**Pn**	**18 52 27.3**	**-0.1**
DSZ	**Denniston Nort**	**2.09**	**267**	P	**Pn**	**18 52 27.4**	**-0.6**
PRHZ	**Porangahau**	**2.09**	**48**	P	**Pn**	**18 52 26.5**	**-1.4**
PNHZ	**Pukenui**	**2.14**	**35**	P	**Pn**	**18 52 27.7**	**-1.0**
OKCZ	**Okains Bay**	**2.34**	**208**	P	**Pn**	**18 52 31.3**	**-0.1**
KHEZ	**Kahui Hut**	**2.42**	**349**	P	**Pn**	**18 52 34.3**	**+1.7**
MOVZ	**Moawhango**	**2.43**	**22**	P	**Pn**	**18 52 32.6**	**-0.1**
BHHZ	**Black Hill Sta**	**2.46**	**28**	P	**Pn**	**18 52 32.5**	**-0.5**
MQZ	**McQueen's Vall**	**2.48**	**215**	P	**Pn**	**18 52 32.4**	**-0.9**
WHVZ	**Whangaehu Hut**	**2.51**	**18**	P	**Pn**	**18 52 34.0**	**+0.1**
AKCZ	**Akaroa Harbour**	**2.52**	**209**	P	**Pn**	**18 52 33.9**	**+0.1**
PKE	**Pukeiti**	**2.52**	**349**	P	**Pn**	**18 52 35.8**	**+1.9**
FWVZ	**Far West T-bar**	**2.53**	**17**	P	**Pn**	**18 52 34.6**	**+0.4**
VRZ	**Vera Road**	**2.55**	**3**	P	**Pn**	**18 52 36.3**	**+2.0**
INZ	**Inchbonnie**	**2.56**	**245**	P	**Pn**	**18 52 34.1**	**-0.3**
SNVZ	**South Ngauruho**	**2.61**	**18**	P	**Pn**	**18 52 35.3**	**0.0**
NGZ	**Ngauruhoe**	**2.62**	**17**	P	**Pn**	**18 52 35.5**	**+0.2**
OTVZ	**Oturere**	**2.64**	**18**	P	**Pn**	**18 52 35.6**	**0.0**
KWHZ	**Kaweka Forest**	**2.65**	**32**	P	**Pn**	**18 52 34.4**	**-1.3**
NNVZ	**North Ngauruho**	**2.66**	**17**	P	**Pn**	**18 52 36.2**	**+0.3**
ETVZ	**East Tongariro**	**2.68**	**19**	P	**Pn**	**18 52 36.3**	**+0.2**
TMVZ	**Te Maari**	**2.70**	**19**	P	**Pn**	**18 52 36.2**	**-0.1**
NTVZ	**North Tongarir**	**2.71**	**18**	P	**Pn**	**18 52 36.3**	**-0.1**
BKZ	**Black Stump Fm**	**2.90**	**31**	P	**Pn**	**18 52 37.4**	**-1.6**
BKZ	**Black Stump Fm**	**2.90**	**31**	P	**Pn**	**18 52 39.8**	**+0.8**
HIZ	**Hauiti**	**3.17**	**4**	P	**Pn**	**18 52 44.7**	**+2.0**
HIZ	**Hauiti**	**3.17**	**4**	P	**Pn**	**18 52 43.0**	**+0.3**
WVZ	**Waitaha Valley**	**3.18**	**243**	P	**Pn**	**18 52 42.3**	**-0.5**
RPZ	**Rata Peaks**	**3.31**	**231**	P	**Pn**	**18 52 44.9**	**+0.3**
RPZ	**Rata Peaks**	**3.31**	**231**	P	**Pn**	**18 52 44.4**	**-0.3**
ARCZ	**Arundel**	**3.39**	**227**	P	**Pn**	**18 52 45.0**	**-0.7**
TMZ	**Timaru**	**3.77**	**223**	P	**Pn**	**18 52 50.9**	**-0.1**
FOZ	**Fox Glacier**	**3.98**	**241**	P	**Pn**	**18 52 53.1**	**-0.7**
ODZ	**Otahua Downs**	**4.43**	**219**	P	**Pn**	**18 52 59.0**	**-1.0**
ODZ	**Otahua Downs**	**4.43**	**219**	P	**Pn**	**18 52 59.8**	**-0.2**
MXZ	**Matakaoa Point**	**5.01**	**36**	P	**Pn**	**18 53 09.8**	**+1.8**

NEIC ***10*** *19:21:42.9±0.8, 41°10N±0°02×112°83W±0°04, h0km±2km, ML1.8/30, Error ellipse: s-maj=4.7km s-min=3.9km az=302.0*

IDC ***10*** *19:21:44.9±1.6, 41°40N×112°93W, h0km, mbtmp2.0/1, ML2.1/1, Error ellipse: s-maj=78.1km s-min=11.1km az=149.0*

ISC 10 19:21:42.4±1.0, **41°13N**±0°03×**112°72W**±0°04, **h0**km, **n19**, σ1.9/**03**/18, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.31**	**229**		**Pg**	**19 21 47.2**	**-1.1**
BGU				IAML		19 21 54.9	
	comp=E,141nm,0.3s						
HVU	**Hansel Valley**	**0.65**	**356**	Pg	**Pg**	**19 21 55.3**	**+0.5**
CTU	**Camp Tracy**	**0.86**	**121**		**Pn**	**19 22 01.7**	**-0.1**
CTU				IAML		19 22 22.7	
	comp=N,22nm,0.4s						
CTU				IAML		19 22 23.4	
	comp=E,29nm,0.5s						
DUG	**Dugway, Tooele**	**0.94**	**184**		**Pg**	**19 22 00.7**	**+0.4**
DUG				IAML		19 22 19.7	
	comp=E,32nm,0.6s						
HWUT	**Hardware Ranch**	**0.99**	**61**		**Pn**	**19 22 03.7**	**0.0**
HWUT				IAML		19 22 25.1	
	comp=E,20nm,0.4s						
HWUT				IAML		19 22 27.4	
	comp=E,24nm,0.4s						
TCUT	**Toone Canyon**	**0.99**	**90**		**Pn**	**19 22 04.3**	**+0.5**
JLU	**Jordanelle**	**1.10**	**118**		**Pn**	**19 22 05.1**	**-0.2**
JLU				IAML		19 22 25.5	
	comp=N,14nm,0.9s						
NLU	**North Lily Min**	**1.27**	**157**		**Pb**	**19 22 07.2**	**-0.2**
MPU	**Maple Canyon**	**1.39**	**143**	Pn	**Pg**	**19 22 09.0**	**0.0**
ELK	**Elko**	**1.95**	**259**		**Pn**	**19 22 15.7**	**-1.3**
ELK				IAML		19 22 42.4	
	comp=N,11nm,0.3s						
AHID	**Auburn Hatcher**	**2.03**	**36**		**Pb**	**19 22 19.7**	**-0.6**
TMUT	**Trail Mountain**	**2.17**	**147**		**Pn**	**19 22 20.7**	**+0.7**
TMUT				IAML		19 23 02.0	
	comp=N,8.9nm,0.6s						
TMUT				IAML		19 23 06.1	
	comp=E,8.0nm,1.7s						
SPR3	**Spring Creek 3**	**2.46**	**211**	Pn	**Pn**	**19 22 24.3**	**+0.3**
SPR3				IAML		19 23 12.8	
	comp=E,5.3nm,0.6s						
SPR3				IAML		19 23 13.4	
	comp=N,5.1nm,0.6s						
MSU	**Marysvale**	**2.65**	**171**	Pn	**Pn**	**19 22 26.6**	**+0.1**
HLID	**Hailey**	**2.73**	**333**		**Pn**	**19 22 27.8**	**+0.1**
HLID				IAML		19 22 45.5	
	comp=N,3.5nm,3.5s						
HLID				IAML		19 23 19.6	
	comp=N,3.6nm,0.4s						
PSUT	**Pine Spring**	**2.74**	**199**		**Pn**	**19 22 27.1**	**-0.7**
PSUT				IAML		19 23 24.8	
	comp=N,4.4nm,0.9s						
PSUT				IAML		19 23 34.9	
	comp=E,3.9nm,2.4s						
PDAR	**Pinedale Array**	**2.87**	**54**	Pg	**Pg**	**19 22 37.1**	**-0.3**
	comp=E,1.0nm,0.3s,baz=235,slow=14,SNR=6.8						
PDAR				Lg	Lg	19 23 16.7	
	comp=E,0.8nm,0.3s,baz=232,slow=21,SNR=2.1						
NVAR	**Mina Array Bea**	**5.08**	**240**	Pn	**Pn**	**19 23 03.3**	**+3.3**
	comp=E,0.1nm,0.3s,baz=50,slow=12,SNR=1.5						
	comp=E,0.1nm,0.4s						
I56US	**NEWPORT INFRAS**	**7.79**	**338**	*i*		20 06 10.0	
	comp=E,0.1nm,0.8s,baz=158,slow=320,SNR=1.5						

IDC ***10*** *19:38:19.9±5.7, 34°33N×85°99E, h64km±56km, mb3.1/4, mbtmp3.5/8, ML3.2/4, Error ellipse: s-maj=45.4km s-min=24.5km az=51.0*

ISC 10 19:38:18.7±0.8, **34°51N**±0°08×**86°3E**±0°2, **h35**km, **n18**, σ2.5**07**/18, **mb3.5/3**, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**6.50**	**200**	*eP*	**Pn**	**19 39 53.1**	**+0.9**
	16nm,0.5s						
GUN	**Gumba**	**6.58**	**183**	*eP*	**Pn**	**19 39 57.1**	**+3.8**
	14nm,0.4s						
GKN	**Gorkha**	**6.63**	**193**	*eP*	**Pn**	**19 39 55.9**	**+2.1**
	23nm,0.3s						
KKN	**Kakani**	**6.75**	**188**	*eP*	**Pn**	**19 39 57.7**	**+2.2**
	3.3nm,0.2s						
JIRN	**Jiri**	**6.82**	**181**	*eP*	**Pn**	**19 39 59.5**	**+2.9**
	13nm,0.4s						
DMN	**Daman**	**6.95**	**189**	*eP*	**Pn**	**19 39 59.8**	**+1.6**
	11nm,0.3s						
PKIN	**Phulchoki**	**6.95**	**187**	*eP*	**Pn**	**19 39 59.7**	**+1.4**
	6.7nm,0.4s						
PKI	**Pulchoki**	**6.95**	**186**	*eP*	**Pn**	**19 40 00.3**	**+1.9**
	8.0nm,0.3s						
TAPN	**Taplejung**	**7.24**	**170**	*eP*	**Pn**	**19 40 03.3**	**+1.1**
	15nm,0.4s						
RAMN	**Ramite**	**7.54**	**178**	*eP*	**Pn**	**19 40 05.9**	**-0.4**
	4.8nm,0.4s						
MKAR	**Makanchi Array**	**12.64**	**347**	P	**Pn**	**19 41 17.2**	**+1.3**
	baz=148,slow=14,SNR=4.5						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**17.07**	**343**	P	**Pn**	**19 42 14.7**	**+0.2**
	baz=159,slow=11,SNR=8.6						
	2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**19.47**	**357**	P	**P**	**19 42 43.2**	**+1.0**
	0.2nm,0.3s,baz=195,slow=9.8,SNR=4.7						
	1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**19.56**	**142**	P	**P**	**19 42 43.9**	**+0.4**
	0.2nm,0.3s,baz=323,slow=10,SNR=4.2						
	1.0nm,0.7s						
SONM	**Songino Array**	**20.09**	**42**	P	**Pn**	**19 42 52.3**	**+1.2**
	0.4nm,0.5s,baz=224,slow=10,SNR=4.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**70.84**	**132**	P	**P**	**19 49 30.5**	**-1.6**
	0.5nm,0.9s,baz=325,slow=6.6,SNR=4.9						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**73.42**	**135**	P	**P**	**19 49 44.5**	**-3.0**
	0.3nm,0.6s,baz=314,slow=5.1,SNR=1.4						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.27**	**278**	P	**P**	**19 50 12.8**	**-2.6**
	0.4nm,0.8s,baz=57,slow=4.5,SNR=2.7						
	0.4nm,0.8s						

WEL 10 19:41:04.0±0.9, **32°S**±8°×**17°9E**±1°5, **h33**km, **M4.5/7, mB5.0/2, ML4.6**/12, **MLv4.5/7**, **Mw(mB)4.3/2**, **Error ellipse: s-maj=0.0km s-min=0.0km az=115.9**, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.15**	**49**	P	Pn	19 42 04.8	-0.1
GLKZ				S	Sn	19 42 53.9	+1.6
HAZ	**Te Kaha**	**5.73**	**186**	P	Pn	19 42 27.0	+0.3
HAZ				S	Sn	19 43 33.6	+2.4
WMGZ	**Waiomatatini S**	**5.76**	**181**	P	Pn	19 42 27.7	+0.6
WMGZ				S	Sn	19 43 31.8	-0.2
PKGZ	**Pakihiroa**	**5.84**	**183**	P	Pn	19 42 28.0	-0.3
RUGZ	**Raukumara Rang**	**5.94**	**186**	P	Pn	19 42 28.8	-1.0
TWGZ	**Tauwhareparae**	**6.13**	**184**	P	Pn	19 42 34.0	+1.8
TWGZ				S	Sn	19 43 38.9	-2.4
URZ	**Urewera**	**6.30**	**190**	P	Pn	19 42 35.0	+0.5
URZ				S	Sn	19 43 48.9	+3.5
MWZ	**Matawai**	**6.32**	**187**	P	Pn	19 42 33.6	-1.5
MWZ				S	Sn	19 43 48.7	+2.7
MUGZ	**Murupara**	**6.57**	**192**	P	Pn	19 42 40.5	+2.3
RIGZ	**Rimuhau**	**6.67**	**185**	P	Pn	19 42 37.7	-2.0
MRHZ	**Matea Rd**	**6.98**	**194**	P	Pn	19 42 45.0	+1.1
BKZ	**Black Stump Fm**	**7.29**	**192**	P	Pn	19 42 47.0	-1.2
OTVZ	**Oturere**	**7.47**	**197**	P	Pn	19 42 51.3	+0.6
SNVZ	**South Ngauruho**	**7.50**	**197**	P	Pn	19 42 51.4	+0.3
KWHZ	**Kaweka Forest**	**7.55**	**192**	P	Pn	19 42 50.7	-1.1
KAHZ	**Kahuranaki**	**7.84**	**189**	P	Pn	19 42 52.4	-3.3

NOU ***10*** *19:58:43.5, 39°32S×174°23E, h273km, MLv3.9/9, North Island, New Zealand*

IDC ***10*** *19:58:47.8±8.1, 39°61S×173°72E, h247km±68km, mb2.9/2, mbtmp3.6/3, Error ellipse: s-maj=94.9km s-min=50.1km az=43.0*

WEL ***10*** *19:58:48.8±1.0, 39°S±17°×17°4E±°, h235km±7km, M3.0/25, ML2.7/7, MLv3.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=173.6*

ISC 10 19:58:44.0±1.0, **39°43S**±0°06×**174°24E**±0°06, **h266**km±7km, **n129**, σ1.9**13**/138, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.13**	**104**	P	**Pn**	**19 59 19.4**	**+1.4**
LREZ				S	**S**	**19 59 44.4**	**-0.4**
NEZ	**North Egmont**	**0.19**	**325**	P	**Pn**	**19 59 19.6**	**+1.3**
NEZ				S	**S**	**19 59 44.6**	**-0.6**
KHEZ	**Kahui Hut**	**0.22**	**308**	P	**Pn**	**19 59 19.6**	**+1.3**
DREZ	**Durham Road**	**0.24**	**353**	P	**Pn**	**19 59 16.7**	**-1.5**
PKE	**Pukeiti**	**0.30**	**320**	P	**Pn**	**19 59 19.6**	**+1.3**
VRZ	**Vera Road**	**0.51**	**53**	P	**Pn**	**19 59 19.1**	**+0.4**
WAZ	**Wanganui**	**0.67**	**120**	P	**Pn**	**19 59 20.8**	**+1.6**
WAZ				S	**S**	**19 59 46.5**	**-0.5**
PKVZ	**Pokaka**	**0.87**	**81**	P	**Pn**	**19 59 20.8**	**+0.7**
PKVZ				S	**S**	**19 59 46.8**	**-1.8**
MTVZ	**Mangateitei**	**0.96**	**88**	P	**Pn**	**19 59 21.4**	**+0.9**
MTVZ				S	**S**	**19 59 47.4**	**-2.0**
TWVZ	**Taurewa**	**1.00**	**69**	P	**Pn**	**19 59 21.4**	**+0.5**
TRVZ	**Turoa**	**1.02**	**83**	P	**Pn**	**19 59 22.1**	**+0.9**
HIZ	**Hauiti**	**1.03**	**28**	P	**Pn**	**19 59 21.2**	**+0.2**
HIZ	**Hauiti**	**1.03**	**28**	P	**Pn**	**19 59 21.0**	**0.0**
FWVZ	**Far West T-bar**	**1.04**	**81**	P	**Pn**	**19 59 22.0**	**+0.8**
FWVZ				S	**S**	**19 59 48.0**	**-2.5**
DRZ	**Dome Shelter**	**1.04**	**82**	P	**Pn**	**19 59 22.4**	**+1.1**
DRZ				S	**S**	**19 59 49.4**	**-1.3**
WHVZ	**Whangaehu Hut**	**1.06**	**83**	P	**Pn**	**19 59 22.1**	**+0.8**
NGZ	**Ngauruhoe**	**1.09**	**77**	P	**Pn**	**19 59 22.1**	**+0.7**
WTVZ	**West Tongariro**	**1.10**	**74**	P	**Pn**	**19 59 22.2**	**+0.8**
NNVZ	**North Ngauruho**	**1.11**	**75**	P	**Pn**	**19 59 22.3**	**+0.8**
TUVZ	**Tukino**	**1.11**	**82**	P	**Pn**	**19 59 22.4**	**+0.9**
SNVZ	**South Ngauruho**	**1.12**	**78**	P	**Pn**	**19 59 22.4**	**+0.9**
KRVZ	**Karewarewa**	**1.14**	**73**	P	**Pn**	**19 59 22.4**	**+0.7**
OTVZ	**Oturere**	**1.14**	**77**	P	**Pn**	**19 59 22.6**	**+0.9**
NTVZ	**North Tongarir**	**1.17**	**74**	P	**Pn**	**19 59 22.6**	**+0.8**
MOVZ	**Moawhango**	**1.18**	**89**	P	**Pn**	**19 59 22.3**	**+0.5**
MOVZ				S	**S**	**19 59 48.2**	**-3.4**
ETVZ	**East Tongariro**	**1.18**	**76**	P	**Pn**	**19 59 22.7**	**+0.8**
TMVZ	**Te Maari**	**1.18**	**75**	P	**Pn**	**19 59 22.9**	**+1.0**
KATZ	**Kakaramea**	**1.22**	**69**	P	**Pn**	**19 59 22.8**	**+0.6**
RATZ	**Rangitukua**	**1.32**	**65**	P	**Pn**	**19 59 23.2**	**+0.5**
RITZ	**Rihia Road**	**1.34**	**71**	P	**Pn**	**19 59 23.7**	**+1.0**
WATZ	**Wairara**	**1.37**	**59**	P	**Pn**	**19 59 23.8**	**+0.8**
DUWZ	**D'Urville Isla**	**1.39**	**190**	P	**Pn**	**19 59 24.4**	**+1.4**
BHHZ	**Black Hill Sta**	**1.42**	**93**	P	**Pn**	**19 59 23.8**	**+0.5**
TSZ	**Takapari Road**	**1.47**	**116**	P	**Pn**	**19 59 22.1**	**-1.5**
TLZ	**Tolley Road**	**1.50**	**43**	P	**Pn**	**19 59 24.2**	**+0.3**
KIW	**Kapiti Island**	**1.52**	**160**	P	**Pn**	**19 59 25.0**	**+1.1**
POWZ	**Post Office Ro**	**1.52**	**130**	P	**Pn**	**19 59 25.0**	**+1.1**
OGWZ	**Otaki Gorge**	**1.56**	**153**	P	**Pn**	**19 59 25.5**	**+1.3**
PNHZ	**Pukenui**	**1.59**	**108**	P	**Pn**	**19 59 25.6**	**+1.1**
MRZ	**Mangatainoka R**	**1.61**	**141**	P	**Pn**	**19 59 25.5**	**+1.0**
KWHZ	**Kaweka Forest**	**1.69**	**91**	P	**Pn**	**19 59 26.5**	**+1.1**
DVHZ	**Dannevirke**	**1.72**	**121**	P	**Pn**	**19 59 26.4**	**+1.0**
PRWZ	**Pori Road**	**1.75**	**131**	P	**Pn**	**19 59 27.1**	**+1.4**
HOWZ	**Holdsworth Sta**	**1.77**	**147**	P	**Pn**	**19 59 26.8**	**+1.0**
BKZ	**Black Stump Fm**	**1.77**	**82**	P	**Pn**	**19 59 26.4**	**+0.5**
BKZ	**Black Stump Fm**	**1.77**	**82**	P	**Pn**	**19 59 26.3**	**+0.4**
TCW	**Tory Channel**	**1.78**	**179**	P	**Pn**	**19 59 27.2**	**+1.3**
CAW	**Cannon Point**	**1.79**	**160**	P	**Pn**	**19 59 27.1**	**+1.2**
MRHZ	**Matea Rd**	**1.80**	**71**	P	**Pn**	**19 59 26.1**	**-0.1**
WPHZ	**Waipukurau**	**1.81**	**111**	P	**Pn**	**19 59 27.5**	**+1.3**
TIWZ	**Tintock**	**1.85**	**137**	P	**Pn**	**19 59 27.6**	**+1.2**
ALRZ	**Allen Road**	**1.85**	**63**	P	**Pn**	**19 59 26.7**	**+0.1**
TKNZ	**Takaka Hill**	**1.88**	**211**	P	**Pn**	**19 59 27.7**	**+1.0**
HRRZ	**Handcock Road**	**1.90**	**58**	P	**Pn**	**19 59 27.6**	**+0.5**
NNZ	**Nelson**	**1.90**	**200**	P	**Pn**	**19 59 28.3**	**+1.4**
QRZ	**Quartz Range**	**1.91**	**223**	P	**Pn**	**19 59 27.9**	**+0.9**
QRZ	**Quartz Range**	**1.91**	**223**	P	**Pn**	**19 59 27.8**	**+0.9**
SNZO	**South Karori**	**1.91**	**169**	P	**Pn**	**19 59 28.0**	**+1.1**
HSRZ	**Hossack Road**	**1.92**	**55**	P	**Pn**	**19 59 27.7**	**+0.5**
TOZ	**Tahuroa Road**	**1.96**	**31**	P	**Pn**	**19 59 27.7**	**+0.2**
MTW	**Mount Morrison**	**1.98**	**151**	P	**Pn**	**19 59 27.8**	**+0.2**
BFZ	**Birch Farm**	**1.99**	**130**	P	**Pn**	**19 59 28.6**	**+1.0**
BFZ	**Birch Farm**	**1.99**	**130**	P	**Pn**	**19 59 28.6**	**+1.0**
ANWZ	**Angora Road**	**2.01**	**122**	P	**Pn**	**19 59 29.2**	**+1.4**
TUWZ	**Tuamarina**	**2.01**	**186**	P	**Pn**	**19 59 29.0**	**+1.2**
NMHZ	**Naumai**	**2.02**	**81**	P	**Pn**	**19 59 29.4**	**+1.3**
PRHZ	**Porangahau**	**2.03**	**115**	P	**Pn**	**19 59 29.2**	**+1.2**
KAHZ	**Kahuranaki**	**2.07**	**101**	P	**Pn**	**19 59 29.9**	**+1.5**
RRRZ	**Republican Roa**	**2.08**	**59**	P	**Pn**	**19 59 28.7**	**+0.1**
KARZ	**Kaharoa**	**2.11**	**49**	P	**Pn**	**19 59 29.2**	**+0.4**
PXZ	**Pawanui**	**2.11**	**107**	P	**Pn**	**19 59 29.9**	**+1.2**
MSWZ	**Moikau Station**	**2.13**	**159**	P	**Pn**	**19 59 29.9**	**+1.0**
TARZ	**Mount Tarawera**	**2.13**	**57**	P	**Pn**	**19 59 29.3**	**+0.2**
ARHZ	**Aropaoanui**	**2.15**	**86**	P	**Pn**	**19 59 30.3**	**+1.2**
PAWZ	**Paruwai Farm**	**2.15**	**155**	P	**Pn**	**19 59 30.2**	**+1.1**
MUGZ	**Murupara**	**2.19**	**65**	P	**Pn**	**19 59 29.2**	**-0.3**
CKHZ	**Cape Kidnapper**	**2.21**	**97**	P	**Pn**	**19 59 31.2**	**+1.5**
TRWZ	**Traveller**	**2.26**	**151**	P	**Pn**	**19 59 31.3**	**+1.2**
MRNZ	**Matariki Terra**	**2.27**	**209**	P	**Pn**	**19 59 31.1**	**+1.0**
PLWZ	**Palliser**	**2.28**	**160**	P	**Pn**	**19 59 31.2**	**+1.0**
BSWZ	**Blackbirch Sta**	**2.30**	**187**	P	**Pn**	**19 59 31.7**	**+1.3**
CMWZ	**Cape Campbell**	**2.32**	**180**	P	**Pn**	**19 59 32.3**	**+1.7**
MKAZ	**Moumakai**	**2.43**	**18**	P	**Pn**	**19 59 31.9**	**+0.1**
SNGZ	**Shannon Statio**	**2.50**	**76**	P	**Pn**	**19 59 33.0**	**+0.5**
URZ	**Urewera**	**2.53**	**63**	P	**Pn**	**19 59 32.0**	**-0.7**
URZ	**Urewera**	**2.53**	**63**	P	**Pn**	**19 59 32.0**	**-0.7**
THZ	**Tophouse**	**2.54**	**203**	P	**Pn**	**19 59 33.9**	**+1.1**
KNZ	**Kokohu**	**2.70**	**82**	P	**Pn**	**19 59 35.1**	**+0.8**
MWZ	**Matawai**	**2.79**	**68**	P	**Pn**	**19 59 35.1**	**-0.3**
RIGZ	**Rimuhau**	**2.84**	**76**	P	**Pn**	**19 59 36.3**	**+0.5**
MHGZ	**Mahia Peninsul**	**2.86**	**86**	P	**Pn**	**19 59 36.9**	**+0.9**
KUZ	**Kuaotunu**	**2.92**	**24**	P	**Pn**	**19 59 37.3**	**+0.6**
DSZ	**Denniston Nort**	**2.96**	**218**	P	**Pn**	**19 59 37.8**	**+0.7**
TKGZ	**Te Karaka**	**2.98**	**72**	P	**Pn**	**19 59 37.7**	**+0.4**
KHZ	**Kahutara**	**3.03**	**190**	P	**Pn**	**19 59 38.6**	**+0.9**
KHZ	**Kahutara**	**3.03**	**190**	P	**Pn**	**19 59 38.5**	**+0.9**
RUGZ	**Raukumara Rang**	**3.06**	**63**	P	**Pn**	**19 59 37.0**	**-1.2**
TWGZ	**Tauwhareparae**	**3.18**	**68**	P	**Pn**	**19 59 40.2**	**+0.8**
CNGZ	**Carnagh Statio**	**3.24**	**74**	P	**Pn**	**19 59 40.9**	**+0.9**
HAZ	**Te Kaha**	**3.24**	**60**	P	**Pn**	**19 59 38.8**	**-1.2**
PKGZ	**Pakihiroa**	**3.38**	**64**	P	**Pn**	**19 59 41.3**	**-0.3**
WMGZ	**Waiomatatini S**	**3.65**	**65**	P	**Pn**	**19 59 44.0**	**-0.5**
GVZ	**Greta Valley S**	**3.65**	**194**	P	**Pn**	**19 59 45.0**	**+0.5**
LTZ	**Lake Taylor**	**3.67**	**203**	P	**Pn**	**19 59 45.3**	**+0.6**
MXZ	**Matakaoa Point**	**3.70**	**61**	P	**Pn**	**19 59 45.0**	**-0.1**
INZ	**Inchbonnie**	**3.91**	**212**	P	**Pn**	**19 59 47.8**	**+0.4**
AMCZ	**Amberley**	**3.93**	**197**	P	**Pn**	**19 59

	18nm,0.4s					
SHLS	**Shalkode**	**3.19 179**	Pg	**Pb**	**20 06 05.3**	**+1.9**
	1.6nm,0.2s					
SHLS			Lg	Lg	20 06 45.9	
	18nm,0.4s					
UZB	**Uzynbulak**	**3.21 185**	*e*P	**Pb**	**20 06 04.6**	**+0.9**
	0.7nm,0.2s					
UZB			*e*S	**Sb**	**20 06 44.8**	**+1.8**
	11nm,0.2s					
UZB	**Uzynbulak**	**3.21 185**	Pg	**Pb**	**20 06 04.6**	**+0.9**
	0.7nm,0.2s					
UZB			Lg	Lg	20 06 44.8	
	11nm,0.2s					
ZHN	**Zhinishke**	**3.25 192**	*e*P	**Pg**	**20 06 06.8**	**-2.0**
	4.3nm,0.2s					
ZHN			*e*S	**Sg**	**20 06 48.4**	**-2.5**
	39nm,0.2s					
ZHN	**Zhinishke**	**3.25 192**	Pg	**Pg**	**20 06 06.8**	**-2.0**
	4.3nm,0.2s					
ZHN			Lg	Lg	20 06 48.4	
	39nm,0.2s					
KTBS	**Karatobe**	**3.25 217**	*e*P	**Pb**	**20 06 05.5**	**+1.1**
	4.0nm,0.4s					
KTBS			*e*S	**Sb**	**20 06 46.5**	**+2.4**
	28nm,0.2s					
KTBS	**Karatobe**	**3.25 217**	Pg	**Pb**	**20 06 05.6**	**+1.1**
	4.0nm,0.4s					
KTBS			Lg	Lg	20 06 46.5	
	28nm,0.2s					
KUU	**Kurty**	**3.26 222**	*e*P	**Pb**	**20 06 06.1**	**+1.5**
	4.8nm,0.2s					
KUU			*e*S	**Sb**	**20 06 47.3**	**+3.0**
	18nm,0.2s					
KUU	**Kurty**	**3.26 222**	Pg	**Pb**	**20 06 06.1**	**+1.5**
	4.8nm,0.2s					
KUU			Lg	Lg	20 06 47.3	
	18nm,0.2s					
SATY	**Saty**	**3.36 192**	*e*P	**Pb**	**20 06 07.7**	**+1.4**
	2.6nm,0.2s					
SATY			*e*S	**Sb**	**20 06 50.0**	**+2.7**
	21nm,0.2s					
SATY	**Saty**	**3.36 192**	Pg	**Pb**	**20 06 07.7**	**+1.4**
	2.6nm,0.2s					
SATY			Lg	Lg	20 06 50.0	
	21nm,0.2s					
KOTS	**Kotyrbulak**	**3.50 208**	*e*P	**Pb**	**20 06 09.1**	**+0.3**
	1.0nm,0.4s					
KOTS			*e*S	**Sb**	**20 06 52.7**	**+1.3**
	8.7nm,0.6s					
KOTS	**Kotyrbulak**	**3.50 208**	Pg	**Pb**	**20 06 09.1**	**+0.3**
	1.0nm,0.4s					
KOTS			Lg	Lg	20 06 52.7	
	8.7nm,0.6s					
MDOK	**Medeo**	**3.59 208**	*e*P	**Pb**	**20 06 11.6**	**+1.4**
	1.2nm,0.3s					
MDOK			*e*S	**Sb**	**20 06 56.8**	**+3.0**
	6.5nm,0.5s					
MDOK	**Medeo**	**3.59 208**	Pg	**Pb**	**20 06 11.6**	**+1.4**
	1.2nm,0.3s					
MDOK			Lg	Lg	20 06 56.8	
	6.5nm,0.5s					
KRBS	**Karabastau**	**3.73 226**	*e*P	**Pb**	**20 06 13.1**	**+0.5**
	2.4nm,0.4s					
KRBS			*e*S	**Sb**	**20 06 59.5**	**+1.7**
	5.4nm,0.3s					
KRBS	**Karabastau**	**3.73 226**	Pg	**Pb**	**20 06 13.1**	**+0.5**
	2.4nm,0.4s					
KRBS			Lg	Lg	20 06 59.5	
	5.4nm,0.3s					
MTBS	**Maitube**	**3.84 214**	*e*P	**Pb**	**20 06 16.0**	**+1.5**
	2.3nm,0.1s					
MTBS			*e*S	**Sb**	**20 07 04.3**	**+3.3**
	9.3nm,0.2s					
MTBS	**Maitube**	**3.84 214**	Pg	**Pb**	**20 06 16.0**	**+1.5**
	2.3nm,0.1s					
MTBS			Lg	Lg	20 07 04.3	
	9.3nm,0.2s					
ZSN	**Zaisan**	**3.92 72**	*e*P	**Pb**	**20 06 18.1**	**+2.3**
	2.6nm,1.5s					
ZSN			*e*S	**Sg**	**20 07 08.1**	**-4.5**
	5.1nm,1.2s					
ZSN	**Zaisan**	**3.92 72**	Pg	**Pb**	**20 06 18.2**	**+2.3**
	2.6nm,1.5s					
ZSN			Lg	Lg	20 07 08.1	
	5.1nm,1.2s					
KST	**Kastek**	**4.10 218**	*e*P	**Pb**	**20 06 20.3**	**+1.4**
	1.9nm,0.4s					
KST			*e*S	**Sb**	**20 07 11.8**	**+3.2**
	4.7nm,0.6s					
KST	**Kastek**	**4.10 218**	Pg	**Pb**	**20 06 20.3**	**+1.4**
	1.9nm,0.4s					
KST			Lg	Lg	20 07 11.8	
	4.7nm,0.6s					
KURBB	**Kurchatov Arra**	**4.31 353**	⇑Pn	**Pn**	**20 06 14.8**	**+2.6**
	1.0nm,0.8s					
KURBB			⇓Lg	Lg	20 07 17.8	
	12nm,0.6s					
KURK	**Kurchatov**	**4.40 354**	Sg	**Sb**	**20 07 19.8**	**+2.9**
AAK	**Ala-Archa**	**5.09 225**	Sg	**Sg**	**20 07 44.4**	**-5.6**
UKR	**Ust'-Kan**	**5.82 36**	Sg	**Sg**	**20 08 08.9**	**-4.5**
DGZ	**Jazzator, Alta**	**6.36 55**	Sg	**Sg**	**20 08 27.5**	**-3.1**
AKAR	**Aktash**	**6.78 51**	Sg	**Sg**	**20 08 42.6**	**-1.6**
CUR	**Chagan-Uzun**	**7.07 55**	Sg	**Sg**	**20 08 52.6**	**-0.9**
ULGR	**Ulagan, Altay**	**7.13 50**	Sg	**Sg**	**20 08 52.6**	**-2.7**

*IDC **10** 20:06:50.6±1.1,44.°04N×105.°67W,h0km,mb3.9/4, mbtmp3.7/9,ML3.5/4,MS1.9/1,Error ellipse: s-maj=25.8km s-min=11.1km az=147.0*

*NEIC **10** 20:06:50.5±0.3,43.°78N±0.°02×105.°30W±0.°05,h0km±2km, ML3.3/52,Error ellipse: s-maj=6.8km s-min=3.0km az=62.0*

ISC 10 20:06:49.6±0.8,43.°79N±0.°06×105.°31W±0.°07,h0km,n53, σ0°98/53,mb3.8/4,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**70**	Pg	**Pb**	**20 07 08.8**	**-0.9**
K22A	**Casper**	**1.44**	**218**		**Pn**	**20 07 15.7**	**-1.4**
K22A				IAML		20 07 43.5	
	comp=E,483nm,0.3s						
PHWY	**Pilot Hill**	**2.49**	**183**		**Pn**	**20 07 31.9**	**+0.3**
PHWY				IAML		20 08 12.0	
	comp=E,99nm,0.4s						
RWWY	**Rawlins**	**2.52**	**214**		**Pn**	**20 07 33.3**	**+1.3**
RWWY				IAML		20 08 11.7	
	comp=E,210nm,0.8s						
N23A	**Red Feather La**	**2.93**	**189**	Pn	**Pn**	**20 07 38.3**	**+0.7**
N23A				IAML		20 08 25.1	
	comp=N,94nm,0.6s						
N23A				IAML		20 08 27.6	
	comp=E,79nm,0.8s						
LAO	**LASA Array**	**2.97**	**348**		**Pn**	**20 07 38.9**	**+0.9**
RLMT	**Red Lodge**	**3.13**	**297**	Pn	**Pn**	**20 07 41.2**	**+0.9**
RLMT				IAML		20 08 32.2	
	comp=E,87nm,0.3s						
RLMT				IAML		20 08 33.5	
	comp=E,94nm,0.7s						
BW06	**Boulder Array**	**3.26**	**253**		**Pn**	**20 07 42.9**	**+0.7**
BW06				IAML		20 08 32.1	
	comp=E,66nm,0.4s						
BW06				IAML		20 08 37.4	
	comp=E,58nm,0.3s						
PD31	**Pinedale Array**	**3.26**	**253**		**Pn**	**20 07 42.7**	**+0.5**
PDAR	**Pinedale Array**	**3.26**	**253**	Pn	**Pn**	**20 07 42.9**	**+0.6**
	comp=E,4.9nm,0.3s,baz=80,slow=18,SNR=35						
PDAR				Lg	Lg	20 08 29.6	
	comp=E,25nm,0.3s,baz=66,slow=44,SNR=4.9						
PDAR				LR	LR	20 09 06.7	
	comp=E,20nm,18.7s,baz=204,slow=44						
GCMT	**Greycliff**	**3.69**	**304**		**Pn**	**20 07 49.0**	**+1.0**
OGNE	**Ogallala**	**3.74**	**138**	Pn	**Pn**	**20 07 49.1**	**+0.5**
LOHW	**Long Hollow**	**3.84**	**269**		**Pn**	**20 07 51.0**	**+0.9**
FLWY	**Flagg Ranch**	**3.90**	**276**		**Pn**	**20 07 51.9**	**+0.9**
FLWY				IAML		20 09 04.6	
	comp=E,37nm,1.1s						
FLWY				IAML		20 09 05.5	
	comp=E,38nm,1.1s						
MOOW	**Moose Ponds**	**3.93**	**271**	Pn	**Pn**	**20 07 52.5**	**+1.1**
ISCO	**Idaho Springs**	**3.99**	**183**	Pn	**Pn**	**20 07 53.0**	**+0.7**
REDW	**Red Top Meadow**	**4.05**	**266**		**Pn**	**20 07 53.8**	**+0.8**
IMW	**Indian Meadow**	**4.07**	**273**	Pn	**Pn**	**20 07 54.4**	**+1.0**
IMW				IAML		20 09 04.8	
	comp=E,50nm,0.6s						
IMW				IAML		20 09 06.5	
	comp=E,30nm,0.6s						

TPAW	**Teton Pass**	**4.10 268**		**Pn**	**20 07 54.4**	**+0.6**
TPAW			IAML		20 09 11.1	
	comp=E,28nm,1.0s					
TPAW			IAML		20 09 20.9	
	comp=E,41nm,1.0s					
FXWY	**Fox Creek**	**4.14 270**	Pn	**Pn**	**20 07 55.6**	**+1.3**
O20A	**White River Ci**	**4.25 212**	Pn	**Pn**	**20 07 56.4**	**+0.6**
O20A			IAML		20 09 11.0	
	comp=E,51nm,0.6s					
O20A			IAML		20 09 20.3	
	comp=N,44nm,0.9s					
E28A	**Huff**	**4.29 48**		**Pn**	**20 07 57.1**	**+0.9**
YHL	**Hebgen Lake**	**4.34 286**		**Pn**	**20 07 58.2**	**+1.0**
YHL			IAML		20 09 16.3	
	comp=E,38nm,0.8s					
YHL			IAML		20 09 26.2	
	comp=N,32nm,0.9s					
AHID	**Auburn Hatcher**	**4.35 258**		**Pn**	**20 07 57.9**	**+0.8**
AHID			IAML		20 09 10.8	
	comp=N,38nm,1.2s					
AHID			IAML		20 09 14.2	
	comp=N,37nm,0.8s					
ECR	**Eagle Creek**	**4.47 263**	Pn	**Pn**	**20 07 59.6**	**+0.8**
DGMT	**Dagmar**	**4.75 9**	Pn	**Pn**	**20 08 03.5**	**+1.0**
BOZ	**Bozeman (W)**	**4.85 294**		**Pn**	**20 08 05.1**	**+1.1**
BOZ			IAML		20 09 27.5	
	comp=N,20nm,0.7s					
BOZ			IAML		20 09 31.6	
	comp=N,17nm,0.8s					
HWUT	**Hardware Ranch**	**5.10 247**	Pn	**Pn**	**20 08 08.0**	**+0.6**
KSCO	**Kaye Shedlock'**	**5.18 156**		**Pn**	**20 08 09.0**	**+0.5**
TCUT	**Tocane Canyon**	**5.24 241**		**Pn**	**20 08 10.3**	**+1.0**
HRY	**Holter Researc**	**5.45 305**	Pn	**Pn**	**20 08 13.2**	**+1.0**
LRM	**Limekiln Ridge**	**5.47 294**	Pn	**Pn**	**20 08 13.2**	**+0.6**
MCMT	**McKenzie Canyo**	**5.51 283**	Pn	**Pn**	**20 08 13.9**	**+0.9**
P18A	**Preston Nutter**	**5.56 223**		**Pn**	**20 08 14.4**	**+0.6**
HVU	**Hansel Valley**	**5.84 252**	Pn	**Pn**	**20 08 18.5**	**+0.8**
PV07	**Paradox Valley**	**5.91 206**		**Pn**	**20 08 19.5**	**+0.9**
PV15	**Paradox Valley**	**5.94 205**	Pn	**Pn**	**20 08 19.9**	**+0.8**
SRU	**San Rafael Swe**	**6.09 222**		**Pn**	**20 08 21.8**	**+0.7**
PV13	**Radium Mtn., P**	**6.22 206**		**Pn**	**20 08 23.4**	**+0.6**
TMUT	**Trail Mountain**	**6.30 227**	Pn	**Pn**	**20 08 24.6**	**+0.6**
ECSD	**EROS Data Cent**	**6.30 87**	Pn	**Pn**	**20 08 24.5**	**+0.7**
BGU	**Big Grassy Mou**	**6.39 246**		**Pn**	**20 08 26.0**	**+0.9**
Q16A	**Castle Valley**	**6.56 224**		**Pn**	**20 08 28.2**	**+0.7**
DUG	**Dugway, Tooele**	**6.64 240**	Pn	**Pn**	**20 08 29.0**	**+0.4**
MSU	**Marysvale**	**7.39 227**	Pn	**Pn**	**20 08 39.8**	**+0.9**
ELK	**Elko**	**7.96 251**	Pn	**Pn**	**20 08 48.1**	**+1.3**
	comp=N,0.8nm,0.3s,baz=62,slow=8.8,SNR=10 comp=N,1.3nm,0.3s					
NVAR	**Mina Array Bea**	**11.16 246**	Pn	**Pn**	**20 09 31.7**	**+1.1**
	comp=N,0.2nm,0.3s,baz=50,slow=12,SNR=5.2 comp=N,0.5nm,0.6s					
TXAR	**Lajitas Array**	**14.49 174**	Pn	**P**	**20 10 22.9**	**0.0**
	baz=357,slow=7.5,SNR=2.5 comp=N,0.2nm,0.7s					
BBB	**Bella Bella**	**17.36 307**	P	**Pn**	**20 10 50.4**	**-2.8**
	comp=N,0.3nm,0.3s,baz=174,slow=2.4,SNR=2.2 comp=N,22nm,1.2s					
FINES	**FINESS Array B**	**68.00 23**	P	**P**	**20 17 51.9**	**+1.9**
	comp=N,4.5nm,1.0s,baz=263,slow=12,SNR=2.4 comp=N,4.5nm,1.0s					
ZALV	**Zalesovo Beam**	**82.25 354**	P	**P**	**20 19 11.1**	**-1.3**
	comp=N,0.4nm,0.3s,baz=5.7,slow=7.2,SNR=3.7 comp=N,0.4nm,0.3s					
SONM	**Songino Array**	**84.58 339**	P	**P**	**20 19 24.9**	**+0.2**
	comp=N,0.4nm,0.9s,baz=2.9,slow=5.8,SNR=2.2 comp=N,0.4nm,0.9s					
MKAR	**Makanchi Array**	**89.55 355**	P	**P**	**20 19 48.4**	**-0.3**
	comp=N,0.3nm,0.6s,baz=21,slow=4.5,SNR=2.6 comp=N,0.3nm,0.6s					

IDC 10 20:08:50.6±3.8,59.°39S×148.°80E,h0km,mb3.4/2, mbtmp3.3/3,ML2.4/1,MS3.3/3,Error ellipse: s-maj=422.4km s-min=32.9km az=76.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**18.74**	**171**	P	P	20 13 10.4	0.0
	baz=327,slow=11,SNR=1.7						
VNDA				LR	LR	20 20 10.8	
	comp=Z,46nm,18.9s,baz=348,slow=36 0.2nm,0.6s						
H01W1	**Cape Leeuwin H**	**33.35**	**302**	T	T	20 50 58.7	
	baz=147,slow=76,SNR=15						
H01W2	**Cape Leeuwin H**	**33.35**	**302**	T	T	20 51 05.4	
	baz=147,slow=76,SNR=18						
H01W3	**Cape Leeuwin H**	**33.37**	**302**	T	T	20 50 56.5	
	baz=147,slow=76,SNR=14						
ASAR	**Alice Springs**	**37.21**	**337**	P	P	20 16 03.7	+0.2
	0.4nm,0.7s,baz=163,slow=9.5,SNR=5.4 0.4nm,0.7s						
CTA	**Charters Tower**	**39.30**	**356**	LR	LR	20 31 05.6	
	comp=Z,54nm,18.1s,baz=144,slow=34						
DZM	**Mont Dzumac**	**39.34**	**26**	LR	LR	20 29 52.5	
	comp=Z,55nm,18.9s,baz=146,slow=32						
WRA	**Warramunga Arr**	**40.75**	**339**	P	P	20 16 32.5	-0.6
	0.6nm,0.8s,baz=167,slow=7.0,SNR=2.0 0.6nm,0.8s						
H08S2	**Diego Garcia H**	**76.49**	**278**	T	T	21 45 10.8	
	baz=148,slow=76,SNR=15						
H08S1	**Diego Carcia H**	**76.50**	**278**	T	T	21 45 06.6	
	baz=148,slow=76,SNR=17						
H08S3	**Diego Garcia H**	**76.51**	**278**	T	T	21 45 09.5	
	baz=148,slow=76,SNR=16						
H03S2	**Juan Fernandez**	**79.07**	**141**	T	T	21 48 32.1	
	baz=204						
H03S1	**Juan Fernandez**	**79.07**	**141**	T	T	21 48 34.2	
	baz=204						
H03S3	**Juan Fernandez**	**79.09**	**141**	T	T	21 48 33.6	
	baz=204						

*NEIC **10** 20:16:27.7±1.8,43.°71N±0.°05×105.°39W±0.°04,h0km±1km, ML3.3/61,Error ellipse: s-maj=9.6km s-min=4.6km az=162.0*

*IDC **10** 20:16:28.9±1.6,44.°19N×105.°68W,h0km,mb4.4/1, mbtmp3.3/5,ML3.4/4,Error ellipse: s-maj=29.3km s-min=17.1km az=149.0*

ISC 10 20:16:26.1±0.8,43.°80N±0.°04×105.°34W±0.°04,h0km,n65, σ1°51/63,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.99**	**71**		**Pb**	**20 16 47.4**	**+1.1**
K22A	**Casper**	**1.44**	**217**		**Pg**	**20 16 53.2**	**-0.5**
K22A				IAML		20 17 16.8	
	comp=E,353nm,0.8s						
PHWY	**Pilot Hill**	**2.50**	**182**		**Pn**	**20 17 07.8**	**-0.5**
PHWY				IAML		20 17 51.8	
	comp=E,106nm,0.9s						
RWWY	**Rawlins**	**2.52**	**214**		**Pn**	**20 17 08.2**	**-0.4**
RWWY				IAML		20 17 47.7	
	comp=E,264nm,1.1s						
N23A	**Red Feather La**	**2.94**	**189**	Pn	**Pn**	**20 17 14.6**	**+0.3**
N23A				IAML		20 17 57.4	
	comp=N,123nm,0.7s						
N23A				IAML		20 17 58.3	
	comp=E,86nm,0.8s						
LAO	**LASA Array**	**2.96**	**348**	Pn	**Pb**	**20 17 18.1**	**-1.5**
LAO				IAML		20 18 33.4	
	comp=E,158nm,1.0s						
RLMT	**Red Lodge**	**3.11**	**297**	Pn	**Pn**	**20 17 19.1**	**+2.5**
RLMT				IAML		20 18 22.5	
	comp=E,69nm,1.3s						
RLMT				IAML		20 19 03.0	
	comp=E,50nm,1.4s						
PD31	**Pinedale Array**	**3.25**	**253**		**Pn**	**20 17 20.0**	**+1.4**
PDAR	**Pinedale Array**	**3.25**	**253**	Pn	**Pb**	**20 17 22.7**	**-2.1**
	comp=E,2.6nm,0.3s,baz=71,slow=16,SNR=15						
PDAR				Sn	**Sb**	**20 18 04.0**	**-1.0**
	comp=E,3.1nm,0.3s,baz=86,slow=21,SNR=3.3 comp=E,2.6nm,0.3s						
PDAR	**Pinedale Array**	**3.25**	**253**		**Pn**	**20 17 20.4**	**+1.8**
BW06	**Boulder Array**	**3.25**	**253**		**Pn**	**20 17 19.7**	**+1.1**
BW06				IAML		20 18 09.7	
	comp=E,57nm,0.7s						
GCMT	**Greycliff**	**3.67**	**304**		**Pn**	**20 17 26.1**	**+1.8**
OGNE	**Ogallala**	**3.76**	**138**	Pn	**Pn**	**20 17 26.5**	**+1.1**
LOHW	**Long Hollow**	**3.82**	**269**		**Pn**	**20 17 26.8**	**+0.4**
LOHW				IAML		20 18 57.9	
	comp=E,39nm,1.9s						
LOHW				IAML		20 19 04.3	
	comp=E,28nm,1.3s						

FLWY	**Flagg Ranch**	**3.88 276**		**Pg**	**20 17 39.8**	**-0.7**
FLWY			IAML		20 18 41.4	
	comp=E,77nm,1.9s					
MOOW	**Moose Ponds**	**3.92 271**		**Pn**	**20 17 27.5**	**-0.2**
YNR	**Norris Junctio**	**3.94 285**	Pn	**Pn**	**20 17 27.7**	**-0.4**
SNOW	**Snow King Moun**	**3.95 267**	Pn	**Pn**	**20 17 28.9**	**+0.7**
SNOW			IAML		20 18 46.6	
	comp=E,70nm,1.3s					
ISCO	**Idaho Springs**	**4.00 183**		**Pn**	**20 17 30.0**	**+1.0**
ISCO			IAML		20 18 44.1	
	comp=E,37nm,1.1s					
YFT	**Old Faithful**	**4.01 281**		**Pn**	**20 17 29.6**	**+0.6**
YFT			IAML		20 18 48.7	
	comp=N,36nm,1.3s					
YFT			IAML		20 18 50.3	
	comp=E,36nm,1.5s					
REDW	**Red Top Meadow**	**4.03 266**		**Pn**	**20 17 29.2**	**-0.1**
IMW	**Indian Meadow**	**4.05 273**	Pn	**Pn**	**20 17 31.0**	**+1.4**
IMW			IAML		20 18 44.5	
	comp=E,38nm,1.5s					
IMW			IAML		20 18 45.8	
	comp=E,32nm,0.8s					
TPAW	**Teton Pass**	**4.09 268**		**Pn**	**20 17 30.1**	**0.0**
TPAW			IAML		20 19 00.4	
	comp=E,31nm,1.5s					
TPAW			IAML		20 19 04.7	
	comp=E,50nm,1.4s					
FXWY	**Fox Creek**	**4.13 270**		**Pn**	**20 17 32.2**	**+1.6**
O20A	**White River Ci**	**4.25 212**		**Pn**	**20 17 32.1**	**-0.3**
E28A	**Huff**	**4.30 48**	Pn	**Pn**	**20 17 31.1**	**-1.6**
ECR	**Eagle Creek**	**4.46 262**	Pn	**Pn**	**20 17 35.3**	**+0.2**
RDMU	**Red Mountain**	**4.51 226**		**Pn**	**20 17 37.1**	**+1.3**
RDMU			IAML		20 18 53.5	
	comp=N,45nm,1.3s					
RDMU			IAML		20 18 54.2	
	comp=E,37nm,1.2s					
SUSD	**Miller**	**4.64 80**	Pn	**Pn**	**20 17 37.9**	**+0.5**
DGMT	**Dagmar**	**4.74 9**	Pn	**Pn**	**20 17 40.0**	**+1.2**
BOZ	**Bozeman (W)**	**4.83 294**	Pn	**Pn**	**20 17 41.8**	**+1.5**
BOZ			IAML		20 19 02.9	
	comp=E,27nm,1.4s					
BOZ			IAML		20 19 06.1	
	comp=E,21nm,1.1s					
K31A	**O'Neill**	**4.95 101**	Pn	**Pn**	**20 17 41.9**	**+0.1**
HWUT	**Hardware Ranch**	**5.09 247**		**Pn**	**20 17 44.4**	**+0.7**
HWUT			IAML		20 19 07.3	
	comp=E,31nm,1.2s					
KSCO	**Kaye Shedlock'**	**5.20 156**		**Pn**	**20 17 45.2**	**-0.1**
EGMT	**Eagleton**	**5.23 325**	Pn	**Pn**	**20 17 44.4**	**-1.2**
HRY	**Holter Researc**	**5.43 305**		**Pn**	**20 17 50.5**	**+2.2**
MCMT	**McKenzie Canyo**	**5.49 283**		**Pn**	**20 17 51.7**	**+2.4**
P18A	**Preston Nutter**	**5.56 223**		**Pn**	**20 17 49.1**	**-1.2**
MDND	**Maddock**	**5.70 43**		**Pg**	**20 18 12.1**	**-3.1**
BGNE	**Belgrade**	**5.82 112**	Pn	**Pn**	**20 17 53.1**	**-0.5**
HVU	**Hansel Valley**	**5.83 252**	Pn	**Pn**	**20 17 53.5**	**-0.5**
PV22	**Blue Mesa, Par**	**5.87 207**	Pn	**Pn**	**20 17 54.4**	**-0.1**
PV07	**Paradox Valley**	**5.91 206**		**Pn**	**20 17 55.1**	**0.0**
P17A	**Butcher Ranch,**	**5.92 225**		**Pn**	**20 17 55.3**	**+0.1**
PV15	**Paradox Valley**	**5.95 205**	Pn	**Pn**	**20 17 55.5**	**-0.5**
SDCO	**Great Sand Dun**	**6.05 181**	Pn	**Pn**	**20 17 57.8**	**+0.7**
SRU	**San Rafael Swe**	**6.09 221**		**Pn**	**20 17 55.3**	**-2.3**
PV20	**West Nyswonger**	**6.10 208**	Pn	**Pn**	**20 17 57.8**	**+0.1**
PV11	**David Mesa, Pa**	**6.11 207**		**Pn**	**20 17 57.5**	**-0.4**
S22A	**4UR Ranch, Cre**	**6.15 191**	Pn	**Pn**	**20 17 57.9**	**-0.6**
PV13	**Radium Mtn., P**	**6.22 206**	Pn	**Pn**	**20 17 58.1**	**-1.3**
TMUT	**Trail Mountain**	**6.29 226**		**Pn**	**20 17 57.0**	**-3.5**
Q16A	**Castle Valley**	**6.56 224**	Pn	**Pn**	**20 18 02.3**	**-1.7**
DUG	**Dugway, Tooele**	**6.63 240**	Pn	**Pn**	**20 18 02.4**	**-2.5**
T25A	**Trinidad**	**6.69 174**	Pn	**Pn**	**20 18 06.9**	**+1.0**
F33A	**5 Mile Ranch,**	**6.75 69**	Pn	**Pn**	**20 18 06.7**	**+0.3**
MVCO	**Mesa Verde**	**7.01 201**	Pn	**Pn**	**20 18 10.6**	**+0.4**
MSU	**Marysvale**	**7.38 227**	Pn	**Pn**	**20 18 12.0**	**-3.3**
MVU	**Marysvale**	**7.41 227**	Pn	**Pn**	**20 18 13.9**	**-1.8**
ELK	**Elko**	**7.95 251**	Pn	**Pn**	**20 18 27.2**	**+4.0**
	comp=E,0.1nm,0.3s,baz=63,slow=9.8,SNR=2.3 comp=E,0.3nm,0.3s					
I10CA	**LAC DU BONNET**	**9.02 42**	*i*		21 06 00.0	
	baz=228,slow=323,SNR=2.2					
I56US	**NEWPORT INFRAS**	**9.33 303**	*i*		21 09 10.0	
	baz=114,slow=313,SNR=2.2					
NVAR	**Mina Array Bea**	**11.15 246**	Pn	Pn	20 19 12.1	+5.2
	comp=E,0.1nm,0.3s,baz=58,slow=12,SNR=2.1 comp=E,0.1nm,0.3s					
TXAR	**Lajitas Array**	**14.50 174**	Pn	**P**	**20 20 02.3**	**+2.8**
	baz=358,slow=15,SNR=1.6 comp=E,0.1nm,0.3s					
ARCES	**ARCESS Array B**	**61.37 18**	P	**P**	**20 26 44.4**	**+1.1**
	comp=E,4.7nm,1.0s,baz=316,slow=8.7,SNR=4.5 comp=E,4.7nm,1.0s					

*NEIC **10** 20:22:41.0±1.0,20.°6S±0.°2×178.°1W±0.°2,h607km±25km, mb4.5/23,Error ellipse: s-maj=28.3km s-min=23.6km az=62.0*

*IDC **10** 20:22:43.6±2.6,20.°65S×178.°65W,h591km±23km,mb3.2/6, mbtmp4.2/9,Error ellipse: s-maj=87.4km s-min=15.3km az=152.0*

ISC 10 20:22:41.3±0.9,20.°7S±0.°1×178.°2W±0.°1,h600km,n39, σ1°26/38,mb4.2/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.58**	**309**	P	**P**	**20 24 11.9**	**+0.9**
	26nm,0.6s,baz=245,slow=19,SNR=28						
MSVF	**Nonsavu**	**4.58**	**309**	P	**P**	**20 24 12.0**	**+0.9**
NIUE	**Niue**	**7.97**	**80**	P	**P**	**20 24 38.3**	**-2.1**
AFI	**Afiamalu**	**9.12**	**43**	P	**P**	**20 24 54.3**	**+2.7**
	26nm,0.6s,baz=245,slow=14,SNR=4.7						
AFI	**Afiamalu**	**9.12**	**43**	P	**P**	**20 24 49.1**	**-2.4**
MARNC	**Mare, Loyalty**	**12.86**	**264**	P	**P**	**20 25 27.1**	**-1.6**
DZM	**Mont Dzumac**	**14.35**	**262**	P	**P**	**20 25 43.3**	**-0.3**
	5.6nm,0.5s,baz=133,slow=19,SNR=8.9						
DZM	**Mont Dzumac**	**14.35**	**262**	P	**P**	**20 25 42.0**	**-1.6**
OUZ	**Omahuta**	**16.18**	**205**	P	**P**	**20 26 01.4**	**+1.3**
OUZ				IAmb	IAmb	20 26 09.1	
	comp=Z,50nm,1.3s						
KOUNC	**Koumac, New Ca**	**16.37**	**267**	P	**P**	**20 26 02.0**	**-0.1**
KOUNC				IAmb	IAmb	20 26 43.7	
	comp=Z,33nm,1.3s						
URZ	**Urewera**	**17.98**	**192**	P	**P**	**20 26 17.4**	**+0.8**
BKZ	**Black Stump Fm**	**18.98**	**193**	P	**

comp=Z,1.6nm,0.3s,baz=97,slow=7.6,SNR=96
comp=Z,1.6nm,0.3s

WRA	**Warramunga Arr**	**44.37**	**262**	P		**P**	**20 29 59.3**	**-0.8**
FORT	**Forrest**	**49.03**	**247**	P		**P**	**20 30 34.4**	**-0.5**
FORT				IAmb		IAmb	20 30 42.8	
	comp=Z,45nm,1.3s							
KNRA	**Kununurra**	**50.44**	**266**	P		**P**	**20 30 44.8**	**-0.6**
KNRA				IAmb		IAmb	20 31 09.5	
	comp=Z,14nm,1.4s							
FITZ	**Fitzroy Crossi**	**52.79**	**263**	P		**P**	**20 31 02.5**	**+0.3**
MBWA	**Marble Bar**	**57.61**	**258**	P		**P**	**20 31 35.3**	**-0.4**
MBWA				IAmb		IAmb	20 32 05.8	
	comp=Z,21nm,1.5s							
NVAR	**Mina Array Bea**	**81.30**	**43**	P		P	20 34 00.9	+4.5
	comp=Z,0.2nm,0.4s,baz=226,slow=7.5,SNR=3.0							
	comp=Z,0.2nm,0.4s							
TXAR	**Lajitas Array**	**87.33**	**57**	P		P	20 34 31.0	+5.1
	comp=Z,0.8nm,0.8s,baz=212,slow=8.5,SNR=5.6							
	comp=Z,0.8nm,0.8s							
PDAR	**Pinedale Array**	**89.23**	**43**	P		P	20 34 38.9	+4.2
	comp=Z,0.4nm,0.6s,baz=186,slow=5.3,SNR=3.0							
	comp=Z,0.4nm,0.6s							

ISU ***10*** *20:23:45,41.°10N×72.°45E,h15km*
SOME ***10*** *20:23:46.0,41.°07N×72.°38E,h15km*
KRNET ***10*** *20:23:46.2±0.1,41.°04N×72.°37E,h22km,mb3.8*
NNC ***10*** *20:23:49.1±1.2,41.°20N×72.°39E,h0km,mb4.2,mpv3.9,*
Error ellipse: s-maj=12.9km s-min=4.1km az=0.0

ISC 10 20:23:44.9±1.1**,41°08N**±0.°02×**72°42E**±0.°02**,h8**km±11km**,**
n63,σ1°36/102**,24C-24D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ANR	**Andizhan**	**0.32**	**188**	P		**Pb**	**20 23 53.3**	**+0.4**
ANR				S		**Sb**	**20 23 58.9**	**+0.6**
TSTA	**Tashata**	**0.50**	**175**	P		**Pb**	**20 23 55.7**	**-0.2**
TSTA				S		**Sb**	**20 24 03.3**	**0.0**
NAM	**Namangan**	**0.58**	**262**	P		**Pb**	**20 23 57.4**	**+0.1**
NAM				S		**Sb**	**20 24 06.7**	**+1.0**
OHH	**Osh**	**0.62**	**153**	⇑*e*P		**Pb**	**20 23 57.8**	**-0.2**
	baz=48							
OHH				⇑*e*S		**Sb**	**20 24 06.4**	**-0.4**
	baz=48							
ARK	**Arkit**	**0.80**	**335**	P		**Pg**	**20 24 00.7**	**+0.3**
ARK				S		**Sb**	**20 24 11.7**	**-0.5**
TRKS	**Terek-Say**	**1.06**	**296**	⇑*i*P		**Pg**	**20 24 05.0**	**-0.4**
	baz=95							
TRKS				⇑*e*S		**Sg**	**20 24 18.3**	**-1.0**
	baz=95							
AML	**Almayashu**	**1.43**	**42**	P		**Pg**	**20 24 13.6**	**+1.3**
	SNR=128							
BTK	**Batken**	**1.59**	**231**	⇓*e*P		**Pb**	**20 24 14.4**	**-0.1**
	baz=31							
BTK				⇓*e*S		**Sb**	**20 24 34.7**	**0.0**
	baz=31							
BTK	**Batken**	**1.59**	**231**	P		**Pg**	**20 24 14.8**	**-0.6**
BTK				S		**Sg**	**20 24 36.8**	**+0.9**
DRK	**Karamyk**	**1.66**	**197**	⇑*e*P		**Pb**	**20 24 15.8**	**-0.1**
	baz=96							
DRK				⇑*e*S		**Sg**	**20 24 37.2**	**-1.2**
	baz=96							
MRKS	**Merke**	**1.77**	**20**	*e*P		**Pg**	**20 24 22.0**	**+3.0**
	1.1nm,0.1s							
MRKS				*e*S		**Sg**	**20 24 47.8**	**+5.8**
	52nm,0.2s							
EKS2	**Erkin-Say**	**1.88**	**32**	P		**Pg**	**20 24 21.7**	**+0.7**
	SNR=28							
EKS2	**Erkin-Say**	**1.88**	**32**	⇑*e*P		**Pg**	**20 24 20.7**	**-0.3**
	baz=33							
EKS2				⇑*e*S		**Sg**	**20 24 45.7**	**+0.2**
	baz=33							
UCH	**Uchtor**	**1.95**	**53**	P		**Pg**	**20 24 24.1**	**+1.8**
	SNR=31							
UCH	**Uchtor**	**1.95**	**53**	⇑*e*P		**Pg**	**20 24 21.8**	**-0.5**
	baz=53							
UCH				⇑*e*S		**Sg**	**20 24 47.9**	**+0.3**
	baz=53							
DZA	**Taraz**	**1.99**	**336**	*e*P		**Pg**	**20 24 23.6**	**+0.5**
	215nm,0.2s							
DZA				*e*S		**Sg**	**20 24 50.9**	**+2.1**
	1µm,0.3s							
DZA	**Taraz**	**1.99**	**336**	Pg		**Pg**	**20 24 23.6**	**+0.5**
	215nm,0.2s							
DZA				Lg		Lg	20 24 50.9	
	1µm,0.3s							
IUG	**luzhnay**	**2.09**	**302**	*e*P		**Pg**	**20 24 24.2**	**-0.7**
	2µm,0.3s							
IUG				*e*S		**Sg**	**20 24 52.0**	**0.0**
	1µm,0.5s							
IUG	**luzhnay**	**2.09**	**302**	Pg		**Pg**	**20 24 24.3**	**-0.7**
	2µm,0.3s							
IUG				Lg		Lg	20 24 52.0	
	1µm,0.5s							
YBZ	**Yangibazar**	**2.15**	**277**	P		**Pg**	**20 24 25.5**	**-0.6**
YBZ				S		**Sg**	**20 24 54.7**	**+0.7**
AAK	**Ala-Archa**	**2.20**	**44**	P		**Pg**	**20 24 26.9**	**-0.2**
	SNR=31							
AAK	**Ala-Archa**	**2.20**	**44**	⇓*e*P		**Pb**	**20 24 25.2**	**+0.1**
	baz=44							
AAK				⇓*e*S		**Sb**	**20 24 53.6**	**+1.1**
	baz=44							
TAS	**Tashkent**	**2.37**	**277**	⇑*e*P		**Pb**	**20 24 26.3**	**-1.5**
	baz=78							
TAS				⇑*e*S		**Sb**	**20 24 55.3**	**-1.9**
	baz=78							
TAS	**Tashkent**	**2.37**	**277**	S		**Sg**	**20 25 00.6**	**-0.5**
FRU1	**Bishkek**	**2.39**	**43**	⇓*e*P		**Pb**	**20 24 27.9**	**-0.4**
	baz=43							
FRU1				⇓*e*S		**Sb**	**20 24 58.3**	**+0.3**
	baz=43							
CHM	**Chimkent**	**2.45**	**301**	*e*P		**Pg**	**20 24 31.1**	**-0.7**
	8.8nm,0.5s							
CHM				*e*S		**Sg**	**20 25 03.9**	**+0.3**
	471nm,0.4s							
KBK	**Karagaybulak**	**2.46**	**49**	P		**Pg**	**20 24 31.7**	**-0.5**
	SNR=47							
KBK	**Karagaybulak**	**2.46**	**49**	⇓*e*P		**Pb**	**20 24 28.7**	**-0.8**
	baz=49							
KBK				⇓*e*S		**Sb**	**20 24 59.7**	**-0.4**
	baz=49							
KK31	**Karatay Array**	**2.48**	**326**	Pn		**Pb**	**20 24 28.9**	**-0.7**
	8.9nm,0.3s,baz=139,slow=12,SNR=159							
KK31				⇓Lg		Lg	20 25 04.3	
	106nm,0.5s,baz=138,slow=29,SNR=19							
KKAR	**Karatay Array**	**2.48**	**326**	⇓*e*P		**Pb**	**20 24 28.4**	**-1.2**
	baz=27							
KKAR				⇓*e*S		**Sb**	**20 24 59.0**	**-1.3**
	baz=27							
CHMS	**Chumysh**	**2.59**	**41**	P		**Pb**	**20 24 32.5**	**+0.9**
	SNR=24							
CHMS	**Chumysh**	**2.59**	**41**	⇑Pn		**Pb**	**20 24 32.5**	**+0.9**
	11nm,0.7s							
CHMS				⇑Lg		Lg	20 25 08.9	
	120nm,1.1s							
CHMS	**Chumysh**	**2.59**	**41**	⇓*e*P		**Pb**	**20 24 30.4**	**-1.2**
	baz=41							
CHMS				⇓*e*S		**Sb**	**20 25 02.6**	**-1.0**
	baz=41							
GAR	**Garm**	**2.63**	**219**	⇑*e*P		**Pb**	**20 24 29.8**	**-2.5**
	baz=18							
GAR				⇑*e*S		**Sn**	**20 25 01.4**	**+1.6**
	baz=18							
USP	**Ospenovka**	**2.68**	**35**	P		**Pb**	**20 24 33.5**	**+0.3**
	SNR=22							
USP	**Ospenovka**	**2.68**	**35**	⇑*e*P		**Pb**	**20 24 31.8**	**-1.4**
	baz=35							
USP				⇑*e*S		**Sb**	**20 25 04.7**	**-1.5**
	baz=35							
SGDS	**Sogindy**	**2.89**	**34**	*e*P		**Pg**	**20 24 39.5**	**-0.8**
	21nm,0.5s							
SGDS				*e*S		**Sg**	**20 25 18.0**	**+0.3**
	86nm,0.8s							
SGDS	**Sogindy**	**2.89**	**34**	Pg		**Pg**	**20 24 39.5**	**-0.8**
	21nm,0.5s							
SGDS				Lg		Lg	20 25 18.0	
	86nm,0.8s							
BOOM	**Boomskoye usch**	**2.99**	**61**	⇓*e*P		**Pb**	**20 24 36.1**	**-2.4**
	baz=60							
BOOM				⇓*e*S		**Sb**	**20 25 12.6**	**-2.6**
	baz=60							
TKM2	**Tokmak 2**	**3.00**	**51**	P		**Pb**	**20 24 38.5**	**-0.3**
	SNR=8.2							
TKM2	**Tokmak 2**	**3.00**	**51**	⇑Pn		**Pb**	**20 24 38.1**	**-0.6**
	10.0nm,0.7s							
TKM2				⇓Lg		Lg	20 25 22.7	
	74nm,0.8s							
TKM2	**Tokmak 2**	**3.00**	**51**	⇑*e*P		**Pb**	**20 24 36.4**	**-2.3**
	baz=51							
TKM2				⇑*e*S		**Sb**	**20 25 13.0**	**-2.6**
	baz=51							
ULHL	**Ulahol**	**3.09**	**67**	P		**Pg**	**20 24 44.2**	**0.0**
	SNR=6.6							
ULHL	**Ulahol**	**3.09**	**67**	⇓*e*P		**Pb**	**20 24 37.6**	**-2.7**
	baz=66							
ULHL				⇓*e*S		**Sb**	**20 25 15.1**	**-3.2**
	baz=66							
KST	**Kastek**	**3.29**	**52**	*e*P		**Pg**	**20 24 47.9**	**-0.1**
	22nm,0.4s							
KST				*e*S		**Sg**	**20 25 32.0**	**+1.4**
	102nm,0.7s							
KST	**Kastek**	**3.29**	**52**	Pg		**Pg**	**20 24 47.9**	**-0.1**
	22nm,0.4s							
KST				Lg		Lg	20 25 32.1	
	102nm,0.7s							
CHGR	**Chuyangaron**	**3.48**	**227**	⇑*e*P		**Pn**	**20 24 41.6**	**+2.2**
	baz=27							
CHGR				⇑*e*S		**Sn**	**20 25 21.7**	**+0.8**
	baz=27							
KRBS	**Karabastau**	**3.56**	**42**	*e*P		**Pg**	**20 24 52.4**	**-0.7**
	8.5nm,0.3s							
KRBS				*e*S		**Sg**	**20 25 39.9**	**+0.6**
	57nm,0.7s							
KRBS	**Karabastau**	**3.56**	**42**	Pg		**Pg**	**20 24 52.4**	**-0.7**
	8.5nm,0.3s							
KRBS				Lg		Lg	20 25 39.9	
	57nm,0.7s							
MTBS	**Maitube**	**3.62**	**54**	*e*P		**Pg**	**20 24 53.8**	**-0.6**
	5.7nm,0.3s							
MTBS				*e*S		**Sg**	**20 25 41.9**	**+0.6**
	52nm,0.5s							
MTBS	**Maitube**	**3.62**	**54**	Pg		**Pg**	**20 24 53.8**	**-0.6**
	5.7nm,0.3s							
MTBS				Lg		Lg	20 25 41.9	
	52nm,0.5s							
KNDC	**Almaty**	**4.00**	**56**	⇓Pg		**Pg**	**20 25 01.7**	**+0.1**
	37nm,0.8s							
KNDC				⇓Lg		Lg	20 25 57.8	
	118nm,0.7s							
MDOK	**Medeo**	**4.03**	**57**	*e*P		**Pg**	**20 25 00.3**	**-1.7**
	16nm,0.5s							
MDOK				*e*S		**Sg**	**20 25 53.4**	**-0.8**
	22nm,0.9s							
MDOK	**Medeo**	**4.03**	**57**	⇓Pn		**Pb**	**20 24 52.3**	**-3.8**
	2.9nm,0.3s							
MDOK				Pg		**Pg**	**20 25 00.3**	**-1.7**
	16nm,0.5s							
MDOK				⇑Pg		**Pg**	**20 25 01.3**	**-0.8**
	14nm,0.6s							
MDOK				Lg		Lg	20 25 53.4	
	22nm,0.9s							
MDOK				⇓Lg		Lg	20 25 53.7	
	22nm,0.6s							
KUU	**Kurty**	**4.04**	**45**	*e*P		**Pg**	**20 25 01.1**	**-1.3**
	11nm,0.6s							
KUU				*e*S		**Sg**	**20 25 54.7**	**0.0**
	44nm,0.5s							
KUU	**Kurty**	**4.04**	**45**	Pg		**Pg**	**20 25 01.1**	**-1.3**
	11nm,0.6s							
KUU				Lg		Lg	20 25 54.7	
	44nm,0.5s							
KOTS	**Kotyrbulak**	**4.10**	**57**	*e*P		**Pg**	**20 25 03.5**	**-0.1**
	18nm,0.6s							
KOTS				*e*S		**Sg**	**20 25 58.9**	**+2.2**
	37nm,0.9s							
KOTS	**Kotyrbulak**	**4.10**	**57**	Pg		**Pg**	**20 25 03.5**	**-0.1**
	18nm,0.6s							
KOTS				Lg		Lg	20 25 58.9	
	37nm,0.9s							
KTBS	**Karatobe**	**4.11**	**49**	*e*P		**Pg**	**20 25 02.8**	**-0.9**
	10.0nm,0.4s							
KTBS				*e*S		**Sg**	**20 25 57.6**	**+0.7**
	54nm,0.4s							
KTBS	**Karatobe**	**4.11**	**49**	Pg		**Pg**	**20 25 02.8**	**-0.9**
	10.0nm,0.4s							
KTBS				Lg		Lg	20 25 57.7	
	54nm,0.4s							
KURS	**Kuram**	**4.90**	**59**	*e*P		**Pg**	**20 25 18.0**	**-0.8**
	6.7nm,0.4s							
KURS				*e*S		**Sg**	**20 26 23.5**	**+1.2**
	16nm,0.7s							
PDGK	**Podgornoye**	**5.71**	**64**	⇓Pg		**Pg**	**20 25 35.9**	**+1.6**
	3.2nm,0.6s							
PDGK				⇓Lg		Lg	20 26 47.0	
	18nm,0.7s							
AB31	**Akbulak array**	**12.01**	**317**	Pn		**Pn**	**20 26 35.7**	**-0.5**
	0.3nm,0.4s,baz=131,slow=12,SNR=11							

MAN ***10*** *20:34:24,4.°15N×127.°09E,h31km,Ms4.3*
IDC ***10*** *20:34:28.7±2.7,4.°80N×126.°81E,h19km±16km,mb4.3/24,*
mbtmp4.4/26,ML4.2/2,MS3.4/36,Error ellipse:
s-maj=24.5km s-min=10.7km az=72.0
BJI ***10*** *20:34:28.4±0.0,4.°22N×126.°87E,h64km,mb4.5/50,*
mB4.9/28,Ms4.1/12,Ms7 3.8/13
DJA ***10*** *20:34:33.3±0.5,5.°1N±4.°×12.°7E±.°,h50km±4km,M4.5/24,*
mB5.1/7,mb4.8/24,MLv4.6/12,Mw(mB)4.4/7
NEIC ***10*** *20:34:33.2±1.8,4.°72N±0.°03×126.°83E±0.°06,h53km±7km,*
mb4.6/73,Error ellipse: s-maj=9.8km s-min=1.6km
az=114.0

ISC 10 20:34:33.9±0.8**,4°64N**±0.°04×**126°82E**±0.°06**,h64**km±7km**,**
n207,σ1°85/208**,mb4.5**/66**,11C-13D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.59**	**234**	P		**Pn**	**20 34 59.7**	**-0.3**
DDMP	**Don Marcelino,**	**1.83**	**323**	⇓*e*P		**Pn**	**20 35 00.1**	**-3.0**
DDMP				*i* S		**Sn**	**20 35 23.1**	**-2.2**
GSPH	**General Santos**	**2.35**	**308**	⇑*e*P		**Pn**	**20 35 07.0**	**-3.4**
GSPH				*i* S		**Sn**	**20 35 42.3**	**+4.0**
MATI	**Mati**	**2.36**	**346**	⇓*e*P		**Pn**	**20 35 09.0**	**-1.4**
MATI				*i* S		**Sn**	**20 35 42.8**	**+4.6**
DAV	**Davao City (W)**	**2.71**	**333**	Pn		**Pn**	**20 35 10.5**	**-4.7**
	41nm,0.3s,baz=303,slow=2.9,SNR=1.8							
DAV				Sn		**Sn**	**20 35 51.2**	**+4.3**
	69nm,0.3s,baz=261,slow=22,SNR=4.2							
DAV				LR		LR	20 36 25.4	
	comp=Z,300nm,18.9s,baz=304,slow=46							
	103nm,0.4s							
DAV	**Davao City (W)**	**2.71**	**333**	Pn		**Pn**	**20 35 13.8**	**-1.3**
KCP	**Kidapawan**	**2.92**	**324**	⇓*i*P		**Pn**	**20 35 16.6**	**-1.4**
KCP				*i* S		**Sn**	**20 35 59.1**	**+7.2**
SKMP	**Bagumbayan, Su**	**2.94**	**310**	⇓*e*P		**Pn**	**20 35 17.8**	**-0.4**
SKMP				*i* S		**Sn**	**20 35 55.0**	**+2.6**
BIPH	**Bislig**	**3.55**	**353**	⇑*i*P		**Pn**	**20 35 24.2**	**-2.5**
BIPH				*i* S		**Sn**	**20 36 11.9**	**+4.4**
TNTI	**Ternate**	**3.88**	**172**			**Pn**	**20 35 31.4**	**+0.3**
TNTI	**Ternate**	**3.88**	**172**	P		**Pn**	**20 35 32.2**	**+1.1**
BUTP	**Butuan**	**4.46**	**345**	⇓*e*P		**Pn**	**20 35 42.5**	**+3.3**
BUTP				*i* S		**Sn**	**20 36 36.9**	**+7.1**
PAGZ	**Pagadian**	**4.67**	**313**	⇓*e*P		**Pn**	**20 35 44.2**	**+2.2**
KMSI	**Cibinong**	**4.93**	**215**	P		Pn	20 35 52.7	+7.2
GLSP	**General Luna,**	**5.16**	**352**	⇓*e*P		**Pn**	**20 35 47.4**	**-1.3**
GLSP				*i* S		**Sn**	**20 36 51.5**	**+4.6**
DCPH	**Dipolog City**	**5.22**	**319**	⇓*e*P		**Pn**	**20 35 53.1**	**+3.6**
ZCP	**Zamboanga City**	**5.24**	**296**	⇓*e*P		**Pn**	**20 35 48.7**	**-1.1**
ZCP				*e*S		**Sn**	**20 36 47.7**	**-1.2**
LBMI	**Labuha**	**5.28**	**173**	P		**Pn**	**20 35 53.3**	**+2.9**
	0.4nm672nm67nm,0.9s							
GTOI	**Gorontalo**	**5.50**	**224**	P		**Pn**	**20 35 54.4**	**+1.1**
	0.1nm384nm33nm,0.6s							
TBP	**Tagbilaran**	**5.81**	**330**	*e*P		**Pn**	**20 35 58.4**	**+0.7**
SNPH	**Sibulan**	**5.87**	**323**	*e*P		**Pn**	**20 36 00.8**	**+2.3**
LLP	**Lapu-Lapu**	**6.31**	**334**	*e*P		**Pn**	**20 36 05.0**	**+0.5**
LLP				*e*S		**Sn**	**20 37 20.8**	**+5.6**
MRSI	**Marisa**	**6.39**	**230**	P		**Pn**	**20 36 07.8**	**+2.3**
	0.6nm1µm158nm,0.6s							
SANI	**Sanana**	**6.69**	**187**	P		**Pn**	**20 36 09.8**	**+0.1**
	0.2nm914nm56nm,0.7s							
LUWI	**Luwuk**	**6.94**	**216**	Pn		**Pn**	**20 36 13.6**	**+0.6**
LUWI	**Luwuk**	**6.94**	**216**	P		Pn	20 36 19.6	+6.6
TOLI2	**Tolitoli**	**6.97**	**240**	Pn		**Pn**	**20 36 12.5**	**-1.0**
SIJI	**Sorong**	**7.05**	**141**	Pn		**Pn**	**20 36 12.6**	**-2.0**
	4.0nm,0.3s,baz=337,slow=17,SNR=10							
SIJI				Sn		**Sn**	**20 37 31.5**	**-1.8**
	0.2nm,0.3s,baz=174,slow=23,SNR=1.3							
SIJI				LR		LR	20 39 09.5	
	comp=Z,200nm,19.5s,baz=328,slow=39							
	6.9nm,0.3s							
APSI	**Ampana**	**7.55**	**223**	P		**Pn**	**20 36 25.9**	**+4.5**
	0.3nm765nm75nm,0.7s							
NLAI	**Namlea**	**7.83**	**178**	P		**Pn**	**20 36 25.8**	**+0.6**
	0.2nm3µm36nm,0.5s							
MPSI	**Mapaga**	**8.12**	**238**	P		Pn	20 36 43.3	+14
MYLDM	**Lahad Datu**	**8.30**	**274**	Pn		**Pn**	**20 36 29.9**	**-1.8**
FAKI	**Fak Fak**	**9.26**	**144**	Pn		**Pn**	**20 36 45.3**	**+0.5**
TTSI	**Tana Toraja**	**10.35**	**223**	P		**Pn**	**20 37 02.4**	**+2.7**
	39nm,0.9s							
LQP	**Lukban**	**10.76**	**331**	⇓*e*P		**Pn**	**20 37 08.2**	**+2.7**
BAKI	**Biak**	**10.94**	**122**	P		Pn	20 37 15.5	+7.7
SMPI	**Sarmi**	**13.58**	**119**	P		**P**	**20 37 51.1**	**+0.5**
BBKI	**Banjar Baru**	**14.42**	**236**	P		**Pn**	**20 37 57.3**	**+2.5**
	3µm59nm,0.9s							
SBUM	**Sibu**	**14.73**	**262**	P		**P**	**20 38 02.9**	**-0.5**
BATI	**Baumata**	**15.08**	**192**	Pn		**P**	**20 38 06.4**	**-0.9**
	0.3nm,0.3s,baz=104,slow=20,SNR=1.7							
BATI				LR		LR	20 45 06.0	
	comp=Z,147nm,18.6s,baz=130,slow=42							
KSM	**Kuching**	**16.78**	**260**	P		**P**	**20 38 26.9**	**+0.8**
KSM				IAmb		IAmb	20 38 30.3	
	comp=Z,22nm,0.6s							
MTN	**Manton Dam**	**17.89**	**166**	P		**P**	**20 38 37.6**	**-0.7**
YULB	**Yu-li**	**19.39**	**345**	P		**P**	**20 38 52.7**	**-2.1**
TPUB	**Ta-pu**	**19.49**	**343**	P		**P**	**20 38 54.8**	**-1.2**
TPUB				IAmb		IAmb	20 39 03.9	
	comp=Z,26nm,0.7s							
SSLB	**Suanglung**	**19.86**	**344**	P		**P**	**20 38 58.5**	**-1.5**
GUMO	**Guam**	**19.90**	**62**	LR		LR	20 45 27.0	
	comp=Z,113nm,21.0s,baz=203,slow=33							
KNRA	**Kununurra**	**20.27**	**175**	P		Pn	20 39 06.9	-0.1
KNRA				IAmb		IAmb	20 39 21.8	
	comp=Z,16nm,0.7s							
JOW	**Kunigami**	**22.11**	**3**	LR		LR	20 46 32.5	
	comp=Z,56nm,21.4s,baz=116,slow=33							
LEM	**Lembang**	**22.29**	**239**	LR		LR	20 49 09.0	
	comp=Z,89nm,18.0s,baz=9.5,slow=39							
FITZ	**Fitzroy Crossi**	**22.62**	**183**	P		**P**	**20 39 30.0**	**+0.4**
	comp=Z,4.9nm,0.4s,baz=2.7,slow=6.5,SNR=65							
	comp=Z,4.9nm,0.4s							
FITZ	**Fitzroy Crossi**	**22.62**	**183**	P		**P**	**20 39 30.8**	**+1.2**
FITZ				IAmb		IAmb	20 39 48.9	
	comp=Z,25nm,1.3s							
MYKOM	**Kota Tinggi**	**23.10**	**264**	P		**P**	**20 39 34.2**	**-0.5**
MYKOM				IAmb		IAmb	20 39 38.0	
	comp=Z,14nm,0.8s							
PMG	**Port Moresby**	**24.61**	**125**	LR		LR	20 49 47.4	
	comp=Z,96nm,19.3s,baz=319,slow=37							
WB0	**Warramunga Arr**	**25.37**	**163**	P		**P**	**20 39 56.2**	**+0.9**
WRA	**Warramunga Arr**	**25.52**	**163**	P		**P**	**20 39 57.2**	**+0.5**
	comp=Z,12nm,0.7s,baz=342,slow=10,SNR=69							
WRA				PcP		**PcP**	**20 43 28.4**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=284,slow=2.9,SNR=1.8							
WRA				ScP		**ScP**	**20 47 09.0**	**+8.0**
	comp=Z,0.5nm,0.7s,baz=341,slow=3.1,SNR=5.0							
WRA				LR		LR	20 50 41.8	
	comp=Z,59nm,18.5s,baz=94,slow=38							
	comp=Z,12nm,0.7s							
WRA	**Warramunga Arr**	**25.52**	**163**	P		**P**	**20 39 56.9**	**+0.2**
WB2	**Warramunga Arr**	**25.52**	**163**	P		**P**	**20 39 56.9**	**+0.2**
WB2				IAmb		IAmb	20 40 02.1	
	comp=Z,16nm,0.7s							
WR0	**Warramunga Arr**	**25.59**	**163**	P		**P**	**20 39 59.4**	**+2.1**
WR0				IAmb		IAmb	20 40 04.8	
	comp=Z,14nm,0.9s							
IPM	**Ipoh**	**25.71**	**271**	P		**P**	**20 39 57.1**	**-1.5**
IPM				IAmb		IAmb	20 40 01.0	
	comp=Z,11nm,0.7s							
MBWA	**Marble Bar**	**26.56**	**195**	P		**P**	**20 40 06.0**	**0.0**
JCJ	**Chichijima**	**26.72**	**32**	LR		LR	20 48 46.2	
	comp=Z,52nm,20.4s,baz=156,slow=32							
PSA00	**Pilbara Seismi**	**26.93**	**194**	P		**P**	**20 40 10.5**	**+1.1**
PSA00	**Pilbara Seismi**	**26.93**	**194**	P		**P**	**20 40 10.1**	**+0.7**
PSA00				IAmb		IAmb	20 40 11.7	
	comp=Z,10nm,0.8s							
PSI	**Prapat**	**27.89**	**267**	LR		LR	20 52 23.5	
	comp=Z,112nm,20.1s,baz=80,slow=38							
NJ2	**Nanjing**	**28.28**	**346**	*e*P		**P**	**20 40 23.3**	**+2.0**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
AS31	**Alice Springs**	**28.97**	**166**	P		**P**	**20 40 28.0**	**+0.4**
ASAR	**Alice Springs**	**28.97**	**166**	P		**P**	**20 40 28.9**	**+1.2**
	comp=Z,1.6nm,0.4s,baz=344,slow=6.3,SNR=21							
ASAR				PcP		**PcP**	**20 43 35.9**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=339,slow=2.8,SNR=4.5							
	comp=Z,1.6nm,0.4s							
ASAR	**Alice Springs**	**28.97**	**166**	P		**P**	**20 40 26.8**	**-0.8**
ENH	**Enshi**	**30.29**	**329**	P		**P**	**20 40 37.6**	**-1.7**
CMAR	**Chiang Mai Arr**	**30.50**	**299**	P		**P**	**20 40 40.7**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=118,slow=7.8,SNR=9.8							
CMAR				PcP		**PcP**	**20 43 41.3**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=132,slow=1.9,SNR=4.8							
CMAR				ScP		**ScP**	**20 47 20.2**	**+3.8**
	comp=Z,0.3nm,0.4s,baz=158,slow=1.5,SNR=4.1							
CMAR				LR		LR	20 53 45.2	
	comp=Z,48nm,18.4s,baz=115,slow=38							
	comp=Z,1.1nm,0.6s							
CHTO	**Chiang Mai**	**30.64**	**300**	P		**P**	**20 40 42.7**	**+0.3**

comp=Z,150nm,18.9s
GTA LR LR
comp=Z,120nm,18.5s
GOMU GeErMu 43.03 321 P **P** **20 42 26.2 -1.7**
GOMU pmax pmax
comp=Z,4.0nm,1.1s
GOMU pmax pmax
comp=Z,27nm,4.1s
TAPN Taplejung 43.56 305 *e*P **P** **20 42 30.1 -2.0**
comp=Z,12nm,0.4s
ODAN Odare 43.62 305 *e*P **P** **20 42 32.0 -0.6**
RAMN Ramite 44.31 304 *e*P **P** **20 42 37.9 -0.2**
comp=Z,18nm,0.7s
JIRN Jiri 44.92 305 *e*P **P** **20 42 41.0 -2.1**
GUN Gumba 45.27 305 *e*P **P** **20 42 43.8 -2.1**
PKI Pulchoki 45.52 305 *e*P **P** **20 42 47.0 -0.9**
comp=Z,4.6nm,0.5s
PKIN Phulchoki 45.54 305 *e*P **P** **20 42 47.1 -0.8**
comp=Z,7.3nm,0.5s
KKN Kakani 45.71 305 *e*P **P** **20 42 47.3 -1.9**
DMN Daman 45.79 305 *e*P **P** **20 42 49.3 -0.5**
PALK Pallekele 45.93 276 LR LR 21 03 07.9
comp=Z,29nm,21.3s,baz=199,slow=38
ULN Ulaanbaatar 46.29 342 P **P** **20 42 54.2 +0.8**
GKN Gorkha 46.32 305 *e*P **P** **20 42 52.5 -1.4**
comp=Z,4.0nm,0.3s
SONM Songino Array 46.47 341 P **P** **20 42 54.3 -0.4**
comp=Z,5.4nm,0.6s,baz=156,slow=8.0,SNR=40
SONM PcP **PcP** **20 44 29.6 +1.2**
comp=Z,1.3nm,0.8s,baz=135,slow=6.9,SNR=3.3
SONM LR LR 21 03 39.8
comp=Z,62nm,19.6s,baz=161,slow=38
comp=Z,5.4nm,0.6s
SONM Songino Array 46.47 341 P **P** **20 42 55.2 +0.5**
SONM IAmb IAmb 20 42 57.4
comp=Z,6.3nm,1.0s
DANN Dangsing 47.17 305 *e*P **P** **20 42 58.9 -1.8**
comp=Z,35nm,0.6s
WMQ Urumqi 52.04 325 *e*P **P** **20 43 38.5 +1.3**
PETK Petropavlovsk- 54.56 22 P **P** **20 43 54.0 -1.5**
comp=Z,6.6nm,0.8s,baz=218,slow=9.4,SNR=8.0
PETK LR LR 21 08 17.5
comp=Z,18nm,19.7s,baz=198,slow=37
comp=Z,6.6nm,0.8s
PETK Petropavlovsk- 54.56 22 P **P** **20 43 54.9 -0.6**
MSVF Nonsavu 55.21 115 LR LR 21 05 05.7
comp=Z,49nm,21.5s,baz=193,slow=33
MK31 Makanchi Array 56.87 325 P **P** **20 44 11.4 -0.7**
MK31 IAmb IAmb 20 44 13.5
comp=Z,4.6nm,0.6s
MKAR Makanchi Array 56.87 325 P **P** **20 44 11.3 -0.9**
comp=Z,5.4nm,0.6s,baz=118,slow=7.5,SNR=78
MKAR PcP **PcP** **20 45 08.0 +0.9**
comp=Z,1.2nm,0.6s,baz=118,slow=3.9,SNR=1.7
MKAR ScP **ScP** **20 49 04.0 +2.6**
comp=Z,0.9nm,0.8s,baz=117,slow=4.3,SNR=4.3
comp=Z,5.4nm,0.6s
MKAR Makanchi Array 56.87 325 P **P** **20 44 11.0 -1.1**
MAKZ Makanchi 57.05 325 P **P** **20 44 12.6 -0.9**
YAK Yakutsk 57.30 2 P **P** **20 44 13.8 -1.1**
NIL Nilore 57.45 307 P **P** **20 44 15.5 -1.0**
KSH Kashi 57.47 315 P **P** **20 44 18.1 +1.4**
KSH pmax pmax
comp=Z,3.0nm,0.8s
ZAA0 Zalesovo Array 59.83 333 P **P** **20 44 32.9 +0.3**
ZAA0 IAmb IAmb 20 44 42.1
comp=Z,3.1nm,0.9s
ZALV Zalesovo Beam 59.83 333 P **P** **20 44 31.5 -1.1**
comp=Z,1.4nm,0.3s,baz=123,slow=6.4,SNR=12
ZALV PcP **PcP** **20 45 19.8 +1.3**
comp=Z,1.1nm,0.6s,baz=109,slow=8.0,SNR=1.6
ZALV LR LR 21 11 22.2
comp=Z,32nm,18.9s,baz=128,slow=37
comp=Z,1.4nm,0.3s
ZALV Zalesovo Beam 59.83 333 P **P** **20 44 32.4 -0.2**
DRK Karamyk 60.45 313 P **P** **20 44 37.0 -0.6**
KURBB Kurchatov Arra 61.03 327 P **P** **20 44 39.7 -1.1**
comp=Z,5.9nm,0.6s,baz=129,slow=6.7,SNR=38
KURBB LR LR 21 13 25.4
comp=Z,33nm,18.3s,baz=128,slow=38
comp=Z,5.9nm,0.6s
KURK Kurchatov 61.03 327 **P** **20 44 39.8 -1.1**
KBL Kabul 61.05 307 P **P** **20 44 39.5 -2.0**
BTK Batken 61.36 314 P **P** **20 44 41.1 -2.4**
BTK IAmb IAmb 20 44 44.5
comp=Z,6.9nm,1.1s
GAR Garm 61.38 312 P **P** **20 44 41.1 -2.6**
SHEM Shemya Is, Ala 61.64 31 LR LR 21 05 59.5
comp=Z,57nm,20.8s,baz=316,slow=31
RPZ Rata Peaks 62.45 145 LR LR 21 11 37.4
comp=Z,53nm,18.6s,baz=254,slow=36
KK31 Karatay Array 62.63 317 P **P** **20 44 50.5 -1.4**
KK31 IAmb IAmb 20 44 51.8
comp=Z,4.8nm,0.8s
KKAR Karatay Array 62.63 317 P **P** **20 44 51.0 -0.8**
KKAR Karatay Array 62.63 317 P **P** **20 44 50.6 -1.3**
KKAR IAmb IAmb 20 44 51.8
comp=Z,4.8nm,0.8s
BRVK Borovoye 66.69 327 P **P** **20 45 17.4 -0.6**
WSAR Wadi Sarin 68.15 293 LR LR 21 17 24.2
comp=Z,19nm,19.6s,baz=136,slow=38
NRIK Noril'sk 69.58 346 P **P** **20 45 34.8 -1.0**
comp=Z,3.3nm,0.5s,baz=99,slow=7.3,SNR=4.7
comp=Z,3.3nm,0.5s
NRIK Noril'sk 69.58 346 P **P** **20 45 34.4 -1.4**
NRIK IAmb IAmb 20 45 48.4
comp=Z,5.7nm,0.8s
GEYT Alibeck 70.40 309 P **P** **20 45 41.3 -0.2**
comp=Z,2.5nm,0.7s,baz=193,slow=17,SNR=4.1
comp=Z,2.5nm,0.7s
GEYT Alibeck 70.40 309 P **P** **20 45 40.5 -1.0**
GYA0B ALIBECK ARRAY 70.40 309 P **P** **20 45 40.3 -1.3**
GYA0B IAmb IAmb 20 45 48.6
comp=Z,3.1nm,0.6s
ABKAR Akbulak array 71.51 321 P **P** **20 45 46.9 -1.0**
ABKAR Akbulak array 71.51 321 P **P** **20 45 46.2 -1.7**
ABKAR IAmb IAmb 20 45 48.1
comp=Z,5.4nm,0.8s
AKTO Aktyubinsk 73.01 321 LR LR 21 19 00.7
comp=Z,39nm,20.9s,baz=103,slow=37
ARU Arti 74.22 328 LR LR 21 20 25.7
comp=Z,29nm,19.3s,baz=100,slow=37
ARU Arti 74.22 328 P **P** **20 46 02.3 -1.6**
ARU IAmb IAmb 20 46 03.8
comp=Z,6.5nm,0.7s
RAYN Ar Rayn 80.21 293 P **P** **20 46 37.2 -1.0**
GNI Garni 80.97 310 LR LR 21 28 05.6
comp=Z,7.6nm,19.3s,baz=77,slow=40
K20K Telida 80.99 27 P **P** **20 46 42.3 +0.8**
K20K IAmb IAmb 20 46 43.8
comp=Z,7.7nm,1.4s
J20K Nowinta River 81.07 26 P **P** **20 46 42.4 +0.6**
M20K Styx River 81.24 28 P **P** **20 46 42.8 -0.2**
IMAR Indian Mountai 81.48 24 P **P** **20 46 44.0 0.0**
H21K Melozitna Rive 81.83 24 P **P** **20 46 46.3 +0.4**
ONI Oni 82.00 312 P **P** **20 46 46.2 -1.1**
I21K Tanana 82.12 25 P **P** **20 46 48.0 +0.6**
I21K IAmb IAmb 20 46 54.4
comp=Z,5.7nm,0.8s
GEVA Gevas 82.25 308 P **P** **20 46 47.5 -1.4**
GEVA IAmb IAmb 20 46 53.0
comp=Z,5.1nm,0.7s
KBZ Khabaz 82.42 313 P **P** **20 46 49.1 -0.2**
comp=Z,1.6nm,0.8s,baz=201,slow=5.3,SNR=2.6
comp=Z,1.6nm,0.8s
BPAW Bear Paw Mtn. 82.44 26 P **P** **20 46 49.2 +0.1**
BPAW IAmb IAmb 20 46 50.2
comp=Z,7.6nm,1.2s
MLY Manley 82.63 25 P **P** **20 46 50.5 +0.4**
MLY IAmb IAmb 20 46 52.6
comp=Z,4.7nm,0.8s
TRF Thorofare Moun 82.69 27 P **P** **20 46 49.7 -0.9**
TRF IAmb IAmb 20 46 56.9
comp=Z,4.7nm,0.9s
GURO Guroymak-BITLI 83.06 308 P **P** **20 46 53.0 0.0**
GURO IAmb IAmb 20 47 07.3
comp=Z,4.4nm,0.8s
H23K Yukon River 83.19 24 P **P** **20 46 53.9 +1.0**
H23K IAmb IAmb 20 46 59.6
comp=Z,4.8nm,0.8s
I23K Minto, Yukon-K 83.22 25 P **P** **20 46 53.5 +0.5**
NEA2 Nenana 83.31 26 P **P** **20 46 53.7 +0.1**
NEA2 IAmb IAmb 20 46 59.4
comp=Z,4.8nm,0.8s
MCK McKinley 83.32 26 P **P** **20 46 53.2 -0.5**
MCK IAmb IAmb 20 46 59.5
comp=Z,6.6nm,0.9s
RND Reindeer 83.34 27 P **P** **20 46 53.2 -0.7**
RND IAmb IAmb 20 46 55.3
comp=Z,4.0nm,1.0s
TOLK Toolik Lake Re 83.38 22 P **P** **20 46 53.9 0.0**
TOLK IAmb IAmb 20 46 59.8
comp=Z,4.5nm,0.8s
SML Sawmill 83.50 28 P **P** **20 46 54.2 -0.5**
MDM Murphy Dome 83.69 25 P **P** **20 46 55.5 0.0**
WRH Wood River Hil 83.72 26 P **P** **20 46 55.2 -0.5**
WRH IAmb IAmb 20 47 01.8
comp=Z,4.4nm,1.0s
H24K Noodor Dome 83.87 24 P **P** **20 46 56.6 +0.1**
H24K IAmb IAmb 20 46 59.0
comp=Z,5.3nm,0.8s
HDA Harding Lake 84.22 26 P **P** **20 46 56.7 -1.5**
HDA IAmb IAmb 20 47 03.6
comp=Z,4.1nm,0.8s
KOPT Kop Dagi 84.23 310 P **P** **20 46 58.7 -0.5**
ILAR Eielson Array 84.25 25 P **P** **20 46 57.0 -1.4**
comp=Z,0.8nm,0.6s,baz=252,slow=5.6,SNR=6.1
comp=Z,0.8nm,0.6s
ILAR Eielson Array 84.25 25 P **P** **20 46 57.9 -0.5**
VNDA Vanda 84.31 173 P **P** **20 47 00.5 +2.1**
comp=Z,2.0nm,1.0s,baz=331,slow=5.5,SNR=8.5
comp=Z,2.0nm,1.0s
KLMR Klimovskoe 84.66 331 *e*P **P** **20 46 59.4 -1.1**
KLMR AMP 20 47 03.7
comp=Z,30nm,1.4s
PRP Porcupine Dome 84.84 25 P **P** **20 47 01.2 -0.3**
J25K Salcha River, 84.90 26 P **P** **20 47 00.4 -1.3**
RIDG Independent Ri 85.14 27 P **P** **20 47 02.6 -0.3**
RIDG IAmb IAmb 20 47 03.6
comp=Z,7.8nm,1.3s
BMAR Burnt Mountain 85.21 23 P **P** **20 47 03.9 +0.7**
I26K Coal Creek Min 85.83 25 P **P** **20 47 06.9 +0.6**
I26K IAmb IAmb 20 47 13.2
comp=Z,2.8nm,0.8s
K27K Chicken 86.35 26 P **P** **20 47 09.2 +0.3**
K27K IAmb IAmb 20 47 12.0
comp=Z,9.3nm,1.5s
OBN Obninsk 86.37 325 P **P** **20 47 08.8 -0.3**
ASF Jabal al Asfar 87.49 302 P **P** **20 47 15.4 +0.2**
comp=Z,1.9nm,0.7s,baz=44,slow=6.6,SNR=4.0
comp=Z,1.9nm,0.7s
BR131 Keskin Array S 89.51 310 P **P** **20 47 22.9 -1.8**
BRTR Keskin Array B 89.51 310 P **P** **20 47 22.9 -1.8**
comp=Z,2.0nm,0.9s,baz=126,slow=4.3,SNR=7.4
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 89.51 310 P **P** **20 47 23.3 -1.4**
ARCES ARCESS Array B 89.63 340 P **P** **20 47 23.8 -0.7**
comp=Z,7.2nm,0.9s,baz=92,slow=5.5,SNR=11
comp=Z,7.2nm,0.9s
KMBO Kilima Mbogo 89.66 269 P **P** **20 47 26.5 +0.5**
comp=Z,3.1nm,0.9s,baz=62,slow=5.6,SNR=6.2
comp=Z,3.1nm,0.9s
FINES FINESS Array B 91.08 332 P **P** **20 47 31.1 -0.2**
comp=Z,2.6nm,0.6s,baz=59,slow=4.7,SNR=20
FINES LR LR 21 30 46.4
comp=Z,25nm,18.1s,baz=71,slow=37
comp=Z,2.6nm,0.6s
AKASG Malin Array Be 91.25 321 P **P** **20 47 30.8 -1.5**
comp=Z,2.0nm,0.7s,baz=66,slow=5.0,SNR=7.7
AKASG LR LR 21 32 45.8
comp=Z,31nm,18.5s,baz=28,slow=38
comp=Z,2.0nm,0.7s
MNK Minsk 91.44 325 *i* P **P** **20 47 31.1 -1.9**
comp=E,2.0nm,1.0s
MNK *i* P **P** **20 47 31.1 -1.9**
comp=N,6.0nm,0.9s
MNK *i* P **P** **20 47 31.1 -1.9**
comp=Z,9.0nm,0.8s,baz=259
MNK *i* PP **PP** **20 51 08.2 -3.1**
MNK *i* PPP PPP 20 53 06.7
MNK *i* S **SKSac** **20 58 00.2 +0.2**
MNK *i* PS **PS** **20 59 40.5 -3.8**
MNK *i* SS **SS** **21 04 33.6 -0.3**
MNK *i* SSS SSS 21 08 11.8
MNK *i* LQ LQ 21 21 24.1
MNK *i* LR LR 21 26 51.9
MNK *i* LRM MLR 21 30 06.4
comp=N,18nm,17.9s
MNK *i* LRM MLR 21 30 44.7
comp=E,21nm,25.6s
MNK *i* LRM MLR 21 30 49.8
comp=Z,80nm,24.3s
DLBC Dease Lake 92.92 31 LR LR 21 24 15.0
comp=Z,33nm,21.4s,baz=258,slow=32
VRI Vrincioaia 93.70 316 ⇑P **P** **20 47 43.3 -0.6**
NEHR Nehoiu 94.08 316 ⇑P **P** **20 47 45.7 +0.1**
MLR Muntele Rosu 94.31 316 ⇓P **P** **20 47 47.0 +0.3**
MLR Muntele Rosu 94.31 316 LR LR 21 33 48.1
comp=Z,32nm,21.7s,baz=61,slow=38
BURAR Bucovina Array 94.39 318 ⇓P **P** **20 47 47.3 +0.2**
VOIR 94.94 316 ⇑P **P** **20 47 50.8 +1.2**
ARR Arges 95.24 316 ⇑P **P** **20 47 51.7 +0.8**
VLAD Vladila 95.68 315 ⇑P **P** **20 47 52.0 -0.9**
LOT Lotru 95.82 316 ⇑P **P** **20 47 53.9 +0.3**
MBAR Mbarara 96.11 270 LR LR 21 33 27.6
comp=Z,24nm,18.6s,baz=70,slow=37
BZS Buzias 97.25 317 ⇑P **P** **20 47 59.4 -0.6**
NB2 NORSAR Subarra 98.02 334 P **P** **20 48 02.6 -0.5**
comp=Z,3.6nm,0.9s,baz=66,slow=4.4
NB2 NORSAR Subarra 98.02 334 P **P** **20 48 02.6 -0.5**
baz=66,slow=4.4
NOA NORSAR Array B 98.02 334 P **P** **20 48 02.1 -1.0**
comp=Z,0.9nm,0.7s,baz=66,slow=4.5,SNR=5.2
NOA LR LR 21 36 31.7
comp=Z,23nm,20.7s,baz=75,slow=38
comp=Z,0.9nm,0.7s
VRAC Vranov 99.49 321 LR LR 21 35 42.8
comp=Z,12nm,19.6s,baz=66,slow=37
LSZ Lusaka 99.52 255 LR LR 21 32 08.0
comp=Z,29nm,18.4s,baz=145,slow=35
GERES GERESS Array B 101.43 322 P **Pdif** **20 48 18.6 -0.1**
comp=Z,0.4nm,0.5s,baz=86,slow=4.1,SNR=5.5
TXAR Lajitas Array 120.97 52 PKP **PKiKP** **20 53 21.0 +0.8**
comp=Z,0.2nm,0.6s,baz=211,slow=1.5,SNR=4.8
TORD Torodi Ar. Bea 122.72 289 PKP **PKiKP** **20 53 24.1 +0.4**
comp=Z,1.5nm,0.7s,baz=44,slow=1.9,SNR=7.9

*NNC **10** 20:35:00.6±0.8, 46.°31N×79.°29E, h0km, mb3.3, mpv3.1, Error ellipse: s-maj=9.6km s-min=3.2km az=135.0*
*SOME **10** 20:35:02.3, 46.°15N×79.°10E, h0km*
*ASRS **10** 20:35:04.2±0.4, 47.°N±2.°×8.°0E±.°, h5km, MLh3.1/4, Error ellipse: s-maj=4.9km s-min=4.1km az=136.8, confirmed*
ISC 10 20:34:59.2±1.3, 46.°45N±0.°03×79.°31E±0.°03, h5km±12km, n46, σ1°$18/74, 5C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
TDK	**Taldyqorghan** 144nm,0.3s	**1.58**	**204**	*e*P	**Pn**		**20 35 28.1**	**+0.3**
TDK				*e*S	**Sn**		**20 35 47.3**	**-1.4**
	153nm,0.3s							
TDK	**Taldyqorghan** 144nm,0.3s	**1.58**	**204**	P	**Pn**		**20 35 28.1**	**+0.3**
TDK				S	**Sn**		**20 35 47.3**	**-1.4**
	153nm,0.3s							
MAKZ	**Makanchi** 2.6nm,0.3s	**1.88**	**78**	⇓Pn	**Pb**		**20 35 34.1**	**+0.2**
MAKZ				⇑Sn	**Sg**		**20 35 59.3**	**-0.1**
	5.5nm,0.3s							
MAKZ	**Makanchi**	**1.88**	**78**	Pg	**Pb**		**20 35 34.5**	**+0.6**
MAKZ				Sg	**Sg**		**20 35 59.2**	**-0.2**
MK31	**Makanchi Array** 1.0nm,0.2s,baz=255,slow=16,SNR=98	**2.08**	**80**	⇓Pn	**Pb**		**20 35 38.1**	**+0.6**
MK31				⇓Sn	**Sg**		**20 36 05.7**	**-0.4**
	8.4nm,0.3s,baz=260,slow=27,SNR=4.2							
MKAR	**Makanchi Array**	**2.08**	**80**	Pg	**Pb**		**20 35 38.3**	**+0.8**
MKAR				Sg	**Sg**		**20 36 05.6**	**-0.5**
KNOS	**Konyrlen** 4.8nm,0.2s	**2.10**	**182**	*e*P	**Pb**		**20 35 37.2**	**-0.5**
KNOS				*e*S	**Sb**		**20 36 02.4**	**-1.7**
	38nm,0.2s							
DJR	**Jarkent** 6.3nm,0.2s	**2.15**	**171**	*e*P	**Pb**		**20 35 38.2**	**-0.4**
DJR				*e*S	**Sb**		**20 36 04.7**	**-0.9**
	42nm,0.3s							
DJR	**Jarkent** 6.3nm,0.2s	**2.15**	**171**	Pg	**Pb**		**20 35 38.2**	**-0.4**
DJR				Lg	Lg		20 36 04.7	
	42nm,0.3s							
BLB	**Baldybastay** 4.4nm,0.2s	**2.43**	**194**	*e*P	**Pb**		**20 35 43.3**	**-0.1**
BLB				*e*S	**Sb**		**20 36 13.1**	**-0.5**
	37nm,0.3s							
BLB	**Baldybastay** 4.4nm,0.2s	**2.43**	**194**	Pg	**Pb**		**20 35 43.3**	**-0.1**
BLB				Lg	Lg		20 36 13.1	
	37nm,0.3s							
ARXS	**Arharly** 5.6nm,0.2s	**2.47**	**206**	*e*P	**Pb**		**20 35 43.6**	**-0.5**
ARXS				*e*S	**Sb**		**20 36 13.7**	**-1.2**
	43nm,0.4s							
ARXS	**Arharly** 5.6nm,0.2s	**2.47**	**206**	Pg	**Pb**		**20 35 43.6**	**-0.5**
ARXS				Lg	Lg		20 36 13.7	
	43nm,0.4s							
KURS	**Kuram** 3.7nm,0.6s	**3.07**	**196**	*e*P	**Pb**		**20 35 55.5**	**+1.2**
KURS				*e*S	**Sb**		**20 36 33.6**	**+1.5**
	4.4nm,0.5s							
KURS	**Kuram** 3.7nm,0.6s	**3.07**	**196**	Pg	**Pb**		**20 35 55.5**	**+1.2**
KURS				Lg	Lg		20 36 33.6	
	4.4nm,0.5s							
KTMS	**Ketmen** 1.3nm,0.3s	**3.10**	**166**	*e*P	**Pb**		**20 35 54.8**	**0.0**
KTMS				*e*S	**Sb**		**20 36 32.6**	**-0.3**
	6.6nm,0.4s							
KTMS	**Ketmen** 1.3nm,0.3s	**3.10**	**166**	Pg	**Pb**		**20 35 54.8**	**0.0**
KTMS				Lg	Lg		20 36 32.6	
	6.6nm,0.4s							
PDGK	**Podgornoye** 1.0nm,0.4s	**3.13**	**178**	Pg	**Pb**		**20 35 55.7**	**+0.4**
PDGK				Lg	Lg		20 36 33.9	
	8.0nm,0.5s							
PDGK	**Podgornoye** 0.6nm,0.6s	**3.13**	**178**	⇑Pg	**Pb**		**20 35 54.3**	**-1.0**
PDGK				⇑Lg	Lg		20 36 33.7	
	6.5nm,0.4s							
SHLS	**Shalkode** 1.8nm,0.2s	**3.30**	**178**	*e*P	**Pb**		**20 35 59.1**	**+0.9**
SHLS				*e*S	**Sb**		**20 36 39.7**	**+1.1**
	8.8nm,0.3s							
SHLS	**Shalkode** 1.8nm,0.2s	**3.30**	**178**	Pg	**Pb**		**20 35 59.1**	**+0.9**
SHLS				Lg	Lg		20 36 39.7	
	8.8nm,0.3s							
KUU	**Kurty** 2.4nm,0.2s	**3.31**	**220**	*e*P	**Pb**		**20 35 58.9**	**+0.5**
KUU				*e*S	**Sb**		**20 36 39.5**	**+0.6**
	14nm,0.3s							
KUU	**Kurty** 2.4nm,0.2s	**3.31**	**220**	Pg	**Pb**		**20 35 58.9**	**+0.5**
KUU				Lg	Lg		20 36 39.5	
	14nm,0.3s							
KTBS	**Karatobe** 2.7nm,0.2s	**3.31**	**215**	*e*P	**Pb**		**20 35 59.1**	**+0.7**
KTBS				*e*S	**Sb**		**20 36 40.2**	**+1.3**
	22nm,0.3s							
KTBS	**Karatobe** 2.7nm,0.2s	**3.31**	**215**	Pg	**Pb**		**20 35 59.1**	**+0.7**
KTBS				Lg	Lg		20 36 40.3	
	22nm,0.3s							
UZB	**Uzynbulak** 0.4nm,0.1s	**3.31**	**184**	*e*P	**Pb**		**20 35 59.3**	**+0.9**
UZB				*e*S	**Sb**		**20 36 40.1**	**+1.0**
	11nm,0.4s							
UZB	**Uzynbulak** 0.4nm,0.1s	**3.31**	**184**	Pg	**Pb**		**20 35 59.3**	**+0.9**
UZB				Lg	Lg		20 36 40.1	
	11nm,0.4s							
ZHN	**Zhinishke** 4.4nm,0.2s	**3.34**	**191**	*e*P	**Pb**		**20 36 00.4**	**+1.4**
ZHN				*e*S	**Sb**		**20 36 42.0**	**+2.0**
	26nm,0.2s							
ZHN	**Zhinishke** 4.4nm,0.2s	**3.34**	**191**	Pg	**Pb**		**20 36 00.4**	**+1.4**
ZHN				Lg	Lg		20 36 42.0	
	26nm,0.2s							
SATY	**Saty** 2.9nm,0.3s	**3.45**	**191**	*e*P	**Pb**		**20 36 01.7**	**+0.8**
SATY				*e*S	**Sb**		**20 36 44.2**	**+1.0**
	19nm,0.2s							
SATY	**Saty** 2.9nm,0.3s	**3.45**	**191**	Pg	**Pb**		**20 36 01.7**	**+0.8**
SATY				Lg	Lg		20 36 44.2	
	19nm,0.2s							
KOTS	**Kotyrbulak** 1.0nm,0.3s	**3.58**	**207**	*e*P	**Pb**		**20 36 03.5**	**+0.5**
KOTS				*e*S	**Sb**		**20 36 47.7**	**+0.9**
	6.9nm,0.6s							
KOTS	**Kotyrbulak** 1.0nm,0.3s	**3.58**	**207**	Pg	**Pb**		**20 36 03.5**	**+0.5**
KOTS				Lg	Lg		20 36 47.7	
	6.9nm,0.6s							
MDOK	**Medeo** 2.1nm,0.2s	**3.66**	**207**	*e*P	**Pb**		**20 36 05.7**	**+1.3**
MDOK				*e*S	**Sb**		**20 36 50.9**	**+1.7**
	4.6nm,0.5s							
MDOK	**Medeo** 2.1nm,0.2s	**3.66**	**207**	Pg	**Pb**		**20 36 05.7**	**+1.3**
MDOK				Lg	Lg		20 36 50.9	
	4.6nm,0.5s							
KRBS	**Karabastau** 2.4nm,0.4s	**3.77**	**224**	*e*P	**Pb**		**20 36 06.5**	**+0.2**
KRBS				*e*S	**Sb**		**20 36 52.7**	**+0.5**
	3.9nm,0.3s							
KRBS	**Karabastau** 2.4nm,0.4s	**3.77**	**224**	Pg	**Pb**		**20 36 06.5**	**+0.2**
KRBS				Lg	Lg		20 36 52.7	
	3.9nm,0.3s							
ZSN	**Zaisan** 4.3nm,1.0s	**3.94**	**73**	*e*P	**Pg**		**20 36 14.1**	**-0.5**
ZSN				*e*S	**Sg**		**20 37 05.4**	**-0.1**
	3.8nm,0.5s							
ZSN	**Zaisan** 4.3nm,1.0s	**3.94**	**73**	Pg	**Pg**		**20 36 14.1**	**-0.5**
ZSN				Lg	Lg		20 37 05.4	
	3.8nm,0.5s							
KST	**Kastek** 1.5nm,0.3s	**4.16**	**216**	*e*P	**Pb**		**20 36 13.3**	**+0.4**
KST				*e*S	**Sb**		**20 37 04.3**	**+0.8**
	3.7nm,0.6s							
KST	**Kastek** 1.5nm,0.3s	**4.16**	**216**	Pg	**Pb**		**20 36 13.3**	**+0.4**
KST				Lg	Lg		20 37 04.3	
	3.7nm,0.6s							
KURBB	**Kurchatov Arra** 0.5nm,0.4s	**4.21**	**353**	⇑Pg	**Pg**		**20 36 20.5**	**+0.8**
KURBB				⇑Lg	Lg		20 37 12.5	
	14nm,0.6s							
KURK	**Kurchatov**	**4.29**	**354**	Pg	**Pg**		**20 36 20.5**	**-0.8**
KURK				Sg	**Sg**		**20 37 13.7**	**-3.2**
BOOM	**Boomskoye usch**	**4.64**	**212**	Pn	**Pb**		**20 36 21.3**	**+0.2**
BOOM				S	**Sb**		**20 37 18.2**	**+1.0**
UKR	**Ust'-Kan**	**5.76**	**37**	Pn	**Pn**		**20 36 29.3**	**+3.9**
UKR				S	**Sn**		**20 37 31.0**	**-0.9**
UKR				Sg	**Sg**		**20 38 02.2**	**-2.0**
AKAR	**Aktash**	**6.75**	**52**	S	**Sn**		**20 37 52.1**	**-4.2**
AKAR				Sg	**Sg**		**20 38 35.7**	**-0.2**

WEL 10 20:35:28.6, 38°S±11°×17°6E±1°7, h145km±22km, M2.6/22, mB5.1/1, MLv2.6/22, Mw(mB)4.4/1, Error ellipse: s-maj=0.0km s-min=0.0km az=89.8, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MUGZ	**Murupara**	**0.59**	**111**	P	Pn		20 35 50.2	+0.4
MRHZ	**Matea Rd**	**0.63**	**155**	P	Pn		20 35 51.0	+0.9
TOZ	**Tahuroa Road**	**0.70**	**319**	P	Pn		20 35 49.5	-1.0
URZ	**Urewera**	**0.81**	**90**	P	Pn		20 35 50.8	-0.5
MTHZ	**Maungatantwha**	**0.84**	**135**	P	Pn		20 35 52.3	+0.7
TWVZ	**Taurewa**	**0.95**	**212**	P	Pn		20 35 53.7	+1.2
BKZ	**Black Stump Fm**	**0.96**	**160**	P	Pn		20 35 53.3	+0.8
SNVZ	**South Ngauruho**	**0.98**	**200**	P	Pn		20 35 54.4	+1.5
NMHZ	**Naumai**	**1.01**	**146**	P	Pn		20 35 54.6	+1.6
RAHZ	**Arahi**	**1.02**	**130**	P	Pn		20 35 53.8	+0.7
SNGZ	**Shannon Statio**	**1.12**	**118**	P	Pn		20 35 54.4	+0.4
MWZ	**Matawai**	**1.15**	**94**	P	Pn		20 35 53.4	-0.8
MOVZ	**Moawhango**	**1.17**	**192**	P	Pn		20 35 55.2	+0.7
KWHZ	**Kaweka Forest**	**1.19**	**167**	P	Pn		20 35 56.0	+1.3
BHHZ	**Black Hill Sta**	**1.22**	**180**	P	Pn		20 35 55.7	+0.7
ARHZ	**Aropaoanui**	**1.23**	**144**	P	Pn		20 35 56.1	+1.1
MCHZ	**McNeill Hill**	**1.27**	**158**	P	Pn		20 35 56.9	+1.5
RUGZ	**Raukumara Rang**	**1.30**	**77**	P	Pn		20 35 54.3	-1.5
RIGZ	**Rimuhau**	**1.40**	**109**	P	Pn		20 35 56.4	-0.2
HAZ	**Te Kaha**	**1.44**	**70**	P	Pn		20 35 55.1	-2.0

CKHZ	**Cape Kidnapper**	**1.60 151**	P	Pn	20 35 59.6	+0.9
PKGZ	**Pakihiroa**	**1.62 77**	P	Pn	20 35 57.3	-1.8
PNHZ	**Pukenui**	**1.65 177**	P	Pn	20 35 59.9	+0.5
KAHZ	**Kahuranaki**	**1.65 158**	P	Pn	20 36 00.2	+0.8
MHGZ	**Mahia Peninsul**	**1.69 122**	P	Pn	20 35 59.7	0.0
TSZ	**Takapari Road**	**1.79 183**	P	Pn	20 36 01.3	+0.3
WMGZ	**Waiomatatini S**	**1.90 77**	P	Pn	20 36 00.1	-2.1
ABAZ	**Army Bay**	**1.93 329**	P	Pn	20 36 00.2	-2.5
DVHZ	**Dannevirke**	**2.03 178**	P	Pn	20 36 03.5	-0.3
PRHZ	**Porangahau**	**2.04 168**	P	Pn	20 36 04.0	+0.1
POWZ	**Post Office Ro**	**2.14 186**	P	Pn	20 36 04.6	-0.3
ANWZ	**Angora Road**	**2.21 172**	P	Pn	20 36 05.8	-0.1
PRWZ	**Pori Road**	**2.29 182**	P	Pn	20 36 06.6	-0.3
BFZ	**Birch Farm**	**2.42 177**	P	Pn	20 36 07.7	-0.7
MRZ	**Mangatainoka R**	**2.42 189**	P	Pn	20 36 07.6	-0.9
TIWZ	**Tintock**	**2.51 183**	P	Pn	20 36 08.8	-0.8
OGWZ	**Otaki Gorge**	**2.64 195**	P	Pn	20 36 10.1	-1.0
HOWZ	**Holdsworth Sta**	**2.66 189**	P	Pn	20 36 10.1	-1.3
KIW	**Kapiti Island**	**2.74 199**	P	Pn	20 36 10.9	-1.5
MTW	**Mount Morrison**	**2.92 189**	P	Pn	20 36 12.9	-1.8
CAW	**Cannon Point**	**2.94 195**	P	Pn	20 36 13.4	-1.6
TRWZ	**Traveller**	**3.14 185**	P	Pn	20 36 15.7	-1.8
PAWZ	**Paruwai Farm**	**3.15 189**	P	Pn	20 36 15.6	-2.1
MSWZ	**Moikau Station**	**3.21 191**	P	Pn	20 36 16.3	-2.1
PLWZ	**Palliser**	**3.36 191**	P	Pn	20 36 17.9	-2.5
AMCZ	**Amberley**	**5.55 207**	P	Pn	20 36 45.1	-4.1

*TAP **10** 20:39:40.6, 24°.69N × 122°.34E, h93km, ML2.7, C*
*JMA **10** 20:39:40.2±0.2, 25°N±1°×122°.3E±0°.4, h94km±2km, MV2.0/9, TAIWAN REGION*
ISC 10 20:39:41.6±1.5, **24°.66N**±0°.04×**122°.37E**±0°.03, **h83**km±9km, **n67**, σ0**s79**/126, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.44 296**		*e*P	**Pn**	**20 39 55.2**	**0.0**
	baz=286						
TWC	**Suao**	**0.48 265**		*i* P	**Pn**	**20 39 55.4**	**-0.1**
	baz=259						
TWC				S	**Sn**	**20 40 05.7**	**-0.1**
	baz=259						
TWB1	**Santiao Chiao**	**0.49 316**		*e*P	**Pn**	**20 39 55.6**	**-0.1**
	baz=309						
TWB1				*e*S	**Sn**	**20 40 06.4**	**+0.4**
	baz=309						
NTC	**Toucheng**	**0.53 292**		*e*P	**Pn**	**20 39 55.5**	**-0.4**
	baz=289						
NTC				*e*S	**Sn**	**20 40 06.4**	**-0.2**
	baz=289						
JYNG	**Yonagunijimaku**	**0.56 111**		P	**Pn**	**20 39 56.5**	**+0.2**
JYNG				S	**Sn**	**20 40 07.8**	**+0.8**
ILA	**Ilan**	**0.58 281**		*i* P	**Pn**	**20 39 56.5**	**+0.2**
	baz=278						
ILA				S	**Sn**	**20 40 08.0**	**+0.7**
	baz=278						
EWUT	**Wuta**	**0.58 249**		*e*P	**Pn**	**20 39 55.8**	**-0.6**
	baz=245						
EWUT				*e*S	**Sn**	**20 40 07.1**	**-0.2**
	baz=245						
TIPB	**Shuangxi**	**0.59 303**		*i* P	**Pn**	**20 39 56.3**	**-0.2**
	baz=296						
TIPB				S	**Sn**	**20 40 07.3**	**-0.2**
	baz=296						
NDS	**Dongshan**	**0.59 268**		*e*P	**Pn**	**20 39 55.8**	**-0.8**
	baz=264						
NDS				*e*S	**Sn**	**20 40 07.1**	**-0.5**
	baz=264						
YOJ	**Yonaguni jima**	**0.61 108**		P	**Pn**	**20 39 56.9**	**+0.2**
	baz=116						
YOJ				S	**Sn**	**20 40 09.1**	**+1.2**
	baz=116						
YOJ	**Yonaguni jima**	**0.61 108**		P	**Pn**	**20 39 56.9**	**+0.2**
YOJ				*e*S	**Sn**	**20 40 08.7**	**+0.8**
ENA	**Nanau**	**0.62 249**		*i* P	**Pn**	**20 39 57.0**	**+0.3**
	baz=239						
SXI1	**Grass Mountain**	**0.63 314**		*e*P	**Pn**	**20 39 56.6**	**-0.3**
	baz=314						
SXI1				*e*S	**Sn**	**20 40 08.2**	**-0.1**
	baz=314						
TWE	**Neicheng**	**0.64 276**		*i* P	**Pn**	**20 39 57.0**	**0.0**
	baz=275						
TWE				*e*S	**Sn**	**20 40 08.7**	**+0.3**
	baz=275						
NWF	**Wu-fen Shan**	**0.68 308**		*e*P	**Pn**	**20 39 57.2**	**-0.2**
	baz=300						
WFSB	**Wu-fen Shan**	**0.68 308**		P	**Pn**	**20 39 57.2**	**-0.1**
	baz=301						
WFSB				S	**Sn**	**20 40 09.1**	**+0.2**
	baz=301						
FUSB	**Fushanzhiwuyua**	**0.72 279**		P	**Pn**	**20 39 57.6**	**-0.2**
	baz=281						
FUSB				*e*S	**Sn**	**20 40 09.3**	**-0.6**
	baz=281						
ENTT	**Nioudou**	**0.73 269**		*e*P	**Pn**	**20 39 57.2**	**-0.7**
	baz=270						
ENTT				S	**Sn**	**20 40 10.7**	**+0.6**
	baz=270						
TNOU	**National Taiwa**	**0.73 312**		*e*P	**Pn**	**20 39 57.5**	**-0.4**
	baz=309						
TNOU				*e*S	**Sn**	**20 40 09.7**	**-0.2**
	baz=309						
LATG	**Datong**	**0.78 261**		P	**Pn**	**20 39 58.7**	**+0.3**
	baz=253						
LATG				*e*S	**Sn**	**20 40 12.5**	**+1.5**
	baz=253						
NDT	**Datong Townshi**	**0.78 266**		P	**Pn**	**20 39 58.9**	**+0.4**
	baz=265						
NDT				S	**Sn**	**20 40 11.9**	**+1.0**
	baz=265						
NACB	**Ninganchiao**	**0.85 236**		*e*P	**Pn**	**20 39 58.8**	**-0.4**
	baz=228						
NACB				S	**Sn**	**20 40 11.9**	**-0.4**
	baz=228						
YM01	**YM01**	**0.88 304**		P	**Pn**	**20 39 58.9**	**-0.5**
	baz=295						
YM01				*e*S	**Sn**	**20 40 12.4**	**-0.4**
	baz=295						
YHNB	**Yeheng**	**0.91 271**		*e*P	**Pn**	**20 39 59.9**	**0.0**
	baz=276						
YHNB				*e*S	**Sn**	**20 40 13.7**	**+0.2**
	baz=276						
TWD	**Chiawan**	**0.91 231**		*e*P	**Pn**	**20 39 59.2**	**-0.6**
	baz=228						
TWD				S	**Sn**	**20 40 13.5**	**+0.1**
	baz=228						
NSK	**Sanguang**	**0.92 272**		*e*P	**Pn**	**20 39 59.0**	**-1.0**
	baz=276						
NSK				*e*S	**Sn**	**20 40 12.9**	**-0.8**
	baz=276						
ETLH	**Xiulin Townshi**	**0.92 241**		*e*P	**Pn**	**20 39 59.8**	**-0.3**
	baz=232						
ETLH				*e*S	**Sn**	**20 40 13.5**	**-0.3**
	baz=232						
NNSB	**Datong**	**0.93 256**		P	**Pn**	**20 40 00.1**	**0.0**
	baz=249						
NNSB				*e*S	**Sn**	**20 40 14.8**	**+0.8**
	baz=249						
NNSH	**Datong**	**0.93 256**		*e*P	**Pn**	**20 40 00.0**	**-0.1**
	baz=249						
NNSH				*e*S	**Sn**	**20 40 14.3**	**+0.4**
	baz=249						
NNS	**Nan Shan**	**0.93 257**		*e*P	**Pn**	**20 39 59.2**	**-1.0**
	baz=248						
NNS				S	**Sn**	**20 40 13.4**	**-0.7**
	baz=248						
TWS1	**Kuangyinshan**	**0.97 297**		P	**Pn**	**20 40 00.0**	**-0.5**
	baz=296						
TWS1				*e*S	**Sn**	**20 40 14.4**	**-0.3**
	baz=296						
NTST	**Danshui**	**0.98 301**		*e*P	**Pn**	**20 39 59.9**	**-0.7**
	baz=300						
NTST				*e*S	**Sn**	**20 40 14.4**	**-0.3**
	baz=300						
ETM	**Tongmen**	**1.05 230**		*e*P	**Pn**	**20 40 01.1**	**-0.5**
	baz=227						
ETM				*e*S	**Sn**	**20 40 15.9**	**-0.6**
	baz=227						
FUSS	**Fushou**	**1.10 249**		*e*P	**Pn**	**20 40 02.7**	**+0.3**
	baz=241						
FUSS				*e*S	**Sn**	**20 40 18.9**	**+1.0**
	baz=241						
WHF	**Hehuan Shan**	**1.13 243**		*e*P	**Pn**	**20 40 02.6**	**-0.2**
	baz=240						
WHF				*e*S	**Sn**	**20 40 18.5**	**-0.2**
	baz=240						
NFF	**Wufeng Townshi**	**1.14 269**		*e*P	**Pn**	**20 40 01.7**	**-0.9**
	baz=272						
NFF				*e*S	**Sn**	**20 40 17.2**	**-1.1**
	baz=272						
TWT	**Tachien**	**1.16 250**		*e*P	**Pn**	**20 40 03.6**	**+0.6**
	baz=241						
TWT				*e*S	**Sn**	**20 40 19.7**	**+0.7**
	baz=241						
TDCB	**Techi**	**1.17 250**		*e*P	**Pn**	**20 40 03.4**	**+0.3**
	baz=241						
TDCB				*e*S	**Sn**	**20 40 19.3**	**+0.1**
	baz=241						
ESL	**Shilin**	**1.20 226**		*e*P	**Pn**	**20 40 02.4**	**-0.8**
	baz=231						
ESL				*e*S	**Sn**	**20 40 18.4**	**-1.2**
	baz=231						
LIOB	**Emei**	**1.23 270**		*e*P	**Pn**	**20 40 03.5**	**-0.2**
	baz=268						
LIOB				*e*S	**Sn**	**20 40 20.5**	**+0.2**
	baz=268						
CHGB	**Renai**	**1.24 242**		*e*P	**Pn**	**20 40 04.1**	**+0.1**
	baz=233						
CHGB				*e*S	**Sn**	**20 40 21.5**	**+0.7**
	baz=233						
NSTT	**Nanjuang**	**1.25 269**		*e*P	**Pn**	**20 40 03.4**	**-0.4**
	baz=267						
NSTT				*e*S	**Sn**	**20 40 20.6**	**0.0**
	baz=267						
IRIF	**Iriomote-Funau**	**1.28 104**		P	**Pn**	**20 40 03.8**	**-0.5**
IRIF				*e*S	**Sn**	**20 40 21.7**	**+0.4**
OWD	**Renai**	**1.29 238**		*e*P	**Pn**	**20 40 04.4**	**-0.2**
	baz=230						
OWD				*e*S	**Sn**	**20 40 21.5**	**-0.3**
	baz=230						
EGFH	**Guangfu**	**1.31 221**		*e*P	**Pn**	**20 40 04.3**	**-0.3**
	baz=228						
EGFH				*e*S	**Sn**	**20 40 21.7**	**-0.2**
	baz=228						
WUSB	**Renai**	**1.32 240**		*e*P	**Pn**	**20 40 05.1**	**+0.2**
	baz=238						
WUSB				*e*S	**Sn**	**20 40 22.3**	**-0.1**
	baz=238						
WHP	**Taichung City**	**1.35 254**		*e*P	**Pn**	**20 40 05.9**	**+0.6**
	baz=252						
WHP				*e*S	**Sn**	**20 40 24.3**	**+1.2**
	baz=252						
VWDT	**VWDT**	**1.44 232**		*e*P	**Pn**	**20 40 06.2**	**-0.1**
	baz=224						
VWDT				*e*S	**Sn**	**20 40 24.8**	**-0.1**
	baz=224						
HGSD	**Ruisui**	**1.45 217**		*e*P	**Pn**	**20 40 07.0**	**+0.6**
	baz=208						
HGSD				*e*S	**Sn**	**20 40 25.0**	**0.0**
	baz=208						
DPDB	**Guoxing**	**1.46 245**		*e*P	**Pn**	**20 40 07.0**	**+0.4**
	baz=238						
DPDB				*e*S	**Sn**	**20 40 27.2**	**+1.8**
	baz=238						
WCS	**Beigang Elemen**	**1.46 246**		*e*P	**Pn**	**20 40 06.5**	**-0.1**
	baz=239						
WCS				*e*S	**Sn**	**20 40 25.8**	**+0.5**
	baz=239						
EHY	**Hungye**	**1.49 220**		*e*P	**Pn**	**20 40 06.9**	**-0.1**
	baz=226						
EHY				*e*S	**Sn**	**20 40 23.9**	**-2.2**
	baz=226						
SMLT	**Sun Moon Lake**	**1.55 240**		*e*P	**Pn**	**20 40 08.8**	**+1.0**
	baz=232						
SMLT				*e*S	**Sn**	**20 40 29.7**	**+2.2**
	baz=232						
JKRS	**Kuro-shima**	**1.55 105**		P	**Pn**	**20 40 07.7**	**0.0**
JKRS				*e*S	**Sn**	**20 40 28.1**	**+0.6**
SSLB	**Suanglung**	**1.56 237**		*e*P	**Pn**	**20 40 08.7**	**+0.9**
	baz=231						
SSLB				*e*S	**Sn**	**20 40 29.0**	**+1.3**
	baz=231						
YULB	**Yu-li**	**1.59 218**		*e*P	**Pn**	**20 40 06.9**	**-1.4**
	baz=225						
YULB				*e*S	**Sn**	**20 40 26.8**	**-1.7**
	baz=225						
JIJ	**Ishigaki jima**	**1.64 100**		P	**Pn**	**20 40 08.5**	**-0.3**
JIJ				S	**Sn**	**20 40 29.1**	**-0.5**
WHYT	**Xinyi Township**	**1.68 236**		*e*S	**Sn**	**20 40 32.4**	**+1.8**
	baz=233						
WJS	**Zhushan**	**1.71 241**		*e*S	**Sn**	**20 40 33.4**	**+2.2**
	baz=249						
YUS	**Yu-Shan**	**1.74 228**		P	**Pn**	**20 40 10.8**	**+0.1**
	baz=219						
YUS				*e*S	**Sn**	**20 40 32.4**	**-0.2**
	baz=219						
FULB	**Fuli**	**1.75 214**		*e*P	**Pn**	**20 40 09.7**	**-0.7**
	baz=222						
FULB				*e*S	**Sn**	**20 40 31.7**	**-0.5**
	baz=222						
JISG	**Ishigakijimahi**	**1.77 92**		S	**Sn**	**20 40 32.2**	**-0.3**
ALS	**Alishan**	**1.83 232**		*e*P	**Pn**	**20 40 12.6**	**+0.9**
	baz=223						
ALS				*e*S	**Sn**	**20 40 36.3**	**+1.9**
	baz=223						
CHN5	**Tsauling**	**1.87 236**		*e*S	**Sn**	**20 40 35.9**	**+0.8**
	baz=245						
ELDTW	**Lidau**	**1.91 221**		*e*S	**Sn**	**20 40 34.9**	**-1.3**
	baz=213						
EDH	**Donghe**	**1.94 210**		*e*P	**Pn**	**20 40 11.4**	**-1.4**
	baz=203						
EDH				*e*S	**Sn**	**20 40 35.0**	**-1.6**
	baz=203						
TPUB	**Ta-pu**	**2.09 230**		*e*P	**Pn**	**20 40 15.3**	**+0.5**
	baz=228						
TPUB				*e*S	**Sn**	**20 40 42.4**	**+2.3**
	baz=228						

*NEIC **10** 20:52:53.8±1.6, 4°.9S±0°.1×149°.7E±0°.1, h395km±10km, mb4.1/17, Error ellipse: s-maj=20.7km s-min=17.4km az=60.0*
*IDC **10** 20:52:54.5±1.6, 5°.18S×149°.72E, h380km±20km, mb3.1/7, mbtmp3.8/8, Error ellipse: s-maj=41.8km s-min=16.1km az=118.0*
ISC 10 20:52:54.2±0.7, **4°.99S**±0°.10×**149°.7E**±0°.1, **h400**km, **n30**, σ1**s30**/30, **mb3.6**/11, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.43**	**74**	P	**Pn**	**20 53 51.9**	**-1.3**
	63nm,0.6s,baz=180,slow=6.1,SNR=3.6						
MANU	**Manus Island**	**3.73**	**322**	Pn	**Pn**	**20 54 01.5**	**-2.3**
CTAO	**Charters Tower**	**15.38**	**192**	P	**P**	**20 56 09.3**	**-1.6**
CTAO				IAmb	IAmb	20 56 53.1	
	comp=Z,13nm,1.4s						
MTN	**Manton Dam**	**19.91**	**246**	P	**P**	**20 56 58.6**	**+0.6**
MTN				IAmb	IAmb	20 57 40.9	
	comp=Z,8.8nm,1.0s						
WB0	**Warramunga Arr**	**20.92**	**224**	P	**P**	**20 57 07.6**	**+0.4**
WB0				IAmb	IAmb	20 57 08.9	
	comp=Z,10nm,1.2s						
WR0	**Warramunga Arr**	**20.95**	**223**	P	**P**	**20 57 07.7**	**+0.3**
WR0				IAmb	IAmb	20 57 08.7	
	comp=Z,10nm,1.2s						
KOUNC	**Koumac, New Ca**	**21.00**	**139**	P	**P**	**20 57 06.3**	**-1.5**
WB2	**Warramunga Arr**	**21.06**	**224**	P	**P**	**20 57 09.3**	**+0.8**
WB2				IAmb	IAmb	20 57 10.3	
	comp=Z,6.8nm,0.6s						
WRA	**Warramunga Arr**	**21.07**	**224**	P	**P**	**20 57 09.4**	**+0.8**
	comp=Z,3.6nm,0.5s,baz=50,slow=9.9,SNR=85						
WRA				PcP	**PcP**	**21 01 01.1**	**+2.6**
	comp=Z,0.7nm,1.1s,baz=57,slow=2.3,SNR=2.7						
	comp=Z,3.6nm,0.5s						
WRA	**Warramunga Arr**	**21.07**	**224**	P	**P**	**20 57 08.4**	**-0.2**
KNRA	**Kununurra**	**23.13**	**241**	P	**P**	**20 57 28.0**	**+0.7**
AS31	**Alice Springs**	**24.00**	**218**	P	**P**	**20 57 35.4**	**+0.3**
ASAR	**Alice Springs**	**24.00**	**218**	P	**P**	**20 57 35.8**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=52,slow=8.2,SNR=19						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**24.00**	**218**	P	**P**	**20 57 35.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**26.87**	**239**	P	**P**	**20 58 01.2**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=39,slow=9.8,SNR=38						
	comp=Z,1.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**26.87**	**239**	P	**P**	**20 58 00.7**	**+0.1**
FITZ				IAmb	IAmb	20 58 01.8	
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**27.80**	**195**	P	**P**	**20 58 09.8**	**+1.0**
	comp=Z,2.5nm,1.0s,baz=50,slow=17,SNR=1.8						
	comp=Z,2.5nm,1.0s						
STKA	**Stephens Creek**	**27.80**	**195**	P	**P**	**20 58 09.5**	**+0.8**
FORT	**Forrest**	**32.75**	**216**	P	**P**	**20 58 52.1**	**+0.3**
MBWA	**Marble Bar**	**33.20**	**238**	P	**P**	**20 58 55.4**	**-0.5**
MBWA				IAmb	IAmb	20 59 03.8	
	comp=Z,17nm,1.4s						
NACB	**Ninganchiao**	**39.86**	**318**	P	**P**	**20 59 51.7**	**+0.4**
SONM	**Songino Array**	**64.86**	**329**	P	**P**	**21 02 55.7**	**+3.4**
	comp=Z,0.5nm,0.6s,baz=143,slow=5.7,SNR=4.1						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**64.86**	**329**	P	**P**	**21 02 51.7**	**-0.6**
MKAR	**Makanchi Array**	**78.44**	**320**	P	P	21 04 17.3	+5.1
	comp=Z,0.3nm,0.6s,baz=104,slow=7.1,SNR=2.2						
	comp=Z,0.3nm,0.6s						
ZAA0	**Zalesovo Array**	**79.60**	**327**	P	**P**	**21 04 16.4**	**-1.8**
ZAA0				IAmb	IAmb	21 04 27.8	
	comp=Z,1.2nm,0.9s						
ZALV	**Zalesovo Beam**	**79.60**	**327**	P	**P**	**21 04 16.7**	**-1.5**
ILAR	**Eielson Array**	**83.52**	**23**	P	**P**	**21 04 40.1**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=233,slow=5.5,SNR=2.3						
	comp=Z,0.3nm,0.7s						
BCAR	**Beaver Creek A**	**84.89**	**25**	P	**P**	**21 04 45.7**	**+0.6**
QSPA	**South Pole Qui**	**84.97**	**180**	P	**P**	**21 04 45.4**	**-0.2**
QSPA				IAmb	IAmb	21 05 18.8	
	comp=Z,5.4nm,1.4s						
TORD	**Torodi Ar. Bea**	**147.40**	**287**	PKPbc	**PKiKP**	**21 11 54.2**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=58,slow=2.2,SNR=10						

*IDC **10** 20:54:43.9±1.1, 5°.51N × 74°.27W, h101km±11km, mb3.3/2, mbtmp3.8/3, MS3.0/1, Error ellipse: s-maj=49.5km s-min=13.1km az=129.0*
*RSNC **10** 20:54:45.3±1.4, 5°.61N × 74°.36W, h93km±5km, ML3.4, Mw3.5*
ISC 10 20:54:43.8±0.8, **5°.61N**±0°.03×**74°.38W**±0°.03, **h100**km±6km, **n43**, σ1**s38**/76, **4C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.31**	**81**	⇑ *i*P	**Pn**	**20 54 58.2**	**-0.4**
SPBC				*e*S	**Sn**	**20 55 08.1**	**-1.6**
NORC	**Norcasia**	**0.49**	**265**	*e*P	**Pn**	**20 54 59.7**	**+0.1**
NORC				*e*S	**Sn**	**20 55 11.0**	**-0.4**
ROSC	**El Rosal**	**0.76**	**176**	P	**Pn**	**20 55 02.9**	**+0.5**
	432nm,0.3s,baz=49,slow=20,SNR=292						
ROSC				S	**Sn**	**20 55 16.0**	**-0.1**
	520nm,0.3s,baz=12,slow=20,SNR=12						
ROSC	**El Rosal**	**0.76**	**176**	*e*P	**Pn**	**20 55 03.0**	**+0.6**
ROSC				*e*S	**Sn**	**20 55 16.8**	**+0.7**
ROSC				*i*		20 55 18.2	
	comp=Z,511nm,0.3s						
PTBC	**PUERTO BERRIO,**	**0.93**	**355**	⇑ *i*P	**Pn**	**20 55 03.5**	**-0.2**
PTBC				*e*S	**Sn**	**20 55 17.8**	**-0.7**
PTBC				*i*		20 55 19.1	
	comp=Z,634nm,0.4s						
GUY2C	**Guyana, Caldas**	**1.05**	**249**	⇓ *i*P	**Pn**	**20 55 05.9**	**+0.6**
GUY2C				*e*S	**Sn**	**20 55 23.4**	**+1.9**
GUY2C				*i*		20 55 26.4	
	comp=Z,352nm,0.2s						
CHIC	**Chingaza**	**1.16**	**146**	*e*P	**Pn**	**20 55 07.1**	**+0.6**
CHIC				*e*S	**Sn**	**20 55 24.9**	**+1.3**
CHIC				*i*		20 55 26.7	
	comp=Z,279nm,0.4s						
HELC	**Santa Helena**	**1.28**	**297**	*e*P	**Pn**	**20 55 08.7**	**+0.9**
HELC				*e*S	**Sn**	**20 55 27.4**	**+1.4**
HELC				*i*		20 55 28.9	
	comp=Z,326nm,0.4s						
RUSC	**La Rusia**	**1.32**	**77**	*e*P	**Pn**	**20 55 08.7**	**+0.2**
RUSC				*e*S	**Sn**	**20 55 27.8**	**+0.8**
RUSC				*i*		20 55 28.8	
	comp=Z,146nm,0.4s						
ANIL	**Santa Ana**	**1.50**	**223**	*e*P	**Pn**	**20 55 11.4**	**+1.0**
ANIL				*e*S	**Sn**	**20 55 31.9**	**+1.3**
ANIL				*i*		20 55 33.0	
	comp=Z,887nm,0.3s						
BARC	**Barichara**	**1.54**	**50**	*e*P	**Pn**	**20 55 11.7**	**+0.8**
BARC				*e*S	**Sn**	**20 55 32.3**	**+0.9**
BARC				*i*		20 55 38.5	
	comp=Z,527nm,0.5s						
VILC	**Villavicencio,**	**1.63**	**155**	*e*P	**Pn**	**20 55 12.8**	**+0.9**
VILC				*e*S	**Sn**	**20 55 34.1**	**+1.0**
VILC				*i*		20 55 36.6	
	comp=Z,406nm,0.3s						
BRRC	**Barranca, Sant**	**1.63**	**24**	*e*P	**Pn**	**20 55 12.1**	**+0.3**
BRRC				*e*S	**Sn**	**20 55 34.8**	**+1.8**
BRRC				*i*		20 55 37.8	
	comp=Z,856nm,0.2s						
CBOC	**Ciudad Bolivar**	**1.65**	**279**	*e*P	**Pn**	**20 55 13.4**	**+1.3**
CBOC				*e*S	**Sn**	**20 55 34.7**	**+1.2**
ZARC	**Zaragoza, Cauc**	**1.94**	**346**	⇓ *i*P	**Pn**	**20 55 15.7**	**0.0**
ZARC				*e*S	**Sn**	**20 55 41.6**	**+1.8**
ZARC				*i*		20 55 46.5	
	comp=Z,655nm,0.4s						
PRAC	**Prado**	**1.94**	**195**	*e*P	**Pn**	**20 55 16.0**	**+0.2**
PRAC				*e*S	**Sn**	**20 55 42.2**	**+2.1**
PRAC				*i*		20 55 46.1	
	comp=Z,178nm,0.3s						
PLMC	**San Jos del P**	**2.02**	**250**	*e*P	**Pn**	**20 55 17.8**	**+1.1**
DBBC	**Dabeiba**	**2.30**	**308**	*e*P	**Pn**	**20 55 21.5**	**+1.1**
DBBC				*e*S	**Sn**	**20 55 45.2**	**-3.2**
DBBC				*i*		20 55 55.8	
	comp=Z,69nm,0.4s						
PAMC	**Pamplona, Colo**	**2.40**	**44**	*e*P	**Pn**	**20 55 22.4**	**+0.4**
PAMC				*e*S	**Sn**	**20 55 51.3**	**0.0**
PAMC				*i*		20 56 00.4	
	comp=Z,204nm,0.3s						
UREC	**San Jos de Ur**	**2.42**	**332**	*e*P	**Pn**	**20 55 21.6**	**-0.3**
UREC				*e*S	**Sn**	**20 55 51.7**	**+0.6**
UREC				*i*		20 55 59.8	
	comp=Z,263nm,0.2s						
YOTC	**Yotoco, Valle**	**2.54**	**231**	*e*P	**Pn**	**20 55 24.5**	**+1.0**
PTGC	**Puerto Gaitan,**	**2.64**	**122**	*e*P	**Pn**	**20 55 25.0**	**+0.2**
PTGC				*e*S	**Sn**	**20 55 55.2**	**-1.1**
TAMC	**Tame, Arauca**	**2.70**	**72**	*e*P	**Pn**	**20 55 26.7**	**+1.0**
TAMC				*e*S	**Sn**	**20 55 59.1**	**+1.3**
TAMC				*i*		20 56 04.6	
	comp=Z,129nm,0.8s						
MALC	**Bahia Malaga**	**3.34**	**242**	*e*P	**Pn**	**20 55 35.5**	**+1.3**
MACC	**Macarena, Meta**	**3.48**	**171**	*e*P	**Pn**	**20 55 35.6**	**-0.4**
MACC				*e*S	**Sn**	**20 56 14.7**	**-1.7**
MACC				*i*		20 56 14.7	
	comp=Z,76nm,0.3s						
GUVC	**San Jose del G**	**3.51**	**150**	*e*P	**Pn**	**20 55 36.2**	**-0.2**
GUVC				*e*S	**Sn**	**20 56 15.9**	**-1.2**
GUVC				*i*		20 56 17.6	
	comp=Z,72nm,0.2s						
GARC	**Garzon, Huila**	**3.57**	**198**	*e*P	**Pn**	**20 55 37.5**	**0.0**
GARC				*e*S	**Sn**	**20 56 20.2**	**+1.2**
GARC				*i*		20 56 21.8	
	comp=Z,178nm,0.2s						
LCBC	**Los crdobas,**	**3.79**	**329**	⇑ *i*P	**Pn**	**20 55 40.2**	**

YKA	**Yellowknife Ar**	**63.98**	**341**	P	**P**	**21 05 06.4**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=131,slow=6.3,SNR=2.0						
	comp=Z,0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.21**	**78**	P	**P**	**21 06 15.5**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=266,slow=8.2,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**147.39**	**234**	PKPbc	**PKPbc**	**21 14 16.4**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=123,slow=3.5,SNR=31						
WRA	**Warramunga Arr**	**148.65**	**240**	PKPbc	**PKiKP**	**21 14 19.8**	**-1.9**
	comp=Z,1.0nm,0.5s,baz=107,slow=3.0,SNR=22						

*TAP **10** 21:02:46.3,24.32N×122.00E,h58km,ML2.8,C*
*JMA **10** 21:02:46.0±0.2,24.2N±0.8×122.0E±0.5,h61km±2km, MV2.2/9, TAIWAN REGION*
ISC 10 21:02:47.1±1.2**,24.30N**±0.02×**122.04E**±0.02**,h50**km±6km**, n103,**σ0**85**/189**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.27**	**272**	*e*P	**Pn**	**21 02 56.0**	**-0.1**
	baz=266						
EWUT	**Wuta**	**0.28**	**301**	P	**Pn**	**21 02 55.2**	**-0.9**
EWUT	baz=307			S	**Sn**	**21 03 02.5**	**+0.1**
	baz=307						
ENA	**Nanau**	**0.30**	**295**	*i* P	**Pn**	**21 02 56.4**	**+0.1**
ENA	baz=299			S	**Sn**	**21 03 03.5**	**+0.8**
	baz=299						
TWC	**Suao**	**0.35**	**330**	*i* P	**Pn**	**21 02 57.0**	**+0.3**
TWC	baz=335			*e*S	**Sn**	**21 03 04.3**	**+0.7**
	baz=335						
ETL	**Fush Village**	**0.41**	**249**	P	**Pn**	**21 02 57.0**	**-0.4**
ETL	baz=244			*e*S	**Sn**	**21 03 05.0**	**+0.3**
	baz=244						
NACB	**Ninganchiao**	**0.43**	**253**	P	**Pn**	**21 02 57.0**	**-0.5**
NACB	baz=248			S	**Sn**	**21 03 05.1**	**+0.1**
	baz=248						
NDS	**Dongshan**	**0.44**	**318**	P	**Pn**	**21 02 56.8**	**-0.9**
NDS	baz=320			*e*S	**Sn**	**21 03 05.1**	**-0.2**
	baz=320						
TWD	**Chiawan**	**0.46**	**241**	*i* P	**Pn**	**21 02 57.4**	**-0.5**
TWD	baz=230			S	**Sn**	**21 03 06.2**	**+0.6**
	baz=230						
HWA	**Hwalien**	**0.51**	**231**	*e*S	**Sn**	**21 03 08.6**	**+1.9**
ETLH	baz=225 **Xiulin Townshi**	**0.52**	**259**	*i* P	**Pn**	**21 02 58.4**	**-0.3**
ETLH	baz=256			*e*S	**Sn**	**21 03 07.2**	**+0.2**
	baz=256						
LATG	**Datong**	**0.52**	**296**	*i* P	**Pn**	**21 02 58.4**	**-0.4**
LATG	baz=290			S	**Sn**	**21 03 07.7**	**+0.6**
	baz=290						
ILA	**Ilan**	**0.53**	**330**	*e*S	**Sn**	**21 03 08.5**	**+1.4**
	baz=336						
TWE	**Neicheng**	**0.54**	**321**	*i* P	**Pn**	**21 02 58.8**	**0.0**
TWE	baz=323			S	**Sn**	**21 03 07.7**	**+0.5**
	baz=323						
ENTT	**Nioudou**	**0.55**	**308**	*e*P	**Pn**	**21 02 57.8**	**-1.1**
ENTT	baz=309			*e*S	**Sn**	**21 03 07.2**	**-0.3**
	baz=309						
EGS		**0.55**	**350**	P	**Pn**	**21 02 59.0**	**0.0**
	baz=3.0						
NDT	**Datong Townshi**	**0.57**	**302**	P	**Pn**	**21 02 58.9**	**-0.3**
NDT	baz=302			S	**Sn**	**21 03 08.0**	**+0.1**
	baz=302						
NTC	**Toucheng**	**0.58**	**341**	*e*P	**Pn**	**21 02 59.8**	**+0.4**
NTC	baz=350			S	**Sn**	**21 03 08.9**	**+0.7**
	baz=350						
TEYL	**Yanliau Villag**	**0.59**	**223**	P	**Pn**	**21 02 59.1**	**-0.4**
TEYL	baz=221			*e*S	**Sn**	**21 03 09.3**	**+0.9**
	baz=221						
ETM	**Tongmen**	**0.60**	**236**	P	**Pn**	**21 02 59.2**	**-0.4**
ETM	baz=243			S	**Sn**	**21 03 08.6**	**0.0**
	baz=243						
NNSB	**Datong**	**0.61**	**282**	P	**Pn**	**21 02 59.3**	**-0.6**
NNSB	baz=281			*e*S	**Sn**	**21 03 08.9**	**-0.1**
	baz=281						
NNSH	**Datong**	**0.61**	**282**	P	**Pn**	**21 02 59.3**	**-0.6**
NNSH	baz=281			S	**Sn**	**21 03 08.9**	**-0.2**
	baz=281						
FUSB	**Fushanzhiwuyua**	**0.61**	**318**	P	**Pn**	**21 02 59.9**	**0.0**
FUSB	baz=312			*e*S	**Sn**	**21 03 08.9**	**-0.1**
	baz=312						
NNS	**Nan Shan**	**0.62**	**283**	*e*P	**Pn**	**21 02 58.8**	**-1.3**
NNS	baz=281			*e*S	**Sn**	**21 03 08.2**	**-1.1**
	baz=281						
NWLT	**Wulai**	**0.68**	**314**	*e*P	**Pn**	**21 03 00.8**	**+0.2**
NWLT	baz=307			*e*S	**Sn**	**21 03 10.7**	**+0.2**
	baz=307						
TIPB	**Shuangxi**	**0.69**	**344**	P	**Pn**	**21 03 00.8**	**-0.1**
TIPB	baz=348			S	**Sn**	**21 03 10.6**	**-0.2**
	baz=348						
TWB1	**Santiao Chiao**	**0.70**	**356**	P	**Pn**	**21 03 00.4**	**-0.5**
TWB1	baz=10.0			S	**Sn**	**21 03 10.4**	**-0.5**
	baz=10.0						
YHNB	**Yeheng**	**0.71**	**301**	P	**Pn**	**21 03 00.8**	**-0.2**
YHNB	baz=301			*e*S	**Sn**	**21 03 11.0**	**-0.2**
	baz=301						
NSK	**Sanguang**	**0.72**	**301**	*e*P	**Pn**	**21 02 59.9**	**-1.4**
NSK	baz=292			*e*S	**Sn**	**21 03 10.2**	**-1.3**
	baz=292						
WHF	**Hehuan Shan**	**0.72**	**258**	P	**Pn**	**21 03 01.1**	**-0.5**
WHF	baz=255			S	**Sn**	**21 03 11.6**	**-0.4**
	baz=255						
FUSS	**Fushou**	**0.73**	**266**	*e*P	**Pn**	**21 03 01.3**	**-0.1**
FUSS	baz=264			*e*S	**Sn**	**21 03 11.8**	**0.0**
	baz=264						
ESL	**Shilin**	**0.74**	**229**	P	**Pn**	**21 03 00.6**	**-0.8**
ESL	baz=235			*e*S	**Sn**	**21 03 10.8**	**-0.9**
	baz=235						
TEGC	**Jichi Village**	**0.75**	**218**	*e*S	**Sn**	**21 03 12.7**	**+0.8**
	baz=205						
TWT	**Tachien**	**0.79**	**267**	P	**Pn**	**21 03 02.4**	**+0.2**
TWT	baz=259			*e*S	**Sn**	**21 03 13.6**	**+0.4**
	baz=259						
TWA	**Mucha**	**0.79**	**328**	P	**Pn**	**21 03 02.2**	**+0.1**
TWA	baz=330			*e*S	**Sn**	**21 03 13.8**	**+0.8**
	baz=330						
NWF	**Wu-fen Shan**	**0.80**	**343**	P	**Pn**	**21 03 02.1**	**-0.2**
NWF	baz=345			*e*S	**Sn**	**21 03 13.1**	**-0.2**
	baz=345						
WFSB	**Wu-fen Shan**	**0.80**	**343**	P	**Pn**	**21 03 02.0**	**-0.2**
WFSB	baz=345			*e*S	**Sn**	**21 03 13.0**	**-0.2**
	baz=345						
SXI1	**Grass Mountain**	**0.80**	**349**	P	**Pn**	**21 03 01.7**	**-0.6**
SXI1	baz=1.0			*e*S	**Sn**	**21 03 13.0**	**-0.4**
	baz=1.0						
NHDH	**Xindian Distri**	**0.81**	**325**	P	**Pn**	**21 03 02.3**	**0.0**
NHDH	baz=326			*e*S	**Sn**	**21 03 13.6**	**+0.3**
	baz=326						
TDCB	**Techi**	**0.81**	**267**	P	**Pn**	**21 03 02.4**	**0.0**
TDCB	baz=259			*e*S	**Sn**	**21 03 13.4**	**-0.2**
	baz=259						
CHGB	**Renai**	**0.83**	**253**	P	**Pn**	**21 03 02.6**	**-0.1**
	baz=244						
CHGB				*e*S	**Sn**	**21 03 13.7**	**-0.4**
	baz=244						
TATO	**Taipei**	**0.84**	**323**	*e*P	**Pn**	**21 03 02.8**	**+0.1**
TATO	baz=324			*e*S	**Sn**	**21 03 14.1**	**0.0**
	baz=324						
JYNG	**Yonagunijimaku**	**0.84**	**80**	*e*P	**Pn**	**21 03 02.6**	**0.0**
JYNG				*e*S	**Sn**	**21 03 14.6**	**+0.6**
EGFH	**Guangfu**	**0.84**	**222**	*e*P	**Pn**	**21 03 02.1**	**-0.7**
EGFH	baz=229			*e*S	**Sn**	**21 03 13.5**	**-0.7**
	baz=229						
OWD	**Renai**	**0.86**	**246**	P	**Pn**	**21 03 02.7**	**-0.5**
OWD	baz=239			*e*S	**Sn**	**21 03 14.0**	**-0.9**
	baz=239						
WUSB	**Renai**	**0.90**	**250**	P	**Pn**	**21 03 03.5**	**-0.1**
WUSB	baz=243			*e*S	**Sn**	**21 03 15.6**	**-0.1**
	baz=243						
YOJ	**Yonaguni jima**	**0.90**	**80**	*e*P	**Pn**	**21 03 03.6**	**+0.2**
YOJ	baz=82			*e*S	**Sn**	**21 03 16.2**	**+0.8**
	baz=82						
YOJ	**Yonaguni jima**	**0.90**	**80**	*e*P	**Pn**	**21 03 03.7**	**+0.3**
YOJ				S	**Sn**	**21 03 16.1**	**+0.6**
NFF	**Wufeng Townshi**	**0.90**	**291**	*e*P	**Pn**	**21 03 02.8**	**-0.8**
NFF	baz=291			*e*S	**Sn**	**21 03 15.2**	**-0.5**
	baz=291						
YM01	**YM01**	**0.94**	**333**	P	**Pn**	**21 03 03.9**	**-0.2**
YM01	baz=334			*e*S	**Sn**	**21 03 16.9**	**+0.3**
	baz=334						
NJD	**Zhudong**	**0.97**	**297**	*e*P	**Pn**	**21 03 04.8**	**+0.3**
NJD	baz=289			*e*S	**Sn**	**21 03 18.7**	**+1.5**
	baz=289						
TWS1	**Kuangyinshan**	**0.98**	**325**	*e*P	**Pn**	**21 03 04.5**	**-0.1**
TWS1	baz=316			*e*S	**Sn**	**21 03 17.9**	**+0.6**
	baz=316						
HGSD	**Ruisui**	**0.98**	**215**	*e*P	**Pn**	**21 03 05.5**	**+0.8**
HGSD	baz=203			*e*S	**Sn**	**21 03 18.5**	**+0.9**
	baz=203						
LIOB	**Emei**	**0.99**	**290**	*e*P	**Pn**	**21 03 04.9**	**+0.1**
LIOB	baz=289			*e*S	**Sn**	**21 03 18.8**	**+1.0**
	baz=289						
ANP	**Anpu**	**1.00**	**332**	*e*P	**Pn**	**21 03 04.5**	**-0.4**
ANP	baz=333			*e*S	**Sn**	**21 03 17.2**	**-0.8**
	baz=333						
WHP	**Taichung City**	**1.00**	**269**	*e*P	**Pn**	**21 03 05.6**	**+0.7**
WHP	baz=264			*e*S	**Sn**	**21 03 19.8**	**+1.8**
	baz=264						
NSTT	**Nanjuang**	**1.00**	**289**	*e*P	**Pn**	**21 03 04.9**	**+0.1**
NSTT	baz=288			*e*S	**Sn**	**21 03 18.5**	**+0.6**
	baz=288						
NTST	**Danshui**	**1.01**	**328**	*e*S	**Sn**	**21 03 18.4**	**+0.2**
	baz=337						
EHY	**Hungye**	**1.03**	**220**	*e*P	**Pn**	**21 03 04.0**	**-1.2**
EHY	baz=227			*e*S	**Sn**	**21 03 16.9**	**-1.7**
	baz=227						
WPL	**Puli Township**	**1.03**	**254**	*e*P	**Pn**	**21 03 05.4**	**+0.1**
WPL	baz=249			*e*S	**Sn**	**21 03 19.1**	**+0.5**
	baz=249						
TWY	**Chenhua**	**1.05**	**338**	*e*S	**Sn**	**21 03 19.4**	**+0.3**
	baz=339						
DPDB	**Guoxing**	**1.05**	**255**	*e*P	**Pn**	**21 03 06.5**	**+0.9**
DPDB	baz=250			*e*S	**Sn**	**21 03 19.7**	**+0.4**
	baz=250						
WCS	**Beigang Elemen**	**1.06**	**257**	*e*P	**Pn**	**21 03 04.9**	**-0.7**
WCS	baz=252			*e*S	**Sn**	**21 03 19.3**	**-0.1**
	baz=252						
SSLB	**Suanglung**	**1.12**	**243**	*e*P	**Pn**	**21 03 07.1**	**+0.6**
SSLB	baz=236			*e*S	**Sn**	**21 03 20.8**	**0.0**
	baz=236						
SMLT	**Sun Moon Lake**	**1.12**	**248**	*e*P	**Pn**	**21 03 07.2**	**+0.6**
SMLT	baz=241			*e*S	**Sn**	**21 03 21.5**	**+0.4**
	baz=241						
YULB	**Yu-li**	**1.13**	**217**	*e*P	**Pn**	**21 03 05.3**	**-1.3**
YULB	baz=224			*e*S	**Sn**	**21 03 19.5**	**-1.7**
	baz=224						
TWQ1	**Liyutan**	**1.16**	**272**	*e*P	**Pn**	**21 03 06.8**	**-0.2**
EYUL	baz=271 **Yuli**	**1.16**	**215**	*e*P	**Pn**	**21 03 07.8**	**+0.8**
EYUL	baz=221			*e*S	**Sn**	**21 03 22.2**	**+0.4**
	baz=221						
NMLH	**Miaoli**	**1.16**	**282**	*e*P	**Pn**	**21 03 06.7**	**-0.3**
	baz=280						
TWF1	**Yuli**	**1.17**	**216**	*e*P	**Pn**	**21 03 05.8**	**-1.4**
TWF1	baz=222			*e*S	**Sn**	**21 03 20.3**	**-1.6**
	baz=222						
WHYT	**Xinyi Township**	**1.24**	**241**	*e*S	**Sn**	**21 03 24.2**	**+0.3**
	baz=235						
WWF	**Wufeng**	**1.25**	**258**	*e*P	**Pn**	**21 03 08.1**	**-0.2**
WWF	baz=269			*e*S	**Sn**	**21 03 24.8**	**+0.8**
	baz=269						
YUS	**Yu-Shan**	**1.28**	**231**	*e*P	**Pn**	**21 03 09.1**	**-0.1**
YUS	baz=222			*e*S	**Sn**	**21 03 24.8**	**-0.7**
	baz=222						
WJS	**Zhushan**	**1.29**	**249**	*e*S	**Sn**	**21 03 25.3**	**+0.3**
	baz=238						
FULB	**Fuli**	**1.29**	**212**	*e*P	**Pn**	**21 03 09.4**	**+0.5**
FULB	baz=219			*e*S	**Sn**	**21 03 25.3**	**+0.2**
	baz=219						
WNT	**Mingjian**	**1.31**	**251**	*e*P	**Pn**	**21 03 10.0**	**+1.0**
WNT	baz=249			*e*S	**Sn**	**21 03 27.2**	**+1.8**
	baz=249						
ALS	**Alishan**	**1.38**	**235**	*e*P	**Pn**	**21 03 11.1**	**+0.9**
ALS	baz=225			*e*S	**Sn**	**21 03 29.4**	**+1.9**
	baz=225						
ELDTW	**Lidau**	**1.45**	**220**	*e*P	**Pn**	**21 03 10.3**	**-0.8**
ELDTW	baz=211			*e*S	**Sn**	**21 03 27.9**	**-1.1**
	baz=211						
EDH	**Donghe**	**1.49**	**207**	*e*P	**Pn**	**21 03 10.4**	**-1.0**
EDH	baz=197			*e*S	**Sn**	**21 03 28.0**	**-1.8**
	baz=197						
WDLH	**Douliu**	**1.50**	**246**	*e*P	**Pn**	**21 03 13.0**	**+1.3**
WDLH	baz=244			*e*S	**Sn**	**21 03 32.2**	**+2.0**
	baz=244						
IRIF	**Iriomote-Funau**	**1.54**	**88**	P	**Pn**	**21 03 12.1**	**0.0**
IRIF				S	**Sn**	**21 03 30.9**	**-0.1**
WRL	**Guolierlin Hig**	**1.57**	**256**	*e*P	**Pn**	**21 03 11.4**	**-1.2**
WRL	baz=254			*e*S	**Sn**	**21 03 30.9**	**-0.9**
	baz=254						
STYH	**Taoyuan**	**1.62**	**226**	*e*P	**Pn**	**21 03 13.8**	**+0.6**
STYH	baz=224			*e*S	**Sn**	**21 03 32.3**	**-0.6**
	baz=224						
LONT	**Longtian**	**1.62**	**211**	*e*P	**Pn**	**21 03 13.3**	**0.0**
LONT	baz=208			*e*S	**Sn**	**21 03 31.1**	**-1.9**
	baz=208						
WTK	**Tuku**	**1.63**	**248**	*e*P	**Pn**	**21 03 13.8**	**+0.4**
WTK	baz=246			*e*S	**Sn**	**21 03 34.0**	**+0.8**
	baz=246						
TPUB	**Ta-pu**	**1.63**	**233**	*e*P	**Pn**	**21 03 14.2**	**+0.7**
TPUB	baz=222			*e*S	**Sn**	**21 03 34.1**	**+0.8**
	baz=222						
WTP	**Ta-pu**	**1.68**	**231**	*e*P	**Pn**	**21 03 15.2**	**+1.0**
WTP	baz=229			*e*S	**Sn**	**21 03 36.2**	**+1.7**
	baz=229						
LDUT	**Ludao**	**1.71**	**198**	*e*P	**Pn**	**21 03 12.9**	**-1.6**
LDUT	baz=195			*e*S	**Sn**	**21 03 32.6**	**-2.5**
	baz=195						
TTN	**Taitung**	**1.75**	**208**	*e*S	**Sn**	**21 03 35.7**	**-0.4**
TWK	baz=205 **Hsinying**	**1.76**	**234**	*e*S	**Sn**	**21 03 37.6**	**+1.2**
CHN1	baz=232 **Nanshi**	**1.78**	**232**	*e*P	**Pn**	**21 03 16.3**	**+0.8**
CHN1	baz=229			*e*S	**Sn**	**21 03 38.5**	**+1.6**
	baz=229						
SNST	**Tainan City**	**1.78**	**233**	*e*P	**Pn**	**21 03 15.9**	**+0.5**
SNST	baz=231			*e*S	**Sn**	**21 03 38.6**	**+1.7**
	baz=231						
JKRS	**Kuro-shima**	**1.80**	**92**	P	**Pn**	**21 03 16.0**	**+0.4**
JKRS				S	**Sn**	**21 03 38.1**	**+0.8**
SGST	**Jiashian**	**1.81**	**228**	*e*S	**Sn**	**21 03 38.5**	**+0.9**
	baz=218						
WSL	**Shuilin Townsh**	**1.83**	**245**	*e*P	**Pn**	**21 03 16.6**	**+0.4**
WSL	baz=255			*e*S	**Sn**	**21 03 40.5**	**+2.3**
	baz=255						
JIJ	**Ishigaki jima**	**1.92**	**88**	P	**Pn**	**21 03 17.3**	**-0.1**
JIJ				S	**Sn**	**21 03 39.6**	**-0.7**
ECL	**Taimali**	**1.97**	**211**	*e*P	**Pn**	**21 03 19.1**	**+1.1**
ECL	baz=208			*e*S	**Sn**	**21 03 40.3**	**-1.3**
	baz=208						
TSMG	**Majia**	**2.04**	**219**	*e*P	**Pn**	**21 03 20.2**	**+1.2**
TSMG	baz=217			*e*S	**Sn**	**21 03 45.3**	**+2.0**
	baz=217						
JISG	**Ishigakijimahi**	**2.09**	**82**	P	**Pn**	**21 03 19.6**	**0.0**
MASBT	**Mashibuluo**	**2.12**	**218**	*e*P	**Pn**	**21 03 21.4**	**+1.2**
MASBT	baz=205			*e*S	**Sn**	**21 03 46.4**	**+1.0**
	baz=205						
SLIU	**Shizi**	**2.37**	**209**	*e*P	**Pn**	**21 03 24.6**	**+1.0**
SLIU	baz=203			*e*S	**Sn**	**21 03 51.0**	**-0.5**
	baz=203						
PHUB	**P'eng-hu**	**2.39**	**251**	*e*P	**Pn**	**21 03 24.0**	**+0.2**
PHUB	baz=250			*e*S	**Sn**	**21 03 50.6**	**-1.4**
	baz=250						
VWUC	**VWUC**	**2.46**	**287**	*e*P	**Pn**	**21 03 23.0**	**-1.7**
XPSS	baz=285 **Dashiqiu**	**3.10**	**328**	*e*P	**Pn**	**21 03 32.0**	**-1.6**
	baz=327						

*NNC **10** 21:09:36.6±5.6,42.83N×83.79E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=50.1km s-min=25.4km az=141.0*
*SOME **10** 21:09:41.5,43.28N×84.10E,h15km*
ISC 10 21:09:44.0±3.0**,43.3N**±0.1×**83.9E**±0.1**,h10**km**,n7,** σ1§52/12**,3C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.61**	**274**	*e*P	**Pb**	**21 10 30.5**	**-0.4**
KTMS	0.7nm,0.1s			*e*S	**Sb**	**21 11 04.2**	**+1.1**
	3.8nm,0.1s						
PDGK	**Podgornoye**	**3.24**	**272**	⇓Pg	**Pn**	**21 10 34.3**	**-0.7**
PDGK	0.7nm,0.6s			⇓Lg	Lg	21 11 18.2	
	9.0nm,0.8s						
SHLS	**Shalkode**	**3.26**	**269**	*e*P	**Pn**	**21 10 37.1**	**+1.7**
SHLS	1.6nm,0.2s			*e*S	**Sn**	**21 11 16.1**	**+1.8**
	12nm,0.2s						
UZB	**Uzynbulak**	**3.58**	**269**	*e*P	**Pb**	**21 10 47.4**	**-0.2**
UZB	0.8nm,0.2s			*e*S	**Sb**	**21 11 33.4**	**+2.2**
	4.1nm,0.3s						
MK31	**Makanchi Array**	**3.68**	**342**	Pn	**Pn**	**21 10 41.2**	**+0.2**
MK31	0.9nm,0.6s,baz=155,slow=17,SNR=9.1			Lg	Lg	21 11 47.6	
	1.1nm,0.5s,baz=146,slow=29,SNR=5.5						
MAKZ	**Makanchi**	**3.77**	**339**	⇑Pn	**Pn**	**21 10 42.3**	**+0.1**
MAKZ	1.5nm,0.8s			⇑Pg	**Pb**	**21 10 51.4**	**+0.8**
	2.0nm,0.9s						
MAKZ				⇑Lg	Lg	21 11 48.9	
	1.6nm,1.1s						
BLB	**Baldybastay**	**4.03**	**283**	*e*P	**Pg**	**21 10 58.6**	**-2.5**
BLB	3.1nm,0.3s			*e*S	**Sg**	**21 11 52.6**	**-0.8**
	4.5nm,0.4s						

*IDC **10** 21:16:03.7±1.9,48.65N×154.14E,h0km,mb3.5/6, mbtmp3.5/7,ML2.3/1,MS2.9/3,Error ellipse: s-maj=52.7km s-min=23.7km az=148.0*
ISC 10 21:16:06.2±2.4**,48.6N**±0.3×**154.1E**±0.3**,h10**km**,n15,** σ0§67/4**,mb3.5**/6**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.07**	**26**	Pn	Pn	21 17 19.9	-2.3
PETK	0.6nm,0.3s,baz=216,slow=12,SNR=12			Sn	**Sn**	**21 18 21.1**	**+0.3**
	baz=123,slow=11						
PETK				LR	LR	21 19 44.8	
	comp=Z,67nm,19.6s,baz=136,slow=44						
	1.9nm,0.5s						
KSRS	**Korea Array**	**22.02**	**249**	P	**P**	**21 21 01.1**	**+0.5**
	0.5nm,0.4s,baz=56,slow=9.8,SNR=4.2						
	0.5nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**30.59**	**156**	T	T	21 53 45.8	
	baz=344,slow=76,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**30.61**	**156**	T	T	21 53 47.9	
	baz=344,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**30.61**	**156**	T	T	21 53 49.7	
	baz=344,slow=76,SNR=5.6						
SONM	**Songino Array**	**31.38**	**287**	LR	LR	21 36 02.3	
	comp=Z,19nm,18.6s,baz=196,slow=38						
H11S1	**WAKE ISLAND Hy**	**31.71**	**157**	T	T	21 55 12.1	
	baz=344,slow=76,SNR=38						
H11S3	**WAKE ISLAND Hy**	**31.72**	**157**	T	T	21 55 11.7	
	baz=344,slow=76,SNR=47						
H11S2	**WAKE ISLAND Hy**	**31.73**	**157**	T	T	21 55 08.8	
	baz=344,slow=76,SNR=39						
ILAR	**Eielson Array**	**34.71**	**40**	P	**P**	**21 22 55.7**	**-0.1**
	0.1nm,0.4s,baz=278,slow=8.1,SNR=1.6						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**46.69**	**296**	P	**P**	**21 24 34.6**	**-0.4**
	0.7nm,0.7s,baz=61,slow=9.3,SNR=4.6						
	0.7nm,0.7s						
HFS	**Hagfors**	**66.96**	**340**	P	P	21 26 56.8	-1.7
	2.4nm,1.1s,baz=102,slow=6.1,SNR=4.2						
	2.4nm,1.1s						
EKA	**Eskdalemuir Ar**	**74.70**	**347**	P	P	21 27 43.5	-2.1
	0.2nm,0.3s,baz=23,slow=5.7,SNR=1.6						
	0.2nm,0.3s						
VRAC	**Vranov**	**75.81**	**333**	LR	LR	22 04 21.4	
	comp=Z,14nm,18.0s,baz=6.0,slow=38						
TXAR	**Lajitas Array**	**76.03**	**62**	P	P	21 27 52.0	-1.8
	0.2nm,0.4s,baz=304,slow=6.4,SNR=2.8						
	0.2nm,0.4s						

IDC 10 21:21:57.1±9.1**,6.64S**×**129.60E,h509**km±145km**,mb2.4**/1**, mbtmp3.3**/3**,Error ellipse: s-maj=132.5km s-min=54.4km az=77.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.03**	**198**	S	S	21 26 40.0	-6.8
	0.8nm,0.9s,baz=38,slow=11,SNR=1.2						
WRA	**Warramunga Arr**	**14.00**	**161**	P	P	21 24 55.0	-1.8
	0.2nm,0.5s,baz=342,slow=11,SNR=5.9						
WRA				S	S	21 27 19.9	-5.0
	0.1nm,0.3s,baz=330,slow=15,SNR=5.8						
ASAR	**Alice Springs**	**17.43**	**167**	P	P	21 25 33.5	+1.6
	0.5nm,0.6s,baz=348,slow=9.5,SNR=7.4						
SONM	**Songino Array**	**57.98**	**342**	P	P	21 31 00.3	-0.3
	0.2nm,0.5s,baz=137,slow=7.8,SNR=1.3						
	0.2nm,0.5s						

*BJI **10** 21:52:48.2±0.0,2.40N×129.01E,h232km,mb4.4/44, mB4.5/22*
*IDC **10** 21:52:53.7±1.2,2.88N×128.62E,h226km±11km,mb4.0/21, mbtmp4.6/23,Error ellipse: s-maj=18.3km s-min=6.8km*

az=78.0
*NEIC **10** 21:52:54.7±1.4,2.90N±0.05×128.55E±0.08,h229km±6km, mb4.6/80, Error ellipse: s-maj=12.4km s-min=6.5km az=104.0*
*DJA **10** 21:52:54.7±0.3,3.3N×3.12.9E±.°, h222km,3km, M4.5/20, mB5.0/10, mb4.7/20, MLv4.6/14, Mw(mB)4.3/10*
*MAN **10** 21:53:00, 3.54N×128.51E, h185km, Ms4.3*

ISC 10 21:52:56.1±0.3, 2.89N±0.04×128.46E±0.05, h250km, n203,
σ1§42/220, mb4.5/66, 1C-5D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.37**	**208**	Pn	**Pn**	**21 53 39.5**	**-2.5**
TNTI	**Ternate**	**2.37**	**208**	P	**Pn**	**21 53 39.6**	**-2.5**
TNTI	**Ternate**	**2.37**	**208**	P	**Pn**	**21 53 40.0**	**-2.1**
SGSI	**Sangihe**	**3.04**	**285**	P	**Pn**	**21 53 46.5**	**-2.5**
SGSI				S	**S**	**21 54 27.1**	**-3.7**
LBMI	**Labuha**	**3.63**	**195**	P	**Pn**	**21 53 53.6**	**-2.1**
LBMI				S	**S**	**21 54 40.7**	**-2.3**
DDMP	**Don Marcelino,**	**4.21**	**319**	⇓*e*P	**Pn**	**21 53 59.6**	**-2.9**
SIJI	**Sorong**	**4.67**	**143**	P	Pn	21 53 59.5	-8.4
	2.2nm,0.3s,baz=275,slow=23,SNR=1.6						
SIJI				S	**S**	**21 55 02.0**	**-3.0**
	5.1nm,0.4s,baz=217,slow=23,SNR=0.8						
GSPH	**General Santos**	**4.73**	**312**	⇓*i*P	**Pn**	**21 54 05.6**	**-3.2**
KMSI	**Cibinong**	**5.04**	**243**	P	**Pn**	**21 54 11.3**	**-1.1**
	2.9nm11µm651nm,0.8s						
DAV	**Davao City (W)**	**5.05**	**325**	P	**Pn**	**21 54 08.9**	**-3.7**
	220nm,0.6s,baz=81,slow=5.5,SNR=4.3						
DAV	**Davao City (W)**	**5.05**	**325**	Pn	**Pn**	**21 54 10.5**	**-2.1**
KCP	**Kidapawan**	**5.30**	**321**	⇓*i*P	**Pn**	**21 54 14.5**	**-1.1**
SKMP	**Bagumbayan, Su**	**5.32**	**313**	⇓*e*P	**Pn**	**21 54 14.1**	**-1.7**
SANI	**Sanana**	**5.49**	**207**	P	**Pn**	**21 54 14.4**	**-3.6**
	2.0nm8µm377nm,0.7s						
GTOI	**Gorontalo**	**5.89**	**248**	P	**Pn**	**21 54 22.7**	**-0.2**
NLAI	**Namlea**	**6.24**	**193**	P	**Pn**	**21 54 26.0**	**-1.2**
	0.4nm2µm76nm,0.5s						
FAKI	**Fak Fak**	**6.90**	**147**		**Pn**	**21 54 33.7**	**-1.9**
FAKI	**Fak Fak**	**6.90**	**147**	P	**Pn**	**21 54 33.3**	**-2.3**
	0.3nm76nm,1.0s						
FAKI	**Fak Fak**	**6.90**	**147**	P	**Pn**	**21 54 34.5**	**-1.1**
LUWI	**Luwuk**	**6.90**	**236**	Pn	**Pn**	**21 54 34.7**	**-0.8**
LUWI	**Luwuk**	**6.90**	**236**	P	**Pn**	**21 54 35.1**	**-0.5**
	1.4nm2µm134nm,0.7s						
LUWI	**Luwuk**	**6.90**	**236**	P	**Pn**	**21 54 35.7**	**+0.1**
MRSI	**Marisa**	**6.95**	**250**	P	**Pn**	**21 54 36.3**	**+0.2**
	0.2nm636nm37nm,0.5s						
MRSI				S	**S**	**21 55 54.8**	**-1.6**
	0.2nm636nm37nm,0.5s						
APSI	**Ampana**	**7.79**	**241**	P	**Pn**	**21 54 45.9**	**-0.9**
	0.3nm945nm55nm,0.4s						
TOLI2	**Tolitoli**	**7.88**	**257**	Pn	**Pn**	**21 54 47.1**	**-0.8**
TOLI2	**Tolitoli**	**7.88**	**257**	P	**Pn**	**21 54 47.2**	**-0.7**
BAKI	**Biak**	**8.65**	**118**	P	**Pn**	**21 54 54.9**	**-2.8**
	109nm,0.9s						
TTSI	**Tana Toraja**	**10.46**	**236**	P	**Pn**	**21 55 20.2**	**-0.3**
	27nm,0.5s						
SPSI	**Sidrap Palu**	**11.04**	**232**	P	**P**	**21 55 30.5**	**-1.6**
KAPI	**Kappang**	**11.72**	**228**	P	**P**	**21 55 41.0**	**+1.3**
	6.1nm,0.3s,baz=77,slow=2.3,SNR=12						
KAPI				S	**S**	**21 57 45.4**	**-1.8**
	2.5nm,0.3s,baz=353,slow=23,SNR=1.5						
KAPI	**Kappang**	**11.72**	**228**		**P**	**21 55 39.3**	**-0.4**
KAPI	**Kappang**	**11.72**	**228**	P	**Pn**	**21 55 37.5**	**+1.2**
GENI	**Genyem**	**12.90**	**115**	P	**P**	**21 55 53.2**	**+0.4**
	5µm84nm,0.7s						
EDFI	**Ende, Flores**	**13.39**	**210**	P	**P**	**21 56 00.5**	**+2.2**
	25nm,0.9s						
BATI	**Baumata**	**13.86**	**200**	P	**Pn**	**21 56 02.1**	**-0.6**
	41nm,0.5s,baz=138,slow=6.2,SNR=8.2						
PLAI	**Plampang**	**15.78**	**222**	P	**Pn**	**21 56 27.1**	**+1.4**
MTN	**Manton Dam**	**15.85**	**170**	P	**P**	**21 56 24.3**	**-1.2**
MTN				IAmb	IAmb	21 56 28.2	
	comp=Z,32nm,1.1s						
MTN	**Manton Dam**	**15.85**	**170**	P	**P**	**21 56 24.2**	**-1.2**
KDU	**Kakadu**	**15.98**	**166**	P	**Pn**	**21 56 26.0**	**-2.0**
JAGI	**Jajag, Banyuwa**	**18.19**	**232**	P	**Pn**	**21 56 53.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**18.19**	**232**	P	**Pn**	**21 56 54.2**	**+0.1**
KNRA	**Kununurra**	**18.45**	**179**	P	**P**	**21 56 53.3**	**-0.3**
KNRA	**Kununurra**	**18.45**	**179**	P	**P**	**21 56 53.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.04**	**188**	P	**P**	**21 57 19.6**	**-1.5**
	comp=Z,14nm,0.5s,baz=21,slow=7.7,SNR=57						
	comp=Z,14nm,0.5s						
FITZ	**Fitzroy Crossi**	**21.04**	**188**	P	**P**	**21 57 20.2**	**-1.0**
FITZ				IAmb	IAmb	21 57 22.4	
	comp=Z,13nm,0.6s						
TPUB	**Ta-pu**	**21.67**	**340**	P	**P**	**21 57 25.5**	**-1.6**
TPUB	**Ta-pu**	**21.67**	**340**	P	**P**	**21 57 26.0**	**-1.1**
SSLB	**Suanglung**	**22.01**	**341**	P	**P**	**21 57 29.6**	**-0.8**
SSLB				IAmb	IAmb	21 57 31.6	
	comp=Z,25nm,0.8s						
SSLB	**Suanglung**	**22.01**	**341**	P	**P**	**21 57 29.8**	**-0.5**
YOJ	**Yonaguni jima**	**22.09**	**347**	P	**P**	**21 57 30.8**	**-0.1**
COEN	**Coen**	**22.20**	**139**	P	**P**	**21 57 30.9**	**-1.3**
COEN				IAmb	IAmb	21 57 41.0	
	comp=Z,30nm,1.4s						
YHNB	**Yeheng**	**22.71**	**343**	P	**P**	**21 57 36.7**	**0.0**
YHNB				IAmb	IAmb	21 57 38.2	
	comp=Z,24nm,0.8s						
YHNB	**Yeheng**	**22.71**	**343**	P	**P**	**21 57 37.3**	**+0.6**
TATO	**Taipei**	**22.97**	**344**	P	**P**	**21 57 38.4**	**-0.5**
WB0	**Warramunga Arr**	**23.25**	**166**	P	**P**	**21 57 40.9**	**-0.8**
WRAB	**Tennant Creek**	**23.40**	**166**	P	**P**	**21 57 42.3**	**-0.7**
WRA	**Warramunga Arr**	**23.41**	**166**	P	**P**	**21 57 41.9**	**-1.2**
	comp=Z,5.5nm,0.4s,baz=344,slow=9.9,SNR=121						
WRA				S	S	22 01 48.5	+11
	comp=Z,0.6nm,0.4s,baz=16,slow=12,SNR=2.4						
WRA				ScP	**ScP**	**22 04 38.2**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=343,slow=2.5,SNR=3.9						
	comp=Z,5.5nm,0.4s						
WRA	**Warramunga Arr**	**23.41**	**166**	P	**P**	**21 57 41.4**	**-1.7**
WR0	**Warramunga Arr**	**23.48**	**166**	P	**P**	**21 57 42.5**	**-1.1**
WR0				IAmb	IAmb	21 57 45.2	
	comp=Z,6.7nm,0.6s						
JOW	**Kunigami**	**23.81**	**360**	P	**P**	**21 57 46.7**	**+0.1**
MBWA	**Marble Bar**	**25.38**	**199**	P	**P**	**21 58 00.7**	**-0.2**
MBWA				IAmb	IAmb	21 58 28.9	
	comp=Z,9.5nm,1.0s						
MBWA	**Marble Bar**	**25.38**	**199**	P	**P**	**21 58 00.9**	**0.0**
PSA00	**Pilbara Seismi**	**25.73**	**199**	P	**P**	**21 58 03.9**	**-0.1**
PSA00				IAmb	IAmb	21 58 04.7	
	comp=Z,13nm,0.7s						
PSA00	**Pilbara Seismi**	**25.73**	**199**	P	**P**	**21 58 03.1**	**-1.0**
PSA00				IAmb	IAmb	21 58 04.6	
	comp=Z,4.8nm,0.7s						
PSA00	**Pilbara Seismi**	**25.73**	**199**	P	**P**	**21 58 04.5**	**+0.5**
QIS	**Mount Isa**	**25.73**	**155**	P	**P**	**21 58 03.5**	**-0.6**
UBPT	**Khong Chiam**	**25.79**	**300**	P	**P**	**21 58 06.2**	**+1.6**
UBPT				IAmb	IAmb	21 58 16.2	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**26.92**	**169**	P	**P**	**21 58 14.4**	**-0.3**
AS31				IAmb	IAmb	21 58 15.4	
	comp=Z,4.5nm,0.5s						
ASAR	**Alice Springs**	**26.92**	**169**	P	**P**	**21 58 14.2**	**-0.5**
	comp=Z,5.0nm,0.4s,baz=354,slow=8.3,SNR=123						
ASAR				PcP	**PcP**	**22 01 30.7**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=342,slow=1.6,SNR=4.4						
ASAR				S	**S**	**22 02 33.9**	**+1.0**
	comp=Z,3.8nm,0.7s,baz=23,slow=11,SNR=4.5						
ASAR				ScP	**ScP**	**22 04 48.0**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=345,slow=3.1,SNR=4.9						
	comp=Z,5.0nm,0.4s						
WRKA	**Warakurna**	**27.76**	**180**	P	**P**	**21 58 22.0**	**-0.1**
GIRL	**Giralia**	**28.93**	**208**	P	**P**	**21 58 33.0**	**+0.6**
GIRL	**Giralia**	**28.93**	**208**	P	**P**	**21 58 34.0**	**+1.6**
PSI	**Prapat**	**29.50**	**271**	P	**P**	**21 58 39.5**	**+1.7**
MEEK	**Meekatharra**	**30.86**	**197**	P	**P**	**21 58 49.3**	**-0.1**
JMN	**Monobe**	**31.10**	**9**	P	**P**	**21 58 51.6**	**+0.2**
JMN				IAmb	IAmb	21 58 52.6	
	comp=Z,14nm,0.8s						
OOD	**Oodnadatta**	**31.29**	**168**	P	**P**	**21 58 52.9**	**-0.2**
JHS	**Saijyo**	**32.24**	**7**	P	**P**	**21 59 00.8**	**-0.5**
JHS				IAmb	IAmb	21 59 03.1	
	comp=Z,20nm,1.2s						
CRAI	**Chiangrai**	**32.37**	**304**	P	**P**	**21 59 04.4**	**+1.7**
NAWB	**Namwon**	**32.39**	**358**	P	**P**	**21 59 02.4**	**-0.1**
NAWB				IAmb	IAmb	21 59 03.7	
	comp=Z,18nm,0.7s						
ENH	**Enshi**	**32.63**	**329**	P	**P**	**21 59 05.3**	**+0.5**
ENH				IAmb	IAmb	21 59 06.9	
	comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.79**	**300**	P	**P**	**21 59 08.8**	**+2.5**
	comp=Z,3.1nm,0.7s,baz=113,slow=7.0,SNR=21						
CMAR				ScP	**ScP**	**22 05 09.4**	**+3.9**
	comp=Z,1.0nm,0.3s,baz=147,slow=2.6,SNR=10.0						
	comp=Z,3.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**32.79**	**300**	P	**P**	**21 59 08.3**	**+2.0**
CHTO	**Chiang Mai**	**32.94**	**301**	P	**P**	**21 59 09.1**	**+1.5**
CHTO				IAmb	IAmb	21 59 10.4	
	comp=Z,7.6nm,0.8s						
INU	**Inuyama**	**33.26**	**13**	P	**P**	**21 59 09.7**	**-0.5**
INU	**Inuyama**	**33.26**	**13**	P	**P**	**21 59 09.9**	**-0.2**
MULG	**Mulgathing**	**33.41**	**171**	P	**P**	**21 59 11.5**	**0.0**
FORT	**Forrest**	**33.48**	**181**	P	**P**	**21 59 11.9**	**-0.1**
FORT	**Forrest**	**33.48**	**181**	P	**P**	**21 59 12.0**	**-0.1**
KSCHJ	**Chungju**	**33.82**	**359**	P	**P**	**21 59 14.9**	**-0.1**
KSCHJ				IAmb	IAmb	21 59 15.9	
	comp=Z,6.8nm,0.7s						
MORW	**Morawa**	**33.93**	**200**	P	**P**	**21 59 15.9**	**-0.1**
MORW				IAmb	IAmb	21 59 23.3	
	comp=Z,40nm,1.5s						
MORW	**Morawa**	**33.93**	**200**	P	**P**	**21 59 16.0**	**0.0**
KSAR	**Wonju Array Be**	**34.39**	**359**	P	**P**	**21 59 19.9**	**+0.1**
KSRS	**Korea Array**	**34.41**	**359**	P	**P**	**21 59 20.3**	**+0.4**
	comp=Z,7.2nm,0.6s,baz=175,slow=9.8,SNR=36						
	comp=Z,7.2nm,0.6s						
LCRK	**Leigh Creek**	**34.43**	**165**	P	**P**	**21 59 20.6**	**+0.4**
KS19	**Wonju Array Si**	**34.45**	**359**	P	**P**	**21 59 20.0**	**-0.3**
KS19				IAmb	IAmb	21 59 20.7	
	comp=Z,7.6nm,0.5s						
MJAR	**Matsushiro Arr**	**34.68**	**14**	P	**P**	**21 59 20.2**	**-2.1**
	comp=Z,8.9nm,0.7s,baz=178,slow=10.0,SNR=34						
	comp=Z,8.9nm,0.7s						
MAJO	**Matsushiro**	**34.68**	**14**	P	**P**	**21 59 20.9**	**-1.4**
MAJO				IAmb	IAmb	21 59 22.7	
	comp=Z,21nm,0.8s						
MAJO	**Matsushiro**	**34.68**	**14**	P	**P**	**21 59 21.1**	**-1.2**
BLDU	**Ballidu**	**35.15**	**198**	P	**P**	**21 59 26.4**	**0.0**
SEHB	**SEOHWA**	**35.22**	**360**	P	**P**	**21 59 27.2**	**+0.4**
EIDS	**Eidsvold**	**35.64**	**143**	P	**P**	**21 59 29.6**	**-1.0**
KLBR	**Kellerberrin**	**35.77**	**196**	P	**P**	**21 59 31.8**	**+0.2**
XAN	**Xi'an**	**35.96**	**332**	P	**P**	**21 59 32.8**	**-0.5**
XAN				pP	pP	22 00 17.6	-5.7
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
JSD	**Sado**	**36.12**	**13**	P	**P**	**21 59 33.3**	**-1.2**
JSD				IAmb	IAmb	21 59 35.2	
	comp=Z,17nm,1.0s						
BBOO	**Buckleboo**	**36.22**	**169**	P	**P**	**21 59 35.3**	**-0.1**
BBOO	**Buckleboo**	**36.22**	**169**	P	**P**	**21 59 35.4**	**-0.1**
CD2	**Chengdu**	**36.35**	**323**	P	**P**	**21 59 37.6**	**+0.9**
MUN	**Mundaring**	**36.58**	**198**	P	**P**	**21 59 38.9**	**+0.5**
JMM	**Marumori**	**36.60**	**16**	P	**P**	**21 59 38.1**	**-0.4**
STKA	**Stephens Creek**	**36.76**	**161**	P	**P**	**21 59 39.3**	**-0.6**
	comp=Z,5.8nm,0.3s,baz=344,slow=7.8,SNR=35						
STKA				ScP	**ScP**	**22 05 21.0**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=340,slow=2.6,SNR=3.8						
	comp=Z,5.8nm,0.3s						
STKA	**Stephens Creek**	**36.76**	**161**	P	**P**	**21 59 39.5**	**-0.5**
STKA	**Stephens Creek**	**36.76**	**161**	P	**P**	**21 59 39.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**37.17**	**196**	P	**P**	**21 59 43.8**	**+0.3**
NWAO	**Narrogin (SRO)**	**37.17**	**196**	P	**P**	**21 59 44.0**	**+0.6**
HTT	**Hallett**	**37.45**	**166**	P	**P**	**21 59 46.2**	**+0.4**
BJT	**Baijiatuan**	**38.61**	**345**	P	**P**	**21 59 55.7**	**-0.4**
BJT				IAmb	IAmb	21 59 56.5	
	comp=Z,12nm,0.7s						
BJI	**Beijing**	**38.63**	**345**	P	**P**	**21 59 55.5**	**+0.1**
BJI				pmax	pmax		
	comp=Z,16nm,0.7s						
JTM	**Tenmabayashi**	**39.41**	**15**	P	**P**	**22 00 02.3**	**+0.3**
JTM				IAmb	IAmb	22 00 02.8	
	comp=Z,20nm,0.6s						
ARMA	**Armidale**	**39.83**	**148**	P	**P**	**22 00 05.4**	**-0.3**
ARMA				IAmb	IAmb	22 00 20.9	
	comp=Z,28nm,1.4s						
ARMA	**Armidale**	**39.83**	**148**	P	**P**	**22 00 05.9**	**+0.2**
LZH	**Lanzhou**	**40.11**	**328**	*e*P	**P**	**22 00 10.1**	**+2.1**
LZH				sP	sP	22 01 18.8	-8.5
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC	**Hu-ho-hao-te**	**40.75**	**340**	*e*P	**P**	**22 00 16.1**	**+3.0**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,4.8s						
ERM	**Erimo**	**41.12**	**17**	P	**P**	**22 00 16.4**	**+0.5**
USRK	**Ussuriysk Ar.**	**41.26**	**4**	P	**P**	**22 00 16.7**	**-0.3**
	comp=Z,5.4nm,0.6s,baz=188,slow=8.0,SNR=15						
	comp=Z,5.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**41.26**	**4**	P	**P**	**22 00 17.1**	**+0.1**
ARPS	**Mount Arapiles**	**41.38**	**164**	P	**P**	**22 00 19.1**	**+1.1**
XLT	**XiLinHaoTe**	**42.29**	**347**	⇑*i*P	**P**	**22 00 26.0**	**+0.5**
XLT				pmax	pmax		
	comp=Z,13nm,0.7s						
XLT				pmax	pmax		
	comp=Z,86nm,4.0s						
TOO	**Toolangi**	**43.25**	**160**	P	**P**	**22 00 34.1**	**+1.0**
TOO				IAmb	IAmb	22 00 55.9	
	comp=Z,31nm,1.4s						
LSA	**Lhasa**	**44.29**	**311**	P	**P**	**22 00 43.5**	**+1.4**
DZM	**Mont Dzumac**	**44.64**	**126**	P	**P**	**22 00 44.6**	**+0.1**
DZM				IAmb	IAmb	22 01 06.2	
	comp=Z,26nm,1.4s						
DZM	**Mont Dzumac**	**44.64**	**126**	P	**P**	**22 00 45.5**	**+1.0**
GTA	**Gaotai**	**44.71**	**328**	⇓P	**P**	**22 00 46.2**	**+1.3**
GTA				pP	pP	22 01 30.2	-6.5
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GOMU	**GeErMu**	**45.42**	**321**	P	**P**	**22 00 52.9**	**+2.1**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,75nm,4.4s						
TAPN	**Taplejung**	**45.91**	**306**	*e*P	**P**	**22 00 55.9**	**+1.3**
ODAN	**Odare**	**45.97**	**305**	*e*P	**P**	**22 00 55.8**	**+0.8**
RAMN	**Ramite**	**46.65**	**305**	*e*P	**P**	**22 01 01.5**	**+1.2**
JIRN	**Jiri**	**47.27**	**306**	*e*P	**P**	**22 01 06.3**	**+1.1**
GUN	**Gumba**	**47.62**	**306**	*e*P	**P**	**22 01 08.9**	**+1.0**
PKI	**Pulchoki**	**47.87**	**305**	*e*P	**P**	**22 01 10.4**	**+0.6**
PKIN	**Phulchoki**	**47.88**	**305**	*e*P	**P**	**22 01 10.4**	**+0.6**
DMN	**Daman**	**48.13**	**305**	*e*P	**P**	**22 01 12.8**	**+1.1**
ULN	**Ulaanbaatar**	**48.47**	**341**	P	**P**	**22 01 14.2**	**+0.4**
SONM	**Songino Array**	**48.66**	**340**	P	**P**	**22 01 15.8**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=152,slow=8.1,SNR=19						
SONM				PcP	**PcP**	**22 02 37.4**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=154,slow=5.1,SNR=3.2						
	comp=Z,2.9nm,0.6s						
SONM	**Songino Array**	**48.66**	**340**	P	**P**	**22 01 15.7**	**+0.5**
GKN	**Gorkha**	**48.66**	**305**	*e*P	**P**	**22 01 16.5**	**+0.8**
DANN	**Dangsing**	**49.51**	**305**	*e*P	**P**	**22 01 23.4**	**+1.2**
WMQ	**Urumqi**	**54.41**	**324**	*e*P	**P**	**22 01 58.2**	**+1.0**
WMQ				pP	pP	22 02 48.1	-4.1
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
PETK	**Petropavlovsk-**	**55.57**	**21**	P	**P**	**22 02 06.2**	**+0.4**
	comp=Z,5.2nm,0.7s,baz=186,slow=4.5,SNR=5.5						
	comp=Z,5.2nm,0.7s						
PETK	**Petropavlovsk-**	**55.57**	**21**	P	**P**	**22 02 05.8**	**+0.1**
YAK	**Yakutsk**	**59.01**	**1**	P	**P**	**22 02 29.8**	**+0.4**
QRZ	**Quartz Range**	**59.20**	**142**	P	**P**	**22 02 31.8**	**+0.5**
MK31	**Makanchi Array**	**59.23**	**325**	P	**P**	**22 02 32.1**	**+0.7**
MKAR	**Makanchi Array**	**59.23**	**325**	P	**P**	**22 02 32.2**	**+0.8**
	comp=Z,3.8nm,0.4s,baz=113,slow=8.3,SNR=114						
MKAR				PcP	**PcP**	**22 03 17.4**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=103,slow=5.4,SNR=5.6						
MKAR				ScP	**ScP**	**22 06 54.9**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=103,slow=5.2,SNR=4.4						
	comp=Z,3.8nm,0.4s						
MKAR	**Makanchi Array**	**59.23**	**325**	P	**P**	**22 02 32.1**	**+0.7**
MAKZ	**Makanchi**	**59.42**	**325**	P	**P**	**22 02 33.4**	**+0.7**
MAKZ				IAmb	IAmb	22 02 34.3	
	comp=Z,13nm,1.2s						
NIL	**Nilore**	**59.81**	**308**	P	**P**	**22 02 37.5**	**+1.9**
KSH	**Kashi**	**59.86**	**315**	P	**P**	**22 02 38.7**	**+2.8**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RPZ	**Rata Peaks**	**60.09**	**146**	P	**P**	**22 02 37.6**	**+0.4**
	comp=Z,15nm,0.9s,baz=39,slow=6.8,SNR=3.2						
	comp=Z,15nm,0.9s						
RPZ	**Rata Peaks**	**60.09**	**146**	P	**P**	**22 02 37.4**	**+0.3**
RPZ				IAmb	IAmb	22 02 38.1	
	comp=Z,12nm,0.8s						
URZ	**Urewera**	**60.75**	**137**	P	**P**	**22 02 42.2**	**+0.5**
	comp=Z,4.1nm,0.4s,baz=249,slow=8.6						
	comp=Z,4.1nm,0.4s						
BKZ	**Black Stump Fm**	**60.80**	**139**	P	**P**	**22 02 42.0**	**-0.1**
BKZ				IAmb	IAmb	22 02 43.3	
	comp=Z,15nm,0.9s						
ZAA0	**Zalesovo Array**	**62.12**	**333**	P	**P**	**22 02 50.3**	**-0.4**
ZALV	**Zalesovo Beam**	**62.12**	**333**	P	**P**	**22 02 50.3**	**-0.4**
	comp=Z,2.8nm,0.4s,baz=124,slow=6.3,SNR=16						
ZALV				PcP	**PcP**	**22 03 27.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=96,slow=9.6,SNR=1.4						
	comp=Z,2.8nm,0.4s						
ZALV	**Zalesovo Beam**	**62.12**	**333**	P	**P**	**22 02 50.1**	**-0.5**
KURK	**Kurchatov**	**63.38**	**327**	P	**P**	**22 02 59.1**	**+0.1**
KURK				IAmb	IAmb	22 03 00.2	
	comp=Z,12nm,0.6s						
GAR	**Garm**	**63.77**	**312**	P	**P**	**22 03 02.2**	**+0.3**
GAR				IAmb	IAmb	22 03 03.4	
	comp=Z,26nm,1.3s						
KK31	**Karatay Array**	**65.03**	**317**	P	**P**	**22 03 10.1**	**+0.2**
KKAR	**Karatay Array**	**65.03**	**317**	P	**P**	**22 03 09.9**	**+0.1**
ADK	**Adak**	**66.69**	**33**	P	**P**	**22 03 20.2**	**0.0**
TIXI	**Tiksi**	**68.67**	**0**	P	**P**	**22 03 31.7**	**-0.4**
TIXI				IAmb	IAmb	22 03 32.9	
	comp=Z,7.1nm,0.8s						
BRVK	**Borovoye**	**69.04**	**327**	P	**P**	**22 03 35.1**	**+0.3**
BRVK				IAmb	IAmb	22 03 35.6	
	comp=Z,8.4nm,0.5s						
CASY	**Casey**	**70.20**	**188**	P	**P**	**22 03 42.1**	**+0.5**
CASY				IAmb	IAmb	22 03 44.1	
	comp=Z,17nm,1.3s						
NRIK	**Noril'sk**	**71.66**	**346**	P	**P**	**22 03 50.6**	**+0.3**
	comp=Z,4.2nm,0.6s,baz=127,slow=7.4,SNR=6.2						
	comp=Z,4.2nm,0.6s						
NRIK	**Noril'sk**	**71.66**	**346**	P	**P**	**22 03 50.5**	**+0.3**
NRIK				IAmb	IAmb	22 03 51.0	
	comp=Z,4.5nm,0.7s						
GEYT	**Alibeck**	**72.77**	**309**	P	**P**	**22 03 58.6**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=193,slow=4.0,SNR=2.8						
	comp=Z,1.4nm,0.4s						
GEYT	**Alibeck**	**72.77**	**309**	P	**P**	**22 03 57.5**	**0.0**
AKUT	**Akutan**	**73.64**	**34**	P	**P**	**22 04 02.3**	**+0.1**
ABKAR	**Akbulak array**	**73.89**	**321**	P	**P**	**22 04 03.9**	**+0.1**
ABKAR	**Akbulak array**	**73.89**	**321**	P	**P**	**22 04 03.7**	**-0.1**
ARU	**Arti**	**76.57**	**328**	P	**P**	**22 04 18.6**	**-0.3**
SDPT	**Sand Point**	**76.93**	**34**	P	**P**	**22 04 21.0**	**+0.1**
CNBA	**Chernabura Isl**	**77.30**	**34**	P	**P**	**22 04 23.3**	**+0.4**
CNBA				IAmb	IAmb	22 05 07.4	
	comp=Z,15nm,1.0s						
SII	**Sitkinak Islan**	**80.64**	**33**	P	**P**	**22 04 41.3**	**+0.3**
N19K	**Bonanza Creek**	**81.18**	**29**	P	**P**	**22 04 45.1**	**+1.1**
OHAK	**Old Harbor**	**81.22**	**33**	P	**P**	**22 04 44.9**	**+0.9**
OHAK				IAmb	IAmb	22 04 46.2	
	comp=Z,6.7nm,0.8s						
KDAK	**Kodiak Island**	**81.68**	**32**	P	**P**	**22 04 47.4**	**+1.0**
KDAK				IAmb	IAmb	22 04 47.9	
	comp=Z,9.9nm,0.5s						
J20K	**Nowinta River**	**81.92**	**26**	P	**P**	**22 04 49.0**	**+1.4**
J20K				IAmb	IAmb	22 04 49.8	
	comp=Z,5.7nm,0.8s						
M20K	**Styx River**	**82.00**	**28**	P	**P**	**22 04 49.3**	**+1.1**
VNDA	**Vanda**	**82.38**	**173**	P	**P**	**22 04 49.7**	**0.0**
	comp=Z,0.9nm,0.4s,baz=319,slow=6.4,SNR=13						
	comp=Z,0.9nm,0.4s						
VNDA	**Vanda**	**82.38**	**173**	P	**P**	**22 04 50.3**	**+0.6**
IMAR	**Indian Mountai**	**82.41**	**24**	P	**P**	**22 04 51.3**	**+1.2**
MLY	**Manley**	**83.51**	**25**	P	**P**	**22 04 56.7**	**+0.9**
MAW	**Mawson**	**83.57**	**201**	P	**P**	**22 04 55.5**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=0.0,slow=5.1,SNR=1.7						
	comp=Z,1.6nm,0.9s						
SML	**Sawmill**	**

H03N1 Juan Fernandez 72.42 147 T T 23 38 27.2
baz=325,slow=78,SNR=13

H03N3 Juan Fernandez 72.43 147 T T 23 38 28.3
baz=325,slow=78,SNR=9.4

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*ATH **10** 22:52:10.6, 34˚.78N×23˚.09E, h13km±3km, ML2.8/10, Error ellipse: s-maj=4.8km s-min=1.5km az=53.0*
*THE **10** 22:52:11.3, 34˚.86N×23˚.06E, h2km±5km, ML2.8/4, Error ellipse: s-maj=5.9km s-min=2.3km az=73.0*
ISC 10 22:52:10.2±2.6, 34˚.81N±0˚.09×23˚.06E±0˚.09, h8km±11km, n17, σ0°43/25, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.67**	**50**	P		**Pg**	**22 52 22.5**	**-0.6**
KNDR				S		**Sg**	**22 52 31.9**	**+0.1**
KNDR				AML		AML	22 52 36.8	
	comp=N,1667μm,0.3s							
KNDR				AML		AML	22 52 38.7	
	comp=E,2221μm,0.4s							
GVD	**Gavdhos**	**0.85**	**87**	P		**Pg**	**22 52 26.1**	**-0.3**
GVD				S		**Sb**	**22 52 39.0**	**+0.3**
	comp=E,1μm,0.3s							
GVD	**Gavdhos**	**0.85**	**87**	P		**Pg**	**22 52 26.1**	**-0.3**
GVD				S		**Sg**	**22 52 37.6**	**+0.2**
GVD				AML		AML	22 52 46.0	
	comp=N,2820μm,0.4s							
GVD				AML		AML	22 52 46.7	
	comp=E,2403μm,0.3s							
IMMV	**Iera Moni Meta**	**1.00**	**49**	P		**Pg**	**22 52 29.2**	**-0.2**
IMMV				S		**Sn**	**22 52 44.4**	**-0.4**
	comp=E,468nm,0.5s							
IMMV	**Iera Moni Meta**	**1.00**	**49**	P		**Pg**	**22 52 29.0**	**-0.4**
IMMV				AML		AML	22 52 48.0	
	comp=N,918μm,0.4s							
IMMV				AML		AML	22 52 59.2	
	comp=E,787μm,0.5s							
CHAN	**Chania**	**1.08**	**48**	P		**Pg**	**22 52 30.5**	**-0.4**
CHAN				AML		AML	22 52 59.3	
	comp=N,774μm,0.8s							
CHAN				AML		AML	22 53 00.1	
	comp=E,748μm,0.7s							
ANKY	**Antikythira Is**	**1.08**	**11**	P		**Pg**	**22 52 30.5**	**-0.3**
ANKY				S		**Sg**	**22 52 45.0**	**+0.1**
	comp=E,375nm,0.8s							
ANKY	**Antikythira Is**	**1.08**	**11**	P		**Pg**	**22 52 30.5**	**-0.3**
ANKY				S		**Sb**	**22 52 45.4**	**+0.1**
ANKY				AML		AML	22 52 52.5	
	comp=E,654μm,0.5s							
ANKY				AML		AML	22 52 55.8	
	comp=N,676μm,0.6s							
KTHA	**Kythira Island**	**1.45**	**0**	P		**Pn**	**22 52 37.0**	**+0.3**
KTHA				S		**Sn**	**22 52 55.3**	**-0.6**
	comp=N,205nm,0.8s							
KTHA	**Kythira Island**	**1.45**	**0**	P		**Pn**	**22 52 37.1**	**+0.4**
KTHA				AML		AML	22 53 00.8	
	comp=N,273μm,0.7s							
KTHA				AML		AML	22 53 08.1	
	comp=E,551μm,0.9s							
KTHR	**Kythira**	**1.45**	**358**	P		**Pn**	**22 52 36.9**	**+0.2**
KTHR				AML		AML	22 53 00.5	
	comp=E,1293μm,0.4s							
KTHR				AML		AML	22 53 01.4	
	comp=N,742μm,0.4s							
SIVA	**Sivas**	**1.46**	**81**	P		**Pn**	**22 52 36.3**	**-0.4**
SIVA				AML		AML	22 53 13.6	
	comp=N,756μm,0.7s							
SIVA				AML		AML	22 53 16.0	
	comp=E,1011μm,0.6s							
IDI	**Anoyia**	**1.58**	**72**	P		**Pb**	**22 52 39.8**	**+0.2**
IDI				S		**Sg**	**22 53 01.8**	**+0.9**
IDI	**Anoyia**	**1.58**	**72**	P		**Pn**	**22 52 39.0**	**+0.5**
IDI				AML		AML	22 53 02.4	
	comp=N,188μm,0.5s							
IDI				AML		AML	22 53 10.3	
	comp=E,141μm,0.5s							
IACM	**Heraklion**	**1.73**	**73**	P		**Pb**	**22 52 42.6**	**+0.5**
IACM	**Heraklion**	**1.73**	**73**	P		**Pb**	**22 52 41.6**	**-0.5**
VLI	**Veliai**	**1.91**	**357**	P		**Pb**	**22 52 45.6**	**+0.3**
VLI				AML		AML	22 53 20.3	
	comp=N,260μm,0.6s							
VLI				AML		AML	22 53 30.2	
	comp=E,203μm,1.0s							

ROM 10 22:55:09.5±0.1, 38˚.116N±0˚.006×15˚.126E±0˚.008, h10km, ML1.9/9, Error ellipse: s-maj=0.6km s-min=0.6km az=345.0, Sicily

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AIO	**Antillo**	**0.17**	**150**	P		Pg	22 55 13.6	+0.5
AIO				S		Sg	22 55 16.5	+0.9
AIO				AML		AML		
	comp=N,1185μm,0.2s							
AIO				AML		AML		
	comp=E,650μm,0.9s							
MILZ	**Milazzo**	**0.18**	**28**	P		Pg	22 55 13.9	+0.7
MILZ				S		Sg	22 55 17.4	+1.6
VPL	**Vulcano Piano**	**0.29**	**337**	P		Pg	22 55 15.8	+0.6
VPL				AML		AML		
	comp=E,1555μm,0.4s							
VPL				AML		AML		
	comp=N,1615μm,0.6s							
EMSG	**Monte Spagnolo**	**0.33**	**205**	P		Pb	22 55 17.3	-0.1
MSRU	**Castanea**	**0.34**	**64**	P		Pg	22 55 16.9	+0.7
MSRU				S		Sb	22 55 22.2	-0.9
MSRU				AML		AML		
	comp=E,322μm,0.9s							
MSRU				AML		AML		
	comp=N,267μm,0.2s							
EPZF	**Pizzo Felice**	**0.36**	**216**	P		Pb	22 55 17.5	-0.6
MSFR	**San Fratello**	**0.43**	**259**	P		Pg	22 55 18.1	+0.1
MSFR				S		Sb	22 55 25.6	-0.2
MTTG	**Motta San Giov**	**0.46**	**104**	P		Pg	22 55 18.9	+0.4
MTTG				AML		AML		
	comp=N,126μm,0.5s							
MTTG				AML		AML		
	comp=E,106μm,1.2s							
IFIL	**Filicudi I Eol**	**0.63**	**316**	P		Pg	22 55 21.8	+0.1
IFIL				AML		AML		
	comp=N,283μm,0.9s							
IFIL				AML		AML		
	comp=E,754μm,0.1s							
SOI	**Samo**	**0.73**	**93**	P		Pg	22 55 23.2	-0.4
SOI				AML		AML		
	comp=E,37μm,0.6s							
SOI				AML		AML		
	comp=N,48μm,1.3s							
IACL	**Alicudi**	**0.73**	**305**	P		Pg	22 55 23.1	-0.6
IACL				AML		AML		
	comp=N,122μm,0.7s							
IACL				AML		AML		
	comp=E,150μm,0.2s							
PLLN	**Pollina**	**0.79**	**261**	P		Pg	22 55 24.2	-0.4
HLNI	**Lentini**	**0.79**	**195**	P		Pb	22 55 25.3	-0.1
PETRA	**Petralia Sopra**	**0.85**	**251**	P		Pg	22 55 25.6	-0.2
PETRA				AML		AML		
	comp=E,67μm,1.5s							
PETRA				AML		AML		
	comp=N,76μm,0.9s							
CSLB	**Castelbuono**	**0.86**	**258**	P		Pg	22 55 25.1	-0.9
CSLB				AML		AML		
	comp=E,17μm,1.5s							
CSLB				AML		AML		
	comp=N,23μm,1.0s							

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*NEIC **10** 23:23:15.2±1.6, 20˚.66S±0˚.09×175˚.35W±0˚.09, h57km±5km, mb4.9/69, Error ellipse: s-maj=14.1km s-min=10.9km az=152.0*
*BJI **10** 23:23:16.2±0.0, 20˚.80S×175˚.08W, h88km, mb5.0/10, mB5.2/7*
*IDC **10** 23:23:20.8±2.2, 20˚.70S×175˚.63W, h106km±18km, mb4.3/20, mbtmp4.6/21, MS3.4/7, Error ellipse: s-maj=15.8km s-min=11.4km az=148.0*
*NOU **10** 23:23:20.5, 20˚.58S×174˚.84W, h150km, mb5.1/44, Tonga Islands*
*GCMT **10** 23:23:21.2±0.4, 20˚.91S±0˚.04×175˚.03W±0˚.03, h126km±6km, MW4.8/87, Moment Tensor Solution. s13,c13; s87,c99; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.20±.13; Mθθ0.53±.23; Mϕϕ-0.73±.22;*
Mrθ-0.81±.09; Mrϕ0.20±.23; Mθϕ-1.65±.08; Best double couple: M₀1.95600×10^16 NP1:φ207.00000°, δ86.00000°, λ108.00000°. NP2:φ299.08000°, δ19.00000°, λ12.00000°. Principal axes: T 1.8870, Plg46.0000°, Azm135.0000°; N 0.1370, Plg18.0000°, Azm25.0000°; P -2.0240, Plg38.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 10 23:23:19.6±0.3, 20.74S±0˚.06×175.46W±0˚.06, h100km, n283, σ1§57/277, mb4.8/59, 18C-7D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**4.03**	**308**	P		Pn	23 24 24.4	+5.1
NIUE	**Niue**	**5.46**	**73**	P		Pn	23 24 32.5	-6.0
	baz=5.1,SNR=27							
NIUE				S		Sn	23 25 25.5	-15
	baz=5.1,SNR=25							
NIUE	**Niue**	**5.46**	**73**	Pn		Pn	23 24 32.5	-6.1
NIUE				Sn		Sn	23 25 26.4	-14
NIUE	**Niue**	**5.46**	**73**	P		Pn	23 24 32.8	-5.8
TAVE	**Taveuni**	**5.82**	**313**	P		Pn	23 24 48.7	+5.2
MSVF	**Nonsavu**	**6.83**	**295**	P		Pn	23 25 04.0	+6.8
	468nm,1.1s,baz=127,slow=13,SNR=87							
MSVF				LR		LR	23 27 07.1	
	comp=Z,298nm,20.5s,baz=105,slow=34							
MSVF	**Nonsavu**	**6.83**	**295**	P		Pn	23 25 04.2	+7.0
AFI	**Afiamalu**	**7.65**	**28**	P		Pn	23 25 01.9	-6.6
	17nm,0.4s,baz=283,slow=22,SNR=2.4							
AFI				S		Sn	23 26 17.2	-16
	20nm,0.3s,baz=318,slow=22,SNR=1.5							
AFI	**Afiamalu**	**7.65**	**28**	Pn		Pn	23 25 02.7	-5.7
RAR	**Rarotonga**	**14.66**	**95**	P		**Pn**	**23 26 42.1**	**+0.1**
	7.9nm,0.3s,baz=270,slow=5.4,SNR=3.8							
RAR				S		Sn	23 29 05.9	-18
	14nm,0.5s,baz=335,slow=14,SNR=2.6							
RAR				LR		LR	23 31 18.7	
	comp=Z,93nm,20.9s,baz=290,slow=32							
RAR	**Rarotonga**	**14.66**	**95**	Pn		Pn	23 26 38.4	-3.7
MARNC	**Mare, Loyalty**	**15.43**	**264**			**P**	**23 26 55.3**	**+1.2**
MARNC	**Mare, Loyalty**	**15.43**	**264**	P		**P**	**23 26 57.7**	**+3.6**
YATNC	**Mamie plateau,**	**16.49**	**262**	P		**P**	**23 27 10.6**	**+4.6**
OUENC	**Ouen Island, N**	**16.55**	**261**			**P**	**23 27 07.1**	**+0.6**
OUENC	**Ouen Island, N**	**16.55**	**261**	P		**P**	**23 27 11.0**	**+4.4**
ONTNC	**Ouen Toro**	**16.91**	**261**	P		**P**	**23 27 11.7**	**+1.2**
ONTNC				IAmb		IAmb	23 27 32.6	
	comp=Z,86nm,1.0s							
DZM	**Mont Dzumac**	**16.91**	**262**	P		**P**	**23 27 14.4**	**+3.8**
	comp=Z,85nm,0.8s,baz=79,slow=18,SNR=44							
DZM	**Mont Dzumac**	**16.91**	**262**	*e*P		**P**	**23 27 12.2**	**+1.6**
	comp=Z,232nm,1.1s							
DZM				*e*LR		LR	23 31 10.4	
	comp=Z,383nm,28.6s							
DZM	**Mont Dzumac**	**16.91**	**262**	Pn		**P**	**23 27 13.4**	**+2.8**
DZM				IAmb		IAmb	23 27 17.8	
	comp=Z,86nm,0.8s							
DZM	**Mont Dzumac**	**16.91**	**262**	P		**P**	**23 27 15.8**	**+5.2**
NOUC	**Port Laguerre**	**17.04**	**262**	P		**P**	**23 27 17.6**	**+5.6**
OUZ	**Omahuta**	**17.34**	**211**	P		**Pn**	**23 27 17.7**	**+2.4**
URZ	**Urewera**	**18.60**	**199**	P		**P**	**23 27 28.4**	**-0.6**
	comp=Z,36nm,0.7s,baz=316,slow=1.4,SNR=28							
URZ				S		**S**	**23 30 46.9**	**-8.8**
	comp=Z,8.4nm,0.5s,baz=84,slow=18,SNR=5.7							
URZ				LR		LR	23 32 49.8	
	comp=Z,83nm,19.5s,baz=31,slow=31							
URZ	**Urewera**	**18.60**	**199**	P		**P**	**23 27 27.3**	**-1.7**
URZ				IAmb		IAmb	23 27 29.8	
	comp=Z,36nm,0.7s							
URZ	**Urewera**	**18.60**	**199**	P		**P**	**23 27 25.1**	**-3.9**
URZ				S		S	23 30 40.4	-15
URZ	**Urewera**	**18.60**	**199**	P		**P**	**23 27 28.7**	**-0.3**
TOZ	**Tahuroa Road**	**18.66**	**203**	P		**P**	**23 27 28.4**	**-1.2**
TOZ				S		Sn	23 31 13.2	+13
KOUNC	**Koumac, New Ca**	**18.96**	**267**	P		**Pn**	**23 27 36.0**	**+1.2**
KOUNC				IAmb		IAmb	23 27 45.7	
	comp=Z,54nm,0.8s							
NMHZ	**Naumai**	**19.47**	**198**	P		**P**	**23 27 35.0**	**-3.5**
NMHZ				S		S	23 31 03.0	-10
HIZ	**Hauiti**	**19.59**	**203**	P		**P**	**23 27 39.9**	**+0.2**
HIZ				IAmb		IAmb	23 27 47.4	
	comp=Z,90nm,1.5s							
HIZ	**Hauiti**	**19.59**	**203**	P		**P**	**23 27 41.5**	**+1.7**
HIZ	**Hauiti**	**19.59**	**203**	P		**P**	**23 27 40.7**	**+1.0**
BKZ	**Black Stump Fm**	**19.62**	**199**	P		**P**	**23 27 38.0**	**-2.2**
BKZ	**Black Stump Fm**	**19.62**	**199**	P		**P**	**23 27 39.2**	**-1.0**
BKZ				S		S	23 31 03.4	-13
NTVZ	**North Tongarir**	**19.82**	**201**	P		**P**	**23 27 42.0**	**-0.5**
WTVZ	**West Tongariro**	**19.86**	**201**	P		**P**	**23 27 42.0**	**-0.9**
TWVZ	**Taurewa**	**19.88**	**201**	P		**P**	**23 27 42.7**	**-0.3**
KWHZ	**Kaweka Forest**	**19.88**	**199**	P		**P**	**23 27 42.1**	**-0.9**
NGZ	**Ngauruhoe**	**19.92**	**201**	P		**P**	**23 27 41.6**	**-1.9**
PKVZ	**Pokaka**	**20.10**	**201**	P		**P**	**23 27 44.7**	**-0.7**
BFZ	**Birch Farm**	**21.09**	**198**	P		**P**	**23 27 57.1**	**+1.1**
SNZO	**South Karori**	**22.14**	**200**	P		**P**	**23 28 06.7**	**-0.3**
QRZ	**Quartz Range**	**22.48**	**204**	P		**P**	**23 28 09.8**	**-0.8**
KHZ	**Kahutara**	**23.51**	**201**	P		**P**	**23 28 20.6**	**+0.1**
PAE	**Paea**	**24.62**	**87**	*e*P		**P**	**23 28 29.4**	**-1.4**
	comp=Z,20nm,1.1s							
PAE	**Paea**	**24.62**	**87**	*e*T		T	23 53 46.6	
	comp=Z,6.9nm,0.3s							
PPT2	**Papeete2**	**24.64**	**87**	*e*P		**P**	**23 28 29.5**	**-1.6**
	comp=Z,102nm,1.3s							
PPT2				*e*LR		LR	23 34 35.2	
	comp=Z,338nm,30.2s							
PPT2				*e*LR		LR	23 34 35.3	
	comp=Z,96nm,23.0s							
PPT	**Papeete**	**24.64**	**87**	P		**P**	**23 28 31.7**	**+0.7**
	comp=Z,32nm,0.4s,baz=149,slow=5.1,SNR=5.5							
PPT				LR		LR	23 36 02.9	
	comp=Z,61nm,20.8s,baz=240,slow=31							
	comp=Z,32nm,0.4s							
PPTF	**Pamatai, Papee**	**24.65**	**87**	P		**P**	**23 28 30.2**	**-1.0**
TIAR	**Tiarei**	**24.86**	**87**	*e*P		**P**	**23 28 31.5**	**-1.5**
	comp=Z,13nm,1.0s							
RPZ	**Rata Peaks**	**25.52**	**203**	P		**P**	**23 28 39.5**	**+0.7**
	comp=Z,26nm,0.6s,baz=339,slow=2.8,SNR=22							
	comp=Z,26nm,0.6s							
RPZ	**Rata Peaks**	**25.52**	**203**	P		**P**	**23 28 39.8**	**+1.0**
RPZ				IAmb		IAmb	23 28 43.0	
	comp=Z,29nm,0.6s							
MEH	**Mehetia**	**26.00**	**88**	*e*T		T	23 54 55.0	
	comp=Z,50nm,0.2s							
EIDS	**Eidsvold**	**31.08**	**255**	P		**P**	**23 29 29.0**	**+0.5**
	baz=31,SNR=15							
EIDS				P		**P**	**23 29 29.0**	**+0.5**
	baz=31,SNR=10.0							
EIDS	**Eidsvold**	**31.08**	**255**	P		**P**	**23 29 28.7**	**+0.2**
EIDS				IAmb		IAmb	23 29 29.9	
	comp=Z,17nm,0.6s							
EIDS	**Eidsvold**	**31.08**	**255**	P		**P**	**23 29 29.1**	**+0.6**
ARMA	**Armidale**	**31.12**	**245**	P		**P**	**23 29 30.3**	**+1.4**
	baz=31,SNR=5.7							
ARMA	**Armidale**	**31.12**	**245**	P		**P**	**23 29 29.6**	**+0.7**
ARMA				IAmb		IAmb	23 29 58.1	
	comp=Z,38nm,1.6s							
MGCD	**Mangrove Creek**	**32.14**	**240**	P		**P**	**23 29 38.3**	**+0.6**
	baz=32							
MGCD	**Mangrove Creek**	**32.14**	**240**	P		**P**	**23 29 39.6**	**+1.9**
	comp=Z,19nm,0.7s							
RMQ	**Roma**	**33.21**	**253**	P		**P**	**23 29 48.2**	**+1.1**
	baz=34,SNR=7.9							
RMQ	**Roma**	**33.21**	**253**	P		**P**	**23 29 48.5**	**+1.3**
CNB	**Canberra Magne**	**34.08**	**237**	P		**P**	**23 29 55.0**	**+0.3**
	baz=34,SNR=5.2							
CAN	**Canberra**	**34.37**	**237**	P		**P**	**23 29 57.3**	**+0.2**
CAN	**Canberra**	**34.37**	**237**	P		**P**	**23 29 58.0**	**+0.9**
	comp=Z,31nm,2.0s							
CTAO	**Charters Tower**	**35.84**	**264**	P		**P**	**23 30 10.3**	**+0.5**
CTAO				IAmb		IAmb	23 30 12.3	
	comp=Z,23nm,0.7s							
CTAO	**Charters Tower**	**35.84**	**264**	P		**P**	**23 30 10.2**	**+0.3**
	comp=Z,27nm,0.6s							
CTAO	**Charters Tower**	**35.84**	**264**	P		**P**	**23 30 09.6**	**-0.3**
CTAO				pP		pP	23 30 22.2	-10
TAOE	**Nuku Hiva Isla**	**36.03**	**76**	*e*LR		LR	23 39 51.6	
	comp=Z,290nm,29.0s							
TAOE	**Nuku Hiva Isla**	**36.03**	**76**	*e*T		T	00 07 49.5	
	comp=Z,40nm,0.2s							
CMSA	**Cobar Meteorol**	**36.33**	**245**	P		**P**	**23 30 13.7**	**-0.2**
	baz=37,SNR=6.9							
QLP	**Quilpie**	**37.26**	**253**	P		**P**	**23 30 22.0**	**+0.1**
	baz=38,SNR=9.0							
QLP	**Quilpie**	**37.26**	**253**	P		**P**	**23 30 23.0**	**+1.1**
TOO	**Toolangi**	**37.69**	**235**	P		**P**	**23 30 25.3**	**-0.1**
	baz=38,SNR=15							
TOO				P		**P**	**23 30 25.5**	**0.0**
	baz=38,SNR=4.6							
TOO	**Toolangi**	**37.69**	**235**	P		**P**	**23 30 25.1**	**-0.3**
TOO				IAmb		IAmb	23 30 36.9	
	comp=Z,42nm,1.4s							
TOO	**Toolangi**	**37.69**	**235**	P		**P**	**23 30 25.6**	**+0.2**
	comp=Z,29nm,1.5s							
PMG	**Port Moresby**	**37.72**	**282**	P		**P**	**23 30 25.7**	**-0.1**
	comp=Z,68nm,0.8s,baz=59,slow=6.1,SNR=15							
	comp=Z,68nm,0.8s							
MTSU	**Mount Surprise**	**37.96**	**267**	P		**P**	**23 30 28.7**	**+0.8**
	baz=38,SNR=46							
MTSU	**Mount Surprise**	**37.96**	**267**	P		**P**	**23 30 29.0**	**+1.1**
TAU	**Tasmania Unive**	**38.15**	**226**	P		**P**	**23 30 29.1**	**-0.1**
STKA	**Stephens Creek**	**39.83**	**245**	P		**P**	**23 30 43.2**	**-0.2**
	comp=Z,14nm,0.6s,baz=88,slow=9.9,SNR=47							
	comp=Z,14nm,0.6s							
STKA	**Stephens Creek**	**39.83**	**245**	P		**P**	**23 30 43.4**	**0.0**
	baz=40,SNR=15							
STKA	**Stephens Creek**	**39.83**	**245**	P		**P**	**23 30 43.1**	**-0.2**
STKA	**Stephens Creek**	**39.83**	**245**	P		**P**	**23 30 44.2**	**+0.8**
COEN	**Coen**	**39.97**	**273**	P		**P**	**23 30 45.2**	**+0.5**
	baz=40,SNR=13							
COEN	**Coen**	**39.97**	**273**	P		**P**	**23 30 45.5**	**+0.8**
COEN	**Coen**	**39.97**	**273**	P		**P**	**23 30 44.8**	**+0.1**
ARPS	**Mount Arapiles**	**40.35**	**237**	P		**P**	**23 30 47.1**	**-0.4**
PTCN	**Pitcairn Islan**	**41.86**	**105**	P		P	23 30 51.5	-8.6
QIS	**Mount Isa**	**41.95**	**262**	P		**P**	**23 30 59.9**	**-0.9**
	baz=42,SNR=3.7							
QIS	**Mount Isa**	**41.95**	**262**	P		**P**	**23 31 00.9**	**0.0**
HTT	**Hallett**	**42.23**	**243**	P		**P**	**23 31 02.4**	**-0.6**
	baz=42,SNR=7.1							
HTT	**Hallett**	**42.23**	**243**	P		**P**	**23 31 03.7**	**+0.7**
LCRK	**Leigh Creek**	**42.63**	**247**	P		**P**	**23 31 06.8**	**+0.5**
BBOO	**Buckleboo**	**44.58**	**244**	P		**P**	**23 31 21.1**	**-0.8**
	baz=45,SNR=15							
BBOO	**Buckleboo**	**44.58**	**244**	P		**P**	**23 31 21.1**	**-0.8**
BBOO	**Buckleboo**	**44.58**	**244**	P		**P**	**23 31 21.8**	**-0.1**
OOD	**Oodnadatta**	**44.85**	**251**	P		**P**	**23 31 25.2**	**+1.1**
MULG	**Mulgathing**	**46.23**	**248**	P		**P**	**23 31 34.4**	**-0.5**
WR0	**Warramunga Arr**	**46.73**	**262**	P		**P**	**23 31 38.6**	**-0.5**
WR0				IAmb		IAmb	23 31 42.7	
	comp=Z,10nm,0.8s							
AS31	**Alice Springs**	**46.78**	**257**	P		**P**	**23 31 39.1**	**-0.3**
AS31				IAmb		IAmb	23 31 41.0	
	comp=Z,8.4nm,0.8s							
ASAR	**Alice Springs**	**46.78**	**257**	P		**P**	**23 31 39.0**	**-0.5**
	comp=Z,30nm,0.8s,baz=88,slow=8.2,SNR=144							
ASAR				PcP		**PcP**	**23 33 11.6**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=103,slow=4.5,SNR=6.1							
ASAR				ScP		**ScP**	**23 36 57.1**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=100,slow=4.3,SNR=6.5							
ASAR				S		**S**	**23 38 17.4**	**-4.9**
	comp=Z,1.3nm,0.8s,baz=98,slow=16,SNR=6.3							
	comp=Z,30nm,0.8s							
ASAR	**Alice Springs**	**46.78**	**257**	P		**P**	**23 31 38.9**	**-0.6**
GENI	**Genyem**	**46.83**	**287**	P		**P**	**23 31 40.0**	**+0.2**
	comp=Z,2μmcomp=Z,72nm,0.9s							
WB0	**Warramunga Arr**	**46.91**	**262**	P		**P**	**23 31 39.3**	**-1.1**
WB0				IAmb		IAmb	23 31 40.7	
	comp=Z,19nm,0.6s							
WRAB	**Tennant Creek**	**46.92**	**262**	P		**P**	**23 31 39.5**	**-1.0**
WRAB	**Tennant Creek**	**46.92**	**262**	P		**P**	**23 31 38.4**	**-2.1**
WRAB				pP		pP	23 31 52.9	-11
WRA	**Warramunga Arr**	**46.92**	**262**	P		**P**	**23 31 39.2**	**-1.3**
	comp=Z,18nm,0.8s,baz=98,slow=4.8,SNR=88							
WRA				PcP		**PcP**	**23 33 11.4**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=98,slow=4.0,SNR=3.3							
WRA				ScP		**ScP**	**23 36 57.2**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=86,slow=4.4,SNR=4.1							
	comp=Z,18nm,0.8s							
WRA	**Warramunga Arr**	**46.92**	**262**	P		**P**	**23 31 39.3**	**-1.3**
SMPI	**Sarmi**	**48.40**	**287**	P		**P**	**23 31 51.9**	**-0.1**
	comp=Z,24nm,1.1s							
KDU	**Kakadu**	**50.34**	**271**	P		**P**	**23 32 06.5**	**-0.1**
	baz=51,SNR=14							
KDU	**Kakadu**	**50.34**	**271**	P		**P**	**23 32 06.6**	**-0.1**
BAKI	**Biak**	**51.09**	**286**	P		**P**	**23 32 12.1**	**-0.3**
	comp=Z,56nm,1.0s							
FORT	**Forest**	**51.39**	**247**	P		**P**	**23 32 13.5**	**-0.9**
	baz=52,SNR=22							
FORT	**Forest**	**51.39**	**247**	P		**P**	**23 32 13.2**	**-1.1**
FORT	**Forest**	**51.39**	**247**	P		**P**	**23 32 13.6**	**-0.8**
MTN	**Manton Dam**	**51.55**	**270**	P		**P**	**23 32 15.6**	**-0.1**
	baz=52,SNR=13							
MTN				P		**P**	**23 32 15.7**	**-0.1**
	baz=52,SNR=11							
MTN	**Manton Dam**	**51.55**	**270**	P		**P**	**23 32 15.4**	**-0.4**
MTN	**Manton Dam**	**51.55**	**270**	P		**P**	**23 32 15.8**	**0.0**
WRKA	**Warakurna**	**51.69**	**254**	P		**P**	**23 32 15.8**	**-0.9**
	baz=52,SNR=67							
WRKA	**Warakurna**	**51.69**	**254**	P		**P**	**23 32 15.9**	**-0.9**
KNRA	**Kununurra**	**53.02**	**266**	P		**P**	**23 32 26.2**	**-0.4**
	baz=53,SNR=20							
KNRA	**Kununurra**	**53.02**	**266**	P		**P**	**23 32 26.3**	**-0.4**
KNRA	**Kununurra**	**53.02**	**266**	P		**P**	**23 32 26.4**	**-0.2**
FAKI	**Fak Fak**	**53.88**	**282**	P		**P**	**23 32 33.4**	**+0.4**
DRV	**Dumont d'Urvil**	**53.93**	**200**	P		**P**	**23 32 33.2**	**+0.7**
DRV				sP		**pP**	**23 32 56.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**55.35**	**262**	P		**P**	**23 32 43.2**	**-0.4**
MSAI	**Masohi**	**56.76**	**280**	P		**P**	**23 32 54.3**	**+0.6**
	comp=Z,13nm,0.6s							
MSAI				pP		pP	23 32 59.8	-18
	comp=Z,13nm,0.6s							
SBA	**Scott Base**	**57.80**	**184**	P		**P**	**23 33 02.2**	**+2.3**
SBA				IAmb		IAmb	23 33 23.0	
	comp=Z,20nm,1.8s

PEA0B Petropavlovsk- 77.14 344 P **P** **23 35 01.7 -0.3**
PETK Petropavlovsk- 77.14 344 P **P** **23 35 02.0 +0.1**
comp=Z,3.7nm,0.6s,baz=148,slow=8.6,SNR=5.5
comp=Z,3.7nm,0.6s
PETK Petropavlovsk- 77.14 344 P **P** **23 35 01.6 -0.3**
SMAI San Martin Ant 77.52 159 P **P** **23 35 05.1 +1.1**
SMAI IAmb IAmb 23 35 07.1
comp=Z,13nm,1.0s
KSRS Korea Array 78.66 317 P **P** **23 35 09.8 -0.9**
comp=Z,1.5nm,0.8s,baz=143,slow=7.1,SNR=7.1
comp=Z,1.5nm,0.8s
KSAR Wonju Array Be 78.68 317 P **P** **23 35 11.4 +0.6**
BELA Belgrano 2 79.00 172 P **P** **23 35 12.7 +0.6**
BELA IAmb IAmb 23 35 13.6
comp=Z,11nm,0.8s
LHV Little Huntoon 79.35 42 P **P** **23 35 15.0 +0.5**
NVAR Mina Array Bea 79.59 42 P **P** **23 35 17.0 +0.9**
comp=Z,3.8nm,0.8s,baz=225,slow=9.4,SNR=23
comp=Z,3.8nm,0.8s
NVAR Mina Array Bea 79.59 42 P **P** **23 35 16.6 +0.6**
OHAK Old Harbor 79.86 12 P **P** **23 35 17.1 +0.3**
OHAK IAmb IAmb 23 35 59.8
comp=Z,21nm,1.4s
KVN Kaiserville 80.08 42 P **P** **23 35 17.7 -1.0**
KDAK Kodiak Island 80.52 12 P **P** **23 35 20.4 +0.1**
KDAK IAmb IAmb 23 35 55.3
comp=Z,32nm,1.8s
Y14A Wickenburg 80.55 48 P **P** **23 35 20.6 -0.6**
TUC Tucson 81.27 51 P **P** **23 35 24.3 -0.8**
MAW Mawson 82.13 199 P **P** **23 35 29.7 +0.8**
comp=Z,4.1nm,0.7s,baz=129,slow=7.5,SNR=7.8
comp=Z,4.1nm,0.7s
MAW Mawson 82.13 199 P **P** **23 35 29.3 +0.4**
U15A North Rim 82.38 47 P **P** **23 35 30.1 -0.9**
WUAZ Wupatki 82.53 48 P **P** **23 35 30.6 -1.1**
WUAZ IAmb IAmb 23 35 35.2
comp=Z,13nm,1.2s
ELK Elko 82.86 42 P **P** **23 35 32.5 -0.9**
G08A Pilot Rock 83.38 36 P **P** **23 35 35.6 -0.2**
H03S2 Juan Fernandez 83.88 124 T T 01 08 03.9
baz=248
H03S1 Juan Fernandez 83.90 124 T T 01 08 10.5
baz=248
H03S3 Juan Fernandez 83.90 124 T T 01 08 07.1
baz=248
H03N2 Juan Fernandez 84.02 123 T T 01 08 08.8
baz=258,slow=71,SNR=551
H03N3 Juan Fernandez 84.02 123 T T 01 08 09.5
baz=258,slow=71,SNR=358
H03N1 Juan Fernandez 84.03 123 T T 01 08 12.1
baz=258,slow=71,SNR=274
GLI Glacier Island 84.50 13 P **P** **23 35 40.9 -0.1**
GLI IAmb IAmb 23 35 42.2
comp=Z,6.3nm,0.8s
TMUT Trail Mountain 84.64 45 P **P** **23 35 41.9 -0.7**
TMUT IAmb IAmb 23 35 46.9
comp=Z,5.2nm,0.7s
TX31 Lajitas Ar. Si 85.19 56 P **P** **23 35 45.3 0.0**
TX31 IAmb IAmb 23 35 47.8
comp=Z,19nm,1.1s
TXAR Lajitas Array 85.19 56 P **P** **23 35 46.0 +0.8**
comp=Z,3.2nm,0.9s,baz=218,slow=7.9,SNR=22
comp=Z,3.2nm,0.9s
TXAR Lajitas Array 85.19 56 P **P** **23 35 45.2 -0.1**
SCM Sheep Creek Mo 85.31 13 P **P** **23 35 45.3 +0.2**
SCM IAmb IAmb 23 36 20.9
comp=Z,6.8nm,1.0s
K20K Telida 85.49 9 P **P** **23 35 47.0 +1.1**
N25K Chitina, Valde 85.71 14 P **P** **23 35 47.7 +0.6**
N25K IAmb IAmb 23 35 50.3
comp=Z,19nm,1.7s
TRF Thorofare Moun 86.21 11 P **P** **23 35 49.6 0.0**
TRF IAmb IAmb 23 35 55.2
comp=Z,6.3nm,1.0s
M27K Edge Creek, AK 87.01 15 P **P** **23 35 53.6 +0.2**
M27K IAmb IAmb 23 35 55.4
comp=Z,7.2nm,1.2s
SEY Seymchan 87.17 346 P **P** **23 35 54.8 +0.7**
comp=Z,3.1nm,0.6s,baz=190,slow=22,SNR=5.4
comp=Z,3.1nm,0.6s
PLCA Paso Flores 87.37 133 P **P** **23 35 57.0 +1.1**
comp=Z,2.2nm,1.0s,baz=170,slow=8.1,SNR=2.7
PLCA LR LR 00 10 07.7
comp=Z,64nm,18.4s,baz=220,slow=32
comp=Z,2.2nm,1.0s
TROLL Troll, Antarti 87.48 179 P **P** **23 35 56.2 +0.4**
PDAR Pinedale Array 87.52 42 P **P** **23 35 56.5 0.0**
comp=Z,0.4nm,0.6s,baz=201,slow=3.9,SNR=2.2
comp=Z,0.4nm,0.6s
WRH Wood River Hil 87.54 12 P **P** **23 35 56.1 +0.3**
WRH IAmb IAmb 23 36 27.6
comp=Z,8.5nm,1.2s
BCAR Beaver Creek A 87.64 15 P **P** **23 35 57.8 +1.5**
SNAA Sanae 87.69 178 P **P** **23 35 57.0 +0.2**
SNAA Sanae 87.69 178 P **P** **23 35 57.6 +0.9**
SNAA IAmb IAmb 23 35 58.2
comp=Z,13nm,1.7s
VNA3 Neumayer Olymp 87.73 175 P **P** **23 35 58.1 +1.2**
VNA3 Neumayer Olymp 87.73 175 pP pP 23 36 11.9 -11
CCB Clear Creek Bu 87.76 12 P **P** **23 35 56.8 0.0**
ILAR Eielson Array 88.04 12 P **P** **23 35 58.0 -0.1**
comp=Z,0.8nm,0.6s,baz=214,slow=6.4,SNR=8.6
comp=Z,0.8nm,0.6s
VNA2 Neumayer--Watz 88.20 176 P **P** **23 35 55.8 -3.3**
VNA2 Neumayer--Watz 88.20 176 pP pP 23 36 14.2 -11
VNA1 Neumayer--Stat 88.41 176 P **P** **23 35 59.5 -0.5**
XAN Xi'an 90.18 306 P **P** **23 36 10.2 +1.2**
XAN pmax pmax
comp=Z,9.0nm,0.8s
CMAR Chiang Mai Arr 92.44 289 P **P** **23 36 20.0 +0.2**
comp=Z,1.1nm,0.3s,baz=116,slow=3.0,SNR=7.6
comp=Z,1.1nm,0.3s
LVC Limon Verde 96.41 117 LR LR 00 15 49.2
comp=Z,20nm,18.4s,baz=214,slow=33
SONM Songino Array 97.51 318 P Pdif 23 36 43.3 +0.8
comp=Z,0.3nm,0.3s,baz=100,slow=4.4,SNR=2.2
comp=Z,0.3nm,0.3s
LPAZ La Paz 99.76 112 P **Pdif** **23 36 54.0 +0.1**
comp=Z,0.8nm,0.7s,baz=286,slow=1.8,SNR=5.1
LPAZ LR LR 00 14 44.2
comp=Z,22nm,18.8s,baz=215,slow=31
comp=Z,0.8nm,0.7s
ZALV Zalesovo Beam 112.18 321 PKiKP **PKiKP** **23 41 42.0 -1.2**
comp=Z,0.7nm,0.5s,baz=124,slow=2.6,SNR=2.9
MKAR Makanchi Array 113.10 313 PKiKP **PKiKP** **23 41 44.6 -0.6**
comp=Z,0.5nm,0.4s,baz=115,slow=0.5,SNR=9.2
BRVK Borovoye 120.85 320 PKPdf **PKPdf** **23 41 59.5 -0.4**
KK31 Karatay Array 121.26 309 PKPdf **PKPdf** **23 42 00.5 -0.6**
KKAR Karatay Array 121.26 309 PKPdf **PKPdf** **23 42 00.7 -0.3**
KKAR Karatay Array 121.26 309 PKPdf **PKPdf** **23 42 00.5 -0.5**
ABKAR Akbulak array 127.90 317 PKPdf **PKPdf** **23 42 14.2 +0.7**
ARCES ARCESS Array B 129.57 351 PKP **PKPdf** **23 42 16.2 0.0**
comp=Z,0.7nm,0.6s,baz=0.0,slow=0.6,SNR=4.4
ARCES ARCESS Array B 129.57 351 PKPdf **PKPdf** **23 42 15.2 -1.0**
GEYT Alibeck 130.92 303 SKPbc **SKPbc** **23 45 35.5 +0.4**
comp=Z,4.4nm,0.8s,baz=232,slow=1.7,SNR=4.8
FINES FINESS Array B 136.65 345 PKhKP PKPpre 23 42 18.4
comp=Z,2.3nm,1.0s,baz=46,slow=4.2,SNR=1.5
FINES PKP **PKPdf** **23 42 29.3 -0.3**
comp=Z,3.0nm,0.9s,baz=36,slow=5.2,SNR=3.7
MNK Minsk 141.93 338 *i* PKP **PKPdf** **23 42 33.1 -6.3**
comp=E,1.0nm,0.8s
MNK *i* PKP **PKPdf** **23 42 33.1 -6.3**
comp=N,11nm,1.0s
MNK *i* PKP **PKPdf** **23 42 33.1 -6.3**
comp=Z,11nm,0.8s,baz=217
MNK *i* pPKP PKiKP 23 42 50.7 +8.3
MNK *i* PP **PP** **23 45 39.5 -5.5**
MNK *i* PPP PPP 23 48 46.9
MNK *i* SKS **SKSdf** **23 49 37.6 -2.6**
MNK *i* SS **SS** **00 04 09.3 +0.1**
MNK *i* SSS SSS 00 09 28.0
MNK *i* LR LR 00 42 37.1
MNK *i* LRM MLR 00 45 15.5
comp=E,20nm,19.1s
MNK *i* LRM MLR 00 45 24.8
comp=Z,55nm,24.3s
MNK *i* LRM MLR 00 45 59.0
comp=N,15nm,17.9s
GURO Guroymak-BITLI 143.21 307 PKPdf PKPbc 23 42 40.6 +0.9
AKASG Malin Array Be 144.35 333 PKP **PKPab** **23 42 41.5 -0.6**
comp=N,1.7nm,0.4s,baz=42,slow=4.2,SNR=13
AKASG Malin Array Be 144.35 333 PKPdf **PKPab** **23 42 42.0 -0.2**
AKBB Malin Array Si 144.35 333 PKPdf **PKPab** **23 42 42.0 -0.1**
MARD Mardin 144.53 306 PKPdf **PKPab** **23 42 43.5 0.0**
LODK Lodwar 145.41 244 PKPbc **PKPbc** **23 42 47.5 +0.5**

SORM Soroca 146.62 331 ⇑P **PKPdf** **23 42 48.5 +0.7**
MILM Milestii Mici 147.27 329 ⇓P **PKPbc** **23 42 51.3 -0.1**
VASR Vaslui 147.96 329 ⇑P **PKPab** **23 42 56.5 +0.3**
BURAR Bucovina Array 148.40 333 ⇓P **PKiKP** **23 42 56.6 +0.5**
BURAR Bucovina Array 148.40 333 PKPbc **PKPbc** **23 42 54.4 -0.2**
BIZ Bicaz 148.53 331 ⇑P **PKPbc** **23 42 56.0 +1.2**
BR131 Keskin Array S 148.75 314 PKPbc **PKPbc** **23 42 54.8 -1.0**
BRTR Keskin Array B 148.75 314 PKPbc **PKPbc** **23 42 55.9 +0.1**
comp=N,2.7nm,0.6s,baz=132,slow=3.8,SNR=14
BRTR Keskin Array B 148.75 314 PKPbc **PKPdf** **23 42 54.5 +2.6**
CLL Collm 148.78 350 PKPbc **PKPdf** **23 42 54.3 +3.0**
CLL Collm 148.78 350 *i* PKPbc **PKPbc** **23 42 55.9 +0.7**
comp=Z,11nm,1.1s
CLL *i* PKPab **PKPab** **23 42 59.8 +0.5**
comp=Z,6.0nm,0.7s
CLL *ep*PKPdf PKiKP 23 43 08.0 +11
CLL *i* x x 23 43 24.3
CFR Carcaliu 148.82 327 ⇓P **PKPbc** **23 42 56.2 +0.7**
OSTC Ostas 148.85 346 ⇑*e*PKP **PKPbc** **23 42 56.7 +1.2**
TPGR Topolog 148.90 326 ⇓P **PKPbc** **23 42 56.5 +0.7**
UPC Upice 148.95 346 ⇑*e*PKP **PKPbc** **23 42 57.2 +1.5**
DPC Dobruska-Polom 149.02 345 ⇑*e*PKP **PKPbc** **23 42 56.8 +0.8**
BRG Berggiesshubel 149.03 348 *e*PKP **PKPbc** **23 42 56.7 +0.8**
BRG Amp 23 42 58.7
comp=Z,8.5nm,1.2s
BRG *ex* x 23 43 23.0
BRG Amp 23 43 26.4
comp=Z,5.3nm,1.1s
VRI Vrincioaia 149.03 329 ⇓P **PKPbc** **23 42 56.1 0.0**
PLOR Plostina 149.08 329 ⇑P **PKiKP** **23 42 59.8 +2.3**
KRLC Kraliky 149.16 345 ⇑*e*PKP **PKPbc** **23 42 57.1 +0.8**
PVCC Panska Ves 149.24 347 ⇑*e*PKP **PKPbc** **23 42 57.4 +1.0**
MORC Moravsky Berou 149.24 343 *e*PKP **PKPbc** **23 42 57.1 +0.6**
HARR Harsova 149.26 326 ⇓P **PKPbc** **23 42 58.0 +1.3**
DOPR Dopca 149.59 331 ⇑P **PKPbc** **23 42 58.4 +0.9**
MLR Muntele Rosu 149.68 329 ⇑P **PKPbc** **23 42 58.0 +0.2**
PRU Pruhonice 149.76 347 ⇑*e*PKP **PKPbc** **23 42 58.3 +0.6**
PRU *e*PKPAB **PKPab** **23 43 04.2 +0.9**
VYHS Vyhne 150.02 341 *e*PKP **PKPbc** **23 42 59.2 +0.8**
JAVC Velka Javorina 150.04 343 *e*PKP **PKPbc** **23 42 59.5 +1.0**
KRUC Moravsky 150.19 344 *e*PKP **PKPbc** **23 42 59.1 +0.3**
ARR Arges 150.39 331 ⇑P **PKiKP** **23 43 00.9 +0.7**
KHC Kasperske Hory 150.77 348 PKPbc **PKPbc** **23 43 00.6 +0.4**
KHC Kasperske Hory 150.77 348 ⇑*e*PKP **PKPbc** **23 43 00.6 +0.4**
BORA Eskisehir 150.77 316 PKPbc **PKPbc** **23 43 00.6 0.0**
CKRC Cesky Krumlov 150.91 347 ⇑*e*PKP **PKPbc** **23 43 00.9 +0.3**
CKRC *e*PKPAB **PKiKP** **23 43 05.2 +4.1**
CSS Mathiatis 151.00 305 PKPbc **PKPbc** **23 42 59.3 -1.9**
GERES GERESS Array B 151.02 347 PKPbc **PKPbc** **23 43 01.8 +0.9**
comp=Z,1.8nm,0.8s,baz=48,slow=2.0,SNR=15
GERES GERESS Array B 151.02 347 PKPbc **PKPbc** **23 43 01.0 +0.1**
GZR Gura Zlata 151.19 333 ⇑P **PKPbc** **23 43 00.8 -0.6**
CONA Conrad Observa 151.38 344 P **PKiKP** **23 43 03.2 +0.9**
RONA Rosalia, Austr 151.47 343 *e*P **PKiKP** **23 43 03.4 +1.0**
comp=Z,2.9nm,0.6s
BZS Buzias 151.49 334 ⇓P **PKPbc** **23 43 02.4 +0.4**
HERR Herculane 151.75 333 ⇑P **PKPbc** **23 43 02.9 +0.3**
WATA Walderalm 152.86 349 *e*P **PKPbc** **23 43 06.0 +0.8**
comp=Z,1.5nm,0.4s
WTTA Wattenberg 152.92 349 *e*P **PKPbc** **23 43 05.8 +0.4**
comp=Z,1.3nm,0.3s
MOTA Moosalm 152.93 350 *e*P **PKPbc** **23 43 05.4 +0.1**
comp=Z,0.9nm,0.4s
VTS Vitosha 153.12 328 ⇑P **PKPbc** **23 43 05.1 -0.9**
ESDC Sonseca Array 159.77 19 PKPab **PKPab** **23 43 47.2 +0.9**
comp=Z,0.4nm,0.7s,baz=317,slow=4.8,SNR=1.7
TORD Torodi Ar. Bea 171.97 160 PKP **PKPdf** **23 43 17.8 +0.3**
comp=Z,0.7nm,1.0s,baz=204,slow=3.2,SNR=2.7
TORD PKPab **PKPab** **23 44 40.6 +0.2**
comp=Z,1.0nm,0.9s,baz=203,slow=3.0,SNR=4.2

*IDC **10** 23:38:50.9±2.7,22.2°28S×171.2°23E,h49km±23km,mb4.1/12, mbtmp4.3/14,ML5.3/2,MS3.5/37,Error ellipse: s-maj=27.2km s-min=17.2km az=154.0*
*NEIC **10** 23:38:52.5±1.5,22.1°1S±0.1°×171.2°20E±0.0°08,h59km±7km, mb4.8/36,Error ellipse: s-maj=15.5km s-min=10.3km az=170.0*
*NOU **10** 23:39:22.9,22.1°11S×168.2°54E,h0km,MLv4.2/6,New Caledonia*
ISC 10 23:38:51.9±0.5,22.1°18S±0.0°07×171.1°15E±0.0°06,h60km±3km, h59km:pP-P,n218,σ1s01/188,mb4.7/33,MS3.6/33, 19C-18D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MARNC	**Mare, Loyalty**	**2.98**	**283**	Pn	**Pn**	**23 39 37.3**	**+0.5**
MARNC				Sn	**Sn**	**23 40 09.2**	**-2.1**
MARNC	**Mare, Loyalty**	**2.98**	**283**	P	**Pn**	**23 39 38.0**	**+1.3**
YATNC	**Mamie plateau,**	**3.95**	**271**	P	**Pn**	**23 39 50.6**	**+0.6**
OUENC	**Ouen Island, N**	**4.00**	**266**	Pn	**Pn**	**23 39 51.4**	**+0.8**
OUENC				Sn	**Sn**	**23 40 34.1**	**-2.2**
OUENC	**Ouen Island, N**	**4.00**	**266**	P	**Pn**	**23 39 51.6**	**+1.0**
ONTNC	**Ouen Toro**	**4.35**	**267**	Pn	**Pn**	**23 39 56.5**	**+1.0**
ONTNC	**Ouen Toro**	**4.35**	**267**	P	**Pn**	**23 39 57.3**	**+1.8**
DZM	**Mont Dzumac**	**4.37**	**271**	P	**Pn**	**23 39 56.9**	**+1.1**
	47nm,0.3s,baz=134,slow=7.8,SNR=927						
DZM				S	**Sn**	**23 40 42.4**	**-3.0**
	840nm,0.7s,baz=158,slow=16,SNR=18						
DZM				LR	LR	23 41 10.9	
	comp=Z,394nm,19.2s,baz=46,slow=32						
	126nm,0.3s						
DZM	**Mont Dzumac**	**4.37**	**271**	*e*Pn	**Pn**	**23 39 56.3**	**+0.5**
	336nm,0.8s						
DZM				*e*Sn	**Sn**	**23 40 42.2**	**-3.2**
	2μm,1.1s						
DZM				*e*LR	LR	23 40 54.6	
	comp=Z,1μm,26.2s						
DZM	**Mont Dzumac**	**4.37**	**271**	Pn	**Pn**	**23 39 56.7**	**+0.9**
DZM	**Mont Dzumac**	**4.37**	**271**	P	**Pn**	**23 39 56.9**	**+1.1**
NOUC	**Port Laguerre**	**4.50**	**270**	P	**Pn**	**23 39 58.6**	**+1.1**
KOUNC	**Koumac, New Ca**	**6.60**	**283**	Pn	**Pn**	**23 40 28.1**	**+1.8**
MSVF	**Nonsavu**	**7.85**	**57**	P	**Pn**	**23 40 41.3**	**-2.2**
	2.3nm,0.3s,baz=23,slow=22,SNR=9.9						
MSVF				LR	LR	23 43 18.2	
	comp=Z,585nm,20.8s,baz=201,slow=34						
	5.2nm,0.4s						
MSVF	**Nonsavu**	**7.85**	**57**	Pn	**Pn**	**23 40 41.8**	**-1.7**
RAO	**Raoul Island**	**12.11**	**128**	LR	LR	23 45 24.4	
	comp=Z,223nm,20.0s,baz=304,slow=33						
HNR	**Honiara**	**16.62**	**318**	LR	LR	23 48 04.0	
	comp=Z,32nm,19.2s,baz=130,slow=33						
URZ	**Urewera**	**16.83**	**164**	LR	LR	23 47 54.8	
	comp=Z,159nm,19.6s,baz=31,slow=33						
BKZ	**Black Stump Fm**	**17.54**	**166**		**P**	**23 42 54.3**	**+1.7**
EIDS	**Eidsvold**	**18.64**	**256**		**Pn**	**23 43 06.7**	**+1.0**
ARMA	**Armidale**	**19.31**	**241**	P	**Pn**	**23 43 13.4**	**-0.5**
ARMA				IAmb	IAmb	23 43 19.1	
	comp=Z,58nm,1.4s						
LTZ	**Lake Taylor**	**20.57**	**178**	P	Pn	23 43 27.2	-1.2
RPZ	**Rata Peaks**	**21.48**	**180**	LR	LR	23 50 35.9	
	comp=Z,112nm,20.7s,baz=28,slow=33						
CTA	**Charters Tower**	**23.31**	**271**	P	**P**	**23 43 56.5**	**+1.6**
	comp=Z,4.3nm,0.7s,baz=59,slow=3.0,SNR=3.5						
CTA				LR	LR	23 51 52.7	
	comp=Z,163nm,20.2s,baz=94,slow=33						
	comp=Z,4.3nm,0.7s						
CTAO	**Charters Tower**	**23.31**	**271**	P	**P**	**23 43 57.0**	**+2.1**
CAN	**Canberra**	**23.36**	**231**	P	**P**	**23 43 56.5**	**+1.3**
CAN				IAmb	IAmb	23 44 19.8	
	comp=Z,36nm,1.4s						
PMG	**Port Moresby**	**26.30**	**295**	LR	LR	23 53 05.8	
	comp=Z,113nm,19.1s,baz=124,slow=32						
TOO	**Toolangi**	**26.91**	**229**	P	**P**	**23 44 28.2**	**+0.8**
TOO				IAmb	IAmb	23 44 59.2	
	comp=Z,56nm,1.5s						
RAR	**Rarotonga**	**27.02**	**93**	LR	LR	23 55 25.3	
	comp=Z,22nm,18.1s,baz=271,slow=37						
COEN	**Coen**	**27.79**	**282**	P	**P**	**23 44 36.1**	**+0.6**
COEN				IAmb	IAmb	23 45 19.5	
	comp=Z,34nm,1.4s						
STKA	**Stephens Creek**	**27.97**	**243**	P	**P**	**23 44 37.7**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=58,slow=8.7,SNR=3.8						
STKA				PcP	**PcP**	**23 47 51.3**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=109,slow=7.3,SNR=5.7						
STKA				LR	LR	23 54 37.7	
	comp=Z,126nm,20.5s,baz=29,slow=34						
	comp=Z,1.7nm,0.6s						
STKA	**Stephens Creek**	**27.97**	**243**	P	**P**	**23 44 37.5**	**+0.5**
AS31	**Alice Springs**	**34.28**	**260**	P	**P**	**23 45 32.9**	**+0.3**
ASAR	**Alice Springs**	**34.28**	**260**	P	**P**	**23 45 32.9**	**+0.2**
	comp=Z,6.1nm,0.8s,baz=86,slow=9.1,SNR=63						
ASAR				PcP	**PcP**	**23 48 07.7**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=103,slow=3.2,SNR=5.9						
ASAR				LR	LR	23 59 21.3	
	comp=Z,118nm,20.6s,baz=154,slow=36						
	comp=Z,6.1nm,0.8s						
ASAR	**Alice Springs**	**34.28**	**260**	P	**P**	**23 45 32.6**	**0.0**
WB0	**Warramunga Arr**	**34.36**	**267**	P	**P**	**23 45 33.4**	**+0.1**
WB0				IAmb	IAmb	23 45 36.0	
	comp=Z,17nm,1.6s						
WRA	**Warramunga Arr**	**34.37**	**267**	P	**P**	**23 45 32.6**	**-0.8**
	comp=Z,2.4nm,1.0s,baz=100,slow=7.5,SNR=15						
WRA				PcP	**PcP**	**23 48 08.1**	**-0.2**
	comp=Z,3.0nm,1.1s,baz=93,slow=3.5,SNR=6.2						
WRA				LR	LR	23 59 31.7	
	comp=Z,171nm,18.1s,baz=96,slow=36						
	comp=Z,2.4nm,1.0s						
WRA	**Warramunga Arr**	**34.37**	**267**	P	**P**	**23 45 32.8**	**-0.6**
PPT2	**Papeete2**	**37.14**	**90**	*e*LR	LR	23 56 03.7	
	comp=Z,181nm,29.5s						
PPT2				*e*LR	LR	23 56 03.8	
	comp=Z,160nm,29.5s						
MTN	**Manton Dam**	**39.17**	**277**	P	**P**	**23 46 14.1**	**-0.2**
MTN				IAmb	IAmb	23 46 15.0	
	comp=Z,11nm,0.7s						
BAKI	**Biak**	**39.96**	**297**	P	**P**	**23 46 19.1**	**-1.7**
KNRA	**Kununurra**	**40.52**	**272**	P	**P**	**23 46 25.4**	**+0.1**
KNRA				IAmb	IAmb	23 46 26.5	
	comp=Z,13nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**41.84**	**354**	T	T	00 31 59.9	
	baz=173						
H11N3	**WAKE ISLAND Hy**	**41.84**	**354**	T	T	00 32 01.0	
	baz=173						
H11N2	**WAKE ISLAND Hy**	**41.86**	**354**	T	T	00 32 03.6	
	baz=173						
FAKI	**Fak Fak**	**42.32**	**291**	P	**P**	**23 46 39.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**42.80**	**267**	LR	LR	00 04 03.2	
	comp=Z,55nm,19.0s,baz=104,slow=35						
FITZ	**Fitzroy Crossi**	**42.80**	**267**	P	**P**	**23 46 44.7**	**+0.6**
FITZ				IAmb	IAmb	23 46 46.0	
	comp=Z,14nm,1.0s						
GUMO	**Guam**	**43.91**	**322**	LR	LR	00 05 48.0	
	comp=Z,30nm,19.6s,baz=106,slow=37						
SWI	**Sorong**	**44.22**	**293**	P	**P**	**23 46 56.2**	**+0.7**
	comp=Z,1μmcomp=Z,40nm,1.3s						
BATI	**Baumata**	**46.95**	**277**	LR	LR	00 07 22.4	
	comp=Z,178nm,18.7s,baz=128,slow=36						
PSA00	**Pilbara Seismi**	**47.42**	**261**	P	**P**	**23 47 21.1**	**+0.3**
PSA00	**Pilbara Seismi**	**47.42**	**261**	P	**P**	**23 47 20.0**	**-0.8**
PSA00				IAmb	IAmb	23 48 38.2	
	comp=Z,21nm,1.8s						
MBWA	**Marble Bar**	**47.61**	**261**	P	**P**	**23 47 22.4**	**+0.3**
MBWA	**Marble Bar**	**47.61**	**261**	P	**P**	**23 47 22.2**	**+0.1**
MBWA				sP	**sP**	**23 47 43.4**	**0.0**
SANI	**Sanana**	**48.20**	**288**	P	**P**	**23 47 27.9**	**+1.1**
DRV	**Dumont d'Urvil**	**48.68**	**196**	P	**P**	**23 47 29.7**	**0.0**
DRV				pP	**pP**	**23 47 45.8**	**+1.8**
MORW	**Morawa**	**49.79**	**250**	P	**P**	**23 47 38.6**	**-0.2**
KAPI	**Kappang**	**52.51**	**281**	LR	LR	00 14 38.5	
	comp=Z,19nm,18.2s,baz=98,slow=41						
VNDA	**Vanda**	**55.58**	**182**	LR	LR	00 09 03.4	
	comp=Z,59nm,18.2s,baz=358,slow=33						
VNDA	**Vanda**	**55.58**	**182**	P	**P**	**23 48 22.0**	**+1.2**
VNDA	**Vanda**	**55.58**	**182**	P	**P**	**23 48 17.1**	**-3.7**
VNDA				pP	**pP**	**23 48 33.1**	**-2.2**
SBA	**Scott Base**	**55.77**	**181**	P	**P**	**23 48 23.3**	**+1.2**
SBA				IAmb	IAmb	23 48 24.8	
	comp=Z,7.9nm,1.0s						
SBA	**Scott Base**	**55.77**	**181**	P	**P**	**23 48 18.9**	**-3.3**
SBA				sP	**sP**	**23 48 44.9**	**+1.9**
CASY	**Casey**	**58.18**	**205**	P	**P**	**23 48 38.5**	**-0.9**
MYLDM	**Lahad Datu**	**58.24**	**291**	P	**P**	**23 48 39.6**	**-0.9**
CCD	**Concordia, Ant**	**58.44**	**193**	P	**P**	**23 48 40.2**	**-1.3**
CCD				pP	**pP**	**23 48 54.3**	**-1.9**
CCD				sP	**sP**	**23 49 04.4**	**+1.9**
KSM	**Kuching**	**63.78**	**283**	P	**P**	**23 49 18.2**	**0.0**
MJAR	**Matsushiro Arr**	**66.17**	**331**	P	**P**	**23 49 34.2**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=146,slow=8.8,SNR=1.6						
MJAR				LR	LR	00 18 31.5	
	comp=Z,10nm,19.2s,baz=149,slow=36						
	comp=Z,0.7nm,0.4s						
QSPA	**South Pole Qui**	**67.89**	**180**	P	**P**	**23 49 44.3**	**+0.3**
QSPA				IAmb	IAmb	23 49 44.6	
	comp=Z,9.1nm,0.8s						
KSRS	**Korea Array**	**71.93**	**325**	LR	LR	00 21 00.7	
	comp=Z,8.9nm,18.9s,baz=170,slow=35						
IPM	**Ipoh**	**73.44**	**282**	P	**P**	**23 50 18.1**	**-0.3**
IPM				IAmb	IAmb	23 50 19.6	
	comp=Z,12nm,0.7s						
PSI	**Prapat**	**74.67**	**280**	LR	LR	00 25 08.6	
	comp=Z,19nm,18.6s,baz=141,slow=37						
USA0B	**Ussuriysk Arra**	**75.16**	**332**	P	**P**	**23 50 26.4**	**-1.3**
USA0B				IAmb	IAmb	23 51 48.9	
	comp=Z,6.1nm,0.7s						
PETK	**Petropavlovsk-**	**75.87**	**352**	P	**P**	**23 50 32.6**	**+1.0**
	comp=Z,4.4nm,0.8s,baz=181,slow=12,SNR=3.5						
PETK				LR	LR	00 21 04.1	
	comp=Z,27nm,19.7s,baz=94,slow=33						
	comp=Z,4.4nm,0.8s						
PETK	**Petropavlovsk-**	**75.87**	**352**	P	**P**	**23 50 31.7**	**+0.1**
MAW	**Mawson**	**76.39**	**202**	P	**P**	**23 50 34.5**	**0.0**
	comp=Z,1.9nm,0.7s,baz=158,slow=10,SNR=3.9						
MAW				LR	LR	00 18 32.4	
	comp=Z,37nm,20.9s,baz=152,slow=31						
	comp=Z,1.9nm,0.7s						
MAW	**Mawson**	**76.39**	**202**	P	**P**	**23 50 35.2**	**+0.8**
BELA	**Belgrano 2**	**79.03**	**175**	P	**P**	**23 50 48.1**	**-1.0**
BELA				IAmb	IAmb	23 50 49.0	
	comp=Z,8.0nm,0.9s						
KLR	**Kul'dur**	**79.28**	**335**	LR	LR	00 21 08.0	
	comp=Z,17nm,21.9s,baz=86,slow=32						
SMAI	**San Martin Ant**	**80.49**	**161**	P	**P**	**23 50 57.5**	**+0.5**
SMAI				IAmb	IAmb	23 50 58.9	
	comp=Z,20nm,1.0s						
CMAR	**Chiang Mai Arr**	**81.33**	**294**	P	**P**	**23 51 04.2**	**+1.8**
	comp=Z,3.4nm,0.7s,baz=136,slow=4.3,SNR=17						
	comp=Z,3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**81.33**	**294**	P	**P**	**23 51 03.9**	**+1.5**
XAN	**Xi'an**	**81.40**	**312**	*e*P	**P**	**23 51 03.4**	**+0.9**
XAN				pP	pwP	23 51 20.5	-0.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	**Chiang Mai**	**81.49**	**294**	P	**P**	**23 51 03.2**	**0.0**
CHTO				IAmb	IAmb	23 51 06.2	
	comp=Z,9.1nm,1.1s						
PZH	**PanZhiHua**	**82.79**	**302**	P	**P**

GTA pP pP 23 52 10.4 +7.2
GTA sP sP 23 52 19.2 +10
GTA pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 90.63 322 P **P 23 51 48.8 +1.0**
comp=Z,2.4nm,1.0s,baz=150,slow=5.1,SNR=8.4
SONM LR LR 00 30 03.4
comp=Z,9.1nm,21.9s,baz=102,slow=34
comp=Z,2.4nm,1.0s
BBB Bella Bella 90.96 32 LR LR 00 26 14.7
comp=Z,26nm,18.7s,baz=236,slow=31
ILAR Eielson Array 92.50 17 P **P 23 51 55.2 -0.7**
comp=Z,0.6nm,0.8s,baz=228,slow=5.9,SNR=4.9
comp=Z,0.6nm,0.8s
ELK Elko 92.60 47 LR LR 00 27 58.3
comp=Z,48nm,19.1s,baz=270,slow=32
H03S2 Juan Fernandez 93.15 128 T T 01 35 30.2
baz=239
H03S1 Juan Fernandez 93.16 128 T T 01 35 47.3
baz=239
H03S3 Juan Fernandez 93.16 128 T T 01 35 42.8
baz=239
NEW Newport 94.88 40 LR LR 00 25 46.3
comp=Z,60nm,21.0s,baz=266,slow=30
PLCA Paso Flores 95.16 138 P **P 23 52 09.7 +0.6**
comp=Z,1.6nm,0.8s,baz=146,slow=3.5,SNR=3.1
comp=Z,1.6nm,0.8s
ANMO Albuquerque 96.50 55 LR LR 00 26 50.0
comp=Z,32nm,21.3s,baz=282,slow=30
TXAR Lajitas Array 96.60 61 PKKP **PKKPbc 00 09 00.5 +1.0**
comp=Z,0.3nm,0.5s,baz=98,slow=2.7,SNR=6.3
TXAR LR LR 00 27 07.3
comp=Z,25nm,20.9s,baz=285,slow=30
INK Inuvik 98.76 18 LR LR 00 32 03.5
comp=Z,22nm,20.2s,baz=113,slow=32
CMIG Matias Romero 99.84 76 LR LR 00 27 09.4
comp=Z,23nm,21.0s,baz=228,slow=29
MKAR Makanchi Array 105.07 315 PKKPbc PKKPbc 00 08 33.0 -2.6
comp=Z,0.8nm,0.5s,baz=261,slow=2.6,SNR=9.1
BOSA Boshof 119.73 215 PKP **PKPdf 23 57 35.6 -0.4**
comp=Z,0.8nm,0.4s,baz=173,slow=2.7,SNR=7.4
BDFB Brasilia 126.29 131 PKP **PKPdf 23 57 48.8 0.0**
comp=Z,4.3nm,0.6s,baz=265,slow=3.9,SNR=7.5
ARCES ARCESS Array B 128.35 345 PKP **PKPdf 23 57 49.9 -1.1**
comp=Z,3.3nm,0.9s,baz=83,slow=3.0,SNR=10
KBZ Khabaz 132.42 310 PKP **PKiKP 23 58 01.0 +0.5**
comp=Z,1.3nm,0.8s,baz=186,slow=2.1,SNR=3.0
FINES FINESS Array B 133.97 338 PKhKP PKPpre 23 57 51.0
comp=Z,1.3nm,0.8s,baz=47,slow=2.5,SNR=1.3
NOA NORSAR Array B 138.73 345 PKP **PKPdf 23 58 11.6 +0.9**
comp=Z,0.4nm,0.6s,baz=27,slow=1.9,SNR=2.0
AKASG Malin Array Be 138.91 323 PKP **PKPdf 23 58 10.2 -1.1**
comp=Z,0.7nm,0.4s,baz=58,slow=2.7,SNR=5.5
BRTR Keskin Array B 140.00 306 PKhKP PKPpre 23 58 10.5
comp=Z,0.8nm,1.0s,baz=71,slow=2.0,SNR=2.7
BRTR PKP **PKiKP 23 58 15.7 -0.6**
comp=Z,0.4nm,0.5s,baz=117,slow=1.4,SNR=3.5
SORM Soroca 140.64 320 ⇓P **PKPdf 23 58 14.1 -0.4**
BIR Birlad 141.94 318 ⇑P **PKPdf 23 58 16.2 -0.8**
GHRR 142.17 318 ⇑P **PKPdf 23 58 17.3 -0.1**
BIZ Bicaz 142.55 320 ⇓P **PKPdf 23 58 17.3 -0.7**
BURAR Bucovina Array 142.74 321 ⇓P **PKPdf 23 58 17.3 -1.1**
MLR Muntele Rosu 143.34 318 ⇑P PKPab 23 58 15.5 -0.2
DOPR Dopca 143.46 319 ⇑P PKPbc 23 58 18.0 +1.0
ARCR ARCALIA 143.51 321 ⇑P PKPbc 23 58 17.5 +0.3
KOLS Kolonicke sedl 143.65 325 *e*PKP **PKPdf 23 58 20.8 +0.9**
BMR Baia Mare 143.69 322 ⇑P PKPbc 23 58 18.6 +1.0
VOIR 143.92 318 ⇓P PKPbc 23 58 19.0 +0.5
CBBR Cluj-Babes-Bol 144.15 321 ⇓P **PKPdf 23 58 20.4 -0.4**
CJR Cluj-Napoca 144.15 321 ⇓P PKPbc 23 58 20.0 +0.8
ARR Arges 144.21 318 ⇓P **PKPdf 23 58 20.5 -0.5**
SZH Strazhica 144.33 314 P **PKPdf 23 58 21.1 -0.2**
HUMR Humele 144.39 317 ⇑P PKPbc 23 58 20.2 +0.3
DRGR 144.62 322 ⇑P **PKPdf 23 58 21.5 -0.2**
LOT Lotru 144.70 319 ⇓P **PKPdf 23 58 22.2 +0.2**
LTVH Ltavrtes, Hu 144.75 323 PKP **PKPdf 23 58 23.1 +1.3**
LANS Liptovska Anna 144.97 327 *e*PKP **PKPdf 23 58 23.0 +0.8**
VLAD Vladila 145.00 316 ⇑P **PKPdf 23 58 23.0 +0.6**
OKC Ostrava-Krasne 145.16 329 *e*PKP **PKPdf 23 58 23.0 +0.5**
GZR Gura Zlata 145.33 319 ⇑P **PKPab 23 58 23.2 +0.1**
MORC Moravsky Berou 145.49 329 ⇑P **PKPab 23 58 24.2 +0.6**
MORC Moravsky Berou 145.49 329 *e*PKP **PKPab 23 58 23.9 +0.4**
PSZ Piszkesteto 145.53 325 ⇑P **PKPab 23 58 24.3 +0.5**
PSZ Piszkesteto 145.53 325 PKP **PKPab 23 58 24.6 +0.9**
OSTC Ostas 145.55 331 *e*PKP **PKPab 23 58 24.1 +0.4**
KRLC Kraliky 145.64 330 *e*PKP **PKPab 23 58 24.6 +0.5**
DPC Dobruska-Polom 145.65 331 *e*PKP **PKPab 23 58 24.7 +0.6**
UPC Upice 145.67 332 *e*PKP **PKPab 23 58 24.5 +0.4**
VYHS Vyhne 145.71 327 *e*PKP **PKPab 23 58 25.0 +0.6**
MPEP Malo Peshtene 145.73 316 P **PKPab 23 58 25.2 +0.6**
RZN Rozhen 145.81 313 P **PKPab 23 58 25.2 0.0**
HERR Herculane 145.81 319 ⇓P **PKPbc 23 58 24.6 +0.2**
BZS Buzias 145.90 321 ⇑P **PKPbc 23 58 24.4 -0.2**
JAVC Velka Javorina 146.05 328 *e*PKP **PKPab 23 58 27.0 +1.3**
VRAC Vranov 146.26 330 ⇑P **PKPab 23 58 26.6 +0.2**
VRAC Vranov 146.26 330 *e*PKP **PKPab 23 58 26.3 -0.1**
BRG Berggiesshubel 146.28 334 *i* PKP **PKPab 23 58 26.2 -0.2**
BRG Amp 23 58 27.8
comp=Z,17nm,1.0s
PVCC Panska Ves 146.28 333 *e*PKP **PKPab 23 58 26.5 +0.1**
BLKB Belogradchik 146.28 317 ⇑P **PKPab 23 58 26.7 0.0**
CLL Collm 146.32 335 *e*PKPbc **PKPbc 23 58 25.7 0.0**
comp=Z,17nm,1.0s
VTS Vitosha 146.40 315 ⇑P **PKPab 23 58 27.2 -0.2**
VTS Vitosha 146.40 315 P **PKPbc 23 58 26.7 +0.3**
MMB Musomiste 146.52 313 P **PKPbc 23 58 26.8 +0.1**
KRUC Moravsky 146.53 329 *e*PKP **PKPbc 23 58 26.9 +0.5**
MODS Modra-Piesok 146.57 328 *e*PKP **PKPab 23 58 28.3 +0.6**
PRU Pruhonice 146.70 332 *e*PKP **PKPab 23 58 27.7 -0.4**
TREC Trest 146.78 330 *e*PKP **PKPab 23 58 27.9 -0.6**
KKB Krupnik 146.84 314 P **PKPab 23 58 28.3 -0.6**
BOVS Bovan 146.89 317 ⇓P **PKPbc 23 58 27.5 0.0**
FRGS Fruska Gora 147.21 321 ⇑P **PKPbc 23 58 27.9 -0.6**
MPLH Magyarpolny 147.23 326 PKP **PKPbc 23 58 29.2 +0.8**
MORH Mrgy, Hungar 147.25 324 ⇑P **PKPbc 23 58 28.8 +0.3**
MORH Mrgy, Hungar 147.25 324 PKP **PKPbc 23 58 28.8 +0.3**
RONA Rosalia, Austr 147.51 328 *e*P **PKPbc 23 58 30.1 +0.9**
comp=Z,9.6nm,0.6s
CONA Conrad Observa 147.57 328 *e*P **PKPbc 23 58 30.3 +0.9**
comp=Z,6.6nm,0.7s
KOVH Kovagotottos 147.62 324 PKP **PKPbc 23 58 30.0 +0.5**
CKRC Cesky Krumlov 147.66 331 *e*PKP **PKPbc 23 58 30.2 +0.6**
KHC Kasperske Hory 147.75 332 *e*PKP **PKPbc 23 58 30.5 +0.6**
KHC *ep*PKP **sPKPbc 23 58 51.3 -1.3**
GERES GERESS Array B 147.91 332 PKPbc **PKPbc 23 58 30.7 +0.4**
comp=Z,9.2nm,0.7s,baz=49,slow=2.6,SNR=73
MOA Molln 148.39 330 *e*P **PKPbc 23 58 31.9 +0.4**
comp=Z,5.8nm,0.5s
SOKA Soboth 148.84 327 *i* P **PKPbc 23 58 32.8 0.0**
comp=Z,5.0nm,0.6s
PDG Podgorica 149.05 317 ⇑P **PKPbc 23 58 33.5 +0.1**
OBKA Obir 149.20 328 *i* P **PKPbc 23 58 34.1 +0.4**
comp=Z,3.8nm,0.6s
TIR Tirane 149.21 315 ⇓P **PKiKP 23 58 34.6 -0.4**
BTNL Ternell 149.31 341 *d*PKiKP **PKPbc 23 58 34.2 +0.4**
MEM Membach 149.33 341 *d*PKiKP **PKPbc 23 58 34.1 +0.3**
KBA Koelnbreinsper 149.38 330 *i* P **PKPbc 23 58 33.8 -0.4**
comp=Z,7.3nm,0.5s
BSTI Sart Tilman 149.48 342 *d*PKiKP **PKPbc 23 58 34.6 +0.4**
LJU Ljubljana 149.53 327 *i* PKPbc **PKPbc 23 58 34.8 +0.4**
BHOU Houvegnez 149.55 341 *d*PKiKP **PKPbc 23 58 34.9 +0.5**
MYKA Terra Mystica 149.56 329 *e*P **PKPbc 23 58 34.4 -0.2**
comp=Z,10nm,0.4s
CRNS Crni Vrh 149.64 327 *i* PKPbc **PKPbc 23 58 34.7 -0.1**
CEY Cerknica 149.79 327 *i* PKPbc **PKPbc 23 58 35.4 +0.2**
BMRD Maredsous 149.96 342 *d*PKiKP **PKPbc 23 58 35.8 +0.5**
WATA Walderalm 149.99 332 *i* P **PKPbc 23 58 35.6 -0.1**
comp=Z,7.6nm,0.4s,SNR=7.9
ABTA Abfaltersbach 150.01 330 *i* P **PKPbc 23 58 35.3 -0.4**
comp=Z,15nm,0.6s,SNR=6.1
WTTA Wattenberg 150.02 332 *i* P **PKPbc 23 58 36.0 +0.2**
comp=Z,9.1nm,0.4s,SNR=8.4
WLF Walferdange 150.12 340 *d*PKiKP **PKiKP 23 58 36.4 -0.2**
MOTA Moosalm 150.19 332 *i* P **PKPbc 23 58 36.3 0.0**
comp=Z,20nm,0.8s,SNR=8.9
DOU Dourbes 150.19 342 *d*PKiKP **PKPbc 23 58 36.3 +0.4**
RETA Reutte 150.22 333 *e*P **PKPbc 23 58 36.1 -0.1**
comp=Z,4.0nm,0.5s
SQTA Sankt Quirin 150.24 332 *i* P **PKPbc 23 58 36.5 +0.2**
comp=Z,19nm,0.6s,SNR=9.4
FETA Feichten 150.60 332 *i* P **PKPbc 23 58 37.5 +0.3**
comp=Z,15nm,1.0s,SNR=8.1
DAVA Damuels 150.75 333 *e*P **PKPbc 23 58 37.8 +0.2**
comp=Z,6.2nm,0.5s

DBIC Dimbokro 164.11 195 PKP **PKPdf 23 58 48.6 -0.7**
comp=Z,4.5nm,0.9s,baz=175,slow=2.0,SNR=3.7
TORD Torodi Ar. Bea 166.53 230 PKP **PKPdf 23 58 51.3 -0.1**
comp=Z,5.2nm,0.9s,baz=46,slow=0.9,SNR=19
TORD PKPab **PKPab 23 59 52.5 -1.1**
comp=Z,1.7nm,1.0s,baz=126,slow=7.5,SNR=4.8

*KRNET **10** 23:43:13.7±0.1,39.°51N×73.°48E,mb2.8*
*ISU **10** 23:43:15,39.°55N×73.°37E,h20km*
*SOME **10** 23:43:15.7,39.°53N×73.°47E,h0km*
*NNC **10** 23:43:18.1±2.3,39.°57N×73.°37E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=17.4km s-min=8.8km az=172.0
ISC 10 23:43:12.2±2.0,39.°45N±0.°09×73.°45E±0.°04,h1km±12km,
n31,σ1°75/51,11C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**335**	⇑*i*P	**Pb**	**23 43 35.6**	**0.0**
	baz=33						
OHH				⇑*i*S	**Sn**	**23 43 51.7**	**-1.2**
	baz=33						
OHH	**Osh**	**1.19**	**335**	P	**Pn**	**23 43 36.5**	**+0.4**
OHH				S	**Sn**	**23 43 51.4**	**-1.5**
TSTA	**Tashata**	**1.35**	**327**	S	**Sg**	**23 43 56.3**	**+0.7**
ANR	**Andizhan**	**1.55**	**328**	S	**Sg**	**23 44 04.5**	**+2.5**
FRG	**Fergana**	**1.58**	**306**	P	**Pb**	**23 43 42.2**	**0.0**
FRG				S	**Sb**	**23 44 02.7**	**0.0**
BTK	**Batken**	**2.12**	**287**	⇓*e*P	**Pb**	**23 43 52.5**	**+1.0**
	baz=86						
BTK				⇓*i*S	**Sg**	**23 44 21.0**	**+0.7**
	baz=86						
ARLS	**Aral**	**2.50**	**15**	⇑*i*P	**Pb**	**23 43 57.0**	**-1.0**
	baz=15						
ARLS				⇑*i*S	**Sb**	**23 44 28.4**	**-0.9**
	baz=15						
ARK	**Arkit**	**2.60**	**335**	⇑*i*P	**Pb**	**23 43 58.8**	**-1.0**
	baz=34						
ARK				⇑*i*S	**Sb**	**23 44 31.4**	**-0.9**
	baz=34						
ARK	**Arkit**	**2.60**	**335**	P	**Pb**	**23 44 00.1**	**+0.3**
ARK				S	**Sg**	**23 44 33.8**	**-2.1**
TRKS	**Terek-Say**	**2.72**	**320**	⇑*i*P	**Pn**	**23 43 59.5**	**+2.2**
	baz=19						
TRKS				⇑*i*S	**Sb**	**23 44 33.2**	**-2.6**
	baz=19						
MRKS	**Merke**	**3.29**	**357**	*e*P	**Pg**	**23 44 17.8**	**+2.5**
	1.2nm,0.1s						
MRKS				*e*S	**Sg**	**23 45 02.3**	**+4.3**
	11nm,0.4s						
MRKS	**Merke**	**3.29**	**357**	Pg	**Pg**	**23 44 18.6**	**+3.2**
	2.7nm,0.2s						
MRKS				Lg	Lg	23 45 03.2	
	11nm,0.4s						
IUG	**Iuzhnay**	**3.74**	**317**	*e*P	**Pg**	**23 44 22.8**	**-1.1**
	78nm,0.2s						
IUG				*e*S	**Sg**	**23 45 11.2**	**-1.2**
	19nm,0.4s						
IUG	**Iuzhnay**	**3.74**	**317**	Pg	**Pg**	**23 44 22.8**	**-1.1**
	78nm,0.4s						
IUG				Lg	Lg	23 45 11.2	
	16nm,0.7s						
TKM2	**Tokmak 2**	**3.83**	**24**	⇑Pg	**Pg**	**23 44 25.5**	**0.0**
	1.2nm,0.7s						
TKM2				⇓Lg	Lg	23 45 16.5	
	4.0nm,0.6s						
KST	**Kastek**	**4.06**	**27**	*e*P	**Pg**	**23 44 30.9**	**+0.9**
	1.1nm,0.4s						
KST				*e*S	**Sg**	**23 45 24.9**	**+2.4**
	12nm,0.6s						
KST	**Kastek**	**4.06**	**27**	Pg	**Pg**	**23 44 30.9**	**+0.9**
	1.1nm,0.4s						
KST				Lg	Lg	23 45 24.9	
	12nm,0.6s						
SGDS	**Sogindy**	**4.09**	**12**	*e*P	**Pg**	**23 44 30.2**	**-0.5**
	1.6nm,0.2s						
SGDS				*e*S	**Sg**	**23 45 23.4**	**-0.3**
	17nm,1.1s						
SGDS	**Sogindy**	**4.09**	**12**	Pg	**Pg**	**23 44 30.2**	**-0.5**
	1.3nm,0.3s						
SGDS				Lg	Lg	23 45 23.4	
	1.0nm,0.3s						
KK31	**Karatay Array**	**4.27**	**330**	⇓Pn	**Pb**	**23 44 23.6**	**-4.5**
	0.5nm,0.5s,baz=134,slow=12,SNR=9.9						
KK31				⇓Pg	**Sg**	**23 44 32.1**	**-1.8**
	0.8nm,0.4s,baz=138,slow=16,SNR=4.8						
KK31				⇑Sn	**Sn**	**23 45 13.0**	**+4.2**
	4.8nm,0.7s,baz=131,slow=16,SNR=6.6						
KK31				⇑Lg	Lg	23 45 26.8	
	2.8nm,0.4s,baz=129,slow=28,SNR=4.1						
KRBS	**Karabastau**	**4.56**	**21**	*e*P	**Pg**	**23 44 38.9**	**-0.6**
	2.2nm,0.8s						
KRBS				*e*S	**Sg**	**23 45 38.8**	**+0.3**
	5.9nm,0.3s						
KRBS	**Karabastau**	**4.56**	**21**	Pg	**Pg**	**23 44 38.9**	**-0.6**
	2.2nm,0.8s						
KRBS				Lg	Lg	23 45 38.8	
	2.4nm,0.5s						
MDOK	**Medeo**	**4.59**	**35**	*e*P	**Pg**	**23 44 40.6**	**+0.4**
	1.4nm,0.2s						
MDOK				*e*S	**Sg**	**23 45 41.8**	**+2.1**
	4.7nm,0.3s						
MDOK	**Medeo**	**4.59**	**35**	Pg	**Pg**	**23 44 40.6**	**+0.4**
	1.4nm,0.4s						
MDOK				Lg	Lg	23 45 41.7	
	4.7nm,0.8s						
KTBS	**Karatobe**	**4.90**	**29**	*e*P	**Pg**	**23 44 46.0**	**-0.1**
	1.0nm,0.4s						
KTBS				*e*S	**Sg**	**23 45 51.2**	**+1.8**
	6.8nm,0.2s						
KTBS	**Karatobe**	**4.90**	**29**	Pg	**Pg**	**23 44 46.0**	**-0.1**
	1.4nm,0.8s						
KTBS				Lg	Lg	23 45 51.2	
	6.3nm,0.3s						
KUU	**Kurty**	**4.94**	**25**	*e*P	**Pg**	**23 44 46.5**	**-0.3**
	1.1nm,0.5s						
KUU				*e*S	**Sg**	**23 45 51.9**	**+1.1**
	7.3nm,0.2s						
KUU	**Kurty**	**4.94**	**25**	Pg	**Pg**	**23 44 46.5**	**-0.3**
	1.1nm,0.5s						
KUU				Lg	Lg	23 45 51.9	
	7.3nm,0.2s						
ARXS	**Arharly**	**5.77**	**33**	*e*P	**Pg**	**23 45 00.4**	**-2.3**
	1.2nm,0.5s						
ARXS				*e*S	**Sg**	**23 46 15.9**	**-1.7**
	4.1nm,0.3s						
ARXS	**Arharly**	**5.77**	**33**	Pg	**Pg**	**23 45 02.7**	**-0.1**
	1.2nm,0.5s						
ARXS				Lg	Lg	23 46 19.5	
	2.3nm,0.6s						
BLB	**Baldybastay**	**5.97**	**37**	*e*P	**Pg**	**23 45 04.5**	**-2.1**
	0.8nm,0.2s						
BLB				*e*S	**Sg**	**23 46 22.4**	**-1.5**
	4.7nm,0.4s						

IDC 10 23:46:56.2±3.1,31.°47S×178.°63W,h0km,mb3.7/2,
mbtmp3.7/3,ML3.5/1,Error ellipse: s-maj=70.5km
s-min=46.4km az=112.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.62**	**206**	Pn	Pn	23 48 47.4	-1.1
	0.7nm,0.3s,baz=283,slow=5.5,SNR=7.1						
URZ				Sn	Sn	23 50 07.7	-7.8
	0.6nm,0.3s,baz=75,slow=22,SNR=1.2						
	5.8nm,0.8s						
ASAR	**Alice Springs**	**42.52**	**268**	P	P	23 54 53.0	-0.7
	0.4nm,0.4s,baz=102,slow=8.6,SNR=4.3						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**43.61**	**274**	P	P	23 55 02.9	+0.4
	0.9nm,0.5s,baz=114,slow=7.5,SNR=13						
	0.9nm,0.5s						
H03S2	**Juan Fernandez**	**80.32**	**124**	T	T	01 27 54.7	
	baz=236						
H03S1	**Juan Fernandez**	**80.33**	**124**	T	T	01 27 50.1	
	baz=236						
H03S3	**Juan Fernandez**	**80.34**	**124**	T	T	01 27 52.3	
	baz=236						
H03N3	**Juan Fernandez**	**80.52**	**123**	T	T	01 28 00.9	
	baz=240,slow=72,SNR=4.2						
H03N2	**Juan Fernandez**	**80.53**	**123**	T	T	01 27 58.2	
	baz=240,slow=72,SNR=2.7						
H03N1	**Juan Fernandez**	**80.54**	**123**	T	T	01 27 58.6	
	baz=240,slow=72,SNR=8.0						
FINES	**FINESS Array B**	**145.96**	**339**	PKPbc	PKPdf	00 06 36.3	0.0
	1.1nm,0.5s,baz=48,slow=2.1,SNR=4.6						

WEL 11 00:03:38.5±1.4,31.°S±22.°×177.°9E±6.°0,h250km±60km,
M4.4/6,mB4.6/4,ML4.8/7,MLv4.6/6,Mw(mB)3.8/4,Error
ellipse: s-maj=0.1km s-min=0.0km az=109.4,Kermadec
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.25**	**57**	P	Pn	00 04 33.7	-0.1
RIZ	**Raoul Island**	**3.26**	**57**	S	S	00 05 18.2	+0.5
HAZ	**Te Kaha**	**6.73**	**188**	P	Pn	00 05 13.3	-2.4
HAZ				S	S	00 06 36.4	+2.8
WMGZ	**Waiomatatini S**	**6.74**	**184**	P	Pn	00 05 16.9	+1.1
WMGZ				S	S	00 06 32.4	-1.4
PKGZ	**Pakihiroa**	**6.83**	**186**	P	Pn	00 05 18.0	+1.0
PKGZ				S	S	00 06 36.4	+0.4
RUGZ	**Raukumara Rang**	**6.95**	**188**	P	Pn	00 05 17.9	-0.6
RUGZ				S	S	00 06 34.8	-4.1
TWGZ	**Tauwhareparae**	**7.12**	**186**	P	Pn	00 05 21.6	+0.9
TWGZ				S	S	00 06 45.4	+2.6
URZ	**Urewera**	**7.32**	**192**	P	Pn	00 05 22.5	-0.6
URZ				S	S	00 06 48.7	+1.5
MWZ	**Matawai**	**7.33**	**189**	P	Pn	00 05 24.2	+0.9
MWZ				S	S	00 06 47.1	-0.5
CNGZ	**Carnagh Statio**	**7.41**	**185**	P	Pn	00 05 24.7	+0.5
RAGZ	**Rawiri**	**7.50**	**189**	P	Pn	00 05 22.3	-3.3
MUGZ	**Murupara**	**7.59**	**193**	P	Pn	00 05 26.9	+0.3
RIGZ	**Rimuhau**	**7.67**	**187**	P	Pn	00 05 26.7	-0.9
RIGZ				S	S	00 06 55.2	-0.1

*PGC **11** 00:20:16.0±0.0,48.°85N×128.°75W,h10km,MLSn3.2/43,*
Mw3.8/43,209km west of Tofino, Bc Vancouver Island,
Canada Region
*IDC **11** 00:20:16.5±1.4,49.°00N×128.°52W,h0km,mb3.5/4,*
mbtmp3.5/13,ML3.6/9,MS3.3/8,Error ellipse:
s-maj=26.8km s-min=9.7km az=65.0
ISC 11 00:20:16.4±3.2,48.°88N±0.°04×128.°68W±0.°04,
h13km±22km,n90,σ1°67/119,mb3.5/4,MS3.1/7,
Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NCHR	**NEPTUNE Canada**	**0.95**	**197**	P	Pb	00 20 32.0	-2.4
NCHR				S	**Sb**	**00 20 43.0**	**-3.7**
KEFF	**NEPTUNE Canada**	**0.98**	**197**	P	Pb	00 20 32.5	-2.4
NC89	**ODP889**	**1.23**	**99**	P	**Pb**	**00 20 38.1**	**-1.1**
NC27	**ODP1027**	**1.28**	**151**	P	**Pn**	**00 20 37.4**	**-2.1**
BPBC	**Brooks Peninsu**	**1.41**	**25**	Pn	**Pn**	**00 20 40.2**	**-1.4**
BPBC				Sn	**Sb**	**00 20 57.1**	**-3.1**
EDB	**Eliza Dome**	**1.42**	**45**	Pn	**Pn**	**00 20 40.6**	**-1.2**
EDB				Sn	**Sb**	**00 20 57.5**	**-3.2**
ETB	**Estevan Point**	**1.49**	**70**	Pn	**Pn**	**00 20 42.2**	**-0.6**
NCBC	**Barkley Canyon**	**1.72**	**104**	Pn	**Pn**	**00 20 45.2**	**-0.7**
NCBC				Sn	**Sn**	**00 21 05.3**	**-2.3**
PACB	**Port Alice, BC**	**1.73**	**26**	Pn	**Pn**	**00 20 44.8**	**-1.3**
PACB				Sn	**Sn**	**00 21 05.5**	**-2.5**
HOLB	**Holberg**	**1.79**	**11**	Pn	**Pn**	**00 20 45.7**	**-1.3**
HOLB				Sn	**Sn**	**00 21 07.6**	**-2.0**
MAYB	**Maynard**	**1.81**	**32**	Pn	**Pn**	**00 20 46.3**	**-1.0**
MAYB				Sn	**Sn**	**00 21 07.9**	**-2.2**
TOFB	**Tofino**	**1.84**	**81**	Pn	**Pn**	**00 20 46.5**	**-1.1**
TOFB				Sn	**Sn**	**00 21 08.6**	**-2.1**
WOSB	**Woss**	**1.88**	**46**	Pn	**Pn**	**00 20 47.0**	**-0.4**
WOSB				Sn	**Sn**	**00 21 10.2**	**-1.5**
GDR	**Gold River**	**1.95**	**62**	Pn	**Pn**	**00 20 48.3**	**-0.8**
GDR				Sn	**Sn**	**00 21 11.1**	**-2.2**
PHC	**Port Hardy**	**2.00**	**23**	Pn	**Pn**	**00 20 48.8**	**-0.9**
PHC				Sn	**Sn**	**00 21 11.9**	**-2.6**
TLCB	**Telegraph Cove**	**2.05**	**35**	Pn	**Pn**	**00 20 49.9**	**-0.5**
TLCB				Sn	**Sn**	**00 21 14.0**	**-1.8**
B012	**Ucluelet**	**2.07**	**88**	Pn	**Pn**	**00 20 49.5**	**-1.1**
B012				Sn	**Sn**	**00 21 13.3**	**-2.9**
OZB	**Mount Ozzard**	**2.10**	**87**	Pn	**Pn**	**00 20 50.1**	**-1.1**
OZB				Sn	**Sn**	**00 21 14.2**	**-3.0**
BTB	**Buttle Lake**	**2.15**	**73**	Pn	**Pn**	**00 20 51.7**	**-0.3**
BTB				Sn	**Sn**	**00 21 17.3**	**-1.3**
SPLB	**Strathcona Par**	**2.22**	**62**	Pn	**Pn**	**00 20 52.9**	**+0.1**
SPLB				Sn	**Sn**	**00 21 19.0**	**-1.0**
NCRB	**Newcastle Ridg**	**2.29**	**47**	Pn	**Pn**	**00 20 54.0**	**+0.2**
NCRB				Sn	**Sn**	**00 21 20.1**	**-1.5**
BFSB	**Bamfield**	**2.34**	**90**	Pn	**Pn**	**00 20 53.3**	**-1.1**
BFSB				Sn	**Sn**	**00 21 20.1**	**-2.9**
B928	**Bamfield**	**2.34**	**90**	Pn	**Pn**	**00 20 53.4**	**-1.0**
B928				Sn	**Sn**	**00 21 20.3**	**-2.6**
MWAB	**Mount Washingt**	**2.37**	**67**	Pn	**Pn**	**00 20 55.0**	**0.0**
MWAB				Sn	**Sn**	**00 21 22.6**	**-1.3**
CBB	**Campbell River**	**2.45**	**61**	Pn	**Pn**	**00 20 56.0**	**+0.1**
CBB				Sn	**Sn**	**00 21 24.9**	**-0.7**
B927	**Port Alberni**	**2.56**	**81**	Sn	**Sn**	**00 21 26.5**	**-1.9**
MGB	**Mount Grey**	**2.63**	**86**	Pn	**Pn**	**00 20 57.5**	**-1.1**
MGB				Sn	**Sn**	**00 21 28.0**	**-2.4**
OCP	**Olym-Cheeka Pk**	**2.75**	**101**	Pn	**Pn**	**00 20 59.8**	**-0.3**
PFB	**Port Renfrew**	**2.82**	**95**	Pn	**Pn**	**00 21 00.3**	**-0.8**
PFB				Sn	**Sn**	**00 21 32.0**	**-3.0**
TXB	**Texada**	**2.89**	**72**	Pn	**Pn**	**00 21 02.2**	**+0.1**
TXB				Sn	**Sn**	**00 21 36.2**	**-0.5**
GHNB	**Nanoose**	**2.95**	**80**	Pn	**Pn**	**00 21 03.4**	**+0.6**
GHNB				Sn	**Sn**	**00 21 36.1**	**-1.2**
B926	**Mesachie Lake**	**3.00**	**90**	Pn	**Pn**	**00 21 02.8**	**-0.7**
B926				Sn	**Sn**	**00 21 37.5**	**-1.9**
CLRS	**Cowichan Lake**	**3.00**	**90**	Pn	**Pn**	**00 21 02.7**	**-0.8**
CLRS				Sn	**Sn**	**00 21 37.0**	**-2.3**
NLLB	**Nanaimo Lost L**	**3.10**	**82**	Pn	**Pn**	**00 21 05.1**	**+0.2**
NLLB				Sn	**Sn**	**00 21 41.1**	**-0.7**
SHB	**Sechelt**	**3.23**	**75**	Pn	**Pn**	**00 21 07.1**	**+0.4**
SHB				Sn	**Sn**	**00 21 44.1**	**-0.9**
BBB	**Bella Bella**	**3.33**	**6**	Pn	**Pn**	**00 21 07.5**	**-0.5**
	35nm,0.3s,baz=193,slow=4.9,SNR=172						
BBB				Sn	**Sn**	**00 21 44.1**	**-3.1**
	14nm,0.3s,baz=110,slow=17,SNR=8.2						
	113nm,0.4s

NBC5	NorthernBC 5	9.37	20	Pn		Pn	00 22 33.5	+2.5
PRDA	Priddis	9.50	73	Pn		Pn	00 22 36.3	+3.5
DLBC	Dease Lake	9.61	356	Pn		Pn	00 22 36.1	+1.9
	0.2nm,0.3s,baz=279,slow=2.2,SNR=4.4 1.9nm,0.7s							
FNBB	Fort Nelson	10.56	16	Pn		Pn	00 22 49.2	+1.9
ELK	Elko	12.53	125	Pn		Pn	00 23 20.2	+5.9
	0.1nm,0.3s,baz=346,slow=1.6,SNR=3.2 0.3nm,0.3s							
NVAR	Mina Array Bea	12.86	141	Pn		Pn	00 23 24.8	+5.9
	0.1nm,0.3s,baz=317,slow=12,SNR=8.7 1.3nm,0.9s							
PDAR	Pinedale Array	14.65	108	Pn		Pn	00 23 45.3	+1.9
	0.1nm,0.3s,baz=269,slow=12,SNR=1.8							
PDAR				LR		LR	00 29 51.3	
	comp=Z,132nm,18.7s,baz=296,slow=39 0.2nm,0.3s							
YKA	Yellowknife Ar	15.72	25	Pn		Pn	00 23 53.8	-3.4
	0.2nm,0.3s,baz=216,slow=11,SNR=2.7 1.3nm,0.9s							
ILAR	Eielson Array	18.66	335	P		P	00 24 34.4	+0.7
	baz=153,slow=11,SNR=11 1.0nm,0.9s							
ANMO	Albuquerque	21.51	122	P		P	00 25 08.3	+3.2
	1.3nm,1.0s,baz=308,slow=12,SNR=3.8 1.3nm,1.0s							
TXAR	Lajitas Array	27.32	126	P		P	00 26 01.4	+0.6
	0.2nm,0.9s,baz=327,slow=4.3,SNR=2.5							
TXAR				LR		LR	00 37 45.0	
	comp=Z,40nm,20.2s,baz=322,slow=38 0.2nm,0.9s							
LPIG	La Paz	28.66	143	LR		LR	00 36 56.9	
	comp=Z,24nm,18.4s,baz=206,slow=35							
SADO	Sadowa	33.66	78	LR		LR	00 40 51.1	
	comp=Z,122nm,20.7s,baz=346,slow=37							
SCHQ	Schefferville	37.54	57	LR		LR	00 43 22.4	
	comp=Z,130nm,18.0s,baz=242,slow=37							
SFJD	Kangerlussuaq	41.89	35	LR		LR	00 46 00.6	
	comp=Z,52nm,18.2s,baz=278,slow=37							
PETK	Petropavlovsk-	44.64	305	LR		LR	00 45 55.5	
	comp=Z,17nm,20.9s,baz=66,slow=34							
SJG	San Juan	58.55	98	LR		LR	00 56 25.8	
	comp=Z,16nm,20.6s,baz=263,slow=37							
H11N2	WAKE ISLAND Hy	58.63	264	T		T	01 33 42.5	
	baz=44,slow=76,SNR=15							
H11N3	WAKE ISLAND Hy	58.63	264	T		T	01 33 40.4	
	baz=44,slow=76,SNR=22							
H11N1	WAKE ISLAND Hy	58.65	264	T		T	01 33 54.2	
	baz=44,slow=76,SNR=20							
ESDC	Sonseca Array	79.19	40	P		P	00 32 22.8	+1.9
	0.7nm,0.8s,baz=287,slow=4.7,SNR=4.3 0.7nm,0.8s							
MKAR	Makanchi Array	80.97	339	P		P	00 32 31.2	+0.9
	0.6nm,0.6s,baz=7.6,slow=3.7,SNR=3.8 0.6nm,0.6s							

IDC ***11*** *01:00:57.2±4.5, 34°.35N×85°.93E, h49km±43km, mb3.5/5, mbtmp3.8/9, ML3.0/3, Error ellipse: s-maj=37.2km s-min=26.7km az=62.0*

ISC 11 01:00:55.9±0.8, 34°.50N±0°.08×86°.6E±0°.1, h35km, n19, σ1§31/18, mb3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	Lhasa	6.17	140	P		Pn	01 02 23.5	-1.5
LSA				LR		LR		
	comp=N,2μm,5.0s							
LSA				LR		LR		
	comp=E,1μm,6.1s							
LSA				LR		LR		
	comp=Z,1μm,6.4s							
DANN	Dangsing	6.58	202	*e*P		Pn	01 02 30.9	+0.5
	comp=Z,9.5nm,0.4s							
GUN	Gumba	6.59	185	*e*P		Pn	01 02 31.2	+0.6
GKN	Gorkha	6.68	195	*e*P		Pn	01 02 31.8	+0.1
JIRN	Jiri	6.82	183	*e*P		Pn	01 02 34.7	+0.9
	comp=Z,14nm,0.4s							
PKIN	Phulchoki	6.97	189	*e*P		Pn	01 02 36.0	+0.2
	comp=Z,17nm,0.4s							
PKI	Pulchoki	6.97	188	*e*P		Pn	01 02 36.4	+0.5
	comp=Z,17nm,0.4s							
DMN	Daman	6.98	191	*e*P		Pn	01 02 36.5	+0.6
TAPN	Taplejung	7.19	172	*e*P		Pn	01 02 39.3	+0.4
	comp=Z,8.7nm,0.3s							
RAMN	Ramite	7.52	180	*e*P		Pn	01 02 43.5	+0.2
	comp=Z,4.8nm,0.4s							
MKAR	Makanchi Array	12.70	347	P		Pn	01 03 55.0	+1.1
	comp=Z,0.1nm,0.3s,baz=144,slow=15,SNR=6.2 comp=Z,1.2nm,0.8s							
KURBB	Kurchatov Arra	17.15	342	P		Pn	01 04 53.2	+0.5
	comp=Z,0.1nm,0.3s,baz=160,slow=11,SNR=20 comp=Z,4.0nm,0.8s							
CMAR	Chiang Mai Arr	19.42	142	P		Pn	01 05 21.7	+1.2
	comp=Z,0.9nm,0.3s,baz=331,slow=7.2,SNR=1.6							
ZALV	Zalesovo Beam	19.49	357	P		Pn	01 05 21.7	+0.6
	comp=Z,0.2nm,0.3s,baz=180,slow=12,SNR=7.1 comp=Z,2.3nm,0.9s							
SONM	Songino Array	19.94	42	P		Pn	01 05 29.9	+3.2
	comp=Z,2.8nm,1.0s,baz=235,slow=12,SNR=9.3 comp=Z,2.8nm,1.0s							
NRIK	Noril'sk	34.90	1	P		P	01 07 45.5	+1.8
	comp=Z,5.4nm,0.8s,baz=161,slow=6.8,SNR=9.0 comp=Z,5.4nm,0.8s							
NOA	NORSAR Array B	53.54	324	P		P	01 10 10.1	-2.8
	comp=Z,0.6nm,0.8s,baz=141,slow=12,SNR=2.0 comp=Z,0.6nm,0.8s							
ILAR	Eielson Array	72.63	21	P		P	01 12 20.6	+1.2
	comp=Z,0.6nm,0.9s,baz=290,slow=3.7,SNR=2.5 comp=Z,0.6nm,0.9s							
TORD	Torodi Ar. Bea	78.49	278	P		P	01 12 51.5	-2.4
	comp=Z,0.5nm,0.9s,baz=52,slow=5.6,SNR=1.6 comp=Z,0.5nm,0.9s							

BJI ***11*** *01:01:02.6±0.0, 34°.32N×86°.29E, h8km, mb4.6/57, mB4.9/41, Ms4.6/60, Ms7 4.3/56*

MOS ***11*** *01:01:04.9±1.1, 34°.47N×86°.25E, h30km, mb4.8/29, MS4.2/15, Error ellipse: s-maj=7.9km s-min=4.1km az=117.6*

GCMT ***11*** *01:01:05.8±0.2, 34°.37N±0°.02×86°.31E±0°.02, h16km±1km, MW4.8/86, Moment Tensor Solution. s29,c35; s86,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.14±.12; $M_{\theta\theta}$-0.16±.08; $M_{\phi\phi}$1.30±.08; $M_{r\theta}$-0.05±.24; $M_{r\phi}$1.40±.05; $M_{\theta\phi}$1.36±.23; Best double couple: M_o2.26400×10^{16} NP1:ϕs182.00000°,δ70.00000°,λ-125.00000°. NP2: ϕs66.00000°,δ40.00000°,λ-32.00000°. Principal axes: T 2.5170, Plg18.0000°, Azm297.0000°; N -0.5090, Plg33.0000°, Azm195.0000°; P -2.0120, Plg51.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***11*** *01:01:05.9±1.6, 34°.4N±0°.1×86°.3E±0°.1, h29km±2km, mb4.7/32 Error ellipse: s-maj=15.7km s-min=12.8km az=217.0*

IDC ***11*** *01:01:07.5±3.1, 34°.29N×86°.22E, h52km±27km, mb4.2/23, mbtmp4.5/28, ML3.9/5, MS3.9/15, Error ellipse: s-maj=16.8km s-min=11.4km az=13.0*

ISC 11 01:01:06.9±0.3, 34°.33N±0°.04×86°.12E±0°.03, h35km, n238, σ1§52/259, mb4.7/70, MS4.2/46, 33C-7D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	Lhasa	6.29	136	S		Sn	01 03 49.6	+1.1
GTK	Tadong	7.31	162	*ex*		Pn	01 02 53.7	+2.4
GOMU	GeErMu	7.35	73	Pn		Pn	01 02 53.0	+0.9
GOMU				Sn		Sn	01 04 19.4	+5.0
GOMU				LR		LR		
	comp=N,3μm,7.0s							
GOMU				LR		LR		
	comp=E,2μm,7.7s							
GOMU				LR		LR		
	comp=Z,3μm,9.1s							
SMLA	Simla	8.19	250	*ex*		Pn	01 03 05.1	+1.9
SMLA				*ex*		x	01 05 23.7	
SMLA				*ex*		x	01 05 35.5	
ZIRO	ZIRO	9.49	134	*ex*		Pn	01 03 20.1	-1.1
ZIRO				*i*	x	x	01 06 43.6	
WMQ	Urumqi	9.55	7	*e*P		Pn	01 03 22.6	+0.6
WMQ				pP			01 03 25.6	
WMQ				pmax		pmax		
	comp=Z,32nm,0.7s							
WMQ				LR		LR		
	comp=N,1μm,12.1s							
WMQ				LR		LR		
	comp=Z,380nm,12.7s							
KSH	Kashi	9.63	305	P		Pn	01 03 27.4	+4.3
KSH				S		Sn	01 05 22.0	+12
KSH				pmax		pmax		
	comp=Z,14nm,1.6s							
KSH				LR		LR		
	comp=N,1μm,8.2s							
KSH				LR		LR		
	comp=E,2μm,15.5s							
KSH				LR		LR		
	comp=Z,3μm,18.4s							
SHLS	Shalkode	10.23	331	*e*P		Pn	01 03 28.5	-2.7
SHLS	Shalkode baz=332	10.23	331	*e*P		Pn	01 03 28.6	-2.7
UZB	Uzynbulak	10.40	330	*e*P		Pn	01 03 33.7	+0.1
UZB	Uzynbulak baz=329	10.40	330	*e*P		Pn	01 03 33.7	+0.1
BOK	Bokaro	10.50	181	*ex*		Pn	01 03 34.0	-1.0
BOK				*ex*		x	01 07 43.7	
SATY	Saty	10.59	328	*e*P		Pn	01 03 35.8	-0.4
SATY	Saty baz=327	10.59	328	*e*P		Pn	01 03 35.9	-0.3
ZHN	Zhinishke	10.66	328	*e*P		Pn	01 03 37.2	0.0
ZHN	Zhinishke baz=327	10.66	328	*e*P		Pn	01 03 37.2	0.0
MDOK	Medeo	11.30	324	*e*P		Pn	01 03 45.8	-0.2
MDOK	Medeo baz=323	11.30	324	*e*P		Pn	01 03 45.9	-0.2
AAA	Alma-Ata	11.40	324	*e*P		Pn	01 03 47.7	+0.5
AAA	Alma-Ata baz=323	11.40	324	*e*P		Pn	01 03 47.8	+0.5
GTA	Gaotai	12.08	61	*e*P		Pn	01 03 54.5	-2.1
GTA				S		Sn	01 06 10.0	-0.1
GTA				SS		SnSn	01 06 23.9	+1.9
GTA				pmax		pmax		
	comp=Z,5.0nm,1.1s							
GTA				pmax		pmax		
	comp=Z,83nm,5.3s							
GTA				LR		LR		
	comp=N,1μm,10.9s							
GTA				LR		LR		
	comp=E,570nm,9.1s							
GTA				LR		LR		
	comp=Z,720nm,8.7s							
TDK	Taldyqorghan	12.19	333	*e*P		Pn	01 03 57.9	-0.1
TDK	Taldyqorghan baz=332	12.19	333	*e*P		Pn	01 03 57.9	-0.1
AAK	Ala-Archa 5.2nm,0.5s	12.31	316	P		Pn	01 04 00.0	+0.3
AAK	Ala-Archa	12.31	316	*ce*P		Pn	01 04 02.2	+2.4
AAK				pmax		pmax		
	comp=Z,15nm,1.3s							
MK31	Makanchi Array	12.78	348	Pn		Pn	01 04 05.1	-1.0
MK31	Makanchi Array	12.78	348	*c* *i*P		Pn	01 04 05.3	-0.8
MKAR	Makanchi Array comp=Z,0.3nm,0.3s,baz=155,slow=15,SNR=38 comp=Z,9.0nm,0.8s	12.78	348	P		Pn	01 04 05.3	-0.7
MKAR	Makanchi Array	12.78	348	Pn		Pn	01 04 03.9	-2.2
MAKZ	Makanchi	12.85	347			Pn	01 04 05.9	-1.1
MAKZ	Makanchi	12.85	347	P		Pn	01 04 05.9	-1.1
ZSN	Zaisan	13.14	356	*e*P		Pn	01 04 08.2	-2.7
ZSN	Zaisan baz=356	13.14	356	*e*P		Pn	01 04 08.2	-2.7
GAR	Garm	13.51	295			Pn	01 04 15.2	-1.0
KBL	Kabul	14.10	276	Pn		Pn	01 04 21.3	-3.0
KBL	Kabul	14.10	276	P		Pn	01 04 21.3	-3.0
CHGR	Chuyangaron	14.31	292			Pn	01 04 27.4	+0.3
CHGR	Chuyangaron	14.31	292	P		Pn	01 04 27.4	+0.3
DZA	Taraz	14.36	311	*e*P		Pn	01 04 26.0	-1.7
DZA	Taraz baz=310	14.36	311	*e*P		Pn	01 04 26.0	-1.7
LZH	Lanzhou	14.60	78	*e*P		Pn	01 04 30.3	-0.7
LZH				sP		P	01 04 36.6	-0.4
LZH				sS		Sn	01 07 20.5	+8.8
LZH				pmax		pmax		
	comp=Z,17nm,0.9s							
LZH				pmax		pmax		
	comp=Z,250nm,4.8s							
LZH				LR		LR		
	comp=Z,990nm,14.3s							
LZH				LR		LR		
	comp=Z,820nm,15.1s							
LZH				LR		LR		
	comp=Z,570nm,15.5s							
IUG	Iuzhnay	14.84	306	*e*P		Pn	01 04 35.1	+0.9
IUG	Iuzhnay baz=306	14.84	306	*e*P		Pn	01 04 35.2	+1.0
KKAR	Karatay Array	14.99	310	P		Pn	01 04 35.6	-0.5
KKAR	Karatay Array	14.99	310	P		Pn	01 04 35.6	-0.5
CD2	Chengdu	15.25	98	P		Pn	01 04 41.3	+1.7
CD2				S		Sn	01 07 30.4	+3.0
CD2				pmax		pmax		
	comp=Z,60nm,1.0s							
CD2				pmax		pmax		
	comp=Z,180nm,3.0s							
CD2				LR		LR		
	comp=Z,2μm,8.0s							
CD2				LR		LR		
	comp=Z,2μm,6.2s							
CD2				LR		LR		
	comp=Z,2μm,6.7s							
PZH	PanZhiHua	15.56	116	P		Pn	01 04 45.3	+1.5
PZH				S		Sn	01 07 39.5	+4.4
PZH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
PZH				pmax		pmax		
	comp=Z,120nm,4.1s							
PZH				LR		LR		
	comp=Z,1μm,16.8s							
PZH				LR		LR		
	comp=Z,1μm,17.5s							
PZH				LR		LR		
	comp=Z,2μm,15.7s							
SEM	Semipalatinsk	16.63	347	*e*P		Pn	01 04 55.6	-1.8
SEM	Semipalatinsk baz=346	16.63	347	*e*P		Pn	01 04 55.6	-1.8
KMI	Kunming	17.09	118	⇑P		Pn	01 05 02.6	-0.7
KMI				S		Sn	01 08 11.4	-0.9
KMI				pmax		pmax		
	comp=Z,33nm,1.0s							
KMI				pmax		pmax		
	comp=Z,190nm,3.5s							
KMI				LR		LR		
	comp=Z,550nm,17.6s							
KMI				LR		LR		
	comp=Z,510nm,17.7s							
KMI				LR		LR		
	comp=Z,810nm,20.0s							
KURBB	Kurchatov Arra comp=Z,0.3nm,0.3s,baz=156,slow=12,SNR=48 comp=Z,34nm,0.9s	17.20	343	P		Pn	01 05 03.5	-0.8
KURK	Kurchatov	17.27	344	P		Pn	01 05 03.5	-1.6
HYBB	Hyderabad (bro	18.16	204	*e*P		Pn	01 05 15.2	-1.1
HYBB				*e*S		S	01 08 44.4	+1.8
BRZS	Berezniki	18.50	332	*e*P		Pn	01 05 20.3	+0.1
BRZS	Berezniki baz=331	18.50	332	*e*P		Pn	01 05 20.4	+0.1
XAN	Xi'an	18.86	84	P		P	01 05 23.4	-0.7
XAN				pP		pP	01 05 30.7	-4.1
XAN				sP		sP	01 05 33.6	-6.3
XAN				S		S	01 08 59.3	+2.6
XAN				pmax		pmax		
	comp=Z,25nm,0.9s							
XAN				pmax		pmax		
	comp=Z,390nm,4.6s							
XAN				LR		LR		
	comp=Z,850nm,7.6s							
XAN				LR		LR		
	comp=Z,770nm,10.8s							
XAN				LR		LR		
	comp=Z,1μm,10.5s							
CRAI	Chiangrai	18.88	134			P	01 05 22.3	-2.0
CHTO	Chiang Mai	19.21	140	P		P	01 05 27.5	-0.5
CHTO	Chiang Mai	19.21	140	P		P	01 05 27.5	-0.5
CHTO				pmax		pmax		
	comp=Z,11nm,0.7s							
GYA	Guiyang	19.36	108	⇑P		P	01 05 28.9	-0.7
GYA				S		Sn	01 09 08.0	+0.9
GYA				pmax		pmax		
	comp=Z,20nm,0.9s							
GYA				pmax		pmax		
	comp=Z,440nm,4.2s							
GYA				LR		LR		
	comp=Z,550nm,8.9s							
GYA				LR		LR		
	comp=Z,640nm,8.9s							
GYA				LR		LR		
	comp=Z,600nm,17.1s							
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.3s,baz=324,slow=11,SNR=30 comp=Z,3.2nm,0.8s	19.51	141	P		P	01 05 30.5	-0.7
CMAR	Chiang Mai Arr	19.51	141			P	01 05 31.1	-0.1
CMAR	Chiang Mai Arr	19.51	141	*ce*P		Pn	01 05 34.2	+1.6
CMAR				pmax		pmax		
	comp=Z,19nm,1.0s							
ZALV	Zalesovo Beam comp=Z,0.6nm,0.3s,baz=178,slow=11,SNR=37 comp=Z,15nm,0.9s	19.63	358	P		P	01 05 32.0	-0.3
HRA	Herat	19.71	277			P	01 05 34.0	+0.5
SONM	Songino Array comp=Z,18nm,1.0s,baz=231,slow=12,SNR=47 comp=Z,18nm,1.0s	20.30	42	P		P	01 05 39.3	-0.5
SONM	Songino Array	20.30	42				01 05 39.2	-0.5
SONM				IAmb		IAmb	01 05 41.5	
	comp=Z,37nm,1.2s							
ZAK	Zakamensk	20.37	33	*e*P		P	01 05 40.1	-0.3
ZAK				pmax		pmax		
	comp=Z,33nm,1.7s							
MOY	Mondy	20.39	27	*e*P		P	01 05 41.2	+0.5
ULN	Ulaanbaatar	20.69	43			P	01 05 42.1	-1.9
ULN	Ulaanbaatar	20.69	43	*de*P		P	01 05 44.1	+0.1
ULN				pmax		pmax		
	comp=Z,84nm,1.7s							
HHC	Hu-ho-hao-te	21.14	65	*e*P		P	01 05 48.6	-0.3
HHC				pmax		pmax		
	comp=Z,78nm,0.9s							
HHC				pmax		pmax		
	comp=Z,380nm,7.5s							
HHC				LR		LR		
	comp=Z,5μm,17.7s							
HHC				LR		LR		
	comp=Z,1μm,14.1s							
HHC				LR		LR		
	comp=Z,2μm,16.3s							
TIY	Taiyuan	21.52	73	*e*P		P	01 05 51.2	-1.8
TIY				S		S	01 09 50.6	+0.8
TIY				pmax		pmax		
	comp=Z,52nm,0.8s							
TIY				pmax		pmax		
	comp=Z,230nm,3.5s							
TIY				LR		LR		
	comp=Z,600nm,10.3s							
TIY				LR		LR		
	comp=Z,430nm,9.6s							
TIY				LR		LR		
	comp=Z,390nm,16.5s							
LYN	LuoYang	21.71	82	⇑P		P	01 05 53.4	-1.6
LYN				sP		pP	01 06 06.7	+0.9
LYN				PP		PnPn	01 06 17.9	+1.5
LYN				S		S	01 09 41.3	-12
LYN				sS		Sn	01 10 00.9	-2.6
LYN				pmax		pmax		
	comp=Z,10.0nm,0.8s							
LYN				pmax		pmax		
	comp=Z,150nm,4.1s							
LYN				LR		LR		
	comp=Z,730nm,21.2s							
LYN				LR		LR		
	comp=Z,410nm,14.3s							
LYN				LR		LR		
	comp=Z,270nm,16.6s							
BRVK	Borovoye	21.86	334	P		P	01 05 56.8	+0.5
BRVK				IAmb		IAmb	01 06 05.4	
	comp=Z,31nm,1.0s							
BRVK	Borovoye	21.86	334	*i* P		P	01 05 57.0	+0.7
BRVK				pmax		pmax		
	comp=Z,23nm,1.0s							
GEYT	Alibeck comp=Z,10nm,1.1s,baz=162,slow=10,SNR=7.7 comp=Z,10nm,1.1s	22.87	287	P		P	01 06 08.4	+1.1
GEYT	Alibeck	22.87	287	P		P	01 06 08.3	+1.1
GEYT				IAmb		IAmb	01 06 17.1	
	comp=Z,28nm,1.4s							
GYA0B	ALIBECK ARRAY	22.87	287	P		P	01 06 08.1	+0.8
GYA0B				IAmb		IAmb	01 06 16.9	
	comp=Z,19nm,1.1s							
HNS	HongShan	23.33	74	⇑P		P	01 06 11.2	-0.7
HNS				sP		pP	01 06 24.4	+1.4
HNS				S		S	01 10 27.0	+4.9
HNS				pmax		pmax		
	comp=Z,39nm,1.2s							
HNS				LR		LR		
	comp=Z,640nm,12.0s							
HNS				LR		LR		
	comp=Z,510nm,11.6s							
CNSH	ChangSha	23.69	98	⇑P		P	01 06 13.2	-2.2
CNSH				S		S	01 10 31.1	+3.1
CNSH				LR		LR		
	comp=Z,630nm,17.5s							
CNSH				LR		LR		
	comp=Z,510nm,17.3s							
CNSH				LR		LR		
	comp=Z,730nm,16.1s							
ABKAR	Akbulak array	24.40	316	P		P	01 06 22.2	+0.4
ABKAR	Akbulak array	24.40	316	P		P	01 06 22.3	+0.4
ABKAR				IAmb		IAmb	01 06 26.0	
	comp=Z,12nm,0.8s							
BJI	Beijing	24.54	68	P		P	01 06 22.9	-0.3
BJI				S		S	01 10 45.7	+4.1
BJI				pmax		pmax		
	comp=Z,11nm,0.7s							
BJI				pmax		pmax		
	comp=Z,170nm,4.9s							
BJI				LR		LR		
	comp=Z,250nm,12.5s							
BJI				LR		LR		
	comp=Z,340nm,14.0s							
BJI				LR		LR		
	comp=Z,860nm,14.7s							
XLT	XiLinHaoTe	25.02	59	⇓ *i*P		P	01 06 28.0	+0.4
XLT				pP		pP	01 06 35.3	-3.9
XLT				S		S	01 10 50.1	+0.8
XLT				pmax		pmax		
	comp=Z,16nm,0.7s							
XLT				pmax		pmax		
	comp=Z,170nm,4.0s							
XLT				LR		LR		
	comp=Z,98nm,12.2s							
XLT				LR		LR		
	comp=Z,970nm,10.9s							
XLT				LR		LR		
	comp=Z,770nm,10.5s							
TIA	Tai'an	25.33	77	⇑P		P	01 06 29.9	-0.5
TIA				pmax		pmax		
	comp=Z,30nm,1.0s							
TIA				pmax		pmax		
	comp=Z,120nm,3.5s							
TIA				LR		LR		
	comp=Z,560nm,10.6s							
TIA				LR		LR		
	comp=Z,470nm,10.2s							
TIA				LR		LR		
	comp=Z,440nm,11.0s							
UBPT	Khong Chiam	25.77	133	P		P	01 06 31.9	-2.6
QIZ	Qiongzhong	26.02	120	P		P	01 06 34.5	-2.2
QIZ				S		S	01 11 04.5	-0.8
QIZ				LR		LR		
	comp=Z,480nm,10.4s							
QIZ				LR		LR		
	comp=Z,280nm,17.1s							
QIZ				LR		LR		
	comp=Z,410nm,17.5s							
AKTO	Aktyubinsk comp=Z,11nm,0.9s,baz=118,slow=8.2,SNR=23 comp=Z,11nm,0.9s	26.05	317	P		P	01 06 37.4	+0.6
NJ2	Nanjing	27.42	86	*e*P		P	01 06 49.6	+0.3
NJ2				pmax		pmax		
	comp=Z,18nm,0.5s							
NJ2				LR		LR		
	comp=Z,1μm,15.1s							
NJ2				LR		LR		
	comp=Z,550nm,15.7s							
NJ2				LR		LR		
	comp=Z,490nm,12.7s							
ARU	Arti comp=Z,0.9nm,0.3s,baz=135,slow=11,SNR=3.7 comp=Z,0.9nm,0.3s	29.03	328	P		P	01 07 03.0	-0.4
ARU	Arti	29.03	328	*c* *i*P		P	01 07 04.1	+0.7
ARU							01 07 59.3	
ARU							01 10 06.0	

ARU S **S** **01 11 53.5 +1.3**
ARU pmax pmax
comp=Z,5.0nm,1.5s
ARU MLR MLR
comp=Z,475nm,17.0s
MAK Makhachkala 31.14 298 *e*P **P** **01 07 22.7 +0.5**
MAK *e*S **S** **01 12 26.8 +1.2**
MAK pmax pmax
comp=Z,52nm,1.2s
MAK MLR MLR
comp=Z,433nm,17.0s
CN2 Changchun 31.71 61 *e*P **P** **01 07 26.5 -0.7**
CN2 *e*S **S** **01 12 31.3 -3.2**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,1μm,13.0s
CN2 LR LR
comp=Z,1μm,13.0s
CN2 LR LR
comp=Z,1μm,13.0s
BELG Belogornoye 32.80 315 P **P** **01 07 36.8 +0.1**
comp=Z,30nm,0.9s,baz=106,slow=2.9,SNR=6.2
comp=Z,30nm,0.9s
BELG Belogornoye 32.80 315 *i*P **P** **01 07 38.8 +2.1**
BELG pmax pmax
comp=Z,7.0nm,1.1s
BNX BinXian 33.25 57 ⇑P **P** **01 07 39.7 -1.0**
BNX pmax pmax
comp=Z,12nm,0.9s
BNX pmax pmax
comp=Z,120nm,4.9s
TJN Taejon 33.52 74 P **P** **01 07 41.1 -2.0**
TJN Taejon 33.52 74*ce*P **P** **01 07 40.7 -2.4**
KSAR Wonju Array Be 33.78 72 P **P** **01 07 43.8 -1.6**
KSAR Wonju Array Be 33.78 72 P **P** **01 07 43.8 -1.6**
KSRS Korea Array 33.81 72 P **P** **01 07 44.0 -1.6**
comp=Z,4.6nm,0.7s,baz=272,slow=8.9,SNR=28
comp=Z,4.6nm,0.7s
SEHB SEOHWA 33.97 71 P **P** **01 07 45.8 -1.2**
SEHB IAmb IAmb 01 07 50.1
comp=Z,12nm,0.9s
KIRV Kirov 34.34 326 *i*P **P** **01 07 51.2 +1.3**
KIV Kislovodsk 34.68 299 *e*P **P** **01 07 55.1 +1.8**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,88nm,16.0s
ZEA Zeya 34.73 43 *e*P **P** **01 07 53.6 +0.2**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA MLR MLR
comp=E,300nm,10.0s
ZEA MLR MLR
comp=N,200nm,13.0s
ZEA MLR MLR
comp=Z,400nm,14.0s
NRIK Noril'sk 35.07 1 P **P** **01 07 55.9 -0.3**
comp=Z,38nm,0.8s,baz=165,slow=6.0,SNR=36
comp=Z,38nm,0.8s
NRIK Noril'sk 35.07 1*ce*P **P** **01 07 56.6 +0.5**
NRIK pmax pmax
comp=Z,34nm,0.9s
VRH Novokhopyorsk 36.06 312 *e*P **P** **01 08 05.1 +0.2**
VRH pmax pmax
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 36.44 60 P **P** **01 08 07.6 -0.6**
comp=Z,6.7nm,1.0s,baz=253,slow=9.6,SNR=9.7
comp=Z,6.7nm,1.0s
USRK Ussuriysk Ar. 36.44 60 P **P** **01 08 06.5 -1.7**
KLR Kul'dur 36.55 52*ce*P **P** **01 08 08.5 -0.6**
KLR pmax pmax
comp=Z,11nm,1.3s
VSR Storozhevoye 37.65 311 *e*P **P** **01 08 18.3 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORR Voronezh 37.69 312 *e*P **P** **01 08 19.5 +0.8**
VORR pmax pmax
comp=Z,20nm,0.4s
LPSR Galich'ya Gora 38.01 313 *e*P **P** **01 08 21.2 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
YAK Yakutsk 38.94 31*ce*P **P** **01 08 31.0 +1.9**
YAK pmax pmax
comp=Z,9.0nm,0.5s
MOS Moscow 39.36 318 *e*P **P** **01 08 32.8 +0.1**
MOS *e* 01 10 43.2
GRNR Gornyy 39.70 50⇓*i*P **P** **01 08 35.4 -0.3**
GRNR pmax pmax
comp=Z,4.0nm,0.9s
GRNR MLR MLR
comp=E,1μm,15.0s
GRNR MLR MLR
comp=N,310nm,17.0s
GRNR MLR MLR
comp=Z,320nm,12.0s
OBN Obninsk 39.83 317*ce*P **P** **01 08 35.3 -1.3**
OBN *e* 01 10 10.2
OBN *e*S S 01 14 48.6 +10
OBN pmax pmax
comp=Z,17nm,1.3s
OBN MLR MLR
comp=Z,128nm,17.0s
KLMR Klimovskoe 39.84 326 *e*P **P** **01 08 35.5 -1.1**
KLMR *e* 01 10 08.4
KLMR *e* 01 10 41.2
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR Klimovskoe 39.84 326 *e*P **P** **01 08 35.5 -1.1**
KLMR AMP 01 08 37.9
comp=Z,18nm,1.3s
KLMR *e*PP **PP** **01 10 08.4 +0.1**
KLMR *e*PcP **PcP** **01 10 41.3 -0.6**
SIM Simferopol' 40.80 301 *e*P **P** **01 08 47.8 +3.0**
SIM *e*PPP PPP 01 10 50.0
SIM *e*S **S** **01 14 58.0 +4.8**
SIM *e*SSS SSS 01 18 29.5
SIM pmax pmax
comp=Z,14nm,1.2s
SIM smax smax
comp=N,120nm,5.7s
SIM MLR MLR
comp=Z,80nm,18.5s
BRTR Keskin Array B 41.75 293 P **P** **01 08 52.1 -0.7**
comp=Z,1.1nm,0.9s,baz=109,slow=6.7,SNR=6.6
comp=Z,1.1nm,0.9s
BRTR Keskin Array B 41.75 293*ce*P **P** **01 08 55.7 +2.8**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
MJAR Matsushiro Arr 42.07 71 P **P** **01 08 53.8 -1.6**
comp=Z,4.8nm,1.0s,baz=279,slow=7.2,SNR=12
comp=Z,4.8nm,1.0s
TIXI Tiksi 43.53 18 *i*P **P** **01 09 06.6 -0.1**
TIXI pmax pmax
comp=Z,6.0nm,0.9s
YSS Yuzh-Sakhalins 43.88 56 *i*P **P** **01 09 10.3 +0.5**
YSS pmax pmax
comp=Z,9.0nm,1.0s
AKASG Malin Array Be 43.89 310 P **P** **01 09 09.6 -0.2**
comp=Z,3.7nm,0.9s,baz=82,slow=7.2,SNR=8.9
comp=Z,3.7nm,0.9s
AKASG Malin Array Be 43.89 310*ce*P **P** **01 09 12.6 +2.8**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKBB Malin Array Si 43.89 310 P **P** **01 09 10.1 +0.3**
AKBB IAmb IAmb 01 09 14.3
comp=Z,15nm,1.1s
AKBB Malin Array Si 43.89 310*ce*P **P** **01 09 09.8 0.0**
MNK Minsk 44.76 315 *i*P **P** **01 09 15.9 -0.8**
MNK *i* 01 10 57.6
MNK *i* 01 11 00.8
MNK *i* PPP PPP 01 11 38.8
MNK *i* S **S** **01 15 51.1 0.0**
MNK *i* SS **SS** **01 19 16.1 +3.8**
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,15nm,0.9s
MNK MLR MLR
comp=Z,93nm,18.0s
MNK MLR MLR
comp=E,50nm,18.0s
MNK Minsk 44.76 315 *i*P **P** **01 09 16.0 -0.8**
comp=E,2.0nm,0.9s
MNK *i*P **P** **01 09 16.0 -0.8**
MNK *i*P **P** **01 09 16.0 -0.8**
comp=Z,15nm,0.9s,baz=92
MNK *i*PcP **PcP** **01 10 57.7 -0.7**
MNK *i*PP **PP** **01 11 00.8 -0.6**
MNK *i*PPP PPP 01 11 38.9
MNK *i*S **S** **01 15 51.2 0.0**
MNK *i*SS **SS** **01 19 16.1 +3.8**
MNK *i*LQ LQ 01 24 02.6
MNK *i*LR LR 01 27 31.6
MNK *i*LRM MLR 01 30 03.3
comp=Z,93nm,17.6s
MNK *i*LRM MLR 01 30 38.5
comp=E,50nm,18.0s
MNK *i*LRM MLR 01 30 40.5
ELL Elmali 45.24 290 P **P** **01 09 21.6 +0.6**
ELL Elmali 45.24 290 P **P** **01 09 21.6 +0.6**
ELL pmax pmax
comp=Z,41nm,1.1s
NACGM Naroch 45.41 316⇑*e*P **P** **01 09 24.7 +2.8**
baz=91
IIGN Ignalina 45.74 316 *e*P **P** **01 09 25.3 +0.8**
ISAL Salakas 45.80 317 *e*P **P** **01 09 26.0 +1.0**
VRI Vrincioaia 45.89 303⇓P **P** **01 09 27.8 +1.9**
PLOR Plostina 45.95 303⇑P **P** **01 09 27.7 +1.3**
BIZ Bicaz 46.19 305⇑P **P** **01 09 29.3 +1.1**
FINES FINESS Array B 46.30 325 P **P** **01 09 28.2 -0.6**
comp=Z,3.6nm,0.9s,baz=63,slow=13,SNR=8.0
comp=Z,3.6nm,0.9s
MLR Muntele Rosu 46.49 303⇑P **P** **01 09 32.3 +1.6**
MLR Muntele Rosu 46.49 303 P **P** **01 09 31.8 +1.1**
MLR IAmb IAmb 01 09 36.4
comp=Z,13nm,1.0s
MLR Muntele Rosu 46.49 303 P **P** **01 09 31.8 +1.1**
MLR pmax pmax
comp=Z,13nm,1.0s
PABE Paberze 47.03 317 P **P** **01 09 33.8 -0.8**
PABE Paberze 47.03 317 *e*P **P** **01 09 35.5 +0.9**
VOIR 47.12 303⇑P **P** **01 09 36.6 +1.0**
LVV L'vov 47.26 309 *e*P **P** **01 09 37.3 +0.7**
LVV *e*S **S** **01 16 27.7 +0.4**
LVV *e* 01 19 51.1
LVV pmax pmax
comp=Z,30nm,1.2s
LVV MLR MLR
comp=E,200nm,17.0s
LVV MLR MLR
comp=N,100nm,16.0s
LVV MLR MLR
comp=Z,300nm,17.0s
ARR Arges 47.42 303⇑P **P** **01 09 40.1 +2.2**
LOT Lotru 48.01 303⇑P **P** **01 09 44.5 +2.0**
JCJ Chichijima 48.23 83 LR LR 01 32 34.2
comp=Z,58nm,18.5s,baz=151,slow=39
DRGR 48.52 305⇓P **P** **01 09 48.1 +1.7**
UZH Uzhgorod 48.53 307 *e*P **P** **01 09 48.0 +1.6**
UZH *e* 01 10 01.1
SEY Seymchan 49.34 34*ce*P **P** **01 09 52.9 +0.6**
SEY pmax pmax
comp=Z,4.0nm,0.3s
BZS Buzias 49.47 304⇑P **P** **01 09 54.5 +0.9**
BOVS Bovan 49.80 301⇑P **P** **01 09 57.4 +1.3**
VYHS Vyhne 50.82 308 *e*P **P** **01 10 04.7 +0.9**
VYHS Vyhne 50.82 308 *e*P **P** **01 10 04.7 +0.9**
OKC Ostrava-Krasne 51.04 309 *e*P **P** **01 10 05.9 +0.5**
OKC MLR MLR
comp=Z,200nm,14.0s
OKC Ostrava-Krasne 51.04 309 *e*P **P** **01 10 05.9 +0.5**
OKC AMS AMS 01 35 00.0
comp=Z,200nm,14.0s
MORC Moravsky Berou 51.44 309⇑P **P** **01 10 10.2 +1.8**
MORC Moravsky Berou 51.44 309 *e*P **P** **01 10 10.6 +2.1**
JAVC Velka Javorina 51.52 308 *e*P **P** **01 10 10.6 +1.5**
KRLC Kraliky 51.87 310 *e*P **P** **01 10 13.6 +1.9**
KRLC MLR MLR
comp=Z,200nm,14.0s
KRLC Kraliky 51.87 310 *e*P **P** **01 10 13.6 +1.9**
KRLC AMS AMS 01 35 20.0
comp=Z,200nm,14.0s
DPC Dobruska-Polom 52.11 310 *e*P **P** **01 10 12.7 -0.8**
DPC MLR MLR
comp=Z,300nm,12.6s
DPC Dobruska-Polom 52.11 310 *e*P **P** **01 10 12.7 -0.8**
DPC AMS AMS 01 35 30.0
comp=Z,300nm,12.6s
VRAC Vranov 52.13 309 *e*P **P** **01 10 14.7 +1.1**
OSTC Ostas 52.14 311 *e*P **P** **01 10 14.4 +0.7**
OSTC AMS AMS 01 35 30.0
comp=Z,300nm,15.4s
CHVC Chvalec 52.24 311 *e*P **P** **01 10 15.5 +1.1**
UPC Upice 52.28 311 *e*P **P** **01 10 15.6 +0.9**
UPC MLR MLR
comp=Z,200nm,14.8s
UPC Upice 52.28 311 *e*P **P** **01 10 15.6 +0.9**
UPC AMS AMS 01 36 00.0
comp=Z,200nm,14.8s
KRUC Moravsky 52.30 309 *e*P **P** **01 10 16.1 +1.2**
TREC Trest 52.84 309 AMS AMS 01 35 50.0
comp=Z,200nm,26.3s
PVCC Panska Ves 53.18 311 AMS AMS 01 37 10.0
comp=Z,200nm,13.4s
PRU Pruhonice 53.30 310 *e*P **P** **01 10 23.1 +0.9**
PRU MLR MLR
comp=Z,200nm,12.6s
PRU Pruhonice 53.30 310 *e*P **P** **01 10 23.1 +0.9**
PRU AMS AMS 01 36 10.0
comp=Z,200nm,12.6s
NB2 NORSAR Subarra 53.47 324 P **P** **01 10 22.6 -0.7**
comp=Z,6.2nm,1.0s,baz=84,slow=7.4
NOA NORSAR Array B 53.47 324 P **P** **01 10 22.6 -0.7**
comp=Z,3.4nm,0.8s,baz=84,slow=7.3,SNR=8.9
comp=Z,3.4nm,0.8s
BRG Berggiesshubel 53.50 311 *e*P **P** **01 10 24.5 +0.8**
BRG Amp 01 10 29.1
comp=Z,8.1nm,1.0s
BRG Amp 01 36 54.0
comp=Z,0.2nm,15.5s
BRG Amp 01 36 58.0
comp=E,0.2nm,21.5s
BRG Amp 01 36 59.0
comp=N,0.1nm,13.8s
BRG Berggiesshubel 53.50 311 *e*P **P** **01 10 24.4 +0.8**
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG MLR MLR
comp=Z,235nm,15.5s
BRG MLR MLR
comp=E,218nm,21.5s
BRG MLR MLR
comp=N,75nm,13.8s
CKRC Cesky Krumlov 53.70 309 *e*P **P** **01 10 27.1 +1.9**
CLL Collm 53.99 312 *e*P **P** **01 10 27.0 -0.3**
CLL *i*Pmax 01 10 30.8
comp=Z,9.0nm,1.3s
CLL *i*pP **pP** **01 10 36.9 -2.7**
CLL *e*S **S** **01 18 03.0 +2.4**
CLL *ex* x 01 22 30.0
CLL Lm MLR 01 37 00.0
comp=Z,300nm,18.8s
GEC2 GERESS Array S 54.09 309 P **P** **01 10 28.1 0.0**
GEC2 IAmb IAmb 01 10 33.5
comp=Z,11nm,1.2s
GERES GERESS Array B 54.09 309 P **P** **01 10 28.0 -0.1**
comp=Z,3.0nm,0.8s,baz=81,slow=8.2,SNR=16
comp=Z,3.0nm,0.8s
GERES GERESS Array B 54.09 309 P **P** **01 10 28.3 +0.2**
GERES GERESS Array B 54.09 309 P **P** **01 10 28.3 +0.2**
KHC Kasperske Hory 54.10 309 *e*P **P** **01 10 28.7 +0.5**
KHC MLR MLR
comp=Z,200nm,18.0s
KHC Kasperske Hory 54.10 309 *e*P **P** **01 10 28.7 +0.5**
KHC AMS AMS 01 37 00.0
comp=Z,200nm,18.0s
BILL Bilibino 55.01 27 *e*P **P** **01 10 35.9 +1.5**
BILL pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 57.77 243 P **P** **01 10 54.5 -0.6**
comp=Z,1.3nm,0.4s,baz=34,slow=8.3,SNR=5.4
comp=Z,1.3nm,0.4s
KMBO Kilima Mbogo 57.77 243*ce*P **P** **01 10 57.4 +2.3**
KMBO pmax pmax
comp=Z,2.0nm,0.5s
MBAR Mbarara 62.34 248 LR LR 01 42 43.2
comp=Z,46nm,19.5s,baz=34,slow=40
MBAR Mbarara 62.34 248 *i*P **P** **01 11 28.9 +2.6**
MBAR pmax pmax
comp=Z,8.0nm,1.0s
ESDC Sonseca Array 69.14 304 P **P** **01 12 09.2 -0.6**
comp=Z,3.6nm,0.9s,baz=51,slow=6.1,SNR=15
comp=Z,3.6nm,0.9s
ESDC Sonseca Array 69.14 304 P **P** **01 12 09.1 -0.7**
TOLK Toolik Lake Re 69.42 19 P **P** **01 12 10.6 -0.4**
TOLK IAmb IAmb 01 12 14.4
comp=Z,6.5nm,1.0s
WRA Warramunga Arr 70.83 132 P **P** **01 12 18.0 -2.2**
comp=Z,4.9nm,0.8s,baz=325,slow=6.9,SNR=4.4
comp=Z,4.9nm,0.8s
WRA Warramunga Arr 70.83 132*ce*P **P** **01 12 22.2 +2.0**
WRA pmax pmax
comp=Z,5.0nm,0.8s
J20K Nowinta River 71.04 24 P **P** **01 12 20.0 -0.9**
I23K Minto, Yukon-K 71.90 21 P **P** **01 12 24.8 -1.2**
NEA2 Nenana 72.38 22 P **P** **01 12 27.9 -1.0**
NEA2 IAmb IAmb 01 12 32.5
comp=Z,5.5nm,1.0s
ILAR Eielson Array 72.91 21 P **P** **01 12 31.1 -1.0**
comp=Z,1.8nm,0.8s,baz=309,slow=5.0,SNR=13
comp=Z,1.8nm,0.8s
ILAR Eielson Array 72.91 21 P **P** **01 12 30.5 -1.7**
SKT Skwentna 73.40 25 P **P** **01 12 32.6 -2.5**
J26L Joseph Creek 74.08 20 P **P** **01 12 38.0 -1.1**
J26L IAmb IAmb 01 12 38.9
comp=Z,3.8nm,0.8s
RIDG Independent Ri 74.28 21 P **P** **01 12 38.9 -1.3**
RIDG IAmb IAmb 01 12 39.5
comp=Z,4.7nm,0.8s
SCRK Sand Creek 74.35 21 P **P** **01 12 39.6 -1.1**
L27K Beaver Creek, 75.68 20 P **P** **01 12 47.5 -0.8**
L27K IAmb IAmb 01 12 53.1
comp=Z,6.9nm,1.2s
BCAR Beaver Creek A 75.69 20 P **P** **01 12 47.0 -1.3**
TORD Torodi Ar. Bea 78.16 278 P **P** **01 13 01.7 -1.3**
comp=Z,5.3nm,1.1s,baz=36,slow=4.5,SNR=9.7
comp=Z,5.3nm,1.1s
N31M Braeburn, Yuko 78.64 19 P **P** **01 13 04.3 -0.7**
N31M IAmb IAmb 01 13 10.8
comp=Z,10nm,1.1s
YKA Yellowknife Ar 82.08 10 P **P** **01 13 20.8 -2.5**
comp=Z,1.3nm,0.6s,baz=335,slow=6.0,SNR=5.6
YKA LR LR 01 51 23.7
comp=Z,70nm,21.3s,baz=338,slow=37
comp=Z,1.3nm,0.6s
YKA Yellowknife Ar 82.08 10 *i*P **P** **01 13 22.5 -0.8**
YKA pmax pmax
comp=Z,1.0nm,0.6s
KOWA Kowa 82.08 282 P **P** **01 13 23.7 -0.5**
KOWA IAmb IAmb 01 13 26.7
comp=Z,6.7nm,0.8s
HNR Honiara 82.18 107 LR LR 01 47 47.9
comp=Z,52nm,21.4s,baz=130,slow=34
LBTB Lobatse 82.33 233 P **P** **01 13 24.9 -0.4**
LBTB Lobatse 82.33 233 P **P** **01 13 24.9 -0.4**
LBTB pmax pmax
comp=Z,14nm,1.1s
DLBC Dease Lake 82.76 18 LR LR 01 53 19.4
comp=Z,61nm,20.2s,baz=276,slow=38
STKA Stephens Creek 84.03 135 P **P** **01 13 31.7 -2.0**
comp=Z,5.4nm,1.0s,baz=293,slow=2.8,SNR=3.8
STKA LR LR 01 55 28.6
comp=Z,86nm,18.9s,baz=7.2,slow=39
comp=Z,5.4nm,1.0s
TSUM Tsumeb 84.11 242 LR LR 01 52 16.4
comp=Z,83nm,18.3s,baz=29,slow=36
BOSA Boshof 85.02 230 P **P** **01 13 37.7 -1.3**
comp=Z,5.9nm,0.9s,baz=44,slow=3.9,SNR=8.2
BOSA LR LR 01 49 42.3
comp=Z,46nm,20.8s,baz=20,slow=34
comp=Z,5.9nm,0.9s
BOSA Boshof 85.02 230 P **P** **01 13 38.2 -0.8**
BOSA Boshof 85.02 230 P **P** **01 13 38.2 -0.8**
BOSA pmax pmax
comp=Z,13nm,1.2s
DBIC Dimbokro 87.09 276 P **P** **01 13 48.9 -0.5**
comp=Z,9.8nm,0.7s,baz=53,slow=4.5,SNR=8.7
DBIC LR LR 01 55 37.4
comp=Z,110nm,19.8s,baz=76,slow=38
comp=Z,9.8nm,0.7s
KIC Kosan Boka 87.17 276⇑*i*P **P** **01 13 50.0 +0.1**
comp=Z,13nm,0.6s
TIC Toumodi 87.24 276⇓*i*P **P** **01 13 50.7 +0.5**
comp=Z,4.1nm,0.3s
LIC Lamto 87.48 276⇓*i*P **P** **01 13 52.3 +0.9**
comp=Z,13nm,0.5s
SCHQ Schefferville 88.20 345 LR LR 01 58 19.5
comp=Z,49nm,19.7s,baz=26,slow=39
BBB Bella Bella 88.79 20 LR LR 01 57 47.3
comp=Z,52nm,19.9s,baz=338,slow=38
SUR Sutherland 90.38 230 LR LR 01 53 13.2
comp=Z,64nm,19.1s,baz=84,slow=35
BBTS Babate 91.96 289 LR LR 02 02 52.0
comp=Z,66nm,18.3s,baz=58,slow=40
NEW Newport 95.19 15 LR LR 02 01 21.8
comp=Z,41nm,21.0s,baz=354,slow=38
YBH Yreka Blue Hor 99.81 21 LR LR 02 03 09.4
comp=Z,43nm,19.1s,baz=2.5,slow=37
TXAR Lajitas Array 116.01 10 PKP **PKiKP** **01 19 45.0 -1.6**
comp=Z,0.4nm,0.9s,baz=354,slow=1.3,SNR=4.3
TXAR Lajitas Array 116.01 10 PKIKP **PKiKP** **01 19 45.0 -1.6**
CPUP Villa Florida 147.59 274 PKPbc **PKPdf** **01 20 44.8 -0.3**
comp=Z,7.1nm,1.1s,baz=238,slow=6.0,SNR=3.1

*NEIC **11** 01:06:21.9±1.5, 1°.42N±0°.03×120°.97E±0°.03, h10km±1km, mb4.6/17, Error ellipse: s-maj=6.1km s-min=3.8km az=236.0*
*DJA **11** 01:06:25.5±0.4, 1°.N±4°×12°.1E±°, h64km±5km, M4.6/14, mb4.5/11, mB5.3/4, MLv4.6/14, Mw(mB)4.7/4, MwMwp5.2/1, Mwp5.4/1*
*IDC **11** 01:06:28.3±4.0, 1°.20N×120°.92E, h70km±39km, mb3.9/12, mbtmp4.2/14, ML4.0/2, MS3.5/8, Error ellipse: s-maj=36.4km s-min=14.4km az=65.0*
ISC 11 01:06:21.5±0.5, 1°.39N±0°.05×120°.90E±0°.05, h10km, n61, σ1§22/60, mb4.3/21, MS3.4/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**0.30**	**204**	Pg	**Pg**	**Pg**	**01 06 29.3**	**+1.7**
TOLI2				Sg	**Sg**	**Sg**	**01 06 33.1**	**+1.5**
MRSI	**Marisa**	**1.38**	**131**	P	**Pg**	**Pg**	**01 06 48.8**	**+0.8**
MPSI	**Mapaga**	**1.45**	**224**	P	**Pn**	**Pn**	**01 06 45.9**	**-1.9**
GTOI	**Gorontalo**	**2.23**	**109**	P	**Pb**	**Pb**	**01 07 00.4**	**-1.6**
APSI	**Ampana**	**2.40**	**162**	P	**Pb**	**Pb**	**01 07 04.0**	**-0.9**
LUWI	**Luwuk**	**3.05**	**142**	Pn	**Pn**	**Pn**	**01 07 10.7**	**+0.8**
LUWI				Sn	**Sn**	**Sn**	**01 07 46.3**	**-0.1**
LUWI	**Luwuk**	**3.05**	**142**	P	**Pb**	**Pb**	**01 07 14.7**	**-1.3**
KMSI	**Cibinong**	**3.18**	**105**	P	**Pb**	**Pb**	**01 07 17.7**	**-0.5**
MYLDM	**Lahad Datu**	**4.47**	**328**	Pn	**Pn**	**Pn**	**01 07 29.9**	**+0.5**
TTSI	**Tana Toraja**	**4.53**	**194**	P	**Pn**	**Pn**	**01 07 31.9**	**+1.6**
SPSI	**Sidrap Palu** 0.5nm2μm93nm,0.7s	**5.43**	**192**	P	**Pn**	**Pn**	**01 07 43.7**	**+1.0**
KAPI	**Kappang** 1.6nm,0.3s,baz=320,slow=6.5,SNR=4.7	**6.46**	**190**	P	**Pn**	**Pn**	**01 07 58.0**	**+1.2**
KAPI				S	**Sn**	**Sn**	**01 09 10.4**	**-0.2**
KAPI	9.3nm,0.4s,baz=70,slow=18,SNR=1.3			LR	LR	LR	01 10 54.8	
	comp=Z,775nm,18.2s,baz=330,slow=42 4.2nm,0.3s							
KAPI	**Kappang**	**6.46**	**190**	Pn	**Pn**	**Pn**	**01 07 57.2**	**+0.4**
BKSI	**Bulukumba**	**6.71**	**187**	P	**Pn**		01 08 09.5	+9.3
BBSI	**Bau Bau** 0.1nm411nm22nm,0.9s	**7.03**	**166**	P	**Pn**	**Pn**	**01 08 06.1**	**+1.5**
DAV	**Davao City (W)**	**7.32**	**39**	LR	LR	LR	01 11 04.3	
	comp=Z,242nm,19.0s,baz=189,slow=37							
BSSI	**Bau Bau, Buton** 0.2nm46nm,0.8s	**7.49**	**183**	P	**Pn**	**Pn**	**01 08 13.6**	**+2.7**
NLAI	**Namlea** 0.2nm2μm32nm,0.7s	**7.71**	**127**	P	**Pn**	**Pn**	**01 08 17.6**	**+3.6**
BATI	**Baumata**	**11.84**	**167**	LR	LR	LR	01 14 30.6	
	comp=Z,566nm,19.6s,baz=310,slow=41							
MTN	**Manton Dam**	**17.41**	**145**		**Pn**	**Pn**	**01 10 24.5**	**-0.1**
SMPI	**Sarmi** 4μm26μm34nm,0.5s	**18.12**	**101**	P	**Pn**	**Pn**	**01 10 32.1**	**-1.4**
KNRA	**Kununurra**	**18.65**	**156**	P	**P**	**P**	**01 10 39.8**	**+0.1**
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=0.2,slow=7.0,SNR=18	**19.91**	**167**	P	**P**	**P**	**01 10 52.0**	**-1.5**
FITZ				LR	LR	LR	01 20 39.5	
	comp=Z,133nm,18.3s,baz=358,slow=43 12nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.91**	**167**	P	**P**	**P**	**01 10 53.6**	**0.0**

WB0	**Warramunga Arr**	**24.84**	**148**	P	**P**	**01 11 42.8**	**-1.6**
WB0				IAmb	IAmb	01 11 49.5	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**24.96**	**149**	P	**P**	**01 11 42.7**	**-2.7**
	comp=Z,3.5nm,0.7s,baz=326,slow=10,SNR=41						
	comp=Z,3.5nm,0.7s						
WRA	**Warramunga Arr**	**24.96**	**149**	P	**P**	**01 11 43.6**	**-1.8**
WB2	**Warramunga Arr**	**24.97**	**149**	P	**P**	**01 11 44.0**	**-1.5**
WB2				IAmb	IAmb	01 11 50.1	
	comp=Z,8.8nm,0.7s						
WR0	**Warramunga Arr**	**25.08**	**148**	P	**P**	**01 11 45.5**	**-1.0**
WR0				IAmb	IAmb	01 11 46.7	
	comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.42**	**310**	P	**P**	**01 12 08.6**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=133,slow=7.2,SNR=9.3						
CMAR				LR	LR	01 25 55.0	
	comp=Z,72nm,18.6s,baz=115,slow=42						
	comp=Z,1.4nm,0.3s						
CHTO	**Chiang Mai**	**27.63**	**310**	P	**P**	**01 12 09.0**	**-0.6**
CHTO				IAmb	IAmb	01 12 11.1	
	comp=Z,5.6nm,0.9s						
ASAR	**Alice Springs**	**27.93**	**154**	P	**P**	**01 12 11.4**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=342,slow=13,SNR=13						
	comp=Z,1.4nm,0.7s						
FORT	**Forrest**	**32.70**	**169**	P	**P**	**01 12 53.3**	**-1.0**
KSRS	**Korea Array**	**36.47**	**9**	P	**P**	**01 13 28.3**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=184,slow=9.6,SNR=5.5						
	comp=Z,0.8nm,0.5s						
PATS	**Pohnpei**	**37.69**	**81**	P	**P**	**01 13 36.8**	**-0.7**
STKA	**Stephens Creek**	**38.46**	**151**	LR	LR	01 30 20.8	
	comp=Z,33nm,18.6s,baz=21,slow=37						
TAPN	**Taplejung**	**40.97**	**312**	*eP*	**P**	**01 14 05.8**	**+0.7**
	comp=Z,22nm,0.7s						
RAMN	**Ramite**	**41.58**	**311**	*eP*	**P**	**01 14 10.9**	**+0.7**
JIRN	**Jiri**	**42.27**	**311**	*eP*	**P**	**01 14 16.4**	**+0.5**
GUN	**Gumba**	**42.63**	**311**	*eP*	**P**	**01 14 19.6**	**+0.8**
PKI	**Pulchoki**	**42.81**	**311**	*eP*	**P**	**01 14 20.5**	**+0.2**
PKIN	**Phulchoki**	**42.82**	**311**	*eP*	**P**	**01 14 20.5**	**+0.2**
	comp=Z,13nm,0.6s						
DMN	**Daman**	**43.06**	**311**	*eP*	**P**	**01 14 22.6**	**+0.4**
GKN	**Gorkha**	**43.62**	**311**	*eP*	**P**	**01 14 27.1**	**+0.5**
DANN	**Dangsing**	**44.46**	**311**	*eP*	**P**	**01 14 34.0**	**+0.5**
	comp=Z,60nm,0.8s						
SONM	**Songino Array**	**47.95**	**347**	P	**P**	**01 15 02.0**	**+1.5**
	comp=Z,1.7nm,0.9s,baz=168,slow=6.8,SNR=6.0						
SONM				LR	LR	01 35 51.0	
	comp=Z,49nm,19.9s,baz=246,slow=37						
	comp=Z,1.7nm,0.9s						
AIS	**Amsterdam Isla**	**55.85**	**221**	P	**P**	**01 16 00.6**	**+1.2**
MK31	**Makanchi Array**	**56.35**	**329**	P	**P**	**01 16 03.4**	**+0.6**
MK31				IAmb	IAmb	01 16 04.6	
	comp=Z,3.9nm,1.1s						
MKAR	**Makanchi Array**	**56.35**	**329**	P	**P**	**01 16 03.4**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=131,slow=9.2,SNR=8.2						
	comp=Z,0.8nm,0.4s						
ZAA0	**Zalesovo Array**	**60.20**	**336**	P	**P**	**01 16 29.4**	**-0.2**
ZAA0				IAmb	IAmb	01 16 30.4	
	comp=Z,3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**60.20**	**336**	P	**P**	**01 16 29.2**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=129,slow=6.3,SNR=8.2						
ZALV				LR	LR	01 44 51.4	
	comp=Z,38nm,18.5s,baz=122,slow=38						
	comp=Z,2.3nm,0.8s						
ZALV	**Zalesovo Beam**	**60.20**	**336**	P	**P**	**01 16 29.5**	**-0.1**
KURK	**Kurchatov**	**60.74**	**331**	P	**P**	**01 16 34.0**	**+0.6**
KURK				IAmb	IAmb	01 16 34.8	
	comp=Z,7.9nm,0.9s						
MCQ	**Macquarie Isla**	**63.92**	**156**	P	**P**	**01 16 52.6**	**-2.0**
BRVK	**Borovoye**	**66.30**	**329**	P	**P**	**01 17 10.3**	**+0.2**
BRVK				IAmb	IAmb	01 17 11.5	
	comp=Z,7.6nm,1.1s						
GEYT	**Alibeck**	**67.90**	**311**	P	**P**	**01 17 20.3**	**-0.4**
GEYT				IAmb	IAmb	01 17 28.2	
	comp=Z,5.9nm,1.2s						
NRIK	**Noril'sk**	**71.41**	**348**	P	**P**	**01 17 42.1**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=134,slow=6.4,SNR=6.6						
	comp=Z,3.6nm,0.7s						
AKTO	**Aktyubinsk**	**71.95**	**323**	P	**P**	**01 17 45.5**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=105,slow=8.4,SNR=14						
	comp=Z,2.8nm,0.7s						
ARU	**Arti**	**73.87**	**329**	P	**P**	**01 17 56.5**	**0.0**
	comp=Z,6.8nm,0.8s,baz=142,slow=3.5,SNR=9.3						
	comp=Z,6.8nm,0.8s						
VNDA	**Vanda**	**81.91**	**172**	P	**P**	**01 18 39.5**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=314,slow=7.4,SNR=3.3						
	comp=Z,0.6nm,0.6s						
BRTR	**Keskin Array B**	**87.01**	**310**	P	**P**	**01 19 06.5**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=152,slow=6.5,SNR=3.7						
	comp=Z,0.5nm,0.8s						

*CRAAG **11** 01:41:41.1,36°.19N×2°.36E, Ml3.2*
*MDD **11** 01:41:43.2±0.9,36°.16N×2°.37E, h4km±5km, Mb3.8/14, M_mb3.1/15, Error ellipse: s-maj=9.0km s-min=4.9km az=158.0*

ISC 11 01:41:41.4±1.2**, 36°.10N**±0°.06×**2°.37E**±0°.04**, h12km**, n21, σ1§49/32, 11C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.70**	**286**	P	**Pn**	**01 41 56.8**	**-0.4**
ADJB	**Djebel Djouab**	**0.87**	**86**	P	**Pn**	**01 41 59.7**	**+0.1**
ABA	**Alger-Bouzarea**	**0.88**	**38**	P	**Pg**	**01 41 58.8**	**+0.3**
AKET	**Djebel Ketaf**	**1.23**	**92**	P	**Pg**	**01 42 06.4**	**+1.3**
EIBI	**Ibiza**	**3.03**	**345**	Pn	**Pn**	**01 42 29.8**	**+0.6**
EIBI				⇑*i*Vmb_V		01 42 30.3	
	300nm,SNR=1.3						
EIBI				Sn	**Sn**	**01 43 03.5**	**-1.9**
EMUR	**La Murta**	**3.37**	**302**	Pn	**Pn**	**01 42 35.2**	**+1.2**
EMUR				⇑*i*Vmb_V		01 42 36.3	
	82nm,SNR=0.7						
EMUR				Sn	**Sn**	**01 43 12.5**	**-1.3**
AFON	**Font Roja**	**3.45**	**319**	Pn	**Pn**	**01 42 36.4**	**+1.3**
AFON				⇑*i*Vmb_V		01 42 39.1	
	35nm,SNR=0.3						
AFON				Sn	**Sn**	**01 43 15.6**	**-0.4**
ETOS	**Mallorca**	**3.68**	**5**	Pn	**Pn**	**01 42 37.9**	**-0.2**
ETOS				⇑*i*Vmb_V		01 42 40.4	
	335nm,SNR=1.3						
ETOS				Sn	**Sn**	**01 43 18.5**	**-3.0**
EZAR	**Zarzadilla de**	**3.70**	**300**	Pn	**Pn**	**01 42 37.6**	**-0.9**
EZAR				Sn	**Sn**	**01 43 19.6**	**-2.4**
ECOL	**Islas Columbre**	**4.02**	**341**	Pn	**Pn**	**01 42 43.3**	**+0.6**
ECOL				Sn	**Sn**	**01 43 28.1**	**-1.6**
ETOB	**Tobarra**	**4.02**	**310**	Pn	**Pn**	**01 42 44.2**	**+1.4**
ETOB				⇑*i*Vmb_V		01 42 47.7	
	125nm,SNR=1.3						
ETOB				Sn	**Sn**	**01 43 29.8**	**-0.1**
TAF	**Taforalt**	**4.11**	**253**	P	**Pn**	**01 42 44.9**	**+0.8**
EBER	**Berja**	**4.31**	**282**	Pn	**Pn**	**01 42 46.4**	**-0.6**
EBER				⇑*i*Vmb_V		01 42 48.3	
	206nm,SNR=1.0						
EBER				Sn	**Sn**	**01 43 37.3**	**+0.1**
ECHE	**Chera**	**4.37**	**324**	Pn	**Pn**	**01 42 49.7**	**+2.1**
ECHE				⇑*i*Vmb_V		01 42 50.2	
	165nm,SNR=1.4						
ECHE				Sn	**Sn**	**01 43 38.7**	**+0.2**
JBK	**JBK**	**4.41**	**248**	P	**Pn**	**01 42 47.7**	**-0.6**
EQES	**Quesada**	**4.67**	**293**	Pn	**Pn**	**01 42 53.9**	**+2.0**
EQES				⇑*i*Vmb_V		01 42 57.8	
	103nm,SNR=1.4						
EQES				Sn	**Sn**	**01 43 47.9**	**+1.8**
EMOS	**Mosqueruela**	**4.81**	**333**	Pn	**Pn**	**01 42 55.1**	**+1.4**
EMOS				Sn	**Sn**	**01 43 46.9**	**-2.6**
ELGU	**Los Guajares,**	**4.89**	**281**	Pn	**Pn**	**01 42 56.5**	**+1.7**
ELGU				⇑*i*Vmb_V		01 42 59.1	
	84nm,SNR=0.5						
AKLM	**AKL**	**5.33**	**254**	P	**Pn**	**01 42 59.7**	**-1.3**
EMIJ	**Mijas**	**5.78**	**277**	Pn	**Pn**	**01 43 04.9**	**-2.1**
EMIJ				⇑*i*Vmb_V		01 43 08.5	
	77nm,SNR=0.9						
PAB	**San Pablo**	**6.33**	**305**	Pn	**Pn**	**01 43 16.0**	**+1.4**
PAB				⇑*i*Vmb_V		01 43 17.5	
	8.9nm,SNR=0.1						

*DJA **11** 01:43:27.8±0.2,2°.S×2°.12E±°, h10km, M4.4/16, mb4.8/5, mB5.1/4, MLv4.2/16, Mw(mB)4.4/4*
*IDC **11** 01:43:33.2±2.5, 2°.58S×127°.15E, h54km±25km, mb3.7/5, mbtmp4.1/8, ML4.2/3, MS3.0/3, Error ellipse: s-maj=19.0km s-min=10.3km az=72.0*

ISC 11 01:43:30.5±0.8**, 2°.49S**±0°.04×**126°.85E**±0°.05**, h35km, n22, σ1§62/25, mb4.0/5, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.79**	**161**	P	**Pn**	**01 43 45.3**	**+0.2**
NLAI				S	**Sn**	**01 43 55.6**	**-0.1**
SANI	**Sanana**	**0.96**	**297**	P	**Pn**	**01 43 46.5**	**-1.0**
SANI				S	**Sn**	**01 43 57.4**	**-2.6**
AAI	**Ambon**	**1.80**	**131**	P	**Pn**	**01 43 58.7**	**-0.3**
LBMI	**Labuha**	**1.95**	**20**	P	**Pn**	**01 44 02.1**	**+0.9**
LBMI				S	**Sn**	**01 44 23.3**	**-1.2**
MSAI	**Masohi**	**2.25**	**112**	P	**Pn**	**01 44 06.3**	**+1.1**
TNTI	**Ternate**	**3.28**	**9**	P	**Pn**	**01 44 18.7**	**-0.8**
BNDI	**Bandanaira**	**3.66**	**124**	P	**Pn**	**01 44 24.6**	**-0.1**
LUWI	**Luwuk**	**4.32**	**289**	P	**Pn**	**01 44 33.5**	**-0.2**
SWI	**Sorong**	**4.70**	**70**	P	**Pn**	**01 44 37.8**	**-1.2**
SIJI	**Sorong**	**4.70**	**70**	P	**Pn**	**01 44 38.0**	**-1.0**
	15nm,0.3s,baz=239,slow=24,SNR=24						
SIJI				S	**Sn**	**01 45 29.1**	**-3.3**
	21nm,0.5s,baz=262,slow=22,SNR=1.9						
	44nm,0.2s						
FAKI	**Fak Fak**	**5.42**	**95**	P	**Pn**	**01 44 47.6**	**-1.2**
	0.3nm41nm,1.3s						
APSI	**Ampana**	**5.43**	**287**	P	**Pn**	**01 44 49.2**	**+0.2**
	0.5nm2µm126nm,0.8s						
MRSI	**Marisa**	**5.72**	**301**	P	**Pn**	**01 44 51.9**	**-1.1**
KAPI	**Kappang**	**7.51**	**250**	P	Pn	01 45 23.2	+5.6
	7.3nm,0.3s,baz=81,slow=9.9,SNR=13						
KAPI				LR	LR	01 48 18.2	
	comp=Z,58nm,19.6s,baz=80,slow=37						
	16nm,0.3s						
WRA	**Warramunga Arr**	**18.83**	**158**	P	**P**	**01 47 47.4**	**0.0**
	0.4nm,0.3s,baz=339,slow=12,SNR=15						
WRA				S	**Sn**	**01 51 15.2**	**-2.8**
	1.1nm,0.9s,baz=339,slow=21,SNR=5.0						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**22.13**	**163**	P	**P**	**01 48 23.5**	**+0.2**
	1.0nm,0.4s,baz=344,slow=11,SNR=9.7						
ASAR				S	**S**	**01 52 22.3**	**-3.0**
	0.7nm,0.6s,baz=343,slow=21,SNR=4.1						
	1.0nm,0.4s						
GUMO	**Guam**	**23.98**	**48**	LR	LR	01 58 44.0	
	comp=Z,22nm,18.1s,baz=125,slow=38						
STKA	**Stephens Creek**	**32.37**	**156**	P	**P**	**01 49 57.5**	**+0.6**
	0.6nm,0.2s,baz=343,slow=17,SNR=1.4						
	0.6nm,0.2s						
SONM	**Songino Array**	**53.22**	**343**	P	**P**	**01 52 48.3**	**+2.7**
	1.4nm,0.7s,baz=164,slow=8.3,SNR=6.6						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**62.76**	**327**	P	**P**	**01 53 54.1**	**+1.8**
	1.5nm,0.4s,baz=115,slow=8.1,SNR=15						
	1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**66.18**	**334**	P	**P**	**01 54 15.5**	**+1.0**
	0.8nm,0.5s,baz=101,slow=4.6,SNR=2.2						
	0.8nm,0.5s						
NRIK	**Noril'sk**	**76.46**	**347**	LR	LR	02 33 10.4	
	comp=Z,19nm,19.1s,baz=258,slow=39						

*IDC **11** 02:19:55.6±0.8, 67°.18N×21°.00E, h0km, mbtmp3.3/5, ML2.5/5, Error ellipse: s-maj=15.1km s-min=6.8km az=107.0*
*KOLA **11** 02:19:55.8, 67°.14N×20°.51E, h0km, ML2.2*
*BER **11** 02:19:56.7±2.1, 67°.00N×21°.06E, h0km, ML2.0, Confirmed Induced event*
*HEL **11** 02:19:56.1±0.1, 67°.19N×20°.64E, h1km, ML2.0, ML2.7(UPP), Confirmed Induced event*

ISC 11 02:19:54.7±0.7**, 67°.16N**±0°.03×**20°.67E**±0°.03**, h0km, n35, σ1§40/50, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.80**	**351**	*i* P	**Pg**	**02 20 09.9**	**-0.2**
KUA				*i* S	**Sg**	**02 20 20.7**	**+0.2**
SALU	**Saltoluokta**	**0.87**	**286**	*i* P	**Pg**	**02 20 11.6**	**+0.3**
PAJU	**Pajala**	**0.97**	**97**	*eP*	**Pg**	**02 20 13.5**	**+0.3**
PAJU				*eS*	**Sg**	**02 20 27.1**	**+1.3**
HARU	**Harads**	**1.01**	**173**	*eP*	**Pg**	**02 20 14.5**	**+0.4**
LANU	**Lannavaara**	**1.02**	**29**	*eP*	**Pg**	**02 20 13.8**	**-0.5**
LANU				*eS*	**Sg**	**02 20 27.4**	**-0.2**
KOVU	**Salmi**	**1.08**	**350**	*eP*	**Pg**	**02 20 14.9**	**-0.5**
KLF	**Kolari**	**1.29**	**85**	*eP*	**Pg**	**02 20 19.2**	**-0.2**
KLF				*eS*	**Sg**	**02 20 36.6**	**+0.6**
HEF	**Hetta**	**1.69**	**41**	*eP*	**Pn**	**02 20 25.9**	**+0.4**
HEF	**Hetta**	**1.69**	**41**	*eP*	**Pn**	**02 20 25.5**	**0.0**
HEF				*eS*	**Sn**	**02 20 47.1**	**-0.7**
HEF				MSG		02 20 51.3	
	comp=Z,7.8nm,0.2s						
KALU	**Kalix**	**1.70**	**139**	*eP*	**Pn**	**02 20 26.7**	**+1.2**
KALU				*eS*	**Sb**	**02 20 50.0**	**+1.4**
SJUU	**Sjulsmark**	**1.71**	**167**	*eP*	**Pn**	**02 20 26.8**	**+1.1**
TOF	**Tornio**	**1.82**	**125**	*eP*	**Pn**	**02 20 28.7**	**+1.5**
TOF				*eSG*	**Sb**	**02 20 53.0**	**+0.8**
KIF	**Kilpisjarvi**	**1.85**	**2**	*eP*	**Pb**	**02 20 29.1**	**-0.3**
KIF				*eS*	**Sg**	**02 20 55.1**	**+1.0**
KIF	**Kilpisjarvi**	**1.85**	**2**	*eP*	**Pn**	**02 20 28.8**	**+1.2**
KIF				*eSG*	**Sg**	**02 20 54.5**	**+0.4**
FAUS	**Fauske**	**2.10**	**278**	*eP*	**Pb**	**02 20 33.2**	**-0.4**
FAUS				*eS*	**Sb**	**02 21 01.5**	**+1.3**
FAUS				IAML		02 21 02.4	
	comp=Z,16nm,0.4s						
RNF	**Rovaniemi**	**2.18**	**102**	*eP*	**Pn**	**02 20 33.8**	**+1.6**
RNF				*eSG*	**Sb**	**02 21 03.5**	**+0.9**
RNF				MSG		02 21 05.2	
	comp=Z,9.5nm,0.2s						
STEI	**Steigen**	**2.22**	**293**	*eP*	**Pn**	**02 20 34.3**	**+1.6**
STEI				IAML		02 21 07.7	
	comp=Z,12nm,0.6s						
SGF	**Sodankyl**	**2.29**	**80**	*eP*	**Pn**	**02 20 35.1**	**+1.4**
SGF				*eSB*	**Sb**	**02 21 05.8**	**+0.1**
SGF				MSG		02 21 07.8	
	comp=Z,9.3nm,0.3s						
JETT	**Jettan, Norway**	**2.41**	**358**	*eP*	**Pn**	**02 20 37.5**	**+2.2**
JETT				*eS*	**Sb**	**02 21 09.8**	**+0.8**
JETT				IAML		02 21 14.5	
	comp=Z,17nm,0.3s						
TRO	**Tromso**	**2.56**	**346**	*eP*	**Pn**	**02 20 39.0**	**+1.6**
TRO				IAML		02 21 16.6	
	comp=Z,14nm,0.4s						
MOR8	**Moi Rana**	**2.67**	**251**	*eP*	**Pn**	**02 20 39.7**	**+0.7**
MOR8				IAML		02 21 17.5	
	comp=Z,16nm,0.3s						
OUL	**Oulu**	**2.98**	**132**	MSG		02 21 35.4	
	comp=Z,4.3nm,0.3s						
ARA0	**ARCESS Array S**	**2.98**	**35**	*eP*	**Pn**	**02 20 44.4**	**+1.2**
ARCES	**ARCESS Array B**	**2.98**	**35**	Pn	**Pn**	**02 20 44.0**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=214,slow=13,SNR=106						
ARCES				Pg	**Pb**	**02 20 46.6**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=218,slow=16,SNR=4.3						
ARCES				Lg	Lg	02 21 24.1	
	comp=Z,1.2nm,0.3s,baz=214,slow=26,SNR=11						
	comp=Z,2.0nm,0.3s						
ARCES	**ARCESS Array B**	**2.98**	**35**	P	**Pn**	**02 20 43.9**	**+0.7**
ARCES				S	**Sn**	**02 21 21.1**	**+1.5**
OBF0	**Syolatti, Pyha**	**3.05**	**150**	MSG		02 21 39.4	
	comp=Z,5.4nm,0.2s						
KONS	**Konsvik**	**3.06**	**261**	*eP*	**Pn**	**02 20 46.0**	**+1.8**
OUF	**Merijarvi**	**3.27**	**147**	MSG		02 21 38.7	
	comp=Z,3.0nm,0.2s						
KEV	**Kevo**	**3.50**	**39**	*eP*	**Pn**	**02 20 51.2**	**+0.9**
HAMF	**Hammerfest**	**3.66**	**16**	*eP*	**Pn**	**02 20 55.0**	**+2.5**
APA0	**Apatity Array**	**4.78**	**79**	P	**Pn**	**02 21 09.2**	**+1.3**
APA0				S	**Sn**	**02 22 03.1**	**-0.7**
FINES	**FINESS Array B**	**6.20**	**155**	Pn	**Pn**	**02 21 28.5**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=336,slow=12,SNR=20						
FINES				Sn	**Sn**	**02 22 38.1**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=342,slow=18,SNR=1.4						
FINES				Lg	Lg	02 23 11.2	
	comp=Z,0.5nm,0.3s,baz=344,slow=29,SNR=3.5						
	comp=Z,1.4nm,0.4s						
NOA	**NORSAR Array B**	**7.40**	**218**	Pn	**Pn**	**02 21 44.4**	**+0.5**
	baz=28,slow=11,SNR=5.0						
NOA				Sn	Sn	02 23 00.6	-7.9
	baz=28,slow=14,SNR=3.3						
	comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**7.70**	**207**	Pn	**Pn**	**02 21 47.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=18,slow=14,SNR=17						
HFS				Sn	**Sn**	**02 23 09.8**	**-6.0**
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=1.7						
	comp=Z,0.9nm,0.3s						
SPITS	**Spitsbergen Ar**	**11.14**	**355**	Pn	**Pn**	**02 22 35.0**	**0.0**
	baz=156,slow=12						
	comp=Z,6.2nm,0.9s						

*IDC **11** 02:35:39.9±6.0, 5°.33S×147°.20E, h161km±62km, mb3.6/3, mbtmp4.1/6, Error ellipse: s-maj=87.5km s-min=27.0km az=138.0*
*NEIC **11** 02:35:43.0±1.6, 5°.3S±0°.1×147°.3E±0°.1, h204km±7km, mb4.5/13, Error ellipse: s-maj=19.7km s-min=14.9km az=211.0*

ISC 11 02:35:42.1±0.7**, 5°.39S**±0°.08×**147°.3E**±0°.1**, h200km, n23, σ1§42/25, mb4.5/7, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.99**	**181**	P	**Pn**	**02 36 41.2**	**-2.5**
	50nm,0.3s,baz=42,slow=11,SNR=36						
PMG				S	Sn	02 37 24.6	-7.7
	46nm,0.4s,baz=35,slow=21,SNR=13						
COEN	**Coen**	**9.41**	**205**	Pn	**Pn**	**02 37 54.5**	**+0.6**
CTA	**Charters Tower**	**14.64**	**184**	P	**Pn**	**02 39 01.0**	**+1.0**
	4.9nm,0.6s,baz=2.6,slow=12,SNR=8.0						
CTAO	**Charters Tower**	**14.64**	**184**	P	**P**	**02 39 03.0**	**+1.9**
WB0	**Warramunga Arr**	**19.00**	**220**	P	**P**	**02 39 49.5**	**+0.6**
WR0	**Warramunga Arr**	**19.05**	**219**	P	**P**	**02 39 50.1**	**+0.7**
WR0				IAmb	IAmb	02 39 50.7	
	comp=Z,15nm,1.1s						
WB2	**Warramunga Arr**	**19.16**	**220**	P	**P**	**02 39 51.2**	**+0.6**
WB2				IAmb	IAmb	02 39 52.4	
	comp=Z,7.1nm,0.8s						
WRA	**Warramunga Arr**	**19.16**	**220**	P	**P**	**02 39 51.2**	**+0.5**
	comp=Z,2.8nm,0.4s,baz=42,slow=11,SNR=72						
WRA				S	**S**	**02 43 13.7**	**-3.5**
	comp=Z,1.0nm,0.8s,baz=41,slow=22,SNR=5.0						
WRA	**Warramunga Arr**	**19.16**	**220**	P	**P**	**02 39 49.7**	**-1.0**
AS31	**Alice Springs**	**22.26**	**214**	P	**P**	**02 40 24.2**	**+1.2**
AS31				IAmb	IAmb	02 40 24.9	
	comp=Z,5.2nm,0.2s						
ASAR	**Alice Springs**	**22.27**	**214**	P	**P**	**02 40 23.9**	**+1.0**
	comp=Z,4.3nm,0.6s,baz=48,slow=8.3,SNR=80						
ASAR				S	**S**	**02 44 11.9**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=31,slow=18,SNR=2.4						
	comp=Z,4.3nm,0.6s						
ASAR	**Alice Springs**	**22.27**	**214**	P	**P**	**02 40 23.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**24.61**	**237**	P	**P**	**02 40 45.2**	**+1.0**
	comp=Z,2.3nm,0.5s,baz=55,slow=10,SNR=18						
	comp=Z,2.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.61**	**237**	P	**P**	**02 40 45.5**	**+1.3**
FITZ				IAmb	IAmb	02 40 54.0	
	comp=Z,8.5nm,1.4s						
FUNA	**Funafuti**	**31.84**	**97**	P	**P**	**02 41 48.1**	**-0.5**
SSLB	**Suanglung**	**38.73**	**320**	P	**P**	**02 42 46.9**	**-0.3**
SSLB				IAmb	IAmb	02 43 27.6	
	comp=Z,21nm,1.2s						
MXZ	**Matakaoa Point**	**42.73**	**143**	P	**P**	**02 43 20.0**	**+0.4**
INCN	**Inchon**	**46.79**	**337**	P	**P**	**02 43 51.0**	**-0.7**
ILSW	**Iliamna Southw**	**80.06**	**26**	P	**P**	**02 47 27.9**	**-1.5**
ILSW				IAmb	IAmb	02 48 07.6	
	comp=Z,5.3nm,0.5s						
KBL	**Kabul**	**83.39**	**306**	P	**P**	**02 47 46.0**	**-1.6**
KBL				IAmb	IAmb	02 48 15.1	
	comp=Z,4.4nm,0.5s						
QSPA	**South Pole Qui**	**84.57**	**180**	P	**P**	**02 47 53.4**	**+0.7**
ILAR	**Eielson Array**	**84.82**	**23**	P	**P**	**02 47 55.6**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=251,slow=4.1,SNR=4.9						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**145.19**	**285**	PKPbc	**PKPab**	**02 54 58.8**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=72,slow=3.2,SNR=7.8						

*NEIC **11** 02:41:31.6±0.7, 21°.5S±0°.1×176°.5W±0°.2, h128km±10km, mb4.5/9, Error ellipse: s-maj=27.9km s-min=10.3km az=135.0*
*IDC **11** 02:41:39.9±3.7, 21°.92S×176°.33W, h209km±29km, mb3.4/4, mbtmp4.1/7, Error ellipse: s-maj=32.7km s-min=23.2km az=111.0*

ISC 11 02:41:38.9±1.0**, 21°.9S**±0°.1×**176°.4W**±0°.2**, h200km, n23, σ1§93/20, mb4.1/10, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.69**	**308**	P	**Pn**	**02 43 15.9**	**+0.7**
	5.9nm,0.2s,baz=52,slow=20,SNR=15						
NIUE	**Niue**	**6.70**	**66**	Pn	Pn	02 43 06.8	-8.5
DZM	**Mont Dzumac**	**15.91**	**266**	P	**P**	**02 45 13.7**	**+1.7**
	11nm,0.9s,baz=84,slow=18,SNR=4.6						
URZ	**Urewera**	**17.20**	**198**	P	**P**	**02 45 27.6**	**+1.8**
	7.8nm,0.6s,baz=23,slow=7.7,SNR=10						
URZ				S	**S**	**02 48 29.3**	**-5.1**
	3.7nm,0.6s,baz=49,slow=10,SNR=1.3						
CTA	**Charters Tower**	**34.85**	**266**	P	**P**	**02 48 12.6**	**+1.3**
	1.8nm,0.5s,baz=102,slow=15,SNR=1.9						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**45.66**	**258**	P	**P**	**02 49 40.5**	**+0.5**
	2.0nm,0.9s,baz=100,slow=7.6,SNR=20						

	baz=309							
NDS				S		Sn	02 47 01.4	-1.4
	baz=309							
ETLH	**Xiulin Townshi**	**0.86**	**281**	P		Pb	02 46 50.7	-0.1
	baz=276							
ETLH				S		Sn	02 47 02.7	-0.3
	baz=276							
ESL	**Shilin**	**0.93**	**255**	P		Pb	02 46 51.6	-0.2
	baz=244							
ESL				S		Sb	02 47 04.2	+0.5
	baz=244							
LATG	**Datong**	**0.94**	**301**	P		Pn	02 46 52.0	-0.2
	baz=297							
LATG				*e*S		Sn	02 47 06.4	+1.4
	baz=297							
NTC	**Toucheng**	**0.96**	**327**	P		Pn	02 46 52.9	+0.5
	baz=323							
ENTT	**Nioudou**	**0.97**	**307**	*i* P		Pn	02 46 52.3	-0.2
	baz=304							
ENTT				*i* S		Sn	02 47 05.2	-0.4
	baz=304							
EGFH	**Guangfu**	**0.98**	**247**	*e*S		Sn	02 47 06.0	+0.3
	baz=245							
NDT	**Datong Townshi**	**0.99**	**304**	*i* P		Pn	02 46 51.9	-0.9
	baz=300							
NDT				*i* S		Sn	02 47 05.6	-0.4
	baz=300							
NNSB	**Datong**	**1.01**	**292**	P		Pb	02 46 53.0	-0.3
	baz=288							
NNSB				S		Sn	02 47 06.6	-0.1
	baz=288							
NNS	**Nan Shan**	**1.02**	**292**	P		Pb	02 46 54.1	+0.5
	baz=289							
NNS				S		Sn	02 47 06.9	-0.1
	baz=289							
FUSB	**Fushanzhiwuyua**	**1.03**	**313**	P		Pb	02 46 53.9	+0.2
	baz=309							
FUSB				S		Sn	02 47 07.8	+0.7
	baz=309							
WHF	**Hehuan Shan**	**1.05**	**275**	*i* P		Pn	02 46 53.6	-0.4
	baz=272							
WHF				*i* S		Sn	02 47 09.2	+1.1
	baz=272							
HGSD	**Ruisui**	**1.06**	**239**	P		Pn	02 46 53.5	-0.2
	baz=237							
HGSD				S		Sn	02 47 07.4	-0.4
	baz=237							
TIPB	**Shuangxi**	**1.06**	**330**	*i* P		Pb	02 46 54.5	+0.4
	baz=326							
TIPB				*i* S		Sn	02 47 07.9	0.0
	baz=326							
FUSS	**Fushou**	**1.08**	**281**	*i* P		Pb	02 46 54.8	+0.1
	baz=277							
YHNB	**Yeheng**	**1.13**	**303**	P		Pn	02 46 54.1	-0.7
	baz=286							
YHNB				S		Sn	02 47 10.8	+1.3
	baz=286							
CHGB	**Renai**	**1.13**	**271**	P		Pn	02 46 54.8	-0.2
	baz=256							
CHGB				S		Sb	02 47 10.8	+1.0
	baz=256							
OWD	**Renai**	**1.13**	**265**	*i* P		Pn	02 46 55.1	+0.2
	baz=262							
OWD				S		Sn	02 47 09.5	-0.2
	baz=262							
EHY	**Hungye**	**1.14**	**242**	*i* P		Pn	02 46 54.5	-0.2
	baz=240							
EHY				*i* S		Sn	02 47 09.5	-0.1
	baz=240							
NSK	**Sanguang**	**1.15**	**303**	*i* P		Pn	02 46 54.2	-0.8
	baz=286							
TWT	**Tachien**	**1.15**	**280**	P		Pn	02 46 55.1	0.0
	baz=264							
TWT				S		Sb	02 47 11.1	+0.9
	baz=264							
SXI1	**Grass Mountain**	**1.15**	**335**	P		Pb	02 46 54.9	-0.7
	baz=346							
SXI1				S		Sb	02 47 11.0	+0.8
	baz=346							
TDCB	**Techi**	**1.16**	**280**	*e*S		Sb	02 47 11.0	+0.3
	baz=264							
NWF	**Wu-fen Shan**	**1.17**	**331**	*e*S		Sb	02 47 12.3	+1.6
	baz=327							
WUSB	**Renai**	**1.19**	**267**	P		Pn	02 46 54.4	-1.2
	baz=265							
WUSB				S		Sb	02 47 11.5	+0.2
	baz=265							
VWDT	**VWDT**	**1.20**	**256**	P		Pn	02 46 56.2	+0.6
	baz=243							
VWDT				S		Sn	02 47 09.5	-1.7
	baz=243							
YULB	**Yu-li**	**1.21**	**238**	P		Pn	02 46 55.6	-0.3
	baz=251							
YULB				S		Sn	02 47 10.0	-1.6
	baz=251							
EYUL	**Yuli**	**1.22**	**235**	*i* P		Pn	02 46 55.8	-0.2
	baz=234							
EYUL				*i* S		Sn	02 47 12.0	+0.2
	baz=234							
IRIF	**Iriomote-Funau**	**1.24**	**76**	P		Pn	02 46 56.4	+0.3
IRIF				*e*S		Sb	02 47 12.7	+0.1
HATJ	**Hateruma jima**	**1.27**	**89**	*e*S		Sb	02 47 14.1	+0.4
NFF	**Wufeng Townshi**	**1.31**	**296**	P		Pb	02 46 58.2	-0.3
	baz=293							
NFF				S		Sb	02 47 15.8	+0.8
	baz=293							
FULB	**Fuli**	**1.33**	**231**	P		Pn	02 46 58.0	+0.5
	baz=230							
FULB				S		Sn	02 47 14.8	+0.4
	baz=230							
YM01	**YM01**	**1.33**	**325**	S		Sb	02 47 15.4	0.0
	baz=335							
WHP	**Taichung City**	**1.36**	**280**	P		Pb	02 46 59.6	+0.4
	baz=265							
WHP				*e*S		Sb	02 47 16.6	+0.4
	baz=265							
SSLB	**Suanglung**	**1.36**	**259**	P		Pb	02 46 59.6	+0.4
	baz=246							
WCS	**Beigang Elemen**	**1.37**	**271**	P		Pn	02 46 58.8	-0.6
	baz=267							
SMLT	**Sun Moon Lake**	**1.39**	**263**	P		Pb	02 46 59.9	0.0
	baz=260							
LIOB	**Emei**	**1.40**	**295**	*e*P		Pb	02 46 59.5	-0.4
	baz=292							
LIOB				*e*S		Sb	02 47 18.9	+1.4
	baz=292							
YUS	**Yu-Shan**	**1.45**	**248**	*i* P		Pb	02 47 01.4	+0.3
	baz=246							
YUS				S		Sn	02 47 17.9	-0.2
	baz=246							
JKRS	**Kuro-shima**	**1.47**	**82**	P		Pn	02 47 00.2	+0.8
JKRS				*e*S		Sb	02 47 19.4	0.0
EDH	**Donghe**	**1.48**	**224**	S		Sn	02 47 16.3	-1.8
	baz=224							
ELDTW	**Lidau**	**1.54**	**236**	P		Pn	02 46 59.9	-0.6
	baz=236							
ELDTW				S		Sn	02 47 18.6	-1.2
	baz=236							
ALS	**Alishan**	**1.57**	**250**	*e*P		Pn	02 47 02.3	+1.3
	baz=248							
JIJ	**Ishigaki jima**	**1.61**	**78**	P		Pn	02 47 01.7	+0.3
JIJ				*e*S		Sn	02 47 20.9	-0.5
CHN5	**Tsauling**	**1.65**	**254**	*e*P		Pb	02 47 04.1	-0.1
	baz=243							
CHN5				S		Sb	02 47 24.3	-0.3
	baz=243							
STYH	**Taoyuan**	**1.74**	**240**	*e*P		Pn	02 47 04.8	+1.7
	baz=230							
STYH				*e*S		Sn	02 47 24.3	-0.1
	baz=230							
WDLH	**Douliu**	**1.75**	**259**	*e*S		Sb	02 47 29.6	+2.1
	baz=257							
TPUB	**Ta-pu**	**1.80**	**246**	*e*S		Sb	02 47 29.2	+0.4
	baz=245							
CHN4	**Tsaushan**	**1.81**	**248**	*i* P		Pb	02 47 06.1	-0.8
	baz=247							
CHN4				*i* S		Sb	02 47 28.6	-0.5
	baz=247							
WTP	**Ta-pu**	**1.83**	**244**	P		Pb	02 47 06.9	-0.4
	baz=244							
WTP				S		Sb	02 47 29.6	-0.2
	baz=244							
TWK	**Hsinying**	**1.93**	**247**	*e*S		Sb	02 47 31.9	-0.7
	baz=246							
CHN1	**Nanshi**	**1.93**	**244**	*e*S		Sb	02 47 32.9	+0.3
	baz=243							

*IDC **11** 02:46:45.3±1.3,31.59S×71.22W,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=61.2km s-min=40.5km az=81.0*

*GUC **11** 02:46:54.0±0.7,31.48S×71.19W,h62km±2km,ML3.5*

ISC 11 02:46:54.2±0.9,31.46S±0.03×71.19W±0.08,h61km±8km, n30,σ0.78/38,mb3.5/3,2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.30**	**33**	*e*P	**Pn**	**02 47 04.2**	**-0.3**
CO02				*e*S	**Sn**	**02 47 11.9**	**-0.1**
CO03	**El Pedregal**	**0.75**	**35**	*i* P	**Pn**	**02 47 09.3**	**+0.1**
CO03				*e*S	**Sn**	**02 47 20.6**	**+0.4**
CO03				IAML		02 47 21.9	
	comp=E,6μm,0.1s						
CO06	**Fray Jorge**	**0.87**	**334**	*e*P	**Pn**	**02 47 11.1**	**+0.5**
CO06				*e*S	**Sn**	**02 47 23.5**	**+0.8**
CO06				IAML		02 47 26.8	
	comp=N,2μm,0.2s						
VA06	**Catapilco**	**1.10**	**185**	*e*P	**Pn**	**02 47 13.5**	**-0.2**
VA06				*e*S	**Sn**	**02 47 28.2**	**+0.1**
VA06				IAML		02 47 32.9	
	comp=E,1μm,0.2s						
VA03	**San Esteban**	**1.41**	**158**	*e*P	**Pn**	**02 47 17.8**	**0.0**
VA03				*e*S	**Sn**	**02 47 36.0**	**+0.4**
VA03				IAML		02 47 37.4	
	comp=E,2μm,0.1s						
ROCH	**El Roble**	**1.52**	**174**	*e*P	**Pn**	**02 47 19.8**	**+0.4**
ROCH				*e*S	**Sn**	**02 47 39.2**	**+0.9**
ROCH				IAML		02 47 40.5	
	comp=N,677nm,0.2s						
CO05	**La Serena**	**1.53**	**358**	*e*P	**Pn**	**02 47 19.6**	**+0.3**
CO05				*e*S	**Sn**	**02 47 37.0**	**-1.3**
CO05				IAML		02 47 47.4	
	comp=E,817nm,0.3s						
VA01	**Torpederas**	**1.61**	**194**	*e*P	**Pn**	**02 47 21.2**	**+0.8**
VA01				*e*S	**Sn**	**02 47 42.3**	**+2.2**
PEL	**Peldehue**	**1.74**	**166**	*e*P	**Pn**	**02 47 22.6**	**+0.4**
PEL				*e*S	**Sn**	**02 47 43.6**	**+0.3**
PEL				IAML		02 47 50.0	
	comp=N,341nm,0.2s						
CO01	**Juntas del Tor**	**1.75**	**33**	*e*P	**Pn**	**02 47 23.6**	**+1.1**
CO01				*e*S	**Sn**	**02 47 45.4**	**+1.4**
CO01				IAML		02 47 46.0	
	comp=N,497nm,0.2s						
MT02	**Curacav**	**1.80**	**179**	*e*P	**Pn**	**02 47 22.7**	**-0.2**
MT02				*e*S	**Sn**	**02 47 44.8**	**0.0**
MT02				IAML		02 47 47.7	
	comp=E,338nm,0.3s						
MT05	**Renca**	**1.97**	**169**	*e*P	**Pn**	**02 47 26.0**	**+0.7**
MT05				*e*S	**Sn**	**02 47 49.4**	**+0.4**
MT05				IAML		02 47 58.9	
	comp=E,774nm,0.3s						
MT03	**Universidad Ad**	**2.11**	**164**	*e*P	**Pn**	**02 47 28.1**	**+0.8**
MT03				*e*S	**Sn**	**02 47 52.6**	**+0.1**
MT03				IAML		02 48 07.8	
	comp=N,533nm,0.3s						
VA05	**Santo Domingo**	**2.22**	**189**	*e*P	**Pn**	**02 47 28.5**	**-0.2**
VA05				*e*S	**Sn**	**02 47 56.5**	**+1.4**
VA05				IAML		02 48 03.4	
	comp=N,355nm,0.2s						
MT09	**Talagante**	**2.32**	**176**	*e*P	**Pn**	**02 47 30.4**	**+0.2**
MT09				*e*S	**Sn**	**02 47 57.8**	**+0.1**
MT09				IAML		02 48 03.6	
	comp=E,231nm,0.2s						
MT01	**Popeta**	**2.40**	**181**	*e*P	**Pn**	**02 47 31.3**	**+0.2**
MT01				*e*S	**Sn**	**02 47 59.4**	**-0.1**
MT01				IAML		02 48 06.1	
	comp=E,321nm,0.2s						
LCO	**Las Campanas**	**2.47**	**10**	*e*P	**Pn**	**02 47 32.7**	**+0.3**
LCO				*e*S	**Sn**	**02 48 02.5**	**+0.9**
H03N1	**Juan Fernandez**	**6.82**	**251**	T	T	02 55 15.2	
	baz=77,slow=72,SNR=623						
H03N3	**Juan Fernandez**	**6.83**	**251**	T	T	02 55 16.2	
	baz=77,slow=72,SNR=552						
H03N2	**Juan Fernandez**	**6.83**	**251**	T	T	02 55 16.8	
	baz=77,slow=72,SNR=412						
QSPA	**South Pole Qui**	**58.77**	**180**	P	**P**	**02 56 44.1**	**-1.7**
	comp=E,0.5nm,0.8s,baz=132,slow=7.2,SNR=1.2						
	comp=E,0.5nm,0.8s						
TXAR	**Lajitas Array**	**67.89**	**330**	P	**P**	**02 57 46.6**	**+0.2**
	comp=E,0.1nm,0.4s,baz=165,slow=7.5,SNR=1.6						
	comp=E,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**82.67**	**70**	P	**P**	**02 59 11.7**	**+0.2**
	comp=E,0.3nm,0.5s,baz=238,slow=5.7,SNR=5.9						
	comp=E,0.3nm,0.5s						
H11S2	**WAKE ISLAND Hyl**	**26.49**	**271**	T	T	05 24 52.6	
	baz=116,slow=75,SNR=6.9						
H11S1	**WAKE ISLAND Hyl**	**26.50**	**271**	T	T	05 24 50.9	
	baz=116,slow=75,SNR=6.4						
H11S3	**WAKE ISLAND Hyl**	**26.51**	**271**	T	T	05 24 48.8	
	baz=116,slow=75,SNR=5.5						
H11N3	**WAKE ISLAND Hyl**	**26.84**	**272**	T	T	05 25 17.4	
	baz=114,slow=74						
H11N1	**WAKE ISLAND Hyl**	**26.86**	**272**	T	T	05 25 26.2	
	baz=114						
H11N2	**WAKE ISLAND Hyl**	**26.86**	**272**	T	T	05 25 18.7	
	baz=114,slow=74						
ZALV	**Zalesovo Beam**	**151.69**	**30**	PKPbc	**PKPbc**	**03 06 41.0**	**-0.2**
	comp=E,1.0nm,0.5s,baz=326,slow=3.2,SNR=4.0						

*IDC **11** 03:17:01.3±0.9,21.25S×67.77W,h146km±11km,mb3.5/2, mbtmp3.8/4,MS2.8/1,Error ellipse: s-maj=32.7km s-min=13.9km az=125.0*

*GUC **11** 03:17:03.0±0.9,21.21S×68.12W,h159km±8km,ML3.3*

*SCB **11** 03:17:04.7±0.6,21.28S×68.11W,h156km±8km,ML3.2/3, MW3.0,Error ellipse: s-maj=3.5km s-min=2.3km az=0.0*

ISC 11 03:17:01.5±0.8,21.16S±0.04×68.04W±0.05,h153km±8km, n28,σ1.47/44,1C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**1.29**	**240**	*i* P	**Pn**	**03 17 30.5**	**+1.2**
PB09				*e*S	**Sn**	**03 17 51.8**	**+1.1**
PB09				IAML		03 17 54.8	
	comp=N,200nm,0.3s						
PB01	**IPOC Station P**	**1.35**	**275**	*i* P	**Pn**	**03 17 30.2**	**+0.4**
PB01				*e*S	**Sn**	**03 17 52.0**	**+0.4**
PB01				IAML		03 17 53.2	
	comp=N,361nm,0.2s						
LVC	**Limon Verde**	**1.66**	**209**	P	**Pn**	**03 17 34.1**	**+0.8**
	comp=N,36nm,0.4s,baz=46,slow=9.7,SNR=93						
LVC				S	**Sn**	**03 17 57.7**	**-0.1**
	comp=N,45nm,0.3s,baz=31,slow=6.3,SNR=6.3						
LVC	**Limon Verde**	**1.66**	**209**	*i* P	**Pn**	**03 17 33.9**	**+0.5**
LVC				*e*S	**Sn**	**03 17 57.6**	**-0.2**
PB02	**IPOC Station P**	**1.74**	**264**	*i* P	**Pn**	**03 17 34.3**	**+0.4**
PB02				*e*S	**Sn**	**03 17 58.1**	**-0.7**
PB02				IAML		03 18 00.6	
	comp=E,770nm,0.3s						
PB02	**IPOC Station P**	**1.74**	**264**	P	**Pn**	**03 17 34.5**	**+0.6**
PB07	**IPOC Station P**	**1.81**	**251**	*i* P	**Pn**	**03 17 35.2**	**+0.4**
PB07				*e*S	**Sn**	**03 17 59.3**	**-1.0**
PB07				IAML		03 18 01.3	
	comp=N,364nm,0.2s						
GO01	**Chusmiza**	**1.83**	**324**	*i* P	**Pn**	**03 17 36.5**	**+1.0**
GO01				*e*S	**Sn**	**03 18 02.3**	**+0.9**
GO01				IAML		03 18 07.5	
	comp=N,121nm,0.2s						
PATCX	**Punta Patache**	**2.00**	**279**	*i* P	**Pn**	**03 17 37.5**	**+0.7**
PATCX				*e*S	**Sn**	**03 18 03.3**	**-0.8**
PATCX				IAML		03 18 06.2	
	comp=N,301nm,0.2s						
TA01	**Diego Aracena**	**2.08**	**286**	*i* P	**Pn**	**03 17 37.5**	**-0.2**
TA01				*e*S	**Sn**	**03 18 04.4**	**-1.2**
TA01				IAML		03 18 06.0	
	comp=E,176nm,0.2s						
PB06	**IPOC Station P**	**2.10**	**222**	*i* P	**Pn**	**03 17 38.3**	**+0.3**
PB06				*e*S	**Sn**	**03 18 05.8**	**-0.5**
PB06				IAML		03 18 08.1	
	comp=E,271nm,0.2s						
PB06	**IPOC Station P**	**2.10**	**222**	P	**Pn**	**03 17 38.2**	**+0.1**
PB06				S	**Sn**	**03 18 02.7**	**-3.6**
PB06				IAML		03 18 07.0	
	comp=E,220nm,0.2s						
MOCB	**Mochara**	**2.25**	**93**	P	**Pn**	**03 17 41.8**	**+1.7**
MOCB				S	**Sn**	**03 18 09.9**	**+0.1**
MOCB				IAML		03 18 12.0	
	comp=E,41nm,0.4s						
PB04	**IPOC Station P**	**2.28**	**239**	*i* P	**Pn**	**03 17 40.2**	**0.0**
PB04				*e*S	**Sn**	**03 18 08.4**	**-1.8**
PB04				IAML		03 18 14.4	
	comp=N,174nm,0.1s						
PB04	**IPOC Station P**	**2.28**	**239**	P	**Pn**	**03 17 40.7**	**+0.4**
PB04				S	**Sn**	**03 18 06.7**	**-3.5**
PB04				IAML		03 18 14.5	
	comp=N,151nm,0.2s						
PB15	**IPOC Station P**	**2.43**	**213**	*i* P	**Pn**	**03 17 43.2**	**+1.1**
PB15				*e*S	**Sn**	**03 18 13.3**	**-0.2**
PB15	**IPOC Station P**	**2.43**	**213**	P	**Pn**	**03 17 42.1**	**0.0**
YJA	**Yavi**	**2.56**	**114**	P	**Pn**	**03 17 45.6**	**+1.7**
PB12	**IPOC Station P**	**3.32**	**319**	*i* P	**Pn**	**03 17 52.3**	**-0.9**
PB12				*e*S	**Sn**	**03 18 31.2**	**-2.0**
BBOE	**La Paz, Chanca**	**4.32**	**1**	P	**Pn**	**03 18 09.2**	**+2.6**
BBOD	**La Paz, Gloria**	**4.53**	**353**	P	**Pn**	**03 18 11.9**	**+2.6**
LPAZ	**La Paz**	**4.84**	**359**	P	**Pn**	**03 18 15.4**	**+1.9**
	comp=N,6.1nm,0.4s,baz=164,slow=7.5,SNR=6.3						
SIV	**San Ignacio**	**8.37**	**53**	P	**Pn**	**03 18 57.4**	**-2.5**
	comp=N,1.9nm,0.3s,baz=243,slow=12,SNR=14						
SIV				S	**Sn**	**03 20 29.7**	**-3.4**
	comp=N,0.6nm,0.3s,baz=171,slow=8.3,SNR=1.6						
PLCA	**Paso Flores**	**19.63**	**186**	P	**P**	**03 21 18.3**	**+0.1**
	comp=N,1.1nm,0.7s,baz=353,slow=8.1,SNR=1.1						
SDV	**Santo Domingo**	**29.96**	**355**	LR	LR	03 38 18.9	
	comp=N,21nm,21.7s,baz=268,slow=42						
TORD	**Torodi Ar. Bea**	**76.48**	**70**	P	**P**	**03 28 34.6**	**-0.3**
	comp=N,0.5nm,0.5s,baz=251,slow=4.6,SNR=11						
	comp=N,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**91.14**	**340**	P	**P**	**03 29 48.9**	**+0.6**
	comp=N,0.4nm,0.5s,baz=122,slow=6.4,SNR=6.0						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**144.88**	**36**	PKP	**PKPdf**	**03 36 20.7**	**+0.4**
	comp=N,0.5nm,0.4s,baz=322,slow=3.8,SNR=4.8						

*IDC **11** 03:22:55.0±12.0,17.33S×178.40W,h520km±139km, mb3.0/4,mbtmp3.9/4,Error ellipse: s-maj=132.7km s-min=48.1km az=156.0*

ISC 11 03:22:57.1±2.1,17.45S±0.7×178.5W±0.4,h547km,n6, σ0.21/6,mb3.4/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.69**	**259**	P	**P**	**03 30 21.8**	**-0.2**
	0.7nm,0.3s,baz=94,slow=7.4,SNR=29						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**44.90**	**254**	P	**P**	**03 30 23.8**	**+0.2**
	3.3nm,0.5s,baz=86,slow=8.8,SNR=36						
	3.3nm,0.5s						
ILAR	**Eielson Array**	**85.38**	**13**	P	**P**	**03 34 36.4**	**+0.1**
	0.2nm,0.7s,baz=222,slow=5.3,SNR=2.2						
	0.2nm,0.7s						
TXAR	**Lajitas Array**	**85.74**	**58**	P	**P**	**03 34 39.0**	**0.0**
	0.4nm,1.0s,baz=258,slow=4.5,SNR=2.6						
	0.4nm,1.0s						
BRTR	**Keskin Array B**	**144.38**	**315**	PKP	**PKPdf**	**03 41 31.5**	**-0.1**
	0.4nm,0.6s,baz=140,slow=4.8,SNR=2.4						
GERES	**GERESS Array B**	**147.09**	**345**	PKPbc	**PKPbc**	**03 41 38.8**	**-0.1**
	0.1nm,0.3s,baz=39,slow=3.8,SNR=4.2						

*ISK **11** 03:26:41.9,34.63N×23.71E,h29km,ML3.5/17*

*ATH **11** 03:26:41.0,34.56N×23.48E,h17km±3km,ML3.4/4,Error ellipse: s-maj=4.2km s-min=1.7km az=159.0*

*THE **11** 03:26:43.0,34.64N×23.58E,h15km±1km,ML3.2/5,Error ellipse: s-maj=2.1km s-min=0.9km az=191.0*

*DDA **11** 03:26:44.0±0.0,34.88N×23.88E,h7km±5km,ML3.0*

*IDC **11** 03:26:45.6±1.8,34.75N×23.61E,h65km±17km,mb3.4/8, mbtmp3.6/11,MS2.5/1,Error ellipse: s-maj=26.8km s-min=18.1km az=153.0*

ISC 11 03:26:41.3±1.5,34.61N±0.07×23.56E±0.04,h31km±10km, n74,σ1.35/93,mb3.8/8,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.49**	**62**	P	**Pn**	**03 26 52.0**	**-0.1**
GVD				S	**Sn**	**03 26 59.1**	**-0.5**
	5μm,0.3s						
GVD	**Gavdhos**	**0.49**	**62**	PG	**Pn**	**03 26 51.7**	**-0.5**
GVD				SG	**Sb**	**03 26 57.4**	**-1.3**
GVD	**Gavdhos**	**0.49**	**62**	P	**Pn**	**03 26 52.1**	**-0.1**
GVD				S	**Sn**	**03 27 00.1**	**+0.4**
GVD				AML	AML	03 27 02.2	
	comp=N,10047μm,0.4s						
GVD				AML	AML	03 27 03.1	
	comp=E,10121μm,0.3s						
KNDR	**Palaiochora Ch**	**0.63**	**9**	PG	**Pn**	**03 26 54.2**	**+0.1**
KNDR				SG	**Sn**	**03 27 04.0**	**+0.9**
KNDR	**Palaiochora Ch**	**0.63**	**9**	P	**Pn**	**03 26 54.2**	**+0.1**
KNDR				S	**Sn**	**03 27 03.9**	**+0.8**
KNDR				AML	AML	03 27 06.0	
	comp=E,7484μm,0.6s						
KNDR				AML	AML	03 27 09.2	
	comp=N,6331μm,0.5s						
IMMV	**Iera Moni Meta**	**0.91**	**22**	P	**Pb**	**03 26 58.9**	**+0.2**
IMMV				S	**Sn**	**03 27 12.6**	**+2.5**
	comp=N,2μm,0.6s						
IMMV	**Iera Moni Meta**	**0.91**	**22**	PG	**Pb**	**03 26 58.6**	**-0.1**
IMMV				SG	**Sb**	**03 27 10.1**	**-0.4**
IMMV	**Iera Moni Meta**	**0.91**	**22**	P	**Pb**	**03 26 59.0**	**+0.4**
IMMV				S	**Sn**	**03 27 12.4**	**+2.2**
IMMV				AML	AML	03 27 17.4	
	comp=E,3829μm,0.5s						
IMMV				AML	AML	03 27 18.4	
	comp=N,2585μm,0.4s						
CHAN	**Chania**	**0.99**	**23**	P	**Pb**	**03 27 00.6**	**+0.7**
CHAN				S	**Sn**	**03 27 14.2**	**+2.3**
CHAN				AML	AML	03 27 19.8	
	comp=N,3545μm,0.9s						
CHAN				AML	AML	03 27 27.5	
	comp=E,2800μm,0.8s						
TMBK	**Timbaki Herakl**	**1.09**	**65**	P	**Pb**	**03 27 02.4**	**+0.8**
SIVA	**Sivas**	**1.10**	**68**	P	**Pb**	**03 27 02.9**	**+1.1**
ANKY	**Antikythira Is**	**1.27**	**350**	P	**Pb**	**03 27 05.1**	**+0.4**
ANKY				S	**Sb**	**03 27 21.2**	**+0.6**
ANKY	**Antikythira Is**	**1.27**	**350**	P	**Pb**	**03 27 05.0**	**+0.4**
IDI	**Anoyia**	**1.28**	**58**	P	**Pb**	**03 27 05.2**	**+0.3**
	comp=E,60nm,0.4s,baz=238,slow=14,SNR=102						
IDI				S	**Sb**	**03 27 21.9**	**+0.8**
	comp=E,106nm,0.4s,baz=316,slow=20,SNR=18						
IDI	**Anoyia**	**1.28**	**58**	P	**Pb**	**03 27 05.0**	**+0.1**
IDI				S	**Sb**	**03 27 21.9**	**+0.8**
	comp=E,478nm,0.7s						
IDI	**Anoyia**	**1.28**	**58**	PN	**Pn**	**03 27 02.8**	**-0.4**
IDI	**Anoyia**	**1.28**	**58**	P	**Pb**	**03 27 05.0**	**+0.1**
IACM	**Heraklion**	**1.42**	**60**	P	**Pb**	**03 27 07.2**	**0.0**
IACM				S	**Sb**	**03 27 25.3**	**+0.4**
	comp=E,3μm,0.7s						
IACM	**Heraklion**	**1.42**	**60**	P	**Pb**	**03 27 07.2**	**0.0**
HRKL	**Herakleio**	**1.44**	**61**	PN	**Pn**	**03 27 05.1**	**-0.2**
KTHA	**Kythira Island**	**1.69**	**346**	P	**Pb**	**03 27 11.2**	**-0.6**
KTHA				S	**Sb**	**03 27 31.7**	**-1.0**
	comp=E,308nm,0.9s						
KTHA	**Kythira Island**	**1.69**	**346**	P	**Pb**	**03 27 11.3**	**-0.6**

YER	**Yerkesik**	**4.59**	**55**	P	**Pn**	**03 27 50.1**	**+1.5**
YER				S	**Sn**	**03 28 38.5**	**-2.3**
AYDN	**Tasoluk**	**4.63**	**48**	P	**Pn**	**03 27 50.3**	**+1.1**
DALY	**Dalyan (Mula)**	**4.69**	**61**	PN	**Pn**	**03 27 51.6**	**+1.7**
FETY	**Fethiye**	**4.93**	**64**	PN	**Pn**	**03 27 52.7**	**-0.6**
TAVA	**DENIZLI_Tavas**	**5.19**	**55**	P	**Pn**	**03 27 57.9**	**+1.0**
TAVA				S	**Sn**	**03 28 56.3**	**+0.6**
AKAS	**Kas**	**5.19**	**70**	PN	**Pn**	**03 27 56.8**	**-0.2**
AKAS	**Kas**	**5.19**	**70**	P	**Pn**	**03 27 56.1**	**-0.8**
AKAS				S	**Sn**	**03 28 49.6**	**-6.3**
AKAS				*i* AML	AML	03 28 56.0	
	comp=E,36nm,0.9s						
AKAS				*i* AML	AML	03 29 00.0	
	comp=E,24nm,0.5s						
CAME	**Cameli-Denizli**	**5.21**	**62**	PN	**Pn**	**03 27 58.9**	**+1.6**
GOLH	**Golhisar**	**5.53**	**60**	P	**Pn**	**03 28 02.8**	**+1.3**
GOLH				*i* AML	AML	03 29 26.0	
	comp=E,10nm,1.1s						
ELL	**Elmali**	**5.59**	**66**	PN	**Pn**	**03 28 04.1**	**+1.7**
ELL	**Elmali**	**5.59**	**66**	P	**Pn**	**03 28 03.3**	**+0.9**
ELL				*i* AML	AML	03 29 04.0	
	comp=E,11nm,1.8s						
ELL				*i* AML	AML	03 29 10.0	
	comp=E,11nm,0.4s						
KEPZ	**Antalya-Kepez**	**6.93**	**68**	P	**Pn**	**03 28 21.3**	**+0.6**
KEPZ				*i* AML	AML	03 29 33.0	
	comp=E,4.8nm,1.7s						
KEPZ				*i* AML	AML	03 29 35.0	
	comp=E,4.7nm,1.4s						
BRTR	**Keskin Array B**	**9.52**	**55**	P	**Pn**	**03 28 56.3**	**-0.1**
	comp=E,0.3nm,0.4s,baz=219,slow=15,SNR=2.4						
CKRC	**Cesky Krumlov**	**15.77**	**337**	*e*P	**P**	**03 30 24.9**	**+0.3**
GERES	**GERESS Array B**	**15.99**	**336**	P	**P**	**03 30 25.8**	**-1.4**
	comp=E,0.6nm,0.5s,baz=151,slow=12,SNR=7.8						
KHC	**Kasperske Hory**	**16.28**	**336**	*e*P	**P**	**03 30 31.8**	**+1.5**
AKASG	**Malin Array Be**	**16.60**	**13**	P	**Pn**	**03 30 30.9**	**-0.7**
	comp=E,0.2nm,0.3s,baz=207,slow=10,SNR=2.7						
KBZ	**Khabaz**	**17.51**	**53**	P	**P**	**03 30 43.7**	**-0.1**
	comp=E,0.5nm,0.3s,baz=238,slow=13,SNR=1.9						
GNI	**Garni**	**17.70**	**66**	LR	LR	03 38 51.2	
	comp=E,16nm,19.3s,baz=274,slow=41						
ESDC	**Sonseca Array**	**22.47**	**291**	P	**P**	**03 31 39.6**	**+1.6**
	comp=E,0.4nm,0.7s,baz=75,slow=8.3,SNR=4.7						
	comp=E,0.4nm,0.7s						
HFS	**Hagfors**	**26.33**	**349**	P	**P**	**03 32 13.8**	**-0.3**
	comp=E,1.7nm,0.5s,baz=140,slow=9.7,SNR=13						
	comp=E,1.7nm,0.5s						
FINES	**FINESS Array B**	**26.90**	**3**	P	**P**	**03 32 19.0**	**-0.2**
	comp=E,2.0nm,1.0s,baz=181,slow=7.2,SNR=1.4						
	comp=E,2.0nm,1.0s						
NOA	**NORSAR Array B**	**27.61**	**347**	P	**P**	**03 32 25.6**	**-0.1**
	comp=E,0.6nm,0.8s,baz=153,slow=11,SNR=1.8						
	comp=E,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**29.14**	**228**	P	**P**	**03 32 41.8**	**+2.1**
	comp=E,0.2nm,0.4s,baz=33,slow=8.9,SNR=6.6						
	comp=E,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**34.99**	**1**	P	**P**	**03 33 29.9**	**-0.5**
	comp=E,1.6nm,0.8s,baz=175,slow=12,SNR=4.3						
	comp=E,1.6nm,0.8s						
MKAR	**Makanchi Array**	**45.17**	**56**	P	**P**	**03 34 55.0**	**-0.1**
	comp=E,0.6nm,0.4s,baz=270,slow=7.8,SNR=9.5						
	comp=E,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**46.33**	**46**	P	**P**	**03 35 03.3**	**-0.8**
	comp=E,0.6nm,0.4s,baz=278,slow=6.3,SNR=2.8						
	comp=E,0.6nm,0.4s						

*IDC **11** 03:35:00.1±0.8,29.˚63S×178.˚66W,h0km,mb4.0/5, mbtmp4.0/8,ML4.2/3,MS3.8/42,Error ellipse: s-maj=31.0km s-min=12.8km az=154.0*
*NEIC **11** 03:35:02.5±2.1,29.˚5S±0.˚1×178.˚6W±0.˚1,h19km±5km, mb4.7/12,Error ellipse: s-maj=17.2km s-min=9.8km az=142.0*
*GCMT **11** 03:35:06.5±0.3,29.˚48S±0.˚02×178.˚93W±0.˚02,h17km±1km, MW4.8/82,Moment Tensor Solution. s19,c21; s82,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.20±.09; $M_{\theta\theta}$0.15±.09; $M_{\phi\phi}$0.04±.08; $M_{r\theta}$0.12±.22; $M_{\theta\phi}$2.20±.08; $M_{r\phi}$-0.07±.23; Best double couple: M_o2.20500×10^{16} NP1:ϕ_s271.00000°,δ88.00000°,λ-3.00000°. NP2: ϕ_s1.00000°,δ87.00000°,λ-178.00000°. Principal axes: T 2.2990, Plg1.0000°, Azm316.0000°; N -0.1890, Plg86.0000°, Azm57.0000°; P -2.1110, Plg4.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 03:35:01.3±0.5,29.˚62S±0.˚07×178.˚63W±0.˚07,h10km,n73, σ1§34/33,mb4.3/8,MS3.9/40,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.71**	**60**	Pn	**Pn**	**03 35 17.1**	**-0.5**
	3μm,0.3s,baz=124,slow=2.0,SNR=111						
RAO				Sn	**Sn**	**03 35 29.5**	**+0.9**
	2μm,0.3s,baz=98,slow=23,SNR=6.8						
RAO	**Raoul Island**	**0.71**	**60**		**Pn**	**03 35 17.0**	**-0.5**
RAO				Sg	**Sg**	**03 35 23.4**	**-1.2**
OUZ	**Omahuta**	**8.63**	**228**	Pn	**Pn**	**03 37 07.4**	**+1.2**
URZ	**Urewera**	**9.32**	**201**	Pn	**Pn**	**03 37 14.7**	**-1.0**
	0.5nm,0.3s,baz=25,slow=21,SNR=1.2						
URZ				Sn	**Sn**	**03 39 00.2**	**-0.4**
	baz=158,slow=24						
	2.6nm,0.4s						
HIZ	**Hauiti**	**10.39**	**210**	Pn	**Pn**	**03 37 31.9**	**+1.6**
MSVF	**Nonsavu**	**12.21**	**345**	Pn	**Pn**	**03 37 55.8**	**+0.4**
	0.4nm,0.3s,baz=196,slow=16,SNR=2.0						
MSVF				LR	LR	03 41 41.6	
	comp=Z,2μm,19.5s,baz=158,slow=33						
	3.5nm,0.6s						
DZM	**Mont Dzumac**	**15.39**	**296**	Pn	**Pn**	**03 38 37.4**	**-1.4**
	0.2nm,0.3s,baz=201,slow=12,SNR=2.0						
DZM				LR	LR	03 43 07.3	
	comp=Z,986nm,20.6s,baz=115,slow=32						
	4.3nm,0.8s						
DZM	**Mont Dzumac**	**15.39**	**296**	*e*Pn	**P**	**03 38 46.8**	**+3.4**
	66nm,1.6s						
DZM				*e*LR	LR	03 42 39.7	
	comp=Z,737nm,22.1s						
DZM	**Mont Dzumac**	**15.39**	**296**	Pn	**Pn**	**03 38 37.3**	**-1.4**
DZM				IAmb	IAmb	03 38 48.0	
	comp=Z,50nm,1.4s						
RPZ	**Rata Peaks**	**16.31**	**208**	LR	LR	03 44 50.0	
	comp=Z,551nm,19.0s,baz=38,slow=36						
RAR	**Rarotonga**	**18.96**	**68**	LR	LR	03 47 29.5	
	comp=Z,195nm,18.2s,baz=248,slow=40						
DCZ	**Deep Cove**	**19.38**	**211**	P	**P**	**03 39 27.5**	**+0.3**
DCZ				IAmb	IAmb	03 39 48.1	
	comp=Z,37nm,1.3s						
HNR	**Honiara**	**28.38**	**311**	LR	LR	03 50 14.0	
	comp=Z,165nm,21.7s,baz=122,slow=32						
PAE	**Paea**	**29.06**	**72**	*e*T	T	04 11 30.8	
	comp=Z,7.3nm,0.3s						
PPT2	**Papeete2**	**29.10**	**72**	*e*LR	LR	03 47 32.8	
	comp=Z,253nm,29.0s						
PPT2				*e*LR	LR	03 47 32.9	
	comp=Z,229nm,24.5s						
PPT2	**Papeete2**	**29.10**	**72**	*e*T	T	04 11 32.8	
	comp=Z,7.5nm,0.3s						
PPT	**Papeete**	**29.11**	**72**	LR	LR	03 49 29.4	
	comp=Z,130nm,20.6s,baz=246,slow=30						
TVO	**Taravao**	**29.28**	**73**	*e*T	T	04 11 54.4	
	comp=Z,1.6nm,0.3s						
VAH	**Vaihoa**	**31.91**	**70**	*e*T	T	04 15 12.8	
	comp=Z,17nm,0.2s						
CTA	**Charters Tower**	**33.14**	**278**	LR	LR	03 52 57.0	
	comp=Z,403nm,19.9s,baz=98,slow=32						
CTAO	**Charters Tower**	**33.14**	**278**	P	**P**	**03 41 35.9**	**-2.1**
CTAO				IAmb	IAmb	03 41 48.9	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**34.13**	**256**	P	**P**	**03 41 45.0**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=112,slow=12,SNR=3.3						
	comp=Z,1.4nm,0.7s						
XMAS	**Kiritimati**	**37.44**	**36**	P	**P**	**03 42 15.2**	**+0.2**
PMG	**Port Moresby**	**37.78**	**295**	LR	LR	03 54 58.1	
	comp=Z,222nm,20.4s,baz=114,slow=32						
TAOE	**Nuku Hiva Isla**	**41.51**	**68**	*e*LR	LR	03 53 17.7	
	comp=Z,182nm,28.4s						
ASAR	**Alice Springs**	**42.61**	**266**	P	**P**	**03 42 57.8**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=102,slow=7.8,SNR=17						
ASAR				LR	LR	03 59 46.7	
	comp=Z,264nm,18.2s,baz=128,slow=35						
	comp=Z,1.8nm,0.6s						
WR0	**Warramunga Arr**	**43.35**	**272**	P	**P**	**03 43 02.3**	**-1.7**
WB2	**Warramunga Arr**	**43.52**	**272**	P	**P**	**03 43 05.6**	**+0.2**
WB2				IAmb	IAmb	03 43 12.5	
	comp=Z,15nm,1.1s						
WRA	**Warramunga Arr**	**43.53**	**272**	P	**P**	**03 43 04.3**	**-1.1**
	comp=Z,3.3nm,1.1s,baz=110,slow=7.1,SNR=7.4						
WRA				LR	LR	03 59 45.8	
	comp=Z,144nm,19.7s,baz=98,slow=34						
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**43.53**	**272**	P	**P**	**03 43 04.5**	**-0.9**
WB0	**Warramunga Arr**	**43.55**	**272**	P	**P**	**03 43 05.2**	**-0.5**
WB0				IAmb	IAmb	03 43 28.0	
	comp=Z,9.1nm,0.8s						
VNDA	**Vanda**	**48.82**	**186**	LR	LR	04 01 51.3	
	comp=Z,74nm,19.3s,baz=27,slow=33						
VNDA	**Vanda**	**48.82**	**186**	P	**P**	**03 43 45.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**51.82**	**270**	P	**P**	**03 44 10.1**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=96,slow=13,SNR=2.4						
FITZ				LR	LR	04 04 12.1	
	comp=Z,105nm,20.6s,baz=112,slow=34						
	comp=Z,2.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.82**	**270**	P	**P**	**03 44 09.3**	**-0.5**
FITZ				IAmb	IAmb	03 44 22.6	
	comp=Z,18nm,1.2s						
KHLH	**Kahului Airpor**	**54.58**	**26**	P	**P**	**03 44 27.8**	**-2.2**
GUMO	**Guam**	**55.54**	**315**	LR	LR	04 06 26.2	
	comp=Z,62nm,19.0s,baz=124,slow=34						
RPN	**Rapa Nui**	**60.17**	**106**	LR	LR	04 06 10.7	
	comp=Z,38nm,18.4s,baz=298,slow=31						
QSPA	**South Pole Qui**	**60.49**	**180**	LR	LR	04 08 53.0	
	comp=Z,94nm,19.4s,baz=46,slow=34						
QSPA	**South Pole Qui**	**60.49**	**180**	P	**P**	**03 45 12.2**	**+0.9**
KAPI	**Kappng**	**62.94**	**280**	LR	LR	04 14 25.6	
	comp=Z,49nm,18.1s,baz=92,slow=38						
JCJ	**Chichijima**	**67.73**	**323**	LR	LR	04 10 38.1	
	comp=Z,58nm,19.9s,baz=135,slow=32						
MAW	**Mawson**	**72.85**	**201**	LR	LR	04 17 24.6	
	comp=Z,73nm,19.3s,baz=88,slow=35						
PMSA	**Palmer Station**	**73.20**	**156**	LR	LR	04 15 06.9	
	comp=Z,156nm,19.6s,baz=269,slow=33						
JHJ	**Hachijo jima 2**	**73.79**	**325**	LR	LR	04 16 13.6	
	comp=Z,27nm,18.5s,baz=101,slow=34						
MJAR	**Matsushiro Arr**	**77.29**	**326**	LR	LR	04 15 47.3	
	comp=Z,56nm,19.0s,baz=150,slow=32						
SNAA	**Sanae**	**78.95**	**179**	LR	LR	04 21 08.0	
	comp=Z,68nm,18.7s,baz=218,slow=35						
KSRS	**Korea Array**	**83.40**	**320**	LR	LR	04 23 57.7	
	comp=Z,20nm,18.1s,baz=120,slow=35						
PLCA	**Paso Flores**	**83.44**	**133**	LR	LR	04 16 12.3	
	comp=Z,57nm,20.1s,baz=188,slow=30						
LPIG	**La Paz**	**84.59**	**119**	LR	LR	04 21 31.2	
	comp=Z,60nm,18.2s,baz=220,slow=33						
PETK	**Petropavlovsk-**	**84.92**	**346**	LR	LR	04 18 05.2	
	comp=Z,91nm,21.3s,baz=158,slow=30						
YBH	**Yreka Blue Hor**	**87.75**	**38**	LR	LR	04 18 33.3	
	comp=Z,47nm,21.8s,baz=222,slow=30						
NVAR	**Mina Array Bea**	**88.03**	**43**	P	**P**	**03 47 53.9**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=287,slow=6.2,SNR=1.2						
NVAR				LR	LR	04 19 04.2	
	comp=Z,57nm,21.3s,baz=270,slow=30						
	comp=Z,0.3nm,0.7s						
KLR	**Kul'dur**	**90.09**	**330**	LR	LR	04 23 36.1	
	comp=Z,33nm,19.4s,baz=186,slow=32						
ELK	**Elko**	**91.33**	**43**	LR	LR	04 25 28.1	
	comp=Z,46nm,18.2s,baz=260,slow=33						
TXAR	**Lajitas Array**	**92.42**	**58**	LR	LR	04 24 48.0	
	comp=Z,35nm,18.6s,baz=284,slow=32						
CMAR	**Chiang Mai Arr**	**92.63**	**290**	LR	LR	04 33 21.1	
	comp=Z,5.7nm,18.1s,baz=105,slow=38						
BBB	**Bella Bella**	**92.67**	**28**	LR	LR	04 25 21.9	
	comp=Z,46nm,18.5s,baz=216,slow=33						
CMIG	**Matias Romero**	**93.03**	**72**	LR	LR	04 19 55.2	
	comp=Z,25nm,20.8s,baz=228,slow=29						
ANMO	**Albuquerque**	**93.51**	**52**	LR	LR	04 23 07.9	
	comp=Z,57nm,20.1s,baz=267,slow=31						
NNA	**Nana**	**94.16**	**106**	LR	LR	04 24 12.3	
	comp=Z,25nm,18.4s,baz=224,slow=31						
LVC	**Lion Verde**	**94.79**	**119**	LR	LR	04 20 55.8	
	comp=Z,67nm,21.9s,baz=216,slow=29						
NEW	**Newport**	**95.06**	**36**	LR	LR	04 23 09.1	
	comp=Z,79nm,21.6s,baz=240,slow=30						
ATAH	**Atahualpa**	**95.33**	**101**	LR	LR	04 22 42.0	
	comp=Z,39nm,21.0s,baz=221,slow=30						
PDAR	**Pinedale Array**	**95.94**	**44**	LR	LR	04 23 26.3	
	comp=Z,43nm,21.8s,baz=268,slow=30						
DLBC	**Dease Lake**	**96.62**	**23**	LR	LR	04 28 47.9	
	comp=Z,47nm,18.0s,baz=242,slow=33						
ILAR	**Eielson Array**	**97.29**	**13**	LR	LR	04 25 44.5	
	comp=Z,33nm,21.0s,baz=223,slow=31						
FINES	**FINESS Array B**	**144.22**	**340**	PKP	**PKPab**	**03 54 35.1**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=219,slow=0.9,SNR=1.2						
NB2	**NORSAR Subarra**	**147.90**	**351**	PKP	PKPab	03 54 57.3	+8.6
	comp=Z,11nm,1.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**147.90**	**351**	PKPbc	**PKPbc**	**03 54 48.1**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=16,slow=4.5,SNR=1.9						
AKASG	**Malin Array Be**	**150.35**	**323**	PKPbc	**PKPbc**	**03 54 53.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=46,slow=3.8,SNR=0.7						
BRTR	**Keskin Array B**	**151.75**	**300**	PKPbc	**PKPbc**	**03 54 57.2**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=177,slow=2.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**163.61**	**181**	PKPab	**PKPab**	**03 55 57.7**	**+1.1**
	comp=Z,0.9nm,0.9s,baz=196,slow=1.5,SNR=1.7						

*IDC **11** 03:37:32.7±9.6,17.˚57S×178.˚23W,h560km±105km, mb2.7/4,mbtmp3.6/4,Error ellipse: s-maj=122.3km s-min=39.7km az=151.0*

ISC 11 03:37:31.7±1.9,17.˚5S±0.˚7×178.˚3W±0.˚4,h550km,n6, σ0§72/7,mb3.1/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.85**	**259**	P	**P**	**03 44 58.0**	**+0.4**
	0.2nm,0.4s,baz=96,slow=7.2,SNR=1.0						
WRA				PcP	**PcP**	**03 46 26.3**	**-1.2**
	0.1nm,0.3s,baz=90,slow=3.2,SNR=1.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**45.05**	**254**	P	**P**	**03 44 59.2**	**+0.2**
	0.6nm,0.4s,baz=86,slow=8.0,SNR=4.5						
	0.6nm,0.4s						
ILAR	**Eielson Array**	**85.46**	**13**	P	**P**	**03 49 10.8**	**-0.1**
	0.2nm,0.4s,baz=215,slow=5.3,SNR=2.0						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**85.65**	**58**	P	**P**	**03 49 13.1**	**+0.2**
	0.3nm,0.7s,baz=217,slow=6.3,SNR=3.6						
	0.3nm,0.7s						
BRTR	**Keskin Array B**	**144.60**	**315**	PKP	**PKPdf**	**03 56 06.9**	**+0.6**
	0.5nm,0.7s,baz=142,slow=3.0,SNR=1.7						
GERES	**GERESS Array B**	**147.26**	**345**	PKPbc	**PKPbc**	**03 56 13.4**	**-0.2**
	0.4nm,0.4s,baz=42,slow=2.2,SNR=4.9						

*IDC **11** 03:49:00.8±0.6,30.˚23N×107.˚37E,h0km,mb4.1/22, mbtmp4.1/25,ML3.8/2,MS3.7/24,Error ellipse: s-maj=17.3km s-min=12.6km az=53.0*
*BJI **11** 03:49:02.0±0.0,30.˚25N×107.˚41E,h10km,mb4.2/30, mB4.5/13,ML4.4/24,Ms4.3/42,Ms7 4.1/38*
*NEIC **11** 03:49:02.4±1.9,30.˚3N±0.˚1×107.˚29E±0.˚08,h15km±5km, mb4.4/18,Error ellipse: s-maj=16.4km s-min=10.0km az=184.0*

ISC 11 03:49:02.1±0.4,30.˚23N±0.˚03×107.˚43E±0.˚03,h10km,n83, σ2§07/93,mb4.2/30,MS3.8/24,3C-5D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	**1.78**	**88**		**Pb**	**03 49 35.2**	**+0.3**
ENH				Sn	**Sb**	**03 49 58.0**	**+0.7**
CD2	**Chengdu**	**3.24**	**283**	Pn	**Pn**	**03 49 53.4**	**+0.3**
CD2				Pg	**Pg**	**03 50 02.9**	**-1.3**
CD2				Sn	**Sn**	**03 50 33.4**	**+1.6**
CD2				Sg	**Sg**	**03 50 46.5**	**+0.3**
CD2				*s*max	*s*max		
	comp=N,970nm,0.7s						
CD2				*s*max	*s*max		
	comp=E,960nm,0.8s						
GYA	**Guiyang**	**3.81**	**190**	⇓*i*Pn	**Pn**	**03 50 03.1**	**+2.0**
GYA				Pg	**Pg**	**03 50 14.0**	**-1.2**
GYA				Sn	**Sn**	**03 50 47.8**	**+1.8**
GYA				Sg	**Sg**	**03 51 04.1**	**-0.6**
GYA				*s*max	*s*max		
	comp=N,710nm,1.2s						
GYA				*s*max	*s*max		
	comp=E,1μm,1.2s						
GYA				LR	LR		
	comp=N,2μm,3.8s						
GYA				LR	LR		
	comp=E,2μm,3.8s						
GYA				LR	LR		
	comp=Z,850nm,3.8s						
XAN	**Xi'an**	**4.01**	**18**	Pn	**Pn**	**03 50 04.4**	**+0.8**
XAN				Pg	**Pb**	**03 50 15.4**	**+2.5**
XAN				Sn	**Sn**	**03 50 49.9**	**-0.8**
XAN				Sg	**Sg**	**03 51 06.0**	**-4.8**
XAN				*s*max	*s*max		
	comp=N,2μm,1.2s						
XAN				*s*max	*s*max		
	comp=E,2μm,1.1s						
XAN				LR	LR		
	comp=N,6μm,5.8s						
XAN				LR	LR		
	comp=E,4μm,6.0s						
XAN				LR	LR		
	comp=Z,6μm,7.6s						
CNSH	**ChangSha**	**5.22**	**112**	⇓Pn	**Pn**	**03 50 20.6**	**+0.3**
CNSH				Sn	**Sn**	**03 51 21.3**	**+0.7**
CNSH				*s*max	*s*max		
	comp=N,780nm,1.1s						
CNSH				*s*max	*s*max		
	comp=E,600nm,0.8s						
GULI	**GuiLin**	**5.56**	**151**	⇑Pn	**Pn**	**03 50 28.0**	**+3.0**
GULI				Sn	**Sn**	**03 51 30.2**	**+1.2**
GULI				LR	LR		
	comp=N,2μm,4.9s						
GULI				LR	LR		
	comp=E,3μm,4.6s						
GULI				LR	LR		
	comp=Z,3μm,8.7s						
WHN	**Wuhan**	**5.99**	**85**	⇓Pn	**Pn**	**03 50 32.8**	**+2.0**
WHN				Sn	**Sn**	**03 51 38.7**	**-0.7**
WHN				LR	LR		
	comp=N,2μm,5.1s						
WHN				LR	LR		
	comp=E,3μm,3.8s						
WHN				LR	LR		
	comp=Z,2μm,4.2s						
LYN	**LuoYang**	**6.06**	**43**	⇑Pn	**Pn**	**03 50 32.0**	**+0.2**
LYN				Pg	**Pb**	**03 50 51.2**	**+3.4**
LYN				Sn	**Sn**	**03 51 40.9**	**-0.3**
LYN				Sg	**Sg**	**03 52 10.5**	**-6.2**
LYN				*s*max	*s*max		
	comp=N,400nm,1.2s						
LYN				*s*max	*s*max		
	comp=E,400nm,1.3s						
LYN				LR	LR		
	comp=N,2μm,7.5s						
LYN				LR	LR		
	comp=E,2μm,7.7s						
LYN				LR	LR		
	comp=Z,3μm,7.9s						
PZH	**PanZhiHua**	**6.23**	**235**	Pn	**Pn**	**03 50 37.9**	**+3.6**
PZH				Sn	**Sn**	**03 51 49.2**	**+3.5**
PZH				Sg	**Sg**	**03 52 18.7**	**-3.6**
PZH				*s*max	*s*max		
	comp=N,100nm,1.1s						
PZH				*s*max	*s*max		
	comp=E,100nm,1.3s						
PZH				LR	LR		
	comp=N,1μm,5.6s						
PZH				LR	LR		
	comp=E,1μm,5.9s						
PZH				LR	LR		
	comp=Z,1μm,8.0s						
KMI	**Kunming**	**6.57**	**220**	⇑Pn	**Pn**	**03 50 42.6**	**+3.6**
KMI				Sn	**Sn**	**03 51 55.6**	**+1.5**
KMI				*s*max	*s*max		
	comp=N,73nm,1.4s						
KMI				*s*max	*s*max		
	comp=E,96nm,0.9s						
KMI				LR	LR		
	comp=N,2μm,9.5s						
KMI				LR	LR		
	comp=E,2μm,9.6s						
KMI				LR	LR		
	comp=Z,2μm,10.6s						
LZH	**Lanzhou**	**6.57**	**334**	Pn	**Pn**	**03 50 41.9**	**+2.9**
LZH				Sn	**Sn**	**03 51 54.6**	**+0.5**
LZH				Sg	**Sg**	**03 52 36.1**	**+3.0**
LZH				*s*max	*s*max		
	comp=N,290nm,1.2s						
LZH				*s*max	*s*max		
	comp=E,390nm,1.3s						
LZH				LR	LR		
	comp=N,3μm,8.9s						
LZH				LR	LR		
	comp=E,2μm,7.5s						
LZH				LR	LR		
	comp=Z,3μm,9.9s						
HNS	**HongShan**	**9.37**	**38**	⇓P	Pn	03 51 24.7	+7.5
HNS				S	Sn	03 53 15.8	+13
HNS				LR	LR		
	comp=N,2μm,8.2s						
HNS				LR	LR		
	comp=E,1μm,8.4s						
HNS				LR	LR		
	comp=Z,1μm,10.2s						
TIA	**Tai'an**	**10.07**	**51**	P	**Pn**	**03 51 31.0**	**+4.1**
TIA				*p*max	*p*max		
	comp=Z,10.0nm,1.0s						
TIA				LR	LR		
	comp=N,660nm,9.9s						
TIA				LR	LR		
	comp=E,680nm,8.9s						
TIA				LR	LR		
	comp=Z,920nm,9.0s						
BTO	**Baotou**	**10.57**	**11**	*e*P	**Pn**	**03 51 34.0**	**+0.3**
BTO				S	**Sn**	**03 53 36.2**	**+4.0**
BTO				LR	LR		
	comp=N,5μm,10.8s						
BTO				LR	LR		
	comp=E,2μm,8.0s						
GTA	**Gaotai**	**11.09**	**328**	*e*P	**Pn**	**03 51 42.5**	**+1.6**
GTA				*p*P		03 51 45.8	
GTA				*s*P		03 51 48.9	
GTA				*p*max	*p*max		
	comp=Z,3.0nm,1.3s						
GTA				*p*max	*p*max		
	comp=Z,48nm,4.8s						
GTA				LR	LR		
	comp=N,990nm,12.0s						
GTA				LR	LR		
	comp=E,780nm,12.7s						
GTA				LR	LR		
	comp=Z,1μm,12.4s						
QIZ	**Qiongzhong**	**11.36**	**168**	P	**Pn**	**03 51 44.1**	**-0.5**
QIZ				S	**Sn**	**03 53 53.7**	**+2.1**
QIZ				LR	LR		
	comp=N,970nm,9.6s						
QIZ				LR	LR		
	comp=E,710nm,8.8s						
QIZ				LR	LR		
	comp=Z,900nm,12.7s						
BJI	**Beijing**	**12.12**	**34**	P	**Pn**	**03 51 53.0**	**-1.8**
BJI				*p*max

comp=Z,75nm,21.8s,baz=250,slow=36
comp=Z,8.2nm,0.9s
JSU Suzuyama 19.80 80 P **P** **03 53 32.0 -0.8**
JSU IAmb IAmb 03 53 35.4
comp=Z,28nm,1.0s
WMQ Urumqi 20.73 316 *eP* Pn 03 53 44.1 -1.0
WMQ sP sP 03 53 49.3 +2.2
WMQ pmax pmax
comp=Z,25nm,0.8s
WMQ LR LR
comp=Z,480nm,12.3s
WMQ LR LR
comp=Z,440nm,11.9s
WMQ LR LR
comp=Z,200nm,15.1s
BNX BinXian 21.99 40 ⇓P **P** **03 53 58.6 +2.3**
BNX pP **sP** **03 54 03.4 +2.8**
BNX sP **pP** **03 54 06.1 +6.8**
BNX pmax pmax
comp=Z,14nm,1.2s
BNX pmax pmax
comp=Z,83nm,4.6s
BNX LR LR
comp=Z,330nm,9.5s
BNX LR LR
comp=Z,280nm,11.0s
BNX LR LR
comp=Z,430nm,13.9s
USRK Usuriysk Ar. 23.91 48 P **P** **03 54 15.9 -0.1**
INU Inuyama 25.34 71 P **P** **03 54 27.5 -1.7**
INU IAmb IAmb 03 54 31.8
comp=Z,17nm,1.2s
MK31 Makanchi Array 25.54 317 P **P** **03 54 30.0 -0.9**
MK31 IAmb IAmb 03 54 53.3
comp=Z,3.6nm,0.9s
MKAR Makanchi Array 25.54 317 P **P** **03 54 31.5 +0.6**
comp=Z,1.1nm,0.5s,baz=116,slow=9.5,SNR=9.7
MKAR LR LR 04 05 29.2
comp=Z,157nm,21.6s,baz=95,slow=39
comp=Z,1.1nm,0.5s
MKAR Makanchi Array 25.54 317 P **P** **03 54 30.4 -0.6**
MAKZ Makanchi 25.73 317 P **P** **03 54 28.6 -4.1**
MAKZ IAmb IAmb 03 54 48.1
comp=Z,4.6nm,0.6s
MJAR Matsushiro Arr 26.39 68 P **P** **03 54 40.3 +1.5**
comp=Z,2.4nm,1.0s,baz=265,slow=7.7,SNR=5.6
comp=Z,2.4nm,1.0s
KLR Kul'dur 26.45 37 P **P** **03 54 39.1 -0.1**
comp=Z,2.1nm,0.9s,baz=236,slow=7.5,SNR=5.6
KLR LR LR 04 06 35.3
comp=Z,320nm,18.5s,baz=225,slow=40
comp=Z,2.1nm,0.9s
ZALV Zalesovo Beam 28.80 332 LR LR 04 07 04.7
comp=Z,140nm,18.2s,baz=125,slow=38
AAK Ala-Archa 29.07 304 LR LR 04 08 56.1
comp=Z,132nm,19.3s,baz=98,slow=41
KURBB Kurchatov Arra 29.68 322 P **P** **03 55 08.7 +0.7**
comp=Z,0.3nm,0.3s,baz=129,slow=8.1,SNR=2.5
comp=Z,0.3nm,0.3s
PALK Pallekele 33.91 233 LR LR 04 11 47.7
comp=Z,68nm,18.6s,baz=168,slow=40
YAK Yakutsk 34.98 18 LR LR 04 11 24.5
comp=Z,206nm,19.1s,baz=269,slow=38
LEM Lembang 36.84 180 LR LR 04 12 27.0
comp=Z,201nm,20.0s,baz=292,slow=38
ABKAR Akbulak array 40.39 312 P **P** **03 56 37.7 -2.5**
NRIK Noril'sk 40.78 349 P **P** **03 56 43.4 +0.2**
comp=Z,3.1nm,0.5s,baz=148,slow=10,SNR=4.1
NRIK LR LR 04 14 58.6
comp=Z,189nm,19.1s,baz=166,slow=38
comp=Z,3.1nm,0.5s
GEYT Alibeck 41.17 294 P **P** **03 56 47.5 +0.7**
comp=Z,2.5nm,0.5s,baz=188,slow=14,SNR=2.0
comp=Z,2.5nm,0.5s
AKTO Aktyubinsk 41.83 313 P **P** **03 56 52.7 +0.7**
comp=Z,1.3nm,0.8s,baz=106,slow=14,SNR=3.6
AKTO LR LR 04 15 40.2
comp=Z,142nm,19.8s,baz=101,slow=38
comp=Z,1.3nm,0.8s
ARU Arti 42.88 322 P **P** **03 57 00.8 +0.3**
comp=Z,2.2nm,0.3s,baz=17,slow=15,SNR=3.6
ARU LR LR 04 16 25.8
comp=Z,46nm,18.2s,baz=104,slow=38
comp=Z,2.2nm,0.3s
WSAR Wadi Sarin 43.87 273 P **P** **03 57 08.0 -0.9**
comp=Z,7.7nm,0.9s,baz=116,slow=7.4,SNR=3.0
comp=Z,7.7nm,0.9s
FITZ Fitzroy Crossi 51.15 158 P **P** **03 58 05.8 +0.4**
comp=Z,1.2nm,0.7s,baz=352,slow=5.6,SNR=6.9
comp=Z,1.2nm,0.7s
GNI Garni 51.24 299 LR LR 04 23 14.4
comp=Z,33nm,19.1s,baz=81,slow=40
KBZ Khabaz 52.06 304 P **P** **03 58 11.6 -0.5**
comp=Z,0.8nm,0.5s,baz=83,slow=2.5,SNR=2.4
KBZ LR LR 04 23 56.3
comp=Z,36nm,18.4s,baz=54,slow=40
comp=Z,0.8nm,0.5s
KIV Kislovodsk 52.18 304 P **P** **03 58 11.0 -2.1**
GURO Guroymak-BITLI 53.60 298 P **P** **03 58 21.4 -2.4**
GURO IAmb IAmb 03 58 26.0
comp=Z,4.9nm,1.1s
WB0 Warramunga Arr 56.07 149 P **P** **03 58 41.5 -0.1**
WRA Warramunga Arr 56.20 149 P **P** **03 58 43.0 +0.6**
comp=Z,9.2nm,1.1s,baz=338,slow=7.8,SNR=29
comp=Z,9.2nm,1.1s
WRA Warramunga Arr 56.20 149 P **P** **03 58 42.5 0.0**
WB2 Warramunga Arr 56.21 149 P **P** **03 58 42.8 +0.3**
WR0 Warramunga Arr 56.31 149 P **P** **03 58 43.3 +0.1**
WR0 IAmb IAmb 03 58 44.3
comp=Z,8.6nm,1.0s
ARCES ARCESS Array B 59.23 336 P **P** **03 59 02.7 -0.5**
comp=Z,4.7nm,1.1s,baz=83,slow=8.4,SNR=1.7
comp=Z,4.7nm,1.1s
ASAR Alice Springs 59.31 152 P **P** **03 59 05.2 +0.8**
comp=Z,2.4nm,0.8s,baz=333,slow=6.9,SNR=16
comp=Z,2.4nm,0.8s
ASAR Alice Springs 59.31 152 P **P** **03 59 04.2 -0.1**
BRTR Keskin Array B 59.66 301 P **P** **03 59 07.2 +0.4**
comp=Z,1.2nm,0.8s,baz=107,slow=6.5,SNR=6.0
comp=Z,1.2nm,0.8s
FINES FINESS Array B 59.88 327 P **P** **03 59 08.0 +0.2**
comp=Z,5.6nm,1.1s,baz=222,slow=7.7,SNR=2.1
FINES LR LR 04 27 14.1
comp=Z,69nm,18.5s,baz=53,slow=38
comp=Z,5.6nm,1.1s
AKASG Malin Array Be 60.06 314 P **P** **03 59 08.8 -0.5**
comp=Z,0.3nm,0.4s,baz=68,slow=6.6,SNR=5.0
AKASG LR LR 04 26 50.2
comp=Z,42nm,19.7s,baz=26,slow=38
comp=Z,0.3nm,0.4s
EIL Elat 61.74 290 LR LR 04 32 09.0
comp=Z,26nm,18.5s,baz=94,slow=42
BURAR Bucovina Array 63.37 311 P **P** **03 59 29.3 -2.5**
BURAR IAmb IAmb 03 59 33.4
comp=Z,3.3nm,1.5s
MLR Muntele Rosu 63.50 309 LR LR 04 28 40.1
comp=Z,60nm,20.7s,baz=63,slow=38
NOA NORSAR Array B 66.92 328 P **P** **03 59 53.3 -1.2**
comp=Z,0.6nm,0.7s,baz=69,slow=6.2,SNR=3.0
NOA LR LR 04 31 06.4
comp=Z,56nm,18.3s,baz=60,slow=38
comp=Z,0.6nm,0.7s
L19K White Mountain 67.18 30 P **P** **03 59 54.6 -1.5**
L19K IAmb IAmb 03 59 58.4
comp=Z,5.7nm,1.2s
JMIC Jan Mayen 69.56 342 LR LR 04 32 18.6
comp=Z,36nm,21.2s,baz=56,slow=37
STKA Stephens Creek 69.75 149 P **P** **04 00 12.4 0.0**
comp=Z,2.6nm,0.9s,baz=342,slow=13,SNR=3.1
comp=Z,2.6nm,0.9s
GERES GERESS Array B 70.19 316 P **P** **04 00 15.2 0.0**
comp=Z,0.1nm,0.3s,baz=92,slow=5.8,SNR=3.7
comp=Z,0.1nm,0.3s
INK Inuvik 72.02 20 LR LR 04 36 34.5
comp=Z,49nm,18.7s,baz=213,slow=40
KMBO Kilima Mbogo 73.52 259 P **P** **04 00 34.8 -1.1**
comp=Z,1.9nm,0.7s,baz=56,slow=11,SNR=4.7
comp=Z,1.9nm,0.7s
RES Resolute Bay 74.33 6 LR LR 04 36 34.4
comp=Z,50nm,18.6s,baz=342,slow=38
YKA Yellowknife Ar 81.65 18 P **P** **04 01 19.9 -0.4**
comp=Z,0.7nm,0.5s,baz=327,slow=5.5,SNR=5.3
comp=Z,0.7nm,0.5s
TSUM Tsumeb 99.30 253 LR LR 04 47 05.2
comp=Z,55nm,19.6s,baz=149,slow=35
PDAR Pinedale Array 99.80 27 LR LR 04 49 28.5
comp=Z,34nm,19.5s,baz=320,slow=36
ROSC El Rosal 145.09 3 PKPbc **PKPdf** **04 08 41.3 +0.2**
comp=Z,8.4nm,0.4s,baz=172,slow=18,SNR=5.1

*KRSC **11** 04:02:16.8±1.2,53.˚90N×159.˚14E,h171km±11km,ML3.6*
*IDC **11** 04:02:17.7±1.8,54.˚22N×158.˚61E,h153km±36km,mb2.9/5, mbtmp3.4/5,MS3.5/1,Error ellipse: s-maj=79.4km s-min=28.7km az=173.0*
ISC 11 04:02:18.5±0.8,53.˚95N±0.˚06×159.˚04E±0.˚07,h166km±7km, n31,σ0˚87/38,mb3.1/5,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.26**	**71**	*eP*	**Pn**		**04 02 41.0**	**+0.2**
KRX	**Arik**	**0.64**	**202**	*eP*	**Pn**		**04 02 42.7**	**+0.2**
KRER	**Koryakskii**	**0.67**	**195**	*eP*	**Pn**		**04 02 43.1**	**+0.3**
SDLR	**Sedlovina**	**0.68**	**188**	*eP*	**Pn**		**04 02 42.9**	**+0.2**
GNL	**Ganaly**	**0.70**	**249**	*eP*	**Pn**		**04 02 42.5**	**-0.3**
GNL				*eS*	**Sn**		**04 03 01.4**	**0.0**
KOK	**Koryaka**	**0.70**	**200**	*eP*	**Pn**		**04 02 43.1**	**+0.3**
SMAR	**Somma**	**0.71**	**192**	*eP*	**Pn**		**04 02 43.6**	**+0.6**
AVH	**Avacha**	**0.71**	**195**	*eP*	**Pn**		**04 02 43.3**	**+0.5**
UGLR	**Uglovaya**	**0.76**	**190**	*eP*	**Pn**		**04 02 43.6**	**+0.5**
NLC	**Nalytchevo**	**0.80**	**167**	*eP*	**Pn**		**04 02 43.2**	**-0.1**
NLC				*eS*	**Sn**		**04 03 02.6**	**+0.3**
DALK	**Dalny**	**0.94**	**191**	*i P*	**Pn**		**04 02 44.3**	**+0.1**
SPN	**Mys Shipunski**	**1.04**	**145**	*eP*	**Pn**		**04 02 44.6**	**-0.4**
SPN				*eS*	**Sn**		**04 03 04.9**	**-0.5**
PETK	**Petropavlovsk-**	**1.17**	**224**	P	**Pn**		**04 02 44.8**	**-1.3**
	21nm,0.6s,baz=64,slow=14,SNR=38							
KRMR	**Karymshinskiy**	**1.25**	**206**	*eP*	**Pn**		**04 02 46.7**	**-0.1**
KRMR				*eS*	**Sn**		**04 03 08.6**	**0.0**
TUMR	**Tumrok**	**1.48**	**25**	*eP*	**Pn**		**04 02 50.0**	**+0.9**
GRL	**Gorelyy**	**1.52**	**203**	*eP*	**Pn**		**04 02 50.2**	**+0.6**
APC	**Apacha**	**1.53**	**228**	*eP*	**Pn**		**04 02 49.4**	**0.0**
APC				*eS*	**Sn**		**04 03 13.1**	**-0.2**
RUS	**Russkaya**	**1.56**	**192**	*eP*	**Pn**		**04 02 49.3**	**-0.5**
RUS				*eS*	**Sn**		**04 03 13.2**	**-0.6**
MTVR	**Mutnovka**	**1.56**	**200**	*eP*	**Pn**		**04 02 50.6**	**+0.6**
MTVR				*eS*	**Sn**		**04 03 15.4**	**+1.2**
MKZ	**Mys Kozlova**	**1.69**	**68**	*eP*	**Pn**		**04 02 51.0**	**-0.1**
MKZ				*eS*	**Sn**		**04 03 14.8**	**-1.5**
ESO	**Esso**	**1.99**	**354**	*i P*	Pn		04 02 56.7	+2.4
KDTR	**Khodutka, Kamc**	**2.23**	**196**	*eP*	**Pn**		**04 02 56.9**	**-0.2**
KDTR				*eS*	**Sn**		**04 03 25.0**	**-1.9**
SRDR	**Sredinnyy**	**2.40**	**9**	*eP*	**Pn**		**04 02 59.2**	**0.0**
KBTR	**Krutoberegovo**	**3.13**	**42**	*eP*	**Pn**		**04 03 07.9**	**-0.1**
BKI	**Bering**	**4.22**	**170**	*eS*	**Sn**		**04 04 09.4**	**-2.0**
TIXI	**Tiksi**	**22.04**	**335**	LR	LR		04 17 10.3	
	comp=Z,121nm,20.4s,baz=182,slow=41							
ILAR	**Eielson Array**	**28.66**	**46**	P	**P**		**04 07 59.5**	**+0.2**
	0.3nm,0.9s,baz=253,slow=6.8,SNR=4.1							
	0.3nm,0.9s							
YKA	**Yellowknife Ar**	**42.96**	**43**	P	**P**		**04 10 00.9**	**+0.4**
	0.8nm,0.9s,baz=302,slow=7.0,SNR=1.2							
	0.8nm,0.9s							
MKAR	**Makanchi Array**	**47.22**	**294**	P	**P**		**04 10 32.1**	**-2.3**
	0.3nm,0.5s,baz=59,slow=8.2,SNR=2.5							
	0.3nm,0.5s							
PDAR	**Pinedale Array**	**57.65**	**61**	P	**P**		**04 11 52.3**	**+1.0**
	0.2nm,0.6s,baz=274,slow=2.6,SNR=3.4							
	0.2nm,0.6s							
TXAR	**Lajitas Array**	**70.87**	**66**	P	**P**		**04 13 18.8**	**+1.5**
	0.1nm,0.4s,baz=292,slow=4.5,SNR=4.9							
	0.1nm,0.4s							

*IDC **11** 04:22:46.4±0.6,5.˚07S×151.˚87E,h72km±5km,mb4.3/7, mbtmp4.6/8,MS3.2/10,Error ellipse: s-maj=19.2km s-min=7.0km az=114.0*
*DJA **11** 04:22:47.4±0.6,5.˚5S±9.˚15˚2E±1.˚1,h78km±10km,M4.9/6, mB5.3/1,mb4.7/6,MLv5.0/1,Mw(mB)4.7/1*
*NEIC **11** 04:22:47.1±1.2,5.˚03S±0.˚09×151.˚9E±0.˚1,h79km±9km, mb4.8/18,Error ellipse: s-maj=21.9km s-min=9.2km az=116.0*
ISC 11 04:22:46.5±0.5,5.˚04S±0.˚06×151.˚81E±0.˚08,h76km±4km, h77km:pP-P,n66,σ1s01/70,mb4.5/20,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.76**	**17**	P	**Pn**		**04 23 03.2**	**+0.7**
	3μm,0.3s,baz=278,slow=1.4,SNR=242							
KRVT				S	**Sn**		**04 23 15.3**	**+0.9**
	16μm,0.5s,baz=322,slow=22,SNR=18							
RABL	**Rabaul**	**0.91**	**23**	Pn	**Pn**		**04 23 04.4**	**+0.1**
RABL				Sn	**Sn**		**04 23 17.5**	**0.0**
RABL	**Rabaul**	**0.91**	**23**	P	**Pn**		**04 23 04.6**	**+0.3**
PMG	**Port Moresby**	**6.33**	**226**	P	**Pn**		**04 24 18.8**	**+1.6**
	162nm,0.6s,baz=52,slow=8.7,SNR=30							
PMG				S	**Sn**		**04 25 28.9**	**+0.7**
	31nm,0.3s,baz=152,slow=22,SNR=1.4							
PMG	**Port Moresby**	**6.33**	**226**	Pn	**Pn**		**04 24 18.7**	**+1.4**
HNR	**Honiara**	**9.18**	**119**	LR	LR		04 28 26.7	
	comp=Z,75nm,20.5s,baz=346,slow=37							
COEN	**Coen**	**12.29**	**223**	Pn	**Pn**		**04 25 40.1**	**+1.6**
COEN	**Coen**	**12.29**	**223**	P	**Pn**		**04 25 39.8**	**+1.2**
PATS	**Pohnpei**	**13.46**	**29**	Pn	**Pn**		**04 25 55.0**	**+0.6**
MTSU	**Mount Surprise**	**14.94**	**209**	P	**P**		**04 26 15.7**	**-1.6**
CTA	**Charters Tower**	**15.91**	**199**	P	**P**		**04 26 28.4**	**+0.3**
	4.0nm,0.5s,baz=29,slow=11,SNR=8.1							
CTA				LR	LR		04 31 60.0	
	comp=Z,120nm,18.0s,baz=4.0,slow=35							
CTAO	**Charters Tower**	**15.91**	**199**	Pn	**Pn**		**04 26 25.5**	**-0.4**
QIS	**Mount Isa**	**19.46**	**216**	P	**Pn**		**04 27 08.7**	**-0.4**
FAKI	**Fak Fak**	**19.62**	**275**	P	**P**		**04 27 09.2**	**+0.2**
FAKI				IAmb	IAmb		04 27 42.1	
	comp=Z,94nm,1.5s							
KDU	**Kakadu**	**20.55**	**247**	P	**P**		**04 27 19.6**	**+0.6**
MTN	**Manton Dam**	**21.83**	**248**	P	**P**		**04 27 33.8**	**+1.0**
MTN				IAmb	IAmb		04 27 35.0	
	comp=Z,14nm,0.8s							
MTN	**Manton Dam**	**21.83**	**248**	P	**P**		**04 27 33.7**	**+1.0**
DZM	**Mont Dzumac**	**22.08**	**141**	P	**P**		**04 27 35.4**	**-0.1**
	comp=Z,18nm,0.6s,baz=311,slow=5.6,SNR=15							
DZM				LR	LR		04 34 56.4	
	comp=Z,54nm,19.9s,baz=20,slow=33							
	comp=Z,18nm,0.6s							
DZM	**Mont Dzumac**	**22.08**	**141**	P	**P**		**04 27 35.2**	**-0.3**
DZM				IAmb	IAmb		04 27 37.0	
	comp=Z,21nm,0.8s							
DZM	**Mont Dzumac**	**22.08**	**141**	P	**P**		**04 27 35.4**	**-0.1**
WB0	**Warramunga Arr**	**22.40**	**228**	P	**P**		**04 27 38.4**	**-0.6**
WB0				IAmb	IAmb		04 27 41.3	
	comp=Z,64nm,1.1s							
WR0	**Warramunga Arr**	**22.42**	**227**	P	**P**		**04 27 38.8**	**-0.2**
WR0				IAmb	IAmb		04 27 59.6	
	comp=Z,32nm,0.7s							
WRAB	**Tennant Creek**	**22.54**	**227**	P	**P**		**04 27 40.0**	**-0.3**
WB2	**Warramunga Arr**	**22.54**	**227**	P	**P**		**04 27 40.1**	**-0.3**
WRA	**Warramunga Arr**	**22.55**	**227**	P	**P**		**04 27 40.4**	**-0.2**
	comp=Z,37nm,0.7s,baz=53,slow=9.9,SNR=136							
WRA				pP	**pP**		**04 27 56.5**	**-0.1**
	comp=Z,21nm,0.9s,baz=54,slow=10,SNR=6.3							
WRA				S	**S**		**04 31 40.6**	**-2.0**
	comp=Z,7.7nm,1.0s,baz=63,slow=17,SNR=9.4							
	comp=Z,37nm,0.7s							
WRA	**Warramunga Arr**	**22.55**	**227**	P	**P**		**04 27 39.0**	**-1.5**
KNRA	**Kununurra**	**24.98**	**243**	P	**P**		**04 28 03.7**	**+0.5**
KNRA				IAmb	IAmb		04 28 06.2	
	comp=Z,27nm,0.5s							
KNRA	**Kununurra**	**24.98**	**243**	P	**P**		**04 28 04.2**	**+1.0**
AS31	**Alice Springs**	**25.31**	**221**	P	**P**		**04 28 07.0**	**+0.7**
ASAR	**Alice Springs**	**25.32**	**221**	P	**P**		**04 28 06.8**	**+0.5**
	comp=Z,23nm,0.7s,baz=56,slow=8.2,SNR=112							
ASAR				pP	**pP**		**04 28 25.1**	**+0.8**
	comp=Z,16nm,0.8s,baz=58,slow=8.3,SNR=9.5							
ASAR				sP	**sP**		**04 28 32.6**	**-0.7**
	comp=Z,17nm,0.8s,baz=57,slow=9.1,SNR=6.1							
ASAR				S	**S**		**04 32 29.2**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=52,slow=17,SNR=1.9							
	comp=Z,23nm,0.7s							
ASAR	**Alice Springs**	**25.32**	**221**	P	**P**		**04 28 06.6**	**+0.4**
CMSA	**Cobar Meteorol**	**26.98**	**192**	P	**P**		**04 28 20.2**	**-0.9**
OOD	**Oodnadatta**	**27.34**	**212**	P	**P**		**04 28 24.0**	**-0.4**
LCRK	**Leigh Creek**	**28.34**	**205**	P	**P**		**04 28 32.7**	**-0.6**
STKA	**Stephens Creek**	**28.37**	**199**	LR	LR		04 38 49.7	
	comp=Z,58nm,19.7s,baz=21,slow=34							
FITZ	**Fitzroy Crossi**	**28.68**	**241**	P	**P**		**04 28 36.4**	**0.0**
	comp=Z,7.0nm,0.5s,baz=58,slow=8.5,SNR=39							
FITZ				pP	**pP**		**04 28 53.1**	**-1.5**
	comp=Z,8.1nm,0.7s,baz=76,slow=7.2,SNR=5.9							
	comp=Z,7.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**28.68**	**241**	P	**P**		**04 28 36.3**	**-0.2**
FITZ				IAmb	IAmb		04 28 55.2	
	comp=Z,10nm,0.8s							
FITZ	**Fitzroy Crossi**	**28.68**	**241**	P	**P**		**04 28 36.2**	**-0.2**
WRKA	**Warakurna**	**30.08**	**226**	P	**P**		**04 28 48.6**	**-0.2**
MULG	**Mulgathing**	**30.18**	**212**	P	**P**		**04 28 49.2**	**-0.4**
HTT	**Hallett**	**30.70**	**201**	P	**P**		**04 28 53.4**	**-0.8**
BBOO	**Buckleboo**	**31.30**	**206**	P	**P**		**04 28 59.0**	**-0.5**
BBOO				IAmb	IAmb		04 29 14.2	
	comp=Z,39nm,1.4s							
BBOO	**Buckleboo**	**31.30**	**206**	P	**P**		**04 28 58.9**	**-0.6**
KAPI	**Kappang**	**31.93**	**269**	LR	LR		04 44 04.6	
	comp=Z,32nm,18.7s,baz=82,slow=40							
PCI	**Palu**	**32.18**	**276**	P	**P**		**04 29 05.1**	**-2.4**
FORT	**Forrest**	**33.99**	**218**	P	**P**		**04 29 22.8**	**-0.2**
MBWA	**Marble Bar**	**35.00**	**240**	P	**P**		**04 29 31.7**	**-0.1**
MBWA				IAmb	IAmb		04 29 51.3	
	comp=Z,22nm,1.2s							
MBWA	**Marble Bar**	**35.00**	**240**	P	**P**		**04 29 31.2**	**-0.6**
MBWA				pP	**pP**		**04 29 49.3**	**-1.0**
URZ	**Urewera**	**40.29**	**149**	P	**P**		**04 30 16.0**	**-0.2**
	comp=Z,6.9nm,0.6s,baz=230,slow=6.0,SNR=2.0							
URZ				LR	LR		04 45 02.4	
	comp=Z,55nm,19.4s,baz=212,slow=33							
	comp=Z,6.9nm,0.6s							
KSRS	**Korea Array**	**47.77**	**334**	pP	pP		04 31 36.4	+1.4
	comp=Z,0.7nm,0.5s,baz=152,slow=7.8,SNR=2.8							
PETK	**Petropavlovsk-**	**58.14**	**4**	pP	pP		04 32 52.0	+0.3
	comp=Z,1.6nm,0.6s,baz=178,slow=9.9,SNR=2.4							
DRV	**Dumont d'Urvil**	**62.07**	**185**	P	**P**		**04 32 58.9**	**+0.1**
DRV				pP	**pP**		**04 33 22.2**	**+3.5**
SONM	**Songino Array**	**66.00**	**328**	P	**P**		**04 33 26.9**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=127,slow=7.1,SNR=2.5							
SONM				pP	**pP**		**04 33 44.8**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=145,slow=5.3,SNR=2.3							
	comp=Z,0.8nm,0.5s							
VNDA	**Vanda**	**72.63**	**178**	P	**P**		**04 34 05.5**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=329,slow=7.2,SNR=5.1							
VNDA				pP	**pP**		**04 34 24.5**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=350,slow=6.4,SNR=3.6							
	comp=Z,0.5nm,0.6s							
VNDA	**Vanda**	**72.63**	**178**	P	**P**		**04 34 06.2**	**+0.8**
HYBB	**Hyderabad (bro**	**75.64**	**289**	*eP*	**P**		**04 34 23.3**	**-0.7**
HYBB				*eSP*	**sP**		**04 34 53.1**	**+0.5**
MKAR	**Makanchi Array**	**79.85**	**319**	pP	pP		04 35 08.8	+1.5
	comp=Z,0.6nm,0.8s,baz=111,slow=7.9,SNR=3.6							
BERG	**Berg Lake**	**82.11**	**27**	P	**P**		**04 34 58.7**	**+0.2**
ILAR	**Eielson Array**	**82.75**	**22**	pP	pP		04 35 22.7	+0.2
	comp=Z,0.8nm,0.9s,baz=245,slow=5.9,SNR=3.6							
QSPA	**South Pole Qui**	**84.93**	**180**	P	**P**		**04 35 13.6**	**+0.6**
QSPA				IAmb	IAmb		04 35 50.4	
	comp=Z,7.6nm,1.4s							
MAW	**Mawson**	**84.97**	**203**	pP	pP		04 35 32.9	-1.0
	comp=Z,1.6nm,0.7s,baz=85,slow=7.7,SNR=3.2							
BBB	**Bella Bella**	**87.88**	**37**	LR	LR		05 09 53.3	
	comp=Z,1.1nm,20.1s,baz=251,slow=32							
NVAR	**Mina Array Bea**	**93.01**	**52**	pP	**pP**		**04 36 12.2**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=243,slow=6.0,SNR=3.1							
NVAR				LR	LR		05 13 20.9	
	comp=Z,19nm,18.2s,baz=272,slow=33							
LPIG	**La Paz**	**99.22**	**66**	LR	LR		05 19 45.6	
	comp=Z,7.7nm,18.2s,baz=206,slow=34							
PDAR	**Pinedale Array**	**99.74**	**48**	LR	LR		05 18 35.7	
	comp=Z,11nm,18.0s,baz=320,slow=34							
TORD	**Torodi Ar. Bea**	**149.43**	**287**	PKPbc	**PKPbc**		**04 42 27.5**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=76,slow=2.2,SNR=8.8							
TORD				pPKPbc	**pPKPbc**		**04 42 48.0**	**-1.8**
	comp=Z,1.1nm,0.6s,baz=68,slow=3.5,SNR=5.1							

*GII **11** 04:25:57.2±0.0,27.˚72N×34.˚19E,h1km,MD3.5/3,Mm3.4/3*
*HLW **11** 04:26:00.4,27.˚85N×34.˚44E,h4km±2km,Md3.3*
ISC 11 04:26:00.3±1.9,27.˚89N±0.˚07×34.˚38E±0.˚07,h7km±14km, n19,σ1s27/26,Red Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HKAT	**Jabal Katrina**	**0.72**	**331**	P	**Pb**		**04 26 15.5**	**+0.2**
	baz=330							
HKAT				S	**Sb**		**04 26 24.8**	**-0.7**
	baz=330							
TR2	**Tor 2**	**0.76**	**310**	P	**Pn**		**04 26 16.8**	**-0.8**
	baz=311							
HDHB	**Dhahab**	**0.85**	**14**	P	**Pg**		**04 26 17.1**	**+0.4**
	baz=10.0							
HHRG	**Al Ghardaqah**	**0.98**	**227**	P	**Pn**		**04 26 21.7**	**+1.1**
	baz=224							
HHRG				S	**Sn**		**04 26 35.7**	**+0.9**
	baz=224							
NUB	**Nuweibaa**	**1.16**	**12**	P	**Pb**		**04 26 22.2**	**-0.5**
	baz=8.0							
HRDS	**Abu Rudays**	**1.26**	**311**	P	**Pg**		**04 26 25.6**	**+1.1**
	baz=311							
HBST	**Basata**	**1.36**	**13**	P	**Pg**		**04 26 26.6**	**+0.2**
	baz=10.0							
HBST				S	**Sg**		**04 26 44.5**	**+0.5**
	baz=10.0							
GRB	**Gharib**	**1.46**	**285**	P	**Pb**		**04 26 27.3**	**-0.6**
	baz=287							
EIL	**Elat**	**1.84**	**16**	Pn	**Pn**		**04 26 32.4**	**0.0**
EIL				Sn	**Sg**		**04 26 59.4**	**-0.1**
MBRI	**Mt Berech**	**1.95**	**14**	Pn	**Pn**		**04 26 34.2**	**+0.2**
MBRI				Sn	**Sb**		**04 27 02.3**	**+1.3**
HRFI	**Mount Harif**	**2.21**	**15**	Pn	**Pn**		**04 26 38.1**	**+0.5**
HRFI				Sn	**Sb**		**04 27 09.2**	**+0.8**
KRMI	**Paran Flat**	**2.24**	**8**	Pn	**Pn**		**04 26 37.9**	**0.0**
SUZ	**Suez**	**2.37**	**325**	P	**Pn**		**04 26 41.0**	**+1.3**
	baz=325							
PRNI	**Paran**	**2.51**	**12**	Pn	**Pn**		**04 26 41.9**	**+0.2**
ASUT		**2.55**	**260**	P	**Pb**		**04 26 43.7**	**-2.8**
	baz=261							
ZFRI	**Zfri**	**2.74**	**15**	Pn	**Pn**		**04 26 45.6**	**+0.8**
ZFRI				Sn	**Sb**		**04 27 21.7**	**-1.9**
KZIT	**Kziot**	**3.00**	**0**	Pn	**Pb**		**04 26 51.1**	**-3.1**
YTIR	**Yattir**	**3.52**	**10**	Pn	**Pn**		**04 26 56.6**	**+1.0**
DSI	**Dead Sea**	**3.77**	**13**	Pn	**Pn**		**04 27 00.6**	**+1.7**

*IDC **11** 05:08:03.7±1.7,10.˚72S×166.˚20E,h0km,mb4.0/5, mbtmp4.0/6,ML4.0/1,MS3.2/1,Error ellipse: s-maj=50.1km s-min=28.1km az=128.0*
*N

MKAR Makanchi Array 93.71 317 P **P** 05 21 22.6 +0.5
comp=Z,0.7nm,0.7s,baz=101,slow=6.3,SNR=6.8
comp=Z,0.7nm,0.7s

IDC ***11*** *05:18:34.9±1.0, 6°.09S×152°.37E, h0km, mb4.2/10, mbtmp4.2/11, ML2.6/1, MS3.0/2, Error ellipse: s-maj=31.0km s-min=15.0km az=105.0*

ISC 11 05:18:40.4±1.0, 6°.08S±0°.08×152°.4E±0°.2, h38km, n14, σ0°72/15, mb4.1/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.80**	**349**	Pn	**Pn**	**05 19 08.2**	**-0.7**
	205nm,0.3s,baz=148,slow=2.8,SNR=12						
KRVT				Sn	**Sn**	**05 19 31.3**	**+0.8**
	614nm,0.3s,baz=133,slow=24,SNR=32						
PMG	**Port Moresby**	**6.14**	**237**	Pn	**Pn**	**05 20 08.5**	**-0.1**
	8.4nm,0.3s,baz=71,slow=11,SNR=6.8						
PMG				Sn	**Sn**	**05 21 18.3**	**+0.8**
	8.5nm,0.3s,baz=288,slow=20,SNR=2.7						
PMG				LR	LR	05 22 32.0	
	comp=Z,137nm,18.1s,baz=152,slow=39						
	26nm,0.5s						
CTA	**Charters Tower**	**15.14**	**203**	LR	LR	05 27 37.1	
	comp=Z,53nm,18.1s,baz=74,slow=36						
WRA	**Warramunga Arr**	**22.30**	**230**	P	**P**	**05 23 34.1**	**-0.6**
	3.1nm,0.9s,baz=54,slow=9.7,SNR=16						
	3.1nm,0.9s						
ASAR	**Alice Springs**	**24.93**	**224**	P	**P**	**05 24 00.0**	**-0.3**
	5.6nm,0.8s,baz=57,slow=9.1,SNR=37						
	5.6nm,0.8s						
STKA	**Stephens Creek**	**27.57**	**200**	P	**P**	**05 24 23.1**	**-0.9**
	2.0nm,0.6s,baz=8.7,slow=13,SNR=2.8						
	2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**28.69**	**243**	P	**P**	**05 24 33.5**	**-0.7**
	3.4nm,0.6s,baz=64,slow=7.0,SNR=17						
	3.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.05**	**296**	P	**P**	**05 28 29.5**	**-0.7**
	0.7nm,0.3s,baz=98,slow=6.6,SNR=4.5						
	0.7nm,0.3s						
SONM	**Songino Array**	**67.18**	**328**	P	**P**	**05 29 30.9**	**+0.1**
	0.8nm,0.5s,baz=136,slow=3.6,SNR=3.7						
	0.8nm,0.5s						
VNDA	**Vanda**	**71.57**	**178**	P	**P**	**05 29 57.7**	**+0.5**
	0.6nm,0.8s,baz=331,slow=5.8,SNR=5.3						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**81.01**	**319**	P	**P**	**05 30 52.7**	**+1.3**
	0.8nm,0.8s,baz=102,slow=5.2,SNR=5.1						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**81.98**	**327**	P	**P**	**05 30 56.0**	**-0.2**
	4.4nm,0.6s,baz=112,slow=5.7,SNR=15						
	4.4nm,0.6s						
ILAR	**Eielson Array**	**83.50**	**22**	P	**P**	**05 31 04.4**	**+0.5**
	3.0nm,0.8s,baz=250,slow=5.0,SNR=22						
	3.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**150.28**	**286**	PKPbc	**PKPbc**	**05 38 28.9**	**+0.2**
	2.9nm,0.8s,baz=72,slow=2.8,SNR=15						

ISK ***11*** *05:32:38.3, 40°.05N×23°.31E, h15km, ML3.9/24*

IDC ***11*** *05:32:42.3±1.2, 40°.08N×23°.83E, h0km, mb3.8/8, mbtmp3.8/13, ML3.6/5, MS2.8/9, Error ellipse: s-maj=17.5km s-min=15.9km az=38.0*

SOF ***11*** *05:32:42.1, 40°.09N×23°.94E, h11km, MD4.2*

THE ***11*** *05:32:43.9, 40°.11N×23°.88E, h8km, ML3.8/14, Error ellipse: s-maj=0.7km s-min=0.4km az=330.0*

ATH ***11*** *05:32:44.0, 40°.09N×23°.90E, h18km±2km, ML3.9/8, Error ellipse: s-maj=2.4km s-min=0.8km az=217.0*

TIR ***11*** *05:32:44.8, 40°.28N×23°.81E, h42km±2km, Ml3.8*

DDA ***11*** *05:32:46.0±0.0, 40°.16N×24°.07E, h22km±67km, MW3.8*

ISC 11 05:32:43.7±0.9, 40°.10N±0°.02×23°.91E±0°.01, h13km±6km, n216, σ1$25/263, mb3.8/8, MS2.6/5, 19C-14D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.25**	**226**	P	**Pg**	**05 32 49.3**	**+0.4**
PAIG				S	**Sg**	**05 32 52.5**	**0.0**
PAIG	**Paliouri**	**0.25**	**226**	P	**Pg**	**05 32 49.4**	**+0.4**
PAIG				S	**Sg**	**05 32 52.8**	**+0.3**
KOKK	**Kokkinochori,**	**0.72**	**5**	P	**Pg**	**05 32 57.9**	**+0.1**
KOKK				S	**Sg**	**05 33 07.3**	**+0.1**
	9μm,0.5s						
KOKK	**Kokkinochori,**	**0.72**	**5**	P	**Pg**	**05 32 57.9**	**+0.1**
KOKK				S	**Sg**	**05 33 07.3**	**+0.1**
HORT	**Hortiatis**	**0.80**	**309**	P	**Pg**	**05 32 58.2**	**-0.9**
HORT				S	**Sg**	**05 33 09.2**	**-0.4**
	5μm,0.3s						
HORT	**Hortiatis**	**0.80**	**309**	P	**Pg**	**05 32 58.2**	**-0.9**
HORT				S	**Sg**	**05 33 09.1**	**-0.5**
HORT				AML	AML	05 33 09.8	
	comp=E,12154μm,0.5s						
HORT				AML	AML	05 33 10.7	
	comp=N,11724μm,0.4s						
THAS	**Thassos island**	**0.80**	**50**	P	**Pg**	**05 32 59.1**	**-0.1**
THAS				S	**Sb**	**05 33 11.1**	**+0.9**
	comp=N,15μm,0.3s						
THAS	**Thassos island**	**0.80**	**50**	P	**Pg**	**05 32 59.1**	**-0.1**
THAS				S	**Sg**	**05 33 09.5**	**-0.1**
THAS				AML	AML	05 33 12.8	
	comp=N,31792μm,0.2s						
THAS				AML	AML	05 33 13.6	
	comp=E,27882μm,0.3s						
SOH	**Sokhos**	**0.84**	**330**	P	**Pg**	**05 32 59.7**	**-0.2**
SOH				S	**Sg**	**05 33 11.0**	**+0.1**
	comp=E,13μm,0.5s						
SOH	**Sokhos**	**0.84**	**330**	P	**Pg**	**05 32 59.7**	**-0.2**
SOH				S	**Sg**	**05 33 10.3**	**-0.6**
SOH				AML	AML	05 33 11.9	
	comp=N,24936μm,0.5s						
SOH				AML	AML	05 33 13.6	
	comp=E,39025μm,0.6s						
THE	**Thessaloniki**	**0.90**	**307**	P	**Pb**	**05 33 00.1**	**-1.0**
THE				S	**Sb**	**05 33 12.4**	**-0.6**
	comp=E,3μm,0.4s						
THE	**Thessaloniki**	**0.90**	**307**	P	**Pb**	**05 33 00.1**	**-1.0**
	baz=299						
THE				S	**Sb**	**05 33 11.1**	**-1.9**
	baz=299						
THE	**Thessaloniki**	**0.90**	**307**	P	**Pb**	**05 33 00.1**	**-1.0**
KVLA	**Kavala**	**0.91**	**23**	P	**Pb**	**05 33 01.3**	**-0.1**
KVLA				S	**Sb**	**05 33 12.7**	**-0.7**
KVLA				AML	AML	05 33 15.1	
	comp=N,28441μm,0.5s						
KVLA				AML	AML	05 33 15.5	
	comp=E,39994μm,0.3s						
XOR	**Xorichti**	**0.92**	**217**	P	**Pb**	**05 33 01.1**	**-0.4**
XOR				S	**Sb**	**05 33 14.0**	**+0.3**
	comp=E,6μm,0.6s						
XOR	**Xorichti**	**0.92**	**217**	P	**Pb**	**05 33 01.6**	**+0.1**
ALNA	**Alonissos**	**0.95**	**182**	P	**Pb**	**05 33 01.7**	**-0.3**
NEO	**Neokhori**	**0.95**	**214**	P	**Pb**	**05 33 01.8**	**-0.3**
NEO				S	**Sg**	**05 33 15.2**	**+0.6**
	comp=E,6μm,0.4s						
NEO	**Neokhori**	**0.95**	**214**	P	**Pb**	**05 33 02.0**	**-0.2**
NEO				S	**Sb**	**05 33 14.8**	**+0.1**
NEO				AML	AML	05 33 18.3	
	comp=E,12740μm,0.4s						
NEO				AML	AML	05 33 18.5	
	comp=N,12732μm,0.4s						
LIA	**Limnos Island**	**1.00**	**101**	P	**Pb**	**05 33 02.9**	**+0.1**
LIA				S	**Sn**	**05 33 17.9**	**+0.5**
	comp=N,4μm,0.6s						
LIA	**Limnos Island**	**1.00**	**101**	P	**Pb**	**05 33 03.0**	**+0.1**
LIA				S	**Sb**	**05 33 15.0**	**-0.9**
LIA				AML	AML	05 33 20.6	
	comp=E,7753μm,0.4s						
LIA				AML	AML	05 33 21.1	
	comp=N,8543μm,0.8s						
KAVA	**Kavala**	**1.01**	**27**	P	**Pb**	**05 33 02.8**	**-0.3**
KAVA				S	**Sg**	**05 33 16.9**	**+0.6**
	comp=N,14μm,0.4s						
KAVA	**Kavala**	**1.01**	**27**	P	**Pb**	**05 33 02.8**	**-0.3**
KAVA				S	**Sb**	**05 33 16.1**	**-0.2**
SRS	**Serrai**	**1.04**	**347**	P	**Pb**	**05 33 03.7**	**0.0**
SRS				S	**Sg**	**05 33 17.8**	**+0.3**
	comp=N,4μm,0.6s						
SRS	**Serrai**	**1.04**	**347**	P	**Pb**	**05 33 03.7**	**0.0**
SRS				S	**Sb**	**05 33 17.6**	**+0.2**
SRS				AML	AML	05 33 21.1	
	comp=E,8036μm,0.6s						
SRS				AML	AML	05 33 23.4	
	comp=N,7210μm,0.5s						
NVR	**Nevrokopi**	**1.25**	**358**	P	**Pn**	**05 33 06.4**	**-0.6**
NVR				S	**Sn**	**05 33 23.8**	**+0.1**
	comp=N,3μm,0.4s						
NVR	**Nevrokopi**	**1.25**	**358**	P	**Pn**	**05 33 06.7**	**-0.3**
NVR				S	**Sn**	**05 33 23.6**	**-0.1**
NVR				AML	AML	05 33 25.2	
	comp=E,5920μm,0.5s						
NVR				AML	AML	05 33 25.8	
	comp=N,4620μm,0.3s						
SMTH	**Samothraki Isl**	**1.29**	**73**	P	**Pn**	**05 33 06.7**	**-0.8**
SMTH				S	**Sg**	**05 33 26.2**	**+0.8**
	comp=N,1μm,0.3s						
SMTH	**Samothraki Isl**	**1.29**	**73**	P	**Pn**	**05 33 06.5**	**-1.0**
KNT	**Kendrikon**	**1.31**	**324**	P	**Pn**	**05 33 07.5**	**-0.3**
KNT				S	**Sn**	**05 33 25.9**	**+0.7**
	comp=N,4μm,0.4s						
KNT	**Kendrikon**	**1.31**	**324**	P	**Pn**	**05 33 07.6**	**-0.3**
KNT				S	**Sn**	**05 33 25.6**	**+0.4**
SKY	**Skiros Island**	**1.32**	**158**	P	**Pn**	**05 33 07.8**	**0.0**
SKY				S	**Sg**	**05 33 27.3**	**+1.1**
	comp=N,3μm,0.3s						
SKY	**Skiros Island**	**1.32**	**158**	P	**Pn**	**05 33 07.5**	**-0.3**
TYRN	**Tyrnavos**	**1.35**	**254**	P	**Pn**	**05 33 08.7**	**+0.5**
TYRN				S	**Sn**	**05 33 26.0**	**0.0**
TYRN	**Tyrnavos**	**1.35**	**254**	P	**Pn**	**05 33 08.8**	**+0.6**
KTI	**Kastanea**	**1.40**	**283**	P	**Pn**	**05 33 08.4**	**-0.8**
GRG	**Griva**	**1.43**	**307**	P	**Pn**	**05 33 09.4**	**-0.1**
GRG				S	**Sb**	**05 33 29.0**	**+0.5**
GRG	**Griva**	**1.43**	**307**	P	**Pn**	**05 33 09.6**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.47**	**174**	P	**Pn**	**05 33 09.4**	**-0.5**
KYMI				S	**Sg**	**05 33 31.4**	**+0.3**
KYMI	**Kymi, Euboea I**	**1.47**	**174**	P	**Pn**	**05 33 09.5**	**-0.5**
MMB	**Musomiste**	**1.50**	**355**	P	**Pn**	**05 33 09.7**	**-0.6**
GOKA	**anakkale-Gk**	**1.53**	**86**	P	**Pn**	**05 33 10.5**	**-0.3**
THL	**Klokotos Trika**	**1.55**	**251**	P	**Pn**	**05 33 10.8**	**-0.3**
THL				S	**Sn**	**05 33 31.5**	**+0.4**
THL	**Klokotos Trika**	**1.55**	**251**	P	**Pn**	**05 33 10.9**	**-0.2**
ATAL	**Atalanti**	**1.56**	**206**	P	**Pn**	**05 33 10.9**	**-0.3**
ATAL	**Atalanti**	**1.56**	**206**	P	**Pn**	**05 33 10.9**	**-0.3**
VAY	**Valandovo**	**1.59**	**321**	*i* Pn	**Pn**	**05 33 12.2**	**+0.6**
RDO	**Rodhopi**	**1.62**	**49**	P	**Pn**	**05 33 11.4**	**-0.6**
RDO				S	**Sb**	**05 33 33.6**	**-0.3**
RDO	**Rodhopi**	**1.62**	**49**	PN	**Pn**	**05 33 11.8**	**-0.2**
RDO				SN	**Sg**	**05 33 37.7**	**+1.8**
RDO	**Rodhopi**	**1.62**	**49**	P	**Pn**	**05 33 11.5**	**-0.5**
AGG	**Agios Georgios**	**1.63**	**229**	P	**Pn**	**05 33 11.9**	**-0.2**
AGG				S	**Sn**	**05 33 33.7**	**+0.7**
AGG	**Agios Georgios**	**1.63**	**229**	P	**Pn**	**05 33 12.0**	**-0.2**
AXAR	**Agios Charalam**	**1.65**	**216**	P	**Pn**	**05 33 12.2**	**-0.2**
AXAR	**Agios Charalam**	**1.65**	**216**	P	**Pn**	**05 33 12.3**	**-0.2**
KZN	**Kozani**	**1.65**	**278**	P	**Pn**	**05 33 12.6**	**+0.1**
KZN				S	**Sn**	**05 33 32.4**	**-1.3**
KZN	**Kozani**	**1.65**	**278**	P	**Pn**	**05 33 12.7**	**+0.2**
BOZC	**Bozcaada**	**1.67**	**98**	P	**Pn**	**05 33 12.5**	**-0.1**
BOZC				S	**Sn**	**05 33 31.9**	**-2.0**
RZN	**Rozhen**	**1.70**	**21**	P	**Pn**	**05 33 13.6**	**+0.3**
ECEA	**Canakkale, Ece**	**1.74**	**91**	P	**Pn**	**05 33 14.2**	**+0.6**
ECEA				S	**Sn**	**05 33 32.3**	**-3.4**
SIGR	**SIGRI**	**1.74**	**120**	P	**Pn**	**05 33 13.7**	**0.0**
SIGR				S	**Sb**	**05 33 36.7**	**-0.7**
SIGR	**SIGRI**	**1.74**	**120**	P	**Pn**	**05 33 13.8**	**0.0**
MAKR	**Makrakomi, Fth**	**1.75**	**232**	P	**Pn**	**05 33 13.9**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.75**	**232**	P	**Pn**	**05 33 13.9**	**+0.1**
ALN	**Alexandroupoli**	**1.81**	**63**	P	**Pn**	**05 33 14.1**	**-0.6**
ALN				S	**Sb**	**05 33 39.6**	**+0.2**
KOCA	**Canakkale, Ayv**	**1.82**	**108**	P	**Pb**	**05 33 16.0**	**-0.8**
KOCA				S	**Sn**	**05 33 37.9**	**+0.2**
CAVK	**Edirne/Enez-Ca**	**1.82**	**70**	P	**Pn**	**05 33 14.1**	**-0.7**
CAVK				S	**Sb**	**05 33 40.3**	**+0.6**
GPNR	**Gulpinar-Canak**	**1.83**	**110**	PN	**Pb**	**05 33 16.1**	**-1.0**
KKB	**Krupnik**	**1.87**	**341**	P	**Pn**	**05 33 15.4**	**-0.1**
EZN	**Ezine**	**1.88**	**98**	PN	**Pb**	**05 33 16.8**	**-1.0**
EZN				SN	**Sg**	**05 33 45.0**	**+0.9**
KDZ	**Kurdzhali**	**1.93**	**36**	PN	**Pn**	**05 33 15.1**	**-1.1**
KDZ				SN	**Sb**	**05 33 42.4**	**-0.3**
KDZ	**Kurdzhali**	**1.93**	**36**	P	**Pn**	**05 33 15.2**	**-1.0**
VILL	**Villia**	**1.99**	**194**	P	**Pn**	**05 33 16.8**	**-0.3**
EVR	**Evrytania**	**2.01**	**235**	P	**Pn**	**05 33 17.4**	**-0.1**
DION	**Dionisos Attik**	**2.02**	**179**	P	**Pn**	**05 33 17.4**	**-0.1**
PTL	**Penteli**	**2.05**	**181**	P	**Pn**	**05 33 17.9**	**0.0**
BAYC	**CANAKKALE_Bayr**	**2.06**	**99**	P	**Pn**	**05 33 18.6**	**+0.5**
BAYC				S	**Sn**	**05 33 42.2**	**-1.4**
ERIK	**Erikli-Kesan**	**2.07**	**73**	PN	**Pb**	**05 33 19.7**	**-1.4**
PLD	**Plovdiv**	**2.09**	**16**	PN	**Pn**	**05 33 16.8**	**-1.7**
PLD	**Plovdiv**	**2.09**	**16**	P	**Pn**	**05 33 19.6**	**+1.1**
PENT	**Pentalofos**	**2.13**	**273**	P	**Pn**	**05 33 19.7**	**+0.6**
ATHU	**Athens Univers**	**2.13**	**183**	P	**Pn**	**05 33 18.9**	**-0.2**
LTK	**Loutraki**	**2.20**	**200**	P	**Pn**	**05 33 19.9**	**-0.1**
SERG	**Sergoula**	**2.21**	**221**	P	**Pn**	**05 33 20.2**	**0.0**
LOUT	**Loutraki**	**2.23**	**199**	P	**Pn**	**05 33 20.4**	**0.0**
KESN	**Edirne-Kesan**	**2.23**	**70**	P	**Pn**	**05 33 20.4**	**-0.4**
EFP	**Efpalio**	**2.28**	**224**	P	**Pn**	**05 33 21.2**	**+0.1**
AYVA	**Ayvalik**	**2.29**	**109**	P	**Pn**	**05 33 20.9**	**-0.2**
DIM	**Dimitrovgrad**	**2.30**	**32**	P	**Pn**	**05 33 22.0**	**+0.6**
DIM	**Dimitrovgrad**	**2.30**	**32**	Pg	**Pg**	**05 33 28.3**	**+0.4**
UKOP	**Uzunkopru-Edir**	**2.31**	**63**	PN	**Pn**	**05 33 22.8**	**+1.3**
PVO	**Paravola**	**2.37**	**232**	P	**Pn**	**05 33 23.3**	**+1.0**
CHOS	**Chios island**	**2.39**	**135**	P	**Pn**	**05 33 22.9**	**+0.3**
LAKA	**Lakka**	**2.39**	**220**	P	**Pn**	**05 33 22.5**	**-0.1**
KBN	**Korca**	**2.44**	**283**	P	**Pn**	**05 33 24.8**	**+1.4**
	baz=280						
KBN				S	**Sn**	**05 33 53.9**	**+0.7**
	baz=280						
BUHA	**Balikesir, Bur**	**2.51**	**103**	P	**Pn**	**05 33 25.1**	**+0.8**
DKL	**Dikili**	**2.53**	**113**	PN	**Pn**	**05 33 25.9**	**+1.4**
LSK	**Leskovik**	**2.54**	**272**	P	**Pn**	**05 33 25.8**	**+1.1**
	baz=269						
LSK				S	**Sn**	**05 33 57.2**	**+1.7**
	baz=269						
LSK				AMP			
	comp=E,2.0nm,0.8s,baz=269						
EPID	**Epidavros**	**2.56**	**194**	P	**Pn**	**05 33 24.7**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.56**	**76**	PN	**Pn**	**05 33 26.9**	**+1.9**
VTS	**Vitosha**	**2.57**	**349**	⇓P	**Pn**	**05 33 25.6**	**+0.4**
VTS	**Vitosha**	**2.57**	**349**	P	**Pn**	**05 33 25.6**	**+0.4**
ZEDA	**zmir-Bergama**	**2.70**	**114**	P	**Pn**	**05 33 27.8**	**+1.0**
ZEDA				S	**Sn**	**05 33 56.4**	**-2.9**
URLA	**Izmir**	**2.71**	**129**	PN	**Pn**	**05 33 27.1**	**0.0**
URLA	**Izmir**	**2.71**	**129**	P	**Pn**	**05 33 26.2**	**-0.9**
ZEYE	**Izmir, Urla-Ze**	**2.74**	**132**	P	**Pn**	**05 33 26.0**	**-1.4**
ZEYE				S	**Sn**	**05 33 57.3**	**-3.1**
EDRB	**Edirne**	**2.77**	**50**	PN	**Pn**	**05 33 29.3**	**+1.5**
KNL	**Balıkesir**	**2.77**	**85**	P	**Pb**	**05 33 30.9**	**-2.3**
IGT	**Igoumenitsa**	**2.81**	**260**	P	**Pb**	**05 33 31.8**	**-2.0**
	baz=256						
IGT				S	**Sn**	**05 34 04.9**	**+2.7**
	baz=256						
LKD2	**Lefkada island**	**2.84**	**244**	P	**Pn**	**05 33 31.7**	**+2.9**
	baz=240						
LKD2				S	**Sb**	**05 34 06.9**	**-2.0**
	baz=240						
MRMT	**Marmara Adasi**	**2.86**	**79**	PN	**Pn**	**05 33 30.9**	**+1.8**
BALY	**Balya**	**2.88**	**96**	P	**Pn**	**05 33 29.0**	**-0.3**
GONE	**Gonen-Balikesi**	**2.90**	**90**	PN	**Pn**	**05 33 31.5**	**+1.9**
KIRK	**Kırklareli**	**2.94**	**54**	P	**Pn**	**05 33 30.4**	**+0.2**
SRN	**Sarande**	**3.01**	**267**	P	**Pn**	**05 33 33.5**	**+2.4**
	baz=264						
SRN				S	**Sn**	**05 34 07.4**	**+0.3**
	baz=264						
SRN				AMP			
	comp=E,0.8nm,0.6s,baz=264						
STEP	**BALIKESIR_Sava**	**3.02**	**103**	P	**Pn**	**05 33 32.0**	**+0.7**
EDC	**Edincik**	**3.04**	**84**	PN	**Pn**	**05 33 34.0**	**+2.5**
PHP	**Peshkopia**	**3.07**	**302**	P	**Pn**	**05 33 32.4**	**+0.4**
	baz=300						
PHP				S	**Sn**	**05 34 08.3**	**-0.3**
	baz=300						
PHP				AMP			
	comp=N,0.7nm,0.8s,baz=300						
DGB	**zmir**	**3.09**	**131**	P	**Pn**	**05 33 32.0**	**-0.2**
ARMN	**Kirklareli, Me**	**3.19**	**55**	P	**Pn**	**05 33 32.6**	**-1.0**
MPEP	**Malo Peshtene**	**3.26**	**358**	P	**Pn**	**05 33 35.3**	**+0.8**
APE	**Apeiranthos**	**3.28**	**157**	⇑P	**Pn**	**05 33 34.9**	**0.0**
APE	**Apeiranthos**	**3.28**	**157**	PN	**Pn**	**05 33 32.9**	**+2.0**
VIZE	**Kirklareli, Vi**	**3.33**	**62**	P	**Pn**	**05 33 35.6**	**+0.1**
SLVT	**Silivri**	**3.46**	**70**	PN	**Pn**	**05 33 39.9**	**+2.6**
DURS	**Dursunbey**	**3.55**	**97**	P	**Pn**	**05 33 40.8**	**+2.2**
CTYL	**Yalikoy Yolu**	**3.60**	**66**	P	**Pn**	**05 33 41.5**	**+2.3**
BLKB	**Belogradchik**	**3.64**	**346**	⇑P	**Pn**	**05 33 40.3**	**+0.5**
CTKS	**Kestanelik-??a**	**3.68**	**71**	PN	**Pn**	**05 33 42.8**	**+2.6**
BCI	**Bajram Curri**	**3.68**	**309**	P	**Pn**	**05 33 41.4**	**+1.1**
	baz=308						
AYDB	**Zeytinkoy-Aydi**	**3.77**	**123**	PN	**Pn**	**05 33 42.8**	**+1.1**
ARMT	**Armutlu**	**3.81**	**81**	PN	**Pn**	**05 33 45.0**	**+2.8**
BOVS	**Bovan**	**3.90**	**336**	⇓P	**Pn**	**05 33 43.3**	**0.0**
AYDN	**Tasoluk**	**3.94**	**127**	P	**Pn**	**05 33 45.0**	**+1.0**
MANT	**Manisa**	**3.95**	**113**	P	**Pn**	**05 33 45.2**	**+1.0**
ROIA	**ROIAK**	**3.96**	**40**	P	**Pn**	**05 33 45.2**	**+1.0**
RAZG	**Razgrad**	**3.97**	**28**	⇓P	**Pn**	**05 33 44.5**	**+0.2**
KULA	**Kula-Manisa**	**4.01**	**112**	PN	**Pn**	**05 33 47.1**	**+2.1**
BODT	**Bodrum**	**4.04**	**138**	PN	**Pn**	**05 33 45.5**	**+0.2**
ISK	**Istanbul-Kandi**	**4.04**	**75**	PN	**Pn**	**05 33 47.9**	**+2.7**
KAVV	**Kandilli-Istan**	**4.04**	**75**	PN	**Pn**	**05 33 48.5**	**+3.3**
PRD	**Provadia**	**4.05**	**39**	P	**Pn**	**05 33 45.5**	**+0.1**
KLYT	**Kilyos**	**4.07**	**72**	PN	**Pn**	**05 33 48.5**	**+2.8**
KURT	**Yalova, Merkez**	**4.08**	**81**	P	**Pb**	**05 33 51.8**	**-3.6**
DRME	**Dracevica, Mon**	**4.13**	**302**	*e*Pn	**Pn**	**05 33 47.5**	**+0.9**
USAK	**Usak-Merkez**	**4.19**	**108**	P	**Pn**	**05 33 49.4**	**+1.9**
YLV	**Yalova**	**4.20**	**82**	PN	**Pn**	**05 33 50.7**	**+3.1**
PDG	**Podgorica**	**4.21**	**305**	⇓P	**Pn**	**05 33 48.8**	**+1.1**
PDG	**Podgorica**	**4.21**	**305**	*e*Pn	**Pn**	**05 33 47.6**	**0.0**
GDZ	**Gediz**	**4.42**	**101**	P	**Pn**	**05 33 50.5**	**-0.2**
YER	**Yerkesik**	**4.53**	**129**	PN	**Pn**	**05 33 53.1**	**+1.1**
BILE	**Bilecik/Merkez**	**4.57**	**87**	P	**Pn**	**05 33 48.0**	**-4.7**
HCY	**Herceg Novi**	**4.71**	**302**	*e*Pn	**Pn**	**05 33 58.1**	**+3.6**
STFAR	**Stefanesti-Arg**	**4.82**	**9**	⇑P	**Pn**	**05 33 57.7**	**+1.6**
UPM	**Unac-Piva**	**4.87**	**311**	*e*Pn	**Pn**	**05 33 58.3**	**+1.5**
IDI	**Anoyia**	**4.87**	**171**	⇑P	**Pn**	**05 33 57.1**	**+0.3**
IDI	**Anoyia**	**4.87**	**171**	Pn	**Pn**	**05 33 57.0**	**+0.3**
	comp=N,4.5nm,0.3s,baz=356,slow=9.5,SNR=28						
	comp=N,21nm,0.5s						
RUDO	**Rudo**	**4.88**	**318**	*e*Pn	**Pn**	**05 33 57.2**	**+0.3**
BRY	**Bratogost**	**4.91**	**307**	*e*Pn	**Pn**	**05 33 58.0**	**+0.6**
TREB	**Trebinje**	**4.93**	**304**	*e*Pn	**Pn**	**05 34 00.5**	**+3.0**
DIVS	**Divibare**	**4.95**	**325**	*e*Pn	**Pn**	**05 33 58.1**	**+0.3**
MDVR	**Moldovita**	**4.95**	**342**	⇓P	**Pn**	**05 33 58.1**	**+0.3**
BBLS	**Lazići**	**5.04**	**320**	*e*Pn	**Pn**	**05 33 59.6**	**+0.5**
MTUR	**Matau**	**5.19**	**9**	⇑P	**Pn**	**05 34 02.6**	**+1.4**
ARR	**Arges**	**5.29**	**6**	⇑P	**Pn**	**05 34 03.3**	**+0.8**
LOT	**Lotru**	**5.35**	**359**	⇑P	**Pn**	**05 34 03.5**	**+0.2**
GZR	**Gura Zlata**	**5.36**	**351**	⇑P	**Pn**	**05 34 03.8**	**+0.4**
ISR	**Istrita**	**5.38**	**20**	⇑P	**Pn**	**05 34 05.3**	**+1.6**
VOIR		**5.40**	**9**	⇑P	**Pn**	**05 34 05.0**	**+1.0**
STON	**Ston**	**5.42**	**303**	*e*Pn	**Pn**	**05 34 02.6**	**-1.7**
TIRR	**Tirgusor**	**5.49**	**36**	⇓P	**Pn**	**05 34 05.3**	**+0.1**
MLR	**Muntele Rosu**	**5.59**	**15**	⇓P	**Pn**	**05 34 08.2**	**+1.5**
MLR	**Muntele Rosu**	**5.59**	**15**	Pn	**Pn**	**05 34 08.2**	**+1.5**
	comp=N,0.9nm,0.3s,baz=190,slow=3.5,SNR=15						
MLR				Lg	Lg	05 35 42.5	
	comp=N,2.1nm,0.3s,baz=244,slow=23,SNR=3.4						
MLR				LR	LR	05 36 37.9	
	comp=N,122nm,21.4s,baz=120,slow=42						
	comp=N,10nm,0.5s						
TIP	**Timpagrande**	**5.60**	**263**	⇓P	**Pn**	**05 34 07.7**	**+0.9**
NEHR	**Nehoiu**	**5.61**	**17**	⇑P	**Pn**	**05 34 08.4**	**+1.6**
BZS	**Buzias**	**5.77**	**344**	⇑P	**Pn**	**05 34 09.3**	**+0.3**
TPGR	**Topolog**	**5.81**	**34**	⇑P	**Pn**	**05 34 09.7**	**+0.1**
FRGS	**Fruska Gora**	**5.89**	**330**	⇑P	**Pn**	**05 34 11.3**	**+0.6**
FRGS	**Fruska Gora**	**5.89**	**330**	*e*Pn	**Pn**	**05 34 10.1**	**-0.6**
CFR	**Carcaliu**	**5.96**	**30**	⇑P	**Pn**	**05 34 11.6**	**+0.1**
DOPR	**Dopca**	**5.96**	**10**	⇑P	**Pn**	**05 34 13.0**	**+1.3**
COVR	**Voineasa-Covas**	**5.98**	**16**	⇓P	**Pn**	**05 34 13.8**	**+1.8**
PLOR	**Plostina

	comp=Z,81nm,19.4s,baz=145,slow=34						
	2.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**30.51**	**341**	LR	LR	05 55 16.8	
	comp=Z,43nm,20.3s,baz=234,slow=31						
KAPI	**Kappang**	**32.33**	**233**	LR	LR	05 56 45.1	
	comp=Z,37nm,21.1s,baz=60,slow=32						
KLR	**Kul'dur**	**35.18**	**345**	LR	LR	05 59 59.2	
	comp=Z,60nm,19.3s,baz=166,slow=35						
WB0	**Warramunga Arr**	**36.71**	**197**	P	**P**	**05 46 34.9**	**+0.3**
WB0				IAmb	IAmb	05 46 36.1	
	comp=Z,5.1nm,0.9s						
WB2	**Warramunga Arr**	**36.89**	**197**	P	**P**	**05 46 36.4**	**+0.3**
WRA	**Warramunga Arr**	**36.89**	**197**	P	**P**	**05 46 36.9**	**+0.8**
	comp=Z,3.4nm,1.0s,baz=16,slow=9.3,SNR=11						
	comp=Z,3.4nm,1.0s						
WRA	**Warramunga Arr**	**36.89**	**197**	P	**P**	**05 46 36.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**38.57**	**210**	P	**P**	**05 46 50.9**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=33,slow=10,SNR=6.8						
	comp=Z,3.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**38.57**	**210**	P	**P**	**05 46 50.4**	**0.0**
FITZ				IAmb	IAmb	05 46 51.9	
	comp=Z,4.3nm,0.8s						
PETK	**Petropavlovsk-**	**38.69**	**12**	LR	LR	06 01 19.2	
	comp=Z,35nm,21.1s,baz=171,slow=34						
ASAR	**Alice Springs**	**40.55**	**196**	P	**P**	**05 47 07.5**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=28,slow=10,SNR=4.0						
	comp=Z,0.8nm,1.0s						
DZM	**Mont Dzumac**	**43.00**	**150**	LR	LR	06 04 01.8	
	comp=Z,56nm,18.8s,baz=355,slow=34						
SONM	**Songino Array**	**45.11**	**324**	LR	LR	06 06 40.8	
	comp=Z,57nm,19.2s,baz=92,slow=36						
MSVF	**Nonsavu**	**46.52**	**134**	LR	LR	06 05 38.0	
	comp=Z,30nm,18.0s,baz=185,slow=34						
YAK	**Yakutsk**	**47.57**	**350**	LR	LR	06 06 30.7	
	comp=Z,51nm,21.4s,baz=94,slow=34						
AFI	**Afiamalu**	**51.89**	**122**	LR	LR	06 06 18.4	
	comp=Z,57nm,20.2s,baz=152,slow=31						
ZALV	**Zalesovo Beam**	**60.01**	**324**	LR	LR	06 16 05.6	
	comp=Z,35nm,18.9s,baz=119,slow=37						
MKAR	**Makanchi Array**	**60.08**	**315**	LR	LR	06 16 32.7	
	comp=Z,32nm,18.2s,baz=88,slow=37						
KURBB	**Kurchatov Arra**	**63.12**	**319**	LR	LR	06 17 07.9	
	comp=Z,67nm,20.8s,baz=93,slow=36						
PALK	**Pallekele**	**63.34**	**270**	LR	LR	06 14 51.1	
	comp=Z,25nm,20.9s,baz=191,slow=34						
RPZ	**Rata Peaks**	**63.73**	**159**	LR	LR	06 16 51.3	
	comp=Z,58nm,18.7s,baz=288,slow=35						
NRIK	**Noril'sk**	**64.22**	**341**	LR	LR	06 16 59.3	
	comp=Z,90nm,20.8s,baz=142,slow=35						
AAK	**Ala-Archa**	**65.25**	**310**	LR	LR	06 20 33.0	
	comp=Z,30nm,18.3s,baz=103,slow=38						
RAR	**Rarotonga**	**65.44**	**123**	LR	LR	06 11 01.1	
	comp=Z,44nm,21.3s,baz=314,slow=29						
PPT	**Papeete**	**72.47**	**114**	LR	LR	06 15 57.9	
	comp=Z,63nm,19.9s,baz=296,slow=30						
ARU	**Arti**	**75.13**	**325**	LR	LR	06 25 43.0	
	comp=Z,46nm,19.6s,baz=116,slow=37						
AKTO	**Aktyubinsk**	**76.17**	**319**	LR	LR	06 25 31.6	
	comp=Z,52nm,20.1s,baz=78,slow=36						
GNI	**Garni**	**87.64**	**311**	LR	LR	06 34 11.4	
	comp=Z,20nm,21.1s,baz=31,slow=38						
KBZ	**Khabaz**	**87.78**	**315**	LR	LR	06 34 21.3	
	comp=Z,18nm,18.7s,baz=36,slow=38						
NOA	**NORSAR Array B**	**95.16**	**339**	LR	LR	06 38 35.2	
	comp=Z,15nm,19.7s,baz=275,slow=37						

*AUST **11** 05:44:08.1±0.6,32.°36S×150.°89E,h0km,Error ellipse: s-maj=8.9km s-min=4.3km az=81.0*
*NOU **11** 05:44:09.1,32.°37S×150.°80E,h0km,MLv3.8/8,New South Wales, Australia*

ISC 11 05:44:08.2±1.3,32.°35S±0.°03×150.°86E±0.°04,h6km±12km, n20,σ0s93/27,New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**0.89**	**166**	P	**Pg**	**05 44 25.4**	**+0.2**
	baz=0.9						
MGCD				S	**Sb**	**05 44 37.7**	**-0.4**
	baz=0.9						
MGCD	**Mangrove Creek**	**0.89**	**166**	P	**Pg**	**05 44 25.5**	**+0.2**
NTLH	**Newcastle Hard**	**0.90**	**128**	P	**Pg**	**05 44 25.7**	**+0.2**
NTLS	**Newcastle Soft**	**0.96**	**128**	P	**Pn**	**05 44 29.4**	**+1.2**
AUKHS	**Kincumber High**	**1.19**	**159**	P	**Pb**	**05 44 30.8**	**-0.4**
	baz=1.2						
AUKHS				S	**Sn**	**05 44 47.0**	**-0.9**
	baz=1.2						
AUPHS	**Peel High Scho**	**1.24**	**1**	P	**Pn**	**05 44 32.0**	**-0.2**
	baz=1.3						
AUPHS				S	**Sg**	**05 44 48.6**	**+0.4**
	baz=1.3						
SYDH	**Sydney Hard Ro**	**1.42**	**184**	P	**Pb**	**05 44 34.4**	**-0.7**
AUTKS	**The King's Sch**	**1.44**	**174**	P	**Pb**	**05 44 34.9**	**-0.5**
	baz=1.4						
AUTKS				S	**Sg**	**05 44 54.1**	**-0.3**
	baz=1.4						
AUDCS	**Dubbo College**	**1.89**	**273**	P	**Pb**	**05 44 41.8**	**-1.4**
	baz=1.9						
AUDCS				S	**Sg**	**05 45 09.0**	**-0.1**
	baz=1.9						
ARMA	**Armidale**	**2.03**	**19**	P	**Pb**	**05 44 44.9**	**-0.7**
	baz=2.0						
ARMA				S	**Sb**	**05 45 11.6**	**+0.5**
	baz=2.0						
ARMA	**Armidale**	**2.03**	**19**	P	**Pb**	**05 44 45.0**	**-0.6**
AUUHS	**Ulladulla High**	**3.02**	**186**	P	**Pb**	**05 45 00.8**	**-1.7**
	baz=3.0						
CNB	**Canberra Magne**	**3.21**	**202**	P	**Pn**	**05 45 00.5**	**+1.2**
	baz=3.2						
CNB	**Canberra Magne**	**3.21**	**202**	P	**Pn**	**05 44 59.9**	**+0.6**
AUMTS	**Mt Stromlo**	**3.35**	**207**	P	**Pn**	**05 45 01.8**	**+0.7**
	baz=3.4						
AUMTS				S	**Sb**	**05 45 50.4**	**+1.4**
	baz=3.4						
AUMHS	**Melrose High S**	**3.35**	**206**	P	**Pn**	**05 45 02.4**	**+1.2**
	baz=3.4						
CAN	**Canberra**	**3.35**	**207**	P	**Pn**	**05 45 02.7**	**+1.5**
CMSA	**Cobar Meteorol**	**4.47**	**279**	P	**Pn**	**05 45 17.8**	**+1.2**
	baz=4.5						
CMSA	**Cobar Meteorol**	**4.47**	**279**	P	**Pn**	**05 45 17.3**	**+0.8**
QLP	**Quilpie**	**8.14**	**313**	P	**Pn**	**05 46 07.1**	**0.0**
	baz=8.2						

*IDC **11** 05:57:31.2±1.9,13.°49S×166.°16E,h0km,mb3.7/4, mbtmp3.8/5,ML4.1/1,MS3.4/5,Error ellipse: s-maj=49.0km s-min=32.0km az=133.0*
*NEIC **11** 05:57:33.9±1.1,13.°6S±0.°1×165.°96E±0.°06,h10km±2km, mb4.5/9,Error ellipse: s-maj=20.2km s-min=8.6km az=340.0*

ISC 11 05:57:36.6±1.3,13.°65S±0.°10×166.°0E±0.°2,h36km,n20, σ1s16/20,mb4.1/8,MS3.4/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**7.06**	**193**	Pn	**Pn**	**05 59 15.0**	**-2.4**
KOUNC				Sn	**Sn**	**06 00 38.1**	**+1.8**
DZM	**Mont Dzumac**	**8.39**	**177**	Pn	**Pn**	**05 59 35.9**	**+0.2**
	2.1nm,0.3s,baz=196,slow=19,SNR=17						
DZM				Sn	**Sn**	**06 01 07.4**	**-1.9**
	0.7nm,0.3s,baz=135,slow=20,SNR=1.3						
	3.9nm,0.3s						
DZM	**Mont Dzumac**	**8.39**	**177**	Pn	**Pn**	**05 59 35.8**	**+0.1**
ONTNC	**Ouen Toro**	**8.63**	**177**	Pn	**Pn**	**05 59 38.7**	**-0.2**
OUENC	**Ouen Island, N**	**8.76**	**175**	Pn	**Pn**	**05 59 41.3**	**+0.5**
CTA	**Charters Tower**	**19.93**	**249**	P	**Pn**	**06 02 08.6**	**+1.3**
	5.7nm,0.9s,baz=74,slow=10,SNR=6.0						
CTA				LR	LR	06 08 11.7	
	comp=Z,87nm,18.4s,baz=84,slow=32						
	5.7nm,0.9s						
WB0	**Warramunga Arr**	**30.83**	**254**	P	**P**	**06 03 49.4**	**-0.1**
WB2	**Warramunga Arr**	**30.89**	**254**	P	**P**	**06 03 50.0**	**+0.1**
WB2				IAmb	IAmb	06 03 51.0	
	comp=Z,4.7nm,1.1s						
WRA	**Warramunga Arr**	**30.91**	**254**	P	**P**	**06 03 51.1**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=83,slow=8.5,SNR=7.2						
WRA				LR	LR	06 15 45.9	
	comp=Z,89nm,18.4s,baz=111,slow=35						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**31.92**	**247**	P	**P**	**06 04 00.3**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=73,slow=9.2,SNR=8.0						
ASAR				LR	LR	06 16 12.8	
	comp=Z,43nm,18.3s,baz=166,slow=35						
	comp=Z,0.7nm,0.7s						
BBOO	**Buckleboo**	**33.29**	**230**	P	**P**	**06 04 10.8**	**0.0**
BBOO				IAmb	IAmb	06 04 18.5	
	comp=Z,10nm,1.1s						
KNRA	**Kununurra**	**36.04**	**262**	P	**P**	**06 04 34.1**	**-0.7**
KNRA				IAmb	IAmb	06 04 36.4	
	comp=Z,11nm,1.1s						
FORT	**Forrest**	**38.80**	**238**	P	**P**	**06 04 56.4**	**-1.7**
FITZ	**Fitzroy Crossi**	**39.01**	**258**	LR	LR	06 19 13.5	
	comp=Z,52nm,19.6s,baz=102,slow=33						
FITZ	**Fitzroy Crossi**	**39.01**	**258**	P	**P**	**06 05 00.6**	**+0.6**
NWAO	**Narrogin (SRO)**	**48.25**	**238**	P	**P**	**06 06 14.6**	**+0.4**
MORW	**Morawa**	**48.63**	**243**	P	**P**	**06 06 16.9**	**-0.3**
MORW				IAmb	IAmb	06 06 19.8	
	comp=Z,10.0nm,1.1s						
QSPA	**South Pole Qui**	**76.38**	**180**	P	**P**	**06 09 23.2**	**+1.2**
QSPA				IAmb	IAmb	06 09 28.7	
	comp=Z,2.2nm,1.1s						
ILAR	**Eielson Array**	**85.89**	**18**	P	**P**	**06 10 11.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=237,slow=5.4,SNR=4.5						
	comp=Z,0.4nm,0.6s						
ELK	**Elko**	**90.49**	**48**	LR	LR	06 44 13.6	
	comp=Z,18nm,19.5s,baz=218,slow=31						

*IDC **11** 06:02:51.5±0.8,16.°32N×98.°92W,h0km,mb4.3/13, mbtmp4.2/16,ML3.6/3,MS3.6/36,Error ellipse: s-maj=25.0km s-min=14.2km az=54.0*
*MEX **11** 06:02:53.1±1.1,16.°13N×99.°23W,h19km±46km,MD4.7*
*NEIC **11** 06:02:55.5±2.5,16.°54N±0.°06×99.°01W±0.°06,h10km±1km, mb4.7/355,Md4.7/102(MEX),Error ellipse: s-maj=12.4km s-min=7.3km az=223.0*

ISC 11 06:02:51.0±1.2,16.°30N±0.°03×99.°12W±0.°02,h4km±7km, n571,σ1s64/449,mb4.7/164,MS3.7/34,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.43**	**358**		**Pn**	**06 03 02.4**	**-1.7**
CRIG	**Cruz Grande**	**0.43**	**358**	*eP*	**Pn**	**06 03 02.4**	**-1.7**
CRIG				*i* S	**Sb**	**06 03 10.6**	**+2.4**
DAIG	**Los Arroyos**	**0.88**	**324**		**Pg**	**06 03 07.9**	**0.0**
DAIG					**Sg**	**06 03 20.2**	**+0.9**
DAIG	**Los Arroyos**	**0.88**	**324**	*i* P	**Pg**	**06 03 07.9**	**0.0**
DAIG				*eS*	**Sg**	**06 03 20.2**	**+0.9**
ACP2	**Acapulco**	**0.93**	**308**		**Pg**	**06 03 08.4**	**-0.5**
ACP2					**Sg**	**06 03 20.9**	**-0.1**
ACP2	**Acapulco**	**0.93**	**308**	*eP*	**Pg**	**06 03 08.4**	**-0.5**
ACP2				*i* S	**Sg**	**06 03 20.9**	**-0.1**
PNIG	**Pinotepa**	**0.95**	**85**		**Pb**	**06 03 09.5**	**-0.7**
PNIG					**Sn**	**06 03 23.3**	**-2.0**
PNIG	**Pinotepa**	**0.95**	**85**	*i* P	**Pb**	**06 03 09.5**	**-0.7**
PNIG				*eS*	**Sn**	**06 03 23.3**	**-2.0**
CAIG	**El Cayaco**	**1.33**	**304**	*eP*	**Pn**	**06 03 13.7**	**-2.7**
CAIG				*i* S	**Sb**	**06 03 29.0**	**-4.9**
TLIG	**Tlapa**	**1.36**	**23**		**Pg**	**06 03 17.1**	**0.0**
TLIG	**Tlapa**	**1.36**	**23**	*eP*	**Pg**	**06 03 17.1**	**0.0**
TLIG				*eS*	**Sg**	**06 03 35.8**	**+1.0**
ATYC	**Atoyac**	**1.55**	**306**	*eP*	**Pg**	**06 03 20.6**	**-0.1**
ATYC				*eS*	**Sb**	**06 03 40.4**	**0.0**
HMTT	**Tlapaneco**	**1.58**	**20**		**Pb**	**06 03 20.0**	**-0.9**
HMTT					**Sb**	**06 03 40.6**	**-0.7**
HMTT	**Tlapaneco**	**1.58**	**20**	*eP*	**Pb**	**06 03 20.0**	**-0.9**
HMTT				*eS*	**Sb**	**06 03 40.6**	**-0.7**
TXIG	**Tlaxiaco**	**1.60**	**54**	*eP*	**Pb**	**06 03 20.4**	**-1.0**
TXIG				*eS*	**Sb**	**06 03 41.3**	**-0.8**
YOIG	**Yosondua**	**1.60**	**70**	*eP*	**Pb**	**06 03 20.1**	**-1.3**
YOIG				*eS*	**Sb**	**06 03 41.3**	**-0.9**
MEIG	**Mezcala**	**1.68**	**343**		**Pn**	**06 03 21.4**	**0.0**
MEIG					**Sn**	**06 03 42.4**	**-1.1**
MEIG	**Mezcala**	**1.68**	**343**	*i* P	**Pn**	**06 03 21.4**	**0.0**
MEIG				*i* S	**Sn**	**06 03 42.4**	**-1.1**
FTIG	**Fresnillo de T**	**1.85**	**30**	*eP*	**Pb**	**06 03 24.2**	**-1.4**
FTIG				*eS*	**Sb**	**06 03 48.2**	**-1.0**
PEIG	**Puerto Escondi**	**1.92**	**99**	*eP*	**Pn**	**06 03 23.0**	**-1.6**
PEIG				*i* S	**Sn**	**06 03 45.0**	**-4.2**
HLIG	**Huajuapan de L**	**1.97**	**39**	*eP*	**Pb**	**06 03 25.8**	**-1.8**
HLIG				*eS*	**Sb**	**06 03 51.4**	**-1.3**
PLIG	**Platanillo**	**2.11**	**350**		**Pn**	**06 03 28.0**	**+0.8**
PLIG					**Sn**	**06 03 53.2**	**-0.9**
PLIG	**Platanillo**	**2.11**	**350**	*eP*	**Pn**	**06 03 28.0**	**+0.8**
PLIG				*eS*	**Sn**	**06 03 53.2**	**-0.9**
ARIG	**Puente Sto Nin**	**2.29**	**329**		**Pn**	**06 03 29.8**	**+0.1**
ARIG					**Sn**	**06 03 58.3**	**-0.1**
ARIG	**Puente Sto Nin**	**2.29**	**329**	*eP*	**Pn**	**06 03 29.8**	**+0.1**
ARIG				*eS*	**Sn**	**06 03 58.3**	**-0.1**
VHO	**Vista Hermosa**	**2.41**	**71**	*eP*	**Pn**	**06 03 31.9**	**+0.4**
VHO				*eS*	**Sn**	**06 04 00.6**	**-1.0**
OXBJ	**Oaxaca**	**2.42**	**71**		**Pn**	**06 03 31.6**	**+0.1**
OXBJ					**Sn**	**06 03 59.6**	**-2.1**
OXBJ	**Oaxaca**	**2.42**	**71**	*eP*	**Pn**	**06 03 31.6**	**+0.1**
OXBJ				*eS*	**Sn**	**06 03 59.6**	**-2.1**
OXLC	**Oaxaca**	**2.43**	**72**	*eP*	**Pn**	**06 03 31.9**	**+0.1**
OXLC				*eS*	**Sn**	**06 04 01.1**	**-1.1**
YAIG	**Yautepec**	**2.55**	**1**		**Pn**	**06 03 33.7**	**+0.4**
YAIG					**Sb**	**06 04 07.0**	**-2.1**
YAIG	**Yautepec**	**2.55**	**1**	*eP*	**Pn**	**06 03 33.7**	**+0.4**
YAIG				*eS*	**Sb**	**06 04 07.0**	**-2.1**
ZIIG	**Zihuatanejo**	**2.59**	**300**		**Pn**	**06 03 31.9**	**-2.0**
ZIIG					**Sn**	**06 04 01.4**	**-4.5**
ZIIG	**Zihuatanejo**	**2.59**	**300**	*eP*	**Pn**	**06 03 31.9**	**-2.0**
ZIIG				*eS*	**Sn**	**06 04 01.4**	**-4.5**
TOIG	**Toxpalan**	**2.65**	**47**	*eP*	**Pn**	**06 03 35.0**	**+0.3**
TOIG				*eS*	**Sb**	**06 04 09.5**	**-2.6**
MAVM	**Malinalco, Edo**	**2.66**	**352**		**Pg**	**06 03 41.7**	**-0.4**
MAVM					**Sb**	**06 04 11.8**	**-0.8**
MAVM	**Malinalco, Edo**	**2.66**	**352**	*eP*	**Pg**	**06 03 41.7**	**-0.4**
MAVM				*eS*	**Sb**	**06 04 11.8**	**-0.8**
TPIG	**Tehuac#an**	**2.69**	**38**		**Pn**	**06 03 35.7**	**+0.4**
TPIG					**Sb**	**06 04 11.7**	**-1.7**
TPIG	**Tehuac#an**	**2.69**	**38**	*eP*	**Pn**	**06 03 35.7**	**+0.4**
TPIG				*eS*	**Sb**	**06 04 11.7**	**-1.7**
TEJU	**Tejupilco**	**2.77**	**339**	*eP*	**Pb**	**06 03 38.9**	**-2.4**
TEJU				*eS*	**Sn**	**06 04 10.7**	**+0.2**
PPM	**Popocatepetl**	**2.79**	**10**	*eP*	**Pn**	**06 03 38.2**	**+1.2**
PPM				*eS*	**Sb**	**06 04 14.1**	**-2.4**
PHPU	**Puebla**	**2.87**	**18**		**Pn**	**06 03 36.7**	**-1.2**
PHPU					**Sb**	**06 04 15.8**	**-2.9**
PHPU	**Puebla**	**2.87**	**18**	*eP*	**Pn**	**06 03 36.7**	**-1.2**
PHPU				*eS*	**Sb**	**06 04 15.8**	**-2.9**
TLVM	**San Miguel Top**	**2.89**	**359**	*eP*	**Pb**	**06 03 43.6**	**+0.2**
TLVM				*eS*	**Sn**	**06 04 15.6**	**+1.9**
XCVM	**Xochimilco**	**2.93**	**360**	*eP*	**Pb**	**06 03 42.6**	**-1.5**
XCVM				*eS*	**Sn**	**06 04 15.2**	**+0.6**
HUIG	**Huatulco**	**2.94**	**100**		**Pn**	**06 03 37.5**	**-1.1**
HUIG					**Sn**	**06 04 09.7**	**-4.7**
HUIG	**Huatulco**	**2.94**	**100**	*eP*	**Pn**	**06 03 37.5**	**-1.1**
HUIG				*i* S	**Sn**	**06 04 09.7**	**-4.7**
AOVM	**Tlapan**	**2.96**	**356**	*eP*	**Pn**	**06 03 40.4**	**+1.2**
AOVM				*eS*	**Sn**	**06 04 14.2**	**-1.2**
INVM	**La Marquesa**	**2.98**	**355**	*eP*	**Pn**	**06 03 34.3**	**-5.2**
INVM				*eS*	**Sn**	**06 04 12.7**	**-3.3**
THVM	**De Xico**	**3.00**	**3**	*eP*	**Pb**	**06 03 43.5**	**-1.7**
THVM				*eS*	**Sb**	**06 04 20.3**	**-2.0**
UNM	**Universidad Na**	**3.01**	**359**		**Pn**	**06 03 40.6**	**+0.8**
UNM	**Universidad Na**	**3.01**	**359**	*eP*	**Pb**	**06 03 44.3**	**-1.1**
UNM				*eS*	**Sn**	**06 04 16.9**	**+0.4**
COVM	**Coyoacan**	**3.03**	**359**	*eP*	**Pn**	**06 03 41.9**	**+1.8**
COVM				*eP*	**Pb**	**06 03 43.2**	**-2.5**
COVM				*eS*	**Sn**	**06 04 17.5**	**+0.5**
COVM				*i* S	**Sb**	**06 04 19.1**	**-4.2**
CJVM	**Cuajimalpa**	**3.05**	**357**	*eP*	**Pb**	**06 03 46.1**	**+0.1**
CJVM				*eS*	**Sb**	**06 04 20.2**	**-3.5**
BJVM	**Benito Juarez**	**3.06**	**359**	*eP*	**Pg**	**06 03 48.4**	**-1.2**
BJVM				*eS*	**Sb**	**06 04 20.4**	**-3.5**
UON	**La Union**	**3.07**	**303**	*eP*	**Pn**	**06 03 39.7**	**-0.6**
UON				*eS*	**Sn**	**06 04 15.6**	**-1.9**
TXVM	**Universitario**	**3.12**	**3**	*eP*	**Pb**	**06 03 44.3**	**-3.0**
TXVM				*eS*	**Sn**	**06 04 20.7**	**+1.4**
APVM	**Azcapotzalco**	**3.17**	**358**	*eP*	**Pb**	**06 03 48.1**	**0.0**
APVM				*eS*	**Sn**	**06 04 21.0**	**+0.6**
GMVM	**Gustavo A Made**	**3.17**	**0**	*eP*	**Pb**	**06 03 45.2**	**-3.0**
GMVM				*eS*	**Sb**	**06 04 24.3**	**-3.1**
OZST	**Orizaba**	**3.19**	**37**	*eP*	**Pn**	**06 03 40.5**	**-1.7**
OZST				*eS*	**Sn**	**06 04 23.0**	**+2.2**
NEUV	**Arroyo Zacate**	**3.47**	**66**	*i* P	**Pn**	**06 03 46.2**	**+0.3**
NEUV				*eS*	**Sn**	**06 04 27.3**	**-0.1**
ACIG	**Acambay**	**3.73**	**349**	*eP*	**Pn**	**06 03 51.9**	**+2.3**
ACIG				*eS*	**Sn**	**06 04 32.9**	**-1.2**
JAUV	**Jalcomulco**	**3.76**	**36**	*eP*	**Pn**	**06 03 49.3**	**-0.6**
JAUV				*eS*	**Sn**	**06 04 37.2**	**+2.5**
MOIG	**Morelia**	**3.89**	**330**		Pb	06 03 55.8	-4.7
DEIG	**Demacu**	**3.98**	**1**	*eP*	**Pn**	**06 03 56.9**	**+3.8**
DEIG				*eS*	**Sn**	**06 04 40.8**	**+0.5**
CXUV	**Coxquihui**	**4.11**	**20**	*eP*	**Pn**	**06 03 56.5**	**+1.7**
CXUV				*eS*	**Sb**	**06 04 48.5**	**-5.7**
CMIG	**Matias Romero**	**4.13**	**78**	Pn	**Pn**	**06 03 54.4**	**-0.6**
	9.0nm,0.3s,baz=263,slow=10,SNR=153						
CMIG				Sn	**Sn**	**06 04 39.9**	**-3.9**
	20nm,0.3s,baz=249,slow=12,SNR=4.9						
CMIG				Lg	Lg	06 05 07.4	
	27nm,0.3s,baz=252,slow=4.5,SNR=8.3						
CMIG				LR	LR	06 05 36.5	
	comp=Z,1µm,20.7s,baz=268,slow=42						
	17nm,0.3s						
CMIG	**Matias Romero**	**4.13**	**78**		**Pn**	**06 03 54.2**	**-0.8**
CMIG					**Sn**	**06 04 41.5**	**-2.3**
CMIG	**Matias Romero**	**4.13**	**78**	*i* P	**Pn**	**06 03 54.2**	**-0.8**
CMIG				*eS*	**Sn**	**06 04 41.5**	**-2.3**
UXUV	**UXUV**	**4.87**	**77**	*eP*	**Pn**	**06 04 04.6**	**-0.5**
UXUV				*eS*	**Sn**	**06 04 58.3**	**-3.6**
CCIG	**Comitan**	**6.70**	**89**		**Pn**	**06 04 32.7**	**+2.2**
ZAIG	**Zacatecas**	**7.21**	**334**	Pn	**Pn**	**06 04 38.7**	**+1.2**
RTAL	**Retalhuleu**	**7.37**	**103**		**Pn**	**06 04 42.2**	**+2.7**
HUEH	**Huehuetenango**	**7.39**	**97**	Pn	**Pn**	**06 04 42.2**	**+2.1**
PETF	**Flores**	**8.89**	**85**		**Pn**	**06 05 00.1**	**-0.3**
ESQI	**Esquipulas**	**9.58**	**99**	Pn	**Pn**	**06 05 13.3**	**+3.3**
TEIG	**Tepich**	**11.01**	**68**		**Pn**	**06 05 28.1**	**-1.3**
H06E1	**SOCORRO T-PHAS**	**1.53**	**284**	T	T	06 17 14.5	
	SNR=88						
TGUH	**Tegucigalpa,Un**	**11.65**	**99**	Pn	**Pn**	**06 05 40.1**	**+1.8**
833A	**Chaparral WMA,**	**11.97**	**359**	Pn	**Pn**	**06 05 42.4**	**-0.1**
833A	**Chaparral WMA,**	**11.97**	**359**	P	**Pn**	**06 05 40.2**	**-2.3**
	baz=178						
SLBS	**Sierra La Lagu**	**12.55**	**308**	Pn	Pn	06 05 54.7	+4.1
LPIG	**La Paz**	**13.05**	**308**	LR	LR	06 10 01.8	
	comp=Z,236nm,21.3s,baz=122,slow=33						
MATN	**Matagalpa**	**13.20**	**103**		**Pn**	**06 06 02.2**	**+2.7**
TX31	**Lajitas Ar. Si**	**13.63**	**343**		**Pn**	**06 06 07.0**	**+1.7**
TX32	**Lajitas Array**	**13.63**	**343**		**Pn**	**06 06 07.0**	**+1.7**
TXAR	**Lajitas Array**	**13.63**	**343**	Pn	**Pn**	**06 06 08.1**	**+2.8**
	baz=163,slow=14,SNR=12						
TXAR				Lg	Lg	06 10 08.9	
	baz=166,slow=34,SNR=2.7						
	0.9nm,0.8s						
TXAR	**Lajitas Array**	**13.63**	**343**	Pn	**Pn**	**06 06 06.8**	**+1.5**
HKT	**Hockley**	**13.91**	**12**	Pn	**Pn**	**06 06 09.2**	**+0.2**
JCT	**Junction City**	**14.13**	**358**	Pn	**Pn**	**06 06 10.8**	**-1.3**
JCT	**Junction City**	**14.13**	**358**	P	**Pn**	**06 06 11.2**	**-0.9**
	baz=176						
HZTE	**Horizontes, Gu**	**14.27**	**111**		**P**	**06 06 19.4**	**-2.1**
435B	**Jarrell**	**14.48**	**5**		**Pn**	**06 06 16.7**	**-0.2**
435B	**Jarrell**	**14.48**	**5**	P	**Pn**	**06 06 14.8**	**-2.1**
	baz=185						
ORTG	**Ortega, Santa**	**14.54**	**112**		**P**	**06 06 22.5**	**-2.1**
DUNO	**Dulce Nombre,**	**14.63**	**113**		**P**	**06 06 24.6**	**-1.0**
JTS	**Las Juntas de**	**15.02**	**112**		**P**	**06 06 29.0**	**-0.9**
JTS				IAmb	IAmb	06 06 49.1	
	comp=Z,27nm,1.0s						
441A	**DeRidder**	**15.37**	**20**	P	**P**	**06 06 31.4**	**-2.2**
WHTX	**Lake Whitney,**	**15.69**	**5**	Pn	**Pn**	**06 06 30.7**	**-2.4**
WHTX				IAmb	IAmb	06 06 39.8	
	comp=Z,48nm,0.9s						
WHTX	**Lake Whitney,**	**15.69**	**5**	P	**Pn**	**06 06 31.4**	**-1.7**
	baz=185						
NATX	**Nacogdoches**	**15.91**	**14**	P	**Pn**	**06 06 34.1**	**-1.8**
	baz=195						
RIMA	**Rio Macho**	**16.21**	**112**		**Pn**	**06 06 39.8**	**-0.3**
342A	**Flagon Creek P**	**16.23**	**21**		**Pn**	**06 06 40.2**	**+0.2**
342A				IAmb	IAmb	06 06 50.7	
	comp=Z,40nm,0.8s						
ABTX	**Abilene, Hawle**	**16.26**	**358**	Pn	**P**	**06 06 41.8**	**-1.7**
**

T35A IAmb IAmb 06 07 49.7
comp=Z,48nm,1.1s
TIGA Tifton 20.66 40 P **P** **06 07 30.5 -1.5**
baz=227
KAN06 Argonia West S 20.89 3 IAmb IAmb 06 07 39.1
comp=Z,45nm,1.4s
W18A Petrified Fore 21.01 335 P **P** **06 07 36.2 +0.3**
baz=150
PLAL Pickwick Lake 21.07 26 P **P** **06 07 35.8 -0.5**
PLAL IAmb IAmb 06 07 42.1
comp=Z,34nm,0.9s
113A Mohawk Valley, 21.09 324 P **P** **06 07 39.4 +2.8**
113A IAmb IAmb 06 07 40.7
comp=Z,20nm,0.9s
X16A Lo Mia Camp, P 21.16 331 IAmb IAmb 06 07 45.3
comp=Z,30nm,0.8s
T25A Trinidad 21.28 348 IAmb IAmb 06 07 58.7
comp=Z,25nm,0.9s
T25A Trinidad 21.28 348 P **P** **06 07 38.5 -0.3**
baz=165,SNR=25
MGMO Mountain Grove 21.64 15 P **P** **06 07 42.2 -0.2**
255A Hazlehurst 21.69 41 P **P** **06 07 42.9 -0.2**
154A Montrose 21.77 39 IAmb IAmb 06 07 51.8
comp=Z,52nm,1.1s
PBMO Poplar Bluff 21.80 19 IAmb IAmb 06 07 48.3
comp=Z,25nm,0.8s
FPAL Fort Paine 21.84 31 IAmb IAmb 06 07 48.8
comp=Z,37nm,0.8s
GLA Glamis 21.90 322 P **P** **06 07 48.1 +2.7**
GLA IAmb IAmb 06 07 57.0
comp=Z,56nm,1.1s
GLA Glamis 21.90 322 P **P** **06 07 46.6 +1.2**
baz=135,SNR=10
R32A Long Quarter, 22.04 1 IAmb IAmb 06 07 51.9
comp=Z,23nm,1.0s
WUAZ Wupatki 22.05 333 P **P** **06 07 50.2 +3.2**
WUAZ Wupatki 22.05 333 P **P** **06 07 48.6 +1.6**
baz=146,SNR=24
SDCO Great Sand Dun 22.09 346 P **P** **06 07 49.3 +1.7**
SDCO Great Sand Dun 22.09 346 P **P** **06 07 47.8 +0.2**
baz=163,SNR=19
GOGA Godfrey 22.13 37 P **P** **06 07 48.0 +0.3**
GOGA IAmb IAmb 06 07 55.3
comp=Z,18nm,0.8s
GOGA Godfrey 22.13 37 P **P** **06 07 45.5 -2.2**
baz=223,SNR=9.9
WVT Waverly 22.16 25 P **P** **06 07 47.5 -0.5**
WVT IAmb IAmb 06 07 51.3
comp=Z,40nm,0.9s
WVT Waverly 22.16 25 P **P** **06 07 45.8 -2.2**
baz=210
SWET Sewanee 22.22 30 IAmb IAmb 06 07 52.3
comp=Z,20nm,0.9s
BLYC Blythe 22.24 324 IAmb IAmb 06 07 59.8
comp=Z,24nm,1.0s
X51A Calhoun 22.24 32 IAmb IAmb 06 07 58.1
comp=Z,20nm,0.8s
V48A Smith Brothers 22.25 27 IAmb IAmb 06 07 52.4
comp=Z,23nm,0.8s
YUH Yuha Desert 22.28 320 P **P** **06 07 52.2 +2.8**
IKP In-Ko-Pah, Jac 22.40 320 P **P** **06 07 52.3 +1.5**
baz=132
SWSC Sam W. Stewart 22.41 321 P **P** **06 07 52.3 +1.6**
baz=133
S22A 4UR Ranch, Cre 22.42 344 IAmb IAmb 06 08 01.6
comp=Z,20nm,0.9s
S22A 4UR Ranch, Cre 22.42 344 P **P** **06 07 52.2 +1.1**
baz=159,SNR=35
MVCO Mesa Verde 22.42 340 P **P** **06 07 52.9 +1.8**
MVCO IAmb IAmb 06 08 01.8
comp=Z,56nm,1.3s
MVCO Mesa Verde 22.42 340 P **P** **06 07 51.8 +0.7**
baz=155,SNR=27
CBKS Cedar Bluff 22.43 359 P **P** **06 07 51.4 +0.4**
baz=178
PDMCI Parker Dam,Lak 22.44 326 P **P** **06 07 53.4 +2.4**
baz=138
W50A Signal Mountai 22.51 31 IAmb IAmb 06 08 10.2
comp=Z,22nm,0.9s
CGM3 Cape Girardeau 22.52 20 P **P** **06 07 52.0 +0.1**
CGM3 IAmb IAmb 06 08 01.6
comp=Z,18nm,0.8s
BC3 Big Chuckawall 22.70 323 P **P** **06 07 55.1 +1.1**
baz=135
R40A Maddies Statio 22.72 14 IAmb IAmb 06 08 04.2
comp=Z,45nm,1.2s
CCM Cathedral Cave 22.75 16 P **P** **06 07 54.0 -0.3**
CCM Cathedral Cave 22.75 16 P **P** **06 07 53.5 -0.8**
baz=200
MONP2 Monument Peak 22.76 320 P **P** **06 07 56.1 +1.4**
baz=131
CLTN Cedars of Leba 22.76 28 IAmb IAmb 06 07 57.9
comp=Z,17nm,0.9s
KSU1 Kansas State U 22.82 5 IAmb IAmb 06 07 58.5
comp=Z,25nm,0.8s
KSU1 Kansas State U 22.82 5 P **P** **06 07 53.9 -1.2**
baz=186
KSCO Kaye Shedlock' 22.83 353 P **P** **06 07 56.7 +1.4**
KSCO IAmb IAmb 06 08 03.6
comp=Z,26nm,0.9s
KSCO Kaye Shedlock' 22.83 353 P **P** **06 07 55.1 -0.2**
baz=171,SNR=7.2
IRM Iron Mountain 22.89 324 P **P** **06 07 58.0 +2.2**
baz=136,SNR=6.7
W13A Hualapai Mount 22.91 328 IAmb IAmb 06 08 08.4
comp=Z,20nm,1.2s
FVM French Village 22.92 18 IAmb IAmb 06 07 58.2
comp=Z,25nm,0.8s
CPCT Cooper Cave 23.10 32 IAmb IAmb 06 08 00.3
comp=Z,30nm,0.9s
W52A Murphy 23.13 33 IAmb IAmb 06 08 01.0
comp=Z,29nm,0.9s
109C Camp Elliot, M 23.18 319 P **P** **06 07 59.8 +1.0**
baz=130
Q24A Divide 23.19 348 P **P** **06 07 59.6 +0.4**
baz=164,SNR=5.9
T47A Sharon Grove 23.19 25 IAmb IAmb 06 08 09.4
comp=Z,43nm,1.1s
U15A North Rim 23.21 332 IAmb IAmb 06 08 04.1
comp=Z,18nm,0.9s
PMD Palm Desert 23.24 321 IAmb IAmb 06 08 11.2
comp=Z,15nm,1.1s
TPFO Pinon Flats 23.26 321 P **P** **06 08 00.2 +0.3**
baz=133
BELC Belle Mtn. Jos 23.27 322 P **P** **06 07 60.0 +0.1**
baz=134
PFO Pinyon Flats O 23.27 321 P **P** **06 08 01.3 +1.4**
comp=Z,2.3nm,0.8s,baz=128,slow=13,SNR=2.5
PFO LR LR 06 17 06.6
comp=Z,114nm,18.5s,baz=134,slow=37
comp=Z,2.3nm,0.8s
PFO Pinyon Flats O 23.27 321 P **P** **06 08 04.0 +4.1**
PFO Pinyon Flats O 23.27 321 P **P** **06 08 00.5 +0.6**
baz=133
U49A Red Boiling Sp 23.36 28 IAmb IAmb 06 08 02.8
comp=Z,22nm,1.1s
PV15 Paradox Valley 23.45 341 IAmb IAmb 06 08 19.6
comp=Z,22nm,1.1s
V51A Loudon 23.46 31 IAmb IAmb 06 08 12.1
comp=Z,25nm,0.8s
PV11 David Mesa, Pa 23.53 340 IAmb IAmb 06 08 14.7
comp=Z,13nm,0.8s
BG3 Lake Jocassee 23.59 35 IAmb IAmb 06 08 14.8
comp=Z,23nm,1.0s
PV07 Paradox Valley 23.59 341 IAmb IAmb 06 08 06.0
comp=Z,19nm,1.0s
GMRC Granite Mounta 23.63 324 P **P** **06 08 03.4 -0.2**
baz=136,SNR=11
TKL Tuckaleechee C 23.64 32 P **P** **06 08 04.2 +0.7**
comp=Z,8.8nm,0.7s,baz=199,slow=9.2,SNR=14
comp=Z,8.8nm,0.7s
TKL Tuckaleechee C 23.64 32 IAmb IAmb 06 08 13.9
comp=Z,21nm,0.9s
PV10 Paradox Valley 23.66 340 IAmb IAmb 06 08 15.1
comp=Z,30nm,1.2s
MURC Murrieta 23.71 320 P **P** **06 08 05.7 +1.5**
baz=131
PV23 Carpenter Ridg 23.72 340 P **P** **06 08 06.3 +1.8**
PV23 IAmb IAmb 06 08 23.9
comp=Z,30nm,1.2s
SMCO Snowmass 23.80 345 IAmb IAmb 06 08 22.6
comp=Z,45nm,1.2s
V52A Sevierville 23.88 32 IAmb IAmb 06 08 15.5
comp=Z,32nm,1.1s
NHSC New Hope 23.93 42 P **P** **06 08 06.5 +0.3**
NHSC New Hope 23.93 42 P **P** **06 08 05.3 -1.0**
baz=230
P40A Paris 23.95 14 P **P** **06 08 06.4 0.0**
P40A IAmb IAmb 06 08 08.5
comp=Z,32nm,0.9s
JSC Jenkinsville 24.04 39 IAmb IAmb 06 08 16.9
comp=Z,31nm,1.2s
HEC Hector,Ludlow 24.05 323 P **P** **06 08 08.8 +1.3**
baz=135
ISCO Idaho Springs 24.09 348 IAmb IAmb 06 08 22.4
comp=Z,41nm,1.5s
ISCO Idaho Springs 24.09 348 P **P** **06 08 07.2 -0.8**
baz=164,SNR=21
PAULI Pauline 24.09 37 IAmb IAmb 06 08 24.1
comp=Z,36nm,1.4s
LCMT Little Creek M 24.13 331 IAmb IAmb 06 08 27.5
comp=Z,22nm,1.5s
V53A Saluda 24.16 34 IAmb IAmb 06 08 16.6
comp=Z,16nm,0.8s
T50A Nancy 24.20 29 IAmb IAmb 06 08 17.5
comp=Z,30nm,1.0s
TUQ Turquoise Moun 24.26 325 P **P** **06 08 10.1 +0.6**
baz=137
OLIL Olney 24.35 21 IAmb IAmb 06 08 18.0
comp=Z,21nm,0.9s
CIS Catalina Islan 24.35 318 P **P** **06 08 10.5 +0.2**
baz=129
BFSC Mount Baldy Ra 24.42 320 P **P** **06 08 11.6 +0.5**
baz=132
TZTN Tazewell 24.45 31 P **P** **06 08 10.4 -0.7**
baz=218,SNR=6.7
RRX Edison Barstow 24.46 322 P **P** **06 08 12.4 +1.1**
baz=134
MTPU Mount Pierson 24.52 335 IAmb IAmb 06 08 31.1
comp=Z,33nm,1.2s
KMSC Kings Mountain 24.60 37 IAmb IAmb 06 08 15.3
comp=Z,20nm,0.9s
KMSC Kings Mountain 24.60 37 P **P** **06 08 10.9 -1.5**
baz=225,SNR=11
GSC Goldstone, Bar 24.66 323 IAmb IAmb 06 08 17.8
comp=Z,19nm,1.3s
GSC Goldstone, Bar 24.66 323 P **P** **06 08 14.3 +1.3**
baz=135,SNR=7.5
N35A Tabor 24.66 6 P **P** **06 08 13.1 +0.2**
OGNE Ogallala 24.68 355 P **P** **06 08 13.2 -0.1**
baz=173,SNR=6.0
P43A Skaggs, Pawnee 24.71 18 IAmb IAmb 06 08 22.1
comp=Z,37nm,1.2s
BIRD Birdtown, Kers 24.77 39 IAmb IAmb 06 08 16.3
comp=Z,16nm,1.0s
SHOC Shoshone, Teco 24.79 325 P **P** **06 08 14.9 +0.7**
baz=137
SRU San Rafael Swe 24.82 338 IAmb IAmb 06 08 18.5
comp=Z,24nm,0.8s
Q16A Castle Valley 24.89 337 IAmb IAmb 06 08 33.1
comp=Z,19nm,1.0s
BGNE Belgrade 25.03 2 P **P** **06 08 15.8 -0.5**
baz=182
O20A White River Ci 25.04 343 P **P** **06 08 17.7 +1.1**
baz=158,SNR=20
EDW2 Edwards Air Fo 25.06 321 P **P** **06 08 18.4 +1.7**
baz=132
R49A Shelbyville 25.11 27 IAmb IAmb 06 08 18.0
comp=Z,13nm,0.9s
QSM Queen of Sheba 25.17 324 IAmb IAmb 06 08 22.6
comp=Z,17nm,1.0s
N23A Red Feather La 25.21 348 IAmb IAmb 06 08 24.5
comp=Z,14nm,0.8s
N23A Red Feather La 25.21 348 P **P** **06 08 19.3 +1.1**
baz=164,SNR=15
GWY Greenwater Val 25.22 325 IAmb IAmb 06 08 30.1
comp=Z,30nm,1.4s
P17A Butcher Ranch, 25.22 339 IAmb IAmb 06 08 22.7
comp=Z,15nm,1.1s
TMUT Trail Mountain 25.23 338 IAmb IAmb 06 08 40.1
comp=Z,31nm,1.3s
S51A Beattyville 25.29 30 IAmb IAmb 06 08 27.0
comp=Z,14nm,0.7s
N41A Harden Midland 25.35 15 IAmb IAmb 06 08 20.5
comp=Z,26nm,1.1s
W57A Gilead 25.39 39 P **P** **06 08 20.3 +0.7**
X58A Rowland 25.40 41 P **P** **06 08 19.8 +0.1**
P46A Rosedale 25.45 22 IAmb IAmb 06 08 23.6
comp=Z,16nm,0.7s
R50A Paris 25.47 28 IAmb IAmb 06 08 37.4
comp=Z,15nm,1.2s
PHWY Pilot Hill 25.51 349 IAmb IAmb 06 08 24.8
comp=Z,17nm,0.9s
SCZ2 Santa Cruz Isl 25.51 317 P **P** **06 08 21.6 +0.8**
baz=128
FURC Furnace Creek, 25.53 325 P **P** **06 08 22.5 +1.7**
baz=136
TPNV Topopah Spring 25.56 327 IAmb IAmb 06 08 37.7
comp=Z,30nm,1.1s
TPNV Topopah Spring 25.56 327 P **P** **06 08 22.9 +1.6**
baz=138,SNR=26
MPMC Manual Prospec 25.58 324 P **P** **06 08 24.6 +3.0**
baz=135,SNR=11
HDIL Hopedale 25.63 17 P **P** **06 08 21.2 -0.4**
baz=202,SNR=20
PSUT Pine Spring 25.65 333 IAmb IAmb 06 08 34.6
comp=Z,13nm,1.0s
L34A Svendsen Farm, 25.68 5 IAmb IAmb 06 08 41.9
comp=Z,21nm,0.8s
ARVC Arnn 25.73 320 P **P** **06 08 25.6 +2.9**
baz=131
SBC Santa Barbara 25.84 318 P **P** **06 08 26.6 +2.9**
baz=128
ISA Isabella, Lake 25.88 322 P **P** **06 08 27.4 +3.3**
baz=132,SNR=5.2
OTAV Otavalo 25.89 126 P **P** **06 08 28.6 +3.8**
P48A Milroy 25.99 25 IAmb IAmb 06 08 42.1
comp=Z,13nm,1.1s
U56A King 26.00 36 IAmb IAmb 06 08 37.7
comp=Z,36nm,1.4s
SCIA State Center 26.02 10 P **P** **06 08 25.8 +0.6**
baz=193
MPU Maple Canyon 26.02 338 IAmb IAmb 06 08 36.7
comp=Z,22nm,1.5s
NLU North Lily Min 26.13 337 IAmb IAmb 06 08 37.3
comp=Z,24nm,1.4s
SFIN Lafayette 26.16 21 IAmb IAmb 06 08 28.4
comp=Z,21nm,0.8s
SFIN Lafayette 26.16 21 P **P** **06 08 26.5 0.0**
baz=207,SNR=5.1
CWC Cottonwood Cre 26.19 324 P **P** **06 08 30.1 +3.1**
baz=134
GRAC Grapevine Rang 26.19 325 IAmb IAmb 06 08 40.5
comp=Z,40nm,1.4s
GRAC Grapevine Rang 26.19 325 P **P** **06 08 28.7 +1.8**
baz=136
SPR3 Spring Creek 3 26.25 332 IAmb IAmb 06 08 38.6
comp=Z,17nm,1.4s
R11A Troy Canyon, C 26.30 330 IAmb IAmb 06 08 41.0
comp=Z,18nm,1.3s
R11A Troy Canyon, C 26.30 330 P **P** **06 08 31.4 +3.3**
baz=141,SNR=10
P49A Miami Univ. Ec 26.34 26 P **P** **06 08 28.4 +0.3**
baz=212,SNR=26
V58A Windy Hill, Pi 26.36 39 IAmb IAmb 06 08 31.7
comp=Z,21nm,0.9s
VES Veal, Richgr 26.37 321 P **P** **06 08 30.9 +2.5**
baz=132
Q51A Peebles 26.52 28 IAmb IAmb 06 08 39.8
comp=Z,28nm,1.0s
L40A Anamosa 26.55 13 IAmb IAmb 06 08 34.0
comp=Z,12nm,0.8s
BLA Blacksburg 26.59 35 IAmb IAmb 06 08 42.2
comp=Z,22nm,0.9s
BLA Blacksburg 26.59 35 P **P** **06 08 29.6 -1.0**
baz=223
DUG Dugway, Tooele 26.62 336 P **P** **06 08 32.9 +2.0**
baz=149
CNNC Cliffs of the 26.75 41 P **P** **06 08 31.7 -0.2**
baz=231
O48B Farmland 26.78 24 P **P** **06 08 32.4 +0.3**
baz=211,SNR=44
TCUT Toone Canyon 26.92 339 IAmb IAmb 06 08 45.8
comp=Z,14nm,0.8s
K22A Casper 27.02 348 IAmb IAmb 06 09 02.4
comp=Z,28nm,1.4s
K22A Casper 27.02 348 P **P** **06 08 35.9 +1.5**
baz=164
T57A Hurt 27.10 37 IAmb IAmb 06 08 46.8
comp=Z,28nm,1.3s
HQIL Hanson Quary C 27.20 19 IAmb IAmb 06 08 45.4
comp=Z,154nm,1.4s
HWUT Hardware Ranch 27.41 339 IAmb IAmb 06 08 49.1
comp=Z,18nm,1.2s
ECSD EROS Data Cent 27.43 4 IAmb IAmb 06 08 48.9
comp=Z,17nm,1.1s
ECSD EROS Data Cent 27.43 4 P **P** **06 08 38.7 +0.8**
baz=185,SNR=9.1
L44A Lake County Fo 27.52 18 P **P** **06 08 39.2 +0.4**
baz=204
R55A Marlinton 27.54 34 IAmb IAmb 06 08 49.4
comp=Z,16nm,0.9s
P52A Corning 27.57 29 IAmb IAmb 06 08 49.0
comp=Z,16nm,1.0s
P52A Corning 27.57 29 P **P** **06 08 38.4 -0.8**
baz=217
JFWS Jewell Farm 27.59 14 IAmb IAmb 06 08 56.0
comp=Z,10nm,0.8s
JFWS Jewell Farm 27.59 14 P **P** **06 08 39.7 +0.4**
baz=198
ACSO Alum Creek Sta 27.66 27 IAmb IAmb 06 08 50.6
comp=Z,18nm,0.9s
ACSO Alum Creek Sta 27.66 27 P **P** **06 08 40.3 +0.2**
baz=215
NV11 Mina Array Sit 27.67 327 IAmb IAmb 06 08 53.5
comp=Z,14nm,1.2s
Q54A Coxs Mills 27.69 32 IAmb IAmb 06 08 50.4
comp=Z,18nm,1.0s
NVAR Mina Array Bea 27.75 326 P **P** **06 08 44.2 +3.1**
comp=Z,5.0nm,1.0s,baz=148,slow=8.5,SNR=18
NVAR PcP **PcP** **06 11 59.5 +1.6**
comp=Z,0.4nm,0.6s,baz=145,slow=2.2,SNR=3.6
NVAR LR LR 06 20 43.8
comp=Z,171nm,21.2s,baz=108,slow=39
comp=Z,5.0nm,1.0s
BW06 Boulder Array 27.85 343 P **P** **06 08 42.8 +0.8**
baz=158,SNR=28
PDAR Pinedale Array 27.85 343 P **P** **06 08 43.8 +1.8**
comp=Z,4.9nm,0.8s,baz=139,slow=9.9,SNR=31
comp=Z,4.9nm,0.8s
PDAR Pinedale Array 27.85 343 P **P** **06 08 43.2 +1.2**
K43A Burlington 27.89 17 IAmb IAmb 06 08 52.8
comp=Z,21nm,0.9s
RSSD Black Hills 28.04 352 P **P** **06 08 45.1 +1.4**
RSSD IAmb IAmb 06 08 55.4
comp=Z,20nm,1.5s
RSSD Black Hills 28.04 352 P **P** **06 08 44.7 +1.0**
baz=169
ELK Elko 28.08 333 P **P** **06 08 46.2 +2.1**
comp=Z,2.3nm,0.9s,baz=144,slow=6.6,SNR=9.3
ELK LR LR 06 22 00.6
comp=Z,290nm,18.2s,baz=156,slow=41
comp=Z,2.3nm,0.9s
KVN Kaiserville 28.10 327 IAmb IAmb 06 08 59.2
comp=Z,16nm,1.4s
AHID Auburn Hatcher 28.30 341 IAmb IAmb 06 09 05.2
comp=Z,12nm,1.3s
O53A New Philadelph 28.48 30 P **P** **06 08 46.9 -0.5**
baz=218
Q56A Snyder Ridge, 28.59 34 IAmb IAmb 06 09 03.6
comp=Z,21nm,1.2s
MCWV Mont Chateau 28.70 32 IAmb IAmb 06 09 09.8
comp=Z,25nm,1.2s
MCWV Mont Chateau 28.70 32 P **P** **06 08 48.9 -0.4**
baz=221
REDW Red Top Meadow 28.77 342 IAmb IAmb 06 09 18.3
comp=Z,28nm,1.4s
SNOW Snow King Moun 28.83 342 IAmb IAmb 06 09 05.2
comp=Z,16nm,1.0s
TPAW Teton Pass 28.91 342 IAmb IAmb 06 09 05.2
comp=Z,21nm,1.5s
LOHW Long Hollow 28.92 343 IAmb IAmb 06 09 03.3
comp=Z,15nm,1.1s
N53A Lisbon 29.10 29 IAmb IAmb 06 08 54.6
comp=Z,13nm,0.9s
AAM Ann Arbor 29.11 24 P **P** **06 08 52.8 -0.1**
baz=212
MPK Martis Peak 29.30 326 IAmb IAmb 06 08 59.4
comp=Z,13nm,1.1s
SPMN Marine on St. 29.32 9 IAmb IAmb 06 09 05.1
comp=Z,7.3nm,0.7s
SPMN Marine on St. 29.32 9 P **P** **06 08 54.1 -0.6**
baz=192
FLWY Flagg Ranch 29.38 343 IAmb IAmb 06 09 07.9
comp=Z,18nm,1.2s
M52A Chesterland 29.44 28 IAmb IAmb 06 08 59.1
comp=Z,18nm,0.9s
M53A WI Miller and 29.67 29 P **P** **06 08 57.5 -0.5**
baz=218
RLMT Red Lodge 29.97 346 IAmb IAmb 06 09 11.0
comp=Z,18nm,1.2s
RLMT Red Lodge 29.97 346 P **P** **06 09 01.1 +0.3**
baz=160
YMR Madison River 30.00 343 IAmb IAmb 06 09 13.3
comp=Z,8.9nm,1.0s
HLID Hailey 30.13 338 P **P** **06 09 02.8 +0.6**
baz=149,SNR=6.7
QLMT Earthquake Lak 30.28 342 P **P** **06 09 06.3 +2.8**
SSPA Standing Stone 30.44 33 P **P** **06 09 05.6 +0.9**
SSPA IAmb IAmb 06 09 15.7
comp=Z,27nm,1.4s
SSPA Standing Stone 30.44 33 P **P** **06 09 03.9 -0.8**
baz=223
MFID Camas Ranch 30.54 336 IAmb IAmb 06 09 29.2
comp=Z,16nm,1.4s
GLMI Grayling 30.95 20 P **P** **06 09 08.2 -1.0**
baz=208
WVOR Wild Horse Val 30.95 331 IAmb IAmb 06 09 37.3
comp=Z,12nm,1.4s
BOZ Bozeman (W) 31.03 343 P **P** **06 09 11.1 +1.0**
baz=156,SNR=13
M57A Sunshine Farm, 31.34 33 IAmb IAmb 06 09 16.3
comp=Z,7.3nm,0.8s
MDND Maddock 31.46 359 P **P** **06 09 14.7 +1.0**
baz=179
SJG San Juan 31.52 82 LR LR 06 23 26.6
comp=Z,73nm,18.3s,baz=250,slow=39
L56A Greenwood 31.70 31 IAmb IAmb 06 09 25.7
comp=Z,22nm,1.2s
AGMN Agassiz Nation 32.02 4 P **P** **06 09 19.8 +1.3**
baz=186,SNR=13
PLID Pearl Lake 32.02 337 IAmb IAmb 06 09 30.1
comp=Z,12nm,1.1s
B35A Bob, Littlefor 32.27 7 IAmb IAmb 06 09 22.1
comp=Z,8.9nm,0.8s
DGMT Dagmar 32.35 354 P **P** **06 09 23.0 +1.5**
baz=170
E46A Sault Ste Mari 32.42 19 IAmb IAmb 06 09 29.6
comp=Z,12nm,0.8s
BINY Binghamton 32.55 33 P **P** **06 09 23.1 -0.3**
baz=224
L04D Klamath Falls 32.60 327 P **P** **06 09 25.7 +1.8**
baz=135
MSO Missoula 32.84 341 P **P** **06 09 27.6 +1.7**
baz=152,SNR=7.9
SADO Sadowa 33.00 27 LR LR 06 25 09.6
comp=Z,73nm,20.3s,baz=199,slow=41
SADO Sadowa 33.00 27 IAmb IAmb 06 09 35.1
comp=Z,8.6nm,0.9s
J04D Umpqua Nationa 33.23 329 P **P** **06 09 31.2 +1.7**
baz=136
G08A Pilot Rock 33.36 334 IAmb IAmb 06 09 33.1
comp=Z,9.5nm,0.9s
DELO Deloro Mine 33.48 28 IAmb IAmb 06 09 41.8
comp=Z,13nm,1.1s
E09A Wood Farm, Sta 34.03 336 IAmb IAmb 06 09 37.9
comp=Z,6.9nm,1.0s
J01E Myrtle Point 34.11 327 P **P** **06 09 39.5 +2.5**
baz=133
I02E Swisshome, OR 34.73 328 P **P** **06 09 44.8 +2.6**
baz=135
LONY Lake Ozonia 35.00 31 P **P** **06 09 45.7 +1.0**
baz=224
NEW Newport 35.14 339 LR LR 06 26 03.1
comp=Z,146nm,20.2s,baz=170,slow=40
NEW Newport 35.14 339 P **P** **06 09 47.5 +1.7**
baz=148
LTY Liberty 35.65 335 IAmb IAmb 06 09 53.4
comp=Z,7.6nm,0.9s
NNA Nana 35.71 141 LR LR 06 21 20.5
comp=Z,96nm,19.1s,baz=330,slow=31
TRQ Mont Tremblant 36.18 29 IAmb IAmb 06 10 11.3
comp=Z,25nm,1.4s
PKME Peaks-Kenny Pk 38.20 35 P **P** **06 10 12.1 +0.2**
baz=230
LLLB Lillooet 38.81 337 IAmb IAmb 06 10 25.9
comp=Z,11nm,1.0s
BOAV Boa Vista 40.41 106 P **P** **06 10 29.7 -1.0**
BOAV IAmb IAmb 06 10 38.3
comp=Z,7.8nm,1.4s
ETMB Extrema 41.64 126 P **P** **06 10 41.2 +0.4**
ETMB IAmb IAmb 06 10 48.9
comp=Z,6.7nm,1.0s
BBB Bella Bella 42.53 334 LR LR 06 28 31.8

comp=Z,49nm,19.8s,baz=144,slow=36
RPN Rapa Nui 44.30 193 LR LR 06 24 57.2
comp=Z,112nm,20.9s,baz=265,slow=30
SCHQ Schefferville 45.79 26 P **P** **06 11 13.6 -0.2**
SCHQ LR LR 06 31 41.1
comp=Z,59nm,20.9s,baz=178,slow=38
comp=Z,12nm,0.8s
SCHQ Schefferville 45.79 26 P **P** **06 11 14.7 +0.9**
T35M Bob Quinn 46.88 337 P **P** **06 11 24.3 +2.0**
baz=137
MDP Montagnes des 46.89 98 LR LR 06 34 20.5
comp=Z,32nm,18.4s,baz=314,slow=40
YKA Yellowknife Ar 47.41 350 P **P** **06 11 26.7 +0.3**
comp=Z,4.7nm,0.9s,baz=159,slow=7.1,SNR=9.8
YKA LR LR 06 31 02.3
comp=Z,140nm,19.8s,baz=143,slow=36
comp=Z,4.7nm,0.9s
DLBC Dease Lake 47.88 339 LR LR 06 31 56.1
comp=Z,120nm,20.7s,baz=134,slow=36
DLBC Dease Lake 47.88 339 P **P** **06 11 32.1 +1.9**
baz=138
VILB Vilhena 48.22 125 P P 06 11 39.2 +5.9
VILB IAmb IAmb 06 11 47.1
comp=Z,13nm,1.3s
R33M Jennings River 48.92 339 P **P** **06 11 40.8 +2.6**
baz=137,SNR=5.5
SIV San Ignacio 49.38 129 LR LR 06 29 28.9
comp=Z,53nm,18.0s,baz=90,slow=32
P32M Atlin 50.04 338 P **P** **06 11 48.3 +1.6**
baz=134
P33M Teslin, Yukon 50.16 339 P **P** **06 11 49.2 +1.6**
baz=136
PTLB Pontes e Lacer 50.52 127 P P 06 11 56.5 +5.7
PTLB IAmb IAmb 06 11 58.3
comp=Z,6.8nm,1.2s
PLBC Pleasant Camp 50.93 337 P **P** **06 11 55.9 +2.5**
baz=131
N32M Quiet Lake 50.93 340 P **P** **06 11 55.5 +2.1**
baz=136
WHY Whitehorse 51.20 338 P **P** **06 11 57.6 +2.1**
baz=134
O30N Mendenhall 51.71 338 P **P** **06 12 02.0 +2.7**
baz=132
N31M Braeburn, Yuko 52.09 339 IAmb IAmb 06 12 12.3
comp=Z,13nm,0.9s
N31M Braeburn, Yuko 52.09 339 P **P** **06 12 04.0 +1.9**
baz=133,SNR=5.8
M31M Drury Creek, Y 52.12 340 P **P** **06 12 04.4 +2.1**
baz=135
HYT Haines Junctio 52.27 337 IAmb IAmb 06 12 32.1
comp=Z,18nm,1.3s
HYT Haines Junctio 52.27 337 P **P** **06 12 05.6 +2.1**
baz=131
YUK6 Outpost Mounta 52.66 337 P **P** **06 12 08.5 +1.9**
baz=130
YUK4 Talbot Arm 53.03 337 P **P** **06 12 12.7 +3.4**
baz=130
H03N2 Juan Fernandez 53.09 159 T T 07 09 10.9
baz=338,slow=77,SNR=157
H03N1 Juan Fernandez 53.09 159 T T 07 09 17.9
baz=338,slow=77,SNR=115
H03N3 Juan Fernandez 53.10 159 T T 07 09 14.3
baz=338,slow=77,SNR=211
O28M Mount Upton 53.25 336 P **P** **06 12 12.6 +1.6**
baz=128
M29M Somme Creek 53.68 339 P **P** **06 12 15.6 +1.8**
baz=130
YUK3 Moose Creek 53.97 337 P **P** **06 12 18.4 +2.2**
baz=128
MCARA McCarthy VSAT 54.72 336 P **P** **06 12 23.6 +2.2**
baz=125
M27K Edge Creek, AK 54.86 337 P **P** **06 12 24.5 +2.0**
baz=127
DAWY Dawson 55.06 340 P **P** **06 12 25.4 +1.5**
baz=130
BMRM Bremner River 55.12 335 P **P** **06 12 26.0 +1.7**
baz=123
L27K Beaver Creek, 55.27 338 P **P** **06 12 26.1 +0.8**
baz=127
M26K Nabesna, AK 55.30 337 P **P** **06 12 26.4 +0.8**
baz=126
EYAK Cordova Ski Ar 55.36 334 P **P** **06 12 27.5 +1.5**
baz=122
N25K Chitina, Valde 55.47 336 P **P** **06 12 28.5 +1.6**
baz=123
I29M Ogilvie Camp, 55.58 341 IAmb IAmb 06 12 37.5
comp=Z,4.7nm,0.8s
I29M Ogilvie Camp, 55.58 341 P **P** **06 12 28.0 +0.4**
baz=132
L26K Log Cabin Wild 55.80 337 P **P** **06 12 30.3 +1.1**
baz=126
EPYK Eagle Plains 55.81 343 P **P** **06 12 29.8 +0.7**
baz=134
K27K Chicken 55.95 339 IAmb IAmb 06 12 40.1
comp=Z,14nm,1.1s
K27K Chicken 55.95 339 P **P** **06 12 32.1 +1.9**
baz=127
GLI Glacier Island 56.10 334 P **P** **06 12 32.8 +1.5**
baz=120
EGAK Eagle 56.11 340 IAmb IAmb 06 12 39.9
comp=Z,8.7nm,0.8s
EGAK Eagle 56.11 340 P **P** **06 12 32.7 +1.4**
baz=129,SNR=7.7
INK Inuvik 56.39 345 P **P** **06 12 33.1 -0.1**
comp=Z,8.2nm,0.8s,baz=109,slow=5.4,SNR=11
INK LR LR 06 39 56.3
comp=Z,114nm,19.4s,baz=182,slow=39
comp=Z,8.2nm,0.8s
INK Inuvik 56.39 345 P **P** **06 12 34.4 +1.2**
INK IAmb IAmb 06 12 42.8
comp=Z,12nm,0.9s
INK Inuvik 56.39 345 P **P** **06 12 34.5 +1.3**
baz=139,SNR=5.7
DOT Dot Lake 56.43 338 IAmb IAmb 06 12 43.2
comp=Z,9.6nm,1.2s
PAX Paxson 56.56 337 IAmb IAmb 06 12 43.7
comp=Z,6.5nm,1.1s
PAX Paxson 56.56 337 P **P** **06 12 36.8 +2.1**
baz=123
SCRK Sand Creek 56.59 338 P **P** **06 12 36.9 +2.0**
baz=125
J26L Joseph Creek 56.75 339 P **P** **06 12 37.8 +1.8**
baz=126,SNR=11
RIDG Independent Ri 56.77 338 IAmb IAmb 06 12 45.5
comp=Z,13nm,1.1s
RIDG Independent Ri 56.77 338 P **P** **06 12 37.9 +1.8**
baz=124,SNR=6.0
I27K Kandik River 56.78 340 P **P** **06 12 39.0 +2.8**
baz=129
I26K Coal Creek Min 57.10 340 IAmb IAmb 06 12 47.6
comp=Z,5.9nm,0.9s
I26K Coal Creek Min 57.10 340 P **P** **06 12 41.0 +2.7**
baz=127,SNR=6.4
K24K Donnelly Dome 57.15 337 P **P** **06 12 39.8 +1.1**
baz=123
H27K Steamboat Moun 57.15 341 P **P** **06 12 40.2 +1.5**
baz=129
WAT6 Susitna Watana 57.24 336 P **P** **06 12 40.5 +1.0**
baz=121
CNPM China Poot 57.28 331 IAmb IAmb 06 12 48.1
comp=Z,8.5nm,0.9s
PMR Palmer 57.31 334 IAmb IAmb 06 12 48.6
comp=Z,6.4nm,0.7s
PMR Palmer 57.31 334 P **P** **06 12 41.4 +1.5**
baz=119
GHO Glory Hole Cre 57.31 334 IAmb IAmb 06 12 48.8
comp=Z,7.6nm,0.7s
RC01 Rabbit Creek A 57.32 333 P **P** **06 12 41.5 +1.5**
baz=118
OHAK Old Harbor 57.33 328 P **P** **06 12 40.9 +0.9**
baz=112
DHY Denali Highway 57.35 336 P **P** **06 12 41.6 +1.2**
baz=121
J25K Salcha River, 57.45 338 P **P** **06 12 41.1 +0.2**
baz=124
G27K Doyon Strip 57.56 342 P **P** **06 12 43.0 +1.3**
baz=129,SNR=7.6
HDA Harding Lake 57.91 338 IAmb IAmb 06 12 52.7
comp=Z,5.2nm,1.0s
HDA Harding Lake 57.91 338 P **P** **06 12 45.2 +1.1**
baz=122
SUA Susitna One 57.93 334 P **P** **06 12 46.3 +1.9**
baz=117
PRP Porcupine Dome 58.03 339 IAmb IAmb 06 12 55.2
comp=Z,9.0nm,1.0s
PRP Porcupine Dome 58.03 339 P **P** **06 12 46.8 +1.7**
baz=124,SNR=8.8

IL31 58.08 338 IAmb IAmb 06 12 54.0
comp=Z,10nm,1.1s
ILAR Eielson Array 58.08 338 P **P** **06 12 46.8 +1.5**
comp=Z,3.7nm,0.9s,baz=138,slow=5.1,SNR=27
ILAR PcP **PcP** **06 13 37.0 0.0**
comp=Z,1.5nm,1.0s,baz=147,slow=2.3,SNR=1.4
ILAR LR LR 06 37 33.4
comp=Z,49nm,20.2s,baz=97,slow=36
comp=Z,3.7nm,0.9s
Q19K Cape Douglas, 58.16 330 P **P** **06 12 47.8 +1.8**
baz=113
MCK McKinley 58.30 336 P **P** **06 12 48.5 +1.7**
MCK IAmb IAmb 06 12 56.4
comp=Z,7.6nm,0.9s
MCK McKinley 58.30 336 P **P** **06 12 48.7 +1.9**
baz=120
G26K Porcupine Rive 58.31 341 P **P** **06 12 48.6 +1.8**
baz=127
E27K Coleen River 58.44 343 P **P** **06 12 48.9 +1.2**
baz=130,SNR=6.7
POKR Poker Plat Res 58.47 338 P **P** **06 12 48.0 0.0**
baz=122
FYU Fort Yukon 58.54 340 IAmb IAmb 06 12 58.0
comp=Z,16nm,1.4s
H25K Birch Creek 58.56 340 P **P** **06 12 50.4 +1.9**
baz=125
TRF Thorofare Moun 58.68 336 P **P** **06 12 51.5 +1.8**
baz=118,SNR=14
CPUP Villa Florida 58.70 136 P **P** **06 12 49.3 -0.8**
comp=Z,3.2nm,1.1s,baz=292,slow=11,SNR=2.7
comp=Z,3.2nm,1.1s
NEA2 Nenana 58.79 337 P **P** **06 12 51.6 +1.4**
baz=120
F26K Sheenjek River 58.87 342 P **P** **06 12 52.0 +1.2**
baz=122
H24K Nodor Dome 59.02 339 P **P** **06 12 53.5 +1.6**
baz=122,SNR=8.1
R17K Ugashik Creek 59.04 328 P **P** **06 12 53.4 +1.4**
baz=109
M20K Styx River 59.14 333 IAmb IAmb 06 13 00.9
comp=Z,5.4nm,0.8s
M20K Styx River 59.14 333 P **P** **06 12 53.6 +0.8**
baz=115
I23K Minto, Yukon-K 59.18 338 P **P** **06 12 54.0 +1.1**
baz=120,SNR=8.3
PPLA Purkeypile 59.19 335 P **P** **06 12 54.4 +1.3**
baz=116
O18K Koktuh Hills 59.25 331 P **P** **06 12 54.3 +0.7**
baz=112
BPAW Bear Paw Mtn. 59.27 336 IAmb IAmb 06 13 02.6
comp=Z,7.6nm,1.1s
BPAW Bear Paw Mtn. 59.27 336 P **P** **06 12 54.4 +0.8**
baz=118
F25K Christian Rive 59.27 341 P **P** **06 12 54.8 +1.2**
baz=126
N19K Bonanza Creek 59.29 332 P **P** **06 12 55.2 +1.4**
baz=113,SNR=6.2
G24K Hadweenzic Riv 59.35 340 P **P** **06 12 55.1 +1.0**
baz=123,SNR=13
CAST Castle Rocks 59.38 335 IAmb IAmb 06 13 04.2
comp=Z,8.0nm,0.9s
CAST Castle Rocks 59.38 335 P **P** **06 12 55.3 +0.9**
baz=117,SNR=9.1
Q16K King Salmon 59.53 329 P **P** **06 12 57.0 +1.6**
baz=110
SFJD Kangerlussuaq 59.56 20 LR LR 06 39 48.9
comp=Z,68nm,20.6s,baz=231,slow=37
E25K Arctic Village 59.56 342 P **P** **06 12 56.2 +0.7**
baz=126
BDFB Brasilia 59.59 120 P **P** **06 12 57.0 +0.4**
comp=Z,1.5nm,0.7s,baz=297,slow=6.8,SNR=3.0
comp=Z,1.5nm,0.7s
MLY Manley 59.62 337 IAmb IAmb 06 13 04.8
comp=Z,10nm,1.1s
MLY Manley 59.62 337 P **P** **06 12 57.5 +1.4**
baz=119,SNR=9.7
M19K Big River Lodg 59.69 333 IAmb IAmb 06 13 12.2
comp=Z,8.8nm,1.0s
M19K Big River Lodg 59.69 333 P **P** **06 12 58.0 +1.4**
baz=114,SNR=5.9
L20K Farewell, AK 59.71 334 P **P** **06 12 57.5 +0.9**
baz=114,SNR=7.2
N18K Kilae Creek 59.88 332 P **P** **06 12 59.4 +1.5**
N18K IAmb IAmb 06 13 05.7
comp=Z,5.3nm,0.8s
N18K Kilae Creek 59.88 332 P **P** **06 12 59.1 +1.2**
baz=111
SVW2 Sparrevohn 59.90 332 IAmb IAmb 06 13 05.9
comp=Z,5.3nm,0.8s
F24K Squaw Lake 59.94 340 P **P** **06 12 59.6 +1.4**
baz=123
C27K Jago River 59.95 343 P **P** **06 12 59.6 +1.5**
baz=128
L19K White Mountain 60.00 333 IAmb IAmb 06 13 07.1
comp=Z,5.7nm,1.1s
L19K White Mountain 60.00 333 P **P** **06 13 00.4 +1.7**
baz=113
PPT Papeete 60.03 238 LR LR 06 34 10.7
comp=Z,42nm,18.7s,baz=64,slow=31
PPT2 Papeete2 60.05 238 eLR LR 06 13 00.2
comp=Z,70nm,22.0s
O17K Koliganek Bris 60.12 330 P **P** **06 12 59.4 0.0**
baz=110
K20K Telida 60.16 335 P **P** **06 13 00.6 +0.8**
baz=115,SNR=7.1
I21K Tanana 60.16 337 P **P** **06 13 00.8 +1.1**
baz=118
G23K Bananza Creek 60.22 339 P **P** **06 13 01.1 +1.0**
baz=120,SNR=5.4
H22K Ishtalitna Cre 60.28 338 P **P** **06 13 01.4 +0.9**
baz=119,SNR=7.4
E24K Your Creek 60.44 341 P **P** **06 13 03.1 +1.5**
baz=123
D25K Kavik River 60.51 343 P **P** **06 13 03.8 +1.7**
baz=126,SNR=6.2
O16K Kokwok River B 60.53 330 P **P** **06 13 02.5 +0.2**
baz=109
J20K Nowinta River 60.54 336 P **P** **06 13 03.6 +1.3**
J20K Nowinta River 60.54 336 P **P** **06 13 03.2 +0.9**
baz=115,SNR=5.3
H21K Melozitna Rive 60.69 337 P **P** **06 13 04.5 +1.3**
H21K IAmb IAmb 06 13 11.4
comp=Z,5.0nm,0.9s
H21K Melozitna Rive 60.69 337 P **P** **06 13 04.1 +0.8**
baz=117,SNR=5.2
TTA Tatalina 60.79 334 P **P** **06 13 05.2 +1.1**
TTA IAmb IAmb 06 13 28.7
comp=Z,5.2nm,0.8s
TOLK Toolik Lake Re 61.08 341 P **P** **06 13 06.3 +0.3**
TOLK Toolik Lake Re 61.08 341 P **P** **06 13 07.2 +1.2**
baz=122
D24K Happy Valley 61.13 342 P **P** **06 13 08.3 +2.1**
baz=123
N16K Nishlik Lake 61.14 331 P **P** **06 13 06.6 +0.2**
baz=108
IMAR Indian Mountai 61.18 338 P **P** **06 13 05.3 -1.4**
G21K Allakaket 61.34 338 P **P** **06 13 08.2 +0.5**
baz=117
F22K John River 61.34 339 P **P** **06 13 08.7 +1.0**
baz=119
C24K Franklin Bluff 61.41 342 P **P** **06 13 08.3 +0.2**
baz=123
S12K Black Hills 61.49 325 P **P** **06 13 10.1 +1.1**
baz=103
D23K Nanushuk River 61.60 341 P **P** **06 13 11.2 +1.8**
baz=121
F21K Alatna River 61.65 339 P **P** **06 13 12.0 +2.2**
baz=117,SNR=5.8
C23K Itkillik River 62.03 342 P **P** **06 13 13.5 +1.3**
baz=121
PLCA Paso Flores 62.64 156 P **P** **06 13 18.7 +1.9**
comp=Z,3.5nm,0.9s,baz=308,slow=12,SNR=3.1
PLCA LR LR 06 34 25.1
comp=Z,27nm,21.8s,baz=260,slow=30
comp=Z,3.5nm,0.9s
RCBR Riachuelo 66.27 104 LR LR 06 45 07.6
comp=Z,75nm,18.4s,baz=108,slow=38
BORG Borgarnes 70.18 26 LR LR 06 45 55.0
comp=Z,25nm,19.2s,baz=264,slow=37
RAR Rarotonga 70.20 240 LR LR 06 36 34.2
comp=Z,75nm,21.4s,baz=353,slow=29
JMIC Jan Mayen 74.92 20 LR LR 06 50 15.4
comp=Z,37nm,20.3s,baz=255,slow=38
BBTS Babate 79.04 78 LR LR 06 45 57.9
comp=Z,54nm,18.8s,baz=310,slow=33
SPITS Spitsbergen Ar 79.18 11 LR LR 06 52 37.8
comp=Z,50nm,20.0s,baz=271,slow=38
EKA Eskdalemuir Ar 80.10 35 LR LR 06 51 00.6
comp=Z,33nm,20.3s,baz=178,slow=36
NOA NORSAR Array B 85.34 27 P **P** **06 15 29.8 +0.4**
comp=Z,0.7nm,0.8s,baz=303,slow=5.0,SNR=3.9
NOA LR LR 06 53 48.5
comp=Z,20nm,22.0s,baz=250,slow=36
comp=Z,0.7nm,0.8s
ARCES ARCESS Array B 86.03 17 LR LR 06 55 19.3
comp=Z,30nm,20.6s,baz=311,slow=37
HFS Hagfors 86.84 28 LR LR 06 56 35.5
comp=Z,16nm,19.2s,baz=292,slow=37
YAK Yakutsk 92.99 339 LR LR 07 01 42.4
comp=Z,45nm,18.8s,baz=96,slow=38
VRAC Vranov 93.54 36 LR LR 07 01 04.0
comp=Z,25nm,18.1s,baz=322,slow=37
TORD Torodi Ar. Bea 96.45 74 LR LR 06 57 34.2
comp=Z,45nm,18.1s,baz=212,slow=34
AKASG Malin Array Be 99.41 30 LR LR 07 01 39.8
comp=Z,28nm,21.5s,baz=274,slow=36
WRA Warramunga Arr 129.24 257 PKP **PKiKP** **06 22 02.4 +0.1**
comp=Z,0.9nm,0.9s,baz=82,slow=1.6,SNR=7.2
ASAR Alice Springs 129.87 253 PKP **PKiKP** **06 22 04.0 +0.5**
comp=Z,0.4nm,0.8s,baz=108,slow=3.0,SNR=2.7
PZH PanZhiHua 132.87 334 PKP **PKiKP** **06 22 12.9 +3.2**

IDC 11 06:39:42.2±575.0, 52°41N×44°24E, h0km, Error ellipse: s-maj=294.3km s-min=44.3km az=152.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**5.94**	**319**	*i*			07 18 30.0	
	baz=135,slow=320,SNR=0.4							
I26DE	**FREYUNG INFRAS**	**19.61**	**272**	*i*			08 32 20.0	
	baz=65,slow=325,SNR=0.8							
I37NO	**I37NO**	**20.60**	**334**	*i*			08 46 09.3	
	baz=131,slow=324,SNR=1.7							

*NEIC **11** 06:40:32.5±1.2, 17.9N±0.2×69.03W±0.04, h83km±19km, Error ellipse: s-maj=26.8km s-min=5.0km az=182.0*
*RSPR **11** 06:40:33.2, 17.93N×68.94W, h104km±4km, MD3.4/13*
ISC 11 06:40:31.7±1.5, 18.0N±0.2×69.02W±0.05, h110km, n51, σ0.80/53, 4C-15D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.77**	**51**	⇑*eP*		**Pn**	**06 40 50.8**	**+0.1**
PCDR	**Punta Cana, DR**	**0.77**	**51**			**Pn**	**06 40 50.8**	**+0.1**
PCDR					Sn	**Sn**	**06 41 05.4**	**+0.4**
PCDR					IAML		06 41 06.9	
	comp=E,518nm,0.8s							
DR12	**Loma Pena Alta**	**0.83**	**335**	⇓*eP*		Pn	06 40 49.9	-1.5
DR12				*eS*		**Sn**	**06 41 02.9**	**-3.2**
DR12	**Loma Pena Alta**	**0.83**	**335**			Pn	06 40 49.8	-1.5
SDD	**Santo Domingo**	**0.95**	**297**	Pn		**Pn**	**06 40 52.2**	**-0.2**
SDD					Sn	**Sn**	**06 41 06.6**	**-1.4**
SDD					IAML		06 41 08.0	
	comp=E,315nm,0.2s							
SDD					IAML		06 41 09.0	
	comp=N,216nm,0.1s							
BANI	**BANI**	**1.33**	**286**	Pn		**Pn**	**06 40 57.0**	**+0.4**
IDE	**Isla Desecheo**	**1.51**	**76**	⇓*eP*		**Pn**	**06 40 59.1**	**+0.4**
IDE	**Isla Desecheo**	**1.51**	**76**	*eS*		**Sn**	**06 41 19.2**	**+0.1**
PRSN	**Puerto Rico Se**	**1.79**	**84**			**Pn**	**06 41 02.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.81**	**90**	⇑*eP*		**Pn**	**06 41 02.8**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.81**	**90**	*eS*		**Sn**	**06 41 25.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.81**	**90**			**Pn**	**06 41 02.7**	**+0.4**
CRPR					IAML		06 41 25.1	
	comp=N,101nm,0.6s							
CRPR					IAML		06 41 25.8	
	comp=E,101nm,0.4s							
LSP	**Las Mesas**	**1.84**	**85**	⇓*eP*		**Pn**	**06 41 03.4**	**+0.6**
LSP	**Las Mesas**	**1.84**	**85**	*eS*		**Sn**	**06 41 26.0**	**-0.4**
AGPR	**Aguadilla, PR**	**1.86**	**76**	⇓*eP*		**Pn**	**06 41 03.9**	**+0.9**
AGPR	**Aguadilla, PR**	**1.86**	**76**	*eS*		**Sn**	**06 41 26.7**	**-0.1**
AGPR	**Aguadilla, PR**	**1.86**	**76**			**Pn**	**06 41 04.0**	**+1.1**
AGPR					IAML		06 41 32.2	
	comp=N,176nm,0.6s							
AGPR					IAML		06 41 34.0	
	comp=E,139nm,0.3s							
MLPR	**Magueyes Islan**	**1.88**	**92**	⇑*eP*		**Pn**	**06 41 02.4**	**-0.7**
MLPR	**Magueyes Islan**	**1.88**	**92**			**Pn**	**06 41 02.4**	**-0.7**
GBPR	**Guanica, Bosqu**	**2.03**	**91**	⇓*eP*		**Pn**	**06 41 06.0**	**+0.8**
GBPR	**Guanica, Bosqu**	**2.03**	**91**	*eS*		**Sn**	**06 41 30.0**	**-0.7**
SC01	**Santiago de lo**	**2.14**	**311**	Pn		**Pn**	**06 41 07.4**	**+1.0**
SC01					IAML		06 41 35.7	
	comp=N,109nm,0.8s							
SC01					IAML		06 41 42.0	
	comp=E,126nm,0.7s							
AOPR	**Arecibo Observ**	**2.17**	**81**	⇑*eP*		**Pn**	**06 41 07.6**	**+0.6**
AOPR	**Arecibo Observ**	**2.17**	**81**	*eS*		**Sn**	**06 41 34.1**	**+0.1**
AOPR	**Arecibo Observ**	**2.17**	**81**			**Pn**	**06 41 07.5**	**+0.6**
UUPR	**Utuado, UPR, P**	**2.19**	**84**	⇓*eP*		**Pn**	**06 41 07.4**	**+0.2**
UUPR	**Utuado, UPR, P**	**2.19**	**84**	*eS*		**Sn**	**06 41 33.7**	**-0.7**
UUPR	**Utuado, UPR, P**	**2.19**	**84**			**Pn**	**06 41 07.4**	**+0.2**
UUPR						**Sn**	**06 41 33.7**	**-0.7**
OBIP	**Obispado Ponce**	**2.29**	**89**	⇓*eP*		**Pn**	**06 41 08.1**	**-0.4**
OBIP	**Obispado Ponce**	**2.29**	**89**			**Pn**	**06 41 07.9**	**-0.5**
SDDR	**Presa de Saban**	**2.35**	**294**			**Pn**	**06 41 11.8**	**+2.4**
SDDR					IAML		06 41 45.4	
	comp=E,48nm,0.5s							
ICMP	**Isla Caja de M**	**2.37**	**93**	Pn		**Pn**	**06 41 09.9**	**+0.4**
ICMP					IAML		06 41 38.3	
	comp=N,90nm,0.5s							
ICMP					IAML		06 41 38.6	
	comp=E,85nm,0.3s							
EMPR	**Esperanza - Ma**	**2.41**	**79**	⇓*eP*		**Pn**	**06 41 10.5**	**+0.6**
EMPR	**Esperanza - Ma**	**2.41**	**79**	*eS*		**Sn**	**06 41 39.2**	**0.0**
EMPR	**Esperanza - Ma**	**2.41**	**79**			**Pn**	**06 41 10.3**	**+0.5**
EMPR					IAML		06 41 50.3	
	comp=E,132nm,0.8s							
SJG	**San Juan**	**2.73**	**88**	Pn		**Pn**	**06 41 14.7**	**+0.6**
SJG					IAML		06 41 49.0	
	comp=E,60nm,0.3s							
SJG					IAML		06 41 50.3	
	comp=E,62nm,0.3s							
IGPR	**InterUniversit**	**2.77**	**91**	⇓*eP*		**Pn**	**06 41 14.7**	**0.0**
GCPR	**Guaynabo City**	**2.80**	**84**	⇓*eP*		**Pn**	**06 41 15.5**	**+0.4**
GCPR	**Guaynabo City**	**2.80**	**84**	*eS*		**Sn**	**06 41 48.6**	**+0.1**
GCPR	**Guaynabo City**	**2.80**	**84**			**Pn**	**06 41 14.8**	**-0.3**
PDPR	**Patillas Dam,**	**2.85**	**90**	Pn		**Pn**	**06 41 16.0**	**+0.2**
CBYP	**Canovanas**	**3.01**	**85**	⇓*eP*		**Pn**	**06 41 18.2**	**+0.2**
CBYP	**Canovanas**	**3.01**	**85**			**Pn**	**06 41 18.0**	**+0.1**
HUMP	**Col San Antoni**	**3.01**	**87**	⇓*eP*		**Pn**	**06 41 19.2**	**+1.3**
HUMP	**Col San Antoni**	**3.01**	**87**			**Pn**	**06 41 18.4**	**+0.6**
HUMP					IAML		06 41 58.8	
	comp=N,76nm,0.3s							
CUPR	**Culebra, Puert**	**3.56**	**85**	⇓*eP*		**Pn**	**06 41 25.4**	**+0.2**
CUPR	**Culebra, Puert**	**3.56**	**85**			**Pn**	**06 41 24.5**	**-0.7**
STVI	**Saint Thomas**	**3.88**	**85**	⇓*eP*		**Pn**	**06 41 30.1**	**+0.7**
STVI	**Saint Thomas**	**3.88**	**85**			**Pn**	**06 41 29.5**	**+0.1**
STVI					IAML		06 42 21.2	
	comp=N,27nm,0.8s							
SJVI	**Gifft Hill Sch**	**4.05**	**85**	⇓*eP*		**Pn**	**06 41 32.1**	**+0.4**
SJVI	**Gifft Hill Sch**	**4.05**	**85**			**Pn**	**06 41 32.1**	**+0.4**

SVSA 11 06:43:44.8±1.3, 38°13N×26°54W, h5km, ML3.8 (INMG), Error ellipse: s-maj=6.6km s-min=1.4km az=31.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMOS	**Mosteiros**	**0.61**	**112**	*eP*		Pg	06 43 54.9	-1.7
PMOS				*eS*		Sg	06 44 03.3	-1.3
PMOS				A		A	06 44 05.0	
	5μm,0.2s							
PSET	**Sete Cidades**	**0.71**	**115**	*eP*		Pg	06 43 56.3	-2.2
PSET				*eS*		Sg	06 44 05.4	-2.4
PSET				A		A	06 44 08.0	
	2μm,0.2s							
PSCM	**Serra do Cume**	**0.73**	**322**	*eP*		Pg	06 43 56.5	-2.3
PSCM				*eS*		Sg	06 44 06.2	-2.1
PSCM				A		A	06 44 08.6	
	4μm,0.1s							
PDA	**Ponta Delgada**	**0.79**	**118**	*eP*		Pg	06 43 57.5	-2.5
PDA				*eS*		Sg	06 44 07.8	-2.4
PDA				A		A	06 44 10.3	
	2μm,0.2s							
PAGU	**Agualva, Azore**	**0.81**	**322**	*eP*		Pg	06 43 57.5	-3.0
PAGU				A		A	06 44 09.5	
	7μm,0.3s							
PRIG	**Ribeira Grande**	**0.86**	**111**	*eP*		Pg	06 43 58.4	-2.9

PRIG				*e*S	Sg	06 44 09.2	-3.2
PRIG				A	A	06 44 11.7	
	7µm,0.2s						
CMLA	**Cha da Macela**	**0.88**	**114**	*e*P	Pg	06 43 58.8	-2.9
CMLA				*e*S	Sg	06 44 09.9	-3.2
CMLA				A	A	06 44 14.1	
	6µm,0.3s						
PCALD	**Caldeiras da R**	**0.90**	**111**	*e*P	Pg	06 43 58.8	-3.2
PCALD				*e*S	Sg	06 44 09.8	-3.8
PCALD				A	A	06 44 11.7	
	2µm,0.1s						
PGRON	**Lagoa das Cont**	**0.99**	**111**	*e*P	Pg	06 44 00.2	-3.5
PGRON				*e*S	Sg	06 44 12.8	-3.8
PGRON				A	A	06 44 13.7	
	1µm,0.2s						
PTOPO	**Topo S. Jorge**	**1.04**	**294**	*e*S	Sg	06 44 13.5	-4.9
PPOV	**Povoaş£o**	**1.09**	**110**	*e*S	Sg	06 44 13.7	-6.2
BART	**Pico Bartolome**	**1.14**	**107**	*e*P	Pg	06 44 02.1	-4.5
BART				*e*S	Sg	06 44 15.9	-5.5
BART				A	A	06 44 21.3	
	1µm,0.3s						
PNOR2	**Nordeste**	**1.14**	**104**	*e*S	Sg	06 44 16.2	-5.2
PID	**Ribeirinha**	**1.28**	**285**	*e*P	Pg	06 44 05.0	-4.4
PMAN	**Manadas**	**1.32**	**293**	*e*P	Pn	06 44 05.3	-4.6
PMAN				*e*S	Sg	06 44 19.7	-7.5
PPNO	**Prainha do Nor**	**1.40**	**285**	*e*P	Pn	06 44 06.4	-4.6
PPNO				*e*S	Sb	06 44 22.2	-7.4
PPNO				A	A	06 44 25.8	
	165nm,0.3s						
PGRA	**Graciosa**	**1.45**	**309**	*e*P	Pn	06 44 06.8	-4.8
PGRA				*e*S	Sb	06 44 23.8	-7.1
PGRA				A	A	06 44 26.0	
	313nm,0.3s						
ROSA	**Rosais**	**1.46**	**294**	*e*P	Pn	06 44 06.7	-5.2
ROSA				*e*S	Sb	06 44 23.6	-7.8
ROSA				A	A	06 44 26.7	
	203nm,0.2s						
PCAN	**Candelaria**	**1.57**	**283**	*e*P	Pn	06 44 08.3	-5.0
PCAN				*e*S	Sn	06 44 26.3	-7.7
PCAN				A	A	06 44 29.7	
	93nm,0.2s						
PSMA	**Santa Maria**	**1.59**	**135**	*e*P	Pn	06 44 08.6	-5.0
PSMA				*e*S	Sn	06 44 26.8	-7.8
PSMA				A	A	06 44 29.9	
	422nm,0.2s						
PSMN	**Pico do Norte,**	**1.62**	**133**	*e*P	Pn	06 44 09.3	-4.8
PSMN				*e*S	Sn	06 44 27.6	-7.7
PSMN				A	A	06 44 28.3	
	203nm,0.2s						
PSMN				A	A	06 44 35.7	
	303nm,0.4s						
CALA	**Caldeira**	**1.76**	**286**	*e*P	Pn	06 44 11.2	-4.8
CALA				*e*S	Sn	06 44 31.6	-7.2
CALA				A	A	06 44 38.2	
	482nm,0.3s						
PCED	**Cedros**	**1.77**	**287**	*e*P	Pn	06 44 10.8	-5.3
PCED				A	A	06 44 29.9	
	34nm,0.3s						
PCED				*e*S	Sn	06 44 30.8	-8.2

IDC 11 07:01:01.2±2.3, 6°04S×128°77E, h0km, mb3.7/1, mbtmp4.2/3, ML4.6/2, Error ellipse: s-maj=150.0km s-min=31.8km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.85**	**159**	Pn	Pn	07 04 34.6	+2.0
	2.5nm,0.3s,baz=341,slow=12,SNR=78						
WRA				Sn	Sn	07 07 08.8	-9.2
	0.4nm,0.3s,baz=337,slow=20,SNR=6.2						
	6.3nm,0.5s						
ASAR	**Alice Springs**	**18.21**	**165**	P	Pn	07 05 14.5	-1.2
	2.7nm,0.3s,baz=347,slow=11,SNR=135						
ASAR				S	Sn	07 08 21.6	-18
	1.8nm,0.7s,baz=348,slow=22,SNR=9.1						
	9.5nm,0.6s						
MKAR	**Makanchi Array**	**66.75**	**327**	P	P	07 11 54.5	+0.1
	0.4nm,0.5s,baz=121,slow=7.2,SNR=3.7						
	0.4nm,0.5s						

*NNC **11** 07:06:37.0±4.9, 37°69N×71°05E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=38.1km s-min=26.0km az=174.0*

ISC 11 07:06:36.1±3.6, 37°3N±0°2×71°0E±0°1, h68km, n10, σ1§03/14, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.21**	**23**	P	**Pn**	**07 07 52.9**	**+1.1**
	SNR=17						
EKS2	**Erkin-Say**	**5.72**	**21**	P	**Pn**	**07 07 59.6**	**+1.0**
	SNR=12						
KK31	**Karatay Array**	**5.76**	**356**	⇓P	**Pn**	**07 08 01.2**	**+2.2**
	1.6nm,0.3s,baz=179,slow=13,SNR=27						
KK31				⇑S	**Sn**	**07 09 03.9**	**+0.1**
	4.6nm,0.5s,baz=173,slow=22,SNR=5.7						
AAK	**Ala-Archa**	**5.93**	**26**	P	**Pn**	**07 08 02.4**	**+1.0**
	SNR=6.0						
CHMS	**Chumysh**	**6.34**	**26**	P	**Pn**	**07 08 07.5**	**+0.6**
	SNR=7.9						
CHMS	**Chumysh**	**6.34**	**26**	⇓P	**Pn**	**07 08 07.2**	**+0.3**
	16nm,0.8s						
CHMS				⇑S	**Sn**	**07 09 17.8**	**0.0**
	4.2nm,0.5s						
USP	**Ospenovka**	**6.49**	**23**	P	**Pn**	**07 08 09.2**	**+0.2**
	SNR=12						
TKM2	**Tokmak 2**	**6.59**	**31**	P	**Pn**	**07 08 10.5**	**0.0**
	SNR=11						
TKM2	**Tokmak 2**	**6.59**	**31**	⇓P	**Pn**	**07 08 10.3**	**-0.2**
	4.3nm,0.6s						
TKM2				⇑S	**Sn**	**07 09 24.3**	**+0.1**
	3.8nm,0.7s						
AB31	**Akbulak array**	**14.35**	**330**	⇑P	**Pn**	**07 09 55.0**	**-0.7**
	0.2nm,0.2s,baz=140,slow=13,SNR=20						
AB31				S	**Sn**	**07 12 31.7**	**-1.6**
	1.3nm,0.6s,baz=151,slow=23,SNR=5.9						

*SNET **11** 07:28:10.5±1.0, 11°87N×87°66W, h15km±165km, ML3.7*
*UCR **11** 07:28:10.9±2.5, 11°96N×87°61W, h12km±22km, ML3.5*
*IDC **11** 07:28:11.7±4.5, 12°48N×87°44W, h0km, mb3.5/3, mbtmp3.6/4, ML3.7/1, MS2.9/2, Error ellipse: s-maj=125.2km s-min=56.2km az=30.0*
*INET **11** 07:28:11.5±1.1, 11°82N×87°50W, h15km±11km, ML3.7*

ISC 11 07:28:10.5±1.7, 11°95N±0°05×87°59W±0°04, h14km±11km, n67, σ1§36/69, mb3.5/3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.92**	**35**	*e*P	**Pn**	**07 28 29.3**	**+0.2**
CRIN				*e*S	**Sb**	**07 28 41.8**	**+1.4**
TEL3	**Telica 3**	**0.96**	**49**	*e*P	**Pg**	**07 28 29.2**	**0.0**
TELN	**Telica**	**0.99**	**49**	*e*P	**Pb**	**07 28 30.2**	**+0.7**
COPN	**Copaltepe**	**1.01**	**76**	*e*P	**Pb**	**07 28 28.8**	**-0.9**
CSGN	**Cosiguina Volc**	**1.02**	**2**	*e*P	**Pn**	**07 28 31.0**	**+0.5**
CNGN	**Cerro Negro**	**1.03**	**58**	*e*P	**Pb**	**07 28 29.9**	**-0.4**
CNGN				*e*S	**Sg**	**07 28 44.1**	**+0.1**
CNGN				IAML		07 28 54.8	
	comp=E,2µm,0.4s						
MOMN	**Momotombo**	**1.13**	**66**	*e*P	**Pb**	**07 28 30.7**	**-1.2**
MGAN	**Managua**	**1.33**	**81**	*e*P	**Pn**	**07 28 32.9**	**-1.8**
MGAN				*e*S	**Sb**	**07 28 50.5**	**-1.7**
LCND	**La Caada**	**1.39**	**348**	*e*P	**Pn**	**07 28 35.7**	**+0.2**
LCND				*e*S	**Sg**	**07 28 55.6**	**+0.3**
LCND				IAML		07 29 00.2	
	comp=Z,2µm,0.4s						
LCND	**La Caada**	**1.39**	**348**	*e*P	**Pn**	**07 28 35.7**	**+0.2**
LCND				*e*S	**Sg**	**07 28 55.6**	**+0.3**
LCND				IAML		07 29 00.2	
	comp=Z,2µm,0.4s						
WILN	**Americas 2**	**1.39**	**81**	*e*P	**Pn**	**07 28 34.3**	**-1.2**
MASN	**Masaya**	**1.41**	**88**	*e*P	**Pn**	**07 28 35.7**	**-0.1**
HUEN		**1.44**	**74**	*e*P	**Pn**	**07 28 34.7**	**-1.5**
COEB	**Comit de Eme**	**1.79**	**329**	*e*P	**Pn**	**07 28 41.0**	**-0.2**
COEB				*e*S	**Sn**	**07 29 04.9**	**+1.0**
COEB				IAML		07 29 13.6	
	comp=Z,440nm,0.5s						
COEB	**Comit de Eme**	**1.79**	**329**	*e*P	**Pn**	**07 28 41.0**	**-0.2**
COEB				*e*S	**Sn**	**07 29 04.9**	**+1.0**
COEB				IAML		07 29 13.6	
	comp=Z,440nm,0.5s						
MATN	**Matagalpa**	**1.90**	**59**	*e*P	**Pn**	**07 28 42.0**	**-0.6**
PQSS	**Presa 15 de Se**	**1.92**	**331**	*e*P	**Pn**	**07 28 43.2**	**+0.5**
PQSS	**Presa 15 de Se**	**1.92**	**331**	*e*P	**Pn**	**07 28 43.2**	**+0.5**
BOAB	**BOACO BROADBAN**	**.95**	**75**	*e*P	**Pn**	**07 28 41.7**	**-1.5**
CONN	**Concepcion**	**1.96**	**101**	*e*P	**Pn**	**07 28 40.0**	**-3.4**
SCLA	**Alcaldia de Sa**	**2.07**	**328**	*e*P	**Pn**	**07 28 45.6**	**+0.8**
SCLA				IAML		07 29 23.9	
	comp=Z,481nm,0.9s						
SCLA	**Alcaldia de Sa**	**2.07**	**328**	*e*P	**Pn**	**07 28 45.6**	**+0.8**
SCLA				IAML		07 29 23.9	
	comp=Z,481nm,0.9s						
RCON	**San Juan de Ri**	**2.08**	**42**	*e*P	**Pn**	**07 28 45.9**	**+0.8**
COEG	**Centro de Oper**	**2.08**	**323**	*e*P	**Pn**	**07 28 45.3**	**+0.1**
COEG	**Centro de Oper**	**2.08**	**323**	*e*P	**Pn**	**07 28 45.3**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.12**	**8**	*e*P	**Pn**	**07 28 47.2**	**+1.5**
SJTE	**Alcalda de S**	**2.16**	**320**	*e*P	**Pn**	**07 28 45.6**	**-0.5**
SJTE	**Alcalda de S**	**2.16**	**320**	*e*P	**Pn**	**07 28 45.6**	**-0.5**
PAVA	**Las Pavas**	**2.19**	**323**	*e*P	**Pn**	**07 28 47.3**	**+0.6**
PAVA				*e*S	**Sb**	**07 29 15.8**	**-1.4**
PAVA				IAML		07 29 27.1	
	comp=Z,355nm,0.4s						
PAVA	**Las Pavas**	**2.19**	**323**	*e*P	**Pn**	**07 28 47.3**	**+0.6**
PAVA				*e*S	**Sb**	**07 29 15.8**	**-1.4**
PAVA				IAML		07 29 27.1	
	comp=Z,355nm,0.4s						
HZTE	**Horizontes, Gu**	**2.31**	**122**	*e*P	**Pn**	**07 28 49.1**	**+1.0**
ACON	**Aceyapa**	**2.37**	**89**	*e*P	**Pn**	**07 28 46.5**	**-2.4**
UEES	**Universidad Ev**	**2.38**	**318**	IAML		07 29 28.8	
	comp=Z,234nm,0.2s						
UEES	**Universidad Ev**	**2.38**	**318**	IAML		07 29 28.8	
	comp=Z,234nm,0.2s						
BUEV	**Buena Vista**	**2.43**	**118**	*e*P	**Pn**	**07 28 48.7**	**-1.2**
JAYA	**Jayaque - finc**	**2.48**	**313**	*e*P	**Pn**	**07 28 50.1**	**-0.6**
JAYA	**Jayaque - finc**	**2.48**	**313**	*e*P	**Pn**	**07 28 50.1**	**-0.6**
GPS2	**Hotel Rincn d**	**2.50**	**118**	*e*P	**Pn**	**07 28 51.4**	**+0.6**
CEDA	**San Andres**	**2.55**	**317**	IAML		07 29 36.0	
	comp=Z,464nm,0.5s						
CEDA	**San Andres**	**2.55**	**317**	IAML		07 29 36.0	
	comp=Z,464nm,0.5s						
ORTG	**Ortega, Santa**	**2.62**	**127**	*e*P	**Pn**	**07 28 53.9**	**+1.4**
GUAB	**Guayabo de Bag**	**2.62**	**118**	*e*P	**Pn**	**07 28 52.5**	**-0.1**
COLC	**Colonia**	**2.67**	**118**	*e*P	**Pn**	**07 28 54.0**	**+0.9**
HORNC	**Hornillas**	**2.67**	**117**	*e*P	**Pn**	**07 28 51.6**	**-1.6**
PLVR	**Palo Verde**	**2.71**	**126**	*e*P	**Pn**	**07 28 54.1**	**+0.2**
CEVE	**Cerro Verde**	**2.73**	**314**	IAML		07 29 38.8	
	comp=Z,437nm,0.4s						
CEVE	**Cerro Verde**	**2.73**	**314**	IAML		07 29 38.8	
	comp=Z,437nm,0.4s						
VERA	**Finca Concepci**	**2.88**	**112**	*e*P	**Pn**	**07 28 56.9**	**+0.9**
NUBE	**Las Nubes**	**2.89**	**313**	*e*P	**Pn**	**07 28 55.6**	**-0.6**
NUBE	**Las Nubes**	**2.89**	**313**	*e*P	**Pn**	**07 28 55.6**	**-0.6**
JTS	**Las Juntas de**	**3.07**	**122**	*e*P	**Pn**	**07 29 00.5**	**+1.8**
ARE1	**Arenal 1**	**3.18**	**117**	*e*P	**Pn**	**07 29 01.9**	**+1.7**
CEDE	**Laguna Cedeo**	**3.18**	**117**	*e*P	**Pn**	**07 29 02.5**	**+2.2**
FORC	**Fortuna**	**3.22**	**117**	*e*P	**Pn**	**07 29 02.6**	**+1.9**
ESPN	**Las Esperanzas**	**3.23**	**85**	*e*P	**Pn**	**07 29 01.6**	**+0.7**
LAFE	**Finca La Fe, P**	**3.38**	**129**	*e*P	**Pn**	**07 28 59.2**	**-3.8**
JACO	**JACO, Garabito**	**3.67**	**128**	*e*P	**Pn**	**07 29 11.2**	**+4.4**
HDC3	**Heredia 3**	**3.93**	**119**	*e*P	**Pn**	**07 29 12.2**	**+1.6**
RIMA	**Rio Macho**	**4.25**	**120**	*e*P	**Pn**	**07 29 14.2**	**-0.9**
CDM	**Cerro de Muert**	**4.45**	**122**	*e*P	**Pn**	**07 29 17.0**	**-1.1**
CMIG	**Matias Romero**	**8.72**	**307**	Pn	**Pn**	**07 30 16.8**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=150,slow=8.0,SNR=22						
CMIG				Sn	**Sn**	**07 31 52.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=198,slow=20,SNR=1.6						
	comp=Z,2.3nm,0.3s						
TXAR	**Lajitas Array**	**22.88**	**322**	P	**P**	**07 33 13.7**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=135,slow=10,SNR=29						
	comp=Z,2.4nm,0.7s						
PDAR	**Pinedale Array**	**36.15**	**332**	P	**P**	**07 35 11.9**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=128,slow=9.4,SNR=4.6						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**37.99**	**319**	P	**P**	**07 35 30.1**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=139,slow=7.2,SNR=5.2						
	comp=Z,0.4nm,0.6s						
YBH	**Yreka Blue Hor**	**42.65**	**321**	LR	LR	07 57 57.3	
	comp=Z,16nm,18.5s,baz=234,slow=42						
SFJD	**Kangerlussuaq**	**60.24**	**16**	LR	LR	08 02 35.7	
	comp=Z,9.7nm,21.5s,baz=197,slow=35						
WRA	**Warramunga Arr**	**138.99**	**253**	PKP	**PKiKP**	**07 47 40.1**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=92,slow=2.2,SNR=5.5						

IDC 11 07:39:52.0±2.8, 53°95N×86°67E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=22.8km s-min=14.3km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.09**	**271**	*i*		07 45 46.6	
	baz=90,slow=319,SNR=6.3						
ZALV	**Zalesovo Beam**	**1.09**	**271**	Pg	Pg	07 40 11.1	-1.8
	0.7nm,0.3s,baz=91,slow=15,SNR=5.9						
ZALV				Lg	Lg	07 40 28.2	
	2.4nm,0.3s,baz=93,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**6.00**	**240**	Pn	Pn	07 41 23.2	+1.2
	0.1nm,0.3s,baz=55,slow=14,SNR=5.5						
KURBB				Lg	Lg	07 43 07.0	
	baz=47,slow=23,SNR=4.1						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.69**	**203**	Pn	Pn	07 41 46.0	+0.8
	0.1nm,0.3s,baz=25,slow=14,SNR=4.5						
	0.2nm,0.3s						

IDC 11 07:49:20.6±3.1, 54°29N×86°85E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=26.4km s-min=17.2km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**255**	*i*		07 56 15.7	
	baz=74,slow=313,SNR=12						
ZALV	**Zalesovo Beam**	**1.24**	**255**	Pg	Pg	07 49 43.2	-1.2
	1.2nm,0.3s,baz=75,slow=17,SNR=16						
ZALV				Lg	Lg	07 50 00.8	
	1.5nm,0.3s,baz=74,slow=26,SNR=8.6						
KURBB	**Kurchatov Arra**	**6.27**	**238**	Pn	Pn	07 50 55.4	+1.1
	0.1nm,0.3s,baz=54,slow=14,SNR=7.4						
KURBB				Lg	Lg	07 52 39.6	
	baz=56,slow=33,SNR=4.2						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**8.05**	**203**	Pn	Pn	07 51 19.5	+0.8
	0.1nm,0.3s,baz=25,slow=13,SNR=3.5						
MKAR				Lg	Lg	07 53 39.1	
	baz=22,slow=20,SNR=3.0						
	0.1nm,0.3s						

*IDC **11** 08:13:11.4±2.6, 53°56N×87°80E, h0km, mbtmp3.6/2, ML3.1/2, Error ellipse: s-maj=22.4km s-min=14.8km az=61.0*
*NNC **11** 08:13:12.4±2.8, 53°51N×87°60E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=21.6km s-min=10.3km az=64.0, Suspected Mining explosion.*

ISC 11 08:13:11.8±3.4, 53°6N±0°1×87°6E±0°2, h0km, n9, σ1§15/14, 8C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**283**	*i*		08 24 40.3	
	0.1nm,1.1s,baz=99,slow=315,SNR=13						
ZAA0	**Zalesovo Array**	**1.70**	**283**	⇓Pg	**Pn**	**08 13 42.6**	**-0.1**
	2.6nm,0.6s						
ZAA0				⇑Lg	Lg	08 14 08.4	
	17nm,0.8s						
ZALV	**Zalesovo Beam**	**1.70**	**283**	Pn	**Pb**	**08 13 43.5**	**-0.4**
	6.1nm,0.3s,baz=105,slow=12,SNR=30						
ZALV				Lg	Lg	08 14 08.6	
	17nm,0.3s,baz=102,slow=24,SNR=18						
KURK	**Kurchatov**	**6.25**	**246**	⇓Pn	**Pn**	**08 14 46.2**	**+1.0**
	2.1nm,0.5s						
KURK				⇓Sn	**Sn**	**08 15 57.1**	**-0.2**
	3.9nm,0.5s						
KURK				⇑Lg	Lg	08 16 30.2	
	23nm,0.8s						
KURBB	**Kurchatov Arra**	**6.35**	**246**	Pn	**Pn**	**08 14 48.1**	**+1.5**
	0.4nm,0.3s,baz=62,slow=14,SNR=24						
KURBB				Sn	**Sn**	**08 15 59.7**	**0.0**
	0.1nm,0.3s,baz=54,slow=19,SNR=2.6						
KURBB				Lg	Lg	08 16 35.1	
	0.2nm,0.3s,baz=60,slow=36,SNR=10.0						
	5.5nm,0.5s						
KURBB	**Kurchatov Arra**	**6.35**	**246**	⇑Pn	**Pn**	**08 14 47.7**	**+1.1**
	4.8nm,0.4s						
KURBB				⇑Sn	**Sn**	**08 15 59.3**	**-0.4**
	17nm,0.6s						
KURBB				⇑Lg	Lg	08 16 35.4	

*UCR **11** 08:24:43.0±1.3, 11°83N×95°95W, h35km±999km, ML3.8, mb4.6(NEIC)*

SNET 11 08:24:43.0±1.3, 11°83N×95°95W, h34km±999km, ML4.5, Off coast of Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**6.36**	**70**	*e*P	Pn	08 26 16.1	+1.6
NUBE	**Las Nubes**	**6.36**	**70**	*e*P	Pn	08 26 16.1	+1.6
SLOZ	**Alcaldia de Sa**	**6.40**	**69**	*e*P	Pn	08 26 15.0	+0.1
CEVE	**Cerro Verde**	**6.48**	**71**	*e*P	Pn	08 26 17.3	+1.1
CEVE	**Cerro Verde**	**6.48**	**71**	*e*P	Pn	08 26 17.3	+1.1
JAYA	**Jayaque - finc**	**6.60**	**73**	*e*P	Pn	08 26 17.4	-0.4
JAYA				IAML		08 26 51.6	
	comp=Z,169nm,0.8s						
JAYA	**Jayaque - finc**	**6.60**	**73**	*e*P	Pn	08 26 17.4	-0.4
JAYA				IAML		08 26 51.6	
	comp=Z,169nm,0.8s						
CEDA	**San Andres**	**6.69**	**72**	*e*P	Pn	08 26 20.6	+1.7
CEDA				IAML		08 27 24.5	
	comp=Z,140nm,0.5s						
CEDA	**San Andres**	**6.69**	**72**	*e*P	Pn	08 26 20.6	+1.7
CEDA				IAML		08 27 24.5	
	comp=Z,140nm,0.5s						
SCLA	**Alcaldia de Sa**	**7.29**	**74**	*e*P	Pn	08 26 29.4	+2.2
SCLA	**Alcaldia de Sa**	**7.29**	**74**	*e*P	Pn	08 26 29.4	+2.2
COEB	**Comit de Eme**	**7.43**	**76**	*e*P	Pn	08 26 30.1	+1.0
COEB				*e*S	Sn	08 27 54.2	+1.8
COEB	**Comit de Eme**	**7.43**	**76**	*e*P	Pn	08 26 30.1	+1.0
COEB				*e*S	Sn	08 27 54.2	+1.8

*MEX **11** 08:25:17.0±0.8, 14°28N×93°87W, h16km±20km, MD4.5*
*IDC **11** 08:25:20.4±5.0, 14°67N×93°52W, h33km±37km, mb4.3/17, mbtmp4.4/19, ML3.9/2, MS3.7/37, Error ellipse: s-maj=32.8km s-min=13.8km az=46.0*
*NEIC **11** 08:25:20.7±2.0, 14°63N±0°04×93°65W±0°04, h28km±6km, mb4.6/72, Md4.5/56(MEX), Error ellipse: s-maj=6.4km s-min=5.5km az=58.0*
*GCG **11** 08:25:34.3±0.6, 14°74N×92°53W, h18km±25km, MD4.6*

ISC 11 08:25:18.7±1.0, 14°57N±0°05×93°70W±0°04, h27km±6km, n389, σ1§26/384, mb4.6/45, MS3.8/34, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.43**	**76**		**Pn**	**08 25 42.5**	**-0.4**
THIG					**Sb**	**08 26 00.7**	**-1.9**
THIG		**1.43**	**76**	*e*P	**Pn**	**08 25 42.5**	**-0.4**
THIG				*e*S	**Sb**	**08 26 00.7**	**-1.9**
PATR	**El Naranjo**	**1.52**	**69**	*e*P	**Pn**	**08 25 43.8**	**-0.5**
PATR				*e*S	**Sb**	**08 26 05.0**	**-0.5**
PAVE	**Pavencul**	**1.60**	**67**	*e*P	**Pn**	**08 25 45.2**	**-0.3**
PAVE				*e*S	**Sb**	**08 26 07.6**	**-0.1**
CHUJ	**Union Juarez**	**1.63**	**71**	*e*P	**Pn**	**08 25 45.2**	**-0.6**
CHUJ				*e*S	**Sb**	**08 26 07.2**	**-1.3**
CARR	**Arriaga**	**1.68**	**353**	*e*P	**Pn**	**08 25 46.3**	**0.0**
CARR				*i* S	**Sb**	**08 26 08.6**	**-1.2**
RTAL	**Retalhuleu**	**1.94**	**91**		**Pn**	**08 25 49.2**	**-0.7**
STG3	**Santiaguito 3,**	**2.07**	**86**	*e*P	**Pn**	**08 25 51.6**	**-0.2**
NILT	**Santiago Nilte**	**2.17**	**336**	*e*P	**Pn**	**08 25 52.3**	**-0.8**
NILT				*e*S	**Sn**	**08 26 19.4**	**+0.3**
HUEH	**Huehuetenango**	**2.25**	**70**		**Pb**	**08 25 55.5**	**-3.4**
TGIG		**2.27**	**14**		**Pn**	**08 25 56.5**	**+2.0**
TGIG					**Sb**	**08 26 26.0**	**-0.7**
TGIG		**2.27**	**14**	*e*P	**Pn**	**08 25 56.5**	**+2.0**
TGIG				*e*S	**Sb**	**08 26 26.0**	**-0.7**
CCIG	**Comitan**	**2.28**	**41**		**Pb**	**08 25 56.9**	**-2.4**
CCIG	**Comitan**	**2.28**	**41**	*e*P	**Pb**	**08 25 57.4**	**-1.9**
CCIG				*i* S	**Sb**	**08 26 26.4**	**-0.7**
HUIG	**Huatulco**	**2.61**	**298**		**Pn**	**08 25 55.4**	**-3.7**
HUIG	**Huatulco**	**2.61**	**298**	*e*P	**Pn**	**08 25 55.4**	**-3.7**
HUIG				*i* S	Sn	**08 26 22.2**	**-7.8**
CMIG	**Matias Romero**	**2.76**	**336**	Pn	**Pn**	**08 26 00.8**	**-0.4**
	12nm,0.3s,baz=158,slow=11,SNR=342						
CMIG				LR	LR	08 26 32.5	
	comp=Z,403nm,20.6s,baz=194,slow=26						
CMIG				Sn	**Sn**	**08 26 33.6**	**+0.1**
	34nm,0.3s,baz=84,slow=17,SNR=4.6						
	174nm,0.7s						
CMIG	**Matias Romero**	**2.76**	**336**	*i* P	**Pn**	**08 26 00.7**	**-0.4**
CMIG				*e*S	**Sn**	**08 26 29.9**	**-3.6**
FUEG	**Fuego 3**	**2.77**	**92**	*e*P	**Pn**	**08 26 01.8**	**+0.3**
PCG	**Pacaya**	**3.00**	**93**	*e*P	**Pn**	**08 26 06.2**	**+1.5**
NBG	**Las Nubes**	**3.25**	**89**	*e*P	**Pn**	**08 26 09.9**	**+1.8**
PEIG	**Puerto Escondi**	**3.62**	**294**	*e*P	Pn	08 26 10.0	-3.0
PEIG				*i* S	Sn	08 26 46.2	-8.6
NEUV	**Arroyo Zacate**	**3.72**	**327**	*e*P	**Pn**	**08 26 13.3**	**-1.1**
NEUV				*e*S	**Sn**	**08 26 50.8**	**-6.6**
VHO	**Vista Hermosa**	**3.84**	**311**	*e*P	**Pn**	**08 26 15.9**	**-0.2**
VHO				*e*S	**Sn**	**08 26 56.1**	**-4.4**
MRL	**Marmol**	**3.92**	**82**	*e*P	**Pn**	**08 26 18.5**	**+1.2**
ESQI	**Esquipulas**	**4.22**	**90**		**Pn**	**08 26 21.4**	**0.0**
YOIG	**Yosondua**	**4.34**	**302**	*e*P	**Pn**	**08 26 22.4**	**-0.8**
YOIG				*e*S	**Sn**	**08 27 10.7**	**-2.4**
PETF	**Flores**	**4.37**	**57**		**Pn**	**08 26 25

DRK0 Durika 11.51 116 Pn **Pn** **08 28 02.6 +1.1**
ZAIG Zacatecas 11.71 315 Pn **Pn** **08 28 06.3 +2.0**
833A Chaparral WMA, 14.67 340 **Pn** **08 28 45.8 +1.3**
833A Chaparral WMA, 14.67 340 P **Pn** **08 28 45.5 +1.0**
baz=159
435B Jarrell 16.53 348 **Pn** **08 29 09.7 +1.0**
435B IAmb IAmb 08 29 20.0
comp=Z,37nm,1.2s
JCT Junction City 16.80 342 P **Pn** **08 29 13.6 +1.5**
JCT Junction City 16.80 342 P **Pn** **08 29 13.0 +0.8**
baz=160,SNR=10
344A Westbrook Farm 17.03 9 P **Pn** **08 29 15.7 +0.8**
344A IAmb IAmb 08 29 25.9
comp=Z,52nm,1.2s
NATX Nacogdoches 17.14 357 P **Pn** **08 29 17.1 +0.9**
TX32 Lajitas Array 17.34 330 P **Pn** **08 29 20.2 +1.2**
TXAR Lajitas Array 17.34 330 P **Pn** **08 29 20.0 +1.0**
comp=Z,0.1nm,0.3s,baz=157,slow=11,SNR=27
TXAR LR LR 08 35 26.4
comp=Z,50nm,20.9s,baz=150,slow=35
comp=Z,3.7nm,0.9s
TXAR Lajitas Array 17.34 330 P **Pn** **08 29 20.7 +1.7**
TX31 Lajitas Ar. Si 17.35 330 P **Pn** **08 29 21.0 +2.0**
TX31 IAmb IAmb 08 29 37.8
comp=Z,99nm,1.5s
BRAL Brewton 17.62 19 P **P** **08 29 23.7 +0.7**
baz=202
WHTX Lake Whitney, 17.68 349 P **Pn** **08 29 23.4 +0.3**
WHTX Lake Whitney, 17.68 349 P **Pn** **08 29 23.6 +0.6**
baz=169
143A Socs Landing, 18.18 6 P **P** **08 29 30.1 +0.9**
143A IAmb IAmb 08 29 38.2
comp=Z,31nm,0.9s
LPIG La Paz 18.30 304 LR LR 08 35 56.2
comp=Z,60nm,20.2s,baz=98,slow=35
Z38A Mt. Pleasant 18.65 357 P **Pn** **08 29 36.4 +1.5**
Z38A IAmb IAmb 08 29 43.0
comp=Z,28nm,1.0s
ABTX Abilene, Hawle 18.77 344 P **P** **08 29 37.5 +1.6**
ABTX Abilene, Hawle 18.77 344 P **P** **08 29 36.8 +0.9**
baz=163,SNR=6.3
UREC San Jos de Ur 19.06 109 eP **P** **08 29 39.6 +0.5**
TIGA Tifton 19.18 27 P **P** **08 29 40.5 +0.2**
baz=211
Z47A Carrollton 19.24 14 P **Pn** **08 29 42.7 +0.7**
LRAL Lakeview Retre 19.37 17 P **Pn** **08 29 43.8 +0.3**
LRAL Lakeview Retre 19.37 17 P **P** **08 29 42.9 +0.5**
baz=200
CBOC Ciudad Bolivar 19.43 115 eP **Pn** **08 29 44.8 +0.2**
PLMC San Jos del P 19.65 118 eP **P** **08 29 42.0 -3.6**
ZARC Zaragoza, Cauc 19.78 109 eP **P** **08 29 47.4 +0.4**
MIAR Mount Ida 19.89 0 P **P** **08 29 49.5 +1.5**
MIAR IAmb IAmb 08 29 54.0
comp=Z,23nm,0.8s
MIAR Mount Ida 19.89 0 P **P** **08 29 48.8 +0.8**
baz=181,SNR=8.4
CLNB Carlsbad 19.92 334 P **P** **08 29 50.1 +1.6**
HTMS Hat Mesa 19.99 335 P **P** **08 29 50.9 +1.6**
CLN7 Carlsbad 7 20.02 334 P **P** **08 29 51.0 +1.5**
GDL2 Guadalupe Moun 20.07 333 P **P** **08 29 51.6 +1.5**
MNTX Cornudas Mount 20.13 330 P **P** **08 29 51.5 +0.9**
MNTX Cornudas Mount 20.13 330 P **P** **08 29 51.8 +1.2**
baz=146
OXF Oxford 20.23 10 P **P** **08 29 52.3 +0.5**
baz=192
GUY2C Guyana, Caldas 20.29 115 eP Pn 08 29 55.9 +0.7
BBAC Balboa, Cauca 20.48 126 eP **P** **08 29 55.2 +0.4**
PTBC PUERTO BERRIO, 20.52 111 eP **P** **08 29 55.4 +0.4**
NORC Norcasia 20.57 114 eP **P** **08 29 57.2 +1.6**
WMOK Wichita Mounta 20.60 348 P **P** **08 29 56.1 +0.4**
baz=167
POPC Popayan, Colom 20.62 124 eP **P** **08 29 57.4 +1.1**
FNO Franklin 20.87 351 **P** **08 29 59.4 +0.7**
GOGA Godfrey 20.94 25 P **P** **08 30 00.1 +0.8**
baz=209
MSTX Muleshoe 20.99 339 P **P** **08 30 00.8 +0.7**
baz=156,SNR=17
OK025 Westminster Rd 21.18 352 **P** **08 30 02.8 +0.9**
SPBC San Pablo de B 21.24 113 eP **P** **08 30 03.6 +0.7**
TUL1 Leonard 21.34 355 P **P** **08 30 04.3 +0.6**
baz=175,SNR=8.0
ROSC El Rosal 21.39 115 P **P** **08 30 07.5 +2.7**
comp=Z,20nm,0.9s,baz=103,slow=5.6,SNR=7.4
ROSC El Rosal 21.39 115 eP **P** **08 30 07.5 +2.7**
PRAC Prado 21.46 118 eP **P** **08 30 08.2 +3.0**
AMTX Amarillo 21.47 342 P **P** **08 30 06.0 +0.8**
baz=159
CHIC Chingaza 22.01 115 eP **P** **08 30 13.3 +1.9**
FLOC Florencia 22.01 124 eP **P** **08 30 11.5 +0.4**
121A Cookes Peak, D 22.01 327 P **P** **08 30 12.9 +1.8**
baz=142,SNR=43
WVT Waverly 22.11 13 P **P** **08 30 13.1 +1.1**
baz=195
VILC Villavicencio, 22.29 116 eP **P** **08 30 18.0 +3.9**
TKL Tuckaleechee C 22.82 21 P **P** **08 30 17.2 -2.3**
comp=Z,7.0nm,1.1s,baz=178,slow=12,SNR=4.9
TKL LR LR 08 41 17.7
comp=Z,301nm,18.4s,baz=197,slow=42
comp=Z,7.0nm,1.1s
TAMC Tame, Arauca 22.99 108 eP **P** **08 30 22.1 +0.5**
SOCV Socops 23.24 103 eP **P** **08 30 25.7 +1.7**
SDV Santo Domingo 23.27 101 P **P** **08 30 25.4 +0.8**
comp=Z,8.9nm,0.4s,baz=271,slow=6.5,SNR=5.1
comp=Z,8.9nm,0.4s
KMSC Kings Mountain 23.32 26 P **P** **08 30 24.7 +0.1**
baz=212
ANMO Albuquerque 23.32 333 P **P** **08 30 25.3 +0.5**
comp=Z,4.5nm,0.9s,baz=157,slow=12,SNR=8.4
ANMO LR LR 08 40 13.6
comp=Z,114nm,19.7s,baz=155,slow=38
comp=Z,4.5nm,0.9s
ANMO Albuquerque 23.32 333 P **P** **08 30 25.8 +0.9**
baz=148
CCM Cathedral Cave 23.50 5 P **P** **08 30 26.1 -0.3**
baz=186
TUC Tucson 23.55 322 P **P** **08 30 29.2 +2.1**
TUC IAmb IAmb 08 30 30.6
comp=Z,21nm,1.0s
TUC Tucson 23.55 322 P **P** **08 30 28.7 +1.7**
baz=136
PTGC Puerto Gaitan, 23.61 114 eP **P** **08 30 24.6 -3.1**
R40A Maddies Statio 23.67 3 P **P** **08 30 27.4 -0.5**
R40A IAmb IAmb 08 30 30.3
comp=Z,12nm,0.7s
TZTN Tazewell 23.69 21 P **P** **08 30 28.3 0.0**
baz=205
R32A Long Quarter, 24.17 350 P **P** **08 30 33.1 +0.4**
T25A Trinidad 24.42 339 P **P** **08 30 37.4 +2.1**
T25A Trinidad 24.42 339 P **P** **08 30 35.5 +0.2**
baz=155,SNR=12
KSU1 Kansas State U 24.57 355 P **P** **08 30 35.8 -0.6**
baz=174
214A Organ Pipe Nat 24.58 318 P **P** **08 30 36.0 -0.6**
baz=131
X18A Snowflake 24.70 326 P **P** **08 30 39.5 +1.6**
X18A IAmb IAmb 08 30 42.4
comp=Z,15nm,0.9s
CBKS Cedar Bluff 24.73 349 P **P** **08 30 37.4 -0.5**
baz=166
P40A Paris 24.91 3 P **P** **08 30 38.2 -1.2**
P40A IAmb IAmb 08 30 39.7
comp=Z,16nm,0.7s
P38A Dawn 24.96 0 P **P** **08 30 39.1 -0.8**
P38A IAmb IAmb 08 30 40.5
comp=Z,16nm,0.8s
W18A Petrified Fore 25.04 328 P **P** **08 30 40.4 -0.5**
baz=142
SDCO Great Sand Dun 25.35 338 P **P** **08 30 45.1 +1.4**
SDCO IAmb IAmb 08 30 47.0
comp=Z,17nm,1.2s
SDCO Great Sand Dun 25.35 338 P **P** **08 30 44.5 +0.8**
baz=153,SNR=6.7
BLA Blacksburg 25.47 25 P **P** **08 30 44.4 -0.1**
baz=211
KSCO Kaye Shedlock' 25.59 344 P **P** **08 30 46.3 +0.5**
baz=160
P46A Rosedale 25.60 12 P **P** **08 30 45.5 -0.1**
S22A 4UR Ranch, Cre 25.86 336 P **P** **08 30 50.3 +1.9**
S22A 4UR Ranch, Cre 25.86 336 P **P** **08 30 49.9 +1.4**
baz=150,SNR=6.5
MVCO Mesa Verde 26.12 332 P **P** **08 30 51.7 +1.0**
MVCO IAmb IAmb 08 30 53.8
comp=Z,11nm,0.9s
MVCO Mesa Verde 26.12 332 P **P** **08 30 50.5 -0.2**
baz=147,SNR=12
N38A Joes South For 26.13 1 P **P** **08 30 50.0 -0.5**

HDIL Hopedale 26.18 8 P **P** **08 30 49.9 -1.0**
baz=190
WUAZ Wupatki 26.21 326 P **P** **08 30 53.2 +1.7**
WUAZ IAmb IAmb 08 30 58.1
comp=Z,17nm,1.1s
WUAZ Wupatki 26.21 326 P **P** **08 30 52.2 +0.8**
baz=139,SNR=13
Q24A Divide 26.32 340 P **P** **08 30 53.7 +1.1**
Q24A IAmb IAmb 08 30 55.5
comp=Z,9.1nm,0.9s
Q24A Divide 26.32 340 P **P** **08 30 53.1 +0.5**
baz=155,SNR=5.9
ATAH Atahualpa 26.37 144 P **P** **08 30 54.8 +1.5**
comp=Z,5.8nm,0.7s,baz=338,slow=5.8,SNR=4.3
ATAH LR LR 08 38 59.3
comp=Z,102nm,19.0s,baz=324,slow=31
comp=Z,5.8nm,0.7s
GLA Glamis 26.59 317 P **P** **08 30 56.5 +1.7**
GLA IAmb IAmb 08 30 57.6
comp=Z,9.5nm,0.8s
GLA Glamis 26.59 317 P **P** **08 30 56.3 +1.5**
baz=130
SJG San Juan 26.66 79 LR LR 08 40 57.1
comp=Z,78nm,21.7s,baz=191,slow=35
P52A Corning 26.96 20 P **P** **08 30 58.4 +0.4**
baz=205
PDMCI Parker Dam,Lak 26.96 320 P **P** **08 30 59.3 +1.2**
baz=133,SNR=6.0
ISCO Idaho Springs 27.22 340 P **P** **08 31 01.9 +1.2**
ISCO IAmb IAmb 08 31 03.6
comp=Z,14nm,0.8s
ISCO Idaho Springs 27.22 340 P **P** **08 31 01.4 +0.7**
baz=155,SNR=7.3
SCIA State Center 27.25 1 P **P** **08 31 00.9 +0.4**
baz=181,SNR=5.6
PV23 Carpenter Ridg 27.37 333 P **P** **08 31 03.5 +1.5**
PV23 IAmb IAmb 08 31 05.2
comp=Z,16nm,0.9s
BC3 Big Chuckawall 27.38 318 P **P** **08 31 03.4 +1.4**
baz=130,SNR=6.5
IRM Iron Mountain 27.50 319 P **P** **08 31 04.2 +1.3**
baz=131,SNR=5.3
BELC Belle Mtn. Jos 27.95 318 P **P** **08 31 07.5 +0.4**
baz=129
L44A Lake County Fo 27.97 9 P **P** **08 31 07.5 +0.5**
baz=192
TPFO Pinon Flats 28.01 317 P **P** **08 31 07.6 0.0**
baz=128
PFO Pinyon Flats O 28.01 317 P **P** **08 31 09.5 +1.8**
comp=Z,1.3nm,0.6s,baz=124,slow=8.2,SNR=4.4
PFO LR LR 08 41 59.1
comp=Z,146nm,19.0s,baz=136,slow=36
comp=Z,1.3nm,0.6s
PFO Pinyon Flats O 28.01 317 P **P** **08 31 07.5 -0.2**
baz=128
GMRC Granite Mounta 28.23 319 P **P** **08 31 10.1 +0.6**
baz=131,SNR=5.3
O20A White River Ci 28.48 336 P **P** **08 31 11.7 -0.1**
baz=150
Q16A Castle Valley 28.73 331 P **P** **08 31 15.5 +1.4**
CCUT Cedar City 28.79 326 P **P** **08 31 17.0 +2.4**
P17A Butcher Ranch, 28.98 332 P **P** **08 31 16.6 +0.4**
TMUT Trail Mountain 29.05 331 P **P** **08 31 18.2 +1.2**
ECSD EROS Data Cent 29.18 356 P **P** **08 31 17.4 -0.4**
ECSD IAmb IAmb 08 31 18.1
comp=Z,13nm,0.8s
ECSD EROS Data Cent 29.18 356 P **P** **08 31 17.4 -0.4**
baz=175,SNR=13
BFSC Mount Baldy Ra 29.19 316 P **P** **08 31 17.6 -0.5**
baz=127
TPNV Topopah Spring 30.00 322 P **P** **08 31 27.3 +2.0**
TPNV Topopah Spring 30.00 322 P **P** **08 31 25.7 +0.3**
baz=133
FURC Furnace Creek, 30.06 321 P **P** **08 31 26.7 +1.1**
baz=131
K22A Casper 30.09 341 P **P** **08 31 27.0 +1.0**
K22A IAmb IAmb 08 31 28.8
comp=Z,14nm,1.1s
K22A Casper 30.09 341 P **P** **08 31 27.3 +1.2**
baz=155,SNR=5.7
MPMC Manual Prospec 30.19 319 P **P** **08 31 27.5 +0.5**
baz=130,SNR=7.0
SPR3 Spring Creek 3 30.37 327 P **P** **08 31 29.9 +1.1**
SPR3 IAmb IAmb 08 31 31.6
comp=Z,6.5nm,1.0s
DUG Dugway, Tooele 30.52 330 P **P** **08 31 30.5 +0.7**
baz=142
SPMN Marine on St. 30.57 1 P **P** **08 31 29.7 -0.3**
baz=182
R11A Troy Canyon, C 30.58 325 P **P** **08 31 31.5 +1.0**
baz=136,SNR=7.3
GRAC Grapevine Rang 30.71 321 P **P** **08 31 33.7 +2.3**
GRAC IAmb IAmb 08 31 35.2
comp=Z,11nm,1.1s
GRAC Grapevine Rang 30.71 321 P **P** **08 31 31.9 +0.5**
baz=131
RSSD Black Hills 30.75 345 P **P** **08 31 32.8 +0.9**
RSSD Black Hills 30.75 345 P **P** **08 31 32.7 +0.8**
baz=161
CWC Cottonwood Cre 30.80 319 P **P** **08 31 33.0 +0.6**
baz=129
VES Vestal, Richgr 31.08 318 P **P** **08 31 35.7 +1.0**
baz=127
BGU Big Grassy Mou 31.19 331 P **P** **08 31 36.7 +0.9**
NNA Nana 31.23 147 LR LR 08 41 36.4
comp=Z,66nm,20.0s,baz=324,slow=31
BW06 Boulder Array 31.24 337 P **P** **08 31 37.3 +1.0**
BW06 Boulder Array 31.24 337 P **P** **08 31 36.8 +0.6**
baz=150,SNR=5.4
PD31 Pinedale Array 31.24 337 P **P** **08 31 36.9 +0.6**
PDAR Pinedale Array 31.24 337 P **P** **08 31 38.0 +1.7**
comp=Z,2.5nm,0.9s,baz=137,slow=8.2,SNR=16
PDAR LR LR 08 45 29.5
comp=Z,106nm,18.9s,baz=152,slow=39
comp=Z,2.5nm,0.9s
HVU Hansel Valley 31.75 332 P **P** **08 31 42.0 +1.4**
HVU IAmb IAmb 08 31 44.0
comp=Z,16nm,1.2s
ELK Elko 32.13 328 LR LR 08 46 53.1
comp=Z,262nm,19.3s,baz=145,slow=40
NVAR Mina Array Bea 32.20 322 P **P** **08 31 47.2 +2.4**
comp=Z,7.7nm,0.9s,baz=155,slow=6.9,SNR=4.2
NVAR PcP **PcP** **08 34 34.5 +1.4**
comp=Z,1.8nm,1.0s,baz=120,slow=1.3,SNR=7.3
NVAR LR LR 08 47 04.3
comp=Z,258nm,18.7s,baz=136,slow=41
comp=Z,7.7nm,0.9s
SNOW Snow King Moun 32.29 336 P **P** **08 31 46.8 +1.2**
MOOW Moose Ponds 32.53 337 P **P** **08 31 48.6 +1.0**
MOOW IAmb IAmb 08 31 54.0
comp=Z,5.5nm,1.0s
FXWY Fox Creek 32.55 336 P **P** **08 31 49.0 +1.3**
SADO Sadowa 32.55 19 LR LR 08 46 51.2
comp=Z,286nm,18.4s,baz=192,slow=40
H17A Grant Village 33.02 338 P **P** **08 31 52.0 +0.1**
baz=150
YFT Old Faithful 33.16 337 P **P** **08 31 54.8 +1.7**
YFT IAmb IAmb 08 32 08.0
comp=Z,7.4nm,1.0s
RLMT Red Lodge 33.19 340 P **P** **08 31 54.0 +0.6**
RLMT IAmb IAmb 08 31 55.4
comp=Z,9.7nm,0.9s
RLMT Red Lodge 33.19 340 P **P** **08 31 53.1 -0.2**
baz=152,SNR=11
YMR Madison River 33.40 337 P **P** **08 31 57.3 +2.2**
YHL Hebgen Lake 33.63 337 P **P** **08 31 59.1 +1.8**
YHL IAmb IAmb 08 32 01.8
comp=Z,16nm,1.3s
AGMN Agassiz Nation 33.68 357 P **P** **08 31 55.5 -1.8**
baz=177,SNR=5.2
LAO LASA Array 33.70 344 P **P** **08 31 57.7 +0.1**
baz=158
QLMT Earthquake Lak 33.71 337 P **P** **08 31 59.5 +1.6**
HLID Hailey 33.90 333 P **P** **08 31 59.1 -0.4**
baz=143,SNR=13
GCMT Greycliff 33.91 340 P **P** **08 32 00.5 +1.0**
BOZ Bozeman (W) 34.43 338 P **P** **08 32 04.1 0.0**
baz=149,SNR=14
DGMT Dagmar 34.90 348 P **P** **08 32 08.1 +0.2**
baz=162
EGMT Eagleton 35.91 342 P **P** **08 32 16.6 -0.1**
baz=153,SNR=6.2
MSO Missoula 36.34 336 P **P** **08 32 20.2 -0.2**
baz=146,SNR=11
YBH Yreka Blue Hor 36.91 323 LR LR 08 48 36.5
comp=Z,214nm,19.7s,baz=148,slow=38
L04D Klamath Falls 36.98 324 P **P** **08 32 26.1 +0.1**

baz=130
J04D Umpqua Nationa 37.53 325 P **P** **08 32 30.1 -0.7**
baz=132
NEW Newport 38.77 335 LR LR 08 51 13.8
comp=Z,189nm,18.1s,baz=150,slow=40
NEW Newport 38.77 335 P **P** **08 32 41.7 +0.8**
baz=143,SNR=5.6
MDP Montagnes des 41.47 99 LR LR 08 50 59.5
comp=Z,101nm,21.8s,baz=295,slow=37
RPN Rapa Nui 44.13 200 LR LR 08 46 28.1
comp=Z,72nm,20.9s,baz=294,slow=29
LVC Limon Verde 44.22 146 LR LR 08 51 26.9
comp=Z,46nm,19.2s,baz=264,slow=35
SIV San Ignacio 44.29 132 LR LR 08 52 13.3
comp=Z,96nm,18.2s,baz=288,slow=36
SCHQ Schefferville 45.29 22 LR LR 08 53 57.0
comp=Z,267nm,19.2s,baz=214,slow=38
BBB Bella Bella 46.47 331 LR LR 08 53 38.1
comp=Z,84nm,18.9s,baz=148,slow=36
YKA Yellowknife Ar 50.11 348 P **P** **08 34 11.8 +0.6**
comp=Z,12nm,0.7s,baz=154,slow=7.1,SNR=37
comp=Z,12nm,0.7s
T35M Bob Quinn 50.58 335 P **P** **08 34 16.1 +1.3**
baz=132
DLBC Dease Lake 51.47 337 P **P** **08 34 23.1 +1.5**
baz=133
FRB Frobisher Bay 52.15 14 LR LR 08 57 50.1
comp=Z,89nm,18.2s,baz=207,slow=38
R33M Jennings River 52.48 337 P **P** **08 34 29.8 +0.6**
baz=133
P32M Atlin 53.67 336 P **P** **08 34 38.0 +0.2**
baz=130
P33M Teslin, Yukon 53.73 337 P **P** **08 34 39.0 +0.7**
baz=131
BDFB Brasilia 54.22 122 P **P** **08 34 41.9 -0.6**
comp=Z,7.2nm,0.7s,baz=287,slow=7.5,SNR=10
comp=Z,7.2nm,0.7s
N32M Quiet Lake 54.44 338 P **P** **08 34 44.2 +0.8**
baz=131
O30N Mendenhall 55.34 336 P **P** **08 34 49.9 -0.1**
baz=128
M31M Drury Creek, Y 55.60 338 P **P** **08 34 52.0 +0.2**
baz=136
N31M Braeburn, Yuko 55.66 337 P **P** **08 34 52.4 +0.2**
baz=129
HYT Haines Junctio 55.92 336 P **P** **08 34 54.2 -0.1**
baz=126
N30M Aishikik Lake 56.14 337 P **P** **08 34 56.4 +0.7**
baz=127
M29M Somme Creek 57.25 337 P **P** **08 35 03.8 +0.2**
baz=126
YUK3 Moose Creek 57.64 336 P **P** **08 35 06.9 +0.4**
baz=124
BVCY Beaver Creek 58.15 336 P **P** **08 35 09.4 -0.5**
baz=124
MCARA McCarthy VSAT 58.47 335 P **P** **08 35 12.8 +0.7**
baz=121
M27K Edge Creek, AK 58.52 336 P **P** **08 35 12.5 0.0**
baz=123
DAWY Dawson 58.54 338 P **P** **08 35 12.5 -0.1**
baz=126
L27K Beaver Creek, 58.88 337 P **P** **08 35 14.8 -0.1**
baz=123,SNR=7.9
BMRM Bremner River 58.93 334 P **P** **08 35 15.5 +0.2**
baz=119
I29M Ogilvie Camp, 58.94 340 P **P** **08 35 16.0 +0.7**
baz=128
M26K Nabesna, AK 58.98 336 P **P** **08 35 16.0 +0.3**
baz=121,SNR=5.2
EYAK Cordova Ski Ar 59.23 333 P **P** **08 35 17.8 +0.5**
baz=118
N25K Chitina, Valde 59.24 334 P **P** **08 35 17.4 -0.1**
baz=119
INK Inuvik 59.44 344 P **P** **08 35 18.9 +0.3**
comp=Z,7.3nm,0.7s,baz=119,slow=6.2,SNR=10.0
INK LR LR 09 05 06.8
comp=Z,120nm,18.1s,baz=139,slow=40
comp=Z,7.3nm,0.7s
INK Inuvik 59.44 344 P **P** **08 35 18.4 -0.2**
baz=134,SNR=5.3
L26K Log Cabin Wild 59.45 336 P **P** **08 35 19.1 +0.2**
baz=121
SFJD Kangerlussuaq 59.49 18 LR LR 09 03 00.9
comp=Z,167nm,18.1s,baz=237,slow=38
K27K Chicken 59.50 338 P **P** **08 35 19.9 +0.7**
K27K IAmb IAmb 08 35 22.5
comp=Z,4.7nm,0.8s
K27K Chicken 59.50 338 P **P** **08 35 19.4 +0.3**
baz=123
EGAK Eagle 59.58 339 P **P** **08 35 19.7 0.0**
EGAK IAmb IAmb 08 35 21.0
comp=Z,4.8nm,0.8s
EGAK Eagle 59.58 339 P **P** **08 35 20.8 +1.1**
baz=124
KLU Klutina 59.74 334 P **P** **08 35 21.2 +0.2**
baz=118
DOT Dot Lake 60.05 337 P **P** **08 35 24.5 +1.5**
SCRK Sand Creek 60.18 337 P **P** **08 35 24.7 +0.7**
baz=121,SNR=7.0
I27K Kandik River 60.20 339 P **P** **08 35 24.1 +0.1**
baz=124
PAX Paxson 60.26 336 P **P** **08 35 24.5 0.0**
baz=119,SNR=6.9
J26L Joseph Creek 60.30 338 P **P** **08 35 25.7 +1.0**
baz=122,SNR=11
RIDG Independent Ri 60.39 337 P **P** **08 35 26.1 +0.8**
RIDG Independent Ri 60.39 337 P **P** **08 35 25.5 +0.2**
baz=120,SNR=13
SCM Sheep Creek Mo 60.50 334 P **P** **08 35 25.9 -0.2**
baz=117
H27K Steamboat Moun 60.53 340 P **P** **08 35 26.3 +0.1**
baz=125
I26K Coal Creek Min 60.58 339 P **P** **08 35 27.1 +0.6**
I26K IAmb IAmb 08 35 30.3
comp=Z,6.7nm,1.2s
I26K Coal Creek Min 60.58 339 P **P** **08 35 26.2 -0.3**
baz=123
M23K Glacier View 60.65 334 P **P** **08 35 27.0 -0.1**
baz=116
SEW Seward 60.71 332 P **P** **08 35 27.7 +0.3**
baz=114
RCBR Riachuelo 60.78 105 LR LR 09 05 47.7
comp=Z,120nm,18.5s,baz=124,slow=40
K24K Donnelly Dome 60.78 336 P **P** **08 35 27.8 -0.2**
baz=119,SNR=9.1
KNK Knik Glacier 60.80 333 P **P** **08 35 28.1 -0.1**
baz=115
G27K Doyon Strip 60.90 340 P **P** **08 35 28.9 +0.1**
baz=125,SNR=7.0
SML Sawmill 60.91 334 P **P** **08 35 29.8 +0.9**
SML Sawmill 60.91 334 P **P** **08 35 29.2 +0.2**
baz=116
WAT6 Susitna Watana 61.00 335 P **P** **08 35 30.0 +0.3**
baz=117,SNR=11
J25K Salcha River, 61.03 337 P **P** **08 35 30.3 +0.6**
baz=120,SNR=6.7
DHY Denali Highway 61.08 335 P **P** **08 35 30.3 +0.1**
baz=117
PMR Palmer 61.17 333 P **P** **08 35 31.3 +0.7**
PMR IAmb IAmb 08 35 31.9
comp=Z,4.8nm,0.9s
PMR Palmer 61.17 333 P **P** **08 35 30.4 -0.1**
baz=115,SNR=5.2
RC01 Rabbit Creek A 61.23 333 P **P** **08 35 31.1 +0.1**
baz=114
KDAK Kodiak Island 61.37 329 P **P** **08 35 31.9 -0.1**
baz=110
WAT1 Susitna Watana 61.45 335 P **P** **08 35 32.7 +0.1**
baz=116
HDA Harding Lake 61.53 337 P **P** **08 35 33.6 +0.6**
baz=118,SNR=6.2
PRP Porcupine Dome 61.54 338 P **P** **08 35 33.9 +0.7**
PRP Porcupine Dome 61.54 338 P **P** **08 35 33.4 +0.2**
baz=120,SNR=17
OHAK Old Harbor 61.55 328 P **P** **08 35 33.0 -0.2**
baz=109
ILAR Eielson Array 61.67 337 P **P** **08 35 34.5 +0.5**
comp=Z,6.4nm,0.9s,baz=137,slow=4.5,SNR=49
ILAR LR LR 09 02 51.0
comp=Z,50nm,19.8s,baz=108,slow=36
comp=Z,6.4nm,0.9s
E27K Coleen River 61.68 342 P **P** **08 35 34.2 +0.2**
baz=126,SNR=5.5
G26K Porcupine Rive 61.68 340 P **P** **08 35 34.1 +0.2**
baz=123
SII Sitkinak Islan 61.82 327 P **P** **08 35 35.5 +0.4**
baz=107
RND Reindeer 61.82 335 P **P** **08 35 36.0 +0.9**

SUA	**Susitna One**	**61.83**	**333**	P	**P**	**08 35 35.9 +0.7**
SUA				IAmb	IAmb	08 35 36.8
	comp=Z,5.6nm,0.8s					
SUA	**Susitna One**	**61.83**	**333**	P	**P**	**08 35 35.4 +0.2**
	baz=113					
MCK	**McKinley**	**62.00**	**336**	P	**P**	**08 35 35.4 -0.8**
	baz=116,SNR=5.3					
H25K	**Birch Creek**	**62.02**	**339**	P	**P**	**08 35 36.1 -0.1**
	baz=120					
POKR	**Poker Plat Res**	**62.04**	**337**	P	**P**	**08 35 36.5 +0.1**
	baz=118					
COLA	**College**	**62.09**	**337**	P	**P**	**08 35 36.9 +0.2**
	baz=118					
TCOL	**CIGO, UAF Yank**	**62.09**	**337**	P	**P**	**08 35 37.0 +0.3**
	baz=118					
O20K	**Slope Mountain**	**62.17**	**331**	P	**P**	**08 35 37.1 -0.4**
	baz=111					
BMAR	**Burnt Mountain**	**62.20**	**340**	P	**P**	**08 35 38.1 +0.6**
F26K	**Sheenjek River**	**62.20**	**341**	P	**P**	**08 35 37.7 +0.2**
	baz=123					
G25K	**Bearman Lake**	**62.37**	**339**	P	**P**	**08 35 38.8 +0.3**
	baz=120,SNR=7.5					
SKT	**Skwentna**	**62.37**	**333**	P	**P**	**08 35 39.5 +0.7**
SKT	**Skwentna**	**62.37**	**333**	P	**P**	**08 35 38.9 +0.2**
	baz=113					
TRF	**Thorofare Moun**	**62.43**	**335**	P	**P**	**08 35 39.2 -0.1**
	baz=115,SNR=7.1					
NEA2	**Nenana**	**62.43**	**336**	P	**P**	**08 35 39.1 +0.1**
	baz=116					
H24K	**Noodor Dome**	**62.55**	**338**	P	**P**	**08 35 39.9 0.0**
	baz=118,SNR=11					
F25K	**Christian Rive**	**62.63**	**340**	P	**P**	**08 35 40.4 -0.1**
	baz=121,SNR=6.8					
I23K	**Minto, Yukon-K**	**62.78**	**337**	P	**P**	**08 35 41.1 -0.2**
	baz=116,SNR=14					
G24K	**Hadweenzic Riv**	**62.81**	**339**	P	**P**	**08 35 41.8 +0.2**
	baz=119,SNR=11					
E25K	**Arctic Village**	**62.88**	**341**	P	**P**	**08 35 42.0 -0.1**
	baz=122					
BPAW	**Bear Paw Mtn.**	**62.98**	**335**	P	**P**	**08 35 42.4 -0.3**
	baz=114,SNR=10					
PPLA	**Purkeypile**	**63.00**	**334**	P	**P**	**08 35 42.6 -0.5**
	baz=112					
M20K	**Styx River**	**63.04**	**333**	P	**P**	**08 35 43.3 0.0**
	baz=111					
C27K	**Jago River**	**63.13**	**342**	P	**P**	**08 35 43.2 -0.5**
	baz=124,SNR=5.4					
H23K	**Yukon River**	**63.15**	**338**	P	**P**	**08 35 43.3 -0.5**
	baz=116					
CAST	**Castle Rocks**	**63.16**	**335**	P	**P**	**08 35 43.3 -0.6**
	baz=113,SNR=9.5					
MLY	**Manley**	**63.26**	**336**	P	**P**	**08 35 44.1 -0.6**
	baz=115,SNR=19					
R17K	**Ugashik Creek**	**63.28**	**328**	P	**P**	**08 35 44.4 -0.4**
	baz=106					
N19K	**Bonanza Creek**	**63.29**	**331**	P	**P**	**08 35 44.3 -0.6**
	baz=109,SNR=5.2					
O18K	**Koktuh Hills**	**63.33**	**330**	P	**P**	**08 35 44.4 -0.7**
	baz=108					
F24K	**Squaw Lake**	**63.35**	**340**	P	**P**	**08 35 44.7 -0.4**
	baz=119					
CHUM	**Lake Minchumin**	**63.43**	**335**	P	**P**	**08 35 45.5 -0.2**
	baz=113					
L20K	**Farewell, AK**	**63.58**	**333**	P	**P**	**08 35 45.9 -0.8**
	baz=111,SNR=8.3					
M19K	**Big River Lodg**	**63.61**	**333**	P	**P**	**08 35 46.6 -0.4**
	baz=110					
PPT	**Papeete**	**63.69**	**242**	LR	LR	08 55 23.1
	comp=Z,46nm,21.7s,baz=54,slow=28					
Q16K	**King Salmon**	**63.70**	**329**	P	**P**	**08 35 46.8 -0.7**
	baz=106					
G23K	**Bananza Creek**	**63.72**	**338**	P	**P**	**08 35 47.4 -0.2**
	baz=116,SNR=6.8					
D25K	**Kavik River**	**63.76**	**342**	P	**P**	**08 35 47.5 -0.3**
	baz=121,SNR=8.6					
I21K	**Tanana**	**63.80**	**336**	P	**P**	**08 35 48.1 -0.1**
	baz=114,SNR=6.2					
E24K	**Your Creek**	**63.81**	**340**	P	**P**	**08 35 47.9 -0.3**
	baz=118					
H22K	**Ishtalitna Cre**	**63.86**	**337**	P	**P**	**08 35 48.1 -0.4**
	baz=115,SNR=7.3					
N18K	**Kilae Creek**	**63.90**	**331**	P	**P**	**08 35 48.0 -0.9**
	baz=108					
L19K	**White Mountain**	**63.90**	**333**	P	**P**	**08 35 48.3 -0.6**
	baz=110					
K20K	**Telida**	**63.97**	**334**	P	**P**	**08 35 48.3 -0.9**
	baz=111,SNR=7.8					
O17K	**Koliganek Bris**	**64.22**	**330**	P	**P**	**08 35 50.7 -0.3**
	baz=106,SNR=5.6					
J20K	**Nowinta River**	**64.29**	**335**	P	**P**	**08 35 50.3 -1.0**
	baz=111,SNR=7.0					
H21K	**Melozitna River**	**64.31**	**337**	P	**P**	**08 35 51.3 -0.2**
	baz=113					
D24K	**Happy Valley**	**64.43**	**341**	P	**P**	**08 35 51.8 -0.4**
	baz=119					
TOLK	**Toolik Lake Re**	**64.43**	**340**	P	**P**	**08 35 52.0 -0.3**
	baz=118					
TTA	**Tatalina**	**64.65**	**333**	P	**P**	**08 35 53.3 -0.6**
	baz=109					
O16K	**Kokwok River B**	**64.66**	**330**	P	**P**	**08 35 53.5 -0.3**
	baz=105					
C24K	**Franklin Bluff**	**64.67**	**342**	P	**P**	**08 35 53.6 -0.1**
	baz=119					
F22K	**John River**	**64.82**	**339**	P	**P**	**08 35 54.8 0.0**
	baz=114					
G21K	**Allakaket**	**64.90**	**338**	P	**P**	**08 35 55.4 0.0**
	baz=113					
D23K	**Nanushuk River**	**64.94**	**340**	P	**P**	**08 35 55.7 +0.2**
	baz=117					
F21K	**Alatna River**	**65.17**	**338**	P	**P**	**08 35 57.2 +0.1**
	baz=113,SNR=20					
N16K	**Nishlik Lake**	**65.21**	**330**	P	**P**	**08 35 57.0 -0.5**
	baz=105					
C23K	**Itkillik River**	**65.31**	**341**	P	**P**	**08 35 57.3 -0.6**
	baz=117					
UNV	**Unalaska Valle**	**68.22**	**322**	P	**P**	**08 36 15.5 -1.2**
	baz=95					
BORG	**Borgarnes**	**69.42**	**26**	LR	LR	09 07 10.7
	comp=Z,98nm,18.0s,baz=268,slow=36					
BBTS	**Babate**	**74.28**	**79**	LR	LR	09 07 30.9
	comp=Z,51nm,19.0s,baz=316,slow=34					
JMIC	**Jan Mayen**	**74.77**	**20**	LR	LR	09 09 43.4
	comp=Z,124nm,21.9s,baz=241,slow=36					
SPITS	**Spitsbergen Ar**	**79.86**	**11**	LR	LR	09 14 03.0
	comp=Z,148nm,21.4s,baz=251,slow=37					
ESDC	**Sonseca Array**	**80.66**	**51**	P	**P**	**08 37 29.2 -0.2**
	comp=Z,2.3nm,0.9s,baz=291,slow=5.1,SNR=9.7					
	comp=Z,2.3nm,0.8s					
NB2	**NORSAR Subarra**	**84.43**	**28**	P	**P**	**08 37 49.6 +0.9**
	comp=Z,3.9nm,0.8s,baz=290,slow=5.1					
NOA	**NORSAR Array B**	**84.43**	**28**	P	**P**	**08 37 50.1 +1.5**
	comp=Z,7.9nm,0.9s,baz=291,slow=4.9,SNR=20					
NOA				LR	LR	09 14 11.9
	comp=Z,56nm,20.7s,baz=290,slow=35					
	comp=Z,7.9nm,0.9s					
NC405	**NORSAR Array S**	**84.64**	**28**	P	**P**	**08 37 51.2 +1.6**
HFS	**Hagfors**	**85.90**	**29**	LR	LR	09 14 54.8
	comp=Z,75nm,20.4s,baz=241,slow=35					
ARCES	**ARCESS Array B**	**86.11**	**18**	P	**P**	**08 37 57.2 +0.3**
	comp=Z,2.9nm,0.7s,baz=321,slow=3.3,SNR=8.8					
ARCES				LR	LR	09 16 49.5
	comp=Z,78nm,20.1s,baz=286,slow=36					
	comp=Z,2.9nm,0.7s					
ECH	**Echery**	**86.34**	**41**	P	**P**	**08 37 58.7 +0.2**
DBIC	**Dimbokro**	**87.24**	**84**	P	**P**	**08 38 03.4 0.0**
	comp=Z,4.2nm,0.8s,baz=329,slow=1.9,SNR=3.3					
	comp=Z,4.2nm,0.8s					
CLL	**Collm**	**88.86**	**37**	*i* P	**P**	**08 38 11.5 +1.1**
	comp=Z,5.0nm,0.9s					
CLL				*i* sP	**sP**	**08 38 24.0 +1.7**
CLL				LmV		09 17 00.0
	comp=Z,100nm,21.6s					
GERES	**GERESS Array B**	**90.21**	**39**	P	**P**	**08 38 16.9 -0.1**
	comp=Z,1.2nm,0.8s,baz=330,slow=4.6,SNR=8.5					
	comp=Z,1.2nm,0.8s					
TORD	**Torodi Ar. Bea**	**91.85**	**76**	P	**P**	**08 38 23.7 -1.3**
	comp=Z,0.5nm,0.7s,baz=279,slow=5.0,SNR=3.1					
	comp=Z,0.5nm,0.7s					
NRIK	**Noril'sk**	**96.31**	**360**	LR	LR	09 24 17.5
	comp=Z,35nm,21.4s,baz=20,slow=37					
YAK	**Yakutsk**	**96.39**	**341**	LR	LR	09 28 11.3
	comp=Z,29nm,18.4s,baz=90,slow=39					
OBN	**Obninsk**	**98.92**	**26**	LR	LR	09 23 44.6
	comp=Z,17nm,20.1s,baz=208,slow=36					
MKAR	**Makanchi Array**	**118.82**	**3**	PKP	**PKPdf**	**08 44 02.8 -1.9**
	comp=Z,0.2nm,0.5s,baz=20,slow=4.6,SNR=2.9					
BOSA	**Boshof**	**122.09**	**115**	PKP	**PKPdf**	**08 44 11.4 -0.2**
	comp=Z,1.2nm,0.9s,baz=259,slow=5.2,SNR=2.2					
WRA	**Warramunga Arr**	**133.93**	**256**	PKP	**PKPdf**	**08 44 33.8 -0.4**
	comp=Z,0.4nm,0.9s,baz=300,slow=1.2,SNR=7.0					
PZH	**PanZhiHua**	**136.50**	**340**	PKP	**PKPdf**	**08 44 36.8 -2.3**
CMAR	**Chiang Mai Arr**	**144.90**	**339**	PKP	**PKPab**	**08 44 53.8 +0.5**
	comp=Z,2.8nm,0.3s,baz=343,slow=4.2,SNR=25					

NEIC ***11*** *09:11:50.7±1.8, 6°.15S±0°.07×128°.47E±0°.08, h303km±8km, mb4.6/31, Error ellipse: s-maj=11.7km s-min=10.7km az=68.0*

DJA ***11*** *09:11:50.3±0.4, 6°.5S±4°×12°.9E±°, h341km±6km, M4.6/15, mb4.8/8, mB5.0/6, MLv4.8/15, Mw(mB)4.3/6*

IDC ***11*** *09:11:51.6±1.5, 6°.14S×128°.44E, h313km±16km, mb3.8/10, mbtmp4.7/15, Error ellipse: s-maj=16.7km s-min=9.5km az=64.0*

ISC 11 09:11:51.5±0.4, 6°.21S±0°.04×128°.46E±0°.05, h322km, n119, σ1°.45/126, mb4.3/23, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.21**	**41**	P	**Pn**	**09 12 42.4**	**+0.4**
BNDI				S	**S**	**09 13 23.4**	**+1.1**
BNDI	**Bandanaira**	**2.21**	**41**	P	**Pn**	**09 12 42.7**	**+0.7**
AAI	**Ambon**	**2.52**	**354**	P	**Pn**	**09 12 45.3**	**+0.7**
AAI				S	**S**	**09 13 29.4**	**+2.4**
MSAI	**Masohi**	**2.88**	**9**	P	**Pn**	**09 12 47.0**	**-0.8**
NLAI	**Namlea**	**3.25**	**335**	P	**Pn**	**09 12 53.2**	**+1.9**
NLAI				S	**S**	**09 13 41.6**	**+2.5**
SAUI	**Saumlaki**	**3.33**	**122**	Pn	Pn	09 12 44.2	-7.9
SAUI					**S**	**09 13 33.8**	**-6.7**
SANI	**Sanana**	**4.81**	**329**	P	**Pn**	**09 13 08.2**	**+0.3**
SANI	**Sanana**	**4.81**	**329**	P	**Pn**	**09 13 08.2**	**+0.3**
FAKI	**Fak Fak**	**5.00**	**49**	Pn	**Pn**	**09 13 08.9**	**-1.1**
FAKI	**Fak Fak**	**5.00**	**49**	P	**Pn**	**09 13 08.4**	**-1.6**
SOEI	**Soe**	**5.44**	**229**	Pn	**Pn**	**09 13 15.2**	**+0.1**
SOEI	**Soe**	**5.44**	**229**	P	**Pn**	**09 13 15.3**	**+0.1**
	3.6nm11μm906nm,0.5s						
SOEI	**Soe**	**5.44**	**229**	P	**Pn**	**09 13 16.0**	**+0.8**
LBMI	**Labuha**	**5.62**	**350**	P	**Pn**	**09 13 17.3**	**+0.2**
	1.2nm3μm302nm,0.9s						
BBSI	**Bau Bau**	**5.90**	**277**	P	**Pn**	**09 13 20.3**	**-0.1**
	0.1nm371nm37nm,0.9s						
SIJI	**Sorong**	**6.00**	**28**	P	**Pn**	**09 13 19.9**	**-1.7**
	69nm,0.3s,baz=209,slow=8.9,SNR=14						
SIJI				S	**S**	**09 14 27.1**	**-7.2**
	122nm,0.3s,baz=66,slow=23,SNR=21						
BATI	**Baumata**	**6.19**	**230**	P	**Pn**	**09 13 24.4**	**+0.7**
	955nm,0.4s,baz=77,slow=2.6,SNR=116						
BATI				S	**S**	**09 14 33.1**	**-5.2**
	540nm,0.5s,baz=68,slow=2.6,SNR=7.9						
BATI	**Baumata**	**6.19**	**230**	P	**Pn**	**09 13 24.1**	**+0.4**
	3.6nm10μm619nm,0.4s						
MTN	**Manton Dam**	**7.10**	**158**	Pn	**Pn**	**09 13 34.1**	**-0.5**
EDFI	**Ende, Flores**	**7.17**	**249**	P	**Pn**	**09 13 37.0**	**+1.5**
	0.1nm360nm20nm,0.6s						
KDU	**Kakadu**	**7.56**	**149**	P	**Pn**	**09 13 39.7**	**-0.3**
BSSI	**Bau Bau, Buton**	**7.92**	**270**	P	**Pn**	**09 13 45.8**	**+1.3**
KAPI	**Kappang**	**8.74**	**277**	P	**P**	**09 13 56.7**	**-1.6**
	16nm,0.5s,baz=114,slow=2.9,SNR=11						
KAPI	**Kappang**	**8.74**	**277**		**Pn**	**09 13 52.9**	**-1.5**
KAPI	**Kappang**	**8.74**	**277**	P	**Pn**	**09 13 55.6**	**+1.2**
KNRA	**Kununurra**	**9.41**	**178**	Pn	**Pn**	**09 14 02.6**	**+0.2**
KNRA	**Kununurra**	**9.41**	**178**	P	**Pn**	**09 14 02.7**	**+0.2**
TOLI2	**Tolitoli**	**10.56**	**313**		**S**	**09 16 18.3**	**+2.9**
PLAI	**Plampang**	**10.90**	**256**	P	**Pn**	**09 14 20.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.13**	**193**	P	**Pn**	**09 14 34.6**	**-0.7**
	45nm,0.6s,baz=26,slow=9.6,SNR=79						
FITZ				S	**S**	**09 16 52.6**	**+2.3**
	10nm,0.4s,baz=346,slow=12,SNR=3.5						
FITZ	**Fitzroy Crossi**	**12.13**	**193**		**Pn**	**09 14 34.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**12.13**	**193**	P	**Pn**	**09 14 34.6**	**-0.7**
JAGI	**Jagaj, Banyuwa**	**14.36**	**260**		**P**	**09 15 00.3**	**-0.4**
WB0	**Warramunga Arr**	**14.66**	**157**		**P**	**09 15 04.2**	**+0.3**
WRAB	**Tennant Creek**	**14.80**	**158**	P	**P**	**09 15 05.2**	**-0.2**
WRAB	**Tennant Creek**	**14.80**	**158**	P	**P**	**09 15 05.9**	**+0.6**
WRA	**Warramunga Arr**	**14.80**	**158**	P	**P**	**09 15 05.8**	**+0.4**
	33nm,0.5s,baz=338,slow=12,SNR=246						
WRA	**Warramunga Arr**	**14.80**	**158**	P	**P**	**09 15 04.4**	**-1.0**
WB2	**Warramunga Arr**	**14.80**	**158**		**P**	**09 15 05.8**	**+0.3**
WR0	**Warramunga Arr**	**14.89**	**157**	P	**P**	**09 15 06.6**	**+0.2**
COEN	**Coen**	**16.40**	**119**		**P**	**09 15 23.4**	**+0.5**
COEN	**Coen**	**16.40**	**119**	P	**P**	**09 15 23.6**	**+0.7**
MBWA	**Marble Bar**	**17.10**	**209**	P	**P**	**09 15 30.7**	**+0.3**
MBWA				IAmb	IAmb	09 15 31.5	
	comp=Z,24nm,0.7s						
MBWA	**Marble Bar**	**17.10**	**209**	P	**P**	**09 15 30.7**	**+0.3**
KKM	**Kota Kinabalu**	**17.25**	**315**	P	**P**	**09 15 30.8**	**-1.4**
KKM				IAmb	IAmb	09 15 40.1	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	**17.40**	**208**	P	**P**	**09 15 33.0**	**-0.6**
PSA00				IAmb	IAmb	09 15 34.8	
	comp=Z,20nm,1.1s						
PSA00	**Pilbara Seismi**	**17.40**	**208**	P	**P**	**09 15 34.0**	**+0.4**
PSA00				IAmb	IAmb	09 15 34.9	
	comp=Z,26nm,0.7s						
PSA00	**Pilbara Seismi**	**17.40**	**208**	P	**P**	**09 15 34.1**	**+0.5**
QIS	**Mount Isa**	**17.90**	**144**	P	**P**	**09 15 39.9**	**+0.8**
AS31	**Alice Springs**	**18.13**	**164**	P	**P**	**09 15 41.6**	**+0.2**
AS31				IAmb	IAmb	09 15 43.5	
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**18.13**	**164**	P	**P**	**09 15 42.6**	**+1.1**
	comp=Z,51nm,0.5s,baz=346,slow=12,SNR=802						
ASAR				S	**S**	**09 18 51.5**	**-0.9**
	comp=Z,53nm,0.8s,baz=345,slow=20,SNR=60						
WRKA	**Warakurna**	**18.72**	**180**	P	**P**	**09 15 48.7**	**+0.9**
PMG	**Port Moresby**	**18.80**	**101**	P	**P**	**09 15 50.8**	**+2.2**
	comp=Z,45nm,0.7s,baz=108,slow=0.1,SNR=14						
PMG	**Port Moresby**	**18.80**	**101**	P	**P**	**09 15 51.3**	**+2.6**
GIRL	**Giralia**	**21.34**	**219**	P	**P**	**09 16 14.9**	**+1.0**
GIRL	**Giralia**	**21.34**	**219**	P	**P**	**09 16 15.4**	**+1.5**
CTA	**Charters Tower**	**22.12**	**130**	P	**P**	**09 16 22.7**	**+1.6**
	comp=Z,25nm,0.8s,baz=312,slow=11,SNR=29						
	comp=Z,25nm,0.8s						
CTA	**Charters Tower**	**22.12**	**130**	P	**P**	**09 16 22.7**	**+1.6**
CTAO	**Charters Tower**	**22.12**	**130**	P	**P**	**09 16 22.1**	**+1.1**
CTAO				IAmb	IAmb	09 16 24.0	
	comp=Z,25nm,0.8s						
CTAO	**Charters Tower**	**22.12**	**130**	P	**P**	**09 16 22.7**	**+1.6**
MEEK	**Meekatharra**	**22.38**	**204**	P	**P**	**09 16 23.1**	**-0.3**
OOD	**Oodnadatta**	**22.54**	**163**	P	**P**	**09 16 25.7**	**+0.9**
INKA	**Innaminka**	**24.39**	**153**	P	**P**	**09 16 43.0**	**+1.5**
FORT	**Forrest**	**24.45**	**181**	P	**P**	**09 16 42.0**	**0.0**
FORT				IAmb	IAmb	09 16 43.8	
	comp=Z,27nm,0.8s						
FORT	**Forrest**	**24.45**	**181**	P	**P**	**09 16 42.6**	**+0.6**
MULG	**Mulgathing**	**24.52**	**168**	P	**P**	**09 16 43.3**	**+0.6**
MORW	**Morawa**	**25.59**	**206**	P	**P**	**09 16 51.8**	**-0.5**
MORW				IAmb	IAmb	09 16 52.3	
	comp=Z,27nm,1.4s						
MORW	**Morawa**	**25.59**	**206**	P	**P**	**09 16 52.1**	**-0.2**
LCRK	**Leigh Creek**	**25.80**	**160**	P	**P**	**09 16 54.6**	**+0.5**
BLDU	**Ballidu**	**26.67**	**203**	P	**P**	**09 17 01.7**	**-0.2**
KLBR	**Kellerberrin**	**27.17**	**200**	P	**P**	**09 17 06.5**	**+0.2**
RK1H	**Rockhampton Ha**	**27.23**	**131**	P	**P**	**09 17 07.7**	**+0.7**
BBOO	**Buckleboo**	**27.40**	**166**	P	**P**	**09 17 08.0**	**-0.3**
BBOO				IAmb	IAmb	09 17 21.7	
	comp=Z,28nm,1.4s						
BBOO	**Buckleboo**	**27.40**	**166**	P	**P**	**09 17 08.8**	**+0.5**
STKA	**Stephens Creek**	**28.34**	**156**	P	**P**	**09 17 17.0**	**+0.3**
STKA					**pP**	**09 18 18.1**	**+1.0**
NWAO	**Narrogin (SRO)**	**28.56**	**200**	P	**P**	**09 17 19.7**	**-0.7**
NWAO	**Narrogin (SRO)**	**28.56**	**200**	P	**P**	**09 17 19.0**	**+0.4**
EIDS	**Eidsvold**	**28.84**	**134**	P	**P**	**09 17 21.4**	**+0.2**
EIDS				IAmb	IAmb	09 17 46.6	
	comp=Z,15nm,1.5s						
CMSA	**Cobar Meteorol**	**29.92**	**150**	P	**P**	**09 17 31.7**	**+1.1**
YOJ	**Yonaguni jima**	**30.94**	**350**	P	**P**	**09 17 37.5**	**-2.0**
JOW	**Kunigami**	**32.85**	**360**	P	**P**	**09 17 55.0**	**-1.1**
JOW				IAmb	IAmb	09 17 57.0	
	comp=Z,18nm,0.7s						
CAN	**Canberra**	**34.60**	**150**	P	**P**	**09 18 12.4**	**+1.3**
CAN				IAmb	IAmb	09 18 13.6	
	comp=Z,29nm,1.4s						
CAN	**Canberra**	**34.60**	**150**	P	**P**	**09 18 12.1**	**+1.0**
JSU	**Suzuyama**	**37.55**	**3**	P	**P**	**09 18 35.7**	**-0.2**
JSU				IAmb	IAmb	09 18 36.5	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.05**	**311**	P	**P**	**09 18 40.9**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=150,slow=7.9,SNR=6.5						
	comp=Z,1.5nm,0.4s						
DZM	**Mont Dzumac**	**39.92**	**117**	P	**P**	**09 18 56.3**	**+0.6**
	comp=Z,5.8nm,0.8s,baz=287,slow=17,SNR=7.3						
	comp=Z,5.8nm,0.8s						
DZM	**Mont Dzumac**	**39.92**	**117**	P	**P**	**09 18 56.2**	**+0.6**
YATNC	**Mamie plateau,**	**40.31**	**117**	P	**P**	**09 19 00.2**	**+1.4**
KSCHJ	**Chungju**	**42.86**	**359**	P	**P**	**09 19 18.3**	**-0.6**
KSRS	**Korea Array**	**43.44**	**359**	P	**P**	**09 19 24.1**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=177,slow=9.2,SNR=29						
	comp=Z,4.0nm,0.6s						
KS19	**Wonju Array Si**	**43.49**	**359**	P	**P**	**09 19 23.5**	**-0.5**
MJAR	**Matsushiro Arr**	**43.50**	**11**	P	**P**	**09 19 22.9**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=191,slow=9.3,SNR=6.5						
	comp=Z,2.5nm,0.7s						
XAN	**Xi'an**	**44.09**	**336**	P	**P**	**09 19 27.9**	**-1.0**
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,5.0s						
SEHB	**SEOHWA**	**44.25**	**360**	P	**P**	**09 19 30.6**	**+0.6**
JMM	**Marumori**	**45.33**	**14**	P	**P**	**09 19 37.9**	**-0.5**
JMM				IAmb	IAmb	09 19 52.9	
	comp=Z,30nm,1.2s						
USRK	**Ussuriysk Ar.**	**50.28**	**3**	P	**P**	**09 20 16.1**	**+0.1**
	comp=Z,2.3nm,0.4s,baz=190,slow=7.0,SNR=7.5						
	comp=Z,2.3nm,0.4s						
USRK	**Ussuriysk Ar.**	**50.28**	**3**	P	**P**	**09 20 15.0**	**-1.0**
WHZ	**Wether Hill Ro**	**52.21**	**146**	P	**P**	**09 20 29.0**	**-1.3**
QRZ	**Quartz Range**	**52.26**	**138**	P	**P**	**09 20 30.9**	**+0.1**
QRZ				IAmb	IAmb	09 20 56.7	
	comp=Z,44nm,1.4s						
QRZ	**Quartz Range**	**52.26**	**138**	P	**P**	**09 20 32.4**	**+1.6**
GTA	**Gaotai**	**52.55**	**332**	⇓P	**P**	**09 20 33.6**	**+0.6**
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
RPZ	**Rata Peaks**	**52.80**	**142**	P	**P**	**09 20 35.8**	**+1.2**
	comp=Z,9.4nm,0.5s,baz=272,slow=2.7,SNR=8.1						
	comp=Z,9.4nm,0.5s						
RPZ	**Rata Peaks**	**52.80**	**142**	P	**P**	**09 20 35.7**	**+1.2**
RPZ				IAmb	IAmb	09 20 48.8	
	comp=Z,42nm,1.4s						
RPZ	**Rata Peaks**	**52.80**	**142**	P	**P**	**09 20 35.8**	**+1.2**
THZ	**Tophouse**	**52.97**	**139**	P	**P**	**09 20 36.7**	**+0.7**
TUWZ	**Tuamarina**	**53.49**	**138**	P	**P**	**09 20 39.6**	**0.0**
KHZ	**Kahutara**	**53.70**	**139**	P	**P**	**09 20 41.3**	**+0.2**
KHZ				IAmb	IAmb	09 20 53.3	
	comp=Z,23nm,1.2s						
KHZ	**Kahutara**	**53.70**	**139**	P	**P**	**09 20 41.5**	**+0.4**
SONM	**Songino Array**	**57.22**	**342**	P	**P**	**09 21 07.6**	**+1.6**
	comp=Z,3.4nm,0.7s,baz=165,slow=9.3,SNR=3.6						
	comp=Z,3.4nm,0.7s						
MKAR	**Makanchi Array**	**66.73**	**327**	P	**P**	**09 22 09.4**	**+0.7**
	comp=Z,4.1nm,0.4s,baz=121,slow=8.4,SNR=59						
	comp=Z,4.1nm,0.4s						
MAKZ	**Makanchi**	**66.91**	**327**	P	**P**	**09 22 10.5**	**+0.6**
ZALV	**Zalesovo Beam**	**70.20**	**334**	P	**P**	**09 22 29.6**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=126,slow=5.2,SNR=9.9						
	comp=Z,3.4nm,0.6s						
ZALV	**Zalesovo Beam**	**70.20**	**334**	P	**P**	**09 22 29.0**	**-0.9**
KURK	**Kurchatov**	**71.05**	**329**	P	**P**	**09 22 35.7**	**+0.7**
KURK				IAmb	IAmb	09 22 36.4	
	comp=Z,5.2nm,0.9s						
TXAR	**Lajitas Array**	**125.83**	**58**	PKP	**PKiKP**	**09 30 16.8**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=298,slow=1.9,SNR=1.6						
I37A	**Lemond, Waseca**	**127.49**	**37**		**PKiKP**	**09 30 19.0**	**-0.3**
TIGA	**Tifton**	**140.90**	**46**		PKPpre	09 30 37.8	
CPUP	**Villa Florida**	**147.17**	**170**	PKPbc	**PKPbc**	**09 30 58.0**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=162,slow=3.2,SNR=3.9						
CZSB	**Cruzeiro do Su**	**154.76**	**123**		**PKPdf**	**09 31 04.1**	**-2.9**

IDC 11 09:14:24.8±2.7, 19°.40S×177°.40W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=209.3km s-min=25.1km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**34.17**	**263**	P	P	09 21 14.1	+1.9
	2.1nm,0.4s,baz=84,slow=9.1,SNR=5.6						
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**45.32**	**261**	P	P	09 22 44.0	-1.0
	1.2nm,0.3s,baz=96,slow=7.6,SNR=12						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**45.33**	**256**	P	P	09 22 44.1	-0.9
	3.8nm,0.

comp=N,2µm,0.6s
PNCL Nicolau / Gran 3.71 65 *e*P **Pn 09 25 23.4 +0.3**
PNCL S **Sn 09 26 02.2 -4.6**
PNCL A A 09 26 16.4
comp=N,457nm,0.7s
PACT Alcochete 3.81 54 *e*P **Pn 09 25 25.4 +0.9**
PACT S **Sn 09 26 04.9 -4.4**
PACT A A 09 26 20.3
comp=N,1µm,0.6s
MESJ Messejana 3.84 70 *e*P **Pn 09 25 25.3 +0.4**
MESJ *e*S **Sn 09 26 05.5 -4.7**
MESJ IAML 09 26 08.8
comp=N,471nm,0.2s
MESJ Messejana 3.84 70 *e*P **Pn 09 25 25.4 +0.4**
MESJ S **Sn 09 26 05.9 -4.3**
MESJ A A 09 26 17.1
comp=N,540nm,0.5s
PCVE Castro Verde 3.92 73 *e*P **Pn 09 25 26.7 +0.6**
PCVE S **Sn 09 26 07.7 -4.5**
PCVE A A 09 26 08.9
comp=N,575nm,0.4s
PBDV Barranco-do-Ve 3.93 79 *e*P **Pn 09 25 27.2 +1.0**
PBDV S **Sn 09 26 08.4 -4.1**
PBDV A A 09 26 19.2
comp=N,612nm,0.8s
PVAQ Vaqueiros 4.13 77 Pn 09 25 29.8 +0.9
PVAQ Vaqueiros 4.13 77 P **Pn 09 25 29.8 +0.9**
PVAQ S **Sn 09 26 15.2 -2.0**
PVAQ Vaqueiros 4.13 77 *e*P **Pn 09 25 29.8 +0.9**
PVAQ S **Sn 09 26 13.3 -3.9**
PVAQ A A 09 26 15.8
comp=N,382nm,0.3s
PBEJ Beja 4.17 68 *e*P **Pn 09 25 29.7 +0.3**
PBEJ S **Sn 09 26 12.3 -5.9**
PBEJ A A 09 26 24.6
comp=N,356nm,0.4s
EVO Evora 4.25 61 P **Pn 09 25 30.5 -0.1**
EVO S **Sn 09 26 13.6 -6.6**
EVO Evora 4.25 61 *e*P **Pn 09 25 30.6 0.0**
EVO S **Sn 09 26 14.6 -5.6**
EVO A A 09 26 20.3
comp=N,488nm,0.1s
PSBE So Bento 4.29 46 *e*P **Pn 09 25 31.5 +0.4**
PSBE S **Sn 09 26 16.0 -5.2**
PSBE A A 09 26 31.7
comp=N,694nm,0.6s
EGRO El Granado 4.33 76 P **Pn 09 25 32.2 +0.5**
EGRO ⇑*i*Vmb_V 09 25 36.2
comp=N,6µm,SNR=26
EGRO S **Sn 09 26 17.4 -4.9**
PMTG Montargil 4.37 54 *e*P **Pn 09 25 32.1 -0.1**
PMTG S **Sn 09 26 17.5 -5.7**
PMTG A A 09 26 20.9
comp=N,488nm,0.9s
PMPST Porto Santo, M 4.56 221 S **Sn 09 26 23.2 -4.8**
PMPS Porto Santo 4.58 221 *e*P **Pn 09 25 36.4 +1.3**
PMPS S **Sn 09 26 22.6 -5.8**
PMPS A A 09 26 27.5
comp=N,849nm,0.2s
PESTR Estremoz 4.70 59 Pn 09 25 36.4 -0.3
PESTR Estremoz 4.70 59 P **Pn 09 25 36.3 -0.3**
PESTR Estremoz 4.70 59 *e*P **Pn 09 25 36.5 -0.3**
PESTR S **Sn 09 26 24.7 -6.5**
PESTR A A 09 26 39.0
comp=N,314nm,0.6s
PCAS Casmilo, Conde 4.82 43 *e*P **Pn 09 25 38.6 +0.2**
PCAS S **Sn 09 26 27.9 -6.5**
PCAS A A 09 26 32.3
comp=N,346nm,0.5s
PBAR Barrancos 4.83 69 *e*P **Pn 09 25 38.7 +0.1**
PBAR S **Sn 09 26 29.4 -5.2**
PBAR A A 09 26 35.0
comp=N,316nm,0.5s
COI Coimbra 4.98 42 Pn **Pn 09 25 40.7 +0.1**
COI Coimbra 4.98 42 *e*P **Pn 09 25 40.7 +0.1**
COI S **Sn 09 26 31.4 -6.8**
COI A A 09 26 35.4
comp=N,1µm,0.5s
EMIN Mina Concepcio 5.01 75 P **Pn 09 25 41.2 +0.1**
EMIN ⇑*i*Vmb_V 09 25 42.6
comp=N,4µm,SNR=46
EMIN S **Sn 09 26 33.4 -5.6**
EBAD Badajoz 5.05 63 P **Pn 09 25 41.6 -0.1**
EBAD ⇑*i*Vmb_V 09 25 44.0
comp=N,14µm,SNR=145
EBAD S **Sn 09 26 33.8 -6.3**
PMRV Marv??o 5.11 55 *e*P **Pn 09 25 42.2 -0.2**
PMRV S **Sn 09 26 34.5 -6.9**
PMRV A A 09 26 45.0
comp=N,432nm,0.7s
PMAR Madeira 5.15 223 P **Pn 09 25 45.1 +2.1**
PMAR Madeira 5.15 223‖ *e*P **Pn 09 25 44.9 +1.8**
PMAR S **Sn 09 26 39.1 -3.6**
PMAR A A 09 26 46.5
comp=N,1µm,0.7s
FUL Funchal 5.20 222 *e*P **Pn 09 25 44.9 +1.4**
FUL S **Sn 09 26 38.9 -4.6**
FUL A A 09 26 46.6
comp=N,709nm,0.4s
PMOZ Porto Moniz, M 5.23 225 Pn 09 25 45.5 +1.3
PMOZ Porto Moniz, M 5.23 225 P **Pn 09 25 46.3 +2.2**
PMOZ Porto Moniz, M 5.23 225 S **Sn 09 26 39.5 -5.1**
PCBR Castelo Branco 5.28 50 *e*P **Pn 09 25 45.0 +0.2**
PCBR S **Sn 09 26 39.1 -6.6**
PCBR A A 09 26 53.3
comp=N,261nm,0.6s
AVE Averroes 5.49 125 P **Pn 09 25 49.1 +1.4**
AVE S **Sn 09 26 44.8 -6.0**
AVE Averroes 5.49 125 Pn 09 25 49.0 +1.4
AVE Averroes 5.49 125 P **Pn 09 25 49.2 +1.6**
ESPR Espera 5.56 85 ⇑P **Pn 09 25 49.6 +1.0**
ESPR ⇑*i*Vmb_V 09 25 50.7
comp=N,14µm,SNR=160
ESPR S **Sn 09 26 48.2 -4.4**
PTO Porto 5.59 34 *e*P **Pn 09 25 49.0 +0.1**
PTO S **Sn 09 26 45.5 -7.7**
PTO A A 09 26 49.0
comp=N,912nm,0.5s
EAH EAH 5.59 151 P **Pn 09 25 50.2 +1.2**
EAH EAH 5.59 151 P **Pn 09 25 50.5 +1.5**
EAH S **Sn 09 26 50.2 -3.1**
MTE Manteigas 5.59 46 Pn **Pn 09 25 49.1 0.0**
MTE Manteigas 5.59 46 *e*P **Pn 09 25 49.2 +0.1**
MTE S **Sn 09 26 46.3 -7.2**
MTE A A 09 26 50.9
comp=N,554nm,0.7s
PVIS Viseu 5.62 41 *e*P **Pn 09 25 49.4 0.0**
PVIS S **Sn 09 26 46.1 -7.9**
PVIS A A 09 26 49.3
comp=N,584nm,0.3s
SRHM Skhour des Reh 5.75 134 P **Pn 09 25 52.8 +1.6**
SRHM S **Sn 09 26 53.0 -4.2**
EJIF Jimena Fronter 5.88 89 P **Pn 09 25 54.8 +1.8**
ZHG ZHG 5.93 120 P **Pn 09 25 54.8 +1.1**
ZHG S **Sn 09 26 57.7 -4.0**
ECEU Ceuta 6.02 94 P **Pn 09 25 54.0 -0.8**
ECEU ⇑*i*Vmb_V 09 25 56.8
comp=N,3µm,SNR=2.4
ECEU S **Sn 09 27 00.7 -3.0**
CEU Ceuta 6.02 94 P **Pn 09 25 56.9 +2.1**
CEU S **Sn 09 26 56.2 -7.5**
ECAB El Cabril 6.04 74 P **Pn 09 25 55.4 +0.2**
ECAB ⇑*i*Vmb_V 09 25 56.3
comp=N,11µm,SNR=146
ECAB S **Sn 09 26 57.9 -6.6**
SMIR Smir Dam 6.05 96 P **Pn 09 25 56.9 +1.6**
SMIR S **Sn 09 26 59.4 -5.2**
PVRL Vila Real 6.12 39 *e*P **Pn 09 25 55.9 -0.4**
PVRL S **Sn 09 26 58.1 -8.2**
PVRL A A 09 27 03.7
comp=N,492nm,0.7s
POLO Lamas de Olo 6.15 38 *e*P **Pn 09 25 56.4 -0.4**
POLO S **Sn 09 26 58.4 -8.9**
POLO A A 09 27 01.7
comp=N,250nm,0.4s
CHEFC Chefchaouen 6.21 102 P **Pn 09 26 02.0 +4.4**
CHEFC Chefchaouen 6.21 102 P **Pn 09 26 00.3 +2.6**
CHEFC S **Sn 09 27 04.6 -4.2**
PCAB Cabril 6.30 34 *e*P **Pn 09 25 58.5 -0.3**
PCAB S **Sn 09 27 02.3 -8.6**
PCAB A A 09 27 05.9
comp=N,370nm,0.3s
EZAM Zamans 6.39 28 P **Pn 09 25 58.7 -1.2**
EZAM ⇑*i*Vmb_V 09 26 02.5
comp=N,1µm,SNR=6.8
EZAM S Sn 09 27 02.7 -10
MVO Moncorvo 6.40 43 *e*P **Pn 09 25 59.7 -0.4**
MVO S **Sn 09 27 04.5 -8.8**
MVO A A 09 27 06.6
comp=N,767nm,0.7s
PGAV Gavieira, Arco 6.41 32 *e*P **Pn 09 26 00.1 -0.2**
PGAV S **Sn 09 27 04.5 -9.0**
PGAV A A 09 27 16.3
comp=N,405nm,0.6s
CGR Cap Guir 6.41 157 P **Pn 09 26 00.4 +0.1**
CGR S **Sn 09 27 08.7 -4.8**
ELOB Lobios 6.42 33 P **Pn 09 25 59.9 -0.5**
ELOB ⇑*i*Vmb_V 09 26 03.1
comp=N,3µm,SNR=18
ELOB S **Sn 09 27 04.9 -8.8**
EMIJ Mijas 6.44 88 P **Pn 09 26 01.3 +0.7**
EMIJ ⇑*i*Vmb_V 09 26 01.7
comp=N,2µm,SNR=14
EMIJ S **Sn 09 27 09.5 -4.7**
EMAL Malaga-Limoner 6.71 86 P **Pn 09 26 05.5 +1.2**
EMAL S **Sn 09 27 14.9 -5.9**
EADA Adamuz 6.71 74 P **Pn 09 26 04.4 -0.1**
EADA ⇑*i*Vmb_V 09 26 07.2
comp=N,3µm,SNR=38
EADA S **Sn 09 27 15.1 -5.9**
OUK Oukaimeden 6.74 141 P **Pn 09 26 07.0 +1.9**
OUK Oukaimeden 6.74 141 P **Pn 09 26 07.4 +2.3**
OUK S **Sn 09 27 17.2 -4.9**
EGOR Sierra Gorda, 6.97 83 P **Pn 09 26 09.1 +1.1**
EGOR ⇑*i*Vmb_V 09 26 11.1
comp=N,923nm,SNR=11
EGOR S **Sn 09 27 23.7 -3.6**
IFR Ifrane 6.98 114 P **Pn 09 26 08.1 -0.1**
IFR S Sn 09 27 17.9 -10
EMAZ Mazaricos 6.99 24 P **Pn 09 26 07.3 -1.0**
EMAZ ⇑*i*Vmb_V 09 26 09.6
comp=N,1µm,SNR=5.9
EMAZ S Sn 09 27 16.4 -11
PBRG Braganca 7.00 40 *e*P **Pn 09 26 08.2 -0.2**
PBRG S Sn 09 27 18.6 -10
PBRG A A 09 27 19.7
comp=N,276nm,0.6s
PVLZ Peæn de 7.02 99 P **Pn 09 26 09.5 +0.9**
PVLZ S **Sn 09 27 22.5 -5.9**
TTIG Tnine Tigouga, 7.03 148 P **Pn 09 26 07.2 -1.7**
TTIG Tnine Tigouga, 7.03 148 P **Pn 09 26 07.1 -1.7**
TTIG S **Sn 09 27 20.5 -8.4**
LCRM LCR 7.10 112 P Pn 09 26 15.0 +5.1
LCRM LCR 7.10 112 P **Pn 09 26 10.5 +0.6**
LCRM S **Sn 09 27 23.6 -7.1**
ECAL Calabor 7.11 39 P **Pn 09 26 09.3 -0.6**
ECAL ⇑*i*Vmb_V 09 26 10.7
comp=N,5µm,SNR=53
ECAL S **Sn 09 27 22.3 -8.4**
EAGO Agolada(Pontev 7.18 29 P **Pn 09 26 10.3 -0.5**
EAGO ⇑*i*Vmb_V 09 26 11.8
comp=N,2µm,SNR=10
EAGO S Sn 09 27 21.2 -11
PAB San Pablo 7.27 64 Pn 09 26 11.6 -0.6
PAB San Pablo 7.27 64 P **Pn 09 26 11.6 -0.6**
PAB ⇑*i*Vmb_V 09 26 13.6
comp=N,2µm,SNR=28
PAB S **Sn 09 27 27.7 -7.0**
PAB San Pablo 7.27 64 P **Pn 09 26 11.6 -0.6**
CZD Col de Zad 7.28 117 P Pn 09 26 18.0 +5.5
CZD Col de Zad 7.28 117 P **Pn 09 26 14.3 +1.9**
CZD S **Sn 09 27 27.6 -7.8**
PALE Palemas 7.30 98 P **Pn 09 26 14.6 +2.1**
ELGU Los Guajares, 7.35 85 P **Pn 09 26 14.5 +1.3**
ELGU ⇑*i*Vmb_V 09 26 15.9
comp=N,1µm,SNR=6.9
ELGU S **Sn 09 27 31.3 -5.4**
EFAM Famara 7.47 185 P **Pn 09 26 15.0 +0.3**
EFAM ⇑*i*Vmb_V 09 26 16.6
comp=N,892nm,SNR=1.3
EFAM S **Sn 09 27 34.5 -5.0**
EQUE Quentar 7.50 83 P **Pn 09 26 16.9 +1.5**
EQUE ⇑*i*Vmb_V 09 26 18.4
comp=N,2µm,SNR=17
EQUE S **Sn 09 27 36.1 -4.4**
MD31 MD31 7.57 117 P **Pn 09 26 17.4 +1.2**
MD31 S **Sn 09 27 36.7 -5.4**
ESDC Sonseca Array 7.59 63 Pn **Pn 09 26 16.3 -0.3**
comp=N,54nm,0.3s,baz=251,slow=13,SNR=700
ESDC Sn Sn 09 27 33.6 -9.1
comp=N,11nm,0.3s,baz=258,slow=23,SNR=6.7
ESDC Sonseca Array 7.59 63 Pn **Pn 09 26 16.1 -0.5**
ESDC Sonseca Array 7.59 63 P **Pn 09 26 15.8 -0.7**
ESDC ⇑*i*Vmb_V 09 26 17.3
comp=N,3µm,SNR=36
ESDC S **Sn 09 27 34.6 -8.1**
ESBB Sonseca Array 7.60 63 Pn **Pn 09 26 16.0 -0.6**
MDT Midelt 7.71 117 LR LR 09 29 16.8
comp=N,128nm,21.7s,baz=297,slow=37
MDT Midelt 7.71 117 P **Pn 09 26 22.2 +4.1**
MDT Midelt 7.71 117 P **Pn 09 26 19.8 +1.6**
MDT S **Sn 09 27 39.9 -5.6**
EQES Quesada 7.84 78 P **Pn 09 26 19.7 -0.2**
EQES ⇑*i*Vmb_V 09 26 22.7
comp=N,1µm,SNR=14
EQES S **Sn 09 27 43.6 -5.2**
CLOB Isla de Lobos, 7.85 187 P **Pn 09 26 21.9 +1.9**
CLOB ⇑*i*Vmb_V 09 26 26.2
comp=N,1µm,SNR=1.2
CLOB S **Sn 09 27 43.0 -5.9**
GUD Guadarrama 7.87 56 P **Pn 09 26 20.0 -0.4**
GUD ⇑*i*Vmb_V 09 26 21.4
comp=N,1µm,SNR=16
GUD S **Sn 09 27 40.6 -8.9**
EBER Berja 7.94 85 P **Pn 09 26 22.6 +1.2**
EBER ⇑*i*Vmb_V 09 26 24.5
comp=N,816nm,SNR=3.6
EBER S **Sn 09 27 51.0 -0.4**
CFUE Fuerteventura 7.98 187 P **Pn 09 26 22.6 +0.8**
CFUE ⇑*i*Vmb_V 09 26 23.9
comp=N,885nm,SNR=3.2
CFUE S **Sn 09 27 44.0 -8.1**
EPON Pontenova 8.00 31 P **Pn 09 26 21.3 -0.6**
EPON ⇑*i*Vmb_V 09 26 22.4
comp=N,862nm,SNR=5.2
EPON S Sn 09 27 42.4 -10
GOG Mont Gurugu 8.05 97 P **Pn 09 26 23.1 +0.2**
EMEL Melilla 8.06 96 S **Sn 09 27 45.7 -8.4**
WMELI Melilla 8.06 96 P **Pb** 09 26 37.5 -8.0
WMELI S **Sn 09 27 45.7 -8.5**
CFTV Fuerteventura 8.22 188 P **Pn 09 26 24.7 -0.5**
CFTV S Sn 09 27 47.5 -11
TANT Tantan 8.26 171 P **Pn 09 26 27.3 +1.7**
TANT S **Sn 09 27 56.0 -3.0**
UCM Universidad Co 8.35 61 P **Pn 09 26 27.2 +0.3**
UCM S **Sn 09 27 52.2 -8.9**
CGIN Giniginamar, F 8.43 188 P **Pn 09 26 29.1 +1.1**
CGIN ⇑*i*Vmb_V 09 26 34.1
comp=N,840nm,SNR=1.4
CGIN S Sn 09 27 54.4 -8.9
ENIJ Nijar 8.49 84 P **Pn 09 26 29.8 +1.1**
ENIJ ⇑*i*Vmb_V 09 26 31.0
comp=N,1µm,SNR=7.5
ENIJ S **Sn 09 27 58.1 -6.5**
CHAS Isla Isabel II 8.51 96 S Sn 09 27 55.5 -10
TAF Taforalt 8.61 99 P **Pn 09 26 29.5 -1.0**
TAF S **Sn 09 28 00.8 -6.9**
JBK JBK 8.62 102 P **Pn 09 26 31.9 +1.1**
JBK S Sn 09 27 58.8 -9.4
GGC Guia, Gran Can 8.78 197 S Sn 09 28 01.9 -10
CGUI Guimar, Teneri 8.80 202 P **Pn 09 26 35.3 +2.1**
CGUI ⇑*i*Vmb_V 09 26 36.8
comp=N,398nm,SNR=0.5
CGUI S Sn 09 28 02.6 -10
EOSO Osorio 8.81 196 P **Pn 09 26 31.4 -1.9**
EOSO ⇑*i*Vmb_V 09 26 36.1
comp=N,440nm,SNR=0.6
EOSO S **Sn 09 28 05.0 -7.7**
EARI Arriondas 8.87 39 P **Pn 09 26 34.1 +0.1**
EARI ⇑*i*Vmb_V 09 26 37.6
comp=N,478nm,SNR=2.2
EARI S **Sn 09 28 05.3 -8.6**
MACI Morro de la Ar 8.89 202 P **Pn 09 26 33.7 -0.8**
MACI ⇑*i*Vmb_V 09 26 38.8
comp=N,547nm,SNR=0.6
MACI S Sn 09 28 05.8 -9.0
EZAR Zarzadilla de 8.93 78 P **Pn 09 26 34.2 -0.7**
EZAR S **Sn 09 28 09.8 -5.8**
CBOL Buenavista del 8.93 204 P **Pn 09 26 35.7 +0.7**
CBOL S Sn 09 28 05.7 -10
CCAN Las Canadas 8.95 202 P **Pn 09 26 34.1 -1.3**
CCAN ⇑*i*Vmb_V 09 26 37.3
comp=N,572nm,SNR=1.2
CCAN S Sn 09 28 04.0 -12
TBT Taburiente 9.00 210 P **Pn 09 26 35.3 -0.5**
TBT S Sn 09 28 04.0 -13
EHIG Higuera 9.06 209 S Sn 09 28 09.2 -10
ETOB Tobarra 9.14 74 P **Pn 09 26 36.7 -1.0**
ETOB ⇑*i*Vmb_V 09 26 38.4
comp=N,968nm,SNR=9.3
ETOB S **Sn 09 28 13.4 -7.4**
EGOM La Gomera 9.20 205 P **Pn 09 26 38.2 -0.4**
EGOM S Sn 09 28 12.6 -10
EMUR La Murta 9.28 79 P **Pn 09 26 39.7 -0.1**
EMUR ⇑*i*Vmb_V 09 26 41.6
comp=N,523nm,SNR=4.1
EMUR S **Sn 09 28 17.0 -7.3**
ETOR Torete 9.38 60 P **Pn 09 26 40.8 -0.3**
ETOR ⇑*i*Vmb_V 09 26 43.0
comp=N,7µm,SNR=58
ETOR S Sn 09 28 16.7 -10
CART Cartagena 9.46 80 P **Pn 09 26 41.7 -0.3**
CART S **Sn 09 28 20.4 -8.0**
CART Cartagena 9.46 80 Pn **Pn 09 26 41.5 -0.5**
CART Cartagena 9.46 80 P **Pn 09 26 42.3 +0.2**
ECHE Chera 9.78 69 P **Pn 09 26 46.4 -0.1**
ECHE ⇑*i*Vmb_V 09 26 54.5
comp=N,1µm,SNR=9.0
ECHE S **Sn 09 28 29.4 -6.9**
CTIG El Hierro 9.80 208 S Sn 09 28 27.3 -9.4
CCUM Cumbre, El Hie 9.88 208 S **Sn 09 28 30.5 -8.3**
CTAN El Hierro 9.88 208 S **Sn 09 28 30.8 -7.9**
CTAD Las Tabladas, 9.89 209 S **Sn 09 28 32.0 -7.2**
CMCL Mercadel, El H 9.90 208 S **Sn 09 28 32.6 -6.9**
AFON Font Roja 9.92 74 P **Pn 09 26 49.3 +0.8**
AFON ⇑*i*Vmb_V 09 26 51.8
comp=N,706nm,SNR=3.9
AFON S **Sn 09 28 36.7 -3.3**
EBEN2 Beniarda presa 10.20 74 P **Pn 09 26 52.3 +0.2**
CMLA Cha da Macela 10.24 280 S **Sn 09 28 43.6 -4.2**
EMOS Mosqueruela 10.35 65 P **Pn 09 26 55.0 +0.5**
EMOS ⇑*i*Vmb_V 09 26 56.9
comp=N,1µm,SNR=6.2
EMOS S **Sn 09 28 43.7 -7.0**
FIGM Figuig 10.50 112 P **Pn 09 26 58.9 +2.4**
EARA Aranguren 10.60 51 P **Pn 09 26 58.0 +0.3**
EARA ⇑*i*Vmb_V 09 26 58.8
comp=N,2µm,SNR=7.7
EARA S **Sn 09 28 48.6 -7.9**
EORO Oroz-Betelu 10.84 51 P **Pn 09 27 00.8 -0.2**
EORO ⇑*i*Vmb_V 09 27 02.0
comp=N,1µm,SNR=11
EORO S **Sn 09 28 54.7 -7.6**
ESAC San Caprasio 10.84 58 P **Pn 09 27 01.0 0.0**
ESAC ⇑*i*Vmb_V 09 27 02.4
comp=N,939nm,SNR=2.9
EALK Alkurruntz 10.89 49 P **Pn 09 27 02.1 +0.3**
EALK ⇑*i*Vmb_V 09 27 02.6
comp=N,1µm,SNR=7.3
EALK S Sn 09 28 54.1 -10
SJPF Ste Jean 11.01 50 *e*Pn **Pn 09 27 03.5 +0.3**
SJPF *e*Sn Sn 09 28 56.9 -9.5
comp=N,38nm,0.4s
ECOL Islas Columbre 11.09 69 P **Pn 09 27 05.0 +0.6**
ERTA Horta de San J 11.12 63 P **Pn 09 27 04.3 -0.5**
ERTA ⇑*i*Vmb_V 09 27 05.0
comp=N,496nm,SNR=2.8
ERTA S **Sn 09 29 01.9 -7.4**
ETSF Etsaut 11.31 52 *e*Pn **Pn 09 27 07.4 -0.1**
ETSF Etsaut 11.31 52 *e*P **Pn 09 27 12.1 +4.6**
ETSF *e*Sn Sn 09 29 04.2 -10
comp=N,38nm,0.5s
EIBI Ibiza 11.43 73 P **Pn 09 27 09.0 -0.1**
EIBI S **Sn 09 29 09.0 -7.7**
ECHI Chisagues Biel 11.69 55 P **Pn 09 27 12.4 -0.4**
ECHI ⇑*i*Vmb_V 09 27 14.1
comp=N,1µm,SNR=3.4
ECHI S **Sn 09 29 14.8 -8.6**
EPOB Poblet 11.78 62 P **Pn 09 27 12.7 -1.2**
EPOB ⇑*i*Vmb_V 09 27 13.5
comp=N,716nm,SNR=5.0
EPOB S Sn 09 29 15.2 -10
EPF Esparros 11.95 53 *e*Pn **Pn 09 27 16.5 +0.2**
EPF *e*Sn Sn 09 29 19.1 -11
comp=N,15nm,0.2s
EMIR Miracle 12.29 60 P **Pn 09 27 20.8 -0.1**
EMIR S **Sn 09 29 30.9 -7.0**
ETOS Mallorca 12.67 71 P **Pn 09 27 26.6 +0.6**
ETOS ⇑*i*Vmb_V 09 27 28.3
comp=N,390nm,SNR=1.5
LFF La Frestale 13.20 47 *e*Pn **Pn 09 27 32.4 -0.7**
LFF *e*Sn Sn 09 29 48.4 -12
comp=N,34nm,0.6s
MTLF Montolieu 13.32 55 *e*Pn **Pn 09 27 34.8 -0.1**
MTLF Montolieu 13.32 55 *e*P **P 09 27 40.4 -4.2**
MTLF *e*Sn Sn 09 29 52.4 -11
comp=N,18nm,0.6s
QUIF Quistinic 13.36 29 *e*Pn **Pn 09 27 34.8 -0.5**
QUIF *e*Sn Sn 09 29 49.2 -15
comp=N,15nm,0.2s
EJON La Jonquera 13.43 59 P **Pn 09 27 35.6 -0.7**
EJON ⇑*i*Vmb_V 09 27 38.5
comp=N,525nm,SNR=2.1
ROSF Rostrenen 13.66 28 *e*Pn **Pn 09 27 38.2 -1.3**
ROSF Rostrenen 13.66 28 *e*P **Pn 09 27 42.1 +2.6**
ROSF *e*Sn Sn 09 29 57.6 -14
comp=N,44nm,0.6s
MFF Saint Martin d 13.74 39 *e*Pn **Pn 09 27 39.4 -1.2**
MFF *e*Sn Sn 09 30 00.9 -12
comp=N,40nm,0.7s
RJF Les Rejaudoux 13.86 47 *e*Pn **Pn 09 27 41.0 -1.2**
RJF *e*Sn Sn 09 30 02.5 -14
comp=N,76nm,0.6s
SGMF Saint Gilles 13.87 30 *e*Pn **Pn 09 27 42.0 -0.3**
SGMF *e*Sn Sn 09 30 03.2 -13
comp=N,29nm,0.6s
CAF Calviac 13.98 49 *e*Pn **Pn 09 27 42.4 -1.5**
CAF *e*Sn Sn 09 30 07.1 -12
comp=N,8.0nm,0.4s
CCA1 Carnmenellis 14.64 20 P **Pn 09 27 52.3 -0.7**
CCA1 S Sn 09 30 18.6 -17
GRR Gorron 14.69 33 *e*Sn Sn 09 30 20.8 -15
comp=N,12nm,0.3s
JSA Saint Aubin 14.78 28 S Sn 09 30 22.7 -16
TCF Toulx Ste Croi 14.81 45 *e*Pn **Pn 09 27 53.3 -2.0**
TCF Toulx Ste Croi 14.81 45 *e*P **P 09 27 59.5 -1.7**
TCF *e*Sn Sn 09 30 24.0 -15
comp=N,15nm,0.4s
FLN La Foliniere 15.13 33 *e*Pn **Pn 09 27 58.1 -1.4**
FLN La Foliniere 15.13 33 *e*P **Pn 09 28 01.6 +2.1**
FLN *e*Sn Sn 09 30 35.8 -11
comp=N,47nm,0.7s
LDF La Druitiere 15.16 34 *e*Pn **Pn 09 27 58.4 -1.5**
LDF La Druitiere 15.16 34 *e*P **Pn 09 28 02.1 +2.2**
LDF *e*Sn Sn 09 30 35.4 -12
comp=N,40nm,0.8s
DYA Yadsworthy 15.24 22 P **Pn 09 28 01.5 +0.6**
DYA S Sn 09 30 35.1 -15
BGF Bois d'Agland 15.33 45 *e*Pn **Pn 09 28 01.2 -0.9**
BGF *e*Sn Sn 09 30 40.7 -11
comp=N,70nm,0.6s
VAL Valentia 15.45 6 S Sn 09 30 41.5 -13
VIVF Saint-Julien-l 15.57 53 *e*Pn **Pn 09 28 05.3 0.0**
VIVF *e*Sn Sn 09 30 44.9 -13
comp=N,13nm,0.7s
HTL Hartland 15.58 20 S Sn 09 30 43.2 -15
HYF Humbligny 15.64 42 *e*Pn **Pn 09 28 05.6 -0.5**
SSB Saint Sauveur 15.68 51 Pn **Pn 09 28 06.2 -0.5**
SSB IAmb IAmb 09 28 07.6
comp=Z,28nm,0.8s
AVF Avril sur Loir 15.75 45 *e*Pn **Pn 09 28 06.2 -1.4**
AVF *e*Sn Sn 09 30 48.3 -14
comp=Z,15nm,0.6s
SMRF Simiane la Rot 15.81 57 *e*Pn **Pn 09 28 06.6 -1.8**
CLF Chambon-Foret 15.91 39 Pn **Pn 09 28 10.5 +0.8**
CLF IAmb IAmb 09 28 12.5
comp=Z,49nm,1.1s
CLF Chambon-Foret 15.91 39 S **Sn 09 30 55.9 -10**
SSF Saint Saulge 15.99 44 *e*Pn **Pn 09 28 09.7 -1.0**

SSF					*e*Sn		Sn	09 30 54.9	-13
	comp=Z,16nm,0.6s								
LMR	**La Mourre**	**16.23**	**60**	*e*Pn			**Pn**	**09 28 12.4**	**-1.4**
LOR	**Lormes**	**16.31**	**44**	*e*Pn			**Pn**	**09 28 13.9**	**-0.9**
	baz=233								
LOR					*e*Sn		Sn	09 31 01.5	-14
	comp=Z,9.1nm,0.5s								
IWEX	**Carrickbyrne,**	**16.34**	**13**	S			Sn	09 31 00.1	-16
ORIF	**Oris-en-Rattie**	**16.38**	**54**	*e*Pn			**Pn**	**09 28 16.1**	**+0.3**
MBDF	**Montbardon**	**16.88**	**55**	*e*Pn			**Pn**	**09 28 22.8**	**+0.5**
MCH1	**Michaelchurch**	**16.89**	**21**	S			Sn	09 31 14.8	-15
SBF	**Sospel**	**17.03**	**59**	*e*P			**P**	**09 28 25.7**	**-0.2**
LPL	**La Plagne**	**17.17**	**53**	*e*Pn			**P**	**09 28 28.1**	**+0.5**
LPG	**La Plagne**	**17.18**	**53**	*e*Pn			**Pn**	**09 28 26.7**	**+0.6**
DSB	**Dublin**	**17.25**	**13**	S			Sn	09 31 22.7	-16
CABF	**La Chapelle**	**17.26**	**49**	*e*Pn			**Pn**	**09 28 27.6**	**+0.7**
SFTF	**Sexfontaines**	**17.50**	**43**	*e*Pn			**Pn**	**09 28 30.2**	**+0.4**
SFTF					*e*Sn		Sn	09 31 31.7	-13
	comp=Z,8.8nm,0.6s								
FOEL	**Foel Wylfa**	**17.63**	**19**	S			Sn	09 31 31.6	-16
MEZF	**Maizieres J'vi**	**17.68**	**42**	*e*Pn			**P**	**09 28 33.5**	**+0.6**
SAVF	**Savonnieres en**	**17.78**	**42**	*e*Pn			**P**	**09 28 34.3**	**+0.3**
PGF	**Pioggiola**	**17.79**	**64**	*e*Pn			**Pn**	**09 28 33.4**	**-0.1**
KEST	**Kesra**	**17.88**	**86**	P			**P**	**09 28 35.8**	**+0.5**
	comp=Z,14nm,1.1s,baz=192,slow=3.8,SNR=7.9								
KEST					LR		LR	09 35 32.1	
	comp=Z,96nm,21.1s,baz=278,slow=37								
KEST	**Kesra**	**17.88**	**86**	P			**P**	**09 28 35.8**	**+0.5**
SENIN	**Lac Senin/Sane**	**17.89**	**51**	P			**P**	**09 28 36.9**	**+1.4**
PAGF	**Fort de Pagny**	**18.07**	**43**	*e*Pn			**P**	**09 28 38.4**	**+1.1**
HAU	**Haudompre**	**18.12**	**45**	*e*Pn			**Pn**	**09 28 37.6**	**+0.1**
HAU					*e*Sn		Sn	09 31 45.7	-14
	comp=Z,6.6nm,0.5s								
BAIF	**Baives**	**18.21**	**37**	*e*Pn			**P**	**09 28 41.0**	**+2.2**
HINF	**Hinteralfeld**	**18.31**	**46**	*e*Pn			**P**	**09 28 40.1**	**+0.2**
DOU	**Dourbes**	**18.43**	**37**	S			Sn	09 31 53.0	-14
DOU	**Dourbes**	**18.43**	**37**	κP			**Pn**	**09 28 43.1**	**+2.0**
	comp=Z,25nm,0.9s								
LBWR	**Ladybower, Pea**	**18.50**	**21**	S			**Sn**	**09 32 10.1**	**+1.4**
GIVF	**Givet**	**18.54**	**38**	*e*Pn			**Pn**	**09 28 44.5**	**+1.9**
GIVF					*e*Sn		Sn	09 31 58.3	-11
	comp=Z,36nm,0.8s								
IOMK	**Kirk Michael**	**18.57**	**15**	P			**P**	**09 28 41.1**	**-1.5**
BMRD	**Maredsous**	**18.65**	**37**	*d*P			**Pn**	**09 28 45.5**	**+1.7**
BMRD					*d*PP		**PnPn**	**09 29 00.8**	**+5.1**
ECH	**Echery**	**18.69**	**45**	P			**P**	**09 28 43.7**	**-0.4**
RCHB	**Rochefort**	**18.78**	**38**	*d*P			**Pn**	**09 28 46.9**	**+1.5**
	comp=Z,26nm,0.9s								
CDF	**Champ du Feu**	**18.86**	**45**	*e*Pn			**Pn**	**09 28 48.2**	**+1.6**
WLF	**Walferdange**	**18.95**	**40**	P			**Pn**	**09 28 47.7**	**+0.2**
WLF					IAmb		IAmb	09 29 05.2	
	comp=Z,64nm,0.9s								
WLF	**Walferdange**	**18.95**	**40**	*d*P			**Pn**	**09 28 48.4**	**+0.9**
WLF					*d*PP		**PnPn**	**09 29 00.7**	**+0.9**
LMK	**Market Rasen**	**18.98**	**23**	P			**P**	**09 28 45.9**	**-1.2**
BCLA	**Clavier**	**18.98**	**38**	κP			**Pn**	**09 28 49.7**	**+1.7**
	comp=Z,30nm,1.1s								
HPK	**Haverah Park**	**19.02**	**21**	P			**P**	**09 28 47.9**	**+0.3**
BFO	**Black Forest**	**19.42**	**46**	P			**Pn**	**09 28 52.8**	**-0.5**
MEM	**Membach**	**19.45**	**38**	*d*P			**Pn**	**09 28 55.3**	**+1.7**
MEM					*d*PP		**PnPn**	**09 29 06.1**	**-0.6**
DAVOX	**Davos/Dischmat**	**19.68**	**52**	LR			LR	09 37 34.6	
	comp=Z,379nm,18.1s,baz=261,slow=40								
DAVA	**Damuels**	**19.89**	**50**	*i* P			**Pn**	**09 29 00.6**	**+1.6**
	comp=Z,18nm,0.8s,SNR=5.6								
FETA	**Feichten**	**20.31**	**52**	*i* P			Pn	09 29 04.7	+0.7
	comp=Z,27nm,1.0s,SNR=6.9								
MURB	**Monte Urbino**	**20.47**	**63**	P			**P**	**09 29 04.3**	**+0.7**
RETA	**Reutte**	**20.52**	**51**	*e*P			Pn	09 29 06.4	+0.1
	comp=Z,13nm,0.9s								
CTI	**Castel Tesino**	**20.57**	**55**				Pn	09 29 06.3	-0.6
CTI					IAmb		IAmb	09 29 07.9	
	comp=Z,39nm,0.9s								
MOTA	**Moosalm**	**20.67**	**51**	*e*P			Pn	09 29 08.1	-0.1
	comp=Z,16nm,0.9s								
SQTA	**Sankt Quirin**	**20.69**	**52**	*e*P			Pn	09 29 08.7	+0.3
	comp=Z,27nm,1.1s								
TAM	**Tamanrasset**	**20.96**	**126**	P			**P**	**09 29 07.1**	**-2.1**
WATA	**Walderalm**	**20.97**	**52**	*i* P			Pn	09 29 11.3	-0.3
	comp=Z,60nm,1.2s,SNR=9.6								
WTTA	**Wattenberg**	**20.98**	**52**	*i* P			Pn	09 29 11.6	-0.2
	comp=Z,36nm,1.0s,SNR=9.0								
CIMO	**Cimolais**	**21.17**	**55**		IAmb		IAmb	09 29 17.4	
	comp=Z,30nm,1.3s								
STAL	**STALIGIAL**	**21.33**	**55**	P			**P**	**09 29 13.8**	**+0.9**
STAL					IAmb		IAmb	09 29 19.1	
	comp=Z,32nm,1.1s								
ABTA	**Abfaltersbach**	**21.36**	**54**	*i* P			**P**	**09 29 15.1**	**+1.9**
	comp=Z,8.8nm,0.8s								
CLUD	**Cludinico**	**21.51**	**55**		IAmb		IAmb	09 29 17.4	
	comp=Z,48nm,1.1s								
RAFF	**Raffo Rosso**	**21.68**	**80**	P			**P**	**09 29 17.3**	**+0.6**
PRED	**Cave del Predi**	**21.95**	**55**		IAmb		IAmb	09 29 22.7	
	comp=Z,43nm,1.3s								
KBA	**Koelnbreinsper**	**22.01**	**53**	*e*P			**P**	**09 29 22.2**	**+1.9**
	comp=Z,9.5nm,0.8s								
MYKA	**Terra Mystica**	**22.06**	**55**	*i* P			**P**	**09 29 22.3**	**+1.6**
	comp=Z,35nm,1.1s,SNR=8.3								
BBTS	**Babate**	**22.09**	**190**	LR			LR	09 38 04.7	
	comp=Z,267nm,18.2s,baz=20,slow=37								
BIOA	**Bad Ischl, Aus**	**22.40**	**52**	*i* P			**P**	**09 29 25.9**	**+1.6**
	comp=Z,40nm,1.3s								
OBKA	**Obir**	**22.62**	**55**	*e*P			**P**	**09 29 29.9**	**+3.1**
	comp=Z,12nm,0.8s								
CEL	**Celeste**	**22.79**	**77**		IAmb		IAmb	09 29 33.7	
	comp=Z,27nm,0.9s								
MOA	**Molln**	**22.85**	**52**	*i* P			**P**	**09 29 30.6**	**+1.5**
	comp=Z,16nm,1.0s,SNR=6.0								
GEC2	**GERESS Array S**	**22.86**	**49**		IAmb		IAmb	09 29 32.1	
	comp=Z,29nm,1.1s								
GERES	**GERESS Array B**	**22.86**	**49**	P			**P**	**09 29 30.6**	**+1.4**
	comp=Z,4.8nm,0.8s,baz=240,slow=7.5,SNR=34								
	comp=Z,4.8nm,0.8s								
KHC	**Kasperske Hory**	**22.89**	**49**	*e*P			**P**	**09 29 31.9**	**+2.3**
KHC				*ep*P			**pwP**	**09 29 35.5**	**-0.2**
KHC				*ex*			x	09 29 47.5	
KHC					AMS		AMS	09 39 50.0	
	comp=Z,300nm,17.2s								
SOKA	**Soboth**	**22.99**	**55**	*e*P			**P**	**09 29 32.4**	**+1.7**
	comp=Z,20nm,1.0s								
CKRC	**Cesky Krumlov**	**23.22**	**50**	*e*P			**P**	**09 29 33.9**	**+1.0**
MATE	**Matera**	**23.33**	**71**	⇑P			**P**	**09 29 33.6**	**-0.4**
KOWA	**Kowa**	**23.35**	**158**	P			**P**	**09 29 34.7**	**+0.3**
TIP	**Timpagrande**	**23.41**	**75**	⇑P			**P**	**09 29 35.1**	**+0.2**
TIP	**Timpagrande**	**23.41**	**75**	IAmb			IAmb	09 29 38.4	
	comp=Z,19nm,0.8s								
ARSA	**Arzberg**	**23.47**	**54**	*e*P			**P**	**09 29 35.9**	**+0.4**
	comp=Z,5.5nm,0.6s								
CLL	**Collm**	**23.52**	**43**	*i* P			**P**	**09 29 36.9**	**+1.1**
	comp=Z,4.0nm,1.0s								
PRU	**Pruhonice**	**23.81**	**47**	*e*P			**P**	**09 29 40.0**	**+1.3**
PRU					AMS		AMS	09 40 00.0	
	comp=Z,200nm,20.7s								
BRG	**Berggiesshubel**	**23.84**	**45**	*e*P			**P**	**09 29 41.0**	**+2.0**
BRG					Amp			09 29 43.6	
	comp=Z,5.2nm,0.9s								
BRG				*ex*			x	09 30 02.5	
BRG					Amp			09 30 05.6	
	comp=Z,10nm,1.2s								
BRG					Amp			09 38 03.0	
	comp=E,0.1nm,15.7s								
BRG					Amp			09 38 05.0	
	comp=N,0.4nm,17.4s								
BRG					Amp			09 38 06.0	
	comp=Z,0.1nm,13.6s								
CONA	**Conrad Observa**	**23.89**	**53**	*i* P			**P**	**09 29 40.0**	**+0.4**
	comp=Z,37nm,1.9s,SNR=11								
PVCC	**Panska Ves**	**24.05**	**46**	*e*P			**P**	**09 29 42.9**	**+1.9**
PVCC					AMS		AMS	09 40 10.0	
	comp=Z,200nm,13.8s								
RONA	**Rosalia, Austr**	**24.11**	**53**	*i* P			**P**	**09 29 42.0**	**+0.4**
	comp=Z,35nm,0.8s,SNR=12								
TREC	**Trest**	**24.11**	**49**	AMS			AMS	09 39 20.0	
	comp=Z,200nm,16.1s								
KRUC	**Moravsky**	**24.59**	**50**	*e*P			**P**	**09 29 45.8**	**-0.1**
ZST	**Bratislava**	**24.77**	**53**	*e*P			**P**	**09 29 48.9**	**+1.4**
MPLH	**Magyarpolny**	**24.78**	**55**	P			**P**	**09 29 49.1**	**+1.5**
VRAC	**Vranov**	**24.80**	**50**	⇑P			**P**	**09 29 49.3**	**+1.5**
VRAC	**Vranov**	**24.80**	**50**	LR			LR	09 39 03.4	
	comp=Z,155nm,18.7s,baz=254,slow=36								
VRAC	**Vranov**	**24.80**	**50**	*e*P			**P**	**09 29 48.3**	**+0.5**
UPC	**Upice**	**24.89**	**47**	AMS			AMS	09 40 30.0	
	comp=Z,200nm,14.1s								
KOVH	**Kovagotottos**	**24.91**	**58**	P			**P**	**09 29 49.8**	**+0.9**
MODS	**Modra-Piesok**	**24.93**	**52**	*e*P			**P**	**09 29 50.0**	**+1.0**
CHVC	**Chvalec**	**24.94**	**47**	*e*P			**P**	**09 29 52.1**	**+3.0**
DPC	**Dobruska-Polom**	**25.01**	**47**	*e*P			**P**	**09 29 50.3**	**+0.6**
DPC				*ep*P			**sP**	**09 29 52.3**	**-0.3**
DPC					AMS		AMS	09 41 00.0	
	comp=Z,200nm,11.9s								
OSTC	**Ostas**	**25.02**	**47**	*e*P			**P**	**09 29 52.6**	**+2.8**
OSTC					AMS		AMS	09 40 40.0	
	comp=Z,200nm,18.9s								
KRLC	**Kraliky**	**25.18**	**48**		AMS		AMS	09 41 10.0	
	comp=Z,300nm,14.1s								
KSP	**Ksiaz**	**25.18**	**46**	*e*P			**P**	**09 29 53.9**	**+2.6**
PDG	**Podgorica**	**25.29**	**67**	⇑P			**P**	**09 29 53.0**	**+0.7**
CSKK	**Cskako**	**25.30**	**55**	P			**P**	**09 29 53.9**	**+1.6**
MORH	**Mrgy, Hungar**	**25.31**	**58**	⇑P			**P**	**09 29 53.3**	**+0.8**
MORH	**Mrgy, Hungar**	**25.31**	**58**	P			**P**	**09 29 53.2**	**+0.8**
MORC	**Moravsky Berou**	**25.54**	**49**	⇑P			**P**	**09 29 57.4**	**+2.9**
OKC	**Ostrava-Krasne**	**25.93**	**50**	AMS			AMS	09 39 40.0	
	comp=Z,200nm,15.2s								
FRGS	**Fruska Gora**	**25.94**	**61**	⇓P			**P**	**09 30 00.7**	**+2.5**
DIVS	**Divibare**	**25.95**	**63**	IAmb			IAmb	09 30 02.1	
	comp=Z,19nm,0.8s								
VYHS	**Vyhne**	**25.96**	**53**	*e*P			**P**	**09 29 58.7**	**+0.3**
PSZ	**Piszkesteto**	**26.50**	**54**	⇑P			**P**	**09 30 05.1**	**+1.7**
PSZ	**Piszkesteto**	**26.50**	**54**	IAmb			IAmb	09 30 08.3	
	comp=Z,24nm,1.3s								
PSZ	**Piszkesteto**	**26.50**	**54**	P			**P**	**09 30 02.6**	**-0.8**
LANS	**Liptovska Anna**	**26.54**	**52**	*e*P			**P**	**09 30 06.2**	**+2.6**
TOA0	**Torodi Ar. Sit**	**26.71**	**147**	P			**P**	**09 30 08.1**	**+2.8**
TOA0					IAmb		IAmb	09 30 22.0	
	comp=Z,14nm,0.9s								
TORD	**Torodi Ar. Bea**	**26.71**	**147**	P			**P**	**09 30 09.5**	**+4.2**
	comp=Z,3.2nm,0.6s,baz=327,slow=10.0,SNR=19								
	comp=Z,3.2nm,0.6s								
TORD	**Torodi Ar. Bea**	**26.71**	**147**	IAmb			IAmb	09 30 44.6	
	comp=Z,21nm,0.8s								
NIE	**Niedzica**	**27.14**	**51**	*e*P			**P**	**09 30 10.9**	**+1.9**
BOVS	**Bovan**	**27.15**	**64**	⇑P			**P**	**09 30 10.6**	**+1.5**
MDVR	**Moldovita**	**27.24**	**62**	⇑P			**P**	**09 30 11.7**	**+1.7**
BZS	**Buzias**	**27.26**	**60**	⇑P			**P**	**09 30 12.0**	**+1.8**
SIRR	**Siria**	**27.38**	**59**	⇑P			**P**	**09 30 13.1**	**+1.9**
CRVS	**Cervenica-Dubn**	**27.75**	**53**	*e*P			**P**	**09 30 16.2**	**+1.8**
BLKB	**Belogradchik**	**27.85**	**64**	⇑P			**P**	**09 30 16.9**	**+1.4**
GZR	**Gura Zlata**	**28.05**	**61**	⇑P			**P**	**09 30 18.9**	**+1.6**
KKB	**Krupnik**	**28.13**	**68**	⇑P			**P**	**09 30 22.2**	**+4.2**
DRGR		**28.18**	**58**	⇑P			**P**	**09 30 20.2**	**+1.9**
VTS	**Vitosha**	**28.24**	**67**	⇑P			**P**	**09 30 21.5**	**+2.4**
VTS	**Vitosha**	**28.24**	**67**	IAmb			IAmb	09 30 24.6	
	comp=Z,16nm,0.9s								
VTS	**Vitosha**	**28.24**	**67**	P			**P**	**09 30 23.7**	**+4.6**
KOLS	**Kolonicke sedl**	**28.28**	**53**	*e*P			**P**	**09 30 20.8**	**+1.6**
MPEP	**Malo Peshtene**	**28.62**	**65**	P			**P**	**09 30 24.1**	**+1.8**
MMB	**Musomiste**	**28.62**	**69**	P			**P**	**09 30 26.4**	**+4.0**
BORG	**Borgarnes**	**28.66**	**352**	LR			LR	09 40 29.0	
	comp=Z,47nm,18.0s,baz=166,slow=34								
PGB	**Panagyurishte**	**28.93**	**67**	P			**P**	**09 30 27.4**	**+2.3**
ARR	**Arges**	**29.35**	**61**	⇑P			**P**	**09 30 31.1**	**+2.3**
VOIR		**29.65**	**61**	⇑P			**P**	**09 30 33.0**	**+1.5**
KDZ	**Kurdzhali**	**29.89**	**68**	P			P	09 30 39.3	+5.8
MLR	**Muntele Rosu**	**30.28**	**61**	⇑P			**P**	**09 30 39.0**	**+1.9**
DBIC	**Dimbokro**	**30.64**	**164**	P			**P**	**09 30 43.7**	**+3.3**
	comp=Z,4.0nm,0.7s,baz=17,slow=8.8,SNR=3.6								
DBIC					LR		LR	09 43 10.5	
	comp=Z,62nm,18.8s,baz=349,slow=36								
	comp=Z,4.0nm,0.7s								
JMB	**Yambol**	**30.72**	**67**	P			**P**	**09 30 40.1**	**-0.7**
AKASG	**Malin Array Be**	**33.03**	**51**	P			**P**	**09 31 01.6**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=272,slow=7.0,SNR=7.6								
AKASG					LR		LR	09 44 15.1	
	comp=Z,70nm,19.0s,baz=250,slow=36								
	comp=Z,1.1nm,0.7s								
AKBB	**Malin Array Si**	**33.03**	**51**	P			**P**	**09 31 01.2**	**+0.2**
AKBB					IAmb		IAmb	09 31 03.3	
	comp=Z,10nm,1.1s								
JMIC	**Jan Mayen**	**34.54**	**2**	LR			LR	09 42 35.5	
	comp=Z,57nm,20.8s,baz=239,slow=32								
FINES	**FINESS Array B**	**34.75**	**32**	P			**P**	**09 31 16.9**	**+1.1**
	comp=Z,5.2nm,0.6s,baz=245,slow=6.7,SNR=17								
FINES					LR		LR	09 45 22.0	
	comp=Z,66nm,18.3s,baz=236,slow=36								
	comp=Z,5.2nm,0.6s								
BR131	**Keskin Array S**	**36.32**	**71**	P			**P**	**09 31 31.2**	**+1.4**
BR131					IAmb		IAmb	09 31 32.9	
	comp=Z,18nm,1.4s								
BRTR	**Keskin Array B**	**36.32**	**71**	P			**P**	**09 31 31.9**	**+2.1**
	comp=Z,2.6nm,1.0s,baz=272,slow=8.3,SNR=13								
	comp=Z,2.6nm,1.0s								
BRTR	**Keskin Array B**	**36.32**	**71**	P			**P**	**09 31 30.6**	**+0.8**
SFJD	**Kangerlussuaq**	**37.30**	**337**	LR			LR	09 43 45.8	
	comp=Z,104nm,19.0s,baz=134,slow=31								
ARCES	**ARESS Array B**	**38.94**	**20**	P			**P**	**09 31 53.2**	**+1.7**
	comp=Z,3.2nm,0.5s,baz=233,slow=9.2,SNR=50								
ARCES					LR		LR	09 47 57.2	
	comp=Z,86nm,18.5s,baz=280,slow=36								
	comp=Z,3.2nm,0.5s								
KBZ	**Khabaz**	**42.45**	**62**	P			**P**	**09 32 23.5**	**+2.7**
	comp=Z,9.5nm,1.1s,baz=272,slow=5.3,SNR=12								
KBZ					LR		LR	09 51 01.6	
	comp=Z,43nm,19.2s,baz=248,slow=38								
	comp=Z,9.5nm,1.1s								
ONI	**Oni**	**43.06**	**64**	P			**P**	**09 32 27.5**	**+1.7**
GNI	**Garni**	**44.56**	**67**	LR			LR	09 52 16.8	
	comp=Z,46nm,20.5s,baz=322,slow=38								
ARU	**Arti**	**50.46**	**43**	LR			LR	09 55 07.2	
	comp=Z,47nm,18.1s,baz=272,slow=37								
MBAR	**Mbarara**	**54.73**	**123**	LR			LR	09 58 20.2	
	comp=Z,81nm,18.8s,baz=101,slow=37								
KMBO	**Kilima Mbogo**	**59.64**	**117**	LR			LR	10 01 52.4	
	comp=Z,83nm,18.2s,baz=90,slow=38								
KK31	**Karatay Array**	**61.77**	**56**	P			**P**	**09 34 45.5**	**+1.0**
KKAR	**Karatay Array**	**61.77**	**56**	P			**P**	**09 34 45.4**	**+0.8**
KKAR	**Karatay Array**	**61.77**	**56**	IAmb			IAmb	09 34 46.8	
	comp=Z,2.9nm,0.9s								
KURBB	**Kurchatov Arra**	**63.52**	**45**	LR			LR	10 04 16.9	
	comp=Z,45nm,18.4s,baz=276,slow=38								
LSZ	**Lusaka**	**64.46**	**135**	LR			LR	10 04 02.4	
	comp=Z,118nm,19.2s,baz=262,slow=37								
DGMT	**Dagmar**	**64.56**	**317**	P			**P**	**09 35 04.9**	**+1.9**
AAK	**Ala-Archa**	**64.61**	**55**	LR			LR	10 04 55.4	
	comp=Z,34nm,22.0s,baz=313,slow=38								
ZALV	**Zalesovo Beam**	**65.43**	**40**	P			**P**	**09 35 10.3**	**+1.9**
	comp=Z,1.0nm,0.4s,baz=305,slow=5.2,SNR=4.3								
ZALV					LR		LR	10 06 44.7	
	comp=Z,38nm,18.2s,baz=292,slow=39								
	comp=Z,1.0nm,0.4s								
KSH	**Kashi**	**67.06**	**57**	P			**P**	**09 35 22.1**	**+2.7**
KSH					pmax		pmax		
	comp=Z,13nm,1.1s								
MAKZ	**Makanchi**	**67.32**	**48**	P			**P**	**09 35 21.1**	**+0.3**
MAKZ					IAmb		IAmb	09 35 23.3	
	comp=Z,3.8nm,0.9s								
MK31	**Makanchi Array**	**67.52**	**48**	P			**P**	**09 35 22.9**	**+0.8**
MKAR	**Makanchi Array**	**67.52**	**48**	P			**P**	**09 35 23.8**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=297,slow=5.2,SNR=13								
MKAR					LR		LR	10 05 50.2	
	comp=Z,56nm,19.1s,baz=303,slow=37								
	comp=Z,1.9nm,0.7s								
MKAR	**Makanchi Array**	**67.52**	**48**	P			**P**	**09 35 22.9**	**+0.8**
PDAR	**Pinedale Array**	**70.64**	**309**	P			**P**	**09 35 43.4**	**+1.6**
	comp=Z,2.1nm,0.9s,baz=63,slow=6.4,SNR=5.1								
	comp=Z,2.1nm,0.9s								
DLMT	**Dillon**	**71.09**	**313**	IAmb			IAmb	09 36 08.3	
	comp=Z,8.4nm,1.1s								
LBTB	**Lobatse**	**71.16**	**143**	LR			LR	10 07 42.2	
	comp=Z,51nm,18.1s,baz=309,slow=36								
RDMU	**Red Mountain**	**71.83**	**307**	P			**P**	**09 35 51.7**	**+2.7**
RDMU					IAmb		IAmb	09 36 15.1	
	comp=Z,9.4nm,1.0s								
PRP	**Porcupine Dome**	**71.83**	**341**	P			**P**	**09 35 51.4**	**+3.0**
PRP					IAmb		IAmb	09 36 09.1	
	comp=Z,3.6nm,0.8s								
WMQ	**Urumqi**	**72.32**	**48**	*e*P			**P**	**09 35 55.1**	**+3.4**
WMQ					LR		LR		
	comp=N,350nm,18.3s								
WMQ					LR		LR		
	comp=E,270nm,19.9s								
HWUT	**Hardware Ranch**	**72.52**	**309**	P			**P**	**09 35 55.0**	**+1.9**
HWUT					IAmb		IAmb	09 36 14.3	
	comp=Z,8.0nm,0.8s								
ILAR	**Eielson Array**	**72.78**	**341**	P			**P**	**09 35 56.4**	**+2.4**
	comp=Z,0.5nm,0.7s,baz=20,slow=5.5,SNR=5.2								
	comp=Z,0.5nm,0.7s								
L26K	**Log Cabin Wild**	**73.18**	**339**	IAmb			IAmb	09 36 19.8	
	comp=Z,4.7nm,0.8s								
SRU	**San Rafael Swe**	**73.24**	**306**	IAmb			IAmb	09 36 21.5	
	comp=Z,4.1nm,0.7s								
WRH	**Wood River Hil**	**73.33**	**341**	P			**P**	**09 35 58.8**	**+1.6**
WRH					IAmb		IAmb	09 36 17.2	
	comp=Z,3.9nm,0.8s								
CMIG	**Matias Romero**	**73.80**	**279**	LR			LR	10 01 17.9	
	comp=Z,42nm,21.7s,baz=47,slow=30								
BOSA	**Boshof**	**74.06**	**146**	LR			LR	10 09 47.7	
	comp=Z,57nm,18.4s,baz=12,slow=37								
KTH	**Kantishna Hill**	**74.80**	**342**	P			**P**	**09 36 07.0**	**+1.1**
KTH					IAmb		IAmb	09 36 25.4	
	comp=Z,6.4nm,0.8s								
J08A	**Circle Bar Ran**	**75.69**	**314**		IAmb		IAmb	09 36 15.3	
	comp=Z,6.2nm,0.8s								
SONM	**Songino Array**	**79.96**	**37**	LR			LR	10 15 13.9	
	comp=Z,83nm,18.6s,baz=338,slow=38								
PFO	**Pinyon Flats O**	**80.33**	**305**	LR			LR	10 11 16.1	
	comp=Z,50nm,18.6s,baz=70,slow=35								
GOMU	**GeErMu**	**81.24**	**51**	P			**P**	**09 36 45.2**	**+2.6**
GOMU					pP		PcP	09 36 49.1	+0.3
GOMU					sP		pwP	09 36 51.4	+1.9
GOMU					pmax		pmax		
	comp=Z,4.0nm,0.4s								
GOMU					pmax		pmax		
	comp=Z,54nm,5.8s								
GOMU					LR		LR		
	comp=N,92nm,16.9s								
GOMU					LR		LR		
	comp=E,140nm,19.0s								
LZH	**Lanzhou**	**86.79**	**46**	*e*P			**P**	**09 37 10.5**	**-0.1**
LZH					pP		pwP	09 37 18.5	+1.5
LZH					pmax		pmax		
	comp=Z,20nm,1.4s								
HHC	**Hu-ho-hao-te**	**87.58**	**39**	*e*P			**P**	**09 37 15.0**	**+0.7**
HHC					pmax		pmax		
	comp=Z,24nm,0.7s								
HHC					pmax		pmax		
	comp=Z,110nm,4.8s								
PZH	**PanZhiHua**	**92.05**	**55**	P			**P**	**09 37 37.8**	**+2.3**
PZH					pmax		pmax		
	comp=Z,20nm,0.5s								
PZH					pmax		pmax		
	comp=Z,80nm,4.6s								
NJ2	**Nanjing**	**98.08**	**40**	*e*P			**P**	**09 38 02.3**	**-0.5**
NJ2					pmax		pmax		
	comp=Z,9.0nm,0.5s								
WRA	**Warramunga Arr**	**146.83**	**69**	PKPbc			**PKPab**	**09 44 10.1**	**+0.2**
	comp=Z,3.4nm,1.0s,baz=319,slow=2.8,SNR=9.3								
ASAR	**Alice Springs**	**148.59**	**75**	PKPbc			**PKiKP**	**09 44 14.8**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=321,slow=2.4,SNR=6.6					

COVM eS Sn 09 30 48.1 +4.1
XCVM Xochimilco 4.19 75 eP Pn 09 29 59.9 +4.0
XCVM eS Sb 09 30 50.9 -5.7
GMVM Gustavo A Made 4.26 72 eP Pn 09 30 00.0 +3.2
GMVM eS Sn 09 30 48.3 +2.3
CRIG Cruz Grande 4.34 109 Pn 09 29 58.7 +1.1
CRIG Cruz Grande 4.34 109 eP Pn 09 29 58.7 +1.1
CRIG eS Sb 09 30 56.5 -4.0
THVM De Xico 4.34 75 eP Pn 09 30 02.5 +4.6
THVM eS Sn 09 30 50.7 +2.8
TXVM Universitario 4.42 73 eP Pb 09 30 09.0 -1.1
TXVM eS Sn 09 30 51.0 +1.1
ZAIG Zacatecas 4.60 10 Pn Pn 09 30 03.4 +1.9
PPM Popocatepetl 4.61 79 eP Pn 09 30 05.7 +3.9
PPM eS Sn 09 30 55.6 +0.7
TLIG Tlapa 4.65 97 Pn 09 30 03.8 +1.7
TLIG Tlapa 4.65 97 eP Pn 09 30 03.6 +1.6
TLIG eS Sn 09 30 52.4 -3.1
FTIG Fresnillo de T 5.03 93 eP Pn 09 30 07.1 0.0
FTIG eS Sb 09 31 13.0 -7.4
PNIG Pinotepa 5.36 109 Pn 09 30 12.4 +0.8
PNIG Pinotepa 5.36 109 eP Pn 09 30 12.4 +0.8
PNIG eS Sb 09 31 23.4 -6.5
TPIG Tehuac#an 5.74 87 Pn 09 30 19.0 +1.9
TPIG Sn 09 31 24.2 +1.7
TPIG Tehuac#an 5.74 87 eP Pn 09 30 19.0 +1.9
TPIG eS Sn 09 31 24.2 +1.7
H06E1 SOCORRO T-PHAS 7.16 276 T T 09 37 52.9
SNR=116
H06S1 SOCORRO T 7.19 275 T T 09 37 59.1
SNR=12
H06N1 SOCORRO T-PHAS 7.22 276 T T 09 38 01.1
SNR=8.9
SLBS Sierra La Lagu 8.18 313 Pn Pn 09 30 53.6 +3.1
CMIG Matias Romero 8.20 97 P Pn 09 30 52.3 +1.6
0.8nm,0.3s,baz=254,slow=12,SNR=16
CMIG S Sn 09 32 23.8 +1.0
8.9nm,0.9s,baz=288,slow=18,SNR=1.3
2.7nm,0.5s
LPIG La Paz 8.70 313 LR LR 09 33 29.1
comp=Z,71nm,21.8s,baz=103,slow=31
833A Chaparral WMA, 10.71 19 P Pn 09 31 30.3 +5.2
baz=200
CCIG Comitan 10.94 98 Pn Pn 09 31 30.0 +1.6
TX31 Lajitas Ar. Si 11.07 359 Pn Pn 09 31 29.0 -1.1
TX32 Lajitas Array 11.07 359 Pn Pn 09 31 27.2 -2.9
TXAR Lajitas Array 11.07 359 P Pn 09 31 33.5 +3.4
0.2nm,0.3s,baz=177,slow=16,SNR=28
TXAR LR LR 09 36 24.4
comp=Z,238nm,19.1s,baz=173,slow=41
1.7nm,0.7s
TXAR Lajitas Array 11.07 359 Pn Pn 09 31 30.1 0.0
JCT Junction City 12.64 14 P Pn 09 31 56.2 +4.7
baz=196
MNTX Cornudas Mount 13.54 353 P Pn 09 32 07.2 +3.3
baz=172
435B Jarrell 13.58 22 P Pn 09 32 07.1 +2.8
baz=204
WHTX Lake Whitney, 14.73 20 P Pn 09 32 22.5 +2.5
baz=202
ABTX Abilene, Hawle 14.74 13 P Pn 09 32 21.6 +1.4
baz=194
121A Cookes Peak, D 14.79 345 P P 09 32 24.0 -2.8
baz=164
TUC Tucson 15.53 336 P P 09 32 34.6 -0.3
baz=153
NATX Nacogdoches 15.63 29 P P 09 32 35.6 -0.3
NATX Nacogdoches 15.63 29 P Pn 09 32 33.5 +1.5
baz=212
MSTX Muleshoe 15.70 2 IAmb IAmb 09 32 45.9
comp=Z,20nm,1.2s
MSTX Muleshoe 15.70 2 P P 09 32 35.0 -1.8
baz=182
SBM South Baldy 16.05 349 P Pn 09 32 36.6 -1.1
BNM Barren Site 16.13 350 P 09 32 41.0 -0.7
LENM Lemitar 16.20 349 P P 09 32 42.0 -0.4
342A Flagon Creek P 16.50 35 P 09 32 46.0 +0.5
LOOK Love County 16.67 18 P 09 32 46.9 -0.5
LOOK IAmb IAmb 09 32 59.8
comp=Z,12nm,0.7s
AMTX Amarillo 16.67 5 P 09 32 47.1 -0.5
AMTX Amarillo 16.67 5 P P 09 32 46.3 -1.2
baz=186
Z38A Mt. Pleasant 16.78 25 P 09 32 47.8 -0.8
Z38A IAmb IAmb 09 33 11.5
comp=Z,18nm,0.9s
ANMO Albuquerque 16.88 351 P Pn 09 32 48.7 +0.6
comp=Z,0.3nm,0.6s,baz=147,slow=17,SNR=2.1
ANMO LR LR 09 38 45.3
comp=Z,80nm,19.0s,baz=168,slow=35
ANMO Albuquerque 16.88 351 Pn 09 32 48.7 +0.6
ANMO Albuquerque 16.88 351 P P 09 32 50.4 +0.4
baz=170
WMOK Wichita Mounta 16.96 13 P Pn 09 32 48.7 -0.2
X37A Clayton 17.81 22 P P 09 32 59.5 -0.5
X37A IAmb IAmb 09 33 20.7
comp=Z,13nm,1.0s
MIAR Mount Ida 18.47 26 P P 09 33 05.8 -1.5
baz=210
OK030 Cody Creek RV 18.59 17 IAmb IAmb 09 33 29.4
comp=Z,11nm,1.1s
PDMCI Parker Dam,Lak 18.67 331 P Pn 09 33 10.1 +0.2
baz=147
OK034 N. Norfolk Rd. 18.69 17 IAmb IAmb 09 33 20.7
comp=Z,13nm,0.8s
MONP2 Monument Peak 18.72 324 P Pn 09 33 11.2 +0.4
baz=139
QUOK Quay 18.84 17 P P 09 33 11.1 -0.3
QUOK IAmb IAmb 09 33 13.4
comp=Z,9.7nm,0.9s
TUL1 Leonard 18.87 19 IAmb IAmb 09 33 24.0
comp=Z,24nm,0.9s
TUL1 Leonard 18.87 19 P P 09 33 10.9 -0.8
baz=203
T25A Trinidad 18.87 358 P P 09 33 11.8 -0.2
baz=177
IRM Iron Mountain 19.03 329 P Pn 09 33 14.7 +0.4
baz=144
PMD Palm Desert 19.26 325 IAmb IAmb 09 33 21.4
comp=Z,5.7nm,1.0s
TPFO Pinon Flats 19.27 325 P Pn 09 33 17.6 +0.2
baz=140
PFO Pinyon Flats O 19.28 325 P Pn 09 33 18.4 +0.9
comp=Z,0.1nm,0.3s,baz=158,slow=5.6,SNR=5.6
PFO LR LR 09 40 27.3
comp=Z,68nm,18.6s,baz=132,slow=36
comp=Z,2.3nm,0.8s
PFO Pinyon Flats O 19.28 325 P Pn 09 33 18.2 +0.7
PFO Pinyon Flats O 19.28 325 P Pn 09 33 17.3 -0.2
baz=140
BELC Belle Mtn. Jos 19.33 327 P Pn 09 33 18.1 0.0
baz=142
MVCO Mesa Verde 19.44 348 P Pn 09 33 19.5 0.0
MVCO Mesa Verde 19.44 348 P P 09 33 18.4 +0.2
baz=166
SDCO Great Sand Dun 19.54 355 P Pn 09 33 20.7 -0.1
SDCO Great Sand Dun 19.54 355 P Pn 09 33 22.1 +1.4
baz=174
T35A Sooner Cattle 19.59 17 IAmb IAmb 09 33 19.7
comp=Z,7.5nm,0.8s
BRAL Brewton 19.64 46 P Pn 09 33 22.8 +1.1
baz=232
WHAR Wooly Hollow 19.66 28 P P 09 33 19.3 -1.1
WHAR IAmb IAmb 09 33 21.4
comp=Z,14nm,0.9s
MURC Murrieta 19.68 324 P Pn 09 33 22.7 +0.6
baz=138
S22A 4UR Ranch, Cre 19.69 352 P Pn 09 33 21.8 -0.7
baz=170
GMRC Granite Mounta 19.78 329 P P 09 33 22.6 +0.7
baz=144
HHAR Hobbs 19.84 23 P P 09 33 19.9 -2.4
HHAR IAmb IAmb 09 33 32.4
comp=Z,5.9nm,0.8s
SCI2 San Clemente I 20.03 320 P P 09 33 25.3 +0.9
baz=134
HEC Hector,Ludlow 20.16 328 P Pn 09 33 27.0 -0.8
baz=142
FCAR Ozark Folk Cen 20.24 27 P P 09 33 25.7 -1.0
FCAR IAmb IAmb 09 33 35.6
comp=Z,12nm,0.7s
CIS Catalina Islan 20.24 321 P Pn 09 33 28.8 0.0
baz=135
Z47A Carrollton 20.30 40 P P 09 33 26.4 -0.9
Z47A IAmb IAmb 09 33 31.1
comp=Z,9.9nm,0.7s

BFSC Mount Baldy Ra 20.41 324 P Pn 09 33 30.6 -0.3
baz=138
TUQ Turquoise Moun 20.43 330 P Pn 09 33 31.4 +0.2
baz=144
OXF Oxford 20.47 35 P P 09 33 29.7 +0.5
baz=221
KNB Kanab 20.48 338 IAmb IAmb 09 34 08.6
comp=Z,8.2nm,1.3s
Q24A Divide 20.73 356 P Pn 09 33 34.3 -0.4
baz=175
KSCO Kaye Shedlock' 20.73 2 IAmb IAmb 09 33 36.2
comp=Z,9.2nm,1.0s
KSCO Kaye Shedlock' 20.73 2 P Pn 09 33 33.8 -0.8
baz=182
GSC Goldstone, Bar 20.76 328 IAmb IAmb 09 33 35.4
comp=Z,6.7nm,0.9s
GSC Goldstone, Bar 20.76 328 P P 09 33 33.3 +0.8
baz=142
LRAL Lakeview Retre 20.85 42 P P 09 33 31.4 -2.0
LRAL IAmb IAmb 09 33 32.8
comp=Z,11nm,1.1s
LRAL Lakeview Retre 20.85 42 P P 09 33 31.9 -1.5
baz=228
SHPR Sheep Range 20.96 333 P P 09 33 33.8 -1.0
SHOC Shoshone, Teco 20.98 330 P P 09 33 35.8 +1.1
baz=144
EDW2 Edwards Air Fo 21.07 325 P P 09 33 36.0 +0.2
MTPU Mount Pierson 21.19 341 IAmb IAmb 09 33 44.2
comp=Z,4.2nm,0.8s
MGMO Mountain Grove 21.25 25 P P 09 33 35.7 -1.9
CCAC Calif City Air 21.29 325 IAmb IAmb 09 33 47.7
comp=Z,9.0nm,0.8s
S39A Bolivar 21.32 22 IAmb IAmb 09 33 46.0
comp=Z,4.1nm,0.7s
LRMC Laurel Mtn Rad 21.35 326 P P 09 33 40.0 +1.1
baz=140
PLAL Pickwick Lake 21.56 36 P P 09 33 39.8 -1.1
PLAL IAmb IAmb 09 33 43.4
comp=Z,12nm,1.1s
ISCO Idaho Springs 21.59 355 P P 09 33 43.2 +1.6
baz=174
MPMC Manual Prospec 21.70 328 P P 09 33 43.3 +0.6
baz=142
X48A Hartselle 21.78 39 IAmb IAmb 09 33 43.6
comp=Z,12nm,0.9s
TPNV Topopah Spring 21.82 331 P P 09 33 45.2 +1.4
TPNV IAmb IAmb 09 33 47.2
comp=Z,5.4nm,0.8s
TPNV Topopah Spring 21.82 331 P P 09 33 45.8 +1.9
baz=146,SNR=9.0
ISA Isabella, Lake 21.91 325 P P 09 33 47.2 +2.3
baz=139
PKM Mcpherson Peak 22.11 322 P P 09 33 48.5 +1.5
baz=135
Z51A Franklin 22.21 44 IAmb IAmb 09 34 15.9
comp=Z,16nm,1.1s
O20A White River Ci 22.24 350 P P 09 33 48.2 -0.2
baz=168
R40A Maddies Statio 22.24 24 IAmb IAmb 09 33 56.0
comp=Z,5.6nm,0.8s
CWC Cottonwood Cre 22.30 327 P P 09 33 49.6 +0.6
baz=141
VES Vestal, Richgr 22.38 325 P P 09 33 51.9 +2.2
baz=138
CCM Cathedral Cave 22.45 26 P P 09 33 48.2 -2.3
CCM IAmb IAmb 09 33 56.8
comp=Z,6.7nm,0.8s
CCM Cathedral Cave 22.45 26 P P 09 33 48.2 -2.3
baz=211
WVT Waverly 22.54 35 P P 09 33 49.1 -2.4
WVT IAmb IAmb 09 34 06.9
comp=Z,11nm,1.3s
WVT Waverly 22.54 35 P P 09 33 49.0 -2.4
baz=221
R11A Troy Canyon, C 22.70 335 P P 09 33 54.0 +0.6
baz=149
N23A Red Feather La 22.71 355 P P 09 33 53.7 +0.2
baz=174
FVM French Village 22.73 27 IAmb IAmb 09 34 00.5
comp=Z,5.1nm,0.7s
TPH Tonopah 23.18 331 IAmb IAmb 09 34 00.6
comp=Z,14nm,1.0s
P40A Paris 23.41 23 IAmb IAmb 09 34 07.2
comp=Z,8.8nm,0.7s
GOGA Godfrey 23.41 46 P P 09 33 58.3 -2.2
GOGA IAmb IAmb 09 34 32.6
comp=Z,12nm,1.2s
GOGA Godfrey 23.41 46 P P 09 33 57.9 -2.6
baz=234
OMMB Old Mammoth Mi 23.67 328 P P 09 34 04.5 +1.2
MDPB Devils Postpil 23.72 328 IAmb IAmb 09 34 06.2
comp=Z,4.5nm,0.9s
NV11 Mina Array Sit 23.90 330 IAmb IAmb 09 34 07.7
comp=Z,6.3nm,1.2s
NVAR Mina Array Bea 23.97 330 P P 09 34 08.1 +2.0
comp=Z,1.4nm,0.6s,baz=152,slow=11,SNR=21
comp=Z,1.4nm,0.6s
CPCT Cooper Cave 23.98 41 IAmb IAmb 09 34 04.6
comp=Z,6.3nm,0.6s
KVN Kaiserville 24.37 331 IAmb IAmb 09 34 13.1
comp=Z,6.1nm,0.9s
TKL Tuckaleechee C 24.58 41 P P 09 34 09.9 -1.6
comp=Z,9.9nm,0.8s,baz=201,slow=12,SNR=16
comp=Z,9.9nm,0.8s
ELK Elko 24.65 338 P P 09 34 14.5 +2.2
comp=Z,0.9nm,0.8s,baz=138,slow=4.6,SNR=4.9
comp=Z,0.9nm,0.8s
BG3 Lake Jocassee 24.70 43 P P 09 34 10.7 -1.9
V52A Sevierville 24.81 41 IAmb IAmb 09 34 12.9
comp=Z,6.6nm,0.8s
T50A Nancy 24.85 37 IAmb IAmb 09 34 13.2
comp=Z,8.3nm,0.8s
PDAR Pinedale Array 25.02 349 P P 09 34 14.7 -1.0
comp=Z,1.2nm,0.8s,baz=160,slow=9.3,SNR=7.8
comp=Z,1.2nm,0.8s
BW06 Boulder Array 25.02 349 P P 09 34 14.5 -1.2
baz=166
PNTR Pine Nut 25.11 329 IAmb IAmb 09 34 19.1
comp=Z,5.4nm,1.0s
V53A Saluda 25.19 42 IAmb IAmb 09 34 33.2
comp=Z,8.1nm,0.8s
TZTN Tazewell 25.29 40 P P 09 34 16.0 -1.8
baz=229
LOHW Long Hollow 26.04 348 IAmb IAmb 09 34 27.4
comp=Z,2.3nm,0.8s
BEKR Beckworth 26.08 329 IAmb IAmb 09 34 36.3
comp=Z,4.0nm,1.2s
P49A Miami Univ. Ec 26.71 33 IAmb IAmb 09 34 29.4
comp=Z,9.9nm,0.9s
P49A Miami Univ. Ec 26.71 33 P P 09 34 28.0 -2.6
baz=222
O48B Farmland 27.02 32 P P 09 34 31.4 -2.1
baz=221
BOZ Bozeman (W) 28.15 348 P P 09 34 42.9 -0.7
baz=163
DGMT Dagmar 30.18 359 P P 09 35 03.1 +1.5
baz=178
WRAK Wrangell Islan 43.90 337 P P 09 36 58.3 +0.6
baz=139
DLBC Dease Lake 44.67 340 P P 09 37 04.4 +0.4
baz=143
R33M Jennings River 45.72 341 P P 09 37 13.2 +0.8
baz=142
P33M Teslin, Yukon 46.95 340 P P 09 37 22.7 +0.7
baz=140
SKAG Skagway 47.22 338 P P 09 37 24.5 +0.5
baz=137
P30M Million Dollar 48.27 338 P P 09 37 31.9 -0.3
baz=135
O30N Mendenhall 48.44 339 P P 09 37 34.2 +0.7
baz=137
N31M Braeburn, Yuko 48.87 340 P P 09 37 36.0 -0.7
baz=138
HYT Haines Junctio 48.96 339 P P 09 37 37.2 -0.5
baz=135
M31M Drury Creek, Y 48.97 341 P P 09 37 37.5 0.0
baz=140
O29M Mount Kennedy 48.98 338 P P 09 37 38.6 +0.9
baz=134
N30M Aishikik Lake 49.28 339 P P 09 37 40.2 +0.3
baz=136
PINM Pinnacle 49.46 337 P P 09 37 41.6 +0.3
baz=132
YUK4 Talbot Arm 49.73 339 P P 09 37 43.8 +0.3
baz=134
O28M Mount Upton 49.88 337 P P 09 37 46.6 +1.8
baz=132

M29M Somme Creek 50.44 340 P P 09 37 50.0 +1.2
baz=135
YUK3 Moose Creek 50.66 338 P P 09 37 51.3 +0.8
baz=132
CRQE Cirque 50.96 336 P P 09 37 53.6 +0.9
baz=129
BVCY Beaver Creek 51.23 339 P P 09 37 55.2 +0.6
baz=132
M27K Edge Creek, AK 51.54 338 P P 09 37 56.9 -0.2
baz=131
BMRM Bremner River 51.68 336 P P 09 37 59.1 +1.1
baz=127
EYAK Cordova Ski Ar 51.88 335 P P 09 37 59.9 +0.4
baz=126
DAWY Dawson 51.88 341 P P 09 37 58.4 -1.2
baz=135
M26K Nabesna, AK 51.97 338 P P 09 38 01.2 +1.0
baz=130
L27K Beaver Creek, 51.99 339 P P 09 38 00.6 +0.2
baz=132
N25K Chitina, Valde 52.06 336 P P 09 38 01.2 +0.2
baz=128
P23K Montague Islan 52.25 334 P P 09 38 01.6 -0.6
baz=124
I29M Ogilvie Camp, 52.49 342 P P 09 38 03.5 -0.5
baz=137
L26K Log Cabin Wild 52.49 338 P P 09 38 04.0 -0.1
baz=130
GLI Glacier Island 52.61 335 P P 09 38 04.6 -0.4
baz=124
C36M Paulatuk 52.70 351 P P 09 38 06.3 +0.9
baz=155
K27K Chicken 52.72 340 P P 09 38 06.3 +0.6
baz=132
HARP HAARP 52.75 337 P P 09 38 05.9 -0.1
baz=128
EPYK Eagle Plains 52.80 344 P P 09 38 06.1 -0.2
baz=139
EGAK Eagle 52.93 341 P P 09 38 08.2 +0.9
baz=133,SNR=7.3
M24K Tolsona, Glenn 52.96 336 P P 09 38 08.1 +0.6
baz=126
PWL Port Wells 53.11 334 P P 09 38 08.6 0.0
baz=123
SEW Seward 53.17 333 P P 09 38 10.1 +1.1
baz=121
PAX Paxson 53.22 338 P P 09 38 10.0 +0.5
baz=128,SNR=7.9
SCM Sheep Creek Mo 53.25 336 P P 09 38 09.6 -0.2
baz=125
SCRK Sand Creek 53.32 339 P P 09 38 10.4 +0.1
baz=130
M23K Glacier View 53.38 336 P P 09 38 11.1 +0.4
baz=124
KNK Knik Glacier 53.46 335 P P 09 38 12.2 +1.0
baz=123
RIDG Independent Ri 53.47 339 P P 09 38 12.2 +1.0
baz=129,SNR=18
J26L Joseph Creek 53.52 340 P P 09 38 13.1 +1.4
baz=130,SNR=10
INK Inuvik 53.55 347 P P 09 38 11.3 -0.4
comp=Z,5.2nm,0.9s,baz=173,slow=3.6,SNR=4.4
comp=Z,5.2nm,0.9s
INK Inuvik 53.55 347 P P 09 38 11.2 -0.5
baz=144
OHAK Old Harbor 53.57 329 P P 09 38 12.8 +0.8
baz=116
SML Sawmill 53.63 335 P P 09 38 12.0 -0.5
baz=124
I27K Kandik River 53.64 341 P P 09 38 12.6 +0.1
baz=133
RC01 Rabbit Creek A 53.81 334 P P 09 38 13.4 -0.4
baz=122
PMR Palmer 53.83 335 P P 09 38 14.2 +0.3
baz=123
WAT6 Susitna Watana 53.83 336 P P 09 38 14.2 +0.1
baz=125,SNR=6.2
K24K Donnelly Dome 53.84 338 P P 09 38 14.1 +0.2
baz=128,SNR=5.2
I26K Coal Creek Min 53.91 341 P P 09 38 14.7 +0.2
baz=131
DHY Denali Highway 53.98 337 P P 09 38 14.9 -0.3
baz=125
H27K Steamboat Moun 54.05 342 P P 09 38 15.6 +0.1
baz=134
CHIR Chirikof Islan 54.19 327 P P 09 38 16.7 +0.1
baz=112
J25K Salcha River, 54.19 339 P P 09 38 17.1 +0.5
baz=128
M22K Willow 54.31 335 P P 09 38 17.7 +0.3
baz=122
SUA Susitna One 54.42 334 P P 09 38 19.2 +0.8
baz=121
G27K Doyon Strip 54.48 342 P P 09 38 20.4 +1.8
baz=134,SNR=12
HDA Harding Lake 54.61 338 P P 09 38 20.4 +0.9
baz=127
P19K Oil Pt 54.62 332 P P 09 38 20.3 +0.6
baz=117
CUT Chulitna 54.72 335 P P 09 38 19.2 -1.1
baz=122
ILAR Eielson Array 54.81 339 P P 09 38 21.5 +0.5
comp=Z,3.9nm,0.8s,baz=147,slow=6.2,SNR=34
ILAR PcP PcP 09 39 23.9 +0.8
comp=Z,0.3nm,0.6s,baz=134,slow=3.0,SNR=4.2
comp=Z,3.9nm,0.8s
PRP Porcupine Dome 54.81 340 P P 09 38 21.6 +0.4
baz=129,SNR=18
SPCR Spurr Chakacha 54.90 334 P P 09 38 21.6 -0.2
baz=119
MCK McKinley 54.93 337 P P 09 38 21.8 -0.1
baz=124
G26K Porcupine Rive 55.20 342 P P 09 38 23.6 -0.2
baz=132,SNR=5.5
COLA College 55.20 339 P P 09 38 24.7 +1.0
baz=126
TCOL CIGO, UAF Yank 55.20 339 P P 09 38 24.7 +0.9
baz=126
R17K Ugashik Creek 55.27 328 P P 09 38 24.8 +0.4
baz=113
TRF Thorofare Moun 55.28 336 P P 09 38 24.9 +0.3
baz=122,SNR=19
H25K Birch Creek 55.38 341 P P 09 38 25.9 +0.9
baz=129
E27K Coleen River 55.43 344 P P 09 38 25.8 +0.4
baz=135
NEA2 Nenana 55.47 338 P P 09 38 25.6 -0.2
baz=124
O18K Koktuh Hills 55.60 331 P P 09 38 26.7 -0.1
baz=115
M20K Styx River 55.62 334 P P 09 38 27.2 +0.2
baz=119,SNR=6.8
N19K Bonanza Creek 55.70 333 P P 09 38 27.8 +0.2
baz=117,SNR=8.0
PPLA Purkeypile 55.73 335 P P 09 38 28.6 +0.7
baz=120
G25K Bearman Lake 55.78 341 P P 09 38 28.8 +0.9
baz=129,SNR=14
H24K Noodor Dome 55.78 340 P P 09 38 28.7 +0.7
baz=126,SNR=15
F26K Sheenjek River 55.80 342 P P 09 38 28.5 +0.4
baz=132,SNR=9.6
I23K Minto, Yukon-K 55.88 338 P P 09 38 28.5 -0.1
baz=124,SNR=6.6
BPAW Bear Paw Mtn. 55.89 337 P P 09 38 28.3 -0.5
baz=122
CAST Castle Rocks 55.95 336 P P 09 38 28.8 -0.5
baz=121,SNR=12
M19K Big River Lodg 56.15 334 P P 09 38 30.9 +0.2
baz=117
F25K Christian Rive 56.17 342 P P 09 38 30.8 0.0
baz=130,SNR=7.9
G24K Hadweenzic Riv 56.17 341 P P 09 38 31.3 +0.6
baz=127,SNR=18
L20K Farewell, AK 56.21 334 P P 09 38 30.9 -0.2
baz=118,SNR=9.3
N18K Kilae Creek 56.26 332 P P 09 38 31.7 +0.2
baz=115,SNR=8.8
CHUM Lake Minchumin 56.28 336 P P 09 38 31.1 -0.4
baz=121
MLY Manley 56.30 338 P P 09 38 32.0 +0.2
baz=123,SNR=9.7
H23K Yukon River 56.33 339 P P 09 38 31.9 0.0
baz=125,SNR=6.0
H03N2 Juan Fernandez 56.43 155 T T 10 39 27.9
baz=333,slow=77,SNR=450
H03N1 Juan Fernandez 56.44 155 T T 10 39 29.1
baz=333,slow=77,SNR=504
O17K Koliganek Bris 56.44 331 P P 09 38 33.0 +0.2

baz=113,SNR=5.1
H03N3 Juan Fernandez 56.45 155 T T 10 39 28.1
baz=333,slow=77,SNR=397
L19K White Mountain 56.48 334 P P 09 38 32.5 -0.5
baz=117,SNR=8.6
E25K Arctic Village 56.48 342 P P 09 38 33.5 +0.5
baz=130
K20K Telida 56.70 335 P P 09 38 34.5 -0.1
baz=118,SNR=6.3
F24K Squaw Lake 56.80 341 P P 09 38 34.9 -0.3
baz=127
I21K Tanana 56.83 338 P P 09 38 35.9 +0.5
baz=122,SNR=9.1
O16K Kokwok River B 56.84 330 P P 09 38 35.9 +0.3
baz=112
C27K Jago River 56.98 344 P P 09 38 36.5 +0.1
baz=133
G23K Bananza Creek 57.00 340 P P 09 38 37.1 +0.5
baz=125,SNR=9.4
H22K Ishtalitna Cre 57.00 339 P P 09 38 36.5 -0.2
baz=123,SNR=9.8
J20K Nowinta River 57.13 336 P P 09 38 37.4 -0.2
baz=119,SNR=11
TTA Tatalina 57.29 334 P P 09 38 38.4 -0.5
baz=116,SNR=8.2
E24K Your Creek 57.31 342 P P 09 38 39.3 +0.4
baz=127
H21K Melozitna Rive 57.37 338 P P 09 38 39.4 +0.1
baz=121,SNR=11
N16K Nishlik Lake 57.48 331 P P 09 38 41.1 +0.9
baz=112
D25K Kavik River 57.49 343 P P 09 38 40.9 +0.8
baz=130
TOLK Toolik Lake Re 57.98 342 P P 09 38 44.2 +0.7
baz=126
G21K Allakaket 58.06 339 P P 09 38 44.1 0.0
baz=121
D24K Happy Valley 58.06 343 P P 09 38 43.8 -0.3
baz=127
F22K John River 58.14 340 P P 09 38 45.9 +1.3
baz=123
C24K Franklin Bluff 58.38 343 P P 09 38 45.6 -0.6
baz=128
F21K Alatna River 58.42 339 P P 09 38 47.2 +0.6
baz=121,SNR=7.9
GCSA Galena City Sc 58.44 336 P P 09 38 46.9 +0.2
baz=116
D23K Nanushuk River 58.49 342 P P 09 38 48.2 +1.1
baz=125
C23K Itkillik River 58.98 343 P P 09 38 50.5 +0.1
baz=126
SEY Seymchan 80.24 333 P P 09 41 02.5 +0.9
comp=Z,1.7nm,0.7s,baz=129,slow=8.7,SNR=3.8
comp=Z,1.7nm,0.7s
ARCES ARCESS Array B 85.36 16 P P 09 41 27.8 -0.4
comp=Z,3.9nm,0.9s,baz=319,slow=6.2,SNR=5.3
comp=Z,3.9nm,0.9s
NOA NORSAR Array B 85.48 26 P P 09 41 29.7 +0.7
comp=Z,0.4nm,0.5s,baz=309,slow=5.5,SNR=3.6
comp=Z,0.4nm,0.5s
ESDC Sonseca Array 85.57 50 P P 09 41 30.7 +0.8
comp=Z,1.7nm,0.9s,baz=299,slow=5.5,SNR=6.8
comp=Z,1.7nm,0.9s

UPA ***11*** *09:32:40.7±0.6,8.34N×82.95W,h7km±1km,MW3.4*
UCR ***11*** *09:32:40.6±1.6,8.33N×83.02W,h5km,MW3.6*
ISC 11 09:32:40.6±1.3,**8.31N**±0.05×**83.00W**±0.03,**h15**km±6km,
n46,σ1°19/68,3C-9D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCOL	**Caracol de Cor**	**0.10**	**12**	*iP*	**Pg**	**09 32 43.5**	**-0.4**
CCOL				*eS*	**Sg**	**09 32 47.2**	**+1.1**
CDITO	**Canoas**	**0.29**	**25**	*iP*	**Pg**	**09 32 46.4**	**-0.4**
CDITO				*eS*	**Sb**	**09 32 51.9**	**-0.3**
CDITO	**Canoas**	**0.29**	**25**	*iP*	**Pg**	**09 32 46.4**	**-0.4**
CDITO				*eS*	**Sg**	**09 32 50.5**	**-0.5**
PTJ1	**Puerto Jimnez**	**0.38**	**307**	*eP*	**Pg**	**09 32 47.7**	**-0.6**
EDSV	**San Vito**	**0.51**	**3**	*iP*	**Pg**	**09 32 50.3**	**-0.5**
EDSV				*eS*	**Sb**	**09 32 59.6**	**+0.9**
MLIR3	**Monte Lirio, C**	**0.51**	**19**	*eP*	**Pg**	**09 32 50.0**	**-0.8**
MLIR3				*eS*	**Sb**	**09 32 58.3**	**-0.4**
DVD	**David**	**0.56**	**76**	*eP*	**Pg**	**09 32 51.3**	**-0.2**
DVD				*eS*	**Sg**	**09 32 58.6**	**-0.4**
BRU2	**Volcan**	**0.57**	**32**	*iP*	**Pg**	**09 32 51.6**	**-0.3**
BRU2				*eS*	**Sb**	**09 33 00.8**	**+0.4**
BRU2	**Volcan**	**0.57**	**32**	*iP*	**Pg**	**09 32 51.6**	**-0.3**
BRU2				*eS*	**Sb**	**09 33 00.6**	**+0.2**
BCO2	**Palmira**	**0.62**	**48**	*eP*	**Pg**	**09 32 52.5**	**-0.3**
BCO2				*eS*	**Sb**	**09 33 01.5**	**-0.3**
CHIR3	**Chiriqui UPA,**	**0.67**	**82**	*eP*	**Pg**	**09 32 53.0**	**-0.6**
CHIR3				*eS*	**Sb**	**09 33 02.8**	**-0.2**
LNBQ3	**Los Naranjos,**	**0.73**	**49**	*eP*	**Pg**	**09 32 54.4**	**-0.5**
LNBQ3				*eS*	**Sb**	**09 33 04.7**	**-0.3**
POTG	**Potrero Grande**	**0.75**	**351**	*iP*	**Pg**	**09 32 54.2**	**-1.1**
POTG				*eS*	**Sb**	**09 33 05.5**	**0.0**
EDPN	**Palmar Norte**	**0.80**	**325**	*eP*	**Pg**	**09 32 54.3**	**-1.8**
EDPN				*eS*	**Sg**	**09 33 06.1**	**-0.6**
EDBA	**Buenos Aires**	**0.90**	**342**	*eP*	**Pg**	**09 32 56.9**	**-1.1**
DRK0	**Durika**	**0.98**	**346**	*eP*	**Pg**	**09 32 58.9**	**-0.8**
DRK0	**Durika**	**0.98**	**346**	*eP*	**Pg**	**09 32 58.9**	**-0.8**
DRK0				*eS*	**Sb**	**09 33 13.2**	**+0.9**
SRBA	**San Rafael, Bu**	**0.99**	**339**	*eP*	**Pg**	**09 32 57.8**	**-2.0**
SRBA				*eS*	**Sb**	**09 33 13.6**	**+1.1**
REME3	**Remedios, Chir**	**1.15**	**94**	*eP*	**Pg**	**09 33 01.3**	**-1.5**
REME3				*eS*	**Sg**	**09 33 16.6**	**-1.4**
CNI2	**El Empalme, Bo**	**1.23**	**25**	*eP*	**Pg**	**09 33 02.1**	**-2.2**
CNI2				*eS*	**Sg**	**09 33 17.6**	**-2.7**
PEZE	**Perez Zeledon,**	**1.27**	**328**	*eP*	**Pg**	**09 33 02.5**	**-2.6**
EDDO	**Dominical**	**1.27**	**318**	*eP*	**Pg**	**09 33 03.0**	**-2.2**
EDDO				*eS*	**Sn**	**09 33 21.9**	**+1.3**
CDM	**Cerro de Muert**	**1.45**	**329**	*eP*	**Pn**	**09 33 05.7**	**-1.0**
CDM				*eS*	**Sb**	**09 33 26.2**	**+0.1**
MRVA	**Moravia de Chi**	**1.57**	**344**	*iP*	**Pn**	**09 33 07.7**	**-0.4**
MRVA				*eS*	**Sg**	**09 33 30.3**	**-1.1**
RIMA	**Rio Macho**	**1.69**	**330**	*eP*	**Pn**	**09 33 09.2**	**-0.5**
LCR2	**La Lucha 2**	**1.74**	**325**	*eP*	**Pn**	**09 33 11.3**	**+0.8**
RAFA	**San Farael, Vo**	**1.83**	**334**	*eP*	**Pn**	**09 33 11.9**	**+0.1**
OCM	**Ochomogo**	**1.84**	**329**	*eP*	**Pn**	**09 33 12.0**	**+0.1**
CVTR	**Volcan Turrial**	**1.86**	**336**	*eP*	**Pn**	**09 33 12.6**	**+0.2**
VTUN	**Crater Central**	**1.87**	**336**	*eP*	**Pn**	**09 33 13.4**	**+1.0**
HDC3	**Heredia 3**	**2.01**	**327**	*eP*	**Pn**	**09 33 14.9**	**+0.7**
HDC	**Heredia**	**2.02**	**327**	*eP*	**Pn**	**09 33 15.3**	**+1.1**
HDC	**Heredia**	**2.02**	**327**	*eP*	**Pn**	**09 33 15.1**	**+0.9**
HDC				*eS*	**Sn**	**09 33 41.0**	**+1.8**
JACO	**JACO, Garabito**	**2.13**	**310**	*eP*	**Pn**	**09 33 14.8**	**-0.8**
SRA1	**San Ramn**	**2.30**	**320**	*eP*	**Pn**	**09 33 20.6**	**+2.5**
LAFE	**Finca La Fe, P**	**2.41**	**308**	*eP*	**Pn**	**09 33 19.5**	**0.0**
ARE1	**Arenal 1**	**2.73**	**322**	*eP*	**Pn**	**09 33 25.9**	**+1.9**
JTS	**Las Juntas de**	**2.76**	**316**	*eP*	**Pn**	**09 33 26.1**	**+1.7**
JTS	**Las Juntas de**	**2.76**	**316**	*eP*	**Pn**	**09 33 25.8**	**+1.4**
JTS				*eS*	**Sn**	**09 33 59.3**	**+1.9**
DUNO	**Dulce Nombre,**	**3.03**	**306**	*eP*	**Pn**	**09 33 28.4**	**+0.4**
GRZA	**Playa Garza**	**3.06**	**302**	*eP*	**Pn**	**09 33 28.4**	**0.0**
PLVR	**Palo Verde**	**3.09**	**311**	*eP*	**Pn**	**09 33 28.8**	**-0.2**
CUI	**Cuipilapa**	**3.17**	**318**	*eP*	**Pn**	**09 33 32.0**	**+2.0**
ORTG	**Ortega, Santa**	**3.18**	**310**	*eP*	**Pn**	**09 33 30.9**	**+0.8**
VMAR	**Armenia, Volca**	**3.26**	**320**	*eP*	**Pn**	**09 33 33.2**	**+2.1**
BUEV	**Buena Vista**	**3.43**	**316**	*eP*	**Pn**	**09 33 35.5**	**+1.8**

IDC ***11*** *09:36:41.3±3.5,23.46S×179.80W,h496km±39km,mb3.6/6, mbtmp4.5/7,Error ellipse: s-maj=62.5km s-min=19.7km az=152.0*
NEIC ***11*** *09:36:42.7±1.1,23.6S±0.1×179.6W±0.2,h528km±13km, mb4.5/29,Error ellipse: s-maj=21.5km s-min=19.9km az=176.0*
ISC 11 09:36:43.4±0.6,**23.5S**±0.1×**179.70W**±0.10,**h536**km,**n45,**
σ1°07/44,mb4.4/18,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**10.12**	**66**	P	**P**	**09 39 00.8**	**-1.7**
MARNC	**Mare, Loyalty**	**11.53**	**278**	P	**P**	**09 39 16.8**	**-0.3**
AFI	**Afiamalu**	**12.15**	**39**	P	**P**	**09 39 20.9**	**-2.8**
	20nm,0.6s,baz=207,slow=10,SNR=4.1						
AFI	**Afiamalu**	**12.15**	**39**	P	**P**	**09 39 22.5**	**-1.2**
QRZ	**Quartz Range**	**18.45**	**199**	P	**P**	**09 40 26.1**	**+0.3**
NNZ	**Nelson**	**18.57**	**197**	P	**P**	**09 40 25.8**	**-1.2**
THZ	**Tophouse**	**19.21**	**197**	P	**P**	**09 40 32.7**	**-0.1**
THZ				IAmb	IAmb	09 40 38.7	
	comp=Z,23nm,1.2s						
KHZ	**Kahutara**	**19.66**	**195**	P	**P**	**09 40 36.5**	**-0.4**
KHZ				IAmb	IAmb	09 40 52.9	
	comp=Z,24nm,1.2s						
LTZ	**Lake Taylor**	**20.33**	**197**	P	**P**	**09 40 41.8**	**-1.2**
LTZ				IAmb	IAmb	09 41 21.2	
	comp=Z,36nm,1.5s						
WKZ	**Wanaka**	**23.16**	**201**	P	**P**	**09 41 07.2**	**-1.2**
MLZ	**Mavora Lakes**	**23.94**	**202**	P	**P**	**09 41 15.9**	**+0.6**
WHZ	**Wether Hill Ro**	**24.46**	**201**	P	**P**	**09 41 20.5**	**+0.7**
ARMA	**Armidale**	**26.42**	**249**	P	**P**	**09 41 37.0**	**-0.5**
ARMA				IAmb	IAmb	09 42 01.9	
	comp=Z,9.0nm,1.1s						
EIDS	**Eidsvold**	**26.64**	**260**	P	**P**	**09 41 40.1**	**+0.6**
EIDS				IAmb	IAmb	09 41 40.6	
	comp=Z,7.5nm,0.6s						
CAN	**Canberra**	**29.57**	**239**	P	**P**	**09 42 04.7**	**-0.3**
CAN				IAmb	IAmb	09 42 18.5	
	comp=Z,34nm,1.4s						
CTAO	**Charters Tower**	**31.76**	**270**	P	**P**	**09 42 24.3**	**+0.5**
TOO	**Toolangi**	**32.88**	**237**	P	**P**	**09 42 32.5**	**-0.8**
TOO				IAmb	IAmb	09 43 16.1	
	comp=Z,27nm,1.4s						
STKA	**Stephens Creek**	**35.12**	**248**	P	**P**	**09 42 52.4**	**+0.3**
	comp=Z,6.0nm,0.6s,baz=93,slow=10,SNR=22						
	comp=Z,6.0nm,0.6s						
STKA	**Stephens Creek**	**35.12**	**248**	P	**P**	**09 42 51.8**	**-0.3**
BBOO	**Buckleboo**	**39.85**	**246**	P	**P**	**09 43 30.1**	**-0.7**
BBOO				IAmb	IAmb	09 44 04.6	
	comp=Z,37nm,1.4s						
AS31	**Alice Springs**	**42.37**	**260**	P	**P**	**09 43 50.5**	**-0.4**
ASAR	**Alice Springs**	**42.37**	**260**	P	**P**	**09 43 50.7**	**-0.2**
	comp=Z,9.7nm,0.8s,baz=95,slow=8.0,SNR=75						
	comp=Z,9.7nm,0.8s						
WR0	**Warramunga Arr**	**42.52**	**266**	P	**P**	**09 43 51.3**	**-0.8**
WR0				IAmb	IAmb	09 43 52.1	
	comp=Z,6.5nm,0.8s						
WB2	**Warramunga Arr**	**42.70**	**266**	P	**P**	**09 43 52.8**	**-0.7**
WB2				IAmb	IAmb	09 43 53.6	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	**42.70**	**266**	P	**P**	**09 43 53.0**	**-0.6**
WB0				IAmb	IAmb	09 43 53.6	
	comp=Z,14nm,0.7s						
WRAB	**Tennant Creek**	**42.70**	**266**	P	**P**	**09 43 52.8**	**-0.8**
WRAB				IAmb	IAmb	09 43 53.6	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**42.71**	**266**	P	**P**	**09 43 52.9**	**-0.7**
	comp=Z,12nm,0.7s,baz=103,slow=7.9,SNR=129						
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**42.71**	**266**	P	**P**	**09 43 51.7**	**-1.9**
FORT	**Forrest**	**46.70**	**249**		**P**	**09 44 23.1**	**-1.0**
KNRA	**Kununurra**	**48.97**	**269**	P	**P**	**09 44 40.8**	**-0.5**
KNRA				IAmb	IAmb	09 44 41.7	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.14**	**265**	P	**P**	**09 44 56.7**	**-0.4**
PSA00	**Pilbara Seismi**	**55.51**	**259**	P	**P**	**09 45 26.9**	**-1.2**
MBWA	**Marble Bar**	**55.71**	**260**	P	**P**	**09 45 28.8**	**-0.8**
MBWA				IAmb	IAmb	09 45 29.8	
	comp=Z,12nm,0.8s						
MORW	**Morawa**	**57.27**	**250**	P	**P**	**09 45 39.4**	**-0.7**
MORW				IAmb	IAmb	09 45 40.5	
	comp=Z,17nm,0.8s						
QSPA	**South Pole Qui**	**66.55**	**180**	P	**P**	**09 46 41.1**	**+1.0**
BELA	**Belgrano 2**	**76.77**	**173**	P	**P**	**09 47 39.2**	**0.0**
KSRS	**Korea Array**	**78.14**	**320**	P	**P**	**09 47 49.1**	**+1.9**
	comp=Z,7.0nm,0.6s,baz=127,slow=5.3,SNR=2.5						
	comp=Z,0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.66**	**290**	P	**P**	**09 48 46.7**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=142,slow=3.5,SNR=4.2						
	comp=Z,0.9nm,0.3s						
TXAR	**Lajitas Array**	**90.00**	**58**	P	**P**	**09 48 48.6**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=224,slow=5.0,SNR=4.2						
	comp=Z,0.5nm,0.7s						
MKAR	**Manchi Array**	**112.11**	**313**	PKiKP	**PKiKP**	**09 54 17.3**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=109,slow=4.2,SNR=1.7						
ARCES	**ARCESS Array B**	**131.58**	**348**	PKP	**PKiKP**	**09 54 55.3**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=64,slow=4.2,SNR=4.0						
HFS	**Hagfors**	**142.24**	**349**	PKhKP	PKPpre	09 55 11.0	
	comp=Z,1.6nm,0.3s,baz=92,slow=4.5,SNR=15						
AKASG	**Malin Array Be**	**144.81**	**328**	PKP	**PKPab**	**09 55 19.1**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=44,slow=4.6,SNR=6.2						
BRTR	**Keskin Array B**	**147.57**	**308**	PKPbc	**PKPab**	**09 55 32.0**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=65,slow=3.4,SNR=6.0						
CLL	**Collm**	**150.58**	**344**	*i* PKPbc	**PKiKP**	**09 55 35.5**	**+0.5**

IDC ***11*** *09:36:56.3±2.3,16.17N×99.03W,h0km,mb3.9/6, mbtmp3.8/9,ML3.4/3,Error ellipse: s-maj=44.8km s-min=19.6km az=4.0*
NEIC ***11*** *09:36:57.5±2.0,16.17N±0.10×99.10W±0.09,h10km±2km, mb4.2/119,Error ellipse: s-maj=18.4km s-min=12.2km az=215.0*
ISC 11 09:36:58.0±1.0,**16.2N**±0.1×**99.03W**±0.08,**h14**km,**n138,**
σ1°09/77,mb4.2/54,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.43**	**18**		**Pn**	**09 37 22.6**	**-1.1**
UNM	**Universidad Na**	**3.12**	**357**		**Pn**	**09 37 49.4**	**+2.3**
MOIG	**Morelia**	**4.03**	**330**		**Pb**	**09 38 08.5**	**-0.4**
CMIG	**Matias Romero**	**4.08**	**77**	Pn	**Pn**	**09 37 59.8**	**-0.1**
	4.7nm,0.3s,baz=268,slow=13,SNR=26						
CMIG				Sn	**Sn**	**09 38 47.4**	**-0.1**
	8.5nm,0.3s,baz=21,slow=20,SNR=12						
CMIG				Lg	Lg	09 39 07.1	
	6.9nm,0.3s,baz=346,slow=17,SNR=2.7						
	11nm,0.4s						
CMIG	**Matias Romero**	**4.08**	**77**		**Sn**	**09 38 47.4**	**-0.1**
CMIG	**Matias Romero**	**4.08**	**77**		**Pn**	**09 37 59.8**	**-0.1**
CCIG	**Comitan**	**6.62**	**88**		**Pn**	**09 38 36.9**	**+1.7**
ZAIG	**Zacatecas**	**7.34**	**334**	Pn	**Pn**	**09 38 45.2**	**+0.1**
PETF	**Flores**	**8.82**	**84**	Pn	**Pn**	**09 39 06.5**	**+1.4**
TGUH	**Tegucigalpa,Un**	**11.55**	**99**	Pn	**Pn**	**09 39 41.9**	**-0.8**
833A	**Chaparral WMA,**	**12.08**	**358**	Pn	**Pn**	**09 39 48.8**	**-0.9**
SLBS	**Sierra La Lagu**	**12.68**	**308**	Pn	**Pn**	**09 39 58.3**	**+0.2**
TX31	**Lajitas Ar. Si**	**13.76**	**343**		**Pn**	**09 40 08.6**	**-4.1**
TX32	**Lajitas Array**	**13.76**	**343**		**Pn**	**09 40 08.8**	**-3.9**
TXAR	**Lajitas Array**	**13.76**	**343**	Pn	**Pn**	**09 40 14.0**	**+1.2**
	baz=160,slow=13,SNR=3.0						
	0.2nm,0.6s						
JCT	**Junction City**	**14.24**	**357**	Pn	**Pn**	**09 40 19.4**	**+0.1**
ORTG	**Ortega, Santa**	**14.42**	**112**	Pn	**Pn**	**09 40 23.7**	**+1.8**
435B	**Jarrell**	**14.59**	**5**	Pn	**Pn**	**09 40 21.5**	**-2.6**
JTS	**Las Juntas de**	**14.90**	**111**	Pn	**Pn**	**09 40 26.5**	**-1.9**
WHTX	**Lake Whitney,**	**15.79**	**5**	IAmb	IAmb	09 40 45.1	
	comp=Z,2.1nm,1.0s						
WHTX	**Lake Whitney,**	**15.79**	**5**	P	**Pn**	**09 40 42.7**	**+2.6**
RIMA	**Rio Macho**	**16.10**	**112**	Pn	**Pn**	**09 40 42.9**	**-1.3**
342A	**Flagon Creek P**	**16.30**	**21**	P	**Pn**	**09 40 48.6**	**+2.0**
ABTX	**Abilene, Hawle**	**16.37**	**358**	P	**Pn**	**09 40 49.6**	**+2.2**
MNTX	**Cornudas Mount**	**16.48**	**341**	P	**Pn**	**09 40 48.3**	**-0.6**
CLNB	**Carlsbad**	**16.60**	**345**	P	**P**	**09 40 52.6**	**-0.2**
GDL2	**Guadalupe Moun**	**16.66**	**344**	P	**P**	**09 40 53.8**	**+0.2**
HSIG		**16.84**	**321**	P	**Pn**	**09 40 52.3**	**-1.1**
Z35A	**Perchaven, San**	**17.14**	**5**	IAmb	IAmb	09 41 07.6	
	comp=Z,12nm,0.8s						
Z35A	**Perchaven, San**	**17.14**	**5**	P	**Pn**	**09 40 58.1**	**+1.0**
319A	**Douglas**	**17.77**	**330**		**Pn**	**09 41 05.8**	**+0.6**
LOOK	**Love County**	**17.80**	**5**	IAmb	IAmb	09 41 10.1	
	comp=Z,5.0nm,0.8s						
LOOK	**Love County**	**17.80**	**5**	P	**P**	**09 41 06.8**	**+0.7**
MSTX	**Muleshoe**	**18.02**	**350**	P	**Pn**	**09 41 07.6**	**-0.6**
121A	**Cookes Peak, D**	**18.10**	**336**	P	**Pn**	**09 41 09.6**	**+0.3**
WLAR	**White Oak Lake**	**18.22**	**16**	P	**Pn**	**09 41 10.5**	**0.0**
X37A	**Clayton**	**18.61**	**10**	P	**P**	**09 41 15.5**	**+0.5**
AMTX	**Amarillo**	**18.77**	**353**	P	**P**	**09 41 16.1**	**-0.7**
BNM	**Barren Site**	**19.14**	**340**	P	**P**	**09 41 22.3**	**+1.1**
SBM	**South Baldy**	**19.17**	**339**	P	**P**	**09 41 20.8**	**-0.8**
TUC	**Tucson**	**19.27**	**328**	P	**P**	**09 41 23.3**	**+1.0**
LENM	**Lemitar**	**19.27**	**340**	P	**P**	**09 41 23.0**	**+0.5**
BCOK	**Bluff Creek, N**	**19.43**	**3**	IAmb	IAmb	09 41 32.0	
	comp=Z,18nm,0.8s						
BCOK	**Bluff Creek, N**	**19.43**	**3**	P	**P**	**09 41 24.4**	**+0.5**
Y45A	**Yeager Farm, C**	**19.57**	**24**	IAmb	IAmb	09 41 26.8	
	comp=Z,14nm,0.8s						
Y45A	**Yeager Farm, C**	**19.57**	**24**	P	**P**	**09 41 25.5**	**0.0**
OK030	**Cody Creek RV**	**19.76**	**5**	IAmb	IAmb	09 41 33.9	
	comp=Z,10.0nm,0.8s						
OK030	**Cody Creek RV**	**19.76**	**5**	P	**P**	**09 41 26.9**	**-0.6**
ANMO	**Albuquerque**	**19.83**	**342**	P	**P**	**09 41 29.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=148,slow=13,SNR=7.4						
	comp=Z,1.4nm,0.8s						
ANMO	**Albuquerque**	**19.83**	**342**	P	**P**	**09 41 28.4**	**-0.2**
OK034	**N. Norfolk Rd.**	**19.85**	**6**	IAmb	IAmb	09 41 34.7	
	comp=Z,9.0nm,0.8s						
OK034	**N. Norfolk Rd.**	**19.85**	**6**	P	**P**	**09 41 28.9**	**+0.3**
TUL1	**Leonard**	**19.85**	**8**	IAmb	IAmb	09 41 36.9	
	comp=Z,8.0nm,0.7s						
TUL1	**Leonard**	**19.85**	**8**	P	**P**	**09 41 27.9**	**-0.6**
WHAR	**Wooly Hollow**	**19.95**	**16**	IAmb	IAmb	09 41 36.1	
	comp=Z,11nm,1.1s						
WHAR	**Wooly Hollow**	**19.95**	**16**	P	**P**	**09 41 30.6**	**+0.9**
214A	**Organ Pipe Nat**	**20.08**	**324**	P	**P**	**09 41 30.8**	**-0.3**
HHAR	**Hobbs**	**20.52**	**12**	P	Pn	09 41 37.9	-0.1
FCAR	**Ozark Folk Cen**	**20.56**	**16**	P	**P**	**09 41 35.5**	**-0.8**
T35A	**Sooner Cattle**	**20.76**	**6**	IAmb	IAmb	09 41 46.9	
	comp=Z,17nm,1.1s						
T35A	**Sooner Cattle**	**20.76**	**6**	P	**P**	**09 41 38.0**	**-0.5**
LCAR	**Lake Charles**	**21.00**	**18**	IAmb	IAmb	09 41 44.9	
	comp=Z,8.6nm,1.1s						
LCAR	**Lake Charles**	**21.00**	**18**	P	**P**	**09 41 41.6**	**+0.5**
X48A	**Hartselle**	**21.13**	**28**	P	**P**	**09 41 43.0**	**+0.5**
W18A	**Petrified Fore**	**21.14**	**335**	IAmb	IAmb	09 41 46.5	
	comp=Z,6.9nm,0.9s						
W18A	**Petrified Fore**	**21.14**	**335**	P	**P**	**09 41 41.0**	**-1.8**
113A	**Mohawk Valley,**	**21.22**	**324**	IAmb	IAmb	09 41 46.1	
	comp=Z,7.1nm,0.9s						
X16A	**Lo Mia Camp, P**	**21.30**	**331**	IAmb	IAmb	09 41 50.7	
	comp=Z,9.3nm,0.8s						
T25A	**Trinidad**	**21.40**	**348**	IAmb	IAmb	09 41 49.4	
	comp=Z,8.3nm,0.9s						
T25A	**Trinidad**	**21.40**	**348**	P	**P**	**09 41 45.1**	**-0.5**
PBMO	**Poplar Bluff**	**21.88**	**19**	IAmb	IAmb	09 42 01.6	
	comp=Z,8.6nm,0.7s						
FPAL	**Fort Paine**	**21.89**	**31**	IAmb	IAmb	09 41 54.1	
	comp=Z,14nm,1.0s						
WUAZ	**Wupatki**	**22.18**	**332**	IAmb	IAmb	09 41 58.1	
	comp=Z,10nm,1.0s						
WVT	**Waverly**	**22.22**	**25**	IAmb	IAmb	09 41 56.6	
	comp=Z,10nm,0.9s						
WVT	**Waverly**	**22.22**	**25**	P	**P**	**09 41 55.1**	**+0.9**
SWET	**Sewanee**	**22.28**	**29**	IAmb	IAmb	09 42 00.2	
	comp=Z,4.8nm,0.8s						
SWET	**Sewanee**	**22.28**	**29**	P	**P**	**09 41 53.0**	**-1.9**
V48A	**Smith Brothers**	**22.31**	**27**	IAmb	IAmb	09 42 05.5	
	comp=Z,8.6nm,1.1s						
BLYC	**Blythe**	**22.37**	**324**	IAmb	IAmb	09 41 58.3	
	comp=Z,8.9nm,1.1s						
S22A	**4UR Ranch, Cre**	**22.55**	**344**	IAmb	IAmb	09 41 59.9	
	comp=Z,6.1nm,1.0s						
MVCO	**Mesa Verde**	**22.55**	**340**	IAmb	IAmb	09 42 02.4	
	comp=Z,6.0nm,0.8s						
CGM3	**Cape Girardeau**	**22.60**	**20**	IAmb	IAmb	09 42 07.6	
	comp=Z,4.5nm,0.5s						
R40A	**Maddies Statio**	**22.81**	**14**	IAmb	IAmb	09 42 10.2	
	comp=Z,5.8nm,0.7s						
R40A	**Maddies Statio**	**22.81**	**14**	P	**P**	**09 42 00.5**	**+0.1**
CLTN	**Cedars of Leba**	**22.82**	**27**	IAmb	IAmb	09 42 12.1	
	comp=Z,5.0nm,0.7s						
CCM	**Cathedral Cave**	**22.84**	**16**	IAmb	IAmb	09 42 05.7	
	comp=Z,4.8nm,0.9s						
CCM	**Cathedral Cave**	**22.84**	**16**	P	**P**	**09 41 60.0**	**-0.7**
FVM	**French Village**	**23.00**	**18**	IAmb	IAmb	09 42 03.6	
	comp=Z,6.8nm,0.8s						
FVM	**French Village**	**23.00**	**18**	P	**P**	**09 42 02.4**	**0.0**
S44A	**Carbondale**	**23.09**	**20**	P	**P**	**09 42 03.7**	**+0.3**
SIUC	**Southern Illin**	**23.12**	**20**	P	**P**	**09 42 03.5**	**-0.2**
CPCT	**Cooper Cave**	**23.15**	**31**	IAmb	IAmb	09 42 12.8	
	comp=Z,9.2nm,0.8s						
CPCT	**Cooper Cave**	**23.15**	**31**	P	**P**	**09 42 03.4**	**-0.6**
W52A	**Murphy**	**23.18**	**33**	IAmb	IAmb	09 42 09.2	
	comp=Z,7.4nm,0.8s						
T47A	**Sharon Grove**	**23.26**	**25**	IAmb	IAmb	09 42 14.4	
	comp=Z,11nm,1.0s						
Q24A	**Divide**	**23.31**	**348**	P	**P**	**09 42 03.8**	**-2.2**
U49A	**Red Boiling Sp**	**23.42**	**28**	IAmb	IAmb	09 42 16.0	
	comp=Z,7.2nm,1.0s						
V51A	**Loudon**	**23.52**	**31**	IAmb	IAmb	09 42 09.3	
	comp=Z,9.3nm,1.1s						
PV13	**Radium Mtn., P**	**23.52**	**340**	IAmb	IAmb	09 42 11.3	
	comp=Z,5.5nm,1.1s						
PV15	**Paradox Valley**	**23.58**	**341**	IAmb	IAmb	09 42 10.1	
	comp=Z,12nm,1.2s						
TKL	**Tuckaleechee C**	**23.69**	**32**	P	**P**	**09 42 10.4**

2.6470, Plg73.0000°, Azm7.0000°; N -0.4230, Plg4.0000°, Azm109.0000°; P -2.2240, Plg17.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC ***11*** *09:38:14.5±2.3, 16°.43N±0°.05×99°.04W±0°.05, h10km±1km, mb4.9/400, Md4.9/111(MEX) Error ellipse: s-maj=9.9km s-min=6.3km az=216.0*

ISC 11 09:38:11.8±1.2, 16°.33N±0°.03×99°.13W±0°.02, h4km±7km, n626, σ1ŝ45/525, mb4.8/189, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.40**	**360**				**Pb**	**09 38 22.5**	**+1.0**
CRIG	**Cruz Grande**	**0.40**	**360**	*eP*			**Pb**	**09 38 22.5**	**+1.0**
CRIG				*eS*			**Sb**	**09 38 31.2**	**+3.2**
DAIG	**Los Arroyos**	**0.85**	**324**				**Pg**	**09 38 28.1**	**0.0**
DAIG							**Sg**	**09 38 39.7**	**+0.6**
DAIG	**Los Arroyos**	**0.85**	**324**	*eP*			**Pg**	**09 38 28.1**	**0.0**
DAIG				*eS*			**Sg**	**09 38 39.7**	**+0.6**
ACP2	**Acapulco**	**0.90**	**307**				**Pn**	**09 38 30.8**	**-0.5**
ACP2							**Sg**	**09 38 40.9**	**0.0**
ACP2	**Acapulco**	**0.90**	**307**	*eP*			**Pn**	**09 38 30.8**	**-0.5**
ACP2				*eS*			**Sg**	**09 38 40.9**	**0.0**
PNIG	**Pinotepa**	**0.96**	**86**				**Pg**	**09 38 29.6**	**-0.7**
PNIG							**Sb**	**09 38 43.7**	**-0.5**
PNIG	**Pinotepa**	**0.96**	**86**	*eP*			**Pg**	**09 38 29.6**	**-0.7**
PNIG				*eS*			**Sb**	**09 38 43.7**	**-0.5**
CAIG	**El Cayaco**	**1.30**	**303**				**Pn**	**09 38 33.8**	**-3.0**
CAIG							**Sb**	**09 38 50.2**	**-3.6**
CAIG	**El Cayaco**	**1.30**	**303**	*eP*			**Pn**	**09 38 33.8**	**-3.0**
CAIG				*i* S			**Sb**	**09 38 50.2**	**-3.6**
TLIG	**Tlapa**	**1.34**	**24**		Pn		**Pg**	**09 38 37.8**	**+0.4**
TLIG	**Tlapa**	**1.34**	**24**	*eP*			**Pg**	**09 38 37.4**	**-0.1**
TLIG				*eS*			**Sb**	**09 38 55.1**	**0.0**
ATYC	**Atoyac**	**1.52**	**305**	*eP*			**Pg**	**09 38 41.9**	**+0.8**
ATYC				*eS*			**Sg**	**09 39 00.7**	**-0.1**
HMTT	**Tlapaneco**	**1.56**	**20**				**Pb**	**09 38 40.5**	**-0.7**
HMTT							**Sn**	**09 39 00.6**	**-0.5**
HMTT	**Tlapaneco**	**1.56**	**20**	*eP*			**Pb**	**09 38 40.5**	**-0.7**
HMTT				*eS*			**Sn**	**09 39 00.6**	**-0.5**
TXIG	**Tlaxiaco**	**1.59**	**55**	*eP*			**Pn**	**09 38 40.4**	**-0.7**
TXIG				*eS*			**Sb**	**09 39 02.3**	**-0.3**
YOIG	**Yosondua**	**1.61**	**71**	*eP*			**Pn**	**09 38 40.4**	**-0.8**
YOIG				*eS*			**Sb**	**09 39 02.1**	**-0.9**
MEIG	**Mezcala**	**1.65**	**344**				**Pb**	**09 38 42.0**	**-0.9**
MEIG							**Sn**	**09 39 02.9**	**-0.6**
MEIG	**Mezcala**	**1.65**	**344**	*eP*			**Pb**	**09 38 42.0**	**-0.9**
MEIG				*eS*			**Sn**	**09 39 02.9**	**-0.6**
FTIG	**Fresnillo de T**	**1.83**	**31**	*eP*			**Pn**	**09 38 44.2**	**0.0**
FTIG				*eS*			**Sb**	**09 39 10.2**	**+0.8**
PEIG	**Puerto Escondi**	**1.93**	**100**	*eP*			**Pn**	**09 38 45.5**	**-0.2**
PEIG				*eS*			**Sb**	**09 39 09.9**	**-2.3**
HLIG	**Huajuapan de L**	**1.96**	**40**	*eP*			**Pn**	**09 38 46.0**	**0.0**
HLIG				*eS*			**Sb**	**09 39 13.1**	**+0.1**
PLIG	**Platanillo**	**2.08**	**350**				**Pb**	**09 38 50.3**	**+0.2**
PLIG							**Sn**	**09 39 14.7**	**+0.7**
PLIG	**Platanillo**	**2.08**	**350**	*eP*			**Pb**	**09 38 50.3**	**+0.2**
PLIG				*eS*			**Sn**	**09 39 14.7**	**+0.7**
ARIG	**Puente Sto Nin**	**2.26**	**329**				**Pb**	**09 38 52.4**	**-0.8**
ARIG							**Sn**	**09 39 17.1**	**-1.2**
ARIG	**Puente Sto Nin**	**2.26**	**329**	*eP*			**Pb**	**09 38 52.4**	**-0.8**
ARIG				*eS*			**Sn**	**09 39 17.1**	**-1.2**
VHO	**Vista Hermosa**	**2.41**	**72**	*eP*			**Pn**	**09 38 52.0**	**-0.2**
VHO				*eS*			**Sn**	**09 39 22.1**	**-0.3**
OXBJ	**Oaxaca**	**2.42**	**72**				**Pn**	**09 38 51.4**	**-1.0**
OXBJ							**Sn**	**09 39 21.5**	**-1.0**
OXBJ	**Oaxaca**	**2.42**	**72**	*eP*			**Pn**	**09 38 51.4**	**-1.0**
OXBJ				*eS*			**Sn**	**09 39 21.5**	**-1.0**
OXLC	**Oaxaca**	**2.44**	**72**	*eP*			**Pn**	**09 38 52.1**	**-0.4**
OXLC				*eS*			**Sn**	**09 39 23.1**	**+0.2**
YAIG	**Yautepec**	**2.52**	**1**				**Pb**	**09 38 57.5**	**-0.1**
YAIG							**Sn**	**09 39 26.6**	**+1.8**
YAIG	**Yautepec**	**2.52**	**1**	*eP*			**Pb**	**09 38 57.5**	**-0.1**
YAIG				*eS*			**Sn**	**09 39 26.6**	**+1.8**
ZIIG	**Zihuatanejo**	**2.57**	**300**				**Pn**	**09 38 55.4**	**+1.3**
ZIIG							**Sn**	**09 39 26.7**	**+0.9**
ZIIG	**Zihuatanejo**	**2.57**	**300**	*eP*			**Pn**	**09 38 55.4**	**+1.3**
ZIIG				*eS*			**Sn**	**09 39 26.7**	**+0.9**
MAVM	**Malinalco, Edo**	**2.63**	**352**				**Pb**	**09 38 59.5**	**-0.2**
MAVM							**Sb**	**09 39 30.5**	**-2.0**
MAVM	**Malinalco, Edo**	**2.63**	**352**	*eP*			**Pb**	**09 38 59.5**	**-0.2**
MAVM				*eS*			**Sb**	**09 39 30.5**	**-2.0**
TOIG	**Toxpalan**	**2.64**	**48**	*eP*			**Pn**	**09 38 55.2**	**-0.1**
TOIG				*eS*			**Sn**	**09 39 27.2**	**-0.6**
TPIG	**Tehuac#an**	**2.68**	**39**				**Pb**	**09 38 57.8**	**-2.6**
TPIG							**Sn**	**09 39 29.0**	**+0.2**
TPIG	**Tehuac#an**	**2.68**	**39**	*eP*			**Pb**	**09 38 57.8**	**-2.6**
TPIG				*eS*			**Sn**	**09 39 29.0**	**+0.2**
THEZ	**Tehuacan**	**2.71**	**38**	*e*			**Pb**	**09 39 01.7**	**+0.8**
THEZ				*eS*			**Sb**	**09 39 34.2**	**-0.4**
TEJU	**Tejupilco**	**2.74**	**339**	*e*			**Pb**	**09 38 60.0**	**-1.5**
TEJU				*eS*			**Sb**	**09 39 33.5**	**-2.0**
PPM	**Popocatepetl**	**2.76**	**10**	*i* P			Pn	09 38 52.5	-4.9
PPM				*eS*			**Sb**	**09 39 35.0**	**-1.5**
TLVM	**San Miguel Top**	**2.86**	**360**	*eP*			**Pn**	**09 38 55.7**	**-2.9**
TLVM				*eS*			**Sn**	**09 39 33.3**	**-0.4**
XCVM	**Xochimilco**	**2.91**	**0**	*eP*			**Pn**	**09 38 59.5**	**+0.5**
XCVM				*eS*			**Sn**	**09 39 36.7**	**+2.1**
AOVM	**Tlapan**	**2.93**	**356**	*eP*			**Pn**	**09 38 56.7**	**-2.8**
AOVM				*eS*			**Sn**	**09 39 34.7**	**-0.7**
INVM	**La Marquesa**	**2.95**	**355**	*eP*			**Pn**	**09 38 59.8**	**-0.1**
INVM				*eS*			**Sn**	**09 39 36.2**	**+0.2**
HUIG	**Huatulco**	**2.96**	**100**				**Pn**	**09 38 57.7**	**-1.9**
HUIG							**Sn**	**09 39 31.2**	**-4.4**
HUIG	**Huatulco**	**2.96**	**100**	*eP*			**Pn**	**09 38 57.7**	**-1.9**
HUIG				*eS*			**Sn**	**09 39 31.2**	**-4.4**
THVM	**De Xico**	**2.97**	**3**	*eP*			**Pn**	**09 38 59.2**	**-0.7**
THVM				*eS*			**Sn**	**09 39 36.9**	**+0.8**
UNM	**Universidad Na**	**2.98**	**359**		Pn		**Pn**	**09 38 59.6**	**-0.5**
UNM	**Universidad Na**	**2.98**	**359**	*eP*			**Pn**	**09 39 01.3**	**+1.2**
UNM				*eS*			**Sn**	**09 39 34.3**	**-2.2**
COVM	**Coyoacan**	**3.00**	**360**	*eP*			**Pn**	**09 38 57.1**	**-3.3**
COVM				*eS*			**Sb**	**09 39 40.2**	**-3.0**
CJVM	**Cuajimalpa**	**3.02**	**357**	*eP*			**Pn**	**09 39 00.8**	**+0.2**
CJVM				*eS*			**Sn**	**09 39 37.1**	**-0.2**
BJVM	**Benito Juarez**	**3.03**	**359**	*eP*			**Pn**	**09 38 58.8**	**-1.9**
BJVM				*eS*			**Sn**	**09 39 38.9**	**+1.3**
TXVM	**Universitario**	**3.09**	**4**	*eP*			**Pb**	**09 39 05.0**	**-2.5**
TXVM				*eS*			**Sn**	**09 39 41.8**	**+2.5**
APVM	**Azcapotzalco**	**3.14**	**359**	*eP*			**Pn**	**09 39 03.4**	**+1.1**
APVM				*eS*			**Sb**	**09 39 46.4**	**-0.7**
GMVM	**Gustavo A Made**	**3.14**	**0**	*eP*			**Pb**	**09 39 07.1**	**-1.3**
GMVM				*eS*			**Sn**	**09 39 43.2**	**+2.6**
OZST	**Orizaba**	**3.18**	**37**	*eP*			**Pb**	**09 39 07.9**	**-1.0**
OZST				*eS*			**Sn**	**09 39 42.9**	**+1.7**
NEUV	**Arroyo Zacate**	**3.47**	**66**	*eP*			**Pn**	**09 39 02.5**	**-4.0**
NEUV				*eS*			**Sb**	**09 39 51.8**	**-4.5**
ACIG	**Acambay**	**3.70**	**349**	*eP*			Pn	09 39 04.8	-5.1
ACIG				*eS*			**Sn**	**09 39 50.6**	**-3.5**
JAUV	**Jalcomulco**	**3.75**	**36**	*eP*			**Pn**	**09 39 06.8**	**-3.6**
JAUV				*eS*			**Sn**	**09 39 57.2**	**+2.2**
MOIG	**Morelia**	**3.86**	**330**		Pn		**Pn**	**09 39 10.1**	**-2.1**
MOIG	**Morelia**	**3.86**	**330**	*eP*			Pn	09 39 07.6	-4.6
MOIG				*eS*			**Sn**	**09 39 55.1**	**-3.1**
DEIG	**Demacu**	**3.95**	**1**	*eP*			**Pn**	**09 39 12.7**	**-0.7**
CXUV	**Coxquihui**	**4.09**	**21**	*eP*			**Pn**	**09 39 14.6**	**-0.6**
CXUV				*eS*			**Sn**	**09 40 05.0**	**+1.4**
CMIG	**Matias Romero**	**4.14**	**79**		Pn		**Pn**	**09 39 15.4**	**-0.4**
	14nm,0.3s,baz=207,slow=16,SNR=6.6								
CMIG					Lg		Lg	09 40 22.9	
	46nm,0.3s,baz=249,slow=5.1,SNR=5.9 565nm,1.0s								
CMIG	**Matias Romero**	**4.14**	**79**				**Pn**	**09 39 11.5**	**-4.3**
CMIG							**Sn**	**09 40 03.3**	**-1.4**
CMIG	**Matias Romero**	**4.14**	**79**	*eP*			**Pn**	**09 39 11.5**	**-4.3**
CMIG				*eS*			**Sn**	**09 40 03.3**	**-1.4**
UXUV	**UXUV**	**4.87**	**78**	*eP*			**Pn**	**09 39 26.0**	**+0.1**
UXUV				*eS*			**Sn**	**09 40 27.6**	**+4.8**
COIG	**Colima**	**5.19**	**304**	*eP*			**Pn**	**09 39 33.9**	**+3.6**
COIG				*eS*			**Sn**	**09 40 25.7**	**-4.9**
JUBC	**Volcan de Coli**	**5.28**	**308**	*eP*			**Pn**	**09 39 34.8**	**+3.0**
JUBC				*eS*			**Sn**	**09 40 31.6**	**-1.6**
EZ5V		**5.28**	**307**				Pn	09 39 35.7	+3.9
EZ5V		**5.28**	**307**	*eP*			Pn	09 39 35.7	+3.9
EZ5V				*eS*			**Sn**	**09 40 34.9**	**+1.6**
MNGA	**Volcan de Coli**	**5.29**	**307**	*eP*			**Pn**	**09 39 34.5**	**+2.7**
MNGA				*eS*			**Sn**	**09 40 31.7**	**-1.8**
INCO	**Volcan de Coli**	**5.31**	**307**	*eP*			**Pn**	**09 39 35.4**	**+3.1**
INCO				*eS*			**Sn**	**09 40 32.4**	**-1.8**
CDAR	**Ciudad de Arme**	**5.33**	**300**	*eP*			**Pn**	**09 39 34.7**	**+2.5**
CDAR				*eS*			**Sn**	**09 40 32.5**	**-1.5**
R15V		**5.42**	**302**				**Pn**	**09 39 31.0**	**-2.4**
R15V		**5.42**	**302**	*eP*			**Pn**	**09 39 31.0**	**-2.4**
R15V				*eS*			**Sn**	**09 40 33.5**	**-2.8**
CCIG	**Comitan**	**6.72**	**89**		Pn		**Pn**	**09 39 51.5**	**+0.1**
ZAIG	**Zacatecas**	**7.18**	**334**		Pn		**Pn**	**09 39 58.4**	**+0.5**
HUEH	**Huehuetenango**	**7.41**	**97**		Pn		**Pn**	**09 40 01.6**	**+0.6**
PETF	**Flores**	**8.90**	**85**				**Pn**	**09 40 20.3**	**-0.9**
H06E1	**SOCORRO T-PHASE** SNR=54	**1.51**	**284**		T		T	09 53 04.0	
H06S1	**SOCORRO T** SNR=5.5	**11.53**	**284**		T		T	09 53 12.8	
TGUH	**Tegucigalpa,Un**	**11.67**	**100**				**Pn**	**09 40 59.4**	**+0.1**
833A	**Chaparral WMA,**	**11.94**	**359**		Pn		**Pn**	**09 41 01.5**	**-1.3**
833A	**Chaparral WMA,** baz=178,SNR=6.1	**11.94**	**359**		P		**Pn**	**09 41 03.3**	**+0.4**
LPIG	**La Paz**	**13.03**	**308**		LR		LR	09 45 29.9	
	comp=Z,823nm,18.5s,baz=128,slow=33								
MATN	**Matagalpa**	**13.22**	**103**				**Pn**	**09 41 19.3**	**-1.1**
TXAR	**Lajitas Array** baz=161,slow=12,SNR=4.2	**13.60**	**343**		Pn		**Pn**	**09 41 29.1**	**+3.5**
TXAR					Lg		Lg	09 45 41.5	
	baz=161,slow=24,SNR=5.2 1.2nm,0.9s								
TXAR	**Lajitas Array**	**13.60**	**343**				**Pn**	**09 41 27.9**	**+2.3**
TX31	**Lajitas Ar. Si**	**13.60**	**343**				**Pn**	**09 41 27.6**	**+2.0**
TX32	**Lajitas Array**	**13.60**	**343**				**Pn**	**09 41 26.9**	**+1.3**
JCT	**Junction City**	**14.10**	**358**				**Pn**	**09 41 32.7**	**+0.3**
JCT	**Junction City** baz=176	**14.10**	**358**		P		**Pn**	**09 41 31.9**	**-0.5**
ACON	**Acoyapa**	**14.21**	**106**				**Pn**	**09 41 34.0**	**0.0**
435B	**Jarrell**	**14.46**	**5**				**Pn**	**09 41 36.9**	**-0.3**
ORTG	**Ortega, Santa**	**14.56**	**112**				**Pn**	**09 41 39.1**	**+0.2**
DUNO	**Dulce Nombre,**	**14.65**	**113**				**Pn**	**09 41 41.1**	**+1.1**
JTS	**Las Juntas de**	**15.04**	**112**		Pn		**P**	**09 41 48.8**	**-2.0**
441A	**DeRidder**	**15.35**	**20**		P		**P**	**09 41 52.4**	**-1.7**
441A					IAmb		IAmb	09 41 56.2	
	comp=Z,64nm,0.9s								
WHTX	**Lake Whitney,**	**15.66**	**5**		P		**P**	**09 41 56.9**	**-0.8**
WHTX					IAmb		IAmb	09 42 00.1	
	comp=Z,61nm,0.9s								
WHTX	**Lake Whitney,** baz=185,SNR=9.6	**15.66**	**5**		P		**Pn**	**09 41 53.0**	**-0.4**
NATX	**Nacogdoches**	**15.89**	**14**		P		**P**	**09 42 00.6**	**+0.5**
NATX					IAmb		IAmb	09 42 08.4	
	comp=Z,67nm,0.9s								
NATX	**Nacogdoches** baz=195	**15.89**	**14**		P		**Pn**	**09 41 56.6**	**+0.3**
237A	**Washetta, Mont**	**15.89**	**10**		P		**P**	**09 42 00.1**	**0.0**
342A	**Flagon Creek P** comp=Z,58nm,0.8s	**16.21**	**21**		IAmb		IAmb	09 42 11.1	
CVTR	**Volcan Turrial**	**16.22**	**111**		P		**P**	**09 42 03.1**	**-1.2**
ABTX	**Abilene, Hawle**	**16.23**	**358**		P		**P**	**09 42 04.2**	**+0.3**
ABTX	**Abilene, Hawle** baz=177,SNR=6.3	**16.23**	**358**		P		**Pn**	**09 42 00.5**	**-0.2**
RIMA	**Rio Macho**	**16.23**	**112**		P		**P**	**09 42 04.6**	**+0.4**
MNTX	**Cornudas Mount**	**16.32**	**341**		P		**P**	**09 42 03.7**	**-1.3**
CLNB	**Carlsbad**	**16.44**	**346**		P		**P**	**09 42 07.9**	**+1.5**
SOR	**Soroa**	**16.49**	**65**		P		**P**	**09 42 07.4**	**+0.5**
GDL2	**Guadalupe Moun**	**16.50**	**344**		P		**P**	**09 42 08.6**	**+1.6**
CLN7	**Carlsbad 7**	**16.56**	**346**		P		**P**	**09 42 07.0**	**-0.8**
HTMS	**Hat Mesa**	**16.58**	**347**		P		**P**	**09 42 08.9**	**+1.0**
HSIG		**16.67**	**321**		P		**P**	**09 42 10.0**	**+1.2**
SRBA	**San Rafael, Bu**	**16.91**	**113**		P		**P**	**09 42 13.7**	**+2.0**
Z35A	**Perchaven, San**	**17.01**	**5**		P		**P**	**09 42 13.1**	**+0.5**
Z38A	**Mt. Pleasant**	**17.27**	**12**				**Pn**	**09 42 13.0**	**-0.8**
319A	**Douglas**	**17.60**	**330**				**P**	**09 42 20.8**	**+1.5**
VBMS	**Vicksburg**	**17.64**	**25**		P		**P**	**09 42 19.1**	**-0.5**
LOOK	**Love County**	**17.67**	**5**				**P**	**09 42 19.0**	**-0.8**
LOOK					IAmb		IAmb	09 42 28.7	
	comp=Z,40nm,1.2s								
143A	**Socs Landing,**	**17.74**	**22**		P		**Pn**	**09 42 17.9**	**-1.8**
MSTX	**Muleshoe**	**17.87**	**350**				**P**	**09 42 23.2**	**+1.1**
MSTX					IAmb		IAmb	09 42 32.5	
	comp=Z,93nm,1.4s								
MSTX	**Muleshoe** baz=168,SNR=14	**17.87**	**350**		P		**P**	**09 42 22.3**	**+0.1**
121A	**Cookes Peak, D**	**17.94**	**336**				**P**	**09 42 24.9**	**+1.9**
121A	**Cookes Peak, D** baz=151	**17.94**	**336**		P		**P**	**09 42 24.5**	**+1.5**
X34A	**Smith Ranch, M**	**18.23**	**3**				**Pn**	**09 42 24.5**	**-1.3**
WMOK	**Wichita Mounta**	**18.33**	**1**				**P**	**09 42 27.7**	**+0.5**
WMOK	**Wichita Mounta** baz=180	**18.33**	**1**		P		**P**	**09 42 27.6**	**+0.4**
X37A	**Clayton**	**18.49**	**10**				**Pn**	**09 42 29.4**	**+0.4**
AMTX	**Amarillo**	**18.62**	**353**		P		**Pn**	**09 42 30.6**	**0.0**
AMTX	**Amarillo** baz=172	**18.62**	**353**		P		**Pn**	**09 42 31.0**	**+0.4**
MIAR	**Mount Ida**	**18.81**	**14**				**P**	**09 42 31.5**	**-0.9**
MIAR	**Mount Ida** baz=196	**18.81**	**14**		P		**Pn**	**09 42 32.1**	**-0.8**
CRNM	**Carthage**	**18.83**	**340**		P		**Pn**	**09 42 35.1**	**+1.8**
FNO	**Franklin**	**18.91**	**4**		P		**P**	**09 42 32.8**	**-0.7**
BNM	**Barren Site**	**18.98**	**341**				**Pn**	**09 42 36.0**	**+0.9**
SBM	**South Baldy**	**19.00**	**339**		P		**Pn**	**09 42 34.5**	**-1.1**
Y22D	**IRIS PASSCAL I**	**19.01**	**340**		P		**Pn**	**09 42 35.8**	**+0.4**
TUC	**Tucson**	**19.10**	**328**				**Pn**	**09 42 39.1**	**+2.6**
TUC	**Tucson** baz=143	**19.10**	**328**		P		**Pn**	**09 42 38.0**	**+1.5**
LENM	**Lemitar**	**19.11**	**340**		P		**Pn**	**09 42 36.5**	**-0.2**
OK025	**Westminster Rd** comp=Z,44nm,0.8s	**19.24**	**4**		IAmb		IAmb	09 42 44.7	
CSTR	**Hydro, Custer**	**19.24**	**1**		P		**Pn**	**09 42 36.8**	**-1.2**
CSTR					IAmb		IAmb	09 42 46.3	
	comp=Z,3.2nm,0.9s								
BCOK	**Bluff Creek, N** comp=Z,48nm,0.9s	**19.30**	**4**		IAmb		IAmb	09 42 47.0	
Y45A	**Yeager Farm, C**	**19.48**	**25**				**P**	**09 42 38.9**	**-0.9**
DEOK	**Depew** comp=Z,81nm,1.4s	**19.57**	**6**		IAmb		IAmb	09 42 50.9	
OK030	**Cody Creek RV** comp=Z,50nm,1.0s	**19.63**	**6**		IAmb		IAmb	09 42 49.3	
OK031	**S. Brethren Rd** comp=Z,83nm,1.0s	**19.65**	**6**		IAmb		IAmb	09 42 49.5	
ELIS	**Ellis County** comp=Z,33nm,1.2s	**19.66**	**359**		IAmb		IAmb	09 42 51.7	
ANMO	**Albuquerque** comp=Z,0.2nm,0.3s,baz=152,slow=10,SNR=11	**19.66**	**342**		P		**Pn**	**09 42 44.2**	**+0.8**
ANMO					LR		LR	09 49 48.4	
	comp=Z,662nm,18.7s,baz=159,slow=35 comp=Z,6.2nm,0.9s								
ANMO	**Albuquerque**	**19.66**	**342**		P		**Pn**	**09 42 43.3**	**0.0**
ANMO	**Albuquerque** baz=158	**19.66**	**342**		P		**Pn**	**09 42 43.7**	**+0.4**
OK034	**N. Norfolk Rd.** comp=Z,49nm,1.0s	**19.72**	**6**		IAmb		IAmb	09 42 51.6	
TUL1	**Leonard**	**19.73**	**8**		P		**P**	**09 42 42.0**	**-0.4**
TUL1	**Leonard** baz=189,SNR=6.3	**19.73**	**8**		P		**P**	**09 42 42.1**	**-0.3**
WHAR	**Wooly Hollow** comp=Z,52nm,1.0s	**19.85**	**17**		IAmb		IAmb	09 42 51.1	
352A	**Blakely**	**19.87**	**38**		P		**Pn**	**09 42 44.0**	**-1.6**
352A					IAmb		IAmb	09 42 51.9	
	comp=Z,58nm,0.8s								
QUOK	**Quay** comp=Z,42nm,0.9s	**19.88**	**6**		IAmb		IAmb	09 42 51.1	
214A	**Organ Pipe Nat**	**19.91**	**324**		P		**Pn**	**09 42 45.7**	**-0.4**
214A	**Organ Pipe Nat** baz=137	**19.91**	**324**		P		**Pn**	**09 42 47.2**	**+1.1**
LRAL	**Lakeview Retre** baz=216	**19.92**	**31**		P		**P**	**09 42 44.1**	**-0.5**
U32A	**Winter Ranch,** comp=Z,72nm,1.2s	**19.97**	**0**		IAmb		IAmb	09 42 55.3	
OK038	**West end E0370**	**20.07**	**1**		P		Pn	09 42 47.9	-0.1
OK038					IAmb		IAmb	09 42 54.8	
	comp=Z,58nm,0.8s								
RLO	**Rose Lookout** comp=Z,26nm,1.1s	**20.09**	**10**		IAmb		IAmb	09 42 53.2	
OXF	**Oxford** comp=Z,76nm,1.1s	**20.10**	**24**		IAmb		IAmb	09 42 59.5	
OXF	**Oxford** baz=208,SNR=6.5	**20.10**	**24**		P		**P**	**09 42 46.1**	**-0.4**
CROK	**Carrier** comp=Z,28nm,0.9s	**20.12**	**3**		IAmb		IAmb	09 42 53.2	
FCAR	**Ozark Folk Cen**	**20.46**	**16**		P		**P**	**09 42 50.4**	**0.0**
U38A	**Gravette**	**20.47**	**11**		P		**P**	**09 42 50.2**	**-0.3**
X18A	**Snowflake**	**20.56**	**334**		P		Pn	09 42 54.9	+1.0
KAN14	**Manchester OK**	**20.57**	**3**				Pn	09 42 54.4	+0.5
T35A	**Sooner Cattle** comp=Z,67nm,1.1s	**20.64**	**6**		IAmb		IAmb	09 43 01.7	
KAN13	**South Haven SW**	**20.65**	**4**				**P**	**09 42 52.8**	**+0.3**
KAN13					IAmb		IAmb	09 42 58.1	
	comp=Z,42nm,0.8s								
TIGA	**Tifton** baz=227	**20.65**	**40**		P		**P**	**09 42 52.1**	**-0.4**
KAN01	**Argonia South**	**20.78**	**3**				**P**	**09 42 53.6**	**-0.3**
152A	**Waverly Hall** comp=Z,31nm,0.5s	**20.85**	**36**		IAmb		IAmb	09 43 03.0	
KS20	**Mayfield South** comp=Z,25nm,0.8s	**20.86**	**4**		IAmb		IAmb	09 43 01.1	
KAN06	**Argonia West S** comp=Z,54nm,0.9s	**20.86**	**3**		IAmb		IAmb	09 42 59.9	
LCAR	**Lake Charles**	**20.90**	**18**				**P**	**09 42 54.4**	**-0.8**
W18A	**Petrified Fore** baz=150	**20.98**	**335**		P		**P**	**09 42 58.1**	**+1.9**
PLAL	**Pickwick Lake** comp=Z,64nm,1.0s	**21.05**	**26**		IAmb		IAmb	09 43 01.8	
113A	**Mohawk Valley,** comp=Z,41nm,1.2s	**21.05**	**324**		IAmb		IAmb	09 43 07.2	
X48A	**Hartselle** comp=Z,38nm,1.1s	**21.06**	**29**		IAmb		IAmb	09 43 07.0	
X16A	**Lo Mia Camp, P** comp=Z,29nm,0.8s	**21.13**	**331**		IAmb		IAmb	09 43 05.7	
GNAR	**Gosnell**	**21.17**	**21**		P		**P**	**09 42 59.7**	**+1.6**
GNAR	comp=Z,62nm,1.0s						IAmb	IAmb	09 43 08.7
T25A	**Trinidad** comp=Z,35nm,0.9s	**21.25**	**348**		IAmb		IAmb	09 43 05.8	
T25A	**Trinidad** baz=165,SNR=17	**21.25**	**348**		P		**P**	**09 43 00.9**	**+1.7**
255A	**Hazlehurst**	**21.68**	**41**		P		**P**	**09 43 02.7**	**-0.9**
154A	**Montrose**	**21.76**	**39**		P		**P**	**09 43 04.2**	**-0.2**
PBMO	**Poplar Bluff** comp=Z,38nm,0.9s	**21.78**	**19**		IAmb		IAmb	09 43 08.5	
FPAL	**Fort Paine** comp=Z,51nm,0.9s	**21.82**	**31**		IAmb		IAmb	09 43 09.0	
GLA	**Glamis**	**21.87**	**322**		P		**P**	**09 43 08.8**	**+3.0**
GLA	**Glamis** baz=135,SNR=9.0	**21.87**	**322**		P		**P**	**09 43 08.0**	**+2.3**
R32A	**Long Quarter,** comp=Z,52nm,1.1s	**22.01**	**1**		IAmb		IAmb	09 43 19.6	
WUAZ	**Wupatki**	**22.01**	**333**		P		**P**	**09 43 09.4**	**+2.0**
WUAZ	comp=Z,29nm,0.9s						IAmb	IAmb	09 43 11.7
WUAZ	**Wupatki** baz=146,SNR=9.9	**22.01**	**333**		P		**P**	**09 43 09.9**	**+2.5**
SDCO	**Great Sand Dun**	**22.06**	**346**		P		**P**	**09 43 09.1**	**+1.1**
SDCO	**Great Sand Dun** baz=163,SNR=16	**22.06**	**346**		P		**P**	**09 43 08.4**	**+0.5**
Y52A	**Lilburn**	**22.11**	**35**		P		**P**	**09 43 07.9**	**-0.3**
GOGA	**Godfrey** comp=Z,35nm,0.8s	**22.11**	**37**		IAmb		IAmb	09 43 15.9	
GOGA	**Godfrey** baz=223,SNR=10.0	**22.11**	**37**		P		**P**	**09 43 07.3**	**-1.0**
WVT	**Waverly**	**22.14**	**25**		P		**P**	**09 43 07.4**	**-1.1**
WVT	comp=Z,57nm,0.9s						IAmb	IAmb	09 43 11.5
WVT	**Waverly** baz=210	**22.14**	**25**		P		**P**	**09 43 07.2

JSC IAmb IAmb 09 43 37.7
comp=Z,78nm,1.5s
ISCO Idaho Springs 24.06 348 IAmb IAmb 09 43 39.4
comp=Z,23nm,0.8s
ISCO Idaho Springs 24.06 348 P **P** **09 43 29.0 +0.6**
baz=164,SNR=12
PAULI Pauline 24.08 37 IAmb IAmb 09 43 30.0
comp=Z,28nm,1.2s
V53A Saluda 24.14 34 IAmb IAmb 09 43 38.6
comp=Z,54nm,1.2s
T50A Nancy 24.18 29 IAmb IAmb 09 43 37.7
comp=Z,48nm,1.0s
TUQ Turquoise Moun 24.23 325 P **P** **09 43 32.4 +2.5**
baz=137,SNR=9.7
CIS Catalina Islan 24.32 318 P **P** **09 43 32.9 +2.2**
baz=129
OLIL Olney 24.33 21 IAmb IAmb 09 43 38.3
comp=Z,35nm,0.9s
Y57A Sumter 24.38 40 P **P** **09 43 30.9 -0.1**
Y57A IAmb IAmb 09 43 39.3
comp=Z,38nm,1.0s
BFSC Mount Baldy Ra 24.39 320 P **P** **09 43 33.4 +2.0**
baz=132
TZTN Tazewell 24.43 32 P **P** **09 43 31.8 +0.2**
baz=218
MTPU Mount Pierson 24.49 335 IAmb IAmb 09 43 44.0
comp=Z,23nm,0.9s
SZCU Shurtz Canyon 24.50 332 IAmb IAmb 09 43 43.8
comp=Z,22nm,1.3s
UREC San Jos de Ur 24.58 108 *eP* **P** **09 43 33.9 +0.7**
KMSC Kings Mountain 24.58 37 IAmb IAmb 09 43 41.6
comp=Z,32nm,0.9s
KMSC Kings Mountain 24.58 37 P **P** **09 43 32.8 -0.2**
baz=225,SNR=8.7
GSC Goldstone, Bar 24.62 323 IAmb IAmb 09 43 44.3
comp=Z,33nm,1.4s
GSC Goldstone, Bar 24.62 323 P **P** **09 43 36.1 +2.6**
baz=135,SNR=5.7
SHPR Sheep Range 24.62 328 IAmb IAmb 09 43 44.9
comp=Z,19nm,1.2s
OGNE Ogallala 24.66 355 P **P** **09 43 34.8 +1.1**
baz=173,SNR=7.2
P43A Skaggs, Pawnee 24.69 18 IAmb IAmb 09 43 42.4
comp=Z,41nm,1.0s
BIRD Birdtown, Kers 24.75 39 IAmb IAmb 09 43 43.9
comp=Z,37nm,1.3s
SRU San Rafael Swe 24.79 338 P **P** **09 43 36.1 +1.1**
SRU IAmb IAmb 09 43 38.8
comp=Z,28nm,0.9s
BGNE Belgrade 25.00 2 P **P** **09 43 37.8 +1.0**
O20A White River Ci 25.01 343 IAmb IAmb 09 43 41.5
comp=Z,45nm,1.1s
O20A White River Ci 25.01 343 P **P** **09 43 38.3 +1.3**
baz=158,SNR=12
EDW2 Edwards Air Fo 25.03 321 P **P** **09 43 39.9 +2.7**
baz=132
R49A Shelbyville 25.09 27 IAmb IAmb 09 43 44.9
comp=Z,20nm,0.8s
QSM Queen of Sheba 25.14 324 P **P** **09 43 40.1 +2.1**
QSM IAmb IAmb 09 43 49.1
comp=Z,22nm,1.0s
V55A Taylorsville 25.16 36 P **P** **09 43 38.8 +0.6**
P18A Preston Nutter 25.16 339 P **P** **09 43 41.0 +2.5**
N23A Red Feather La 25.18 348 IAmb IAmb 09 43 44.8
comp=Z,14nm,0.9s
N23A Red Feather La 25.18 348 P **P** **09 43 40.2 +1.6**
baz=164,SNR=7.3
GWY Greenwater Val 25.19 325 IAmb IAmb 09 43 51.2
comp=Z,34nm,1.3s
P17A Butcher Ranch, 25.19 339 IAmb IAmb 09 43 49.2
comp=Z,24nm,1.1s
TMUT Trail Mountain 25.20 338 IAmb IAmb 09 43 49.1
comp=Z,19nm,0.9s
LRMC Laurel Mtn Rad 25.26 323 P **P** **09 43 41.1 +1.9**
baz=134,SNR=7.1
S51A Beattyville 25.27 30 IAmb IAmb 09 43 48.3
comp=Z,29nm,0.8s
PRN Pahroc Range 25.27 329 P **P** **09 43 43.0 +3.6**
BLO Bloomington 25.29 23 P **P** **09 43 39.0 -0.4**
U54A Nelsons Funny 25.31 34 P **P** **09 43 40.0 +0.3**
PHWY Pilot Hill 25.48 349 IAmb IAmb 09 43 45.1
comp=Z,18nm,0.8s
FURC Furnace Creek, 25.50 325 P **P** **09 43 44.5 +3.2**
baz=136,SNR=8.4
TPNV Topopah Spring 25.53 327 P **P** **09 43 43.5 +1.8**
baz=138,SNR=12
MPMC Manual Prospec 25.55 324 P **P** **09 43 44.5 +2.5**
baz=135,SNR=6.7
HDIL Hopedale 25.60 18 P **P** **09 43 42.9 +0.8**
baz=202,SNR=15
L34A Svendsen Farm, 25.66 5 IAmb IAmb 09 43 46.9
comp=Z,22nm,0.7s
ARVC Arvin 25.70 320 P **P** **09 43 44.9 +1.7**
baz=131,SNR=7.1
GUY2C Guyana, Caldas 25.79 113 *eP* **P** **09 43 48.8 +4.2**
RDMU Red Mountain 25.80 342 P **P** **09 43 45.8 +1.6**
S11A Rachel 25.80 329 P **P** **09 43 46.6 +2.4**
S11A IAmb IAmb 09 43 50.1
comp=Z,25nm,1.1s
ISA Isabella, Lake 25.85 322 IAmb IAmb 09 43 57.4
comp=Z,34nm,1.2s
ISA Isabella, Lake 25.85 322 P **P** **09 43 46.4 +1.8**
baz=132,SNR=6.6
P48A Milroy 25.97 25 IAmb IAmb 09 43 53.5
comp=Z,15nm,0.8s
MPU Maple Canyon 25.99 338 P **P** **09 43 47.0 +1.1**
MPU IAmb IAmb 09 43 56.3
comp=Z,30nm,1.4s
SCIA State Center 25.99 10 P **P** **09 43 45.9 +0.2**
SCIA IAmb IAmb 09 43 47.1
comp=Z,24nm,0.8s
SCIA State Center 25.99 10 P **P** **09 43 46.3 +0.6**
baz=193
NLU North Lily Min 26.10 337 IAmb IAmb 09 43 58.4
comp=Z,48nm,1.4s
SFIN Lafayette 26.14 21 IAmb IAmb 09 43 54.9
comp=Z,30nm,0.8s
SFIN Lafayette 26.14 21 P **P** **09 43 47.2 +0.1**
baz=207,SNR=11
CWC Cottonwood Cre 26.16 324 P **P** **09 43 49.7 +2.2**
baz=134
GRAC Grapevine Rang 26.16 325 P **P** **09 43 50.4 +3.1**
baz=136
PKM Mcpherson Peak 26.16 319 P **P** **09 43 50.5 +2.9**
baz=129
K31A O'Neill 26.20 1 IAmb IAmb 09 43 59.2
comp=Z,34nm,0.9s
SPR3 Spring Creek 3 26.21 332 IAmb IAmb 09 43 59.7
comp=Z,30nm,1.4s
R11A Troy Canyon, C 26.27 330 P **P** **09 43 50.2 +1.7**
baz=141,SNR=7.9
P49A Miami Univ. Ec 26.32 26 P **P** **09 43 48.2 -0.5**
baz=212,SNR=16
VES Vestal, Richgr 26.34 321 P **P** **09 43 51.4 +2.5**
baz=132
V58A Windy Hill, Pi 26.34 39 IAmb IAmb 09 43 58.0
comp=Z,32nm,0.8s
Q51A Peebles 26.50 28 P **P** **09 43 50.4 0.0**
L40A Anamosa 26.53 13 P **P** **09 43 50.2 -0.4**
L40A IAmb IAmb 09 43 58.9
comp=Z,35nm,1.0s
S54A Dingess, Beckl 26.54 33 IAmb IAmb 09 44 00.0
comp=Z,38nm,1.0s
SMMC Simmler 26.55 319 P **P** **09 43 53.5 +2.6**
baz=129
BLA Blacksburg 26.58 35 IAmb IAmb 09 43 59.5
comp=Z,25nm,0.8s
BLA Blacksburg 26.58 35 P **P** **09 43 50.5 -0.6**
baz=223
DUG Dugway, Tooele 26.59 336 P **P** **09 43 53.3 +2.0**
baz=149
SDDR Presa de Saban 26.65 80 *eP* **P** **09 43 55.2 +3.3**
O48B Farmland 26.76 24 P **P** **09 43 52.6 0.0**
baz=211,SNR=23
TCUT Toone Canyon 26.88 339 IAmb IAmb 09 44 04.6
comp=Z,36nm,1.1s
K22A Casper 26.98 348 P **P** **09 43 55.6 +0.8**
baz=164
T57A Hurt 27.08 37 P **P** **09 43 54.6 -1.0**
T57A IAmb IAmb 09 43 59.5
comp=Z,19nm,1.0s
HQIL Hanson Quary C 27.18 19 IAmb IAmb 09 44 05.6
comp=Z,254nm,1.3s
BARC Barichara 27.18 108 *eP* P 09 44 04.6 +7.7
HWUT Hardware Ranch 27.37 339 IAmb IAmb 09 44 09.4
comp=Z,20nm,1.2s
ECSD EROS Data Cent 27.40 4 IAmb IAmb 09 44 06.9
comp=Z,13nm,0.9s
ECSD EROS Data Cent 27.40 4 P **P** **09 43 58.9 +0.5**
baz=185,SNR=6.7
L44A Lake County Fo 27.50 18 P **P** **09 43 59.2 -0.1**
baz=204
OMMB Old Mammoth Mi 27.51 324 IAmb IAmb 09 44 12.6
comp=Z,18nm,1.3s
R55A Marlinton 27.52 34 IAmb IAmb 09 44 03.9
comp=Z,25nm,1.0s
P52A Corning 27.55 29 IAmb IAmb 09 44 07.8
comp=Z,32nm,1.2s
P52A Corning 27.55 29 P **P** **09 43 59.7 0.0**
baz=217
JFWS Jewell Farm 27.56 14 IAmb IAmb 09 44 09.0
comp=Z,17nm,1.0s
JFWS Jewell Farm 27.56 14 P **P** **09 43 59.3 -0.5**
baz=198
ACSO Alum Creek Sta 27.64 27 IAmb IAmb 09 44 08.8
comp=Z,31nm,0.9s
ACSO Alum Creek Sta 27.64 27 P **P** **09 43 59.3 -1.3**
baz=215
Q54A Coxs Mills 27.68 32 IAmb IAmb 09 44 10.5
comp=Z,47nm,1.4s
NVAR Mina Array Bea 27.72 326 P **P** **09 44 04.3 +2.8**
comp=Z,4.8nm,0.9s,baz=150,slow=9.1,SNR=11
NVAR PcP **PcP** **09 47 19.4 +0.9**
comp=Z,0.8nm,0.9s,baz=165,slow=3.7,SNR=3.4
comp=Z,4.8nm,0.9s
S57A Dark Hollow, R 27.79 36 IAmb IAmb 09 44 10.4
comp=Z,14nm,0.8s
P53A Whipple 27.79 30 IAmb IAmb 09 44 12.8
comp=Z,21nm,1.1s
BW06 Boulder Array 27.82 343 IAmb IAmb 09 44 13.1
comp=Z,41nm,1.3s
BW06 Boulder Array 27.82 343 P **P** **09 44 03.3 +0.9**
baz=158,SNR=30
PD31 Pinedale Array 27.82 343 IAmb IAmb 09 44 13.0
comp=Z,37nm,1.3s
PDAR Pinedale Array 27.82 343 P **P** **09 44 04.2 +1.8**
comp=Z,6.6nm,0.8s,baz=141,slow=9.3,SNR=16
PDAR PcP **PcP** **09 47 17.9 -0.8**
comp=Z,0.3nm,0.7s,baz=101,slow=2.3,SNR=2.5
comp=Z,6.6nm,0.8s
RSSD Black Hills 28.01 352 P **P** **09 44 04.5 +0.5**
RSSD IAmb IAmb 09 44 13.4
comp=Z,14nm,1.1s
RSSD Black Hills 28.01 352 P **P** **09 44 05.0 +0.9**
baz=169
I37A Lemond, Waseca 28.02 9 P **P** **09 44 02.0 -1.9**
I37A IAmb IAmb 09 44 10.3
comp=Z,15nm,1.1s
ELK Elko 28.05 333 P **P** **09 44 07.2 +2.7**
comp=Z,2.8nm,0.9s,baz=165,slow=7.0,SNR=8.9
comp=Z,2.8nm,0.9s
AHID Auburn Hatcher 28.27 341 IAmb IAmb 09 44 16.2
comp=Z,14nm,1.1s
I40A Norwalk 28.41 13 IAmb IAmb 09 44 17.1
comp=Z,23nm,1.4s
O53A New Philadelph 28.47 30 P **P** **09 44 06.9 -1.1**
baz=218
L48A N Adams 28.48 23 P **P** **09 44 07.4 -0.7**
Q56A Snyder Ridge, 28.57 34 IAmb IAmb 09 44 18.1
comp=Z,29nm,1.1s
MCWV Mont Chateau 28.69 32 IAmb IAmb 09 44 20.9
comp=Z,34nm,1.2s
MCWV Mont Chateau 28.69 32 P **P** **09 44 09.2 -0.7**
baz=221
REDW Red Top Meadow 28.73 342 IAmb IAmb 09 44 19.1
comp=Z,16nm,1.3s
SNOW Snow King Moun 28.80 342 IAmb IAmb 09 44 15.1
comp=Z,15nm,1.0s
I42A Draeger Farm, 28.81 15 IAmb IAmb 09 44 19.3
comp=Z,31nm,1.2s
O54A Avella 28.82 31 IAmb IAmb 09 44 19.7
comp=Z,20nm,1.2s
TPAW Teton Pass 28.88 342 P **P** **09 44 11.7 -0.2**
TPAW IAmb IAmb 09 44 19.7
comp=Z,16nm,1.4s
LOHW Long Hollow 28.89 343 IAmb IAmb 09 44 22.2
comp=Z,37nm,1.5s
PNTR Pine Nut 28.89 326 P **P** **09 44 12.2 +0.2**
VCNR Virginia City 29.07 326 P **P** **09 44 15.5 +1.9**
N53A Lisbon 29.08 29 IAmb IAmb 09 44 22.1
comp=Z,18nm,0.9s
EMB Emerald Bay 29.08 325 IAmb IAmb 09 44 26.9
comp=Z,21nm,1.1s
AAM Ann Arbor 29.09 24 P **P** **09 44 12.9 -0.5**
baz=212
MPK Martis Peak 29.27 326 IAmb IAmb 09 44 25.8
comp=Z,21nm,1.2s
SPMN Marine on St. 29.29 9 IAmb IAmb 09 44 16.2
comp=Z,18nm,1.1s
SPMN Marine on St. 29.29 9 P **P** **09 44 15.3 +0.1**
baz=192
P57A Homestead Farm 29.52 34 P **P** **09 44 18.4 +1.0**
P57A IAmb IAmb 09 44 26.4
comp=Z,26nm,1.5s
H17A Grant Village 29.60 343 P **P** **09 44 20.2 +1.9**
baz=157
M53A WI Miller and 29.65 29 IAmb IAmb 09 44 27.9
comp=Z,42nm,1.5s
M53A WI Miller and 29.65 29 P **P** **09 44 18.3 -0.2**
baz=218
G40A Rib Lake 29.81 13 IAmb IAmb 09 44 28.1
comp=Z,25nm,1.5s
RLMT Red Lodge 29.94 346 P **P** **09 44 21.3 +0.1**
RLMT Red Lodge 29.94 346 P **P** **09 44 22.7 +1.4**
baz=160
PLTX Planet X, Gerl 30.00 328 IAmb IAmb 09 44 30.9
comp=Z,17nm,1.2s
HLID Hailey 30.09 338 P **P** **09 44 24.0 +1.4**
baz=149,SNR=6.8
YHL Hebgen Lake 30.19 343 P **P** **09 44 25.2 +1.6**
SSPA Standing Stone 30.42 33 P **P** **09 44 26.0 +0.7**
SSPA IAmb IAmb 09 44 30.0
comp=Z,11nm,1.0s
SSPA Standing Stone 30.42 33 P **P** **09 44 25.5 +0.2**
baz=223
ERPA Erie 30.50 29 P **P** **09 44 26.7 +0.7**
baz=218
MFID Camas Ranch 30.51 336 IAmb IAmb 09 44 37.3
comp=Z,12nm,1.1s
COWI Conover 30.83 14 IAmb IAmb 09 44 36.4
comp=Z,13nm,1.0s
LAO LASA Array 30.84 350 P **P** **09 44 28.5 -0.5**
LAO LASA Array 30.84 350 P **P** **09 44 29.7 +0.7**
baz=166
GLMI Grayling 30.93 20 P **P** **09 44 29.4 -0.3**
baz=208
BOZ Bozeman (W) 31.00 343 P **P** **09 44 32.3 +1.8**
baz=156,SNR=9.1
BAUV El Baul 31.18 100 P **P** **09 44 31.0 -1.2**
MOD Modoc Plateau 31.31 329 IAmb IAmb 09 44 42.7
comp=Z,9.6nm,1.0s
M57A Sunshine Farm, 31.32 33 IAmb IAmb 09 44 42.6
comp=Z,10nm,0.8s
WVNY West Valley, N 31.38 30 IAmb IAmb 09 44 42.2
comp=Z,25nm,1.1s
MDND Maddock 31.43 359 P **P** **09 44 34.6 +0.5**
baz=179,SNR=12
J08A Circle Bar Ran 31.57 333 IAmb IAmb 09 44 38.9
comp=Z,19nm,1.1s
E43A Lone Tree Farm 31.62 16 IAmb IAmb 09 44 42.9
comp=Z,26nm,1.1s
L56A Greenwood 31.69 31 IAmb IAmb 09 44 45.9
comp=Z,33nm,1.4s
MMNY Mt. Morris Dam 31.96 30 P **P** **09 44 40.1 +1.3**
MMNY IAmb IAmb 09 44 48.7
comp=Z,31nm,1.3s
PLID Pearl Lake 31.99 337 P **P** **09 44 40.5 +1.2**
PLID IAmb IAmb 09 44 50.3
comp=Z,14nm,1.1s
AGMN Agassiz Nation 31.99 4 P **P** **09 44 39.8 +0.8**
AGMN Agassiz Nation 31.99 4 P **P** **09 44 40.0 +1.0**
baz=186,SNR=15
B35A Bob, Littlefor 32.25 7 IAmb IAmb 09 44 42.2
comp=Z,16nm,0.9s
DGMT Dagmar 32.32 354 P **P** **09 44 43.1 +1.2**
baz=170
YBH Yreka Blue Hor 32.44 326 P **P** **09 44 43.9 +0.7**
comp=Z,2.5nm,0.8s,baz=164,slow=4.8,SNR=3.7
comp=Z,2.5nm,0.8s
BINY Binghamton 32.54 33 P **P** **09 44 43.7 -0.2**
baz=224
K57A Scipio Center 32.65 32 P **P** **09 44 45.0 +0.1**
K57A IAmb IAmb 09 44 54.1
comp=Z,28nm,1.1s
EGMT Eagleton 32.79 347 P **P** **09 44 47.1 +0.9**
baz=160
MSO Missoula 32.80 341 IAmb IAmb 09 44 56.3
comp=Z,14nm,1.2s
MSO Missoula 32.80 341 P **P** **09 44 47.8 +1.5**
baz=153
SADO Sadowa 32.98 27 P **P** **09 44 47.3 -0.4**
comp=Z,6.3nm,0.9s,baz=258,slow=6.9,SNR=7.0
comp=Z,6.3nm,0.9s
F10A Beach Ranch, E 33.20 337 IAmb IAmb 09 44 53.1
comp=Z,19nm,0.8s
J04D Umpqua Nationa 33.20 329 P **P** **09 44 51.2 +1.3**
baz=136
G08A Pilot Rock 33.33 334 IAmb IAmb 09 44 53.4
comp=Z,9.2nm,0.9s
DELO Deloro Mine 33.46 28 IAmb IAmb 09 44 59.7
comp=Z,19nm,1.1s
KSCT Kent School, K 33.57 36 IAmb IAmb 09 44 56.1
comp=Z,12nm,0.9s
I05D Terrebonne, OR 33.64 331 P **P** **09 44 54.6 +1.0**
baz=138
J01E Myrtle Point 34.08 327 P **P** **09 44 58.9 +1.6**
baz=134
I03D Drain, OR 34.16 328 P **P** **09 44 59.4 +1.4**
baz=135
H04A Detroit Lake 34.30 330 IAmb IAmb 09 45 08.1
comp=Z,20nm,1.1s
HOOD Mount Hood Mea 34.53 332 P **P** **09 45 03.4 +2.0**
I02E Swisshome, OR 34.70 328 P **P** **09 45 03.7 +1.0**
baz=135
WALA Waterton Lakes 34.80 343 IAmb IAmb 09 45 14.7
comp=Z,11nm,1.1s
LONY Lake Ozonia 34.98 31 IAmb IAmb 09 45 14.4
comp=Z,14nm,1.0s
LONY Lake Ozonia 34.98 31 P **P** **09 45 04.2 -1.0**
baz=224
NEW Newport 35.10 339 P **P** **09 45 08.1 +1.9**
comp=Z,3.3nm,0.8s,baz=147,slow=12,SNR=7.5
comp=Z,3.3nm,0.8s
NEW Newport 35.10 339 P **P** **09 45 07.2 +1.0**
baz=148,SNR=5.7
C09A Chrisman Ranch 35.12 337 IAmb IAmb 09 45 15.6
comp=Z,18nm,0.7s
CZSB Cruzeiro do Su 35.43 130 P **P** **09 45 10.6 +1.2**
CZSB IAmb IAmb 09 45 17.4
comp=Z,24nm,1.4s
LTY Liberty 35.62 335 IAmb IAmb 09 45 21.8
comp=Z,15nm,1.0s
B08A Colville Reser 35.98 337 IAmb IAmb 09 45 22.5
comp=Z,10nm,0.9s
TRQ Mont Tremblant 36.16 29 IAmb IAmb 09 45 25.5
comp=Z,32nm,1.4s
LLLB Lillooet 38.78 337 IAmb IAmb 09 45 49.0
comp=Z,15nm,1.0s
BOAV Boa Vista 40.42 106 P **P** **09 45 50.8 -0.8**
BOAV IAmb IAmb 09 45 58.7
comp=Z,7.9nm,1.2s
LMN Caledonia Mun 41.05 37 P **P** **09 45 56.9 +0.5**
LMN IAmb IAmb 09 46 06.2
comp=Z,47nm,1.4s
SCHQ Schefferville 45.77 26 P **P** **09 46 34.6 +0.3**
comp=Z,15nm,0.8s,baz=245,slow=4.9,SNR=12
comp=Z,15nm,0.8s
SCHQ Schefferville 45.77 26 P **P** **09 46 34.1 -0.2**
YKA Yellowknife Ar 47.38 350 P **P** **09 46 47.6 +0.8**
comp=Z,6.0nm,0.9s,baz=158,slow=7.5,SNR=11
comp=Z,6.0nm,0.9s
DLBC Dease Lake 47.85 339 IAmb IAmb 09 47 01.0
comp=Z,11nm,1.1s
DLBC Dease Lake 47.85 339 P **P** **09 46 51.4 +0.7**
baz=138
LVC Limon Verde 48.71 142 LR LR 10 03 52.5
comp=Z,38nm,18.1s,baz=326,slow=32
R33M Jennings River 48.89 339 P **P** **09 46 59.8 +1.1**
baz=137,SNR=7.4
P32M Atlin 50.00 338 P **P** **09 47 07.1 0.0**
baz=134
P33M Teslin, Yukon 50.13 339 IAmb IAmb 09 47 17.7
comp=Z,18nm,1.4s
P33M Teslin, Yukon 50.13 339 P **P** **09 47 07.6 -0.5**
baz=136
O30N Mendenhall 51.68 338 P **P** **09 47 19.9 +0.2**
baz=132
FARO Faro, Yukon 51.77 340 IAmb IAmb 09 47 29.8
comp=Z,13nm,1.4s
N31M Braeburn, Yuko 52.06 339 IAmb IAmb 09 47 32.7
comp=Z,21nm,0.9s
N31M Braeburn, Yuko 52.06 339 P **P** **09 47 22.5 0.0**
baz=133
M31M Drury Creek, Y 52.09 340 P **P** **09 47 22.7 -0.1**
baz=135
PNL Peninsula 52.22 335 P **P** **09 47 23.6 -0.2**
baz=128
YUK4 Talbot Arm 52.99 337 P **P** **09 47 29.4 -0.3**
baz=130
H03N2 Juan Fernandez 53.12 159 T T 10 44 32.9
baz=337,slow=77,SNR=47
H03N1 Juan Fernandez 53.12 159 T T 10 44 34.6
baz=337,slow=77,SNR=36
H03N3 Juan Fernandez 53.13 159 T T 10 44 32.9
baz=337,slow=77,SNR=52
M29M Somme Creek 53.65 339 P **P** **09 47 35.8 +1.4**
baz=131
YUK3 Moose Creek 53.94 337 P **P** **09 47 37.0 +0.3**
baz=128,SNR=5.3
MCARA McCarthy VSAT 54.69 336 P **P** **09 47 42.3 +0.5**
baz=125
M27K Edge Creek, AK 54.83 337 P **P** **09 47 43.7 +0.7**
baz=127
DAWY Dawson 55.03 340 P **P** **09 47 45.3 +1.0**
baz=130
GLB Gilahina Butte 55.03 336 P **P** **09 47 45.8 +1.5**
GLB IAmb IAmb 09 47 54.0
comp=Z,10nm,0.9s
BMRM Bremner River 55.08 335 P **P** **09 47 45.8 +1.0**
baz=123,SNR=5.1
BCAR Beaver Creek A 55.22 338 P **P** **09 47 46.5 +0.7**
L27K Beaver Creek, 55.24 338 IAmb IAmb 09 47 55.3
comp=Z,12nm,1.4s
L27K Beaver Creek, 55.24 338 P **P** **09 47 46.8 +1.0**
baz=127
M26K Nabesna, AK 55.27 337 P **P** **09 47 47.4 +1.3**
baz=126
EYAK Cordova Ski Ar 55.33 334 P **P** **09 47 48.0 +1.6**
baz=122
N25K Chitina, Valde 55.44 336 P **P** **09 47 48.3 +1.0**
baz=123
I29M Ogilvie Camp, 55.55 341 IAmb IAmb 09 47 56.2
comp=Z,8.3nm,0.8s
I29M Ogilvie Camp, 55.55 341 P **P** **09 47 49.4 +1.4**
baz=132
P23K Montague Islan 55.75 333 P **P** **09 47 51.2 +1.7**
baz=120
L26K Log Cabin Wild 55.77 337 IAmb IAmb 09 47 59.9
comp=Z,12nm,1.4s
L26K Log Cabin Wild 55.77 337 P **P** **09 47 50.9 +1.2**
baz=126
EPYK Eagle Plains 55.77 343 P **P** **09 47 50.8 +1.2**
baz=135
KLU Klutina 55.91 335 P **P** **09 47 50.2 -0.5**
baz=122,SNR=5.4
K27K Chicken 55.92 339 P **P** **09 47 51.6 +1.0**
baz=128
EGAK Eagle 56.08 340 IAmb IAmb 09 48 00.2
comp=Z,12nm,0.8s
EGAK Eagle 56.08 340 P **P** **09 47 52.0 +0.3**
baz=129,SNR=8.1
M24K Tolsona, Glenn 56.34 336 P **P** **09 47 55.1 +1.3**
baz=122
INK Inuvik 56.36 345 P **P** **09 47 55.3 +1.6**
comp=Z,7.7nm,0.8s,baz=110,slow=8.0,SNR=7.8
comp=Z,7.7nm,0.8s
INK Inuvik 56.36 345 P **P** **09 47 53.6 -0.1**
INK Inuvik 56.36 345 P **P** **09 47 53.8 +0.1**
baz=139,SNR=5.7
DOT Dot Lake 56.40 338 IAmb IAmb 09 48 03.5
comp=Z,23nm,1.3s
PAX Paxson 56.53 337 IAmb IAmb 09 48 04.1
comp=Z,15nm,1.2s
PAX Paxson 56.53 337 P **P** **09 47 55.6 +0.5**
baz=123
SCRK Sand Creek 56.56 338 IAmb IAmb 09 48 04.8
comp=Z,11nm,1.1s
SCRK Sand Creek 56.56 338 P **P** **09 47 56.8 +1.3**
baz=125
PWL Port Wells 56.58 334 IAmb IAmb 09 48 03.4
comp=Z,8.3nm,0.5s
PWL Port Wells 56.58 334 P **P** **09 47 55.2 -0.3**
baz=119

SCM	Sheep Creek Mo	56.66	335	P	P	09 47 55.5 -0.5
	baz=121					
SEW	Seward	56.70	333	P	P	09 47 57.4 +1.2
	baz=118					
J26L	Joseph Creek	56.72	339	P	P	09 47 57.9 +1.4
	baz=126,SNR=12					
RIDG	Independent Ri	56.73	338	P	P	09 47 56.7 +0.1
	baz=124,SNR=8.3					
I27K	Kandik River	56.75	340	P	P	09 47 56.5 -0.1
	baz=129					
SML	Sawmill	57.05	335	P	P	09 47 58.8 0.0
	baz=120					
I26K	Coal Creek Min	57.07	340	IAmb	IAmb	09 48 07.5
	comp=Z,12nm,1.0s					
I26K	Coal Creek Min	57.07	340	P	P	09 47 59.0 +0.2
	baz=127					
K24K	Donnelly Dome	57.11	337	P	P	09 47 59.3 +0.1
	baz=123					
BRSE	Bradley Lake S	57.12	332	P	P	09 47 59.6 +0.3
	baz=116					
H27K	Steamboat Moun	57.12	341	P	P	09 47 59.7 +0.4
	baz=129					
WAT6	Susitna Watana	57.21	336	P	P	09 48 00.3 +0.3
	baz=121,SNR=5.3					
PMR	Palmer	57.28	334	P	P	09 47 58.8 -1.5
PMR				IAmb	IAmb	09 48 09.0
	comp=Z,7.6nm,0.7s					
PMR	Palmer	57.28	334	P	P	09 48 00.2 -0.1
	baz=119					
GHO	Glory Hole Cre	57.28	334	P	P	09 47 59.7 -0.8
GHO				IAmb	IAmb	09 48 09.2
	comp=Z,13nm,0.8s					
RC01	Rabbit Creek A	57.29	333	P	P	09 47 59.6 -0.9
	baz=118					
OHAK	Old Harbor	57.29	328	P	P	09 48 00.5 0.0
	baz=112					
DHY	Denali Highway	57.32	336	P	P	09 48 00.2 -0.6
	baz=121					
J25K	Salcha River,	57.42	338	IAmb	IAmb	09 48 10.4
	comp=Z,15nm,1.4s					
J25K	Salcha River,	57.42	338	P	P	09 48 01.4 0.0
	baz=124					
G27K	Doyon Strip	57.53	342	P	P	09 48 01.6 -0.5
	baz=129,SNR=6.4					
M22K	Willow	57.77	334	P	P	09 48 03.8 0.0
	baz=118					
HDA	Harding Lake	57.88	338	IAmb	IAmb	09 48 13.0
	comp=Z,11nm,1.0s					
HDA	Harding Lake	57.88	338	P	P	09 48 04.5 0.0
	baz=122					
SUA	Susitna One	57.90	334	P	P	09 48 05.9 +1.0
SUA	Susitna One	57.90	334	P	P	09 48 06.3 +1.4
	baz=117					
PRP	Porcupine Dome	57.99	339	IAmb	IAmb	09 48 14.4
	comp=Z,21nm,1.1s					
PRP	Porcupine Dome	57.99	339	P	P	09 48 06.3 +0.7
	baz=125,SNR=8.4					
IL31		58.05	338	P	P	09 48 06.1 +0.4
ILAR	Eielson Array	58.05	338	P	P	09 48 07.2 +1.5
	comp=Z,4.1nm,1.0s,baz=144,slow=5.5,SNR=14					
	comp=Z,4.1nm,1.0s					
RND	Reindeer	58.07	336	P	P	09 48 07.4 +1.4
MCK	McKinley	58.26	336	P	P	09 48 07.8 +0.5
MCK				IAmb	IAmb	09 48 15.9
	comp=Z,20nm,1.1s					
MCK	McKinley	58.26	336	P	P	09 48 07.4 +0.1
	baz=120					
G26K	Porcupine Rive	58.28	341	P	P	09 48 07.7 +0.5
	baz=127					
CCB	Clear Creek Bu	58.32	338	IAmb	IAmb	09 48 16.7
	comp=Z,7.6nm,1.2s					
WRH	Wood River Hil	58.33	337	IAmb	IAmb	09 48 16.3
	comp=Z,7.3nm,1.0s					
E27K	Coleen River	58.40	343	P	P	09 48 08.2 -0.1
	baz=130,SNR=6.0					
COLA	College	58.45	338	P	P	09 48 09.1 +0.6
	baz=122					
TCOL	CIGO, UAF Yank	58.46	338	IAmb	IAmb	09 48 18.8
	comp=Z,11nm,0.8s					
TCOL	CIGO, UAF Yank	58.46	338	P	P	09 48 09.1 +0.5
	baz=122					
H25K	Birch Creek	58.52	340	P	P	09 48 09.7 +0.7
	baz=125					
MDM	Murphy Dome	58.64	338	P	P	09 48 10.4 +0.5
MDM				IAmb	IAmb	09 48 19.9
	comp=Z,6.6nm,1.0s					
TRF	Thorofare Moun	58.65	336	P	P	09 48 10.9 +0.8
	baz=118,SNR=5.7					
CPUP	Villa Florida	58.73	136	P	P	09 48 10.2 -0.8
	comp=Z,2.3nm,1.0s,baz=288,slow=6.4,SNR=2.2					
	comp=Z,2.3nm,1.0s					
NEA2	Nenana	58.75	337	P	P	09 48 11.0 +0.3
NEA2				IAmb	IAmb	09 48 19.8
	comp=Z,16nm,1.2s					
NEA2	Nenana	58.75	337	P	P	09 48 11.6 +0.9
	baz=120,SNR=6.1					
F26K	Sheenjek River	58.84	342	P	P	09 48 11.2 0.0
	baz=127					
G25K	Bearman Lake	58.91	340	P	P	09 48 11.6 0.0
	baz=125					
KTH	Kantishna Hill	58.95	336	IAmb	IAmb	09 48 20.4
	comp=Z,17nm,1.2s					
H24K	Noodor Dome	58.98	339	P	P	09 48 13.4 +1.1
H24K	Noodor Dome	58.98	339	P	P	09 48 12.7 +0.4
	baz=122,SNR=6.3					
R17K	Ugashik Creek	59.01	328	P	P	09 48 12.8 +0.2
	baz=109					
M20K	Styx River	59.10	333	P	P	09 48 13.2 -0.1
M20K				IAmb	IAmb	09 48 21.1
	comp=Z,9.2nm,0.9s					
M20K	Styx River	59.10	333	P	P	09 48 13.3 +0.1
	baz=115,SNR=6.1					
I23K	Minto, Yukon-K	59.15	338	P	P	09 48 13.9 +0.6
	baz=120,SNR=6.5					
PPLA	Purkeypile	59.15	335	P	P	09 48 13.4 -0.2
	baz=116,SNR=5.8					
O18K	Koktuh Hills	59.22	331	P	P	09 48 15.1 +1.1
	baz=112					
BPAW	Bear Paw Mtn.	59.23	336	IAmb	IAmb	09 48 22.3
	comp=Z,18nm,1.3s					
BPAW	Bear Paw Mtn.	59.23	336	P	P	09 48 14.1 +0.1
	baz=118,SNR=5.4					
F25K	Christian Rive	59.24	341	P	P	09 48 13.6 -0.5
	baz=126					
N19K	Bonanza Creek	59.26	332	IAmb	IAmb	09 48 22.5
	comp=Z,11nm,0.8s					
N19K	Bonanza Creek	59.26	332	P	P	09 48 14.9 +0.5
	baz=113,SNR=5.5					
G24K	Hadweenzic Riv	59.32	340	P	P	09 48 15.7 +1.1
	baz=123,SNR=11					
CAST	Castle Rocks	59.35	335	P	P	09 48 15.2 +0.3
	baz=117,SNR=7.9					
Q16K	King Salmon	59.49	329	P	P	09 48 16.6 +0.7
	baz=110					
E25K	Arctic Village	59.53	342	P	P	09 48 16.2 +0.2
	baz=126					
H23K	Yukon River	59.56	338	P	P	09 48 16.2 -0.1
	baz=120					
R16K	Pilot Point	59.59	328	P	P	09 48 17.8 +1.3
	baz=108					
MLY	Manley	59.59	337	P	P	09 48 16.4 -0.2
	baz=119,SNR=9.1					
CHUM	Lake Minchumin	59.65	336	P	P	09 48 17.9 +1.1
	baz=117					
M19K	Big River Lodg	59.66	333	P	P	09 48 18.0 +1.1
	baz=114					
L20K	Farewell, AK	59.67	334	P	P	09 48 18.2 +1.0
	baz=114,SNR=9.5					
N18K	Kilae Creek	59.85	332	P	P	09 48 18.3 0.0
N18K				IAmb	IAmb	09 48 26.6
	comp=Z,21nm,1.4s					
N18K	Kilae Creek	59.85	332	P	P	09 48 19.4 +1.1
	baz=111					
F24K	Squaw Lake	59.91	340	P	P	09 48 18.8 +0.2
	baz=123					
C27K	Jago River	59.92	343	P	P	09 48 20.0 +1.4
	baz=128,SNR=5.0					
L19K	White Mountain	59.97	333	P	P	09 48 19.3 +0.1
L19K				IAmb	IAmb	09 48 27.4
	comp=Z,14nm,1.1s					
L19K	White Mountain	59.97	333	P	P	09 48 19.7 +0.6
	baz=113					
O17K	Koliganek Bris	60.08	330	P	P	09 48 20.1 +0.2
	baz=110					
K20K	Telida	60.12	335	P	P	09 48 20.2 0.0
K20K	Telida	60.12	335	P	P	09 48 21.1 +1.0
	baz=115,SNR=6.6					
I21K	Tanana	60.13	337	P	P	09 48 21.1 +1.0
	baz=118,SNR=5.8					
G23K	Bananza Creek	60.18	339	P	P	09 48 22.1 +1.5
	baz=120,SNR=6.0					
H22K	Ishtalitna Cre	60.25	338	P	P	09 48 22.1 +1.1
	baz=119,SNR=6.6					
E24K	Your Creek	60.40	341	P	P	09 48 23.9 +1.8
	baz=123,SNR=5.1					
D25K	Kavik River	60.48	343	P	P	09 48 23.9 +1.3
	baz=126,SNR=7.3					
O16K	Kokwok River B	60.50	330	P	P	09 48 23.9 +1.2
	baz=109					
J20K	Nowinta River	60.51	336	P	P	09 48 23.6 +1.0
J20K	Nowinta River	60.51	336	P	P	09 48 23.8 +1.0
	baz=115,SNR=7.5					
H21K	Melozitna Rive	60.65	337	P	P	09 48 23.9 +0.2
H21K				IAmb	IAmb	09 48 31.8
	comp=Z,11nm,1.1s					
H21K	Melozitna Rive	60.65	337	P	P	09 48 24.2 +0.5
	baz=117,SNR=5.4					
DY2G	Dye2	60.75	22	*i* P	P	09 48 23.7 -1.0
DY2G				IAmb	IAmb	09 48 26.3
	comp=Z,15nm,0.9s					
TTA	Tatalina	60.76	334	IAmb	IAmb	09 48 32.3
	comp=Z,17nm,1.1s					
TTA	Tatalina	60.76	334	P	P	09 48 25.3 +0.7
	baz=112,SNR=5.5					
TOLK	Toolik Lake Re	61.05	341	P	P	09 48 26.7 +0.2
TOLK	Toolik Lake Re	61.05	341	P	P	09 48 26.8 +0.4
	baz=122,SNR=5.1					
D24K	Happy Valley	61.10	342	P	P	09 48 27.6 +0.9
	baz=123					
N16K	Nishlik Lake	61.11	331	P	P	09 48 27.0 +0.1
	baz=108,SNR=5.2					
F22K	John River	61.31	339	P	P	09 48 28.1 -0.1
	baz=119					
C24K	Franklin Bluff	61.38	342	P	P	09 48 29.0 +0.4
	baz=123					
S12K	Black Hills	61.46	325	P	P	09 48 29.2 -0.3
	baz=103					
D23K	Nanushuk River	61.56	341	P	P	09 48 29.2 -0.6
	baz=121					
F21K	Alatna River	61.62	339	P	P	09 48 30.5 +0.2
	baz=117,SNR=18					
C23K	Itkillik River	62.00	342	P	P	09 48 32.7 -0.1
	baz=121					
UNV	Unalaska Valle	63.64	322	P	P	09 48 46.3 +2.3
	baz=58					
ICESG	Greenland Ices	64.16	20	*i* P	P	09 48 47.7 +0.1
ICESG				IAmb	IAmb	09 48 48.3
	comp=Z,8.9nm,0.9s					
DAG	Danmarks Havn	72.03	14	*i* P	P	09 49 36.0 -0.4
DAG				IAmb	IAmb	09 49 36.7
	comp=Z,7.4nm,0.9s					
NOR	Nord	72.84	9	*e*P	P	09 49 41.4 +0.1
NOR				IAmb	IAmb	09 49 42.3
	comp=Z,4.2nm,0.9s					
ESDC	Sonseca Array	83.63	51	P	P	09 50 41.0 -0.9
	comp=Z,0.5nm,0.7s,baz=276,slow=6.3,SNR=2.4					
	comp=Z,0.5nm,0.7s					
NB2	NORSAR Subarra	85.32	27	P	P	09 50 51.0 +1.0
	comp=Z,15nm,1.4s,baz=302,slow=5.1					
NOA	NORSAR Array B	85.32	27	P	P	09 50 51.0 +1.0
	comp=Z,0.5nm,0.7s,baz=301,slow=5.0,SNR=4.0					
	comp=Z,0.5nm,0.7s					
TIXI	Tiksi	86.47	346	P	P	09 50 56.1 +0.8
WRA	Warramunga Arr	129.23	257	PKP	PKiKP	09 57 22.4 -0.6
	comp=Z,0.4nm,0.8s,baz=88,slow=1.6,SNR=2.0					
ASAR	Alice Springs	129.86	253	PKP	PKiKP	09 57 23.6 -0.6
	comp=Z,0.2nm,0.7s,baz=27,slow=3.1,SNR=1.9					
PZH	PanZhiHua	132.84	334	PKP	PKiKP	09 57 33.5 +3.2
CMAR	Chiang Mai Arr	141.12	332	PKP	PKiKP	09 57 44.9 -2.3
	comp=Z,1.4nm,0.4s,baz=321,slow=1.2,SNR=2.5					
HYBB	Hyderabad (bro	146.38	4	*e*PKPdf	PKPbc	09 57 53.9 -1.1

IDC ***11*** *10:16:02.9±0.6, 10°.93N×43°.52W, h0km, mb4.3/14, mbtmp4.3/14, ML6.1/1, MS3.7/59, Error ellipse: s-maj=19.3km s-min=15.4km az=148.0*

NEIC ***11*** *10:16:04.8±1.6, 10°.8N±0°.1×43°.5W±0°.1, h10km±1km, mb4.7/75, Error ellipse: s-maj=20.5km s-min=17.9km az=164.0*

GCMT ***11*** *10:16:06.8±0.3, 10°.90N±0°.02×43°.47W±0°.02, h25km±1km, MW4.9/92, Moment Tensor Solution. s17,c21; s92,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.07±.10; $M_{\theta\theta}$-0.66±.10; $M_{\phi\phi}$0.59±.08; $M_{r\theta}$-0.64±.19; $M_{\theta\phi}$-2.03±.08; $M_{\phi r}$1.40±.21; Best double couple: $M_0$2.55800×10^{16} NP1:*ϕ_s*274.00000°,*δ*63.00000°,*λ*166.00000°. Principal axes: T 2.9000, Plg28.0000°, Azm236.0000°; N -0.6840, Plg60.0000°, Azm32.0000°; P -2.2160, Plg10.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 10:16:05.5±0.5, 10.79N±0°.08×43°.55W±0°.07, h16km, n130, σ0°.95/53, mb4.7/55, MS3.8/58, 2C-1D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MDP	Montagnes des	10.63	239	Pn		Pn		10 18 37.0	-0.3
	149nm,0.3s,baz=52,slow=14,SNR=1133								
MDP				Sn		Sn		10 20 26.2	-10
	11nm,0.3s,baz=151,slow=10,SNR=4.3								
MDP				LR		LR		10 22 11.4	
	comp=Z,835nm,21.2s,baz=69,slow=34								
H05S1	Guadeloupe/Mar	17.25	284	T		T		10 37 43.2	
	SNR=117								
RCBR	Riachuelo	18.18	155	LR		LR		10 25 36.7	
	comp=Z,258nm,19.2s,baz=126,slow=31								
RCBR	Riachuelo	18.18	155			Pn		10 20 17.0	-0.5
BOAV	Boa Vista	18.80	245	P		P		10 20 23.2	-1.2
BOAV					IAmb	IAmb		10 20 27.1	
	comp=Z,70nm,0.9s								
CDVI	St. Croix	21.68	291	P		P		10 20 56.2	+0.5
MACA	Manacapuru-AM	21.98	232	P		P		10 21 00.2	+1.3
MACA					IAmb	IAmb		10 21 01.6	
	comp=Z,251nm,0.9s								
STVI	Saint Thomas	22.02	292	P		P		10 20 59.3	-0.1
STVI					IAmb	IAmb		10 21 04.2	
	comp=Z,38nm,1.0s								
BIRV	Birongo	22.33	271	P		P		10 21 02.8	0.0
BIRV					IAmb	IAmb		10 21 37.4	
	comp=Z,30nm,1.1s								
HUMP	Col San Antoni	22.78	291	P		P		10 21 08.2	+0.7
SJG	San Juan	23.04	291	LR		LR		10 28 27.1	
	comp=Z,189nm,20.3s,baz=96,slow=32								
BAUV	El Baul	24.20	268	P		P		10 21 21.1	-0.5
BBTS	Babate	26.62	79	LR		LR		10 29 35.4	
	comp=Z,319nm,20.4s,baz=250,slow=31								
BDFB	Brasilia	26.63	190	P		P		10 21 44.5	+0.8
	comp=Z,3.9nm,0.7s,baz=24,slow=10.0,SNR=2.4								
	comp=Z,3.9nm,0.7s								
SDV	Santo Domingo	26.75	268	P		P		10 21 44.8	-0.1
	comp=Z,7.6nm,0.4s,baz=66,slow=7.6,SNR=6.6								
SDV				LR		LR		10 33 28.5	
	comp=Z,213nm,18.8s,baz=88,slow=39								
	comp=Z,7.6nm,0.4s								
SDV	Santo Domingo	26.75	268	P		P		10 21 44.9	0.0
SDV					IAmb	IAmb		10 21 45.9	
	comp=Z,20nm,1.0s								
ETMB	Extrema	30.45	229	P		P		10 22 18.3	+0.6
ETMB					IAmb	IAmb		10 22 19.7	
	comp=Z,20nm,0.8s								
ROSC	El Rosal	31.03	261	LR		LR		10 35 52.4	
	comp=Z,782nm,18.2s,baz=60,slow=38								
SIV	San Ignacio	31.76	213	P		P		10 22 31.1	+1.9
	comp=Z,7.6nm,0.9s,baz=46,slow=8.4,SNR=26								
SIV				LR		LR		10 35 54.7	
	comp=Z,172nm,18.2s,baz=94,slow=37								
	comp=Z,7.6nm,0.9s								
H10N3	ASCENSION HYDR	34.33	121	T		T		10 59 09.5	
	baz=302,slow=75,SNR=316								
H10N2	ASCENSION HYDR	34.34	121	T		T		10 59 09.9	
	baz=302,slow=75,SNR=289								
H10N1	ASCENSION HYDR	34.35	121	T		T		10 59 11.8	
	baz=302,slow=75,SNR=409								
CZSB	Cruzeiro do Su	34.36	239	P		P		10 22 52.0	+0.1
CZSB					IAmb	IAmb		10 22 54.6	
	comp=Z,36nm,0.8s								
H10S3	ASCENSION HYDR	34.80	123	T		T		10 59 33.8	
	baz=299,slow=74,SNR=102								
H10S2	ASCENSION HYDR	34.82	123	T		T		10 59 35.2	
	baz=281,slow=74,SNR=31								
LPAZ	La Paz	36.27	222	LR		LR		10 38 20.1	
	comp=Z,187nm,19.4s,baz=42,slow=37								
BOSC	San Juan Bosco	37.44	250	P		P		10 23 17.6	-1.0
BOSC					IAmb	IAmb		10 23 18.8	
	comp=Z,17nm,0.9s								
TIC	Toumodi	38.29	93↑	*i*P		P		10 23 25.3	-0.3
	comp=Z,19nm,0.5s								
LIC	Lamto	38.35	94↓	*i*P		P		10 23 25.5	-0.6
	comp=Z,36nm,0.6s								
DBIC	Dimbokro	38.45	93	P		P		10 23 26.9	0.0
	comp=Z,18nm,0.9s,baz=282,slow=10,SNR=14								
DBIC				LR		LR		10 36 05.0	
	comp=Z,102nm,18.1s,baz=281,slow=31								
	comp=Z,18nm,0.9s								
DBIC	Dimbokro	38.45	93	P		P		10 23 26.4	-0.5
KIC	Kosan Boka	38.61	93↑	*e*P		P		10 23 28.1	-0.2
	comp=Z,14nm,0.6s								
ATAH	Atahualpa	38.99	244	LR		LR		10 39 50.4	
	comp=Z,152nm,19.7s,baz=51,slow=36								
MCRA	Macar, Loja	39.24	249	IAmb		IAmb		10 23 34.5	
	comp=Z,34nm,1.3s								
CPUP	Villa Florida	39.26	200	LR		LR		10 39 57.8	
	comp=Z,79nm,18.0s,baz=23,slow=36								
RIMA	Rio Macho	39.66	272	P		P		10 23 38.4	+1.1
NNA	Nana	40.07	237	LR		LR		10 40 15.6	
	comp=Z,126nm,18.5s,baz=36,slow=36								
ACON	Acoyapa	40.79	276	P		P		10 23 46.6	+0.1
ACON					IAmb	IAmb		10 23 48.0	
	comp=Z,22nm,1.0s								
BATG	Bathurst New B	41.03	337	P		P		10 23 47.0	-1.0
BATG					IAmb	IAmb		10 23 51.5	
	comp=Z,19nm,1.2s								
PB02	IPOC Station P	41.09	219	P		P		10 23 48.3	-0.6
PB02					IAmb	IAmb		10 24 05.9	
	comp=Z,13nm,0.8s								
MVL	Millersville	41.10	321	P		P		10 23 50.6	+1.9
MVL					IAmb	IAmb		10 24 00.2	
	comp=Z,15nm,1.2s								
LVC	Limon Verde	41.47	217	LR		LR		10 42 07.6	
	comp=Z,116nm,21.6s,baz=24,slow=38								
LVC	Limon Verde	41.47	217	P		P		10 23 51.3	-1.0
MATN	Matagalpa	41.49	277	P		P		10 23 53.3	+0.9
MATN					IAmb	IAmb		10 23 54.7	
	comp=Z,11nm,0.9s								
S57A	Dark Hollow, R	41.56	316	IAmb		IAmb		10 24 03.6	
	comp=Z,14nm,1.2s								
MDT	Midelt	41.94	52	LR		LR		10 38 25.4	
	comp=Z,88nm,20.2s,baz=274,slow=32								
PB15	IPOC Station P	42.26	217	IAmb		IAmb		10 24 00.3	
	comp=Z,18nm,1.0s								
TKL	Tuckaleechee C	44.03	311	LR		LR		10 38 54.9	
	comp=Z,123nm,20.5s,baz=121,slow=31								
TORD	Torodi Ar. Bea	44.28	82	P		P		10 24 14.2	-0.6
	comp=Z,4.0nm,0.8s,baz=280,slow=8.8,SNR=21								
	comp=Z,4.0nm,0.8s								
AC02	Maricunga	44.90	213	P		P		10 24 20.5	+0.3
AC02					IAmb	IAmb		10 24 21.9	
	comp=Z,9.4nm,0.9s								
ESDC	Sonseca Array	45.36	44	P		P		10 24 26.3	+3.1
	comp=Z,0.3nm,0.6s,baz=219,slow=9.9,SNR=5.3								
ESDC				LR		LR		10 38 57.6	
	comp=Z,108nm,20.9s,baz=274,slow=30								
SWET	Sewanee	45.49	309	IAmb		IAmb		10 24 36.2	
	comp=Z,9.6nm,0.9s								
SADO	Sadowa	45.59	325	LR		LR		10 39 49.9	
	comp=Z,46nm,19.3s,baz=169,slow=31								
V48A	Smith Brothers	46.35	310	IAmb		IAmb		10 24 32.8	
	comp=Z,11nm,1.0s								
WVT	Waverly	47.26	310	P		P		10 24 37.6	-0.5
WVT					IAmb	IAmb		10 24 39.3	
	comp=Z,6.0nm,0.9s								
SCHQ	Schefferville	47.63	342	P		P		10 24 40.2	-0.6
	comp=Z,12nm,0.8s,baz=124,slow=5.2,SNR=9.1								
SCHQ				LR		LR		10 41 32.3	
	comp=Z,79nm,21.5s,baz=70,slow=32								
	comp=Z,12nm,0.8s								
SCHQ	Schefferville	47.63	342	P		P		10 24 42.1	+1.4
SIUC	Southern Illin	48.86	311	IAmb		IAmb		10 24 52.0	
	comp=Z,9.0nm,0.8s								
CMIG	Matias Romero	50.10	283	LR		LR		10 47 02.2	
	comp=Z,33nm,18.5s,baz=92,slow=37								
L42A	Oliver, Polo	50.83	316	IAmb		IAmb		10 25 08.8	
	comp=Z,14nm,1.1s								
S39A	Bolivar	51.93	310	IAmb		IAmb		10 25 24.4	
	comp=Z,7.3nm,1.0s								
KEST	Kesra	53.81	54	LR		LR		10 48 22.8	
	comp=Z,89nm,18.2s,baz=232,slow=36								
EKA	Eskdalemuir Ar	54.53	27	LR		LR		10 43 26.2	
	comp=Z,64nm,21.5s,baz=190,slow=30								
WMOK	Wichita Mounta	55.46	305	P		P		10 25 38.5	-1.2
JCT	Junction City	55.59	300	IAmb		IAmb		10 25 41.1	
	comp=Z,14nm,1.4s								
FRB	Frobisher Bay	55.76	347	LR		LR		10 46 31.3	
	comp=Z,61nm,19.7s,baz=176,slow=33								
H09W1	TRISTAN DA CUN	55.94	150	T		T		11 26 00.6	
	SNR=7.5								
BORG	Borgarnes	56.07	11	LR		LR		10 43 47.4	
	comp=Z,59nm,19.1s,baz=221,slow=30								
SFJD	Kangerlussuaq	56.34	357	LR		LR		10 44 35.8	
	comp=Z,72nm,20.6s,baz=186,slow=30								
PLCA	Paso Flores	57.02	204	P		P		10 25 51.3	+0.6
	comp=Z,4.4nm,1.0s,baz=324,slow=8.7,SNR=3.2								
	comp=Z,4.4nm,1.0s								
DAVOX	Davos/Dischmat	57.49	41	LR		LR		10 47 38.5	
	comp=Z,131nm,20.1s,baz=260,slow=33								
MSTX	Muleshoe	58.58	303	IAmb		IAmb		10 26 12.2	
	comp=Z,11nm,1.1s								
TXAR	Lajitas Array	58.79	298	P		P		10 26 03.5	0.0
	comp=Z,0.9nm,0.8s,baz=126,slow=7.4,SNR=14								
TXAR				LR		LR		10 50 53.9	
	comp=Z,13nm,21.8s,baz=102,slow=36								
	comp=Z,0.9nm,0.8s								
TX31	Lajitas Ar. Si	58.79	298	IAmb		IAmb		10 26 15.8	
	comp=Z,5nm,1.1s								
GDL2	Guadalupe Moun	59.67	301	P		P		10 26 08.5	-1.1
MNTX	Cornudas Mount	60.48	300	IAmb		IAmb		10 26 25.4	
	comp=Z,10nm,1.4s								
CLL	Collm	61.00	37	*e*Px		Px		10 26 20.0	
CLL					Lm	MLR		10 47 00.0	
	comp=Z,100nm,21.1s								
ANMO	Albuquerque	61.72	304	LR		LR		10 51 00.3	
	comp=Z,54nm,19.6s,baz=96,slow=34								
ISCO	Idaho Springs	61.75	309	IAmb		IAmb		10 26 34.6	
	comp=Z,8.2nm,1.1s								
S22A	4UR Ranch, Cre	62.38	307	IAmb		IAmb		10 26 39.4	
	comp=Z,7.4nm,1.3s								
VRAC	Vranov	62.56	40	LR		LR		10 51 53.6	
	comp=Z,58nm,19.1s,baz=255,slow=34								
NB2	NORSAR Subarra	64.00	26	P		P		10 26 39.3	+1.2
	comp=Z,4.1nm,1.0s,baz=243,slow=6.9								
NOA	NORSAR Array B	64.00	26	P		P		10 26 36.

AKASG	**Malin Array Be**	**70.82**	**40**	P		**P**	**10 27 21.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=269,slow=6.0,SNR=8.9							
AKASG				LR		LR	10 54 54.7	
	comp=Z,53nm,21.9s,baz=246,slow=33							
	comp=Z,0.4nm,0.4s							
FINES	**FINESS Array B**	**70.88**	**28**	P		**P**	**10 27 20.1**	**-1.4**
	comp=Z,5.0nm,1.0s,baz=302,slow=8.0,SNR=2.5							
FINES				LR		LR	10 55 02.7	
	comp=Z,67nm,18.7s,baz=244,slow=33							
	comp=Z,5.0nm,1.0s							
NEW	**Newport**	**71.09**	**317**	LR		LR	10 57 32.2	
	comp=Z,78nm,18.6s,baz=105,slow=35							
NVAR	**Mina Array Bea**	**71.45**	**307**	LR		LR	10 59 37.0	
	comp=Z,21nm,18.1s,baz=110,slow=37							
YKA	**Yellowknife Ar**	**71.77**	**332**	LR		LR	10 57 22.3	
	comp=Z,48nm,18.4s,baz=44,slow=35							
ARCES	**ARCESS Array B**	**72.68**	**20**	LR		LR	10 54 06.4	
	comp=Z,80nm,19.6s,baz=280,slow=32							
BRTR	**Keskin Array B**	**73.36**	**52**	P		**P**	**10 27 36.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=276,slow=1.3,SNR=2.4							
BRTR				LR		LR	11 01 14.8	
	comp=Z,29nm,18.2s,baz=278,slow=37							
	comp=Z,0.5nm,0.6s							
SPITS	**Spitsbergen Ar**	**73.53**	**11**	LR		LR	10 51 47.6	
	comp=Z,103nm,21.3s,baz=214,slow=29							
EIL	**Elat**	**74.81**	**62**	LR		LR	11 02 22.4	
	comp=Z,119nm,18.1s,baz=269,slow=37							
YBH	**Yreka Blue Hor**	**74.83**	**310**	LR		LR	10 59 47.3	
	comp=Z,41nm,19.3s,baz=82,slow=35							
SUR	**Sutherland**	**74.90**	**128**	LR		LR	10 53 00.5	
	comp=Z,73nm,18.8s,baz=326,slow=30							
OBN	**Obninsk**	**75.57**	**36**	LR		LR	11 00 45.5	
	comp=Z,17nm,18.2s,baz=194,slow=36							
LBTB	**Lobatse**	**76.17**	**119**	LR		LR	10 56 32.0	
	comp=Z,57nm,18.5s,baz=283,slow=32							
BOSA	**Boshof**	**77.08**	**123**	LR		LR	10 54 03.1	
	comp=Z,66nm,19.5s,baz=334,slow=30							
BBB	**Bella Bella**	**78.23**	**321**	LR		LR	11 00 17.3	
	comp=Z,38nm,20.6s,baz=92,slow=34							
DLBC	**Dease Lake**	**79.05**	**328**	LR		LR	11 00 05.4	
	comp=Z,47nm,20.1s,baz=53,slow=34							
INK	**Inuvik**	**80.04**	**338**	LR		LR	11 01 17.1	
	comp=Z,81nm,19.3s,baz=106,slow=34							
KIRV	**Kirov**	**82.42**	**39**	LR		LR	11 02 47.4	
	comp=Z,77nm,19.2s,baz=294,slow=34							
PRP	**Porcupine Dome**	**85.17**	**336**	IAmb		IAmb	10 28 51.5	
	comp=Z,4.8nm,1.1s							
IL31		**85.93**	**335**	P		**P**	**10 28 44.7**	**+0.2**
IL31				IAmb		IAmb	10 28 54.7	
	comp=Z,7.5nm,1.2s							
ILAR	**Eielson Array**	**85.93**	**335**	P		**P**	**10 28 44.8**	**+0.2**
	comp=Z,2.1nm,1.0s,baz=64,slow=4.0,SNR=13							
ILAR				LR		LR	11 06 10.1	
	comp=Z,46nm,18.0s,baz=70,slow=35							
	comp=Z,2.1nm,1.0s							
ILAR	**Eielson Array**	**85.93**	**335**	P		**P**	**10 28 44.5**	**-0.1**
H24K	**Noodor Dome**	**86.02**	**336**	IAmb		IAmb	10 29 05.9	
	comp=Z,5.7nm,1.2s							
CCB	**Clear Creek Bu**	**86.34**	**335**	P		**P**	**10 28 45.9**	**-0.7**
CCB				IAmb		IAmb	10 29 07.4	
	comp=Z,9.4nm,1.4s							
MDM	**Murphy Dome**	**86.42**	**336**	IAmb		IAmb	10 28 47.8	
	comp=Z,5.3nm,1.2s							
WRH	**Wood River Hil**	**86.51**	**335**	P		**P**	**10 28 47.2**	**-0.3**
WRH				IAmb		IAmb	10 28 48.7	
	comp=Z,6.2nm,1.2s							
NEA2	**Nenana**	**86.88**	**335**	IAmb		IAmb	10 28 60.0	
	comp=Z,7.9nm,1.3s							
MLY	**Manley**	**87.41**	**336**	IAmb		IAmb	10 29 10.5	
	comp=Z,4.8nm,1.3s							
ARU	**Arti**	**87.70**	**33**	LR		LR	11 07 26.1	
	comp=Z,57nm,18.5s,baz=264,slow=35							
AKTO	**Aktyubinsk**	**89.02**	**39**	LR		LR	11 09 13.5	
	comp=Z,42nm,18.0s,baz=340,slow=36							
ASAR	**Alice Springs**	**166.97**	**170**	PKPab		**PKPab**	**10 37 14.1**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=193,slow=3.6,SNR=2.7							

ISC 11 10:24:36.4±1.4, 48.77N±0.06×18.15E±0.05, h10km±11km, n5, σ0.935/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAVC	**Velka Javorina**	**0.33**	**285**	*e*PG		**Pg**	**10 24 42.7**	**-0.3**
JAVC				*e*SG		**Sg**	**10 24 47.8**	**+0.3**
VYHS	**Vyhne**	**0.53**	**121**	*e*PG		**Pb**	**10 24 48.0**	**+0.2**
VYHS				*e*SG		**Sb**	**10 24 55.6**	**0.0**
VYHS				*e*LG		Lg	10 24 59.4	
MODS	**Modra-Piesok**	**0.70**	**236**	*e*PG		**Pb**	**10 24 50.7**	**-0.1**
MODS				*e*SG		**Sb**	**10 25 01.0**	**+0.5**
MORC	**Moravsky Berou**	**1.08**	**339**	*e*PG		**Pb**	**10 24 57.5**	**+0.3**
MORC				*e*SG		**Sn**	**10 25 12.4**	**-0.3**
VRAC	**Vranov**	**1.16**	**298**	*e*PG		**Pb**	**10 24 58.6**	**+0.1**
VRAC				*e*SG		**Sn**	**10 25 14.3**	**-0.2**

*MDD **11** 10:44:19.8±0.8, 36.78N×11.26W, h20km±18km, Mb3.8/12, M_mb3.1/12, Error ellipse: s-maj=19.7km s-min=5.6km az=57.0*
*IGIL **11** 10:44:20.9, 36.80N×11.28W, h30km, ML1.9*
*INMG **11** 10:44:21.2±1.2, 36.78N×11.30W, h34km, ML2.2, Error ellipse: s-maj=5.6km s-min=4.4km az=73.0*

ISC 11 10:44:20.5±3.5, 36.9N±0.1×11.2W±0.2, h35km, n31, σ0.988/54, 12C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PFVI	**Vila Bisbo**	**1.93**	**82**	*e*P		**Pn**	**10 44 51.3**	**+0.5**
PFVI				*e*S		**Sn**	**10 45 13.6**	**-0.2**
PFVI				A		A	10 45 15.2	
	13nm,0.4s							
MORF	**Marmelete**	**2.09**	**78**	*e*P		**Pn**	**10 44 53.6**	**+0.6**
MORF				*e*S		**Sn**	**10 45 17.3**	**-0.6**
MORF				IAML			10 45 19.2	
	comp=N,15nm,0.1s							
MORF	**Marmelete**	**2.09**	**78**	*e*P		**Pn**	**10 44 53.7**	**+0.6**
MORF				*e*S		**Sn**	**10 45 17.9**	**0.0**
MORF				A		A	10 45 20.4	
	comp=N,8.0nm,0.2s							
PNCL	**Nicolau / Gran**	**2.46**	**59**	*e*P		**Pn**	**10 44 59.7**	**+1.6**
PNCL				*e*S		**Sn**	**10 45 28.2**	**+1.3**
PNCL				A		A	10 45 30.0	
	comp=N,7.4nm,0.5s							
MESJ	**Messejana**	**2.57**	**67**	*e*S		**Sn**	**10 45 29.2**	**-0.4**
MESJ				IAML			10 45 31.6	
	comp=N,3.0nm,0.2s							
MESJ	**Messejana**	**2.57**	**67**	*e*P		**Pn**	**10 45 00.9**	**+1.3**
MESJ				*e*S		**Sn**	**10 45 30.3**	**+0.7**
MESJ				A		A	10 45 37.1	
	comp=N,3.9nm,0.2s							
PMAFR	**Mafra**	**2.57**	**36**	*e*P		**Pn**	**10 45 00.4**	**+0.8**
PMAFR				*e*S		**Sn**	**10 45 30.6**	**+1.0**
PMAFR				A		A	10 45 33.7	
	comp=N,7.9nm,0.2s							
PCVE	**Castro Verde**	**2.64**	**73**	*e*P		**Pn**	**10 45 01.6**	**+1.0**
PCVE				*e*S		**Sn**	**10 45 31.3**	**-0.1**
PCVE				A		A	10 45 33.9	
	comp=N,2.8nm,0.1s							
PBDV	**Barranco-do-Ve**	**2.65**	**81**	*e*P		**Pn**	**10 45 01.6**	**+0.8**
PBDV				*e*S		**Sn**	**10 45 31.7**	**0.0**
PBDV				A		A	10 45 40.7	
	comp=N,4.0nm,0.5s							
PVAQ	**Vaqueiros**	**2.84**	**79**	*e*P		**Pn**	**10 45 04.5**	**+1.1**
PVAQ				*e*S		**Sn**	**10 45 35.8**	**-0.5**
PVAQ				A		A	10 45 42.1	
	comp=N,4.9nm,0.3s							
PBEJ	**Beja**	**2.90**	**66**	*e*S		**Sn**	**10 45 37.6**	**-0.1**
PBEJ				A		A	10 45 38.9	
	comp=N,2.6nm,0.1s							
EVO	**Evora**	**3.02**	**56**	*e*S		**Sn**	**10 45 40.5**	**-0.3**
EVO				A		A	10 45 44.4	
	comp=N,8.9nm,0.2s							
EGRO	**El Granado**	**3.05**	**77**	P		**Pn**	**10 45 07.4**	**+1.2**
EGRO				⇑*i*Vmb_V			10 45 08.6	
	comp=N,84nm,SNR=0.5							
EGRO				S		**Sn**	**10 45 40.7**	**-0.7**
PMTG	**Montargil**	**3.21**	**46**	*e*P		**Pn**	**10 45 08.9**	**+0.4**
PMTG				*e*S		**Sn**	**10 45 45.6**	**+0.1**
PMTG				A		A	10 45 49.8	
	comp=N,2.3nm,0.1s							
PESTR	**Estremoz**	**3.48**	**54**	S		**Sn**	**10 45 52.3**	**+0.1**
PESTR				A		A	10 45 55.9	
	comp=N,30nm,0.1s							
PBAR	**Barrancos**	**3.56**	**68**	*e*P		**Pn**	**10 45 14.6**	**+1.4**
PBAR				S		**Sn**	**10 45 53.3**	**-0.8**
PBAR				A		A	10 45 57.5	
	comp=N,2.2nm,0.3s							
EMIN	**Mina Concepcio**	**3.72**	**75**	P		**Pn**	**10 45 16.0**	**+0.4**
EMIN				⇑*i*Vmb_V			10 45 17.0	
	comp=N,80nm,SNR=0.7							
EMIN				S		**Sn**	**10 45 57.2**	**-1.0**
PCAS	**Casmilo, Conde**	**3.81**	**33**	*e*P		**Pn**	**10 45 17.5**	**+0.8**
PCAS				*e*S		**Sn**	**10 46 00.1**	**-0.2**
PCAS				A		A	10 46 04.3	
	comp=N,1.5nm,0.1s							
EBAD	**Badajoz**	**3.81**	**59**	P		**Pn**	**10 45 17.7**	**+1.0**
EBAD				⇑*i*Vmb_V			10 45 22.4	
	comp=N,167nm,SNR=1.8							
EBAD				S		**Sn**	**10 46 00.0**	**-0.3**
PMRV	**Marv??o**	**3.94**	**49**	*e*P		**Pn**	**10 45 18.6**	**+0.1**
PMRV				*e*S		**Sn**	**10 46 03.0**	**-0.4**
PMRV				A		A	10 46 04.2	
	comp=N,2.2nm,0.2s							
ESPR	**Espera**	**4.29**	**89**	P		**Pn**	**10 45 23.6**	**+0.2**
ESPR				⇑*i*Vmb_V			10 45 24.2	
	comp=N,129nm,SNR=1.1							
ESPR				S		**Sn**	**10 46 12.0**	**-0.2**
ECAB	**El Cabril**	**4.76**	**74**	P		**Pn**	**10 45 30.2**	**+0.4**
ECAB				⇑*i*Vmb_V			10 45 31.0	
	comp=N,60nm,SNR=0.7							
ECAB				S		**Sn**	**10 46 21.6**	**-2.1**
MVO	**Moncorvo**	**5.37**	**36**	*e*P		**Pn**	**10 45 38.5**	**+0.3**
MVO				*e*S		**Sn**	**10 46 37.6**	**-1.2**
MVO				A		A	10 46 39.6	
	comp=N,1.7nm,0.4s							
EADA	**Adamuz**	**5.43**	**74**	P		**Pn**	**10 45 39.7**	**+0.8**
EADA				⇑*i*Vmb_V			10 45 40.4	
	comp=N,43nm,SNR=0.6							
EADA				S		**Sn**	**10 46 39.5**	**-0.7**
ELOB	**Lobios**	**5.54**	**25**	P		**Pn**	**10 45 40.4**	**-0.1**
ELOB				⇑*i*Vmb_V			10 45 40.9	
	comp=N,108nm,SNR=0.7							
ELOB				S		**Sn**	**10 46 41.2**	**-1.8**
PGAV	**Gavieira, Arco**	**5.56**	**23**	*e*P		**Pn**	**10 45 41.1**	**+0.3**
PGAV				S		**Sn**	**10 46 41.7**	**-1.8**
EGOR	**Sierra Gorda,**	**5.69**	**86**	P		**Pn**	**10 45 42.3**	**-0.4**
EGOR				⇑*i*Vmb_V			10 45 43.0	
	comp=N,62nm,SNR=0.7							
PAB	**San Pablo**	**6.02**	**62**	⇑*i*Vmb_V			10 45 48.6	
	comp=N,68nm,SNR=0.9							
PAB				S		**Sn**	**10 46 53.1**	**-1.8**
ECAL	**Calabor**	**6.12**	**33**	P		**Pn**	**10 45 49.0**	**+0.5**
ECAL				⇑*i*Vmb_V			10 45 49.9	
	comp=N,87nm,SNR=0.8							
ECAL				S		**Sn**	**10 46 56.8**	**-0.5**
EAGO	**Agolada(Pontev**	**6.38**	**21**	P		**Pn**	**10 45 53.1**	**+1.1**
EAGO				⇑*i*Vmb_V			10 45 54.2	
	comp=N,44nm,SNR=0.3							
EQES	**Quesada**	**6.55**	**80**	P		**Pn**	**10 45 54.1**	**-0.3**
EQES				⇑*i*Vmb_V			10 45 54.8	
	comp=N,30nm,SNR=0.3							

LVSN 11 10:46:16.7±6.1, 57.76N×19.94E, h0km±311km, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SLIT	**Slitere, Latvi**	**1.27**	**95**	*e*S		Sg	10 46 55.0	-2.5
MTSE	**Matsula**	**2.26**	**63**	*e*P		Pn	10 46 52.4	-2.9
MTSE				*e*S		Sn	10 47 22.2	-1.6
ARBE	**Arbavere**	**3.58**	**60**	*e*S		Sn	10 47 46.1	-10

HEL 11 10:47:37.0±0.3, 60.11N×23.81E, h0km, ML0.9, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MEF	**Metsahovi**	**0.31**	**69**	*e*S		Sg	10 47 46.1	-1.0
MEF	**Metsahovi**	**0.31**	**69**	*e*P		Pg	10 47 42.6	-0.4
MEF				*e*S		Sg	10 47 46.0	-1.0
NUR	**Nurmijrvi**	**0.58**	**46**	*e*P		Pg	10 47 47.5	-0.6
NUR				*e*S		Sg	10 47 54.4	-1.3
PVF	**Pernaja**	**1.11**	**66**	*e*P		Pg	10 47 57.4	-0.8
PVF				*e*S		Sg	10 48 10.9	-1.7
RAF	**Rauma**	**1.36**	**313**	*e*P		Pg	10 48 01.0	-2.1
RAF				*e*S		Sg	10 48 19.4	-1.4
FIA0	**FINESS Array S**	**1.74**	**39**	*e*P		Pn	10 48 07.3	-1.1
FIA0				*e*S		Sn	10 48 30.4	-0.9
FIA0				MSG			10 48 31.8	
	comp=Z,0.6nm,0.1s							
VJF	**Virojoki**	**1.91**	**75**	*e*P		Pn	10 48 10.9	+0.1
VJF				*e*S		Sn	10 48 35.6	+0.1
KEF	**Keuruu**	**2.13**	**14**	*e*SG		Sb	10 48 43.3	-0.1
KEF				MSG			10 48 47.4	
	comp=Z,0.4nm,0.1s							

*IDC **11** 10:52:20.3±0.5, 7.66N×93.71E, h0km, mb4.4/27, mbtmp4.4/28, ML3.8/1, Error ellipse: s-maj=22.1km s-min=12.2km az=51.0*
*NEIC **11** 10:52:26.2±1.7, 7.59N±0.09×93.7E±0.1, h40km, 8km, mb4.5/36, Error ellipse: s-maj=17.2km s-min=12.3km az=62.0*
*NDI **11** 10:52:30.8±4.5, 7.51N×92.73E, h16km±192km, ML3.6, mb4.5(NEIC)*
*DJA **11** 10:52:37.1±2.1, 7.1N±6.1×9.4E±2.7, h191km±35km, M4.2/9, mB5.0/1, mb4.3/9, MLv4.1/3, Mw(mB)4.4/1*

ISC 11 10:52:27.5±0.4, 7.58N±0.08×93.65E±0.08, h55km, n108, σ1.920/108, mb4.5/41, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PBA	**Port Blair**	**4.15**	**348**	*e*P		**Pn**	**10 53 32.6**	**+4.2**
PBA				IAML			10 54 31.3	
	comp=E,169nm,1.0s							
PBA				IAML			10 54 32.4	
	comp=N,222nm,1.0s							
PBA				IAML			10 54 41.4	
	comp=E,294nm,0.7s							
PBA				IAML			10 56 44.8	
	comp=E,196nm,1.3s							
PBA				IAML			10 56 45.5	
	comp=N,183nm,2.1s							
DGPR	**DIGLIPUR**	**5.61**	**353**	*ex*		**Pn**	**10 53 49.6**	**+1.2**
DGPR				IAML			10 54 49.3	
	comp=N,69nm,1.7s							
DGPR				IAML			10 55 03.0	
	comp=E,56nm,0.0s							
KCSI	**Kotacane, Aceh**	**5.75**	**134**	P		**Pn**	**10 53 53.0**	**+2.7**
	comp=E,0.2nmcomp=E,53nm,0.6s							
SRIT	**Nakonsritamara**	**5.98**	**80**	Pn		**Pn**	**10 53 51.6**	**-1.9**
PSI	**Prapat**	**7.08**	**132**	Pn		**Pn**	**10 54 07.5**	**-1.2**
	comp=E,1.6nm,0.3s,baz=334,slow=9.6,SNR=6.3							
	comp=E,10nm,0.5s							
RPSI	**Rantau Prapat**	**7.15**	**132**	Pn		**Pn**	**10 54 08.4**	**-1.1**
RPSI	**Rantau Prapat**	**7.15**	**132**			**Pn**	**10 54 07.5**	**-2.1**
KULM	**Kulim**	**7.32**	**108**	Pn		**Pn**	**10 54 12.3**	**+0.4**
IPM	**Ipoh**	**7.96**	**112**	Pn		**Pn**	**10 54 18.4**	**-2.2**
CMAR	**Chiang Mai Arr**	**11.98**	**25**	Pn		**Pn**	**10 55 15.2**	**-0.5**
	comp=E,0.5nm,0.3s,baz=212,slow=15,SNR=19							
MDRS	**Chennai**	**14.27**	**294**	*e*P		**Pn**	**10 55 42.4**	**-4.3**
MDRS				IAmb		IAmb	10 55 51.0	
	comp=Z,68nm,0.2s							
MDRS				*e*S		Sn	10 58 11.0	-12
RAGD	**RAYAGADA**	**15.25**	**321**	*e*P		**Pn**	**10 55 59.2**	**-0.3**
SALM	**Salem**	**15.76**	**286**	*e*P		Pn	10 55 58.9	-7.1
SALM				*ex*		x	10 58 49.7	
KOD	**Kodaikanal**	**16.20**	**281**	*e*P		**Pn**	**10 56 08.6**	**-3.4**
HYBB	**Hyderabad (bro**	**17.67**	**305**	*e*P		**Pn**	**10 56 29.9**	**-0.1**
BLSP	**Bilaspur**	**18.23**	**324**	*e*P		**Pn**	**10 56 37.9**	**+1.1**
ODAN	**Odare**	**20.08**	**344**	*e*P		**P**	**10 56 56.1**	**-0.7**
RAMN	**Ramite**	**20.40**	**342**	*e*P		**P**	**10 57 00.4**	**+0.2**
	comp=Z,55nm,0.7s							
TAPN	**Taplejung**	**20.46**	**345**	*e*P		**P**	**10 57 00.5**	**-0.4**
JIRN	**Jiri**	**21.19**	**341**	*e*P		**P**	**10 57 08.3**	**-0.6**
PKI	**Pulchoki**	**21.36**	**340**	*e*P		**P**	**10 57 10.2**	**-0.5**
	comp=Z,26nm,0.7s							
PKIN	**Phulchoki**	**21.37**	**340**	*e*P		**P**	**10 57 10.6**	**-0.1**
	comp=Z,33nm,0.7s							
DMN	**Daman**	**21.50**	**339**	*e*P		**P**	**10 57 11.9**	**-0.2**
	comp=Z,20nm,0.5s							
GUN	**Gumba**	**21.52**	**341**	*e*P		**P**	**10 57 12.3**	**-0.1**
KKN	**Kakani**	**21.61**	**340**	*e*P		**P**	**10 57 11.7**	**-1.5**
GKN	**Gorkha**	**22.03**	**338**	*e*P		**P**	**10 57 16.9**	**-0.8**
DANN	**Dangsing**	**22.68**	**337**	*e*P		**P**	**10 57 23.9**	**-0.8**
	comp=Z,53nm,0.8s							
NIL	**Nilore**	**32.07**	**327**	P		**P**	**10 58 49.2**	**-0.1**
DRK	**Karamyk**	**37.33**	**332**	P		**P**	**10 59 35.7**	**+0.7**
GAR	**Garm**	**37.68**	**330**	P		**P**	**10 59 37.9**	**+0.2**
CHGR	**Chuyangaron**	**38.01**	**328**	P		**P**	**10 59 40.0**	**-0.5**
AAK	**Ala-Archa**	**38.79**	**337**	P		**P**	**10 59 46.0**	**-1.0**
AAK				IAmb		IAmb	10 59 53.3	
	comp=Z,6.3nm,0.8s							
MK31	**Makanchi Array**	**40.27**	**348**	P		**P**	**10 59 57.8**	**-1.3**
MKAR	**Makanchi Array**	**40.27**	**348**	P		**P**	**10 59 58.3**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=169,slow=8.5,SNR=26							
	comp=Z,1.6nm,0.4s							
MKAR	**Makanchi Array**	**40.27**	**348**	P		**P**	**10 59 56.9**	**-2.3**
MAKZ	**Makanchi**	**40.35**	**348**	P		**P**	**10 59 59.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**40.60**	**129**	P		**P**	**11 00 01.8**	**-0.4**
KK31	**Karatay Array**	**40.81**	**334**	P		**P**	**11 00 03.6**	**-0.1**
KK31				IAmb		IAmb	11 00 05.0	
	comp=Z,8.5nm,0.8s							
KKAR	**Karatay Array**	**40.81**	**334**	P		**P**	**11 00 04.1**	**+0.4**
KKAR				IAmb		IAmb	11 00 05.0	
	comp=Z,8.5nm,0.8s							
KKAR	**Karatay Array**	**40.81**	**334**	P		**P**	**11 00 04.0**	**+0.4**
SONM	**Songino Array**	**41.56**	**13**	P		**P**	**11 00 09.1**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=198,slow=7.8,SNR=10							
SONM				PcP		**PcP**	**11 02 07.3**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=198,slow=4.4,SNR=4.1							
	comp=Z,2.7nm,0.7s							
SONM	**Songino Array**	**41.56**	**13**	P		**P**	**11 00 10.4**	**+0.6**
GEYT	**Alibeck**	**44.10**	**319**	P		**P**	**11 00 31.8**	**+1.4**
	comp=Z,18nm,0.6s,baz=135,slow=9.4,SNR=25							
	comp=Z,18nm,0.6s							
GEYT	**Alibeck**	**44.10**	**319**	P		**P**	**11 00 31.5**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**44.10**	**319**	P		**P**	**11 00 30.2**	**-0.2**
KURBB	**Kurchatov Arra**	**44.72**	**346**	P		**P**	**11 00 34.6**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=175,slow=7.2,SNR=24							
KURBB				PcP		**PcP**	**11 02 17.9**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=164,slow=2.8,SNR=5.3							
	comp=Z,1.9nm,0.7s							
KURK	**Kurchatov**	**44.78**	**346**	P		**P**	**11 00 36.1**	**+0.5**
KURK				IAmb		IAmb	11 00 37.3	
	comp=Z,5.1nm,1.1s							
ZAA0	**Zalesovo Array**	**46.79**	**353**	IAmb		IAmb	11 00 51.7	
	comp=Z,2.4nm,0.7s							
ZALV	**Zalesovo Beam**	**46.79**	**353**	P		**P**	**11 00 51.0**	**-0.4**
	comp=Z,3.3nm,0.4s,baz=183,slow=8.1,SNR=17							
	comp=Z,3.3nm,0.4s							
ZALV	**Zalesovo Beam**	**46.79**	**353**	P		**P**	**11 00 50.1**	**-1.2**
WB0	**Warramunga Arr**	**48.45**	**125**	P		**P**	**11 01 03.4**	**-1.4**
WB0				IAmb		IAmb	11 01 04.0	
	comp=Z,5.7nm,1.1s							
WRA	**Warramunga Arr**	**48.49**	**125**	P		**P**	**11 01 03.8**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=305,slow=8.6,SNR=29							
WRA				PcP		**PcP**	**11 02 33.8**	**+3.2**
	comp=Z,0.4nm,0.5s,baz=318,slow=2.6,SNR=7.3							
	comp=Z,0.7nm,0.5s							
WRA	**Warramunga Arr**	**48.49**	**125**	P		**P**	**11 01 03.6**	**-1.5**
WB2	**Warramunga Arr**	**48.50**	**125**	P		**P**	**11 01 04.1**	**-1.1**
WB2				IAmb		IAmb	11 01 09.3	
	comp=Z,4.4nm,0.9s							
WR0	**Warramunga Arr**	**48.66**	**125**	P		**P**	**11 01 05.3**	**-1.1**
WR0				IAmb		IAmb	11 01 11.4	
	comp=Z,7.9nm,1.4s							
RAYN	**Ar Rayn**	**48.76**	**295**	P		**P**	**11 01 09.1**	**+1.8**
MJAR	**Matsushiro Arr**	**49.72**	**48**	P		**P**	**11 01 14.5**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=224,slow=6.2,SNR=5.0							
	comp=Z,1.1nm,0.7s							
ASAR	**Alice Springs**	**50.10**	**129**	P		**P**	**11 01 16.2**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=300,slow=8.0,SNR=12							
ASAR				PcP		**PcP**	**11 02 37.0**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=304,slow=3.3,SNR=5.6							
	comp=Z,0.4nm,0.5s							
ABKAR	**Akbulak array**	**50.26**	**332**	P		**P**	**11 01 18.3**	**+0.1**
ABKAR	**Akbulak array**	**50.26**	**332**	P		**P**	**11 01 18.4**	**+0.2**
FORT	**Forrest**	**50.41**	**141**	P		**P**	**11 01 19.5**	**-0.1**
AKTO	**Aktyubinsk**	**51.98**	**332**	P		**P**	**11 01 30.9**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=132,slow=8.4,SNR=14							
	comp=Z,3.8nm,0.7s							
ARU	**Arti**	**55.97**	**337**	P		**P**	**11 02 00.6**	**+0.5**
	comp=Z,3.0nm,0.3s,baz=153,slow=6.5,SNR=8.5							
	comp=Z,3.0nm,0.3s							
ARU	**Arti**	**55.97**	**337**	P		**P**	**11 01 58.8**	**-1.3**
MARD	**Mardin**	**56.21**	**310**	P		**P**	**11 02 01.7**	**-0.6**
KBZ	**Khabaz**	**56.98**	**318**	P		**P**	**11 02 06.8**	**-0.7**
	comp=Z,4.1nm,0.9s,baz=189,slow=5.9,SNR=6.0							
	comp=Z,4.1nm,0.9s							
STKA	**Stephens Creek**	**60.26**	**133**	P		**P**	**11 02 30.1**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=9.5,slow=6.1,SNR=1.1							
	comp=Z

comp=Z,3.0nm,0.7s,baz=116,slow=4.5,SNR=5.3
PTLB Pontes e Lacer 152.23 251 PKiKP 11 12 18.5 +0.1
LPAZ La Paz 160.20 242 PKP **PKPdf 11 12 24.5 +2.0**
comp=Z,1.3nm,0.6s,baz=332,slow=3.1,SNR=4.9

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*IDC **11** 10:55:07.1±0.4, 7.73N×93.72E, h0km, mb4.7/33, mbtmp4.7/34, ML4.0/1, MS3.5/21, Error ellipse: s-maj=15.3km s-min=10.6km az=52.0*
*NEIC **11** 10:55:13.2±2.2, 7.73N±0.06×93.69E±0.09, h41km±6km, mb4.8/104, Error ellipse: s-maj=13.1km s-min=8.7km az=78.0*
*BJI **11** 10:55:13.4±0.0, 7.56N×93.56E, h73km, mb4.8/57, mB4.7/33, Ms4.2/23, Ms7 3.9/24*
*NDI **11** 10:55:17.0±4.3, 8.22N×93.03E, h16km±81km, mb4.5, mb4.5(NEIC)*
ISC 11 10:55:10.3±0.6, 7.78N±0.05×93.53E±0.05, h19km±2km, n286, σ1s45/276, mb4.9/92, MS3.6/29, 34C-6D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**4.24**	**127**	Pn	**Pn**	**10 56 14.8**	**+0.9**
SRIT	**Nakonsritamara**	**6.06**	**82**	Pn	**Pn**	**10 56 38.6**	**-0.4**
PSI	**Prapat**	**7.30**	**132**	Pn	**Pn**	**10 56 55.6**	**-0.5**
	2.6nm,0.3s,baz=307,slow=9.1,SNR=7.8						
	21nm,0.6s						
RPSI	**Rantau Prapat**	**7.37**	**133**	Pn	**Pn**	**10 56 55.7**	**-1.3**
KULM	**Kulim**	**7.49**	**109**	Pn	**Pn**	**10 56 58.2**	**-0.4**
IPM	**Ipoh**	**8.14**	**113**	Pn	**Pn**	**10 57 06.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**11.85**	**26**	Pn	Pn	10 58 03.0	+4.7
	0.6nm,0.3s,baz=213,slow=14,SNR=22						
CMAR				LR	LR	11 03 00.1	
	comp=Z,100nm,20.8s,baz=215,slow=40						
CHTO	**Chiang Mai**	**12.16**	**25**	Pn	**Pn**	**10 58 03.9**	**+1.2**
PALK	**Pallekele**	**12.73**	**269**	Sn	Sn	11 00 22.7	-9.2
	3.1nm,0.3s,baz=109,slow=23,SNR=6.4						
PALK				LR	LR	11 02 42.2	
	comp=Z,183nm,18.6s,baz=184,slow=35						
UBPT	**Khong Chiam**	**13.87**	**56**	P	**Pn**	**10 58 28.9**	**+2.9**
CRAI	**Chiangrai**	**14.04**	**27**	P	**Pn**	**10 58 31.9**	**+3.6**
MDRS	**Chennai**	**14.08**	**293**	*ex*	x	10 58 35.8	
MDRS				*eS*	Sn	11 00 55.9	-8.9
BWNR	**Bhubaneshwar**	**14.52**	**330**	*eP*	**Pn**	**10 58 33.3**	**-1.6**
BWNR				*eS*	Sn	11 01 06.1	-9.3
RAGD	**RAYAGADA**	**15.02**	**320**	*eP*	**Pn**	**10 58 39.7**	**-2.0**
RAGD				*eS*	**Sn**	**11 01 20.9**	**-6.8**
SALM	**Salem**	**15.59**	**285**	*eP*	**Pn**	**10 58 50.4**	**+1.1**
SALM				*eS*	**Sn**	**11 01 36.1**	**-5.5**
KOD	**Kodaikanal**	**16.05**	**280**	*eP*	**P**	**10 58 58.5**	**-0.4**
KOD				*eS*	Sn	11 01 42.1	-11
PCHI	**Peechi**	**17.18**	**280**	*eP*	**P**	**10 59 14.0**	**+2.9**
PCHI				*eS*	**Sn**	**11 02 12.4**	**-7.9**
HYBB	**Hyderabad (bro**	**17.46**	**305**	*eP*	**P**	**10 59 15.7**	**+1.5**
HYBB				*eS*	**S**	**11 02 36.8**	**+1.6**
BOK	**Bokaro**	**17.53**	**336**	*eP*	**P**	**10 59 15.3**	**+0.4**
BOK				IAmb	IAmb	10 59 28.1	
	comp=Z,26nm,0.9s						
SHL	**Shillong**	**17.76**	**355**	*eP*	**Pn**	**10 59 16.9**	**+0.1**
SHL				IAmb	IAmb	10 59 21.1	
	comp=Z,13nm,0.6s						
SBUM	**Sibu**	**19.35**	**105**		**P**	**10 59 32.7**	**-2.2**
KMI	**Kunming**	**19.36**	**26**	⇑P	**Pn**	**10 59 38.0**	**+1.7**
KMI				pP	sP	10 59 53.7	+11
KMI				sP	pP	11 00 04.1	+24
KMI				S	**Sn**	**11 03 07.7**	**-5.5**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMI				LR	LR		
	comp=Z,220nm,11.5s						
KMI				LR	LR		
	comp=Z,160nm,11.1s						
KMI				LR	LR		
	comp=Z,140nm,12.2s						
ODAN	**Odare**	**19.85**	**344**	*eP*	**Pn**	**10 59 42.3**	**+0.1**
RAMN	**Ramite**	**20.17**	**342**	*eP*	Pn	10 59 46.3	+0.3
	comp=Z,146nm,0.7s						
PZH	**PanZhiHua**	**20.19**	**22**	P	Pn	10 59 47.8	+1.7
PZH				S	**S**	**11 03 26.8**	**-3.4**
PZH				pmax	pmax		
	comp=Z,20nm,1.1s						
PZH				pmax	pmax		
	comp=Z,80nm,3.9s						
PZH				LR	LR		
	comp=Z,350nm,18.8s						
PZH				LR	LR		
	comp=Z,400nm,16.7s						
PZH				LR	LR		
	comp=Z,260nm,12.6s						
TAPN	**Taplejung**	**20.23**	**345**	*eP*	Pn	10 59 46.3	-0.5
	comp=Z,67nm,0.5s						
JIRN	**Jiri**	**20.96**	**342**	*eP*	Pn	10 59 54.8	-0.5
PKI	**Pulchoki**	**21.14**	**340**	*eP*	**P**	**10 59 56.9**	**+2.3**
	comp=Z,76nm,0.8s						
PKIN	**Phulchoki**	**21.14**	**340**	*eP*	**P**	**10 59 56.7**	**+2.1**
	comp=Z,61nm,0.6s						
DMN	**Daman**	**21.27**	**339**	*eP*	**P**	**10 59 57.6**	**+1.6**
	comp=Z,72nm,0.7s						
GUN	**Gumba**	**21.29**	**341**	*eP*	**P**	**10 59 58.2**	**+1.9**
	comp=Z,62nm,0.7s						
KKN	**Kakani**	**21.38**	**340**	*eP*	**P**	**10 59 59.6**	**+2.5**
	comp=Z,43nm,0.9s						
GKN	**Gorkha**	**21.80**	**338**	*eP*	**P**	**11 00 03.2**	**+1.6**
	comp=Z,133nm,0.7s						
BHPL	**Bhopal**	**21.81**	**317**	*eP*	**P**	**11 00 03.6**	**+2.1**
BHPL				IAmb	IAmb	11 00 11.3	
	comp=Z,20nm,0.9s						
LSA	**Lhasa**	**21.92**	**354**	P	**P**	**11 00 03.4**	**+0.2**
GYA	**Guiyang**	**22.38**	**32**	⇑P	**P**	**11 00 09.8**	**+2.0**
GYA				pP	sP	11 00 22.9	+7.4
GYA				pmax	pmax		
	comp=Z,15nm,0.8s						
GYA				LR	LR		
	comp=Z,240nm,10.0s						
GYA				LR	LR		
	comp=Z,140nm,9.9s						
GYA				LR	LR		
	comp=Z,220nm,14.1s						
DANN	**Dangsing**	**22.45**	**337**	*eP*	**P**	**11 00 10.1**	**+1.5**
	comp=Z,44nm,0.5s						
HKPS	**Hong Kong Po S**	**24.53**	**52**		pP	11 00 36.6	+2.2
CD2	**Chengdu**	**24.92**	**21**	P	**P**	**11 00 32.7**	**+0.3**
CD2				pP	sP	11 00 47.4	+7.0
CD2				S	**S**	**11 04 54.6**	**-0.5**
CD2				sS	sS	11 05 16.9	+13
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				pmax	pmax		
	comp=Z,180nm,4.1s						
CD2				LR	LR		
	comp=Z,260nm,10.6s						
CD2				LR	LR		
	comp=Z,230nm,11.4s						
CD2				LR	LR		
	comp=Z,290nm,7.8s						
H08S3	**Diego Garcia H**	**25.97**	**234**	T	T	11 27 29.9	
	baz=54,slow=75,SNR=5025						
H08S2	**Diego Garcia H**	**25.98**	**234**	T	T	11 27 27.8	
	baz=54,slow=75,SNR=6611						
H08S1	**Diego Garcia H**	**25.99**	**234**	T	T	11 27 28.9	
	baz=54,slow=75,SNR=552						
SMLA	**Simla**	**27.81**	**329**	*eP*	**P**	**11 01 00.4**	**+2.0**
SMLA				IAmb	IAmb	11 01 03.4	
	comp=Z,12nm,0.6s						
GOMU	**GeErMu**	**28.31**	**2**	P	**P**	**11 01 05.2**	**+1.9**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,69nm,5.3s						
LZH	**Lanzhou**	**29.71**	**17**	*eP*	**P**	**11 01 15.8**	**+0.3**
LZH				pP	sP	11 01 36.3	+13
LZH				sP	pP	11 01 43.1	+22
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				pmax	pmax		
	comp=Z,210nm,6.4s						
LZH				LR	LR		
	comp=Z,250nm,19.5s						
LZH				LR	LR		
	comp=Z,410nm,17.9s						
LZH				LR	LR		
	comp=Z,290nm,19.8s						
XAN	**Xi'an**	**29.74**	**26**	⇑P	**P**	**11 01 15.4**	**-0.3**
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				pmax	pmax		
	comp=Z,80nm,4.6s						
XAN				LR	LR		
	comp=Z,210nm,16.2s						
XAN				LR	LR		
	comp=Z,260nm,15.1s						
XAN				LR	LR		
	comp=Z,210nm,13.9s						
XAN	**Xi'an**	**29.74**	**26**	P	**P**	**11 01 14.6**	**-1.0**
XAN				pP	**pP**	**11 01 20.4**	**-1.0**
NIL	**Nilore**	**31.84**	**327**	P	**P**	**11 01 35.3**	**+1.0**
GTA	**Gaotai**	**32.00**	**9**	⇑P	**P**	**11 01 36.6**	**+1.0**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,62nm,5.2s						
GTA				LR	LR		
	comp=Z,50nm,14.9s						
GTA				LR	LR		
	comp=Z,88nm,13.5s						
GTA				LR	LR		
	comp=Z,78nm,15.6s						
NJ2	**Nanjing**	**33.73**	**41**	*eP*	**P**	**11 01 54.2**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KBL	**Kabul**	**34.88**	**323**	P	**P**	**11 02 01.3**	**+0.4**
HNS	**HongShan**	**35.20**	**30**	⇑P	**P**	**11 02 04.8**	**+1.5**
HNS				pmax	pmax		
	comp=Z,21nm,0.9s						
HNS				LR	LR		
	comp=Z,170nm,12.8s						
HNS				LR	LR		
	comp=Z,170nm,11.6s						
KSH	**Kashi**	**35.31**	**336**	P	**P**	**11 02 04.1**	**-0.4**
KSH				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ	**Urumqi**	**36.26**	**353**	*eP*	**P**	**11 02 12.1**	**-0.4**
WMQ				pP	sP	11 02 26.4	+5.9
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				LR	LR		
	comp=Z,120nm,18.9s						
HHC	**Hu-ho-hao-te**	**36.64**	**23**	*eP*	**P**	**11 02 16.9**	**+1.1**
HHC				pmax	pmax		
	comp=Z,34nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
NRN	**Naryn**	**36.95**	**338**	P	**P**	**11 02 20.8**	**+2.1**
NRN				IAmb	IAmb	11 02 21.2	
	comp=Z,8.8nm,0.9s						
GAR	**Garm**	**37.45**	**330**	P	**P**	**11 02 22.6**	**-0.2**
CHGR	**Chuyangaron**	**37.78**	**328**	P	**P**	**11 02 25.7**	**+0.2**
BJT	**Baijiatuan**	**37.95**	**29**	P	**P**	**11 02 26.9**	**+0.1**
BJT				IAmb	IAmb	11 02 33.4	
	comp=Z,12nm,0.7s						
BJI	**Beijing**	**37.98**	**29**	P	**P**	**11 02 28.3**	**+1.3**
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
TKM2	**Tokmak 2**	**38.39**	**339**	P	**P**	**11 02 31.8**	**+1.1**
	SNR=7.9						
KBK	**Karaybulak**	**38.40**	**338**	P	**P**	**11 02 33.1**	**+2.3**
	SNR=10						
AML	**Almayashu**	**38.44**	**336**	P	**P**	**11 02 33.2**	**+1.8**
	SNR=43						
AAK	**Ala-Archa**	**38.56**	**337**	LR	LR	11 21 06.7	
	comp=Z,96nm,18.4s,baz=146,slow=40						
AAK	**Ala-Archa**	**38.56**	**337**	P	**P**		
	SNR=7.8						
AAK	**Ala-Archa**	**38.56**	**337**	P	**P**	**11 02 33.6**	**+1.5**
AAK				IAmb	IAmb	11 02 35.9	
	comp=Z,21nm,0.9s						
CHMS	**Chumysh**	**38.77**	**338**	P	**P**	**11 02 35.3**	**+1.5**
	SNR=5.5						
EKS2	**Erkin-Say**	**38.86**	**337**	P	**P**	**11 02 36.8**	**+2.2**
	SNR=15						
USP	**Ospenovka**	**39.09**	**338**	P	**P**	**11 02 37.7**	**+1.3**
	SNR=14						
HRA	**Herat**	**39.11**	**317**	P	**P**	**11 02 37.4**	**+0.5**
HRA				IAmb	IAmb	11 03 00.7	
	comp=Z,11nm,0.8s						
MK31	**Makanchi Array**	**40.05**	**348**	P	**P**	**11 02 44.4**	**+0.1**
MKAR	**Makanchi Array**	**40.05**	**348**	P	**P**	**11 02 44.6**	**+0.3**
	comp=Z,3.8nm,0.5s,baz=169,slow=7.8,SNR=37						
MKAR				PcP	**PcP**	**11 04 52.2**	**+3.2**
	comp=Z,0.9nm,0.5s,baz=184,slow=2.0,SNR=5.5						
MKAR				LR	LR	11 21 40.8	
	comp=Z,103nm,21.6s,baz=242,slow=40						
	comp=Z,3.8nm,0.5s						
MAKZ	**Makanchi**	**40.13**	**348**	P	**P**	**11 02 44.0**	**-1.0**
MAKZ	**Makanchi**	**40.13**	**348**	P	**P**	**11 02 45.2**	**+0.2**
MAKZ				pP	**pP**	**11 02 50.7**	**0.0**
KK31	**Karatay Array**	**40.58**	**334**	P	**P**	**11 02 50.0**	**+1.3**
KKAR	**Karatay Array**	**40.58**	**334**	P	**P**	**11 02 49.8**	**+1.1**
KKAR	**Karatay Array**	**40.58**	**334**	IAmb	IAmb	11 02 51.6	
	comp=Z,26nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.82**	**129**	P	**P**	**11 02 50.8**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=327,slow=5.7,SNR=6.5						
FITZ				LR	LR	11 20 47.1	
	comp=Z,43nm,19.1s,baz=317,slow=38						
	comp=Z,2.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.82**	**129**	P	**P**	**11 02 50.0**	**-1.0**
	baz=41,SNR=4.1						
XLT	**XiLinHaoTe**	**41.02**	**25**	⇑P	**P**	**11 02 53.8**	**+1.3**
XLT				pP	sP	11 03 06.7	+6.1
XLT				pmax	pmax		
	comp=Z,38nm,3.5s						
XLT				LR	LR		
	comp=Z,240nm,16.6s						
XLT				LR	LR		
	comp=Z,140nm,15.6s						
SONM	**Songino Array**	**41.39**	**13**	P	**P**	**11 02 55.5**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=195,slow=7.8,SNR=17						
SONM				PcP	**PcP**	**11 04 53.9**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=199,slow=4.8,SNR=6.1						
SONM				LR	LR	11 21 33.5	
	comp=Z,93nm,19.8s,baz=208,slow=38						
	comp=Z,6.1nm,0.8s						
SONM	**Songino Array**	**41.39**	**13**	P	**P**	**11 02 55.2**	**-0.3**
ULN	**Ulaanbaatar**	**41.57**	**14**	P	**P**	**11 02 56.5**	**-0.5**
KSRS	**Korea Array**	**42.93**	**41**	P	**P**	**11 03 07.2**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=234,slow=9.0,SNR=10						
	comp=Z,1.7nm,0.8s						
GEYT	**Alibeck**	**43.87**	**319**	P	**P**	**11 03 18.2**	**+2.5**
	comp=Z,51nm,0.7s,baz=128,slow=9.6,SNR=53						
GEYT				LR	LR	11 22 31.8	
	comp=Z,56nm,21.4s,baz=149,slow=37						
	comp=Z,51nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**43.87**	**319**	P	**P**	**11 03 17.6**	**+1.9**
KURBB	**Kurchatov Arra**	**44.49**	**346**	P	**P**	**11 03 21.0**	**+0.6**
	comp=Z,7.4nm,0.9s,baz=174,slow=7.2,SNR=34						
KURBB				PcP	**PP**	**11 05 04.3**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=177,slow=2.5,SNR=5.8						
	comp=Z,7.4nm,0.9s						
KURK	**Kurchatov**	**44.56**	**347**	P	**P**	**11 03 21.6**	**+0.7**
KURK				IAmb	IAmb	11 03 23.9	
	comp=Z,16nm,1.2s						
KURK	**Kurchatov**	**44.56**	**347**	P	**P**	**11 03 22.1**	**+1.2**
KURK				pP	**pP**	**11 03 27.1**	**+0.5**
JHS	**Saijyo**	**45.27**	**47**	P	**P**	**11 03 27.1**	**+0.1**
JHS				IAmb	IAmb	11 03 34.4	
	comp=Z,13nm,0.9s						
CN2	**Changchun**	**45.43**	**33**	*eP*	**P**	**11 03 31.9**	**+3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
ZAA0	**Zalesovo Array**	**46.57**	**353**	IAmb	IAmb	11 03 38.3	
	comp=Z,11nm,0.7s						
ZALV	**Zalesovo Beam**	**46.57**	**353**	P	**P**	**11 03 37.4**	**+0.6**
	comp=Z,8.5nm,0.4s,baz=185,slow=8.2,SNR=29						
ZALV				LR	LR	11 27 00.5	
	comp=Z,69nm,19.6s,baz=208,slow=41						
	comp=Z,8.5nm,0.4s						
ZALV	**Zalesovo Beam**	**46.57**	**353**	P	**P**	**11 03 37.0**	**+0.2**
HIA	**Hailar**	**46.85**	**23**	P	**P**	**11 03 39.5**	**+0.4**
WRKA	**Warakurna**	**47.01**	**135**	P	**P**	**11 03 39.8**	**-1.0**
	baz=47,SNR=7.5						
BNX	**BinXian**	**47.77**	**32**	⇓P	**P**	**11 03 46.2**	**-0.1**
BNX				pmax	pmax		
	comp=Z,18nm,0.9s						
BNX				pmax	pmax		
	comp=Z,83nm,4.8s						
MDJ	**Mudanjiang**	**48.22**	**34**	IAmb	IAmb	11 03 56.6	
	comp=Z,11nm,0.9s						
RAYN	**Ar Rayn**	**48.58**	**294**	P	**P**	**11 03 54.9**	**+1.9**
RAYN	**Ar Rayn**	**48.58**	**294**	P	**P**	**11 03 55.0**	**+2.1**
RAYN				sP	**sP**	**11 04 00.4**	**-0.6**
WB0	**Warramunga Arr**	**48.66**	**125**	P	**P**	**11 03 49.8**	**-3.8**
WB0				IAmb	IAmb	11 04 07.4	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**48.70**	**125**	P	**P**	**11 03 50.1**	**-3.8**
	comp=Z,2.0nm,0.6s,baz=306,slow=8.4,SNR=17						
WRA				PcP	**PcP**	**11 05 20.4**	**+1.4**
	comp=Z,1.2nm,0.5s,baz=318,slow=2.7,SNR=7.7						
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**48.70**	**125**	P	**P**	**11 03 51.2**	**-2.7**
WB2	**Warramunga Arr**	**48.71**	**125**	P	**P**	**11 03 52.4**	**-1.6**
	baz=49						
WB2	**Warramunga Arr**	**48.71**	**125**	P	P	11 03 49.4	-4.6
BRVK	**Borovoye**	**48.95**	**342**	P	**P**	**11 03 54.4**	**-0.9**
BRVK				IAmb	IAmb	11 03 56.9	
	comp=Z,6.1nm,0.8s						
MJAR	**Matsushiro Arr**	**49.67**	**48**	P	**P**	**11 04 01.4**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=227,slow=6.5,SNR=7.8						
MJAR				PcP	**PcP**	**11 05 21.8**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=245,slow=2.6,SNR=4.3						
	comp=Z,2.2nm,0.7s						
ABKAR	**Akbulak array**	**50.03**	**332**	P	**P**	**11 04 04.1**	**+0.5**
ABKAR	**Akbulak array**	**50.03**	**332**	IAmb	IAmb	11 04 06.0	
	comp=Z,29nm,0.8s						
ASAR	**Alice Springs**	**50.32**	**129**	P	**P**	**11 04 02.6**	**-3.7**
	comp=Z,1.8nm,0.6s,baz=301,slow=7.3,SNR=14						
ASAR				PcP	**PcP**	**11 05 23.2**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=310,slow=3.0,SNR=5.4						
	comp=Z,1.8nm,0.6s						
AKTO	**Aktyubinsk**	**51.74**	**332**	P	**P**	**11 04 16.9**	**+0.4**
	comp=Z,12nm,0.8s,baz=130,slow=8.1,SNR=21						
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**52.27**	**31**	P	**P**	**11 04 21.1**	**+0.6**
	baz=209,slow=4.9						
GNI	**Garni**	**54.07**	**315**	P	**P**	**11 04 35.5**	**+1.4**
	comp=Z,19nm,1.0s,baz=93,slow=3.4,SNR=8.9						
	comp=Z,19nm,1.0s						
GNI	**Garni**	**54.07**	**315**	P	**P**	**11 04 35.1**	**+1.0**
JEW	**Eniwo**	**54.58**	**42**	P	**P**	**11 04 36.2**	**-1.3**
ARU	**Arti**	**55.74**	**337**	P	**P**	**11 04 46.4**	**+0.8**
	comp=Z,15nm,0.7s,baz=148,slow=5.3,SNR=22						
ARU				LR	LR	11 31 08.8	
	comp=Z,50nm,18.9s,baz=136,slow=39						
	comp=Z,15nm,0.7s						
ARU	**Arti**	**55.74**	**337**	P	**P**	**11 04 46.2**	**+0.6**
ARU	**Arti**	**55.74**	**337**	P	**P**	**11 04 46.3**	**+0.6**
ARU				pP	**pP**	**11 04 51.4**	**-0.1**
ONI	**Oni**	**55.92**	**317**	IAmb	IAmb	11 04 49.1	
	comp=Z,6.8nm,1.1s						
KBZ	**Khabaz**	**56.75**	**318**	P	**P**	**11 04 53.9**	**+0.8**
	comp=Z,9.8nm,0.9s,baz=143,slow=6.8,SNR=14						
	comp=Z,9.8nm,0.9s						
KMBO	**Kilima Mbogo**	**56.81**	**264**	P	**P**	**11 04 56.9**	**+2.5**
	comp=Z,4.8nm,0.8s,baz=57,slow=11,SNR=8.4						
KMBO				LR	LR	11 25 58.7	
	comp=Z,35nm,18.9s,baz=92,slow=32						
	comp=Z,4.8nm,0.8s						
KMBO	**Kilima Mbogo**	**56.81**	**264**	P	**P**	**11 04 55.4**	**+1.0**
KIV	**Kislovodsk**	**56.98**	**318**	P	**P**	**11 04 55.5**	**+0.6**
YSS	**Yuzh-Sakhalins**	**57.23**	**38**	P	**P**	**11 04 56.6**	**+0.2**
YSS	**Yuzh-Sakhalins**	**57.23**	**38**	P	**P**	**11 04 56.3**	**-0.1**
YSS				pP	**pP**	**11 05 01.0**	**-1.4**
EIL	**Elat**	**58.95**	**300**	LR	LR	11 33 04.4	
	comp=Z,28nm,18.5s,baz=90,slow=38						
YAK	**Yakutsk**	**60.28**	**19**	LR	LR	11 31 18.0	
	comp=Z,22nm,18.5s,baz=252,slow=36						
STKA	**Stephens Creek**	**60.48**	**133**	P	**P**	**11 05 17.4**	**-1.9**
	comp=Z,2.6nm,1.0s,baz=309,slow=3.9,SNR=3.6						
	comp=Z,2.6nm,1.0s						
NRIK	**Noril'sk**	**61.61**	**358**	P	**P**	**11 05 25.7**	**-0.6**
	comp=Z,5.4nm,0.6s,baz=98,slow=2.3,SNR=6.5						
	comp=Z,5.4nm,0.6s						
NRIK	**Noril'sk**	**61.61**	**358**	P	**P**	**11 05 24.7**	**-1.6**
NRIK				IAmb	IAmb	11 05 31.6	
	comp=Z,6.3nm,0.7s						
BRTR	**Keskin Array B**	**62.03**	**311**	P	**P**	**11 05 29.4**	**-0.5**
	comp=Z,9.5nm,0.7s,baz=129,slow=7.3,SNR=42						
BRTR				LR	LR	11 35 18.4	
	comp=Z,30nm,19.1s,baz=114,slow=39						
	comp=Z,9.5nm,0.7s						
BRTR	**Keskin Array B**	**62.03**	**311**	P	**P**	**11 05 29.1**	**-0.8**
MBAR	**Mbarara**	**63.15**	**265**	LR	LR	11 30 08.3	
	comp=Z,62nm,19.4s,baz=105,slow=33						
CMSA	**Cobar Meteorol**	**63.32**	**131**	P	**P**	**11 05 37.4**	**-0.9**
	baz=63						
KLMR	**Klimovskoe**	**66.28**	**334**	*eP*	**P**	**11 05 55.3**	**-1.8**
KLMR				AMP		11 05 58.3	
	comp=Z,34nm,1.2s						
KLMR				*ePcP*	**PcP**	**11 06 23.3**	**-3.8**
TIRR	**Tirgusor**	**66.89**	**315**	⇑P	**P**	**11 06 01.6**	**+0.2**
TIRR	**Tirgusor**	**66.89**	**315**	P	**P**	**11 05 59.9**	**-1.5**
TPGR	**Topolog**	**66.97**	**315**	⇑P	**P**	**11 06 01.9**	**0.0**
MA2	**Magadan**	**67.13**	**28**	P	**P**	**11 06 01.9**	**-0.7**
MA2	**Magadan**	**67.13**	**28**	P	**P**	**11 06 01.9**	**-0.7**
MA2				pP	**pP**	**11 06 06.8**	**-1.8**
MILM	**Milestii Mici**	**67.17**	**318**	*eP*	**P**	**11 06 02.0**	**-1.1**
	comp=Z,34nm,0.7s						
MILM				LRM	MLR	11 38 43.0	
	comp=Z,130nm,14.0s						
CFR	**Carcaliu**	**67.24**	**316**	⇑P	**P**	**11 06 03.8**	**+0.2**
HARR	**Harsova**	**67.28**	**315**	⇑P	**P**	**11 06 04.3**	**+0.4**
PRD	**Provadia**	**67.36**	**314**	P	**P**	**11 06 04.5**	**+0.1**
TIXI	**Tiksi**	**67.44**	**11**	P	**P**	**11 06 03.7**	**-0.7**
AKASG	**Malin Array Be**	**67.85**	**322**	P	**P**	**11 06 06.4**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=85,slow=5.8,SNR=18						
AKASG				LR	LR	11 38 51.4	
	comp=Z,29nm,20.4s,baz=48,slow=39						
	comp=Z,1.6nm,0.5s						
AKBB	**Malin Array Si**	**67.85**	**322**	P	**P**	**11 06 06.0**	**-1.4**
AKBB				IAmb	IAmb	11 06 07.3	
	comp=Z,13nm,1.1s						
IDI	**Anoyia**	**68.12**	**305**	⇑P	**P**	**11 06 10.7**	**+1.2**
VRI	**Vrincioaia**	**68.35**	**316**	⇑P	**P**	**11 06 11.8**	**+1.2**
PLOR	**Plostina**	**68.40**	**316**	⇑P	**P**	**11 06 12.2**	**+1.2**
TESR	**Tescani**	**68.53**	**317**	⇑P	**P**	**11 06 12.4**	**+0.7**
KDZ	**Kurdzhali**	**68.54**

OKC	Ostrava-Krasne	74.67 319	*e*P		P		11 06 49.4	+0.8
KEV	Kevo	74.72 341	P		P		11 06 49.5	+1.0
KEV			IAmb		IAmb		11 06 54.5	
	comp=Z,16nm,1.1s							
JAVC	Velka Javorina	74.88 318	*e*P		P		11 06 50.0	0.0
TIP	Timpagrande	74.88 308	⇑P		P		11 06 50.5	+0.3
BOSA	Boshof	75.02 238	P		P		11 06 52.3	+1.1
	comp=Z,4.0nm,0.5s,baz=80,slow=3.6,SNR=17							
	comp=Z,4.0nm,0.5s							
MORC	Moravsky Berou	75.05 319	⇑P		P		11 06 51.3	+0.4
MORC	Moravsky Berou	75.05 319	IAmb		IAmb		11 06 52.6	
	comp=Z,18nm,1.1s							
MORC	Moravsky Berou	75.05 319	*e*P		P		11 06 51.0	+0.1
MODS	Modra-Piesok	75.09 318	*e*P		P		11 06 51.9	+0.7
ARA0	ARCESS Array S	75.15 340	*e*P		P		11 06 51.2	+0.1
ARCES	ARCESS Array B	75.15 340	P		P		11 06 51.8	+0.7
	comp=Z,6.5nm,0.7s,baz=86,slow=6.2,SNR=24							
	comp=Z,6.5nm,0.7s							
ARCES	ARCESS Array B	75.15 340	P		P		11 06 51.8	+0.7
ZST	Bratislava	75.20 318	*e*P		P		11 06 52.8	+1.1
KRLC	Kraliky	75.57 320	*e*P		P		11 06 54.8	+0.9
KRLC			*e*x		x		11 06 57.8	
VRAC	Vranov	75.63 319	P		P		11 06 54.8	+0.6
	comp=Z,1.7nm,0.3s,baz=142,slow=3.0,SNR=3.8							
	comp=Z,1.7nm,0.3s							
VRAC	Vranov	75.63 319	*e*P		P		11 06 54.8	+0.6
KOGS	Kog	75.64 316	*e*P		P		11 06 54.6	+0.3
RONA	Rosalia, Austr	75.70 317	*e*P		P		11 06 54.9	+0.3
	comp=Z,11nm,1.1s							
KRUC	Moravsky	75.73 319	*e*P		P		11 06 55.3	+0.5
DPC	Dobruska-Polom	75.89 320	*e*P		P		11 06 56.4	+0.7
DPC			*e*x		x		11 07 00.2	
OSTC	Ostas	75.97 320	*e*P		P		11 06 56.9	+0.7
OSTC			*e*x		x		11 07 02.2	
CONA	Conrad Observa	76.00 317	*e*P		P		11 06 56.2	-0.3
	comp=Z,6.4nm,1.0s							
HAMF	Hammerfest	76.08 341	*e*P		P		11 06 56.0	-0.3
CHVC	Chvalec	76.08 320	*e*P		P		11 06 57.6	+0.8
UPC	Upice	76.10 320	*e*P		P		11 06 57.4	+0.5
ARSA	Arzberg	76.19 317	*e*P		P		11 06 57.7	+0.2
	comp=Z,8.6nm,0.9s							
PERS	Pernice	76.43 316	*i* P		P		11 06 59.3	+0.4
SOKA	Soboth	76.49 316	*i* P		P		11 07 00.2	+0.9
	comp=Z,22nm,1.2s,SNR=6.2							
OBKA	Obir	76.82 316	*e*P		P		11 07 02.0	+0.9
	comp=Z,9.2nm,0.8s							
JETT	Jettan, Norway	76.88 340	*e*P		P		11 07 01.2	+0.3
JETT			IAmb		IAmb		11 07 03.5	
	comp=Z,34nm,1.1s							
PRU	Pruhonice	77.00 319	*e*P		P		11 07 02.5	+0.5
MOA	Molln	77.07 317	*e*P		P		11 07 02.7	+0.2
	comp=Z,9.1nm,1.1s							
CKRC	Cesky Krumlov	77.09 318	*e*P		P		11 07 03.2	+0.7
TRO	Tromso	77.40 340	*e*P		P		11 07 04.0	+0.2
TRO			IAmb		IAmb		11 07 05.0	
	comp=Z,68nm,1.5s							
BRG	Berggiesshubel	77.44 320	*i* P		P		11 07 05.3	+0.9
BRG			Amp				11 07 07.1	
	comp=Z,8.5nm,0.8s							
MYKA	Terra Mystica	77.45 316	*e*P		P		11 07 05.2	+0.6
	comp=Z,5.4nm,0.7s							
BIOA	Bad Ischl, Aus	77.49 317	*e*P		P		11 07 05.3	+0.5
	comp=Z,11nm,0.9s							
GERES	GERESS Array B	77.49 318	P		P		11 07 05.8	+0.8
	comp=Z,12nm,0.8s,baz=93,slow=5.3,SNR=51							
	comp=Z,12nm,0.8s							
ROBS	Robic	77.53 316	*e*P		P		11 07 05.0	0.0
KHC	Kasperske Hory	77.59 319	IAmb		IAmb		11 07 06.8	
	comp=Z,11nm,0.9s							
KHC	Kasperske Hory	77.59 319	*e*P		P		11 07 05.5	+0.2
KHC			*e*x		x		11 07 09.9	
KBA	Koelnbreinsper	77.67 316	*e*P		P		11 07 06.2	+0.2
	comp=Z,6.0nm,0.7s							
CLL	Collm	78.05 321	⇓ *i* P		P		11 07 08.0	+0.2
	comp=Z,11nm,1.3s							
HFS	Hagfors	78.23 330	LR		LR		11 46 18.5	
	comp=Z,31nm,18.1s,baz=78,slow=39							
CIMO	Cimolais	78.27 316	IAmb		IAmb		11 07 10.4	
	comp=Z,33nm,0.9s							
MAW	Mawson	78.32 192	P		P		11 07 09.2	+0.4
	comp=Z,2.9nm,0.8s,baz=60,slow=4.9,SNR=4.0							
	comp=Z,2.9nm,0.8s							
FAUS	Fauske	78.34 337	*e*P		P		11 07 09.5	+0.5
FAUS			IAmb		IAmb		11 07 14.5	
	comp=Z,23nm,0.8s							
STEI	Steigen	78.43 338	*e*P		P		11 07 10.2	+0.6
STEI			IAmb		IAmb		11 07 11.2	
	comp=Z,34nm,1.0s							
MOR8	Moi Rana	78.52 336	*e*P		P		11 07 09.8	-0.3
MOR8			IAmb		IAmb		11 07 10.6	
	comp=Z,21nm,0.9s							
WTTA	Wattenberg	78.84 317	*i* P		P		11 07 12.2	-0.2
	SNR=7.7							
WATA	Walderalm	78.88 317	*e*P		P		11 07 11.8	-0.8
LOF	Lofoten	79.09 338	*e*P		P		11 07 12.7	-0.5
LOF			IAmb		IAmb		11 07 13.9	
	comp=Z,14nm,0.8s							
SQTA	Sankt Quirin	79.13 317	*i* P		P		11 07 13.8	-0.2
	SNR=7.0							
MOTA	Moosalm	79.20 317	*i* P		P		11 07 14.5	0.0
	SNR=8.2							
NC602	NORSAR Array S	79.34 330	*e*P		P		11 07 14.7	0.0
NC602			IAmb		IAmb		11 07 15.3	
	comp=Z,24nm,1.0s							
NSS	Namsos	79.39 334	*e*P		P		11 07 15.0	+0.1
NSS			IAmb		IAmb		11 07 16.5	
	comp=Z,16nm,0.8s							
RETA	Reutte	79.43 317	*i* P		P		11 07 15.7	+0.1
	SNR=10							
TSUM	Tsumeb	79.43 249	P		P		11 07 13.6	-2.6
FETA	Feichten	79.45 316	*i* P		P		11 07 16.3	+0.4
	SNR=7.0							
NB201	NORSAR Array S	79.48 331	P		P		11 07 15.5	0.0
NB2	NORSAR Subarra	79.52 331	P		P		11 07 15.5	-0.2
	comp=Z,4.3nm,0.7s,baz=97,slow=5.3							
NB2	NORSAR Subarra	79.52 331	P		P		11 07 15.5	-0.2
	baz=97,slow=5.3							
NOA	NORSAR Array B	79.52 331	P		P		11 07 15.8	+0.1
	comp=Z,8.4nm,0.8s,baz=94,slow=5.6,SNR=21							
NOA			LR		LR		11 47 43.1	
	comp=Z,18nm,18.6s,baz=105,slow=40							
	comp=Z,8.4nm,0.8s							
OSL	Oslo	79.71 329	*e*P		P		11 07 17.8	+1.1
SPA0	Spitsbergen Ar	79.81 348	*e*P		P		11 07 17.1	+0.1
SPITS	Spitsbergen Ar	79.81 348	LR		LR		11 49 12.7	
	comp=Z,44nm,18.1s,baz=90,slow=41							
DAVA	Damuels	80.03 317	*i* P		P		11 07 19.4	+0.4
	SNR=8.3							
DAVOX	Davos/Dischmat	80.04 316	P		P		11 07 19.7	+0.7
	comp=Z,24nm,0.8s,baz=112,slow=6.6,SNR=31							
	comp=Z,24nm,0.8s							
KONO	Kongsberg	80.27 329	*e*P		P		11 07 20.0	+0.2
DOMB	Dombas	80.58 332	*e*P		P		11 07 21.9	+0.4
KEST	Kesra	80.80 305	P		P		11 07 24.6	+1.4
	comp=Z,12nm,0.8s,baz=38,slow=3.6,SNR=8.6							
	comp=Z,12nm,0.8s							
SKAR	Skarslia	80.93 330	*e*P		P		11 07 24.1	+0.8
MOL	Molde	81.30 332	*e*P		P		11 07 25.4	+0.3
ODD1	Odda	81.77 329	*e*P		P		11 07 29.1	+1.2
SENIN	Lac Senin/Sane	81.83 316	IAmb		IAmb		11 07 30.9	
	comp=Z,10nm,0.8s							
BLS5	Blasjo	81.87 329	*e*P		P		11 07 28.4	+0.1
HYA	Hoyanger	81.96 331	*e*P		P		11 07 29.5	+0.8
BNI	Bardonecchia	82.33 314	P		P		11 07 30.8	-0.5
BTNL	Ternell	82.40 320	*d*P		P		11 07 31.9	+0.6
MEM	Membach	82.48 320	*d*P		P		11 07 30.7	-0.9
KMY	Karmoy	82.50 329	*e*P		P		11 07 32.4	+0.8
DOU	Dourbes	83.41 320	*d*P		P		11 07 36.9	+0.4
EKA	Eskdalemuir Ar	87.45 325	P		P		11 07 57.4	+0.8
	comp=Z,8.2nm,0.9s,baz=108,slow=5.7,SNR=10.0							
	comp=Z,8.2nm,0.9s							
TORD	Torodi Ar. Bea	90.03 283	P		P		11 08 10.6	+1.0
	comp=Z,4.7nm,1.0s,baz=81,slow=4.3,SNR=16							
	comp=Z,4.7nm,1.0s							
ESDC	Sonseca Array	90.82 310	P		P		11 08 13.7	+0.9
	comp=Z,7.3nm,0.9s,baz=59,slow=4.1,SNR=26							
	comp=Z,7.3nm,0.8s							
IMAR	Indian Mountai	91.94 22	P		P		11 08 15.7	-1.7
TOLK	Toolik Lake Re	92.24 19	P		P		11 08 18.2	-0.6
TOLK			IAmb		IAmb		11 08 24.7	
	comp=Z,5.0nm,0.8s							
H21K	Melozitna Rive	92.44 22	IAmb		IAmb		11 08 25.7	
	comp=Z,3.6nm,0.8s							
N18K	Kilae Creek	93.12 27	P		P		11 08 23.3	+0.3
N18K			IAmb		IAmb		11 08 29.0	
	comp=Z,4.3nm,0.8s							

BORG	Borgarnes	93.28 337	LR		LR		11 53 25.6	
	comp=Z,17nm,18.2s,baz=47,slow=38							
M19K	Big River Lodg	93.32 26	IAmb		IAmb		11 08 29.9	
	comp=Z,3.0nm,0.7s							
MLY	Manley	93.49 23	IAmb		IAmb		11 08 31.8	
	comp=Z,3.4nm,0.8s							
ILAR	Eielson Array	95.06 22	P		P		11 08 30.8	-1.0
	comp=Z,0.4nm,0.7s,baz=292,slow=4.0,SNR=4.8							
ILAR			PP		PP		11 12 22.9	+2.1
	comp=Z,0.5nm,0.7s,baz=300,slow=6.7,SNR=4.4							
	comp=Z,0.4nm,0.7s							
SUA	Susitna One	95.08 26	P		P		11 08 31.2	-0.9
PRP	Porcupine Dome	95.17 21	P		P		11 08 32.2	-0.3
PRP			IAmb		IAmb		11 08 37.7	
	comp=Z,2.9nm,0.9s							
NVAR	Mina Array Bea	125.31 31	PKP		PKPdf		11 14 10.9	+0.2
	comp=Z,0.8nm,0.5s,baz=252,slow=0.6,SNR=5.2							
PDAR	Pinedale Array	125.47 21	PKP		PKPdf		11 14 09.9	-1.0
	comp=Z,0.7nm,0.6s,baz=294,slow=1.5,SNR=4.1							
ANMO	Albuquerque	133.50 23	PKP		PKPdf		11 14 25.3	-1.1
	comp=Z,0.2nm,0.3s,baz=95,slow=4.4,SNR=2.6							
TXAR	Lajitas Array	139.55 23	PKhKP		PKPpre		11 14 29.0	
	comp=Z,0.2nm,0.5s,baz=207,slow=1.8,SNR=4.1							
TXAR			PKP		PKPdf		11 14 36.2	-1.4
	comp=Z,0.4nm,0.6s,baz=237,slow=1.5,SNR=5.1							
BDFB	Brasilia	141.59 255	PKP		PKPdf		11 14 42.4	+0.8
	comp=Z,3.9nm,0.6s,baz=31,slow=1.5,SNR=4.7							
PLCA	Paso Flores	144.25 201	PKP		PKPbc		11 14 43.9	+0.1
	comp=Z,6.6nm,1.1s,baz=178,slow=4.0,SNR=3.5							
CPUP	Villa Florida	146.72 233	PKPbc		PKPbc		11 14 51.6	-0.2
	comp=Z,7.8nm,0.8s,baz=95,slow=2.7,SNR=13							
LPAZ	La Paz	160.19 243	PKP		PKPdf		11 15 10.7	+0.4
	comp=Z,2.4nm,0.7s,baz=354,slow=1.6,SNR=9.2							
LPAZ			PKPab		PKPab		11 15 50.3	-0.2
	comp=Z,2.1nm,0.7s,baz=72,slow=3.1,SNR=6.3							

IDC ***11*** *11:11:02.0± 1.5, 60.81N×20.92E, h0km, mbtmp2.9/3, ML2.1/3, Error ellipse: s-maj=25.5km s-min=7.4km az=175.0*

HEL ***11*** *11:11:02.9± 0.1, 60.83N×20.65E, h0km, ML2.4, ML3.0(UPP), Explosion*

UPP ***11*** *11:11:03.4± 0.3, 60.80N×20.47E, h0km, ML3.0, Suspected explosion*

DNK ***11*** *11:11:03.4± 0.7, 60.82N×20.55E, h0km, ML3.0(UPP), Suspected explosion*

ISC 11 11:11:00.4±0.7, 60.84N±0.03×20.69E±0.02, h0km, n53, σ1s03/66, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
RAF	Rauma	0.56	70	*e*P		Pg	11 11 10.2	-0.9
AAL	Aland	0.74	208	P		Pb	11 11 16.1	-0.2
AAL				S		Sb	11 11 26.0	-0.9
AAL	Aland	0.74	208	*e*P		Pb	11 11 16.0	-0.2
AAL				*e*S		Sb	11 11 26.3	-0.6
GRAU	Graesoe	1.17	246	P		Pb	11 11 23.4	-0.2
GRAU	Graesoe	1.17	246	P		Pb	11 11 23.4	-0.2
GRAU	Graesoe	1.17	246	*e*P		Pb	11 11 23.4	-0.2
FORU	Forsmark	1.32	251	P		Pn	11 11 25.8	-0.3
FORU				S		Sb	11 11 42.8	-0.5
FORU	Forsmark	1.32	251	P		Pn	11 11 25.8	-0.3
FORU				S		Sb	11 11 42.8	-0.5
FORU	Forsmark	1.32	251	*e*P		Pn	11 11 25.8	-0.3
FORU				*e*S		Sb	11 11 42.8	-0.5
NRTU	Norrtaelje	1.55	222	P		Pb	11 11 29.6	-0.4
NRTU				S		Sg	11 11 50.3	+0.1
NRTU	Norrtaelje	1.55	222	P		Pb	11 11 29.6	-0.4
NRTU				S		Sg	11 11 50.3	+0.1
NRTU	Norrtaelje	1.55	222	*e*P		Pb	11 11 29.6	-0.4
NRTU				*e*S		Sg	11 11 50.3	+0.1
FLYU	Flymyra	1.56	244	P		Pg	11 11 29.9	-0.4
FLYU	Flymyra	1.56	244	P		Pg	11 11 29.9	-0.4
FLYU	Flymyra	1.56	244	*e*P		Pg	11 11 29.9	-0.4
ARNU	Arnoeviken	1.82	300	P		Pg	11 11 35.2	0.0
ARNU	Arnoeviken	1.82	300	P		Pg	11 11 35.2	0.0
ARNU	Arnoeviken	1.82	300	*e*P		Pg	11 11 35.2	0.0
OSTU	Oestervaala	1.86	252	P		Pg	11 11 35.4	-0.6
OSTU	Oestervaala	1.86	252	P		Pg	11 11 35.4	-0.6
OSTU	Oestervaala	1.86	252	*e*P		Pg	11 11 35.4	-0.6
MEF	Metsahovi	1.94	107	*e*P		Pn	11 11 34.9	+0.3
MEF	Metsahovi	1.94	107	*e*P		Pg	11 11 37.0	-0.5
MEF				*e*S		Sg	11 12 02.3	-0.2
HUDU	Hudiksvall	1.95	299	P		Pg	11 11 37.3	-0.4
HUDU	Hudiksvall	1.95	299	P		Pg	11 11 37.3	-0.4
HUDU	Hudiksvall	1.95	299	*e*P		Pg	11 11 37.3	-0.4
NUR	Nurmijrvi	1.98	98	*e*P		Pg	11 11 38.0	-0.3
NUR				*e*SG		Sg	11 12 04.5	+0.6
NUR				MSG			11 12 06.0	
	comp=Z,30nm,0.2s							
HEMU	Hemsoen	2.24	327	P		Pb	11 11 41.3	-0.3
HEMU	Hemsoen	2.24	327	P		Pb	11 11 41.3	-0.3
HEMU	Hemsoen	2.24	327	*e*P		Pb	11 11 41.3	-0.3
HEMU				*e*SB		Sg	11 12 10.5	-1.7
NYNU	Nynaeshamn	2.28	218	P		Pb	11 11 42.0	-0.4
NYNU	Nynaeshamn	2.28	218	P		Pb	11 11 42.0	-0.4
NYNU	Nynaeshamn	2.28	218	*e*P		Pb	11 11 42.0	-0.4
HASU	Hassela	2.36	306	P		Pb	11 11 43.0	-0.7
HASU	Hassela	2.36	306	P		Pb	11 11 43.0	-0.7
HASU	Hassela	2.36	306	*e*P		Pb	11 11 43.0	-0.7
VAF	Ylistaro	2.40	22	*e*PB		Pb	11 11 44.5	-0.1
VAF				*e*SB		Sb	11 12 15.1	+0.4
VAF				MSG			11 12 17.1	
	comp=Z,13nm,0.2s							
FALU	Falun	2.42	264	P		Pb	11 11 43.1	-1.6
FALU	Falun	2.42	264	P		Pb	11 11 43.1	-1.6
FALU	Falun	2.42	264	*e*P		Pb	11 11 43.1	-1.6
ROTU	Roteberg	2.44	286	P		Pb	11 11 43.5	-1.6
ROTU	Roteberg	2.44	286	P		Pb	11 11 43.5	-1.6
ROTU	Roteberg	2.44	286	*e*P		Pb	11 11 43.5	-1.6
HUSU	Husum	2.61	345	P		Pb	11 11 46.8	-1.2
HUSU	Husum	2.61	345	P		Pb	11 11 46.8	-1.2
HUSU	Husum	2.61	345	*e*P		Pb	11 11 46.8	-1.2
MTSE	Matsula	2.65	142	*e*P		Pb	11 11 47.9	-0.8
FINES	FINESS Array B	2.68	75	Pn		Pb	11 11 48.0	-1.2
	comp=Z,2.2nm,0.3s,baz=256,slow=14,SNR=80							
FINES				Lg		Lg	11 12 21.8	
	comp=Z,3.8nm,0.3s,baz=260,slow=31,SNR=30							
	comp=Z,3.9nm,0.3s							
ESKU	Eskilstuna	2.69	235	P		Pb	11 11 47.2	-2.1
ESKU	Eskilstuna	2.69	235	P		Pb	11 11 47.2	-2.1
ESKU	Eskilstuna	2.69	235	*e*P		Pb	11 11 47.2	-2.1
NOA	NORSAR Array B	4.63	277	Pn		Pn	11 12 13.7	+2.1
	baz=82,slow=14,SNR=2.0							
NOA				Sn		Sn	11 13 09.9	+4.0
	baz=300,slow=13,SNR=1.6							
NOA				Lg		Lg	11 13 27.9	
	comp=Z,0.1nm,0.3s,baz=137,slow=26,SNR=4.5							
	comp=Z,0.1nm,0.3s							
ARCES	ARCESS Array B	8.96	11	Pn		Pn	11 13 11.2	+0.3
	comp=Z,0.2nm,0.3s,baz=192,slow=13,SNR=42							
	comp=Z,0.5nm,0.2s							

BJI ***11*** *11:19:58.3± 0.0, 5.62S×150.53E, h93km, mb5.1/53, mB5.0/23*

IDC ***11*** *11:20:01.7± 1.0, 5.63S×150.36E, h106km±9km, mb4.3/21, mbtmp4.7/25, MS3.2/40, Error ellipse: s-maj=12.7km s-min=8.4km az=107.0*

NEIC ***11*** *11:20:01.3± 2.4, 5.55S±0.04×150.22E±0.07, h95km±6km, mb4.7/91, Error ellipse: s-maj=9.9km s-min=5.9km az=70.0*

DJA ***11*** *11:20:02.7± 0.4, 6˚S±3˚×15˚0E±˚, h106km±5km, M5.0/20, mB5.2/6, mb4.9/20, MLv5.3/3, Mw(mB)4.6/6*

GCMT ***11*** *11:20:02.3± 0.3, 5.71S±0.02×150.28E±0.03, h118km±6km, MW4.8/80, Moment Tensor Solution. s14,c15; s80,c108; Duration: 0 Moment tensor: Scale 1016Nm; Mrr~0.54±. 12; Mθθ 0.36±. 14; Mθφ 0.17±.13; Mrθ -1.91±.07; Mθφ -0.65±.20; Mφr~0.20±.07; Best double couple: Mo2.07200×1016 NP1:δ89.00000°, δ83.00000°, λ-109.00000°. NP2: φs340.00000°, δ20.00000°, λ-20.00000°. Principal axes: T 1.9590, Plg36.0000°, Azm196.0000°; N 0.2260, Plg19.0000°, Azm92.0000°; P -2.1850, Plg48.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 11:20:00.5±0.5, 5.63S±0.04×150.26E±0.06, h93km±4km, h93km:pP-P, n190, σ1s22/164, mb4.8/75, 4C, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
KRVT	Keravat (AS076	2.20	53	P		Pn	11 20 36.7	+1.2
	1μm,0.6s,baz=252,slow=9.6,SNR=120							
KRVT				S		Sn	11 21 02.7	+0.5
	2μm,0.9s,baz=162,slow=20,SNR=10							
KRVT				LR		LR	11 21 21.5	
	comp=Z,725nm,21.6s,baz=8.1,slow=38							
RABL	Rabaul	2.38	53			Pn	11 20 38.4	+0.6
RABL	Rabaul	2.38	53	P		Pn	11 20 39.5	+1.6
MANU	Manus Island	4.58	321			Pn	11 21 06.4	-1.2
PMG	Port Moresby	4.85	219	P		Pn	11 21 13.1	+2.0
	123nm,0.3s,baz=52,slow=5.8,SNR=53							
PMG				S		Sn	11 22 06.7	+0.6
	3μm,0.9s,baz=30,slow=20,SNR=8.6							
PMG	Port Moresby	4.85	219	Pn		Pn	11 21 12.9	+1.7
PMG	Port Moresby	4.85	219	P		Pn	11 21 13.2	+2.0
PMG	Port Moresby	4.85	219	P		Pn	11 21 13.3	+2.1
HNR	Honiara	10.32 112	LR			LR	11 26 37.7	
	comp=Z,58nm,19.4s,baz=306,slow=39							
COEN	Coen	10.82 220	Pn			Pn	11 22 33.3	+0.7
COEN	Coen	10.82 220	P			Pn	11 22 33.3	+0.7
SMPI	Sarmi	12.07 287	P			P	11 23 08.1	+10
MTSU	Mount Surprise	13.72 205	P			Pn	11 23 13.7	+2.5
CTA	Charters Tower	14.89 195	P			Pn	11 23 27.8	+1.5
	64nm,1.0s,baz=19,slow=12,SNR=20							
CTA			LR			LR	11 29 29.1	
	comp=Z,67nm,19.0s,baz=344,slow=38							
CTA	Charters Tower	14.89 195	P			P	11 23 28.6	-1.1
CTAO	Charters Tower	14.89 195	P			Pn	11 23 27.1	+0.8
CTAO	Charters Tower	14.89 195	P			P	11 23 28.6	-1.1
RK1H	Rockhampton Ha	17.66 179	P			Pn	11 24 01.6	+1.0
QIS	Mount Isa	18.09 214	P			Pn	11 24 06.7	+0.8
KDU	Kakadu	18.89 247	P			P	11 24 14.4	+0.5
SIJI	Sorong	19.53 283	LR			LR	11 33 20.2	
	comp=Z,95nm,19.3s,baz=164,slow=41							
EIDS	Eidsvold	19.65 178	P			Pn	11 24 23.4	-0.8
EIDS	Eidsvold	19.65 178	P			Pn	11 24 23.5	-0.8
GUMO	Guam	19.82 344	P			Pn	11 24 25.5	-0.8
	76nm,0.6s,baz=182,slow=17,SNR=3.6							
GUMO			LR			LR	11 30 48.6	
	comp=Z,82nm,20.0s,baz=132,slow=33							
MTN	Manton Dam	20.18 248	P			P	11 24 27.9	+0.1
MTN			IAmb			IAmb	11 24 47.3	
	comp=Z,28nm,0.9s							
MTN	Manton Dam	20.18 248	P			P	11 24 28.1	+0.2
RMQ	Roma	20.79 184	P			P	11 24 36.0	+1.6
WB0	Warramunga Arr	20.87 226	P			P	11 24 35.8	+0.5
WB0			IAmb			IAmb	11 24 37.3	
	comp=Z,55nm,0.9s							
WR0	Warramunga Arr	20.89 226	P			P	11 24 35.6	+0.1
WR0			IAmb			IAmb	11 24 37.4	
	comp=Z,49nm,0.9s							
WRAB	Tennant Creek	21.01 226	P			P	11 24 37.0	+0.1
WRAB			IAmb			IAmb	11 24 39.3	
	comp=Z,49nm,0.7s							
WRAB	Tennant Creek	21.01 226	P			P	11 24 37.2	+0.4
WB2	Warramunga Arr	21.02 226	P			P	11 24 37.5	+0.6
WB2			IAmb			IAmb	11 24 39.4	
	comp=Z,48nm,0.8s							
WRA	Warramunga Arr	21.02 226	P			P	11 24 37.3	+0.3
	comp=Z,32nm,0.6s,baz=52,slow=11,SNR=251							
WRA			S			S	11 28 23.0	-3.0
	comp=Z,4.8nm,1.1s,baz=42,slow=22,SNR=7.3							
WRA			PcP			PcP	11 28 40.0	-0.7
	comp=Z,2.1nm,0.9s,baz=38,slow=2.5,SNR=4.7							
WRA			ScP			ScP	11 32 08.1	-1.1
	comp=Z,7.2nm,0.8s,baz=47,slow=2.8,SNR=20							
WRA			LR			LR	11 33 46.4	
	comp=Z,122nm,18.1s,baz=38,slow=39							
	comp=Z,32nm,0.6s							
WRA	Warramunga Arr	21.02 226	P			P	11 24 36.0	-1.0
QLP	Quilpie	21.62 195	P			P	11 24 44.3	+1.1
DZM	Mont Dzumac	22.64 138	P			P	11 24 54.4	+0.2
	comp=Z,26nm,0.6s,baz=297,slow=14,SNR=34							
DZM			LR			LR	11 32 15.8	
	comp=Z,84nm,21.8s,baz=14,slow=32							
	comp=Z,26nm,0.6s							
DZM	Mont Dzumac	22.64 138	*e*P			P	11 24 53.0	-1.1
	comp=Z,57nm,0.8s							
DZM			*e*LR			LR	11 30 31.7	
	comp=Z,382nm,29.2s							
DZM	Mont Dzumac	22.64 138	P			P	11 24 53.9	-0.2
DZM			IAmb			IAmb	11 24 55.4	
	comp=Z,25nm,0.6s							
DZM	Mont Dzumac	22.64 138	P			P	11 24 54.3	+0.2
YATNC	Mamie plateau,	22.93 137	P			P	11 24 57.6

comp=Z,12nm,0.9s
YHNB Yeheng 41.20 318 P **P** **11 27 38.1 +1.7**
TUWZ Tuamarina 41.45 153 P **P** **11 27 38.7 +0.5**
JSU Suzuyama 41.48 334 IAmb IAmb 11 27 42.6
comp=Z,22nm,1.0s
MSWZ Moikau Station 42.04 152 P **P** **11 27 43.2 +0.2**
KHZ Kahutara 42.06 154 P **P** **11 27 43.0 -0.1**
RPZ Rata Peaks 42.12 157 P **P** **11 27 42.5 -1.1**
comp=Z,22nm,0.9s,baz=344,slow=8.2,SNR=5.7
comp=Z,22nm,0.9s
PLWZ Palliser 42.17 152 P **P** **11 27 43.7 -0.4**
MLZ Mavora Lakes 42.54 161 P **P** **11 27 47.6 +0.7**
MLZ IAmb IAmb 11 27 48.5
comp=Z,19nm,0.8s
MJAR Matsushiro Arr 43.44 346 P **P** **11 27 52.5 -1.8**
comp=Z,10nm,1.0s,baz=156,slow=11,SNR=22
MJAR PcP **PcP** **11 29 41.8 +0.7**
comp=Z,0.5nm,0.5s,baz=174,slow=3.5,SNR=1.5
MJAR LR LR 11 44 23.6
comp=Z,26nm,18.8s,baz=160,slow=34
comp=Z,10nm,1.0s
MAJO Matsushiro 43.44 346 P **P** **11 27 54.5 +0.2**
MAJO IAmb IAmb 11 27 57.2
comp=Z,17nm,0.8s
JHS Saijyo 43.52 339 IAmb IAmb 11 27 58.8
comp=Z,26nm,1.2s
JSD Sado 44.85 347 P **P** **11 28 06.1 +0.6**
JTM Tenmabayashi 46.95 350 P **P** **11 28 22.1 +0.1**
KSRS Korea Array 47.65 336 P **P** **11 28 28.7 +1.2**
comp=Z,6.2nm,0.8s,baz=151,slow=8.5,SNR=33
KSRS LR LR 11 44 48.8
comp=Z,15nm,21.1s,baz=140,slow=31
comp=Z,6.2nm,0.8s
ERM Erimo 47.85 353 P **P** **11 28 31.1 +2.2**
ERM IAmb IAmb 11 28 48.5
comp=Z,19nm,1.1s
NJ2 Nanjing 47.94 323 *e*P **P** **11 28 31.5 +1.7**
NJ2 pmax pmax
comp=Z,13nm,0.5s
WHN Wuhan 49.74 318 ⇑P **P** **11 28 45.9 +2.3**
WHN pmax pmax
comp=Z,62nm,1.0s
TIA Tai'an 51.92 326 ⇑P **P** **11 29 00.7 +0.8**
TIA pmax pmax
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 52.26 343 P **P** **11 29 03.8 +1.6**
comp=Z,17nm,0.8s,baz=169,slow=9.0,SNR=35
USRK LR LR 11 50 26.3
comp=Z,17nm,18.2s,baz=205,slow=35
comp=Z,17nm,0.8s
USRK Ussuriysk Ar. 52.26 343 P **P** **11 29 03.6 +1.4**
ENH Enshi 52.90 315 P **P** **11 29 07.3 -0.1**
MDJ Mudanjiang 53.35 342 P **P** **11 29 12.1 +1.8**
MDJ pmax pmax
comp=Z,46nm,1.4s
MDJ pmax pmax
comp=Z,170nm,3.9s
LYN LuoYang 53.54 321 *e*P **P** **11 29 12.8 +0.9**
LYN pmax pmax
comp=Z,10.0nm,0.7s
CN2 Changchun 54.06 338 *e*P **P** **11 29 16.7 +1.2**
CN2 pmax pmax
comp=Z,20nm,1.2s
HNS HongShan 54.13 325 ⇑P **P** **11 29 17.3 +1.2**
HNS pmax pmax
comp=Z,30nm,1.2s
BNX BinXian 55.06 341 ⇑P **P** **11 29 24.1 +1.4**
BNX pmax pmax
comp=Z,90nm,1.1s
BNX pmax pmax
comp=Z,120nm,6.6s
BJI Beijing 55.22 328 P **P** **11 29 25.0 +1.1**
BJI sP **sP** **11 29 56.3 -0.8**
BJI pmax pmax
comp=Z,11nm,0.9s
XAN Xi'an 55.51 318 P **P** **11 29 26.7 +0.5**
XAN pmax pmax
comp=Z,23nm,0.9s
XAN pmax pmax
comp=Z,100nm,3.7s
CMAR Chiang Mai Arr 55.95 297 P **P** **11 29 31.4 +1.7**
comp=Z,2.3nm,1.0s,baz=116,slow=5.4,SNR=9.2
CMAR LR LR 11 54 08.9
comp=Z,3.5nm,18.1s,baz=130,slow=36
comp=Z,2.3nm,1.0s
PZH PanZhiHua 56.80 307 P **P** **11 29 39.6 +3.9**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,80nm,4.1s
KLR Kul'dur 56.97 346 LR LR 11 53 44.3
comp=Z,16nm,18.1s,baz=194,slow=36
CD2 Chengdu 57.38 312 P **P** **11 29 40.6 +1.0**
XLT XiLinHaoTe 58.13 331 *e*P **P** **11 29 45.9 +1.2**
XLT pmax pmax
comp=Z,20nm,1.0s
XLT pmax pmax
comp=Z,120nm,4.6s
HHC Hu-ho-hao-te 58.27 326 *e*P **P** **11 29 47.2 +1.5**
HHC pmax pmax
comp=Z,43nm,1.0s
HHC pmax pmax
comp=Z,83nm,6.2s
PEA0B Petropavlovsk- 58.85 5 P **P** **11 29 48.9 -0.4**
PETK Petropavlovsk- 58.85 5 P **P** **11 29 49.4 0.0**
comp=Z,4.8nm,0.6s,baz=176,slow=8.3,SNR=13
PETK LR LR 11 51 51.3
comp=Z,39nm,21.2s,baz=169,slow=32
comp=Z,4.8nm,0.6s
PETK Petropavlovsk- 58.85 5 P **P** **11 29 48.9 -0.4**
PPT2 Papeete2 59.90 107 *e*LR LR 11 47 47.2
comp=Z,35nm,29.8s
LZH Lanzhou 60.09 317 *e*P **P** **11 30 02.6 +4.2**
LZH pmax pmax
comp=Z,20nm,1.3s
GTA Gaotai 64.57 319 *e*P **P** **11 30 29.6 +1.4**
GTA pP pP 11 30 53.7 +2.1
GTA sP PcP 11 31 03.3 +1.8
ULN Ulaanbaatar 65.39 330 P **P** **11 30 34.3 +0.9**
ULN IAmb IAmb 11 30 35.8
comp=Z,7.9nm,0.9s
SONM Songino Array 65.70 329 P **P** **11 30 36.4 +1.1**
comp=Z,4.5nm,0.6s,baz=151,slow=4.3,SNR=14
SONM LR LR 11 58 31.5
comp=Z,19nm,21.8s,baz=121,slow=35
comp=Z,4.5nm,0.6s
SONM Songino Array 65.70 329 P **P** **11 30 35.9 +0.6**
SONM IAmb IAmb 11 30 38.3
comp=Z,22nm,1.4s
YAK Yakutsk 69.31 350 LR LR 12 09 08.5
comp=Z,6.5nm,18.0s,baz=84,slow=42
UNV Unalaska Valle 69.44 26 P **P** **11 30 57.4 -1.2**
UNV IAmb IAmb 11 30 58.0
comp=Z,22nm,1.3s
AKUT Akutan 69.96 26 P **P** **11 31 00.8 -0.9**
AKUT IAmb IAmb 11 31 25.1
comp=Z,19nm,1.0s
VNDA Vanda 72.11 177 P **P** **11 31 15.2 +0.7**
comp=Z,4.0nm,0.8s,baz=331,slow=8.9,SNR=28
comp=Z,4.0nm,0.8s
VNDA Vanda 72.11 177 P **P** **11 31 14.9 +0.5**
VNDA pP **pP** **11 31 37.0 -1.5**
SBA Scott Base 72.70 176 P **P** **11 31 19.8 +1.9**
SBA **pP** **11 31 41.9 -0.1**
WMQ Urumqi 74.65 318 *e*P **P** **11 31 31.9 +1.9**
OHAK Old Harbor 77.44 28 P **P** **11 31 44.3 -1.1**
OHAK IAmb IAmb 11 31 49.8
comp=Z,5.9nm,1.0s
N18K Kilae Creek 78.22 24 P **P** **11 31 49.6 -0.2**
N18K IAmb IAmb 11 32 18.0
comp=Z,7.9nm,1.4s
MK31 Makanchi Array 79.29 320 P **P** **11 31 55.3 -0.7**
MKAR Makanchi Array 79.29 320 P **P** **11 31 55.1 -0.9**
comp=Z,2.5nm,0.9s,baz=102,slow=7.3,SNR=13
MKAR LR LR 12 07 40.5
comp=Z,6.6nm,20.1s,baz=92,slow=36
comp=Z,2.5nm,0.9s
MKAR Makanchi Array 79.29 320 P **P** **11 31 55.4 -0.6**
MAKZ Makanchi 79.50 320 P **P** **11 31 57.0 -0.1**
MAKZ IAmb IAmb 11 31 59.9
comp=Z,7.6nm,1.1s
CNPM China Poot 79.56 26 IAmb IAmb 11 31 58.9
comp=Z,16nm,0.8s
ZAA0 Zalesovo Array 80.44 327 IAmb IAmb 11 32 02.7
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 80.44 327 P **P** **11 32 00.5 -1.5**
comp=Z,5.5nm,0.6s,baz=111,slow=5.5,SNR=21
ZALV LR LR 12 07 09.8
comp=Z,11nm,20.9s,baz=131,slow=35
comp=Z,5.5nm,0.6s
ZALV Zalesovo Beam 80.44 327 P **P** **11 32 00.3 -1.6**
PWL Port Wells 81.48 26 IAmb IAmb 11 32 08.8
comp=Z,8.1nm,0.8s
SML Sawmill 81.93 25 P **P** **11 32 08.4 -1.4**
SML IAmb IAmb 11 32 10.8
comp=Z,6.7nm,0.8s
IMAR Indian Mountai 82.01 20 P **P** **11 32 08.4 -1.6**
NIL Nilore 82.36 305 P **P** **11 32 12.1 -0.5**
RND Reindeer 82.48 23 IAmb IAmb 11 32 12.9
comp=Z,8.9nm,0.8s
MCK McKinley 82.60 23 P **P** **11 32 10.9 -2.3**
MCK IAmb IAmb 11 32 13.5
comp=Z,10nm,0.8s
KLU Klutina 82.81 26 IAmb IAmb 11 32 44.9
comp=Z,9.0nm,1.3s
KURK Kurchatov 82.87 323 P **P** **11 32 14.6 -0.2**
KURK IAmb IAmb 11 32 16.4
comp=Z,12nm,1.1s
DHY Denali Highway 82.91 24 IAmb IAmb 11 32 17.3
comp=Z,4.5nm,0.8s
WRH Wood River Hil 83.28 23 IAmb IAmb 11 32 16.8
comp=Z,5.1nm,0.9s
AAK Ala-Archa 83.40 314 LR LR 12 10 36.3
comp=Z,8.6nm,21.4s,baz=112,slow=36
TCOL CIGO, UAF Yank 83.56 22 IAmb IAmb 11 32 17.5
comp=Z,6.5nm,0.8s
COLA College 83.56 22 P **P** **11 32 15.4 -2.6**
COLA IAmb IAmb 11 32 18.0
comp=Z,5.8nm,0.8s
MAW Mawson 83.84 203 P **P** **11 32 19.5 +0.1**
comp=Z,3.4nm,0.9s,baz=91,slow=7.6,SNR=5.2
comp=Z,3.4nm,0.9s
ILAR Eielson Array 83.88 23 P **P** **11 32 17.2 -2.5**
comp=Z,3.4nm,0.7s,baz=251,slow=4.2,SNR=49
ILAR LR LR 12 04 04.7
comp=Z,18nm,20.9s,baz=255,slow=32
comp=Z,3.4nm,0.7s
QSPA South Pole Qui 84.34 180 P **P** **11 32 22.1 -0.2**
QSPA **pP** **11 32 44.5 -2.4**
QSPA IAmb IAmb 11 32 46.0
comp=Z,16nm,0.9s
J25K Salcha River, 84.39 23 IAmb IAmb 11 32 23.0
comp=Z,7.5nm,0.7s
DOT Dot Lake 84.51 24 P **P** **11 32 21.0 -2.0**
M27K Edge Creek, AK 84.91 26 IAmb IAmb 11 32 26.9
comp=Z,12nm,1.4s
BCAR Beaver Creek A 85.22 25 P **P** **11 32 24.9 -1.6**
K27K Chicken 85.47 24 IAmb IAmb 11 32 29.9
comp=Z,5.7nm,1.2s
NRIK Noril'sk 85.93 342 P **P** **11 32 29.1 -0.8**
comp=Z,5.4nm,0.9s,baz=104,slow=7.5,SNR=4.5
comp=Z,5.4nm,0.9s
NRIK Noril'sk 85.93 342 IAmb IAmb 11 32 32.2
comp=Z,6.5nm,0.9s
EGAK Eagle 86.12 24 P **P** **11 32 28.8 -2.1**
EGAK IAmb IAmb 11 32 33.0
comp=Z,4.7nm,0.9s
HYT Haines Junctio 86.34 28 IAmb IAmb 11 32 34.3
comp=Z,5.7nm,1.1s
KKAR Karatay Array 86.36 314 P **P** **11 32 30.6 -2.0**
KKAR pP **pP** **11 32 59.0 +1.7**
KKAR Karatay Array 86.36 314 IAmb IAmb 11 32 33.4
comp=Z,6.1nm,0.8s
CHGR Chuyangaron 86.56 309 IAmb IAmb 11 32 33.9
comp=Z,9.1nm,0.7s
DAWY Dawson 86.58 25 P **P** **11 32 32.0 -1.2**
DAWY IAmb IAmb 11 32 35.8
comp=Z,3.4nm,0.8s
I29M Ogilvie Camp, 87.46 23 IAmb IAmb 11 32 37.1
comp=Z,3.6nm,0.8s
FARO Faro, Yukon 88.65 27 IAmb IAmb 11 32 43.0
comp=Z,3.7nm,1.0s
BBB Bella Bella 89.29 38 LR LR 12 04 09.5
comp=Z,21nm,21.6s,baz=268,slow=30
DLBC Dease Lake 89.39 31 LR LR 12 08 47.0
comp=Z,18nm,20.6s,baz=286,slow=33
INK Inuvik 90.13 21 LR LR 12 10 07.5
comp=Z,18nm,19.6s,baz=186,slow=33
YBH Yreka Blue Hor 91.49 48 LR LR 12 07 30.4
comp=Z,20nm,20.0s,baz=314,slow=31
NVAR Mina Array Bea 94.59 52 P **P** **11 33 10.8 -0.7**
comp=Z,0.9nm,0.7s,baz=254,slow=6.1,SNR=13
NVAR LR LR 12 14 35.1
comp=Z,11nm,18.3s,baz=256,slow=35
comp=Z,0.9nm,0.7s
AKTO Aktyubinsk 95.72 320 LR LR 12 17 12.0
comp=Z,8.0nm,21.1s,baz=83,slow=36
PFO Pinyon Flats O 95.81 57 LR LR 12 11 33.6
comp=Z,14nm,18.9s,baz=252,slow=32
NEW Newport 95.91 42 LR LR 12 08 40.0
comp=Z,16nm,21.6s,baz=302,slow=30
RPN Rapa Nui 96.67 118 LR LR 12 09 14.8
comp=Z,17nm,21.1s,baz=256,slow=31
ELK Elko 97.05 50 LR LR 12 11 22.8
comp=Z,19nm,20.1s,baz=332,slow=32
YKA Yellowknife Ar 97.33 28 P **P** **11 33 21.1 -1.9**
comp=Z,1.1nm,0.7s,baz=269,slow=4.2,SNR=5.6
YKA LR LR 12 13 06.9
comp=Z,31nm,20.1s,baz=6.5,slow=33
comp=Z,1.1nm,0.7s
PLCA Paso Flores 120.61 145 PKP **PKiKP** **11 38 41.7 -0.5**
comp=Z,2.2nm,0.8s,baz=225,slow=8.0,SNR=3.9
GERES GERESS Array B 123.40 327 PKP **PKPdf** **11 38 46.8 -0.3**
comp=Z,1.0nm,0.6s,baz=77,slow=2.9,SNR=7.1
LPAZ La Paz 136.22 120 PKP **PKPdf** **11 39 13.1 +0.1**
comp=Z,1.0nm,0.5s,baz=260,slow=6.1,SNR=4.4
TORD Torodi Ar. Bea 148.12 286 PKPbc **PKPbc** **11 39 35.0 -1.6**
comp=Z,2.4nm,0.7s,baz=64,slow=2.6,SNR=12
BDFB Brasília 152.18 140 PKPbc **PKPbc** **11 39 45.5 -1.0**
comp=Z,3.3nm,0.5s,baz=198,slow=3.2,SNR=4.0

*IDC **11** 11:31:27.9±15.0, 7.°32S×69.°15E, h0km, mb3.6/3, mbtmp3.6/3, MS3.3/4, Error ellipse: s-maj=505.3km s-min=41.3km az=63.0*

ISC 11 11:31:30.5±2.6, 7.°2S±0.°4×69.°4E±0.°3, h10km, n13, σ0§48/6, mb3.9/3, MS3.3/4, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**3.11**	**98**	Pn	**Pb**	**11 32 26.0**	**+0.2**
H08S3	**Diego Garcia H**	**3.12**	**98**	Pn	**Pb**	**11 32 25.4**	**-0.5**
H08S2	**Diego Garcia H**	**3.13**	**98**	Pn	**Pb**	**11 32 26.3**	**+0.2**
PSI	**Prapat**	**31.12**	**72**	LR	LR	11 48 43.6	
	comp=Z,60nm,19.3s,baz=230,slow=33						
KMBO	**Kilima Mbogo**	**32.58**	**279**	LR	LR	11 49 38.9	
	comp=Z,24nm,20.6s,baz=76,slow=34						
LSZ	**Lusaka**	**41.13**	**255**	LR	LR	11 52 44.0	
	comp=Z,44nm,18.4s,baz=151,slow=31						
H01W3	**Cape Leeuwin H**	**49.46**	**130**	T	T	12 33 44.2	
	baz=292						
H01W2	**Cape Leeuwin H**	**49.46**	**130**	T	T	12 33 44.8	
	baz=292						
H01W1	**Cape Leeuwin H**	**49.47**	**130**	T	T	12 33 52.3	
	baz=292						
MKAR	**Makanchi Array**	**54.97**	**11**	P	**P**	**11 41 01.8**	**0.0**
	0.2nm,0.6s,baz=195,slow=5.9,SNR=1.9						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**63.84**	**113**	P	**P**	**11 42 03.4**	**-0.4**
	0.6nm,0.7s,baz=276,slow=6.3,SNR=8.9						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**64.08**	**109**	P	**P**	**11 42 05.8**	**+0.5**
	1.0nm,0.9s,baz=281,slow=6.5,SNR=9.6						
	1.0nm,0.9s						
ARCES	**ARCESS Array B**	**82.24**	**346**	LR	LR	12 21 24.8	
	comp=Z,26nm,19.0s,baz=104,slow=36						

*IDC **11** 11:35:09.9±1.6, 60.°75N×21.°05E, h0km, mbtmp2.7/3, ML1.9/3, Error ellipse: s-maj=26.5km s-min=7.4km az=175.0*
*HEL **11** 11:35:11.2±0.1, 60.°80N×20.°70E, h0km, ML1.9, ML2.2(UPP), Explosion*
*DNK **11** 11:35:12.8±0.6, 60.°73N×20.°48E, h0km, ML2.2(UPP), Suspected explosion*
*UPP **11** 11:35:13.8±0.6, 60.°68N×20.°33E, h0km, ML2.2, Suspected explosion*

ISC 11 11:35:08.8±0.8, 60.°78N±0.°04×20.°78E±0.°03, h0km, n45, σ1§14/56, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAF	**Rauma**	**0.54**	**63**	*e*P	**Pg**	**11 35 18.1**	**-1.1**
RAF				*e*S	**Sg**	**11 35 25.2**	**-1.0**
AAL	**Aland**	**0.72**	**213**	P	**Pb**	**11 35 23.9**	**-0.2**
AAL				S	**Sg**	**11 35 31.7**	**0.0**
AAL	**Aland**	**0.72**	**213**	*e*P	**Pb**	**11 35 23.9**	**-0.2**
AAL				*e*S	**Sb**	**11 35 33.7**	**-0.8**
GRAU	**Graesoe**	**1.19**	**249**	P	**Pb**	**11 35 31.8**	**-0.4**
GRAU	**Graesoe**	**1.19**	**249**	P	**Pb**	**11 35 31.8**	**-0.4**
GRAU	**Graesoe**	**1.19**	**249**	*e*P	**Pb**	**11 35 31.8**	**-0.4**
FORU	**Forsmark**	**1.34**	**254**	P	**Pn**	**11 35 34.3**	**-0.4**
FORU	**Forsmark**	**1.34**	**254**	P	**Pn**	**11 35 34.3**	**-0.4**
FORU	**Forsmark**	**1.34**	**254**	*e*P	**Pn**	**11 35 34.3**	**-0.4**
NRTU	**Norrtaelje**	**1.54**	**225**	P	**Pb**	**11 35 37.7**	**-0.4**
NRTU				S	**Sb**	**11 35 57.2**	**-0.9**
NRTU	**Norrtaelje**	**1.54**	**225**	P	**Pb**	**11 35 37.7**	**-0.4**
NRTU				S	**Sb**	**11 35 57.2**	**-0.9**
NRTU	**Norrtaelje**	**1.54**	**225**	*e*P	**Pb**	**11 35 37.7**	**-0.4**
NRTU				*e*S	**Sb**	**11 35 57.2**	**-0.9**
FLYU	**Flymyra**	**1.57**	**247**	P	**Pb**	**11 35 38.3**	**-0.4**
FLYU	**Flymyra**	**1.57**	**247**	P	**Pb**	**11 35 38.3**	**-0.4**
FLYU	**Flymyra**	**1.57**	**247**	*e*P	**Pb**	**11 35 38.3**	**-0.4**
UPP	**Uppsala**	**1.82**	**241**	P	**Pb**	**11 35 42.8**	**-0.1**
UPP	**Uppsala**	**1.82**	**241**	*e*P	**Pb**	**11 35 42.8**	**-0.1**
MEF	**Metsahovi**	**1.88**	**106**	*e*P	**Pg**	**11 35 44.7**	**0.0**
MEF				*e*S	**Sg**	**11 36 09.3**	**+0.3**
OSTU	**Oestervaala**	**1.89**	**255**	P	**Pb**	**11 35 43.8**	**-0.2**
OSTU	**Oestervaala**	**1.89**	**255**	P	**Pb**	**11 35 43.8**	**-0.2**
OSTU	**Oestervaala**	**1.89**	**255**	*e*P	**Pb**	**11 35 43.8**	**-0.2**
FIBU	**Brunna**	**1.92**	**244**	P	**Pb**	**11 35 44.3**	**-0.3**
FIBU	**Brunna**	**1.92**	**244**	P	**Pb**	**11 35 44.3**	**-0.3**
FIBU	**Brunna**	**1.92**	**244**	*e*P	**Pb**	**11 35 44.3**	**-0.3**
NUR	**Nurmijrvi**	**1.93**	**96**	*e*P	**Pg**	**11 35 45.6**	**-0.1**
NUR				*e*S	**Sg**	**11 36 11.5**	**+0.8**
NUR				MSG		11 36 13.6	
	comp=Z,8.9nm,0.1s						
NYNU	**Nynaeshamn**	**2.26**	**219**	P	**Pb**	**11 35 50.1**	**-0.4**
NYNU	**Nynaeshamn**	**2.26**	**219**	P	**Pb**	**11 35 50.1**	**-0.4**
NYNU	**Nynaeshamn**	**2.26**	**219**	*e*P	**Pb**	**11 35 50.1**	**-0.4**
KEF	**Keuruu**	**2.41**	**53**	*e*P	**Pb**	**11 35 52.4**	**-0.6**
KEF				*e*SB	**Sb**	**11 36 23.8**	**+0.6**
KEF				MSG		11 36 25.3	
	comp=Z,4.4nm,0.1s						
VAF	**Ylistaro**	**2.44**	**21**	*e*PB	**Pb**	**11 35 53.3**	**-0.2**
VAF				*e*SB	**Sb**	**11 36 24.9**	**+0.7**
VAF				MSG		11 36 25.9	
	comp=Z,4.3nm,0.1s						
FALU	**Falun**	**2.45**	**265**	P	**Pb**	**11 35 52.2**	**-1.5**
FALU	**Falun**	**2.45**	**265**	P	**Pb**	**11 35 52.2**	**-1.5**
FALU	**Falun**	**2.45**	**265**	*e*P	**Pb**	**11 35 52.2**	**-1.5**
FINES	**FINESS Array B**	**2.66**	**73**	Pn	**Pb**	**11 35 55.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=259,slow=13,SNR=23						
FINES				Lg	Lg	11 36 27.9	
	comp=Z,1.4nm,0.3s,baz=260,slow=25,SNR=19						
	comp=Z,1.5nm,0.3s						
ESKU	**Eskilstuna**	**2.69**	**237**	P	**Pb**	**11 35 55.8**	**-2.1**
ESKU	**Eskilstuna**	**2.69**	**237**	P	**Pb**	**11 35 55.8**	**-2.1**
ESKU	**Eskilstuna**	**2.69**	**237**	*e*P	**Pb**	**11 35 55.8**	**-2.1**
NRAU	**Nora**	**3.11**	**250**	P	**Pn**	**11 36 01.3**	**+2.2**
NRAU	**Nora**	**3.11**	**250**	P	**Pn**	**11 36 01.3**	**+2.2**
NRAU	**Nora**	**3.11**	**250**	*e*P	**Pn**	**11 36 01.3**	**+2.2**
ASKU	**Askersund**	**3.55**	**240**	P	**Pn**	**11 36 07.2**	**+2.2**
ASKU	**Askersund**	**3.55**	**240**	P	**Pn**	**11 36 07.2**	**+2.2**
ASKU	**Askersund**	**3.55**	**240**	*e*P	**Pn**	**11 36 07.2**	**+2.2**
NOA	**NORSAR Array B**	**4.68**	**277**	Pn	**Pn**	**11 36 22.9**	**+2.3**
	baz=126,slow=8.3,SNR=2.1						
NOA				Sn	**Sn**	**11 37 16.6**	**+1.0**
	baz=94,slow=19,SNR=1.4						
NOA				Lg	Lg	11 37 40.4	
	baz=308,slow=24,SNR=1.7						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	**9.01**	**11**	Pn	**Pn**	**11 37 19.5**	**-0.5**
	baz=192,slow=13,SNR=8.4						
	comp=Z,1.2nm,0.9s						

OTT 11 11:37:08.2±0.6, 78.°39N×92.°88W, h18km, MN3.8/2, 230km southwest from Eureka, Nu Sverdrup Seismic Zone., Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EUNU	**Eureka**	**2.07**	**33**	PN	Pb	11 37 45.2	0.0
RES	**Resolute Bay**	**3.75**	**188**	PN	Pn	11 38 04.6	-0.5
RES				SN	Sn	11 38 46.9	-1.7
RES				LG	Lg	11 39 05.5	
RES				Trac		11 39 18.9	
	comp=Z,243nm,0.6s						
TULEG	**Thule**	**5.53**	**97**	*i* P	Pn	11 38 33.0	+3.6
ILON	**Igloolik, Nuna**	**9.54**	**156**	PN	Pn	11 39 28.8	-1.6
ILON				SN	Sn	11 41 03.6	-7.3
ILON				LG	Lg	11 42 09.9	
ILON				Trac		11 42 22.1	
	comp=Z,48nm,0.8s						
KUKN	**Kugluktuk,NWT**	**12.27**	**222**	PN	Pn	11 40 00.5	-1.3
KUKN				SN	Sn	11 42 08.8	-8.9
KUKN				Trac		11 43 55.2	
	comp=Z,49nm,1.6s						
INK	**Inuvik**	**14.94**	**250**	PN	Pn	11 40 36.7	-1.3
INK				SN	Sn	11 43 08.8	-14
INK				Trac		11 43 18.9	
	comp=Z,32nm,2.6s						

*BJI **11** 11:44:09.5±0.0, 36.°54N×71.°06E, h110km, mb4.6/20, mB4.4/7*
*NNC **11** 11:44:09.1±1.9, 36.°79N×70.°86E, h0km, mb5.1, mpv5.1, Error ellipse: s-maj=18.1km s-min=9.3km az=155.0*
*IDC **11** 11:44:10.1±2.0, 36.°25N×71.°14E, h118km±18km, mb3.9/25, mbtmp4.4/29, Error ellipse: s-maj=12.1km s-min=10.1km az=167.0*
*MOS **11** 11:44:10.6±0.9, 36.°46N×71.°16E, h131km, mb4.4/19, Error ellipse: s-maj=7.0km s-min=3.7km az=81.3*
*NEIC **11** 11:44:12.0±1.9, 36.°41N±0.°06×71.°11E±0.°09, h133km±8km, mb4.5/29, Error ellipse: s-maj=11.0km s-min=8.2km az=110.0*

ISC 11 11:44:12.8±0.3, 36.°38N±0.°04×71.°10E±0.°04, h150km, n220, σ2§61/239, mb4.4/51, 26C-26D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.48**	**223**	Pn	**Pn**	**11 44 52.7**	**-1.2**
KBL	**Kabul**	**2.48**	**223**	PN	**Pn**	**11 44 52.7**	**-1.2**
CEP	**Cherat**	**2.63**	**165**	P	**Pn**	**11 44 54.5**	**-1.2**
CEP				S	**Sn**	**11 45 27.0**	**-1.7**
GAR	**Garm**	**2.69**	**347**	Pn	**Pn**	**11 44 54.4**	**-2.0**
CHGR	**Chuyangaron**	**2.75**	**326**		**Pn**	**11 44 54.9**	**-2.1**
CHGR	**Chuyangaron**	**2.75**	**326**	PN	**Pn**	**11 44 54.9**	**-2.1**
DRK	**Karamyk**	**3.15**	**10**		**Pn**	**11 45 01.2**	**-1.1**
CHCP	**Chirah Chowk**	**3.24**	**146**	P	**Pn**	**11 45 02.1**	**-1.2**
NIL	**Nilore**	**3.24**	**146**	Pn	**Pn**	**11 45 02.2**	**-1.1**
NIL	**Nilore**	**3.24**	**146**	PN	**Pn**	**11 45 02.2**	**-1.1**
THW	**Thamme Wali**	**3.61**	**171**	P	**Pn**	**11 45 06.7**	**-1.3**
OHH	**Osh**	**4.35**	**17**	PN	**Pn**	**11 45 15.9**	**-1.7**
JMU	**Jammu**	**4.81**	**138**	*e*P	**Pn**	**11 45 21.6**	**-2.1**
JMU				*e*S	**Sn**	**11 46 13.6**	**-5.3**
KSH	**Kashi**	**4.97**	**49**	Pn	Pn	11 45 19.9	-5.9
KSH				Sn	Sn	11 46 09.8	-13
KSH				pmax	pmax		
	comp=Z,370nm,0.6s						
KSH				smax	smax		
	comp=N,3μm,0.4s						
KSH				smax	smax		
	comp=E,2μm,0.9s						
TAS	**Tashkent**	**5.14**	**345**	Pn	**Pn**	**11 45 26.2**	**-1.8**
TAS	**Tashkent**	**5.14**	**345**	PN	**Pn**	**11 45 26.2**	**-1.8**
TRKS	**Terek-Say**	**5.15**	**0**	PN	**Pn**	**11 45 25.3**	**-2.9**
THN	**Thein Dam**	**5.48**	**135**	*e*P	**Pn**	**11 45 30.7**	**-1.8**
THN				*e*S	**Sn**	**11 46 30.4**	**-4.4**
IUG	**luzhnay**	**5.82**	**352**	*d i*PN	**Pn**	**11 45 35.3**	**-1.8**
IUG	**luzhnay**	**5.82**	**352**	‖ *i*P	**Pn**	**11 45 35.4**	**-1.8**
	baz=352						
IUG				*e*S	**Sn**	**11 46 37.5**	**-5.7**
	baz=352						
ARLS	**Aral**	**6.02**	**24**	PN	**Pn**	**11 45 37.2**	**-2.7**
AML	**Almayashu**	**6.09**	**19**	P	**Pn**	**11 45 38.4**	**-2.5**
	SNR=721						
NRN	**Naryn**	**6.33**	**36**	Pn	**Pn**	**11 45 41.3**	**-2.8**
NRN	**Naryn**	**6.33**	**36**	PN	**Pn**	**11 45 41.3**	**-2.8**
UCH	**Uchtor**	**6.42**	**23**	P	**Pn**	**11 45 43.2**	**-2.2**
	SNR=82						

EKS2 Erkin-Say 6.61 17 P Pn 11 45 45.7 -1.9
SNR=129

BHK Bhakra 6.63 137 *e*P Pn 11 45 44.7 -3.3
BHK *e*S Sn 11 46 56.4 -6.1
KK31 Karatay Array 6.74 356 Pn Pn 11 45 47.3 -1.9
KK31 Karatay Array 6.74 356 *e*PN Pn 11 45 47.3 -1.9
KK31 Karatay Array 6.74 356 ⇑P Pn 11 45 44.3 -4.9
comp=E,208nm,0.4s,baz=182,slow=13,SNR=2599
KK31 ⇑S Sn 11 46 59.0 -5.8
comp=E,33nm,0.3s,baz=185,slow=24,SNR=4.8
KKAR Karatay Array 6.74 356 Pn 11 45 47.3 -2.0
KKAR Karatay Array 6.74 356 Pn Pn 11 45 47.2 -2.0
KKAR Karatay Array 6.74 356 PN Pn 11 45 47.2 -2.0
AAK Ala-Archa 6.78 22 P Pn 11 45 48.1 -1.8
comp=E,140nm,0.4s,baz=189,slow=5.7,SNR=142
AAK S Sn 11 47 01.5 -4.7
comp=E,57nm,0.5s,baz=136,slow=23,SNR=11
AAK Ala-Archa 6.78 22 P Pn 11 45 48.1 -1.8
SNR=142
AAK Ala-Archa 6.78 22 Pn Pn 11 45 47.8 -2.2
AAK Ala-Archa 6.78 22 *d*PN Pn 11 45 48.0 -2.0
AAK pmax pmax
comp=Z,70nm,0.5s
KBK Karagaybulak 6.94 24 P Pn 11 45 50.4 -1.7
SNR=21
ULHL Ulahol 7.09 33 P Pn 11 45 51.9 -2.2
SNR=27
CHMS Chumysh 7.19 22 P Pn 11 45 53.0 -2.2
SNR=45
CHMS Chumysh 7.19 22 *i* PN Pn 11 45 53.2 -2.1
CHMS pmax pmax
comp=Z,48nm,0.4s
CHMS Chumysh 7.19 22 ⇓P Pn 11 45 52.8 -2.5
comp=Z,48nm,0.5s
CHMS ⇓S Sn 11 47 11.1 -4.6
comp=Z,244nm,1.2s
SMLA Simla 7.27 134 *e*P Pn 11 45 53.0 -3.5
SMLA *e*S Sn 11 47 09.6 -8.2
SMLA IAML 11 47 13.6
comp=N,700nm,0.3s
SMLA IAML 11 47 14.8
comp=E,518nm,0.3s
USP Ospenovka 7.36 20 P Pn 11 45 55.4 -2.2
SNR=69
TKM2 Tokmak 2 7.40 27 P Pn 11 45 56.2 -2.1
SNR=110
TKM2 Tokmak 2 7.40 27 PN Pn 11 45 55.8 -2.4
TKM2 Tokmak 2 7.40 27 ⇑P Pn 11 45 55.9 -2.4
comp=E,68nm,0.5s
TKM2 ⇓S Sn 11 47 17.0 -4.0
comp=E,61nm,0.7s
SGDS Sogindy 7.57 20 *d* iPN Pn 11 45 57.3 -3.1
SGDS Sogindy 7.57 20 ⇓*i*P Pn 11 45 57.4 -3.0
baz=20
SGDS *e*S Sn 11 47 20.4 -4.6
baz=20
AAA Alma-Ata 8.16 31 *d* iPN Pn 11 46 06.4 -1.8
AAA Alma-Ata 8.16 31 ⇓*i*P Pn 11 46 06.5 -1.8
baz=32
MDOK Medeo 8.18 32 *i* PN Pn 11 46 06.4 -2.2
MDOK Medeo 8.18 32 *i* P Pn 11 46 06.4 -2.2
baz=33
MDOK Medeo 8.18 32 ⇑P Pn 11 46 06.3 -2.2
comp=E,36nm,0.7s
MDOK ⇑S Sn 11 47 35.5 -4.2
comp=E,22nm,0.7s
DDI Dehra Dun 8.38 134 *e*P Pn 11 46 09.0 -2.3
KUU Kurty 8.51 26 *c* iPN Pn 11 46 10.0 -2.9
KUU Kurty 8.51 26 ⇑*i*P Pn 11 46 10.0 -2.9
baz=27
SATY Saty 8.73 38 *c* iPN Pn 11 46 13.3 -2.6
SATY Saty 8.73 38 ⇑*i*P Pn 11 46 13.3 -2.6
baz=38
ZHN Zhinishke 8.82 38 *e*PN Pn 11 46 14.3 -2.9
ZHN Zhinishke 8.82 38 *e*P Pn 11 46 14.3 -2.9
baz=38
UZB Uzynbulak 9.10 40 *d* iP Pn 11 46 18.5 -2.4
UZB *e*S Sn 11 47 57.4 -4.6
UZB Uzynbulak 9.10 40 ⇓*i*P Pn 11 46 18.5 -2.4
baz=40
UZB *e*S Sn 11 47 57.4 -4.6
baz=40
NDI New Delhi 9.24 144 *e*P Pn 11 46 20.0 -2.8
NDI *ex* x 11 48 00.0
SHLS Shalkode 9.34 41 *i* P Pn 11 46 25.4 +1.4
SHLS Shalkode 9.34 41 *i* P Pn 11 46 25.4 +1.4
baz=43
ARXS Arharly 9.36 31 *e*P Pn 11 46 20.8 -3.5
KUDL Kundal 9.39 149 *e*P Pn 11 46 20.5 -4.2
KUDL *e*S Sn 11 47 56.6 -12
TDK Taldyqorghan 10.24 30 *e*P Pn 11 46 31.6 -4.3
TDK Taldyqorghan 10.24 30 *e*P Pn 11 46 31.6 -4.3
baz=31
AJM Ajmer 10.32 162 *e*P Pn 11 46 34.5 -2.6
LGTI Lohaghat 10.33 129 *e*P Pn 11 46 50.9 +14
LGTI *e*S Sn 11 48 39.1 +7.7
GEYT Alibeck 10.48 282 P Pn 11 46 37.0 -2.0
comp=E,5.5nm,0.3s,baz=113,slow=12,SNR=16
GEYT S Sn 11 48 29.0 -6.0
comp=E,16nm,0.8s,baz=96,slow=23,SNR=3.2
GEYT Alibeck 10.48 282 Pn Pn 11 46 37.2 -1.9
GYA0 ALIBECK ARRAY 10.48 282 P Pn 11 46 37.4 -1.7
GYA0 S Sn 11 48 32.3 -2.7
GYA0B ALIBECK ARRAY 10.48 282 Pn 11 46 37.2 -1.8
GYA0B ALIBECK ARRAY 10.48 282 ⇓P Pn 11 46 37.0 -2.0
GYA0B ⇓S Sn 11 48 32.1 -2.9
BHUJ Bhuj 13.14 186 *e*P Pn 11 47 11.1 -2.6
BHUJ IAmb IAmb 11 47 13.9
comp=Z,281nm,0.2s
MAKZ Makanchi 13.21 35 Pn 11 47 11.6 -2.9
MAKZ Makanchi 13.21 35 P Pn 11 47 11.7 -2.8
MAKZ Makanchi 13.21 35 ⇓P Pn 11 47 15.3 +0.7
comp=Z,14nm,0.8s
MK31 Makanchi Array 13.35 35 Pn Pn 11 47 13.8 -2.4
MK31 Makanchi Array 13.35 35 *c* iP Pn 11 47 13.5 -2.7
MK31 Makanchi Array 13.35 35 ⇓Pg P 11 47 20.9 +0.4
comp=Z,1.9nm,0.3s,baz=81,slow=18,SNR=69
MK31 ⇑Lg Lg 11 47 58.4
comp=Z,1.0nm,0.3s,baz=80,slow=30
MKAR Makanchi Array 13.35 35 P Pn 11 47 13.9 -2.3
comp=Z,3.4nm,0.7s,baz=219,slow=9.4,SNR=26
MKAR Makanchi Array 13.35 35 Pn Pn 11 47 13.4 -2.8
MKAR Makanchi Array 13.35 35 *ce*P Pn 11 47 13.5 -2.8
MKAR pmax pmax
comp=Z,6.0nm,0.9s
DANN Dangsing 13.35 123 *e*P Pn 11 47 12.4 -4.4
comp=Z,52nm,0.3s
DANN *e*S Sn 11 49 30.6 -14
BRZS Berezniki 13.65 4 *e*P Pn 11 47 17.7 -2.3
BRZS Berezniki 13.65 4 *e*P Pn 11 47 17.7 -2.3
baz=4.3
GKN Gorkha 14.17 122 *e*P Pn 11 47 23.1 -3.9
GKN *e*S Sn 11 49 49.3 -15
BHPL Bhopal 14.19 156 *e*P Pn 11 47 22.3 -4.8
BHPL *e*S Sn 11 49 48.5 -16
BHPL IAML 11 49 55.4
comp=E,86nm,0.2s
DMN Daman 14.74 122 *e*P Pn 11 47 30.7 -3.5
KKN Kakani 14.74 121 *e*P Pn 11 47 30.2 -4.0
PKIN Phulchoki 14.96 122 *e*P Pn 11 47 33.6 -3.3
comp=E,73nm,0.5s
PKI Pulchoki 14.97 122 *e*P Pn 11 47 33.7 -3.5
comp=E,45nm,0.3s
ZSN Zaisan 15.06 38 *e*P Pn 11 47 36.2 -1.5
ZSN Zaisan 15.06 38 *e*P Pn 11 47 36.3 -1.5
baz=39
GUN Gumba 15.09 120 *e*P Pn 11 47 35.0 -3.6
comp=E,76nm,0.5s
KURBB Kurchatov Arra 15.21 18 P Pn 11 47 35.3 -4.3
comp=E,2.2nm,0.6s,baz=209,slow=11,SNR=19
KURBB Kurchatov Arra 15.21 18 P Pn 11 47 35.5 -4.1
KURBB Kurchatov Arra 15.21 18 ⇑P P 11 47 40.4 -0.7
comp=E,14nm,0.8s
AB31 Akbulak array 15.23 331 *i* P Pn 11 47 38.5 -1.3
AB31 S Sn 11 50 16.5 -13
AB31 Akbulak array 15.23 331 ⇓P Pn 11 47 38.3 -1.5
comp=E,9.4nm,0.4s,baz=145,slow=12,SNR=269
AB31 ⇑S Sn 11 50 22.5 -6.5
comp=E,20nm,0.7s,baz=141,slow=27,SNR=4.4
ABKAR Akbulak array 15.23 331 Pn 11 47 38.3 -1.5
ABKAR Akbulak array 15.23 331 Pn 11 47 38.5 -1.3
ABKAR IAmb IAmb 11 47 41.3
comp=Z,30nm,0.6s
JBP Jabalpur 15.24 147 *e*P Pn 11 47 36.0 -4.3
JBP *e*S Sn 11 50 13.7 -16

KURK Kurchatov 15.32 18 Pn Pn 11 47 37.4 -3.5
KURK IAmb IAmb 11 47 43.6
comp=Z,15nm,0.8s
KURK Kurchatov 15.32 18 *de*P P 11 47 41.8 -0.5
KURK pmax pmax
comp=Z,16nm,0.8s
KURK Kurchatov 15.32 18 ⇑P P 11 47 42.0 -0.3
comp=Z,17nm,0.9s
JIRN Jiri 15.46 120 *e*P Pn 11 47 39.8 -3.4
comp=Z,116nm,0.4s
SEM Semipalatinsk 15.51 22 *e*P Pn 11 47 41.2 -2.2
SEM Semipalatinsk 15.51 22 *e*P Pn 11 47 41.2 -2.2
baz=22
RAMN Ramite 16.18 121 *e*P Pn 11 47 48.5 -3.5
comp=Z,57nm,0.4s
BVA0 Borovoye Array 16.66 359 P P 11 47 55.6 -1.5
comp=Z,9.4nm,0.6s,baz=172,slow=14,SNR=66
BRVK Borovoye 16.69 358 Pn 11 47 57.1 -0.5
BRVK IAmb IAmb 11 48 01.3
comp=Z,18nm,0.7s
BRVK Borovoye 16.69 358 *de*P P 11 47 55.7 -1.7
BRVK pmax pmax
comp=Z,17nm,0.7s
BRVK Borovoye 16.69 358 ⇑P Pn 11 47 56.4 -1.3
comp=Z,16nm,0.7s
TAPN Taplejung 16.72 118 *e*P P 11 47 56.7 -1.6
ODAN Odare 16.79 120 *e*P P 11 47 56.4 -2.6
AKTO Aktyubinsk 16.93 330 P Pn 11 48 01.2 +0.7
comp=Z,74nm,0.8s,baz=136,slow=11,SNR=157
AKTO S S 11 51 01.1 -7.5
comp=Z,9.1nm,0.5s,baz=121,slow=18,SNR=4.5
AKTO Aktyubinsk 16.93 330 ⇑P Pn 11 48 00.9 +0.3
comp=Z,69nm,0.8s
AKTO ⇓S S 11 51 07.0 -1.6
comp=Z,19nm,0.8s
BOK Bokaro 17.89 130 *e*P Pn 11 48 11.8 -0.4
BOK IAmb IAmb 11 48 16.4
comp=Z,14nm,0.6s
GOMU GeErMu 19.11 83 P Pn 11 48 26.7 -0.2
GOMU pmax pmax
comp=Z,3.0nm,0.8s
GOMU pmax pmax
comp=Z,83nm,5.0s
SEKA Sheki 19.22 292 P Pn 11 48 26.9 -1.0
GANJ Ganja 19.83 290 P Pn 11 48 34.1 -0.8
ZAA0 Zalesovo Array 20.00 24 P P 11 48 33.3 0.0
ZAA0 IAmb IAmb 11 48 35.0
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 20.00 24 P P 11 48 33.5 +0.1
comp=Z,20nm,0.5s,baz=217,slow=10.0,SNR=79
ZALV S S 11 52 12.8 +3.0
comp=Z,2.6nm,0.9s,baz=208,slow=24,SNR=2.7
comp=Z,20nm,0.5s
ZALV Zalesovo Beam 20.00 24 *i* P P 11 48 33.5 +0.1
ZALV pmax pmax
comp=Z,20nm,0.4s
HYBB Hyderabad (bro 20.00 159 *e*P P 11 48 34.4 +0.5
GNI Garni 21.01 288 P P 11 48 45.0 +0.4
comp=Z,11nm,0.6s,baz=127,slow=10,SNR=7.7
comp=Z,11nm,0.6s
GNI Garni 21.01 288 ⇓*e*P P 11 48 46.6 +2.0
GNI pmax pmax
comp=Z,27nm,1.0s
ARU Arti 21.78 341 P P 11 48 53.5 +1.2
comp=Z,10nm,0.5s,baz=155,slow=8.1,SNR=18
ARU S S 11 52 49.8 +6.8
comp=Z,2.8nm,0.3s,baz=163,slow=19,SNR=2.1
comp=Z,10nm,0.5s
ARU Arti 21.78 341 P P 11 48 53.2 +0.8
ARU IAmb IAmb 11 48 54.6
comp=Z,21nm,0.9s
ARU Arti 21.78 341 *c* iP P 11 48 53.6 +1.2
ARU 11 49 20.7
ARU S S 11 52 48.7 +5.7
ARU SS 11 53 33.2
ARU pmax pmax
comp=Z,76nm,1.9s
ONI Oni 22.17 295 P P 11 48 59.8 +3.2
ONI IAmb IAmb 11 49 43.5
comp=Z,14nm,1.2s
ONI Oni 22.17 295 P P 11 48 59.8 +3.2
ONI pmax pmax
comp=Z,14nm,1.2s
KBZ Khabaz 22.73 298 P P 11 49 03.5 +1.7
comp=Z,4.1nm,0.9s,baz=122,slow=11,SNR=6.2
comp=Z,4.1nm,0.9s
KBZ Khabaz 22.73 298 ⇓*e*P P 11 49 03.1 +1.3
KBZ pmax pmax
comp=Z,8.0nm,1.3s
GTA Gaotai 22.82 74 *e*P P 11 49 05.1 +2.2
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,46nm,5.3s
GTA LR LR
comp=Z,52nm,14.5s
GTA LR LR
comp=Z,59nm,15.3s
GTA LR LR
comp=Z,67nm,13.4s
KIV Kislovodsk 22.92 298 *e*P P 11 49 05.2 +1.5
KIV *e*S S 11 53 06.4 +4.3
KIV pmax pmax
comp=Z,7.0nm,1.0s
BELG Belogornoye 23.04 321 ⇑*e*P P 11 49 04.8 +0.3
BELG pmax pmax
comp=Z,5.0nm,0.9s
KNGR Kungurtug, Tuv 23.70 45 ⇓*e*P P 11 49 12.7 +1.9
KNGR pmax pmax
comp=Z,13nm,0.7s
RAYN Ar Rayn 25.52 247 P P 11 49 28.5 +1.0
RAYN Ar Rayn 25.52 247 P P 11 49 28.5 +1.0
RAYN pmax pmax
comp=Z,4.0nm,1.0s
VRH Novokhopyorsk 25.65 315 *e*P P 11 49 28.6 +0.3
VRH pmax pmax
comp=Z,10.0nm,0.9s
KIRV Kirov 26.39 334 *de*P P 11 49 34.2 -0.6
VSR Storozhevoye 27.14 313 *e*P P 11 49 42.1 +0.4
VSR pmax pmax
comp=Z,9.0nm,1.0s
VORR Voronezh 27.29 314 *e*P P 11 49 42.8 -0.1
VORR pmax pmax
comp=Z,100nm,0.4s
LPSR Galich'ya Gora 27.80 316 *e*P P 11 49 48.1 +0.6
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 28.34 55 P P 11 49 54.0 +1.4
comp=Z,0.8nm,0.4s,baz=254,slow=10,SNR=4.5
comp=Z,0.8nm,0.4s
SONM Songino Array 28.34 55 P P 11 49 54.0 +1.4
BR131 Keskin Array S 29.55 288 ⇓*e*P P 11 50 05.8 +2.4
BRTR Keskin Array B 29.55 288 P P 11 50 06.0 +2.6
comp=Z,1.1nm,0.7s,baz=104,slow=9.1,SNR=6.3
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 29.55 288 *ce*P P 11 50 06.0 +2.6
BRTR pmax pmax
comp=Z,1.0nm,0.7s
OBN Obninsk 30.08 319 ⇑*e*P P 11 50 07.4 -0.3
OBN pmax pmax
comp=Z,8.0nm,0.8s
CMAR Chiang Mai Arr 30.32 119 P P 11 50 11.2 +1.0
comp=Z,0.6nm,0.6s,baz=298,slow=7.5,SNR=4.3
comp=Z,0.6nm,0.6s
CMAR Chiang Mai Arr 30.32 119 *ce*P P 11 50 13.3 +3.1
CMAR pmax pmax
comp=Z,1.0nm,0.6s
KLMR Klimovskoe 31.63 331 *e*P P 11 50 21.6 +0.4
KLMR pmax pmax
comp=Z,4.0nm,0.6s
KLMR Klimovskoe 31.63 331 *e*P P 11 50 21.6 +0.4
KLMR AMP 11 50 23.0
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 33.09 309 P P 11 50 35.7 +1.7
comp=Z,4.2nm,0.5s,baz=80,slow=7.3,SNR=28
comp=Z,4.2nm,0.5s
AKASG Malin Array Be 33.09 309 P P 11 50 34.9 +0.9
AKASG Malin Array Be 33.09 309 *ce*P P 11 50 35.9 +1.9
AKASG pmax pmax
comp=Z,7.0nm,0.5s
AKBB Malin Array Si 33.09 309 P P 11 50 34.7 +0.7
AKBB IAmb IAmb 11 50 36.4
comp=Z,9.4nm,0.6s
AKBB Malin Array Si 33.09 309 *ce*P P 11 50 35.5 +1.5
NRIK Noril'sk 34.23 10 P P 11 50 45.7 +2.0
comp=Z,4.3nm,0.6s,baz=206,slow=5.9,SNR=5.5
comp=Z,4.3nm,0.6s
NRIK Noril'sk 34.23 10 *ce*P P 11 50 45.3 +1.6
NRIK pmax pmax
comp=Z,5.0nm,1.2s
NACGM Naroch 35.36 316 ⇓*e*P P 11 50 55.8 +2.2
baz=103
UZH Uzhgorod 37.40 305 *c* iP P 11 51 10.7 -0.2
UZH *e* 11 51 37.0
FINES FINESS Array B 37.63 326 P P 11 51 14.7 +1.9
comp=Z,6.0nm,0.7s,baz=120,slow=9.1,SNR=24
comp=Z,6.0nm,0.7s
FINES FINESS Array B 37.63 326 *i* P P 11 51 14.6 +1.9
FINES pmax pmax
comp=Z,5.0nm,0.5s
NJ2 Nanjing 39.41 82 *e*P P 11 51 27.5 -0.5
NJ2 pmax pmax
comp=Z,11nm,0.5s
ARA0 ARCESS Array S 41.29 338 *e*P P 11 51 45.2 +2.2
ARA0 IAmb IAmb 11 51 47.3
comp=Z,7.9nm,0.8s
ARCES ARCESS Array B 41.29 338 P P 11 51 44.9 +2.0
comp=Z,5.5nm,0.6s,baz=116,slow=8.3,SNR=53
comp=Z,5.5nm,0.6s
ARCES ARCESS Array B 41.29 338 P P 11 51 43.9 +1.0
ARCES IAmb IAmb 11 51 45.6
comp=Z,7.2nm,0.7s
ARCES ARCESS Array B 41.29 338 P P 11 51 43.9 +1.0
ARCES pmax pmax
comp=Z,7.0nm,0.7s
HAMF Hammerfest 42.37 339 *e*P P 11 51 54.0 +2.3
HAMF IAmb IAmb 11 51 54.8
comp=Z,17nm,0.6s
JETT Jettan, Norway 42.91 336 *e*P P 11 51 58.2 +2.2
JETT IAmb IAmb 11 51 59.4
comp=Z,12nm,1.0s
FAUS Fauske 43.95 333 *e*P P 11 52 06.4 +2.0
MOR8 Moi Rana 43.96 331 *e*P P 11 52 06.0 +1.4
MOR8 IAmb IAmb 11 52 06.5
comp=Z,9.4nm,0.7s
STEI Steigen 44.12 333 *e*P P 11 52 07.6 +1.9
NC405 NORSAR Array S 44.29 323 P P 11 52 08.7 +1.5
NC602 NORSAR Array S 44.34 323 P P 11 52 08.9 +1.3
NC602 NORSAR Array S 44.34 323 *e*P P 11 52 08.9 +1.3
NC602 IAmb IAmb 11 52 10.0
comp=Z,10nm,1.0s
NB2 NORSAR Subarra 44.53 323 P P 11 52 10.0 +0.9
comp=Z,5.1nm,0.5s,baz=98,slow=7.9
NB2 NORSAR Subarra 44.53 323 P P 11 52 10.0 +0.9
baz=98,slow=7.9
NOA NORSAR Array B 44.53 323 P P 11 52 10.5 +1.4
comp=Z,9.7nm,0.7s,baz=96,slow=7.8,SNR=54
comp=Z,9.7nm,0.7s
KONS Konsvik 44.56 331 *e*P P 11 52 10.9 +1.7
NBO00 NORSAR Array S 44.74 323 P P 11 52 11.6 +0.8
NC204 NORSAR Array S 44.77 323 P P 11 52 12.4 +1.4
KSRS Korea Array 44.84 71 P P 11 52 12.8 +0.9
comp=Z,1.4nm,0.5s,baz=283,slow=7.2,SNR=11
comp=Z,1.4nm,0.5s
KLR Kul'dur 45.15 54 P P 11 52 16.0 +1.8
comp=Z,1.3nm,0.8s,baz=302,slow=9.2,SNR=2.5
comp=Z,1.3nm,0.8s
KONO Kongsberg 45.23 321 *e*P P 11 52 16.3 +1.7
TIXI Tiksi 45.86 22 P P 11 52 19.9 +0.5
comp=Z,2.4nm,0.3s,baz=274,slow=18,SNR=2.6
comp=Z,2.4nm,0.3s
SPA0 Spitsbergen Ar 47.63 347 *e*P P 11 52 35.5 +2.4
SPA0 IAmb IAmb 11 52 35.9
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 52.92 68 P P 11 53 14.1 +0.6
comp=Z,2.2nm,0.7s,baz=290,slow=6.7,SNR=5.5
comp=Z,2.2nm,0.7s
SEY Seymchan 54.48 34 P P 11 53 25.8 +1.4
comp=Z,1.6nm,0.9s,baz=304,slow=15,SNR=4.3
comp=Z,1.6nm,0.9s
ESDC Sonseca Array 57.59 298 P P 11 53 48.3 +1.4
comp=Z,0.3nm,0.5s,baz=51,slow=7.8,SNR=4.2
comp=Z,0.3nm,0.5s
TORD Torodi Ar. Bea 65.79 269 P P 11 54 41.5 -0.6
comp=Z,2.9nm,0.6s,baz=50,slow=5.8,SNR=57
comp=Z,2.9nm,0.6s
TOLK Toolik Lake Re 71.02 15 P P 11 55 15.3 +1.5
TOLK IAmb IAmb 11 55 15.9
comp=Z,14nm,1.5s
J20K Nowinta River 73.62 19 P P 11 55 30.9 +1.7
H24K Noodor Dome 73.75 16 P P 11 55 30.8 +0.8
INK Inuvik 74.01 9 P P 11 55 33.3 +1.9
comp=Z,3.0nm,0.5s,baz=330,slow=5.4,SNR=10
comp=Z,3.0nm,0.5s
K20K Telida 74.30 19 P P 11 55 34.2 +1.0
MDM Murphy Dome 74.42 16 IAmb IAmb 11 55 36.6
comp=Z,5.9nm,1.3s
LBTB Lobatse 74.64 222 P P 11 55 37.4 +1.7
LBTB IAmb IAmb 11 55 38.8
comp=Z,25nm,1.4s
LBTB Lobatse 74.64 222 P P 11 55 37.4 +1.7
LBTB pmax pmax
comp=Z,25nm,1.4s
CAST Castle Rocks 74.77 19 IAmb IAmb 11 55 38.1
comp=Z,8.3nm,1.1s
ILAR Eielson Array 74.88 16 P P 11 55 37.0 +0.5
comp=Z,1.2nm,0.9s,baz=316,slow=5.0,SNR=8.5
comp=Z,1.2nm,0.9s
ILAR Eielson Array 74.88 16 P P 11 55 37.0 +0.5
KTH Kantishna Hill 74.96 18 P P 11 55 37.5 +0.4
KTH IAmb IAmb 11 55 39.3
comp=Z,10nm,1.4s
DHY Denali Highway 76.22 17 P P 11 55 44.9 +0.5
BOSA Boshof 77.70 220 P P 11 55 53.8 +0.8
comp=Z,4.9nm,0.7s,baz=36,slow=6.9,SNR=9.3
comp=Z,4.9nm,0.7s
M27K Edge Creek, AK 78.08 15 P P 11 55 56.6 +1.9
M27K IAmb IAmb 11 55 59.7
comp=Z,5.2nm,1.0s
YKA Yellowknife Ar 81.36 3 P P 11 56 13.7 +1.4
comp=Z,3.3nm,0.7s,baz=352,slow=5.5,SNR=19
comp=Z,3.3nm,0.7s
YKA Yellowknife Ar 81.36 3 *i* P P 11 56 13.6 +1.4
YKA pmax pmax
comp=Z,4.0nm,0.7s
P33M Teslin, Yukon 81.77 12 IAmb IAmb 11 56 17.0
comp=Z,11nm,1.2s
DLBC Dease Lake 83.90 11 P P 11 56 27.0 +1.5
comp=Z,1.2nm,0.7s,baz=292,slow=5.4,SNR=2.3
comp=Z,1.2nm,0.7s
ASAR Alice Springs 84.12 125 P P 11 56 27.2 +0.2
comp=Z,3.7nm,0.8s,baz=308,slow=4.6,SNR=4.6
comp=Z,3.7nm,0.8s
PLCA Paso Flores 149.86 250 PKPbc **PKiKP** 12 03 45.0 -0.8
comp=Z,5.1nm,1.0s,baz=78,slow=1.0,SNR=5.4

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*IDC **11** 11:48:12.1±2.0,6°.56S×130°.05E,h126km±22km,mb3.8/7, mbtmp4.2/12,Error ellipse: s-maj=22.4km s-min=17.4km az=115.0*
*DJA **11** 11:48:12.9±0.6,7°.5±3°×13°.0E±°,h187km±8km,M4.6/7, mB5.0/4,mb4.7/4,MLv4.6/7,Mw(mB)4.3/4*
*NEIC **11** 11:48:14.3±2.9,6°.46S±0°.07×129°.93E±0°.05,h134km±9km, mb4.2/11,Error ellipse: s-maj=10.5km s-min=6.2km az=210.0*

ISC 11 11:48:13.8±0.5,6°.54S±0°.05×130°.06E±0°.05,h146km,n63, σ2s25/68,mb3.8/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.89**	**139**			**Pn**	**11 48 48.6**	**+1.3**
SAUI	**Saumlaki**	**1.89**	**139**	P		**Pn**	**11 48 48.9**	**+1.6**
SAUI				S		**Sn**	**11 49 16.4**	**+3.3**
SAUI	**Saumlaki**	**1.89**	**139**	P		**Pn**	**11 48 49.2**	**+1.9**
BNDI	**Bandanaira**	**2.01**	**356**	P		**Pn**	**11 48 49.5**	**+0.7**
BNDI				S		**Sn**	**11 49 20.6**	**+4.8**
BNDI	**Bandanaira**	**2.01**	**356**	P		**Pn**	**11 48 50.0**	**+1.2**
MSAI	**Masohi**	**3.37**	**340**	P		**Pn**	**11 49 07.8**	**+2.0**
FAKI	**Fak Fak**	**4.21**	**31**			**Pn**	**11 49 15.4**	**-1.3**
FAKI	**Fak Fak**	**4.21**	**31**	P		**Pn**	**11 49 15.2**	**-1.5**
SIJI	**Sorong**	**5.76**	**12**	P		**Pn**	**11 49 35.8**	**-1.6**
SIJI	18nm,0.2s,baz=41,slow=2.9,SNR=57			S		**Sn**	**11 50 36.5**	**-6.2**
SANI	55nm,0.3s,baz=142,slow=19,SNR=6.1 **Sanana**	**6.03**	**318**	P		**Pn**	**11 49 42.5**	**+1.6**
MTN	**Manton Dam**	**6.35**	**171**			**Pn**	**11 49 45.2**	**+0.1**
MTN	**Manton Dam**	**6.35**	**171**	P		**Pn**	**11 49 44.6**	**-0.5**
KDU	**Kakadu**	**6.55**	**159**	P		**Pn**	**11 49 47.5**	**-0.3**
BATI	**Baumata**	**7.30**	**240**	P		**Pn**	**11 49 57.7**	**-0.2**
BATI	197nm,0.5s,baz=104,slow=4.6,SNR=27 33nm,0.5s,baz=61,slow=19,SNR=1.7			S		**Sn**	**11 51 16.4**	**-3.1**

BATI	Baumata	7.30	240	P		Pn	11 49 58.0	+0.1
KNRA	Kununurra	9.17	188			Pn	11 50 21.6	-1.2
KNRA	Kununurra	9.17	188	P		Pn	11 50 21.3	-1.5
FITZ	Fitzroy Crossi	12.27	200	P		Pn	11 51 01.3	-2.4
	2.4nm,0.2s,baz=19,slow=9.7,SNR=41							
FITZ				S		Sn	11 53 08.2	-11
	16nm,0.4s,baz=19,slow=17,SNR=3.6							
FITZ	Fitzroy Crossi	12.27	200			Pn	11 51 01.0	-2.7
PLAI	Plampang	12.38	259	P		Pn	11 51 03.9	-1.4
WB0	Warramunga Arr	13.80	163			Pn	11 51 21.4	-2.0
WRAB	Tennant Creek	13.95	163	Pn		Pn	11 51 25.5	+0.2
WRA	Warramunga Arr	13.95	163	P		Pn	11 51 22.7	-2.6
	6.0nm,0.4s,baz=338,slow=13,SNR=111							
WRA				S		Sn	11 53 47.9	-12
	5.6nm,0.4s,baz=338,slow=22,SNR=9.2							
WRA	Warramunga Arr	13.95	163			Pn	11 51 22.2	-3.2
WB2	Warramunga Arr	13.96	163			Pn	11 51 22.8	-2.6
WR0	Warramunga Arr	14.03	162	Pn		Pn	11 51 24.3	-2.0
COEN	Coen	14.85	121	Pn		Pn	11 51 39.1	+2.4
COEN				IAmb		IAmb	11 51 49.8	
	comp=Z,10nm,1.2s							
COEN	Coen	14.85	121	P		Pn	11 51 38.1	+1.4
JAGI	Jajag, Banyuwa	15.89	262	P		P	11 51 51.6	+1.4
QIS	Mount Isa	16.73	147	P		P	11 51 59.8	+0.4
PMG	Port Moresby	17.17	101	P		P	11 52 05.5	+1.2
	comp=Z,4.3nm,0.5s,baz=315,slow=16,SNR=1.7							
PMG				S		S	11 55 08.5	-7.5
	comp=Z,7.3nm,0.7s,baz=281,slow=19,SNR=1.6							
AS31	Alice Springs	17.42	168	P		P	11 52 09.3	+2.2
ASAR	Alice Springs	17.42	168	P		P	11 52 07.9	+0.8
	comp=Z,3.1nm,0.7s,baz=345,slow=8.2,SNR=36							
ASAR				S		S	11 55 13.5	-7.6
	comp=Z,2.6nm,0.4s,baz=336,slow=25,SNR=8.2							
ASAR	Alice Springs	17.42	168	P		P	11 52 09.0	+1.9
MBWA	Marble Bar	17.64	214	P		P	11 52 10.5	+1.1
MBWA				IAmb		IAmb	11 52 17.4	
	comp=Z,8.2nm,0.9s							
MBWA	Marble Bar	17.64	214	P		P	11 52 10.7	+1.3
PSA00	Pilbara Seismi	17.91	212	P		P	11 52 13.3	+0.8
PSA00	Pilbara Seismi	17.91	212	P		P	11 52 13.3	+0.8
PSA00	Pilbara Seismi	17.91	212	P		P	11 52 13.7	+1.3
WRKA	Warakurna	18.47	185	P		P	11 52 20.4	+1.9
KKM	Kota Kinabalu	18.64	312	P		P	11 52 20.7	+0.2
KKM				IAmb		IAmb	11 52 30.2	
	comp=Z,30nm,1.2s							
SBUM	Sibu	19.93	296	P		P	11 52 33.9	-0.5
SBUM				IAmb		IAmb	11 52 38.1	
	comp=Z,3.3nm,0.5s							
OOD	Oodnadatta	21.80	166	P		P	11 52 55.4	+1.1
MEEK	Meekatharra	22.77	207	P		P	11 53 04.4	+0.6
MULG	Mulgathing	23.91	171	P		P	11 53 16.5	+2.3
FORT	Forrest	24.18	184	P		P	11 53 18.7	+2.0
FORT	Forrest	24.18	184	P		P	11 53 18.2	+1.5
LCRK	Leigh Creek	24.98	163	P		P	11 53 25.3	+1.3
MORW	Morawa	26.02	209	P		P	11 53 35.3	+1.9
MORW				IAmb		IAmb	11 53 54.5	
	comp=Z,20nm,1.4s							
MORW	Morawa	26.02	209	P		P	11 53 34.5	+1.1
BBOO	Buckleboo	26.73	169	P		P	11 53 42.5	+2.8
BBOO	Buckleboo	26.73	169	P		P	11 53 41.5	+1.9
BLDU	Balldu	27.03	196	P		P	11 53 43.3	+0.9
KLBR	Kellerberrin	27.45	203	P		P	11 53 45.8	-0.3
NWAO	Narrogin (SRO)	28.84	203	P		P	11 53 59.6	+1.2
NWAO	Narrogin (SRO)	28.84	203	P		P	11 53 59.6	+1.2
CMAR	Chiang Mai Arr	39.49	310	P		P	11 55 31.1	+0.7
	comp=Z,0.5nm,0.4s,baz=129,slow=7.1,SNR=4.4							
	comp=Z,0.5nm,0.4s							
MJAR	Matsushiro Arr	43.53	10	P		P	11 56 01.8	-1.2
	comp=Z,1.4nm,0.7s,baz=185,slow=10,SNR=6.8							
	comp=Z,1.4nm,0.7s							
KSRS	Korea Array	43.81	358	P		P	11 56 06.1	+0.9
	comp=Z,0.7nm,0.6s,baz=177,slow=9.1,SNR=4.9							
	comp=Z,0.7nm,0.6s							
MKAR	Makanchi Array	67.88	327	P		P	11 58 57.5	+1.1
	comp=Z,3.7nm,0.5s,baz=125,slow=8.3,SNR=7.1							
	comp=Z,3.7nm,0.5s							
YAK	Yakutsk	68.37	360	P		P	11 58 59.5	+0.3
	comp=Z,6.0nm,0.5s,baz=182,slow=1.6,SNR=2.2							
	comp=Z,6.0nm,0.5s							
ZALV	Zalesovo Beam	71.20	334	P		P	11 59 16.4	-0.3
	comp=Z,0.5nm,0.4s,baz=121,slow=5.6,SNR=1.9							
	comp=Z,0.5nm,0.4s							
SEY	Seymchan	71.35	11	P		P	11 59 18.6	+1.3
	comp=Z,1.5nm,0.6s,baz=188,slow=7.1,SNR=4.7							
	comp=Z,1.5nm,0.6s							

JMA 11 12:10:47.8±0.3, 22°N±1°×12°6E±°, h62km, MV3.8/17, FAR S OFF ISHIGAKIJIMA, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTJ	Tarama	2.54	336	eP	Pn	12 11 27.7	+1.0
JKRS	Kuro-shima	2.55	319	eP	Pn	12 11 27.8	+1.1
JKRS				eS	Sn	12 11 57.8	+1.2
HATJ	Hateruma jima	2.55	313	eP	Pn	12 11 27.7	+1.0
HATJ				eS	Sn	12 11 56.8	+0.2
JIJ	Ishigaki jima	2.57	323	P	Pn	12 11 28.1	+1.0
JIJ				eS	Sn	12 11 57.8	+0.7
JIRB	Irabujima	2.58	347	P	Pn	12 11 27.9	+0.7
JIRB				eS	Sn	12 11 60.0	+2.5
JISG	Ishigakijimahi	2.66	329	eP	Pn	12 11 29.4	+1.1
IRIF	Iriomote-Funau	2.79	317	eP	Pn	12 11 31.3	+1.3
IRIF				S	Sn	12 12 04.0	+1.4
YOJ	Yonaguni jima	3.36	310	eP	Pn	12 11 39.2	+1.4
YOJ				eS	Sn	12 12 17.3	+0.8
JYNG	Yonagunijimaku	3.40	309	eS	Sn	12 12 18.0	+0.5
JNTH	Nagotoyohara	4.65	25	eS	Sn	12 12 49.4	+1.3
JIH	Iheya	5.09	22	eS	Sn	12 12 59.1	+0.1
JMZ	Minamidaito 2	6.04	54	eP	Pn	12 12 10.7	-3.9
JMZ				eS	Sn	12 13 16.1	-6.3
JKDJ	Kitadaitoujima	6.17	53	P	Pn	12 12 12.7	-3.7
JKDJ				eS	Sn	12 13 19.8	-5.8

IDC 11 12:11:03.5±4.4, 7°.53N×93°.68E, h59km±40km, mb3.5/10, mbtmp3.8/12, ML3.5/2, MS3.1/4, Error ellipse: s-maj=46.6km s-min=17.9km az=57.0

ISC 11 12:11:03.1±0.9, 7°.5N±0°.1×93°.6E±0°.2, h55km, n17, σ0s90/12, mb3.7/10, MS3.1/3, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	7.08	131	P	Pn	12 12 44.8	+0.5
	0.5nm,0.3s,baz=328,slow=16,SNR=2.3						
	3.8nm,0.6s						
CMAR	Chiang Mai Arr	12.08	25	P	Pn	12 13 53.4	+0.8
	0.1nm,0.3s,baz=220,slow=14,SNR=1.0						
	0.6nm,0.4s						
LEM	Lembang	19.96	135	LR	LR	12 24 09.2	
	comp=Z,43nm,18.5s,baz=312,slow=40						
H08S3	Diego Garcia H	25.85	235	T	T	12 43 19.9	
	baz=54,slow=75,SNR=194						
H08S2	Diego Garcia H	25.85	235	T	T	12 43 18.6	
	baz=54,slow=75,SNR=193						
H08S1	Diego Carcia H	25.86	235	T	T	12 43 21.2	
	baz=54,slow=75,SNR=85						
MKAR	Makanchi Array	40.34	348	P	P	12 18 34.7	-0.6
	0.3nm,0.4s,baz=162,slow=7.6,SNR=4.9						
MKAR				LR	LR	12 37 28.1	
	comp=Z,18nm,20.7s,baz=234,slow=39						
	0.3nm,0.4s						
SONM	Songino Array	41.65	13	P	P	12 18 44.8	-1.4
	0.5nm,0.6s,baz=190,slow=5.7,SNR=3.8						
SONM				LR	LR	12 36 24.4	
	comp=Z,31nm,19.7s,baz=191,slow=37						
	0.5nm,0.6s						
GEYT	Alibeck	44.11	319	P	P	12 19 05.6	-0.5
	3.8nm,0.7s,baz=163,slow=15,SNR=4.4						
	3.8nm,0.7s						
ZALV	Zalesovo Beam	46.86	353	P	P	12 19 27.2	-0.3
	0.6nm,0.4s,baz=179,slow=7.5,SNR=3.0						
	0.6nm,0.4s						
WRA	Warramunga Arr	48.50	125	P	P	12 19 40.0	-0.8
	0.6nm,1.0s,baz=302,slow=9.6,SNR=2.5						
	0.6nm,1.0s						
ASAR	Alice Springs	50.11	129	P	P	12 19 52.5	-0.6
	0.2nm,0.4s,baz=303,slow=8.0,SNR=7.7						
	0.2nm,0.4s						
EIL	Elat	59.13	300	LR	LR	12 48 10.9	
	comp=Z,14nm,19.3s,baz=48,slow=38						
BRTR	Keskin Array B	62.25	311	P	P	12 21 19.4	-0.2
	0.8nm,0.6s,baz=107,slow=7.9,SNR=4.2						
	0.8nm,0.6s						
FINES	FINESS Array B	72.78	332	P	P	12 22 26.3	+0.8
	5.0nm,1.1s,baz=65,slow=7.8,SNR=2.4						
	5.0nm,1.1s						
ARCES	ARCESS Array B	75.43	340	P	P	12 22 41.5	+0.8
	0.3nm,0.4s,baz=82,slow=6.5,SNR=4.2						
	0.3nm,0.4s						
GERES	GERESS Array B	77.73	318	P	P	12 22 55.5	+1.2
	0.4nm,0.4s,baz=75,slow=5.2,SNR=4.4						
	0.4nm,0.4s						

IDC 11 12:13:26.8±2.9, 28°.88S×61°.49E, h0km, mb3.6/3, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=120.2km s-min=34.0km az=37.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	Ambohidratompo	16.62	305	Pn	Pn	12 17 21.1	-0.3
	0.1nm,0.3s,baz=87,slow=21,SNR=1.7						
OPO				Sn	Sn	12 20 14.1	-13
	baz=289,slow=22,SNR=1.4						
	0.9nm,0.3s						
H01W2	Cape Leeuwin H	44.68	112	T	T	13 09 22.0	
	baz=261,slow=75,SNR=9.3						
H01W3	Cape Leeuwin H	44.69	112	T	T	13 09 22.3	
	baz=261,slow=75,SNR=8.4						
H01W1	Cape Leeuwin H	44.70	112	T	T	13 09 23.3	
	baz=261,slow=75,SNR=7.8						
ASAR	Alice Springs	64.23	104	P	P	12 24 03.8	-0.3
	1.0nm,1.0s,baz=244,slow=6.7,SNR=5.1						
	1.0nm,1.0s						
WRA	Warramunga Arr	66.04	100	P	P	12 24 16.0	+0.3
	0.3nm,0.5s,baz=253,slow=5.3,SNR=2.4						
	0.3nm,0.5s						
MKAR	Makanchi Array	77.63	14	P	P	12 25 24.7	-0.1
	0.7nm,0.9s,baz=212,slow=5.1,SNR=4.7						
	0.7nm,0.9s						
YKA	Yellowknife Ar	146.28	357	PKPbc	PKPdf	12 33 08.0	+0.5
	0.3nm,0.6s,baz=353,slow=3.4,SNR=4.5						

IDC 11 12:36:12.4±6.3, 18°.64N×145°.53E, h200km±47km, mb3.1/4, mbtmp3.8/5, Error ellipse: s-maj=112.2km s-min=29.1km az=125.0
NEIC 11 12:36:12.7±1.1, 18°.7N±0°.1×145°.6E±0°.3, h199km±11km, mb4.1/13, Error ellipse: s-maj=44.0km s-min=3.6km az=110.0

ISC 11 12:36:12.3±0.8, 18°.7N±0°.1×145°.5E±0°.3, h200km, n21, σ0s70/23, mb4.0/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.07	187	P	Pn	12 37 29.1	+1.4
	15nm,0.3s,baz=18,slow=20,SNR=1.6						
GUMO				S	Sn	12 38 26.1	-1.1
	24nm,0.5s,baz=0.0,slow=20,SNR=1.3						
GUMO	Guam	5.07	187	Pn	Pn	12 37 28.3	+0.6
JMM	Marumori	19.58	349	P	P	12 40 25.2	+0.1
WB0	Warramunga Arr	39.70	196	P	P	12 43 25.8	+0.4
WR0	Warramunga Arr	39.85	196	P	P	12 43 26.2	-0.4
WR0				IAmb	IAmb	12 43 45.9	
	comp=Z,9.4nm,1.3s						
WB2	Warramunga Arr	39.88	196	P	P	12 43 27.1	+0.3
WB2				IAmb	IAmb	12 44 04.5	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	39.89	196	P	P	12 43 26.9	0.0
	comp=Z,0.5nm,0.3s,baz=14,slow=8.4,SNR=17						
WRA				PcP	PcP	12 45 27.4	-1.2
	comp=Z,0.2nm,0.4s,baz=17,slow=3.4,SNR=1.9						
	comp=Z,0.5nm,0.3s						
WRA	Warramunga Arr	39.89	196	P	P	12 43 26.4	-0.5
FITZ	Fitzroy Crossi	41.41	209	P	P	12 43 39.7	+0.4
	comp=Z,2.1nm,0.9s,baz=26,slow=9.2,SNR=9.3						
	comp=Z,2.1nm,0.9s						
FITZ	Fitzroy Crossi	41.41	209	P	P	12 43 40.0	+0.7
FITZ				IAmb	IAmb	12 43 57.2	
	comp=Z,5.4nm,1.4s						
ASAR	Alice Springs	43.56	196	P	P	12 43 56.5	-0.2
	comp=Z,0.3nm,0.8s,baz=111,slow=6.9,SNR=6.0						
	comp=Z,0.3nm,0.8s						
SDPT	Sand Point	54.62	35	P	P	12 45 20.2	+0.2
IMAR	Indian Mountai	61.34	24	P	P	12 46 06.5	-0.1
RC01	Rabbit Creek A	61.69	30	P	P	12 46 09.1	+0.1
I21K	Tanana	61.78	25	P	P	12 46 09.1	-0.4
I21K				IAmb	IAmb	12 46 27.9	
	comp=Z,4.6nm,1.5s						
MLY	Manley	62.24	25	P	P	12 46 13.1	+0.5
MLY				IAmb	IAmb	12 46 14.1	
	comp=Z,3.8nm,1.3s						
I23K	Minto, Yukon-K	62.84	26	P	P	12 46 16.5	0.0
I23K				IAmb	IAmb	12 46 35.2	
	comp=Z,5.5nm,1.5s						
MDM	Murphy Dome	63.26	26	P	P	12 46 19.1	-0.2
MDM				IAmb	IAmb	12 46 43.2	
	comp=Z,2.5nm,1.3s						
EYAK	Cordova Ski Ar	63.50	31	P	P	12 46 22.6	+1.7
BMAR	Burnt Mountain	65.23	24	P	P	12 46 31.8	-0.4
NVAR	Mina Array Bea	83.32	52	P	P	12 48 17.1	-0.2
	comp=Z,0.5nm,0.7s,baz=270,slow=5.4,SNR=4.8						
	comp=Z,0.5nm,0.7s						

IGIL 11 12:48:29.6, 36°.82N×12°.74W, h30km, ML2.0
MDD 11 12:48:31.3±1.1, 36°.93N×12°.32W, h0km, Mb3.7/9, M_mb3.0/9, Error ellipse: s-maj=8.2km s-min=6.5km az=62.0
INMG 11 12:48:32.3±1.4, 36°.76N×12°.76W, h30km, ML2.1, Error ellipse: s-maj=7.4km s-min=6.1km az=94.0

ISC 11 12:48:33.3±4.1, 36°.9N±0°.1×12°.4W±0°.2, h35km, n29, σ0s95/41, 9C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	2.84	84	eP	Pn	12 49 15.9	-0.3
PFVI				eS	Sn	12 49 49.6	+0.3
PFVI				A	A	12 49 51.0	
	4.3nm,0.1s						
PTEO	Sao Teotonio	2.98	76	eP	Pn	12 49 18.5	+0.4
PTEO				S	Sn	12 49 52.4	-0.2
PTEO				A	A	12 49 54.4	
	2.2nm,0.3s						
MORF	Marmelete	3.00	81	eP	Pn	12 49 18.1	-0.3
MORF				eS	Sn	12 49 53.6	+0.4
MORF				IAML		12 49 56.8	
	comp=E,9.3nm,0.3s						
MORF	Marmelete	3.00	81	eP	Pn	12 49 18.1	-0.3
MORF				S	Sn	12 49 54.0	+0.8
MORF				A	A	12 49 57.3	
	comp=E,4.4nm,0.1s						
PMAFR	Mafra	3.19	49	eP	Pn	12 49 21.6	+0.6
PMAFR				eS	Sn	12 49 59.3	+1.5
PMAFR				A	A	12 49 59.5	
	comp=E,14nm,0.3s						
PNCL	Nicolau / Gran	3.29	67	eP	Pn	12 49 23.0	+0.7
PNCL				S	Sn	12 50 00.9	+0.8
PNCL				A	A	12 50 01.3	
	comp=E,3.2nm,0.3s						
PACT	Alcochete	3.36	55	eP	Pn	12 49 24.4	+1.1
PACT				eS	Sn	12 50 04.4	+2.4
MESJ	Messejana	3.44	73	eS	Sn	12 50 03.8	0.0
MESJ				IAML		12 50 06.6	
	comp=E,2.3nm,0.1s						
MESJ	Messejana	3.44	73	eS	Sn	12 50 04.0	+0.2
MESJ				A	A	12 50 06.8	
	comp=E,1.7nm,0.1s						
PCVE	Castro Verde	3.53	77	eP	Pn	12 49 26.2	+0.5
PCVE				eS	Sn	12 50 05.4	-0.8
PCVE				A	A	12 50 09.1	
	comp=E,1.5nm,0.1s						
PBDV	Barranco-do-Ve	3.57	83	eP	Pn	12 49 27.4	+1.2
PBDV				eS	Sn	12 50 07.7	+0.6
PBDV				A	A	12 50 11.3	
	comp=E,2.4nm,0.1s						
PVAQ	Vaqueiros	3.75	81	eP	Pn	12 49 28.8	+0.1
PVAQ				eS	Sn	12 50 12.8	+1.2
PBEJ	Beja	3.75	71	eS	Sn	12 50 11.1	-0.6
EVO	Evora	3.82	63	eS	Sn	12 50 12.7	-0.6
EVO				A	A	12 50 15.2	
	comp=E,4.5nm,0.2s						
PMTG	Montargil	3.92	55	eP	Pn	12 49 31.0	-0.1
PMTG				S	Sn	12 50 15.5	-0.4
PMTG				A	A	12 50 20.4	
	comp=E,1.7nm,0.1s						
EGRO	El Granado	3.95	79	P	Pn	12 49 30.6	-0.8
EGRO				⇑iVmb_V		12 49 34.0	
	comp=E,87nm,SNR=0.7						
EGRO				S	Sn	12 50 15.2	-1.4
PESTR	Estremoz	4.26	61	eP	Pn	12 49 34.5	-1.2
PESTR				eS	Sn	12 50 23.1	-1.1
PESTR				A	A	12 50 27.7	
	comp=E,0.6nm,0.1s						
PBAR	Barrancos	4.42	72	eP	Pn	12 49 38.2	+0.3
PBAR				eS	Sn	12 50 27.8	-0.4
PBAR				A	A	12 50 32.8	
	comp=E,1.1nm,0.2s						
EMIN	Mina Concepcio	4.62	77	P	Pn	12 49 40.4	-0.3
EMIN				⇑iVmb_V		12 49 42.0	
	comp=E,30nm,SNR=0.3						
EMIN				S	Sn	12 50 30.1	-3.0
EBAD	Badajoz	4.63	65	P	Pn	12 49 40.8	+0.1
EBAD				⇑iVmb_V		12 49 41.6	
	comp=E,95nm,SNR=0.9						
EBAD				S	Sn	12 50 31.9	-1.3
PMRV	Marv??o	4.66	56	eP	Pn	12 49 41.5	+0.2
PMRV				eS	Sn	12 50 33.0	-1.2
PMRV				A	A	12 50 34.7	
	comp=E,1.1nm,0.1s						
ECAB	El Cabril	5.65	76	P	Pn	12 49 54.1	-0.7
ECAB				⇑iVmb_V		12 49 55.7	
	comp=E,33nm,SNR=0.4						
ECAB				S	Sn	12 50 56.3	-2.2
EZAM	Zamans	5.96	27	S	Sn	12 51 02.4	-3.7
ELOB	Lobios	5.98	33	⇑iVmb_V		12 50 01.9	
	comp=E,96nm,SNR=0.7						
ELOB				S	Sn	12 51 03.8	-2.8
EADA	Adamuz	6.32	76	P	Pn	12 50 03.6	-0.4
EADA				⇑iVmb_V		12 50 05.1	
	comp=E,25nm,SNR=0.4						
EADA				S	Sn	12 51 13.1	-1.9
EMAZ	Mazaricos	6.58	22	⇑iVmb_V		12 50 08.5	
	comp=E,40nm,SNR=0.2						
EMAZ				S	Sn	12 51 14.6	-6.8
ECAL	Calabor	6.66	39	P	Pn	12 50 09.4	+0.7
ECAL				S	Sn	12 51 20.4	-2.9
EAGO	Agolada(Pontev	6.75	28	⇑iVmb_V		12 50 12.4	
	comp=E,119nm,SNR=1.0						
EAGO				S	Sn	12 51 20.6	-5.0
PAB	San Pablo	6.84	65	P	Pn	12 50 11.9	+0.6
PAB				⇑iVmb_V		12 50 14.9	
	comp=E,12nm,SNR=0.2						
PAB				S	Sn	12 51 25.7	-2.3

TEH 11 13:09:22.6, 31°.39N×46°.02E, h5km, ML3.3
ISN 11 13:09:31.6±0.5, 31°.79N×46°.59E, h14km±3km, ML2.7

ISC 11 13:09:33.7±1.7, 31°.62N±0°.09×46°.43E±0°.06, h35km, n14, σ1s44/17, Iraq

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAFI	Al-Rafai	0.29	290	ePg	Pn	13 09 40.0	-1.6
RAFI				eSg	Sn	13 09 46.0	-0.9
RAFI				AML	AML	13 09 58.0	
	comp=E,485nm,0.2s						
IBDR	Badra	1.54	344	ePg	Pn	13 09 58.0	-0.8
IBDR				eSg	Sn	13 10 17.0	-0.6
IBDR				AML	AML	13 10 30.2	
	comp=E,118nm,0.4s						
IBDR				AML	AML	13 10 47.5	
	comp=N,123nm,1.0s						
IKFM	Kafar-mosalman	2.24	32	e		13 10 48.7	
	comp=Z,1μm,0.5s						
IKFM				ePn	Pn	13 10 08.3	0.0
BHD	Baghdad	2.39	314	ePn	Pn	13 10 12.0	+1.6
BHD				eSn	Sn	13 10 42.0	+3.5
AMIS	Naft Sefid	2.43	88	ePn	Pn	13 10 10.5	-0.5
IDOB	Doab	2.61	34	ePn	Pn	13 10 13.6	0.1
IKOM	Komasi	2.70	19	ePn	Pn	13 10 13.9	-1.0
IKOM				e		13 11 17.5	
	comp=Z,865nm,0.8s						
IGHG	Ghaleghazi	2.70	2	ePn	Pn	13 10 12.9	-2.0
IGHG				e		13 11 09.0	
	comp=Z,808nm,0.9s						
IDHR	Dehrash	3.07	359	ePn	Pn	13 10 18.0	-2.0
IBZA	Bozab	3.08	22	ePn	Pn	13 10 20.2	0.0
IBZA				e		13 10 31.2	
	comp=Z,329nm,0.4s						
HSAM	Samen	3.16	35	ePn	Pn	13 10 20.9	-0.4
QAMS	Qamsar	4.69	62	ePn	Pn	13 10 42.7	+0.5
IRAZ	Razeghan	4.77	37	ePn	Pn	13 10 43.5	+0.2
IRAM	Ramesheh	5.07	86	ePn	Pn	13 10 47.1	-0.4

INET 11 13:33:57.9±0.4, 12°.79N×87°.11W, h11km±1km, MW4.2
NEIC 11 13:33:58.3±1.1, 12°.86N±0°.06×87°.04W±0°.06, h10km±12km, Md4.2(SNET), Error ellipse: s-maj=10.8km s-min=4.3km az=223.0

ISC 11 13:33:57.8±1.1, 12°.88N±0°.05×87°.02W±0°.06, h13km±9km, n26, σ0s93/29, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	0.18	191	Pg	Pg	13 34 01.9	0.0
CRIN				Sg	Sg	13 34 04.8	0.0
CRIN	San Cristobal	0.18	191	eP	Pg	13 34 01.9	0.0
CRIN				eS	Sg	13 34 04.7	0.0
TELN	Telica	0.33	146	eP	Pb	13 34 05.1	-0.4
TEL3	Telica 3	0.34	151	eP	Pg	13 34 05.3	+0.5
CNGN	Cerro Negro	0.48	140	Pg	Pb	13 34 07.9	-0.3
CNGN				Sg	Sb	13 34 14.9	-0.4
CSGN	Cosiguina Volc	0.54	281	eP	Pg	13 34 07.7	-0.6
MOMN	Momotombo	0.66	135	eP	Pb	13 34 10.9	-0.2
COPN	Copaltepe	0.81	149	eP	Pg	13 34 12.7	-0.7
APYN	Apoyeque	0.91	134	eP	Pg	13 34 15.1	-0.3
MGAN	Managua	1.04	134	eP	Pb	13 34 16.3	-1.4
MATN	Matagalpa	1.06	87		Pn	13 34 19.0	+0.5
WILN	Americas 2	1.08	131	eP	Pb	13 34 17.9	-0.3
TGUH	Tegucigalpa,Un	1.20	348	Pn	Pg	13 34 21.3	+0.3
BOAB	BOACO BROADBAN	.38	108	Pn	Pn	13 34 22.8	-0.1
BOAB	BOACO BROADBAN	.38	108	eP	Pn	13 34 22.8	-0.1
CONN	Concepcion	1.88	134	eP	Pb	13 34 31.3	-0.8
ACON	Acoyapa	2.01	116	Pn	Pb	13 34 33.1	-1.2
ACON	Acoyapa	2.01	116	eP	Pn	13 34 33.0	+1.5
HZTE	Horizontes

INET 11 13:42:10.9±1.2, 12.81N×87.09W, h6km±4km, MW3.7, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.12**	**161**	*e*P	Pg	13 42 14.6	+1.2
TELN	**Telica**	**0.32**	**129**	*e*P	Pg	13 42 17.6	+0.3
TEL3	**Telica 3**	**0.34**	**135**	*e*P	Pg	13 42 17.6	+0.2
CSGN	**Cosiguina Volc**	**0.49**	**290**	*e*P	Pg	13 42 20.5	+0.1
CNGN	**Cerro Negro**	**0.49**	**129**	*e*P	Pg	13 42 20.4	0.0
MOMN	**Momotombo**	**0.67**	**127**	*e*P	Pg	13 42 23.6	-0.1
COPN	**Copaltepe**	**0.79**	**142**	*e*P	Pg	13 42 25.1	-1.1
LCND	**La Caada**	**0.93**	**302**	*e*P	Pg	13 42 27.8	-0.9
LCND				*e*S	Sb	13 42 42.0	+0.1
LCND	**La Caada**	**0.93**	**302**	*e*P	Pg	13 42 27.8	-0.9
LCND				*e*S	Sb	13 42 42.0	+0.1
HUEN		**1.01**	**118**	*e*P	Pg	13 42 29.7	-0.6
MGAN	**Managua**	**1.05**	**129**	*e*P	Pg	13 42 29.9	-1.3
WILN	**Americas 2**	**1.09**	**126**	*e*P	Pg	13 42 30.5	-1.3
MATN	**Matagalpa**	**1.14**	**84**	*e*P	Pg	13 42 31.5	-1.3
TGUH	**Tegucigalpa,Un**	**1.25**	**352**	*e*P	Pg	13 42 33.9	-1.1
PACA	**Pacayal**	**1.37**	**299**	*e*P	Pn	13 42 35.6	-1.1
COEB	**Comit de Eme**	**1.56**	**296**	*e*P	Pn	13 42 38.6	-0.7
COEB	**Comit de Eme**	**1.56**	**296**	*e*P	Pn	13 42 38.6	-0.7
SCLA	**Alcaldia de Sa**	**1.83**	**299**	*e*P	Pn	13 42 43.2	+0.4
SCLA				*e*S	Sb	13 43 08.7	+0.8
SCLA	**Alcaldia de Sa**	**1.83**	**299**	*e*P	Pn	13 42 43.2	+0.4
SCLA				*e*S	Sb	13 43 08.7	+0.8
CONN	**Concepcion**	**1.89**	**131**	*e*P	Pn	13 42 43.4	-0.3
PAVA	**Las Pavas**	**2.01**	**297**	*e*P	Pn	13 42 46.7	+1.2
PAVA				*e*S	Sb	13 43 13.5	+0.2
PAVA	**Las Pavas**	**2.01**	**297**	*e*P	Pn	13 42 46.7	+1.2
PAVA				*e*S	Sb	13 43 13.5	+0.2
SJTE	**Alcalda de S**	**2.03**	**293**	*e*P	Pn	13 42 45.7	0.0
SJTE				*e*S	Sb	13 43 12.8	-1.1
SJTE	**Alcalda de S**	**2.03**	**293**	*e*P	Pn	13 42 45.7	0.0
SJTE				*e*S	Sb	13 43 12.8	-1.1
JAYA	**Jayaque - finc**	**2.45**	**290**	*e*P	Pn	13 42 51.4	-0.2
JAYA	**Jayaque - finc**	**2.45**	**290**	*e*P	Pn	13 42 51.4	-0.2
ESPN	**Las Esperanzas**	**2.79**	**102**	*e*P	Pn	13 42 54.6	-1.5
NUBE	**Las Nubes**	**2.84**	**293**	*e*P	Pn	13 42 57.7	+0.8
NUBE	**Las Nubes**	**2.84**	**293**	*e*P	Pn	13 42 57.7	+0.8
JTS	**Las Juntas de**	**3.26**	**140**	*e*P	Pn	13 43 02.3	-0.4

*NNC **11** 13:46:20.8±0.4, 50.01N×78.76E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=7.0km s-min=2.1km az=80.0, Suspected Mining explosion.*

*ASRS **11** 13:46:29.9±0.6, 50°N±3.7×7.9E±, h0km, MLh3.6/7, Error ellipse: s-maj=6.2km s-min=5.4km az=70.2, confirmed*

ISC 11 13:46:21.7±0.8, 49.96N±0.03×78.71E±0.03, h0km, n33, σ2s03/71, 18C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.64**	**349**	⇑P	**Pg**	**13 46 32.2**	**-1.7**
KUR07				⇓S	**Sg**	**13 46 41.4**	**-0.7**
KUR06	**Kurchatov Arra**	**0.66**	**349**	⇓P	**Pg**	**13 46 32.7**	**-1.6**
KUR06				⇑S	**Sg**	**13 46 41.9**	**-0.8**
KUR14	**Kurchatov Arra**	**0.66**	**353**	⇑P	**Pg**	**13 46 32.6**	**-1.7**
KUR14				⇑S	**Sg**	**13 46 41.9**	**-1.0**
KUR15	**Kurchatov Arra**	**0.67**	**352**	⇓P	**Pg**	**13 46 32.7**	**-1.8**
KUR15				⇓S	**Sg**	**13 46 42.0**	**-1.1**
KURBB	**Kurchatov Arra**	**0.67**	**350**	⇑P	**Pg**	**13 46 32.7**	**-1.9**
	38nm,0.4s						
KURBB				⇓S	**Sg**	**13 46 42.0**	**-1.4**
	186nm,0.7s						
KUR16	**Kurchatov Arra**	**0.68**	**348**	⇑P	**Pg**	**13 46 32.9**	**-1.9**
KUR16				⇑S	**Sg**	**13 46 42.2**	**-1.4**
KUR17	**Kurchatov Arra**	**0.69**	**347**	⇓P	**Pg**	**13 46 33.2**	**-1.7**
KUR17				⇓S	**Sg**	**13 46 43.0**	**-0.9**
KUR05	**Kurchatov Arra**	**0.69**	**351**	⇑P	**Pg**	**13 46 33.2**	**-1.7**
KUR05				⇓S	**Sg**	**13 46 42.4**	**-1.5**
KUR04	**Kurchatov Arra**	**0.71**	**351**	⇓P	**Pg**	**13 46 33.7**	**-1.6**
KUR04				⇓S	**Sg**	**13 46 43.0**	**-1.5**
KURK	**Kurchatov**	**0.76**	**356**	⇑P	**Pg**	**13 46 34.2**	**-2.0**
	18nm,0.4s						
KURK				⇑S	**Sg**	**13 46 44.6**	**-1.5**
	114nm,0.8s						
KURK	**Kurchatov**	**0.76**	**356**	Pg	**Pg**	**13 46 34.2**	**-2.0**
KURK				Sg	**Sg**	**13 46 41.9**	**-4.2**
MAKZ	**Makanchi**	**3.83**	**144**	⇑Pg	**Pb**	**13 47 30.7**	**+0.6**
	7.0nm,0.9s						
MAKZ				⇑Lg	Lg	13 48 21.2	
	23nm,0.7s						
MAKZ	**Makanchi**	**3.83**	**144**	Pg	**Pb**	**13 47 29.7**	**-0.4**
MAKZ				Sg	**Sb**	**13 48 20.2**	**+3.1**
MK31	**Makanchi Array**	**3.96**	**142**	⇑Pn	**Pn**	**13 47 25.0**	**+1.2**
	0.2nm,0.2s,baz=127,slow=21,SNR=36						
MK31				⇑Pg	**Pb**	**13 47 33.0**	**+0.6**
	1.0nm,0.3s,baz=323,slow=15,SNR=21						
MK31				⇑Lg	Lg	13 48 25.8	
	24nm,0.6s,baz=324,slow=26,SNR=20						
MKAR	**Makanchi Array**	**3.96**	**142**	Pn	**Pn**	**13 47 24.9**	**+1.1**
MKAR				Pg	**Pb**	**13 47 32.9**	**+0.5**
MKAR				S	**Sn**	**13 48 08.3**	**-2.7**
MKAR				Sg	**Sb**	**13 48 24.9**	**+4.0**
UKR	**Ust'-Kan**	**3.99**	**74**	Pn	**Pn**	**13 47 25.6**	**+1.4**
UKR				Pg	**Pg**	**13 47 36.3**	**-1.9**
UKR				Sg	**Sg**	**13 48 28.3**	**-1.6**
OTUK	**Ortayu**	**4.53**	**250**	⇓Pn	**Pn**	**13 47 31.9**	**+0.4**
	2.0nm,0.4s						
OTUK				⇓Pg	**Pb**	**13 47 43.8**	**+1.8**
	1.2nm,0.5s						
OTUK				⇑Lg	Lg	13 48 45.7	
	12nm,0.8s						
TDK	**Taldyqorghan**	**4.96**	**183**	Pg	**Pg**	**13 47 56.9**	**+0.1**
	38nm,0.6s						
TDK				Lg	Lg	13 49 01.2	
	68nm,0.7s						
NVS	**Novosibirsk**	**5.62**	**28**	Sg	**Sg**	**13 49 28.1**	**+6.1**
NVSII	**Novosibirsk**	**5.62**	**28**	Sg	**Sg**	**13 49 26.9**	**+4.9**
CHBI	**Chibit, Altay**	**5.66**	**83**	Pn	**Pn**	**13 47 49.3**	**+2.1**
CHBI				Pg	**Pg**	**13 48 09.7**	**-0.5**
CHBI				S	**Sn**	**13 48 50.8**	**-2.1**
CHBI				Sg	**Sg**	**13 49 20.8**	**-2.7**
DJR	**Jarkent**	**5.68**	**172**	Pg	**Pg**	**13 48 08.4**	**-2.0**
	2.4nm,0.4s						
DJR				Lg	Lg	13 49 20.2	
	10nm,0.6s						
ARTR	**Artybash**	**5.73**	**68**	Pn	**Pn**	**13 47 48.2**	**+0.3**
ARTR				S	**Sn**	**13 48 53.1**	**-1.3**
ARTR				Sg	**Sg**	**13 49 21.8**	**-3.7**
ELT	**Eltsovka**	**5.74**	**52**	Pn	**Pn**	**13 47 48.9**	**+0.9**
ELT				Pg	**Pg**	**13 48 13.4**	**+1.9**
ELT				S	**Sn**	**13 48 53.1**	**-1.4**
ELT				Sg	**Sg**	**13 49 24.6**	**-1.2**
AKAR	**Aktash**	**5.74**	**83**	Pn	**Pn**	**13 47 50.1**	**+1.9**
AKAR				Pg	**Pg**	**13 48 12.5**	**+0.9**
AKAR				S	**Sn**	**13 48 55.0**	**+0.2**
AKAR				Sg	**Sg**	**13 49 23.5**	**-2.5**
ARXS	**Arharly**	**5.78**	**186**	Pg	**Pg**	**13 48 10.6**	**-1.8**
	3.7nm,0.6s						
ARXS				Lg	Lg	13 49 24.2	
	48nm,0.7s						
BLB	**Baldybastay**	**5.87**	**182**	Pg	**Pg**	**13 48 12.4**	**-1.7**
	8.0nm,0.7s						
BLB				Lg	Lg	13 49 27.1	
	28nm,0.6s						
ULGR	**Ulagan, Altay**	**5.96**	**80**	Pn	**Pn**	**13 47 52.6**	**+1.4**
ULGR				Pg	**Pg**	**13 48 12.2**	**+0.2**
ULGR				S	**Sn**	**13 48 58.6**	**-1.8**
ULGR				Sg	**Sg**	**13 49 30.5**	**-2.7**
BVA0	**Borovoye Array**	**6.04**	**304**	Sn	**Sn**	**13 49 01.3**	**-0.6**
	3.1nm,0.6s,baz=112,slow=21,SNR=14						
BVA0				⇑Lg	Lg	13 49 29.8	
	4.1nm,0.8s,baz=117,slow=24,SNR=4.0						
BRVK	**Borovoye**	**6.11**	**304**	⇓Sn	**Sn**	**13 49 02.3**	**-1.4**
	6.0nm,0.7s						
BRVK				⇑Lg	Lg	13 49 35.2	
	5.9nm,0.7s						
CUR	**Chagan-Uzun**	**6.21**	**85**	Pn	**Pn**	**13 47 56.3**	**+1.6**
CUR				Pg	**Pg**	**13 48 18.6**	**-2.1**
CUR				S	**Sn**	**13 49 08.8**	**+2.3**
CUR				Sg	**Sg**	**13 49 40.8**	**-0.3**
KOTS	**Kotyrbulak**	**6.82**	**190**	Pg	**Pg**	**13 48 29.1**	**-3.2**
	1.5nm,0.3s						
KOTS				Lg	Lg	13 49 56.9	
	26nm,0.7s						
LUZB	**Luzhba, Kemero**	**7.32**	**56**	Pg	**Pg**	**13 48 41.7**	**-0.2**
LUZB				S	**Sn**	**13 49 32.7**	**-0.8**
LUZB				Sg	**Sg**	**13 50 14.7**	**-1.9**

*NNC **11** 13:50:53.2±2.0, 37.82N×71.30E, h0km, mb4.7, mpv4.2, Error ellipse: s-maj=19.1km s-min=9.8km az=155.0*

*IDC **11** 13:50:55.0±3.2, 37.49N×71.92E, h104km±26km, mb3.8/22, mbtmp4.2/26, MS3.1/13, Error ellipse: s-maj=22.2km s-min=12.0km az=178.0*

*BJI **11** 13:50:54.8±0.0, 37.50N×71.89E, h106km, mb4.3/28, mB4.7/15*

*MOS **11** 13:50:55.8±0.8, 37.60N×71.90E, h119km, mb4.4/14, Error ellipse: s-maj=7.1km s-min=4.5km az=87.2*

*NEIC **11** 13:50:56.9±1.6, 37.61N±0.06×71.74E±0.08, h113km±6km, mb4.4/28, Error ellipse: s-maj=9.4km s-min=8.4km az=105.0*

*SOME **11** 13:50:58.7, 38.82N×72.18E, h10km*

ISC 11 13:50:54.8±0.4, 37.48N±0.04×71.71E±0.04, h100km, n206, σ2s08/218, mb4.3/47, 13C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**1.87**	**325**	Pn	**Pn**	**13 51 28.1**	**+2.2**
GAR				Sn	**Sn**	**13 51 51.7**	**+2.2**
DRK	**Karamyk**	**2.00**	**2**		**Pn**	**13 51 29.5**	**+1.8**
CHGR	**Chuyangaron**	**2.33**	**301**		**Pn**	**13 51 33.7**	**+1.9**
CHGR	**Chuyangaron**	**2.33**	**301**	PN	**Pn**	**13 51 33.7**	**+1.9**
KBL	**Kabul**	**3.64**	**217**		**Pn**	**13 51 54.1**	**+4.7**
KBL	**Kabul**	**3.64**	**217**	PN	**Pn**	**13 51 54.1**	**+4.7**
CEP	**Cherat**	**3.65**	**177**	P	**Pn**	**13 51 53.0**	**+3.5**
CEP				S	**Sn**	**13 51 58.0**	**+3.3**
KSH	**Kashi**	**3.92**	**57**	P	Pn	13 51 49.8	-3.2
KSH				S	Sn	13 52 28.2	-10
KSH				pmax	pmax		
	comp=Z,210nm,1.0s						
KSH				smax	smax		
	comp=N,1μm,0.3s						
KSH				smax	smax		
	comp=E,820nm,0.4s						
CHCP	**Chirah Chowk**	**4.02**	**161**	P	**Pn**	**13 51 57.9**	**+3.6**
NIL	**Nilore**	**4.02**	**161**	Pn	**Pn**	**13 51 57.5**	**+3.1**
NIL	**Nilore**	**4.02**	**161**	PN	**Pn**	**13 51 57.5**	**+3.1**
THW	**Thamme Wali**	**4.67**	**180**	P	**Pn**	**13 52 05.8**	**+2.6**
IUG	**Iuzhnay**	**4.84**	**345**	*e*PN	**Pn**	**13 52 06.6**	**+1.3**
IUG				*e*S	**Sn**	**13 53 00.8**	**+0.6**
IUG	**Iuzhnay**	**4.84**	**345**	*e*P	**Pn**	**13 52 09.3**	**+3.9**
	752nm,0.3s						
IUG				*e*S	**Sn**	**13 53 00.5**	**+0.3**
	1μm,0.5s						
IUG	**Iuzhnay**	**4.84**	**345**	*e*P	**Pn**	**13 52 06.7**	**+1.3**
	baz=343						
IUG				*e*S	**Sn**	**13 53 00.8**	**+0.6**
	baz=343						
AML	**Almayashu**	**4.89**	**18**	P	**Pn**	**13 52 06.6**	**+0.2**
	SNR=59						
CHM	**Chimkent**	**5.10**	**342**	*e*P	**Pn**	**13 52 13.1**	**+4.3**
	128nm,0.2s						
CHM				*e*S	**Sn**	**13 53 06.6**	**+0.2**
	822nm,0.4s						
NRN	**Naryn**	**5.16**	**39**	Pn	**Pn**	**13 52 09.8**	**-0.2**
NRN	**Naryn**	**5.16**	**39**	PN	**Pn**	**13 52 09.8**	**-0.2**
UCH	**Uchtor**	**5.21**	**24**	P	**Pn**	**13 52 11.8**	**+1.1**
	SNR=9.1						
EKS2	**Erkin-Say**	**5.41**	**16**	P	**Pn**	**13 52 14.4**	**+1.2**
	SNR=11						
JMU	**Jammu**	**5.43**	**150**	*e*P	**Pn**	**13 52 14.7**	**+1.4**
JMU				*e*S	**Sn**	**13 53 11.6**	**-2.8**
AAK	**Ala-Archa**	**5.58**	**22**	P	**Pn**	**13 52 14.5**	**-1.0**
	15nm,0.3s,baz=197,slow=6.4,SNR=17						
AAK				S	**Sn**	**13 53 16.4**	**-1.9**
	32nm,0.4s,baz=315,slow=21,SNR=10.0						
AAK	**Ala-Archa**	**5.58**	**22**	P	**Pn**	**13 52 16.2**	**+0.7**
	SNR=17						
AAK	**Ala-Archa**	**5.58**	**22**	Pn	**Pn**	**13 52 16.0**	**+0.5**
AAK	**Ala-Archa**	**5.58**	**22**	*c i*PN	**Pn**	**13 52 16.0**	**+0.5**
KK31	**Karatay Array**	**5.69**	**351**	Pn	**Pn**	**13 52 17.5**	**+0.6**
KK31	**Karatay Array**	**5.69**	**351**	PN	**Pn**	**13 52 17.5**	**+0.6**
KK31	**Karatay Array**	**5.69**	**351**	⇓P	**Pn**	**13 52 14.8**	**-2.0**
	22nm,0.4s,baz=170,slow=12,SNR=276						
KK31				⇓S	**Sn**	**13 53 18.6**	**-2.3**
	385nm,0.7s,baz=177,slow=22,SNR=16						
KKAR	**Karatay Array**	**5.69**	**351**	Pn	**Pn**	**13 52 17.4**	**+0.6**
KKAR	**Karatay Array**	**5.69**	**351**		**Pn**	**13 52 17.5**	**+0.6**
KKAR	**Karatay Array**	**5.69**	**351**	PN	**Pn**	**13 52 17.5**	**+0.6**
ULHL	**Ulahol**	**5.90**	**35**	P	**Pn**	**13 52 20.4**	**+0.5**
	SNR=18						
BOOM	**Boomskoye usch**	**5.97**	**32**		**Pn**	**13 52 21.3**	**+0.5**
BOOM	**Boomskoye usch**	**5.97**	**32**	PN	**Pn**	**13 52 21.3**	**+0.5**
CHMS	**Chumysh**	**5.98**	**22**	P	**Pn**	**13 52 21.6**	**+0.7**
	SNR=15						
CHMS	**Chumysh**	**5.98**	**22**	*i* PN	**Pn**	**13 52 21.0**	**+0.1**
CHMS				pmax	pmax		
	comp=Z,28nm,0.8s						
CHMS	**Chumysh**	**5.98**	**22**	⇓P	**Pn**	**13 52 21.0**	**+0.1**
	comp=Z,30nm,0.7s						
CHMS				⇑S	**Sn**	**13 53 27.4**	**-0.6**
	comp=Z,33nm,0.7s						
THN	**Thein Dam**	**6.02**	**146**	*e*P	**Pn**	**13 52 22.3**	**+0.9**
THN				*e*S	**Sn**	**13 53 26.1**	**-2.7**
USP	**Ospenovka**	**6.16**	**19**	P	**Pn**	**13 52 23.7**	**+0.4**
	SNR=11						
TKM2	**Tokmak 2**	**6.20**	**28**	P	**Pn**	**13 52 24.1**	**+0.2**
	SNR=21						
TKM2	**Tokmak 2**	**6.20**	**28**	PN	**Pn**	**13 52 24.0**	**+0.1**
TKM2				S	**Sn**	**13 53 34.6**	**+1.2**
TKM2	**Tokmak 2**	**6.20**	**28**	⇑P	**Pn**	**13 52 24.0**	**+0.1**
	comp=Z,13nm,0.6s						
TKM2				⇑S	**Sn**	**13 53 34.7**	**+1.2**
	comp=Z,11nm,0.5s						
SGDS	**Sogindy**	**6.37**	**20**	*e*PN	**Pn**	**13 52 26.0**	**-0.1**
SGDS	**Sogindy**	**6.37**	**20**	*e*P	**Pn**	**13 52 29.2**	**+3.1**
	comp=Z,12nm,0.7s						
SGDS				*e*S	**Sn**	**13 53 34.6**	**-2.8**
	comp=Z,48nm,0.6s						
SGDS	**Sogindy**	**6.37**	**20**	*e*P	**Pn**	**13 52 26.0**	**-0.1**
	baz=18						
SGDS				*e*S	**Sn**	**13 53 35.4**	**-2.0**
	baz=18						
KST	**Kastek**	**6.44**	**29**	*e*P	Pn	13 52 34.6	+7.5
	comp=Z,5.1nm,0.5s						
KST				*e*S	**Sn**	**13 53 43.6**	**+4.4**
	comp=Z,33nm,1.3s						
MDOK	**Medeo**	**6.99**	**34**	PN	**Pn**	**13 52 36.7**	**+2.1**
MDOK	**Medeo**	**6.99**	**34**	*e*P	Pn	13 52 44.6	+10
	comp=Z,7.1nm,0.8s						
MDOK				*e*S	**Sn**	**13 54 00.8**	**+8.2**
	comp=Z,9.9nm,0.7s						
MDOK	**Medeo**	**6.99**	**34**	*e*P	**Pn**	**13 52 33.2**	**-1.4**
	baz=33						
MDOK	**Medeo**	**6.99**	**34**	⇑P	**Pn**	**13 52 36.8**	**+2.1**
	comp=Z,5.8nm,0.6s						
MDOK				⇑S	**Sn**	**13 53 56.6**	**+4.0**
	comp=Z,21nm,1.1s						
BHK	**Bhakra**	**7.19**	**146**	*e*P	**Pn**	**13 52 38.0**	**+0.7**
BHK				*e*S	**Sn**	**13 53 52.1**	**-5.4**
KUU	**Kurty**	**7.31**	**27**	*e*PN	**Pn**	**13 52 37.4**	**-1.4**
KUU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KUU	**Kurty**	**7.31**	**27**	*e*P	Pn	13 52 48.5	+10
KUU				*e*S	**Sn**	**13 54 07.2**	**+7.0**
	comp=Z,8.8nm,0.4s						
KUU	**Kurty**	**7.31**	**27**	*e*P	**Pn**	**13 52 37.4**	**-1.4**
	comp=Z,2.7nm,0.8s,baz=26						
SATY	**Saty**	**7.57**	**40**	*e*PN	**Pn**	**13 52 41.4**	**-1.1**
SATY	**Saty**	**7.57**	**40**	*e*P	**Pn**	**13 52 41.4**	**-1.1**
	baz=40						
SMLA	**Simla**	**7.78**	**143**	*e*P	**Pn**	**13 52 44.6**	**-0.7**
SMLA				*e*S	Sn	13 54 03.9	-7.8
UZB	**Uzynbulak**	**7.95**	**42**	*e*PN	**Pn**	**13 52 47.6**	**-0.1**
UZB	**Uzynbulak**	**7.95**	**42**	*e*P	**Pn**	**13 52 47.7**	**-0.1**
	baz=42						
SHLS	**Shalkode**	**8.20**	**44**	*e*PN	**Pn**	**13 52 53.0**	**+2.0**
SHLS	**Shalkode**	**8.20**	**44**	*e*P	**Pn**	**13 52 53.0**	**+2.0**
	baz=45						
HRA	**Herat**	**8.27**	**251**	Pn	**Pn**	**13 52 53.1**	**+0.9**
DDI	**Dehra Dun**	**8.88**	**142**	*e*P	**Pn**	**13 53 01.0**	**+0.7**
DDI				*e*S	Sn	13 54 29.0	-10
DDI				IAML		13 54 39.0	
	comp=N,726nm,0.2s						
TDK	**Taldyqorghan**	**9.05**	**32**	*e*PN	**Pn**	**13 53 01.0**	**-1.5**
TDK	**Taldyqorghan**	**9.05**	**32**	*e*P	**Pn**	**13 53 01.0**	**-1.5**
	baz=31						
KUDL	**Kundal**	**10.14**	**155**	*e*P	**Pn**	**13 53 15.5**	**-1.9**
KUDL				*e*S	Sn	13 54 59.8	-9.4
LGTI	**Lohaghat**	**10.72**	**136**	*e*P	**Pn**	**13 53 22.8**	**-2.5**
LGTI				*e*S	Sn	13 55 11.9	-11
GEYT	**Alibeck**	**10.78**	**277**	P	**Pn**	**13 53 24.5**	**-1.6**
	comp=N,19nm,0.3s,baz=102,slow=14,SNR=56						
GEYT				S	**Sn**	**13 55 22.4**	**-2.3**
	comp=N,30nm,0.3s,baz=204,slow=7.5,SNR=12						
GEYT	**Alibeck**	**10.78**	**277**	Pn	**Pn**	**13 53 24.8**	**-1.2**
GYA0	**ALIBECK ARRAY**	**10.78**	**277**	P	**Pn**	**13 53 24.7**	**-1.4**
GYA0				S	**Sn**	**13 55 20.3**	**-4.4**
GYA0B	**ALIBECK ARRAY**	**10.78**	**277**	Pn	**Pn**	**13 53 24.6**	**-1.5**
GYA0B	**ALIBECK ARRAY**	**10.78**	**277**	⇑P	**Pn**	**13 53 24.8**	**-1.3**
GYA0B				⇑S	**Sn**	**13 55 20.4**	**-4.3**
AJM	**Ajmer**	**11.25**	**166**	*e*P	**Pn**	**13 53 32.0**	**-0.5**
AJM				*e*S	**Sn**	**13 55 29.1**	**-7.2**
MK31	**Makanchi Array**	**12.17**	**37**		**Pn**	**13 53 44.1**	**-0.5**
MK31	**Makanchi Array**	**12.17**	**37**	*i* P	**Pn**	**13 53 45.4**	**+0.8**
MKAR	**Makanchi Array**	**12.17**	**37**	P	**Pn**	**13 53 43.1**	**-1.5**
	comp=N,1.1nm,0.7s,baz=216,slow=12,SNR=6.1						
MKAR	**Makanchi Array**	**12.17**	**37**		**Pn**	**13 53 43.9**	**-0.8**
JHNI	**Jhansi**	**13.31**	**152**	*e*P	**Pn**	**13 53 57.2**	**-2.7**
JHNI				*e*S	Sn	13 56 13.9	-12
DANN	**Dangsing**	**13.61**	**129**	*e*P	Pn	13 53 59.5	-4.4
	comp=N,57nm,0.3s						
DANN				*e*S	Sn	13 56 19.3	-14
	comp=N,306nm,0.6s						
WMQ	**Urumqi**	**13.68**	**57**	*e*P	**Pn**	**13 54 06.0**	**+1.4**
KURBB	**Kurchatov Arra**	**14.02**	**18**	P	Pn	13 54 04.5	-4.2
	comp=N,0.6nm,0.5s,baz=204,slow=11,SNR=2.5						
KURK	**Kurchatov**	**14.12**	**18**		**Pn**	**13 54 14.1**	**+3.9**
KURK	**Kurchatov**	**14.12**	**18**	⇑*e*P	**Pn**	**13 54 09.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,13nm,3.9s						
GKN	**Gorkha**	**14.40**	**127**	*e*P	Pn	13 54 08.8	-5.3
	comp=Z,61nm,0.3s						
GKN				*e*S	Sn	13 56 36.9	-16
AB31	**Akbulak array**	**14.53**	**328**	*e*P	**Pn**	**13 54 13.4**	**-2.0**
AB31	**Akbulak array**	**14.53**	**328**	P	**Pn**	**13 54 13.4**	**-2.0**
	comp=Z,2.1nm,0.3s,baz=134,slow=13,SNR=163						
AB31				⇑S	**Sn**	**13 56 49.5**	**-5.8**
	comp=Z,8.0nm,0.4s,baz=150,slow=21,SNR=20						
ABKAR	**Akbulak array**	**14.53**	**328**	Pn	**Pn**	**13 54 13.1**	**-2.3**
ABKAR	**Akbulak array**	**14.53**	**328**	Pn	**Pn**	**13 54 13.3**	**-2.0**
DMN	**Daman**	**14.97**	**127**	*e*P	Pn	13 54 16.5	-4.9
	comp=Z,21nm,0.2s						
BHPL	**Bhopal**	**15.02**	**159**	*e*P	**Pn**	**13 54 18.7**	**-3.2**
BHPL				IAmb	IAmb	13 54 21.0	
	comp=Z,20nm,1.1s						
BHPL				*i* x	x	13 54 24.9	
BHPL				*e*S	Sn	13 56 53.2	-14
BHPL				IAML		13 57 00.8	
	comp=N,66nm,0.6s						
BHPL				IAML		13 57 01.8	
	comp=E,60nm,0.3s						
PKIN	**Phulchoki**	**15.18**	**127**	*e*P	**Pn**	**13 54 18.9**	**-5.2**
	comp=E,30nm,0.2s						
PKI	**Pulchoki**	**15.19**	**127**	*e*P	**Pn**	**13 54 19.1**	**-5.2**
GUN	**Gumba**	**15.26**	**125**	*e*P	Pn	13 54 19.7	-5.5
BRVK	**Borovoye**	**15.61**	**357**	Pn	**Pn**	**13 54 25.8**	**-3.2**
JIRN	**Jiri**	**15.63**	**125**	*e*P	**Pn**	**13 54 24.9**	**-5.0**
	comp=E,74nm,0.3s						
AKTO	**Aktyubinsk**	**16.24**	**327**	P	**Pn**	**13 54 37.8**	**+0.9**
	comp=E,27nm,0.4s,baz=130,slow=12,SNR=51						
AKTO				S	Sn	13 57 24.3	-12
	comp=E,8.8nm,0.6s,baz=136,slow=14,SNR=3.9						
AKTO				LR	LR	14 02 14.7	
	comp=E,18nm,18.6s,baz=154,slow=42						
AKTO	**Aktyubinsk**	**16.24**	**327**	⇓P	**Pn**	**13 54 36.2**	**-0.7**
	comp=E,42nm,0.7s						
AKTO				⇓S	**Sn**	**13 57 31.2**	**-5.4**
	comp=E,13nm,0.7s						
RAMN	**Ramite**	**16.38**	**126**	*e*P	Pn	13 54 33.4	-5.7
	comp=E,22nm,0.3s						
BLSP	**Bilaspur**	**17.75**	**147**	*e*P	**P**	**13 54 55.9**	**+0.8**
BLSP				*e*S	Sn	13 57 56.2	-17
LKRN	**Lenkeran, Azer**	**18.08**	**281**	P	**Pn**	**13 55 01.7**	**+2.3**
UOSS	**Minazif**	**18.19**	**231**	P	**P**	**13 55 00.7**	**+1.0**
UOSS				IAmb	IAmb	13 55 20.8	
	comp=Z,18nm,1.1s						
GOMU	**GeErMu**	**18.54**	**87**	P	**P**	**13 55 04.5**	**+0.6**
GOMU				pmax	pmax		
	comp

BR131	**Keskin Array S**	**29.69**	**286**	P		**P**		**13 56 52.9**	**+1.6**
BR131	**Keskin Array S**	**29.69**	**286**	P		**P**		**13 56 52.9**	**+1.6**
BR131				pmax		pmax			
	comp=Z,4.0nm,1.0s								
BRTR	**Keskin Array B**	**29.69**	**286**	P		**P**		**13 56 53.7**	**+2.4**
	comp=Z,1.4nm,0.5s,baz=96,slow=8.6,SNR=8.2								
	comp=Z,1.4nm,0.5s								
BRTR	**Keskin Array B**	**29.69**	**286**	P		**P**		**13 56 52.9**	**+1.6**
CMAR	**Chiang Mai Arr**	**30.45**	**121**	P		**P**		**13 57 00.5**	**+2.4**
	comp=Z,1.3nm,0.9s,baz=268,slow=8.7,SNR=5.4								
HHC	**Hu-ho-hao-te**	**30.90**	**71**	*eP*		**P**		**13 57 03.1**	**+1.1**
HHC				pmax		pmax			
	comp=Z,19nm,0.7s								
HHC				pmax		pmax			
	comp=Z,130nm,6.2s								
PALK	**Pallekele**	**31.16**	**163**	LR		LR		14 10 31.7	
	comp=Z,32nm,18.7s,baz=103,slow=38								
AKASG	**Malin Array Be**	**32.78**	**308**	P		**P**		**13 57 19.1**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=82,slow=7.5,SNR=20								
AKASG				LR		LR		14 12 58.3	
	comp=Z,25nm,18.7s,baz=54,slow=40								
	comp=Z,1.2nm,0.4s								
AKBB	**Malin Array Si**	**32.78**	**308**	P		**P**		**13 57 17.8**	**-0.5**
AKBB				IAmb		IAmb		13 57 21.6	
	comp=Z,4.4nm,0.8s								
AKBB	**Malin Array Si**	**32.78**	**308⇑**	*eP*		**P**		**13 57 19.3**	**+1.1**
AK05	**Malin Array Si**	**32.79**	**307**	P		**P**		**13 57 18.7**	**+0.4**
MLR	**Muntele Rosu**	**34.81**	**298**	P		**P**		**13 57 38.2**	**+2.2**
	comp=Z,2.7nm,0.5s,baz=110,slow=3.2,SNR=7.1								
	comp=Z,2.7nm,0.5s								
FIA1	**FINESS Array S**	**36.99**	**325**	P		**P**		**13 57 54.9**	**+0.6**
FINES	**FINESS Array B**	**36.99**	**325**	P		**P**		**13 57 55.0**	**+0.7**
	comp=Z,4.0nm,0.3s,baz=120,slow=9.0,SNR=56								
FINES				LR		LR		14 12 51.9	
	comp=Z,31nm,21.7s,baz=62,slow=36								
	comp=Z,4.0nm,0.3s								
FINES	**FINESS Array B**	**36.99**	**325**	P		**P**		**13 57 55.0**	**+0.7**
FINES	**FINESS Array B**	**36.99**	**325**	*i P*		**P**		**13 57 55.2**	**+1.0**
FINES				pmax		pmax			
	comp=Z,4.0nm,0.3s								
NJ2	**Nanjing**	**38.79**	**84**	*eP*		P		13 58 05.9	-3.8
NJ2				pmax		pmax			
	comp=Z,15nm,0.5s								
KEV	**Kevo**	**40.11**	**338**	P		**P**		**13 58 20.2**	**+0.1**
KEV	**Kevo**	**40.11**	**338**	P		**P**		**13 58 20.2**	**+0.1**
KEV				pmax		pmax			
	comp=Z,13nm,1.1s								
ARA0	**ARCESS Array S**	**40.46**	**337**	*eP*		**P**		**13 58 23.9**	**+0.8**
ARCES	**ARCESS Array B**	**40.46**	**337**	P		**P**		**13 58 23.8**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=113,slow=8.1,SNR=47								
ARCES				LR		LR		14 15 52.8	
	comp=Z,79nm,18.2s,baz=112,slow=37								
	comp=Z,1.5nm,0.3s								
ARCES	**ARCESS Array B**	**40.46**	**337**	P		**P**		**13 58 23.5**	**+0.4**
ARCES				IAmb		IAmb		13 58 27.0	
	comp=Z,11nm,1.1s								
VRAC	**Vranov**	**40.89**	**305**	LR		LR		14 17 39.2	
	comp=Z,18nm,18.3s,baz=70,slow=39								
HAMF	**Hammerfest**	**41.52**	**338**	*eP*		**P**		**13 58 32.6**	**+0.8**
JETT	**Jettan, Norway**	**42.09**	**336**	*eP*		**P**		**13 58 37.7**	**+1.2**
JETT				IAmb		IAmb		13 58 39.1	
	comp=Z,8.2nm,0.4s								
BRG	**Berggiesshubel**	**42.47**	**307**	*eP*		**P**		**13 58 41.9**	**+2.2**
BRG				Amp				13 58 43.5	
	comp=Z,7.8nm,1.1s								
BRG	**Berggiesshubel**	**42.47**	**307**	*eP*		**P**		**13 58 41.9**	**+2.2**
BRG				pmax		pmax			
	comp=Z,8.0nm,1.1s								
HFS	**Hagfors**	**42.65**	**321**	LR		LR		14 17 46.9	
	comp=Z,25nm,19.1s,baz=89,slow=38								
GERES	**GERESS Array B**	**42.83**	**305**	P		**P**		**13 58 44.0**	**+1.2**
	comp=Z,4.0nm,0.3s,baz=76,slow=8.2,SNR=3.4								
	comp=Z,0.4nm,0.3s								
KHC	**Kasperske Hory**	**42.88**	**305**	*eP*		**P**		**13 58 44.5**	**+1.3**
KHC	**Kasperske Hory**	**42.88**	**305**	*eP*		**P**		**13 58 44.5**	**+1.3**
CLL	**Collm**	**43.02**	**308**	*i P*		**P**		**13 58 45.9**	**+1.7**
GSI	**Gunungsitoli**	**43.17**	**140**	P		**P**		**13 58 47.5**	**+1.7**
MOR8	**Moi Rana**	**43.24**	**330**	*eP*		**P**		**13 58 45.8**	**-0.1**
MOR8				IAmb		IAmb		13 58 46.4	
	comp=Z,11nm,0.8s								
NC405	**NORSAR Array S**	**43.71**	**323**	P		**P**		**13 58 49.2**	**-0.4**
NC405				IAmb		IAmb		13 59 17.4	
	comp=Z,7.3nm,0.9s								
KONS	**Konsvik**	**43.84**	**330**	*eP*		**P**		**13 58 51.1**	**+0.6**
NC303	**NORSAR Array S**	**43.88**	**323**	P		**P**		**13 58 51.7**	**+0.7**
NB201	**NORSAR Array S**	**43.91**	**322**	P		**P**		**13 58 51.5**	**+0.3**
NB201				IAmb		IAmb		13 59 27.8	
	comp=Z,8.9nm,1.0s								
NB2	**NORSAR Subarra**	**43.94**	**322**	P		**P**		**13 58 51.7**	**+0.2**
	comp=Z,3.9nm,0.7s,baz=95,slow=7.9								
NB2	**NORSAR Subarra**	**43.94**	**322**	P		**P**		**13 58 51.7**	**+0.2**
	baz=95,slow=7.9								
NOA	**NORSAR Array B**	**43.94**	**322**	P		**P**		**13 58 51.3**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=94,slow=8.5,SNR=18								
NOA				LR		LR		14 18 17.8	
	comp=Z,23nm,18.1s,baz=120,slow=37								
	comp=Z,1.6nm,0.5s								
KSRS	**Korea Array**	**44.03**	**72**	P		**P**		**13 58 50.8**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=269,slow=6.9,SNR=1.9								
	comp=Z,0.3nm,0.4s								
KLR	**Kul'dur**	**44.11**	**55**	LR		LR		14 19 56.5	
	comp=Z,20nm,18.1s,baz=54,slow=40								
NBO00	**NORSAR Array S**	**44.16**	**322**	P		**P**		**13 58 53.7**	**+0.5**
NC204	**NORSAR Array S**	**44.18**	**323**	P		**P**		**13 58 54.0**	**+0.6**
NC204				IAmb		IAmb		13 59 12.0	
	comp=Z,9.8nm,1.1s								
NC204	**NORSAR Array S**	**44.18**	**323**	*eP*		**P**		**13 58 53.7**	**+0.3**
TIXI	**Tiksi**	**44.65**	**22**	P		**P**		**13 58 56.9**	**-0.1**
TIXI				IAmb		IAmb		13 59 15.2	
	comp=Z,4.7nm,1.0s								
TIXI	**Tiksi**	**44.65**	**22**	P		**P**		**13 58 56.9**	**-0.1**
TIXI				pmax		pmax			
	comp=Z,5.0nm,1.0s								
KONO	**Kongsberg**	**44.69**	**320**	P		**P**		**13 58 57.4**	**0.0**
KONO				IAmb		IAmb		13 59 41.5	
	comp=Z,8.0nm,1.1s								
KONO	**Kongsberg**	**44.69**	**320**	P		**P**		**13 58 57.4**	**0.0**
KONO				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KONO	**Kongsberg**	**44.69**	**320**	*eP*		**P**		**13 58 58.1**	**+0.7**
SENIN	**Lac Senin/Sane**	**47.54**	**302**	P		**P**		**13 59 19.9**	**-0.3**
JMIC	**Jan Mayen**	**51.92**	**336**	LR		LR		14 21 46.5	
	comp=Z,23nm,18.2s,baz=235,slow=36								
EKA	**Eskdalemuir Ar**	**51.98**	**316**	LR		LR		14 23 01.8	
	comp=Z,36nm,18.1s,baz=153,slow=37								
ESDC	**Sonseca Array**	**57.50**	**298**	P		**P**		**14 00 33.8**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=55,slow=6.9,SNR=13								
	comp=Z,0.9nm,0.4s								
TOA0	**Torodi Ar. Sit**	**66.31**	**269**	P		**P**		**14 01 32.7**	**-0.2**
TOA0				IAmb		IAmb		14 01 33.9	
	comp=Z,2.8nm,0.6s								
TORD	**Torodi Ar. Bea**	**66.31**	**269**	P		**P**		**14 01 32.3**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=50,slow=5.7,SNR=28								
	comp=Z,2.1nm,0.5s								
TOLK	**Toolik Lake Re**	**69.83**	**15**	P		**P**		**14 01 54.2**	**+0.1**
TOLK				IAmb		IAmb		14 01 55.3	
	comp=Z,4.2nm,0.7s								
IMAR	**Indian Mountai**	**71.07**	**18**	P		**P**		**14 02 00.9**	**-0.7**
BMAR	**Burnt Mountain**	**71.86**	**14**	P		**P**		**14 02 05.9**	**-0.5**
INK	**Inuvik**	**72.85**	**10**	P		**P**		**14 02 11.8**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=24,slow=4.0,SNR=5.2								
	comp=Z,2.4nm,0.7s								
ILAR	**Eielson Array**	**73.68**	**16**	P		**P**		**14 02 15.6**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=315,slow=4.9,SNR=8.6								
	comp=Z,0.9nm,0.8s								
DAWY	**Dawson**	**75.84**	**14**	P		**P**		**14 02 29.6**	**-0.2**
SCM	**Sheep Creek Mo**	**76.11**	**18**	P		**P**		**14 02 30.7**	**-0.6**
SCM				IAmb		IAmb		14 02 31.7	
	comp=Z,4.0nm,0.8s								
SCM	**Sheep Creek Mo**	**76.11**	**18**	P		**P**		**14 02 30.7**	**-0.6**
SCM				pmax		pmax			
	comp=Z,4.0nm,0.8s								
BCAR	**Beaver Creek A**	**76.27**	**15**	P		**P**		**14 02 31.6**	**-0.6**
KDAK	**Kodiak Island**	**78.08**	**22**	P		**P**		**14 02 41.5**	**-0.7**
KDAK				IAmb		IAmb		14 02 42.2	
	comp=Z,5.8nm,1.1s								
KDAK	**Kodiak Island**	**78.08**	**22**	P		**P**		**14 02 41.6**	**-0.7**
KDAK				pmax		pmax			
	comp=Z,6.0nm,1.1s								
OHAK	**Old Harbor**	**78.32**	**23**	P		**P**		**14 02 43.3**	**-0.4**
OHAK				IAmb		IAmb		14 03 21.3	
	comp=Z,4.5nm,1.0s								
HYT	**Haines Junctio**	**79.17**	**14**	P		**P**		**14 02 47.6**	**-0.8**
YKA	**Yellowknife Ar**	**80.24**	**3**	P		**P**		**14 02 53.8**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=351,slow=5.8,SNR=13								
	comp=Z,1.3nm,0.5s								
WRA	**Warramunga Arr**	**82.03**	**122**	P		**P**		**14 03 02.3**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=330,slow=4.8,SNR=5.0								
	comp=Z,0.4nm,0.7s								
ASAR	**Alice Springs**	**84.36**	**125**	P		**P**		**14 03 16.2**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=317,slow=5.0,SNR=1.4								
	comp=Z,0.2nm,0.7s								

***NNC 11* 13:53:24.7±1.1, 50°.40N×73°.63E, *h0*km, mb3.6, mpv3.3, 7C-5D, Error ellipse: s-maj=10.4km s-min=9.6km az=1.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OTUK	**Ortayu**	**2.31**	**202**	⇑Pn		Pn	13 54 05.1	+1.1
	7.4nm,0.3s							
OTUK				⇑Lg		Lg	13 54 35.9	
	19nm,0.4s							
KURBB	**Kurchatov Arra**	**3.14**	**84**	⇑Pg		Pb	13 54 20.7	-0.6
	9.1nm,0.7s							
KURBB				⇑Lg		Lg	13 55 08.1	
	44nm,0.6s							
KURK	**Kurchatov**	**3.20**	**82**	⇓Pg		Pb	13 54 20.7	-1.6
	7.8nm,1.0s							
KURK				⇓Lg		Lg	13 55 08.8	
	16nm,0.7s							
BVA0	**Borovoye Array**	**3.31**	**324**	P		Pb	13 54 25.0	+0.7
BVA0	**Borovoye Array**	**3.31**	**324**	⇓Lg		Lg	13 55 09.0	
	32nm,0.9s,baz=142,slow=29							
BVA0	**Borovoye Array**	**3.31**	**324**	⇑Pg		Pb	13 54 25.3	+1.1
	4.8nm,0.6s,baz=140,slow=16,SNR=28							
BRVK	**Borovoye**	**3.38**	**323**	*ce*P		Pb	13 54 26.9	+1.5
BRVK	**Borovoye**	**3.38**	**323**	⇓Lg		Lg	13 55 11.5	
	19nm,0.7s							
BRVK	**Borovoye**	**3.38**	**323**	⇓Pg		Pb	13 54 26.7	+1.3
	13nm,0.5s							
MAKZ	**Makanchi**	**6.60**	**120**	⇑Lg		Lg	13 56 57.8	
	6.5nm,0.8s							
MK31	**Makanchi Array**	**6.78**	**119**	Lg		Lg	13 57 01.4	
	1.8nm,0.5s,baz=286,slow=29,SNR=4.1							

*ISK **11** 14:14:13.6, 36°.38N×27°.08E, h123km±1km, ML2.5/15*
*ATH **11** 14:14:14.3, 36°.27N×26°.99E, h87km±7km, ML3.0/1, Error ellipse: s-maj=7.3km s-min=1.7km az=114.0*
*THE **11** 14:14:17.5, 36°.30N×27°.01E, h96km±5km, ML2.7/4, Error ellipse: s-maj=5.7km s-min=1.0km az=114.0*
ISC 11 14:14:14.3±1.8, **36°.29N**±0°.05×**27°.08E**±0°.04, **h115**km±12km, **n28**, σ0**°58**/40, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.32**	**14**	P		**Pn**	**14 14 30.1**	**-0.6**
DAT	**Datca**	**0.59**	**42**	PG		**Pn**	**14 14 32.9**	**+0.5**
DAT				SG		**Sn**	**14 14 46.6**	**+0.6**
KARP	**Karpathos**	**0.75**	**175**	P		**Pn**	**14 14 33.4**	**-0.2**
KARP				S		**Sn**	**14 14 46.5**	**-1.6**
	670nm,0.1s							
KARP	**Karpathos**	**0.75**	**175**	P		**Pn**	**14 14 33.6**	**0.0**
BODT	**Bodrum**	**0.79**	**13**	PG		**Pn**	**14 14 33.7**	**-0.2**
BODT				SG		**Sn**	**14 14 48.2**	**-0.5**
ARG	**Arkhangelos**	**0.85**	**95**	P		**Pn**	**14 14 35.1**	**+0.7**
ARG				S		**Sn**	**14 14 48.9**	**-0.6**
	828nm,0.1s							
ARG	**Arkhangelos**	**0.85**	**95**	PG		**Pn**	**14 14 35.1**	**+0.7**
ARG	**Arkhangelos**	**0.85**	**95**	P		**Pn**	**14 14 35.0**	**+0.7**
ARG				S		**Sn**	**14 14 50.0**	**+0.5**
ARG				AML		AML	14 14 50.9	
	comp=E,2712μm,0.2s							
ARG				AML		AML	14 14 51.2	
	comp=N,570μm,0.1s							
TURN	**Turunc**	**1.05**	**62**	PG		**Pn**	**14 14 36.7**	**+0.4**
TURN				SG		**Sn**	**14 14 53.1**	**0.0**
AMGA	**Amorgos Island**	**1.10**	**300**	P		**Pn**	**14 14 37.3**	**+0.4**
YER	**Yerkesik**	**1.28**	**49**	PN		**Pn**	**14 14 38.9**	**0.0**
SANT	**Santorini**	**1.31**	**274**	PN		**Pn**	**14 14 39.6**	**+0.4**
SANT	**Santorini**	**1.31**	**274**	P		**Pn**	**14 14 39.4**	**+0.2**
SANT				S		**Sn**	**14 14 58.3**	**+0.2**
STIA	**Sitia Lasithi**	**1.35**	**217**	P		**Pn**	**14 14 40.0**	**+0.3**
STIA				S		**Sn**	**14 14 58.9**	**0.0**
THR3	**Thira Island,**	**1.36**	**275**	P		**Pn**	**14 14 40.2**	**+0.5**
THR6	**Thira Island,**	**1.36**	**273**	P		**Pn**	**14 14 40.1**	**+0.4**
DALY	**Dalyan (Mula)**	**1.37**	**67**	PN		**Pn**	**14 14 40.4**	**+0.6**
DALY				SN		**Sn**	**14 14 59.4**	**+0.2**
ZKR	**Zakros**	**1.37**	**211**	P		**Pn**	**14 14 40.7**	**+0.8**
ZKR				S		**Sn**	**14 14 58.6**	**-0.7**
	comp=N,98nm,0.4s							
ZKR	**Zakros**	**1.37**	**211**	PN		**Pn**	**14 14 40.9**	**+1.0**
ZKR	**Zakros**	**1.37**	**211**	P		**Pn**	**14 14 40.7**	**+0.8**
ZKR				S		**Sn**	**14 14 59.6**	**+0.3**
APE	**Apeiranthos**	**1.47**	**302**	PN		**Pn**	**14 14 41.2**	**+0.2**
FETY	**Fethiye**	**1.65**	**77**	PN		**Pn**	**14 14 43.3**	**+0.1**
CAME	**Cameli-Denizli**	**1.90**	**69**	PN		**Pn**	**14 14 46.6**	**+0.2**
AKAS	**Kas**	**2.04**	**91**	PN		**Pn**	**14 14 47.4**	**-0.7**
IDI	**Anoyia**	**2.04**	**241**	P		**Pn**	**14 14 48.1**	**0.0**
IDI				S		**Sn**	**14 15 12.8**	**-1.2**
	comp=N,78nm,0.2s							
APMY	**Acipayam-Deniz**	**2.13**	**56**	PN		**Pn**	**14 14 48.9**	**-0.3**
ELL	**Elmali**	**2.32**	**78**	PN		**Pn**	**14 14 51.9**	**+0.2**
KORT	**Korkueli**	**2.72**	**74**	PN		**Pn**	**14 14 56.9**	**0.0**

*VIE **11** 14:23:36.1±0.5, 51°.53N×16°.11E, h0km, mb2.6/8, ml3.1/8, Error ellipse: s-maj=3.6km s-min=2.8km az=168.0 79 km NW of Wroclaw Suspected Mining induced.*
*IPEC **11** 14:23:36.5±0.4, 51°.53N×16°.23E, h1km±1km, ML2.8/5, Error ellipse: s-maj=2.6km s-min=1.2km az=30.0*
*IDC **11** 14:23:38.0±0.7, 51°.48N×16°.04E, h0km, mbtmp3.3/6, ML2.8/6, Error ellipse: s-maj=11.7km s-min=6.3km az=107.0*
*PRU **11** 14:23:37.4±0.0, 51°.48N×16°.14E, h0km*
*BGR **11** 14:23:38.1±0.3, 51°.45N×16°.14E, h1km, ML3.2/18, Error ellipse: s-maj=4.4km s-min=2.2km az=24.0*
ISC 11 14:23:35.2±0.6, **51°.57N**±0°.03×**16°.18E**±0°.02, **h0**km, **n63**, σ1**°35**/122, **Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**174**	*e*Pg		**Pg**	**14 23 50.0**	**+0.8**
KSP				*e*Sg		**Sg**	**14 23 58.8**	**+0.3**
KSP	**Ksiaz**	**0.73**	**174**	*e*Pg		**Pg**	**14 23 50.0**	**+0.8**
KSP				*e*Sg		**Sg**	**14 23 59.0**	**+0.4**
DPC	**Dobruska-Polom**	**1.22**	**176**	*e*PG		**Pg**	**14 23 59.0**	**+0.4**
DPC				*e*SG		**Sg**	**14 24 14.6**	**+0.2**
DPC	**Dobruska-Polom**	**1.22**	**176**	*e*Pg		**Pg**	**14 23 58.9**	**+0.4**
DPC				*e*Sg		**Sg**	**14 24 14.6**	**+0.2**
PVCC	**Panska Ves**	**1.46**	**225**	*e*PG		**Pb**	**14 24 03.6**	**+0.4**
PVCC				*e*SG		**Sb**	**14 24 22.2**	**0.0**
PVCC	**Panska Ves**	**1.46**	**225**	*e*Pg		**Pb**	**14 24 03.8**	**+0.7**
PVCC				*e*Sg		**Sn**	**14 24 22.9**	**+0.4**
KRLC	**Kraliky**	**1.54**	**166**	*e*PG		**Pn**	**14 24 04.3**	**+0.3**
KRLC				*e*SG		**Sg**	**14 24 24.6**	**-0.1**
	comp=Z,110nm,0.8s							
BRG	**Berggiesshubel**	**1.57**	**245**	Pg		**Pg**	**14 24 06.0**	**+0.7**
BRG				Sg		**Sg**	**14 24 26.4**	**+0.8**
BRG				Amp			14 24 27.4	
	comp=Z,128nm,0.7s							
BRG	**Berggiesshubel**	**1.57**	**245**	*e*Pg		**Pg**	**14 24 06.1**	**+0.8**
BRG				*e*Sg		**Sg**	**14 24 26.6**	**+0.9**
RUE	**Ruedersdorf**	**1.74**	**303**	*e*Pg		**Pg**	**14 24 09.1**	**+0.5**
RUE				*e*Sg		**Sg**	**14 24 34.9**	**+3.7**
FBE	**Freiberg**	**1.89**	**251**	*e*Pn		**Pg**	**14 24 12.1**	**+0.7**
FBE				*e*Sg		**Sg**	**14 24 36.5**	**+0.5**
PRU	**Pruhonice**	**1.89**	**214**	*e*PG		**Pb**	**14 24 10.5**	**-0.1**
PRU				*e*SG		**Sg**	**14 24 36.0**	**0.0**
PRU	**Pruhonice**	**1.89**	**214**	*e*Pn		**Pn**	**14 24 09.7**	**+1.0**
MORC	**Moravsky Berou**	**1.99**	**154**	*e*Pn		**Pn**	**14 24 10.6**	**+0.4**
	baz=335							
MORC				*e*Sg		**Sb**	**14 24 37.6**	**0.0**
	comp=Z,67nm,0.5s,baz=335							
MORC	**Moravsky Berou**	**1.99**	**154**	*e*PN		**Pn**	**14 24 10.6**	**+0.4**
MORC				*e*SG		**Sb**	**14 24 37.6**	**0.0**
MORC	**Moravsky Berou**	**1.99**	**154**	*e*Pn		**Pn**	**14 24 10.6**	**+0.4**
MORC				*e*Sg		**Sb**	**14 24 38.1**	**+0.4**
CLL	**Collm**	**2.01**	**264**	*i* Pn		**Pn**	**14 24 10.7**	**+0.4**
CLL				*i* Pg		**Pg**	**14 24 14.1**	**+0.4**
CLL				*i* x		x	14 24 18.3	
CLL				*i* Sg		**Sg**	**14 24 40.6**	**+0.9**
	comp=Z,53nm,0.7s							
CLL	**Collm**	**2.01**	**264**	*e*Pn		**Pn**	**14 24 10.8**	**+0.4**
CLL				*e*Sg		**Sg**	**14 24 40.7**	**+1.1**
OKC	**Ostrava-Krasne**	**2.13**	**143**	*e*PG		**Pb**	**14 24 15.4**	**+0.7**
OKC				*e*SG		**Sb**	**14 24 42.8**	**+1.1**
OKC	**Ostrava-Krasne**	**2.13**	**143**	*e*Pn		**Pn**	**14 24 12.8**	**+0.7**
OKC				*e*Sg		**Sb**	**14 24 43.0**	**+1.3**
VRAC	**Vranov**	**2.28**	**173**	Pn		**Pn**	**14 24 15.3**	**+1.3**
	comp=Z,2.3nm,0.3s,baz=344,slow=16,SNR=5.8							
VRAC				Pg		**Pg**	**14 24 19.3**	**+0.5**
	comp=Z,4.0nm,0.3s,baz=350,slow=16,SNR=14							
VRAC				Lg		Lg	14 24 46.2	
	comp=Z,7.9nm,0.3s,baz=286,slow=20,SNR=10.0							
	comp=Z,10nm,0.2s							
VRAC	**Vranov**	**2.28**	**173**	*e*Pn		**Pn**	**14 24 14.7**	**+0.7**
	baz=354							
VRAC				*e*Sg		**Sb**	**14 24 46.4**	**+0.6**
	comp=Z,41nm,0.4s,baz=354							
VRAC	**Vranov**	**2.28**	**173**	*e*PN		**Pn**	**14 24 14.8**	**+0.7**
VRAC				*e*SG		**Sb**	**14 24 46.5**	**+0.6**
VRAC	**Vranov**	**2.28**	**173**	*e*Pn		**Pn**	**14 24 15.6**	**+1.6**
TREC	**Trest**	**2.32**	**191**	*e*PG		**Pb**	**14 24 17.8**	**-0.1**
TREC				*e*SG		**Sb**	**14 24 47.5**	**+0.5**
TREC	**Trest**	**2.32**	**191**	*e*Pn		**Pn**	**14 24 16.6**	**+1.9**
TREC				*e*Sg		**Sg**	**14 24 48.7**	**-0.9**
KRUC	**Moravsky**	**2.51**	**177**	*e*Pn		**Pn**	**14 24 17.8**	**+0.5**
	baz=358							
KRUC				*e*Sg		**Sb**	**14 24 54.0**	**+1.4**
	comp=Z,41nm,0.4s,baz=358							
KRUC	**Moravsky**	**2.51**	**177**	*e*PN		**Pn**	**14 24 17.8**	**+0.5**
KRUC				*e*SG		**Sb**	**14 24 54.0**	**+1.4**
KRUC	**Moravsky**	**2.51**	**177**	*e*Pn		**Pn**	**14 24 19.0**	**+1.7**
TANN	**Tannenbergstha**	**2.62**	**245**	*e*Pn		**Pn**	**14 24 19.9**	**+1.1**
TANN				*e*Sg		**Sg**	**14 24 59.0**	**-0.3**
OJC	**Ojcow**	**2.66**	**119**	*e*Pg		**Pg**	**14 24 27.0**	**+0.9**
OJC				*e*Sg		**Sg**	**14 25 01.4**	**+0.8**
OJC	**Ojcow**	**2.66**	**119**	*e*Pg		**Pg**	**14 24 27.1**	**+1.0**
OJC				*e*Sg		**Sg**	**14 25 01.3**	**+0.8**
WERD	**Werda**	**2.69**	**247**	*e*Pn		**Pn**	**14 24 21.0**	**+1.2**
WERD				*e*Pg		**Pg**	**14 24 27.4**	**+0.6**
WERD				*e*Sg		**Sg**	**14 25 01.4**	**-0.3**
JAVC	**Velka Javorina**	**2.88**	**160**	*e*Pn		**Pn**	**14 24 22.9**	**+0.6**
	baz=341							
JAVC	**Velka Javorina**	**2.88**	**160**	*e*PN		**Pn**	**14 24 23.0**	**+0.6**
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN		**Pn**	**14 24 24.5**	**+1.1**
KHC				*e*PG		**Pb**	**14 24 28.5**	**-0.2**
KHC				*e*SN		**Sn**	**14 24 59.2**	**-0.4**
KHC				*e*SG		**Sg**	**14 25 08.8**	**-1.3**
CKRC	**Cesky Krumlov**	**3.00**	**204**	*e*PG		**Pb**	**14 24 30.2**	**+0.7**
CKRC				*e*SG		**Sg**	**14 25 09.7**	**-1.9**
MOX	**Moxa**	**3.02**	**254**	*e*Pg		**Pg**	**14 24 33.0**	**-0.1**
MOX				*e*Sg		**Sg**	**14 25 12.9**	**+0.6**
GEC2	**GERESS Array S**	**3.16**	**211**	*e*Pn		**Pn**	**14 24 28.1**	**+1.8**
GEC2				*e*Pg		**Pg**	**14 24 35.3**	**-0.4**
GEC2				*e*Sg		**Sg**	**14 25 14.6**	**-2.0**
GERES	**GERESS Array B**	**3.16**	**211**	Pn		**Pn**	**14 24 27.0**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=25,slow=12,SNR=9.7							
GERES				Pg		**Pb**	**14 24 34.0**	**+1.8**
	comp=Z,3.7nm,0.3s,baz=31,slow=17,SNR=22							
GERES				Sn		**Sn**	**14 25 03.3**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=29,slow=20,SNR=4.7							
GERES				Lg		Lg	14 25 13.0	
	comp=Z,9.2nm,0.3s,baz=29,slow=28,SNR=12							
	comp=Z,0.7nm,0.3s							
LANS	**Liptovska

DALY				SG	Sb		14 55 24.0	+0.6
CAEL	**Denizli, Camel**	**1.25**	**360**	P	**Pn**		14 55 09.9	-0.5
TURN	**Turunc**	**1.25**	**316**	PN	**Pn**		14 55 11.4	+1.1
TURN	**Turunc**	**1.25**	**316**	P	**Pn**		14 55 10.6	+0.3
GOLH	**Golhisar**	**1.38**	**8**	P	**Pb**		14 55 14.2	-0.2
GOLH				S	**Sb**		14 55 32.6	+0.9
GOLH				*i* AML	AML		14 55 40.0	
	comp=N,98nm,0.4s							
KORT	**Korkueli**	**1.40**	**36**	PN	**Pb**		14 55 15.4	+0.6
KORT	**Korkueli**	**1.40**	**36**	P	**Pb**		14 55 14.6	-0.2
YER	**Yerkesik**	**1.52**	**327**	PN	**Pn**		14 55 15.1	+1.1
APMY	**Acipayam-Deniz**	**1.60**	**359**	PN	**Pb**		14 55 17.1	-1.0
MULA	**Mugla, Merkez-**	**1.60**	**330**	P	**Pb**		14 55 17.3	-0.8
TAVA	**DENIZLI_Tavas**	**1.62**	**348**	P	**Pb**		14 55 17.8	-0.8
TAVA				S	**Sn**		14 55 36.6	+1.2
TAVA				*i* AML	AML		14 55 38.0	
	comp=N,102nm,0.3s							
DAT	**Datca**	**1.65**	**302**	PN	**Pn**		14 55 16.7	+0.8
DAT	**Datca**	**1.65**	**302**	P	**Pn**		14 55 16.5	+0.6
KARP	**Karpathos**	**1.79**	**260**	PN	**Pn**		14 55 18.1	+0.3
KARP	**Karpathos**	**1.79**	**260**	P	**Pn**		14 55 18.5	+0.7
BRDR	**BURDUR-Merkez**	**1.91**	**18**	P	**Pb**		14 55 25.0	+1.4
BODT	**Bodrum**	**2.01**	**307**	PN	**Pn**		14 55 20.6	-0.2
SUTC	**Sutluce-Ispart**	**2.09**	**40**	PN	**Pb**		14 55 25.3	-1.3
KEPZ	**Antalya-Kepez**	**2.11**	**60**	P	**Pn**		14 55 23.4	+1.2
KEPZ				S	**Sn**		14 55 47.5	+0.4
AYDN	**Tasoluk**	**2.13**	**327**	P	**Pb**		14 55 26.3	-0.9
AYDB	**Zeytinkoy-Aydi**	**2.37**	**331**	PN	**Pn**		14 55 27.6	+1.8
GAZI	**Gazipasa**	**2.45**	**81**	P	**Pn**		14 55 26.5	-0.3
PASA	**Karahalli, USA**	**2.48**	**3**	P	**Pb**		14 55 30.8	-2.3
GCAM	**G?zelcaml?**	**2.48**	**318**	PN	**Pn**		14 55 28.9	+1.7
SEDI	**Konya, Seydise**	**2.51**	**50**	P	**Pn**		14 55 27.9	+0.2
SEDI				S	**Sb**		14 56 02.1	-2.1
SEYD	**Seydisehir-KON**	**2.54**	**52**	PN	**Pb**		14 55 31.5	-2.6
AKMS	**Akamas**	**2.60**	**108**	P	**Pn**		14 55 29.3	+0.4
AKMS				AML	AML		14 56 00.1	
	0.9nm,0.4s							
AKMS				AML	AML		14 56 00.4	
	0.6nm,0.2s							
ZKR	**Zakros**	**2.65**	**254**	P	**Pn**		14 55 30.4	+0.9
ALFC	**Alefka**	**2.76**	**104**	P	**Pn**		14 55 31.5	+0.4
ALFC				AML	AML		14 56 03.8	
	0.6nm,0.2s							
ALFC				AML	AML		14 56 03.8	
	0.6nm,0.2s							
ALFC				S	**Sn**		14 56 04.1	+0.7
ALFC				AML	AML		14 56 04.7	
	0.5nm,0.4s							
ALFC				AML	AML		14 56 04.7	
	0.5nm,0.4s							
OSC1	**CSNet OBS 1**	**2.86**	**145**	P	**Pn**		14 55 32.7	+0.3
NATA	**Nata**	**2.87**	**111**	P	**Pn**		14 55 33.5	+0.9
NATA				S	**Sn**		14 56 07.1	+1.1
NATA				AML	AML		14 56 07.4	
	0.7nm,0.4s							
NATA				AML	AML		14 56 07.4	
	0.7nm,0.4s							
NATA				AML	AML		14 56 07.5	
	0.6nm,0.3s							
NATA				AML	AML		14 56 07.5	
	0.6nm,0.3s							
SZAC	**Souni**	**3.12**	**110**	P	**Pn**		14 55 36.5	+0.5
SZAC				AML	AML		14 56 14.0	
	0.8nm,0.4s							
SZAC				AML	AML		14 56 14.1	
	0.6nm,0.3s							
ASGA	**Asgata**	**3.38**	**108**	P	**Pn**		14 55 40.4	+0.7
ASGA				AML	AML		14 56 20.8	
	0.2nm,0.3s							
ASGA				AML	AML		14 56 22.0	
	0.2nm,0.4s							
CSS	**Mathiatis**	**3.40**	**104**	P	**Pn**		14 55 40.3	+0.5
OSC2	**CSNet OBS 4**	**3.70**	**138**	P	**Pn**		14 55 45.1	+1.2

*IDC **11** 14:57:03.8±1.3,29˚19S×61˚28E,h0km,mb3.9/6, mbtmp3.9/7,ML4.2/1,MS3.3/13,Error ellipse: s-maj=53.5km s-min=24.8km az=27.0*

ISC 11 14:57:05.4±1.3,29˚2S±0˚3×61˚2E±0˚2,h10km,n28, σ0s95/9,mb4.0/6,MS3.3/13,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.58**	**306**	Pn	**Pn**	**15 00 56.8**	**-1.4**
	0.1nm,0.3s,baz=120,slow=14,SNR=2.9						
OPO				Sn	Sn	15 03 48.2	-14
	baz=252,slow=20,SNR=1.2						
	1.7nm,0.3s						
H08S1	**Diego Carcia H**	**23.91**	**29**	T	T	15 27 01.6	
	baz=204,slow=76,SNR=5.1						
H08S2	**Diego Garcia H**	**23.92**	**29**	T	T	15 27 02.6	
	baz=204,slow=76,SNR=6.5						
H08S3	**Diego Garcia H**	**23.93**	**29**	T	T	15 27 02.7	
	baz=204,slow=76,SNR=30						
KMBO	**Kilima Mbogo**	**36.04**	**316**	LR	LR	15 17 58.0	
	comp=Z,51nm,18.4s,baz=89,slow=35						
MAW	**Mawson**	**38.47**	**179**	LR	LR	15 16 19.0	
	comp=Z,62nm,19.8s,baz=344,slow=30						
MBAR	**Mbarara**	**40.63**	**309**	LR	LR	15 19 39.3	
	comp=Z,40nm,19.4s,baz=106,slow=33						
TSUM	**Tsumeb**	**40.80**	**274**	LR	LR	15 19 35.5	
	comp=Z,22nm,21.5s,baz=138,slow=33						
PALK	**Pallekele**	**40.82**	**30**	LR	LR	15 18 44.9	
	comp=Z,42nm,18.4s,baz=312,slow=32						
H01W2	**Cape Leeuwin H**	**44.82**	**111**	T	T	15 52 59.3	
	baz=261,slow=75,SNR=15						
H01W3	**Cape Leeuwin H**	**44.82**	**111**	T	T	15 52 59.3	
	baz=261,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**44.84**	**111**	T	T	15 53 00.5	
	baz=261,slow=75,SNR=15						
WSAR	**Wadi Sarin**	**52.17**	**357**	LR	LR	15 24 55.8	
	comp=Z,43nm,18.2s,baz=186,slow=32						
SNAA	**Sanae**	**54.46**	**200**	LR	LR	15 26 24.0	
	comp=Z,28nm,19.4s,baz=22,slow=32						
CMAR	**Chiang Mai Arr**	**59.76**	**42**	P	**P**	**15 07 11.4**	**+0.6**
	0.3nm,0.3s,baz=224,slow=7.6,SNR=1.7						
	0.3nm,0.3s						
EIL	**Elat**	**63.65**	**335**	LR	LR	15 31 51.6	
	comp=Z,33nm,19.0s,baz=102,slow=33						
ASAR	**Alice Springs**	**64.42**	**104**	P	**P**	**15 07 41.4**	**-0.8**
	1.0nm,0.8s,baz=243,slow=6.3,SNR=14						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**66.24**	**100**	P	**P**	**15 07 53.6**	**-0.5**
	1.2nm,0.9s,baz=247,slow=5.7,SNR=8.4						
	1.2nm,0.9s						
GNI	**Garni**	**70.64**	**347**	LR	LR	15 37 19.2	
	comp=Z,24nm,20.1s,baz=332,slow=34						
TORD	**Torodi Ar. Bea**	**71.16**	**298**	P	**P**	**15 08 26.0**	**+1.3**
	0.8nm,0.7s,baz=115,slow=4.5,SNR=4.8						
	0.8nm,0.7s						
AAK	**Ala-Archa**	**72.50**	**10**	LR	LR	15 37 04.6	
	comp=Z,12nm,19.7s,baz=312,slow=33						
IDI	**Anoyia**	**72.68**	**330**	LR	LR	15 37 14.2	
	comp=Z,6.3nm,21.1s,baz=274,slow=33						
KBZ	**Khabaz**	**74.46**	**346**	LR	LR	15 39 16.9	
	comp=Z,27nm,21.8s,baz=85,slow=34						
MKAR	**Makanchi Array**	**77.98**	**15**	P	**P**	**15 09 03.1**	**-0.5**
	0.7nm,0.9s,baz=194,slow=5.2,SNR=5.9						
	0.7nm,0.9s						
KEST	**Kesra**	**80.93**	**320**	LR	LR	15 46 24.9	
	comp=Z,35nm,18.3s,baz=260,slow=37						
ZALV	**Zalesovo Beam**	**85.27**	**14**	P	**P**	**15 09 42.1**	**+0.2**
	0.6nm,0.4s,baz=198,slow=4.1,SNR=2.3						
	0.6nm,0.4s						
YKA	**Yellowknife Ar**	**146.56**	**356**	PKPbc	**PKPdf**	**15 16 45.3**	**+0.5**
	1.2nm,0.7s,baz=350,slow=3.6,SNR=7.7						
TXAR	**Lajitas Array**	**166.77**	**274**	PKP	**PKPdf**	**15 17 11.5**	**-0.2**
	0.2nm,0.7s,baz=151,slow=3.9,SNR=3.6						

*ISU **11** 15:29:32,39˚51N×73˚66E,h0km*
*KRNET **11** 15:29:33.9±0.1,39˚45N×73˚48E,mb3.5*
*NNC **11** 15:29:38.6±3.1,39˚54N×73˚59E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=23.0km s-min=11.5km az=172.0*
*SOME **11** 15:29:42.0,39˚73N×73˚57E,h5km*

ISC 11 15:29:32.8±1.6,39˚40N±0˚06×73˚53E±0˚03,h4km±11km, n33,σ2s06/53,11C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.26**	**333**	⇑*i*P	**Pn**	**15 29 56.7**	**-0.5**
	baz=34						
OHH				⇑*i*S	**Sn**	**15 30 13.4**	**-1.2**
	baz=34						
OHH	**Osh**	**1.26**	**333**	P	**Pb**	**15 29 56.4**	**-0.7**
OHH				S	**Sn**	15 30 14.7	+0.1
TSTA	**Tashata**	**1.43**	**326**	P	**Pg**	15 29 59.6	-0.5
TSTA				S	**Sn**	15 30 19.0	+0.3
ANR	**Andizhan**	**1.62**	**327**	S	**Sg**	15 30 27.9	+3.0
FRG	**Fergana**	**1.66**	**306**	P	**Pg**	15 30 05.6	+1.0
FRG				S	**Sg**	15 30 28.6	+2.5
BTK	**Batken**	**2.19**	**288**	P	**Pg**	15 30 14.2	-0.6
BTK				S	**Sg**	15 30 45.2	+2.0
ARLS	**Aral**	**2.53**	**14**	⇑*i*P	**Pb**	15 30 17.6	-1.2
	baz=15						
ARLS				⇑*i*S	**Sb**	15 30 49.9	-0.4
	baz=15						
GAR	**Garm**	**2.53**	**262**	⇑*e*P	**Pb**	15 30 18.0	-0.8
	baz=61						
GAR				⇑*i*S	**Sb**	15 30 50.0	-0.4
	baz=61						
TRKS	**Terek-Say**	**2.80**	**320**	⇑*i*P	**Pb**	15 30 20.4	-3.0
	baz=20						
TRKS				⇑*i*S	**Sb**	15 30 54.2	-3.9
	baz=20						
MRKS	**Merke**	**3.35**	**356**	*e*P	**Pg**	15 30 40.9	+4.0
	7.4nm,0.4s						
MRKS				*e*S	**Sg**	15 31 23.1	+2.9
	38nm,0.5s						
MRKS	**Merke**	**3.35**	**356**	Pg	**Pg**	15 30 39.7	+2.9
	6.6nm,0.4s						
MRKS				Lg	Lg	15 31 21.4	
	38nm,0.5s						
BOOM	**Boomskoye usch**	**3.58**	**30**	⇓*e*P	**Pn**	15 30 32.7	+3.5
	baz=31						
BOOM				⇓*i*S	**Sn**	15 31 15.7	+3.7
	baz=31						
CHMS	**Chumysh**	**3.71**	**14**	⇓Pg	**Pb**	15 30 40.1	+1.3
	4.6nm,0.7s						
CHMS				⇓Lg	Lg	15 31 31.3	
	6.2nm,0.5s						
IUG	**Iuzhnay**	**3.82**	**317**	*e*P	**Pg**	15 30 47.1	+1.1
	211nm,0.7s						
IUG				*e*S	**Sg**	15 31 33.7	-1.7
	46nm,0.7s						
IUG	**Iuzhnay**	**3.82**	**317**	Pg	**Pg**	15 30 47.1	+1.1
	319nm,0.6s						
IUG				Lg	Lg	15 31 33.7	
	46nm,0.7s						
TKM2	**Tokmak 2**	**3.84**	**23**	⇑Pg	**Pg**	15 30 45.5	-0.9
	5.2nm,0.7s						
TKM2				⇑Lg	Lg	15 31 36.0	
	13nm,0.6s						
KST	**Kastek**	**4.07**	**26**	*e*P	**Pg**	15 30 49.2	-1.6
	1.5nm,1.1s						
KST				*e*S	**Sb**	15 31 37.5	+2.9
	12nm,0.9s						
MTBS	**Maitube**	**4.32**	**29**	*e*P	**Pg**	15 30 57.3	+1.8
	2.0nm,0.4s						
MTBS				*e*S	**Sg**	15 31 51.3	0.0
	12nm,0.3s						
MTBS	**Maitube**	**4.32**	**29**	Pg	**Pg**	15 30 57.2	+1.8
	3.5nm,0.1s						
MTBS				Lg	Lg	15 31 51.3	
	13nm,0.6s						
KK31	**Karatay Array**	**4.34**	**329**	⇓Pn	Pb	15 30 44.0	-5.7
	2.1nm,0.5s,baz=144,slow=13						
KK31				⇓Sn	**Sb**	15 31 37.5	-4.8
	2.7nm,0.3s,baz=152,slow=23						
KK31				⇑Lg	Lg	15 31 53.2	
	3.5nm,0.5s						
KRBS	**Karabastau**	**4.58**	**20**	*e*P	**Pg**	15 31 00.8	+0.3
	4.1nm,0.7s						
KRBS				*e*S	**Sg**	15 31 57.6	-2.2
	9.9nm,0.7s						
KRBS	**Karabastau**	**4.58**	**20**	Pg	**Pg**	15 31 00.8	+0.3
	4.1nm,0.7s						
KRBS				Lg	Lg	15 31 57.6	
	9.9nm,0.7s						
MDOK	**Medeo**	**4.59**	**34**	*e*P	**Pg**	15 31 01.6	+0.8
	4.0nm,0.4s						
MDOK				*e*S	**Sg**	15 31 59.0	-1.3
	13nm,1.3s						
MDOK	**Medeo**	**4.59**	**34**	Pg	**Pg**	15 30 59.0	-1.8
	8.6nm,0.9s						
MDOK				Pg	Pb	15 31 01.6	+7.6
	4.0nm,0.4s						
MDOK				Lg	Lg	15 31 59.0	
	13nm,1.3s						
MDOK				Lg	Lg	15 31 59.5	
	14nm,0.8s						
KOTS	**Kotyrbulak**	**4.68**	**34**	*e*P	**Pg**	15 31 01.9	-0.6
	3.6nm,0.6s						
KOTS				*e*S	**Sg**	15 31 59.5	-3.5
	29nm,1.4s						
KOTS	**Kotyrbulak**	**4.68**	**34**	Pg	**Pg**	15 31 01.9	-0.6
	3.6nm,0.6s						
KOTS				Lg	Lg	15 31 59.5	
	29nm,1.4s						
KTBS	**Karatobe**	**4.91**	**28**	*e*P	**Pg**	15 31 07.5	+0.7
	2.0nm,0.7s						
KTBS				*e*S	**Sg**	15 32 08.9	-1.5
	19nm,0.6s						
KTBS	**Karatobe**	**4.91**	**28**	Pg	**Pg**	15 31 07.5	+0.7
	2.0nm,0.7s						
KTBS				Lg	Lg	15 32 08.9	
	19nm,0.6s						
SATY	**Saty**	**5.18**	**44**	*e*P	**Pg**	15 31 13.2	+1.2
	1.4nm,0.1s						
SATY				*e*S	**Sg**	15 32 19.1	+0.1
	6.4nm,0.4s						
ARXS	**Arharly**	**5.78**	**32**	*e*P	**Pg**	15 31 22.8	-0.6
	4.0nm,0.8s						
ARXS				*e*S	**Sg**	15 32 35.5	-2.7
	12nm,0.6s						
ARXS	**Arharly**	**5.78**	**32**	Pg	**Pg**	15 31 22.8	-0.6
	4.0nm,0.8s						
ARXS				Lg	Lg	15 32 35.5	
	12nm,0.6s						
BLB	**Baldybastay**	**5.97**	**37**	*e*P	**Pg**	15 31 26.1	-1.0
	2.4nm,0.5s						
BLB				*e*S	**Sg**	15 32 41.0	-3.4
	7.3nm,1.0s						
BLB	**Baldybastay**	**5.97**	**37**	Pg	**Pg**	15 31 26.2	-1.0
	2.4nm,0.5s						
BLB				Lg	Lg	15 32 41.0	
	7.3nm,1.0s						

*NOU **11** 15:31:10.9,38˚91S×175˚03E,h266km,MLv4.4/9,North Island, New Zealand*
*IDC **11** 15:31:10.9±0.6,38˚41S×175˚32E,h267km±10km,mb3.1/4, mbtmp3.7/4,Error ellipse: s-maj=27.8km s-min=19.4km az=35.0*
*WEL **11** 15:31:14.7±0.7,39˚S±5˚×17˚5E±˚,h234km±5km,M3.5/62, ML3.4/7,MLv3.5/62,Error ellipse: s-maj=0.0km s-min=0.0km az=123.0*

ISC 11 15:31:11.0±0.6,38˚91S±0˚05×175˚00E±0˚06,h264km±5km, n181,σ1s12/197,mb3.5/6,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.29**	**221**	P	**Pn**	**15 31 45.6**	**+0.6**
TWVZ	**Taurewa**	**0.38**	**116**	P	**Pn**	15 31 46.0	+0.7
TWVZ				S	**S**	15 32 11.0	-1.3
HIZ	**Hauiti**	**0.41**	**344**	P	**Pn**	15 31 46.0	+0.6
HIZ	**Hauiti**	**0.41**	**344**	P	**Pn**	15 31 46.0	+0.6
PKVZ	**Pokaka**	**0.47**	**145**	P	**Pn**	15 31 46.3	+0.8
PKVZ				S	**S**	15 32 11.5	-1.1
WTVZ	**West Tongariro**	**0.50**	**115**	P	**Pn**	15 31 46.2	+0.6
NNVZ	**North Ngauruho**	**0.53**	**115**	P	**Pn**	15 31 46.3	+0.5
KRVZ	**Karewarewa**	**0.53**	**111**	P	**Pn**	15 31 46.4	+0.7
KRVZ				S	**S**	15 32 11.8	-1.2
NGZ	**Ngauruhoe**	**0.54**	**120**	P	**Pn**	15 31 46.4	+0.6
KATZ	**Kakaramea**	**0.54**	**98**	P	**Pn**	15 31 46.2	+0.4
FWVZ	**Far West T-bar**	**0.55**	**129**	P	**Pn**	15 31 46.7	+0.8
MHEZ	**Mangahewa**	**0.56**	**252**	P	**Pn**	15 31 46.9	+1.3
NTVZ	**North Tongariro**	**0.56**	**110**	P	**Pn**	15 31 46.6	+0.8
SNVZ	**South Ngauruho**	**0.57**	**120**	P	**Pn**	15 31 46.5	+0.6
DRZ	**Dome Shelter**	**0.57**	**130**	P	**Pn**	15 31 46.9	+0.8
OTVZ	**Oturere**	**0.58**	**117**	P	**Pn**	15 31 46.4	+0.4
TRVZ	**Turoa**	**0.58**	**153**	P	**Pn**	15 31 46.8	+0.8
TMVZ	**Te Maari**	**0.58**	**111**	P	**Pn**	15 31 46.4	+0.6
WHVZ	**Whangaehu Hut**	**0.59**	**130**	P	**Pn**	15 31 46.8	+0.8
ETVZ	**East Tongariro**	**0.60**	**113**	P	**Pn**	15 31 46.4	+0.5
ETVZ				S	**S**	15 32 12.1	-1.3
MTVZ	**Mangateitei**	**0.60**	**143**	P	**Pn**	15 31 46.7	+0.9
RATZ	**Rangitukua**	**0.60**	**87**	P	**Pn**	15 31 46.3	+0.4
WATZ	**Wairara**	**0.60**	**71**	P	**Pn**	15 31 46.6	+0.7
TUVZ	**Tukino**	**0.62**	**126**	P	**Pn**	15 31 46.9	+0.9
RITZ	**Rihia Road**	**0.67**	**96**	P	**Pn**	**15 31 46.8**	**+0.7**
DREZ	**Durham Road**	**0.69**	**245**	P	**Pn**	15 31 47.3	+1.2
TLZ	**Tolley Road**	**0.71**	**36**	P	**Pn**	15 31 46.6	+0.3
LREZ	**Lake Rotokare**	**0.72**	**220**	P	**Pn**	15 31 47.5	+1.4
KUTZ	**Kaahu Road**	**0.77**	**57**	P	**Pn**	15 31 47.0	+0.5
MOVZ	**Moawhango**	**0.77**	**131**	P	**Pn**	15 31 47.0	+0.5
MOVZ				S	**S**	15 32 12.0	-2.5
WHTZ	**Whakaora**	**0.78**	**73**	P	**Pn**	15 31 47.1	+0.5
NEZ	**North Egmont**	**0.79**	**242**	P	**Pn**	15 31 47.9	+1.3
PKE	**Pukeiti**	**0.84**	**250**	P	**Pn**	15 31 48.0	+1.2
WAZ	**Wanganui**	**0.85**	**181**	P	**Pn**	15 31 48.1	+1.4
WAZ				S	**S**	15 32 15.2	+0.2
HATZ	**Hinemaiaia**	**0.85**	**89**	P	**Pn**	15 31 47.0	+0.2
HATZ				S	**S**	15 32 12.2	-2.8
KHEZ	**Kahui Hut**	**0.86**	**243**	P	**Pn**	15 31 48.0	+1.1
NBEZ	**Newall Road No**	**0.95**	**247**	P	**Pn**	15 31 48.6	+1.4
WPRZ	**Whakapapataran**	**0.99**	**67**	P	**Pn**	15 31 47.6	+0.1
BHHZ	**Black Hill Sta**	**1.01**	**126**	P	**Pn**	15 31 48.2	+0.6
BHHZ				S	**S**	15 32 13.7	-2.8
NMEZ	**Namu Road**	**1.01**	**240**	P	**Pn**	15 31 48.9	+1.4
ALRZ	**Allen Road**	**1.10**	**72**	P	**Pn**	15 31 48.2	0.0
MRHZ	**Matea Rd**	**1.11**	**87**	P	**Pn**	15 31 48.1	-0.1
MRHZ				S	**S**	15 32 13.7	-3.8
HRRZ	**Handcock Road**	**1.13**	**63**	P	**Pn**	15 31 48.5	+0.2
HSRZ	**Hossack Road**	**1.14**	**59**	P	**Pn**	15 31 48.7	+0.3
PRRZ	**Plateau Road**	**1.16**	**70**	P	**Pn**	15 31 48.5	0.0
UTU	**Utuhina**	**1.18**	**52**	P	**Pn**	15 31 49.0	+0.3
KWHZ	**Kaweka Forest**	**1.22**	**116**	P	**Pn**	15 31 49.8	+1.0
KWHZ				S	**S**	15 32 17.1	-1.6
NGRZ	**Ngongotaha**	**1.23**	**50**	P	**Pn**	15 31 49.1	+0.2
TOZ	**Tahuroa Road**	**1.24**	**19**	P	**Pn**	15 31 49.4	+0.5
HLRZ	**Highlands Stat**	**1.24**	**59**	P	**Pn**	15 31 49.7	+0.7
KMRZ	**Kaimai**	**1.29**	**35**	P	**Pn**	15 31 49.4	0.0
RRRZ	**Republican Roa**	**1.31**	**65**	P	**Pn**	15 31 49.3	-0.1
KARZ	**Kaharoa**	**1.32**	**48**	P	**Pn**	15 31 49.5	0.0
OHWZ	**Ohakea**	**1.32**	**170**	P	**Pn**	15 31 50.9	+1.6
OMRZ	**Omania**	**1.34**	**54**	P	**Pn**	15 31 49.7	0.0
TARZ	**Mount Tarawera**	**1.35**	**61**	P	**Pn**	15 31 49.8	0.0
PNHZ	**Pukenui**	**1.37**	**138**	P	**Pn**	15 31 50.6	+0.8
TSZ	**Takapari Road**	**1.37**	**148**	P	**Pn**	15 31 50.7	+1.0
MKRZ	**Makatiti**	**1.38**	**57**	P	**Pn**	15 31 50.4	+0.4
NMHZ	**Naumai**	**1.42**	**98**	P	**Pn**	15 31 51.4	+1.2
MCHZ	**McNeill Hill**	**1.42**	**113**	P	**Pn**	15 31 51.4	+1.3
MUGZ	**Murupara**	**1.45**	**73**	P	**Pn**	15 31 49.9	-0.4
TGRZ	**Tauranga**	**1.54**	**40**	P	**Pn**	15 31 50.8	-0.2
EDRZ	**Edgecumbe**	**1.58**	**60**	P	**Pn**	15 31 50.9	-0.5
ARHZ	**Aropaoanui**	**1.59**	**104**	P	**Pn**	15 31 52.3	+1.0
POWZ	**Post Office Ro**	**1.60**	**159**	P	**Pn**	15 31 52.0	+0.7
MARZ	**Manawahe**	**1.60**	**56**	P	**Pn**	15 31 51.3	-0.1
WPHZ	**Waipukurau**	**1.60**	**137**	P	**Pn**	15 31 52.3	+0.9
OPRZ	**Ohinepanea**	**1.62**	**50**	P	**Pn**	15 31 51.1	-0.4
RAHZ	**Arahi**	**1.63**	**91**	P	**Pn**	15 31 52.3	+0.7
DVHZ	**Dannevirke**	**1.66**	**147**	P	**Pn**	15 31 52.4	+0.6
KAHZ	**Kahuranaki**	**1.70**	**122**	P	**Pn**	15 31 53.3	+1.1
WHHZ	**Waihua**	**1.75**	**96**	P	**Pn**	15 31 53.2	+0.7
URZ	**Urewera**	**1.77**	**69**	P	**Pn**	15 31 51.7	-1.0
	130nm,0.3s,baz=254,slow=3.9,SNR=510						
URZ				S	**S**	15 32 21.2	-4.5
	383nm,0.3s,baz=155,slow=13,SNR=21						
URZ	**Urewera**	**1.77**	**69**	P	**Pn**	15 31 51.9	-0.8
URZ	**Urewera**	**1.77**	**69**	P	**Pn**	15 31 52.0	-0.8
CKHZ	**Cape Kidnapper**	**1.78**	**116**	P	**Pn**	15 31 53.7	+1.0
MKAZ	**Moumakai**	**1.80**	**4**	P	**Pn**	15 31 53.2	+0.2
MRZ	**Mangatainoka R**	**1.81**	**166**	P	**Pn**	15 31 53.5	+0.5
PRWZ	**Pori Road**	**1.81**	**156**	P	**Pn**	15 31 53.9	+0.9
PXZ	**Pawanui**	**1.83**	**129**	P	**Pn**	15 31 53.9	+0.8
SNGZ	**Shannon Statio**	**1.83**	**87**	P	**Pn**	15 31 53.5	+0.3
PRHZ	**Porangahau**	**1.85**	**138**	P	**Pn**	15 31 54.2	+0.8
AWAZ	**Awhitu Peninsu**	**1.86**	**351**	P	**Pn**	15 31 53.8	+0.3
OGWZ	**Otaki Gorge**	**1.91**	**176**	P	**Pn**	15 31 54.6	+0.8
ANWZ	**Angora Road**	**1.92**	**144**	P	**Pn**	15 31 54.8	+0.9
ETAZ	**East Tamaki Re**	**1.95**	**358**	P	**Pn**	15 31 54.6	+0.3
KIW	**Kapiti Island**	**1.95**	**182**	P	**Pn**	15 31 54.8	+0.6
TIWZ	**Tintock**	**1.99**	**160**	P	**Pn**	15 31 55.1	+0.6
WTAZ	**Waiatarua**	**2.00**	**350**	P	**Pn**	15 31 55.4	+0.7
BFZ	**Birch Farm**	**2.02**	**152**	P	**Pn**	15 31 55.2	+0.5
BFZ	**Birch Farm**	**2.02**	**152**	P	**Pn**	15 31 55.2	+0.5
HOWZ	**Holdsworth Sta**	**2.03**	**169**	P	**Pn**	15 31 55.3	+0.4
MWZ	**Matawai**	**2.06**	**75**	P	**Pn**	15 31 54.8	-0.4
DUWZ	**D'Urville Isla**	**2.07**	**203**	P

4.7nm,0.3s,baz=253,slow=19,SNR=12
ASAR Alice Springs 37.93 281 P **P** **15 38 04.5 +1.0**
2.5nm,0.6s,baz=131,slow=8.7,SNR=70
ASAR PcP **PcP** **15 40 11.8 -1.8**
0.4nm,0.6s,baz=117,slow=3.9,SNR=4.3
ASAR S **S** **15 43 36.1 +0.8**
0.3nm,0.8s,baz=129,slow=15,SNR=4.1
2.5nm,0.6s
VNDA Vanda 39.12 184 P **P** **15 38 16.7 +4.0**
0.3nm,0.4s,baz=350,slow=6.8,SNR=2.4
0.3nm,0.4s
WRA Warramunga Arr 39.75 287 P **P** **15 38 19.5 +0.9**
0.2nm,0.3s,baz=122,slow=8.0,SNR=9.9
WRA PcP **PcP** **15 40 18.3 -1.0**
0.1nm,0.5s,baz=130,slow=2.9,SNR=1.3
0.2nm,0.3s
QSPA South Pole Qui 51.22 180 P **P** **15 39 50.9 +3.3**
1.1nm,1.0s,baz=39,slow=9.2,SNR=1.8
1.1nm,1.0s
KSRS Korea Array 87.47 324 P **P** **15 43 30.1 +1.6**
1.1nm,0.7s,baz=141,slow=5.5,SNR=7.8
KURBB Kurchatov Arra 122.56 311 PKP **PKPdf** **15 49 32.5 -2.0**
0.1nm,0.3s,baz=117,slow=1.7,SNR=2.2
KBZ Khabaz 144.10 293 PKP **PKPab** **15 50 13.0 -0.2**
1.4nm,0.5s,baz=90,slow=4.0,SNR=5.1
ARCES ARCESS Array B 145.28 342 PKP **PKPdf** **15 50 15.7 -0.4**
3.4nm,0.7s,baz=57,slow=3.3,SNR=22
BRTR Keskin Array B 150.25 284 PKPab **PKPab** **15 50 37.9 -0.2**
0.5nm,0.5s,baz=128,slow=4.2,SNR=3.2
FINES FINESS Array B 150.42 330 PKPbc **PKPbc** **15 50 28.7 -1.6**
1.9nm,0.7s,baz=14,slow=2.9,SNR=5.0
FINES PKPab **PKPab** **15 50 36.5 -1.4**
1.4nm,0.4s,baz=57,slow=5.1,SNR=16

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*VIE **11** 15:56:14.5±0.5,51.53N×16.07E,h0km,mb2.7/4,ml2.5/6, Error ellipse: s-maj=3.8km s-min=2.9km az=151.0 81 km NW of Wroclaw Suspected Mining induced.*
*PRU **11** 15:56:15.0±0.0,51.51N×16.11E,h0km*
ISC 11 15:56:13.5±1.3,51.61N±0.06×16.18E±0.04,h0km,n23,
σ0s79/40,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**175**	*e*Pg		**Pg**	**15 56 28.4**	**+0.2**
KSP				*e*Sg		**Sg**	**15 56 38.1**	**-0.1**
DPC	**Dobruska-Polom**	**1.26**	**176**	*e*Pg		**Pg**	**15 56 36.8**	**-0.9**
DPC				*e*Sg		**Sg**	**15 56 53.3**	**-0.7**
PVCC	**Panska Ves**	**1.48**	**224**	*e*Pg		**Pn**	**15 56 41.1**	**-0.3**
PVCC				*e*Sg		**Sg**	**15 56 59.6**	**-1.5**
KRLC	**Kraliky**	**1.58**	**166**	*e*Pg		**Pn**	**15 56 42.3**	**-0.5**
KRLC				*e*Sg		**Sn**	**15 57 03.2**	**-0.8**
comp=Z,13nm,0.2s								
BRG	**Berggiesshubel**	**1.59**	**243**	Pg		**Pb**	**15 56 43.3**	**-0.4**
BRG				Sg		**Sn**	**15 57 03.8**	**-0.2**
BRG				Amp			15 57 05.0	
comp=Z,44nm,0.4s								
PRU	**Pruhonice**	**1.93**	**213**	*e*Pg		**Pn**	**15 56 48.0**	**+0.5**
PRU				*e*Sg		**Sn**	**15 57 12.9**	**+0.5**
CLL	**Collm**	**2.01**	**263**	*i* Pn		**Pn**	**15 56 49.2**	**+0.6**
CLL				*i* Pg		**Pb**	**15 56 50.7**	**-0.2**
CLL				*i* x		x	15 56 54.8	
CLL				*i* Sg		**Sg**	**15 57 17.8**	**-0.2**
comp=Z,15nm,0.4s								
MORC	**Moravsky Berou**	**2.03**	**154**	*e*PN		**Pn**	**15 56 48.5**	**-0.5**
MORC				*e*SG		**Sb**	**15 57 17.3**	**+0.3**
OKC	**Ostrava-Krasne**	**2.17**	**144**	*e*SG		**Sb**	**15 57 21.4**	**+0.4**
VRAC	**Vranov**	**2.32**	**173**	*e*PN		**Pn**	**15 56 53.3**	**+0.4**
VRAC				*e*SG		**Sb**	**15 57 25.8**	**+0.5**
KRUC	**Moravsky**	**2.55**	**177**	*e*PN		**Pn**	**15 56 55.8**	**-0.3**
KRUC				*e*SG		**Sb**	**15 57 33.6**	**+1.5**
OJC	**Ojcow**	**2.68**	**120**	*e*Pg		**Pg**	**15 57 04.7**	**-0.2**
OJC				*e*Sg		**Sg**	**15 57 39.8**	**+0.3**
KHC	**Kasperske Hory**	**2.99**	**215**	*e*PN		**Pn**	**15 57 01.5**	**-0.6**
KHC				*e*PG		**Pb**	**15 57 07.5**	**-0.1**
KHC				*e*SN		**Sn**	**15 57 36.7**	**-1.9**
KHC				*e*SG		**Sb**	**15 57 46.1**	**+1.5**
CKRC	**Cesky Krumlov**	**3.04**	**204**	*e*SG		**Sb**	**15 57 47.8**	**+1.7**
LANS	**Liptovska Anna**	**3.24**	**138**	*e*PG		**Pg**	**15 57 15.4**	**-0.1**
MODS	**Modra-Piesok**	**3.32**	**167**	*e*SG		**Sg**	**15 57 59.9**	**0.0**
VYHS	**Vyhne**	**3.56**	**150**	*e*PG		**Pg**	**15 57 22.2**	**+0.6**
CONA	**Conrad Observa**	**3.69**	**183**	*e*Pn		**Pn**	**15 57 11.5**	**-0.3**
CONA				*e*Sn		**Sn**	**15 57 57.4**	**+1.3**
comp=Z,0.2nm,0.1s								
RONA	**Rosalia, Austr**	**3.91**	**179**	*e*Pn		**Pn**	**15 57 15.3**	**+0.4**
comp=Z,0.3nm,0.2s								
RONA				*e*Sn		**Sn**	**15 58 01.4**	**-0.1**
BIOA	**Bad Ischl, Aus**	**4.25**	**204**	*e*Sn		**Sn**	**15 58 10.1**	**+0.2**
comp=Z,5.9nm,0.3s								
ARSA	**Arzberg**	**4.38**	**186**	*e*Sn		**Sn**	**15 58 11.9**	**-1.2**
comp=Z,2.5nm,0.5s								
KBA	**Koelnbreinsper**	**4.90**	**203**	*e*Sg		**Sg**	**15 58 51.4**	**+0.7**
comp=Z,0.4nm,0.2s								
WTTA	**Wattenberg**	**5.26**	**216**	*e*Sg		**Sg**	**15 59 02.0**	**-0.5**
comp=Z,1.7nm,0.4s								

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*DJA **11** 15:58:54.2±0.2,4.2×12.9E±,h10km,M4.6/15, mb4.8/10,mB5.0/5,MLv4.6/15,Mw(mB)4.3/5*
*IDC **11** 15:58:57.5±2.6,4.10S×129.31E,h35km±20km,mb4.1/15, mbtmp4.3/19,ML4.5/5,MS3.3/25,Error ellipse: s-maj=20.7km s-min=10.1km az=79.0*
*NEIC **11** 15:58:58.2±1.7,4.02S±0.05×129.24E±0.06,h42km±5km, mb4.5/39,Error ellipse: s-maj=9.3km s-min=7.5km az=114.0*
ISC 11 15:58:56.9±0.4,4.08S±0.04×129.22E±0.05,h32km,n133,
σ1s40/129,mb4.5/31,MS3.3/18,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.78**	**338**	P		**Pn**	**15 59 09.4**	**-2.3**
MSAI				S		**Sn**	**15 59 19.7**	**-2.7**
BNDI	**Bandanaira**	**0.81**	**123**	P		**Pn**	**15 59 09.9**	**-2.2**
BNDI				S		**Sn**	**15 59 22.0**	**-1.0**
BNDI	**Bandanaira**	**0.81**	**123**	P		**Pn**	**15 59 11.4**	**-0.7**
AAI	**Ambon**	**1.10**	**291**	P		**Pn**	**15 59 13.8**	**-2.2**
NLAI	**Namlea**	**2.28**	**291**	P		**Pn**	**15 59 30.7**	**-1.6**
FAKI	**Fak Fak**	**3.23**	**69**	Pn		**Pn**	**15 59 45.4**	**0.0**
FAKI	**Fak Fak**	**3.23**	**69**	P		**Pn**	**15 59 45.6**	**+0.2**
FAKI	**Fak Fak**	**3.23**	**69**	P		**Pn**	**15 59 46.0**	**+0.6**
SIJI	**Sorong**	**3.79**	**33**	Pn		**Pn**	**15 59 52.3**	**-0.7**
26nm,0.3s,baz=246,slow=20,SNR=212								
SIJI				Sn		**Sn**	**16 00 35.5**	**-1.0**
22nm,0.3s,baz=218,slow=20,SNR=3.6								
SIJI				LR		LR	16 01 45.5	
comp=Z,902nm,19.9s,baz=295,slow=45 87nm,0.2s								
SANI	**Sanana**	**3.81**	**302**	P		**Pn**	**15 59 52.5**	**-0.8**
SANI	**Sanana**	**3.81**	**302**	P		**Pn**	**15 59 52.6**	**-0.8**
LBMI	**Labuha**	**3.83**	**333**	P		**Pn**	**15 59 54.5**	**+0.9**
SAUI	**Saumlaki**	**4.39**	**152**	Pn		**Pn**	**16 00 03.4**	**+2.0**
TNTI	**Ternate**	**5.16**	**339**			**Pn**	**16 00 12.0**	**+0.1**
TNTI	**Ternate**	**5.16**	**339**	P		**Pn**	**16 00 11.8**	**-0.2**
0.2nm47nm,0.6s								
TNTI	**Ternate**	**5.16**	**339**	P		**Pn**	**16 00 12.6**	**+0.6**
KMSI	**Cibinong**	**6.99**	**311**	P		**Pn**	**16 00 37.3**	**+0.3**
0.6nm61nm,0.7s								
LUWI	**Luwuk**	**7.12**	**295**			**Pn**	**16 00 39.4**	**+0.6**
LUWI	**Luwuk**	**7.12**	**295**	P		**Pn**	**16 00 39.0**	**+0.2**
LUWI	**Luwuk**	**7.12**	**295**	P		**Pn**	**16 00 40.4**	**+1.6**
APSI	**Ampana**	**8.19**	**292**	P		**Pn**	**16 00 53.6**	**0.0**
999nm108nm,1.1s								
BATI	**Baumata**	**8.21**	**222**	Pn		**Pn**	**16 00 56.8**	**+2.8**
48nm,0.3s,baz=89,slow=4.3,SNR=71								
BATI				Sn		**Sn**	**16 02 27.4**	**+1.6**
baz=163,slow=19								
BATI				LR		LR	16 04 31.1	
comp=Z,273nm,21.8s,baz=46,slow=40								
BATI	**Baumata**	**8.21**	**222**	P		**Pn**	**16 00 54.0**	**+0.1**
933nm79nm,0.5s								
MMRI	**Maumere**	**8.29**	**237**	Pn		**Pn**	**16 00 55.4**	**+0.5**
MMRI	**Maumere**	**8.29**	**237**	P		**Pn**	**16 00 54.5**	**-0.4**
50nm,0.7s								
MRSI	**Marisa**	**8.57**	**302**	P		**Pn**	**16 00 56.3**	**-2.5**
MTN	**Manton Dam**	**8.91**	**168**	Pn		**Pn**	**16 01 04.5**	**+0.9**
MTN	**Manton Dam**	**8.91**	**168**	P		**Pn**	**16 01 04.4**	**+0.9**
KDU	**Kakadu**	**9.14**	**160**	P		**Pn**	**16 00 56.6**	**0.0**
KAPI	**Kappang**	**9.49**	**264**	Pn		**Pn**	**16 01 14.3**	**+2.9**
3.4nm,0.3s,baz=82,slow=7.1,SNR=8.4								
KAPI				LR		LR	16 04 28.5	
comp=Z,175nm,20.9s,baz=91,slow=35 19nm,0.6s								
KAPI	**Kappang**	**9.49**	**264**			**Pn**	**16 01 13.4**	**+2.0**
KAPI	**Kappang**	**9.49**	**264**	P		**Pn**	**16 01 12.8**	**+1.4**
TOLI2	**Tolitoli**	**9.89**	**301**	Pn		**Pn**	**16 01 17.1**	**+0.2**
TOLI2	**Tolitoli**	**9.89**	**301**	P		**Pn**	**16 01 18.6**	**+1.8**
KNRA	**Kununurra**	**11.54**	**182**	Pn		**Pn**	**16 01 36.6**	**-2.8**
KNRA	**Kununurra**	**11.54**	**182**	P		**Pn**	**16 01 38.1**	**-1.3**
DAV	**Davao City (W)**	**11.66**	**342**	LR		LR	16 07 11.1	
comp=Z,28nm,21.4s,baz=220,slow=42								
PLAI	**Plampang**	**12.31**	**247**	P		**Pn**	**16 01 51.7**	**+1.6**
FITZ	**Fitzroy Crossi**	**14.37**	**194**	Pn		**Pn**	**16 02 16.4**	**-1.8**
0.3nm,0.3s,baz=23,slow=12,SNR=9.4								
FITZ				LR		LR	16 07 53.4	
comp=Z,128nm,20.2s,baz=24,slow=37 1.8nm,0.5s								
FITZ	**Fitzroy Crossi**	**14.37**	**194**	Pn		**Pn**	**16 02 16.1**	**-2.1**
FITZ	**Fitzroy Crossi**	**14.37**	**194**	P		**Pn**	**16 02 17.3**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.60**	**253**	Pn		**Pn**	**16 02 35.4**	**+0.8**
JAGI				IAmb		IAmb	16 03 18.8	
comp=Z,110nm,1.4s								
WB0	**Warramunga Arr**	**16.39**	**162**	Pn		**Pn**	**16 02 41.0**	**-3.7**
WRA	**Warramunga Arr**	**16.54**	**163**	Pn		**Pn**	**16 02 41.9**	**-4.7**
comp=Z,0.4nm,0.3s,baz=339,slow=13,SNR=25								
WRA				LR		LR	16 09 41.8	
comp=Z,148nm,20.0s,baz=332,slow=39								
WRA	**Warramunga Arr**	**16.54**	**163**			**Pn**	**16 02 42.6**	**-3.9**
WB2	**Warramunga Arr**	**16.54**	**163**	Pn		**Pn**	**16 02 43.4**	**-3.2**
WR0	**Warramunga Arr**	**16.61**	**162**	P		**Pn**	**16 02 44.0**	**-3.5**
COEN	**Coen**	**16.91**	**126**			**Pn**	**16 02 49.5**	**-1.8**
COEN	**Coen**	**16.91**	**126**	P		**Pn**	**16 02 51.1**	**-0.1**
SBUM	**Sibu**	**18.19**	**291**	P		**P**	**16 03 07.4**	**+0.2**
SBUM				IAmb		IAmb	16 03 10.3	
comp=Z,41nm,0.9s								
QIS	**Mount Isa**	**19.25**	**149**	P		**P**	**16 03 18.9**	**+0.1**
MBWA	**Marble Bar**	**19.32**	**208**	P		**P**	**16 03 18.2**	**-1.4**
PSA00	**Pilbara Seismi**	**19.63**	**207**	P		**P**	**16 03 22.8**	**-0.1**
PSA00				IAmb		IAmb	16 03 32.5	
comp=Z,11nm,0.8s								
PSA00	**Pilbara Seismi**	**19.63**	**207**	P		**P**	**16 03 21.8**	**-1.1**
PSA00				IAmb		IAmb	16 03 25.9	
comp=Z,11nm,1.2s								
PSA00	**Pilbara Seismi**	**19.63**	**207**	P		**Pn**	**16 03 24.2**	**-0.2**
KSM	**Kuching**	**19.69**	**286**	P		**P**	**16 03 22.1**	**-1.6**
KSM				IAmb		IAmb	16 03 25.9	
comp=Z,54nm,1.1s								
KSM	**Kuching**	**19.69**	**286**	P		**Pn**	**16 03 25.7**	**+0.5**
AS31	**Alice Springs**	**19.99**	**167**	P		**P**	**16 03 27.0**	**+0.1**
AS31				IAmb		IAmb	16 03 33.3	
comp=Z,7.4nm,0.6s								
ASAR	**Alice Springs**	**19.99**	**167**	P		**P**	**16 03 27.3**	**+0.4**
comp=Z,2.4nm,0.3s,baz=351,slow=11,SNR=216								
ASAR				S		**S**	**16 07 10.1**	**-0.2**
comp=Z,2.5nm,0.9s,baz=348,slow=22,SNR=4.2								
ASAR				PcP		**PcP**	**16 07 42.4**	**-0.3**
comp=Z,0.4nm,0.6s,baz=354,slow=2.3,SNR=1.6								
ASAR				ScP		**ScP**	**16 11 17.1**	**+0.4**
comp=Z,0.6nm,1.1s,baz=3.8,slow=2.8,SNR=2.1								
ASAR				LR		LR	16 11 35.0	
comp=Z,132nm,18.3s,baz=348,slow=38 comp=Z,14nm,0.6s								
ASAR	**Alice Springs**	**19.99**	**167**	P		**P**	**16 03 27.2**	**+0.4**
ASAR						**S**	**16 07 08.8**	**-1.4**
MTSU	**Mount Surprise**	**20.33**	**135**	P		**P**	**16 03 31.4**	**+0.8**
WRKA	**Warakurna**	**20.86**	**182**	P		**P**	**16 03 37.4**	**+1.1**
LEM	**Lembang**	**21.68**	**262**	LR		LR	16 12 33.9	
comp=Z,120nm,18.9s,baz=212,slow=38								
CTA	**Charters Tower**	**22.99**	**135**	P		**P**	**16 03 59.3**	**+0.2**
comp=Z,8.6nm,0.9s,baz=315,slow=13,SNR=7.2 comp=Z,8.6nm,0.9s								
CTA	**Charters Tower**	**22.99**	**135**	P		**P**	**16 04 00.7**	**+1.6**
CTAO	**Charters Tower**	**22.99**	**135**	P		**P**	**16 03 58.3**	**-0.8**
CTAO				IAmb		IAmb	16 04 02.2	
comp=Z,21nm,1.4s								
GUMO	**Guam**	**23.44**	**41**	LR		LR	16 13 14.7	
comp=Z,20nm,18.4s,baz=204,slow=37								
OOD	**Oodnadatta**	**24.38**	**166**	P		**P**	**16 04 13.4**	**+1.1**
MEEK	**Meekatharra**	**24.62**	**203**	P		**P**	**16 04 16.1**	**+1.5**
MYKOM	**Kota Tinggi**	**26.02**	**282**	P		**P**	**16 04 27.0**	**-0.3**
MYKOM				IAmb		IAmb	16 04 32.0	
comp=Z,10nm,0.7s								
MULG	**Mulgathing**	**26.46**	**171**	P		**P**	**16 04 32.5**	**+1.4**
FORT	**Forrest**	**26.58**	**182**	P		**P**	**16 04 31.7**	**-0.5**
FORT	**Forrest**	**26.58**	**182**	P		**P**	**16 04 32.1**	**-0.1**
LCRK	**Leigh Creek**	**27.57**	**163**	P		**P**	**16 04 42.5**	**+1.4**
BBOO	**Buckleboo**	**29.29**	**168**	P		**P**	**16 04 56.0**	**-0.4**
BBOO				IAmb		IAmb	16 05 09.9	
comp=Z,25nm,1.3s								
BBOO	**Buckleboo**	**29.29**	**168**	P		**P**	**16 04 58.3**	**+1.9**
IPM	**Ipoh**	**29.43**	**286**	P		**P**	**16 04 57.9**	**0.0**
IPM	**Ipoh**	**29.43**	**286**	P		**P**	**16 04 58.6**	**+0.7**
STKA	**Stephens Creek**	**30.00**	**159**	P		**P**	**16 05 02.2**	**-0.5**
comp=Z,1.8nm,0.5s,baz=327,slow=10.0,SNR=10								
STKA				LR		LR	16 17 32.9	
comp=Z,113nm,18.9s,baz=13,slow=37 comp=Z,1.8nm,0.5s								
STKA	**Stephens Creek**	**30.00**	**159**	P		**P**	**16 05 02.3**	**-0.4**
STKA	**Stephens Creek**	**30.00**	**159**	P		**P**	**16 05 04.2**	**+1.5**
KULM	**Kulim**	**30.02**	**288**	P		**P**	**16 05 01.4**	**-1.7**
KULM				IAmb		IAmb	16 05 04.9	
comp=Z,12nm,0.7s								
HTT	**Hallett**	**30.57**	**164**	P		**P**	**16 05 09.1**	**+1.3**
PATS	**Pohnpei**	**31.00**	**70**	P		**P**	**16 05 12.1**	**+0.4**
GSI	**Gunungsitoli**	**32.08**	**279**	P		**P**	**16 05 20.0**	**-1.3**
JCJ	**Chichijima**	**33.43**	**21**	LR		LR	16 16 55.7	
comp=Z,71nm,21.5s,baz=253,slow=32								
CAN	**Canberra**	**36.07**	**152**	P		**P**	**16 05 57.2**	**+1.5**
CRAI	**Chiangrai**	**37.23**	**312**	P		**P**	**16 06 06.4**	**+0.7**
CRAI				IAmb		IAmb	16 06 07.2	
comp=Z,3.4nm,0.8s								
CM31	**Chiang Mai Arr**	**37.30**	**308**	P		**P**	**16 06 06.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**37.30**	**308**	P		**P**	**16 06 07.6**	**+1.2**
comp=Z,7.7nm,0.9s,baz=139,slow=7.4,SNR=36 comp=Z,7.7nm,0.9s								
CMAR	**Chiang Mai Arr**	**37.30**	**308**	P		**P**	**16 06 06.3**	**-0.1**
CHTO	**Chiang Mai**	**37.50**	**308**	P		**P**	**16 06 08.6**	**+0.6**
JHJ	**Hachijo jima 2**	**38.32**	**14**	LR		LR	16 19 31.9	
comp=Z,70nm,19.1s,baz=176,slow=32								
KMI	**Kunming**	**38.78**	**320**	⇑P		**P**	**16 06 20.6**	**+1.6**
KMI				pmax		pmax		
comp=Z,7.0nm,0.7s								
PZH	**PanZhiHua**	**40.39**	**320**	P		**P**	**16 06 31.8**	**-0.5**
PZH				pmax		pmax		
comp=Z,10.0nm,0.9s								
PZH				pmax		pmax		
comp=Z,70nm,4.6s								
MJAR	**Matsushiro Arr**	**41.27**	**11**	P		**P**	**16 06 39.5**	**+0.2**
comp=Z,0.9nm,0.7s,baz=177,slow=10.0,SNR=4.5								
MJAR				LR		LR	16 21 09.2	
comp=Z,22nm,21.6s,baz=189,slow=32 comp=Z,0.9nm,0.7s								
KSRS	**Korea Array**	**41.34**	**358**	P		**P**	**16 06 40.9**	**+1.2**
comp=Z,1.0nm,0.8s,baz=177,slow=9.1,SNR=2.6								
KSRS				LR		LR	16 22 55.1	
comp=Z,26nm,21.8s,baz=180,slow=35 comp=Z,1.0nm,0.8s								
SEHB	**SEOHWA**	**42.14**	**359**	P		**P**	**16 06 45.9**	**-0.5**
SEHB				IAmb		IAmb	16 07 02.6	
comp=Z,5.3nm,1.0s								
JMM	**Marumori**	**43.09**	**13**	P		**P**	**16 06 54.4**	**+0.4**
JMM				IAmb		IAmb	16 06 59.9	
comp=Z,32nm,1.4s								
BJI	**Beijing**	**45.51**	**346**	P		**P**	**16 07 14.8**	**+1.4**
BJI				pmax		pmax		
comp=Z,5.0nm,0.7s								
BJI				smax		smax		
comp=N,22nm,0.7s								
BJI				smax		smax		
comp=E,82nm,0.6s								
HHC	**Hu-ho-hao-te**	**47.54**	**342**	*e*P		**P**	**16 07 31.3**	**+1.8**
HHC				pmax		pmax		
comp=Z,29nm,0.7s								
HHC				pmax		pmax		
comp=Z,82nm,5.5s								
PALK	**Pallekele**	**49.72**	**283**	LR		LR	16 29 56.0	
comp=Z,37nm,19.3s,baz=212,slow=37								
GTA	**Gaotai**	**51.06**	**331**	*e*P		**P**	**16 07 56.9**	**+0.5**
GTA				pP		pwP	16 08 10.7	+1.8
GTA				sP		sP	16 08 17.7	+9.2
GTA				pmax		pmax		
comp=Z,3.0nm,1.2s								
KLR	**Kul'dur**	**53.14**	**2**	LR		LR	16 33 00.1	
comp=Z,16nm,18.2s,baz=238,slow=38								
SONM	**Songino Array**	**55.44**	**341**	P		**P**	**16 08 29.3**	**+0.8**
comp=Z,1.3nm,0.9s,baz=164,slow=7.5,SNR=5.0								
SONM				LR		LR	16 34 10.7	
comp=Z,22nm,19.1s,baz=101,slow=38 comp=Z,1.3nm,0.9s								
KAAM	**Kaadhehdhoo**	**56.37**	**273**	P		**P**	**16 08 33.4**	**-2.2**
WMQ	**Urumqi**	**60.54**	**327**	*e*P		**P**	**16 09 07.1**	**+2.8**
WMQ				pmax		pmax		
comp=Z,35nm,0.9s								
PETK	**Petropavlovsk-**	**61.82**	**19**	LR		LR	16 32 15.9	
comp=Z,24nm,21.3s,baz=166,slow=32								
PETK	**Petropavlovsk-**	**61.82**	**19**	P		**P**	**16 09 11.3**	**-1.3**
MKAR	**Makanchi Array**	**65.38**	**326**	P		**P**	**16 09 36.2**	**-0.1**
comp=Z,2.3nm,0.7s,baz=119,slow=7.5,SNR=0.5								
MKAR				LR		LR	16 42 00.1	
comp=Z,10.0nm,18.9s,baz=84,slow=40 comp=Z,2.3nm,0.7s								
MAKZ	**Makanchi**	**65.56**	**326**	P		**P**	**16 09 36.9**	**-0.6**
MAKZ				IAmb		IAmb	16 09 46.2	
comp=Z,5.7nm,1.3s								
YAK	**Yakutsk**	**65.92**	**0**	LR		LR	16 36 39.7	
comp=Z,20nm,21.9s,baz=102,slow=34								
ZAA0	**Zalesovo Array**	**68.64**	**334**	P		**P**	**16 09 55.5**	**-1.3**
ZAA0				IAmb		IAmb	16 09 59.1	
comp=Z,4.7nm,0.9s								
ZALV	**Zalesovo Beam**	**68.64**	**334**	P		**P**	**16 09 56.2**	**-0.6**
comp=Z,3.9nm,0.8s,baz=113,slow=5.5,SNR=15 comp=Z,3.9nm,0.8s								
ZALV	**Zalesovo Beam**	**68.64**	**334**	P		**P**	**16 09 56.0**	**-0.8**
SEY	**Seymchan**	**69.10**	**11**	P		**P**	**16 10 01.1**	**+1.6**
comp=Z,2.0nm,0.8s,baz=214,slow=7.6,SNR=4.6 comp=Z,2.0nm,0.8s								
KURK	**Kurchatov**	**69.64**	**328**	P		**P**	**16 10 02.7**	**-0.4**
KURK				IAmb		IAmb	16 10 06.0	
comp=Z,11nm,1.1s								
KKAR	**Karatay Array**	**70.65**	**318**	P		**P**	**16 10 08.9**	**-0.6**
BRVK	**Borovoye**	**75.27**	**328**	P		**P**	**16 10 36.6**	**0.0**
BRVK				IAmb		IAmb	16 10 39.1	
comp=Z,5.8nm,1.1s								
VNDA	**Vanda**	**75.42**	**173**	P		**P**	**16 10 36.1**	**-1.0**
comp=Z,0.6nm,0.6s,baz=323,slow=5.9,SNR=6.5								
VNDA				LR		LR	16 42 34.9	
comp=Z,26nm,19.6s,baz=291,slow=35 comp=Z,0.6nm,0.6s								
VNDA	**Vanda**	**75.42**	**173**	P		**P**	**16 10 35.9**	**-1.2**
VNDA				IAmb		IAmb	16 11 17.0	
comp=Z,5.6nm,1.4s								
SBA	**Scott Base**	**76.31**	**172**	P		**P**	**16 10 43.0**	**+0.9**
MAW	**Mawson**	**77.38**	**201**	LR		LR	16 42 43.4	
comp=Z,41nm,18.2s,baz=89,slow=34								
NRIK	**Noril'sk**	**78.56**	**346**	P		**P**	**16 10 55.4**	**+0.6**
comp=Z,4.4nm,0.9s,baz=144,slow=10.0,SNR=6.1 comp=Z,4.4nm,0.9s								
ABKAR	**Akbulak array**	**79.75**	**321**	P		**P**	**16 11 00.7**	**-1.1**
ABKAR				IAmb		IAmb	16 11 04.4	
comp=Z,3.4nm,0.9s								
ABKAR	**Akbulak array**	**79.75**	**321**	P		**P**	**16 11 01.1**	**-0.7**
AKTO	**Aktyubinsk**	**81.30**	**322**	P		**P**	**16 11 09.8**	**-0.2**
comp=Z,1.4nm,0.5s,baz=110,slow=9.3,SNR=5.6								
AKTO				LR		LR	16 49 23.8	
comp=Z,17nm,21.2s,baz=77,slow=37 comp=Z,1.4nm,0.5s								
BELG	**Belogorsk**	**88.08**	**323**	P		**P**	**16 11 44.7**	**+0.5**
comp=Z,7.7nm,0.5s,baz=72,slow=3.2,SNR=2.5 comp=Z,7.7nm,0.5s								
ILAR	**Eielson Array**	**91.05**	**25**	P		**P**	**16 11 58.1**	**+0.3**
comp=Z,0.4nm,0.8s,baz=260,slow=5.4,SNR=2.4 comp=Z,0.4nm,0.8s								
MBAR	**Mbarara**	**98.42**	**269**	LR		LR	16 55 27.7	
comp=Z,24nm,18.2s,baz=84,slow=34								
ARCES	**ARCESS Array B**	**98.59**	**340**	P		Pdif	16 12 32.8	+0.5
comp=Z,1.7nm,0.9s,baz=67,slow=7.1,SNR=4.4								
ARCES				LR		LR	17 01 23.2	
comp=Z,14nm,19.4s,baz=66,slow=38 comp=Z,1.7nm,0.9s								
TORD	**Torodi Ar. Bea**	**127.44**	**283**	PKP		**PKiKP**	**16 17 59.9**	**-0.3**
comp=Z,0.9nm,0.8s,baz=43,slow=2.2,SNR=4.4								
CPUP	**Villa Florida**	**149.11**	**168**	PKPbc		**PKPbc**	**16 18 42.9**	**+0.2**
comp=Z,1.6nm,0.8s,baz=117,slow=2.3,SNR=3.1								

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*IDC **11** 16:05:01.8±1.9,20.63N×144.82E,h154km±17km, mb3.9/24,mbtmp4.4/28,Error ellipse: s-maj=16.2km s-min=8.7km az=87.0*
*NEIC **11** 16:05:03.7±1.8,20.80N±0.07×144.7E±0.1,h157km±7km, mb4.4/132,

comp=Z,37nm,1.5s
YHNB Yeheng 21.93 285 P P 16 09 43.7 +0.1
KSRS Korea Array 22.20 322 P P 16 09 46.6 +0.6
comp=Z,24nm,0.7s,baz=149,slow=8.6,SNR=129
comp=Z,24nm,0.7s
KSAR Wonju Array Be 22.21 322 P P 16 09 45.7 -0.4
SSLB Suanglung 22.25 282 P P 16 09 47.1 +0.4
SSLB IAmb IAmb 16 09 48.5
comp=Z,25nm,1.0s
JEW Eniwo 22.25 354 P P 16 09 46.9 +0.5
KS19 Wonju Array Si 22.26 322 P P 16 09 47.0 +0.3
TPUB Ta-pu 22.52 281 P P 16 09 49.9 +0.5
SEHB SEOHWA 22.59 324 P P 16 09 49.0 -0.8
USRK Ussuriysk Ar. 25.73 339 P P 16 10 18.9 +0.6
comp=Z,3.0nm,0.6s,baz=168,slow=9.2,SNR=5.7
comp=Z,3.0nm,0.6s
USRK Ussuriysk Ar. 25.73 339 P P 16 10 18.7 +0.4
NJ2 Nanjing 25.75 301 *eP* **P 16 10 18.2 -0.5**
NJ2 pmax pmax
comp=Z,12nm,0.5s
TOLI2 Tolitoli 30.46 233 P P 16 11 01.7 +1.0
TOLI2 IAmb IAmb 16 11 02.7
comp=Z,4.6nm,0.8s
PETK Petropavlovsk- 33.85 14 P P 16 11 30.0 +0.1
comp=Z,1.8nm,1.0s,baz=156,slow=7.3,SNR=1.4
comp=Z,1.8nm,1.0s
HHC Hu-ho-hao-te 34.59 313 *eP* **P 16 11 38.3 +1.7**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,75nm,6.2s
MIDW Midway 35.16 70 P P 16 11 41.4 -0.1
MTN Manton Dam 35.93 203 P P 16 11 46.5 -1.5
KNRA Kununurra 39.42 205 P P 16 12 16.0 -1.3
KNRA IAmb IAmb 16 12 18.0
comp=Z,11nm,1.2s
PZH PanZhiHua 39.71 287 P P 16 12 19.2 -0.8
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,70nm,4.5s
SONM Songino Array 41.04 320 P P 16 12 30.8 +0.2
comp=Z,2.6nm,0.4s,baz=132,slow=7.4,SNR=20
SONM PcP **PcP 16 14 27.6 -0.1**
comp=Z,0.3nm,0.5s,baz=159,slow=4.3,SNR=2.9
comp=Z,2.6nm,0.4s
SONM Songino Array 41.04 320 P P 16 12 31.3 +0.7
WB0 Warramunga Arr 41.48 195 P P 16 12 34.0 -0.2
WB0 IAmb IAmb 16 13 03.8
comp=Z,9.5nm,1.4s
CRAI Chiangrai 41.49 277 P P 16 12 35.3 +0.8
WR0 Warramunga Arr 41.63 195 P P 16 12 35.0 -0.5
WB2 Warramunga Arr 41.66 195 P P 16 12 34.6 -1.2
WRA Warramunga Arr 41.66 195 P P 16 12 34.5 -1.2
comp=Z,1.0nm,0.4s,baz=18,slow=8.4,SNR=19
comp=Z,1.0nm,0.4s
WRA Warramunga Arr 41.66 195 P P 16 12 34.6 -1.2
SEY Seymchan 42.52 5 P P 16 12 43.0 +0.8
comp=Z,1.3nm,0.5s,baz=112,slow=13,SNR=3.8
comp=Z,1.3nm,0.5s
YAK Yakutsk 42.60 350 P P 16 12 42.6 -0.3
FITZ Fitzroy Crossi 42.88 207 P P 16 12 44.8 -0.8
comp=Z,3.5nm,0.3s,baz=37,slow=11,SNR=40
comp=Z,3.5nm,0.3s
FITZ Fitzroy Crossi 42.88 207 P P 16 12 45.2 -0.4
CMAR Chiang Mai Arr 43.12 275 P P 16 12 48.7 +0.9
comp=Z,0.9nm,0.7s,baz=88,slow=6.2,SNR=6.4
comp=Z,0.9nm,0.7s
AS31 Alice Springs 45.35 194 P P 16 13 04.5 -0.8
ASAR Alice Springs 45.35 194 P P 16 13 03.8 -1.5
comp=Z,0.5nm,0.6s,baz=13,slow=6.6,SNR=18
comp=Z,0.5nm,0.6s
ASAR Alice Springs 45.35 194 P P 16 13 04.4 -0.9
KULM Kulim 45.45 257 P P 16 13 07.6 +1.4
GOMU GeErMu 46.06 301 P P 16 13 13.6 +2.3
GOMU pmax pmax
comp=Z,4.0nm,0.9s
GOMU pmax pmax
comp=Z,90nm,4.5s
WMQ Urumqi 52.35 310 *eP* **P 16 14 01.2 +2.6**
STKA Stephens Creek 52.37 183 P P 16 13 56.8 -1.8
comp=Z,0.9nm,0.5s,baz=35,slow=6.5,SNR=6.0
comp=Z,0.9nm,0.5s
STKA Stephens Creek 52.37 183 P P 16 13 57.2 -1.3
SDPT Sand Point 53.34 36 P P 16 14 05.6 +0.1
SDPT IAmb IAmb 16 14 17.8
comp=Z,12nm,1.0s
JIRN Jiri 53.47 290 *eP* **P 16 14 08.5 +1.1**
GUN Gumba 53.72 290 *eP* **P 16 14 11.8 +2.6**
PKI Pulchoki 54.17 290 *eP* **P 16 14 12.7 +0.3**
comp=Z,6.3nm,0.6s
PKIN Phulchoki 54.18 290 *eP* **P 16 14 12.8 +0.4**
comp=Z,8.9nm,0.5s
GKN Gorkha 54.80 290 *eP* **P 16 14 17.4 +0.6**
comp=Z,7.0nm,0.4s
DANN Dangsing 55.53 291 *eP* **P 16 14 23.2 +1.0**
comp=Z,35nm,0.4s
ZAA0 Zalesovo Array 55.90 322 P P 16 14 23.4 -0.6
ZALV Zalesovo Beam 55.90 322 P P 16 14 24.1 +0.1
comp=Z,6.8nm,0.5s,baz=107,slow=8.2,SNR=32
ZALV PcP **PcP 16 15 20.3 -0.6**
comp=Z,1.3nm,0.6s,baz=87,slow=3.3,SNR=3.6
comp=Z,6.8nm,0.5s
ZALV Zalesovo Beam 55.90 322 P P 16 14 23.4 -0.6
ZALV PcP **PcP 16 15 18.5 -2.4**
MK31 Makanchi Array 56.45 313 P P 16 14 28.6 +0.5
MK31 IAmb IAmb 16 14 30.0
comp=Z,2.9nm,0.8s
MK31 PcP **PcP 16 15 21.8 -1.4**
MKAR Makanchi Array 56.45 313 P P 16 14 29.0 +0.9
comp=Z,5.6nm,1.0s,baz=92,slow=9.0,SNR=27
MKAR PcP **PcP 16 15 23.1 -0.2**
comp=Z,0.9nm,0.5s,baz=84,slow=5.8,SNR=5.4
comp=Z,5.6nm,1.0s
MAKZ Makanchi 56.67 313 P P 16 14 30.7 +1.1
MORW Morawa 56.71 210 P P 16 14 29.7 -0.3
SII Sitkinak Islan 57.08 35 P P 16 14 31.9 -0.4
N18K Kilae Creek 57.26 30 P P 16 14 33.8 +0.3
N18K IAmb IAmb 16 14 35.3
comp=Z,6.1nm,1.2s
O18K Koktuh Hills 57.35 31 P P 16 14 35.1 +0.9
O18K IAmb IAmb 16 14 36.3
comp=Z,3.8nm,0.8s
SVW2 Sparrevohn 57.52 30 P P 16 14 35.3 0.0
OHAK Old Harbor 57.70 35 P P 16 14 36.9 +0.3
OHAK IAmb IAmb 16 14 41.6
comp=Z,14nm,1.5s
TTA Tatalina 57.88 28 P P 16 14 38.9 +1.0
TTA IAmb IAmb 16 14 39.8
comp=Z,4.4nm,1.2s
N19K Bonanza Creek 57.96 30 P P 16 14 40.0 +1.5
N19K IAmb IAmb 16 14 42.1
comp=Z,2.8nm,0.8s
KDAK Kodiak Island 58.19 34 P P 16 14 42.2 +2.2
KDAK IAmb IAmb 16 15 13.9
comp=Z,9.8nm,1.4s
ILSW Iliamna Southw 58.39 31 P P 16 14 42.7 +1.1
ILSW IAmb IAmb 16 15 02.3
comp=Z,11nm,1.4s
K20K Telida 58.85 27 P P 16 14 45.9 +1.3
K20K IAmb IAmb 16 14 47.0
comp=Z,3.3nm,0.9s
J20K Nowinta River 59.06 27 P P 16 14 47.3 +1.4
J20K IAmb IAmb 16 14 48.1
comp=Z,2.3nm,0.6s
KURK Kurchatov 59.21 317 P P 16 14 47.6 +0.5
KURK IAmb IAmb 16 14 48.3
comp=Z,5.6nm,0.7s
CNPM China Poot 59.23 32 P P 16 14 47.1 -0.2
NRIK Noril'sk 59.44 340 P P 16 14 47.8 -0.6
comp=Z,4.7nm,0.8s,baz=108,slow=9.4,SNR=4.9
comp=Z,4.7nm,0.8s
NRIK Noril'sk 59.44 340 P P 16 14 48.4 0.0
NRIK IAmb IAmb 16 15 25.5
comp=Z,7.3nm,1.3s
PPLA Purkeypile 59.55 28 P P 16 14 50.7 +1.2
PPLA IAmb IAmb 16 14 55.3
comp=Z,4.8nm,1.1s
SKT Skwentna 59.63 29 P P 16 14 50.1 +0.2
SKT IAmb IAmb 16 14 50.7
comp=Z,3.6nm,1.0s
CAST Castle Rocks 59.73 28 P P 16 14 51.1 +0.5
CAST IAmb IAmb 16 14 52.5
comp=Z,4.5nm,0.8s
IMAR Indian Mountai 59.77 25 P P 16 14 50.7 0.0
H21K Melozitna Rive 60.04 25 P P 16 14 53.7 +1.0
H21K IAmb IAmb 16 14 54.6
comp=Z,2.5nm,0.7s
I21K Tanana 60.24 26 P P 16 14 55.2 +1.2
I21K IAmb IAmb 16 15 03.0
comp=Z,4.8nm,1.3s
KTH Kantishna Hill 60.27 28 P P 16 14 54.2 -0.1
BPAW Bear Paw Mtn. 60.37 27 P P 16 14 56.0 +1.0
BPAW IAmb IAmb 16 14 56.7
comp=Z,3.8nm,0.7s
MLY Manley 60.71 26 P P 16 14 57.8 +0.6
GHO Glory Hole Cre 60.79 30 P P 16 14 58.2 +0.3
GHO IAmb IAmb 16 14 58.8
comp=Z,4.0nm,0.8s
BOOM Boomskoye usch 60.88 308 P P 16 14 59.6 +0.6
PWL Port Wells 60.91 31 P P 16 14 59.2 +0.5
PWL IAmb IAmb 16 15 06.7
comp=Z,6.3nm,0.9s
KSH Kashi 61.01 304 P P 16 15 05.2 +5.4
KSH pmax pmax
comp=Z,6.0nm,0.7s
SML Sawmill 61.08 30 P P 16 15 00.2 +0.4
SML IAmb IAmb 16 15 01.5
comp=Z,7.9nm,0.8s
NEA2 Nenana 61.30 27 P P 16 15 02.0 +0.9
I23K Minto, Yukon-K 61.30 26 P P 16 15 02.0 +0.8
I23K IAmb IAmb 16 15 03.4
comp=Z,2.1nm,0.6s
H23K Yukon River 61.38 25 P P 16 15 02.5 +0.7
H23K IAmb IAmb 16 15 07.0
comp=Z,6.0nm,1.4s
GLI Glacier Island 61.51 31 P P 16 15 02.6 0.0
SCM Sheep Creek Mo 61.55 30 P P 16 15 03.3 +0.3
MID Middleton Isla 61.68 33 P P 16 15 02.8 -1.0
WRH Wood River Hil 61.69 27 P P 16 15 03.4 -0.4
WRH IAmb IAmb 16 15 43.7
comp=Z,5.1nm,1.4s
MDM Murphy Dome 61.73 26 P P 16 15 04.0 -0.1
HIN Hinchinbrook I 61.73 32 P P 16 15 04.4 +0.2
DHY Denali Highway 61.74 29 P P 16 15 04.5 +0.2
FID Port Fidalgo 61.79 31 P P 16 15 04.6 0.0
FID IAmb IAmb 16 15 33.1
comp=Z,4.8nm,0.8s
CCB Clear Creek Bu 61.84 27 P P 16 15 04.6 -0.2
H24K Noodor Dome 62.06 25 P P 16 15 06.2 -0.1
TOLK Toolik Lake Re 62.08 22 P P 16 15 07.6 +1.3
KLU Klutina 62.16 31 P P 16 15 06.3 -0.8
KLU IAmb IAmb 16 15 09.9
comp=Z,4.1nm,1.1s
IL31 62.26 27 P P 16 15 07.0 -0.5
ILAR Eielson Array 62.26 27 P P 16 15 07.0 -0.6
comp=Z,2.1nm,0.8s,baz=258,slow=5.5,SNR=17
comp=Z,2.1nm,0.8s
ILAR Eielson Array 62.26 27 P P 16 15 07.1 -0.5
PAX Paxson 62.58 29 P P 16 15 10.5 +0.6
BMRM Bremner River 62.73 31 P P 16 15 11.7 +0.8
BMRM IAmb IAmb 16 15 36.7
comp=Z,8.4nm,1.4s
N25K Chitina, Valde 62.80 30 P P 16 15 12.8 +1.4
HMT Hamilton 62.83 32 P P 16 15 11.3 -0.2
J25K Salcha River, 62.87 27 P P 16 15 11.2 -0.6
RIDG Independent Ri 62.97 28 P P 16 15 12.1 -0.3
RIDG IAmb IAmb 16 15 13.6
comp=Z,3.6nm,0.8s
RIDG PcP **PcP 16 15 48.6 -0.5**
GLB Gilahina Butte 63.16 31 P P 16 15 13.5 -0.2
GLB IAmb IAmb 16 15 15.5
comp=Z,5.9nm,1.3s
SCRK Sand Creek 63.38 28 P P 16 15 15.4 +0.2
SCRK IAmb IAmb 16 15 16.3
comp=Z,3.4nm,0.8s
CRQM Cirque 63.42 31 P P 16 15 16.1 +0.5
CRQM IAmb IAmb 16 15 16.9
comp=Z,11nm,1.2s
J26L Joseph Creek 63.63 27 P P 16 15 17.1 +0.3
J26L IAmb IAmb 16 15 17.9
comp=Z,3.9nm,0.8s
J26L PcP **pP 16 15 52.3 +1.0**
BMAR Burnt Mountain 63.65 24 P P 16 15 18.0 +1.3
BMAR PcP **PcP 16 15 52.1 +0.3**
NIL Nilore 63.80 298 P P 16 15 19.8 +1.4
NIL IAmb IAmb 16 15 21.4
comp=Z,5.7nm,0.6s
M27K Edge Creek, AK 64.16 30 P P 16 15 20.5 +0.2
L27K Beaver Creek, 64.24 29 P P 16 15 21.5 +0.8
BCAR Beaver Creek A 64.26 29 P P 16 15 21.2 +0.3
BRVK Borovoye 64.45 320 P P 16 15 22.6 +0.4
BRVK IAmb IAmb 16 15 23.5
comp=Z,7.0nm,0.8s
KK31 Karatay Array 64.83 309 P P 16 15 25.7 +0.8
KK31 IAmb IAmb 16 15 26.8
comp=Z,5.7nm,0.8s
KKAR Karatay Array 64.83 309 P P 16 15 25.5 +0.6
KKAR Karatay Array 64.83 309 P P 16 15 25.8 +1.0
KKAR IAmb IAmb 16 15 26.8
comp=Z,5.7nm,0.8s
GAR Garm 65.43 304 P P 16 15 29.8 +0.8
HYT Haines Junctio 66.18 32 P P 16 15 33.0 -0.4
HYT IAmb IAmb 16 16 13.3
comp=Z,6.5nm,1.4s
CHGR Chuyangaron 66.37 304 P P 16 15 35.7 +0.8
KBL Kabul 67.11 300 P P 16 15 40.0 +0.1
SNZO South Karori 67.66 156 P P 16 15 45.8 +3.2
ARU Arti 70.94 324 P P 16 16 02.4 -0.4
comp=Z,2.8nm,0.3s,baz=89,slow=5.7,SNR=4.8
comp=Z,2.8nm,0.3s
ABKAR Akbulak array 71.29 316 P P 16 16 05.0 -0.1
ABKAR IAmb IAmb 16 16 06.3
comp=Z,3.0nm,0.6s
ABKAR PcP **PcP 16 16 21.5 -2.5**
HRA Herat 72.64 301 P P 16 16 12.4 -1.2
HRA IAmb IAmb 16 16 15.6
comp=Z,7.8nm,0.7s
KAAM Kaadhehdhoo 72.79 264 P P 16 16 13.3 -1.3
KIRV Kirov 75.31 327 P P 16 16 28.3 -0.1
comp=Z,12nm,0.7s,baz=49,slow=9.3,SNR=4.1
comp=Z,12nm,0.7s
EUNU Eureka 75.88 8 P P 16 16 32.2 +0.8
EUNU IAmb IAmb 16 16 32.5
comp=Z,3.5nm,0.6s
YKA Yellowknife Ar 76.64 28 P P 16 16 36.0 +0.1
comp=Z,4.6nm,0.6s,baz=293,slow=5.6,SNR=38
comp=Z,4.6nm,0.6s
YKA Yellowknife Ar 76.64 28 P P 16 16 35.8 -0.1
PINE Pine Mountain 78.96 47 P P 16 16 50.2 +0.9
PINE IAmb IAmb 16 16 51.5
comp=Z,4.5nm,0.8s
UOSS Minazif 80.29 293 P P 16 16 56.4 -0.2
UOSS IAmb IAmb 16 16 58.1
comp=Z,10nm,1.1s
ARCES ARCESS Array B 80.33 342 P P 16 16 55.7 -0.3
comp=Z,1.5nm,0.7s,baz=85,slow=8.7,SNR=8.4
comp=Z,1.5nm,0.7s
ARCES ARCESS Array B 80.33 342 P P 16 16 55.6 -0.4
BEKR Beckworth 80.61 51 P P 16 16 59.2 +0.9
TULEG Thule 80.86 8 P P 16 16 59.3 +0.6
TULEG IAmb IAmb 16 17 00.1
comp=Z,10.0nm,0.7s
BMO Blue Mountains 81.08 45 P P 16 17 01.0 +0.4
PNTR Pine Nut 81.42 52 P P 16 17 03.5 +0.8
PNTR IAmb IAmb 16 17 05.4
comp=Z,5.8nm,0.7s
KVN Kaiserville 82.53 51 P P 16 17 09.1 +0.7
NVAR Mina Array Bea 82.60 52 P P 16 17 09.4 +0.5
comp=Z,2.4nm,0.6s,baz=269,slow=6.0,SNR=19
comp=Z,2.4nm,0.6s
NV11 Mina Array Sit 82.71 52 P P 16 17 09.9 +0.5
LCH Last Change Ra 83.51 53 P P 16 17 14.2 +0.8
GRAC Grapevine Rang 83.80 53 P P 16 17 15.6 +0.7
GRAC IAmb IAmb 16 17 18.1
comp=Z,5.3nm,1.3s
LRM Limekiln Ridge 83.90 43 P P 16 17 16.0 +0.7
ELK Elko 83.97 49 P P 16 17 16.0 +0.2
BOZ Bozeman (W) 84.51 43 P P 16 17 18.3 -0.1
FIA1 FINESS Array S 84.71 335 P P 16 17 17.6 -1.1
FINES FINESS Array B 84.71 335 P P 16 17 17.6 -1.2
comp=Z,4.6nm,0.4s,baz=74,slow=3.9,SNR=46
comp=Z,4.6nm,0.4s
PDAR Pinedale Array 87.05 45 P P 16 17 29.4 -1.6
comp=Z,0.3nm,0.4s,baz=126,slow=1.1,SNR=5.0
comp=Z,0.3nm,0.4s
AKASG Malin Array Be 89.17 325 P P 16 17 38.4 -2.2
comp=Z,0.2nm,0.4s,baz=50,slow=4.8,SNR=2.2
comp=Z,0.2nm,0.4s
HFS Hagfors 90.21 338 P P 16 17 43.5 -1.7
comp=Z,0.3nm,0.3s,baz=64,slow=6.6,SNR=1.0
comp=Z,0.3nm,0.3s
BRTR Keskin Array B 92.09 314 P P 16 17 53.0 -1.6
comp=Z,0.8nm,0.7s,baz=54,slow=4.0,SNR=3.2
comp=Z,0.8nm,0.7s
TORD Torodi Ar. Bea 130.51 310 PKP PKPdf 16 23 55.1 -0.6
comp=Z,0.3nm,0.4s,baz=93,slow=2.6,SNR=1.6
LPAZ La Paz 148.53 88 PKPbc PKPbc 16 24 31.8 -0.9
comp=Z,1.9nm,0.6s,baz=300,slow=1.8,SNR=7.2

KEA 11 16:06:18.4, 43.84N×125.63E, h10km, ML3.0/1, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**2.95**	**73**	Pg	Pg	16 07 14.5	-0.4
MDJ				Sg	Sg	16 07 53.4	+0.2
MDJ				smax	smax		
	comp=N,63nm,0.9s						
MDJ				smax	smax		
	comp=E,74nm,0.7s						
CHJN	**Chongjin**	**3.68**	**122**	Sg	Sg	16 08 18.8	+2.2
SUJ	**Sinuiju**	**3.83**	**193**	Pg	Pg	16 07 32.9	+1.2
SUJ				Sg	Sg	16 08 24.0	+2.6
SUJ				AML	AML		
	comp=N,31nm,0.9s						
SUJ				AML	AML		
	comp=E,40nm,0.8s						
SUJ				AML	AML		
	comp=Z,35nm,0.3s						
HJU	**Haeju**	**5.79**	**179**	Sg	Sg	16 09 27.9	+3.6

DDA ***11*** *16:21:14.9±0.0, 38.80N×26.41E, h7km±3km, ML3.1*
ISK ***11*** *16:21:14.9, 38.79N×26.43E, h11km, ML3.2/18*
THE ***11*** *16:21:16.6, 38.81N×26.42E, h13km, ML2.7/6, Error ellipse: s-maj=1.7km s-min=0.6km az=266.0*
ATH ***11*** *16:21:16.4, 38.79N×26.42E, h26km±8km, ML2.9/5, Error ellipse: s-maj=8.5km s-min=1.0km az=297.0*

ISC 11 16:21:15.7±0.9, 38.79N±0.02×26.47E±0.02, h15km±7km, n61, σ0.861/95, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.22**	**110**	PG	**Pg**	**16 21 20.6**	**0.0**
FOCM				SG	**Sg**	**16 21 24.5**	**+0.6**
URLA	**Izmir**	**0.44**	**167**	PG	**Pg**	**16 21 24.1**	**-0.4**
URLA				SG	**Sb**	**16 21 31.0**	**-0.6**
URLA	**Izmir**	**0.44**	**167**	P	**Pg**	**16 21 23.7**	**-0.8**
URLA				S	**Sb**	**16 21 30.9**	**-0.8**
URLA				*i* AML	AML	16 21 32.0	
	comp=E,933nm,0.4s						
DKL	**Dikili**	**0.44**	**50**	PG	**Pg**	**16 21 24.4**	**-0.2**
DKL				SG	**Sb**	**16 21 31.3**	**-0.4**
PRK	**Paraskevi**	**0.48**	**342**	P	**Pb**	**16 21 26.1**	**+0.2**
PRK				S	**Sg**	**16 21 32.6**	**+0.9**
PRK							
	2μm,0.5s						
PRK	**Paraskevi**	**0.48**	**342**	P	**Pb**	**16 21 26.1**	**+0.2**
PRK				S	**Sg**	**16 21 32.7**	**+1.0**
PRK				AML	AML	16 21 33.9	
	comp=N,4449μm,0.4s						
PRK				AML	AML	16 21 34.7	
	comp=E,3594μm,0.5s						
ZEDA	**zmir-Bergama**	**0.51**	**69**	P	**Pg**	**16 21 25.7**	**-0.1**
CHOS	**Chios island**	**0.51**	**219**	P	**Pb**	**16 21 26.4**	**-0.1**
CHOS				S	**Sb**	**16 21 34.2**	**+0.4**
	comp=E,2μm,0.2s						
CHOS	**Chios island**	**0.51**	**219**	P	**Pb**	**16 21 26.3**	**-0.1**
CHOS				S	**Sg**	**16 21 33.0**	**+0.2**
CHOS				AML	AML	16 21 35.1	
	comp=E,3853μm,0.3s						
CHOS				AML	AML	16 21 38.5	
	comp=N,2441μm,0.1s						
AYVA	**Ayvalik**	**0.55**	**19**	P	**Pg**	**16 21 26.1**	**-0.4**
AYVA				S	**Sg**	**16 21 32.9**	**-0.9**
ZEYE	**Izmir, Urla-Ze**	**0.55**	**177**	P	**Pb**	**16 21 26.8**	**-0.3**
ZEYE				S	**Sb**	**16 21 35.2**	**+0.5**
ZEYE				*i* AML	AML	16 21 39.0	
	comp=N,1μm,0.3s						
ZEYE				*i* AML	AML	16 21 39.0	
	comp=N,834nm,0.3s						
BLCB	**Balcova**	**0.60**	**132**	PG	**Pb**	**16 21 27.7**	**-0.3**
BLCB				SG	**Sb**	**16 21 36.9**	**+0.6**
SIGR	**SIGRI**	**0.64**	**312**	P	**Pg**	**16 21 28.0**	**-0.2**
SIGR				S	**Sg**	**16 21 37.2**	**+0.6**
	comp=N,452nm,0.2s						
SIGR	**SIGRI**	**0.64**	**312**	P	**Pg**	**16 21 28.0**	**-0.2**
SIGR				S	**Sg**	**16 21 36.8**	**+0.2**
SIGR				AML	AML	16 21 40.7	
	comp=N,1005μm,0.4s						
SIGR				AML	AML	16 21 41.5	
	comp=E,828μm,0.3s						
GPNR	**Gulpinar-Canak**	**0.71**	**339**	PG	**Pg**	**16 21 28.9**	**-0.7**
PSRA	**Psara**	**0.75**	**251**	P	**Pb**	**16 21 30.9**	**+0.5**
PSRA				S	**Sb**	**16 21 40.4**	**0.0**
PSRA				AML	AML	16 21 45.1	
	comp=N,3512μm,0.2s						
PSRA				AML	AML	16 21 45.6	
	comp=E,3291μm,0.2s						
KOCA	**Canakkale, Ayv**	**0.76**	**340**	P	**Pg**	**16 21 30.4**	**0.0**
KOCA				S	**Sg**	**16 21 39.5**	**-0.9**
DGB	**zmir**	**0.81**	**156**	P	**Pg**	**16 21 30.9**	**-0.4**
DGB				S	**Sb**	**16 21 42.4**	**+0.3**
BUHA	**Balikesir, Bur**	**0.86**	**34**	P	**Pg**	**16 21 31.8**	**-0.5**
BUHA				S	**Sb**	**16 21 44.5**	**+0.9**
BUHA				*i* AML	AML	16 21 49.0	
	comp=E,581nm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.95**	**4**	P	**Pg**	**16 21 33.2**	**-0.9**
BAYC				S	**Sg**	**16 21 44.6**	**-2.1**
BAYC				*i* AML	AML	16 21 48.0	
	comp=E,413nm,0.1s						
BAYC				*i* AML	AML	16 21 49.0	
	comp=E,629nm,0.4s						
EZN	**Ezine**	**1.04**	**354**	PG	**Pb**	**16 21 35.3**	**-0.1**
EZN				SG	**Sg**	**16 21 50.0**	**+0.6**
AKS	**Akhisar**	**1.06**	**85**	PN	**Pn**	**16 21 36.4**	**+0.4**
AKHS	**Akhisar**	**1.06**	**85**	P	**Pn**	**16 21 36.7**	**+0.7**
BOZC	**Bozcaada**	**1.10**	**343**	PN	**Pb**	**16 21 36.2**	**-0.2**
BOZC				SN	**Sg**	**16 21 51.8**	**+0.5**
BOZC	**Bozcaada**	**1.10**	**343**	P	**Pb**	**16 21 35.7**	**-0.7**
BOZC				P	**Pn**	**16 21 36.0**	**-0.6**
BOZC				*i* AML	AML	16 21 52.0	
	comp=E,432nm,0.4s						
SMG	**Samos**	**1.12**	**165**	P	**Pb**	**16 21 36.5**	**-0.2**
SMG				S	**Sn**	**16 21 53.5**	**+1.5**
	comp=E,818nm,0.4s						
SMG	**Samos**	**1.12**	**165**	P	**Pg**	**16 21 36.7**	**-0.5**
SMG				S	**Sn**	**16 21 52.0**	**+0.1**
SMG				AML	AML	16 21 57.0	
	comp=N,1400μm,0.5s						
SMG				AML	AML	16 21 57.0	
	comp=E,1851μm,0.3s						
GOMA	**Golmarmara-Man**	**1.14**	**94**	PN	**Pg**	**16 21 37.8**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.14**	**59**	P	**Pb**	**16 21 37.0**	**-0.2**
STEP				S	**Sn**	**16 21 53.4**	**+0.8**
STEP				*i* AML	AML	16 21 54.0	
	comp=E,589nm,0.5s						
STEP				*i* AML	AML	16 21 55.0	
	comp=E,835nm,0.7s						
GCAM	**G?zelcaml?**	**1.24**	**151**	PN	**Pg**	**16 21 39.2**	**-0.4**
GCAM	**G?zelcaml?**	**1.24**	**151**	P	**Pg**	**16 21 39.6**	**0.0**
GCAM				S	**Sg**	**16 21 56.5**	**+0.7**
GCAM				*i* AML	AML	16 21 58.0	
	comp=E,186nm,0.3s						
ECEA	**Canakkale, Ece**	**1.27**	**350**	P	**Pn**	**16 21 38.2**	**-0.8**
ECEA				S	**Sn**	**16 21 56.7**	**+0.9**
ECEA				*i* AML	AML	16 21 59.0	
	comp=E,990nm,0.4s						
ECEA				*i* AML	AML	16 22 02.0	
	comp=E,476nm,0.5s						
BALY	**Balya**	**1.31**	**43**	P	**Pn**	**16 21 38.4**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**1.40**	**126**	PN	**Pb**	**16 21 41.5**	**-0.1**
GOKA	**anakkale-Gk**	**1.47**	**343**	P	**Pn**	**16 21 41.5**	**-0.1**
GOKA				S	**Sn**	**16 22 01.6**	**+1.1**
GOKA				*i* AML	AML	16 22 03.0	
	comp=E,688nm,0.5s						
GADA	**Gvkgeada**	**1.47**	**343**	PN	**Pn**	**16 21 41.7**	**+0.1**
GADA				SN	**Sn**	**16 22 01.4**	**+0.8**
LIA	**Limnos Island**	**1.49**	**318**	P	**Pn**	**16 21 41.8**	**-0.1**
LIA				S	**Sn**	**16 22 00.2**	**-0.9**
	comp=E,140nm,0.3s						
LIA	**Limnos Island**	**1.49**	**318**	P	**Pn**	**16 21 41.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.57**	**37**	PN	**Pn**	**16 21 43.6**	**+0.5**
AYDN	**Tasoluk**	**1.58**	**135**	P	**Pn**	**16 21 42.9**	**-0.4**

GELI	**Tayfur-Gelibol**	**1.61**	**0**	PN	**Pn**	**16 21 43.9**	**+0.3**
MANT	**Manisa**	**1.67**	**100**	P	**Pg**	**16 21 47.0**	**-0.7**
MANT				S	**Sg**	**16 22 09.5**	**+0.1**
KULA	**Kula-Manisa**	**1.74**	**98**	PN	**Pb**	**16 21 46.5**	**-0.9**
DURS	**Dursunbey**	**1.76**	**62**	P	**Pn**	**16 21 45.5**	**-0.3**
DEMI	**Demirci**	**1.77**	**81**	P	**Pg**	**16 21 49.4**	**-0.4**
SMTH	**Samothraki Isl**	**1.83**	**337**	P	**Pn**	**16 21 46.4**	**-0.2**
SMTH				S	**Sn**	**16 22 09.8**	**+0.2**
	comp=E,82nm,0.2s						
SMTH	**Samothraki Isl**	**1.83**	**337**	P	**Pn**	**16 21 46.4**	**-0.2**
KYMI	**Kymi, Euboea I**	**1.86**	**266**	P	**Pn**	**16 21 47.1**	**+0.1**
APE	**Apeiranthos**	**1.87**	**204**	P	**Pn**	**16 21 46.7**	**-0.5**
APE				S	**Sb**	**16 22 12.1**	**-0.7**
APE	**Apeiranthos**	**1.87**	**204**	PN	**Pn**	**16 21 47.5**	**+0.3**
ERIK	**Erikli-Kesan**	**1.88**	**1**	PN	**Pn**	**16 21 47.7**	**+0.4**
EDC	**Edincik**	**1.89**	**34**	PN	**Pn**	**16 21 47.7**	**+0.2**
ENEZ	**Enez**	**1.96**	**353**	PN	**Pn**	**16 21 49.0**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.97**	**16**	PN	**Pn**	**16 21 49.3**	**+0.6**
SART	**Tekirdag**	**1.98**	**16**	P	**Pb**	**16 21 51.7**	**+0.3**
MRMT	**Marmara Adasi**	**2.01**	**25**	PN	**Pn**	**16 21 49.7**	**+0.5**
KESN	**Edirne-Kesan**	**2.04**	**5**	P	**Pn**	**16 21 50.1**	**+0.2**
KESN				S	**Sb**	**16 22 18.6**	**+0.5**
KESN				*i* AML	AML	16 22 21.0	
	comp=E,204nm,0.6s						
KESN				*i* AML	AML	16 22 24.0	
	comp=E,183nm,0.2s						
ALN	**Alexandroupoli**	**2.13**	**351**	P	**Pn**	**16 21 50.5**	**-0.3**
ALN				S	**Sn**	**16 22 16.6**	**-0.4**
THAS	**Thassos island**	**2.26**	**324**	P	**Pn**	**16 21 52.3**	**-0.2**
GDZ	**Gediz**	**2.37**	**82**	P	**Pg**	**16 21 59.8**	**-1.4**
TVSB	**Tavsanli**	**2.42**	**73**	PN	**Pn**	**16 21 55.9**	**+1.0**

IDC 11 16:42:22.4±3.3, 31°.20S×177°.19W, h0km, mb3.3/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=71.0km s-min=27.7km az=97.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.04**	**342**	Pn	Pn	16 42 58.0	0.0
	30nm,0.3s,baz=216,slow=23,SNR=1.6						
RAO				Sn	Sn	16 43 23.9	-0.2
	142nm,0.3s,baz=186,slow=20,SNR=7.8						
	88nm,0.3s						
URZ	**Urewera**	**8.46**	**212**	Pn	Pn	16 44 24.3	-1.9
	0.2nm,0.3s,baz=33,slow=17,SNR=1.2						
URZ				Sn	Sn	16 45 57.4	-5.0
	1.1nm,0.3s,baz=29,slow=19,SNR=8.2						
	6.2nm,0.8s						
ASAR	**Alice Springs**	**43.77**	**267**	P	P	16 50 30.1	+0.2
	0.3nm,0.8s,baz=103,slow=7.1,SNR=2.7						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**44.83**	**273**	P	P	16 50 38.7	+0.2
	0.2nm,0.3s,baz=112,slow=7.8,SNR=5.6						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**146.13**	**340**	PKPbc	PKPdf	17 02 02.9	+0.1
	1.9nm,0.8s,baz=90,slow=4.2,SNR=2.0						

IDC 11 17:01:24.4±2.3, 7°.53S×121°.12E, h0km, mb3.3/2, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=248.4km s-min=29.6km az=54.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.79**	**135**	P	P	17 05 34.9	+0.4
	0.1nm,0.3s,baz=310,slow=13,SNR=5.5						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**20.20**	**144**	P	P	17 06 00.3	-0.6
	0.8nm,0.4s,baz=320,slow=10,SNR=17						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**64.15**	**331**	P	P	17 12 00.7	0.0
	0.2nm,0.6s,baz=129,slow=5.7,SNR=2.4						
	0.2nm,0.6s						

*KRNET **11** 17:13:10.5±0.1, 39°.52N×73°.58E, mb3.1*
*NNC **11** 17:13:17.5±9.7, 39°.66N×73°.72E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=72.0km s-min=38.6km az=167.0*

ISC 11 17:13:16.5±2.2, 39°.69N±0°.08×73°.37E±0°.07, h14km±14km, n8, σ1§91/12, 13C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.94**	**332**	⇑*i* P	**Pb**	**17 13 32.8**	**-1.9**
	baz=29						
OHH				⇑*i* S	**Sg**	**17 13 48.9**	**+1.7**
	baz=29						
DRK	**Karamyk**	**1.23**	**261**	⇑*i* P	Pn	17 13 36.4	-3.1
	baz=69						
DRK				⇑*i* S	**Sb**	**17 13 55.3**	**-0.3**
	baz=69						
ARLS	**Aral**	**2.28**	**18**	⇑*e* P	**Pn**	**17 13 52.6**	**-1.3**
	baz=14						
ARLS				⇑*i* S	**Sb**	**17 14 23.8**	**-1.9**
	baz=14						
GAR	**Garm**	**2.47**	**255**	⇑*i* P	**Pn**	**17 13 55.4**	**-1.0**
	baz=59						
GAR				⇑*i* S	**Sn**	**17 14 27.8**	**+1.5**
	baz=59						
TRKS	**Terek-Say**	**2.50**	**318**	⇓*i* P	**Pn**	**17 13 56.5**	**-0.4**
	baz=17						
TRKS				⇓*i* S	**Sn**	**17 14 30.2**	**+3.0**
	baz=17						
CHMS	**Chumysh**	**3.46**	**17**	⇑Pg	**Pg**	**17 14 22.5**	**-0.3**
	2.6nm,0.6s						
CHMS				⇓Lg	Lg	17 15 07.0	
	5.2nm,0.5s						
TKM2	**Tokmak 2**	**3.63**	**27**	⇑Pg	**Pb**	**17 14 22.5**	**+1.9**
	0.9nm,0.4s						
TKM2				⇑Lg	Lg	17 15 12.2	
	4.0nm,0.7s						
KK31	**Karatay Array**	**4.03**	**329**	⇑Pn	Pn	17 14 20.0	+2.3
	0.4nm,0.4s,baz=141,slow=13,SNR=13						
KK31				⇑Sn	**Sb**	**17 15 14.5**	**-1.3**
	0.7nm,0.3s						
KK31				⇓Lg	Lg	17 15 27.8	
	1.4nm,0.4s,baz=138,slow=27,SNR=3.5						

IDC 11 17:20:48.6±524.0, 55°.48N×39°.62E, h0km, Error ellipse: s-maj=155.8km s-min=29.8km az=143.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**1.83**	**314**	*i*		17 33 20.0	
	baz=130,slow=315,SNR=1.0						
I37NO	**I37NO**	**16.63**	**333**	*i*		19 01 50.0	
	baz=135,slow=327,SNR=1.7						
I26DE	**FREYUNG INFRAS**	**17.15**	**258**	*i*		19 02 10.0	
	baz=62,slow=331,SNR=1.0						

*SKHL **11** 17:21:06.2±0.5, 43°.20N×146°.20E, h34km±3km, mb3.8/3*
*JMA **11** 17:21:06.4±0.2, 43°.2N±0°.6×146°.1E±1°.0, h48km, MV2.5/35, OFF NEMURO PENINSULA*

ISC 11 17:21:05.9±1.8, 43°.21N±0°.10×146°.19E±0°.07, h44km±13km, n13, σ0§60/22, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.36**	**296**	*e* P	**Pn**	**17 21 15.3**	**+0.2**
NEM2				*e* S	**Sn**	**17 21 21.9**	**+0.3**
NMR	**Nemuro--Hokkai**	**0.37**	**296**	*i* P	**Pn**	**17 21 15.3**	**0.0**
NMR				*e* S	**Sn**	**17 21 22.0**	**+0.1**
JKHN	**Kushirohamanak**	**0.76**	**261**	*e* P	**Pn**	**17 21 20.4**	**+0.2**
SHO	**Shikotan**	**0.81**	**35**	*i* P	**Pn**	**17 21 20.5**	**-0.4**
SHO				AMB	AMB	17 21 21.0	
	10.0nm,0.1s						
SHO				*e* S	**Sn**	**17 21 30.8**	**-1.0**
SHO				A	A	17 21 31.9	
	170nm,0.2s						
SHO				A	A	17 21 31.9	
	60nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.86**	**344**	*i* P	**Pn**	**17 21 21.5**	**-0.1**
YUK				AMB	AMB	17 21 22.7	
	110nm,0.2s						
YUK				*e* S	**Sn**	**17 21 32.4**	**-0.6**
YUK				A	A	17 21 34.1	
	300nm,0.2s						
YUK				A	A	17 21 34.1	
	200nm,0.2s						
JNSB	**Nemuroshibetsu**	**1.03**	**304**	*e* P	**Pn**	**17 21 23.8**	**-0.1**
JRA	**Rausu**	**1.06**	**314**	*e* P	**Pn**	**17 21 24.6**	**+0.3**
JAK	**Akkeshi**	**1.11**	**260**	*e* P	**Pn**	**17 21 24.7**	**-0.3**
JAK				*e* S	**Sn**	**17 21 38.5**	**-0.6**
JNK	**Nakash**	**1.14**	**290**	*e* P	**Pn**	**17 21 25.1**	**-0.2**
JNK				*e* S	**Sn**	**17 21 39.0**	**-0.8**
JOB	**Onbets**	**1.75**	**261**	*e* P	**Pn**	**17 21 34.0**	**+0.2**
JOB				*e* S	**Sn**	**17 21 54.4**	**-0.5**
JAR	**Ashorobuto**	**1.77**	**274**	*e* P	**Pn**	**17 21 34.6**	**+0.5**
JAR				*e* S	**Sn**	**17 21 55.4**	**+0.1**
JTKR	**Abashiri--Toko**	**1.82**	**296**	*e* P	**Pn**	**17 21 35.7**	**+0.9**
KUR	**Kuril'sk**	**2.36**	**30**	*e* P	**Pn**	**17 21 43.5**	**+1.4**
KUR				AMB	AMB	17 21 44.1	
	10.0nm,0.4s						
KUR				*e* S	**Sn**	**17 22 09.5**	**-0.3**
KUR				A	A	17 22 16.3	
	20nm,0.3s						
KUR				A	A	17 22 16.3	
	10.0nm,0.3s						

*NAO **11** 17:21:14.6±1.4, 67°.65N×33°.78E, ML2.5*
*HEL **11** 17:21:15.4±0.2, 68°.03N×33°.63E, h0km, ML1.8, Explosion*
*BER **11** 17:21:17.4±2.3, 67°.65N×33°.56E, h0km, ML2.5(NAO), Suspected explosion*

ISC 11 17:21:14.5±1.1, 67°.64N±0°.05×33°.73E±0°.04, h0km, n19, σ1§41/37, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.14**	**239**	Pg	**Pg**	**17 21 18.0**	**+0.8**
APZ9				Lg	Lg	17 21 21.0	
APZ9	**Apatity**	**0.14**	**239**	Pg	**Pg**	**17 21 18.0**	**+0.8**
APZ9				Sg	**Sg**	**17 21 21.0**	**+1.9**
APA0	**Apatity Array**	**0.28**	**263**	Pg	**Pg**	**17 21 20.2**	**+0.3**
	baz=81,slow=16						
APA0				Lg	Lg	17 21 24.3	
	baz=73,slow=37						
APA0				Rg	Rg	17 21 25.8	
	baz=78,slow=37						
APA0	**Apatity Array**	**0.28**	**263**	Pg	**Pg**	**17 21 20.2**	**+0.3**
	baz=81,slow=16						
APA0				Sg	**Sg**	**17 21 24.3**	**+0.7**
	baz=73,slow=37						
APA0				Rg	Rg	17 21 25.8	
	baz=78,slow=37						
LVZ	**Lovozero**	**0.44**	**53**	PG	**Pg**	**17 21 22.8**	**-0.1**
LVZ				SG	**Sg**	**17 21 28.4**	**-0.1**
VRF	**Varrio**	**1.57**	**276**	PG	**Pn**	**17 21 43.2**	**-0.5**
VRF				MSG		17 22 01.8	
	comp=Z,6.7nm,0.2s						
VRF				SG	**Sg**	**17 22 03.7**	**-1.4**
OLKF	**Oulanka, Finla**	**2.16**	**234**	PN	**Pb**	**17 21 54.0**	**-0.4**
OLKF				SN	**Sg**	**17 22 23.4**	**-0.3**
MSF	**Maaselka**	**2.54**	**229**	PN	**Pb**	**17 21 59.7**	**-1.3**
MSF				SN	**Sg**	**17 22 34.6**	**-1.6**
SGF	**Sodankyl**	**2.77**	**269**	PB	**Pb**	**17 22 03.6**	**-1.3**
	baz=76						
SGF				SB	**Sb**	**17 22 39.1**	**-0.2**
RNF	**Rovaniemi**	**3.19**	**255**	PN	**Pn**	**17 22 06.4**	**+0.6**
RNF				SN	**Sn**	**17 22 45.3**	**+0.9**
KEV	**Kevo**	**3.24**	**314**	Pn	**Pn**	**17 22 07.2**	**+0.6**
KEV				Sn	**Sn**	**17 22 46.0**	**+0.2**
KEV				Lg	Lg	17 22 56.1	
KEV	**Kevo**	**3.24**	**314**	Pn	**Pn**	**17 22 07.2**	**+0.6**
KEV				Sn	**Sn**	**17 22 46.0**	**+0.2**
KEV	**Kevo**	**3.24**	**314**	PG	**Pn**	**17 22 07.2**	**+0.6**
KEV				MSG		17 22 42.5	
	comp=Z,3.1nm,0.2s						
KEV				SG	**Sn**	**17 22 46.0**	**+0.2**
ARA0	**ARCESS Array S**	**3.56**	**306**	Pn	**Pn**	**17 22 11.2**	**+0.2**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**17 22 19.0**	**+0.7**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**17 22 51.0**	**-2.8**
	baz=119,slow=28						
ARA0				Lg	Lg	17 23 03.6	
	baz=108,slow=37						
ARA0	**ARCESS Array S**	**3.56**	**306**	Pn	**Pn**	**17 22 11.2**	**+0.2**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**17 22 19.0**	**+0.7**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**17 22 51.0**	**-2.8**
	baz=119,slow=28						
ARA0				Sg	**Sb**	**17 23 03.6**	**+1.5**
	baz=108,slow=37						
KLF	**Kolari**	**3.79**	**268**	PG	**Pb**	**17 22 23.3**	**+1.2**
	baz=71						
KLF				SG	**Sb**	**17 23 11.5**	**+3.0**
TOF	**Tornio**	**4.03**	**251**	PG	**Pb**	**17 22 27.9**	**+1.7**
TOF				SG	**Sg**	**17 23 21.9**	**-1.9**
LANU	**Lannavaara**	**4.46**	**281**	SB	**Sb**	**17 23 26.0**	**-2.0**
KALU	**Kalix**	**4.48**	**251**	SG	**Sg**	**17 23 35.0**	**-3.4**

IDC 11 17:39:29.6±2.3, 16°.75S×73°.62W, h0km, mb4.0/2, mbtmp3.8/3, ML3.6/1, MS3.1/4, Error ellipse: s-maj=102.3km s-min=40.1km az=11.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.28**	**86**	Pn	Pn	17 40 52.5	+2.0
	1.1nm,0.3s,baz=265,slow=11,SNR=12						
LPAZ				LR	LR	17 42 43.2	
	comp=Z,26nm,19.1s,baz=236,slow=37						
	1.4nm,0.3s						
MDP	**Montagnes des**	**30.02**	**45**	LR	LR	17 56 47.0	
	comp=Z,30nm,20.1s,baz=85,slow=35						
SCHQ	**Schefferville**	**71.53**	**4**	LR	LR	18 24 02.3	
	comp=Z,29nm,20.0s,baz=66,slow=37						
TORD	**Torodi Ar. Bea**	**80.10**	**73**	P	P	17 51 40.9	-1.2
	1.1nm,0.7s,baz=256,slow=5.1,SNR=5.6						
	1.1nm,0.7s						
YKA	**Yellowknife Ar**	**85.29**	**342**	P	P	17 52 08.3	+0.4
	0.5nm,0.5s,baz=137,slow=5.1,SNR=5.5						
	0.5nm,0.5s						
DLBC	**Dease Lake**	**87.98**	**334**	LR	LR	18 34 28.2	
	comp=Z,47nm,18.3s,baz=84,slow=38						
WRA	**Warramunga Arr**	**134.35**	**218**	PKP	PKPdf	17 58 50.7	+0.2
	0.2nm,0.7s,baz=127,slow=1.7,SNR=1.3						
SONM	**Songino Array**	**149.00**	**360**	PKPbc	PKPbc	17 59 19.6	-0.3
	0.5nm,0.7s,baz=336,slow=3.2,SNR=2.4						

*IDC **11** 17:55:36.8±2.0, 11°.42S×118°.62E, h0km, mb3.4/1, mbtmp3.7/6, ML3.5/5, MS2.8/2, Error ellipse: s-maj=52.3km s-min=24.1km az=52.0*

ISC 11 17:55:39.3±1.6, 11°.41S±0°.08×118°.7E±0°.1, h35km, n7, σ3§70/10, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.02**	**77**	Pn	**Pn**	**17 56 54.6**	**+2.4**
	7.7nm,0.3s,baz=232,slow=19,SNR=9.5						
BATI				Sn	**Sn**	**17 57 50.5**	**+1.3**
	4.6nm,0.3s,baz=222,slow=24,SNR=2.0						
	12nm,0.3s						
KAPI	**Kappang**	**6.44**	**9**	Pn	**Pn**	**17 57 13.6**	**+1.9**
	1.6nm,0.3s,baz=183,slow=18,SNR=2.0						
KAPI				Sn	**Sn**	**17 58 19.0**	**-5.0**
	1.4nm,0.3s,baz=198,slow=20,SNR=2.1						
KAPI				LR	LR	17 59 39.4	
	comp=Z,45nm,18.1s,baz=90,slow=38						
	3.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.45**	**136**	Pn	**Pn**	**17 57 54.5**	**+1.5**
	0.4nm,0.3s,baz=323,slow=12,SNR=16						
FITZ				Sn	**Sn**	**17 59 35.2**	**-2.8**
	0.5nm,0.3s,baz=341,slow=18,SNR=6.8						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**17.27**	**121**	P	**P**	**17 59 38.6**	**-0.5**
	0.1nm,0.3s,baz=290,slow=14,SNR=2.6						
WRA				S	**Sn**	**18 02 45.0**	**-4.1**
	0.3nm,0.7s,baz=291,slow=26,SNR=2.1						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**18.92**	**132**	P	**Pn**	**18 00 01.6**	**+3.5**
	0.2nm,0.3s,baz=316,slow=13,SNR=15						
ASAR				S	**Sn**	**18 03 24.5**	**-4.5**
	0.3nm,0.8s,baz=305,slow=22,SNR=3.0						
	2.2nm,0.9s						
MKAR	**Makanchi Array**	**66.46**	**334**	P	P	18 06 27.7	+2.5
	0.2nm,0.5s,baz=147,slow=6.6,SNR=4.5						
	0.2nm,0.5s						
YAK	**Yakutsk**	**73.71**	**5**	LR	LR	18 41 54.3	
	comp=Z,11nm,21.0s,baz=96,slow=38						

IDC 11 17:56:02.3±1.7, 0°.80N×126°.05E, h0km, mb3.4/4, mbtmp3.4/4, MS3.2/1, Error ellipse: s-maj=182.4km s-min=21.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**19.89**	**247**	LR	LR	18 08 29.8	
	comp=Z,71nm,19.0s,baz=342,slow=38						
WRA	**Warramunga Arr**	**22.16**	**159**	P	P	18 01 00.4	+0.3
	0.3nm,0.3s,baz=337,slow=11,SNR=7.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**25.49**	**163**	P	P	18 01 32.3	-0.2
	0.3nm,0.4s,baz=345,slow=12,SNR=12						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.58**	**327**	P	P	18 06 08.4	+0.5
	0.2nm,0.5s,baz=120,slow=8.5,SNR=2.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.84**	**328**	P	P	18 06 36.2	-0.3
	0.4nm,0.4s,baz=132,slow=6.0,SNR=8.2						
	0.4nm,0.4s						

*IDC **11** 18:06:06.2±3.9, 59°.02S×25°.57W, h40km±33km, mb4.4/15, mbtmp4.7/17, ML4.9/2, MS3.9/40, Error ellipse: s-maj=16.8km s-min=13.5km az=56.0*
*NEIC **11** 18:06:06.4±2.0, 58°.96S±0°.09×25°.3W±0°.2, h44km±5km, mb5.0/54, Error ellipse: s-maj=15.0km s-min=11.2km az=219.0*
*GCMT **11** 18:06:08.4±0.4, 59°.36S±0°.03×24°.91W±0°.05, h57km±3km, MW5.0/61, Moment Tensor Solution. s27,c29; s61,c71; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.00±.24; Mθθ 1.36±.21; Mϕϕ -3.36±.16; Mrθ -1.16±.11; Mrϕ 1.35±.13; Mθϕ 0.42±.15; Best double couple: Mo 3.36600×10^16 NP1: φs 313.00000°, δ63.00000°, λ45.00000°. NP2: φs 199.00000°, δ51.00000°, λ145.00000°. Principal axes: T 2.9250, Plg50.0000°, Azm172.0000°; N 0.8820, Plg39.0000°, Azm338.0000°; P -3.8070, Plg7.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 18:06:05.3±0.3, 58°.97S±0°.06×25°.36W±0°.07, h35km, n324, σ1§03/293, mb4.9/40, MS3.9/40, 4C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.72**	**303**	Pn	**Pn**	**18 07 56.0**	**+0.9**
ORCD	**Orcadas**	**9.90**	**251**	Pn	**Pn**	**18 08 27.8**	**+2.9**
VNA1	**Neumayer--Stat**	**13.72**	**156**	P	**Pn**	**18 09 15.9**	**-1.0**
VNA1				S	Sn	18 11 35.2	-13
VNA3	**Neumayer Olymp**	**13.90**	**159**	P	**Pn**	**18 09 17.9**	**-1.6**
VNA3	**Neumayer Olymp**	**13.90**	**159**	PcP	**PcP**	**18 14 41.3**	**+1.8**
VNA3				S	Sn	18 11 36.9	-16
VNA2	**Neumayer--Watz**	**14.11**	**155**	P	**Pn**	**18 09 20.5**	**-1.9**
	baz=309,slow=14						
VNA2	**Neumayer--Watz**	**14.11**	**155**	PcP	**PcP**	**18 14 41.2**	**+1.5**
VNA2				S	Sn	18 11 44.7	-13
SNAA	**Sanae**	**15.67**	**153**	P	**Pn**	**18 09 42.3**	**-1.0**
SNAA	**Sanae**	**15.67**	**153**	PcP	**PcP**	**18 14 43.4**	**+1.4**
SNAA				S	Sn	18 12 20.9	-15
SNAA	**Sanae**	**15.67**	**153**	Pn	**Pn**	**18 09 42.2**	**-1.0**
	17nm,0.3s,baz=315,slow=15,SNR=126						
SNAA				Sn	Sn	18 12 20.7	-15
	0.6nm,0.3s,baz=316,slow=17,SNR=3.1						
SNAA				LR	LR	18 14 25.7	
	comp=Z,467nm,21.6s,baz=37,slow=32						
	54nm,0.4s						
SNAA	**Sanae**	**15.67**	**153**		**Pn**	**18 09 41.8**	**-1.4**
SNAA				IAmb	IAmb	18 09 44.6	
	comp=Z,51nm,0.5s						
TROLL	**Troll, Antarti**	**17.20**	**151**	P	**Pn**	**18 10 02.7**	**+0.2**
TROLL				S	Sn	18 13 01.8	-11
PMSA	**Palmer Station**	**18.90**	**236**	P	**P**	**18 10 23.3**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=92,slow=7.3,SNR=6.4						
PMSA				LR	LR	18 16 17.6	
	comp=Z,479nm,20.7s,baz=82,slow=33						
	comp=Z,11nm,0.8s						
PMSA	**Palmer Station**	**18.90**	**236**	P	**P**	**18 10 23.9**	**+1.6**
BELA	**Belgrano 2**	**19.25**	**186**	P	**P**	**18 10 25.5**	**-0.7**
BELA				IAmb	IAmb	18 10 29.6	
	comp=Z,102nm,1.3s						
SMAI	**San Martin Ant**	**20.30**	**226**	P	**P**	**18 10 38.6**	**+0.9**
SMAI				IAmb	IAmb	18 10 56.9	
	comp=Z,52nm,0.9s						
USHA	**Ushuaia**	**23.57**	**261**	P	**P**	**18 11 11.6**	**-0.7**
	comp=Z,12nm,0.5s,baz=121,slow=9.8,SNR=7.2						
USHA				LR	LR	18 18 34.2	
	comp=Z,365nm,19.9s,baz=82,slow=32						
	comp=Z,12nm,0.5s						
QSPA	**South Pole Qui**	**31.27**	**180**	P	**P**	**18 12 22.4**	**+0.9**
	comp=Z,22nm,0.6s,baz=205,slow=2.5,SNR=291						
QSPA				PcP	**PcP**	**18 15 15.1**	**+0.2**
	comp=Z,7.3nm,0.8s,baz=225,slow=0.6,SNR=4.0						
QSPA				LR	LR	18 24 07.1	
	comp=Z,299nm,21.4s,baz=194,slow=35						
	comp=Z,22nm,0.6s						
QSPA	**South Pole Qui**	**31.27**	**180**	P	**P**	**18 12 22.4**	**+0.9**
TRQA	**Tornquist**	**31.43**	**295**	P	**P**	**18 12 23.2**	**+0.2**
TRQA				IAmb	IAmb	18 12 27.4	
	comp=Z,14nm,0.7s						
PLCA	**Paso Flores**	**33.55**	**283**	P	**P**	**18 12 41.0**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=128,slow=7.6,SNR=8.7						
PLCA				LR	LR	18 26 58.5	
	comp=Z,130nm,18.7s,baz=160,slow=37						
	comp=Z,5.0nm,0.8s						
MAW	**Mawson**	**37.23**	**141**	P	**P**	**18 13 12.2**	**-0.6**
	comp=Z,5.2nm,0.7s,baz=229,slow=8.8,SNR=15						
MAW				PcP	**PcP**	**18 15 33.0**	**+1.3**
	comp=Z,3.7nm,0.7s,baz=240,slow=2.1,SNR=4.0						
MAW				LR	LR	18 26 24.0	
	comp=Z,199nm,20.4s,baz=243,slow=33						
	comp=Z,5.2nm,0.7s						
BO02	**Sierra Bellavi**	**38.27**	**289**	P	**P**	**18 13 21.3**	**-0.7**
BO02				IAmb	IAmb	18 13 27.1	
	comp=Z,18nm,0.5s						
GO05	**Huala**	**38.66**	**287**	P	**P**	**18 13 23.9**	**-1.4**
GO05				IAmb	IAmb	18 13 28.3	
	comp=Z,18nm,0.8s						
BO01	**Tunca**	**38.74**	**289**	P	**P**	**18 13 25.1**	**-0.8**
BO01				IAmb	IAmb	18 13 28.4	
	comp=Z,13nm,0.7s						
LMEL	**Las Melosas**	**38.75**	**290**	P	**P**	**18 13 25.7**	**-0.4**
MT03	**Universidad Ad**	**39.18**	**290**	P	**P**	**18 13 29.9**	**+0.2**
MT03				IAmb	IAmb	18 13 33.5	
	comp=Z,39nm,1.0s						
MT09	**Talagante**	**39.19**	**290**	P	**P**	**18 13 29.1**	**-0.7**
MT09				IAmb	IAmb	18 13 34.1	
	comp=Z,24nm,0.6s						
MT01	**Popeta**	**39.25**	**289**	P	**P**	**18 13 29.6**	**-0.5**
MT05	**Renca**	**39.38**	**290**	P	**P**	**18 13 30.3**	**-1.1**

CO05 La Serena 42.47 293 P P 18 13 55.9 -0.8
SOE Somerset East 42.66 75 P P 18 13 55.1 -3.3
SOE IAmb IAmb 18 14 57.8
comp=Z,38nm,0.9s
AC05 El Transito 42.92 295 P P 18 14 00.8 +0.2
LCO Las Campanas 42.98 294 P P 18 14 00.9 -0.2
LCO IAmb IAmb 18 14 03.2
comp=Z,33nm,1.3s
SBA Scott Base 43.23 184 P P 18 14 04.2 +1.9
SBA IAmb IAmb 18 14 05.3
comp=Z,13nm,0.8s
SBA Scott Base 43.23 184 P P 18 14 04.1 +1.8
VNDA Vanda 43.69 182 P P 18 14 07.5 +1.5
comp=Z,16nm,0.7s,baz=185,slow=6.9,SNR=177
VNDA LR LR 18 30 39.9
comp=Z,133nm,22.0s,baz=172,slow=34
comp=Z,16nm,0.7s
VNDA Vanda 43.69 182 P P 18 14 07.3 +1.3
VNDA IAmb IAmb 18 14 08.5
comp=Z,18nm,0.8s
VNDA Vanda 43.69 182 P P 18 14 07.4 +1.3
AC02 Maricunga 44.08 297 P P 18 14 11.0 +0.7
GO02 Mina Guanaco 45.73 298 P P 18 14 22.8 -0.4
GO02 IAmb IAmb 18 14 26.3
comp=Z,46nm,1.4s
BOSA Boshof 45.85 71 P P 18 14 25.4 +1.5
comp=Z,2.2nm,0.7s,baz=216,slow=7.8,SNR=6.6
BOSA LR LR 18 30 10.8
comp=Z,155nm,18.2s,baz=168,slow=31
comp=Z,2.2nm,0.7s
BDFB Brasilia 46.39 329 P P 18 14 29.0 +0.8
comp=Z,2.4nm,0.4s,baz=112,slow=10,SNR=3.1
BDFB LR LR 18 31 01.3
comp=Z,98nm,21.3s,baz=162,slow=32
comp=Z,2.4nm,0.4s
PB15 IPOC Station P 47.36 299 P P 18 14 35.7 -0.2
PB15 IAmb IAmb 18 15 25.4
comp=Z,16nm,1.2s
LVC Limon Verde 47.63 300 LR LR 18 38 12.8
comp=Z,44nm,18.1s,baz=179,slow=40
LVC Limon Verde 47.63 300 P P 18 14 38.3 +0.1
PB07 IPOC Station P 48.84 300 P P 18 14 46.2 -1.1
PB07 IAmb IAmb 18 15 03.4
comp=Z,10nm,0.7s
LBTB Lobatse 49.02 69 LR LR 18 31 29.2
comp=Z,225nm,21.4s,baz=207,slow=31
LBTB Lobatse 49.02 69 P P 18 14 49.9 +1.3
LBTB IAmb IAmb 18 15 04.4
comp=Z,10nm,0.8s
PB01 IPOC Station P 49.26 301 P P 18 14 51.0 +0.5
PB01 IAmb IAmb 18 14 54.8
comp=Z,7.6nm,0.8s
SIV San Ignacio 50.30 313 LR LR 18 36 29.1
comp=Z,62nm,20.0s,baz=120,slow=36
GO01 Chusmiza 50.33 302 P P 18 14 56.1 -3.0
TSUM Tsumeb 50.35 57 LR LR 18 31 56.5
comp=Z,121nm,21.7s,baz=240,slow=31
TSUM Tsumeb 50.35 57 P P 18 14 57.3 -1.5
CASY Casey 50.82 159 P P 18 14 58.9 -2.7
H10N1 ASCENSION HYDR 51.68 14 T T 19 10 57.6
baz=181,slow=72,SNR=18
H10N3 ASCENSION HYDR 51.68 14 T T 19 10 57.5
baz=181,slow=72,SNR=21
H10N2 ASCENSION HYDR 51.70 14 T T 19 10 58.9
baz=181,slow=72,SNR=26
LPAZ La Paz 52.87 305 P P 18 15 17.6 -0.6
comp=Z,1.6nm,0.4s,baz=114,slow=7.3,SNR=7.8
LPAZ LR LR 18 38 24.5
comp=Z,30nm,21.2s,baz=131,slow=37
comp=Z,1.6nm,0.4s
LPAZ La Paz 52.87 305 P P 18 15 15.8 -2.4
RCBR Riachuelo 53.63 347 LR LR 18 33 19.6
comp=Z,77nm,21.9s,baz=318,slow=30
DRV Dumont d'Urvil 54.21 173 P P 18 15 25.3 -1.3
DRV pP pP 18 15 36.2 -0.1
SAML Samuel 57.56 314 P P 18 15 48.9 -2.4
LSZ Lusaka 58.60 65 LR LR 18 37 60.0
comp=Z,211nm,19.5s,baz=184,slow=33
NNA Nana 60.52 298 LR LR 18 40 18.4
comp=Z,67nm,21.6s,baz=188,slow=34
OPO Ambohidratompo 65.28 85 LR LR 18 42 20.6
comp=Z,46nm,18.9s,baz=2.5,slow=33
ATAH Atahualpa 65.50 299 LR LR 18 44 16.2
comp=Z,47nm,21.9s,baz=159,slow=35
LIC Lamto 66.99 22⇑ iP P 18 16 55.8 +1.4
comp=Z,11nm,0.4s
KIC Kosan Boka 67.18 22⇑ iP P 18 16 57.0 +1.4
comp=Z,2.3nm,0.4s
BOAV Boa Vista 67.19 321 P P 18 16 53.2 -2.4
BOAV IAmb IAmb 18 17 10.8
comp=Z,3.4nm,0.9s
TIC Toumodi 67.41 22⇑ iP P 18 16 58.4 +1.4
comp=Z,3.3nm,0.2s
DBIC Dimbokro 67.46 22 P P 18 16 58.8 +1.5
comp=Z,2.3nm,0.5s,baz=187,slow=6.6,SNR=5.1
DBIC LR LR 18 39 52.8
comp=Z,38nm,19.2s,baz=187,slow=30
comp=Z,2.3nm,0.5s
MDP Montagnes des 67.48 330 LR LR 18 43 34.4
comp=Z,54nm,21.1s,baz=160,slow=33
MCRA Macar, Loja 68.65 299 P P 18 17 03.1 -1.8
MBAR Mbarara 72.67 60 LR LR 18 46 49.3
comp=Z,100nm,18.7s,baz=200,slow=34
BBTS Babate 73.72 9 LR LR 18 41 41.5
comp=Z,116nm,20.7s,baz=228,slow=29
ROSC El Rosal 74.50 309 LR LR 18 50 46.5
comp=Z,86nm,21.6s,baz=70,slow=36
TOA0 Torodi Ar. Sit 75.16 27 P P 18 17 45.1 +1.3
TOA0 IAmb IAmb 18 17 46.4
comp=Z,13nm,0.7s
TORD Torodi Ar. Bea 75.16 27 P P 18 17 45.6 +1.8
comp=Z,14nm,0.6s,baz=199,slow=6.5,SNR=96
comp=Z,14nm,0.6s
TORD Torodi Ar. Bea 75.16 27 P P 18 17 44.9 +1.1
TORD IAmb IAmb 18 17 46.4
comp=Z,7.8nm,0.7s
KMBO Kilima Mbogo 75.23 67 LR LR 18 48 06.2
comp=Z,174nm,18.9s,baz=90,slow=33
BIRV Birongo 76.67 319 P P 18 17 50.7 -1.7
BIRV IAmb IAmb 18 19 15.3
comp=Z,17nm,1.1s
SDV Santo Domingo 76.76 314 LR LR 18 51 15.4
comp=Z,128nm,21.7s,baz=169,slow=35
RPZ Rata Peaks 76.78 192 LR LR 18 49 56.2
comp=Z,68nm,18.1s,baz=178,slow=34
BSWZ Blackbirch Sta 78.42 195 P P 18 18 01.4 -0.5
THZ Tophouse 78.49 194 P P 18 18 03.0 +0.5
TUWZ Tuamarina 78.69 195 P P 18 18 01.4 -2.0
QRZ Quartz Range 79.46 194 P P 18 18 05.9 -1.8
URZ Urewera 81.34 198 LR LR 18 51 13.8
comp=Z,32nm,20.0s,baz=211,slow=33
PDPR Patillas Dam, 83.63 321 P P 18 18 29.4 -0.4
SJG San Juan 83.76 321 LR LR 18 55 09.2
comp=Z,39nm,22.0s,baz=112,slow=35
FORT Forrest 87.89 157 P P 18 18 50.6 -0.4
STKA Stephens Creek 88.85 169 P P 18 18 55.3 -0.2
comp=Z,6.8nm,0.7s,baz=151,slow=6.0,SNR=18
STKA LR LR 18 57 19.0
comp=Z,103nm,18.9s,baz=204,slow=35
comp=Z,6.8nm,0.7s
STKA Stephens Creek 88.85 169 P P 18 18 55.5 0.0
PPT2 Papeete2 91.20 232 eLR LR 18 48 22.4
comp=Z,84nm,23.8s
PPT Papeete 91.22 232 LR LR 18 52 37.9
comp=Z,46nm,18.4s,baz=176,slow=31
RAR Rarotonga 91.75 222 LR LR 18 51 49.9
comp=Z,27nm,20.3s,baz=190,slow=30
MDT Midelt 93.06 17 LR LR 18 54 49.1
comp=Z,78nm,21.9s,baz=155,slow=31
TAOE Nuku Hiva Isla 94.81 244 eLR LR 18 50 03.3
comp=Z,186nm,25.0s
ASAR Alice Springs 95.90 161 P P 18 19 27.6 -0.6
comp=Z,4.4nm,0.6s,baz=186,slow=4.1,SNR=100
ASAR PP PP 18 23 19.4 -0.3
comp=Z,0.5nm,0.7s,baz=183,slow=7.8,SNR=5.5
ASAR PKiKP PKiKP 18 24 07.3 +0.1
comp=Z,0.3nm,0.6s,baz=173,slow=1.2,SNR=8.3
ASAR PKKPbc PKKPbc 18 36 16.0 +2.2
comp=Z,0.7nm,0.4s,baz=15,slow=2.2,SNR=16
ASAR LR LR 18 59 33.9
comp=Z,113nm,21.4s,baz=185,slow=34
comp=Z,4.4nm,0.6s
AS31 Alice Springs 95.90 161 P P 18 19 27.7 -0.6
DZM Mont Dzumac 98.67 191 LR LR 18 59 14.4
comp=Z,80nm,21.6s,baz=190,slow=32
DZM Mont Dzumac 98.67 191 eLR LR 18 51 49.8
comp=Z,136nm,22.4s

FITZ Fitzroy Crossi 99.61 152 LR LR 19 03 01.8
comp=Z,35nm,19.9s,baz=192,slow=34
WRA Warramunga Arr 99.62 161 P Pdif 18 19 44.0 -1.0
comp=Z,0.7nm,0.8s,baz=194,slow=4.4,SNR=4.7
WRA PKiKP PKiKP 18 24 13.5 -0.2
comp=Z,0.3nm,0.8s,baz=204,slow=1.5,SNR=1.6
WRA PKKPbc PKKPbc 18 36 05.2 +1.6
comp=Z,0.4nm,0.4s,baz=356,slow=2.6,SNR=8.7
WRA LR LR 19 01 49.3
comp=Z,108nm,21.9s,baz=184,slow=34
comp=Z,0.7nm,0.8s
ESDC Sonseca Array 99.88 17 LR LR 18 59 30.8
comp=Z,34nm,20.1s,baz=160,slow=32
TXAR Lajitas Array 108.98 295 PKiKP PKiKP 18 24 30.5 -0.1
comp=Z,0.2nm,0.6s,baz=160,slow=4.0,SNR=3.9
SDCO Great Sand Dun 116.81 299 P PKPdf 18 24 45.8 +0.3
baz=145
S22A 4UR Ranch, Cre 117.42 298 P PKPdf 18 24 47.1 +0.4
baz=145
IKP In-Ko-Pah, Jac 117.71 288 P PKPdf 18 24 47.9 +0.8
baz=144
MVCO Mesa Verde 117.75 296 P PKPdf 18 24 47.5 +0.2
baz=145
AKASG Malin Array Be 117.98 36 PKP PKPdf 18 24 46.7 -0.2
comp=Z,0.9nm,0.5s,baz=230,slow=1.2,SNR=6.7
PDMCI Parker Dam,Lak 118.08 290 P PKPdf 18 24 48.1 +0.4
baz=144
BC3 Big Chuckawall 118.20 289 P PKPdf 18 24 48.3 +0.2
baz=144
ISCO Idaho Springs 118.54 300 P PKPdf 18 24 49.0 +0.2
baz=145
GMRC Granite Mounta 119.21 289 P PKPdf 18 24 50.7 +0.7
baz=144
SRU San Rafael Swe 120.23 296 PKPdf 18 24 51.9 0.0
EDW2 Edwards Air Fo 120.43 288 P PKPdf 18 24 52.9 +0.6
baz=143
P18A Preston Nutter 120.51 297 PKPdf 18 24 52.7 +0.1
LRMC Laurel Mtn Rad 120.76 288 P PKPdf 18 24 53.7 +0.7
baz=143
MPMC Manual Prospec 121.12 289 P PKPdf 18 24 54.4 +0.6
baz=143
TPNV Topopah Spring 121.22 290 PKPdf 18 24 52.8 -1.0
TPNV Topopah Spring 121.22 290 P PKPdf 18 24 54.7 +0.8
baz=143
K22A Casper 121.25 301 P PKPdf 18 24 53.3 -0.5
baz=143
ISA Isabella, Lake 121.29 288 P PKPdf 18 24 54.6 +0.6
baz=143
PSUT Pine Spring 121.33 293 PKPdf 18 24 54.6 +0.5
RSSD Black Hills 121.34 304 PKPdf 18 24 53.3 -0.7
RSSD Black Hills 121.34 304 P PKPdf 18 24 53.6 -0.4
baz=144
AGMN Agassiz Nation 121.42 312 P PKPdf 18 24 53.1 -0.5
baz=145
CWC Cottonwood Cre 121.71 289 P PKPdf 18 24 55.2 +0.4
baz=143
R11A Troy Canyon, C 122.01 292 P PKPdf 18 24 55.8 +0.5
baz=142
DUG Dugway, Tooele 122.16 295 PKPdf 18 24 55.6 0.0
DUG Dugway, Tooele 122.16 295 P PKPdf 18 24 55.8 +0.3
baz=142
TIN Tinemaha, Big 122.27 289 P PKPdf 18 24 56.4 +0.6
baz=142
HWUT Hardware Ranch 122.69 297 PKPdf 18 24 55.9 -0.7
BW06 Boulder Array 122.69 299 P PKPdf 18 24 55.9 -0.7
baz=142
PDAR Pinedale Array 122.69 299 PKP PKPdf 18 24 56.0 -0.6
comp=Z,0.6nm,0.5s,baz=127,slow=5.4,SNR=7.0
NB2 NORSAR Subarra 123.00 20 PKPdf PKPdf 18 24 56.7 +0.4
comp=Z,0.6nm,0.6s,baz=202,slow=1.8
NOA NORSAR Array B 123.00 20 PKP PKPdf 18 24 56.5 +0.2
comp=Z,0.4nm,0.6s,baz=160,slow=3.2,SNR=7.0
CMAR Chiang Mai Arr 123.11 111 PKP PKPdf 18 24 58.2 +0.4
comp=Z,2.3nm,0.8s,baz=231,slow=4.0,SNR=12
NVAR Mina Array Bea 123.39 290 PKP PKPdf 18 24 59.2 +1.2
comp=Z,1.3nm,0.6s,baz=129,slow=3.3,SNR=13
LOHW Long Hollow 123.83 299 PKPdf 18 24 58.4 -0.4
MOOW Moose Ponds 124.00 299 PKPdf 18 24 59.0 -0.1
FXWY Fox Creek 124.04 299 PKPdf 18 24 59.0 -0.1
RLMT Red Lodge 124.41 301 P PKPdf 18 25 00.3 +0.6
baz=141
DGMT Dagmar 124.87 307 P PKPdf 18 25 01.0 +0.7
baz=142
YHL Hebgen Lake 125.06 300 PKPdf 18 25 01.1 0.0
BEKR Beckworth 125.51 290 PKPdf 18 25 03.3 +1.3
HLID Hailey 125.53 297 P PKPdf 18 25 02.9 +1.0
baz=141
BOZ Bozeman (W) 125.83 300 P PKPdf 18 25 03.4 +1.0
baz=140
FINES FINESS Array B 126.51 28 PKP PKPdf 18 25 03.2 +0.3
comp=Z,3.4nm,0.5s,baz=157,slow=1.3,SNR=40
WVOR Wild Horse Val 126.65 293 PKPdf 18 25 04.9 +0.8
HRY Holter Researc 126.78 301 PKPdf 18 25 05.2 +1.1
EGMT Eagleton 126.87 303 P PKPdf 18 25 04.4 +0.2
baz=140
MSO Missoula 127.81 300 P PKPdf 18 25 06.7 +0.6
baz=139
BMO Blue Mountains 127.86 296 PKPdf 18 25 06.2 0.0
ABKAR Akbulak array 128.20 56 PKPdf 18 25 06.4 -0.1
ABKAR Akbulak array 128.20 56 PKPdf 18 25 06.7 +0.1
AKTO Aktyubinsk 128.27 54 PKP PKPdf 18 25 07.1 +0.4
comp=Z,4.6nm,0.8s,baz=167,slow=3.7,SNR=13
J05D Fort Rock, OR 128.54 292 P PKPdf 18 25 08.2 +0.6
baz=139
G08A Pilot Rock 128.96 295 PKPdf 18 25 09.2 +0.8
KLMR Klimovskoe 129.66 35 e PKPdf 18 25 07.7 -1.2
KLMR AMP 18 25 10.2
comp=Z,21nm,1.4s
AAK Ala-Archa 129.99 72 PKP PKPdf 18 25 11.2 +0.8
comp=Z,1.2nm,0.3s,baz=221,slow=5.3,SNR=3.6
PZH PanZhiHua 131.28 108 PKP PKPdf 18 25 12.3 -1.1
ARU Arti 132.90 49 PKP PKPdf 18 25 15.2 -0.1
comp=Z,0.8nm,0.5s,baz=342,slow=7.3,SNR=3.0
ARCES ARCESS Array B 133.29 22 PKP PKPdf 18 25 14.7 -0.9
comp=Z,2.5nm,0.5s,baz=217,slow=1.8,SNR=31
CD2 Chengdu 135.90 107 ePKP PKPdf 18 25 21.0 -0.8
MK31 Makanchi Array 136.84 73 PKPdf 18 25 21.9 -1.1
MKAR Makanchi Array 136.84 73 PKhKP PKPpre 18 25 12.6
comp=Z,0.4nm,0.7s,baz=267,slow=2.3,SNR=4.1
MKAR PKP PKPdf 18 25 20.8 -2.2
comp=Z,1.0nm,0.8s,baz=233,slow=0.9,SNR=6.5
WMQ Urumqi 137.48 80 eP PKPdf 18 25 25.4 +1.1
KURBB Kurchatov Arra 137.61 67 PKhKP PKPpre 18 25 17.3
comp=Z,0.7nm,0.6s,baz=237,slow=3.4,SNR=4.5
KURBB PKP PKPdf 18 25 25.3 +1.1
comp=Z,0.8nm,0.5s,baz=232,slow=2.6,SNR=8.6
YKA Yellowknife Ar 138.97 315 PKhKP PKPpre 18 25 19.8
comp=Z,0.5nm,0.7s,baz=117,slow=3.6,SNR=5.0
YKA PKP PKPdf 18 25 26.6 +0.2
comp=Z,11nm,0.6s,baz=121,slow=2.5,SNR=79
YKA Yellowknife Ar 138.97 315 PKPdf 18 25 26.0 -0.3
LZH Lanzhou 140.07 102 ePKP PKiKP 18 25 32.7 +0.8
GTA Gaotai 140.54 95 ⇓PKP PKiKP 18 25 33.0 +0.3
GTA pPKP sPKPdf 18 25 45.0 +0.4
GTA sPKP 18 25 50.7
GTA PP PP 18 28 38.4 +8.3
ZALV Zalesovo Beam 142.71 66 PKhKP PKPpre 18 25 29.4
comp=Z,1.5nm,0.5s,baz=234,slow=3.9,SNR=7.3
P33M Teslin, Yukon 144.95 304 PKPbc 18 25 36.3 -0.4
P33M Teslin, Yukon 144.95 304 P PKPbc 18 25 36.3 -0.3
baz=121
P32M Atlin 145.02 303 P PKPbc 18 25 36.6 -0.3
baz=121
N32M Quiet Lake 145.54 305 P PKPdf 18 25 38.5 +0.3
baz=119
WHY Whitehorse 146.07 304 P PKPdf 18 25 40.0 +0.8
baz=119
HNS HongShan 146.48 112 ⇑P PKPbc 18 25 42.5 +0.6
HNS pmax pmax
comp=Z,18nm,0.8s
M31M Drury Creek, Y 146.59 306 PKPdf PKPdf 18 25 41.1 +1.2
M31M Drury Creek, Y 146.59 306 P PKPbc 18 25 41.9 +0.4
baz=117
O30N Mendenhall 146.64 303 P PKPdf 18 25 41.8 +1.7
baz=118
TIA Tai'an 146.66 116 ⇓P PKPbc 18 25 43.3 +0.8
TIA pmax pmax
comp=Z,11nm,0.8s
N31M Braeburn, Yuko 146.84 305 P PKPbc 18 25 43.2 +0.9
baz=117
N30M Aishikik Lake 147.39 304 P PKPbc 18 25 45.4 +1.6
baz=117
HHC Hu-ho-hao-te 147.60 105 eP PKPdf 18 25 44.2 +1.8
JSU Suzuyama 148.04 139 PKPbc 18 25 46.4 -0.1
M29M Somme Creek 148.40 305 P PKPbc 18 25 47.2 +0.6
baz=115

O28M Mount Upton 148.43 302 P PKPbc 18 25 47.6 +0.6
baz=116
INK Inuvik 148.66 317 PKPbc 18 25 46.5 -0.4
INK Inuvik 148.66 317 P PKPbc 18 25 46.9 0.0
baz=109
YUK3 Moose Creek 148.98 303 P PKPbc 18 25 48.6 +0.4
baz=114
CTG Chitna Glacier 149.02 302 P PKPbc 18 25 48.8 +0.6
baz=115
BVCY Beaver Creek 149.41 304 P PKPbc 18 25 49.7 +0.7
baz=113
DAWY Dawson 149.43 308 PKPbc 18 25 48.5 -0.6
DAWY Dawson 149.43 308 P PKPbc 18 25 49.7 +0.6
baz=112
CRQE Cirque 149.71 300 P PKPbc 18 25 50.3 +0.4
baz=115
M27K Edge Creek, AK 149.83 304 PKPdf PKPdf 18 25 43.2 -2.1
M27K PKPbc 18 25 49.3 -0.9
M27K Edge Creek, AK 149.83 304 P PKPbc 18 25 50.5 +0.4
baz=113
SONM Songino Array 149.83 90 PKP PKPdf 18 25 44.7 -1.1
comp=Z,0.8nm,0.9s,baz=160,slow=4.7,SNR=4.4
SONM PKPbc PKPbc 18 25 51.1 +0.4
comp=Z,4.2nm,0.6s,baz=228,slow=2.9,SNR=31
SONM Songino Array 149.83 90 PKPbc 18 25 50.8 +0.2
KAIM Kayak Island 149.96 298 P PKPbc 18 25 51.7 +1.4
baz=115
BCAR Beaver Creek A 150.06 305 PKPdf 18 25 43.6 -2.0
BCAR PKPbc PKPbc 18 25 50.3 -0.3
L27K Beaver Creek, 150.07 305 PKPdf PKPdf 18 25 43.6 -2.0
L27K PKPbc PKPbc 18 25 50.3 -0.3
L27K Beaver Creek, 150.07 305 P PKPbc 18 25 51.0 +0.4
baz=112
ULN Ulaanbaatar 150.19 91 PKPbc 18 25 51.2 -0.3
M26K Nabesna, AK 150.32 304 P PKPbc 18 25 51.8 +0.6
baz=112
BMRM Bremner River 150.47 300 P PKPbc 18 25 52.5 +0.9
baz=114
K27K Chicken 150.52 307 P PKPbc 18 25 52.5 +0.9
baz=110
NRIK Noril'sk 150.60 42 PKPbc PKPbc 18 25 51.9 +0.3
comp=Z,4.9nm,0.7s,baz=119,slow=1.2,SNR=6.3
N25K Chitina, Valde 150.72 301 P PKPbc 18 25 52.9 +0.6
baz=112
EYAK Cordova Ski Ar 150.82 299 P PKPbc 18 25 53.3 +0.9
baz=114
I27K Kandik River 150.84 310 P PKPbc 18 25 53.0 +0.6
baz=108
H27K Steamboat Moun 150.99 311 P PKPbc 18 25 53.0 +0.3
baz=106
G27K Doyon Strip 151.20 313 P PKPbc 18 25 53.2 +0.1
baz=105
JMN Monobe 151.22 142 PKPbc 18 25 54.5 +0.2
KLU Klutina 151.27 301 P PKPbc 18 25 53.8 +0.3
baz=112
J26L Joseph Creek 151.29 307 P PKPbc 18 25 53.7 +0.2
baz=108,SNR=18
SCRK Sand Creek 151.30 306 PKPbc 18 25 53.8 +0.2
SCRK Sand Creek 151.30 306 P PKPbc 18 25 53.8 +0.2
baz=109,SNR=16
P23K Montague Islan 151.36 297 P PKPbc 18 25 53.7 0.0
baz=114
I26K Coal Creek Min 151.37 309 PKPbc 18 25 53.5 0.0
I26K Coal Creek Min 151.37 309 P PKPbc 18 25 53.6 0.0
baz=107,SNR=32
E27K Coleen River 151.52 315 P PKPbc 18 25 54.1 +0.2
baz=103
GLI Glacier Island 151.56 299 P PKPbc 18 25 54.1 0.0
baz=112
RIDG Independent Ri 151.58 306 P PKPbc 18 25 54.6 +0.5
baz=109,SNR=20
PAX Paxson 151.59 304 P PKPbc 18 25 54.2 0.0
baz=110,SNR=5.1
M24K Tolsona, Glenn 151.60 302 P PKPbc 18 25 54.7 +0.4
baz=111
K24K Donnelly Dome 152.00 305 P PKPbc 18 25 55.1 0.0
baz=108
SCM Sheep Creek Mo 152.01 301 P PKPbc 18 25 55.3 +0.1
baz=110
G26K Porcupine Rive 152.05 312 P PKPbc 18 25 55.2 +0.2
baz=104,SNR=16
J25K Salcha River, 152.07 307 P PKPbc 18 25 55.2 -0.1
baz=107
PWL Port Wells 152.12 299 P PKPbc 18 25 55.4 0.0
baz=112
M23K Glacier View 152.18 301 P PKPbc 18 25 55.7 +0.2
baz=110
SEW Seward 152.34 297 P PKPbc 18 25 56.5 +0.6
baz=112
F26K Sheenjek River 152.35 314 P PKPbc 18 25 56.3 +0.5
baz=102,SNR=19
KNK Knik Glacier 152.37 300 P PKPbc 18 25 56.6 +0.6
baz=111
KSAR Wonju Array Be 152.38 129 PKPbc 18 25 56.0 -0.7
PRP Porcupine Dome 152.38 309 P PKPbc 18 25 56.8 +0.7
baz=105
KSRS Korea Array 152.40 129 PKPbc PKPbc 18 25 57.0 +0.3
comp=Z,1.8nm,0.7s,baz=189,slow=2.2,SNR=9.8
KSRS PKPab PKPab 18 26 07.0 0.0
comp=Z,3.3nm,0.9s,baz=215,slow=4.1,SNR=12
DHY Denali Highway 152.45 303 P PKPbc 18 25 56.4 +0.1
baz=108
WAT6 Susitna Watana 152.45 302 P PKPbc 18 25 56.4 +0.1
baz=109,SNR=8.0
SML Sawmill 152.45 301 P PKPbc 18 25 56.0 -0.2
baz=110
BMAR Burnt Mountain 152.46 313 PKPbc 18 25 56.2 +0.2
C27K Jago River 152.54 318 P PKPbc 18 25 56.6 +0.5
baz=99
HDA Harding Lake 152.66 306 P PKPbc 18 25 56.6 +0.1
baz=106
H25K Birch Creek 152.68 311 P PKPbc 18 25 57.0 +0.6
baz=103
ILAR Eielson Array 152.74 307 PKPbc PKPbc 18 25 56.5 -0.2
comp=Z,8.9nm,0.7s,baz=152,slow=2.2,SNR=42
ILAR Eielson Array 152.74 307 PKPbc 18 25 55.8 -0.9
PMR Palmer 152.74 300 P PKPbc 18 25 57.5 +0.8
baz=110
BRSE Bradley Lake S 152.81 295 P PKPbc 18 25 57.4 +0.5
baz=112
WAT1 Susitna Watana 152.88 303 P PKPbc 18 25 57.1 0.0
baz=108
F25K Christian River 152.89 313 P PKPbc 18 25 57.3 +0.2
baz=101,SNR=11
KDAK Kodiak Island 152.89 291 P PKPbc 18 25 57.2 0.0
baz=115
G25K Bearman Lake 152.90 312 P PKPbc 18 25 57.3 +0.3
baz=102
E25K Arctic Village 152.96 315 P PKPbc 18 25 57.5 +0.3
baz=100,SNR=15
OHAK Old Harbor 152.99 289 P PKPbc 18 25 57.3 -0.1
baz=116
MCK McKinley 153.31 304 PKPbc 18 25 57.2 -0.8
MCK McKinley 153.31 304 P PKPbc 18 25 58.0 0.0
baz=106
H24K Noodor Dome 153.40 309 PKPbc 18 25 57.3 -0.9
H24K Noodor Dome 153.40 309 P PKPbc 18 25 58.3 +0.1
baz=103
G24K Hadweenzic Riv 153.42 311 P PKPbc 18 25 58.5 +0.4
baz=101
D25K Kavik River 153.43 317 P PKPbc 18 25 58.2 +0.1
baz=97
CHIR Chirikof Islan 153.52 285 P PKPbc 18 25 58.7 +0.1
baz=118
NEA2 Nenana 153.60 306 P PKPbc 18 25 58.2 -0.4
baz=104
F24K Squaw Lake 153.73 313 P PKPbc 18 25 59.0 +0.2
baz=99
TRF Thorofare Moun 153.82 303 P PKPbc 18 25 59.1 -0.2
baz=106
I23K Minto, Yukon-K 153.85 307 P PKPbc 18 25 59.2 +0.2
baz=103
Q19K Cape Douglas, 153.87 292 P PKPbc 18 25 58.7 -0.7
baz=113
SKT Skwentna 153.94 300 P PKPbc 18 25 59.5 +0.1
baz=108
P19K Oil Pt 153.94 294 P PKPbc 18 25 59.2 -0.2
baz=111
E24K Your Creek 154.03 314 P PKPbc 18 25 59.8 +0.3
baz=98,SNR=6.6
H23K Yukon River 154.07 309 P PKPbc 18 25 59.6 0.0
baz=102
D24K Happy Valley 154.28 317 P PKPbc 18 26 00.0 +0.1
baz=95
C24K Franklin Bluff 154.28 318 P PKPbc 18 25 60.0 +0.1
baz=94
BPAW Bear Paw Mtn. 154.29 305 PKPbc 18 25 59.9 -0.3

BPAW	**Bear Paw Mtn.** baz=104	**154.29**	**305**	P		**PKPbc**	**18 25 59.8**	**-0.3**
MLY	**Manley** baz=102	**154.39**	**307**	P		**PKPbc**	**18 26 00.3**	**0.0**
G23K	**Bananza Creek** baz=99	**154.42**	**311**	P		**PKPbc**	**18 26 00.7**	**+0.3**
PPLA	**Purkeypile** baz=106	**154.50**	**302**	P		**PKPbc**	**18 26 00.6**	**-0.1**
TOLK	**Toolik Lake Re**	**154.50**	**315**			**PKPbc**	**18 26 00.8**	**+0.3**
TOLK	**Toolik Lake Re** baz=96,SNR=13	**154.50**	**315**	P		**PKPbc**	**18 26 00.8**	**+0.3**
COLD	**Coldfoot** baz=98	**154.57**	**312**	P		**PKPbc**	**18 26 00.7**	**+0.1**
CAST	**Castle Rocks** baz=105,SNR=5.1	**154.59**	**303**	P		**PKPbc**	**18 26 00.9**	**+0.1**
M20K	**Styx River** baz=107	**154.64**	**299**	P		**PKPbc**	**18 26 00.5**	**-0.4**
R17K	**Ugashik Creek** baz=114	**154.69**	**288**	P		**PKPbc**	**18 26 00.9**	**-0.1**
CHUM	**Lake Minchumin** baz=104	**154.80**	**304**	P		**PKPbc**	**18 26 01.0**	**-0.1**
H22K	**Ishtalitna Cre** baz=100	**154.82**	**309**	P		**PKPbc**	**18 26 01.1**	**-0.1**
N19K	**Bonanza Creek** baz=108	**154.93**	**296**	P		**PKPbc**	**18 26 01.4**	**-0.2**
D23K	**Nanushuk River** baz=94	**154.93**	**316**	P		**PKPbc**	**18 26 01.4**	**+0.1**
I21K	**Tanana** baz=101	**154.94**	**307**	P		**PKPbc**	**18 26 01.2**	**-0.2**
C23K	**Itkillik River** baz=92	**154.95**	**318**	P		**PKPbc**	**18 26 01.3**	**0.0**
CHNA	**Chernabura Isl** baz=118	**155.06**	**281**	P		PKPdf	18 26 02.1	+9.1
MJAR	**Matsushiro Arr** comp=Z,1.4nm,0.8s,baz=163,slow=5.6,SNR=4.7	**155.13**	**147**	PKPbc		**PKPdf**	**18 26 01.6**	**+7.7**
MJAR	comp=Z,1.6nm,0.6s,baz=186,slow=4.7,SNR=5.8			PKPab	sPKPbc		18 26 17.9	+0.6
L20K	**Farewell, AK** baz=105	**155.14**	**300**	P		PKPdf	18 26 02.2	+9.1
M19K	**Big River Lodg** baz=106	**155.21**	**299**	P		PKPdf	18 26 02.5	+9.3
E22K	**Anaktuvuk Pass** baz=95	**155.28**	**314**	P		PKPdf	18 26 02.7	+10
F22K	**John River** baz=96	**155.36**	**312**	P		PKPdf	18 26 03.4	+10
H21K	**Melozitna Rive**	**155.36**	**308**			PKPdf	18 26 01.6	+8.3
H21K	**Melozitna Rive** baz=99	**155.36**	**308**	P		PKPdf	18 26 02.7	+9.4
K20K	**Telida** baz=103	**155.44**	**302**	P		PKPdf	18 26 03.3	+10
G21K	**Allakaket** baz=97	**155.77**	**310**	P		PKPdf	18 26 03.9	+10
IMAR	**Indian Mountai**	**155.80**	**309**			PKPdf	18 26 03.6	+10
F21K	**Alatna River** baz=95	**155.84**	**312**	P		PKPdf	18 26 04.3	+10
TTA	**Tatalina** baz=103	**156.20**	**301**	P		PKPdf	18 26 04.9	+10
BNX	**BinXian**	**158.93**	**117**	⇓P		**PKPab**	**18 26 34.2**	**-0.6**
BNX	comp=Z,5.0nm,0.7s			pmax	pmax			
BNX	comp=Z,60nm,4.0s			pmax	pmax			
KLR	**Kul'dur** comp=Z,0.8nm,0.5s,baz=251,slow=0.7,SNR=2.7	**163.49**	**116**	PKP		**PKPdf**	**18 26 02.5**	**-0.6**
KLR	comp=Z,1.1nm,0.5s,baz=247,slow=4.5,SNR=4.6			PKPab		**PKPab**	**18 26 52.9**	**-1.8**
PETK	**Petropavlovsk-** comp=Z,4.0nm,0.9s,baz=92,slow=5.0,SNR=5.0	**173.88**	**198**	PKPab		**PKPab**	**18 27 40.4**	**0.0**

*SOME **11** 18:16:44.6,39.˝33N×73.˝77E,h0km*
*NNC **11** 18:16:48.0±1.5,39.˝40N×73.˝72E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=10.8km s-min=6.2km az=171.0*
*KRNET **11** 18:16:47.5±0.1,39.˝54N×73.˝61E,mb3.5*
ISC 11 18:16:48.6±1.9,**39.˝47N**±0.˝07×**73.˝65E**±0.˝04,**h2**km±12km, **n33**,σ2§**15**/55,**13C-6D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=27	**1.25**	**328**	⇓*i*P	**Pn**	**18 17 09.4**	**-3.7**
OHH	baz=27			⇓*i*S	**Sb**	**18 17 26.0**	**-3.4**
DRK	**Karamyk** baz=68	**1.43**	**271**	⇑*i*P	**Pn**	**18 17 14.0**	**-1.9**
DRK	baz=68			⇑*i*S	**Sn**	**18 17 33.3**	**-2.1**
ARLS	**Aral** baz=13	**2.44**	**12**	⇑*e*P	**Pn**	**18 17 29.6**	**-0.1**
ARLS	baz=13			⇑*i*S	**Sn**	**18 18 00.3**	**+0.1**
GAR	**Garm** baz=59	**2.63**	**261**	⇓*i*P	**Pn**	**18 17 32.8**	**+0.6**
GAR	baz=59			⇓*i*S	**Sn**	**18 18 05.9**	**+1.1**
TRKS	**Terek-Say** baz=17	**2.81**	**318**	⇑*e*P	**Pn**	**18 17 34.0**	**-0.7**
TRKS	baz=17			⇑*i*S	**Sn**	**18 18 07.6**	**-1.6**
MRKS	**Merke** 7.3nm,0.3s	**3.29**	**355**	*e*P	**Pg**	**18 17 50.6**	**-1.0**
MRKS	28nm,0.7s			*e*S	**Sg**	**18 18 38.6**	**+4.4**
MRKS	**Merke** 5.1nm,0.3s	**3.29**	**355**	Pg	**Pg**	**18 17 50.6**	**-1.0**
MRKS	7.3nm,0.3s			Pg	**Pg**	**18 17 50.6**	**-1.0**
MRKS	29nm,0.5s			Lg	Lg	18 18 37.8	
MRKS	28nm,0.7s			Lg	Lg	18 18 38.6	
BOOM	**Boomskoye usch** baz=30	**3.48**	**29**	⇑*e*P	**Pn**	**18 17 44.5**	**+0.6**
BOOM	baz=30			⇑*i*S	**Sn**	**18 18 26.0**	**+0.2**
CHMS	**Chumysh** 4.3nm,0.6s	**3.62**	**13**	⇑Pn	**Pn**	**18 17 47.8**	**+2.1**
CHMS	13nm,0.9s			⇓Lg	Lg	18 18 43.6	
TKM2	**Tokmak 2** 3.9nm,0.6s	**3.75**	**22**	⇑Pg	**Pb**	**18 17 57.6**	**+2.0**
TKM2	7.8nm,0.6s			⇑Lg	Lg	18 18 47.2	
IUG	**Iuzhnay** 151nm,0.3s	**3.83**	**315**	*e*P	**Pb**	**18 17 59.8**	**+2.8**
IUG	51nm,0.7s			*e*S	**Sg**	**18 18 54.0**	**+2.3**
IUG	**Iuzhnay** 257nm,0.4s	**3.83**	**315**	Pg	**Pb**	**18 17 59.8**	**+2.8**
IUG	51nm,0.7s			Lg	Lg	18 18 54.0	
KST	**Kastek** 4.9nm,0.4s	**3.97**	**25**	*e*P	**Pb**	**18 18 00.6**	**+1.1**
KST	18nm,0.8s			*e*S	**Sg**	**18 18 54.9**	**-1.3**
KST	**Kastek** 4.9nm,0.4s	**3.97**	**25**	Pg	**Pb**	**18 18 00.6**	**+1.1**
KST	18nm,0.8s			Lg	Lg	18 18 54.9	
SGDS	**Sogindy** 3.5nm,0.2s	**4.05**	**10**	*e*P	**Pg**	**18 18 05.3**	**-0.8**
SGDS	12nm,0.9s			*e*S	**Sg**	**18 19 03.0**	**+4.4**
CHM	**Chimkent** 88nm,0.4s	**4.18**	**314**	*e*P	**Pb**	**18 18 04.8**	**+1.8**
CHM	76nm,0.2s			*e*S	**Sg**	**18 19 02.3**	**-0.7**
MTBS	**Maitube** 3.2nm,0.1s	**4.21**	**29**	*e*P	**Pb**	**18 18 05.0**	**+1.5**
MTBS	9.9nm,0.3s			*e*S	**Sg**	**18 19 03.1**	**-0.9**
MTBS	**Maitube** 3.2nm,0.1s	**4.21**	**29**	Pg	**Pb**	**18 18 05.0**	**+1.5**
MTBS	10nm,0.5s			Lg	Lg	18 19 03.1	
KK31	**Karatay Array** 0.3nm,0.2s,baz=149,slow=14,SNR=31	**4.33**	**328**	Pn	**Pn**	**18 17 56.2**	**+0.7**
KK31	4.0nm,0.7s			⇑Pg	**Pb**	**18 18 06.6**	**+1.1**
KK31	3.4nm,0.5s,baz=152,slow=25,SNR=4.5			⇓Sn	**Sn**	**18 18 48.8**	**+2.2**
KK31	2.1nm,0.3s			⇑Lg	Lg	18 19 06.1	
KRBS	**Karabastau** 3.2nm,0.5s	**4.49**	**19**	*e*P	**Pb**	**18 18 09.8**	**+1.7**
KRBS	7.7nm,0.7s			*e*S	**Sg**	**18 19 11.1**	**-1.6**
KRBS	**Karabastau** 4.2nm,0.4s	**4.49**	**19**	Pg	**Pb**	**18 18 09.8**	**+1.7**
KRBS	3.2nm,0.5s			Pg	Pg	18 18 09.9	-4.7
KRBS	7.7nm,0.7s			Lg	Lg	18 19 11.1	
KRBS	7.7nm,0.7s			Lg	Lg	18 19 11.1	
MDOK	**Medeo** 4.4nm,0.7s	**4.49**	**34**	*e*P	**Pb**	**18 18 10.2**	**+1.9**
MDOK	7.3nm,1.2s			*e*S	**Sg**	**18 19 11.4**	**-1.4**
MDOK	**Medeo** 4.4nm,0.7s	**4.49**	**34**	Pg	**Pb**	**18 18 10.1**	**+1.9**
MDOK	7.3nm,1.2s			Lg	Lg	18 19 11.4	
KOTS	**Kotyrbulak** 2.8nm,0.3s	**4.58**	**34**	*e*P	**Pb**	**18 18 12.2**	**+2.5**
KOTS	17nm,0.9s			*e*S	**Sg**	**18 19 15.1**	**-0.4**
KOTS	**Kotyrbulak** 2.8nm,0.3s	**4.58**	**34**	Pg	**Pb**	**18 18 12.2**	**+2.5**
KOTS	17nm,0.9s			Lg	Lg	18 19 15.1	
KTBS	**Karatobe** 3.0nm,0.7s	**4.81**	**27**	*e*P	**Pb**	**18 18 15.8**	**+2.2**
KTBS	8.0nm,0.5s			*e*S	**Sg**	**18 19 21.5**	**-1.6**
KTBS	**Karatobe** 3.0nm,0.7s	**4.81**	**27**	Pg	**Pb**	**18 18 15.8**	**+2.2**
KTBS	3.0nm,0.7s			Pg	Pg	18 18 16.0	-4.7
KTBS	8.0nm,0.5s			Lg	Lg	18 19 21.5	
KTBS	8.0nm,0.4s			Lg	Lg	18 19 21.5	
KUU	**Kurty** 2.5nm,0.3s	**4.86**	**24**	*e*P	**Pb**	**18 18 16.4**	**+2.0**
KUU	5.9nm,0.6s			*e*S	**Sg**	**18 19 22.1**	**-2.5**
KUU	**Kurty** 2.5nm,0.3s	**4.86**	**24**	Pg	**Pb**	**18 18 16.4**	**+2.0**
KUU	5.9nm,0.6s			Lg	Lg	18 19 22.1	
ARXS	**Arharly** 3.2nm,0.6s	**5.67**	**32**	*e*P	**Pb**	**18 18 30.6**	**+2.3**
ARXS	7.7nm,0.9s			*e*S	**Sg**	**18 19 47.3**	**-3.4**
ARXS	**Arharly** 3.2nm,0.6s	**5.67**	**32**	Pg	**Pb**	**18 18 30.6**	**+2.3**
ARXS	7.7nm,0.9s			Lg	Lg	18 19 47.3	
BLB	**Baldybastay** 5.2nm,0.5s	**5.86**	**36**	*e*P	**Pb**	**18 18 35.1**	**+3.4**
BLB	4.4nm,0.6s			*e*S	**Sg**	**18 19 55.0**	**-1.9**
BLB	**Baldybastay** 5.2nm,0.5s	**5.86**	**36**	Pg	**Pb**	**18 18 35.1**	**+3.4**
BLB	4.4nm,0.6s			Lg	Lg	18 19 55.0	

*NNC **11** 18:23:55.0±7.5,41.˝94N×84.˝84E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=55.7km s-min=33.1km az=151.0*
*SOME **11** 18:23:57.3,41.˝82N×84.˝52E,h5km*
ISC 11 18:23:58.1±3.3,**41.˝9N**±0.˝1×**84.˝46E**±0.˝10,**h10**km,**n15**, σ2§**37**/23,**2C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen** 1.0nm,0.1s	**3.40**	**299**	*e*P	**Pb**	**18 25 01.0**	**+2.5**
KTMS	7.6nm,0.2s			*e*S	**Sg**	**18 25 47.0**	**-0.4**
KTMS	**Ketmen** 1.0nm,0.1s	**3.40**	**299**	Pg	**Pb**	**18 25 01.0**	**+2.5**
KTMS	7.6nm,0.2s			Lg	Lg	18 25 47.0	
SHLS	**Shalkode** 2.9nm,0.3s	**3.90**	**291**	*e*P	**Pb**	**18 25 05.6**	**-1.4**
SHLS	15nm,0.7s			*e*S	**Sb**	**18 25 54.5**	**+0.1**
SHLS	**Shalkode** 2.9nm,0.3s	**3.90**	**291**	Pg	**Pb**	**18 25 05.6**	**-1.4**
SHLS	15nm,0.7s			Lg	Lg	18 25 54.5	
DJR	**Jarkent** 1.0nm,0.1s	**4.20**	**307**	*e*P	**Pg**	**18 25 17.9**	**-0.6**
DJR	5.1nm,0.5s			*e*S	**Sg**	**18 26 15.4**	**+2.6**
UZB	**Uzynbulak** 0.6nm,0.1s	**4.21**	**289**	*e*P	**Pg**	**18 25 18.3**	**-0.4**
UZB	3.5nm,0.3s			*e*S	**Sg**	**18 26 16.4**	**+3.2**
UZB	**Uzynbulak**	**4.21**	**289**	Pg	**Pg**	**18 25 18.3**	**-0.4**
UZB	1.5nm,0.5s			Lg	Lg	18 26 16.3	
SATY	**Saty** 3.9nm,0.4s	**4.62**	**287**	*e*P	**Pb**	**18 25 23.4**	**+4.0**
SATY	3.6nm,0.7s			*e*S	**Sg**	**18 26 25.1**	**-1.4**
BLB	**Baldybastay** 3.7nm,0.8s	**4.91**	**299**	*e*P	**Pg**	**18 25 30.3**	**-1.8**
BLB	3.6nm,0.7s			*e*S	**Sg**	**18 26 37.2**	**+1.6**
BLB	**Baldybastay** 4.7nm,0.5s	**4.91**	**299**	Pg	**Pg**	**18 25 29.4**	**-2.7**
BLB	3.3nm,0.9s			Lg	Lg	18 26 36.1	
MK31	**Makanchi Array** 1.0nm,0.6s,baz=157,slow=15,SNR=6.9	**5.14**	**343**	⇑Pg	**Pb**	**18 25 27.1**	**-1.0**
MK31	4.2nm,0.7s,baz=152,slow=29,SNR=9.1			⇓Lg	Lg	18 26 44.5	
MAKZ	**Makanchi** 1.6nm,0.8s	**5.23**	**341**	⇑Pg	**Pg**	**18 25 35.4**	**-2.8**
MAKZ	4.3nm,1.1s			⇓Lg	Lg	18 26 47.5	
ARXS	**Arharly** 1.8nm,0.6s	**5.38**	**298**	*e*P	**Pg**	**18 25 37.5**	**-3.6**
ARXS	4.6nm,0.5s			*e*S	**Sg**	**18 26 49.9**	**-0.9**
ARXS	**Arharly** 1.8nm,0.6s	**5.38**	**298**	Pg	**Pg**	**18 25 37.6**	**-3.6**
ARXS	4.6nm,0.5s			Lg	Lg	18 26 49.9	
ZSN	**Zaisan** 1.1nm,0.3s	**5.57**	**3**	*e*P	**Pg**	**18 25 43.7**	**-1.0**
ZSN	4.3nm,0.7s			*e*S	**Sg**	**18 27 00.1**	**+3.4**

WEL 11 18:27:10.0±1.3,**35.˝S**±9.˝×**18.˝0W**±1.˝5,**h33**km,**M3.8/8, ML4.1/13,MLv3.8/8,Error ellipse: s-maj=0.0km s-min=0.0km az=110.1,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.21**	**207**	P	Pn	18 27 58.0	0.0
HAZ	**Te Kaha**	**3.42**	**215**	P	Pn	18 28 01.1	+0.1
HAZ				S	Sn	18 28 41.6	+1.2
RUGZ	**Raukumara Rang**	**3.64**	**214**	P	Pn	18 28 04.8	+0.7
TWGZ	**Tauwhareparae**	**3.69**	**209**	P	Pn	18 28 05.0	+0.3
TWGZ				S	Sn	18 28 49.5	+2.4
CNGZ	**Carnagh Statio**	**3.87**	**205**	P	Pn	18 28 07.8	+0.6
CNGZ				S	Sn	18 28 53.8	+2.2
MWZ	**Matawai**	**4.01**	**213**	P	Pn	18 28 08.7	-0.4
URZ	**Urewera**	**4.15**	**217**	P	Pn	18 28 10.8	-0.2
URZ				S	Sn	18 28 57.2	-1.1
RIGZ	**Rimuhau**	**4.23**	**208**	P	Pn	18 28 12.3	+0.1
RIGZ				S	Sn	18 29 01.1	+0.6
SNGZ	**Shannon Statio**	**4.46**	**211**	P	Pn	18 28 15.0	-0.4
MUGZ	**Murupara**	**4.48**	**218**	P	Pn	18 28 14.1	-1.6
MUGZ				S	Sn	18 29 06.1	-0.5
MHGZ	**Mahia Peninsul**	**4.58**	**204**	P	Pn	18 28 15.9	-1.0
TOZ	**Tahuroa Road**	**4.73**	**233**	P	Pn	18 28 20.8	+1.8
WCZ	**Waipu Caves**	**4.93**	**257**	P	Pn	18 28 22.5	+0.7
MRHZ	**Matea Rd**	**4.94**	**218**	P	Pn	18 28 21.5	-0.4
TMVZ	**Te Maari**	**5.51**	**220**	P	Pn	18 28 31.0	+1.1
OTVZ	**Oturere**	**5.57**	**220**	P	Pn	18 28 29.6	-1.1
BHHZ	**Black Hill Sta**	**5.62**	**215**	P	Pn	18 28 30.8	-0.4

*MOS **11** 18:34:57.1±0.8,59.˝77N×153.˝38W,h119km,mb4.3/12, Error ellipse: s-maj=14.7km s-min=7.1km az=88.1*
*NEIC **11** 18:34:58.3±1.3,59.˝72N±0.˝03×153.˝36W±0.˝07, h118km±3km,Error ellipse: s-maj=5.1km s-min=4.6km az=120.0*

*ANF **11** 18:34:58.5±0.1,59.˝74N×153.˝36W,h115km±2km,ML4.5/69, Error ellipse: s-maj=1.8km s-min=1.3km az=140.0*
*NEIC **11** 18:34:59,59.˝74N×153.˝34W,h89km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr0.48; Mθθ-1.00; Mφφ0.52; Mrθ-0.26; Mrφ0.77; Mθφ1.18; Fault plane solution: Mo1.67000×10^{15} NP1:φs332.44000°, δ78.29000°, λ131.54000°. NP2:φs75.34000°, δ42.87000°, λ17.35000°. Principal axes: T 1.7315, Plg41.0000°, Azm281.0000°; N -0.1224, Plg40.0000°, Azm142.0000°; P -1.6091, Plg22.0000°, Azm32.0000°;*
*AEIC **11** 18:34:59±1.6,59.˝73N±0.˝03×153.˝33W±0.˝06,h111km±3km, ML4.1,mb4.4/4(NEIC),ML4.4/124(NEIC),Mwr4.1/52(NEIC) Error ellipse: s-maj=4.8km s-min=4.6km az=141.0*
*IDC **11** 18:35:00.5±2.2,59.˝95N×153.˝47W,h124km±19km, mb3.9/17,mbtmp4.3/21,MS3.4/3,Error ellipse: s-maj=22.1km s-min=11.3km az=8.0*
ISC 11 18:34:59.0±0.5,**59.˝75N**±0.˝03×**153.˝31W**±0.˝03, **h121**km±4km,**n453**,σ1§**06**/459,**mb4.3**/31,**5C-9D,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPT	**Oil Point**	**0.10**	**158**		**Pn**	**18 35 14.7**	**-0.9**
P19K	**Oil Pt**	**0.10**	**158**		**Pn**	**18 35 14.6**	**-1.0**
P19K	**Oil Pt**	**0.10**	**158**		**Sn**	**18 35 27.0**	**-1.1**
P19K	**Oil Pt** baz=326,SNR=657	**0.10**	**158**	P	**Pn**	**18 35 14.8**	**-0.8**
P19K	baz=326			S	**Sn**	**18 35 27.1**	**-1.1**
ILSW	**Iliamna Southw** comp=E,6.4nm,2.0s	**0.25**	**19**	IAML		18 35 07.2	
ILSW				Pn	**Pn**	**18 35 14.9**	**-1.2**
ILSW	**Iliamna Southw**	**0.25**	**19**		**Sn**	**18 35 27.3**	**-1.7**
IVE	**Iliamna Volcan**	**0.31**	**28**		**Pn**	**18 35 15.3**	**-0.9**
IVE					**Sn**	**18 35 27.9**	**-1.4**
AUL	**Augustine Lava**	**0.37**	**190**		**Pn**	**18 35 15.6**	**-0.8**
AUL					**Sn**	**18 35 28.3**	**-1.2**
AU22	**Augustine Moun**	**0.38**	**184**		**Pn**	**18 35 15.6**	**-0.8**
AU22					**Sn**	**18 35 28.2**	**-1.3**
AUCH	**Augustine Cone**	**0.39**	**190**		**Pn**	**18 35 15.8**	**-0.8**
O20K	**Slope Mountain**	**0.48**	**45**		**Pn**	**18 35 16.4**	**-0.6**
O20K					**Sn**	**18 35 29.7**	**-1.0**
O20K	**Slope Mountain** baz=226,SNR=182	**0.48**	**45**	P	**Pn**	**18 35 16.4**	**-0.6**
O20K	baz=226			S	**Sn**	**18 35 29.6**	**-1.1**
O19K	**Port Alsworth**	**0.68**	**312**		**Pn**	**18 35 17.1**	**-1.1**
O19K	comp=E,12μm,0.5s			IAML		18 35 31.7	
O19K	comp=N,9μm,0.5s			IAML		18 35 32.3	
O19K	**Port Alsworth**	**0.68**	**312**		**Sn**	**18 35 31.1**	**-1.7**
O19K	**Port Alsworth** baz=133,SNR=83	**0.68**	**312**	P	**Pn**	**18 35 17.2**	**-1.1**
O19K	baz=133			S	**Sn**	**18 35 31.1**	**-1.7**
RED	**Redoubt Volcan**	**0.73**	**21**		**Pn**	**18 35 18.1**	**-0.6**
RED					**Sn**	**18 35 32.8**	**-1.0**
RSO	**Redoubt South**	**0.77**	**21**		**Pn**	**18 35 18.6**	**-0.6**
RDWB	**Redoubt West**	**0.78**	**17**		**Pn**	**18 35 18.5**	**-0.8**
RDWB					**Sn**	**18 35 33.7**	**-1.0**
Q19K	**Cape Douglas,**	**0.84**	**192**		**Sn**	**18 35 33.4**	**-1.8**
Q19K	**Cape Douglas,**	**0.84**	**192**	Pn	**Pn**	**18 35 18.6**	**-1.1**
Q19K	**Cape Douglas,** comp=N,13μm,0.8s	**0.84**	**192**	IAML		18 35 38.9	
Q19K	comp=E,14μm,1.2s			IAML		18 35 42.3	
Q19K	**Cape Douglas,** baz=11,SNR=590	**0.84**	**192**	P	**Pn**	**18 35 18.7**	**-1.0**
Q19K	baz=11			S	**Sn**	**18 35 33.5**	**-1.8**
NCT	**North Crescent**	**0.84**	**13**		**Pn**	**18 35 19.1**	**-0.7**
HOM	**Homer**	**0.85**	**95**		**Pn**	**18 35 19.2**	**-0.5**
HOM	**Homer**	**0.85**	**95**		**Sn**	**18 35 35.3**	**0.0**
HOM	**Homer** comp=E,20μm,0.5s	**0.85**	**95**	IAML		18 35 36.0	
HOM	comp=N,19μm,0.5s			IAML		18 35 36.0	
HOM	**Homer** baz=276,SNR=178	**0.85**	**95**	P	**Pn**	**18 35 19.3**	**-0.3**
HOM	baz=276			S	**Sn**	**18 35 35.1**	**-0.2**
RDJH	**Redoubt Jeurge**	**0.89**	**16**		**Pn**	**18 35 19.6**	**-0.6**
RDJH					**Sn**	**18 35 35.5**	**-0.8**
O18K	**Koktuh Hills**	**0.97**	**277**		**Pn**	**18 35 19.6**	**-1.2**
O18K					**Sn**	**18 35 35.4**	**-1.9**
O18K	**Koktuh Hills** baz=97	**0.97**	**277**	P	**Pn**	**18 35 19.6**	**-1.2**
O18K	baz=97			S	**Sn**	**18 35 35.0**	**-2.3**
CNPM	**China Poot**	**1.07**	**101**		**Pn**	**18 35 21.0**	**-0.9**
CNPM	**China Poot**	**1.07**	**101**		**Sn**	**18 35 37.9**	**-1.3**
CNPM	**China Poot** comp=N,12μm,0.4s	**1.07**	**101**	IAML		18 35 38.9	
CNPM	comp=E,10μm,0.3s			IAML		18 35 39.2	
N19K	**Bonanza Creek**	**1.22**	**332**	Pn	**Pn**	**18 35 22.6**	**-0.9**
N19K	**Bonanza Creek** baz=152,SNR=324	**1.22**	**332**	P	**Pn**	**18 35 22.8**	**-0.7**
N19K	baz=152			S	**Sn**	**18 35 40.4**	**-1.7**
BRLK	**Bradley Lake**	**1.23**	**88**		**Pn**	**18 35 22.4**	**-1.0**
BRLK	comp=N,9μm,0.3s			IAML		18 35 41.1	
BRLK	comp=E,8μm,0.2s			IAML		18 35 42.3	
Q20K	**Shuyak Island** baz=337,SNR=458	**1.23**	**157**	P	**Pn**	**18 35 22.8**	**-0.7**
Q20K	baz=337			S	**Sn**	**18 35 40.2**	**-1.9**
SYI	**Shuyak Island**	**1.23**	**157**		**Pn**	**18 35 22.7**	**-0.7**
SYI					**Sn**	**18 35 40.5**	**-1.5**
KAPH	**Katmai Pasha**	**1.27**	**205**		**Pn**	**18 35 23.2**	**-0.8**
BRSE	**Bradley Lake S**	**1.30**	**89**		**Pn**	**18 35 23.3**	**-0.9**
BRSE	**Bradley Lake S** baz=270,SNR=135	**1.30**	**89**	P	**Pn**	**18 35 23.4**	**-0.8**
BRSE	baz=270			S	**Sn**	**18 35 41.7**	**-1.7**
KARR	**Katmai Rainbow**	**1.44**	**211**		**Pn**	**18 35 25.2**	**-0.7**
CAPN	**Captain Cook N**	**1.48**	**45**		**Pn**	**18 35 27.1**	**+0.9**
CAPN	comp=N,11μm,0.8s			IAML		18 35 50.9	
CAPN	comp=E,9μm,0.5s			IAML		18 35 51.0	
CAPN	**Captain Cook N** baz=227	**1.48**	**45**	P	**Pn**	**18 35 27.5**	**+1.3**
SPCR	**Spurr Chakacha**	**1.56**	**20**		**Pn**	**18 35 27.0**	**-0.2**
SPCR	**Spurr Chakacha** baz=201,SNR=62	**1.56**	**20**	P	**Pn**	**18 35 27.2**	**0.0**
SPCR	baz=201			S	**Sn**	**18 35 48.1**	**-0.6**
KAWH	**Katmai**	**1.57**	**210**		**Pn**	**18 35 26.4**	**-0.9**
SPU	**Mount Spurr**	**1.57**	**23**		**Pn**	**18 35 27.1**	**-0.2**
SPCN	**Chakachatna No**	**1.58**	**20**		**Pn**	**18 35 27.5**	**0.0**
N18K	**Kilae Creek**	**1.59**	**307**		**Pn**	**18 35 26.5**	**-1.1**
N18K	**Kilae Creek** baz=126,SNR=52	**1.59**	**307**	P	**Pn**	**18 35 26.6**	**-0.9**
N18K	baz=126			S	**Sn**	**18 35 47.7**	**-1.6**
SPNN	**North Nagishla**	**1.65**	**10**		**Pn**	**18 35 28.3**	**-0.1**
P17K	**Kvichak River**	**1.69**	**252**		**Pn**	**18 35 28.1**	**-0.6**
P17K	**Kvichak River** baz=70,SNR=1000	**1.69**	**252**	P	**Pn**	**18 35 28.1**	**-0.6**
P17K	baz=70			S	**Sn**	**18 35 49.8**	**-1.5**
KAKN	**Katmai Knife C**	**1.71**	**213**		**Pn**	**18 35 28.2**	**-0.8**
SLKM	**Skilak Lake**	**1.72**	**62**		**Pn**	**18 35 28.8**	**-0.3**
SVW2	**Sparrevohn**	**1.76**	**321**	Pn	**Pn**	**18 35 28.5**	**-1.0**
O17K	**Koliganek Bris**	**1.92**	**272**		**Pn**	**18 35 30.5**	**-0.9**
O17K	**Koliganek Bris** baz=90,SNR=579	**1.92**	**272**	P	**Pn**	**18 35 30.7**	**-0.7**
O17K	baz=90			S	**Sn**	**18 35 54.4**	**-1.8**
O22K	**Cooper Landing**	**1.94**	**66**		**Pn**	**18 35 31.8**	**+0.2**
O22K	**Cooper Landing** baz=249	**1.94**	**66**	P	**Pn**	**18 35 31.5**	**-0.2**
SEW	**Seward**	**1.97**	**78**		**Pn**	**18 35 31.6**	**-0.5**
SEW	**Seward** baz=261,SNR=76	**1.97**	**78**	P	**Pn**	**18 35 31.1**	**-1.0**
KDAK	**Kodiak Island**	**2.00**	**169**		**Pn**	**18 35 30.7**	**-1.8**
KDAK	comp=E,4μm,0.4s			IAML		18 35 57.4	
KDAK				IAML		18 35 57.4	

comp=E,6µm,0.4s
KDAK Kodiak Island 2.00 169 P Pn 18 35 30.7 -1.8
KDAK Kodiak Island 2.00 169 P Pn 18 35 30.9 -1.6
baz=349
Q16K King Salmon 2.03 240 Pn 18 35 32.3 -0.5
Q16K King Salmon 2.03 240 P Pn 18 35 32.2 -0.5
baz=57,SNR=407
FIS Fire Island 2.08 46 Pn 18 35 34.5 +1.1
FIS IAML 18 36 03.7
comp=E,4µm,0.3s
FIS IAML 18 36 04.8
comp=N,4µm,0.5s
M20K Styx River 2.15 2 Pn Pn 18 35 34.3 -0.1
M20K Styx River 2.15 2 P Pn 18 35 34.5 +0.1
baz=183,SNR=152
M20K S Sn 18 36 00.3 -1.1
baz=183
RC01 Rabbit Creek A 2.23 51 Pn 18 35 35.1 -0.1
RC01 IAML 18 36 03.0
comp=E,4µm,0.3s
RC01 Rabbit Creek A 2.23 51 P Pn 18 35 35.1 -0.1
baz=234,SNR=154
M19K Big River Lodg 2.23 347 Pn 18 35 34.7 -0.6
M19K Big River Lodg 2.23 347 P Pn 18 35 34.8 -0.5
baz=166,SNR=280
M19K S Sn 18 36 01.6 -1.6
baz=166
SKT Skwentna 2.40 20 Pn 18 35 37.8 +0.2
SKT Skwentna 2.40 20 P Pn 18 35 37.6 +0.1
baz=202
O16K Kokwok River B 2.43 268 Pn 18 35 37.4 -0.4
O16K Kokwok River B 2.43 268 P Pn 18 35 37.5 -0.4
baz=85,SNR=438
O16K S Sn 18 36 06.2 -1.5
baz=85
P16K Nushagak River 2.50 255 P Pn 18 35 38.8 +0.1
baz=72,SNR=176
P16K S Sn 18 36 08.7 -0.6
baz=72
OHAK Old Harbor 2.53 180 Pn 18 35 37.1 -2.0
OHAK IAML 18 36 08.9
comp=N,1µm,0.6s
OHAK IAML 18 36 09.7
comp=E,917nm,0.4s
OHAK Old Harbor 2.53 180 P Pn 18 35 37.2 -2.0
baz=360,SNR=123
M22K Willow 2.55 36 Pn 18 35 39.5 +0.2
M22K Willow 2.55 36 P Pn 18 35 39.6 +0.2
baz=219,SNR=112
L19K White Mountain 2.56 344 Pn Pn 18 35 38.7 -0.8
L19K White Mountain 2.56 344 P Pn 18 35 39.0 -0.6
baz=163,SNR=230
R17K Ugashik Creek 2.66 219 Pn 18 35 40.5 -0.3
R17K Ugashik Creek 2.66 219 P Pn 18 35 40.6 -0.1
baz=36,SNR=434
PWL Port Wells 2.71 64 Pn 18 35 40.5 -1.0
PWL Port Wells 2.71 64 P Pn 18 35 40.5 -1.0
baz=248,SNR=43
L20K Farewell, AK 2.76 354 Pn 18 35 41.8 -0.3
L20K Farewell, AK 2.76 354 P Pn 18 35 42.1 0.0
baz=174,SNR=293
PMR Palmer 2.77 46 Pn 18 35 41.3 -0.9
PMR Palmer 2.77 46 IAML 18 36 14.8
comp=N,957nm,0.5s
PMR IAML 18 36 18.5
comp=E,1µm,0.4s
PMR Palmer 2.77 46 P Pn 18 35 41.2 -0.9
baz=230,SNR=48
N16K Nishlik Lake 2.83 287 Pn 18 35 42.9 -0.1
N16K Nishlik Lake 2.83 287 P Pn 18 35 42.9 -0.1
baz=103,SNR=108
KNK Knik Glacier 2.92 53 Pn 18 35 43.2 -0.9
KNK Knik Glacier 2.92 53 IAML 18 36 19.1
comp=N,2µm,0.5s
KNK Knik Glacier 2.92 53 P Pn 18 35 43.4 -0.8
baz=237,SNR=60
GHO Glory Hole Cre 2.96 45 Pn 18 35 43.9 -0.9
GHO Glory Hole Cre 2.96 45 IAML 18 36 19.3
comp=N,2µm,0.4s
GHO IAML 18 36 19.5
comp=E,2µm,0.3s
P23K Montague Islan 2.99 83 Pn 18 35 45.0 -0.1
P23K Montague Islan 2.99 83 P Pn 18 35 45.0 -0.1
baz=267,SNR=77
CUT Chulitna 3.05 28 Pn 18 35 46.0 +0.2
CUT Chulitna 3.05 28 IAML 18 36 23.1
comp=N,991nm,0.5s
CUT IAML 18 36 26.7
comp=E,1µm,0.4s
CUT Chulitna 3.05 28 P Pn 18 35 45.8 0.0
baz=210,SNR=22
R16K Pilot Point 3.12 227 Pn 18 35 46.3 -0.5
R16K Pilot Point 3.12 227 P Pn 18 35 46.7 -0.1
baz=44,SNR=69
SML Sawmill 3.20 48 Pn 18 35 46.9 -0.9
SML Sawmill 3.20 48 IAML 18 36 26.1
comp=E,1µm,0.9s
SML IAML 18 36 27.7
comp=N,1µm,0.8s
SML Sawmill 3.20 48 P Pn 18 35 47.0 -0.9
baz=232,SNR=48
PPLA Purkeypile 3.21 9 Pn 18 35 49.2 +1.1
PPLA Purkeypile 3.21 9 P Pn 18 35 48.8 +0.8
baz=190,SNR=251
SII Sitkinak Islan 3.23 189 Pn 18 35 46.3 -2.0
SII Sitkinak Islan 3.23 189 IAML 18 36 24.7
comp=N,932nm,0.7s
SII IAML 18 36 29.4
comp=E,821nm,0.6s
SII Sitkinak Islan 3.23 189 P Pn 18 35 46.3 -2.0
baz=7,SNR=39
GLI Glacier Island 3.29 67 Pn 18 35 48.6 -0.5
GLI Glacier Island 3.29 67 IAML 18 36 25.5
comp=E,2µm,0.4s
GLI Glacier Island 3.29 67 P Pn 18 35 48.4 -0.7
baz=252,SNR=16
M23K Glacier View 3.42 51 Pn 18 35 50.0 -0.8
M23K Glacier View 3.42 51 P Pn 18 35 49.8 -0.9
baz=236,SNR=63
TT01 Tatalina 3.43 339 Pn 18 35 50.3 -0.6
TTA Tatalina 3.45 339 Pn 18 35 50.1 -1.1
TTA Tatalina 3.45 339 P Pn 18 35 50.1 -1.1
TTA Tatalina 3.45 339 P Pn 18 35 50.4 -0.8
baz=157,SNR=138
HIN Hinchinbrook I 3.47 76 Pn 18 35 50.7 -0.8
HIN IAML 18 36 32.7
comp=E,2µm,0.4s
FID Port Fidalgo 3.55 71 Pn 18 35 51.0 -1.4
Q23K Middleton Isla 3.55 92 Pn 18 35 52.0 -0.4
Q23K Middleton Isla 3.55 92 IAML 18 36 34.9
comp=N,1µm,0.5s
Q23K IAML 18 36 35.6
comp=E,599nm,0.5s
Q23K Middleton Isla 3.55 92 P Pn 18 35 52.1 -0.4
baz=278,SNR=8.0
MID Middleton Isla 3.56 92 Pn 18 35 51.9 -0.6
MID Middleton Isla 3.56 92 IAML 18 36 34.6
comp=N,952nm,0.4s
MID IAML 18 36 35.6
comp=E,656nm,0.5s
MID Middleton Isla 3.56 92 P Pn 18 35 51.9 -0.6
JPK Jack Peak 3.58 66 Pn 18 35 53.0 +0.1
SCM Sheep Creek Mo 3.60 52 Pn 18 35 52.5 -0.7
SCM Sheep Creek Mo 3.60 52 IAML 18 36 36.6
comp=E,929nm,0.6s
SCM IAML 18 36 38.4
comp=N,1µm,0.8s
SCM Sheep Creek Mo 3.60 52 P Pn 18 35 52.5 -0.7
baz=237,SNR=59
K20K Telida 3.64 355 Pn 18 35 53.6 -0.1
K20K Telida 3.64 355 P Pn 18 35 53.5 -0.2
baz=174,SNR=225
CAST Castle Rocks 3.73 8 Pn 18 35 55.0 +0.1
CAST Castle Rocks 3.73 8 P Pn 18 35 55.1 +0.3
baz=190,SNR=340
WAT7 Susitna Watana 3.77 33 Pn 18 35 55.4 -0.1
ANNE Aniakchak Nort 3.79 223 Pn 18 35 55.1 -0.6
WAT1 Susitna Watana 3.85 35 Pn 18 35 56.0 -0.5
WAT1 Susitna Watana 3.85 35 P Pn 18 35 56.0 -0.5
baz=219
EYAK Cordova Ski Ar 3.86 75 Pn 18 35 55.7 -0.9
EYAK Cordova Ski Ar 3.86 75 P Pn 18 35 56.3 -0.3
baz=261,SNR=15
ANPK Aniakchak Peak 3.87 223 Pn 18 35 56.1 -0.7
WAT6 Susitna Watana 3.92 41 Pn 18 35 56.7 -0.8
WAT6 Susitna Watana 3.92 41 P Pn 18 35 56.7 -0.8
baz=226,SNR=169
DIV Divide 3.98 66 Pn 18 35 58.4 +0.1
KTH Kantishna Hill 3.99 16 Pn 18 35 58.0 -0.3
KTH Kantishna Hill 3.99 16 IAML 18 37 24.4
comp=E,162nm,0.9s
KTH IAML 18 37 35.1
comp=N,162nm,0.8s
TRF Thorofare Moun 3.99 20 Pn 18 35 58.1 -0.3
TRF Thorofare Moun 3.99 20 IAML 18 36 44.3
comp=N,291nm,0.5s
TRF IAML 18 36 46.7
comp=E,146nm,0.5s
TRF Thorofare Moun 3.99 20 P Pn 18 35 57.9 -0.5
baz=203,SNR=176
KLU Klutina 4.04 61 Pn 18 35 58.2 -0.9
KLU Klutina 4.04 61 P Pn 18 35 58.0 -1.0
baz=247,SNR=246
CHIR Chirikof Islan 4.12 198 Pn 18 35 58.0 -2.2
CHIR Chirikof Islan 4.12 198 IAML 18 36 44.4
comp=N,328nm,0.5s
CHIR IAML 18 36 44.4
comp=E,271nm,0.5s
CHIR Chirikof Islan 4.12 198 P Pn 18 35 57.9 -2.2
baz=16,SNR=20
CHUM Lake Minchumin 4.18 6 Pn 18 36 01.0 +0.3
CHUM Lake Minchumin 4.18 6 P Pn 18 36 01.0 +0.3
baz=187,SNR=317
M24K Tolsona, Glenn 4.21 53 Pn 18 36 01.0 -0.3
M24K Tolsona, Glenn 4.21 53 IAML 18 36 50.2
comp=E,792nm,0.8s
M24K IAML 18 36 50.9
comp=N,722nm,1.0s
M24K Tolsona, Glenn 4.21 53 P Pn 18 36 01.0 -0.3
baz=239,SNR=84
M24K S Sn 18 36 47.6 -2.0
baz=239
RND Reindeer 4.25 28 Pn 18 36 01.2 -0.6
RND Reindeer 4.25 28 IAML 18 36 51.0
comp=N,119nm,0.5s
RND IAML 18 36 53.7
comp=E,134nm,0.5s
RND Reindeer 4.25 28 P Pn 18 36 01.2 -0.6
GOAT Goat Mountain 4.37 75 Pn 18 36 03.4 0.0
RAGM Ragged Mountai 4.37 78 Pn 18 36 03.2 -0.2
PS12 TAPS Pump St12 4.38 63 Pn 18 36 04.0 +0.5
DHY Denali Highway 4.39 38 Pn 18 36 03.2 -0.5
DHY Denali Highway 4.39 38 IAML 18 36 55.1
comp=N,296nm,0.4s
DHY IAML 18 36 57.1
comp=E,322nm,0.3s
DHY Denali Highway 4.39 38 P Pn 18 36 03.1 -0.7
baz=223,SNR=66
CHGN Chignik 4.39 220 Pn 18 36 02.8 -0.9
CHGN Chignik 4.39 220 IAML 18 36 52.8
comp=N,224nm,0.1s
CHGN IAML 18 36 52.9
comp=E,248nm,0.1s
CHGN Chignik 4.39 220 P Pn 18 36 02.7 -1.0
baz=36,SNR=69
J20K Nowinta River 4.46 355 Pn 18 36 04.4 -0.2
J20K Nowinta River 4.46 355 P Pn 18 36 04.4 -0.2
baz=175,SNR=260
KAIM Kayak Island 4.49 84 Pn 18 36 04.9 0.0
KAIM Kayak Island 4.49 84 IAML 18 37 02.9
comp=E,625nm,0.6s
KAIM Kayak Island 4.49 84 P Pn 18 36 05.0 0.0
baz=271,SNR=5.7
BMRM Bremner River 4.49 70 Pn 18 36 04.8 -0.2
BMRM Bremner River 4.49 70 P Pn 18 36 04.9 -0.2
baz=258,SNR=40
BPAW Bear Paw Mtn. 4.50 13 Pn 18 36 04.5 -0.7
BPAW Bear Paw Mtn. 4.50 13 P Pn 18 36 04.4 -0.7
baz=195,SNR=210
MCK McKinley 4.51 26 Pn 18 36 05.2 -0.1
MCK McKinley 4.51 26 IAML 18 36 57.1
comp=E,124nm,0.4s
MCK IAML 18 37 26.2
comp=N,136nm,0.6s
MCK McKinley 4.51 26 P Pn 18 36 05.0 -0.2
baz=209,SNR=71
HMT Hamilton 4.58 79 Pn 18 36 06.0 -0.1
N25K Chitina, Valde 4.67 63 Pn 18 36 06.7 -0.8
N25K Chitina, Valde 4.67 63 IAML 18 37 01.7
comp=N,593nm,0.7s
N25K IAML 18 37 02.8
comp=E,396nm,0.5s
N25K Chitina, Valde 4.67 63 P Pn 18 36 06.8 -0.7
baz=250,SNR=258
VNSG Veniaminof 6 4.76 223 Pn 18 36 08.1 -0.6
HARP HAARP 4.77 53 Pn 18 36 08.3 -0.4
HARP HAARP 4.77 53 P Pn 18 36 08.2 -0.6
baz=240,SNR=43
BWN Browne 4.80 21 Pn 18 36 09.0 -0.1
BWN IAML 18 37 58.8
comp=N,178nm,0.7s
BWN IAML 18 38 06.5
comp=E,184nm,1.2s
S14K Fog Glacier 4.80 226 P Pn 18 36 09.3 0.0
baz=41,SNR=11
VNFG Fog Glacier, M 4.80 226 Pn 18 36 08.5 -0.8
BERG Berg Lake 4.86 78 Pn 18 36 09.4 -0.5
PAX Paxson 4.97 46 Pn 18 36 10.9 -0.5
PAX Paxson 4.97 46 P Pn 18 36 11.0 -0.5
baz=233,SNR=61
GLB Gilahina Butte 4.98 66 Pn Pn 18 36 10.8 -0.8
BGLC Bering Glacier 5.06 81 P Pn 18 36 13.4 +0.8
baz=270
KHIT Khitrov Hills 5.08 78 Pn 18 36 12.6 -0.4
CRQM Cirque 5.17 74 Pn 18 36 13.9 -0.3
CRQE Cirque 5.19 74 P Pn 18 36 14.2 -0.3
baz=263,SNR=14
NEA2 Nenana 5.25 20 Pn 18 36 14.4 -0.9
NEA2 Nenana 5.25 20 P Pn 18 36 14.3 -0.9
baz=204,SNR=239
SNH Sunshine Point 5.28 81 Pn 18 36 15.5 -0.1
SNH IAML 18 37 16.7
comp=N,341nm,0.3s
SNH IAML 18 37 16.8
comp=E,401nm,0.5s
WAX Waxell Ridge 5.28 78 Pn 18 36 14.6 -1.1
GCSA Galena City Sc 5.29 343 Pn 18 36 15.1 -0.6
GCSA Galena City Sc 5.29 343 P Pn 18 36 15.0 -0.6
baz=160,SNR=11
TGL Tana Glacier 5.32 75 Pn 18 36 16.1 -0.1
MCARA McCarthy VSAT 5.33 68 Pn 18 36 16.6 +0.3
MCARA McCarthy VSAT 5.33 68 P Pn 18 36 16.7 +0.5
baz=256,SNR=24
WRH Wood River Hil 5.34 25 Pn 18 36 15.6 -0.7
WRH Wood River Hil 5.34 25 IAML 18 37 15.1
comp=E,78nm,0.6s
K24K Donnelly Dome 5.42 38 P Pn 18 36 18.0 +0.6
baz=225,SNR=130
MLY Manley 5.44 12 Pn 18 36 16.8 -0.9
MLY Manley 5.44 12 P Pn 18 36 16.8 -0.9
baz=194,SNR=166
I21K Tanana 5.49 6 Pn 18 36 18.0 -0.3
I21K Tanana 5.49 6 P Pn 18 36 17.9 -0.4
baz=187,SNR=176
ISLE Juniper Island 5.54 76 Pn 18 36 19.2 0.0
CCB Clear Creek Bu 5.55 25 Pn 18 36 18.1 -1.1
HDA Harding Lake 5.55 30 Pn 18 36 18.3 -0.9
HDA Harding Lake 5.55 30 P Pn 18 36 18.2 -1.0
baz=215,SNR=172
KIAG Kiagna River 5.57 73 Pn 18 36 19.5 -0.1
MENT Mentasta 5.62 51 Pn 18 36 19.2 -0.9
M26K Nabesna, AK 5.67 58 Pn 18 36 20.7 -0.1
M26K Nabesna, AK 5.67 58 P Pn 18 36 20.6 -0.2
baz=246,SNR=363
RIDG Independent Ri 5.67 41 Pn 18 36 20.5 -0.4
RIDG Independent Ri 5.67 41 P Pn 18 36 20.5 -0.4
baz=229,SNR=104
PS08 TAPS Pump Stn8 5.69 29 Pn 18 36 20.3 -0.8
I23K Minto, Yukon-K 5.72 17 Pn 18 36 20.4 -1.0
I23K Minto, Yukon-K 5.72 17 P Pn 18 36 20.8 -0.7
baz=200,SNR=300
MESA MESA 5.72 81 Pn 18 36 22.0 +0.3
MESA MESA 5.72 81 P Pn 18 36 21.8 +0.1
baz=270,SNR=11
TCOL CIGO, UAF Yank 5.74 24 Pn 18 36 20.9 -0.7
TCOL CIGO, UAF Yank 5.74 24 P Pn 18 36 20.9 -0.7
baz=209,SNR=23
COLA College 5.74 24 Pn 18 36 20.9 -0.8
COLA College 5.74 24 *d* iP Pn 18 36 20.6 -1.1
COLA pmax pmax
comp=Z,71nm,0.8s
COLA College 5.74 24 P Pn 18 36 21.0 -0.7
baz=209
MDM Murphy Dome 5.74 22 Pn 18 36 20.6 -1.2
L26K Log Cabin Wild 5.81 51 Pn 18 36 22.5 -0.2
L26K Log Cabin Wild 5.81 51 P Pn 18 36 22.9 +0.3
baz=240,SNR=25
YAH Yahtse 5.83 79 Pn 18 36 23.3 +0.2
GRNC Granite Creek 5.84 75 Pn 18 36 23.5 +0.2
SDPT Sand Point 5.86 224 Pn 18 36 21.6 -1.8
SDPT Sand Point 5.86 224 P Pn 18 36 21.5 -1.8
baz=38,SNR=8.5
IL31 5.87 28 Pn 18 36 22.1 -1.3
ILAR Eielson Array 5.87 28 P Pn 18 36 22.2 -1.2
comp=Z,100nm,0.5s,baz=216,slow=14,SNR=1091
ILAR S Sn 18 37 23.7 -5.6
comp=Z,12nm,0.5s,baz=210,slow=15,SNR=1.3
ILAR Eielson Array 5.87 28 Pn 18 36 22.0 -1.4
ILAR Eielson Array 5.87 28 P Pn 18 36 22.0 -1.4
DOT Dot Lake 5.89 44 Pn 18 36 22.7 -1.0
H21K Melozitna Rive 5.94 2 Pn 18 36 24.3 -0.2
H21K Melozitna Rive 5.94 2 P Pn 18 36 24.1 -0.3
baz=183,SNR=208
CHNA Chernabura Isl 5.99 217 P Pn 18 36 22.3 -2.8
baz=32,SNR=10
CNBA Chernabura Isl 6.00 217 Pn 18 36 22.5 -2.7
POKR Poker Plat Res 6.04 24 Pn 18 36 24.9 -0.9
POKR Poker Plat Res 6.04 24 P Pn 18 36 24.8 -0.9
baz=210,SNR=18
CTG Chitna Glacier 6.06 73 P Pn 18 36 26.9 +0.7
baz=264,SNR=30
CTGM Chitina Glacie 6.07 73 Pn 18 36 26.7 +0.4
SCRK Sand Creek 6.12 42 Pn 18 36 25.5 -1.5
SCRK Sand Creek 6.12 42 P Pn 18 36 25.6 -1.3
baz=230,SNR=69
TABL Table Mountain 6.13 78 Pn 18 36 27.4 +0.2
J25K Salcha River, 6.13 34 Pn 18 36 26.4 -0.7
J25K Salcha River, 6.13 34 P Pn 18 36 26.3 -0.8
baz=221,SNR=320
M27K Edge Creek, AK 6.14 60 Pn 18 36 27.3 +0.1
M27K Edge Creek, AK 6.14 60 P Pn 18 36 28.1 +0.9
baz=250,SNR=114
S12K Black Hills 6.20 233 P Pn 18 36 27.8 -0.2
baz=46,SNR=7.8
LOGN Logan Glacier 6.21 75 Pn 18 36 28.7 +0.4
H22K Ishtalitna Cre 6.24 7 Pn 18 36 27.6 -0.8
H22K Ishtalitna Cre 6.24 7 P Pn 18 36 27.4 -1.0
baz=189,SNR=93
IM03 6.27 358 Pn 18 36 28.7 -0.1
IMAR Indian Mountai 6.27 358 Pn Pn 18 36 28.7 -0.1
H23K Yukon River 6.34 14 Pn 18 36 28.8 -1.1
H23K Yukon River 6.34 14 P Pn 18 36 29.1 -0.8
baz=198,SNR=212
L27K Beaver Creek, 6.43 54 Pn 18 36 30.5 -0.6
L27K Beaver Creek, 6.43 54 P Pn 18 36 30.5 -0.6
baz=244,SNR=50
BC03 6.45 54 Pn 18 36 30.9 -0.4
BCAR Beaver Creek A 6.45 54 Pn Pn 18 36 30.6 -0.8
PCA Pinnacle 6.57 81 Pn 18 36 33.3 +0.3
PINM Pinnacle 6.57 81 P Pn 18 36 33.3 +0.2
baz=272,SNR=13
H24K Noodor Dome 6.60 20 Pn 18 36 32.4 -1.0
H24K Noodor Dome 6.60 20 P Pn 18 36 32.3 -1.1
baz=205,SNR=80
J26L Joseph Creek 6.60 40 Pn 18 36 32.6 -0.8
J26L Joseph Creek 6.60 40 P Pn 18 36 32.3 -1.1
baz=228,SNR=71
BVCY Beaver Creek 6.60 61 P Pn 18 36 34.4 +0.9
baz=252,SNR=72
O28M Mount Upton 6.61 75 P Pn 18 36 34.5 +0.8
baz=267,SNR=81
YUK3 Moose Creek 6.62 67 P Pn 18 36 34.3 +0.5
baz=258,SNR=69
G21K Allakaket 6.80 359 P Pn 18 36 35.9 0.0
baz=179,SNR=84
PRP Porcupine Dome 6.81 28 Pn 18 36 35.6 -0.7
PRP Porcupine Dome 6.81 28 P Pn 18 36 35.0 -1.3
baz=215,SNR=180
K27K Chicken 6.82 46 Pn 18 36 35.4 -0.9
K27K Chicken 6.82 46 P Pn 18 36 35.5 -0.8
baz=236
BCPM Bancas Point 6.89 82 Pn 18 36 33.0 -4.3
PNL Peninsula 7.04 85 Pn 18 36 39.0 -0.3
PNL Peninsula 7.04 85 P Pn 18 36 39.0 -0.3
baz=276,SNR=66
G23K Bananza Creek 7.15 11 Pn 18 36 39.7 -1.0
G23K Bananza Creek 7.15 11 P Pn 18 36 40.3 -0.4
baz=194,SNR=208
G22K Bettles 7.25 6 P Pn 18 36 42.1 0.0
baz=187
I26K Coal Creek Min 7.29 36 Pn 18 36 41.6 -1.0
I26K Coal Creek Min 7.29 36 P Pn 18 36 41.5 -1.0
baz=225,SNR=71
H25K Birch Creek 7.37 24 Pn 18 36 42.9 -0.7
H25K Birch Creek 7.37 24 P Pn 18 36 43.0 -0.7
baz=211
O29M Mount Kennedy 7.40 79 P Pn 18 36 45.1 +0.8
baz=272,SNR=17
YUK4 Talbot Arm 7.40 71 P Pn 18 36 45.5 +1.1
baz=263,SNR=11
G24K Hadweenzic Riv 7.46 18 Pn 18 36 43.8 -1.1
G24K Hadweenzic Riv 7.46 18 P Pn 18 36 43.5 -1.4
baz=203,SNR=91
F21K Alatna River 7.51 359 P Pn 18 36 45.8 +0.2
baz=179,SNR=64
YUK6 Outpost Mounta 7.51 74 P Pn 18 36 45.8 0.0
baz=267,SNR=14
COLD Coldfoot 7.64 9 Pn 18 36 46.5 -0.8
COLD Coldfoot 7.64 9 P Pn 18 36 46.4 -0.9
baz=192,SNR=54
M29M Somme Creek 7.68 63 P Pn 18 36 48.7 +0.6
baz=256
FYU Fort Yukon 7.75 25 Pn Pn 18 36 47.7 -1.1
G25K Bearman Lake 7.75 22 Pn 18 36 47.7 -1.1
G25K Bearman Lake 7.75 22 P Pn 18 36 47.7 -1.1
baz=208,SNR=37
F22K John River 7.81 3 Pn 18 36 49.1 -0.5
F22K John River 7.81 3 P Pn 18 36 48.9 -0.8
baz=184,SNR=28
DAWY Dawson 7.86 51 Pn Pn 18 36 50.2 -0.2
DAWY Dawson 7.86 51 P Pn 18 36 50.2 -0.2
baz=243,SNR=13
P29M Windy Craggy 7.88 84 Pn 18 36 50.8 +0.2
P29M Windy Craggy 7.88 84 P Pn 18 36 51.3 +0.7
baz=277,SNR=122
HYT Haines Junctio 7.93 75 Pn Pn 18 36 51.8 +0.4
HYT Haines Junctio 7.93 75 P Pn 18 36 52.0 +0.6
baz=269,SNR=8.9
I27K Kandik River 7.96 37 Pn 18 36 50.7 -1.0
I27K Kandik River 7.96 37 P Pn 18 36 50.0 -1.7
baz=228
WECS Westdahl Cape 8.13 235 Pn 18 36 53.2 -0.9
N30M Aishikik Lake 8.16 71 P Pn 18 36 53.7 -0.8
baz=265,SNR=26
F24K Squaw Lake 8.16 15 Pn 18 36 53.8 -0.7
F24K Squaw Lake 8.16 15 P Pn 18 36 53.4 -1.1
baz=200,SNR=67
P30M Million Dollar 8.22 80 P Pn 18 36 55.6 +0.3
baz=274
G26K Porcupine Rive 8.39 27 Pn 18 36 56.2 -1.2
G26K Porcupine Rive 8.39 27 P Pn 18 36 56.0 -1.4
baz=215,SNR=32
H27K Steamboat Moun 8.42 34 Pn 18 36 56.5 -1.4
H27K Steamboat Moun 8.42 34 P Pn 18 36 56.4 -1.4
baz=225
E22K Anaktuvuk Pass 8.45 4 P Pn 18 36 58.5 +0.2
baz=185
F25K Christian Rive 8.57 20 Pn 18 36 58.2 -1.8
F25K Christian Rive 8.57 20 P Pn 18 36 58.5 -1.5
baz=207,SNR=43
PLBC Pleasant Camp 8.60 85 Pn 18 37 00.7 +0.4
PLBC Pleasant Camp 8.60 85 P Pn 18 37 00.7 +0.4
baz=279,SNR=72
BM03 Burnt Mountain 8.61 23 Pn 18 36 58.5 -2.1
O30N Mendenhall 8.62 76 Pn 18 37 00.3 -0.3
O30N Mendenhall 8.62 76 P Pn 18 37 00.9 +0.2
baz=271,SNR=10
E24K Your Creek 8.62 12 Pn 18 36 59.9 -0.8
E24K Your Creek 8.62 12 P Pn 18 36 59.9 -0.8
baz=196,SNR=44
BMAR Burnt Mountain 8.63 23 Pn Pn 18 36 58.5 -2.2
BM01 Burnt Mountain 8.66 23 Pn 18 36 58.8 -2.3
N31M Braeburn, Yuko 8.79 71 Pn 18 37 02.8 -0.2
N31M Braeburn, Yuko 8.79 71 P Pn 18 37 02.8 -0.2
baz=266,SNR=8.9
G27K Doyon Strip 8.80 32 P Pn 18 37 02.1 -1.0

baz=222,SNR=20
AKLV Akutan Long Va 8.88 236 Pn 18 37 03.4 -0.8
I29M Ogilvie Camp, 8.91 44 Pn 18 37 04.5 -0.1
I29M Ogilvie Camp, 8.91 44 P Pn 18 37 04.0 -0.5
baz=238
AKBBA Akutan Broad B 8.92 236 Pn 18 37 03.6 -1.1
F26K Sheenjek River 8.94 23 Pn 18 37 02.9 -2.0
F26K Sheenjek River 8.94 23 P Pn 18 37 02.7 -2.2
baz=211,SNR=19
E25K Arctic Village 9.06 19 P Pn 18 37 05.2 -1.4
baz=206,SNR=32
TOLK Toolik Lake Re 9.08 9 Pn 18 37 06.1 -0.6
TOLK Toolik Lake Re 9.08 9 P Pn 18 37 06.8 0.0
baz=192,SNR=34
SKAG Skagway 9.12 84 Pn 18 37 08.6 +1.3
SKAG Skagway 9.12 84 P Pn 18 37 08.8 +1.5
baz=279,SNR=26
WHY Whitehorse 9.22 76 Pn 18 37 08.3 -0.5
WHY Whitehorse 9.22 76 P Pn 18 37 08.7 0.0
baz=272,SNR=16
D23K Nanushuk River 9.33 6 Pn 18 37 09.0 -1.1
D23K Nanushuk River 9.33 6 P Pn 18 37 09.4 -0.7
baz=188,SNR=16
UNV Unalaska Valle 9.34 236 Pn 18 37 08.7 -1.6
UNV Unalaska Valle 9.34 236 P Pn 18 37 09.0 -1.3
baz=45
MNAT Makushin Natee 9.39 237 Pn 18 37 10.0 -1.0
M31M Drury Creek, Y 9.51 67 Pn Pn 18 37 12.7 +0.1
M31M Drury Creek, Y 9.51 67 P Pn 18 37 13.2 +0.6
baz=263,SNR=14
MGOD Makushin Gods 9.53 237 Pn 18 37 11.2 -1.7
BESE Bessie Mountai 9.55 89 Pn 18 37 13.8 +0.7
D24K Happy Valley 9.64 10 P Pn 18 37 14.5 +0.2
baz=194
JIS Juneau Island 9.87 90 Pn 18 37 19.1 +1.7
E27K Coleen River 9.89 26 P Pn 18 37 16.1 -1.6
baz=217,SNR=11
P32M Atlin 9.91 82 Pn 18 37 17.7 -0.3
P32M Atlin 9.91 82 P Pn 18 37 18.5 +0.5
baz=279,SNR=7.4
EPYK Eagle Plains 10.01 41 Pn 18 37 19.4 +0.1
EPYK Eagle Plains 10.01 41 P Pn 18 37 19.6 +0.3
baz=236,SNR=19
D25K Kavik River 10.06 14 P Pn 18 37 18.8 -1.2
baz=200,SNR=45
C23K Itkillik River 10.20 5 P Pn 18 37 21.8 0.0
baz=188,SNR=5.9
C24K Franklin Bluff 10.20 9 P Pn 18 37 21.3 -0.5
baz=193
P33M Teslin, Yukon 10.27 79 Pn Pn 18 37 23.5 +0.6
P33M Teslin, Yukon 10.27 79 P Pn 18 37 23.2 +0.2
baz=276,SNR=9.9
C27K Jago River 10.72 18 P Pn 18 37 28.0 -0.7
baz=207,SNR=5.1
R33M Jennings River 11.32 82 P Pn 18 37 37.1 +0.1
baz=281,SNR=9.6
WRAK Wrangell Islan 11.57 98 P Pn 18 37 40.4 +0.2
baz=295
CRAG Craig 11.62 103 P Pn 18 37 41.1 +0.2
baz=300
DLBC Dease Lake 12.03 86 P Pn 18 37 48.6 +2.3
comp=Z,8.0nm,0.3s,baz=277,slow=12,SNR=16
DLBC S **Sn 18 39 56.0 -2.5**
comp=Z,3.4nm,0.4s,baz=125,slow=27,SNR=7.7
DLBC Dease Lake 12.03 86 Pn Pn 18 37 47.5 +1.2
DLBC Dease Lake 12.03 86 P Pn 18 37 47.8 +1.5
baz=286,SNR=6.3
INK Inuvik 12.13 37 P Pn 18 37 47.6 +0.1
comp=Z,9.8nm,0.5s,baz=238,slow=17,SNR=8.8
INK Inuvik 12.13 37 Pn Pn 18 37 47.4 -0.1
INK Inuvik 12.13 37 P Pn 18 37 47.4 -0.1
INK Inuvik 12.13 37 P Pn 18 37 47.8 +0.3
baz=235
C36M Paulatuk 15.64 40 Pn Pn 18 38 29.8 -2.5
C36M IAmb IAmb 18 38 38.0
comp=Z,16nm,0.6s
C36M Paulatuk 15.64 40 P Pn 18 38 30.1 -2.1
baz=247
YKA Yellowknife Ar 18.70 65 P Pn 18 39 08.6 -0.7
comp=Z,16nm,0.7s,baz=278,slow=10,SNR=94
YKA ScP **ScP 18 46 54.5 +0.6**
comp=Z,0.5nm,0.6s,baz=295,slow=2.5,SNR=5.8
YKA Yellowknife Ar 18.70 65 P P 18 39 08.4 +0.9
YKA Yellowknife Ar 18.70 65 P P 18 39 08.4 +0.9
BILL Bilibino 19.27 312 eP P 18 39 14.4 +0.8
BILL pmax pmax
comp=Z,6.0nm,0.8s
SEY Seymchan 25.59 301 P P 18 40 15.9 -0.4
comp=Z,1.3nm,0.7s,baz=77,slow=11,SNR=8.7
comp=Z,1.3nm,0.7s
SEY Seymchan 25.59 301 eP P 18 40 14.8 -1.5
SEY pmax pmax
comp=Z,6.0nm,1.6s
PETK Petropavlovsk- 27.34 278 P P 18 40 32.1 -0.1
comp=Z,3.8nm,0.6s,baz=67,slow=13,SNR=17
comp=Z,3.8nm,0.6s
NVAR Mina Array Bea 30.74 118 P P 18 41 06.2 +3.6
comp=Z,0.5nm,0.6s,baz=312,slow=9.1,SNR=5.1
comp=Z,0.5nm,0.6s
S11A Rachel 32.53 116 P P 18 41 17.4 -0.8
YAK Yakutsk 35.50 308 P P 18 41 43.7 +0.3
comp=Z,1.8nm,0.4s,baz=71,slow=6.1
comp=Z,1.8nm,0.4s
YAK Yakutsk 35.50 308 eP P 18 41 43.5 +0.1
YAK pmax pmax
comp=Z,5.0nm,0.7s
KLR Kul'dur 42.49 290 P P 18 42 41.5 -0.2
comp=Z,1.1nm,0.6s,baz=26,slow=7.7,SNR=4.2
comp=Z,1.1nm,0.6s
KLR Kul'dur 42.49 290 eP P 18 42 42.9 +1.2
KLR pmax pmax
comp=Z,4.0nm,2.5s
SCHQ Schefferville 43.83 56 P P 18 42 53.2 +0.8
comp=Z,6.3nm,0.4s,baz=316,slow=7.6,SNR=13
comp=Z,6.3nm,0.4s
NRIK Noril'sk 44.05 334 P P 18 42 54.6 +0.6
comp=Z,4.5nm,0.4s,baz=41,slow=7.2,SNR=5.1
comp=Z,4.5nm,0.4s
NRIK Noril'sk 44.05 334 eP P 18 42 54.7 +0.7
NRIK pmax pmax
comp=Z,6.0nm,0.6s
BOD Bodaibo 44.30 310 eP P 18 42 55.3 -0.8
BOD pmax pmax
comp=Z,6.0nm,1.3s
TXAR Lajitas Array 45.04 110 P P 18 43 05.0 +2.6
comp=Z,0.2nm,0.4s,baz=318,slow=4.8,SNR=4.3
comp=Z,0.2nm,0.4s
MAJO Matsushiro 48.64 273 ceP P 18 43 29.8 -0.5
MAJO *i *PP **pP 18 44 02.3 +3.9**
MAJO pmax pmax
comp=Z,6.0nm,0.9s
MJAR Matsushiro Arr 48.64 273 P P 18 43 29.6 -0.7
comp=Z,1.9nm,0.9s,baz=30,slow=8.0,SNR=5.4
comp=Z,1.9nm,0.9s
BORG Borgarnes 50.68 24 LR LR 19 07 18.5
comp=Z,24nm,20.7s,baz=192,slow=38
KSRS Korea Array 53.08 282 P P 18 44 04.3 +0.9
comp=Z,6.0nm,0.6s,baz=40,slow=6.8,SNR=45
comp=Z,6.0nm,0.6s
TJN Taejon 54.21 282 deP P 18 44 12.1 +0.5
ULN Ulaanbaatar 54.52 305 ceP P 18 44 14.3 +0.3
ULN pmax pmax
comp=Z,8.0nm,1.0s
SONM Songino Array 54.81 306 P P 18 44 17.1 +1.0
comp=Z,11nm,0.7s,baz=43,slow=6.8,SNR=73
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 57.49 323 P P 18 44 35.1 +0.3
comp=Z,11nm,0.5s,baz=31,slow=6.9,SNR=65
comp=Z,11nm,0.5s
ZALV Zalesovo Beam 57.49 323 P P 18 44 34.5 -0.3
FINES FINESS Array B 59.14 0 P P 18 44 46.0 -0.1
comp=Z,1.3nm,0.7s,baz=15,slow=8.3,SNR=4.2
comp=Z,1.3nm,0.7s
FINES FINESS Array B 59.14 0 *i* P P 18 44 49.0 +2.9
FINES pmax pmax
comp=Z,1.0nm,0.8s
ARU Arti 61.44 340 *c i* P P 18 45 01.3 -0.5
ARU 18 47 14.3
ARU S **S 18 53 15.4 +2.5**
ARU SS **SS 18 57 12.6 -1.9**
ARU pmax pmax
comp=Z,5.0nm,0.5s
NJ2 Nanjing 61.86 286 eP P 18 45 01.9 -3.1
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KURK Kurchatov 62.15 326 deP P 18 45 06.6 -0.1
KURK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 62.22 332 deP P 18 45 07.0 -0.1
BRVK pmax pmax
comp=Z,4.0nm,0.6s
KURBB Kurchatov Arra 62.26 326 P P 18 45 07.2 -0.2
comp=Z,2.9nm,0.4s,baz=28,slow=6.6,SNR=37
comp=Z,2.9nm,0.4s
GTA Gaotai 64.45 305 ⇓P P 18 45 22.3 +0.1
GTA pP PcP 18 45 53.7 -1.8
GTA sP sP 18 46 09.4 +4.2
GTA pmax pmax
comp=Z,9.0nm,0.9s
MK31 Makanchi Array 64.53 321 *d* iP P 18 45 21.9 -0.6
MKAR Makanchi Array 64.53 321 P P 18 45 22.1 -0.4
comp=Z,1.3nm,0.5s,baz=37,slow=6.7,SNR=18
comp=Z,1.3nm,0.5s
MAKZ Makanchi 64.62 321 P P 18 45 22.0 -1.1
MAKZ IAmb IAmb 18 45 23.3
comp=Z,3.7nm,0.9s
MAKZ Makanchi 64.62 321 P P 18 45 22.0 -1.1
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
WMQ Urumqi 65.34 316 eP P 18 45 30.8 +3.0
LZH Lanzhou 65.51 300 eP P 18 45 29.2 0.0
LZH pmax pmax
comp=Z,31nm,1.3s
GOMU GeErMu 69.24 307 P P 18 45 52.4 -0.5
GOMU pmax pmax
comp=Z,5.0nm,0.6s
GOMU pmax pmax
comp=Z,45nm,6.2s
AKASG Malin Array Be 69.89 358 P P 18 45 54.2 -1.9
comp=Z,0.2nm,0.3s,baz=5.8,slow=6.0,SNR=1.8
comp=Z,0.2nm,0.3s
AAK Ala-Archa 70.67 325 LR LR 19 21 36.0
comp=Z,23nm,20.1s,baz=261,slow=40
KKAR Karatay Array 71.37 328 P P 18 46 04.9 -0.4
KKAR Karatay Array 71.37 328 P P 18 46 04.9 -0.4
KKAR pmax pmax
comp=Z,2.0nm,0.7s
PZH PanZhiHua 74.59 296 P P 18 46 25.7 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,4.4s
KIV Kislovodsk 75.82 348 eP P 18 46 30.0 -1.4
KIV pmax pmax
comp=Z,3.0nm,1.1s
CMAR Chiang Mai Arr 82.83 294 P P 18 47 09.1 -0.6
comp=Z,1.2nm,0.6s,baz=16,slow=5.2,SNR=7.0
comp=Z,1.2nm,0.6s
DZM Mont Dzumac 87.92 217 LR LR 19 24 49.0
comp=Z,29nm,18.3s,baz=22,slow=34
BOSA Boshof 148.86 2 PKPbc PKPbc 18 54 31.0 -0.9
comp=Z,2.0nm,0.8s,baz=359,slow=1.9,SNR=8.0
BOSA Boshof 148.86 2 PKP2 PKPbc 18 54 31.0 -0.9

*IDC **11** 19:46:52.5±1.9, 17°.51N×93°.91W, h0km, mb3.5/4, mbtmp3.5/5, ML3.8/1, MS3.1/1, Error ellipse: s-maj=42.5km s-min=11.6km az=146.0*
*NEIC **11** 19:46:59.1±2.7, 16°.87N±0°.05×95°.10W±0°.04, h99km±13km, mb4.1/20, Md4.7/81(MEX), Error ellipse: s-maj=8.2km s-min=3.5km az=151.0*
*MEX **11** 19:47:00.6±1.0, 16°.95N×95°.05W, h100km±5km, MD4.7*
ISC 11 19:46:58.6±0.7, 16°.86N±0°.04×95°.12W±0°.02, h104km±6km, n86, σ1°45/130, mb3.7/5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.32**	**44**	Pg	**Pn**		**19 47 13.7**	**0.0**
	240nm,0.3s,baz=220,slow=7.5,SNR=1540							
CMIG				LR	LR		19 47 21.9	
	comp=Z,42nm,21.6s,baz=330,slow=29							
CMIG				Lg	Lg		19 47 24.3	
	418nm,0.3s,baz=97,slow=22,SNR=20							
CMIG	**Matias Romero**	**0.32**	**44**		**Pn**		**19 47 13.6**	**-0.1**
CMIG					**Sn**		**19 47 24.1**	**-1.1**
CMIG	**Matias Romero**	**0.32**	**44**	*i* P	**Pn**		**19 47 13.6**	**-0.1**
CMIG					**Sn**		**19 47 24.1**	**-1.1**
NILT	**Santiago Nilte**	**0.56**	**122**	*eP*	**Pn**		**19 47 15.4**	**+0.1**
NILT					**Sn**		**19 47 27.2**	**-0.6**
UXUV	**UXUV**	**1.03**	**64**	*eP*	**Pn**		**19 47 19.9**	**+0.2**
UXUV					**Sn**		**19 47 34.9**	**-0.7**
NEUV	**Arroyo Zacate**	**1.07**	**322**	*i* P	**Pn**		**19 47 20.0**	**-0.1**
NEUV				*i* S	**Sn**		**19 47 35.9**	**-0.4**
CARR	**Arriaga**	**1.30**	**118**	*eP*	**Pn**		**19 47 22.5**	**-0.2**
CARR				*eS*	**Sn**		**19 47 40.2**	**-0.8**
HUIG	**Huatulco**	**1.45**	**221**		**Pn**		**19 47 23.0**	**-1.4**
HUIG					**Sn**		**19 47 43.0**	**-1.0**
HUIG	**Huatulco**	**1.45**	**221**	*i* P	**Pn**		**19 47 23.2**	**-1.3**
HUIG				*eS*	**Sn**		**19 47 43.0**	**-1.0**
OXLC	**Oaxaca**	**1.53**	**278**	*eP*	**Pn**		**19 47 27.1**	**+1.5**
OXLC				*eS*	**Sn**		**19 47 47.6**	**+1.4**
OXBJ	**Oaxaca**	**1.55**	**278**		**Pn**		**19 47 27.2**	**+1.3**
OXBJ					**Sn**		**19 47 47.4**	**+0.7**
OXBJ	**Oaxaca**	**1.55**	**278**	*eP*	**Pn**		**19 47 27.0**	**+1.1**
OXBJ				*eS*	**Sn**		**19 47 47.7**	**+1.0**
VHO	**Vista Hermosa**	**1.56**	**278**	*eP*	**Pn**		**19 47 27.5**	**+1.5**
VHO				*eS*	**Sn**		**19 47 48.0**	**+1.1**
PANG	**Puerto Angel**	**1.77**	**228**		**Pn**		**19 47 26.6**	**-1.8**
PANG					**Sn**		**19 47 50.4**	**-0.7**
TGIG		**1.91**	**92**		**Pn**		**19 47 30.4**	**+0.2**
TGIG					**Sn**		**19 47 53.4**	**-1.0**
TGIG		**1.91**	**92**	*i* P	**Pn**		**19 47 30.5**	**+0.2**
TGIG				*eS*	**Sn**		**19 47 52.4**	**-2.0**
TGBT	**Tuxtla Gutierr**	**1.94**	**92**		**Pn**		**19 47 30.4**	**-0.2**
TGBT					**Sn**		**19 47 53.8**	**-1.2**
PEIG	**Puerto Escondi**	**2.13**	**246**	*eP*	**Pn**		**19 47 31.7**	**-1.4**
PEIG				*eS*	**Sn**		**19 47 58.0**	**-1.4**
TOIG	**Toxpalan**	**2.23**	**304**	*eP*	**Pn**		**19 47 35.6**	**+1.2**
TOIG				*eS*	**Sn**		**19 48 03.1**	**+1.2**
YOIG	**Yosondua**	**2.33**	**270**	*eP*	**Pn**		**19 47 36.5**	**+0.6**
YOIG				*eS*	**Sn**		**19 48 04.2**	**-0.2**
TXIG	**Tlaxiaco**	**2.57**	**279**	*eP*	**Pn**		**19 47 40.4**	**+1.4**
TXIG				*eS*	**Sn**		**19 48 09.9**	**-0.1**
OZST	**Orizaba**	**2.74**	**317**	*eP*	**Pn**		**19 47 41.2**	**+0.1**
OZST				*eS*	**Sn**		**19 48 12.6**	**-1.3**
HLIG	**Huajuapan de L**	**2.74**	**291**	*eP*	**Pn**		**19 47 43.0**	**+1.8**
HLIG				*eS*	**Sn**		**19 48 13.3**	**-0.7**
CCIG	**Comitan**	**2.91**	**101**	Pn	**Pn**		**19 47 43.8**	**+0.3**
CCIG	**Comitan**	**2.91**	**101**	*eP*	**Pn**		**19 47 44.4**	**+0.9**
CCIG				*eS*	**Sn**		**19 48 16.8**	**-1.2**
PNIG	**Pinotepa**	**2.93**	**261**		**Pn**		**19 47 42.6**	**-0.8**
PNIG					**Sn**		**19 48 17.0**	**-1.1**
PNIG	**Pinotepa**	**2.93**	**261**	*eP*	**Pn**		**19 47 42.7**	**-0.8**
PNIG				*eS*	**Sn**		**19 48 16.2**	**-1.9**
JAUV	**Jalcomulco**	**2.96**	**327**	*i* P	**Pn**		**19 47 43.4**	**-0.6**
JAUV				*eS*	**Sn**		**19 48 17.3**	**-1.7**
PATR	**El Naranjo**	**3.27**	**122**	*eP*	**Pn**		**19 47 49.6**	**+1.3**
PATR				*eS*	**Sn**		**19 48 27.4**	**+0.8**
PAVE	**Pavencul**	**3.28**	**120**	*eP*	**Pn**		**19 47 49.8**	**+1.5**
PAVE				*eS*	**Sn**		**19 48 27.5**	**+0.7**
THIG		**3.36**	**125**		**Pn**		**19 47 47.5**	**-1.8**
THIG					**Sn**		**19 48 29.3**	**+0.9**
TLIG	**Tlapa**	**3.37**	**282**		**Pn**		**19 47 51.0**	**+1.5**
TLIG	**Tlapa**	**3.37**	**282**	*eP*	**Pn**		**19 47 51.1**	**+1.5**
TLIG				*eS*	**Sn**		**19 48 27.5**	**-1.4**
CHUJ	**Union Juarez**	**3.38**	**121**	*eP*	**Pn**		**19 47 51.1**	**+1.2**
CHUJ				*eS*	**Sn**		**19 48 30.5**	**+1.1**
HUEH	**Huehuetenango**	**3.80**	**113**	Pn	**Pn**		**19 47 56.5**	**+1.2**
CRIG	**Cruz Grande**	**3.85**	**269**		**Pn**		**19 47 55.3**	**-0.6**
CRIG					**Sn**		**19 48 37.3**	**-2.8**
CRIG	**Cruz Grande**	**3.85**	**269**	*eP*	**Pn**		**19 47 55.3**	**-0.6**
CRIG				*eS*	**Sn**		**19 48 36.9**	**-3.3**
PPM	**Popocatepetl**	**4.00**	**304**	*eP*	**Pn**		**19 48 01.7**	**+3.4**
PPM				*eS*	**Sn**		**19 48 44.6**	**+0.1**
RTAL	**Retalhuleu**	**4.03**	**125**	Pn	**Pn**		**19 47 59.4**	**+1.1**
CXUV	**Coxquihui**	**4.04**	**325**	*i* P	**Pn**		**19 47 58.9**	**+0.4**
CXUV				*i* S	**Sn**		**19 48 44.4**	**-0.5**
YAIG	**Yautepec**	**4.26**	**298**		**Pn**		**19 48 03.4**	**+1.9**
YAIG					**Sn**		**19 48 49.6**	**-0.7**
YAIG	**Yautepec**	**4.26**	**298**	*eP*	**Pn**		**19 48 04.2**	**+2.7**
YAIG				*eS*	**Sn**		**19 48 48.5**	**-1.7**
SCIG	**Sabancuy**	**4.29**	**60**	*eP*	**Pn**		**19 48 00.4**	**-1.3**
SCIG				*eS*	**Sn**		**19 48 45.3**	**-5.4**
DAIG	**Los Arroyos**	**4.34**	**273**		**Pn**		**19 48 02.6**	**0.0**
DAIG					**Sn**		**19 48 49.7**	**-2.4**
DAIG	**Los Arroyos**	**4.34**	**273**	*eP*	**Pn**		**19 48 02.6**	**0.0**
DAIG				*eS*	**Sn**		**19 48 49.7**	**-2.4**
MEIG	**Mezcala**	**4.43**	**284**		**Pn**		**19 48 05.5**	**+1.7**
MEIG					**Sn**		**19 48 52.9**	**-1.4**
MEIG	**Mezcala**	**4.43**	**284**	*eP*	**Pn**		**19 48 05.8**	**+2.0**
MEIG				*eS*	**Sn**		**19 48 52.8**	**-1.5**
PLIG	**Platanillo**	**4.45**	**291**		**Pn**		**19 48 05.5**	**+1.4**
PLIG					**Sn**		**19 48 54.0**	**-0.9**
PLIG	**Platanillo**	**4.45**	**291**	*eP*	**Pn**		**19 48 06.5**	**+2.4**
PLIG				*eS*	**Sn**		**19 48 53.1**	**-1.7**
PETF	**Flores**	**5.02**	**89**	Pn	**Pn**		**19 48 10.9**	**-0.8**
ARIG	**Puente Sto Nin**	**5.19**	**287**		**Pn**		**19 48 16.0**	**+2.1**
ARIG					**Sn**		**19 49 13.0**	**+0.4**
ARIG	**Puente Sto Nin**	**5.19**	**287**	*eP*	**Pn**		**19 48 16.4**	**+2.5**
ARIG				*eS*	**Sn**		**19 49 11.9**	**-0.7**
ESQI	**Esquipulas**	**6.01**	**112**	Pn	**Pn**		**19 48 24.3**	**-0.9**
ZIIG	**Zihuatanejo**	**6.11**	**278**		**Pn**		**19 48 27.3**	**+0.8**
ZIIG					**Sn**		**19 49 33.4**	**-1.7**
ZIIG	**Zihuatanejo**	**6.11**	**278**	*eP*	**Pn**		**19 48 27.9**	**+1.4**
ZIIG				*eS*	**Sn**		**19 49 31.8**	**-3.3**
MOIG	**Morelia**	**6.41**	**297**	Pn	**Pn**		**19 48 28.6**	**-2.2**
TEIG	**Tepich**	**7.30**	**62**	Pn	**Pn**		**19 48 39.9**	**-2.7**
ZAIG	**Zacatecas**	**9.15**	**311**	Pn	**Pn**		**19 49 07.4**	**-0.5**
JCT	**Junction City**	**14.21**	**343**		**Pn**		**19 50 16.4**	**+1.2**
TXAR	**Lajitas Array**	**14.69**	**329**	Pn	**P**		**19 50 24.4**	**-0.3**
	0.1nm,0.3s,baz=153,slow=14,SNR=5.3							
	0.4nm,0.5s							
WHTX	**Lake Whitney,**	**15.21**	**352**	Pn	**Pn**		**19 50 25.1**	**-2.7**
ABTX	**Abilene, Hawle**	**16.22**	**346**	Pn	**Pn**		**19 50 40.2**	**-0.2**
X37A	**Clayton**	**17.66**	**359**	P	**Pn**		**19 50 57.9**	**0.0**
X37A				IAmb	IAmb		19 51 07.6	
	comp=Z,17nm,0.6s							
MIAR	**Mount Ida**	**17.66**	**4**	P	**P**		**19 50 57.5**	**+0.1**
MIAR				IAmb	IAmb		19 51 20.6	
	comp=Z,4.9nm,0.6s							
X34A	**Smith Ranch, M**	**17.83**	**353**	Pn	**Pn**		**19 51 01.6**	**+1.5**
UALR	**University of**	**18.01**	**7**		**P**		**19 51 01.1**	**-0.2**
UALR				IAmb	IAmb		19 51 04.0	
	comp=Z,7.6nm,0.6s							
TUL1	**Leonard**	**18.98**	**358**		**Pn**		**19 51 13.9**	**+0.2**
TUL1				IAmb	IAmb		19 51 35.6	
	comp=Z,18nm,0.8s							
HBAR	**Harrisburg**	**19.04**	**11**	P	**P**		**19 51 12.6**	**+0.2**
FCAR	**Ozark Folk Cen**	**19.14**	**7**	P	**P**		**19 51 14.3**	**+0.8**
FCAR				IAmb	IAmb		19 51 15.6	
	comp=Z,6.9nm,0.8s							
LCAR	**Lake Charles**	**19.45**	**10**	P	**P**		**19 51 17.4**	**+0.5**
FPAL	**Fort Paine**	**19.55**	**24**	P	**P**		**19 51 16.7**	**-1.5**
FPAL				IAmb	IAmb		19 51 26.6	
	comp=Z,9.2nm,1.2s							
SWET	**Sewanee**	**20.03**	**22**	P	**P**		**19 51 22.4**	**-1.0**
SWET				IAmb	IAmb		19 51 22.8	
	comp=Z,5.6nm,0.6s							
WVT	**Waverly**	**20.25**	**17**	P	**P**		**19 51 26.1**	**+0.5**
LENM	**Lemitar**	**20.25**	**331**	P	**P**		**19 51 27.2**	**+1.3**
PBMO	**Poplar Bluff**	**20.27**	**11**	P	**P**		**19 51 26.1**	**+0.3**
PBMO				IAmb	IAmb		19 51 26.3	
	comp=Z,8.4nm,1.1s							
MGMO	**Mountain Grove**	**20.37**	**7**	P	Pn		19 51 28.7	-1.3
ANMO	**Albuquerque**	**20.67**	**333**	P	Pn		19 51 35.2	+1.6
	comp=Z,1.3nm,0.5s,baz=156,slow=10,SNR=4.0							
	comp=Z,1.3nm,0.5s							
U49A	**Red Boiling Sp**	**21.25**	**21**		**P**		**19 51 35.0**	**-1.4**
T47A	**Sharon Grove**	**21.26**	**18**	P	**P**		**19 51 34.2**	**-2.3**
T47A				IAmb	IAmb		19 51 38.1	
	comp=Z,5.8nm,0.7s							
CCM	**Cathedral Cave**	**21.39**	**8**	P	**P**		**19 51 37.1**	**-0.7**
R40A	**Maddies Statio**	**21.49**	**6**	P	**P**		**19 51 40.5**	**+1.6**
R40A				IAmb	IAmb		19 51 41.5	
	comp=Z,4.3nm,0.7s							
SCIA	**State Center**	**25.01**	**3**	P	**P**		**19 52 13.0**	**+0.2**
YKA	**Yellowknife Ar**	**47.59**	**348**	P	**P**		**19 55 25.7**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=154,slow=7.2,SNR=2.2							
	comp=Z,0.3nm,0.6s							
SFJD	**Kangerlussuaq**	**57.75**	**19**	LR	LR		20 21 20.2	
	comp=Z,18nm,20.0s,baz=342,slow=36							
ILAR	**Eielson Array**	**59.04**	**337**	P	P		19 56 54.0	+6.6
	comp=Z,0.2nm,0.5s,baz=114,slow=8.3,SNR=1.8							
	comp=Z,0.2nm,0.5s							
ESDC	**Sonseca Array**	**80.30**	**52**	P	**P**		**19 58 58.2**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=284,slow=6.7,SNR=6.7							
	comp=Z,1.3nm,0.9s							

*IDC **11** 19:59:17.3±2.0, 6°.39S×129°.48E, h0km, mb4.2/1, mbtmp3.9/3, ML3.6/2, Error ellipse: s-maj=117.4km s-min=31.5km az=68.0*
ISC 11 19:59:32.6±1.1, 6°.77S±0°.09×129°.6E±0°.1, h150km, n14, σ2°79/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.10**	**125**	P	**Pn**		**20 00 11.8**	**+2.9**
FAKI	**Fak Fak**	**4.67**	**35**	P	**Pn**		**20 00 40.0**	**-1.7**
MTN	**Manton Dam**	**6.23**	**166**	P	**Pn**		**20 01 04.1**	**+1.8**
KDU	**Kakadu**	**6.54**	**154**	P	**Pn**		**20 01 07.5**	**+1.0**
KNRA	**Kununurra**	**8.88**	**185**	P	**Pn**		**20 01 38.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**11.89**	**198**	P	**Pn**		**20 02 17.2**	**-0.2**
WRAB	**Tennant Creek**	**13.88**	**161**	P	**Pn**		**20 02 44.6**	**+1.5**
WRA	**Warramunga Arr**	**13.89**	**161**	Pn	**Pn**		**20 02 40.3**	**-2.9**
	0.2nm,0.3s,baz=340,slow=13,SNR=14							
WRA					Sn	Sn	20 05 06.7	-10
	0.5nm,0.3s,baz=334,slow=22,SNR=7.0							
	0.8nm,0.6s							
COEN	**Coen**	**15.17**	**119**	P	**Pn**		**20 03 01.3**	**+2.1**
ASAR	**Alice Springs**	**17.31**	**167**	Pn	**Pn**		**20 03 25.8**	**+0.6**
	0.5nm,0.3s,baz=347,slow=10,SNR=52							
ASAR					Sn	**S**	**20 06 29.3**	**-7.8**
	0.1nm,0.3s,baz=354,slow=26,SNR=4.8							
	2.1nm,0.6s							
WRKA	**Warakurna**	**18.20**	**184**	P	**P**		**20 03 34.5**	**+0.4**
OOD	**Oodnadatta**	**21.70**	**165**	P	**P**		**20 04 11.7**	**0.0**
MULG	**Mulgathing**	**23.77**	**170**	P	**P**		**20 04 32.3**	**+1.0**
MKAR	**Makanchi Array**	**67.80**	**327**	P	**P**		**20 10 14.8**	**+0.5**
	1.0nm,0.4s,baz=116,slow=7.8,SNR=24							
	1.0nm,0.4s							

*NEIC **11** 20:07:13.1±1.9, 5°.93N±0°.07×127°.5E±0°.1, h10km±1km, mb4.3/18, Error ellipse: s-maj=22.3km s-min=4.8km az=59.0*
*MAN **11** 20:07:17, 5°.59N×127°.19E, h36km, Ms4.1*
*IDC **11** 20:07:19.3±2.6, 5°.55N×126°.98E, h62km±22km, mb3.8/9, mbtmp4.1/11, ML4.1/2, MS3.0/7, Error ellipse: s-maj=73.9km s-min=12.5km az=66.0*
*DJA **11** 20:07:19.3±0.5, 5°.N±3°×12°.7E±°, h10km, M4.4/12, mB5.2/3, mb4.4/8, MLv4.4/12, Mw(mB)4.6/3*
ISC 11 20:07:16.8±0.6, 5°.54N±0°.06×127°.19E±0°.08, h35km, n59, σ2°12/59, mb4.2/17, MS3.3/4, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.20**	**314**	P	**Pn**		**20 07 52.0**	**+1.1**
	78nm,0.3s,baz=198,slow=3.4,SNR=7.4							
DAV				S	**Sn**		**20 08 23.8**	**+6.8**
	1μm,0.9s,baz=257,slow=20,SNR=12							
DAV				LR	LR		20 08 52.1	
	comp=Z,367nm,18.9s,baz=105,slow=45							
	176nm,0.3s							
DAV	**Davao City (W)**	**2.20**	**314**	Pn	**Pn**		**20 07 50.7**	**-0.3**
GSPH	**

TOLI2	**Tolitoli**	**7.76**	**236**	Pn	**Pn**	**20 09 06.6 -0.7**
LUWI	**Luwuk**	**7.88**	**214**	Pn	**Pn**	**20 09 08.9 -0.2**
LUWI	**Luwuk**	**7.88**	**214**	P	**Pn**	**20 09 09.1 +0.1**
	0.3nm1µm59nm,1.2s					
MYLDM	**Lahad Datu**	**8.65**	**268**	Pn	**Pn**	**20 09 22.9 +3.3**
NLAI	**Namlea**	**8.72**	**181**	P	**Pn**	**20 09 21.5 +1.0**
SBUM	**Sibu**	**15.24**	**259**	P	**P**	**20 10 55.2 +1.1**
SBUM				IAmb	IAmb	20 10 57.9
	comp=Z,17nm,1.0s					
KSM	**Kuching**	**17.32**	**257**	Pn	**P**	**20 11 18.2 +1.1**
MTN	**Manton Dam**	**18.68**	**168**	P	**P**	**20 11 32.6 +0.5**
MTN				IAmb	IAmb	20 11 36.2
	comp=Z,8.9nm,0.5s					
GUMO	**Guam**	**19.17**	**64**	LR	LR	20 17 34.3
	comp=Z,28nm,21.8s,baz=314,slow=32					
NACB	**Ninganchiao**	**19.29**	**344**	P	**P**	**20 11 35.1 -3.6**
NACB				IAmb	IAmb	20 11 46.0
	comp=Z,15nm,0.8s					
KNRA	**Kununurra**	**21.14**	**176**	P	**P**	**20 11 59.9 +1.0**
KNRA				IAmb	IAmb	20 12 21.6
	comp=Z,19nm,1.1s					
FITZ	**Fitzroy Crossi**	**23.54**	**184**	P	**P**	**20 12 24.0 0.0**
	comp=Z,1.5nm,0.6s,baz=13,slow=11,SNR=2.6					
	comp=Z,1.5nm,0.6s					
WB0	**Warramunga Arr**	**26.13**	**164**	P	**P**	**20 12 49.4 +1.6**
WRAB	**Tennant Creek**	**26.28**	**165**	P	**P**	**20 12 51.0 +1.9**
WRA	**Warramunga Arr**	**26.28**	**165**	P	**P**	**20 12 50.1 +1.0**
	comp=Z,4.2nm,0.6s,baz=342,slow=10,SNR=67					
WRA				PcP	**PcP**	**20 16 14.4 -0.8**
	comp=Z,0.4nm,0.9s,baz=342,slow=2.6,SNR=2.0					
	comp=Z,4.2nm,0.6s					
WRA	**Warramunga Arr**	**26.28**	**165**	P	**P**	**20 12 50.4 +1.2**
WB2	**Warramunga Arr**	**26.29**	**165**	P	**P**	**20 12 51.5 +2.3**
WB2				IAmb	IAmb	20 12 53.4
	comp=Z,7.1nm,0.6s					
WR0	**Warramunga Arr**	**26.35**	**164**	P	**P**	**20 12 49.3 -0.5**
WR0				IAmb	IAmb	20 12 55.6
	comp=Z,9.2nm,1.2s					
ASAR	**Alice Springs**	**29.76**	**168**	P	**P**	**20 13 20.5 +0.3**
	comp=Z,0.6nm,0.5s,baz=350,slow=7.8,SNR=13					
ASAR				PcP	**PcP**	**20 16 22.9 -0.8**
	comp=Z,0.2nm,0.5s,baz=356,slow=3.4,SNR=1.9					
	comp=Z,0.6nm,0.5s					
CMAR	**Chiang Mai Arr**	**30.40**	**297**	LR	LR	20 25 16.4
	comp=Z,20nm,21.5s,baz=170,slow=36					
STKA	**Stephens Creek**	**39.66**	**161**	P	**P**	**20 14 46.6 +1.1**
	comp=Z,1.6nm,0.4s,baz=341,slow=9.9,SNR=12					
	comp=Z,1.6nm,0.4s					
H11N1	**WAKE ISLAND Hy**	**41.10**	**66**	T	T	20 59 36.1
	baz=254					
H11N2	**WAKE ISLAND Hy**	**41.11**	**66**	T	T	20 59 43.2
	baz=254					
H11N3	**WAKE ISLAND Hy**	**41.11**	**66**	T	T	20 59 45.3
	baz=254					
GTA	**Gaotai**	**41.80**	**328**	*e*P	**P**	**20 15 06.5 +3.2**
GTA				pP	pP	20 15 13.6 +1.7
GTA				sP	sP	20 15 17.4 +2.0
GTA				pmax	pmax	
	comp=Z,1.0nm,1.2s					
SONM	**Songino Array**	**45.74**	**340**	P	**P**	**20 15 34.9 +0.1**
	comp=Z,0.6nm,0.6s,baz=148,slow=7.2,SNR=4.5					
	comp=Z,0.6nm,0.6s					
MK31	**Makanchi Array**	**56.35**	**324**	P	**P**	**20 16 52.6 -1.8**
MKAR	**Makanchi Array**	**56.35**	**324**	P	**P**	**20 16 53.1 -1.3**
	comp=Z,1.1nm,0.5s,baz=116,slow=6.5,SNR=14					
	comp=Z,1.1nm,0.5s					
MKAR	**Makanchi Array**	**56.35**	**324**	P	**P**	**20 16 52.6 -1.8**
MAKZ	**Makanchi**	**56.54**	**324**	P	**P**	**20 16 53.7 -2.0**
ZAA0	**Zalesovo Array**	**59.20**	**332**	P	**P**	**20 17 12.9 -1.4**
ZAA0				IAmb	IAmb	20 17 16.4
	comp=Z,5.4nm,1.3s					
ZALV	**Zalesovo Beam**	**59.20**	**332**	P	**P**	**20 17 12.3 -1.9**
	comp=Z,1.7nm,0.6s,baz=138,slow=6.9,SNR=7.9					
ZALV				LR	LR	20 43 45.4
	comp=Z,17nm,19.1s,baz=120,slow=37					
	comp=Z,1.7nm,0.6s					
ZALV	**Zalesovo Beam**	**59.20**	**332**	P	**P**	**20 17 12.9 -1.4**
KURK	**Kurchatov**	**60.48**	**327**	P	**P**	**20 17 22.2 -0.9**
KKAR	**Karatay Array**	**62.23**	**316**	P	**P**	**20 17 34.1 -1.1**
KKAR	**Karatay Array**	**62.23**	**316**	P	**P**	**20 17 33.9 -1.3**
KKAR				IAmb	IAmb	20 17 37.4
	comp=Z,2.7nm,1.3s					
BRVK	**Borovoye**	**66.14**	**326**	P	**P**	**20 18 00.1 -0.5**
ABKAR	**Akbulak array**	**71.05**	**320**	P	**P**	**20 18 29.6 -1.7**
ABKAR	**Akbulak array**	**71.05**	**320**	P	**P**	**20 18 28.5 -2.8**
ABKAR				IAmb	IAmb	20 18 33.9
	comp=Z,1.6nm,1.0s					
M19K	**Big River Lodg**	**79.69**	**28**	P	P	20 19 17.1 -3.6
M19K				IAmb	IAmb	20 19 26.6
	comp=Z,7.0nm,1.4s					
ARCES	**ARCESS Array B**	**88.92**	**340**	P	**P**	**20 20 06.3 -1.0**
	comp=Z,0.7nm,0.6s,baz=64,slow=5.5,SNR=5.2					
	comp=Z,0.7nm,0.6s					
FINES	**FINESS Array B**	**90.46**	**332**	P	**P**	**20 20 13.3 -1.3**
	comp=Z,1.9nm,0.9s,baz=50,slow=7.4,SNR=4.5					
	comp=Z,1.9nm,0.9s					
MLR	**Muntele Rosu**	**93.92**	**316**	LR	LR	21 06 00.7
	comp=Z,24nm,21.1s,baz=334,slow=38					
NOA	**NORSAR Array B**	**97.38**	**334**	LR	LR	21 08 40.8
	comp=Z,14nm,20.2s,baz=245,slow=38					
TORD	**Torodi Ar. Bea**	**122.77**	**289**	PKP	**PKPdf**	**20 26 07.5 -2.7**
	comp=Z,0.4nm,0.6s,baz=11,slow=2.3,SNR=3.1					

*IDC **11** 20:12:41.1±1.2,49.°22S×120.°85E,h0km,mb3.9/7, mbtmp3.9/7,MS3.3/7,Error ellipse: s-maj=67.3km s-min=17.8km az=105.0*

ISC 11 20:12:42.4±1.1,49.°2S±0.°1×120.°8E±0.°4,h10km,n13, σ0s92/9,mb3.7/7,MS3.2/7,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.13**	**339**	T	T	20 31 53.7	
	baz=162,slow=74,SNR=40						
H01W2	**Cape Leeuwin H**	**15.13**	**339**	T	T	20 31 43.3	
	baz=162,slow=74,SNR=49						
H01W3	**Cape Leeuwin H**	**15.14**	**339**	T	T	20 31 49.9	
	baz=162,slow=74,SNR=49						
STKA	**Stephens Creek**	**23.33**	**50**	P	**P**	**20 17 51.2 +0.6**	
	1.5nm,0.9s,baz=192,slow=9.3,SNR=1.2						
STKA				LR	LR	20 25 54.9	
	comp=Z,56nm,18.5s,baz=207,slow=34						
	1.5nm,0.9s						
ASAR	**Alice Springs**	**27.52**	**27**	P	**P**	**20 18 29.5 +0.3**	
	2.7nm,0.9s,baz=200,slow=8.6,SNR=13						
ASAR				LR	LR	20 28 06.7	
	comp=Z,75nm,21.4s,baz=169,slow=34						
	2.7nm,0.9s						
WRA	**Warramunga Arr**	**31.17**	**25**	P	**P**	**20 19 01.2 -0.3**	
	1.1nm,0.9s,baz=196,slow=9.6,SNR=4.7						
WRA				LR	LR	20 30 11.4	
	comp=Z,47nm,20.5s,baz=56,slow=34						
	1.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**31.29**	**9**	P	**P**	**20 19 01.5 -1.1**	
	2.8nm,0.9s,baz=184,slow=11,SNR=4.2						
FITZ				LR	LR	20 30 30.4	
	comp=Z,40nm,20.9s,baz=211,slow=34						
	2.8nm,0.9s						
VNDA	**Vanda**	**32.38**	**165**	P	**P**	**20 19 10.8 -0.8**	
	0.5nm,0.7s,baz=297,slow=11,SNR=4.7						
VNDA				LR	LR	20 31 49.1	
	comp=Z,45nm,18.2s,baz=306,slow=36						
	0.5nm,0.7s						
CTA	**Charters Tower**	**35.49**	**44**	LR	LR	20 33 15.6	
	comp=Z,51nm,20.9s,baz=221,slow=35						
QSPA	**South Pole Qui**	**40.90**	**180**	P	**P**	**20 20 24.0 -0.5**	
	0.8nm,0.5s,baz=314,slow=4.4,SNR=1.9						
QSPA				LR	LR	20 36 12.3	
	comp=Z,44nm,19.3s,baz=316,slow=34						
	0.8nm,0.5s						
SNAA	**Sanae**	**53.03**	**199**	P	**P**	**20 21 59.9 +0.9**	
	3.8nm,0.9s,baz=157,slow=7.6,SNR=6.8						
	3.8nm,0.9s						
PDAR	**Pinedale Array**	**144.98**	**81**	PKP	**PKPdf**	**20 32 20.7 +1.2**	
	0.1nm,0.3s,baz=189,slow=5.2,SNR=1.8						
YKA	**Yellowknife Ar**	**147.31**	**45**	PKPbc	**PKPbc**	**20 32 25.1 +0.2**	
	1.0nm,0.7s,baz=279,slow=2.2,SNR=5.4						

IDC 11 20:16:15.6±1.8,28.°94S×61.°24E,h0km,mb3.6/5, mbtmp3.6/5,MS3.3/4,Error ellipse: s-maj=74.2km s-min=32.3km az=28.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**23.68**	**29**	T	T	20 46 14.9	
	baz=203						
H08S2	**Diego Garcia H**	**23.69**	**29**	T	T	20 46 27.8	
	baz=203						
H08S3	**Diego Garcia H**	**23.70**	**29**	T	T	20 46 23.6	
	baz=203						
MBAR	**Mbarara**	**40.52**	**309**	LR	LR	20 38 49.3	
	comp=Z,32nm,18.7s,baz=106,slow=33						
TSUM	**Tsumeb**	**40.82**	**274**	LR	LR	20 39 46.6	
	comp=Z,34nm,18.2s,baz=162,slow=35						
ATD	**Arta Tunnel**	**43.98**	**334**	LR	LR	20 39 04.3	
	comp=Z,32nm,18.9s,baz=164,slow=31						
H01W2	**Cape Leeuwin H**	**44.87**	**112**	T	T	21 12 18.7	
	baz=261,slow=75,SNR=4.1						
H01W3	**Cape Leeuwin H**	**44.87**	**112**	T	T	21 12 18.9	
	baz=261,slow=75,SNR=4.2						
H01W1	**Cape Leeuwin H**	**44.88**	**112**	T	T	21 12 10.4	
	baz=261,slow=75,SNR=4.1						
BATI	**Baumata**	**61.04**	**86**	LR	LR	20 47 13.9	
	comp=Z,51nm,21.2s,baz=116,slow=30						
ASAR	**Alice Springs**	**64.43**	**104**	P	P	20 26 53.9	-0.2
	0.3nm,0.8s,baz=244,slow=6.3,SNR=4.1						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**66.24**	**100**	P	P	20 27 06.1	+0.3
	0.2nm,0.6s,baz=245,slow=5.9,SNR=1.5						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**71.09**	**297**	P	P	20 27 36.1	+0.1
	0.7nm,0.7s,baz=115,slow=6.2,SNR=4.3						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**77.74**	**15**	P	P	20 28 14.3	+0.1
	0.5nm,0.8s,baz=186,slow=4.3,SNR=4.6						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**85.03**	**14**	P	P	20 28 52.4	-0.2
	0.2nm,0.3s,baz=206,slow=6.3,SNR=1.8						
	0.2nm,0.3s						

*IDC **11** 20:26:00.9±3.5,26.°27N×96.°19E,h128km±34km,mb3.4/15, mbtmp3.8/16,Error ellipse: s-maj=28.0km s-min=12.2km az=60.0*

ISC 11 20:25:58.5±0.7,26.°3N±0.°1×96.°02E±0.°09,h100km,n23, σ0s99/26,mb3.8/15,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.28**	**160**	P	**Pn**	**20 27 57.5 +1.5**	
	1.0nm,0.8s,baz=337,slow=13,SNR=4.3						
GUN	**Gumba**	**9.17**	**282**	*e*Pn	**Pn**	**20 28 09.3 +1.0**	
PKI	**Pulchoki**	**9.55**	**280**	*e*Pn	**Pn**	**20 28 14.0 +0.6**	
PKIN	**Phulchoki**	**9.56**	**280**	*e*Pn	**Pn**	**20 28 13.8 +0.3**	
PKIN				*e*Sn	**Sn**	**20 29 59.0 -0.3**	
	36nm,0.4s						
KKN	**Kakani**	**9.69**	**281**	*e*Pn	**Pn**	**20 28 15.9 +0.7**	
KKN				*e*Sn	**Sn**	**20 30 01.6 -0.6**	
	17nm,0.2s						
DMN	**Daman**	**9.82**	**280**	*e*Pn	**Pn**	**20 28 18.3 +1.2**	
GKN	**Gorkha**	**10.28**	**282**	*e*Pn	**Pn**	**20 28 23.6 +0.5**	
GKN				*e*Sn	**Sn**	**20 30 14.3 -2.2**	
	33nm,0.5s						
DANN	**Dangsing**	**11.09**	**283**	*e*Pn	Pn	20 28 33.6	-0.7
SONM	**Songino Array**	**22.97**	**18**	P	**P**	**20 30 53.4 -1.2**	
	0.1nm,0.3s,baz=200,slow=12,SNR=1.9						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**23.15**	**335**	P	**P**	**20 30 57.3 +1.1**	
	1.7nm,0.4s,baz=140,slow=9.5,SNR=31						
	1.7nm,0.4s						
KURBB	**Kurotov Arra**	**27.72**	**336**	P	**P**	**20 31 38.0 +0.7**	
	0.4nm,0.4s,baz=152,slow=8.1,SNR=6.4						
KURBB				PcP	**PcP**	**20 34 51.0 -0.6**	
	0.2nm,0.4s,baz=142,slow=2.6,SNR=3.4						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**28.82**	**346**	P	**P**	**20 31 47.7 +0.6**	
	0.4nm,0.3s,baz=166,slow=7.6,SNR=4.6						
	0.4nm,0.3s						
BRTR	**Keskin Array B**	**53.01**	**301**	P	**P**	**20 35 05.1 -0.3**	
	0.3nm,0.5s,baz=111,slow=6.7,SNR=2.5						
	0.3nm,0.5s						
AKASG	**Malin Array Be**	**55.58**	**315**	P	**P**	**20 35 23.9 +0.3**	
	0.3nm,0.3s,baz=77,slow=6.6,SNR=4.9						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**57.68**	**328**	P	**P**	**20 35 38.3 0.0**	
	2.4nm,0.9s,baz=105,slow=2.2,SNR=4.0						
	2.4nm,0.9s						
ARCES	**ARCESS Array B**	**58.79**	**337**	P	**P**	**20 35 46.6 +0.7**	
	0.7nm,0.6s,baz=81,slow=8.0,SNR=6.6						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**59.14**	**137**	P	**P**	**20 35 47.2 -1.8**	
	0.9nm,0.5s,baz=325,slow=7.5,SNR=40						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**61.74**	**140**	P	**P**	**20 36 05.1 -1.6**	
	0.7nm,0.5s,baz=322,slow=6.6,SNR=15						
	0.7nm,0.5s						
KMBO	**Kilima Mbogo**	**62.83**	**254**	P	**P**	**20 36 14.0 -0.4**	
	0.8nm,0.3s,baz=60,slow=19,SNR=1.8						
	0.8nm,0.3s						
NOA	**NORSAR Array B**	**64.86**	**328**	P	**P**	**20 36 27.0 +0.3**	
	0.4nm,0.6s,baz=83,slow=6.4,SNR=2.5						
	0.4nm,0.6s						
GERES	**GERESS Array B**	**65.77**	**314**	P	**P**	**20 36 33.4 +0.4**	
	0.5nm,0.4s,baz=78,slow=7.0,SNR=7.0						
	0.5nm,0.4s						
BOSA	**Boshof**	**87.14**	**236**	P	**P**	**20 38 33.4 -0.4**	
	0.9nm,0.7s,baz=114,slow=12,SNR=1.5						
	0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**88.07**	**284**	P	**P**	**20 38 38.7 +0.4**	
	0.6nm,0.8s,baz=56,slow=5.7,SNR=3.3						
	0.6nm,0.8s						

*SEA **11** 20:47:35.6±2.3,49.°058N±0.°009×122.°29W±0.°02, h6km±4km,Error ellipse: s-maj=1.8km s-min=1.3km az=80.0*

NEIC 11 20:47:34.5±1.6,49.°08N±0.°01×122.°34W±0.°02,h5km±1km, Error ellipse: s-maj=3.0km s-min=1.9km az=18.0, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VDB	**Vedder Mountai**	**0.17**	**111**		Pg	20 47 38.3	+0.5
VDB					Sg	20 47 40.3	+0.3
HNBB	**Haney**	**0.26**	**323**		Pg	20 47 39.8	+0.3
HNBB					Sg	20 47 43.5	+0.6
MBW	**Mount Baker**	**0.42**	**136**		Pg	20 47 42.7	+0.1
SHUK	**Shuksan-Mt. Ba**	**0.49**	**118**		Pg	20 47 43.9	-0.1
SHUK					Sg	20 47 50.4	0.0
MCW	**Mount Constitu**	**0.52**	**219**		Pg	20 47 45.0	+0.5
SNB	**Saturna Island**	**0.63**	**241**		Pg	20 47 47.2	+0.6
SNB					Sg	20 47 55.2	+0.4
HOPB	**Hope**	**0.67**	**63**		Pg	20 47 46.8	-0.7
HOPB					Sg	20 47 55.0	-1.2
CMW	**Cultus Mountai**	**0.68**	**168**		Pg	20 47 47.5	0.0
RPW	**Rockport**	**0.84**	**139**		Pg	20 47 49.8	-0.8
RPW					Sg	20 48 00.9	-0.5
B011	**North Saanich**	**0.85**	**240**		Pg	20 47 50.3	-0.5
PGC	**Sidney**	**0.85**	**240**		Pg	20 47 50.9	+0.1
VGZ	**Gonzales**	**0.94**	**225**		Sg	20 48 03.8	-0.8
CLRS	**Cowichan Lake**	**1.21**	**258**	Pg	Pg	20 47 56.4	-1.3
B04A	**Port Angeles**	**1.29**	**217**		Pn	20 47 57.4	-1.7
B04A				Sg	Sg	20 48 13.4	-2.4
B04A				IAML		20 48 15.1	
	comp=E,53nm,0.3s						
LLLB	**Lillooet**	**1.56**	**11**		Pn	20 48 02.3	-0.6
LLLB					Sn	20 48 22.8	-0.7
LLLB				IAML		20 48 23.1	
	comp=N,29nm,0.3s						
LLLB				IAML		20 48 24.2	
	comp=E,26nm,0.6s						
D05A	**Enumclaw**	**1.91**	**173**	Pn	Pn	20 48 07.2	-0.5
D05A				IAML		20 48 37.7	
	comp=N,23nm,0.7s						
D05A				IAML		20 48 49.1	
	comp=E,14nm,2.0s						
NLWA	**Neilton Lookou**	**1.98**	**212**	Pn	Pn	20 48 09.1	+0.4
NLWA				IAML		20 48 33.8	
	comp=E,13nm,2.9s						
NLWA				IAML		20 48 49.8	
	comp=E,15nm,3.4s						
OZB	**Mount Ozzard**	**2.08**	**268**		Pn	20 48 10.1	0.0
B08A	**Colville Reser**	**2.12**	**109**	Pn	Pn	20 48 11.2	+0.6
B08A				Sn	Sb	20 48 38.9	-1.1
B08A				IAML		20 48 40.8	
	comp=N,6.8nm,0.3s						
LTY	**Liberty**	**2.14**	**148**	Pn	Pn	20 48 12.3	+1.3
LTY				IAML		20 48 47.7	
	comp=E,7.7nm,3.5s						
RADR	**Rader Ridge**	**2.84**	**201**	Pn	Pn	20 48 20.9	+0.4
RADR				IAML		20 48 48.2	
	comp=E,48nm,2.4s						
RADR				IAML		20 49 39.7	
	comp=N,39nm,3.0s						

*IDC **11** 21:44:54.7±4.8,34.°75N×22.°07E,h0km,mb3.5/4, mbtmp3.4/9,ML3.2/5,MS2.0/1,Error ellipse: s-maj=88.2km s-min=24.5km az=32.0*
*ATH **11** 21:45:02.2,35.°10N×22.°35E,h7km±3km,ML3.2/8,Error ellipse: s-maj=3.7km s-min=1.8km az=91.0*
*THE **11** 21:45:03.2,35.°15N×22.°43E,h0km±2km,ML3.0/6,Error ellipse: s-maj=2.8km s-min=1.3km az=242.0*
*ISK **11** 21:45:07.9,35.°46N×22.°89E,h14km,ML3.3/12*

ISC 11 21:45:01.3±1.9,35.°08N±0.°06×22.°31E±0.°06,h16km±10km, n39,σ1s18/49,mb3.6/4,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**1.13**	**46**	P	**Pg**	**21 45 22.4 -0.7**	
ANKY				S	**Sg**	**21 45 37.0 -0.8**	
	1µm,0.5s						
ANKY	**Antikythira Is**	**1.13**	**46**	P	**Pg**	**21 45 22.6 -0.5**	
ANKY				S	**Sg**	**21 45 37.4 -0.5**	
ANKY				AML	AML	21 45 40.9	
	comp=E,2511µm,0.6s						
ANKY				AML	AML	21 45 44.0	
	comp=N,2248µm,0.4s						
KTHR	**Kythira**	**1.30**	**26**	P	**Pn**	**21 45 25.2 +0.3**	
KTHR				S	**Sb**	**21 45 41.8 -0.2**	
KTHR				AML	AML	21 45 45.9	
	comp=N,5658µm,0.3s						
KTHR				AML	AML	21 45 48.8	
	comp=E,5249µm,0.4s						
KTHA	**Kythira Island**	**1.32**	**27**	P	**Pn**	**21 45 25.8 +0.7**	
KTHA				S	**Sb**	**21 45 43.6 +1.1**	
	comp=E,918nm,0.6s						
KTHA	**Kythira Island**	**1.32**	**27**	P	**Pn**	**21 45 26.1 +1.0**	
KTHA				S	**Sn**	**21 45 44.0 +1.6**	
KTHA				AML	AML	21 45 50.9	
	comp=E,1881µm,0.5s						
KTHA				AML	AML	21 45 57.2	
	comp=N,772µm,0.9s						
IMMV	**Iera Moni Meta**	**1.42**	**74**	P	**Pn**	**21 45 27.7 +1.3**	
IMMV				S	**Sg**	**21 45 47.4 +0.2**	
	comp=N,895nm,0.8s						
IMMV	**Iera Moni Meta**	**1.42**	**74**	PG	**Pn**	**21 45 25.4 -1.0**	
IMMV	**Iera Moni Meta**	**1.42**	**74**	P	**Pn**	**21 45 27.8 +1.3**	
IMMV				S	**Sn**	**21 45 46.4 +1.6**	
IMMV				AML	AML	21 45 55.4	
	comp=N,1637µm,1.1s						
IMMV				AML	AML	21 45 57.6	
	comp=E,1938µm,0.6s						
GVD	**Gavdhos**	**1.48**	**99**	P	**Pn**	**21 45 28.7 +1.4**	
GVD				S	**Sb**	**21 45 48.2 +1.2**	
	comp=E,402nm,0.5s						
GVD	**Gavdhos**	**1.48**	**99**	PN	**Pg**	**21 45 30.3 +0.5**	
GVD				SN	**Sn**	**21 45 46.3 0.0**	
GVD	**Gavdhos**	**1.48**	**99**	P	**Pn**	**21 45 28.5 +1.2**	
GVD				AML	AML	21 46 03.5	
	comp=N,1155µm,0.4s						
GVD				AML	AML	21 46 11.8	
	comp=E,875µm,0.5s						
CHAN	**Chania**	**1.48**	**72**	P	**Pn**	**21 45 28.5 +1.2**	
CHAN				AML	AML	21 46 02.0	
	comp=N,1730µm,0.7s						
CHAN				AML	AML	21 46 04.1	
	comp=E,2040µm,0.8s						
VLI	**Veliai**	**1.71**	**17**	P	**Pn**	**21 45 32.3 +1.9**	
VLI				S	**Sb**	**21 45 54.4 +0.8**	
	comp=E,418nm,0.5s						
VLI	**Veliai**	**1.71**	**17**	P	**Pb**	**21 45 33.0 +0.6**	
VLI				S	**Sb**	**21 45 54.9 +1.2**	
VLI				AML	AML	21 46 05.2	
	comp=N,733µm,0.4s						
VLI				AML	AML	21 46 09.5	
	comp=E,988µm,0.7s						
PYL	**PYLOS**	**1.87**	**346**	P	**Pn**	**21 45 34.5 +1.9**	
ITM	**Ithomi**	**2.12**	**352**	P	**Pb**	**21 45 39.4 +0.1**	
ITM	**Ithomi**	**2.12**	**352**	PN	**Pb**	**21 45 40.5 +1.2**	
ITM	**Ithomi**	**2.12**	**352**	P	**Pb**	**21 45 39.9 +0.7**	
ITM				AML	AML	21 46 25.6	
	comp=N,327µm,0.5s						
ITM				AML	AML	21 46 30.9	
	comp=E,324µm,0.7s						
IDI	**Anoyia**	**2.12**	**84**	Pn	**Pn**	**21 45 37.0 +0.8**	
	comp=E,2.7nm,0.3s,baz=281,slow=14,SNR=19						
IDI				Sn	**Sb**	**21 46 05.5 -0.1**	
	comp=E,12nm,0.3s,baz=61,slow=20,SNR=6.5						
IDI				LR	LR	21 46 49.8	
	comp=E,36nm,20.2s,baz=273,slow=48						
	comp=E,6.7nm,0.4s						
IDI	**Anoyia**	**2.12**	**84**	P	**Pn**	**21 45 37.7 +1.5**	
IDI				S	**Sb**	**21 46 05.3 -0.3**	
	comp=E,170nm,1.1s						
IDI	**Anoyia**	**2.12**	**84**	PN	**Pn**	**21 45 37.1 +0.9**	
HRKL	**Herakleio**	**2.30**	**84**	PN	**Pn**	**21 45 39.6 +1.1**	
SANT	**Santorini**	**2.87**	**62**	PN	**Pn**	**21 45 46.1 -0.3**	
ZKR	**Zakros**	**3.21**	**88**	PN	**Pn**	**21 45 52.7 +1.7**	
DION	**Dionisos Attik**	**3.26**	**23**	P	**Pn**	**21 45 52.2 +0.4**	
APE	**Apeiranthos**	**3.28**	**52**	PN	**Pn**	**21 45 52.0 0.0**	
ARG	**Arkhangelos**	**4.87**	**75**	PN	**Pn**	**21 46 15.1 +1.2**	
TURN	**Turunc**	**5.11**	**69**	PN	**Pn**	**21 46 18.2 +1.1**	
CAME	**Cameli-Denizli**	**5.96**	**70**	PN	**Pn**	**21 46 29.9 +0.8**	
AKAS	**Kas**	**6.05**	**77**	PN	**Pn**	**21 46 32.1 +1.9**	
VAE	**Valguarnera**	**6.81**	**293**	Sn	Sn	21 47 51.1	-6.7
	comp=E,0.9nm,0.3s,baz=175,slow=17,SNR=1.9						
BRTR	**Keskin Array B**	**10.13**	**59**	Pn	**Pn**	**21 47 28.4 +2.2**	
	comp=E,0.1nm,0.3s,baz=270,slow=10,SNR=2.1						
	comp=E,0.5nm,0.8s						
MMAI	**Mount Meron Ar**	**11.06**	**97**	Pn	**Pn**	**21 47 37.3 -1.6**	
	comp=E,0.2nm,0.3s,baz=289,slow=10,SNR=1.6						
	comp=E,0.2nm,0.3s						
EIL	**Elat**	**11.97**	**113**	Pn	Pn	21 47 48.0	-3.3
	comp=E,0.4nm,0.3s,baz=340,slow=21,SNR=1.4				

VRI				⇓S	Sn	21 47 52.7	-0.6	CVDA			⇑S	Sn	21 48 13.4	-0.8
VRI	**Vrincioaia**	**0.14**	**9**	⇑P	Pn	21 47 39.1	+0.3	**CVDA**	**Cernavoda**	**1.69**	**145** ⇑P	Pn	21 47 50.4	-0.2
VRI				⇓S	Sn	21 47 52.7	-0.6	CVDA			⇑S	Sn	21 48 13.4	-0.8
VRI	**Vrincioaia**	**0.14**	**9**	P	Pn	21 47 39.1	+0.3	**HUMR**	**Humele**	**1.71**	**226** ⇑P	Pn	21 47 51.1	+0.3
VRI				S	Sn	21 47 52.4	-1.0	HUMR			⇑S	Sn	21 48 13.7	-0.9
ODBI	**Odobesti**	**0.26**	**81**	⇓P	Pn	21 47 40.1	+1.2	**HUMR**	**Humele**	**1.71**	**226** ⇑P	Pn	21 47 51.1	+0.3
ODBI				⇓S	Sn	21 47 54.7	+1.0	HUMR			⇑S	Sn	21 48 13.7	-0.9
ODBI	**Odobesti**	**0.26**	**81**	⇓P	Pn	21 47 40.1	+1.2	**HUMR**	**Humele**	**1.71**	**226** P	Pn	21 47 50.9	+0.1
ODBI				⇓S	Sn	21 47 54.7	+1.0	**TIRR**	**Tirgusor**	**1.76**	**136** ⇑P	Pn	21 47 52.1	+0.7
PANC	**Panciu**	**0.35**	**65**	⇑P	Pn	21 47 39.9	+0.6	TIRR			⇑S	Sn	21 48 14.3	-1.3
PANC				⇑S	Sn	21 47 54.2	0.0	**TIRR**	**Tirgusor**	**1.76**	**136** ⇑P	Pn	21 47 52.1	+0.7
PANC	**Panciu**	**0.35**	**65**	⇑P	Pn	21 47 39.9	+0.6	TIRR			⇑S	Sn	21 48 14.3	-1.3
PANC				⇑S	Sn	21 47 54.2	0.0	**ICOR**	**Ion Corvin**	**1.79**	**154** ⇓P	Pn	21 47 52.9	+1.1
COVR	**Voineasa-Covas**	**0.36**	**289**	⇑P	Pn	21 47 39.5	+0.1	ICOR			⇑S	Sn	21 48 15.7	-0.6
COVR				⇑S	Sn	21 47 53.7	-0.7	**ICOR**	**Ion Corvin**	**1.79**	**154** ⇓P	Pn	21 47 52.9	+1.1
COVR	**Voineasa-Covas**	**0.36**	**289**	⇑P	Pn	21 47 39.5	+0.1	ICOR			⇑S	Sn	21 48 15.7	-0.6
COVR				⇑S	Sn	21 47 53.7	-0.7	**MILM**	**Milestii Mici**	**1.89**	**50** ⇓P	Pn	21 47 53.5	+0.7
GRER		**0.40**	**150**	⇑S	Sn	21 47 54.0	-0.6		16nm,0.1s					
GRER		**0.40**	**150**	⇑S	Sn	21 47 54.0	-0.6	MILM			*i* S	Sn	21 48 17.0	-1.4
NEHR	**Nehoiu**	**0.41**	**224**	⇑P	Pn	21 47 40.3	+0.7		93nm,0.1s					
NEHR				⇑S	Sn	21 47 53.6	-1.1	**MILM**	**Milestii Mici**	**1.89**	**50** ⇓P	Pn	21 47 53.6	+0.7
NEHR	**Nehoiu**	**0.41**	**224**	⇑P	Pn	21 47 40.3	+0.7	MILM			⇑S	Sn	21 48 17.2	-1.2
NEHR				⇑S	Sn	21 47 53.6	-1.1	**MILM**	**Milestii Mici**	**1.89**	**50** ⇓P	Pn	21 47 53.6	+0.7
MLR	**Muntele Rosu**	**0.58**	**246**	⇑P	Pn	21 47 41.2	+0.6	MILM			⇑S	Sn	21 48 17.2	-1.2
MLR				⇑S	Sn	21 47 56.1	-0.3	**MILM**	**Milestii Mici**	**1.89**	**50** P	Pn	21 47 53.5	+0.7
MLR	**Muntele Rosu**	**0.58**	**246**	⇑P	Pn	21 47 41.2	+0.6	MILM			Pm		21 48 18.0	
MLR				⇑S	Sn	21 47 56.1	-0.3	MILM			m		21 48 18.0	
MLR	**Muntele Rosu**	**0.58**	**246**	P	Pn	21 47 41.0	+0.4	**MILM**	**Milestii Mici**	**1.89**	**50** P	Pn	21 47 53.5	+0.7
GHRR		**0.60**	**56**	⇑P	Pn	21 47 41.1	+0.6	**COPA**	**Copaceanca**	**1.91**	**214** ⇑P	Pn	21 47 53.5	+0.4
GHRR				⇑S	Sn	21 47 56.6	+0.2	COPA			⇑S	Sn	21 48 17.9	-0.8
GHRR		**0.60**	**56**	⇑P	Pn	21 47 41.1	+0.6	**COPA**	**Copaceanca**	**1.91**	**214** ⇑P	Pn	21 47 53.5	+0.4
GHRR				⇑S	Sn	21 47 56.6	+0.2	COPA			⇑S	Sn	21 48 17.9	-0.8
ISR	**Istrita**	**0.62**	**190**	⇑P	Pn	21 47 41.9	+1.1	**KIS**	**Kishinev**	**1.94**	**48** ⇑P	Pn	21 47 54.4	+0.9
ISR				⇑S	Sn	21 47 54.8	-1.9	KIS			⇑S	Sn	21 48 18.7	-0.8
ISR	**Istrita**	**0.62**	**190**	⇑P	Pn	21 47 41.9	+1.1	**KIS**	**Kishinev**	**1.94**	**48** ⇑P	Pn	21 47 54.4	+0.9
ISR				⇑S	Sn	21 47 54.8	-1.9	KIS			⇑S	Sn	21 48 18.7	-0.8
TUDR		**0.69**	**101**	⇓P	Pn	21 47 41.5	+0.4	**KIS**	**Kishinev**	**1.94**	**48** P	Pn	21 47 54.4	+0.9
TUDR				⇓S	Sn	21 47 57.7	+0.3	KIS			Pm		21 47 54.5	
TUDR		**0.69**	**101**	⇓P	Pn	21 47 41.5	+0.4	KIS			S	Sn	21 48 18.2	-1.3
TUDR				⇓S	Sn	21 47 57.7	+0.3	KIS			Sm		21 48 18.4	
SLCR	**Slobozia Conac**	**0.77**	**100**	⇑P	Pn	21 47 41.7	+0.1	KIS			m		21 48 20.0	
SLCR				⇑S	Sn	21 47 57.8	-0.5	**LOT**	**Lotru**	**2.07**	**263** ⇑P	Pn	21 47 54.8	-0.4
SLCR	**Slobozia Conac**	**0.77**	**100**	⇑P	Pn	21 47 41.7	+0.1	**LOT**	**Lotru**	**2.07**	**263** ⇑P	Pn	21 47 54.8	-0.4
SLCR				⇑S	Sn	21 47 57.8	-0.5	**BURAR**	**Bucovina Array**	**2.15**	**332** ⇑P	Pn	21 47 57.7	+1.6
IZVR	**Izvoarele**	**0.77**	**103**	⇑P	Pn	21 47 42.0	+0.3	**BURAR**	**Bucovina Array**	**2.15**	**332** *i* P	Pn	21 47 57.7	+1.6
IZVR				⇑S	Sn	21 47 58.8	+0.4	**PSN**	**Preselentsi**	**2.30**	**152** *i* P	Pn	21 47 59.4	+1.5
IZVR	**Izvoarele**	**0.77**	**103**	⇑P	Pn	21 47 42.0	+0.3	**MANR**	**Mangalia**	**2.33**	**144** ⇑S	Sn	21 48 27.4	-0.5
IZVR				⇑S	Sn	21 47 58.8	+0.4	**MANR**	**Mangalia**	**2.33**	**144** ⇑S	Sn	21 48 27.4	-0.5
TESR	**Tescani**	**0.79**	**358**	⇓P	Pn	21 47 41.7	-0.2	**VLAD**	**Vladila**	**2.37**	**224** ⇓S	Sn	21 48 27.5	-1.3
TESR				⇓S	Sn	21 47 56.6	-2.2	**VLAD**	**Vladila**	**2.37**	**224** ⇓S	Sn	21 48 27.5	-1.3
TESR	**Tescani**	**0.79**	**358**	⇓P	Pn	21 47 41.7	-0.2	**SZH**	**Strazhica**	**2.52**	**193** *i* P	Pn	21 48 01.0	+0.4
TESR				⇓S	Sn	21 47 56.6	-2.2	**SORM**	**Soroca**	**2.66**	**25** ⇓P	Pn	21 48 01.7	-0.6
TESR	**Tescani**	**0.79**	**358**	P	Pn	21 47 41.7	-0.2	**SORM**	**Soroca**	**2.66**	**25** ⇓P	Pn	21 48 01.7	-0.6
SECR		**0.82**	**213**	⇑P	Pn	21 47 43.1	+1.0	**SORM**	**Soroca**	**2.66**	**25** P	Pn	21 48 01.7	-0.6
SECR				⇑S	Sn	21 47 58.5	-0.7	**GZR**	**Gura Zlata**	**2.77**	**265** ⇑P	Pn	21 48 04.8	+1.0
SECR		**0.82**	**213**	⇑P	Pn	21 47 43.1	+1.0	GZR			⇑S	Sn	21 48 37.4	-0.5
SECR				⇑S	Sn	21 47 58.5	-0.7	**GZR**	**Gura Zlata**	**2.77**	**265** ⇑P	Pn	21 48 04.8	+1.0
VARL	**Varlezi**	**0.82**	**77**	⇓P	Pn	21 47 42.6	+0.5	GZR			⇑S	Sn	21 48 37.4	-0.5
VARL				⇓S	Sn	21 47 58.6	-0.6	**KSV**	**Kosov**	**2.82**	**337** *i* P	Pn	21 48 06.5	+2.2
VARL	**Varlezi**	**0.82**	**77**	⇓P	Pn	21 47 42.6	+0.5	KSV			Pm		21 48 19.9	
VARL				⇓S	Sn	21 47 58.6	-0.6	KSV			*e*S	Sn	21 48 40.0	+1.1
SCHL	**Schela**	**0.83**	**105**	⇑P	Pn	21 47 42.6	+0.6	KSV			Sm		21 48 44.0	
SCHL				⇑S	Sn	21 47 58.9	-0.2	**NDNU**	**Novodnistrovsk**	**2.91**	**9** *e*P	Pn	21 48 05.6	+0.2
SCHL	**Schela**	**0.83**	**105**	⇑P	Pn	21 47 42.6	+0.6	NDNU			Pm		21 48 05.8	
SCHL				⇑S	Sn	21 47 58.9	-0.2	NDNU			*e*S	Sn	21 48 43.5	+2.7
PGOR	**Pogoanele**	**0.84**	**166**	⇑P	Pn	21 47 43.3	+1.1	NDNU			Sm		21 48 59.5	
PGOR				⇑S	Sn	21 47 60.0	+0.6	**HERR**	**Herculane**	**3.14**	**256** ⇓P	Pn	21 48 08.3	-0.1
PGOR	**Pogoanele**	**0.84**	**166**	⇑P	Pn	21 47 43.3	+1.1	**HERR**	**Herculane**	**3.14**	**256** ⇓P	Pn	21 48 08.3	-0.1
PGOR				⇑S	Sn	21 47 60.0	+0.6	**MPEP**	**Malo Peshtene**	**3.17**	**223** *i* P	Pn	21 48 09.3	+0.4
BIR	**Birlad**	**0.84**	**50**	⇑P	Pn	21 47 43.0	+0.7	**HORU**	**Horodok**	**3.50**	**357** *e*P	Pn	21 48 13.2	+0.2
BIR				⇑S	Sn	21 47 59.2	-0.3	HORU			Pm		21 48 15.7	
BIR	**Birlad**	**0.84**	**50**	⇑P	Pn	21 47 43.0	+0.7	HORU			*e*S	Sn	21 48 56.5	+2.1
BIR				⇑S	Sn	21 47 59.2	-0.3	HORU			Sm		21 48 57.5	
SCTR	**Scanteiesti**	**0.91**	**93**	⇑P	Pn	21 47 43.6	+0.8	**BLKB**	**Belogradchik**	**3.56**	**235** ⇑P	Pn	21 48 13.3	-0.5
SCTR				⇑S	Sn	21 47 60.0	-0.4	**BLKB**	**Belogradchik**	**3.56**	**235** ⇑P	Pn	21 48 13.3	-0.5
SCTR	**Scanteiesti**	**0.91**	**93**	⇑P	Pn	21 47 43.6	+0.8	**MDVR**	**Moldovita**	**3.64**	**257** ⇑P	Pn	21 48 15.2	+0.2
SCTR				⇑S	Sn	21 47 60.0	-0.4	**MDVR**	**Moldovita**	**3.64**	**257** ⇑P	Pn	21 48 15.2	+0.2
PLAR	**PLOIESTI**	**0.94**	**210**	⇑S	Sn	21 48 01.7	+0.9	**VTS**	**Vitosha**	**3.98**	**220** ⇑P	Pn	21 48 19.9	+0.4
PLAR	**PLOIESTI**	**0.94**	**210**	⇑S	Sn	21 48 01.7	+0.9	**VTS**	**Vitosha**	**3.98**	**220** ⇑P	Pn	21 48 19.9	+0.4
DOPR	**Dopca**	**0.95**	**285**	⇑P	Pn	21 47 43.2	+0.1	**BOVS**	**Bovan**	**4.13**	**241** ⇓P	Pn	21 48 20.7	-0.5
DOPR				⇑S	Sn	21 48 00.0	-1.0	**BOVS**	**Bovan**	**4.13**	**241** ⇓P	Pn	21 48 20.7	-0.5
DOPR	**Dopca**	**0.95**	**285**	⇑P	Pn	21 47 43.2	+0.1	**LUBAR**	**Lubar, Ukraine**	**4.26**	**9** P	Pn	21 48 23.1	+0.1
DOPR				⇑S	Sn	21 48 00.0	-1.0	**RZN**	**Rozhen**	**4.28**	**200** P	Pn	21 48 24.4	+0.8
TATR	**Tatarca**	**0.96**	**97**	⇑P	Pn	21 47 43.9	+0.7	**NVR**	**Nevrokopi**	**4.83**	**206** P	Pn	21 48 31.6	+0.9
TATR				⇑S	Sn	21 48 00.9	-0.2	**AK07**	**Malin Array Si**	**5.11**	**18** P	Pn	21 48 34.5	+0.2
TATR	**Tatarca**	**0.96**	**97**	⇑P	Pn	21 47 43.9	+0.7	**SRS**	**Serrai**	**5.13**	**207** P	Pn	21 48 35.6	+1.0
TATR				⇑S	Sn	21 48 00.9	-0.2	**AK13**	**Malin Array Si**	**5.14**	**17** P	Pn	21 48 34.6	0.0
VLDR	**Vladesti**	**0.98**	**82**	⇑P	Pn	21 47 44.1	+0.8	**AK06**	**Malin Array Si**	**5.14**	**18** P	Pn	21 48 35.0	+0.3
VLDR				⇑S	Sn	21 48 01.0	-0.4	**AK14**	**Malin Array Si**	**5.17**	**17** P	Pn	21 48 35.1	+0.1
VLDR	**Vladesti**	**0.98**	**82**	⇑P	Pn	21 47 44.1	+0.8	**AK10**	**Malin Array Si**	**5.17**	**18** P	Pn	21 48 35.0	0.0
VLDR				⇑S	Sn	21 48 01.0	-0.4	**AK05**	**Malin Array Si**	**5.18**	**18** P	Pn	21 48 35.3	+0.2
GISR	**Galati**	**0.99**	**106**	⇑S	Sn	21 48 00.3	-1.3	**AK09**	**Malin Array Si**	**5.19**	**19** P	Pn	21 48 35.5	+0.2
GISR	**Galati**	**0.99**	**106**	⇑S	Sn	21 48 00.3	-1.3	**AK08**	**Malin Array Si**	**5.20**	**18** P	Pn	21 48 35.5	+0.1
SULR		**1.09**	**197**	⇑P	Pn	21 47 45.4	+1.0	**AK16**	**Malin Array Si**	**5.20**	**17** P	Pn	21 48 35.5	0.0
SULR				⇑S	Sn	21 48 04.2	+1.0	**AK17**	**Malin Array Si**	**5.21**	**17** P	Pn	21 48 35.6	+0.1
SULR		**1.09**	**197**	⇑P	Pn	21 47 45.4	+1.0	**AK11**	**Malin Array Si**	**5.22**	**18** P	Pn	21 48 35.9	+0.1
SULR				⇑S	Sn	21 48 04.2	+1.0	**AK15**	**Malin Array Si**	**5.23**	**17** P	Pn	21 48 36.1	+0.3
CFR	**Carcaliu**	**1.15**	**118**	⇑P	Pn	21 47 45.5	+0.5	**AK19**	**Malin Array Si**	**5.23**	**16** P	Pn	21 48 35.8	-0.1
CFR				⇑S	Sn	21 48 03.8	-0.4	**AK18**	**Malin Array Si**	**5.25**	**17** P	Pn	21 48 36.0	0.0
CFR	**Carcaliu**	**1.15**	**118**	⇑P	Pn	21 47 45.5	+0.5	**MI28**	**MI28,Pidlybu**	**5.25**	**7** P	Pn	21 48 36.3	+0.2
CFR				⇑S	Sn	21 48 03.8	-0.4	**AK20**	**Malin Array Si**	**5.25**	**16** P	Pn	21 48 36.0	-0.1
VASR	**Vaslui**	**1.19**	**39**	⇓P	Pn	21 47 46.0	+0.7	**AK04**	**Malin Array Si**	**5.27**	**17** P	Pn	21 48 36.3	0.0
VASR				⇓S	Sn	21 48 03.8	-1.1	**AK22**	**Malin Array Si**	**5.28**	**17** P	Pn	21 48 36.5	0.0
VASR	**Vaslui**	**1.19**	**39**	⇓P	Pn	21 47 46.0	+0.7	**AK21**	**Malin Array Si**	**5.29**	**16** P	Pn	21 48 36.6	0.0
VASR				⇓S	Sn	21 48 03.8	-1.1	**AK23**	**Malin Array Si**	**5.29**	**17** P	Pn	21 48 36.7	0.0
VOIR		**1.19**	**257**	⇑P	Pn	21 47 45.7	+0.3	**SOH**	**Sokhos**	**5.47**	**208** P	Pn	21 48 39.9	+0.6
VOIR				⇑S	Sn	21 48 04.1	-1.0							
VOIR		**1.19**	**257**	⇑P	Pn	21 47 45.7	+0.3							
VOIR				⇓S	Sn	21 48 04.1	-1.0							
VOIR		**1.19**	**257**	P	Pn	21 47 45.7	+0.3							
AMRR	**Amara**	**1.20**	**158**	⇓S	Sn	21 48 05.6	+0.6							
AMRR	**Amara**	**1.20**	**158**	⇓S	Sn	21 48 05.6	+0.6							
MTUR	**Matau**	**1.25**	**247**	⇑P	Pn	21 47 46.9	+0.9							
MTUR	**Matau**	**1.25**	**247**	⇑P	Pn	21 47 46.9	+0.9							
LEHL	**Lehliu**	**1.25**	**176**	⇓P	Pn	21 47 46.9	+1.0							
LEHL				⇓S	Sn	21 48 06.5	+0.5							
LEHL	**Lehliu**	**1.25**	**176**	⇓P	Pn	21 47 46.9	+1.0							
LEHL				⇓S	Sn	21 48 06.5	+0.5							
BIZ	**Bicaz**	**1.28**	**342**	⇑S	Sn	21 48 05.8	-0.8							
BIZ	**Bicaz**	**1.28**	**342**	⇓P	Pn	21 47 47.4	+1.2							
BIZ				⇓S	Sn	21 48 05.8	-0.8							
BIZ	**Bicaz**	**1.28**	**342**	⇓P	Pn	21 47 47.4	+1.2							
INCR	**INCERC-Sediu C**	**1.34**	**197**	⇓P	Pn	21 47 47.7	+0.9							
INCR	**INCERC-Sediu C**	**1.34**	**197**	⇓P	Pn	21 47 47.7	+0.9							
HARR	**Harsova**	**1.35**	**139**	⇑P	Pn	21 47 47.7	+0.7							
HARR	**Harsova**	**1.35**	**139**	⇑P	Pn	21 47 47.7	+0.7							
BUC1	**Bucharest**	**1.46**	**199**	⇑S	Sn	21 48 09.4	-0.3							
BUC1	**Bucharest**	**1.46**	**199**	⇑S	Sn	21 48 09.4	-0.3							
ARR	**Arges**	**1.49**	**257**	⇓P	Pn	21 47 50.0	+1.4							
ARR				⇓S	Sn	21 48 10.6	0.0							
ARR	**Arges**	**1.49**	**257**	⇓P	Pn	21 47 50.0	+1.4							
ARR				⇓S	Sn	21 48 10.6	0.0							
TPGR	**Topolog**	**1.50**	**125**	⇓P	Pn	21 47 48.9	+0.4							
TPGR				⇓S	Sn	21 48 09.5	-1.0							
TPGR	**Topolog**	**1.50**	**125**	⇓P	Pn	21 47 48.9	+0.4							
TPGR				⇓S	Sn	21 48 09.5	-1.0							
STFAR	**Stefanesti-Arg**	**1.50**	**235**	⇑P	Pn	21 47 49.5	+1.0							
STFAR				⇑S	Sn	21 48 10.9	+0.3							
STFAR	**Stefanesti-Arg**	**1.50**	**235**	⇑P	Pn	21 47 49.5	+1.0							
STFAR				⇑S	Sn	21 48 10.9	+0.3							
TLBR	**Topalu**	**1.52**	**141**	⇑P	Pn	21 47 49.5	+0.8							
TLBR				⇑S	Sn	21 48 10.1	-0.8							
TLBR	**Topalu**	**1.52**	**141**	⇑P	Pn	21 47 49.5	+0.8							
TLBR				⇑S	Sn	21 48 10.1	-0.8							
RASA	**Rasa**	**1.54**	**168**	⇑S	Sn	21 48 10.5	-0.9							
RASA	**Rasa**	**1.54**	**168**	⇑S	Sn	21 48 10.5	-0.9							
IAS	**Iasi**	**1.58**	**22**	⇓P	Pn	21 47 49.9	+0.5							
IAS				⇓S	Sn	21 48 11.0	-1.3							
IAS	**Iasi**	**1.58**	**22**	⇓P	Pn	21 47 49.9	+0.5							
IAS				⇓S	Sn	21 48 11.0	-1.3							
TLCR		**1.59**	**109**	⇓P	Pn	21 47 50.2	+0.7							
TLCR				⇓S	Sn	21 48 11.8	-0.4							
TLCR		**1.59**	**109**	⇓P	Pn	21 47 50.2	+0.7							
TLCR				⇓S	Sn	21 48 11.8	-0.4							
SGRR	**Singureni**	**1.59**	**199**	⇑P	Pn	21 47 50.1	+0.7							
SGRR				⇑S	Sn	21 48 11.5	-0.8							
SGRR	**Singureni**	**1.59**	**199**	⇑P	Pn	21 47 50.1	+0.7							
SGRR				⇑S	Sn	21 48 11.5	-0.8							
CVDA	**Cernavoda**	**1.69**	**145**	⇑P	Pn	21 47 50.4	-0.2							

*IDC **11** 21:53:56.5±2.0,6°.79S×129°.81E,h177km±22km, mb3.2/3, mbtmp4.1/7, Error ellipse: s-maj=32.9km s-min=20.3km az=104.0*
*NEIC **11** 21:53:58.6±2.7,6°.78S±0°.05×129°.4E±0°.1,h131km±12km, mb4.1/10, Error ellipse: s-maj=17.5km s-min=7.0km az=95.0*

ISC 11 21:53:58.9±0.6,6°.72S±0°.07×129°.45E±0°.06,h150km,n41, σ2s38/41,mb3.6/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.22**	**125**		**Pn**	**21 54 35.7**	**-1.0**
SAUI				Sn	**Sn**	**21 55 05.1**	**-0.7**
SAUI	**Saumlaki**	**2.22**	**125**	P	**Pn**	**21 54 38.0**	**+1.3**
FAKI	**Fak Fak**	**4.69**	**37**	Pn	**Pn**	**21 55 08.2**	**-0.1**
SIJI	**Sorong**	**6.08**	**17**	P	**Pn**	**21 55 24.2**	**-2.6**
	10nm,0.3s,baz=202,slow=19,SNR=72						
SIJI				S	Sn	21 56 26.1	-10
	11nm,0.3s,baz=244,slow=23,SNR=7.1						
MTN	**Manton Dam**	**6.31**	**165**	Pn	**Pn**	**21 55 27.2**	**-2.7**
MTN	**Manton Dam**	**6.31**	**165**	P	**Pn**	**21 55 26.9**	**-2.9**
KDU	**Kakadu**	**6.64**	**154**	P	**Pn**	**21 55 31.0**	**-3.2**
BATI	**Baumata**	**6.70**	**238**	P	**Pn**	**21 55 37.5**	**+2.5**
	28nm,0.4s,baz=76,slow=5.5,SNR=8.1						
BATI				S	**Sn**	**21 56 46.5**	**-3.8**
	63nm,0.4s,baz=348,slow=20,SNR=13						
KNRA	**Kununurra**	**8.93**	**184**	Pn	**Pn**	**21 56 01.1**	**-3.7**
PLAI	**Plampang**	**11.76**	**259**	P	**Pn**	**21 56 44.7**	**+2.5**
FITZ	**Fitzroy Crossi**	**11.91**	**198**	P	**Pn**	**21 56 40.4**	**-3.7**
	4.8nm,0.3s,baz=29,slow=12,SNR=44						
FITZ				S	Sn	21 58 38.0	-18
	3.5nm,0.5s,baz=30,slow=12,SNR=2.3						
FITZ	**Fitzroy Crossi**	**11.91**	**198**	Pn	**Pn**	**21 56 40.6**	**-3.5**
FITZ	**Fitzroy Crossi**	**11.91**	**198**	P	**Pn**	**21 56 39.7**	**-4.4**
WB0	**Warramunga Arr**	**13.83**	**160**	Pn	**Pn**	**21 57 05.9**	**-3.0**
WRAB	**Tennant Creek**	**13.97**	**161**	Pn	**Pn**	**21 57 09.0**	**-1.7**
WRA	**Warramunga Arr**	**13.98**	**161**	P	**Pn**	21 57 04.8	-5.9
	1.9nm,0.3s,baz=346,slow=13,SNR=33						
WRA				S	Sn	21 59 25.5	-20
	5.1nm,0.4s,baz=331,slow=23,SNR=10						
WRA	**Warramunga Arr**	**13.98**	**161**	Pn	**Pn**	**21 57 09.2**	**-1.4**
WB2	**Warramunga Arr**	**13.98**	**161**	Pn	**Pn**	**21 57 08.6**	**-2.2**
WR0	**Warramunga Arr**	**14.06**	**160**	Pn	**Pn**	**21 57 09.8**	**-2.0**
JAGI	**Jajag, Banyuwa**	**15.27**	**262**		**P**	**21 57 30.6**	**+2.3**
COEN	**Coen**	**15.29**	**119**		**P**	**21 57 29.4**	**+0.9**
COEN				IAmb	IAmb	21 57 53.6	
	comp=Z,28nm,1.4s						
QIS	**Mount Isa**	**16.92**	**145**	P	**Pn**	**21 57 48.0**	**+1.1**
MBWA	**Marble Bar**	**17.17**	**212**		**Pn**	**21 57 49.3**	**-0.6**
MBWA				IAmb	IAmb	21 57 51.4	
	comp=Z,21nm,1.4s						
AS31	**Alice Springs**	**17.39**	**166**		**P**	**21 57 51.0**	**-0.6**
AS31				IAmb	IAmb	21 57 57.8	
	comp=Z,3.5nm,0.5s						
ASAR	**Alice Springs**	**17.39**	**166**	P	**P**	**21 57 49.4**	**-2.2**
	comp=Z,2.0nm,0.4s,baz=336,slow=9.0,SNR=19						
ASAR				S	S	22 00 50.7	-15
	comp=Z,1.5nm,0.8s,baz=317,slow=13,SNR=5.6						
ASAR	**Alice Springs**	**17.39**	**166**		**Pn**	**21 57 51.5**	**-1.1**
PSA00	**Pilbara Seismi**	**17.45**	**211**		**Pn**	**21 57 53.3**	**+0.1**
PSA00				IAmb	IAmb	21 57 56.1	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**17.45**	**211**	Pn	**Pn**	**21 57 53.4**	**+0.1**
PSA00				IAmb	IAmb	21 57 56.3	
	comp=Z,4.6nm,1.1s						
PSA00	**Pilbara Seismi**	**17.45**	**211**	P	**Pn**	**21 57 53.3**	**+0.1**
WRKA	**Warakurna**	**18.25**	**183**	P	**Pn**	**21 58 01.0**	**-1.8**
OOD	**Oodnadatta**	**21.78**	**165**	P	**P**	**21 58 38.5**	**-0.5**
MEEK	**Meekatharra**	**22.34**	**206**	P	**P**	**21 58 45.9**	**+1.3**
MULG	**Mulgathing**	**23.84**	**170**	P	**P**	**21 58 58.7**	**+0.3**
FORT	**Forrest**	**23.98**	**183**	P	**P**	**21 58 58.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**39.13**	**310**	P	**P**	**22 01 08.6**	**-3.5**
	comp=Z,0.4nm,0.5s,baz=142,slow=6.8,SNR=4.1						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.69**	**327**	P	**P**	**22 04 36.7**	**-3.3**
	comp=Z,0.3nm,0.4s,baz=114,slow=6.7,SNR=10						
	comp=Z,0.3nm,0.4s						
KK31	**Karatay Array**	**72.77**	**319**	P	**P**	**22 05 13.1**	**+2.1**
KKAR	**Karatay Array**	**72.77**	**319**	P	**P**	**22 05 13.1**	**+2.1**
MAW	**Mawson**	**75.02**	**201**	P	**P**	**22 05 25.1**	**+1.5**
HRA	**Herat**	**75.35**	**308**	P	**P**	**22 05 30.5**	**+4.0**
HRA				IAmb	IAmb	22 05 31.8	
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	**93.32**	**25**	P	P	22 06 50.8	-5.7
	comp=Z,0.3nm,0.5s,baz=272,slow=6.2,SNR=1.8						
	comp=Z,0.3nm,0.5s						

IDC 11 21:56:40.2±1.5,28°.50N×103°.82E,h0km,mb3.5/3, mbtmp3.4/4,ML3.3/1,MS2.8/1,Error ellipse: s-maj=89.7km s-min=25.9km az=63.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**19.41**	**5**	P	P	22 01 07.8	-0.1
	0.1nm,0.3s,baz=188,slow=9.9,SNR=3.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**24.84**	**323**	P	P	22 02 04.2	0.0
	0.9nm,0.8s,baz=127,slow=7.8,SNR=5.8						
	0.9nm,0.8s		

ABTX	**Abilene, Hawle**	**20.47**	**339**	P	**P**	**22 07 02.2**	**+0.4**
ABTX				IAmb	IAmb	22 07 03.7	
	comp=Z,9.7nm,0.9s						
LPIG	**La Paz**	**20.82**	**303**	LR	LR	22 15 20.2	
	comp=Z,30nm,18.0s,baz=269,slow=37						
UALR	**University of**	**21.16**	**358**	P	**P**	**22 07 09.0**	**-0.1**
FPAL	**Fort Paine**	**21.52**	**13**	P	**P**	**22 07 12.6**	**-0.5**
WHAR	**Wooly Hollow**	**21.67**	**358**	P	**P**	**22 07 14.5**	**-0.1**
WHAR				IAmb	IAmb	22 07 15.7	
	comp=Z,9.2nm,1.1s						
CLNB	**Carlsbad**	**21.91**	**330**	P	**P**	**22 07 17.5**	**+0.2**
HTMS	**Hat Mesa**	**21.97**	**331**	P	**P**	**22 07 17.6**	**-0.4**
CLN7	**Carlsbad 7**	**22.00**	**331**	P	**P**	**22 07 17.9**	**-0.4**
GDL2	**Guadalupe Moun**	**22.10**	**329**	P	**P**	**22 07 19.7**	**+0.3**
SWET	**Sewanee**	**22.11**	**12**	P	**P**	**22 07 19.3**	**-0.1**
SWET				IAmb	IAmb	22 07 36.2	
	comp=Z,12nm,1.4s						
MNTX	**Cornudas Mount**	**22.23**	**327**	IAmb	IAmb	22 07 24.6	
	comp=Z,11nm,1.0s						
LCAR	**Lake Charles**	**22.43**	**0**	P	**P**	**22 07 22.1**	**-0.7**
TKL	**Tuckaleechee C**	**23.03**	**16**	P	**P**	**22 07 28.6**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=191,slow=11,SNR=7.2						
TKL				LR	LR	22 16 53.3	
	comp=Z,57nm,20.5s,baz=141,slow=38						
	comp=Z,4.1nm,0.8s						
PBMO	**Poplar Bluff**	**23.15**	**2**	P	**P**	**22 07 29.2**	**-1.0**
AMTX	**Amarillo**	**23.23**	**338**	P	**P**	**22 07 30.5**	**-0.7**
AMTX				IAmb	IAmb	22 07 33.3	
	comp=Z,9.5nm,1.0s						
TZTN	**Tazewell**	**23.93**	**15**	P	**P**	**22 07 37.4**	**-0.5**
TZTN				IAmb	IAmb	22 07 38.3	
	comp=Z,5.5nm,0.7s						
S39A	**Bolivar**	**24.11**	**356**	P	**P**	**22 07 38.7**	**-0.8**
S39A				IAmb	IAmb	22 07 39.4	
	comp=Z,5.5nm,0.8s						
121A	**Cookes Peak, D**	**24.18**	**324**	P	**P**	**22 07 40.2**	**-0.2**
121A				IAmb	IAmb	22 07 44.5	
	comp=Z,6.8nm,1.1s						
U54A	**Nelsons Funny**	**24.40**	**19**	P	**P**	**22 07 42.0**	**-0.3**
CCM	**Cathedral Cave**	**24.41**	**0**	P	**P**	**22 07 41.4**	**-0.8**
CCM				IAmb	IAmb	22 07 43.0	
	comp=Z,6.1nm,0.7s						
R40A	**Maddies Statio**	**24.66**	**358**	IAmb	IAmb	22 07 43.9	
	comp=Z,6.8nm,1.1s						
CRNM	**Carthage**	**24.69**	**328**	P	**P**	**22 07 46.0**	**+0.9**
BNM	**Barren Site**	**24.79**	**328**	P	**P**	**22 07 45.7**	**-0.3**
LENM	**Lemitar**	**24.98**	**328**	P	**P**	**22 07 48.6**	**+0.9**
ANMO	**Albuquerque**	**25.34**	**330**	P	**P**	**22 07 51.7**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=152,slow=12,SNR=5.2						
	comp=Z,1.4nm,0.7s						
TUC	**Tucson**	**25.83**	**320**	P	**P**	**22 07 55.0**	**-0.3**
P40A	**Paris**	**25.89**	**359**	P	**P**	**22 07 54.5**	**-1.2**
X16A	**Lo Mia Camp, P**	**27.66**	**322**	P	**P**	**22 08 11.8**	**-0.2**
WUAZ	**Wupatki**	**28.39**	**324**	P	**P**	**22 08 17.4**	**-1.0**
WUAZ				IAmb	IAmb	22 08 22.3	
	comp=Z,4.7nm,1.0s						
PFO	**Pinyon Flats O**	**30.38**	**315**	LR	LR	22 22 02.7	
	comp=Z,30nm,18.5s,baz=146,slow=39						
MTPU	**Mount Pierson**	**30.66**	**326**	P	**P**	**22 08 38.8**	**0.0**
CCUT	**Cedar City**	**30.96**	**324**	P	**P**	**22 08 41.0**	**-0.3**
CCUT				IAmb	IAmb	22 08 46.1	
	comp=Z,4.8nm,1.1s						
MSU	**Marysvale**	**31.01**	**327**	P	**P**	**22 08 42.2**	**+0.6**
K22A	**Casper**	**31.86**	**338**	P	**P**	**22 08 44.4**	**-4.6**
PSUT	**Pine Spring**	**31.93**	**325**	P	**P**	**22 08 50.1**	**+0.3**
PSUT				IAmb	IAmb	22 08 54.0	
	comp=Z,3.1nm,0.8s						
J56A	**Wolcott**	**32.12**	**20**	P	**P**	**22 08 49.8**	**-1.3**
SADO	**Sadowa**	**32.80**	**16**	LR	LR	22 22 57.7	
	comp=Z,45nm,20.8s,baz=181,slow=38						
BW06	**Boulder Array**	**33.12**	**335**	P	P	22 08 51.9	-8.3
BW06				IAmb	IAmb	22 08 58.5	
	comp=Z,7.2nm,1.1s						
PD31	**Pinedale Array**	**33.12**	**335**	P	P	22 08 51.8	-8.4
PD31				IAmb	IAmb	22 08 58.5	
	comp=Z,6.3nm,1.1s						
PDAR	**Pinedale Array**	**33.12**	**335**	LR	LR	22 24 28.1	
	comp=Z,23nm,18.3s,baz=66,slow=40						
PDAR	**Pinedale Array**	**33.12**	**335**	P	P	22 08 52.2	-7.9
ELK	**Elko**	**34.25**	**327**	P	**P**	**22 09 11.3**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=182,slow=5.2,SNR=5.0						
ELK				LR	LR	22 24 37.5	
	comp=Z,28nm,19.2s,baz=193,slow=39						
	comp=Z,1.4nm,0.8s						
NV11	**Mina Array Sit**	**34.37**	**321**	P	**P**	**22 09 11.4**	**+0.4**
NV11				IAmb	IAmb	22 09 24.3	
	comp=Z,5.4nm,1.1s						
NVAR	**Mina Array Bea**	**34.46**	**321**	P	**P**	**22 09 14.0**	**+2.2**
	comp=Z,2.6nm,0.8s,baz=134,slow=7.9,SNR=18						
NVAR				PcP	**PcP**	**22 11 48.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=147,slow=1.8,SNR=3.8						
	comp=Z,2.6nm,0.8s						
BMN	**Battle Mountai**	**35.12**	**325**	IAmb	IAmb	22 09 20.4	
	comp=Z,2.1nm,0.7s						
WVOR	**Wild Horse Val**	**37.26**	**326**	IAmb	IAmb	22 09 39.7	
	comp=Z,6.4nm,1.1s						
LPAZ	**La Paz**	**37.45**	**142**	P	**P**	**22 09 36.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=249,slow=10,SNR=2.1						
	comp=Z,0.3nm,0.3s						
F10A	**Beach Ranch, E**	**39.04**	**331**	P	**P**	**22 09 50.1**	**-0.5**
SIV	**San Ignacio**	**41.87**	**134**	P	**P**	**22 10 14.5**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=357,slow=3.2,SNR=5.2						
	comp=Z,0.7nm,0.3s						
LVC	**Limon Verde**	**42.09**	**148**	LR	LR	22 27 05.2	
	comp=Z,28nm,18.0s,baz=231,slow=35						
RPN	**Rapa Nui**	**44.07**	**203**	LR	LR	22 23 34.9	
	comp=Z,26nm,19.5s,baz=264,slow=29						
SCHQ	**Schefferville**	**45.41**	**20**	LR	LR	22 30 28.0	
	comp=Z,42nm,18.6s,baz=124,slow=37						
YKA	**Yellowknife Ar**	**51.63**	**346**	P	**P**	**22 11 28.4**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=145,slow=7.5,SNR=7.8						
	comp=Z,0.8nm,0.5s						
DLBC	**Dease Lake**	**53.35**	**336**	P	**P**	**22 11 44.0**	**+1.1**
	comp=Z,4.8nm,0.8s,baz=169,slow=4.3,SNR=9.6						
	comp=Z,4.8nm,0.8s						
SFJD	**Kangerlussuaq**	**59.74**	**17**	LR	LR	22 38 06.3	
	comp=Z,33nm,21.7s,baz=220,slow=36						
GHO	**Glory Hole Cre**	**63.11**	**333**	P	**P**	**22 12 50.2**	**-0.9**
ILAR	**Eielson Array**	**63.53**	**337**	P	**P**	**22 12 53.6**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=131,slow=5.6,SNR=6.4						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**63.53**	**337**	P	**P**	**22 12 53.0**	**-0.8**
BMAR	**Burnt Mountain**	**63.96**	**340**	P	**P**	**22 12 56.2**	**-0.4**
BWN	**Browne**	**64.29**	**336**	P	**P**	**22 12 55.3**	**-3.4**
Q19K	**Cape Douglas,**	**64.34**	**329**	P	**P**	**22 12 59.6**	**+0.4**
P19K	**Oil Pt**	**64.36**	**330**	P	**P**	**22 12 59.3**	**0.0**
H24K	**Noodor Dome**	**64.37**	**338**	P	**P**	**22 12 59.6**	**+0.3**
H24K				IAmb	IAmb	22 13 33.7	
	comp=Z,1.7nm,0.9s						
I23K	**Minto, Yukon-K**	**64.64**	**337**	P	**P**	**22 13 00.3**	**-0.7**
I23K				IAmb	IAmb	22 13 01.4	
	comp=Z,3.6nm,0.9s						
BPAW	**Bear Paw Mtn.**	**64.88**	**335**	P	**P**	**22 13 01.7**	**-0.9**
BPAW				IAmb	IAmb	22 13 02.6	
	comp=Z,3.5nm,0.9s						
PPLA	**Purkeypile**	**64.95**	**334**	P	**P**	**22 13 01.8**	**-1.4**
H23K	**Yukon River**	**64.99**	**337**	P	**P**	**22 13 02.0**	**-1.3**
H23K				IAmb	IAmb	22 13 32.7	
	comp=Z,2.3nm,1.2s						
M20K	**Styx River**	**65.02**	**333**	P	**P**	**22 13 02.7**	**-0.9**
MLY	**Manley**	**65.13**	**336**	P	**P**	**22 13 04.3**	**0.0**
N19K	**Bonanza Creek**	**65.31**	**331**	P	**P**	**22 13 05.3**	**-0.2**
M19K	**Big River Lodg**	**65.59**	**332**	P	**P**	**22 13 07.0**	**-0.3**
M19K				IAmb	IAmb	22 13 07.7	
	comp=Z,3.1nm,0.8s						
L19K	**White Mountain**	**65.88**	**333**	P	**P**	**22 13 08.2**	**-1.0**
L19K				IAmb	IAmb	22 13 08.9	
	comp=Z,2.1nm,0.9s						
SVW2	**Sparrevohn**	**65.90**	**331**	P	**P**	**22 13 08.3**	**-0.9**
SVW2				IAmb	IAmb	22 13 09.6	
	comp=Z,4.2nm,1.1s						
K20K	**Telida**	**65.91**	**334**	P	**P**	**22 13 08.0**	**-1.2**
K20K				IAmb	IAmb	22 13 09.2	
	comp=Z,3.3nm,0.9s						
N18K	**Kilae Creek**	**65.93**	**331**	P	**P**	**22 13 09.6**	**+0.2**
N18K				IAmb	IAmb	22 13 10.6	
	comp=Z,3.9nm,0.9s						
H21K	**Melozitna Rive**	**66.17**	**337**	P	**P**	**22 13 09.9**	**-1.0**
H21K				IAmb	IAmb	22 13 20.8	
	comp=Z,4.6nm,1.5s						
CHGN	**Chignik**	**66.18**	**326**	P	**P**	**22 13 11.4**	**+0.4**
J20K	**Nowinta River**	**66.20**	**335**	P	**P**	**22 13 10.5**	**-0.6**
J20K				IAmb	IAmb	22 13 30.3	
	comp=Z,4.9nm,1.4s						
EUNU	**Eureka**	**66.57**	**1**	P	**P**	**22 13 11.2**	**-2.0**
BORG	**Borgarnes**	**69.31**	**26**	LR	LR	22 43 17.9	
	comp=Z,11nm,18.6s,baz=274,slow=36						
JMIC	**Jan Mayen**	**74.93**	**20**	LR	LR	22 47 33.7	
	comp=Z,11nm,18.6s,baz=294,slow=36						
CMAR	**Chiang Mai Arr**	**146.64**	**342**	PKPbc	**PKPbc**	**22 22 05.7**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=352,slow=3.5,SNR=14						

ISC 11 22:11:52.1±2.9, 13°.0N±0°.1×89°.1W±0°.1, h29km±16km, n29, σ0°.22/36, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJTE	**Alcalda de S**	**0.61**	**12**	*eP*	**Pb**	**22 12 04.4**	**0.0**
SJTE				*eS*	**Sn**	**22 12 13.8**	**0.0**
SJTE				IAML		22 12 14.6	
	comp=Z,1μm,0.2s						
SJTE	**Alcalda de S**	**0.61**	**12**	*eP*	**Pb**	**22 12 04.4**	**0.0**
SJTE				*eS*	**Sn**	**22 12 13.8**	**0.0**
SJTE				IAML		22 12 14.6	
	comp=Z,1μm,0.2s						
COEG	**Centro de Oper**	**0.65**	**22**	*eP*	**Pb**	**22 12 05.0**	**0.0**
COEG	**Centro de Oper**	**0.65**	**22**	*eP*	**Pb**	**22 12 05.0**	**0.0**
JAYA	**Jayaque - finc**	**0.70**	**334**	IAML		22 12 18.3	
	comp=Z,6μm,0.1s						
JAYA	**Jayaque - finc**	**0.70**	**334**	IAML		22 12 18.3	
	comp=Z,6μm,0.1s						
PAVA	**Las Pavas**	**0.72**	**15**	*eP*	**Pb**	**22 12 06.1**	**-0.1**
PAVA				*eS*	**Sn**	**22 12 16.6**	**0.0**
PAVA				IAML		22 12 20.4	
	comp=Z,2μm,0.2s						
PAVA	**Las Pavas**	**0.72**	**15**	*eP*	**Pb**	**22 12 06.1**	**-0.1**
PAVA				*eS*	**Sn**	**22 12 16.6**	**0.0**
PAVA				IAML		22 12 20.4	
	comp=Z,2μm,0.2s						
LBRS	**Las Brisas**	**0.72**	**7**	*eP*	**Pb**	**22 12 06.6**	**+0.3**
LBRS	**Las Brisas**	**0.72**	**7**	*eP*	**Pb**	**22 12 06.6**	**+0.3**
BOQS	**Boqueron**	**0.73**	**349**	*eP*	**Pn**	**22 12 06.7**	**0.0**
BOQS	**Boqueron**	**0.73**	**349**	*eP*	**Pn**	**22 12 06.7**	**0.0**
LFU	**La Fuente**	**0.73**	**2**	*eP*	**Pn**	**22 12 06.5**	**-0.1**
LFU	**La Fuente**	**0.73**	**2**	*eP*	**Pn**	**22 12 06.5**	**-0.1**
COEB	**Comit de Eme**	**0.76**	**51**	*eP*	**Pn**	**22 12 06.7**	**-0.3**
COEB				*eS*	**Sn**	**22 12 18.1**	**+0.5**
COEB	**Comit de Eme**	**0.76**	**51**	*eP*	**Pn**	**22 12 06.7**	**-0.3**
COEB				*eS*	**Sn**	**22 12 18.1**	**+0.5**
SCLA	**Alcaldia de Sa**	**0.79**	**30**	*eP*	**Pn**	**22 12 07.2**	**-0.1**
SCLA				*eS*	**Sn**	**22 12 18.4**	**+0.2**
SCLA				IAML		22 12 20.1	
	comp=Z,294nm,0.2s						
SCLA	**Alcaldia de Sa**	**0.79**	**30**	*eP*	**Pn**	**22 12 07.2**	**-0.1**
SCLA				*eS*	**Sn**	**22 12 18.4**	**+0.2**
SCLA				IAML		22 12 20.1	
	comp=Z,294nm,0.2s						
PQSS	**Presa 15 de Se**	**0.82**	**43**	*eP*	**Pn**	**22 12 07.8**	**0.0**
PQSS	**Presa 15 de Se**	**0.82**	**43**	*eP*	**Pn**	**22 12 07.8**	**0.0**
PACA	**Pacayal**	**0.91**	**60**	*eP*	**Pb**	**22 12 09.4**	**0.0**
PACA				IAML		22 12 25.4	
	comp=Z,29μm,0.3s						
PACA	**Pacayal**	**0.91**	**60**	*eP*	**Pb**	**22 12 09.4**	**0.0**
PACA				IAML		22 12 25.4	
	comp=Z,29μm,0.3s						
P5NO	**Presa 5 de nov**	**1.03**	**21**	*eP*	**Pn**	**22 12 10.2**	**-0.5**
P5NO				*eS*	**Sn**	**22 12 23.8**	**-0.3**
CAHU	**Cacacuatique**	**1.17**	**50**	*eP*	**Pn**	**22 12 12.8**	**0.0**
CAHU	**Cacacuatique**	**1.17**	**50**	*eP*	**Pn**	**22 12 12.8**	**0.0**
LCND	**La Caada**	**1.25**	**76**	*eP*	**Pn**	**22 12 13.6**	**-0.1**
LCND				IAML		22 12 33.2	
	comp=Z,1μm,0.2s						
LCND	**La Caada**	**1.25**	**76**	*eP*	**Pn**	**22 12 13.6**	**-0.1**
LCND				IAML		22 12 33.2	
	comp=Z,1μm,0.2s						
CNCH	**Conchagua**	**1.29**	**78**	*eP*	**Pn**	**22 12 14.1**	**-0.3**
CNCH				IAML		22 12 35.0	
	comp=Z,2μm,0.2s						
CNCH	**Conchagua**	**1.29**	**78**	*eP*	**Pn**	**22 12 14.1**	**-0.3**
CNCH				IAML		22 12 35.0	
	comp=Z,2μm,0.2s						

SOME ***11*** *22:13:59.6, 40°.43N×76°.82E, h10km*
KRNET ***11*** *22:14:00.5±0.1, 40°.43N×77°.07E, mb3.7*
NNC ***11*** *22:14:01.4±1.4, 40°.46N×77°.14E, h0km, mb4.1, mpv3.8,*
Error ellipse: s-maj=10.2km s-min=7.3km az=159.0

ISC 11 22:14:01.8±1.6, 40°.43N±0°.07×76°.94E±0°.03, h10km, n58, σ2s04/97, 22C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**1.89**	**344**	P	**Pb**	**22 14 36.2**	**-0.3**
	SNR=29						
ULHL	**Ulahol**	**1.89**	**344**	⇑*iP*	**Pb**	**22 14 35.7**	**-0.8**
	baz=41						
ULHL				⇑*iS*	**Sb**	**22 15 01.9**	**+1.6**
	baz=41						
BOOM	**Boomskoye usch**	**2.19**	**340**	⇑*iP*	**Pb**	**22 14 40.5**	**-1.2**
	baz=38						
BOOM				⇑*iS*	**Sb**	**22 15 09.5**	**+0.6**
	baz=38						
PRZ	**Przheval'sk**	**2.33**	**28**	⇑*iP*	**Pn**	**22 14 41.1**	**+0.7**
	baz=25						
PRZ				⇑*iS*	**Sb**	**22 15 11.2**	**-1.7**
	baz=25						
ARLS	**Aral**	**2.44**	**307**	⇑*iP*	**Pb**	**22 14 44.1**	**-1.8**
	baz=5.0						
ARLS				⇑*eS*	**Sb**	**22 15 16.3**	**+0.3**
	baz=5.0						
KBK	**Karagaybulak**	**2.68**	**327**	P	**Pb**	**22 14 48.0**	**-2.0**
	SNR=11						
KBK	**Karagaybulak**	**2.68**	**327**	⇑*iP*	**Pn**	**22 14 47.4**	**+2.2**
	baz=25						
KBK				⇑*iS*	**Sb**	**22 15 21.5**	**-1.5**
	baz=25						
TKM2	**Tokmak 2**	**2.68**	**338**	P	**Pb**	**22 14 47.6**	**-2.5**
	SNR=44						
TKM2	**Tokmak 2**	**2.68**	**338**	⇑Pn	**Pb**	**22 14 47.5**	**-2.5**
	7.6nm,0.2s						
TKM2				⇑Lg	Lg	22 15 27.9	
	47nm,0.3s						
TKM2	**Tokmak 2**	**2.68**	**338**	⇓*iP*	**Pn**	**22 14 47.2**	**+1.9**
	baz=37						
TKM2				⇓*iS*	**Sb**	**22 15 21.3**	**-1.9**
	baz=37						
KST	**Kastek**	**2.71**	**345**	*eP*	**Pb**	**22 14 51.3**	**+0.8**
	18nm,0.3s						
KST				*eS*	**Sg**	**22 15 28.3**	**-0.6**
	109nm,0.5s						
KST	**Kastek**	**2.71**	**345**	Pg	**Pb**	**22 14 51.1**	**+0.6**
	18nm,0.3s						
KST				Pg	**Pb**	**22 14 51.3**	**+0.8**
	18nm,0.4s						
KST				Lg	Lg	22 15 28.2	
	92nm,0.4s						
KST				Lg	Lg	22 15 28.3	
	109nm,0.5s						
MTBS	**Maitube**	**2.73**	**352**	*eP*	**Pb**	**22 14 51.0**	**+0.3**
	35nm,0.3s						
MTBS				*eS*	**Sg**	**22 15 27.9**	**-1.4**
	90nm,0.3s						
MTBS	**Maitube**	**2.73**	**352**	Pg	**Pb**	**22 14 51.0**	**+0.3**
	35nm,0.3s						
MTBS				Pg	**Pg**	**22 14 51.4**	**-2.7**
	35nm,0.3s						
MTBS				Lg	Lg	22 15 28.0	
	90nm,0.3s						
MTBS				Lg	Lg	22 15 28.1	
	90nm,0.3s						
MDOK	**Medeo**	**2.73**	**2**	*eP*	**Pb**	**22 14 50.7**	**-0.2**
	23nm,0.2s						
MDOK				*eS*	**Sg**	**22 15 27.5**	**-2.1**
	120nm,0.7s						
MDOK	**Medeo**	**2.73**	**2**	⇑Pn	**Pn**	**22 14 46.9**	**+1.0**
	10nm,0.4s						
MDOK				Pg	**Pb**	**22 14 50.7**	**-0.2**
	23nm,0.2s						
MDOK				Pg	**Pg**	**22 14 50.9**	**-3.3**
	23nm,0.2s						
MDOK				Pg	Pg	22 14 54.0	-0.2
	43nm,0.6s						
MDOK				Lg	Lg	22 15 27.5	
	120nm,0.7s						
MDOK				Lg	Lg	22 15 27.6	
	120nm,0.7s						
MDOK				Lg	Lg	22 15 29.2	
	106nm,0.6s						
AAA	**Alma-Ata**	**2.78**	**360**	*eP*	**Pb**	**22 14 52.1**	**+0.5**
	73nm,0.3s						
AAA				*eS*	**Sg**	**22 15 30.0**	**-1.1**
	205nm,0.6s						
AAA	**Alma-Ata**	**2.78**	**360**	Pg	**Pb**	**22 14 52.1**	**+0.5**
	73nm,0.3s						
AAA				Lg	Lg	22 15 29.9	
	205nm,0.6s						
KOTS	**Kotyrbulak**	**2.81**	**3**	*eP*	**Pb**	**22 14 52.2**	**+0.1**
	25nm,0.2s						
KOTS				*eS*	**Sg**	**22 15 30.2**	**-1.7**
	250nm,0.4s						
KOTS	**Kotyrbulak**	**2.81**	**3**	Pg	**Pb**	**22 14 52.2**	**+0.1**
	25nm,0.2s						
KOTS				Lg	Lg	22 15 30.2	
	250nm,0.4s						
SATY	**Saty**	**2.85**	**22**	*eP*	**Pb**	**22 14 51.4**	**-1.5**
	12nm,0.4s						
SATY				*eS*	**Sb**	**22 15 28.9**	**+1.2**
	121nm,0.7s						
SATY	**Saty**	**2.85**	**22**	Pg	**Pb**	**22 14 51.4**	**-1.5**
	12nm,0.4s						
SATY				Pg	**Pg**	**22 14 51.8**	**-4.6**
	12nm,0.4s						
SATY				Lg	Lg	22 15 28.9	
	121nm,0.7s						
SATY				Lg	Lg	22 15 29.0	
	121nm,0.7s						
AAK	**Ala-Archa**	**2.87**	**321**	P	**Pb**	**22 14 50.5**	**-2.7**
	SNR=10						
AAK	**Ala-Archa**	**2.87**	**321**	⇑*iP*	**Pn**	**22 14 50.2**	**+2.4**
	baz=20						
AAK				⇑*iS*	**Sb**	**22 15 26.5**	**-1.9**
	baz=20						
ZHN	**Zhinishke**	**2.96**	**22**	*eP*	**Pb**	**22 14 53.5**	**-1.1**
	26nm,0.2s						
ZHN				*eS*	**Sb**	**22 15 32.5**	**+1.7**
	172nm,0.4s						
ZHN	**Zhinishke**	**2.96**	**22**	Pg	**Pb**	**22 14 53.6**	**-1.1**
	26nm,0.2s						
ZHN				Lg	Lg	22 15 32.5	
	172nm,0.4s						
AML	**Almayashu**	**2.98**	**306**	P	**Pb**	**22 14 52.3**	**-2.9**
	SNR=78						
CHMS	**Chumysh**	**3.04**	**328**	P	**Pn**	**22 14 52.8**	**+2.7**
	SNR=12						
CHMS	**Chumysh**	**3.04**	**328**	⇓Pn	**Pn**	**22 14 52.3**	**+2.2**
	29nm,0.7s						
CHMS				⇑Pg	**Pg**	**22 14 59.6**	**-0.5**
	15nm,0.5s						
CHMS				⇑Lg	Lg	22 15 38.9	
	30nm,0.5s						
CHMS	**Chumysh**	**3.04**	**328**	⇑*iP*	**Pn**	**22 14 52.3**	**+2.2**
	baz=27						
CHMS				⇑*iS*	**Sn**	**22 15 29.9**	**+3.3**
	baz=27						
UZB	**Uzynbulak**	**3.13**	**29**	*eP*	**Pb**	**22 14 56.4**	**-1.2**
	4.0nm,0.4s						
UZB				*eS*	**Sb**	**22 15 37.3**	**+1.3**
	36nm,0.5s						
UZB	**Uzynbulak**	**3.13**	**29**	Pg	**Pb**	**22 14 56.4**	**-1.2**
	4.0nm,0.4s						
UZB				Pg	Pg	22 14 56.6	-5.2
	4.2nm,0.4s						
UZB				Lg	Lg	22 15 37.3	
	36nm,0.5s						
UZB				Lg	Lg	22 15 37.4	
	40nm,0.5s						
EKS2	**Erkin-Say**	**3.25**	**314**	P	**Pn**	**22 14 56.1**	**+3.1**
	SNR=16						
EKS2	**Erkin-Say**	**3.25**	**314**	⇑*iP*	**Pn**	**22 14 55.7**	**+2.6**
	baz=13						
EKS2				⇑*iS*	**Sn**	**22 15 35.9**	**+4.0**
	baz=13						
KTBS	**Karatobe**	**3.29**	**357**	*eP*	**Pb**	**22 15 00.1**	**-0.2**
	31nm,0.4s						
KTBS				*eS*	**Sb**	**22 15 43.9**	**+3.6**
	120nm,0.2s						
KTBS	**Karatobe**	**3.29**	**357**	Pg	**Pb**	**22 15 00.0**	**-0.2**
	31nm,0.4s						
KTBS				Lg	Lg	22 15 43.9	
	120nm,0.2s						
SHLS	**Shalkode**	**3.31**	**34**	*eP*	**Pg**	**22 15 03.4**	**-2.0**
	13nm,0.3s						
SHLS				*eS*	**Sg**	**22 15 49.4**	**+1.1**
	46nm,0.5s						
SHLS	**Shalkode**	**3.31**	**34**	Pg	**Pg**	**22 15 03.4**	**-2.0**
	13nm,0.3s						
SHLS				Lg	Lg	22 15 49.4	
	46nm,0.5s						
USP	**Ospenovka**	**3.37**	**328**	P	**Pn**	**22 14 57.2**	**+2.6**
	SNR=11						
USP	**Ospenovka**	**3.37**	**328**	⇓*iP*	**Pn**	**22 14 56.9**	**+2.3**
	baz=27						
USP				⇓*iS*	**Sn**	**22 15 37.9**	**+3.3**
	baz=27						
KRBS	**Karabastau**	**3.40**	**344**	*eP*	**Pb**	**22 15 02.9**	**+0.7**
	12nm,0.6s						
KRBS				*eS*	**Sg**	**22 15 48.5**	**-2.4**
	33nm,0.6s						
KRBS	**Karabastau**	**3.40**	**344**	Pg	**Pb**	**22 15 02.9**	**+0.7**
	12nm,0.6s						
KRBS				Pg	**Pb**	**22 15 02.9**	**+0.7**
	12nm,0.6s						
KRBS				Lg	Lg	22 15 48.2	
	33nm,0.4s						
KRBS				Lg	Lg	22 15 48.5	
	33nm,0.6s						
SGDS	**Sogindy**	**3.48**	**331**	*eP*	**Pb**	**22 15 04.7**	**+1.2**
	13nm,0.8s						
SGDS				*eS*	**Sg**	**22 15 51.8**	**-1.6**
	26nm,0.6s						
SGDS	**Sogindy**	**3.48**	**331**	Pg	**Pb**	**22 15 04.7**	**+1.2**
	13nm,0.8s						
SGDS				Pg	**Pg**	**22 15 05.2**	**-3.2**
	13nm,0.4s						
SGDS				Lg	Lg	22 15 51.8

TDK				eS		Sg	22 16 26.9	-5.6
TDK	**Taldyqorghan**	**4.70**	**13**	Pg		**Pb**	**22 15 25.2**	**+1.0**
TDK				Lg		Lg	22 16 26.9	
IUG	**Iuzhnay**	**5.48**	**290**	Pg		**Pg**	**22 15 44.3**	**-2.5**
	78nm,0.4s							
IUG				Lg		Lg	22 16 58.9	
	24nm,1.1s							
KK31	**Karatay Array**	**5.50**	**301**	⇓Pn		**Pn**	**22 15 25.5**	**+1.8**
	0.1nm,0.2s,baz=129,slow=12,SNR=4.6							
KK31				⇓Pg		**Pg**	**22 15 44.4**	**-2.7**
	2.4nm,0.5s,baz=128,slow=15,SNR=14							
KK31				⇑Lg		Lg	22 16 55.7	
	1.7nm,0.4s,baz=129,slow=28,SNR=5.5							

*IDC **11** 22:39:18.5±0.8,51°.44N×174°.26W,h0km,mb3.8/16, mbtmp3.8/17,ML4.0/1,MS3.2/2,Error ellipse: s-maj=24.6km s-min=17.2km az=173.0*
*AEIC **11** 22:39:22±1.9,51°.35N±0°.08×174°.22W±0°.08,h18km±6km, Error ellipse: s-maj=12.1km s-min=6.8km az=169.0*
*NEIC **11** 22:39:23.9±1.8,51°.39N±0°.08×174°.22W±0°.08, h37km±11km,mb3.8/54,ML3.5/30(AEIC),Error ellipse: s-maj=12.4km s-min=7.2km az=172.0*

ISC 11 22:39:21.8±0.7,51°.36N±0°.10×174°.25W±0°.04,h21km±4km, n127,σ1§02/121,mb3.9/19,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.92**	**6**		**Pn**	**22 39 39.7**	**+0.1**
KOKL	**Mount Kliuchef**	**0.96**	**2**		**Pn**	**22 39 40.5**	**+0.3**
KOSE	**Korovin Southe**	**0.99**	**7**		**Pn**	**22 39 40.9**	**+0.4**
KOWE	**Korovin West**	**1.01**	**360**		**Pn**	**22 39 40.9**	**+0.2**
GSMY	**Great Sitkin M**	**1.32**	**302**		**Pn**	**22 39 45.2**	**+0.2**
GSMY					**Sb**	**22 40 03.0**	**+0.8**
GSTR	**Great Sitkin T**	**1.35**	**304**	Pn	**Pn**	**22 39 45.7**	**+0.4**
GSTR				Sn	**Sn**	**22 40 02.8**	**+0.1**
GSCK	**Great Sitkin C**	**1.36**	**299**		**Pn**	**22 39 45.8**	**+0.3**
GSTD	**Great Sitkin T**	**1.37**	**301**		**Pn**	**22 39 46.2**	**+0.5**
GSTD					**Sb**	**22 40 04.7**	**+0.8**
ETKA	**Kagalaska Isla**	**1.44**	**291**		**Pn**	**22 39 47.0**	**+0.4**
ADK	**Adak**	**1.61**	**290**		**Pn**	**22 39 49.1**	**+0.2**
ADK				Sn	**Sn**	**22 40 09.6**	**+0.6**
KIWB	**Kanaga Island**	**1.88**	**286**		**Pn**	**22 39 53.6**	**+1.0**
KIKV	**Kanaga Island**	**1.90**	**287**		**Pb**	**22 39 54.8**	**-0.8**
KIMD	**Kanaga Island**	**1.91**	**283**		**Pn**	**22 39 54.0**	**+1.0**
TAPA	**Tanaga Point A**	**2.27**	**283**		**Pn**	**22 39 59.7**	**+1.6**
TAFP	**Tanaga Falls P**	**2.39**	**285**		**Pn**	**22 40 01.2**	**+1.5**
TAFP					**Sb**	**22 40 31.6**	**-1.5**
TASE	**Tanaga Southea**	**2.41**	**283**		**Pn**	**22 40 01.6**	**+1.6**
GANE	**Gareloi Northe**	**2.86**	**281**		**Pn**	**22 40 07.9**	**+1.7**
CLES	**Cleveland East**	**3.06**	**60**	Pn	**Pn**	**22 40 09.8**	**+1.0**
CLCO	**Concord Point,**	**3.14**	**61**		**Pn**	**22 40 10.6**	**+0.7**
NIKH	**Nikolski High**	**3.69**	**62**	Pn	**Pn**	**22 40 17.8**	**+0.2**
NIKH	**Nikolski High**	**3.69**	**62**		**Sn**	**22 41 01.2**	**+0.8**
AMKA	**Amchitka**	**4.04**	**273**	Pn	**Pn**	**22 40 23.4**	**+1.1**
OKCE	**Okmok Cone E**	**4.26**	**59**		**Pn**	**22 40 26.6**	**+1.2**
MAPS	**Pakushin South**	**5.08**	**58**		**Pn**	**22 40 37.7**	**+1.0**
MNAT	**Makushin Natee**	**5.25**	**58**		**Pn**	**22 40 40.3**	**+1.2**
UNV	**Unalaska Valle**	**5.33**	**59**	Pn	**Pn**	**22 40 40.5**	**+0.4**
AKUT	**Akutan**	**5.85**	**58**	Pn	**Pn**	**22 40 47.6**	**+0.4**
SPIA	**Saint Paul Isl**	**6.28**	**20**	Pn	**Pn**	**22 40 54.5**	**+1.5**
WECS	**Westdahl Cape**	**6.54**	**57**		**Pn**	**22 40 58.1**	**+1.3**
SDPT	**Sand Point**	**9.15**	**59**	Pn	**Pn**	**22 41 32.7**	**+0.3**
CNBA	**Chernabura Isl**	**9.47**	**63**	Pn	**Pn**	**22 41 36.5**	**-0.3**
CHGN	**Chignik**	**10.58**	**56**	Pn	**Pn**	**22 41 52.5**	**+0.5**
CHIR	**Chirikof Islan**	**11.92**	**61**	Pn	**Pn**	**22 42 09.1**	**-1.3**
SII	**Sitkinak Islan**	**12.89**	**58**	Pn	**Pn**	**22 42 23.0**	**-0.6**
OHAK	**Old Harbor**	**13.55**	**56**	Pn	**Pn**	**22 42 30.3**	**-2.2**
N18K	**Kilae Creek**	**13.82**	**40**	Pn	**Pn**	**22 42 36.9**	**+0.5**
Q19K	**Cape Douglas,**	**13.96**	**49**	P	**P**	**22 42 46.0**	**-0.1**
SVW2	**Sparrevohn**	**14.19**	**39**		**P**	**22 42 48.7**	**+0.1**
P19K	**Oil Pt**	**14.46**	**47**	P	**P**	**22 42 51.0**	**-0.6**
N19K	**Bonanza Creek**	**14.48**	**42**		**Pn**	**22 42 48.2**	**+2.9**
L19K	**White Mountain**	**15.11**	**37**		**P**	**22 42 59.2**	**+0.4**
L19K				IAmb	IAmb	22 43 13.3	
	comp=Z,4.8nm,1.1s						
M19K	**Big River Lodg**	**15.12**	**38**	P	**P**	**22 42 57.7**	**-1.3**
TTA	**Tatalina**	**15.17**	**33**	P	**P**	**22 42 59.9**	**+0.4**
TTA				IAmb	IAmb	22 43 20.1	
	comp=Z,11nm,1.4s						
CNPM	**China Poot**	**15.34**	**49**	P	**P**	**22 43 00.3**	**-1.1**
M20K	**Styx River**	**15.60**	**39**		**P**	**22 43 04.8**	**+0.5**
K20K	**Telida**	**16.12**	**34**	P	**P**	**22 43 09.7**	**-0.3**
K20K				IAmb	IAmb	22 43 24.9	
	comp=Z,6.7nm,1.1s						
SEW	**Seward**	**16.39**	**48**	Pn	**Pn**	**22 43 07.4**	**-2.8**
SEW				IAmb	IAmb	22 43 37.0	
	comp=Z,16nm,1.2s						
PPLA	**Purkeypile**	**16.53**	**37**	P	**P**	**22 43 16.9**	**+2.2**
PPLA				IAmb	IAmb	22 43 40.5	
	comp=Z,9.5nm,1.1s						
J20K	**Nowinta River**	**16.62**	**32**	P	**P**	**22 43 17.0**	**+1.5**
PWL	**Port Wells**	**17.18**	**46**	Pn	**Pn**	**22 43 20.1**	**-0.2**
GHO	**Glory Hole Cre**	**17.29**	**43**		**Pn**	**22 43 22.2**	**+0.5**
GHO				IAmb	IAmb	22 43 23.3	
	comp=Z,5.6nm,0.5s						
KTH	**Kantishna Hill**	**17.38**	**36**		**Pn**	**22 43 23.2**	**+0.4**
SML	**Sawmill**	**17.56**	**43**	Pn	**Pn**	**22 43 24.1**	**-0.9**
SML				IAmb	IAmb	22 44 02.2	
	comp=Z,5.3nm,0.9s						
BPAW	**Bear Paw Mtn.**	**17.66**	**35**		**P**	**22 43 28.9**	**+1.8**
BPAW				IAmb	IAmb	22 43 42.4	
	comp=Z,12nm,1.5s						
IMAR	**Indian Mountai**	**17.98**	**28**		**Pn**	**22 43 30.2**	**+0.1**
I21K	**Tanana**	**17.98**	**31**	P	**Pn**	**22 43 30.2**	**+0.1**
I21K				IAmb	IAmb	22 43 47.1	
	comp=Z,5.3nm,0.9s						
FID	**Port Fidalgo**	**18.00**	**48**		**Pn**	**22 43 28.6**	**-1.8**
SCM	**Sheep Creek Mo**	**18.01**	**44**		**Pn**	**22 43 29.9**	**-0.7**
SCM				IAmb	IAmb	22 43 44.2	
	comp=Z,7.7nm,0.8s						
H21K	**Melozitna Rive**	**18.04**	**29**	P	**P**	**22 43 32.0**	**+0.8**
MLY	**Manley**	**18.30**	**33**	P	**P**	**22 43 34.8**	**+0.7**
MLY				IAmb	IAmb	22 43 50.6	
	comp=Z,4.9nm,0.7s						
KLU	**Klutina**	**18.50**	**46**	P	**P**	**22 43 35.8**	**-0.6**
KLU				IAmb	IAmb	22 44 19.9	
	comp=Z,13nm,1.4s						
DHY	**Denali Highway**	**18.52**	**40**	P	**Pn**	**22 43 37.0**	**+0.2**
M24K	**Tolsona, Glenn**	**18.62**	**44**	P	**P**	**22 43 37.1**	**-0.5**
I23K	**Minto, Yukon-K**	**18.84**	**33**	P	**Pn**	**22 43 40.4**	**-0.2**
I23K				IAmb	IAmb	22 43 43.9	
	comp=Z,5.2nm,0.7s						
WRH	**Wood River Hil**	**18.92**	**36**	P	**P**	**22 43 39.3**	**-1.6**
BMRM	**Bremner River**	**18.94**	**48**		**P**	**22 43 40.8**	**-0.3**
BMRM				IAmb	IAmb	22 44 11.8	
	comp=Z,16nm,1.4s						
CCB	**Clear Creek Bu**	**19.12**	**36**	P	**P**	**22 43 43.2**	**+0.1**
CCB				IAmb	IAmb	22 43 45.7	
	comp=Z,9.8nm,1.4s						
MDM	**Murphy Dome**	**19.13**	**35**	P	**Pn**	**22 43 44.4**	**+0.2**
N25K	**Chitina, Valde**	**19.14**	**46**	P	**P**	**22 43 42.5**	**-0.9**
N25K				IAmb	IAmb	22 43 45.1	
	comp=Z,4.9nm,1.0s						
H23K	**Yukon River**	**19.18**	**32**	Pn	**Pn**	**22 43 46.7**	**+2.0**
PAX	**Paxson**	**19.26**	**42**	P	**Pn**	**22 43 45.1**	**-0.6**
PAX				IAmb	IAmb	22 43 58.5	
	comp=Z,6.1nm,1.5s						
HDA	**Harding Lake**	**19.32**	**37**	P	**P**	**22 43 44.4**	**-0.8**
HDA				IAmb	IAmb	22 43 58.4	
	comp=Z,4.6nm,0.8s						
GLB	**Gilahina Butte**	**19.45**	**47**	P	**Pn**	**22 43 47.3**	**-0.6**
GLB				IAmb	IAmb	22 43 52.3	
	comp=Z,3.9nm,0.8s						
IL31		**19.52**	**36**	P	**P**	**22 43 47.1**	**-0.3**
ILAR	**Eielson Array**	**19.52**	**36**	P	**P**	**22 43 45.3**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=232,slow=8.9,SNR=23						
	comp=Z,1.3nm,0.5s						
ILAR	**Eielson Array**	**19.52**	**36**	P	**P**	**22 43 48.0**	**+0.5**
H24K	**Noodor Dome**	**19.75**	**33**	P	**P**	**22 43 50.2**	**+0.2**
H24K				IAmb	IAmb	22 44 07.4	
	comp=Z,3.9nm,0.8s						
RIDG	**Independent Ri**	**19.83**	**40**	P	**P**	**22 43 50.2**	**-0.6**
RIDG				IAmb	IAmb	22 44 05.1	
	comp=Z,4.0nm,0.7s						
J25K	**Salcha River,**	**20.02**	**37**	P	**P**	**22 43 51.4**	**-1.5**
M26K	**Nabesna, AK**	**20.11**	**45**	P	**P**	**22 43 54.6**	**+0.6**
M26K				IAmb	IAmb	22 43 56.0	
	comp=Z,4.4nm,0.6s						
DOT	**Dot Lake**	**20.11**	**41**	P	**P**	**22 43 53.5**	**-0.4**
DOT				IAmb	IAmb	22 44 08.3	
	comp=Z,3.5nm,0.9s						

SCRK	**Sand Creek**	**20.28**	**40**	P		**P**	**22 43 55.3**	**-0.5**
SCRK				IAmb		IAmb	22 43 55.4	
	comp=Z,4.9nm,0.6s							
PRP	**Porcupine Dome**	**20.40**	**35**	P		**P**	**22 43 57.2**	**0.0**
M27K	**Edge Creek, AK**	**20.59**	**45**	P		Pn	22 44 00.7	-0.9
M27K				IAmb		IAmb	22 44 14.9	
	comp=Z,4.2nm,0.8s							
J26L	**Joseph Creek**	**20.66**	**39**	P		**P**	**22 43 58.9**	**-1.1**
L27K	**Beaver Creek,**	**20.84**	**43**	P		Pn	22 44 03.9	-0.4
BCAR	**Beaver Creek A**	**20.86**	**43**	P		Pn	22 44 03.5	-1.0
TOLK	**Toolik Lake Re**	**21.00**	**25**	P		**P**	**22 44 03.9**	**+0.4**
K27K	**Chicken**	**21.07**	**41**	P		**P**	**22 44 04.7**	**+0.5**
K27K				IAmb		IAmb	22 44 18.8	
	comp=Z,5.9nm,1.2s							
I26K	**Coal Creek Min**	**21.17**	**37**	P		**P**	**22 44 04.3**	**-1.0**
I26K				IAmb		IAmb	22 44 21.7	
	comp=Z,4.5nm,0.8s							
BMAR	**Burnt Mountain**	**21.73**	**31**	P		**P**	**22 44 12.3**	**+1.0**
HYT	**Haines Junctio**	**22.29**	**51**	P		**P**	**22 44 15.1**	**-2.4**
EPYK	**Eagle Plains**	**24.02**	**37**	P		**P**	**22 44 33.8**	**-1.1**
CRAG	**Craig**	**24.59**	**64**	P		**P**	**22 44 42.4**	**+2.3**
DIB	**Dawson Inlet,**	**25.36**	**69**	P		**P**	**22 44 48.1**	**+1.1**
YKA	**Yellowknife Ar**	**33.16**	**47**	LR		LR	23 01 00.6	
	comp=Z,53nm,18.7s,baz=320,slow=39							
H11N2	**WAKE ISLAND Hy**	**34.88**	**212**	T		T	23 24 06.1	
	baz=20,slow=76,SNR=8.4							
H11N3	**WAKE ISLAND Hy**	**34.89**	**212**	T		T	23 24 05.9	
	baz=20,slow=76,SNR=16							
H11N1	**WAKE ISLAND Hy**	**34.90**	**212**	T		T	23 24 08.7	
	baz=20,slow=76,SNR=13							
H11S1	**WAKE ISLAND Hy**	**36.08**	**212**	T		T	23 25 21.9	
	baz=20,slow=76,SNR=17							
H11S2	**WAKE ISLAND Hy**	**36.10**	**212**	T		T	23 25 23.9	
	baz=20,slow=76,SNR=20							
H11S3	**WAKE ISLAND Hy**	**36.10**	**212**	T		T	23 25 24.5	
	baz=20,slow=76,SNR=10							
USRK	**Ussuriysk Ar.**	**36.12**	**280**	P		**P**	**22 46 22.3**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=52,slow=7.5,SNR=13							
	comp=Z,3.2nm,0.6s							
NEW	**Newport**	**36.20**	**72**	LR		LR	23 00 08.6	
	comp=Z,21nm,18.9s,baz=294,slow=35							
NVAR	**Mina Array Bea**	**40.71**	**86**	P		**P**	**22 47 02.4**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=290,slow=8.8,SNR=4.2							
	comp=Z,0.5nm,0.7s							
PDAR	**Pinedale Array**	**43.58**	**75**	P		**P**	**22 47 24.5**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=306,slow=3.5,SNR=5.3							
	comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**49.18**	**299**	P		**P**	**22 48 08.4**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=52,slow=9.3,SNR=2.7							
	comp=Z,0.3nm,0.5s							
TXAR	**Lajitas Array**	**55.83**	**84**	P		**P**	**22 48 57.2**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=295,slow=4.9,SNR=5.5							
	comp=Z,0.3nm,0.6s							
ARCES	**ARCESS Array B**	**58.55**	**352**	P		**P**	**22 49 15.1**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=6.4,slow=8.5,SNR=10							
	comp=Z,0.6nm,0.5s							
KURK	**Kurchatov**	**61.06**	**316**	P		**P**	**22 49 33.1**	**-0.5**
MK31	**Makanchi Array**	**62.24**	**311**	P		**P**	**22 49 41.0**	**-0.8**
MKAR	**Makanchi Array**	**62.24**	**311**	P		**P**	**22 49 41.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=43,slow=6.8,SNR=9.7							
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**62.24**	**311**	P		**P**	**22 49 40.9**	**-0.9**
FINES	**FINESS Array B**	**66.38**	**350**	P		**P**	**22 50 07.2**	**-1.2**
	comp=Z,4.4nm,1.0s,baz=52,slow=3.1,SNR=4.0							
	comp=Z,4.4nm,1.0s							
NOA	**NORSAR Array B**	**67.87**	**357**	P		**P**	**22 50 17.2**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=263,slow=3.3,SNR=4.0							
	comp=Z,0.4nm,0.6s							
AKTO	**Aktyubinsk**	**69.30**	**327**	P		**P**	**22 50 27.2**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=60,slow=9.2,SNR=6.4							
	comp=Z,1.3nm,0.6s							
ABKAR	**Akbulak array**	**69.62**	**325**	P		**P**	**22 50 29.4**	**+0.3**
ABKAR	**Akbulak array**	**69.62**	**325**	P		**P**	**22 50 29.2**	**+0.1**
ABKAR				IAmb		IAmb	22 50 53.3	
	comp=Z,2.1nm,1.1s							
KKAR	**Karatay Array**	**70.45**	**315**	P		**P**	**22 50 33.9**	**-0.5**
KKAR	**Karatay Array**	**70.45**	**315**	P		**P**	**22 50 33.9**	**-0.5**
KKAR				IAmb		IAmb	22 50 35.8	
	comp=Z,0.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**73.84**	**279**	P		**P**	**22 50 56.3**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=30,slow=7.3,SNR=3.4							
	comp=Z,0.8nm,0.4s							
AKASG	**Malin Array Be**	**76.38**	**345**	P		**P**	**22 51 08.3**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=9.6,slow=5.2,SNR=2.4							
	comp=Z,0.5nm,0.4s							
GERES	**GERESS Array B**	**79.94**	**355**	P		**P**	**22 51 29.4**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=28,slow=6.0,SNR=5.6							
	comp=Z,0.5nm,0.6s							
WRA	**Warramunga Arr**	**84.05**	**228**	P		**P**	**22 51 49.9**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=36,slow=6.3,SNR=12							
	comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**87.47**	**226**	P		**P**	**22 52 07.2**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=39,slow=6.0,SNR=7.2							
	comp=Z,0.9nm,0.8s							
ESDC	**Sonseca Array**	**88.94**	**7**	P		**P**	**22 52 13.3**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=355,slow=3.5,SNR=4.7							
	comp=Z,0.5nm,0.7s							
BOSA	**Boshof**	**152.97**	**320**	PKPbc		**PKiKP**	**22 59 18.2**	**+0.7**
	comp=Z,3.3nm,1.0s,baz=109,slow=11,SNR=2.7							

*JMA **11** 23:13:00.0±0.1,42°.8N±0°.4×144°.8E±0°.4,h47km,MV2.9/38, OFF NEMURO PENINSULA*
*SKHL **11** 23:13:01.2±0.5,42°.90N×144°.90E,h41km±5km,mb4.0/2*
ISC 11 23:12:59.7±1.5,42°.80N±0°.07×144°.82E±0°.04,h48km±9km, n14,σ0§77/27,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.22**	**335**	P	**Pn**	**23 13 07.9**	**-0.1**
JAK				*e*S	**Sn**	**23 13 13.7**	**-0.1**
AKK	**Akkeshi**	**0.22**	**4**	*e*P	**Pn**	**23 13 08.1**	**+0.1**
AKK				*e*S	**Sn**	**23 13 13.7**	**-0.1**
JKHN	**Kushirohamanak**	**0.38**	**41**	*i* P	**Pn**	**23 13 10.1**	**+0.6**
JKHN				*e*S	**Sn**	**23 13 17.3**	**+0.9**
JOB	**Onbets**	**0.73**	**279**	P	**Pn**	**23 13 13.5**	**-0.3**
JOB				*e*S	**Sn**	**23 13 23.4**	**-0.6**
JNK	**Nakash**	**0.79**	**355**	P	**Pn**	**23 13 14.4**	**-0.2**
JNK				*e*S	**Sn**	**23 13 24.7**	**-0.7**
NMR	**Nemuro--Hokkai**	**0.88**	**49**	*e*P	**Pn**	**23 13 15.6**	**-0.1**
NMR				*e*S	**Sn**	**23 13 26.5**	**-0.9**
NEM2	**Nemuro 2**	**0.88**	**50**	P	**Pn**	**23 13 15.6**	**-0.2**
NEM2				*e*S	**Sn**	**23 13 26.8**	**-0.8**
JAR	**Ashorobuto**	**0.92**	**303**	P	**Pn**	**23 13 16.0**	**-0.3**
JAR				*e*S	**Sn**	**23 13 27.8**	**-0.6**
JCH	**Churui**	**1.09**	**261**	*e*P	**Pn**	**23 13 18.2**	**-0.4**
JCH				*e*S	**Sn**	**23 13 31.5**	**-1.1**
JRA	**Rausu**	**1.16**	**11**	*e*P	**Pn**	**23 13 20.1**	**+0.5**
JRA				*e*S	**Sn**	**23 13 34.4**	**+0.1**
JTKR	**Abashiri--Toko**	**1.35**	**331**	*e*P	**Pn**	**23 13 22.7**	**+0.6**
JTKR				*e*S	**Sn**	**23 13 40.1**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**1.45**	**31**	*e*P	**Pn**	**23 13 24.5**	**+1.0**
YUK				AMB	AMB	23 13 26.0	
	60nm,0.3s						
YUK				*e*S	**Sn**	**23 13 41.7**	**+0.3**
YUK				A	A	23 13 43.5	
	130nm,0.3s						
YUK				A	A	23 13 43.5	
	290nm,0.3s						
JEM	**Erimo**	**1.46**	**238**	*e*P	**Pn**	**23 13 25.3**	**+1.7**
SHO	**Shikotan**	**1.82**	**53**	*e*P	**Pn**	**23 13 28.4**	**-0.1**
SHO				AMB	AMB	23 13 31.0	
	10.0nm,0.1s						
SHO				*e*S	**Sn**	**23 13 48.9**	**-1.4**
SHO				A	A	23 13 53.3	
	40nm,0.2s						
SHO				A	A	23 13 53.3	
	160nm,0.2s						

IDC 11 23:14:05.6±4.2,9°.80S×125°.10E,h99km±46km,mb3.4/1, mbtmp3.5/4,Error ellipse: s-maj=63.6km s-min=18.7km az=48.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.47**	**254**	P	Pn	23 14 33.2	+1.7
	22nm,0.3s,baz=253,slow=6.8,SNR=3.1						
BATI				S	Sn	23 14 50.6	-0.6
	60nm,0.5s,baz=73,slow=21,SNR=3.5						
FITZ	**Fitzroy Crossi**	**8.27**	**176**	P	Pn	23 16 03.4	+0.6
	0.9nm,0.3s,baz=0.1,slow=12,SNR=3.0						
FITZ				S	Sn	23 17 35.3	+0.7
	0.8nm,0.3s,baz=152,slow=5.1,SNR=3.9						
WRA	**Warramunga Arr**	**13.46**	**140**	P	Pn	23 17 11.1	-1.6
	0.6nm,0.7s,baz=321,slow=13,SNR=5.1						
WRA				S	Sn	23 19 37.7	-3.2
	0.2nm,0.6s,baz=327,slow=23,SNR=1.7						
ASAR	**Alice Springs**	**16.15**	**150**	P	Pn	23 17 47.0	0.0
	0.2nm,0.4s,baz=318,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**68.04**	**330**	P	P	23 24 54.4	-0.1
	0.9nm,1.0s,baz=141,slow=5.1,SNR=1.8						
	0.9nm,1.0s						

KRSC 11 23:17:32.2±1.6,50°.25N×156°.99E,h52km±21km,ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.71**	**308**	*i* P	Pn	23 17 46.7	+0.6
SKR				*e*S	Sn	23 17 56.5	+0.3
PAU	**Pauzhetka**	**1.23**	**355**	*e*P	Pn	23 17 54.0	+1.0
PAU				*e*S	Sn	23 18 09.9	+1.4
KDTR	**Khodutka, Kamc**	**1.71**	**23**	*e*P	Pn	23 18 02.2	+2.7
KDTR				*e*S	Sn	23 18 23.4	+3.2
MTVR	**Mutnovka**	**2.36**	**18**	*e*P	Pn	23 18 11.5	+2.9
MTVR				*e*S	Sn	23 18 40.4	+4.0
RUS	**Russkaya**	**2.39**	**23**	*e*P	Pn	23 18 10.9	+2.1
RUS				*e*S	Sn	23 18 39.9	+3.1
GRL	**Gorelyy**	**2.40**	**16**	*e*P	Pn	23 18 11.9	+2.7
GRL				*e*S	Sn	23 18 41.0	+3.5
KRMR	**Karymshinskiy**	**2.68**	**15**	*e*S	Sn	23 18 47.4	+3.3
APC	**Apacha**	**2.68**	**2**	*e*P	Pn	23 18 17.0	+4.1
DALK	**Dalny**	**3.00**	**21**	*e*P	Pn	23 18 20.5	+3.4
UGLR	**Uglovaya**	**3.18**	**20**	*e*P	Pn	23 18 24.1	+4.4
KOK	**Koryaka**	**3.21**	**18**	*e*P	Pn	23 18 23.7	+3.4
SMAR	**Somma**	**3.22**	**20**	*e*P	Pn	23 18 24.5	+4.0
SDLR	**Sedlovina**	**3.25**	**20**	*e*P	Pn	23 18 23.6	+2.8
SPN	**Mys Shipunski**	**3.42**	**32**	*e*P	Pn	23 18 25.5	+2.5
SPN				*e*S	Sn	23 19 05.6	+3.4
GNL	**Ganaly**	**3.50**	**9**	*e*P	Pn	23 18 25.9	+1.7
TUMR	**Tumrok**	**5.39**	**20**	P	Pn	23 18 55.8	+5.7
KBTR	**Krutoberegovo**	**6.92**	**28**	*e*P	Pn	23 19 14.3	+3.4

*NEIC **11** 23:28:52.1±1.6,41°.64N±0°.08×127°.0W±0°.2,h9km±9km, ML3.0/54,Error ellipse: s-maj=17.8km s-min=10.2km az=74.0*
*IDC **11** 23:28:57.2±2.6,42°.18N×126°.36W,h0km,mb3.0/2, mbtmp3.0/6,ML3.3/4,MS2.9/10,Error ellipse: s-maj=51.4km s-min=21.2km az=38.0*
ISC 11 23:28:55.5±1.9,41°.73N±0°.08×126°.8W±0°.2,h10km,n57, σ1§48/41,MS2.9/3,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.99**	**75**	Pn	**Pn**	**23 29 26.9**	**-2.4**
KBO				IAML		23 29 47.1	
	comp=N,81nm,1.7s						
KBO				IAML		23 30 02.6	
	comp=E,71nm,2.7s						
KEBM	**Edson Butte**	**2.17**	**57**	Pn	**Pn**	**23 29 29.6**	**-2.2**
KEBM				IAML		23 29 45.8	
	comp=N,71nm,2.4s						
KEBM				IAML		23 30 32.7	
	comp=E,85nm,2.9s						
KRPM	**Rodgers**	**2.18**	**104**	Pn	**Pn**	**23 29 29.9**	**-2.0**
KRPM				IAML		23 29 47.1	
	comp=E,75nm,1.8s						
KRPM				IAML		23 29 48.0	
	comp=N,76nm,3.1s						
KSXB	**Camp Six Broad**	**2.20**	**86**		**Pn**	**23 29 30.4**	**-1.9**
JCC	**Jacoby Creek,**	**2.29**	**112**	Pn	Pn	23 29 30.2	-3.1
JCC				IAML		23 30 42.7	
	comp=E,53nm,2.0s						
KMPM	**Mount Pierce**	**2.42**	**122**		Pn	23 29 32.9	-2.4
KMPM				IAML		23 30 11.5	
	comp=E,56nm,1.8s						
KMPM				IAML		23 30 27.3	
	comp=N,58nm,3.1s						
KHMM	**Horse Mountain**	**2.48

comp=E,0.1nm,0.3s
ANMO Albuquerque 17.33 106 LR LR 23 39 42.2
comp=E,26nm,21.9s,baz=309,slow=38
TXAR Lajitas Array 22.46 116 P **P** **23 33 58.6 +3.7**
comp=E,0.4nm,0.9s,baz=298,slow=8.1,SNR=4.9
TXAR LR LR 23 43 36.3
comp=E,42nm,18.9s,baz=274,slow=39
comp=E,0.4nm,0.9s
ILAR Eielson Array 25.79 340 P **P** **23 34 26.6 +0.3**
comp=E,0.2nm,0.6s,baz=131,slow=7.8,SNR=4.2
comp=E,0.2nm,0.6s
TKL Tuckaleechee C 33.87 86 LR LR 23 50 24.9
comp=E,50nm,19.6s,baz=320,slow=38
SADO Sadowa 34.47 69 LR LR 23 50 17.3
comp=E,19nm,20.9s,baz=350,slow=38
H11N3 WAKE ISLAND Hy 59.59 270 T T 00 43 15.3
baz=52,slow=75,SNR=30
H11N2 WAKE ISLAND Hy 59.59 270 T T 00 43 16.6
baz=52,slow=75,SNR=31
H11N1 WAKE ISLAND Hy 59.61 270 T T 00 43 16.5
baz=52,slow=75,SNR=26
H11S1 WAKE ISLAND Hy 60.48 269 T T 00 44 21.0
baz=52,slow=75,SNR=41
H11S2 WAKE ISLAND Hy 60.49 269 T T 00 44 18.7
baz=52,slow=75,SNR=42
H11S3 WAKE ISLAND Hy 60.50 269 T T 00 44 22.2
baz=52,slow=75,SNR=31

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*SGS **11** 23:49:30.1, 15˚.68N×43˚.03E, h1km, Ml3.4*
*IDC **11** 23:49:31.5±1.9, 15˚.65N×43˚.21E, h0km, mb3.6/7, mbtmp3.6/7, MS2.9/6, Error ellipse: s-maj=49.7km s-min=25.6km az=174.0*

ISC 11 23:49:33.4±1.1, 15˚.82N±0˚.10×42˚.95E±0˚.07, h10km, n33, σ1s20/28, mb3.7/7, MS2.9/5, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRSS	**Farasan al Kab**	**1.21**	**319**	P	**Pn**	**23 49 55.0**	**-1.5**
FRSS	**Farasan al Kab**	**1.21**	**319**	S	**Sb**	**23 50 11.0**	**-1.2**
AKWA	**Algayed**	**1.45**	**350**	S	**Sb**	**23 50 19.1**	**0.0**
AKWA	**Algayed**	**1.45**	**350**	P	**Pn**	**23 49 58.0**	**-1.7**
FRSS2	**Sair Farasan I**	**1.51**	**313**	P	**Pn**	**23 49 59.0**	**-1.6**
BESHS	**BESHS**	**1.54**	**356**	P	**Pn**	**23 49 59.3**	**-1.7**
BESHS	**BESHS**	**1.54**	**356**	S	**Sb**	**23 50 21.2**	**-0.4**
MKHL	**Mahalah**	**1.56**	**350**	P	**Pn**	**23 49 59.7**	**-1.5**
DJNS	**Zahran al Janu**	**1.95**	**17**	P	**Pn**	**23 50 06.3**	**-0.6**
KNGHS	**KNGHS**	**2.51**	**12**	P	**Pn**	**23 50 13.9**	**-0.7**
AMGES	**AMGES**	**2.96**	**333**	P	**Pn**	**23 50 19.3**	**-1.1**
ENMS	**ENMS**	**3.25**	**354**	P	**Pn**	**23 50 24.8**	**+0.2**
RHWAS	**RHWAS**	**3.40**	**18**	P	**Pn**	**23 50 26.9**	**+0.2**
NAMS	**An Nimas**	**3.41**	**348**	P	**Pn**	**23 50 26.9**	**+0.1**
QNF02	**Al Qunfudhah**	**3.51**	**337**	P	**Pn**	**23 50 27.7**	**-0.3**
TATS	**Tathlith**	**3.73**	**8**	P	**Pn**	**23 50 31.0**	**-0.2**
QNF01	**Al Qunfudhah**	**3.89**	**336**	P	**Pn**	**23 50 33.1**	**-0.2**
BAHS	**BAHS**	**4.32**	**343**	P	**Pn**	**23 50 40.0**	**+0.6**
QNFDS	**Al Qunfudhah**	**4.39**	**334**	P	**Pn**	**23 50 39.3**	**-0.9**
LTHS	**Al Lith**	**5.04**	**332**	P	**Pn**	**23 50 48.7**	**-0.4**
BAHS2	**Abu Rakh**	**5.29**	**342**	P	**Pn**	**23 50 53.6**	**+1.1**
KMBO	**Kilima Mbogo**	**17.76**	**199**	LR	LR	00 00 38.5	
	comp=Z,42nm,18.1s,baz=104,slow=38						
GNI	**Garni**	**24.29**	**3**	LR	LR	00 05 46.4	
	comp=Z,17nm,19.2s,baz=192,slow=40						
BRTR	**Keskin Array B**	**25.17**	**343**	P	**P**	**23 55 02.0**	**+3.0**
	0.8nm,0.8s,baz=144,slow=11,SNR=5.2						
BRTR				LR	LR	00 04 22.9	
	comp=Z,49nm,21.4s,baz=152,slow=35						
	0.8nm,0.8s						
AAK	**Ala-Archa**	**37.98**	**39**	LR	LR	00 14 07.4	
	comp=Z,18nm,21.3s,baz=204,slow=39						
TORD	**Torodi Ar. Bea**	**39.99**	**272**	P	**P**	**23 57 10.4**	**+1.8**
	0.9nm,0.7s,baz=87,slow=8.8,SNR=6.1						
	0.9nm,0.7s						
GERES	**GERESS Array B**	**40.69**	**330**	P	**P**	**23 57 15.0**	**+0.9**
	0.3nm,0.6s,baz=167,slow=9.1,SNR=4.4						
	0.3nm,0.6s						
DAVOX	**Davos/Dischmat**	**41.31**	**325**	LR	LR	00 15 35.4	
	comp=Z,15nm,19.8s,baz=92,slow=38						
MKAR	**Makanchi Array**	**44.90**	**38**	P	**P**	**23 57 48.0**	**-0.3**
	1.3nm,0.9s,baz=233,slow=6.8,SNR=7.9						
	1.3nm,0.9s						
ZALV	**Zalesovo Beam**	**50.04**	**31**	P	**P**	**23 58 26.9**	**-1.2**
	0.5nm,0.5s,baz=237,slow=6.3,SNR=2.2						
	0.5nm,0.5s						
NOA	**NORSAR Array B**	**50.57**	**341**	LR	LR	00 21 22.6	
	comp=Z,9.9nm,18.6s,baz=165,slow=38						
CMAR	**Chiang Mai Arr**	**53.39**	**79**	P	**P**	**23 58 52.0**	**-1.8**
	0.3nm,0.3s,baz=279,slow=12,SNR=1.6						
	0.3nm,0.3s						
SONM	**Songino Array**	**60.65**	**44**	P	**P**	**23 59 44.4**	**-0.5**
	0.4nm,0.5s,baz=254,slow=10,SNR=2.5						
	0.4nm,0.5s						

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*NAO **12** 00:04:28.6±0.8, 67˚.86N×20˚.29E, ML2.7*
*UPP **12** 00:04:28.6±0.1, 67˚.84N×20˚.22E, h0km, ML2.1, Explosion*
*IDC **12** 00:04:29.6±1.1, 67˚.85N×20˚.36E, h0km, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=20.9km s-min=9.2km az=120.0*
*HEL **12** 00:04:29.2±0.1, 67˚.85N×20˚.22E, h0km, ML2.3, ML2.1(UPP), Explosion*
*BER **12** 00:04:30.7±3.6, 67˚.86N×20˚.16E, h0km, ML2.0, Suspected explosion*

ISC 12 00:04:28.3±0.7, 67˚.81N±0˚.02×20˚.19E±0˚.03, h0km, n52, σ1s50/85, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.16**	**21**	P	**Pg**	**00 04 31.2**	**-0.2**
KUA				S	**Sg**	**00 04 32.9**	**-0.6**
KUA	**Kurravaara**	**0.16**	**21**	*i* P	**Pg**	**00 04 31.2**	**-0.2**
KUA				*i* S	**Sg**	**00 04 32.9**	**-0.6**
KOVU	**Salmi**	**0.42**	**359**	P	**Pg**	**00 04 35.9**	**-0.4**
KOVU				S	**Sg**	**00 04 41.0**	**-0.7**
KOVU	**Salmi**	**0.42**	**359**	*i* P	**Pg**	**00 04 35.9**	**-0.4**
KOVU				*i* S	**Sg**	**00 04 41.0**	**-0.7**
DUNU	**Dundret**	**0.70**	**168**	P	**Pg**	**00 04 42.4**	**+0.7**
DUNU	**Dundret**	**0.70**	**168**	*i* P	**Pg**	**00 04 42.4**	**+0.7**
LANU	**Lannavaara**	**0.72**	**69**	P	**Pg**	**00 04 41.8**	**-0.3**
LANU				S	**Sg**	**00 04 51.2**	**-0.2**
LANU	**Lannavaara**	**0.72**	**69**	*e*P	**Pg**	**00 04 41.5**	**-0.6**
	baz=262						
LANU				*e*S	**Sg**	**00 04 51.1**	**-0.4**
SALU	**Saltoluokta**	**0.77**	**237**	P	**Pg**	**00 04 43.7**	**+0.7**
SALU	**Saltoluokta**	**0.77**	**237**	*i* P	**Pg**	**00 04 43.7**	**+0.7**
KIF	**Kilpisjarvi**	**1.23**	**10**	Pg	**Pg**	**00 04 51.2**	**-0.5**
KIF				Lg	Lg	00 05 06.8	
KIF	**Kilpisjarvi**	**1.23**	**10**	Sg	**Sg**	**00 05 06.8**	**-0.9**
KIF	**Kilpisjarvi**	**1.23**	**10**	*e*P	**Pg**	**00 04 51.1**	**-0.7**
KIF				MSG		00 05 04.2	
	comp=Z,38nm,0.2s						
KIF				*e*SB	**Sg**	**00 05 07.0**	**-0.6**
PAJU	**Pajala**	**1.38**	**123**	*e*P	**Pg**	**00 04 53.7**	**-0.9**
	baz=304						
PAJU				*e*SB	**Sg**	**00 05 13.1**	**+0.7**
HEF	**Hetta**	**1.44**	**63**	*e*P	**Pn**	**00 04 54.6**	**-1.0**
HEF	**Hetta**	**1.44**	**63**	*e*PG	**Pn**	**00 04 54.6**	**-1.0**
HEF				MSG		00 05 11.7	
	comp=Z,26nm,0.2s						
HEF				*e*SB	**Sg**	**00 05 14.0**	**-0.3**
KLF	**Kolari**	**1.56**	**110**	*e*P	**Pn**	**00 04 57.0**	**-0.2**
KLF				*e*SN	**Sb**	**00 05 18.9**	**+0.6**
JETT	**Jettan, Norway**	**1.76**	**3**	Pn	**Pn**	**00 04 60.0**	**-0.1**
JETT				Sn	**Sn**	**00 05 22.9**	**-0.3**
FAUS	**Fauske**	**1.93**	**260**	IAML		00 05 34.5	
	comp=Z,28nm,0.5s						
KALU	**Kalix**	**2.32**	**146**	*e*P	**Pn**	**00 05 09.2**	**+1.6**
	baz=331						
KALU				*e*SB	**Sb**	**00 05 39.9**	**-0.2**
TOF	**Tornio**	**2.38**	**135**	*e*PB	**Pn**	**00 05 10.3**	**+1.9**
	baz=315						
TOF				MSG		00 05 41.0	
	comp=Z,17nm,0.2s						
TOF				*e*SG	**Sb**	**00 05 43.5**	**+1.8**
SGF	**Sodankyl**	**2.45**	**96**	*e*P	**Pn**	**00 05 10.5**	**+1.0**
SGF				*e*SB	**Sb**	**00 05 42.7**	**-1.2**
LOF	**Lofoten**	**2.53**	**281**	IAML		00 05 52.7	
	comp=Z,17nm,0.5s						
RNF	**Rovaniemi**	**2.57**	**115**	*e*PB	**Pn**	**00 05 13.0**	**+2.0**
	baz=303						
RNF				*e*SG	**Sb**	**00 05 47.8**	**+0.6**
ARA0	**ARCESS Array S**	**2.61**	**46**	Pn	**Pn**	**00 05 12.1**	**+0.4**
	baz=226,slow=14						
ARA0				Sn	**Sn**	**00 05 45.1**	**+1.2**
	baz=236,slow=28						
ARA0	**ARCESS Array S**	**2.61**	**46**	Pn	**Pn**	**00 05 12.1**	**+0.4**
	baz=226,slow=14						
ARA0				IAML		00 05 53.7	
	comp=Z,12nm,0.4s						
ARA0	**ARCESS Array S**	**2.61**	**46**	*e*P	**Pn**	**00 05 12.1**	**+0.4**
ARA0				*e*SB	**Sn**	**00 05 45.7**	**+1.7**
ARCES	**ARCESS Array B**	**2.61**	**46**	Pn	**Pn**	**00 05 12.1**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=233,slow=14,SNR=63						
ARCES				Sn	**Sn**	**00 05 45.1**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=234,slow=24,SNR=13						
	comp=Z,1.9nm,0.2s						
KONS	**Konsvik**	**3.05**	**248**	IAML		00 06 06.7	
	comp=Z,10nm,0.4s						
KEV	**Kevo**	**3.16**	**49**	*e*P	**Pn**	**00 05 19.6**	**+0.4**
KEV	**Kevo**	**3.16**	**49**	*e*P	**Pn**	**00 05 19.5**	**+0.3**
KEV				*e*S	**Sn**	**00 05 58.3**	**+0.8**
KEV				MSG		00 06 00.7	
	comp=Z,8.1nm,0.2s						
VRF	**Varrio**	**3.58**	**87**	*e*P	**Pn**	**00 05 26.0**	**+1.0**
VRF				*e*SB	**Sb**	**00 06 16.6**	**+0.2**
OBF4	**Vikkela, Lumij**	**3.60**	**144**	*e*P	**Pn**	**00 05 28.3**	**+3.1**
OBF0	**Syolatti, Pyha**	**3.71**	**152**	*e*P	**Pn**	**00 05 30.0**	**+3.3**
OLKF	**Oulanka, Finla**	**3.90**	**108**	*e*P	**Pn**	**00 05 30.4**	**+1.0**
OLKF				*e*SG	**Sg**	**00 06 31.6**	**-1.8**
OUF	**Merijarvi**	**3.92**	**150**	*e*P	**Pn**	**00 05 31.5**	**+1.9**
MSF	**Maaselka**	**3.98**	**114**	*e*P	**Pn**	**00 05 32.1**	**+1.7**
	baz=299						
MSF				*e*S	**Sn**	**00 06 20.2**	**+2.4**
KU6	**Riekki**	**4.22**	**111**	*e*P	**Pn**	**00 05 35.1**	**+1.4**
	baz=296						
KU6				*e*SG	**Sg**	**00 06 42.0**	**-1.6**
HUSU	**Husum**	**4.50**	**186**	*e*PG	**Pb**	**00 05 50.0**	**+1.9**
	baz=2.0						
APA0	**Apatity Array**	**4.88**	**86**	Pn	**Pn**	**00 05 42.8**	**0.0**
	baz=276,slow=11						
APA0				Sn	**Sn**	**00 06 39.0**	**-1.0**
	baz=278,slow=22						
APA0				Lg	Lg	00 06 56.2	
	baz=270,slow=18						
APA0	**Apatity Array**	**4.88**	**86**	Pn	**Pn**	**00 05 42.8**	**0.0**
	baz=276,slow=11						
APA0				Sn	**Sn**	**00 06 39.0**	**-1.0**
	baz=278,slow=22						
FIA0	**FINESS Array S**	**6.87**	**156**	Pn	**Pn**	**00 06 11.5**	**+1.5**
	baz=344,slow=10						
FIA0				Sn	**Sn**	**00 07 28.6**	**-0.1**
	baz=345,slow=28						
FIA0				Lg	Lg	00 08 03.6	
	baz=339,slow=37						
FIA0	**FINESS Array S**	**6.87**	**156**	Pn	**Pn**	**00 06 11.5**	**+1.5**
	baz=344,slow=10						
FIA0				Sn	**Sn**	**00 07 28.6**	**-0.1**
	baz=345,slow=28						
FIA0				Sg	**Sg**	**00 08 03.6**	**-5.0**
	baz=339,slow=37						
FINES	**FINESS Array B**	**6.87**	**156**	Pn	**Pn**	**00 06 11.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=1.9						
FINES				Sn	**Sn**	**00 07 28.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=350,slow=23,SNR=5.0						
	comp=Z,1.4nm,0.7s						
NB2	**NORSAR Subarra**	**7.81**	**214**	Pn	**Pn**	**00 06 24.2**	**+1.1**
	baz=19,slow=14						
NB2				Lg	Lg	00 08 33.8	
	baz=18,slow=37						
NB2	**NORSAR Subarra**	**7.81**	**214**	Pn	**Pn**	**00 06 24.2**	**+1.1**
	baz=19,slow=14						
NB2				Sg	**Sg**	**00 08 33.8**	**-5.1**
	baz=18,slow=37						
NOA	**NORSAR Array B**	**7.81**	**214**	Pn	**Pn**	**00 06 24.1**	**+0.9**
	baz=24,slow=11,SNR=6.8						
	comp=Z,0.3nm,0.6s						
NRA0	**NORESS Array S**	**8.02**	**212**	Pn	**Pn**	**00 06 26.1**	**+0.2**
	baz=16,slow=16						
NRA0				Sn	**Sn**	**00 07 56.1**	**-1.1**
	baz=31,slow=28						
NRA0				Lg	Lg	00 08 42.3	
	baz=9.5,slow=28						
NRA0	**NORESS Array S**	**8.02**	**212**	Pn	**Pn**	**00 06 26.1**	**+0.2**
	baz=16,slow=16						
NRA0				Sn	**Sn**	**00 07 56.1**	**-1.1**
	baz=31,slow=28						
NRA0				Sg	**Sg**	**00 08 42.3**	**-3.3**
	baz=9.5,slow=28						
HFS	**Hagfors**	**8.21**	**203**	Pn	**Pn**	**00 06 28.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=21,slow=13,SNR=5.1						
	comp=Z,0.4nm,0.3s						
HFS	**Hagfors**	**8.21**	**203**	Pn	**Pn**	**00 06 28.4**	**0.0**
	baz=8.3,slow=14						
HFS				Sn	**Sn**	**00 08 00.4**	**-1.4**
	baz=21,slow=28						
HFS				Lg	Lg	00 08 46.6	
	baz=30,slow=28						
HFS	**Hagfors**	**8.21**	**203**	Pn	**Pn**	**00 06 28.4**	**0.0**
	baz=8.3,slow=14						
HFS				Sn	**Sn**	**00 08 00.4**	**-1.4**
	baz=21,slow=28						
HFS				Sg	**Sg**	**00 08 46.6**	**-4.9**
	baz=30,slow=28						

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*KRNET **12** 00:07:37.4±0.1, 41˚.20N×73˚.75E, h21km, mb3.2*
*SOME **12** 00:07:37.7, 41˚.25N×73˚.77E, h10km*
*NNC **12** 00:07:39.8±1.1, 41˚.28N×73˚.72E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=10.2km s-min=4.5km az=164.0*
*KNET **12** 00:07:40.6±0.6, 41˚.33N×73˚.72E, h18km±5km, ml2.9, Error ellipse: s-maj=5.2km s-min=3.7km az=59.0*

ISC 12 00:07:36.3±1.2, 41˚.11N±0˚.04×73˚.89E±0˚.03, h3km±11km, n49, σ0s94/83, 32C-20D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**0.81**	**23**	⇑*i*P	**Pg**	**00 07 52.4**	**+0.5**
	baz=34						
ARLS				⇑*i*S	**Sg**	**00 08 03.3**	**+0.9**
	baz=34						
AML	**Almayashu**	**1.03**	**352**	⇓P	**Pg**	**00 07 55.9**	**-0.1**
	56nm,0.2s,SNR=206						
AML				⇑S	**Sg**	**00 08 08.4**	**-0.9**
	386nm,0.3s						
OHH	**Osh**	**1.03**	**235**	⇓*i*P	**Pg**	**00 07 56.1**	**+0.1**
	baz=28						
OHH				⇓*i*S	**Sg**	**00 08 09.7**	**+0.4**
	baz=28						
UCH	**Uchtor**	**1.21**	**22**	⇓P	**Pn**	**00 08 00.6**	**+0.1**
	12nm,0.2s,SNR=9.3						
UCH				⇑S	**Sb**	**00 08 16.5**	**+0.3**
	188nm,0.2s						
UCH	**Uchtor**	**1.21**	**22**	⇑*i*P	**Pg**	**00 07 59.5**	**+0.1**
	baz=29						
UCH				⇑*i*S	**Sg**	**00 08 15.6**	**+0.5**
	baz=29						
EKS2	**Erkin-Say**	**1.55**	**357**	⇓P	**Pn**	**00 08 05.3**	**+0.4**
	22nm,0.1s,SNR=24						
EKS2				⇓S	**Sn**	**00 08 24.3**	**-1.3**
	34nm,0.2s						
EKS2	**Erkin-Say**	**1.55**	**357**	⇑*i*P	**Pn**	**00 08 04.4**	**-0.5**
	baz=1.0						
EKS2				⇑*i*S	**Sn**	**00 08 24.1**	**-1.6**
	baz=1.0						
AAK	**Ala-Archa**	**1.59**	**16**	⇓P	**Pg**	**00 08 07.3**	**+0.6**
	16nm,0.2s,SNR=5.5						
AAK				⇑S	**Sb**	**00 08 27.4**	**+0.5**
	66nm,0.2s						
AAK	**Ala-Archa**	**1.59**	**16**	⇓*i*P	**Pn**	**00 08 05.9**	**+0.4**
	baz=21						
AAK				⇓*i*S	**Sn**	**00 08 26.6**	**0.0**
	baz=21						
MRKS	**Merke**	**1.70**	**343**	P	**Pn**	**00 08 08.1**	**+1.0**
	41nm,0.2s						
KBK	**Karagaybulak**	**1.73**	**27**	⇓P	**Pg**	**00 08 10.5**	**+1.1**
	18nm,0.1s,SNR=9.7						
KBK				⇑S	**Sg**	**00 08 33.3**	**+1.4**
	236nm,0.4s						
KBK	**Karagaybulak**	**1.73**	**27**	⇑*i*P	**Pb**	**00 08 08.8**	**0.0**
	baz=31						
KBK				⇑*i*S	**Sb**	**00 08 31.7**	**+0.6**
	baz=31						
CHMS	**Chumysh**	**1.99**	**18**	⇓P	**Pg**	**00 08 14.4**	**0.0**
	14nm,0.2s,SNR=14						
CHMS				⇑S	**Sg**	**00 08 39.9**	**-0.2**
	39nm,0.2s						
CHMS	**Chumysh**	**1.99**	**18**	⇑Pn	**Pg**	**00 08 14.4**	**0.0**
	8.0nm,0.3s						
CHMS				⇓Sn	**Sb**	**00 08 39.5**	**+1.2**
	53nm,0.5s						
CHMS	**Chumysh**	**1.99**	**18**	⇑*i*P	**Pb**	**00 08 12.6**	**-0.6**
	baz=22						
CHMS				⇑*i*S	**Sb**	**00 08 38.2**	**-0.2**
	baz=22						
BOOM	**Boomskoye usch**	**2.06**	**47**	⇑*i*P	**Pb**	**00 08 14.7**	**+0.3**
	baz=51						
BOOM				⇑*i*S	**Sg**	**00 08 41.8**	**-0.6**
	baz=51						
ULHL	**Ulahol**	**2.09**	**56**	⇓P	**Pg**	**00 08 17.3**	**+1.0**
	8.5nm,0.1s,SNR=24						
ULHL				⇑S	**Sg**	**00 08 45.4**	**+1.9**
	16nm,0.1s						
ULHL	**Ulahol**	**2.09**	**56**	⇓*i*P	**Pb**	**00 08 15.4**	**+0.4**
	baz=60						
ULHL				⇓*i*S	**Sg**	**00 08 43.1**	**-0.4**
	baz=60						
TRKS	**Terek-Say**	**2.12**	**282**	⇑*i*P	**Pn**	**00 08 12.8**	**0.0**
	baz=79						
TRKS				⇑*i*S	**Sn**	**00 08 38.6**	**-1.1**
	baz=79						
USP	**Ospenovka**	**2.20**	**12**	⇓P	**Pb**	**00 08 17.6**	**+0.9**
	35nm,0.3s,SNR=35						
USP				⇑S	**Sb**	**00 08 45.8**	**+1.4**
	57nm,0.2s						
USP	**Ospenovka**	**2.20**	**12**	⇑*i*P	**Pn**	**00 08 15.2**	**+1.4**
	baz=15						
USP				⇑*i*S	**Sn**	**00 08 42.9**	**+1.3**
	baz=15						
TKM2	**Tokmak 2**	**2.21**	**35**	⇑P	**Pg**	**00 08 18.8**	**+0.2**
	15nm,0.3s,SNR=31						
TKM2				⇓S	**Sg**	**00 08 47.6**	**+0.4**
	40nm,0.1s						
TKM2	**Tokmak 2**	**2.21**	**35**	⇓Pn	**Pg**	**00 08 18.8**	**+0.2**
	7.0nm,0.4s						
TKM2				⇑Lg	Lg	00 08 47.2	
	55nm,0.7s						
TKM2	**Tokmak 2**	**2.21**	**35**	⇑*e*P	**Pb**	**00 08 16.3**	**-0.7**
	baz=38						
TKM2				⇑*i*S	**Sb**	**00 08 44.6**	**-0.2**
	baz=38						
SGDS	**Sogindy**	**2.40**	**13**	*e*P	**Pb**	**00 08 20.6**	**+0.4**
	12nm,0.2s						
SGDS				*e*S	**Sb**	**00 08 50.8**	**+0.6**
	31nm,0.1s						
SGDS	**Sogindy**	**2.40**	**13**	Pg	**Pb**	**00 08 21.2**	**+1.0**
	12nm,0.2s						
SGDS				Lg	Lg	00 08 51.7	
	31nm,0.1s						
KST	**Kastek**	**2.47**	**38**	*e*P	**Pg**	**00 08 23.9**	**+0.4**
	13nm,0.2s						
KST				*e*S	**Sg**	**00 08 56.6**	**+1.1**
	64nm,0.4s						
KST	**Kastek**	**2.47**	**38**	Pg	**Pg**	**00 08 23.9**	**+0.4**
	13nm,0.2s						
KST				Lg	Lg	00 08 56.4	
	64nm,0.4s						
MTBS	**Maitube**	**2.76**	**42**	*e*P	**Pg**	**00 08 29.3**	**+0.2**
	18nm,0.1s						
MTBS				*e*S	**Sg**	**00 09 05.7**	**+0.8**
	60nm,0.4s						
MTBS	**Maitube**	**2.76**	**42**	Pg	**Pg**	**00 08 29.3**	**+0.2**
	18nm,0.1s						
MTBS				Lg	Lg	00 09 05.7	
	60nm,0.4s						
KRBS	**Karabastau**	**2.90**	**26**	*e*P	**Pg**	**00 08 30.6**	**-1.2**
	5.4nm,0.1s						
KRBS				*e*S	**Sg**	**00 09 08.1**	**-1.3**
	78nm,0.3s						
KRBS	**Karabastau**	**2.90**	**26**	Pg	**Pg**	**00 08 30.9**	**-0.9**
	5.4nm,0.1s						
KRBS				Lg	Lg	00 09 08.2	
	78nm,0.3s						
IUG	**Iuzhnay**	**3.07**	**291**	*e*P	**Pb**	**00 08 31.9**	**+0.2**
	501nm,0.6s						
IUG				*e*S	**Sb**	**00 09 09.8**	**+0.2**
	133nm,0.5s						
IUG	**Iuzhnay**	**3.07**	**291**	Pg	**Pb**	**00 08 31.8**	**+0.2**
	501nm,0.6s						
IUG				Lg	Lg	00 09 09.9	
	133nm,0.5s						
KNDC	**Almaty**	**3.10**	**46**	⇑Pg	**Pg**	**00 08 34.6**	**-1.1**
	22nm,0.5s						
KNDC				⇑Lg	Lg	00 09 18.3	
	53nm,0.4s						
MDOK	**Medeo**	**3.11**	**48**	⇑Pg	**Pg**	**00 08 34.8**	**-1.1**
	8.5nm,0.5s						
MDOK				⇑Lg	Lg	00 09 17.4	
	30nm,0.6s						
KK31	**Karatay Array**	**3.21**	**309**	Pn	**Pn**	**00 08 28.4**	**+0.8**
	0.5nm,0.5s,baz=132,slow=13,SNR=93						
KK31				⇓Pg	**Pb**	**00 08 33.2**	**-0.7**
	3.3nm,0.3s,baz=127,slow=17,SNR=11						
KK31				⇓Lg	Lg	00 09 14.0	
	18nm,0.5s,baz=125,slow=28,SNR=10						
KUU	**Kurty**	**3.31**	**32**	*e*P	**Pg**	**00 08 38.4**	**-1.4**
	5.5nm,0.3s						
KUU				*e*S	**Sg**	**00 09 21.2**	**-1.5**
	36nm,0.5s						
KUU	**Kurty**	**3.31**	**32**	Pg	**Pg**	**00 08 38.4**	**-1.4**
	5.5nm,0.3s						
KUU				Lg	Lg	00 09 21.1	
	36nm,0.5s						
KTBS	**Karatobe**	**3.32**	**38**	*e*P	**Pg**	**00 08 39.2**	**-0.7**
	3.9nm,0.1s						
KTBS				*e*S	**Sg**	**00 09 22.7**	**-0.1**
	85nm,0.2s						
KTBS	**Karatobe**	**3.32**	**38**	Pg	**Pg**	**00 08 39.1**	**-0.7**
	3.9nm,0.1s						
KTBS				Lg	Lg	00 09 22.4	
	85nm,0.2s						
ARXS	**Arharly**	**4.24**	**42**	*e*P	**Pg**	**00 08 55.3**	**-2.2**
	6.1nm,0.5s						
ARXS				*e*S	**Sg**	**00 09 50.5**	**-2.0**
	38nm,0.5s						
ARXS	**Arharly**	**4.24**	**42**	Pg	**Pg**	**00 08 55.4**	**-2.1**
	6.1nm,0.5s						
ARXS				Lg	Lg	00 09 50.6	
	38nm,0.5s						
UZB	**Uzynbulak**	**4.32**	**60**	*e*P	**Pg**	**00 08 57.7**	**-1.3**
	1.7nm,0.1s						
UZB				*e*S	**Sg**	**00 09 54.6**	**-0.4**
	11nm,0.3s						
UZB	**Uzynbulak**	**4.32**	**60**	Pg	**Pg**	**00 08 57.9**	**-1.2**
	1.7nm,0.1s						
UZB				Lg	Lg	00 09 54.7	
	11nm,0.3s						
KTMS	**Ketmen**	**5.33**	**62**	*e*P

WB0	**Warramunga Arr**	**19.94**	**230**	P	**P**	**00 22 39.1**	**-0.1**
WB0				IAmb	IAmb	00 22 40.8	
	comp=Z,4.9nm,0.8s						
WR0	**Warramunga Arr**	**19.94**	**230**	P	**P**	**00 22 39.4**	**+0.2**
WB2	**Warramunga Arr**	**20.08**	**230**	P	**P**	**00 22 40.6**	**0.0**
WB2				IAmb	IAmb	00 22 45.2	
	comp=Z,6.9nm,1.1s						
WRA	**Warramunga Arr**	**20.09**	**230**	P	**P**	**00 22 40.3**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=55,slow=11,SNR=36						
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**20.09**	**230**	P	**P**	**00 22 40.1**	**-0.7**
DZM	**Mont Dzumac**	**21.17**	**135**	P	**P**	**00 22 53.5**	**+1.0**
DZM				IAmb	IAmb	00 23 13.1	
	comp=Z,7.3nm,0.9s						
PINNC	**Pines Island,**	**22.22**	**135**	P	**P**	**00 23 03.6**	**-0.1**
AS31	**Alice Springs**	**22.76**	**223**	P	**P**	**00 23 09.3**	**-0.2**
ASAR	**Alice Springs**	**22.76**	**223**	P	**P**	**00 23 08.9**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=56,slow=9.9,SNR=19						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**22.76**	**223**	P	**P**	**00 23 09.3**	**-0.2**
KNRA	**Kununurra**	**22.88**	**247**	P	**P**	**00 23 09.6**	**-1.1**
KNRA				IAmb	IAmb	00 23 12.2	
	comp=Z,8.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**26.50**	**244**	P	**P**	**00 23 45.0**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=63,slow=8.2,SNR=16						
	comp=Z,4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.50**	**244**	P	**P**	**00 23 44.7**	**+0.2**
FITZ				IAmb	IAmb	00 23 45.6	
	comp=Z,4.2nm,0.6s						
FORT	**Forrest**	**31.40**	**219**	P	**P**	**00 24 27.4**	**-0.5**
QSPA	**South Pole Qui**	**82.60**	**180**	P	**P**	**00 30 30.3**	**+0.8**
TORD	**Torodi Ar. Bea**	**148.85**	**283**	PKPbc	**PKiKP**	**00 37 55.9**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=79,slow=3.3,SNR=6.4						

DJA ***12*** *00:29:30.7±1.6,1°N±9°×9°7E±°,h17km±15km,M3.8/6, MLv3.8/6*

IDC ***12*** *00:29:31.2±2.3,0°90N×96°82E,h0km,mb3.7/4, mbtmp3.6/5,ML2.7/1,MS3.2/1,Error ellipse: s-maj=53.5km s-min=30.7km az=54.0*

ISC 12 00:29:34.9±1.6,10N±0°1×96°8E±0°1,h25km,n15, σ1§12/10,mb3.8/4,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.82**	**71**	P	**Pb**	**00 29 50.1**	**-0.5**
GSI				S	**Sn**	**00 30 04.3**	**+1.9**
KCSI	**Kotacane, Aceh**	**2.66**	**21**	P	**Pn**	**00 30 15.6**	**-0.7**
KCSI				S	**Sn**	**00 30 46.9**	**-0.9**
PSI	**Prapat**	**2.76**	**50**	Pn	**Pn**	**00 30 17.5**	**-0.2**
	1.3nm,0.3s,baz=211,slow=5.9,SNR=6.4						
	4.6nm,0.4s						
MNSI	**Mandailing Nat**	**2.79**	**95**	P	**Pn**	**00 30 17.4**	**-0.6**
LEM	**Lembang**	**13.32**	**126**	LR	LR	00 38 36.0	
	comp=Z,90nm,18.1s,baz=280,slow=41						
H08S2	**Diego Garcia H**	**25.73**	**250**	T	T	01 01 49.6	
	baz=71,slow=75,SNR=222						
H08S3	**Diego Garcia H**	**25.73**	**250**	T	T	01 01 49.3	
	baz=71,slow=75,SNR=193						
H08S1	**Diego Garcia H**	**25.74**	**250**	T	T	01 01 57.0	
	baz=71,slow=75,SNR=166						
H01W3	**Cape Leeuwin H**	**39.24**	**157**	T	T	01 18 30.2	
	baz=333,slow=76,SNR=75						
H01W2	**Cape Leeuwin H**	**39.25**	**157**	T	T	01 18 31.1	
	baz=333,slow=76,SNR=76						
H01W1	**Cape Leeuwin H**	**39.26**	**157**	T	T	01 18 29.5	
	baz=333,slow=76,SNR=58						
WRA	**Warramunga Arr**	**42.29**	**122**	P	**P**	**00 37 26.1**	**-0.8**
	0.7nm,0.8s,baz=302,slow=9.0,SNR=5.4						
	0.7nm,0.8s						
KSRS	**Korea Array**	**46.22**	**35**	P	**P**	**00 37 58.1**	**+0.1**
	0.5nm,0.3s,baz=223,slow=8.3,SNR=4.1						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**47.31**	**346**	P	**P**	**00 38 07.9**	**+1.4**
	0.6nm,0.8s,baz=134,slow=10,SNR=2.1						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**53.66**	**351**	P	**P**	**00 38 55.1**	**+0.8**
	0.8nm,0.5s,baz=165,slow=6.2,SNR=6.2						
	0.8nm,0.5s						

HLW ***12*** *00:44:60.0,28°98N×34°93E,h16km±1km,Md3.5*

GII ***12*** *00:45:01.6±0.0,29°15N×34°83E,h1km,MD2.9/4,Mm2.6/3*

ISC 12 00:45:01.0±1.3,29°03N±0°05×34°80E±0°08,h18km±6km, n24,σ1§01/33,Egypt

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUB	**Nuweibaa**	**0.14**	**268**	P	**Pg**	**00 45 05.4**	**+0.4**
	baz=273						
HBST	**Basata**	**0.19**	**341**	P	**Pg**	**00 45 05.9**	**+0.1**
	baz=324						
HDHB	**Dhahab**	**0.35**	**208**	P	**Pg**	**00 45 08.6**	**+0.3**
	baz=228						
EIL	**Elat**	**0.65**	**12**	Pg	**Pb**	**00 45 13.2**	**-0.6**
EIL				Sg	**Sb**	**00 45 22.2**	**-0.3**
MBRI	**Mt Berech**	**0.76**	**7**	Pg	**Pg**	**00 45 15.3**	**-0.7**
MBRI				Sg	**Sb**	**00 45 26.4**	**+0.4**
HKAT	**Jabal Katrina**	**0.87**	**235**	P	**Pg**	**00 45 17.5**	**-0.5**
	baz=242						
HKAT				S	**Sg**	**00 45 30.0**	**+0.3**
	baz=242						
HRFI	**Mount Harif**	**1.02**	**11**	Pg	**Pg**	**00 45 19.3**	**-1.5**
HRFI				Sg	**Sb**	**00 45 33.5**	**+0.2**
KRMI	**Paran Flat**	**1.08**	**356**	Pg	**Pg**	**00 45 20.7**	**-1.3**
KRMI				Sg	**Sg**	**00 45 35.1**	**-1.1**
TR2	**Tor 2**	**1.15**	**236**	P	**Pb**	**00 45 21.9**	**-0.5**
	baz=242						
PRNI	**Paran**	**1.33**	**8**	Pg	**Pb**	**00 45 25.2**	**-0.2**
PRNI				Sg	**Sn**	**00 45 42.9**	**+1.0**
HRDS	**Abu Rudays**	**1.36**	**257**	P	**Pn**	**00 45 25.4**	**+0.3**
	baz=260						
ZFRI	**Zfri**	**1.55**	**12**	Pn	**Pb**	**00 45 28.9**	**-0.3**
ZFRI				Sn	**Sg**	**00 45 50.3**	**-0.8**
KZIT	**Kziot**	**1.90**	**349**	Pn	**Pn**	**00 45 34.0**	**+1.5**
KZIT				Sn	**Sb**	**00 45 59.7**	**+1.1**
GRB	**Gharib**	**1.93**	**247**	P	**Pn**	**00 45 32.0**	**-0.9**
	baz=251						
ZAF	**Zafarana**	**1.99**	**278**	P	**Pn**	**00 45 34.5**	**+0.8**
	baz=279						
HHRG	**Al Ghardaqah**	**2.11**	**211**	P	**Pn**	**00 45 35.5**	**+0.1**
	baz=212						
HHRG				S	**Sn**	**00 46 01.6**	**+0.3**
	baz=212						
YTIR	**Yattir**	**2.34**	**7**	Pn	**Pn**	**00 45 40.2**	**+1.6**
GHAJ	**Ghor Haditha**	**2.36**	**16**	Pn	**Pb**	**00 45 41.1**	**-1.8**
AMAZ	**Amatzia**	**2.49**	**2**	Pn	**Pn**	**00 45 42.3**	**+1.6**
DSI	**Dead Sea**	**2.58**	**11**	Pn	**Pn**	**00 45 43.8**	**+1.9**
NBNS	**Bani Suef**	**3.10**	**263**	P	**Pn**	**00 45 49.9**	**+0.7**
	baz=265						
ASUT		**3.29**	**241**	P	**Pn**	**00 45 51.8**	**+0.1**
	baz=243						
MMLI	**Mount Malkishu**	**3.44**	**9**	Pn	**Pn**	**00 45 55.4**	**+1.7**
RYAN	**Fayoum**	**3.96**	**272**	P	**Pn**	**00 46 01.2**	**+0.3**
	baz=273						

IDC ***12*** *00:46:22.0±0.5,34°33N×86°27E,h0km,mb4.5/25, mbtmp4.5/30,ML4.0/5,MS3.9/33,Error ellipse: s-maj=14.6km s-min=11.2km az=27.0*

BJI ***12*** *00:46:22.2±0.0,34°28N×86°35E,h5km,mb4.5/60, mB4.9/43,Ms4.7/62,Ms7 4.5/57*

NEIC ***12*** *00:46:24.1±1.5,34°41N±0°08×86°29E±0°02,h10km±1km, mb4.7/136,Error ellipse: s-maj=13.0km s-min=3.1km az=10.0*

MOS ***12*** *00:46:25.3±1.3,34°48N×86°23E,h30km,mb4.9/46, MS4.1/18,Error ellipse: s-maj=6.1km s-min=3.3km az=120.3*

NDI ***12*** *00:46:28.7±6.0,34°39N×86°27E,h10km±52km,MS4.4, mb4.7(NEIC)*

GCMT ***12*** *00:46:29.1±0.3,34°36N±0°03×86°23E±0°02,h18km±1km, MW4.9/67,Moment Tensor Solution. s24,c31; s67,c115; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.33±.18; Mθθ-0.60±.11; Mφφ1.93±.12; Mrθ0.22±.34; Mθφ1.45±.07; Mφr1.60±.30; Best double couple: M0 2.61400×10^16 NP1:φs182.00000°,δ69.00000°,λ-117.00000°. NP2: φs57.00000°,δ34.00000°,λ-40.00000°. Principal axes: T 3.1330, Plg19.0000°, Azm292.0000°; N -1.0340, Plg25.0000°, Azm193.0000°; P -2.0950, Plg57.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 00:46:24.4±0.3,34°41N±0°04×86°13E±0°03,h10km,n409, σ1§69/388,mb4.7/122,MS4.1/57,38C-21D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.34**	**136**	Pn	Pn	00 47 54.7	-3.6
LSA				Pg	**Pb**	**00 48 19.6**	**+4.5**
LSA	**Lhasa**	**6.34**	**136**	P	Pn	00 48 04.2	+5.9
LSA				S	**Sb**	**00 49 37.6**	**+6.4**
LSA				LR	LR		
	comp=N,3μm,8.6s						
LSA				LR	LR		
	comp=E,4μm,7.7s						
LSA				LR	LR		
	comp=Z,2μm,8.4s						
DANN	**Dangsing**	**6.37**	**199**	*e*P	**Pn**	**00 48 00.4**	**+1.8**
	comp=Z,78nm,0.5s						
GUN	**Gumba**	**6.48**	**182**	*e*P	**Pn**	**00 48 01.9**	**+1.7**
	comp=Z,76nm,0.5s						
GKN	**Gorkha**	**6.51**	**192**	*e*P	**Pn**	**00 48 02.2**	**+1.8**
	comp=Z,33nm,0.5s						
KKN	**Kakani**	**6.64**	**187**	*e*P	**Pn**	**00 48 04.6**	**+2.4**
	comp=Z,28nm,0.6s						
JIRN	**Jiri**	**6.73**	**180**	*e*P	**Pn**	**00 48 05.2**	**+1.6**
	comp=Z,65nm,0.4s						
DMN	**Daman**	**6.83**	**188**	*e*P	**Pn**	**00 48 07.0**	**+2.1**
	comp=Z,68nm,0.5s						
PKIN	**Phulchoki**	**6.84**	**185**	*e*P	**Pn**	**00 48 07.2**	**+2.2**
	comp=Z,79nm,0.6s						
PKI	**Pulchoki**	**6.84**	**185**	*e*P	**Pn**	**00 48 07.4**	**+2.3**
	comp=Z,28nm,0.4s						
TAPN	**Taplejung**	**7.17**	**169**	*e*P	**Pn**	**00 48 10.2**	**+0.7**
	comp=Z,27nm,0.3s						
GOMU	**GeÉrMu**	**7.32**	**73**	P	**Pn**	**00 48 14.5**	**+2.8**
GOMU				pP	Pb	00 48 18.3	-13
GOMU				sP	Pg	00 48 20.4	-24
GOMU				S	**Sn**	**00 49 43.4**	**+8.3**
GOMU				pmax	pmax		
	comp=Z,17nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,110nm,4.1s						
GOMU				LR	LR		
	comp=N,3μm,6.1s						
GOMU				LR	LR		
	comp=E,2μm,7.2s						
GOMU				LR	LR		
	comp=Z,4μm,9.3s						
RAMN	**Ramite**	**7.45**	**177**	*e*P	**Pn**	**00 48 14.9**	**+1.6**
	comp=Z,34nm,0.4s						
ODAN	**Odare**	**7.60**	**171**	*e*P	**Pn**	**00 48 16.3**	**+0.9**
WMQ	**Urumqi**	**9.48**	**7**	*e*P	**Pn**	**00 48 43.3**	**+2.3**
WMQ				smax	smax		
	comp=Z,19nm,1.1s						
WMQ				smax	smax		
	comp=Z,15nm,1.1s						
WMQ				LR	LR		
	comp=Z,910nm,9.5s						
WMQ				LR	LR		
	comp=Z,930nm,8.7s						
WMQ				LR	LR		
	comp=Z,340nm,11.9s						
KSH	**Kashi**	**9.59**	**305**	P	**Pn**	**00 48 46.3**	**+3.7**
KSH				S	**Sn**	**00 50 38.0**	**+7.5**
KSH				pmax	pmax		
	comp=Z,17nm,1.5s						
KSH				LR	LR		
	comp=Z,2μm,6.4s						
KSH				LR	LR		
	comp=Z,2μm,7.9s						
KSH				LR	LR		
	comp=Z,2μm,6.5s						
PRZ	**Przheval'sk**	**10.08**	**325**	Pn	**Pn**	**00 48 49.9**	**+0.5**
PRZ	**Przheval'sk**	**10.08**	**325**	P	**Pn**	**00 48 49.9**	**+0.5**
SHLS	**Shalkode**	**10.16**	**331**	*e*P	Pn	00 48 49.3	-1.1
SHLS	**Shalkode**	**10.16**	**331**	*e*P	Pn	00 48 49.4	-1.1
	baz=332						
UZB	**Uzunbulak**	**10.33**	**330**	*e*P	**Pn**	**00 48 53.2**	**+0.4**
UZB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
UZB	**Uzunbulak**	**10.33**	**330**	*e*P	**Pn**	**00 48 53.2**	**+0.4**
	comp=Z,5.6nm,1.3s,baz=329						
SATY	**Saty**	**10.53**	**327**	*e*P	**Pn**	**00 48 56.2**	**+0.8**
SATY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SATY	**Saty**	**10.53**	**327**	*e*P	**Pn**	**00 48 56.2**	**+0.8**
	comp=Z,7.6nm,1.1s,baz=327						
ZHN	**Zhinishke**	**10.60**	**328**	*e*P	**Pn**	**00 48 56.8**	**+0.4**
ZHN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZHN	**Zhinishke**	**10.60**	**328**	*e*P	**Pn**	**00 48 56.8**	**+0.4**
	comp=Z,5.9nm,1.0s,baz=327						
NRN	**Naryn**	**10.63**	**314**		**Pn**	**00 48 57.6**	**+0.6**
NRN	**Naryn**	**10.63**	**314**	P	**Pn**	**00 48 57.6**	**+0.6**
NIL	**Nilore**	**10.71**	**270**	Pn	**Pn**	**00 48 58.9**	**+1.0**
NIL	**Nilore**	**10.71**	**270**	P	**Pn**	**00 48 58.9**	**+1.0**
ULHL	**Ulahol**	**11.02**	**318**	P	**Pn**	**00 49 04.0**	**+1.8**
	SNR=8.4						
MDOK	**Medeo**	**11.24**	**324**	*e*P	**Pn**	**00 49 05.9**	**+0.7**
MDOK	**Medeo**	**11.24**	**324**	*e*P	**Pn**	**00 49 06.0**	**+0.7**
	baz=323						
ARXS	**Arharly**	**11.71**	**329**	*e*P	**Pn**	**00 49 11.6**	**+0.1**
TKM2	**Tokmak 2**	**11.82**	**319**	P	**Pn**	**00 49 14.3**	**+1.1**
	SNR=11						
TKM2	**Tokmak 2**	**11.82**	**319**	P	**Pn**	**00 49 13.8**	**+0.6**
KBK	**Karagaybulak**	**12.01**	**317**	P	**Pn**	**00 49 17.9**	**+2.1**
	SNR=6.3						
GTA	**Gaotai**	**12.04**	**62**	⇓P	**Pn**	**00 49 14.9**	**-1.1**
GTA				pP		00 49 24.9	
GTA				S	**Sn**	**00 51 31.9**	**+1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,160nm,6.6s						
GTA				LR	LR		
	comp=Z,1μm,9.5s						
GTA				LR	LR		
	comp=Z,740nm,9.5s						
GTA				LR	LR		
	comp=Z,1μm,8.7s						
TDK	**Taldyqorghan**	**12.13**	**333**	*e*P	**Pn**	**00 49 17.9**	**+0.7**
TDK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TDK	**Taldyqorghan**	**12.13**	**333**	*e*P	**Pn**	**00 49 17.9**	**+0.7**
	comp=Z,6.7nm,0.6s,baz=332						
KUU	**Kurty**	**12.13**	**324**	*e*P	**Pn**	**00 49 17.0**	**-0.2**
KUU	**Kurty**	**12.13**	**324**	*e*P	**Pn**	**00 49 17.1**	**-0.2**
	baz=324						
AAK	**Ala-Archa**	**12.26**	**315**	Pn	**Pn**	**00 49 20.6**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=140,slow=13,SNR=9.2						
AAK				LR	LR	00 53 55.0	
	comp=Z,117nm,20.0s,baz=127,slow=36						
	comp=Z,8.7nm,1.0s						
AAK	**Ala-Archa**	**12.26**	**315**	Pn	**Pn**	**00 49 19.0**	**-0.1**
AAK	**Ala-Archa**	**12.26**	**315**	*e*P	**Pn**	**00 49 20.9**	**+1.8**
AAK				pmax	pmax		
	comp=Z,13nm,1.3s						
AML	**Almayashu**	**12.44**	**312**	P	**Pn**	**00 49 24.0**	**+2.3**
	SNR=28						
EKS2	**Erkin-Say**	**12.69**	**314**	P	**Pn**	**00 49 27.1**	**+2.1**
	SNR=13						
SGDS	**Sogindy**	**12.70**	**319**	*e*P	**Pn**	**00 49 24.9**	**-0.2**
SGDS	**Sogindy**	**12.70**	**319**	*e*P	**Pn**	**00 49 25.0**	**-0.2**
	baz=318						
MK31	**Makanchi Array**	**12.71**	**348**	Pn	**Pn**	**00 49 24.9**	**-0.2**
MK31	**Makanchi Array**	**12.71**	**348**	*d*P	**Pn**	**00 49 25.3**	**+0.2**
MKAR	**Makanchi Array**	**12.71**	**348**	Pn	**Pn**	**00 49 25.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=156,slow=14,SNR=39						
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	**12.71**	**348**	Pn	**Pn**	**00 49 25.3**	**+0.2**
MKAR	**Makanchi Array**	**12.71**	**348**	P	**Pn**	**00 49 25.3**	**+0.2**
MAKZ	**Makanchi**	**12.78**	**347**		**Pn**	**00 49 25.8**	**-0.3**
MAKZ	**Makanchi**	**12.78**	**347**	P	**Pn**	**00 49 25.8**	**-0.3**
ZSN	**Zaisan**	**13.06**	**356**	*e*P	**Pn**	**00 49 29.1**	**-0.8**
ZSN	**Zaisan**	**13.06**	**356**	*e*P	**Pn**	**00 49 29.2**	**-0.8**
	baz=356						
GAR	**Garm**	**13.49**	**294**	Pn	Pn	00 49 34.8	-1.1
KBL	**Kabul**	**14.10**	**275**	Pn	Pn	00 49 42.5	-1.8
KBL	**Kabul**	**14.10**	**275**	P	Pn	00 49 42.5	-1.8
CHGR	**Chuyangaron**	**14.29**	**292**		Pn	00 49 44.6	-2.2
CHGR	**Chuyangaron**	**14.29**	**292**	P	Pn	00 49 44.6	-2.2
DZA	**Taraz**	**14.32**	**311**	*e*P	**Pn**	**00 49 48.4**	**+1.3**
DZA	**Taraz**	**14.32**	**311**	*e*P	**Pn**	**00 49 48.4**	**+1.3**
	baz=310						
LZH	**Lanzhou**	**14.57**	**78**	⇑P	**Pn**	**00 49 49.8**	**-1.0**
LZH				pP	P	00 49 55.0	-2.4
LZH				sP		00 49 59.1	
LZH				S	**Sn**	**00 52 34.7**	**+2.2**
LZH				SS	**SnSn**	**00 52 50.2**	**+5.3**
LZH				pmax	pmax		
	comp=Z,40nm,1.2s						
LZH				pmax	pmax		
	comp=Z,320nm,8.4s						
LZH				LR	LR		
	comp=Z,5μm,13.3s						
LZH				LR	LR		
	comp=Z,2μm,12.9s						
LZH				LR	LR		
	comp=Z,2μm,17.0s						
IUG	**Iuzhnay**	**14.80**	**306**	*e*P	Pn	00 49 52.8	-1.0
IUG	**Iuzhnay**	**14.80**	**306**	*e*P	Pn	00 49 52.9	-1.0
	baz=306						
KK31	**Karatay Array**	**14.94**	**310**		**Pn**	**00 49 54.3**	**-1.3**
KK31	**Karatay Array**	**14.94**	**310**	*i* P	**Pn**	**00 49 58.0**	**+2.4**
KKAR	**Karatay Array**	**14.94**	**310**	Pn	**Pn**	**00 49 54.5**	**-1.1**
KKAR	**Karatay Array**	**14.94**	**310**		**Pn**	**00 49 54.1**	**-1.6**
KKAR				IAmb	IAmb	00 50 27.3	
	comp=Z,6.3nm,1.0s						
KKAR	**Karatay Array**	**14.94**	**310**	P	**Pn**	**00 49 54.5**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TAS	**Tashkent**	**14.97**	**302**	Pn	**Pn**	**00 49 55.4**	**-0.6**
TAS	**Tashkent**	**14.97**	**302**	P	**Pn**	**00 49 55.4**	**-0.6**
TAS				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2	**Chengdu**	**15.25**	**98**	P	**Pn**	**00 49 58.1**	**-1.7**
CD2				S	**Sn**	**00 52 47.7**	**-1.2**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,370nm,5.5s						
CD2				LR	LR		
	comp=Z,2μm,7.6s						
CD2				LR	LR		
	comp=Z,3μm,8.8s						
CD2				LR	LR		
	comp=Z,2μm,7.5s						
PZH	**PanZhiHua**	**15.59**	**116**	P	**Pn**	**00 50 03.6**	**-0.7**
PZH				S	**Sn**	**00 52 51.0**	**-6.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,220nm,5.6s						
PZH				LR	LR		
	comp=Z,800nm,9.2s						
PZH				LR	LR		
	comp=Z,640nm,9.4s						
PZH				LR	LR		
	comp=Z,850nm,8.2s						
SEM	**Semipalatinsk**	**16.56**	**347**	*e*P	**Pn**	**00 50 15.9**	**-0.8**
SEM	**Semipalatinsk**	**16.56**	**347**	*e*P	**Pn**	**00 50 16.0**	**-0.8**
	baz=346						
KMI	**Kunming**	**17.12**	**118**	⇑P	**Pn**	**00 50 22.7**	**-1.3**
KMI				pP	P	00 50 24.3	-1.4
KMI				S	**Sn**	**00 53 33.0**	**-1.5**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,240nm,3.5s						
KMI				LR	LR		
	comp=Z,700nm,9.2s						
KMI				LR	LR		
	comp=Z,730nm,8.7s						
KMI				LR	LR		
	comp=Z,860nm,19.1s						
KURBB	**Kurchatov Arra**	**17.13**	**343**	P	**Pn**	**00 50 23.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=157,slow=11,SNR=52						
	comp=Z,36nm,0.9s						
KURBB	**Kurchatov Arra**	**17.13**	**343**	P	**Pn**	**00 50 24.2**	**+0.5**
KURK	**Kurchatov**	**17.19**	**344**	Pn	**Pn**	**00 50 23.2**	**-1.3**
KURK				IAmb	IAmb	00 50 29.3	
	comp=Z,60nm,1.0s						
KURK	**Kurchatov**	**17.19**	**344**	*de*P	**Pn**	**00 50 23.3**	**-1.2**
KURK				pmax	pmax		
	comp=Z,112nm,1.7s						
KNGR	**Kungurtug, Tuv**	**18.20**	**24**	*ce*P	**Pn**	**00 50 39.1**	**+2.0**
KNGR				pmax	pmax		
	comp=Z,90nm,0.9s						
HYBB	**Hyderabad (bro**	**18.23**	**204**	*e*P	**Pn**	**00 50 37.9**	**+0.3**
BRZS	**Berezniki**	**18.43**	**332**	*e*P	**P**	**00 50 40.4**	**+0.6**
BRZS	**Berezniki**	**18.43**	**332**	*e*P	**P**	**00 50 40.4**	**+0.6**
	baz=331						
XAN	**Xi'an**	**18.85**	**85**	⇑P	**P**	**00 50 42.6**	**-2.0**
XAN				pP	Pn	00 50 46.3	+1.2
XAN				S	**Sn**	**00 54 11.9**	**-4.2**
XAN				sS	S	00 54 18.6	-0.4
XAN				SS	**SnSn**	**00 54 36.6**	**+6.7**
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN				pmax	pmax		
	comp=Z,430nm,6.0s						
XAN				LR	LR		
	comp=Z,990nm,6.4s						
XAN				LR	LR		
	comp=Z,750nm,7.2s						
XAN				LR	LR		
	comp=Z,860nm,8.1s						
CRAI	**Chiangrai**	**18.93**	**135**	P	**P**	**00 50 44.6**	**-0.9**
CHTO	**Chiang Mai**	**19.27**	**140**	P	**P**	**00 50 48.8**	**-0.4**
CHTO	**Chiang Mai**	**19.27**	**140**	P	**P**	**00 50 48.8**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,27nm,1.4s						
GYA	**Guiyang**	**19.38**	**109**	⇑P	**P**	**00 50 49.7**	**-0.8**
GYA				pmax	pmax		
	comp=Z,25nm,1.3s						
GYA				pmax	pmax		
	comp=Z,460nm,4.6s						
GYA				LR	LR		
	comp=Z,760nm,7.3s						
GYA				LR	LR		
	comp=Z,750nm,9.6s						
GYA				LR	LR		
	comp=Z,710nm,11.4s						
ZAA0	**Zalesovo Array**	**19.56**	**358**	P	**P**	**00 50 52.0**	**-0.1**
ZAA0				IAmb	IAmb	00 50 53.5	
	comp=Z,45nm,1.2s						
ZALV	**Zalesovo Beam**	**19.56**	**358**	P	**P**	**00 50 52.0**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=178,slow=11,SNR=78						
ZALV				LR	LR	00 59 09.2	
	comp=Z,468nm,18.5s,baz=184,slow=39						
	comp=Z,21nm,0.8s						
ZALV	**Zalesovo Beam**	**19.56**	**358**	P	**P**	**00 50 52.0**	**-0.1**
CM31	**Chiang Mai Arr**	**19.57**	**141**	P	**P**	**00 50 52.0**	**-0.5**
CM31				IAmb	IAmb	00 50 57.7	
	comp=Z,54nm,1.2s						
CMAR	**Chiang Mai Arr**	**19.57**	**141**	P	**P**	**00 50 51.7**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=321,slow=9.5,SNR=18						
CMAR				LR	LR	00 59 22.0	
	comp=Z,265nm,19.6s,baz=325,slow=40						
	comp=Z,6.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**19.57**	**141**	P	**P**	**00 50 52.3**	**-0.1**
CMAR	**

TIY LR LR
comp=Z,560nm,10.2s
TIY LR LR
comp=Z,780nm,9.8s
LYN LuoYang 21.70 82⇓*e*P P 00 51 13.6 -1.8
LYN pP pP 00 51 17.8 -2.0
LYN sP sP 00 51 22.7 +0.9
LYN S **S 00 55 14.8 -0.8**
LYN pmax pmax
comp=Z,210nm,6.1s
LYN LR LR
comp=Z,770nm,22.2s
LYN LR LR
comp=Z,400nm,13.9s
LYN LR LR
comp=Z,520nm,10.9s
BVA0 Borovoye Array 21.72 334 *i* P **P 00 51 16.6 +1.0**
BRVK Borovoye 21.79 334 P **P 00 51 16.2 0.0**
BRVK IAmb IAmb 00 51 26.3
comp=Z,22nm,0.9s
BRVK Borovoye 21.79 334*ce*P **P 00 51 17.7 +1.5**
BRVK pmax pmax
comp=Z,16nm,1.3s
IRK Irkutsk 22.07 31 *e*P **P 00 51 20.5 +1.2**
IRK pmax pmax
comp=Z,246nm,1.4s
GEYT Alibeck 22.85 287 P **P 00 51 28.4 +0.6**
comp=Z,5.5nm,0.7s,baz=194,slow=11,SNR=15
GEYT LR LR 01 02 20.8
comp=Z,1µm,20.0s,baz=102,slow=42
comp=Z,5.5nm,0.7s
GEYT Alibeck 22.85 287 P **P 00 51 28.1 +0.3**
GEYT IAmb IAmb 00 51 37.1
comp=Z,23nm,1.0s
GYA0 ALIBECK ARRAY 22.85 287 P **P 00 51 28.7 +0.9**
GYA0B ALIBECK ARRAY 22.85 287 P **P 00 51 27.4 -0.4**
GYA0B IAmb IAmb 00 51 37.1
comp=Z,20nm,0.9s
HNS HongShan 23.30 74 ⇓P **P 00 51 31.5 -0.9**
HNS S **S 00 55 44.3 -0.6**
HNS pmax pmax
comp=Z,67nm,1.3s
HNS pmax pmax
comp=Z,280nm,4.9s
HNS LR LR
comp=Z,380nm,10.4s
HNS LR LR
comp=Z,850nm,11.8s
HNS LR LR
comp=Z,750nm,11.6s
CNSH ChangSha 23.69 98 ⇑P **P 00 51 33.3 -3.0**
CNSH S **S 00 55 48.4 -2.9**
CNSH pmax pmax
comp=Z,42nm,1.1s
CNSH LR LR
comp=Z,940nm,9.9s
CNSH LR LR
comp=Z,620nm,10.8s
CNSH LR LR
comp=Z,780nm,14.4s
WHN Wuhan 24.08 91 ⇑P **P 00 51 39.4 -0.6**
WHN sP **pP 00 51 46.1 +1.5**
AB31 Akbulak array 24.35 315 *i* P **P 00 51 43.1 +0.8**
ABKAR Akbulak array 24.35 315 P **P 00 51 42.8 +0.5**
ABKAR Akbulak array 24.35 315 P **P 00 51 42.6 +0.3**
ABKAR IAmb IAmb 00 51 46.9
comp=Z,12nm,1.0s
BJT Baijiatuau 24.50 68 P **P 00 51 42.4 -1.4**
BJT Baijiatuau 24.50 68 P **P 00 51 42.4 -1.4**
BJT pmax pmax
comp=Z,8.0nm,0.8s
BJI Beijing 24.51 68 P **P 00 51 43.9 +0.1**
BJI S **S 00 56 06.8 +2.6**
BJI pmax pmax
comp=Z,11nm,0.8s
BJI pmax pmax
comp=Z,170nm,5.5s
BJI LR LR
comp=Z,260nm,12.4s
BJI LR LR
comp=Z,370nm,16.1s
BJI LR LR
comp=Z,1µm,13.3s
XLT XiLinHaoTe 24.97 59 *e*P **P 00 51 48.4 +0.3**
XLT pP pP 00 51 53.8 +1.1
XLT PP **PnPn 00 52 20.6 -0.4**
XLT S **S 00 56 17.4 +5.6**
XLT pmax pmax
comp=Z,27nm,0.8s
XLT pmax pmax
comp=Z,180nm,6.1s
XLT LR LR
comp=Z,1µm,10.5s
XLT LR LR
comp=Z,1µm,10.8s
TIA Tai'an 25.31 77 ⇓P **P 00 51 50.3 -0.8**
TIA pmax pmax
comp=Z,51nm,1.2s
TIA pmax pmax
comp=Z,140nm,3.8s
TIA LR LR
comp=Z,800nm,10.3s
TIA LR LR
comp=Z,570nm,12.3s
TIA LR LR
comp=Z,530nm,10.8s
UBPT Khong Chiam 25.81 133 P **P 00 51 53.6 -2.2**
AKTO Aktyubinsk 26.00 317 P **P 00 51 58.1 +0.9**
comp=Z,13nm,0.9s,baz=119,slow=9.9,SNR=21
comp=Z,13nm,0.9s
WSAR Wadi Sarin 26.46 252 LR LR 01 03 53.7
comp=Z,207nm,20.1s,baz=98,slow=40
NJ2 Nanjing 27.41 86 *e*P **P 00 52 09.6 -0.6**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 LR LR
comp=Z,1µm,17.1s
NJ2 LR LR
comp=Z,410nm,16.9s
NJ2 LR LR
comp=Z,430nm,12.4s
PALK Pallekele 27.46 192 LR LR 01 03 34.6
comp=Z,196nm,19.4s,baz=129,slow=38
HIA Hailar 28.83 49 P **P 00 52 21.1 -1.6**
HIA IAmb IAmb 00 52 24.4
comp=Z,9.5nm,0.5s
HIA Hailar 28.83 49 P **P 00 52 21.1 -1.6**
HIA pmax pmax
comp=Z,9.0nm,0.5s
ARU Arti 28.97 328 P **P 00 52 24.0 +0.2**
comp=Z,0.8nm,0.3s,baz=122,slow=15,SNR=2.8
ARU LR LR 01 05 18.6
comp=Z,256nm,19.9s,baz=144,slow=39
comp=Z,0.8nm,0.3s
ARU Arti 28.97 328*d* *i*P **P 00 52 23.8 0.0**
ARU 00 53 11.5
ARU S **S 00 57 15.6 +1.2**
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARU MLR MLR
comp=Z,300nm,16.0s
MAK Makhachkala 31.11 298 *e*P P 00 52 39.0 -3.9
MAK *e*S **S 00 57 43.6 -4.8**
MAK pmax pmax
comp=Z,152nm,1.3s
MAK MLR MLR
comp=Z,290nm,12.0s
CN2 Changchun 31.67 61 *e*P **P 00 52 46.0 -1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,400nm,13.0s
CN2 LR LR
comp=Z,1µm,13.0s
CN2 LR LR
comp=Z,2µm,14.4s
NACB Ninganchiao 32.42 99 P P 00 52 52.1 -2.5
BELG Belogornoye 32.75 315*c* *i*P **P 00 52 57.6 +0.4**
BELG pmax pmax
comp=Z,5.0nm,0.9s
INCN Inchon 32.76 73 P **P 00 52 55.8 -1.7**
INCN Inchon 32.76 73 P **P 00 52 55.8 -1.7**
INCN pmax pmax
comp=Z,49nm,1.0s

GNI Garni 33.20 292 LR LR 01 09 00.1
comp=Z,160nm,20.9s,baz=100,slow=41
BNX BinXian 33.21 58 ⇑P **P 00 53 01.2 -0.1**
BNX pmax pmax
comp=Z,19nm,1.0s
BNX pmax pmax
comp=Z,77nm,4.9s
TJN Taejon 33.49 75 P **P 00 53 01.8 -2.0**
TJN Taejon 33.49 75*d* *i*P **P 00 53 01.9 -2.0**
PSI Prapat 33.63 156 P **P 00 53 04.2 -1.1**
PSI pmax pmax
comp=Z,10.0nm,1.1s
NAWB Namwon 33.68 76 P P 00 53 02.2 -3.3
NAWB IAmb IAmb 00 53 04.4
comp=Z,17nm,1.2s
KS19 Wonju Array Si 33.73 72 P **P 00 53 04.3 -1.7**
KS19 IAmb IAmb 00 53 06.2
comp=Z,12nm,0.8s
RPSI Rantau Prapat 33.73 157 P **P 00 53 04.2 -1.9**
RPSI IAmb IAmb 00 53 07.3
comp=Z,9.9nm,1.1s
KSAR Wonju Array Be 33.75 73 P **P 00 53 04.7 -1.4**
KSAR Wonju Array Be 33.75 73 P **P 00 53 04.7 -1.4**
KSRS Korea Array 33.78 73 P **P 00 53 04.4 -2.0**
comp=Z,8.0nm,0.8s,baz=272,slow=8.7,SNR=41
KSRS LR LR 01 07 39.1
comp=Z,123nm,21.5s,baz=280,slow=38
comp=Z,8.0nm,0.8s
KSCHJ Chungju 33.90 74 P P 00 53 05.4 -2.0
KSCHJ IAmb IAmb 00 53 06.4
comp=Z,6.5nm,0.7s
SEHB SEOHWA 33.94 71 P **P 00 53 06.2 -1.6**
ONI Oni 34.09 297 P **P 00 53 08.4 -0.7**
ONI IAmb IAmb 00 53 14.9
comp=Z,12nm,1.0s
ONI Oni 34.09 297 P **P 00 53 08.4 -0.7**
ONI pmax pmax
comp=Z,12nm,1.0s
KIRV Kirov 34.28 326 LR LR 01 08 33.6
comp=Z,201nm,19.7s,baz=125,slow=39
KIRV Kirov 34.28 326*d* *i*P **P 00 53 10.7 +0.3**
KARS Kars 34.44 293 P **P 00 53 12.8 +0.5**
KARS Kars 34.44 293 P **P 00 53 12.8 +0.5**
KARS pmax pmax
comp=Z,45nm,1.4s
KIV Kislovodsk 34.65 299 P **P 00 53 13.2 -0.8**
KIV Kislovodsk 34.65 299 *e*P **P 00 53 14.5 +0.5**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,87nm,16.0s
ZEA Zeya 34.66 43 *e*P **P 00 53 14.4 +0.6**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,400nm,10.0s
ZEA MLR MLR
comp=N,100nm,9.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
MDJ Mudanjiang 34.68 60 P **P 00 53 12.4 -1.7**
MDJ IAmb IAmb 00 53 14.8
comp=Z,11nm,0.7s
NRIK Noril'sk 34.99 1 P **P 00 53 17.1 +0.6**
comp=Z,54nm,0.8s,baz=164,slow=7.4,SNR=77
NRIK LR LR 01 09 04.2
comp=Z,560nm,18.1s,baz=185,slow=39
comp=Z,54nm,0.8s
NRIK Noril'sk 34.99 1*d* *i*P **P 00 53 16.8 +0.3**
NRIK Noril'sk 34.99 1*d* *i*P **P 00 53 16.8 +0.3**
NRIK pmax pmax
comp=Z,67nm,0.9s
JTU Tsushima 35.47 77 P P 00 53 18.8 -2.2
JTU IAmb IAmb 00 53 20.6
comp=Z,20nm,1.1s
VRH Novokhopyorsk 36.02 312 *e*P **P 00 53 26.4 +0.9**
VRH pmax pmax
comp=Z,10.0nm,1.2s
USA0B Ussuriysk Arra 36.40 60 P **P 00 53 27.5 -1.3**
USA0B Ussuriysk Arra 36.40 60 P **P 00 53 27.5 -1.3**
USA0B pmax pmax
comp=Z,5.0nm,0.8s
USRK Ussuriysk Ar. 36.40 60 P **P 00 53 28.4 -0.4**
comp=Z,13nm,1.1s,baz=290,slow=5.5,SNR=17
comp=Z,13nm,1.1s
USRK Ussuriysk Ar. 36.40 60 P **P 00 53 27.9 -1.0**
KLR Kul'dur 36.50 52 LR LR 01 09 56.4
comp=Z,246nm,21.2s,baz=262,slow=39
KLR Kul'dur 36.50 52*d* *i*P **P 00 53 29.3 -0.4**
KLR pmax pmax
comp=Z,20nm,1.3s
MARD Mardin 36.60 288 P **P 00 53 31.6 +0.7**
MARD IAmb IAmb 00 53 40.0
comp=Z,14nm,1.3s
SOC Sochi 36.81 299 *e*P P 00 53 30.2 -2.1
SOC *e* 00 54 54.7
SOC *e*PPP PPP 00 55 14.8
SOC *e*S **S 00 59 14.5 -1.9**
SOC *e*SS **SnSn 01 01 39.5 -8.1**
SOC *e*SSS SSS 01 02 08.5
SOC MLR MLR
comp=Z,121nm,18.0s
RAYN Ar Rayn 36.94 264 P **P 00 53 34.1 +0.4**
RAYN Ar Rayn 36.94 264 P **P 00 53 34.2 +0.4**
RAYN pmax pmax
comp=Z,6.0nm,1.0s
JSU Suzuyama 37.09 82 P P 00 53 31.7 -3.2
VSR Storozhevoye 37.61 311 *e*P **P 00 53 39.1 +0.1**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORR Voronezh 37.65 312 *e*P **P 00 53 39.0 -0.4**
VORR pmax pmax
comp=Z,10.0nm,0.3s
LPSR Galich'ya Gora 37.96 313 *e*P **P 00 53 41.8 -0.2**
LPSR pmax pmax
comp=Z,20nm,0.8s
JHS Saijyo 38.35 75 P **P 00 53 43.7 -1.8**
ANN Anapa 38.41 301 *e*P **P 00 53 48.6 +2.7**
ANN pmax pmax
comp=Z,26nm,0.9s
YAK Yakutsk 38.87 31 LR LR 01 11 53.4
comp=Z,76nm,19.0s,baz=268,slow=39
YAK Yakutsk 38.87 31⇓*e*P **P 00 53 51.3 +1.8**
YAK pmax pmax
comp=Z,9.0nm,0.4s
JMN Monobe 39.27 77 P **P 00 53 51.4 -1.9**
JMN IAmb IAmb 00 53 57.4
comp=Z,20nm,1.0s
MOS Moscow 39.31 318 *e*P **P 00 53 52.2 -1.1**
MOS *e* 00 55 24.2
MOS pmax pmax
comp=Z,28nm,1.0s
GRNR Gornyy 39.65 50⇑*i*P **P 00 53 55.4 -0.8**
GRNR pmax pmax
comp=Z,10.0nm,1.3s
GRNR MLR MLR
comp=E,410nm,11.0s
GRNR MLR MLR
comp=N,390nm,10.0s
GRNR MLR MLR
comp=Z,450nm,11.0s
KLMR Klimovskoe 39.78 326 *e*P P 00 53 55.6 -1.5
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR Klimovskoe 39.78 326 *e*P P 00 53 55.6 -1.5
KLMR AMP 00 54 00.7
comp=Z,22nm,1.2s
KLMR LQ LQ 01 06 45.8
KLMR LQ LQ 01 06 45.8
KLMR LR LR 01 09 32.7
OBN Obninsk 39.78 317 LR LR 01 12 20.4
comp=Z,37nm,18.8s,baz=98,slow=39
OBN Obninsk 39.78 317 P **P 00 53 57.1 -0.1**
OBN IAmb IAmb 00 54 25.0
comp=Z,9.7nm,0.5s
OBN Obninsk 39.78 317 *i* P **P 00 53 59.7 +2.5**
OBN *i* 00 56 01.1
OBN *i* SS SS 01 02 54.4 -2.2
OBN pmax pmax
comp=Z,10.0nm,0.8s
OBN MLR MLR
comp=Z,134nm,18.0s
KSM Kuching 39.79 140 P **P 00 53 55.8 -1.9**
SIM Simferopol' 40.76 301 *e*P **P 00 54 07.8 +2.3**
SIM *e*S S 01 00 09.0 -7.1

SIM pmax pmax
comp=Z,27nm,1.3s
SIM MLR MLR
comp=Z,180nm,23.0s
JGF Kuroka 41.59 73 P **P 00 54 10.5 -2.0**
BR131 Keskin Array S 41.73 293 P **P 00 54 13.3 -0.4**
BR131 Keskin Array S 41.73 293⇑*e*P **P 00 54 15.8 +2.1**
BRTR Keskin Array B 41.73 293 P **P 00 54 14.4 +0.7**
comp=Z,1.7nm,1.0s,baz=94,slow=8.0,SNR=9.0
BRTR LR LR 01 14 11.5
comp=Z,190nm,20.5s,baz=92,slow=40
comp=Z,1.7nm,1.0s
BRTR Keskin Array B 41.73 293 P **P 00 54 13.2 -0.4**
BRTR Keskin Array B 41.73 293*ce*P **P 00 54 17.1 +3.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
JSD Sado 41.76 69 P P 00 54 11.3 -2.5
JSD IAmb IAmb 00 54 12.2
comp=Z,14nm,1.0s
MMAI Mount Meron Ar 41.86 283 LR LR 01 14 21.2
comp=Z,134nm,20.1s,baz=234,slow=40
MAJO Matsushiro 42.04 72 P P 00 54 14.1 -2.0
MAJO IAmb IAmb 00 54 15.0
comp=Z,13nm,0.9s
MAJO Matsushiro 42.04 72*ce*P **P 00 54 14.3 -1.8**
MAJO pmax pmax
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 42.04 72 P **P 00 54 14.7 -1.5**
comp=Z,6.8nm,0.9s,baz=286,slow=7.5,SNR=13
MJAR LR LR 01 11 55.8
comp=Z,171nm,20.7s,baz=290,slow=37
comp=Z,6.8nm,0.9s
LWLI Liwa 42.71 153 P P 00 54 33.7 +12
EIL Elat 43.27 278 LR LR 01 16 03.2
comp=Z,329nm,18.1s,baz=82,slow=41
JEW Eniwo 43.35 62 P **P 00 54 25.4 -1.3**
TIXI Tiksi 43.46 18 P **P 00 54 26.1 -1.0**
comp=Z,4.6nm,0.8s,baz=92,slow=22,SNR=4.3
comp=Z,4.6nm,0.8s
TIXI Tiksi 43.46 18 P **P 00 54 26.0 -1.0**
TIXI IAmb IAmb 00 54 28.2
comp=Z,12nm,1.1s
JYT Yasato 43.67 71 P P 00 54 26.3 -3.0
JMM Marumori 43.76 69 P P 00 54 27.6 -2.4
JMM IAmb IAmb 00 54 28.9
comp=Z,16nm,0.9s
YSS Yuzh-Sakhalins 43.83 56 P **P 00 54 28.7 -1.8**
YSS IAmb IAmb 00 54 30.8
comp=Z,10nm,0.6s
YSS Yuzh-Sakhalins 43.83 56 *e*P **P 00 54 29.3 -1.2**
YSS pmax pmax
comp=Z,10.0nm,0.6s
YSS MLR MLR
comp=Z,400nm,14.0s
AKASG Malin Array Be 43.85 310 P **P 00 54 30.7 +0.2**
comp=Z,2.8nm,0.8s,baz=81,slow=6.9,SNR=15
comp=Z,2.8nm,0.8s
AKASG Malin Array Be 43.85 310 P **P 00 54 31.6 +1.0**
AKASG Malin Array Be 43.85 310*ce*P **P 00 54 30.7 +0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 43.85 310 P **P 00 54 30.8 +0.3**
AKBB IAmb IAmb 00 54 34.3
comp=Z,12nm,0.9s
AKBB Malin Array Si 43.85 310*de*P **P 00 54 32.7 +2.2**
JHJ Hachijo jima 2 44.18 76 LR LR 01 14 06.9
comp=Z,147nm,19.3s,baz=214,slow=38
SORM Soroca 44.52 306⇑P **P 00 54 35.9 -0.1**
SORM Soroca 44.52 306⇑P **P 00 54 35.9 -0.1**
MNK Minsk 44.71 315 *i* P **P 00 54 36.7 -0.6**
MNK *i* 00 56 17.5
MNK *i* 00 56 21.6
MNK *i* S **S 01 01 13.3 -0.5**
MNK *i* SS **SS 01 04 36.3 +2.4**
MNK *i* SSS SSS 01 05 20.8
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK pmax pmax
comp=N,6.0nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK MLR MLR
comp=Z,140nm,17.0s
MNK MLR MLR
comp=N,18nm,19.0s
MNK MLR MLR
comp=E,27nm,19.0s
MNK Minsk 44.71 315 *i* P **P 00 54 36.8 -0.6**
comp=E,1.0nm,0.8s
MNK *i* P **P 00 54 36.8 -0.6**
comp=N,6.0nm,0.8s
MNK *i* P **P 00 54 36.8 -0.6**
comp=Z,8.0nm,0.9s,baz=272
MNK *i* PcP **PcP 00 56 17.6 -2.1**
MNK *i* PP **PP 00 56 21.6 +0.1**
MNK *i* PPP PPP 00 56 55.3
MNK *i* S **S 01 01 13.3 -0.5**
MNK *i* SS **SS 01 04 36.4 +2.4**
MNK *i* SSS SSS 01 05 20.9
MNK *i* LQ LQ 01 09 57.5
MNK *i* LR LR 01 12 38.8
MNK *i* LRM MLR 01 15 12.6
comp=Z,140nm,17.2s
MNK *i* LRM MLR 01 15 30.7
comp=N,18nm,19.0s
MNK *i* LRM MLR 01 15 31.6
comp=E,27nm,19.4s
ERM Erimo 44.73 63 P **P 00 54 36.5 -1.3**
ERM IAmb IAmb 00 54 42.0
comp=Z,13nm,0.9s
ERM Erimo 44.73 63⇓*e*P **P 00 54 37.9 +0.2**
ERM pmax pmax
comp=Z,17nm,1.0s
ELL Elmali 45.23 290 P **P 00 54 42.7 +0.8**
ELL Elmali 45.23 290 P **P 00 54 42.7 +0.8**
ELL pmax pmax
comp=Z,49nm,1.1s
DAV Davao City (W) 45.38 118 LR LR 01 16 45.0
comp=Z,194nm,18.7s,baz=338,slow=40
ATD Arta Tunnel 45.44 251 P **P 00 54 43.9 +0.1**
ATD IAmb IAmb 00 54 47.5
comp=Z,17nm,1.1s
VRI Vrincioaia 45.85 303⇓P **P 00 54 48.5 +1.9**
VRI Vrincioaia 45.85 303⇓P **P 00 54 48.5 +1.9**
PLOR Plostina 45.91 303⇑P **P 00 54 50.8 +3.7**
PLOR Plostina 45.91 303⇑P **P 00 54 50.8 +3.7**
BIZ Bicaz 46.15 305⇑P **P 00 54 51.6 +2.7**
COVR Voineasa-Covas 46.22 303⇑P **P 00 54 51.3 +1.7**
FIA1 FINESS Array S 46.24 325 P **P 00 54 49.4 0.0**
FINES FINESS Array B 46.24 325 P **P 00 54 49.6 +0.2**
comp=Z,5.9nm,1.0s,baz=134,slow=16,SNR=6.0
comp=Z,5.9nm,1.0s
FINES FINESS Array B 46.24 325 P **P 00 54 49.2 -0.2**
MLR Muntele Rosu 46.45 303⇑P **P 00 54 54.2 +2.7**
MLR Muntele Rosu 46.45 303 P **P 00 54 52.4 +0.9**
MLR Muntele Rosu 46.45 303⇑P **P 00 54 54.2 +2.7**
BURAR Bucovina Array 46.67 306⇑P **P 00 54 56.2 +3.0**
BURAR Bucovina Array 46.67 306 P **P 00 54 53.5 +0.4**
BURAR Bucovina Array 46.67 306⇑P **P 00 54 56.2 +3.0**
BUR08 Bucovina Ar. S 46.68 306 P **P 00 54 54.2 +0.9**
PABE Paberze 46.98 317 P **P 00 54 55.4 +0.1**
VOIR 47.08 303⇑P **P 00 54 58.7 +2.3**
VOIR 47.08 303⇑P **P 00 54 58.7 +2.3**
LVV L'vov 47.22 309 *e*P **P 00 54 58.0 +0.7**
LVV *e*S **S 01 01 47.4 -2.7**
LVV pmax pmax
comp=Z,50nm,1.2s
LVV MLR MLR
comp=N,100nm,17.0s
LVV MLR MLR
comp=E,200nm,17.0s
LVV MLR MLR
comp=Z,300nm,18.0s
ARCES ARCESS Array B 47.99 336 P **P 00 55 03.2 +0.2**
comp=Z,3.0nm,0.9s,baz=102,slow=8.5,SNR=5.9
ARCES LR LR 01 15 41.2
comp=Z,156nm,20.6s,baz=105,slow=37
comp=Z,3.0nm,0.9s
JCJ Chichijima 48.21 83 LR LR 01 17 08.0
comp=Z,100nm,18.6s,baz=302,slow=38
MA2 Magadan 48.36 38 P **P 00 55 05.3 -0.6**
MA2 Magadan 48.36 38*d* *i*P **P 00 55 05.4 -0.6**
MA2 pmax pmax
comp=Z,20nm,1.1s
DRGR 48.48 305⇑P **P 00 55 10.2 +3.0**

DRGR		**48.48 305**	⇑P		**P**		**00 55 10.2 +3.0**
UZH	**Uzhgorod**	**48.49 307**	*e*P		P		00 55 04.5 -2.6
UZH			*i*				00 55 10.5
SEY	**Seymchan**	**49.27 34**⇑	*e*P		**P**		**00 55 13.2 +0.3**
SEY			pmax	pmax			
	comp=Z,19nm,1.3s						
BOVS	**Bovan**	**49.76 301**	⇑P		**P**		**00 55 19.8 +2.8**
PSZ	**Piszkesteto**	**50.18 307**	P		**P**		**00 55 19.8 -0.4**
PSZ	**Piszkesteto**	**50.18 307**	P		**P**		**00 55 19.8 -0.4**
PSZ			pmax	pmax			
	comp=Z,6.0nm,1.3s						
KAPI	**Kappang**	**50.43 134**	LR		LR		01 18 45.2
	comp=Z,110nm,21.1s,baz=278,slow=39						
KAPI	**Kappang**	**50.43 134**	P		**P**		**00 55 21.1 -1.2**
KAPI			IAmb	IAmb			00 55 22.9
	comp=Z,15nm,1.1s						
KAPI	**Kappang**	**50.43 134**	P		**P**		**00 55 21.1 -1.2**
KAPI			pmax	pmax			
	comp=Z,15nm,1.1s						
VYHS	**Vyhne**	**50.78 308**	*e*P		**P**		**00 55 25.2 +0.6**
VYHS	**Vyhne**	**50.78 308**	*e*P		**P**		**00 55 25.2 +0.6**
DIVS	**Divibare**	**50.87 302**			**P**		**00 55 26.1 +0.7**
DIVS			IAmb	IAmb			00 55 29.2
	comp=Z,8.5nm,1.2s						
OKC	**Ostrava-Krasne**	**51.00 309**	*e*P		**P**		**00 55 29.3 +3.1**
OKC			MLR	MLR			
	comp=Z,200nm,16.1s						
OKC	**Ostrava-Krasne**	**51.00 309**	*e*P		**P**		**00 55 29.3 +3.1**
OKC			AMS	AMS			01 20 30.0
	comp=Z,200nm,16.1s						
MORH	**Mrgy, Hungar**	**51.34 305**	P		**P**		**00 55 30.9 +2.0**
MORC	**Moravsky Berou**	**51.39 309**			**P**		**00 55 29.3 +0.1**
MORC			IAmb	IAmb			00 55 33.2
	comp=Z,9.3nm,1.2s						
MORC	**Moravsky Berou**	**51.39 309**	P		**P**		**00 55 29.3 +0.1**
MORC			pmax	pmax			
	comp=Z,9.0nm,1.2s						
MORC	**Moravsky Berou**	**51.39 309**	*e*P		**P**		**00 55 30.0 +0.7**
JAVC	**Velka Javorina**	**51.47 308**	*e*P		**P**		**00 55 33.7 +3.8**
KRLC	**Kraliky**	**51.82 310**	*e*P		**P**		**00 55 33.3 +0.8**
KRLC			MLR	MLR			
	comp=Z,200nm,15.7s						
KRLC	**Kraliky**	**51.82 310**	*e*P		**P**		**00 55 33.3 +0.8**
KRLC			AMS	AMS			01 20 40.0
	comp=Z,200nm,15.7s						
DPC	**Dobruska-Polom**	**52.07 310**	*e*P		**P**		**00 55 34.6 +0.3**
DPC			MLR	MLR			
	comp=Z,200nm,18.8s						
DPC	**Dobruska-Polom**	**52.07 310**	*e*P		**P**		**00 55 34.6 +0.3**
DPC			AMS	AMS			01 20 50.0
	comp=Z,200nm,18.8s						
VRAC	**Vranov**	**52.09 309**	LR		LR		01 20 59.3
	comp=Z,115nm,18.6s,baz=78,slow=40						
VRAC	**Vranov**	**52.09 309**	*e*P		**P**		**00 55 34.6 +0.2**
OSTC	**Ostas**	**52.10 311**	*e*P		**P**		**00 55 35.0 +0.5**
UPC	**Upice**	**52.23 311**	*e*P		**P**		**00 55 37.9 +2.4**
UPC	**Upice**	**52.23 311**	*e*P		**P**		**00 55 37.9 +2.4**
KRUC	**Moravsky**	**52.26 309**	*e*P		**P**		**00 55 36.6 +0.9**
HFS	**Hagfors**	**52.27 323**	LR		LR		01 19 14.4
	comp=Z,225nm,20.9s,baz=88,slow=38						
SPITS	**Spitsbergen Ar**	**52.45 346**	LR		LR		01 22 38.7
	comp=Z,119nm,18.3s,baz=84,slow=41						
PETK	**Petropavlovsk-**	**52.67 46**	LR		LR		01 19 56.7
	comp=Z,331nm,18.9s,baz=282,slow=38						
PETK	**Petropavlovsk-**	**52.67 46**	P		**P**		**00 55 37.3 -1.4**
PETK	**Petropavlovsk-**	**52.67 46**	P		**P**		**00 55 37.3 -1.4**
PVCC	**Panska Ves**	**53.13 311**	AMS		AMS		01 22 30.0
	comp=Z,200nm,13.3s						
NC405	**NORSAR Array S**	**53.16 324**	P		**P**		**00 55 41.9 -0.2**
PRU	**Pruhonice**	**53.26 310**	*e*P		**P**		**00 55 44.3 +1.3**
PRU			MLR	MLR			
	comp=Z,200nm,14.3s						
PRU	**Pruhonice**	**53.26 310**	*e*P		**P**		**00 55 44.3 +1.3**
PRU			AMS	AMS			01 21 30.0
	comp=Z,200nm,14.3s						
NB2	**NORSAR Subarra**	**53.41 324**	P		**P**		**00 55 43.0 -1.0**
	comp=Z,5.0nm,0.9s,baz=84,slow=7.9						
NOA	**NORSAR Array B**	**53.41 324**	P		**P**		**00 55 43.3 -0.8**
	comp=Z,2.7nm,0.7s,baz=84,slow=7.3,SNR=9.8						
NOA			LR		LR		01 20 11.3
	comp=Z,157nm,21.6s,baz=80,slow=38						
	comp=Z,2.7nm,0.7s						
BRG	**Berggiesshubel**	**53.45 311**	*e*P		**P**		**00 55 45.2 +0.8**
BRG			Amp				00 55 48.4
	comp=Z,7.9nm,0.9s						
BRG			Amp				01 22 38.0
	comp=E,0.2nm,14.6s						
BRG			Amp				01 22 55.0
	comp=N,0.1nm,11.7s						
BRG			Amp				01 22 55.0
	comp=Z,0.2nm,15.7s						
BRG	**Berggiesshubel**	**53.45 311**	*e*P		**P**		**00 55 45.2 +0.8**
BRG			pmax	pmax			
	comp=Z,8.0nm,1.0s						
BRG			MLR	MLR			
	comp=E,213nm,14.6s						
BRG			MLR	MLR			
	comp=N,76nm,11.7s						
BRG			MLR	MLR			
	comp=Z,191nm,15.7s						
NC204	**NORSAR Array S**	**53.60 324**	P		**P**		**00 55 45.2 -0.3**
CKRC	**Cesky Krumlov**	**53.66 309**	*e*P		**P**		**00 55 47.3 +1.3**
CKRC			*ex*		x		00 55 51.0
CLL	**Collm**	**53.95 312**	P		**P**		**00 55 48.5 +0.4**
CLL	**Collm**	**53.95 312**	*i* P		**P**		**00 55 50.4 +2.3**
CLL			pmax	pmax			
	comp=Z,6.0nm,1.1s						
CLL			MLR	MLR			
	comp=Z,300nm,18.7s						
CLL	**Collm**	**53.95 312**	*i* P		**P**		**00 55 50.4 +2.3**
	comp=Z,6.0nm,1.1s						
CLL			*i* x		x		00 55 57.3
	comp=Z,5.0nm,0.9s						
CLL			*ex*		x		01 07 48.0
CLL			Lm		MLR		01 22 00.0
	comp=Z,300nm,18.7s						
GEC2	**GERESS Array S**	**54.04 309**	P		**P**		**00 55 49.5 +0.6**
GEC2			IAmb	IAmb			00 55 52.8
	comp=Z,7.1nm,1.1s						
GERES	**GERESS Array B**	**54.04 309**	P		**P**		**00 55 49.5 +0.6**
	comp=Z,3.2nm,0.8s,baz=87,slow=6.8,SNR=18						
GERES			LR		LR		01 21 25.2
	comp=Z,56nm,20.6s,baz=78,slow=39						
	comp=Z,3.2nm,0.8s						
GERES	**GERESS Array B**	**54.04 309**	P		**P**		**00 55 49.1 +0.1**
KHC	**Kasperske Hory**	**54.06 309**	*e*P		P		00 55 46.8 -2.2
KHC			*e*				00 55 51.6
KHC			MLR	MLR			
	comp=Z,200nm,13.1s						
KHC	**Kasperske Hory**	**54.06 309**	*e*P		P		00 55 46.8 -2.2
KHC			*ep*P		pP		00 55 51.6 -2.3
KHC			AMS	AMS			01 22 10.0
	comp=Z,200nm,13.1s						
BILL	**Bilibino**	**54.94 27**	*i* P		**P**		**00 55 54.7 -0.3**
BILL			pmax	pmax			
	comp=Z,9.0nm,1.1s						
BILL			MLR	MLR			
	comp=Z,178nm,18.0s						
GRA1	**Grafenberg Arr**	**55.42 310**	P		**P**		**00 55 59.7 +0.9**
GRA1			IAmb	IAmb			00 56 03.2
	comp=Z,11nm,1.0s						
GRF	**Grafenberg Arr**	**55.42 310**	P		**P**		**00 55 59.7 +0.9**
GRF			pmax	pmax			
	comp=Z,11nm,1.0s						
GRFO	**Grafenberg**	**55.42 310**	P		**P**		**00 55 59.7 +0.9**
GRFO			IAmb	IAmb			00 56 03.1
	comp=Z,11nm,1.0s						
GRFO	**Grafenberg**	**55.42 310**	P		**P**		**00 55 59.7 +0.9**
GRFO			pmax	pmax			
	comp=Z,11nm,1.0s						
LODK	**Lodwar**	**56.27 248**	P		**P**		**00 56 05.6 +0.2**
LODK			IAmb	IAmb			00 56 08.6
	comp=Z,7.3nm,1.0s						
MURB	**Monte Urbino**	**56.31 303**	P		**P**		**00 56 06.2 +0.8**
DAVOX	**Davos/Dischmat**	**57.06 307**	LR		LR		01 23 23.0
	comp=Z,177nm,21.6s,baz=64,slow=39						
KMBO	**Kilima Mbogo**	**57.81 243**	P		**P**		**00 56 18.0 +1.5**
	comp=Z,4.2nm,0.9s,baz=34,slow=9.3,SNR=8.5						
KMBO			LR		LR		01 21 32.2
	comp=Z,102nm,18.5s,baz=97,slow=36						
	comp=Z,4.2nm,0.9s						
KMBO	**Kilima Mbogo**	**57.81 243**	P		**P**		**00 56 17.2 +0.7**
KMBO			IAmb	IAmb			00 56 19.2
	comp=Z,8.1nm,1.1s						
KMBO	**Kilima Mbogo**	**57.81 243**‖	*e*P		**P**		**00 56 18.5 +2.0**
KMBO			pmax	pmax			
	comp=Z,4.0nm,0.9s						
ECH	**Echery**	**58.40 310**	P		**P**		**00 56 20.2 +0.2**
ECH			IAmb	IAmb			00 56 24.2
	comp=Z,6.4nm,1.0s						
ECH	**Echery**	**58.40 310**	P		**P**		**00 56 20.2 +0.2**
ECH			pmax	pmax			
	comp=Z,6.0nm,1.0s						
JMIC	**Jan Mayen**	**59.37 338**	LR		LR		01 23 55.2
	comp=Z,52nm,20.5s,baz=70,slow=38						
SSB	**Saint Sauveur**	**61.07 307**	P		**P**		**00 56 37.8 -0.6**
SSB			IAmb	IAmb			00 56 38.6
	comp=Z,11nm,1.3s						
SSB	**Saint Sauveur**	**61.07 307**	P		**P**		**00 56 37.8 -0.6**
EKA	**Eskdalemuir Ar**	**62.13 320**	LR		LR		01 24 29.2
	comp=Z,152nm,21.1s,baz=56,slow=37						
MBAR	**Mbarara**	**62.37 248**	P		**P**		**00 56 48.1 +0.4**
MBAR	**Mbarara**	**62.37 248**‖	*e*P		**P**		**00 56 48.6 +0.8**
EUNU	**Eureka**	**65.71 359**	P		**P**		**00 57 08.3 -0.3**
VOI	**Vohitsoka**	**67.34 220**	P		**P**		**00 57 19.7 -0.2**
ESDC	**Sonseca Array**	**69.11 304**	P		**P**		**00 57 30.4 -0.3**
	comp=Z,5.6nm,0.9s,baz=57,slow=6.0,SNR=20						
	comp=Z,5.6nm,0.9s						
ESDC	**Sonseca Array**	**69.11 304**	P		**P**		**00 57 30.1 -0.7**
ESDC			IAmb	IAmb			00 57 33.5
	comp=Z,5.8nm,1.1s						
TOLK	**Toolik Lake Re**	**69.35 19**	P		**P**		**00 57 31.1 -0.7**
TOLK			IAmb	IAmb			00 57 32.1
	comp=Z,5.9nm,0.8s						
PAB	**San Pablo**	**69.43 304**	P		**P**		**00 57 33.0 +0.2**
PAB			IAmb	IAmb			00 57 35.3
	comp=Z,7.7nm,1.1s						
PAB	**San Pablo**	**69.43 304**	P		**P**		**00 57 33.0 +0.2**
PAB			pmax	pmax			
	comp=Z,8.0nm,1.2s						
IMAR	**Indian Mountai**	**69.92 22**	P		**P**		**00 57 34.4 -0.8**
COLD	**Coldfoot**	**70.14 20**	P		**P**		**00 57 36.0 -0.7**
COLD			IAmb	IAmb			00 57 38.1
	comp=Z,4.2nm,0.9s						
H21K	**Melozitna Rive**	**70.42 22**	P		**P**		**00 57 38.2 -0.2**
H21K			IAmb	IAmb			00 57 38.5
	comp=Z,7.4nm,1.2s						
WB0	**Warramunga Arr**	**70.78 132**	P		**P**		**00 57 39.1 -2.0**
WB0			IAmb	IAmb			00 57 41.8
	comp=Z,8.9nm,1.2s						
WRA	**Warramunga Arr**	**70.88 132**	P		**P**		**00 57 39.6 -2.1**
	comp=Z,2.4nm,0.8s,baz=325,slow=6.6,SNR=33						
	comp=Z,2.4nm,0.8s						
WRA	**Warramunga Arr**	**70.88 132**	P		**P**		**00 57 39.6 -2.1**
WRAB	**Tennant Creek**	**70.88 132**‖	*e*P		**P**		**00 57 42.1 +0.4**
WRAB			pmax	pmax			
	comp=Z,8.0nm,1.7s						
WB2	**Warramunga Arr**	**70.88 132**	P		**P**		**00 57 39.6 -2.1**
J20K	**Nowinta River**	**70.97 24**	P		**P**		**00 57 41.7 0.0**
WR0	**Warramunga Arr**	**71.01 132**	P		P		00 57 40.1 -2.5
WR0			IAmb	IAmb			00 57 44.2
	comp=Z,5.1nm,1.1s						
TTA	**Tatalina**	**71.13 25**	P		**P**		**00 57 41.9 -0.9**
TTA			IAmb	IAmb			00 57 43.5
	comp=Z,5.5nm,1.1s						
TTA	**Tatalina**	**71.13 25**	P		**P**		**00 57 41.9 -0.9**
TTA			pmax	pmax			
	comp=Z,6.0nm,1.1s						
MLY	**Manley**	**71.49 22**	P		**P**		**00 57 43.6 -1.3**
K20K	**Telida**	**71.53 24**	P		**P**		**00 57 44.9 -0.2**
K20K			IAmb	IAmb			00 57 46.0
	comp=Z,4.9nm,1.0s						
H24K	**Noodor Dome**	**71.78 21**	P		**P**		**00 57 46.1 -0.6**
I23K	**Minto, Yukon-K**	**71.83 22**	P		**P**		**00 57 46.8 -0.1**
L19K	**White Mountain**	**72.02 26**	P		**P**		**00 57 47.9 -0.2**
CAST	**Castle Rocks**	**72.16 24**	P		**P**		**00 57 48.3 -0.6**
CAST			IAmb	IAmb			00 57 49.3
	comp=Z,5.9nm,1.0s						
MDM	**Murphy Dome**	**72.30 21**	P		**P**		**00 57 48.7 -1.1**
NEA2	**Nenana**	**72.31 22**	P		**P**		**00 57 48.8 -1.0**
NEA2			IAmb	IAmb			00 57 50.1
	comp=Z,6.9nm,0.8s						
M19K	**Big River Lodg**	**72.37 26**	P		**P**		**00 57 50.1 -0.1**
M19K			IAmb	IAmb			00 58 12.7
	comp=Z,7.1nm,1.2s						
KTH	**Kantishna Hill**	**72.44 23**	P		**P**		**00 57 49.7 -1.0**
KTH			IAmb	IAmb			00 57 51.2
	comp=Z,4.9nm,1.0s						
SVW2	**Sparrevohn**	**72.46 27**	P		**P**		**00 57 50.2 -0.5**
SVW2			IAmb	IAmb			00 57 52.5
	comp=Z,9.0nm,1.3s						
COLA	**College**	**72.48 21**⇑	*e*P		**P**		**00 57 49.7 -1.0**
COLA			pmax	pmax			
	comp=Z,7.0nm,1.0s						
PRP	**Porcupine Dome**	**72.69 20**	P		**P**		**00 57 51.6 -0.6**
M20K	**Styx River**	**72.83 25**	P		**P**		**00 57 52.9 -0.2**
M20K			IAmb	IAmb			00 57 53.9
	comp=Z,4.8nm,0.9s						
IL31		**72.84 21**	IAmb	IAmb			00 57 56.4
	comp=Z,7.6nm,1.3s						
ILAR	**Eielson Array**	**72.84 21**	P		**P**		**00 57 51.6 -1.3**
	comp=Z,2.8nm,0.8s,baz=303,slow=4.7,SNR=23						
ILAR			PP		PP		01 00 29.4 -5.0
	comp=Z,0.7nm,0.8s,baz=313,slow=8.0,SNR=5.0						
	comp=Z,2.8nm,0.8s						
N19K	**Bonanza Creek**	**73.06 27**	P		**P**		**00 57 54.4 0.0**
AS31	**Alice Springs**	**73.44 135**	P		**P**		**00 57 55.1 -1.9**
ASAR	**Alice Springs**	**73.44 135**	P		**P**		**00 57 55.4 -1.7**
	comp=Z,1.7nm,0.7s,baz=320,slow=6.1,SNR=14						
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**73.44 135**	P		**P**		**00 57 55.0 -2.1**
J26L	**Joseph Creek**	**74.00 20**	P		**P**		**00 57 58.7 -1.2**
J26L			IAmb	IAmb			00 57 60.0
	comp=Z,6.5nm,0.8s						
RIDG	**Independent Ri**	**74.20 21**	IAmb	IAmb			00 58 00.6
	comp=Z,9.2nm,0.9s						
SCRK	**Sand Creek**	**74.28 21**	P		**P**		**00 58 00.7 -0.8**
SCRK			IAmb	IAmb			00 58 01.7
	comp=Z,6.4nm,0.9s						
P19K	**Oil Pt**	**74.30 27**	P		**P**		**00 58 00.3 -1.3**
SML	**Sawmill**	**74.53 24**	P		**P**		**00 58 02.1 -0.8**
K27K	**Chicken**	**74.78 20**	P		**P**		**00 58 04.0 -0.4**
K27K			IAmb	IAmb			00 58 05.3
	comp=Z,7.4nm,0.9s						
DAWY	**Dawson**	**75.49 19**	P		**P**		**00 58 07.8 -0.7**
L27K	**Beaver Creek,**	**75.61 20**	P		**P**		**00 58 08.8 -0.3**
L27K			IAmb	IAmb			00 58 10.3
	comp=Z,7.3nm,1.0s						
BCAR	**Beaver Creek A**	**75.61 20**	P		**P**		**00 58 09.0 -0.2**
OHAK	**Old Harbor**	**75.92 29**	P		**P**		**00 58 10.3 -0.7**
M27K	**Edge Creek, AK**	**76.14 21**	P		**P**		**00 58 12.0 -0.3**
M27K			IAmb	IAmb			00 58 17.9
	comp=Z,9.3nm,1.2s						
MCARA	**McCarthy VSAT**	**76.54 22**	P		**P**		**00 58 13.6 -0.9**
TOA0	**Torodi Ar. Sit**	**78.16 278**	P		**P**		**00 58 23.7 -0.6**
TOA0			IAmb	IAmb			00 58 26.5
	comp=Z,4.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.16 278**	P		**P**		**00 58 23.3 -1.0**
	comp=Z,3.9nm,0.8s,baz=42,slow=4.5,SNR=15						
	comp=Z,3.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.16 278**	P		P		00 58 22.7 -1.6
TORD			IAmb	IAmb			00 58 26.5
	comp=Z,5.3nm,0.9s						
M31M	**Drury Creek, Y**	**78.33 18**	P		**P**		**00 58 23.9 -0.6**
N31M	**Braeburn, Yuko**	**78.56 19**	P		**P**		**00 58 25.2 -0.6**
HYT	**Haines Junctio**	**78.63 20**	P		**P**		**00 58 25.8 -0.5**
HYT			IAmb	IAmb			00 58 27.1
	comp=Z,7.0nm,0.9s						
P33M	**Teslin, Yukon**	**80.43 19**	P		**P**		**00 58 34.5 -1.5**
P33M			IAmb	IAmb			00 58 36.0
	comp=Z,8.0nm,1.1s						
YKA	**Yellowknife Ar**	**82.00 10**	P		**P**		**00 58 43.0 -1.2**
	comp=Z,2.3nm,0.7s,baz=342,slow=5.0,SNR=10						
	comp=Z,2.3nm,0.7s						
KOWA	**Kowa**	**82.07 282**	P		**P**		**00 58 45.9 +0.5**
LBTB	**Lobatse**	**82.39 233**	P		**P**		**00 58 45.9 -1.0**
LBTB	**Lobatse**	**82.39 233**	P		**P**		**00 58 45.9 -1.0**
LBTB			pmax	pmax			
	comp=Z,24nm,1.5s						
STKA	**Stephens Creek**	**84.08 135**	P		**P**		**00 58 53.2 -2.1**
	comp=Z,1.8nm,0.4s,baz=325,slow=5.9,SNR=4.5						
	comp=Z,1.8nm,0.4s						
TSUM	**Tsumeb**	**84.15 242**	P		**P**		**00 58 56.4 +0.3**
TSUM			IAmb	IAmb			00 59 02.6
	comp=Z,3.0nm,0.8s						
BOSA	**Boshof**	**85.08 230**	P		**P**		**00 58 59.4 -1.1**
	comp=Z,6.5nm,1.0s,baz=8.4,slow=7.3,SNR=5.7						
	comp=Z,6.5nm,1.0s						
BOSA	**Boshof**	**85.08 230**	P		**P**		**00 58 59.3 -1.3**
DBIC	**Dimbokro**	**87.09 276**	P		**P**		**00 59 10.5 -0.3**
	comp=Z,18nm,0.9s,baz=63,slow=5.4,SNR=13						
	comp=Z,18nm,0.9s						
DBIC	**Dimbokro**	**87.09 276**	P		**P**		**00 59 10.2 -0.6**
KIC	**Kosan Boka**	**87.17 276**⇑	*i* PKIKP		**P**		**00 59 10.7 -0.5**
	comp=Z,16nm,0.5s						
TIC	**Toumodi**	**87.24 276**⇑	*i* PKIKP		**P**		**00 59 11.0 -0.6**
	comp=Z,6.4nm,0.3s						
LIC	**Lamto**	**87.48 276**⇑	*e*PKIKP		P		00 59 10.7 -2.0
	comp=Z,41nm,0.7s						
NVAR	**Mina Array Bea**	**104.06 20**	PP		**PKiKP**		**01 04 45.3 -0.1**
	comp=Z,0.4nm,0.6s,baz=350,slow=2.3,SNR=4.5						
TXAR	**Lajitas Array**	**115.93 10**	PKP		**PKiKP**		**01 05 07.3 -0.6**
	comp=Z,0.4nm,0.9s,baz=326,slow=2.6,SNR=3.9						
CPUP	**Villa Florida**	**147.59 274**	PKPbc		**PKPdf**		**01 06 09.0 +2.5**
	comp=Z,1.9nm,0.7s,baz=47,slow=2.0,SNR=4.6						
CPUP	**Villa Florida**	**147.59 274**	PKP2		**PKPdf**		**01 06 09.0 +2.5**

MAN ***12*** *00:55:41.5˙87N×127˙64E,h9km,Ms3.2*
IDC ***12*** *00:55:47.2±2.5,5˙94N×127˙15E,h44km±22km,mb3.9/15, mbtmp4.2/15,MS3.2/1,Error ellipse: s-maj=28.7km s-min=13.1km az=79.0*
NEIC ***12*** *00:55:53.7±1.3,5˙95N±0˙08×127˙2E±0˙1,h93km±8km, mb4.4/47,Error ellipse: s-maj=17.6km s-min=9.9km az=65.0*

ISC 12 00:55:51.9±0.5,5˚96N±0˚06×127˚22E±0˚07,h83km,n82, σ1ş39/83,mb4.4/37,2C-5D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.37 316**‖	*e*P		**Pn**	**00 56 11.1**	**-4.6**
DDMP	**Don Marcelino,**	**1.51 276**‖	*e*P		**Pn**	**00 56 14.0**	**-3.5**
DAV	**Davao City (W)**	**1.97 304**	LR		LR	00 57 07.4	
	comp=Z,501nm,21.4s,baz=260,slow=42						
DAV	**Davao City (W)**	**1.97 304**	Pn		**Pn**	**00 56 24.4**	**+0.8**
GSPH	**General Santos**	**2.27 273**‖	*e*P		Pn	00 56 21.7	-5.9
GSPH			*i* S		**Sn**	**00 56 54.1**	**-0.7**
KCP	**Kidapawan**	**2.36 296**⇑	*i* P		**Pn**	**00 56 25.9**	**-2.9**
SKMP	**Bagumbayan, Su**	**2.72 282**‖	*e*P		**Pn**	**00 56 31.3**	**-2.3**
BUKP	**Musuan**	**2.87 312**‖	*e*P		**Pn**	**00 56 33.6**	**-2.1**
BUKP			*e*S		**Sn**	**00 57 12.7**	**+3.4**
PAGZ	**Pagadian**	**4.25 296**‖	*e*P		**Pn**	**00 56 54.7**	**+0.4**
TNTI	**Ternate**	**5.16 178**	Pn		**Pn**	**00 57 07.5**	**+0.9**
LUWI	**Luwuk**	**8.25 213**	Pn		**Pn**	**00 57 50.5**	**+1.5**
MYLDM	**Lahad Datu**	**8.72 265**	Pn		**Pn**	**00 57 57.0**	**+1.7**
SBUM	**Sibu**	**15.36 258**	P		**P**	**00 59 28.4**	**+1.3**
SBUM			IAmb		IAmb	00 59 28.8	
	comp=Z,18nm,0.6s						
SSLB	**Suanglung**	**18.72 342**	P		**Pn**	**01 00 06.7**	**+1.3**
SSLB			IAmb		IAmb	01 00 49.6	
	comp=Z,16nm,1.1s						
GUMO	**Guam**	**18.96 65**	LR		LR	01 08 19.8	
	comp=Z,60nm,18.2s,baz=231,slow=40						
JOW	**Kunigami**	**20.78 3**	P		**P**	**01 00 27.4**	**+1.1**
JOW			IAmb		IAmb	01 00 28.6	
	comp=Z,18nm,0.5s						
KNRA	**Kununurra**	**21.55 176**	P		**P**	**01 00 34.8**	**+0.1**
KNRA			IAmb		IAmb	01 00 55.6	
	comp=Z,15nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.96 184**	P		**P**	**01 00 58.0**	**-0.7**
	comp=Z,3.4nm,0.9s,baz=17,slow=10.0,SNR=4.4						
	comp=Z,3.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.96 184**	P		**P**	**01 00 58.8**	**+0.2**
COEN	**Coen**	**25.34 141**	P		**P**	**01 01 12.1**	**+0.7**
COEN			IAmb		IAmb	01 01 50.5	
	comp=Z,21nm,1.4s						
JCJ	**Chichijima**	**25.39 32**	P		**P**	**01 01 11.6**	**-0.1**
	comp=Z,45nm,0.5s,baz=270,slow=23,SNR=6.0						
JCJ	**Chichijima**	**25.39 32**	P		**P**	**01 01 12.2**	**+0.6**
WB0	**Warramunga Arr**	**26.52 165**	P		**P**	**01 01 21.6**	**-0.4**
WB0			IAmb		IAmb	01 01 53.4	
	comp=Z,7.3nm,0.8s						
WRAB	**Tennant Creek**	**26.67 165**	P		**P**	**01 01 25.4**	**+2.1**
WRA	**Warramunga Arr**	**26.68 165**	P		**P**	**01 01 21.9**	**-1.5**
	comp=Z,1.6nm,1.0s,baz=335,slow=11,SNR=21						
WRA			ScP		**ScP**	**01 08 22.1**	**+3.9**
	comp=Z,0.5nm,0.6s,baz=353,slow=2.9,SNR=6.2						
	comp=Z,1.6nm,1.0s						
WRA	**Warramunga Arr**	**26.68 165**	P		**P**	**01 01 21.8**	**-1.5**
WB2	**Warramunga Arr**	**26.68 165**	P		**P**	**01 01 23.3**	**0.0**
WR0	**Warramunga Arr**	**26.74 165**	P		**P**	**01 01 24.1**	**+0.2**
WR0			IAmb		IAmb	01 01 52.0	
	comp=Z,11nm,1.3s						
ASAR	**Alice Springs**	**30.16 168**	P		**P**	**01 01 53.8**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=356,slow=8.4,SNR=3.4						
ASAR			ScP		**ScP**	**01 08 33.0**	**+4.0**
	comp=Z,0.4nm,0.7s,baz=344,slow=3.4,SNR=4.0						
	comp=Z,0.5nm,0.8s						
MJAR	**Matsushiro Arr**	**32.06 17**	P		**P**	**01 02 09.9**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=173,slow=10,SNR=4.6						
	comp=Z,0.7nm,0.4s						
BBOO	**Buckleboo**	**39.46 168**	P		**P**	**01 03 14.1**	**-0.2**
STKA	**Stephens Creek**	**40.05 161**	P		**P**	**01 03 17.8**	**-1.3**
	comp=Z,1

I23K	**Minto, Yukon-K**	**81.86**	**25**	P	**P**	**01 08 02.8**	**+1.0**
TOLK	**Toolik Lake Re**	**82.00**	**22**	P	**P**	**01 08 03.7**	**+1.1**
TOLK				IAmb	IAmb	01 08 35.9	
	comp=Z,7.4nm,1.4s						
PWL	**Port Wells**	**82.12**	**29**	P	**P**	**01 08 02.9**	**-0.4**
SML	**Sawmill**	**82.15**	**28**	P	**P**	**01 08 03.3**	**-0.3**
SML				IAmb	IAmb	01 08 32.8	
	comp=Z,13nm,1.4s						
H24K	**Noodor Dome**	**82.51**	**24**	P	**P**	**01 08 06.7**	**+1.4**
H24K				IAmb	IAmb	01 08 07.9	
	comp=Z,2.6nm,0.7s						
ILAR	**Eielson Array**	**82.89**	**26**	P	**P**	**01 08 06.4**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=235,slow=5.3,SNR=7.6						
	comp=Z,0.6nm,0.6s						
J25K	**Salcha River,**	**83.54**	**26**	P	**P**	**01 08 10.4**	**-0.3**
RIDG	**Independent Ri**	**83.78**	**27**	P	**P**	**01 08 12.3**	**+0.4**
RIDG				IAmb	IAmb	01 08 36.6	
	comp=Z,4.6nm,1.1s						
BMAR	**Burnt Mountain**	**83.84**	**23**	P	**P**	**01 08 13.6**	**+1.4**
N25K	**Chitina, Valde**	**83.93**	**29**	P	**P**	**01 08 13.2**	**+0.4**
N25K				IAmb	IAmb	01 08 49.1	
	comp=Z,9.8nm,1.4s						
GLB	**Gilahina Butte**	**84.31**	**29**	P	**P**	**01 08 15.1**	**+0.4**
GLB				IAmb	IAmb	01 08 15.9	
	comp=Z,9.2nm,1.3s						
J26L	**Joseph Creek**	**84.32**	**26**	P	**P**	**01 08 15.6**	**+0.9**
J26L				IAmb	IAmb	01 08 29.0	
	comp=Z,3.5nm,1.1s						
WAX	**Waxell Ridge**	**84.82**	**30**	P	**P**	**01 08 18.3**	**+1.1**
ARCES	**ARCESS Array B**	**88.54**	**340**	P	**P**	**01 08 33.5**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=79,slow=6.3,SNR=5.7						
	comp=Z,0.5nm,0.5s						
FINES	**FINESS Array B**	**90.11**	**332**	P	**P**	**01 08 41.4**	**-1.1**
	comp=Z,2.2nm,1.0s,baz=18,slow=5.0,SNR=3.9						
	comp=Z,2.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**122.67**	**290**	PKP	**PKPdf**	**01 14 38.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=65,slow=1.8,SNR=12						

NEIC ***12*** *00:59:56.6±0.7,2°.89N±0°.08×127°.7E±0°.1,h90km±12km, mb4.2/8,Error ellipse: s-maj=22.1km s-min=5.8km az=62.0*

IDC ***12*** *00:59:56.5±1.4,1°.85N×127°.82E,h0km,mb4.0/4, mbtmp4.1/4,Error ellipse: s-maj=124.7km s-min=21.6km az=68.0*

ISC 12 00:59:56.5±2.3,2°.9N±0°.2×127°.8E±0°.1,h100km,n12, σ1ŝ71/12,mb4.1/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.17**	**192**	Pn	**Pn**	**01 00 33.5**	**+2.1**
TNTI				Sn	**Sn**	**01 00 56.3**	**-1.6**
FAKI	**Fak Fak**	**7.30**	**142**	Pn	**Pn**	**01 01 39.4**	**-1.2**
UGM	**Wanagama**	**20.32**	**238**	P	**P**	**01 04 21.8**	**-3.0**
COEN	**Coen**	**22.65**	**138**	P	**P**	**01 04 50.3**	**+0.7**
COEN				IAmb	IAmb	01 05 25.5	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**23.45**	**164**	P	**P**	**01 04 57.4**	**+0.3**
WRA	**Warramunga Arr**	**23.60**	**164**	P	**P**	**01 04 58.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=344,slow=11,SNR=7.1						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**23.60**	**164**	P	**P**	**01 04 58.6**	**+0.1**
WB2	**Warramunga Arr**	**23.60**	**164**	P	**P**	**01 04 58.5**	**0.0**
WB2				IAmb	IAmb	01 05 03.0	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**23.67**	**164**	P	**P**	**01 04 58.2**	**-0.9**
WR0				IAmb	IAmb	01 05 42.1	
	comp=Z,9.4nm,1.3s						
STKA	**Stephens Creek**	**37.00**	**160**	P	**P**	**01 06 59.0**	**+2.5**
	comp=Z,2.5nm,0.5s,baz=326,slow=11,SNR=3.5						
	comp=Z,2.5nm,0.5s						
STKA	**Stephens Creek**	**37.00**	**160**	P	**P**	**01 06 57.1**	**+0.7**
STKA				IAmb	IAmb	01 07 11.8	
	comp=Z,4.2nm,1.4s						
SONM	**Songino Array**	**48.41**	**341**	P	P	01 08 48.3	+20
	comp=Z,1.1nm,0.6s,baz=150,slow=8.8,SNR=7.1						
	comp=Z,1.1nm,0.6s						

DJA ***12*** *01:01:27.4±2.2,1°.N±5°.×9°.7E±1°.1,h14km±13km,M4.6/10, mb4.8/4,mB5.8/1,MLv4.5/10,Mw(mB)5.4/1*

IDC ***12*** *01:01:31.9±1.0,0°.93N×96°.84E,h26km±3km,mb4.1/9, mbtmp4.2/11,ML3.8/2,MS3.5/2,Error ellipse: s-maj=31.0km s-min=13.2km az=60.0*

NEIC ***12*** *01:01:33.5±1.2,0°.98N±0°.06×96°.95E±0°.09,h40km±8km, mb4.4/23,Error ellipse: s-maj=13.7km s-min=7.1km az=67.0*

ISC 12 01:01:31.8±0.7,0°.95N±0°.06×96°.90E±0°.07,h30km±3km, h30km:pP-P,n76,σ1ŝ14/75,mb4.4/27,MS4.1/6,1C-1D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.76**	**62**		**Pb**	**01 01 47.1**	**+0.4**
GSI	**Gunungsitoli**	**0.76**	**62**	P	**Pb**	**01 01 47.0**	**+0.3**
GSI				S	**Sb**	**01 01 54.8**	**-2.0**
RPSI	**Rantau Prapat**	**2.67**	**49**		**Pn**	**01 02 13.0**	**+0.3**
MNSI	**Mandailing Nat**	**2.68**	**93**	P	**Pn**	**01 02 14.5**	**+1.5**
KCSI	**Kotacane, Aceh**	**2.70**	**19**	P	**Pn**	**01 02 12.8**	**-0.5**
PSI	**Prapat**	**2.74**	**48**	Pn	**Pn**	**01 02 13.9**	**0.0**
	6.2nm,0.3s,baz=210,slow=6.5,SNR=22						
	43nm,0.8s						
SISI	**Saibi**	**3.15**	**136**	P	**Pn**	**01 02 20.2**	**+0.8**
BKNI	**Bangkinang**	**4.19**	**98**	Pn	**Pn**	**01 02 34.3**	**+0.7**
LHMI	**Lhok Sumawe**	**4.25**	**1**	Pn	**Pn**	**01 02 35.5**	**+0.9**
LHMI	**Lhok Sumawe**	**4.25**	**1**	P	**Pn**	**01 02 33.0**	**-1.6**
IPM	**Ipoh**	**5.41**	**50**		**Pn**	**01 02 51.3**	**+0.7**
KRJI	**Kerinci**	**5.47**	**123**	P	**Pn**	**01 02 50.4**	**-1.0**
KULM	**Kulim**	**5.71**	**41**	Pn	**Pn**	**01 02 54.2**	**-0.4**
MNAI	**Manna**	**8.03**	**131**	P	**Pn**	**01 03 24.8**	**-1.7**
CM31	**Chiang Mai Arr**	**17.52**	**6**		**Pn**	**01 05 34.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**17.52**	**6**	P	**P**	**01 05 34.5**	**-0.4**
	0.2nm,0.3s,baz=196,slow=12,SNR=7.4						
CMAR				LR	LR	01 12 59.2	
	comp=Z,71nm,20.0s,baz=185,slow=39						
	1.6nm,0.6s						
CHTO	**Chiang Mai**	**17.87**	**6**	Pn	**Pn**	**01 05 35.9**	**-2.4**
CRAI	**Chiangrai**	**19.46**	**10**	P	**P**	**01 05 55.4**	**-0.9**
AZL	**Aizawl**	**23.02**	**350**	*e*P	**P**	**01 06 34.0**	**-0.6**
TOLI2	**Tolitoli**	**23.88**	**89**	P	**P**	**01 06 42.8**	**-0.2**
HYBB	**Hyderabad (bro**	**24.36**	**313**	*e*P	**P**	**01 06 45.6**	**-1.9**
HYBB				*e*pP	**sP**	**01 06 58.2**	**-0.4**
KMI	**Kunming**	**24.69**	**13**	⇑P	**P**	**01 06 53.8**	**+3.2**
KMI				pP	sP	01 07 01.1	-1.6
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				LR	LR		
	comp=N,270nm,12.5s						
KMI				LR	LR		
	comp=E,260nm,12.9s						
KMI				LR	LR		
	comp=Z,280nm,11.5s						
KOHI	**KOHIMA**	**24.78**	**354**	*e*P	**P**	**01 06 51.1**	**-0.1**
SHL	**Shillong**	**24.95**	**349**	*e*P	**P**	**01 06 52.6**	**-0.3**
BOK	**Bokaro**	**25.10**	**336**	*e*P	**P**	**01 06 55.4**	**+1.3**
H08S2	**Diego Garcia H**	**25.79**	**250**	T	T	01 34 05.0	
	baz=71,slow=75,SNR=1063						
H08S3	**Diego Garcia H**	**25.80**	**250**	T	T	01 33 48.3	
	baz=71,slow=75,SNR=1072						
H08S1	**Diego Carcia H**	**25.81**	**250**	T	T	01 33 55.4	
	baz=71,slow=75,SNR=535						
PZH	**PanZhiHua**	**25.83**	**10**	P	**P**	**01 07 03.0**	**+2.2**
PZH				S	**S**	**01 11 25.1**	**-3.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
PZH				LR	LR		
	comp=N,350nm,13.9s						
PZH				LR	LR		
	comp=E,340nm,15.7s						
PZH				LR	LR		
	comp=Z,470nm,15.7s						
LKP	**Lekhapani**	**26.25**	**358**	*e*P	**P**	**01 07 06.3**	**+1.8**
BATI	**Baumata**	**28.85**	**113**	LR	LR	01 20 09.4	
	comp=Z,205nm,19.8s,baz=156,slow=39						
LSA	**Lhasa**	**29.11**	**350**	P	**P**	**01 07 30.8**	**+0.2**
LSA				IAmb	IAmb	01 07 33.1	
	comp=Z,7.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**34.03**	**125**	P	**P**	**01 08 14.0**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=248,slow=3.6,SNR=7.0						
	comp=Z,2.9nm,0.8s						
XAN	**Xi'an**	**34.79**	**18**	P	**P**	**01 08 20.4**	**+0.5**
XAN				pP	pP	01 08 27.0	-1.5
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				LR	LR		
	comp=N,220nm,11.7s						
XAN				LR	LR		
	comp=E,180nm,11.3s						
XAN				LR	LR		
	comp=Z,250nm,12.9s						
LZH	**Lanzhou**	**35.55**	**10**	*e*P	P	01 08 35.1	+8.5
LZH				pP	sP	01 08 43.2	+4.4
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				LR	LR		
	comp=N,260nm,15.6s						
LZH				LR	LR		
	comp=E,420nm,18.1s						
LZH				LR	LR		
	comp=Z,200nm,18.3s						
GTA	**Gaotai**	**38.37**	**4**	*e*P	**P**	**01 08 51.0**	**+0.5**
GTA				pP	pP	01 08 56.0	-2.7
GTA				sP	sP	01 08 59.0	-2.8
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,72nm,5.4s						
GTA				LR	LR		
	comp=N,100nm,12.3s						
GTA				LR	LR		
	comp=E,92nm,10.1s						
GTA				LR	LR		
	comp=Z,130nm,10.5s						
H01W3	**Cape Leeuwin H**	**39.13**	**157**	T	T	01 50 25.2	
	baz=333,slow=76,SNR=222						
H01W2	**Cape Leeuwin H**	**39.14**	**157**	T	T	01 50 26.1	
	baz=333,slow=76,SNR=250						
H01W1	**Cape Leeuwin H**	**39.14**	**157**	T	T	01 50 27.9	
	baz=333,slow=76,SNR=185						
HHC	**Hu-ho-hao-te**	**41.88**	**17**	*e*P	**P**	**01 09 21.7**	**+2.1**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,70nm,5.5s						
WB0	**Warramunga Arr**	**42.13**	**121**	P	**P**	**01 09 20.9**	**-0.9**
WB0				IAmb	IAmb	01 09 22.9	
	comp=Z,5.5nm,0.9s						
WRA	**Warramunga Arr**	**42.16**	**122**	P	**P**	**01 09 22.7**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=301,slow=9.0,SNR=22						
WRA				pP	**pP**	**01 09 30.3**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=300,slow=9.0,SNR=10						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**42.16**	**122**	P	**P**	**01 09 20.8**	**-1.2**
BJT	**Baijiatuan**	**42.66**	**22**	P	**P**	**01 09 26.4**	**+0.6**
BJT				IAmb	IAmb	01 09 38.0	
	comp=Z,7.3nm,0.8s						
WMQ	**Urumqi**	**43.47**	**350**	*e*P	**P**	**01 09 34.7**	**+2.4**
ASAR	**Alice Springs**	**43.48**	**127**	P	**P**	**01 09 33.8**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=300,slow=8.0,SNR=7.7						
ASAR				pP	**pP**	**01 09 41.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=303,slow=8.5,SNR=5.1						
	comp=Z,0.8nm,0.7s						
BOOM	**Boomskoye usch**	**45.44**	**338**	P	P	01 09 57.9	+10
AAK	**Ala-Archa**	**46.12**	**337**	P	**P**	**01 09 53.8**	**+0.2**
KSAR	**Wonju Array Be**	**46.20**	**35**	P	**P**	**01 09 54.2**	**+0.1**
KSRS	**Korea Array**	**46.23**	**35**	P	**P**	**01 09 54.6**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=224,slow=8.9,SNR=11						
KSRS				pP	**pP**	**01 10 02.9**	**0.0**
	comp=Z,4.4nm,0.9s,baz=223,slow=8.7,SNR=6.1						
	comp=Z,2.8nm,0.8s						
KS19	**Wonju Array Si**	**46.23**	**35**	P	**P**	**01 09 53.4**	**-1.0**
KS19				IAmb	IAmb	01 09 55.8	
	comp=Z,6.7nm,0.8s						
MK31	**Makanchi Array**	**47.41**	**346**	P	**P**	**01 10 03.2**	**-0.3**
MK31				IAmb	IAmb	01 10 13.4	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**47.41**	**346**	P	**P**	**01 10 03.0**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=126,slow=7.9,SNR=26						
MKAR	**Makanchi Array**	**47.41**	**346**	P	**P**	**01 10 04.0**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=163,slow=8.3,SNR=16						
MKAR				pP	**pP**	**01 10 12.2**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=162,slow=7.5,SNR=9.2						
	comp=Z,3.6nm,0.7s						
MKAR	**Makanchi Array**	**47.41**	**346**	P	**P**	**01 10 02.7**	**-0.8**
MKAR	**Makanchi Array**	**47.41**	**346**				
	comp=Z,3.3nm,0.7s						
SONM	**Songino Array**	**47.42**	**9**	P	**P**	**01 10 04.5**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=192,slow=8.9,SNR=11						
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**47.42**	**9**	P	**P**	**01 10 02.7**	**-1.0**
SONM				IAmb	IAmb	01 10 05.5	
	comp=Z,2.5nm,0.9s						
ULN	**Ulaanbaatar**	**47.56**	**9**	P	**P**	**01 10 06.1**	**+1.3**
ULN				IAmb	IAmb	01 10 17.6	
	comp=Z,3.8nm,0.9s						
KK31	**Karatay Array**	**48.15**	**334**	P	**P**	**01 10 09.7**	**+0.4**
KK31				IAmb	IAmb	01 10 25.1	
	comp=Z,4.8nm,1.2s						
KKAR	**Karatay Array**	**48.15**	**334**	P	**P**	**01 10 09.4**	**+0.1**
KKAR				IAmb	IAmb	01 10 25.1	
	comp=Z,4.8nm,1.2s						
KURK	**Kurchatov**	**51.96**	**345**	P	**P**	**01 10 37.6**	**-0.3**
KURK				IAmb	IAmb	01 10 39.6	
	comp=Z,8.8nm,1.4s						
BNX	**BinXian**	**52.05**	**27**	⇓P	**P**	**01 10 39.5**	**+0.8**
BNX				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,130nm,7.7s						
USRK	**Ussuriysk Ar.**	**53.14**	**31**	P	**P**	**01 10 48.1**	**+1.2**
	comp=Z,6.4nm,0.8s,baz=245,slow=6.2,SNR=9.8						
USRK				pP	**pP**	**01 10 55.8**	**+0.1**
	comp=Z,5.7nm,0.8s,baz=248,slow=8.0,SNR=4.7						
	comp=Z,6.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.14**	**31**	P	**P**	**01 10 46.2**	**-0.7**
ZAA0	**Zalesovo Array**	**53.76**	**351**	P	**P**	**01 10 51.1**	**-0.1**
ZALV	**Zalesovo Beam**	**53.76**	**351**	P	**P**	**01 10 51.8**	**+0.6**
	comp=Z,8.4nm,0.9s,baz=182,slow=5.5,SNR=22						
ZALV				pP	**pP**	**01 10 59.9**	**+0.3**
	comp=Z,10nm,0.5s,baz=173,slow=7.0,SNR=21						
	comp=Z,8.4nm,0.9s						
ZALV	**Zalesovo Beam**	**53.76**	**351**	P	**P**	**01 10 51.3**	**+0.1**
BRVK	**Borovoye**	**56.45**	**341**	P	**P**	**01 11 10.7**	**0.0**
BRVK				IAmb	IAmb	01 11 19.6	
	comp=Z,1.9nm,0.9s						
ABKAR	**Akbulak array**	**57.59**	**332**	P	**P**	**01 11 18.6**	**-0.2**
BURAR	**Bucovina Array**	**77.02**	**319**	P	**P**	**01 13 21.9**	**-0.1**
ARCES	**ARCESS Array B**	**82.67**	**340**	P	**P**	**01 13 52.5**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=19,slow=5.1,SNR=6.9						
ARCES				pP	**pP**	**01 14 01.2**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=95,slow=4.3,SNR=1.5						
	comp=Z,1.2nm,0.8s						
TOA0	**Torodi Ar. Sit**	**94.86**	**283**	P	**P**	**01 14 49.8**	**-1.9**
TORD	**Torodi Ar. Bea**	**94.86**	**283**	P	**P**	**01 14 49.8**	**-1.9**
TORD				IAmb	IAmb	01 14 59.1	
	comp=Z,1.7nm,1.1s						
TXAR	**Lajitas Array**	**144.04**	**31**	PKP	PKPbc	01 21 04.2	+1.0
	comp=Z,0.5nm,0.8s,baz=183,slow=0.8,SNR=5.6						
CPUP	**Villa Florida**	**144.62**	**222**	PKP	**PKPdf**	**01 21 06.7**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=140,slow=3.6,SNR=4.8						

IDC 12 01:04:26.2±8.4,4°.92S×155°.17E,h64km±61km,mb3.4/4, mbtmp3.8/5,ML3.9/1,Error ellipse: s-maj=59.3km s-min=34.0km az=91.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.19**	**281**	P	Pn	01 05 14.1	0.0
	12nm,0.3s,baz=243,slow=1.7,SNR=8.9						
KRVT				S	Sn	01 05 51.6	+0.7
	98nm,0.4s,baz=77,slow=23,SNR=6.5						
	71nm,0.4s						
WRA	**Warramunga Arr**	**25.18**	**232**	P	P	01 09 44.6	-1.3
	1.0nm,0.5s,baz=55,slow=9.8,SNR=16						
	1.0nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**25.89**	**26**	T	T	01 37 38.4	
	baz=207,slow=73,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**25.89**	**26**	T	T	01 37 48.0	
	baz=207,slow=73,SNR=13						
H11S1	**WAKE ISLAND Hy**	**25.91**	**26**	T	T	01 37 37.2	
	baz=207,slow=73,SNR=9.0						
ASAR	**Alice Springs**	**27.71**	**226**	P	P	01 10 09.6	+0.9
	0.3nm,0.6s,baz=61,slow=9.6,SNR=2.2						
	0.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**31.70**	**243**	P	P	01 10 43.7	-0.2
	0.6nm,0.5s,baz=61,slow=10,SNR=1.2						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**81.97**	**318**	P	P	01 16 40.6	+1.3
	0.4nm,0.6s,baz=94,slow=5.8,SNR=2.9						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**152.59**	**289**	PKPbc	PKPbc	01 24 16.1	-0.4
	0.3nm,0.4s,baz=42,slow=1.7,SNR=3.1						

IDC ***12*** *01:14:45.6±1.0,10°.43S×160°.78E,h0km,mb4.4/12, mbtmp4.4/13,ML4.3/1,MS3.9/1,Error ellipse: s-maj=27.6km s-min=17.8km az=128.0*

BJI ***12*** *01:14:46.0±0.0,10°.40S×160°.70E,h10km,mb4.8/20, mB4.9/12*

NEIC ***12*** *01:14:47.6±1.1,10°.34S±0°.09×160°.71E±0°.09,h7km±1km, mb4.8/52,Error ellipse: s-maj=16.4km s-min=7.9km az=48.0*

NOU ***12*** *01:14:53.7,10°.11S×160°.51E,h54km,mb4.8/15,Solomon Islands*

ISC 12 01:14:52.4±0.5,10°.27S±0°.07×160°.61E±0°.08,h42km,n109, σ1ŝ52/89,mb4.8/45,1C-2D,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.06**	**322**	Pn	**Pn**	**01 15 10.6**	**-0.2**
	209nm,0.3s,baz=185,slow=9.7,SNR=42						
HNR				Sn	**Sn**	**01 15 24.7**	**+0.3**
	1µm,0.3s,baz=188,slow=14,SNR=11						
HNR	**Honiara**	**1.06**	**322**	Pn	**Pn**	**01 15 10.4**	**-0.4**
HNR				Sg	**Sn**	**01 15 25.1**	**+0.8**
HNR	**Honiara**	**1.06**	**322**	P	**Pn**	**01 15 10.1**	**-0.7**
PMG	**Port Moresby**	**13.28**	**273**	LR	LR	01 22 49.7	
	comp=Z,542nm,19.9s,baz=89,slow=36						
MANU	**Manus Island**	**15.49**	**301**	Pn	**Pn**	**01 18 27.1**	**-1.0**
TARA	**Tarawa**	**16.84**	**47**	Pn	**Pn**	**01 18 43.1**	**-2.1**
TARA				IAmb	IAmb	01 18 44.4	
	comp=Z,139nm,1.5s						
CTA	**Charters Tower**	**16.94**	**233**	Pn	**Pn**	**01 18 46.5**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=66,slow=10,SNR=18						
	comp=Z,18nm,0.7s						
CTA	**Charters Tower**	**16.94**	**233**	P	**Pn**	**01 18 46.6**	**+0.1**
CTAO	**Charters Tower**	**16.94**	**233**		**Pn**	**01 18 45.9**	**-0.6**
CTAO	**Charters Tower**	**16.94**	**233**	P	**Pn**	**01 18 46.5**	**+0.1**
COEN	**Coen**	**17.44**	**256**		**Pn**	**01 18 52.0**	**-0.7**
COEN				IAmb	IAmb	01 18 58.8	
	comp=Z,160nm,2.0s						
COEN	**Coen**	**17.44**	**256**	P	**P**	**01 18 53.4**	**-0.1**
EIDS	**Eidsvold**	**17.53**	**210**		**Pn**	**01 18 53.1**	**-0.7**
EIDS	**Eidsvold**	**17.53**	**210**	P	**P**	**01 18 55.9**	**+1.4**
RMQ	**Roma**	**19.64**	**213**	P	**Pn**	**01 19 19.6**	**+0.3**
QLP	**Quilpie**	**22.42**	**221**	P	**P**	**01 19 49.1**	**+1.4**
QIS	**Mount Isa**	**22.66**	**241**	P	**P**	**01 19 50.4**	**+0.1**
SMPI	**Sarmi**	**23.26**	**289**	P	**P**	**01 19 56.1**	**-0.3**
	comp=Z,2µmcomp=Z,37nm,1.1s						
CMSA	**Cobar Meteorol**	**25.28**	**211**	P	**P**	**01 20 15.0**	**0.0**
INKA	**Innaminka**	**25.52**	**224**	P	**P**	**01 20 17.7**	**+0.5**
WR0	**Warramunga Arr**	**26.91**	**246**	P	**P**	**01 20 29.4**	**-0.5**
WB0	**Warramunga Arr**	**26.99**	**246**	P	**P**	**01 20 29.9**	**-0.7**
WB0				IAmb	IAmb	01 20 31.3	
	comp=Z,23nm,0.9s						
WRAB	**Tennant Creek**	**27.08**	**246**	P	**P**	**01 20 30.6**	**-0.8**
WRAB				IAmb	IAmb	01 20 32.0	
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**27.08**	**246**	P	**P**	**01 20 31.3**	**-0.1**
WRA	**Warramunga Arr**	**27.09**	**246**	P	**P**	**01 20 31.1**	**-0.4**
	comp=Z,12nm,0.8s,baz=74,slow=9.8,SNR=49						
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**27.09**	**246**	P	**P**	**01 20 30.7**	**-0.8**
ASAR	**Alice Springs**	**28.74**	**239**	P	**P**	**01 20 45.0**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=62,slow=10,SNR=16						
	comp=Z,1.3nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**29.20**	**12**	T	T	01 49 44.8	
	baz=194,slow=76,SNR=58						
H11S3	**WAKE ISLAND Hy**	**29.20**	**12**	T	T	01 49 44.7	
	baz=194,slow=76,SNR=35						
OOD	**Oodnadatta**	**29.21**	**230**	P	**P**	**01 20 49.8**	**-0.4**
H11S1	**WAKE ISLAND Hy**	**29.22**	**12**	T	T	01 49 46.4	
	baz=194,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	**30.43**	**12**	T	T	01 51 29.2	
	baz=192,slow=76,SNR=53						
H11N3	**WAKE ISLAND Hy**	**30.44**	**12**	T	T	01 51 29.8	
	baz=192,slow=76,SNR=51						
H11N2	**WAKE ISLAND Hy**	**30.45**	**12**	T	T	01 51 30.7	
	baz=192,slow=76,SNR=61						
KNRA	**Kununurra**	**31.48**	**257**	P	**P**	**01 21 09.5**	**-0.9**
KNRA	**Kununurra**	**31.48**	**257**	P	**P**	**01 21 10.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**34.74**	**253**	P	**P**	**01 21 38.4**	**-0.5**
	comp=Z,16nm,0.7s,baz=88,slow=7.3,SNR=43						
	comp=Z,16nm,0.7s						
FITZ	**Fitzroy Crossi**	**34.74**	**253**	P	**P**	**01 21 37.4**	**-1.5**
FITZ	**Fitzroy Crossi**	**34.74**	**253**	P	**P**	**01 21 38.4**	**-0.5**
GTOI	**Gorontalo**	**38.95**	**284**	P	**P**	**01 22 11.0**	**-3.7**
JMN	**Monobe**	**50.60**	**331**	P	**P**	**01 23 47.5**	**+0.2**
MJAR	**Matsushiro Arr**	**51.11**	**337**	P	**P**	**01 23 50.5**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=164,slow=9.5,SNR=6.5						
	comp=Z,2.3nm,0.8s						
KSCHJ	**Chungju**	**56.03**	**329**	P	**P**	**01 24 26.9**	**-0.2**
KSRS	**Korea Array**	**56.50**	**329**	P	**P**	**01 24 31.3**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=143,slow=7.3,SNR=20						
	comp=Z,3.3nm,0.

SONM IAmb IAmb 01 26 32.5
comp=Z,13nm,1.6s
KDAK Kodiak Island 77.80 24 P P 01 26 43.9 -1.2
KDAK IAmb IAmb 01 26 46.6
comp=Z,8.1nm,0.8s
BILL Bilibino 78.21 2 P P 01 26 48.5 +1.3
SVW2 Sparrevohn 79.03 20 IAmb IAmb 01 26 54.2
comp=Z,11nm,0.8s
CNPM China Poot 79.50 23 IAmb IAmb 01 26 56.2
comp=Z,10.0nm,0.8s
QSPA South Pole Qui 79.73 180 P P 01 26 57.5 +1.7
M19K Big River Lodg 80.01 20 IAmb IAmb 01 26 59.5
comp=Z,8.8nm,0.8s
L19K White Mountain 80.06 20 P P 01 26 58.0 +0.6
CAST Castle Rocks 81.83 20 IAmb IAmb 01 27 07.6
comp=Z,7.9nm,0.8s
KTH Kantishna Hill 82.31 20 IAmb IAmb 01 27 09.9
comp=Z,6.2nm,0.8s
I21K Tanana 83.07 18 IAmb IAmb 01 27 14.6
comp=Z,7.5nm,1.1s
MCK McKinley 83.09 20 P P 01 27 12.6 -0.9
MLY Manley 83.36 19 IAmb IAmb 01 27 16.0
comp=Z,3.7nm,0.7s
MAW Mawson 83.52 202 P P 01 27 15.4 -0.2
NEA2 Nenana 83.61 20 IAmb IAmb 01 27 16.6
comp=Z,5.3nm,0.8s
MDM Murphy Dome 84.12 19 IAmb IAmb 01 27 19.2
comp=Z,5.6nm,0.9s
HDA Harding Lake 84.20 20 IAmb IAmb 01 27 20.1
comp=Z,5.8nm,1.0s
H23K Yukon River 84.26 18 IAmb IAmb 01 27 20.9
comp=Z,4.8nm,0.8s
M26K Nabesna, AK 84.44 23 IAmb IAmb 01 27 22.6
comp=Z,6.1nm,0.8s
ILAR Eielson Array 84.45 20 P P 01 27 19.5 -0.8
comp=Z,1.3nm,0.6s,baz=261,slow=4.7,SNR=10
comp=Z,1.3nm,0.6s
DOT Dot Lake 84.76 22 P P 01 27 22.2 +0.3
DOT IAmb IAmb 01 27 23.5
comp=Z,5.7nm,1.0s
WMQ Urumqi 85.00 316 *e*P **P 01 27 25.4 +1.7**
BCAR Beaver Creek A 85.27 23 P **P 01 27 25.5 +1.0**
HYBB Hyderabad (bro 85.58 288 *e*PKiKP **PKiKP 01 32 36.5 -0.7**
HYBB *ep*PKiKP **pPKiKP 01 32 39.0 -10**
HYBB *e*SKiKP **SKiKP 01 36 11.2 +2.9**
HYBB *e*SKSac **SKSac 01 37 51.5 +1.8**
K27K Chicken 85.70 22 IAmb IAmb 01 27 29.4
comp=Z,9.3nm,1.3s
EGAK Eagle 86.44 21 IAmb IAmb 01 27 32.3
comp=Z,5.2nm,0.9s
DAWY Dawson 86.71 22 IAmb IAmb 01 27 33.9
comp=Z,7.7nm,1.2s
PGC Sidney 88.51 40 P P 01 27 40.6 +0.1
NVAR Mina Array Bea 89.42 51 P P 01 27 45.7 +0.4
comp=Z,0.6nm,0.8s,baz=247,slow=6.0,SNR=5.0
comp=Z,0.6nm,0.8s
NVAR Mina Array Bea 89.42 51 P P 01 27 45.0 -0.3
MKAR Makanchi Array 89.53 318 P P 01 27 45.5 +0.1
comp=Z,0.9nm,0.8s,baz=94,slow=6.8,SNR=10
comp=Z,0.9nm,0.8s
MKAR Makanchi Array 89.53 318 P P 01 27 45.8 +0.4
PRN Pahroc Range 91.71 52 P P 01 27 54.6 -1.3
PRN IAmb IAmb 01 27 58.1
comp=Z,6.0nm,1.2s
HLID Hailey 93.38 47 P P 01 28 03.7 +0.1
SMCO Snowmass 98.26 52 P P 01 28 24.8 -1.4
SMCO IAmb IAmb 01 28 27.4
comp=Z,3.7nm,1.4s
ARCES ARCESS Array B 114.27 344 PKP PKPdf 01 33 26.4 -0.6
comp=Z,2.2nm,0.9s,baz=66,slow=3.0,SNR=6.9
FINES FINESS Array B 119.14 337 PKP **PKPdf 01 33 36.0 -0.5**
comp=Z,2.9nm,1.0s,baz=145,slow=7.0,SNR=3.6
AKASG Malin Array Be 123.40 325 PKP **PKPdf 01 33 44.6 -0.4**
comp=Z,0.3nm,0.5s,baz=69,slow=1.6,SNR=4.7
NOA NORSAR Array B 124.54 342 PKP **PKPdf 01 33 46.6 -0.3**
comp=Z,0.5nm,0.7s,baz=65,slow=5.3,SNR=3.7
GERES GERESS Array B 132.66 331 PKP **PKPdf 01 34 03.1 +0.2**
comp=Z,0.3nm,0.5s,baz=48,slow=2.0,SNR=5.7
ESDC Sonseca Array 147.66 337 PKPbc **PKPbc 01 34 33.1 +0.3**
comp=Z,1.4nm,1.0s,baz=14,slow=4.1,SNR=6.4
TORD Torodi Ar. Bea 159.16 280 PKPab **PKPab 01 35 25.1 +0.9**
comp=Z,0.9nm,0.7s,baz=70,slow=4.8,SNR=4.8

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*BJI **12** 01:26:34.3±0.0,22.5°S×173.1°E,h10km,mb5.7/78, mB6.6/76,Ms7.0/93,Ms7 6.9/86*
*NEIC **12** 01:26:34.8,22.505S×173.107E,h13km,Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-1.15; $M_{\theta\theta}$-2.18; $M_{\phi\phi}$3.33; $M_{r\theta}$0.45; $M_{r\phi}$-3.87; $M_{\theta\phi}$0.52; Fault plane solution: $M_0$4.91000×10^{19} NP1:ϕ_s288.20000°, δ80.31000°,λ-173.41000°. NP2:ϕ_s197.08000°, δ83.50000°,λ-9.76000°. Principal axes: T 5.3420, Plg2.0000°, Azm243.0000°; N -1.0338, Plg78.0000°, Azm344.0000°; P -4.3083, Plg11.0000°, Azm152.0000°;*
*MOS **12** 01:26:35.8±1.1,22.255S×173.102E,h27km,mb6.4/49, MS7.1/35 Error ellipse: s-maj=8.1km s-min=6.2km az=120.0 Broadband fault plane solution: P waves. NP1:ϕ_s288.00000°,δ82.00000°,λ158.00000°. NP2: ϕ_s21.00000°,δ68.00000°,λ8.00000°. Principal axes: T Plg21.0000°, Azm242.0000°; N Plg67.0000°, Azm90.0000°; P Plg10.0000°, Azm336.0000°;*
*NEIC **12** 01:26:36.3±1.8,22.248S±0.07×173.12E±0.06,h16km±2km, mb6.3/480,Ms_20 7.2/353,Mwb7.1/52,Mww7.2 Error ellipse: s-maj=9.6km s-min=8.0km az=181.0*
*IDC **12** 01:26:36.8±4.5,22.253S×173.12E,h28km±30km,mb5.9/33, mbtmp6.0/36,ML6.8/2,MS7.0/56,Error ellipse: s-maj=12.2km s-min=10.3km az=50.0*
*NOU **12** 01:26:38.8,22.615S×173.18E,h34km,ML7.1/166, Southeast of Loyalty Islands*
*GCMT **12** 01:26:44.3±0.1,22.256S×173.107E,h22km,MW7.2/175, Moment Tensor Solution. s175,c476; s174,c864; Duration: 963 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.88±.02; $M_{\theta\theta}$-3.76±.02; $M_{\phi\phi}$4.63±.02; $M_{r\theta}$-0.18±.09; $M_{r\phi}$-5.31±.02; $M_{\theta\phi}$2.06±.09; Best double couple: $M_0$7.03900×10^{19} NP1:ϕ_s19.00000°,δ87.00000°, λ15.00000°. NP2:ϕ_s288.00000°,δ75.00000°,λ176.00000°. Principal axes: T 7.6430, Plg13.0000°, Azm245.0000°; N -1.2170, Plg75.0000°, Azm32.0000°; P -6.4340, Plg8.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **12** 01:26:47,22.495S×173.120E,h16km,Moment Tensor Solution. Duration: 22s0 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.57; $M_{\theta\theta}$-3.79; $M_{\phi\phi}$4.36; $M_{r\theta}$0.86; $M_{\theta\phi}$-5.67; $M_{r\phi}$4.49; Fault plane solution: $M_0$8.36000×10^{19} NP1: ϕ_s287.00000°,δ57.00000°,λ-179.00000°. NP2: ϕ_s197.00000°,δ89.00000°,λ-33.00000°. Principal axes: T 8.7422, Plg22.0000°, Azm247.0000°; N -0.8255, Plg57.0000°, Azm16.0000°; P -7.9168, Plg23.0000°, Azm147.0000°;*

ISC 12 01:26:35.5±0.3,22.63S±0.03,173.03E±0.03,h13km,1km, h13km;pP-P,n2232,σ2≥20/2289,mb6.4/457,MS7.2/317, 197C-143D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.77**	**283**	Pn	**Pn**	**01 27 47.0**		**-0.1**
MARNC	**Mare, Loyalty**	**4.77**	**283**	P	**Pn**	**01 27 48.3**		**+1.2**
MARNC	**Mare, Loyalty**	**4.77**	**283**	⇑P	**Pn**	**01 27 47.0**		**-0.1**
PINNC	**Pines Island,**	**5.16**	**269**		**Pn**	**01 27 53.1**		**+0.7**
PINNC	**Pines Island,** 25µm,0.6s	**5.16**	**269**	P	**Pn**	**01 27 54.9**		**+2.5**
YATNC	**Mamie plateau,** 9µm,0.5s	**5.71**	**274**	P	**Pn**	**01 28 01.5**		**+1.5**
OUENC	**Ouen Island, N**	**5.72**	**271**	Pn	**Pn**	**01 28 01.5**		**+1.3**
OUENC	**Ouen Island, N** 7µm,1.3s	**5.72**	**271**	P	**Pn**	**01 28 02.2**		**+2.0**
I22FR	**PORTLAGUERRE I** baz=93,slow=12	**5.74**	**273**	Pn	**Pn**	**01 28 02.1**		**+1.7**
ONTNC	**Ouen Toro**	**6.09**	**272**	Pn	**Pn**	**01 28 06.3**		**+1.1**
ONTNC	**Ouen Toro** 15µm,1.0s	**6.09**	**272**	P	**Pn**	**01 28 07.4**		**+2.2**
ONTNC	**Ouen Toro**	**6.09**	**272**	⇑P	**Pn**	**01 28 06.2**		**+1.1**
DZM	**Mont Dzumac** 3µm,0.3s,baz=140,slow=14,SNR=4646	**6.12**	**274**	*e*Pn	**Pn**	**01 28 06.6**		**+0.9**
DZM	**Mont Dzumac** 10µm,0.9s	**6.12**	**274**	*e*LR	LR	**01 28 07.0**		**+1.3**
DZM	**Mont Dzumac** 6µm,0.8s	**6.12**	**274**	P	**Pn**	**01 28 08.0**		**+2.3**
DZM	**Mont Dzumac**	**6.12**	**274**	⇑P	**Pn**	**01 28 06.4**		**+0.7**
NOUC	**Port Laguerre** 8µm,0.7s	**6.25**	**274**	P	**Pn**	**01 28 09.6**		**+2.2**
RTV	**Rentapao** 48µm,1.0s	**6.46**	**317**	P	Pn	01 28 15.2		+4.8
DVP	**Devils Point** 124µm,1.0s	**6.66**	**316**	P	**Pn**	**01 28 17.2**		**+4.1**
MSVF	**Nonsavu** 59nm,0.3s,baz=237,slow=17,SNR=97	**6.78**	**45**	Pn	**Pn**	**01 28 11.0**		**-3.8**
MSVF	19nm,0.3s,baz=137,slow=14,SNR=1.1			Sn	**Sn**	**01 29 39.0**		**+7.1**
MSVF	comp=Z,2932µm,21.7s,baz=199,slow=36 171nm,0.5s			LR	LR	01 30 34.5		
MSVF	**Nonsavu**	**6.78**	**45**	Pn	**Pn**	**01 28 11.4**		**-3.4**
MSVF	**Nonsavu**	**6.78**	**45**	⇑*i*P	**Pn**	**01 28 11.4**		**-3.4**
MSVF	comp=Z,234nm,0.5s			pmax	pmax			
MSVF	**Nonsavu**	**6.78**	**45**	P	**Pn**	**01 28 11.9**		**-2.9**
MSVF	comp=Z,5µm,1.2s **Nonsavu**	**6.78**	**45**	⇑P	**Pn**	**01 28 11.2**		**-3.5**
NFK	**Norfolk Island** baz=8.1,SNR=464	**7.86**	**215**	P	**Pn**	**01 28 30.3**		**+0.8**
NFK	**Norfolk Island** comp=Z,12µm,0.6s	**7.86**	**215**	P	**Pn**	**01 28 30.5**		**+0.9**
NFK	**Norfolk Island**	**7.86**	**215**	⇑P	**Pn**	**01 28 29.6**		**+0.1**
KOUNC	**Koumac, New Ca**	**8.39**	**283**	Pn	**Pn**	**01 28 38.5**		**+1.6**
KOUNC	**Koumac, New Ca** comp=Z,7µm,1.1s	**8.39**	**283**	P	**Pn**	**01 28 39.8**		**+3.0**
KOUNC	**Koumac, New Ca**	**8.39**	**283**	⇑P	**Pn**	**01 28 38.6**		**+1.8**
LKBA	**Tubou, Lakemba** comp=Z,47nm,0.7s	**8.81**	**62**	P	**Pn**	**01 28 40.4**		**-2.2**
TAVE	**Taveuni** comp=Z,8µm,1.9s	**8.89**	**50**	P	**Pn**	**01 28 41.0**		**-2.6**
DGTI	**Dogotuki** comp=Z,2µm,2.1s	**8.92**	**46**	P	**Pn**	**01 28 43.4**		**-0.7**
RAO	**Raoul Island** comp=Z,233nm,0.5s,baz=288,slow=23,SNR=1.4	**10.48**	**131**	Pn	**Pn**	**01 29 03.9**		**-1.6**
RAO	comp=Z,39nm,0.3s,baz=71,slow=22,SNR=1.0			Sn	**Sn**	**01 31 08.6**		**+5.8**
RAO	comp=Z,1011µm,19.9s,baz=356,slow=33			LR	LR	01 32 25.2		
RAO	**Raoul Island**	**10.48**	**131**		**Pn**	**01 29 06.2**		**+0.7**
RAO	**Raoul Island**	**10.48**	**131**	P	**Pn**	**01 29 06.2**		**+0.7**
RAO	**Raoul Island** comp=Z,2µm,1.3s	**10.48**	**131**	P	**Pn**	**01 29 05.5**		**0.0**
OUZ	**Omahuta**	**12.56**	**178**	Pn	**Pn**	**01 29 36.8**		**+2.9**
OUZ	**Omahuta** comp=Z,645nm,1.9s	**12.56**	**178**	P	**Pn**	**01 29 35.2**		**+1.3**
OUZ	**Omahuta**	**12.56**	**178**	⇑P	**Pn**	**01 29 35.6**		**+1.8**
ABAZ	**Army Bay**	**14.02**	**174**	P	**P**	**01 29 58.9**		**-2.7**
MBAZ	**Motutapu North**	**14.19**	**174**	P	**P**	**01 30 01.8**		**-1.8**
KUZ	**Kuaotunu**	**14.26**	**171**	P	**Pn**	**01 29 59.9**		**+2.7**
AWAZ	**Awhitu Peninsu**	**14.46**	**175**	P	**P**	**01 30 03.8**		**-2.8**
MKAZ	**Moumakai**	**14.55**	**173**	P	**Pn**	**01 30 03.7**		**+2.6**
TOZ	**Tahuroa Road**	**15.21**	**172**	P	**P**	**01 30 13.6**		**-1.3**
FUNA	**Funafuti**	**15.22**	**24**	Pn	**Pn**	**01 30 08.0**		**-2.2**
FUNA	**Funafuti** comp=Z,1µm,1.8s	**15.22**	**24**	P	**Pn**	**01 30 10.6**		**+0.4**
FUNA	**Funafuti**	**15.22**	**24**	⇑P	**Pn**	**01 30 11.5**		**+1.2**
LHI	**Lord Howe Isla** baz=16,SNR=25	**15.26**	**232**	P	**Pn**	**01 30 11.9**		**+1.2**
LHI	**Lord Howe Isla**	**15.26**	**232**	Pn	**Pn**	**01 30 12.7**		**+2.1**
LHI	**Lord Howe Isla** comp=Z,3µm,1.5s	**15.26**	**232**	P	**P**	**01 30 13.7**		**-1.8**
LHI	**Lord Howe Isla**	**15.26**	**232**	⇑P	**Pn**	**01 30 11.7**		**+1.0**
KMRZ	**Kaimai**	**15.38**	**171**	P	**P**	**01 30 21.1**		**+4.3**
OMRZ	**Omania**	**15.70**	**170**	P	**P**	**01 30 24.8**		**+4.4**
TLZ	**Tolley Road**	**15.80**	**173**	P	**P**	**01 30 24.8**		**+3.3**
TARZ	**Mount Tarawera**	**15.84**	**170**	P	**P**	**01 30 26.4**		**+4.3**
HIZ	**Hauiti**	**15.91**	**175**	P	**P**	**01 30 24.8**		**+2.0**
HRRZ	**Handcock Road**	**15.96**	**171**	P	**P**	**01 30 27.1**		**+3.8**
URZ	**Urewera** comp=Z,424nm,1.1s,baz=4.9,slow=10,SNR=45	**15.97**	**168**	Pn	**P**	**01 30 21.8**		**-1.6**
URZ	comp=Z,1.0nm,0.3s,baz=3.6,slow=23,SNR=0.5			Sn	**S**	**01 33 28.6**		**-2.2**
URZ	comp=Z,1253µm,20.5s,baz=22,slow=32			LR	LR	01 35 17.0		
URZ	**Urewera**	**15.97**	**168**	⇓P	**P**	**01 30 21.8**		**-1.6**
PRRZ	**Plateau Road**	**16.08**	**170**	P	**P**	**01 30 28.1**		**+3.4**
NIUE	**Niue** baz=16,SNR=18	**16.32**	**81**	P	**Pn**	**01 30 21.4**		**-3.1**
NIUE	**Niue**	**16.32**	**81**		**Pn**	**01 30 22.0**		**-2.4**
NIUE	comp=Z,2µm,1.1s			IAmb	IAmb	01 30 28.8		
NIUE	**Niue** comp=Z,2µm,1.4s	**16.32**	**81**	P	**Pn**	**01 30 24.6**		**+0.2**
NIUE	**Niue**	**16.32**	**81**	⇑P	**Pn**	**01 30 19.7**		**-4.7**
MRHZ	**Matea Rd**	**16.41**	**171**	P	**P**	**01 30 29.8**		**+1.4**
MTHZ	**Maungataniwha**	**16.50**	**169**	P	**P**	**01 30 30.7**		**+1.4**
SNGZ	**Shannon Statio**	**16.52**	**168**	P	**P**	**01 30 30.9**		**+1.4**
TMVZ	**Te Maari**	**16.60**	**173**	P	**P**	**01 30 33.1**		**+2.6**
NNVZ	**North Ngauruho**	**16.60**	**173**	P	**P**	**01 30 31.1**		**+0.6**
ETVZ	**East Tongariro**	**16.62**	**173**	P	**P**	**01 30 33.6**		**+2.9**
OTVZ	**Oturere**	**16.64**	**173**	P	**P**	**01 30 34.3**		**+3.3**
NGZ	**Ngauruhoe**	**16.64**	**173**	P	**P**	**01 30 31.2**		**+0.2**
AFI	**Afiamalu** comp=Z,3.3nm,0.3s,baz=63,slow=3.8,SNR=12	**16.82**	**62**	Pn	**Pn**	**01 30 26.0**		**-4.9**
AFI	comp=Z,233µm,20.6s,baz=240,slow=34			LR	LR	01 36 00.0		
AFI	**Afiamalu**	**16.82**	**62**	Pn	**Pn**	**01 30 26.4**		**-4.5**
AFI	**Afiamalu** comp=Z,338nm,1.1s	**16.82**	**62**	P	**Pn**	**01 30 26.4**		**-4.5**
AFI	comp=Z,1µm,2.4s **Afiamalu**	**16.82**	**62**	P	**Pn**	**01 30 28.6**		**-2.3**
AFI	**Afiamalu**	**16.82**	**62**	⇑P	**Pn**	**01 30 26.7**		**-4.3**
HNR	**Honiara** comp=Z,9µm,0.9s,baz=198,slow=5.2,SNR=46	**18.15**	**314**	P	**P**	**01 30 48.9**		**+1.3**
HNR	comp=Z,489µm,21.2s,baz=146,slow=34			LR	LR	01 36 59.0		
HNR	**Honiara**	**18.15**	**314**	P	**Pn**	**01 30 47.0**		**-0.4**
HNR	**Honiara** comp=Z,16µm,1.0s	**18.15**	**314**	P	**Pn**	**01 30 47.0**		**-0.4**
HNR	**Honiara** comp=Z,16µm,1.1s	**18.15**	**314**	P	**P**	**01 30 51.6**		**+4.0**
HNR	**Honiara**	**18.15**	**314**	⇓P	**P**	**01 30 48.8**		**+1.1**
QRZ	**Quartz Range** comp=Z,1µm,1.3s	**18.15**	**181**	P	**P**	**01 30 51.3**		**+3.8**
BFZ	**Birch Farm** comp=Z,2µm,1.2s	**18.21**	**172**	P	**P**	**01 30 49.3**		**+1.2**
SNZO	**South Karori** comp=Z,2µm,2.2s	**18.68**	**176**	P	**Pn**	**01 30 56.6**		**+2.9**
SNZO	**South Karori**	**18.68**	**176**	⇑P	**Pn**	**01 30 54.7**		**+1.0**
KHZ	**Kahutara**	**19.74**	**179**	⇑P	**Pn**	**01 31 07.0**		**+0.6**
LTZ	**Lake Taylor**	**20.11**	**182**	P	**P**	**01 31 09.7**		**+0.7**
LTZ	comp=Z,2µm,1.0s			IAmb	IAmb	01 31 19.3		
LTZ	comp=Z,1298µm,19.0s			IAMs_20	IAMs_20	01 38 03.8		
EIDS	**Eidsvold** baz=20,SNR=383	**20.23**	**258**	P	Pn	01 31 11.6		-0.8
EIDS	**Eidsvold**	**20.23**	**258**	P	Pn	01 31 12.1		-0.3
EIDS	**Eidsvold** comp=Z,7µm,1.7s	**20.23**	**258**	P	Pn	01 31 14.2		+1.8
EIDS	**Eidsvold**	**20.23**	**258**	⇑P	Pn	01 31 12.7		+0.3
ARMA	**Armidale** baz=21,SNR=320	**20.64**	**243**	P	Pn	01 31 17.8		+0.5
ARMA	**Armidale**	**20.64**	**243**	P	Pn	01 31 17.6		+0.4
ARMA	**Armidale** comp=Z,2µm,0.9s	**20.64**	**243**	P	Pn	01 31 19.5		+2.3
ARMA	**Armidale**	**20.64**	**243**	⇑P	Pn	01 31 17.8		+0.5
OXZ	**Oxford** comp=Z,1188µm,18.0s	**20.66**	**182**	IAMs_20	IAMs_20	01 38 30.4		
RK1H	**Rockhampton Ha** comp=Z,2µm,0.8s	**20.75**	**264**	P	Pn	01 31 18.8		+0.3
RPZ	**Rata Peaks** comp=Z,275nm,0.9s,baz=35,slow=3.0,SNR=36	**21.10**	**184**	P	**P**	**01 31 20.7**		**+1.0**
RPZ	comp=Z,41nm,1.0s,baz=83,slow=16,SNR=1.4			S	**S**	**01 35 15.7**		**+1.5**
RPZ	comp=Z,1134µm,18.1s,baz=357,slow=35			LR	LR	01 39 02.4		
RPZ	**Rata Peaks** comp=Z,2µm,1.1s	**21.10**	**184**	P	**P**	**01 31 20.3**		**+0.7**
RPZ				IAmb	IAmb	01 31 41.2		
NTLS	**Newcastle Soft** comp=Z,2µm,1.1s	**21.39**	**237**	P	**P**	**01 31 26.7**		**+3.8**
NTLH	**Newcastle Hard** comp=Z,3µm,0.9s	**21.43**	**237**	P	**P**	**01 31 27.4**		**+4.1**
MGCD	**Mangrove Creek** baz=22,SNR=97	**22.01**	**237**	P	**P**	**01 31 32.8**		**+3.2**
MGCD	**Mangrove Creek** comp=Z,2µm,1.1s	**22.01**	**237**	P	**P**	**01 31 33.3**		**+3.8**
WKZ	**Wanaka** comp=Z,815µm,20.0s	**22.39**	**188**	IAMs_20	IAMs_20	01 38 46.2		
RMQ	**Roma** baz=22,SNR=819	**22.40**	**255**	P	**P**	**01 31 36.1**		**+2.3**
RMQ	**Roma** comp=Z,4µm,1.0s	**22.40**	**255**	P	**P**	**01 31 36.3**		**+2.5**
ODZ	**Otahua Downs** comp=Z,960µm,18.0s	**22.45**	**184**	IAMs_20	IAMs_20	01 39 34.7		
ODZ	**Otahua Downs**	**22.45**	**184**	⇑P	**P**	**01 31 35.6**		**+1.5**
SYDH	**Sydney Hard Ro** comp=Z,2µm,1.6s	**22.51**	**236**	P	**P**	**01 31 37.9**		**+3.0**
DCZ	**Deep Cove**	**23.28**	**190**	P	**P**	**01 31 44.1**		**+1.3**
DCZ	comp=Z,3µm,1.7s			IAmb	IAmb	01 32 09.5		
DCZ	comp=Z,711µm,18.0s			IAMs_20	IAMs_20	01 39 19.9		
WHZ	**Wether Hill Ro** comp=Z,606µm,18.0s	**23.58**	**189**	IAMs_20	IAMs_20	01 40 02.7		
TARA	**Tarawa**	**23.84**	**360**	P	**P**	**01 31 46.6**		**-1.9**
TARA	**Tarawa** comp=Z,1µm,1.1s	**23.84**	**360**	P	**P**	**01 31 47.8**		**-0.7**
PYZ	**Puysegur Point** comp=Z,604µm,18.0s	**24.05**	**191**	IAMs_20	IAMs_20	01 39 59.1		
CNB	**Canberra Magne** baz=24,SNR=630	**24.19**	**233**	P	**P**	**01 31 53.3**		**+1.5**
CNB	**Canberra Magne** comp=Z,4µm,1.1s	**24.19**	**233**	P	**P**	**01 31 53.6**		**+1.8**
CAN	**Canberra**	**24.46**	**234**	P	**P**	**01 31 55.1**		**+0.8**
CAN	**Canberra** comp=Z,4µm,1.6s	**24.46**	**234**	P	**P**	**01 31 55.1**		**+0.8**
CAN				pmax	pmax			
CAN	**Canberra** comp=Z,3µm,1.4s	**24.46**	**234**	P	**P**	**01 31 55.8**		**+1.5**
CAN	**Canberra**	**24.46**	**234**	⇑P	**P**	**01 31 55.5**		**+1.2**
CTA	**Charters Tower** comp=Z,443nm,0.6s,baz=94,slow=10,SNR=129	**25.05**	**271**	P	**P**	**01 31 59.7**		**0.0**
CTA				LR	LR	01 41 11.3		
CTA	comp=Z,154µm,20.7s,baz=94,slow=35 comp=Z,443nm,0.6s							
CTA	**Charters Tower** comp=Z,1µm,1.2s	**25.05**	**271**	P	**P**	**01 32 00.8**		**+1.1**
CTAO	**Charters Tower**	**25.05**	**271**	P	**P**	**01 31 59.7**		**0.0**
CTAO	**Charters Tower**	**25.05**	**271**	P	**P**	**01 31 59.7**		**0.0**
CTAO	comp=Z,4µm,1.7s			pmax	pmax			
CTAO	comp=Z,366µm,22.0s			MLR	MLR			
CTAO	**Charters Tower** comp=Z,1µm,1.2s	**25.05**	**271**	P	**P**	**01 32 00.7**		**+1.1**
CTAO	**Charters Tower**	**25.05**	**271**	⇑P	**P**	**01 31 59.7**		**0.0**
MILA	**Mila** baz=25,SNR=58	**25.12**	**230**	P	**P**	**01 32 01.8**		**+1.6**
MILA	**Mila**	**25.12**	**230**	⇑P	**P**	**01 32 01.5**		**+1.3**
RAR	**Rarotonga** comp=Z,52nm,0.9s,baz=333,slow=17,SNR=4.5	**25.26**	**92**	P	**P**	**01 31 60.0**		**-1.5**
RAR	comp=Z,183µm,21.0s,baz=292,slow=30			LR	LR	01 39 23.2		
RAR	**Rarotonga**	**25.26**	**92**	P	**P**	**01 31 59.4**		**-2.2**
RAR	comp=Z,612nm,1.4s			IAmb	IAmb	01 32 26.9		
RAR	**Rarotonga**	**25.26**	**92**	P	**P**	**01 32 00.0**		**-1.5**
RAR	**Rarotonga** comp=Z,392nm,1.7s	**25.26**	**92**	P	**P**	**01 32 01.8**		**+0.3**
RAR	**Rarotonga**	**25.26**	**92**	⇑P	**P**	**01 32 05.2**		**+3.7**
CMSA	**Cobar Meteorol** baz=26,SNR=808	**25.85**	**244**	P	**P**	**01 32 07.4**		**+0.5**
CMSA	**Cobar Meteorol** comp=Z,1µm,1.1s	**25.85**	**244**	P	**P**	**01 32 08.2**		**+1.4**
QLP	**Quilpie** baz=27,SNR=158	**26.45**	**256**	P	**P**	**01 32 12.4**		**+0.1**
QLP	**Quilpie** comp=Z,3µm,1.4s	**26.45**	**256**	P	**P**	**01 32 13.5**		**+1.2**
QLP	**Quilpie**	**26.45**	**256**	⇑P	**P**	**01 32 12.2**		**0.0**
RABL	**Rabaul**	**27.27**	**309**	P	**P**	**01 32 17.9**		**-1.8**
RABL	**Rabaul** comp=Z,1µm,1.1s	**27.27**	**309**	P	**P**	**01 32 21.3**		**+1.5**
KRVT	**Keravat (AS076** comp=Z,4µm,1.0s,baz=175,slow=1.7,SNR=92	**27.29**	**309**	P	**P**	**01 32 19.3**		**-0.6**
GLAD	**Gladstone** comp=Z,646nm,0.8s	**27.90**	**223**	P	**P**	**01 32 26.9**		**+1.7**
TOO	**Toolangi** baz=28,SNR=110	**27.96**	**232**	P	**P**	**01 32 27.1**		**+1.3**
TOO	**Toolangi** comp=Z,1µm,1.3s	**27.96**	**232**	P	**P**	**01 32 26.8**		**+0.9**
TOO				IAmb	IAmb	01 32 31.5		
TOO	**Toolangi** comp=Z,1µm,1.3s	**27.96**	**232**	P	**P**	**01 32 26.8**		**+0.9**
TOO				pmax	pmax			
TOO	**Toolangi** comp=Z,778nm,1.1s	**27.96**	**232**	P	**P**	**01 32 27.3**		**+1.4**
TOO	**Toolangi**	**27.96**	**232**	⇑P	**P**	**01 32 27.0**		**+1.1**
PMG	**Port Moresby** comp=Z,1µm,0.9s,baz=113,slow=5.7,SNR=100	**28.06**	**294**	P	**P**	**01 32 26.5**		**-0.4**
PMG	comp=Z,201µm,19.8s,baz=64,slow=34 comp=Z,1µm,0.9s			LR	LR	01 42 17.4		
PMG	**Port Moresby**	**28.06**	**294**	P	**P**	**01 32 26.1**		**-0.7**
PMG	**Port Moresby**	**28.06**	**294**	*ce*P	**P**	**01 32 26.4**		**-0.4**
PMG	comp=Z,2µm,1.0s			pmax	pmax			
PMG	comp=Z,234µm,15.0s			MLR	MLR			
PMG	**Port Moresby** comp=Z,2µm,0.9s	**28.06**	**294**	P	**P**	**01 32 28.2**		**+1.4**
MLBS	**Spotswood, Mel** comp=Z,356nm,0.8s	**28.50**	**231**	P	**P**	**01 32 26.4**		**+2.0**
CORO	**Coronation Par** comp=Z,279nm,1.2s	**28.70**	**223**	P	**P**	**01 32 34.0**		**+1.7**
GEXS	**Deakin Univers** comp=Z,374nm,1.1s	**29.09**	**231**	P	**P**	**01 32 38.1**		**+2.3**
BRAT	**Ballarat** comp=Z,534nm,1.1s	**29.09**	**233**	P	**P**	**01 32 37.7**		**+1.9**
MOO	**Moorlands** baz=29,SNR=30	**29.22**	**221**	P	**P**	**01 32 38.6**		**+1.7**
MOO	**Moorlands** comp=Z,556nm,1.0s	**29.22**	**221**	P	**P**	**01 32 38.3**		**+1.4**
STKA	**Stephens Creek** comp=Z,228nm,0.6s,baz=89,slow=11,SNR=65	**29.34**	**245**	P	**P**	**01 32 38.8**		**+0.7**
STKA				S	**S**	**01 37 33.4**		**+2.1**
STKA	comp=Z,28nm,1.0s,baz=339,slow=22,SNR=1.3			LR	LR	01 43 16.1		
STKA	comp=Z,661µm,21.7s,baz=80,slow=34 comp=Z,228nm,0.6s							
STKA	**Stephens Creek** baz=30,SNR=187	**29.34**	**245**	P	**P**	**01 32 38.8**		**+0.7**
STKA	**Stephens Creek**	**29.34**	**245**	P	**P**	**01 32 38.6**		**+0.5**
STKA	comp=Z,908nm,1.9s			IAmb	IAmb	01 32 43.3		
STKA	**Stephens Creek**	**29.34**	**245**	*c i*P	**P**	**01 32 38.6**		**+0.5**
STKA	**Stephens Creek** comp=Z,186nm,1.1s	**29.34**	**245**	P	**P**	**01 32 39.2**		**+1.1**
TAU	**Tasmania Unive**	**29.41**	**220**	P	**P**	**01 32 39.3**		**+0.7**
TAU	comp=Z,562nm,1.1s			IAmb	IAmb	01 32 44.9		
TAU	**Tasmania Unive**	**29.41**	**220**	P	**P**	**01 32 39.3**		**+0.7**
TAU	comp=Z,562nm,1.1s			pmax	pmax			
TAU	**Tasmania Unive** comp=Z,488nm,1.5s	**29.41**	**220**	P	**P**	**01 32 40.2**		**+1.6**
TAU	**

GHSS Government Hou 32.41 240 P **P** **01 33 06.8 +1.7**
comp=Z,923nm,0.8s

TWOA Tennyson Woods 32.45 240 P **P** **01 33 06.8 +1.3**
comp=Z,805nm,0.8s

PTPS Port Pirie 32.56 243 P **P** **01 33 07.8 +1.3**
comp=Z,1µm,1.1s

PATS Pohnpei 32.63 332 P **P** **01 33 07.6 +0.4**
baz=33,SNR=11

PATS Pohnpei 32.63 332 P **P** **01 33 06.7 -0.5**

PATS Pohnpei 32.63 332 P **P** **01 33 08.4 +1.2**
comp=Z,1µm,0.9s

WHYH Whyalla 32.88 244 P **P** **01 33 10.1 +0.8**
comp=Z,2µm,0.9s

MCQ Macquarie Isla 33.54 195 P **P** **01 33 14.9 +0.2**
baz=34,SNR=3.5

MCQ Macquarie Isla 33.54 195 P **P** **01 33 16.2 +1.5**
MCQ IAmb IAmb 01 33 20.8
comp=Z,1µm,1.6s

MCQ Macquarie Isla 33.54 195 P **P** **01 33 16.2 +1.5**
MCQ pmax pmax
comp=Z,1µm,1.7s

MCQ Macquarie Isla 33.54 195 P **P** **01 33 16.0 +1.2**
comp=Z,358nm,1.7s

OOD Oodnadatta 34.08 254 P **P** **01 33 21.5 +1.7**
comp=Z,5µm,1.2s

BBOO Buckleboo 34.11 245 P **P** **01 33 20.0 0.0**
baz=34,SNR=133

BBOO Buckleboo 34.11 245 P **P** **01 33 19.8 -0.3**

BBOO Buckleboo 34.11 245 P **P** **01 33 20.5 +0.4**
comp=Z,2µm,1.6s

PAE Paea 35.39 89 *e*P **P** **01 33 32.6 +1.4**
comp=Z,78nm,1.3s

PPT2 Papeete2 35.41 89 *e*P **P** **01 33 32.6 +1.1**
comp=Z,356nm,1.3s

PPT2 Papeete2 35.41 89 *e*PP **PP** **01 34 50.8 -1.1**
comp=Z,23µm,17.5s

PPT2 Papeete2 35.41 89 *e*PP **PP** **01 34 51.0 -0.9**
comp=Z,20µm,18.0s

PPT2 *e*S **S** **01 39 05.8 -0.4**
comp=Z,204µm,19.0s

PPT2 *e*S **S** **01 39 06.0 -0.2**
comp=Z,133µm,28.2s

PPT2 *e*LQ LQ 01 41 28.5
comp=Z,911µm,29.8s

PPT2 *e*LQ LQ 01 41 28.9
comp=Z,220µm,24.0s

PPT2 *e*LR LR 01 42 57.1
comp=Z,580µm,27.0s

PPT2 *e*LR LR 01 42 57.8
comp=Z,322µm,27.0s

PPT Papeete 35.42 89 LR LR 01 44 03.1
comp=Z,168µm,20.8s,baz=257,slow=30

PPTF Pamatai, Papee 35.42 89 P **P** **01 33 31.3 -0.3**
comp=Z,268nm,1.3s

MULG Mulgathing 35.58 249 P **P** **01 33 33.1 +0.4**
comp=Z,2µm,1.1s

TIAR Tiarei 35.63 89 *e*P **P** **01 33 34.5 +1.2**
comp=Z,50nm,1.2s

TVO Taravao 35.66 89 *e*P **P** **01 33 34.7 +1.0**
comp=Z,211nm,1.6s

WR0 Warramunga Arr 35.89 267 P **P** **01 33 33.7 -1.9**
WR0 IAmb IAmb 01 33 37.1
comp=Z,537nm,0.9s

AS31 Alice Springs 35.91 261 P **P** **01 33 34.5 -1.2**
AS31 IAmb IAmb 01 33 38.6
comp=Z,307nm,0.9s

ASAR Alice Springs 35.91 261 P **P** **01 33 34.8 -1.0**
comp=Z,764nm,0.9s,baz=94,slow=8.5,SNR=267

ASAR LR LR 01 48 14.4
comp=Z,384µm,19.1s,baz=100,slow=36

ASAR P3KPbc 02 04 17.6
comp=Z,0.7nm,0.8s,baz=270,slow=2.8,SNR=4.1

ASAR PKPPKP **P'P'df 02 06 37.9 -4.8**
comp=Z,0.9nm,1.0s,baz=232,slow=1.1,SNR=4.4
comp=Z,764nm,0.9s

WB0 Warramunga Arr 36.07 267 P **P** **01 33 35.1 -2.0**
WB0 IAmb IAmb 01 33 38.5
comp=Z,849nm,1.1s

WRAB Tennant Creek 36.07 267 IAMs_20 IAMs_20 01 47 30.7
comp=Z,380µm,22.0s

WRAB Tennant Creek 36.07 267*c i*P **P** **01 33 35.0 -2.1**
WRAB pmax pmax
comp=Z,917nm,1.2s

WRAB MLR MLR
comp=Z,464µm,14.0s

WRAB Tennant Creek 36.07 267 P **P** **01 33 36.3 -0.8**
comp=Z,716nm,1.5s

WRAB Tennant Creek 36.07 267 ⇑P **P** **01 33 35.0 -2.1**

WRA Warramunga Arr 36.08 267 P **P** **01 33 35.2 -2.0**
comp=Z,288nm,0.8s,baz=96,slow=8.5,SNR=300

WRA PP **PP** **01 35 00.7 +1.5**
comp=Z,532nm,1.3s,baz=99,slow=11,SNR=5.9

WRA LR LR 01 48 03.9
comp=Z,323µm,20.9s,baz=94,slow=36
comp=Z,288nm,0.8s

MEH Mehetia 36.74 90 *e*P **P** **01 33 42.2 -0.6**
comp=Z,105nm,1.3s

GENI Genyem 37.58 297 P **P** **01 33 48.0 -1.9**
comp=Z,115µmcomp=Z,58µmcomp=Z,4µm,1.6s

GENI Genyem 37.58 297 P **P** **01 33 51.0 +1.1**
comp=Z,4µm,1.6s

XMAS Kiritimati 37.83 53 P **P** **01 33 50.5 -1.5**
XMAS IAmb IAmb 01 34 15.5
comp=Z,370nm,1.0s

XMAS Kiritimati 37.83 53 P **P** **01 33 54.6 +2.6**
comp=Z,429nm,3.0s

XMAS Kiritimati 37.83 53 ⇓P **P** **01 33 51.5 -0.5**

VAH Vaihoa 37.85 86 *e*P **P** **01 33 52.3 +0.1**
comp=Z,251nm,1.1s

SMPI Sarmi 39.12 297 P **P** **01 34 00.7 -2.2**
comp=Z,83µmcomp=Z,20µmcomp=Z,660nm,1.9s

KDU Kakadu 39.77 277 P **P** **01 34 07.0 -1.4**
baz=40,SNR=124

KDU Kakadu 39.77 277 P **P** **01 34 07.9 -0.5**
comp=Z,1µm,1.2s

KDU Kakadu 39.77 277 ⇑P **P** **01 34 07.0 -1.4**

FORT Forrest 40.77 249 P **P** **01 34 16.0 -0.5**
baz=41,SNR=464

FORT Forrest 40.77 249 P **P** **01 34 15.7 -0.8**

FORT Forrest 40.77 249 P **P** **01 34 16.9 +0.4**
comp=Z,4µm,0.9s

FORT Forrest 40.77 249 ⇑P **P** **01 34 15.8 -0.7**

WRKA Warakurna 40.85 257 P **P** **01 34 16.5 -0.8**
baz=41,SNR=725

WRKA Warakurna 40.85 257 P **P** **01 34 17.4 +0.1**
comp=Z,2µm,1.4s

WRKA Warakurna 40.85 257 ⇑P **P** **01 34 16.4 -0.8**

MTN Manton Dam 40.95 276 P **P** **01 34 17.0 -1.2**
baz=41,SNR=55

MTN Manton Dam 40.95 276 P **P** **01 34 16.6 -1.5**
MTN IAmb IAmb 01 34 20.4
comp=Z,1µm,1.4s

MTN Manton Dam 40.95 276 P **P** **01 34 17.7 -0.4**
comp=Z,815nm,1.2s

MTN Manton Dam 40.95 276 ⇑P **P** **01 34 16.6 -1.5**

SRPI Serui, Papua 41.24 295 P **P** **01 34 19.0 -1.5**
comp=Z,72µmcomp=Z,22µmcomp=Z,978nm,1.4s

H11S2 WAKE ISLAND Hy 41.33 351 P **P** **01 34 21.2 +0.3**
H11S2 T T 02 18 04.6
baz=171,slow=76,SNR=2262

H11S3 WAKE ISLAND Hy 41.34 351 P **P** **01 34 21.3 +0.3**
H11S3 T T 02 18 07.3
baz=171,slow=76,SNR=1060

H11S1 WAKE ISLAND Hy 41.35 351 P **P** **01 34 21.4 +0.3**
H11S1 T T 02 18 07.9
baz=171,slow=76,SNR=1333

BAKI Biak 41.72 296 P **P** **01 34 25.0 +0.5**
comp=Z,147µmcomp=Z,49µmcomp=Z,3µm,1.2s

WAKE Wake Island 42.12 351 P **P** **01 34 25.8 -1.7**

WAKE Wake Island 42.12 351 P **P** **01 34 28.4 +0.9**
comp=Z,265nm,1.2s

WAKE Wake Island 42.12 351 ⇓P **P** **01 34 27.5 0.0**

KNRA Kununurra 42.26 271 P **P** **01 34 27.6 -1.2**
baz=42,SNR=210

KNRA Kununurra 42.26 271 P **P** **01 34 27.6 -1.2**
KNRA IAmb IAmb 01 34 30.9
comp=Z,1µm,0.9s

KNRA Kununurra 42.26 271 P **P** **01 34 29.0 +0.1**
comp=Z,1µm,1.3s

H11N1 WAKE ISLAND Hy 42.51 351 P **P** **01 34 30.9 +0.5**
baz=162,slow=6.5,SNR=9.5

H11N1 T T 02 19 35.3
baz=172,slow=76,SNR=770

H11N3 WAKE ISLAND Hy 42.51 351 P **P** **01 34 31.3 +0.9**
baz=162,slow=6.5,SNR=13

H11N3 T T 02 19 35.5
baz=172,slow=76,SNR=569

H11N2 WAKE ISLAND Hy 42.52 351 T T 02 19 36.6
baz=172,slow=76,SNR=610

SAUI Saumlaki 42.63 283 P **P** **01 34 31.6 -0.4**
SAUI IAMs_20 IAMs_20 01 51 34.1
comp=Z,277µm,18.0s

SAUI Saumlaki 42.63 283 P **P** **01 34 28.3 -3.6**
comp=Z,221µmcomp=Z,43µmcomp=Z,1µm,1.3s

SAUI Saumlaki 42.63 283 P **P** **01 34 32.9 +1.0**
comp=Z,1µm,1.3s

JOHN Johnston Islan 42.68 25 P **P** **01 34 30.9 -1.2**

JOHN Johnston Islan 42.68 25 P **P** **01 34 35.0 +2.9**
comp=Z,791nm,1.7s

JOHN Johnston Islan 42.68 25 ⇓P **P** **01 34 34.5 +2.4**

FAKI Fak Fak 44.10 290 P **P** **01 34 42.7 -1.1**

FAKI Fak Fak 44.10 290 P **P** **01 34 42.0 -1.8**
comp=Z,134µmcomp=Z,23µmcomp=Z,1µm,1.7s

FAKI Fak Fak 44.10 290 P **P** **01 34 44.1 +0.3**
comp=Z,1µm,1.6s

FITZ Fitzroy Crossi 44.51 267 P **P** **01 34 46.7 -0.4**
comp=Z,1µm,0.9s,baz=120,slow=7.1,SNR=275

FITZ S **S** **01 41 22.3 -0.1**
comp=Z,18nm,0.9s,baz=304,slow=15,SNR=1.5

FITZ LR LR 01 52 04.4
comp=Z,350µm,22.0s,baz=104,slow=34
comp=Z,1µm,0.9s

FITZ Fitzroy Crossi 44.51 267 P **P** **01 34 46.6 -0.4**
baz=45,SNR=977

FITZ Fitzroy Crossi 44.51 267 P **P** **01 34 46.5 -0.5**

FITZ Fitzroy Crossi 44.51 267 P **P** **01 34 47.4 +0.4**
comp=Z,2µm,1.2s

FITZ Fitzroy Crossi 44.51 267 ⇑P **P** **01 34 46.5 -0.5**

GUMO Guam 45.35 320 P **P** **01 34 53.5 -0.1**
comp=Z,663nm,0.8s,baz=183,slow=10,SNR=18

GUMO S **S** **01 41 37.5 +3.1**
comp=Z,32nm,0.5s,baz=216,slow=23,SNR=1.8

GUMO LR LR 01 53 22.4
comp=Z,83µm,19.3s,baz=136,slow=35
comp=Z,663nm,0.8s

GUMO Guam 45.35 320 P **P** **01 34 52.7 -1.0**

GUMO Guam 45.35 320 P **P** **01 34 54.8 +1.2**
comp=Z,1µm,1.3s

GUMO Guam 45.35 320 ⇑P **P** **01 34 54.0 +0.4**

BNDI Bandanaira 45.39 287 P **P** **01 34 51.7 -2.4**
comp=Z,144µmcomp=Z,41µmcomp=Z,3µm,1.1s

BNDI Bandanaira 45.39 287 P **P** **01 34 56.5 +2.4**
comp=Z,3µm,1.2s

SIJI Sorong 45.98 292 P **P** **01 34 57.9 -0.9**
comp=Z,2µm,1.0s,baz=92,slow=6.8,SNR=56

SIJI LR LR 01 54 27.9
comp=Z,203µm,19.3s,baz=109,slow=36
comp=Z,2µm,1.0s

SWI Sorong 45.99 292 P **P** **01 34 57.2 -1.6**
comp=Z,124µmcomp=Z,31µmcomp=Z,3µm,1.2s

MSAI Masohi 46.80 288 P **P** **01 35 05.1 -0.1**
comp=Z,376nmcomp=Z,3µmcomp=Z,65nm,1.0s

TAOE Nuku Hiva Isla 46.90 81 *e*P **P** **01 35 06.9 +0.8**
comp=Z,357nm,0.9s

TAOE Nuku Hiva Isla 46.90 81 *e*PP **PP** **01 36 55.0 -1.5**
comp=Z,12µm,36.8s

TAOE *e*S **S** **01 41 56.1 -1.0**
comp=Z,226µm,26.7s

TAOE *e*LQ LQ 01 46 18.1
comp=Z,656µm,25.1s

TAOE *e*LR LR 01 48 16.3
comp=Z,414µm,30.1s

TAOE Nuku Hiva Isla 46.90 81 P **P** **01 35 05.7 -0.4**

TAOE IAmb IAmb 01 35 21.4
comp=Z,234nm,0.9s

TAOE Nuku Hiva Isla 46.90 81 P **P** **01 35 07.3 +1.2**
comp=Z,312nm,0.9s

TAOE Nuku Hiva Isla 46.90 81 ⇓P **P** **01 35 08.0 +1.9**

AAI Ambon 47.29 287 P **P** **01 35 06.2 -2.8**
comp=Z,143µmcomp=Z,17µmcomp=Z,2µm,1.4s

SOEI Soe 48.33 277 P **P** **01 35 16.7 -0.6**
comp=Z,220µmcomp=Z,26µmcomp=Z,875nm,1.2s

SOEI Soe 48.33 277 P **P** **01 35 19.5 +2.2**
comp=Z,874nm,1.3s

NLAI Namlea 48.46 287 P **P** **01 35 17.2 -0.9**
comp=Z,956µmcomp=Z,24µmcomp=Z,2µm,1.4s

BATI Baumata 48.73 276 P **P** **01 35 20.5 +0.3**
comp=Z,487nm,0.7s,baz=137,slow=2.5,SNR=55

BATI LR LR 01 55 10.2
comp=Z,296µm,20.7s,baz=136,slow=35
comp=Z,487nm,0.7s

BATI Baumata 48.73 276 P **P** **01 35 19.6 -0.6**
comp=Z,107µmcomp=Z,17µmcomp=Z,537nm,1.0s

PSA00 Pilbara Seismi 49.06 261 P **P** **01 35 22.0 -0.7**
PSA00 IAmb IAmb 01 35 26.2
comp=Z,834nm,1.4s

PSA00 Pilbara Seismi 49.06 261 P **P** **01 35 22.8 +0.1**
comp=Z,696nm,1.3s

MBWA Marble Bar 49.25 261 P **P** **01 35 23.1 -1.0**

MBWA Marble Bar 49.25 261 P **P** **01 35 23.4 -0.8**

MBWA P **P** **01 35 23.4 -0.8**

MBWA P **P** **01 35 23.4 -0.8**

MBWA S **S** **01 42 31.5 +1.3**

MBWA S **S** **01 42 31.5 +1.3**

MBWA S **S** **01 42 31.5 +1.3**

MBWA Marble Bar 49.25 261 P **P** **01 35 24.1 0.0**
comp=Z,615nm,1.1s

MBWA Marble Bar 49.25 261 ⇑P **P** **01 35 23.3 -0.8**

MBWA ⇑P **P** **01 35 23.4 -0.8**

MEEK Meekatharra 49.32 254 P **P** **01 35 23.6 -1.0**
baz=49,SNR=160

MEEK Meekatharra 49.32 254 P **P** **01 35 24.3 -0.3**
comp=Z,771nm,1.1s

LBMI Labuha 49.34 290 P **P** **01 35 25.1 +0.2**
comp=Z,85µmcomp=Z,26µmcomp=Z,1µm,1.2s

KLBR Kellerberrin 49.56 247 P **P** **01 35 25.7 -0.7**
baz=50,SNR=283

KLBR Kellerberrin 49.56 247 P **P** **01 35 27.5 +1.1**
comp=Z,3µm,1.0s

NWAO Narrogin (SRO) 49.92 245 P **P** **01 35 28.4 -0.7**

NWAO Narrogin (SRO) 49.92 245 P **P** **01 35 28.4 -0.7**

NWAO pmax pmax
comp=Z,862nm,0.8s

NWAO Narrogin (SRO) 49.92 245 P **P** **01 35 28.8 -0.4**

NWAO P **P** **01 35 28.8 -0.4**

NWAO S **S** **01 42 40.4 +1.1**

NWAO S **S** **01 42 40.4 +1.1**

NWAO Narrogin (SRO) 49.92 245 P **P** **01 35 28.7 -0.4**
comp=Z,1µm,1.1s

SANI Sanana 49.99 287 P **P** **01 35 28.7 -1.1**
comp=Z,141µmcomp=Z,39µmcomp=Z,4µm,1.3s

SANI Sanana 49.99 287 P **P** **01 35 30.9 +1.1**
comp=Z,4µm,1.3s

RKGY Rocky Gully 50.07 243 P **P** **01 35 30.3 +0.1**
baz=50,SNR=30

RKGY Rocky Gully 50.07 243 P **P** **01 35 32.6 +2.4**
comp=Z,1µm,0.9s

TNTI Ternate 50.16 291 P **P** **01 35 30.1 -1.0**

TNTI Ternate 50.16 291 P **P** **01 35 29.7 -1.4**
comp=Z,70µmcomp=Z,18µmcomp=Z,708nm,1.6s

TNTI Ternate 50.16 291 P **P** **01 35 32.9 +1.8**
comp=Z,709nm,1.7s

BLDU Ballidu 50.54 248 P **P** **01 35 32.8 -1.0**
baz=51,SNR=159

BLDU Ballidu 50.54 248 P **P** **01 35 34.3 +0.5**
comp=Z,1µm,1.4s

MMRI Maumere 50.61 278 P **P** **01 35 33.8 -0.7**

MMRI Maumere 50.61 278 P **P** **01 35 31.7 -2.8**
comp=Z,175µmcomp=Z,24µmcomp=Z,1µm,0.8s

MMRI Maumere 50.61 278 P **P** **01 35 34.3 -0.2**
comp=Z,1µm,0.8s

MUN Mundaring 50.85 247 P **P** **01 35 35.9 -0.3**
baz=51,SNR=40

MUN Mundaring 50.85 247 P **P** **01 35 37.9 +1.7**
comp=Z,838nm,1.1s

EDFI Ende, Flores 51.07 277 P **P** **01 35 36.3 -1.8**
comp=Z,102µmcomp=Z,10µmcomp=Z,430nm,1.3s

MTKN Mount Kenneth 51.22 247 P **P** **01 35 40.6 +1.7**
comp=Z,1µm,1.0s

MORW Morawa 51.27 250 P **P** **01 35 38.4 -1.1**
baz=51,SNR=122

MORW Morawa 51.27 250 P **P** **01 35 38.3 -1.1**

MORW Morawa 51.27 250 P **P** **01 35 40.1 +0.7**
comp=Z,1µm,1.1s

MORW Morawa 51.27 250 ⇑P **P** **01 35 38.3 -1.1**

MIDW Midway 51.39 11 P **P** **01 35 40.5 +0.6**

MIDW IAmb IAmb 01 35 55.1
comp=Z,221nm,0.9s

MIDW Midway 51.39 11 P **P** **01 35 40.5 +0.6**
comp=Z,338nm,2.1s

BBSI Bau Bau 51.54 281 P **P** **01 35 39.0 -2.5**
comp=Z,1µmcomp=Z,124nm,1.3s

BASI Baing, Sumba 51.56 275 P **P** **01 35 41.2 -0.4**
comp=Z,109µmcomp=Z,25µmcomp=Z,2µm,1.4s

KHU Kahuku 51.68 39 P **P** **01 35 41.7 -0.9**
KHU IAmb IAmb 01 36 03.7
comp=Z,659nm,1.1s

KHU Kahuku 51.68 39 P **P** **01 35 41.7 -0.9**
KHU pmax pmax
comp=Z,659nm,1.1s

PTCN Pitcairn Islan 51.75 105 P **P** **01 35 43.2 +0.2**

KHLU Kahalu`u 51.79 38 P **P** **01 35 43.3 0.0**
KHLU IAmb IAmb 01 36 06.8
comp=Z,1µm,1.6s

MWH Moku'aweowe 51.87 39 IAmb IAmb 01 36 11.5
comp=Z,844nm,1.4s

HLP Hilina Pali 51.89 39 P **P** **01 35 43.6 -0.5**

MLOA Mauna Loa Obse 51.93 39 IAmb IAmb 01 36 05.6
comp=Z,691nm,1.3s

KKO Keanakako`i 52.00 39 P **P** **01 35 44.4 -0.5**
KKO IAmb IAmb 01 36 17.5
comp=Z,564nm,1.1s

MLH Mauna Loa 52.00 39 pP 01 35 47.5 -0.4

PUH Pauahi 52.01 39 P **P** **01 35 45.5 +0.5**

HMH Humu'ula Sheep 52.03 39 P **P** **01 35 44.1 -1.2**

KIP Kipapa 52.10 35 P **P** **01 35 44.6 -0.8**
KIP IAmb IAmb 01 36 05.2
comp=Z,262nm,0.8s

KIP Kipapa 52.10 35⇑*e*P **P** **01 35 42.0 -3.4**
KIP pmax pmax
comp=Z,549nm,1.8s

KIP Kipapa 52.10 35 P **P** **01 35 45.6 +0.2**
comp=Z,358nm,1.1s

KIP Kipapa 52.10 35 P **P** **01 35 45.8 +0.4**
comp=Z,358nm,1.1s

POHA Pohakuloa 52.13 38 P **P** **01 35 45.4 -0.6**
POHA IAmb IAmb 01 36 33.1
comp=Z,967nm,1.4s

POHA Pohakuloa 52.13 38 P **P** **01 35 46.3 +0.3**
comp=Z,770nm,2.1s

POHA Pohakuloa 52.13 38 ⇑P **P** **01 35 49.1 +3.1**

H01W1 Cape Leeuwin H 52.38 243 P **P** **01 35 49.7 +2.5**
baz=100,slow=8.8,SNR=44

H01W3 Cape Leeuwin H 52.39 243 P **P** **01 35 49.5 +2.1**
baz=100,slow=8.8,SNR=61

H01W2 Cape Leeuwin H 52.40 243 P **P** **01 35 49.9 +2.5**
baz=100,slow=8.8,SNR=26

WBSI Waikabubak, Su 52.85 275 P **P** **01 35 49.9 -1.5**
comp=Z,157µmcomp=Z,17µmcomp=Z,917nm,0.9s

KMSI Cibinong 53.00 289 P **P** **01 35 51.8 -0.6**
comp=Z,2µmcomp=Z,14µmcomp=Z,1µm,0.9s

BSSI Bau Bau, Buton 53.17 280 P **P** **01 35 53.1 -0.5**
comp=Z,83µmcomp=Z,10µmcomp=Z,323nm,1.3s

LUWI Luwuk 53.30 287 P **P** **01 35 54.5 -0.1**

LUWI Luwuk 53.30 287 P **P** **01 35 53.6 -1.0**
comp=Z,145µmcomp=Z,47µmcomp=Z,5µm,1.2s

LUWI Luwuk 53.30 287 P **P** **01 35 55.5 +0.9**
comp=Z,5µm,1.2s

BKSI Bulukumba 53.83 280 P **P** **01 35 56.5 -2.0**
comp=Z,145µmcomp=Z,18µmcomp=Z,499nm,1.4s

GIRL Giralia 53.94 258 P **P** **01 35 59.4 +0.3**
baz=54,SNR=16

GIRL Giralia 53.94 258 P **P** **01 35 59.8 +0.6**

GIRL Giralia 53.94 258 P **P** **01 36 01.0 +1.8**
comp=Z,2µm,1.3s

GIRL Giralia 53.94 258 ⇑P **P** **01 36 00.2 +1.1**

KAPI Kappang 54.29 280 LR LR 01 59 38.8
comp=Z,137µm,19.9s,baz=118,slow=36

KAPI Kappang 54.29 280 P **P** **01 36 01.3 -0.5**

KAPI Kappang 54.29 280 IAMs_20 IAMs_20 01 59 28.0
comp=Z,175µm,19.0s

KAPI Kappang 54.29 280*c i*P **P** **01 36 01.5 -0.4**
KAPI pmax pmax
comp=Z,2µm,1.3s

KAPI MLR MLR
comp=Z,164µm,18.0s

KAPI Kappang 54.29 280 P **P** **01 36 01.6 -0.2**
KAPI P **P** **01 36 01.6 -0.2**
KAPI P **P** **01 36 01.6 -0.2**
KAPI S **S** **01 43 38.2 -1.5**
KAPI S **S** **01 43 38.2 -1.5**
KAPI S **S** **01 43 38.2 -1.5**

KAPI Kappang 54.29 280 P **P** **01 36 03.5 +1.6**
comp=Z,1µm,1.5s

KAPI Kappang 54.29 280 ⇑P **P** **01 36 01.7 -0.2**

APSI Ampana 54.36 286 P **P** **01 36 01.5 -0.8**
comp=Z,84µmcomp=Z,20µmcomp=Z,2µm,1.1s

PLAI Plampang 54.63 275 P **P** **01 36 01.9 -2.4**
comp=Z,174µmcomp=Z,20µmcomp=Z,2µm,1.1s

PLAI Plampang 54.63 275 P **P** **01 36 05.5 +1.2**
comp=Z,2µm,1.1s

SPSI Sidrap Palu 54.71 282 P **P** **01 36 03.1 -1.8**
comp=Z,123µmcomp=Z,14µmcomp=Z,610nm,1.2s

MRSI Marisa 54.75 288 P **P** **01 36 03.5 -1.6**
comp=Z,117µmcomp=Z,16µmcomp=Z,622nm,1.1s

DAV Davao City (W) 55.01 297 P **P** **01 36 06.9 -0.1**
comp=Z,344nm,0.7s,baz=58,slow=4.5

DAV LR LR 01 58 07.6
comp=Z,45µm,21.4s,baz=152,slow=34
comp=Z,344nm,0.7s

DAV Davao City (W) 55.01 297 P **P** **01 36 07.2 +0.1**

DAV Davao City (W) 55.01 297 P **P** **01 36 07.1 +0.1**

DAV P **P** **01 36 07.1 +0.1**

DAV S **S** **01 43 48.9 -0.3**

DAV S **S** **01 43 48.9 -0.3**

DAV Davao City (W) 55.01 297 P **P** **01 36 08.8 +1.7**
comp=Z,721nm,1.0s

TTSI Tana Toraja 55.05 283 P **P** **01 36 06.5 -0.9**
comp=Z,118µmcomp=Z,16µmcomp=Z,1µm,1.2s

VNDA Vanda 55.21 183 P **P** **01 36 07.7 +0.1**
comp=Z,52nm,0.9s,baz=2.2,slow=7.6,SNR=133

VNDA LR LR 01 57 39.1
comp=Z,209µm,18.1s,baz=12,slow=34
comp=Z,52nm,0.9s

VNDA Vanda 55.21 183 P **P** **01 36 07.6 0.0**

VNDA IAmb IAmb 01 36 33.5
comp=Z,376nm,1.1s

SBA Scott Base 55.36 182 P **P** **01 36 09.8 +1.1**

SBA Scott Base 55.36 182 IAMs_20 IAMs_20 01 55 39.8
comp=Z,186µm,20.0s

SBA Scott Base 55.36 182 P **P** **01 36 09.8 +1.1**

SBA pmax pmax
comp=Z,1µm,1.1s

TWSI Taliwang, Sumb 55.49 275 P **P** **01 36 09.5 -1.0**
comp=Z,98µmcomp=Z,11µmcomp=Z,672nm,1.3s

MPSI Mapaga 56.49 286 P **P** **01 36 16.1 -1.5**
comp=Z,126µmcomp=Z,13µmcomp=Z,1µm,1.0s

DNP Denpasar 57.05 274 P **P** **01 36 20.2 -1.5**
comp=Z,163µmcomp=Z,50µmcomp=Z,1µm,1.5s

IGBI Denpasar 57.06 274 P **P** **01 36 21.3 -0.4**
comp=Z,78µmcomp=Z,19µmcomp=Z,2µm,1.4s

SRBI Singaraja 57.26 275 P **P** **01 36 22.3 -0.9**
comp=Z,157µmcomp=Z,22µmcomp=Z,1µm,1.4s

JCJ Chichijima 57.73 327 P **P** **01 36 24.9 -1.3**
comp=Z,1µm,0.9s,baz=115,slow=2.8,SNR=36

JCJ LR LR 01 57 36.7
comp=Z,72µm,21.9s,baz=160,slow=32
comp=Z,1µm,0.9s

JCJ Chichijima 57.73 327 P **P** **01 36 26.2 +0.1**
comp=Z,3µm,1.3s

JCJ Chichijima 57.73 327 ⇓P **P** **01 36 25.1 -1.0**

JAGI Jajag, Banyuwa 58.10 274 P **P** **01 36 27.4 -1.7**
comp=Z,152µmcomp=Z,16µmcomp=Z,1µm,1.4s

JAGI Jajag, Banyuwa 58.10 274 P **P** **01 36 28.2 -0.9**
comp=Z,1µm,1.4s

ABJI Asem Bagus 58.27 275 P **P** **01 36 29.7 -0.6**
comp=Z,139µmcomp=Z,22µmcomp=Z,751nm,1.5s

BKB Balikpapan 58.45 283 P **P** **01 36 32.0 +0.5**

BKB Balikpapan 58.45 283 P **P** **01 36 33.0 +1.4**
comp=Z,169µmcomp=Z,30µmcomp=Z,1µm,1.4s

BKB Balikpapan 58.45 283 P **P** **01 36 34.6 +3.0**
comp=Z,1µm,1.4s

CASY Casey 58.50 205 P **P** **01 36 30.3 -0.7**

CASY Casey 58.50 205 IAMs_20 IAMs_20 01 57 11.4
comp=Z,194µm,18.0s

CASY Casey 58.50 205 ⇑P **P** **01 36 30.4 -0.7**

SMKI Samarinda 58.53 284 P **P** **01 36 32.5 +0.4**
comp=Z,157µmcomp=Z,28µmcomp=Z,2µm,1.2s

KMMI Kalianget 58.79 276 P **P** **01 36 32.7 -1.2**
comp=Z,142µmcomp=Z,23µmcomp=Z,1µm,1.4s

GMJI Gumukmas 58.82 274 P **P** **01 36 32.3 -1.8**
comp=Z,124µmcomp=Z,15µmcomp=Z,481nm,1.6s

BLJI Banyuglugur 58.88 275 P **P** **01 36 33.4 -1.1**
comp=Z,86µmcomp=Z,13µmcomp=Z,328nm,1.3s

BBKI Banjar Baru 59.39 280 P **P** **01 36 37.2 -0.9**
comp=Z,19µmcomp=Z,2µm,1.1s

MYLDM Lahad Datu 60.02 291 P **P** **01 36 42.1 -0.2**

MYLDM Lahad Datu 60.02 291 ⇑P **P** **01 36 42.6 +0.3**

MTKI Muara Teweh, K 60.40 282 P **P** **01 36 44.3 -0.7**
comp=Z,70µmcomp=Z,11µmcomp=Z,564nm,1.0s

PWJI Pagerwojo 60.43 274 P **P** **01 36 43.1 -2.1**
comp=Z,156µmcomp=Z,17µmcomp=Z,882nm,0.9s
TBJI Tambak Boyo 60.83 275 P **P** **01 36 46.3 -1.6**
comp=Z,78µmcomp=Z,22µmcomp=Z,1µm,1.7s
PCJI Pacitan 60.94 273 P **P** **01 36 47.9 -0.8**
comp=Z,139µmcomp=Z,31µmcomp=Z,3µm,1.4s
NGJI Ngawi 60.98 274 P **P** **01 36 49.4 +0.4**
comp=Z,160µmcomp=Z,30µmcomp=Z,647nm,1.0s
SPMM Sapulut 61.56 289 P **P** **01 36 56.0 +3.1**
UGM Wanagama 61.65 273 P **P** **01 36 52.8 -0.8**
UGM IAMs_20 IAMs_20 02 00 17.3
comp=Z,209µm,22.0s
UGM Wanagama 61.65 273 P **P** **01 36 52.9 -0.6**
comp=Z,151µmcomp=Z,27µmcomp=Z,2µm,1.1s
UGM Wanagama 61.65 273 P **P** **01 36 54.6 +1.1**
comp=Z,2µm,1.1s
YOGI Yogyakarta 61.89 273 P **P** **01 36 50.9 -4.3**
comp=Z,69µmcomp=Z,14µmcomp=Z,1µm,1.2s
KKM Kota Kinabalu 62.42 290 P **P** **01 37 01.3 +2.5**
comp=Z,717nm,1.9s
KKM Kota Kinabalu 62.42 290 ⇑P **P** **01 36 57.9 -0.9**
PBKI Pangkalan Bun 62.59 279 P **P** **01 36 59.3 -0.5**
comp=Z,29µmcomp=Z,3µm,1.1s
JHJ Hachijo jima 2 63.87 329 P **P** **01 37 07.1 -0.7**
comp=Z,171nm,0.8s,baz=210,slow=4.5,SNR=4.1
comp=Z,171nm,0.8s
STKI Sintang 63.91 282 P **P** **01 37 07.8 -0.8**
comp=Z,16µmcomp=Z,724nm,1.4s
JCJI Jatiwangi 64.25 274 P **P** **01 37 09.2 -1.6**
comp=Z,124µmcomp=Z,31µmcomp=Z,3µm,1.1s
SBUM Sibu 64.28 285 P **P** **01 37 10.9 -0.1**
SBUM Sibu 64.28 285 P **P** **01 37 14.0 +3.0**
SBUM Sibu 64.28 285 ⇑P **P** **01 37 10.5 -0.5**
LEM Lembang 64.72 273 P **P** **01 37 13.8 -0.3**
comp=Z,2µm,0.8s,baz=66,slow=6.8,SNR=12
LEM LR LR 02 04 35.5
comp=Z,220µm,22.0s,baz=122,slow=35
CNJI Cibinong 65.00 272 P **P** **01 37 13.3 -2.4**
comp=Z,123µmcomp=Z,18µmcomp=Z,2µm,0.9s
XMI Christmas Isla 65.22 269 P **P** **01 37 17.7 +0.5**
comp=Z,1µm,1.0s
XMI Christmas Isla 65.22 269 ⇓P **P** **01 37 18.1 +0.9**
XMIS Christmas Isla 65.25 269 P **P** **01 37 16.2 -1.1**
XMIS Christmas Isla 65.25 269 P **P** **01 37 19.0 +1.7**
comp=Z,1µm,1.0s
JOW Kunigami 65.51 316 S **S** **01 45 59.5 -4.0**
JOW Kunigami 65.51 316 P **P** **01 37 17.4 -1.3**
JOW Kunigami 65.51 316 P **P** **01 37 19.4 +0.7**
comp=Z,612nm,1.1s
JOW Kunigami 65.51 316 ⇓P **P** **01 37 18.5 -0.2**
JOW Kunigami 65.51 316 P **P** **01 37 18.5 -0.2**
KSM Kuching 65.57 283 P **P** **01 37 18.7 -0.7**
KSM Kuching 65.57 283 P **P** **01 37 21.6 +2.2**
comp=Z,513nm,1.4s
KSM Kuching 65.57 283 ⇑P **P** **01 37 18.6 -0.8**
DBJI Dramaga 65.63 273 P **P** **01 37 18.8 -1.0**
comp=Z,124µmcomp=Z,42µmcomp=Z,4µm,1.0s
SKJI Sukabumi 65.64 272 P **P** **01 37 18.3 -1.6**
comp=Z,9µmcomp=Z,1µm,1.0s
TNG Tangerang 65.86 273 P **P** **01 37 24.9 +3.6**
JMJ Miyako jima 2 66.10 313 P **P** **01 37 23.3 +0.7**
comp=Z,3µm,0.9s
TPI Tanjungpandan 66.24 277 P **P** **01 37 23.2 -0.6**
comp=Z,76µmcomp=Z,9µmcomp=Z,397nm,1.1s
JYT Yasato 66.25 331 ⇑P **P** **01 37 22.9 -0.4**
JYT Yasato 66.25 331 P **P** **01 37 23.3 0.0**
SBJI Serang 66.36 273 P **P** **01 37 23.1 -1.4**
comp=Z,28µmcomp=Z,2µm,1.1s
JRY Ryogami san 66.66 330 P **P** **01 37 25.2 -0.8**
INU Inuyama 67.00 329 P **P** **01 37 28.5 +0.4**
comp=Z,429nm,1.4s
INU Inuyama 67.00 329 ⇑P **P** **01 37 27.3 -0.8**
JGF Kuroka 67.04 329 P **P** **01 37 27.4 -1.0**
JGF IAmb IAmb 01 37 45.1
comp=Z,530nm,1.5s
JGF Kuroka 67.04 329 ⇑P **P** **01 37 27.0 -1.4**
JGF Kuroka 67.04 329 P **P** **01 37 27.3 -1.1**
JMN Monobe 67.31 325 ⇑P **P** **01 37 29.6 -0.5**
JMN Monobe 67.31 325 P **P** **01 37 30.1 0.0**
JMM Marumori 67.37 333 ⇓P **P** **01 37 30.2 -0.2**
MJAR Matsushiro Arr 67.41 330 P **P** **01 37 29.7 -1.0**
comp=Z,323nm,1.1s,baz=152,slow=8.8,SNR=77
MJAR LR LR 02 02 59.0
comp=Z,60µm,21.9s,baz=138,slow=32
MJAR PKPPKP **P'P'df** **02 05 51.1 +0.3**
comp=Z,1.7nm,0.7s,baz=303,slow=4.5,SNR=2.4
comp=Z,323nm,1.1s
MAJO Matsushiro 67.41 330 P **P** **01 37 29.3 -1.4**
MAJO Matsushiro 67.41 330*c i*P **P** **01 37 29.1 -1.6**
MAJO pmax pmax
comp=Z,654nm,1.0s
MAJO Matsushiro 67.41 330 P **P** **01 37 31.3 +0.6**
comp=Z,687nm,1.2s
MAJO Matsushiro 67.41 330 ⇑P **P** **01 37 29.6 -1.1**
QSPA South Pole Qui 67.45 180 P **P** **01 37 29.9 -0.9**
comp=Z,358nm,1.1s,baz=27,slow=1.6,SNR=172
QSPA S **S** **01 46 27.9 +1.6**
comp=Z,7.7nm,1.0s,baz=171,slow=20,SNR=2.1
QSPA LR LR 02 02 19.6
comp=Z,163µm,21.2s,baz=36,slow=32
comp=Z,358nm,1.1s
QSPA South Pole Qui 67.45 180 P **P** **01 37 29.9 -0.9**
YOJ Yonaguni jima 67.45 311 P **P** **01 37 30.2 -0.9**
YOJ Yonaguni jima 67.45 311 P **P** **01 37 30.3 -0.9**
YOJ pmax pmax
comp=Z,463nm,0.8s
YOJ Yonaguni jima 67.45 311 P **P** **01 37 31.3 +0.2**
comp=Z,682nm,1.0s
YOJ Yonaguni jima 67.45 311 ⇓P **P** **01 37 31.1 0.0**
YOJ Yonaguni jima 67.45 311 P **P** **01 37 30.7 -0.4**
BLSI Bandar Lampung 67.45 274 P **P** **01 37 30.1 -1.4**
comp=Z,90µmcomp=Z,16µmcomp=Z,2µm,1.0s
JSU Suzuyama 67.53 321 P **P** **01 37 30.8 -0.8**
JSU Suzuyama 67.53 321 ⇑P **P** **01 37 30.4 -1.2**
JSU Suzuyama 67.53 321 P **P** **01 37 30.4 -1.2**
JGN Niukaw 67.57 329 P **P** **01 37 30.5 -1.3**
JWT Wachi 67.74 327 P **P** **01 37 32.2 -0.6**
PPBI Pangkal Pinang 67.87 277 P **P** **01 37 33.2 -0.9**
comp=Z,115µmcomp=Z,27µmcomp=Z,768nm,1.1s
YULB Yu-li 67.99 309 P **P** **01 37 33.8 -0.8**
YULB IAmb IAmb 01 37 50.2
comp=Z,234nm,1.3s
KLI Kotabumi 68.00 274 P **P** **01 37 32.8 -2.1**
comp=Z,100µmcomp=Z,15µmcomp=Z,2µm,0.9s
KASI Kota Agung 68.09 273 P **P** **01 37 33.1 -2.4**
comp=Z,105µmcomp=Z,22µmcomp=Z,2µm,0.9s
JAD Aida 68.10 326 P **P** **01 37 34.8 -0.2**
NACB Ninganchiao 68.26 310 P **P** **01 37 34.8 -1.5**
TPUB Ta-pu 68.41 308 P **P** **01 37 35.1 -2.2**
TPUB IAmb IAmb 01 37 38.2
comp=Z,259nm,0.9s
TPUB Ta-pu 68.41 308 P **P** **01 37 36.8 -0.5**
comp=Z,288nm,1.0s
JYA Atsumi 68.44 332 P **P** **01 37 36.8 -0.3**
JNU Nakatsue 68.48 323 P **P** **01 37 36.0 -1.6**
SSLB Suanglung 68.48 309 IAmb IAmb 01 37 38.6
comp=Z,214nm,0.8s
SSLB Suanglung 68.48 309 P **P** **01 37 36.7 -1.0**
comp=Z,257nm,0.9s
JOM Ohasama 68.53 334 P **P** **01 37 37.3 -0.4**
JSD Sado 68.61 331 ⇑P **P** **01 37 37.5 -0.7**
JSD Sado 68.61 331 P **P** **01 37 37.6 -0.7**
LWLI Liwa 68.68 273 P **P** **01 37 37.5 -1.8**
comp=Z,70µmcomp=Z,18µmcomp=Z,2µm,0.8s
JHS Saijyo 68.69 326 ⇑P **P** **01 37 37.9 -0.9**
JHS Saijyo 68.69 326 P **P** **01 37 37.9 -0.9**
YHNB Yeheng 68.73 310 P **P** **01 37 38.5 -0.8**
YHNB IAmb IAmb 01 37 44.9
comp=Z,468nm,1.2s
YHNB Yeheng 68.73 310 P **P** **01 37 39.7 +0.4**
comp=Z,329nm,1.1s
PMBI Palembang 68.82 276 P **P** **01 37 39.9 -0.2**
PMBI IAMs_20 IAMs_20 02 07 41.3
comp=Z,175µm,22.0s
PMBI Palembang 68.82 276 P **P** **01 37 38.9 -1.2**
comp=Z,106µmcomp=Z,2µm,1.1s
PMBI Palembang 68.82 276 P **P** **01 37 41.9 +1.8**
comp=Z,2µm,1.1s
TATO Taipei 68.84 310 P **P** **01 37 38.9 -1.0**
TATO Taipei 68.84 310 P **P** **01 37 39.2 -0.7**
TATO P **P** **01 37 39.2 -0.7**
TATO S **S** **01 46 45.0 +1.2**
TATO S **S** **01 46 45.0 +1.2**
JFU Fukue jima 2 69.35 321 P **P** **01 37 42.0 -0.9**
RPN Rapa Nui 69.53 112 LR LR 02 00 43.5
comp=Z,85µm,20.9s,baz=252,slow=30
JTM Tenmabayashi 69.74 335 P **P** **01 37 44.0 -1.1**
JTM IAmb IAmb 01 38 01.1
comp=Z,374nm,0.9s
JTM Tenmabayashi 69.74 335 ⇑P **P** **01 37 44.0 -1.1**
JTM Tenmabayashi 69.74 335 P **P** **01 37 44.0 -1.1**
MNAI Manna 69.94 274 P **P** **01 37 45.4 -1.6**
MNAI IAMs_20 IAMs_20 02 05 32.2
comp=Z,171µm,22.0s
MNAI Manna 69.94 274 P **P** **01 37 45.6 -1.4**
comp=Z,104µmcomp=Z,36µmcomp=Z,3µm,1.4s
MNAI Manna 69.94 274 P **P** **01 37 49.1 +2.1**
comp=Z,3µm,1.4s
DSRI Dabo 69.97 278 P **P** **01 37 46.6 -0.6**
comp=Z,64µmcomp=Z,10µmcomp=Z,345nm,1.2s
ERM Erimo 70.00 337 P **P** **01 37 46.6 0.0**
ERM IAmb IAmb 01 38 04.6
comp=Z,418nm,1.1s
ERM Erimo 70.00 337 IAMs_20 IAMs_20 02 02 41.0
comp=Z,162µm,22.0s
ERM Erimo 70.00 337*d i*P **P** **01 37 46.9 +0.2**
ERM pmax pmax
comp=Z,492nm,1.2s
ERM Erimo 70.00 337 P **P** **01 37 47.8 +1.1**
comp=Z,545nm,1.5s
ERM Erimo 70.00 337 ⇓P **P** **01 37 47.0 +0.4**
JEM Erimo 70.00 337 P **P** **01 37 46.7 0.0**
JOT Ohata 70.25 335 P **P** **01 37 48.0 -0.2**
JTU Tsushima 70.34 323 IAmb IAmb 01 38 04.1
comp=Z,305nm,1.4s
JTU Tsushima 70.34 323 ⇓P **P** **01 37 47.8 -1.1**
JMBI JAMBI 70.37 277 P **P** **01 37 49.7 +0.1**
comp=Z,15µmcomp=Z,1µm,1.1s
KSI Kapahiang 70.55 274 P **P** **01 37 48.8 -2.0**
comp=Z,26µmcomp=Z,2µm,1.0s
TPRI Tanjung Pinang 70.58 279 P **P** **01 37 50.2 -0.7**
comp=Z,129µmcomp=Z,17µmcomp=Z,593nm,1.2s
YUK Yuzh-Kuril'sk 70.86 340*d i*P **P** **01 37 52.1 +0.3**
YUK *i* 01 38 10.6
YUK *i* 01 40 28.1
YUK *i*S **S** **01 47 10.2 +3.6**
YUK *i* 01 47 53.2
YUK *e*SS **SS** **01 51 40.8 +1.0**
YUK pmax pmax
comp=Z,2µm,1.3s
YUK pmax pmax
comp=E,1µm,1.0s
YUK pmax pmax
comp=Z,3µm,1.6s
QZH Quanzhou 70.89 309⇑*i*P **P** **01 37 52.9 +0.4**
QZH S **S** **01 47 07.7 -0.1**
QZH pmax pmax
comp=Z,78nm,1.2s
QZH pmax pmax
comp=Z,13µm,11.4s
QZH LR LR
comp=Z,19µm,18.9s
QZH LR LR
comp=Z,27µm,18.5s
QZH LR LR
comp=Z,37µm,19.9s
KSBUS Busan 71.03 323 P **P** **01 37 52.2 -0.9**
KSBUS IAmb IAmb 01 38 00.1
comp=Z,280nm,1.0s
KUR Kuril'sk 71.32 342*d i*P **P** **01 37 55.3 +0.7**
KUR *i*S **S** **01 47 18.4 +6.4**
KUR pmax pmax
comp=E,336nm,1.5s
KUR pmax pmax
comp=Z,3µm,1.5s
KUR pmax pmax
comp=N,1µm,1.6s
KUR pmax pmax
comp=Z,17µm,5.4s
KUR pmax pmax
comp=E,2µm,5.9s
KUR pmax pmax
comp=N,9µm,4.9s
KUR MLR MLR
comp=N,53µm,17.0s
KUR MLR MLR
comp=Z,55µm,17.0s
JEW Eniwo 71.35 336 ⇓P **P** **01 37 55.0 +0.1**
JEW Eniwo 71.35 336 P **P** **01 37 54.8 -0.1**
MYKOM Kota Tinggi 71.55 280 P **P** **01 37 56.1 -0.7**
MYKOM IAmb IAmb 01 38 00.7
comp=Z,553nm,1.3s
MYKOM IAMs_20 IAMs_20 02 09 20.6
comp=Z,123µm,20.0s
MYKOM Kota Tinggi 71.55 280 P **P** **01 37 59.0 +2.2**
JMP Maruseppu 71.67 338 P **P** **01 37 57.0 +0.2**
JSH Shimam 71.72 335 P **P** **01 37 56.9 -0.2**
ASAJ Asahikawa 72.03 337 P **P** **01 38 00.0 +1.0**
NAWB Namwon 72.12 322 P **P** **01 37 58.8 -0.9**
NAWB IAmb IAmb 01 38 16.7
comp=Z,476nm,1.5s
KRJI Kerinci 72.19 275 P **P** **01 37 58.4 -2.4**
comp=Z,90µmcomp=Z,21µmcomp=Z,1µm,1.0s
COCO West Island 72.79 264 P **P** **01 38 04.2 0.0**
COCO West Island 72.79 264 P **P** **01 38 04.2 0.0**
COCO pmax pmax
comp=Z,959nm,1.2s
COCO MLR MLR
comp=Z,188µm,19.0s
TJN Taejon 72.83 323 P **P** **01 38 02.9 -1.0**
TJN Taejon 72.83 323*d i*P **P** **01 38 03.2 -0.7**
TJN Taejon 72.83 323 P **P** **01 38 03.6 -0.3**
comp=Z,2µm,1.1s
SSE Sheshan 72.95 315 P **P** **01 38 03.2 -1.6**
SSE S **S** **01 47 30.6 -0.7**
SSE pmax pmax
comp=Z,56nm,1.2s
SSE pmax pmax
comp=Z,4µm,9.8s
SSE LR LR
comp=Z,9µm,22.7s
SSE LR LR
comp=Z,2µm,23.4s
KSRS Korea Array 73.30 324 P **P** **01 38 05.7 -0.9**
comp=Z,142nm,1.0s,baz=138,slow=5.6,SNR=123
KSRS PKPPKP **P'P'df** **02 05 46.7 +5.3**
comp=Z,1.3nm,0.7s,baz=5.7,slow=2.4,SNR=6.9
KSRS LR LR 02 07 05.5
comp=Z,38µm,21.9s,baz=135,slow=33
comp=Z,142nm,1.0s
JWK2 Keihoku 73.32 338 P **P** **01 38 07.5 +0.9**
KS19 Wonju Array Si 73.36 324 P **P** **01 38 06.4 -0.7**
KS19 IAmb IAmb 01 38 23.8
comp=Z,404nm,1.2s
BKNI Bangkinang 73.53 277 IAMs_20 IAMs_20 02 08 38.0
comp=Z,173µm,22.0s
BKNI Bangkinang 73.53 277 P **P** **01 38 07.4 -1.2**
comp=Z,102µmcomp=Z,21µmcomp=Z,808nm,1.3s
BKNI Bangkinang 73.53 277 P **P** **01 38 10.2 +1.6**
comp=Z,808nm,1.3s
SEHB SEOHWA 73.72 325 IAmb IAmb 01 38 13.3
comp=Z,314nm,1.2s
GZH Guangzhou 73.72 304 P **P** **01 38 08.9 -0.5**
GZH S **S** **01 47 41.4 +1.1**
GZH pmax pmax
comp=Z,6µm,9.2s
GZH LR LR
comp=Z,26µm,19.7s
GZH LR LR
comp=Z,36µm,22.8s
AMKA Amchitka 73.89 4 P **P** **01 38 09.3 -0.5**
INCN Inchon 74.03 323 P **P** **01 38 10.8 -0.2**
INCN Inchon 74.03 323 P **P** **01 38 10.8 -0.2**
INCN pmax pmax
comp=Z,3µm,1.9s
INCN Inchon 74.03 323 P **P** **01 38 10.1 -0.9**
INCN S **S** **01 47 45.3 +2.0**
INCN Inchon 74.03 323 P **P** **01 38 11.6 +0.6**
comp=Z,596nm,2.0s
INCN Inchon 74.03 323 ⇑P **P** **01 38 10.2 -0.8**
QIZ Qiongzhong 74.31 299 P **P** **01 38 14.4 +1.4**
comp=Z,71nm,1.1s
YSS Yuzh-Sakhalins 74.46 339 P **P** **01 38 13.6 +0.4**
YSS IAMs_20 IAMs_20 02 07 25.6
comp=Z,135µm,21.0s
YSS Yuzh-Sakhalins 74.46 339⇓*i*P **P** **01 38 14.1 +0.9**
YSS *e*S **S** **01 47 50.1 +2.5**
YSS *e*SS **SS** **01 52 32.0 -2.8**
YSS pmax pmax
comp=Z,610nm,0.9s
YSS pmax pmax
comp=Z,7µm,3.4s
YSS smax smax
comp=N,46µm,11.0s
YSS smax smax
comp=E,25µm,8.0s
YSS Yuzh-Sakhalins 74.46 339 P **P** **01 38 14.2 +1.0**
comp=E,1µm,1.8s
YSS Yuzh-Sakhalins 74.46 339 ⇑P **P** **01 38 13.6 +0.4**
SKR Severo-Kuril's 74.50 349*e*P **P** **01 38 13.7 +0.3**
SKR *e* 01 38 29.9
SKR *e*PPP PPP 01 42 44.4
SKR *e*S **S** **01 47 54.5 +6.6**
SKR *e*SS **SS** **01 52 37.5 +2.2**
SKR pmax pmax
comp=Z,4µm,3.9s
SKR pmax pmax
comp=Z,331nm,1.1s
SKR smax smax
comp=N,22µm,13.9s
SKR smax smax
comp=E,47µm,12.1s
SKR MLR MLR
comp=Z,24µm,17.0s
KIWB Kanaga Island 74.65 6 P **P** **01 38 14.1 -0.2**
SISI Saibi 74.67 275 P **P** **01 38 14.2 -1.1**
comp=Z,63µmcomp=Z,10µmcomp=Z,383nm,1.8s
ADK Adak 74.73 7 P **P** **01 38 14.0 -0.7**
ADK IAmb IAmb 01 38 17.6
comp=Z,464nm,0.9s
ADK Adak 74.73 7 P **P** **01 38 14.0 -0.7**
ADK pmax pmax
comp=Z,464nm,1.0s
ADK Adak 74.73 7 P **P** **01 38 14.1 -0.6**
comp=Z,598nm,1.0s
ADK Adak 74.73 7 ⇑P **P** **01 38 13.9 -0.8**
HJU Haeju 74.93 323 P **P** **01 38 15.1 -1.1**
HJU pP **pP** **01 38 19.0 -0.1**
HJU S **S** **01 47 54.9 +1.6**
HJU AmB
comp=Z,10µm,4.7s
HJU AMS AMS
comp=N,94µm,43.8s
HJU AMS AMS
comp=E,121µm,56.3s
HJU AMS AMS
comp=Z,35µm,16.1s
SHEM Shemya Is, Ala 75.04 1 P **P** **01 38 18.0 +1.6**
comp=Z,442nm,1.1s,baz=116,slow=1.6,SNR=7.0
SHEM LR LR 02 07 07.1
comp=Z,45µm,21.9s,baz=186,slow=32
SMY Shemya 75.04 1 IAmb IAmb 01 38 19.6
comp=Z,560nm,1.1s
MNSI Mandailing Nat 75.05 277 P **P** **01 38 17.9 +0.4**
TEY Ternei 75.08 334⇓*i*P **P** **01 38 16.5 -0.4**
TEY *e* 01 38 32.9
TEY *e* 01 47 54.9
TEY pmax pmax
comp=N,10.0nm,2.1s
TEY pmax pmax
comp=Z,20nm,2.1s
TEY pmax pmax
comp=E,1µm,13.0s
TEY pmax pmax
comp=N,700nm,15.7s
NJ2 Nanjing 75.09 315 *e*P **P** **01 38 17.0 -0.3**
NJ2 PcP **PcP** **01 38 29.9 -0.9**
NJ2 S **S** **01 47 53.0 -2.4**
NJ2 SKS **SKSac** **01 48 21.9 -4.4**
NJ2 pmax pmax
comp=N,140nm,1.0s
NJ2 pmax pmax
comp=N,2µm,6.2s
IPM Ipoh 75.23 281 P **P** **01 38 17.3 -1.3**
IPM IAmb IAmb 01 38 32.9
comp=Z,417nm,0.9s
IPM IAMs_20 IAMs_20 02 09 13.8
comp=Z,124µm,22.0s
IPM Ipoh 75.23 281 P **P** **01 38 19.0 +0.5**
IPM Ipoh 75.23 281 P **P** **01 38 19.1 +0.5**
comp=Z,612nm,1.4s
IPM Ipoh 75.23 281 ⇑P **P** **01 38 17.3 -1.3**
HHU Hamhung 75.32 325 P **P** **01 38 17.5 -0.8**
HHU pP **pP** **01 38 21.6 +0.4**
HHU S **S** **01 47 58.8 +1.3**
HHU AmB
comp=Z,11µm,5.1s
HHU AMS AMS
comp=N,42µm,26.0s
HHU AMS AMS
comp=E,56µm,33.9s
HHU AMS AMS
comp=Z,25µm,15.5s
MSHR Mys Shultsa 75.50 329*de*P **P** **01 38 19.6 +0.2**
MSHR pmax pmax
comp=Z,366nm,1.6s
VLA Vladivostok 75.58 330*de*P **P** **01 38 18.4 -1.4**
VLA pmax pmax
comp=Z,371nm,1.3s
PYAG Pyongyang 75.63 324 P **P** **01 38 20.5 +0.3**
KULM Kulim 75.91 282 IAMs_20 IAMs_20 02 10 20.7
comp=Z,147µm,21.0s
KULM Kulim 75.91 282 P **P** **01 38 23.0 +0.6**
KULM Kulim 75.91 282 ⇑P **P** **01 38 20.8 -1.6**
UBPT Khong Chiam 76.10 293 ⇑P **P** **01 38 24.6 +1.3**
PET Petropavlovsk 76.36 351 P **P** **01 38 23.2 -0.8**
PET IAMs_20 IAMs_20 02 07 31.4
comp=Z,93µm,20.0s
PET Petropavlovsk 76.36 351*ce*P **P** **01 38 23.4 -0.6**
PET *e* 01 38 35.4
PET *e*S **S** **01 48 08.3 -0.2**
PET *e*SS **SS** **01 53 01.3 -2.2**
PET pmax pmax
comp=Z,266nm,1.7s
PET pmax pmax
comp=Z,2µm,12.1s
PET smax smax
comp=E,36µm,14.4s
PET smax smax
comp=N,30µm,12.0s
PET smax smax
comp=E,41µm,11.8s
PET smax smax
comp=N,25µm,12.1s
PET MLR MLR
comp=Z,132µm,19.0s
PET MLR MLR
comp=Z,108µm,18.0s
PET Petropavlovsk 76.36 351 P **P** **01 38 24.1 +0.1**
comp=Z,2µm,1.6s
PET Petropavlovsk 76.36 351 ⇑P **P** **01 38 23.9 0.0**
USA0B Ussuriysk Arra 76.38 331 P **P** **01 38 23.6 -0.7**
USA0B Ussuriysk Arra 76.38 331 P **P** **01 38 23.6 -0.7**
USA0B pmax pmax
comp=Z,143nm,1.2s
USRK Ussuriysk Ar. 76.38 331 P **P** **01 38 23.3 -1.1**
comp=Z,304nm,1.1s,baz=134,slow=4.6,SNR=109
USRK S **S** **01 48 10.0 +0.9**
comp=Z,2.6nm,0.8s,baz=129,slow=48,SNR=1.6
USRK LR LR 02 07 19.3
comp=Z,71µm,21.6s,baz=232,slow=32
comp=Z,304nm,1.1s
RPSI Rantau Prapat 76.41 279 IAmb IAmb 01 38 38.0
comp=Z,416nm,1.2s
RPSI IAMs_20 IAMs_20 02 14 44.8
comp=Z,141µm,20.0s
PSI Prapat 76.45 279 P **P** **01 38 24.6 -1.1**
comp=Z,69nm,0.9s,baz=161,slow=3.7,SNR=29
PSI PP **PP** **01 41 16.1 -1.5**
comp=Z,143nm,1.2s,baz=199,slow=6.6,SNR=6.6
PSI LR LR 02 14 47.4
comp=Z,99µm,18.1s,baz=126,slow=38
comp=Z,69nm,0.9s
UGL Uglegorsk 76.54 340 *e*P **P** **01 38 26.1 +1.0**
UGL *e*S **S** **01 48 13.8 +3.2**
UGL pmax pmax
comp=Z,5µm,5.8s
UGL pmax pmax
comp=Z,200nm,1.6s
UGL smax smax
comp=N,47µm,12.0s
UGL smax smax
comp=E,27µm,12.0s
PEA0B Petropavlovsk- 76.58 351*d i*P **P** **01 38 25.3 0.0**
PETK Petropavlovsk- 76.58 351 P **P** **01 38 24.6 -0.7**
comp=E,336nm,0.9s,baz=155,slow=8.2,SNR=94
PETK LR LR 02 07 38.8

comp=E,128µm,20.3s,baz=152,slow=32
comp=E,336nm,0.9s
PETK Petropavlovsk- 76.58 351 P **P** **01 38 24.8 -0.5**
PETK Petropavlovsk- 76.58 351 P **P** **01 38 24.8 -0.5**
CLES Cleveland East 76.59 11 IAmb IAmb 01 38 40.5
comp=Z,953nm,1.0s
MAW Mawson 76.63 202 P **P** **01 38 25.4 -0.2**
comp=Z,65nm,0.7s,baz=125,slow=7.0,SNR=84
MAW LR LR 02 10 50.5
comp=Z,142µm,18.1s,baz=104,slow=35
comp=Z,65nm,0.7s
MAW Mawson 76.63 202 P **P** **01 38 25.3 -0.2**
baz=77,SNR=101
MAW Mawson 76.63 202 P **P** **01 38 26.2 +0.8**
MAW Mawson 76.63 202 P **P** **01 38 26.3 +0.8**
MAW pmax pmax
comp=Z,115nm,1.0s
MAW Mawson 76.63 202 ⇑P **P** **01 38 25.3 -0.2**
MAW ⇓P P 01 38 41.3 +16
CNSH ChangSha 76.88 308 ⇑P **P** **01 38 25.7 -1.9**
CNSH S **S** **01 48 11.8 -3.5**
CNSH pmax pmax
comp=Z,11µm,11.3s
CNSH LR LR
comp=Z,42µm,25.2s
CNSH LR LR
comp=Z,29µm,25.1s
CNSH LR LR
comp=Z,51µm,24.4s
NIKH Nikolski High 76.91 11 P **P** **01 38 25.5 -1.6**
baz=197,SNR=56
NIKH S **S** **01 48 17.4 +2.9**
baz=197
SUJ Sinuiju 77.06 324 P **P** **01 38 27.1 -1.1**
SUJ pP **pP** **01 38 31.2 +0.1**
SUJ S **S** **01 48 17.9 +1.2**
SUJ AmB
comp=Z,13µm,5.1s
SUJ AMS AMS
comp=N,30µm,34.1s
SUJ AMS AMS
comp=E,13µm,14.5s
SUJ AMS AMS
comp=Z,12µm,13.9s
TSI Tuntungan 77.06 279 P **P** **01 38 28.3 -0.6**
comp=Z,16µmcomp=Z,334nm,1.1s
GSI Gunungsitoli 77.09 277 P **P** **01 38 29.2 +0.1**
comp=Z,114µmcomp=Z,23µmcomp=Z,449nm,0.8s
GSI Gunungsitoli 77.09 277 P **P** **01 38 30.6 +1.5**
comp=Z,450nm,0.8s
GULI GuiLin 77.20 304 ⇓P **P** **01 38 30.9 +1.5**
GULI S **S** **01 48 17.9 -0.9**
GULI pmax pmax
comp=Z,50nm,1.2s
GULI LR LR
comp=Z,36µm,24.9s
GULI LR LR
comp=Z,30µm,21.7s
GULI LR LR
comp=Z,53µm,24.0s
WHN Wuhan 77.23 311 ⇓P **P** **01 38 28.4 -1.1**
WHN sP **sP** **01 38 35.4 +2.1**
WHN S **S** **01 48 15.4 -3.6**
WHN sS **sS** **01 48 25.8 +1.9**
WHN SS **SS** **01 53 22.6 +5.1**
WHN pmax pmax
comp=Z,320nm,1.0s
WHN pmax pmax
comp=Z,15µm,11.3s
WHN LR LR
comp=Z,88µm,18.9s
WHN LR LR
comp=Z,111µm,25.6s
WHN LR LR
comp=Z,167µm,22.5s
MDJ Mudanjiang 77.79 330 P **P** **01 38 31.8 -0.5**
MDJ IAmb IAmb 01 38 35.5
comp=Z,205nm,0.9s
MDJ Mudanjiang 77.79 330 P **P** **01 38 31.8 -0.5**
MDJ pP pP 01 38 35.2 0.0
MDJ S **S** **01 48 31.9 +7.4**
MDJ sS SKSac 01 48 38.1 -7.5
MDJ pmax pmax
comp=Z,270nm,2.4s
MDJ pmax pmax
comp=Z,860nm,7.0s
MDJ LR LR
comp=Z,26µm,14.9s
MDJ LR LR
comp=Z,42µm,20.1s
MDJ LR LR
comp=Z,67µm,22.9s
MDJ Mudanjiang 77.79 330 P **P** **01 38 32.5 +0.2**
comp=Z,278nm,1.0s
KCSI Kotacane, Aceh 77.80 279 P **P** **01 38 30.5 -2.6**
comp=Z,83µmcomp=Z,9µmcomp=Z,142nm,0.7s
DL2 Dalian 77.85 321 ⇓*i*P **P** **01 38 32.8 +0.1**
DL2 S **S** **01 48 28.8 +3.5**
DL2 SKS **SKSac** **01 48 45.4 -0.8**
DL2 pmax pmax
comp=Z,100nm,1.0s
DL2 pmax pmax
comp=Z,9µm,11.4s
DL2 LR LR
comp=Z,58µm,22.1s
DL2 LR LR
comp=Z,31µm,31.3s
DL2 LR LR
comp=Z,86µm,40.7s
TYV Tymovskoe 77.92 341 *e*P **P** **01 38 34.1 +1.3**
TYV *e*S **S** **01 48 31.5 +5.9**
TYV pmax pmax
comp=Z,4µm,4.5s
TYV pmax pmax
comp=Z,211nm,1.5s
TYV smax smax
comp=N,24µm,7.6s
TYV smax smax
comp=E,24µm,7.6s
UNV Unalaska Valle 78.18 12 IAmb IAmb 01 38 50.8
comp=Z,255nm,1.0s
UNV Unalaska Valle 78.18 12 P **P** **01 38 32.0 -2.2**
baz=199,SNR=31
UNV S **S** **01 48 29.8 +1.6**
baz=199
SRIT Nakonsritamara 78.24 284 IAmb IAmb 01 38 50.9
comp=Z,207nm,1.0s
BELA Belgrano 2 78.41 174 P **P** **01 38 34.0 -1.4**
BELA IAmb IAmb 01 38 53.4
comp=Z,521nm,1.2s
AKUT Akutan 78.60 13 IAmb IAmb 01 38 57.4
comp=Z,200nm,1.1s
AKUT Akutan 78.60 13 ⇓P **P** **01 38 36.2 -0.3**
AKUT ⇓P **P** **01 38 36.6 +0.1**
SNY Shenyang 78.77 325 ⇓P **P** **01 38 36.8 -0.9**
SNY S **S** **01 48 43.2 +8.2**
SNY pmax pmax
comp=Z,21nm,1.0s
SNY pmax pmax
comp=Z,2µm,4.3s
SNY LR LR
comp=Z,73µm,24.0s
SNY LR LR
comp=Z,57µm,24.5s
SNY LR LR
comp=Z,105µm,24.5s
TIA Tai'an 78.82 317 ⇑P **P** **01 38 36.3 -1.9**
TIA S **S** **01 48 36.2 +0.3**
TIA pmax pmax
comp=Z,36nm,0.8s
TIA pmax pmax
comp=Z,10µm,10.3s
TIA LR LR
comp=Z,54µm,21.6s
TIA LR LR
comp=Z,41µm,23.0s
TIA LR LR
comp=Z,104µm,21.8s
CN2 Changchun 79.19 327 *e*P **P** **01 38 38.4 -1.7**
CN2 PP **PP** **01 41 43.2 +3.2**
CN2 *e*S **S** **01 48 38.0 -1.6**
CN2 SS **SS** **01 53 44.3 -2.4**
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,2µm,8.2s
CN2 LR LR
comp=Z,36µm,21.0s
CN2 LR LR
comp=Z,31µm,21.0s
CN2 LR LR
comp=Z,42µm,20.0s
LHMI Lhok Sumawe 79.24 280 IAmb IAmb 01 38 55.7
comp=Z,407nm,1.0s
LHMI IAMs_20 IAMs_20 02 12 35.1
comp=Z,137µm,20.0s
LHMI Lhok Sumawe 79.24 280 P **P** **01 38 41.5 +0.5**
comp=Z,90µmcomp=Z,15µmcomp=Z,573nm,1.0s
LHMI Lhok Sumawe 79.24 280 P **P** **01 38 42.0 +1.0**
comp=Z,567nm,1.0s
SMAI San Martin Ant 79.50 161 P **P** **01 38 41.4 0.0**
SMAI IAmb IAmb 01 38 57.6
comp=Z,423nm,1.0s
BNX BinXian 79.66 329 ⇑P **P** **01 38 40.5 -2.0**
BNX pP **sP** **01 38 47.5 +1.1**
BNX sP **pwP** **01 38 52.4 +1.1**
BNX S **S** **01 48 39.5 -4.9**
BNX sS **SKSac** **01 48 56.9 -2.0**
BNX pmax pmax
comp=Z,72nm,0.9s
BNX pmax pmax
comp=Z,3µm,6.4s
BNX LR LR
comp=Z,33µm,23.3s
BNX LR LR
comp=Z,46µm,24.9s
BNX LR LR
comp=Z,62µm,23.0s
GRNR Gornyy 79.89 337 ⇓*i*P **P** **01 38 41.1 -2.6**
GRNR *e*S **S** **01 48 46.3 -0.4**
GRNR pmax pmax
comp=E,6.0nm,1.0s
GRNR pmax pmax
comp=N,4.0nm,0.9s
GRNR smax smax
comp=E,8.0nm,0.8s
KLR Kul'dur 80.42 334 P **P** **01 38 45.9 -0.7**
comp=E,43nm,0.8s,baz=132,slow=3.5,SNR=69
comp=E,43nm,0.8s
KLR Kul'dur 80.42 334 *de*P **P** **01 38 46.7 +0.1**
KLR pmax pmax
comp=Z,540nm,2.4s
ENH Enshi 80.54 308 P **P** **01 38 46.3 -1.5**
ENH IAmb IAmb 01 39 08.0
comp=Z,556nm,1.4s
AIS Amsterdam Isla 80.57 233 P **P** **01 38 47.9 0.0**
CHNA Chernabura Isl 80.64 16 P **P** **01 38 45.6 -1.9**
baz=205,SNR=48
CHNA S **S** **01 48 56.9 +2.7**
baz=205
GYA Guiyang 80.64 304 ⇑*i*P **P** **01 38 48.6 +0.1**
GYA sP PcP 01 38 54.7 -0.6
GYA PP **PP** **01 41 53.8 +1.3**
GYA S **S** **01 48 58.4 +2.5**
GYA SS **SS** **01 54 14.1 +4.9**
GYA pmax pmax
comp=Z,33nm,0.8s
GYA pmax pmax
comp=Z,3µm,8.8s
GYA LR LR
comp=Z,28µm,18.1s
GYA LR LR
comp=Z,28µm,23.2s
GYA LR LR
comp=Z,66µm,27.6s
SPIA Saint Paul Isl 80.73 9 IAmb IAmb 01 39 04.1
comp=Z,649nm,1.2s
SPIA Saint Paul Isl 80.73 9 P **P** **01 38 46.9 -1.1**
baz=196
SPIA S **S** **01 48 59.7 +4.6**
baz=196
SPIA Saint Paul Isl 80.73 9 P **P** **01 38 47.8 -0.2**
comp=Z,285nm,1.1s
S12K Black Hills 80.85 14 P **P** **01 38 46.5 -2.3**
baz=203
S12K S **S** **01 48 58.5 +2.0**
baz=203
LYN LuoYang 80.86 313 ⇑*i*P **P** **01 38 47.4 -1.9**
LYN pP sP 01 38 54.1 +1.0
LYN sP PcP 01 38 56.5 +0.7
LYN PP **PP** **01 42 01.3 +7.3**
LYN S **S** **01 48 51.4 -6.1**
LYN pmax pmax
comp=Z,20nm,1.0s
LYN pmax pmax
comp=Z,12µm,11.7s
LYN LR LR
comp=Z,29µm,20.4s
LYN LR LR
comp=Z,70µm,25.5s
SDPT Sand Point 80.89 15 IAmb IAmb 01 39 08.7
comp=Z,318nm,1.2s
SDPT Sand Point 80.89 15 P **P** **01 38 46.9 -2.0**
baz=205,SNR=17
SDPT S **S** **01 48 57.8 +1.0**
baz=205
PAF Port-aux-Franc 81.06 220 IAMs_20 IAMs_20 02 10 41.4
comp=Z,87µm,18.0s
PAF Port-aux-Franc 81.06 220 ⇓P **P** **01 38 54.4 +4.1**
HNS HongShan 81.08 317 ⇓P **P** **01 38 50.0 -0.4**
HNS S **S** **01 49 00.0 +0.4**
HNS SS **SS** **01 54 11.8 -3.2**
HNS pmax pmax
comp=Z,100nm,1.7s
HNS pmax pmax
comp=Z,12µm,11.0s
HNS LR LR
comp=Z,42µm,20.7s
HNS LR LR
comp=Z,43µm,22.3s
HNS LR LR
comp=Z,78µm,23.5s
BJT Baijiatuau 81.78 319 P **P** **01 38 53.3 -0.8**
BJT Baijiatuau 81.78 319 P **P** **01 38 53.3 -0.8**
BJT pmax pmax
comp=Z,146nm,1.2s
BJI Beijing 81.79 320 P **P** **01 38 52.8 -1.3**
BJI PcP **pP** **01 38 56.6 -0.4**
BJI S **S** **01 49 04.6 -2.3**
BJI SS **SS** **01 54 27.0 +1.4**
BJI pmax pmax
comp=Z,26nm,1.7s
BJI pmax pmax
comp=Z,2µm,5.6s
BJI LR LR
comp=Z,15µm,24.2s
BJI LR LR
comp=Z,64µm,24.2s
BJI LR LR
comp=Z,152µm,27.5s
S14K Fog Glacier 81.96 15 P **P** **01 38 53.0 -1.7**
baz=205,SNR=24
S14K S **S** **01 49 12.4 +4.2**
baz=205
CHGN Chignik 82.25 16 IAmb IAmb 01 39 08.5
comp=Z,227nm,1.0s
CHGN Chignik 82.25 16 P **P** **01 38 54.0 -2.1**
baz=206,SNR=41
CHGN S **S** **01 49 11.3 +0.3**
baz=206
PMSA Palmer Station 82.51 159 LR LR 02 08 29.1
comp=Z,102µm,21.4s,baz=228,slow=30
PMSA Palmer Station 82.51 159 P **P** **01 38 56.8 -0.8**
PMSA Palmer Station 82.51 159 IAMs_20 IAMs_20 02 08 06.5
comp=Z,92µm,21.0s
PMSA Palmer Station 82.51 159 ⇑P **P** **01 38 56.7 -0.8**
CHIR Chirikof Islan 82.56 17 IAmb IAmb 01 39 20.9
comp=Z,625nm,1.8s
CHIR Chirikof Islan 82.56 17 P **P** **01 38 55.6 -2.1**
baz=209,SNR=7.1
CHIR S **S** **01 49 18.2 +4.1**
baz=209
TIY Taiyuan 82.72 316 ⇓P **P** **01 38 58.9 -0.2**
TIY S **S** **01 49 17.2 +0.5**
TIY pmax pmax
comp=Z,66nm,0.7s
TIY pmax pmax
comp=Z,8µm,10.3s
TIY LR LR
comp=Z,16µm,20.6s
TIY LR LR
comp=Z,32µm,20.6s
TIY LR LR
comp=Z,65µm,23.4s
XAN Xi'an 83.00 311 ⇑P **P** **01 38 58.9 -1.7**
XAN pP PcP 01 39 06.3 +1.0
XAN sP pwP 01 39 10.4 +0.9
XAN PP **PP** **01 42 17.4 +5.7**
XAN S **S** **01 49 18.0 -1.7**
XAN SS **SS** **01 54 49.3 +5.4**
XAN pmax pmax
comp=Z,130nm,1.4s
XAN pmax pmax
comp=Z,3µm,6.4s
XAN LR LR
comp=Z,30µm,18.0s
XAN LR LR
comp=Z,46µm,18.4s
XAN LR LR
comp=Z,60µm,19.4s
KMI Kunming 83.05 301 ⇓P **P** **01 39 01.0 -0.3**
KMI pP PcP 01 39 06.8 +0.8
KMI sP pwP 01 39 09.1 -0.8
KMI S **S** **01 49 21.0 0.0**
KMI SS **SS** **01 54 47.6 +2.3**
KMI pmax pmax
comp=Z,26nm,1.0s
KMI pmax pmax
comp=Z,5µm,11.5s
KMI LR LR
comp=Z,50µm,24.4s
KMI LR LR
comp=Z,31µm,23.1s
KMI LR LR
comp=Z,40µm,24.3s
CM31 Chiang Mai Arr 83.10 293 P **P** **01 39 01.2 -0.2**
CM31 Chiang Mai Arr 83.10 293 P **P** **01 39 03.2 +1.8**
CM31 P **P** **01 39 03.2 +1.8**
CM31 S **S** **01 49 22.2 +1.0**
CM31 S **S** **01 49 22.2 +1.0**
CMAR Chiang Mai Arr 83.10 293 P **P** **01 39 00.4 -1.0**
comp=Z,29nm,0.9s,baz=131,slow=3.8,SNR=58
CMAR PKPPKP **P'P'df** **02 05 29.3 +1.6**
comp=Z,0.5nm,0.3s,baz=262,slow=2.3,SNR=4.1
CMAR LR LR 02 15 54.4
comp=Z,33µm,21.9s,baz=135,slow=36
comp=Z,29nm,0.9s
CMAR Chiang Mai Arr 83.10 293 *i*P **P** **01 39 01.2 -0.2**
CMAR pmax pmax
comp=Z,59nm,0.9s
CHTO Chiang Mai 83.26 293 P **P** **01 39 01.8 -0.4**
CHTO IAmb IAmb 01 39 07.6
comp=Z,166nm,1.1s
CHTO Chiang Mai 83.26 293 P **P** **01 39 01.8 -0.4**
CHTO pmax pmax
comp=Z,166nm,1.2s
CHTO MLR MLR
comp=Z,56µm,20.0s
CHTO Chiang Mai 83.26 293 P **P** **01 39 05.1 +2.8**
CHTO P **P** **01 39 05.1 +2.8**
CHTO Chiang Mai 83.26 293 P **P** **01 39 03.0 +0.7**
comp=Z,81nm,1.2s
CHTO Chiang Mai 83.26 293 ⇑P **P** **01 39 01.4 -0.9**
R16K Pilot Point 83.59 15 P **P** **01 39 01.1 -1.9**
baz=207,SNR=5.7
R16K S **S** **01 49 27.1 +2.6**
baz=207
SII Sitkinak Islan 83.60 18 P **P** **01 39 00.9 -2.2**
baz=210,SNR=15
SII S **S** **01 49 31.1 +6.4**
baz=210
SII Sitkinak Islan 83.60 18 P **P** **01 39 03.4 +0.3**
comp=Z,328nm,1.0s
MA2 Magadan 83.92 349 LR LR 02 10 16.1
comp=Z,114µm,21.6s,baz=166,slow=31
MA2 Magadan 83.92 349 P **P** **01 39 03.1 -1.5**
MA2 IAmb IAmb 01 39 17.3
comp=Z,307nm,1.2s
MA2 IAMs_20 IAMs_20 02 09 43.4
comp=Z,130µm,22.0s
MA2 Magadan 83.92 349 *de*P **P** **01 39 03.3 -1.4**
MA2 pmax pmax
comp=Z,376nm,1.3s
MA2 Magadan 83.92 349 P **P** **01 39 03.8 -0.9**
comp=Z,247nm,1.5s
MA2 Magadan 83.92 349 ⇓P **P** **01 39 03.2 -1.5**
MA2 ⇓s P 01 39 16.3 +12
MA2 ⇓s P 01 39 16.7 +12
R17K Ugashik Creek 83.96 16 P **P** **01 39 03.1 -1.8**
baz=208,SNR=79
R17K S **S** **01 49 31.2 +2.9**
baz=208
XLT XiLinHaoTe 84.26 322 ⇑*i*P **P** **01 39 05.3 -1.6**
XLT pP pP 01 39 09.3 -0.5
XLT sP pwP 01 39 14.8 -1.0
XLT SKS **S** **01 49 24.4 -7.7**
XLT S **SKSac** **01 49 30.1 -0.1**
XLT sS sS 01 49 38.4 +1.5
XLT SS **SS** **01 55 03.1 +0.8**
XLT pmax pmax
comp=Z,40nm,1.2s
XLT pmax pmax
comp=Z,3µm,6.5s
XLT LR LR
comp=Z,4µm,19.7s
XLT LR LR
comp=Z,29µm,20.2s
XLT LR LR
comp=Z,44µm,22.9s
OHAK Old Harbor 84.42 18 P **P** **01 39 05.2 -2.1**
baz=211,SNR=106
OHAK S **S** **01 49 36.6 +3.8**
baz=211
PZH PanZhiHua 84.50 302 P **P** **01 39 08.1 -0.5**
PZH sP **sP** **01 39 13.4 +0.9**
PZH SKS **S** **01 49 28.1 -7.2**
PZH S **SKSac** **01 49 33.2 +0.6**
PZH ScS **ScS** **01 49 45.1 -1.8**
PZH pmax pmax
comp=Z,30nm,1.0s
PZH pmax pmax
comp=Z,9µm,11.2s
PZH LR LR
comp=Z,40µm,21.6s
PZH LR LR
comp=Z,34µm,24.7s
PZH LR LR
comp=Z,56µm,24.9s
P16K Nushagak River 84.80 15 P **P** **01 39 06.5 -2.7**
baz=207,SNR=53
P16K S **S** **01 49 38.6 +2.0**
baz=207
Q16K King Salmon 84.81 15 P **P** **01 39 07.4 -1.7**
baz=208,SNR=76
Q16K S **S** **01 49 39.5 +2.9**
baz=208
H06S1 SOCORRO T 84.87 67 P **P** **01 39 12.9 +2.5**
H06E1 SOCORRO T-PHAS 84.91 67 P **P** **01 39 13.4 +2.7**
SNR=7.2
SNCC San Nicolas Is 84.94 51 P **P** **01 39 09.2 -1.3**
baz=239,SNR=9.4
SNCC S **S** **01 49 40.1 +0.9**
baz=239
HHC Hu-ho-hao-te 85.09 318 *e*P **P** **01 39 10.3 -0.9**
HHC PP **PP** **01 42 33.8 +5.0**
HHC S **S** **01 49 42.8 +2.3**
HHC SS **SS** **01 55 13.8 -0.9**
HHC pmax pmax
comp=Z,190nm,1.0s
HHC pmax pmax
comp=Z,4µm,6.9s
HHC LR LR
comp=Z,88µm,19.9s
HHC LR LR
comp=Z,116µm,22.0s
HHC LR LR
comp=Z,398µm,21.3s
CD2 Chengdu 85.09 306 P **P** **01 39 11.7 +0.3**
CD2 pP PcP 01 39 14.8 +0.2
CD2 sP sP 01 39 16.9 +1.6
CD2 SKS **S** **01 49 34.9 -6.0**
CD2 S **SKKSac** **01 49 39.4 -2.9**
CD2 sS ScS 01 49 50.0 -1.4
CD2 pmax pmax
comp=Z,60nm,0.6s
CD2 pmax pmax
comp=Z,2µm,5.0s
CD2 LR LR

comp=Z,55µm,22.9s
CD2 LR LR
comp=Z,56µm,19.8s
CD2 LR LR
comp=Z,53µm,19.6s
KDAK Kodiak Island 85.10 18 P **P 01 39 10.0 -0.7**
KDAK IAmb IAmb 01 39 27.7
comp=Z,235nm,1.1s
KDAK Kodiak Island 85.10 18 P **P 01 39 10.0 -0.7**
KDAK pmax pmax
comp=Z,235nm,1.1s
KDAK Kodiak Island 85.10 18 P **P 01 39 08.7 -1.9**
baz=212
KDAK S **S 01 49 40.9 +1.3**
baz=212
MCCM Marconi Confer 85.24 45 ⇓P **P 01 39 12.9 +1.0**
MCCM ⇑P **P 01 39 14.8 +2.9**
SCZ2 Santa Cruz Isl 85.25 50 P **P 01 39 09.4 -2.6**
baz=239,SNR=10
SCZ2 S **S 01 49 43.9 +1.6**
baz=239
O16K Kokwok River B 85.28 14 P **P 01 39 09.6 -2.0**
baz=206,SNR=56
O16K S **S 01 49 42.3 +1.0**
baz=206
P17K Kvichak River 85.32 15 P **P 01 39 09.4 -2.3**
baz=208,SNR=73
P17K S **S 01 49 41.6 -0.1**
baz=208
TROLL Troll, Antarti 85.39 183 P **P 01 39 10.4 -2.0**
SBC Santa Barbara 85.42 50 P **P 01 39 10.5 -2.3**
baz=239
SBC S **S 01 49 46.5 +2.7**
baz=239
SAO San Andreas Ge 85.44 47 P **P 01 39 12.3 -0.7**
SAO IAmb IAmb 01 39 17.6
comp=Z,179nm,1.1s
SAO San Andreas Ge 85.44 47 P **P 01 39 12.3 -0.7**
SAO pmax pmax
comp=Z,179nm,1.1s
SAO San Andreas Ge 85.44 47 ⇑P **P 01 39 12.8 -0.1**
SCI2 San Clemente I 85.51 52 P **P 01 39 11.2 -2.2**
baz=240,SNR=11
SCI2 S **S 01 49 46.9 +2.1**
baz=240
HOPS Hopland Field 85.58 45 P **P 01 39 13.6 +0.1**
HOPS IAmb IAmb 01 39 29.8
comp=Z,283nm,1.1s
PKM Mcpherson Peak 85.58 49 P **P 01 39 11.2 -2.7**
baz=239,SNR=38
PKM S **S 01 49 47.8 +1.9**
baz=239
PMPB Monarch Peak 85.59 48 IAmb IAmb 01 39 55.1
comp=Z,597nm,1.6s
PBA Port Blair 85.64 284 *e*P **P 01 39 12.8 -1.6**
O17K Koliganek Bris 85.68 15 P **P 01 39 11.8 -1.6**
baz=207,SNR=30
O17K S **S 01 49 46.5 +1.3**
baz=207
SMMC Simmler 85.68 49 P **P 01 39 11.8 -2.4**
baz=238,SNR=8.2
SMMC S **S 01 49 48.7 +2.3**
baz=238
ZEA Zeya 85.69 335 *e*P **P 01 39 12.9 -0.8**
ZEA *e*S **S 01 49 46.6 +0.9**
ZEA pmax pmax
comp=E,60nm,1.1s
ZEA pmax pmax
comp=N,80nm,0.9s
ZEA pmax pmax
comp=Z,180nm,1.0s
ZEA pmax pmax
comp=E,1µm,10.4s
ZEA pmax pmax
comp=N,2µm,7.1s
ZEA pmax pmax
comp=Z,5µm,10.0s
PAGB Antelope Grade 85.72 49 IAmb IAmb 01 39 37.2
comp=Z,317nm,1.4s
Q19K Cape Douglas, 85.79 17 P **P 01 39 12.3 -1.9**
baz=210,SNR=32
Q19K S **S 01 49 47.1 +0.5**
baz=210
CIS Catalina Islan 85.82 51 P **P 01 39 13.4 -1.5**
baz=240
CIS S **S 01 49 48.9 +1.0**
baz=240
HIA Hailar 85.82 328 IAmb IAmb 01 39 30.6
comp=Z,1µm,3.0s
HIA Hailar 85.82 328 *de*P **P 01 39 13.4 -1.2**
HIA pmax pmax
comp=Z,101nm,1.6s
Q20K Shuyak Island 85.86 17 P **P 01 39 12.8 -1.6**
baz=212,SNR=30
Q20K S **S 01 49 46.9 -0.1**
baz=212
KMRM Mail Ridge 85.86 43 P **P 01 39 15.2 +0.2**
BCW Bitter Crk WRg 85.89 50 IAmb IAmb 01 39 22.9
comp=Z,189nm,0.9s
BTO Baotou 85.91 317 *e*P **P 01 39 14.6 -0.7**
BTO PP **PP 01 42 36.8 +1.4**
BTO S **S 01 49 50.2 +1.5**
BTO LR LR
comp=Z,147µm,21.4s
BTO LR LR
comp=Z,157µm,26.5s
SNAA Sanae 85.91 181 P **P 01 39 12.8 -2.1**
SNAA Sanae 85.91 181 LR LR 02 13 53.7
comp=Z,174µm,21.7s,baz=180,slow=33
SNAA Sanae 85.91 181 P **P 01 39 12.8 -2.1**
SNAA Sanae 85.91 181 P **P 01 39 12.8 -2.1**
SNAA pmax pmax
comp=Z,838nm,1.6s
NVL N'lazarevskaya 85.93 186 ⇓*i*P **P 01 39 15.2 +0.4**
NVL *e*S **SKSac 01 49 39.3 -0.8**
NVL *e*SP **SPn 01 50 49.9 +7.3**
NVL *e*PS PnS 01 51 16.0 +31
NVL pmax pmax
comp=Z,299nm,1.0s
NVL MLR MLR
comp=Z,103µm,15.0s
N16K Nishlik Lake 85.93 14 P **P 01 39 13.8 -1.0**
baz=206,SNR=137
N16K S **S 01 49 50.0 +2.2**
baz=206
JCC Jacoby Creek, 85.99 43 IAMs_20 IAMs_20 02 08 42.0
comp=Z,125µm,21.0s
FMP Fort Macarthur 86.06 51 P **P 01 39 13.4 -2.7**
baz=240
FMP S **S 01 49 52.4 +2.2**
baz=240
DGPR DIGLIPUR 86.09 286 *e*P **P 01 39 16.6 0.0**
KHMM Horse Mountain 86.21 43 IAmb IAmb 01 39 33.5
comp=Z,283nm,1.2s
DECC Green Verdugo 86.31 51 P **P 01 39 15.5 -1.8**
baz=240,SNR=7.4
DECC S **S 01 49 52.2 -0.4**
baz=240
CCX Cicese 86.33 53 P **P 01 39 17.1 -0.3**
VNA3 Neumayer Olymp 86.37 179 P **P 01 39 14.7 -2.4**
PASC Pasadena Art C 86.37 51 IAMs_20 IAMs_20 02 08 39.5
comp=Z,89µm,21.0s
ARVC Arvin 86.40 50 P **P 01 39 16.9 -0.9**
baz=239,SNR=24
ARVC S **S 01 49 53.1 -0.3**
baz=239
109C Camp Elliot, M 86.51 52 P **P 01 39 16.5 -1.8**
baz=240,SNR=6.7
109C S **S 01 49 54.6 -0.1**
baz=240
P19K Oil Pt 86.53 16 IAmb IAmb 01 39 31.5
comp=Z,166nm,0.8s
P19K Oil Pt 86.53 16 P **P 01 39 15.9 -1.9**
baz=211,SNR=23
P19K S **S 01 49 56.9 +3.2**
baz=211
VES Vestal, Richgr 86.58 49 P **P 01 39 16.9 -1.7**
baz=239,SNR=48
VES S **S 01 49 54.1 -1.1**
baz=239
VOG Valley Oaks Go 86.62 48 P **P 01 39 16.7 -2.0**
baz=239
KSXB Camp Six Broad 86.66 42 IAmb IAmb 01 39 29.7
comp=Z,231nm,1.0s
VNA2 Neumayer--Watz 86.70 180 P **P 01 39 16.5 -2.2**
baz=172,slow=5.0
O19K Port Alsworth 86.72 16 IAmb IAmb 01 39 34.8
comp=Z,354nm,0.9s
O19K Port Alsworth 86.72 16 P **P 01 39 16.6 -2.0**
baz=210,SNR=40
O19K S **S 01 49 57.8 +2.5**
baz=210
BAR Barrett 86.73 53 P **P 01 39 18.2 -1.2**
BAR IAmb IAmb 01 39 47.1
comp=Z,307nm,2.0s
USHA Ushuaia 86.76 149 P **P 01 39 19.4 +0.2**
comp=Z,51nm,1.3s,baz=68,slow=8.6,SNR=5.2
USHA LR LR 02 09 27.8
comp=Z,82µm,21.9s,baz=222,slow=30
comp=Z,51nm,1.3s
N18K Kilae Creek 86.76 15 P **P 01 39 18.8 -0.1**
N18K IAMs_20 IAMs_20 02 11 31.4
comp=Z,113µm,20.0s
N18K Kilae Creek 86.76 15 P **P 01 39 17.0 -1.9**
baz=208,SNR=17
N18K S **S 01 49 59.0 +3.1**
baz=208
BFSC Mount Baldy Ra 86.78 51 P **P 01 39 18.7 -1.1**
baz=240,SNR=39
BFSC S **S 01 49 57.2 -0.3**
baz=240
MURC Murrieta 86.80 52 P **P 01 39 18.4 -1.3**
baz=240,SNR=16
MURC S **S 01 49 57.8 +0.3**
baz=240
GO09 Cerro Castillo 86.81 145 P **P 01 39 19.9 +0.4**
GO09 IAmb IAmb 01 39 28.9
comp=Z,442nm,1.2s
SEY Seymchan 86.82 351 LR LR 02 13 32.2
comp=Z,146µm,20.8s,baz=162,slow=32
SEY Seymchan 86.82 351 *de*P **P 01 39 18.0 -1.1**
SEY pmax pmax
comp=Z,837nm,1.7s
ILSW Iliamna Southw 86.83 16 IAmb IAmb 01 39 34.7
comp=Z,337nm,1.2s
CMB Columbia Colle 86.83 47 IAmb IAmb 01 39 24.6
comp=Z,200nm,1.1s
EDW2 Edwards Air Fo 86.86 50 P **P 01 39 17.2 -2.9**
baz=240,SNR=86
EDW2 S **S 01 49 57.2 -0.9**
baz=240
ISA Isabella, Lake 86.92 49 IAmb IAmb 01 39 25.3
comp=Z,261nm,1.1s
ISA Isabella, Lake 86.92 49 P **P 01 39 18.7 -1.6**
baz=239,SNR=198
ISA S **S 01 49 57.0 -1.6**
baz=239
GAMB Gambell 86.94 7 IAmb IAmb 01 39 35.8
comp=Z,334nm,1.2s
GAMB Gambell 86.94 7 P **P 01 39 19.6 -0.1**
baz=194,SNR=27
GAMB S **S 01 50 02.6 +5.2**
baz=194
GAMB Gambell 86.94 7 ⇑P **P 01 39 19.5 -0.1**
GAMB ⇑P **P 01 39 19.9 +0.3**
GAMB ⇑s P 01 39 35.6 +16
CNPM China Poot 86.95 17 IAmb IAmb 01 39 34.8
comp=Z,124nm,0.9s
CNPM IAMs_20 IAMs_20 02 10 38.5
comp=Z,148µm,22.0s
HOM Homer 86.95 17 IAmb IAmb 01 39 37.0
comp=Z,305nm,1.0s
HOM Homer 86.95 17 P **P 01 39 19.0 -0.8**
baz=212
HOM S **S 01 50 01.6 +4.0**
baz=212
VNA1 Neumayer--Stat 86.98 180 P **P 01 39 18.1 -1.9**
L02F Cave Junction 87.01 42 P **P 01 39 19.8 -0.7**
baz=236,SNR=31
L02F S **S 01 49 59.4 +0.3**
baz=236
MONP2 Monument Peak 87.01 53 P **P 01 39 19.4 -1.7**
baz=241,SNR=38
MONP2 S **S 01 49 58.8 -1.2**
baz=241
O20K Slope Mountain 87.05 16 P **P 01 39 18.6 -1.8**
baz=211,SNR=7.4
O20K S **S 01 50 01.7 +2.9**
baz=211
IKP In-Ko-Pah, Jac 87.13 53 P **P 01 39 20.7 -0.8**
baz=241,SNR=34
IKP S **S 01 50 01.1 +0.3**
baz=241
N19K Bonanza Creek 87.21 15 IAmb IAmb 01 39 38.1
comp=Z,132nm,1.1s
N19K Bonanza Creek 87.21 15 P **P 01 39 19.0 -2.2**
baz=210,SNR=24
N19K S **S 01 50 03.4 +3.0**
baz=210
BRLK Bradley Lake 87.25 17 IAmb IAmb 01 39 40.0
comp=Z,144nm,1.0s
BRSE Bradley Lake S 87.27 17 P **P 01 39 20.0 -1.4**
baz=213,SNR=16
BRSE S **S 01 49 57.8 -3.0**
baz=213
K02D Willamette Mer 87.28 41 P **P 01 39 20.2 -1.7**
baz=236,SNR=14
SFX San Felipe 87.29 55 P **P 01 39 22.9 +0.7**
BBRC Big Bear Solar 87.32 51 P **P 01 39 20.7 -1.8**
baz=240
BBRC S **S 01 50 00.6 -2.3**
baz=240
YBH Yreka Blue Hor 87.33 42 LR LR 02 09 59.2
comp=Z,129µm,21.9s,baz=239,slow=30
YBH Yreka Blue Hor 87.33 42 IAmb IAmb 01 39 39.8
comp=Z,216nm,1.3s
YBH IAMs_20 IAMs_20 02 09 37.3
comp=Z,133µm,22.0s
PFO Pinyon Flats O 87.34 52 LR LR 02 09 32.0
comp=Z,71µm,21.2s,baz=248,slow=30
PFO Pinyon Flats O 87.34 52 P **P 01 39 22.1 -0.5**
PFO Pinyon Flats O 87.34 52 IAMs_20 IAMs_20 02 08 44.2
comp=Z,98µm,22.0s
PFO Pinyon Flats O 87.34 52⇑ *e*P **P 01 39 21.8 -0.7**
PFO pmax pmax
comp=Z,244nm,2.5s
PFO Pinyon Flats O 87.34 52 P **P 01 39 20.5 -2.0**
baz=241,SNR=18
PFO S **S 01 50 02.6 -0.3**
baz=241
TPFO Pinon Flats 87.34 52 P **P 01 39 20.9 -1.6**
baz=241,SNR=33
TPFO S **S 01 50 03.5 +0.6**
baz=241
J01E Myrtle Point 87.38 41 IAmb IAmb 01 39 37.6
comp=Z,249nm,1.1s
J01E Myrtle Point 87.38 41 P **P 01 39 21.7 -0.5**
baz=236,SNR=11
J01E S **S 01 50 00.3 -2.2**
baz=236
LRMC Laurel Mtn Rad 87.38 50 P **P 01 39 20.8 -1.9**
baz=240,SNR=12
LRMC S **S 01 50 02.0 -1.3**
baz=240
PMD Palm Desert 87.42 52 IAmb IAmb 01 39 42.7
comp=Z,88nm,1.3s
SWSC Sam W. Stewart 87.50 53 P **P 01 39 21.5 -1.6**
baz=241,SNR=28
SWSC S **S 01 50 04.2 +0.1**
baz=241
MDPB Devils Postpil 87.51 47 IAmb IAmb 01 39 41.4
comp=Z,238nm,1.4s
OMMB Old Mammoth Mi 87.55 47 IAmb IAmb 01 39 39.8
comp=Z,128nm,1.2s
MG02 Cerro Sombrero 87.56 147 P **P 01 39 24.6 +1.4**
RRX Edison Barstow 87.57 51 P **P 01 39 22.2 -1.3**
baz=240
RRX S **S 01 50 02.4 -2.4**
baz=240
CWC Cottonwood Cre 87.59 49 P **P 01 39 22.3 -1.4**
baz=240
CWC S **S 01 50 02.1 -3.2**
baz=240
SRIG Santa Rosalia 87.60 59 P **P 01 39 23.1 -0.7**
SRIG IAmb IAmb 01 39 41.2
comp=Z,151nm,1.1s
LZH Lanzhou 87.61 311 ⇑P **P 01 39 23.0 -0.8**
LZH sP pwP 01 39 37.4 +4.7
LZH SKS **SKSac 01 49 46.8 -5.0**
LZH S **S 01 50 06.8 +1.3**
LZH SS **SS 01 55 57.7 +5.6**
LZH pmax pmax
comp=Z,190nm,1.7s
LZH pmax pmax
comp=Z,4µm,8.7s
LZH LR LR
comp=Z,29µm,16.8s
LZH LR LR
comp=Z,24µm,17.8s
LZH LR LR
comp=Z,66µm,18.4s
HUMO Hull Mountain 87.66 42 IAmb IAmb 01 39 34.0
comp=Z,198nm,1.2s
MLAC Mammoth, Mammo 87.67 48 P **P 01 39 22.7 -1.5**
baz=239,SNR=8.3
MLAC S **S 01 50 03.8 -2.4**
baz=239
MPK Martis Peak 87.73 46 IAmb IAmb 01 39 40.6
comp=Z,256nm,1.2s
LPIG La Paz 87.74 63 LR LR 02 08 33.8
comp=Z,92µm,21.9s,baz=244,slow=29
DBO Dodson Butte 87.77 41 IAmb IAmb 01 39 34.4
comp=Z,143nm,1.2s
TIN Tinemaha, Big 87.80 48 P **P 01 39 23.6 -1.0**
baz=240,SNR=7.5
TIN S **S 01 50 01.4 -5.7**
baz=240
MPMC Manual Prospec 87.81 49 P **P 01 39 24.4 -0.5**
baz=240,SNR=46
MPMC S **S 01 50 04.5 -3.0**
baz=240
BEKR Beckworth 87.82 45 IAmb IAmb 01 39 48.2
comp=Z,198nm,1.4s
L04D Klamath Falls 87.85 42 IAmb IAmb 01 40 16.3
comp=Z,382nm,1.4s
L04D IAMs_20 IAMs_20 02 09 54.0
comp=Z,99µm,22.0s
L04D Klamath Falls 87.85 42 P **P 01 39 22.5 -2.3**
baz=237,SNR=29
L04D S **S 01 50 01.8 -5.7**
baz=237
SLBS Sierra La Lagu 87.86 63 P **P 01 39 23.3 -1.9**
SLBS IAmb IAmb 01 39 52.0
comp=Z,356nm,1.8s
SLBS Sierra La Lagu 87.86 63 IAMs_20 IAMs_20 02 10 31.7
comp=Z,102µm,20.0s
SLBS Sierra La Lagu 87.86 63 ⇓P **P 01 39 26.3 +1.1**
SLBS ⇑P **P 01 39 27.5 +2.3**
SLBS ⇑P **P 01 39 28.9 +3.7**
BELC Belle Mtn. Jos 87.86 52 P **P 01 39 23.2 -1.8**
baz=241,SNR=63
BELC S **S 01 50 04.7 -3.2**
baz=241
GSC Goldstone, Bar 87.92 50 P **P 01 39 23.4 -1.8**
baz=240,SNR=32
GSC S **S 01 50 02.0 -6.3**
baz=240
SEW Seward 87.93 18 IAmb IAmb 01 39 41.5
comp=Z,400nm,1.8s
SEW Seward 87.93 18 P **P 01 39 21.9 -2.6**
baz=214,SNR=7.9
SEW S **S 01 50 00.5 -6.6**
baz=214
I02E Swisshome, OR 87.96 40 IAMs_20 IAMs_20 02 12 43.0
comp=Z,90µm,19.0s
I02E Swisshome, OR 87.96 40 P **P 01 39 23.7 -1.3**
baz=236
I02E S **S 01 50 04.3 -3.7**
baz=236
VCNR Virginia City 87.99 46 IAmb IAmb 01 39 49.2
comp=Z,467nm,2.0s
HEC Hector,Ludlow 88.02 51 P **P 01 39 23.5 -2.2**
baz=241,SNR=31
HEC S **S 01 50 04.5 -4.8**
baz=241
CAPN Captain Cook N 88.02 17 P **P 01 39 22.9 -2.0**
baz=213
I03D Drain, OR 88.03 41 P **P 01 39 22.9 -2.5**
baz=236,SNR=20
I03D S **S 01 50 03.6 -5.1**
baz=236
BC3 Big Chuckawall 88.09 52 P **P 01 39 21.9 -4.2**
baz=241,SNR=26
BC3 S **S 01 50 05.8 -4.3**
baz=241
YERR Yerington 88.10 46 IAmb IAmb 01 39 44.1
comp=Z,214nm,1.3s
SPCR Spurr Chakacha 88.11 16 P **P 01 39 22.3 -3.2**
baz=212
O22K Cooper Landing 88.17 17 P **P 01 39 23.2 -2.4**
baz=214
M19K Big River Lodg 88.19 15 IAMs_20 IAMs_20 02 12 05.1
comp=Z,106µm,20.0s
M19K Big River Lodg 88.19 15 P **P 01 39 23.6 -2.2**
baz=210,SNR=26
QSM Queen of Sheba 88.20 50 P **P 01 39 25.2 -1.3**
QSM IAmb IAmb 01 39 54.5
comp=Z,120nm,1.3s
LHV Little Huntoon 88.22 47 IAmb IAmb 01 39 35.3
comp=Z,283nm,1.4s
GLA Glamis 88.27 53 IAmb IAmb 01 39 36.9
comp=Z,130nm,1.1s
GLA Glamis 88.27 53 P **P 01 39 25.1 -1.8**
baz=242,SNR=11
LCH Last Change Ra 88.29 48 IAmb IAmb 01 39 57.5
comp=Z,185nm,1.5s
Q23K Middleton Isla 88.30 19 P **P 01 39 25.0 -1.2**
baz=217
L19K White Mountain 88.32 14 IAmb IAmb 01 39 42.9
comp=Z,152nm,1.1s
L19K IAMs_20 IAMs_20 02 12 29.7
comp=Z,127µm,20.0s
L19K White Mountain 88.32 14 P **P 01 39 23.7 -2.7**
baz=209,SNR=107
GRAC Grapevine Rang 88.36 49 P **P 01 39 24.5 -2.7**
baz=240,SNR=9.6
PAHR Pah Rah Range 88.38 46 IAmb IAmb 01 39 37.1
comp=Z,200nm,1.2s
RYN Ryan 88.39 47 IAmb IAmb 01 39 37.1
comp=Z,145nm,1.3s
K04D Chiloquin, OR 88.41 42 P **P 01 39 25.0 -2.4**
baz=237,SNR=6.9
P23K Montague Islan 88.44 19 P **P 01 39 24.9 -2.1**
baz=216
NVAR Mina Array Bea 88.44 47 P **P 01 39 26.0 -1.8**
comp=Z,65nm,1.1s,baz=224,slow=7.6,SNR=61
NVAR PKPPKP **P'P'df 02 05 17.9 +2.1**
comp=Z,0.4nm,0.7s,baz=75,slow=5.4,SNR=3.7
NVAR LR LR 02 10 38.2
comp=Z,215µm,22.0s,baz=252,slow=30
comp=Z,65nm,1.1s
GWY Greenwater Val 88.45 50 IAmb IAmb 01 39 48.7
comp=Z,196nm,1.6s
FURC Furnace Creek, 88.45 49 P **P 01 39 26.0 -1.5**
baz=240,SNR=36
M20K Styx River 88.47 15 IAmb IAmb 01 39 43.9
comp=Z,434nm,2.5s
M20K Styx River 88.47 15 P **P 01 39 25.3 -1.9**
baz=211
GMRC Granite Mounta 88.49 51 P **P 01 39 24.8 -3.2**
baz=241,SNR=21
ANM Nome 88.51 9 IAMs_20 IAMs_20 02 14 03.7
comp=Z,92µm,20.0s
ANM Nome 88.51 9 P **P 01 39 24.7 -2.5**
baz=200
BUCK Buck Mountain 88.53 40 IAmb IAmb 01 39 46.2
comp=Z,235nm,1.1s
J04D Umpqua Nationa 88.53 41 P **P 01 39 26.8 -1.2**
baz=237,SNR=19
NV11 Mina Array Sit 88.54 47 P **P 01 39 26.7 -1.5**
NV11 IAmb IAmb 01 39 37.8
comp=Z,186nm,1.2s
COR Corvallis 88.55 40 IAMs_20 IAMs_20 02 11 14.6
comp=Z,92µm,20.0s
COR Corvallis 88.55 40 ⇓P **P 01 39 30.6 +2.8**
COR ⇑P **P 01 39 31.8 +3.9**
COR ⇑s P 01 39 37.6 +10
IRM Iron Mountain 88.56 52 P **P 01 39 26.2 -2.0**
baz=241,SNR=59
SHOC Shoshone, Teco 88.59 50 P **P 01 39 25.6 -2.6**
baz=241,SNR=24
TUQ Turquoise Moun 88.61 51 P **P 01 39 25.7 -2.8**
baz=241,SNR=37
I04A Tendick Farm, 88.65 41 P **P 01 39 26.0 -2.4**
baz=236,SNR=18
RC01 Rabbit Creek A 88.67 17 IAmb IAmb 01 39 44.8
comp=Z,378nm,1.3s
RC01 Rabbit Creek A 88.67 17 P **P 01 39 25.9 -2.2**
baz=214,SNR=22
TTA Tatalina 88.72 14 P **P 01 39 26.8 -1.5**
baz=208,SNR=42
L20K Farewell, AK 88.81 15 P **P 01 39 26.7 -1.9**
baz=210,SNR=61

L20K S **S** **01 50 19.7 +4.3**
baz=210
PLTX **Planet X, Gerl** **88.84 45** IAmb IAmb 01 39 39.3
comp=Z,328nm,1.2s
H04D **Lebanon** **88.86 40** IAmb IAmb 01 40 07.0
comp=Z,309nm,1.4s
H04D IAMs_20 IAMs_20 02 11 55.6
comp=Z,75µm,20.0s
H04D **Lebanon** **88.86 40** P **P** **01 39 26.8 -2.5**
baz=236,SNR=14
H04D S **S** **01 50 21.6 +5.1**
baz=236
PWL **Port Wells** **88.87 18** P **P** **01 39 26.6 -2.4**
baz=215,SNR=10.0
PWL S **S** **01 50 19.9 +3.9**
baz=215
KVN **Kaiserville** **88.89 47** IAmb IAmb 01 39 49.9
comp=Z,462nm,1.8s
G03D **McMinnville, O** **88.93 39** IAmb IAmb 01 39 49.0
comp=Z,209nm,1.1s
G03D IAMs_20 IAMs_20 02 13 10.5
comp=Z,84µm,19.0s
G03D **McMinnville, O** **88.93 39** P **P** **01 39 27.0 -2.6**
baz=236,SNR=6.5
G03D S **S** **01 50 22.0 +4.8**
baz=236
MOD **Modoc Plateau** **88.93 43** P **P** **01 39 29.0 -0.9**
MOD IAmb IAmb 01 39 48.0
comp=Z,231nm,1.2s
MOD IAMs_20 IAMs_20 02 10 51.8
comp=Z,126µm,21.0s
K05A **Summer Lake** **89.00 42** IAmb IAmb 01 39 40.4
comp=Z,243nm,1.2s
HG4B **Hotspring** **89.01 31** IAmb IAmb 01 39 46.3
comp=Z,182nm,1.0s
DIB **Dawson Inlet,** **89.01 29** IAmb IAmb 01 39 47.0
comp=Z,210nm,1.2s
H02S1 **DAWSON INLET T** **89.01 29** P **P** **01 39 30.1 +0.3**
SNR=65
J05D **Fort Rock, OR** **89.09 42** P **P** **01 39 28.3 -2.3**
baz=237,SNR=120
J05D S **S** **01 50 22.7 +3.5**
baz=237
TNA **Tin City** **89.11 8** P **P** **01 39 29.2 -0.8**
baz=198
TNA S **S** **01 50 22.1 +4.2**
baz=198
TPNV **Topopah Spring** **89.12 49** IAMs_20 IAMs_20 02 10 09.1
comp=Z,146µm,22.0s
TPNV **Topopah Spring** **89.12 49** P **P** **01 39 27.9 -3.0**
baz=241,SNR=112
TPNV **Topopah Spring** **89.12 49** ⇓P **P** **01 39 29.9 -1.0**
M22K **Willow** **89.12 17** P **P** **01 39 27.7 -2.4**
baz=214,SNR=13
NEE2 **Needles Airpor** **89.23 52** P **P** **01 39 29.7 -1.6**
baz=242
GLI **Glacier Island** **89.24 18** IAmb IAmb 01 39 46.5
comp=Z,279nm,1.1s
GLI **Glacier Island** **89.24 18** P **P** **01 39 28.7 -2.0**
baz=216,SNR=11
GLI S **S** **01 50 21.7 +2.2**
baz=216
PMR **Palmer** **89.25 17** P **P** **01 39 29.7 -1.0**
PMR IAmb IAmb 01 39 47.4
comp=Z,268nm,1.2s
PMR **Palmer** **89.25 17** P **P** **01 39 29.7 -1.0**
PMR pmax pmax
comp=Z,268nm,1.2s
PMR **Palmer** **89.25 17** P **P** **01 39 29.0 -1.7**
baz=214,SNR=10
PMR S **S** **01 50 22.7 +3.3**
baz=214
214A **Organ Pipe Nat** **89.26 55** IAmb IAmb 01 40 24.1
comp=Z,164nm,1.6s
214A **Organ Pipe Nat** **89.26 55** P **P** **01 39 29.8 -1.7**
baz=243,SNR=16
214A S **S** **01 50 27.3 +6.3**
baz=243
H04A **Detroit Lake** **89.27 40** IAmb IAmb 01 39 40.6
comp=Z,558nm,1.9s
KNK **Knik Glacier** **89.29 17** IAmb IAmb 01 39 47.1
comp=Z,254nm,1.1s
KNK **Knik Glacier** **89.29 17** P **P** **01 39 28.5 -2.5**
baz=215,SNR=14
KNK S **S** **01 50 24.9 +4.9**
baz=215
KAIM **Kayak Island** **89.29 20** IAMs_20 IAMs_20 02 13 19.5
comp=Z,81µm,20.0s
KAIM **Kayak Island** **89.29 20** P **P** **01 39 29.1 -1.9**
baz=219
FID **Port Fidalgo** **89.32 19** IAmb IAmb 01 39 47.5
comp=Z,383nm,1.4s
PDMCI **Parker Dam,Lak** **89.36 52** P **P** **01 39 29.8 -2.1**
baz=242,SNR=44
EYAK **Cordova Ski Ar** **89.38 19** P **P** **01 39 29.4 -1.9**
baz=217,SNR=9.7
EYAK S **S** **01 50 24.3 +3.6**
baz=217
HSIG **89.38 58** P **P** **01 39 31.8 -0.4**
HSIG IAmb IAmb 01 39 37.2
comp=Z,150nm,1.2s
Q09A **Carvers** **89.40 47** IAmb IAmb 01 39 41.9
comp=Z,203nm,1.0s
GHO **Glory Hole Cre** **89.46 17** IAmb IAmb 01 39 53.1
comp=Z,308nm,1.1s
E03A **Lebam** **89.50 38** IAmb IAmb 01 39 56.2
comp=Z,372nm,1.2s
K20K **Telida** **89.52 14** IAmb IAmb 01 39 40.5
comp=Z,185nm,1.4s
K20K IAMs_20 IAMs_20 02 13 19.5
comp=Z,121µm,20.0s
K20K **Telida** **89.52 14** P **P** **01 39 30.5 -1.5**
baz=210,SNR=40
K20K S **S** **01 50 22.0 0.0**
baz=210
PINE **Pine Mountain** **89.54 41** IAmb IAmb 01 39 47.8
comp=Z,203nm,1.1s
F04D **Rainier, OR** **89.56 39** P **P** **01 39 29.3 -3.2**
baz=236
F04D S **S** **01 50 26.9 +3.9**
baz=236
PPLA **Purkeypile** **89.57 15** P **P** **01 39 29.7 -2.7**
baz=212
PPLA S **S** **01 50 24.2 +1.5**
baz=212
RAGM **Ragged Mountai** **89.58 20** IAMs_20 IAMs_20 02 10 22.8
comp=Z,95µm,22.0s
I05D **Terrebonne, OR** **89.59 41** P **P** **01 39 30.2 -2.6**
baz=237,SNR=28
I05D S **S** **01 50 26.1 +2.4**
baz=237
CUT **Chulitna** **89.63 16** IAmb IAmb 01 39 48.5
comp=Z,364nm,1.3s
CUT IAMs_20 IAMs_20 02 12 41.4
comp=Z,135µm,21.0s
CUT **Chulitna** **89.63 16** P **P** **01 39 30.1 -2.4**
baz=213,SNR=10
CUT S **S** **01 50 26.5 +3.5**
baz=213
SML **Sawmill** **89.65 17** IAmb IAmb 01 39 51.6
comp=Z,239nm,1.3s
SML **Sawmill** **89.65 17** P **P** **01 39 30.1 -2.6**
baz=215,SNR=11
SML S **S** **01 50 26.6 +3.2**
baz=215
HMT **Hamilton** **89.66 20** IAmb IAmb 01 39 47.4
comp=Z,251nm,1.2s
WISH **Wishkah** **89.71 38** IAmb IAmb 01 39 43.6
comp=Z,421nm,1.6s
BGLC **Bering Glacier** **89.80 20** P **P** **01 39 32.0 -1.2**
baz=220
M23K **Glacier View** **89.81 17** P **P** **01 39 30.4 -3.0**
baz=216,SNR=6.5
M23K S **S** **01 50 27.3 +2.6**
baz=216
S11A **Rachel** **89.81 49** IAmb IAmb 01 39 43.7
comp=Z,218nm,1.2s
NLWA **Neilton Lookou** **89.81 37** IAmb IAmb 01 39 52.1
comp=Z,166nm,1.2s
NLWA IAMs_20 IAMs_20 02 13 38.7
comp=Z,108µm,19.0s
NLWA **Neilton Lookou** **89.81 37** ⇑P **P** **01 39 33.1 -0.6**
NLWA ⇑P **P** **01 39 33.8 0.0**
F04A **Amboy** **89.82 39** IAmb IAmb 01 39 51.6
comp=Z,215nm,1.2s
OZB **Mount Ozzard** **89.82 35** IAmb IAmb 01 39 43.3
comp=Z,263nm,1.7s
DIV **Divide** **89.83 19** IAmb IAmb 01 39 49.5
comp=Z,327nm,1.2s
HOOD **Mount Hood Mea** **89.94 40** P **P** **01 39 33.9 -0.6**
HOOD IAmb IAmb 01 39 48.9
comp=Z,162nm,0.9s
SCM **Sheep Creek Mo** **89.95 18** IAmb IAmb 01 39 54.1
comp=Z,280nm,1.1s
SCM **Sheep Creek Mo** **89.95 18** P **P** **01 39 32.3 -1.8**
baz=216,SNR=17
SCM S **S** **01 50 27.0 +0.8**
baz=216
CAST **Castle Rocks** **90.04 15** P **P** **01 39 31.2 -3.2**
baz=212,SNR=130
CAST S **S** **01 50 26.4 -0.4**
baz=212
IMP **Imphal** **90.04 297** *e*P **P** **01 39 34.7 -0.7**
IMP IAmb IAmb 01 39 47.7
comp=Z,44nm,0.7s
COYC **Coyhaique** **90.05 140** P **P** **01 39 34.7 -0.4**
COYC IAmb IAmb 01 39 51.9
comp=Z,401nm,1.4s
COYC **Coyhaique** **90.05 140** IAMs_20 IAMs_20 02 09 26.0
comp=Z,95µm,22.0s
COYC **Coyhaique** **90.05 140** ⇑P **P** **01 39 35.5 +0.5**
COYC ⇑P **P** **01 39 37.1 +2.1**
COYC ⇑P **P** **01 39 37.5 +2.5**
COYC ⇓s P 01 39 42.2 +7.1
COYC ⇓s P 01 39 42.6 +7.6
BMRM **Bremner River** **90.05 19** IAmb IAmb 01 39 49.7
comp=Z,154nm,1.0s
BMRM **Bremner River** **90.05 19** P **P** **01 39 32.3 -2.3**
baz=218,SNR=33
BMRM S **S** **01 50 28.4 +1.3**
baz=218
KLU **Klutina** **90.08 18** IAmb IAmb 01 39 51.5
comp=Z,220nm,1.1s
KLU **Klutina** **90.08 18** P **P** **01 39 32.4 -2.3**
baz=217,SNR=20
KLU S **S** **01 50 30.6 +3.2**
baz=217
G05D **Wamic, OR** **90.09 40** P **P** **01 39 32.0 -3.1**
baz=237,SNR=14
G05D S **S** **01 50 28.4 +0.2**
baz=237
GCSA **Galena City Sc** **90.15 12** P **P** **01 39 33.2 -1.6**
baz=208
GCSA S **S** **01 50 32.0 +4.3**
baz=208
BMN **Battle Mountai** **90.17 46** IAmb IAmb 01 39 40.8
comp=Z,327nm,1.2s
PRN **Pahroc Range** **90.18 49** IAmb IAmb 01 39 41.2
comp=Z,176nm,1.2s
WAX **Waxell Ridge** **90.20 20** IAmb IAmb 01 39 52.5
comp=Z,293nm,1.2s
MOKO **MOKOCHONG** **90.20 298** *e*P **P** **01 39 35.9 -0.4**
MOKO IAmb IAmb 01 39 45.2
comp=Z,212nm,1.4s
J20K **Nowinta River** **90.22 14** P **P** **01 39 33.4 -1.8**
baz=210,SNR=27
J20K S **S** **01 50 30.3 +1.9**
baz=210
CRAG **Craig** **90.23 27** IAmb IAmb 01 39 59.1
comp=Z,156nm,1.3s
CRAG **Craig** **90.23 27** P **P** **01 39 32.5 -3.0**
baz=228
CRAG S **S** **01 50 34.2 +5.4**
baz=228
R11A **Troy Canyon, C** **90.26 48** P **P** **01 39 32.9 -3.4**
baz=241,SNR=139
WVOR **Wild Horse Val** **90.27 43** ⇓P **P** **01 39 35.8 -0.4**
WVOR ⇓P **pP** **01 39 38.8 -0.3**
MESA **MESA** **90.28 21** IAmb IAmb 01 39 53.1
comp=Z,380nm,1.2s
MESA IAMs_20 IAMs_20 02 10 52.5
comp=Z,120µm,22.0s
MESA **MESA** **90.28 21** P **P** **01 39 33.8 -2.1**
baz=221,SNR=5.6
MESA S **S** **01 50 31.5 +1.9**
baz=221
KOHI **KOHIMA** **90.28 298** *e*P **P** **01 39 36.8 +0.1**
KOHI IAmb IAmb 01 39 43.7
comp=Z,64nm,1.1s
AY01 **Puyuhuapi** **90.34 139** P **P** **01 39 35.6 -0.8**
AY01 IAmb IAmb 01 39 57.2
comp=Z,205nm,1.4s
CRQM **Cirque** **90.34 20** IAmb IAmb 01 39 51.3
comp=Z,272nm,1.0s
CRQE **Cirque** **90.35 20** P **P** **01 39 34.5 -1.6**
baz=220,SNR=23
CRQE S **S** **01 50 31.8 +1.8**
baz=220
CHUM **Lake Minchumin** **90.38 15** P **P** **01 39 33.4 -2.6**
baz=212,SNR=13
CHUM S **S** **01 50 29.0 -0.9**
baz=212
B04A **Port Angeles** **90.39 37** IAmb IAmb 01 39 54.8
comp=Z,178nm,1.1s
SIT **Sitka** **90.41 25** IAmb IAmb 01 39 53.3
comp=Z,126nm,1.2s
SIT **Sitka** **90.41 25** P **P** **01 39 34.1 -2.1**
baz=226,SNR=5.9
SIT S **S** **01 50 35.1 +4.7**
baz=226
BBB **Bella Bella** **90.42 32** LR LR 02 10 51.6
comp=Z,83µm,21.9s,baz=238,slow=29
BBB **Bella Bella** **90.42 32** IAmb IAmb 01 39 52.5
comp=Z,144nm,1.1s
WAT1 **Susitna Watana** **90.43 17** P **P** **01 39 33.4 -2.9**
baz=215
WAT1 S **S** **01 50 31.2 +0.7**
baz=215
KTH **Kantishna Hill** **90.43 15** IAMs_20 IAMs_20 02 13 35.4
comp=Z,112µm,21.0s
TGL **Tana Glacier** **90.44 20** IAmb IAmb 01 39 52.8
comp=Z,283nm,1.2s
WAT6 **Susitna Watana** **90.44 17** P **P** **01 39 34.1 -2.4**
baz=216,SNR=52
WAT6 S **S** **01 50 31.3 +0.4**
baz=216
ISLE **Juniper Island** **90.48 20** IAMs_20 IAMs_20 02 14 07.7
comp=Z,77µm,20.0s
YAH **Yahtse** **90.49 21** IAmb IAmb 01 39 51.9
comp=Z,382nm,1.4s
YAH IAMs_20 IAMs_20 02 11 21.9
comp=Z,101µm,22.0s
M24K **Tolsona, Glenn** **90.49 18** P **P** **01 39 34.1 -2.5**
baz=217,SNR=18
M24K S **S** **01 50 31.5 +0.3**
baz=217
TRF **Thorofare Moun** **90.50 16** IAmb IAmb 01 39 51.8
comp=Z,123nm,1.1s
TRF **Thorofare Moun** **90.50 16** P **P** **01 39 33.1 -3.6**
baz=213,SNR=15
TRF S **S** **01 50 30.5 -0.9**
baz=213
CBB **Campbell River** **90.52 35** IAmb IAmb 01 39 53.4
comp=Z,111nm,0.9s
BILL **Bilibino** **90.53 357** P **P** **01 39 35.7 -0.9**
BILL **Bilibino** **90.53 357** *d* *i*P **P** **01 39 35.6 -1.0**
BILL *i* 01 43 10.5
BILL *i* SS SS 01 56 36.7 +3.9
BILL pmax pmax
comp=Z,736nm,1.9s
BILL pmax pmax
comp=Z,545nm,1.8s
N25K **Chitina, Valde** **90.56 19** IAmb IAmb 01 39 53.9
comp=Z,284nm,1.1s
N25K **Chitina, Valde** **90.56 19** P **P** **01 39 35.1 -1.8**
baz=218,SNR=66
N25K S **S** **01 50 31.8 0.0**
baz=218
I07A **Izee** **90.58 42** IAmb IAmb 01 39 52.3
comp=Z,123nm,1.0s
GRNB **Grenville Isla** **90.58 30** IAmb IAmb 01 39 53.7
comp=Z,98nm,0.9s
JORH **JORHAT** **90.59 299** *e*P **P** **01 39 38.9 +1.0**
VRDI **Verde Repeater** **90.61 19** IAmb IAmb 01 39 52.5
comp=Z,156nm,1.1s
CIT **Chita** **90.61 328** *e*P **P** **01 39 35.4 -2.0**
CIT *e* 01 43 19.4
CIT *e* 01 45 10.2
CIT *e* 01 50 02.4
CIT *e* 01 51 46.8
CIT *e* 01 56 39.4
CIT pmax pmax
comp=Z,744nm,2.6s
AZL **Aizawl** **90.63 295** *e*P **P** **01 39 38.1 -0.1**
AZL IAmb IAmb 01 39 43.6
comp=Z,52nm,0.5s
GLB **Gilahina Butte** **90.67 19** IAmb IAmb 01 39 52.5
comp=Z,180nm,1.0s
TABL **Table Mountain** **90.74 21** IAmb IAmb 01 39 53.4
comp=Z,212nm,1.0s
TABL IAMs_20 IAMs_20 02 11 29.7
comp=Z,96µm,22.0s
RUBB **Prince Rupert** **90.75 29** IAmb IAmb 01 39 56.3
comp=Z,338nm,1.9s
PGC **Sidney** **90.75 36** P **P** **01 39 37.7 -0.3**
PGC IAmb IAmb 01 39 53.0
comp=Z,165nm,1.1s
PNL **Peninsula** **90.76 22** P **P** **01 39 35.8 -2.0**
baz=223
PNL S **S** **01 50 34.7 +1.1**
baz=223
GRNC **Granite Creek** **90.76 20** IAmb IAmb 01 39 53.4
comp=Z,181nm,1.0s
PINM **Pinnacle** **90.78 21** P **P** **01 39 35.9 -2.2**
baz=222,SNR=10
PINM S **S** **01 50 36.8 +2.9**
baz=222
RND **Reindeer** **90.83 16** IAmb IAmb 01 39 54.7
comp=Z,301nm,1.2s
J08A **Circle Bar Ran** **90.84 43** IAmb IAmb 01 39 53.4
comp=Z,137nm,1.0s
MCARA **McCarthy VSAT** **90.86 20** P **P** **01 39 36.1 -2.1**
baz=220,SNR=22
MCARA S **S** **01 50 33.2 -1.3**
baz=220
BPAW **Bear Paw Mtn.** **90.88 15** P **P** **01 39 35.1 -3.2**
baz=213,SNR=14
BPAW S **S** **01 50 32.3 -2.2**
baz=213
BCPM **Bancas Point** **90.89 22** IAMs_20 IAMs_20 02 13 49.6
comp=Z,81µm,20.0s
DHY **Denali Highway** **90.94 17** IAmb IAmb 01 39 47.7
comp=Z,220nm,1.4s
DHY **Denali Highway** **90.94 17** P **P** **01 39 36.4 -2.4**
baz=216,SNR=53
DHY S **S** **01 50 36.6 +1.1**
baz=216
TUC **Tucson** **90.96 55** P **P** **01 39 38.6 -0.9**
TUC **Tucson** **90.96 55** IAMs_20 IAMs_20 02 11 00.2
comp=Z,107µm,22.0s
TUC **Tucson** **90.96 55** P **P** **01 39 38.6 -0.9**
TUC pmax pmax
comp=Z,106nm,1.2s
TUC **Tucson** **90.96 55** P **P** **01 39 37.3 -2.2**
baz=244
TUC S **S** **01 50 40.3 +3.5**
baz=244
TUC **Tucson** **90.96 55** ⇑P **P** **01 39 39.2 -0.3**
TUC ⇑P **P** **01 39 39.6 0.0**
TUC ⇑P **P** **01 39 42.9 +3.4**
HARP **HAARP** **91.02 18** P **P** **01 39 37.0 -2.0**
baz=218,SNR=25
HARP S **S** **01 50 34.9 -1.0**
baz=218
CTG **Chitna Glacier** **91.07 20** P **P** **01 39 37.4 -2.0**
baz=221,SNR=26
CTG S **S** **01 50 38.2 +1.5**
baz=221
CTGM **Chitina Glacie** **91.08 20** IAmb IAmb 01 39 56.5
comp=Z,215nm,1.2s
CTGM IAMs_20 IAMs_20 02 11 18.5
comp=Z,87µm,22.0s
MCK **McKinley** **91.08 16** IAmb IAmb 01 40 02.0
comp=Z,106nm,1.1s
MCK **McKinley** **91.08 16** P **P** **01 39 36.8 -2.4**
baz=215,SNR=18
MCK S **S** **01 50 36.2 -0.2**
baz=215
LOGN **Logan Glacier** **91.08 21** IAmb IAmb 01 39 54.3
comp=Z,338nm,1.5s
LOGN IAMs_20 IAMs_20 02 11 41.6
comp=Z,88µm,22.0s
YAK **Yakutsk** **91.18 341** P **P** **01 39 36.9 -2.7**
comp=Z,64nm,0.8s,baz=321,slow=1.2,SNR=18
YAK LR LR 02 15 01.5
comp=Z,51µm,21.2s,baz=140,slow=32
comp=Z,64nm,0.8s
YAK **Yakutsk** **91.18 341** P **P** **01 39 39.2 -0.5**
YAK IAmb IAmb 01 39 52.7
comp=Z,236nm,0.9s
YAK IAMs_20 IAMs_20 02 14 16.9
comp=Z,87µm,22.0s
YAK **Yakutsk** **91.18 341** *e*P **P** **01 39 39.5 -0.2**
YAK *e**PP **sP** **01 39 45.0 +1.4**
YAK *e* 01 43 17.8
YAK *e*PPP PPP 01 45 17.3
YAK *e*S **SKSac** **01 50 10.0 -1.1**
YAK *e* 01 50 41.9
YAK *e*SS **SS** **01 56 48.9 +6.6**
YAK pmax pmax
comp=Z,185nm,1.1s
YAK pmax pmax
comp=N,18nm,1.3s
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=Z,311nm,2.0s
YAK pmax pmax
comp=E,92nm,1.7s
YAK pmax pmax
comp=N,191nm,1.8s
YAK smax smax
comp=N,1µm,6.4s
YAK smax smax
comp=E,1µm,7.1s
YAK MLR MLR
comp=Z,26µm,17.0s
YAK MLR MLR
comp=N,16µm,18.0s
YAK MLR MLR
comp=E,6µm,18.0s
YAK **Yakutsk** **91.18 341** ⇑P **P** **01 39 37.2 -2.5**
YAK ⇑P **P** **01 39 39.8 +0.2**
ITAN **ITANAGAR** **91.19 299** *e*P **P** **01 39 41.5 +0.9**
WRAK **Wrangell Islan** **91.19 27** IAmb IAmb 01 39 57.1
comp=Z,191nm,1.3s
WRAK **Wrangell Islan** **91.19 27** P **P** **01 39 37.3 -2.5**
baz=229,SNR=8.0
WRAK S **S** **01 50 40.7 +3.1**
baz=229
ZIRO **ZIRO** **91.25 299** *e*P **P** **01 39 40.9 -0.2**
ZIRO IAmb IAmb 01 39 50.3
comp=Z,62nm,0.9s
LCMT **Little Creek M** **91.26 50** IAmb IAmb 01 39 57.2
comp=Z,146nm,1.3s
O28M **Mount Upton** **91.30 21** P **P** **01 39 38.7 -2.0**
baz=222,SNR=25
O28M S **S** **01 50 39.2 +0.1**
baz=222
BWN **Browne** **91.31 15** IAMs_20 IAMs_20 02 13 46.7
comp=Z,94µm,20.0s
P29M **Windy Craggy** **91.31 23** IAmb IAmb 01 39 58.0
comp=Z,326nm,1.4s
P29M **Windy Craggy** **91.31 23** P **P** **01 39 39.0 -1.4**
baz=224,SNR=22
P29M S **S** **01 50 38.3 -0.5**
baz=224
PAX **Paxson** **91.38 18** P **P** **01 39 38.8 -2.0**
PAX IAmb IAmb 01 39 55.4
comp=Z,99nm,1.0s
PAX **Paxson** **91.38 18** P **P** **01 39 38.8 -2.0**
PAX pmax pmax
comp=Z,99nm,1.0s
PAX **Paxson** **91.38 18** P **P** **01 39 38.2 -2.6**
baz=218,SNR=37
PAX S **S** **01 50 37.6 -1.7**
baz=218
CCUT **Cedar City** **91.43 50** IAmb IAmb 01 39 47.1
comp=Z,134nm,1.2s
SPR3 **Spring Creek 3** **91.43 48** IAmb IAmb 01 39 58.7
comp=Z,148nm,1.3s
ORCD **Orcadas** **91.47 162** P **P** **01 39 40.1 -1.2**
H03S2 **Juan Fernandez** **91.50 128** T T 03 21 51.9
SNR=69
O29M **Mount Kennedy** **91.50 22** P **P** **01 39 39.4 -2.0**
baz=224
O29M S **S** **01 50 39.1 -1.5**
baz=224
H03S1 **Juan Fernandez** **91.52 128** T T 03 21 47.8
SNR=72
H03S3 **Juan Fernandez** **91.52 128** T T 03 21 43.1
SNR=94

G08A **Pilot Rock** **91.53 41** IAmb IAmb 01 39 51.5
comp=Z,156nm,1.2s
I21K **Tanana** **91.56 14** IAmb IAmb 01 40 03.0
comp=Z,148nm,1.1s
I21K IAMs_20 IAMs_20 02 14 53.3
comp=Z,108µm,21.0s
I21K **Tanana** **91.56 14** P **P** **01 39 39.5 -1.9**
baz=212,SNR=64
I21K S **S** **01 50 39.5 -1.2**
baz=212
LL01 **San Ignacio de** **91.59 138** P **P** **01 39 43.4 +1.2**
JIS **Juneau Island** **91.61 25** IAmb IAmb 01 39 58.8
comp=Z,136nm,1.2s
ELK **Elko** **91.64 46** LR LR 02 12 24.6
comp=Z,183µm,21.9s,baz=248,slow=30
ELK **Elko** **91.64 46** P **P** **01 39 41.6 -1.1**
ELK IAmb IAmb 01 40 02.7
comp=Z,398nm,1.9s
ELK **Elko** **91.64 46** P **P** **01 39 41.6 -1.1**
ELK pmax pmax
comp=Z,398nm,1.9s
SZCU **Shurtz Canyon** **91.64 50** IAmb IAmb 01 40 09.8
comp=Z,127nm,1.2s
M26K **Nabesna, AK** **91.65 19** IAmb IAmb 01 39 59.0
comp=Z,283nm,1.1s
M26K **Nabesna, AK** **91.65 19** P **P** **01 39 39.6 -2.4**
baz=220,SNR=69
M26K S **S** **01 50 40.9 -0.9**
baz=220
U15A **North Rim** **91.68 51** IAmb IAmb 01 39 47.2
comp=Z,148nm,1.0s
PLBC **Pleasant Camp** **91.68 23** P **P** **01 39 40.6 -1.5**
baz=226,SNR=28
PLBC S **S** **01 50 38.9 -3.0**
baz=226
ULN **Ulaanbaatar** **91.69 322** P **P** **01 39 41.3 -1.3**
ULN **Ulaanbaatar** **91.69 322** *d i* P **P** **01 39 41.3 -1.3**
ULN pmax pmax
comp=Z,60nm,1.0s
ULN **Ulaanbaatar** **91.69 322** P **P** **01 39 40.4 -2.2**
ULN P **P** **01 39 40.4 -2.2**
ULN S **SKSac** **01 50 13.1 -2.0**
ULN S **SKSac** **01 50 13.1 -2.0**
ULN **Ulaanbaatar** **91.69 322** ⇑P **P** **01 39 40.6 -2.1**
ULN ⇑P **P** **01 39 42.1 -0.5**
319A **Douglas** **91.70 57** IAmb IAmb 01 39 48.4
comp=Z,117nm,1.2s
MLY **Manley** **91.72 15** IAmb IAmb 01 39 58.5
comp=Z,151nm,1.4s
MLY **Manley** **91.72 15** P **P** **01 39 39.5 -2.7**
baz=213,SNR=51
MLY S **S** **01 50 40.2 -2.0**
baz=213
TEZP **TEZPUR** **91.72 298** *e* P **P** **01 39 43.0 -0.1**
TEZP IAmb IAmb 01 39 45.9
comp=Z,47nm,0.5s
NEA2 **Nenana** **91.75 15** IAmb IAmb 01 39 58.4
comp=Z,470nm,2.0s
NEA2 **Nenana** **91.75 15** P **P** **01 39 39.4 -3.0**
baz=214,SNR=16
NEA2 S **S** **01 50 42.4 -0.1**
baz=214
HAWA **Hanford** **91.76 40** IAmb IAmb 01 39 56.8
comp=Z,115nm,1.1s
HAWA IAMs_20 IAMs_20 02 14 24.5
comp=Z,102µm,20.0s
HAWA **Hanford** **91.76 40** ⇓P **P** **01 39 42.0 -0.8**
HAWA ⇓P **P** **01 39 42.0 -0.8**
H21K **Melozitna Rive** **91.79 13** IAmb IAmb 01 39 59.8
comp=Z,184nm,1.4s
H21K **Melozitna Rive** **91.79 13** P **P** **01 39 41.0 -1.5**
baz=211,SNR=41
H21K S **S** **01 50 44.6 +1.8**
baz=211
MENT **Mentasta** **91.85 18** IAmb IAmb 01 40 00.9
comp=Z,104nm,1.0s
WRH **Wood River Hil** **91.89 16** IAmb IAmb 01 39 59.1
comp=Z,280nm,1.2s
WUAZ **Wupatki** **91.94 52** P **P** **01 39 43.2 -0.9**
WUAZ IAmb IAmb 01 40 12.1
comp=Z,109nm,1.1s
WUAZ IAMs_20 IAMs_20 02 11 32.9
comp=Z,94µm,22.0s
WUAZ **Wupatki** **91.94 52** P **P** **01 39 42.0 -2.1**
baz=244,SNR=79
WUAZ S **S** **01 50 50.8 +5.1**
baz=244
WUAZ **Wupatki** **91.94 52** ⇓P **P** **01 39 43.4 -0.7**
WUAZ ⇑P **P** **01 39 43.5 -0.6**
WUAZ ⇑P **P** **01 39 47.1 +3.0**
P30M **Million Dollar** **91.94 23** P **P** **01 39 42.6 -0.8**
baz=225
P30M S **S** **01 50 47.2 +2.8**
baz=225
M27K **Edge Creek, AK** **91.96 19** P **P** **01 39 42.0 -1.5**
baz=221,SNR=72
M27K S **S** **01 50 43.3 -1.4**
baz=221
K24K **Donnelly Dome** **91.96 17** P **P** **01 39 41.8 -1.6**
baz=217,SNR=30
K24K S **S** **01 50 46.3 +1.9**
baz=217
YUK3 **Moose Creek** **91.96 20** P **P** **01 39 42.0 -1.6**
baz=222,SNR=41
YUK3 S **S** **01 50 41.3 -3.6**
baz=222
GTA **Gaotai** **92.01 312** *e* P **P** **01 39 42.9 -1.4**
GTA pP pP 01 39 47.5 +0.3
GTA sP sP 01 39 50.3 +2.1
GTA PP **PP** **01 43 24.7 +0.4**
GTA SKS **SKSac** **01 50 17.6 +0.3**
GTA S **S** **01 50 43.1 -3.1**
GTA SS **SS** **01 56 56.2 +0.5**
GTA pmax pmax
comp=Z,14nm,1.4s
GTA pmax pmax
comp=Z,1µm,8.8s
GTA LR LR
comp=Z,29µm,22.2s
GTA LR LR
comp=Z,30µm,24.4s
GTA LR LR
comp=Z,64µm,24.0s
L26K **Log Cabin Wild** **92.03 18** IAmb IAmb 01 40 00.7
comp=Z,155nm,1.1s
L26K **Log Cabin Wild** **92.03 18** P **P** **01 39 41.9 -1.8**
baz=220,SNR=39
L26K S **S** **01 50 44.6 -0.4**
baz=220
YUK6 **Outpost Mounta** **92.04 21** P **P** **01 39 42.6 -1.5**
baz=224
YUK6 S **S** **01 50 45.6 0.0**
baz=224
SHL **Shillong** **92.05 297** *e* P **P** **01 39 44.1 -0.8**
SHL IAmb IAmb 01 40 17.8
comp=Z,282nm,2.0s
SONM **Songino Array** **92.05 322** P **P** **01 39 42.0 -2.3**
comp=Z,35nm,0.9s,baz=128,slow=3.3,SNR=58
SONM PKPPKP **P'P'df** **02 05 15.0 +6.9**
comp=Z,0.6nm,0.5s,baz=248,slow=0.6,SNR=4.5
SONM LR LR 02 19 01.9
comp=Z,28µm,21.8s,baz=124,slow=34
comp=Z,35nm,0.9s
SONM **Songino Array** **92.05 322** P **P** **01 39 42.7 -1.6**
SONM **Songino Array** **92.05 322** P **P** **01 39 42.7 -1.6**
SONM pmax pmax
comp=Z,41nm,0.9s
SKAG **Skagway** **92.07 24** IAmb IAmb 01 40 01.2
comp=Z,168nm,1.2s
SKAG **Skagway** **92.07 24** P **P** **01 39 42.7 -1.1**
baz=226,SNR=12
SKAG S **S** **01 50 50.8 +5.4**
baz=226
CCB **Clear Creek Bu** **92.11 16** IAmb IAmb 01 39 59.9
comp=Z,254nm,1.3s
HDA **Harding Lake** **92.14 16** IAMs_20 IAMs_20 02 14 18.5
comp=Z,128µm,21.0s
HDA **Harding Lake** **92.14 16** P **P** **01 39 41.7 -2.4**
baz=216,SNR=87
HDA S **S** **01 50 45.1 -0.8**
baz=216
HDA S **S** **01 50 45.1 -0.8**
baz=216
RDOG **Red Dog Mine** **92.14 9** IAMs_20 IAMs_20 02 22 59.0
comp=Z,81µm,21.0s
I23K **Minto, Yukon-K** **92.14 15** IAmb IAmb 01 40 01.3
comp=Z,241nm,1.8s
I23K **Minto, Yukon-K** **92.14 15** P **P** **01 39 41.2 -2.9**
baz=214,SNR=45
I23K S **S** **01 50 45.1 -0.7**
baz=214
RIDG **Independent Ri** **92.16 17** P **P** **01 39 41.5 -2.8**
baz=218,SNR=81
RIDG S **S** **01 50 45.2 -1.1**
baz=218
YUK4 **Talbot Arm** **92.24 21** P **P** **01 39 43.5 -1.4**
baz=224,SNR=12
YUK4 S **S** **01 50 50.0 +2.7**
baz=224
HYT **Haines Junctio** **92.25 22** P **P** **01 39 42.6 -2.3**
baz=225,SNR=21
HYT S **S** **01 50 50.6 +3.3**
baz=225
MDM **Murphy Dome** **92.26 15** IAMs_20 IAMs_20 02 14 24.8
comp=Z,102µm,20.0s
LL03 **Petrohue** **92.26 137** IAmb IAmb 01 40 11.6
comp=Z,219nm,0.9s
TCOL **CIGO, UAF Yank** **92.28 16** P **P** **01 39 42.0 -2.7**
baz=216
TCOL S **S** **01 50 49.8 +2.7**
baz=216
COLA **College** **92.28 16** P **P** **01 39 43.3 -1.4**
COLA **College** **92.28 16** IAMs_20 IAMs_20 02 14 25.4
comp=Z,120µm,20.0s
COLA **College** **92.28 16** ⇑P **P** **01 39 43.6 -1.1**
COLA **College** **92.28 16** P **P** **01 39 42.2 -2.5**
baz=216
COLA S **S** **01 50 44.8 -2.3**
baz=216
COLA **College** **92.28 16** ⇓P **P** **01 39 42.2 -2.5**
COLA ⇑P **P** **01 39 42.5 -2.2**
COLA ⇑P **P** **01 39 45.5 +0.8**
H22K **Ishtalitna Cre** **92.30 14** P **P** **01 39 43.2 -1.7**
baz=212,SNR=71
H22K S **S** **01 50 48.9 +1.5**
baz=212
DOT **Dot Lake** **92.31 18** IAmb IAmb 01 40 01.7
comp=Z,278nm,1.2s
BVCY **Beaver Creek** **92.31 20** P **P** **01 39 42.8 -2.2**
baz=222,SNR=9.9
BVCY S **S** **01 50 48.9 +1.3**
baz=222
BMO **Blue Mountains** **92.32 42** IAMs_20 IAMs_20 02 12 04.4
comp=Z,85µm,22.0s
G21K **Allakaket** **92.38 13** P **P** **01 39 43.5 -1.7**
baz=211,SNR=55
G21K S **S** **01 50 50.3 +2.3**
baz=211
LL04 **Puerto Octay** **92.38 136** P **P** **01 39 46.4 +0.3**
LL04 IAmb IAmb 01 40 17.9
comp=Z,98nm,1.1s
T35M **Bob Quinn** **92.44 27** P **P** **01 39 44.6 -1.1**
baz=231
T35M S **S** **01 50 53.4 +4.5**
baz=231
IL31 **92.44 16** IAmb IAmb 01 40 01.6
comp=Z,190nm,1.1s
ILAR **Eielson Array** **92.44 16** P **P** **01 39 41.9 -3.6**
comp=Z,60nm,0.8s,baz=232,slow=5.4,SNR=115
ILAR PKKPbc **PKKPdf** **01 57 00.1 -0.3**
comp=Z,1.9nm,0.8s,baz=354,slow=3.1,SNR=7.0
ILAR PKPPKP **P'P'df** **02 05 08.2 +2.8**
comp=Z,0.9nm,0.8s,baz=337,slow=2.1,SNR=4.7
ILAR LR LR 02 14 29.3
comp=Z,136µm,21.4s,baz=201,slow=31
comp=Z,60nm,0.8s
ILAR **Eielson Array** **92.44 16** P **P** **01 39 43.2 -2.3**
ILAR **Eielson Array** **92.44 16** P **P** **01 39 43.2 -2.3**
GUWA **GUWAHATI** **92.46 297** *e* P **P** **01 39 45.3 -1.1**
MTPU **Mount Pierson** **92.48 50** IAmb IAmb 01 40 07.8
comp=Z,272nm,1.6s
L27K **Beaver Creek,** **92.51 19** IAmb IAmb 01 40 02.9
comp=Z,155nm,1.2s
L27K **Beaver Creek,** **92.51 19** P **P** **01 39 44.3 -1.6**
baz=221,SNR=67
L27K S **S** **01 50 48.8 -0.5**
baz=221
TCRU **Three Creeks R** **92.56 49** IAmb IAmb 01 40 12.4
comp=Z,215nm,1.6s
POKR **Poker Plat Res** **92.58 16** IAmb IAmb 01 40 02.0
comp=Z,271nm,1.5s
POKR **Poker Plat Res** **92.58 16** P **P** **01 39 42.7 -3.5**
baz=216,SNR=8.4
POKR S **S** **01 50 50.2 +0.3**
baz=216
SCRK **Sand Creek** **92.59 18** P **P** **01 39 44.4 -2.0**
baz=219,SNR=120
SCRK S **S** **01 50 46.2 -4.0**
baz=219
H23K **Yukon River** **92.66 15** IAmb IAmb 01 40 09.7
comp=Z,250nm,1.9s
H23K IAMs_20 IAMs_20 02 15 05.4
comp=Z,128µm,21.0s
H23K **Yukon River** **92.66 15** P **P** **01 39 44.0 -2.6**
baz=214,SNR=20
H23K S **S** **01 50 51.6 +1.0**
baz=214
O30N **Mendenhall** **92.70 22** P **P** **01 39 44.7 -2.2**
baz=226,SNR=17
O30N S **S** **01 50 53.7 +2.5**
baz=226
J25K **Salcha River,** **92.71 17** P **P** **01 39 44.7 -2.1**
baz=218,SNR=105
J25K S **S** **01 50 49.8 -1.4**
baz=218
P32M **Atlin** **92.76 24** P **P** **01 39 45.4 -1.8**
baz=228,SNR=11
P32M S **S** **01 50 54.9 +3.2**
baz=228
N30M **Aishikik Lake** **92.84 22** P **P** **01 39 45.3 -2.2**
baz=225,SNR=8.0
N30M S **S** **01 50 53.3 +0.9**
baz=225
B08A **Colville Reser** **92.90 38** P **P** **01 39 46.6 -1.5**
F10A **Beach Ranch, E** **92.93 41** IAmb IAmb 01 40 01.6
comp=Z,76nm,1.0s
W18A **Petrified Fore** **92.97 53** IAmb IAmb 01 39 53.7
comp=Z,98nm,1.1s
W18A **Petrified Fore** **92.97 53** P **P** **01 39 45.8 -3.1**
baz=244,SNR=19
W18A S **S** **01 50 58.6 +3.6**
baz=244
F21K **Alatna River** **93.00 12** P **P** **01 39 46.4 -1.7**
baz=211,SNR=37
F21K S **S** **01 50 56.1 +2.6**
baz=211
DUG **Dugway, Tooele** **93.02 48** P **P** **01 39 47.3 -1.7**
baz=243,SNR=33
DUG S **S** **01 51 00.9 +5.7**
baz=243
WHY **Whitehorse** **93.06 23** IAmb IAmb 01 40 05.0
comp=Z,108nm,1.4s
WHY **Whitehorse** **93.06 23** P **P** **01 39 44.9 -3.7**
baz=227,SNR=13
WHY S **S** **01 50 59.3 +4.8**
baz=227
H24K **Noodor Dome** **93.06 15** P **P** **01 39 45.5 -2.9**
baz=216,SNR=16
H24K S **S** **01 50 53.4 -0.8**
baz=216
M29M **Somme Creek** **93.09 20** P **P** **01 39 46.7 -2.0**
baz=224
M29M S **S** **01 50 58.5 +3.8**
baz=224
J26L **Joseph Creek** **93.11 17** P **P** **01 39 47.3 -1.4**
baz=219,SNR=174
J26L S **S** **01 50 57.6 +2.8**
baz=219
G22K **Bettles** **93.14 13** P **P** **01 39 47.2 -1.4**
baz=212
G22K S **S** **01 50 58.8 +4.1**
baz=212
K27K **Chicken** **93.17 18** P **P** **01 39 47.8 -1.1**
K27K IAmb IAmb 01 40 06.5
comp=Z,266nm,1.3s
K27K **Chicken** **93.17 18** P **P** **01 39 46.1 -2.8**
baz=221
K27K S **S** **01 50 57.9 +2.8**
baz=221
G23K **Bananza Creek** **93.29 14** P **P** **01 39 48.0 -1.5**
baz=214,SNR=32
G23K S **S** **01 51 01.5 +5.3**
baz=214
N31M **Braeburn, Yuko** **93.31 22** IAmb IAmb 01 40 06.9
comp=Z,242nm,1.4s
N31M **Braeburn, Yuko** **93.31 22** P **P** **01 39 48.0 -1.6**
baz=226,SNR=11
N31M S **S** **01 51 03.5 +7.0**
baz=226
121A **Cookes Peak, D** **93.34 56** P **P** **01 39 51.2 +0.5**
baz=245
121A S S 01 51 10.3 +12
baz=245
121A **Cookes Peak, D** **93.34 56** P **P** **01 39 49.9 -0.8**
baz=245
121A S **S** **01 51 03.3 +4.9**
baz=245
PRP **Porcupine Dome** **93.39 16** IAmb IAmb 01 40 07.2
comp=Z,359nm,1.7s
PRP **Porcupine Dome** **93.39 16** P **P** **01 39 47.9 -2.2**
baz=218,SNR=53
PRP S **S** **01 50 59.9 +2.6**
baz=218
DLBC **Dease Lake** **93.45 26** LR LR 02 13 30.0
comp=Z,76µm,21.5s,baz=239,slow=30
DLBC **Dease Lake** **93.45 26** IAmb IAmb 01 40 08.5
comp=Z,136nm,1.6s
DLBC **Dease Lake** **93.45 26** P **P** **01 39 48.0 -2.4**
baz=231,SNR=13
DLBC S **S** **01 51 03.1 +5.1**
baz=231
F22K **John River** **93.50 13** P **P** **01 39 49.1 -1.3**
baz=212
F22K S **S** **01 51 01.5 +3.5**
baz=212
P33M **Teslin, Yukon** **93.51 24** P **P** **01 39 49.1 -1.6**
baz=229,SNR=6.8
P33M S **S** **01 51 00.4 +1.9**
baz=229
HLID **Hailey** **93.52 44** P **P** **01 39 50.4 -0.8**
baz=242,SNR=38
HLID S **S** **01 51 03.2 +3.8**
baz=242
EFI **East Falkland** **93.56 151** IAMs_20 IAMs_20 02 12 17.7
comp=Z,104µm,22.0s
Q16A **Castle Valley** **93.58 49** IAmb IAmb 01 40 12.4
comp=Z,148nm,1.2s
PLCA **Paso Flores** **93.66 137** P **P** **01 39 51.9 -0.2**
comp=Z,30nm,1.1s,baz=232,slow=5.0,SNR=14
PLCA LR LR 02 12 12.9
comp=Z,78µm,21.4s,baz=246,slow=29
comp=Z,30nm,1.1s
PLCA **Paso Flores** **93.66 137** P **P** **01 39 51.5 -0.5**
PLCA **Paso Flores** **93.66 137** P **P** **01 39 51.5 -0.5**
PLCA pmax pmax
comp=Z,81nm,1.2s
ZAIG **Zacatecas** **93.67 67** P **P** **01 39 51.6 -1.0**
COLD **Coldfoot** **93.68 14** IAmb IAmb 01 40 08.7
comp=Z,232nm,1.2s
COLD **Coldfoot** **93.68 14** P **P** **01 39 49.9 -1.2**
baz=214,SNR=74
COLD S **S** **01 51 02.3 +2.8**
baz=214
R33M **Jennings River** **93.69 25** P **P** **01 39 50.4 -1.2**
baz=230,SNR=41
R33M S **S** **01 51 03.2 +3.1**
baz=230
GO06 **Curarrehue** **93.71 136** P **P** **01 39 51.3 -1.0**
GO06 IAmb IAmb 01 40 18.6
comp=Z,233nm,1.5s
TMUT **Trail Mountain** **93.73 49** IAmb IAmb 01 40 18.9
comp=Z,134nm,1.5s
HVU **Hansel Valley** **93.77 46** IAmb IAmb 01 40 01.9
comp=Z,124nm,1.4s
I26K **Coal Creek Min** **93.84 17** P **P** **01 39 49.9 -2.0**
baz=220
I26K S **S** **01 51 05.0 +4.0**
baz=220
G24K **Hadweenzic Riv** **93.86 15** P **P** **01 39 50.3 -1.8**
baz=216,SNR=43
G24K S **S** **01 51 08.1 +7.0**
baz=216
H25K **Birch Creek** **93.91 15** P **P** **01 39 50.5 -1.7**
baz=218
H25K S **S** **01 51 02.3 +0.8**
baz=218
BOD **Bodaibo** **93.94 333** *e* P **P** **01 39 51.0 -1.5**
BOD pmax pmax
comp=Z,70nm,2.8s
DAWY **Dawson** **93.98 19** IAmb IAmb 01 40 09.8
comp=Z,146nm,1.2s
DAWY **Dawson** **93.98 19** P **P** **01 39 51.0 -1.7**
baz=223,SNR=52
DAWY S **S** **01 51 06.6 +4.2**
baz=223
EGAK **Eagle** **94.00 18** P **P** **01 39 51.8 -0.8**
baz=222,SNR=91
EGAK S **S** **01 51 09.7 +7.4**
baz=222
KIDD **KIDD Seismic O** **94.02 57** P **P** **01 39 54.3 +0.6**
baz=246
KIDD S S 01 51 14.3 +10
baz=246
EPT **El Paso** **94.02 57** IAMs_20 IAMs_20 02 14 00.4
comp=Z,106µm,20.0s
N32M **Quiet Lake** **94.04 23** P **P** **01 39 52.0 -1.1**
baz=228
N32M S **S** **01 51 05.8 +2.8**
baz=228
E22K **Anaktuvuk Pass** **94.11 12** P **P** **01 39 51.4 -1.8**
baz=212
E22K S **S** **01 51 08.2 +4.9**
baz=212
NEW **Newport** **94.12 39** LR LR 02 17 01.4
comp=Z,92µm,18.9s,baz=246,slow=32
NEW **Newport** **94.12 39** IAMs_20 IAMs_20 02 16 50.0
comp=Z,97µm,20.0s
NEW **Newport** **94.12 39** P **P** **01 39 52.2 -1.5**
baz=240,SNR=10
NEW S **S** **01 51 06.1 +1.8**
baz=240
P17A **Butcher Ranch,** **94.13 49** IAmb IAmb 01 40 14.2
comp=Z,382nm,2.4s
GOMU **GeErMu** **94.14 307** ⇑ *e* P **P** **01 39 54.6 +0.1**
GOMU pP pwP 01 40 01.3 -2.1
GOMU pmax pmax
comp=Z,21nm,0.9s
GOMU LR LR
comp=Z,16µm,20.1s
GOMU LR LR
comp=Z,16µm,19.0s
GOMU LR LR
comp=Z,22µm,19.6s
G25K **Bearman Lake** **94.24 15** P **P** **01 39 51.0 -2.7**
baz=217,SNR=16
G25K S **S** **01 51 08.8 +4.5**
baz=217
M31M **Drury Creek, Y** **94.28 22** IAMs_20 IAMs_20 02 15 49.4
comp=Z,81µm,20.0s
M31M **Drury Creek, Y** **94.28 22** P **P** **01 39 53.1 -1.0**
baz=227,SNR=14
M31M S **S** **01 51 05.9 +0.9**
baz=227
FYU **Fort Yukon** **94.29 15** IAMs_20 IAMs_20 02 15 47.5
comp=Z,121µm,20.0s
LSA **Lhasa** **94.30 300** P **P** **01 39 54.4 -1.1**
LSA **Lhasa** **94.30 300** P **P** **01 39 55.0 -0.5**
LSA pmax pmax
comp=Z,12nm,0.8s
LSA LR LR
comp=Z,20µm,26.3s
LSA LR LR
comp=Z,40µm,27.9s
LSA LR LR
comp=Z,16µm,28.7s
LSA **Lhasa** **94.30 300** P **P** **01 39 54.4 -1.1**
LSA pmax pmax
comp=Z,104nm,1.7s
LSA **Lhasa** **94.30 300** P **P** **01 39 57.4 +1.8**
LSA P **P** **01 39 57.4 +1.8**
TCUT **Toone Canyon** **94.39 47** IAmb IAmb 01 40 15.2
comp=Z,209nm,1.4s
F24K **Squaw Lake** **94.43 14** P **P** **01 39 53.1 -1.6**
baz=216,SNR=68
F24K S **S** **01 51 08.7 +2.5**
baz=216
I27K **Kandik River** **94.49 17** P **P** **01 39 52.1 -2.9**
baz=221
I27K S **S** **01 51 09.9 +3.2**
baz=221
Y22A **Socorro** **94.55 55** P **P** **01 39 56.4 +0.2**
baz=246
Y22A S **S** **01 51 17.6 +8.7**

baz=246
J29M Klondike Camp 94.62 19 P P 01 39 54.2 -1.5
baz=224
J29M S S 01 51 11.5 +3.5
baz=224
Y22D IRIS PASSCAL I 94.64 55 S S 01 51 18.9 +9.3
baz=246
Y22D IRIS PASSCAL I 94.64 55 P P 01 39 53.4 -3.2
baz=246
CRNM Carthage 94.73 55 P P 01 39 56.3 -0.8
E24K Your Creek 94.75 14 P P 01 39 53.8 -2.3
baz=215
E24K S S 01 51 18.2 +9.2
baz=215
MVCO Mesa Verde 94.76 52 IAMs_20 IAMs_20 02 13 11.6
comp=Z,89µm,22.0s
MVCO Mesa Verde 94.76 52 P P 01 39 54.0 -3.2
baz=245
MVCO S S 01 51 17.9 +7.1
baz=245
MNTX Cornudas Mount 94.87 58 IAMs_20 IAMs_20 02 14 35.9
comp=Z,97µm,20.0s
MNTX Cornudas Mount 94.87 58 P P 01 39 57.5 0.0
baz=246
MNTX S S 01 51 19.0 +7.6
baz=246
MNTX Cornudas Mount 94.87 58 P P 01 39 55.4 -2.1
baz=246
MNTX S S 01 51 18.3 +6.8
baz=246
PALK Pallekele 94.89 276 P P 01 39 58.6 +0.5
comp=Z,18nm,1.0s,baz=83,slow=8.1,SNR=3.9
PALK LR LR 02 21 55.2
comp=Z,84µm,21.9s,baz=225,slow=35
comp=Z,18nm,1.0s
PALK Pallekele 94.89 276 P P 01 39 57.0 -1.1
PALK IAmb IAmb 01 40 15.1
comp=Z,138nm,1.6s
PALK Pallekele 94.89 276 eP P 01 39 58.7 +0.6
PALK pmax pmax
comp=Z,103nm,1.5s
PALK Pallekele 94.89 276 P P 01 39 57.6 -0.4
PALK P P 01 39 57.6 -0.4
PALK S **SKSac** 01 50 30.6 -3.4
PALK S **SKSac** 01 50 30.6 -3.4
G26K Porcupine Rive 94.95 16 P P 01 39 55.8 -1.2
baz=219,SNR=81
G26K S S 01 51 13.0 +2.5
baz=219
H27K Steamboat Moun 94.99 17 P P 01 39 56.0 -1.2
baz=221
H27K S S 01 51 14.2 +3.2
baz=221
TOLK Toolik Lake Re 94.99 13 IAmb IAmb 01 40 14.8
comp=Z,167nm,1.3s
TOLK IAMs_20 IAMs_20 02 19 50.0
comp=Z,107µm,20.0s
TOLK Toolik Lake Re 94.99 13 P P 01 39 55.4 -1.8
baz=214,SNR=28
TOLK S S 01 51 10.2 -0.8
baz=214
F25K Christian Rive 95.01 15 P P 01 39 56.2 -1.1
baz=218,SNR=41
F25K S S 01 51 14.3 +3.1
baz=218
D23K Nanushuk River 95.04 12 P P 01 39 56.3 -1.1
baz=213,SNR=61
D23K S S 01 51 15.5 +4.2
baz=213
ZAK Zakamensk 95.11 323 eP P 01 39 56.0 -2.3
BWNR Bhubaneshwar 95.15 290 eP P 01 40 00.8 +1.7
I29M Ogilvie Camp, 95.25 18 IAmb IAmb 01 40 15.3
comp=Z,125nm,1.2s
I29M Ogilvie Camp, 95.25 18 P P 01 39 56.5 -1.9
baz=224,SNR=25
I29M S S 01 51 14.4 +1.1
baz=224
TX31 Lajitas Ar. Si 95.30 61 IAmb IAmb 01 40 21.0
comp=Z,98nm,1.1s
TX31 Lajitas Ar. Si 95.30 61 P P 01 40 00.2 +0.5
baz=247
TX31 S S 01 51 19.1 +3.6
baz=247
TXAR Lajitas Array 95.30 61 P P 01 39 59.4 -0.3
comp=Z,18nm,1.1s,baz=224,slow=3.2,SNR=35
TXAR PKKPbc **PKKPbc** 01 56 52.5 -0.6
comp=Z,1.5nm,0.7s,baz=106,slow=2.9,SNR=14
TXAR LR LR 02 13 47.4
comp=Z,128µm,21.8s,baz=238,slow=30
comp=Z,18nm,1.1s
TXAR Lajitas Array 95.30 61 P P 01 39 59.6 -0.1
AHID Auburn Hatcher 95.32 46 IAMs_20 IAMs_20 02 13 59.0
comp=Z,102µm,21.0s
MSO Missoula 95.33 41 IAMs_20 IAMs_20 02 16 31.1
comp=Z,95µm,20.0s
MSO Missoula 95.33 41 P P 01 39 58.0 -1.4
baz=242,SNR=8.0
MSO S S 01 51 16.6 +1.5
baz=242
ANMO Albuquerque 95.34 54 LR LR 02 14 23.6
comp=Z,71µm,21.9s,baz=252,slow=30
ANMO Albuquerque 95.34 54 P P 01 39 58.0 -1.8
ANMO Albuquerque 95.34 54 IAMs_20 IAMs_20 02 13 19.2
comp=Z,79µm,22.0s
ANMO Albuquerque 95.34 54 eP P 01 39 57.8 -2.0
ANMO pmax pmax
comp=Z,38nm,1.1s
ANMO Albuquerque 95.34 54 P P 01 39 59.5 -0.3
baz=246
ANMO Albuquerque 95.34 54 P P 01 39 57.1 -2.7
baz=246
ANMO S S 01 51 19.5 +3.7
baz=246
SLGI Shiliguri 95.35 297 eP P 01 40 01.3 +1.5
G27K Doyon Strip 95.39 16 P P 01 39 58.1 -1.0
baz=221,SNR=31
G27K S S 01 51 14.0 -0.5
baz=221
GTK Tadong 95.44 297 eP P 01 40 00.4 +0.1
GTK IAmb IAmb 01 40 05.0
comp=Z,34nm,0.5s
E25K Arctic Village 95.44 14 P P 01 39 58.2 -1.1
baz=218,SNR=29
E25K S S 01 51 15.3 +0.4
baz=218
F26K Sheenjek River 95.44 15 P P 01 39 57.9 -1.4
baz=219,SNR=40
F26K S S 01 51 17.3 +2.4
baz=219
D24K Happy Valley 95.57 13 P P 01 39 59.2 -0.6
baz=215
D24K S S 01 51 22.9 +7.0
baz=215
C23K Itkillik River 95.78 12 P P 01 40 00.3 -0.4
baz=213,SNR=26
C23K S S 01 51 20.8 +3.2
baz=213
ML02 Panimavida 95.83 132 P P 01 40 02.7 +0.7
ML02 IAmb IAmb 01 40 39.0
comp=Z,132nm,1.3s
GO05 Huala 95.89 132 IAmb IAmb 01 40 31.3
comp=Z,164nm,1.8s
IMW Indian Meadow 95.92 45 IAMs_20 IAMs_20 02 14 32.7
comp=Z,121µm,21.0s
LOHW Long Hollow 96.01 45 IAMs_20 IAMs_20 02 14 45.4
comp=Z,125µm,22.0s
A21K Barrow 96.04 9 IAMs_20 IAMs_20 02 15 56.7
comp=Z,76µm,22.0s
A21K Barrow 96.04 9 P P 01 40 01.2 -0.7
baz=208
A21K S S 01 51 20.0 +0.2
baz=208
C24K Franklin Bluff 96.06 13 P P 01 40 01.9 -0.1
baz=215
C24K S S 01 51 23.1 +3.0
baz=215
O20A White River Ci 96.15 49 P P 01 40 03.3 -0.1
O20A White River Ci 96.15 49 P P 01 40 02.5 -0.9
baz=246
O20A S S 01 51 27.2 +4.6
baz=246
TAPN Taplejung 96.18 297 eP P 01 40 02.4 -1.6
S22A 4UR Ranch, Cre 96.19 52 P P 01 40 03.1 -0.7
baz=246,SNR=16
S22A S S 01 51 29.4 +6.1
baz=246
BOZ Bozeman (W) 96.21 43 P P 01 40 02.1 -1.4
baz=244,SNR=19
BOZ S S 01 51 28.6 +5.7
baz=244
D25K Kavik River 96.22 13 P P 01 40 01.2 -1.7
baz=217
D25K S S 01 51 25.8 +4.2
baz=217
BW06 Boulder Array 96.35 46 P P 01 40 02.7 -1.6
baz=245
PDAR Pinedale Array 96.35 46 P P 01 40 02.8 -1.5
comp=Z,2.1nm,0.8s,baz=228,slow=3.6,SNR=18
PDAR PP PP 01 43 57.6 -0.7
comp=Z,4.7nm,1.0s,baz=244,slow=6.3,SNR=5.4
PDAR PKKPbc **PKKPbc** 01 56 51.3 +0.3
comp=Z,1.5nm,1.0s,baz=48,slow=2.2,SNR=3.8
PDAR PKPPKP **P'P'df** 02 05 03.4 +2.3
comp=Z,0.4nm,0.8s,baz=28,slow=4.1,SNR=2.1
PDAR LR LR 02 15 27.4
comp=Z,117µm,21.9s,baz=242,slow=30
H17A Grant Village 96.37 45 P P 01 40 04.2 -0.1
baz=245
VIS Vishakhapatnam 96.38 286 ex P 01 39 59.5 -5.2
VIS IAmb IAmb 01 40 17.9
comp=Z,191nm,2.0s
BOK Bokaro 96.39 293 eP P 01 40 05.3 +0.7
BOK IAmb IAmb 01 40 09.2
comp=Z,72nm,1.6s
EPYK Eagle Plains 96.43 18 IAmb IAmb 01 40 20.8
comp=Z,239nm,1.6s
EPYK Eagle Plains 96.43 18 P P 01 40 01.8 -2.0
baz=226,SNR=19
EPYK S S 01 51 24.7 +1.2
baz=226
YNR Norris Junctio 96.44 44 P P 01 40 04.3 -0.4
E27K Coleen River 96.44 16 P P 01 40 01.9 -1.9
baz=221,SNR=24
E27K S S 01 51 29.8 +6.3
baz=221
SMCO Snowmass 96.66 50 IAMs_20 IAMs_20 02 17 38.8
comp=Z,74µm,20.0s
BO02 Sierra Bellavi 96.80 132 IAmb IAmb 01 40 50.5
comp=Z,81nm,1.1s
BO01 Tunca 96.81 131 IAmb IAmb 01 40 40.5
comp=Z,46nm,0.4s
RAGD RAYAGADA 96.82 288 eP P 01 40 06.6 -0.1
DGAR Diego Garcia 96.84 259 P P 01 40 03.8 -3.1
RAMN Ramite 96.95 296 eP P 01 40 05.9 -1.5
MOY Mondy 96.99 323 eP P 01 40 05.2 -1.6
C26K Camden Bay 97.01 13 P P 01 40 05.1 -1.2
baz=218,SNR=5.6
C26K S S 01 51 29.3 +1.1
baz=218
C27K Jago River 97.05 14 P P 01 40 05.0 -1.5
baz=220,SNR=22
C27K S S 01 51 29.5 +0.9
baz=220
SDCO Great Sand Dun 97.16 52 IAMs_20 IAMs_20 02 14 53.1
comp=Z,83µm,22.0s
SDCO Great Sand Dun 97.16 52 P P 01 40 07.9 -0.3
baz=247
SDCO Great Sand Dun 97.16 52 P P 01 40 06.3 -1.9
baz=247,SNR=10
MDRS Chennai 97.45 281 eP Pdif 01 40 09.7 0.0
RLMT Red Lodge 97.52 44 P P 01 40 07.8 -1.7
baz=246
JIRN Jiri 97.55 297 eP P 01 40 09.1 -1.2
T25A Trinidad 97.72 53 P P 01 40 08.1 -2.6
baz=248
MSTX Muleshoe 97.77 57 P P 01 40 10.6 -0.1
baz=248
MSTX Muleshoe 97.77 57 P P 01 40 08.7 -2.1
baz=248
ISCO Idaho Springs 97.87 50 P P 01 40 09.0 -2.4
baz=247
Q24A Divide 97.88 51 P P 01 40 08.8 -2.6
baz=247,SNR=7.2
GUN Gumba 97.90 297 eP P 01 40 10.9 -0.9
N23A Red Feather La 98.06 49 P P 01 40 08.2 -3.9
baz=247,SNR=6.5
PKI Pulchoki 98.16 296 eP P 01 40 11.1 -1.9
comp=Z,46nm,0.8s
PKIN Phulchoki 98.18 296 eP P 01 40 11.1 -1.9
comp=Z,36nm,0.8s
CMIG Matias Romero 98.28 75 LR LR 02 14 21.7
comp=Z,56µm,22.0s,baz=249,slow=29
VJD Vijayawada 98.33 284 eP Pdif 01 40 13.7 +0.2
K22A Casper 98.34 47 P Pdif 01 40 14.8 +1.5
baz=247
K22A Casper 98.34 47 P P 01 40 10.2 -3.1
baz=247
833A Chaparral WMA, 98.40 63 Pdiff P 01 40 11.0 -2.6
baz=249
EGMT Eagleton 98.41 41 Pdiff P 01 40 12.7 -0.6
baz=246
CO06 Fray Jorge 98.43 128 IAmb IAmb 01 40 40.2
comp=Z,38nm,0.7s
DMN Daman 98.43 296 eP P 01 40 12.9 -1.2
PHWY Pilot Hill 98.56 49 IAMs_20 IAMs_20 02 16 21.9
comp=Z,109µm,22.0s
INK Inuvik 98.66 18 P P 01 40 11.4 -2.3
comp=Z,4.9nm,0.7s,baz=250,slow=4.3
INK LR LR 02 17 34.3
comp=Z,59µm,21.6s,baz=214,slow=31
comp=Z,4.9nm,0.7s
INK Inuvik 98.66 18 IAmb IAmb 01 40 30.3
comp=Z,135nm,1.7s
INK Inuvik 98.66 18 Pdiff P 01 40 12.0 -1.7
baz=229
TRD Trivandrum 98.79 276 ex P 01 40 20.8 +5.1
TRD IAmb IAmb 01 40 32.1
comp=Z,64nm,1.2s
TIXI Tiksi 98.79 347 P P 01 40 14.0 -0.3
comp=Z,4.7nm,0.8s,baz=270,slow=23,SNR=5.7
TIXI LR LR 02 19 56.3
comp=Z,41µm,21.6s,baz=178,slow=32
comp=Z,4.7nm,0.8s
TIXI Tiksi 98.79 347 deP P 01 40 13.7 -0.6
TIXI pmax pmax
comp=Z,15nm,1.0s
SALM Salem 98.80 279 eP P 01 40 15.5 -0.2
JCT Junction City 98.84 61 IAMs_20 IAMs_20 02 15 16.4
comp=Z,78µm,21.0s
JCT Junction City 98.84 61 S S 01 51 48.7 +3.0
baz=249
JCT Junction City 98.84 61 Pdiff P 01 40 13.2 -2.4
baz=249
AMTX Amarillo 98.94 56 P P 01 40 15.1 -0.9
AMTX Amarillo 98.94 56 Pdiff P 01 40 13.7 -2.3
baz=249
KOD Kodaikanal 98.95 277 ex P 01 40 22.2 +5.5
GKN Gorkha 98.96 297 eP P 01 40 15.1 -1.2
HOPE Hope Point 99.30 163 IAMs_20 IAMs_20 02 17 01.5
comp=Z,96µm,22.0s
VLK Valmikinagar 99.36 296 eP Pdif 01 40 17.7 -0.2
VAR Varanasi 99.36 293 eP Pdif 01 40 18.1 +0.2
KAAM Kaadhehdhoo 99.45 267 IAMs_20 IAMs_20 02 20 31.8
comp=Z,85µm,22.0s
ROCAM Rodrigues Isla 99.45 244 IAMs_20 IAMs_20 02 24 12.4
comp=Z,63µm,19.0s
KSCO Kaye Shedlock' 99.72 52 Pdiff Pdif 01 40 18.1 -1.3
baz=249
ABTX Abilene, Hawle 99.72 59 Pdif 01 40 20.8 +1.3
ABTX Abilene, Hawle 99.72 59 Pdiff Pdif 01 40 16.6 -2.8
baz=249
DANN Dangsing 99.80 297 eP Pdif 01 40 18.7 -1.5
LAO LASA Array 100.09 44 Pdiff Pdif 01 40 20.6 -0.2
baz=248
HYBB Hyderabad (bro 100.52 285 ePKiKP **PKiKP** 01 44 48.7 -1.3
HYBB eSKiKP **SKiKP** 01 48 24.0 -0.9
HYBB eSS **SS** 01 58 55.7 -1.1
RSSD Black Hills 100.58 47 IAMs_20 IAMs_20 02 17 42.2
comp=Z,81µm,22.0s
RSSD Black Hills 100.58 47 Pdiff Pdif 01 40 21.7 -1.5
baz=249
435B Jarrell 100.74 61 IAMs_20 IAMs_20 02 16 14.6
comp=Z,99µm,22.0s
435B Jarrell 100.74 61 Pdiff Pdif 01 40 22.8 -1.2
baz=250
OGNE Ogallala 100.83 50 Pdiff Pdif 01 40 23.8 -0.5
baz=250
ELIS Ellis County 101.08 56 Pdif Pdif 01 40 25.9 +0.5
WMOK Wichita Mounta 101.13 57 IAMs_20 IAMs_20 02 18 06.6
comp=Z,98µm,22.0s
WMOK Wichita Mounta 101.13 57 Pdiff Pdif 01 40 23.4 -2.3
baz=250
WHTX Lake Whitney, 101.25 60 Pdiff Pdif 01 40 23.1 -3.1
baz=250
NOKA Waynoka 101.65 55 Pdif Pdif 01 40 29.5 +1.6
CBKS Cedar Bluff 101.77 53 Pdiff Pdif 01 40 25.7 -2.7
baz=250
OK035 E0210 Rd and N 101.84 55 IAMs_20 IAMs_20 02 18 43.3
comp=Z,100µm,21.0s
HKT Hockley 101.89 62 IAMs_20 IAMs_20 02 20 22.1
comp=Z,68µm,21.0s
DGMT Dagmar 102.02 42 IAMs_20 IAMs_20 02 20 37.0
comp=Z,100µm,20.0s
DGMT Dagmar 102.02 42 Pdiff Pdif 01 40 27.9 -1.4
baz=250
C36M Paulatuk 102.02 19 IAMs_20 IAMs_20 02 18 14.9
comp=Z,76µm,22.0s
C36M Paulatuk 102.02 19 Pdiff Pdif 01 40 28.5 -0.2
baz=237
YKA Yellowknife Ar 102.05 27 P Pdif 01 40 27.0 -2.0
comp=Z,2.9nm,0.7s,baz=254,slow=4.3,SNR=13
YKA PKKPbc **PKKPbc** 01 56 31.7 -3.4
comp=Z,1.2nm,0.7s,baz=47,slow=2.9,SNR=6.1
WMQ Urumqi 102.09 312 P Pdif 01 40 30.5 +0.7
WMQ PP **PKiKP** 01 44 49.6 -2.6
WMQ S **Sdif** 01 52 12.6 +0.2
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ pmax pmax
comp=Z,1µm,6.7s
WMQ LR LR
comp=Z,16µm,22.1s
WMQ LR LR
comp=Z,32µm,24.9s
WMQ LR LR
comp=Z,59µm,24.9s
OK032 Salt Plains WL 102.25 55 IAMs_20 IAMs_20 02 17 51.2
comp=Z,108µm,21.0s
BCOK Bluff Creek, N 102.33 56 Pdif Pdif 01 40 32.8 +1.9
OK025 Westminster Rd 102.52 57 IAMs_20 IAMs_20 02 19 12.5
comp=Z,108µm,21.0s
AKL Akola 103.00 287 ex P 01 40 41.3
OK030 Cody Creek RV 103.06 56 IAMs_20 IAMs_20 02 19 49.7
comp=Z,96µm,20.0s
LGTI Lohaghat 103.07 297 eP Pdif 01 40 37.6 +3.3
PTH Pithoragarh 103.13 297 eP Pdif 01 40 37.6 +2.8
JHNI Jhansi 103.23 292 ex P 01 40 41.0
NATX Nacogdoches 103.42 61 IAMs_20 IAMs_20 02 18 09.7
comp=Z,98µm,22.0s
NATX Nacogdoches 103.42 61 Pdiff Pdif 01 40 34.5 -1.4
baz=252
NNA Nana 103.43 109 eP **PKiKP** 01 44 58.2 +2.7
BHPL Bhopal 103.48 290 eP Pdif 01 40 35.3 -1.1
T35A Sooner Cattle 103.58 56 Pdif Pdif 01 40 38.0 +1.6
BGNE Belgrade 103.75 51 Pdiff Pdif 01 40 34.8 -2.4
baz=252
TUL1 Leonard 103.82 57 IAMs_20 IAMs_20 02 18 36.8
comp=Z,91µm,22.0s
TUL1 Leonard 103.82 57 Pdiff Pdif 01 40 36.2 -1.3
baz=252
CRIN San Cristobal 103.82 82 eP **PKiKP** 01 45 00.8 +4.7
CNGN Cerro Negro 104.08 82 eP PKiKP 01 45 11.4 +15
TGUH Tegucigalpa,Un 104.09 80 eP PKiKP 01 44 48.0 -8.7
SUSD Miller 104.12 48 Pdiff Pdif 01 40 37.4 -1.3
baz=252
KSU1 Kansas State U 104.17 53 Pdif Pdif 01 40 39.1 +0.1
KSU1 Kansas State U 104.17 53 IAMs_20 IAMs_20 02 21 04.9
comp=Z,78µm,21.0s
KSU1 Kansas State U 104.17 53 Pdiff Pdif 01 40 37.6 -1.4
baz=252
MDND Maddock 104.72 44 Pdiff Pdif 01 40 40.8 -0.5
baz=253
LVC Limon Verde 104.80 122 IAMs_20 IAMs_20 02 18 40.9
comp=Z,61µm,20.0s
JTS Las Juntas de 104.91 85 eP PP 01 45 00.8 -2.6
RER Riviere de l'E 104.95 239 IAMs_20 IAMs_20 02 24 32.9
comp=Z,62µm,20.0s
LPA La Plata 105.09 139 PKIKP **PKiKP** 01 44 53.4 -4.5
LPA PP PP 01 45 05.5 +2.1
LPA pPP 01 45 18.9
LPA PPP PPP 01 47 14.1
LPA SKIKP 01 48 28.9
LPA PKIKS 01 48 40.2
LPA SKS **SKSac** 01 51 32.3 +8.8
LPA SKIKS 01 52 06.4
LPA SDIFF **Sdif** 01 52 29.9 -8.0
LPA PS **PS** 01 54 19.8 +1.5
LPA PPS PPS 01 55 24.7
LPA SSS SSS 02 03 33.3
LPA PPP PPP 02 04 21.7
ZSN Zaisan 105.12 315 eP Pdif 01 40 41.4 -1.6
ZSN e 01 45 00.7
ZSN Zaisan 105.12 315 ePdif Pdif 01 40 41.5 -1.6
baz=315
ZSN ePP **PKiKP** 01 45 00.8 +3.2
baz=315
MIAR Mount Ida 105.14 59 IAMs_20 IAMs_20 02 19 17.9
comp=Z,106µm,22.0s
MIAR Mount Ida 105.14 59 Pdiff Pdif 01 40 41.3 -2.1
baz=253
DDI Dehra Dun 105.15 297 eP Pdif 01 40 40.9 -2.8
ACON Acoyapa 105.29 83 eP PP 01 45 10.9 +4.7
ECSD EROS Data Cent 105.53 49 Pdif Pdif 01 40 45.6 +0.7
ECSD EROS Data Cent 105.53 49 Pdiff Pdif 01 40 43.3 -1.7
baz=254
MAPC Malpelo 105.71 92 eP PP 01 45 23.2 +14
SMLA Simla 106.12 297 eP Pdif 01 40 48.7 +0.8
SMLA IAmb IAmb 01 40 51.5
comp=Z,110nm,2.4s
MKAR Makanchi Array 106.62 314 Pdiff Pdif 01 40 51.0 +1.2
comp=Z,3.7nm,0.7s,baz=101,slow=4.8,SNR=14
MKAR PP PP 01 45 14.9 -0.5
comp=Z,16nm,0.9s,baz=105,slow=8.9,SNR=6.9
MKAR PKKPbc **PKKPbc** 01 56 20.6 -0.2
comp=Z,3.2nm,0.9s,baz=296,slow=3.3,SNR=6.0
PAC1 Pacto, Paraso 106.86 97 eP PP 01 45 24.1 +6.2
AJM Ajmer 106.88 292 eP Pdif 01 40 51.9 +0.5
VBMS Vicksburg 106.92 62 Pdiff Pdif 01 40 48.9 -2.5
baz=254
ZALV Zalesovo Beam 106.94 322 Pdiff Pdif 01 40 49.8 -1.2
comp=Z,2.1nm,0.6s,baz=109,slow=5.7,SNR=8.9
ZALV PKiKP **PKiKP** 01 45 01.2 +0.6
comp=Z,21nm,1.1s,baz=111,slow=4.1,SNR=6.1
ZALV PP PP 01 45 12.7 -4.8
comp=Z,9.8nm,1.0s,baz=79,slow=7.5,SNR=2.7
OTAV Otavalo 107.16 97 eP PP 01 45 20.5 +0.1
AGMN Agassiz Nation 107.26 44 P **PKiKP** 01 45 00.7 -0.8
baz=255,SNR=5.0
AGMN Agassiz Nation 107.26 44 Pdiff Pdif 01 40 50.8 -1.7
baz=255
SCIA State Center 107.44 51 IAMs_20 IAMs_20 02 22 07.3
comp=Z,95µm,22.0s
SCIA State Center 107.44 51 Pdiff Pdif 01 40 53.6 +0.1
baz=255
SHLS Shalkode 107.62 310 eP Pdif 01 40 51.3 -3.1
SHLS e 01 45 20.2
SHLS Shalkode 107.62 310 ePdif Pdif 01 40 51.4 -3.1
baz=310
SHLS ePP PP 01 45 20.2 -2.7
baz=310
CCM Cathedral Cave 107.92 56 Pdiff Pdif 01 40 56.3 +0.6
baz=255
UZB Uzynbulak 107.93 310 eP Pdif 01 40 53.2 -2.6
UZB e 01 45 23.2
UZB Uzynbulak 107.93 310 ePdif Pdif 01 40 53.2 -2.6
baz=310
UZB ePP PP 01 45 23.2 -2.1
baz=310
SATY Saty 108.35 310 eP Pdif 01 40 55.0 -2.6
SATY e 01 45 26.4
SATY Saty 108.35 310 ePdif Pdif 01 40 55.1 -2.6
baz=310
SATY ePP PP 01 45 26.5 -1.8
baz=310
ZHN Zhinishke 108.35 310 ePP PP 01 45 26.8 -1.6
baz=310
OXF Oxford 108.43 60 IAMs_20 IAMs_20 02 21 38.2
comp=Z,88µm,21.0s
OXF Oxford 108.43 60 Pdiff Pdif 01 40 56.0 -2.0
baz=255
PNME Penonome 108.54 88 eP PP 01 45 35.7 +5.7
SPMN Marine on St. 108.55 48 Pdiff Pdif 01 40 56.9 -1.5
baz=256
LPAZ La Paz 108.75 117 PP PP 01 45 30.9 -0.8
comp=Z,4.7nm,1.1s,baz=237,slow=4.5,SNR=4.1
LPAZ PKKPbc **PKKPbc** 01 56 13.5 -0.4
comp=Z,1.4nm,0.8s,baz=26,slow=5.5,SNR=3.6
LPAZ La Paz 108.75 117 eP PKiKP 01 45 15.1 +9.2
LPAZ La Paz 108.75 117 eP PP 01 45 34.5 +2.7
TDK Taldyqorghan 108.81 312 eP Pdif 01 40 57.4 -2.1
TDK e 01 45 29.5

TDK ePPP PPP 01 47 47.2
TDK eSS SS 02 00 47.3 -2.0
TDK Taldyqorghan 108.81 312 ePdif **Pdif 01 40 57.5 -2.1**
baz=312
TDK ePP **PP 01 45 29.6 -1.9**
baz=312
TDK ePPP PPP 01 47 47.2
baz=312
TDK eSS SS 02 00 47.3 -2.0
baz=312
TDK LR LR 02 32 24.9
comp=Z,23µm,21.9s,baz=312
SEM Semipalatinsk 108.82 318 eP **Pdif 01 40 59.1 -0.6**
SEM e 01 45 30.7
SEM Semipalatinsk 108.82 318 ePdif **Pdif 01 40 59.1 -0.6**
baz=318
SEM ePP **PP 01 45 30.8 -0.9**
baz=318
KSH Kashi 109.28 306 Pdif **Pdif 01 41 06.5 +4.6**
KSH PP PP 01 45 44.1 +8.9
KSH S **Sdif 01 53 15.4 +2.8**
KSH SS **SS 02 01 02.1 +5.9**
KSH AMB AMB
comp=Z,6µm,8.2s
KSH LR LR
comp=Z,24µm,25.2s
KSH LR LR
comp=Z,23µm,27.9s
KSH LR LR
comp=Z,56µm,29.9s
MDOK Medeo 109.34 310 *i* P **Pdif 01 40 59.9 -2.2**
MDOK e 01 45 32.3
MDOK eSS SS 02 00 55.0 -1.9
MDOK eSSS SSS 02 05 00.7
MDOK Medeo 109.34 310 ePdif **Pdif 01 40 60.0 -2.2**
baz=310
MDOK ePP **PP 01 45 32.3 -3.2**
baz=310
MDOK eSS SS 02 00 55.1 -1.8
baz=310
MDOK eSSS SSS 02 05 00.7
baz=310
NRIK Noril'sk 109.37 338 Pdiff **Pdif 01 41 01.5 +0.1**
comp=Z,2.3nm,0.3s,baz=82,slow=2.4,SNR=2.6
NRIK PP **PP 01 45 33.4 -1.4**
comp=Z,60nm,1.3s,baz=109,slow=7.2,SNR=11
ITQB Itaqui 109.41 135 eP **PP 01 45 35.7 +0.5**
FOMA Nahampoana Res 109.44 231 IAMs_20 IAMs_20 02 26 03.3
comp=Z,83µm,19.0s
AAA Alma-Ata 109.44 310 ePP **PP 01 45 34.2 -2.0**
baz=310
AAA LR LR 02 33 45.6
comp=Z,22µm,18.7s,baz=310
UPA Univ. de Panam 109.44 88 eP **PP 01 45 37.1 +0.5**
PLAL Pickwick Lake 109.61 59 IAMs_20 IAMs_20 02 22 04.5
comp=Z,73µm,21.0s
POPC Popayan, Colom 109.70 96 eP **PP 01 45 32.6 -6.1**
JFWS Jewell Farm 109.82 51 IAMs_20 IAMs_20 02 24 39.1
comp=Z,88µm,20.0s
JFWS Jewell Farm 109.82 51 Pdiff **Pdif 01 41 02.3 -1.7**
baz=257
KURK Kurchatov 109.90 318 IAMs_20 IAMs_20 02 28 40.6
comp=Z,63µm,21.0s
KURBB Kurchatov Arra 109.94 318 Pdiff **Pdif 01 41 04.3 0.0**
comp=Z,1.3nm,0.9s,baz=97,slow=3.9,SNR=7.1
KURBB PP **PP 01 45 37.3 -2.1**
comp=Z,16nm,0.9s,baz=103,slow=7.0,SNR=12
KURBB PKKPbc **PKKPbc 01 56 09.4 -0.9**
comp=Z,4.1nm,0.8s,baz=280,slow=3.9,SNR=14
HDIL Hopedale 109.99 53 IAMs_20 IAMs_20 02 23 41.8
comp=Z,98µm,22.0s
HDIL Hopedale 109.99 53 Pdiff **Pdif 01 41 03.3 -1.6**
baz=257
LRAL Lakeview Retre 110.00 62 Pdiff **Pdif 01 41 02.7 -2.4**
baz=256
KUU Kurty 110.00 310 eP **Pdif 01 41 03.0 -1.9**
KUU e 01 45 38.5
KUU ePS **PS 01 55 07.5 -1.8**
KUU Kurty 110.00 310 ePdif **Pdif 01 41 03.0 -1.9**
baz=310
KUU ePP **PP 01 45 38.5 -1.6**
baz=310
KUU ePS **PS 01 55 07.5 -1.8**
baz=310
EYMN Ely 110.03 45 IAMs_20 IAMs_20 02 24 49.2
comp=Z,65µm,21.0s
EYMN Ely 110.03 45 Pdiff **Pdif 01 41 04.0 -0.9**
baz=258
WVT Waverly 110.08 58 IAMs_20 IAMs_20 02 22 53.9
comp=Z,100µm,22.0s
WVT Waverly 110.08 58 Pdiff **Pdif 01 41 05.3 -0.1**
baz=256
FLOC Florencia 110.26 97 eP PKiKP 01 45 17.9 +10
PTAC Punta Ardita, 110.38 91 eP **PP 01 45 39.0 -4.5**
PTLC Puerto Leguiza 110.48 99 eP **PP 01 45 49.3 +5.2**
YOTC Yotoco, Valle 110.56 94 eP **PP 01 45 44.2 -0.6**
SOR Soroa 110.68 73 eP **PP 01 45 46.4 +0.9**
UPD2 Meteti 110.69 89 eP PP 01 46 13.8 +28
PLMC San Jos del P 110.96 93 eP **PP 01 45 48.5 +0.8**
AAK Ala-Archa 111.06 309 PP **PP 01 45 49.9 +1.9**
comp=Z,2.9nm,0.3s,baz=106,slow=11,SNR=3.9
CPUP Villa Florida 111.12 132 PP **PP 01 45 42.7 -4.9**
comp=Z,8.4nm,1.1s,baz=214,slow=7.3,SNR=3.0
SGDS Sogindy 111.12 309 eP **Pdif 01 41 07.7 -2.2**
SGDS e 01 45 46.2
SGDS Sogindy 111.12 309 ePdif **Pdif 01 41 07.7 -2.2**
baz=310
SGDS ePP **PP 01 45 46.3 -2.1**
baz=310
COWI Conover 111.25 48 IAMs_20 IAMs_20 02 24 25.6
comp=Z,81µm,21.0s
HQIL Hanson Quary C 111.31 52 IAMs_20 IAMs_20 02 25 25.9
comp=Z,72µm,20.0s
L44A Lake County Fo 111.35 52 IAMs_20 IAMs_20 02 24 12.7
comp=Z,68µm,22.0s
L44A Lake County Fo 111.35 52 Pdiff **Pdif 01 41 08.9 -1.9**
baz=258
SFIN Lafayette 111.59 54 Pdiff **Pdif 01 41 10.0 -2.0**
baz=258
PRAC Prado 111.80 95 eP **PP 01 45 58.3 +4.7**
GUY2C Guyana, Caldas 111.93 94 eP **PP 01 46 01.2 +6.1**
HELC Santa Helena 112.14 92 eP **PP 01 46 03.6 +7.2**
MACC Macarena, Meta 112.14 97 eP **PP 01 45 55.0 -1.0**
TIGA Tifton 112.42 64 Pdiff **Pdif 01 41 12.8 -3.1**
baz=256
NORC Norcasia 112.51 93 eP **PP 01 46 03.1 +4.3**
UREC San Jos de Ur 112.70 91 eP **PP 01 46 04.5 +4.4**
ROSC El Rosal 112.75 94 eP **PP 01 46 01.6 +0.8**
GOGA Godfrey 112.96 62 Pdiff **Pdif 01 41 16.9 -1.4**
baz=257
O48B Farmland 113.02 54 Pdiff **Pdif 01 41 17.0 -1.4**
baz=259
MGV Manicaragua 113.18 75 eP **PP 01 46 01.0 -2.4**
TKL Tuckaleechee C 113.19 60 PKiKP **PKiKP 01 45 11.2 -1.8**
comp=Z,4.3nm,1.0s,baz=235,slow=2.7,SNR=4.4
P49A Miami Univ. Ec 113.22 55 IAMs_20 IAMs_20 02 26 06.5
comp=Z,92µm,21.0s
P49A Miami Univ. Ec 113.22 55 Pdiff **Pdif 01 41 18.6 -0.6**
baz=259
ZARC Zaragoza, Cauc 113.23 91 eP **PP 01 46 06.5 +2.6**
PTBC PUERTO BERRIO 113.26 93 eP **PP 01 46 04.1 0.0**
SPBC San Pablo de B 113.28 94 eP **PP 01 46 00.0 -4.3**
DZA Taraz 113.39 308 ePP **PP 01 46 02.2 -2.4**
baz=308
DWPF Disney Wildern 113.45 68 Pdiff **Pdif 01 41 19.6 -0.9**
baz=256
BRZS Berezniki 113.53 316 eP **Pdif 01 41 18.5 -1.9**
BRZS e 01 46 03.7
BRZS ePS **SP 01 55 40.1 +0.8**
BRZS eSS SS 02 01 50.2 -1.9
BRZS Berezniki 113.53 316 ePdif **Pdif 01 41 18.6 -1.9**
baz=316
BRZS ePP **PP 01 46 03.8 -1.5**
baz=316
BRZS ePS **SP 01 55 40.1 +0.8**
baz=316
BRZS eSS **SS 02 01 50.3 -1.9**
baz=316
TZTN Tazewell 113.55 59 Pdiff **Pdif 01 41 20.5 -0.4**
baz=259
S51A Beattyville 113.72 58 P **PKiKP 01 45 12.8 -1.2**
baz=259
S51A P **PKiKP 01 45 12.8 -1.2**
baz=259
SJCC San Jacinto, C 113.79 89 eP **PP 01 46 14.5 +6.6**
ITAB Concordia 113.95 136 eP **PP 01 46 11.1 +3.3**

KKAR Karatay Array 114.02 308 Pdif **Pdif 01 41 23.9 +1.1**
KKAR Karatay Array 114.02 308 P **Pdif 01 41 23.9 +1.1**
GLMI Grayling 114.17 50 Pdiff **Pdif 01 41 21.6 -1.7**
baz=262
IUG Iuzhnay 114.22 307 ePP **PP 01 46 07.5 -3.0**
baz=307
MTDJ Mount Denham 114.28 79 eP **PP 01 46 09.0 -2.4**
MTDJ Mount Denham 114.28 79 IVMs_BB IVMs_BB 02 02 30.9
comp=Z,10µm,24.3s
MTDJ eP **PP 01 46 09.6 -1.8**
RUSC La Rusia 114.28 94 eP **PP 01 46 11.0 -0.9**
AAM Ann Arbor 114.48 52 IAMs_20 IAMs_20 02 25 59.6
comp=Z,70µm,22.0s
AAM Ann Arbor 114.48 52 Pdiff **Pdif 01 41 23.5 -1.3**
baz=261
PTGC Puerto Gaitan, 114.52 96 eP **PP 01 46 19.6 +6.7**
E46A Sault Ste Mari 114.60 48 P PKPdf 01 45 15.2 -0.1
baz=262
SIV San Ignacio 114.61 121 PP **PP 01 46 11.8 -1.2**
comp=Z,0.8nm,0.4s,baz=229,slow=10,SNR=3.2
ACSO Alum Creek Sta 114.65 55 Pdiff **Pdif 01 41 25.0 -0.6**
baz=261
OCAC Ocana 114.92 91 eP **PP 01 46 21.3 +5.2**
KMSC Kings Mountain 115.05 61 Pdiff **Pdif 01 41 27.6 +0.1**
baz=259
SMRC Santa Marta, M 115.10 88 eP **PP 01 46 17.0 -0.1**
LL1C La Loma 1 Cana 115.16 90 eP **PP 01 46 24.5 +7.0**
P52A Corning 115.20 56 Pdiff **Pdif 01 41 27.9 -0.1**
baz=261
LMGC Las Mercedes 115.28 78 IVMs_BB IVMs_BB 02 02 42.2
comp=N,8µm,22.5s
LMGC eP **PP 01 46 16.5 -1.8**
LMGC IVMs_BB IVMs_BB 02 03 15.5
comp=E,10µm,42.3s
LL6C La Loma 6 Bece 115.49 90 eP **PP 01 46 19.9 0.0**
S54A Dingess, Beckl 115.53 58 PKPdf **PKPdf 01 45 16.3 -1.2**
NHSC New Hope 115.60 63 IAMs_20 IAMs_20 02 26 34.3
comp=Z,55µm,22.0s
NHSC New Hope 115.60 63 Pdiff **Pdif 01 41 28.1 -1.9**
baz=259
TAMC Tame, Arauca 115.68 94 eP PP 01 45 56.9 -24
P53A Whipple 115.74 56 **PKPdf 01 45 15.6 -2.2**
O53A New Philadelph 115.99 55 Pdiff **Pdif 01 41 30.0 -1.5**
baz=262
Q54A Coxs Mills 116.09 56 P **PKPdf 01 45 16.1 -2.3**
baz=261
Q54A P **PKPdf 01 45 16.1 -2.3**
baz=261
BLA Blacksburg 116.14 58 IAMs_20 IAMs_20 02 27 06.1
comp=Z,88µm,22.0s
BLA Blacksburg 116.14 58 Pdiff **Pdif 01 41 30.3 -2.0**
baz=261
N53A Lisbon 116.36 54 P **PKPdf 01 45 17.7 -1.2**
baz=262
N53A P **PKPdf 01 45 17.7 -1.2**
baz=262
PTLB Pontes e Lacer 116.44 122 PKPdf **PKPdf 01 45 18.8 -1.1**
PTLB Pontes e Lacer 116.44 122 eP **PP 01 46 28.6 +2.8**
RCC Rio Carpintero 116.44 78 IVMs_BB IVMs_BB 02 02 59.8
comp=N,9µm,24.3s
RCC eP PP 01 46 17.0 -10
RCC IVMs_BB IVMs_BB 02 03 31.3
comp=E,12µm,41.4s
M53A WI Miller and 116.56 54 IAMs_20 IAMs_20 02 28 00.9
comp=Z,77µm,20.0s
M53A WI Miller and 116.56 54 Pdiff **Pdif 01 41 34.2 +0.1**
baz=263
SAML Samuel 116.65 113 **PKPdf 01 45 19.1 -1.2**
SAML Samuel 116.65 113 PKiKP **PKPdf 01 45 19.1 -1.2**
MCWV Mont Chateau 116.95 56 Pdiff **Pdif 01 41 33.7 -2.1**
baz=262
ERPA Erie 117.15 53 IAMs_20 IAMs_20 02 27 33.5
comp=Z,88µm,22.0s
ERPA Erie 117.15 53 Pdiff **Pdif 01 41 34.7 -2.0**
baz=263
SOCV Socops 117.21 92 eP PP 01 46 14.8 -17
TIJ01 Guaruva-PR 117.28 137 eP **PP 01 46 38.6 +7.2**
URIC Uribia, Colomb 117.34 88 eP **PP 01 46 34.5 +1.7**
MASC Masc 117.82 78 eP **PP 01 46 37.2 +1.1**
POGA Pongola 117.83 219 PKPdf **PKPdf 01 45 21.8 -0.5**
CNNC Cliffs of the 117.84 61 IAMs_20 IAMs_20 02 27 54.4
comp=Z,76µm,22.0s
CNNC Cliffs of the 117.84 61 Pdiff **Pdif 01 41 40.9 +1.1**
baz=261
TULEG Thule 118.29 14 PKPdf **PKPdf 01 45 20.2 -1.4**
TULEG Thule 118.29 14 *i* P **PKPdf 01 45 18.4 -3.2**
PCMB Pacaembu 118.39 132 eP **PP 01 46 41.3 +2.2**
SSPA Standing Stone 118.56 55 **PKPdf 01 45 22.1 -1.1**
SSPA Standing Stone 118.56 55 IAMs_20 IAMs_20 02 28 31.9
comp=Z,78µm,22.0s
SSPA Standing Stone 118.56 55 P **PKPdf 01 45 21.7 -1.4**
baz=264
SSPA Standing Stone 118.56 55 Pdiff **Pdif 01 41 42.9 0.0**
baz=264
L56A Greenwood 118.95 53 P **PKPdf 01 45 22.6 -1.4**
baz=265
L56A P **PKPdf 01 45 22.6 -1.4**
baz=265
SUR Sutherland 119.19 207 PKPdf **PKPdf 01 45 25.0 -0.1**
M57A Sunshine Farm, 119.20 54 P **PKPdf 01 45 23.3 -1.1**
baz=265
M57A P **PKPdf 01 45 23.3 -1.1**
baz=265
SDMD Soldier's Deli 119.22 56 P **PKPdf 01 45 23.3 -1.2**
baz=264
N58A Sunbury 119.47 55 P **PKPdf 01 45 23.2 -1.7**
baz=265
N58A P **PKPdf 01 45 23.2 -1.7**
baz=265
J56A Wolcott 119.56 52 P **PKPdf 01 45 23.5 -1.5**
baz=266
J56A P **PKPdf 01 45 23.5 -1.5**
baz=266
BAUV El Baul 120.05 93 eP **Pdif 01 41 51.5 +1.3**
BAUV El Baul 120.05 93 e 01 46 46.0
BINY Binghamton 120.12 53 **PKPdf 01 45 25.1 -1.1**
BINY IAMs_20 IAMs_20 02 32 05.3
comp=Z,60µm,20.0s
BINY Binghamton 120.12 53 Pdiff **Pdif 01 41 46.5 -3.4**
baz=266
SDDR Presa de Saban 120.17 81 eP **PP 01 46 53.6 +1.1**
SDDR Presa de Saban 120.17 81 eP **PP 01 46 51.9 -0.6**
RCLB Rio Claro- Sao 120.30 136 eP **PKiKP 01 45 28.2 +0.9**
BOSA Boshof 120.33 213 PKP **PKPdf 01 45 26.1 -1.1**
comp=Z,7.4nm,0.8s,baz=149,slow=3.5,SNR=11
BOSA PKKPab **PKKPbc 01 55 35.5 +1.4**
comp=Z,5.3nm,0.8s,baz=21,slow=5.3,SNR=7.3
BOSA Boshof 120.33 213 PKPdf **PKPdf 01 45 26.3 -0.9**
TRIS Tristan da Cun 120.42 175 IAMs_20 IAMs_20 02 30 08.2
comp=Z,53µm,21.0s
WCNY West Carthage 120.48 51 P **PKPdf 01 45 23.4 -3.4**
baz=267,SNR=7.7
PDRB Porto dos Gac 120.55 120 eP **PKiKP 01 45 28.8 +0.8**
BB19B Bebedouro 120.60 134 eP **PKiKP 01 45 29.1 +1.1**
J58A Remsen 120.71 52 P **PKPdf 01 45 25.7 -1.5**
baz=267
J58A P **PKPdf 01 45 25.7 -1.5**
baz=267
NOR Nord 120.81 2 *i* P **PKPdf 01 45 24.1 -2.4**
PARB Paraibuna 120.84 138 eP **PKiKP 01 45 29.4 +1.0**
SOCY Socotra 121.25 271 IAMs_20 IAMs_20 02 45 51.5
comp=Z,47µm,18.0s
LONY Lake Ozonia 121.27 51 IAMs_20 IAMs_20 02 33 09.2
comp=Z,62µm,20.0s
LONY Lake Ozonia 121.27 51 Pdiff **Pdif 01 41 50.6 -4.4**
baz=268
J59A Pieseo 121.29 52 P **PKPdf 01 45 27.1 -1.3**
baz=268
J59A P **PKPdf 01 45 27.1 -1.3**
baz=268
NCB Newcomb 121.51 51 P **PKPdf 01 45 26.4 -2.3**
baz=268,SNR=6.6
PAL Palisades 121.60 55 IAMs_20 IAMs_20 02 34 51.3
comp=Z,58µm,20.0s
PAL Palisades 121.60 55 Pdiff **Pdif 01 41 55.5 -0.9**
baz=266
MACA Manacapuru-AM 121.67 109 eP **PKiKP 01 45 31.2 +1.0**
CLDB Colider 121.73 120 eP **PKiKP 01 45 30.9 +0.6**
ABKAR Akbulak array 121.76 315 PKPdf **PKPdf 01 45 27.7 -1.4**
ACCN Adirondack Com 121.89 52 **PKPdf 01 45 28.2 -1.3**
FRNY Flat Rock 121.99 50 P **PKPdf 01 45 28.0 -1.7**
baz=269,SNR=5.4
WSPT Westport, CT 122.05 55 IAMs_20 IAMs_20 02 31 32.1
comp=Z,46µm,20.0s
ARU Arti 122.05 323 PKP **PKPdf 01 45 27.0 -2.4**
comp=Z,10.0nm,0.6s,baz=116,slow=3.1,SNR=12

ARU PP **PP 01 47 08.1 +4.0**
comp=Z,62nm,1.2s,baz=42,slow=11,SNR=3.6
ARU PKKPbc **PKKPbc 01 55 27.2 -0.7**
comp=Z,3.3nm,0.6s,baz=67,slow=4.7,SNR=3.3
ARU Arti 122.05 323 PKPdf **PKPdf 01 45 27.0 -2.4**
ARU IAMs_20 IAMs_20 02 37 40.0
comp=Z,68µm,22.0s
ARU Arti 122.05 323 *i* PKIKP **PKPdf 01 45 26.8 -2.6**
ARU 01 52 38.7
ARU SP SP 01 56 52.0 -3.7
ARU MLR MLR
comp=Z,62µm,22.0s
MAN01 Angra dos Reis 122.20 139 eP **PKiKP 01 45 32.1 +1.0**
YLE Yale 122.35 55 IAMs_20 IAMs_20 02 32 08.4
comp=Z,60µm,21.0s
MCVT Middlebury Col 122.40 51 P **PKPdf 01 45 28.5 -2.0**
baz=269
VT1 Waterbury 122.58 51 P **PKPdf 01 45 29.7 -1.1**
baz=269
L61B Northampton 122.59 53 P **PKPdf 01 45 29.6 -1.2**
baz=268
L61B Northampton 122.59 53 Pdiff **Pdif 01 41 57.4 -3.5**
baz=268
J61A Chester 122.70 52 P **PKPdf 01 45 29.3 -1.8**
baz=269
J61A P **PKPdf 01 45 29.3 -1.8**
baz=269
GEYT Alibeck 122.81 301 PKP **PKPdf 01 45 30.1 -1.4**
comp=Z,5.7nm,0.7s,baz=125,slow=7.4,SNR=5.4
GYA0B ALIBECK ARRAY 122.81 301 PKPdf **PKPdf 01 45 30.1 -1.4**
QUA2 Belchertown 122.82 53 P **PKPdf 01 45 30.5 -0.9**
baz=268
HNH Hanover 122.90 52 IAMs_20 IAMs_20 02 33 46.5
comp=Z,70µm,20.0s
AKTO Aktyubinsk 122.95 316 PKP **PKPdf 01 45 29.6 -1.7**
comp=Z,8.2nm,0.7s,baz=103,slow=4.9,SNR=16
AKTO PP **PP 01 47 12.7 +2.3**
comp=Z,8.6nm,0.9s,baz=118,slow=3.5,SNR=4.0
AKTO PKKPbc **PKKPab 01 55 21.5 -0.5**
comp=Z,5.3nm,1.0s,baz=288,slow=2.6,SNR=5.8
IPMB Ipameri, GO 122.95 132 eP **PKiKP 01 45 33.4 +0.8**
KBS Kingsbay 122.97 356 **PKPdf 01 45 29.2 -1.4**
KBS Kingsbay 122.97 356 *c i* PKIKP **PKPdf 01 45 30.1 -0.5**
KBS pmax pmax
comp=Z,61nm,1.7s
KBS MLR MLR
comp=Z,32µm,19.0s
KBS Kingsbay 122.97 356 *i* P **PKPdf 01 45 27.4 -3.2**
KBS Kingsbay 122.97 356 eP **PKPdf 01 45 29.6 -1.1**
KBS IVmB_BB 01 45 34.2
comp=Z,644nm,2.5s
KBS ePKPdf **sPKPdf 01 45 37.8 +3.3**
KBS ePP **PP 01 47 08.4 -1.3**
KBS eSS SS 02 03 52.2 -0.4
UPNV Upernavik 123.03 16 eP **PKPdf 01 45 28.9 -1.9**
UPNV IAMs_20 IAMs_20 02 35 15.7
comp=Z,86µm,21.1s
LBTB Lobatse 123.07 216 PKKPab PKKPab 01 55 23.0 -2.5
comp=Z,2.0nm,0.3s,baz=237,slow=14,SNR=11
LBTB Lobatse 123.07 216 PKPdf **PKPdf 01 45 31.6 -1.0**
LBTB Lobatse 123.07 216 PKIKP **PKPdf 01 45 31.6 -1.0**
LBNH Lisbon 123.17 51 P **PKPdf 01 45 31.3 -0.6**
baz=270
LBNH Lisbon 123.17 51 Pdiff **Pdif 01 42 00.3 -3.1**
baz=270
SPA0 Spitsbergen Ar 123.31 354 eP **PKPdf 01 45 29.6 -1.7**
SPA0 IVmBBB 01 45 41.5
comp=Z,786nm,2.0s
SPA0 ePP **PP 01 47 09.4 -2.6**
SPA0 eSS SS 02 04 00.2 +3.2
SPITS Spitsbergen Ar 123.31 354 PKP **PKPdf 01 45 29.0 -2.3**
comp=Z,52nm,0.8s,baz=90,slow=5.0,SNR=27
SPITS PKKPbc **PKKPab 01 55 21.3 +1.8**
comp=Z,1.1nm,0.9s,baz=161,slow=7.9,SNR=12
SPITS Spitsbergen Ar 123.31 354 PKIKP **PKPdf 01 45 29.0 -2.3**
HRV Adam Dziewonsk 123.42 53 Pdiff **Pdif 01 42 05.1 +0.6**
baz=269
BRYW Bryant College 123.42 54 IAMs_20 IAMs_20 02 31 28.4
comp=Z,82µm,22.0s
I62A Tamworth 123.59 52 P **PKPdf 01 45 31.1 -1.7**
baz=270
I62A P **PKPdf 01 45 31.1 -1.7**
baz=270
H62A Milan 123.72 51 P **PKPdf 01 45 31.6 -1.4**
baz=271,SNR=6.3
H62A P **PKPdf 01 45 31.6 -1.4**
baz=271,SNR=6.3
DUB01 Friburgo-RJ 123.75 140 eP **PKPdf 01 45 34.0 +0.2**
HOPEN Hopen 123.77 351 ePP **PP 01 47 15.1 +0.1**
HOPEN eSS SS 02 04 05.5 +2.9
PMNB Patos De Minas 123.77 133 eP **PKiKP 01 45 35.2 +0.9**
I63A Otisfield 124.14 51 P **PKPdf 01 45 33.2 -0.6**
baz=271
I63A P **PKPdf 01 45 33.2 -0.6**
baz=271
G62A West of Eustis 124.15 50 P **PKPdf 01 45 32.9 -0.9**
baz=272,SNR=8.1
G62A P **PKPdf 01 45 32.9 -0.9**
baz=272,SNR=8.1
NPGB Novo Progresso 124.22 116 eP **PKiKP 01 45 35.5 +0.3**
BOAV Boa Vista 124.36 103 eP **PKiKP 01 45 36.4 +1.0**
CAM01 Campos-RJ 124.37 140 eP **PKiKP 01 45 37.3 +2.1**
HSPB Hornsund (broa 124.46 354 ePKP **PKPdf 01 45 32.7 -0.7**
HSPB eSS SS 02 04 22.1 +11
HSPB eL L 02 30 46.9
comp=Z,49µm,25.8s
HSPB Hornsund (broa 124.46 354 eP **PKPdf 01 45 31.9 -1.6**
HSPB IVmB_BB 01 45 34.8
comp=Z,314nm,0.9s
NUUG Nuugaatsiaq 124.49 16 *i* P **PKPdf 01 45 33.3 -0.3**
NUUG IAMs_20 IAMs_20 02 18 48.2
comp=Z,263µm,76.4s
SNDB Serra Nova Dou 124.61 124 eP **PKiKP 01 45 36.4 +0.5**
SJG San Juan 124.64 83 PKP **PKPdf 01 45 34.0 -1.5**
comp=Z,21nm,0.7s,baz=20,slow=8.8,SNR=8.1
SJG San Juan 124.64 83 **PKPdf 01 45 33.9 -1.6**
BDFB Brasilia 124.67 130 PKP **PKPdf 01 45 34.0 -1.8**
comp=Z,9.3nm,0.8s,baz=225,slow=3.8,SNR=7.9
BDFB Brasilia 124.67 130 PKPdf **PKPdf 01 45 35.7 -0.2**
BDFB Brasilia 124.67 130 eP **PKiKP 01 45 36.7 +0.6**
WVL Waterville 124.79 51 P **PKPdf 01 45 33.6 -1.4**
baz=272
E62A Clayton Lake 124.80 48 P **PKPdf 01 45 34.6 -0.4**
baz=273
E62A P **PKPdf 01 45 34.6 -0.4**
baz=273
PKME Peaks-Kenny Pk 125.03 50 IAMs_20 IAMs_20 02 44 25.4
comp=Z,39µm,19.0s
PKME Peaks-Kenny Pk 125.03 50 P **PKPdf 01 45 33.7 -1.7**
baz=272,SNR=8.9
PKME Peaks-Kenny Pk 125.03 50 Pdiff **Pdif 01 42 13.7 +2.1**
baz=272
F63A Nahmakanta, Br 125.14 49 P **PKPdf 01 45 34.8 -0.8**
baz=273,SNR=9.8
F63A P **PKPdf 01 45 34.8 -0.8**
baz=273,SNR=9.8
ITTB Itaituba 125.34 113 eP **PKiKP 01 45 37.3 -0.1**
SCHQ Schefferville 125.48 38 PKP **PKPdf 01 45 34.3 -1.8**
comp=Z,18nm,0.9s,baz=355,slow=1.5,SNR=13
DAG Danmarks Havn 125.49 3 *i* P **PKPdf 01 45 32.8 -2.7**
DAG IAMs_20 IAMs_20 02 28 29.8
comp=Z,61µm,27.4s
E63A Oxbow 125.57 48 P **PKPdf 01 45 35.6 -0.9**
baz=274,SNR=5.3
E63A P **PKPdf 01 45 35.6 -0.9**
baz=274,SNR=5.3
F64A Sherman 125.66 49 P **PKPdf 01 45 35.6 -1.0**
baz=274,SNR=7.0
F64A P **PKPdf 01 45 35.6 -1.0**
baz=274,SNR=7.0
DIAM Diamantina, MG 125.77 136 eP **PKiKP 01 45 39.4 +1.1**
G65A Princeton 126.25 50 P **PKPdf 01 45 35.8 -2.0**
baz=274,SNR=8.1
G65A P **PKPdf 01 45 35.8 -2.0**
baz=274,SNR=8.1
BJO1 Bjornoya 126.28 352 ePP **PP 01 47 30.8 -1.0**
BJO1 eSS SS 02 04 43.3 +9.0
EMMW East Machias 126.35 50 IAMs_20 IAMs_20 02 34 03.6
comp=Z,64µm,20.0s
KIRV Kirov 126.42 327 PKP **PKPdf 01 45 36.0 -1.7**
comp=Z,10nm,0.6s,baz=122,slow=0.8,SNR=13
KIRV PP **PP 01 47 34.9 +1.6**
comp=Z,47nm,1.1s,baz=62,slow=2.1,SNR=5.7
KIRV Kirov 126.42 327 *d i* PKIKP **PKPdf 01 45 36.3 -1.3**
ILULI Ilulissat 126.44 18 *i* P **PKPdf 01 45 36.7 -0.8**
ILULI IAMs_20 IAMs_20 02 35 14.2

comp=Z,60µm,22.1s
MC01 Montes Claros 126.74 134 *e*P **PKiKP** **01 45 42.5 +2.3**
TRN Trinidad (W) 126.77 94 *e*P **Pdif** **01 42 24.6 +4.5**
GRGR Grenville 127.03 92 *e*P **Pdif** **01 42 24.8 +3.6**
SJMB Sao Joao De Ma 127.04 138 *e*P **PKiKP** **01 45 43.0 +2.4**
RIB01 Linhares ES 127.05 139 *e*P **PKiKP** **01 45 46.4 +5.7**
PRGR Permogore 127.16 332 *e*PKIKP **PKPdf** **01 45 37.7 -1.3**
SMRT St. Maarten 127.45 84 *e*P **Pdif** **01 42 32.0 +9.0**
JANB Januaria 127.66 132 *e*P **PKiKP** **01 45 43.6 +1.6**
TOSP Speyside 127.79 93 *e* **PKiKP** **01 45 42.2 +0.1**
DBG Daneborg 127.80 5 *i*P **PKPdf** **01 45 38.4 -1.5**
DBG IAMs_20 IAMs_20 02 33 45.1
comp=Z,44µm,23.3s
MALB Monte Alegre 127.89 111 *e*P **PKiKP** **01 45 43.4 +0.9**
MLYT Lee's Yard 127.91 86 *e*P **Pdif** **01 42 28.8 +3.8**
SFJD Kangerlussuaq 127.92 20 PKPdf **PKPdf** **01 45 39.3 -1.0**
SFJD Kangerlussuaq 127.92 20 IAMs_20 IAMs_20 02 43 58.1
comp=Z,46µm,19.0s
SFJD Kangerlussuaq 127.92 20 PKIKP **PKPdf** **01 45 39.3 -1.0**
SFJD MLR MLR
comp=Z,46µm,19.0s
SFJD Kangerlussuaq 127.92 20 *i*P **PKPdf** **01 45 38.6 -1.7**
SFJD IAMs_20 IAMs_20 02 33 27.7
comp=Z,68µm,22.5s
LVZ Lovozero 127.98 341 PKPdf **PKPdf** **01 45 40.4 -0.1**
LVZ IAMs_20 IAMs_20 02 42 42.9
comp=Z,51µm,22.0s
LVZ Lovozero 127.98 341 ⇓*i*PKIKP **PKPdf** **01 45 39.2 -1.3**
LVZ pmax pmax
comp=Z,50nm,1.7s
TDBA Terre de Bas, 128.18 87 *e*P **Pdif** **01 42 31.2 +4.9**
SLBI Saint Lucia, B 128.26 90 *e*P **Pdif** **01 42 43.0 +16**
DSLB Salisbury 128.26 88 *e*P **Pdif** **01 42 25.0 -1.6**
FDF Fort de France 128.31 89 *e*P **Pdif** **01 42 33.9 +7.0**
BIM Bigot 128.32 89 *e*P **Pdif** **01 42 35.6 +8.7**
NAN01 Guarapari, ES 128.34 138 *e*P **PKiKP** **01 45 44.2 +1.0**
ANBD Bethesda, Anti 128.39 86 *e*P **Pdif** **01 42 27.7 +0.5**
MPOM Morne Pois Mar 128.49 89 *e*P **Pdif** **01 42 30.3 +2.7**
ABD La Joyeuse, An 128.49 87 *e*P **Pdif** **01 42 28.6 +1.0**
ANWB Willy Bob 128.54 85 *e*P **Pdif** **01 42 28.3 +0.5**
MAGL Barre de l'ile 128.54 87 *e*P **Pdif** **01 42 30.7 +2.9**
APA Apatity 128.56 341 ⇓*i*PKIKP **PKPdf** **01 45 37.3 -4.2**
APA *i* 01 47 44.0
APA *i* 01 52 40.0
APA *i* PPS PPS 01 57 48.0
APA pmax pmax
comp=Z,17nm,1.2s
KEV Kevo 128.70 346 PKPdf **PKPdf** **01 45 41.3 -0.4**
KEV IAMs_20 IAMs_20 02 43 20.1
comp=Z,61µm,22.0s
KEV Kevo 128.70 346 PKIKP **PKPdf** **01 45 41.3 -0.4**
KEV MLR MLR
comp=Z,61µm,22.0s
HAMF Hammerfest 128.73 347 *e*P **PKPdf** **01 45 40.4 -1.3**
HAMF IVmBBB 01 45 51.4
comp=Z,759nm,2.2s
HAMF *e*PP **PP** **01 47 45.3 -2.7**
HAMF *e*SS SS 02 05 03.4 -1.3
BELG Belogornoye 129.07 320*c* *i*PKIKP **PKPdf** **01 45 40.7 -2.2**
BELG MLR MLR
comp=Z,6µm,21.0s
SDBA SAO DESIDERIO 129.07 129 *e*P **PKiKP** **01 45 47.9 +3.0**
NUUK Nuuk 129.14 23 *i*P **PKPdf** **01 45 40.3 -2.4**
NUUK IAMs_20 IAMs_20 01 49 27.7
comp=Z,6µm,12.3s
ARA0 ARCESS Array S 129.21 346 *e*P **PKPdf** **01 45 41.9 -0.9**
ARA0 IVmBBB 01 45 46.3
comp=Z,593nm,1.2s
ARCES ARCESS Array B 129.21 346 PKP **PKPdf** **01 45 40.6 -2.1**
comp=Z,27nm,0.8s,baz=62,slow=1.0,SNR=44
ARCES PP **PP** **01 47 53.3 +2.1**
comp=Z,16nm,1.2s,baz=64,slow=2.1,SNR=1.6
PRPB Parauapebas 129.25 119 *e*P **PKiKP** **01 45 45.5 +0.2**
BBGH Gun Hill 129.29 91 *e*P **Pdif** **01 42 46.3 +15**
BBSP Saint Philip 129.37 91 *e*P Pdif 01 42 54.7 +23
SMTB Santa Maria do 129.39 124 *e*P **PKiKP** **01 45 46.0 +0.5**
GUA01 Guaratinga, BA 129.49 138 *e*P **PKiKP** **01 45 46.0 +0.4**
ICESG Greenland Ices 129.51 15 *i*P **PKPdf** **01 45 42.0 -1.8**
KIBK Kibwezi 129.57 246 PKPdf **PKPdf** **01 45 44.4 -0.9**
KIBK IAMs_20 IAMs_20 02 38 00.8
comp=Z,59µm,22.0s
DY2G Dye2 129.60 19 *i*P **PKPdf** **01 45 41.5 -2.4**
DY2G IAMs_20 IAMs_20 02 34 37.0
comp=Z,70µm,23.6s
KLMR Klimovskoe 130.16 332 *e*PKIKP **PKPdf** **01 45 41.6 -3.1**
KLMR *e* 01 47 56.3
KLMR *e*SS SS 02 05 26.2 +3.2
KLMR *e*SSS SSS 02 10 13.6
KLMR pmax pmax
comp=Z,93nm,1.4s
KLMR Klimovskoe 130.16 332 *e*PKPdf **PKPdf** **01 45 41.7 -3.0**
KLMR AMP 01 45 49.7
comp=Z,93nm,1.4s
KLMR *e*PP **PP** **01 47 56.3 -1.4**
KLMR *e*SKKPbc SKKPbc 01 58 45.8 -5.1
KLMR *e*PKKS 01 59 18.8
KLMR *e*PKKS 01 59 18.8
KLMR *e*SS **SS** **02 05 26.3 +3.3**
KLMR *e*SS **SS** **02 05 26.3 +3.3**
KLMR *e*SSS SSS 02 10 13.7
KLMR *e*SSS SSS 02 10 13.7
KLMR LQ LQ 02 27 51.9
KLMR LQ LQ 02 27 51.9
KLMR LR LR 02 34 34.8
KLMR AMP 02 36 30.4
comp=Z,61µm,24.8s
JETT Jettan, Norway 130.27 348 *e*P **PKPdf** **01 45 43.2 -1.6**
JETT IVmBBB 01 45 48.6
comp=Z,730nm,4.7s
JETT IVmB_BB 01 45 50.6
comp=Z,541nm,1.5s
JETT *e*PP **PP** **01 47 57.6 -0.5**
JETT *e*SS SS 02 05 33.6 +10
TRO Tromso 130.49 348 *e*P **PKPdf** **01 45 43.0 -2.2**
TRO IVmB_BB 01 45 46.9
comp=Z,829nm,1.7s
TRO *e*PP **PP** **01 47 57.0 -2.4**
TRO *e*SS SS 02 05 26.2 -0.1
MCPB Macapa, AP 130.54 111 *e*P **PKiKP** **01 45 48.8 +0.9**
CMC01 Camacan, BA 130.59 137 *e*P **PKiKP** **01 45 49.1 +1.2**
MAK Makhachkala 130.83 308 *e*P **Pdif** **01 42 30.3 -7.1**
MAK *i* 01 45 42.8
MAK *e*SS SS 02 05 32.8 +0.1
MAK *e*SSS SSS 02 10 23.9
MAK pmax pmax
comp=Z,102nm,1.0s
KMBO Kilima Mbogo 130.88 247 PKP **PKPdf** **01 45 47.7 -0.2**
comp=Z,4.8nm,0.8s,baz=70,slow=8.0,SNR=7.6
KMBO PP **PP** **01 48 09.3 +5.5**
comp=Z,5.9nm,1.2s,baz=112,slow=10,SNR=1.5
KMBO Kilima Mbogo 130.88 247 PKPdf **PKPdf** **01 45 46.2 -1.7**
KMBO Kilima Mbogo 130.88 247 IAMs_20 IAMs_20 02 41 17.7
comp=Z,55µm,18.0s
KMBO Kilima Mbogo 130.88 247 ⇑*i*PKIKP **PKPdf** **01 45 47.2 -0.7**
KMBO Kilima Mbogo 130.88 247 *e*P **PKiKP** **01 45 49.4 +0.6**
ATD Arta Tunnel 131.32 266 IAMs_20 IAMs_20 02 38 13.9
comp=Z,69µm,20.0s
ATD Arta Tunnel 131.32 266 *e*P **PKiKP** **01 45 50.6 +1.2**
ATD Arta Tunnel 131.32 266 ⇓*e*P PKiKP 01 46 02.3 +13
JMIC Jan Mayen 131.61 1 *e*P **PKPdf** **01 45 47.4 +0.2**
JMIC IVmB_BB 01 45 55.4
comp=Z,1µm,2.5s
GDU01 Guandu, BA 131.78 135 *e*P **PKiKP** **01 45 51.5 +1.2**
RAYN Ar Rayn 131.94 282 **PKPdf** **01 45 47.3 -2.0**
RAYN Ar Rayn 131.94 282 IAMs_20 IAMs_20 02 41 11.5
comp=Z,58µm,21.0s
RAYN Ar Rayn 131.94 282 PKIKP **PKPdf** **01 45 47.3 -2.0**
RAYN MLR MLR
comp=Z,58µm,21.0s
TSUM Tsumeb 132.00 212 PKPdf **PKPdf** **01 45 47.4 -2.3**
GROC Groznyy 132.04 308 *i* PKIKP **PKPdf** **01 45 48.9 0.0**
GROC *e* 01 48 14.1
GROC *e* 01 52 57.8
GROC pmax pmax
comp=Z,19nm,0.5s
IVI Ivigtut 132.17 25 *i*P **PKPdf** **01 45 47.5 -1.0**
IVI IAMs_20 IAMs_20 02 35 03.8
comp=Z,70µm,24.1s
STEI Steigen 132.64 349 *e*P **PKPdf** **01 45 47.1 -2.2**
STEI IVmBBB 01 45 49.6
comp=Z,699nm,1.6s
STEI *e*SS SS 02 06 01.1 +8.5
LOF Lofoten 132.75 350 *e*P **PKPdf** **01 45 48.6 -0.9**
LOF IVmBBB 01 45 49.5
comp=Z,659nm,1.5s
LOF *e*PP **PP** **01 48 12.2 -1.7**
LOF *e*SS SS 02 06 04.0 +10
TMAB Tom-Au,PA,Br 132.82 116 *e*P **PKiKP** **01 45 53.6 +1.2**
VRH Novokhopyorsk 132.92 320 *i* PKIKP **PKPdf** **01 45 49.1 -1.2**
VRH *e* 01 48 16.1
VRH *e*SS SS 02 06 00.3 +2.8
VRH *e*SSS SSS 02 10 49.5
VRH pmax pmax
comp=Z,20nm,1.3s
VRH MLR MLR
comp=Z,44µm,21.0s
FAUS Fauske 133.12 348 *e*P **PKPdf** **01 45 46.6 -3.6**
FAUS IVmBBB 01 45 50.6
comp=Z,821nm,2.6s
FAUS *e*PP **PP** **01 48 14.6 -1.7**
NRS Narsarsuaq 133.27 24 IAMs_20 IAMs_20 02 42 18.9
comp=Z,64µm,21.0s
NRS Narsarsuaq 133.27 24 *i*P **PKPdf** **01 45 49.5 -1.1**
NRS IAMs_20 IAMs_20 02 38 50.4
comp=Z,69µm,22.0s
MOS Moscow 133.44 327 *i* PKIKP **PKPdf** **01 45 48.4 -2.7**
MOS *e* 01 48 15.0
MOS *e*PPS PPS 02 00 15.8
MOS *e*SS SS 02 05 57.7 -5.5
MOS *e*SSS SSS 02 10 54.9
MOS MLR MLR
comp=Z,39µm,21.0s
ZEI Tsey 133.48 308 *i* PKIKP **PKiKP** **01 45 58.9 +5.8**
ZEI pmax pmax
comp=Z,12nm,1.0s
ANKE Ethiopia-Afar 133.49 262 *e*P **PKPdf** **01 45 52.4 -0.6**
ANKE Ethiopia-Afar 133.49 262 *e*P PKiKP 01 46 07.3 +13
GOF Gofitskoye 133.68 311⇑*e*PKIKP **PKPdf** **01 45 52.5 +0.6**
KBZ Khabaz 134.04 310 PKP **PKPdf** **01 45 49.8 -2.8**
comp=Z,0.8nm,0.4s,baz=3.5,slow=2.0,SNR=4.3
KBZ PP **PP** **01 48 22.5 -0.8**
comp=Z,22nm,1.0s,baz=151,slow=2.2,SNR=7.6
LPSR Galich'ya Gora 134.05 322 *i* PKIKP **PKPdf** **01 45 51.5 -0.8**
LPSR *e* 01 48 20.8
LPSR *e*SS SS 02 06 04.1 -6.8
LPSR *e*SSS SSS 02 11 00.9
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR MLR MLR
comp=Z,25µm,22.0s
KIV Kislovodsk 134.15 310 ⇓P **PKiKP** **01 45 59.0 +4.7**
KIV Kislovodsk 134.15 310 *i* PKIKP **PKPdf** **01 45 53.6 +0.6**
KIV *e* 01 48 23.1
KIV *e*PPP PPP 01 51 18.6
KIV *e*PS **PS** **01 58 42.8 -1.8**
KIV *e*SS SS 02 06 14.4 +1.2
KIV *e*SSS SSS 02 11 13.7
AAE Adis Abeba 134.16 260 *e*P **PKPdf** **01 45 53.5 -0.6**
AAE Adis Abeba 134.16 260 *e*P PKiKP 01 46 08.8 +13
FURI Furi 134.18 260 PKPdf **PKPdf** **01 45 52.8 -1.4**
FURI Furi 134.18 260 *e*P **PKPdf** **01 45 54.1 -0.1**
FURI Furi 134.18 260 *e*P PKiKP 01 46 08.9 +13
VORR Voronezh 134.24 321 *e*PKIKP **PKPdf** **01 45 50.0 -2.7**
VORR *e* 01 48 24.0
VORR pmax pmax
comp=Z,30nm,0.4s
OBN Obninsk 134.26 326 PKPdf **PKPdf** **01 45 52.7 +0.1**
OBN IAMs_20 IAMs_20 02 47 00.3
comp=Z,53µm,21.0s
OBN Obninsk 134.26 326*c* *i*PKIKP **PKPdf** **01 45 52.5 -0.1**
OBN *i* 01 48 22.5
OBN *i* SS SS 02 06 17.0 +3.9
OBN pmax pmax
comp=Z,24nm,1.2s
OBN pmax pmax
comp=Z,748nm,5.6s
KONS Konsvik 134.30 349 *e*P **PKPdf** **01 45 49.1 -3.2**
KONS IVmB_BB 01 45 55.3
comp=Z,1µm,4.0s
MOR8 Moi Rana 134.34 348 *e*P **PKPdf** **01 45 51.8 -0.7**
MOR8 *e*SKPdf **SKPbc** **01 49 19.1 -2.8**
VSR Storozhevoye 134.43 321 *i* PKIKP **PKPdf** **01 45 52.9 -0.2**
VSR *e* 01 48 22.5
VSR *e*SSS SSS 02 11 10.4
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR MLR MLR
comp=Z,53µm,23.0s
LODK Lodwar 134.79 251 IAMs_20 IAMs_20 02 42 10.5
comp=Z,44µm,19.0s
LODK Lodwar 134.79 251 *e*P **PKPdf** **01 45 51.8 -3.3**
NBLA Lagarto - SE 134.97 135 *e*P **PKiKP** **01 45 56.9 +0.1**
FINES FINESS Array B 135.04 338 PKhKP PKPpre 01 45 39.5
comp=Z,1.3nm,0.5s,baz=50,slow=2.7,SNR=7.3
FINES PKP **PKPdf** **01 45 52.8 -1.1**
comp=Z,11nm,0.6s,baz=98,slow=2.8,SNR=16
FINES PP **PP** **01 48 26.3 -2.4**
comp=Z,7.1nm,0.8s,baz=61,slow=7.0,SNR=3.3
BCA Borcka 135.37 307 ⇓P **PKPdf** **01 45 54.2 -1.1**
ROSB Rosrio 135.75 120 *e*P **PKiKP** **01 45 58.7 +0.3**
NSS Namsos 136.28 348 *e*P PKPdf 01 45 45.0 -11
NSS IVmB_BB 01 45 58.9
comp=Z,1µm,3.8s
NSS *e*PP **PP** **01 48 38.9 +2.5**
NSS *e*SKPdf **SKPdf** **01 49 30.4 -0.6**
SOC Sochi 136.33 310*ce*P **Pdif** **01 43 00.0 -1.9**
SOC *i* 01 45 56.8
SOC *e* 01 48 36.7
SOC *e* 01 52 59.9
SOC *e*PS **PS** **01 59 05.6 +2.7**
SOC *e*SS SS 02 06 38.4 -0.7
SOC *e*SSS SSS 02 11 40.6
SOC pmax pmax
comp=Z,21nm,1.1s
MARD Mardin 136.56 301 PKPdf **PKPdf** **01 45 56.5 -1.3**
MBAR Mbarara 136.63 243 PKPdf **PKPdf** **01 45 57.3 -1.3**
MBAR Mbarara 136.63 243 PKIKP **PKPdf** **01 45 57.3 -1.3**
MBAR Mbarara 136.63 243 *e*P **PKPdf** **01 45 51.2 -7.4**
ANN Anapa 137.61 312 *i* PKIKP **PKPdf** **01 45 59.3 +0.1**
ANN *e* 01 48 50.0
ANN *e* 01 53 09.9
ANN pmax pmax
comp=Z,47nm,1.3s
ANN MLR MLR
comp=N,79µm,26.0s
ANN MLR MLR
comp=Z,81µm,25.0s
ANN MLR MLR
comp=E,19µm,23.0s
TBLU Trondheim 137.77 348 *e*P **PKPdf** **01 45 55.4 -3.6**
MNK Minsk 138.84 330 *i* PKIKP **PKPdf** **01 45 54.6 -6.6**
MNK *i*SS SS 02 07 08.5 +0.8
MNK *i*SSS SSS 02 12 20.9
MNK pmax pmax
comp=E,1.0nm,0.5s
MNK pmax pmax
comp=Z,24nm,0.8s
MNK pmax pmax
comp=N,9.0nm,0.9s
MNK MLR MLR
comp=Z,48µm,24.0s
MNK MLR MLR
comp=E,5µm,23.0s
MNK Minsk 138.84 330 *i* PKP **PKPdf** **01 45 54.6 -6.6**
comp=E,1.0nm,0.5s
MNK *i* PKP **PKPdf** **01 45 54.6 -6.6**
comp=N,9.0nm,0.8s
MNK *i* PKP **PKPdf** **01 45 54.6 -6.6**
comp=Z,24nm,0.8s,baz=233
MNK *i* PP PP 01 48 44.3 -8.4
MNK *i* PPP PPP 01 51 48.0
MNK *i* SKS SKSdf 01 52 51.3 -20
MNK *i* SKKS **SKKSdf** **02 02 36.7 -7.8**
MNK *i*SS **SS** **02 07 08.5 +0.9**
MNK *i* SSS SSS 02 12 21.0
MNK *i* LR LR 02 41 29.2
MNK *i* LRM MLR 02 46 43.1
comp=Z,48µm,24.4s
MNK *i* LRM MLR 02 46 49.4
comp=E,5µm,22.6s
MNK *i* LRM MLR 02 47 08.4
comp=N,32nm,24.4s
MOL Molde 138.87 350 *e*P PKPpre 01 45 51.6
ISAL Salakas 138.98 332 *e*P **PKPdf** **01 45 54.7 -6.7**
IIGN Ignalina 139.07 331 *e*P PKPpre 01 45 55.0
DOMB Dombas 139.10 349 IVmBBB 01 46 03.5
comp=Z,798nm,2.4s
DOMB *e*P PKPpre 01 45 52.6
NACGM Naroch 139.10 331 *e*PKP PKPpre 01 45 55.5
comp=Z,53nm,0.9s,baz=51
AKN Aaknes 139.33 350 *e*P **PKPdf** **01 46 00.2 -1.7**
AKN IVmB_BB 01 46 03.0
comp=Z,1µm,2.4s
NC303 NORSAR Array S 139.38 346 IVmBBB 01 46 03.8
comp=Z,624nm,1.1s
NC303 *e*P PKPpre 01 45 55.9
NB2 NORSAR Subarra 139.58 346 PKPdf PKPpre 01 45 52.7
comp=Z,92nm,1.7s,baz=27,slow=1.8
NB2 NORSAR Subarra 139.58 346 PKPdf PKPpre 01 45 52.7
baz=27,slow=1.8
NOA NORSAR Array B 139.58 346 PKhKP PKPpre 01 45 50.7
comp=Z,2.2nm,0.7s,baz=217,slow=18,SNR=24
NOA PP **PP** **01 48 55.6 -1.4**
comp=Z,13nm,1.1s,baz=26,slow=6.0,SNR=11
NB000 NORSAR Array S 139.69 347 **PKPdf** **01 46 01.0 -1.6**
HFS Hagfors 139.80 344 PP **PP** **01 48 56.4 -1.9**
comp=Z,28nm,1.1s,baz=132,slow=8.7,SNR=6.3
SIM Simferopol' 139.80 314 *i* PKHKP PKPpre 01 45 54.9
SIM pmax pmax
comp=Z,17nm,1.4s
SIM pmax pmax
comp=Z,4µm,10.4s
PABE Paberze 139.94 333 IAMs_20 IAMs_20 02 45 43.1
comp=Z,66µm,22.0s
RCBR Riachuelo 139.99 132 PKPdf **PKPdf** **01 46 01.5 -3.1**
RCBR Riachuelo 139.99 132 IAMs_20 IAMs_20 02 40 37.4
comp=Z,68µm,22.0s
RCBR Riachuelo 139.99 132 PKIKP **PKPdf** **01 46 01.5 -3.1**
RCBR Riachuelo 139.99 132 *e*P **PKiKP** **01 46 06.5 -0.6**
ASF Jabal al Asfar 140.14 294 PP **PP** **01 48 59.5 -2.6**
comp=Z,7.3nm,1.0s,baz=121,slow=5.9,SNR=3.8
FOO Floro 140.18 351 *e*PP **PP** **01 48 57.2 -3.2**
FOO *e*P PKPpre 01 45 55.6
AKASG Malin Array Be 140.29 324 PKhKP PKPpre 01 45 53.9
comp=Z,7.4nm,0.7s,baz=51,slow=4.1,SNR=15
AKASG PP **PP** **01 48 54.9 -7.0**
comp=Z,0.7nm,0.5s,baz=229,slow=28,SNR=3.0
AKBB Malin Array Si 140.29 324 **PKPdf** **01 46 02.5 -1.4**
AKBB Malin Array Si 140.29 324 PKIKP **PKPdf** **01 46 02.5 -1.4**
HYA Hoyanger 140.42 350 *e*P **PKPdf** **01 46 01.2 -2.6**
SKAR Skarslia 140.50 348 *e*PP **PP** **01 49 01.0 -1.6**
SKAR *e*P PKPpre 01 45 57.5
OSL Oslo 140.68 346 *e*PP **PP** **01 49 01.7 -1.9**
OSL *e*P PKPpre 01 45 57.7
OSL *e*PKSdf **PKSdf** **01 49 43.6 +3.7**
SUE Sulen 140.74 351 *e*PP PP 01 49 15.5 +12
KONO Kongsberg 141.19 347 PKPpre 01 45 58.8
KONO Kongsberg 141.19 347 ⇓PKHKP PKPpre 01 45 58.9
KONO Kongsberg 141.19 347 IVmBBB 01 46 00.1
comp=Z,784nm,1.9s
KONO *e*P PKPpre 01 45 58.6
KONO *e*PP **PP** **01 49 06.0 -0.7**
KONO *e*SS SS 02 07 40.4 +6.0
ASK Askoy 141.22 350 *e*P PKPpre 01 46 01.3
BER Bergen 141.29 350 *e*PP **PP** **01 49 07.1 -0.2**
BER *e*P PKPpre 01 45 58.4
GHAJ Ghor Haditha 141.31 292 IAMs_20 IAMs_20 02 49 48.5
comp=Z,46µm,20.0s
ODD1 Odda 141.53 349 *e*P PKPpre 01 46 01.2
SHEL Horse Pasture 141.63 182 IAMs_20 IAMs_20 02 49 16.4
comp=Z,50µm,18.0s
BRTR Keskin Array B 141.67 306 PKhKP PKPpre 01 46 00.9
comp=Z,3.5nm,0.6s,baz=120,slow=4.3,SNR=16
BRTR PP **PP** **01 49 10.8 -0.3**
comp=Z,6.9nm,1.0s,baz=90,slow=6.1,SNR=3.8
EIL Elat 141.88 290 PKhKP PKPpre 01 46 02.9
comp=Z,6.6nm,0.9s,baz=87,slow=4.1,SNR=3.2
EIL PP **PP** **01 49 09.5 -3.2**
comp=Z,16nm,1.0s,baz=68,slow=5.4,SNR=3.5
BLS5 Blasjo 142.02 349 *e*SS SS 02 07 55.5 +12
BLS5 *e*P PKPpre 01 46 02.4
SORM Soroca 142.09 321 ⇑P PKPpre 01 46 01.4
SORM Soroca 142.09 321 ⇑PKHKP PKPpre 01 46 01.4
ANTO Ankara 142.26 306 ⇓P PKPpre 01 46 02.9
ANTO Ankara 142.26 306 ⇓PKIKP PKPpre 01 46 02.9
KIS Kishinev 142.36 319 *e*PKP PKPpre 01 46 02.0
comp=Z,450nm,6.0s
KIS Kishinev 142.36 319 *e*PP PP 01 49 24.0 +9.3
KIS *e*L L 02 46 09.0
KIS LRM MLR 02 50 26.0
comp=Z,9µm,21.0s
KIS Kishinev 142.36 319 *e*PKHKP PKPpre 01 46 02.0
KIS pmax pmax
comp=Z,450nm,6.0s
KIS MLR MLR
comp=E,7µm,21.0s
KIS MLR MLR
comp=Z,9µm,21.0s
MILM Milestii Mici 142.40 319 *e*PKP PKPpre 01 46 02.0
comp=Z,900nm,5.0s
MILM Milestii Mici 142.40 319 *e*PP PP 01 49 16.0 +1.1
MILM *e*L L 02 30 32.0
comp=Z,13µm,29.0s
MILM LRM MLR 02 50 29.0
comp=Z,27µm,22.0s
MILM Milestii Mici 142.40 319 ⇑P PKPpre 01 46 02.6
MILM Milestii Mici 142.40 319 *e*PKHKP PKPpre 01 46 02.0
MILM *e* 01 49 16.0
MILM pmax pmax
comp=Z,900nm,5.0s
MILM MLR MLR
comp=E,18µm,22.0s
MILM MLR MLR
comp=Z,27µm,22.0s
KMY Karmoy 142.42 350 *e*P **PKPdf** **01 46 05.3 -2.1**
HOMB Homborsund 142.68 347 *e*P PKPpre 01 46 02.8
SNART Snartemo 142.89 348 *e*P **PKPdf** **01 46 05.3 -3.1**
IAS Iasi 143.02 320 ⇑P PKPbc 01 46 05.8 +0.1
IAS Iasi 143.02 320 ⇑PKIKP PKPbc 01 46 05.8 0.0
VASR Vaslui 143.15 319 ⇑P PKPbc 01 46 05.8 -0.4
TLCR 143.18 316 ⇑P PKPab 01 46 05.4 +0.6
TLCR 143.18 316 ⇑PKIKP PKPab 01 46 05.4 +0.5
VLDR Vladesti 143.34 318 ⇑P PKPab 01 46 05.1 -0.4
BIR Birlad 143.43 319 ⇑P PKPbc 01 46 06.7 -0.2
BIR Birlad 143.43 319 ⇑PKIKP PKPbc 01 46 06.7 -0.2
SCTR Scanteiesti 143.47 318 ⇑P PKPbc 01 46 07.1 +0.1
TATR Tatarca 143.48 317 ⇓P PKPab 01 46 06.2 +0.1
LVV L'vov 143.55 326 *e*PKIKP PKPab 01 46 05.3 -0.9
LVV *e* 02 08 02.8
TPGR Topolog 143.57 316 ⇑P PKPab 01 46 06.7 +0.2
CFR Carcaliu 143.61 317 ⇓P PKPab 01 46 06.1 -0.5
CFR Carcaliu 143.61 317 ⇓PKIKP PKPab 01 46 06.1 -0.5
GOET G??ttrup 143.64 345 *i* P PKPab 01 46 04.8 -1.5
SLCR Slobozia Conac 143.65 318 ⇑P PKPbc 01 46 07.3 -0.2
SCHL Schela 143.66 317 ⇑P PKPbc 01 46 07.6 +0.1
GHRR 143.66 318 ⇓P PKPbc 01 46 07.9 +0.4
BSD Bornholm Skovb 143.67 339 *e*P PKPab 01 46 05.2 -1.3
BSD Bornholm Skovb 143.67 339⇓*i*P PKPab 01 46 04.4 -2.1
BSD IAMs_20 IAMs_20 02 41 14.4
comp=Z,64µm,28.4s
TUDR 143.72 318 ⇑P PKPbc 01 46 08.1 +0.4
TIRR Tirgusor 143.75 315 ⇑P PKPab 01 46 07.1 0.0
TIRR Tirgusor 143.75 315 ⇑PKIKP PKPab 01 46 07.1 0.0
BEL Belsk 143.83 331 *e*PKP PKPab 01 46 05.7 -1.5
BEL *e*L L 02 47 00.9
comp=Z,105µm,24.3s
MFTR Murfatlar 143.86 315 ⇑P PKPab 01 46 07.9 +0.3
MANR Mangalia 143.90 314 ⇑P PKPbc 01 46 08.9 +0.6
TESR Tescani 143.90 320 ⇑P PKPab 01 46 06.7 -1.0
PANC Panciu 143.91 318 ⇑P PKPbc 01 46 09.1 +0.8
TLBR Topalu 143.95 316 ⇑P PKPbc 01 46 08.6 +0.2
HARR Harsova 143.96 316 ⇓P PKPab 01 46 07.7 -0.2
HARR Harsova 143.96 316 ⇓PKIKP PKPab 01 46 07.7 -0.2
COP Copenhagen 143.98 341⇓*i*P PKPab 01 46 05.9 -1.7
COP IAMs_20 IAMs_20 02 45 27.1
comp=Z,103µm,24.5s
BIZ Bicaz 144.01 320 ⇑P **PKPab** **01 46 07.7 -0.4**
ODBI Odobesti 144.02 318 ⇑P PKPbc 01 46 08.9 +0.3
CVDA Cernavoda 144.04 315 ⇓P PKPbc 01 46 08.8 0.0
BIGH Upper Bighouse 144.10 357 *e*P **PKPab** **01 46 05.0 -3.0**
BIGH IAMs_20 IAMs_20 02 38 28.1
comp=Z,51µm,29.3s
BURAR Bucovina Array 144.16 322 ⇓P PKPbc 01 46 09.1 -0.1
BURAR Bucovina Array 144.16 322 ⇓PKPdf **PKPab** **01 46 07.6 -1.2**
BURAR Bucovina Array 144.16 322 ⇓PKIKP PKPbc 01 46 09.1 -0.1
VRI Vrincioaia 144.17 319 ⇓P **PKPab** **01 46 08.3 -0.4**
VRI Vrincioaia 144.17 319 ⇓PKIKP **PKPab** **01 46 08.3 -0.4**
MUD Monsted U'grnd 144.18 345 *i* P **PKPab** **01 46 06.4 -1.9**
MUD IAMs_20 IAMs_20 02 42 54.1
comp=Z,80µm,26.5s

PSN Preselentsi 144.22 314 *i* P PKPab 01 46 08.5 -0.5
PLOR Plostina 144.22 319 ⇓P PKPab 01 46 07.7 -1.3
PLOR Plostina 144.22 319 ⇓PKIKP PKPab 01 46 07.7 -1.3
GRER 144.25 318 ⇑P PKPdf 01 46 10.4 -0.8
MLA1 Latheron 144.26 357 *e*P PKPab 01 46 07.0 -1.7
GKP Gorka Klasztor 144.29 335 *e*PKP PKPab 01 46 07.0 -1.9
GKP eL L 02 52 09.9
comp=Z,72µm,23.2s
GKP Gorka Klasztor 144.29 335 *e*P PKPab 01 46 06.1 -2.8
ICOR Ion Corvin 144.29 315 ⇑P PKPab 01 46 09.2 0.0
KWP Kalwaria Pacla 144.35 326 *e*PKP PKPab 01 46 07.4 -1.9
KWP eSS SS 02 08 11.6 -0.4
KWP eL L 02 48 38.0
comp=Z,68µm,24.9s
AMRR Amara 144.37 316 ⇓P PKPbc 01 46 09.8 0.0
AMRR Amara 144.37 316 ⇓PKIKP PKPbc 01 46 09.8 0.0
PGOR Pogoanele 144.46 317 ⇑P PKPab 01 46 08.0 -1.8
COVR Voineasa-Covas 144.50 319 ⇑P PKPab 01 46 08.4 -1.6
LEWI Lewis, Hebride 144.52 360 *e*P PKPab 01 46 06.5 -3.1
OZUR 144.63 319 ⇑P PKPab 01 46 10.4 -0.1
ISR Istrita 144.64 318 ⇓P PKPbc 01 46 10.9 +0.1
ISR Istrita 144.64 318 ⇓PKIKP PKPbc 01 46 10.9 +0.2
NEHR Nehoiu 144.65 318 ⇑P PKPbc 01 46 10.8 +0.1
RGN Rugen 144.66 340 IAMs_20 IAMs_20 02 48 32.0
comp=Z,50µm,22.0s
RASA Rasa 144.67 316 ⇓P PKPbc 01 46 10.7 0.0
LEHL Lehliu 144.76 316 ⇓P PKPbc 01 46 11.1 0.0
MLR Muntele Rosu 144.83 318 ⇓P PKPab 01 46 10.7 -0.6
MLR Muntele Rosu 144.83 318 PKP PKPab 01 46 08.9 -2.4
comp=Z,218nm,1.2s,baz=11,slow=3.2,SNR=60
MLR Muntele Rosu 144.83 318 PKPdf PKPbc 01 46 09.3 -2.1
MLR IAMs_20 IAMs_20 02 53 33.6
comp=Z,49µm,22.0s
MLR Muntele Rosu 144.83 318 ⇓PKIKP PKPab 01 46 10.7 -0.6
DOPR Dopca 144.93 319 ⇑P PKPab 01 46 10.2 -1.4
PRD Provadia 144.94 314 *i* P PKPab 01 46 10.1 -1.5
ARCR ARCALIA 144.94 322 ⇑P PKPbc 01 46 11.8 +0.2
SECR 144.97 318 ⇑P PKPbc 01 46 12.1 +0.4
MCD Coleburn Disti 144.98 357 *e*P PKPab 01 46 09.0 -2.3
KOLS Kolonicke sedl 145.00 326 *e*PKIKP PKPbc 01 46 10.2 -1.4
KOLS Kolonicke sedl 145.00 326 *e*PKP PKPbc 01 46 10.2 -1.5
SULR 145.03 317 ⇑P PKPbc 01 46 11.2 -0.7
BMR Baia Mare 145.10 323 ⇓P PKPbc 01 46 11.0 -1.0
BMR Baia Mare 145.10 323 ⇓PKIKP PKPbc 01 46 11.0 -1.0
KAC Achnashellach 145.14 358 *e*P PKPbc 01 46 10.0 -1.9
TGMR Targu Mures 145.15 321 ⇑P PKPdf 01 46 13.0 +0.3
MDO Dochfour 145.17 358 *e*P PKPbc 01 46 09.9 -2.0
UZH Uzhgorod 145.18 325 *e*PKP2 PKPbc 01 46 09.9 -2.3
UZH *e*PPP PPP 01 52 49.1
UZH MLR MLR
comp=N,7µm,24.0s
UZH MLR MLR
comp=Z,3µm,24.0s
ELL Elmali 145.23 302 PKPbc 01 46 11.6 -1.4
ELL Elmali 145.23 302 PKIKP PKPbc 01 46 11.6 -1.4
KPL Plockton 145.31 359 *e*P PKPbc 01 46 10.1 -2.3
KPL IAMs_20 IAMs_20 02 36 38.6
comp=Z,58µm,38.5s
BUC1 Bucharest 145.32 317 ⇑P PKPbc 01 46 10.7 -2.2
BUC1 Bucharest 145.32 317 ⇑PKP2 PKPbc 01 46 10.7 -2.2
RAZG Razgrad 145.37 315 ⇑P PKPbc 01 46 12.3 -0.8
OJC Ojcow 145.39 329 *e*PKP PKPbc 01 46 09.7 -3.2
OJC eL L 02 49 01.5
comp=Z,78µm,23.6s
VOIR 145.40 319 ⇑P PKPbc 01 46 12.1 -1.1
VOIR 145.40 319 ⇑PKIKP PKPbc 01 46 12.1 -1.1
MDB Medias 145.44 320 ⇑P PKPbc 01 46 12.8 -0.4
MDB Medias 145.44 320 ⇑PKIKP PKPbc 01 46 12.8 -0.4
CRVS Cervenica-Dubn 145.44 326 *e*PKIKP PKPbc 01 46 11.5 -1.6
CRVS eSS SS 02 08 25.8 +1.4
CRVS MLR MLR
comp=Z,72µm,22.8s
CRVS Cervenica-Dubn 145.44 326 *e*PKP PKPbc 01 46 11.5 -1.6
CRVS eL L 01 50 45.6
CRVS *e* 01 52 23.1
CBBR Cluj-Babes-Bol 145.58 322 ⇑P PKPdf 01 46 13.5 0.0
CJR Cluj-Napoca 145.58 322 ⇓P PKPdf 01 46 13.0 -0.5
CJR Cluj-Napoca 145.58 322 ⇓PKIKP PKPdf 01 46 13.0 -0.5
DRUM Mains of Drumt 145.59 356 *e*P PKPdf 01 46 11.2 -1.9
DRUM IAMs_20 IAMs_20 02 38 02.8
comp=Z,66µm,34.1s
CEI Carei 145.66 324 ⇑P PKPab 01 46 14.4 +0.3
CEI Carei 145.66 324 ⇑PKP2 PKPab 01 46 14.4 +0.3
NIE Niedzica 145.69 328 *e*PKP PKPdf 01 46 12.0 -1.6
NIE eSS SS 02 08 24.3 -2.9
NIE eL L 02 49 22.6
comp=Z,34µm,24.2s
ARR Arges 145.69 319 ⇑P PKPdf 01 46 12.0 -1.8
MESR Meseneni 145.70 323 ⇑P PKPdf 01 46 13.6 -0.1
STFAR Stefanesti-Arg 145.75 318 ⇑P PKPab 01 46 15.2 +0.6
JMB Yambol 145.79 313 *i* P PKPdf 01 46 11.8 -2.1
SZH Strazhica 145.88 315 *i* P PKPbc 01 46 14.7 0.0
HUMR Humele 145.90 318 ⇑P PKPdf 01 46 13.4 -0.6
COPA Copaceanca 145.94 317 ⇓P PKPdf 01 46 14.0 -0.1
EDU Dundee 145.99 356 *e*P PKPdf 01 46 13.1 -0.7
DRGR 146.04 322 ⇓P PKPdf 01 46 13.0 -1.3
DRGR 146.04 322 ⇓PKP2 PKPdf 01 46 13.0 -1.3
LTVH Ltavrtes, Hu 146.14 324 ⇓P PKPbc 01 46 15.3 0.0
LOT Lotru 146.17 320 ⇓P PKPdf 01 46 14.5 -0.2
INVG Invergeldie, C 146.17 357 *e*P PKPdf 01 46 11.9 -2.2
INVG IAMs_20 IAMs_20 02 42 60.0
comp=Z,52µm,25.7s
KECS Kecovo 146.21 327 *e*PKP2 PKPbc 01 46 15.2 -0.3
KECS Kecovo 146.21 327 *e*PKP PKPbc 01 46 15.2 -0.3
LANS Liptovska Anna 146.27 328 *e*PKP2 PKPdf 01 46 14.3 -0.3
LANS Liptovska Anna 146.27 328 *e*PKP PKPdf 01 46 14.3 -0.3
BORR Bors 146.38 324 ⇑P PKiKP 01 46 18.2 -0.9
LAWE Loch Awe, Argy 146.39 358 *e*P PKPdf 01 46 13.4 -1.1
LAWE IAMs_20 IAMs_20 02 43 32.3
comp=Z,37µm,25.7s
OKC Ostrava-Krasne 146.43 330 *e*PKP2 PKPdf 01 46 15.4 +0.6
OKC MLR MLR
comp=Z,60µm,23.7s
OKC Ostrava-Krasne 146.43 330 *e*PKP PKPdf 01 46 15.4 +0.6
OKC AMS AMS 02 49 10.0
comp=Z,60µm,23.7s
DEV Deva 146.44 321 ⇓P PKPdf 01 46 14.7 -0.2
DEV Deva 146.44 321 ⇓PKP2 PKPdf 01 46 14.7 -0.2
KSP Ksiaz 146.51 333 *e*PKP PKPdf 01 46 14.2 -0.7
KSP eL L 02 47 37.4
comp=Z,101µm,26.4s
VLAD Vladila 146.52 317 ⇑P PKPdf 01 46 15.8 +0.7
ESY Stoneypath 146.59 356 *e*P PKPdf 01 46 14.1 -0.7
EDI Edinburgh 146.63 356 *e*P PKPdf 01 46 14.6 -0.3
EDI IAMs_20 IAMs_20 02 38 34.5
comp=Z,50µm,28.3s
MORC Moravsky Berou 146.74 331 ⇑P PKPdf 01 46 15.5 +0.1
MORC Moravsky Berou 146.74 331 ⇑PKP2 PKPdf 01 46 15.5 +0.1
MORC Moravsky Berou 146.74 331 *e*PKP PKPdf 01 46 13.4 -2.0
MORC eSS SS 02 08 46.8 +7.7
OSTC Ostas 146.75 333 *e*PKP PKPdf 01 46 16.1 +0.7
OSTC AMS AMS 02 47 30.0
comp=Z,124µm,26.0s
EBL Broad Law 146.77 356 *e*P PKPdf 01 46 14.8 -0.3
GZR Gura Zlata 146.79 320 ⇑P PKPdf 01 46 15.4 -0.2
GZR Gura Zlata 146.79 320 ⇑PKIKP PKPdf 01 46 15.4 -0.2
CHVC Chvalec 146.80 333 *e*PKP PKPdf 01 46 15.9 +0.5
PGBU Glenifferbraes 146.81 357 *e*P PKPdf 01 46 15.0 -0.2
DPC Dobruska-Polom 146.86 332 *e*PKP2 PKPbc 01 46 17.0 -0.4
DPC MLR MLR
comp=Z,123µm,25.1s
DPC Dobruska-Polom 146.86 332 *e*PKP PKPbc 01 46 17.0 -0.4
DPC AMS AMS 02 47 50.0
comp=Z,123µm,25.1s
KRLC Kraliky 146.87 332 *e*PKP2 PKPdf 01 46 16.2 +0.6
KRLC MLR MLR
comp=Z,70µm,22.7s
KRLC Kraliky 146.87 332 *e*PKP PKPdf 01 46 16.2 +0.6
KRLC AMS AMS 02 51 40.0
comp=Z,70µm,22.7s
PSZ Piszkesteto 146.87 326 ⇑P PKPdf 01 46 15.9 +0.2
PSZ Piszkesteto 146.87 326 ⇑PKP2 PKPdf 01 46 15.9 +0.2
UPC Upice 146.88 333 *e*PKP2 PKPbc 01 46 16.8 -0.6
UPC MLR MLR
comp=Z,119µm,25.3s
UPC Upice 146.88 333 *e*PKP PKPbc 01 46 16.8 -0.6
UPC AMS AMS 02 47 30.0
comp=Z,119µm,25.3s
SRE Strehaia 146.92 319 ⇑P PKPbc 01 46 18.0 +0.3
SRE Strehaia 146.92 319 ⇑PKP2 PKPbc 01 46 18.0 +0.3
SIRR Siria 146.94 322 ⇑P PKPdf 01 46 16.8 +1.0
VYHS Vyhne 147.02 328 *e*PKP2 PKPdf 01 46 15.8 -0.1
VYHS *e*SS SS 02 08 47.3 +5.0
VYHS MLR MLR
comp=Z,73µm,24.4s
VYHS Vyhne 147.02 328 *e*PKP PKPdf 01 46 15.8 -0.1
VYHS *e*SS SS 02 08 47.3 +5.0
BSZH Besenyszg 147.07 325 ⇓P PKPdf 01 46 16.7 +0.8
BAIL Bailesti 147.17 318 ⇓P PKPbc 01 46 17.8 -0.6
EKA Eskdalemuir Ar 147.21 356 PKP PKPdf 01 46 13.4 -2.5
comp=Z,77nm,0.6s,baz=6.6,slow=3.1,SNR=5.9
EKA PKPbc PKPbc 01 46 15.9 -2.2
comp=Z,150nm,0.7s,baz=358,slow=2.6,SNR=9.9
ESK Eskdalemuir 147.23 356 *e*P PKPdf 01 46 15.8 -0.2
ESK IAMs_20 IAMs_20 02 38 50.6
comp=Z,56µm,30.4s
ESK Eskdalemuir 147.23 356 PKPbc PKPdf 01 46 16.4 +0.4
ESK Eskdalemuir 147.23 356 IAMs_20 IAMs_20 02 57 55.7
comp=Z,34µm,21.0s
ESK Eskdalemuir 147.23 356 PKP2 PKPdf 01 46 16.4 +0.4
RMGR Halanga-Turnu 147.23 319 ⇑P PKPbc 01 46 18.9 +0.3
MPEP Malo Peshtene 147.25 316 *i* P PKPdf 01 46 16.4 0.0
HERR Herculane 147.28 320 ⇓P PKPdf 01 46 17.5 +1.1
PUNG Punghina 147.29 318 ⇑P PKPab 01 46 19.9 -0.6
JAVC Velka Javorina 147.33 329 *e*PKP PKPbc 01 46 14.9 -1.5
DJES Djerdap 147.34 319 ⇑P PKPbc 01 46 18.5 -0.4
BZS Buzias 147.34 322 ⇑P PKPdf 01 46 15.5 -0.9
BZS Buzias 147.34 322 ⇑PKIKP PKPdf 01 46 15.5 -0.9
BRG Berggiesshubel 147.43 335 *e*PKP PKPdf 01 46 14.7 -1.8
BRG Amp 01 46 16.7
comp=Z,25nm,1.3s
BRG *i* x x 01 46 17.9
BRG Amp 01 46 23.1
comp=Z,169nm,0.9s
BRG *ex* x 01 46 32.4
BRG Amp 01 46 35.9
comp=Z,375nm,1.2s
BRG Berggiesshubel 147.43 335 *e*PKIKP PKPdf 01 46 14.6 -1.8
BRG *i* 01 46 17.8
BRG pmax pmax
comp=Z,25nm,1.3s
BRG pmax pmax
comp=Z,169nm,0.9s
CLL Collm 147.44 337 PKPbc PKPdf 01 46 16.0 -0.5
CLL IAMs_20 IAMs_20 02 55 15.5
comp=Z,47µm,22.0s
CLL Collm 147.44 337 *i* PKP2 PKPdf 01 46 17.6 +1.2
CLL pmax pmax
comp=Z,144nm,0.9s
CLL MLR MLR
comp=Z,21µm,22.0s
CLL Collm 147.44 337 *e*PKPdf PKPdf 01 46 15.0 -1.4
comp=Z,80nm,1.8s
CLL *i* PKPbc PKPdf 01 46 17.6 +1.2
comp=Z,144nm,0.9s
CLL *i* x x 01 46 32.1
comp=Z,352nm,1.2s
CLL *i* PKPlp 01 46 42.0
CLL *e*PP PP 01 49 43.0 -1.4
CLL *e*SKPdf SKPdf 01 49 50.0 -0.2
CLL *e*PKSbc PKSbc 01 50 03.0 +4.8
CLL *e*PSKS 02 00 12.0
CLL *e*PPPPrev 02 03 48.0
CLL *ex* x 02 04 42.0
CLL *e*SS SS 02 08 54.0 +7.5
CLL *e*SSS SSS 02 14 12.0
CLL *ex* x 02 19 00.0
CLL Lmax 02 37 00.0
CLL LV 02 48 00.0
comp=Z,21µm,22.0s
PVCC Panska Ves 147.46 334 *e*PKP2 PKPdf 01 46 16.8 +0.3
PVCC Panska Ves 147.46 334 *e*PKP PKPdf 01 46 16.8 +0.3
PVCC *ex* x 01 46 18.5
PVCC AMS AMS 02 44 50.0
comp=Z,71µm,27.3s
NEWG New Galloway 147.49 357 *e*P PKPdf 01 46 16.3 0.0
NEWG IAMs_20 IAMs_20 02 47 03.8
comp=Z,40µm,23.5s
VRAC Vranov 147.51 331 ⇑P PKPdf 01 46 17.6 +1.0
VRAC Vranov 147.51 331 PKPbc PKPdf 01 46 16.0 -0.7
comp=Z,64nm,1.0s,baz=59,slow=1.7,SNR=32
VRAC Vranov 147.51 331 PKIKP PKPdf 01 46 16.0 -0.7
VRAC Vranov 147.51 331 *e*PKP PKPdf 01 46 14.3 -2.3
VRAC *e*SS SS 02 08 54.5 +6.8
CLGH Cloghs, Cushen 147.58 359 *e*P PKPbc 01 46 18.2 -1.0
EDMD Edmundbyers 147.62 355 *e*P PKPdf 01 46 17.6 +1.0
KARP Karpathos 147.68 301 PKPbc PKPdf 01 46 18.3 +0.9
KARP IAMs_20 IAMs_20 03 07 29.8
comp=Z,34µm,21.0s
SMOL Smolenice 147.69 329 *e*PKIKP PKPdf 01 46 17.0 0.0
SMOL MLR MLR
comp=Z,7µm,21.6s
SRO Srobarova 147.74 327 *e*PKIKP PKPdf 01 46 17.2 +0.2
SRO Srobarova 147.74 327 *e*PKP PKPdf 01 46 17.2 +0.2
BANR Banloc 147.75 322 ⇓P PKPdf 01 46 17.9 +0.7
MDVR Moldovita 147.75 320 ⇓P PKPbc 01 46 19.0 -1.1
KRUC Moravsky 147.78 331 *e*PKP PKPdf 01 46 14.5 -2.6
KRUC *e*SS SS 02 08 58.7 +8.0
BLKB Belogradchik 147.79 318 ⇑P PKPdf 01 46 17.9 +0.5
MODS Modra-Piesok 147.86 329 *e*PKIKP PKPdf 01 46 17.0 -0.3
MODS Modra-Piesok 147.86 329 *e*PKP PKPdf 01 46 17.0 -0.3
MODS *e*SS SS 02 08 59.2 +7.5
MODS *e*L L 02 43 03.6
PRU Pruhonice 147.88 334 *e*PKIKP PKPdf 01 46 17.2 0.0
PRU *e* 01 46 19.0
PRU MLR MLR
comp=Z,71µm,25.6s
PRU Pruhonice 147.88 334 *e*PKP PKPdf 01 46 17.2 0.0
PRU *ex* x 01 46 19.0
PRU AMS AMS 02 45 30.0
comp=Z,71µm,25.6s
GDLE Glaisdale, N Y 147.91 353 *e*P PKPdf 01 46 18.5 +1.4
GDLE IAMs_20 IAMs_20 02 39 58.9
comp=Z,57µm,31.9s
VTS Vitosha 147.94 316 ⇑P PKPbc 01 46 19.5 -1.3
VTS Vitosha 147.94 316 ⇑PKP2 PKPbc 01 46 19.5 -1.3
VTS Vitosha 147.94 316 *i* P PKPbc 01 46 20.5 -0.3
KESW Keswick, Cumbr 147.95 356 *e*P PKPdf 01 46 18.5 +1.3
KESW IAMs_20 IAMs_20 02 39 08.8
comp=Z,51µm,30.8s
TREC Trest 148.01 332 *e*PKP2 PKPbc 01 46 19.3 -1.3
TREC MLR MLR
comp=Z,111µm,23.4s
TREC Trest 148.01 332 *e*PKP PKPbc 01 46 19.3 -1.3
TREC AMS AMS 02 49 10.0
comp=Z,111µm,23.4s
ZST Bratislava 148.07 329 *e*PKP2 PKPdf 01 46 18.5 +0.9
ZST Bratislava 148.07 329 *e*PKP PKPdf 01 46 18.5 +0.9
MMB Musomiste 148.09 314 *i* P PKPdf 01 46 18.0 +0.1
IOMK Kirk Michael 148.36 357 *e*P PKPdf 01 46 19.4 +1.6
BOVS Bovan 148.38 318 ⇑P PKPdf 01 46 19.2 +1.0
GMM Mts of Mourne 148.42 359 *e*P PKPbc 01 46 20.3 -1.1
HPK Haverah Park 148.45 354 *e*P PKPdf 01 46 18.1 +0.1
HPK IAMs_20 IAMs_20 02 40 13.0
comp=Z,50µm,30.8s
WIM Isle of Man 148.48 357 *e*P PKPdf 01 46 18.6 +0.5
APE Apeiranthos 148.52 305 ⇓P PKPdf 01 46 18.9 +0.1
APE Apeiranthos 148.52 305 ⇓PKIKP PKPdf 01 46 18.9 +0.1
MORH Mrgy, Hungar 148.62 325 ⇓P PKPdf 01 46 18.7 +0.1
FRGS Fruska Gora 148.64 322 ⇓P PKPbc 01 46 20.7 -1.6
FRGS Fruska Gora 148.64 322 *e*P PKPdf 01 46 18.4 -0.2
ILTH Belurgan, Co L 148.64 359 *e*P PKPdf 01 46 19.5 +1.2
ASCN Ascension 148.78 166 PKPbc PKPbc 01 46 22.7 -0.9
ASCN IAMs_20 IAMs_20 02 59 59.6
comp=Z,40µm,19.0s
SANT Santorini 148.79 303 ⇑P PKPdf 01 46 20.3 +1.1
LMK Market Rasen 148.80 352 *e*P PKPbc 01 46 20.9 -1.5
RONA Rosalia, Austr 148.80 329 *e*P PKPdf 01 46 18.0 -0.8
comp=Z,8.2nm,1.5s
RONA *i* P PKPbc 01 46 22.3 -0.4
comp=Z,141nm,1.4s,SNR=22
H10N3 ASCENSION HYDR 148.84 165 PKPbc PKiKP 01 46 25.0 +0.2
H10N1 ASCENSION HYDR 148.84 166 PKPbc PKiKP 01 46 25.0 +0.2
CONA Conrad Observa 148.84 330 *i* P PKPdf 01 46 18.1 -0.9
comp=Z,12nm,1.7s,SNR=82
CONA *e*P pPKPdf 01 46 21.6 -0.3
comp=Z,190nm,1.6s
H10N2 ASCENSION HYDR 148.85 165 PKPbc PKiKP 01 46 25.0 +0.2
CKRC Cesky Krumlov 148.88 332 *e*PKP PKPdf 01 46 18.2 -0.7
CKRC *ex* PKPdf 01 46 21.6 +2.7
CKRC AMS AMS 02 54 50.0
comp=Z,44µm,21.2s
KHC Kasperske Hory 148.95 333 IAMs_20 IAMs_20 03 01 30.8
comp=Z,36µm,20.0s
KHC Kasperske Hory 148.95 333 *e*PKIKP PKPdf 01 46 17.0 -2.0
KHC *e* 01 46 21.4
KHC MLR MLR
comp=Z,100µm,25.8s
KHC Kasperske Hory 148.95 333 *e*PKP PKPdf 01 46 17.0 -2.0
KHC *ep*PKP pPKPdf 01 46 21.4 -0.6
KHC *ex* x 01 46 35.5
KHC AMS AMS 02 45 30.0
comp=Z,100µm,25.8s
VAY Valandovo 148.99 314 *i* P PKPdf 01 46 21.2 +1.9
LBWR Ladybower, Pea 149.01 354 *e*P PKPdf 01 46 20.5 +1.5
LBWR IAMs_20 IAMs_20 02 37 59.5
comp=Z,86µm,51.7s
GERES GERESS Array B 149.12 333 PKP PKPdf 01 46 16.8 -2.6
comp=Z,0.4nm,0.6s,baz=264,slow=40,SNR=7.0
GERES PKPbc pPKPdf 01 46 20.9 -1.4
comp=Z,61nm,1.0s,baz=50,slow=4.2,SNR=35
DIVS Divibare 149.16 320 PKPbc PKPdf 01 46 21.5 +1.9
DIVS Divibare 149.16 320 ⇑*i*P PKPdf 01 46 20.6 +1.0
BLJ Bijeljina 149.17 322 ⇑*i*P PKPdf 01 46 20.9 +1.4
WME Myndd Eilian 149.21 357 *e*P PKPdf 01 46 18.4 -0.8
WPS Cemaes, Angles 149.22 357 *e*P PKPdf 01 46 19.3 +0.1
WLF1 Llynfaes 149.32 357 *e*P PKPdf 01 46 20.4 +1.0
STNC Stoke 149.37 354 *e*P PKPbc 01 46 22.5 -1.3
YRC Rhoscolyn 149.37 357 *e*P PKPdf 01 46 20.1 +0.7
WACR West Acre 149.39 351 *e*P PKPdf 01 46 20.7 +1.2
GRA1 Grafenberg Arr 149.42 337 IAMs_20 IAMs_20 02 49 21.2
comp=Z,37µm,21.0s
GRFO Grafenberg 149.42 337 PKPbc 01 46 22.7 -1.5
GRFO IAMs_20 IAMs_20 02 49 22.2
comp=Z,38µm,22.0s
GRFO Grafenberg 149.42 337 PKP2 PKPbc 01 46 22.7 -1.5
DSB Dublin 149.43 359 IAMs_20 IAMs_20 02 56 05.0
comp=Z,32µm,21.0s
YLL Llanberis 149.46 357 *e*P PKPdf 01 46 21.7 +2.1
ARSA Arzberg 149.49 329 *i* P PKPdf 01 46 18.9 -1.1
comp=Z,16nm,1.9s,SNR=11
ARSA *e*P pPKPdf 01 46 23.3 +0.3
comp=Z,42nm,1.1s
IDI Anoyia 149.54 302 ⇑P PKPbc 01 46 23.9 -1.1
IDI Anoyia 149.54 302 PKPbc PKPbc 01 46 23.7 -1.3
comp=Z,31nm,0.6s,baz=21,slow=8.1,SNR=41
IDI Anoyia 149.54 302 IAMs_20 IAMs_20 02 55 40.9
comp=Z,34µm,22.0s
MOA Molln 149.63 331 *i* P PKPdf 01 46 19.0 -1.2
comp=Z,9.0nm,1.5s,SNR=18
SBD1 Bryn Du 149.63 356 *e*P PKPab 01 46 28.4 -1.3
SBD1 IAMs_20 IAMs_20 02 42 54.6
comp=Z,48µm,28.9s
BBLS Lazići 149.64 321 *e*P PKPdf 01 46 22.2 +1.8
FOEL Foel Wylfa 149.65 355 *e*P PKPdf 01 46 22.2 +2.2
FOEL IAMs_20 IAMs_20 02 49 59.4
comp=Z,55µm,22.9s
LLW Llanuwychllyn 149.72 356 *e*P PKPdf 01 46 22.2 +2.1
RUDO Rudo 149.80 320 ⇑*i*P PKPdf 01 46 20.8 +0.3
KALN Kalnik 149.82 327 *i* P PKPdf 01 46 18.9 -1.7
DOB Doboj 149.86 323 *e*P PKPbc 01 46 25.3 -0.1
IVA Berane 149.91 318 ⇓*i*PKP PKPbc 01 46 23.5 -2.2
ELMS Elmsett, Ipswi 149.95 350 *e*P PKPbc 01 46 23.9 -1.4
ELMS IAMs_20 IAMs_20 02 50 43.8
comp=Z,60µm,23.7s
PLE Pljevlja 149.96 320 ⇓*i*PKP PKPbc 01 46 24.0 -1.8
HLM1 Long Mynd 149.99 355 *e*P PKPdf 01 46 20.8 +0.3
HLM1 IAMs_20 IAMs_20 02 43 51.4
comp=Z,52µm,32.8s
LOBO Lobor 150.00 327 *i* P PKPdf 01 46 17.4 -3.4
MOSL Moslavina 150.01 326 *i* P PKPdf 01 46 19.5 -1.3
PVY Plav 150.02 318 ⇓*i*PKP PKPbc 01 46 23.8 -2.2
BIOA Bad Ischl, Aus 150.03 332 *i* P PKPdf 01 46 19.1 -1.7
comp=Z,18nm,1.7s,SNR=17
BIOA *e*P sPKPdf 01 46 25.2 +0.4
comp=Z,95nm,1.5s
BCI Bajram Curri 150.08 318 *i* P PKPbc 01 46 24.3 -1.8
SOKA Soboth 150.14 329 *e*P PKPdf 01 46 19.8 -1.3
comp=Z,16nm,1.8s,SNR=34
SOKA *e*P PKPbc 01 46 25.7 -0.4
comp=Z,116nm,1.1s
KOME Kolasin 150.15 319 ⇓*i*PKP PKPbc 01 46 24.2 -2.1
BEBN Eben Emael 150.20 344 *d*PKP PKPbc 01 46 24.6 -1.4
BEBN *dx* x 01 46 44.5
PHP Peshkopia 150.20 316 *i* P PKPbc 01 46 25.5 -0.9
PTJ Puntijarka 150.22 327 P PKPdf 01 46 20.7 -0.5
ZAG Zagreb 150.26 327 P PKPdf 01 46 20.2 -0.9
BTNL Ternell 150.27 343 *d*PKP PKPbc 01 46 24.7 -1.6
MEM Membach 150.28 343 *d*PKPdf PKPdf 01 46 20.8 -0.2
MEM *d*PKP sPKPdf 01 46 24.9 -0.1
IWEX Carrickbyrne, 150.30 360 *e*P PKPdf 01 46 23.6 +2.6
UPM Unac-Piva 150.32 320 *e*P PKPbc 01 46 25.9 -0.9
UPM Unac-Piva 150.32 320 ⇓*i*PKP PKPbc 01 46 25.1 -1.7
BLY Banja Luka 150.35 324 *e*P PKPdf 01 46 22.2 +0.8
BSTI Sart Tilman 150.42 344 *d*PcP PKPbc 01 46 24.6 -2.0
BSTI *dx* x 01 46 44.0
PRIJ Prijedor 150.46 325 *e*P PKPbc 01 46 25.0 -1.8
OBKA Obir 150.49 329 *e*P PKPdf 01 46 22.8 +1.2
OBKA Obir 150.49 329 *i* P PKPbc 01 46 24.9 -2.0
comp=Z,51nm,1.1s,SNR=9.5
KBN Korca 150.51 314 *i* P PKPdf 01 46 22.6 +0.8
BHOU Houvegnez 150.51 343 *d*PKP PKPbc 01 46 25.6 -1.2
BHOU *dx* x 01 46 44.3
MCH1 Michaelchurch 150.52 355 *e*P PKPbc 01 46 24.7 -2.0
MCH1 IAMs_20 IAMs_20 02 38 10.6
comp=Z,90µm,52.3s
NKME Niksic 150.54 319 ⇓*i*PKP PKPbc 01 46 24.8 -2.4
PDG Podgorica 150.54 318 ⇑P PKPbc 01 46 25.4 -1.7
PDG Podgorica 150.54 318 IAMs_20 IAMs_20 02 54 59.5
comp=Z,41µm,22.0s
PDG Podgorica 150.54 318 *e*P PKPbc 01 46 25.0 -2.0
TTG Podgorica 150.54 318 ⇓*i*PKP PKPbc 01 46 25.1 -2.0
A251A Rujevac 150.59 325 *i* P PKPdf 01 46 24.0 +2.3
MGRS Mrkonjic Grad 150.62 323 *e*P PKPbc 01 46 25.3 -2.0
KBA Koelnbreinsper 150.62 331 *i* P PKPbc 01 46 25.0 -2.4
comp=Z,216nm,1.6s,SNR=25
BCLA Clavier 150.64 344 *d*PKP PKPbc 01 46 25.3 -1.7
BCLA *dx* x 01 46 40.9
MONM Monmouth 150.66 355 *e*P PKPbc 01 46 25.3 -1.8
MONM IAMs_20 IAMs_20 02 41 14.0
comp=Z,55µm,31.4s
STRD Stroud 150.66 354 *e*P PKPbc 01 46 25.3 -1.8
RSBS Rosebush, Pemb 150.67 357 *e*P PKPbc 01 46 24.8 -2.3
OZLJ Ozalj 150.67 327 *i* P PKPdf 01 46 21.1 -0.7
CEME Cevo 150.69 319 ⇓*i*PKP PKPbc 01 46 25.2 -2.3
BRY Bratogost 150.71 320 *e*P PKPbc 01 46 25.2 -2.5
BRY Bratogost 150.71 320 ⇓*i*PKP PKPbc 01 46 25.1 -2.6
DRME Dracevica, Mon 150.72 318 *e*P PKPdf 01 46 24.6 +2.6
DRME Dracevica, Mon 150.72 318 ⇓*i*PKP PKPbc 01 46 25.4 -2.2
TIR Tirane 150.75 316 IAMs_20 IAMs_20 02 57 20.4
comp=Z,40µm,22.0s
TIR Tirane 150.75 316 *i* P PKPdf 01 46 23.8 +1.7
SRKY Kupres RS 150.80 323 ⇑*i*P PKPdf 01 46 25.0 +2.8
SNF Seneffe 150.81 345 *d*PKP PKPbc 01 46 26.0 -1.4
ULC Ulcinj 150.81 318 ⇓*i*PKP PKPbc 01 46 25.3 -2.5
OLDB Oldbury-Upon-S 150.81 354 *e*P PKPdf 01 46 24.2 +2.4
MYKA Terra Mystica 150.82 330 *i* P PKPbc 01 46 25.3 -2.4
comp=Z,134nm,1.4s,SNR=20
LJU Ljubljana 150.84 328 *e*PKPdf PKPdf 01 46 21.1 -1.0
LJU *i* PKPbc PKPbc 01 46 27.3 -0.4
ELSH Elham, Standar 150.84 349 *e*P PKPbc 01 46 26.2 -1.3
BUM Brajici-Budva 150.84 318 ⇓*i*PKP PKPdf 01 46 25.1 +2.8
LSK Leskovik 150.86 313 *i* P PKPbc 01 46 25.4 -2.6
BOJS Bojanci 150.86 327 *i* PKPbc PKPbc 01 46 27.6 -0.1
BMRD Maredsous 150.88 344 *d*PKP PKPbc 01 46 26.1 -1.5
BMRD *dx* x 01 46 44.8
SWN1 Swindon 150.88 353 *e*P PKPbc 01 46 26.3 -1.3
RCHB Rochefort 150.90 344 *d*PKP PKPbc 01 46 25.8 -1.9
RCHB *dx* x 01 46 41.6
STU Stuttgart 150.92 338 IAMs_20 IAMs_20 02 52 10.7
comp=Z,36µm,22.0s
TREB Trebinje 150.93 320 ⇑*i*P PKPbc 01 46 26.1 -1.9
GBAS Gorenja Brezov 150.96 328 *i* PKPbc PKPbc 01 46 27.4 -0.6
HCY Herceg Novi 151.00 319 *e*P PKPbc 01 46 25.9 -2.3
HCY Herceg Novi 151.00 319 ⇓*i*PKP PKPbc 01 46 25.4 -2.8
WOL Wolverton 151.02 353 *e*P PKPbc 01 46 26.0 -1.9
DBRK Dubrovnik 151.08 320 *i* P PKPdf 01 46 23.6 +1.0
WLF Walferdange 151.10 342 *d*PKP PKPbc 01 46 25.8 -2.4
PLIT Plitvice 151.10 326 *i* P PKPdf 01 46 22.8 +0.2
CEY Cerknica 151.10 328 *e*P PKPbc 01 46 26.6 -1.8
DOU Dourbes 151.11 344 *d*PKP PKPbc 01 46 25.4 -2.8
DOU *dx* x 01 46 43.3
RICI Ricice 151.18 322 *i* P PKPdf 01 46 23.3 +0.6
WATA Walderalm 151.19 333 *i* P PKPdf 01 46 20.9 -1.8
comp=Z,18nm,1.8s,SNR=35
WTTA Wattenberg 151.22 333 *i* P PKPdf 01 46 20.4 -2.5
comp=Z,26nm,1.6s,SNR=29
WTTA *e*P sPKPdf 01 46 26.9 +0.1

	comp=Z,206nm,1.3s							
STON	**Ston**	**151.23**	**320**	*e*P		**PKPdf**	**01 46 24.0**	**+1.3**
STON	**Ston**	**151.23**	**320**	*i* P		**PKPdf**	**01 46 23.6**	**+0.8**
HMNX	**Herstmonceux**	**151.24**	**350**	*e*P		**PKPbc**	**01 46 26.3**	**-2.1**
ABTA	**Abfaltersbach**	**151.25**	**332**	*i* P		**PKPdf**	**01 46 21.1**	**-1.7**
	comp=Z,15nm,1.2s,SNR=27							
ABTA				*e*P		**pPKPdf**	**01 46 26.2**	**+0.5**
	comp=Z,78nm,0.8s							
KIJV	**Kijevo**	**151.26**	**323**	*i* P		**PKPdf**	**01 46 25.5**	**+2.7**
UDBI	**Udbina**	**151.26**	**325**	*i* P		**PKPbc**	**01 46 27.0**	**-1.8**
IGT	**Igoumenitsa**	**151.33**	**312**	*i* P		**PKPdf**	**01 46 24.3**	**+1.3**
MAKA	**Makarska**	**151.37**	**322**	*i* P		**PKPdf**	**01 46 24.8**	**+1.8**
MOTA	**Moosalm**	**151.37**	**334**	*i* P		**PKPdf**	**01 46 21.1**	**-2.0**
	comp=Z,17nm,1.4s,SNR=36							
MOTA				*e*P		**sPKPdf**	**01 46 26.7**	**-0.3**
	comp=Z,104nm,0.9s							
SRN	**Sarande**	**151.39**	**313**	*i* P		**PKPdf**	**01 46 24.8**	**+1.8**
RETA	**Reutte**	**151.40**	**334**	*e*P		**PKPdf**	**01 46 21.6**	**-1.4**
	comp=Z,9.3nm,1.3s							
RETA				*i* P		**sPKPdf**	**01 46 27.2**	**+0.3**
	comp=Z,65nm,1.4s,SNR=12							
SQTA	**Sankt Quirin**	**151.43**	**334**	*e*P		**PKPdf**	**01 46 22.2**	**-0.9**
	comp=Z,14nm,1.3s							
SQTA				*i* P		**PKPbc**	**01 46 28.6**	**-0.6**
	comp=Z,32nm,0.8s,SNR=19							
LKD2	**Lefkada island**	**151.45**	**311**	*i* P		**PKPdf**	**01 46 21.5**	**-1.8**
BFO	**Black Forest**	**151.59**	**338**	IAMs_20	IAMs_20		02 51 56.1	
	comp=Z,38µm,22.0s							
HTL	**Hartland**	**151.62**	**357**	*e*P		**PKPdf**	**01 46 26.2**	**+3.2**
HTL				IAMs_20	IAMs_20		02 40 53.7	
	comp=Z,47µm,27.3s							
FETA	**Feichten**	**151.78**	**334**	*e*P		**PKPdf**	**01 46 22.4**	**-1.3**
	comp=Z,15nm,1.3s,SNR=15							
DAVA	**Damuels**	**151.91**	**335**	*i* P		**PKPbc**	**01 46 28.6**	**-1.7**
	comp=Z,118nm,1.6s,SNR=15							
ECH	**Echery**	**152.08**	**340**	IAMs_20	IAMs_20		02 56 40.2	
	comp=Z,39µm,22.0s							
DYA	**Yadsworthy**	**152.14**	**356**	*e*P		**PKPbc**	**01 46 28.4**	**-2.1**
DYA				IAMs_20	IAMs_20		02 38 39.4	
	comp=Z,70µm,41.9s							
SCTE	**Santa Cesarea**	**152.31**	**315**			**PKPbc**	**01 46 29.8**	**-1.4**
SCTE	**Santa Cesarea**	**152.31**	**315**	*i* P		**PKPdf**	**01 46 26.6**	**+2.1**
DAVOX	**Davos/Dischmat**	**152.32**	**335**	PKP		**PKPbc**	**01 46 23.4**	**-1.1**
	comp=Z,6.7nm,0.9s,baz=96,slow=4.6,SNR=9.6							
DAVOX				PKPbc		**PKPbc**	**01 46 30.0**	**-1.4**
	comp=Z,44nm,0.7s,baz=283,slow=2.1,SNR=46							
DAVOX				PP		**PP**	**01 50 12.0**	**-0.9**
	comp=Z,15nm,1.1s,baz=42,slow=0.5,SNR=3.1							
JVM	**Valle D.L. Mar**	**153.19**	**353**	*e*P		**PKPbc**	**01 46 30.6**	**-2.3**
JSA	**Saint Aubin**	**153.22**	**353**	*e*P		**PKPbc**	**01 46 31.3**	**-1.7**
H07S1	**FLORES T-PHASB**	**153.47**	**45**	*e*PKP		**PKPbc**	**01 46 24.5**	**-1.8**
SENIN	**Lac Senin/Sane**	**153.64**	**337**			**PKPdf**	**01 46 25.4**	**-1.2**
SENIN				IAMs_20	IAMs_20		03 01 18.5	
	comp=Z,52µm,21.0s							
TIP	**Timpagrande**	**153.91**	**315**	IAMs_20	IAMs_20		03 03 40.4	
	comp=Z,37µm,22.0s							
AQU	**L'Aquila**	**154.00**	**324**	IAMs_20	IAMs_20		03 10 38.9	
	comp=Z,48µm,22.0s							
VLC	**Villacollemand**	**154.19**	**330**	IAMs_20	IAMs_20		03 10 50.1	
	comp=Z,47µm,22.0s							
MSSA	**Maissana**	**154.46**	**332**	PKPdf		**PKPdf**	**01 46 27.8**	**+0.3**
MSSA						**PKPab**	**01 46 47.3**	**-2.9**
PCD	**Cedros**	**155.52**	**44**	*e*PKP		**PKPdf**	**01 46 27.4**	**-1.7**
SSB	**Saint Sauveur**	**155.52**	**340**	IAMs_20	IAMs_20		03 01 21.1	
	comp=Z,31µm,20.0s							
CALA	**Caldeira**	**155.54**	**44**	*e*PKP		**PKPdf**	**01 46 32.9**	**+3.7**
HOR	**Horta**	**155.62**	**45**	*e*PKP		**PKPdf**	**01 46 28.8**	**-0.4**
SRBC	**Serra Branca**	**155.70**	**43**	*e*PKP		**PKPdf**	**01 46 30.6**	**+1.3**
PGRA	**Graciosa**	**155.74**	**43**	*e*PKP		**PKPdf**	**01 46 30.9**	**+1.5**
PCAN	**Candelaria**	**155.75**	**44**	*e*PKP		**PKPdf**	**01 46 35.1**	**+5.7**
ROSA	**Rosais**	**155.76**	**44**	*e*PKP		**PKPdf**	**01 46 23.3**	**-6.1**
PPNO	**Prainha do Nor**	**155.89**	**44**	*e*PKP		**PKPdf**	**01 46 23.7**	**-6.0**
PID	**Ribeirinha**	**156.00**	**44**	*e*PKP		**PKPdf**	**01 46 30.0**	**+0.2**
VAE	**Valguarnera**	**156.38**	**314**	PKPbc		**PKPdf**	**01 46 35.2**	**+4.9**
	comp=Z,12nm,1.1s,baz=205,slow=8.4,SNR=4.2							
PAGU	**Agualva, Azore**	**156.40**	**42**	*e*PKP		**PKPdf**	**01 46 28.7**	**-1.6**
PSCM	**Serra do Cume**	**156.48**	**42**	*e*PKP		**PKPdf**	**01 46 34.6**	**+4.2**
CLTB	**Caltabellotta**	**157.11**	**315**	IAMs_20	IAMs_20		03 09 06.8	
	comp=Z,56µm,22.0s							
PSET	**Sete Cidades**	**157.89**	**43**	*e*PKP		**PKPdf**	**01 46 32.1**	**-0.1**
CMLA	**Cha da Macela**	**158.04**	**42**	*e*PKP		**PKPdf**	**01 46 32.8**	**+0.4**
PCALD	**Caldeiras da R**	**158.05**	**42**	*e*PKP		**PKPdf**	**01 46 35.1**	**+2.7**
PGRON	**Lagoa das Cont**	**158.13**	**42**	*e*PKP		**PKPdf**	**01 46 35.1**	**+2.6**
BART	**Pico Bartolome**	**158.26**	**42**	*e*PKP		**PKPdf**	**01 46 38.0**	**+5.3**
PSMA	**Santa Maria**	**158.76**	**44**	*e*PKP		**PKPdf**	**01 46 39.9**	**+6.7**
PSMN	**Pico do Norte,**	**158.80**	**43**	*e*PKP		**PKPdf**	**01 46 37.3**	**+4.0**
MAHO	**Mahon**	**160.31**	**334**	PKP		**PKPdf**	**01 46 34.4**	**-0.5**
MAHO	**Mahon**	**160.31**	**334**	PP		PP	01 51 10.1	+13
PGAV	**Gavieira, Arco**	**160.68**	**3**	*e*PKPdf		**PKPdf**	**01 46 35.5**	**+0.1**
PGAV	**Gavieira, Arco**	**160.68**	**3**	eLQ	LQ		02 33 57.5	
PGAV				eLR	LR		02 42 39.1	
	comp=Z,45µm,20.0s							
KEST	**Kesra**	**160.71**	**316**	PKPab		**PKPab**	**01 47 17.0**	**-0.5**
	comp=Z,30nm,0.8s,baz=328,slow=4.8,SNR=12							
KEST	**Kesra**	**160.71**	**316**	PKPdf		**PKPdf**	**01 46 33.8**	**-1.8**
KEST						**PKPab**	**01 47 16.0**	**-1.5**
PBRG	**Braganca**	**160.87**	**359**	*e*PKPdf		**PKPdf**	**01 46 34.4**	**-1.2**
PBRG	**Braganca**	**160.87**	**359**	*e*PKPab		**PKPab**	**01 47 17.4**	**-0.4**
POLO	**Lamas de Olo**	**161.29**	**2**	*e*PKPdf		**PKPdf**	**01 46 34.4**	**-1.7**
PVRL	**Vila Real**	**161.39**	**2**	*e*PKPdf		**PKPdf**	**01 46 33.2**	**-2.9**
PVRL	**Vila Real**	**161.39**	**2**	*e*PKPab		**PKPab**	**01 47 20.8**	**+0.7**
MVO	**Moncorvo**	**161.51**	**0**	*e*PKPdf		**PKPdf**	**01 46 35.5**	**-0.8**
MVO	**Moncorvo**	**161.51**	**0**	eLQ	LQ		02 34 21.4	
MVO				eLR	LR		02 42 25.4	
	comp=Z,48µm,20.0s							
PVIS	**Viseu**	**161.95**	**2**	*e*PKPdf		**PKPdf**	**01 46 35.5**	**-1.2**
PVIS	**Viseu**	**161.95**	**2**	*e*PKPab		**PKPab**	**01 47 22.7**	**+0.1**
UCM	**Universidad Co**	**162.09**	**351**	PKP		**PKPdf**	**01 46 34.9**	**-2.0**
MTE	**Manteigas**	**162.27**	**1**	PKPdf		**PKPdf**	**01 46 35.3**	**-1.8**
MTE	**Manteigas**	**162.27**	**1**	*e*PKPdf		**PKPdf**	**01 46 35.5**	**-1.6**
MTE	**Manteigas**	**162.27**	**1**	*e*PKPab		**PKPab**	**01 47 24.2**	**+0.2**
MTE	**Manteigas**	**162.27**	**1**	eLQ	LQ		02 34 33.1	
MTE				eLR	LR		02 43 01.3	
	comp=Z,41µm,20.0s							
COI	**Coimbra**	**162.43**	**4**	*e*PKPdf		**PKPdf**	**01 46 36.7**	**-0.4**
COI	**Coimbra**	**162.43**	**4**	*e*PKPab		**PKPab**	**01 47 25.5**	**+0.9**
PCAS	**Casmilo, Conde**	**162.58**	**4**	*e*PKPdf		**PKPdf**	**01 46 37.1**	**-0.2**
PCAS	**Casmilo, Conde**	**162.58**	**4**	*e*PKPab		**PKPab**	**01 47 25.3**	**0.0**
ESDC	**Sonseca Array**	**162.81**	**352**	PKP		**PKPdf**	**01 46 35.4**	**-2.2**
	comp=Z,0.9nm,1.1s,baz=304,slow=3.0,SNR=5.2							
ESDC				PKPab		**PKPab**	**01 47 25.3**	**-1.1**
	comp=Z,12nm,0.9s,baz=357,slow=2.9,SNR=17							
ESDC				PP		**PP**	**01 51 14.1**	**+4.1**
	comp=Z,12nm,1.2s,baz=31,slow=4.8,SNR=6.1							
PCBR	**Castelo Branco**	**162.83**	**1**	*e*PKPdf		**PKPdf**	**01 46 37.1**	**-0.5**
PCBR	**Castelo Branco**	**162.83**	**1**	*e*PKPab		**PKPab**	**01 47 27.0**	**+0.6**
PSBE	**So Bento**	**163.09**	**5**	*e*PKPdf		**PKPdf**	**01 46 38.6**	**+0.7**
PMRV	**Marv??o**	**163.25**	**1**	*e*PKPdf		**PKPdf**	**01 46 38.2**	**+0.2**
PMRV	**Marv??o**	**163.25**	**1**	*e*PKPab		**PKPab**	**01 47 28.8**	**+0.6**
PMRV	**Marv??o**	**163.25**	**1**	eLQ	LQ		02 34 57.8	
PMRV				eLR	LR		02 43 23.2	
	comp=Z,42µm,20.0s							
PMTG	**Montargil**	**163.57**	**3**	*e*PKPdf		**PKPdf**	**01 46 39.8**	**+1.5**
LIC	**Lamto**	**163.59**	**187**	⇑*i*P		**PKPdf**	**01 46 40.2**	**+1.1**
	comp=Z,263nm,1.4s							
PMAFR	**Mafra**	**163.60**	**6**	*e*PKPdf		**PKPdf**	**01 46 37.1**	**-1.2**
PMAFR	**Mafra**	**163.60**	**6**	*e*PKPab		**PKPab**	**01 47 30.5**	**+0.7**
KIC	**Kosan Boka**	**163.69**	**188**	⇑*i*P		**PKPdf**	**01 46 40.1**	**+0.9**
	comp=Z,12nm,0.8s							
PESTR	**Estremoz**	**163.80**	**2**	PKPdf		**PKPdf**	**01 46 39.8**	**+1.2**
PESTR				PKPab		**PKPab**	**01 47 28.9**	**-1.8**
PESTR	**Estremoz**	**163.80**	**2**	*e*PKPdf		**PKPdf**	**01 46 39.4**	**+0.9**
PESTR	**Estremoz**	**163.80**	**2**	*e*PKPab		**PKPab**	**01 47 31.0**	**+0.3**
PMST	**Lisbon--Monsan**	**163.83**	**6**	*e*PKPdf		**PKPdf**	**01 46 37.1**	**-1.4**
PACT	**Alcochete**	**163.83**	**5**	*e*PKPdf		**PKPdf**	**01 46 39.0**	**+0.5**
PACT	**Alcochete**	**163.83**	**5**	*e*PKPab		**PKPab**	**01 47 33.2**	**+2.4**
LIS	**Lisbon**	**163.85**	**6**	*e*PKPdf		**PKPdf**	**01 46 37.8**	**-0.8**
LIS				IAMs_20	IAMs_20		02 52 29.5	
	comp=E,81µm,23.0s							
LIS	**Lisbon**	**163.85**	**6**	*e*PKIKP		**PKPdf**	**01 46 37.7**	**-0.8**
TIC	**Toumodi**	**164.00**	**187**	⇑*i*P		**PKPdf**	**01 46 38.5**	**-1.0**
	comp=E,186nm,1.1s							
DBIC	**Dimbokro**	**164.01**	**188**	PKP		**PKPdf**	**01 46 38.0**	**-1.5**
	comp=E,4.4nm,0.6s,baz=214,slow=1.8,SNR=5.4							
DBIC				PKPab		**PKPab**	**01 47 31.4**	**-0.7**
	comp=E,52nm,1.0s,baz=160,slow=5.7,SNR=9.1							
DBIC				PP		**PP**	**01 51 16.3**	**+0.1**
	comp=E,11nm,0.8s,baz=155,slow=5.5,SNR=4.0							
EVO	**Evora**	**164.12**	**3**	PKP		**PKPdf**	**01 46 39.3**	**+0.5**
EVO	**Evora**	**164.12**	**3**	PP		PP	01 51 33.8	+17
EVO	**Evora**	**164.12**	**3**	*e*PKPdf		**PKPdf**	**01 46 40.1**	**+1.3**
EVO	**Evora**	**164.12**	**3**	*e*PKPab		**PKPab**	**01 47 33.2**	**+1.1**
CART	**Cartagena**	**164.22**	**342**	PKP		**PKPdf**	**01 46 38.7**	**-0.2**
PBAR	**Barrancos**	**164.50**	**0**	*e*PKPdf		**PKPdf**	**01 46 39.0**	**-0.2**
PBAR	**Barrancos**	**164.50**	**0**	*e*PKPab		**PKPab**	**01 47 33.2**	**-0.5**
PNCL	**Nicolau / Gran**	**164.51**	**5**	*e*PKPdf		**PKPdf**	**01 46 39.8**	**+0.6**
PNCL	**Nicolau / Gran**	**164.51**	**5**	*e*PKPab		**PKPab**	**01 47 36.4**	**+2.6**
MESJ	**Messejana**	**164.80**	**4**	*e*PKPdf		**PKPdf**	**01 46 38.7**	**-0.7**
MESJ				IAMs_20	IAMs_20		02 58 48.7	
	comp=Z,89µm,18.0s							
MESJ	**Messejana**	**164.80**	**4**	*e*PKIKP		**PKPdf**	**01 46 38.7**	**-0.7**
MESJ	**Messejana**	**164.80**	**4**	*e*PKPdf		**PKPdf**	**01 46 42.1**	**+2.7**
PCVE	**Castro Verde**	**165.01**	**3**	*e*PKPdf		**PKPdf**	**01 46 41.3**	**+1.7**
PCVE	**Castro Verde**	**165.01**	**3**	*e*PKPab		**PKPab**	**01 47 35.9**	**-0.1**
PTEO	**Sao Teotonio**	**165.05**	**5**	*e*PKPab		**PKPab**	**01 47 35.3**	**-0.9**
PVAQ	**Vaqueiros**	**165.26**	**2**	*e*PKPdf		**PKPdf**	**01 46 41.3**	**+1.5**
PVAQ	**Vaqueiros**	**165.26**	**2**	*e*PKPab		**PKPab**	**01 47 37.5**	**+0.4**
PVAQ	**Vaqueiros**	**165.26**	**2**	eLQ	LQ		02 35 44.0	
PVAQ				eLR	LR		02 44 19.8	
	comp=Z,65µm,20.0s							
MORF	**Marmelete**	**165.30**	**5**	*e*PKPdf		**PKPdf**	**01 46 39.1**	**-0.9**
MORF				IAMs_20	IAMs_20		03 02 49.5	
	comp=Z,112µm,34.2s							
MORF	**Marmelete**	**165.30**	**5**	*e*PKIKP		**PKPdf**	**01 46 39.1**	**-0.9**
PBDV	**Barranco-do-Ve**	**165.41**	**3**	*e*PKPdf		**PKPdf**	**01 46 41.3**	**+1.3**
SFS	**San Fernando**	**166.19**	**357**	PP		PP	01 51 44.5	+17
PMOZ	**Porto Moniz, M**	**166.40**	**39**	eLQ	LQ		02 35 28.4	
PMOZ				eLR	LR		02 44 53.0	
	comp=Z,47µm,20.0s							
CEU	**Ceuta**	**166.70**	**354**	PKP		**PKPdf**	**01 46 42.1**	**+1.1**
CEU	**Ceuta**	**166.70**	**354**	PP		PP	01 51 38.1	+7.9
FUL	**Funchal**	**166.71**	**39**	*e*PKPdf		**PKPdf**	**01 46 41.3**	**+0.2**
CHAS	**Isla Isabel II**	**166.87**	**343**	PKP		**PKPdf**	**01 46 42.5**	**+1.3**
WMELI	**Melilla**	**166.88**	**345**	PKP		**PKPdf**	**01 46 43.9**	**+2.7**
PVLZ	**Peæn de**	**167.28**	**350**	PKP		**PKPdf**	**01 46 38.3**	**-3.2**
PVLZ	**Peæn de**	**167.28**	**350**	PP		PP	01 51 27.2	-6.0
TOA0	**Torodi Ar. Sit**	**167.48**	**223**			**PKPdf**	**01 46 39.5**	**-2.7**
TOA0				PKPab		**PKPab**	**01 47 47.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**167.48**	**223**	PKP		**PKPdf**	**01 46 39.2**	**-3.0**
	comp=Z,5.5nm,0.9s,baz=1.7,slow=0.8,SNR=20							
TORD				PKPab		**PKPab**	**01 47 46.6**	**-0.9**
	comp=Z,20nm,0.7s,baz=122,slow=3.2,SNR=6.4							
TORD				PP		**PP**	**01 51 38.7**	**+3.4**
	comp=Z,12nm,1.0s,baz=116,slow=7.3,SNR=2.3							
IFR	**Ifrane**	**169.03**	**352**	PKP		**PKPdf**	**01 46 41.5**	**-1.5**
IFR	**Ifrane**	**169.03**	**352**	PP		PP	01 51 39.6	-2.8
AVE	**Averroes**	**169.36**	**2**	PKP		**PKPdf**	**01 46 45.1**	**+2.1**
AVE	**Averroes**	**169.36**	**2**	PP		PP	01 51 56.8	+13
MDT	**Midelt**	**169.64**	**349**	PKP		**PKPdf**	**01 46 43.1**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=104,slow=7.5,SNR=6.8							
MDT				PP		PP	01 51 55.5	+10
	comp=Z,22nm,1.4s,baz=58,slow=3.9,SNR=4.4							
KOWA	**Kowa**	**171.44**	**200**			**PKPdf**	**01 46 41.4**	**-3.2**
KOWA				PKPab		**PKPab**	**01 48 05.5**	**+0.6**

*IDC **12** 01:32:44.4±0.8,22.˚64S×173.˚22E,h0km,mb5.0/13, mbtmp5.0/14,ML5.1/1,Error ellipse: s-maj=24.0km s-min=21.5km az=136.0*
*NEIC **12** 01:32:49.9±1.6,22.˚1S±0.˚1×173.˚1E±0.˚1,h10km±1km, mb5.4/22,Error ellipse: s-maj=20.9km s-min=17.9km az=194.0*

ISC 12 01:32:50.8±0.5,22.˚34S±0.˚09×173.˚14E±0.˚07,h32km,n54, σ1§79/51,mb5.3/23,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.82**	**279**	Pn	**Pn**	**01 34 01.6**	**+0.5**
PINNC	**Pines Island,**	**5.27**	**266**	Pn	**Pn**	**01 34 07.2**	**-0.1**
OUENC	**Ouen Island, N**	**5.83**	**268**	Pn	**Pn**	**01 34 14.6**	**-0.4**
ONTNC	**Ouen Toro**	**6.19**	**269**	Pn	**Pn**	**01 34 20.9**	**+1.0**
DZM	**Mont Dzumac**	**6.21**	**271**	Pn	**Pn**	**01 34 20.3**	**0.0**
	40nm,0.3s,baz=95,slow=15,SNR=3.9						
DZM				Sn	**Sn**	**01 35 29.8**	**-0.5**
	30nm,0.3s,baz=173,slow=14,SNR=2.0						
	156nm,0.5s						
DZM	**Mont Dzumac**	**6.21**	**271**	Pn	**Pn**	**01 34 22.0**	**+1.7**
BSWZ	**Blackbirch Sta**	**19.33**	**178**	P	**Pn**	**01 37 18.7**	**+4.1**
EIDS	**Eidsvold**	**20.39**	**257**	P	**P**	**01 37 25.4**	**+0.3**
LTZ	**Lake Taylor**	**20.40**	**182**	P	Pn	01 37 30.9	+3.7
ARMA	**Armidale**	**20.86**	**243**	P	**P**	**01 37 31.7**	**+1.5**
OXZ	**Oxford**	**20.95**	**182**	P	**P**	**01 37 34.9**	**+4.0**
CTAO	**Charters Tower**	**25.15**	**270**	P	**P**	**01 38 13.8**	**+0.5**
STKA	**Stephens Creek**	**29.55**	**244**	P	**P**	**01 38 51.4**	**-1.3**
	9.9nm,0.6s,baz=94,slow=16,SNR=1.2						
	9.9nm,0.6s						
MANU	**Manus Island**	**32.15**	**305**	P	**P**	**01 39 15.4**	**-0.3**
MANU				IAmb	IAmb	01 39 26.1	
	comp=Z,164nm,1.9s						
ASAR	**Alice Springs**	**36.06**	**260**	P	**P**	**01 39 47.4**	**-2.3**
	comp=Z,14nm,0.7s,baz=76,slow=9.4,SNR=6.8						
	comp=Z,14nm,0.7s						
ASAR	**Alice Springs**	**36.06**	**260**	P	**P**	**01 39 50.6**	**+0.9**
FORT	**Forrest**	**40.96**	**248**	P	**P**	**01 40 33.1**	**+2.3**
FORT				IAmb	IAmb	01 40 48.4	
	comp=Z,104nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.63**	**266**	P	**P**	**01 40 58.9**	**-1.7**
	comp=Z,28nm,0.7s,baz=136,slow=12,SNR=7.3						
	comp=Z,28nm,0.7s						
FITZ	**Fitzroy Crossi**	**44.63**	**266**	P	**P**	**01 41 01.5**	**+0.9**
FITZ				IAmb	IAmb	01 41 05.5	
	comp=Z,61nm,1.3s						
LEM	**Lembang**	**64.81**	**273**	P	**P**	**01 43 26.5**	**-0.7**
	comp=Z,90nm,0.7s,baz=83,slow=9.1,SNR=6.7						
	comp=Z,90nm,0.7s						
JYT	**Yasato**	**66.06**	**331**	P	**P**	**01 43 34.4**	**-0.1**
MJAR	**Matsushiro Arr**	**67.22**	**330**	P	**P**	**01 43 41.5**	**-0.5**
	comp=Z,11nm,1.0s,baz=165,slow=7.4,SNR=6.6						
	comp=Z,11nm,1.0s						
MAJO	**Matsushiro**	**67.22**	**330**	P	**P**	**01 43 41.8**	**-0.1**
MAJO				IAmb	IAmb	01 43 55.8	
	comp=Z,37nm,1.2s						
QSPA	**South Pole Qui**	**67.73**	**180**	P	**P**	**01 43 42.0**	**-3.0**
	comp=Z,20nm,1.0s,baz=275,slow=2.9,SNR=5.9						
	comp=Z,20nm,1.0s						
QSPA	**South Pole Qui**	**67.73**	**180**	P	P	01 43 50.4	+5.3
JHS	**Saijyo**	**68.51**	**325**		**P**	**01 43 49.8**	**-0.4**
JHS				IAmb	IAmb	01 43 56.6	
	comp=Z,24nm,0.8s						
KSRS	**Korea Array**	**73.13**	**324**	P	**P**	**01 44 19.8**	**+1.7**
	comp=Z,5.4nm,0.8s,baz=138,slow=6.2,SNR=5.9						
	comp=Z,5.4nm,0.8s						
YSS	**Yuzh-Sakhalins**	**74.23**	**339**	P	**P**	**01 44 26.6**	**+2.2**
USRK	**Ussuriysk Ar.**	**76.18**	**331**	P	**P**	**01 44 35.4**	**-0.2**
	comp=Z,8.0nm,0.6s,baz=114,slow=4.4,SNR=11						
	comp=Z,8.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**76.18**	**331**	P	**P**	**01 44 36.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**76.32**	**350**	P	**P**	**01 44 37.6**	**+1.4**
PEA0B				IAmb	IAmb	01 44 44.4	
	comp=Z,84nm,1.4s						
PETK	**Petropavlovsk-**	**76.32**	**350**	P	**P**	**01 44 37.8**	**+1.5**
	comp=Z,6.1nm,0.6s,baz=134,slow=6.2,SNR=2.9						
	comp=Z,6.1nm,0.6s						
MDJ	**Mudanjiang**	**77.60**	**330**	P	**P**	**01 44 42.7**	**-0.9**
MDJ				IAmb	IAmb	01 44 44.2	
	comp=Z,75nm,1.7s						
PMSA	**Palmer Station**	**82.73**	**159**	P	**P**	**01 45 08.2**	**-3.0**
	comp=Z,29nm,0.8s,baz=266,slow=4.3,SNR=4.4						
	comp=Z,29nm,0.8s						
PMSA	**Palmer Station**	**82.73**	**159**	P	**P**	**01 45 13.3**	**+2.2**
PMSA				IAmb	IAmb	01 45 13.6	
	comp=Z,34nm,0.9s						
OHAK	**Old Harbor**	**84.12**	**18**	P	**P**	**01 45 19.6**	**+1.5**
OHAK				IAmb	IAmb	01 45 24.2	
	comp=Z,30nm,1.2s						
TROLL	**Troll, Antarti**	**85.68**	**183**	P	**P**	**01 45 22.0**	**-4.2**
O19K	**Port Alsworth**	**86.42**	**16**	P	**P**	**01 45 31.6**	**+2.1**
O19K				IAmb	IAmb	01 45 36.4	
	comp=Z,30nm,1.1s						
CMB	**Columbia Colle**	**86.57**	**46**	P	**P**	**01 45 32.7**	**+1.8**
VNA3	**Neumayer Olymp**	**86.65**	**179**	P	P	01 45 24.8	-6.0
ISA	**Isabella, Lake**	**86.66**	**49**	P	**P**	**01 45 33.0**	**+1.5**
ISA				IAmb	IAmb	01 45 37.3	
	comp=Z,15nm,0.9s						
VNA2	**Neumayer--Watz**	**86.99**	**180**	P	P	01 45 27.1	-5.4
	baz=171,slow=5.0						
VNA1	**Neumayer--Stat**	**87.26**	**180**	P	**P**	**01 45 30.3**	**-3.5**
NVAR	**Mina Array Bea**	**88.17**	**47**	P	**P**	**01 45 39.3**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=227,slow=7.4,SNR=7.4						
NVAR				PP	**PP**	**01 49 04.6**	**-1.9**
	comp=Z,3.0nm,0.9s,baz=228,slow=7.7,SNR=3.8						
	comp=Z,4.2nm,0.9s						
TPNV	**Topopah Spring**	**88.86**	**49**	P	**P**	**01 45 43.0**	**+0.9**
BMN	**Battle Mountai**	**89.90**	**46**	P	**P**	**01 45 48.5**	**+1.6**
BMN				IAmb	IAmb	01 45 52.4	
	comp=Z,18nm,1.0s						
SONM	**Songino Array**	**91.89**	**322**	P	**P**	**01 45 56.1**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=116,slow=3.5,SNR=5.7						
	comp=Z,2.5nm,0.6s						
ILAR	**Eielson Array**	**92.14**	**16**	P	**P**	**01 45 56.2**	**-0.3**
	comp=Z,6.3nm,0.9s,baz=235,slow=5.3,SNR=4.9						
	comp=Z,6.3nm,0.9s						
PLCA	**Paso Flores**	**93.80**	**137**	PP	**PP**	**01 49 49.5**	**-0.5**
	comp=Z,4.1nm,1.0s,baz=248,slow=5.9,SNR=3.2						
ARCES	**ARCESS Array B**	**128.96**	**346**	PKP	**PKPdf**	**01 51 51.5**	**-3.1**
	comp=Z,2.4nm,0.7s,baz=66,slow=2.0,SNR=5.3						
MLR	**Muntele Rosu**	**144.69**	**319**	PKP	PKPbc	01 52 23.6	+0.3
	comp=Z,11nm,1.0s,baz=5.2,slow=13,SNR=5.4						
EKA	**Eskdalemuir Ar**	**146.94**	**356**	PKPbc	**PKPdf**	**01 52 27.9**	**+0.2**
	comp=Z,4.8nm,0.5s,baz=350,slow=2.5,SNR=12						
CLL	**Collm**	**147.22**	**337**	*i* PKPbc	**PKPbc**	**01 52 30.8**	**+0.2**
GERES	**GERESS Array B**	**148.91**	**333**	PKPbc	**PKPbc**	**01 52 35.6**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=44,slow=4.5,SNR=7.5						

*IDC **12** 01:36:01.4±1.4,22.˚80S×173.˚28E,h0km,mb4.5/4, mbtmp4.5/5,ML4.3/1,Error ellipse: s-maj=41.5

ESPR				*i* Vmb_Lg			01 37 32.5		
EQES	**Quesada**	**2.30**	**13**	Pg	**Pb**		**01 37 00.6**	**-0.9**	
EQES				Sg	**Sb**		**01 37 30.3**	**+0.3**	
EQES				*i* Vmb_Lg			01 37 32.3		
IFR	**Ifrane**	**2.34**	**210**	P	**Pn**		**01 36 59.3**	**+0.8**	
IFR				S	**Sn**		**01 37 27.7**	**+0.5**	
EADA	**Adamuz**	**2.69**	**346**	Pn	**Pn**		**01 37 05.2**	**+2.1**	
EADA				Pg	**Pb**		**01 37 08.8**	**+0.6**	
EADA				Sn	**Sn**		**01 37 36.4**	**+0.7**	
EADA				Sg	**Sb**		**01 37 41.7**	**+0.6**	
EADA				*i* Vmb_Lg			01 37 45.2		
CZD	**Col de Zad**	**2.75**	**204**	P	**Pn**		**01 37 04.5**	**+0.4**	
CZD				S	**Sn**		**01 37 37.9**	**+0.6**	
MD31	**MD31**	**2.82**	**198**	P	**Pn**		**01 37 06.0**	**+1.1**	
MD31				S	**Sn**		**01 37 37.9**	**-0.9**	
EZAR	**Zarzadilla de**	**2.83**	**35**	Pn	**Pn**		**01 37 05.2**	**+0.1**	
EZAR				Sn	**Sn**		**01 37 39.3**	**+0.2**	
MDT	**Midelt**	**2.83**	**195**	P	**Pn**		**01 37 06.3**	**+1.2**	
ECAB	**El Cabril**	**2.86**	**332**	Pn	**Pn**		**01 37 07.7**	**+2.3**	
ECAB				Sn	**Sn**		**01 37 40.6**	**+0.9**	
ECAB				*i* Vmb_Lg			01 37 52.0		
EMUR	**La Murta**	**3.03**	**40**	Pn	**Pn**		**01 37 09.2**	**+1.4**	
EMUR				Sn	**Sn**		**01 37 42.1**	**-1.9**	
EMUR				*i* Vmb_Lg			01 37 50.9		
ZHG	**ZHG**	**3.20**	**230**	P	**Pn**		**01 37 11.4**	**+1.2**	
ZHG				S	**Sn**		**01 37 48.0**	**-0.3**	
EMIN	**Mina Concepcio**	**3.24**	**314**	Pn	**Pn**		**01 37 11.2**	**+0.6**	
EMIN				Sn	**Sn**		**01 37 47.4**	**-1.6**	
EMIN				*i* Vmb_Lg			01 37 49.4		
ETOB	**Tobarra**	**3.54**	**29**	Pn	**Pn**		**01 37 17.6**	**+2.8**	
ETOB				Sn	**Sn**		**01 37 57.4**	**+0.8**	
ETOB				*i* Vmb_Lg			01 38 03.0		
EGRO	**El Granado**	**3.61**	**304**	Pn	**Pn**		**01 37 16.2**	**+0.4**	
EGRO				Sn	**Sn**		**01 37 56.4**	**-1.9**	
EGRO				*i* Vmb_Lg			01 37 59.1		
PVAQ	**Vaqueiros**	**3.71**	**301**	P	**Pn**		**01 37 16.5**	**-0.6**	
PVAQ				S	**Sn**		**01 37 58.5**	**-2.1**	
PVAQ	**Vaqueiros**	**3.71**	**301**	*e*Pn	**Pn**		**01 37 18.0**	**+0.9**	
PVAQ				*e*Sn	**Sn**		**01 37 58.9**	**-1.7**	
PVAQ				A	A		01 38 01.2		
	6.0nm,0.6s								
PBAR	**Barrancos**	**3.73**	**315**	*e*Pn	**Pn**		**01 37 18.2**	**+0.9**	
PBAR				*e*Sn	**Sn**		**01 38 00.2**	**-0.9**	
PBAR				A	A		01 38 08.8		
	2.6nm,0.4s								
PBDV	**Barranco-do-Ve**	**3.79**	**298**	*e*Pn	**Pn**		**01 37 19.1**	**+0.9**	
PBDV				*e*Sn	**Sn**		**01 38 02.3**	**-0.3**	
PBDV				A	A		01 38 19.3		
	4.8nm,0.6s								
FIGM	**Figuig**	**3.98**	**148**	P	**Pn**		**01 37 22.2**	**+1.2**	
AFON	**Font Roja**	**4.01**	**38**	Pn	**Pn**		**01 37 24.2**	**+2.9**	
PAB	**San Pablo**	**4.01**	**353**	Pn	**Pn**		**01 37 23.5**	**+2.2**	
PAB				Sn	**Sn**		**01 38 07.3**	**-1.0**	
PAB				Sg	**Sb**		**01 38 22.9**	**+3.8**	
PAB				*i* Vmb_Lg			01 38 23.9		
PCVE	**Castro Verde**	**4.04**	**302**	*e*Pn	**Pn**		**01 37 22.9**	**+1.2**	
PCVE				*e*Sn	**Sn**		**01 38 09.3**	**+0.4**	
PCVE				A	A		01 38 16.2		
	4.7nm,0.8s								
ESDC	**Sonseca Array**	**4.11**	**357**	Pn	**Pn**		**01 37 24.8**	**+2.1**	
ESDC				Sn	**Sn**		**01 38 10.4**	**-0.3**	
ESDC				*i* Vmb_Lg			01 38 32.6		
EBAD	**Badajoz**	**4.13**	**322**	Pn	**Pn**		**01 37 23.5**	**+0.6**	
EBAD				Sn	**Sn**		**01 38 09.6**	**-1.5**	
EBAD				*i* Vmb_Lg			01 38 12.0		
PBEJ	**Beja**	**4.14**	**308**	*e*Pn	**Pn**		**01 37 24.6**	**+1.6**	
PBEJ				*e*Sn	**Sn**		**01 38 10.5**	**-0.7**	
MESJ	**Messejana**	**4.27**	**304**	*e*P	**Pn**		**01 37 25.0**	**+0.2**	
MESJ	**Messejana**	**4.27**	**304**	*e*Pn	**Pn**		**01 37 26.1**	**+1.3**	
MESJ				*e*Sn	**Sn**		**01 38 13.5**	**-1.0**	
MESJ				A	A		01 38 14.8		
	3.7nm,0.4s								
PFVI	**Vila Bisbo**	**4.41**	**292**	*e*Pn	**Pn**		**01 37 27.7**	**+1.0**	
PFVI				*e*Sn	**Sn**		**01 38 15.8**	**-2.1**	
PFVI				A	A		01 38 18.4		
	5.8nm,0.9s								
PTEO	**Sao Teotonio**	**4.49**	**298**	*e*Pn	**Pn**		**01 37 29.1**	**+1.3**	
PTEO				*e*Sn	**Sn**		**01 38 20.4**	**+0.6**	
PTEO				A	A		01 38 30.1		
	5.8nm,0.7s								
PESTR	**Estremoz**	**4.52**	**318**	P	**Pn**		**01 37 29.2**	**+0.9**	
PESTR	**Estremoz**	**4.52**	**318**	*e*Pn	**Pn**		**01 37 30.0**	**+1.7**	
PESTR				*e*Sn	**Sn**		**01 38 19.2**	**-1.5**	
PESTR				A	A		01 38 30.3		
	2.1nm,0.5s								
EVO	**Evora**	**4.54**	**312**	P	**Pn**		**01 37 29.9**	**+1.4**	
EVO				S	**Sn**		**01 38 19.0**	**-2.0**	
EVO	**Evora**	**4.54**	**312**	*e*Pn	**Pn**		**01 37 29.9**	**+1.4**	
EVO				*e*Sn	**Sn**		**01 38 19.1**	**-2.0**	
EVO				A	A		01 38 22.5		
	4.5nm,0.7s								
ECHE	**Chera**	**4.58**	**28**	Pn	**Pn**		**01 37 31.4**	**+2.3**	
PNCL	**Nicolau / Gran**	**4.62**	**305**	*e*Pn	**Pn**		**01 37 30.4**	**+0.8**	
PNCL				*e*Sn	**Sn**		**01 38 21.9**	**-1.2**	
PNCL				A	A		01 38 23.3		
	3.0nm,0.5s								
PMRV	**Marv??o**	**4.84**	**324**	*e*Pn	**Pn**		**01 37 34.1**	**+1.4**	
PMRV				*e*Sn	**Sn**		**01 38 28.2**	**-0.4**	
PMRV				A	A		01 38 38.4		
	2.3nm,0.5s								
PMTG	**Montargil**	**5.01**	**316**	*e*Pn	**Pn**		**01 37 35.8**	**+0.8**	
PMTG				*e*Sn	**Sn**		**01 38 31.6**	**-1.2**	
PMTG				A	A		01 38 54.9		
	1.8nm,0.7s								
GUD	**Guadarrama**	**5.09**	**356**	Pn	**Pn**		**01 37 37.7**	**+1.5**	
GUD				Sn	**Sn**		**01 38 33.2**	**-1.6**	
GUD				Sg	**Sb**		**01 38 56.4**	**+6.3**	
PACT	**Alcochete**	**5.19**	**310**	*e*Pn	**Pn**		**01 37 39.0**	**+1.6**	
PACT				*e*Sn	**Sn**		**01 38 36.5**	**-0.6**	
PACT				A	A		01 38 37.2		
	18nm,0.7s								
PCBR	**Castelo Branco**	**5.21**	**326**	*e*Pn	**Pn**		**01 37 39.4**	**+1.7**	
PCBR				*e*Sn	**Sn**		**01 38 37.2**	**-0.4**	
EIBI	**Ibiza**	**5.32**	**48**	Pn	**Pn**		**01 37 39.1**	**-0.1**	
EIBI				Sn	**Sn**		**01 38 38.0**	**-2.3**	
ETOR	**Torete**	**5.41**	**14**	Pn	**Pn**		**01 37 42.6**	**+2.0**	
ETOR				Sg	**Sg**		**01 39 07.2**	**-6.6**	
OUK	**Oukaimeden**	**5.55**	**220**	P	**Pn**		**01 37 43.1**	**+0.3**	
PSBE	**So Bento**	**5.64**	**316**	*e*Pn	**Pn**		**01 37 45.5**	**+1.8**	
PSBE				*e*Sn	**Sn**		**01 38 46.4**	**-2.0**	
MTE	**Manteigas**	**5.70**	**329**	*e*Pn	**Pn**		**01 37 44.6**	**+0.1**	
PCAS	**Casmilo, Conde**	**5.87**	**321**	*e*Pn	**Pn**		**01 37 49.8**	**+3.1**	
PVIS	**Viseu**	**6.11**	**329**	*e*Pn	**Pn**		**01 37 52.2**	**+2.1**	
MVO	**Moncorvo**	**6.17**	**336**	*e*Pn	**Pn**		**01 37 53.2**	**+2.2**	
MVO				*e*Sn	**Sn**		**01 38 59.7**	**-1.7**	
TTIG	**Tnine Tigouga,**	**6.38**	**220**	P	**Pn**		**01 37 54.7**	**+0.8**	
PVRL	**Vila Real**	**6.51**	**332**	*e*Pn	**Pn**		**01 37 57.6**	**+2.0**	
POLO	**Lamas de Olo**	**6.62**	**332**	*e*Pn	**Pn**		**01 37 59.0**	**+1.7**	
POLO				*e*Sn	**Sn**		**01 39 13.7**	**+1.0**	
PBRG	**Braganca**	**6.67**	**340**	*e*Pn	**Pn**		**01 38 00.0**	**+2.2**	
ECAL	**Calabor**	**6.79**	**341**	Pn	**Pn**		**01 38 01.2**	**+1.6**	
ECAL				Sn	**Sn**		**01 39 15.2**	**-1.6**	
ELOB	**Lobios**	**7.15**	**333**	Pn	**Pn**		**01 38 05.8**	**+1.4**	
ELOB				Sn	**Sn**		**01 39 23.7**	**-2.0**	
PGAV	**Gavieira, Arco**	**7.32**	**332**	*e*Pn	**Pn**		**01 38 09.0**	**+2.3**	

*INET **12** 01:36:51.2±0.6, 12°.10N×89°.62W, h16km, MW3.3*
*SNET **12** 01:36:51.1±0.9, 12°.22N×89°.61W, h14km±8km, ML3.7*
*UCR **12** 01:36:51.3±0.9, 12°.20N×89°.62W, h20km±8km, ML3.7*
*GCG **12** 01:36:54.5±0.8, 12°.32N×89°.82W, h103km±101km, MD3.9*

ISC 12 01:36:53.1±2.3, 12°.2N±0°.1×89°.55W±0°.06, h33km, n35, σ0$67/46, 4C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**1.41**	**4**	*e*P	**Pn**	**01 37 16.3**	**-0.2**
JAYA				*e*S	**Sb**	**01 37 35.5**	**-1.1**
JAYA				IAML		01 37 37.5	
	comp=Z,2μm,0.2s						
JAYA	**Jayaque - finc**	**1.41**	**4**	*e*P	**Pn**	**01 37 16.3**	**-0.2**
JAYA				*e*S	**Sb**	**01 37 35.5**	**-1.1**
JAYA				IAML		01 37 37.5	
	comp=Z,2μm,0.2s						
LFRS	**El Faro**	**1.45**	**19**	*e*P	**Pn**	**01 37 17.2**	**+0.1**
LFRS	**El Faro**	**1.45**	**19**	*e*P	**Pn**	**01 37 17.2**	**+0.1**
COEG	**Centro de Oper**	**1.52**	**25**	*e*P	**Pn**	**01 37 18.1**	**+0.1**
COEG	**Centro de Oper**	**1.52**	**25**	*e*P	**Pn**	**01 37 18.1**	**+0.1**
CEVE	**Cerro Verde**	**1.58**	**357**⇑	*e*P	**Pn**	**01 37 19.1**	**+0.1**
CEVE				IAML		01 37 44.0	
	comp=Z,1μm,0.2s						
CEVE	**Cerro Verde**	**1.58**	**357**⇑	*e*P	**Pn**	**01 37 19.1**	**+0.1**
CEVE				IAML		01 37 44.0	
	comp=Z,1μm,0.2s						
PAVA	**Las Pavas**	**1.58**	**22**	*e*P	**Pn**	**01 37 19.2**	**+0.4**
PAVA	**Las Pavas**	**1.58**	**22**	*e*P	**Pn**	**01 37 19.2**	**+0.4**
SBLS	**San Blas**	**1.59**	**357**	*e*P	**Pn**	**01 37 19.2**	**0.0**
SBLS	**San Blas**	**1.59**	**357**	*e*P	**Pn**	**01 37 19.2**	**0.0**
COEB	**Comit de Eme**	**1.59**	**38**	*e*P	**Pn**	**01 37 19.5**	**+0.4**
COEB				*e*S	**Sb**	**01 37 41.5**	**-0.4**
COEB				IAML		01 37 47.1	
	comp=Z,563nm,0.3s						
COEB	**Comit de Eme**	**1.59**	**38**	*e*P	**Pn**	**01 37 19.5**	**+0.4**
COEB				*e*S	**Sb**	**01 37 41.5**	**-0.4**
COEB				IAML		01 37 47.1	
	comp=Z,563nm,0.3s						
SCLA	**Alcaldia de Sa**	**1.66**	**29**	*e*P	**Pn**	**01 37 20.5**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.66**	**29**	*e*P	**Pn**	**01 37 20.5**	**+0.6**
NUBE	**Las Nubes**	**1.67**	**352**⇑	*e*P	**Pn**	**01 37 19.9**	**-0.2**
NUBE	**Las Nubes**	**1.67**	**352**⇑	*e*P	**Pn**	**01 37 19.9**	**-0.2**
PQSS	**Presa 15 de Se**	**1.68**	**35**	*e*P	**Pn**	**01 37 20.6**	**+0.5**
PQSS	**Presa 15 de Se**	**1.68**	**35**	*e*P	**Pn**	**01 37 20.6**	**+0.5**
PACA	**Pacayal**	**1.71**	**44**	*e*P	**Pn**	**01 37 21.4**	**+0.7**
PACA	**Pacayal**	**1.71**	**44**	*e*P	**Pn**	**01 37 21.4**	**+0.7**
PACA	**Pacayal**	**1.71**	**44**	*e*P	**Pn**	**01 37 21.3**	**+0.7**
SLOZ	**Alcaldia de Sa**	**1.79**	**353**	*e*P	**Pn**	**01 37 22.1**	**+0.4**
P5NO	**Presa 5 de nov**	**1.90**	**24**	*e*P	**Pn**	**01 37 23.8**	**+0.7**
LCND	**La Caada**	**1.93**	**57**	*e*P	**Pn**	**01 37 23.6**	**-0.1**
LCND				*e*S	**Sb**	**01 37 50.3**	**-1.1**
LCND				IAML		01 37 52.5	
	comp=Z,713nm,0.5s						
LCND	**La Caada**	**1.93**	**57**	*e*P	**Pn**	**01 37 23.6**	**-0.1**
LCND				*e*S	**Sb**	**01 37 50.3**	**-1.1**
LCND				IAML		01 37 52.5	
	comp=Z,713nm,0.5s						
CNCH	**Conchagua**	**1.96**	**58**	*e*P	**Pn**	**01 37 24.5**	**+0.4**
CNCH	**Conchagua**	**1.96**	**58**	*e*P	**Pn**	**01 37 24.5**	**+0.4**
CSGN	**Cosiguina Volc**	**2.07**	**69**	*e*P	**Pn**	**01 37 25.8**	**+0.2**
PCG	**Pacaya**	**2.37**	**334**	*e*P	**Pn**	**01 37 30.7**	**+0.7**
PCG				*e*S	**Sn**	**01 37 59.3**	**+1.2**
NBG	**Las Nubes**	**2.46**	**342**	*e*P	**Pn**	**01 37 32.9**	**+1.7**
NBG				*e*S	**Sn**	**01 38 01.9**	**+1.7**
CRIN	**San Cristobal**	**2.48**	**79**	*e*P	**Pn**	**01 37 31.4**	**+0.2**
FUG	**Fuego 3**	**2.53**	**330**	*e*P	**Pn**	**01 37 31.8**	**-0.2**
FUG				*e*P	**Pn**	**01 37 31.8**	**-0.2**
FUG				*e*S	**Sn**	**01 38 02.5**	**+0.6**
STG3	**Santiaguito 3,**	**3.15**	**321**	*e*P	**Pn**	**01 37 40.6**	**+0.1**
STG3				*e*S	**Sn**	**01 38 16.0**	**-1.1**

*IDC **12** 01:38:05.8±0.9, 22°.59S×173°.20E, h0km, mb4.4/12, mbtmp4.4/12, Error ellipse: s-maj=31.4km s-min=20.1km az=83.0*
*NEIC **12** 01:38:08.7±1.9, 22°.67S±0°.05×173°.7E±0°.1, h10km±1km, mb4.9/42, Error ellipse: s-maj=21.1km s-min=5.2km az=107.0*

ISC 12 01:38:08.0±0.5, 22°.59S±0°.08×173°.29E±0°.09, h10km, n73, σ1$32/60, mb4.8/31, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.36**	**273**	Pn	**Pn**	**01 39 42.3**	**+0.4**
	7.4nm,0.3s,baz=284,slow=8.0,SNR=1.9						
MSVF	**Nonsavu**	**6.58**	**44**	Pn	**Pn**	**01 39 47.6**	**+2.6**
	5.2nm,0.3s,baz=266,slow=12,SNR=5.1						
MSVF	**Nonsavu**	**6.58**	**44**	Pn	**Pn**	**01 39 44.1**	**-0.8**
SNZO	**South Karori**	**18.70**	**177**		**Pn**	**01 42 27.6**	**+0.8**
SNZO				IAmb	IAmb	01 42 36.5	
	comp=Z,63nm,1.1s						
LTZ	**Lake Taylor**	**20.15**	**182**	P	Pn	01 42 42.5	-1.8
LTZ				IAmb	IAmb	01 42 44.3	
	comp=Z,76nm,0.9s						
EIDS	**Eidsvold**	**20.48**	**258**	P	Pn	01 42 50.1	+1.8
EIDS				IAmb	IAmb	01 42 54.0	
	comp=Z,68nm,1.1s						
ARMA	**Armidale**	**20.87**	**244**	P	Pn	01 42 52.5	-0.4
RPZ	**Rata Peaks**	**21.15**	**185**	P	**P**	**01 42 53.8**	**+0.6**
	comp=Z,31nm,0.8s,baz=55,slow=2.8,SNR=5.2						
	comp=Z,31nm,0.8s						
TARA	**Tarawa**	**23.81**	**359**	P	**P**	**01 43 21.8**	**+0.6**
TARA				IAmb	IAmb	01 43 22.8	
	comp=Z,48nm,0.9s						
CAN	**Canberra**	**24.68**	**234**	P	**P**	**01 43 29.6**	**+0.4**
TOO	**Toolangi**	**28.18**	**232**	P	**P**	**01 44 01.9**	**+1.1**
BBOO	**Buckleboo**	**34.35**	**245**	P	**P**	**01 44 56.8**	**+1.6**
ASAR	**Alice Springs**	**36.16**	**260**	P	**P**	**01 45 08.8**	**-2.1**
	comp=Z,2.4nm,0.7s,baz=78,slow=9.1,SNR=5.2						
	comp=Z,2.4nm,0.7s						
ASAR	**Alice Springs**	**36.16**	**260**	P	P	01 45 13.2	+2.3
WB2	**Warramunga Arr**	**36.32**	**267**	P	P	01 45 14.8	+2.6
WRA	**Warramunga Arr**	**36.33**	**267**	P	**P**	**01 45 10.7**	**-1.6**
	comp=Z,2.5nm,0.8s,baz=97,slow=8.6,SNR=5.5						
	comp=Z,2.5nm,0.8s						
FORT	**Forrest**	**41.01**	**249**	P	**P**	**01 45 53.3**	**+1.9**
FAKI	**Fak Fak**	**44.32**	**290**	P	**P**	**01 46 14.9**	**-3.7**
	comp=Z,46nm,2.8s						
FITZ	**Fitzroy Crossi**	**44.76**	**267**	P	**P**	**01 46 20.3**	**-1.7**
	comp=Z,7.0nm,0.8s,baz=122,slow=8.4,SNR=2.1						
	comp=Z,7.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.76**	**267**	P	P	01 46 25.0	+3.0
NWAO	**Narrogin (SRO)**	**50.16**	**245**	P	P	01 47 06.6	+2.7
TNTI	**Ternate**	**50.38**	**291**	P	P	01 47 09.1	+3.4
EDFI	**Ende, Flores**	**51.31**	**277**	P	P	01 47 06.8	-6.1
	comp=Z,12nm,2.6s						
LUWI	**Luwuk**	**53.53**	**286**	P	P	01 47 32.6	+3.3
KAPI	**Kappang**	**54.53**	**280**	P	**P**	**01 47 37.7**	**+1.1**
KAPI				IAmb	IAmb	01 47 38.5	
	comp=Z,25nm,1.2s						
VNDA	**Vanda**	**55.26**	**183**	P	**P**	**01 47 40.8**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=358,slow=8.7,SNR=2.6						
	comp=Z,1.6nm,0.6s						
VNDA	**Vanda**	**55.26**	**183**	P	**P**	**01 47 41.6**	**+0.7**
SBA	**Scott Base**	**55.40**	**182**	P	**P**	**01 47 43.1**	**+1.1**
SBA				IAmb	IAmb	01 47 45.1	
	comp=Z,12nm,0.9s						
TOLI2	**Tolitoli**	**56.29**	**288**	P	**P**	**01 47 51.2**	**+1.9**
TOLI2				IAmb	IAmb	01 47 54.8	
	comp=Z,9.0nm,1.0s						
SBUM	**Sibu**	**64.51**	**284**	P	**P**	**01 48 47.2**	**+1.7**
SBUM				IAmb	IAmb	01 48 55.9	
	comp=Z,20nm,1.5s						
KSM	**Kuching**	**65.80**	**282**	P	P	01 48 57.2	+3.2
JMM	**Marumori**	**67.46**	**333**	P	**P**	**01 49 05.5**	**+1.6**
QSPA	**South Pole Qui**	**67.48**	**180**	P	**P**	**01 49 03.2**	**-0.8**
	comp=Z,9.0nm,0.9s,baz=257,slow=0.9,SNR=6.1						
	comp=Z,9.0nm,0.9s						
QSPA	**South Pole Qui**	**67.48**	**180**	P	**P**	**01 49 03.4**	**-0.6**
MJAR	**Matsushiro Arr**	**67.51**	**330**	P	**P**	**01 49 03.5**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=173,slow=5.7,SNR=3.1						
	comp=Z,2.1nm,0.7s						
JSU	**Suzuyama**	**67.66**	**321**	P	P	01 49 08.0	+2.7
JSU				IAmb	IAmb	01 49 12.0	
	comp=Z,9.8nm,1.0s						
JHS	**Saijyo**	**68.80**	**325**	P	**P**	**01 49 14.1**	**+1.6**
JHS				IAmb	IAmb	01 49 22.4	
	comp=Z,10nm,1.1s						
KSCHJ	**Chungju**	**72.97**	**323**	P	P	01 49 40.1	+2.3
KSRS	**Korea Array**	**73.42**	**324**	P	**P**	**01 49 40.2**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=127,slow=5.2,SNR=2.7						
	comp=Z,1.2nm,0.8s						
KSAR	**Wonju Array Be**	**73.43**	**324**	P	**P**	**01 49 42.0**	**+1.6**
KS19	**Wonju Array Si**	**73.48**	**324**	P	**P**	**01 49 42.1**	**+1.3**
KS19				IAmb	IAmb	01 49 43.5	
	comp=Z,24nm,1.8s						
SEHB	**SEOHWA**	**73.83**	**325**	P	**P**	**01 49 44.1**	**+1.2**
USRK	**Ussuriysk Ar.**	**76.47**	**331**	P	**P**	**01 49 58.4**	**+0.5**
PETK	**Petropavlovsk-**	**76.59**	**350**	P	**P**	**01 49 59.1**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=178,slow=8.7,SNR=2.7						
	comp=Z,2.0nm,0.8s						
MAW	**Mawson**	**76.75**	**202**	P	**P**	**01 49 59.0**	**-0.2**
	comp=Z,3.4nm,0.8s,baz=125,slow=9.0,SNR=3.9						
	comp=Z,3.4nm,0.8s						
MAW	**Mawson**	**76.75**	**202**	P	**P**	**01 50 00.1**	**+0.9**
MDJ	**Mudanjiang**	**77.89**	**330**	P	**P**	**01 50 06.9**	**+1.0**
BELA	**Belgrano 2**	**78.42**	**174**	P	**P**	**01 50 08.7**	**+0.3**
BELA				IAmb	IAmb	01 50 16.3	
	comp=Z,17nm,1.4s						
SMAI	**San Martin Ant**	**79.45**	**161**	P	**P**	**01 50 13.8**	**-0.4**
SMAI				IAmb	IAmb	01 50 15.7	
	comp=Z,34nm,1.7s						
SNAA	**Sanae**	**85.95**	**181**	P	**P**	**01 50 46.0**	**-2.1**
	comp=Z,3.3nm,0.8s,baz=161,slow=2.5,SNR=2.8						
	comp=Z,3.3nm,0.8s						
CMB	**Columbia Colle**	**86.63**	**46**	P	**P**	**01 50 53.3**	**-1.6**
ISA	**Isabella, Lake**	**86.71**	**49**	P	**P**	**01 50 52.2**	**-0.1**
ISA				IAmb	IAmb	01 50 56.5	
	comp=Z,4.8nm,1.0s						
BEKR	**Beckworth**	**87.62**	**45**	P	**P**	**01 50 54.6**	**-2.2**
YERR	**Yerington**	**87.90**	**46**	P	**P**	**01 50 57.5**	**-0.7**
PAHR	**Pah Rah Range**	**88.18**	**45**	P	**P**	**01 51 00.2**	**+0.8**
NVAR	**Mina Array Bea**	**88.24**	**47**	P	**P**	**01 50 59.7**	**-0.2**
J04D	**Umpqua Nationa**	**88.34**	**41**	P	**P**	**01 51 00.0**	**-0.2**
J04D				IAmb	IAmb	01 51 09.7	
	comp=Z,12nm,1.1s						
MOD	**Modoc Plateau**	**88.74**	**43**	P	**P**	**01 51 01.9**	**-0.2**
W13A	**Hualapai Mount**	**89.70**	**52**	P	**P**	**01 51 04.9**	**-1.9**
KLU	**Klutina**	**89.97**	**18**	P	**P**	**01 51 05.9**	**-1.4**
KLU				IAmb	IAmb	01 51 12.7	
	comp=Z,10nm,1.1s						
BMN	**Battle Mountai**	**89.97**	**46**	P	**P**	**01 51 07.4**	**-0.5**
BMN				IAmb	IAmb	01 51 09.9	
	comp=Z,5.0nm,1.0s						
D05A	**Enumclaw**	**90.58**	**38**	P	**P**	**01 51 10.2**	**-0.2**
G08A	**Pilot Rock**	**91.35**	**41**	P	**P**	**01 51 14.7**	**+0.6**
G08A				IAmb	IAmb	01 51 17.1	
	comp=Z,5.8nm,1.3s						
M26K	**Nabesna, AK**	**91.54**	**19**	P	**P**	**01 51 16.4**	**+1.9**
DOT	**Dot Lake**	**92.20**	**18**	P	**P**	**01 51 16.8**	**-0.7**
DOT				IAmb	IAmb	01 51 17.8	
	comp=Z,4.6nm,1.1s						
MTPU	**Mount Pierson**	**92.28**	**50**	P	**P**	**01 51 18.0**	**-0.9**
ILAR	**Eielson Array**	**92.34**	**16**	P	**P**	**01 51 16.6**	**-1.5**
	comp=Z,2.4nm,0.8s,baz=238,slow=4.9,SNR=6.7						
	comp=Z,2.4nm,0.8s						
ILAR	**Eielson Array**	**92.34**	**16**	P	**P**	**01 51 17.0**	**-1.1**
I26K	**Coal Creek Min**	**93.74**	**17**	P	**P**	**01 51 24.5**	**-0.1**
I26K				IAmb	IAmb	01 51 26.9	
	comp=Z,10nm,1.3s						
BMAR	**Burnt Mountain**	**95.04**	**15**	P	**P**	**01 51 31.2**	**+0.7**
AKAS	**Kas**	**145.78**	**302**	PKPbc	**PKPab**	**01 57 47.1**	**-1.1**
EKA	**Eskdalemuir Ar**	**147.20**	**356**	PKPbc	**PKPbc**	**01 57 49.4**	**-1.8**
	comp=Z,3.5nm,0.8s,baz=350,slow=2.2,SNR=2.0						
CLL	**Collm**	**147.51**	**337**	*e*PKPbc	**PKiKP**	**01 57 53.0**	**-1.3**
CLL				*ex*	x	01 58 00.0	

*IDC **12** 01:38:33.2±0.5, 22°.52S×173°.37E, h0km, mb5.0/22, mbtmp5.0/23, ML5.1/1, Error ellipse: s-maj=16.9km s-min=14.1km az=65.0*
*MOS **12** 01:38:34.9±1.2, 22°.67S×173°.37E, h21km, mb5.7/22, Error ellipse: s-maj=14.6km s-min=10.5km az=20.9*
*BJI **12** 01:38:35.1±0.0, 22°.11S×174°.08E, h23km, mb4.9/22, mB5.1/1*
*NEIC **12** 01:38:35.9±1.6, 22°.62S±0°.05×173°.41E±0°.07, h10km±1km, mb5.4/104, Error ellipse: s-maj=13.7km s-min=4.3km az=56.0*
*NOU **12** 01:38:42.3, 22°.74S×173°.34E, h53km, mb5.6/59, Southeast of Loyalty Islands*

ISC 12 01:38:35.6±0.3, 22°.69S±0°.05×173°.36E±0°.05, h10km, n389, σ1$52/366, mb5.3/90, 13C-14D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.09**	**283**	Pn	**Pn**	**01 39 51.1**	**-0.8**
MARNC				Sn	**Sn**	**01 40 51.5**	**+0.7**
MARNC	**Mare, Loyalty**	**5.09**	**283**	P	**Pn**	**01 39 54.1**	**+2.2**
PINNC	**Pines Island,**	**5.46**	**270**		**Pn**	**01 39 56.6**	**-0.5**

comp=Z,6.1nm,0.4s,baz=97,slow=8.4,SNR=17
comp=Z,6.1nm,0.4s
WRA Warramunga Arr 36.39 267 P P 01 45 38.0 -2.4
GENI Genyem 37.88 297 P P 01 45 53.4 +0.3
comp=Z,188nm,2.3s
FORT Forrest 41.03 249 P P 01 46 18.9 -0.3
FORT IAmb IAmb 01 46 34.7
comp=Z,118nm,0.8s
FORT Forrest 41.03 249 P P 01 46 21.4 +2.1
WRKA Warakurna 41.14 257 P P 01 46 19.4 -0.9
MTN Manton Dam 41.27 276 P P 01 46 20.0 -1.4
MTN IAmb IAmb 01 46 34.8
comp=Z,186nm,1.9s
FAKI Fak Fak 44.41 290 P P 01 46 45.3 -1.6
FAKI Fak Fak 44.41 290 P P 01 46 45.3 -1.6
FITZ Fitzroy Crossi 44.82 267 P P 01 46 49.1 -1.0
comp=Z,27nm,0.7s,baz=105,slow=4.3,SNR=16
comp=Z,27nm,0.7s
FITZ Fitzroy Crossi 44.82 267 P P 01 46 49.6 -0.4
FITZ IAmb IAmb 01 46 51.0
comp=Z,127nm,1.4s
FITZ Fitzroy Crossi 44.82 267 P P 01 46 49.7 -0.4
SIJI Sorong 46.29 292 P P 01 47 00.5 -1.3
comp=Z,119nm,1.2s,baz=92,slow=8.1,SNR=7.8
comp=Z,119nm,1.2s
MBWA Marble Bar 49.55 261 P P 01 47 26.1 -0.9
KLBR Kellerberrin 49.83 247 P P 01 47 28.7 -0.3
NWAO Narrogin (SRO) 50.18 245 P P 01 47 32.3 +0.6
NWAO IAmb IAmb 01 47 34.7
comp=Z,115nm,1.3s
NWAO Narrogin (SRO) 50.18 245 P P 01 47 32.3 +0.6
NWAO pmax pmax
comp=Z,115nm,1.3s
NWAO Narrogin (SRO) 50.18 245 P P 01 47 31.3 -0.4
SANI Sanana 50.31 287 P P 01 47 32.7 -0.1
TNTI Ternate 50.48 291 P P 01 47 33.5 -0.6
MUN Mundaring 51.11 247 P P 01 47 38.4 -0.3
MORW Morawa 51.55 250 P P 01 47 41.7 -0.3
MORW IAmb IAmb 01 47 47.5
comp=Z,58nm,1.0s
MORW Morawa 51.55 250 P P 01 47 41.0 -1.0
LUWI Luwuk 53.62 286 P P 01 47 56.9 -0.6
KAPI Kappang 54.61 280 P P 01 48 04.0 -0.8
comp=Z,7.0nm,0.4s,baz=189,slow=4.4,SNR=7.1
comp=Z,7.0nm,0.4s
KAPI Kappang 54.61 280 P P 01 48 04.2 -0.6
KAPI Kappang 54.61 280⇑ eP P 01 48 03.5 -1.3
KAPI pmax pmax
comp=Z,85nm,1.5s
KAPI Kappang 54.61 280 P P 01 48 04.1 -0.7
VNDA Vanda 55.17 183 P P 01 48 09.0 +1.1
comp=Z,6.6nm,0.6s,baz=2.6,slow=5.6,SNR=15
comp=Z,6.6nm,0.6s
VNDA Vanda 55.17 183 P P 01 48 08.9 +1.0
VNDA IAmb IAmb 01 48 10.6
comp=Z,102nm,1.6s
SBA Scott Base 55.31 182 P P 01 48 10.4 +1.5
SBA Scott Base 55.31 182 P P 01 48 10.4 +1.5
SBA pmax pmax
comp=Z,377nm,1.5s
TOLI2 Tolitoli 56.38 288 P P 01 48 17.4 -0.1
TOLI2 IAmb IAmb 01 48 26.9
comp=Z,104nm,1.7s
JAGI Jajag, Banyuwa 58.41 274 P P 01 48 29.8 -2.1
CASY Casey 58.58 205 P P 01 48 32.6 +0.4
SBUM Sibu 64.59 284 P P 01 49 13.6 -0.1
SBUM IAmb IAmb 01 49 25.7
comp=Z,96nm,2.0s
LEM Lembang 65.04 273 P P 01 49 16.5 -0.3
comp=Z,41nm,0.4s,baz=137,slow=9.8,SNR=4.5
comp=Z,41nm,0.4s
JOW Kunigami 65.77 316 P P 01 49 19.3 -1.7
KSM Kuching 65.88 282 P P 01 49 20.8 -1.2
KSM IAmb IAmb 01 49 34.1
comp=Z,34nm,1.3s
DBJI Dramaga 65.94 273 P P 01 49 22.8 +0.4
INU Inuyama 67.22 328 P P 01 49 33.5 +3.4
JGF Kuroka 67.26 329 P P 01 49 29.8 -0.6
JGF IAmb IAmb 01 49 42.9
comp=Z,81nm,1.9s
QSPA South Pole Qui 67.39 180 P P 01 49 31.4 +0.4
comp=Z,33nm,0.9s,baz=204,slow=1.8,SNR=13
comp=Z,33nm,0.9s
QSPA South Pole Qui 67.39 180 P P 01 49 31.9 +0.9
JMN Monobe 67.54 325 P P 01 49 32.4 +0.2
JMN IAmb IAmb 01 49 41.2
comp=Z,50nm,1.1s
JMM Marumori 67.57 333 IAmb IAmb 01 49 41.2
comp=Z,55nm,1.1s
MJAR Matsushiro Arr 67.62 330 P P 01 49 31.7 -0.9
comp=Z,13nm,1.1s,baz=159,slow=7.9,SNR=9.3
comp=Z,13nm,1.1s
MAJO Matsushiro 67.62 330 P P 01 49 32.5 -0.2
MAJO Matsushiro 67.62 330⇑ eP P 01 49 32.3 -0.3
MAJO pmax pmax
comp=Z,24nm,1.3s
MAJO Matsushiro 67.62 330 P P 01 49 32.4 -0.2
KASI Kota Agung 68.40 273 P P 01 49 43.7 +5.6
JSD Sado 68.82 331 P P 01 49 39.6 -0.5
JTM Tenmabayashi 69.93 334 P P 01 49 46.7 -0.1
JTM IAmb IAmb 01 49 55.3
comp=Z,38nm,1.2s
YUK Yuzh-Kuril'sk 71.02 339⇑ eP P 01 49 58.0 +4.5
KUR Kuril'sk 71.48 341⇓ eP P 01 49 57.9 +1.7
KUR pmax pmax
comp=Z,54nm,1.4s
TJN Taejon 73.06 323⇑ eP P 01 50 06.7 +0.8
TJN Taejon 73.06 323 P P 01 50 07.5 +1.6
comp=Z,201nm,1.4s
KSCHJ Chungju 73.08 323 IAmb IAmb 01 50 07.6
comp=Z,58nm,1.6s
KSRS Korea Array 73.53 324 P P 01 50 07.9 -0.7
comp=Z,6.4nm,1.0s,baz=147,slow=5.8,SNR=11
comp=Z,6.4nm,1.0s
KSAR Wonju Array Be 73.55 324 P P 01 50 08.3 -0.4
KSAR Wonju Array Be 73.55 324 P P 01 50 08.3 -0.4
KS19 Wonju Array Si 73.60 324 P P 01 50 09.3 +0.3
KS19 IAmb IAmb 01 50 10.9
comp=Z,59nm,1.6s
SEHB SEOHWA 73.95 325 P P 01 50 12.5 +1.3
INCN Inchon 74.26 323 P P 01 50 13.0 0.0
INCN Inchon 74.26 323 P P 01 50 13.0 0.0
INCN pmax pmax
comp=Z,210nm,1.8s
INCN Inchon 74.26 323 P P 01 50 16.1 +3.1
comp=Z,58nm,1.4s
YSS Yuzh-Sakhalins 74.62 339 P P 01 50 15.3 +0.5
YSS Yuzh-Sakhalins 74.62 339⇑ eP P 01 50 18.5 +3.7
YSS pmax pmax
comp=Z,36nm,1.0s
NJ2 Nanjing 75.36 314 eP P 01 50 18.4 -1.0
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Ar. 76.58 331 P P 01 50 25.1 -1.0
comp=Z,2.6nm,0.6s,baz=130,slow=5.8,SNR=3.0
comp=Z,2.6nm,0.6s
USRK Ussuriysk Ar. 76.58 331 P P 01 50 25.8 -0.4
MAW Mawson 76.68 202 P P 01 50 27.1 +0.6
comp=Z,8.2nm,0.7s,baz=137,slow=8.0,SNR=11
comp=Z,8.2nm,0.7s
MAW Mawson 76.68 202 P P 01 50 27.4 +0.9
PEA0B Petropavlovsk- 76.69 350 P P 01 50 27.7 +1.1
PEA0B IAmb IAmb 01 50 40.8
comp=Z,69nm,1.4s
PEA0B Petropavlovsk- 76.69 350 P P 01 50 27.7 +1.1
PEA0B pmax pmax
comp=Z,69nm,1.4s
PETK Petropavlovsk- 76.69 350 P P 01 50 25.0 -1.6
comp=Z,7.1nm,0.8s,baz=186,slow=13,SNR=4.6
comp=Z,7.1nm,0.8s
PETK Petropavlovsk- 76.69 350 P P 01 50 27.1 +0.6
PETK Petropavlovsk- 76.69 350 P P 01 50 25.0 -1.6
MDJ Mudanjiang 78.00 330 P P 01 50 33.7 -0.4
MDJ IAmb IAmb 01 50 47.0
comp=Z,25nm,1.0s
MDJ Mudanjiang 78.00 330 P P 01 50 34.2 +0.1
BELA Belgrano 2 78.32 174 P P 01 50 35.2 -0.4
SMAI San Martin Ant 79.34 161 P P 01 51 41.8 +0.6
CN2 Changchun 79.42 327 eP P 01 50 43.2 +1.3
BNX BinXian 79.87 329 ⇑P P 01 50 42.2 -2.1
BNX pmax pmax
comp=Z,12nm,0.8s
CHNA Chernabura Isl 80.61 15 P P 01 50 48.8 +0.7
baz=205
KLR Kul'dur 80.62 334⇑ eP P 01 50 50.8 +2.5
KLR pmax pmax
comp=Z,8.0nm,1.8s
ENH Enshi 80.82 308 P P 01 50 49.1 -0.8
S12K Black Hills 80.83 14 P P 01 50 50.2 +0.9
baz=203
SDPT Sand Point 80.87 15 P P 01 50 50.6 +1.2
baz=204
HNS HongShan 81.33 317 ⇓P P 01 50 51.4 -1.0
HNS pmax pmax
comp=Z,23nm,2.0s
BJT Baijiatuau 82.03 319 P P 01 50 55.2 -0.7
BJT Baijiatuau 82.03 319 P P 01 50 55.3 -0.7
BJT pmax pmax
comp=Z,24nm,1.3s
PMSA Palmer Station 82.34 159 P P 01 50 57.4 +0.1
comp=Z,43nm,1.1s,baz=228,slow=6.0,SNR=15
comp=Z,43nm,1.1s
PMSA Palmer Station 82.34 159 P P 01 50 57.4 +0.1
XAN Xi'an 83.27 311 P P 01 50 56.2 -6.5
XAN pP pP 01 51 01.3 -2.8
XAN pmax pmax
comp=Z,11nm,1.2s
CM31 Chiang Mai Arr 83.41 293 P P 01 51 03.2 -0.4
CMAR Chiang Mai Arr 83.41 293 P P 01 51 02.7 -1.0
CMAR Chiang Mai Arr 83.41 293 P P 01 51 02.7 -1.0
R17K Ugashik Creek 83.93 16 P P 01 51 04.6 -0.8
baz=208
OHAK Old Harbor 84.39 17 P P 01 51 07.3 -0.4
OHAK Old Harbor 84.39 17 P P 01 51 07.1 -0.6
baz=211
Q16K King Salmon 84.78 15 P P 01 51 09.2 -0.5
baz=208
P16K Nushagak River 84.79 14 P P 01 51 10.8 +1.1
baz=206
PZH PanZhiHua 84.79 301 P P 01 51 11.3 +0.6
PZH pmax pmax
comp=Z,10.0nm,0.5s
O16K Kokwok River B 85.27 14 P P 01 51 10.6 -1.5
baz=206
P17K Kvichak River 85.30 15 P P 01 51 13.5 +1.3
baz=208
HHC Hu-ho-hao-te 85.34 318 eP P 01 51 15.1 +2.0
TROLL Troll, Antarti 85.34 183 P P 01 51 11.4 -1.3
CD2 Chengdu 85.38 306 eP P 01 51 14.3 +0.8
PKM Mcpherson Peak 85.39 49 P P 01 51 13.0 -0.6
baz=238
PMPB Monarch Peak 85.41 48 P P 01 51 14.0 +0.5
PMPB IAmb IAmb 01 51 25.2
comp=Z,35nm,1.1s
Q20K Shuyak Island 85.82 17 P P 01 51 16.6 +1.7
baz=211
SNAA Sanae 85.86 181 P P 01 51 13.4 -1.8
SNAA Sanae 85.86 181 P P 01 51 13.4 -1.8
comp=Z,6.7nm,0.6s,baz=215,slow=7.1,SNR=15
comp=Z,6.7nm,0.6s
SNAA Sanae 85.86 181 P P 01 51 14.2 -1.0
SNAA Sanae 85.86 181 P P 01 51 14.2 -1.0
SNAA pmax pmax
comp=Z,130nm,1.6s
NVL N'lazarevskaya 85.90 186 eP P 01 51 14.4 -0.9
NVL eS S 02 01 40.2 -8.3
NVL pmax pmax
comp=Z,16nm,0.8s
N16K Nishlik Lake 85.92 13 P P 01 51 16.1 +0.8
baz=206
HIA Hailar 86.04 328 P P 01 51 14.1 -2.2
HIA Hailar 86.04 328⇑ eP P 01 51 15.1 -1.2
HIA pmax pmax
comp=Z,5.0nm,1.0s
ARVC Arvin 86.20 50 P P 01 51 17.3 -0.1
baz=239
VNA3 Neumayer Olymp 86.30 179 P P 01 51 16.0 -1.4
VES Vestal, Richgr 86.39 49 P P 01 51 18.5 +0.2
baz=239
BFSC Mount Baldy Ra 86.58 51 P P 01 51 18.9 -0.6
baz=240
VNA2 Neumayer--Watz 86.64 180 P P 01 51 17.0 -2.0
baz=171,slow=5.0
EDW2 Edwards Air Fo 86.67 50 P P 01 51 20.2 +0.5
baz=239
O19K Port Alsworth 86.69 16 P P 01 51 21.1 +1.9
baz=210
ISA Isabella, Lake 86.72 49 P 01 51 19.4 -0.6
ISA IAmb IAmb 01 51 32.3
comp=Z,16nm,0.9s
ISA Isabella, Lake 86.72 49 P P 01 51 19.4 -0.6
ISA pmax pmax
comp=Z,16nm,0.9s
ISA Isabella, Lake 86.72 49 P P 01 51 20.8 +0.7
baz=239
MONP2 Monument Peak 86.81 52 P P 01 51 20.9 +0.2
baz=240
L02F Cave Junction 86.85 42 P P 01 51 22.0 +1.6
baz=236
VNA1 Neumayer--Stat 86.91 179 P P 01 51 18.7 -1.6
SEY Seymchan 86.94 351⇑ eP P 01 51 21.2 +0.9
SEY pmax pmax
comp=Z,11nm,1.0s
PFO Pinyon Flats O 87.13 52 P P 01 51 21.1 -1.1
baz=240
TPFO Pinon Flats 87.13 52 P P 01 51 21.6 -0.6
baz=240
LRMC Laurel Mtn Rad 87.19 50 P P 01 51 22.1 -0.3
baz=240
SWSC Sam W. Stewart 87.29 53 P P 01 51 22.1 -0.7
baz=241
OMMB Old Mammoth Mi 87.37 47 IAmb IAmb 01 51 37.2
comp=Z,36nm,1.9s
CWC Cottonwood Cre 87.40 49 P P 01 51 22.4 -1.0
baz=239
HUMO Hull Mountain 87.50 41 P 01 51 23.2 -0.4
HUMO IAmb IAmb 01 51 29.2
comp=Z,16nm,1.1s
MPMC Manual Prospec 87.61 49 P P 01 51 24.2 -0.3
baz=240
BEKR Beckworth 87.64 45 IAmb IAmb 01 51 35.5
comp=Z,42nm,1.9s
BELC Belle Mtn. Jos 87.66 52 P P 01 51 24.8 +0.1
baz=241
L04D Klamath Falls 87.69 42 P P 01 51 23.7 -1.0
baz=236
GSC Goldstone, Bar 87.72 50 P P 01 51 22.8 -2.1
baz=240
PNTR Pine Nut 87.73 46 P P 01 51 25.6 +0.6
PNTR IAmb IAmb 01 51 28.3
comp=Z,16nm,1.0s
HEC Hector,Ludlow 87.82 51 P P 01 51 25.4 0.0
baz=240
BC3 Big Chuckawall 87.89 52 P P 01 51 26.5 +0.8
baz=241
YERR Yerington 87.92 46 IAmb IAmb 01 51 37.0
comp=Z,40nm,1.7s
LHV Little Huntoon 88.03 47 IAmb IAmb 01 51 33.9
comp=Z,56nm,1.9s
GLA Glamis 88.06 53 P P 01 51 26.4 -0.1
baz=241
GRAC Grapevine Rang 88.17 49 P P 01 51 26.8 -0.2
baz=240
PAHR Pah Rah Range 88.20 45 IAmb IAmb 01 51 35.5
comp=Z,20nm,1.3s
RYN Ryan 88.21 47 IAmb IAmb 01 51 28.7
comp=Z,51nm,1.9s
NVAR Mina Array Bea 88.26 47 P P 01 51 27.6 +0.1
comp=Z,3.2nm,0.9s,baz=224,slow=5.3,SNR=5.4
comp=Z,3.2nm,0.9s
NVAR Mina Array Bea 88.26 47 P P 01 51 27.9 +0.3
GMRC Granite Mounta 88.28 51 P P 01 51 28.9 +1.2
baz=241
L19K White Mountain 88.30 14 P P 01 51 27.8 +0.9
baz=209
IRM Iron Mountain 88.35 52 P P 01 51 28.3 +0.4
baz=241
J04D Umpqua Nationa 88.37 41 P P 01 51 28.5 +0.6
baz=236
I04A Tendick Farm, 88.49 41 P P 01 51 27.5 -0.8
baz=236
RC01 Rabbit Creek A 88.64 17 P P 01 51 28.5 -0.1
baz=214
113A Mohawk Valley, 88.71 54 IAmb IAmb 01 51 30.1
comp=Z,23nm,1.6s
TTA Tatalina 88.71 13 P P 01 51 31.1 +2.2
baz=208
KVN Kaiserville 88.71 46 P 01 51 28.1 -1.5
KVN Kaiserville 88.71 46 P P 01 51 28.2 -1.5
KVN pmax pmax
comp=Z,16nm,1.2s
L20K Farewell, AK 88.79 15 P P 01 51 31.9 +2.7
baz=210
DIB Dawson Inlet, 88.92 29 IAmb IAmb 01 51 32.4
comp=Z,42nm,1.4s
J05D Fort Rock, OR 88.93 42 P P 01 51 29.5 -1.0
baz=237
214A Organ Pipe Nat 89.05 55 P P 01 51 29.9 -1.3
baz=242
HSIG 89.15 58 P P 01 51 30.9 -0.8
PDMCI Parker Dam,Lak 89.15 52 P P 01 51 31.6 0.0
baz=242
SCM Sheep Creek Mo 89.92 17 P P 01 51 34.6 0.0
baz=216
BMN Battle Mountai 90.00 46 IAmb IAmb 01 51 40.7
comp=Z,13nm,0.8s
BMRM Bremner River 90.01 19 P P 01 51 35.5 +0.5
baz=218
CAST Castle Rocks 90.02 15 P P 01 51 35.8 +0.9
baz=212
KLU Klutina 90.04 18 IAmb IAmb 01 51 47.7
comp=Z,92nm,2.0s
KLU Klutina 90.04 18 P P 01 51 36.1 +0.9
baz=217
R11A Troy Canyon, C 90.07 48 P P 01 51 35.4 -0.6
baz=241
WAT6 Susitna Watana 90.41 17 P P 01 51 36.2 -0.8
baz=215
M24K Tolsona, Glenn 90.46 18 P P 01 51 37.1 +0.1
baz=217
N25K Chitina, Valde 90.52 19 P P 01 51 37.9 +0.5
baz=218
BILL Bilibino 90.61 357 P P 01 51 38.1 +0.5
D05A Enumclaw 90.62 38 IAmb IAmb 01 51 47.3
comp=Z,44nm,1.3s
J08A Circle Bar Ran 90.68 43 IAmb IAmb 01 51 52.4
comp=Z,18nm,1.3s
PINM Pinnacle 90.73 21 P P 01 51 39.3 +0.9
baz=222
TUC Tucson 90.74 55 P 01 51 38.3 -0.8
TUC IAmb IAmb 01 51 52.6
comp=Z,34nm,1.9s
TUC Tucson 90.74 55 P P 01 51 38.3 -0.8
TUC pmax pmax
comp=Z,34nm,1.9s
MCARA McCarthy VSAT 90.82 19 P P 01 51 39.9 +1.2
baz=220
HARP HAARP 90.98 18 P P 01 51 40.5 +1.0
baz=218
CCUT Cedar City 91.23 50 IAmb IAmb 01 51 42.3
comp=Z,28nm,1.7s
SPR3 Spring Creek 3 91.24 48 P 01 51 39.8 -1.8
SPR3 IAmb IAmb 01 51 42.2
comp=Z,30nm,1.7s
O28M Mount Upton 91.25 21 P P 01 51 42.6 +1.5
baz=222
P29M Windy Craggy 91.25 23 P P 01 51 41.7 +0.9
baz=224
ORCD Orcadas 91.32 162 P P 01 51 41.3 0.0
PAX Paxson 91.35 18 P P 01 51 43.6 +2.3
baz=217
ELK Elko 91.46 46 P 01 51 41.1 -1.4
ELK Elko 91.46 46 P P 01 51 41.1 -1.4
ELK pmax pmax
comp=Z,7.0nm,1.1s
U15A North Rim 91.48 51 IAmb IAmb 01 51 48.7
comp=Z,17nm,0.9s
I21K Tanana 91.55 14 P P 01 51 42.9 +0.9
baz=212
M26K Nabesna, AK 91.61 19 IAmb IAmb 01 51 49.9
comp=Z,19nm,1.1s
M26K Nabesna, AK 91.61 19 P P 01 51 43.4 +0.9
baz=220
HAWA Hanford 91.61 40 P 01 51 42.9 +0.1
HAWA IAmb IAmb 01 51 45.7
comp=Z,16nm,1.2s
MLY Manley 91.70 14 P P 01 51 45.0 +2.2
baz=213
H21K Melozitna Rive 91.78 13 P P 01 51 44.2 +1.1
baz=211
WRH Wood River Hil 91.87 16 IAmb IAmb 01 51 49.3
comp=Z,30nm,1.4s
P30M Million Dollar 91.88 22 P P 01 51 44.8 +1.1
baz=225
M27K Edge Creek, AK 91.91 19 IAmb IAmb 01 51 57.2
comp=Z,19nm,1.1s
M27K Edge Creek, AK 91.91 19 P P 01 51 45.2 +1.3
baz=220
K24K Donnelly Dome 91.93 17 P P 01 51 45.5 +1.7
baz=217
ULN Ulaanbaatar 91.93 322⇑ eP P 01 51 42.1 -2.3
ULN pmax pmax
comp=Z,4.0nm,1.2s
CCB Clear Creek Bu 92.09 16 P P 01 51 44.3 -0.2
HDA Harding Lake 92.11 16 P P 01 51 45.2 +0.6
baz=216
RIDG Independent Ri 92.13 17 P P 01 51 45.1 +0.3
baz=218
COLA College 92.26 16⇑ eP P 01 51 46.0 +0.7
COLA pmax pmax
comp=Z,13nm,1.0s
DOT Dot Lake 92.28 18 IAmb IAmb 01 51 54.9
comp=Z,10nm,1.0s
GTA Gaotai 92.28 312 eP P 01 51 45.1 -1.1
GTA pP sP 01 51 49.8 +1.6
GTA sP pwP 01 51 52.8 -2.3
GTA pmax pmax
comp=Z,6.0nm,1.2s
SONM Songino Array 92.29 322 P P 01 51 45.0 -1.0
comp=Z,1.2nm,0.6s,baz=99,slow=2.8,SNR=2.7
comp=Z,1.2nm,0.6s
H22K Ishtalitna Cre 92.29 14 P P 01 51 44.7 -0.8
baz=212
G21K Allakaket 92.37 13 P P 01 51 46.0 +0.2
baz=210
IL31 92.42 16 IAmb IAmb 01 51 55.2
comp=Z,14nm,0.9s
ILAR Eielson Array 92.42 16 P P 01 51 43.5 -2.5
comp=Z,4.1nm,0.7s,baz=223,slow=4.6,SNR=10
comp=Z,4.1nm,0.7s
L27K Beaver Creek, 92.47 19 P P 01 51 45.0 -1.4
baz=221
SCRK Sand Creek 92.55 17 P P 01 51 45.6 -1.2
SCRK IAmb IAmb 01 51 56.4
comp=Z,12nm,1.0s
SCRK Sand Creek 92.55 17 P P 01 51 45.6 -1.2
baz=219
J25K Salcha River, 92.68 17 P P 01 51 47.6 +0.2
baz=218
W18A Petrified Fore 92.75 53 P P 01 51 48.9 +0.4
baz=244
F21K Alatna River 92.99 12 P P 01 51 51.6 +2.9
baz=210
J26L Joseph Creek 93.08 17 IAmb IAmb 01 51 53.2
comp=Z,11nm,0.9s
J26L Joseph Creek 93.08 17 P P 01 51 48.3 -1.0
baz=219
K27K Chicken 93.13 18 P P 01 51 49.2 -0.2
baz=220
CRZF Crozet Islands 93.26 216 P P 01 51 51.1 +0.5
PLCA Paso Flores 93.40 137 P P 01 51 52.0 +0.6
comp=Z,7.1nm,1.1s,baz=217,slow=5.3,SNR=5.9
comp=Z,7.1nm,1.1s
F22K John River 93.50 13 P P 01 51 52.3 +1.3
baz=212
R33M Jennings River 93.61 25 P P 01 51 52.5 +0.6
baz=230
L29M L29M 93.63 20 P P 01 51 52.6 +0.9
baz=224
COLD Coldfoot 93.67 13 P P 01 51 53.8 +2.0
baz=213
I26K Coal Creek Min 93.81 17 IAmb IAmb 01 51 59.4
comp=Z,35nm,1.4s
I26K Coal Creek Min 93.81 17 P P 01 51 53.0 +0.5
baz=220
DAWY Dawson 93.94 19 P P 01 51 53.3 +0.2
baz=223
EGAK Eagle 93.96 18 IAmb IAmb 01 52 03.8
comp=Z,16nm,1.1s
N32M Quiet Lake 93.97 23 P P 01 51 53.2 -0.1
baz=228
E22K Anaktuvuk Pass 94.11 12 P P 01 51 54.4 +0.5
baz=212
F24K Squaw Lake 94.42 14 P P 01 51 56.5 +1.2
baz=215
I27K Kandik River 94.46 17 P P 01 51 56.6 +1.1
baz=221
G26K Porcupine Rive 94.93 16 P P 01 51 56.7 -0.8
baz=219
H27K Steamboat Moun 94.96 17 P P 01 51 58.9 +1.1

baz=221
F25K Christian Rive 94.99 15 P P 01 51 59.3 +1.4
baz=217
D23K Nanushuk River 95.03 12 P P 01 51 59.3 +1.3
baz=213
C23K Itkillik River 95.78 12 P P 01 52 03.6 +2.2
baz=213
C27K Jago River 97.03 14 P P 01 52 07.8 +0.7
baz=219
WMQ Urumqi 102.36 312 *e*P **Pdif 01 52 33.5 +1.9**
KSH Kashi 109.57 305 Pdif **Pdif 01 53 11.1 +7.3**
KSH LR LR
comp=N,25μm,18.9s
KSH LR LR
comp=E,19μm,22.3s
KSH LR LR
comp=Z,39μm,21.6s
ARU Arti 122.28 323 *i* PKIKP **PKPdf 01 57 29.4 -1.1**
PRGR Permogore 127.36 332 *e*PKIKP **PKiKP 01 57 42.4 +1.8**
APA Apatity 128.72 342 ⇓ *i* PKIKP **PKPdf 01 57 36.0 -6.5**
APA pmax pmax
comp=Z,8.0nm,1.1s
ARCES ARCESS Array B 129.35 346 PKP **PKPdf 01 57 40.8 -2.8**
comp=Z,2.3nm,0.6s,baz=41,slow=1.4,SNR=10
KLMR Klimovskoe 130.36 332 *e*PKIKP **PKiKP 01 57 46.9 +0.3**
KLMR pmax pmax
comp=Z,30nm,1.4s
KLMR Klimovskoe 130.36 332 *e*PKPdf **PKiKP 01 57 46.9 +0.3**
KLMR AMP 01 57 48.2
comp=Z,30nm,1.4s
KIV Kislovodsk 134.43 310 *e*PKIKP **PKPdf 01 57 54.3 +0.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s
FINES FINESS Array B 135.21 338 PKP **PKPdf 01 57 52.7 -2.2**
comp=Z,3.6nm,0.8s,baz=119,slow=3.8,SNR=3.3
BR131 Keskin Array S 141.95 306 PKPdf **PKPdf 01 58 07.8 -0.4**
BR131 Keskin Array S 141.95 306 PKIKP **PKPdf 01 58 07.8 -0.4**
DEL Delary 143.04 341 *i* P **PKPdf 01 58 03.0 -6.3**
LUNU Lund 143.88 341 *i* P PKPab 01 58 06.0 -1.9
MLR Muntele Rosu 145.08 319 PKP **PKPbc 01 58 11.7 -1.2**
comp=Z,6.6nm,1.4s,baz=0,slow=5.1,SNR=4.7
MLR Muntele Rosu 145.08 319 PKPbc **PKPbc 01 58 12.7 -0.2**
KOLS Kolonicke sedl 145.23 326 *e*PKIKP **PKPbc 01 58 11.9 -1.2**
KOLS Kolonicke sedl 145.23 326 *e*PKP **PKPbc 01 58 11.9 -1.2**
UZH Uzhgorod 145.40 326 *e*PKIKP **PKPbc 01 58 12.1 -1.5**
UZH *e* 01 58 18.3
CRVS Cervenica-Dubn 145.66 327 *e*PKP2 **PKPdf 01 58 13.4 -0.8**
CRVS Cervenica-Dubn 145.66 327 *e*PKP **PKPdf 01 58 13.4 -0.8**
AKAS Kas 145.88 302 PKPdf 01 58 13.6 -1.5
LANS Liptovska Anna 146.49 328 *e*PKP2 **PKPdf 01 58 15.7 +0.1**
LANS Liptovska Anna 146.49 328 *e*PKP **PKPdf 01 58 15.7 +0.1**
MORC Moravsky Berou 146.95 331 *e*PKP **PKPdf 01 58 17.4 +1.0**
OSTC Ostas 146.95 333 *e*PKP **PKPbc 01 58 18.0 -0.3**
OSTC *ex* x 01 58 26.1
DPC Dobruska-Polom 147.06 333 *e*PKP2 **PKPdf 01 58 16.3 -0.3**
DPC Dobruska-Polom 147.06 333 *e*PKP **PKPdf 01 58 16.3 -0.3**
DPC *ex* x 01 58 26.4
KRLC Kraliky 147.07 332 *e*PKP2 **PKPdf 01 58 16.4 -0.2**
KRLC Kraliky 147.07 332 *e*PKP **PKPdf 01 58 16.4 -0.2**
VYHS Vyhne 147.24 328 *e*PKP2 **PKPdf 01 58 17.1 +0.2**
VYHS Vyhne 147.24 328 *e*PKP **PKPdf 01 58 17.1 +0.2**
EKA Eskdalemuir Ar 147.29 356 PKPbc **PKPbc 01 58 18.4 -0.7**
comp=Z,5.4nm,0.6s,baz=350,slow=2.6,SNR=6.5
JAVC Velka Javorina 147.54 330 *e*PKP **PKPbc 01 58 19.3 -0.7**
BRG Berggiesshubel 147.62 335 *e*PKP **PKPdf 01 58 17.7 +0.2**
BRG Amp 01 58 21.0
comp=Z,26nm,1.4s
BRG *ex* x 01 58 29.4
BRG Amp 01 58 30.2
comp=Z,22nm,1.0s
BRG Berggiesshubel 147.62 335 *e*PKP2 **PKPdf 01 58 17.6 +0.2**
BRG pmax pmax
comp=Z,26nm,1.4s
BRG pmax pmax
comp=Z,22nm,1.0s
CLL Collm 147.62 337 *i* PKP2 **PKPdf 01 58 18.1 +0.7**
CLL pmax pmax
comp=Z,54nm,1.7s
CLL Collm 147.62 337 *i* PKPbc **PKPdf 01 58 18.1 +0.7**
comp=Z,54nm,1.7s
CLL *i* x x 01 58 27.8
comp=Z,25nm,0.9s
PVCC Panska Ves 147.65 334 *e*PKP2 **PKPbc 01 58 19.7 -0.5**
PVCC Panska Ves 147.65 334 *e*PKP **PKPbc 01 58 19.7 -0.5**
VRAC Vranov 147.71 331 *e*PKP **PKPbc 01 58 19.5 -0.9**
KRUC Moravsky 147.98 331 *e*PKP **PKPdf 01 58 19.8 +1.7**
MODS Modra-Piesok 148.07 329 *e*PKP2 **PKPdf 01 58 19.6 +1.3**
MODS Modra-Piesok 148.07 329 *e*PKP **PKPdf 01 58 19.5 +1.3**
PRU Pruhonice 148.08 334 *e*PKP2 **PKPbc 01 58 20.6 -0.7**
PRU Pruhonice 148.08 334 *e*PKP **PKPbc 01 58 20.6 -0.7**
PRU *ex* x 01 58 29.0
RONA Rosalia, Austr 149.01 329 *e*P **PKPdf 01 58 21.7 +1.9**
comp=Z,20nm,1.6s
CONA Conrad Observa 149.05 330 *e*P **PKPbc 01 58 22.9 -1.1**
CKRC Cesky Krumlov 149.08 333 *e*PKP **PKPdf 01 58 22.0 +2.1**
CKRC *ex* x 01 58 32.4
KHC Kasperske Hory 149.14 334 *e*PKP2 **PKPdf 01 58 22.0 +2.0**
KHC Kasperske Hory 149.14 334 *e*PKP **PKPdf 01 58 22.0 +2.0**
KHC *ex* x 01 58 32.0
GEC2 GERESS Array S 149.31 333 PKPbc **PKPdf 01 58 22.7 +2.3**
GERES GERESS Array B 149.31 333 PKPbc **PKPdf 01 58 22.0 +1.7**
comp=Z,3.1nm,1.0s,baz=35,slow=3.3,SNR=4.5
IDI Anoyia 149.83 302 PKPbc **PKPdf 01 58 23.9 +2.3**
comp=Z,7.3nm,0.8s,baz=323,slow=4.9,SNR=6.1
BTNL Ternell 150.42 343 *d*PKP **PKPbc 01 58 25.8 -1.4**
BTNL *d*PKPab **pPKPab 01 58 34.7 -0.4**
MEM Membach 150.43 344 *d*PKP **PKPdf 01 58 24.6 +2.7**
BSTI Sart Tilman 150.56 344 *d*PKPab **PKPab 01 58 35.2 +1.0**
BHOU Houvegnez 150.66 343 *d*PKP **PKPbc 01 58 26.6 -1.3**
SNF Seneffe 150.94 346 *d*PKP **PKPbc 01 58 26.2 -2.2**
RCHB Rochefort 151.04 344 *d*PKP **PKPdf 01 58 25.5 +2.6**
WLF Walferdange 151.25 343 *d*PKP **PKPbc 01 58 26.8 -2.4**
WLF *d*PKPab **PKPab 01 58 37.0 0.0**
DOU Dourbes 151.26 345 *d*PKP **PKPbc 01 58 26.7 -2.5**
FETA Feichten 151.98 334 *e*P **PKPbc 01 58 29.6 -1.5**
comp=Z,16nm,1.6s
FETA *e*P **PKPab 01 58 39.7 -0.7**
comp=Z,15nm,0.9s
DAVOX Davos/Dischmat 152.51 335 PKPbc **PKPbc 01 58 30.3 -2.1**
comp=Z,5.4nm,0.8s,baz=183,slow=3.5,SNR=5.6
DBIC Dimbokro 163.98 186 PKPab **PKPab 01 59 32.7 +0.1**
comp=Z,2.2nm,0.4s,baz=177,slow=8.5,SNR=5.9
TORD Torodi Ar. Bea 167.64 221 PKPab **PKPab 01 59 49.2 +0.3**
comp=Z,4.1nm,1.1s,baz=119,slow=4.0,SNR=2.1
KOWA Kowa 171.48 197 PKPdf **PKPdf 01 58 44.4 -0.8**
KOWA **PKPab 02 00 04.9 -0.9**

GUC 12 01:39:40.5±0.7, 32.47S×70.63W, h94km±3km, ML3.3, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
VA03	**San Esteban**	**0.30**	**167**	*e*P		Pn	01 39 53.8	-0.8
VA03				*e*S		Sn	01 40 04.3	-0.6
VA03				IAML			01 40 05.3	
	comp=E,2μm,0.1s							
VA06	**Catapilco**	**0.57**	**261** ⇑	*i*P		Pn	01 39 55.6	-0.6
VA06				*i*S		Sn	01 40 07.2	-0.8
VA06				IAML			01 40 07.5	
	comp=E,3μm,0.2s							
ROCH	**El Roble**	**0.59**	**213** ⇓	*e*P		Pn	01 39 56.3	-0.4
ROCH				*i*S		Sn	01 40 08.8	0.0
ROCH				IAML			01 40 10.6	
	comp=N,1μm,0.3s							
PEL	**Peldehue**	**0.67**	**184**	*e*P		Pn	01 39 56.5	-0.7
PEL				*e*S		Sn	01 40 09.4	-0.3
PEL	**Peldehue**	**0.67**	**184**	P		Pn	01 40 09.6	+12
PEL	**Peldehue**	**0.67**	**184**	P		Pn	01 40 09.6	+12
MT02	**Curacav**	**0.90**	**208**	*e*P		Pn	01 39 58.9	-0.4
MT02				*e*S		Sn	01 40 13.1	-0.4
FCH	**Farellones**	**0.90**	**162** ⇓	*i*P		Pn	01 40 00.0	+0.3
FCH				*e*S		Sn	01 40 14.5	+0.3
FCH				IAML			01 40 16.6	
	comp=E,855nm,0.3s							
MT05	**Renca**	**0.92**	**186**	*e*P		Pn	01 39 59.7	0.0
MT05				*e*S		Sn	01 40 13.3	-0.8
MT05				IAML			01 40 15.4	
	comp=N,801nm,0.2s							
VA01	**Torpederas**	**1.02**	**237**	*e*P		Pn	01 40 00.3	-0.4
VA01				*e*S		Sn	01 40 15.8	0.0
VA01				IAML			01 40 19.5	
	comp=E,521nm,0.2s							
MT03	**Universidad Ad**	**1.02**	**174**	*e*P		Pn	01 40 01.0	+0.1
MT03				*e*S		Sn	01 40 16.9	+0.7
MT03				IAML			01 40 19.2	
	comp=N,888nm,0.3s							
CO02	**Combarbal**	**1.30**	**346** ⇑	*i*P		Pn	01 40 03.5	-0.7
CO02				*e*S		Sn	01 40 21.9	-0.1
CO02				IAML			01 40 23.2	
	comp=E,1μm,0.1s							
MT09	**Talagante**	**1.34**	**193**	*e*P		Pn	01 40 04.5	0.0
MT09				*e*S		Sn	01 40 22.6	-0.1
MT09				IAML			01 40 24.3	
	comp=E,279nm,0.1s							
LMEL	**Las Melosas**	**1.42**	**166**	*e*P		Pn	01 40 06.1	+0.5
LMEL				*e*S		Sn	01 40 26.4	+1.8
LMEL				IAML			01 40 29.1	
	comp=N,572nm,0.2s							
MT01	**Popeta**	**1.48**	**200**	*e*P		Pn	01 40 06.2	-0.1
MT01				*e*S		Sn	01 40 25.4	-0.3
MT01	**Popeta**	**1.48**	**200**	P		Pn	01 40 06.4	+0.2
CO03	**El Pedregal**	**1.63**	**358**	*e*P		Pn	01 40 08.2	0.0
CO03				*e*S		Sn	01 40 29.2	+0.1
CO03				IAML			01 40 30.4	
	comp=E,752nm,0.2s							
BO01	**Tunca**	**1.95**	**191**	*e*P		Pn	01 40 12.1	-0.2
BO01				*e*S		Sn	01 40 36.1	-0.3

IDC ***12*** *01:42:25.3±0.5, 22.54S×173.18E, h0km, mb4.9/26, mbtmp4.9/28, ML5.5/2, Error ellipse: s-maj=14.5km s-min=14.0km az=86.0*
NOU ***12*** *01:42:25.6, 22.69S×174.32E, h57km, mb5.7/24, Southeast of Loyalty Islands*
BJI ***12*** *01:42:27.0±0.0, 22.70S×173.20E, h10km, mb5.1/17, mB5.9/1*
NEIC ***12*** *01:42:28.1±2.3, 22.67S±0.08×173.24E±0.08, h10km±1km, mb5.2/114, Error ellipse: s-maj=13.3km s-min=12.3km az=187.0*
ISC 12 01:42:30.6±0.3, 22.65S±0.06×173.21E±0.06, h32km, n297, σ1§10/252, mb5.2/85, 24C-14D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.94**	**283**		Pn **Pn**	**01 43 43.0**	**+0.4**
PINNC	**Pines Island,**	**5.33**	**269**		**Pn**	**01 43 49.3**	**+1.4**
OUENC	**Ouen Island, N**	**5.89**	**271**		Pn **Pn**	**01 43 57.3**	**+1.7**
ONTNC	**Ouen Toro**	**6.26**	**272**		Pn **Pn**	**01 44 02.6**	**+1.9**
DZM	**Mont Dzumac**	**6.29**	**274**		Pn **Pn**	**01 44 01.0**	**-0.2**
	17nm,0.3s,baz=130,slow=13,SNR=8.9						
DZM					Sn **Sn**	**01 45 10.7**	**-1.3**
	27nm,0.3s,baz=188,slow=20,SNR=3.8						
	48nm,0.3s						
DZM	**Mont Dzumac**	**6.29**	**274**	Pn	**Pn**	**01 44 01.5**	**+0.3**
RTV	**Rentapao**	**6.59**	**316**	P	Pn	01 44 10.6	+5.3
	2μm,0.9s						
MSVF	**Nonsavu**	**6.67**	**44**	Pn	**Pn**	**01 44 05.9**	**-0.6**
	9.9nm,0.3s,baz=246,slow=21,SNR=8.2						
	23nm,0.4s						
MSVF	**Nonsavu**	**6.67**	**44**	Pn	**Pn**	**01 44 07.7**	**+1.2**
DVP	**Devils Point**	**6.80**	**315**	P	Pn	01 44 14.3	+6.2
	9μm,0.9s						
NFK	**Norfolk Island**	**7.94**	**216**	P	**Pn**	**01 44 24.3**	**+0.5**
RAO	**Raoul Island**	**10.34**	**131**	Pn	**Pn**	**01 44 56.0**	**-0.7**
MXZ	**Matakaoa Point**	**15.50**	**165**		**Pn**	**01 46 06.8**	**0.0**
HIZ	**Hauiti**	**15.88**	**175**	Pn	**Pn**	**01 46 12.5**	**+0.8**
URZ	**Urewera**	**15.92**	**169**	Pn	**Pn**	**01 46 12.1**	**0.0**
AFI	**Afiamalu**	**16.68**	**61**	Pn	**Pn**	**01 46 21.4**	**-0.8**
BFZ	**Birch Farm**	**18.16**	**173**		**Pn**	**01 46 38.6**	**-1.6**
HNR	**Honiara**	**18.29**	**314**		**P**	**01 46 42.0**	**+0.2**
HNR	**Honiara**	**18.29**	**314**	P	**P**	**01 46 41.4**	**-0.4**
	1μm,1.5s						
NNZ	**Nelson**	**18.52**	**180**	P	**Pn**	**01 46 45.0**	**+0.4**
SNZO	**South Karori**	**18.65**	**176**	P	**Pn**	**01 46 47.5**	**+1.3**
SNZO				IAmb	IAmb	01 47 00.1	
	comp=Z,168nm,1.2s						
TUWZ	**Tuamarina**	**18.74**	**178**	P	**Pn**	**01 46 48.0**	**+0.7**
EIDS	**Eidsvold**	**20.39**	**258**	P	**P**	**01 47 05.6**	**+0.7**
EIDS				IAmb	IAmb	01 47 12.4	
	comp=Z,84nm,0.9s						
EIDS	**Eidsvold**	**20.39**	**258**	P	Pn	01 47 07.8	+0.7
	comp=Z,136nm,1.7s						
ARMA	**Armidale**	**20.78**	**244**	P	**P**	**01 47 10.0**	**+0.8**
ARMA	**Armidale**	**20.78**	**244**	P	Pn	01 47 13.8	+2.1
RK1H	**Rockhampton Ha**	**20.92**	**264**	P	Pn	01 47 13.9	+0.7
RPZ	**Rata Peaks**	**21.09**	**184**	P	**P**	**01 47 13.7**	**+1.5**
	comp=Z,30nm,0.9s,baz=266,slow=3.5,SNR=6.0						
	comp=Z,30nm,0.9s						
NTLH	**Newcastle Hard**	**21.56**	**237**	P	**P**	**01 47 21.8**	**+4.5**
RMQ	**Roma**	**22.55**	**255**	P	**P**	**01 47 30.2**	**+2.1**
	comp=Z,237nm,0.8s						
SYDH	**Sydney Hard Ro**	**22.64**	**236**	P	**P**	**01 47 30.2**	**+1.3**
TARA	**Tarawa**	**23.86**	**359**	P	**P**	**01 47 40.7**	**-0.4**
CNB	**Canberra Magne**	**24.31**	**233**	P	**P**	**01 47 46.8**	**+1.4**
CAN	**Canberra**	**24.58**	**234**	P	**P**	**01 47 48.4**	**+0.5**
CAN				IAmb	IAmb	01 48 04.0	
	comp=Z,73nm,1.1s						
CTA	**Charters Tower**	**25.22**	**271**	P	**P**	**01 47 53.6**	**-0.1**
	comp=Z,18nm,0.8s,baz=100,slow=12,SNR=8.1						
	comp=Z,18nm,0.8s						
CTAO	**Charters Tower**	**25.22**	**271**	P	**P**	**01 47 53.6**	**-0.1**
CMSA	**Cobar Meteorol**	**26.00**	**244**	P	**P**	**01 48 01.2**	**+0.6**
KRVT	**Keravat (AS076**	**27.43**	**309**	P	**P**	**01 48 12.7**	**-1.0**
	comp=Z,111nm,0.8s,baz=165,slow=1.3,SNR=5.4						
	comp=Z,111nm,0.8s						
PMG	**Port Moresby**	**28.22**	**294**	P	**P**	**01 48 19.9**	**-0.9**
	comp=Z,237nm,0.9s,baz=102,slow=5.6,SNR=5.9						
	comp=Z,32nm,0.9s						
PMG	**Port Moresby**	**28.22**	**294**	P	**P**	**01 48 19.8**	**-0.9**
PMG				IAmb	IAmb	01 48 20.9	
	comp=Z,39nm,1.0s						
BRAT	**Ballarat**	**29.22**	**233**	P	**P**	**01 48 31.1**	**+1.7**
STKA	**Stephens Creek**	**29.48**	**245**	P	**P**	**01 48 31.8**	**0.0**
	comp=Z,16nm,0.9s,baz=96,slow=11,SNR=7.1						
	comp=Z,16nm,0.9s						
HTT	**Hallett**	**31.98**	**243**	P	**P**	**01 48 54.0**	**+0.1**
	comp=Z,46nm,1.7s						
LCRK	**Leigh Creek**	**32.16**	**249**	P	**P**	**01 48 54.9**	**-0.5**
	comp=Z,212nm,0.9s						
WHYH	**Whyalla**	**33.03**	**244**	P	**P**	**01 49 03.1**	**+0.1**
	comp=Z,58nm,0.8s						
OOD	**Oodnadatta**	**34.24**	**254**	P	**P**	**01 49 13.5**	**-0.1**
BBOO	**Buckleboo**	**34.26**	**245**	P	**P**	**01 49 13.4**	**-0.4**
BBOO	**Buckleboo**	**34.26**	**245**	P	**P**	**01 49 13.2**	**-0.5**
	comp=Z,141nm,2.9s						
MULG	**Mulgathing**	**35.73**	**249**	P	**P**	**01 49 25.6**	**-0.9**
	comp=Z,167nm,0.7s						
ASAR	**Alice Springs**	**36.08**	**261**	P	**P**	**01 49 28.1**	**-1.4**
	comp=Z,8.9nm,0.7s,baz=76,slow=9.4,SNR=16						
	comp=Z,8.9nm,0.7s						
ASAR	**Alice Springs**	**36.08**	**261**	P	**P**	**01 49 27.5**	**-2.0**
WB0	**Warramunga Arr**	**36.23**	**267**	P	**P**	**01 49 31.2**	**+0.3**
WRA	**Warramunga Arr**	**36.25**	**267**	P	**P**	**01 49 28.6**	**-2.4**
	comp=Z,7.5nm,0.8s,baz=98,slow=8.5,SNR=11						
	comp=Z,7.5nm,0.8s						
FORT	**Forrest**	**40.92**	**249**	P	**P**	**01 50 08.5**	**-1.6**
MTN	**Manton Dam**	**41.12**	**276**	P	**P**	**01 50 10.6**	**-1.3**
KNRA	**Kununurra**	**42.43**	**271**	P	**P**	**01 50 22.7**	**+0.1**
KNRA				IAmb	IAmb	01 50 33.8	
	comp=Z,116nm,1.9s						
FITZ	**Fitzroy Crossi**	**44.68**	**267**	P	**P**	**01 50 39.9**	**-0.9**
	comp=Z,27nm,0.8s,baz=139,slow=9.1,SNR=13						
	comp=Z,27nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.68**	**267**	P	**P**	**01 50 39.8**	**-1.0**
FITZ				IAmb	IAmb	01 50 40.8	
	comp=Z,28nm,0.8s						
SIJI	**Sorong**	**46.15**	**292**	P	**P**	**01 50 50.9**	**-1.5**
	comp=Z,42nm,0.8s,baz=47,slow=8.8,SNR=5.8						
	comp=Z,42nm,0.8s						
NLAI	**Namlea**	**48.63**	**287**	P	**P**	**01 51 11.1**	**-0.6**
	comp=Z,49nm,1.0s						
SANI	**Sanana**	**50.16**	**287**	P	**P**	**01 51 22.3**	**-1.1**
MORW	**Morawa**	**51.43**	**250**	P	**P**	**01 51 31.9**	**-1.0**
MORW				IAmb	IAmb	01 51 46.2	
	comp=Z,35nm,0.9s						
KAPI	**Kappang**	**54.46**	**280**	P	**P**	**01 51 54.8**	**-0.6**
	comp=Z,18nm,0.9s,baz=174,slow=5.5,SNR=5.8						
	comp=Z,18nm,0.9s						
KAPI	**Kappang**	**54.46**	**280**	P	**P**	**01 51 55.2**	**-0.2**
KAPI				IAmb	IAmb	01 52 09.0	
	comp=Z,31nm,1.0s						
VNDA	**Vanda**	**55.20**	**183**	P	**P**	**01 52 00.3**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=356,slow=7.4,SNR=5.8						
	comp=Z,3.2nm,0.8s						
VNDA	**Vanda**	**55.20**	**183**	P	**P**	**01 52 00.7**	**+0.9**
VNDA				IAmb	IAmb	01 52 13.0	
	comp=Z,29nm,1.1s						
SBA	**Scott Base**	**55.35**	**182**	P	**P**	**01 52 02.9**	**+2.1**
TOLI2	**Tolitoli**	**56.23**	**288**	P	**P**	**01 52 06.7**	**-1.4**
JCJ	**Chichijima**	**57.84**	**327**	P	**P**	**01 52 19.9**	**+0.7**
LEM	**Lembang**	**64.89**	**273**	P	**P**	**01 53 07.1**	**-0.4**
	comp=Z,61nm,0.6s,baz=142,slow=22,SNR=5.0						
	comp=Z,61nm,0.6s						
JMN	**Monobe**	**67.42**	**325**	P	**P**	**01 53 23.4**	**+0.3**
QSPA	**South Pole Qui**	**67.43**	**180**	P	**P**	**01 53 22.8**	**0.0**
	comp=Z,34nm,1.0s,baz=9.2,slow=2.4,SNR=14						
	comp=Z,34nm,1.0s						
QSPA	**South Pole Qui**	**67.43**	**180**	P	**P**	**01 53 22.9**	**0.0**
MJAR	**Matsushiro Arr**	**67.51**	**330**	P	**P**	**01 53 22.1**	**-1.5**
	comp=Z,12nm,1.0s,baz=158,slow=7.4,SNR=14						
	comp=Z,12nm,1.0s						
MAJO	**Matsushiro**	**67.52**	**330**	P	**P**	**01 53 23.4**	**-0.2**
JSD	**Sado**	**68.72**	**331**	P	**P**	**01 53 30.4**	**-0.7**
JTM	**Tenmabayashi**	**69.83**	**335**	P	**P**	**01 53 38.6**	**+0.7**
KSRS	**Korea Array**	**73.42**	**324**	P	**P**	**01 53 58.9**	**-0.7**
	comp=Z,5.0nm,0.8s,baz=142,slow=6.2,SNR=10						
	comp=Z,5.0nm,0.8s						
INCN	**Inchon**	**74.15**	**323**	P	**P**	**01 54 04.2**	**+0.3**
INCN				IAmb	IAmb	01 54 10.6	
	comp=Z,22nm,0.9s						
YSS	**Yuzh-Sakhalins**	**74.54**	**339**	P	**P**	**01 54 07.3**	**+1.4**
YSS				IAmb	IAmb	01 54 09.5	
	comp=Z,24nm,0.7s						
USRK	**Ussuriysk Ar.**	**76.48**	**331**	P	**P**	**01 54 16.4**	**-0.7**
	comp=Z,12nm,0.9s,baz=133,slow=3.8,SNR=11						
	comp=Z,12nm,0.9s						
PEA0B	**Petropavlovsk-**	**76.63**	**350**	P	**P**	**01 54 18.2**	**+0.4**
PETK	**Petropavlovsk-**	**76.63**	**350**	P	**P**	**01 54 17.7**	**-0.1**
	comp=Z,12nm,0.8s,baz=175,slow=8.3,SNR=14						
	comp=Z,12nm,0.8s						
MAW	**Mawson**	**76.67**	**202**	P	**P**	**01 54 18.4**	**+0.4**
	comp=Z,8.8nm,0.9s,baz=126,slow=7.5,SNR=7.7						
	comp=Z,8.8nm,0.9s						
MAW	**Mawson**	**76.67**	**202**	P	**P**	**01 54 18.3**	**+0.4**
MDJ	**Mudanjiang**	**77.90**	**330**	P	**P**	**01 54 25.5**	**+0.4**
MDJ				IAmb	IAmb	01 54 31.6	
	comp=Z,20nm,0.9s						
BELA	**Belgrano 2**	**78.38**	**174**	P	**P**	**01 54 26.0**	**-1.4**
BELA				IAmb	IAmb	01 54 39.6	
	comp=Z,33nm,1.1s						
CN2	**Changchun**	**79.31**	**327**	*e*P	**P**	**01 54 37.1**	**+4.2**
SMAI	**San Martin Ant**	**79.42**	**161**	P	**P**	**01 54 34.2**	**+1.0**
BNX	**BinXian**	**79.76**	**329** ⇑	P	**P**	**01 54 33.5**	**-1.8**
BNX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KLR	**Kul'dur**	**80.52**	**334**	P	**P**	**01 54 38.3**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=208,slow=15,SNR=2.8						
	comp=Z,2.2nm,0.7s						
CHNA	**Chernabura Isl**	**80.61**	**16**	P	**P**	**01 54 40.1**	**+0.5**
	baz=205						
S12K	**Black Hills**	**80.83**	**14**	P	**P**	**01 54 41.3**	**+0.5**
	baz=203						
PMSA	**Palmer Station**	**82.43**	**159**	P	**P**	**01 54 49.3**	**+0.1**
	comp=Z,15nm,0.9s,baz=221,slow=5.4,SNR=7.3						
	comp=Z,15nm,0.9s						
PMSA	**Palmer Station**	**82.43**	**159**	P	**P**	**01 54 49.4**	**+0.1**
XAN	**Xi'an**	**83.14**	**311**	P	**P**	**01 54 56.6**	**+3.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**83.26**	**293**	P	**P**	**01 54 55.8**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=132,slow=3.9,SNR=7.0						
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**83.26**	**293**	P	**P**	**01 54 56.0**	**+1.5**
CHTO	**Chiang Mai**	**83.42**	**293**	P	**P**	**01 54 55.7**	**+0.5**
R17K	**Ugashik Creek**	**83.93**	**16**	P	**P**	**01 54 57.1**	**+0.2**
	baz=208						
OHAK	**Old Harbor**	**84.39**	**18**	P	**P**	**01 54 58.9**	**-0.3**
OHAK	**Old Harbor**	**84.39**	**18**	P	**P**	**01 54 59.0**	**-0.3**
	baz=211						
PZH	**PanZhiHua**	**84.65**	**301**	P	**P**	**01 55 05.8**	**+4.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
P16K	**Nushagak River**	**84.78**	**14**	P	**P**	**01 55 00.8**	**-0.4**
	baz=206						
Q16K	**King Salmon**	**84.78**	**15**	P	**P**	**01 55 01.0**	**-0.2**
	baz=208						
KDAK	**Kodiak Island**	**85.07**	**18**	P	**P**	**01 55 04.3**	**+1.7**
KDAK				IAmb	IAmb	01 55 14.0	
	comp=Z,15nm,1.0s						
HHC	**Hu-ho-hao-te**	**85.22**	**318**	*e*P	**P**	**01 55 06.1**	**+2.1**
CD2	**Chengdu**	**85.24**	**306**	*e*P	**P**	**01 55 05.8**	**+1.5**
O16K	**Kokwok River B**	**85.26**	**14**	P	**P**	**01 55 02.3**	**-1.3**
	baz=206						
P17K	**Kvichak River**	**85.30**	**15**	P	**P**	**01 55 02.7**	**-1.1**
	baz=208						
SAO	**San Andreas Ge**	**85.33**	**47**	IAmb	IAmb	01 55 16.9	
	comp=Z,20nm,1.2s						
TROLL	**Troll, Antarti**	**85.38**	**183**	P	**P**	**01 55 03.1**	**-1.4**
PKM	**Mcpherson Peak**	**85.47**	**49**	P	**P**	**01 55 07.2**	**+1.7**
	baz=238						
CIS	**Catalina Islan**	**85.70**	**51**	P	**P**	**01 55 06.6**	**+0.1**
	baz=239						
SNAA	**Sanae**	**85.89**	**181**	P	**P**	**01 55 05.3**	**-1.6**
SNAA	**Sanae**	**85.89**	**181**	P	**P**	**01 55 06.6**	**-0.4**
N16K	**Nishlik Lake**	**85.91**	**13**	P	**P**	**01 55 07.9**	**+1.0**
	baz=206						
HIA	**Hailar**	**85.93**	**328**	P	**P**	**01 55 08.9**	**+1.7**
VNA3	**Neumayer Olymp**	**86.34**	**179**	P	**P**	**01 55 07.4**	**-1.7**
BFSC	**Mount Baldy Ra**	**86.66**	**51**	P	**P**	**01 55 11.9**	**+0.5**
	baz=240						
VNA2	**Neumayer--Watz**	**86.68**	**180**	P	**P**	**01 55 09

PINE IAmb IAmb 01 55 26.7
comp=Z,12nm,0.8s
HOOD Mount Hood Mea 89.84 40 IAmb IAmb 01 55 34.1
comp=Z,11nm,0.8s
BMN Battle Mountai 90.07 46 IAmb IAmb 01 55 34.5
comp=Z,14nm,0.9s
R11A Troy Canyon, C 90.14 48 P **P** **01 55 28.8 +0.9**
baz=241
WVOR Wild Horse Val 90.17 43 IAmb IAmb 01 55 40.1
comp=Z,15nm,1.2s
WAT6 Susitna Watana 90.41 17 P **P** **01 55 29.2 +0.7**
baz=216
I07A Izee 90.48 42 IAmb IAmb 01 55 41.5
comp=Z,11nm,1.1s
N25K Chitina, Valde 90.52 19 IAmb IAmb 01 55 39.6
comp=Z,11nm,0.9s
N25K Chitina, Valde 90.52 19 P **P** **01 55 29.1 +0.2**
baz=218
GLB Gilahina Butte 90.63 19 IAmb IAmb 01 55 30.3
comp=Z,10nm,0.8s
J08A Circle Bar Ran 90.74 43 IAmb IAmb 01 55 32.4
comp=Z,8.4nm,0.8s
TUC Tucson 90.83 55 P **P** **01 55 31.9 +0.8**
DHY Denali Highway 90.92 17 P **P** **01 55 30.6 -0.3**
baz=216
HARP HAARP 90.98 18 P **P** **01 55 30.9 -0.1**
baz=218
CTG Chitna Glacier 91.03 20 P **P** **01 55 30.9 -0.5**
baz=221
O28M Mount Upton 91.26 21 P **P** **01 55 32.1 -0.5**
baz=222
CCUT Cedar City 91.31 50 IAmb IAmb 01 55 45.6
comp=Z,12nm,1.4s
SPR3 Spring Creek 3 91.32 48 IAmb IAmb 01 55 45.4
comp=Z,9.3nm,1.1s
PAX Paxson 91.35 18 P **P** **01 55 31.5 -1.3**
baz=218
G08A Pilot Rock 91.44 41 P **P** **01 55 33.5 -0.2**
G08A IAmb IAmb 01 55 35.4
comp=Z,6.8nm,0.9s
SZCU Shurtz Canyon 91.53 50 IAmb IAmb 01 55 47.5
comp=Z,12nm,1.3s
I21K Tanana 91.54 14 P **P** **01 55 34.0 +0.6**
baz=212
U15A North Rim 91.56 51 IAmb IAmb 01 55 42.9
comp=Z,11nm,0.9s
M26K Nabesna, AK 91.62 19 IAmb IAmb 01 55 39.1
comp=Z,9.2nm,0.9s
M26K Nabesna, AK 91.62 19 P **P** **01 55 33.8 -0.2**
baz=220
P30M Million Dollar 91.89 23 P **P** **01 55 35.0 -0.3**
baz=225
M27K Edge Creek, AK 91.92 19 IAmb IAmb 01 55 41.5
comp=Z,17nm,1.2s
M27K Edge Creek, AK 91.92 19 P **P** **01 55 35.2 -0.3**
baz=221
PKCU Pink Cliffs 92.01 50 IAmb IAmb 01 55 44.7
comp=Z,15nm,1.1s
HDA Harding Lake 92.11 16 P **P** **01 55 35.5 -0.6**
baz=216
RIDG Independent Ri 92.13 17 IAmb IAmb 01 55 36.7
comp=Z,12nm,0.8s
RIDG Independent Ri 92.13 17 P **P** **01 55 35.6 -0.7**
baz=218
GTA Gaotai 92.15 312 *e*P P 01 55 42.5 +5.4
GTA sP sP 01 55 48.5 -0.2
GTA pmax pmax
comp=Z,6.0nm,1.5s
SONM Songino Array 92.17 322 P **P** **01 55 34.9 -2.1**
comp=Z,1.8nm,0.8s,baz=120,slow=5.7,SNR=3.4
comp=Z,1.8nm,0.8s
SONM Songino Array 92.17 322 P **P** **01 55 38.5 +1.6**
MDM Murphy Dome 92.23 15 IAmb IAmb 01 55 36.2
comp=Z,14nm,1.1s
DOT Dot Lake 92.28 18 IAmb IAmb 01 55 41.4
comp=Z,8.2nm,0.9s
G21K Allakaket 92.36 13 P **P** **01 55 38.0 +0.7**
baz=210
D08A Wollman Farm, 92.38 39 IAmb IAmb 01 55 39.5
comp=Z,8.3nm,0.9s
IL31 92.42 16 P **P** **01 55 36.3 -1.2**
IL31 IAmb IAmb 01 55 42.3
comp=Z,13nm,1.1s
ILAR Eielson Array 92.42 16 P **P** **01 55 35.1 -2.5**
comp=Z,5.4nm,0.8s,baz=230,slow=5.0,SNR=18
comp=Z,5.4nm,0.8s
L27K Beaver Creek, 92.47 19 P **P** **01 55 37.7 -0.2**
baz=221
BCAR Beaver Creek A 92.49 19 P **P** **01 55 38.1 +0.1**
SCRK Sand Creek 92.56 17 IAmb IAmb 01 55 38.8
comp=Z,9.3nm,0.9s
SCRK Sand Creek 92.56 17 P **P** **01 55 37.9 -0.5**
baz=219
J25K Salcha River, 92.68 17 IAmb IAmb 01 55 44.2
comp=Z,7.2nm,0.9s
J25K Salcha River, 92.68 17 P **P** **01 55 37.8 -1.1**
baz=218
P32M Atlin 92.71 24 P **P** **01 55 38.0 -1.1**
baz=228
J26L Joseph Creek 93.08 17 P **P** **01 55 40.1 -0.6**
baz=219
K27K Chicken 93.14 18 P **P** **01 55 39.1 -1.8**
baz=220
G23K Bananza Creek 93.27 14 P **P** **01 55 41.0 -0.5**
baz=214
PRP Porcupine Dome 93.36 16 P **P** **01 55 40.9 -1.2**
baz=218
HLID Hailey 93.42 44 P **P** **01 55 43.9 +1.0**
F22K John River 93.49 13 P **P** **01 55 43.0 +0.5**
baz=212
PLCA Paso Flores 93.53 137 P **P** **01 55 44.0 +0.4**
comp=Z,3.5nm,1.0s,baz=292,slow=3.3,SNR=3.0
comp=Z,3.5nm,1.0s
R33M Jennings River 93.64 25 P **P** **01 55 44.3 +0.8**
baz=230
COLD Coldfoot 93.66 13 IAmb IAmb 01 55 44.8
comp=Z,9.2nm,0.8s
COLD Coldfoot 93.66 13 P **P** **01 55 43.4 +0.1**
baz=213
I26K Coal Creek Min 93.82 17 IAmb IAmb 01 55 44.7
comp=Z,11nm,0.9s
I26K Coal Creek Min 93.82 17 P **P** **01 55 43.5 -0.5**
baz=220
EGAK Eagle 93.96 18 IAmb IAmb 01 55 58.1
comp=Z,14nm,1.0s
E22K Anaktuvuk Pass 94.10 12 P **P** **01 55 44.4 -0.9**
baz=212
F24K Squaw Lake 94.41 14 P **P** **01 55 47.1 +0.4**
baz=216
I27K Kandik River 94.46 17 P **P** **01 55 47.0 -0.1**
baz=221
E24K Your Creek 94.74 14 P **P** **01 55 48.1 -0.2**
baz=215
G26K Porcupine Rive 94.93 16 P **P** **01 55 48.5 -0.5**
baz=219
PDAR Pinedale Array 96.24 46 P **P** **01 55 56.4 +0.5**
comp=Z,0.5nm,0.7s,baz=204,slow=2.0,SNR=2.7
comp=Z,0.5nm,0.7s
WMQ Urumqi 102.23 312 *e*P **Pdif** **01 56 25.1 +2.6**
ARCES ARCESS Array B 129.27 346 PKP **PKPdf** **02 01 33.2 -1.8**
comp=Z,2.1nm,0.6s,baz=60,slow=1.7,SNR=9.5
FINES FINESS Array B 135.12 338 PKP **PKPdf** **02 01 45.3 -0.8**
comp=Z,2.0nm,0.9s,baz=33,slow=4.5,SNR=4.5
TPGR Topolog 143.70 316 ⇑P PKPab 02 01 59.2 +0.1
CFR Carcaliu 143.74 317 ⇑P PKPbc 02 01 59.6 -0.4
TESR Tescani 144.03 320 ⇑P PKPbc 02 02 00.6 -0.1
BIZ Bicaz 144.13 321 ⇓P **PKPab** **02 02 00.1 -0.5**
ODBI Odobesti 144.15 318 ⇑P **PKPdf** **02 02 02.3 -0.7**
BUR08 Bucovina Ar. S 144.28 322 PKPbc 02 02 01.6 0.0
BURAR Bucovina Array 144.28 322 ⇑P **PKPab** **02 02 01.0 -0.3**
VRI Vrincioaia 144.30 319 ⇑P **PKPab** **02 02 00.2 -1.2**
PLOR Plostina 144.35 319 ⇑P **PKPab** **02 02 00.8 -0.8**
ICOR Ion Corvin 144.42 315 ⇑P PKPbc 02 02 02.6 +0.5
COVR Voineasa-Covas 144.62 319 ⇑P **PKPab** **02 02 01.2 -1.4**
MLR Muntele Rosu 144.96 319 ⇓P **PKPdf** **02 02 04.4 -0.3**
MLR Muntele Rosu 144.96 319 PKP **PKPab** **02 02 04.0 +0.1**
comp=Z,32nm,1.2s,baz=262,slow=3.2,SNR=7.2
MLR Muntele Rosu 144.96 319 **PKPab** **02 02 04.0 +0.1**
DOPR Dopca 145.06 320 ⇑P **PKPbc** **02 02 02.9 -1.2**
ARCR ARCALIA 145.07 322 ⇑P **PKPbc** **02 02 04.0 -0.1**
KOLS Kolonicke sedl 145.12 326 *e*PKP **PKPbc** **02 02 03.0 -1.2**
BMR Baia Mare 145.22 323 ⇑P **PKPbc** **02 02 04.1 -0.4**
VOIR 145.53 319 ⇓P **PKPdf** **02 02 03.5 -2.1**
CRVS Cervenica-Dubn 145.55 326 *e*PKP **PKPdf** **02 02 04.3 -1.1**
ARR Arges 145.82 319 ⇑P **PKPdf** **02 02 06.0 -0.1**
MANT Manisa 145.96 306 **PKPbc** **02 02 07.0 -0.5**
DRGR 146.16 323 ⇑P **PKPdf** **02 02 06.5 -0.1**

LOT Lotru 146.29 320 ⇑P **PKPbc** **02 02 07.5 -0.6**
LANS Liptovska Anna 146.38 328 *e*PKP **PKPab** **02 02 08.7 -0.3**
OKC Ostrava-Krasne 146.53 330 *e*PKP **PKPdf** **02 02 06.8 -0.2**
MORC Moravsky Berou 146.84 331 ⇑P **PKPbc** **02 02 09.5 0.0**
MORC Moravsky Berou 146.84 331 *e*PKP **PKPbc** **02 02 09.2 -0.3**
OSTC Ostas 146.85 333 *e*PKP **PKPbc** **02 02 09.2 -0.2**
GZR Gura Zlata 146.91 320 ⇑P **PKPdf** **02 02 06.7 -1.2**
DPC Dobruska-Polom 146.96 333 *e*PKP **PKPdf** **02 02 07.8 0.0**
KRLC Kraliky 146.97 332 *e*PKP **PKPbc** **02 02 09.4 -0.4**
PSZ Piszkesteto 146.98 326 PKPbc **PKPbc** **02 02 09.6 -0.4**
SIRR Siria 147.06 323 ⇑P **PKPdf** **02 02 07.1 -0.9**
VYHS Vyhne 147.13 328 *e*PKP **PKPbc** **02 02 10.0 -0.3**
EKA Eskdalemuir Ar 147.25 356 PKPbc **PKPdf** **02 02 08.5 +0.5**
comp=Z,8.8nm,0.6s,baz=0.1,slow=2.6,SNR=27
HERR Herculane 147.41 320 ⇑P **PKPbc** **02 02 10.6 -0.6**
JAVC Velka Javorina 147.44 329 *e*PKP **PKPbc** **02 02 10.0 -1.2**
BZS Buzias 147.46 322 ⇓P **PKPdf** **02 02 07.4 -1.4**
BRG Berggiesshubel 147.52 335 *i* PKP **PKPbc** **02 02 11.1 -0.1**
BRG Amp 02 02 12.6
comp=Z,9.9nm,0.7s
BRG *ex* x 02 02 16.8
BRG Amp 02 02 17.6
comp=Z,11nm,0.9s
CLL Collm 147.53 337 **PKPbc** **02 02 10.4 -0.8**
CLL Collm 147.53 337 *i* PKPbc **PKPbc** **02 02 10.7 -0.5**
comp=Z,13nm,0.7s
CLL *i* x x 02 02 15.8
comp=Z,16nm,1.0s
PVCC Panska Ves 147.55 334 *e*PKP **PKPbc** **02 02 10.6 -0.7**
VRAC Vranov 147.61 331 ⇓P **PKPdf** **02 02 08.7 -0.2**
VRAC Vranov 147.61 331 PKPbc **PKPbc** **02 02 11.4 -0.1**
comp=Z,4.4nm,0.9s,baz=61,slow=3.5,SNR=4.8
VRAC Vranov 147.61 331 *e*PKP **PKPbc** **02 02 10.2 -1.4**
KRUC Moravsky 147.88 331 *e*PKP **PKPdf** **02 02 10.2 +0.9**
MODS Modra-Piesok 147.97 329 *e*PKP **PKPbc** **02 02 12.7 +0.1**
PRU Pruhonice 147.98 334 *e*PKP **PKPbc** **02 02 11.3 -1.2**
VTS Vitosha 148.07 316 ⇑P **PKPdf** **02 02 11.0 +1.0**
TREC Trest 148.11 332 *e*PKP **PKPbc** **02 02 12.3 -0.6**
BOVS Bovan 148.51 318 ⇑P **PKPdf** **02 02 12.1 +1.6**
MORH Mrgy. Hungar 148.74 325 ⇑P **PKPdf** **02 02 12.4 +1.6**
FRGS Fruska Gora 148.76 322 ⇑P **PKPbc** **02 02 14.3 -0.5**
RONA Rosalia, Austr 148.91 329 *e*P **PKPdf** **02 02 12.3 +1.2**
comp=Z,18nm,1.4s
CONA Conrad Observa 148.95 330 *e*P **PKPbc** **02 02 15.5 +0.2**
CKRC Cesky Krumlov 148.97 333 *e*PKP **PKPdf** **02 02 12.8 +1.7**
KHC Kasperske Hory 149.04 334 *e*PKP **PKPbc** **02 02 14.4 -1.0**
GERES GERESS Array B 149.21 333 PKPbc **PKPbc** **02 02 14.9 -1.0**
comp=Z,2.2nm,0.8s,baz=54,slow=2.3,SNR=5.9
GERES GERESS Array B 149.21 333 PKPbc **PKPbc** **02 02 16.1 +0.2**
DIVS Divibare 149.28 321 PKPbc **PKPbc** **02 02 14.3 -1.8**
IDI Anoyia 149.69 302 PKPbc **PKPbc** **02 02 16.6 -0.9**
comp=Z,4.6nm,0.6s,baz=8.5,slow=4.6,SNR=6.1
BTNL Tennell 150.34 343 *d*PKP **PKPbc** **02 02 17.0 -1.5**
MEM Membach 150.35 343 *d*PKP **PKPbc** **02 02 17.8 -0.7**
BSTI Sart Tilman 150.49 344 *d*PKP **PKPbc** **02 02 18.2 -0.6**
BMRD Maredsous 150.95 345 *d*PKP **PKPbc** **02 02 18.6 -1.3**
RCHB Rochefort 150.97 344 *d*PKP **PKPbc** **02 02 19.3 -0.6**
WLF Walferdange 151.17 342 **PKPbc** **02 02 20.2 -0.2**
WLF Walferdange 151.17 342 *d*PKP **PKPbc** **02 02 20.1 -0.2**
DOU Dourbes 151.18 345 *dp*PKPdf **PKPbc** **02 02 18.4 -2.0**
DOU *d*PKPab **pPKPbc** **02 02 28.7 -0.5**
DOU *dp*PKPab **sPKPbc** **02 02 31.8 -0.4**
CIMO Cimolais 151.71 331 **PKPbc** **02 02 20.0 -1.9**
FETA Feichten 151.88 334 *e*P **PKPbc** **02 02 21.9 -0.5**
comp=Z,11nm,1.3s
DAVOX Davos/Dischmat 152.41 335 PKPbc **PKPbc** **02 02 22.7 -0.9**
comp=Z,5.5nm,0.8s,baz=308,slow=16,SNR=8.6
TORD Torodi Ar. Bea 167.58 222 PKPab **PKPab** **02 03 39.5 -0.7**
comp=Z,4.9nm,0.9s,baz=128,slow=4.7,SNR=7.3

*IDC **12** 02:03:41.0±1.1,22.˚58S×173.˚08E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=37.7km s-min=26.7km az=137.0*
ISC 12 02:03:45.4±0.8, 22.˚7S±0.˚2×173.˚1E±0.˚2, h32km, n13, σ1°28/13, mb4.0/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.98**	**261**	P	**P**	**P**	**02 10 44.5**	**+0.9**
	1.6nm,0.9s,baz=83,slow=9.0,SNR=7.4							
	1.6nm,0.9s							
WRA	**Warramunga Arr**	**36.15**	**267**	P	**P**	**P**	**02 10 44.0**	**-1.1**
	0.6nm,0.5s,baz=97,slow=8.6,SNR=11							
	0.6nm,0.5s							
VNDA	**Vanda**	**55.17**	**183**	P	**P**	**P**	**02 13 15.9**	**+1.4**
	0.8nm,0.7s,baz=357,slow=6.6,SNR=2.8							
	0.8nm,0.7s							
MJAR	**Matsushiro Arr**	**67.48**	**330**	P	**P**	**P**	**02 14 38.7**	**+0.4**
	1.2nm,0.6s,baz=157,slow=7.0,SNR=5.2							
	1.2nm,0.6s							
PETK	**Petropavlovsk-**	**76.64**	**351**	P	**P**	**P**	**02 15 33.8**	**+1.1**
	4.3nm,0.9s,baz=177,slow=11,SNR=5.7							
	4.3nm,0.9s							
TROLL	**Troll, Antarti**	**85.35**	**183**	P	**P**	**P**	**02 16 18.9**	**-0.3**
VNA3	**Neumayer Olymp**	**86.32**	**179**	P	**P**	**P**	**02 16 23.1**	**-0.8**
VNA2	**Neumayer--Watz**	**86.66**	**180**	P	**P**	**P**	**02 16 22.9**	**-2.6**
VNA1	**Neumayer--Stat**	**86.93**	**180**	P	**P**	**P**	**02 16 26.1**	**-0.7**
NVAR	**Mina Array Bea**	**88.42**	**47**	P	**P**	**P**	**02 16 35.5**	**+0.8**
	0.2nm,0.5s,baz=228,slow=8.0,SNR=2.9							
	0.2nm,0.5s							
ILAR	**Eielson Array**	**92.47**	**16**	P	**P**	**P**	**02 16 51.6**	**-1.0**
	0.9nm,0.7s,baz=227,slow=5.0,SNR=6.2							
	0.9nm,0.7s							
EKA	**Eskdalemuir Ar**	**147.26**	**356**	PKPbc	**PKPbc**	**PKPbc**	**02 23 24.5**	**-0.8**
	1.4nm,0.6s,baz=15,slow=3.1,SNR=6.8							
GERES	**GERESS Array B**	**149.19**	**333**	PKPbc	**PKPbc**	**PKPbc**	**02 23 30.0**	**-0.7**
	0.1nm,0.3s,baz=305,slow=3.5,SNR=1.8							

*IDC **12** 02:06:21.1±2.4,23.˚11S×173.˚55E, h0km, mb4.2/6, mbtmp4.2/8, ML4.9/2, MS5.5/1, Error ellipse: s-maj=74.1km s-min=24.1km az=150.0*
ISC 12 02:06:27.6±1.0, 22.˚9S±0.˚2×173.˚37E±0.˚10, h35km, n16, σ0°96/13, mb4.3/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.46**	**276**	Pn	**Pn**	**Pn**	**02 08 00.8**	**+0.5**
	4.2nm,0.3s,baz=121,slow=19,SNR=6.0							
DZM				Sn	**Sn**	**Sn**	**02 09 12.0**	**-0.8**
	1.8nm,0.3s,baz=169,slow=11,SNR=2.6							
	19nm,0.6s							
MSVF	**Nonsavu**	**6.73**	**42**	Pn	**Pn**	**Pn**	**02 08 04.1**	**0.0**
	2.4nm,0.3s,baz=245,slow=18,SNR=4.7							
	2.4nm,0.3s							
PPT	**Papeete**	**35.10**	**88**	LR	LR	02 26 04.7		
	comp=Z,7µm,18.1s,baz=275,slow=34							
ASAR	**Alice Springs**	**36.19**	**261**	P	**P**	**P**	**02 13 27.0**	**-0.2**
	2.4nm,0.8s,baz=88,slow=8.8,SNR=11							
	2.4nm,0.8s							
WRA	**Warramunga Arr**	**36.39**	**267**	P	**P**	**P**	**02 13 28.6**	**-0.3**
	1.3nm,0.7s,baz=98,slow=8.5,SNR=5.6							
	1.3nm,0.7s							
H11S2	**WAKE ISLAND Hy**	**41.61**	**350**	T	T	02 58 20.8		
	baz=171,slow=76,SNR=15							
H11S3	**WAKE ISLAND Hy**	**41.62**	**350**	T	T	02 58 24.0		
	baz=171,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**41.63**	**350**	T	T	02 58 21.9		
	baz=171,slow=76,SNR=13							
MJAR	**Matsushiro Arr**	**67.78**	**330**	P	**P**	**P**	**02 17 21.9**	**0.0**
	3.5nm,1.0s,baz=154,slow=8.1,SNR=6.2							
	3.5nm,1.0s							
KSRS	**Korea Array**	**73.68**	**324**	P	**P**	**P**	**02 17 58.8**	**+1.1**
	0.7nm,0.4s,baz=133,slow=5.7,SNR=5.4							
	0.7nm,0.4s							
PETK	**Petropavlovsk-**	**76.87**	**350**	P	**P**	**P**	**02 18 16.6**	**+0.8**
	3.3nm,0.9s,baz=136,slow=7.4,SNR=4.0							
	3.3nm,0.9s							
TROLL	**Troll, Antarti**	**85.17**	**183**	P	**P**	**P**	**02 19 01.6**	**+1.6**
VNA2	**Neumayer--Watz**	**86.47**	**180**	P	**P**	**P**	**02 19 05.1**	**-1.2**
	baz=174,slow=6.0							
ILAR	**Eielson Array**	**92.58**	**16**	P	**P**	**P**	**02 19 33.7**	**-1.2**
	1.4nm,0.9s,baz=232,slow=6.6,SNR=8.1							
	1.4nm,0.9s							
EKA	**Eskdalemuir Ar**	**147.47**	**356**	PKPbc	**PKPbc**	**PKPbc**	**02 26 06.7**	**-0.9**
	1.9nm,0.7s,baz=359,slow=3.5,SNR=4.9							
GERES	**GERESS Array B**	**149.47**	**333**	PKPbc	**PKPbc**	**PKPbc**	**02 26 13.3**	**+0.2**
	0.6nm,0.7s,baz=48,slow=2.0,SNR=4.8							

*SOME **12** 02:06:59.4,39.˚38N×73.˚72E, h10km*
*IDC **12** 02:06:59.3±0.7,39.˚21N×73.˚59E, h0km, mb4.2/19, mbtmp4.2/26, ML3.6/7, Error ellipse: s-maj=13.9km s-min=11.2km az=154.0*

*KRNET **12** 02:06:59.7±0.1,39.˚35N×73.˚57E, mb4.8*
*NNC **12** 02:07:03.8±1.2,39.˚56N×73.˚55E, h0km, mb4.9, mpv4.7, Error ellipse: s-maj=10.1km s-min=5.6km az=177.0*
*NEIC **12** 02:07:03.1±2.6,39.˚36N±0.˚05×73.˚51E±0.˚07, h10km±1km, mb4.5/23, Error ellipse: s-maj=10.4km s-min=7.7km az=124.0*
*MOS **12** 02:07:04.6±1.0,39.˚40N×73.˚59E, h47km, mb4.5/18, Error ellipse: s-maj=5.6km s-min=3.5km az=82.9*
ISC 12 02:07:02.9±0.8, 39.˚42N±0.˚03×73.˚55E±0.˚02, h16km±5km, n255, σ2°34/307, mb4.3/43, 38C-37D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.25**	**332**	*i* P		**Pn**	**02 07 24.4**	**-1.4**
OHH				*i* S		**Sb**	**02 07 43.0**	**+0.9**
OHH	**Osh**	**1.25**	**332**	⇑*i* P		**Pn**	**02 07 24.4**	**-1.4**
	baz=33							
OHH				⇑*i* S		**Sb**	**02 07 43.0**	**+0.9**
	baz=33							
DRK	**Karamyk**	**1.35**	**273**			**Pn**	**02 07 27.7**	**+0.4**
DRK	**Karamyk**	**1.35**	**273**	⇓*e*P		**Pn**	**02 07 25.8**	**-1.6**
	baz=76							
DRK				⇓*i* S		**Sb**	**02 07 44.8**	**-0.4**
	baz=76							
KSH	**Kashi**	**1.88**	**86**	Pg		Pn	02 07 28.2	-6.3
KSH				Sg		**Sn**	**02 07 51.7**	**-6.3**
KSH				pmax		pmax		
	comp=Z,430nm,0.8s							
KSH				smax		smax		
	comp=N,6µm,0.7s							
KSH				smax		smax		
	comp=E,4µm,1.1s							
ARLS	**Aral**	**2.51**	**13**	*i* PN		**Pn**	**02 07 44.6**	**+1.4**
ARLS				*i* S		**Sn**	**02 08 17.2**	**+3.6**
ARLS	**Aral**	**2.51**	**13**	⇓*i* P		**Pn**	**02 07 44.6**	**+1.4**
	baz=13							
ARLS				⇓*i* S		**Sn**	**02 08 17.2**	**+3.6**
	baz=13							
GAR	**Garm**	**2.54**	**262**			**Pn**	**02 07 45.3**	**+1.7**
GAR	**Garm**	**2.54**	**262**	*i* PN		**Pn**	**02 07 44.5**	**+0.9**
GAR				*i* S		**Sn**	**02 08 16.9**	**+2.6**
GAR	**Garm**	**2.54**	**262**	⇓*e*P		**Pn**	**02 07 44.5**	**+0.9**
	baz=63							
GAR				⇓*i* S		**Sn**	**02 08 16.9**	**+2.6**
	baz=63							
AML	**Almayashu**	**2.71**	**2**	P		**Pn**	**02 07 48.6**	**+2.4**
	SNR=449							
AML	**Almayashu**	**2.71**	**2**	*i* PN		**Pn**	**02 07 47.8**	**+1.6**
AML				*i* S		**Sn**	**02 08 22.6**	**+3.7**
NRN	**Naryn**	**2.75**	**42**	Pn		**Pn**	**02 07 48.3**	**+1.6**
NRN	**Naryn**	**2.75**	**42**	PN		**Pn**	**02 07 48.3**	**+1.6**
TRKS	**Terek-Say**	**2.80**	**320**	*i* PN		**Pn**	**02 07 47.8**	**+0.7**
TRKS				*i* S		**Sn**	**02 08 22.7**	**+2.1**
TRKS	**Terek-Say**	**2.80**	**320**	⇑*e*P		**Pn**	**02 07 47.8**	**+0.7**
	baz=20							
TRKS				⇑*i* S		**Sn**	**02 08 22.7**	**+2.1**
	baz=20							
UCH	**Uchtor**	**2.90**	**14**	P		**Pn**	**02 07 52.9**	**+4.0**
	SNR=17							
UCH	**Uchtor**	**2.90**	**14**	*i* PN		**Pn**	**02 07 50.1**	**+1.2**
UCH				*i* S		**Sn**	**02 08 27.0**	**+3.4**
UCH	**Uchtor**	**2.90**	**14**	⇓*i* P		**Pn**	**02 07 50.1**	**+1.2**
	baz=14							
UCH				⇓*i* S		**Sn**	**02 08 27.0**	**+3.4**
	baz=14							
EKS2	**Erkin-Say**	**3.25**	**3**	P		**Pn**	**02 07 56.3**	**+3.0**
	SNR=68							
EKS2	**Erkin-Say**	**3.25**	**3**	*i* PN		**Pn**	**02 07 55.0**	**+1.7**
EKS2				*i* S		**Sn**	**02 08 35.0**	**+3.4**
EKS2	**Erkin-Say**	**3.25**	**3**	⇑*e*P		**Pn**	**02 07 55.0**	**+1.7**
	baz=3.0							
EKS2				⇑*i* S		**Sn**	**02 08 35.0**	**+3.4**
	baz=3.0							
AAK	**Ala-Archa**	**3.30**	**12**	Pn		**Pn**	**02 07 57.7**	**+3.7**
	comp=E,17nm,0.3s,baz=186,slow=9.5,SNR=45							
AAK				Sn		**Sb**	**02 08 43.4**	**+2.4**
	comp=E,17nm,0.3s,baz=210,slow=16,SNR=7.4							
	comp=E,65nm,0.4s							
AAK	**Ala-Archa**	**3.30**	**12**	P		**Pn**	**02 07 57.3**	**+3.3**
	SNR=53							
AAK	**Ala-Archa**	**3.30**	**12**			**Pn**	**02 07 57.2**	**+3.3**
AAK	**Ala-Archa**	**3.30**	**12**	⇓*e*PN		**Pn**	**02 07 56.2**	**+2.2**
AAK	**Ala-Archa**	**3.30**	**12**	⇑*e*P		**Pn**	**02 07 55.3**	**+1.3**
	baz=12							
AAK				⇑*i* S		**Sn**	**02 08 36.1**	**+3.2**
	baz=12							
MRKS	**Merke**	**3.33**	**356**	*e*P		**Pb**	**02 08 01.6**	**-0.1**
	comp=E,61nm,0.6s							
MRKS				*e*S		**Sb**	**02 08 46.3**	**+4.3**
	comp=E,903nm,0.6s							
MRKS	**Merke**	**3.33**	**356**	Pg		**Pb**	**02 07 59.5**	**-2.2**
	comp=E,163nm,0.2s							
MRKS				Lg		Lg	02 08 44.2	
	comp=E,903nm,0.6s							
KBK	**Karagaybulak**	**3.41**	**18**	P		**Pn**	**02 07 59.2**	**+3.7**
	SNR=38							
KBK	**Karagaybulak**	**3.41**	**18**	*i* PN		**Pn**	**02 07 57.1**	**+1.6**
KBK				*i* S		**Sn**	**02 08 39.0**	**+3.3**
KBK	**Karagaybulak**	**3.41**	**18**	⇑*e*P		**Pn**	**02 07 57.1**	**+1.6**
	baz=17							
KBK				⇑*i* S		**Sn**	**02 08 39.0**	**+3.3**
	baz=17							
ULHL	**Ulahol**	**3.49**	**35**	P		**Pn**	**02 08 00.8**	**+4.1**
	SNR=14							
ULHL	**Ulahol**	**3.49**	**35**	*i* PN		**Pn**	**02 07 57.8**	**+1.1**
ULHL				*i* S		**Sn**	**02 08 40.7**	**+3.0**
ULHL	**Ulahol**	**3.49**	**35**	⇑*e*P		**Pn**	**02 07 57.8**	**+1.1**
	baz=34							
ULHL				⇑*i* S		**Sn**	**02 08 40.7**	**+3.0**
	baz=34							
CHGR	**Chuyangaron**	**3.50**	**259**			**Pn**	**02 07 57.0**	**+0.3**
CHGR	**Chuyangaron**	**3.50**	**259**	PN		**Pn**	**02 07 57.0**	**+0.3**
CHGR	**Chuyangaron**	**3.50**	**259**	⇓*e*P		**Pn**	**02 07 57.5**	**+0.8**
	baz=60							
CHGR				⇓*i* S		**Sn**	**02 08 39.6**	**+1.8**
	baz=60							
BOOM	**Boomskoye usch**	**3.57**	**30**			**Pn**	**02 08 00.6**	**+2.9**
BOOM	**Boomskoye usch**	**3.57**	**30**	PN		**Pn**	**02 08 00.6**	**+2.9**
BOOM	**Boomskoye usch**	**3.57**	**30**	⇓*e*P		**Pn**	**02 07 59.0**	**+1.3**
	baz=29							
BOOM				⇓*e*S		**Sn**	**02 08 42.7**	**+3.1**
	baz=29							
CHMS	**Chumysh**	**3.69**	**14**	P		**Pn**	**02 08 02.9**	**+3.5**
	SNR=9.5							
CHMS	**Chumysh**	**3.69**	**14**	*i* PN		**Pn**	**02 08 02.1**	**+2.8**
CHMS				pmax		pmax		
	comp=Z,75nm,0.7s							
CHMS	**Chumysh**	**3.69**	**14**	⇓Pn		**Pn**	**02 08 02.1**	**+2.8**
	comp=Z,75nm,0.7s							
CHMS				⇓Lg		Lg	02 08 58.7	
	comp=Z,554nm,1.1s							
TAS	**Tashkent**	**3.77**	**302**			**Pn**	**02 08 02.7**	**+2.4**
TAS	**Tashkent**	**3.77**	**302**	PN		**Pn**	**02 08 02.7**	**+2.4**
TAS	**Tashkent**	**3.77**	**302**	⇑*i* P		**Pn**	**02 08 01.8**	**+1.5**
	baz=3.0							
TAS				⇑*i* S		**Sn**	**02

USP	**Ospenovka**	**3.91**	**10**	P		**Pn**	**02 08 05.7**	**+3.4**
	SNR=30							
USP	**Ospenovka**	**3.91**	**10**	*i* PN		**Pn**	**02 08 04.0**	**+1.6**
USP				*i* S		**Sn**	**02 08 51.1**	**+3.1**
USP	**Ospenovka**	**3.91**	**10⇑**	*e*P		**Pn**	**02 08 04.0**	**+1.6**
	baz=10.0							
USP				⇑*i*S		**Sn**	**02 08 51.1**	**+3.1**
	baz=10.0							
KST	**Kastek**	**4.06**	**26**	*e*P		**Pb**	**02 08 14.5**	**+0.5**
	comp=Z,62nm,0.5s							
KST				*e*S		**Sb**	**02 09 09.0**	**+6.1**
	comp=Z,531nm,0.7s							
KST	**Kastek**	**4.06**	**26**	Pg		**Pb**	**02 08 12.7**	**-1.3**
	comp=Z,62nm,0.5s							
KST				Lg		Lg	02 09 06.9	
	comp=Z,531nm,0.7s							
SGDS	**Sogindy**	**4.11**	**11**	*e*PN		**Pn**	**02 08 07.6**	**+2.5**
SGDS	**Sogindy**	**4.11**	**11**	*e*P		**Pb**	**02 08 15.8**	**+0.9**
	comp=Z,41nm,0.3s							
SGDS				*e*S		**Sg**	**02 09 11.5**	**-3.5**
	comp=Z,266nm,0.7s							
SGDS	**Sogindy**	**4.11**	**11**	*e*Pn		**Pn**	**02 08 07.7**	**+2.5**
	baz=11							
SGDS	**Sogindy**	**4.11**	**11**	Pg		**Pb**	**02 08 15.3**	**+0.3**
	comp=Z,41nm,0.3s							
SGDS				Lg		Lg	02 09 11.4	
	comp=Z,266nm,0.7s							
CHM	**Chimkent**	**4.16**	**315**	PN		Pn	02 08 02.1	-3.7
CHM							02 08 58.6	
MTBS	**Maitube**	**4.30**	**29**	*e*P		**Pb**	**02 08 19.6**	**+1.4**
	comp=Z,78nm,0.4s							
MTBS				*e*S		**Sg**	**02 09 17.0**	**-3.9**
	comp=Z,179nm,0.6s							
MTBS	**Maitube**	**4.30**	**29**	Pg		**Pb**	**02 08 17.6**	**-0.6**
	comp=Z,78nm,0.4s							
MTBS				Lg		Lg	02 09 15.0	
	comp=Z,179nm,0.6s							
KK31	**Karatay Array**	**4.33**	**329**			**Pn**	**02 08 10.3**	**+2.2**
KK31	**Karatay Array**	**4.33**	**329**	*e*PN		**Pn**	**02 08 10.6**	**+2.5**
KK31				*e*			02 09 06.1	
KK31	**Karatay Array**	**4.33**	**329**	⇑Pn		**Pn**	**02 08 10.6**	**+2.5**
	comp=Z,11nm,0.3s,baz=132,slow=12,SNR=306							
KK31				⇑Pg		**Pb**	**02 08 21.4**	**+2.7**
	comp=Z,28nm,0.4s,baz=145,slow=13,SNR=14							
KK31				⇓Sn		**Sn**	**02 09 02.0**	**+3.7**
	comp=Z,123nm,0.7s,baz=158,slow=24,SNR=4.6							
KK31				⇓Lg		Lg	02 09 18.8	
	comp=Z,127nm,0.5s							
KKAR	**Karatay Array**	**4.33**	**329**			**Pn**	**02 08 11.1**	**+3.0**
KKAR	**Karatay Array**	**4.33**	**329**	*i* PN		**Pn**	**02 08 09.9**	**+1.8**
KKAR				*i* S		**Sn**	**02 09 01.2**	**+2.9**
KKAR	**Karatay Array**	**4.33**	**329⇑**	*i*P		**Pn**	**02 08 09.9**	**+1.8**
	baz=29							
KKAR				⇑*i*S		**Sn**	**02 09 01.2**	**+2.9**
	baz=29							
AAA	**Alma-Ata**	**4.56**	**33**	*e*PN		**Pn**	**02 08 14.5**	**+3.3**
AAA	**Alma-Ata**	**4.56**	**33**	*e*P		**Pb**	**02 08 25.4**	**+2.9**
	comp=Z,96nm,0.2s							
AAA				*e*S		**Sg**	**02 09 27.4**	**-1.9**
	comp=Z,429nm,0.6s							
AAA	**Alma-Ata**	**4.56**	**33**	*e*Pn		**Pn**	**02 08 14.6**	**+3.3**
	baz=33							
AAA	**Alma-Ata**	**4.56**	**33**	Pg		**Pb**	**02 08 23.5**	**+0.9**
	comp=Z,96nm,0.2s							
AAA				Lg		Lg	02 09 25.4	
	comp=Z,429nm,0.6s							
KRBS	**Karabastau**	**4.56**	**20**	*e*P		**Pb**	**02 08 23.6**	**+1.0**
	comp=Z,46nm,0.7s							
KRBS				*e*S		**Sg**	**02 09 24.7**	**-4.8**
	comp=Z,242nm,0.6s							
KRBS	**Karabastau**	**4.56**	**20**	Pg		**Pb**	**02 08 23.0**	**+0.3**
	comp=Z,46nm,0.7s							
KRBS				Lg		Lg	02 09 24.4	
	comp=Z,242nm,0.6s							
MDOK	**Medeo**	**4.58**	**34**	PN		**Pn**	**02 08 14.5**	**+2.9**
MDOK	**Medeo**	**4.58**	**34**	*e*P		**Pb**	**02 08 23.8**	**+0.9**
	comp=Z,60nm,0.9s							
MDOK				*e*S		**Sg**	**02 09 25.0**	**-5.0**
	comp=Z,275nm,0.9s							
MDOK	**Medeo**	**4.58**	**34**	*e*Pn		**Pn**	**02 08 13.6**	**+2.0**
	baz=34							
MDOK	**Medeo**	**4.58**	**34**	⇑Pn		**Pn**	**02 08 14.6**	**+2.9**
	comp=Z,18nm,0.6s							
MDOK				Pg		**Pb**	**02 08 23.9**	**+0.9**
	comp=Z,60nm,0.9s							
MDOK				⇑Pg		**Pg**	**02 08 26.3**	**-4.3**
	comp=Z,161nm,1.3s							
MDOK				Lg		Lg	02 09 25.9	
	comp=Z,275nm,0.9s							
MDOK				⇑Lg		Lg	02 09 27.2	
	comp=Z,581nm,1.3s							
KNDC	**Almaty**	**4.59**	**33**	⇑Pn		**Pn**	**02 08 13.7**	**+2.1**
	comp=Z,78nm,0.7s							
KNDC				⇓Pg		**Pb**	**02 08 26.6**	**+3.5**
	comp=Z,186nm,0.6s							
KNDC				⇓Lg		Lg	02 09 27.1	
	comp=Z,1μm,0.8s							
KTBS	**Karatobe**	**4.89**	**28**	*e*P		**Pb**	**02 08 30.3**	**+2.0**
	comp=Z,48nm,0.6s							
KTBS				*e*S		**Sg**	**02 09 35.6**	**-4.4**
	comp=Z,140nm,0.2s							
KTBS	**Karatobe**	**4.89**	**28**	Pg		**Pb**	**02 08 28.7**	**+0.4**
	comp=Z,48nm,0.6s							
KTBS				Lg		Lg	02 09 34.0	
	comp=Z,140nm,0.2s							
KUU	**Kurty**	**4.94**	**24**	*e*PN		**Pn**	**02 08 18.8**	**+2.4**
KUU	**Kurty**	**4.94**	**24**	*e*P		**Pb**	**02 08 30.3**	**+1.4**
	comp=Z,33nm,0.3s							
KUU				*e*S		**Sg**	**02 09 36.0**	**-5.4**
	comp=Z,428nm,0.5s							
KUU	**Kurty**	**4.94**	**24**	*e*Pn		**Pn**	**02 08 18.8**	**+2.4**
	baz=24							
KUU	**Kurty**	**4.94**	**24**	Pg		**Pb**	**02 08 29.7**	**+0.8**
	comp=Z,33nm,0.3s							
KUU				Lg		Lg	02 09 36.0	
	comp=Z,428nm,0.5s							
SATY	**Saty**	**5.16**	**44**	*e*PN		**Pn**	**02 08 21.3**	**+1.7**
SATY				pmax		pmax		
	comp=Z,4.0nm,0.7s							
SATY	**Saty**	**5.16**	**44**	*e*P		**Pb**	**02 08 35.3**	**+2.4**
	comp=Z,63nm,0.4s							
SATY				*e*S		**Sg**	**02 09 44.1**	**-4.5**
	comp=Z,102nm,0.7s							
SATY	**Saty**	**5.16**	**44**	*e*Pn		**Pn**	**02 08 21.4**	**+1.7**
	comp=Z,3.9nm,0.7s,baz=44							
SATY	**Saty**	**5.16**	**44**	Pg		**Pb**	**02 08 34.9**	**+2.0**
	comp=Z,63nm,0.4s							
SATY				Lg		Lg	02 09 44.5	
	comp=Z,102nm,0.7s							
ZHN	**Zhinishke**	**5.25**	**43**	*e*PN		**Pn**	**02 08 21.6**	**+0.8**
ZHN				pmax		pmax		
	comp=Z,2.0nm,0.8s							
ZHN	**Zhinishke**	**5.25**	**43**	*e*P		**Pb**	**02 08 36.4**	**+2.0**
	comp=Z,61nm,0.5s							
ZHN				*e*S		**Sg**	**02 09 45.7**	**-5.9**
	comp=Z,128nm,0.5s							
ZHN	**Zhinishke**	**5.25**	**43**	*e*Pn		**Pn**	**02 08 21.7**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=43							
ZHN	**Zhinishke**	**5.25**	**43**	Pg		**Pb**	**02 08 36.4**	**+2.0**
	comp=Z,61nm,0.5s							
ZHN				Lg		Lg	02 09 47.3	
	comp=Z,128nm,0.5s							
KURS	**Kuram**	**5.35**	**39**	*e*P		**Pb**	**02 08 38.6**	**+2.6**
	comp=Z,73nm,0.9s							
KURS				*e*S		**Sg**	**02 09 50.5**	**-4.1**
	comp=Z,107nm,1.5s							
KURS	**Kuram**	**5.35**	**39**	Pg		**Pb**	**02 08 38.2**	**+2.2**
	comp=Z,73nm,0.9s							
KURS				Lg		Lg	02 09 50.5	
	comp=Z,107nm,1.5s							
UZB	**Uzynbulak**	**5.56**	**46**	*e*PN		**Pn**	**02 08 26.1**	**+1.0**
UZB	**Uzynbulak**	**5.56**	**46**	*e*P		**Pb**	**02 08 43.1**	**+3.4**
	comp=Z,29nm,0.5s							
UZB				*e*S		**Sg**	**02 09 57.1**	**-4.2**
	comp=Z,88nm,0.7s							
UZB	**Uzynbulak**	**5.56**	**46**	*e*Pn		**Pn**	**02 08 26.1**	**+1.0**
	baz=46							
UZB	**Uzynbulak**	**5.56**	**46**	Pg		**Pb**	**02 08 41.8**	**+2.2**
	comp=Z,29nm,0.5s							
UZB				Lg		Lg	02 09 56.7	
	comp=Z,88nm,0.7s							
CEP	**Cherat**	**5.73**	**194**	P		**Pn**	**02 08 31.1**	**+3.6**
CHCP	**Chirah Chowk**	**5.75**	**182**	P		**Pn**	**02 08 31.6**	**+4.0**
NIL	**Nilore**	**5.76**	**182**	Pn		**Pn**	**02 08 28.6**	**+0.8**
NIL	**Nilore**	**5.76**	**182**	PN		**Pn**	**02 08 28.6**	**+0.8**
ARXS	**Arharly**	**5.76**	**32**	*e*P		**Pb**	**02 08 45.7**	**+2.7**
	comp=Z,64nm,0.5s							
ARXS				*e*S		**Sg**	**02 10 02.3**	**-5.5**
	comp=Z,199nm,0.7s							
ARXS	**Arharly**	**5.76**	**32**	Pg		**Pb**	**02 08 46.4**	**+3.4**
	comp=Z,64nm,0.5s							
ARXS				Lg		Lg	02 10 04.4	
	comp=Z,199nm,0.7s							
SHLS	**Shalkode**	**5.82**	**48**	*e*PN		**Pn**	**02 08 33.1**	**+4.6**
SHLS				pmax		pmax		
	comp=Z,11nm,0.8s							
SHLS	**Shalkode**	**5.82**	**48**	*e*P		**Pg**	**02 08 51.6**	**-2.7**
	comp=Z,34nm,0.7s							
SHLS				*e*S		**Sg**	**02 10 12.6**	**+3.0**
	comp=Z,129nm,0.9s							
SHLS	**Shalkode**	**5.82**	**48**	*e*Pn		**Pn**	**02 08 33.2**	**+4.6**
	comp=Z,11nm,0.8s,baz=50							
SHLS	**Shalkode**	**5.82**	**48**	Pg		**Pg**	**02 08 51.0**	**-3.2**
	comp=Z,34nm,0.7s							
SHLS				Lg		Lg	02 10 12.4	
	comp=Z,129nm,0.9s							
BLB	**Baldybastay**	**5.96**	**37**	*e*P		**Pb**	**02 08 48.4**	**+2.1**
	comp=Z,44nm,0.6s							
BLB				*e*S		**Sg**	**02 10 07.2**	**-6.8**
	comp=Z,98nm,1.0s							
BLB	**Baldybastay**	**5.96**	**37**	Pg		**Pb**	**02 08 48.0**	**+1.6**
	comp=Z,44nm,0.6s							
BLB				Lg		Lg	02 10 07.6	
	comp=Z,98nm,1.0s							
KBL	**Kabul**	**6.05**	**218**	Pn		**Pn**	**02 08 32.3**	**+0.4**
KBL	**Kabul**	**6.05**	**218**	PN		**Pn**	**02 08 32.3**	**+0.4**
KTMS	**Ketmen**	**6.51**	**50**	Pg		**Pb**	**02 08 59.7**	**+3.8**
	comp=Z,17nm,0.8s							
KTMS				Lg		Lg	02 10 27.3	
	comp=Z,32nm,0.8s							
TDK	**Taldyqorghan**	**6.65**	**31**	*e*PN		**Pn**	**02 08 40.7**	**+0.9**
TDK	**Taldyqorghan**	**6.65**	**31**	*e*Pn		**Pn**	**02 08 40.8**	**+0.9**
	baz=31							
TDK				*e*Sn		**Sn**	**02 09 55.8**	**+0.6**
	baz=31							
TDK	**Taldyqorghan**	**6.65**	**31**	Pg		**Pb**	**02 09 02.6**	**+4.5**
	comp=Z,81nm,0.3s							
TDK				Lg		Lg	02 10 32.5	
	comp=Z,350nm,0.7s							
THW	**Thamme Wali**	**6.77**	**193**	P		**Pn**	**02 08 44.0**	**+2.4**
DJR	**Jarkent**	**6.77**	**41**	Pg		**Pb**	**02 09 04.4**	**+4.2**
	comp=Z,17nm,0.5s							
DJR				Lg		Lg	02 10 35.5	
	comp=Z,63nm,0.7s							
JMU	**Jammu**	**6.78**	**170**	*e*P		Pn	02 08 48.1	+6.5
JMU				*e*S		**Sn**	**02 09 58.6**	**+0.2**
THN	**Thein Dam**	**7.19**	**165**	*e*P		**Pn**	**02 08 50.4**	**+3.1**
THN				*e*S		**Sn**	**02 10 10.7**	**+2.1**
BHK	**Bhakra**	**8.32**	**163**	*e*P		Pn	02 09 08.4	+5.6
BHK				*e*S		**Sn**	**02 10 34.6**	**-1.9**
SMLA	**Simla**	**8.78**	**159**	*e*P		**Pn**	**02 09 11.9**	**+2.8**
SMLA				*e*S		**Sn**	**02 10 42.5**	**-5.3**
SMLA				IAML			02 10 48.6	
	comp=E,158nm,0.8s							
SMLA				IAML			02 10 54.8	
	comp=E,147nm,0.3s							
OTUK	**Ortayu**	**8.87**	**355**	Pn		**Pn**	**02 09 12.0**	**+1.7**
OTUK				Lg		Lg	02 11 40.6	
MAKZ	**Makanchi**	**9.62**	**37**	Pn		**Pn**	**02 09 21.2**	**+0.7**
MAKZ	**Makanchi**	**9.62**	**37**	P		**Pn**	**02 09 21.3**	**+0.7**
MAKZ	**Makanchi**	**9.62**	**37**	⇓Pn		**Pn**	**02 09 22.4**	**+1.7**
	comp=E,4.7nm,0.7s							
MAKZ				⇑Pg			02 09 57.0	
	comp=E,12nm,1.2s							
MAKZ				⇑Lg		Lg	02 12 08.1	
	comp=E,70nm,1.5s							
MK31	**Makanchi Array**	**9.76**	**38**	Pn		**Pn**	**02 09 24.7**	**+2.3**
MK31	**Makanchi Array**	**9.76**	**38⇓**	*e*P		**Pn**	**02 09 24.8**	**+2.3**
MK31	**Makanchi Array**	**9.76**	**38**	Pn		**Pn**	**02 09 25.1**	**+2.6**
	comp=E,2.7nm,0.7s,baz=222,slow=11,SNR=6.8							
MK31				⇓Pg			02 09 59.8	
	comp=E,5.3nm,0.8s,baz=222,slow=13,SNR=4.1							
MK31				⇑Lg		Lg	02 12 12.8	
	comp=E,9.1nm,0.7s,baz=224,slow=27,SNR=5.2							
MKAR	**Makanchi Array**	**9.76**	**38**	Pn		**Pn**	**02 09 25.4**	**+2.9**
	comp=E,0.2nm,0.3s,baz=219,slow=17,SNR=7.1							
MKAR				Lg		Lg	02 12 07.4	
	comp=E,0.3nm,0.3s,baz=227,slow=25,SNR=2.1							
	comp=E,1.2nm,0.7s							
MKAR	**Makanchi Array**	**9.76**	**38**	Pn		**Pn**	**02 09 23.7**	**+1.2**
MKAR	**Makanchi Array**	**9.76**	**38**	P		**Pn**	**02 09 23.7**	**+1.2**
HRA	**Herat**	**10.35**	**244**			**Pn**	**02 09 29.4**	**-1.5**
BRZS	**Berezniki**	**10.58**	**357**	*e*P		**Pn**	**02 09 35.1**	**+1.3**
BRZS				*e*			02 11 32.5	
BRZS				pmax		pmax		
	comp=Z,2.0nm,0.9s							
BRZS	**Berezniki**	**10.58**	**357**	*e*Pn		**Pn**	**02 09 35.1**	**+1.3**
	comp=Z,1.8nm,0.9s,baz=357							
BRZS				*e*Sn		**Sn**	**02 11 32.6**	**+0.7**
	baz=357							
WMQ	**Urumqi**	**11.47**	**63**	*e*P		Pn	02 09 53.5	+7.5
ZSN	**Zaisan**	**11.49**	**42**	*e*P		**Pn**	**02 09 47.3**	**+1.1**
ZSN	**Zaisan**	**11.49**	**42**	*e*Pn		**Pn**	**02 09 47.4**	**+1.1**
	baz=42							
KUDL	**Kundal**	**11.51**	**167**	*e*P		**Pn**	**02 09 45.1**	**-1.4**
KURBB	**Kurchatov Arra**	**11.74**	**16**	Pn		**Pn**	**02 09 50.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=205,slow=12,SNR=12							
KURBB				Lg		Lg	02 13 12.0	
	comp=Z,0.1nm,0.3s,baz=139,slow=52,SNR=16							
	comp=Z,1.4nm,0.7s							
KURBB	**Kurchatov Arra**	**11.74**	**16**	⇑Pn		**Pn**	**02 09 51.0**	**+1.4**
	comp=Z,4.4nm,0.8s							
KURBB				⇓Lg		Lg	02 13 13.0	
	comp=Z,93nm,0.9s							
KURK	**Kurchatov**	**11.85**	**16**	Pn		**Pn**	**02 09 53.8**	**+2.7**
KURK	**Kurchatov**	**11.85**	**16⇓**	*e*P		**Pn**	**02 09 54.3**	**+3.2**
SEM	**Semipalatinsk**	**11.97**	**21**	*e*P		**Pn**	**02 09 53.7**	**+0.8**
SEM	**Semipalatinsk**	**11.97**	**21**	*e*Pn		**Pn**	**02 09 53.7**	**+0.8**
	baz=21							
GEYT	**Alibeck**	**12.15**	**268**	Pn		**Pn**	**02 09 52.7**	**-2.6**
	comp=Z,1.9nm,0.3s,baz=114,slow=7.3,SNR=9.0							
	comp=Z,2.4nm,0.4s							
GEYT	**Alibeck**	**12.15**	**268**	Pn		**Pn**	**02 09 53.4**	**-1.9**
AJM	**Ajmer**	**12.93**	**176**	*ex*		x	02 10 04.0	
AJM				*ex*		x	02 10 04.1	
AJM				*e*S		**Sn**	**02 12 26.8**	**-2.9**
BVA0	**Borovoye Array**	**13.78**	**352**	Pn		**Pn**	**02 10 16.7**	**-0.8**
	comp=Z,11nm,0.8s,baz=164,slow=14,SNR=31							
BVA0				Sn		**Sn**	**02 12 52.7**	**+2.6**
	comp=Z,8.1nm,1.0s,baz=166,slow=23,SNR=5.3							
BVA0				⇓Lg		Lg	02 14 18.9	
	comp=Z,22nm,0.9s,baz=154,slow=30,SNR=3.9							
AB31	**Akbulak array**	**13.82**	**320**	*e*P		**Pn**	**02 10 16.2**	**-1.7**
AB31							02 12 46.4	
AB31	**Akbulak array**	**13.82**	**320**	⇑Pn		**Pn**	**02 10 16.3**	**-1.7**
	comp=Z,9.6nm,0.8s,baz=130,slow=14,SNR=84							
AB31				⇑Sn		**Sn**	**02 12 50.8**	**-0.1**
	comp=Z,7.2nm,0.8s,baz=126,slow=24,SNR=3.8							
ABKAR	**Akbulak array**	**13.82**	**320**	Pn		**Pn**	**02 10 17.0**	**-1.0**
BRVK	**Borovoye**	**13.83**	**352**	Pn		**Pn**	**02 10 17.5**	**-0.6**
BRVK	**Borovoye**	**13.83**	**352⇓**	*e*P		**Pn**	**02 10 17.3**	**-0.8**
BRVK				pmax		pmax		
	comp=Z,15nm,1.7s							
AKTO	**Aktyubinsk**	**15.53**	**320**	Pn		**Pn**	**02 10 41.3**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=115,slow=11,SNR=19							
	comp=Z,13nm,0.9s							
AKTO	**Aktyubinsk**	**15.53**	**320**	⇑Pn		**Pn**	**02 10 40.1**	**-1.0**
	comp=Z,22nm,0.8s							
AKTO				⇓Sn		**Sn**	**02 13 33.5**	**+0.8**
	comp=Z,22nm,1.2s							
ZAA0	**Zalesovo Array**	**16.43**	**24**	Pn		**Pn**	**02 10 53.6**	**+0.9**
ZALV	**Zalesovo Beam**	**16.43**	**24**	Pn		**Pn**	**02 10 52.2**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=206,slow=11,SNR=19							
	comp=Z,9.8nm,0.7s							
ZALV	**Zalesovo Beam**	**16.43**	**24**	Pn		**Pn**	**02 10 53.0**	**+0.4**
ZALV	**Zalesovo Beam**	**16.43**	**24**	*i* P		**Pn**	**02 10 52.4**	**-0.2**
ZALV				pmax		pmax		
	comp=Z,9.0nm,0.6s							
GOMU	**GeErMu**	**17.11**	**94⇑**	*i*P		**P**	**02 11 06.9**	**+3.6**
GOMU				pP		sP	02 11 10.9	-0.9
GOMU				sP		pP	02 11 12.5	+3.4
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.7s							
LSA	**Lhasa**	**17.42**	**118**			**P**	**02 11 07.2**	**+0.3**
LSA	**Lhasa**	**17.42**	**118**	P		**P**	**02 11 07.2**	**+0.3**
LSA				pmax		pmax		
	comp=Z,13nm,1.4s							
LKRN	**Lenkeran, Azer**	**19.23**	**276**	P		**Pn**	**02 11 29.1**	**+1.8**
ARU	**Arti**	**19.69**	**335**	P		**P**	**02 11 32.2**	**+1.1**
	baz=155,slow=5.0,SNR=15							
	comp=Z,10nm,0.7s							
ARU	**Arti**	**19.69**	**335**			**P**	**02 11 30.9**	**-0.2**
ARU				IAmb		IAmb	02 11 38.1	
	comp=Z,16nm,0.9s							
ARU	**Arti**	**19.69**	**335**	*c* P		**P**	**02 11 31.7**	**+0.6**
ARU				S		**S**	**02 15 11.1**	**-1.3**
ARU				pmax		pmax		
	comp=Z,10.0nm,0.8s							
SEKA	**Sheki**	**20.15**	**284**	P		Pn	02 11 39.4	+1.1
KNGR	**Kungurtug, Tuv**	**20.21**	**49⇑**	*e*P		**P**	**02 11 38.9**	**+1.8**
KNGR				pmax		pmax		
	comp=Z,11nm,1.3s							
MNGR	**Mingechevir, A**	**20.27**	**282**	P		Pn	02 11 40.6	+1.0
GTA	**Gaotai**	**20.28**	**82**	*e*P		**P**	**02 11 38.6**	**+0.7**
GTA				pP		pP	02 11 42.1	-1.7
GTA				sP		sP	02 11 45.7	-0.9
GTA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
WSAR	**Wadi Sarin**	**20.50**	**223**	P		**P**	**02 11 40.3**	**0.0**
	comp=Z,5.9nm,0.7s,baz=84,slow=9.5,SNR=4.4							
GANJ	**Ganja**	**20.86**	**282**	P		Pn	02 11 47.0	+0.5
NAX	**Nakhchivan**	**21.68**	**278**	P		**P**	**02 11 55.7**	**+2.8**
BELG	**Belogornoye**	**22.07**	**315⇓**	*e*P		**P**	**02 11 56.6**	**-0.3**
BELG				*i* *PP		**sP**	**02 12 10.0**	**+4.4**
BELG				pmax		pmax		
	comp=Z,9.0nm,1.4s							
GNI	**Garni**	**22.11**	**281**	P		**P**	**02 11 59.2**	**+1.6**
	comp=Z,5.8nm,0.5s,baz=197,slow=9.8,SNR=6.7							
	comp=Z,5.8nm,0.5s							
GNI	**Garni**	**22.11**	**281**	P		**P**	**02 11 58.3**	**+0.6**
GNI				IAmb		IAmb	02 12 11.7	
	comp=Z,41nm,1.1s							
GNI	**Garni**	**22.11**	**281⇓**	*e*P		**P**	**02 11 58.8**	**+1.1**
GNI				pmax		pmax		
	comp=Z,22nm,1.4s							
HYBB	**Hyderabad (bro**	**22.35**	**167**	*e*P		**P**	**02 12 00.2**	**0.0**
ZEI	**Tsey**	**22.54**	**288**	*e*P		**P**	**02 12 03.0**	**+0.8**
ZEI				pmax		pmax		
	comp=Z,5.0nm,0.5s							
ONI	**Oni**	**22.87**	**288**	P		**P**	**02 12 06.4**	**+0.8**
ONI	**Oni**	**22.87**	**288**	P		**P**	**02 12 06.4**	**+0.8**
ONI				pmax		pmax		
	comp=Z,34nm,1.0s							
GOF	**Gofitskoye**	**23.19**	**294⇑**	*e*P		P	02 12 26.3	+17
KBZ	**Khabaz**	**23.26**	**291**	P		**P**	**02 12 10.2**	**+0.8**
	comp=Z,3.8nm,1.0s,baz=153,slow=7.8,SNR=4.8							
	comp=Z,3.8nm,1.0s							
KBZ	**Khabaz**	**23.26**	**291⇓**	*e*P		**P**	**02 12 10.1**	**+0.6**
KBZ				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KIV	**Kislovodsk**	**23.41**	**291**	*e*P		**P**	**02 12 11.1**	**0.0**
KIV				pmax		pmax		
	comp=Z,17nm,1.1s							
ZAK	**Zakamensk**	**23.59**	**53**	*e*P		**P**	**02 12 11.1**	**-1.7**
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.6s							
LZH	**Lanzhou**	**24.13**	**88**	*e*P		**P**	**02 12 20.5**	**+2.3**
LZH				sP		sP	02 12 38.9	+12
LZH				pmax		pmax		
	comp=Z,20nm,1.0s							
GURO	**Guroymak-BITLI**	**24.45**	**278**	P		**P**	**02 12 21.8**	**+0.7**
GURO				IAmb		IAmb	02 12 33.8	
	comp=Z,3.7nm,0.4s							
KIRV	**Kirov**	**24.63**	**329⇓**	*e*P		**P**	**02 12 22.6**	**+0.3**
SONM	**Songino Array**	**25.07**	**60**	P		**P**	**02 12 27.0**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=271,slow=9.3,SNR=8.6							
	comp=Z,2.6nm,0.8s							
SONM	**Songino Array**	**25.07**	**60**	P		**P**	**02 12 28.2**	**+1.6**
SONM	**Songino Array**	**25.07**	**60**	P		**P**	**02 12 27.0**	**+0.4**
ULN	**Ulaanbaatar**	**25.52**	**60**	P		**P**	**02 12 32.5**	**+1.8**
ULN	**Ulaanbaatar**	**25.52**	**60⇓**	*e*P		**P**	**02 12 30.6**	**-0.1**
ULN				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MARD	**Mardin**	**25.70**	**276**	P		**P**	**02 12 32.0**	**-0.4**
MARD				IAmb		IAmb	02 12 38.3	
	comp=Z,5.9nm,0.7s							
VORR	**Voronezh**	**26.73**	**309**	*e*P		**P**	**02 12 39.7**	**-1.7**
VORR				pmax		pmax		
	comp=Z,20nm,0.4s							
PZH	**PanZhiHua**	**26.82**	**110**	P		**P**	**02 12 47.3**	**+4.8**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PRGR	**Permogore**	**28.05**	**332**	*e*P		**P**	**02 12 53.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**28.96**	**75**	*e*P		**P**	**02 13 03.6**	**+2.0**

MBAR					pmax	pmax			
	comp=Z,6.0nm,0.8s								
ESDC	**Sonseca Array**	**57.90**	**297**	P	**P**	**02 16 53.8**	**-0.3**		
	comp=Z,1.0nm,0.7s,baz=54,slow=7.0,SNR=12								
	comp=Z,1.0nm,0.7s								
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P	**P**	**02 17 58.7**	**-1.6**		
	comp=Z,2.0nm,0.4s,baz=51,slow=5.5,SNR=34								
	comp=Z,2.0nm,0.4s								
COLD	**Coldfoot**	**68.61**	**17**	P	**P**	**02 18 05.2**	**+0.6**		
COLD				IAmb	IAmb	02 18 06.7			
	comp=Z,2.8nm,0.9s								
INK	**Inuvik**	**70.69**	**10**	P	**P**	**02 18 17.1**	**-0.2**		
	comp=Z,1.5nm,0.5s,baz=350,slow=8.6,SNR=2.8								
	comp=Z,1.5nm,0.5s								
ILAR	**Eielson Array**	**71.42**	**17**	P	**P**	**02 18 20.6**	**-1.2**		
	comp=Z,2.0nm,0.9s,baz=312,slow=4.5,SNR=10								
	comp=Z,2.0nm,0.9s								
KTH	**Kantishna Hill**	**71.46**	**19**	P	**P**	**02 18 21.9**	**-0.3**		
KTH				IAmb	IAmb	02 18 23.6			
	comp=Z,5.5nm,1.0s								
YKA	**Yellowknife Ar**	**78.22**	**4**	P	**P**	**02 19 00.6**	**-0.7**		
	comp=Z,1.6nm,0.9s,baz=341,slow=5.4,SNR=5.4								
	comp=Z,1.6nm,0.9s								
YKA	**Yellowknife Ar**	**78.22**	**4**	*i* P	**P**	**02 19 00.8**	**-0.4**		
YKA				pmax	pmax				
	comp=Z,1.0nm,0.9s								
BOSA	**Boshof**	**81.26**	**222**	P	**P**	**02 19 17.4**	**-0.8**		
	comp=Z,1.4nm,0.7s,baz=195,slow=7.3,SNR=3.8								
	comp=Z,1.4nm,0.7s								
WRA	**Warramunga Arr**	**81.88**	**124**	P	**P**	**02 19 20.1**	**-1.5**		
	comp=Z,2.4nm,0.9s,baz=323,slow=5.3,SNR=13								
	comp=Z,2.4nm,0.9s								
WRA	**Warramunga Arr**	**81.88**	**124**	*i* P	**P**	**02 19 19.6**	**-2.0**		
WRA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
ASAR	**Alice Springs**	**84.33**	**127**	P	**P**	**02 19 32.7**	**-1.5**		
	comp=Z,0.9nm,0.7s,baz=315,slow=5.0,SNR=7.5								
	comp=Z,0.9nm,0.7s								

IDC ***12*** *02:11:57.5±1.5,22.2°59S×173.2°42E,h0km,mb3.7/5, mbtmp3.7/6,ML3.9/1,Error ellipse: s-maj=38.1km s-min=29.4km az=161.0*

ISC 12 02:11:59.2±1.2,22.6°6S±0.2°×173.4°E±0.1°,h10km,n7, σ1°29/7,mb3.6/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.50**	**274**	Pn	**Pn**	**02 13 36.3**	**+1.3**
	2.7nm,0.3s,baz=78,slow=19,SNR=4.0						
DZM				Sn	**Sn**	**02 14 48.3**	**-1.0**
	3.3nm,0.3s,baz=115,slow=19,SNR=5.8						
	6.6nm,0.3s						
MSVF	**Nonsavu**	**6.51**	**43**	Pn	Pn	02 13 38.5	+3.4
	2.4nm,0.3s,baz=231,slow=18,SNR=7.0						
ASAR	**Alice Springs**	**36.29**	**260**	P	**P**	**02 19 02.7**	**-0.5**
	0.7nm,0.8s,baz=80,slow=8.9,SNR=5.0						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**36.46**	**267**	P	**P**	**02 19 03.8**	**-0.8**
	0.5nm,0.7s,baz=97,slow=8.2,SNR=6.3						
	0.5nm,0.7s						
VNDA	**Vanda**	**55.23**	**183**	P	**P**	**02 21 32.2**	**+0.2**
	0.4nm,0.7s,baz=1.8,slow=6.9,SNR=2.6						
	0.4nm,0.7s						
PETK	**Petropavlovsk-**	**76.64**	**350**	P	**P**	**02 23 51.0**	**+1.2**
	1.0nm,0.7s,baz=154,slow=7.2,SNR=1.8						
	1.0nm,0.7s						
ILAR	**Eielson Array**	**92.34**	**16**	P	**P**	**02 25 08.0**	**-1.3**
	0.4nm,0.6s,baz=245,slow=3.9,SNR=4.4						
	0.4nm,0.6s						

DRS ***12*** *02:12:10.5±0.0,41.°53N×47.°95E,h16km*
MOS ***12*** *02:12:10.1±0.0,41.°60N×47.°80E,h9km,MPVA3.3*

ISC 12 02:12:11.1±1.8,41.°59N±0.°05×47.°90E±0.°08,h16km±9km, n15,σ1°38/30,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKT	**Akhty**	**0.17**	**229**	*i* Pg	**Pb**	**02 12 15.0**	**-0.9**
AKT				*i* Sg	**Sg**	**02 12 18.1**	**-0.4**
URKR	**Urkarakh**	**0.61**	**341**	*e*Pg	**Pg**	**02 12 22.6**	**-0.6**
URKR				*e*Sg	**Sg**	**02 12 32.0**	**+0.1**
KMKR	**Kumukh**	**0.80**	**312**	*e*Pg	**Pg**	**02 12 25.9**	**-1.0**
KMKR				*e*Sg	**Sb**	**02 12 37.4**	**-0.2**
SGKR	**Sergokala**	**0.89**	**349**	*e*Pg	**Pb**	**02 12 28.4**	**+0.2**
SGKR				*e*Sg	**Sn**	**02 12 41.2**	**-0.3**
ARKR	**Arakani**	**1.21**	**327**	*e*Pg	**Pg**	**02 12 33.8**	**-0.8**
ARKR				*e*Sg	**Sg**	**02 12 51.1**	**+0.6**
LGD	**Lagodekhi**	**1.26**	**282**	P	**Pb**	**02 12 33.9**	**-0.6**
LGD				S	**Sb**	**02 12 49.6**	**-0.9**
XNZR	**Khunzakh**	**1.30**	**317**	*e*Pg	**Pg**	**02 12 35.4**	**-0.9**
XNZR				*e*Sg	**Sg**	**02 12 53.3**	**+0.1**
DDFL	**Dedoflistskaro**	**1.34**	**264**	P	**Pg**	**02 12 39.4**	**+2.4**
DDFL				S	**Sg**	**02 12 59.7**	**+5.2**
BUJR	**Buynaksk**	**1.37**	**335**	*e*Pg	**Pg**	**02 12 37.0**	**-0.5**
BUJR				*e*Sg	**Sg**	**02 12 55.3**	**0.0**
UNCR	**Uncukul**	**1.39**	**324**	*e*Pg	**Pg**	**02 12 37.0**	**-0.9**
UNCR				*e*Sg	**Sg**	**02 12 56.5**	**+0.5**
MAK	**Makhachkala**	**1.40**	**348**	*e*Pg	**Pg**	**02 12 39.3**	**+1.2**
MAK				*e*Sg	**Sg**	**02 12 58.5**	**+2.2**
KRNR	**Karanay**	**1.44**	**330**	*e*Pg	**Pb**	**02 12 37.6**	**0.0**
KRNR				*e*Sg	**Sg**	**02 12 57.7**	**+0.1**
DLMR	**Dylym**	**1.75**	**328**	*e*Pg	**Pb**	**02 12 43.3**	**+0.4**
DLMR				*e*Sg	**Sg**	**02 13 07.5**	**-0.1**
DVE	**Vedeno**	**1.90**	**317**	*e*Pg	**Pg**	**02 12 47.2**	**-0.3**
DVE				*e*Sg	**Sg**	**02 13 12.7**	**+0.5**
DGRG	**David-gareji**	**1.90**	**267**	P	**Pg**	**02 12 45.8**	**-1.8**
DGRG				S	**Sg**	**02 13 12.2**	**-0.1**

IDC ***12*** *02:17:14.2±1.4,22.°42S×172.°98E,h0km,mb3.5/3, mbtmp3.6/5,ML5.3/1,Error ellipse: s-maj=37.5km s-min=26.7km az=172.0*
NEIC ***12*** *02:17:14.4±3.0,22.°38S±0.°07×172.°99E±0.°07,h8km±6km, mb4.5/8,Error ellipse: s-maj=13.5km s-min=4.6km az=223.0*

ISC 12 02:17:17.6±0.7,22.°4S±0.°1×173.°03E±0.°08,h32km,n21, σ1°41/22,mb3.8/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.73**	**280**	Pn	**Pn**	**02 18 24.2**	**-2.4**
PINNC	**Pines Island,**	**5.17**	**266**	Pn	**Pn**	**02 18 34.2**	**+1.5**
OUENC	**Ouen Island, N**	**5.72**	**269**	Pn	**Pn**	**02 18 38.7**	**-1.7**
DZM	**Mont Dzumac**	**6.11**	**272**	Pn	**Pn**	**02 18 47.1**	**+1.3**
	2.4nm,0.3s,baz=133,slow=16,SNR=7.1						
DZM				Sn	**Sn**	**02 19 56.7**	**+2.1**
	0.8nm,0.3s,baz=40,slow=12,SNR=1.5						
DZM	**Mont Dzumac**	**6.11**	**272**	Pn	**Pn**	**02 18 43.2**	**-2.6**
MSVF	**Nonsavu**	**6.61**	**46**	Pn	**Pn**	**02 18 53.6**	**+0.9**
	1.9nm,0.3s,baz=234,slow=22,SNR=5.1						
	2.7nm,0.4s						
MSVF	**Nonsavu**	**6.61**	**46**	Pn	**Pn**	**02 18 51.6**	**-1.1**
EIDS	**Eidsvold**	**20.28**	**257**	P	**P**	**02 21 48.4**	**-2.3**
EIDS				IAmb	IAmb	02 22 04.4	
	comp=Z,16nm,1.4s						
OXZ	**Oxford**	**20.90**	**182**	P	**P**	**02 21 56.7**	**-0.6**
OXZ				IAmb	IAmb	02 22 09.2	
	comp=Z,55nm,1.4s						
ASAR	**Alice Springs**	**35.95**	**260**	P	**P**	**02 24 16.5**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=78,slow=9.6,SNR=2.5						
	comp=Z,0.4nm,0.6s						
WB2	**Warramunga Arr**	**36.09**	**267**	P	**P**	**02 24 15.9**	**-0.8**
WB2				IAmb	IAmb	02 24 23.1	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**36.10**	**267**	P	**P**	**02 24 16.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=98,slow=8.2,SNR=7.1						
	comp=Z,0.2nm,0.4s						
FORT	**Forrest**	**40.85**	**248**	P	**P**	**02 24 57.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**44.53**	**267**	P	**P**	**02 25 26.6**	**0.0**
VNDA	**Vanda**	**55.45**	**183**	P	**P**	**02 26 49.6**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=355,slow=7.9,SNR=7.9						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**55.45**	**183**	P	**P**	**02 26 49.0**	**+0.4**
SBA	**Scott Base**	**55.60**	**182**	P	**P**	**02 26 50.5**	**+0.8**
QSPA	**South Pole Qui**	**67.68**	**180**	P	**P**	**02 28 11.6**	**+0.1**
QSPA				IAmb	IAmb	02 28 12.9	
	comp=Z,6.9nm,1.1s						
PETK	**Petropavlovsk-**	**76.35**	**351**	P	**P**	**02 29 04.6**	**+1.3**
BELA	**Belgrano 2**	**78.65**	**174**	P	**P**	**02 29 14.9**	**-1.0**
GERES	**GERESS Array B**	**148.91**	**333**	PKPbc	**PKiKP**	**02 37 04.2**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=58,slow=3.7,SNR=2.4						

IDC ***12*** *02:34:41.9±0.5,22.°50S×173.°28E,h0km,mb4.7/19, mbtmp4.7/20,ML4.6/1,MS5.1/1,Error ellipse: s-maj=16.5km s-min=14.5km az=90.0*
NEIC ***12*** *02:34:44.3±1.7,22.°61S±0.°08×173.°29E±0.°08,h10km±1km, mb5.0/113,Error ellipse: s-maj=14.1km s-min=13.1km az=161.0*
MOS ***12*** *02:34:45.5±1.3,22.°57S×173.°19E,h28km,mb5.1/25,Error ellipse: s-maj=9.7km s-min=9.4km az=83.5*
NOU ***12*** *02:34:50.6,22.°67S×173.°20E,h59km,mb5.3/38, Southeast of Loyalty Islands*

ISC 12 02:34:47.3±0.3,22.°66S±0.°05×173.°23E±0.°06,h32km,n358, σ1°19/321,mb4.9/89,23C-16D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.96**	**283**	Pn	**Pn**	**02 35 59.9**	**+0.3**
MARNC	**Mare, Loyalty**	**4.96**	**283**	P	**Pn**	**02 36 02.7**	**+3.1**
PINNC	**Pines Island,**	**5.34**	**269**		**Pn**	**02 36 05.4**	**+0.6**
PINNC	**Pines Island,**	**5.34**	**269**	P	**Pn**	**02 36 06.4**	**+1.6**
YATNC	**Mamie plateau,**	**5.89**	**275**	P	**Pn**	**02 36 14.3**	**+1.8**
OUENC	**Ouen Island, N**	**5.91**	**271**	Pn	**Pn**	**02 36 11.4**	**-1.2**
OUENC	**Ouen Island, N**	**5.91**	**271**	P	**Pn**	**02 36 14.2**	**+1.6**
ONTNC	**Ouen Toro**	**6.27**	**272**	Pn	**Pn**	**02 36 17.7**	**+0.1**
ONTNC	**Ouen Toro**	**6.27**	**272**	P	**Pn**	**02 36 20.4**	**+2.7**
DZM	**Mont Dzumac**	**6.30**	**274**	Pn	**Pn**	**02 36 18.4**	**+0.2**
	13nm,0.3s,baz=79,slow=19,SNR=19						
DZM				Sn	**Sn**	**02 37 29.4**	**+0.2**
	2.2nm,0.3s,baz=101,slow=16,SNR=2.4						
	49nm,0.4s						
DZM	**Mont Dzumac**	**6.30**	**274**	P	**Pn**	**02 36 20.0**	**+1.8**
RTV	**Rentapao**	**6.61**	**316**	P	**Pn**	**02 36 26.1**	**+3.7**
MSVF	**Nonsavu**	**6.67**	**44**	Pn	**Pn**	**02 36 23.8**	**+0.5**
	6.2nm,0.3s,baz=210,slow=11,SNR=13						
MSVF	**Nonsavu**	**6.67**	**44**	Pn	**Pn**	**02 36 22.9**	**-0.4**
MSVF	**Nonsavu**	**6.67**	**44**	P	**Pn**	**02 36 22.9**	**-0.4**
MSVF	**Nonsavu**	**6.67**	**44**	P	**Pn**	**02 36 24.6**	**+1.3**
DVP	**Devils Point**	**6.82**	**315**	P	**Pn**	**02 36 29.9**	**+4.7**
NFK	**Norfolk Island**	**7.94**	**216**	P	**Pn**	**02 36 41.3**	**+0.7**
KOUNC	**Koumac, New Ca**	**8.58**	**282**	Pn	**Pn**	**02 36 50.8**	**+1.4**
KOUNC	**Koumac, New Ca**	**8.58**	**282**	P	**Pn**	**02 36 52.3**	**+3.0**
TAVE	**Taveuni**	**8.77**	**49**	P	**Pn**	**02 36 54.8**	**+2.8**
OUZ	**Omahuta**	**12.52**	**179**	P	**Pn**	**02 37 46.0**	**+2.7**
LHI	**Lord Howe Isla**	**15.38**	**232**	Pn	**Pn**	**02 38 22.2**	**+0.1**
HIZ	**Hauiti**	**15.87**	**175**	Pn	**Pn**	**02 38 28.2**	**-0.1**
HIZ				IAmb	IAmb	02 38 36.7	
	comp=Z,126nm,1.2s						
URZ	**Urewera**	**15.90**	**169**	Pn	**P**	**02 38 33.0**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=11,slow=7.6,SNR=7.8						
URZ	**Urewera**	**15.90**	**169**	Pn	**Pn**	**02 38 29.2**	**+0.4**
URZ				IAmb	IAmb	02 38 36.6	
	comp=Z,120nm,1.4s						
URZ	**Urewera**	**15.90**	**169**	P	**P**	**02 38 32.1**	**0.0**
DVHZ	**Dannevirke**	**17.76**	**173**	P	**P**	**02 38 54.7**	**+2.0**
MRZ	**Mangatainoka R**	**18.06**	**174**	P	**P**	**02 38 58.0**	**+2.0**
QRZ	**Quartz Range**	**18.12**	**182**		**Pn**	**02 38 56.0**	**-0.5**
QRZ				IAmb	IAmb	02 39 01.5	
	comp=Z,113nm,1.3s						
QRZ	**Quartz Range**	**18.12**	**182**	P	**P**	**02 38 58.5**	**+1.8**
BFZ	**Birch Farm**	**18.15**	**173**	P	**P**	**02 38 58.5**	**+1.5**
BFZ	**Birch Farm**	**18.15**	**173**	P	**P**	**02 38 57.8**	**+0.8**
OGWZ	**Otaki Gorge**	**18.18**	**175**	P	**P**	**02 38 59.6**	**+2.4**
HNR	**Honiara**	**18.30**	**314**	Pn	**P**	**02 38 55.9**	**-3.0**
HNR	**Honiara**	**18.30**	**314**	P	**P**	**02 38 55.9**	**-3.0**
HNR				pmax	pmax		
	comp=Z,467nm,1.1s						
NNZ	**Nelson**	**18.50**	**180**	P	**Pn**	**02 39 03.8**	**+2.6**
TCW	**Tory Channel**	**18.52**	**178**	P	**Pn**	**02 39 03.8**	**+2.5**
TMWZ	**Te Maipa**	**18.53**	**174**	P	**Pn**	**02 39 02.6**	**+1.0**
TUWZ	**Tuamarina**	**18.73**	**178**	P	**Pn**	**02 39 05.4**	**+1.5**
MSWZ	**Moikau Station**	**18.78**	**175**	P	**P**	**02 39 04.0**	**+0.1**
TRWZ	**Traveller**	**18.80**	**174**	P	**Pn**	**02 39 05.2**	**+0.5**
PLWZ	**Palliser**	**18.93**	**175**	P	**Pn**	**02 39 06.8**	**+0.4**
BSWZ	**Blackbirch Sta**	**19.01**	**179**	P	**Pn**	**02 39 10.1**	**+2.8**
KHZ	**Kahutara**	**19.70**	**179**	P	**Pn**	**02 39 16.6**	**+1.1**
KHZ	**Kahutara**	**19.70**	**179**	P	**Pn**	**02 39 15.8**	**+0.2**
LTZ	**Lake Taylor**	**20.08**	**182**	P	Pn	02 39 20.8	+0.7
EIDS	**Eidsvold**	**20.41**	**258**	P	**P**	**02 39 22.4**	**+0.6**
EIDS				IAmb	IAmb	02 39 28.4	
	comp=Z,71nm,0.9s						
EIDS	**Eidsvold**	**20.41**	**258**	P	Pn	02 39 23.3	-0.7
ARMA	**Armidale**	**20.79**	**244**	P	Pn	02 39 27.4	-1.1
ARMA				IAmb	IAmb	02 39 33.2	
	comp=Z,81nm,1.4s						
RPZ	**Rata Peaks**	**21.08**	**184**	P	**P**	**02 39 31.3**	**+2.4**
	comp=Z,38nm,0.8s,baz=309,slow=1.8,SNR=12						
	comp=Z,38nm,0.8s						
RPZ	**Rata Peaks**	**21.08**	**184**	P	**P**	**02 39 30.2**	**+1.3**
ODZ	**Otahua Downs**	**22.43**	**185**	P	**P**	**02 39 44.0**	**+0.6**
RMQ	**Roma**	**22.57**	**255**	P	**P**	**02 39 46.5**	**+1.4**
CAN	**Canberra**	**24.59**	**234**	P	**P**	**02 40 05.3**	**+0.6**
CAN	**Canberra**	**24.59**	**234**	P	**P**	**02 40 05.3**	**+0.6**
CAN				pmax	pmax		
	comp=Z,168nm,2.0s						
CTA	**Charters Tower**	**25.23**	**271**	P	**P**	**02 40 11.3**	**+0.7**
	comp=Z,13nm,0.6s,baz=97,slow=10,SNR=23						
	comp=Z,13nm,0.6s						
CTA	**Charters Tower**	**25.23**	**271**	P	**P**	**02 40 11.1**	**+0.5**
CTAO	**Charters Tower**	**25.23**	**271**	P	**P**	**02 40 10.1**	**-0.5**
CTAO	**Charters Tower**	**25.23**	**271**	P	**P**	**02 40 10.1**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,15nm,0.7s						
CTAO	**Charters Tower**	**25.23**	**271**	P	**P**	**02 40 10.9**	**+0.3**
KRVT	**Keravat (AS076**	**27.45**	**309**	P	**P**	**02 40 30.4**	**-0.3**
	comp=Z,34nm,0.5s,baz=160,slow=12,SNR=4.2						
	comp=Z,34nm,0.5s						
TOO	**Toolangi**	**28.09**	**232**	P	**P**	**02 40 36.4**	**+0.2**
TOO				IAmb	IAmb	02 40 38.6	
	comp=Z,23nm,0.9s						
TOO	**Toolangi**	**28.09**	**232**	P	**P**	**02 40 36.4**	**+0.2**
TOO				pmax	pmax		
	comp=Z,23nm,1.0s						
STKA	**Stephens Creek**	**29.49**	**245**	P	**P**	**02 40 48.9**	**+0.2**
	comp=Z,14nm,0.8s,baz=89,slow=11,SNR=9.5						
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**29.49**	**245**	P	**P**	**02 40 49.0**	**+0.4**
STKA	**Stephens Creek**	**29.49**	**245**	P	**P**	**02 40 49.1**	**+0.4**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
QIS	**Mount Isa**	**31.29**	**267**	P	**P**	**02 41 04.3**	**-0.4**
HTT	**Hallett**	**31.99**	**243**	P	**P**	**02 41 10.9**	**+0.1**
LCRK	**Leigh Creek**	**32.17**	**249**	P	**P**	**02 41 11.7**	**-0.6**
OOD	**Oodnadatta**	**34.25**	**254**	P	**P**	**02 41 31.0**	**+0.5**
BBOO	**Buckleboo**	**34.26**	**245**	P	**P**	**02 41 31.0**	**+0.4**
BBOO	**Buckleboo**	**34.26**	**245**	P	**P**	**02 41 30.1**	**-0.5**
MULG	**Mulgathing**	**35.74**	**249**	P	**P**	**02 41 43.5**	**+0.2**
ASAR	**Alice Springs**	**36.09**	**261**	P	**P**	**02 41 45.5**	**-0.9**
	comp=Z,11nm,0.8s,baz=89,slow=9.5,SNR=47						
	comp=Z,11nm,0.8s						
ASAR	**Alice Springs**	**36.09**	**261**	P	**P**	**02 41 45.4**	**-1.1**
WB2	**Warramunga Arr**	**36.25**	**267**	P	**P**	**02 41 46.4**	**-1.4**
WRAB	**Tennant Creek**	**36.26**	**267**	*e*P	**P**	**02 41 48.9**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,12nm,1.7s						
WRAB	**Tennant Creek**	**36.26**	**267**	P	**P**	**02 41 49.0**	**+1.1**
WRA	**Warramunga Arr**	**36.26**	**267**	P	**P**	**02 41 46.0**	**-2.0**
	comp=Z,4.9nm,0.5s,baz=102,slow=8.1,SNR=34						
	comp=Z,4.9nm,0.5s						
FORT	**Forrest**	**40.92**	**249**	P	**P**	**02 42 25.8**	**-1.2**
FORT	**Forrest**	**40.92**	**249**	P	**P**	**02 42 26.9**	**-0.1**
WRKA	**Warakurna**	**41.02**	**257**	P	**P**	**02 42 27.6**	**-0.3**
MTN	**Manton Dam**	**41.14**	**276**	P	**P**	**02 42 28.6**	**-0.3**
MTN				IAmb	IAmb	02 42 31.2	
	comp=Z,16nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**41.39**	**351**	T	T	03 25 59.8	
	baz=171,slow=76,SNR=7.4						
H11S3	**WAKE ISLAND Hy**	**41.40**	**351**	T	T	03 26 17.6	
	baz=171,slow=76,SNR=2.7						
H11S1	**WAKE ISLAND Hy**	**41.41**	**351**	T	T	03 26 23.2	
	baz=171,slow=76,SNR=6.0						
KNRA	**Kununurra**	**42.45**	**271**	P	**P**	**02 42 38.4**	**-1.2**
FITZ	**Fitzroy Crossi**	**44.69**	**267**	P	**P**	**02 42 57.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**44.69**	**267**	P	**P**	**02 42 57.6**	**-0.1**
GUMO	**Guam**	**45.49**	**320**	LR	LR	03 00 01.3	
	comp=Z,3µm,21.9s,baz=230,slow=34						
MBWA	**Marble Bar**	**49.43**	**261**	P	**P**	**02 43 34.2**	**-0.4**
MBWA				IAmb	IAmb	02 43 36.5	
	comp=Z,17nm,0.7s						
MBWA	**Marble Bar**	**49.43**	**261**	P	**P**	**02 43 34.6**	**0.0**
MEEK	**Meekatharra**	**49.49**	**254**	P	**P**	**02 43 34.1**	**-0.9**
KLBR	**Kellerberrin**	**49.72**	**247**	P	**P**	**02 43 36.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**50.08**	**245**	P	**P**	**02 43 39.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**50.08**	**245**	P	**P**	**02 43 39.3**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,74nm,1.7s						
NWAO	**Narrogin (SRO)**	**50.08**	**245**	P	**P**	**02 43 39.0**	**-0.4**
SANI	**Sanana**	**50.18**	**287**	P	**P**	**02 43 41.8**	**+1.4**
	comp=Z,71nm,0.6s						
EDFI	**Ende, Flores**	**51.25**	**277**	P	**P**	**02 43 48.3**	**-0.3**
	comp=Z,12nm,0.7s						
BKSI	**Bulukumba**	**54.02**	**280**	P	**P**	**02 44 09.9**	**+0.9**
	comp=Z,25nm,0.7s						
KAPI	**Kappang**	**54.48**	**280**	P	**P**	**02 44 11.6**	**-0.7**
KAPI				IAmb	IAmb	02 44 13.8	
	comp=Z,23nm,1.1s						
KAPI	**Kappang**	**54.48**	**280**	*e*P	**P**	**02 44 12.4**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,28nm,1.2s						
VNDA	**Vanda**	**55.19**	**183**	P	**P**	**02 44 17.6**	**+1.1**
	comp=Z,5.8nm,0.6s,baz=2.2,slow=7.5,SNR=58						
	comp=Z,5.8nm,0.6s						
VNDA	**Vanda**	**55.19**	**183**	P	**P**	**02 44 17.2**	**+0.6**
TTSI	**Tana Toraja**	**55.24**	**283**	P	**P**	02 44 23.6	+5.8
SBA	**Scott Base**	**55.34**	**182**	P	**P**	**02 44 18.7**	**+1.2**
SBA	**Scott Base**	**55.34**	**182**	P	**P**	**02 44 18.7**	**+1.2**
SBA				pmax	pmax		
	comp=Z,92nm,1.0s						
TOLI2	**Tolitoli**	**56.25**	**288**	P	**P**	**02 44 24.5**	**-0.6**
TOLI2				IAmb	IAmb	02 44 26.3	
	comp=Z,9.2nm,0.8s						
MPSI	**Mapaga**	**56.67**	**286**	P	**P**	**02 44 29.1**	**+1.0**
	comp=Z,14nm,0.6s						
CASY	**Casey**	**58.55**	**205**	P	**P**	**02 44 40.4**	**-0.1**
DBJI	**Dramaga**	**65.81**	**273**	P	**P**	**02 45 30.9**	**+0.9**
	comp=Z,80nm,0.9s						
QSPA	**South Pole Qui**	**67.41**	**180**	P	**P**	**02 45 40.1**	**+0.5**
	comp=Z,45nm,1.0s,baz=14,slow=1.1,SNR=65						
	comp=Z,45nm,1.0s						
QSPA	**South Pole Qui**	**67.41**	**180**	P	**P**	**02 45 39.7**	**+0.1**
JMN	**Monobe**	**67.44**	**325**	P	**P**	**02 45 39.8**	**-0.2**
MJAR	**Matsushiro Arr**	**67.53**	**330**	P	**P**	**02 45 40.1**	**-0.4**
	comp=Z,8.6nm,1.0s,baz=156,slow=7.6,SNR=9.1						
	comp=Z,8.6nm,1.0s						
MAJO	**Matsushiro**	**67.53**	**330**	P	**P**	**02 45 40.3**	**-0.1**
MAJO	**Matsushiro**	**67.53**	**330**	*i*P	**P**	**02 45 40.4**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,11nm,0.9s						
JSU	**Suzuyama**	**67.67**	**321**	P	**P**	**02 45 43.1**	**+1.6**
JSU				IAmb	IAmb	02 45 46.9	
	comp=Z,21nm,1.2s						
JSD	**Sado**	**68.73**	**331**	P	**P**	**02 45 47.7**	**-0.2**
JHS	**Saijyo**	**68.82**	**325**	P	**P**	**02 45 48.4**	**-0.2**
KUR	**Kuril'sk**	**71.41**	**341**	*e*P	**P**	**02 46 05.7**	**+1.5**
KUR				pmax	pmax		
	comp=Z,52nm,1.7s						
TJN	**Taejon**	**72.97**	**323**	*e*P	**P**	**02 46 13.6**	**-0.1**
KSRS	**Korea Array**	**73.44**	**324**	P	**P**	**02 46 15.9**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=149,slow=6.1,SNR=11						
	comp=Z,2.3nm,0.8s						
KSAR	**Wonju Array Be**	**73.45**	**324**	P	**P**	**02 46 15.9**	**-0.6**
KSAR	**Wonju Array Be**	**73.45**	**324**	P	**P**	**02 46 15.9**	**-0.6**
KS19	**Wonju Array Si**	**73.50**	**324**	P	**P**	**02 46 16.8**	**-0.1**
KS19				IAmb	IAmb	02 46 29.7	
	comp=Z,14nm,1.2s						
INCN	**Inchon**	**74.17**	**323**	P	**P**	**02 46 21.5**	**+0.7**
INCN				IAmb	IAmb	02 46 26.9	
	comp=Z,18nm,0.9s						
INCN	**Inchon**	**74.17**	**323**	P	**P**	**02 46 21.5**	**+0.7**
INCN				pmax	pmax		
	comp=Z,18nm,1.0s						

ISA pmax pmax
comp=Z,11nm,1.1s
ISA Isabella, Lake 86.80 49 P **P** **02 47 29.0 +0.2**
baz=239
SEY Seymchan 86.89 351⇓ *e*P **P** **02 47 27.4 -1.0**
SEY pmax pmax
comp=Z,7.0nm,1.2s
VNA1 Neumayer--Stat 86.94 180 P **P** **02 47 27.8 -1.0**
CWC Cottonwood Cre 87.47 49 P **P** **02 47 31.7 -0.4**
baz=239
MPMC Manual Prospec 87.69 49 P **P** **02 47 33.2 0.0**
baz=240
BELC Belle Mtn. Jos 87.74 52 P **P** **02 47 32.9 -0.5**
baz=241
L04D Klamath Falls 87.75 42 P **P** **02 47 33.1 -0.1**
baz=236
PNTR Pine Nut 87.80 46 IAmb IAmb 02 47 39.3
comp=Z,7.7nm,0.9s
HEC Hector,Ludlow 87.90 51 P **P** **02 47 33.3 -0.8**
baz=240
YERR Yerington 87.99 46 IAmb IAmb 02 47 38.0
comp=Z,24nm,1.9s
QSM Queen of Sheba 88.08 50 P **P** **02 47 34.2 -0.6**
LHV Little Huntoon 88.10 47 IAmb IAmb 02 47 40.6
comp=Z,8.8nm,1.2s
M19K Big River Lodg 88.17 15 P **P** **02 47 36.4 +1.8**
baz=210
GRAC Grapevine Rang 88.25 49 P **P** **02 47 35.9 +0.3**
baz=240
PAHR Pah Rah Range 88.27 45 IAmb IAmb 02 47 41.2
comp=Z,10nm,1.3s
NVAR Mina Array Bea 88.33 47 P **P** **02 47 35.9 -0.3**
comp=Z,1.7nm,0.7s,baz=232,slow=7.1,SNR=14
comp=Z,1.7nm,0.7s
FURC Furnace Creek, 88.33 49 P **P** **02 47 36.1 +0.2**
baz=240
GMRC Granite Mounta 88.36 51 P **P** **02 47 36.4 0.0**
baz=241
J04D Umpqua Nationa 88.43 41 P **P** **02 47 36.9 +0.3**
baz=236
I04A Tendick Farm, 88.55 41 P **P** **02 47 36.6 -0.3**
baz=236
TTA Tatalina 88.71 14 P **P** **02 47 37.8 +0.6**
baz=208
KVN Kaiserville 88.78 47 P **P** **02 47 37.0 -1.3**
KVN IAmb IAmb 02 47 40.0
comp=Z,16nm,1.7s
KVN Kaiserville 88.78 47 P **P** **02 47 37.0 -1.3**
KVN pmax pmax
comp=Z,16nm,1.7s
L20K Farewell, AK 88.79 15 P **P** **02 47 38.7 +1.2**
baz=210
MOD Modoc Plateau 88.83 43 IAmb IAmb 02 47 44.4
comp=Z,5.3nm,0.8s
J05D Fort Rock, OR 88.99 42 P **P** **02 47 39.3 +0.2**
baz=237
TPNV Topopah Spring 89.00 49 P **P** **02 47 38.8 -0.5**
TPNV Topopah Spring 89.00 49 P **P** **02 47 38.8 -0.5**
TPNV pmax pmax
comp=Z,4.0nm,0.8s
GHO Glory Hole Cre 89.44 17 IAmb IAmb 02 47 50.9
comp=Z,14nm,1.0s
PINE Pine Mountain 89.44 41 IAmb IAmb 02 47 53.2
comp=Z,12nm,1.1s
SHPR Sheep Range 89.55 50 IAmb IAmb 02 47 42.2
comp=Z,13nm,1.8s
KLU Klutina 90.05 18 P **P** **02 47 43.7 +0.1**
baz=217
BMN Battle Mountai 90.06 46 IAmb IAmb 02 47 44.9
comp=Z,8.4nm,0.8s
R11A Troy Canyon, C 90.14 48 P **P** **02 47 44.2 -0.4**
baz=241
WVOR Wild Horse Val 90.16 43 IAmb IAmb 02 47 50.8
comp=Z,8.5nm,1.2s
CHUM Lake Minchumin 90.37 15 P **P** **02 47 43.9 -0.9**
baz=211
WAT6 Susitna Watana 90.42 17 P **P** **02 47 43.6 -1.7**
baz=216
M24K Tolsona, Glenn 90.47 18 P **P** **02 47 45.4 0.0**
baz=217
I07A Izee 90.48 42 IAmb IAmb 02 47 47.1
comp=Z,7.1nm,1.1s
TRF Thorofare Moun 90.48 15 P **P** **02 47 45.0 -0.6**
baz=213
BILL Bilibino 90.57 357 P **P** **02 47 47.2 +1.5**
BILL IAmb IAmb 02 47 51.4
comp=Z,14nm,1.2s
BILL Bilibino 90.57 357 *i* P **P** **02 47 45.5 -0.2**
BILL pmax pmax
comp=Z,4.0nm,1.0s
J08A Circle Bar Ran 90.74 43 IAmb IAmb 02 47 58.8
comp=Z,7.1nm,1.0s
DHY Denali Highway 90.92 17 P **P** **02 47 47.7 +0.1**
baz=216
CTG Chitna Glacier 91.04 20 P **P** **02 47 48.6 +0.3**
baz=221
SPR3 Spring Creek 3 91.31 48 IAmb IAmb 02 47 55.9
comp=Z,3.8nm,1.2s
PAX Paxson 91.36 18 P **P** **02 47 49.9 +0.3**
PAX IAmb IAmb 02 48 01.2
comp=Z,8.1nm,1.2s
PAX Paxson 91.36 18 P **P** **02 47 49.9 +0.3**
PAX pmax pmax
comp=Z,8.0nm,1.2s
PAX Paxson 91.36 18 P **P** **02 47 50.2 +0.6**
baz=218
ORCD Orcadas 91.39 162 P **P** **02 47 48.8 -1.0**
G08A Pilot Rock 91.44 41 IAmb IAmb 02 47 51.9
comp=Z,5.2nm,1.0s
I21K Tanana 91.55 14 P **P** **02 47 49.7 -0.6**
baz=212
U15A North Rim 91.56 51 IAmb IAmb 02 48 04.6
comp=Z,6.5nm,0.9s
M26K Nabesna, AK 91.62 19 IAmb IAmb 02 48 05.0
comp=Z,6.5nm,1.1s
M26K Nabesna, AK 91.62 19 P **P** **02 47 49.7 -1.1**
baz=220
HAWA Hanford 91.67 40 IAmb IAmb 02 47 57.4
comp=Z,6.0nm,1.0s
H21K Melozitna Rive 91.78 13 P **P** **02 47 51.7 +0.3**
baz=211
WUAZ Wupatki 91.81 52 IAmb IAmb 02 47 53.8
comp=Z,6.2nm,1.2s
ULN Ulaanbaatar 91.83 322⇓ *e*P **P** **02 47 51.2 -1.0**
ULN pmax pmax
comp=Z,2.0nm,0.9s
WRH Wood River Hil 91.88 16 IAmb IAmb 02 47 55.3
comp=Z,6.0nm,0.9s
M27K Edge Creek, AK 91.93 19 P **P** **02 47 50.9 -1.4**
baz=221
L26K Log Cabin Wild 92.00 18 P **P** **02 47 51.7 -0.8**
L26K IAmb IAmb 02 47 55.2
comp=Z,4.7nm,0.7s
PKCU Pink Cliffs 92.00 50 P **P** **02 47 52.8 -0.7**
CCB Clear Creek Bu 92.09 16 IAmb IAmb 02 47 56.6
comp=Z,7.1nm,1.0s
HDA Harding Lake 92.12 16 IAmb IAmb 02 47 57.2
comp=Z,12nm,1.2s
HDA Harding Lake 92.12 16 P **P** **02 47 51.2 -1.7**
baz=216
RIDG Independent Ri 92.14 17 P **P** **02 47 52.1 -1.1**
baz=218
GTA Gaotai 92.17 312 *e*P **P** **02 47 53.9 -0.1**
GTA pP pP 02 47 59.6 -3.1
GTA sP sP 02 48 02.9 -2.7
GTA pmax pmax
comp=Z,3.0nm,1.1s
COLA College 92.27 16↑ *e*P **P** **02 47 51.8 -1.8**
COLA pmax pmax
comp=Z,7.0nm,1.1s
H22K Ishtalitna Cre 92.29 14 P **P** **02 47 52.6 -1.2**
baz=212
MTPU Mount Pierson 92.36 50 IAmb IAmb 02 47 56.6
comp=Z,4.6nm,1.1s
G21K Allakaket 92.37 13 P **P** **02 47 53.2 -0.9**
baz=210
D08A Wollman Farm, 92.38 39 IAmb IAmb 02 47 59.2
comp=Z,5.6nm,1.1s
IL31 92.42 16 P **P** **02 47 52.1 -2.2**
IL31 IAmb IAmb 02 47 57.6
comp=Z,7.7nm,1.0s
ILAR Eielson Array 92.42 16 P **P** **02 47 51.9 -2.5**
comp=Z,3.2nm,0.7s,baz=232,slow=5.5,SNR=19
comp=Z,3.2nm,0.7s
L27K Beaver Creek, 92.48 19 P **P** **02 47 53.8 -0.9**
baz=221
SCRK Sand Creek 92.56 17 P **P** **02 47 53.8 -1.4**
SCRK IAmb IAmb 02 47 59.3
comp=Z,4.5nm,0.9s
SCRK Sand Creek 92.56 17 P **P** **02 47 53.5 -1.7**
baz=219
J25K Salcha River, 92.69 17 IAmb IAmb 02 47 57.4
comp=Z,4.4nm,0.6s
F10A Beach Ranch, E 92.83 41 IAmb IAmb 02 48 00.6
comp=Z,9.1nm,1.4s
J26L Joseph Creek 93.09 17 P **P** **02 47 56.9 -0.6**
baz=219
K27K Chicken 93.14 18 IAmb IAmb 02 48 03.0
comp=Z,4.8nm,1.1s
K27K Chicken 93.14 18 P **P** **02 47 57.2 -0.5**
baz=220
G23K Bananza Creek 93.28 14 P **P** **02 47 58.2 -0.1**
baz=214
PRP Porcupine Dome 93.37 16 P **P** **02 47 57.3 -1.6**
baz=218
F22K John River 93.50 13 P **P** **02 47 58.8 -0.5**
baz=212
PLCA Paso Flores 93.51 137 P **P** **02 48 00.9 +0.6**
comp=Z,4.4nm,0.9s,baz=166,slow=3.3,SNR=7.9
comp=Z,4.4nm,0.9s
L29M L29M 93.65 20 P **P** **02 48 00.5 +0.4**
baz=224
COLD Coldfoot 93.67 13 IAmb IAmb 02 48 05.4
comp=Z,12nm,1.2s
COLD Coldfoot 93.67 13 P **P** **02 47 59.8 -0.3**
baz=213
I26K Coal Creek Min 93.82 17 IAmb IAmb 02 48 05.8
comp=Z,11nm,0.9s
I26K Coal Creek Min 93.82 17 P **P** **02 47 59.8 -1.1**
baz=220
EGAK Eagle 93.97 18 IAmb IAmb 02 48 14.4
comp=Z,8.6nm,0.9s
F24K Squaw Lake 94.42 14 P **P** **02 48 03.2 -0.4**
baz=216
I27K Kandik River 94.47 17 P **P** **02 48 04.8 +1.0**
baz=221
LSA Lhasa 94.47 300 P **P** **02 48 05.9 +0.6**
LSA IAmb IAmb 02 48 07.6
comp=Z,5.6nm,0.6s
LSA Lhasa 94.47 300 P **P** **02 48 05.9 +0.6**
LSA pmax pmax
comp=Z,6.0nm,0.6s
G26K Porcupine Rive 94.94 16 P **P** **02 48 05.5 -0.3**
baz=219
F25K Christian Rive 94.99 15 P **P** **02 48 04.7 -1.5**
baz=218
D23K Nanushuk River 95.03 12 P **P** **02 48 05.6 -0.7**
baz=213
BMAR Burnt Mountain 95.11 15 P **P** **02 48 06.4 -0.4**
TXAR Lajitas Array 95.16 61 P **P** **02 48 06.0 -1.9**
comp=Z,0.3nm,0.9s,baz=205,slow=3.8,SNR=3.6
comp=Z,0.3nm,0.9s
ANMO Albuquerque 95.21 54⇑ *e*P **P** **02 48 06.6 -1.6**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
G27K Doyon Strip 95.37 16 P **P** **02 48 08.2 +0.3**
baz=221
F26K Sheenjek River 95.43 15 P **P** **02 48 07.6 -0.6**
baz=219
E25K Arctic Village 95.43 14 P **P** **02 48 09.4 +1.2**
baz=218
C23K Itkillik River 95.78 12 P **P** **02 48 10.1 +0.4**
baz=213
PDAR Pinedale Array 96.24 46 P **P** **02 48 12.4 -0.3**
comp=Z,0.2nm,0.5s,baz=255,slow=2.7,SNR=2.6
comp=Z,0.2nm,0.5s
WMQ Urumqi 102.25 312 *e*P **Pdif** **02 48 41.1 +1.7**
ARCES ARCESS Array B 129.29 346 PKP **PKPdf** **02 53 49.1 -2.7**
comp=Z,1.3nm,0.6s,baz=48,slow=1.8,SNR=12
FINES FINESS Array B 135.14 339 PKIKP PKPpre 02 53 58.8
comp=Z,1.4nm,0.8s,baz=64,slow=3.2,SNR=1.6
FINES FINESS Array B 135.14 338 *c i* PKIKP **PKPdf** **02 54 03.0 0.0**
FINES pmax pmax
comp=Z,2.0nm,0.8s
GHRR 143.81 319⇓ P PKPab 02 54 16.6 +0.4
BIZ Bicaz 144.15 321⇑ P **PKPab** **02 54 17.7 +0.2**
BURAR Bucovina Array 144.30 322⇑ P **PKPab** **02 54 16.7 -1.5**
BURAR Bucovina Array 144.30 322⇑ PKIKP **PKPab** **02 54 16.7 -1.5**
VRI Vrincioaia 144.31 319⇓ P **PKPab** **02 54 17.5 -0.7**
VRI Vrincioaia 144.31 319⇓ PKIKP **PKPab** **02 54 17.5 -0.7**
PLOR Plostina 144.37 319⇑ P **PKPab** **02 54 16.9 -1.5**
PLOR Plostina 144.37 319⇑ PKIKP **PKPab** **02 54 16.9 -1.5**
MLR Muntele Rosu 144.98 319⇑ P **PKPab** **02 54 18.7 -2.1**
MLR Muntele Rosu 144.98 319⇑ PKIKP **PKPab** **02 54 18.7 -2.1**
ARCR Arcas 145.09 322⇑ P **PKPab** **02 54 21.0 +0.1**
KOLS Kolonicke sedl 145.13 326 *e*PKIKP **PKPbc** **02 54 20.2 -0.8**
KOLS Kolonicke sedl 145.13 326 *e*PKP **PKPbc** **02 54 20.2 -0.8**
UZH Uzhgorod 145.31 326 *e*PKIKP **PKPbc** **02 54 20.3 -1.2**
UZH *e* 02 54 24.7
UZH *e* 02 54 31.9
CRVS Cervenica-Dubn 145.57 326 *e*PKIKP **PKPdf** **02 54 21.2 -1.0**
CRVS Cervenica-Dubn 145.57 326 *e*PKP **PKPdf** **02 54 21.2 -1.0**
ARR Arges 145.84 319⇑ P **PKPdf** **02 54 22.7 -0.2**
HUMR Humele 146.05 318⇑ P **PKPdf** **02 54 22.2 -0.9**
LANS Liptovska Anna 146.40 328 *e*PKP2 **PKPdf** **02 54 24.3 +0.6**
LANS Liptovska Anna 146.40 328 *e*PKP **PKPdf** **02 54 24.3 +0.6**
OKC Ostrava-Krasne 146.54 330 *e*PKP2 **PKiKP** **02 54 28.6 +0.4**
OKC Ostrava-Krasne 146.54 330 *e*PKP **PKiKP** **02 54 28.6 +0.4**
MORC Moravsky Berou 146.86 331⇑ P **PKPdf** **02 54 24.6 +0.2**
MORC Moravsky Berou 146.86 331 PKPbc **PKPab** **02 54 27.7 0.0**
MORC Moravsky Berou 146.86 331⇑ PKP2 **PKPdf** **02 54 24.6 +0.2**
MORC Moravsky Berou 146.86 331 PKP **PKPdf** **02 54 24.4 0.0**
OSTC Ostas 146.87 333 *e*PKP **PKPdf** **02 54 25.2 +0.8**
GZR Gura Zlata 146.93 320⇓ P **PKPdf** **02 54 24.9 +0.2**
GZR Gura Zlata 146.93 320⇓ PKIKP **PKPdf** **02 54 24.9 +0.2**
DPC Dobruska-Polom 146.98 333 *e*PKP2 **PKPdf** **02 54 24.9 +0.3**
DPC Dobruska-Polom 146.98 333 *e*PKP **PKPdf** **02 54 24.9 +0.3**
KRLC Kraliky 146.98 332 *e*PKP2 **PKPdf** **02 54 24.7 +0.1**
KRLC Kraliky 146.98 332 *e*PKP **PKPdf** **02 54 24.7 +0.1**
SIRR Siria 147.07 323⇑ P **PKPdf** **02 54 25.1 +0.2**
VYHS Vyhne 147.15 328 *e*PKP2 **PKPdf** **02 54 25.3 +0.4**
VYHS Vyhne 147.15 328 *e*PKP **PKPdf** **02 54 25.3 +0.4**
EKA Eskdalemuir Ar 147.26 356 PKPbc **PKPdf** **02 54 24.5 -0.4**
comp=Z,3.9nm,0.6s,baz=0.3,slow=2.5,SNR=14
ESK Eskdalemuir 147.28 356 PKPbc **PKPbc** **02 54 26.2 -1.0**
ESK Eskdalemuir 147.28 356 PKP2 **PKPbc** **02 54 26.2 -1.0**
JAVC Velka Javorina 147.46 329 *e*PKP **PKPbc** **02 54 27.3 -0.7**
BRG Berggiesshubel 147.54 335 *e*PKP **PKPdf** **02 54 26.6 +1.2**
BRG Amp 02 54 29.2
comp=Z,4.7nm,0.7s
BRG *ex* x 02 54 31.6
BRG Amp 02 54 32.4
comp=Z,8.8nm,1.1s
BRG Berggiesshubel 147.54 335 *e*PKP2 **PKPdf** **02 54 26.6 +1.2**
BRG pmax pmax
comp=Z,5.0nm,0.7s
BRG pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 147.54 337 *i* PKIKP **PKPdf** **02 54 25.7 +0.3**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 147.54 337 *i* PKPbc **PKPdf** **02 54 25.7 +0.3**
comp=Z,8.0nm,0.9s
CLL *i* PKPab **PKPbc** **02 54 27.7 -0.4**
CLL *i* x x 02 54 31.1
comp=Z,9.0nm,0.8s
PVCC Panska Ves 147.57 334 *e*PKP2 **PKPdf** **02 54 26.5 +1.0**
PVCC Panska Ves 147.57 334 *e*PKP **PKPdf** **02 54 26.5 +1.0**
VRAC Vranov 147.63 331 *e*PKP **PKPdf** **02 54 26.8 +1.1**
KRUC Moravsky 147.90 331 *e*PKP **PKPdf** **02 54 27.1 +1.0**
MODS Modra-Piesok 147.98 329 *e*PKP2 **PKPbc** **02 54 28.7 -0.7**
MODS Modra-Piesok 147.98 329 *e*PKP **PKPbc** **02 54 28.7 -0.7**
PRU Pruhonice 148.00 334 *e*PKP2 **PKPdf** **02 54 27.6 +1.4**
PRU Pruhonice 148.00 334 *e*PKP **PKPdf** **02 54 27.6 +1.4**
RONA Rosalia, Austr 148.93 329 *e*P **PKPdf** **02 54 29.7 +1.8**
comp=Z,3.1nm,0.7s
CONA Conrad Observa 148.97 330 *e*P **PKPbc** **02 54 30.5 -1.6**
comp=Z,5.6nm,1.1s
KHC Kasperske Hory 149.06 334 *e*PKIKP **PKPdf** **02 54 30.2 +2.1**
KHC Kasperske Hory 149.06 334 *e*PKP **PKPdf** **02 54 30.2 +2.1**
GERES GERESS Array B 149.23 333 PKPbc **PKPdf** **02 54 30.7 +2.2**
comp=Z,1.0nm,0.7s,baz=69,slow=4.4,SNR=12
SOKA Soboth 150.26 329 *e*P **PKPdf** **02 54 30.7 +0.5**
comp=Z,8.9nm,1.3s
BTNL Ternell 150.35 343 *d*PKP **PKPbc** **02 54 33.3 -2.0**
MEM Membach 150.37 343 *d*PKP **PKPbc** **02 54 33.0 -2.3**
BMRD Maredsous 150.96 345 *d*PKP **PKPbc** **02 54 35.2 -1.5**
WLF Walferdange 151.18 342 *d*PKPab **PKPab** **02 54 45.4 +0.4**
WLF *dp*PKPab **sPKPbc** **02 54 48.3 -0.7**
DOU Dourbes 151.19 345 *d*PKP **PKPbc** **02 54 35.5 -1.7**
WATA Walderalm 151.30 334 *e*P **PKPbc** **02 54 35.4 -2.4**
comp=Z,4.0nm,0.9s
WTTA Wattenberg 151.33 333 *e*P **PKPbc** **02 54 35.3 -2.6**
comp=Z,2.9nm,0.6s
ABTA Abfaltersbach 151.36 332 *e*P **PKPdf** **02 54 34.2 +2.4**
comp=Z,9.1nm,1.6s
SQTA Sankt Quirin 151.54 334 *e*P **PKPbc** **02 54 36.3 -2.0**
comp=Z,0.1nm,0.2s
FETA Feichten 151.90 334 *e*P **PKPbc** **02 54 36.4 -2.8**
comp=Z,4.0nm,1.2s
DBIC Dimbokro 164.00 187 PKPab **PKPab** **02 55 40.7 -0.3**
comp=Z,2.8nm,0.5s,baz=178,slow=5.3,SNR=5.8
TORD Torodi Ar. Bea 167.58 222 PKPab **PKPab** **02 55 55.6 -1.3**
comp=Z,3.3nm,0.9s,baz=131,slow=3.0,SNR=11

*IDC **12** 02:38:21.4±3.4,21°.89S×179°.75W,h587km±32km, mb3.3/6, mbtmp4.3/7, Error ellipse: s-maj=79.6km s-min=24.9km az=152.0*
ISC 12 02:38:21.5±1.6, 21°.9S±0°.3×179°.7W±0°.2, h592km, n7, σ1§17/7, mb4.2/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.66**	**333**	P	**P**		**02 39 51.0**	**-0.5**
	20nm,0.4s,baz=233,slow=22,SNR=19							
CTA	**Charters Tower**	**31.80**	**267**	P	**P**		**02 43 59.3**	**+0.1**
	4.3nm,0.4s,baz=96,slow=11,SNR=7.6							
	4.3nm,0.4s							
STKA	**Stephens Creek**	**35.76**	**246**	P	**P**		**02 44 32.1**	**-0.1**
	3.0nm,0.5s,baz=95,slow=12,SNR=5.8							
	3.0nm,0.5s							
ASAR	**Alice Springs**	**42.67**	**258**	P	**P**		**02 45 27.2**	**-0.6**
	6.3nm,0.8s,baz=91,slow=8.6,SNR=16							
	6.3nm,0.8s							
WRA	**Warramunga Arr**	**42.86**	**264**	P	**P**		**02 45 28.1**	**-1.1**
	1.3nm,0.3s,baz=96,slow=7.8,SNR=68							
	1.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**89.10**	**290**	P	**P**		**02 50 17.1**	**+1.9**
	0.8nm,0.3s,baz=144,slow=2.9,SNR=4.2							
	0.8nm,0.3s							
TXAR	**Lajitas Array**	**89.14**	**58**	P	**P**		**02 50 14.9**	**-0.4**
	0.4nm,0.9s,baz=214,slow=6.0,SNR=3.5							
	0.4nm,0.9s							

*IDC **12** 02:41:34.4±0.8,22°.62S×173°.04E, h0km, mb4.2/9, mbtmp4.2/11, ML5.1/2, Error ellipse: s-maj=24.8km s-min=19.4km az=162.0*
*NEIC **12** 02:41:37.0±1.2,22°.5S±0°.1×173°.05E±0°.09, h10km±1km, mb4.6/19, Error ellipse: s-maj=20.7km s-min=13.4km az=166.0*
ISC 12 02:41:39.5±0.5, 22°.5S±0°.1×173°.05E±0°.07, h32km, n54, σ1§29/51, mb4.5/20, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.76**	**281**			**Pn**	**02 42 48.6**	**-0.4**
PINNC	**Pines Island,**	**5.18**	**267**			**Pn**	**02 42 54.4**	**-0.4**
OUENC	**Ouen Island, N**	**5.74**	**269**			**Pn**	**02 43 02.6**	**+0.1**
ONTNC	**Ouen Toro**	**6.10**	**270**		Pn	**Pn**	**02 43 08.2**	**+0.7**
DZM	**Mont Dzumac**	**6.13**	**273**		Pn	**Pn**	**02 43 07.8**	**-0.2**
	6.1nm,0.3s,baz=140,slow=12,SNR=28							
DZM					Sn	**Sn**	**02 44 17.3**	**+0.2**
	4.9nm,0.3s,baz=300,slow=8.0,SNR=3.3							
	12nm,0.3s							
DZM	**Mont Dzumac**	**6.13**	**273**		Pn	**Pn**	**02 43 07.9**	**-0.1**
MSVF	**Nonsavu**	**6.66**	**46**		Pn	**Pn**	**02 43 15.4**	**+0.1**
	3.3nm,0.3s,baz=217,slow=21,SNR=7.0							
	6.6nm,0.4s							
MSVF	**Nonsavu**	**6.66**	**46**		Pn	**Pn**	**02 43 15.0**	**-0.4**
KOUNC	**Koumac, New Ca**	**8.38**	**282**		Pn	**Pn**	**02 43 38.9**	**+0.1**
EIDS	**Eidsvold**	**20.28**	**257**		P	**P**	**02 46 13.0**	**+0.4**
EIDS					IAmb	IAmb	02 46 19.2	
	comp=Z,41nm,1.0s							
CTA	**Charters Tower**	**25.07**	**270**		P	**P**	**02 47 02.1**	**+0.8**
	comp=Z,4.0nm,0.6s,baz=80,slow=11,SNR=3.1							
	comp=Z,4.0nm,0.6s							
CTAO	**Charters Tower**	**25.07**	**270**		P	**P**	**02 47 01.5**	**+0.2**
PMG	**Port Moresby**	**28.02**	**294**		P	**P**	**02 47 26.6**	**-1.4**
PMG					IAmb	IAmb	02 47 29.9	
	comp=Z,19nm,0.8s							
STKA	**Stephens Creek**	**29.41**	**245**		P	**P**	**02 47 41.9**	**+1.6**
	comp=Z,1.9nm,0.5s,baz=84,slow=14,SNR=4.3							
WR0	**Warramunga Arr**	**35.92**	**267**		P	**P**	**02 48 36.9**	**-0.3**
ASAR	**Alice Springs**	**35.96**	**260**		P	**P**	**02 48 36.7**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=89,slow=8.2,SNR=11							
	comp=Z,1.8nm,0.7s							
ASAR	**Alice Springs**	**35.96**	**260**		P	**P**	**02 48 37.2**	**-0.3**
WB0	**Warramunga Arr**	**36.09**	**267**		P	**P**	**02 48 37.3**	**-1.4**
WRA	**Warramunga Arr**	**36.11**	**267**		P	**P**	**02 48 36.9**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=95,slow=8.4,SNR=12							
	comp=Z,0.5nm,0.3s							
H11S2	**WAKE ISLAND Hy**	**41.19**	**351**		T	T	03 33 07.0	
	baz=171,slow=76,SNR=5.3							
H11S3	**WAKE ISLAND Hy**	**41.20**	**351**		T	T	03 33 06.1	
	baz=171,slow=76,SNR=4.4							
H11S1	**WAKE ISLAND Hy**	**41.21**	**351**		T	T	03 33 09.3	
	baz=171,slow=76,SNR=4.2							
FAKI	**Fak Fak**	**44.07**	**290**		P	**P**	**02 49 43.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**44.54**	**267**		P	**P**	**02 49 48.6**	**0.0**
FITZ					IAmb	IAmb	02 49 50.6	
	comp=Z,11nm,1.4s							
SBA	**Scott Base**	**55.51**	**182**		P	**P**	**02 51 12.6**	**+1.6**
TOLI2	**Tolitoli**	**56.04**	**288**		P	**P**	**02 51 16.2**	**+0.4**
TOLI2					IAmb	IAmb	02 51 19.3	
	comp=Z,5.8nm,1.1s							
QSPA	**South Pole Qui**	**67.59**	**180**		P	**P**	**02 52 32.4**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=297,slow=0.5,SNR=12							
	comp=Z,2.5nm,0.8s							
QSPA	**South Pole Qui**	**67.59**	**180**		P	**P**	**02 52 33.9**	**+1.0**
QSPA					IAmb	IAmb	02 52 39.2	
	comp=Z,5.3nm,1.1s							
KSAR	**Wonju Array Be**	**73.21**	**324**		P	**P**	**02 53 07.4**	**0.0**
KS19	**Wonju Array Si**	**73.26**	**324**		P	**P**	**02 53 07.3**	**-0.4**
PETK	**Petropavlovsk**	**76.44**	**351**		P	**P**	**02 53 27.5**	**+1.8**
	comp=Z,3.4nm,0.8s,baz=171,slow=10,SNR=7.1							
	comp=Z,3.4nm,0.8s							
PETK	**Petropavlovsk-**	**76.44**	**351**		P	**P**	**02 53 26.7**	**+1.0**
NIKH	**Nikolski High**	**76.77**	**11**		P	**P**	**02 53 28.3**	**+0.8**
SMAI	**San Martin Ant**	**79.63**	**161**		P	**P**	**02 53 42.9**	**-0.4**
SMAI					IAmb	IAmb	02 53 44.9	
	comp=Z,8.3nm,1.0s							
ENH	**Enshi**	**80.47**	**308**		P	**P**	**02 53 44.5**	**-4.0**
ENH					IAmb	IAmb	02 53 45.4	
	comp=Z,20nm,1.5s							
PMSA	**Palmer Station**	**82.64**	**159**		P	**P**	**02 53 59.1**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=238,slow=4.9,SNR=3.1							
	comp=Z,5.0nm,0.8s							
PZH	**PanZhiHua**	**84.44**	**301**		P	**P**	**02 54 12.3**	**+2.8**
PZH					pmax	pmax		
	comp=Z,10.0nm,0.5s							
HHC	**Hu-ho-hao-te**	**84.99**	**318**	*e*P	**P**	**P**	**02 54 14.1**	**+2.2**
TROLL	**Troll, Antarti**	**85.53**	**183**	P		**P**	**02 54 12.7**	**-1.6**
TROLL	**Troll, Antarti**	**85.53**	**183**	PP	PP	PP	02 57 41.3	+9.1
SNAA	**Sanae**	**86.06**	**181**	P		**P**	**02 54 14.8**	**-2.0**
SNAA	**Sanae**	**86.06**	**181**	P		**P**	**02 54 14.8**	**-2.0**
	comp=Z,1.1nm,0.8s,baz=168,slow=6.3,SNR=3.0							
	comp=Z,1.1nm,0.8s							
VNA3	**Neumayer Olymp**	**86.51**	**179**	P		**P**	**02 54 16.8**	**-2.1**
ISA	**Isabella, Lake**	**86.81**	**49**	P		**P**	**02 54 20.9**	**-0.1**
ISA					IAmb	IAmb	02 54 23.5	
	comp=Z,3.0nm,0.8s							
VNA1	**Neumayer--Stat**	**87.12**	**180**	P		**P**	**02 54 19.7**	**-2.1**
PFO	**Pinyon Flats O**	**87.23**	**52**	P		**P**	**02 54 23.0**	**-0.2**
PFO					IAmb	IAmb	02 54 24.7	
	comp=Z,3.8nm,1.2s							
NVAR	**Mina Array Bea**	**88.33**	**47**	P		**P**	**02 54 29.2**	**+0.7**
	comp=Z,2.2nm,0.4s,baz=220,slow=5.9,SNR=4.4							
	comp=Z,0.2nm,0.4s							
NVAR	**Mina Array Bea**	**88.33**	**47**	P		**P**	**02 54 28.4**	**0.0**
TPNV	**Topopah Spring**	**89.01**	**49**	P		**P**	**02 54 32.2**	**+0.6**
U15A	**North Rim**	**91.57**	**51**	P		**P**	**02 54 44.2**	**+0.5**
U15A					IAmb	IAmb	02 54 46.0	
	comp=Z,2.9nm,0.8s							
ILAR	**Eielson Array**	**92.30**	**16**	P		**P**	**02 54 44.7**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=225,slow=4.8,SNR=11							
	comp=Z,0.6nm,0.7s							
MTPU	**Mount Pierson**	**92.38**	**50**	P		**P**	**02 54 47.7**	**+0.2**
MTPU					IAmb	IAmb	02 54 50.8	
	comp=Z,2.0nm,0.9s							
WMQ	**Urumqi**	**102.01**	**312**	*e*P		**Pdif**	**02 55 32.8**	**+2.3**
ARCES	**ARCESS Array B**	**129.08**	**346**	PKP		**PKPdf**	**03 00 43.4**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=57,slow=3.3,SNR=3.7							

*ISK **12** 02:44:11.9, 36°.43N×31°.05E, h62km±1km, ML2.8/31*

NIC **12** *02:44:11.5±0.0,36.42N×31.04E,h98km±8km,MI3.1/4*
DDA **12** *02:44:13.6±0.0,36.59N×31.08E,h54km±1km,ML2.8*

ISC 12 02:44:12.2±1.3,**36.46N**±0.03×**31.10E**±0.02,**h21**km±5km, **n76,σ1907/99, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.57**	**321**	PG	**Pn**	**02 44 25.2**	**+0.2**
ANTB				SG	**Sn**	**02 44 35.2**	**+1.5**
ANTB	**Antalya**	**0.57**	**321**	P	**Pn**	**02 44 25.3**	**+0.4**
ANTB				*i* AML	AML	02 44 31.0	
	comp=N,279nm,1.4s						
ANTB				S	**Sn**	**02 44 34.4**	**+0.8**
ANTB				*i* AML	AML	02 44 44.0	
	comp=E,848nm,0.8s						
KEPZ	**Antalya-Kepez**	**0.60**	**42**	P	**Pn**	**02 44 26.2**	**+0.8**
KEPZ				S	**Sn**	**02 44 35.6**	**+1.2**
AKUM	**Antalya-Kumluc**	**0.63**	**257**	P	**Pn**	**02 44 26.5**	**+0.7**
AKUM				*i* AML	AML	02 44 37.0	
	comp=E,263nm,1.0s						
AKUM				S	**Sn**	**02 44 39.0**	**+3.9**
KORT	**Korkueli**	**0.81**	**312**	PG	**Pb**	**02 44 27.8**	**+0.2**
KORT	**Korkueli**	**0.81**	**312**	P	**Pb**	**02 44 28.0**	**+0.4**
BUCA	**Burdur, Bucak-**	**0.97**	**333**	P	**Pn**	**02 44 30.5**	**-0.1**
ELL	**Elmali**	**1.00**	**287**	PG	**Pb**	**02 44 30.9**	**0.0**
ELL	**Elmali**	**1.00**	**287**	P	**Pn**	**02 44 31.3**	**+0.3**
ELL				S	**Sn**	**02 44 47.5**	**+2.8**
ELL	**Elmali**	**1.00**	**287**	P	**Pn**	**02 44 32.2**	**+1.1**
GAZI	**Gazipasa**	**1.01**	**103**	PG	**Pn**	**02 44 31.2**	**+0.2**
GAZI	**Gazipasa**	**1.01**	**103**	P	**Pb**	**02 44 30.7**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.02**	**355**	PG	**Pb**	**02 44 31.0**	**-0.1**
SUTC				SG	**Sn**	**02 44 45.8**	**+0.8**
SEYD	**Seydisehir-KON**	**1.11**	**32**	PN	**Pb**	**02 44 32.9**	**+0.2**
SEYD				SN	**Sn**	**02 44 48.2**	**+0.9**
SEDI	**Konya, Seydise**	**1.12**	**28**	P	**Pn**	**02 44 33.2**	**+0.7**
SEDI				S	**Sn**	**02 44 48.3**	**+0.8**
SEDI				*i* AML	AML	02 44 57.0	
	comp=E,114nm,1.1s						
AKAS	**Kas**	**1.23**	**260**	PN	**Pn**	**02 44 32.9**	**-1.3**
AKAS	**Kas**	**1.23**	**260**	P	**Pn**	**02 44 33.0**	**-1.3**
ISP	**Isparta**	**1.44**	**341**	PN	**Pn**	**02 44 36.9**	**-0.1**
GOLH	**Golhisar**	**1.46**	**302**	P	**Pb**	**02 44 39.3**	**+0.7**
ERMK	**Ermenek**	**1.47**	**82**	P	**Pb**	**02 44 40.5**	**+1.6**
CAME	**Cameli-Denizli**	**1.52**	**289**	PN	**Pn**	**02 44 37.3**	**-1.0**
BAGO	**Egridir - ISPA**	**1.55**	**351**	P	**Pn**	**02 44 38.9**	**+0.3**
CAEL	**Denizli, Camel**	**1.57**	**295**	P	**Pb**	**02 44 40.8**	**+0.2**
FETY	**Fethiye**	**1.64**	**277**	PN	**Pn**	**02 44 39.3**	**-0.4**
KMER	**Konya-Meram**	**1.65**	**37**	P	**Pn**	**02 44 40.9**	**+0.9**
TEKE	**Tekeli-Mersin**	**1.66**	**100**	PN	**Pn**	**02 44 40.4**	**+0.5**
BASM	**Basmaki-Afyon**	**1.68**	**330**	PN	**Pn**	**02 44 40.0**	**-0.4**
DOGA	**KONYA_Doganhis**	**1.70**	**15**	P	**Pb**	**02 44 42.8**	**0.0**
BERE	**Bereket-Mersin**	**1.71**	**93**	PN	**Pn**	**02 44 40.9**	**0.0**
AKMS	**Akamas**	**1.76**	**145**	P	**Pn**	**02 44 40.9**	**-0.4**
AKMS				AML	AML	02 45 09.0	
	0.4nm,0.3s						
AKMS				AML	AML	02 45 12.0	
	0.5nm,0.7s						
APMY	**Acipayam-Deniz**	**1.76**	**305**	PN	**Pn**	**02 44 41.2**	**-0.3**
ALFC	**Alefka**	**1.78**	**137**	P	**Pn**	**02 44 40.4**	**-1.3**
ALFC				AML	AML	02 45 02.8	
	0.3nm,0.1s						
ALFC				AML	AML	02 45 04.2	
	0.5nm,0.2s						
KONT	**Konya--Tatoy**	**1.79**	**34**	PN	**Pn**	**02 44 42.6**	**+0.8**
YVAC	**Isparta, Yalva**	**1.81**	**3**	P	**Pn**	**02 44 43.3**	**+1.1**
YVAC				S	**Sn**	**02 45 04.1**	**-0.5**
KRMN	**Karaman**	**1.87**	**67**	PN	**Pn**	**02 44 43.5**	**+0.4**
TEVE	**Tevekalti-Mers**	**1.89**	**90**	PN	**Pn**	**02 44 43.8**	**+0.6**
AKDN	**Akdeniz- Kıbrı**	**1.91**	**127**	PN	**Pn**	**02 44 43.4**	**0.0**
KZIL	**AFYON_Kizioren**	**1.95**	**337**	P	**Pn**	**02 44 44.6**	**+0.5**
KZIL				*i* AML	AML	02 45 05.0	
	comp=E,61nm,1.1s						
KZIL				S	**Sn**	**02 45 07.5**	**-0.5**
LEF	**Lefka**	**1.98**	**132**	PN	**Pn**	**02 44 42.7**	**-1.7**
AKKU	**Akkuyu-Mersin**	**2.00**	**98**	PN	**Pn**	**02 44 45.1**	**+0.4**
DALY	**Dalyan (Mula)**	**2.00**	**281**	PN	**Pn**	**02 44 44.2**	**-0.5**
LADK	**Ladik-KONYA**	**2.01**	**30**	PN	**Pn**	**02 44 44.2**	**-0.5**
LADK	**Ladik-KONYA**	**2.01**	**30**	P	**Pn**	**02 44 44.2**	**-0.7**
LADK				*i* AML	AML	02 45 06.0	
	comp=N,120nm,1.3s						
LADK				S	**Sn**	**02 45 08.1**	**-1.3**
LADK				*i* AML	AML	02 45 23.0	
	comp=E,98nm,1.1s						
TAVA	**DENIZLI_Tavas**	**2.02**	**300**	P	**Pn**	**02 44 46.0**	**+0.9**
TAVA				*i* AML	AML	02 45 08.0	
	comp=E,137nm,1.2s						
TAVA				S	**Sb**	**02 45 13.1**	**+0.2**
NATA	**Nata**	**2.06**	**144**	P	**Pn**	**02 44 45.5**	**0.0**
NATA				AML	AML	02 45 25.2	
	0.8nm,0.6s						
NATA				AML	AML	02 45 27.0	
	0.6nm,0.7s						
IKL	**Isikli**	**2.10**	**95**	PN	**Pn**	**02 44 46.5**	**+0.5**
IKL	**Isikli**	**2.10**	**95**	P	**Pn**	**02 44 47.6**	**+1.6**
IKL				*i* AML	AML	02 45 10.0	
	comp=N,31nm,1.0s						
IKL				S	**Sb**	**02 45 14.2**	**-0.8**
IKL				*i* AML	AML	02 45 27.0	
	comp=E,45nm,1.2s						
KEBE	**Keben-Mersin**	**2.10**	**90**	PN	**Pn**	**02 44 46.7**	**+0.5**
SHUT	**Suhut-Afyon**	**2.13**	**348**	PN	**Pn**	**02 44 46.7**	**+0.1**
KDHN	**Kadinhani**	**2.21**	**21**	P	**Pn**	**02 44 47.4**	**-0.3**
KDHN				*i* AML	AML	02 45 05.0	
	comp=E,64nm,1.5s						
KDHN				S	**Sn**	**02 45 10.4**	**-4.0**
PASA	**Karahalli, USA**	**2.28**	**326**	P	**Pn**	**02 44 48.7**	**+0.1**
PASA				S	**Sn**	**02 45 16.2**	**+0.1**
PASA				*i* AML	AML	02 45 22.0	
	comp=E,31nm,0.3s						
PASA				*i* AML	AML	02 45 23.0	
	comp=N,86nm,0.6s						
LFK	**Lefkose**	**2.30**	**120**	PN	**Pn**	**02 44 48.9**	**0.0**
LFK	**Lefkose**	**2.30**	**120**	P	**Pn**	**02 44 50.1**	**+1.3**
LFK				S	**Sn**	**02 45 17.3**	**+0.8**
ALIN	**Konya, Altinte**	**2.32**	**37**	P	**Pn**	**02 44 49.3**	**+0.1**
ALIN				*i* AML	AML	02 45 14.0	
	comp=E,205nm,1.3s						
ALIN				*i* AML	AML	02 45 16.0	
	comp=N,74nm,1.3s						
ALIN				S	**Sn**	**02 45 16.8**	**-0.3**
CSS	**Mathiatis**	**2.35**	**129**	P	**Pn**	**02 44 48.9**	**-0.6**
YER	**Yerkesik**	**2.36**	**287**	P	**Pn**	**02 44 50.7**	**+1.0**
ASGA	**Asgata**	**2.42**	**133**	P	**Pn**	**02 44 50.4**	**0.0**
KIZK	**Mersin**	**2.45**	**89**	PN	**Pn**	**02 44 51.8**	**+0.9**
KIZT	**Kizilcal**	**2.49**	**14**	PN	**Pn**	**02 44 51.7**	**+0.1**
KIZT	**Kizilcal**	**2.49**	**14**	P	**Pn**	**02 44 51.0**	**-0.5**
KIZT				*i* AML	AML	02 45 16.0	
	comp=N,135nm,0.7s						
KIZT				S	**Sn**	**02 45 19.9**	**-1.5**
MVOU	**Mavrovouni**	**2.51**	**124**	P	**Pn**	**02 44 50.3**	**-1.4**
MVOU				AML	AML	02 45 30.8	
	0.2nm,0.6s						
MVOU				AML	AML	02 45 31.4	
	0.2nm,0.5s						
CHBY	**Cihanbeyli**	**2.55**	**33**	PN	**Pn**	**02 44 53.0**	**+0.7**
CHBY	**Cihanbeyli**	**2.55**	**33**	P	**Pn**	**02 44 52.8**	**+0.4**
SULT	**Sultanhani-AKS**	**2.59**	**47**	PN	**Pn**	**02 44 53.9**	**+1.0**
MERS	**Mersin**	**2.78**	**81**	PN	**Pn**	**02 44 56.5**	**+1.0**
USAK	**Uak-Merkez**	**2.79**	**324**	P	**Pn**	**02 44 55.8**	**+0.1**
USAK				*i* AML	AML	02 45 23.0	
	comp=E,103nm,1.5s						
USAK				S	**Sn**	**02 45 28.2**	**-0.5**
USAK				*i* AML	AML	02 45 35.0	
	comp=N,16nm,0.7s						
AYDN	**Tasoluk**	**2.84**	**296**	P	**Pn**	**02 44 56.1**	**-0.2**
MANT	**Manisa**	**2.86**	**316**	P	**Pn**	**02 44 57.4**	**+0.6**
MANT				*i* AML	AML	02 45 25.0	
	comp=N,54nm,1.5s						
MANT				S	**Sn**	**02 45 28.6**	**-2.1**
MANT				*i* AML	AML	02 45 41.0	
	comp=E,59nm,0.9s						
GEDZ	**Gediz**	**2.91**	**333**	PN	**Pn**	**02 44 57.8**	**+0.6**
GDZ	**Gediz**	**2.92**	**334**	P	**Pn**	**02 44 56.5**	**-1.0**
GDZ				*i* AML	AML	02 45 25.0	
	comp=N,69nm,1.4s						
GDZ				S	**Sn**	**02 45 29.4**	**-2.5**
GDZ				*i* AML	AML	02 45 34.0	
	comp=E,82nm,0.9s						
OSC1	**CSNet OBS 1**	**2.96**	**177**	P	**Pn**	**02 44 57.1**	**-0.8**
OSC1				S	**Sn**	**02 45 31.6**	**-1.0**
SVRH	**Sivrihisar-ESK**	**3.00**	**6**	PN	**Pn**	**02 44 59.2**	**+0.7**
KKUL	**Konya-Kulu**	**3.06**	**27**	P	**Pn**	**02 44 59.3**	**-0.1**
TVSB	**Tavsanli**	**3.25**	**337**	P	**Pn**	**02 45 01.4**	**-0.6**
TVSB				S	**Sn**	**02 45 37.7**	**-2.5**
TVSB				*i* AML	AML	02 45 44.0	
	comp=E,19nm,0.3s						
CMRD	**Camardi-Nigde**	**3.33**	**68**	PN	**Pn**	**02 45 04.5**	**+1.4**
OSC2	**CSNet OBS 4**	**3.51**	**164**	S	**Sn**	**02 45 46.4**	**0.0**

IDC **12** *02:45:04.0±1.2,22.64S×173.26E,h0km,mb4.1/6, mbtmp4.1/8,ML5.8/1,Error ellipse: s-maj=30.8km s-min=23.4km az=144.0*
NEIC **12** *02:45:08.7±2.5,22.3S±0.1×173.15E±0.07,h10km±1km, mb4.6/12,Error ellipse: s-maj=22.5km s-min=3.1km az=154.0*

ISC 12 02:45:11.1±0.6,**22.3S**±0.1×**173.17E**±0.08,**h32**km,**n32, σ1851/33,mb4.4/13,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.83**	**278**	Pn	**Pn**	**02 46 21.9**	**+0.3**
PINNC	**Pines Island,**	**5.30**	**265**		**Pn**	**02 46 27.6**	**-0.5**
OUENC	**Ouen Island, N**	**5.86**	**267**	Pn	**Pn**	**02 46 35.2**	**-0.5**
ONTNC	**Ouen Toro**	**6.22**	**268**	Pn	**Pn**	**02 46 41.7**	**+1.1**
DZM	**Mont Dzumac**	**6.23**	**271**	Pn	**Pn**	**02 46 40.1**	**-0.8**
	11nm,0.3s,baz=77,slow=13,SNR=5.1						
DZM				Sn	**Sn**	**02 47 52.6**	**+1.4**
	2.9nm,0.3s,baz=132,slow=16,SNR=1.8						
DZM	**Mont Dzumac**	**6.23**	**271**		**Pn**	**02 46 41.2**	**+0.2**
MSVF	**Nonsavu**	**6.43**	**46**	Pn	**Pn**	**02 46 43.5**	**-0.3**
	5.8nm,0.3s,baz=231,slow=21,SNR=12						
	7.2nm,0.3s						
MSVF	**Nonsavu**	**6.43**	**46**	Pn	**Pn**	**02 46 44.0**	**+0.3**
KOUNC	**Koumac, New Ca**	**8.45**	**280**	Pn	**Pn**	**02 47 12.4**	**+1.1**
EIDS	**Eidsvold**	**20.44**	**257**	P	**P**	**02 49 45.6**	**-0.2**
CAN	**Canberra**	**24.78**	**233**	P	**P**	**02 50 29.9**	**-0.2**
CAN				IAmb	IAmb	02 50 33.6	
	comp=Z,33nm,1.5s						
WR0	**Warramunga Arr**	**36.04**	**266**	P	**P**	**02 52 08.3**	**-1.5**
ASAR	**Alice Springs**	**36.10**	**260**	P	**P**	**02 52 08.3**	**-2.0**
	comp=Z,2.1nm,0.8s,baz=86,slow=8.6,SNR=11						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**36.10**	**260**	P	**P**	**02 52 08.8**	**-1.5**
WRA	**Warramunga Arr**	**36.23**	**266**	P	**P**	**02 52 09.0**	**-2.5**
	comp=Z,1.1nm,0.7s,baz=103,slow=8.7,SNR=6.0						
	comp=Z,1.1nm,0.7s						
SBA	**Scott Base**	**55.73**	**182**	P	**P**	**02 54 46.3**	**+2.2**
MJAR	**Matsushiro Arr**	**67.17**	**330**	P	**P**	**02 56 01.6**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=159,slow=9.1,SNR=6.7						
	comp=Z,2.2nm,0.8s						
QSPA	**South Pole Qui**	**67.81**	**180**	P	**P**	**02 56 01.7**	**-4.1**
	comp=Z,2.8nm,0.9s,baz=1.8,slow=6.3,SNR=5.1						
	comp=Z,2.8nm,0.9s						
QSPA	**South Pole Qui**	**67.81**	**180**	P	**P**	**02 56 06.6**	**+0.9**
KSRS	**Korea Array**	**73.09**	**324**	P	**P**	**02 56 38.8**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=138,slow=7.4,SNR=5.6						
	comp=Z,0.7nm,0.5s						
KS19	**Wonju Array Si**	**73.15**	**324**	P	**P**	**02 56 40.4**	**+1.8**
KS19				IAmb	IAmb	02 56 42.5	
	comp=Z,5.2nm,1.1s						
PETK	**Petropavlovsk-**	**76.25**	**350**	P	**P**	**02 56 56.7**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=93,slow=9.2,SNR=5.3						
	comp=Z,2.8nm,0.8s						
PETK	**Petropavlovsk-**	**76.25**	**350**	P	**P**	**02 56 56.1**	**-0.1**
SMAI	**San Martin Ant**	**79.79**	**161**	P	**P**	**02 57 17.1**	**+1.4**
SMAI				IAmb	IAmb	02 57 19.7	
	comp=Z,7.8nm,1.1s						
M19K	**Big River Lodg**	**87.81**	**15**	P	**P**	**02 57 57.7**	**+1.1**
M19K				IAmb	IAmb	02 58 00.1	
	comp=Z,2.9nm,0.7s						
U15A	**North Rim**	**91.35**	**51**	P	**P**	**02 58 14.7**	**+0.5**
U15A				IAmb	IAmb	02 58 23.6	
	comp=Z,3.4nm,1.0s						
IL31		**92.06**	**16**	P	**P**	**02 58 15.5**	**-0.9**
IL31				IAmb	IAmb	02 58 21.8	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**92.06**	**16**	P	**P**	**02 58 12.8**	**-3.6**
	comp=Z,1.3nm,0.9s,baz=233,slow=6.1,SNR=12						
ILAR	**Eielson Array**	**92.06**	**16**	P	**P**	**02 58 15.0**	**-1.5**
MFID	**Camas Ranch**	**92.20**	**44**	P	**P**	**02 58 16.6**	**-1.2**
J26L	**Joseph Creek**	**92.73**	**17**	P	**P**	**02 58 19.6**	**-0.1**
GERES	**GERESS Array B**	**148.85**	**333**	PKPbc	**PKPdf**	**03 04 52.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=130,slow=29,SNR=3.9						

IDC **12** *02:47:03.6±0.8,22.64S×173.10E,h0km,mb4.4/11, mbtmp4.4/13,ML5.3/2,Error ellipse: s-maj=20.4km s-min=18.4km az=130.0*
NEIC **12** *02:47:05.2±1.7,22.61S±0.09×173.05E±0.08,h10km±1km, mb4.7/52,Error ellipse: s-maj=16.1km s-min=12.3km az=160.0*

ISC 12 02:47:07.7±0.4,**22.61S**±0.08×**173.09E**±0.07,**h32**km,**n106, σ1814/93,mb4.7/36,3D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.82**	**282**	Pn	**Pn**	**02 48 17.1**	**-1.1**
PINNC	**Pines Island,**	**5.21**	**269**	Pn	**Pn**	**02 48 22.3**	**-1.2**
OUENC	**Ouen Island, N**	**5.78**	**271**	Pn	**Pn**	**02 48 30.6**	**-0.7**
ONTNC	**Ouen Toro**	**6.14**	**271**	Pn	**Pn**	**02 48 36.6**	**+0.3**
DZM	**Mont Dzumac**	**6.17**	**274**	Pn	**Pn**	**02 48 37.7**	**+0.9**
	17nm,0.3s,baz=49,slow=5.1,SNR=7.9						
DZM				Sn	**Sn**	**02 49 48.8**	**+2.4**
	5.0nm,0.3s,baz=85,slow=22,SNR=2.1						
	61nm,0.5s						
DZM	**Mont Dzumac**	**6.17**	**274**	Pn	**Pn**	**02 48 35.8**	**-1.0**
MSVF	**Nonsavu**	**6.72**	**45**	Pn	**Pn**	**02 48 45.1**	**+0.7**
	3.8nm,0.3s,baz=220,slow=9.0,SNR=6.5						
	39nm,0.7s						
MSVF	**Nonsavu**	**6.72**	**45**	Pn	**Pn**	**02 48 43.7**	**-0.7**
KOUNC	**Koumac, New Ca**	**8.44**	**282**	Pn	**Pn**	**02 49 05.7**	**-2.2**
HIZ	**Hauiti**	**15.93**	**175**	Pn	**Pn**	**02 50 47.5**	**-2.0**
HIZ				IAmb	IAmb	02 51 03.0	
	comp=Z,67nm,1.2s						
EIDS	**Eidsvold**	**20.29**	**258**		**P**	**02 51 39.1**	**-1.8**
EIDS				IAmb	IAmb	02 51 49.9	
	comp=Z,50nm,0.9s						
ARMA	**Armidale**	**20.70**	**243**	P	**P**	**02 51 44.9**	**-0.6**
TARA	**Tarawa**	**23.82**	**360**	P	**P**	**02 52 14.9**	**-3.0**
CAN	**Canberra**	**24.52**	**234**	P	**P**	**02 52 24.9**	**+0.4**
CAN				IAmb	IAmb	02 52 41.5	
	comp=Z,24nm,1.1s						
CTA	**Charters Tower**	**25.11**	**271**	P	**P**	**02 52 31.7**	**+1.9**
	comp=Z,8.7nm,0.8s,baz=97,slow=9.7,SNR=11						
	comp=Z,8.7nm,0.8s						
CTAO	**Charters Tower**	**25.11**	**271**	P	**P**	**02 52 29.1**	**-0.7**
STKA	**Stephens Creek**	**29.40**	**245**	P	**P**	**02 53 08.7**	**+0.5**
	comp=Z,2.8nm,0.5s,baz=78,slow=12,SNR=5.8						
	comp=Z,2.8nm,0.5s						
WR0	**Warramunga Arr**	**35.95**	**267**	P	**P**	**02 54 04.3**	**-1.4**
AS31	**Alice Springs**	**35.97**	**260**	P	**P**	**02 54 04.5**	**-1.4**
ASAR	**Alice Springs**	**35.97**	**260**	P	**P**	**02 54 05.9**	**0.0**
	comp=Z,4.7nm,0.7s,baz=79,slow=9.3,SNR=16						
	comp=Z,4.7nm,0.7s						
ASAR	**Alice Springs**	**35.97**	**260**	P	**P**	**02 54 05.5**	**-0.3**
WB2	**Warramunga Arr**	**36.13**	**267**	P	**P**	**02 54 06.6**	**-0.6**
WRA	**Warramunga Arr**	**36.14**	**267**	P	**P**	**02 54 06.7**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=98,slow=7.9,SNR=14						
	comp=Z,3.4nm,0.7s						
FORT	**Forrest**	**40.83**	**249**	P	**P**	**02 54 46.2**	**-0.4**
MTN	**Manton Dam**	**41.00**	**276**	P	**P**	**02 54 47.8**	**-0.3**
MTN				IAmb	IAmb	02 54 49.0	
	comp=Z,24nm,1.4s						
KNRA	**Kununurra**	**42.31**	**271**	P	**P**	**02 54 57.8**	**-1.1**
KNRA				IAmb	IAmb	02 55 01.0	
	comp=Z,13nm,0.9s						
FITZ	**Fitzroy Crossi**	**44.57**	**267**	P	**P**	**02 55 16.8**	**-0.3**
FITZ				IAmb	IAmb	02 55 20.0	
	comp=Z,9.5nm,0.8s						
VNDA	**Vanda**	**55.24**	**183**	P	**P**	**02 56 38.1**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=0.1,slow=7.7,SNR=11						
	comp=Z,1.5nm,0.6s						
VNDA	**Vanda**	**55.24**	**183**	P	**P**	**02 56 39.2**	**+2.0**
VNDA				IAmb	IAmb	02 56 53.7	
	comp=Z,8.7nm,1.4s						
SBA	**Scott Base**	**55.39**	**182**	P	**P**	**02 56 39.8**	**+1.5**
TOLI2	**Tolitoli**	**56.11**	**288**	P	**P**	**02 56 44.4**	**-0.1**
TOLI2				IAmb	IAmb	02 56 57.2	
	comp=Z,7.8nm,0.9s						
MJAR	**Matsushiro Arr**	**67.42**	**330**	P	**P**	**02 58 00.5**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=156,slow=8.2,SNR=4.1						
	comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**02 58 00.7**	**+0.3**
	comp=Z,5.6nm,0.7s,baz=304,slow=1.8,SNR=17						
	comp=Z,5.6nm,0.7s						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**02 58 00.6**	**+0.3**
JSD	**Sado**	**68.62**	**331**	P	**P**	**02 58 08.3**	**+0.6**
JHS	**Saijyo**	**68.70**	**326**	P	**P**	**02 58 09.3**	**+1.0**
KSRS	**Korea Array**	**73.31**	**324**	P	**P**	**02 58 37.3**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=137,slow=6.2,SNR=5.1						
	comp=Z,0.8nm,0.4s						
PETK	**Petropavlovsk-**	**76.57**	**351**	P	**P**	**02 58 55.8**	**+1.2**
	comp=Z,16nm,1.1s,baz=167,slow=7.4,SNR=7.9						
	comp=Z,16nm,1.1s						
PETK	**Petropavlovsk-**	**76.57**	**351**	P	**P**	**02 58 56.0**	**+1.3**
MAW	**Mawson**	**76.67**	**202**	P	**P**	**02 58 56.2**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=125,slow=9.5,SNR=2.8						
	comp=Z,2.2nm,0.8s						
BELA	**Belgrano 2**	**78.43**	**174**	P	**P**	**02 59 03.9**	**-0.9**
SMAI	**San Martin Ant**	**79.50**	**161**	P	**P**	**02 59 11.1**	**+0.2**
ENH	**Enshi**	**80.57**	**308**	P	**P**	**02 59 15.8**	**-1.5**
PMSA	**Palmer Station**	**82.51**	**159**	P	**P**	**02 59 27.1**	**+0.2**
CHTO	**Chiang Mai**	**83.30**	**293**	P	**P**	**02 59 31.4**	**-0.4**
PZH	**PanZhiHua**	**84.53**	**301**	P	**P**	**02 59 38.5**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**85.11**	**318**	*e*P	**P**	**02 59 42.1**	**+1.4**
TROLL	**Troll, Antarti**	**85.41**	**183**	P	**P**	**02 59 41.0**	**-0.9**
TROLL	**Troll, Antarti**	**85.41**	**183**	P	PKiKP	03 05 01.3	+9.1
SNAA	**Sanae**	**85.93**	**181**	P	**P**	**02 59 42.2**	**-2.2**
SNAA	**Sanae**	**85.93**	**181**	P	PKiKP	03 05 02.7	+10
SNAA	**Sanae**	**85.93**	**181**	P	**P**	**02 59 45.7**	**+1.4**
SNAA				IAmb	IAmb	02 59 56.6	
	comp=Z,3.7nm,0.8s						
VNA3	**Neumayer Olymp**	**86.39**	**179**	P	**P**	**02 59 45.4**	**-1.1**
VNA3	**Neumayer Olymp**	**86.39**	**179**	P	PKiKP	03 05 05.3	+12
VNA2	**Neumayer--Watz**	**86.72**	**180**	P	**P**	**02 59 47.2**	**-1.0**
	baz=170,slow=5.0						
VNA2	**Neumayer--Watz**	**86.72**	**180**	P	PKiKP	03 05 06.8	+13
	baz=175,slow=5.0						
CMB	**Columbia Colle**	**86.78**	**47**	P	**P**	**02 59 49.8**	**+0.8**
ISA	**Isabella, Lake**	**86.86**	**49**	P	**P**	**02 59 48.9**	**-0.6**
VNA1	**Neumayer--Stat**	**87.00**	**180**	P	**P**	**02 59 49.1**	**-0.4**
VNA1	**Neumayer--Stat**	**87.00**	**180**	P	PKiKP	03 05 09.2	+15
LZH	**Lanzhou**	**87.64**	**311**	*e*P	**P**	**02 59 51.5**	**-1.8**
LZH				pP	pP	02 59 59.3	-2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
L19K	**White Mountain**	**88.29**	**14**	P	**P**	**02 59 57.7**	**+2.1**
L19K				IAmb	IAmb	03 00 05.7	
	comp=Z,5.2nm,1.2s						
NVAR	**Mina Array Bea**	**88.39**	**47**	P	**P**	**02 59 57.3**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=229,slow=6.7,SNR=5.3						
	comp=Z,1.5nm,0.9s						
NVAR	**Mina Array Bea**	**88.39**	**47**	P	**P**	**02 59 56.7**	**-0.2**
KVN	**Kaiserville**	**88.84**	**47**	P	**P**	**02 59 59.9**	**+0.9**
TPNV	**Topopah Spring**	**89.06**	**49**	P	**P**	**03 00 01.2**	**+1.2**
TPNV				IAmb	IAmb	03 00 02.9	
	comp=Z,3.9nm,0.8s						
PINE	**Pine Mountain**	**89.49**	**41**	P	**P**	**03 00 02.4**	**+0.5**
PINE				IAmb	IAmb	03 00 16.9	
	comp=Z,4.6nm,0.8s						
BMN	**Battle Mountai**	**90.12**	**46**	IAmb	IAmb	03 00 07.5	
	comp=Z,5.5nm,0.8s						
PRN	**Pahroc Range**	**90.12**	**49**	P	**P**	**03 00 06.2**	**+1.2**
WVOR	**Wild Horse Val**	**90.21**	**43**	IAmb	IAmb	03 00 11.8	
	comp=Z,6.3nm,1.3s						
I07A	**Izee**	**90.52**	**42**	IAmb	IAmb	03 00 10.1	
	comp=Z,4.0nm,1.0s						
J08A	**Circle Bar Ran**	**90.79**	**43**	IAmb	IAmb	03 00 10.4	
	comp=Z,3.5nm,0.9s						
X16A	**Lo Mia Camp, P**	**91.34**	**53**	P	**P**	**03 00 11.2**	**+0.5**
X16A				IAmb	IAmb	03 00 13.5	
	comp=Z,2.8nm,0.9s						
CCUT	**Cedar City**	**91.37**	**50**	IAmb	IAmb	03 00 13.8	
	comp=Z,2.8nm,0.9s						
SPR3	**Spring Creek 3**	**91.38**	**48**	IAmb	IA

OBIP	**Obispado Ponce**	**1.47 149**	*eS*	**Sn**	**02 52 01.9**	**-0.2**
OBIP	**Obispado Ponce**	**1.47 149**		**Pn**	**02 51 43.8**	**+0.3**
OBIP				**Sn**	**02 52 01.9**	**-0.2**
OBIP	**Obispado Ponce**	**1.47 149**	IAML		02 52 06.4	
	comp=N,17nm,1.5s					
GCPR	**Guaynabo City**	**1.60 128**	Pn	**Pb**	**02 51 46.6**	**-0.5**
GCPR			IAML		02 52 27.2	
	comp=N,14nm,4.8s					

IDC 12 02:52:16.0±6.3, 21°.39S×173°.48E, h0km, mb3.9/6, mbtmp3.9/7, ML3.5/1, Error ellipse: s-maj=165.7km s-min=31.2km az=27.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.58**	**263**	Pn	Pn	02 53 53.6	-0.5
	1.0nm,0.3s,baz=132,slow=16,SNR=1.2 5.8nm,0.5s						
ASAR	**Alice Springs**	**36.55**	**259**	P	P	02 59 23.5	-0.3
	0.7nm,0.8s,baz=86,slow=6.6,SNR=4.2 0.7nm,0.8s						
WRA	**Warramunga Arr**	**36.59**	**265**	P	P	02 59 24.2	+0.1
	0.3nm,0.7s,baz=96,slow=9.0,SNR=1.7 0.3nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**40.19**	**350**	T	T	03 43 50.2	
	baz=171,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**40.19**	**350**	T	T	03 43 50.8	
	baz=171,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**40.20**	**350**	T	T	03 43 51.7	
	baz=171,slow=76,SNR=17						
VNDA	**Vanda**	**56.46**	**183**	P	P	03 01 58.6	-0.6
	0.6nm,0.7s,baz=15,slow=7.4,SNR=2.7 0.6nm,0.7s						
QSPA	**South Pole Qui**	**68.68**	**180**	P	P	03 03 21.2	0.0
	3.2nm,0.9s,baz=334,slow=4.3,SNR=4.9 3.2nm,0.9s						
MAW	**Mawson**	**77.93**	**202**	P	P	03 04 16.2	+0.8
	1.6nm,0.7s,baz=115,slow=14,SNR=4.2 1.6nm,0.7s						
SNAA	**Sanae**	**87.15**	**181**	P	P	03 05 03.4	-0.3
	1.0nm,0.7s,baz=203,slow=7.4,SNR=4.3 1.0nm,0.7s						

NEIC 12 02:54:34.5±1.6, 56°.9S±0°.1×26°.5W±0°.2, h61km±11km, mb4.3/8, Error ellipse: s-maj=19.7km s-min=16.1km az=177.0

IDC 12 02:54:36.9±8.2, 56°.84S×26°.27W, h82km±75km, mb4.0/4, mbtmp4.2/5, ML3.8/1, Error ellipse: s-maj=37.1km s-min=22.4km az=58.0

ISC 12 02:54:36.8±0.7, 57°.0S±0°.1×26°.7W±0°.1, h86km, n28, σ1°19/23, mb4.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.19**	**292**	Pn	**Pn**	**02 56 03.3**	**-2.1**
ORCD	**Orcadas**	**10.10**	**240**	Pn	**Pn**	**02 56 56.9**	**-1.7**
VNA1	**Neumayer--Stat**	**15.84**	**157**	P	**Pn**	**02 58 13.1**	**-1.2**
VNA3	**Neumayer Olymp**	**16.03**	**160**	P	**Pn**	**02 58 16.2**	**-0.6**
VNA2	**Neumayer--Watz**	**16.23**	**157**	P	**Pn**	**02 58 17.7**	**-1.5**
	baz=319,slow=13						
ESPZ	**Base Esperanza**	**16.29**	**234**	Pn	**Pn**	**02 58 18.6**	**-1.4**
SNAA	**Sanae**	**17.79**	**155**	P	**Pn**	**02 58 38.9**	**+0.5**
SNAA	**Sanae**	**17.79**	**155**	P	**Pn**	**02 58 40.0**	**+1.7**
	0.3nm,0.3s,baz=311,slow=10,SNR=8.4 2.0nm,0.6s						
SNAA	**Sanae**	**17.79**	**155**	P	**P**	**02 58 38.0**	**+0.1**
TROLL	**Troll, Antarti**	**19.30**	**153**	P	**Pn**	**02 58 57.6**	**+1.2**
PMSA	**Palmer Station**	**19.55**	**231**	P	**P**	**02 58 57.5**	**+0.5**
PMSA				IAmb	IAmb	02 59 40.4	
	comp=Z,12nm,0.9s						
COYC	**Coyhaique**	**30.06**	**273**	P	**P**	**03 00 38.3**	**+0.8**
QSPA	**South Pole Qui**	**33.29**	**180**	P	**P**	**03 01 06.8**	**+1.0**
	comp=Z,4.0nm,0.6s,baz=216,slow=4.9,SNR=21 comp=Z,4.0nm,0.6s						
QSPA	**South Pole Qui**	**33.29**	**180**	P	**P**	**03 01 06.4**	**+0.7**
QSPA				IAmb	IAmb	03 01 27.7	
	comp=Z,9.5nm,1.4s						
LMEL	**Las Melosas**	**37.42**	**289**	P	**P**	**03 01 42.0**	**+0.5**
CPUP	**Villa Florida**	**37.64**	**311**	P	**P**	**03 01 43.5**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=174,slow=7.5,SNR=3.3 comp=Z,1.8nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.79**	**16**	T	T	03 55 54.2	
	baz=188,slow=74,SNR=7.4						
H10S3	**ASCENSION HYDR**	**48.79**	**16**	T	T	03 55 54.7	
	baz=32,slow=74,SNR=17						
H10N1	**ASCENSION HYDR**	**49.91**	**16**	T	T	03 57 16.2	
	baz=187,slow=76,SNR=6.5						
H10N3	**ASCENSION HYDR**	**49.91**	**16**	T	T	03 57 21.7	
	baz=187,slow=76,SNR=6.8						
H10N2	**ASCENSION HYDR**	**49.92**	**16**	T	T	03 57 27.2	
	baz=187,slow=76,SNR=8.7						
LPAZ	**La Paz**	**51.15**	**305**	P	**P**	**03 03 33.2**	**+1.7**
	comp=Z,2.5nm,0.3s,baz=124,slow=3.6,SNR=38 comp=Z,2.5nm,0.3s						
LPAZ	**La Paz**	**51.15**	**305**	P	**P**	**03 03 32.8**	**+1.2**
LPAZ				IAmb	IAmb	03 03 34.3	
	comp=Z,3.0nm,0.7s						
MBAR	**Mbarara**	**72.30**	**62**	P	**P**	**03 05 51.7**	**-1.4**
MBAR				IAmb	IAmb	03 05 53.0	
	comp=Z,2.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.70**	**29**	P	**P**	**03 06 00.4**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=193,slow=6.3,SNR=17 comp=Z,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**137.05**	**317**	PKP	**PKPdf**	**03 13 48.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=115,slow=2.4,SNR=4.1						
SONM	**Songino Array**	**150.47**	**88**	PKPbc	**PKPbc**	**03 14 17.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=270,slow=1.4,SNR=1.7						
ILAR	**Eielson Array**	**150.94**	**310**	PKPbc	**PKiKP**	**03 14 18.6**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=106,slow=1.4,SNR=13						

NEIC 12 03:01:27.8±1.4, 23°.3S±0°.2×173°.5E±0°.1, h10km±2km, mb4.2/6, Error ellipse: s-maj=32.0km s-min=16.3km az=25.0

IDC 12 03:01:30.4±1.1, 22°.62S×173°.04E, h0km, mb3.9/6, mbtmp4.0/8, ML4.8/2, Error ellipse: s-maj=33.7km s-min=21.7km az=154.0

ISC 12 03:01:34.6±0.8, 22°.8S±0°.1×173°.14E±0°.08, h35km, n40, σ1°37/38, mb3.9/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.91**	**284**	Pn	**Pn**	**03 02 46.1**	**+0.2**
MARNC	**Mare, Loyalty**	**4.91**	**284**	P	**Pn**	**03 02 47.9**	**+2.0**
PINNC	**Pines Island,**	**5.26**	**271**		**Pn**	**03 02 51.2**	**+0.5**
PINNC	**Pines Island,**	**5.26**	**271**	P	**Pn**	**03 02 52.3**	**+1.6**
PINNC	**Pines Island,**	**5.26**	**271**	P	**Pn**	**03 02 52.1**	**+1.4**
YATNC	**Mamie plateau,**	**5.82**	**276**	P	**Pn**	**03 02 58.6**	**+0.1**
YATNC	**Mamie plateau,**	**5.82**	**276**	P	**Pn**	**03 02 58.6**	**+0.1**
OUENC	**Ouen Island, N**	**5.83**	**272**		**Pn**	**03 02 57.3**	**-1.3**
OUENC	**Ouen Island, N**	**5.83**	**272**	P	**Pn**	**03 02 59.7**	**+1.1**
OUENC	**Ouen Island, N**	**5.83**	**272**	P	**Pn**	**03 02 59.7**	**+1.1**
ONTNC	**Ouen Toro**	**6.20**	**273**		**Pn**	**03 03 04.7**	**+1.1**
ONTNC	**Ouen Toro**	**6.20**	**273**	P	**Pn**	**03 03 05.5**	**+1.8**
ONTNC	**Ouen Toro**	**6.20**	**273**	P	**Pn**	**03 03 05.4**	**+1.8**
DZM	**Mont Dzumac**	**6.23**	**275**	Pn	**Pn**	**03 03 04.1**	**-0.2**
	7.7nm,0.3s,baz=138,slow=13,SNR=26						
DZM				Sn	**Sn**	**03 04 14.6**	**+0.3**
	4.3nm,0.3s,baz=112,slow=22,SNR=4.3 19nm,0.3s						
DZM	**Mont Dzumac**	**6.23**	**275**		**Pn**	**03 03 03.4**	**-0.8**
DZM	**Mont Dzumac**	**6.23**	**275**	P	**Pn**	**03 03 04.4**	**+0.2**
DZM	**Mont Dzumac**	**6.23**	**275**	P	**Pn**	**03 03 04.5**	**+0.2**
NOUC	**Port Laguerre**	**6.36**	**275**	P	**Pn**	**03 03 06.9**	**+1.1**
NOUC	**Port Laguerre**	**6.36**	**275**	P	**Pn**	**03 03 07.1**	**+1.3**
MSVF	**Nonsavu**	**6.82**	**43**	Pn	**Pn**	**03 03 11.6**	**-0.7**
	1.4nm,0.3s,baz=254,slow=17,SNR=5.0 8.5nm,0.6s						
KOUNC	**Koumac, New Ca**	**8.52**	**283**		**Pn**	**03 03 36.8**	**+1.2**
KOUNC	**Koumac, New Ca**	**8.52**	**283**	P	**Pn**	**03 03 39.1**	**+3.5**
EIDS	**Eidsvold**	**20.30**	**258**	P	**P**	**03 06 05.7**	**-1.9**
EIDS				IAmb	IAmb	03 06 15.7	
	comp=Z,24nm,1.1s						
EIDS	**Eidsvold**	**20.30**	**258**	P	Pn	03 06 13.9	+4.2
RMQ	**Roma**	**22.45**	**256**	P	P	03 06 39.5	+8.7
AS31	**Alice Springs**	**35.99**	**261**	P	**P**	**03 08 30.4**	**-2.1**
AS31				IAmb	IAmb	03 08 49.1	
	comp=Z,1.7nm,1.2s						
ASAR	**Alice Springs**	**35.99**	**261**	P	**P**	**03 08 32.4**	**0.0**
	comp=Z,1.7nm,0.8s,baz=86,slow=9.0,SNR=16 comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**35.99**	**261**	P	**P**	**03 08 30.1**	**-2.4**
WB0	**Warramunga Arr**	**36.16**	**267**	P	**P**	**03 08 33.3**	**-0.6**
WB0				IAmb	IAmb	03 08 40.0	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**36.17**	**267**	P	**P**	**03 08 34.0**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=98,slow=8.3,SNR=12 comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**36.17**	**267**	P	**P**	**03 08 32.4**	**-1.7**
FORT	**Forrest**	**40.80**	**249**	P	**P**	**03 09 11.0**	**-1.8**
VNDA	**Vanda**	**55.06**	**183**	P	**P**	**03 11 04.6**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=342,slow=7.2,SNR=3.9 comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**67.29**	**180**	P	P	03 12 18.6	-7.1
KSRS	**Korea Array**	**73.49**	**324**	P	**P**	**03 13 03.5**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=150,slow=7.0,SNR=4.1 comp=Z,0.7nm,0.7s						
PETK	**Petropavlovsk-**	**76.75**	**351**	P	**P**	**03 13 21.9**	**-0.2**
	comp=Z,5.2nm,1.0s,baz=190,slow=7.5,SNR=5.0 comp=Z,5.2nm,1.0s						
TROLL	**Troll, Antarti**	**85.24**	**183**	P	**P**	**03 14 07.2**	**-0.2**
SNAA	**Sanae**	**85.76**	**181**	P	**P**	**03 14 09.1**	**-0.8**
NVAR	**Mina Array Bea**	**88.47**	**47**	P	**P**	**03 14 24.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=220,slow=8.3,SNR=1.8 comp=Z,0.2nm,0.3s						
GERES	**GERESS Array B**	**149.30**	**333**	PKPbc	**PKiKP**	**03 21 21.6**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=52,slow=2.4,SNR=7.2						

PGC 12 03:01:44.5±1.8, 47°.93N×131°.05W, h10km, MLSn3.0/16, Mw3.6/16, 401km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMF	**NEPTUNE Canada**	**1.31**	**89**	P	Pg	03 02 17.8	+8.1
NCHR	**NEPTUNE Canada**	**1.32**	**87**	P	Pg	03 02 16.6	+6.8
BPBC	**Brooks Peninsu**	**3.10**	**43**	P	Pn	03 02 33.1	-0.4
EDB	**Eliza Dome**	**3.24**	**52**	Sn	Sn	03 03 08.9	-5.1
HOLB	**Holberg**	**3.32**	**34**	Pn	Pn	03 02 35.7	-0.7
ETB	**Estevan Point**	**3.32**	**63**	Pn	Pn	03 02 35.8	-0.7
PACB	**Port Alice, BC**	**3.42**	**42**	Sn	Sn	03 03 15.4	-3.1
MAYB	**Maynard**	**3.55**	**44**	Pn	Pn	03 02 38.1	-1.6
TOFB	**Tofino**	**3.63**	**68**	Sn	Sn	03 03 19.1	-4.4
PHC	**Port Hardy**	**3.65**	**39**	Sn	Sn	03 03 22.4	-1.6
WOSB	**Woss**	**3.70**	**51**	Pn	Pn	03 02 40.0	-1.7
B012	**Ucluelet**	**3.80**	**73**	Sn	Sn	03 03 24.1	-3.6
OZB	**Mount Ozzard**	**3.84**	**72**	Sn	Sn	03 03 25.1	-3.7
BTB	**Buttle Lake**	**3.97**	**65**	Pn	Pn	03 02 44.1	-1.5
BTB				Sn	Sn	03 03 27.4	-4.9
BFSB	**Bamfield**	**4.04**	**75**	Sn	Sn	03 03 30.9	-2.8
B928	**Bamfield**	**4.04**	**75**	Sn	Sn	03 03 31.2	-2.6
NCRB	**Newcastle Ridg**	**4.11**	**51**	Pn	Pn	03 02 46.8	-0.6
NCRB				Sn	Sn	03 03 32.1	-3.4
CBB	**Campbell River**	**4.29**	**59**	Sn	Sn	03 03 35.0	-4.9
MGB	**Mount Grey**	**4.36**	**73**	Sn	Sn	03 03 38.7	-3.2
PFB	**Port Renfrew**	**4.46**	**79**	Sn	Sn	03 03 42.4	-1.8
GHNB	**Nanoose**	**4.72**	**71**	Sn	Sn	03 03 47.8	-2.8
NLLB	**Nanaimo Lost L**	**4.86**	**72**	Sn	Sn	03 03 52.4	-1.6
SHB	**Sechelt**	**5.03**	**68**	Sn	Sn	03 03 57.0	-1.3

TAP 12 03:17:24.1, 21°.35N×122°.37E, h143km±1km, ML3.5, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.03**	**312**	*eS*	Sn	03 18 05.9	-1.2
	baz=313						
TSEB	**Hengchuen, Pin**	**1.47**	**292**	*eP*	Pn	03 17 53.8	+1.0
	baz=288						
TSEB				S	Sn	03 18 16.1	+1.3
	baz=288						
LDUT	**Ludao**	**1.56**	**328**	*eS*	Sn	03 18 15.9	-0.7
	baz=333						
TWKBT	**Hengchun**	**1.56**	**293**	*eP*	Pn	03 17 54.2	+0.3
	baz=288						
TWKBT				*eS*	Sn	03 18 15.9	-0.7
	baz=288						
TWK1	**Hengchun**	**1.57**	**293**	*eP*	Pn	03 17 54.3	+0.4
	baz=287						
TWK1				*eS*	Sn	03 18 16.3	-0.4
	baz=287						
SMST	**Manzhou Townsh**	**1.57**	**296**	*eP*	Pn	03 17 54.2	+0.3
	baz=301						
SMST				*eS*	Sn	03 18 16.7	0.0
	baz=301						
HEN	**Hengchun**	**1.65**	**294**	*eP*	Pn	03 17 55.0	+0.2
	baz=296						
HEN				*eS*	Sn	03 18 17.9	-0.4
	baz=296						
TAWH	**Dawu Township**	**1.69**	**306**	P	Pn	03 17 54.6	-0.6
	baz=306						
TAWH				S	Sn	03 18 18.0	-1.2
	baz=306						
SLIU	**Shizi**	**1.70**	**301**	P	Pn	03 17 55.5	+0.2
	baz=304						
SLIU				S	Sn	03 18 18.8	-0.4
	baz=304						
EAST	**Anshuo**	**1.75**	**306**	P	Pn	03 17 56.1	+0.1
	baz=306						
EAST				S	Sn	03 18 19.1	-1.2
	baz=306						
ECL	**Taimali**	**1.81**	**314**	*eP*	Pn	03 17 56.7	+0.1
	baz=309						
ECL				*eS*	Sn	03 18 20.1	-1.4
	baz=309						
EDH	**Donghe**	**1.90**	**329**	*eS*	Sn	03 18 23.1	-0.2
	baz=332						
SCZT	**Fangliau**	**1.92**	**303**	P	Pn	03 17 57.9	0.0
	baz=302						
SCZT				S	Sn	03 18 23.2	-0.6
	baz=302						
LONT	**Longtian**	**1.93**	**324**	*eP*	Pn	03 17 58.5	+0.5
	baz=316						
LONT				*eS*	Sn	03 18 23.8	-0.3
	baz=316						
SSPT	**Xinbi**	**2.02**	**304**	*eP*	Pn	03 17 59.5	+0.5
	baz=304						
SSPT				*eS*	Sn	03 18 25.2	-0.7
	baz=304						
MASBT	**Mashibuluo**	**2.04**	**308**	P	Pn	03 17 59.9	+0.5
	baz=308						
MASBT				S	Sn	03 18 25.4	-1.0
	baz=308						
TSMG	**Majia**	**2.10**	**311**	*eP*	Pn	03 18 00.5	+0.5
	baz=305						
TSMG				*eS*	Sn	03 18 27.2	-0.3
	baz=305						
FULB	**Fuli**	**2.10**	**332**	*eP*	Pn	03 18 00.6	+0.6
	baz=334						
FULB				*eS*	Sn	03 18 27.5	-0.1
	baz=334						
WLCH	**Liuqiu**	**2.10**	**299**	*eP*	Pn	03 18 00.8	+0.8
	baz=294						
WLCH				*eS*	Sn	03 18 29.0	+1.4
	baz=294						
SSD	**Sandimen**	**2.13**	**311**	P	Pn	03 18 00.7	+0.3
	baz=308						
SSD				*eS*	Sn	03 18 27.8	-0.5
	baz=308						
ELDTW	**Lidau**	**2.22**	**326**	*eP*	Pn	03 18 03.2	+1.6
	baz=323						
ELDTW				*eS*	Sn	03 18 29.6	-0.8
	baz=323						
YULB	**Yu-li**	**2.27**	**334**	*eP*	Pn	03 18 02.0	-0.1
	baz=336						
YULB				*eS*	Sn	03 18 31.5	+0.2
	baz=336						
SCST	**Cishan**	**2.32**	**312**	*eP*	Pn	03 18 02.9	+0.3
	baz=312						
SCST				*eS*	Sn	03 18 31.6	-0.7
	baz=312						
STYH	**Taoyuan**	**2.34**	**321**	*eP*	Pn	03 18 02.8	-0.1
	baz=324						
STYH				*eS*	Sn	03 18 33.4	+0.6
	baz=324						
WSSB	**Gushan**	**2.34**	**304**	*eS*	Sn	03 18 34.2	+1.4
	baz=304						
SGST	**Jiashian**	**2.39**	**317**	*eS*	Sn	03 18 32.9	-1.1
	baz=308						
WTP	**Ta-pu**	**2.49**	**320**	*eP*	Pn	03 18 05.8	+0.9
	baz=311						
WTP				*eS*	Sn	03 18 37.1	+0.8
	baz=311						
CHN1	**Nanshi**	**2.50**	**317**	*eP*	Pn	03 18 05.8	+0.9
	baz=309						
CHN1				*eS*	Sn	03 18 35.6	-0.8
	baz=309						
YUS	**Yu-Shan**	**2.50**	**329**	*eP*	Pn	03 18 06.0	+0.6
	baz=331						
YUS				*eS*	Sn	03 18 35.2	-2.0
	baz=331						
TPUB	**Ta-pu**	**2.52**	**321**	*eP*	Pn	03 18 05.4	+0.1
	baz=321						
TPUB				*eS*	Sn	03 18 37.0	0.0
	baz=321						
SNST	**Tainan City**	**2.55**	**317**	*eP*	Pn	03 18 05.7	+0.3
	baz=309						
SNST				*eS*	Sn	03 18 36.3	-1.1
	baz=309						
TWK	**Hsinying**	**2.59**	**318**	*eP*	Pn	03 18 06.0	0.0
	baz=310						
TWK				*eS*	Sn	03 18 37.4	-0.9
	baz=310						
ALS	**Alishan**	**2.59**	**326**	*eP*	Pn	03 18 07.9	+1.6
	baz=316						
ALS				*eS*	Sn	03 18 39.6	+0.7
	baz=316						
WHYT	**Xinyi Township**	**2.73**	**329**	*eS*	Sn	03 18 42.1	+0.6
	baz=319						
SSLB	**Suanglung**	**2.76**	**332**	*eP*	Pn	03 18 08.8	+0.6
	baz=333						
SSLB				*eS*	Sn	03 18 41.1	-1.2
	baz=333						
WUSB	**Renai**	**2.88**	**337**	*eP*	Pn	03 18 10.8	+1.1
	baz=341						
WUSB				*eS*	Sn	03 18 45.0	0.0
	baz=341						
WSL	**Shuilin Townsh**	**2.94**	**318**	*eS*	Sn	03 18 43.7	-2.4
	baz=311						
WCS	**Beigang Elemen**	**3.02**	**334**	*eP*	Pn	03 18 11.8	+0.4
	baz=323						
WCS				*eS*	Sn	03 18 47.6	-0.3
	baz=323						
WDGT	**Dungji**	**3.15**	**308**	*eP*	Pn	03 18 13.3	+0.2
	baz=313						
WDGT				*eS*	Sn	03 18 48.7	-2.3
	baz=313						
VCHM	**Qimei**	**3.29**	**305**	*eP*	Pn	03 18 14.8	-0.2
	baz=304						
VCHM				*eS*	Sn	03 18 52.0	-2.3
	baz=304						
PNG	**Penghu**	**3.42**	**311**	*eP*	Pn	03 18 16.9	+0.3
	baz=311						
PNG				*eS*	Sn	03 18 55.3	-1.8
	baz=311						

MEX 12 03:19:58.2±0.7, 14°.53N×92°.13W, h85km±8km, MD3.8

GCG 12 03:20:02.0±0.3, 14°.66N×92°.09W, h56km±5km, MD3.7

ISC 12 03:19:58.3±1.7, 14°.40N±0°.10×92°.42W±0°.06, h49km±22km, n14, σ1°63/23, 1C-1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.53**	**16**	*i* P	**Pn**	**03 20 10.2**	**+0.4**
THIG				*i* S	**Sn**	**03 20 19.9**	**+1.9**
PATR	**El Naranjo**	**0.73**	**14**	*i* P	**Pn**	**03 20 12.0**	**-0.7**
PATR				*i* S	**Sn**	**03 20 22.5**	**-0.6**
CHUJ	**Union Juarez**	**0.75**	**23**	*i* P	**Pn**	**03 20 11.9**	**-1.1**
CHUJ				*i* S	**Sn**	**03 20 22.6**	**-0.9**
PAVE	**Pavencul**	**0.82**	**16**	*i* P	**Pn**	**03 20 13.2**	**-0.7**
PAVE				*i* S	**Sn**	**03 20 24.6**	**-0.6**
STG3	**Santiaguito 3,**	**0.88**	**69**	*eP*	**Pn**	**03 20 14.4**	**-0.1**
FUG	**Fuego 3**	**1.53**	**88**	*eP*	**Pn**	**03 20 23.6**	**+0.3**
PCG	**Pacaya**	**1.75**	**90**	*eP*	**Pn**	**03 20 27.1**	**+0.6**
PCG				*eS*	**Sn**	**03 20 46.6**	**-1.2**
CCIG	**Comitan**	**1.89**	**8**	*i* P	**Pn**	**03 20 28.8**	**+0.5**
CCIG				*i* S	**Sn**	**03 20 50.7**	**-0.3**
NBG	**Las Nubes**	**2.02**	**84**	*eP*	**Pn**	**03 20 31.4**	**+1.3**
NBG				*eS*	**Sn**	**03 20 53.6**	**-0.6**
TGIG		**2.46**	**344**	*eP*	**Pn**	**03 20 35.4**	**-0.6**
TGIG				*eS*	**Sn**	**03 21 03.5**	**-1.4**
UXUV	**UXUV**	**3.34**	**330**	*eP*	**Pn**	**03 20 48.0**	**-0.1**
UXUV				*eS*	**Sn**	**03 21 32.3**	**+5.7**
CMIG	**Matias Romero**	**3.58**	**319**	*eP*	**Pn**	**03 20 51.8**	**+0.5**
CMIG				*eS*	**Sn**	**03 21 31.1**	**-1.2**
HUIG	**Huatulco**	**3.81**	**291**	*e*	Pn	03 20 38.3	-16
HUIG				*e*		03 21 29.9	
PEIG	**Puerto Escondi**	**4.83**	**290**	*e*	**Pn**	**03 21 07.2**	**-1.4**
PEIG				*e*		03 21 56.4	

IDC 12 03:25:00.9±0.9, 22°.65S×173°.24E, h0km, mb4.0/8, mbtmp4.1/10, ML5.1/2, Error ellipse: s-maj=25.9km s-min=21.2km az=138.0

NEIC 12 03:25:04.4±1.3, 22°.76S±0°.06×173°.52E±0°.07, h10km±1km, mb4.9/28, Error ellipse: s-maj=15.3km s-min=4.2km az=133.0

ISC 12 03:25:03.8±0.4, 22°.76S±0°.08×173°.43E±0°.07, h10km, n75, σ1°45/72, mb4.7/21, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.17**	**283**	Pn	**Pn**	**03 26 22.7**	**+1.5**
PINNC	**Pines Island,**	**5.53**	**270**		**Pn**	**03 26 27.6**	**+1.4**
OUENC	**Ouen Island, N**	**6.10**	**272**	Pn	**Pn**	**03 26 34.3**	**+0.2**
ONTNC	**Ouen Toro**	**6.47**	**273**	Pn	**Pn**	**03 26 39.9**	**+0.8**
DZM	**Mont Dzumac**	**6.50**	**275**	Pn	**Pn**	**03 26 37.5**	**-2.2**
	6.4nm,0.3s,baz=142,slow=18,SNR=11						
DZM				Sn	**Sn**	**03 27 50.8**	**-3.2**
	7.0nm,0.3s,baz=108,slow=13,SNR=4.5 23nm,0.4s						
DZM	**Mont Dzumac**	**6.50**	**275**	Pn	**Pn**	**03 26 39.8**	**+0.1**
MSVF	**Nonsavu**	**6.62**	**42**	Pn	**Pn**	**03 26 40.8**	**-0.4**
	4.1nm,0.3s,baz=188,slow=17,SNR=8.4 11nm,0.4s						
MSVF	**Nonsavu**	**6.62**	**42**		**Pn**	**03 26 40.5**	**-0.8**
KOUNC	**Koumac, New Ca**	**8.79**	**283**	Pn	**Pn**	**03 27 12.1**	**+1.2**
URZ	**Urewera**	**15.77**	**169**	Pn	**Pn**	**03 28 47.0**	**+1.0**
URZ				IAmb	IAmb	03 28 53.9	
	comp=Z,147nm,1.8s						
OXZ	**Oxford**	**20.55**	**183**	P	**P**	**03 29 42.6**	**+0.1**
OXZ				IAmb	IAmb	03 29 46.5	
	comp=Z,39nm,0.8s						
EIDS	**Eidsvold**	**20.57**	**258**	P	**P**	**03 29 44.2**	**+1.4**
EIDS				IAmb	IAmb	03 29 49.9	
	comp=Z,40nm,1.1s						
ARMA	**Armidale**	**20.91**	**244**	P	**P**	**03 29 47.4**	**+0.7**
BBOO	**Buckleboo**	**34.39**	**245

MAW	**Mawson**	**76.64**	**202**	P		**P**	**03 36 53.4**	**-1.0**	
	comp=Z,6.3nm,1.0s,baz=107,slow=8.2,SNR=6.9								
	comp=Z,6.3nm,1.0s								
USRK	**Ussuriysk Ar.**	**76.68**	**331**	P		**P**	**03 36 55.8**	**+1.0**	
PETK	**Petropavlovsk-**	**76.77**	**350**	P		**P**	**03 36 52.7**	**-2.5**	
	comp=Z,1.8nm,0.9s,baz=165,slow=12,SNR=2.6								
	comp=Z,1.8nm,0.9s								
PETK	**Petropavlovsk-**	**76.77**	**350**	P		**P**	**03 36 56.3**	**+1.1**	
BELA	**Belgrano 2**	**78.24**	**174**	P		**P**	**03 37 04.0**	**+0.7**	
BELA				IAmb		IAmb	03 37 05.2		
	comp=Z,13nm,1.3s								
SMAI	**San Martin Ant**	**79.25**	**161**	P		**P**	**03 37 09.2**	**+0.2**	
SMAI				IAmb		IAmb	03 37 13.6		
	comp=Z,17nm,1.3s								
CN2	**Changchun**	**79.51**	**327**	*e*P		P	03 37 16.6	+6.0	
PMSA	**Palmer Station**	**82.25**	**159**	P		**P**	**03 37 26.0**	**+1.0**	
CMAR	**Chiang Mai Arr**	**83.50**	**293**	P		**P**	**03 37 34.1**	**+1.8**	
PZH	**PanZhiHua**	**84.89**	**301**	P		**P**	**03 37 41.2**	**+1.8**	
PZH				pmax		pmax			
	comp=Z,20nm,0.5s								
TROLL	**Troll, Antarti**	**85.28**	**183**	P		**P**	**03 37 38.5**	**-2.1**	
HHC	**Hu-ho-hao-te**	**85.44**	**318**	*e*P		P	**03 37 43.1**	**+1.3**	
SNAA	**Sanae**	**85.79**	**181**	P		**P**	**03 37 40.4**	**-2.7**	
SNAA	**Sanae**	**85.79**	**181**	P		**P**	**03 37 44.0**	**+0.9**	
VNA3	**Neumayer Olymp**	**86.23**	**179**	P		**P**	**03 37 41.9**	**-3.3**	
VNA2	**Neumayer--Watz**	**86.57**	**180**	P		**P**	**03 37 44.7**	**-2.2**	
	baz=177,slow=5.0								
ISA	**Isabella, Lake**	**86.72**	**49**	P		**P**	**03 37 47.6**	**-0.6**	
VNA1	**Neumayer--Stat**	**86.84**	**179**	P		**P**	**03 37 46.0**	**-2.2**	
NVAR	**Mina Array Bea**	**88.26**	**47**	P		**P**	**03 37 54.6**	**-1.2**	
	comp=Z,0.2nm,0.5s,baz=222,slow=9.3,SNR=2.5								
	comp=Z,0.2nm,0.5s								
NVAR	**Mina Array Bea**	**88.26**	**47**	P		P	**03 37 55.3**	**-0.5**	
MOD	**Modoc Plateau**	**88.77**	**43**	P		**P**	**03 37 57.2**	**-0.8**	
MOD				IAmb		IAmb	03 37 57.2		
	comp=Z,6.8nm,1.5s								
PINE	**Pine Mountain**	**89.39**	**41**	P		**P**	**03 37 59.3**	**-1.7**	
PINE				IAmb		IAmb	03 38 03.4		
	comp=Z,9.9nm,1.3s								
BMN	**Battle Mountai**	**90.00**	**46**	P		**P**	**03 38 04.0**	**+0.1**	
U15A	**North Rim**	**91.47**	**51**	P		**P**	**03 38 11.1**	**+0.1**	
U15A				IAmb		IAmb	03 38 13.6		
	comp=Z,5.0nm,1.4s								
COLA	**College**	**92.31**	**16**	P		**P**	**03 38 13.8**	**+0.1**	
ILAR	**Eielson Array**	**92.47**	**16**	P		**P**	**03 38 10.5**	**-4.0**	
	comp=Z,1.2nm,0.8s,baz=236,slow=6.0,SNR=6.2								
ILAR	**Eielson Array**	**92.47**	**16**	P		**P**	**03 38 13.7**	**-0.8**	
I26K	**Coal Creek Min**	**93.86**	**17**	P		**P**	**03 38 21.2**	**+0.3**	
I26K				IAmb		IAmb	03 38 24.4		
	comp=Z,5.1nm,1.1s								
YMR	**Madison River**	**96.07**	**44**	P		**P**	**03 38 30.6**	**-1.2**	
YMR				IAmb		IAmb	03 38 30.8		
	comp=Z,7.2nm,1.5s								
WMQ	**Urumqi**	**102.46**	**312**	*e*P		**Pdif**	**03 39 03.0**	**+2.8**	
CRVS	**Cervenica-Dubn**	**145.76**	**327**	*e*PKP		**PKPbc**	**03 44 43.8**	**+0.8**	
DPC	**Dobruska-Polom**	**147.15**	**333**	*e*PKP		**PKPbc**	**03 44 47.9**	**+0.8**	
KRLC	**Kraliky**	**147.16**	**332**	*e*PKP		**PKPbc**	**03 44 47.7**	**+0.6**	
VYHS	**Vyhne**	**147.34**	**328**	*e*PKP		**PKPbc**	**03 44 48.0**	**+0.4**	
BRG	**Berggiesshubel**	**147.71**	**335**	*e*PKP		**PKiKP**	**03 44 50.5**	**-0.1**	
BRG				Amp			03 44 54.8		
	comp=Z,6.4nm,1.0s								
CLL	**Collm**	**147.71**	**337**	*i* PKPbc		**PKPdf**	**03 44 46.2**	**+0.5**	
	comp=Z,6.0nm,1.1s								
CLL				*i* (PKPab)		**sPKPdf**	**03 44 48.9**	**+1.3**	
	comp=Z,7.0nm,1.2s								
PRU	**Pruhonice**	**148.17**	**334**	*e*PKP		**PKPab**	**03 44 53.7**	**+1.0**	
CKRC	**Cesky Krumlov**	**149.17**	**333**	*e*PKP		**PKPbc**	**03 44 52.9**	**+0.5**	
KHC	**Kasperske Hory**	**149.23**	**334**	*e*PKP		**PKPbc**	**03 44 53.3**	**+0.7**	
GERES	**GERESS Array B**	**149.40**	**333**	PKPbc		**PKPdf**	**03 44 50.7**	**+2.0**	
	comp=Z,0.6nm,0.8s,baz=20,slow=4.3,SNR=6.3								

BJI **12** *03:29:27.1±0.0,25.°01S×177.°08W,h80km,mb5.5/60, mB6.3/25,Ms6.1/39,Ms7 5.9/37*

NOU **12** *03:29:28.3,25.°40S×176.°43W,h116km,mb5.7/132,South of Fiji Islands*

MOS **12** *03:29:32.6±0.9,25.°11S×177.°50W,h120km,mb5.6/32, MS5.6/7,Error ellipse: s-maj=9.5km s-min=7.7km az=123.5*

NEIC **12** *03:29:32.7±1.7,25.°18S±0.°08×177.°34W±0.°10, h113km±4km,mb5.5/430,Mww6.1,Error ellipse: s-maj=13.1km s-min=11.2km az=102.0*

IDC **12** *03:29:33.0±0.6,25.°04S×177.°34W,h115km±4km,mb5.1/25, mbtmp5.4/25,MS5.3/18,Error ellipse: s-maj=12.9km s-min=10.5km az=166.0*

GCMT **12** *03:29:33.7±0.2,25.°24S±0.°02×176.°93W±0.°02, h138km±3km,MW6.2/145,Moment Tensor Solution. s39,c43; s145,c272; Duration: 2s9 Moment tensor: Scale 10**18**Nm; Mrr-0.51±.08; Mθθ0.02±.07; Mφφ0.48±.07; Mrθ0.14±.05; Mθφ-0.41±.07; Mφr-1.99±.04; Best double couple: M=2.09600×10**18** NP1:φs355.00000°,δ83.00000°, λ-80.00000°. NP2:φs121.00000°,δ13.00000°, λ-143.00000°. Principal axes: T 2.1180, Plg37.0000°, Azm76.0000°; N -0.0450, Plg10.0000°, Azm174.0000°; P -2.0740, Plg51.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **12** *03:29:34,25.°24S×176.°56W,h130km,Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10**18**Nm; Mrr-0.80; Mθθ0.06; Mφφ0.74; Mrθ-0.29; Mθφ0.28; Mφr-1.91; Fault plane solution: M=2.09000×10**18** NP1: φs210.00000°,δ12.00000°,λ-69.00000°. NP2:φs9.00000°, δ79.00000°,λ-94.00000°. Principal axes: T 2.0996, Plg34.0000°, Azm103.0000°; N -0.0127, Plg4.0000°, Azm10.0000°; P -2.0869, Plg56.0000°, Azm274.0000°;*

ISC 12 03:29:32.1±0.4,25.°25S±0.°04×177.°19W±0.°04, h113km±2km,h113km:pP-P,n1517,σ1s42/1397,mb5.5/332, 78C-69D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**4.04**	**189**	P		**Pn**	**03 30 31.5**	**-0.5**
	2μm,0.3s,baz=66,slow=7.7,SNR=20							
RAO				S		**Sn**	**03 31 22.0**	**+3.5**
	12μm,0.3s,baz=54,slow=23,SNR=3.7							
RAO				LR		LR	03 31 22.7	
	comp=Z,15μm,19.4s,baz=355,slow=26							
RAO	**Raoul Island**	**4.04**	**189**			**Pn**	**03 30 31.3**	**-0.7**
RAO	**Raoul Island**	**4.04**	**189**	P		**Pn**	**03 30 31.3**	**-0.7**
RAO	**Raoul Island**	**4.04**	**189**	P		**Pn**	**03 30 30.1**	**-1.9**
GLKZ	**Green Lake**	**4.05**	**189**	P		**Pn**	**03 30 31.8**	**-0.4**
LKBA	**Tubou, Lakemba**	**7.14**	**348**	P		**Pn**	**03 31 15.6**	**+1.6**
MSVF	**Nonsavu**	**8.69**	**328**	P		**Pn**	**03 31 37.8**	**+2.6**
	1μm,1.1s,baz=142,slow=13,SNR=58							
MSVF	**Nonsavu**	**8.69**	**328**	Pn		**Pn**	**03 31 37.5**	**+2.4**
MSVF	**Nonsavu**	**8.69**	**328**	P		**Pn**	**03 31 37.5**	**+2.4**
MSVF	**Nonsavu**	**8.69**	**328**	P		**Pn**	**03 31 38.3**	**+3.2**
TAVE	**Taveuni**	**8.87**	**343**	P		**Pn**	**03 31 40.1**	**+2.7**
NIUE	**Niue**	**9.11**	**49**	P		Pn	03 31 34.0	-6.8
	baz=9.0,SNR=88							
NIUE				S		Sn	03 33 02.0	-20
	baz=9.0							
NIUE	**Niue**	**9.11**	**49**	Pn		Pn	03 31 33.3	-7.4
NIUE	**Niue**	**9.11**	**49**	P		Pn	03 31 34.3	-6.4
DGTI	**Dogotuki**	**9.36**	**342**	P		**Pn**	**03 31 47.1**	**+3.1**
AFI	**Afiamalu**	**12.38**	**25**	P		Pn	03 32 15.8	-8.8
	315nm,0.3s,baz=287,slow=2.7,SNR=54							
AFI				S		Sn	03 34 23.0	-18
	617nm,0.4s,baz=46,slow=23,SNR=8.4							
AFI	**Afiamalu**	**12.38**	**25**	Pn		Pn	03 32 16.3	-8.3
AFI	**Afiamalu**	**12.38**	**25**	P		Pn	03 32 16.3	-8.3
AFI	**Afiamalu**	**12.38**	**25**	P		Pn	03 32 15.9	-8.7
OUZ	**Omahuta**	**12.72**	**217**	Pn		**Pn**	**03 32 31.9**	**+2.9**
OUZ	**Omahuta**	**12.72**	**217**	P		**P**	**03 32 33.3**	**-2.3**
KUZ	**Kuaotunu**	**12.96**	**206**	P		**P**	**03 32 42.1**	**+3.8**
MKAZ	**Moumakai**	**13.50**	**207**	P		**Pn**	**03 32 42.2**	**+3.2**
TWGZ	**Tauwhareparae**	**13.52**	**196**	P		Pn	03 32 30.6	-8.8
TWGZ				S		Sn	03 34 56.7	-12
CNGZ	**Carnagh Statio**	**13.76**	**195**	P		Pn	03 32 33.5	-8.8
CNGZ				S		Sn	03 34 57.4	-17
NFK	**Norfolk Island**	**13.77**	**251**	P		**Pn**	**03 32 41.5**	**-1.1**
	baz=14,SNR=7.2							
NFK	**Norfolk Island**	**13.77**	**251**	P		**P**	**03 32 46.7**	**-0.5**
TKGZ	**Te Karaka**	**13.80**	**197**	P		Pn	03 32 35.2	-7.8
TKGZ				S		Sn	03 35 01.3	-14
URZ	**Urewera**	**13.84**	**199**	S		Sn	03 35 04.6	-11
	112nm,0.3s,baz=251,slow=2.8,SNR=12							
URZ				LR		LR	03 37 24.9	
	comp=Z,9μm,21.3s,baz=42,slow=34							
URZ	**Urewera**	**13.84**	**199**	Pn		Pn	03 32 39.3	-4.2
URZ	**Urewera**	**13.84**	**199**	P		**Pn**	**03 32 40.5**	**-2.9**
TOZ	**Tahuroa Road**	**13.91**	**205**	P		**P**	**03 32 47.6**	**-1.1**
MARNC	**Mare, Loyalty**	**14.08**	**282**			**P**	**03 32 48.5**	**-2.2**
MARNC	**Mare, Loyalty**	**14.08**	**282**	P		P	03 32 54.8	+4.1
	9.3nm,0.6s							
MUGZ	**Murupara**	**14.14**	**200**	P		Pn	03 32 39.6	-7.7
SNGZ	**Shannon Statio**	**14.26**	**198**	P		Pn	03 32 42.6	-6.3
SNGZ				S		Sn	03 35 12.2	-14
PINNC	**Pines Island,**	**14.29**	**277**	P		**P**	**03 32 52.8**	**-0.3**
PINNC	**Pines Island,**	**14.29**	**277**	P		**P**	**03 32 54.7**	**+1.6**
	569nm,1.3s							
WPRZ	**Whakapapatarin**	**14.38**	**201**	P		Pn	03 32 41.9	-8.5
KNZ	**Kokohu**	**14.40**	**196**	P		Pn	03 32 42.5	-8.0
KNZ				S		Sn	03 35 12.5	-17
TLZ	**Tolley Road**	**14.42**	**204**	P		**Pn**	**03 32 49.2**	**-1.7**
MHGZ	**Mahia Peninsul**	**14.46**	**195**	P		Pn	03 32 44.5	-7.0
MHGZ				S		Sn	03 35 14.6	-16
MTHZ	**Maungataniwha**	**14.47**	**199**	P		**Pn**	**03 32 48.5**	**-3.0**
MTHZ				S		Sn	03 35 18.6	-13
MRHZ	**Matea Rd**	**14.58**	**200**	P		Pn	03 32 46.4	-6.5
NMHZ	**Naumai**	**14.71**	**199**	P		**Pn**	**03 32 52.0**	**-2.6**
ARHZ	**Aropaoanui**	**14.81**	**198**	P		**Pn**	**03 32 53.8**	**-1.9**
RATZ	**Rangitukua**	**14.82**	**202**	P		**Pn**	**03 32 56.7**	**+0.7**
HIZ	**Hauiti**	**14.84**	**205**			**P**	**03 32 59.2**	**+0.2**
HIZ	**Hauiti**	**14.84**	**205**	P		**P**	**03 33 00.6**	**+1.6**
OUENC	**Ouen Island, N**	**14.88**	**278**			**P**	**03 32 58.9**	**-0.7**
OUENC	**Ouen Island, N**	**14.88**	**278**	P		**P**	**03 33 03.4**	**+3.8**
	512nm,1.2s							
YATNC	**Mamie plateau,**	**14.93**	**279**	P		P	03 33 04.1	+3.9
	827nm,2.3s							
KATZ	**Kakaramea**	**14.94**	**202**	P		**Pn**	**03 32 59.7**	**+2.0**
MCHZ	**McNeill Hill**	**15.06**	**198**	P		**Pn**	**03 32 56.7**	**-2.3**
NTVZ	**North Tongarir**	**15.06**	**202**	P		**Pn**	**03 32 55.0**	**-4.1**
TMVZ	**Te Maari**	**15.07**	**202**	P		**Pn**	**03 32 56.2**	**-3.0**
KRVZ	**Karewarewa**	**15.07**	**202**	P		**Pn**	**03 32 56.7**	**-2.5**
ETVZ	**East Tongariro**	**15.08**	**202**	P		**Pn**	**03 32 55.6**	**-3.8**
WTVZ	**West Tongariro**	**15.11**	**202**	P		**Pn**	**03 32 58.7**	**-1.0**
NNVZ	**North Ngauruho**	**15.11**	**202**	P		**Pn**	**03 33 00.1**	**+0.4**
TWVZ	**Taurewa**	**15.12**	**203**	P		**Pn**	**03 32 58.5**	**-1.3**
KWHZ	**Kaweka Forest**	**15.12**	**199**	P		**Pn**	**03 32 54.0**	**-5.8**
OTVZ	**Oturere**	**15.12**	**203**	P		**Pn**	**03 32 54.3**	**-5.6**
SNVZ	**South Ngauruho**	**15.15**	**202**	P		**Pn**	**03 33 01.3**	**+1.0**
CKHZ	**Cape Kidnapper**	**15.15**	**197**	P		**Pn**	**03 32 53.9**	**-6.2**
NGZ	**Ngauruhoe**	**15.16**	**202**	P		**Pn**	**03 32 59.3**	**-1.1**
FWVZ	**Far West T-bar**	**15.24**	**202**	P		**Pn**	**03 32 59.8**	**-1.7**
ONTNC	**Ouen Toro**	**15.25**	**278**			**P**	**03 33 03.3**	**-0.5**
WHVZ	**Whangaehu Hut**	**15.26**	**202**	P		**Pn**	**03 33 00.1**	**-1.6**
BHHZ	**Black Hill Sta**	**15.29**	**200**	P		**Pn**	**03 32 57.1**	**-4.8**
RTV	**Rentapao**	**15.29**	**296**	P		**P**	**03 33 06.9**	**+2.6**
MOVZ	**Moawhango**	**15.31**	**201**	P		**Pn**	**03 32 58.6**	**-3.6**
DZM	**Mont Dzumac**	**15.32**	**279**	P		**P**	**03 33 06.4**	**+1.7**
	308nm,1.1s,baz=110,slow=12,SNR=36							
DZM				LR		LR	03 37 01.3	
	comp=Z,10μm,20.4s,baz=134,slow=30							
DZM	**Mont Dzumac**	**15.32**	**279**	*e*Pn		**P**	**03 33 03.3**	**-1.4**
DZM				*e*LR		LR	03 36 37.5	
	comp=Z,39μm,30.3s							
DZM	**Mont Dzumac**	**15.32**	**279**			**P**	**03 33 04.6**	**-0.1**
DZM	**Mont Dzumac**	**15.32**	**279**	P		**P**	**03 33 06.2**	**+1.5**
KAHZ	**Kahuranaki**	**15.33**	**198**	P		Pn	03 32 54.5	-8.0
KRHZ	**Kereru**	**15.34**	**199**	P		Pn	03 32 54.7	-7.7
PKVZ	**Pokaka**	**15.35**	**202**	P		**Pn**	**03 33 03.2**	**+0.6**
VRZ	**Vera Road**	**15.41**	**204**	P		**Pn**	**03 33 04.2**	**+0.9**
NOUC	**Port Laguerre**	**15.44**	**278**	P		**P**	**03 33 08.3**	**+2.4**
DVP	**Devils Point**	**15.52**	**296**	P		**P**	**03 33 10.2**	**+3.4**
PXZ	**Pawanui**	**15.56**	**197**	P		Pn	03 32 58.6	-6.6
PNHZ	**Pukenui**	**15.64**	**199**	P		Pn	03 32 58.6	-7.6
WPHZ	**Waipukurau**	**15.71**	**198**	P		**Pn**	**03 33 06.3**	**-0.8**
NEZ	**North Egmont**	**15.79**	**206**	P		**P**	**03 33 10.1**	**+0.3**
TSZ	**Takapari Road**	**15.84**	**200**	P		**Pn**	**03 33 04.3**	**-4.5**
WAZ	**Wanganui**	**15.88**	**203**	P		**Pn**	**03 33 06.1**	**-3.1**
DVHZ	**Dannevirke**	**16.00**	**199**	P		Pn	03 33 03.6	-7.1
ANWZ	**Angora Road**	**16.07**	**198**	P		**Pn**	**03 33 09.7**	**-1.7**
POWZ	**Post Office Ro**	**16.21**	**200**	P		**Pn**	**03 33 11.4**	**-1.8**
PRWZ	**Pori Road**	**16.30**	**199**	P		**Pn**	**03 33 11.3**	**-3.0**
BFZ	**Birch Farm**	**16.34**	**198**	P		Pn	03 33 07.1	-7.7
BFZ	**Birch Farm**	**16.34**	**198**	P		**Pn**	**03 33 11.8**	**-3.0**
RAR	**Rarotonga**	**16.51**	**79**	P		**Pn**	**03 33 14.6**	**-2.4**
	286nm,0.9s,baz=241,slow=7.7,SNR=16							
RAR				S		Sn	03 36 02.0	-18
	406nm,0.8s,baz=67,slow=20,SNR=13							
RAR				LR		LR	03 38 47.1	
	comp=Z,10μm,19.2s,baz=261,slow=33							
RAR	**Rarotonga**	**16.51**	**79**			**Pn**	**03 33 13.9**	**-3.2**
RAR	**Rarotonga**	**16.51**	**79**	P		**Pn**	**03 33 13.9**	**-3.2**
MRZ	**Mangatainoka R**	**16.51**	**200**	P		**Pn**	**03 33 12.9**	**-4.1**
TIWZ	**Tintock**	**16.53**	**199**	P		**Pn**	**03 33 11.3**	**-5.9**
CPWZ	**Castlepoint**	**16.56**	**198**	P		**Pn**	**03 33 13.0**	**-4.5**
FUNA	**Funafuti**	**16.98**	**348**			**Pn**	**03 33 19.9**	**-3.0**
FUNA	**Funafuti**	**16.98**	**348**	P		**Pn**	**03 33 21.7**	**-1.2**
TRWZ	**Traveller**	**17.16**	**198**	P		**P**	**03 33 20.9**	**-3.9**
PAWZ	**Paruwai Farm**	**17.22**	**199**	P		**P**	**03 33 22.8**	**-2.7**
MSWZ	**Moikau Station**	**17.30**	**199**	P		**P**	**03 33 20.7**	**-5.7**
SNZO	**South Karori**	**17.38**	**201**	P		**P**	**03 33 24.4**	**-2.7**
PLWZ	**Palliser**	**17.44**	**199**	P		**P**	**03 33 24.4**	**-3.5**
KOUNC	**Koumac, New Ca**	**17.69**	**282**	P		**Pn**	**03 33 32.6**	**+1.1**
KOUNC	**Koumac, New Ca**	**17.69**	**282**	P		**Pn**	**03 33 34.5**	**+3.1**
	509nm,2.4s							
QRZ	**Quartz Range**	**17.74**	**206**	P		**P**	**03 33 27.8**	**-3.3**
	370nm,2.1s							
CMWZ	**Cape Campbell**	**17.93**	**201**	P		**P**	**03 33 32.0**	**-1.2**
KHZ	**Kahutara**	**18.75**	**202**	P		**P**	**03 33 37.2**	**-4.9**
RPZ	**Rata Peaks**	**20.77**	**205**	P		**P**	**03 33 59.9**	**-4.1**
	29nm,0.6s,baz=314,slow=3.6,SNR=12							
RPZ				S		S	03 37 34.4	-15
	160nm,0.9s,baz=324,slow=22,SNR=11							
RPZ				LR		LR	03 42 26.0	
	comp=Z,5μm,18.1s,baz=36,slow=37							
RPZ	**Rata Peaks**	**20.77**	**205**	P		**P**	**03 33 59.4**	**-4.6**
LHI	**Lord Howe Isla**	**21.78**	**248**	P		**P**	**03 34 17.8**	**+2.9**
	baz=22,SNR=33							
LHI	**Lord Howe Isla**	**21.78**	**248**	P		**P**	**03 34 18.0**	**+3.0**
LHI	**Lord Howe Isla**	**21.78**	**248**	P		**P**	**03 34 19.4**	**+4.5**
ODZ	**Otahua Downs**	**22.06**	**203**	P		**P**	**03 34 14.3**	**-3.4**
MLZ	**Mavora Lakes**	**23.31**	**207**	P		**P**	**03 34 27.5**	**-2.5**
PAE	**Paea**	**26.75**	**79**	*e*P		**P**	**03 35 00.0**	**-1.4**
	29nm,1.4s							
PAE	**Paea**	**26.75**	**79**	*e*T		T	04 02 09.6	
	89nm,0.3s							
PPT2	**Papeete2**	**26.78**	**79**	*e*P		**P**	**03 35 00.4**	**-1.3**
	122nm,1.5s							
PPT2				*e*LQ		LQ	03 40 39.7	
	12μm,15.2s							
PPT2				*e*LR		LR	03 41 46.9	
	comp=Z,18μm,30.2s							
PPT2				*e*LR		LR	03 41 47.4	
	comp=Z,40μm,33.0s							
PPT2	**Papeete2**	**26.78**	**79**	*e*T		T	04 02 13.7	
	55nm,0.3s							
PPT	**Papeete**	**26.79**	**79**	P		**P**	**03 35 02.1**	**+0.3**
	20nm,0.7s,baz=79,slow=15,SNR=2.9							
PPT				LR		LR	03 43 50.3	
	comp=Z,10μm,18.4s,baz=244,slow=32							
	20nm,0.7s							
HNR	**Honiara**	**26.83**	**302**	LR		LR	03 44 22.5	
	comp=Z,5μm,18.0s,baz=130,slow=33							
HNR	**Honiara**	**26.83**	**302**	P		**P**	**03 35 00.1**	**-2.0**
HNR	**Honiara**	**26.83**	**302**	P		**P**	**03 35 00.1**	**-2.0**
HNR				pmax		pmax		
	comp=Z,450nm,1.1s							
TIAR	**Tiarei**	**27.00**	**79**	*e*P		**P**	**03 35 02.2**	**-1.4**
	comp=Z,300nm,1.5s							
TIAR	**Tiarei**	**27.00**	**79**	*e*T		T	04 02 21.7	
	comp=Z,3.5nm,0.3s							
TVO	**Taravao**	**27.00**	**80**	*e*P		**P**	**03 35 02.2**	**-1.5**
	comp=Z,68nm,1.5s							
TVO	**Taravao**	**27.00**	**80**	*e*T		T	04 02 31.5	
	comp=Z,17nm,0.3s							
ARMA	**Armidale**	**28.00**	**252**	P		**P**	**03 35 14.1**	**+1.5**
	baz=28,SNR=16							
ARMA	**Armidale**	**28.00**	**252**	P		**P**	**03 35 13.4**	**+0.8**
ARMA				IAmb		IAmb	03 35 16.1	
	comp=Z,232nm,1.8s							
ARMA	**Armidale**	**28.00**	**252**	P		**P**	**03 35 13.7**	**+1.1**
MEH	**Mehetia**	**28.02**	**81**	*e*T		T	04 03 50.9	
	comp=Z,179nm,0.3s							
TARA	**Tarawa**	**28.13**	**339**	P		**P**	**03 35 10.9**	**-2.8**
TARA	**Tarawa**	**28.13**	**339**	P		**P**	**03 35 12.6**	**-1.1**
	comp=Z,204nm,1.2s							
NTLH	**Newcastle Hard**	**28.16**	**247**	P		**P**	**03 35 18.2**	**+4.4**
	comp=Z,108nm,0.9s							
EIDS	**Eidsvold**	**28.65**	**263**	P		**P**	**03 35 19.9**	**+1.6**
	baz=29,SNR=65							
EIDS	**Eidsvold**	**28.65**	**263**	P		**P**	**03 35 18.7**	**+0.5**
EIDS	**Eidsvold**	**28.65**	**263**	P		**P**	**03 35 19.3**	**+1.0**
MGCD	**Mangrove Creek**	**28.70**	**247**	P		**P**	**03 35 20.9**	**+2.3**
	baz=29,SNR=30							
MGCD	**Mangrove Creek**	**28.70**	**247**	P		**P**	**03 35 20.2**	**+1.6**
SYDH	**Sydney Hard Ro**	**29.08**	**246**	P		**P**	**03 35 23.5**	**+1.5**
PMOR	**Pomariorio Ree**	**29.28**	**75**	*e*T		T	04 05 18.0	
	comp=Z,5.9nm,0.3s							
VAH	**Vaihoa**	**29.41**	**76**	*e*T		T	04 05 19.9	
	comp=Z,59nm,0.2s							
RK1H	**Rockhampton Ha**	**29.47**	**267**	P		**P**	**03 35 27.7**	**+2.2**
CNB	**Canberra Magne**	**30.45**	**243**	P		**P**	**03 35 35.6**	**+1.4**
	baz=31,SNR=27							
CNB	**Canberra Magne**	**30.45**	**243**	P		**P**	**03 35 35.2**	**+1.0**
RMQ	**Roma**	**30.61**	**260**	P		**P**	**03 35 37.4**	**+1.8**
	baz=31,SNR=111							
RMQ	**Roma**	**30.61**	**260**	P		**P**	**03 35 37.4**	**+1.8**
CAN	**Canberra**	**30.74**	**243**	P		**P**	**03 35 36.9**	**+0.1**
CAN				IAmb		IAmb	03 36 06.9	
	comp=Z,205nm,1.4s							
CAN	**Canberra**	**30.74**	**243**	P		**P**	**03 35 36.9**	**+0.1**
CAN				pmax		pmax		
	comp=Z,205nm,1.4s							
CAN	**Canberra**	**30.74**	**243**	P		**P**	**03 35 38.0**	**+1.2**
MILA	**Mila**	**30.95**	**240**	P		**P**	**03 35 39.9**	**+1.3**
	baz=31,SNR=17							
GLAD	**Gladstone**	**32.85**	**233**	P		**P**	**03 35 55.2**	**+0.2**
CMSA	**Cobar Meteorol**	**33.13**	**250**	P		**P**	**03 35 58.0**	**+0.3**
	baz=33,SNR=41							
CMSA	**Cobar Meteorol**	**33.13**	**250**	P		**P**	**03 35 57.3**	**-0.4**
XMAS	**Kiritimati**	**33.20**	**38**	P		P	**03 35 58.5**	**+0.1**
XMAS	**Kiritimati**	**33.20**	**38**	P		P	03 35 51.6	-6.8
CORO	**Coronation Par**	**33.61**	**232**	P		**P**	**03 36 02.4**	**+0.8**
MOO	**Moorlands**	**33.89**	**231**	P		**P**	**03 36 04.7**	**+0.6**
	baz=34,SNR=5.7							
MOO	**Moorlands**	**33.89**	**231**	P		**P**	**03 36 04.2**	**+0.1**
TOO	**Toolangi**	**33.92**	**240**	P		**P**	**03 36 05.2**	**+0.7**
	baz=34,SNR=29							
TOO	**Toolangi**	**33.92**	**240**	P		**P**	**03 36 04.6**	**+0.1**
TOO	**Toolangi**	**33.92**	**240**	P		**P**	**03 36 04.6**	**+0.1**
TOO				pmax		pmax		
	comp=Z,298nm,1.4s							
TOO	**Toolangi**	**33.92**	**240**	P		**P**	**03 36 05.1**	**+0.7**
TAU	**Tasmania Unive**	**33.95**	**230**	P		**P**	**03 36 04.2**	**-0.4**
TAU	**Tasmania Unive**	**33.95**	**230**	P		**P**	**03 36 04.2**	**-0.4**
TAU				pmax		pmax		
	comp=Z,244nm,1.5s							
TAU	**Tasmania Unive**	**33.95**	**230**	P		**P**	**03 36 04.8**	**+0.2**
CTA	**Charters Tower**	**34.05**	**271**	P		**P**	**03 36 05.8**	**+

WRA LR LR 03 55 24.5
comp=Z,3µm,21.4s,baz=137,slow=35
comp=Z,32nn,0.4s
WRA Warramunga Arr 44.87 267 P P 03 37 34.4 -1.2
GENI Genyem 46.80 292 P P 03 37 49.7 -1.0
comp=Z,7µmcomp=Z,188nn,1.1s
GENI Genyem 46.80 292 P P 03 37 50.2 -0.5
FORT Forrest 48.25 250 P P 03 38 00.7 -1.2
baz=48,SNR=68
FORT Forrest 48.25 250 P P 03 38 00.0 -1.8
FORT Forrest 48.25 250 P P 03 38 00.6 -1.2
SMPI Sarmi 48.35 291 P P 03 38 00.7 -2.0
comp=Z,7µmcomp=Z,52nn,0.5s
KDU Kakadu 48.95 275 P P 03 38 06.4 -0.9
baz=49,SNR=80
KDU Kakadu 48.95 275 P P 03 38 06.3 -1.0
WRKA Warakurna 49.05 258 P P 03 38 06.6 -1.5
baz=49,SNR=69
WRKA Warakurna 49.05 258 P P 03 38 06.8 -1.2
HPAH Hawaii Prepara 49.63 27 P P 03 38 11.1 -1.3
KIP Kipapa 49.99 24 P P 03 38 13.8 -1.2
KIP Kipapa 49.99 24 P P 03 38 13.8 -1.2
KIP pmax pmax
comp=Z,144nn,1.3s
MTN Manton Dam 50.10 274 P P 03 38 15.1 -1.0
baz=50,SNR=24
MTN Manton Dam 50.10 274 P P 03 38 14.2 -1.9
MTN IAmb IAmb 03 38 23.1
comp=Z,58nn,1.0s
MTN PcP **PcP 03 39 33.1 -1.1**
MTN Manton Dam 50.10 274 P P 03 38 15.7 -0.4
SRPI Serui, Papua 50.51 290 P P 03 38 21.2 +2.1
comp=Z,233nn,0.6s
BAKI Biak 50.97 291 P P 03 38 23.4 +0.8
comp=Z,6µmcomp=Z,270nn,1.1s
KNRA Kununurra 51.24 270 P P 03 38 24.5 0.0
baz=51,SNR=43
KNRA Kununurra 51.24 270 P P 03 38 23.5 -1.1
KNRA Kununurra 51.24 270 P P 03 38 24.2 -0.4
SBA Scott Base 53.21 184 P P 03 38 40.5 +2.2
SBA Scott Base 53.21 184 P P 03 38 40.5 +2.2
SBA pmax pmax
comp=Z,216nn,1.1s
VNDA Vanda 53.27 186 P P 03 38 40.9 +2.2
comp=Z,30nn,0.9s,baz=2.4,slow=8.0,SNR=70
VNDA ScP **ScP 03 43 34.2 +2.0**
comp=Z,5.4nn,1.0s,baz=8.4,slow=5.8,SNR=3.7
comp=Z,30nn,0.9s
VNDA Vanda 53.27 186 P P 03 38 40.2 +1.5
FITZ Fitzroy Crossi 53.27 266 LR LR 04 00 29.6
comp=Z,µm,18.4s,baz=238,slow=35
FITZ Fitzroy Crossi 53.27 266 P P 03 38 39.3 -0.4
baz=54,SNR=105
FITZ Fitzroy Crossi 53.27 266 P P 03 38 38.1 -1.5
FITZ Fitzroy Crossi 53.27 266 P P 03 38 39.1 -0.5
FAKI Fak Fak 53.41 286 P P 03 38 38.7 -2.0
FAKI Fak Fak 53.41 286 P P 03 38 39.4 -1.3
comp=Z,4µmcomp=Z,141nn,2.0s
FAKI Fak Fak 53.41 286 P P 03 38 39.6 -1.1
GUMO Guam 53.46 312 P P 03 38 39.7 -1.2
GUMO Guam 53.46 312 P P 03 38 39.7 -1.2
GUMO pmax pmax
comp=Z,242nn,1.1s
GUMO Guam 53.46 312 P P 03 38 40.2 -0.7
MSAI Masohi 56.12 284 P P 03 38 58.7 -1.5
comp=Z,807nmcomp=Z,27nn,0.6s
AAI Ambon 56.60 283 P P 03 39 04.3 +0.7
comp=Z,4µmcomp=Z,185nn,1.2s
KLBR Kellerberrin 56.83 248 P P 03 39 03.6 -1.5
baz=57,SNR=50
KLBR Kellerberrin 56.83 248 P P 03 39 03.9 -1.2
RKGY Rocky Gully 56.93 244 P P 03 39 06.3 +0.6
baz=57,SNR=7.7
RKGY Rocky Gully 56.93 244 P P 03 39 06.8 +1.1
NWAO Narrogin (SRO) 57.01 246 P P 03 39 04.3 -2.0
NWAO Narrogin (SRO) 57.01 246 P P 03 39 04.3 -2.0
NWAO pmax pmax
comp=Z,164nn,1.6s
NWAO Narrogin (SRO) 57.01 246 P P 03 39 05.9 -0.4
NWAO Narrogin (SRO) 57.01 246 P P 03 39 05.2 -1.1
MEEK Meekatharra 57.18 254 P P 03 39 06.0 -1.6
baz=57,SNR=16
MEEK Meekatharra 57.18 254 P P 03 39 04.7 -2.9
PSA00 Pilbara Seismi 57.44 260 IAmb IAmb 03 39 08.5
comp=Z,93nn,1.5s
PSA00 Pilbara Seismi 57.44 260 P P 03 39 07.5 -2.0
SOEI Soe 57.50 274 P P 03 39 10.9 +0.8
MBWA Marble Bar 57.66 260 P P 03 39 08.1 -2.9
MBWA IAmb IAmb 03 39 18.1
comp=Z,39nn,0.9s
MBWA Marble Bar 57.66 260 P P 03 39 10.2 -0.8
MBWA Marble Bar 57.66 260 P P 03 39 09.4 -1.6
NLAI Namlea 57.78 283 P P 03 39 12.2 +0.3
comp=Z,4µmcomp=Z,112nn,0.7s
BATI Baumata 57.87 274 P P 03 39 13.6 +1.0
comp=Z,5µmcomp=Z,147nn,0.7s
BLDU Ballidu 57.91 248 P P 03 39 10.9 -1.7
baz=58,SNR=34
BLDU Ballidu 57.91 248 P P 03 39 10.6 -2.0
MUN Mundaring 58.05 247 P P 03 39 12.5 -1.1
baz=58,SNR=7.7
MUN Mundaring 58.05 247 P P 03 39 12.7 -0.9
MTKN Mount Kenneth 58.42 247 P P 03 39 17.0 +0.9
LBMI Labuha 58.66 286 P P 03 39 16.5 -1.6
comp=Z,2µmcomp=Z,96nn,1.5s
MORW Morawa 58.82 250 P P 03 39 17.8 -1.2
baz=59,SNR=61
MORW Morawa 58.82 250 P P 03 39 17.1 -1.9
SANI Sanana 59.31 283 P P 03 39 22.4 -0.2
comp=Z,4µmcomp=Z,182nn,0.8s
SANI Sanana 59.31 283 P P 03 39 22.0 -0.6
TNTI Ternate 59.47 287 P P 03 39 21.7 -2.0
TNTI Ternate 59.47 287 P P 03 39 25.9 +2.2
comp=Z,3µmcomp=Z,128nn,1.6s
TNTI Ternate 59.47 287 P P 03 39 23.7 +0.1
MMRI Maumere 59.78 275 P P 03 39 23.8 -2.0
MMRI Maumere 59.78 275 P P 03 39 25.9 +0.1
comp=Z,9µmcomp=Z,180nn,0.7s
MMRI Maumere 59.78 275 P P 03 39 25.7 -0.1
CASY Casey 60.03 205 P P 03 39 26.4 -0.3
EDFI Ende, Flores 60.23 274 P P 03 39 28.3 -0.7
comp=Z,2µmcomp=Z,133nn,0.8s
BASI Baing, Sumba 60.65 272 P P 03 39 34.3 +2.6
comp=Z,261nn,1.5s
BBSI Bau Bau 60.80 278 P P 03 39 32.6 -0.2
comp=Z,27nn,0.7s
WBSI Waikabubak, Su 61.95 272 P P 03 39 41.0 +0.4
comp=Z,4µmcomp=Z,112nn,0.6s
GIRL Giralia 62.09 257 P P 03 39 42.2 +0.9
baz=62,SNR=14
GIRL Giralia 62.09 257 P P 03 39 40.7 -0.6
GIRL Giralia 62.09 257 P P 03 39 41.4 +0.1
BSSI Bau Bau, Buton 62.39 276 P P 03 39 42.2 -1.2
comp=Z,99nn,1.3s
LUWI Luwuk 62.62 283 P P 03 39 44.9 0.0
LUWI Luwuk 62.62 283 P P 03 39 46.3 +1.3
comp=Z,5µmcomp=Z,225nn,1.2s
LUWI Luwuk 62.62 283 P P 03 39 46.2 +1.3
BKSI Bulukumba 63.07 277 P P 03 39 47.4 -0.5
comp=Z,3µmcomp=Z,205nn,0.9s
KAPI Kappang 63.54 277 *d* P **P 03 39 50.3 -0.8**
KAPI Kappang 63.54 277 *d i* P **P 03 39 49.7 -1.3**
KAPI pmax pmax
comp=Z,95nn,1.6s
KAPI Kappang 63.54 277 P P 03 39 51.2 +0.2
APSI Ampana 63.67 282 P P 03 39 52.7 +0.8
comp=Z,2µmcomp=Z,132nn,0.9s
PLAI Plampang 63.74 272 P P 03 39 52.4 +0.1
comp=Z,4µmcomp=Z,277nn,1.0s
PLAI Plampang 63.74 272 P P 03 39 52.0 -0.3
SPSI Sidrap Palu 63.98 278 P P 03 39 53.1 -0.8
comp=Z,7µmcomp=Z,90nn,1.1s
MRSI Marisa 64.06 284 P P 03 39 53.8 -0.7
comp=Z,2µmcomp=Z,83nn,0.8s
TTSI Tana Toraja 64.33 279 P P 03 39 56.1 -0.1
comp=Z,67nn,1.9s
TWSI Taliwang, Sumb 64.58 272 P P 03 39 57.7 -0.2
comp=Z,2µmcomp=Z,62nn,1.1s
QSPA South Pole Qui 64.84 180 P P 03 40 00.3 +1.5
TOLI2 Tolitoli 65.38 284 P P 03 40 00.6 -2.5
TOLI2 Tolitoli 65.38 284 P P 03 40 02.2 -0.8
MPSI Mapaga 65.80 283 P P 03 40 04.4 -1.3
comp=Z,102nn,0.8s
IGBI Denpasar 66.12 271 P P 03 40 09.7 +1.9
comp=Z,5µmcomp=Z,161nn,1.3s

JAGI Jajag, Banyuwa 67.16 271 P P 03 40 13.2 -1.2
JAGI Jajag, Banyuwa 67.16 271 P P 03 40 14.7 +0.3
comp=Z,4µmcomp=Z,169nn,1.1s
JAGI Jajag, Banyuwa 67.16 271 P P 03 40 13.4 -1.0
ABJI Asem Bagus 67.36 272 P P 03 40 15.2 -0.4
comp=Z,3µmcomp=Z,101nn,1.1s
SMKI Samarinda 67.83 280 P P 03 40 21.0 +2.4
comp=Z,15µmcomp=Z,169nn,0.5s
KMMI Kalianget 67.90 273 P P 03 40 19.4 +0.3
comp=Z,5µmcomp=Z,199nn,2.2s
BLJI Banyuglugur 67.96 272 P P 03 40 22.0 +2.6
comp=Z,46nn,0.4s
BBKI Banjar Baru 68.62 276 P P 03 40 24.1 +0.6
comp=Z,8µmcomp=Z,129nn,1.1s
MYLDM Lahad Datu 69.33 286 IAmb IAmb 03 40 57.8
comp=Z,139nn,1.2s
PWJI Pagerwojo 69.47 271 P P 03 40 31.5 +2.7
comp=Z,65nn,0.7s
MTKI Muara Teweh, K 69.67 279 P P 03 40 30.5 +0.5
comp=Z,74nn,0.9s
UGM Wanagama 70.67 270 P P 03 40 36.5 +0.3
KKM Kota Kinabalu 71.73 286 P P 03 40 42.6 0.0
STKI Sintang 73.18 278 P P 03 40 52.0 +0.9
comp=Z,147nn,1.2s
SBUM Sibu 73.58 281 P P 03 40 52.5 -1.0
SBUM IAmb IAmb 03 40 55.0
comp=Z,100nn,1.2s
JRY Ryogami san 73.70 324 P P 03 40 53.2 -0.5
LEM Lembang 73.74 270 LR LR 04 16 28.7
comp=Z,2µm,18.1s,baz=277,slow=38
JOW Kunigami 73.80 311 P P 03 40 54.0 -0.3
JOW IAmb IAmb 03 40 59.9
comp=Z,64nm,1.0s
JOW Kunigami 73.80 311 P P 03 40 54.1 -0.3
SMAI San Martin Ant 73.93 159 P P 03 40 56.1 +1.6
MJAR Matsushiro Arr 74.47 324 P P 03 40 56.2 -1.9
comp=Z,3.1nm,0.5s,baz=149,slow=6.6,SNR=10
comp=Z,3.1nm,0.5s
MAJO Matsushiro 74.47 324 P P 03 40 56.2 -2.0
MAJO Matsushiro 74.47 324 *ij eP* **P 03 40 56.5 -1.6**
MAJO pmax pmax
comp=Z,9.0nm,0.7s
MAJO Matsushiro 74.47 324 P P 03 40 57.1 -1.0
CBJI Citeko 74.60 270 P P 03 41 06.4 +7.0
SKJI Sukabumi 74.63 269 P P 03 40 58.9 -0.7
comp=Z,112nm,0.8s
DBJI Dramaga 74.64 270 P P 03 41 00.4 +0.7
comp=Z,156nm,1.3s
BELA Belgrano 2 74.77 172 P P 03 40 59.3 -0.1
KSM Kuching 74.85 279 P P 03 40 59.5 -1.3
KSM Kuching 74.85 279 P P 03 41 00.9 +0.1
JMN Monobe 74.85 319 P P 03 40 59.0 -1.4
JMN Monobe 74.85 319 P P 03 40 59.6 -0.8
JWT Wachi 75.08 321 P P 03 41 00.6 -1.0
JOM Ohasama 75.15 328 P P 03 41 01.2 -0.8
JYA Atsumi 75.25 326 P P 03 41 02.0 -0.5
TPI Tanjungpandan 75.40 274 P P 03 41 05.1 +1.1
comp=Z,1µmcomp=Z,42nn,1.5s
JSU Suzuyama 75.41 316 IAmb IAmb 03 41 07.6
comp=Z,52nn,1.0s
JAD Aida 75.54 320 P P 03 41 03.6 -0.7
YOJ Yonaguni jima 76.09 306 P P 03 41 07.6 0.0
JHS Saijyo 76.19 320 P P 03 41 07.2 -0.8
JHS IAmb IAmb 03 41 21.0
comp=Z,83nn,1.1s
JHS Saijyo 76.19 320 P P 03 41 07.2 -0.8
ERM Erimo 76.31 331 *de* **P P 03 41 08.2 -0.3**
ERM pmax pmax
comp=Z,106nn,4.4s
ERM Erimo 76.31 331 P P 03 41 09.3 +0.8
AMKA Amchitka 76.36 358 P P 03 41 08.3 -0.2
PMSA Palmer Station 76.66 156 P P 03 41 11.2 +1.0
PMSA IAmb IAmb 03 41 13.0
comp=Z,137nm,1.2s
PMSA Palmer Station 76.66 156 *e* **P P 03 41 11.7 +1.5**
YULB Yu-li 76.74 304 IAmb IAmb 03 41 29.3
comp=Z,103nm,1.7s
ADK Adak 76.80 0 P P 03 41 10.1 -0.9
ADK Adak 76.80 0 P P 03 41 10.1 -0.9
ADK pmax pmax
comp=Z,352nm,1.4s
ADK Adak 76.80 0 P P 03 41 09.7 -1.3
PPBI Pangkal Pinang 77.03 274 P P 03 41 14.3 +1.1
KUR Kuril'sk 77.03 335 *ij eP* **P 03 41 12.8 +0.3**
KUR pmax pmax
comp=Z,44nn,1.6s
KLI Kotabumi 77.05 271 P P 03 41 16.5 +3.1
KASI Kota Agung 77.10 270 P P 03 41 13.3 -0.3
comp=Z,90nn,1.5s
TPUB Ta-pu 77.19 304 IAmb IAmb 03 41 45.0
comp=Z,56nn,0.8s
TPUB Ta-pu 77.19 304 P P 03 41 11.9 -2.0
SSLB Suanglung 77.22 304 IAmb IAmb 03 41 18.0
comp=Z,54nn,0.8s
SSLB Suanglung 77.22 304 P P 03 41 14.0 -0.1
MAW Mawson 77.37 200 P P 03 41 15.4 +1.3
comp=Z,138nm,0.5s,baz=130,slow=6.7,SNR=218
comp=Z,138nm,0.5s
MAW Mawson 77.37 200 P P 03 41 15.1 +1.0
baz=77,SNR=71
MAW Mawson 77.37 200 P P 03 41 14.7 +0.5
MAW IAmb IAmb 03 41 18.4
comp=Z,136nm,1.4s
YHNB Yeheng 77.41 305 IAmb IAmb 03 41 48.5
comp=Z,51nm,0.9s
YHNB Yeheng 77.41 305 P P 03 41 14.5 -0.7
TATO Taipei 77.51 305 P P 03 41 14.5 -1.1
LWLI Liwa 77.71 270 P P 03 41 18.8 +1.6
comp=Z,8µmcomp=Z,141nn,0.6s
JEW Eniwo 77.73 330 P P 03 41 15.4 -1.0
JEW IAmb IAmb 03 42 33.2
comp=Z,106nn,1.1s
JMP Maruseppu 77.83 332 P P 03 41 17.1 +0.1
H06S1 SOCORRO T 77.86 63 T T 05 06 19.7
SNR=54
H06N1 SOCORRO T-PHAS 77.90 62 T T 05 06 49.6
SNR=14
H06E1 SOCORRO T-PHAS 77.91 62 P P 03 41 20.2 +2.2
SNR=5.8
H06E1 T T 05 06 14.0
SNR=81
SMY Shemya 78.02 355 P P 03 41 16.9 -0.8
SMY Shemya 78.02 355 P P 03 41 16.9 -0.8
SMY pmax pmax
comp=Z,202nm,0.9s
NIKH Nikolski High 78.23 5 P P 03 41 18.3 -0.6
NIKH Nikolski High 78.23 5 P P 03 41 18.5 -0.4
baz=188,SNR=6.8
MNAI Manna 78.98 270 P P 03 41 26.9 +2.8
comp=Z,426nn,2.2s
DSRI Dabo 79.15 275 P P 03 41 26.4 +1.4
comp=Z,50nn,2.1s
SKR Severo-Kuril's 79.20 343 *e P* **P 03 41 23.7 -0.6**
SKR *e S* **S 03 51 13.5 -1.2**
SKR MLR MLR
comp=Z,1µm,17.0s
UNV Unalaska Valle 79.31 6 IAmb IAmb 03 41 26.5
comp=Z,48nn,0.7s
UNV Unalaska Valle 79.31 6 P P 03 41 24.2 -0.5
baz=190,SNR=8.5
KSI Kapahiang 79.60 271 P P 03 41 28.1 +0.6
comp=Z,154nn,0.6s
QZH Quanzhou 79.65 304 *ij* **iP P 03 41 26.6 -0.7**
QZH pmax pmax
comp=Z,80nn,1.6s
QZH LR LR
comp=Z,3µm,17.5s
QZH LR LR
comp=Z,2µm,17.1s
QZH LR LR
comp=Z,4µm,16.6s
AKUT Akutan 79.67 7 IAmb IAmb 03 41 28.4
comp=Z,43nn,0.8s
SNCC San Nicolas Is 79.96 46 P P 03 41 30.1 +1.2
baz=231
SCZ2 Santa Cruz Isl 80.36 45 P P 03 41 32.5 +1.4
baz=231
SCI2 San Clemente I 80.43 47 P P 03 41 33.3 +1.9
baz=231,SNR=8.0
YSS Yuzh-Sakhalins 80.46 333 P P 03 41 31.1 -0.1
YSS IAmb IAmb 03 41 41.4
comp=Z,124nn,1.4s
YSS Yuzh-Sakhalins 80.46 333 *ij* **iP P 03 41 31.7 +0.5**
YSS pmax pmax
comp=Z,50nn,1.1s
YSS Yuzh-Sakhalins 80.46 333 P P 03 41 31.7 +0.5

TJN Taejon 80.56 318 *de* **P P 03 41 31.4 -0.6**
TJN Taejon 80.56 318 P P 03 41 31.4 -0.6
SBC Santa Barbara 80.59 45 P P 03 41 34.4 +2.3
baz=230
PET Petropavlovsk 80.73 345 P P 03 41 32.0 -0.5
PET IAmb IAmb 03 41 34.8
comp=Z,118nm,1.4s
PET Petropavlovsk 80.73 345 *i eP* **P 03 41 32.0 -0.5**
PET pmax pmax
comp=Z,236nm,2.5s
PET MLR MLR
comp=Z,4µm,18.0s
PET Petropavlovsk 80.73 345 P P 03 41 32.1 -0.4
CIS Catalina Islan 80.78 46 P P 03 41 35.3 +2.0
baz=232,SNR=5.1
MYKOM Kota Tinggi 80.78 276 P P 03 41 33.0 -0.7
PKM Mcpherson Peak 80.81 45 P P 03 41 35.5 +1.9
baz=230,SNR=18
KSRS Korea Array 80.93 319 P P 03 41 33.6 -0.3
comp=Z,4.6nm,0.5s,baz=126,slow=5.8,SNR=21
KSRS LR LR 04 11 52.7
comp=Z,2µm,22.0s,baz=145,slow=32
comp=Z,4.6nm,0.5s
KSAR Wonju Array Be 80.94 319 P P 03 41 33.5 -0.5
KSAR Wonju Array Be 80.94 319 P P 03 41 33.5 -0.5
PEA0B Petropavlovsk- 81.03 345 P P 03 41 33.0 -1.1
PEA0B Petropavlovsk- 81.03 345 *de* **P P 03 41 33.8 -0.3**
PETK Petropavlovsk- 81.03 345 P P 03 41 33.0 -1.1
comp=Z,60nm,0.6s,baz=123,slow=6.9,SNR=66
comp=Z,60nm,0.6s
FMP Fort Macarthur 81.05 46 P P 03 41 36.1 +1.4
baz=232
PAGB Antelope Grade 81.07 44 IAmb IAmb 03 42 06.4
comp=Z,208nm,2.0s
BCW Bitter Crk WRg 81.09 45 IAmb IAmb 03 41 38.9
comp=Z,77nm,0.9s
BBGB Big Mountain B 81.12 43 IAmb IAmb 03 42 07.8
comp=Z,69nm,1.1s
CHNA Chernabura Isl 81.18 10 P P 03 41 34.8 0.0
baz=196,SNR=7.5
LPIG La Paz 81.22 58 LR LR 04 09 03.6
comp=Z,4µm,21.3s,baz=354,slow=29
SEHB SEOHWA 81.27 320 P P 03 41 35.9 +0.1
SLBS Sierra La Lagu 81.28 59 P P 03 41 36.1 -0.1
109C Camp Elliot, M 81.33 48 P P 03 41 36.9 +0.7
baz=232
DECC Green Verdugo 81.36 46 P P 03 41 37.8 +1.4
baz=231,SNR=5.5
PASC Pasadena Art C 81.41 46 IAmb IAmb 03 41 39.6
comp=Z,48nm,0.8s
SRIG Santa Rosalia 81.52 55 P P 03 41 38.3 +1.0
SDPT Sand Point 81.54 10 IAmb IAmb 03 42 06.5
comp=Z,58nm,0.8s
SDPT Sand Point 81.54 10 P P 03 41 36.5 -0.2
baz=195
ARVC Arvin 81.58 45 P P 03 41 39.2 +1.7
baz=231,SNR=11
TEY Ternei 81.65 329 *e P* **P 03 41 37.0 -0.5**
S12K Black Hills 81.66 9 P P 03 41 37.0 -0.3
baz=194
MURC Murrieta 81.71 47 P P 03 41 40.1 +1.9
baz=232,SNR=21
INCN Inchon 81.72 318 P P 03 41 37.6 -0.5
INCN Inchon 81.72 318 P P 03 41 37.7 -0.5
INCN pmax pmax
comp=Z,53nm,1.2s
INCN Inchon 81.72 318 P P 03 41 40.5 +2.3
BFSC Mount Baldy Ra 81.79 46 P P 03 41 40.5 +1.7
baz=232,SNR=16
MONP2 Monument Peak 81.79 48 P P 03 41 40.3 +1.4
baz=233,SNR=31
IKP In-Ko-Pah, Jac 81.86 48 P P 03 41 40.7 +1.6
baz=233,SNR=16
VES Vestal, Richgr 81.87 44 P P 03 41 40.9 +1.9
baz=231,SNR=24
KMPM Mount Pierce 81.87 38 IAmb IAmb 03 42 10.7
comp=Z,90nm,1.2s
EDW2 Edwards Air Fo 81.97 45 P P 03 41 41.7 +2.1
baz=232,SNR=54
KMRM Mail Ridge 81.97 38 IAmb IAmb 03 42 12.8
comp=Z,90nm,1.0s
CCAC Calif City Air 82.12 45 P P 03 41 41.3 +1.0
CCAC pP **pP 03 42 11.8 +2.9**
ISA Isabella, Lake 82.15 45 IAmb IAmb 03 41 44.1
comp=Z,58nm,1.0s
ISA Isabella, Lake 82.15 45 P P 03 41 43.1 +2.6
baz=231,SNR=38
COYC Coyhaique 82.18 137 P P 03 41 41.9 +1.4
COYC pP **pP 03 42 10.3 +1.0**
PFO Pinyon Flats O 82.20 47 P P 03 41 42.2 +1.3
comp=Z,28nm,0.9s,baz=256,slow=4.4,SNR=46
comp=Z,28nm,0.9s
PFO Pinyon Flats O 82.20 47 P P 03 41 41.5 +0.6
PFO Pinyon Flats O 82.20 47 *ij eP* **P 03 41 42.7 +1.8**
PFO pmax pmax
comp=Z,53nm,0.9s
PFO Pinyon Flats O 82.20 47 P P 03 41 43.4 +2.4
baz=233,SNR=26
TPFO Pinon Flats 82.20 47 P P 03 41 43.1 +2.2
baz=233,SNR=22
SWSC Sam W. Stewart 82.24 48 P P 03 41 41.0 +0.1
baz=233,SNR=13
PMD Palm Desert 82.28 47 IAmb IAmb 03 41 44.5
comp=Z,27nm,0.9s
BBRC Big Bear Solar 82.29 47 P P 03 41 41.9 +0.4
baz=232
AY01 Puyuhuapi 82.36 136 P P 03 41 42.9 +1.4
AY01 IAmb IAmb 03 41 45.2
comp=Z,56nm,1.0s
LRMC Laurel Mtn Rad 82.54 45 P P 03 41 44.5 +1.9
baz=232,SNR=6.9
S14K Fog Glacier 82.58 10 P P 03 41 42.7 +0.4
baz=196
MSHR Mys Shultsa 82.59 324 *ij eP* **P 03 41 43.2 +0.7**
MSHR pmax pmax
comp=Z,30nm,1.0s
RRX Edison Barstow 82.61 46 P P 03 41 45.1 +2.2
baz=232
BKNI Bangkinang 82.69 274 P P 03 41 43.8 0.0
GZH Guangzhou 82.70 300 P P 03 41 43.8 +0.3
H03S2 Juan Fernandez 82.72 124 T T 05 12 56.4
SNR=77
H03S1 Juan Fernandez 82.73 124 T T 05 12 57.4
SNR=97
H03S3 Juan Fernandez 82.74 124 T T 05 12 56.2
SNR=97
BELC Belle Mtn. Jos 82.74 47 P P 03 41 45.9 +2.2
baz=233,SNR=64
CHGN Chignik 82.78 10 IAmb IAmb 03 41 55.8
comp=Z,151nm,1.6s
CHGN Chignik 82.78 10 P P 03 41 43.2 0.0
baz=197,SNR=7.5
CHIR Chirikof Islan 82.82 12 IAmb IAmb 03 41 46.6
comp=Z,111nm,1.3s
CHIR Chirikof Islan 82.82 12 P P 03 41 43.5 +0.1
baz=199,SNR=8.4
CWC Cottonwood Cre 82.88 44 P P 03 41 46.1 +1.7
baz=231
H03N3 Juan Fernandez 82.88 124 T T 05 13 01.9
baz=249,slow=73,SNR=88
H03N2 Juan Fernandez 82.88 123 T T 05 13 06.2
baz=249,slow=73,SNR=59
H03N1 Juan Fernandez 82.90 124 T T 05 12 54.3
baz=249,slow=73,SNR=44
BC3 Big Chuckawall 82.90 48 P P 03 41 47.1 +2.6
baz=233,SNR=25
GLA Glamis 82.97 49 P P 03 41 46.2 +1.5
GLA IAmb IAmb 03 41 48.8
comp=Z,64nm,0.9s
GLA pP **pP 03 42 16.0 +2.6**
GLA Glamis 82.97 49 P **P 03 41 46.3 +1.5**
GLA *PP **pP 03 42 16.0 +2.6**
GLA pmax pmax
comp=Z,64nm,0.9s
GLA Glamis 82.97 49 P P 03 41 47.1 +2.3
baz=234,SNR=12
GSC Goldstone, Bar 83.00 46 P P 03 41 46.3 +1.3
GSC IAmb IAmb 03 41 48.4
comp=Z,46nm,0.9s
GSC **pP 03 42 14.9 +1.3**
GSC Goldstone, Bar 83.00 46 P P 03 41 47.2 +2.3
baz=232,SNR=26
TROLL Troll, Antarti 83.00 180 P P 03 41 44.8 +0.2
HEC Hector,Ludlow 83.02 46 P P 03 41 46.9 +1.8
baz=233,SNR=46
MPMC Manual Prospec 83.02 45 P P 03 41 47.0 +1.8
baz=232,SNR=54

MLAC Mammoth, Mammo 83.15 43 P P 03 41 47.8 +2.0
baz=231
SNAA Sanae 83.26 178 P P 03 41 45.6 -0.2
SNAA Sanae 83.26 178 P P 03 41 45.9 +0.1
SNAA Sanae 83.26 178 P P 03 41 45.9 +0.1
SNAA pmax pmax
comp=Z,665nm,1.8s
USRK Ussuriysk Ar. 83.29 326 P P 03 41 45.2 -0.9
comp=Z,4.0nm,0.4s,baz=218,slow=15,SNR=27
comp=Z,4.0nm,0.4s
USA0B Ussuriysk Arra 83.30 326 P P 03 41 46.4 +0.3
USA0B Ussuriysk Arra 83.30 326 P P 03 41 46.4 +0.3
USA0B pmax pmax
comp=Z,77nm,2.0s
L02F Cave Junction 83.33 37 P P 03 41 48.6 +2.2
baz=227
QSM Queen of Sheba 83.36 45 IAmb IAmb 03 42 18.0
comp=Z,57nm,1.1s
VNA3 Neumayer Olymp 83.37 176 P P 03 41 46.2 -0.1
IRM Iron Mountain 83.40 48 P P 03 41 49.2 +2.2
baz=233,SNR=71
GMRC Granite Mounta 83.43 47 P P 03 41 49.5 +2.2
baz=233,SNR=37
NJ2 Nanjing 83.48 310 ⇓P P 03 41 46.9 -0.4
NJ2 pmax pmax
comp=Z,46nm,0.9s
MPK Martis Peak 83.49 41 IAmb IAmb 03 42 19.0
comp=Z,85nm,1.1s
BLYC Blythe 83.58 48 IAmb IAmb 03 41 51.6
comp=Z,49nm,0.9s
PNTR Pine Nut 83.61 41 P P 03 41 48.7 +0.6
PNTR IAmb IAmb 03 41 51.5
comp=Z,56nm,0.8s
TUQ Turquoise Moun 83.65 46 P P 03 41 50.4 +2.0
baz=233,SNR=57
TYV Tymovskoe 83.66 336 *e*P P 03 41 48.3 +0.5
TYV *e*S S 03 52 05.3 +4.6
TYV pmax pmax
comp=Z,77nm,1.6s
TYV pmax pmax
comp=Z,1μm,4.0s
TYV smax smax
comp=N,2μm,6.4s
TYV smax smax
comp=E,1μm,6.4s
FURC Furnace Creek, 83.67 45 P P 03 41 50.2 +2.0
baz=232,SNR=16
K02D Willamette Mer 83.67 37 P P 03 41 50.0 +1.7
baz=227
GRAC Grapevine Rang 83.67 44 IAmb IAmb 03 42 20.1
comp=Z,94nm,1.2s
GRAC Grapevine Rang 83.67 44 P P 03 41 50.6 +2.2
baz=232,SNR=16
SHOC Shoshone, Teco 83.70 46 P P 03 41 50.1 +1.6
baz=233,SNR=30
214A Organ Pipe Nat 83.72 50 P P 03 41 50.6 +2.0
baz=235,SNR=12
LHV Little Huntoon 83.75 43 IAmb IAmb 03 42 20.3
comp=Z,71nm,1.4s
SII Sitkinak Islan 83.79 13 IAmb IAmb 03 41 51.1
comp=Z,54nm,1.0s
SII Sitkinak Islan 83.79 13 P P 03 41 49.2 +0.8
baz=201,SNR=6.9
SII Sitkinak Islan 83.79 13 P P 03 41 49.2 +0.8
VNA2 Neumayer--Watz 83.82 177 P P 03 41 48.6 +0.1
baz=174,slow=4.0
J01E Myrtle Point 83.85 36 P P 03 41 49.2 +0.3
baz=227
RYN Ryan 83.97 42 IAmb IAmb 03 42 21.3
comp=Z,54nm,1.4s
NVAR Mina Array Bea 83.98 43 P P 03 41 51.0 +0.9
comp=Z,22nm,0.9s,baz=224,slow=7.8,SNR=108
NVAR pP pP 03 42 20.4 +1.7
comp=Z,25nm,1.0s,baz=223,slow=8.3,SNR=4.5
NVAR PKPPKP P'P'df 04 08 07.7 -1.7
comp=Z,1.6nm,1.1s,baz=107,slow=1.5,SNR=3.7
comp=Z,22nm,0.9s
NVL N'lazarevskaya 84.04 183 *e*P P 03 41 47.5 -2.1
NVL *e*S S 03 52 05.5 +1.2
NVL pmax pmax
comp=Z,48nm,1.0s
VNA1 Neumayer--Stat 84.05 176 P P 03 41 50.0 +0.3
L04D Klamath Falls 84.09 38 IAmb IAmb 03 42 07.4
comp=Z,50nm,1.0s
L04D Klamath Falls 84.09 38 P P 03 41 52.3 +1.8
baz=228,SNR=13
NEE2 Needles Airpor 84.11 47 P P 03 41 52.4 +1.9
baz=234
PAHR Pah Rah Range 84.13 41 IAmb IAmb 03 42 21.9
comp=Z,52nm,1.2s
PDMCI Parker Dam,Lak 84.16 48 P P 03 41 52.7 +2.0
baz=234,SNR=26
LL04 Puerto Octay 84.17 133 P P 03 41 51.9 +1.0
LL04 IAmb IAmb 03 41 54.4
comp=Z,65nm,0.9s
LL04 pP pP 03 42 20.5 +0.8
MNSI Mandailing Nat 84.21 274 P P 03 41 45.2 -6.3
TPNV Topopah Spring 84.35 45 IAmb IAmb 03 42 23.5
comp=Z,56nm,1.2s
TPNV Topopah Spring 84.35 45 P P 03 41 53.2 +1.3
baz=232,SNR=50
R17K Ugashik Creek 84.40 11 P P 03 41 51.5 +0.1
baz=199,SNR=22
IPM Ipoh 84.48 278 P P 03 41 52.3 -0.7
IPM IAmb IAmb 03 41 54.7
comp=Z,90nm,1.0s
IPM Ipoh 84.48 278 P P 03 41 53.0 +0.1
OHAK Old Harbor 84.59 13 P P 03 41 52.8 +0.5
baz=201,SNR=10
PAF Port-aux-Franc 84.64 217 P P 03 41 53.6 +0.5
PAF Port-aux-Franc 84.64 217 P P 03 41 53.6 +0.5
PAF pmax pmax
comp=Z,678nm,1.2s
K04D Chiloquin, OR 84.67 38 P P 03 41 54.3 +1.0
baz=228
PLTX Planet X, Gerl 84.72 40 IAmb IAmb 03 42 24.8
comp=Z,81nm,1.3s
SHPR Sheep Range 84.79 46 IAmb IAmb 03 42 26.0
comp=Z,64nm,1.3s
W13A Hualapai Mount 84.80 47 IAmb IAmb 03 42 26.0
comp=Z,53nm,1.1s
MDJ Mudanjiang 84.82 325 P P 03 41 54.7 +0.9
MDJ pmax pmax
comp=Z,48nm,2.9s
MDJ pmax pmax
comp=Z,2μm,11.2s
MDJ Mudanjiang 84.82 325 P P 03 41 54.0 +0.2
J04D Umpqua Nationa 84.88 37 IAmb IAmb 03 41 57.8
comp=Z,73nm,0.9s
J04D Umpqua Nationa 84.88 37 P P 03 41 55.9 +1.4
baz=228,SNR=16
Q09A Carvers 84.92 43 IAmb IAmb 03 41 57.9
comp=Z,58nm,0.9s
MOD Modoc Plateau 85.01 39 IAmb IAmb 03 41 58.1
comp=Z,38nm,0.9s
I04A Tendick Farm, 85.09 36 P P 03 41 57.0 +1.7
baz=228,SNR=6.8
S11A Rachel 85.09 44 IAmb IAmb 03 42 26.9
comp=Z,53nm,1.2s
KULM Kulim 85.17 278 IAmb IAmb 03 41 58.4
comp=Z,66nm,1.0s
K05A Summer Lake 85.21 38 IAmb IAmb 03 41 59.6
comp=Z,54nm,1.0s
KDAK Kodiak Island 85.25 13 P P 03 41 55.2 -0.5
KDAK Kodiak Island 85.25 13 P P 03 41 55.2 -0.5
KDAK pmax pmax
comp=Z,29nm,1.2s
KDAK Kodiak Island 85.25 13 P P 03 41 56.0 +0.4
baz=202
Q16K King Salmon 85.34 11 P P 03 41 56.4 +0.3
baz=198,SNR=14
TUC Tucson 85.34 51 P P 03 41 57.8 +0.9
TUC IAmb IAmb 03 42 01.0
comp=Z,59nm,0.9s
TUC Tucson 85.34 51 P P 03 41 57.8 +0.9
TUC pmax pmax
comp=Z,59nm,0.9s
TUC Tucson 85.34 51 P P 03 41 59.2 +2.4
baz=236
UBPT Khong Chiam 85.38 289 IAmb IAmb 03 41 60.0
comp=Z,116nm,1.5s
J05D Fort Rock, OR 85.39 37 P P 03 41 58.6 +1.6
baz=229,SNR=30
PRN Pahroc Range 85.39 45 IAmb IAmb 03 42 29.1
comp=Z,96nm,1.3s
H04D Lebanon 85.41 36 P P 03 41 58.1 +1.3
baz=228

GO06 Curarrehue 85.43 132 P P 03 41 58.6 +1.1
GO06 IAmb IAmb 03 42 01.3
comp=Z,81nm,1.1s
P16K Nushagak River 85.46 10 P P 03 41 56.6 0.0
baz=197,SNR=45
PLCA Paso Flores 85.49 133 P P 03 41 59.1 +1.5
comp=Z,42nm,0.9s,baz=230,slow=5.3,SNR=47
PLCA PKKPbc PKKPbc 04 00 00.8 0.0
comp=Z,1.5nm,0.7s,baz=1.9,slow=4.2,SNR=5.5
comp=Z,42nm,0.9s
PLCA Paso Flores 85.49 133 *e*P P 03 41 59.8 +2.1
G03D McMinnville, O 85.59 35 P P 03 41 56.3 -1.4
baz=227
RPSI Rantau Prapat 85.61 275 P P 03 41 57.8 -0.8
RPSI IAmb IAmb 03 41 59.6
comp=Z,96nm,1.2s
R11A Troy Canyon, C 85.62 44 P P 03 41 58.3 +0.1
R11A pP 03 42 27.1 +0.1
R11A Troy Canyon, C 85.62 44 P P 03 41 60.0 +1.7
baz=233,SNR=17
PSI Prapat 85.65 275 P P 03 41 57.8 -1.1
PSI pmax pmax
comp=Z,96nm,1.2s
DL2 Dalian 85.68 317 P P 03 41 59.2 +0.9
DL2 pmax pmax
comp=Z,49nm,1.3s
WHN Wuhan 85.85 306 ⇓P P 03 41 59.3 0.0
WHN pmax pmax
comp=Z,120nm,0.9s
P17K Kvichak River 85.87 11 P P 03 41 58.6 0.0
baz=199
BMN Battle Mountai 85.88 41 IAmb IAmb 03 42 30.7
comp=Z,40nm,1.2s
PINE Pine Mountain 85.89 37 IAmb IAmb 03 43 19.3
comp=Z,40nm,1.1s
O16K Kokwok River B 85.98 10 P P 03 41 58.5 -0.7
baz=197,SNR=25
I05D Terrebonne, OR 86.03 37 P P 03 42 00.2 +0.2
baz=228
ORCD Orcadas 86.03 159 P P 03 41 59.9 +0.1
GRNR Gornyy 86.05 333 ⇓*i*P P 03 42 00.7 +0.9
GRNR pmax pmax
comp=Z,40nm,1.0s
Q20K Shuyak Island 86.06 13 P P 03 41 59.8 +0.2
baz=202
X16A Lo Mia Camp, P 86.06 49 IAmb IAmb 03 42 04.5
comp=Z,51nm,0.9s
Q19K Cape Douglas, 86.11 12 IAmb IAmb 03 42 12.5
comp=Z,44nm,0.8s
Q19K Cape Douglas, 86.11 12 P P 03 41 59.3 -0.6
baz=201,SNR=6.5
GULI GuiLin 86.15 300 ⇑P P 03 42 02.4 +1.5
GULI S S 03 52 27.4 +0.9
GULI pmax pmax
comp=Z,50nm,1.0s
GULI LR LR
comp=Z,2μm,21.7s
GULI LR LR
comp=Z,4μm,21.7s
GULI LR LR
comp=Z,5μm,21.7s
GSI Gunungsitoli 86.23 273 P P 03 42 01.6 0.0
GSI Gunungsitoli 86.23 273 P P 03 42 01.3 -0.4
comp=Z,124nm,1.0s
GSI Gunungsitoli 86.23 273 P P 03 42 03.7 +2.0
SNY Shenyang 86.31 320 ⇓P P 03 42 00.6 -0.7
SNY pmax pmax
comp=Z,40nm,1.6s
SNY pmax pmax
comp=Z,2μm,10.8s
SNY LR LR
comp=Z,6μm,17.1s
SNY LR LR
comp=Z,3μm,17.1s
SNY LR LR
comp=Z,8μm,16.1s
O17K Koliganek Bris 86.31 10 P P 03 42 00.7 -0.2
baz=198,SNR=14
F04D Rainier, OR 86.32 34 P P 03 42 00.5 -0.7
baz=227
LCMT Little Creek M 86.33 46 IAmb IAmb 03 42 33.5
comp=Z,36nm,1.0s
E03A Lebam 86.35 34 IAmb IAmb 03 42 04.8
comp=Z,46nm,1.0s
CN2 Changchun 86.50 322 *e*P P 03 42 01.7 -0.5
CN2 pmax pmax
comp=Z,70nm,1.6s
F04A Amboy 86.52 35 IAmb IAmb 03 42 05.8
comp=Z,82nm,1.5s
U15A North Rim 86.62 47 IAmb IAmb 03 42 35.4
comp=Z,58nm,1.1s
G05D Wamic, OR 86.64 36 P P 03 42 02.3 -0.5
baz=228
O18K Koktuh Hills 86.70 11 P P 03 42 02.7 -0.1
O18K Koktuh Hills 86.70 11 P P 03 42 01.9 -0.9
baz=200
EFI East Falkland 86.71 147 P P 03 42 05.0 +1.8
EFI East Falkland 86.71 147 *e*P P 03 42 01.7 -1.6
EFI pmax pmax
comp=Z,44nm,0.6s
BNX BinXian 86.72 325 ⇓P P 03 42 02.4 -0.8
BNX pmax pmax
comp=Z,45nm,1.4s
BNX pmax pmax
comp=Z,1μm,4.2s
WUAZ Wupatki 86.72 48 IAmb IAmb 03 42 35.7
comp=Z,60nm,1.1s
WUAZ Wupatki 86.72 48 P P 03 42 04.7 +1.0
baz=236
N16K Nishlik Lake 86.73 9 P P 03 42 02.7 -0.2
baz=196,SNR=51
SZCU Shurtz Canyon 86.77 46 IAmb IAmb 03 42 35.9
comp=Z,43nm,1.2s
SPR3 Spring Creek 3 86.79 44 P P 03 42 03.7 -0.5
SPR3 IAmb IAmb 03 42 35.0
comp=Z,24nm,1.1s
P19K Oil Pt 86.86 12 P P 03 42 03.6 -0.1
P19K IAmb IAmb 03 42 13.9
comp=Z,60nm,0.9s
P19K pP pP 03 42 32.5 +0.2
P19K Oil Pt 86.86 12 P P 03 42 03.3 -0.3
baz=201,SNR=6.6
PAYG Puerto Ayora 86.92 89 P P 03 42 05.8 +0.8
PAYG IAmb IAmb 03 43 14.3
comp=Z,94nm,1.2s
KLR Kul'dur 86.97 329 P P 03 42 04.8 +0.5
comp=Z,16nm,0.9s,baz=126,slow=4.5,SNR=52
comp=Z,16nm,0.9s
KLR Kul'dur 86.97 329 *d*iP P 03 42 04.7 +0.3
KLR pmax pmax
comp=Z,174nm,2.5s
KLR MLR MLR
comp=Z,4μm,16.0s
KCSI Kotacane, Aceh 87.00 275 P P 03 42 05.0 -0.4
comp=Z,3μmcomp=Z,34nm,1.2s
TIA Tai'an 87.02 312 ⇓P P 03 42 04.7 -0.2
TIA pmax pmax
comp=Z,51nm,1.6s
CNPM China Poot 87.13 13 IAmb IAmb 03 42 09.4
comp=Z,40nm,1.0s
X18A Snowflake 87.14 50 IAmb IAmb 03 42 37.7
comp=Z,53nm,1.0s
O19K Port Alsworth 87.17 11 P P 03 42 03.8 -1.2
baz=200,SNR=17
HOM Homer 87.17 13 P P 03 42 04.1 -0.9
baz=203
PKCU Pink Cliffs 87.19 46 IAmb IAmb 03 42 38.7
comp=Z,84nm,1.1s
ILSW Iliana Southw 87.19 12 IAmb IAmb 03 42 07.7
comp=Z,110nm,1.0s
H02S1 DAWSON INLET T 87.24 25 P P 03 42 07.7 +2.2
SNR=3.6
GO05 Huala 87.33 128 P P 03 42 06.9 +0.2
GO05 IAmb IAmb 03 42 09.1
comp=Z,64nm,1.0s
ML02 Panimavida 87.33 128 P P 03 42 06.6 0.0
N18K Kilae Creek 87.36 10 P P 03 42 05.9 -0.1
N18K Kilae Creek 87.36 10 P P 03 42 05.9 -0.1
baz=199,SNR=8.3
O20K Slope Mountain 87.38 12 P P 03 42 06.2 +0.1
baz=202
BRLK Bradley Lake 87.42 13 IAmb IAmb 03 42 10.7
comp=Z,49nm,1.0s
BRSE Bradley Lake S 87.43 13 P P 03 42 06.6 +0.3
baz=204,SNR=7.9
SRIT Nakonsritamara 87.54 281 P P 03 42 07.4 -0.5
121A Cookes Peak, D 87.59 52 IAmb IAmb 03 42 42.0
comp=Z,48nm,1.1s
121A Cookes Peak, D 87.59 52 P P 03 42 10.2 +2.2
baz=238
121A Cookes Peak, D 87.59 52 P P 03 42 10.0 +2.0
baz=238,SNR=24
MTPU Mount Pierson 87.61 46 IAmb IAmb 03 42 12.3
comp=Z,34nm,0.9s
W18A Petrified Fore 87.61 49 IAmb IAmb 03 42 39.9
comp=Z,73nm,1.1s
W18A Petrified Fore 87.61 49 P P 03 42 08.6 +0.6
baz=237,SNR=16
N19K Bonanza Creek 87.73 11 P P 03 42 07.3 -0.5
N19K IAmb IAmb 03 42 11.4
comp=Z,29nm,0.9s
N19K Bonanza Creek 87.73 11 P P 03 42 07.4 -0.5
baz=200,SNR=16
TCRU Three Creeks R 87.76 45 IAmb IAmb 03 42 40.7
comp=Z,39nm,1.2s
SVW2 Sparrevohn 87.81 10 IAmb IAmb 03 42 58.7
comp=Z,54nm,1.6s
SEW Seward 88.03 13 IAmb IAmb 03 42 13.3
comp=Z,42nm,1.2s
SEW Seward 88.03 13 P P 03 42 09.5 +0.4
baz=205
BO01 Tunca 88.24 127 P P 03 42 11.7 +0.7
BO01 IAmb IAmb 03 42 13.3
comp=Z,51nm,1.1s
BO02 Sierra Bellavi 88.26 128 IAmb IAmb 03 42 13.8
comp=Z,51nm,0.9s
LTY Liberty 88.30 35 IAmb IAmb 03 43 08.2
comp=Z,44nm,1.4s
O22K Cooper Landing 88.32 13 P P 03 42 09.2 -1.3
baz=204
MT01 Popeta 88.38 127 P P 03 42 12.1 +0.4
P23K Montague Islan 88.39 14 P P 03 42 09.8 -1.0
baz=207
DUG Dugway, Tooele 88.44 44 P P 03 42 10.4 -1.4
baz=235,SNR=8.5
SPCR Spurr Chakacha 88.49 12 P P 03 42 10.7 -0.7
baz=202
MA2 Magadan 88.54 344 P P 03 42 11.2 -0.4
MA2 Magadan 88.54 344 *d*iP P 03 42 11.1 -0.4
MA2 pmax pmax
comp=Z,353nm,2.5s
MA2 MLR MLR
comp=Z,5μm,16.0s
MA2 Magadan 88.54 344 P P 03 42 11.1 -0.4
MT09 Talagante 88.61 127 P P 03 42 13.4 +0.5
MT09 IAmb IAmb 03 42 15.2
comp=Z,68nm,1.1s
Q16A Castle Valley 88.76 45 IAmb IAmb 03 42 28.6
comp=Z,26nm,1.0s
M19K Big River Lodg 88.77 11 P P 03 42 12.3 -0.3
baz=200,SNR=14
GAMB Gambell 88.83 2 IAmb IAmb 03 42 14.2
comp=Z,114nm,1.8s
GAMB Gambell 88.83 2 P P 03 42 13.1 +0.3
baz=185
RC01 Rabbit Creek A 88.87 13 IAmb IAmb 03 42 17.4
comp=Z,50nm,1.0s
RC01 Rabbit Creek A 88.87 13 P P 03 42 11.8 -1.3
baz=204,SNR=10.0
MNTX Cornudas Mount 88.90 54 IAmb IAmb 03 42 17.3
comp=Z,27nm,0.8s
MNTX Cornudas Mount 88.90 54 P P 03 42 15.3 +1.3
baz=239
MNTX Cornudas Mount 88.90 54 P P 03 42 13.3 -0.7
baz=239,SNR=54
Y22A Socorro 88.92 51 P P 03 42 15.9 +1.7
baz=238
L19K White Mountain 88.95 10 IAmb IAmb 03 42 15.4
comp=Z,72nm,1.3s
L19K White Mountain 88.95 10 P P 03 42 12.9 -0.6
baz=200,SNR=34
PWL Port Wells 88.95 14 IAmb IAmb 03 42 17.7
comp=Z,64nm,1.1s
PWL Port Wells 88.95 14 P P 03 42 11.8 -1.7
baz=206
M20K Styx River 88.96 11 IAmb IAmb 03 42 59.3
comp=Z,53nm,1.7s
M20K Styx River 88.96 11 P P 03 42 12.2 -1.4
baz=202
TX31 Lajitas Ar. Si 89.00 57 P P 03 42 15.8 +1.2
baz=240
TX32 Lajitas Array 89.00 57 IAmb IAmb 03 42 48.0
comp=Z,48nm,1.4s
TXAR Lajitas Array 89.00 57 P P 03 42 15.3 +0.7
comp=Z,11nm,0.8s,baz=213,slow=6.1,SNR=87
TXAR pP pwP 03 42 45.8 +2.2
comp=Z,8.3nm,0.9s,baz=216,slow=5.9,SNR=4.4
TXAR PKKPbc PKKPbc 03 59 53.4 +0.4
comp=Z,0.9nm,0.9s,baz=108,slow=4.1,SNR=7.8
TXAR PKPPKP P'P'df 04 08 02.4 +1.4
comp=Z,0.8nm,1.0s,baz=33,slow=2.2,SNR=3.0
comp=Z,11nm,0.8s
TXAR Lajitas Array 89.00 57 P P 03 42 14.4 -0.2
Y22D IRÍS PASSCAL I 89.02 51 P P 03 42 16.7 +2.1
baz=238
Y22D IRIS PASSCAL I 89.02 51 P P 03 42 15.5 +0.9
baz=238
D08A Wollman Farm, 89.08 36 IAmb IAmb 03 42 17.6
comp=Z,40nm,0.9s
LMEL Las Melosas 89.14 127 IAmb IAmb 03 42 20.4
comp=Z,85nm,1.5s
PEL Peldehue 89.14 126 IAmb IAmb 03 42 18.6
comp=Z,40nm,0.9s
E09A Wood Farm, Sta 89.15 36 IAmb IAmb 03 42 17.6
comp=Z,35nm,1.0s
GLI Glacier Island 89.24 14 P P 03 42 14.5 -0.3
baz=207
SIT Sitka 89.25 21 P P 03 42 13.9 -1.0
baz=217
EYAK Cordova Ski Ar 89.25 15 IAmb IAmb 03 42 57.8
comp=Z,41nm,1.1s
EYAK Cordova Ski Ar 89.25 15 P P 03 42 15.7 +0.8
baz=208,SNR=5.6
SRU San Rafael Swe 89.28 46 IAmb IAmb 03 42 47.1
comp=Z,38nm,1.0s
HNS HongShan 89.29 312 ⇓P P 03 42 16.0 +0.4
HNS pmax pmax
comp=Z,69nm,2.0s
ENH Enshi 89.31 304 P P 03 42 15.0 -1.0
F10A Beach Ranch, E 89.31 37 IAmb IAmb 03 42 18.1
comp=Z,42nm,0.8s
LYN LuoYang 89.31 309 ⇓*i*P P 03 42 15.5 -0.3
LYN pmax pmax
comp=Z,70nm,2.3s
LYN pmax pmax
comp=Z,2μm,13.5s
LYN LR LR
comp=Z,3μm,17.3s
LYN LR LR
comp=Z,3μm,17.8s
LYN LR LR
comp=Z,4μm,17.3s
SKT Skwentna 89.34 12 IAmb IAmb 03 42 18.4
comp=Z,29nm,1.0s
SKT Skwentna 89.34 12 P P 03 42 13.7 -1.6
baz=203
P17A Butcher Ranch, 89.35 45 IAmb IAmb 03 42 47.7
comp=Z,35nm,1.1s
CTU Camp Tracy 89.39 44 IAmb IAmb 03 42 48.8
comp=Z,26nm,1.0s
L20K Farewell, AK 89.39 11 P P 03 42 13.6 -1.9
baz=201,SNR=17
M22K Willow 89.40 13 P P 03 42 15.9 +0.4
M22K Willow 89.40 13 P P 03 42 14.9 -0.6
baz=204,SNR=7.2
KNK Knik Glacier 89.43 13 IAmb IAmb 03 42 18.2
comp=Z,46nm,1.0s
KNK Knik Glacier 89.43 13 P P 03 42 15.0 -0.7
baz=206,SNR=7.8
HLID Hailey 89.44 40 P P 03 42 17.4 +1.0
baz=233,SNR=16
PLID Pearl Lake 89.44 38 IAmb IAmb 03 43 03.1
comp=Z,43nm,1.2s
PMR Palmer 89.45 13 IAmb IAmb 03 42 20.0
comp=Z,26nm,0.8s
PMR Palmer 89.45 13 P P 03 42 14.5 -1.3
baz=205,SNR=13
TTA Tatalina 89.48 10 IAmb IAmb 03 42 19.4
comp=Z,37nm,1.2s
TTA Tatalina 89.48 10 P P 03 42 15.3 -0.7
baz=199,SNR=27
JLU Jordanelle 89.53 44 IAmb IAmb 03 42 26.1
comp=Z,79nm,2.0s
MVCO Mesa Verde 89.59 48 P P 03 42 15.6 -1.7
baz=237,SNR=6.9

GYA	Guiyang	89.63	299	⇑*i*	P		P		03 42 18.6	+0.9
GYA					sP		sP		03 42 53.8	-4.6
GYA					SKS		**SKSac**		**03 52 39.3**	**+1.2**
GYA					S		**ScS**		**03 53 07.5**	**+3.6**
GYA					pmax		pmax			
	comp=Z,40nm,1.9s									
GYA					LR		LR			
	comp=Z,3μm,18.6s									
GYA					LR		LR			
	comp=Z,2μm,14.4s									
GYA					LR		LR			
	comp=Z,3μm,16.3s									
B08A	Colville Reser	89.70	34		IAmb		IAmb		03 42 19.7	
	comp=Z,26nm,0.9s									
DIV	Divide	89.76	15		IAmb		IAmb		03 42 19.8	
	comp=Z,63nm,1.1s									
WRAK	Wrangell Islan	89.77	23		IAmb		IAmb		03 42 21.8	
	comp=Z,29nm,0.9s									
WRAK	Wrangell Islan	89.77	23		P		P		03 42 18.7	+1.4
	baz=220,SNR=11									
BJT	Baijiatuau	89.77	315		P		P		03 42 17.4	-0.4
BJT	Baijiatuau	89.77	315		P		P		03 42 17.4	-0.4
BJT					pmax		pmax			
	comp=Z,247nm,1.8s									
BJI	Beijing	89.78	315		P		P		03 42 17.5	-0.3
BJI					pmax		pmax			
	comp=Z,78nm,2.0s									
BJI					LR		LR			
	comp=Z,810nm,17.1s									
BJI					LR		LR			
	comp=Z,4μm,18.4s									
BJI					LR		LR			
	comp=Z,7μm,18.0s									
ANMO	Albuquerque	89.80	51		P		P		03 42 18.5	+0.2
ANMO					IAmb		IAmb		03 42 50.0	
	comp=Z,62nm,1.1s									
ANMO	Albuquerque	89.80	51	*ce*	P		P		03 42 19.8	+1.4
ANMO					pmax		pmax			
	comp=Z,39nm,1.3s									
ANMO	Albuquerque	89.80	51		P		P		03 42 19.8	+1.4
	baz=239									
ANMO	Albuquerque	89.80	51		P		P		03 42 17.2	-1.1
	baz=239									
SML	Sawmill	89.81	13		P		P		03 42 17.8	+0.2
	baz=206									
TCUT	Toone Canyon	89.84	44		IAmb		IAmb		03 42 50.0	
	comp=Z,48nm,1.1s									
CO02	Combarbal	89.87	125		P		P		03 42 19.5	+0.7
C09A	Chrisman Ranch	89.89	35		IAmb		IAmb		03 42 21.0	
	comp=Z,32nm,0.9s									
BMRM	Bremner River	89.89	15		IAmb		IAmb		03 42 29.1	
	comp=Z,52nm,1.0s									
BMRM	Bremner River	89.89	15		P		P		03 42 17.5	-0.5
	baz=209,SNR=11									
PV23	Carpenter Ridg	89.91	47		P		P		03 42 19.4	+0.5
PV11	David Mesa, Pa	89.92	47		IAmb		IAmb		03 42 50.1	
	comp=Z,45nm,1.4s									
M23K	Glacier View	89.92	14		P		P		03 42 16.7	-1.4
	baz=206,SNR=8.2									
CUT	Chulitna	89.97	12		P		P		03 42 17.2	-0.9
	baz=204,SNR=6.4									
ANM	Nome	89.99	5		P		P		03 42 16.8	-1.4
	baz=190									
SCM	Sheep Creek Mo	90.05	14		P		P		03 42 18.2	-0.5
	baz=207,SNR=17									
KLU	Klutina	90.05	14		IAmb		IAmb		03 42 21.3	
	comp=Z,29nm,1.0s									
KLU	Klutina	90.05	14		P		P		03 42 18.5	-0.2
	baz=208,SNR=9.5									
CRQM	Cirque	90.07	16		IAmb		IAmb		03 42 56.2	
	comp=Z,44nm,1.0s									
PPLA	Purkeypile	90.07	11		P		P		03 42 18.0	-0.8
	baz=202									
CRQE	Cirque	90.08	16		P		P		03 42 19.0	+0.1
	baz=210,SNR=5.3									
PNL	Peninsula	90.14	18		P		P		03 42 18.8	-0.2
	baz=214									
TGL	Tana Glacier	90.14	16		IAmb		IAmb		03 42 56.5	
	comp=Z,33nm,1.0s									
K20K	Telida	90.18	10		IAmb		IAmb		03 42 23.5	
	comp=Z,43nm,1.4s									
K20K	Telida	90.18	10		P		P		03 42 18.6	-0.6
	baz=201,SNR=22									
CO03	El Pedregal	90.28	124		IAmb		IAmb		03 42 23.1	
	comp=Z,48nm,1.2s									
GRNC	Granite Creek	90.40	17		IAmb		IAmb		03 42 35.2	
	comp=Z,31nm,0.8s									
VRDI	Verde Repeater	90.40	16		IAmb		IAmb		03 42 25.3	
	comp=Z,34nm,1.0s									
N25K	Chitina, Valde	90.45	15		IAmb		IAmb		03 42 36.0	
	comp=Z,30nm,0.9s									
N25K	Chitina, Valde	90.45	15		P		P		03 42 21.3	+0.7
	baz=209,SNR=13									
GLB	Gilahina Butte	90.50	15		IAmb		IAmb		03 42 23.4	
	comp=Z,20nm,0.9s									
M24K	Tolsona, Glenn	90.54	14		IAmb		IAmb		03 43 31.6	
	comp=Z,46nm,1.0s									
M24K	Tolsona, Glenn	90.54	14		P		P		03 42 21.5	+0.5
	baz=208									
CAST	Castle Rocks	90.57	11		IAmb		IAmb		03 42 22.6	
	comp=Z,33nm,0.9s									
CAST	Castle Rocks	90.57	11		P		P		03 42 19.1	-2.0
	baz=202,SNR=44									
P29M	Windy Craggy	90.58	19		P		P		03 42 22.2	+1.1
	baz=215									
BESE	Bessie Mountai	90.61	21		IAmb		IAmb		03 42 25.9	
	comp=Z,40nm,1.4s									
WAT6	Susitna Watana	90.63	13		P		P		03 42 21.2	-0.2
	baz=206,SNR=9.0									
MCARA	McCarthy VSAT	90.64	16		IAmb		IAmb		03 42 25.0	
	comp=Z,43nm,1.0s									
MCARA	McCarthy VSAT	90.64	16		P		P		03 42 20.9	-0.4
	baz=210,SNR=9.3									
LOGN	Logan Glacier	90.67	17		P		P		03 42 21.9	+0.2
LOGN					IAmb		IAmb		03 42 35.9	
	comp=Z,26nm,0.8s									
WAT1	Susitna Watana	90.69	13		P		P		03 42 20.9	-0.7
	baz=206									
CTG	Chitna Glacier	90.70	17		P		P		03 42 20.9	-1.0
	baz=212,SNR=6.3									
CTGM	Chitina Glacie	90.70	17		IAmb		IAmb		03 42 52.9	
	comp=Z,30nm,0.8s									
NEW	Newport	90.79	35		P		P		03 42 21.5	-0.9
	baz=232,SNR=11									
TNA	Tin City	90.80	4		IAmb		IAmb		03 42 22.9	
	comp=Z,26nm,0.9s									
TNA	Tin City	90.80	4		P		P		03 42 21.8	-0.1
	baz=188									
O28M	Mount Upton	90.84	17		P		P		03 42 21.8	-0.8
	baz=213									
PLBC	Pleasant Camp	90.85	20		P		P		03 42 22.1	-0.2
	baz=216									
O29M	Mount Kennedy	90.89	18		P		P		03 42 22.2	-0.5
	baz=214									
KTH	Kantishna Hill	90.90	11		IAmb		IAmb		03 42 55.4	
	comp=Z,20nm,0.9s									
TRF	Thorofare Moun	90.92	12		IAmb		IAmb		03 43 00.8	
	comp=Z,39nm,0.8s									
TRF	Thorofare Moun	90.92	12		P		P		03 42 22.4	-0.4
	baz=204,SNR=21									
J20K	Nowinta River	90.94	10		IAmb		IAmb		03 42 23.6	
	comp=Z,33nm,1.4s									
J20K	Nowinta River	90.94	10		P		P		03 42 21.8	-0.9
	baz=201,SNR=14									
T35M	Bob Quinn	90.95	24		P		P		03 42 22.8	-0.1
	baz=221									
AHID	Auburn Hatcher	90.96	42		IAmb		IAmb		03 42 57.0	
	comp=Z,40nm,1.1s									
CHUM	Lake Minchumin	90.96	11		P		P		03 42 22.1	-0.7
	baz=202,SNR=7.9									
TIY	Taiyuan	90.98	312		*eP*		P		03 42 24.8	+1.2
TIY					pmax		pmax			
	comp=Z,59nm,0.5s									
TIY					LR		LR			
	comp=Z,4μm,15.2s									
TIY					LR		LR			
	comp=Z,1μm,15.2s									
TIY					LR		LR			
	comp=Z,4μm,15.7s									
S22A	4UR Ranch, Cre	91.00	48		IAmb		IAmb		03 42 55.6	
	comp=Z,44nm,1.1s									
S22A	4UR Ranch, Cre	91.00	48		P		P		03 42 22.5	-1.5
	baz=238,SNR=34									
HARP	HAARP	91.02	14		P		P		03 42 22.1	-1.1
	baz=208									
GCSA	Galena City Sc	91.08	9		P		P		03 42 22.8	-0.5
	baz=198									
SEY	Seymchan	91.15	347	⇓*e*	P		P		03 42 23.5	-0.1
SEY					pmax		pmax			
	comp=Z,147nm,2.2s									
DHY	Denali Highway	91.15	13		P		P		03 42 23.8	-0.1
	baz=207,SNR=6.5									
RND	Reindeer	91.15	12		P		P		03 42 23.7	-0.1
RND					IAmb		IAmb		03 42 33.9	
	comp=Z,40nm,0.9s									
RND	Reindeer	91.15	12		P		P		03 42 23.7	-0.1
RND					pmax		pmax			
	comp=Z,40nm,0.9s									
SKAG	Skagway	91.17	20		P		P		03 42 23.9	+0.1
	baz=217									
P30M	Million Dollar	91.21	19		P		P		03 42 22.5	-1.6
	baz=216									
O20A	White River Ci	91.32	46		IAmb		IAmb		03 43 28.7	
	comp=Z,34nm,1.4s									
O20A	White River Ci	91.32	46		P		P		03 42 23.8	-1.6
	baz=238,SNR=7.2									
BPAW	Bear Paw Mtn.	91.39	11		P		P		03 42 22.8	-2.0
	baz=203									
ZON	Zonda	91.41	126		P		P		03 42 26.0	+0.1
ZON					IAmb		IAmb		03 42 58.3	
	comp=Z,35nm,1.5s									
ZON	Zonda	91.41	126		P		P		03 42 26.0	+0.1
ZON					pmax		pmax			
	comp=Z,35nm,1.5s									
MCK	McKinley	91.43	12		IAmb		IAmb		03 43 13.4	
	comp=Z,42nm,1.2s									
MCK	McKinley	91.43	12		P		P		03 42 24.0	-1.0
	baz=205,SNR=7.7									
REDW	Red Top Meadow	91.44	42		IAmb		IAmb		03 42 28.9	
	comp=Z,26nm,1.0s									
TPAW	Teton Pass	91.46	42		IAmb		IAmb		03 42 56.5	
	comp=Z,30nm,1.1s									
PAX	Paxson	91.46	14		P		P		03 42 25.0	-0.2
	baz=208,SNR=11									
YUK6	Outpost Mounta	91.48	18		P		P		03 42 23.1	-2.4
	baz=214									
M26K	Nabesna, AK	91.52	15		IAmb		IAmb		03 43 20.3	
	comp=Z,76nm,1.7s									
M26K	Nabesna, AK	91.52	15		P		P		03 42 26.6	+1.1
	baz=210,SNR=18									
SNOW	Snow King Moun	91.56	42		IAmb		IAmb		03 42 29.5	
	comp=Z,34nm,0.9s									
XAN	Xi'an	91.58	307	⇓	P		P		03 42 26.4	-0.1
XAN					pP		pP		03 42 48.2	-7.3
XAN					sP		sP		03 42 58.1	-9.2
XAN					SKS		**SKSac**		**03 52 50.7**	**+1.9**
XAN					S		**ScS**		**03 53 18.8**	**-0.9**
XAN					sS		pS		03 53 54.2	+0.3
XAN					SS		**SS**		**03 59 32.4**	**+5.4**
XAN					pmax		pmax			
	comp=Z,52nm,1.4s									
XAN					pmax		pmax			
	comp=Z,1μm,5.7s									
XAN					LR		LR			
	comp=Z,3μm,18.0s									
XAN					LR		LR			
	comp=Z,3μm,17.0s									
XAN					LR		LR			
	comp=Z,5μm,18.2s									
YUK3	Moose Creek	91.62	17		P		P		03 42 26.8	+0.6
	baz=213,SNR=9.0									
HYT	Haines Junctio	91.63	18		IAmb		IAmb		03 43 21.1	
	comp=Z,30nm,1.5s									
HYT	Haines Junctio	91.63	18		P		P		03 42 27.4	+1.3
	baz=215									
MSO	Missoula	91.64	38		P		P		03 42 25.4	-1.1
	baz=234									
SMCO	Snowmass	91.64	47		IAmb		IAmb		03 43 00.4	
	comp=Z,21nm,1.0s									
IMW	Indian Meadow	91.69	41		IAmb		IAmb		03 42 30.2	
	comp=Z,22nm,0.9s									
MOOW	Moose Ponds	91.72	42		IAmb		IAmb		03 43 14.9	
	comp=Z,48nm,1.6s									
LOHW	Long Hollow	91.73	42		IAmb		IAmb		03 43 14.8	
	comp=Z,40nm,1.5s									
YUK4	Talbot Arm	91.74	17		P		P		03 42 26.7	0.0
	baz=214									
M27K	Edge Creek, AK	91.75	16		P		P		03 42 26.7	0.0
	baz=211,SNR=17									
833A	Chaparral WMA,	91.81	60		IAmb		IAmb		03 42 30.2	
	comp=Z,29nm,0.9s									
833A	Chaparral WMA,	91.81	60		P		P		03 42 28.6	+1.0
	baz=242									
833A	Chaparral WMA,	91.81	60		P		P		03 42 26.0	-1.6
	baz=242									
MENT	Mentasta	91.82	15		IAmb		IAmb		03 43 41.1	
	comp=Z,20nm,1.1s									
SDCO	Great Sand Dun	91.90	49		P		P		03 42 28.7	+0.5
SDCO					pP		**pP**		**03 42 56.6**	**-0.6**
SDCO					IAmb		IAmb		03 42 59.3	
	comp=Z,22nm,1.1s									
SDCO	Great Sand Dun	91.90	49		P		P		03 42 29.2	+1.0
	baz=239									
SDCO	Great Sand Dun	91.90	49		P		P		03 42 28.7	+0.5
	baz=239,SNR=22									
BW06	Boulder Array	91.91	43		IAmb		IAmb		03 43 00.2	
	comp=Z,28nm,1.0s									
BW06	Boulder Array	91.91	43		P		P		03 42 28.3	+0.3
	baz=237,SNR=36									
PD31	Pinedale Array	91.91	43		P		P		03 42 28.1	+0.1
PD31					IAmb		IAmb		03 43 00.2	
	comp=Z,26nm,1.0s									
PDAR	Pinedale Array	91.91	43		P		P		03 42 27.7	-0.3
	comp=Z,15nm,0.8s,baz=204,slow=3.4,SNR=93									
PDAR					pP		**pP**		**03 42 57.9**	**+1.0**
	comp=Z,20nm,0.9s,baz=208,slow=2.9,SNR=6.3									
PDAR					PKKP		**PKKPdf**		**03 59 42.6**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=101,slow=3.2,SNR=6.9									
PDAR					PKPPKP		**P'P'df**		**04 07 55.8**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=158,slow=1.6,SNR=3.7									
	comp=Z,15nm,0.8s									
FLWY	Flagg Ranch	91.94	41		IAmb		IAmb		03 42 31.5	
	comp=Z,31nm,0.8s									
MSTX	Muleshoe	91.94	53		P		P		03 42 28.8	+0.6
	baz=241									
MSTX	Muleshoe	91.94	53		P		P		03 42 28.8	+0.6
	baz=241,SNR=17									
CRAI	Chiangrai	91.94	291		P		P		03 42 29.0	+0.6
XLT	XiLinHaoTe	91.98	318	⇓*i*	P		P		03 42 27.7	-0.4
XLT					pmax		pmax			
	comp=Z,40nm,2.0s									
XLT					LR		LR			
	comp=Z,2μm,17.2s									
XLT					LR		LR			
	comp=Z,4μm,17.9s									
YPP	Pitchstone Pla	91.98	41		IAmb		IAmb		03 43 28.4	
	comp=Z,66nm,1.9s									
L26K	Log Cabin Wild	91.98	15		P		P		03 42 28.7	+1.2
	baz=210									
O30N	Mendenhall	91.99	19		P		P		03 42 29.0	+1.3
	baz=216									
BVCY	Beaver Creek	92.05	16		P		P		03 42 29.0	+1.1
	baz=212									
YFT	Old Faithful	92.06	41		IAmb		IAmb		03 42 34.7	
	comp=Z,22nm,1.0s									
YMR	Madison River	92.11	41		IAmb		IAmb		03 43 01.0	
	comp=Z,44nm,1.2s									
DLBC	Dease Lake	92.12	23		IAmb		IAmb		03 43 23.3	
	comp=Z,23nm,1.2s									
DLBC	Dease Lake	92.12	23		P		P		03 42 27.9	-0.4
	baz=222									
ZEA	Zeya	92.12	331	*eP*			P		03 42 28.5	+0.1
ZEA					pmax		pmax			
	comp=N,20nm,0.7s									
ZEA					pmax		pmax			
	comp=Z,30nm,0.9s									
K24K	Donnelly Dome	92.13	13		P		P		03 42 27.8	-0.4
	baz=208,SNR=9.4									
KMI	Kunming	92.15	297	⇓	P		P		03 42 30.1	+0.6
KMI					pmax		pmax			
	comp=Z,73nm,1.1s									
H17A	Grant Village	92.19	41		P		P		03 42 30.2	+1.0
H17A					IAmb		IAmb		03 42 33.4	
	comp=Z,16nm,0.8s									
H17A							pP		03 42 56.1	-2.1
H17A	Grant Village	92.19	41		P		P		03 42 30.4	+1.2
	baz=236									
NEA2	Nenana	92.19	12		IAmb		IAmb		03 42 31.1	
	comp=Z,35nm,1.7s									
NEA2	Nenana	92.19	12		P		P		03 42 27.5	-1.0
	baz=205									
I21K	Tanana	92.22	10		IAmb		IAmb		03 42 32.5	
	comp=Z,20nm,1.0s									
I21K	Tanana	92.22	10		P		P		03 42 28.3	-0.3
	baz=202,SNR=18									
BOZ	Bozeman (W)	92.24	40		IAmb		IAmb		03 42 32.4	
	comp=Z,22nm,0.8s									
BOZ	Bozeman (W)	92.24	40		P		P		03 42 29.7	+0.4
	baz=235,SNR=40									
WHY	Whitehorse	92.26	19		P		P		03 42 29.6	+0.6
	baz=217									
N30M	Aishikik Lake	92.26	18		P		P		03 42 30.6	+1.7
	baz=216									
WRH	Wood River Hil	92.26	12		IAmb		IAmb		03 43 15.8	
	comp=Z,26nm,1.1s									
RIDG	Independent Ri	92.27	14		IAmb		IAmb		03 42 38.2	
	comp=Z,17nm,1.0s									
RIDG	Independent Ri	92.27	14		P		P		03 42 29.2	+0.3
	baz=209,SNR=10									
MLY	Manley	92.29	11		P		P		03 42 28.9	-0.1
	baz=204									
YNR	Norris Junctio	92.30	41		IAmb		IAmb		03 43 18.5	
	comp=Z,44nm,1.5s									
T25A	Trinidad	92.34	50		IAmb		IAmb		03 43 01.1	
	comp=Z,21nm,1.1s									
T25A	Trinidad	92.34	50		P		P		03 42 29.7	-0.5
	baz=240,SNR=8.5									
DOT	Dot Lake	92.36	14		IAmb		IAmb		03 42 32.2	
	comp=Z,15nm,0.8s									
L27K	Beaver Creek,	92.37	15		P		P		03 42 29.9	+0.5
	baz=211,SNR=7.2									
LKWY	Lake	92.38	41		IAmb		IAmb		03 43 06.2	
	comp=Z,20nm,0.8s									
CM31	Chiang Mai Arr	92.39	289		P		P		03 42 31.3	+0.9
CM31	Chiang Mai Arr	92.39	289		P		P		03 42 32.3	+1.8
	SNR=21									
CMAR	Chiang Mai Arr	92.39	289		P		P		03 42 31.1	+0.6
	comp=Z,48nm,0.9s,baz=129,slow=2.9,SNR=124									
CMAR					PKKPbc		**PKKPbc**		**03 59 45.6**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=296,slow=4.6,SNR=5.7									
	comp=Z,48nm,0.9s									
CMAR	Chiang Mai Arr	92.39	289	*i*	P		P		03 42 31.5	+1.0
CMAR					pmax		pmax			
	comp=Z,50nm,0.9s									
HDA	Harding Lake	92.43	13		IAmb		IAmb		03 42 39.4	
	comp=Z,17nm,0.7s									
HDA	Harding Lake	92.43	13		P		P		03 42 29.3	-0.3
	baz=207,SNR=16									
CCB	Clear Creek Bu	92.47	12		IAmb		IAmb		03 42 38.9	
	comp=Z,13nm,0.6s									
JCT	Junction City	92.49	57		IAmb		IAmb		03 42 32.9	
	comp=Z,21nm,0.8s									
JCT	Junction City	92.49	57		P		P		03 42 31.3	+0.5
	baz=242									
JCT	Junction City	92.49	57		P		P		03 42 29.5	-1.2
	baz=242									
R33M	Jennings River	92.52	22		P		P		03 42 30.4	+0.2
	baz=221									
TRQA	Tornquist	92.53	134		P		P		03 42 32.3	+1.4
TRQA					IAmb		IAmb		03 42 34.2	
	comp=Z,35nm,1.1s									
TRQA	Tornquist	92.53	134		P		P		03 42 32.3	+1.4
TRQA					pmax		pmax			
	comp=Z,35nm,1.1s									
H21K	Melozitna Rive	92.53	10		IAmb		IAmb		03 42 34.4	
	comp=Z,59nm,2.0s									
H21K	Melozitna Rive	92.53	10		P		P		03 42 29.7	-0.3
	baz=202,SNR=9.2									
CHTO	Chiang Mai	92.54	289		P		P		03 42 31.1	0.0
CHTO	Chiang Mai	92.54	289		P		P		03 42 31.2	0.0
CHTO					pmax		pmax			
	comp=Z,80nm,0.9s									
CHTO	Chiang Mai	92.54	289		P		P		03 42 33.3	+2.1
CHTO	Chiang Mai	92.54	289		P		P		03 42 32.1	+0.9
P33M	Teslin, Yukon	92.54	20		P		P		03 42 30.2	-0.1
	baz=219									
I23K	Minto, Yukon-K	92.64	11		P		P		03 42 28.6	-1.9
	baz=205									
N31M	Braeburn, Yuko	92.66	19		P		P		03 42 30.5	-0.3
	baz=217									
SCRK	Sand Creek	92.67	14		P		P		03 42 29.9	-0.9
	baz=210,SNR=15									
TCOL	CIGO, UAF Yank	92.67	12		IAmb		IAmb		03 42 34.3	
	comp=Z,21nm,0.9s									
TCOL	CIGO, UAF Yank	92.67	12		P		P		03 42 30.6	0.0
	baz=206									
COLA	College	92.67	12		P		P		03 42 30.5	-0.1
COLA					IAmb		IAmb		03 42 34.3	
	comp=Z,19nm,0.9s									
COLA	College	92.67	12	*ci*	P		P		03 42 30.1	-0.5
COLA					pmax		pmax			
	comp=Z,21nm,1.0s									
COLA	College	92.67	12		P		P		03 42 30.0	-0.6
	baz=206									
MDM	Murphy Dome	92.67	12		IAmb		IAmb		03 42 34.2	
	comp=Z,37nm,1.5s									
M29M	Somme Creek	92.69	17		P		P		03 42 31.0	0.0
	baz=214									
Q24A	Divide	92.75	48		IAmb		IAmb		03 43 03.4	
	comp=Z,25nm,1.2s									
Q24A	Divide	92.75	48		P		P		03 42 32.9	+0.8
	baz=239,SNR=7.1									
IL31		92.76	13		IAmb		IAmb		03 42 39.6	
	comp=Z,31nm,1.5s									
ILAR	Eielson Array	92.76	13		P		P		03 42 30.4	-0.7
	comp=Z,4.8nm,0.8s,baz=221,slow=4.9,SNR=28									
ILAR					PKKP		**PKKPdf**		**03 59 43.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=8.4,slow=1.9,SNR=4.9									
	comp=Z,4.8nm,0.8s									
RWWY	Rawlins	92.80	45		IAmb		IAmb		03 43 19.3	
	comp=Z,17nm,1.1s									
ISCO	Idaho Springs	92.87	47		P		P		03 42 33.4	+0.8
	baz=239									
ISCO	Idaho Springs	92.87	47		P		P		03 42 32.1	-0.5
	baz=239,SNR=7.3									
J25K	Salcha River,	92.93	13		IAmb		IAmb		03 42 42.1	
	comp=Z,12nm,0.7s									
J25K	Salcha River,	92.93	13		P		P		03 42 31.9	-0.1
	baz=208,SNR=14									
POKR	Poker Plat Res	92.97	12		P		P		03 42 31.3	-0.7
	baz=207									
HIA	Hailar	92.97	324		P		P		03 42 31.7	-0.8
HIA					IAmb		IAmb		03 42 32.6	
	comp=Z,37nm,1.4s									
HIA	Hailar	92.97	324	⇑*e*	P		P		03 42 32.1	-0.4

ABTX	**Abilene, Hawle**	**93.61**	**56**	P		**P**	**03 42 35.7**	**-0.2**
	baz=242								
M31M	**Drury Creek, Y**	**93.63**	**19**	P		**P**	**03 42 34.2**	**-0.9**
	baz=218								
PRP	**Porcupine Dome**	**93.70**	**13**	IAmb		IAmb	03 42 37.5		
	comp=Z,19nm,1.3s								
PRP	**Porcupine Dome**	**93.70**	**13**	P		**P**	**03 42 35.3**	**-0.3**
	baz=208								
K22A	**Casper**	**93.74**	**44**	IAmb		IAmb	03 43 23.6		
	comp=Z,24nm,1.1s								
K22A	**Casper**	**93.74**	**44**	P		**P**	**03 42 37.0**	**+0.6**
	baz=239								
K22A	**Casper**	**93.74**	**44**	P		**P**	**03 42 37.5**	**+1.2**
	baz=239,SNR=9.2								
DAWY	**Dawson**	**93.81**	**16**	P		**P**	**03 42 36.9**	**+0.9**
	baz=214,SNR=6.1								
BILL	**Bilibino**	**93.81**	**354**	P		**P**	**03 42 35.6**	**-0.3**
BILL	**Bilibino**	**93.81**	**354** *c*	*i* P		**P**	**03 42 35.7**	**-0.2**
BILL				pmax		pmax			
	comp=Z,36nm,0.8s								
BILL				MLR		MLR			
	comp=Z,2µm,17.0s								
F21K	**Alatna River**	**93.89**	**9**	P		**P**	**03 42 37.2**	**+0.9**
	baz=201								
G23K	**Bananza Creek**	**93.95**	**10**	P		**P**	**03 42 37.2**	**+0.6**
	baz=204								
CD2	**Chengdu**	**93.96**	**302**	P		**P**	**03 42 37.7**	**+0.2**
CD2				pP		pP	03 42 58.9	-7.6
CD2				sP		sP	03 43 06.9	-11
CD2				S		**S**	**03 53 42.4**	**+4.1**
CD2				pmax		pmax			
	comp=Z,90nm,1.0s								
CD2				LR		LR			
	comp=Z,6µm,20.8s								
CD2				LR		LR			
	comp=Z,7µm,20.8s								
CD2				LR		LR			
	comp=Z,6µm,19.7s								
EGAK	**Eagle**	**93.99**	**15**	IAmb		IAmb	03 42 50.5		
	comp=Z,13nm,0.8s								
EGAK	**Eagle**	**93.99**	**15**	P		**P**	**03 42 37.0**	**+0.2**
	baz=212,SNR=8.2								
I26K	**Coal Creek Min**	**94.00**	**14**	IAmb		IAmb	03 42 47.7		
	comp=Z,11nm,0.8s								
I26K	**Coal Creek Min**	**94.00**	**14**	P		**P**	**03 42 37.3**	**+0.5**
	baz=210								
BTO	**Baotou**	**94.07**	**313**	*e*P		**P**	**03 42 38.2**	**+0.3**
BTO				S		**S**	**03 53 43.9**	**+4.9**
BTO				LR		LR			
	comp=Z,4µm,17.5s								
BTO				LR		LR			
	comp=Z,4µm,15.7s								
F22K	**John River**	**94.35**	**9**	P		**P**	**03 42 38.3**	**0.0**
	baz=202								
G24K	**Hadweenzic Riv**	**94.38**	**11**	P		**P**	**03 42 39.4**	**+0.9**
	baz=207								
COLD	**Coldfoot**	**94.39**	**10**	P		**P**	**03 42 39.8**	**+1.3**
	baz=204								
KSCO	**Kaye Shedlock'**	**94.48**	**49**	P		**P**	**03 42 40.1**	**+0.3**
	baz=241								
I27K	**Kandik River**	**94.59**	**14**	P		**P**	**03 42 40.0**	**+0.4**
	baz=212								
EGMT	**Eagleton**	**94.66**	**38**	IAmb		IAmb	03 43 39.8		
	comp=Z,55nm,1.8s								
EGMT	**Eagleton**	**94.66**	**38**	P		**P**	**03 42 40.8**	**+0.5**
	baz=237								
G25K	**Bearman Lake**	**94.69**	**12**	P		**P**	**03 42 40.5**	**+0.6**
	baz=208								
WHTX	**Lake Whitney,**	**94.97**	**57**	P		**P**	**03 42 42.4**	**+0.4**
WHTX				pP		pP	**03 43 11.9**	**+0.8**
WHTX				IAmb		IAmb	03 43 13.3		
	comp=Z,14nm,0.9s								
WHTX	**Lake Whitney,**	**94.97**	**57**	P		**P**	**03 42 42.1**	**+0.1**
	baz=244								
WHTX	**Lake Whitney,**	**94.97**	**57**	P		**P**	**03 42 41.8**	**-0.2**
	baz=243								
E22K	**Anaktuvuk Pass**	**94.98**	**9**	P		**P**	**03 42 41.9**	**+0.5**
	baz=203								
F24K	**Squaw Lake**	**95.04**	**11**	P		**P**	**03 42 41.1**	**-0.5**
	baz=206								
H27K	**Steamboat Moun**	**95.14**	**14**	P		**P**	**03 42 43.1**	**+1.1**
	baz=212								
G26K	**Porcupine Rive**	**95.30**	**13**	P		**P**	**03 42 43.5**	**+0.9**
	baz=210								
ELIS	**Ellis County**	**95.35**	**53**	IAmb		IAmb	03 43 14.9		
	comp=Z,24nm,0.9s								
E24K	**Your Creek**	**95.44**	**10**	P		**P**	**03 42 43.3**	**-0.2**
	baz=206								
F25K	**Christian Rive**	**95.51**	**12**	P		**P**	**03 42 43.2**	**-0.5**
	baz=208								
G27K	**Doyon Strip**	**95.61**	**13**	P		**P**	**03 42 43.9**	**-0.2**
	baz=212								
Z35A	**Perchaven, San**	**95.72**	**56**	P		**P**	**03 42 47.2**	**+1.8**
	baz=244								
LVC	**Limon Verde**	**95.76**	**118**	P		**P**	**03 42 46.7**	**+0.2**
LVC				IAmb		IAmb	03 43 52.2		
	comp=Z,39nm,1.6s								
LVC	**Limon Verde**	**95.76**	**118**	P		**P**	**03 42 46.7**	**+0.2**
LVC				pmax		pmax			
	comp=Z,39nm,1.6s								
LVC	**Limon Verde**	**95.76**	**118**	*e*P		**P**	**03 42 48.6**	**+2.2**
TOLK	**Toolik Lake Re**	**95.78**	**10**	P		**P**	**03 42 45.8**	**+0.8**
	baz=205								
U32A	**Winter Ranch,**	**95.80**	**53**			**P**	**03 42 45.6**	**-0.1**
U32A				pP		**pP**	**03 43 14.3**	**-0.6**
U32A	**Winter Ranch,**	**95.80**	**53**	P		**P**	**03 42 46.7**	**+0.9**
	baz=243								
F26K	**Sheenjek River**	**95.87**	**12**	P		**P**	**03 42 46.5**	**+1.1**
	baz=210								
D23K	**Nanushuk River**	**95.92**	**9**	P		**P**	**03 42 45.7**	**+0.2**
	baz=204								
E25K	**Arctic Village**	**95.99**	**11**	P		**P**	**03 42 47.1**	**+1.2**
	baz=208								
LAO	**LASA Array**	**96.00**	**41**	IAmb		IAmb	03 43 34.8		
	comp=Z,28nm,1.3s								
LAO	**LASA Array**	**96.00**	**41**	P		**P**	**03 42 47.1**	**+0.7**
	baz=239								
RSSD	**Black Hills**	**96.05**	**44**	P		**P**	**03 42 46.6**	**-0.3**
RSSD	**Black Hills**	**96.05**	**44**	P		**P**	**03 42 46.7**	**-0.3**
RSSD				pmax		pmax			
	comp=Z,29nm,1.0s								
RSSD	**Black Hills**	**96.05**	**44**	P		**P**	**03 42 47.6**	**+0.6**
	baz=241								
RSSD	**Black Hills**	**96.05**	**44**	P		**P**	**03 42 46.7**	**-0.3**
	baz=240								
LOOK	**Love County**	**96.06**	**55**	IAmb		IAmb	03 43 18.5		
	comp=Z,20nm,1.1s								
PB01	**IPOC Station P**	**96.08**	**117**	IAmb		IAmb	03 42 51.2		
	comp=Z,21nm,1.3s								
LZH	**Lanzhou**	**96.22**	**307**	*e*P		**P**	**03 42 48.7**	**+0.8**
LZH				sP		sP	03 43 24.6	-4.1
LZH				pmax		pmax			
	comp=Z,32nm,1.4s								
LZH				LR		LR			
	comp=Z,4µm,19.5s								
LZH				LR		LR			
	comp=Z,6µm,19.9s								
LZH				LR		LR			
	comp=Z,6µm,20.3s								
EPYK	**Eagle Plains**	**96.35**	**15**	P		**P**	**03 42 48.5**	**+1.0**
	baz=216								
CBKS	**Cedar Bluff**	**96.38**	**50**	P		**P**	**03 42 49.7**	**+1.3**
	baz=243								
C23K	**Itkillik River**	**96.72**	**9**	P		**P**	**03 42 48.7**	**-0.4**
	baz=204								
YAK	**Yakutsk**	**96.77**	**338**	P		**P**	**03 42 48.6**	**-0.9**
	comp=Z,31nm,0.5s,baz=303,slow=1.2,SNR=13								
	comp=Z,31nm,0.5s								
YAK	**Yakutsk**	**96.77**	**338**	P		**P**	**03 42 49.2**	**-0.3**
YAK	**Yakutsk**	**96.77**	**338**	*e*P		**P**	**03 42 48.6**	**-0.9**
YAK				pmax		pmax			
	comp=Z,103nm,1.0s								
YAK				pmax		pmax			
	comp=N,9.0nm,1.1s								
YAK				pmax		pmax			
	comp=E,6.0nm,1.1s								
E27K	**Coleen River**	**96.79**	**13**	P		**P**	**03 42 49.6**	**+0.1**
	baz=212								
C24K	**Franklin Bluff**	**96.90**	**10**	P		**P**	**03 42 51.4**	**+1.5**
	baz=206								
D25K	**Kavik River**	**96.91**	**11**	P		**P**	**03 42 50.5**	**+0.4**
	baz=208								
R32A	**Long Quarter,**	**96.92**	**51**	P		**P**	**03 42 51.1**	**+0.3**
	baz=243								
OK034	**N. Norfolk Rd.**	**97.29**	**54**			**P**	**03 42 52.9**	**+0.4**
OK034						**pP**	**03 43 22.1**	**+0.5**
OK034				IAmb		IAmb	03 43 25.1		
	comp=Z,14nm,0.9s								
C27K	**Jago River**	**97.63**	**11**	P		**P**	**03 42 52.4**	**-0.9**
	baz=210								
OTAV	**Otavalo**	**98.01**	**94**	*e*P		Pdif	03 43 00.1	+3.2
DGMT	**Dagmar**	**98.07**	**40**	IAmb		IAmb	03 43 28.4		
	comp=Z,23nm,1.1s								
INK	**Inuvik**	**98.64**	**15**	P		**P**	**03 42 58.1**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=233,slow=8.0,SNR=4.4								
INK				LR		LR	04 22 15.7		
	comp=Z,2µm,20.7s,baz=81,slow=32								
	comp=Z,1.1nm,0.6s								
K31A	**O'Neill**	**98.76**	**47**			**P**	**03 42 58.9**	**-0.1**
MIAR	**Mount Ida**	**99.00**	**56**	P		**Pdif**	**03 42 59.9**	**-0.3**
	baz=246								
U38A	**Gravette**	**99.17**	**54**	IAmb		IAmb	03 43 10.5		
	comp=Z,13nm,1.6s								
ULN	**Ulaanbaatar**	**99.42**	**319**	P		**Pdif**	**03 43 01.9**	**-0.1**
ULN	**Ulaanbaatar**	**99.42**	**319**⇑	*e*P		**Pdif**	**03 43 01.2**	**-0.7**
ULN				pmax		pmax			
	comp=Z,27nm,2.5s								
LPAZ	**La Paz**	**99.54**	**113**	P		**Pdif**	**03 43 06.7**	**+2.9**
	comp=Z,3.8nm,0.8s,baz=231,slow=2.8,SNR=16								
	comp=Z,3.8nm,0.8s								
CZSB	**Cruzeiro do Su**	**99.66**	**103**	*e*P		**Pdif**	**03 43 07.3**	**+3.6**
SONM	**Songino Array**	**99.80**	**318**	P		**Pdif**	**03 43 02.9**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=142,slow=7.5,SNR=5.7								
SONM				PKKPbc		**PKKPbc**	**03 59 25.4**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=286,slow=2.8,SNR=6.8								
	comp=Z,1.1nm,0.6s								
YKA	**Yellowknife Ar**	**100.50**	**25**	P		**Pdif**	**03 43 06.1**	**0.0**
	comp=Z,1.8nm,0.9s,baz=233,slow=4.1,SNR=6.5								
YKA				PKKPbc		**PKKPbc**	**03 59 22.6**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=37,slow=2.8,SNR=7.4								
GTA	**Gaotai**	**100.53**	**309**	*e*P		**Pdif**	**03 43 07.2**	**+0.2**
GTA				pmax		pmax			
	comp=Z,13nm,1.6s								
ECSD	**ERDS Data Cent**	**100.65**	**47**	P		**Pdif**	**03 43 07.7**	**+0.4**
	baz=245								
GOMU	**GeErMu**	**102.93**	**304**	Pdif		**Pdif**	**03 43 19.3**	**+1.2**
GOMU				AMB		AMB			
	comp=Z,890nm,9.0s								
GOMU				LR		LR			
	comp=Z,2µm,17.2s								
GOMU				LR		LR			
	comp=Z,830nm,18.6s								
GOMU				LR		LR			
	comp=Z,1µm,18.6s								
AGMN	**Agassiz Nation**	**102.98**	**43**	P		**Pdif**	**03 43 19.1**	**+1.5**
	baz=247								
HYBB	**Hyderabad (bro**	**109.82**	**280**	*e*PKiKP		**PKiKP**	**03 47 50.8**	**+0.1**
WMQ	**Urumqi**	**110.56**	**310**	*e*PKP		**PKiKP**	**03 47 49.8**	**-1.6**
ZSN	**Zaisan**	**113.36**	**313**	*i* PKiKP		**PKiKP**	**03 47 55.2**	**-1.3**
ZSN	**Zaisan**	**113.36**	**313**	*e*PKiKP		**PKiKP**	**03 47 55.2**	**-1.3**
	baz=313								
ZALV	**Zalesovo Beam**	**114.62**	**320**	PKP		PKPdf	03 47 57.2	-1.5
	comp=Z,3.6nm,0.4s,baz=129,slow=2.1,SNR=11								
ZALV				PKKPbc		**PKKPbc**	**03 58 39.2**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=316,slow=10,SNR=3.5								
MK31	**Makanchi Array**	**114.95**	**312** *d*	*i* PKIKP		PKPdf	03 47 58.3	-1.3
MKAR	**Makanchi Array**	**114.95**	**312**	PKP		PKPdf	03 47 58.5	-1.2
	comp=Z,9.5nm,0.6s,baz=189,slow=0.9,SNR=55								
MKAR				PKKPbc		**PKKPbc**	**03 58 37.2**	**0.0**
	comp=Z,2.5nm,0.7s,baz=278,slow=4.0,SNR=11								
MAKZ	**Makanchi**	**115.16**	**312**	⇑PKIKP		**PKPdf**	**03 47 59.4**	**-0.6**
NRIK	**Noril'sk**	**115.22**	**337**	PKP		**PKiKP**	**03 47 59.1**	**-0.3**
	comp=Z,6.5nm,0.7s,baz=91,slow=3.5,SNR=8.5								
BDFB	**Brasilia**	**115.94**	**124**	PKP		**PKPdf**	**03 48 02.9**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=194,slow=5.9,SNR=5.6								
BDFB				PKKPbc		**PKKPbc**	**03 58 34.4**	**+1.2**
	comp=Z,5.5nm,0.8s,baz=146,slow=3.3,SNR=6.4								
SHLS	**Shalkode**	**116.24**	**307**	*e*PKIKP		**PKPdf**	**03 48 00.1**	**-2.2**
SHLS	**Shalkode**	**116.24**	**307**	*e*PKP		**PKPdf**	**03 48 00.1**	**-2.2**
	baz=308								
UZB	**Uzynbulak**	**116.55**	**307**	*e*PKIKP		**PKPdf**	**03 48 01.6**	**-1.4**
UZB	**Uzynbulak**	**116.55**	**307**	*e*PKP		**PKPdf**	**03 48 01.6**	**-1.4**
	baz=307								
VOI	**Vohitsoka**	**116.60**	**226**	P		**PKiKP**	**03 48 04.7**	**+0.9**
VOI	**Vohitsoka**	**116.60**	**226**	PKP		**PKiKP**	**03 48 06.8**	**+3.1**
SEM	**Semipalatinsk**	**116.87**	**316**	*e*PKIKP		**PKPdf**	**03 48 00.9**	**-2.5**
SEM	**Semipalatinsk**	**116.87**	**316**	*e*PKP		**PKPdf**	**03 48 01.0**	**-2.5**
	baz=316								
SATY	**Saty**	**116.98**	**307**	*e*PKIKP		**PKPdf**	**03 48 01.6**	**-2.2**
SATY				*e*			03 49 11.8		
SATY	**Saty**	**116.98**	**307**	*e*PKP		**PKPdf**	**03 48 01.7**	**-2.1**
	baz=307								
SATY				*e*PP		**PP**	**03 49 11.9**	**-3.2**
	baz=307								
TDK	**Taldyqorghan**	**117.31**	**309**	*e*PKIKP		**PKPdf**	**03 48 02.4**	**-1.8**
TDK				*e*			03 49 14.8		
TDK	**Taldyqorghan**	**117.31**	**309**	*e*PKP		**PKPdf**	**03 48 02.4**	**-1.8**
	baz=309								
TDK				*e*PP		**PP**	**03 49 14.9**	**-2.2**
	baz=309								
KURK	**Kurchatov**	**117.94**	**316**	PKPdf		**PKPdf**	**03 48 03.9**	**-1.3**
KURK	**Kurchatov**	**117.94**	**316**	*i* PKIKP		**PKPdf**	**03 48 04.3**	**-0.8**
KURK	**Kurchatov**	**117.94**	**316**	P		**PKPdf**	**03 48 04.4**	**-0.8**
MDOK	**Medeo**	**117.98**	**307**	*e*PKIKP		**PKPdf**	**03 48 03.9**	**-1.8**
MDOK	**Medeo**	**117.98**	**307**	*e*PKP		**PKPdf**	**03 48 03.9**	**-1.8**
	baz=307								
AAA	**Alma-Ata**	**118.08**	**307**	*e*PKIKP		**PKPdf**	**03 48 04.2**	**-1.6**
AAA	**Alma-Ata**	**118.08**	**307**	*e*PKP		**PKPdf**	**03 48 04.2**	**-1.6**
	baz=307								
KSH	**Kashi**	**118.14**	**303**	PKP		**PKiKP**	**03 48 07.4**	**+1.2**
ULHL	**Ulahol**	**118.42**	**306**	P		**PKPdf**	**03 48 06.5**	**-0.2**
	SNR=11								
NRN	**Naryn**	**118.46**	**305**	PKPdf		**PKPdf**	**03 48 05.7**	**-1.2**
NRN	**Naryn**	**118.46**	**305**	PKIKP		**PKPdf**	**03 48 05.7**	**-1.2**
KUU	**Kurty**	**118.60**	**308**	*e*PKIKP		**PKPdf**	**03 48 04.0**	**-2.7**
KUU				*e*			03 49 23.2		
KUU	**Kurty**	**118.60**	**308**	*e*PKP		**PKPdf**	**03 48 04.1**	**-2.7**
	baz=308								
KUU				*e*PP		**PP**	**03 49 23.2**	**-2.9**
	baz=308								
TULEG	**Thule**	**118.64**	**15**	*i* P		**PKPdf**	**03 48 04.2**	**-1.6**
TKM2	**Tokmak 2**	**118.99**	**307**	P		**PKPdf**	**03 48 06.8**	**-1.0**
	SNR=14								
TKM2	**Tokmak 2**	**118.99**	**307**	PKIKP		**PKPdf**	**03 48 06.5**	**-1.3**
CHMS	**Chumysh**	**119.62**	**307**	P		**PKPdf**	**03 48 07.9**	**-0.9**
	SNR=5.3								
AAK	**Ala-Archa**	**119.75**	**306**	PKPdf		**PKPdf**	**03 48 08.1**	**-1.0**
AAK	**Ala-Archa**	**119.75**	**306**⇑	*i* PKIKP		**PKPdf**	**03 48 08.5**	**-0.7**
AAK				pmax		pmax			
	comp=Z,28nm,2.5s								
E62A	**Clayton Lake**	**119.79**	**49**	PKPdf		**PKPdf**	**03 48 07.8**	**-1.1**
PKME	**Peaks-Kenny Pk**	**119.80**	**51**	P		**PKPdf**	**03 48 07.8**	**-1.1**
	baz=263								
USP	**Ospenovka**	**119.83**	**307**	P		**PKPdf**	**03 48 08.5**	**-0.6**
	SNR=12								
PRPB	**Parauapebas**	**120.08**	**114**	*e*P		**PKiKP**	**03 48 11.8**	**+1.2**
NAN01	**Guarapari, ES**	**120.15**	**131**	*e*P		**PKiKP**	**03 48 13.2**	**+2.6**
SUR	**Sutherland**	**120.17**	**198**			**PKPdf**	**03 48 09.1**	**-1.4**
SUR	**Sutherland**	**120.17**	**198**	P		**PKPdf**	**03 48 11.1**	**+0.6**
AML	**Almayashu**	**120.27**	**306**	P		**PKPdf**	**03 48 10.2**	**-0.2**
	SNR=20								
EKS2	**Erkin-Say**	**120.28**	**306**	P		**PKPdf**	**03 48 09.7**	**-0.4**
	SNR=7.9								
SDBA	**SAO DESIDERIO**	**120.31**	**123**	*e*P		**PKPdf**	**03 48 11.8**	**+0.8**
SMTB	**Santa Maria do**	**120.37**	**118**	*e*P		**PKiKP**	**03 48 12.9**	**+1.8**
BTLS	**Baital**	**120.38**	**309**	*e*PKIKP		**PKPdf**	**03 48 08.5**	**-1.6**
BTLS	**Baital**	**120.38**	**309**	*e*PKP		**PKPdf**	**03 48 08.5**	**-1.6**
	baz=309								
POGA	**Pongola**	**120.75**	**210**			**PKPdf**	**03 48 09.8**	**-1.6**
PQI	**Presque Isle**	**120.83**	**49**			**PKPdf**	**03 48 09.5**	**-1.3**
MCPB	**Macapa, AP**	**121.23**	**107**	*e*P		**PKPdf**	**03 48 13.2**	**+0.5**
BRZS	**Berezniki**	**121.68**	**315**	*e*PKIKP		**PKPdf**	**03 48 10.8**	**-1.6**
BRZS	**Berezniki**	**121.68**	**315**	*e*PKP		**PKPdf**	**03 48 10.8**	**-1.6**
	baz=315								
SCHQ	**Schefferville**	**121.89**	**40**	PKP		**PKPdf**	**03 48 12.6**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=335,slow=6.1,SNR=4.5								
DZA	**Taraz**	**122.10**	**306**	*e*PKIKP		**PKPdf**	**03 48 12.1**	**-1.4**
DZA	**Taraz**	**122.10**	**306**	*e*PKP		**PKPdf**	**03 48 12.1**	**-1.4**
	baz=306								
BOSA	**Boshof**	**122.26**	**203**	PKP		**PKPdf**	**03 48 14.7**	**+0.2**
	comp=Z,18nm,0.8s,baz=170,slow=2.2,SNR=29								
BOSA	**Boshof**	**122.26**	**203**	PKPdf		**PKPdf**	**03 48 13.9**	**-0.6**
CMC01	**Camacan, BA**	**122.29**	**130**	*e*P		**PKiKP**	**03 48 17.0**	**+2.2**
KK31	**Karatay Array**	**122.72**	**306**	PKIKP		**PKPdf**	**03 48 13.7**	**-1.0**
KKAR	**Karatay Array**	**122.72**	**306**	PKPdf		**PKPdf**	**03 48 13.3**	**-1.4**
KKAR	**Karatay Array**	**122.72**	**306**	PKIKP		**PKPdf**	**03 48 13.3**	**-1.4**
KBL	**Kabul**	**122.73**	**296**	PKPdf		**PKPdf**	**03 48 14.4**	**-0.8**
KBL	**Kabul**	**122.73**	**296**	PKIKP		**PKPdf**	**03 48 14.4**	**-0.8**
KBL	**Kabul**	**122.73**	**296**	P		**PKPdf**	**03 48 15.2**	**0.0**
	SNR=16								
UPNV	**Upernavik**	**122.96**	**18**	*i* P		**PKPdf**	**03 48 13.3**	**-0.9**
IUG	**Iuzhnay**	**122.98**	**305**	*e*PKIKP		**PKPdf**	**03 48 14.0**	**-1.3**
	baz=305								
LMN	**Caledonia Moun**	**122.99**	**50**	PKPdf		**PKPdf**	**03 48 14.3**	**-0.7**
NOR	**Nord**	**123.03**	**3**	*i* P		**PKPdf**	**03 48 12.6**	**-1.6**
BVA0	**Borovoye Array**	**123.14**	**318**	*i* PKIKP		**PKPdf**	**03 48 14.3**	**-0.8**
BRVK	**Borovoye**	**123.20**	**318**	PKPdf		**PKPdf**	**03 48 13.7**	**-1.5**
BRVK	**Borovoye**	**123.20**	**318**⇑	*i* PKIKP		**PKPdf**	**03 48 14.8**	**-0.4**
BRVK	**Borovoye**	**123.20**	**318**	P		**PKPdf**	**03 48 14.6**	**-0.7**
GDU01	**Guandu, BA**	**123.37**	**128**	*e*P		**PKPdf**	**03 48 17.5**	**+0.8**
TMAB	**Tom-Au,PA,Br**	**123.58**	**111**	*e*P		**PKPdf**	**03 48 17.5**	**+0.3**
LBTB	**Lobatse**	**125.38**	**206**	PKPdf		**PKPdf**	**03 48 19.8**	**-0.7**
LBTB	**Lobatse**	**125.38**	**206**	PKIKP		**PKPdf**	**03 48 19.8**	**-0.7**
ILUI	**Ilulissat**	**125.92**	**21**	*i* P		**PKPdf**	**03 48 18.1**	**-1.8**
KBS	**Kingsbay**	**126.09**	**358**			**PKPdf**	**03 48 19.6**	**-0.4**
KBS	**Kingsbay**	**126.09**	**358**⇑	*i* PKIKP		**PKPdf**	**03 48 20.5**	**+0.4**
KBS				pmax		pmax			
	comp=Z,21nm,1.0s								
ROSB	**Rosrio**	**126.61**	**115**	*e*P		**PKiKP**	**03 48 25.0**	**+1.5**
SPA0	**Spitsbergen Ar**	**126.63**	**357**	*e*P		**PKPdf**	**03 48 20.8**	**-0.3**
SPA0				IVmBBB			03 48 24.6		
	comp=Z,570nm,1.3s								
SPITS	**Spitsbergen Ar**	**126.63**	**357**	PKP		**PKPdf**	**03 48 20.5**	**-0.7**
	comp=Z,25nm,0.8s,baz=87,slow=7.6,SNR=18								
SPITS	**Spitsbergen Ar**	**126.63**	**357**	PKIKP		**PKPdf**	**03 48 20.7**	**-0.5**
SPB2	**Spitsbergen Ar**	**126.63**	**357**			**PKPdf**	**03 48 20.4**	**-0.8**
NBAN	**Anadia - AL**	**128.48**	**127**	*e*P		**PKPdf**	**03 48 26.8**	**+0.2**
DY2G	**Dye2**	**128.81**	**23**	*i* P		**PKPdf**	**03 48 24.1**	**-1.8**
WBK	**Wadi Bani Khal**	**128.91**	**279**	P		**PKiKP**	**03 48 28.8**	**+1.0**
MHTO	**MHTO**	**129.38**	**277**	P		**PKPdf**	**03 48 28.2**	**+0.2**
DBG	**Daneborg**	**129.42**	**8**	*i* P		**PKPdf**	**03 48 25.8**	**-0.7**
DQM	**DQM**	**129.47**	**276**	P		**PKiKP**	**03 48 29.7**	**+0.8**
ICESG	**Greenland Ices**	**129.48**	**18**	*i* P		**PKPdf**	**03 48 24.9**	**-2.3**
ARU	**Arti**	**129.48**	**323**	PKPdf		**PKPdf**	**03 48 26.2**	**-0.9**
ARU	**Arti**	**129.48**	**323**	*i* PKIKP		**PKPdf**	**03 48 26.9**	**-0.2**
ARU							03 50 38.5		
ARU				PPP		PPP	03 53 22.3		
JMDO	**Jabal Madar**	**129.62**	**279**	P		**PKPdf**	**03 48 28.2**	**-0.3**
SMDO	**Samad**	**129.84**	**280**	P		**PKPdf**	**03 48 29.0**	**0.0**
SQUM	**Sultan Qaboos**	**129.86**	**280**	P		**PKiKP**	**03 48 30.9**	**+1.2**
BIDO	**Bidbid**	**129.89**	**280**	P		**PKPdf**	**03 48 28.3**	**-0.7**
AB31	**Akbulak array**	**129.97**	**314**	*i* PKIKP		**PKPdf**	**03 48 27.9**	**-0.4**
ABKAR	**Akbulak array**	**129.97**	**314**			**PKPdf**	**03 48 27.7**	**-0.6**
NBRF	**Rio Formoso -**	**129.98**	**128**	*e*P		**PKiKP**	**03 48 31.7**	**+1.5**
BSY	**Bisya**	**130.53**	**279**	P		**PKPdf**	**03 48 30.7**	**+0.5**
HOQ	**Hoqain**	**130.63**	**280**	P		**PKPdf**	**03 48 30.2**	**-0.1**
	SNR=6.5								
AKTO	**Aktyubinsk**	**131.04**	**316**	PKIKP		**PKPdf**	**03 48 29.8**	**-0.5**
ARQ	**Araqi**	**131.28**	**280**	P		**PKPdf**	**03 48 32.4**	**+0.8**
RCBR	**Riachuelo**	**131.32**	**124**	*e*P		**PKiKP**	**03 48 34.5**	**+1.6**
SOHO	**SOHO**	**131.45**	**281**	P		**PKPdf**	**03 48 31.8**	**0.0**
SOHO	**SOHO**	**131.45**	**281**	*i* PKiKP		**PKPdf**	**03 48 31.4**	**-0.5**
	SNR=11								
RBK	**Rabkut**	**131.76**	**271**	P		**PKiKP**	**03 48 34.1**	**+0.4**
GEYT	**Alibeck**	**131.85**	**299**	PKP		**PKiKP**	**03 48 33.2**	**-0.1**
	comp=Z,13nm,0.7s,baz=234,slow=5.1,SNR=10								
GEYT				SKPab		**SKPab**	**03 51 49.7**	**+0.9**
	comp=Z,27nm,0.9s,baz=198,slow=4.2,SNR=12								
GYA0	**ALIBECK ARRAY**	**131.85**	**299**	PKIKP		**PKPdf**	**03 48 32.6**	**+0.3**
GYA0B	**ALIBECK ARRAY**	**131.85**	**299**	PKPdf		**PKPdf**	**03 48 32.0**	**-0.2**
MDH	**Madha**	**131.91**	**282**	P		**PKPdf**	**03 48 33.1**	**+0.4**
MDH	**Madha**	**131.91**	**282**	PKiKP		**PKPdf**	**03 48 32.9**	**+0.2**
UOSS	**Minazif**	**131.92**	**282**	P		**PKPdf**	**03 48 33.0**	**+0.2**
UOSS	**Min

OBN pmax pmax
comp=Z,30nm,1.2s
LPSR Galich'ya Gora 141.47 325 *i* PKHKP PKPpre 03 48 44.4
LPSR pmax pmax
comp=Z,60nm,1.9s
VORR Voronezh 141.80 323 *e*PKIKP **PKPdf 03 48 46.5 -3.6**
VORR pmax pmax
comp=Z,30nm,0.4s
LODK Lodwar 141.91 241 PKPdf **PKPdf 03 48 47.6 -4.0**
RAF Rauma 141.96 345 *e*P **PKiKP 03 48 55.0 +1.9**
H10S3 ASCENSION HYDR 141.98 151 T T 06 27 13.8
baz=204,slow=74,SNR=3.3
H10S2 ASCENSION HYDR 141.98 151 T T 06 27 16.5
baz=16,slow=74,SNR=2.4
MEF Metsahovi 141.99 343 *e*P **PKPdf 03 48 46.2 -4.0**
VSR Storozhevoye 142.04 323 *i* PKHKP PKPpre 03 48 45.1
VSR pmax pmax
comp=Z,10.0nm,0.6s
GNI Garni 142.07 304 P **PKPdf 03 48 49.8 -1.5**
ZEI Tsey 142.14 308 *i* PKIKP **PKPdf 03 48 49.8 -1.5**
ZEI pmax pmax
comp=Z,22nm,1.0s
ONI Oni 142.51 308 PKPdf **PKPdf 03 48 48.3 -3.5**
ONI Oni 142.51 308 PKIKP **PKPdf 03 48 48.3 -3.5**
KBZ Khabaz 142.60 310 PKhKP PKPpre 03 48 47.5
comp=Z,111nm,0.8s,baz=126,slow=2.7,SNR=22
KIV Kislovodsk 142.68 310 *e*PKIKP **PKPdf 03 48 51.6 -0.5**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV Kislovodsk 142.68 310 *i* PKPdf **PKPdf 03 48 49.0 -3.1**
SNR=8.3
MBAR Mbarara 142.71 231 PKPdf **PKPdf 03 48 50.1 -3.1**
MBAR Mbarara 142.71 231*c* *i* PKIKP **PKiKP 03 48 57.4 +1.0**
MBAR pmax pmax
comp=Z,32nm,1.3s
MBAR Mbarara 142.71 231 P **PKPdf 03 48 50.6 -2.6**
VSU Vasula 142.75 339 *e*P **PKPdf 03 48 48.6 -3.0**
AKN Aaknes 142.97 357 *e*P **PKPdf 03 48 50.1 -1.8**
AKN IVmBBB 03 49 01.9
comp=Z,1μm,2.2s
DOMB Dombas 142.98 355 *e*P **PKPdf 03 48 50.3 -1.7**
H10N3 ASCENSION HYDR 143.04 151 T T 06 28 34.7
baz=204,slow=75,SNR=3.1
H10N1 ASCENSION HYDR 143.05 151 T T 06 28 28.4
baz=204,slow=75,SNR=11
H10N2 ASCENSION HYDR 143.06 151 T T 06 28 42.9
baz=204,slow=75,SNR=3.8
MTSE Matsula 143.42 342 *e*P PKPab 03 48 49.3 +0.2
NC303 NORSAR Array S 143.56 353 PKPab 03 48 50.0 +0.3
NC204 NORSAR Array S 143.58 354 PKPab 03 48 50.0 +0.2
FOO Floro 143.63 358 *e*P PKPbc 03 48 51.6 +0.8
NC405 NORSAR Array S 143.64 353 PKPdf PKPab 03 48 50.3 +0.3
NB2 NORSAR Subarra 143.76 353 PKP PKPab 03 48 50.4 -0.1
comp=Z,802nm,3.3s,baz=14,slow=3.5
NB2 NORSAR Subarra 143.76 353 PKPab PKPab 03 48 50.4 -0.1
baz=14,slow=3.5
NOA NORSAR Array B 143.76 353 PKhKP PKPpre 03 48 50.1
comp=Z,16nm,0.8s,baz=12,slow=2.3,SNR=39
NOA SKPbc **SKPbc 03 52 21.6 -0.2**
comp=Z,3.2nm,0.9s,baz=15,slow=4.3,SNR=2.9
NC602 NORSAR Array S 144.02 353 *e*P PKPab 03 48 51.0 -0.5
NC602 IVmBBB 03 48 53.1
comp=Z,2μm,2.5s
BCA Borcka 144.11 306 ⇓P PKPbc 03 48 53.0 0.0
SUE Sulen 144.18 358 *e*P **PKPab 03 48 52.1 +0.1**
SKAR Skarslia 144.38 355 *e*P **PKPab 03 48 53.3 +0.4**
SKAR IVmB_BB 03 48 53.6
comp=Z,2μm,3.1s
GURO Guroymak-BITLI 144.42 302 **PKPab 03 48 53.7 -0.2**
ASK Askoy 144.75 358 *e*P **PKPab 03 48 53.8 -0.3**
ASK IVmBBB 03 48 56.0
comp=Z,1μm,1.5s
SLIT Slitere, Latvi 144.77 342 *e*P **PKPab 03 48 53.5 -0.9**
BER Bergen 144.84 358 *e*P **PKPab 03 48 54.6 +0.1**
BER IVmBBB 03 48 55.5
comp=Z,1μm,1.3s
SOC Sochi 144.84 311*d* *i* PKIKP **PKPab 03 48 54.1 -1.0**
SOC *e* 03 52 13.3
SOC *e*PPP PPP 03 55 29.1
SOC pmax pmax
comp=Z,120nm,0.9s
SOC pmax pmax
comp=Z,54nm,0.7s
SOC MLR MLR
comp=Z,793nm,19.0s
OSL Oslo 144.90 353 *e*P **PKPab 03 48 54.4 -0.3**
OSL IVmBBB 03 48 56.3
comp=Z,1μm,1.4s
LRW Lerwick 145.02 3 *e*P PKPbc 03 48 53.2 -1.9
ISAL Salakas 145.23 337 *e*P **PKPbc 03 48 55.9 -0.1**
ODD1 Odda 145.25 357 *e*P **PKPbc 03 48 55.4 -0.6**
ODD1 IVmBBB 03 48 57.8
comp=Z,2μm,2.4s
KONO Kongsberg 145.29 354 **PKPbc 03 48 55.0 -1.0**
KONO Kongsberg 145.29 354 ⇑PKIKP **PKPbc 03 48 56.1 +0.1**
KONO Kongsberg 145.29 354 *e*P **PKPbc 03 48 55.3 -0.7**
KONO IVmB_BB 03 48 56.3
comp=Z,3μm,3.1s
IIGN Ignalina 145.37 336 *e*P **PKPbc 03 48 56.4 0.0**
MNK Minsk 145.38 334 *i* PKIKP **PKPbc 03 48 56.2 -0.2**
MNK *i* 03 52 17.2
MNK *i* 04 04 48.5
MNK pmax pmax
comp=N,4.0nm,1.1s
MNK pmax pmax
comp=Z,303nm,1.1s
MNK pmax pmax
comp=E,19nm,1.3s
MNK MLR MLR
comp=E,248nm,22.0s
MNK MLR MLR
comp=N,14nm,15.0s
MNK MLR MLR
comp=Z,1μm,22.0s
MNK Minsk 145.38 334 *i* PKP **PKPbc 03 48 56.3 -0.2**
comp=E,19nm,1.3s
MNK *i* PKP **PKPbc 03 48 56.3 -0.2**
comp=N,4.0nm,1.1s
MNK *i* PKP **PKPbc 03 48 56.3 -0.2**
comp=Z,303nm,1.1s,baz=222
MNK *i* pPKP pPKPab 03 49 16.3 -10
MNK *i* PP **PP 03 52 17.3 +0.3**
MNK *i* PKS **PKSdf 03 52 33.2 +1.6**
MNK *i* PPS PPS 04 08 46.2
MNK *i* SS SS 04 11 05.4 +6.3
MNK *i* LR LR 04 43 09.7
MNK *i* LRM MLR 04 51 13.1
comp=E,248nm,21.7s
MNK *i* LRM MLR 04 51 37.7
comp=N,14nm,15.2s
MNK *i* LRM MLR 04 52 06.6
comp=Z,1μm,21.7s
NACGM Naroch 145.51 336 ⇓*i* PKP **PKPdf 03 48 56.9 +0.3**
comp=Z,836nm,1.0s,baz=39
KTUT Trabzon 145.58 306 ⇑P **PKPab 03 48 58.1 +0.2**
MARD Mardin 145.61 300 PKPbc **PKPbc 03 48 58.2 +0.2**
VSVD Vaisvydziai 145.65 339 *e*P **PKPdf 03 48 56.7 0.0**
STRU Stroemstad 145.73 352 *i* P **PKPdf 03 48 57.1 +0.4**
BLS5 Blasjo 145.75 357 *e*P **PKPdf 03 48 57.4 +0.5**
BLS5 IVmBBB 03 48 59.6
comp=Z,3μm,2.8s
ANN Anapa 145.94 314 *i* PKP2 **PKPdf 03 48 57.6 0.0**
ANN pmax pmax
comp=Z,598nm,1.6s
KMY Karmoy 146.02 358 *e*P **PKPdf 03 48 57.9 +0.7**
KMY IVmBBB 03 49 00.2
comp=Z,1μm,1.2s
PABE Paberze 146.03 338 *e*P **PKPbc 03 48 58.4 0.0**
PBUR Paburge 146.24 341 *e*P **PKPbc 03 48 58.8 -0.2**
LEWI Lewis, Hebride 146.41 9 *e*P **PKPdf 03 48 57.2 -0.7**
TJOU Tjoern 146.64 351 *i* P **PKPdf 03 48 57.1 -1.2**
MLA1 Latheron 146.68 6 *e*P **PKPbc 03 48 59.9 -0.3**
HOMB Homborsund 146.76 355 *i* P **PKPdf 03 48 59.0 +0.5**
HOMB *i* P **PKPdf 03 48 59.0 +0.5**
HOMB Homborsund 146.76 355 *e*P **PKPbc 03 49 00.7 +0.2**
HOMB IVmBBB 03 49 02.5
comp=Z,2μm,1.0s
SNART Snartemo 146.79 356 *i* P **PKPdf 03 48 59.0 +0.4**
SNART *i* P **PKPdf 03 48 59.0 +0.4**
SNART Snartemo 146.79 356 *e*P **PKPbc 03 49 00.2 -0.3**
SNART IVmBBB 03 49 02.5
comp=Z,4μm,2.4s
BORU Boraas 146.86 350 *i* P **PKPbc 03 49 01.1 +0.4**
ONAU Onsala 147.22 351 *i* P **PKPdf 03 48 59.8 +0.5**

KAC Achnashellach 147.25 8 *e*P **PKPbc 03 49 01.7 -0.2**
KPL Plockton 147.37 9 *e*P **PKPbc 03 49 01.9 -0.2**
MCD Coleburn Disti 147.40 6 *e*P **PKPdf 03 49 01.2 +1.5**
MDO Dochfour 147.43 7 *e*P **PKPbc 03 49 02.3 0.0**
AKASG Malin Array Be 147.47 328 PKP **PKPdf 03 48 58.6 -1.4**
comp=Z,17nm,0.4s,baz=44,slow=3.9,SNR=34
AKASG PKPbc **PKPbc 03 49 01.9 -0.8**
comp=Z,18nm,0.4s,baz=42,slow=4.0,SNR=49
FABU Falkenberg 147.48 350 *i* P **PKPdf 03 49 00.7 +0.9**
BLEU Blekinge 147.56 346 *i* P **PKPdf 03 49 00.9 +1.0**
DEL Delary 147.79 348 *i* P **PKPdf 03 49 02.0 +1.7**
DEL *i* P **PKPdf 03 49 02.0 +1.7**
GOET G??ttrup 147.91 353 *i* P **PKPbc 03 49 02.9 -0.7**
SIM Simferopol' 148.00 316 *i* PKIKP **PKPdf 03 49 02.4 +1.3**
SIM pmax pmax
comp=Z,614nm,0.9s
DRUM Mains of Drumt 148.13 6 *e*P **PKPbc 03 49 03.3 -1.0**
H07N1 FLORES T-PHASE 148.17 55 *e*PKP **PKPbc 03 49 05.8 +0.8**
H07S1 FLORES T-PHASE 148.19 55 *e*PKP **PKPbc 03 49 05.2 +0.2**
BJUU Bjuv 148.32 349 *i* P **PKPdf 03 49 02.2 +1.0**
LAWE Loch Awe, Argy 148.45 9 *e*P **PKPbc 03 49 03.7 -1.4**
INVG Invergeldie, C 148.46 7 *e*P **PKPbc 03 49 04.6 -0.5**
MUD Monsted U'grnd 148.48 353 *i* P **PKPdf 03 49 03.0 +1.6**
MUD *i* P **PKPdf 03 49 03.0 +1.6**
DIKM Dikmen 148.60 309 ⇑P **PKPbc 03 49 05.7 -0.3**
LUNU Lund 148.66 348 *i* P **PKPdf 03 49 04.0 +2.2**
LUNU *i* P **PKPdf 03 49 04.0 +2.2**
COP Copenhagen 148.79 349 *i* P **PKPbc 03 49 05.5 -0.4**
BSD Bornholm Skovb 148.86 347 *e*P **PKPbc 03 49 06.2 +0.1**
BSD Bornholm Skovb 148.86 347 *i* P **PKPdf 03 49 04.4 +2.3**
PGBU Glenifferbraes 149.01 8 *e*P **PKPdf 03 49 01.7 -0.6**
EDI Edinburgh 149.04 7 *e*P **PKPbc 03 49 06.2 -0.4**
ESY Stoneypath 149.11 6 *e*P **PKPbc 03 49 06.5 -0.3**
EBL Broad Law 149.21 6 *e*P **PKPbc 03 49 06.3 -0.7**
BZK Bozkurt 149.35 311 ⇑P **PKPbc 03 49 07.5 -0.3**
SORM Soroca 149.57 325 ⇓P **PKPbc 03 49 07.3 -0.8**
SORM Soroca 149.57 325 ⇓PKP2 **PKPbc 03 49 07.3 -0.8**
ESK Eskdalemuir 149.64 7 **PKPbc 03 49 06.1 +2.7**
ESK Eskdalemuir 149.64 7 PKHKP PKPpre 03 49 06.1
NEWG New Galloway 149.72 8 *e*P **PKPdf 03 49 06.0 +2.5**
PURM Purcari 149.73 321 ⇓P **PKPbc 03 49 08.8 +0.2**
HWQ Hawqa 149.97 295 *e*P **PKPbc 03 49 09.8 +0.1**
GKP Gorka Klasztor 149.99 343 *e*PKPdf **PKPdf 03 49 04.0 0.0**
GKP *e*PKPbc **PKPbc 03 49 09.2 +0.2**
GKP *e*PKPab **PKPab 03 49 14.6 -0.5**
GKP Gorka Klasztor 149.99 343 *e*P **PKPbc 03 49 09.7 +0.7**
MILM Milestii Mici 150.09 323 ⇓*i* PKP **PKPbc 03 49 09.0 -0.4**
comp=Z,2μm,2.6s
MILM Milestii Mici 150.09 323 ⇑P **PKPbc 03 49 09.3 -0.2**
MILM Milestii Mici 150.09 323*d* *i* PKP2 **PKPbc 03 49 09.0 -0.4**
MILM pmax pmax
comp=Z,2μm,2.6s
BEL Belsk 150.13 337 *e*PKPdf **PKPdf 03 49 04.0 -0.2**
BEL *e*PKPbc **PKPbc 03 49 09.7 +0.4**
BEL *e*PKPab **PKPab 03 49 16.4 +0.8**
EDMD Edmundbyers 150.24 6 *e*P **PKPbc 03 49 08.3 -1.3**
BHL Bhannes 150.26 295 *e*P **PKPbc 03 49 10.4 -0.1**
PCED Cedros 150.28 56 *e*PKP **PKPbc 03 49 10.6 +0.4**
QRWL Qaraoun 150.28 294 *e*P **PKiKP 03 49 11.1 -0.1**
CALA Caldeira 150.29 56 *e*PKP **PKPbc 03 49 10.2 -0.1**
DQRL Deir Qamar 150.35 294 *e*P **PKiKP 03 49 11.4 0.0**
KESW Keswick, Cumbr 150.37 7 *e*P **PKPbc 03 49 09.3 -0.6**
BR131 Keskin Array S 150.43 307 P **PKPdf 03 49 05.4 +0.1**
SNR=74
BRTR Keskin Array B 150.43 307 PKP **PKPdf 03 49 03.8 -1.5**
comp=Z,5.7nm,1.0s,baz=149,slow=2.6,SNR=23
BRTR PKPbc **PKPbc 03 49 10.3 -0.4**
comp=Z,22nm,0.5s,baz=140,slow=4.3,SNR=38
BRTR Keskin Array B 150.43 307 PKPdf **PKPdf 03 49 02.6 -2.7**
BRTR PKPbc **PKPbc 03 49 10.6 -0.1**
LVV L'vov 150.46 332 *e*PKIKP **PKPbc 03 49 09.7 -0.5**
PCAN Candelaria 150.49 56 *e*PKP **PKPbc 03 49 11.1 +0.4**
PICO Pico 150.52 56 *e*PKP **PKPbc 03 49 11.6 +0.7**
ROSA Rosais 150.59 55 *e*PKP **PKPbc 03 49 11.1 +0.1**
ROSA Rosais 150.59 55 **PKPbc 03 49 10.0 -1.0**
SRBC Serra Branca 150.64 55 *e*PKP **PKPbc 03 49 11.6 +0.5**
PPNO Prainha do Nor 150.65 56 *e*PKP **PKiKP 03 49 12.5 +0.7**
PMAN Manadas 150.74 55 *e*PKP **PKPbc 03 49 12.1 +0.8**
GDLE Glaisdale, N Y 150.74 4 *e*P **PKPbc 03 49 09.9 -0.9**
PID Ribeirinha 150.77 56 *e*PKP **PKiKP 03 49 12.5 +0.5**
VASR Vaslui 150.81 323 ⇑P **PKPbc 03 49 11.7 +0.5**
ANTO Ankara 150.99 308 ⇓P **PKiKP 03 49 12.5 0.0**
ANTO Ankara 150.99 308 **PKPdf 03 49 04.8 -1.3**
ANTO Ankara 150.99 308 PKIKP **PKPdf 03 49 04.8 -1.3**
ANTO Ankara 150.99 308 P **PKPdf 03 49 06.0 -0.1**
TLCR 151.10 320 ⇑P **PKPbc 03 49 11.1 -0.8**
TLCR 151.10 320 ⇑PKIKP **PKPbc 03 49 11.1 -0.8**
HPK Haverah Park 151.14 5 *e*P **PKiKP 03 49 12.3 +0.4**
VLDR Vladesti 151.14 322 ⇑P **PKiKP 03 49 12.7 +0.2**
KWP Kalwaria Pacla 151.16 333 *e*PKPdf **PKPdf 03 49 05.7 -0.2**
KWP *e*PKPbc **PKPbc 03 49 12.1 +0.2**
KWP *e*PKPab **PKPab 03 49 19.8 -0.3**
VARL Varlezi 151.23 322 ⇑P **PKiKP 03 49 12.9 +0.3**
SCTR Scanteiesti 151.29 322 ⇑P **PKiKP 03 49 13.2 +0.5**
WPS Cemaes, Angles 151.35 9 *e*P **PKPbc 03 49 11.6 -0.6**
PAGU Agualva, Azore 151.36 55 *e*PKP **PKPbc 03 49 12.6 -0.1**
GHRR 151.38 323 ⇑P **PKiKP 03 49 13.5 +0.6**
WME Myndd Eilian 151.39 9 *e*P **PKPbc 03 49 10.8 -1.5**
BURAR Bucovina Array 151.50 327 ⇑P **PKiKP 03 49 13.7 +0.4**
BURAR Bucovina Array 151.50 327 ⇑PKIKP **PKiKP 03 49 13.7 +0.4**
CFR Carcaliu 151.50 321 ⇑P **PKPbc 03 49 12.7 -0.1**
CFR Carcaliu 151.50 321 ⇑PKIKP **PKPbc 03 49 12.7 -0.1**
TESR Tescani 151.50 324 ⇑P **PKPbc 03 49 12.6 -0.2**
BIZ Bicaz 151.51 325 ⇑P **PKiKP 03 49 13.9 +0.6**
TPGR Topolog 151.52 320 ⇓P **PKPbc 03 49 13.3 +0.4**
RUE Ruedersdorf 151.56 346 *e*P **PKPbc 03 49 13.1 +0.4**
PANC Panciu 151.64 323 ⇓P **PKPbc 03 49 13.2 +0.1**
YLL Llanberis 151.66 9 *e*P **PKPbc 03 49 12.5 -0.4**
LBWR Ladybower, Pea 151.68 6 *e*P **PKPbc 03 49 11.0 -2.0**
TIRR Tirgusor 151.75 319 ⇓P **PKPbc 03 49 13.8 +0.4**
TIRR Tirgusor 151.75 319 ⇓PKIKP **PKPbc 03 49 13.8 +0.4**
OJC Ojcow 151.82 337 *e*PKPdf **PKPdf 03 49 05.9 -1.0**
OJC *e*PKPbc **PKPbc 03 49 12.8 -0.6**
OJC *e*PKPab **PKPab 03 49 21.5 -1.2**
VRI Vrincioaia 151.87 323 ⇓P **PKPbc 03 49 12.5 -1.2**
VRI Vrincioaia 151.87 323 ⇓PKIKP **PKPbc 03 49 12.5 -1.2**
KOLS Kolonicke sedl 151.88 332 *e*PKIKP **PKPdf 03 49 07.5 +0.4**
KOLS Kolonicke sedl 151.88 332 *e*PKP **PKPdf 03 49 07.5 +0.4**
KOLS *e* 03 49 14.5
HARR Harsova 151.90 320 ⇑P **PKPbc 03 49 13.4 -0.3**
HARR Harsova 151.90 320 ⇑PKIKP **PKPbc 03 49 13.4 -0.3**
TLBR Topalu 151.92 320 ⇓P **PKPbc 03 49 13.9 +0.1**
PLOR Plostina 151.92 323 ⇓P **PKPbc 03 49 13.6 -0.2**
PLOR Plostina 151.92 323 ⇓PKIKP **PKPbc 03 49 13.6 -0.2**
STNC Stoke 151.94 6 *e*P **PKPbc 03 49 12.9 -0.6**
MANR Mangalia 152.00 318 ⇑P **PKiKP 03 49 14.9 +0.6**
FOEL Foel Wylfa 152.03 8 *e*P **PKPbc 03 49 12.2 -1.6**
UZH Uzhgorod 152.10 332 *e*PKIKP **PKPbc 03 49 13.1 -1.0**
UZH *e* 03 49 55.3
COVR Voineasa-Covas 152.17 324 ⇑P **PKPbc 03 49 13.8 -0.6**
OZUR 152.23 324 ⇑P **PKiKP 03 49 14.9 +0.1**
CRVS Cervenica-Dubn 152.24 333 *e*PKIKP **PKiKP 03 49 14.9 +0.2**
CRVS Cervenica-Dubn 152.24 333 *e*PKP **PKiKP 03 49 14.9 +0.2**
BMR Baia Mare 152.28 329 ⇓P **PKPbc 03 49 14.5 0.0**
BMR Baia Mare 152.28 329 ⇓PKIKP **PKPbc 03 49 14.5 0.0**
ARCR ARCALIA 152.29 327 ⇓P **PKiKP 03 49 15.2 +0.3**
NIE Niedzica 152.29 335 *e*PKPdf **PKPdf 03 49 08.2 +0.5**
NIE *e*PKPbc **PKPbc 03 49 14.9 +0.3**
NIE *e*PKPab **PKPab 03 49 24.9 +0.1**
ICOR Ion Corvin 152.31 319 ⇑P **PKiKP 03 49 15.4 +0.5**
NEHR Nehoiu 152.38 323 ⇑P **PKPbc 03 49 14.8 -0.1**
KSP Ksiaz 152.42 341 *e*PKPdf **PKPdf 03 49 07.6 -0.2**
KSP *e*PKPbc **PKiKP 03 49 15.2 +0.2**
KSP *e*PKPab **PKPab 03 49 25.5 +0.2**
HLM1 Long Mynd 152.43 8 *e*P **PKPbc 03 49 12.7 -2.0**
ISR Istrita 152.44 322 ⇑P **PKPbc 03 49 15.2 +0.1**
ISR Istrita 152.44 322 ⇑PKIKP **PKPbc 03 49 15.2 +0.1**
DOPR Dopca 152.52 325 ⇑P **PKiKP 03 49 16.1 +0.7**
MLR Muntele Rosu 152.53 323 ⇑P **PKPbc 03 49 15.0 -0.3**
MLR ⇑P **PKiKP 03 49 15.9 +0.3**
MLR Muntele Rosu 152.53 323 ⇑PKIKP **PKPbc 03 49 15.0 -0.3**
OSTC Ostas 152.70 341 *e*PKPDF **PKPdf 03 49 08.7 +0.5**
OSTC ⇑*e*PKP **PKiKP 03 49 16.1 +0.5**
CHVC Chvalec 152.72 341⇑*e*PKP **PKPbc 03 49 15.6 +0.2**
OKC Ostrava-Krasne 152.72 338 *e*PKIKP **PKPbc 03 49 15.5 +0.1**
OKC Ostrava-Krasne 152.72 338⇑*e*PKP **PKPbc 03 49 15.5 +0.1**
RSBS Rosebush, Pemb 152.72 10 *e*P **PKPdf 03 49 12.0 +3.9**
SECR 152.75 322 ⇓P **PKPbc 03 49 15.4 -0.3**
UPC Upice 152.80 341 *e*PKIKP **PKPdf 03 49 08.0 -0.4**
UPC Upice 152.80 341 *e*PKPDF **PKPdf 03 49 08.0 -0.4**

UPC ⇑*e*PKP **PKPbc 03 49 15.8 +0.2**
LANS Liptovska Anna 152.82 336 *e*PKIKP **PKiKP 03 49 16.7 +0.8**
LANS Liptovska Anna 152.82 336 *e*PKP **PKiKP 03 49 16.7 +0.8**
CLL Collm 152.83 346 PKPdf **PKPdf 03 49 06.8 -1.6**
CLL Collm 152.83 346 *i* PKIKP **PKPdf 03 49 07.3 -1.1**
CLL *i* 03 49 26.7
CLL pmax pmax
comp=Z,32nm,1.6s
CLL pmax pmax
comp=Z,73nm,1.2s
CLL pmax pmax
comp=Z,73nm,1.3s
CLL Collm 152.83 346 *i* PKPdf **PKPdf 03 49 07.3 -1.1**
comp=Z,32nm,1.6s
CLL *i* PKPbc **PKPbc 03 49 15.6 0.0**
comp=Z,73nm,1.2s
CLL *i* PKPab **PKPab 03 49 26.7 -0.3**
comp=Z,73nm,1.3s
CLL *e*PP **PP 03 52 56.0 -3.8**
comp=Z,106nm,2.5s
DPC Dobruska-Polom 152.85 341 *e*PKIKP **PKPdf 03 49 08.6 +0.1**
DPC Dobruska-Polom 152.85 341 *e*PKPDF **PKPdf 03 49 08.6 +0.1**
DPC ⇑*e*PKP **PKPbc 03 49 16.1 +0.3**
CJR Cluj-Napoca 152.92 328 ⇑P **PKiKP 03 49 16.7 +0.5**
CJR Cluj-Napoca 152.92 328 ⇑PKIKP **PKiKP 03 49 16.7 +0.5**
KRLC Kraliky 152.95 340 *e*PKIKP **PKPdf 03 49 08.5 -0.2**
KRLC Kraliky 152.95 340 *e*PKPDF **PKPdf 03 49 08.5 -0.2**
KRLC ⇑*e*PKP **PKPbc 03 49 15.8 -0.2**
MORC Moravsky Berou 152.97 339 ⇑P **PKPbc 03 49 16.0 0.0**
MORC Moravsky Berou 152.97 339 ⇑PKIKP **PKPbc 03 49 16.0 0.0**
MORC Moravsky Berou 152.97 339 *e*PKP **PKPdf 03 49 07.4 -1.3**
MORC *e* 03 49 28.2
BRG Berggiesshubel 153.02 344 *i* PKIKP **PKPdf 03 49 08.9 +0.2**
BRG pmax pmax
comp=Z,19nm,1.2s
BRG pmax pmax
comp=Z,41nm,1.0s
BRG Berggiesshubel 153.02 344 ⇓*i* PKPf 03 49 09.0
BRG Berggiesshubel 153.02 344 Amp 03 49 12.6
comp=Z,19nm,1.2s
BRG Berggiesshubel 153.02 344 ⇑*i* PKP **PKiKP 03 49 16.6 +0.4**
BRG Berggiesshubel 153.02 344 Amp 03 49 18.9
comp=Z,41nm,1.0s
VOIR 153.05 324 ⇓P **PKiKP 03 49 17.7 +1.1**
VOIR 153.05 324 ⇓PKIKP **PKiKP 03 49 17.7 +1.1**
MONM Monmouth 153.11 8 *e*P **PKPdf 03 49 12.1 +3.3**
PVCC Panska Ves 153.18 343 *e*PKIKP **PKPdf 03 49 09.1 +0.2**
PVCC Panska Ves 153.18 343 *e*PKPDF **PKPdf 03 49 09.1 +0.2**
PVCC ⇑*e*PKP **PKiKP 03 49 16.9 +0.4**
SACV Santiago Islan 153.22 107 **PKPbc 03 49 16.1 -1.5**
DRGR 153.29 329 ⇑P **PKPbc 03 49 16.9 0.0**
DRGR 153.29 329 ⇑PKIKP **PKPbc 03 49 16.9 0.0**
VYHS Vyhne 153.60 336 *e*PKIKP **PKPdf 03 49 09.3 -0.3**
VYHS Vyhne 153.60 336 *e*PKP **PKPdf 03 49 09.3 -0.3**
VYHS *e* 03 49 17.7
PSZ Piszkesteto 153.66 334 ⇑P **PKPbc 03 49 17.7 0.0**
PSZ Piszkesteto 153.66 334 ⇑PKIKP **PKPbc 03 49 17.7 0.0**
PRU Pruhonice 153.68 343 *e*PKIKP **PKPbc 03 49 17.7 +0.2**
PRU Pruhonice 153.68 343⇑*e*PKP **PKPbc 03 49 17.7 +0.2**
VRAC Vranov 153.68 339 ⇑P **PKPbc 03 49 17.1 -0.5**
VRAC Vranov 153.68 339 ⇑PKIKP **PKPbc 03 49 17.1 -0.5**
VRAC Vranov 153.68 339 *e*PKP **PKPdf 03 49 08.8 -0.9**
VRAC *e* 03 49 31.5
JAVC Velka Javorina 153.71 338 *e*PKP **PKPdf 03 49 09.2 -0.6**
JAVC *e* 03 49 32.5
LOT Lotru 153.71 325 ⇑P **PKPbc 03 49 16.6 -1.3**
KRUC Moravsky 153.96 339 *e*PKP **PKPdf 03 49 08.8 -1.3**
KRUC *e* 03 49 32.4
SMOL Smolenice 154.09 337 *e*PKIKP **PKPdf 03 49 10.7 +0.4**
SIRR Siria 154.16 329 ⇑P **PKiKP 03 49 19.3 +0.5**
GZR Gura Zlata 154.25 326 ⇑P **PKPbc 03 49 17.9 -1.1**
GZR Gura Zlata 154.25 326 ⇑PKIKP **PKPbc 03 49 17.9 -1.1**
MODS Modra-Piesok 154.26 337 *e*PKIKP **PKPdf 03 49 11.0 +0.5**
MODS Modra-Piesok 154.26 337 *e*PKP **PKPdf 03 49 11.0 +0.5**
MODS *e* 03 49 34.2
SRO Srobarova 154.36 335 *e*PKP2 **PKPab 03 49 34.5 +1.0**
ZST Bratislava 154.48 337 *e*PKP2 **PKPab 03 49 35.5 +1.5**
MEM Membach 154.56 355 *d*PKPbc **PKPab 03 49 33.5 -0.8**
MEM Membach 154.56 355 *d*PKP **PKPbc 03 49 19.1 -0.3**
BTNL Ternell 154.57 355 *d*PKPab **PKPab 03 49 34.2 -0.2**
BTNL Ternell 154.57 355 *d*PKP **PKPbc 03 49 19.1 -0.3**
BSTI Sart Tilman 154.62 356 *d*PKPab **PKPab 03 49 34.5 -0.1**
BSTI Sart Tilman 154.62 356 *d*PKP **PKiKP 03 49 19.9 +0.4**
KHC Kasperske Hory 154.72 343 *e*PKIKP **PKPdf 03 49 10.7 -0.5**
KHC Kasperske Hory 154.72 343 *e*PKPDF **PKPdf 03 49 10.7 -0.5**
KHC ⇑*e*PKP **PKPbc 03 49 19.8 0.0**
KHC *ex* x 03 49 35.7
SNF Seneffe 154.76 358 *d*PKPab **PKPab 03 49 34.6 -0.5**
HERR Herculane 154.80 326 ⇓P **PKiKP 03 49 20.4 +0.3**
BCLA Clavier 154.80 356 *d*PKPab **PKPab 03 49 34.9 -0.4**
CKRC Cesky Krumlov 154.80 342 *e*PKPDF **PKPdf 03 49 10.8 -0.5**
CKRC ⇑*e*PKP **PKPbc 03 49 20.1 +0.1**
BHOU Houvegnez 154.81 355 *d*PKPab **PKPab 03 49 34.8 -0.6**
BMRD Maredsous 154.94 357 *d*PKPab **PKPab 03 49 35.3 -0.6**
BMRD Maredsous 154.94 357 *d*PKP **PKPbc 03 49 20.1 -0.1**
GERES GERESS Array B 154.95 343 PKP **PKPdf 03 49 10.7 -0.9**
comp=Z,2.1nm,0.8s,baz=214,slow=1.4,SNR=18
GERES PKPab **PKPab 03 49 36.5 +0.4**
comp=Z,7.3nm,0.7s,baz=48,slow=4.1,SNR=8.8
GERES GERESS Array B 154.95 343 PKPdf **PKPdf 03 49 09.9 -1.7**
RCHB Rochefort 155.06 356 *d*PKPab **PKPab 03 49 35.7 -0.8**
CONA Conrad Observa 155.13 339 *i* P **PKPdf 03 49 11.3 -0.6**
comp=Z,8.7nm,1.3s,SNR=6.1
CONA *e*P **PKPab 03 49 38.1 +1.1**
comp=Z,65nm,1.2s
DOU Dourbes 155.16 357 *d*PKP PKPdf 03 49 20.7 +9.0
RONA Rosalia, Austr 155.18 338 *i* P **PKPdf 03 49 10.8 -1.1**
comp=Z,12nm,1.3s,SNR=5.3
RONA *i* P **PKPab 03 49 38.2 +1.1**
comp=Z,74nm,1.2s,SNR=6.7
MPLH Magyarpolny 155.19 336 PKP **PKPdf 03 49 12.4 +0.6**
MDVR Moldovita 155.22 327 ⇑P PKPdf 03 49 20.5 +8.5
WLF Walferdange 155.49 355 *d*PKPab **PKPab 03 49 38.1 -0.2**
WLF Walferdange 155.49 355 *d*PKP PKPdf 03 49 22.1 +10
MORH Mrgy, Hungar 155.53 333 PKP **PKPdf 03 49 11.7 -0.6**
MOA Molln 155.69 341 *e*P **PKPdf 03 49 11.5 -1.0**
comp=Z,8.5nm,1.2s
MOA *i* P **PKPab 03 49 40.1 +0.8**
comp=Z,49nm,1.2s,SNR=7.2
ARSA Arzberg 155.83 339 *e*P **PKPdf 03 49 11.9 -0.8**
comp=Z,5.6nm,0.9s
ARSA *i* P **PKPab 03 49 40.6 +0.7**
comp=Z,28nm,1.0s,SNR=6.3
KOVH Kovagotottos 155.86 333 PKP **PKPdf 03 49 12.7 -0.1**
BIOA Bad Ischl, Aus 156.02 342 *e*P **PKPdf 03 49 12.2 -0.7**
comp=Z,5.0nm,0.8s
BIOA *i* P **PKPab 03 49 41.5 +0.8**
comp=Z,113nm,1.4s,SNR=11
KOGS Kog 156.27 336 *e*PKPab **PKPab 03 49 40.9 -0.9**
SOKA Soboth 156.49 339 *i* P **PKPdf 03 49 13.2 -0.5**
comp=Z,11nm,1.2s,SNR=5.3
SOKA *i* P **PKPab 03 49 43.0 +0.2**
comp=Z,63nm,1.3s,SNR=8.8
BFO Black Forest 156.56 351 PKPdf **PKPdf 03 49 13.1 -0.6**
BFO **PKPab 03 49 42.3 -0.7**
BFO Black Forest 156.56 351 PKIKP **PKPdf 03 49 13.1 -0.6**
BFO 03 49 42.3
KBA Koelnbreinsper 156.66 342 *e*P **PKPdf 03 49 13.5 -0.5**
comp=Z,6.5nm,1.1s
KBA *e*P **PKPab 03 49 43.8 +0.1**
comp=Z,46nm,1.0s
OBKA Obir 156.80 339 *e*P **PKPab 03 49 44.2 0.0**
comp=Z,16nm,1.4s
WATA Walderalm 156.88 345 *e*P **PKPdf 03 49 13.9 -0.4**
comp=Z,11nm,1.2s
WATA *i* P **pPKPdf 03 49 44.9 +0.3**
comp=Z,55nm,1.5s,SNR=6.5
RETA Reutte 156.93 346 P **PKPdf 03 49 13.9 -0.

VAY	**Valandovo**	**157.06**	**319**	*i* P		**PKPab**	**03 49 45.2**	**-0.2**
SQTA	**Sankt Quirin**	**157.08**	**345**	*e*P		**PKPdf**	**03 49 14.1**	**-0.4**
	comp=Z,7.6nm,1.1s							
SQTA				*e*P		**PKPab**	**03 49 45.6**	**+0.2**
	comp=Z,42nm,1.5s							
PRED	**Cave del Predi**	**157.17**	**341**			**PKPdf**	**03 49 13.0**	**-1.5**
PRED						**pPKPdf**	**03 49 44.3**	**-0.6**
ABTA	**Abfaltersbach**	**157.19**	**343**	*e*P		**PKPdf**	**03 49 13.9**	**-0.7**
	comp=Z,11nm,1.3s							
ABTA				*e*P		**PKPab**	**03 49 45.9**	**+0.1**
	comp=Z,23nm,0.7s							
LJU	**Ljubljana**	**157.22**	**339**	*i* PKPdf		**PKPdf**	**03 49 14.1**	**-0.5**
LJU				*e*PKPab		**pPKPdf**	**03 49 45.2**	**+0.3**
CLF	**Chambon-Foret**	**157.26**	**1**	PKPab		**PKPab**	**03 49 44.4**	**-1.5**
DAVA	**Damuels**	**157.30**	**347**	*e*P		**PKPdf**	**03 49 14.7**	**-0.1**
	comp=Z,9.2nm,1.3s							
DAVA				*e*P		**PKPab**	**03 49 48.4**	**+2.0**
	comp=Z,55nm,1.7s							
CADS	**Cadrg**	**157.31**	**340**	*e*PKPab		**PKPab**	**03 49 45.0**	**-1.3**
FETA	**Feichten**	**157.38**	**346**	*i* P		**PKPdf**	**03 49 14.4**	**-0.6**
	comp=Z,13nm,1.3s,SNR=5.7							
FETA				*e*P		**PKPab**	**03 49 48.6**	**+1.9**
	comp=Z,25nm,1.4s							
CIMO	**Cimolais**	**157.61**	**342**			**PKPdf**	**03 49 13.6**	**-1.4**
CIMO					PKPab	**pPKPdf**	**03 49 46.3**	**+0.8**
SANT	**Santorini**	**157.66**	**305**		PKPab	**PKPab**	**03 49 45.9**	**-2.4**
SALO	**Salr**	**158.75**	**345**		PKPab	**PKPab**	**03 49 51.2**	**-1.3**
LIC	**Lamto**	**159.65**	**157**	⇑*i*	PKP1	**PKPdf**	**03 49 17.7**	**-0.7**
	comp=Z,74nm,1.0s							
KIC	**Kosan Boka**	**159.88**	**158**	⇓*i*	PKP1	**PKPdf**	**03 49 18.5**	**-0.2**
	comp=Z,60nm,0.8s							
TIC	**Toumodi**	**160.04**	**157**	⇑*i*	PKP1	**PKPdf**	**03 49 18.2**	**-0.7**
	comp=Z,69nm,0.9s							
DBIC	**Dimbokro**	**160.12**	**157**	PKP		**PKPdf**	**03 49 18.9**	**-0.1**
	comp=Z,14nm,0.9s,baz=220,slow=1.7,SNR=10							
DBIC					PKPab	**PKPab**	**03 50 00.2**	**+1.0**
	comp=Z,13nm,0.7s,baz=215,slow=4.0,SNR=8.8							
OSSC	**Osservatorio P**	**160.51**	**341**			**PKPab**	**03 49 59.0**	**-1.3**
PGAV	**Gavieira, Arco**	**160.98**	**26**	*e*PKPdf		**PKPdf**	**03 49 20.2**	**+1.0**
POLO	**Lamas de Olo**	**161.67**	**26**	*e*PKPdf		**PKPdf**	**03 49 21.0**	**+1.1**
POLO	**Lamas de Olo**	**161.67**	**26**	*e*PKPab		**PKPab**	**03 50 07.1**	**+1.6**
PVRL	**Vila Real**	**161.78**	**26**	*e*PKPab		**PKPab**	**03 50 04.5**	**-1.4**
MVO	**Moncorvo**	**162.14**	**25**	*e*PKPdf		**PKPdf**	**03 49 21.1**	**+0.7**
PVIS	**Viseu**	**162.18**	**27**	*e*PKPdf		**PKPdf**	**03 49 22.4**	**+2.0**
PVIS	**Viseu**	**162.18**	**27**	*e*PKPab		**PKPab**	**03 50 08.3**	**+0.6**
PCAS	**Casmilo, Conde**	**162.46**	**30**	*e*PKPab		**PKPab**	**03 50 08.9**	**0.0**
MTE	**Manteigas**	**162.59**	**27**	*e*PKPdf		**PKPdf**	**03 49 22.6**	**+1.8**
PSBE	**So Bento**	**162.75**	**32**	*e*PKPab		**PKPab**	**03 50 11.8**	**+1.6**
PMAFR	**Mafra**	**162.95**	**34**	*e*PKPdf		**PKPdf**	**03 49 23.8**	**+2.6**
PCBR	**Castelo Branco**	**163.08**	**28**	*e*PKPdf		**PKPdf**	**03 49 22.4**	**+1.2**
PMTG	**Montargil**	**163.37**	**31**	*e*PKPab		**PKPab**	**03 50 13.7**	**+0.8**
PMRV	**Marv??o**	**163.46**	**29**	*e*PKPdf		**PKPdf**	**03 49 22.1**	**+0.5**
PMRV	**Marv??o**	**163.46**	**29**	*e*PKPab		**PKPab**	**03 50 11.6**	**-1.7**
PESTR	**Estremoz**	**163.83**	**30**	*e*PKPdf		**PKPdf**	**03 49 22.7**	**+0.7**
PESTR	**Estremoz**	**163.83**	**30**	*e*PKPab		**PKPab**	**03 50 20.5**	**+5.5**
EVO	**Evora**	**163.90**	**32**	*e*PKPdf		**PKPdf**	**03 49 22.8**	**+0.7**
PNCL	**Nicolau / Gran**	**163.97**	**34**	*e*PKPdf		**PKPdf**	**03 49 23.4**	**+1.3**
PNCL	**Nicolau / Gran**	**163.97**	**34**	*e*PKPab		**PKPab**	**03 50 16.6**	**+1.0**
PTEO	**Sao Teotonio**	**164.30**	**36**	*e*PKPdf		**PKPdf**	**03 49 24.1**	**+1.7**
MESJ	**Messejana**	**164.34**	**34**	*e*PKPdf		**PKPdf**	**03 49 24.0**	**+1.5**
PBEJ	**Beja**	**164.37**	**36**	*e*PKPdf		**PKPdf**	**03 49 24.1**	**+1.6**
ESDC	**Sonseca Array**	**164.53**	**20**	PKP		**PKPdf**	**03 49 22.9**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=348,slow=2.8,SNR=14							
ESDC					PKPab	**PKPab**	**03 50 19.0**	**+0.9**
	comp=Z,3.0nm,0.9s,baz=328,slow=4.4,SNR=6.5							
PCVE	**Castro Verde**	**164.59**	**34**	*e*PKPdf		**PKPdf**	**03 49 25.3**	**+2.6**
PBAR	**Barrancos**	**164.65**	**31**	*e*PKPdf		**PKPdf**	**03 49 23.0**	**+0.3**
PBDV	**Barranco-do-Ve**	**164.94**	**35**	*e*PKPdf		**PKPdf**	**03 49 24.3**	**+1.2**
KOWA	**Kowa**	**167.53**	**148**			**PKPdf**	**03 49 23.9**	**-1.8**
KOWA					PKPab	**PKPab**	**03 50 30.8**	**-1.0**
TOA0	**Torodi Ar. Sit**	**167.92**	**175**			**PKPdf**	**03 49 24.3**	**-1.6**
TOA0					PKPab	**PKPab**	**03 50 32.6**	**-0.8**
TOA0	**Torodi Ar. Sit**	**167.92**	**175**	P		**PKPdf**	**03 49 25.6**	**-0.3**
	SNR=13							
TORD	**Torodi Ar. Bea**	**167.92**	**175**	PKP		**PKPdf**	**03 49 25.2**	**-0.7**
	comp=Z,24nm,1.1s,baz=305,slow=0.7,SNR=47							
TORD					PKPab	**PKPab**	**03 50 34.0**	**+0.7**
	comp=Z,34nm,1.1s,baz=199,slow=2.4,SNR=13							
TORD				PP		**PP**	**03 54 19.6**	**-1.2**
	comp=Z,6.2nm,1.0s,baz=158,slow=4.7,SNR=3.8							
KEST	**Kesra**	**168.13**	**333**	PKPab		**PKPab**	**03 50 33.9**	**-0.2**
	comp=Z,22nm,0.9s,baz=262,slow=2.1,SNR=12							
TAM	**Tamanrasset**	**176.51**	**226**			**PKPdf**	**03 49 24.8**	**-5.0**
TAM						**PKPab**	**03 51 07.5**	**-4.2**
TAM	**Tamanrasset**	**176.51**	**226**	PKP2		**PKPab**	**03 51 07.5**	**-4.2**

IDC ***12*** *04:10:33.1±2.4,1°.94S×133°.57E,h0km,mb3.6/2, mbtmp3.7/5,ML3.7/3,Error ellipse: s-maj=53.5km s-min=22.3km az=63.0*
DJA ***12*** *04:10:35.2±1.8,2°.5S±5°×13°.4E±°,h17km±16km,M4.0/5, mb4.0/1,MLv4.1/5*
ISC 12 04:10:35.8±1.1,1°.87S±0°.09×133°.71E±0°.06,h26km,n8, σ0s98/11,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**1.80**	**234**	P		**Pn**	**04 11 05.5**	**+0.3**
FAKI				S		**Sb**	**04 11 30.6**	**+0.3**
BAKI	**Biak**	**2.49**	**74**	P		**Pn**	**04 11 14.4**	**-0.3**
SIJI	**Sorong**	**2.64**	**292**	Pn		**Pn**	**04 11 16.0**	**-0.8**
	6.9nm,0.3s,baz=111,slow=23,SNR=18							
SIJI				Sn		**Sn**	**04 11 47.5**	**-0.4**
	24nm,0.3s,baz=290,slow=23,SNR=9.3							
	31nm,0.5s							
SWI	**Sorong**	**2.65**	**292**	P		**Pn**	**04 11 16.7**	**-0.2**
SWI				S		**Sn**	**04 11 48.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**17.97**	**206**	P		**Pn**	**04 14 42.2**	**-1.8**
	0.3nm,0.3s,baz=34,slow=14,SNR=9.1							
FITZ				S		Sn	04 17 51.0	-13
	3.2nm,0.6s,baz=306,slow=19,SNR=3.6							
	1.1nm,0.4s							
WRA	**Warramunga Arr**	**17.98**	**178**	P		**Pn**	**04 14 43.1**	**-1.0**
	0.4nm,0.3s,baz=358,slow=12,SNR=19							
WRA				S		Sn	04 17 55.4	-8.7
	0.5nm,0.7s,baz=352,slow=24,SNR=2.6							
	1.1nm,0.4s							
ASAR	**Alice Springs**	**21.67**	**180**	P		**P**	**04 15 25.5**	**+0.8**
	1.8nm,0.6s,baz=5.6,slow=11,SNR=18							
	1.8nm,0.6s							
MKAR	**Makanchi Array**	**66.13**	**324**	P		**P**	**04 21 22.2**	**+1.2**
	0.2nm,0.3s,baz=119,slow=7.7,SNR=1.8							
	0.2nm,0.3s							

SOME ***12*** *04:17:28.3,41°.92N×79°.30E,h10km*
NNC ***12*** *04:17:28.6±0.9,41°.89N×79°.27E,h0km,mb3.5,mpv3.5, Error ellipse: s-maj=6.6km s-min=3.8km az=157.0*
KRNET ***12*** *04:17:28.7±0.1,41°.90N×79°.33E,h23km,mb3.5*
ISC 12 04:17:30.5±2.0,42°.00N±0°.07×79°.32E±0°.04,h1km±11km, n51,σ1s34/90,13C-6D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.83**	**306**	⇑*i*	P	**Pg**	**04 17 45.9**	**-0.6**
	baz=11							
PRZ				⇑*i*	S	**Sg**	**04 17 58.9**	**+1.5**
	baz=11							
SHLS	**Shalkode**	**1.16**	**5**	*e*P		**Pn**	**04 17 53.7**	**-0.4**
	26nm,0.1s							
SHLS				*e*S		**Sn**	**04 18 11.7**	**+1.1**
	92nm,0.2s							
SHLS	**Shalkode**	**1.16**	**5**	P		**Pn**	**04 17 53.7**	**-0.4**
	26nm,0.1s							
SHLS				S		**Sn**	**04 18 12.0**	**+1.3**
	92nm,0.2s							
SHLS	**Shalkode**	**1.16**	**5**	*e*P		**Pn**	**04 17 53.7**	**-0.4**
	baz=18							
SHLS				*e*S		**Sn**	**04 18 11.7**	**+1.1**
	baz=18							
UZB	**Uzunbulak**	**1.17**	**349**	*e*P		**Pb**	**04 17 52.2**	**-1.4**
	13nm,0.1s							
UZB				*e*S		**Sn**	**04 18 09.5**	**-1.3**
	88nm,0.2s							
UZB	**Uzunbulak**	**1.17**	**349**	P		**Pb**	**04 17 52.2**	**-1.4**
	13nm,0.1s							
UZB				S		**Sn**	**04 18 09.4**	**-1.4**
	88nm,0.2s							
UZB	**Uzunbulak**	**1.17**	**349**	*e*P		**Pb**	**04 17 52.2**	**-1.4**
	baz=50							
UZB				*e*S		**Sn**	**04 18 09.5**	**-1.3**
	baz=50							
SATY	**Saty**	**1.25**	**328**	*e*P		**Pn**	**04 17 53.6**	**-1.7**
	19nm,0.1s							
SATY				*e*S		**Sb**	**04 18 11.8**	**+0.1**
	110nm,0.1s							
SATY	**Saty**	**1.25**	**328**	P		**Pn**	**04 17 53.8**	**-1.5**
	19nm,0.1s							
SATY				S		**Sn**	**04 18 12.2**	**-0.8**
	110nm,0.1s							
SATY	**Saty**	**1.25**	**328**	*e*P		**Pn**	**04 17 53.6**	**-1.7**
	baz=30							
SATY				*e*S		**Sb**	**04 18 11.9**	**+0.1**
	baz=30							
PDGK	**Podgornoye**	**1.33**	**5**	P		**Pn**	**04 17 55.3**	**-1.2**
	6.2nm,0.2s							
PDGK	**Podgornoye**	**1.33**	**5**	⇑P		**Pn**	**04 17 54.7**	**-1.7**
	5.5nm,0.3s							
PDGK				⇑S		**Sg**	**04 18 16.9**	**+3.5**
	31nm,0.8s							
ZHN	**Zhinishke**	**1.34**	**331**	*e*P		**Pn**	**04 17 55.1**	**-1.4**
	67nm,0.1s							
ZHN				*e*S		**Sg**	**04 18 14.5**	**+1.0**
	314nm,0.1s							
ZHN	**Zhinishke**	**1.34**	**331**	P		**Pn**	**04 17 55.2**	**-1.2**
	67nm,0.1s							
ZHN				S		**Sg**	**04 18 14.5**	**+1.0**
	314nm,0.1s							
ZHN	**Zhinishke**	**1.34**	**331**	*e*P		**Pn**	**04 17 55.1**	**-1.4**
	baz=33							
ZHN				*e*S		**Sg**	**04 18 14.5**	**+1.0**
	baz=33							
KTMS	**Ketmen**	**1.63**	**27**	*e*P		**Pn**	**04 17 59.9**	**-0.7**
	6.4nm,0.1s							
KTMS				*e*S		**Sg**	**04 18 22.7**	**-0.3**
	14nm,0.1s							
KTMS	**Ketmen**	**1.63**	**27**	P		**Pb**	**04 18 00.4**	**-1.1**
	6.4nm,0.1s							
KTMS				S		**Sg**	**04 18 23.2**	**+0.2**
	14nm,0.1s							
KTMS	**Ketmen**	**1.63**	**27**	*e*P		**Pn**	**04 17 59.9**	**-0.7**
	baz=26							
KTMS				*e*S		**Sg**	**04 18 22.8**	**-0.3**
	baz=26							
KURS	**Kuram**	**1.71**	**331**	*e*P		**Pn**	**04 18 01.3**	**-0.2**
	14nm,0.3s							
KURS				*e*S		**Sb**	**04 18 25.5**	**+0.7**
	46nm,0.2s							
KURS	**Kuram**	**1.71**	**331**	P		**Pn**	**04 18 01.7**	**+0.2**
	14nm,0.3s							
KURS				S		**Sg**	**04 18 25.9**	**+0.4**
	46nm,0.2s							
KURS	**Kuram**	**1.71**	**331**	*e*P		**Pn**	**04 18 01.3**	**-0.2**
	baz=32							
KURS				*e*S		**Sb**	**04 18 25.5**	**+0.7**
	baz=32							
MDOK	**Medeo**	**2.04**	**306**	*e*P		**Pn**	**04 18 06.4**	**+0.3**
	12nm,0.4s							
MDOK				*e*S		**Sb**	**04 18 33.9**	**-0.5**
	171nm,0.3s							
MDOK	**Medeo**	**2.04**	**306**	Pn		**Pn**	**04 18 05.8**	**-0.4**
	7.1nm,0.4s							
MDOK				Pg		**Pn**	**04 18 06.5**	**+0.3**
	12nm,0.4s							
MDOK				Lg		Lg	04 18 34.3	
	171nm,0.3s							
MDOK				⇑Sn		**Sb**	**04 18 34.5**	**+0.2**
	144nm,0.6s							
MDOK	**Medeo**	**2.04**	**306**	*e*P		**Pn**	**04 18 06.4**	**+0.3**
	baz=8.0							
MDOK				*e*S		**Sb**	**04 18 33.9**	**-0.5**
	baz=8.0							
KNDC	**Almaty**	**2.12**	**306**	⇓Sn		**Sn**	**04 18 34.0**	**-0.2**
	84nm,0.3s							
AAA	**Alma-Ata**	**2.15**	**305**	*e*P		**Pb**	**04 18 08.6**	**-1.6**
	45nm,0.3s							
AAA				*e*S		**Sb**	**04 18 37.7**	**+0.4**
	187nm,0.3s							
AAA	**Alma-Ata**	**2.15**	**305**	Pg		**Pb**	**04 18 08.6**	**-1.6**
	45nm,0.3s							
AAA				Lg		Lg	04 18 37.7	
	187nm,0.3s							
BLB	**Baldybastay**	**2.18**	**344**	*e*P		**Pb**	**04 18 09.4**	**-1.5**
	38nm,0.2s							
BLB				*e*S		**Sb**	**04 18 38.8**	**+0.3**
	236nm,0.2s							
BLB	**Baldybastay**	**2.18**	**344**	Pg		**Pb**	**04 18 09.8**	**-1.2**
	38nm,0.2s							
BLB				Lg		Lg	04 18 39.6	
	236nm,0.2s							
ULHL	**Ulahol**	**2.30**	**277**	⇑*i*	P	**Pn**	**04 18 09.9**	**+0.1**
	baz=80							
ULHL				⇑*i*	S	**Sn**	**04 18 38.5**	**-0.3**
	baz=80							
DJR	**Jarkent**	**2.36**	**8**	*e*P		**Pb**	**04 18 13.0**	**-0.9**
	2.3nm,0.2s							
DJR				*e*S		**Sg**	**04 18 45.0**	**-1.2**
	58nm,0.6s							
MTBS	**Maitube**	**2.41**	**299**	*e*P		**Pb**	**04 18 13.1**	**-1.7**
	5.9nm,0.3s							
MTBS				*e*S		**Sb**	**04 18 45.5**	**+0.4**
	50nm,0.2s							
MTBS	**Maitube**	**2.41**	**299**	Pg		**Pb**	**04 18 12.9**	**-2.0**
	6.7nm,0.1s							
MTBS				Lg		Lg	04 18 44.9	
	50nm,0.2s							
ARXS	**Arharly**	**2.47**	**334**	*e*P		**Pb**	**04 18 14.6**	**-1.1**
	8.4nm,0.2s							
ARXS				*e*S		**Sb**	**04 18 48.0**	**+1.4**
	71nm,0.3s							
ARXS	**Arharly**	**2.47**	**334**	Pg		**Pb**	**04 18 14.6**	**-1.1**
	8.4nm,0.2s							
ARXS				Lg		Lg	04 18 48.0	
	71nm,0.3s							
BOOM	**Boomskoye usch**	**2.55**	**282**	⇑*e*P		**Pn**	**04 18 12.9**	**-0.3**
	baz=84							
BOOM				⇑*i*	S	**Sn**	**04 18 44.8**	**-0.2**
	baz=84							
KTBS	**Karatobe**	**2.58**	**312**	*e*P		**Pb**	**04 18 16.4**	**-1.3**
	11nm,0.2s							
KTBS				*e*S		**Sb**	**04 18 51.0**	**+1.0**
	90nm,0.2s							
KTBS	**Karatobe**	**2.58**	**312**	Pg		**Pb**	**04 18 16.1**	**-1.6**
	11nm,0.2s							
KTBS				Lg		Lg	04 18 50.6	
	90nm,0.2s							
KST	**Kastek**	**2.69**	**294**	*e*P		**Pn**	**04 18 17.0**	**+2.0**
	10nm,0.3s							
KST				*e*S		**Sb**	**04 18 52.1**	**-1.0**
	76nm,0.4s							
KST	**Kastek**	**2.69**	**294**	Pg		**Pn**	**04 18 16.7**	**+1.7**
	10nm,0.3s							
KST				Lg		Lg	04 18 51.6	
	76nm,0.4s							
KUU	**Kurty**	**2.89**	**312**	*e*P		**Pb**	**04 18 21.5**	**-1.4**
	2.6nm,0.2s							
KUU				*e*S		**Sb**	**04 18 59.7**	**+0.9**
	38nm,0.6s							
KUU	**Kurty**	**2.89**	**312**	Pg		**Pb**	**04 18 21.2**	**-1.7**
	2.6nm,0.2s							
KUU				Lg		Lg	04 18 59.3	
	38nm,0.6s							
TKM2	**Tokmak 2**	**2.90**	**290**	⇓Pn		**Pn**	**04 18 17.2**	**-0.9**
	1.2nm,0.3s							
TKM2				⇑Pg		**Pb**	**04 18 23.0**	**-0.3**
	2.9nm,0.6s							
TKM2				⇑Lg		Lg	04 19 01.9	
	29nm,0.5s							
TKM2	**Tokmak 2**	**2.90**	**290**	⇓*e*P		**Pn**	**04 18 17.2**	**-0.9**
	baz=92							
TKM2				⇓*i*	S	**Sn**	**04 18 53.1**	**-0.6**
	baz=92							
KRBS	**Karabastau**	**3.17**	**304**	*e*P		**Pb**	**04 18 26.1**	**-1.6**
	4.9nm,0.2s							
KRBS				*e*S		**Sb**	**04 19 07.7**	**+0.9**
	17nm,0.4s							
KRBS	**Karabastau**	**3.17**	**304**	Pg		**Pb**	**04 18 26.1**	**-1.6**
	4.9nm,0.2s							
KRBS				Lg		Lg	04 19 07.7	
	17nm,0.4s							
CHMS	**Chumysh**	**3.52**	**288**	⇓Lg		Lg	04 19 20.9	
	5.8nm,0.5s							
SGDS	**Sogindy**	**3.75**	**294**	*e*P		**Pb**	**04 18 37.4**	**-0.1**
	4.2nm,0.1s							
SGDS				*e*S		**Sb**	**04 19 26.8**	**+3.4**
	8.9nm,0.4s							
BTLS	**Baital**	**4.89**	**310**	*e*P		**Pb**	**04 18 57.6**	**+0.6**
	2.4nm,1.0s							
BTLS				*e*S		**Sb**	**04 20 01.9**	**+5.6**
	3.8nm,0.4s							
MK31	**Makanchi Array**	**5.24**	**23**	Pn			**04 18 49.9**	**-0.2**
	0.1nm,0.2s,baz=203,slow=14,SNR=8.1							
MK31				⇑Pg		**Pb**	**04 19 04.6**	**+1.6**
	0.1nm,0.2s,baz=190,slow=15,SNR=9.0							
MK31				⇓Sn		**Sn**	**04 19 52.4**	**+1.3**
	1.7nm,0.7s,baz=205,slow=24,SNR=6.3							
MK31				⇑Lg		Lg	04 20 16.5	
	0.9nm,0.5s							
KK31	**Karatay Array**	**6.60**	**283**	Lg		Lg	04 20 58.3	
	0.8nm,0.4s,baz=95,slow=27,SNR=5.4							

IDC 12 04:22:23.7±6.4,20°.96S×173°.62E,h0km,mb3.7/4, mbtmp3.8/5,ML3.8/1,Error ellipse: s-maj=156.3km s-min=34.1km az=31.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.77**	**259**	Pn		Pn	04 24 04.0	-0.4
	1.7nm,0.3s,baz=112,slow=16,SNR=3.6							
	5.2nm,0.4s							
WRA	**Warramunga Arr**	**36.76**	**264**	P		P	04 29 32.9	-0.3
	0.2nm,0.3s,baz=96,slow=8.5,SNR=12							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**36.76**	**258**	P		P	04 29 33.3	+0.1
	0.9nm,0.9s,baz=83,slow=7.9,SNR=5.0							
	0.9nm,0.9s							
H11S2	**WAKE ISLAND Hy**	**39.79**	**350**	T		T	05 14 00.4	
	baz=171,slow=76,SNR=6.8							
H11S3	**WAKE ISLAND Hy**	**39.80**	**350**	T		T	05 14 00.5	
	baz=171,slow=76,SNR=5.6							
H11S1	**WAKE ISLAND Hy**	**39.81**	**350**	T		T	05 14 01.2	
	baz=171,slow=76,SNR=9.8							
H11N1	**WAKE ISLAND Hy**	**40.96**	**350**	T		T	05 15 27.9	
	baz=216,slow=74,SNR=4.6							
H11N2	**WAKE ISLAND Hy**	**40.98**	**350**	T		T	05 15 30.0	
	baz=178,slow=74,SNR=4.8							
VNDA	**Vanda**	**56.89**	**183**	P		P	04 32 09.2	-0.8
	0.6nm,0.7s,baz=7.8,slow=9.2,SNR=7.0							
	0.6nm,0.7s							
MAW	**Mawson**	**78.37**	**201**	P		P	04 34 26.6	+0.9
	1.7nm,0.8s,baz=116,slow=6.7,SNR=4.5							
	1.7nm,0.8s							

BJI ***12*** *04:27:55.3±0.0,27°.76N×139°.70E,h509km,mb4.7/51, mB5.0/9*
JMA ***12*** *04:27:55.2±0.3,28°.N±1°×14°.0E±°,h494km±3km,MD5.3/30, MV4.7/30,W OFF OGASAWARA*
IDC ***12*** *04:27:56.0±0.6,27°.87N×139°.61E,h487km±6km,mb3.9/40, mbtmp4.8/44,Error ellipse: s-maj=9.9km s-min=6.1km az=75.0*
NEIC ***12*** *04:27:56.1±1.1,27°.89N±0°.09×139°.68E±0°.05, h485km±6km,mb4.4/197,Error ellipse: s-maj=13.6km s-min=3.1km az=157.0*
ISC 12 04:27:56.3±0.4,27°.84N±0°.04×139°.73E±0°.05,h494km±3km, h495km:pP-P,n549,σ0s99/539,mb4.4/152,2C-4D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.30**	**108**	P		**P**	**04 29 01.3**	**-1.1**
CBIJ				S		**S**	**04 29 52.9**	**-3.2**
CBIJ	**Chichi jima**	**2.30**	**108**	A		A	04 29 01.3	
	comp=E,10.0nm,1.4s,comp=E,7.0nm,1.6s							
JCJ	**Chichijima**	**2.30**	**108**	P		**P**	**04 29 01.1**	**-1.4**
	1μm,0.3s,baz=18,slow=1.0,SNR=207							
JCJ				S		**S**	**04 29 51.8**	**-4.3**
	2μm,0.3s,baz=302,slow=21,SNR=18							
JCJ	**Chichijima**	**2.30**	**108**	P		**P**	**04 29 01.2**	**-1.2**
JHH2	**Haha-jima-NKT2**	**2.49**	**118**	P		**P**	**04 29 02.2**	**-1.3**
JHH2				S		**S**	**04 29 55.0**	**-3.1**
JHH2	**Haha-jima-NKT2**	**2.49**	**118**	A		A	04 29 02.2	
	comp=E,19nm,3.4s,comp=E,17nm,0.3s							
JHCJ	**Hachijojimakas**	**5.22**	**1**	S		**S**	**04 30 33.6**	**-3.6**
JHJ2	**Mitsune**	**5.26**	**1**	P		**P**	**04 29 24.7**	**-0.4**
JHJ2	**Mitsune**	**5.26**	**1**	P		**P**	**04 29 24.7**	**-0.4**
JHJ2	**Mitsune**	**5.26**	**1**	P		**P**	**04 29 24.5**	**-0.6**
JHJ2				*e*S		**S**	**04 30 35.1**	**-2.7**
JHJ	**Hachijo jima 2**	**5.27**	**0**	P		**P**	**04 29 24.5**	**-0.7**
	109nm,0.3s,baz=88,slow=22,SNR=15							
JHJ				S		**S**	**04 30 34.9**	**-3.1**
	437nm,0.4s,baz=277,slow=23,SNR=7.3							
TTO1	**TONANKAI O.B.S**	**6.30**	**337**	P		**P**	**04 29 37.3**	**+2.5**
BSO1	**Boso 1**	**6.88**	**9**	P		**P**	**04 29 40.5**	**+0.2**
BSO1				S		**S**	**04 31 03.5**	**-2.1**
JTNC	**Tanabenakahech**	**6.94**	**330**	P		**P**	**04 29 42.6**	**+1.1**
JTNC				S		**S**	**04 31 09.9**	**+2.2**
JIE	**Ise**	**7.03**	**339**	P		**P**	**04 29 44.0**	**+1.6**
JIE				S		**S**	**04 31 09.0**	**-0.4**
JOD2	**Odawara 2**	**7.42**	**356**	P		**P**	**04 29 45.2**	**-1.2**
JOD2				S		**S**	**04 31 13.6**	**-3.2**
JMN	**Monobe**	**7.73**	**321**	P		**P**	**04 29 49.9**	**+0.3**
JTO	**Tosashimizu**	**7.80**	**312**	P		**P**	**04 29 51.8**	**+1.5**
**IN

KLR ScP **ScP** **04 38 43.0 +0.3**
comp=Z,4.6nm,0.9s,baz=331,slow=3.2,SNR=9.6
comp=Z,7.4nm,0.4s
WHN Wuhan 22.31 283 ⇓P **P** **04 32 16.2 +0.1**
BJT Baijiatuau 22.94 308 P **P** **04 32 20.3 -1.4**
BJT IAmb IAmb 04 32 22.5
comp=Z,6.3nm,0.5s
BJI Beijing 22.95 308 P **P** **04 32 20.9 -0.8**
BJI pmax pmax
comp=Z,8.0nm,1.1s
HNS HongShan 23.08 301 ⇑P **P** **04 32 22.9 0.0**
HNS pmax pmax
comp=Z,17nm,1.4s
LYN LuoYang 24.22 293 *e*P **P** **04 32 30.5 -2.6**
LYN pmax pmax
comp=Z,10.0nm,1.6s
HIA Hailar 26.35 330 P **P** **04 32 51.4 -0.4**
HIA IAmb IAmb 04 32 52.9
comp=Z,9.1nm,0.6s
HHC Hu-ho-hao-te 26.50 307 *e*P **P** **04 32 54.6 +1.2**
HHC pmax pmax
comp=Z,30nm,0.8s
HHC pmax pmax
comp=Z,1µm,5.5s
ENH Enshi 26.51 283 P **P** **04 32 52.7 -0.9**
XAN Xi'an 27.07 291 P **P** **04 32 57.7 -0.8**
XAN pmax pmax
comp=Z,9.0nm,0.6s
PETK Petropavlovsk- 28.55 23 P **P** **04 33 11.6 +0.6**
comp=Z,2.8nm,0.3s,baz=206,slow=4.6,SNR=18
comp=Z,2.8nm,0.3s
PETK Petropavlovsk- 28.55 23 P **P** **04 33 10.8 -0.2**
PET Petropavlovsk 28.81 24 P **P** **04 33 13.1 -0.2**
GYA Guiyang 29.41 275 ⇑P **P** **04 33 19.1 0.0**
GYA pmax pmax
comp=Z,28nm,0.9s
LZH Lanzhou 31.40 294 *e*P **P** **04 33 35.9 -0.3**
LZH pP pP 04 35 01.9 +2.1
LZH pmax pmax
comp=Z,17nm,1.5s
TOLI2 Tolitoli 32.18 218 P **P** **04 33 42.0 -0.9**
TOLI2 Tolitoli 32.18 218 P **P** **04 33 42.7 -0.2**
ULN Ulaanbaatar 32.29 317 P **P** **04 33 42.8 -0.9**
ULN IAmb IAmb 04 33 45.0
comp=Z,11nm,1.0s
SANI Sanana 32.52 206 P **P** **04 33 44.8 -1.0**
MA2 Magadan 32.63 10 P **P** **04 33 46.7 +0.6**
baz=186,slow=9.5
MA2 Magadan 32.63 10 P **P** **04 33 46.5 +0.4**
SONM Songino Array 32.68 317 P **P** **04 33 46.6 -0.3**
comp=Z,2.9nm,0.5s,baz=126,slow=8.6,SNR=19
SONM PcP **PcP** **04 36 18.5 +0.2**
comp=Z,1.5nm,0.4s,baz=149,slow=3.6,SNR=9.9
SONM ScP **ScP** **04 39 14.9 -0.3**
comp=Z,3.9nm,0.9s,baz=132,slow=3.3,SNR=12
comp=Z,2.9nm,0.5s
SONM Songino Array 32.68 317 P **P** **04 33 46.5 -0.4**
PZH PanZhiHua 33.73 277 P **P** **04 33 56.0 -0.2**
PZH pmax pmax
comp=Z,20nm,0.6s
YAK Yakutsk 34.84 352 P **P** **04 34 04.8 0.0**
GTA Gaotai 34.92 300 ⇓P **P** **04 34 05.6 -0.4**
GTA ScP **ScP** **04 39 23.7 +0.4**
GTA pmax pmax
comp=Z,11nm,0.8s
SEY Seymchan 36.07 10 P **P** **04 34 15.6 +0.7**
comp=Z,11nm,0.7s,baz=196,slow=7.9,SNR=28
comp=Z,11nm,0.7s
CHTO Chiang Mai 38.37 265 P **P** **04 34 33.9 -0.6**
CHTO IAmb IAmb 04 34 36.5
comp=Z,17nm,1.2s
CM31 Chiang Mai Arr 38.50 265 P **P** **04 34 34.7 -0.9**
CMAR Chiang Mai Arr 38.50 265 P **P** **04 34 35.3 -0.3**
comp=Z,2.1nm,0.5s,baz=74,slow=5.1,SNR=15
CMAR PcP **PcP** **04 36 37.3 +1.1**
comp=Z,2.0nm,0.9s,baz=83,slow=0.4,SNR=9.8
comp=Z,2.1nm,0.5s
CMAR Chiang Mai Arr 38.50 265 P **P** **04 34 33.9 -1.7**
CMAR **PcP** **04 36 36.9 +0.7**
GOMU GeErMu 38.70 294 P **P** **04 34 38.0 +0.5**
GOMU pmax pmax
comp=Z,16nm,1.0s
ADK Adak 40.35 41 P **P** **04 34 51.1 +1.0**
COEN Coen 41.68 175 P **P** **04 35 02.1 +1.0**
PLAI Plampang 42.19 213 P **P** **04 35 04.4 -0.8**
LSA Lhasa 42.38 285 P **P** **04 35 06.9 -0.2**
LSA Lhasa 42.38 285 P **P** **04 35 07.7 +0.5**
BILL Bilibino 43.25 14 P **P** **04 35 12.9 +0.1**
KULM Kulim 43.36 246 P **P** **04 35 14.4 0.0**
TIXI Tiksi 44.27 355 P **P** **04 35 20.5 -0.2**
comp=Z,4.6nm,0.3s,baz=90,slow=22,SNR=11
comp=Z,4.6nm,0.3s
WMQ Urumqi 44.37 305 *e*P **P** **04 35 23.3 +1.3**
WMQ pP PcP 04 36 54.7 -0.7
WMQ ScP **ScP** **04 39 55.6 -4.5**
WMQ pmax pmax
comp=Z,39nm,0.9s
KNRA Kununurra 44.54 195 P **P** **04 35 23.6 +0.1**
NIKH Nikolski High 45.26 42 P **P** **04 35 28.4 -0.2**
NIKH Nikolski High 45.26 42 P **P** **04 35 27.8 -0.8**
baz=257
TAPN Taplejung 45.81 282 *e*P **P** **04 35 34.1 +0.5**
comp=Z,22nm,0.3s
RPSI Rantau Prapat 46.27 245 P **P** **04 35 36.4 -0.5**
RPSI IAmb IAmb 04 35 38.6
comp=Z,15nm,0.9s
UNV Unalaska Valle 46.82 41 P **P** **04 35 39.6 -0.8**
baz=258
RAMN Ramite 46.87 282 *e*P **P** **04 35 40.0 -1.6**
comp=Z,37nm,0.4s
JIRN Jiri 47.06 283 *e*P **P** **04 35 43.6 +0.4**
comp=Z,78nm,0.4s
GUN Gumba 47.27 283 *e*P **P** **04 35 45.1 +0.4**
comp=Z,67nm,0.3s
ZAA0 Zalesovo Array 47.50 319 P **P** **04 35 45.1 -0.5**
ZAA0 IAmb IAmb 04 35 46.3
comp=Z,12nm,1.1s
ZAA0 PcP **PcP** **04 37 05.8 -0.4**
ZALV Zalesovo Beam 47.50 319 P **P** **04 35 45.0 -0.6**
comp=Z,6.0nm,0.4s,baz=107,slow=7.5,SNR=26
ZALV PcP **PcP** **04 37 05.6 -0.6**
comp=Z,5.4nm,0.4s,baz=118,slow=3.3,SNR=15
ZALV ScP **ScP** **04 40 11.4 -1.5**
comp=Z,2.6nm,0.5s,baz=99,slow=3.8,SNR=11
comp=Z,6.0nm,0.4s
ZALV Zalesovo Beam 47.50 319 P **P** **04 35 45.0 -0.6**
FITZ Fitzroy Crossi 47.66 198 P **P** **04 35 47.5 +0.2**
PKI Pulchoki 47.75 283 *e*P **P** **04 35 48.0 -0.4**
comp=Z,23nm,0.4s
PKIN Phulchoki 47.76 283 *e*P **P** **04 35 47.9 -0.4**
comp=Z,30nm,0.4s
WRAB Tennant Creek 47.77 187 P **P** **04 35 47.9 -0.2**
WRAB IAmb IAmb 04 35 49.7
comp=Z,20nm,0.9s
WRAB Tennant Creek 47.77 187 P **P** **04 35 47.8 -0.2**
WB2 Warramunga Arr 47.78 187 IAmb IAmb 04 35 49.1
comp=Z,26nm,1.0s
WRA Warramunga Arr 47.78 187 P **P** **04 35 47.9 -0.3**
comp=Z,11nm,0.3s,baz=1.5,slow=7.6,SNR=690
WRA PcP **PcP** **04 37 08.6 +0.9**
comp=Z,3.1nm,0.5s,baz=4.7,slow=4.2,SNR=9.4
WRA pP **pP** **04 37 21.0 +0.3**
comp=Z,2.6nm,0.9s,baz=4.5,slow=8.0,SNR=2.5
WRA ScP **ScP** **04 40 14.9 +0.4**
comp=Z,2.1nm,0.9s,baz=3.7,slow=4.5,SNR=4.7
WRA S **S** **04 42 04.8 -3.2**
comp=Z,4.6nm,0.9s,baz=7.7,slow=14,SNR=9.6
comp=Z,11nm,0.3s
DMN Daman 48.00 283 *e*P **P** **04 35 49.7 -0.5**
comp=Z,46nm,0.4s
CTA Charters Tower 48.06 172 P **P** **04 35 50.8 +0.6**
comp=Z,5.5nm,0.4s,baz=2.8,slow=5.3,SNR=12
comp=Z,5.5nm,0.4s
CTAO Charters Tower 48.06 172 P **P** **04 35 50.5 +0.3**
CTAO IAmb IAmb 04 35 52.1
comp=Z,18nm,0.9s
CTAO Charters Tower 48.06 172 P **P** **04 35 51.0 +0.8**
QIS Mount Isa 48.11 180 P **P** **04 35 50.8 +0.2**
GSI Gunungsitoli 48.18 244 P **P** **04 35 51.8 +0.5**
GKN Gorkha 48.31 284 *e*P **P** **04 35 52.6 +0.2**
comp=Z,12nm,0.3s
MK31 Makanchi Array 48.32 309 P **P** **04 35 51.5 -0.5**
MK31 IAmb IAmb 04 35 53.2
comp=Z,15nm,1.2s
MK31 PcP **PcP** **04 37 10.7 +1.3**

MKAR Makanchi Array 48.32 309 P **P** **04 35 51.7 -0.3**
comp=Z,4.5nm,0.4s,baz=87,slow=10,SNR=143
MKAR PcP **PcP** **04 37 09.1 -0.3**
comp=Z,1.9nm,0.5s,baz=81,slow=7.7,SNR=7.5
MKAR ScP **ScP** **04 40 15.7 -0.9**
comp=Z,1.3nm,0.4s,baz=85,slow=5.4,SNR=8.9
comp=Z,4.5nm,0.4s
MKAR Makanchi Array 48.32 309 P **P** **04 35 51.9 0.0**
MKAR PcP **PcP** **04 37 09.4 0.0**
DANN Dangsing 48.99 285 *e*P **P** **04 35 57.9 +0.4**
comp=Z,78nm,0.5s
TNA Tin City 49.65 26 P **P** **04 36 00.8 -0.6**
baz=247
S12K Black Hills 49.68 39 P **P** **04 36 01.3 -0.6**
baz=261
ANM Nome 50.29 27 P **P** **04 36 05.7 -0.5**
baz=250
SDPT Sand Point 50.52 40 P **P** **04 36 07.2 -0.8**
SDPT Sand Point 50.52 40 P **P** **04 36 08.0 0.0**
baz=263
KURK Kurchatov 50.91 314 P **P** **04 36 10.7 -0.2**
KURBB Kurchatov Arra 50.96 314 P **P** **04 36 11.2 -0.2**
comp=Z,26nm,0.4s,baz=92,slow=7.8,SNR=204
KURBB PcP **PcP** **04 37 18.3 -0.8**
comp=Z,1.5nm,0.5s,baz=93,slow=3.9,SNR=4.0
KURBB ScP **ScP** **04 40 26.0 -1.8**
comp=Z,1.7nm,1.1s,baz=92,slow=4.4,SNR=4.1
KURBB S **S** **04 42 48.9 -1.7**
comp=Z,0.2nm,0.3s,baz=92,slow=11,SNR=4.7
comp=Z,26nm,0.4s
CHNA Chernabura Isl 50.97 40 P **P** **04 36 10.9 -0.4**
baz=264,SNR=12
NRIK Noril'sk 51.17 339 P **P** **04 36 12.3 -0.3**
comp=Z,16nm,0.8s,baz=116,slow=8.2,SNR=12
NRIK ScP **ScP** **04 40 27.3 -1.0**
comp=Z,6.6nm,0.9s,baz=131,slow=4.7,SNR=4.7
comp=Z,16nm,0.8s
NRIK Noril'sk 51.17 339 P **P** **04 36 11.7 -0.8**
NRIK IAmb IAmb 04 36 13.2
comp=Z,18nm,0.9s
AS31 Alice Springs 51.51 187 P **P** **04 36 15.6 -0.1**
ASAR Alice Springs 51.51 187 P **P** **04 36 15.4 -0.3**
comp=Z,3.9nm,0.3s,baz=1.3,slow=4.2,SNR=76
ASAR PcP **PcP** **04 37 22.8 +1.3**
comp=Z,4.6nm,0.7s,baz=13,slow=3.7,SNR=15
ASAR S **S** **04 42 56.2 -2.5**
comp=Z,2.2nm,0.9s,baz=19,slow=17,SNR=11
comp=Z,3.9nm,0.3s
ASAR Alice Springs 51.51 187 P **P** **04 36 15.2 -0.5**
ASAR PcP **PcP** **04 37 22.4 +1.0**
CHGN Chignik 51.80 39 P **P** **04 36 17.3 +0.1**
baz=264
N16K Nishlik Lake 52.21 33 P **P** **04 36 20.2 -0.1**
baz=260,SNR=13
P16K Nushagak River 52.37 35 P **P** **04 36 21.5 +0.2**
baz=262,SNR=7.5
O16K Kokwok River B 52.40 35 P **P** **04 36 21.5 0.0**
baz=261,SNR=8.2
MBWA Marble Bar 52.41 204 P **P** **04 36 22.3 +0.2**
RDOG Red Dog Mine 52.41 24 P **P** **04 36 21.5 -0.1**
baz=250
PSA00 Pilbara Seismi 52.75 203 P **P** **04 36 24.7 +0.1**
ULHL Ulahol 52.80 303 P **P** **04 36 25.5 +0.5**
SNR=19
O17K Koliganek Bris 52.93 34 P **P** **04 36 25.5 +0.2**
baz=262,SNR=11
BOOM Boomskoye usch 52.99 304 P **P** **04 36 26.3 0.0**
BOOM IAmb IAmb 04 36 28.1
comp=Z,14nm,0.6s
BOOM PcP **PcP** **04 37 26.9 -0.3**
Q16K King Salmon 53.01 36 P **P** **04 36 26.1 +0.2**
baz=263
R17K Ugashik Creek 53.04 37 P **P** **04 36 26.4 +0.2**
baz=264
P17K Kvichak River 53.18 35 P **P** **04 36 27.6 +0.4**
baz=263,SNR=14
TKM2 Tokmak 2 53.20 304 P **P** **04 36 28.7 +0.8**
SNR=19
CHIR Chirikof Islan 53.31 39 P **P** **04 36 28.4 +0.3**
baz=266
KSH Kashi 53.33 300 P **P** **04 36 32.8 +4.1**
KSH pmax pmax
comp=Z,21nm,0.5s
N18K Kilae Creek 53.64 33 IAmb IAmb 04 36 33.1
comp=Z,18nm,1.1s
N18K Kilae Creek 53.64 33 P **P** **04 36 31.2 +0.7**
baz=263,SNR=8.4
KBK Karagaybulak 53.70 304 P **P** **04 36 32.1 +0.7**
SNR=8.6
WRKA Warakurna 53.71 193 P **P** **04 36 31.6 +0.2**
O18K Koktuh Hills 53.88 35 P **P** **04 36 32.9 +0.7**
baz=264
TTA Tatalina 53.91 31 P **P** **04 36 32.5 +0.1**
baz=261,SNR=9.3
USP Ospenovka 53.97 305 P **P** **04 36 33.4 +0.3**
SNR=6.7
EIDS Eidsvold 54.02 167 P **P** **04 36 33.9 +0.4**
EIDS IAmb IAmb 04 36 35.4
comp=Z,18nm,0.9s
AAK Ala-Archa 54.04 304 P **P** **04 36 34.2 +0.4**
SNR=6.1
AAK Ala-Archa 54.04 304 P **P** **04 36 32.6 -1.2**
AAK IAmb IAmb 04 36 35.3
comp=Z,25nm,1.4s
AAK PcP **PcP** **04 37 29.0 -2.2**
AAK Ala-Archa 54.04 304 *i*P **P** **04 36 34.0 +0.2**
SNR=6.3
SII Sitkinak Islan 54.16 39 P **P** **04 36 34.9 +0.6**
baz=267
SII Sitkinak Islan 54.16 39 P **P** **04 36 34.8 +0.6**
L19K White Mountain 54.34 32 IAmb IAmb 04 36 37.8
comp=Z,18nm,1.1s
L19K White Mountain 54.34 32 P **P** **04 36 36.0 +0.6**
baz=262,SNR=11
N19K Bonanza Creek 54.34 33 P **P** **04 36 35.8 +0.3**
baz=264
O19K Port Alsworth 54.36 34 IAmb IAmb 04 36 37.7
comp=Z,34nm,1.0s
O19K Port Alsworth 54.36 34 P **P** **04 36 36.4 +0.9**
baz=264
M19K Big River Lodg 54.52 32 P **P** **04 36 37.2 +0.6**
baz=263,SNR=5.8
EKS2 Erkin-Say 54.56 304 P **P** **04 36 37.9 +0.4**
SNR=6.6
OHAK Old Harbor 54.68 38 P **P** **04 36 37.7 -0.1**
baz=267
AML Almayashu 54.69 304 P **P** **04 36 39.7 +1.1**
SNR=21
L20K Farewell, AK 54.82 31 P **P** **04 36 39.4 +0.6**
baz=263,SNR=6.7
K20K Telida 54.85 30 IAmb IAmb 04 36 41.8
comp=Z,24nm,0.9s
K20K Telida 54.85 30 P **P** **04 36 39.6 +0.6**
baz=262,SNR=28
P19K Oil Pt 54.86 35 P **P** **04 36 39.3 +0.2**
baz=266
J20K Nowinta River 54.93 29 IAmb IAmb 04 36 42.2
comp=Z,34nm,1.1s
J20K Nowinta River 54.93 29 P **P** **04 36 40.1 +0.7**
baz=262,SNR=26
KDAK Kodiak Island 55.09 37 P **P** **04 36 40.9 +0.2**
KDAK IAmb IAmb 04 36 42.1
comp=Z,37nm,1.1s
KDAK Kodiak Island 55.09 37 P **P** **04 36 41.0 +0.4**
baz=268
M20K Styx River 55.11 32 P **P** **04 36 41.8 +1.0**
baz=264
O20K Slope Mountain 55.20 34 P **P** **04 36 41.4 -0.1**
baz=266
Q20K Shuyak Island 55.23 36 P **P** **04 36 41.5 -0.1**
baz=267,SNR=5.2
OOD Oodnadatta 55.45 184 P **P** **04 36 44.0 +0.5**
SPCR Spurr Chakacha 55.48 33 P **P** **04 36 43.8 +0.3**
baz=266
G21K Allakaket 55.56 27 P **P** **04 36 44.1 +0.3**
baz=261,SNR=15
PPLA Purkeypile 55.64 31 IAmb IAmb 04 36 48.1
comp=Z,31nm,1.2s
PPLA Purkeypile 55.64 31 P **P** **04 36 45.3 +0.7**
baz=264,SNR=8.3
F21K Alatna River 55.69 26 P **P** **04 36 45.1 +0.4**
baz=260,SNR=6.6
CHUM Lake Minchumin 55.69 30 P **P** **04 36 46.1 +1.3**
baz=264,SNR=8.7
H21K Melozitna Rive 55.71 28 IAmb IAmb 04 36 47.5
comp=Z,31nm,1.1s
H21K Melozitna Rive 55.71 28 P **P** **04 36 46.1 +1.2**
baz=262,SNR=36

CAST Castle Rocks 55.74 30 IAmb IAmb 04 36 47.6
comp=Z,30nm,1.0s
CAST Castle Rocks 55.74 30 P **P** **04 36 46.3 +1.0**
baz=264,SNR=25
SKT Skwentna 55.87 32 P **P** **04 36 46.3 +0.2**
baz=266
DZM Mont Dzumac 55.93 150 P **P** **04 36 49.4 +2.3**
comp=Z,20nm,0.8s,baz=331,slow=19,SNR=8.8
comp=Z,20nm,0.8s
DZM Mont Dzumac 55.93 150 P **P** **04 36 47.6 +0.5**
DZM IAmb IAmb 04 36 50.2
comp=Z,24nm,0.9s
CAPN Captain Cook N 55.97 34 P **P** **04 36 46.8 +0.1**
baz=267
I21K Tanana 55.99 28 P **P** **04 36 47.7 +0.9**
baz=263,SNR=32
BRVK Borovoye 56.08 317 P **P** **04 36 47.5 -0.2**
BRVK IAmb IAmb 04 36 49.0
comp=Z,30nm,0.9s
BRSE Bradley Lake S 56.12 35 P **P** **04 36 47.4 -0.5**
baz=268
F22K John River 56.23 25 P **P** **04 36 49.5 +1.0**
baz=261
KTH Kantishna Hill 56.28 30 IAmb IAmb 04 36 52.0
comp=Z,22nm,1.3s
BPAW Bear Paw Mtn. 56.30 30 IAmb IAmb 04 36 51.3
comp=Z,23nm,1.2s
BPAW Bear Paw Mtn. 56.30 30 P **P** **04 36 50.0 +0.9**
baz=265,SNR=14
H22K Ishtalitna Cre 56.32 27 P **P** **04 36 50.5 +1.3**
baz=263,SNR=20
G22K Bettles 56.40 26 P **P** **04 36 50.3 +0.7**
baz=262
E22K Anaktuvuk Pass 56.46 25 P **P** **04 36 51.1 +0.9**
baz=261
CUT Chulitna 56.49 32 P **P** **04 36 50.3 0.0**
baz=266
MLY Manley 56.49 28 IAmb IAmb 04 36 52.8
comp=Z,22nm,1.0s
MLY Manley 56.49 28 P **P** **04 36 51.3 +0.9**
baz=264,SNR=26
DRK Karamyk 56.52 301 IAmb IAmb 04 36 53.2
comp=Z,14nm,0.7s
M22K Willow 56.52 32 P **P** **04 36 51.3 +0.8**
baz=267
TRF Thorofare Moun 56.55 30 P **P** **04 36 51.3 +0.3**
baz=266
NIL Nilore 56.56 294 P **P** **04 36 52.3 +0.8**
RC01 Rabbit Creek A 56.68 33 P **P** **04 36 51.3 -0.3**
baz=268
SEW Seward 56.78 34 P **P** **04 36 53.1 +0.7**
baz=269
KK31 Karatay Array 56.88 305 P **P** **04 36 53.3 -0.2**
KK31 IAmb IAmb 04 36 54.9
comp=Z,20nm,0.8s
KKAR Karatay Array 56.88 305 P **P** **04 36 53.3 -0.2**
KKAR IAmb IAmb 04 36 54.9
comp=Z,20nm,0.8s
COLD Coldfoot 56.95 26 IAmb IAmb 04 36 55.9
comp=Z,15nm,1.0s
COLD Coldfoot 56.95 26 P **P** **04 36 54.3 +0.9**
baz=263,SNR=11
G23K Bananza Creek 56.96 27 P **P** **04 36 54.3 +0.7**
baz=264,SNR=30
PMR Palmer 56.99 33 P **P** **04 36 53.7 0.0**
baz=268,SNR=7.5
D23K Nanushuk River 57.00 24 P **P** **04 36 54.9 +1.1**
baz=262,SNR=9.1
H23K Yukon River 57.07 28 IAmb IAmb 04 36 57.0
comp=Z,40nm,1.2s
H23K Yukon River 57.07 28 P **P** **04 36 55.4 +1.0**
baz=265,SNR=26
I23K Minto, Yukon-K 57.09 28 IAmb IAmb 04 36 56.7
comp=Z,20nm,1.2s
I23K Minto, Yukon-K 57.09 28 P **P** **04 36 55.0 +0.7**
baz=266,SNR=21
GHO Glory Hole Cre 57.09 32 IAmb IAmb 04 36 57.0
comp=Z,14nm,1.0s
C23K Itkillik River 57.15 23 P **P** **04 36 55.5 +0.7**
baz=261,SNR=6.4
NEA2 Nenana 57.17 29 P **P** **04 36 55.7 +0.7**
baz=266,SNR=25
MCK McKinley 57.17 30 P **P** **04 36 54.9 -0.2**
MCK McKinley 57.17 30 P **P** **04 36 56.0 +0.9**
baz=267,SNR=14
RND Reindeer 57.19 31 IAmb IAmb 04 36 56.4
comp=Z,26nm,1.0s
KNK Knik Glacier 57.30 33 P **P** **04 36 56.4 +0.4**
baz=269,SNR=5.9
WAT1 Susitna Watana 57.30 31 P **P** **04 36 55.8 -0.2**
baz=268
PWL Port Wells 57.35 34 P **P** **04 36 56.1 -0.2**
baz=269
TOLK Toolik Lake Re 57.35 24 P **P** **04 36 57.1 +0.8**
baz=263,SNR=7.3
SML Sawmill 57.37 32 IAmb IAmb 04 36 58.0
comp=Z,20nm,0.9s
SML Sawmill 57.37 32 P **P** **04 36 56.8 +0.3**
baz=269,SNR=6.7
MDM Murphy Dome 57.55 29 IAmb IAmb 04 36 59.7
comp=Z,40nm,1.3s
M23K Glacier View 57.66 32 P **P** **04 36 58.2 -0.2**
baz=269
WAT6 Susitna Watana 57.67 32 P **P** **04 36 58.6 -0.1**
baz=269,SNR=7.0
D24K Happy Valley 57.68 24 P **P** **04 36 59.2 +0.8**
baz=264
E24K Your Creek 57.69 25 P **P** **04 36 60.0 +1.4**
baz=264
TCOL CIGO, UAF Yank 57.70 29 IAmb IAmb 04 37 01.4
comp=Z,35nm,1.3s
TCOL CIGO, UAF Yank 57.70 29 P **P** **04 36 59.7 +1.1**
baz=267
COLA College 57.71 29 P **P** **04 36 59.3 +0.7**
COLA IAmb IAmb 04 37 01.4
comp=Z,35nm,1.4s
COLA College 57.71 29 P **P** **04 36 59.7 +1.1**
baz=267
H24K Noodor Dome 57.75 28 IAmb IAmb 04 37 01.4
comp=Z,28nm,1.2s
H24K Noodor Dome 57.75 28 P **P** **04 36 59.7 +0.7**
baz=266,SNR=21
C24K Franklin Bluff 57.79 23 P **P** **04 36 59.5 +0.4**
baz=263
P23K Montague Islan 57.81 35 P **P** **04 36 59.9 +0.5**
baz=271
MEEK Meekatharra 57.84 202 P **P** **04 37 00.1 0.0**
DHY Denali Highway 57.85 31 P **P** **04 36 59.9 +0.1**
baz=269
SCM Sheep Creek Mo 57.85 32 P **P** **04 37 00.3 +0.5**
baz=270,SNR=8.6
F24K Squaw Lake 57.87 26 P **P** **04 37 00.6 +0.8**
baz=265,SNR=18
POKR Poker Plat Res 57.90 29 IAmb IAmb 04 37 02.4
comp=Z,22nm,0.8s
POKR Poker Plat Res 57.90 29 P **P** **04 37 01.1 +1.2**
baz=267
GLI Glacier Island 57.96 34 P **P** **04 37 00.2 -0.2**
baz=270
G24K Hadweenzic Riv 57.97 27 P **P** **04 37 01.3 +0.8**
baz=266,SNR=26
LCRK Leigh Creek 57.98 182 P **P** **04 37 01.6 +0.7**
MULG Mulgathing 58.05 186 P **P** **04 37 01.7 +0.3**
HDA Harding Lake 58.08 29 IAmb IAmb 04 37 02.0
comp=Z,28nm,1.1s
HDA Harding Lake 58.08 29 P **P** **04 37 01.0 -0.2**
baz=268,SNR=13
IL31 58.12 29 IAmb IAmb 04 37 02.2
comp=Z,23nm,1.1s
ILAR Eielson Array 58.12 29 P **P** **04 37 00.9 -0.6**
comp=Z,12nm,1.1s,baz=263,slow=5.5,SNR=50
ILAR pP **pP** **04 38 38.2 -1.0**
comp=Z,1.0nm,1.0s,baz=270,slow=6.0,SNR=2.7
comp=Z,12nm,1.1s
G25K Bearman Lake 58.52 27 P **P** **04 37 05.3 +1.2**
baz=268,SNR=8.0
KLU Klutina 58.52 33 IAmb IAmb 04 37 06.2
comp=Z,19nm,1.0s
KLU Klutina 58.52 33 P **P** **04 37 04.6 +0.2**
baz=271,SNR=6.0
D25K Kavik River 58.57 24 P **P** **04 37 05.0 +0.5**
baz=266
K24K Donnelly Dome 58.58 30 P **P** **04 37 04.9 +0.2**
baz=270
H25K Birch Creek 58.61 27 P **P** **04 37 05.4 +0.7**
baz=268
EYAK Cordova Ski Ar 58.63 34 P **P** **04 37 05.4 +0.5**
baz=272

PRP **Porcupine Dome** 58.71 28 P P 04 37 06.0 +0.3
baz=269
PAX **Paxson** 58.72 31 IAmb IAmb 04 37 08.3
comp=Z,27nm,1.1s
PAX **Paxson** 58.72 31 P P 04 37 06.0 +0.3
baz=270,SNR=17
F25K **Christian Rive** 58.73 26 P P 04 37 06.6 +0.9
baz=268,SNR=22
J25K **Salcha River,** 58.76 29 P P 04 37 06.0 +0.1
baz=270
E25K **Arctic Village** 58.79 25 P P 04 37 06.9 +0.9
baz=267,SNR=15
HARP **HAARP** 58.87 32 P P 04 37 07.4 +0.8
baz=271,SNR=6.7
RIDG **Independent Ri** 58.99 30 IAmb IAmb 04 37 09.8
comp=Z,20nm,1.0s
RIDG **Independent Ri** 58.99 30 P P 04 37 08.5 +1.0
baz=270,SNR=9.0
C26K **Camden Bay** 59.12 23 P P 04 37 09.0 +0.9
baz=267
BMAR **Burnt Mountain** 59.14 26 P P 04 37 09.0 +0.7
N25K **Chitina, Valde** 59.15 33 P P 04 37 09.8 +1.1
baz=272
BMRM **Bremner River** 59.17 33 P P 04 37 10.1 +1.3
baz=272,SNR=11
F26K **Sheenjek River** 59.31 26 P P 04 37 10.8 +1.3
baz=269,SNR=16
FORT **Forrest** 59.34 192 P P 04 37 10.2 +0.1
SCRK **Sand Creek** 59.37 30 IAmb IAmb 04 37 11.4
comp=Z,22nm,1.0s
SCRK **Sand Creek** 59.37 30 P P 04 37 10.2 +0.1
baz=271,SNR=25
STKA **Stephens Creek** 59.41 178 P P 04 37 11.1 +0.5
comp=Z,4.7nm,0.4s,baz=3.1,slow=8.4,SNR=12
comp=Z,4.7nm,0.4s
STKA **Stephens Creek** 59.41 178 P P 04 37 11.0 +0.5
G26K **Porcupine Rive** 59.44 26 P P 04 37 11.4 +1.1
baz=270,SNR=6.7
MENT **Mentasta** 59.52 31 IAmb IAmb 04 37 19.5
comp=Z,11nm,0.8s
C27K **Jago River** 59.52 23 P P 04 37 12.3 +1.5
baz=268,SNR=5.7
GLB **Gilahina Butte** 59.54 33 P P 04 37 11.2 0.0
GLB IAmb IAmb 04 37 13.1
comp=Z,30nm,1.2s
J26L **Joseph Creek** 59.55 29 IAmb IAmb 04 37 12.2
comp=Z,24nm,0.8s
J26L **Joseph Creek** 59.55 29 P P 04 37 11.3 +0.1
baz=271,SNR=31
L26K **Log Cabin Wild** 59.68 31 IAmb IAmb 04 37 13.7
comp=Z,12nm,0.8s
L26K **Log Cabin Wild** 59.68 31 P P 04 37 12.8 +0.8
baz=272,SNR=5.3
I26K **Coal Creek Min** 59.70 28 P P 04 37 11.4 -0.8
baz=271
KBL **Kabul** 59.74 296 P P 04 37 12.2 -1.0
KBL IAmb IAmb 04 37 14.3
comp=Z,37nm,1.5s
BGLC **Bering Glacier** 59.87 34 P P 04 37 14.0 +0.7
baz=274
M26K **Nabesna, AK** 59.87 32 IAmb IAmb 04 37 15.5
comp=Z,19nm,1.3s
M26K **Nabesna, AK** 59.87 32 P P 04 37 13.9 +0.5
baz=273,SNR=6.4
MCARA **McCarthy VSAT** 59.92 33 P P 04 37 14.0 +0.3
baz=274,SNR=5.6
CRQE **Cirque** 59.92 34 P P 04 37 14.1 +0.3
baz=274
K27K **Chicken** 60.21 30 IAmb IAmb 04 37 17.8
comp=Z,15nm,1.2s
K27K **Chicken** 60.21 30 P P 04 37 15.8 +0.2
baz=273
E27K **Coleen River** 60.27 25 P P 04 37 16.3 +0.3
baz=271,SNR=8.2
G27K **Doyon Strip** 60.28 27 P P 04 37 15.6 -0.4
baz=272
I27K **Kandik River** 60.34 28 P P 04 37 16.7 +0.3
baz=272
H27K **Steamboat Moun** 60.35 27 P P 04 37 17.6 +1.1
baz=272
L27K **Beaver Creek,** 60.37 31 IAmb IAmb 04 37 18.8
comp=Z,16nm,1.0s
L27K **Beaver Creek,** 60.37 31 P P 04 37 17.3 +0.6
baz=274,SNR=15
M27K **Edge Creek, AK** 60.40 32 P P 04 37 17.8 +0.8
baz=274,SNR=10
BBOO **Buckleboo** 60.41 184 P P 04 37 17.6 +0.4
MESA **MESA** 60.53 34 P P 04 37 18.5 +0.5
baz=275
EGAK **Eagle** 60.57 29 P P 04 37 18.1 +0.2
baz=273,SNR=6.4
CTG **Chitna Glacier** 60.76 33 P P 04 37 20.0 +0.6
baz=275
BVCY **Beaver Creek** 60.87 32 P P 04 37 20.3 +0.4
baz=275,SNR=5.3
HTT **Hallett** 60.94 181 P P 04 37 21.3 +0.6
MORW **Morawa** 60.96 204 P P 04 37 20.9 0.0
YUK3 **Moose Creek** 61.11 32 P P 04 37 21.8 0.0
baz=276,SNR=10
O28M **Mount Upton** 61.34 33 P P 04 37 24.3 +0.9
baz=276,SNR=5.3
DAWY **Dawson** 61.39 30 P P 04 37 23.1 -0.3
DAWY IAmb IAmb 04 37 25.4
comp=Z,13nm,1.2s
DAWY **Dawson** 61.39 30 P P 04 37 24.3 +0.9
baz=275,SNR=7.7
PINM **Pinnacle** 61.39 34 P P 04 37 24.1 +0.7
baz=277
I29M **Ogilvie Camp,** 61.73 28 IAmb IAmb 04 37 27.6
comp=Z,26nm,1.1s
I29M **Ogilvie Camp,** 61.73 28 P P 04 37 26.9 +1.3
baz=275,SNR=10
M29M **Somme Creek** 61.97 31 P P 04 37 28.3 +1.0
baz=277
YUK4 **Talbot Arm** 62.02 33 P P 04 37 28.9 +1.2
baz=277
BLDU **Ballidu** 62.14 202 P P 04 37 28.5 -0.1
O29M **Mount Kennedy** 62.19 34 P P 04 37 29.6 +0.8
baz=278,SNR=5.8
YUK6 **Outpost Mounta** 62.21 33 P P 04 37 28.9 -0.1
baz=278
EPYK **Eagle Plains** 62.28 27 P P 04 37 29.8 +0.6
baz=276,SNR=22
ARU **Arti** 62.50 322 P P 04 37 30.4 -0.3
comp=Z,21nm,0.5s,baz=85,slow=3.5,SNR=17
comp=Z,21nm,0.5s
ARU **Arti** 62.50 322 P P 04 37 30.2 -0.5
HYT **Haines Junctio** 62.64 33 P P 04 37 32.5 +0.8
HYT IAmb IAmb 04 37 34.4
comp=Z,25nm,1.1s
HYT **Haines Junctio** 62.64 33 P P 04 37 32.5 +0.8
baz=278,SNR=8.6
KLBR **Kellerberrin** 62.70 201 P P 04 37 32.2 -0.1
P29M **Windy Craggy** 62.71 35 P P 04 37 33.2 +1.2
P29M IAmb IAmb 04 37 34.2
comp=Z,14nm,1.0s
P29M **Windy Craggy** 62.71 35 P P 04 37 33.4 +1.4
baz=279
N30M **Aishikik Lake** 62.75 32 P P 04 37 33.0 +0.7
baz=279,SNR=5.5
MAYO **Mayo, Yukon** 62.98 30 P P 04 37 33.9 +0.2
ABKAR **Akbulak array** 63.01 314 P P 04 37 33.7 -0.5
P30M **Million Dollar** 63.02 34 P P 04 37 34.6 +0.6
baz=279
INK **Inuvik** 63.26 25 P P 04 37 35.6 +0.3
comp=Z,2.4nm,0.2s,baz=303,slow=9.8,SNR=86
comp=Z,2.4nm,0.2s
INK **Inuvik** 63.26 25 P P 04 37 36.4 +1.1
baz=278
O30N **Mendenhall** 63.34 33 P P 04 37 36.9 +0.8
baz=280
N31M **Braeburn, Yuko** 63.36 32 P P 04 37 37.3 +1.0
baz=280,SNR=6.0
PLBC **Pleasant Camp** 63.42 35 P P 04 37 37.5 +0.9
baz=280,SNR=7.3
M31M **Drury Creek, Y** 63.89 31 IAmb IAmb 04 37 41.6
comp=Z,15nm,1.0s
M31M **Drury Creek, Y** 63.89 31 P P 04 37 40.0 +0.5
baz=280,SNR=12
WHY **Whitehorse** 63.94 33 P P 04 37 40.7 +0.7
baz=281,SNR=6.9
AKTO **Aktyubinsk** 63.98 315 P P 04 37 39.7 -0.6
comp=Z,7.7nm,0.7s,baz=87,slow=8.5,SNR=25
comp=Z,7.7nm,0.7s
NWAO **Narrogin (SRO)** 64.10 201 P P 04 37 41.4 +0.3
NWAO **Narrogin (SRO)** 64.10 201 P P 04 37 41.5 +0.3
FARO **Faro, Yukon** 64.36 31 IAmb IAmb 04 37 44.7
comp=Z,21nm,1.2s

N32M **Quiet Lake** 64.70 32 P P 04 37 45.6 +0.8
baz=282
P32M **Atlin** 64.72 34 P P 04 37 45.5 +0.5
baz=282
P33M **Teslin, Yukon** 65.03 33 IAmb IAmb 04 37 49.2
comp=Z,18nm,1.3s
P33M **Teslin, Yukon** 65.03 33 P P 04 37 47.6 +0.6
baz=283,SNR=6.9
HRA **Herat** 65.18 297 IAmb IAmb 04 37 50.2
comp=Z,17nm,1.2s
R33M **Jennings River** 66.13 34 P P 04 37 54.7 +0.8
baz=285,SNR=6.7
WRAK **Wrangell Islan** 66.17 37 P P 04 37 55.1 +1.1
baz=285
KIRV **Kirov** 66.85 325 P P 04 37 58.1 0.0
comp=Z,25nm,0.5s,baz=130,slow=2.8,SNR=8.7
comp=Z,25nm,0.5s
DLBC **Dease Lake** 66.85 35 P P 04 37 59.2 +0.8
baz=286,SNR=7.4
T35M **Bob Quinn** 67.14 36 P P 04 38 01.4 +1.3
baz=286
GEYT **Alibeck** 67.27 302 P P 04 38 01.1 -0.2
comp=Z,3.3nm,0.4s,baz=48,slow=16,SNR=4.7
comp=Z,3.3nm,0.4s
GEYT **Alibeck** 67.27 302 P P 04 38 01.4 +0.2
GEYT IAmb IAmb 04 38 02.9
comp=Z,5.1nm,0.6s
GYA0B **ALIBECK ARRAY** 67.27 302 P P 04 38 01.1 -0.1
GYA0B IAmb IAmb 04 38 02.8
comp=Z,14nm,1.4s
KBS **Kingsbay** 69.46 351 eP P 04 38 14.6 +0.8
KBS IAmb IAmb 04 38 15.5
comp=Z,11nm,1.0s
HSPB **Hornsund (broa** 70.14 349 eP P 04 38 18.9 +1.1
HSPB IAmb IAmb 04 38 22.2
comp=Z,40nm,1.6s
KLMR **Klimovskoe** 70.84 329 eP P 04 38 17.0 -5.3
KLMR AMP 04 38 22.6
comp=Z,6.0nm,0.6s
ARA0 **ARCESS Array S** 72.12 340 eP P 04 38 30.0 +0.4
ARA0 IAmb IAmb 04 38 30.9
comp=Z,11nm,0.7s
ARCES **ARCESS Array B** 72.12 340 P P 04 38 29.9 +0.2
comp=Z,5.8nm,0.5s,baz=69,slow=8.0,SNR=96
comp=Z,5.8nm,0.5s
ARCES **ARCESS Array B** 72.12 340 P P 04 38 29.5 -0.2
ARCES IAmb IAmb 04 38 30.8
comp=Z,19nm,1.1s
YKA **Yellowknife Ar** 72.52 28 P P 04 38 31.9 -0.1
comp=Z,2.8nm,0.8s,baz=309,slow=4.4,SNR=43
comp=Z,2.8nm,0.8s
BANOM **Banah** 72.95 291 P P 04 38 35.5 +0.2
SHME **Shamm** 73.03 291 i P P 04 38 36.6 +0.9
SNR=9.5
UOSS **Minazif** 73.41 290 P P 04 38 37.7 -0.2
SOHO **SOHO** 73.46 289 i P P 04 38 38.1 -0.1
SNR=10
HATD **Hatta, Dubai** 73.52 290 P P 04 38 38.8 +0.3
JETT **Jettan, Norway** 73.59 341 eP P 04 38 38.8 +0.7
JETT IAmb IAmb 04 38 39.8
comp=Z,12nm,1.0s
ASHO **Ashiyiah** 73.64 290 P P 04 38 39.3 0.0
LLLB **Lillooet** 74.00 41 IAmb IAmb 04 38 43.2
comp=Z,14nm,1.2s
FAQ **Al Faqa, Dubai** 74.00 290 i P P 04 38 42.0 +0.7
SNR=7.5
NLWA **Neilton Lookou** 74.11 45 IAmb IAmb 04 38 44.7
comp=Z,19nm,1.3s
ASUD **Al Ashush, Dub** 74.27 290 i P P 04 38 43.2 +0.5
SNR=8.9
URZ **Urewera** 74.48 150 P P 04 38 43.7 +0.2
comp=Z,5.3nm,0.3s,baz=251,slow=2.3,SNR=10.0
comp=Z,5.3nm,0.3s
G03D **McMinnville, O** 75.39 46 P P 04 38 50.0 +1.3
baz=295
I02E **Swisshome, OR** 75.47 48 P P 04 38 50.0 +0.9
baz=295
KBZ **Khabaz** 75.90 312 P P 04 38 51.9 +0.3
comp=Z,6.5nm,0.7s,baz=79,slow=1.9,SNR=14
comp=Z,6.5nm,0.7s
KIV **Kislovodsk** 75.94 312 P P 04 38 51.4 -0.5
KIV IAmb IAmb 04 38 54.6
comp=Z,9.8nm,0.9s
ONI **Oni** 76.01 311 P P 04 38 52.1 -0.3
ONI IAmb IAmb 04 38 54.5
comp=Z,22nm,1.5s
STEI **Steigen** 76.08 341 eP P 04 38 51.9 -0.2
STEI IAmb IAmb 04 38 54.3
comp=Z,60nm,1.8s
H04A **Detroit Lake** 76.31 47 IAmb IAmb 04 38 56.3
comp=Z,12nm,1.1s
FINES **FINESS Array B** 76.31 333 P P 04 38 53.0 -0.4
comp=Z,23nm,0.4s,baz=74,slow=5.0,SNR=304
comp=Z,23nm,0.4s
FINES **FINESS Array B** 76.31 333 P P 04 38 52.7 -0.8
FAUS **Fauske** 76.43 341 eP P 04 38 53.7 -0.3
FAUS IAmb IAmb 04 38 54.8
comp=Z,24nm,1.2s
B08A **Colville Reser** 76.47 42 IAmb IAmb 04 38 56.8
comp=Z,12nm,1.1s
I04A **Tendick Farm,** 76.55 48 P P 04 38 55.9 +0.6
baz=296
G05D **Wamic, OR** 76.62 46 P P 04 38 56.1 +0.5
baz=296
RPZ **Rata Peaks** 76.78 157 P P 04 38 56.3 +0.1
comp=Z,16nm,0.7s,baz=145,slow=4.1,SNR=5.7
comp=Z,16nm,0.7s
J04D **Umpqua Nationa** 76.98 48 P P 04 38 59.0 +1.1
baz=296
I05D **Terrebonne, OR** 77.00 47 P P 04 38 58.8 +1.1
baz=296
HAWA **Hanford** 77.23 44 IAmb IAmb 04 39 01.4
comp=Z,16nm,1.5s
L04D **Klamath Falls** 77.30 49 P P 04 38 59.9 +0.4
baz=296
C09A **Chrisman Ranch** 77.35 43 IAmb IAmb 04 39 01.7
comp=Z,15nm,1.4s
MOR8 **Moi Rana** 77.49 340 eP P 04 38 58.5 -1.4
MOR8 IAmb IAmb 04 38 59.4
comp=Z,10nm,0.8s
PINE **Pine Mountain** 77.50 47 P P 04 39 01.2 +0.6
PINE IAmb IAmb 04 39 03.6
comp=Z,28nm,1.1s
J05D **Fort Rock, OR** 77.54 48 P P 04 39 01.4 +0.6
baz=297
NEW **Newport** 77.82 42 P P 04 39 03.4 +1.3
baz=298
K05A **Summer Lake** 78.01 48 P P 04 39 04.8 +1.3
K05A IAmb IAmb 04 39 06.8
comp=Z,24nm,1.3s
E09A **Wood Farm, Sta** 78.03 44 IAmb IAmb 04 39 05.6
comp=Z,12nm,1.2s
G08A **Pilot Rock** 78.09 45 P P 04 39 04.6 +0.9
GURO **Guroymak-BITLI** 78.74 308 P P 04 39 07.7 +0.4
J08A **Circle Bar Ran** 79.30 47 IAmb IAmb 04 39 12.7
comp=Z,13nm,1.1s
MNK **Minsk** 79.33 327 i P P 04 39 10.3 +0.4
MNK comp=E,2.0nm,1.0s i P P 04 39 10.3 +0.4
MNK comp=N,6.0nm,0.9s i P P 04 39 10.3 +0.4
MNK comp=Z,20nm,0.8s,baz=237 i pP pP 04 40 57.6 +2.0
MNK i sP sP 04 41 47.6 +1.2
MNK i PP PP 04 42 17.5 -0.5
MNK i PPP PPP 04 44 10.0
MNK i S S 04 48 28.8 -0.7
MNK i sS sS 04 51 40.6 +2.4
MNK i SS SS 04 53 51.9 +2.9
MNK i SSS SSS 04 57 12.1
MNK i LQ LQ 05 09 12.6
MNK i LR LR 05 13 31.6
MNK i LRM MLR 05 18 24.4
comp=E,117nm,21.5s
MNK i LRM MLR 05 18 25.2
comp=Z,495nm,20.6s
MNK i LRM MLR 05 18 56.2
comp=N,64nm,20.6s
NSS **Namsos** 79.38 340 IAmb IAmb 04 39 09.5
comp=Z,42nm,1.5s
NSS eP P 04 39 09.6 -0.4
MARD **Mardin** 80.18 307 P P 04 39 15.4 +0.4
MSO **Missoula** 80.40 42 P P 04 39 16.3 +0.4
baz=301
PABE **Paberze** 80.62 329 P P 04 39 16.1 -0.5
AKASG **Malin Array Be** 80.72 323 P P 04 39 16.4 -0.9
comp=Z,2.3nm,0.4s,baz=47,slow=6.1,SNR=25
comp=Z,2.3nm,0.4s

AKBB **Malin Array Si** 80.72 323 IAmb IAmb 04 39 17.9
comp=Z,14nm,1.1s
MFID **Camas Ranch** 80.96 46 IAmb IAmb 04 39 21.4
comp=Z,15nm,1.3s
LHV **Little Huntoon** 81.71 51 IAmb IAmb 04 39 25.6
comp=Z,21nm,1.4s
TOKA **Tokat** 81.71 311 P P 04 39 23.0 +0.3
TOKA IAmb IAmb 04 39 24.4
comp=Z,15nm,1.0s
NVAR **Mina Array Bea** 81.76 51 P P 04 39 24.3 +1.1
comp=Z,3.1nm,0.9s,baz=295,slow=5.2,SNR=16
NVAR pP pP 04 41 09.3 -0.7
comp=Z,0.7nm,0.7s,baz=293,slow=4.8,SNR=2.0
comp=Z,3.1nm,0.9s
HLID **Hailey** 81.77 45 P P 04 39 23.7 +0.5
baz=301,SNR=5.6
NV11 **Mina Array Sit** 81.86 51 P P 04 39 24.2 +0.5
HFS **Hagfors** 81.87 336 P P 04 39 21.9 -1.1
comp=Z,5.1nm,0.4s,baz=90,slow=3.4,SNR=67
comp=Z,5.1nm,0.4s
DLMT **Dillon** 81.96 43 IAmb IAmb 04 39 26.2
comp=Z,13nm,1.2s
NB2 **NORSAR Subarra** 82.10 337 P P 04 39 23.1 -1.2
comp=Z,3.9nm,0.5s,baz=49,slow=4.6
NB2 **NORSAR Subarra** 82.10 337 P P 04 39 23.1 -1.2
baz=49,slow=4.6
NOA **NORSAR Array B** 82.10 337 P P 04 39 23.1 -1.2
comp=Z,6.1nm,0.5s,baz=45,slow=4.9,SNR=35
comp=Z,6.1nm,0.5s
EGMT **Eagleton** 82.19 39 IAmb IAmb 04 39 27.0
comp=Z,18nm,1.3s
EGMT **Eagleton** 82.19 39 P P 04 39 25.7 +0.6
baz=303
NC602 **NORSAR Array S** 82.21 337 eP P 04 39 23.3 -1.5
PKM **Mcpherson Peak** 82.39 55 P P 04 39 27.5 +1.0
baz=299
BOZ **Bozeman (W)** 82.41 42 P P 04 39 27.3 +0.9
baz=302,SNR=5.0
VES **Vestal, Richgr** 82.46 54 P P 04 39 27.7 +1.1
baz=299
RAYN **Ar Rayn** 82.85 293 P P 04 39 28.9 0.0
RAYN **Ar Rayn** 82.85 293 i P P 04 39 29.4 +0.5
SNR=40
CWC **Cottonwood Cre** 82.88 53 P P 04 39 29.7 +0.8
baz=299
ISA **Isabella, Lake** 82.98 53 P P 04 39 30.2 +0.9
baz=299
YHL **Hebgen Lake** 83.08 43 IAmb IAmb 04 39 32.7
comp=Z,12nm,1.3s
GRAC **Grapevine Rang** 83.11 52 P P 04 39 31.4 +1.5
baz=300
SKAR **Skarslia** 83.34 338 eP P 04 39 30.8 +0.2
YNR **Norris Junctio** 83.45 43 P P 04 39 33.0 +1.3
YNR IAmb IAmb 04 39 35.9
comp=Z,11nm,1.2s
MPMC **Manual Prospec** 83.48 53 P P 04 39 33.1 +1.1
baz=300,SNR=6.1
LRMC **Laurel Mtn Rad** 83.63 53 P P 04 39 33.5 +0.8
baz=300
R11A **Troy Canyon, C** 83.66 50 P P 04 39 34.1 +1.3
baz=301,SNR=10
EDW2 **Edwards Air Fo** 83.71 54 P P 04 39 34.1 +1.1
baz=300
FURC **Furnace Creek,** 83.72 52 P P 04 39 34.1 +1.3
baz=300
HVU **Hansel Valley** 83.73 46 IAmb IAmb 04 39 35.8
comp=Z,7.9nm,1.1s
FLWY **Flagg Ranch** 83.79 43 IAmb IAmb 04 39 36.6
comp=Z,8.1nm,1.1s
BRTR **Keskin Array B** 83.89 312 P P 04 39 32.9 -1.0
comp=Z,1.5nm,0.6s,baz=107,slow=2.7,SNR=11
comp=Z,1.5nm,0.6s
BRTR **Keskin Array B** 83.89 312 P P 04 39 33.0 -0.9
TPNV **Topopah Spring** 83.91 51 P P 04 39 34.4 +0.3
TPNV IAmb IAmb 04 39 36.1
comp=Z,8.8nm,1.1s
TPNV **Topopah Spring** 83.91 51 P P 04 39 35.3 +1.2
baz=300,SNR=6.8
QSM **Queen of Sheba** 83.97 53 IAmb IAmb 04 39 36.3
comp=Z,6.2nm,0.9s
GWY **Greenwater Val** 84.00 52 IAmb IAmb 04 39 36.5
comp=Z,8.0nm,1.1s
RLMT **Red Lodge** 84.07 42 IAmb IAmb 04 39 37.4
comp=Z,11nm,1.3s
RLMT **Red Lodge** 84.07 42 P P 04 39 35.7 +1.0
baz=304
SPR3 **Spring Creek 3** 84.17 49 IAmb IAmb 04 39 38.0
comp=Z,6.6nm,1.4s
BFSC **Mount Baldy Ra** 84.26 54 P P 04 39 36.4 +0.6
baz=300
GSC **Goldstone, Bar** 84.34 53 P P 04 39 37.3 +1.2
baz=300
DUG **Dugway, Tooele** 84.54 47 IAmb IAmb 04 39 39.4
comp=Z,9.9nm,1.4s
DUG **Dugway, Tooele** 84.54 47 P P 04 39 38.5 +1.5
baz=302,SNR=6.7
HWUT **Hardware Ranch** 84.59 46 IAmb IAmb 04 39 39.9
comp=Z,8.9nm,1.1s
BUR08 **Bucovina Ar. S** 84.63 322 P P 04 39 37.2 -0.1
TUQ **Turquoise Mon** 84.90 53 P P 04 39 39.9 +1.0
baz=301,SNR=5.3
MURC **Murrieta** 84.91 55 P P 04 39 39.9 +1.0
baz=300
LAO **LASA Array** 84.92 39 P P 04 39 39.6 +0.9
baz=306
BW06 **Boulder Array** 85.20 44 P P 04 39 41.2 +0.8
baz=304
PDAR **Pinedale Array** 85.20 44 P P 04 39 41.0 +0.7
comp=Z,0.7nm,0.6s,baz=259,slow=3.0,SNR=4.9
comp=Z,0.7nm,0.6s
GMRC **Granite Mounta** 85.42 53 P P 04 39 42.2 +0.8
baz=301
PFO **Pinyon Flats O** 85.44 54 P P 04 39 42.1 +0.5
PFO **Pinyon Flats O** 85.44 54 P P 04 39 42.4 +0.8
baz=301
TPFO **Pinon Flats** 85.45 54 P P 04 39 42.4 +0.8
baz=301
ASF **Jabal al Asfar** 85.45 304 P P 04 39 42.0 +0.4
comp=Z,1.0nm,0.5s,baz=43,slow=8.9,SNR=3.7
comp=Z,1.0nm,0.5s
PMD **Palm Desert** 85.48 54 IAmb IAmb 04 39 43.5
comp=Z,6.0nm,1.1s
BELC **Belle Mtn. Jos** 85.57 54 P P 04 39 42.7 +0.4
baz=301
MONP2 **Monument Peak** 85.83 55 P P 04 39 44.2 +0.7
baz=301
IRM **Iron Mountain** 86.10 53 P P 04 39 45.2 +0.6
baz=301
MMAI **Mount Meron Ar** 86.11 305 P P 04 39 44.7 0.0
comp=Z,1.5nm,0.4s,baz=70,slow=9.7,SNR=5.6
comp=Z,1.5nm,0.4s
BC3 **Big Chuckawall** 86.14 54 P P 04 39 45.9 +1.0
baz=301
VYHS **Vyhne** 87.46 325 eP P 04 39 50.6 -0.1
O20A **White River Ci** 87.50 45 P P 04 39 52.2 +0.9
baz=305
RSSD **Black Hills** 87.69 40 P P 04 39 53.2 +1.1
baz=308
VRAC **Vranov** 88.03 327 P P 04 39 53.5 +0.2
comp=Z,1.6nm,0.4s,baz=65,slow=7.0,SNR=4.1
comp=Z,1.6nm,0.4s
BRG **Berggiesshubel** 88.21 329 eP P 04 39 53.1 -1.0
BRG Amp 04 39 55.2
comp=Z,3.0nm,0.5s
N23A **Red Feather La** 88.49 44 P P 04 39 57.8 +1.8
baz=306
214A **Organ Pipe Nat** 88.92 54 P P 04 39 58.7 +0.8
baz=302
AGMN **Agassiz Nation** 89.33 33 P P 04 40 00.3 +0.9
baz=313
GERES **GERESS Array B** 89.73 328 P P 04 40 00.9 -0.5
comp=Z,0.9nm,0.5s,baz=72,slow=4.3,SNR=10
comp=Z,0.9nm,0.5s
S22A **4UR Ranch, Cre** 89.78 47 P P 04 40 03.2 +1.1
baz=306
TUC **Tucson** 90.17 53 P P 04 40 04.9 +1.1
baz=304
SDCO **Great Sand Dun** 90.63 46 P P 04 40 06.3 +0.3
baz=307
EKA **Eskdalemuir Ar** 91.28 340 P P 04 40 08.1 -0.2
comp=Z,0.5nm,0.4s,baz=62,slow=2.2,SNR=7.5
comp=Z,0.5nm,0.4s
ANMO **Albuquerque** 91.65 49 P P 04 40 11.1 +0.4
ANMO IAmb IAmb 04 40 13.7
comp=Z,3.0nm,0.9s
ANMO **Albuquerque** 91.65 49 P P 04 40 11.7 +1.1
baz=306

T25A	**Trinidad**	**91.69**	**46**	P		**P**	**04 40 11.9**	**+1.1**
	baz=307							
121A	**Cookes Peak, D**	**92.15**	**51**	P		**P**	**04 40 14.2**	**+1.2**
	baz=305							
DAVOX	**Davos/Dischmat**	**93.01**	**328**	P		**P**	**04 40 16.2**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=112,slow=5.6,SNR=4.2							
	comp=Z,1.4nm,0.5s							
TXAR	**Lajitas Array**	**96.89**	**52**	P		**P**	**04 40 35.6**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=308,slow=2.9,SNR=7.9							
TXAR				pP		**pP**	**04 42 25.4**	**+1.6**
	comp=Z,1.2nm,1.1s,baz=346,slow=0.5,SNR=5.2							
	comp=Z,0.5nm,0.7s							
TXAR	**Lajitas Array**	**96.89**	**52**	P		**P**	**04 40 35.1**	**+0.7**
MIAR	**Mount Ida**	**100.06**	**42**	P		**Pdif**	**04 40 48.9**	**+0.6**
	baz=314							
LRAL	**Lakeview Retre**	**104.94**	**39**	P		**Pdif**	**04 41 10.0**	**-0.1**
	baz=318							
QSPA	**South Pole Qui**	**117.61**	**180**	PKP		**PKPdf**	**04 45 44.8**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=123,slow=1.5,SNR=19							
LBTB	**Lobatse**	**121.59**	**256**	PKPdf		**PKPdf**	**04 45 53.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**122.44**	**309**	PKP		**PKPdf**	**04 45 55.0**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=39,slow=1.8,SNR=28							
TORD				PKKPbc		**PKKPbc**	**04 55 53.2**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=219,slow=4.1,SNR=6.8							
BOSA	**Boshof**	**122.95**	**252**	PKP		**PKPdf**	**04 45 56.4**	**0.0**
	comp=Z,1.0nm,0.4s,baz=340,slow=1.1,SNR=9.0							
KOWA	**Kowa**	**125.18**	**316**	s		**PKPdf**	**04 46 00.2**	**-0.7**
TROLL	**Troll, Antarti**	**130.05**	**196**	PKPdf		**PKPdf**	**04 46 08.9**	**+0.2**
TROLL	**Troll, Antarti**	**130.05**	**196**	SKPbc		**SKPbc**	**04 48 45.1**	**0.0**
SNAA	**Sanae**	**131.54**	**195**	PKPdf		**PKPdf**	**04 46 11.3**	**-0.1**
SNAA	**Sanae**	**131.54**	**195**	SKPbc		**SKPbc**	**04 48 50.1**	**-0.3**
DBIC	**Dimbokro**	**131.55**	**310**	SKPbc		**SKPbc**	**04 48 52.0**	**-0.2**
	comp=Z,4.2nm,0.6s,baz=66,slow=4.5,SNR=6.5							
VNA2	**Neumayer--Watz**	**133.09**	**194**	PKPdf		**PKPdf**	**04 46 14.7**	**+0.3**
	baz=118,slow=2.0							
VNA2	**Neumayer--Watz**	**133.09**	**194**	SKPbc		**SKPbc**	**04 48 55.5**	**-0.2**
	baz=121,slow=4.0							
VNA3	**Neumayer Olymp**	**133.32**	**193**	PKPdf		**PKPdf**	**04 46 14.5**	**-0.3**
VNA3	**Neumayer Olymp**	**133.32**	**193**	SKPbc		**SKPbc**	**04 48 56.5**	**+0.1**
VNA1	**Neumayer--Stat**	**133.49**	**194**	PKPdf		**PKiKP**	**04 46 15.9**	**-0.4**
VNA1	**Neumayer--Stat**	**133.49**	**194**	SKPbc		**SKPbc**	**04 48 55.8**	**-1.2**
CZSB	**Cruzeiro do Su**	**143.40**	**63**	PKPdf		PKPab	04 46 32.8	0.0
ETMB	**Extrema**	**149.71**	**59**			**PKPbc**	**04 46 48.4**	**-2.2**
LL04	**Puerto Octay**	**150.62**	**125**			**PKPbc**	**04 46 51.2**	**-0.8**
LPAZ	**La Paz**	**151.81**	**72**	PKPbc		**PKiKP**	**04 46 57.1**	**+0.8**
	comp=Z,3.4nm,0.4s,baz=343,slow=4.2,SNR=42							
PLCA	**Paso Flores**	**152.02**	**125**	PKPbc		**PKiKP**	**04 46 56.1**	**+0.6**
	comp=Z,3.6nm,0.3s,baz=235,slow=1.9,SNR=53							
PLCA				PKPab		**PKPab**	**04 47 09.2**	**+2.2**
	comp=Z,4.4nm,0.8s,baz=221,slow=3.8,SNR=7.1							
CPUP	**Villa Florida**	**164.73**	**88**	PKP		**PKPdf**	**04 47 04.0**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=5.7,slow=5.5,SNR=4.2							

IDC 12 04:33:37.0±3.2, 28°59S×178°56W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=93.4km s-min=17.4km az=34.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.87**	**140**	Pn	Pn	04 33 56.9	+0.3
	68nm,0.3s,baz=77,slow=23,SNR=2.7						
RAO				Sn	Sn	04 34 10.7	+0.8
	314nm,0.3s,baz=162,slow=20,SNR=12						
STKA	**Stephens Creek**	**34.45**	**254**	P	P	04 40 25.8	-0.7
	3.2nm,0.6s,baz=94,slow=10,SNR=3.9						
	3.2nm,0.6s						
ASAR	**Alice Springs**	**42.74**	**265**	P	P	04 41 36.0	-0.4
	0.5nm,0.5s,baz=101,slow=7.3,SNR=6.3						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**43.56**	**271**	P	P	04 41 43.7	+0.7
	1.6nm,0.6s,baz=112,slow=7.7,SNR=12						
	1.6nm,0.6s						
FINES	**FINESS Array B**	**143.28**	**340**	PKP	PKPbc	04 53 10.1	+0.5
	2.3nm,0.8s,baz=40,slow=2.4,SNR=4.9						

IDC 12 04:44:28.6±5.1, 0.°63N×98.°70E, h64km±40km, mb3.8/7, mbtmp4.1/9, ML4.4/2, Error ellipse: s-maj=67.8km s-min=16.7km az=55.0
NEIC 12 04:44:32.0±0.7, 0.°87N±0.°07×98.°78E±0.°03, h94km±9km, mb4.2/14, Error ellipse: s-maj=10.8km s-min=4.8km az=184.0
DJA 12 04:44:32.0±0.4, 1.°1N±3.°3×9.°9E±.°, h66km±7km, M4.2/10, mb4.3/1, MLv4.2/10

ISC 12 04:44:31.0±0.6, 0.°87N±0.°05×98.°79E±0.°05, h86km, n53, σ1§30/53, mb4.3/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.68**	**8**	P	**Pn**	**04 44 48.5**	**+1.5**
SBSI				S	**Sn**	**04 45 01.3**	**+2.4**
MNSI	**Mandailing Nat**	**0.79**	**95**	P	**Pn**	**04 44 48.9**	**+0.8**
MNSI				S	**Sn**	**04 45 01.8**	**+1.0**
GSI	**Gunungsitoli**	**1.29**	**289**		**Pn**	**04 44 55.0**	**+1.1**
GSI	**Gunungsitoli**	**1.29**	**289**	P	**Pn**	**04 44 55.1**	**+1.1**
GSI				S	**Sn**	**04 45 11.0**	**-0.3**
GSI	**Gunungsitoli**	**1.29**	**289**	P	**Pn**	**04 44 55.2**	**+1.2**
RPSI	**Rantau Prapat**	**1.82**	**4**		**Pn**	**04 45 01.7**	**+0.9**
RPSI	**Rantau Prapat**	**1.82**	**4**		**Pn**	**04 45 01.6**	**+0.9**
PSI	**Prapat**	**1.92**	**4**	P	**Pn**	**04 45 01.6**	**-0.6**
	79nm,0.3s,baz=229,slow=4.5,SNR=197						
PSI				S	**Sn**	**04 45 20.9**	**-5.0**
	135nm,0.5s,baz=168,slow=12,SNR=22						
	203nm,0.3s						
SISI	**Saibi**	**2.20**	**172**	P	**Pn**	**04 45 06.3**	**+0.5**
BKNI	**Bangkinang**	**2.31**	**104**		**Pn**	**04 45 08.6**	**+1.4**
TSI	**Tuntungan**	**2.62**	**355**	P	**Pn**	**04 45 13.1**	**+1.7**
KCSI	**Kotacane, Aceh**	**2.83**	**339**	P	**Pn**	**04 45 14.3**	**+0.1**
IPM	**Ipoh**	**4.22**	**32**		**Pn**	**04 45 34.2**	**+1.1**
IPM	**Ipoh**	**4.22**	**32**	P	**Pn**	**04 45 36.0**	**+2.9**
LHMI	**Lhok Sumawe**	**4.71**	**337**	P	**Pn**	**04 45 40.6**	**+1.0**
LHMI	**Lhok Sumawe**	**4.71**	**337**	P	**Pn**	**04 45 40.8**	**+1.2**
KULM	**Kulim**	**4.76**	**23**		**Pn**	**04 45 41.4**	**+1.0**
MYKOM	**Kota Tinggi**	**5.14**	**80**		**Pn**	**04 45 46.5**	**+1.0**
MNAI	**Manna**	**6.66**	**141**	Pn	**Pn**	**04 46 06.8**	**+0.6**
MNAI	**Manna**	**6.66**	**141**	P	**Pn**	**04 46 06.8**	**+0.6**
CM31	**Chiang Mai Arr**	**17.48**	**0**	P	**P**	**04 48 28.7**	**-0.6**
CM31				IAmb	IAmb	04 48 31.1	
	comp=Z,5.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**17.48**	**0**	P	**P**	**04 48 29.9**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=191,slow=10,SNR=10.0						
	comp=Z,1.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**17.48**	**0**	P	**P**	**04 48 28.7**	**-0.6**
TOLI2	**Tolitoli**	**21.99**	**89**	P	**P**	**04 49 17.9**	**-0.4**
TOLI2				IAmb	IAmb	04 49 19.9	
	comp=Z,7.6nm,0.6s						
AZL	**Aizawl**	**23.49**	**346**	eP	**P**	**04 49 33.7**	**+0.3**
H08S2	**Diego Garcia H**	**27.56**	**252**	T	T	05 17 45.7	
	baz=73,slow=75,SNR=32						
H08S3	**Diego Garcia H**	**27.57**	**252**	T	T	05 17 43.9	
	baz=73,slow=75,SNR=43						
H08S1	**Diego Carcia H**	**27.58**	**252**	T	T	05 17 48.4	
	baz=73,slow=75,SNR=21						
ENH	**Enshi**	**30.96**	**18**	P	**P**	**04 50 40.0**	**-0.1**
ENH				IAmb	IAmb	04 50 44.1	
	comp=Z,11nm,1.3s						
NIL	**Nilore**	**40.46**	**326**	P	**P**	**04 52 00.4**	**-0.9**
WB0	**Warramunga Arr**	**40.48**	**122**	P	**P**	**04 52 00.7**	**-1.0**
WB0				IAmb	IAmb	04 52 11.5	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**40.51**	**123**	P	**P**	**04 52 00.6**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=303,slow=9.0,SNR=20						
WRA				PcP	**PcP**	**04 54 04.0**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=311,slow=2.4,SNR=1.5						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**40.51**	**123**	P	**P**	**04 52 00.5**	**-1.5**
WB2	**Warramunga Arr**	**40.52**	**123**	P	**P**	**04 52 01.3**	**-0.7**
WB2				IAmb	IAmb	04 52 10.4	
	comp=Z,6.8nm,1.4s						
ASAR	**Alice Springs**	**41.93**	**128**	P	**P**	**04 52 12.7**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=300,slow=7.9,SNR=7.4						
	comp=Z,0.6nm,0.5s						
KSAR	**Wonju Array Be**	**45.20**	**33**	P	**P**	**04 52 37.9**	**-1.7**
SONM	**Songino Array**	**47.24**	**7**	P	**P**	**04 52 57.5**	**+1.9**
	comp=Z,1.3nm,0.5s,baz=185,slow=8.9,SNR=5.7						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**47.24**	**7**	P	**P**	**04 52 55.4**	**-0.2**
SONM				IAmb	IAmb	04 52 58.7	
	comp=Z,1.7nm,0.8s						
MK31	**Makanchi Array**	**47.96**	**345**	P	**P**	**04 53 00.6**	**-0.4**
MK31				IAmb	IAmb	04 53 02.9	
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**47.96**	**345**	P	**P**	**04 53 02.2**	**+1.2**
	comp=Z,2.5nm,0.5s,baz=160,slow=7.9,SNR=36						
	comp=Z,2.5nm,0.5s						
MKAR	**Makanchi Array**	**47.96**	**345**	P	**P**	**04 53 00.4**	**-0.6**
BBOO	**Buckleboo**	**48.55**	**137**	P	**P**	**04 53 04.7**	**-1.0**
KK31	**Karatay Array**	**49.07**	**333**	P	**P**	**04 53 10.2**	**+0.6**
KKAR	**Karatay Array**	**49.07**	**333**	P	**P**	**04 53 10.4**	**+0.8**
KURK	**Kurchatov**	**52.53**	**344**	P	**P**	**04 53 35.1**	**-0.3**
KURK				IAmb	IAmb	04 53 37.3	
	comp=Z,4.0nm,1.1s						
ZALV	**Zalesovo Beam**	**54.15**	**350**	P	**P**	**04 53 48.1**	**+0.9**
	comp=Z,2.6nm,0.4s,baz=150,slow=6.4,SNR=12						
	comp=Z,2.6nm,0.4s						
ZALV	**Zalesovo Beam**	**54.15**	**350**	P	**P**	**04 53 47.0**	**-0.2**
ABKAR	**Akbulak array**	**58.56**	**331**	P	**P**	**04 54 18.4**	**-0.3**
BRTR	**Keskin Array B**	**70.51**	**312**	P	**P**	**04 55 37.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=140,slow=5.9,SNR=4.8						
	comp=Z,0.7nm,0.6s						
ARCES	**ARCESS Array B**	**83.38**	**340**	P	**P**	**04 56 50.1**	**+1.7**
	comp=Z,1.6nm,0.9s,baz=93,slow=4.5,SNR=2.0						
	comp=Z,1.6nm,0.9s						
TROLL	**Troll, Antarti**	**92.77**	**198**	P	P	04 57 40.0	+6.5
SNAA	**Sanae**	**94.48**	**198**	P	P	**04 57 41.2**	**-0.2**
VNA2	**Neumayer--Watz**	**96.08**	**199**	P	P	04 57 40.2	-8.4
	baz=174,slow=5.0						

IDC 12 04:45:14.3±12.0, 24°10S×171°34E, h0km, mb3.9/3, mbtmp3.8/4, ML2.9/1, MS4.8/1, Error ellipse: s-maj=314.8km s-min=33.9km az=42.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.94**	**293**	Pn	Pn	04 46 31.0	+1.0
	0.5nm,0.3s,baz=136,slow=16,SNR=1.6						
	2.3nm,0.4s						
STKA	**Stephens Creek**	**27.32**	**247**	LR	LR	05 00 54.1	
	comp=Z,2µm,20.2s,baz=58,slow=34						
ASAR	**Alice Springs**	**34.17**	**263**	P	P	04 52 01.3	-0.3
	0.9nm,0.8s,baz=84,slow=9.4,SNR=6.8						
	0.9nm,0.8s						
VNDA	**Vanda**	**53.67**	**183**	P	P	04 54 37.8	+0.4
	0.6nm,0.6s,baz=359,slow=6.7,SNR=8.6						
	0.6nm,0.6s						
MAW	**Mawson**	**74.69**	**202**	P	P	04 56 54.9	-0.5
	1.9nm,0.8s,baz=124,slow=4.7,SNR=5.7						
	1.9nm,0.8s						

NEIC 12 04:51:59.7±1.3, 22.°4S±0.°2×173.°7E±0.°1, h10km±2km, mb4.3/6, Error ellipse: s-maj=26.4km s-min=21.6km az=14.0
IDC 12 04:52:09.2±6.0, 22.°53S×173.°13E, h64km±48km, mb3.7/6, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=38.9km s-min=27.3km az=52.0

ISC 12 04:52:01.4±1.1, 22.°6S±0.°2×173.°4E±0.°1, h10km, n23, σ1§26/24, mb4.1/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.10**	**281**	Pn	**Pn**	**04 53 18.9**	**+1.1**
PINNC	**Pines Island,**	**5.50**	**268**		**Pn**	**04 53 25.2**	**+1.8**
OUENC	**Ouen Island, N**	**6.07**	**270**	Pn	**Pn**	**04 53 33.3**	**+2.1**
ONTNC	**Ouen Toro**	**6.43**	**271**	Pn	**Pn**	**04 53 38.3**	**+2.1**
DZM	**Mont Dzumac**	**6.46**	**273**	P	**Pn**	**04 53 37.9**	**+1.2**
	1.4nm,0.3s,baz=117,slow=16,SNR=9.2						
DZM				S	**Sn**	**04 54 49.4**	**-1.1**
	4.8nm,0.4s,baz=183,slow=23,SNR=1.6						
	6.4nm,0.4s						
DZM	**Mont Dzumac**	**6.46**	**273**	Pn	**Pn**	**04 53 37.7**	**+1.0**
EIDS	**Eidsvold**	**20.59**	**258**	P	**P**	**04 56 40.7**	**+0.1**
EIDS				IAmb	IAmb	04 56 47.6	
	comp=Z,6.0nm,1.0s						
ASAR	**Alice Springs**	**36.27**	**260**	P	**P**	**04 59 04.0**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=79,slow=9.2,SNR=8.5						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**36.43**	**267**	P	**P**	**04 59 04.7**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=97,slow=8.4,SNR=11						
	comp=Z,0.4nm,0.4s						
MTN	**Manton Dam**	**41.29**	**276**	P	**P**	**04 59 46.4**	**-0.9**
MTN				IAmb	IAmb	04 59 48.6	
	comp=Z,3.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**44.86**	**267**	P	**P**	**05 00 16.5**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=119,slow=7.9,SNR=9.4						
	comp=Z,2.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**44.86**	**267**	P	**P**	**05 00 15.7**	**-0.6**
VNDA	**Vanda**	**55.30**	**183**	P	**P**	**05 01 36.1**	**+1.5**
	comp=Z,1.2nm,1.1s,baz=2.5,slow=6.9,SNR=7.0						
	comp=Z,1.2nm,1.1s						
VNDA	**Vanda**	**55.30**	**183**	P	**P**	**05 01 34.4**	**-0.3**
SBA	**Scott Base**	**55.44**	**182**	P	**P**	**05 01 36.9**	**+1.2**
SBA				IAmb	IAmb	05 01 39.2	
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**67.52**	**180**	P	**P**	**05 02 58.4**	**+0.8**
	comp=Z,3.2nm,1.0s,baz=10,slow=4.9,SNR=7.9						
	comp=Z,3.2nm,1.0s						
QSPA	**South Pole Qui**	**67.52**	**180**	P	**P**	**05 02 55.8**	**-1.9**
QSPA				IAmb	IAmb	05 02 59.0	
	comp=Z,3.8nm,0.9s						
SNAA	**Sanae**	**85.99**	**181**	P	**P**	**05 04 41.1**	**-0.6**
VNA3	**Neumayer Olymp**	**86.43**	**179**	P	**P**	**05 04 42.9**	**-0.9**
VNA2	**Neumayer--Watz**	**86.77**	**180**	P	**P**	**05 04 44.9**	**-0.6**
	baz=167,slow=5.0						
VNA1	**Neumayer--Stat**	**87.04**	**179**	P	**P**	**05 04 47.1**	**+0.3**
ILAR	**Eielson Array**	**92.28**	**16**	P	**P**	**05 05 12.1**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=224,slow=7.3,SNR=4.5						
	comp=Z,0.5nm,0.8s						
ARCES	**ARCESS Array B**	**129.23**	**346**	PKP	**PKiKP**	**05 11 09.3**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=106,slow=2.9,SNR=4.0						

IDC 12 04:55:30.9±1.0, 30.°19S×60.°69E, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=34.5km s-min=25.6km az=40.0
NEIC 12 04:55:31.7±0.6, 30.°2S±0.°1×60.°4E±0.°2, h10km±1km, mb4.4/4, Error ellipse: s-maj=34.5km s-min=16.5km az=245.0

ISC 12 04:55:32.0±0.7, 30.°2S±0.°1×60.°5E±0.°1, h10km, n19, σ0§95/16, mb4.2/7, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.96**	**334**	Pn	**Pn**	**04 57 54.3**	**-1.0**
VOI	**Vohitsoka**	**14.80**	**301**	Pn	**Pn**	**04 59 00.9**	**-0.7**
H01W2	**Cape Leeuwin H**	**45.03**	**111**	T	T	05 51 37.5	
	baz=259,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**45.04**	**111**	T	T	05 51 35.2	
	baz=259,slow=74,SNR=11						
H01W1	**Cape Leeuwin H**	**45.05**	**111**	T	T	05 51 43.7	
	baz=259,slow=74,SNR=12						
TROLL	**Troll, Antarti**	**51.79**	**200**	P	**P**	**05 04 38.8**	**-0.8**
PSA00	**Pilbara Seismi**	**53.60**	**96**	P	**P**	**05 04 54.3**	**+0.7**
PSA00				IAmb	IAmb	05 05 04.9	
	comp=Z,7.4nm,1.5s						
QSPA	**South Pole Qui**	**59.96**	**180**	P	**P**	**05 05 39.6**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=286,slow=1.8,SNR=5.4						
	comp=Z,0.9nm,0.6s						
QSPA	**South Pole Qui**	**59.96**	**180**	P	**P**	**05 05 37.8**	**-0.5**
QSPA				IAmb	IAmb	05 05 55.1	
	comp=Z,3.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**60.94**	**43**	P	**P**	**05 05 45.9**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=225,slow=7.7,SNR=7.1						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**64.78**	**104**	P	**P**	**05 06 10.1**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=242,slow=6.2,SNR=20						
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**66.67**	**100**	P	**P**	**05 06 22.6**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=244,slow=5.9,SNR=25						
	comp=Z,1.9nm,0.6s						
WRA	**Warramunga Arr**	**66.67**	**100**	P	**P**	**05 06 22.6**	**-0.7**
WB2	**Warramunga Arr**	**66.68**	**100**	P	**P**	**05 06 21.9**	**-1.5**
TORD	**Torodi Ar. Bea**	**71.09**	**298**	P	**P**	**05 06 52.3**	**+1.4**
	comp=Z,0.7nm,1.0s,baz=104,slow=8.3,SNR=2.2						
	comp=Z,0.7nm,1.0s						
BRTR	**Keskin Array B**	**73.91**	**339**	P	**P**	**05 07 07.8**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=156,slow=6.5,SNR=4.6						
	comp=Z,0.9nm,0.8s						
ABKAR	**Akbulak array**	**79.10**	**360**	P	**P**	**05 07 36.0**	**-0.3**
MKAR	**Makanchi Array**	**79.14**	**15**	P	**P**	**05 07 36.7**	**+0.1**
YKA	**Yellowknife Ar**	**147.54**	**356**	PKPbc	**PKPbc**	**05 15 15.5**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=1.6,slow=3.1,SNR=11						

BJI 12 05:02:37.6±0.0, 21.°32S×175.°35W, h86km, mb5.0/18, mB5.5/8, Ms4.9/3, Ms7 4.7/3
NEIC 12 05:02:39.9±1.8, 21.°45S±0.°09×175.°62W±0.°09, h85km±6km, mb4.9/74, Error ellipse: s-maj=13.2km s-min=11.8km az=142.0
NOU 12 05:02:42.7, 21.°44S×175.°28W, h141km, mb5.1/42, Tonga Islands
IDC 12 05:02:43.6±6.6, 21.°39S×175.°96W, h111km±57km, mb4.5/20, mbtmp4.8/20, MS4.7/1, Error ellipse: s-maj=17.1km s-min=14.4km az=84.0

ISC 12 05:02:38.5±0.5, 21°43S±0.°05×175°69W±0.°06, h72km±4km, n390, σ1§29/401, mb5.0/62, 23C-14D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**4.33**	**317**	P	Pn	05 03 49.2	+7.3
NIUE	**Niue**	**5.90**	**68**	Pn	**Pn**	**05 04 02.0**	**-1.3**
NIUE	**Niue**	**5.90**	**68**	P	**Pn**	**05 04 02.2**	**-1.1**
TAVE	**Taveuni**	**6.16**	**319**	P	Pn	05 04 14.1	+7.2
MSVF	**Nonsavu**	**6.95**	**301**	P	Pn	05 04 24.9	+7.1
	144nm,0.7s,baz=124,slow=13,SNR=95						
MSVF	**Nonsavu**	**6.95**	**301**	Pn	Pn	05 04 25.7	+7.9
MSVF	**Nonsavu**	**6.95**	**301**	P	Pn	05 04 26.0	+8.2
RIZ	**Raoul Island**	**8.04**	**194**	S	**Sn**	**05 06 03.2**	**+1.3**
RAO	**Raoul Island**	**8.04**	**194**	Pn	**Pn**	**05 04 34.4**	**+1.8**
GLKZ	**Green Lake**	**8.05**	**194**	P	**Pn**	**05 04 33.3**	**+0.6**
GLKZ				S	**Sn**	**05 05 58.4**	**-3.8**
AFI	**Afiamalu**	**8.36**	**27**	P	**Pn**	**05 04 37.1**	**0.0**
	32nm,0.4s,baz=65,slow=20,SNR=4.4						
AFI	**Afiamalu**	**8.36**	**27**		**Pn**	**05 04 37.7**	**+0.6**
AFI	**Afiamalu**	**8.36**	**27**	P	Pn	05 04 41.1	+4.0
FUNA	**Funafuti**	**13.74**	**338**	Pn	**Pn**	**05 05 49.5**	**-0.7**
RAR	**Rarotonga**	**14.84**	**92**	P	**Pn**	**05 06 03.0**	**-1.4**
	52nm,0.6s,baz=246,slow=6.6,SNR=12						
RAR	**Rarotonga**	**14.84**	**92**	Pn	**Pn**	**05 06 03.2**	**-1.2**
RAR	**Rarotonga**	**14.84**	**92**	P	**Pn**	**05 06 02.5**	**-1.9**
MARNC	**Mare, Loyalty**	**15.16**	**267**	Pn	**Pn**	**05 06 08.7**	**+0.2**
MARNC	**Mare, Loyalty**	**15.16**	**267**	P	**P**	**05 06 14.9**	**+2.9**
PINNC	**Pines Island,**	**15.68**	**263**	Pn	**P**	**05 06 16.2**	**-1.7**
PINNC				IAmb	IAmb	05 06 26.2	
	comp=Z,47nm,0.7s						
YATNC	**Mamie plateau,**	**16.20**	**265**	P	**P**	**05 06 27.3**	**+3.7**
OUENC	**Ouen Island, N**	**16.24**	**263**	P	**P**	**05 06 24.1**	**0.0**
OUENC	**Ouen Island, N**	**16.24**	**263**	P	**P**	**05 06 28.8**	**+4.7**
DZM	**Mont Dzumac**	**16.61**	**265**	P	**P**	**05 06 33.2**	**+4.9**
	comp=Z,40nm,0.8s,baz=80,slow=18,SNR=22						
DZM	**Mont Dzumac**	**16.61**	**265**	P	**P**	**05 06 33.5**	**+5.2**
OUZ	**Omahuta**	**16.64**	**212**	P	**P**	**05 06 28.4**	**0.0**
OUZ	**Omahuta**	**16.64**	**212**	P	**P**	**05 06 28.9**	**+0.5**
NOUC	**Port Laguerre**	**16.74**	**264**	P	**P**	**05 06 34.8**	**+5.2**
WCZ	**Waipu Caves**	**16.87**	**209**	P	**P**	**05 06 31.5**	**+0.5**
MXZ	**Matakaoa Point**	**16.89**	**197**	P	**P**	**05 06 33.7**	**+2.5**
KUZ	**Kuaotunu**	**16.99**	**204**	P	**P**	**05 06 32.4**	**+0.1**
WMGZ	**Waiomatatini S**	**17.11**	**196**	P	**P**	**05 06 33.2**	**-0.3**
HAZ	**Te Kaha**	**17.22**	**198**	P	**Pn**	**05 06 29.2**	**-5.1**
HAZ				S	Sn	05 09 27.9	-17
PUZ	**Puketiti**	**17.39**	**196**	P	**Pn**	**05 06 33.0**	**-3.3**
PUZ				S	Sn	05 09 28.3	-21
RUGZ	**Raukumara Rang**	**17.44**	**198**	P	**Pn**	**05 06 32.3**	**-4.8**
RUGZ				S	Sn	05 09 32.5	-18
CNGZ	**Carnagh Statio**	**17.79**	**196**	P	**Pn**	**05 06 41.5**	**+0.5**
CNGZ				S	Sn	05 09 42.8	-16
MWZ	**Matawai**	**17.83**	**198**	P	**Pn**	**05 06 40.8**	**-1.0**
MWZ				S	Sn	05 09 40.0	-20
URZ	**Urewera**	**17.88**	**199**	P	**P**	**05 06 40.7**	**-1.4**
	comp=Z,26nm,0.4s,baz=301,slow=2.4,SNR=44						
URZ	**Urewera**	**17.88**	**199**	P	**P**	**05 06 40.6**	**-1.4**
URZ				IAmb	IAmb	05 06 42.8	
	comp=Z,35nm,0.5s

MTN	**Manton Dam**	**51.33**	**270**	P	**P**	**05 11 34.6**	**-1.3**
MTN				IAmb	IAmb	05 11 35.4	
	comp=Z,13nm,0.8s						
KNRA	**Kununurra**	**52.75**	**266**	P	**P**	**05 11 45.3**	**-1.2**
DRV	**Dumont d'Urvil**	**53.21**	**200**	P	**P**	**05 11 49.3**	**+0.2**
DRV				sP	**sP**	**05 12 15.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**55.04**	**262**	P	**P**	**05 12 01.9**	**-1.3**
FITZ				IAmb	IAmb	05 12 02.5	
	comp=Z,14nm,0.7s						
SWI	**Sorong**	**55.57**	**284**	P	**P**	**05 12 06.9**	**-0.1**
	comp=Z,112nm,0.8s						
SBA	**Scott Base**	**57.10**	**184**	P	**P**	**05 12 18.9**	**+1.9**
SBA				IAmb	IAmb	05 12 20.3	
	comp=Z,10nm,0.8s						
SBA	**Scott Base**	**57.10**	**184**	P	**P**	**05 12 19.4**	**+2.5**
SBA				sP	**sP**	**05 12 44.2**	**+1.0**
VNDA	**Vanda**	**57.19**	**186**	P	**P**	**05 12 19.5**	**+1.9**
	comp=Z,3.2nm,0.7s,baz=357,slow=7.7,SNR=27						
	comp=Z,3.2nm,0.7s						
VNDA	**Vanda**	**57.19**	**186**	P	**P**	**05 12 18.0**	**+0.4**
VNDA	**Vanda**	**57.19**	**186**	P	**P**	**05 12 19.4**	**+1.9**
PSA00	**Pilbara Seismi**	**59.56**	**257**	P	**P**	**05 12 33.1**	**-1.9**
MBWA	**Marble Bar**	**59.76**	**257**	P	**P**	**05 12 34.5**	**-1.9**
MBWA	**Marble Bar**	**59.76**	**257**	P	**P**	**05 12 34.4**	**-1.9**
MORW	**Morawa**	**61.47**	**248**	P	**P**	**05 12 46.3**	**-1.6**
CCD	**Concordia, Ant**	**62.11**	**195**	P	**P**	**05 12 52.8**	**+0.8**
CASY	**Casey**	**64.05**	**206**	P	**P**	**05 13 04.7**	**+0.3**
CASY	**Casey**	**64.05**	**206**	P	**P**	**05 13 04.5**	**+0.1**
GIRL	**Giralia**	**64.38**	**254**	P	**P**	**05 13 06.7**	**-0.6**
TOLI2	**Tolitoli**	**65.90**	**281**	P	**P**	**05 13 17.1**	**-0.2**
TOLI2				IAmb	IAmb	05 13 44.2	
	comp=Z,17nm,1.7s						
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**05 13 34.4**	**+0.5**
QSPA				IAmb	IAmb	05 13 36.0	
	comp=Z,14nm,0.8s						
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**05 13 35.0**	**+1.0**
QSPA				sP	**PcP**	**05 14 03.6**	**+5.2**
UGM	**Wanagama**	**72.10**	**268**	P	**P**	**05 13 54.0**	**-1.7**
MJAR	**Matsushiro Arr**	**72.25**	**322**	P	**P**	**05 13 54.8**	**-1.3**
	comp=Z,7.3nm,0.6s,baz=153,slow=6.7,SNR=24						
	comp=Z,7.3nm,0.6s						
MAJO	**Matsushiro**	**72.25**	**322**	P	**P**	**05 13 55.7**	**-0.4**
MAJO				IAmb	IAmb	05 13 56.2	
	comp=Z,12nm,0.7s						
JSD	**Sado**	**73.28**	**324**	P	**P**	**05 14 02.2**	**0.0**
JSD				IAmb	IAmb	05 14 02.7	
	comp=Z,11nm,0.7s						
JHS	**Saijyo**	**74.22**	**318**	P	**P**	**05 14 07.9**	**+0.1**
JHS				IAmb	IAmb	05 14 08.6	
	comp=Z,16nm,0.8s						
TPUB	**Ta-pu**	**76.29**	**302**	P	**P**	**05 14 17.8**	**-2.2**
SMAI	**San Martin Ant**	**76.96**	**159**	P	**P**	**05 14 24.5**	**+1.5**
SMAI				IAmb	IAmb	05 14 25.4	
	comp=Z,13nm,0.7s						
PEA0B	**Petropavlovsk-**	**77.74**	**344**	P	**P**	**05 14 27.0**	**-0.3**
PEA0B				IAmb	IAmb	05 14 28.2	
	comp=Z,21nm,0.8s						
PETK	**Petropavlovsk-**	**77.74**	**344**	P	**P**	**05 14 27.0**	**-0.4**
	comp=Z,14nm,0.8s,baz=158,slow=10.0,SNR=32						
	comp=Z,14nm,0.8s						
PETK	**Petropavlovsk-**	**77.74**	**344**	P	**P**	**05 14 27.4**	**+0.1**
BFSC	**Mount Baldy Ra**	**78.16**	**46**	P	**P**	**05 14 31.4**	**+1.0**
	baz=234						
VES	**Vestal, Richgr**	**78.18**	**44**	P	**P**	**05 14 31.1**	**+0.9**
	baz=232						
MONP2	**Monument Peak**	**78.22**	**48**	P	**P**	**05 14 31.4**	**+0.6**
	baz=235						
IKP	**In-Ko-Pah, Jac**	**78.30**	**48**	P	**P**	**05 14 31.6**	**+0.5**
	baz=235						
EDW2	**Edwards Air Fo**	**78.32**	**45**	P	**P**	**05 14 31.8**	**+0.7**
	baz=233						
BELA	**Belgrano 2**	**78.35**	**172**	P	**P**	**05 14 29.1**	**-1.4**
BELA				IAmb	IAmb	05 14 31.6	
	comp=Z,15nm,0.8s						
ISA	**Isabella, Lake**	**78.47**	**44**	P	**P**	**05 14 33.4**	**+1.5**
	baz=233						
PFO	**Pinyon Flats O**	**78.61**	**47**	P	**P**	**05 14 33.9**	**+1.1**
	baz=235						
TPFO	**Pinon Flats**	**78.61**	**47**	P	**P**	**05 14 33.7**	**+0.9**
	baz=235						
CHGN	**Chignik**	**78.80**	**10**	P	**P**	**05 14 35.2**	**+2.1**
	baz=196						
KSRS	**Korea Array**	**79.02**	**318**	P	**P**	**05 14 35.0**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=135,slow=5.5,SNR=7.3						
	comp=Z,1.3nm,0.7s						
BELC	**Belle Mtn. Jos**	**79.14**	**47**	P	**P**	**05 14 36.8**	**+1.1**
	baz=235						
CWC	**Cottonwood Cre**	**79.19**	**44**	P	**P**	**05 14 37.0**	**+1.1**
	baz=233						
BC3	**Big Chuckawall**	**79.32**	**47**	P	**P**	**05 14 38.1**	**+1.4**
	baz=235						
MPMC	**Manual Prospec**	**79.35**	**44**	P	**P**	**05 14 38.6**	**+1.7**
	baz=234						
GSC	**Goldstone, Bar**	**79.35**	**45**	P	**P**	**05 14 38.2**	**+1.4**
	baz=234						
HEC	**Hector,Ludlow**	**79.39**	**46**	P	**P**	**05 14 38.3**	**+1.3**
	baz=234						
YBH	**Yreka Blue Hor**	**79.69**	**37**	P	**P**	**05 14 40.4**	**+1.9**
	comp=Z,8.8nm,0.8s,baz=245,slow=1.0,SNR=11						
	comp=Z,8.8nm,0.8s						
K02D	**Willamette Mer**	**79.80**	**36**	P	**P**	**05 14 40.6**	**+1.7**
	baz=228						
IRM	**Iron Mountain**	**79.81**	**47**	P	**P**	**05 14 41.0**	**+1.8**
	baz=235						
GMRC	**Granite Mounta**	**79.82**	**46**	P	**P**	**05 14 40.9**	**+1.6**
	baz=235						
PNTR	**Pine Nut**	**79.84**	**41**	P	**P**	**05 14 39.1**	**-0.4**
PNTR				IAmb	IAmb	05 14 42.4	
	comp=Z,13nm,0.8s						
J01E	**Myrtle Point**	**79.96**	**36**	P	**P**	**05 14 41.5**	**+1.8**
	baz=228						
GRAC	**Grapevine Rang**	**79.98**	**44**	P	**P**	**05 14 41.7**	**+1.6**
	baz=233						
FURC	**Furnace Creek,**	**80.00**	**44**	P	**P**	**05 14 42.2**	**+2.1**
	baz=234						
YERR	**Yerington**	**80.00**	**41**	P	**P**	**05 14 40.4**	**+0.1**
LHV	**Little Huntoon**	**80.01**	**42**	P	**P**	**05 14 41.0**	**+0.9**
TUQ	**Turquoise Moun**	**80.02**	**46**	P	**P**	**05 14 42.1**	**+1.7**
	baz=235						
SHOC	**Shoshone, Teco**	**80.05**	**45**	P	**P**	**05 14 42.1**	**+1.6**
	baz=234						
RYN	**Ryan**	**80.22**	**42**	P	**P**	**05 14 41.8**	**+0.2**
L04D	**Klamath Falls**	**80.24**	**37**	P	**P**	**05 14 43.3**	**+1.9**
	baz=229						
NVAR	**Mina Array Bea**	**80.24**	**42**	P	**P**	**05 14 43.2**	**+1.6**
	comp=Z,2.7nm,0.8s,baz=225,slow=9.3,SNR=25						
	comp=Z,2.7nm,0.8s						
NVAR	**Mina Array Bea**	**80.24**	**42**	P	**P**	**05 14 42.3**	**+0.6**
NV11	**Mina Array Sit**	**80.34**	**42**	P	**P**	**05 14 42.8**	**+0.7**
I03D	**Drain, OR**	**80.63**	**36**	P	**P**	**05 14 45.6**	**+2.3**
	baz=228						
TPNV	**Topopah Spring**	**80.68**	**44**	P	**P**	**05 14 45.7**	**+1.7**
	baz=234						
KVN	**Kaiserville**	**80.74**	**42**	P	**P**	**05 14 42.6**	**-1.7**
USRK	**Ussuriysk Ar.**	**80.95**	**325**	P	**P**	**05 14 46.0**	**+1.0**
	comp=Z,6.9nm,0.8s,baz=189,slow=2.8,SNR=12						
	comp=Z,6.9nm,0.8s						
J04D	**Umpqua Nationa**	**81.01**	**37**	P	**P**	**05 14 47.4**	**+1.7**
	baz=229,SNR=8.4						
I04A	**Tendick Farm,**	**81.21**	**36**	P	**P**	**05 14 47.6**	**+1.1**
	baz=229						
KDAK	**Kodiak Island**	**81.24**	**12**	P	**P**	**05 14 46.2**	**0.0**
KDAK				IAmb	IAmb	05 14 47.3	
	comp=Z,11nm,1.1s						
KDAK	**Kodiak Island**	**81.24**	**12**	P	**P**	**05 14 47.1**	**+0.8**
	baz=202						
K05A	**Summer Lake**	**81.36**	**38**	P	**P**	**05 14 49.5**	**+1.9**
K05A				IAmb	IAmb	05 14 50.6	
	comp=Z,12nm,0.9s						
MAW	**Mawson**	**81.41**	**199**	P	**P**	**05 14 47.8**	**+0.6**
	comp=Z,15nm,0.7s,baz=136,slow=5.6,SNR=52						
	comp=Z,15nm,0.7s						
MAW	**Mawson**	**81.41**	**199**	P	**P**	**05 14 47.2**	**0.0**
P16K	**Nushagak River**	**81.49**	**9**	P	**P**	**05 14 47.9**	**+0.4**
	baz=196						
H04D	**Lebanon**	**81.51**	**35**	P	**P**	**05 14 49.1**	**+1.1**
	baz=229						
J05D	**Fort Rock, OR**	**81.53**	**37**	P	**P**	**05 14 49.8**	**+1.5**
	baz=230,SNR=13						
G03D	**McMinnville, O**	**81.69**	**34**	P	**P**	**05 14 50.1**	**+1.3**
	baz=228						
TUC	**Tucson**	**81.88**	**51**	P	**P**	**05 14 51.3**	**+0.9**
	baz=238						
P17K	**Kvichak River**	**81.88**	**10**	P	**P**	**05 14 50.0**	**+0.4**
	baz=198						
H04A	**Detroit Lake**	**81.91**	**35**	P	**P**	**05 14 51.2**	**+1.1**
H04A				IAmb	IAmb	05 14 52.4	
	comp=Z,10nm,0.8s						
R11A	**Troy Canyon, C**	**81.92**	**44**	P	**P**	**05 14 52.0**	**+1.5**
	baz=234						
O16K	**Kokwok River B**	**82.01**	**9**	P	**P**	**05 14 50.0**	**-0.3**
	baz=196						
Q20K	**Shuyak Island**	**82.05**	**12**	P	**P**	**05 14 50.7**	**+0.2**
	baz=202						
NJ2	**Nanjing**	**82.14**	**309**	*e*P	**P**	**05 14 51.2**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
I05D	**Terrebonne, OR**	**82.15**	**36**	P	**P**	**05 14 53.0**	**+1.5**
	baz=230						
O17K	**Koliganek Bris**	**82.33**	**9**	P	**P**	**05 14 52.1**	**+0.2**
	baz=197						
O18K	**Koktuh Hills**	**82.71**	**10**	P	**P**	**05 14 54.2**	**+0.3**
O18K				IAmb	IAmb	05 14 55.2	
	comp=Z,19nm,1.4s						
O18K	**Koktuh Hills**	**82.71**	**10**	P	**P**	**05 14 54.3**	**+0.4**
	baz=199						
G05D	**Wamic, OR**	**82.75**	**35**	P	**P**	**05 14 53.8**	**-0.7**
	baz=230						
N16K	**Nishlik Lake**	**82.77**	**8**	P	**P**	**05 14 54.8**	**+0.5**
	baz=196						
I07A	**Izee**	**83.00**	**37**	P	**P**	**05 14 57.1**	**+1.1**
WUAZ	**Wupatki**	**83.15**	**48**	P	**P**	**05 14 58.3**	**+1.3**
	baz=238						
O19K	**Port Ailsworth**	**83.18**	**11**	P	**P**	**05 14 56.4**	**+0.1**
	baz=200						
N19K	**Bonanza Creek**	**83.74**	**10**	P	**P**	**05 14 58.4**	**-0.9**
N19K	**Bonanza Creek**	**83.74**	**10**	P	**P**	**05 14 59.5**	**+0.1**
	baz=200						
PGC	**Sidney**	**83.89**	**32**	P	**P**	**05 15 01.7**	**+1.5**
PGC				IAmb	IAmb	05 15 02.7	
	comp=Z,12nm,0.8s						
121A	**Cookes Peak, D**	**84.17**	**52**	P	**P**	**05 15 04.1**	**+1.8**
	baz=240						
CN2	**Changchun**	**84.36**	**321**	*e*P	**P**	**05 15 02.9**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BNX	**BinXian**	**84.44**	**324**	⇑P	**P**	**05 15 03.0**	**-0.1**
BNX				pmax	pmax		
	comp=Z,16nm,0.7s						
CRAG	**Craig**	**84.72**	**23**	P	**P**	**05 15 04.6**	**+0.4**
	baz=219						
DUG	**Dugway, Tooele**	**84.73**	**43**	P	**P**	**05 15 06.1**	**+1.1**
	baz=236						
WHN	**Wuhan**	**84.73**	**306**	P	**P**	**05 15 03.2**	**-1.7**
M19K	**Big River Lodg**	**84.78**	**10**	P	**P**	**05 15 04.7**	**+0.2**
	baz=200						
RC01	**Rabbit Creek A**	**84.86**	**12**	P	**P**	**05 15 05.5**	**+0.6**
	baz=204						
M20K	**Styx River**	**84.97**	**11**	P	**P**	**05 15 05.7**	**+0.2**
	baz=201						
L19K	**White Mountain**	**84.97**	**10**	P	**P**	**05 15 05.7**	**+0.2**
L19K	**White Mountain**	**84.97**	**10**	P	**P**	**05 15 06.4**	**+1.0**
	baz=199						
SKT	**Skwentna**	**85.34**	**11**	P	**P**	**05 15 06.9**	**-0.4**
	baz=202						
M22K	**Willow**	**85.39**	**12**	P	**P**	**05 15 08.3**	**+0.8**
	baz=204						
L20K	**Farewell, AK**	**85.41**	**10**	P	**P**	**05 15 07.8**	**+0.2**
	baz=200						
KNK	**Knik Glacier**	**85.42**	**13**	P	**P**	**05 15 08.1**	**+0.5**
	baz=205						
PMR	**Palmer**	**85.44**	**12**	P	**P**	**05 15 07.7**	**0.0**
	baz=205						
BGLC	**Bering Glacier**	**85.45**	**16**	P	**P**	**05 15 08.1**	**+0.3**
	baz=210						
TTA	**Tatalina**	**85.51**	**9**	P	**P**	**05 15 08.1**	**-0.1**
TTA	**Tatalina**	**85.51**	**9**	P	**P**	**05 15 08.9**	**+0.7**
	baz=198,SNR=5.3						
MNTX	**Cornudas Mount**	**85.55**	**54**	P	**P**	**05 15 10.3**	**+1.3**
	baz=241						
HLID	**Hailey**	**85.64**	**40**	P	**P**	**05 15 10.9**	**+1.5**
	baz=235						
GHO	**Glory Hole Cre**	**85.65**	**12**	P	**P**	**05 15 08.7**	**-0.1**
TXAR	**Lajitas Array**	**85.76**	**56**	P	**P**	**05 15 11.9**	**+1.6**
	comp=Z,1.9nm,1.0s,baz=210,slow=7.0,SNR=12						
	comp=Z,1.9nm,1.0s						
B08A	**Colville Reser**	**85.78**	**34**	P	**P**	**05 15 10.5**	**+0.7**
BMRM	**Bremner River**	**85.87**	**15**	P	**P**	**05 15 09.7**	**-0.3**
	baz=209						
CUT	**Chulitna**	**85.97**	**12**	P	**P**	**05 15 11.0**	**+0.7**
	baz=204						
KLU	**Klutina**	**86.03**	**14**	P	**P**	**05 15 11.5**	**+0.7**
	baz=208						
SCM	**Sheep Creek Mo**	**86.03**	**13**	P	**P**	**05 15 10.8**	**0.0**
SCM				IAmb	IAmb	05 15 12.1	
	comp=Z,14nm,0.7s						
SCM	**Sheep Creek Mo**	**86.03**	**13**	P	**P**	**05 15 11.6**	**+0.8**
	baz=206						
K20K	**Telida**	**86.20**	**10**	P	**P**	**05 15 11.9**	**+0.4**
K20K				IAmb	IAmb	05 15 12.8	
	comp=Z,6.6nm,0.8s						
K20K	**Telida**	**86.20**	**10**	P	**P**	**05 15 11.6**	**+0.1**
	baz=200,SNR=5.9						
ANMO	**Albuquerque**	**86.32**	**50**	P	**P**	**05 15 14.3**	**+1.3**
	baz=241						
N25K	**Chitina, Valde**	**86.43**	**14**	P	**P**	**05 15 13.3**	**+0.5**
	baz=209						
M24K	**Tolsona, Glenn**	**86.52**	**13**	P	**P**	**05 15 14.3**	**+1.1**
	baz=207						
CAST	**Castle Rocks**	**86.58**	**10**	P	**P**	**05 15 12.3**	**-1.0**
CAST				IAmb	IAmb	05 15 13.3	
	comp=Z,9.6nm,0.9s						
CAST	**Castle Rocks**	**86.58**	**10**	P	**P**	**05 15 12.0**	**-1.4**
	baz=202,SNR=9.1						
WAT6	**Susitna Watana**	**86.62**	**13**	P	**P**	**05 15 14.3**	**+0.6**
	baz=206						
CTG	**Chitna Glacier**	**86.67**	**16**	P	**P**	**05 15 14.4**	**+0.4**
	baz=212						
WAT1	**Susitna Watana**	**86.68**	**12**	P	**P**	**05 15 14.2**	**+0.3**
	baz=205						
TROLL	**Troll, Antarti**	**86.80**	**179**	P	**P**	**05 15 14.2**	**-0.5**
O28M	**Mount Upton**	**86.81**	**17**	P	**P**	**05 15 15.2**	**+0.3**
	baz=213						
NEW	**Newport**	**86.89**	**35**	P	**P**	**05 15 15.8**	**+0.6**
	baz=233						
TRF	**Thorofare Moun**	**86.92**	**11**	P	**P**	**05 15 15.0**	**-0.2**
	baz=204,SNR=6.0						
J20K	**Nowinta River**	**86.97**	**9**	P	**P**	**05 15 15.5**	**+0.3**
	baz=200,SNR=7.9						
CHUM	**Lake Minchumin**	**86.98**	**10**	P	**P**	**05 15 14.7**	**-0.5**
	baz=202						
SNAA	**Sanae**	**87.01**	**178**	P	**P**	**05 15 15.0**	**-0.7**
VNA3	**Neumayer Olymp**	**87.06**	**176**	P	**P**	**05 15 15.8**	**-0.1**
PLCA	**Paso Flores**	**87.06**	**133**	P	**P**	**05 15 18.3**	**+1.7**
	comp=Z,2.0nm,0.5s,baz=243,slow=4.5,SNR=15						
	comp=Z,2.0nm,0.5s						
RND	**Reindeer**	**87.15**	**12**	P	**P**	**05 15 16.5**	**+0.3**
P30M	**Million Dollar**	**87.17**	**18**	P	**P**	**05 15 17.0**	**+0.7**
	baz=216						
BPAW	**Bear Paw Mtn.**	**87.40**	**11**	P	**P**	**05 15 17.0**	**-0.3**
	baz=203						
S22A	**4UR Ranch, Cre**	**87.43**	**48**	P	**P**	**05 15 18.3**	**-0.1**
	baz=240						
MCK	**McKinley**	**87.43**	**12**	P	**P**	**05 15 17.5**	**0.0**
	baz=205						
PAX	**Paxson**	**87.44**	**13**	P	**P**	**05 15 17.7**	**0.0**
	baz=208						
M26K	**Nabesna, AK**	**87.50**	**15**	P	**P**	**05 15 18.5**	**+0.6**
	baz=210						
VNA2	**Neumayer--Watz**	**87.53**	**176**	P	**P**	**05 15 18.3**	**+0.2**
	baz=180,slow=5.0						
YUK3	**Moose Creek**	**87.58**	**16**	P	**P**	**05 15 19.9**	**+1.4**
	baz=212						
O20A	**White River Ci**	**87.67**	**45**	P	**P**	**05 15 19.5**	**+0.1**
	baz=239						
M27K	**Edge Creek, AK**	**87.73**	**15**	P	**P**	**05 15 20.5**	**+1.4**
	baz=211						
VNA1	**Neumayer--Stat**	**87.74**	**176**	P	**P**	**05 15 18.9**	**-0.1**
MSO	**Missoula**	**87.78**	**37**	P	**P**	**05 15 20.2**	**+0.5**
	baz=235						
O30N	**Mendenhall**	**87.95**	**18**	P	**P**	**05 15 21.1**	**+1.1**
	baz=216						
L26K	**Log Cabin Wild**	**87.96**	**14**	P	**P**	**05 15 21.4**	**+1.3**
	baz=210						
BVCY	**Beaver Creek**	**88.02**	**15**	P	**P**	**05 15 21.6**	**+1.3**
	baz=212						
DLBC	**Dease Lake**	**88.08**	**22**	P	**P**	**05 15 21.4**	**+0.7**
	baz=222						
BW06	**Boulder Array**	**88.18**	**42**	P	**P**	**05 15 21.9**	**0.0**
	baz=238						
PDAR	**Pinedale Array**	**88.18**	**42**	P	**P**	**05 15 22.4**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=212,slow=3.6,SNR=12						
	comp=Z,1.2nm,0.8s						
NEA2	**Nenana**	**88.19**	**11**	P	**P**	**05 15 20.5**	**-0.5**
	baz=205						
N30M	**Aishikik Lake**	**88.22**	**17**	P	**P**	**05 15 21.6**	**+0.2**
	baz=215						
I21K	**Tanana**	**88.24**	**10**	P	**P**	**05 15 21.3**	**0.0**
I21K				IAmb	IAmb	05 15 22.3	
	comp=Z,7.2nm,0.9s						
I21K	**Tanana**	**88.24**	**10**	P	**P**	**05 15 21.2**	**0.0**
	baz=202,SNR=7.0						
RIDG	**Independent Ri**	**88.25**	**13**	P	**P**	**05 15 21.5**	**+0.1**
	baz=208						
WRH	**Wood River Hil**	**88.26**	**12**	P	**P**	**05 15 20.8**	**-0.6**
WRH				IAmb	IAmb	05 15 22.4	
	comp=Z,7.8nm,0.7s						
MLY	**Manley**	**88.30**	**10**	P	**P**	**05 15 21.4**	**-0.2**
MLY	**Manley**	**88.30**	**10**	P	**P**	**05 15 21.6**	**-0.1**
	baz=203,SNR=5.7						
L27K	**Beaver Creek,**	**88.34**	**15**	P	**P**	**05 15 22.9**	**+1.1**
	baz=211						
SDCO	**Great Sand Dun**	**88.35**	**48**	P	**P**	**05 15 23.3**	**+0.5**
	baz=241						
HDA	**Harding Lake**	**88.42**	**12**	P	**P**	**05 15 21.8**	**-0.3**
	baz=206,SNR=5.3						
BOZ	**Bozeman (W)**	**88.43**	**39**	P	**P**	**05 15 23.8**	**+1.0**
	baz=237						
R33M	**Jennings River**	**88.48**	**21**	P	**P**	**05 15 22.1**	**-0.6**
	baz=221						
MSTX	**Muleshoe**	**88.55**	**53**	P	**P**	**05 15 24.6**	**+1.0**
	baz=243						
H21K	**Melozitna Rive**	**88.56**	**9**	P	**P**	**05 15 23.1**	**+0.3**
H21K	**Melozitna Rive**	**88.56**	**9**	P	**P**	**05 15 23.1**	**+0.3**
	baz=201,SNR=6.2						
N31M	**Braeburn, Yuko**	**88.61**	**18**	P	**P**	**05 15 23.6**	**+0.4**
	baz=217						
I23K	**Minto, Yukon-K**	**88.65**	**11**	P	**P**	**05 15 23.4**	**+0.2**
	baz=204						
SCRK	**Sand Creek**	**88.65**	**13**	P	**P**	**05 15 23.7**	**+0.3**
	baz=209						
M29M	**Somme Creek**	**88.66**	**16**	P	**P**	**05 15 24.2**	**+0.7**
	baz=214						
TCOL	**CIGO, UAF Yank**	**88.67**	**12**	P	**P**	**05 15 23.2**	**0.0**
	baz=206						
COLA	**College**	**88.67**	**12**	P	**P**	**05 15 23.3**	**+0.1**
	baz=206						
IMAR	**Indian Mountai**	**88.73**	**9**	P	**P**	**05 15 23.6**	**0.0**
IL31		**88.76**	**12**	P	**P**	**05 15 23.7**	**+0.1**
IL31				IAmb	IAmb	05 15 25.2	
	comp=Z,11nm,1.6s						
ILAR	**Eielson Array**	**88.76**	**12**	P	**P**	**05 15 23.5**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=224,slow=6.1,SNR=18						
	comp=Z,0.9nm,0.5s						
J25K	**Salcha River,**	**88.92**	**13**	P	**P**	**05 15 24.6**	**0.0**
J25K				IAmb	IAmb	05 15 26.0	
	comp=Z,7.3nm,1.2s						
J25K	**Salcha River,**	**88.92**	**13**	P	**P**	**05 15 25.0**	**+0.4**
	baz=208,SNR=5.6						
POKR	**Poker Flat Res**	**88.97**	**12**	P	**P**	**05 15 24.7**	**0.0**
	baz=206						
H22K	**Ishtalitna Cre**	**89.00**	**10**	P	**P**	**05 15 25.0**	**+0.2**
	baz=202,SNR=9.5						
K27K	**Chicken**	**89.12**	**14**	P	**P**	**05 15 26.5**	**+1.1**
K27K				IAmb	IAmb	05 15 27.6	
	comp=Z,5.7nm,0.9s						
K27K	**Chicken**	**89.12**	**14**	P	**P**	**05 15 26.9**	**+1.5**
	baz=211						
J26L	**Joseph Creek**	**89.20**	**13**	P	**P**	**05 15 27.1**	**+1.2**
J26L	**Joseph Creek**	**89.20**	**13**	P	**P**	**05 15 27.1**	**+1.2**
	baz=210,SNR=24						
H23K	**Yukon River**	**89.23**	**10**	P	**P**	**05 15 26.5**	**+0.5**
H23K				IAmb	IAmb	05 15 46.2	
	comp=Z,17nm,2.0s						
H23K	**Yukon River**	**89.23**	**10**	P	**P**	**05 15 26.3**	**+0.4**
	baz=204						
G21K	**Allakaket**	**89.26**	**9**	P	**P**	**05 15 26.8**	**+0.8**
	baz=200						
H24K	**Noodor Dome**	**89.53**	**11**	P	**P**	**05 15 26.1**	**-1.3**
H24K				IAmb	IAmb	05 15 41.7	
	comp=Z,13nm,1.9s						
RLMT	**Red Lodge**	**89.58**	**40**	P	**P**	**05 15 29.4**	**+1.0**
	baz=238						
M31M	**Drury Creek, Y**	**89.59**	**18**	P	**P**	**05 15 28.3**	**+0.6**
	baz=218						
PRP	**Porcupine Dome**	**89.69**	**12**	P	**P**	**05 15 28.5**	**+0.3**
	baz=208						
AMTX	**Amarillo**	**89.76**	**52**	P	**P**	**05 15 29.8**	**+0.5**
	baz=243						
DAWY	**Dawson**	**89.78**	**15**	P	**P**	**05 15 29.2**	**+0.6**
DAWY				IAmb	IAmb	05 15 30.4	
	comp=Z,9.1nm,0.7s						
DAWY	**Dawson**	**89.78**	**15**	P	**P**	**05 15 29.6**	**+1.0**
	baz=213,SNR=11						
F21K	**Alatna River**	**89.93**	**8**	P	**P**	**05 15 29.5**	**+0.3**
	baz=200						
EGAK	**Eagle**	**89.97**	**14**	P	**P**	**05 15 29.8**	**+0.4**
EGAK				IAmb	IAmb	05 15 31.0	
	comp=Z,8.3nm,0.8s						
EGAK	**Eagle**	**89.97**	**14**	P	**P**	**05 15 30.0**	**+0.7**
	baz=212,SNR=7.1						
G23K	**Bananza Creek**	**89.97**	**10**	P	**P**	**05 15 30.4**	**+1.0**
	baz=204						
I26K	**Coal Creek Min**	**89.98**	**13**	P	**P**	**05 15 30.8**	**+1.4**
	baz=210						
F22K	**John River**	**90.38**	**9**	P	**P**	**05 15 32.3**	**+1.1**
	baz=202						
G24K	**Hadweenzic Riv**	**90.39**	**11**	P	**P**	**05 15 31.4**	**+0.1**
	baz=206						
XAN	**Xi'an**	**90.41**	**307**	P	**P**	**05 15 32.7**	**+0.4**
XAN				pP	sP	05 15 59.2	+0.3
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
COLD	**Coldfoot**	**90.42**	**10**	P	**P**	**05 15 32.1**	**+0.7**
	baz=204						
I27K	**Kandik River**	**90.57**	**13**	P	**P**	**05 15 32.2**	**0.0**
	baz=211						
E22K	**Anaktuvuk Pass**	**91.02**	**9**	P	**P**	**05 15 34.5**	**+0.2**
	baz=202						
F24K	**Squaw Lake**	**91.06**	**10**	P	**P**	**05 15 34.9**	**+0.4**
	baz=206						
I29M	**Ogilvie Camp,**	**91.12**	**15**	P	**P**	**05 15 35.2**	**+0.5**
	baz=214						
H27K	**Steamboat Moun**	**91.12**	**13**	P	**P**	**05 15 35.6**	**+0.8**
	baz=211						
G26K	**Porcupine Rive**	**91.29**	**12**	P	**P**	**05 15

SORM	Soroca	147.11	330	⇑P		PKPdf	05 22 11.0	0.0
BURAR	Bucovina Array	148.91	332	⇓P		PKiKP	05 22 19.6	+0.1
BIZ	Bicaz	149.02	330	⇑P		PKiKP	05 22 19.2	-0.5
BRTR	Keskin Array B	149.06	313	PKPbc		PKPbc	05 22 18.2	-0.7
	comp=Z,5.4nm,0.7s,baz=135,slow=4.6,SNR=28							
CFR	Carcaliu	149.27	326	⇑P		PKiKP	05 22 21.8	+1.7
CRVS	Cervenica-Dubn	149.36	338	*e*PKP		PKPbc	05 22 19.6	+0.5
CLL	Collm	149.42	349	*e*PKPdf		PKPdf	05 22 14.0	-0.7
	comp=Z,3.0nm,0.8s							
CLL				⇓*i* PKPbc		PKPbc	05 22 19.2	+0.1
CLL				*i* PKPab		PKPab	05 22 24.2	+0.1
	comp=Z,10.0nm,0.7s							
OSTC	Ostas	149.46	345	⇑*e*PKP		PKPbc	05 22 19.3	0.0
CHVC	Chvalec	149.47	345	⇑*e*PKP		PKPbc	05 22 19.7	+0.3
VRI	Vrincioaia	149.50	328	⇑P		PKPbc	05 22 18.7	-0.9
PLOR	Plostina	149.55	328	⇓P		PKPbc	05 22 18.5	-1.3
DPC	Dobruska-Polom	149.62	345	⇑*e*PKP		PKPbc	05 22 20.2	+0.4
BRG	Berggiesshubel	149.66	348	*i* PKP		PKPbc	05 22 20.0	+0.2
BRG				Amp			05 22 21.1	
	comp=Z,12nm,1.0s							
BRG				*ex*		x	05 22 25.3	
BRG				Amp			05 22 26.4	
	comp=Z,5.2nm,0.6s							
BRG				*ex*		x	05 22 46.5	
BRG				Amp			05 22 47.1	
	comp=Z,4.7nm,0.8s							
KRLC	Kraliky	149.76	344	⇑*e*PKP		PKPbc	05 22 20.5	+0.4
LANS	Liptovska Anna	149.82	340	*e*PKP		PKiKP	05 22 21.4	+0.2
MORC	Moravsky Berou	149.83	343	*e*PKP		PKPbc	05 22 20.3	0.0
PVCC	Panska Ves	149.86	347	⇑*e*PKP		PKPbc	05 22 20.9	+0.6
DOPR	Dopca	150.07	330	⇑P		PKPbc	05 22 20.9	-0.1
MLR	Muntele Rosu	150.16	329	⇑P		PKPbc	05 22 21.1	-0.2
PRU	Pruhonice	150.38	347	⇑*e*PKP		PKPbc	05 22 21.4	-0.1
VRAC	Vranov	150.51	344	*e*PKP		PKPbc	05 22 21.7	-0.2
VYHS	Vyhne	150.60	340	*e*PKP		PKPbc	05 22 22.4	+0.3
JAVC	Velka Javorina	150.62	342	*e*PKP		PKiKP	05 22 23.2	+0.3
VOIR		150.63	329	⇑P		PKPbc	05 22 20.8	-1.6
KRUC	Moravsky	150.79	344	*e*PKP		PKPbc	05 22 22.5	-0.1
MEM	Membach	150.85	358	*d*PKiKP		PKPbc	05 22 22.6	-0.1
MEM				*d*PKPbc		PKPab	05 22 28.6	-1.4
BTNL	Ternell	150.87	358	*d*PKiKP		PKPbc	05 22 22.7	0.0
BTNL				*d*PKPab		PKPab	05 22 29.2	-0.9
ARR	Arges	150.87	330	⇑P		PKiKP	05 22 24.0	+0.4
SNF	Seneffe	150.98	0	*d*PKPdf		PKPdf	05 22 16.6	-0.5
SNF				*d*PKiKP		PKPbc	05 22 22.9	0.0
BCLA	Clavier	151.06	359	*d*PKPdf		PKPdf	05 22 17.8	+0.5
MODS	Modra-Piesok	151.18	342	*e*PKP		PKiKP	05 22 24.2	+0.2
BMRD	Maredsous	151.19	359	*d*PKiKP		PKPbc	05 22 23.4	0.0
RCHB	Rochefort	151.33	359	*d*PKiKP		PKPbc	05 22 23.8	+0.1
KHC	Kasperske Hory	151.39	347	⇑*e*PKP		PKPbc	05 22 24.1	+0.1
KHC				*e*PKPAB		PKPab	05 22 31.8	-0.5
DOU	Dourbes	151.40	360	*d*PKiKP		PKPbc	05 22 24.0	+0.1
SIRR	Siria	151.47	334	⇑P		PKPbc	05 22 23.1	-1.2
CKRC	Cesky Krumlov	151.53	346	⇑*e*PKP		PKPbc	05 22 24.4	+0.1
GERES	GERESS Array B	151.63	347	PKPbc		PKPbc	05 22 24.5	-0.2
	comp=Z,2.5nm,0.7s,baz=45,slow=2.1,SNR=22							
GZR	Gura Zlata	151.70	332	⇑P		PKPbc	05 22 23.8	-1.0
CONA	Conrad Observa	151.97	343	*e*P		PKPbc	05 22 24.6	-0.9
	comp=Z,5.8nm,0.8s							
RONA	Rosalia, Austr	152.06	343	*e*P		PKPbc	05 22 25.8	+0.2
	comp=Z,8.1nm,0.9s							
HERR	Herculane	152.26	332	⇑P		PKPbc	05 22 25.7	-0.4
MDVR	Moldovita	152.64	332	⇑P		PKPbc	05 22 25.6	-1.4
FRGS	Fruska Gora	153.12	335	⇑P		PKPbc	05 22 27.9	-0.1
KBA	Koelnbreinsper	153.39	346	*e*P		PKPbc	05 22 27.9	-0.8
	comp=Z,3.3nm,0.6s							
BOVS	Bovan	153.55	331	⇑P		PKPbc	05 22 26.9	-2.1
WTTA	Wattenberg	153.56	349	*e*P		PKPbc	05 22 27.8	-1.3
	comp=Z,9.1nm,1.1s							
ABTA	Abfaltersbach	153.88	347	*e*P		PKPbc	05 22 28.9	-0.7
	comp=Z,4.8nm,0.9s							
ESDC	Sonseca Array	160.49	19	PKPab		PKPab	05 23 12.4	+0.8
	comp=Z,1.9nm,0.7s,baz=330,slow=4.1,SNR=12							
TORD	Torodi Ar. Bea	171.39	163	PKP		PKPdf	05 22 38.2	-1.4
	comp=Z,0.9nm,0.9s,baz=228,slow=1.8,SNR=3.6							
TORD				PKPab		PKPab	05 24 00.3	+0.3
	comp=Z,1.7nm,0.8s,baz=190,slow=4.2,SNR=7.7							

*OSPL **12** 05:06:50.5±1.4, 19.°60N×68.°57W, h10km±18km, ML2.7*
*RSPR **12** 05:06:52.7, 19.°50N×68.°58W, h57km±7km, MD3.3/11*
*NEIC **12** 05:06:52.1±2.0, 19.°5N±0.°2×68.°62W±0.°05, h47km±78km,*
Error ellipse: s-maj=24.2km s-min=6.7km az=182.0

ISC 12 05:06:48.7±1.8, **19.°57N**±0.°07×**68.°54W**±0.°04, **h14**km±12km, **n44**, σ1§**04**/49, **12C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	1.06	172	⇑*e*P	Pn	05 07 08.9	-0.2
PCDR	Punta Cana, DR	1.06	172	*e*S	Sb	05 07 23.5	+1.0
PCDR	Punta Cana, DR	1.06	172		Sb	05 07 08.9	-0.2
PCDR					Sb	05 07 23.5	+1.0
PCDR	Punta Cana, DR	1.06	172	*i* P	Pn	05 07 08.9	-0.2
PCDR				*e*S	Sg	05 07 24.1	+1.1
PCDR				IAML		05 07 25.1	
	comp=Z,398nm,0.2s						
DR12	Loma Pena Alta	1.11	226	⇑*e*P	Pg	05 07 09.9	-0.2
DR12				*e*S	Sb	05 07 24.4	+0.4
DR12	Loma Pena Alta	1.11	226		Pb	05 07 09.3	-0.4
IDE	Isla Desecheo	1.55	139	⇑*e*P	Pb	05 07 16.5	-0.7
IDE	Isla Desecheo	1.55	139	*e*S	Sn	05 07 34.9	-0.9
SDD	Santo Domingo	1.70	230	Pn	Pb	05 07 19.2	-0.6
SDD				IAML		05 07 34.3	
	comp=N,162nm,2.7s						
SDD				IAML		05 08 16.3	
	comp=E,124nm,2.2s						
AGPR	Aguadilla, PR	1.74	129	⇓*e*P	Pb	05 07 20.2	-0.3
AGPR	Aguadilla, PR	1.74	129		Pb	05 07 20.2	-0.3
AGPR					Sn	05 07 40.8	+0.3
AGPR	Aguadilla, PR	1.74	129	IAML		05 07 45.9	
	comp=E,76nm,0.5s						
AGPR				IAML		05 08 08.3	
	comp=N,78nm,1.5s						
AGPR	Aguadilla, PR	1.74	129	*i* P	Pb	05 07 19.8	-0.7
AGPR				*e*S	Sn	05 07 40.2	-0.3
AGPR				IAML		05 07 44.0	
	comp=Z,41nm,0.3s						
PRSN	Puerto Rico Se	1.89	135		Pb	05 07 21.8	-1.1
LSP	Las Mesas	1.95	135	⇑*e*P	Pb	05 07 22.5	-1.6
CRPR	Cabo Rojo, PR	2.06	139	⇑*e*P	Pb	05 07 24.3	-1.6
CRPR	Cabo Rojo, PR	2.06	139	*e*S	Sn	05 07 48.6	+0.1
CRPR	Cabo Rojo, PR	2.06	139		Pb	05 07 24.3	-1.6
CRPR					Sn	05 07 48.6	+0.1
CRPR	Cabo Rojo, PR	2.06	139	*i* P	Pb	05 07 24.7	-1.2
CRPR				*e*S	Sn	05 07 49.0	+0.6
CRPR				IAML		05 07 58.1	
	comp=Z,42nm,0.9s						
AOPR	Arecibo Observ	2.08	125	⇑*e*P	Pb	05 07 25.5	-0.8
AOPR	Arecibo Observ	2.08	125	*e*S	Sn	05 07 49.1	+0.1
AOPR	Arecibo Observ	2.08	125		Pb	05 07 25.5	-0.8
AOPR					Sn	05 07 49.1	+0.1
AOPR	Arecibo Observ	2.08	125	IAML		05 08 05.1	
	comp=N,95nm,0.3s						
MLPR	Magueyes Islan	2.13	138	⇑*e*P	Pn	05 07 24.3	+0.4
MLPR	Magueyes Islan	2.13	138	*e*S	Sn	05 07 49.6	-0.5
MLPR	Magueyes Islan	2.13	138		Pn	05 07 24.3	+0.4
MLPR					Sn	05 07 49.6	-0.5
UUPR	Utuado, UPR, P	2.17	127	⇑*e*P	Pb	05 07 26.4	-1.3
UUPR	Utuado, UPR, P	2.17	127	*e*S	Sn	05 07 50.3	-0.7
UUPR	Utuado, UPR, P	2.17	127		Pb	05 07 26.4	-1.3
UUPR					Sn	05 07 50.3	-0.7
OBIP	Obispado Ponce	2.38	129	⇑*e*P	Pb	05 07 28.9	-2.5
OBIP	Obispado Ponce	2.38	129		Pb	05 07 28.9	-2.5
OBIP	Obispado Ponce	2.38	129	IAML		05 08 02.6	
	comp=N,32nm,0.4s						
ICMP	Isla Caja de M	2.54	131	Pn	Pb	05 07 33.4	-0.7
ICMP				IAML		05 08 32.8	
	comp=E,39nm,1.6s						
ICMP				IAML		05 08 42.2	
	comp=N,46nm,1.2s						
SJG	San Juan	2.69	122	Pn	Pb	05 07 35.6	-1.0
SJG				IAML		05 08 12.2	
	comp=N,29nm,0.6s						
PDPR	Patillas Dam,	2.84	122	Pn	Pb	05 07 37.4	-1.8
CBYP	Canovanas	2.85	116	⇑*e*P	Pn	05 07 34.3	+0.4
CBYP	Canovanas	2.85	116		Pn	05 07 34.3	+0.4
CBYP	Canovanas	2.85	116	IAML		05 08 17.6	
	comp=E,55nm,0.2s						
CBYP				IAML		05 08 19.0	
	comp=N,53nm,0.2s						
HUMP	Col San Antoni	2.92	119	⇑*e*P	Pn	05 07 35.4	+0.7
HUMP	Col San Antoni	2.92	119		Pn	05 07 35.4	+0.7
HUMP	Col San Antoni	2.92	119	IAML		05 08 15.8	
	comp=N,26nm,0.3s						
GRTK	Grand Turk	3.10	309	*i* P	Pn	05 07 37.3	+0.1
GRTK				IAML		05 08 23.4	
	comp=Z,26nm,0.7s						
SJVI	Gifft Hill Sch	3.77	108	⇑*e*P	Pn	05 07 48.4	+1.8
SJVI	Gifft Hill Sch	3.77	108		Pn	05 07 48.4	+1.8

*IDC **12** 05:16:07.5±13.0, 12.°61S×167.°21E, h170km±112km,*
mb3.8/5, mbtmp4.2/5, MS4.2/1, Error ellipse:
s-maj=128.2km s-min=42.6km az=136.0
*NEIC **12** 05:16:13.5±1.8, 12.°40S±0.°08×167.°0E±0.°1, h218km±9km,*
mb4.4/22, Error ellipse: s-maj=16.4km s-min=9.4km
az=56.0

ISC 12 05:16:13.6±0.6, **12.°44S**±0.°09×**166.°93E**±0.°09, **h220**km, **n38**, σ0§**84**/38, **mb4.3**/15, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	9.06	173	Pn	Pn	05 18 20.6	+0.1
MSVF	Nonsavu	11.96	117	Pn	Pn	05 18 56.9	-0.7
EIDS	Eidsvold	19.73	227	P	P	05 20 28.0	+1.2
EIDS				IAmb	IAmb	05 20 29.5	
	comp=Z,8.9nm,0.8s						
LHI	Lord Howe Isla	20.33	200	P	P	05 20 32.6	-0.6
AFI	Afiamalu	20.78	96	P	P	05 20 37.4	-0.8
CTA	Charters Tower	21.24	246	P	P	05 20 43.9	+1.0
	comp=Z,5.0nm,0.7s,baz=79,slow=11,SNR=6.0						
	comp=Z,5.0nm,0.7s						
CTAO	Charters Tower	21.24	246		P	05 20 43.1	+0.2
CTAO				IAmb	IAmb	05 20 45.5	
	comp=Z,20nm,1.4s						
MANU	Manus Island	21.96	297	P	P	05 20 48.8	-1.2
COEN	Coen	23.18	264	P	P	05 21 00.9	-0.2
COEN				IAmb	IAmb	05 21 03.5	
	comp=Z,14nm,1.2s						
BKZ	Black Stump Fm	27.94	164	P	P	05 21 44.0	+0.4
STKA	Stephens Creek	30.28	226	LR	LR	05 32 45.9	
	comp=Z,519nm,21.4s,baz=329,slow=33						
WR0	Warramunga Arr	31.95	252	P	P	05 22 17.7	-1.5
WR0				IAmb	IAmb	05 22 57.4	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	32.13	252	P	P	05 22 20.2	-0.6
	comp=Z,1.0nm,0.4s,baz=81,slow=9.0,SNR=37						
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	32.13	252	P	P	05 22 18.7	-2.1
AS31	Alice Springs	33.24	246	P	P	05 22 29.4	-1.0
ASAR	Alice Springs	33.25	246	P	P	05 22 30.0	-0.4
	comp=Z,1.0nm,0.3s,baz=70,slow=9.7,SNR=16						
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	33.25	246	P	P	05 22 29.2	-1.2
BBOO	Buckleboo	34.77	229	P	P	05 22 43.5	+0.2
BBOO				IAmb	IAmb	05 22 45.1	
	comp=Z,32nm,1.4s						
FITZ	Fitzroy Crossi	40.17	257	P	P	05 23 28.9	+0.1
VNDA	Vanda	65.13	181	P	P	05 26 30.7	+0.2
SBA	Scott Base	65.42	180	P	P	05 26 34.3	+2.0
CASY	Casey	65.52	202	P	P	05 26 32.6	-0.5
NIKH	Nikolski High	68.38	15	P	P	05 26 51.7	+0.5
OHAK	Old Harbor	76.77	21	P	P	05 27 39.7	-0.9
OHAK				IAmb	IAmb	05 28 15.0	
	comp=Z,12nm,1.5s						
QSPA	South Pole Qui	77.58	180	P	P	05 27 45.1	-0.1
HDA	Harding Lake	84.18	18	P	P	05 28 19.5	-0.3
HDA				IAmb	IAmb	05 28 20.6	
	comp=Z,7.9nm,0.7s						
MDM	Murphy Dome	84.19	18	P	P	05 28 18.9	-1.0
MDM				IAmb	IAmb	05 28 20.3	
	comp=Z,3.3nm,0.8s						
IL31		84.46	18	P	P	05 28 20.5	-0.6
IL31				IAmb	IAmb	05 28 21.6	
	comp=Z,3.9nm,0.7s						
ILAR	Eielson Array	84.46	18	P	P	05 28 20.6	-0.6
	comp=Z,2.9nm,0.6s,baz=247,slow=5.1,SNR=38						
	comp=Z,2.9nm,0.6s						
ILAR	Eielson Array	84.46	18	P	P	05 28 21.2	0.0
M27K	Edge Creek, AK	84.47	21	P	P	05 28 22.1	+0.7
M27K				IAmb	IAmb	05 28 26.9	
	comp=Z,9.2nm,1.4s						
J25K	Salcha River,	84.82	19	P	P	05 28 23.0	0.0
J25K				IAmb	IAmb	05 28 24.1	
	comp=Z,4.4nm,0.6s						
SCRK	Sand Creek	84.82	20	P	P	05 28 23.3	+0.1
SCRK				IAmb	IAmb	05 28 24.4	
	comp=Z,2.2nm,0.7s						
BCAR	Beaver Creek A	84.97	21	P	P	05 28 24.1	+0.3
MKAR	Makanchi Array	95.32	317	P	P	05 29 13.6	+0.8
	comp=Z,0.5nm,0.8s,baz=81,slow=3.0,SNR=4.0						
	comp=Z,0.5nm,0.8s						
ARCES	ARCESS Array B	117.96	346	PKP	PKiKP	05 34 33.4	-0.1
	comp=Z,0.6nm,0.3s,baz=35,slow=4.4,SNR=19						
FINES	FINESS Array B	123.48	339	PKP	PKiKP	05 34 45.3	+0.7
	comp=Z,1.7nm,0.9s,baz=43,slow=2.7,SNR=1.7						
ESDC	Sonseca Array	151.70	345	PKPbc	PKiKP	05 35 43.1	+0.4
	comp=Z,0.5nm,0.7s,baz=349,slow=3.0,SNR=5.0						
ESDC				PKPab	PKPab	05 35 52.8	+0.9
	comp=Z,0.9nm,0.7s,baz=17,slow=3.6,SNR=5.4						

*ISU **12** 05:17:38, 39.°51N×73.°37E, h2km*
*KRNET **12** 05:17:38.6±0.1, 39.°42N×73.°38E, mb3.2*
*SOME **12** 05:17:52.2, 40.°00N×73.°27E, h0km*

ISC 12 05:17:42.0±2.0, **39.°57N**±0.°08×**73.°31E**±0.°05, **h7**km±12km, **n11**, σ1§**39**/21, **6C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	1.04	337	⇑*i* P	Pg	05 18 01.4	-0.6
	baz=38						
OHH				⇑*i* S	Sn	05 18 18.1	+0.2
	baz=38						
OHH	Osh	1.04	337	P	Pg	05 18 00.7	-1.3
OHH				S	Sn	05 18 18.1	+0.2
TSTA	Tashata	1.20	328	S	Sn	05 18 21.9	+0.2
FRG	Fergana	1.42	305	P	Pb	05 18 08.8	-0.1
FRG				S	Sg	05 18 29.0	+1.2
GAR	Garm	2.39	257	⇑*e*P	Pn	05 18 21.5	-0.2
	baz=61						
GAR				⇑*i* S	Sb	05 18 53.0	-2.2
	baz=61						
ARLS	Aral	2.42	18	⇑*i* P	Pn	05 18 23.3	+1.2
	baz=16						
ARLS				⇑*i* S	Sb	05 18 55.6	-0.4
	baz=16						
IUG	luzhnay	3.58	317	*e*P	Pg	05 18 53.0	+2.4
	113nm,0.5s						
IUG				*e*S	Sg	05 19 37.0	-0.1
	16nm,0.4s						
KST	Kastek	4.01	29	*e*P	Pg	05 19 00.2	+1.4
	1.9nm,0.3s						
KST				*e*S	Sg	05 19 49.4	-1.3
	6.2nm,0.5s						
KRBS	Karabastau	4.49	22	*e*P	Pg	05 19 08.6	+0.6
	1.3nm,0.3s						
KRBS				*e*S	Sg	05 20 03.8	-2.4
	2.6nm,0.5s						
KTBS	Karatobe	4.85	30	*e*P	Pg	05 19 15.8	+0.8
	1.1nm,0.3s						
KTBS				*e*S	Sg	05 20 15.7	-2.1
	4.1nm,0.2s						
ARXS	Arharly	5.74	35	*e*P	Pg	05 19 33.5	+1.6
	1.2nm,0.5s						
ARXS				*e*S	Sg	05 20 46.1	-0.1
	2.1nm,0.4s						

*ANF **12** 05:27:09.8±0.5, 36.°65N×98.°05W, h2km±4km, ML4.9/25,*
Error ellipse: s-maj=2.3km s-min=2.1km az=147.0
*IDC **12** 05:27:09.8±0.8, 36.°74N×98.°11W, h0km, mb3.9/3,*
mbtmp3.8/7, ML4.4/3, Error ellipse: s-maj=14.6km
s-min=11.4km az=158.0
*TUL **12** 05:27:10.4±0.9, 36.°66N±0.°02×98.°09W±0.°08, h6km±4km,*
ML4.2, mb4.1/9(NEIC), mb_Lg4.0/107(NEIC),
Mwr3.6/19(SLM), Error ellipse: s-maj=8.6km s-min=2.6km
az=81.0
*NEIC **12** 05:27:10.4, 36.°64N×98.°08W, h3km, Moment Tensor*
Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.13;
$M_{\theta\theta}$=2.75; $M_{\phi\phi}$=-1.62; $M_{r\theta}$=0.22; $M_{\theta\phi}$=-0.96; $M_{\phi r}$=1.42; Fault
plane solution: $M_0$2.95000×10^{14} NP1:ϕ_s244.00000°,
δ63.00000°, λ-152.00000°. NP2:ϕ_s140.00000°,
δ65.00000°, λ-30.00000°. Principal axes: T 2.9529,
Plg1.0000°, Azm192.0000°; N -0.0013, Plg52.0000°,
Azm284.0000°; P -2.9515, Plg38.0000°, Azm101.0000°;
*NEIC **12** 05:27:11.0±0.6, 36.°65N±0.°02×98.°09W±0.°07, h3km±7km*
Error ellipse: s-maj=8.5km s-min=2.8km az=83.0

ISC 12 05:27:10.3±0.8, **36.°66N**±0.°02×**98.°06W**±0.°02, **h13**km±5km, **n270**, σ1§**11**/264, **mb3.9**/3, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	Carrier	0.17	157	Pg	Pg	05 27 14.2	0.0
CROK				Sg	Sg	05 27 16.9	-0.1
OK032	Salt Plains WL	0.19	321		Pg	05 27 14.4	-0.1
OK032				Sg	Sg	05 27 17.3	-0.1
GC02	Grant County #	0.25	41	Pg	Pg	05 27 16.0	+0.4
GC02				Sg	Sg	05 27 20.0	+0.7
KAN14	Manchester OK	0.31	15	Pg	Pg	05 27 16.9	+0.3
KAN17	Caldwell West	0.45	32	Pg	Pg	05 27 19.6	+0.3
KAN17				Sg	Sb	05 27 26.0	-0.9
KAN10	Anthony SW Sta	0.46	357	Pg	Pg	05 27 19.7	+0.2
KAN05	Bluff City Nor	0.47	19		Pg	05 27 20.0	+0.3
KAN05				Sg	Sb	05 27 26.8	-0.8
OK035	E0210 Rd and N	0.52	276		Pg	05 27 20.3	-0.3
OK035				Sg	Sg	05 27 27.6	+0.1
KAN01	Argonia South	0.55	26	Pg	Pb	05 27 21.4	-0.5
KAN16	Harper SW Stat	0.56	360	Pg	Pg	05 27 21.6	+0.2
KAN08	Anthony NE Sta	0.57	7		Pb	05 27 21.8	-0.5
OK038	West end E0370	0.57	252		Pg	05 27 21.2	-0.4
KAN13	South Haven SW	0.59	53	Pg	Pb	05 27 22.1	-0.4
KAN06	Argonia West S	0.61	16		Pg	05 27 22.4	+0.1
KAN12	Harper NE Stat	0.64	5	Pg	Pb	05 27 23.0	-0.4
NOKA	Waynoka	0.70	268		Pg	05 27 23.5	-0.4
KS20	Mayfield South	0.70	36	Pg	Pg	05 27 24.1	+0.1
KS21	Milan North St	0.70	27	Pg	Pb	05 27 24.3	-0.2
U32A	Winter Ranch,	0.81	250		Pg	05 27 25.4	-0.5
U32A	Winter Ranch,	0.81	250	P	Pg	05 27 25.4	-0.5
	baz=69,SNR=84						
U32A				S	Sg	05 27 36.5	0.0
	baz=69						
OK029	Liberty Lake	0.99	150	Pg	Pb	05 27 29.2	-0.2
BCOK	Bluff Creek, N	1.07	160	Pg	Pb	05 27 30.2	-0.5
CSTR	Hydro, Custer	1.13	207		Pb	05 27 31.5	-0.2
OK031	S. Brethren Rd	1.22	125		Pb	05 27 33.2	0.0
OK025	Westminster Rd	1.23	151	Pg	Pn	05 27 33.3	+0.1
ELIS	Ellis County	1.24	242		Pn	05 27 33.4	-0.1
T35A	Sooner Cattle	1.27	78		Pg	05 27 34.5	-0.3
T35B	Sooner Cattle	1.27	78	P	Pg	05 27 34.5	-0.3
	baz=259,SNR=882						
T35B				S	Sg	05 27 51.3	0.0
	baz=259						
OKCSW	OKLAHOMA CITY	1.35	158		Pb	05 27 35.3	-0.2
FNO	Franklin	1.50	159		Pn	05 27 37.4	+0.4
DEOK	Depew	1.50	122		Pb	05 27 38.0	-0.2
R32A	Long Quarter,	1.83	344	P	Pb	05 27 43.6	-0.2
	baz=164,SNR=276						
R32A				S	Sg	05 28 08.4	-1.0
	baz=164						
TUL1	Leonard	1.98	111	Pn	Pn	05 27 44.8	+1.2
TUL1				IAmb_Lg		05 28 16.1	
	comp=Z,819nm,0.9s						
TUL1	Leonard	1.98	111	P	Pn	05 27 44.9	+1.2
	baz=293,SNR=165						
TUL1				S	Sb	05 28 11.7	+0.8
	baz=293						
TUL1	Leonard	1.98	111	P	Pb	05 27 44.9	-1.4
	baz=293,SNR=277						
WMOK	Wichita Mounta	2.00	197	IAmb_Lg		05 28 12.8	
	comp=Z,518nm,0.8s						
WMOK	Wichita Mounta	2.00	197	P	Pn	05 27 44.8	+0.9
	baz=16,SNR=1000						
WMOK	Wichita Mounta	2.00	197	P	Pn	05 27 45.3	+1.4
	baz=16						
WMOK				S	Sb	05 28 12.1	+0.5
	baz=16						
X34A	Smith Ranch, M	2.06	175		Pb	05 27 46.6	-1.0
X34A				IAmb_Lg		05 28 19.7	
	comp=Z,1μm,0.7s						
RLO	Rose Lookout	2.50	100	Pn	Pn	05 27 51.8	+1.0
CBKS	Cedar Bluff	2.53	329	Pn	Pn	05 27 52.9	+1.8
CBKS				IAmb_Lg		05 28 35.6	
	comp=Z,740nm,0.8s						
CBKS	Cedar Bluff	2.53	329	P	Pn	05 27 52.7	+1.5
	baz=148,SNR=85						
CBKS				S	Sb	05 28 25.3	-1.3
	baz=148						
CBKS	Cedar Bluff	2.53	329	P	Pn	05 27 52.9	+1.8
	baz=148,SNR=74						
CBKS				S	Sb	05 28 24.6	-2.1
	baz=148						
KSU1	Kansas State U	2.69	25		Pn	05 27 55.1	+1.7
KSU1				IAmb_Lg		05 28 41.7	
	comp=Z,581nm,0.8s						
KSU1	Kansas State U	2.69	25	P	Pn	05 27 55.1	+1.7
	baz=206,SNR=32						
KSU1	Kansas State U

baz=232
MGMO Mountain Grove 4.67 82 Pn 05 28 22.1 +1.5
MGMO IAmb_Lg 05 29 45.1
comp=Z,407nm,1.1s
WHTX Lake Whitney, 4.68 174 Pn Pn 05 28 21.8 +1.1
WHTX Lake Whitney, 4.68 174 P Pn 05 28 21.7 +0.9
baz=354,SNR=72
WHTX Lake Whitney, 4.68 174 P Pn 05 28 21.5 +0.7
baz=354
WHTX S Sn 05 29 14.2 -0.8
baz=354
MSTX Muleshoe 4.69 236 P Pn 05 28 21.7 +0.7
baz=54
MSTX Muleshoe 4.69 236 P Pn 05 28 21.9 +0.9
baz=54,SNR=8.5
BGNE Belgrade 4.74 359 IAmb_Lg 05 29 44.0
comp=Z,422nm,0.7s
BGNE Belgrade 4.74 359 P Pn 05 28 22.4 +0.8
baz=179,SNR=43
BGNE Belgrade 4.74 359 P Pn 05 28 22.5 +0.9
baz=179,SNR=11
FCAR Ozark Folk Cen 4.86 97 Pn 05 28 24.1 +0.9
WHAR Wooly Hollow 4.88 105 Pn Pn 05 28 24.0 +0.6
WHAR IAmb_Lg 05 29 49.8
comp=Z,404nm,1.0s
R40A Maddies Statio 4.89 69 IAmb_Lg 05 29 48.8
comp=Z,360nm,0.8s
R40A Maddies Statio 4.89 69 P Pn 05 28 24.7 +1.2
baz=252,SNR=75
237A Washetta, Mont 5.01 157 IAmb_Lg 05 29 58.3
comp=Z,326nm,0.8s
237A Washetta, Mont 5.01 157 P Pn 05 28 25.7 +0.5
baz=339,SNR=28
237A S Sn 05 29 22.4 -0.6
baz=339
UALR University of 5.02 110 IAmb_Lg 05 29 58.8
comp=Z,272nm,1.0s
WLAR White Oak Lake 5.02 125 IAmb_Lg 05 29 53.0
comp=Z,256nm,0.8s
T25A Trinidad 5.11 277 Pn Pn 05 28 28.5 +1.6
T25A IAmb_Lg 05 30 03.3
comp=Z,257nm,0.9s
T25A Trinidad 5.11 277 P Pn 05 28 28.1 +1.2
baz=94,SNR=20
T25A S Sn 05 29 25.4 -0.4
baz=94
OGNE Ogallala 5.28 325 IAmb_Lg 05 30 08.4
comp=Z,484nm,0.8s
OGNE Ogallala 5.28 325 P Pn 05 28 31.0 +1.9
baz=143,SNR=19
OGNE Ogallala 5.28 325 P Pn 05 28 31.3 +2.2
baz=143
OGNE S Sn 05 29 30.8 +0.9
baz=143
L34A Svendsen Farm, 5.46 13 P Pn 05 28 31.1 -0.4
baz=195,SNR=6.7
P40A Paris 5.54 57 IAmb_Lg 05 30 07.4
comp=Z,459nm,0.7s
P40A Paris 5.54 57 P Pn 05 28 33.1 +0.6
baz=241,SNR=13
N38A Joes South For 5.59 41 Pn Pn 05 28 34.2 +1.0
N38A Joes South For 5.59 41 P Pn 05 28 34.3 +1.1
baz=224,SNR=23
LCAR Lake Charles 5.61 94 IAmb_Lg 05 30 11.2
comp=Z,153nm,0.8s
CCM Cathedral Cave 5.61 74 Pn Pn 05 28 34.0 +0.5
CCM IAmb_Lg 05 30 14.0
comp=Z,456nm,1.0s
CCM Cathedral Cave 5.61 74 P Pn 05 28 34.2 +0.7
baz=258,SNR=16
CCM Cathedral Cave 5.61 74 P Pn 05 28 33.9 +0.5
baz=258
NATX Nacogdoches 5.64 149 IAmb_Lg 05 30 22.2
comp=Z,152nm,0.8s
NATX Nacogdoches 5.64 149 P Pn 05 28 33.9 0.0
baz=331
NATX S Sn 05 29 37.0 -1.7
baz=331
CCAR Cane Creek 5.83 116 Pn 05 28 36.7 +0.2
CCAR IAmb_Lg 05 30 21.9
comp=Z,196nm,0.8s
435B Jarrell 5.88 176 Pn 05 28 37.6 +0.5
435B IAmb_Lg 05 30 32.0
comp=Z,295nm,0.9s
435B Jarrell 5.88 176 P Pn 05 28 37.7 +0.5
baz=356
435B Jarrell 5.88 176 P Pn 05 28 37.4 +0.2
baz=356
435B S Sn 05 29 44.2 -0.2
baz=356
K31A O'Neill 5.98 355 IAmb_Lg 05 30 35.6
comp=Z,388nm,0.9s
K31A O'Neill 5.98 355 P Pn 05 28 40.1 +1.5
baz=175
SDCO Great Sand Dun 6.04 283 P Pn 05 28 41.9 +2.3
baz=98,SNR=8.6
SDCO Great Sand Dun 6.04 283 P Pn 05 28 42.0 +2.4
baz=98,SNR=27
Q24A Divide 6.06 294 IAmb_Lg 05 30 28.0
comp=Z,152nm,0.8s
Q24A Divide 6.06 294 P Pn 05 28 41.8 +1.8
baz=110,SNR=6.5
Q24A S Sn 05 29 50.1 +0.6
baz=110
PBMO Poplar Bluff 6.13 87 IAmb_Lg 05 30 35.3
comp=Z,305nm,0.7s
FVM French Village 6.23 75 IAmb_Lg 05 30 28.3
comp=Z,326nm,0.8s
FVM French Village 6.23 75 P Pn 05 28 42.4 +0.4
baz=260,SNR=18
JCT Junction City 6.33 194 P Pn 05 28 43.5 +0.1
baz=13,SNR=17
JCT Junction City 6.33 194 P Pn 05 28 43.6 +0.1
baz=13
SCIA State Center 6.45 34 Pn Pn 05 28 46.2 +1.2
SCIA IAmb_Lg 05 30 41.5
comp=Z,318nm,0.8s
SCIA State Center 6.45 34 P Pn 05 28 45.9 +0.9
baz=217
SCIA S Sn 05 29 56.9 -1.5
baz=217
CLNB Carlsbad 6.50 229 Pn 05 28 46.8 +0.9
SLM Saint Louis 6.52 70 Pn 05 28 46.8 +0.8
ISCO Idaho Springs 6.72 300 IAmb_Lg 05 30 50.1
comp=Z,133nm,1.0s
ISCO Idaho Springs 6.72 300 P Pn 05 28 50.4 +1.4
baz=116,SNR=13
PVMO Portageville 6.74 90 IAmb_Lg 05 30 46.9
comp=Z,340nm,1.0s
143A Socs Landing, 6.76 124 IAmb_Lg 05 31 00.4
comp=Z,121nm,0.8s
CGM3 Cape Girardeau 6.76 82 IAmb_Lg 05 30 41.8
comp=Z,278nm,0.9s
MET Memphis--Engin 6.78 101 IAmb_Lg 05 30 52.5
comp=Z,163nm,0.8s
N41A Harden Midland 6.94 52 P Pn 05 28 52.4 +0.7
baz=237,SNR=6.6
ANMO Albuquerque 7.03 258 Pn Pn 05 28 55.3 +2.1
comp=Z,1.0nm,0.3s,baz=83,slow=18,SNR=13
ANMO Pg Pg 05 29 19.3 -5.6
comp=Z,3.1nm,0.3s,baz=78,slow=18,SNR=16
ANMO Lg Lg 05 30 48.3
comp=Z,9.3nm,0.3s,baz=346,slow=20,SNR=4.4
ANMO Albuquerque 7.03 258 P Pn 05 28 54.4 +1.2
baz=73
S22A 4UR Ranch, Cre 7.08 281 P Pn 05 28 55.0 +1.1
baz=96
HALT Halls 7.09 93 IAmb_Lg 05 31 07.9
comp=Z,275nm,0.8s
HICK Hickman 7.11 88 Pn 05 28 54.5 +0.4
S44A Carbondale 7.11 79 Pn 05 28 54.5 +0.4
SIUC Southern Illin 7.14 79 Pn 05 28 55.0 +0.5
SIUC IAmb_Lg 05 31 01.0
comp=Z,258nm,0.8s
ECSD EROS Data Cent 7.15 8 P Pn 05 28 54.2 -0.5
baz=190,SNR=55
ECSD EROS Data Cent 7.15 8 P Pn 05 28 54.5 -0.1
baz=190,SNR=11
ECSD S Sn 05 30 14.1 -1.7
baz=190
P43A Skaggs, Pawnee 7.36 64 Pn 05 28 58.7 +1.2
P43A Skaggs, Pawnee 7.36 64 P Pn 05 28 58.2 +0.7
baz=249,SNR=8.9
W45A Hickory Valley 7.36 99 IAmb_Lg 05 31 16.4
comp=Z,250nm,0.8s
OXF Oxford 7.37 104 IAmb_Lg 05 31 04.5
comp=Z,170nm,1.1s
OXF Oxford 7.37 104 P Pn 05 28 57.6 -0.1
baz=289,SNR=28
OXF Oxford 7.37 104 P Pn 05 28 56.8 -0.9
baz=289,SNR=23
PHWY Pilot Hill 7.39 311 IAmb_Lg 05 31 15.2
comp=Z,126nm,0.8s
N23A Red Feather La 7.47 307 IAmb_Lg 05 31 17.7
comp=Z,183nm,0.7s
N23A Red Feather La 7.47 307 P Pn 05 29 01.0 +1.7
baz=122,SNR=11
Q44A Meyer Farm, Va 7.51 70 P Pn 05 28 59.9 +0.4
baz=255
Y45A Yeager Farm, C 7.51 109 IAmb_Lg 05 31 21.2
comp=Z,156nm,0.8s
T45B Paducah 7.56 84 P Pn 05 29 00.6 +0.3
baz=270
L40A Anamosa 7.56 42 Pn 05 29 00.8 +0.6
L40A Anamosa 7.56 42 P Pn 05 29 00.6 +0.4
baz=227
T45A Paducah 7.56 84 Pn 05 29 00.1 -0.2
VBMS Vicksburg 7.65 123 S Sn 05 30 25.4 -2.6
baz=308
735A Kenedy 7.79 178 IAmb_Lg 05 31 29.1
comp=Z,127nm,0.8s
SUSD Miller 7.80 355 IAmb_Lg 05 31 29.5
comp=Z,230nm,0.8s
SUSD Miller 7.80 355 S Sn 05 30 30.0 -1.8
baz=175
MNTX Cornudas Mount 7.83 233 P Pn 05 29 04.4 +0.5
baz=49,SNR=12
HDIL Hopedale 7.89 58 P Pn 05 29 05.3 +0.5
baz=243
HDIL S Sn 05 30 31.1 -2.8
baz=243
I37A Lemond, Waseca 8.16 24 IAmb_Lg 05 31 43.4
comp=Z,219nm,0.9s
OLIL Olney 8.17 72 Pn 05 29 09.2 +0.6
OLIL Olney 8.17 72 P Pn 05 29 09.2 +0.6
baz=258
WVT Waverly 8.27 91 Pn Pn 05 29 10.4 +0.4
WVT Waverly 8.27 91 P Pn 05 29 09.7 -0.3
baz=277
833A Chaparral WMA, 8.39 188 IAmb_Lg 05 31 45.9
comp=Z,109nm,0.9s
833A Chaparral WMA, 8.39 188 P Pn 05 29 12.6 +0.9
baz=7.2
L42A Oliver, Polo 8.41 48 P Pn 05 29 12.5 +0.5
baz=233
JFWS Jewell Farm 8.67 42 IAmb_Lg 05 31 53.6
comp=Z,179nm,0.8s
JFWS Jewell Farm 8.67 42 P Pn 05 29 15.2 -0.3
baz=226,SNR=27
TX31 Lajitas Ar. Si 8.69 214 Pn 05 29 16.0 +0.1
TX31 Lajitas Ar. Si 8.69 214 P Pn 05 29 15.6 -0.3
baz=31,SNR=31
TX32 Lajitas Array 8.69 214 Pn 05 29 15.8 0.0
TXAR Lajitas Array 8.69 214 Pn Pn 05 29 15.4 -0.4
comp=Z,1.2nm,0.3s,baz=34,slow=11,SNR=68
TXAR Lg Lg 05 31 40.8
comp=Z,4.2nm,0.3s,baz=41,slow=26,SNR=8.5
comp=Z,1.8nm,0.3s
TXAR Lajitas Array 8.69 214 Pn Pn 05 29 15.8 0.0
RSSD Black Hills 8.73 330 P Pn 05 29 18.3 +1.7
baz=147
T47A Sharon Grove 8.79 85 Pn 05 29 17.2 0.0
K22A Casper 8.85 315 Pn 05 29 19.4 +1.3
K22A IAmb_Lg 05 32 13.7
comp=Z,130nm,0.8s
K22A Casper 8.85 315 P Pn 05 29 19.8 +1.7
baz=130
121A Cookes Peak, D 9.01 246 P Pn 05 29 21.6 +1.3
baz=60
P46A Rosedale 9.05 68 Pn 05 29 20.7 0.0
M44A Midewin, Midew 9.11 56 Pn 05 29 21.9 +0.4
I40A Norwalk 9.19 36 IAmb_Lg 05 32 22.9
comp=Z,94nm,0.7s
I40A Norwalk 9.19 36 P Pn 05 29 22.7 +0.1
baz=221,SNR=10
SFIN Lafayette 9.36 63 Pn 05 29 26.0 +1.1
SFIN Lafayette 9.36 63 P Pn 05 29 24.8 -0.1
baz=250,SNR=6.7
SPMN Marine on St. 9.43 23 IAmb_Lg 05 32 16.2
comp=Z,77nm,0.8s
SPMN Marine on St. 9.43 23 P Pn 05 29 25.8 -0.2
baz=207,SNR=8.0
BLO Bloomington 9.46 71 Pn 05 29 25.9 -0.4
L44A Lake County Fo 9.59 52 Pn 05 29 27.6 -0.4
L44A Lake County Fo 9.59 52 P Pn 05 29 27.7 -0.4
baz=238,SNR=5.2
K43A Burlington 9.62 48 IAmb_Lg 05 32 29.1
comp=Z,221nm,0.9s
LRAL Lakeview Retre 9.79 108 Pn Pn 05 29 30.7 -0.1
LRAL Lakeview Retre 9.79 108 P Pn 05 29 30.6 -0.1
baz=295
U49A Red Boiling Sp 9.88 87 Pn 05 29 32.2 +0.1
Y49A Blount Mountai 9.93 103 Pn Pn 05 29 32.4 -0.4
SWET Sewanee 9.94 95 Pn 05 29 33.5 +0.5
I42A Draeger Farm, 10.05 41 P Pn 05 29 33.5 -0.8
baz=227,SNR=13
FPAL Fort Paine 10.36 98 Pn 05 29 39.1 +0.5
R49A Shelbyville 10.38 77 Pn Pn 05 29 38.9 0.0
R49A Shelbyville 10.38 77 P Pn 05 29 39.0 +0.1
baz=265,SNR=7.7
R49A P Pn 05 29 39.0 +0.1
baz=265,SNR=7.7
L46A Eue Claire 10.56 56 Pn 05 29 41.9 +0.5
BRAL Brewton 10.66 118 Pn Pn 05 29 43.0 +0.2
BRAL Brewton 10.66 118 P Pn 05 29 42.8 0.0
baz=304
O48B Farmland 10.74 67 P Pn 05 29 42.0 -1.9
baz=255,SNR=11
O48B Farmland 10.74 67 P Pn 05 29 42.2 -1.6
baz=255,SNR=10
BW06 Boulder Array 10.75 308 Pn 05 29 45.2 +1.1
BW06 Boulder Array 10.75 308 P Pn 05 29 43.6 -0.5
baz=121
PD31 Pinedale Array 10.75 308 Pn Pn 05 29 45.2 +1.1
PDAR Pinedale Array 10.75 308 Pn Pn 05 29 45.0 +0.9
comp=Z,0.4nm,0.3s,baz=122,slow=14,SNR=9.0
PDAR Pg 05 30 29.5
comp=Z,0.7nm,0.3s,baz=116,slow=17,SNR=4.8
PDAR Lg Lg 05 32 50.5
comp=Z,2.2nm,0.3s,baz=114,slow=28,SNR=4.6
comp=Z,0.5nm,0.5s
P49A Miami Univ. Ec 10.90 71 P Pn 05 29 44.5 -1.6
baz=259,SNR=6.7
X51A Calhoun 10.95 97 Pn 05 29 47.1 +0.4
CPCT Cooper Cave 11.03 92 Pn Pn 05 29 48.2 +0.4
V51A Loudon 11.11 90 Pn 05 29 49.5 +0.5
Q49A Covington 11.33 68 Pn 05 29 50.7 -1.2
S51A Beattyville 11.59 81 Pn 05 29 55.5 0.0
S51A Beattyville 11.59 81 P Pn 05 29 55.7 +0.2
baz=270,SNR=10
S51A P Pn 05 29 55.7 +0.2
baz=270,SNR=10
TKL Tuckaleechee C 11.60 91 Pn Pn 05 29 56.1 +0.5
comp=Z,1.8nm,0.3s,baz=244,slow=8.4,SNR=41
TKL Lg Lg 05 33 11.5
comp=Z,2.8nm,0.3s,baz=184,slow=17,SNR=8.7
comp=Z,12nm,0.6s
TKL Tuckaleechee C 11.60 91 Pn 05 29 56.0 +0.4
TKL Tuckaleechee C 11.60 91 P Pn 05 29 55.8 +0.2
baz=279,SNR=9.6
N49A Columbus Grove 11.64 64 Pn 05 29 55.0 -1.1
TZTN Tazewell 11.67 86 Pn Pn 05 29 57.2 +0.7
TZTN Tazewell 11.67 86 P Pn 05 29 56.4 -0.2
baz=275,SNR=6.9
V52A Sevierville 11.71 90 Pn 05 29 57.1 -0.1
V52A Sevierville 11.71 90 P Pn 05 29 57.3 +0.1
baz=278,SNR=5.6
AGMN Agassiz Nation 11.74 7 P Pn 05 29 54.8 -2.8
baz=189,SNR=6.3
L48A N Adams 11.80 59 Pn 05 29 57.4 -0.9
Q51A Peebles 11.88 74 Pn 05 29 58.3 -1.1
352A Blakely 12.05 112 Pn Pn 05 30 00.9 -0.9
J47A Sunmer 12.09 53 Pn Pn 05 30 01.2 -1.1
EYMN Ely 12.28 21 P Pn 05 30 02.5 -2.3
baz=206
V53A Saluda 12.37 90 Pn 05 30 06.1 -0.1
AAM Ann Arbor 12.47 59 P Pn 05 30 05.9 -1.6
baz=248,SNR=6.5
M50A Fremont 12.60 63 Pn 05 30 08.2 -1.0
DGMT Dagmar 12.63 341 P Pn 05 30 09.0 -0.7
baz=157
P52A Corning 12.89 72 P Pn 05 30 11.1 -2.1
baz=262
R53A Hurricane 12.91 78 Pn 05 30 12.9 -0.6
baz=268,SNR=12
R53A Hurricane 12.91 78 P Pn 05 30 12.8 -0.7
baz=268,SNR=12
GLMI Grayling 13.04 47 P Pn 05 30 12.3 -3.1
baz=236,SNR=11
U54A Nelsons Funny 13.06 86 Pn 05 30 14.8 -0.8
O52A Adamsville 13.19 70 Pn 05 30 17.4 +0.1
S54A Dingess, Beckl 13.40 80 Pn 05 30 19.4 -0.9
P53A Whipple 13.44 73 Pn Pn 05 30 18.9 -1.8
V55A Taylorsville 13.62 88 Pn 05 30 22.1 -1.2
KMSC Kings Mountain 13.65 91 P Pn 05 30 22.1 -1.5
baz=281
O53A New Philadelph 13.68 70 P Pn 05 30 21.4 -2.7
baz=260
Q54A Coxs Mills 13.82 75 Pn 05 30 24.8 -1.1
N53A Lisbon 14.07 68 Pn 05 30 26.3 -3.0
BLA Blacksburg 14.13 82 Pn Pn 05 30 29.2 -1.0
BLA Blacksburg 14.13 82 P Pn 05 30 28.7 -1.5
baz=273
E46A Sault Ste Mari 14.13 42 Pn Pn 05 30 27.6 -2.5
EGMT Eagleton 14.25 326 P Pn 05 30 30.8 -1.1
baz=139
M53A WI Miller and 14.33 65 P Pn 05 30 30.8 -2.0
baz=256
R55A Marlinton 14.35 78 Pn 05 30 32.4 -0.9
R55A Marlinton 14.35 78 P Pn 05 30 31.5 -1.7
baz=269,SNR=10
R55A P Pn 05 30 31.5 -1.7
baz=269,SNR=10
T57A Hurt 15.07 83 Pn 05 30 41.9 -1.1
S57A Dark Hollow, R 15.27 80 Pn Pn 05 30 44.0 -1.6
S57A IAmb IAmb 05 30 44.9
comp=Z,6.4nm,0.6s
NVAR Mina Array Bea 16.15 282 Pn P 05 31 02.4 +1.9
comp=Z,0.1nm,0.3s,baz=90,slow=11,SNR=8.2
SADO Sadowa 16.45 55 Lg Lg 05 35 42.9
comp=Z,1.1nm,0.3s,baz=52,slow=1.6,SNR=7.3
WVOR Wild Horse Val 16.87 296 P P 05 31 08.6 +0.3
K57A Scipio Center 17.64 63 P Pn 05 31 15.4 -0.4
K57A IAmb IAmb 05 31 45.4
comp=Z,25nm,1.4s
J57A Williamstown 18.17 61 P P 05 31 22.4 -0.1
L59A Walton 18.60 66 P P 05 31 26.9 -0.5
L59A IAmb IAmb 05 31 39.4
comp=Z,10nm,0.9s
J58A Remsen 18.66 62 P P 05 31 26.8 -1.1
J58A IAmb IAmb 05 31 58.7
comp=Z,15nm,1.4s
ODNJ Ogdensburg 18.77 69 P P 05 31 28.5 -0.7
ODNJ IAmb IAmb 05 32 09.4
comp=Z,20nm,1.3s
ILAR Eielson Array 40.18 330 P P 05 34 47.9 +1.9
comp=Z,0.6nm,0.7s,baz=115,slow=6.6,SNR=5.6
comp=Z,0.6nm,0.7s
J20K Nowinta River 43.03 328 P P 05 35 11.2 +1.8
ARCES ARCESS Array B 66.42 19 P P 05 37 59.4 +0.6
comp=Z,0.4nm,0.5s,baz=311,slow=5.5,SNR=6.9
comp=Z,0.4nm,0.5s
FINES FINESS Array B 72.27 25 P P 05 38 36.2 +1.2
comp=Z,3.8nm,1.1s,baz=303,slow=13,SNR=2.5
comp=Z,3.8nm,1.1s

CNRM ***12*** *05:34:27.6, 36°28′N×8°06′W, h35km, ml3.2*
INMG ***12*** *05:34:33.5±1.5, 36°42′N×7°87′W, h30km±8km, ML1.7, Error ellipse: s-maj=5.4km s-min=3.4km az=67.0*
IGIL ***12*** *05:34:33.7, 36°42′N×7°86′W, h30km, ML1.7*

ISC 12 05:34:29.8±2.4, 36°33′N±0′.04×7°81′W±0′.07, h33km±1.4km, n23, σ1°48/38, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.92**	**354**	*e*Pg		**Pn**	**05 34 48.3**	**+1.8**
PBDV				*e*Sg		**Sb**	**05 34 58.0**	**-1.3**
PBDV				A		A	05 35 03.2	
	8.1nm,0.3s							
PVAQ	**Vaqueiros**	**1.08**	**4**	P		**Pn**	**05 34 49.6**	**+0.9**
PVAQ				S		**Sn**	**05 35 00.5**	**-1.9**
PVAQ	**Vaqueiros**	**1.08**	**4**	*e*P		**Pn**	**05 34 50.0**	**+1.4**
PVAQ				*e*S		**Sn**	**05 35 02.1**	**-0.3**
PVAQ				A		A	05 35 02.2	
	19nm,0.2s							
PFVI	**Vila Bisbo**	**1.15**	**315**	*e*P		**Pn**	**05 34 50.8**	**+1.2**
PFVI				*e*S		**Sn**	**05 35 03.9**	**-0.2**
PCVE	**Castro Verde**	**1.31**	**352**	*e*P		**Pn**	**05 34 53.4**	**+1.5**
PCVE				*e*S		**Sn**	**05 35 07.7**	**-0.6**
PCVE				A		A	05 35 08.6	
	9.2nm,0.5s							
MESJ	**Messejana**	**1.54**	**348**	*e*P		**Pn**	**05 34 56.5**	**+1.5**
MESJ				*e*S		**Sn**	**05 35 13.0**	**-1.0**
MESJ				IAML			05 35 14.3	
	comp=N,8.9nm,0.1s							
MESJ	**Messejana**	**1.54**	**348**	*e*P		**Pn**	**05 34 56.7**	**+1.6**
MESJ				*e*S		**Sn**	**05 35 13.3**	**-0.7**
MESJ				A		A	05 35 14.5	
	comp=N,8.4nm,0.3s							
PBEJ	**Beja**	**1.70**	**359**	*e*S		**Sn**	**05 35 17.1**	**-0.6**
PNCL	**Nicolau / Gran**	**1.87**	**342**	*e*Pn		**Pn**	**05 35 00.6**	**+1.1**
PNCL				*e*Sn		**Sn**	**05 35 20.4**	**-1.6**
PNCL				A		A	05 35 23.7	
	comp=N,4.3nm,1.1s							
PBAR	**Barrancos**	**1.94**	**18**	*e*Pn		**Pn**	**05 35 02.0**	**+1.4**
PBAR				*e*Sn		**Sn**	**05 35 23.7**	**-0.1**
PBAR				A		A	05 35 25.5	
	comp=N,1.8nm,0.4s							
EVO	**Evora**	**2.21**	**356**	*e*Sn		**Sn**	**05 35 28.9**	**-1.4**
PESTR	**Estremoz**	**2.54**	**4**	P		**Pn**	**05 35 08.1**	**-0.7**
PESTR				S		**Sn**	**05 35 36.8**	**-1.8**
PESTR	**Estremoz**	**2.54**	**4**	*e*Pn		**Pn**	**05 35 10.1**	**+1.3**
PESTR				*e*Sn		**Sn**	**05 35 37.1**	**-1.5**
PESTR				A		A	05 35 39.9	
	comp=N,2.2nm,0.6s							
PMTG	**Montargil**	**2.76**	**353**	*e*Pn		**Pn**	**05 35 13.4**	**+1.7**
PMTG				*e*Sn		**Sn**	**05 35 42.6**	**-1.3**
PMTG				A		A	05 35 45.1	
	comp=N,1.3nm,0.2s							
PMAFR	**Mafra**	**2.87**	**336**	*e*Pn		**Pn**	**05 35 15.7**	**+2.4**
PMAFR				*e*Sn		**Sn**	**05 35 44.7**	**-2.0**
PMAFR				A		A	05 35 47.5	
	comp=N,6.1nm,0.4s							
PMRV	**Marv??o**	**3.11**	**6**	*e*Sn		**Sn**	**05 35 51.6**	**-1.1**
PMRV				A		A	05 35 53.5	
	comp=N,1.8nm,0.3s							
PSBE	**So Bento**	**3.28**	**347**	*e*Sn		**Sn**	**05 35 55.8**	**-0.9**
PCBR	**Castelo Branco**	**3.52**	**4**	*e*Pn		**Pn**	**05 35 24.3**	**+2.1**
PCBR				*e*Sn		**Sn**	**05 36 01.6**	**-1.0**
PCAS	**Casmilo, Conde**	**3.76**	**352**	*e*Sn		**Sn**	**05 36 07.8**	**-0.8**
MD31	**MD31**	**4.27**	**143**	P		**Pn**	**05 35 33.5**	**+0.9**
MD31				S		**Sn**	**05 36 20.1**	**-1.3**
MDT	**Midelt**	**4.39**	**142**	P		**Pn**	**05 35 36.4**	**+2.1**
MDT				S		**Sn**	**05 36 23.9**	**-0.5**
OUK	**Oukaimeden**	**5.11**	**181**	P		Pn	05 35 42.2	-2.2
OUK				S		**Sn**	**05 36 39.7**	**-2.6**
TTIG	**Tnine Tigouga,**	**5.79**	**185**	P		Pn	05 35 51.8	-1.7
TTIG				S		Sn	05 36 52.2	-6.7

IDC 12 05:43:19.0±2.6, 23°67′S×172°63′E, h0km, mb3.7/3, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=84.6km s-min=37.1km az=168.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.92**	**284**	Pn		Pn	05 44 49.6	+1.5
	2.7nm,0.3s,baz=142,slow=10,SNR=16							
DZM				Sn		Sn	05 45 59.7	+2.9
	1.5nm,0.3s,baz=343,slow=19,SNR=3.7							
	6.3nm,0.3s							
ASAR	**Alice Springs**	**35.40**	**262**	P		P	05 50 17.2	+0.4
	0.8nm,0.7s,baz=86,slow=8.6,SNR=8.9							
	0.8nm,0.7s							
WRA	**Warramunga Arr**	**35.67**	**268**	P		P	05 50 17.7	-1.5
	0.3nm,0.4s,baz=98,slow=8.1,SNR=13							
	0.3nm,0.4s							
H11S2	**WAKE ISLAND Hy**	**42.30**	**352**	T		T	06 35 13.4	
	baz=171,slow=76,SNR=27							
H11S3	**WAKE ISLAND Hy**	**42.31**	**352**	T		T	06 35 13.7	
	baz=171,slow=76,SNR=29							
H11S1	**WAKE ISLAND Hy**	**42.32**	**352**	T		T	06 35 16.4	
	baz=171,slow=76,SNR=27							
ILAR	**Eielson Array**	**93.54**	**16**	P		P	05 56 36.9	+0.6
	0.4nm,0.7s,baz=206,slow=5.9,SNR=2.7							
	0.4nm,0.7s							

IDC ***12*** *05:50:08.9±3.0, 10°.21S×161°.53E, h87km±23km, mb3.5/3, mbtmp4.0/4, Error ellipse: s-maj=41.5km s-min=21.9km az=52.0*

ISC 12 05:50:10.4±1.7, 10°.3S±0°.2×161°.4E±0°.3, h100km, n10, σ1§17/11, mb3.5/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.65**	**303**	P		**Pn**	**05 50 37.2**	**-1.3**
	1µm,0.5s,baz=162,slow=9.6,SNR=29							
HNR				S		**Sn**	**05 50 59.7**	**-0.2**
	2µm,0.3s,baz=105,slow=19,SNR=11							
NOUC	**Port Laguerre**	**12.63**	**159**	P		**Pn**	**05 53 05.7**	**-0.7**
DZM	**Mont Dzumac**	**12.65**	**158**	P		**Pn**	**05 53 06.4**	**-0.4**
	7.6nm,0.3s,baz=321,slow=18,SNR=43							
DZM	**Mont Dzumac**	**12.65**	**158**	P		**Pn**	**05 53 06.5**	**-0.3**
YATNC	**Mamie plateau,**	**12.81**	**156**	P		**Pn**	**05 53 06.4**	**-2.4**
ONTNC	**Ouen Toro**	**12.87**	**158**	P		**Pn**	**05 53 10.1**	**+0.5**
OUENC	**Ouen Island, N**	**13.12**	**157**	P		**Pn**	**05 53 12.4**	**-0.4**
WRA	**Warramunga Arr**	**27.73**	**247**	P		**P**	**05 55 50.7**	**+0.9**
	0.9nm,0.7s,baz=72,slow=9.1,SNR=12							
	0.9nm,0.7s							
VNDA	**Vanda**	**67.17**	**180**	P		**P**	**06 00 53.8**	**+0.7**
	0.4nm,0.7s,baz=342,slow=7.5,SNR=2.2							
	0.4nm,0.7s							
SONM	**Songino Array**	**75.58**	**325**	P		**P**	**06 01 45.4**	**+1.0**
	0.9nm,0.5s,baz=141,slow=7.4,SNR=3.5							
	0.9nm,0.5s							

NEIC ***12*** *06:14:49.1±2.3, 22°.02S±0°.06×68°.69W±0°.10, h145km±8km, mb4.7/8, ML4.4(GUC), Error ellipse: s-maj=13.3km s-min=8.0km az=73.0*

IDC ***12*** *06:14:49.9±0.7, 22°.05S×68°.28W, h110km±8km, mb3.4/4, mbtmp4.0/7, Error ellipse: s-maj=26.1km s-min=17.4km az=130.0*

GUC ***12*** *06:14:50.7±0.5, 21°.96S×68°.64W, h130km±2km, ML4.4*

VAO ***12*** *06:14:55.7±0.6, 21°.69S×68°.07W, h138km, mb4.3*

ISC 12 06:14:49.5±0.6, 22°.01S±0°.04×68°.65W±0°.05, h134km±6km, n116, σ1§45/126, mb4.1/6, 6C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.59**	**291**			**Pn**	**06 15 10.2**	**+0.5**
PB09	**IPOC Station P**	**0.59**	**291**	↑	*iP*	**Pn**	**06 15 10.3**	**+0.5**
PB09					*eS*	**Sn**	**06 15 24.7**	**-0.4**
LVC	**Limon Verde**	**0.64**	**202**	P		**Pn**	**06 15 10.6**	**+0.3**
	689nm,0.3s,baz=8.7,slow=7.7,SNR=5838							
LVC				S		**Sn**	**06 15 25.3**	**-0.8**
	2µm,0.3s,baz=229,slow=18,SNR=36							
LVC	**Limon Verde**	**0.64**	**202**	Pn		**Pn**	**06 15 10.8**	**+0.4**
LVC	**Limon Verde**	**0.64**	**202**	*eP*		**Pn**	**06 15 10.8**	**+0.4**
LVC					*eS*	**Sn**	**06 15 25.4**	**-0.8**
LVC					IAML		06 15 27.0	
	22µm,0.2s							
AF01	**San Pedro de A**	**1.03**	**155**			**Pn**	**06 15 14.2**	**+0.7**
AF01	**San Pedro de A**	**1.03**	**155**	↓	*iP*	**Pn**	**06 15 14.2**	**+0.7**
AF01					*eS*	**Sn**	**06 15 32.3**	**+0.7**
AF01					IAML		06 15 47.0	
	comp=N,5µm,0.5s							
PB06	**IPOC Station P**	**1.10**	**231**			**Pn**	**06 15 14.3**	**+0.4**
PB06	**IPOC Station P**	**1.10**	**231**	↑	*iP*	**Pn**	**06 15 15.0**	**+1.1**
PB06					*eS*	**Sn**	**06 15 33.2**	**+0.8**
PB06					*eS*	**Sn**	**06 15 33.5**	**+1.0**
PB06					IAML		06 15 34.2	
	comp=N,8µm,0.2s							
PB07	**IPOC Station P**	**1.18**	**284**			**Pn**	**06 15 14.9**	**+0.1**
PB07	**IPOC Station P**	**1.18**	**284**	↑	*iP*	**Pn**	**06 15 15.4**	**+0.7**
PB07					*eS*	**Sn**	**06 15 33.9**	**0.0**
PB07					IAML		06 15 35.5	
	comp=E,7µm,0.1s							
PB01	**IPOC Station P**	**1.24**	**321**			**Pn**	**06 15 15.3**	**+0.1**
PB01	**IPOC Station P**	**1.24**	**321**		*i* P	**Pn**	**06 15 15.3**	**+0.1**
PB01					*eS*	**Sn**	**06 15 34.0**	**-0.7**
PB01					IAML		06 15 35.7	
	comp=E,11µm,0.2s							
PB02	**IPOC Station P**	**1.35**	**300**			**Pn**	**06 15 16.7**	**+0.3**
PB02	**IPOC Station P**	**1.35**	**300**	↑	*iP*	**Pn**	**06 15 16.8**	**+0.5**
PB02					*eS*	**Sn**	**06 15 36.3**	**-0.5**
PB02					IAML		06 15 37.3	
	comp=N,14µm,0.3s							
PB15	**IPOC Station P**	**1.41**	**212**			**Pn**	**06 15 18.3**	**+1.1**
PB15	**IPOC Station P**	**1.41**	**212**	↑	*iP*	**Pn**	**06 15 18.5**	**+1.3**
PB15					*eS*	**Sn**	**06 15 39.8**	**+1.6**
PB04	**IPOC Station P**	**1.43**	**257**			**Pn**	**06 15 18.1**	**+0.8**
PB04	**IPOC Station P**	**1.43**	**257**	↑	*iP*	**Pn**	**06 15 18.2**	**+1.0**
PB04					*eS*	**Sn**	**06 15 38.9**	**+0.4**
PB04					IAML		06 15 40.6	
	comp=N,3µm,0.3s							
TA02	**Huaiquique**	**2.22**	**321**			**Pn**	**06 15 25.8**	**-0.5**
TA02	**Huaiquique**	**2.22**	**321**	*eP*		**Pn**	**06 15 27.1**	**+0.7**
TA02					*eS*	**Sn**	**06 15 54.2**	**-0.5**
TA02					IAML		06 15 56.2	
	comp=N,4µm,0.1s							
GO01	**Chusmiza**	**2.39**	**348**			**Pn**	**06 15 28.7**	**-0.2**
GO01	**Chusmiza**	**2.39**	**348**	↓	*iP*	**Pn**	**06 15 29.3**	**+0.4**
GO01					*eS*	**Sn**	**06 15 59.2**	**0.0**
GO01					IAML		06 16 02.7	
	comp=E,2µm,0.2s							
PB14	**IPOC Station P**	**3.06**	**211**			**Pn**	**06 15 38.4**	**+1.0**
PB14	**IPOC Station P**	**3.06**	**211**	*eP*		**Pn**	**06 15 39.2**	**+1.8**
PB14					*eS*	**Sn**	**06 16 13.7**	**-0.6**
PB14					IAML		06 16 15.4	
	comp=E,548nm,0.3s							
GO02	**Mina Guanaco**	**3.25**	**195**	Pn		**Pn**	**06 15 40.4**	**+0.5**
GO02	**Mina Guanaco**	**3.25**	**195**	↓	*iP*	**Pn**	**06 15 40.8**	**+0.9**
AC01	**Pan de Azucar**	**4.49**	**203**	Pn		**Pn**	**06 15 55.2**	**-0.6**
AC01	**Pan de Azucar**	**4.49**	**203**	*eP*		**Pn**	**06 15 55.4**	**-0.4**
AC01					*eS*	**Sn**	**06 16 44.5**	**-2.9**
AC02	**Maricunga**	**4.82**	**185**	Pn		**Pn**	**06 16 01.5**	**+0.8**
AC02	**Maricunga**	**4.82**	**185**	↓	*iP*	**Pn**	**06 16 01.6**	**+0.9**
AC02					*eS*	**Sn**	**06 16 57.4**	**+1.2**
AC06	**Mina Casimiro**	**5.54**	**196**			**Pn**	**06 16 08.3**	**-1.6**
LPAZ	**La Paz**	**5.71**	**5**	P		**Pn**	**06 16 14.1**	**+1.2**
	comp=E,33nm,0.3s,baz=317,slow=2.2,SNR=376							
LPAZ	**La Paz**	**5.71**	**5**	Pn		**Pn**	**06 16 13.5**	**+0.6**
LPAZ	**La Paz**	**5.71**	**5**	*eP*		**Pn**	**06 16 14.0**	**+1.2**
GO03	**Copiap**	**5.74**	**194**			**Pn**	**06 16 11.7**	**-1.0**
AC04	**Llanos de Chal**	**6.55**	**199**	Pn		**Pn**	**06 16 20.6**	**-2.8**
AC05	**El Transito**	**6.95**	**192**	Pn		**Pn**	**06 16 27.1**	**-1.9**
LCO	**Las Campanas**	**7.21**	**194**			**Pn**	**06 16 30.3**	**-2.3**
CO01	**Juntas del Tor**	**8.04**	**189**	Pn		**Pn**	**06 16 42.2**	**-1.4**
SIV	**San Ignacio**	**9.34**	**51**	P		**Pn**	**06 16 57.0**	**-4.0**
	comp=E,19nm,0.3s,baz=236,slow=10.0,SNR=144							
CO02	**Combarbal**	**9.39**	**192**	Pn		**Pn**	**06 16 57.6**	**-4.2**
VA03	**San Esteban**	**10.84**	**189**	Pn		**Pn**	**06 17 16.9**	**-4.2**
PTLB	**Pontes e Lacer**	**11.12**	**56**	*eP*		**Pn**	**06 17 21.8**	**-3.0**
CPUP	**Villa Florida**	**11.19**	**115**	*eP*		**Pn**	**06 17 26.9**	**+1.3**
ANTJ	**Antonio Joao (**	**11.73**	**92**	*eP*		**Pn**	**06 17 31.4**	**-1.4**
VILB	**Vilhena**	**12.08**	**43**	*eP*		**Pn**	**06 17 35.7**	**-1.8**
AQDB	**Aquidauana**	**12.17**	**85**	*eP*		**Pn**	**06 17 37.2**	**-1.4**
ETMB	**Extrema**	**12.35**	**11**	Pn		**Pn**	**06 17 38.1**	**-2.8**
SALV	**Santo Antonio**	**13.67**	**66**	*eP*		**Pn**	**06 17 55.7**	**-2.3**
H03N1	**Juan Fernandez**	**14.56**	**216**	P		**P**	**06 18 11.6**	**0.0**
	baz=101,slow=14,SNR=5.3							
H03N1				T		T	06 30 52.3	
	baz=42,slow=72,SNR=6.6							
H03N2	**Juan Fernandez**	**14.57**	**216**	P		**P**	**06 18 11.6**	**0.0**
	baz=101,slow=14,SNR=4.4							
H03N2				T		T	06 30 53.6	
	baz=42,slow=72,SNR=6.1							
H03N3	**Juan Fernandez**	**14.57**	**216**	P		**P**	**06 18 11.5**	**-0.3**
	baz=101,slow=14,SNR=8.9							
H03N3				T		T	06 30 32.4	
	baz=42,slow=72,SNR=6.1							
RODS	**Rosario do Sul**	**14.64**	**127**	*eP*		**P**	**06 18 14.1**	**+1.2**
CZSB	**Cruzeiro do Su**	**14.73**	**344**	*eP*		**P**	**06 18 15.9**	**+1.9**
H03S3	**Juan Fernandez**	**14.85**	**215**	P		**P**	**06 18 14.1**	**-0.7**
	SNR=11							
H03S1	**Juan Fernandez**	**14.86**	**215**	P		**P**	**06 18 14.0**	**-0.9**
	SNR=6.8							
H03S2	**Juan Fernandez**	**14.86**	**215**	P		**P**	**06 18 14.2**	**-0.8**
	SNR=6.6							
PDRB	**Porto dos Gac**	**15.39**	**50**	*eP*		**Pn**	**06 18 19.4**	**-0.2**
PTGB	**Pitanga**	**15.46**	**103**	*eP*		**P**	**06 18 23.3**	**+1.2**
ALGR	**Alto Alegre (B**	**15.64**	**119**	*eP*		**P**	**06 18 24.7**	**+0.6**
ITAB	**Concordia**	**15.89**	**112**	*eP*		**P**	**06 18 26.7**	**0.0**
CPSB	**Cacapava Do Su**	**15.99**	**125**	*eP*		**P**	**06 18 29.8**	**+1.9**
PCMB	**Pacaembu**	**16.15**	**92**	*eP*		**P**	**06 18 29.5**	**-0.2**
CLDB	**Colider**	**16.56**	**50**	*eP*		**Pn**	**06 18 34.1**	**+0.1**
ITRB	**Iturama**	**17.25**	**86**	*eP*		**Pn**	**06 18 42.7**	**+0.3**
PLCA	**Paso Flores**	**18.73**	**185**	P		**Pn**	**06 19 00.8**	**+0.9**
	comp=E,0.9nm,0.5s,baz=358,slow=12,SNR=6.4							
BB19B	**Bebedouro**	**18.74**	**91**	*eP*		**P**	**06 18 58.5**	**+0.4**
SNDB	**Serra Nova Dou**	**19.35**	**62**	*eP*		**P**	**06 19 04.1**	**-0.6**
IPMB	**Ipameri, GO**	**19.61**	**82**	*eP*		**P**	**06 19 07.5**	**-0.2**
NPGB	**Novo Progresso**	**19.64**	**43**	*eP*		**P**	**06 19 07.3**	**-0.7**
PET01	**Itanhaem-SP**	**19.78**	**101**	*eP*		**P**	**06 19 10.1**	**+0.7**
VAO	**Valinhos**	**20.06**	**97**	*eP*		**P**	**06 19 12.2**	**-0.3**
MACA	**Manacapuru-AM**	**20.27**	**24**	P		**P**	**06 19 13.8**	**-0.9**
MACA					IAmb	IAmb	06 19 17.9	
	comp=Z,33nm,0.7s							
MACA	**Manacapuru-AM**	**20.27**	**24**	*eP*		**P**	**06 19 14.3**	**-0.4**
BDFB	**Brasilia**	**20.52**	**76**	P		**P**	**06 19 16.3**	**-1.2**
	comp=Z,4.4nm,0.5s,baz=228,slow=8.7,SNR=14							
	comp=Z,4.4nm,0.5s							
BDFB	**Brasilia**	**20.52**	**76**	P		**P**	**06 19 16.3**	**-1.2**
BDFB	**Brasilia**	**20.52**	**76**	*eP*		**P**	**06 19 16.4**	**-1.1**
PMNB	**Patos De Minas**	**21.11**	**85**	*eP*		**P**	**06 19 23.3**	**-0.5**
LL07	**Hotel Espejo d**	**21.15**	**190**	P		**P**	**06 19 22.1**	**-1.8**
ITTB	**Itaituba**	**21.55**	**37**	*eP*		**P**	**06 19 27.4**	**-1.0**
BSCB	**Bom Sucesso**	**22.23**	**92**	*eP*		**P**	**06 19 35.9**	**+0.4**
PORT	**Chimborazo Vol**	**22.68**	**333**	P		**P**	**06 19 40.0**	**-0.5**
PORT					IAmb	IAmb	06 20 01.3	
	comp=Z,8.5nm,0.6s							
CHSH	**Refugio Sur-Vo**	**22.69**	**333**	P		**P**	**06 19 38.8**	**-1.8**
CHSH					IAmb	IAmb	06 19 57.5	
	comp=Z,27nm,1.0s							
DIAM	**Diamantina, MG**	**23.73**	**86**	*eP*		**P**	**06 19 49.8**	**+0.2**
MC01	**Montes Claros**	**23.89**	**82**	*eP*		**P**	**06 19 51.0**	**-0.1**
PRPB	**Parauapebas**	**24.07**	**52**	*eP*		**P**	**06 19 52.3**	**-0.3**
JANB	**Januaria**	**24.07**	**77**	*eP*		**P**	**06 19 52.3**	**-0.4**
OTAV	**Otavalo**	**24.09**	**335**	P		**P**	**06 19 51.9**	**-1.5**
OTAV	**Otavalo**	**24.09**	**335**	*eP*		**P**	**06 19 58.7**	**+5.3**
SMTB	**Santa Maria do**	**24.10**	**60**	*eP*		**P**	**06 19 53.3**	**+0.4**
MALB	**Monte Alegre**	**24.44**	**37**	*eP*		**P**	**06 19 57.1**	**+1.1**
SDBA	**SAO DESIDERIO**	**24.58**	**71**	*eP*		**P**	**06 19 57.4**	**+0.1**
BOAV	**Boa Vista**	**25.52**	**19**	*eP*		**P**	**06 20 07.6**	**+1.8**
SJMB	**Sao Joao De Ma**	**25.94**	**88**	*eP*		**P**	**06 20 10.2**	**+0.6**
RIB01	**Linhares ES**	**26.56**	**89**	*eP*		**P**	**06 20 16.0**	**+0.9**
MCPB	**Macapa, AP**	**26.92**	**39**	*eP*		**P**	**06 20 18.1**	**-0.3**
NAN01	**Guarapari, ES**	**27.11**	**86**	*eP*		**P**	**06 20 21.1**	**+1.0**
GUA01	**Guaratinga, BA**	**27.73**	**84**	*eP*		**P**	**06 20 26.8**	**+1.2**
GDU01	**Guandu, BA**	**28.83**	**78**	*eP*		**P**	**06 20 35.3**	**-0.1**
NBLA	**Lagarto - SE**	**31.48**	**75**	*eP*		**P**	**06 20 58.2**	**-0.6**
BIRV	**Birongo**	**32.37**	**4**	P		**P**	**06 21 06.6**	**+0.1**
BIRV					IAmb	IAmb	06 21 09.0	
	comp=Z,38nm,1.4s							
NBAN	**Anadia - AL**	**33.39**	**74**	*eP*		**P**	**06 21 16.5**	**+1.1**
JCT	**Junction City**	**60.16**	**329**	P		**P**	**06 24 40.5**	**-2.8**
PDAR	**Pinedale Array**	**74.67**	**330**	P		**P**	**06 26 17.8**	**+3.3**
	comp=Z,0.2nm,0.6s,baz=125,slow=8.9,SNR=2.8							
	comp=Z,0.2nm,0.6s							
NVAR	**Mina Array Bea**	**76.04**	**322**	P		**P**	**06 26 27.0**	**+4.6**
	comp=Z,0.3nm,0.7s,baz=161,slow=5.7,SNR=3.7							
	comp=Z,0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.30**	**70**	P		**P**	**06 26 30.8**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=259,slow=5.1,SNR=15							
	comp=Z,1.3nm,0.5s							
H11S2	**WAKE ISLAND Hy**	**28.18**	**277**	T		T	08 54 03.5	
	baz=103,slow=74,SNR=25							
H11S1	**WAKE ISLAND Hy**	**28.19**	**277**	T		T	08 53 55.2	
	baz=103,slow=74,SNR=18							
H11S3	**WAKE ISLAND Hy**	**28.20**	**277**	T		T	08 54 08.8	
	baz=103,slow=74,SNR=17							
H11N3	**WAKE ISLAND Hy**	**28.27**	**278**	T		T	08 54 12.1	
	baz=104,slow=74,SNR=20							
H11N2	**WAKE ISLAND Hy**	**28.29**	**278**	T		T	08 54 17.1	
	baz=104,slow=74,SNR=7.5							
H11N1	**WAKE ISLAND Hy**	**28.29**	**278**	T		T	08 54 13.8	
	baz=104,slow=74,SNR=7.6							
MKAR	**Makanchi Array**	**145.90**	**37**	PKPbc		**PKiKP**	**06 34 16.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=2.9,slow=2.4,SNR=3.6							
PZH	**PanZhiHua**	**170.16**	**61**	PKP		**PKPdf**	**06 34 40.3**	**-1.8**
PZH	**PanZhiHua**	**170.16**	**61**	PKP		**PKPdf**	**06 34 40.3**	**-1.8**

NOU ***12*** *06:17:35.8, 37°.88S×179°.87W, h0km, MLv4.6/6, East of North Island, N.Z.*

WEL ***12*** *06:17:57.7±0.6, 38°.2S±4°.1×17°.8E±1°, h45km±5km, M3.1/26, ML3.4/26, MLv3.1/26, Error ellipse: s-maj=0.0km s-min=0.0km az=76.4*

ISC 12 06:17:56.4±1.9, 37°.85S±0°.05×178°.24E±0°.07, h69km±10km, n94, σ0§91/100, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**0.13**	**254**	P		**Pn**	**06 18 06.0**	**-0.7**
WMGZ	**Waiomatatini S**	**0.14**	**77**	P		**Pn**	**06 18 07.1**	**+0.4**
WMGZ				S		**Sn**	**06 18 14.7**	**+0.5**
PUZ	**Puketiti**	**0.22**	**176**	P		**Pn**	**06 18 07.0**	**0.0**
PUZ				S		**Sn**	**06 18 14.2**	**-0.7**
MXZ	**Matakaoa Point**	**0.29**	**11**	P		**Pn**	**06 18 07.6**	**+0.1**
MXZ				S		**Sn**	**06 18 15.7**	**+0.2**
HAZ	**Te Kaha**	**0.37**	**285**	P		**Pn**	**06 18 07.6**	**-0.4**
HAZ				S		**Sn**	**06 18 14.9**	**-1.5**
TWGZ	**Tauwhareparae**	**0.38**	**212**	P		**Pn**	**06 18 08.5**	**+0.3**
TWGZ				S		**Sn**	**06 18 17.4**	**+0.6**
RUGZ	**Raukumara Rang**	**0.46**	**256**	P		**Pn**	**06 18 08.5**	**-0.3**
RUGZ				S		**Sn**	**06 18 16.8**	**-1.3**
CNGZ	**Carnagh Statio**	**0.63**	**182**	P		**Pn**	**06 18 11.6**	**+1.1**
TKGZ	**Te Karaka**	**0.66**	**208**	P		**Pn**	**06 18 11.2**	**+0.4**
TKGZ				S		**Sn**	**06 18 22.2**	**+0.8**
MWZ	**Matawai**	**0.74**	**229**	P		**Pn**	**06 18 11.9**	**+0.1**
WIZ	**White Island**	**0.89**	**291**	P		**Pn**	**06 18 12.8**	**-0.7**
WSRZ	**White Island S**	**0.91**	**291**	P		**Pn**	**06 18 13.8**	**+0.1**
RAGZ	**Rawiri**	**0.91**	**225**	P		**Pn**	**06 18 14.3**	**+0.4**
RAGZ				S		**Sn**	**06 18 26.8**	**0.0**
RIGZ	**Rimuhau**	**0.93**	**204**	P		**Pn**	**06 18 14.5**	**+0.5**
URZ	**Urewera**	**0.98**	**245**	P		**Pn**	**06 18 14.5**	**0.0**
URZ	**Urewera**	**0.98**	**245**	P		**Pn**	**06 18 15.1**	**+0.6**
WHRZ	**Whale Island**	**1.00**	**269**	P		**Pn**	**06 18 14.6**	**-0.2**
PRGZ	**Paritu Road**	**1.10**	**194**	P		**Pn**	**06 18 16.4**	**+0.2**
SNGZ	**Shannon Statio**	**1.17**	**217**	P		**Pn**	**06 18 17.6**	**+0.6**
EDRZ	**Edgecumbe**	**1.21**	**257**	P		**Pn**	**06 18 17.4**	**-0.2**
MARZ	**Manawahe**	**1.24**	**263**	P		**Pn**	**06 18 16.1**	**-1.9**
KNZ	**Kokohu**	**1.25**	**201**	P		**Pn**	**06 18 17.9**	**-0.1**
MUGZ	**Murupara**	**1.31**	**241**	P		**Pn**	**06 18 18.8**	**-0.1**
MHGZ	**Mahia Peninsul**	**1.32**	**191**	P		**Pn**	**06 18 19.4**	**+0.4**
OPRZ	**Ohinepanea**	**1.33**	**270**	P		**Pn**	**06 18 18.3**	**-0.8**
RAHZ	**Arahi**	**1.40**	**220**	P		**Pn**	**06 18 20.6**	**+0.7**
TARZ	**Mount Tarawera**	**1.42**	**254**	P		**Pn**	**06 18 20.6**	**+0.2**
WHHZ	**Waihua**	**1.45**	**212**	P		**Pn**	**06 18 21.2**	**+0.5**
MTHZ	**Maungataniwha**	**1.48**	**227**	P		**Pn**	**06 18 21.6**	**+0.5**
TGRZ	**Tauranga**	**1.57**	**274**	P		**Pn**	**06 18 21.5**	**-0.7**
KARZ	**Kaharoa**	**1.58**	**263**	P		**Pn**	**06 18 22.3**	**-0.2**
HRRZ	**Handcock Road**	**1.63**	**250**	P		**Pn**	**06 18 24.2**	**+1.1**
ALRZ	**Allen Road**	**1.65**	**244**	P		**Pn**	**06 18 23.9**	**+0.5**
NMHZ	**Naumai**	**1.68**	**222**	P		**Pn**	**06 18 24.5**	**+0.8**
ARHZ	**Aropaoanui**	**1.71**	**214**	P		**Pn**	**06 18 24.7**	**+0.5**
MRHZ	**Matea Rd**	**1.73**	**235**	P		**Pn**	**06 18 24.7**	**+0.2**
BKZ	**Black Stump Fm**	**1.90**	**226**	P		**Pn**	**06 18 26.9**	**+0.2**
BKZ	**Black Stump Fm**	**1.90**	**226**	P		**Pn**	**06 18 27.1**	**+0.4**
MCHZ	**McNeill Hill**	**2.00**	**217**	P		**Pn**	**06 18 28.4**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.02**	**206**	P		**Pn**	**06 18 27.8**	**-0.5**
KWHZ	**Kaweka Forest**	**2.12**	**222**	P		**Pn**	**06 18 29.5**	**-0.2**
TOZ	**Tahuroa Road**	**2.17**	**272**	P		**Pn**	**06 18 29.6**	**-0.7**
RITZ	**Rihia Road**	**2.18**	**238**	P		**Pn**	**06 18 31.0**	**+0.5**
RATZ	**Rangitukua**	**2.19**	**242**	P		**Pn**	**06 18 31.2**	**+0.6**
KAHZ	**Kahuranaki**	**2.21**	**208**	P		**Pn**	**06 18 30.5**	**-0.4**
KATZ	**Kakaramea**	**2.29**	**240**	P		**Pn**	**06 18 32.5**	**+0.5**
KUZ	**Kuaotunu**	**2.29**	**298**	P		**Pn**	**06 18 31.1**	**-0.8**
KRHZ	**Kereru**	**2.31**	**219**	P		**Pn**	**06 18 31.6**	**-0.6**
TMVZ	**Te Maari**	**2.35**	**237**	P		**Pn**	**06 18 33.0**	**+0.1**
BHHZ	**Black Hill Sta**	**2.36**	**225**	P		**Pn**	**06 18 32.9**	**0.0**
ETVZ	**East Tongariro**	**2.36**	**236**	P		**Pn**	**06 18 33.1**	**0.0**
NTVZ	**North Tongarir**	**2.36**	**237**	P		**Pn**	**06 18 33.1**	**+0.1**
KRVZ	**Karewarewa**	**2.39**	**238**	P		**Pn**	**06 18 33.5**	**+0.2**
OTVZ	**Oturere**	**2.41**	**236**	P		**Pn**	**06 18 33.7**	**+0.1**
NNVZ	**North Ngauruho**	**2.42**	**237**	P		**Pn**	**06 18 34.2**	**+0.3**
PXZ	**Pawanui**	**2.42**	**206**	P		**Pn**	**06 18 32.4**	**-1.4**
WTVZ	**West Tongariro**	**2.43**	**238**	P		**Pn**	**06 18 34.2**	**+0.3**
SNVZ	**South Ngauruho**	**2.43**	**236**	P		**Pn**	**06 18 34.1**	**+0.1**
NGZ	**Ngauruhoe**	**2.45**	**237**	P		**Pn**	**06 18 34.4**	**+0.1**
TUVZ	**Tukino**	**2.47**	**234**	P		**Pn**	**06 18 34.6**	**+0.1**
MOVZ	**Moawhango**	**2.49**	**231**	P		**Pn**	**06 18 34.3**	**-0.4**
TWVZ	**Taurewa**	**2.51**	**240**	P		**Pn**	**06 18 35.3**	**+0.3**
WHVZ	**Whangaehu Hut**	**2.52**	**235**	P		**Pn**	**06 18 35.2**	**-0.1**
TRVZ	**Turoa**	**2.56**	**235**	P		**Pn**	**06 18 35.7**	**-0.1**
MKAZ	**Moumakai**	**2.56**	**286**	P		**Pn**	**06 18 35.2**	**-0.3**
PNHZ	**Pukenui**	**2.60**	**217**	P		**Pn**	**06 18 35.2**	**-1.0**
WPHZ	**Waipukurau**	**2.62**	**212**	P		**Pn**	**06 18 35.7**	**-0.7**
PKVZ	**Pokaka**	**2.68**	**237**	P		**Pn**	**06 18 38.1**	**+0.8**
PRHZ	**Porangahau**	**2.71**	**207**	P		**Pn**	**06 18 36.1**	**-1.6**
GRZ	**Great Barrier**	**2.74**	**305**	P		**Pn**	**06 18 37.8**	**-0.2**
HIZ	**Hauiti**	**2.75**	**255**	P		**Pn**	**06 18 39.1**	**+1.0**
ETAZ	**East Tamaki Re**	**2.78**	**288**	P		**Pn**	**06 18 39.0**	**+0.4**
TSZ	**Takapari Road**	**2.83**	**218**	P		**Pn**	**06 18 38.0**	**-1.3**
MBAZ	**Motutapu North**	**2.87**	**291**	P		**Pn**	**06 18 40.0**	**+0.2**
DVHZ	**Dannevirke**	**2.93**	**213**	P		**Pn**	**06 18 38.8**	**-1.8**
ANWZ	**Angora Road**	**2.94**	**207**	P		**Pn**	**06 18 39.1**	**-1.7**
AWAZ	**Awhitu Peninsu**	**2.97**	**284**	P		**Pn**	**06 18 41.7**	**+0.6**
VRZ	**Vera Road**	**3.01**	**244**	P		**Pn**	**06 18 42.5**	**+0.8**
WAZ	**Wanganui**	**3.17**	**232**	P		**Pn**	**06 18 44.4**	**+0.4**
POWZ	**Post Office Ro**	**3.18**	**216**	P		**Pn**	**06 18 42.4**	**-1.6**
BFZ	**Birch Farm**	**3.22**	**208**	P		**Pn**	**06 18 42.4**	**-2.2**
PRWZ	**Porirua Road**	**3.22**	**212**	P		**Pn**	**06 18 43.2**	**-1.4**
CPWZ	**Castlepoint**	**3.44**	**207**	P		**Pn**	**06 18 45.8**	**-1.8**
TIWZ	**Tintock**	**3.44**	**211**	P		**Pn**	**06 18 45.8**	**-1.8**
MRZ	**Mangatainoka R**	**3.48**	**216**	P		**Pn**	**06 18 45.8**	**-2.4**
NEZ	**North Egmont**	**3.54**	**245**	P		**Pn**	**06 18 51.4**	**+2.3**
PKE	**Pukeiti**	**3.59**	**247**	P		**Pn**	**06 18 52.1**	**+2.4**
WCZ	**Waipu Caves**	**3.66**	**300**	P		**Pn**	**06 18 50.8**	**+0.3**
OUZ	**Omahuta**	**4.57**	**304**	P		**Pn**	**06 19 04.0**	**+1.0**
OUZ	**Omahuta**	**4.57**	**304**	P		**Pn**	**06 19 04.4**	**+1.4**
QRZ	**Quartz Range**	**5.33**	**234**	P		**Pn**	**06 19 14.4**	**+1.0**
KHZ	**Kahutara**	**5.81**	**217**	P		Pn	06 19 16.3	-3

comp=Z,4.7nm,0.9s
SVW2 **Sparrevohn** **58.52** **29** P **P** **06 29 09.0 +1.4**
SVW2 IAmb IAmb 06 29 37.3
comp=Z,5.5nm,1.2s
ZALV **Zalesovo Beam** **58.70** **322** P **P** **06 29 07.6 -1.4**
comp=Z,4.0nm,0.7s,baz=106,slow=8.3,SNR=12
comp=Z,4.0nm,0.7s
ZALV **Zalesovo Beam** **58.70** **322** P **P** **06 29 08.2 -0.8**
N19K **Bonanza Creek** **58.93** **29** P **P** **06 29 12.1 +1.5**
N19K IAmb IAmb 06 29 13.0
comp=Z,4.8nm,0.8s
MK31 **Makanchi Array** **59.23** **314** P **P** **06 29 12.7 -0.1**
MKAR **Makanchi Array** **59.23** **314** P **P** **06 29 12.3 -0.6**
comp=Z,1.7nm,0.8s,baz=96,slow=8.5,SNR=12
comp=Z,1.7nm,0.8s
MKAR **Makanchi Array** **59.23** **314** P **P** **06 29 11.8 -1.1**
K20K **Telida** **59.95** **27** P **P** **06 29 18.9 +1.4**
K20K IAmb IAmb 06 29 53.8
comp=Z,4.2nm,1.1s
J20K **Nowinta River** **60.20** **26** P **P** **06 29 20.2 +1.0**
CAST **Castle Rocks** **60.82** **27** P **P** **06 29 24.0 +0.6**
CAST IAmb IAmb 06 29 25.5
comp=Z,7.5nm,1.1s
H21K **Melozitna Rive** **61.24** **24** P **P** **06 29 27.6 +1.4**
BPAW **Bear Paw Mtn.** **61.49** **26** P **P** **06 29 28.9 +1.0**
MLY **Manley** **61.87** **25** P **P** **06 29 31.3 +0.8**
MLY IAmb IAmb 06 29 32.6
comp=Z,5.8nm,1.1s
NRIK **Noril'sk** **62.07** **340** P **P** **06 29 32.1 +0.4**
comp=Z,14nm,0.7s,baz=108,slow=8.9,SNR=11
comp=Z,14nm,0.7s
H23K **Yukon River** **62.58** **25** P **P** **06 29 36.2 +1.0**
H23K IAmb IAmb 06 29 37.4
comp=Z,3.2nm,1.0s
MDM **Murphy Dome** **62.87** **26** P **P** **06 29 38.4 +1.3**
ILAR **Eielson Array** **63.38** **26** P **P** **06 29 39.7 -0.8**
comp=Z,2.1nm,1.0s,baz=254,slow=4.9,SNR=11
comp=Z,2.1nm,1.0s
TOLK **Toolik Lake Re** **63.40** **22** P **P** **06 29 41.7 +1.1**
TOLK IAmb IAmb 06 30 09.0
comp=Z,5.7nm,0.9s
BOOM **Boomskoye usch** **63.62** **309** P **P** **06 29 42.6 -0.1**
BOOM IAmb IAmb 06 29 43.9
comp=Z,3.0nm,0.8s
RIDG **Independent Ri** **64.03** **27** P **P** **06 29 45.6 +0.6**
RIDG IAmb IAmb 06 29 46.5
comp=Z,6.2nm,1.0s
PLWZ **Palliser** **65.41** **157** P **P** **06 29 54.3 +0.3**
KKAR **Karatay Array** **67.57** **310** P **P** **06 30 07.4 -0.6**
INK **Inuvik** **69.16** **23** P **P** **06 30 17.8 +0.4**
comp=Z,4.1nm,0.8s,baz=253,slow=6.2,SNR=6.4
comp=Z,4.1nm,0.8s
PPT **Papeete** **72.22** **116** LR LR 06 54 54.8
comp=Z,95nm,20.0s,baz=287,slow=30
ABKAR **Akbulak array** **74.08** **317** P **P** **06 30 46.4 -0.9**
ABKAR **Akbulak array** **74.08** **317** P **P** **06 30 46.7 -0.6**
ABKAR IAmb IAmb 06 30 47.9
comp=Z,3.9nm,0.8s
YKA **Yellowknife Ar** **77.70** **28** P **P** **06 31 08.1 +0.4**
comp=Z,2.7nm,0.7s,baz=289,slow=5.0,SNR=8.1
comp=Z,2.7nm,0.7s
KLMR **Klimovskoe** **82.03** **332** *e*P **P** **06 31 29.5 -1.6**
KLMR AMP 06 31 31.2
comp=Z,11nm,0.8s
KEV **Kevo** **82.36** **342** P **P** **06 31 31.8 -0.8**
KVN **Kaiserville** **82.48** **51** P **P** **06 31 35.3 +1.1**
KVN IAmb IAmb 06 31 36.4
comp=Z,4.3nm,0.8s
NVAR **Mina Array Bea** **82.51** **52** P **P** **06 31 35.5 +1.1**
comp=Z,3.1nm,0.7s,baz=265,slow=6.2,SNR=32
NVAR LR LR 07 03 15.8
comp=Z,106nm,21.6s,baz=60,slow=32
comp=Z,3.1nm,0.7s
ARCES **ARCESS Array B** **82.92** **342** P **P** **06 31 35.8 +0.1**
comp=Z,11nm,0.7s,baz=68,slow=7.2,SNR=42
comp=Z,11nm,0.7s
ARCES **ARCESS Array B** **82.92** **342** P **P** **06 31 35.7 +0.1**
HRY **Holter Researc** **84.31** **43** P **P** **06 31 44.6 +1.2**
BOZ **Bozeman (W)** **84.84** **44** P **P** **06 31 47.1 +1.0**
YHL **Hebgen Lake** **85.41** **44** P **P** **06 31 50.5 +1.3**
YHL IAmb IAmb 06 31 52.0
comp=Z,4.3nm,0.8s
RLMT **Red Lodge** **86.56** **43** P **P** **06 31 56.4 +1.6**
RLMT IAmb IAmb 06 31 58.6
comp=Z,4.3nm,0.7s
PDAR **Pinedale Array** **87.28** **46** P **P** **06 31 58.7 +0.4**
comp=Z,0.5nm,0.7s,baz=231,slow=2.0,SNR=6.1
comp=Z,0.5nm,0.7s
FINES **FINESS Array B** **87.41** **336** P **P** **06 31 56.8 -1.4**
comp=Z,7.4nm,0.5s,baz=72,slow=5.1,SNR=46
comp=Z,7.4nm,0.5s
ANMO **Albuquerque** **92.64** **52** LR LR 07 06 34.4
comp=Z,138nm,21.0s,baz=66,slow=31
NB2 **NORSAR Subarra** **93.03** **340** P **P** **06 32 23.1 -1.4**
comp=Z,0.5nm,0.6s,baz=43,slow=4.8
NOA **NORSAR Array B** **93.03** **340** P **P** **06 32 23.1 -1.4**
comp=Z,0.9nm,0.7s,baz=47,slow=4.5,SNR=6.1
comp=Z,0.9nm,0.7s
LPAZ **La Paz** **146.75** **92** PKPbc **PKPbc** **06 38 54.6 +0.1**
comp=Z,1.8nm,0.7s,baz=306,slow=3.3,SNR=9.3

IDC 12 06:25:03.3±3.0, 4°88S×153°60E, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=54.6km s-min=41.3km az=66.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.67**	**290**	Pn	Pn	06 25 34.1	+0.4
	70nm,0.3s,baz=272,slow=1.3,SNR=30						
KRVT				Sn	Sn	06 25 52.8	-3.1
	217nm,0.3s,baz=80,slow=23,SNR=9.2						
WRA	**Warramunga Arr**	**24.00**	**230**	P	P	06 30 20.7	+0.7
	0.9nm,0.5s,baz=54,slow=10.0,SNR=8.9						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**26.64**	**224**	P	P	06 30 43.3	-0.6
	0.3nm,0.7s,baz=45,slow=9.2,SNR=1.4						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**151.08**	**288**	PKPbc	PKPbc	06 44 58.9	-0.7
	1.5nm,1.2s,baz=67,slow=6.1,SNR=3.9						

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*IDC **12** 06:36:19.9±1.4, 39°.32N×73°.63E, h0km, mb3.7/4, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=32.9km s-min=18.5km az=107.0*
*SOME **12** 06:36:20.2, 39°.42N×73°.62E, h5km*
*KRNET **12** 06:36:21.4±0.1, 39°.45N×73°.55E, mb3.9*
*NNC **12** 06:36:22.4±2.0, 39°.49N×73°.54E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=15.4km s-min=8.4km az=176.0*

ISC 12 06:36:23.8±0.7, 39°.37N±0°.05×73°.51E±0°.03, h10km, n66, σ2s66/92, mb3.6/4, 26C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.28**	**335**	⇑*i*P	Pn	06 36 44.2	-3.6
	baz=32						
OHH				⇑*i*S	**Sb**	**06 37 01.5**	**-3.2**
	baz=32						
GAR	**Garm**	**2.51**	**263**	⇑*i*P	**Pn**	**06 37 05.9**	**+1.2**
	baz=61						
GAR				⇑*i*S	**Sn**	**06 37 38.0**	**+2.6**
	baz=61						
ARLS	**Aral**	**2.57**	**14**	⇑*i*P	**Pn**	**06 37 04.6**	**-1.0**
	baz=14						
ARLS				⇑*i*S	**Sn**	**06 37 36.1**	**-0.9**
	baz=14						
AML	**Almayashu**	**2.77**	**3**	P	**Pn**	**06 37 08.6**	**+0.1**
	SNR=77						
TRKS	**Terek-Say**	**2.82**	**321**	⇑*i*P	**Pn**	**06 37 07.9**	**-1.1**
	baz=19						
TRKS				⇑*i*S	**Sn**	**06 37 41.9**	**-1.2**
	baz=19						
UCH	**Uchtor**	**2.96**	**15**	P	**Pn**	**06 37 13.4**	**+2.2**
	SNR=6.0						
EKS2	**Erkin-Say**	**3.30**	**3**	P	**Pn**	**06 37 16.4**	**+0.8**
	SNR=8.3						
EKS2	**Erkin-Say**	**3.30**	**3**	⇑*i*P	**Pn**	**06 37 15.0**	**-0.6**
	baz=3.0						
EKS2				⇑*i*S	**Sn**	**06 37 53.5**	**-1.4**
	baz=3.0						
AAK	**Ala-Arcba**	**3.35**	**13**	Pn	**Pn**	**06 37 17.7**	**+1.3**
	6.7nm,0.3s,baz=174,slow=10,SNR=17						
AAK				Sn	**Sn**	**06 38 00.5**	**+4.2**
	4.5nm,0.3s,baz=343,slow=21,SNR=10						
	20nm,0.4s						
AAK	**Ala-Arcba**	**3.35**	**13**	P	**Pn**	**06 37 18.0**	**+1.6**
	SNR=18						
AAK	**Ala-Arcba**	**3.35**	**13**	⇓*i*P	**Pn**	**06 37 15.4**	**-1.0**
	baz=12						
AAK				⇓*i*S	**Sn**	**06 37 54.8**	**-1.5**
	baz=12						
MRKS	**Merke**	**3.38**	**356**	*e*P	**Pb**	**06 37 25.3**	**+1.4**
	21nm,0.2s						
MRKS				*e*S	**Sg**	**06 38 11.8**	**-0.6**
	67nm,0.6s						
MRKS	**Merke**	**3.38**	**356**	Pg	**Pn**	**06 37 19.3**	**+2.6**
	21nm,0.2s						
MRKS				Lg	Lg	06 38 05.0	
	60nm,0.2s						
CHGR	**Chuyangaron**	**3.46**	**260**	⇓*i*P	**Pn**	**06 37 18.7**	**+0.9**
	baz=58						
CHGR				⇓*i*S	**Sn**	**06 38 00.8**	**+1.9**
	baz=58						
KBK	**Karagaybulak**	**3.46**	**18**	⇑P	**Pn**	**06 37 21.3**	**+3.4**
	SNR=5.2						
KBK	**Karagaybulak**	**3.46**	**18**	⇓*i*P	**Pn**	**06 37 17.2**	**-0.7**
	baz=18						
KBK				⇓*i*S	**Sn**	**06 37 57.7**	**-1.4**
	baz=18						
ULHL	**Ulahol**	**3.55**	**35**	P	**Pb**	**06 37 25.2**	**-1.6**
	SNR=34						
ULHL	**Ulahol**	**3.55**	**35**	⇓*i*P	**Pn**	**06 37 18.5**	**-0.6**
	baz=35						
ULHL				⇓*i*S	**Sn**	**06 37 59.9**	**-1.3**
	baz=35						
BOOM	**Boomskoye usch**	**3.62**	**30**	⇓*i*P	**Pn**	**06 37 19.5**	**-0.6**
	baz=30						
BOOM				⇓*i*S	**Sn**	**06 38 01.8**	**-1.2**
	baz=30						
CHMS	**Chumysh**	**3.75**	**14**	P	**Pn**	**06 37 23.4**	**+1.7**
	SNR=9.0						
CHMS	**Chumysh**	**3.75**	**14**	⇑Pn	**Pn**	**06 37 22.1**	**+0.4**
	7.0nm,0.5s						
CHMS				⇓Pg	**Pb**	**06 37 28.6**	**-1.5**
	16nm,0.5s						
CHMS				⇑Lg	Lg	06 38 17.7	
	36nm,0.8s						
CHMS	**Chumysh**	**3.75**	**14**	⇑*i*P	**Pn**	**06 37 20.7**	**-1.0**
	baz=14						
CHMS				⇑*i*S	**Sn**	**06 38 04.4**	**-1.5**
	baz=14						
IUG	**Iuzhnay**	**3.83**	**318**	*e*P	**Pb**	**06 37 31.8**	**+0.3**
	942nm,0.3s						
IUG				*e*S	**Sb**	**06 38 23.6**	**+5.6**
	136nm,0.5s						
IUG	**Iuzhnay**	**3.83**	**318**	Pg	**Pn**	**06 37 26.7**	**+3.8**
	942nm,0.3s						
IUG				Lg	Lg	06 38 18.3	
	136nm,0.5s						
TKM2	**Tokmak 2**	**3.89**	**23**	P	**Pn**	**06 37 24.6**	**+0.9**
	SNR=7.2						
TKM2	**Tokmak 2**	**3.89**	**23**	⇑Pn	**Pn**	**06 37 24.2**	**+0.4**
	4.6nm,0.6s						
TKM2				⇓Pg	**Pb**	**06 37 31.0**	**-1.5**
	12nm,0.6s						
TKM2				⇑Lg	Lg	06 38 22.6	
	24nm,0.6s						
TKM2	**Tokmak 2**	**3.89**	**23**	⇑*i*P	**Pn**	**06 37 23.0**	**-0.7**
	baz=23						
TKM2				⇑*i*S	**Sn**	**06 38 07.7**	**-1.8**
	baz=23						
USP	**Ospenovka**	**3.97**	**11**	P	**Pn**	**06 37 24.6**	**-0.1**
	SNR=12						
USP	**Ospenovka**	**3.97**	**11**	⇑*i*P	**Pn**	**06 37 24.1**	**-0.6**
	baz=10.0						
USP				⇑*i*S	**Sn**	**06 38 09.7**	**-1.6**
	baz=10.0						
KST	**Kastek**	**4.11**	**26**	*e*P	**Pb**	**06 37 35.2**	**-1.1**
	13nm,0.3s						
KST				*e*S	**Sb**	**06 38 29.6**	**+3.4**
	54nm,0.8s						
KST	**Kastek**	**4.11**	**26**	Pg	Pn	06 37 32.8	+6.0
	13nm,0.3s						
KST				Lg	Lg	06 38 28.5	
	54nm,0.8s						
SGDS	**Sogindy**	**4.17**	**11**	*e*P	**Pb**	**06 37 35.7**	**-1.5**
	14nm,0.3s						
SGDS				*e*S	**Sb**	**06 38 30.1**	**+2.4**
	12nm,0.4s						
SGDS	**Sogindy**	**4.17**	**11**	Pg	Pn	06 37 34.2	+6.7
	14nm,0.3s						
SGDS				Lg	Lg	06 38 30.5	
	12nm,0.4s						
MTBS	**Maitube**	**4.36**	**29**	*e*P	**Pb**	**06 37 39.9**	**-0.6**
	17nm,0.3s						
MTBS				*e*S	**Sb**	**06 38 37.1**	**+3.9**
	24nm,0.4s						
MTBS	**Maitube**	**4.36**	**29**	Pg	Pb	06 37 37.4	-3.1
	17nm,0.3s						
MTBS				Lg	Lg	06 38 36.2	
	24nm,0.4s						
KK31	**Karatay Array**	**4.36**	**330**	Pn	**Pn**	**06 37 30.7**	**+0.6**
	0.8nm,0.2s,baz=167,slow=17,SNR=49						
KK31				⇑Pg	**Pb**	**06 37 39.9**	**-0.6**
	11nm,0.7s,baz=149,slow=12,SNR=14						
KK31				⇓Sn	**Sn**	**06 38 23.0**	**+2.0**
	8.7nm,0.5s,baz=160,slow=26,SNR=4.4						
KK31				⇑Lg	Lg	06 38 36.7	
	9.1nm,0.5s,baz=144,slow=16,SNR=6.2						
KRBS	**Karabastau**	**4.62**	**20**	*e*P	**Pb**	**06 37 44.5**	**-0.4**
	12nm,0.2s						
KRBS				*e*S	**Sb**	**06 38 45.4**	**+4.7**
	20nm,0.5s						
KRBS	**Karabastau**	**4.62**	**20**	Pg	Pb	**06 37 42.7**	**-2.2**
	12nm,0.2s						
KRBS				Lg	Lg	06 38 45.4	
	20nm,0.5s						
MDOK	**Medeo**	**4.64**	**34**	*e*P	**Pb**	**06 37 43.9**	**-1.4**
	14nm,0.4s						
MDOK				*e*S	**Sb**	**06 38 44.3**	**+3.0**
	22nm,0.6s						
MDOK	**Medeo**	**4.64**	**34**	Pg	Pb	06 37 42.2	-3.1
	14nm,0.4s						
MDOK				⇑Pg	Pn	06 37 44.5	+11
	12nm,0.6s						
MDOK				Lg	Lg	06 38 44.6	
	22nm,0.6s						
MDOK				⇑Lg	Lg	06 38 45.9	
	38nm,1.0s						
KTBS	**Karatobe**	**4.95**	**28**	*e*P	**Pb**	**06 37 50.7**	**+0.1**
	10nm,0.4s						
KTBS				*e*S	**Sb**	**06 38 56.1**	**+5.9**
	20nm,0.2s						
KTBS	**Karatobe**	**4.95**	**28**	Pg	Pb	**06 37 49.3**	**-1.2**
	10nm,0.4s						
KTBS				Lg	Lg	06 38 56.9	
	20nm,0.2s						
KUU	**Kurty**	**5.00**	**24**	*e*P	**Pb**	**06 37 50.9**	**-0.4**
	8.9nm,0.3s						
KUU				*e*S	**Sb**	**06 38 56.5**	**+5.1**
	23nm,0.3s						
KUU	**Kurty**	**5.00**	**24**	Pg	Pb	**06 37 49.8**	**-1.5**
	8.9nm,0.3s						
KUU				Lg	Lg	06 38 57.7	
	23nm,0.3s						
SATY	**Saty**	**5.22**	**43**	*e*P	**Pb**	**06 37 55.5**	**+0.3**
	8.9nm,0.4s						
SATY				*e*S	**Sb**	**06 39 04.0**	**+6.0**
	13nm,0.5s						
SATY	**Saty**	**5.22**	**43**	Pg	Pb	**06 37 55.6**	**+0.5**
	8.9nm,0.4s						
SATY				Lg	Lg	06 39 07.8	
	13nm,0.5s						
KURS	**Kuram**	**5.41**	**39**	*e*P	Pb	**06 38 00.6**	**+2.3**
	9.8nm,0.5s						
KURS				*e*S	**Sg**	**06 39 13.0**	**-4.3**
	11nm,0.9s						
KURS	**Kuram**	**5.41**	**39**	Pg	Pb	**06 37 59.9**	**+1.6**
	9.8nm,0.5s						
KURS				Lg	Lg	06 39 15.2	
	11nm,0.9s						
UZB	**Uzynbulak**	**5.62**	**46**	*e*P	**Pb**	**06 38 03.3**	**+1.4**
	2.6nm,0.3s						
UZB				*e*S	**Sb**	**06 39 17.7**	**+8.4**
	14nm,0.6s						
UZB	**Uzynbulak**	**5.62**	**46**	Pg	Pb	**06 38 02.6**	**+0.6**
	2.6nm,0.3s						
UZB				Lg	Lg	06 39 19.7	
	14nm,0.6s						
KPKS	**Kokpek**	**5.65**	**42**	*e*P	**Pb**	**06 38 02.5**	**0.0**
	5.5nm,0.4s						
KPKS				*e*S	**Sb**	**06 39 16.3**	**+6.1**
	10.0nm,0.5s						
KPKS	**Kokpek**	**5.65**	**42**	Pg	**Pb**	**06 38 02.9**	**+0.5**
	5.5nm,0.4s						
KPKS				Lg	Lg	06 39 20.3	
	10.0nm,0.5s						
BTLS	**Baital**	**5.69**	**4**	*e*P	**Pb**	**06 38 04.4**	**+1.4**
	5.2nm,0.3s						
BTLS				*e*S	**Sb**	**06 39 19.3**	**+8.1**
	9.9nm,0.6s						
BTLS	**Baital**	**5.69**	**4**	Pg	**Pb**	**06 38 04.4**	**+1.4**
	5.2nm,0.3s						
BTLS				Lg	Lg	06 39 22.5	
	9.9nm,0.6s						
ARXS	**Arharly**	**5.82**	**32**	*e*P	**Pb**	**06 38 06.0**	**+0.6**
	12nm,0.5s						
ARXS				*e*S	**Sb**	**06 39 22.2**	**+7.0**
	22nm,0.5s						
ARXS	**Arharly**	**5.82**	**32**	Pg	**Pb**	**06 38 06.6**	**+1.3**
	12nm,0.5s						
ARXS				Lg	Lg	06 39 26.5	
	22nm,0.5s						
SHLS	**Shalkode**	**5.87**	**48**	Pg	Pb	06 38 11.9	+5.6
	6.0nm,0.4s						
SHLS				Lg	Lg	06 39 35.4	
	7.8nm,0.4s						
KTMS	**Ketmen**	**6.56**	**49**	Pg	**Pb**	**06 38 20.4**	**+2.4**
	1.2nm,0.3s						
KTMS				Lg	Lg	06 39 50.5	
	2.4nm,0.2s						
BVA0	**Borovoye Array**	**13.83**	**352**	Pn	Pn	06 39 36.2	-3.5
	2.8nm,1.1s,baz=164,slow=15,SNR=8.3						
AB31	**Akbulak array**	**13.84**	**320**	⇑Pn	**Pn**	**06 39 36.7**	**-3.1**
	1.1nm,0.7s,baz=128,slow=14,SNR=12						
AKTO	**Aktyubinsk**	**15.55**	**320**	Pn	**Pn**	**06 40 05.2**	**+2.2**
	0.2nm,0.3s,baz=123,slow=14,SNR=3.5						
ZALV	**Zalesovo Beam**	**16.49**	**24**	Pn	**Pn**	**06 40 16.5**	**+1.5**
	baz=216,slow=14						
BRTR	**Keskin Array B**	**30.57**	**284**	P	**P**	**06 42 37.5**	**-0.3**
	0.6nm,0.6s,baz=108,slow=7.4,SNR=3.8						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**39.30**	**336**	P	**P**	**06 43 50.9**	**-1.5**
	1.5nm,0.8s,baz=112,slow=8.9,SNR=1.5						
	1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**67.76**	**269**	P	**P**	**06 47 19.1**	**-2.8**
	0.3nm,0.6s,baz=34,slow=7.1,SNR=1.4						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**81.88**	**124**	P	**P**	**06 48 41.1**	**-2.4**
	0.4nm,0.7s,baz=330,slow=5.3,SNR=5.5						
	0.4nm,0.7s						

IDC 12 06:55:44.7±2.6, 53°.63N×86°.84E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=25.9km s-min=14.4km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**286**	*i*		07 03 40.0	
	baz=104,slow=314,SNR=5.0						
ZALV	**Zalesovo Beam**	**1.24**	**286**	Pg	Pg	06 56 07.2	-1.3
	1.0nm,0.3s,baz=107,slow=18,SNR=11						
ZALV				Lg	Lg	06 56 25.4	
	1.4nm,0.3s,baz=107,slow=30,SNR=10						
ZALV				Rg	Rg	06 56 33.6	
	1.5nm,0.4s,baz=98,slow=29,SNR=6.9						
KURBB	**Kurchatov Arra**	**5.94**	**243**	Pn	Pn	06 57 14.7	+0.9
	baz=58,slow=13,SNR=3.5						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.44**	**205**	Pn	Pn	06 57 35.8	+1.4
	0.2nm,0.3s,baz=27,slow=14,SNR=9.7						
	0.4nm,0.3s						

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*BJI **12** 06:56:55.4±0.0, 26°.96N×103°.46E, h10km, mb4.7/44, mB4.7/30, ML4.8/20, Ms4.7/56, Ms7 4.3/52*
*IDC **12** 06:56:56.5±4.2, 27°.16N×103°.53E, h17km±26km, mb4.3/23, mbtmp4.4/24, ML4. 1/1, MS4.0/37, Error ellipse: s-maj=17.8km s-min=13.1km az=41.0*
*MOS **12** 06:56:56.6±0.9, 27°.12N×103°.45E, h33km, mb4.8/28, MS4.1/6, Error ellipse: s-maj=7.8km s-min=4.8km az=119.5*
*NEIC **12** 06:56:56.3±1.3, 27°.19N±0°.06×103°.47E±0°.06, h10km±1km, mb4.7/66, Error ellipse: s-maj=13.3km s-min=2.9km az=138.0*

ISC 12 06:56:55.2±0.3, 27°.04N±0°.03×103°.43E±0°.03, h10km, n370, σ1s49/382, mb4.7/76, MS4.0/46, 25C-8D, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**1.60**	**251**	Pg	**Pn**	**06 57 22.5**	**-1.2**
PZH				Sg	**Sn**	**06 57 44.2**	**-0.3**
PZH				smax	smax		
	comp=N,7μm,0.9s						
PZH				smax	smax		
	comp=E,5μm,0.9s						
KMI	**Kunming**	**2.01**	**198**	⇑Pn	**Pb**	**06 57 29.9**	**-2.0**
KMI				Sn	**Sg**	**06 57 59.4**	**-0.4**
KMI				smax	smax		
	comp=N,2μm,1.2s						
KMI				smax	smax		
	comp=E,2μm,1.6s						
GYA	**Guiyang**	**2.95**	**101**	⇓*i*Pn	**Pb**	**06 57 45.2**	**-2.7**
GYA				Pg	**Pg**	**06 57 50.9**	**-0.8**
GYA				Sn	**Sb**	**06 58 22.7**	**-1.4**
GYA				Sg	**Sg**	**06 58 30.6**	**+0.6**
GYA				smax	smax		
	comp=N,3μm,0.8s						
GYA				smax	smax		
	comp=E,3μm,0.7s						
CD2	**Chengdu**	**3.87**	**4**	Pn	**Pn**	**06 57 56.8**	**+2.1**
CD2				Pg	**Pg**	**06 58 08.3**	**-1.0**
CD2				Sn	**Sn**	**06 58 41.8**	**+1.5**
CD2				Sg	**Sb**	**06 58 56.4**	**+6.0**
CD2				smax	smax		
	comp=N,6μm,0.6s						
CD2				smax	smax		
	comp=E,6μm,0.8s						
ENH	**Enshi**	**6.22**	**57**	Pn	**Pn**	**06 58 28.9**	**+1.9**
GULI	**GuiLin**	**6.47**	**104**	⇑P	**Pn**	**06 58 31.9**	**+1.4**
GULI				S	**Sn**	**06 59 43.3**	**-1.1**
GULI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GULI				LR	LR		
	comp=N,2μm,4.4s						
GULI				LR	LR		
	comp=E,2μm,3.9s						
GULI				LR	LR		
	comp=Z,3μm,8.2s						
CRAI	**Chiangrai**	**7.34**	**203**		**Pn**	**06 58 45.0**	**+2.6**
MND	**Mandalay**	**8.33**	**235**	Pn	**Pn**	**06 59 00.5**	**+4.5**
XAN	**Xi'an**	**8.43**	**33**	P	**Pn**	**06 58 57.1**	**-0.3**
XAN				smax	smax		
	comp=Z,860nm,1.1s						
XAN				smax	smax		
	comp=Z,970nm,1.2s						
XAN				LR	LR		
	comp=Z,3μm,7.0s						
XAN				LR	LR		
	comp=Z,3μm,6.9s						
XAN				LR	LR		
	comp=Z,3μm,8.4s						
CNSH	**ChangSha**	**8.51**	**80**	⇑P	**Pn**	**06 58 58.3**	**-0.1**
CNSH				S	**Sn**	**07 00 31.7**	**-2.8**
CNSH				smax	smax		
	comp=Z,380nm,1.3s						
CNSH				smax	smax		
	comp=Z,320nm,1.3s						
LZH	**Lanzhou**	**9.03**	**2**	P	**Pn**	**06 59 10.3**	**+4.6**
LZH				smax	smax		
	comp=Z,170nm,1.0s						
LZH				smax	smax		
	comp=Z,210nm,1.0s						
LZH				LR	LR		
	comp=Z,2μm,7.9s						
LZH				LR	LR		
	comp=Z,6μm,8.2s						
LZH				LR	LR		
	comp=Z,2μm,7.6s						
CHTO	**Chiang Mai**	**9.17**	**208**	Pn	**Pn**	**06 59 11.5**	**+3.8**
CHTO	**Chiang Mai**	**9.17**	**208**	P	**Pn**	**06 59 11.5**	**+3.8**
CM31	**Chiang Mai Arr**	**9.49**	**207**	Pn	**Pn**	**06 59 15.9**	**+3.8**
CMAR	**Chiang Mai Arr**	**9.49**	**207**	Pn	**Pn**	**06 59 15.7**	**+3.7**
	comp=Z,0.5nm,0.3s,baz=12,slow=12,SNR=26						
CMAR				LR	LR	07 03 12.4	
	comp=Z,1μm,19.3s,baz=20,slow=39						
	comp=Z,3.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**9.49**	**207**	Pn	**Pn**	**06 59 15.6**	**+3.6**

GZH	**Guangzhou**	**9.81**	**111**	P		**Pn**	**06 59 17.7**	**+1.4**
GZH	**Guangzhou**	**9.81**	**111**	P		**Pn**	**06 59 17.6**	**+1.3**
GZH				S		**Sn**	**07 01 08.7**	**+2.1**
GZH				smax		smax		
	comp=Z,260nm,1.6s							
GZH				smax		smax		
	comp=Z,200nm,1.5s							
WHN	**Wuhan**	**10.19**	**67**	⇑P		**Pn**	**06 59 23.2**	**+1.6**
WHN				S		**Sn**	**07 01 12.8**	**-3.2**
WHN				pmax		pmax		
	comp=Z,52nm,0.9s							
WHN				LR		LR		
	comp=Z,10μm,8.4s							
WHN				LR		LR		
	comp=Z,4μm,7.8s							
WHN				LR		LR		
	comp=Z,5μm,11.3s							
LSA	**Lhasa**	**11.13**	**287**	Pn		**Pn**	**06 59 35.7**	**+0.8**
LSA	**Lhasa**	**11.13**	**287**	P		**Pn**	**06 59 36.8**	**+1.9**
LSA				LR		LR		
	comp=Z,1μm,12.2s							
LSA				LR		LR		
	comp=Z,380nm,7.8s							
LSA				LR		LR		
	comp=Z,240nm,6.9s							
LSA	**Lhasa**	**11.13**	**287**	P		**Pn**	**06 59 35.7**	**+0.8**
GOMU	**GeErMu**	**11.71**	**323**	P		Pn	06 59 48.4	+5.7
GOMU				pP			06 59 53.1	
GOMU				sP			06 59 54.3	
GOMU				S		**Sn**	**07 01 54.4**	**+0.8**
GOMU				pmax		pmax		
	comp=Z,5.0nm,0.7s							
GOMU				pmax		pmax		
	comp=Z,62nm,4.0s							
GOMU				LR		LR		
	comp=Z,1μm,6.8s							
GOMU				LR		LR		
	comp=Z,670nm,5.9s							
GOMU				LR		LR		
	comp=Z,940nm,11.0s							
GTA	**Gaotai**	**12.70**	**347**	*e*P		Pn	07 00 07.3	+11
GTA				pP			07 00 11.8	
GTA				sP			07 00 14.2	
GTA				pmax		pmax		
	comp=Z,8.0nm,1.1s							
GTA				pmax		pmax		
	comp=Z,42nm,4.1s							
GTA				LR		LR		
	comp=N,560nm,9.1s							
GTA				LR		LR		
	comp=E,760nm,8.7s							
GTA				LR		LR		
	comp=Z,480nm,10.2s							
TIY	**Taiyuan**	**13.07**	**33**	*e*P		**Pn**	**07 00 01.9**	**+0.9**
TIY				pmax		pmax		
	comp=Z,31nm,0.5s							
TIY				LR		LR		
	comp=Z,2μm,10.7s							
TIY				LR		LR		
	comp=Z,2μm,9.3s							
TIY				LR		LR		
	comp=Z,2μm,12.9s							
TAPN	**Taplejung**	**14.00**	**275**	*e*P		**Pn**	**07 00 13.1**	**-0.8**
	comp=Z,12nm,0.5s							
HNS	**HongShan**	**14.05**	**40**	⇑P		**Pn**	**07 00 14.4**	**+0.1**
HNS				*e*S		**Sn**	**07 02 55.8**	**+5.5**
HNS				pmax		pmax		
	comp=Z,14nm,0.9s							
HNS				LR		LR		
	comp=Z,940nm,8.4s							
HNS				LR		LR		
	comp=Z,920nm,7.6s							
HNS				LR		LR		
	comp=Z,870nm,7.2s							
ODAN	**Odare**	**14.31**	**273**	*e*P		**Pn**	**07 00 15.7**	**-2.4**
NJ2	**Nanjing**	**14.32**	**66**	*e*P		**Pn**	**07 00 17.3**	**-0.7**
NJ2				S		**Sn**	**07 02 59.6**	**+2.7**
NJ2				pmax		pmax		
	comp=Z,14nm,0.5s							
NJ2				pmax		pmax		
	comp=Z,53nm,3.5s							
NJ2				LR		LR		
	comp=Z,6μm,12.3s							
NJ2				LR		LR		
	comp=Z,2μm,11.0s							
NJ2				LR		LR		
	comp=Z,1μm,8.0s							
BTO	**Baotou**	**14.59**	**20**	*e*P		**Pn**	**07 00 21.2**	**-0.6**
BTO				S		**Sn**	**07 03 07.0**	**+3.4**
BTO				LR		LR		
	comp=Z,7μm,12.8s							
BTO				LR		LR		
	comp=Z,5μm,8.9s							
TIA	**Tai'an**	**14.81**	**49**	⇓P		**Pn**	**07 00 24.5**	**-0.2**
TIA				pmax		pmax		
	comp=Z,9.0nm,0.8s							
TIA				pmax		pmax		
	comp=Z,88nm,3.5s							
TIA				LR		LR		
	comp=Z,1μm,10.8s							
TIA				LR		LR		
	comp=Z,980nm,6.9s							
TIA				LR		LR		
	comp=Z,440nm,7.4s							
RAMN	**Ramite**	**15.01**	**273**	*e*P		**Pn**	**07 00 25.1**	**-2.5**
HHC	**Hu-ho-hao-te**	**15.33**	**24**	*e*P		**Pn**	**07 00 31.9**	**+0.2**
HHC				pmax		pmax		
	comp=Z,39nm,0.9s							
HHC				pmax		pmax		
	comp=Z,130nm,4.8s							
HHC				LR		LR		
	comp=Z,3μm,10.6s							
HHC				LR		LR		
	comp=Z,970nm,11.6s							
HHC				LR		LR		
	comp=Z,3μm,14.5s							
JIRN	**Jiri**	**15.34**	**276**	*e*P		**Pn**	**07 00 30.2**	**-1.9**
GUN	**Gumba**	**15.61**	**277**	*e*P		**Pn**	**07 00 33.6**	**-2.0**
	comp=Z,78nm,0.9s							
TPUB	**Ta-pu**	**16.01**	**100**			**P**	**07 00 42.8**	**-1.2**
PKI	**Pulchoki**	**16.03**	**276**	*e*P		**Pn**	**07 00 38.4**	**-2.7**
	comp=Z,33nm,0.6s							
PKIN	**Phulchoki**	**16.04**	**276**	*e*P		**Pn**	**07 00 38.8**	**-2.4**
	comp=Z,44nm,0.7s							
KKN	**Kakani**	**16.14**	**277**	*e*P		**Pn**	**07 00 39.3**	**-3.1**
SSLB	**Suanglung**	**16.16**	**98**	Pn		**P**	**07 00 44.0**	**-1.7**
SSLB				IAmb		IAmb	07 01 04.8	
	comp=Z,57nm,1.4s							
DMN	**Daman**	**16.30**	**276**	*e*P		**Pn**	**07 00 41.8**	**-2.7**
GKN	**Gorkha**	**16.70**	**278**	*e*P		**Pn**	**07 00 47.1**	**-2.4**
BJT	**Baijiatuau**	**16.72**	**36**	Pn		**Pn**	**07 00 47.9**	**-1.6**
BJT	**Baijiatuau**	**16.72**	**36**	P		**Pn**	**07 00 47.9**	**-1.6**
BJT				pmax		pmax		
	comp=Z,30nm,1.1s							
BJI	**Beijing**	**16.74**	**36**	P		**Pn**	**07 00 48.6**	**-1.1**
BJI				S		**Sn**	**07 03 53.9**	**-1.7**
BJI				pmax		pmax		
	comp=Z,6.0nm,0.7s							
BJI				pmax		pmax		
	comp=Z,190nm,3.7s							
BJI				LR		LR		
	comp=Z,210nm,12.1s							
BJI				LR		LR		
	comp=Z,900nm,9.7s							
BJI				LR		LR		
	comp=Z,1μm,14.7s							
DANN	**Dangsing**	**17.47**	**279**	*e*P		**Pn**	**07 00 56.6**	**-2.7**
SRIT	**Nakonsritamara**	**18.70**	**192**	P		**Pn**	**07 01 15.2**	**+1.0**
DL2	**Dalian**	**19.27**	**48**	P		**P**	**07 01 17.2**	**-2.8**
DL2				S		**Sn**	**07 04 56.1**	**-1.0**
DL2				pmax		pmax		
	comp=Z,11nm,0.8s							
DL2				pmax		pmax		
	comp=Z,79nm,4.7s							
DL2				LR		LR		
	comp=N,820nm,9.6s							
DL2				LR		LR		
	comp=E,330nm,5.7s							
DL2				LR		LR		
	comp=Z,810nm,13.3s							
XLT	**XiLinHaoTe**	**19.68**	**28**	*e*P		**Pn**	**07 01 27.3**	**+1.3**
XLT				pP		sP	07 01 32.1	+2.6
XLT				sP		pP	07 01 35.0	+7.1
XLT				PP		**PnPn**	**07 01 45.1**	**+5.5**
XLT				S		**Sn**	**07 05 09.3**	**+2.2**
XLT				pmax		pmax		
	comp=Z,23nm,0.8s							
XLT				pmax		pmax		
	comp=Z,110nm,3.7s							
XLT				LR		LR		
	comp=Z,640nm,6.4s							
XLT				LR		LR		
	comp=Z,680nm,9.1s							
SONM	**Songino Array**	**20.89**	**6**	P		**P**	**07 01 37.2**	**-0.4**
	comp=Z,4.4nm,0.5s,baz=189,slow=12,SNR=12							
SONM				LR		LR	07 10 39.5	
	comp=Z,420nm,18.3s,baz=224,slow=40							
	comp=Z,4.4nm,0.5s							
SONM	**Songino Array**	**20.89**	**6**			**P**	**07 01 37.5**	**-0.1**
SONM	**Songino Array**	**20.89**	**6**	P		**P**	**07 01 37.5**	**-0.1**
SONM				pmax		pmax		
	comp=Z,7.0nm,0.8s							
ULN	**Ulaanbaatar**	**20.98**	**7**			**P**	**07 01 38.6**	**0.0**
ULN	**Ulaanbaatar**	**20.98**	**7**	*ce*P		**P**	**07 01 37.9**	**-0.8**
ULN				pmax		pmax		
	comp=Z,15nm,0.8s							
WMQ	**Urumqi**	**21.03**	**327**	*e*P		**P**	**07 01 39.2**	**+0.1**
WMQ				pmax		pmax		
	comp=Z,43nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,210nm,4.5s							
WMQ				LR		LR		
	comp=Z,2μm,18.3s							
WMQ				LR		LR		
	comp=Z,1μm,16.3s							
WMQ				LR		LR		
	comp=Z,180nm,18.3s							
KULM	**Kulim**	**21.79**	**187**	P		**P**	**07 01 49.9**	**+2.5**
KULM				IAmb		IAmb	07 01 54.5	
	comp=Z,24nm,1.1s							
NAWB	**Namwon**	**22.09**	**62**	P		**P**	**07 01 50.0**	**-0.5**
NAWB				IAmb		IAmb	07 01 57.8	
	comp=Z,27nm,0.9s							
SNY	**Shenyang**	**22.14**	**43**	⇓P		**P**	**07 01 53.1**	**+2.1**
SNY				S		S	07 05 43.5	-11
SNY				pmax		pmax		
	comp=Z,34nm,1.5s							
SNY				pmax		pmax		
	comp=Z,24nm,3.5s							
SNY				LR		LR		
	comp=Z,730nm,15.5s							
SNY				LR		LR		
	comp=Z,990nm,15.1s							
SNY				LR		LR		
	comp=Z,1μm,17.3s							
JOW	**Kunigami**	**22.14**	**85**	P		**P**	**07 01 51.5**	**+0.3**
JOW				IAmb		IAmb	07 01 53.5	
	comp=Z,51nm,1.2s							
INCN	**Inchon**	**22.16**	**56**	P		**P**	**07 01 51.3**	**0.0**
INCN				IAmb		IAmb	07 01 54.8	
	comp=Z,21nm,0.6s							
INCN	**Inchon**	**22.16**	**56**	P		**P**	**07 01 51.3**	**0.0**
INCN				pmax		pmax		
	comp=Z,21nm,0.6s							
TJN	**Taejon**	**22.34**	**59**	P		**P**	**07 01 52.8**	**-0.4**
TJN	**Taejon**	**22.34**	**59**	*ce*P		**P**	**07 01 53.2**	**0.0**
KSCHJ	**Chungju**	**22.96**	**59**	P		**P**	**07 02 00.1**	**+0.3**
KSCHJ				IAmb		IAmb	07 02 22.5	
	comp=Z,19nm,1.0s							
KSAR	**Wonju Array Be**	**23.08**	**57**	P		**P**	**07 01 59.9**	**-1.1**
KSAR	**Wonju Array Be**	**23.08**	**57**	P		**P**	**07 01 59.9**	**-1.1**
KS19	**Wonju Array Si**	**23.08**	**57**	P		**P**	**07 02 00.5**	**-0.5**
KS19				IAmb		IAmb	07 02 26.7	
	comp=Z,19nm,1.1s							
KSRS	**Korea Array**	**23.11**	**57**	P		**P**	**07 01 59.8**	**-1.5**
	comp=Z,5.0nm,0.6s,baz=243,slow=10,SNR=27							
KSRS				LR		LR	07 12 27.4	
	comp=Z,355nm,18.3s,baz=245,slow=41							
	comp=Z,5.0nm,0.6s							
ZAK	**Zakamensk**	**23.31**	**360**	*e*P		**P**	**07 02 02.3**	**-1.0**
ZAK				pmax		pmax		
	comp=Z,10.0nm,1.4s							
SEHB	**SEOHWA**	**23.64**	**56**	P		**P**	**07 02 05.3**	**-1.2**
SEHB				IAmb		IAmb	07 02 33.6	
	comp=Z,13nm,0.8s							
KNGR	**Kungurtug, Tuv**	**23.96**	**351**	*i* P		**P**	**07 02 11.3**	**+1.6**
JSU	**Suzuyama**	**23.96**	**73**	P		**P**	**07 02 08.3**	**-1.5**
JSU				IAmb		IAmb	07 02 17.5	
	comp=Z,20nm,1.1s							
CN2	**Changchun**	**24.41**	**41**	*e*P		**P**	**07 02 13.4**	**-0.4**
CN2				*e*S		**S**	**07 06 27.4**	**-6.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CN2				pmax		pmax		
	comp=Z,100nm,3.0s							
CN2				LR		LR		
	comp=Z,400nm,14.0s							
CN2				LR		LR		
	comp=Z,600nm,14.0s							
CN2				LR		LR		
	comp=Z,500nm,18.0s							
PSI	**Prapat**	**24.49**	**191**	LR		LR	07 11 59.1	
	comp=Z,274nm,19.7s,baz=307,slow=36							
HYBB	**Hyderabad (bro**	**24.90**	**253**	*e*P		**P**	**07 02 19.0**	**+0.5**
HYBB				*e*S		**S**	**07 06 44.2**	**+2.3**
ZSN	**Zaisan**	**25.05**	**329**	*e*P		**P**	**07 02 19.8**	**+0.3**
ZSN	**Zaisan**	**25.05**	**329**	*e*P		**P**	**07 02 19.8**	**+0.3**
	baz=329							
SHLS	**Shalkode**	**25.23**	**316**	*e*P		**P**	**07 02 18.9**	**-2.5**
SHLS				*e*S		**S**	**07 06 43.2**	**-3.7**
SHLS	**Shalkode**	**25.23**	**316**	*e*P		**P**	**07 02 18.9**	**-2.5**
	baz=316							
SHLS				*e*S		**S**	**07 06 43.2**	**-3.7**
	baz=316							
UZB	**Uzynbulak**	**25.50**	**315**	*e*P		**P**	**07 02 23.6**	**-0.2**
UZB	**Uzynbulak**	**25.50**	**315**	*e*P		**P**	**07 02 23.6**	**-0.2**
	baz=315							
HIA	**Hailar**	**25.52**	**25**	P		**P**	**07 02 23.7**	**-0.1**
HIA	**Hailar**	**25.52**	**25**	*i* P		**P**	**07 02 23.5**	**-0.3**
HIA				pmax		pmax		
	comp=Z,39nm,1.1s							
MK31	**Makanchi Array**	**25.82**	**325**	P		**P**	**07 02 26.1**	**-0.5**
MK31	**Makanchi Array**	**25.82**	**325**	⇓P		**P**	**07 02 26.3**	**-0.3**
MKAR	**Makanchi Array**	**25.82**	**325**	P		**P**	**07 02 26.7**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=121,slow=9.0,SNR=22							
MKAR				PcP		**PcP**	**07 05 55.4**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=72,slow=4.7,SNR=2.7							
MKAR				ScP		**ScP**	**07 09 34.7**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=129,slow=3.9,SNR=4.9							
	comp=Z,5.4nm,0.8s							
MKAR	**Makanchi Array**	**25.82**	**325**	P		**P**	**07 02 26.4**	**-0.2**
SATY	**Saty**	**25.84**	**315**	*e*P		**P**	**07 02 26.5**	**-0.4**
SATY	**Saty**	**25.84**	**315**	*e*P		**P**	**07 02 26.6**	**-0.4**
	baz=314							
ZHN	**Zhinishke**	**25.88**	**315**	*e*P		**P**	**07 02 26.6**	**-0.6**
ZHN	**Zhinishke**	**25.88**	**315**	*e*P		**P**	**07 02 26.6**	**-0.6**
	baz=315							
MAKZ	**Makanchi**	**25.99**	**325**	P		**P**	**07 02 28.4**	**+0.3**
MAKZ	**Makanchi**	**25.99**	**325**	P		**P**	**07 02 28.4**	**+0.3**
MAKZ				pmax		pmax		
	comp=Z,7.0nm,0.9s							
KSH	**Kashi**	**26.00**	**306**	P		**P**	**07 02 31.5**	**+3.1**
KSH				sP		sP	07 02 39.6	+6.1
KSH				pmax		pmax		
	comp=Z,24nm,1.4s							
KSH				LR		LR		
	comp=Z,530nm,13.3s							
KSH				LR		LR		
	comp=Z,580nm,16.8s							
KSH				LR		LR		
	comp=Z,600nm,15.2s							
JHS	**Saijyo**	**26.58**	**65**	P		**P**	**07 02 33.1**	**-0.5**
JHS				IAmb		IAmb	07 02 36.9	
	comp=Z,24nm,0.9s							
BKNI	**Bangkinang**	**26.66**	**185**	P		**P**	**07 02 35.9**	**+1.6**
BNX	**BinXian**	**26.68**	**39**	⇑P		**P**	**07 02 35.0**	**+0.7**
BNX				pP		**sP**	**07 02 44.1**	**+4.7**
BNX				sP		pP	07 02 48.7	+11
BNX				S		**S**	**07 07 11.3**	**+1.8**
BNX				sS		sS	07 07 25.4	+10
BNX				pmax		pmax		
	comp=Z,14nm,0.8s							
BNX				pmax		pmax		
	comp=Z,77nm,4.4s							
BNX				LR		LR		
	comp=Z,530nm,13.3s							
BNX				LR		LR		
	comp=Z,440nm,9.9s							
BNX				LR		LR		
	comp=Z,740nm,12.9s							
MDOK	**Medeo**	**26.76**	**314**	*e*P		**P**	**07 02 34.4**	**-0.9**
MDOK	**Medeo**	**26.76**	**314**	*e*P		**P**	**07 02 34.5**	**-0.9**
	baz=314							
NIL	**Nilore**	**26.80**	**292**	P		**P**	**07 02 34.7**	**-0.9**
NIL				IAmb		IAmb	07 03 04.3	
	comp=Z,22nm,0.7s							
NIL	**Nilore**	**26.80**	**292**	P		**P**	**07 02 34.7**	**-0.9**
NIL				pmax		pmax		
	comp=Z,22nm,0.7s							
AAA	**Alma-Ata**	**26.87**	**314**	*e*P		**P**	**07 02 35.0**	**-1.1**
AAA	**Alma-Ata**	**26.87**	**314**	*e*P		**P**	**07 02 35.0**	**-1.1**
	baz=314							
JMN	**Monobe**	**27.04**	**68**	P		**P**	**07 02 37.1**	**-0.6**
JMN				IAmb		IAmb	07 02 38.3	
	comp=Z,17nm,1.1s							
KUU	**Kurty**	**27.56**	**315**	*e*P		**P**	**07 02 41.1**	**-1.2**
KUU	**Kurty**	**27.56**	**315**	*e*P		**P**	**07 02 41.1**	**-1.2**
	baz=314							
AAK	**Ala-Archa**	**28.21**	**311**	P		**P**	**07 02 49.6**	**+1.3**
	comp=Z,6.4nm,0.8s,baz=112,slow=7.4,SNR=8.7							
AAK				LR		LR	07 15 41.3	
	comp=Z,277nm,18.7s,baz=138,slow=40							
	comp=Z,6.4nm,0.8s							
USRK	**Ussuriysk Ar.**	**28.64**	**46**	P		**P**	**07 02 51.2**	**-0.7**
	comp=Z,7.6nm,0.8s,baz=254,slow=6.6,SNR=9.0							
	comp=Z,7.6nm,0.8s							
DRK	**Karamyk**	**29.06**	**303**	P		**P**	**07 02 55.7**	**-0.3**
BTLS	**Baital**	**29.55**	**315**	*e*P		**P**	**07 02 58.8**	**-1.2**
BTLS	**Baital**	**29.55**	**315**	*e*P		**P**	**07 02 58.8**	**-1.2**
	baz=315							
GAR	**Garm**	**30.06**	**302**	P		**P**	**07 03 04.8**	**+0.1**
GAR				IAmb		IAmb	07 03 07.6	
	comp=Z,14nm,1.1s							
ZALV	**Zalesovo Beam**	**30.19**	**338**	P		**P**	**07 03 05.2**	**-0.3**
	comp=Z,4.9nm,0.8s,baz=141,slow=9.2,SNR=3.7							
ZALV				LR		LR	07 15 32.2	
	comp=Z,117nm,20.9s,baz=168,slow=37							
	comp=Z,4.9nm,0.8s							
ZALV	**Zalesovo Beam**	**30.19**	**338**	*i* P		**P**	**07 03 05.1**	**-0.4**
ZALV				pmax		pmax		
	comp=Z,5.0nm,0.8s							
KURBB	**Kurchatov Arra**	**30.24**	**328**	P		**P**	**07 03 05.6**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=134,slow=9.6,SNR=32							
KURBB				PcP		**PcP**	**07 06 06.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=126,slow=2.7,SNR=3.8							
	comp=Z,3.4nm,0.7s							
KURK	**Kurchatov**	**30.26**	**328**	P		**P**	**07 03 06.0**	**-0.2**
KURK				IAmb		IAmb	07 03 16.2	
	comp=Z,7.8nm,0.8s							
KURK	**Kurchatov**	**30.26**	**328**	*ce*P		**P**	**07 03 05.0**	**-1.2**
KURK				pmax		pmax		
	comp=Z,16nm,1.7s							
DZA	**Taraz**	**30.46**	**310**	*e*P		**P**	**07 03 08.1**	**0.0**
DZA	**Taraz**	**30.46**	**310**	*e*P		**P**	**07 03 08.2**	**0.0**
	baz=310							
TOLI2	**Tolitoli**	**30.70**	**144**	P		**P**	**07 03 12.6**	**+2.2**
TOLI2				IAmb		IAmb	07 03 14.1	
	comp=Z,17nm,1.3s							
CHGR	**Chuyangaron**	**30.86**	**301**	P		**P**	**07 03 12.5**	**+0.7**
CHGR				IAmb		IAmb	07 03 18.7	
	comp=Z,28nm,1.4s							
CHGR	**Chuyangaron**	**30.86**	**301**	P		**P**	**07 03 12.5**	**+0.7**
CHGR				pmax		pmax		
	comp=Z,29nm,1.4s							
MJAR	**Matsushiro Arr**	**30.90**	**63**	LR		LR	07 16 15.4	
	comp=Z,430nm,19.4s,baz=266,slow=38							
KK31	**Karatay Array**	**31.10**	**310**	P		**P**	**07 03 13.4**	**-0.3**
KK31	**Karatay Array**	**31.10**	**310**	P		**P**	**07 03 13.4**	**-0.3**
KK31				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KKAR	**Karatay Array**	**31.10**	**310**	P		**P**	**07 03 13.7**	**-0.1**
KKAR	**Karatay Array**	**31.10**	**310**	P		**P**	**07 03 13.7**	**-0.1**
KLR	**Kul'dur**	**31.11**	**37**	P		**P**	**07 03 12.7**	**-1.0**
	comp=Z,3.6nm,0.9s,baz=261,slow=9.6,SNR=8.9							
KLR				LR		LR	07 17 11.1	
	comp=Z,552nm,18.1s,baz=249,slow=39							
	comp=Z,3.6nm,0.9s							
KLR	**Kul'dur**	**31.11**	**37**	*ce*P		**P**	**07 03 12.5**	**-1.2**
KLR				pmax		pmax		
	comp=Z,4.0nm,0.9s							
IUG	**Iuzhnay**	**31.12**	**308**	*e*P		**P**	**07 03 14.3**	**+0.3**
IUG	**Iuzhnay**	**31.12**	**308**	*e*P		**P**	**07 03 14.3**	**+0.3**
	baz=308							
JHJ	**Hachijo jima 2**	**31.93**	**70**	LR		LR	07 17 50.4	
	comp=Z,104nm,20.8s,baz=284,slow=39							
ZEA	**Zeya**	**31.95**	**27**	*e*P		**P**	**07 03 21.5**	**+0.5**
ZEA				pmax		pmax		
	comp=Z,20nm,0.6s							
ZEA				MLR		MLR		
	comp=Z,300nm,13.0s							
BRZS	**Berezniki**	**32.84**	**323**	*e*P		**P**	**07 03 29.2**	**+0.3**
BRZS	**Berezniki**	**32.84**	**323**	*e*P		**P**	**07 03 29.2**	**+0.3**
	baz=322							
JCJ	**Chichijima**	**34.42**	**81**	LR		LR	07 16 18.7	
	comp=Z,144nm,21.5s,baz=266,slow=34							
BRVK	**Borovoye**	**35.78**	**326**	P		**P**	**07 03 54.6**	**+0.3**
BRVK	**Borovoye**	**35.78**	**326**	*ce*P		**P**	**07 03 53.7**	**-0.6**
BRVK				pmax		pmax		
	comp=Z,10.0nm,1.3s							
YSS	**Yuzh-Sakhalins**	**36.67**	**47**	*e*P		P	07 04 09.2	+7.2
YSS				pmax		pmax		
	comp=Z,10.0nm,0.7s							
YSS				MLR		MLR		
	comp=Z,700nm,15.0s							
SHO	**Shikotan**	**38.65**	**53**	P		**P**	**07 04 21.9**	**+3.1**
YAK	**Yakutsk**	**39.11**	**19**	LR		LR	07 21 44.3	
	comp=Z,411nm,18.4s,baz=268,slow=38							
YAK	**Yakutsk**	**39.11**	**19**	P		**P**	**07 04 21.5**	**-0.8**
YAK	**Yakutsk**	**39.11**	**19**	*e*P		**P**	**07 04 21.6**	**-0.8**
YAK				*e**PP		**sP**	**07 04 32.2**	**+4.7**
YAK				*e*			07 06 29.5	
YAK				*e*S		**S**	**07 10 18.3**	**-3.5**
YAK				*e**SS		sS	07 10 37.8	+10
YAK				*e*			07 14 27.3	
YAK				pmax		pmax		
	comp=Z,27nm,0.9s							
YAK				pmax		pmax		
	comp=E,5.0nm,0.9s							
YAK				pmax		pmax		
	comp=N,5.0nm,0.9s							
YAK				smax		smax		
	comp=E,39nm,2.7s							
YAK				smax		smax		
	comp=N,34nm,3.2s							
YAK				MLR		MLR		
	comp=Z,472nm,18.0s							
YAK				MLR		MLR		
	comp=E,221nm,18.0s							
GEYT	**Alibeck**	**39.40**	**298**	P		**P**	**07 04 26.4**	**+1.1**
	comp=E,6.9nm,0.7s,baz=96,slow=13,SNR=7.9							
GEYT				LR		LR	07 24 22.6	
	comp=E,169nm,19.0s,baz=112,slow=42							
	comp=E,6.9nm,0.7s							
GEYT	**Alibeck**	**39.40**	**298**	P		**P**	**07 04 26.0**	**+0.8**
GYA0	**ALIBECK ARRAY**	**39.40**	**298**	P		**P**	**07 04 25.7**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**39.40**	**298**	P		**P**	**07 04 25.7**	**+0.5**
ABKAR	**Akbulak array**	**40.04**	**315**	P		**P**	**07 04 30.2**	**-0.1**
ABKAR	**Akbulak array**	**40.04**	**315**	P		**P**	**07 04 30.4**	**+0.1**
ABKAR				IAmb		IAmb	07 04 31.6	
	comp=Z,7.3nm,0.7s							
GUMO	**Guam**	**40.91**	**101**	LR		LR	07 21 37.5	
	comp=Z,86nm,21.0s,baz=215,slow=36							
AKTO	**Aktyubinsk**	**41.58**	**317**	P		**P**	**07 04 43.4**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=91,slow=15,SNR=21							
AKTO				LR		LR	07 23 40.7	
	comp=Z,91nm,19.6s,baz=101,slow=39							
	comp=Z,6.5nm,0.7s							
NRIK	**Noril'sk**	**43.34**	**352**	P		**P**	**07 04 56.7**	**-0.4**
	comp=Z,5.9nm,0.5s,baz=141,slow=9.2,SNR=

comp=Z,29nm,1.2s
TIXI Tiksi 46.84 11 LR LR 07 26 39.4
comp=Z,369nm,19.2s,baz=182,slow=38
PETK Petropavlovsk- 47.56 42 LR LR 07 25 24.1
comp=Z,230nm,20.3s,baz=262,slow=36
BELG Belogornoye 48.35 317 LR LR 07 26 04.8
comp=Z,130nm,19.6s,baz=341,slow=36
BELG Belogornoye 48.35 317 *i* P **P 07 05 36.6 -0.3**
BELG pmax pmax
comp=Z,5.0nm,0.8s
KIRV Kirov 48.72 326 *i* P **P 07 05 39.7 +0.1**
KNRA Kununurra 49.07 147 P **P 07 05 42.7 -0.1**
KNRA IAmb IAmb 07 05 44.2
comp=Z,15nm,1.1s
FITZ Fitzroy Crossi 49.78 152 P **P 07 05 49.0 +0.9**
FITZ IAmb IAmb 07 05 50.5
comp=Z,9.7nm,1.2s
GNI Garni 49.78 301 LR LR 07 30 10.5
comp=Z,68nm,21.8s,baz=98,slow=40
GNI Garni 49.78 301 P **P 07 05 48.6 +0.3**
GNI Garni 49.78 301 *i* P **P 07 05 48.3 0.0**
GNI pmax pmax
comp=Z,11nm,0.8s
ZEI Tsey 50.28 304 *e*P **P 07 05 51.3 -0.8**
ZEI pmax pmax
comp=Z,12nm,1.0s
ONI Oni 50.62 304 P **P 07 05 54.8 +0.3**
ONI IAmb IAmb 07 05 59.2
comp=Z,13nm,1.0s
ONI Oni 50.62 304 P **P 07 05 54.8 +0.3**
ONI pmax pmax
comp=Z,13nm,1.0s
KBZ Khabaz 50.98 306 P **P 07 05 57.0 -0.1**
comp=Z,1.8nm,0.7s,baz=85,slow=6.4,SNR=3.7
comp=Z,1.8nm,0.7s
KBZ Khabaz 50.98 306*ce*P **P 07 05 56.6 -0.5**
KBZ pmax pmax
comp=Z,5.0nm,1.2s
KIV Kislovodsk 51.13 306 *e*P **P 07 05 57.7 -0.6**
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,104nm,17.0s
PRGR Permogore 51.37 329 *e*P **P 07 05 59.1 -0.6**
VRH Novokhopyorsk 51.87 315 *e*P **P 07 06 01.9 -1.7**
VRH pmax pmax
comp=Z,8.0nm,0.9s
GURO Guroymak-BITLI 52.02 299 P **P 07 06 05.6 +0.5**
GURO IAmb IAmb 07 06 09.4
comp=Z,12nm,1.0s
VSR Storozhevoye 53.48 315 *e*P **P 07 06 13.5 -2.0**
VSR pmax pmax
comp=Z,3.0nm,0.9s
LPSR Galich'ya Gora 53.66 317 *e*P P 07 06 08.0 -8.8
LPSR pmax pmax
comp=Z,8.0nm,0.7s
KLMR Klimovskoe 54.10 327 *e*P **P 07 06 18.9 -1.0**
KLMR pmax pmax
comp=Z,27nm,1.0s
KLMR Klimovskoe 54.10 327 *e*P **P 07 06 18.9 -1.0**
KLMR AMP 07 06 23.5
comp=Z,27nm,1.0s
ANN Anapa 54.84 307 *e*P **P 07 06 27.6 +2.1**
ANN pmax pmax
comp=Z,26nm,0.9s
BILL Bilibino 55.10 24 *i* P **P 07 06 25.1 -2.0**
BILL pmax pmax
comp=Z,5.0nm,0.9s
OBN Obninsk 55.15 320 *i* P **P 07 06 29.4 +1.8**
OBN *i* 07 06 36.7
OBN *i* 07 07 31.2
OBN *i* 07 08 30.3
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,98nm,18.0s
WRAB Tennant Creek 55.48 144 P **P 07 06 30.2 -0.2**
WRAB Tennant Creek 55.48 144*ce*P **P 07 06 28.9 -1.5**
WRAB pmax pmax
comp=Z,34nm,2.5s
WRA Warramunga Arr 55.49 144 P **P 07 06 30.8 +0.3**
comp=Z,11nm,0.9s,baz=332,slow=8.6,SNR=41
comp=Z,11nm,0.9s
WRA Warramunga Arr 55.49 144 P **P 07 06 30.6 +0.2**
DIKM Dikmen 56.77 304 ⇓P **P 07 06 39.7 +0.2**
MORW Morawa 57.09 167 P **P 07 06 43.0 +1.3**
SHEM Shemya Is, Ala 57.42 43 LR LR 07 33 48.3
comp=Z,48nm,19.2s,baz=320,slow=39
ILGA Ilgaz 58.01 303 P **P 07 06 48.7 +0.1**
BR131 Keskin Array S 58.30 302 P **P 07 06 49.4 -1.0**
BR131 IAmb IAmb 07 06 53.1
comp=Z,7.3nm,1.1s
BR131 Keskin Array S 58.30 302 *i* P **P 07 06 49.7 -0.8**
BRTR Keskin Array B 58.30 302 P **P 07 06 49.4 -1.0**
comp=Z,2.4nm,0.7s,baz=119,slow=7.1,SNR=13
BRTR LR LR 07 34 24.0
comp=Z,89nm,21.9s,baz=94,slow=38
comp=Z,2.4nm,0.7s
BRTR Keskin Array B 58.30 302 *i* P **P 07 06 49.9 -0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
AS31 Alice Springs 58.38 147 P **P 07 06 50.7 -0.2**
ASAR Alice Springs 58.38 147 P **P 07 06 51.3 +0.3**
comp=Z,5.4nm,0.7s,baz=329,slow=6.3,SNR=34
comp=Z,5.4nm,0.7s
ASAR Alice Springs 58.38 147 P **P 07 06 50.0 -0.9**
EIL Elat 59.51 290 LR LR 07 36 02.5
comp=Z,134nm,19.9s,baz=88,slow=39
AKASG Malin Array Be 59.78 315 P **P 07 06 59.4 -0.9**
comp=Z,3.0nm,0.8s,baz=73,slow=7.2,SNR=7.0
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 59.78 315*ce*P **P 07 06 59.5 -0.8**
MNK Minsk 60.19 319 *i* P **P 07 07 00.3 -2.7**
MNK *i* 07 07 45.1
MNK *i* 07 09 11.3
MNK *i* PPP PPP 07 10 39.9
MNK *i* S **S 07 15 14.7 -1.9**
MNK *i* SS **SS 07 19 12.3 -1.0**
MNK pmax pmax
comp=N,10.0nm,0.8s
MNK pmax pmax
comp=E,3.0nm,0.7s
MNK pmax pmax
comp=Z,6.0nm,0.8s
MNK MLR MLR
comp=Z,91nm,19.0s
MNK MLR MLR
comp=N,89nm,18.0s
MNK MLR MLR
comp=E,50nm,19.0s
MNK Minsk 60.19 319 *i* P **P 07 07 00.3 -2.7**
comp=E,3.0nm,0.7s
MNK *i* P **P 07 07 00.3 -2.7**
comp=N,10.0nm,0.8s
MNK *i* P **P 07 07 00.3 -2.7**
comp=Z,6.0nm,0.8s,baz=84
MNK *i* PcP **PcP 07 07 45.1 -3.5**
MNK *i* PP **PP 07 09 11.4 -4.2**
MNK *i* PPP PPP 07 10 39.9
MNK *i* S **S 07 15 14.8 -1.9**
MNK *i* SS **SS 07 19 12.4 -1.0**
MNK *i* SSS SSS 07 21 56.6
MNK *i* LQ LQ 07 28 28.5
MNK *i* LR LR 07 31 11.8
MNK *i* LRM MLR 07 34 48.0
comp=Z,91nm,19.0s
MNK *i* LRM MLR 07 35 06.1
comp=N,89nm,18.1s
MNK *i* LRM MLR 07 36 36.5
comp=E,50nm,19.0s
KEV Kevo 60.21 337 P **P 07 07 02.8 -0.2**
KEV Kevo 60.21 337 P **P 07 07 02.8 -0.2**
KEV pmax pmax
comp=Z,30nm,1.4s
MILM Milestii Mici 60.57 311 *e*P **P 07 07 09.0 +3.2**
MILM Milestii Mici 60.57 311 *e*P **P 07 07 09.0 +3.2**
MILM *e* 07 15 40.0
FINES FINESS Array B 60.63 327 P **P 07 07 05.3 -0.7**
comp=Z,2.2nm,0.7s,baz=104,slow=7.3,SNR=9.4
FINES LR LR 07 35 22.5
comp=Z,126nm,21.7s,baz=98,slow=38
comp=Z,2.2nm,0.7s
ARCES ARCESS Array B 60.73 337 P **P 07 07 06.2 -0.3**
comp=Z,3.4nm,0.7s,baz=85,slow=7.5,SNR=17
comp=Z,3.4nm,0.7s
VRI Vrincioaia 62.17 310 ⇑P **P 07 07 17.1 +0.4**
VRI Vrincioaia 62.17 310 ⇑P **P 07 07 17.1 +0.4**
PLOR Plostina 62.23 310 ⇑P **P 07 07 17.4 +0.3**
PLOR Plostina 62.23 310 ⇑P **P 07 07 17.4 +0.3**
BIZ Bicaz 62.39 311 ⇑P **P 07 07 18.1 -0.1**
MLR Muntele Rosu 62.78 309 ⇑P **P 07 07 21.7 +0.7**
MLR Muntele Rosu 62.78 309 LR LR 07 39 01.4
comp=Z,108nm,21.2s,baz=38,slow=40
MLR Muntele Rosu 62.78 309 ⇑P **P 07 07 21.7 +0.7**
SPITS Spitsbergen Ar 63.13 347 LR LR 07 37 45.6
comp=Z,148nm,20.8s,baz=54,slow=39
DRGR 64.70 311 ⇑P **P 07 07 33.7 +0.2**
DRGR 64.70 311 ⇑P **P 07 07 33.7 +0.2**
VTS Vitosha 65.34 307 ⇓P **P 07 07 38.1 +0.2**
VTS Vitosha 65.34 307 ⇓P **P 07 07 38.1 +0.2**
HERR Herculane 65.35 309 ⇑P **P 07 07 38.2 +0.5**
HFS Hagfors 66.82 327 LR LR 07 38 59.6
comp=Z,98nm,18.2s,baz=52,slow=38
NC405 NORSAR Array S 67.52 328 P **P 07 07 50.6 -0.7**
NB2 NORSAR Subarra 67.77 328 P **P 07 07 51.5 -1.5**
comp=Z,0.8nm,0.5s,baz=75,slow=6.5
NOA NORSAR Array B 67.77 328 P **P 07 07 51.8 -1.2**
comp=Z,1.8nm,0.7s,baz=74,slow=6.4,SNR=7.3
NOA LR LR 07 37 54.2
comp=Z,90nm,20.3s,baz=70,slow=36
comp=Z,1.8nm,0.7s
UNV Unalaska Valle 68.67 40 P **P 07 07 57.8 -0.9**
baz=287
GCSA Galena City Sc 69.87 27 P **P 07 08 05.6 -0.2**
baz=291,SNR=5.6
GERES GERESS Array B 69.98 315 P **P 07 08 07.0 0.0**
comp=Z,1.5nm,0.8s,baz=96,slow=8.5,SNR=9.7
comp=Z,1.5nm,0.8s
GERES GERESS Array B 69.98 315 P **P 07 08 07.0 0.0**
C23K Itkillik River 70.18 21 P **P 07 08 07.4 -0.3**
baz=294
F21K Alatna River 70.25 24 P **P 07 08 07.6 -0.6**
baz=293
E22K Anaktuvuk Pass 70.48 23 P **P 07 08 09.2 -0.4**
baz=294
D23K Nanushuk River 70.52 22 P **P 07 08 08.7 -1.1**
baz=294
G21K Allakaket 70.52 24 P **P 07 08 09.4 -0.5**
baz=293,SNR=12
N16K Nishlik Lake 70.56 31 P **P 07 08 09.7 -0.5**
baz=290,SNR=7.2
F22K John River 70.60 23 P **P 07 08 10.0 -0.4**
baz=294
IMAR Indian Mountai 70.63 25 P **P 07 08 10.0 -0.5**
TTA Tatalina 70.89 28 P **P 07 08 12.0 -0.3**
TTA IAmb IAmb 07 08 18.4
comp=Z,5.1nm,1.2s
TTA Tatalina 70.89 28 P **P 07 08 12.0 -0.3**
TTA pmax pmax
comp=Z,5.0nm,1.2s
TTA Tatalina 70.89 28 P **P 07 08 11.2 -1.1**
baz=292
TOLK Toolik Lake Re 71.02 22 P **P 07 08 12.2 -0.7**
baz=296
D24K Happy Valley 71.04 21 P **P 07 08 11.9 -1.1**
baz=296
G22K Bees 71.08 24 P **P 07 08 12.3 -0.9**
baz=294
H21K Melozitna Rive 71.12 25 P **P 07 08 13.2 -0.3**
H21K IAmb IAmb 07 08 19.2
comp=Z,12nm,1.4s
H21K Melozitna Rive 71.12 25 P **P 07 08 12.9 -0.6**
baz=294,SNR=8.8
J20K Nowinta River 71.19 27 P **P 07 08 14.2 +0.3**
baz=293,SNR=6.0
O16K Kokwok River B 71.19 32 P **P 07 08 13.8 -0.2**
baz=291,SNR=7.2
COLD Coldfoot 71.42 23 P **P 07 08 15.4 +0.1**
baz=296
P16K Nushagak River 71.44 33 P **P 07 08 15.5 0.0**
baz=292
K20K Telida 71.54 28 P **P 07 08 16.5 +0.4**
baz=293,SNR=6.0
H22K Ishtalitna Cre 71.56 25 P **P 07 08 15.3 -0.9**
baz=295
O17K Koliganek Bris 71.59 32 P **P 07 08 15.9 -0.5**
baz=292
E24K Your Creek 71.63 22 P **P 07 08 16.3 -0.3**
baz=297
I21K Tanana 71.63 25 P **P 07 08 17.2 +0.6**
I21K IAmb IAmb 07 08 24.2
comp=Z,7.5nm,0.8s
I21K Tanana 71.63 25 P **P 07 08 15.9 -0.7**
baz=295,SNR=7.8
S14K Fog Glacier 71.66 36 P **P 07 08 16.2 -0.9**
baz=291
L19K White Mountain 71.67 29 P **P 07 08 17.7 +0.8**
L19K IAmb IAmb 07 08 18.6
comp=Z,5.9nm,0.8s
L19K White Mountain 71.67 29 P **P 07 08 17.1 +0.1**
baz=293,SNR=7.5
G23K Bananza Creek 71.70 24 P **P 07 08 16.4 -0.6**
baz=296,SNR=7.0
N18K Kilae Creek 71.80 31 P **P 07 08 18.2 +0.5**
N18K IAmb IAmb 07 08 25.5
comp=Z,4.2nm,0.9s
N18K Kilae Creek 71.80 31 P **P 07 08 17.4 -0.4**
baz=293
L20K Farewell, AK 71.97 28 P **P 07 08 17.7 -1.0**
baz=294
M19K Big River Lodg 71.99 29 P **P 07 08 19.2 +0.4**
M19K IAmb IAmb 07 08 38.1
comp=Z,4.6nm,0.8s
M19K Big River Lodg 71.99 29 P **P 07 08 17.2 -1.6**
baz=294
CHUM Lake Minchumin 72.04 27 P **P 07 08 17.7 -1.4**
baz=295
F24K Squaw Lake 72.09 23 P **P 07 08 18.5 -0.9**
baz=297
P17K Kvichak River 72.12 32 P **P 07 08 18.6 -1.0**
baz=293
MLY Manley 72.17 25 P **P 07 08 20.1 +0.2**
MLY IAmb IAmb 07 08 21.0
comp=Z,6.5nm,0.8s
MLY Manley 72.17 25 P **P 07 08 19.7 -0.2**
baz=296,SNR=12
CHNA Chernabura Isl 72.17 37 P **P 07 08 18.8 -1.2**
baz=292
R16K Pilot Point 72.19 34 P **P 07 08 18.8 -1.2**
baz=292
Q16K King Salmon 72.22 33 P **P 07 08 19.2 -1.0**
baz=293
CHGN Chignik 72.25 35 P **P 07 08 19.0 -1.4**
baz=292
H23K Yukon River 72.27 24 P **P 07 08 20.9 +0.4**
H23K IAmb IAmb 07 08 21.9
comp=Z,4.5nm,0.8s
H23K Yukon River 72.27 24 P **P 07 08 19.4 -1.1**
baz=296,SNR=5.3
CAST Castle Rocks 72.33 27 P **P 07 08 19.7 -1.1**
baz=295
N19K Bonanza Creek 72.38 30 P **P 07 08 20.1 -1.3**
baz=294
C27K Jago River 72.41 20 P **P 07 08 20.8 -0.4**
baz=300
O18K Koktuh Hills 72.44 31 P **P 07 08 20.7 -0.8**
baz=294
BPAW Bear Paw Mtn. 72.48 26 P **P 07 08 21.9 +0.1**
BPAW Bear Paw Mtn. 72.48 26 P **P 07 08 21.0 -0.8**
baz=296,SNR=12
PPLA Purkeypile 72.51 28 P **P 07 08 20.8 -1.3**
baz=295,SNR=5.4
M20K Styx River 72.54 29 P **P 07 08 22.4 +0.2**
M20K IAmb IAmb 07 08 23.8
comp=Z,7.5nm,0.8s
M20K Styx River 72.54 29 P **P 07 08 21.3 -0.9**
baz=295,SNR=5.5
G24K Hadweenzic Riv 72.61 23 P **P 07 08 21.0 -1.5**
baz=298
I23K Minto, Yukon-K 72.64 25 P **P 07 08 21.4 -1.3**
baz=297
R17K Ugashik Creek 72.76 34 P **P 07 08 22.3 -1.2**
baz=293
F25K Christian Rive 72.81 22 P **P 07 08 23.3 -0.4**
baz=299
H24K Noodor Dome 72.87 24 P **P 07 08 23.9 -0.2**
baz=298
NEA2 Nenana 73.01 25 P **P 07 08 24.5 -0.3**
baz=297,SNR=7.8
TRF Thorofare Moun 73.05 27 P **P 07 08 24.2 -1.1**
baz=297
G25K Bearman Lake 73.06 23 P **P 07 08 24.3 -0.8**
baz=299
DAVOX Davos/Dischmat 73.11 314 LR LR 07 42 07.4
comp=Z,147nm,18.3s,baz=68,slow=37
MDM Murphy Dome 73.16 25 P **P 07 08 25.7 0.0**
BMAR Burnt Mountain 73.25 22 P **P 07 08 26.8 +0.6**
F26K Sheenjek River 73.26 22 P **P 07 08 25.3 -1.0**
baz=301
TCOL CIGO, UAF Yank 73.33 25 P **P 07 08 26.0 -0.7**
baz=298
COLA College 73.34 25 ⇑P **P 07 08 27.0 +0.3**
COLA 07 08 42.9
COLA College 73.34 25 P **P 07 08 26.0 -0.7**
baz=298
POKR Poker Plat Res 73.38 25 P **P 07 08 26.2 -0.9**
baz=298
H25K Birch Creek 73.40 23 P **P 07 08 26.1 -1.0**
baz=300
P19K Oil Pt 73.44 31 P **P 07 08 26.3 -1.2**
baz=295
MCK McKinley 73.46 26 P **P 07 08 26.6 -0.9**
baz=298
Q19K Cape Douglas, 73.55 32 P **P 07 08 27.0 -1.2**
baz=295
SUA Susitna One 73.75 29 P **P 07 08 28.5 -0.9**
baz=297
ILAR Eielson Array 73.75 25 P **P 07 08 27.5 -1.7**
comp=Z,1.2nm,0.8s,baz=282,slow=4.1,SNR=14
ILAR LR LR 07 43 22.6
comp=Z,92nm,19.1s,baz=266,slow=38
comp=Z,1.2nm,0.8s
G26K Porcupine Rive 73.76 22 P **P 07 08 28.7 -0.5**
baz=301
E27K Coleen River 73.82 21 P **P 07 08 29.5 -0.1**
baz=303
M22K Willow 73.88 28 P **P 07 08 29.0 -1.0**
baz=297
PRP Porcupine Dome 73.88 24 P **P 07 08 29.0 -1.1**
baz=300,SNR=9.1
HDA Harding Lake 73.90 25 P **P 07 08 29.7 -0.4**
baz=299
WAT1 Susitna Watana 74.03 27 P **P 07 08 30.0 -0.9**
baz=298
HOM Homer 74.16 31 P **P 07 08 30.3 -1.4**
baz=296
Q20K Shuyak Island 74.28 32 P **P 07 08 31.0 -1.4**
baz=296
SII Sitkinak Islan 74.30 34 P **P 07 08 31.5 -1.1**
baz=295
RC01 Rabbit Creek A 74.35 29 P **P 07 08 31.7 -1.1**
baz=298
PMR Palmer 74.38 28 P **P 07 08 31.5 -1.4**
baz=298
DHY Denali Highway 74.39 27 P **P 07 08 32.2 -1.0**
baz=299
J25K Salcha River, 74.39 25 P **P 07 08 31.4 -1.6**
J25K Salcha River, 74.39 25 P **P 07 08 31.8 -1.3**
baz=300
OHAK Old Harbor 74.45 33 P **P 07 08 32.5 -0.9**
OHAK Old Harbor 74.45 33 P **P 07 08 32.6 -0.8**
baz=296
WAT6 Susitna Watana 74.48 27 P **P 07 08 32.6 -1.1**
baz=299
G27K Doyon Strip 74.55 22 P **P 07 08 33.4 -0.5**
baz=303,SNR=5.4
KDAK Kodiak Island 74.55 33 P **P 07 08 33.1 -0.9**
baz=296
SML Sawmill 74.61 28 P **P 07 08 33.6 -0.7**
baz=299
K24K Donnelly Dome 74.65 25 P **P 07 08 33.8 -0.7**
baz=300
KNK Knik Glacier 74.75 28 P **P 07 08 34.4 -0.7**
baz=299
I26K Coal Creek Min 74.84 24 P **P 07 08 35.3 -0.3**
baz=302
M23K Glacier View 74.87 28 P **P 07 08 35.1 -0.7**
baz=299
H27K Steamboat Moun 74.91 22 P **P 07 08 35.3 -0.7**
baz=303
SEW Seward 74.94 30 P **P 07 08 35.2 -1.0**
baz=298
SCM Sheep Creek Mo 75.01 28 P **P 07 08 36.0 -0.8**
baz=299
RIDG Independent Ri 75.04 25 P **P 07 08 35.6 -1.2**
RIDG IAmb IAmb 07 08 50.8
comp=Z,9.6nm,1.2s
RIDG Independent Ri 75.04 25 P **P 07 08 35.2 -1.6**
baz=301
J26L Joseph Creek 75.12 24 P **P 07 08 36.0 -1.3**
baz=302,SNR=15
PAX Paxson 75.19 26 P **P 07 08 36.9 -0.9**
baz=301
I27K Kandik River 75.22 23 P **P 07 08 37.0 -0.8**
baz=303
SCRK Sand Creek 75.24 25 P **P 07 08 36.9 -1.1**
baz=302
M24K Tolsona, Glenn 75.35 27 P **P 07 08 38.5 -0.2**
baz=300
KLU Klutina 75.77 28 P **P 07 08 41.3 +0.3**
KLU Klutina 75.77 28 P **P 07 08 41.0 -0.1**
baz=301
EGAK Eagle 75.84 24 P **P 07 08 41.2 -0.1**
baz=304
K27K Chicken 75.92 24 P **P 07 08 42.2 +0.4**
baz=303
L26K Log Cabin Wild 75.99 26 P **P 07 08 42.2 0.0**
baz=302
INK Inuvik 76.17 19 LR LR 07 47 13.7
comp=Z,129nm,18.6s,baz=275,slow=40
INK Inuvik 76.17 19 P **P 07 08 43.0 -0.1**
baz=310
N25K Chitina, Valde 76.25 27 P **P 07 08 43.5 -0.3**
baz=302
EYAK Cordova Ski Ar 76.32 28 P **P 07 08 43.9 -0.2**
baz=301
EPYK Eagle Plains 76.41 21 P **P 07 08 43.4 -1.2**
baz=307
M26K Nabesna, AK 76.46 26 P **P 07 08 44.7 -0.3**
baz=303
L27K Beaver Creek, 76.55 25 P **P 07 08 45.5 +0.1**
baz=304
BMRM Bremner River 76.58 28 P **P 07 08 45.1 -0.5**
BMRM Bremner River 76.58 28 P **P 07 08 45.4 -0.3**
baz=302
DAWY Dawson 76.88 24 P **P 07 08 46.8 -0.5**
baz=306
M27K Edge Creek, AK 76.92 26 P **P 07 08 47.5 -0.1**
baz=304
EKA Eskdalemuir Ar 76.96 326 LR LR 07 45 43.7
comp=Z,81nm,18.4s,baz=4.5,slow=38
BVCY Beaver Creek 77.28 25 P **P 07 08 49.1 -0.5**
baz=305
YUK6 Outpost Mounta 79.11 26 P **P 07 08 58.9 -1.1**
baz=307
DLBC Dease Lake 83.96 25 LR LR 07 49 40.0
comp=Z,104nm,19.2s,baz=129,slow=38
SFJD Kangerlussuaq 84.22 350 LR LR 07 49 57.8
comp=Z,111nm,19.0s,baz=18,slow=38
YKA Yellowknife Ar 85.74 17 P **P 07 09 33.8 -0.4**
comp=Z,1.7nm,0.8s,baz=325,slow=5.0,SNR=4.8
YKA LR LR 07 53 16.7
comp=Z,100nm,18.3s,baz=329,slow=40
comp=Z,1.7nm,0.8s
BBB Bella Bella 89.15 29 LR LR 07 50 55.2
comp=Z,41nm,18.1s,baz=270,slow=36
NEW Newport 96.68 26 LR LR 07 58 02.2
comp=Z,56nm,19.8s,baz=306,slow=38
YBH Yreka Blue Hor 99.36 33 LR LR 07 56 21.8
comp=Z,30nm,20.4s,baz=301,slow=36
TXAR Lajitas Array 118.22 27 PKP **PKPdf 07 15 43.1 -0.1**
comp=Z,0.3nm,0.7s,baz=359,slow=0.6,SNR=4.1
SDV Santo Domingo 143.83 350 PKP PKPab 07 16 28.9 +0.2
comp=Z,16nm,0.8s,baz=53,slow=5.6,SNR=6.6
ROSC El Rosal 148.23 356 PKPbc **PKPbc 07 16 44.0 +1.2**
comp=Z,23nm,0.7s,baz=114,slow=12,SNR=12

IDC ***12*** *06:58:32.2±5.5,21.27S×173.51E,h0km,mb3.6/4, mbtmp3.8/6,ML3.5/2, Error ellipse: s-maj=130.1km s-min=29.2km az=32.0*

ISC 12 06:58:43.6±3.4,22.1S±0.5×172.9E±0.2,h35km,n9, s0955/7,mb3.6/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.96**	**269**	Pn		**Pn**	**07 00 10.0**	**+0.6**
	0.6nm,0.3s,baz=127,slow=12,SNR=7.3							
DZM				Sn		**Sn**	**07 01 16.0**	**-0.6**
	0.3nm,0.3s,baz=20,slow=14,SNR=2.9							
	2.1nm,0.4s							

URZ	**Urewera**	**16.48**	**168**	P	**P**	07 02 34.7	+0.3	
	0.2nm,0.3s,baz=333,slow=14,SNR=2.5							
	7.4nm,0.8s							
ASAR	**Alice Springs**	**35.85**	**260**	P	**P**	07 05 40.6	+0.3	
	0.5nm,0.9s,baz=100,slow=9.5,SNR=3.3							
	0.5nm,0.9s							
WRA	**Warramunga Arr**	**35.97**	**266**	P	**P**	07 05 40.9	-0.4	
	0.3nm,0.7s,baz=96,slow=8.6,SNR=1.4							
	0.3nm,0.7s							
H11S2	**WAKE ISLAND Hy**	**40.83**	**351**	T	T	07 48 48.4		
	baz=172							
H11S3	**WAKE ISLAND Hy**	**40.83**	**351**	T	T	07 48 48.9		
	baz=172							
H11S1	**WAKE ISLAND Hy**	**40.84**	**351**	T	T	07 48 49.8		
	baz=172							
VNDA	**Vanda**	**55.69**	**183**	P	**P**	07 08 15.9	0.0	
	0.6nm,0.7s,baz=12,slow=7.5,SNR=6.2							
	0.6nm,0.7s							
QSPA	**South Pole Qui**	**67.93**	**180**	P	**P**	07 09 38.2	-0.5	
	3.1nm,1.0s,baz=27,slow=2.8,SNR=14							
	3.1nm,1.0s							

IDC 12 07:09:43.8±3.6, 53°.76N×88°.15E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=36.7km s-min=19.5km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**277**	*i*		07 22 03.1	
	0.2nm,0.9s,baz=94,slow=309,SNR=7.0						
ZALV	**Zalesovo Beam**	**1.98**	**277**	Pn	Pn	07 10 18.7	+0.1
	2.6nm,0.3s,baz=94,slow=16,SNR=28						
ZALV				Lg	Lg	07 10 46.5	
	3.6nm,0.3s,baz=93,slow=25,SNR=16						
KURBB	**Kurchatov Arra**	**6.70**	**246**	Pn	Pn	07 11 24.0	+0.7
	0.2nm,0.3s,baz=63,slow=14,SNR=8.3						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**7.92**	**211**	Pn	Pn	07 11 41.0	+0.9
	0.2nm,0.3s,baz=32,slow=15,SNR=6.7						
	0.3nm,0.4s						

IDC 12 07:14:39.7±1.4, 22°.60S×172°.83E, h0km, mb3.6/5, mbtmp3.6/6, ML3.6/1, MS3.7/12, Error ellipse: s-maj=38.2km s-min=27.3km az=167.0

ISC 12 07:14:43.6±1.0, 22°.5S±0°.2×172°.90E±0°.10, h32km, n28, σ1§75/8, mb3.6/5, MS3.8/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.99**	**272**	Pn	**Pn**	07 16 09.2	-1.0
	1.7nm,0.3s,baz=86,slow=19,SNR=11						
DZM				Sn	**Sn**	07 17 17.4	-0.4
	0.2nm,0.3s,baz=46,slow=18,SNR=1.7						
	3.8nm,0.4s						
DZM	**Mont Dzumac**	**5.99**	**272**	*e*LR	LR	07 17 49.9	
	comp=Z,2μm,24.7s						
MSVF	**Nonsavu**	**6.75**	**47**	Pn	**Pn**	07 16 18.5	-2.0
	0.3nm,0.3s,baz=227,slow=19,SNR=1.9						
MSVF				LR	LR	07 18 24.3	
	comp=Z,1μm,18.6s,baz=239,slow=33						
RAO	**Raoul Island**	**10.68**	**131**	LR	LR	07 20 14.5	
	comp=Z,135nm,18.1s,baz=106,slow=32						
URZ	**Urewera**	**16.16**	**168**	LR	LR	07 23 12.9	
	comp=Z,392nm,20.8s,baz=29,slow=32						
AFI	**Afiamalu**	**16.85**	**62**	LR	LR	07 23 34.7	
	comp=Z,319nm,19.9s,baz=246,slow=32						
RPZ	**Rata Peaks**	**21.25**	**184**	LR	LR	07 26 48.3	
	comp=Z,376nm,19.3s,baz=9.5,slow=34						
CTA	**Charters Tower**	**24.93**	**270**	LR	LR	07 29 30.8	
	comp=Z,324nm,18.6s,baz=122,slow=36						
RAR	**Rarotonga**	**25.39**	**92**	LR	LR	07 27 26.8	
	comp=Z,101nm,21.7s,baz=280,slow=30						
PPT2	**Papeete2**	**35.52**	**89**	*e*LR	LR	07 30 37.0	
	comp=Z,259nm,27.8s						
PPT2				*e*LR	LR	07 30 37.5	
	comp=Z,286nm,26.5s						
PPT	**Papeete**	**35.53**	**89**	LR	LR	07 35 00.9	
	comp=Z,43nm,18.2s,baz=268,slow=34						
ASAR	**Alice Springs**	**35.83**	**260**	P	**P**	07 21 40.7	+0.2
	0.3nm,0.8s,baz=85,slow=9.3,SNR=2.6						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**35.97**	**267**	P	**P**	07 21 41.4	-0.4
	0.1nm,0.4s,baz=96,slow=8.3,SNR=8.1						
	0.1nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**41.15**	**351**	T	T	08 06 08.1	
	baz=171,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**41.15**	**351**	T	T	08 06 10.9	
	baz=171,slow=76,SNR=38						
H11S1	**WAKE ISLAND Hy**	**41.16**	**351**	T	T	08 06 11.1	
	baz=171,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**42.32**	**352**	T	T	08 07 34.4	
	baz=173,slow=76,SNR=9.5						
H11N3	**WAKE ISLAND Hy**	**42.33**	**352**	T	T	08 07 34.8	
	baz=173,slow=76,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**42.34**	**352**	T	T	08 07 34.7	
	baz=173,slow=76,SNR=6.9						
TAOE	**Nuku Hiva Isla**	**46.99**	**81**	*e*LR	LR	07 35 56.3	
	comp=Z,231nm,27.5s						
KAPI	**Kappang**	**54.15**	**280**	LR	LR	07 46 57.9	
	comp=Z,63nm,21.4s,baz=84,slow=36						
VNDA	**Vanda**	**55.37**	**183**	P	**P**	07 24 13.9	-0.2
	0.6nm,0.7s,baz=352,slow=9.2,SNR=2.9						
VNDA				LR	LR	07 46 37.0	
	comp=Z,93nm,18.6s,baz=324,slow=35						
	0.6nm,0.7s						
PETK	**Petropavlovsk-**	**76.40**	**351**	P	**P**	07 26 32.6	+3.0
	2.2nm,0.8s,baz=138,slow=5.4,SNR=4.3						
PETK				LR	LR	07 53 58.4	
	comp=Z,38nm,21.1s,baz=164,slow=31						
	2.2nm,0.8s						
SNAA	**Sanae**	**86.08**	**181**	LR	LR	08 02 57.8	
	comp=Z,84nm,21.8s,baz=42,slow=34						
NVAR	**Mina Array Bea**	**88.42**	**47**	P	**P**	07 27 33.5	+0.6
	0.3nm,0.9s,baz=226,slow=4.7,SNR=1.5						
	0.3nm,0.9s						
H03S2	**Juan Fernandez**	**91.70**	**128**	T	T	09 09 42.3	
	baz=240						
H03S1	**Juan Fernandez**	**91.71**	**128**	T	T	09 09 34.2	
	baz=240						
H03S3	**Juan Fernandez**	**91.72**	**128**	T	T	09 09 30.1	
	baz=240						

MOS 12 07:17:12.8±1.2, 6°.17S×105°.14E, h41km, mb5.2/37, Error ellipse: s-maj=10.1km s-min=4.9km az=117.6

NEIC 12 07:17:14.8±2.8, 6°.59S±0°.06×104°.85E±0°.06, h44km±6km, mb5.1/64, Error ellipse: s-maj=9.1km s-min=7.7km az=208.0

IDC 12 07:17:15.5±1.2, 6°.25S×105°.02E, h50km±10km, mb4.7/37, mbtmp5.0/39, ML5.4/2, MS3.8/25, Error ellipse: s-maj=13.2km s-min=7.0km az=34.0

DJA 12 07:17:15.1±0.2, 7°S±2°×10°5E±°, h50km±2km, M4.9/57, mB5.4/22, mb5.1/57, MLv5.2/24, Mw(mB)4.9/22

ISC 12 07:17:15.9±0.4, 6°.47S±0°.04×104°.94E±0°.04, h57km±2km, h57km:pP-P, n618, σ1§42/677, mb5.0/105, MS3.9/29, 57C-11D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.04**	**335**	P	**Pn**	07 17 34.6	+0.3
BLSI	**Bandar Lampung**	**1.14**	**16**	P	**Pn**	07 17 36.2	+0.5
BLSI				S	**Sn**	07 17 51.9	+1.5
SBJI	**Serang**	**1.24**	**74**	P	**Pn**	07 17 37.1	+0.1
SBJI				S	**Sn**	07 17 53.8	+1.1
KLI	**Kotabumi**	**1.60**	**357**	P	**Pn**	07 17 43.1	+1.2
KLI				S	**Sn**	07 18 03.3	+1.8
LWLI	**Liwa**	**1.69**	**329**	P	**Pn**	07 17 44.2	+1.0
LWLI				S	**Sn**	07 18 05.9	+2.1
SKJI	**Sukabumi**	**1.69**	**108**	P	**Pn**	07 17 42.7	-0.5
TNG	**Tangerang**	**1.73**	**80**	P	**Pn**	07 17 44.2	+0.6
TNG				S	**Sn**	07 18 06.3	+1.7
DBJI	**Dramaga**	**1.81**	**93**	P	**Pn**	07 17 45.2	+0.5
DBJI				S	**Sn**	07 18 08.5	+2.0
CBJI	**Citeko**	**1.90**	**89**	P	**Pn**	07 17 48.3	+2.3
CNJI	**Cibinong**	**2.33**	**111**	P	**Pn**	07 17 50.5	-1.3
CNJI				S	**Sn**	07 18 18.9	-0.5
LEM	**Lembang**	**2.69**	**98**	P	**Pn**	07 17 57.7	+0.8
	164nm,0.3s,baz=208,slow=7.6,SNR=86						
LEM				S	**Sn**	07 18 29.5	+1.2
	1μm,0.6s,baz=280,slow=21,SNR=3.9						
LEM				LR	LR	07 19 15.4	
	comp=Z,4μm,19.8s,baz=318,slow=45						
	790nm,0.6s						
LEM	**Lembang**	**2.69**	**98**	P	**Pn**	07 17 58.5	+1.6
MNAI	**Manna**	**2.88**	**317**		**Pn**	07 18 00.5	+1.2
MNAI	**Manna**	**2.88**	**317**	P	**Pn**	07 18 00.9	+1.6
MNAI	**Manna**	**2.88**	**317**	P	**Pn**	07 18 01.6	+2.3
JCJI	**Jatiwangi**	**3.31**	**90**	P	**Pn**	07 18 06.3	+1.0
PMBI	**Palembang**	**3.53**	**357**		**Pn**	07 18 10.9	+2.7
PMBI	**Palembang**	**3.53**	**357**	P	**Pn**	07 18 08.4	+0.2
PMBI	**Palembang**	**3.53**	**357**	P	**Pn**	07 18 11.9	+3.7
KSI	**Kapahiang**	**3.65**	**320**	P	**Pn**	07 18 11.8	+1.9
XMIS	**Christmas Isla**	**4.04**	**170**	Pn	**Pn**	07 18 11.3	-4.1
PPBI	**Pangkal Pinang**	**4.45**	**16**	P	**Pn**	07 18 22.5	+1.7
TPI	**Tanjungpandan**	**4.58**	**36**	P	**Pn**	07 18 23.8	+1.2
JMBI	**JAMBI**	**4.98**	**345**	P	**Pn**	07 18 30.4	+2.3
	1.1nm263nm,0.6s						
YOGI	**Yogyakarta**	**5.48**	**104**	P	**Pn**	07 18 37.6	+2.6
	1.9nm386nm,0.8s						
KRJI	**Kerinci**	**5.56**	**321**	P	Pn	07 18 50.3	+14
UGM	**Wanagama**	**5.73**	**105**	P	**Pn**	07 18 41.2	+2.8
	2.4nm620nm,0.8s						
UGM	**Wanagama**	**5.73**	**105**	P	**Pn**	07 18 43.0	+4.6
DSRI	**Dabo**	**5.96**	**357**	P	**Pn**	07 18 43.8	+2.2
	0.4nm2μm97nm,0.5s						
PCJI	**Pacitan**	**6.42**	**106**	P	**Pn**	07 18 49.4	+1.5
	1.7nm186nm,0.7s						
NGJI	**Ngawi**	**6.54**	**98**	P	**Pn**	07 18 52.9	+3.4
	1.2nm447nm,1.0s						
TBJI	**Tambak Boyo**	**6.88**	**93**	P	**Pn**	07 18 52.7	-1.4
	0.5nm150nm,0.8s						
PWJI	**Pagerwojo**	**6.99**	**103**	P	**Pn**	07 18 56.8	+1.2
	1.4nm161nm,0.6s						
TPRI	**Tanjung Pinang**	**7.35**	**357**	P	**Pn**	07 19 00.9	+0.2
	0.9nm16μm75nm,0.4s						
SISI	**Saibi**	**7.75**	**311**	P	**Pn**	07 19 05.0	-1.2
	0.4nm92nm,0.8s						
MYKOM	**Kota Tinggi**	**8.28**	**352**	Pn	**Pn**	07 19 14.2	+0.8
GMJI	**Gumukmas**	**8.63**	**102**	P	Pn	07 19 25.1	+7.0
BLJI	**Banyuglugur**	**8.69**	**99**	P	Pn	07 19 25.3	+6.4
MNSI	**Mandailing Nat**	**8.98**	**323**	P	**Pn**	07 19 24.7	+1.7
	44nm,0.7s						
KMMI	**Kalianget**	**8.99**	**94**	P	**Pn**	07 19 25.0	+1.9
	163nm,1.0s						
STKI	**Sintang**	**9.21**	**45**	P	**Pn**	07 19 29.0	+2.9
	12μm56nm,0.7s						
ABJI	**Asem Bagus**	**9.32**	**99**	P	**Pn**	07 19 30.8	+3.2
	7μm980nm,0.8s						
JAGI	**Jajag, Banyuwa**	**9.35**	**103**	Pn	**Pn**	07 19 28.4	+0.4
JAGI	**Jajag, Banyuwa**	**9.35**	**103**	P	**Pn**	07 19 29.4	+1.3
	6μm466nm,0.9s						
JAGI	**Jajag, Banyuwa**	**9.35**	**103**	P	**Pn**	07 19 30.5	+2.4
KSM	**Kuching**	**9.54**	**34**		**Pn**	07 19 33.1	+2.5
KSM	**Kuching**	**9.54**	**34**	P	**Pn**	07 19 34.1	+3.4
COCO	**West Island**	**9.80**	**234**		**Pn**	07 19 32.2	-2.0
COCO	**West Island**	**9.80**	**234**	P	**Pn**	07 19 32.2	-2.0
BBKI	**Banjar Baru**	**10.31**	**74**	P	**Pn**	07 19 45.0	+3.8
	7μm40nm,0.9s						
SRBI	**Singaraja**	**10.32**	**100**	P	**Pn**	07 19 42.6	+1.3
	4μm305nm,0.8s						
GSI	**Gunungsitoli**	**10.66**	**316**	Pn	**Pn**	07 19 43.8	-2.1
GSI	**Gunungsitoli**	**10.66**	**316**	P	**Pn**	07 19 44.0	-1.9
	133nm,0.4s						
GSI	**Gunungsitoli**	**10.66**	**316**	P	**Pn**	07 19 48.3	+2.4
RPSI	**Rantau Prapat**	**10.91**	**326**		**Pn**	07 19 50.0	+0.7
PSI	**Prapat**	**10.99**	**327**	P	**Pn**	07 19 50.0	-0.6
	3.8nm,0.3s,baz=150,slow=16,SNR=2.6						
PSI	**Prapat**	**10.99**	**327**	P	**Pn**	07 19 50.0	-0.6
SBUM	**Sibu**	**11.47**	**40**	Pn	**Pn**	07 19 58.6	+1.7
TWSI	**Taliwang, Sumb**	**12.05**	**102**	P	**P**	07 20 12.5	-3.5
PLAI	**Plampang**	**12.94**	**101**	P	**Pn**	07 20 16.4	-0.7
	1μm1,0.8s						
PLAI	**Plampang**	**12.94**	**101**	P	**Pn**	07 20 20.3	+3.2
KAPI	**Kappang**	**14.81**	**85**	P	**Pn**	07 20 43.9	+1.8
	16nm,0.8s,baz=236,slow=12,SNR=3.5						
KAPI				LR	LR	07 27 00.1	
	comp=Z,700nm,20.1s,baz=257,slow=40						
KAPI	**Kappang**	**14.81**	**85**	P	**P**	07 20 45.5	-1.2
SPSI	**Sidrap Palu**	**14.98**	**81**	P	**Pn**	07 20 46.5	+2.2
	2μm23nm,1.1s						
BKSI	**Bukumba**	**15.15**	**86**	P	**Pn**	07 20 48.0	+1.5
	932nm128nm,1.0s						
TTSI	**Tana Toraja**	**15.22**	**78**	P	**Pn**	07 20 49.4	+2.0
	47nm,0.8s						
BSSI	**Bau Bau, Buton**	**15.47**	**90**	P	**Pn**	07 20 50.4	-0.2
	49nm,1.0s						
SRIT	**Nakonsritamara**	**15.88**	**340**	P	**P**	07 20 57.5	-1.2
MPSI	**Mapaga**	**16.39**	**66**	P	**P**	07 21 03.6	-0.7
	682nm58nm,0.9s						
EDFI	**Ende, Flores**	**16.76**	**99**	P	**Pn**	07 21 00.2	-6.8
	694nm59nm,0.8s						
KKM	**Kota Kinabalu**	**16.77**	**42**	P	**P**	07 21 08.3	-0.3
KKM	**Kota Kinabalu**	**16.77**	**42**	P	**P**	07 21 11.0	+2.4
MMRI	**Maumere**	**17.29**	**98**		**Pn**	07 21 13.6	+0.1
MMRI	**Maumere**	**17.29**	**98**	P	**P**	07 21 14.9	+0.7
	3μm320nm,0.7s						
MMRI	**Maumere**	**17.29**	**98**	P	**P**	07 21 15.9	+1.7
TOLI2	**Tolitoli**	**17.52**	**65**		**P**	07 21 17.7	+1.0
TOLI2	**Tolitoli**	**17.52**	**65**	P	**P**	07 21 19.3	+2.5
APSI	**Ampana**	**17.57**	**72**	P	**P**	07 21 17.5	+0.3
	957nm84nm,0.8s						
MYLDM	**Lahad Datu**	**17.82**	**50**	P	**P**	07 21 21.5	+1.5
MRSI	**Marisa**	**18.32**	**68**	P	**Pn**	07 21 28.7	+2.6
	862m101nm,0.9s						
GIRL	**Giralia**	**18.41**	**152**	P	**P**	07 21 25.1	-1.4
	baz=18,SNR=15						
LUWI	**Luwuk**	**18.59**	**74**	P	**Pn**	07 21 29.6	+0.2
LUWI				IAmb	IAmb	07 21 33.0	
	comp=Z,91nm,0.9s						
LUWI	**Luwuk**	**18.59**	**74**	P	**P**	07 21 28.8	+0.2
	comp=Z,9μmcomp=Z,138nm,0.5s						
LUWI	**Luwuk**	**18.59**	**74**	P	**Pn**	07 21 32.5	+3.1
BATI	**Baumata**	**18.90**	**103**	P	**P**	07 21 31.8	-0.2
	comp=Z,49nm,0.3s,baz=204,slow=6.7,SNR=23						
BATI				S	**S**	07 25 02.7	-1.1
	comp=Z,81nm,0.5s,baz=320,slow=18,SNR=8.9						
	comp=Z,119nm,0.3s						
BATI	**Baumata**	**18.90**	**103**	P	**P**	07 21 31.8	-0.2
	comp=Z,2μmcomp=Z,215nm,0.7s						
GTOI	**Gorontalo**	**19.37**	**69**	P	**P**	07 21 35.3	-1.8
	comp=Z,270nmcomp=Z,24nm,0.7s						
SOEI	**Soe**	**19.41**	**101**	P	**P**	07 21 38.0	+0.3
SOEI	**Soe**	**19.41**	**101**	P	**P**	07 21 36.2	-1.5
	comp=Z,3μmcomp=Z,439nm,0.9s						
SOEI	**Soe**	**19.41**	**101**	P	**Pn**	07 21 39.4	+0.1
MBWA	**Marble Bar**	**20.45**	**137**	P	**P**	07 21 48.0	-0.9
MBWA	**Marble Bar**	**20.45**	**137**	P	Pn	07 21 50.6	-0.8
PSA00	**Pilbara Seismi**	**20.82**	**138**	P	**P**	07 21 50.7	-2.0
PSA00				IAmb	IAmb	07 21 57.0	
	comp=Z,62nm,0.9s						
PSA00	**Pilbara Seismi**	**20.82**	**138**	P	**P**	07 21 54.1	+1.4
FITZ	**Fitzroy Crossi**	**23.27**	**122**	P	**P**	07 22 18.0	-0.7
	comp=Z,21nm,0.8s,baz=295,slow=7.3,SNR=31						
FITZ				S	**S**	07 26 30.4	+3.7
	comp=Z,1.9nm,0.6s,baz=326,slow=8.2,SNR=1.7						
	comp=Z,21nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.27**	**122**	P	**P**	07 22 18.4	-0.2
	baz=23,SNR=16						
FITZ	**Fitzroy Crossi**	**23.27**	**122**	P	**P**	07 22 18.2	-0.4
FITZ	**Fitzroy Crossi**	**23.27**	**122**	P	**P**	07 22 20.2	+1.6
TNTI	**Ternate**	**23.52**	**73**	P	**P**	07 22 20.9	-0.1
TNTI	**Ternate**	**23.52**	**73**	P	**P**	07 22 21.9	+0.8
	comp=Z,69nm,1.3s						
TNTI	**Ternate**	**23.52**	**73**	P	**P**	07 22 23.7	+2.6
	comp=Z,66nm,1.7s						
MEEK	**Meekatharra**	**23.92**	**149**	P	**P**	07 22 22.9	-1.7
	baz=24,SNR=5.7						
MORW	**Morawa**	**24.80**	**156**	P	**P**	07 22 31.1	-1.6
	baz=25,SNR=4.6						
MORW	**Morawa**	**24.80**	**156**	P	**P**	07 22 32.1	-0.6
MORW				IAmb	IAmb	07 22 36.3	
	comp=Z,36nm,1.1s						
MORW	**Morawa**	**24.80**	**156**	P	**P**	07 22 33.2	+0.6
KNRA	**Kununurra**	**25.08**	**113**	P	**P**	07 22 34.6	-0.7
	baz=25,SNR=30						
KNRA	**Kununurra**	**25.08**	**113**	P	**P**	07 22 34.3	-1.1
KNRA	**Kununurra**	**25.08**	**113**	P	**P**	07 22 36.3	+1.0
CM31	**Chiang Mai Arr**	**25.47**	**347**	P	**P**	07 22 38.6	-0.2
CMAR	**Chiang Mai Arr**	**25.47**	**347**	P	**P**	07 22 36.2	-2.5
	comp=Z,8.1nm,0.8s,baz=182,slow=8.7,SNR=28						
CMAR				PcP	**PcP**	07 26 10.9	+1.3
	comp=Z,1.5nm,0.6s,baz=204,slow=4.2,SNR=2.2						
CMAR				LR	LR	07 33 07.2	
	comp=Z,142nm,21.2s,baz=160,slow=38						
	comp=Z,8.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**25.47**	**347**	P	**P**	07 22 36.9	-1.9
CMAR	**Chiang Mai Arr**	**25.47**	**347**	*i* P	**P**	07 22 39.2	+0.5
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	**Chiang Mai**	**25.81**	**347**	P	**P**	07 22 39.7	-2.2
CHTO	**Chiang Mai**	**25.81**	**347**	P	**P**	07 22 39.7	-2.2
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	**Chiang Mai**	**25.81**	**347**	P	**P**	07 22 42.4	+0.5
CHTO	**Chiang Mai**	**25.81**	**347**	P	**P**	07 22 41.8	-0.1
MTN	**Manton Dam**	**26.58**	**106**	P	**P**	07 22 49.6	+0.8
	baz=27,SNR=30						
MTN	**Manton Dam**	**26.58**	**106**	P	**P**	07 22 47.8	-1.1
MTN	**Manton Dam**	**26.58**	**106**	P	**P**	07 22 50.5	+1.6
CRAI	**Chiangrai**	**26.91**	**351**	P	**P**	07 22 51.4	-0.4
PALK	**Pallekele**	**27.76**	**299**	LR	LR	07 32 43.5	
	comp=Z,214nm,20.9s,baz=235,slow=34						
KDU	**Kakadu**	**27.83**	**105**	P	**P**	07 22 59.1	-1.0
	baz=28,SNR=9.1						
KDU	**Kakadu**	**27.83**	**105**	P	**P**	07 22 59.5	-0.6
WRKA	**Warakurna**	**29.00**	**132**	P	**P**	07 23 10.7	+0.3
	baz=29,SNR=10						
WRKA	**Warakurna**	**29.00**	**132**	P	**P**	07 23 11.6	+1.1
H01W3	**Cape Leeuwin H**	**29.52**	**165**	T	T	07 53 47.0	
	baz=344,slow=76,SNR=445						
H01W1	**Cape Leeuwin H**	**29.53**	**165**	T	T	07 53 48.2	
	baz=344,slow=76,SNR=367						
H01W2	**Cape Leeuwin H**	**29.53**	**165**	T	T	07 53 44.0	
	baz=344,slow=76,SNR=378						
WB0	**Warramunga Arr**	**31.51**	**118**	P	**P**	07 23 31.9	-0.8
WB0				IAmb	IAmb	07 23 33.5	
	comp=Z,24nm,0.9s						
WRA	**Warramunga Arr**	**31.53**	**118**	P	**P**	07 23 32.4	-0.4
	comp=Z,17nm,0.8s,baz=291,slow=10,SNR=112						
WRA				PcP	**PcP**	07 26 24.5	-0.2
	comp=Z,3.9nm,0.7s,baz=296,slow=2.2,SNR=7.8						
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**31.53**	**118**	P	**P**	07 23 32.2	-0.7
WRAB	**Tennant Creek**	**31.53**	**118**	*ce*P	**P**	07 23 32.8	-0.1
WRAB				pmax	pmax		
	comp=Z,46nm,1.3s						
WRAB	**Tennant Creek**	**31.53**	**118**	P	**P**	07 23 33.6	+0.7
WRAB	**Tennant Creek**	**31.53**	**118**	P	**P**	07 23 32.8	-0.1
H08S2	**Diego Garcia H**	**32.21**	**266**	T	T	07 57 40.0	
	baz=90,slow=76,SNR=173						
H08S3	**Diego Garcia H**	**32.22**	**266**	T	T	07 57 43.3	
	baz=90,slow=76,SNR=177						
H08S1	**Diego Carcia H**	**32.23**	**266**	T	T	07 57 41.3	
	baz=90,slow=76,SNR=115						
FORT	**Forrest**	**32.48**	**141**	P	**P**	07 23 40.9	-0.2
FORT				IAmb	IAmb	07 23 46.2	
	comp=Z,57nm,1.4s						
AS31	**Alice Springs**	**32.67**	**125**	P	**P**	07 23 42.4	-0.5
ASAR	**Alice Springs**	**32.67**	**125**	P	**P**	07 23 43.1	+0.3
	comp=Z,16nm,0.8s,baz=301,slow=8.1,SNR=125						
ASAR				PcP	**PcP**	07 26 28.5	+0.7
	comp=Z,5.2nm,0.7s,baz=310,slow=2.2,SNR=14						
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**32.67**	**125**	P	**P**	07 23 42.6	-0.2
PZH	**PanZhiHua**	**32.93**	**355**	P	**P**	07 23 49.3	+4.2
PZH				S	**S**	07 29 00.4	+1.2
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,5.7s						
PZH				LR	LR		
	comp=Z,540nm,20.6s						
PZH				LR	LR		
	comp=Z,360nm,20.2s						
PZH				LR	LR		
	comp=Z,890nm,21.2s						
PCHI	**Peechi**	**33.10**	**300**	*e*P	**P**	07 23 49.6	+3.0
PCHI				*e*S	S	07 29 27.7	+26
HYBB	**Hyderabad (bro**	**35.26**	**313**	*e*P	**P**	07 24 05.0	-0.3
HYBB				*e*S	**S**	07 29 36.5	+1.3
OOD	**Oodnadatta**	**36.05**	**130**	P	**P**	07 24 12.2	+0.2
MULG	**Mulgathing**	**36.19**	**135**	P	**P**	07 24 15.0	+1.9
QIS	**Mount Isa**	**36.40**	**116**	P	**P**	07 24 15.2	+0.1
	baz=36,SNR=11						
QIS	**Mount Isa**	**36.40**	**116**	P	**P**	07 24 15.3	+0.2
	comp=Z,17nm,1.2s						
CD2	**Chengdu**	**37.19**	**358**	*e*P	**P**	07 24 23.4	+1.8
ODAN	**Odare**	**37.24**	**334**	*e*P	**P**	07 24 21.2	-1.2
TAPN	**Taplejung**	**37.53**	**334**	*e*P	**P**	07 24 23.8	-1.1
RAMN	**Ramite**	**37.67**	**333**	*e*P	**P**	07 24 24.5	-1.6
	comp=Z,42nm,0.4s						
COEN	**Coen**	**38.32**	**104**	P	**P**	07 24 30.9	-0.5
	baz=38,SNR=12						
COEN	**

comp=Z,410nm,17.2s
LZH LR LR
comp=Z,420nm,16.3s
QLP Quilpie 42.40 123 P **P** **07 25 04.7 -0.4**
baz=42,SNR=7.5
QLP Quilpie 42.40 123 P **P** **07 25 06.7 +1.7**
STKA Stephens Creek 42.52 131 P **P** **07 25 06.9 +0.9**
comp=Z,22nm,0.6s,baz=309,slow=8.1,SNR=39
STKA LR LR 07 42 51.6
comp=Z,192nm,21.7s,baz=353,slow=36
comp=Z,22nm,0.6s
STKA Stephens Creek 42.52 131 P **P** **07 25 05.6 -0.3**
baz=42,SNR=19
STKA Stephens Creek 42.52 131 P **P** **07 25 06.3 +0.4**
STKA Stephens Creek 42.52 131 *i* P **P** **07 25 06.2 +0.3**
STKA Stephens Creek 42.52 131 P **P** **07 25 07.3 +1.4**
GOMU GeErMu 43.50 348 P **P** **07 25 12.9 -1.2**
GOMU pmax pmax
comp=Z,5.0nm,0.6s
GOMU pmax pmax
comp=Z,63nm,6.2s
CMSA Cobar Meteorol 45.49 129 P **P** **07 25 28.5 -1.2**
baz=45,SNR=13
CMSA Cobar Meteorol 45.49 129 P **P** **07 25 31.4 +1.6**
GTA Gaotai 45.90 354 *eP* **P** **07 25 34.6 +1.7**
GTA PcP **PcP** **07 27 09.8 +0.6**
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,56nm,4.1s
GTA LR LR
comp=Z,120nm,16.4s
GTA LR LR
comp=Z,190nm,17.5s
GTA LR LR
comp=Z,84nm,18.5s
RMQ Roma 46.19 121 P **P** **07 25 34.6 -0.8**
baz=46,SNR=5.6
RMQ Roma 46.19 121 P **P** **07 25 36.3 +0.9**
HHC Hu-ho-hao-te 47.48 7 *eP* **P** **07 25 48.3 +3.1**
HHC pmax pmax
comp=Z,18nm,0.6s
HHC pmax pmax
comp=Z,59nm,5.5s
EIDS Eidsvold 47.89 118 P **P** **07 25 49.4 +0.8**
EIDS IAmb IAmb 07 25 50.5
comp=Z,20nm,1.4s
EIDS Eidsvold 47.89 118 P **P** **07 25 49.1 +0.5**
KSCHJ Chungju 48.21 25 P **P** **07 25 51.2 +0.4**
KSCHJ IAmb IAmb 07 27 34.3
comp=Z,9.3nm,0.8s
KSAR Wonju Array Be 48.66 24 P **P** **07 25 54.0 -0.3**
KSAR Wonju Array Be 48.66 24 P **P** **07 25 54.0 -0.3**
KSRS Korea Array 48.69 24 P **P** **07 25 54.3 -0.1**
comp=Z,3.9nm,1.0s,baz=201,slow=8.5,SNR=14
KSRS PcP **PcP** **07 27 19.0 0.0**
comp=Z,4.3nm,1.0s,baz=197,slow=3.4,SNR=9.7
KSRS ScP **ScP** **07 31 09.2 0.0**
comp=Z,3.1nm,0.9s,baz=212,slow=4.3,SNR=11
comp=Z,3.9nm,1.0s
JHS Saijyo 49.07 31 P **P** **07 25 56.9 -0.6**
JHS IAmb IAmb 07 25 58.7
comp=Z,27nm,0.8s
CAN Canberra 49.58 132 P **P** **07 26 03.0 +1.5**
CAN pP **pP** **07 26 15.9 -0.6**
NIL Nilore 49.94 325 P **P** **07 26 03.4 -0.8**
NIL pP **pP** **07 26 15.6 -3.4**
NIL sP **sP** **07 26 21.2 -4.3**
JHJ Hachijo jima 2 51.43 38 LR LR 07 50 23.1
comp=Z,38nm,18.2s,baz=78,slow=39
WMQ Urumqi 52.43 344 *eP* **P** **07 26 23.1 +0.4**
WMQ pmax pmax
comp=Z,16nm,0.9s
JLN Jalan Bani Buh 52.88 304 P **P** **07 26 28.0 +1.7**
MJAR Matsushiro Arr 52.94 34 P **P** **07 26 23.5 -3.0**
comp=Z,1.8nm,0.5s,baz=207,slow=6.9,SNR=8.3
MJAR PcP **PcP** **07 27 34.7 -0.1**
comp=Z,4.0nm,0.8s,baz=195,slow=4.3,SNR=5.8
MJAR ScP **ScP** **07 31 26.6 -1.0**
comp=Z,2.2nm,0.9s,baz=193,slow=5.0,SNR=4.1
MJAR LR LR 07 49 32.2
comp=Z,52nm,20.3s,baz=194,slow=37
comp=Z,1.8nm,0.5s
KSH Kashi 53.02 332 P **P** **07 26 25.8 -1.4**
KSH S **S** **07 33 48.0 -5.0**
KSH pmax pmax
comp=Z,44nm,0.7s
CN2 Changchun 53.37 18 *eP* **P** **07 26 28.0 -1.5**
CN2 *eS* **S** **07 33 53.5 -3.8**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,100nm,18.0s
WBK Wadi Bani Khal 53.45 304 P **P** **07 26 32.5 +2.0**
WSAR Wadi Sarin 54.02 305 LR LR 07 47 38.4
comp=Z,138nm,19.8s,baz=137,slow=34
WSAR Wadi Sarin 54.02 305 P **P** **07 26 37.0 +2.4**
JMDO Jabal Madar 54.06 304 P **P** **07 26 36.7 +1.7**
SONM Songino Array 54.09 1 P **P** **07 26 34.1 -0.8**
comp=Z,2.6nm,0.6s,baz=180,slow=9.0,SNR=10
SONM PcP **PcP** **07 27 38.2 -0.9**
comp=Z,4.8nm,0.7s,baz=182,slow=3.9,SNR=6.7
SONM ScP **ScP** **07 31 32.5 +0.1**
comp=Z,1.1nm,0.5s,baz=188,slow=5.2,SNR=2.1
comp=Z,2.6nm,0.6s
SONM Songino Array 54.09 1 P **P** **07 26 34.8 -0.1**
SONM Songino Array 54.09 1 P **P** **07 26 34.8 -0.1**
SONM pmax pmax
comp=Z,5.0nm,0.8s
ULN Ulaanbaatar 54.14 2*ceP* **P** **07 26 34.3 -0.9**
ULN pmax pmax
comp=Z,3.0nm,0.8s
SMDO Samad 54.41 304 P **P** **07 26 39.4 +1.8**
SHLS Shalkode 54.54 337 *eP* **P** **07 26 35.5 -2.7**
SHLS Shalkode 54.54 337 *eP* **P** **07 26 35.5 -2.7**
baz=338
BIDO Bidbid 54.56 305 P **P** **07 26 40.4 +1.9**
SNR=5.2
UZB Uzynbulak 54.70 337 *eP* **P** **07 26 37.3 -2.1**
UZB Uzynbulak 54.70 337 *eP* **P** **07 26 37.4 -2.1**
baz=337
SATY Saty 54.87 336 *eP* **P** **07 26 39.0 -1.6**
SATY pmax pmax
comp=Z,3.0nm,0.3s
SATY Saty 54.87 336 *eP* **P** **07 26 39.0 -1.6**
comp=Z,3.4nm,0.3s,baz=336
BSY Bisya 54.98 303 P **P** **07 26 43.4 +1.7**
KPKS Kokpek 55.10 337 *eP* **P** **07 26 40.3 -1.9**
KPKS Kokpek 55.10 337 *eP* **P** **07 26 40.3 -1.9**
baz=337
HOQ Hoqain 55.26 304 P **P** **07 26 45.4 +1.8**
SNR=7.1
MDOK Medeo 55.51 335 *eP* **P** **07 26 44.0 -1.2**
MDOK Medeo 55.51 335 *eP* **P** **07 26 44.0 -1.2**
baz=335
BNX BinXian 55.73 19 ⇓P **P** **07 26 45.9 -0.7**
BNX pmax pmax
comp=Z,21nm,0.8s
BNX pmax pmax
comp=Z,72nm,4.8s
ARQ Araqi 55.80 304 P **P** **07 26 49.0 +1.4**
SNR=8.2
WHFO Wadi Hawf 56.01 297 P **P** **07 26 50.5 +1.3**
USRK Ussuriysk Ar. 56.03 23 P **P** **07 26 47.9 -0.8**
comp=Z,11nm,0.7s,baz=196,slow=4.8,SNR=16
comp=Z,11nm,0.7s
USRK Ussuriysk Ar. 56.03 23 P **P** **07 26 48.0 -0.8**
SOHO SOHO 56.14 305 P **P** **07 26 50.8 +0.9**
SOHO SOHO 56.14 305 P **P** **07 26 50.4 +0.5**
AAK Ala-Archa 56.18 333 LR LR 07 53 59.8
comp=Z,55nm,20.5s,baz=144,slow=39
KUU Kurty 56.40 335 *eP* **P** **07 26 49.1 -2.4**
KUU pmax pmax
comp=Z,10.0nm,0.6s
KUU Kurty 56.40 335 *eP* **P** **07 26 49.1 -2.4**
comp=Z,9.5nm,0.6s,baz=335
TDK Taldyqorghan 56.51 338 *eP* **P** **07 26 49.9 -2.3**
TDK pmax pmax
comp=Z,9.0nm,0.5s
TDK Taldyqorghan 56.51 338 *eP* **P** **07 26 49.9 -2.3**
comp=Z,9.3nm,0.5s,baz=338
ZSN Zaisan 56.55 344 *eP* **P** **07 26 51.5 -0.9**
ZSN pmax pmax
comp=Z,4.0nm,0.5s
ZSN Zaisan 56.55 344 *eP* **P** **07 26 51.5 -0.9**
comp=Z,3.7nm,0.5s,baz=344
MK31 Makanchi Array 56.72 342 P **P** **07 26 52.0 -1.7**
MK31 IAmb IAmb 07 26 53.4
comp=Z,7.4nm,0.5s
MK31 Makanchi Array 56.72 342⇑ *iP* **P** **07 26 52.4 -1.3**
MKAR Makanchi Array 56.72 342 P **P** **07 26 52.0 -1.7**
comp=Z,9.0nm,0.4s,baz=154,slow=8.4,SNR=128
comp=Z,9.0nm,0.4s
MKAR Makanchi Array 56.72 342 P **P** **07 26 52.1 -1.5**
ALNE Al Ain 56.74 304 P **P** **07 26 55.9 +1.6**
SNR=13
ALNE Al Ain 56.74 304 *i* P **P** **07 26 55.6 +1.4**
SNR=13
SGDS Sogindy 56.77 334 *eP* **P** **07 26 51.9 -2.2**
SGDS Sogindy 56.77 334 *eP* **P** **07 26 51.9 -2.2**
baz=334
UOSS Minazif 56.77 305 P **P** **07 26 54.7 +0.3**
UOSS IAmb IAmb 07 26 56.1
comp=Z,36nm,1.2s
UOSS Minazif 56.77 305 P **P** **07 26 55.4 +0.9**
UOSS Minazif 56.77 305 P **P** **07 26 54.9 +0.5**
UOSS Minazif 56.77 305 P **P** **07 26 55.3 +0.9**
ASHO Ashiyiah 56.77 305 P **P** **07 26 55.9 +1.5**
ASHO Ashiyiah 56.77 305 *i* P **P** **07 26 55.8 +1.3**
SNR=7.7
HATD Hatta, Dubai 56.77 305 P **P** **07 26 56.2 +1.7**
HATD Hatta, Dubai 56.77 305 *i* P **P** **07 26 55.7 +1.3**
SNR=6.2
MDH Madha 56.85 306 P **P** **07 26 55.5 +0.6**
MDH Madha 56.85 306 P **P** **07 26 54.7 -0.2**
MSFE Esma-Masafi 56.99 306 P **P** **07 26 57.2 +1.2**
MASF Masafi 56.99 306 P **P** **07 26 57.6 +1.5**
BANOM Banah 57.13 306 P **P** **07 26 58.2 +1.2**
BANOM Banah 57.13 306 P **P** **07 26 56.2 -0.9**
FAQ Al Faqa, Dubai 57.18 305 P **P** **07 26 58.9 +1.6**
FAQ Al Faqa, Dubai 57.18 305 *i* P **P** **07 26 58.7 +1.4**
SNR=20
KNGR Kungurtug, Tuv 57.21 354 *i* P **P** **07 26 55.5 -1.7**
NAZ Nava, Dubai 57.23 305 *i* P **P** **07 26 58.7 +1.0**
SNR=11
SHME Shamm 57.32 306 P **P** **07 26 59.0 +0.8**
SHME Shamm 57.32 306 P **P** **07 26 59.2 +0.9**
ASUD Al Ashush, Dub 57.34 305 P **P** **07 27 00.2 +1.8**
SNR=9.0
ASUD Al Ashush, Dub 57.34 305 *i* P **P** **07 27 00.2 +1.8**
SNR=9.0
VOI Vohitsoka 58.09 248 P **P** **07 27 04.7 +0.7**
VOI IAmb IAmb 07 27 38.4
comp=Z,47nm,1.8s
MZWR Madinat Zayed 58.17 303 P **P** **07 27 05.7 +1.5**
MZR Muzera 58.19 302 P **P** **07 27 06.3 +1.8**
MZR Muzera 58.19 302 *i* P **P** **07 27 06.1 +1.6**
SNR=9.7
BTLS Baital 58.29 335 *eP* **P** **07 27 01.6 -3.1**
BTLS Baital 58.29 335 *eP* **P** **07 27 01.7 -3.1**
baz=335
KKAR Karatay Array 58.39 331 P **P** **07 27 07.2 +1.7**
KKAR Karatay Array 58.39 331 P **P** **07 27 07.2 +1.7**
KOUNC Koumac, New Ca 59.08 110 P **P** **07 27 11.6 +0.8**
KOUNC IAmb IAmb 07 27 12.4
comp=Z,20nm,1.0s
GHWR Ruwais 59.09 303 P **P** **07 27 12.1 +1.4**
JRN Qarnain Island 59.51 304 P **P** **07 27 14.6 +1.1**
KLR Kul'dur 60.21 20 LR LR 07 52 34.5
comp=Z,78nm,22.0s,baz=196,slow=35
KLR Kul'dur 60.21 20*ceP* **P** **07 27 16.2 -1.7**
KLR pmax pmax
comp=Z,10.0nm,0.9s
KURBB Kurchatov Arra 61.27 341 PcP **PcP** **07 28 07.1 0.0**
comp=Z,4.4nm,0.8s,baz=157,slow=3.8,SNR=4.4
KURBB LR LR 07 56 25.5
comp=Z,52nm,22.0s,baz=121,slow=38
KURK Kurchatov 61.33 341 P **P** **07 27 24.6 -0.9**
KURK IAmb IAmb 07 28 10.9
comp=Z,6.9nm,0.8s
KURK Kurchatov 61.33 341*ceP* **P** **07 27 24.2 -1.2**
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 61.33 341 P **P** **07 27 24.4 -1.0**
GEYT Alibeck 62.02 319 P **P** **07 27 30.3 -0.1**
comp=Z,14nm,0.6s,baz=156,slow=8.1,SNR=10
GEYT LR LR 07 56 11.4
comp=Z,50nm,21.2s,baz=102,slow=38
comp=Z,14nm,0.6s
GEYT Alibeck 62.02 319 P **P** **07 27 30.3 -0.1**
GEYT IAmb IAmb 07 27 31.2
comp=Z,15nm,0.7s
ZAA0 Zalesovo Array 62.53 347 P **P** **07 27 31.8 -1.7**
ZAA0 IAmb IAmb 07 27 32.5
comp=Z,8.8nm,0.8s
ZALV Zalesovo Beam 62.53 347 P **P** **07 27 31.6 -1.9**
comp=Z,6.6nm,0.3s,baz=156,slow=5.9,SNR=27
ZALV LR LR 07 57 04.7
comp=Z,120nm,20.7s,baz=143,slow=38
comp=Z,6.6nm,0.3s
ZALV Zalesovo Beam 62.53 347 P **P** **07 27 31.4 -2.1**
BRZS Berezniki 62.81 337 *eP* **P** **07 27 33.0 -2.4**
BRZS Berezniki 62.81 337 *eP* **P** **07 27 33.1 -2.4**
baz=337
YSS Yuzh-Sakhalins 62.86 28 *eP* **P** **07 27 34.8 -1.0**
YSS *e* 07 27 43.4
YSS pmax pmax
comp=Z,20nm,1.0s
ZEA Zeya 62.87 15 *eP* **P** **07 27 34.9 -0.8**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
KUR Kuril'sk 64.22 32 *i* P **P** **07 27 42.9 -1.9**
ATD Arta Tunnel 64.30 286 LR LR 07 50 49.7
comp=Z,46nm,21.2s,baz=334,slow=31
BOD Bodaibo 64.50 5 *eP* **P** **07 27 44.3 -2.1**
BOD pmax pmax
comp=Z,10.0nm,1.3s
RAYN Ar Rayn 65.20 299 P **P** **07 27 50.7 -1.0**
RAYN IAmb IAmb 07 27 53.5
comp=Z,19nm,1.4s
RAYN Ar Rayn 65.20 299 P **P** **07 27 50.7 -1.0**
RAYN pmax pmax
comp=Z,19nm,1.5s
RAYN Ar Rayn 65.20 299 P **P** **07 27 52.1 +0.4**
RAYN Ar Rayn 65.20 299 P **P** **07 27 52.1 +0.4**
BRVK Borovoye 66.17 338 P **P** **07 27 56.2 -1.1**
BRVK IAmb IAmb 07 27 56.9
comp=Z,9.5nm,0.9s
BRVK Borovoye 66.17 338*ceP* **P** **07 27 56.2 -1.1**
BRVK pmax pmax
comp=Z,10.0nm,0.9s
BRVK Borovoye 66.17 338 P **P** **07 27 55.9 -1.3**
MAW Mawson 67.29 196 P **P** **07 28 05.8 +1.6**
comp=Z,5.8nm,0.7s,baz=50,slow=6.6,SNR=11
MAW LR LR 07 51 27.4
comp=Z,100nm,21.6s,baz=26,slow=30
comp=Z,5.8nm,0.7s
MAW Mawson 67.29 196 P **P** **07 28 03.3 -0.9**
baz=67,SNR=8.3
MAW Mawson 67.29 196 P **P** **07 28 05.0 +0.9**
KMBO Kilima Mbogo 67.70 271 LR LR 07 52 38.1
comp=Z,132nm,21.7s,baz=94,slow=31
KMBO Kilima Mbogo 67.70 271 *i* P **P** **07 28 09.6 +1.5**
KMBO pmax pmax
comp=Z,1.0nm,0.5s
ABKAR Akbulak array 67.92 330 P **P** **07 28 07.7 -0.8**
THZ Tophouse 69.32 132 P **P** **07 28 17.8 +0.2**
CCD Concordia, Ant 69.39 175 P **P** **07 28 19.4 +1.7**
CCD sP **pwP** **07 28 38.1 +3.0**
KHZ Kahutara 69.90 133 P **P** **07 28 20.6 -0.3**
SEKA Sheki 70.93 318 P **P** **07 28 28.0 +0.7**
YAK Yakutsk 70.93 12 *eP* **P** **07 28 24.5 -2.3**
YAK *e**PP **pP** **07 28 39.6 -2.6**
YAK *e* 07 28 42.1
YAK *eS* **S** **07 37 36.8 -1.0**
YAK *e**SS **sS** **07 38 11.9 +7.7**
YAK pmax pmax
comp=Z,52nm,0.9s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK smax smax
comp=N,31nm,2.1s
YAK smax smax
comp=E,27nm,3.2s
NAX Nakhchivan 71.20 315 P **P** **07 28 29.1 +0.1**
GANJ Ganja 71.27 317 P **P** **07 28 29.3 -0.1**
BKZ Black Stump Fm 71.65 129 P **P** **07 28 31.9 +0.1**
GNI Garni 72.14 316 P **P** **07 28 35.1 +0.4**
comp=E,5.0nm,0.3s,baz=164,slow=17,SNR=5.0
GNI LR LR 08 02 11.9
comp=E,39nm,21.4s,baz=122,slow=37
comp=E,5.0nm,0.3s
GNI Garni 72.14 316*ceP* **P** **07 28 35.8 +1.0**
GNI pmax pmax
comp=Z,21nm,1.4s
ARU Arti 73.28 335 P **P** **07 28 40.1 -0.8**
comp=Z,16nm,0.5s,baz=149,slow=3.7,SNR=32
ARU LR LR 08 04 31.6
comp=Z,43nm,19.8s,baz=150,slow=39
comp=Z,16nm,0.5s
ARU Arti 73.28 335 P **P** **07 28 40.8 -0.1**
ARU IAmb IAmb 07 28 41.3
comp=Z,31nm,1.0s
ARU Arti 73.28 335*c iP* **P** **07 28 40.2 -0.8**
ARU 07 31 21.4
ARU S **SKiKP** **07 38 06.6 -0.9**
ARU SS **SS** **07 42 49.6 +1.7**
ARU pmax pmax
comp=Z,40nm,1.1s
ZEI Tsey 73.83 318 *eP* **P** **07 28 44.8 0.0**
ZEI pmax pmax
comp=Z,9.0nm,0.6s
PETK Petropavlovsk- 74.15 30 P **P** **07 28 44.5 -1.7**
comp=Z,5.6nm,0.8s,baz=210,slow=8.6,SNR=4.5
comp=Z,5.6nm,0.8s
MBAR Mbarara 74.23 271 LR LR 07 57 17.6
comp=Z,82nm,19.3s,baz=120,slow=32
MBAR Mbarara 74.23 271*ceP* **P** **07 28 50.0 +2.3**
MBAR pmax pmax
comp=Z,9.0nm,1.3s
KBZ Khabaz 74.89 318 P **P** **07 28 50.2 -0.4**
comp=Z,8.5nm,0.8s,baz=117,slow=4.7,SNR=16
comp=Z,8.5nm,0.8s
KBZ Khabaz 74.89 318*ceP* **P** **07 28 50.8 +0.2**
KBZ pmax pmax
comp=Z,18nm,1.1s
KIV Kislovodsk 75.12 319 *eP* **P** **07 28 52.5 +0.4**
KIV pmax pmax
comp=Z,13nm,1.0s
MA2 Magadan 75.17 22 LR LR 08 02 22.3
comp=Z,54nm,20.3s,baz=145,slow=36
ASF Jabal al Asfar 75.18 306 P **P** **07 28 53.7 +1.0**
comp=Z,17nm,0.8s,baz=114,slow=3.8,SNR=26
comp=Z,17nm,0.8s
GHAJ Ghor Haditha 76.01 304 P **P** **07 28 58.4 +1.1**
GHAJ IAmb IAmb 07 28 59.5
comp=Z,26nm,0.8s
EIL Elat 76.06 303 P **P** **07 28 58.7 +1.0**
comp=Z,17nm,0.8s,baz=108,slow=1.1,SNR=12
EIL LR LR 08 00 43.5
comp=Z,62nm,21.2s,baz=92,slow=34
comp=Z,17nm,0.8s
BELG Belogornoye 76.09 328 P **P** **07 28 56.1 -1.2**
comp=Z,27nm,0.8s,baz=317,slow=0.9,SNR=11
comp=Z,27nm,0.8s
BELG Belogornoye 76.09 328 *i* P **P** **07 28 56.6 -0.7**
BELG pmax pmax
comp=Z,8.0nm,1.0s
NRIK Noril'sk 76.59 354 P **P** **07 28 57.9 -2.0**
comp=Z,3.9nm,0.3s,baz=151,slow=3.6,SNR=8.2
comp=Z,3.9nm,0.3s
NRIK Noril'sk 76.59 354 P **P** **07 28 58.6 -1.1**
NRIK Noril'sk 76.59 354*ceP* **P** **07 28 58.7 -1.1**
NRIK pmax pmax
comp=Z,12nm,1.1s
MMAI Mount Meron Ar 76.63 306 P **P** **07 29 02.5 +1.5**
comp=Z,14nm,0.8s,baz=101,slow=7.8,SNR=22
comp=Z,14nm,0.8s
VNDA Vanda 76.86 169 P **P** **07 29 02.5 +1.2**
comp=Z,6.9nm,0.8s,baz=297,slow=5.9,SNR=36
comp=Z,6.9nm,0.8s
VNDA Vanda 76.86 169 P **P** **07 29 01.6 +0.3**
VNDA IAmb IAmb 07 29 03.6
comp=Z,14nm,1.1s
SOC Sochi 76.95 317 *eP* **P** **07 29 03.6 +1.2**
SOC *e* 07 31 53.1
SOC *e*PPP PPP 07 33 40.1
SOC *eS* **S** **07 38 52.1 +5.8**
SOC *eSS* **SS** **07 43 48.1 +3.8**
SOC *eSSS* SSS 07 46 57.1
LBTB Lobatse 77.65 246 P **P** **07 29 07.4 +0.5**
LBTB IAmb IAmb 07 29 09.3
comp=Z,14nm,0.9s
LBTB Lobatse 77.65 246 P **P** **07 29 07.4 +0.5**
LBTB pmax pmax
comp=Z,14nm,0.9s
BOSA Boshof 77.88 242 P **P** **07 29 09.2 +1.0**
comp=Z,7.5nm,0.6s,baz=101,slow=4.7,SNR=24
comp=Z,7.5nm,0.6s
BOSA Boshof 77.88 242 P **P** **07 29 09.1 +1.0**
BOSA IAmb IAmb 07 29 10.4
comp=Z,39nm,1.6s
SBA Scott Base 77.94 169 P **P** **07 29 09.4 +2.1**
SBA IAmb IAmb 07 29 10.5
comp=Z,10nm,0.8s
SBA Scott Base 77.94 169 P **P** **07 29 09.4 +2.1**
SBA pmax pmax
comp=Z,10.0nm,0.8s
SEY Seymchan 78.00 20*ceP* **P** **07 29 06.6 -1.2**
SEY pmax pmax
comp=Z,3.0nm,0.9s
KIRV Kirov 78.51 334 P **P** **07 29 10.7 0.0**
comp=Z,61nm,0.8s,baz=104,slow=2.0,SNR=29
KIRV LR LR 08 10 15.3
comp=Z,31nm,19.5s,baz=107,slow=41
comp=Z,61nm,0.8s
KIRV Kirov 78.51 334*ceP* **P** **07 29 10.2 -0.5**
VRH Novokhopyorsk 78.77 325 *eP* **P** **07 29 10.2 -2.1**
VRH pmax pmax
comp=Z,10.0nm,0.8s
CSS Mathiatis 78.83 307 P **P** **07 29 13.4 +0.4**
ANN Anapa 78.93 318 *eP* **P** **07 29 11.8 -1.5**
ANN *e**PP **pP** **07 29 26.3 -2.9**
ANN *eS* **S** **07 39 04.6 -2.8**
ANN pmax pmax
comp=Z,12nm,0.5s
TIXI Tiksi 79.54 8 LR LR 08 08 38.7
comp=Z,65nm,18.6s,baz=182,slow=39
TIXI Tiksi 79.54 8⇑P **P** **07 29 14.7 -1.4**
BR131 Keskin Array S 79.95 312 P **P** **07 29 18.9 -0.4**
BR131 Keskin Array S 79.95 312⇓ *iP* **P** **07 29 19.3 0.0**
BR131 Keskin Array S 79.95 312 P **P** **07 29 19.4 +0.1**
SNR=16
BRTR Keskin Array B 79.95 312 P **P** **07 29 19.2 0.0**
comp=Z,21nm,0.7s,baz=133,slow=6.8,SNR=100
comp=Z,21nm,0.7s
BRTR Keskin Array B 79.95 312 P **P** **07 29 19.6 +0.3**
BRTR Keskin Array B 79.95 312*ceP* **P** **07 29 19.0 -0.2**
BRTR pmax pmax
comp=Z,22nm,0.7s
VSR Storozhevoye 80.24 324 *eP* **P** **07 29 19.9 -0.4**
VSR pmax pmax
comp=Z,50nm,1.2s
BZK Bozkurt 80.36 314⇑P **P** **07 29 20.8 -0.3**
VORR Voronezh 80.40 325 *eP* **P** **07 29 20.6 -0.5**
VORR pmax pmax
comp=Z,43nm,1.7s
ANTO Ankara 80.62 312⇑P **P** **07 29 23.6 +0.9**
ANTO Ankara 80.62 312⇑P **P** **07 29 23.6 +0.9**
LPSR Galich'ya Gora 80.93 326 *eP* **P** **07 29 23.2 -0.7**
LPSR pmax pmax
comp=Z,40nm,0.8s
SIM Simferopol' 81.20 317 *eP* **P** **07 29 24.2 -1.4**
SIM *e**PP **pP** **07 29 45.0 +3.5**
SIM pmax pmax
comp=Z,35nm,0.9s
PRGR Permogore 81.73 335⇑ *iP* **P** **07 29 27.7 -0.3**
PRGR *e**SP **sP** **07 29 48.7 -1.2**
PRGR *eS* **S** **07 39 32.8 -3.4**
BORA Eskisehir 82.35 312 P **P** **07 29 32.0 +0.1**
BORA IAmb IAmb 07 29 33.2
comp=Z,25nm,0.9s
MOS Moscow 82.85 328 *eP* **P** **07 29 32.7 -1.3**
MOS pmax pmax
comp=Z,36nm,0.7s
OBN Obninsk 83.18 327 P **P** **07 29 35.3 -0.3**
comp=Z,9.4nm,0.5s,baz=112,slow=1.2,SNR=10
comp=Z,9.4nm,0.5s
OBN Obninsk 83.18 327⇑ *iP* **P** **07 29 35.7 +0.1**

OBN pmax pmax
comp=E,58nm,1.0s
QSPA South Pole Qui 83.52 180 LR LR 08 02 26.0
comp=Z,95nm,21.5s,baz=350,slow=32
QSPA South Pole Qui 83.52 180 P **P** **07 29 37.4 -0.1**
QSPA IAmb IAmb 07 29 39.5
comp=Z,22nm,1.1s
KARP Karpathos 83.87 307 P **P** **07 29 40.6 +0.9**
KLMR Klimovskoe 83.99 333 *e*P **P** **07 29 36.8 -2.9**
KLMR *e* 07 32 51.0
KLMR pmax pmax
comp=Z,86nm,1.3s
KLMR Klimovskoe 83.99 333 *e*P **P** **07 29 36.9 -2.8**
KLMR AMP 07 29 40.7
comp=Z,86nm,1.3s
KLMR *e*PP **PP** **07 32 51.1 -3.1**
MILM Milestii Mici 85.31 318 *e*P **P** **07 29 47.0 +0.3**
comp=Z,190nm,4.7s
MILM Milestii Mici 85.31 318 ⇑P **P** **07 29 46.9 +0.2**
MILM Milestii Mici 85.31 318 ⇑P **P** **07 29 46.9 +0.2**
CFR Carcaliu 85.33 316 ⇑P **P** **07 29 46.6 -0.3**
CFR Carcaliu 85.33 316 ⇑P **P** **07 29 46.6 -0.3**
IDI Anoyia 85.63 306 ⇑P **P** **07 29 49.1 +0.4**
IDI Anoyia 85.63 306 P **P** **07 29 49.4 +0.7**
comp=Z,9.5nm,0.6s,baz=96,slow=6.4,SNR=8.9
comp=Z,9.5nm,0.6s
IDI Anoyia 85.63 306 P **P** **07 29 49.4 +0.7**
IDI IAmb IAmb 07 29 50.8
comp=Z,12nm,0.8s
BILL Bilibino 85.67 19⇑ *i*P **P** **07 29 46.8 -1.2**
BILL pmax pmax
comp=Z,10.0nm,1.0s
SORM Soroca 85.91 319 ⇑P **P** **07 29 49.2 -0.5**
SORM Soroca 85.91 319 ⇑P **P** **07 29 49.2 -0.5**
AKASG Malin Array Be 86.01 322 P **P** **07 29 49.7 -0.4**
comp=Z,8.5nm,0.7s,baz=85,slow=4.7,SNR=40
comp=Z,8.5nm,0.7s
AKASG Malin Array Be 86.01 322*ce*P **P** **07 29 49.7 -0.4**
AKASG pmax pmax
comp=Z,10.0nm,0.6s
AKBB Malin Array Si 86.01 322 P **P** **07 29 49.5 -0.6**
AKBB Malin Array Si 86.01 322*ce*P **P** **07 29 49.3 -0.8**
VRI Vrincioaia 86.46 317 ⇑P **P** **07 29 53.7 +1.3**
VRI Vrincioaia 86.46 317 ⇑P **P** **07 29 53.7 +1.3**
PLOR Plostina 86.51 317 ⇑P **P** **07 29 53.8 +1.1**
PLOR Plostina 86.51 317 ⇑P **P** **07 29 53.8 +1.1**
TESR Tescani 86.66 317 ⇑P **P** **07 29 54.3 +0.9**
NEHR Nehoiu 86.66 316 ⇑P **P** **07 29 54.3 +0.8**
COVR Voineasa-Covas 86.81 317 ⇑P **P** **07 29 55.4 +1.2**
MLR Muntele Rosu 86.91 316 ⇓P **P** **07 29 55.8 +0.9**
MLR Muntele Rosu 86.91 316 P **P** **07 29 55.2 +0.4**
comp=Z,43nm,1.1s,baz=107,slow=5.9,SNR=23
comp=Z,43nm,1.1s
MLR Muntele Rosu 86.91 316 ⇓P **P** **07 29 55.8 +0.9**
BIZ Bicaz 87.11 318 ⇓P **P** **07 29 57.1 +1.5**
DOPR Dopca 87.39 317 ⇑P **P** **07 29 57.4 +0.4**
TROLL Troll, Antarti 87.70 198 PcP **PcP** **07 30 00.4 +0.4**
MNK Minsk 87.77 325 *i* P **P** **07 29 59.3 +0.8**
MNK *i* *PP **pP** **07 30 14.3 -0.1**
MNK *i* 07 33 24.1
MNK *i* PPP PPP 07 35 17.4
MNK *i* S **SKSac** **07 40 22.0 +0.3**
MNK *i* SS **SS** **07 46 27.6 +3.3**
MNK *i* SSS SSS 07 50 00.8
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=Z,61nm,1.0s
MNK pmax pmax
comp=N,7.0nm,1.0s
MNK MLR MLR
comp=E,23nm,20.0s
MNK MLR MLR
comp=N,25nm,20.0s
MNK MLR MLR
comp=Z,56nm,18.0s
MNK Minsk 87.77 325 *i* P **P** **07 29 59.3 +0.8**
comp=E,2.0nm,1.0s
MNK *i* P **P** **07 29 59.3 +0.8**
comp=N,7.0nm,1.0s
MNK *i* P **P** **07 29 59.3 +0.8**
comp=Z,61nm,1.0s,baz=104
MNK *i* pP **pP** **07 30 14.3 -0.1**
MNK *i* PP **PP** **07 33 24.1 -0.8**
MNK *i* PPP PPP 07 35 17.5
MNK *i* S **SKSac** **07 40 22.0 +0.3**
MNK *i* sS **ScS** **07 40 46.7 +3.9**
MNK *i* SS **SS** **07 46 27.6 +3.3**
MNK *i* SSS SSS 07 50 00.9
MNK *i* LQ LQ 08 03 12.5
MNK *i* LR LR 08 06 27.3
MNK *i* LRM MLR 08 11 24.9
comp=E,23nm,19.9s
MNK *i* LRM MLR 08 11 40.3
comp=N,25nm,19.9s
MNK *i* LRM MLR 08 12 06.5
comp=Z,56nm,18.1s
ARR Arges 87.79 316 ⇓P **P** **07 29 59.5 +0.5**
BURAR Bucovina Array 87.85 318 ⇑P **P** **07 30 00.8 +1.5**
BURAR Bucovina Array 87.85 318 ⇑P **P** **07 30 00.8 +1.5**
BUR08 Bucovina Ar. S 87.86 318 P **P** **07 30 00.9 +1.5**
VTS Vitosha 88.26 313 ⇑P **P** **07 30 02.0 +0.6**
VTS Vitosha 88.26 313 ⇑P **P** **07 30 02.0 +0.6**
NACGM Naroch 88.49 326⇓ *e*P **P** **07 30 02.4 +0.5**
baz=103
LVZ Lovozero 88.67 339 P **P** **07 30 02.2 -0.4**
LVZ Lovozero 88.67 339 ⇑P **P** **07 30 01.4 -1.2**
CJR Cluj-Napoca 88.75 317 ⇑P **P** **07 30 04.6 +1.1**
CJR Cluj-Napoca 88.75 317 ⇑P **P** **07 30 04.6 +1.1**
DEV Deva 89.08 316 ⇓P **P** **07 30 06.3 +1.4**
DEV Deva 89.08 316 ⇓P **P** **07 30 06.3 +1.4**
GZR Gura Zlata 89.08 316 ⇑P **P** **07 30 06.1 +1.1**
GZR Gura Zlata 89.08 316 P **P** **07 30 07.2 +2.1**
HERR Herculane 89.24 315 ⇑P **P** **07 30 06.6 +0.9**
VSU Vasula 89.34 329 *i* P **P** **07 30 06.1 +0.3**
VSU pmax pmax
comp=Z,95nm,0.8s
VSU Vasula 89.34 329 *e*P **P** **07 30 06.4 +0.6**
DRGR 89.37 317 ⇑P **P** **07 30 07.2 +0.8**
DRGR 89.37 317 ⇑P **P** **07 30 07.2 +0.8**
SNAA Sanae 89.41 198 PcP **PcP** **07 30 08.4 +0.9**
SNAA Sanae 89.41 198 P **P** **07 30 08.0 +1.8**
SNAA IAmb IAmb 07 30 09.5
comp=Z,14nm,1.2s
SNAA Sanae 89.41 198 P **P** **07 30 08.0 +1.8**
SNAA pmax pmax
comp=Z,15nm,1.2s
BOVS Bovan 89.54 314 ⇑P **P** **07 30 07.0 -0.2**
MDVR Moldovita 89.72 315 ⇓P **P** **07 30 09.1 +1.0**
BZS Buzias 89.92 316 ⇑P **P** **07 30 09.5 +0.6**
BZS Buzias 89.92 316 ⇑P **P** **07 30 09.5 +0.6**
SIRR Siria 90.00 316 ⇓P **P** **07 30 09.8 +0.5**
KOLS Kolonicke sedl 90.03 319 *e*P **P** **07 30 11.1 +1.7**
KOLS pmax pmax
comp=Z,36nm,0.9s
KOLS Kolonicke sedl 90.03 319 *e*P **P** **07 30 11.1 +1.7**
PABE Paberze 90.19 326 *e*P **P** **07 30 10.2 +0.3**
FINES FINESS Array B 90.34 332 P **P** **07 30 10.2 -0.3**
comp=Z,15nm,0.7s,baz=101,slow=8.0,SNR=35
comp=Z,15nm,0.7s
FINES FINESS Array B 90.34 332 P **P** **07 30 10.8 +0.4**
FINES FINESS Array B 90.34 332 *i* P **P** **07 30 10.8 +0.4**
FINES pmax pmax
comp=Z,15nm,0.7s
CRVS Cervenica-Dubn 90.55 319 *e*P **P** **07 30 14.1 +2.3**
CRVS Cervenica-Dubn 90.55 319 *e*P **P** **07 30 14.1 +2.3**
MEF Metsahovi 90.89 330 *e*P **P** **07 30 12.9 -0.1**
MTSE Matsula 90.89 329 *e*P **P** **07 30 12.0 -1.0**
VNA2 Neumayer--Watz 91.05 198 PcP **PcP** **07 30 16.1 +1.4**
baz=102,slow=5.0
VNA1 Neumayer--Stat 91.43 198 PcP **PcP** **07 30 18.0 +1.7**
VNA3 Neumayer Olymp 91.60 197 PcP **PcP** **07 30 18.2 +1.1**
VYHS Vyhne 92.22 318 *e*P **P** **07 30 20.3 +0.8**
VYHS Vyhne 92.22 318 *e*P **P** **07 30 20.3 +0.8**
ARA0 ARCESS Array S 92.33 340 *e*P **P** **07 30 18.7 -0.9**
ARCES ARCESS Array B 92.33 340 P **P** **07 30 19.0 -0.6**
comp=Z,10nm,0.7s,baz=95,slow=5.5,SNR=33
comp=Z,10nm,0.7s
ARCES ARCESS Array B 92.33 340 P **P** **07 30 19.5 -0.1**
ARCES ARCESS Array B 92.33 340 P **P** **07 30 19.5 -0.1**
ARCES pmax pmax
comp=Z,17nm,0.9s
KOVH Kovagotottos 92.42 316 P **P** **07 30 20.8 +0.3**

BELA Belgrano 2 92.89 188 P **P** **07 30 22.8 +0.7**
BELA IAmb IAmb 07 30 24.1
comp=Z,4.5nm,0.8s
MORC Moravsky Berou 93.21 320 ⇑P **P** **07 30 24.8 +0.7**
MORC Moravsky Berou 93.21 320 ⇑P **P** **07 30 24.8 +0.7**
JETT Jettan, Norway 94.10 339 *e*P **P** **07 30 27.4 -0.4**
BRG Berggiesshubel 95.60 320 *e*(P) **P** **07 30 35.5 +0.5**
BRG Amp 07 30 37.7
comp=Z,5.6nm,1.2s
BRG Berggiesshubel 95.60 320 *e*P **P** **07 30 35.4 +0.5**
BRG pmax pmax
comp=Z,6.0nm,1.2s
GERES GERESS Array B 95.64 318 P **P** **07 30 35.2 -0.1**
comp=Z,1.0nm,0.6s,baz=86,slow=4.1,SNR=7.0
comp=Z,1.0nm,0.6s
FAUS Fauske 95.79 337 *e*P **P** **07 30 34.8 -0.7**
STEI Steigen 95.83 338 *e*P **P** **07 30 35.1 -0.5**
SPB2 Spitsbergen Ar 95.99 348 P **P** **07 30 34.8 -1.4**
SPA0 Spitsbergen Ar 96.00 348 *e*P **P** **07 30 36.7 +0.4**
SPITS Spitsbergen Ar 96.00 348 LR LR 08 18 59.9
comp=Z,35nm,21.6s,baz=66,slow=39
SPITS Spitsbergen Ar 96.00 348 P **P** **07 30 34.5 -1.8**
SPITS pmax pmax
comp=Z,68nm,1.6s
HFS Hagfors 96.18 330 P **P** **07 30 36.9 -0.5**
comp=Z,6.5nm,0.9s,baz=106,slow=4.7,SNR=7.4
comp=Z,6.5nm,0.9s
LOF Lofoten 96.48 338 *e*P P 07 30 31.7 -6.9
NB2 NORSAR Subarra 97.42 331 P **P** **07 30 42.1 -1.0**
comp=Z,2.8nm,1.0s,baz=90,slow=4.6
NB2 NORSAR Subarra 97.42 331 P **P** **07 30 42.1 -1.0**
baz=90,slow=4.6
NOA NORSAR Array B 97.42 331 P **P** **07 30 42.1 -1.0**
comp=Z,1.7nm,0.9s,baz=90,slow=4.6,SNR=3.8
comp=Z,1.7nm,0.9s
TORD Torodi Ar. Bea 104.30 282 PKiKP **PKiKP** **07 35 31.2 -0.2**
comp=Z,1.1nm,0.8s,baz=62,slow=2.0,SNR=6.3
YKA Yellowknife Ar 117.06 19 PKP **PKPdf** **07 35 53.0 -1.1**
comp=Z,1.3nm,0.7s,baz=344,slow=2.4,SNR=6.1
YKA Yellowknife Ar 117.06 19*c i*PKIKP **PKPdf** **07 35 53.4 -0.7**
YKA pmax pmax
comp=Z,1.0nm,0.7s
NEW Newport 125.19 33 PKP **PKiKP** **07 36 11.4 +0.8**
comp=Z,1.9nm,0.9s,baz=310,slow=3.9,SNR=4.2
NVAR Mina Array Bea 129.63 44 PKP **PKiKP** **07 36 20.4 +0.4**
comp=Z,1.2nm,0.9s,baz=259,slow=3.4,SNR=9.2
NVAR SKPbc SKPbc 07 39 36.2 -0.4
comp=Z,0.5nm,0.7s,baz=291,slow=4.7,SNR=3.5
PDAR Pinedale Array 132.76 35 PKhKP PKPpre 07 36 20.3
comp=Z,0.3nm,0.8s,baz=0.0,slow=0.9,SNR=3.2
PDAR SKPbc **SKPbc** **07 39 47.5 -0.2**
comp=Z,2.2nm,0.9s,baz=318,slow=2.0,SNR=10
PLCA Paso Flores 132.84 185 PKP **PKiKP** **07 36 26.2 0.0**
comp=Z,1.4nm,0.8s,baz=240,slow=8.1,SNR=4.0
ECSD EROS Data Cent 138.34 24 P **PKPdf** **07 36 35.4 +0.3**
baz=327
SDCO Great Sand Dun 138.37 37 P **PKPdf** **07 36 36.7 +1.0**
baz=311
E46A Sault Ste Mari 139.46 10 P **PKPdf** **07 36 37.6 +0.6**
baz=346
ANMO Albuquerque 139.53 41 PKP **PKPdf** **07 36 38.3 +0.5**
comp=Z,1.7nm,0.8s,baz=198,slow=4.5,SNR=9.3
ANMO SKPbc **SKiKP** **07 40 10.0 -1.6**
comp=Z,0.6nm,0.6s,baz=321,slow=6.5,SNR=3.0
ANMO Albuquerque 139.53 41*c i*PKIKP **PKiKP** **07 36 39.5 -0.6**
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO Albuquerque 139.53 41 P **PKPdf** **07 36 38.4 +0.6**
baz=307
CPUP Villa Florida 143.13 207 PKhKP PKPpre 07 36 42.0
comp=Z,2.1nm,0.8s,baz=168,slow=2.9,SNR=5.4
P40A Paris 143.71 22 P PKPab 07 36 41.4 -0.2
baz=331
L48A N Adams 143.71 12 P PKPbc 07 36 42.5 +0.2
baz=344
L48A P PKPbc 07 36 42.5 +0.2
baz=344
K57A Scipio Center 143.87 2 P PKPab 07 36 42.3 +0.1
baz=358
T35B Sooner Cattle 143.92 30 P PKPbc 07 36 42.9 -0.3
baz=322
WVNY West Valley, N 144.08 4 P **PKPab** **07 36 42.3 -0.7**
baz=354
WMOK Wichita Mounta 144.37 35 P **PKPab** **07 36 44.4 0.0**
baz=317
BINY Binghamton 144.41 1 P **PKPab** **07 36 43.9 -0.3**
baz=359
N47A Urbana 144.45 14 P **PKPab** **07 36 43.5 -0.9**
baz=342
N47A P **PKPab** **07 36 43.5 -0.9**
baz=342
P43A Skaggs, Pawnee 144.50 19 P **PKPab** **07 36 44.2 -0.5**
baz=335
SFIN Lafayette 144.56 16 P **PKPab** **07 36 44.5 -0.3**
baz=339
R40A Maddies Statio 144.69 24 P **PKPab** **07 36 44.6 -0.8**
baz=330
TX31 Lajitas Ar. Si 144.72 46 P PKPbc 07 36 46.3 +0.2
baz=305
TXAR Lajitas Array 144.72 46 PKP PKPbc 07 36 46.4 +0.3
comp=Z,10.0nm,0.8s,baz=282,slow=1.5,SNR=128
TXAR SKPbc **SKiKP** **07 40 21.7 -0.7**
comp=Z,0.3nm,0.6s,baz=195,slow=1.7,SNR=3.8
S39A Bolivar 144.77 26 P **PKPab** **07 36 45.0 -0.7**
baz=328
NPNY Mohonk Preserv 144.86 359 P **PKPab** **07 36 45.5 -0.4**
baz=1.7
M55A Ridgway 145.00 5 P **PKPab** **07 36 45.6 -0.8**
baz=354
M55A P **PKPab** **07 36 45.6 -0.8**
baz=354
KSPA Keystone Colle 145.06 1 P **PKPbc** **07 36 45.6 -1.0**
baz=359
TUL1 Leonard 145.07 30 P **PKPbc** **07 36 46.7 -0.1**
baz=322
N51A Ashland 145.09 10 P **PKPbc** **07 36 45.6 -1.1**
baz=347
N51A P **PKPbc** **07 36 45.6 -1.1**
baz=347
SLM Saint Louis 145.16 21 P **PKPbc** **07 36 45.8 -1.2**
baz=333
O48B Farmland 145.16 14 P **PKPbc** **07 36 45.9 -1.1**
baz=342
BRNY Black Rk. Fore 145.19 359 P **PKPbc** **07 36 45.3 -1.7**
baz=2.0
M57A Sunshine Farm, 145.24 3 P **PKPbc** **07 36 46.8 -0.4**
baz=357
M57A P **PKPbc** **07 36 46.8 -0.4**
baz=357
P46A Rosedale 145.24 17 P **PKPbc** **07 36 47.0 -0.2**
baz=339
CCM Cathedral Cave 145.30 23 P **PKPbc** **07 36 46.9 -0.6**
baz=331
PSWB Penn State Wil 145.31 1 P **PKPbc** **07 36 46.9 -0.5**
baz=358
U38A Gravette 145.33 28 P **PKPbc** **07 36 46.9 -0.7**
baz=325
PSDB Penn State Uni 145.34 5 P **PKPbc** **07 36 46.8 -0.7**
baz=354
Q44A Meyer Farm, Va 145.34 19 P **PKPbc** **07 36 46.8 -0.8**
baz=335
BDFB Brasilia 145.35 230 PKPbc **PKPab** **07 36 49.6 +1.0**
comp=Z,14nm,0.7s,baz=104,slow=3.7,SNR=25
ABTX Abilene, Hawle 145.35 38 P **PKPdf** **07 36 47.9 -0.1**
baz=314
O49A Covington 145.41 13 P **PKPbc** **07 36 47.2 -0.6**
baz=344
O49A P **PKPbc** **07 36 47.2 -0.6**
baz=344
N53A Lisbon 145.43 8 P **PKPbc** **07 36 47.2 -0.6**
baz=350
N53A P **PKPbc** **07 36 47.2 -0.6**
baz=350
ODNJ Ogdensburg 145.53 359 P **PKPdf** **07 36 47.7 -0.3**
baz=1.0
PAL Palisades 145.60 358 P **PKPdf** **07 36 47.7 -0.3**
baz=2.2
ACSO Alum Creek Sta 145.64 11 P **PKPdf** **07 36 48.1 -0.1**
baz=346
HHAR Hobbs 145.66 28 P **PKPdf** **07 36 47.8 -0.6**
baz=325
FVM French Village 145.67 22 P **PKPdf** **07 36 48.0 -0.3**
baz=332
FOR Fordham 145.74 358 P **PKPbc** **07 36 48.6 -0.1**
baz=2.2
N58A Sunbury 145.75 2 P **PKPdf** **07 36 48.2 -0.1**
baz=357
N58A P **PKPdf** **07 36 48.2 -0.1**
baz=357
OLIL Olney 145.79 18 P **PKPdf** **07 36 48.6 +0.1**
baz=337
UPAO U. Pittsburgh 145.85 7 P **PKPdf** **07 36 48.7 +0.2**
baz=351
P48A Milroy 145.86 14 P **PKPdf** **07 36 48.2 -0.4**
baz=342
P48A P **PKPdf** **07 36 48.2 -0.4**
baz=342
P49A Miami Univ. Ec 145.96 13 P **PKPdf** **07 36 48.5 -0.2**
baz=343
O52A Adamsville 145.96 9 P **PKPbc** **07 36 49.2 -0.2**
baz=348
O52A P **PKPbc** **07 36 49.2 -0.2**
baz=348
O54A Avella 146.10 7 P **PKPdf** **07 36 49.3 +0.3**
baz=351
O54A P **PKPdf** **07 36 49.3 +0.3**
baz=351
X37A Clayton 146.32 31 P **PKPdf** **07 36 50.1 +0.6**
baz=322
S44A Carbondale 146.35 21 P **PKPdf** **07 36 50.0 +0.5**
baz=334
P51A Williamsport 146.36 11 P **PKPdf** **07 36 49.2 -0.2**
baz=346
P51A P **PKPdf** **07 36 49.2 -0.2**
baz=346
TUPA Temple Univers 146.45 0 P **PKPdf** **07 36 50.0 +0.4**
baz=360
P53A Whipple 146.64 9 P **PKPbc** **07 36 50.7 -0.8**
baz=349
P53A P **PKPbc** **07 36 50.7 -0.8**
baz=349
MCWV Mont Chateau 146.68 7 P **PKPbc** **07 36 51.0 -0.6**
baz=352
JCT Junction City 146.69 41 P **PKPbc** **07 36 51.4 -0.6**
baz=311
PBMO Poplar Bluff 146.73 23 P **PKPdf** **07 36 50.5 +0.3**
baz=332
Q51A Peebles 146.74 12 P **PKPdf** **07 36 50.9 +0.8**
baz=345
Q51A P **PKPdf** **07 36 50.9 +0.8**
baz=345
GEDE Greenville 146.80 1 P **PKPbc** **07 36 51.2 -0.8**
baz=359
R49A Shelbyville 147.03 15 P **PKPbc** **07 36 52.1 -0.5**
baz=342
R49A P **PKPbc** **07 36 52.1 -0.5**
baz=342
P57A Homestead Farm 147.03 4 P **PKPdf** **07 36 51.3 +0.8**
baz=355
P57A P **PKPdf** **07 36 51.3 +0.8**
baz=355
T45B Paducah 147.17 20 P **PKPbc** **07 36 52.6 -0.5**
baz=335
Q54A Coxs Mills 147.22 8 P **PKPbc** **07 36 52.3 -0.9**
baz=350
Q54A P **PKPbc** **07 36 52.3 -0.9**
baz=350
R50A Paris 147.24 14 P **PKPbc** **07 36 52.3 -0.9**
baz=343
R50A P **PKPbc** **07 36 52.3 -0.9**
baz=343
MIAR Mount Ida 147.25 29 P **PKPbc** **07 36 53.2 -0.2**
baz=324
Q56A Snyder Ridge, 147.36 6 P **PKPdf** **07 36 51.0 -0.2**
baz=353
Q56A P **PKPdf** **07 36 51.0 -0.2**
baz=353
R53A Hurricane 147.68 10 P **PKPbc** **07 36 54.2 -0.3**
baz=347
R53A P **PKPbc** **07 36 54.2 -0.3**
baz=347
T47A Sharon Grove 147.70 18 P **PKPbc** **07 36 54.0 -0.5**
baz=337
S51A Beattyville 148.02 13 P **PKPbc** **07 36 54.4 -1.0**
baz=344
S51A P **PKPbc** **07 36 54.4 -1.0**
baz=344
WVT Waverly 148.25 20 P **PKPbc** **07 36 55.6 -0.4**
baz=336
S54A Dingess, Beckl 148.30 9 P **PKPbc** **07 36 55.4 -0.8**
baz=348
S54A P **PKPbc** **07 36 55.4 -0.8**
baz=348
T50A Nancy 148.31 15 P **PKPdf** **07 36 54.3 +1.5**
baz=341
T50A P **PKPdf** **07 36 54.3 +1.5**
baz=341
R58B Mineral 148.55 4 P **PKPbc** **07 36 56.3 -0.4**
baz=355
R58B P **PKPbc** **07 36 56.3 -0.4**
baz=355
W45A Hickory Valley 148.63 23 P **PKPbc** **07 36 56.3 -0.8**
baz=332
S57A Dark Hollow, R 148.66 6 P **PKPbc** **07 36 56.4 -0.7**
baz=353
S57A P **PKPbc** **07 36 56.4 -0.7**
baz=353
V48A Smith Brothers 148.93 19 P **PKPbc** **07 36 57.1 -0.7**
baz=337
BLA Blacksburg 149.02 8 P **PKPbc** **07 36 57.3 -0.7**
baz=350
TZTN Tazewell 149.08 13 P **PKPbc** **07 36 57.7 -0.5**
baz=344
OXF Oxford 149.11 23 P **PKPbc** **07 36 57.8 -0.5**
baz=332
T59A Double "B" Far 149.56 4 P **PKPbc** **07 36 59.2 -0.1**
baz=355
T59A P **PKPbc** **07 36 59.2 -0.1**
baz=355
V51A Loudon 149.59 15 P **PKPbc** **07 36 58.5 -1.0**
baz=342
Y45A Yeager Farm, C 149.62 24 P **PKPbc** **07 36 59.6 0.0**
baz=331
V52A Sevierville 149.74 14 P **PKPbc** **07 36 59.5 -0.3**
baz=343
U56A King 149.87 9 P **PKPbc** **07 36 59.7 -0.5**
baz=350
U56A P **PKPbc** **07 36 59.7 -0.5**
baz=350
TKL Tuckaleechee C 149.87 14 PKPbc **PKPbc** **07 36 59.5 -0.7**
comp=Z,20nm,0.7s,baz=336,slow=2.4,SNR=45
TKL Tuckaleechee C 149.87 14 P **PKPbc** **07 36 59.6 -0.5**
baz=343
W50A Signal Mountai 149.89 17 P **PKPbc** **07 36 59.3 -1.0**
baz=340
X48A Hartselle 150.04 20 P **PKPbc** **07 36 58.9 -1.7**
baz=336
V53A Saluda 150.08 13 P **PKPbc** **07 37 00.2 -0.5**
baz=345
V53A P **PKPbc** **07 37 00.2 -0.5**
baz=345
U59A Littleton 150.16 4 P **PKPbc** **07 37 00.9 +0.1**
baz=355
U59A P **PKPbc** **07 37 00.9 +0.1**
baz=355
V55A Taylorsville 150.22 10 P **PKPbc** **07 37 00.6 -0.4**
baz=348
V55A P **PKPbc** **07 37 00.6 -0.4**
baz=348
W52A Murphy 150.37 15 P **PKPbc** **07 37 01.2 -0.2**
baz=342
V58A Windy Hill, Pi 150.58 7 P **PKPbc** **07 37 00.5 -1.3**
baz=352
V58A P **PKPbc** **07 37 00.5 -1.3**
baz=352
VBMS Vicksburg 150.61 27 P **PKiKP** **07 37 02.4 -0.3**
baz=328
X51A Calhoun 150.62 17 P **PKPbc** **07 37 01.9 -0.1**
baz=340
X51A P **PKPbc** **07 37 01.9 -0.1**
baz=340
CASEE Lake Jocassee 150.71 13 P **PKPbc** **07 37 01.6 -0.6**
baz=344
Z47A Carrollton 150.79 23 P **PKPbc** **07 37 02.0 -0.4**
baz=333
Y49A Blount Mountai 150.79 20 P **PKPbc** **07 37 02.1 -0.4**
baz=337
146A Union 150.89 25 P **PKiKP** **07 37 03.1 -0.2**
baz=331
KMSC Kings Mountain 150.89 11 P **PKPbc** **07 37 02.3 -0.3**
baz=347
W57A Gilead 151.10 8 P **PKPbc** **07 37 02.4 -0.7**
baz=350
W57A P **PKPbc** **07 37 02.4 -0.7**
baz=350
PAULI Pauline 151.11 12 P **PKPbc** **07 37 02.6 -0.5**
baz=346

344A	**Westbrook Farm** baz=326	**151.15**	**29**	P		**PKiKP**	**07 37 04.0**	**+0.2**
CNNC	**Cliffs of the** baz=354	**151.25**	**5**	P		**PKPbc**	**07 37 03.4**	**0.0**
LRAL	**Lakeview Retre** baz=335	**151.34**	**21**	P		**PKPbc**	**07 37 02.6**	**-1.1**
Y52A	**Lilburn** baz=341	**151.50**	**16**	P		**PKiKP**	**07 37 04.4**	**-0.1**
Y52A	baz=341			P		**PKiKP**	**07 37 04.4**	**-0.1**
BIRD	**Birdtown, Kers** baz=349	**151.53**	**9**	P		**PKPbc**	**07 37 03.7**	**-0.4**
HODGE	**Hodges** baz=345	**151.59**	**13**	P		**PKPbc**	**07 37 03.9**	**-0.3**
Z51A	**Franklin** baz=339	**151.69**	**18**	P		**PKPbc**	**07 37 04.4**	**-0.1**
JSC	**Jenkinsville** baz=347	**151.74**	**11**	P		**PKPbc**	**07 37 04.6**	**0.0**
346A	**Big Creek Wild** baz=329	**151.78**	**27**	P		**PKiKP**	**07 37 05.2**	**0.0**
GOGA	**Godfrey** baz=342	**152.08**	**15**	P		**PKPbc**	**07 37 05.5**	**+0.1**
Y57A	**Sumter** baz=349	**152.15**	**10**	P		**PKPbc**	**07 37 05.1**	**-0.4**
Y57A	baz=349			P		**PKPbc**	**07 37 05.1**	**-0.4**
Y58A	**Scranton** baz=350	**152.37**	**8**	P		**PKPbc**	**07 37 05.6**	**-0.4**
Y58A	baz=350			P		**PKPbc**	**07 37 05.6**	**-0.4**
152A	**Waverly Hall** baz=339	**152.43**	**18**	P		**PKPbc**	**07 37 06.2**	**0.0**
250A	**Grady** baz=335	**152.55**	**21**	P		**PKiKP**	**07 37 06.7**	**-0.1**

MEX ***12*** *07:18:18.2±0.5, 26.°88N×112.°05W, h5km, MD4.3*
IDC ***12*** *07:18:19.8±1.3, 26.°96N×111.°57W, h0km, mb3.5/2, mbtmp3.4/9, ML3.3/7, MS3.3/1, Error ellipse: s-maj=20.7km s-min=12.8km az=59.0*

ISC 12 07:18:20.1±1.0, 26.°93N±0.°06×111.°94W±0.°08, h10km, n14, σ3s06/19, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.47**	**325**	*i* P		**Pg**	**07 18 26.8**	**-2.5**
SRIG				*i* S		**Sg**	**07 18 33.8**	**-1.8**
HSIG		**2.26**	**23**	*i* P		**Pn**	**07 18 54.4**	**-3.2**
HSIG				*e*S		**Sn**	**07 19 23.1**	**-2.4**
BAHB	**Baha de los**	**2.47**	**325**	*i* P		**Pn**	**07 18 58.3**	**-2.1**
BAHB				*i* S		**Sn**	**07 19 24.9**	**-5.6**
LPIG	**La Paz** 8.3nm,0.3s,baz=0.0,slow=4.0,SNR=17	**3.18**	**152**	Pn		**Pn**	**07 19 11.4**	**+1.3**
LPIG				Lg		Lg	07 19 54.6	
	11nm,0.3s,baz=208,slow=20,SNR=11 48nm,0.6s							
LAPR	**La Primavera**	**3.57**	**355**	*i* P		**Pn**	**07 19 13.2**	**-2.4**
LAPR				*i* S		**Sn**	**07 20 01.3**	**+3.5**
SLBS	**Sierra La Lagu**	**3.70**	**150**	*i* P		**Pn**	**07 19 14.8**	**-2.7**
SLBS				*i* S		**Sn**	**07 20 00.3**	**-0.9**
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=250,slow=12,SNR=6.6	**7.69**	**70**	Pn		**Pn**	**07 20 08.8**	**-3.4**
TXAR				Lg		Lg	07 22 11.9	
	baz=267,slow=32,SNR=1.5							
TXAR				LR		LR	07 23 14.4	
	comp=Z,192nm,18.1s,baz=268,slow=40 0.2nm,0.5s							
PFO	**Pinyon Flats O** 0.1nm,0.3s,baz=132,slow=17,SNR=1.6	**7.72**	**331**	Pn		**Pn**	**07 20 15.8**	**+3.1**
PFO				Lg		Lg	07 22 26.1	
	0.1nm,0.3s,baz=186,slow=8.5,SNR=5.3 1.4nm,0.8s							
ANMO	**Albuquerque** 0.1nm,0.3s,baz=218,slow=14,SNR=4.3	**9.27**	**29**	Pn		**Pn**	**07 20 34.3**	**+0.3**
ANMO				Lg		Lg	07 23 06.4	
	baz=27,slow=22,SNR=1.7 1.5nm,0.9s							
NVAR	**Mina Array Bea** baz=157,slow=14,SNR=12 1.7nm,1.0s	**12.65**	**337**	Pn		**Pn**	**07 21 24.5**	**+4.2**
ELK	**Elko** 0.1nm,0.3s,baz=201,slow=18,SNR=3.9 1.0nm,0.9s	**14.05**	**350**	Pn		**Pn**	**07 21 43.1**	**+3.7**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=184,slow=11,SNR=11 1.2nm,0.8s	**15.92**	**6**	Pn		**P**	**07 22 09.1**	**+1.0**
NEW	**Newport** 1.3nm,0.8s,baz=166,slow=12,SNR=3.6 1.3nm,0.8s	**21.68**	**351**	P		**P**	**07 23 13.0**	**+2.0**
ILAR	**Eielson Array** 0.7nm,0.8s,baz=152,slow=7.2,SNR=9.6 0.7nm,0.8s	**43.89**	**339**	P		**P**	**07 26 28.4**	**+1.8**

SOME ***12*** *07:24:02.6, 38.°33N×71.°27E, h0km*

ISC 12 07:24:14.2±3.5, 37.°7N±0.°2×70.°2E±0.°1, h30km, n6, σ2s49/11, 1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay** 461nm,0.4s	**4.42**	**358**	*e*P		**Pn**	**07 25 19.5**	**+0.2**
IUG				*e*S		**Sn**	**07 26 13.7**	**+3.8**
	162nm,0.4s							
KK31	**Karatay Array** 2.6nm,0.2s,baz=181,slow=16,SNR=80	**5.38**	**2**	P		**Pn**	**07 25 30.5**	**-1.9**
KK31				S		**Sn**	**07 26 33.3**	**-0.1**
	63nm,0.7s,baz=166,slow=17,SNR=36							
MRKS	**Merke** 8.1nm,0.3s	**5.52**	**24**	*e*P		**Pn**	**07 25 31.1**	**-3.4**
MRKS				*e*S		**Sn**	**07 26 33.3**	**-3.7**
	43nm,0.5s							
KST	**Kastek** 1.6nm,0.4s	**6.89**	**38**	*e*P		**Pn**	**07 25 54.0**	**+0.7**
KST				*e*S		**Sn**	**07 27 12.2**	**+1.4**
	6.9nm,0.7s							
KRBS	**Karabastau** 2.1nm,0.6s	**7.27**	**33**	*e*P		**Pn**	**07 25 59.5**	**+1.2**
KRBS				*e*S		**Sn**	**07 27 21.5**	**+1.6**
	3.9nm,0.7s							
AB31	**Akbulak array** 1.7nm,0.3s,baz=151,slow=10,SNR=184	**13.71**	**330**	⇓P		**Pn**	**07 27 26.7**	**+0.2**

THE ***12*** *07:28:37.7, 38.°74N×25.°53E, h2km±3km, ML2.5/4, Error ellipse: s-maj=4.0km s-min=1.2km az=44.0*
ISK ***12*** *07:28:37.9, 38.°79N×25.°73E, h6km, ML2.6/13*
DDA ***12*** *07:28:38.5±0.0, 38.°76N×25.°74E, h7km±4km, ML2.2*
ATH ***12*** *07:28:38.2, 38.°78N×25.°60E, h23km±10km, ML2.7/3, Error ellipse: s-maj=11.8km s-min=1.9km az=233.0*

ISC 12 07:28:38.0±1.0, 38.°77N±0.°02×25.°68E±0.°04, h11km±9km, n33, σ0s71/54, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PSRA	**Psara**	**0.24**	**201**	P		**Pb**	**07 28 44.5**	**0.0**
PSRA				S		**Sg**	**07 28 48.0**	**+1.6**
PSRA				AML	AML		07 28 48.8	
	comp=E,8721μm,0.1s							
PSRA				AML	AML		07 28 48.9	
	comp=N,5907μm,0.1s							
CHOS	**Chios island**	**0.48**	**142**	P		**Pb**	**07 28 48.4**	**-0.2**
CHOS				S		**Sb**	**07 28 55.3**	**-0.4**
	comp=N,1μm,0.2s							
CHOS	**Chios island**	**0.48**	**142**	P		**Pb**	**07 28 48.3**	**-0.2**
CHOS				S		**Sb**	**07 28 55.3**	**-0.4**
CHOS				AML	AML		07 28 55.4	
	comp=N,1904μm,0.3s							
CHOS				AML	AML		07 28 55.4	
	comp=E,2266μm,0.2s							
PRK	**Paraskevi**	**0.67**	**44**	P		**Pb**	**07 28 52.3**	**+0.7**
PRK				S		**Sn**	**07 29 03.8**	**0.0**
	comp=E,585nm,0.4s							
PRK	**Paraskevi**	**0.67**	**44**	P		**Pb**	**07 28 51.9**	**+0.3**
PRK				AML	AML		07 29 05.5	
	comp=E,1211μm,0.3s							
PRK				AML	AML		07 29 06.3	
	comp=N,1129μm,0.4s							
GPNR	**Gulpinar-Canak**	**0.77**	**27**	PG		**Pg**	**07 28 52.7**	**-0.2**
GPNR				SG		**Sb**	**07 29 03.4**	**-0.5**
KOCA	**Canakkale, Ayv**	**0.81**	**26**	P		**Pb**	**07 28 54.5**	**+0.3**
KOCA				S		**Sn**	**07 29 07.0**	**-0.5**
KOCA				*i* AML	AML		07 29 08.0	
	comp=N,230nm,0.3s							
KOCA				*i* AML	AML		07 29 10.0	
	comp=N,254nm,0.5s							
FOCM	**Foa**	**0.83**	**94**	PG		**Pg**	**07 28 53.5**	**-0.5**
FOCM				SG		**Sb**	**07 29 04.6**	**-0.9**
URLA	**Izmir**	**0.83**	**119**	PG		**Pg**	**07 28 53.9**	**-0.2**
URLA				SG		**Sb**	**07 29 05.7**	**+0.1**
URLA	**Izmir**	**0.83**	**119**	P		**Pg**	**07 28 53.8**	**-0.2**
URLA				S		**Sg**	**07 29 04.4**	**-0.5**
URLA				*i* AML	AML		07 29 07.0	
	comp=N,163nm,0.3s							
URLA				*i* AML	AML		07 29 09.0	
	comp=N,78nm,0.4s							
ZEYE	**Izmir, Urla-Ze**	**0.84**	**129**	P		**Pb**	**07 28 54.8**	**+0.2**
ZEYE				S		**Sb**	**07 29 05.1**	**-0.7**
ZEYE				*i* AML	AML		07 29 09.0	
	comp=N,126nm,0.3s							
ZEYE				*i* AML	AML		07 29 09.0	
	comp=N,189nm,0.3s							
AYVA	**Ayvalik**	**0.96**	**55**	P		**Pb**	**07 28 56.8**	**+0.2**
AYVA				S		**Sn**	**07 29 10.1**	**-0.9**
AYVA				*i* AML	AML		07 29 11.0	
	comp=N,148nm,0.5s							
AYVA				*i* AML	AML		07 29 13.0	
	comp=N,105nm,0.3s							
DKL	**Dikili**	**1.01**	**72**	PG		**Pg**	**07 28 56.5**	**-0.9**
DKL				SG		**Sb**	**07 29 10.8**	**+0.1**
BOZC	**Bozcaada**	**1.11**	**15**	PG		**Pg**	**07 28 59.2**	**-0.2**
BOZC				SG		**Sb**	**07 29 14.5**	**+0.8**
BOZC	**Bozcaada**	**1.11**	**15**	P		**Pg**	**07 28 58.6**	**-0.7**
BOZC				S		**Sb**	**07 29 14.6**	**+1.0**
BOZC				*i* AML	AML		07 29 16.0	
	comp=N,54nm,0.3s							
BOZC				*i* AML	AML		07 29 17.0	
	comp=N,63nm,0.3s							
ZEDA	**zmir-Bergama**	**1.11**	**79**	P		**Pg**	**07 28 58.2**	**-1.2**
ZEDA				S		**Sg**	**07 29 12.7**	**-1.1**
BLCB	**Balcova**	**1.14**	**109**	PN		**Pb**	**07 28 59.7**	**0.0**
BLCB				SN		**Sn**	**07 29 15.7**	**+0.3**
EZN	**Ezine**	**1.17**	**25**	PN		**Pg**	**07 28 59.7**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**1.18**	**35**	P		**Pg**	**07 29 00.4**	**-0.4**
BAYC				S		**Sn**	**07 29 16.9**	**+0.3**
BAYC				*i* AML	AML		07 29 18.0	
	comp=N,38nm,0.2s							
BAYC				*i* AML	AML		07 29 20.0	
	comp=N,30nm,0.3s							
DGB	**zmir**	**1.19**	**127**	P		**Pg**	**07 28 59.7**	**-1.1**
DGB				S		**Sn**	**07 29 16.8**	**+0.2**
DGB				*i* AML	AML		07 29 19.0	
	comp=N,46nm,0.3s							
DGB				*i* AML	AML		07 29 19.0	
	comp=N,37nm,1.0s							
LIA	**Limnos Island**	**1.19**	**341**	P		**Pg**	**07 29 00.2**	**-0.7**
LIA				S		**Sg**	**07 29 16.2**	**-0.2**
	comp=N,60nm,0.5s							
LIA	**Limnos Island**	**1.19**	**341**	P		**Pg**	**07 28 59.5**	**-1.4**
BUHA	**Balikesir, Bur**	**1.31**	**56**	P		**Pg**	**07 29 03.4**	**+0.1**
BUHA				S		**Sn**	**07 29 21.0**	**+1.2**
BUHA				*i* AML	AML		07 29 22.0	
	comp=N,60nm,0.7s							
BUHA				*i* AML	AML		07 29 23.0	
	comp=N,89nm,0.5s							
SMG	**Samos**	**1.40**	**139**	P		**Pg**	**07 29 04.8**	**-0.1**
SMG				S		**Sg**	**07 29 24.1**	**+1.0**
	comp=N,132nm,0.3s							
SMG	**Samos**	**1.40**	**139**	P		**Pb**	**07 29 04.3**	**+0.1**
GCAM	**G?zelcaml?**	**1.63**	**131**	PN		**Pb**	**07 29 07.9**	**-0.1**
APE	**Apeiranthos**	**1.70**	**184**	PN		**Pn**	**07 29 07.2**	**-0.5**
SMTH	**Samothraki Isl**	**1.70**	**356**	P		**Pn**	**07 29 06.9**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.74**	**21**	PN		**Pn**	**07 29 08.7**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.93**	**115**	PN		**Pn**	**07 29 10.9**	**+0.1**
ERIK	**Erikli-Kesan**	**2.00**	**19**	PN		**Pn**	**07 29 12.3**	**+0.5**
BODT	**Bodrum**	**2.14**	**142**	PN		**Pn**	**07 29 15.2**	**+1.5**
MRMT	**Marmara Adasi**	**2.35**	**38**	PN		**Pn**	**07 29 17.8**	**+1.1**

IDC 12 07:28:40.4±1.8, 21.°81S×172.°70E, h0km, mb3.4/3, mbtmp3.4/4, ML4.7/1, MS3.7/5, Error ellipse: s-maj=50.3km s-min=33.4km az=163.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 0.6nm,0.3s,baz=240,slow=18,SNR=1.7	**6.47**	**52**	Pn		Pn	07 30 17.2	+0.2
MSVF				LR		LR	07 32 31.3	
	comp=Z,1μm,18.2s,baz=227,slow=36 5.9nm,0.8s							
AFI	**Afiamalu** comp=Z,188nm,21.3s,baz=244,slow=33	**16.73**	**65**	LR		LR	07 37 51.9	
CTA	**Charters Tower** comp=Z,155nm,21.3s,baz=21,slow=36	**24.75**	**269**	LR		LR	07 43 19.6	
ASAR	**Alice Springs** 0.4nm,0.7s,baz=99,slow=9.7,SNR=4.3	**35.75**	**259**	P		P	07 35 42.0	+0.7
ASAR				LR		LR	07 50 22.1	
	comp=Z,143nm,19.5s,baz=104,slow=36 0.4nm,0.7s							
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=96,slow=8.3,SNR=5.8	**35.83**	**266**	P		P	07 35 41.2	-0.7
WRA				LR		LR	07 50 13.0	
	comp=Z,126nm,20.6s,baz=81,slow=36 0.4nm,0.8s							
H11S2	**WAKE ISLAND Hy** baz=171,slow=76,SNR=7.5	**40.48**	**351**	T		T	08 20 13.2	
H11S3	**WAKE ISLAND Hy** baz=171,slow=76,SNR=5.4	**40.49**	**351**	T		T	08 20 11.5	
H11S1	**WAKE ISLAND Hy** baz=171,slow=76,SNR=3.6	**40.50**	**351**	T		T	08 20 14.0	
VNDA	**Vanda** 0.4nm,0.7s,baz=9.1,slow=8.6,SNR=1.9 0.4nm,0.7s	**56.01**	**183**	P		P	07 38 20.0	-0.3

NNC ***12*** *07:35:27.4±1.3, 54.°26N×87.°12E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=13.4km s-min=6.9km az=6.0, Suspected Mining explosion.*
IDC ***12*** *07:35:28.3±2.6, 54.°20N×87.°12E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=22.4km s-min=16.2km az=59.0*

ISC 12 07:35:27.9±4.6, 54.°3N±0.°2×87.°1E±0.°2, h0km, n8, σ1s20/12, 4C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=78,slow=309,SNR=1.6	**1.36**	**257**	*i*			07 44 00.0	
ZAA0	**Zalesovo Array** 0.8nm,0.6s	**1.36**	**257**	⇓P		**Pg**	**07 35 52.9**	**-1.0**
ZAA0				⇑S		**Sn**	**07 36 12.3**	**-0.5**
	6.7nm,1.2s							
ZALV	**Zalesovo Beam** 1.1nm,0.3s,baz=79,slow=17,SNR=18	**1.36**	**257**	Pg		**Pg**	**07 35 52.7**	**-1.2**
ZALV				Lg		Lg	07 36 11.8	
	1.5nm,0.3s,baz=80,slow=21,SNR=6.0							
KURK	**Kurchatov** 2.6nm,0.8s	**6.26**	**239**	⇑Pn		**Pn**	**07 37 02.2**	**+0.7**
KURK				⇓Lg		Lg	07 38 48.2	
	12nm,1.0s							
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=56,slow=14,SNR=12	**6.37**	**238**	Pn		**Pn**	**07 37 04.0**	**+1.0**
KURBB				Sn		**Sn**	**07 38 17.6**	**+1.4**
	0.1nm,0.3s,baz=52,slow=22,SNR=1.5							
KURBB				Lg		Lg	07 38 46.7	
	baz=56,slow=30 2.1nm,0.8s							
KURBB	**Kurchatov Arra** 2.5nm,0.6s	**6.37**	**238**	⇓Pn		**Pn**	**07 37 03.2**	**+0.2**
KURBB				⇓Sn		**Sn**	**07 38 18.1**	**+1.8**
	4.6nm,0.7s							
KURBB				⇑Lg		Lg	07 38 50.2	
	18nm,1.1s							
MK31	**Makanchi Array** 0.2nm,0.3s,baz=24,slow=14,SNR=11	**8.08**	**204**	⇑Pn		**Pn**	**07 37 27.3**	**+0.9**
MK31				⇓Sn		**Sn**	**07 38 57.5**	**-1.0**
	1.1nm,0.6s,baz=25,slow=28,SNR=4.0							
MK31				Lg		Lg	07 39 44.8	
	13nm,1.2s,baz=27,slow=31,SNR=3.5							
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=25,slow=12,SNR=12	**8.08**	**204**	Pn		**Pn**	**07 37 27.3**	**+0.9**
MKAR				Sn		**Sn**	**07 38 57.6**	**-0.9**
	0.1nm,0.3s,baz=24,slow=27,SNR=5.7							
MKAR				Lg		Lg	07 39 39.2	
	baz=24,slow=29 0.3nm,0.4s							

IDC 12 07:51:38.7±4.0, 22.°34S×173.°04E, h0km, mb3.6/3, mbtmp3.5/5, ML4.3/2, MS3.7/2, Error ellipse: s-maj=155.6km s-min=27.2km az=153.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 1.1nm,0.3s,baz=92,slow=17,SNR=3.6 3.7nm,0.5s	**6.12**	**271**	Pn		Pn	07 53 11.4	+0.9
MSVF	**Nonsavu** 0.7nm,0.3s,baz=158,slow=18,SNR=1.1 2.5nm,0.6s	**6.57**	**47**	Pn		Pn	07 53 18.1	+1.3
RPZ	**Rata Peaks** comp=Z,463nm,20.9s,baz=353,slow=36	**21.38**	**184**	LR		LR	08 04 26.0	
ASAR	**Alice Springs** 0.3nm,0.7s,baz=79,slow=9.5,SNR=5.6 0.3nm,0.7s	**35.97**	**260**	P		P	07 58 42.2	+0.7
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=101,slow=8.4,SNR=8.5 0.3nm,0.5s	**36.11**	**266**	P		P	07 58 41.8	-0.9
H11S2	**WAKE ISLAND Hy** baz=171,slow=76,SNR=144	**41.05**	**351**	T		T	08 44 05.4	
H11S3	**WAKE ISLAND Hy** baz=171,slow=76,SNR=119	**41.05**	**351**	T		T	08 44 06.5	
H11S1	**WAKE ISLAND Hy** baz=171,slow=76,SNR=140	**41.07**	**351**	T		T	08 44 06.7	
JHJ	**Hachijo jima 2** comp=Z,30nm,18.1s,baz=130,slow=38	**63.62**	**329**	LR		LR	08 31 42.5	
ILAR	**Eielson Array** 0.4nm,0.7s,baz=215,slow=4.4,SNR=3.3 0.4nm,0.7s	**92.17**	**16**	P		P	08 04 48.9	-0.8

IDC ***12*** *07:52:36.7±0.8, 22.°42S×172.°74E, h0km, mb4.1/12, mbtmp4.1/15, ML4.2/3, MS4.0/12, Error ellipse: s-maj=21.0km s-min=17.7km az=125.0*
NEIC ***12*** *07:52:42.4±2.2, 22.°92S±0.°09×172.°61E±0.°09, h10km±1km, mb4.7/24, Error ellipse: s-maj=15.7km s-min=13.5km az=353.0*
NOU ***12*** *07:52:53.0, 22.°96S×171.°72E, h10km, MLv4.5/9, Southeast of Loyalty Islands*

ISC 12 07:52:42.4±0.5, 22.°97S±0.°08×172.°51E±0.°06, h10km±, n87, σ1s55/67, mb4.6/22, MS4.1/12, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.41**	**289**			**Pn**	**07 53 49.2**	**-0.2**
PINNC	**Pines Island,**	**4.69**	**273**			**Pn**	**07 53 53.7**	**+0.5**
PINNC	**Pines Island,**	**4.69**	**273**	P		**Pn**	**07 53 54.2**	**+1.0**
OUENC	**Ouen Island, N**	**5.26**	**275**	Pn		**Pn**	**07 54 01.2**	**0.0**
OUENC	**Ouen Island, N**	**5.26**	**275**	P		**Pn**	**07 54 01.7**	**+0.5**
YATNC	**Mamie plateau,**	**5.28**	**279**	P		**Pn**	**07 54 02.0**	**+0.7**
ONTNC	**Ouen Toro**	**5.63**	**276**	Pn		**Pn**	**07 54 05.7**	**-0.6**
ONTNC	**Ouen Toro**	**5.63**	**276**	P		**Pn**	**07 54 07.1**	**+0.8**
DZM	**Mont Dzumac** 5.0nm,0.3s,baz=107,slow=15,SNR=19	**5.68**	**278**	Pn		**Pn**	**07 54 05.5**	**-1.5**
DZM				Sn		**Sn**	**07 55 14.5**	**+2.1**
	baz=107,slow=19 9.4nm,0.3s							
DZM	**Mont Dzumac** 70nm,0.8s	**5.68**	**278**	*e*Pn		**Pn**	**07 54 05.9**	**-1.1**
DZM				*e*Sn		**Sn**	**07 55 10.4**	**-2.0**
	98nm,0.8s							
DZM				*e*LR		LR	07 55 20.9	
DZM	**Mont Dzumac**	**5.68**	**278**	Pn		**Pn**	**07 54 07.0**	**0.0**
DZM	**Mont Dzumac**	**5.68**	**278**	P		**Pn**	**07 54 07.3**	**+0.3**
NOUC	**Port Laguerre**	**5.80**	**277**	P		**Pn**	**07 54 09.0**	**+0.4**
NFK	**Norfolk Island**	**7.31**	**213**	P		Pn	07 54 34.8	+5.5
MSVF	**Nonsavu** 0.3nm,0.3s,baz=87,slow=21,SNR=1.9	**7.36**	**46**	Pn		Pn	07 54 19.9	-10
MSVF				LR		LR	07 55 57.8	
	comp=Z,134nm,20.2s,baz=225,slow=30 6.4nm,0.8s							
MSVF	**Nonsavu**	**7.36**	**46**	Pn		**Pn**	**07 54 27.8**	**-2.2**
KOUNC	**Koumac, New Ca**	**8.02**	**286**	Pn		**Pn**	**07 54 39.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**8.02**	**286**	P		**Pn**	**07 54 39.9**	**+0.9**
RAO	**Raoul Island** comp=Z,907nm,21.2s,baz=327,slow=33	**10.63**	**128**	LR		LR	07 58 31.9	
URZ	**Urewera** 0.2nm,0.3s,baz=290,slow=12,SNR=1.4	**15.74**	**167**	Pn		**Pn**	**07 56 25.0**	**+0.9**
URZ				LR		LR	08 00 58.1	
	comp=Z,450nm,19.6s,baz=46,slow=31 2.3nm,0.4s							
URZ	**Urewera**	**15.74**	**167**	Pn		**Pn**	**07 56 26.0**	**+1.9**
URZ				IAmb		IAmb	07 56 33.8	
	comp=Z,88nm,1.3s							
BKZ	**Black Stump Fm**	**16.50**	**169**	Pn		**Pn**	**07 56 34.9**	**+0.9**
TUWZ	**Tuamarina**	**18.44**	**177**	P		**P**	**07 56 58.4**	**+0.3**
EIDS	**Eidsvold**	**19.70**	**259**			**P**	**07 57 13.4**	**+1.4**
EIDS				IAmb		IAmb	07 57 19.4	
	comp=Z,32nm,1.1s							
ARMA	**Armidale**	**20.06**	**244**			**P**	**07 57 17.4**	**+1.4**
OXZ	**Oxford**	**20.30**	**181**	P		**P**	**07 57 19.8**	**+1.4**
OXZ				IAmb		IAmb	07 57 23.4	
	comp=Z,34nm,0.9s							
RPZ	**Rata Peaks** comp=Z,28nm,1.1s,baz=12,slow=12,SNR=4.1 comp=Z,28nm,1.1s	**20.72**	**183**	P		Pn	07 57 24.9	-0.4
CAN	**Canberra**	**23.87**	**234**	P		**P**	**07 57 56.3**	**+0.1**
CAN				IAmb		IAmb	07 58 02.0	
	comp=Z,40nm,1.2s							
CTA	**Charters Tower** comp=Z,2.1nm,0.8s,baz=95,slow=16,SNR=1.3 comp=Z,2.1nm,0.8s	**24.58**	**272**	P		**P**	**07 58 00.8**	**-2.0**
CTAO	**Charters Tower**	**24.58**	**272**	P		**P**	**07 58 02.9**	**0.0**
RAR	**Rarotonga** comp=Z,283nm,18.1s,baz=262,slow=37	**25.73**	**91**	LR		LR	08 08 10.3	
STKA	**Stephens Creek** comp=Z,2.1nm,0.5s,baz=79,slow=11,SNR=1.9 comp=Z,2.1nm,0.5s	**28.76**	**245**	P		**P**	**07 58 40.1**	**-0.3**
COEN	**Coen**	**29.19**	**283**	P		**P**	**07 58 44.5**	**+0.2**
AS31	**Alice Springs**	**35.39**	**261**	P		**P**	**07 59 38.5**	**-0.1**
ASAR	**Alice Springs** comp=Z,3.6nm,0.9s,baz=90,slow=9.0,SNR=19 comp=Z,3.6nm,0.9s	**35.39**	**261**	P		**P**	**07 59 37.1**	**-1.5**
ASAR	**Alice Springs**	**35.39**	**261**	P		**P**	**07 59 38.1**	**-0.6**
WRA	**Warramunga Arr** comp=Z,0.8nm,0.6s,baz=96,slow=8.5,SNR=20 comp=Z,0.8nm,0.6s	**35.59**	**267**	P		**P**	**07 59 37.5**	**-2.9**
WRA	**Warramunga Arr**	**35.59**	**267**	P		**P**	**07 59 38.0**	**-2.4**
PPT2	**Papeete2** comp=Z,129nm,23.5s	**35.89**	**89**	*e*S		**S**	**08 05 22.7**	**+1.4**
PPT2				*e*S		**S**	**08 05 22.8**	**+1.4**
	comp=Z,144nm,23.8s							
PPT2				*e*LR		LR	08 09 21.0	
	comp=Z,1μm,26.8s							
PPT2				*e*LR		LR	08 09 21.1	
	comp=Z,752nm,25.2s							
FORT	**Forrest**	**40.20**	**249**	P		**P**	**08 00 19.9**	**+0.7**
H11N1	**WAKE ISLAND Hy** baz=173,slow=76,SNR=25	**42.78**	**352**	T		T	08 45 38.9	
H11N3	**WAKE ISLAND Hy** baz=173,slow=76,SNR=16	**42.78**	**352**	T		T	08 45 38.3	
H11N2	**WAKE ISLAND Hy** baz=173,slow=76,SNR=20	**42.80**	**352**	T		T	08 45 37.0	
FITZ	**Fitzroy Crossi**	**44.02**	**267**	P		**P**	**08 00 49.5**	**-1.0**
FITZ				IAmb		IAmb	08 00 59.9	
	comp=Z,16nm,1.2s							
TAOE	**Nuku Hiva Isla** comp=Z,179nm,37.6s	**47.43**	**81**	*e*S		**S**	**08 08 13.1**	**+0.8**
TAOE				*e*SS		**SS**	**08 11 42.0**	**+1.9**
TAOE				*e*LR		LR	08 14 41.5	
	comp=Z,

SEHB					IAmb	IAmb	08 04 24.0		
	comp=Z,6.7nm,1.0s								
SHEM	**Shemya Is, Ala**	**75.39**	**1**	LR	LR		08 32 39.5		
	comp=Z,140nm,19.6s,baz=336,slow=32								
SMY	**Shemya**	**75.39**	**1**	P	**P**		**08 04 26.9**	**+1.0**	
MAW	**Mawson**	**76.13**	**202**	P	**P**		**08 04 29.0**	**-1.1**	
	comp=Z,2.9nm,0.7s,baz=129,slow=8.0,SNR=8.6								
	comp=Z,2.9nm,0.7s								
MAW	**Mawson**	**76.13**	**202**	P	**P**		**08 04 30.3**	**+0.2**	
USA0B	**Ussuriysk Arra**	**76.45**	**331**	P	**P**		**08 04 32.2**	**0.0**	
USA0B					IAmb	IAmb	08 05 01.1		
	comp=Z,6.0nm,0.8s								
PETK	**Petropavlovsk-**	**76.85**	**351**	P	P		08 04 27.1	-7.1	
	comp=Z,5.4nm,1.0s,baz=150,slow=4.0,SNR=8.1								
	comp=Z,5.4nm,1.0s								
BELA	**Belgrano 2**	**78.12**	**174**	P	**P**		**08 04 38.7**	**-2.5**	
BELA					IAmb	IAmb	08 04 40.2		
	comp=Z,11nm,1.2s								
SMAI	**San Martin Ant**	**79.33**	**161**	P	**P**		**08 04 47.3**	**-0.6**	
PZH	**PanZhiHua**	**84.27**	**302**	P	**P**		**08 05 18.5**	**+3.6**	
PZH					pmax	pmax			
	comp=Z,10.0nm,0.8s								
PZH					pmax	pmax			
	comp=Z,80nm,4.7s								
TROLL	**Troll, Antarti**	**85.02**	**183**	P	**P**		**08 05 15.7**	**-2.2**	
HHC	**Hu-ho-hao-te**	**85.03**	**318**	*eP*	**P**		**08 05 20.1**	**+1.8**	
HHC					pmax	pmax			
	comp=Z,15nm,0.6s								
HHC					pmax	pmax			
	comp=Z,260nm,4.6s								
SNAA	**Sanae**	**85.55**	**181**	P	**P**		**08 05 18.0**	**-2.6**	
SNAA	**Sanae**	**85.55**	**181**	P	**P**		**08 05 17.5**	**-3.0**	
SNAA					IAmb	IAmb	08 05 19.1		
	comp=Z,6.8nm,0.9s								
VNA3	**Neumayer Olymp**	**86.03**	**179**	P	**P**		**08 05 21.1**	**-1.7**	
VNA2	**Neumayer--Watz**	**86.36**	**180**	P	**P**		**08 05 22.0**	**-2.4**	
	baz=175,slow=5.0								
VNA1	**Neumayer--Stat**	**86.63**	**180**	P	**P**		**08 05 23.1**	**-2.7**	
SEY	**Seymchan**	**87.09**	**351**	P	P		08 05 20.9	-7.0	
	comp=Z,1.1nm,0.8s,baz=145,slow=3.7,SNR=2.1								
	comp=Z,1.1nm,0.8s								
LZH	**Lanzhou**	**87.48**	**311**	*eP*	P		08 05 25.1	-5.5	
LZH				pP	PcP		08 05 31.3	-1.3	
LZH				sP	sP		08 05 34.2	+0.8	
LZH				pmax	pmax				
	comp=Z,23nm,1.4s								
NVAR	**Mina Array Bea**	**89.03**	**47**	P	P		08 05 31.8	-6.2	
	comp=Z,0.2nm,0.7s,baz=224,slow=5.0,SNR=4.4								
NVAR				LR	LR		08 38 00.7		
	comp=Z,41nm,19.3s,baz=255,slow=31								
	comp=Z,0.2nm,0.7s								
H03S2	**Juan Fernandez**	**91.67**	**128**	T	T		09 47 39.0		
	baz=239,SNR=3.4								
H03S1	**Juan Fernandez**	**91.68**	**128**	T	T		09 47 36.6		
	baz=239,SNR=4.4								
H03S3	**Juan Fernandez**	**91.69**	**128**	T	T		09 47 32.1		
	baz=239,SNR=4.5								
SONM	**Songino Array**	**92.03**	**322**	LR	LR		08 45 41.5		
	comp=Z,26nm,21.8s,baz=158,slow=35								
ILAR	**Eielson Array**	**92.91**	**16**	P	P		08 05 47.0	-8.1	
	comp=Z,0.9nm,1.0s,baz=221,slow=6.8,SNR=5.3								
	comp=Z,0.9nm,1.0s								
TXAR	**Lajitas Array**	**95.89**	**61**	LR	LR		08 41 36.5		
	comp=Z,70nm,19.3s,baz=249,slow=31								
ANMO	**Albuquerque**	**95.93**	**55**	LR	LR		08 39 42.8		
	comp=Z,45nm,18.9s,baz=260,slow=30								
PDAR	**Pinedale Array**	**96.93**	**47**	LR	LR		08 40 07.5		
	comp=Z,42nm,21.9s,baz=278,slow=30								
CMIG	**Matias Romero**	**98.82**	**75**	LR	LR		08 41 00.7		
	comp=Z,102nm,20.7s,baz=236,slow=30								
BRG	**Berggiesshubel**	**147.54**	**334**	*e*PKP		**PKPdf**	**08 12 24.0**	**0.0**	
BRG				Amp			08 12 27.7		
	comp=Z,6.1nm,1.1s								
CLL	**Collm**	**147.56**	**336**	*i* PKPbc		**PKPdf**	**08 12 25.2**	**+1.1**	
TORD	**Torodi Ar. Bea**	**166.90**	**223**	PKPab		**PKPab**	**08 13 51.0**	**-1.4**	
	comp=Z,0.5nm,0.9s,baz=149,slow=3.9,SNR=3.9								

ROM 12 07:56:02.3±0.1, 42°.530N±0°.007×13°.208E±0°.006, h11km, ML1.4/3, Error ellipse: s-maj=0.8km s-min=0.4km az=184.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.02**	**167**	P	Pg	07 56 04.8	+0.3
RM33				S	Sg	07 56 06.0	0.0
RM33				AML	AML		
	comp=N,950μm,0.2s						
RM33				AML	AML		
	comp=E,768μm,0.1s						
RM33				AML	AML		
	comp=N,928μm,0.2s						
RM33				AML	AML		
	comp=N,953μm,0.1s						
RM33				AML	AML		
	comp=E,768μm,0.1s						
RM33				AML	AML		
	comp=N,927μm,0.2s						
RM33				AML	AML		
	comp=E,754μm,0.1s						
SMA1	**SAN MARTINO**	**0.14**	**43**	P	Pg	07 56 06.2	+0.6
SMA1				S	Sg	07 56 08.8	+0.7
SMA1				AML	AML		
	comp=E,127μm,0.2s						
SMA1				AML	AML		
	comp=N,77μm,1.6s						
SMA1				AML	AML		
	comp=N,77μm,1.6s						
SMA1				AML	AML		
	comp=E,127μm,0.2s						
LNSS	**Leonessa**	**0.14**	**300**	P	Pg	07 56 06.3	+0.5
LNSS				S	Sg	07 56 08.9	+0.6
LNSS				AML	AML		
	comp=E,131μm,1.2s						
LNSS				AML	AML		
	comp=N,150μm,0.1s						
LNSS				AML	AML		
	comp=N,150μm,0.1s						
LNSS				AML	AML		
	comp=E,132μm,1.2s						
CAMP	**Campotosto**	**0.15**	**88**	P	Pg	07 56 06.4	+0.6
CAMP				S	Sg	07 56 09.2	+0.8
TERO	**Teramo**	**0.31**	**72**	P	Pg	07 56 08.9	+0.4
TERO				S	Sg	07 56 13.6	+0.9

BUC 12 07:58:14.6±0.2, 46°.00N×22°.88E, h5km±1km, ml1.8/11, 40C-12D, Error ellipse: s-maj=2.0km s-min=1.4km az=109.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.12**	**171**	↑P	Pg	07 58 16.3	-0.7
DEV				↓S	Sg	07 58 19.5	+0.9
DEV	**Deva**	**0.12**	**171**	↑P	Pg	07 58 16.3	-0.7
DEV				↓S	Sg	07 58 19.5	+0.9
GZR	**Gura Zlata**	**0.61**	**187**	↓P	Pg	07 58 25.8	-0.5
GZR				↑S	Sg	07 58 35.2	+1.0
GZR	**Gura Zlata**	**0.61**	**187**	↓P	Pg	07 58 25.8	-0.5
GZR				↑S	Sg	07 58 35.2	+1.0
DRGR		**0.80**	**352**	↑P	Pg	07 58 30.4	+0.4
DRGR				↑S	Sg	07 58 41.3	+0.9
DRGR		**0.80**	**352**	↑P	Pg	07 58 30.4	+0.4
DRGR				↑S	Sg	07 58 41.3	+0.9
CJR	**Cluj-Napoca**	**0.87**	**35**	↑P	Pg	07 58 31.4	+0.1
CJR				↑S	Sb	07 58 44.1	-0.2
CJR	**Cluj-Napoca**	**0.87**	**35**	↑P	Pg	07 58 31.4	+0.1
CJR				↑S	Sb	07 58 44.1	-0.2
SIRR	**Siria**	**0.89**	**288**	↑P	Pg	07 58 31.5	-0.2
SIRR				↑S	Sb	07 58 44.0	-0.7
SIRR	**Siria**	**0.89**	**288**	↑P	Pg	07 58 31.5	-0.2
SIRR				↑S	Sb	07 58 44.0	-0.7
BZS	**Buzias**	**0.96**	**247**	↓P	Pg	07 58 33.3	+0.3
BZS				↑S	Sg	07 58 45.2	-0.3
BZS	**Buzias**	**0.96**	**247**	↓P	Pg	07 58 33.3	+0.3
BZS				↑S	Sg	07 58 45.2	-0.3
HERR	**Herculane**	**1.16**	**196**	↓P	Pg	07 58 36.1	-0.8
HERR				↓S	Sn	07 58 53.7	-0.1
HERR	**Herculane**	**1.16**	**196**	↓P	Pg	07 58 36.1	-0.8
HERR				↓S	Sn	07 58 53.7	-0.1
ARR	**Arges**	**1.38**	**116**	↑P	Pn	07 58 39.9	-0.7
ARR				↑S	Sn	07 58 59.8	+0.5
ARR	**Arges**	**1.38**	**116**	↑P	Pn	07 58 39.9	-0.7
ARR				↑S	Sn	07 58 59.8	+0.5
MDVR	**Moldovita**	**1.47**	**214**	↑P	Pn	07 58 41.1	-0.6
MDVR				↓S	Sg	07 59 03.4	+1.6
MDVR	**Moldovita**	**1.47**	**214**	↑P	Pn	07 58 41.1	-0.6
MDVR				↓S	Sg	07 59 03.4	+1.6
VOIR		**1.62**	**109**	↑P	Pn	07 58 43.7	-0.2
VOIR				↑S	Sg	07 59 06.8	+0.1
VOIR		**1.62**	**109**	↑P	Pn	07 58 43.7	-0.2
VOIR				↑S	Sg	07 59 06.8	+0.1
MLR	**Muntele Rosu**	**2.21**	**102**	↑S	Sn	07 59 20.1	+0.4
MLR	**Muntele Rosu**	**2.21**	**102**	↑S	Sn	07 59 20.1	+0.4
BURAR	**Bucovina Array**	**2.28**	**44**	↑P	Pn	07 58 54.2	+1.2
BURAR				↑S	Sn	07 59 22.6	+1.0
BURAR	**Bucovina Array**	**2.28**	**44**	↑P	Pn	07 58 54.2	+1.2
BURAR				↑S	Sn	07 59 22.6	+1.0
BLKB	**Belogradchik**	**2.38**	**184**	↑S	Sn	07 59 25.3	+1.5
BLKB	**Belogradchik**	**2.38**	**184**	↑S	Sn	07 59 25.3	+1.5
BOVS	**Bovan**	**2.50**	**200**	↑P	Pn	07 58 55.7	-0.3
BOVS				↑S	Sn	07 59 27.9	+1.0
BOVS	**Bovan**	**2.50**	**200**	↑P	Pn	07 58 55.7	-0.3
BOVS				↑S	Sn	07 59 27.9	+1.0

*IDC **12** 08:03:11.2±0.7, 22°.57S×173°.22E, h0km, mb4.3/13, mbtmp4.3/15, ML4.9/2, MS3.9/8, Error ellipse: s-maj=21.1km s-min=17.5km az=132.0*
*NEIC **12** 08:03:14.0±1.8, 22°.75±0°.1×173°.34E±0°.06, h10km±1km, mb4.8/30, Error ellipse: s-maj=17.0km s-min=9.6km az=177.0*
*NOU **12** 08:03:17.0, 23°.10S×173°.08E, h10km, mb4.8/17, Southeast of Loyalty Islands*
ISC 12 08:03:13.6±0.4, 22°.69S±0°.08×173°.25E±0°.06, h10km, n87, σ1§40/80, mb4.6/28, MS3.8/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.99**	**283**	Pn	**Pn**	**08 04 29.9**	**+1.2**
PINNC	**Pines Island,**	**5.36**	**270**		**Pn**	**08 04 34.5**	**+0.7**
PINNC	**Pines Island,**	**5.36**	**270**	P	**Pn**	**08 04 35.3**	**+1.5**
YATNC	**Mamie plateau,**	**5.92**	**275**	P	**Pn**	**08 04 42.1**	**+0.6**
OUENC	**Ouen Island, N**	**5.93**	**271**	Pn	**Pn**	**08 04 42.0**	**+0.4**
OUENC	**Ouen Island, N**	**5.93**	**271**	P	**Pn**	**08 04 42.8**	**+1.2**
ONTNC	**Ouen Toro**	**6.30**	**272**	Pn	**Pn**	**08 04 47.9**	**+1.2**
ONTNC	**Ouen Toro**	**6.30**	**272**	P	**Pn**	**08 04 49.2**	**+2.6**
DZM	**Mont Dzumac**	**6.33**	**274**	Pn	**Pn**	**08 04 46.8**	**-0.3**
	5.2nm,0.3s,baz=124,slow=13,SNR=23						
DZM				Sn	**Sn**	**08 05 57.5**	**-2.1**
	baz=0.0,slow=20						
	21nm,0.5s						
DZM	**Mont Dzumac**	**6.33**	**274**	*e*Pn	**Pn**	**08 04 48.3**	**+1.1**
DZM				*e*Sn	**Sn**	**08 05 54.4**	**-5.2**
	114nm,0.8s						
DZM				*e*LR	LR	08 06 10.8	
DZM	**Mont Dzumac**	**6.33**	**274**	Pn	**Pn**	**08 04 48.3**	**+1.1**
DZM	**Mont Dzumac**	**6.33**	**274**	P	**Pn**	**08 04 48.4**	**+1.2**
NOUC	**Port Laguerre**	**6.46**	**274**	P	**Pn**	**08 04 50.1**	**+1.3**
MSVF	**Nonsavu**	**6.68**	**43**	Pn	**Pn**	**08 04 51.2**	**-0.7**
	2.3nm,0.3s,baz=226,slow=21,SNR=8.2						
MSVF				LR	LR	08 07 08.2	
	comp=Z,941nm,19.4s,baz=191,slow=36						
	6.6nm,0.5s						
MSVF	**Nonsavu**	**6.68**	**43**	Pn	**Pn**	**08 04 51.3**	**-0.6**
KOUNC	**Koumac, New Ca**	**8.61**	**283**	Pn	**Pn**	**08 05 20.6**	**+2.2**
KOUNC	**Koumac, New Ca**	**8.61**	**283**	P	**Pn**	**08 05 20.7**	**+2.3**
RAO	**Raoul Island**	**10.29**	**131**	LR	LR	08 08 45.9	
	comp=Z,606nm,19.1s,baz=318,slow=32						
URZ	**Urewera**	**15.87**	**169**	LR	LR	08 11 43.6	
	comp=Z,525nm,18.6s,baz=30,slow=32						
NNZ	**Nelson**	**18.48**	**180**	P	**P**	**08 07 29.5**	**-0.1**
TUWZ	**Tuamarina**	**18.70**	**178**	P	**P**	**08 07 31.4**	**-0.7**
LTZ	**Lake Taylor**	**20.06**	**182**	P	**P**	**08 07 47.4**	**+0.4**
LTZ				IAmb	IAmb	08 07 50.8	
	comp=Z,44nm,1.0s						
EIDS	**Eidsvold**	**20.42**	**258**		**P**	**08 07 52.5**	**+1.3**
EIDS	**Eidsvold**	**20.42**	**258**	P	**P**	**08 07 52.6**	**+1.5**
OXZ	**Oxford**	**20.61**	**183**	P	**P**	**08 07 53.9**	**+0.9**
OXZ				IAmb	IAmb	08 07 55.5	
	comp=Z,38nm,0.8s						
ARMA	**Armidale**	**20.80**	**244**	P	**P**	**08 07 56.3**	**+1.0**
ARMA				IAmb	IAmb	08 08 04.4	
	comp=Z,69nm,2.0s						
MQZ	**McQueen's Vall**	**20.97**	**181**	P	**P**	**08 07 58.2**	**+1.3**
MQZ				IAmb	IAmb	08 07 58.5	
	comp=Z,100nm,1.5s						
RPZ	**Rata Peaks**	**21.05**	**184**	P	**P**	**08 07 58.8**	**+1.0**
	comp=Z,16nm,0.8s,baz=25,slow=14,SNR=3.6						
RPZ				LR	LR	08 15 40.0	
	comp=Z,566nm,19.1s,baz=343,slow=35						
	comp=Z,16nm,0.8s						
RMQ	**Roma**	**22.58**	**255**	P	**P**	**08 08 16.4**	**+2.0**
CNB	**Canberra Magne**	**24.32**	**234**	P	**P**	**08 08 32.6**	**+1.0**
CTA	**Charters Tower**	**25.26**	**271**	P	**P**	**08 08 40.0**	**-0.3**
	comp=Z,2.4nm,0.5s,baz=88,slow=11,SNR=6.3						
CTA				LR	LR	08 17 52.9	
	comp=Z,134nm,21.1s,baz=100,slow=35						
	comp=Z,2.4nm,0.5s						
CMSA	**Cobar Meteorol**	**26.01**	**244**	P	**P**	**08 08 47.2**	**+0.3**
QLP	**Quilpie**	**26.63**	**256**	P	**P**	**08 08 52.5**	**-0.1**
MTSU	**Mount Surprise**	**27.47**	**274**	P	**P**	**08 09 00.9**	**+0.7**
STKA	**Stephens Creek**	**29.50**	**245**	P	**P**	**08 09 18.1**	**-0.1**
	comp=Z,5.6nm,0.9s,baz=122,slow=7.6,SNR=3.7						
	comp=Z,5.6nm,0.9s						
OOD	**Oodnadatta**	**34.27**	**254**	P	**P**	**08 10 00.4**	**+0.3**
PPT2	**Papeete2**	**35.20**	**89**	*e*LR	LR	08 19 43.6	
	comp=Z,133nm,25.2s						
MULG	**Mulgathing**	**35.75**	**249**	P	**P**	**08 10 12.8**	**-0.1**
AS31	**Alice Springs**	**36.11**	**261**	P	**P**	**08 10 15.0**	**-1.0**
ASAR	**Alice Springs**	**36.11**	**261**	P	**P**	**08 10 14.8**	**-1.3**
	comp=Z,3.6nm,0.8s,baz=85,slow=8.7,SNR=22						
	comp=Z,3.6nm,0.8s						
ASAR	**Alice Springs**	**36.11**	**261**	P	**P**	**08 10 15.2**	**-0.8**
WRA	**Warramunga Arr**	**36.29**	**267**	P	**P**	**08 10 14.6**	**-3.1**
	comp=Z,1.0nm,0.3s,baz=97,slow=8.5,SNR=32						
	comp=Z,1.0nm,0.3s						
FORT	**Forrest**	**40.94**	**249**	P	**P**	**08 10 56.2**	**-0.4**
FORT				IAmb	IAmb	08 11 46.0	
	comp=Z,28nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**41.42**	**351**	T	T	08 56 11.5	
	baz=171,slow=76						
H11S3	**WAKE ISLAND Hy**	**41.43**	**351**	T	T	08 56 11.7	
	baz=171,slow=76						
H11S1	**WAKE ISLAND Hy**	**41.44**	**351**	T	T	08 56 12.5	
	baz=171,slow=76						
FITZ	**Fitzroy Crossi**	**44.72**	**267**	P	**P**	**08 11 26.7**	**-0.7**
FITZ				IAmb	IAmb	08 11 29.5	
	comp=Z,8.5nm,0.9s						
GUMO	**Guam**	**45.53**	**320**	LR	LR	08 30 04.9	
	comp=Z,76nm,18.1s,baz=132,slow=36						
KHLU	**Kahalu`u**	**51.71**	**38**	P	**P**	**08 12 21.1**	**-0.3**
VNDA	**Vanda**	**55.16**	**183**	P	**P**	**08 12 46.2**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=356,slow=7.8,SNR=12						
	comp=Z,2.0nm,0.7s						
VNDA	**Vanda**	**55.16**	**183**	P	**P**	**08 12 46.3**	**+0.4**
SBA	**Scott Base**	**55.31**	**182**	P	**P**	**08 12 48.1**	**+1.1**
SBA				IAmb	IAmb	08 12 49.9	
	comp=Z,25nm,0.9s						
JYT	**Yasato**	**66.41**	**331**	P	**P**	**08 14 04.8**	**+1.8**
QSPA	**South Pole Qui**	**67.39**	**180**	P	**P**	**08 14 08.5**	**-0.5**
COCO	**West Island**	**72.99**	**264**	P	**P**	**08 14 44.9**	**+0.8**
KSRS	**Korea Array**	**73.47**	**324**	P	**P**	**08 14 45.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=142,slow=6.2,SNR=1.7						
	comp=Z,0.4nm,0.3s						
KSAR	**Wonju Array Be**	**73.48**	**324**	P	**P**	**08 14 47.7**	**+1.2**
KS19	**Wonju Array Si**	**73.54**	**324**	P	**P**	**08 14 47.7**	**+0.9**
KS19				IAmb	IAmb	08 15 18.3	
	comp=Z,23nm,1.8s						
KIWB	**Kanaga Island**	**74.69**	**6**	P	**P**	**08 14 53.5**	**+0.4**
MAW	**Mawson**	**76.65**	**202**	P	**P**	**08 15 04.7**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=126,slow=7.4,SNR=10						
	comp=Z,2.7nm,0.7s						
PETK	**Petropavlovsk-**	**76.68**	**350**	P	**P**	**08 15 04.9**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=193,slow=12,SNR=4.5						
	comp=Z,2.0nm,0.5s						
BELA	**Belgrano 2**	**78.33**	**174**	P	**P**	**08 15 12.2**	**-1.4**
BELA				IAmb	IAmb	08 15 12.8	
	comp=Z,6.9nm,0.9s						
SMAI	**San Martin Ant**	**79.37**	**161**	P	**P**	**08 15 20.1**	**+0.7**
SMAI				IAmb	IAmb	08 15 21.1	
	comp=Z,19nm,1.2s						
PMSA	**Palmer Station**	**82.38**	**159**	P	**P**	**08 15 35.0**	**-0.5**
PMSA				IAmb	IAmb	08 15 36.1	
	comp=Z,7.3nm,0.8s						
OHAK	**Old Harbor**	**84.42**	**18**	P	**P**	**08 15 46.3**	**+0.4**
PZH	**PanZhiHua**	**84.71**	**301**	P	**P**	**08 15 46.8**	**-1.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC	**Hu-ho-hao-te**	**85.27**	**318**	*eP*	**P**	**08 15 52.1**	**+1.3**
HHC				pmax	pmax		
	comp=Z,26nm,0.6s						
HHC				pmax	pmax		
	comp=Z,76nm,6.2s						
SNAA	**Sanae**	**85.86**	**181**	P	**P**	**08 15 51.5**	**-1.8**
	comp=Z,3.3nm,0.8s,baz=192,slow=7.5,SNR=4.4						
	comp=Z,3.3nm,0.8s						
KHMM	**Horse Mountain**	**86.11**	**43**	P	**P**	**08 15 54.4**	**-0.6**
CMB	**Columbia Colle**	**86.73**	**46**	P	**P**	**08 15 57.3**	**-0.8**
ISA	**Isabella, Lake**	**86.80**	**49**	P	**P**	**08 15 57.9**	**-0.6**
ISA				IAmb	IAmb	08 16 04.7	
	comp=Z,5.6nm,1.1s						
SEY	**Seymchan**	**86.92**	**351**	P	**P**	**08 15 56.8**	**-1.4**
	comp=Z,2.5nm,0.9s,baz=149,slow=3.1,SNR=4.3						
	comp=Z,2.5nm,0.9s						
LZH	**Lanzhou**	**87.81**	**311**	*eP*	**P**	**08 16 06.7**	**+3.2**
LZH				sP	pwP	08 16 21.5	+10
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
NVAR	**Mina Array Bea**	**88.33**	**47**	P	**P**	**08 16 04.3**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=221,slow=6.7,SNR=5.1						
	comp=Z,0.5nm,0.7s						
HIN	**Hinchinbrook I**	**89.02**	**19**	P	**P**	**08 16 08.7**	**+0.3**
BMN	**Battle Mountai**	**90.07**	**46**	P	**P**	**08 16 14.0**	**0.0**
BMN				IAmb	IAmb	08 16 19.6	
	comp=Z,4.3nm,1.0s						
BBB	**Bella Bella**	**90.36**	**32**	LR	LR	08 49 38.2	
	comp=Z,68nm,19.8s,baz=253,slow=31						
G08A	**Pilot Rock**	**91.44**	**41**	P	**P**	**08 16 19.6**	**-0.6**
CCB	**Clear Creek Bu**	**92.11**	**16**	P	**P**	**08 16 22.4**	**-0.2**
ILAR	**Eielson Array**	**92.44**	**16**	P	**P**	**08 16 20.9**	**-3.3**
	comp=Z,1.4nm,1.0s,baz=229,slow=6.8,SNR=7.9						
	comp=Z,1.4nm,1.0s						
J26L	**Joseph Creek**	**93.11**	**17**	P	**P**	**08 16 26.9**	**-0.5**
J26L				IAmb	IAmb	08 16 31.6	
	comp=Z,4.7nm,0.9s						
COLD	**Coldfoot**	**93.69**	**13**	P	**P**	**08 16 28.8**	**-1.1**
COLD				IAmb	IAmb	08 20 03.7	
	comp=Z,3.2nm,0.6s						
I26K	**Coal Creek Min**	**93.84**	**17**	P	**P**	**08 16 29.5**	**-1.2**
I26K				IAmb	IAmb	08 16 35.6	
	comp=Z,7.8nm,1.2s						
NEW	**Newport**	**94.04**	**39**	LR	LR	08 54 20.5	
	comp=Z,41nm,18.0s,baz=262,slow=33						
WMQ	**Urumqi**	**102.29**	**312**	*eP*		**Pdif**	**08 17 11.5**	**+2.2**
CLL	**Collm**	**147.58**	**337**	*e*PKPbc		**PKPdf**	**08 22 56.0**	**+0.6**
CLL				*ex*		x	08 23 02.0		
GERES	**GERESS Array B**	**149.27**	**333**	PKPbc		**PKPdf**	**08 23 00.4**	**+2.1**
	comp=Z,1.0nm,0.8s,baz=0.0,slow=1.0,SNR=3.5								

*BJI **12** 08:11:45.4±0.0, 29°.11S×60°.40E, h12km, mb4.9/36, mB4.9/18, Ms4.8/16, Ms7 4.5/17*
*MOS **12** 08:11:46.5±0.9, 29°.19S×61°.22E, h10km, mb5.1/40, Error ellipse: s-maj=13.1km s-min=6.2km az=95.0*
*IDC **12** 08:11:46.3±0.4, 29°.22S×61°.17E, h0km, mb4.6/22, mbtmp4.6/23, ML5.1/1, MS4.1/40, Error ellipse: s-maj=14.7km s-min=13.3km az=34.0*
*NEIC **12** 08:11:48.3±2.1, 29°.24S±0°.09×61°.0E±0°.1, h10km±1km, mb5.0/60, Error ellipse: s-maj=16.5km s-min=13.8km az=255.0*
ISC 12 08:11:48.2±0.3, 29°.21S±0°.06×61°.03E±0°.07, h10km, n526, σ1§00/520, mb5.0/93, MS4.2/45, 39C-1D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.33**	**328**	Pn	**Pn**	**08 13 59.5**	**-3.4**
FOMA	**Nahampoana Res**	**13.21**	**285**	Pn	**Pn**	**08 14 53.4**	**-2.4**
VOI	**Vohitsoka**	**14.76**	**296**	Pn	**Pn**	**08 15 16.8**	**-0.4**
VOI	**Vohitsoka**	**14.76**	**296**	P	**Pn**	**08 15 16.8**	**-0.4**
ABPO	**Ambohimpanom**	**16.16**	**306**		**Pn**	**08 15 34.6**	**-1.1**
ABPO	**Ambohimpanom**	**16.16**	**306**	P	**Pn**	**08 15 34.6**	**-1.1**
ABPO				pmax	pmax		
	comp=Z,107nm,1.2s						
AIS	**Amsterdam Isla**	**16.22**	**126**		**P**	**08 15 41.7**	**+2.4**
OPO	**Ambohidratompo**	**16.49**	**307**	Pn	**Pn**	**08 15 39.4**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=124,slow=11,SNR=24						
OPO				Sn	Sn	08 18 27.2	-16
	comp=Z,0.4nm,0.3s,baz=21,slow=18,SNR=3.9						
OPO				LR	LR	08 20 36.2	
	comp=Z,491nm,19.3s,baz=8.0,slow=32						
	comp=Z,27nm,0.5s						
SBV	**Sambava**	**18.76**	**324**	P	**Pn**	**08 16 10.1**	**+2.2**
H08S1	**Diego Carcia H**	**24.00**	**29**	T	T	08 41 45.2	
	baz=205,slow=75						
H08S2	**Diego Garcia H**	**24.01**	**29**	T	T	08 41 45.3	
	baz=205,slow=75						
H08S3	**Diego Garcia H**	**24.02**	**29**	T	T	08 41 46.8	
	baz=205,slow=75						
DGAR	**Diego Garcia**	**24.20**	**29**	P	**P**	**08 17 07.4**	**+2.3**
DGAR	**Diego Garcia**	**24.20**	**29**	P	**P**	**08 17 07.4**	**+2.3**
DGAR				pmax	pmax		
	comp=Z

UOSS IAmb IAmb 08 21 34.8
comp=Z,26nm,1.3s
SNAA Sanae 54.38 200 P P 08 21 14.5 -0.4
SNAA Sanae 54.38 200 P P 08 21 14.3 -0.7
comp=Z,1.9nm,0.6s,baz=105,slow=6.6,SNR=16
comp=Z,1.9nm,0.6s
SNAA Sanae 54.38 200 P P 08 21 15.2 +0.3
SNAA Sanae 54.38 200 P P 08 21 15.2 +0.3
SNAA pmax pmax
comp=Z,7.0nm,1.0s
RAYN Ar Rayn 54.52 342 P P 08 21 15.9 -0.5
RAYN IAmb IAmb 08 21 19.5
comp=Z,14nm,1.1s
RAYN Ar Rayn 54.52 342 P P 08 21 15.9 -0.5
RAYN pmax pmax
comp=Z,14nm,1.1s
VNA2 Neumayer--Watz 55.65 202 P P 08 21 20.0 -4.1
baz=87,slow=7.0
KSM Kuching 56.10 66 P P 08 21 28.2 +0.1
KSM IAmb IAmb 08 21 29.5
comp=Z,31nm,1.4s
VNA3 Neumayer Olymp 56.44 201 P P 08 21 25.1 -4.6
SBUM Sibu 58.21 66 P P 08 21 42.6 -0.3
FITZ Fitzroy Crossi 59.57 95 P P 08 21 51.4 -1.0
FITZ IAmb IAmb 08 21 53.8
comp=Z,10nm,1.0s
CM31 Chiang Mai Arr 59.87 42 P P 08 21 54.1 -0.3
CMAR Chiang Mai Arr 59.87 42 P P 08 21 53.8 -0.6
comp=Z,4.8nm,0.8s,baz=231,slow=7.1,SNR=21
comp=Z,4.8nm,0.8s
CMAR Chiang Mai Arr 59.87 42 P P 08 21 53.3 -1.0
QSPA South Pole Qui 60.95 180 LR LR 08 44 50.0
comp=Z,328nm,21.1s,baz=300,slow=33
QSPA South Pole Qui 60.95 180 P P 08 22 01.5 +0.2
QSPA IAmb IAmb 08 22 07.6
comp=Z,14nm,1.1s
RAMN Ramite 60.98 26 eP P 08 22 01.8 -0.3
comp=Z,72nm,0.8s
DMN Daman 61.02 24 eP P 08 22 02.0 -0.3
PKI Pulchoki 61.09 25 eP P 08 22 01.7 -1.2
PKH Phulchoki 61.10 25 eP P 08 22 01.7 -1.2
ODAN Odare 61.21 27 eP P 08 22 03.0 -0.6
GKN Gorkha 61.21 24 eP P 08 22 02.9 -0.6
DANN Dangsing 61.23 23 eP P 08 22 03.0 -0.7
comp=Z,100nm,0.8s
BATI Baumata 61.24 86 LR LR 08 46 26.4
comp=Z,173nm,19.4s,baz=246,slow=34
KKN Kakani 61.25 25 eP P 08 22 03.0 -0.8
JIRN Jiri 61.47 25 eP P 08 22 04.7 -0.8
comp=Z,39nm,0.7s
GUN Gumba 61.58 25 eP P 08 22 05.8 -0.4
TAPN Taplejung 61.77 27 eP P 08 22 07.0 -0.5
NIL Nilore 63.58 11 P P 08 22 18.4 -0.7
NIL IAmb IAmb 08 22 19.2
comp=Z,11nm,0.7s
NIL Nilore 63.58 11 P P 08 22 18.4 -0.7
NIL pmax pmax
comp=Z,11nm,0.7s
EIL Elat 63.62 335 LR LR 08 46 44.7
comp=Z,247nm,19.4s,baz=94,slow=33
KBL Kabul 63.86 7 P P 08 22 20.1 -1.0
KBL IAmb IAmb 08 22 24.7
comp=Z,30nm,1.8s
KBL Kabul 63.86 7 P P 08 22 20.1 -1.0
KBL pmax pmax
comp=Z,30nm,1.8s
VNDA Vanda 64.01 166 P P 08 22 21.1 -0.4
comp=Z,3.9nm,0.9s,baz=268,slow=7.3,SNR=23
comp=Z,3.9nm,0.9s
VNDA Vanda 64.01 166 P P 08 22 21.4 0.0
VNDA IAmb IAmb 08 22 30.9
comp=Z,9.1nm,1.1s
VNDA Vanda 64.01 166 P P 08 22 21.4 0.0
VNDA pmax pmax
comp=Z,9.0nm,1.1s
ASAR Alice Springs 64.54 104 P P 08 22 24.6 -1.2
comp=Z,11nm,0.8s,baz=243,slow=6.3,SNR=92
comp=Z,11nm,0.8s
ASAR Alice Springs 64.54 104 P P 08 22 24.5 -1.3
AS31 Alice Springs 64.54 104 P P 08 22 24.4 -1.5
SBA Scott Base 64.89 167 P P 08 22 27.4 +0.2
SBA IAmb IAmb 08 22 37.9
comp=Z,7.4nm,0.8s
SBA Scott Base 64.89 167 P P 08 22 27.4 +0.2
SBA pmax pmax
comp=Z,7.0nm,0.9s
LSA Lhasa 65.25 29 P P 08 22 30.6 -0.1
LSA Lhasa 65.25 29 P P 08 22 30.6 -0.1
LSA pmax pmax
comp=Z,27nm,1.3s
WRA Warramunga Arr 66.37 100 P P 08 22 36.5 -1.1
comp=Z,11nm,0.8s,baz=247,slow=5.7,SNR=76
WRA LR LR 08 48 07.0
comp=Z,195nm,20.7s,baz=238,slow=33
comp=Z,11nm,0.8s
WRA Warramunga Arr 66.37 100 P P 08 22 36.8 -0.9
WRA Warramunga Arr 66.37 100 P P 08 22 36.8 -0.9
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRAB Tennant Creek 66.38 100 P P 08 22 36.5 -1.3
WRAB Tennant Creek 66.38 100 *i* P P 08 22 36.6 -1.2
WRAB pmax pmax
comp=Z,18nm,1.0s
MMAI Mount Meron Ar 66.48 337 LR LR 08 48 21.8
comp=Z,194nm,20.0s,baz=301,slow=33
GEYT Alibeck 66.84 357 LR LR 08 49 48.4
comp=Z,107nm,19.8s,baz=176,slow=34
PZH PanZhiHua 67.77 39 P P 08 22 50.3 +3.9
PZH S S 08 31 53.6 +9.1
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,60nm,4.4s
PZH LR LR
comp=Z,650nm,18.0s
PZH LR LR
comp=Z,650nm,18.4s
PZH LR LR
comp=Z,1μm,18.2s
STKA Stephens Creek 67.85 115 P P 08 22 45.7 -1.2
comp=Z,4.5nm,0.7s,baz=293,slow=6.1,SNR=6.7
comp=Z,4.5nm,0.7s
STKA Stephens Creek 67.85 115 *i* P P 08 22 45.8 -1.1
GAR Garm 68.41 8 P P 08 22 49.5 -0.6
GAR IAmb IAmb 08 22 50.2
comp=Z,19nm,1.2s
MARD Mardin 68.84 343 P P 08 22 52.9 0.0
GURO Guroymak-BITLI 69.71 344 P P 08 22 58.6 +0.4
GURO IAmb IAmb 08 23 12.2
comp=Z,17nm,1.1s
KSH Kashi 69.78 12 P P 08 22 56.0 -2.6
KSH sP pwP 08 23 04.4 -2.1
KSH pmax pmax
comp=Z,33nm,0.9s
KSH LR LR
comp=Z,340nm,19.8s
GNI Garni 70.65 347 LR LR 08 52 12.3
comp=Z,255nm,19.9s,baz=171,slow=34
GNI Garni 70.65 347 P P 08 23 04.0 0.0
GNI IAmb IAmb 08 23 39.5
comp=Z,13nm,0.8s
GNI Garni 70.65 347 *i* P P 08 23 04.4 +0.4
GNI pmax pmax
comp=Z,24nm,1.3s
TOA0 Torodi Ar. Sit 71.06 298 P P 08 23 06.6 -0.3
TOA0 IAmb IAmb 08 23 10.2
comp=Z,18nm,0.9s
TORD Torodi Ar. Bea 71.06 298 P P 08 23 07.1 +0.3
comp=Z,11nm,0.8s,baz=112,slow=5.0,SNR=43
TORD LR LR 08 54 02.1
comp=Z,482nm,19.3s,baz=186,slow=36
comp=Z,11nm,0.8s
TORD Torodi Ar. Bea 71.06 298 P P 08 23 06.6 -0.3
TORD IAmb IAmb 08 23 10.1
comp=Z,16nm,0.9s
IUG Iuzhnay 71.48 7 eP P 08 23 08.9 -0.1
IUG Iuzhnay 71.48 7 eP P 08 23 08.9 -0.1
baz=6.8
KIC Kosan Boka 72.35 288⇑ eP P 08 23 15.8 +1.1
comp=Z,20nm,0.8s
DZA Taraz 72.37 8 eP P 08 23 13.6 -0.5
DZA Taraz 72.37 8 eP P 08 23 13.7 -0.5
baz=7.7
GOMU GeErMu 72.41 28 P P 08 23 15.0 0.0
GOMU pP sP 08 23 18.1 +0.7
GOMU sP pP 08 23 19.6 +2.8
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,57nm,4.1s
KK31 Karatay Array 72.48 7 P P 08 23 14.5 -0.3
KK31 IAmb IAmb 08 23 16.1
comp=Z,12nm,1.0s
KK31 Karatay Array 72.48 7 P P 08 23 14.5 -0.3
KK31 pmax pmax
comp=Z,12nm,1.0s
KKAR Karatay Array 72.48 7 P P 08 23 15.2 +0.4
KKAR Karatay Array 72.48 7 P P 08 23 14.9 +0.1
KKAR IAmb IAmb 08 23 16.1
comp=Z,12nm,1.0s
KKAR Karatay Array 72.48 7 P P 08 23 14.9 +0.1
KKAR pmax pmax
comp=Z,12nm,1.0s
LIC Lamto 72.52 288⇑ eP P 08 23 17.5 +1.8
comp=Z,24nm,0.6s
AAK Ala-Archa 72.56 10 eP P 08 23 16.0 +0.5
AAK IAmb IAmb 08 23 17.0
comp=Z,13nm,1.1s
AAK Ala-Archa 72.56 10 P P 08 23 16.0 +0.5
AAK pmax pmax
comp=Z,13nm,1.2s
DBIC Dimbokro 72.62 288 P P 08 23 16.4 +0.2
comp=Z,15nm,0.8s,baz=137,slow=6.2,SNR=14
DBIC LR LR 08 55 16.2
comp=Z,76nm,18.2s,baz=147,slow=36
comp=Z,15nm,0.8s
DBIC Dimbokro 72.62 288 ⇑P P 08 23 17.5 +1.2
BOOM Boomskoye usch 72.65 12 P P 08 23 16.0 -0.1
BOOM Boomskoye usch 72.65 12 P P 08 23 16.0 -0.1
BOOM pmax pmax
comp=Z,14nm,1.3s
TIC Toumodi 72.74 288⇑ eP P 08 23 18.1 +1.0
comp=Z,8.8nm,0.3s
PRZ Przheval'sk 73.11 13 P P 08 23 19.2 +0.4
PRZ Przheval'sk 73.11 13 P P 08 23 19.2 +0.4
PRZ pmax pmax
comp=Z,38nm,0.8s
BR131 Keskin Array S 73.17 338 P P 08 23 18.9 -0.3
BR131 IAmb IAmb 08 23 21.7
comp=Z,12nm,0.9s
BR131 Keskin Array S 73.17 338 *i* P P 08 23 18.9 -0.3
BRTR Keskin Array B 73.17 338 P P 08 23 18.8 -0.4
comp=Z,5.1nm,0.8s,baz=165,slow=7.2,SNR=19
BRTR LR LR 08 52 45.8
comp=Z,128nm,20.6s,baz=132,slow=34
comp=Z,5.1nm,0.8s
BRTR Keskin Array B 73.17 338 P P 08 23 18.9 -0.3
BRTR Keskin Array B 73.17 338 P P 08 23 18.9 -0.3
ONI Oni 73.25 347 P P 08 23 19.4 -0.1
ONI Oni 73.25 347 P P 08 23 19.4 -0.1
ONI pmax pmax
comp=Z,10.0nm,1.3s
SGDS Sogindy 73.37 10 eP P 08 23 19.5 -0.7
SGDS Sogindy 73.37 10 eP P 08 23 19.5 -0.7
baz=10
MDOK Medeo 73.50 12 eP P 08 23 20.7 -0.3
MDOK Medeo 73.50 12 eP P 08 23 20.8 -0.3
baz=12
AAA Alma-Ata 73.53 12 eP P 08 23 20.7 -0.4
AAA Alma-Ata 73.53 12 eP P 08 23 20.8 -0.4
baz=12
SATY Saty 73.67 13⇑ eP P 08 23 21.6 -0.4
SATY pmax pmax
comp=Z,7.0nm,0.8s
SATY Saty 73.67 13⇑ eP P 08 23 21.6 -0.4
comp=Z,6.5nm,0.8s,baz=13
APE Apeiranthos 73.86 331 ⇑P P 08 23 22.8 -0.4
APE Apeiranthos 73.86 331 ⇑P P 08 23 22.8 -0.4
UZB Uzynbulak 73.87 14 eP P 08 23 22.6 -0.6
UZB Uzynbulak 73.87 14 eP P 08 23 22.7 -0.6
baz=13
SHLS Shalkode 73.98 14 eP P 08 23 23.9 +0.1
SHLS pmax pmax
comp=Z,7.0nm,0.9s
SHLS Shalkode 73.98 14 eP P 08 23 23.9 +0.1
comp=Z,7.4nm,0.9s,baz=14
KUU Kurty 74.09 11⇑ eP P 08 23 23.6 -0.7
KUU pmax pmax
comp=Z,16nm,1.0s
KUU Kurty 74.09 11⇑ eP P 08 23 23.6 -0.7
comp=Z,16nm,1.0s,baz=11
KPKS Kokpek 74.11 13 eP P 08 23 23.6 -0.9
KPKS pmax pmax
comp=Z,10.0nm,1.3s
KPKS Kokpek 74.11 13 eP P 08 23 23.6 -0.9
comp=Z,10nm,1.3s,baz=13
TAM Tamanrasset 74.34 308 P P 08 23 24.6 -1.8
TAM Tamanrasset 74.34 308 P P 08 23 24.6 -1.8
TAM pmax pmax
comp=Z,14nm,1.7s
KBZ Khabaz 74.46 346 P P 08 23 26.7 +0.3
comp=Z,3.2nm,0.9s,baz=229,slow=2.8,SNR=8.0
KBZ LR LR 08 54 11.6
comp=Z,295nm,22.0s,baz=136,slow=34
comp=Z,3.2nm,0.9s
KBZ Khabaz 74.46 346 *ce* P P 08 23 27.8 +1.4
KBZ pmax pmax
comp=Z,14nm,1.6s
KVAR Kislovodsk Arr 74.72 346 LR LR 08 54 27.0
comp=Z,172nm,21.8s,baz=94,slow=34
KIV Kislovodsk 74.72 346 eP P 08 23 29.7 +1.6
KIV pmax pmax
comp=Z,10.0nm,1.1s
BTLS Baital 74.84 10 eP P 08 23 28.2 -0.4
BTLS pmax pmax
comp=Z,4.0nm,0.8s
BTLS Baital 74.84 10 eP P 08 23 28.2 -0.4
comp=Z,4.1nm,0.8s,baz=9.3
TDK Taldyqorghan 75.53 13 eP P 08 23 31.5 -1.1
TDK Taldyqorghan 75.53 13 eP P 08 23 31.6 -1.1
baz=12
SMAI San Martin Ant 75.65 198 P P 08 23 33.3 +0.2
WMQ Urumqi 76.67 20 eP P 08 23 41.1 +1.9
WMQ LR LR
comp=Z,270nm,21.9s
WMQ LR LR
comp=Z,170nm,23.5s
PMSA Palmer Station 77.09 201 LR LR 08 49 07.3
comp=Z,137nm,21.6s,baz=122,slow=29
GTA Gaotai 77.23 30 ⇑P P 08 23 42.6 0.0
GTA pP sP 08 23 47.6 +2.6
GTA sP pwP 08 23 51.2 +0.7
GTA pmax pmax
comp=Z,10.0nm,1.4s
GTA pmax pmax
comp=Z,68nm,5.7s
GTA LR LR
comp=Z,94nm,18.2s
GTA LR LR
comp=Z,280nm,20.0s
GTA LR LR
comp=Z,140nm,20.0s
XAN Xi'an 77.51 39 P P 08 23 43.4 -0.7
XAN sP pwP 08 23 49.8 -2.2
XAN pmax pmax
comp=Z,9.0nm,1.0s
XAN LR LR
comp=Z,240nm,16.1s
XAN LR LR
comp=Z,160nm,16.5s
XAN LR LR
comp=Z,280nm,19.9s
MAKZ Makanchi 78.00 15 P P 08 23 46.0 -0.5
MAKZ IAmb IAmb 08 23 47.2
comp=Z,19nm,1.6s
MAKZ Makanchi 78.00 15 ⇑P P 08 23 46.4 -0.1
MK31 Makanchi Array 78.05 15 P P 08 23 46.1 -0.7
MK31 Makanchi Array 78.05 15 P P 08 23 46.2 -0.7
MK31 pmax pmax
comp=Z,10.0nm,1.3s
MKAR Makanchi Array 78.05 15 P P 08 23 46.3 -0.6
comp=Z,6.1nm,0.8s,baz=184,slow=5.7,SNR=40
comp=Z,6.1nm,0.8s
ABKAR Akbulak array 78.11 359 P P 08 23 46.9 -0.1
ABKAR IAmb IAmb 08 23 50.0
comp=Z,18nm,1.2s
ABKAR Akbulak array 78.11 359 P P 08 23 46.8 -0.3
TIRR Tirgusor 79.14 337 ⇑P P 08 23 55.1 +2.4
TIRR Tirgusor 79.14 337 ⇑P P 08 23 55.2 +2.4
ZSN Zaisan 79.27 16 eP P 08 23 53.1 -0.4
ZSN Zaisan 79.27 16 eP P 08 23 53.2 -0.3
baz=16
AKTO Aktyubinsk 79.33 358 LR LR 08 56 16.4
comp=Z,92nm,21.8s,baz=142,slow=34
VAE Valguarnera 79.42 324 LR LR 08 59 31.9
comp=Z,98nm,19.4s,baz=143,slow=36
BRZS Berezniki 79.51 8 eP P 08 23 54.2 -0.6
BRZS Berezniki 79.51 8 eP P 08 23 54.2 -0.6
baz=7.4
CFR Carcaliu 79.86 337 ⇑P P 08 23 56.7 0.0
CFR Carcaliu 79.86 337 ⇑P P 08 23 56.7 0.0
BLKB Belogradchik 80.56 333 ⇑P P 08 24 00.7 +0.1
KEST Kesra 80.87 320 LR LR 09 01 34.9
comp=Z,252nm,18.1s,baz=318,slow=37
MLR Muntele Rosu 80.90 336 ⇑P P 08 24 03.0 +0.5
MLR Muntele Rosu 80.90 336 LR LR 09 00 05.2
comp=Z,78nm,18.4s,baz=148,slow=36
MLR Muntele Rosu 80.90 336 ⇑P P 08 24 03.0 +0.5
VRI Vrincioaia 80.95 336 ⇑P P 08 24 03.3 +0.7
VRI Vrincioaia 80.95 336 ⇑P P 08 24 03.3 +0.7
BOVS Bovan 80.96 332 ⇑P P 08 24 04.0 +1.4
PLOR Plostina 80.96 336 ⇑P P 08 24 02.3 -0.4
PLOR Plostina 80.96 336 ⇑P P 08 24 02.3 -0.4
KURBB Kurchatov Arra 80.98 11 LR LR 08 55 53.1
comp=Z,124nm,22.0s,baz=114,slow=33
SEM Semipalatinsk 81.08 12 eP P 08 24 03.0 -0.4
SEM Semipalatinsk 81.08 12 eP P 08 24 03.0 -0.4
baz=12
KURK Kurchatov 81.08 11 P P 08 24 02.6 -0.5
KURK IAmb IAmb 08 24 06.3
comp=Z,18nm,1.1s
KURK Kurchatov 81.08 11 *ce* P P 08 24 02.9 -0.3
KURK pmax pmax
comp=Z,20nm,1.2s
VOIR 81.18 335 ⇑P P 08 24 05.6 +1.7
VOIR 81.18 335 ⇑P P 08 24 05.6 +1.7
ARR Arges 81.27 335 ⇑P P 08 24 03.3 -1.1
HERR Herculane 81.71 333 ⇑P P 08 24 06.3 -0.3
VRH Novokhopyorsk 81.85 348 eP P 08 24 06.4 -0.8
VRH pmax pmax
comp=Z,10.0nm,0.5s
MDVR Moldovita 81.90 333 ⇑P P 08 24 10.0 +2.3
NJ2 Nanjing 82.01 47 eP P 08 24 08.8 +0.3
NJ2 pmax pmax
comp=Z,12nm,0.5s
DIVS Divibare 82.04 331 P P 08 24 08.6 +0.1
DIVS IAmb IAmb 08 24 12.5
comp=Z,13nm,1.1s
BELG Belogornoye 82.10 352 LR LR 09 03 23.4
comp=Z,72nm,18.0s,baz=141,slow=38
BELG Belogornoye 82.10 352 *i* P P 08 24 09.2 +0.8
BELG pmax pmax
comp=Z,7.0nm,1.1s
BRVK Borovoye 82.31 6 P P 08 24 08.7 -0.9
BRVK Borovoye 82.31 6 *ce* P P 08 24 09.2 -0.4
BRVK pmax pmax
comp=Z,5.0nm,0.7s
VSR Storozhevoye 82.36 346 eP P 08 24 10.5 +0.6
VSR pmax pmax
comp=Z,9.0nm,0.6s
BZS Buzias 82.63 333 ⇑P P 08 24 13.1 +1.6
BZS Buzias 82.63 333 ⇑P P 08 24 13.1 +1.6
VORR Voronezh 82.79 347 eP P 08 24 10.7 -1.4
VORR pmax pmax
comp=Z,100nm,0.4s
BURAR Bucovina Array 82.98 336 P P 08 24 13.6 +0.2
HNS HongShan 83.18 40 ⇓P P 08 24 14.2 -0.3
HNS pmax pmax
comp=Z,11nm,0.8s
RPZ Rata Peaks 83.27 137 LR LR 08 52 40.3
comp=Z,279nm,21.5s,baz=246,slow=30
LPSR Galich'ya Gora 83.72 347 eP P 08 24 17.3 +0.4
LPSR pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 83.96 36 eP P 08 24 20.2 +1.6
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,170nm,6.9s
AKASG Malin Array Be 84.39 340 P P 08 24 20.9 +0.5
comp=Z,3.2nm,0.7s,baz=152,slow=4.0,SNR=15
comp=Z,3.2nm,0.7s
AKASG Malin Array Be 84.39 340 *ce* P P 08 24 22.0 +1.6
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 84.39 340 P P 08 24 21.4 +1.0
AKBB IAmb IAmb 08 24 22.6
comp=Z,9.8nm,0.8s
AKBB Malin Array Si 84.39 340 *ce* P P 08 24 20.3 -0.1
ARU Arti 85.32 359 P P 08 24 24.2 -0.7
ARU Arti 85.32 359 *c* iP P 08 24 24.6 -0.3
ARU S S **08 34 49.0 -6.2**
ARU pmax pmax
comp=Z,29nm,1.4s
ZAA0 Zalesovo Array 85.34 14 P P 08 24 24.7 -0.4
ZAA0 IAmb IAmb 08 24 25.4
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 85.34 14 P P 08 24 24.4 -0.6
comp=Z,5.8nm,0.5s,baz=199,slow=4.1,SNR=26
comp=Z,5.8nm,0.5s
ZALV Zalesovo Beam 85.34 14 P P 08 24 24.7 -0.4
CRVS Cervenica-Dubn 85.42 335 eP P 08 24 27.8 +2.2
CRVS Cervenica-Dubn 85.42 335 eP P 08 24 27.8 +2.2
VYHS Vyhne 86.08 333 eP P 08 24 30.1 +1.2
VYHS Vyhne 86.08 333 eP P 08 24 30.1 +1.2
BBTS Babate 86.55 289 LR LR 09 03 15.7
comp=Z,215nm,18.3s,baz=104,slow=36
OBN Obninsk 86.57 346 LR LR 09 03 48.7
comp=Z,24nm,18.6s,baz=151,slow=36
OBN Obninsk 86.57 346 *i* P P 08 24 32.0 +0.9
OBN *i* 08 24 40.0
OBN *i* S S 08 34 53.3 -14
OBN pmax pmax
comp=Z,41nm,1.4s
OBN MLR MLR
comp=Z,107nm,17.0s
CONA Conrad Observa 86.83 331 eP P 08 24 35.2 +2.4
comp=Z,10.0nm,1.4s
SONM Songino Array 86.84 29 P P 08 24 31.9 -1.0
comp=Z,2.0nm,0.9s,baz=193,slow=4.6,SNR=6.7
comp=Z,2.0nm,0.9s
MOS Moscow 86.94 347 eP P 08 24 33.6 +0.7
MOS pmax pmax
comp=Z,36nm,1.1s
ULN Ulaanbaatar 87.14 29 *ce* P P 08 24 33.6 -0.8
ULN pmax pmax
comp=Z,8.0nm,1.7s
ABTA Abfaltersbach 87.38 329 eP P 08 24 37.5 +2.1
comp=Z,9.9nm,1.5s
MDT Midelt 87.60 310 LR LR 09 03 35.6
comp=Z,194nm,19.1s,baz=128,slow=36
KIRV Kirov 88.00 354 LR LR 09 03 44.1
comp=Z,93nm,20.4s,baz=115,slow=35
KIRV Kirov 88.00 354 *ce* P P 08 24 37.7 -0.2
MNK Minsk 88.13 341 *i* P P 08 24 40.6 +1.9
MNK *i* 08 24 41.9
MNK *i* 08 28 07.1
MNK *i* PPP PPP 08 30 04.8
MNK *i* S **SKSac 08 35 08.8 +1.9**
MNK *i* SS **SS 08 41 13.8 +1.9**
MNK *i* SSS SSS 08 44 47.2
MNK pmax pmax
comp=N,8.0nm,1.1s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,18nm,0.8s
MNK MLR MLR
comp=E,125nm,23.0s
MNK MLR MLR
comp=N,17nm,18.0s
MNK Minsk 88.13 341 *i* P P 08 24 40.6 +1.9
comp=E,2.0nm,0.9s
MNK *i* P P 08 24 40.6 +1.9
comp=N,8.0nm,1.1s
MNK *i* P P 08 24 40.6 +1.9
comp=Z,18nm,0.8s,baz=151
MNK *i* PP PP 08 28 07.2 +1.1
MNK *i* PPP PPP 08 30 04.8
MNK *i* S **SKSac 08 35 08.9 +1.9**
MNK *i* SS **SS 08 41 13.9 +1.9**
MNK *i* SSS SSS 08 44 47.2
MNK *i* LQ LQ 08 53 52.3
MNK *i* LR LR 09 00 27.6
MNK *i* LRM MLR 09 07 01.2
comp=E,125nm,23.2s
MNK *i* LRM MLR 09 08 04.8

comp=N,17nm,17.8s
MNK *i* LRM MLR 09 08 35.7
comp=Z,125nm,22.4s
WTTA Wattenberg 88.16 329 *e*P **P 08 24 40.2 +0.9**
comp=Z,9.0nm,1.1s
WATA Walderalm 88.24 329 *e*P **P 08 24 42.0 +2.4**
comp=Z,4.3nm,0.5s
SQTA Sankt Quirin 88.33 329 *e*P **P 08 24 41.9 +2.0**
comp=Z,4.3nm,0.5s
FETA Feichten 88.40 328 *e*P **P 08 24 41.4 +1.0**
comp=Z,10nm,1.0s
GERES GERESS Array B 88.45 331 P **P 08 24 40.0 -0.5**
comp=Z,0.5nm,0.6s,baz=118,slow=6.1,SNR=2.9
comp=Z,0.5nm,0.6s
MOTA Moosalm 88.47 329 *e*P **P 08 24 41.8 +1.1**
comp=Z,14nm,1.9s
DAVOX Davos/Dischmat 88.61 328 LR LR 09 04 15.7
comp=Z,46nm,21.5s,baz=58,slow=36
RETA Reutte 88.73 329 *e*P **P 08 24 42.7 +0.9**
comp=Z,6.7nm,1.0s
DAVA Damuels 88.98 328 *e*P **P 08 24 44.0 +0.9**
comp=Z,14nm,0.9s
BRG Berggiesshubel 89.91 332 *e*PKP **P 08 24 47.6 +0.4**
BRG Amp 08 24 52.0
comp=Z,12nm,1.5s
BRG Berggiesshubel 89.91 332 *e*P **P 08 24 47.6 +0.4**
BRG pmax pmax
comp=Z,12nm,1.5s
CLL Collm 90.63 332 *e*P **P 08 24 53.0 +2.5**
ESDC Sonseca Array 91.35 316 P **P 08 24 55.4 +1.2**
comp=Z,3.3nm,0.9s,baz=121,slow=2.8,SNR=15
ESDC LR LR 09 04 40.5
comp=Z,110nm,21.7s,baz=108,slow=35
comp=Z,3.3nm,0.9s
ESDC Sonseca Array 91.35 316 P **P 08 24 54.6 +0.3**
PRGR Permogore 91.38 353 *e*P **P 08 24 52.8 -0.9**
PRGR *e* 08 25 00.8
KLMR Klimovskoe 91.44 350 *e*P **P 08 24 52.7 -1.3**
KLMR pmax pmax
comp=Z,19nm,1.3s
KLMR Klimovskoe 91.44 350 *e*P **P 08 24 52.8 -1.3**
KLMR AMP 08 24 54.9
comp=Z,19nm,1.3s
HNR Honiara 93.13 103 LR LR 09 02 34.8
comp=Z,68nm,21.6s,baz=266,slow=33
FINES FINESS Array B 94.67 344 LR LR 09 07 54.2
comp=Z,54nm,20.5s,baz=78,slow=36
PLCA Paso Flores 97.20 215 LR LR 09 03 02.5
comp=Z,48nm,19.0s,baz=150,slow=32
NOA NORSAR Array B 98.60 338 LR LR 09 09 55.2
comp=Z,58nm,19.9s,baz=120,slow=35
SPIA Saint Paul Isl 134.83 37 P **PKiKP 08 31 07.6 -0.6**
baz=286
C23K Itkillik River 135.52 15 P **PKiKP 08 31 08.8 -0.4**
baz=319
D23K Nanushuk River 136.16 16 P **PKiKP 08 31 10.0 -0.6**
baz=319
D24K Happy Valley 136.45 15 P **PKiKP 08 31 10.9 -0.2**
baz=321
TOLK Toolik Lake Re 136.67 16 P **PKiKP 08 31 11.7 0.0**
baz=320
F21K Alatna River 136.69 19 P **PKiKP 08 31 11.6 -0.1**
baz=314
D25K Kavik River 136.84 14 P **PKiKP 08 31 11.6 -0.5**
baz=324
F22K John River 136.85 18 P **PKiKP 08 31 11.5 -0.6**
baz=316
C27K Jago River 137.12 12 P **PKiKP 08 31 12.4 -0.1**
baz=328
G21K Allakaket 137.17 20 P **PKiKP 08 31 12.3 -0.5**
baz=313
COLD Coldfoot 137.58 17 P **PKiKP 08 31 12.7 -0.9**
baz=318
F24K Squaw Lake 137.94 16 P **PKiKP 08 31 13.7 -0.7**
baz=321
H21K Melozitna Rive 137.97 20 P **PKiKP 08 31 13.4 -1.0**
baz=314
G23K Bananza Creek 138.01 18 P **PKiKP 08 31 13.9 -0.6**
baz=318
H22K Ishtalitna Cre 138.23 19 P **PKiKP 08 31 14.2 -0.7**
baz=315
F25K Christian Rive 138.41 15 P **PKPdf 08 31 14.2 +1.0**
baz=324
J20K Nowinta River 138.54 22 P **PKPdf 08 31 14.4 +1.0**
baz=311
I21K Tanana 138.55 20 P **PKPdf 08 31 14.4 +1.0**
baz=314
TTA Tatalina 138.67 25 P **PKPdf 08 31 14.4 +0.6**
baz=307
G24K Hadweenzic Riv 138.68 17 P **PKPdf 08 31 14.2 +0.5**
baz=321
H23K Yukon River 138.80 19 P **PKPdf 08 31 14.8 +0.8**
baz=318
G25K Bearman Lake 138.97 16 P **PKPdf 08 31 14.8 +0.7**
baz=323
N16K Nishlik Lake 138.98 29 P **PKPdf 08 31 15.1 +0.7**
baz=302
MLY Manley 139.03 20 P **PKPdf 08 31 14.7 +0.3**
baz=316
K20K Telida 139.10 23 P **PKPdf 08 31 15.0 +0.5**
baz=310
H24K Noodor Dome 139.24 18 P **PKPdf 08 31 14.8 0.0**
baz=320
CHUM Lake Minchumin 139.34 22 P **PKPdf 08 31 14.8 -0.1**
baz=313
I23K Minto, Yukon-K 139.35 19 P **PKPdf 08 31 14.6 -0.2**
baz=317
G26K Porcupine Rive 139.35 15 P **PKPdf 08 31 14.3 -0.6**
baz=326
BPAW Bear Paw Mtn. 139.62 21 P **PKPdf 08 31 15.6 +0.1**
baz=314
L20K Farewell, AK 139.72 24 P **PKPdf 08 31 15.2 -0.5**
baz=309
CAST Castle Rocks 139.73 22 P **PKPdf 08 31 15.1 -0.6**
baz=312
INK Inuvik 139.93 8 PKP **PKPdf 08 31 16.1 +0.3**
comp=Z,3.4nm,1.0s,baz=329,slow=3.6,SNR=6.3
ILAR Eielson Array 140.33 18 PKhKP PKPpre 08 31 11.4
comp=Z,0.3nm,0.7s,baz=326,slow=40,SNR=3.4
ILAR PKP **PKPdf 08 31 16.6 -0.1**
comp=Z,1.2nm,0.7s,baz=285,slow=3.2,SNR=7.4
I27K Kandik River 140.96 15 P **PKPdf 08 31 17.8 -0.1**
baz=328
EPYK Eagle Plains 141.25 11 P **PKPdf 08 31 17.9 -0.5**
baz=335
BVCY Beaver Creek 143.83 17 P PKPbc 08 31 20.9 +0.2
baz=327
EYAK Cordova Ski Ar 143.88 22 P **PKPdf 08 31 22.0 -1.1**
baz=318
MCARA McCarthy VSAT 144.08 20 P PKPbc 08 31 21.9 +0.4
baz=323
M57A Sunshine Farm, 144.09 301 P PKPbc 08 31 22.2 0.0
baz=84,SNR=5.1
M57A P PKPbc 08 31 22.2 0.0
baz=84,SNR=5.1
L56A Greenwood 144.31 303 P PKPbc 08 31 22.9 0.0
baz=82,SNR=7.6
L56A P PKPbc 08 31 22.9 0.0
baz=82,SNR=7.6
M29M Somme Creek 144.40 15 P PKPbc 08 31 22.9 +0.3
baz=330
YUK3 Moose Creek 144.47 17 P PKPbc 08 31 23.0 +0.1
baz=327
CRQE Cirque 144.56 20 P PKPbc 08 31 23.5 +0.3
baz=322
T59A Double "B" Far 144.67 294 P PKPbc 08 31 24.1 +0.1
baz=90,SNR=5.9
T59A P PKPbc 08 31 24.1 +0.1
baz=90,SNR=5.9
SSPA Standing Stone 144.73 300 P PKPbc 08 31 24.2 0.0
baz=84,SNR=5.5
SSPA Standing Stone 144.73 300 P **PKPab 08 31 23.6 -0.5**
baz=84
U59A Littleton 144.86 293 P PKPbc 08 31 25.1 +0.4
baz=90,SNR=7.6
U59A P PKPbc 08 31 25.1 +0.4
baz=90,SNR=7.6
CTG Chitna Glacier 144.90 19 P PKPbc 08 31 24.4 +0.1
baz=325
R58B Mineral 144.90 295 P PKPbc 08 31 24.9 0.0
baz=88,SNR=9.1
R58B P PKPbc 08 31 24.9 0.0
baz=88,SNR=9.1
BGLC Bering Glacier 145.00 21 P PKPbc 08 31 23.9 -0.4
baz=321
WVNY West Valley, N 145.04 303 P **PKPdf 08 31 25.8 0.0**
baz=81,SNR=6.7
M55A Ridgway 145.29 302 P **PKPab 08 31 26.1 -0.1**
baz=82,SNR=5.1
M55A P **PKPab 08 31 26.1 -0.1**
baz=82,SNR=5.1
YUK4 Talbot Arm 145.30 17 P **PKPbc 08 31 25.1 -0.6**
baz=329
PSDB Penn State Uni 145.33 301 P **PKPbc 08 31 26.1 -0.1**
baz=83
O28M Mount Upton 145.38 18 P **PKPbc 08 31 25.7 -0.3**
baz=326
M31M Drury Creek, Y 145.48 13 P **PKPdf 08 31 25.5 -0.5**
baz=336
N30M Aishikik Lake 145.58 15 P **PKPdf 08 31 25.8 -0.4**
baz=331
S57A Dark Hollow, R 145.76 295 P **PKPab 08 31 28.0 0.0**
baz=88,SNR=6.1
S57A P **PKPab 08 31 28.0 0.0**
baz=88,SNR=6.1
N31M Braeburn, Yuko 145.84 14 P **PKPdf 08 31 26.7 +0.1**
baz=333
Q56A Snyder Ridge, 145.87 297 P **PKPdf 08 31 27.1 -0.2**
baz=86
Q56A P **PKPdf 08 31 27.1 -0.2**
baz=86
V58A Windy Hill, Pi 145.93 292 P **PKPbc 08 31 27.9 -0.2**
baz=90
V58A P **PKPbc 08 31 27.9 -0.2**
baz=90
T57A Hurt 146.03 294 P **PKPdf 08 31 27.9 +0.3**
baz=89,SNR=13
T57A P **PKPdf 08 31 27.9 +0.3**
baz=89,SNR=13
HYT Haines Junctio 146.03 16 P **PKPbc 08 31 27.5 -0.4**
baz=330
ERPA Erie 146.10 303 P **PKPdf 08 31 27.2 -0.4**
baz=80
O29M Mount Kennedy 146.21 17 P **PKPbc 08 31 27.9 -0.5**
baz=328
MCWV Mont Chateau 146.32 299 P **PKPdf 08 31 28.3 +0.2**
baz=84
O30N Mendenhall 146.41 15 P **PKPbc 08 31 28.8 -0.1**
baz=332
PNL Peninsula 146.52 19 P **PKPbc 08 31 28.5 -0.7**
baz=327
YKA Yellowknife Ar 146.59 356 PKPbc **PKPdf 08 31 28.4 +0.7**
comp=Z,8.5nm,0.7s,baz=351,slow=3.5,SNR=35
W57A Gilead 146.64 290 P **PKPdf 08 31 29.1 +0.4**
baz=91
W57A P **PKPdf 08 31 29.1 +0.4**
baz=91
O54A Avella 146.67 300 P **PKPbc 08 31 29.5 -0.7**
baz=83,SNR=8.9
O54A P **PKPbc 08 31 29.5 -0.7**
baz=83,SNR=8.9
N32M Quiet Lake 146.70 12 P **PKPdf 08 31 28.7 +0.7**
baz=337
NHSC New Hope 146.71 287 P **PKPdf 08 31 29.1 +0.3**
baz=94
M53A WI Miller and 146.72 302 P **PKPbc 08 31 29.5 -0.9**
baz=81
P30M Million Dollar 146.78 16 P **PKPbc 08 31 30.2 +0.2**
baz=331
WHY Whitehorse 146.78 14 P **PKPbc 08 31 29.9 -0.2**
baz=334
N53A Lisbon 146.94 301 P **PKPdf 08 31 29.5 +0.5**
baz=82
N53A P **PKPdf 08 31 29.5 +0.5**
baz=82
U56A King 146.95 293 P **PKPdf 08 31 29.7 +0.5**
baz=89
U56A P **PKPdf 08 31 29.7 +0.5**
baz=89
BLA Blacksburg 146.95 294 P **PKPdf 08 31 29.8 +0.5**
baz=88,SNR=6.7
BLA Blacksburg 146.95 294 P **PKPdf 08 31 29.6 +0.4**
baz=88
P29M Windy Craggy 147.01 17 P **PKPbc 08 31 29.8 -0.8**
baz=329
DWPF Disney Wildern 147.13 277 P **PKPdf 08 31 30.6 +0.9**
baz=101
Q54A Coxs Mills 147.15 297 P **PKPdf 08 31 29.8 +0.3**
baz=84,SNR=12
Q54A P **PKPdf 08 31 29.8 +0.3**
baz=84,SNR=12
O53A New Philadelph 147.30 300 P **PKPdf 08 31 29.8 +0.1**
baz=82
P53A Whipple 147.53 298 P **PKPdf 08 31 30.8 +0.7**
baz=83,SNR=10
P53A P **PKPdf 08 31 30.8 +0.7**
baz=83,SNR=10
P33M Teslin, Yukon 147.62 13 P **PKPbc 08 31 31.5 -0.9**
baz=337
JSC Jenkinsville 147.66 289 P **PKPdf 08 31 31.0 +0.5**
baz=92
KMSC Kings Mountain 147.73 290 P **PKPdf 08 31 30.6 +0.1**
baz=90
KMSC Kings Mountain 147.73 290 P **PKPdf 08 31 30.8 +0.3**
baz=90
SKAG Skagway 147.76 16 P **PKPbc 08 31 32.3 -0.3**
baz=333
O52A Adamsville 147.79 300 P **PKPdf 08 31 30.9 +0.4**
baz=82,SNR=6.9
O52A P **PKPdf 08 31 30.9 +0.4**
baz=82,SNR=6.9
P32M Atlin 148.00 14 P **PKPbc 08 31 32.3 -1.0**
baz=335
P52A Corning 148.08 299 P **PKPdf 08 31 32.4 +1.4**
baz=82
R53A Hurricane 148.09 296 P **PKPdf 08 31 31.1 +0.1**
baz=85
R53A P **PKPdf 08 31 31.1 +0.1**
baz=85
U54A Nelsons Funny 148.10 293 P **PKPdf 08 31 31.6 +0.4**
baz=88,SNR=16
U54A P **PKPdf 08 31 31.6 +0.4**
baz=88,SNR=16
PAULI Pauline 148.13 290 P **PKPdf 08 31 31.0 -0.2**
baz=90
Q52A Bidwell 148.26 298 P **PKPdf 08 31 31.3 0.0**
baz=84,SNR=6.1
Q52A P **PKPdf 08 31 31.3 0.0**
baz=84,SNR=6.1
M50A Fremont 148.48 302 P **PKPdf 08 31 31.3 -0.2**
baz=79
M50A P **PKPdf 08 31 31.3 -0.2**
baz=79
ACSO Alum Creek Sta 148.64 300 P **PKPdf 08 31 33.5 +1.7**
baz=81
R33M Jennings River 148.72 12 P **PKPbc 08 31 34.3 -1.1**
baz=340
GLMI Grayling 148.73 309 P **PKPbc 08 31 34.3 -1.3**
baz=72
P51A Williamsport 148.81 299 P **PKPdf 08 31 31.6 -0.6**
baz=82,SNR=5.1
P51A P **PKPdf 08 31 31.6 -0.6**
baz=82,SNR=5.1
V53A Saluda 148.94 291 P **PKPdf 08 31 33.0 +0.5**
baz=88,SNR=23
V53A P **PKPdf 08 31 33.0 +0.5**
baz=88,SNR=23
CASEE Lake Jocassee 149.05 290 P **PKPdf 08 31 33.5 +0.7**
baz=90,SNR=6.8
Q51A Peebles 149.09 298 P **PKPdf 08 31 31.8 -0.9**
baz=82
Q51A P **PKPdf 08 31 31.8 -0.9**
baz=82
L48A N Adams 149.38 304 P **PKPdf 08 31 33.4 +0.3**
baz=77
L48A P **PKPdf 08 31 33.4 +0.3**
baz=77
N49A Columbus Grove 149.41 302 P **PKPdf 08 31 33.3 +0.2**
baz=79
N49A P **PKPdf 08 31 33.3 +0.2**
baz=79
S51A Beattyville 149.44 295 P **PKPdf 08 31 33.5 +0.2**
baz=85,SNR=10.0
S51A P **PKPdf 08 31 33.5 +0.2**
baz=85,SNR=10.0
TIGA Tifton 149.46 283 P **PKPbc 08 31 36.2 -1.7**
baz=95
GOGA Godfrey 149.47 287 P **PKPbc 08 31 36.1 -1.8**
baz=92
TZTN Tazewell 149.49 293 P **PKPdf 08 31 33.3 -0.1**
baz=86,SNR=5.0
TZTN Tazewell 149.49 293 P **PKPbc 08 31 36.5 -1.4**
baz=86
V52A Sevierville 149.57 292 P **PKPdf 08 31 33.6 +0.1**
baz=88,SNR=8.0
O49A Covington 149.67 300 P **PKPdf 08 31 32.9 -0.6**
baz=80
O49A P **PKPdf 08 31 32.9 -0.6**
baz=80
TKL Tuckaleechee C 149.72 291 P **PKPbc 08 31 37.9 -0.6**
baz=88,SNR=6.2
DLBC Dease Lake 149.79 12 P **PKPbc 08 31 37.5 -0.5**
baz=341
W52A Murphy 149.86 290 P **PKPbc 08 31 38.9 +0.1**
baz=89,SNR=8.6
R50A Paris 149.95 297 P **PKPdf 08 31 32.8 -1.2**
baz=83
R50A P **PKPdf 08 31 32.8 -1.2**
baz=83
Y52A Lilburn 149.98 288 P **PKPdf 08 31 35.1 +0.9**
baz=91,SNR=7.7
Y52A P **PKPdf 08 31 35.1 +0.9**
baz=91,SNR=7.7
P49A Miami Univ. Ec 150.07 299 P **PKPdf 08 31 33.7 -0.5**
baz=80,SNR=9.4
P49A Miami Univ. Ec 150.07 299 P **PKPbc 08 31 37.9 -1.2**
baz=80
V51A Loudon 150.18 292 P **PKPdf 08 31 35.9 +1.4**
baz=87,SNR=18
O48B Farmland 150.27 301 P **PKPbc 08 31 38.8 -0.8**
baz=79
T50A Nancy 150.49 294 P **PKPdf 08 31 33.9 -1.0**
baz=85
T50A P **PKPdf 08 31 33.9 -1.0**
baz=85
152A Waverly Hall 150.50 285 P **PKPdf 08 31 35.7 +0.7**
baz=93,SNR=6.1
R49A Shelbyville 150.61 297 P **PKPdf 08 31 35.1 0.0**
baz=82,SNR=10.0
R49A P **PKPdf 08 31 35.1 0.0**
baz=82,SNR=10.0
P48A Milroy 150.62 299 P **PKPdf 08 31 34.0 -1.0**
baz=80,SNR=8.2
P48A P **PKPdf 08 31 34.0 -1.0**
baz=80,SNR=8.2
X51A Calhoun 150.64 289 P **PKPdf 08 31 36.8 +1.6**
baz=89,SNR=13
X51A P **PKPdf 08 31 36.8 +1.6**
baz=89,SNR=13
Z51A Franklin 150.90 287 P **PKPdf 08 31 37.7 +2.0**
baz=91,SNR=5.7
W50A Signal Mountai 150.99 291 P **PKPbc 08 31 41.2 -0.4**
baz=88,SNR=31
T35M Bob Quinn 151.12 13 P **PKPbc 08 31 40.9 -0.3**
baz=339
WRAK Wrangell Islan 151.19 15 P **PKiKP 08 31 41.6 -0.2**
baz=335
SFIN Lafayette 151.70 302 P **PKPbc 08 31 42.4 -0.6**
baz=77
EYMN Ely 151.75 319 P **PKPbc 08 31 42.4 -0.4**
baz=58
250A Grady 151.77 284 P **PKPbc 08 31 43.4 0.0**
baz=93,SNR=6.5
L44A Lake County Fo 151.82 306 P **PKPbc 08 31 42.9 -0.3**
baz=73
Y49A Blount Mountai 151.93 288 P **PKPdf 08 31 37.7 +0.5**
baz=90,SNR=9.0
G40A Rib Lake 152.24 313 P **PKPdf 08 31 36.8 -0.5**
baz=65
BRAL Brewton 152.39 282 P **PKPbc 08 31 44.1 -0.7**
baz=94
LRAL Lakeview Retre 152.42 286 P **PKPdf 08 31 37.4 -0.5**
baz=91,SNR=7.8
LRAL Lakeview Retre 152.42 286 P **PKPbc 08 31 44.5 -0.3**
baz=91
X48A Hartselle 152.44 289 P **PKPdf 08 31 37.0 -0.9**
baz=88
E38A The Farm, Brul 152.46 317 P **PKPdf 08 31 37.3 -0.3**
baz=61
O44A Mansfield 152.77 302 P **PKiKP 08 31 45.7 +0.1**
baz=76,SNR=13
OLIL Olney 152.80 299 P **PKPbc 08 31 45.1 -0.4**
baz=79
WVT Waverly 152.97 293 P **PKPbc 08 31 45.4 -0.6**
baz=84
WVT Waverly 152.97 293 P **PKPbc 08 31 44.8 -1.1**
baz=84
JFWS Jewell Farm 153.20 308 P **PKPbc 08 31 46.1 -0.2**
baz=69
JFWS Jewell Farm 153.20 308 P **PKPbc 08 31 45.5 -0.8**
baz=69
HDIL Hopedale 153.28 303 P **PKPbc 08 31 46.3 -0.2**
baz=74
Z47A Carrollton 153.32 286 P **PKiKP 08 31 47.0 0.0**
baz=90
Q44A Meyer Farm, Va 153.47 299 P **PKPbc 08 31 46.9 0.0**
baz=78
SPMN Marine on St. 153.90 315 P **PKPbc 08 31 39.0 -0.7**
baz=61
SPMN Marine on St. 153.90 315 P **PKPbc 08 31 46.6 -1.1**
baz=61
AGMN Agassiz Nation 153.94 323 P **PKPdf 08 31 38.8 -0.9**
baz=51
AGMN Agassiz Nation 153.94 323 P **PKPdf 08 31 38.8 -0.9**
baz=51
OXF Oxford 154.39 290 P **PKPdf 08 31 39.9 -0.8**
baz=86
PBMO Poplar Bluff 154.96 295 P **PKiKP 08 31 50.3 +0.1**
baz=81
CCM Cathedral Cave 155.36 298 P **PKPdf 08 31 41.0 -1.0**
baz=77
CCM Cathedral Cave 155.36 298 P **PKPdf 08 31 40.9 -1.0**
baz=77
VBMS Vicksburg 155.38 284 P **PKPdf 08 31 41.2 -1.0**
baz=91
P40A Paris 155.59 302 P **PKPdf 08 31 43.1 +0.9**
baz=73
F33A 5 Mile Ranch, 155.65 319 P **PKPdf 08 31 41.5 -0.6**
baz=55,SNR=5.5
R40A Maddies Statio 156.09 299 P **PKPdf 08 31 41.8 -1.1**
baz=76
MDND Maddock 156.12 327 P **PKPdf 08 31 42.1 -0.6**
baz=46
ECSD EROS Data Cent 157.00 315 P **PKPdf 08 31 42.8 -1.2**
baz=58
ECSD EROS Data Cent 157.00 315 P **PKPdf 08 31 42.9 -1.1**
baz=58
MIAR Mount Ida 157.81 290 P **PKPdf 08 31 46.2 +0.9**
baz=83
MIAR Mount Ida 157.81 290 P **PKPdf 08 31 44.7 -0.6**
baz=83
HHAR Hobbs 157.83 295 P **PKPdf 08 31 44.7 -0.6**
baz=79
SUSD Miller 158.00 319 P **PKPdf 08 31 44.2 -1.0**
baz=53
U38A Gravette 158.15 296 P **PKPdf 08 31 44.6 -1.1**
baz=78
NATX Nacogdoches 158.91 283 P **PKPdf 08 31 45.9 -0.8**
baz=90
KSU1 Kansas State U 159.08 304 P **PKPdf 08 31 46.2 -0.5**
baz=69
BGNE Belgrade 159.16 311 P **PKPdf 08 31 46.5 -0.2**
baz=61
X37A Clayton 159.28 291 P **PKPdf 08 31 46.8 -0.3**
baz=82
TUL1 Leonard 159.38 295 P **PKPdf 08 31 46.2 -0.9**
baz=78
EGMT Eagleton 159.91 342 P **PKPdf 08 31 46.7 -0.8**
baz=24
NEW Newport 160.92 356 PKP **PKPdf 08 31 47.6 -0.8**
comp=Z,2.5nm,0.8s,baz=174,slow=1.9,SNR=5.7
NEW Newport 160.92 356 P **PKPdf 08 31 47.7 -0.8**
baz=5.2
RSSD Black Hills 160.94 325 P **PKPdf 08 31 48.6 -0.3**
baz=44
RSSD Black Hills 160.94 325 P **PKPdf 08 31 48.5 -0.3**
baz=44
WHTX Lake Whitney, 161.28 284 P **PKPdf 08 31 48.7 -0.6**
baz=87
OGNE Ogallala 161.89 315 P **PKPdf 08 31 49.2 -0.6**
baz=55
MSO Missoula 161.97 349 P **PKPdf 08 31 49.6 -0.1**
baz=14
WMOK Wichita Mounta 162.01 293 P **PKPdf 08 31 49.9 -0.1**
baz=78
WMOK Wichita Mounta 162.01 293 P **PKPdf 08 31 49.8 -0.3**
baz=78
RLMT Red Lodge 162.36 337 P **PKPdf 08 31 50.1 -0.2**
baz=29
BOZ Bozeman (W) 162.65 342 P **PKPdf 08 31 50.7 +0.2**
baz=22
833A Chaparral WMA, 162.81 272 P **PKPdf 08 31 52.6 +1.6**
baz=98
833A Chaparral WMA, 162.81 272 P **PKPdf 08 31 51.4 +0.4**
baz=98

ABTX	Abilene, Hawle	163.07	286	P		PKPdf	08 31 51.6	+0.4
	baz=84							
ABTX	Abilene, Hawle	163.07	286	P		PKPdf	08 31 51.4	+0.3
	baz=84							
JCT	Junction City	163.32	279	P		PKPdf	08 31 52.1	+0.6
	baz=91							
JCT	Junction City	163.32	279	P		PKPdf	08 31 51.4	0.0
	baz=91							
KSCO	Kaye Shedlock'	163.33	310	P		PKPdf	08 31 51.3	0.0
	baz=59							
G05D	Wamic, OR	163.89	6	P		PKPdf	08 31 52.1	+0.5
	baz=353							
N23A	Red Feather La	164.22	321	P		PKPdf	08 31 51.8	-0.5
	baz=47							
AMTX	Amarillo	164.29	296	P		PKPdf	08 31 52.2	-0.2
	baz=74							
AMTX	Amarillo	164.29	296	P		PKPdf	08 31 52.1	-0.2
	baz=74							
BW06	Boulder Array	164.49	333	P		PKPdf	08 31 51.6	-0.8
	baz=32							
PDAR	Pinedale Array	164.49	333	PKP		PKPdf	08 31 51.5	-0.9
	comp=Z,4.1nm,0.9s,baz=132,slow=2.2,SNR=32							
ISCO	Idaho Springs	164.76	317	P		PKPdf	08 31 53.0	+0.1
	baz=50							
ISCO	Idaho Springs	164.76	317	P		PKPdf	08 31 52.6	-0.2
	baz=50							
Q24A	Divide	164.99	314	P		PKPdf	08 31 52.6	-0.5
	baz=54							
HLID	Hailey	165.22	347	P		PKPdf	08 31 53.1	+0.2
	baz=16							
MSTX	Muleshoe	165.41	293	P		PKPdf	08 31 53.4	0.0
	baz=76							
MSTX	Muleshoe	165.41	293	P		PKPdf	08 31 53.3	0.0
	baz=76							
T25A	Trinidad	165.48	307	P		PKPdf	08 31 53.4	-0.1
	baz=61,SNR=8.2							
J05D	Fort Rock, OR	165.83	7	P		PKPdf	08 31 53.4	0.0
	baz=352							
SDCO	Great Sand Dun	165.91	311	P		PKPdf	08 31 53.2	-0.6
	baz=57							
SDCO	Great Sand Dun	165.91	311	P		PKPdf	08 31 53.9	0.0
	baz=57,SNR=11							
O20A	White River Ci	165.99	324	P		PKPdf	08 31 53.7	-0.1
	baz=42							
TXAR	Lajitas Array	166.64	274	PKP		PKPdf	08 31 54.7	+0.3
	comp=Z,2.5nm,0.8s,baz=130,slow=2.2,SNR=43							
TX31	Lajitas Ar. Si	166.64	274	P		PKPdf	08 31 55.3	+0.9
	baz=93							
S22A	4UR Ranch, Cre	166.77	313	P		PKPdf	08 31 54.8	+0.2
	baz=54,SNR=15							
DUG	Dugway, Tooele	167.93	337	P		PKPdf	08 31 55.8	+0.7
	baz=27							
ANMO	Albuquerque	167.95	302	P		PKPdf	08 31 56.4	+1.1
	baz=65							
ANMO	Albuquerque	167.95	302	P		PKPdf	08 31 56.0	+0.6
	baz=65							
MNTX	Cornudas Mount	168.02	285	P		PKPdf	08 31 56.3	+1.0
	baz=82							
MNTX	Cornudas Mount	168.02	285	P		PKPdf	08 31 55.6	+0.3
	baz=82							
MVCO	Mesa Verde	168.15	315	P		PKPdf	08 31 56.3	+0.8
	baz=51,SNR=6.4							
Y22A	Socorro	168.73	298	P		PKPdf	08 31 57.1	+1.3
	baz=69							
121A	Cookes Peak, D	169.84	292	P		PKPdf	08 31 58.4	+1.7
	baz=74							
121A	Cookes Peak, D	169.84	292	P		PKPdf	08 31 57.5	+0.8
	baz=74							
R11A	Troy Canyon, C	170.46	344	P		PKPdf	08 31 57.6	+0.8
	baz=18							
NVAR	Mina Array Bea	170.78	357	PKP		PKPdf	08 31 56.9	-0.2
	comp=Z,2.1nm,0.8s,baz=205,slow=1.3,SNR=17							
NVAR				PKPab		PKPab	08 33 14.9	0.0
	comp=Z,0.4nm,0.6s,baz=19,slow=5.7,SNR=2.2							
WUAZ	Wupatki	171.01	316	P		PKPdf	08 31 57.7	+0.5
	baz=48,SNR=6.2							
TPNV	Topopah Spring	171.95	344	P		PKPdf	08 31 58.0	+0.5
	baz=18							
GRAC	Grapevine Rang	172.12	351	P		PKPdf	08 31 57.8	+0.3
	baz=11							
TUC	Tucson	172.31	296	P		PKPdf	08 31 58.2	+0.4
	baz=69							
FURC	Furnace Creek,	172.55	347	P		PKPdf	08 31 58.2	+0.6
	baz=15							
CWC	Cottonwood Cre	172.75	354	P		PKPdf	08 31 58.6	+0.7
	baz=6.7							
SHOC	Shoshone, Teco	172.95	342	P		PKPdf	08 31 59.4	+1.5
	baz=20							
MPMC	Manual Prospec	173.06	350	P		PKPdf	08 31 59.6	+1.5
	baz=11							
TUQ	Turquoise Moun	173.28	338	P		PKPdf	08 31 59.5	+1.4
	baz=24							
NEE2	Needles Airpor	173.34	327	P		PKPdf	08 31 59.3	+1.3
	baz=35							
PDMCI	Parker Dam,Lak	173.47	322	P		PKPdf	08 31 59.6	+1.5
	baz=41,SNR=6.5							
ISA	Isabella, Lake	173.55	356	P		PKPdf	08 31 59.4	+1.2
	baz=4.5							
LRMC	Laurel Mtn Rad	173.65	350	P		PKPdf	08 31 59.3	+1.0
	baz=11							
GSC	Goldstone, Bar	173.65	344	P		PKPdf	08 31 59.4	+1.2
	baz=18							
GMRC	Granite Mounta	173.77	334	P		PKPdf	08 31 59.5	+1.1
	baz=28,SNR=12							
SMMC	Simmler	173.85	8	P		PKPdf	08 32 00.2	+2.0
	baz=352							
HEC	Hector,Ludlow	173.97	339	P		PKPdf	08 31 59.8	+1.4
	baz=23							
214A	Organ Pipe Nat	174.03	299	P		PKPdf	08 31 59.6	+1.2
	baz=65							
IRM	Iron Mountain	174.09	328	P		PKPdf	08 31 59.9	+1.6
	baz=35,SNR=12							
EDW2	Edwards Air Fo	174.28	352	P		PKPdf	08 31 59.8	+1.4
	baz=9.3							
BELC	Belle Mtn. Jos	174.59	333	P		PKPdf	08 32 00.4	+1.7
	baz=29,SNR=11							
BC3	Big Chuckawall	174.65	327	P		PKPdf	08 32 00.3	+1.7
	baz=36,SNR=15							
GLA	Glamis	174.78	318	P		PKPdf	08 32 00.3	+1.7
	baz=45							
BFSC	Mount Baldy Ra	174.86	348	P		PKPdf	08 32 00.3	+1.6
	baz=14							
PFO	Pinyon Flats O	175.11	335	P		PKPdf	08 32 00.5	+1.7
	baz=28							
TPFO	Pinon Flats	175.12	335	P		PKPdf	08 32 00.5	+1.7
	baz=28,SNR=6.8							
MURC	Murrieta	175.37	341	P		PKPdf	08 31 59.9	+1.1
	baz=20							
SWSC	Sam W. Stewart	175.39	325	P		PKPdf	08 31 59.5	+0.8
	baz=38,SNR=5.3							
MONP2	Monument Peak	175.73	330	P		PKPdf	08 32 00.5	+1.4
	baz=32,SNR=12							
IKP	In-Ko-Pah, Jac	175.78	325	P		PKPdf	08 31 60.0	+1.0
	baz=37,SNR=10							
CIS	Catalina Islan	175.79	354	P		PKPdf	08 31 59.9	+1.0
	baz=7.6							
SNCC	San Nicolas Is	175.94	7	P		PKPdf	08 32 00.4	+1.5
	baz=354							
109C	Camp Elliot, M	176.00	337	P		PKPdf	08 32 00.2	+1.3
	baz=25							

IDC ***12*** *08:16:42.0±3.6,22°.95S×173°.48E,h0km,mb4.0/4, mbtmp4.0/6,ML4.7/2,MS3.6/7,Error ellipse: s-maj=125.2km s-min=26.2km az=153.0*

NEIC ***12*** *08:16:45.5±1.5,22°.8S±0°.1×173°.55E±0°.07,h10km±1km, mb4.5/13,Error ellipse: s-maj=21.5km s-min=3.1km az=152.0*

NOU ***12*** *08:16:59.0,22°.68S×172°.50E,h0km,mb4.8/12,Southeast of Loyalty Islands*

ISC 12 08:16:45.8±0.7, 22°.7S±0°.1×173°.40E±0°.07, h10km, n50, σ1°98/42, mb4.2/8, MS3.6/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	5.14	283	Pn	Pn	08 18 04.3	+1.5
PINNC	Pines Island,	5.50	270		Pn	08 18 08.2	+0.3
PINNC	Pines Island,	5.50	270	P	Pn	08 18 10.2	+2.4
YATNC	Mamie plateau,	6.07	275	P	Pn	08 18 18.1	+2.5
OUENC	Ouen Island, N	6.07	272		Pn	08 18 17.4	+1.7
OUENC	Ouen Island, N	6.07	272	P	Pn	08 18 18.1	+2.4
ONTNC	Ouen Toro	6.44	272		Pn	08 18 21.9	+1.2
ONTNC	Ouen Toro	6.44	272	P	Pn	08 18 24.1	+3.4
DZM	Mont Dzumac	6.47	275	Pn	Pn	08 18 21.0	-0.3
	2.7nm,0.3s,baz=128,slow=12,SNR=27						
DZM				Sn	Sn	08 19 31.9	-3.4
	1.7nm,0.3s,baz=202,slow=19,SNR=2.0						
	9.4nm,0.4s						
DZM	Mont Dzumac	6.47	275	*e*Pn	Pn	08 18 22.0	+0.7
	94nm,0.8s						
DZM				*e*Sn	Sn	08 19 35.5	+0.2
	132nm,0.9s						
DZM				*e*LR	LR	08 19 54.5	
	comp=Z,795nm,25.1s						
DZM	Mont Dzumac	6.47	275		Pn	08 18 22.1	+0.8
DZM	Mont Dzumac	6.47	275	P	Pn	08 18 23.1	+1.8
NOUC	Port Laguerre	6.60	274	P	Pn	08 18 25.7	+2.8
MSVF	Nonsavu	6.62	42	Pn	Pn	08 18 23.4	+0.1
	1.5nm,0.3s,baz=266,slow=18,SNR=5.5						
MSVF				LR	LR	08 20 20.5	
	comp=Z,714nm,18.0s,baz=215,slow=32						
	10nm,0.7s						
MSVF	Nonsavu	6.62	42	Pn	Pn	08 18 22.0	-1.3
DVP	Devils Point	6.99	315	P	Pn	08 18 35.1	+6.8
KOUNC	Koumac, New Ca	8.76	283		Pn	08 18 55.0	+2.5
KOUNC	Koumac, New Ca	8.76	283	P	Pn	08 18 56.8	+4.3
RAO	Raoul Island	10.14	132	LR	LR	08 21 34.9	
	comp=Z,42nm,20.1s,baz=300,slow=29						
URZ	Urewera	15.79	169	LR	LR	08 25 11.1	
	comp=Z,338nm,19.9s,baz=29,slow=33						
AFI	Afiamalu	16.57	61	LR	LR	08 25 47.9	
	comp=Z,202nm,18.2s,baz=181,slow=33						
THZ	Tophouse	18.97	181		P	08 21 05.7	-1.7
THZ				IAmb	IAmb	08 21 34.7	
	comp=Z,43nm,1.2s						
EIDS	Eidsvold	20.55	258	P	P	08 21 23.9	-0.8
EIDS				IAmb	IAmb	08 21 32.5	
	comp=Z,19nm,1.2s						
EIDS	Eidsvold	20.55	258	P	Pn	08 21 31.2	+4.3
ARMA	Armidale	20.90	244	P	P	08 21 28.2	-0.3
ARMA				IAmb	IAmb	08 21 50.1	
	comp=Z,31nm,1.5s						
RPZ	Rata Peaks	21.01	185	LR	LR	08 29 07.9	
	comp=Z,278nm,18.3s,baz=352,slow=36						
RMQ	Roma	22.70	256	P	P	08 21 53.4	+5.5
RAR	Rarotonga	24.91	92	LR	LR	08 29 35.1	
	comp=Z,63nm,20.0s,baz=262,slow=31						
CTA	Charters Tower	25.40	271	P	P	08 22 13.1	-0.6
	comp=Z,2.5nm,0.7s,baz=80,slow=11,SNR=2.2						
CTA				LR	LR	08 31 54.0	
	comp=Z,77nm,18.6s,baz=92,slow=36						
	comp=Z,2.5nm,0.7s						
STKA	Stephens Creek	29.61	245	LR	LR	08 33 26.9	
	comp=Z,178nm,20.8s,baz=57,slow=34						
STKA	Stephens Creek	29.61	245	P	P	08 22 50.2	-1.1
COEN	Coen	29.94	282	P	P	08 22 53.9	-0.5
COEN				IAmb	IAmb	08 23 24.3	
	comp=Z,12nm,1.1s						
PPT2	Papeete2	35.06	88	*e*LR	LR	08 32 47.4	
	comp=Z,154nm,26.8s						
WR0	Warramunga Arr	36.23	267	P	P	08 23 48.9	-0.4
ASAR	Alice Springs	36.24	261	P	P	08 23 47.2	-2.1
	comp=Z,1.6nm,0.8s,baz=85,slow=9.6,SNR=9.5						
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	36.42	267	P	P	08 23 47.9	-3.1
	comp=Z,1.1nm,0.7s,baz=99,slow=7.9,SNR=2.7						
	comp=Z,1.1nm,0.7s						
WRA	Warramunga Arr	36.42	267	P	P	08 23 50.0	-1.0
FITZ	Fitzroy Crossi	44.85	267	P	P	08 25 00.5	-0.1
FITZ				IAmb	IAmb	08 25 26.8	
	comp=Z,7.2nm,1.1s						
TAOE	Nuku Hiva Isla	46.58	80	*e*LR	LR	08 38 07.0	
	comp=Z,104nm,26.8s						
QSPA	South Pole Qui	67.33	180	P	P	08 27 41.8	+0.9
QSPA				IAmb	IAmb	08 27 57.2	
	comp=Z,13nm,1.5s						
JSU	Suzuyama	67.83	321	P	P	08 27 44.5	+0.1
KSAR	Wonju Array Be	73.61	324	P	P	08 28 19.6	+0.2
BELA	Belgrano 2	78.27	174	P	P	08 28 46.2	+0.8
BELA				IAmb	IAmb	08 29 08.2	
	comp=Z,4.6nm,1.4s						
OHAK	Old Harbor	84.42	17	P	P	08 29 19.4	+1.3
TROLL	Troll, Antarti	85.29	183	P	P	08 29 25.5	+2.8
SNAA	Sanae	85.81	181	P	P	08 29 26.5	+1.3
VNA3	Neumayer Olymp	86.25	179	P	P	08 29 27.7	+0.4
VNA2	Neumayer--Watz	86.59	180	P	P	08 29 29.7	+0.7
	baz=169,slow=5.0						
ILAR	Eielson Array	92.46	16	P	P	08 29 54.5	-2.0
	comp=Z,0.6nm,1.0s,baz=226,slow=6.1,SNR=5.0						
	comp=Z,0.6nm,1.0s						
CLL	Collm	147.68	337	*e*PKPbc	PKPbc	08 36 30.0	-0.4
	comp=Z,5.0nm,0.8s						

DDA 12 08:24:47.9±0.0, 37°.39N×29°.75E, h7km±4km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	Golhisar	0.21	226	P	Pg	08 24 52.1	0.0
GOLH				S	Sg	08 24 56.3	+1.3
GOLH				*i* AML	AML	08 24 57.0	
	comp=N,417nm,0.2s						
GOLH				*i* AML	AML	08 24 57.0	
	comp=E,481nm,0.3s						
BRDR	BURDUR-Merkez	0.40	38	P	Pg	08 24 55.1	-0.5
BRDR				S	Sg	08 25 02.0	+1.1
BRDR				*i* AML	AML	08 25 02.0	
	comp=N,117nm,0.3s						
BRDR				*i* AML	AML	08 25 02.0	
	comp=E,156nm,0.4s						
CAEL	Denizli, Camel	0.43	233	P	Pb	08 24 57.8	-0.1
CAEL				S	Sb	08 25 03.6	-1.1
CAEL				*i* AML	AML	08 25 05.0	
	comp=N,48nm,0.3s						
CAEL				*i* AML	AML	08 25 06.0	
	comp=E,52nm,0.2s						
KORT	Korkueli	0.61	129	P	Pg	08 25 00.2	+0.5
KORT				S	Sb	08 25 08.9	-1.1
KORT				*i* AML	AML	08 25 10.0	
	comp=E,26nm,0.4s						
KORT				*i* AML	AML	08 25 10.0	
	comp=N,14nm,0.5s						
TAVA	DENIZLI_Tavas	0.67	277	P	Pb	08 25 02.8	+0.8
TAVA				*i* AML	AML	08 25 11.0	
	comp=N,15nm,0.5s						
TAVA				S	Sb	08 25 11.0	-0.6
TAVA				*i* AML	AML	08 25 13.0	
	comp=E,9.7nm,0.5s						

BUC 12 08:26:52.6±0.3, 45°.31N×25°.13E, h5km, ml0.6/2, 8C-6D, Error ellipse: s-maj=3.4km s-min=1.9km az=0.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTUR	Matau	0.10	210	↑P	Pg	08 26 54.2	-0.5
MTUR	Matau	0.10	210	↑P	Pg	08 26 54.2	-0.5
VOIR		0.14	335	↑P	Pg	08 26 54.7	-0.7
VOIR				↑S	Sg	08 26 57.6	+0.3
VOIR		0.14	335	↑P	Pg	08 26 54.7	-0.7
VOIR				↑S	Sg	08 26 57.6	+0.3
ARR	Arges	0.36	279	↓P	Pg	08 26 59.9	+0.4
ARR				↑S	Sg	08 27 05.0	+0.8
ARR	Arges	0.36	279	↓P	Pg	08 26 59.9	+0.4
ARR				↑S	Sg	08 27 05.0	+0.8
MLR	Muntele Rosu	0.60	72	↓P	Pg	08 27 04.5	+0.4
MLR				↓S	Sg	08 27 12.8	+0.9
MLR	Muntele Rosu	0.60	72	↓P	Pg	08 27 04.5	+0.4
MLR				↓S	Sg	08 27 12.8	+0.9

SJA ***12*** *08:27:20.3±0.5,22°.46S×66°.09W,h277km±3km,ML4.5, MW4.3*

IDC ***12*** *08:27:21.5±0.9,22°.40S×66°.08W,h244km±9km,mb3.4/6, mbtmp4.0/13,Error ellipse: s-maj=15.1km s-min=13.1km az=171.0*

VAO ***12*** *08:27:21.5±0.3,22°.50S×66°.18W,h253km,mb4.1*

NEIC ***12*** *08:27:21.9±1.5,22°.53S±0°.08×66°.11W±0°.10, h254km±10km,mb4.3/24,Md4.0(SJA),Error ellipse: s-maj=13.2km s-min=12.0km az=58.0*

ISC 12 08:27:21.9±0.5, 22°.53S±0°.04×66°.20W±0°.04, h258km±6km, n149, σ1°10/175, mb4.3/17, 12C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	0.72	61	*e*P	Pn	08 27 57.8	+0.8
YJA				*e*S	S	08 28 25.1	+0.5
HJA	Humahuaca	0.99	133	*e*P	Pn	08 27 59.2	+1.0
HJA				*e*S	S	08 28 27.7	+0.9

AF01	San Pedro de A	1.88	257			Pn	08 28 05.8	+1.5
AF01	San Pedro de A	1.88	257	↑*i*P		Pn	08 28 06.0	+1.7
AF01				*e*S		S	08 28 39.4	+1.6
AF01				IAML			08 28 44.4	
	comp=N,184nm,0.3s							
LVC	Limon Verde	2.51	268	P		Pn	08 28 11.1	+0.9
	comp=N,118nm,0.3s,baz=99,slow=5.5,SNR=388							
LVC				S		S	08 28 47.4	-0.9
	comp=N,41nm,0.3s,baz=254,slow=20,SNR=8.2							
LVC	Limon Verde	2.51	268			Pn	08 28 10.6	+0.5
LVC	Limon Verde	2.51	268	↑*i*P		Pn	08 28 11.1	+0.9
LVC				*e*S		S	08 28 47.8	-0.5
LVC	Limon Verde	2.51	268	*e*P		Pn	08 28 11.2	+1.0
LVC				*e*S		S	08 28 49.3	+1.0
LVC	Limon Verde	2.51	268	*e*P		Pn	08 28 10.7	+0.5
PB09	IPOC Station P	2.91	284			Pn	08 28 14.8	+0.6
PB09	IPOC Station P	2.91	284	↑*i*P		Pn	08 28 15.4	+1.3
PB09				*e*S		S	08 28 55.2	-0.4
PB09	IPOC Station P	2.91	284	*e*P		Pn	08 28 15.2	+1.0
PB09				*e*S		S	08 28 55.5	0.0
PB15	IPOC Station P	3.09	257			Pn	08 28 17.0	+0.9
PB15	IPOC Station P	3.09	257	↑*e*P		Pn	08 28 16.7	+0.7
PB15				*e*S		S	08 28 58.4	-0.6
PB15	IPOC Station P	3.09	257	*e*P		Pn	08 28 17.2	+1.1
PB15				*e*P		Pn	08 28 17.4	+1.3
PB15				*e*S		S	08 28 59.4	+0.4
PB15				IAML			08 29 05.4	
	comp=Z,2μm,0.2s							
PB06	IPOC Station P	3.12	266			Pn	08 28 16.4	+0.1
PB06	IPOC Station P	3.12	266	↑*i*P		Pn	08 28 16.8	+0.5
PB06				*e*S		S	08 28 58.7	-0.8
PB06	IPOC Station P	3.12	266	*e*P		Pn	08 28 17.4	+1.0
PB06				*e*S		S	08 28 59.6	+0.1
PB01	IPOC Station P	3.39	295			Pn	08 28 19.4	+0.1
PB01	IPOC Station P	3.39	295	↑*i*P		Pn	08 28 19.8	+0.5
PB01				*e*S		S	08 29 03.0	-1.8
PB01	IPOC Station P	3.39	295	*e*P		Pn	08 28 19.8	+0.5
PB01				*e*S		S	08 29 03.8	-1.0
PB01				IAML			08 29 05.2	
	comp=Z,392nm,0.3s							
PB07	IPOC Station P	3.51	282			Pn	08 28 20.4	-0.2
PB07	IPOC Station P	3.51	282	↑*i*P		Pn	08 28 21.1	+0.5
PB07				*i* S		S	08 29 05.0	-2.2
PB07	IPOC Station P	3.51	282	*e*P		Pn	08 28 21.3	+0.6
PB07				*e*S		S	08 29 06.3	-1.0
PB07				IAML			08 29 07.5	
	comp=Z,261nm,0.5s							
FSA	Cafayete	3.57	177	*e*P		Pn	08 28 22.1	+0.8
PB02	IPOC Station P	3.64	289			Pn	08 28 22.4	+0.4
PB02	IPOC Station P	3.64	289	↑*i*P		Pn	08 28 22.3	+0.3
PB02				*e*S		S	08 29 07.4	-2.4
PB02	IPOC Station P	3.64	289	*e*P		Pn	08 28 22.5	+0.4
PB02				*e*S		S	08 29 08.2	-1.6
PB02				IAML			08 29 11.2	
	comp=Z,777nm,0.2s							
PB04	IPOC Station P	3.66	272			Pn	08 28 22.3	-0.1
PB04	IPOC Station P	3.66	272	↑*i*P		Pn	08 28 22.7	+0.4
PB04				*e*S		S	08 29 08.4	-2.0
PB04	IPOC Station P	3.66	272	*e*P		Pn	08 28 23.0	+0.7
PB04				IAML			08 29 12.6	
	comp=Z,276nm,0.2s							
GO01	Chusmiza	3.99	315			Pn	08 28 26.9	+0.4
GO01	Chusmiza	3.99	315	↑*i*P		Pn	08 28 27.2	+0.8
GO01				*e*S		S	08 29 16.2	-1.6
GO02	Mina Guanaco	4.06	229	Pn		Pn	08 28 27.2	+0.2
GO02	Mina Guanaco	4.06	229	↑*i*P		Pn	08 28 27.6	+0.6
GO02				*e*S		S	08 29 18.3	-0.6
TA02	Huaiquique	4.30	301	*e*P		Pn	08 28 29.1	-0.5
TA02				*e*S		S	08 29 20.8	-2.7
PB14	IPOC Station P	4.39	241	Pn		Pn	08 28 30.6	-0.3
PB14	IPOC Station P	4.39	241	↑*e*P		Pn	08 28 30.9	0.0
PB14				*e*S		S	08 29 23.0	-2.8
AC02	Maricunga	5.05	211	Pn		Pn	08 28 38.7	-0.3
AC01	Pan de Azucar	5.39	227	Pn		Pn	08 28 41.6	-1.1
AC01	Pan de Azucar	5.39	227	*e*P		Pn	08 28 41.8	-0.9
AC01				*e*S		S	08 29 43.3	-4.0
PB18	Visviri	5.80	327			Pn	08 28 49.5	+1.2
GO03	Copiap	6.23	215			Pn	08 28 51.5	-1.6
LPAZ	La Paz	6.47	343	P		Pn	08 28 56.6	-0.1
	comp=Z,4.1nm,0.3s,baz=128,slow=7.0,SNR=48							
LPAZ				S		S	08 30 09.3	-3.3
	comp=Z,5.5nm,0.6s,baz=262,slow=24,SNR=6.6							
LPAZ	La Paz	6.47	343	*e*P		Pn	08 28 56.8	+0.1
SIV	San Ignacio	8.11	38	P		Pn	08 29 15.1	-1.6
	comp=Z,9.4nm,0.8s,baz=225,slow=7.7,SNR=47							
CPUP	Villa Florida	8.93	117	P		Pn	08 29 27.0	+0.2
	comp=Z,1.1nm,0.8s,baz=270,slow=11,SNR=1.8							
CPUP	Villa Florida	8.93	117	*e*P		Pn	08 29 26.8	0.0
ANTJ	Antonio Joao (	9.46	89	*e*P		Pn	08 29 32.3	-1.3
PTLB	Pontes e Lacer	9.71	45	Pn		Pn	08 29 35.3	-1.4
PTLB	Pontes e Lacer	9.71	45	*e*P		Pn	08 29 35.6	-1.2
AQDB	Aquidauana	9.99	80	Pn		Pn	08 29 39.7	-0.6
AQDB	Aquidauana	9.99	80	*e*P		Pn	08 29 40.3	0.0
VILB	Vilhena	11.10	32	*e*P		Pn	08 29 55.1	+0.8
ITQB	Itaqui	11.16	132	*e*P		Pn	08 29 54.7	-0.2
MCR1	Marechal Candi	11.33	102	*e*P		Pn	08 29 56.6	-0.4
MT02	Curacav	11.54	201	Pn		Pn	08 29 59.6	0.0
SALV	Santo Antonio	11.91	58			Pn	08 30 03.3	-1.0
UNIS	Unistalda (Bra	11.95	125	*e*P		Pn	08 30 04.6	-0.1
CRSM	Crissiumal (Br	12.08	117	*e*P		Pn	08 30 05.9	-0.4
FRBT	Francisco Belt	12.47	109	*e*P		Pn	08 30 10.8	-0.3
RODS	Rosario do Sul	12.56	131	*e*P		Pn	08 30 11.8	-0.3
ETMB	Extrema	12.64	360	Pn		Pn	08 30 12.5	-0.8
ETMB	Extrema	12.64	360	*e*P		Pn	08 30 12.0	-1.3
C2SB	Chapadao do Su	13.05	76	*e*P		Pn	08 30 18.9	+0.6
PTGB	Pitanga

GUA01	**Guaratinga, BA**	**25.54**	**81**	*eP*		**P**	08 32 27.0	-0.5
GDU01	**Guandu, BA**	**26.74**	**75**	*eP*		**P**	08 32 36.9	-1.4
NBLA	**Lagarto - SE**	**29.46**	**72**	*eP*		**P**	08 33 00.7	-1.6
MDP	**Montagnes des**	**30.50**	**27**	P		**P**	08 33 09.7	-1.6
	comp=Z,3.5nm,0.7s,baz=202,slow=11,SNR=4.9							
	comp=Z,3.5nm,0.7s							
NBAN	**Anadia - AL**	**31.39**	**71**	*eP*		**P**	08 33 18.1	-1.2
BIRV	**Birongo**	**32.80**	**360**	P		**P**	08 33 31.4	0.0
BIRV				IAmb	IAmb		08 33 43.0	
	comp=Z,12nm,1.1s							
RCBR	**Riachuelo**	**33.63**	**65**	*eP*		**P**	08 33 38.6	-0.1
SRBA	**San Rafael, Bu**	**35.77**	**330**	P		**P**	08 34 00.0	+3.1
SRBA				IAmb	IAmb		08 34 27.1	
	comp=Z,9.9nm,1.3s							
RIMA	**Rio Macho**	**36.47**	**330**	P		**P**	08 34 06.1	+3.1
FDF	**Fort de France**	**37.36**	**8**	P		**P**	08 34 10.1	-0.2
ORTG	**Ortega, Santa**	**37.75**	**328**	P		**P**	08 34 16.4	+2.8
ORTG				IAmb	IAmb		08 34 18.0	
	comp=Z,13nm,1.1s							
ESPN	**Las Esperanzas**	**38.80**	**331**	P		**P**	08 34 25.1	+3.0
ESPN				IAmb	IAmb		08 34 26.2	
	comp=Z,12nm,0.8s							
MLPR	**Magueyes Islan**	**40.26**	**359**	P		**P**	08 34 33.3	-0.7
TEIG	**Tepich**	**47.65**	**331**	P		**P**	08 35 33.2	+0.6
TEIG				IAmb	IAmb		08 35 34.0	
	comp=Z,29nm,1.3s							
FPAL	**Fort Paine**	**59.68**	**341**	P		**P**	08 36 59.5	+0.1
FPAL				IAmb	IAmb		08 36 60.0	
	comp=Z,4.3nm,0.7s							
V55A	**Taylorsville**	**59.78**	**346**	P		**P**	08 37 00.7	+0.7
V55A				IAmb	IAmb		08 37 01.8	
	comp=Z,7.1nm,0.7s							
X48A	**Hartselle**	**60.03**	**340**	P		**P**	08 37 01.8	0.0
W50A	**Signal Mountai**	**60.21**	**342**	P		**P**	08 37 03.1	+0.1
W50A				IAmb	IAmb		08 37 03.8	
	comp=Z,4.5nm,0.6s							
WVT	**Waverly**	**61.82**	**340**	P		**P**	08 37 13.3	-0.4
MIAR	**Mount Ida**	**62.44**	**335**	P		**P**	08 37 18.6	+0.7
TX32	**Lajitas Array**	**62.93**	**323**	P		**P**	08 37 22.4	+1.1
TXAR	**Lajitas Array**	**62.93**	**323**	P		**P**	08 37 22.1	+0.8
	comp=Z,0.3nm,0.6s,baz=148,slow=7.4,SNR=9.3							
	comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**62.93**	**323**	P		**P**	08 37 21.9	+0.7
P52A	**Corning**	**63.60**	**346**	P		**P**	08 37 25.6	+0.2
P52A				IAmb	IAmb		08 37 27.2	
	comp=Z,12nm,1.5s							
R40A	**Maddies Statio**	**65.26**	**338**	P		**P**	08 37 36.1	0.0
R40A				IAmb	IAmb		08 37 37.1	
	comp=Z,4.1nm,0.7s							
SDCO	**Great Sand Dun**	**70.43**	**328**	P		**P**	08 38 10.5	+1.9
ECSD	**EROS Data Cent**	**71.61**	**337**	P		**P**	08 38 15.3	+0.2
SRU	**San Rafael Swe**	**74.02**	**326**	P		**P**	08 38 31.5	+1.8
TORD	**Torodi Ar. Bea**	**75.36**	**69**	P		**P**	08 38 36.7	-0.9
	comp=Z,2.0nm,0.5s,baz=256,slow=6.0,SNR=33							
	comp=Z,2.0nm,0.5s							
PDAR	**Pinedale Array**	**76.27**	**329**	P		**P**	08 38 43.6	+1.2
	comp=Z,0.5nm,0.6s,baz=124,slow=7.9,SNR=8.0							
	comp=Z,0.5nm,0.6s							
NVAR	**Mina Array Bea**	**77.86**	**321**	P		**P**	08 38 53.0	+1.7
	comp=Z,0.4nm,0.7s,baz=138,slow=5.6,SNR=5.7							
	comp=Z,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**93.00**	**340**	P		**P**	08 40 06.2	+0.7
	comp=Z,0.9nm,0.5s,baz=128,slow=4.6,SNR=8.3							
	comp=Z,0.9nm,0.5s							
ASAR	**Alice Springs**	**130.09**	**204**	PKP		**PKPdf**	08 46 02.2	+0.3
	comp=Z,0.4nm,0.6s,baz=123,slow=2.0,SNR=1.8							
WRA	**Warramunga Arr**	**133.26**	**207**	PKP		**PKiKP**	08 46 08.9	-0.2
	comp=Z,0.3nm,0.3s,baz=156,slow=1.7,SNR=9.0							
MKAR	**Makanchi Array**	**144.92**	**39**	PKP		**PKPab**	08 46 28.9	+0.7
	comp=Z,1.0nm,0.6s,baz=313,slow=4.5,SNR=7.2							

HVO ***12*** *08:28:04.3±1.0, 19°.38N±0°.01×155°.28W±0°.01, h2km±2km, ML2.5/20, ML1.5/30(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=149.0*

NEIC 12 08:28:05.0±1.1, 19°.362N±0°.010×155°.299W±0°.007, h1km±6km, Error ellipse: s-maj=1.5km s-min=0.9km az=197.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDHHI	**Sand Hill**	**0.03**	**10**	Pg	Pg	08 28 05.2	-0.5
SDHHI	**Sand Hill**	**0.03**	**10**		Sg	08 28 05.8	-0.3
RIM	**Rim**	**0.04**	**35**		Sg	08 28 05.9	-0.6
RIM	**Rim**	**0.04**	**35**	Pg	Pg	08 28 05.2	-0.7
WRMHI	**West Rim**	**0.04**	**359**	IAML		08 28 05.4	
	comp=N,607nm,0.8s						
WRMHI				Pg	Pg	08 28 05.5	-0.4
WRMHI	**West Rim**	**0.04**	**359**		Sg	08 28 06.6	0.0
KKO	**Keanakako`i**	**0.05**	**41**	Pg	Sg	08 28 05.4	-0.6
KKO	**Keanakako`i**	**0.05**	**41**		Sg	08 28 06.2	-0.4
NPH	**North Pit**	**0.05**	**19**		Sg	08 28 06.2	-0.6
NPH	**North Pit**	**0.05**	**19**	Pg	Pg	08 28 05.4	-0.7
NPH				IAML		08 28 05.8	
	comp=N,587nm,0.2s						
NPH				IAML		08 28 05.8	
	comp=E,474nm,0.4s						
OBL	**Observatory Le**	**0.06**	**15**	IAML		08 28 05.2	
	comp=E,766nm,0.7s						
OBL				IAML		08 28 05.3	
	comp=N,776nm,0.7s						
OBL				Pg	Pg	08 28 05.7	-0.5
OBL	**Observatory Le**	**0.06**	**15**		Sg	08 28 06.9	-0.1
UWE	**Uwekahuna**	**0.06**	**6**	IAML		08 28 05.2	
	comp=E,670nm,2.0s						
UWE				Pg	Pg	08 28 05.8	-0.5
UWE				IAML		08 28 06.1	
	comp=N,432nm,0.4s						
UWE	**Uwekahuna**	**0.06**	**6**		Sg	08 28 07.2	+0.1
BYL	**Byron's Ledge**	**0.06**	**37**		Sg	08 28 06.9	-0.2
BYL	**Byron's Ledge**	**0.06**	**37**	Pg	Pg	08 28 05.7	-0.6
BYL				IAML		08 28 06.1	
	comp=N,393nm,0.8s						
BYL				IAML		08 28 06.2	
	comp=E,1μm,0.2s						
UWB	**Uwekahuna B**	**0.07**	**18**	Pg	Pg	08 28 05.9	-0.5
UWB	**Uwekahuna B**	**0.07**	**18**		Sg	08 28 07.1	-0.2
HATHI	**Halema'uma'u T**	**0.07**	**31**		Pg	08 28 06.0	-0.5
HATHI	**Halema'uma'u T**	**0.07**	**31**	IAML		08 28 06.5	
	comp=E,662nm,0.6s						
HATHI				IAML		08 28 06.8	
	comp=N,680nm,0.2s						
SBLHI	**Steaming Bluff**	**0.07**	**24**		Sg	08 28 07.4	-0.1
SBLHI	**Steaming Bluff**	**0.07**	**24**	Pg	Pg	08 28 05.9	-0.6
SBLHI				IAML		08 28 05.9	
	comp=N,494nm,1.1s						
SBLHI				IAML		08 28 06.8	
	comp=E,316nm,0.2s						
PUH	**Pauahi**	**0.08**	**81**		Sg	08 28 08.0	+0.3
PUH	**Pauahi**	**0.08**	**81**	Pg	Pg	08 28 06.4	-0.2
PUH				IAML		08 28 06.8	
	comp=N,660nm,0.2s						
PUH				IAML		08 28 07.7	
	comp=E,740nm,0.2s						
RSD	**Rainshed**	**0.10**	**11**		Sg	08 28 08.4	-0.1
KNHH	**Kane Nui o Ham**	**0.12**	**82**		Pg	08 28 07.2	-0.2
AIN	**Ainahou**	**0.15**	**274**	Pg	Pg	08 28 08.4	+0.5
AIN				IAML		08 28 12.2	
	comp=E,246nm,0.5s						
HTC	**Hot Caves**	**0.15**	**217**		Pg	08 28 08.7	+0.7
MLH	**Mauna Loa**	**0.15**	**328**		Pg	08 28 08.2	+0.2
MLH					Sg	08 28 11.6	+1.4
MLH	**Mauna Loa**	**0.15**	**328**	IAML		08 28 11.8	
	comp=N,382nm,0.3s						
MLH				IAML		08 28 12.2	
	comp=E,379nm,0.9s						
STCH	**Steam Cracks**	**0.17**	**82**		Pg	08 28 08.0	-0.3
JOKA	**Jonika Flow**	**0.29**	**76**		Pg	08 28 10.7	+0.1
HMH	**Humu'ula Sheep**	**0.30**	**324**		Pg	08 28 10.6	-0.1
HMH	**Humu'ula Sheep**	**0.30**	**324**	IAML		08 28 16.3	
	comp=E,146nm,3.0s						
HMH				IAML		08 28 17.2	
	comp=N,114nm,2.4s						
MWH	**Moku'aweowe**	**0.31**	**294**		Pg	08 28 11.1	+0.1
MWH	**Moku'aweowe**	**0.31**	**294**	IAML		08 28 18.5	
	comp=E,415nm,1.2s						
MWH				IAML		08 28 18.6	
	comp=N,270nm,0.4s						
KHU	**Kahuku**	**0.32**	**249**		Pg	08 28 11.2	+0.1
KHU	**Kahuku**	**0.32**	**249**	IAML		08 28 14.1	
	comp=N,207nm,3.7s						
KHU				IAML		08 28 19.4	
	comp=E,257nm,3.5s						
ALEP	**Alea Permanent**	**0.37**	**299**		Pg	08 28 11.8	-0.3
ALEP					Sg	08 28 17.8	+0.8
KHLU	**Kahalu`u**	**0.60**	**292**		Pg	08 28 15.8	-0.8

NEIC ***12*** *08:30:07.8±2.4, 6°.54S±0°.06×104°.92E±0°.06, h56km±6km, mb5.2/90, Error ellipse: s-maj=9.1km s-min=8.2km az=81.0*

MOS ***12*** *08:30:08.9±1.2, 6°.11S×105°.12E, h73km, mb5.4/50, Error ellipse: s-maj=8.7km s-min=4.3km az=118.2*

DJA ***12*** *08:30:08.4±0.2, 7°S±2°×10°5E±°, h55km±2km, M5.0/73, mb5.2/73, mB5.5/31, MLv5.3/30, Mw(mB)5.0/31*

IDC ***12*** *08:30:10.1±1.4, 6°.21S×105°.05E, h71km±11km, mb4.8/37, mbtmp5.1/41, MS4.0/32, Error ellipse: s-maj=11.6km s-min=6.7km az=37.0*

ISC 12 08:30:09.1±0.4, 6°.37S±0°.04×104°.94E±0°.04, h68km±2km, h68km:pP-P, n866, σ1§16/916, mb5.1/143, 61C-15D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.95**	**332**	P	**Pn**	08 30 27.2	+0.4
KASI				S	**Sn**	08 30 41.3	+1.3
BLSI	**Bandar Lampung**	**1.04**	**17**	P	**Pn**	08 30 28.8	+0.8
BLSI				S	**Sn**	08 30 44.0	+2.0
SBJI	**Serang**	**1.21**	**78**	P	**Pn**	08 30 29.5	-0.6
KLI	**Kotabumi**	**1.50**	**357**	P	**Pn**	08 30 35.8	+1.8
LWLI	**Liwa**	**1.60**	**327**	P	**Pn**	08 30 36.8	+1.3
TNG	**Tangerang**	**1.71**	**83**	P	**Pn**	08 30 36.5	-0.2
TNG				P	**Pn**	08 30 40.3	+3.6
SKJI	**Sukabumi**	**1.73**	**112**	P	**Pn**	08 30 34.9	-2.1
DBJI	**Dramaga**	**1.81**	**96**	P	**Pn**	08 30 37.7	-0.4
CBJI	**Citeko**	**1.90**	**92**	P	**Pn**	08 30 40.8	+1.5
CNJI	**Cibinong**	**2.37**	**113**	P	**Pn**	08 30 43.4	-2.2
LEM	**Lembang**	**2.70**	**100**	P	**Pn**	08 30 51.6	+1.3
	3μm,0.8s,baz=199,slow=9.9,SNR=135						
LEM				S	**Sn**	08 31 23.6	+1.7
	4μm,0.8s,baz=198,slow=19,SNR=3.6						
LEM				LR	LR	08 32 08.3	
	comp=Z,5μm,18.4s,baz=306,slow=45						
LEM	**Lembang**	**2.70**	**100**	P	**Pn**	08 30 51.0	+0.7
MNAI	**Manna**	**2.81**	**315**	Pn	**Pn**	08 30 53.2	+1.5
MNAI	**Manna**	**2.81**	**315**	P	**Pn**	08 30 53.0	+1.3
MNAI	**Manna**	**2.81**	**315**	P	**Pn**	08 30 53.0	+1.3
JCJI	**Jatiwangi**	**3.31**	**92**	P	**Pn**	08 30 57.7	-0.8
PMBI	**Palembang**	**3.42**	**357**		**Pn**	08 31 03.6	+3.5
PMBI	**Palembang**	**3.42**	**357**	P	**Pn**	08 31 03.8	+3.7
PMBI	**Palembang**	**3.42**	**357**	P	**Pn**	08 31 04.3	+4.2
KSI	**Kapahiang**	**3.57**	**319**	P	**Pn**	08 31 03.7	+1.6
XMIS	**Christmas Isla**	**4.14**	**170**	Pn	Pn	08 31 04.4	-5.6
PPBI	**Pangkal Pinang**	**4.35**	**16**	P	**Pn**	08 31 15.3	+2.6
TPI	**Tanjungpandan**	**4.49**	**37**	P	**Pn**	08 31 16.1	+1.4
JMBI	**JAMBI**	**4.88**	**345**	P	**Pn**	08 31 22.4	+2.4
	1.3nm234nm,1.0s						
KRJI	**Kerinci**	**5.49**	**321**	P	**Pn**	08 31 30.1	+1.7
YOGI	**Yogyakarta**	**5.50**	**105**	P	**Pn**	08 31 29.1	+0.6
	2.5nm563nm,0.7s						
UGM	**Wanagama**	**5.75**	**106**	Pn	**Pn**	08 31 32.1	+0.2
UGM	**Wanagama**	**5.75**	**106**	P	**Pn**	08 31 32.4	+0.5
	3.4nm820nm,0.8s						
DSRI	**Dabo**	**5.86**	**356**	P	**Pn**	08 31 36.4	+3.0
	0.7nm3μm133nm,0.5s						
PCJI	**Pacitan**	**6.45**	**107**	P	**Pn**	08 31 42.1	+0.7
	2.2nm304nm,0.9s						
NGJI	**Ngawi**	**6.55**	**99**	P	**Pn**	08 31 44.4	+1.6
	1.3nm475nm,0.9s						
TBJI	**Tambak Boyo**	**6.88**	**94**	P	**Pn**	08 31 48.6	+1.3
	0.7nm212nm,0.8s						
PWJI	**Pagerwojo**	**7.00**	**104**	P	**Pn**	08 31 50.3	+1.2
	1.8nm310nm,0.7s						
TPRI	**Tanjung Pinang**	**7.25**	**357**	P	**Pn**	08 31 55.9	+3.5
	2.5nm148nm,0.6s						
PPI	**Padang Panjang**	**7.42**	**322**	P	**Pn**	08 31 57.3	+2.6
PBKI	**Pangkalan Bun**	**7.63**	**62**	P	**Pn**	08 31 57.6	0.0
	1.6nm422nm,0.7s						
BWJI	**Bawean**	**7.69**	**87**	P	**Pn**	08 32 00.4	+1.9
	1.3nm8μm303nm,1.0s						
SISI	**Saibi**	**7.69**	**310**	P	**Pn**	08 31 57.4	-1.1
	0.5nm68nm,0.7s						
BKNI	**Bangkinang**	**7.71**	**330**	Pn	**Pn**	08 32 00.6	+1.9
BKNI	**Bangkinang**	**7.71**	**330**	P	**Pn**	08 32 01.0	+2.3
	0.7nm128nm,1.0s						
MYKOM	**Kota Tinggi**	**8.18**	**352**		**Pn**	08 32 08.1	+3.0
GMJI	**Gumukmas**	**8.64**	**103**	P	**Pn**	08 32 12.8	+1.3
	202nm,0.9s						
BLJI	**Banyuglugur**	**8.70**	**100**	P	**Pn**	08 32 13.4	+1.2
	3μm218nm,0.5s						
MNSI	**Mandailing Nat**	**8.90**	**323**	P	**Pn**	08 32 16.5	+1.4
	45nm,0.6s						
KMMI	**Kalianget**	**8.99**	**95**	P	**Pn**	08 32 14.9	-1.3
	152nm,0.8s						
STKI	**Sintang**	**9.13**	**46**	P	**Pn**	08 32 20.7	+2.5
	121nm,0.7s						
ABJI	**Asem Bagus**	**9.33**	**99**	P	**Pn**	08 32 23.7	+2.8
	18μm2μm,0.8s						
JAGI	**Jajag, Banyuwa**	**9.37**	**103**	Pn	**Pn**	08 32 20.3	-1.1
JAGI	**Jajag, Banyuwa**	**9.37**	**103**	P	**Pn**	08 32 20.8	-0.6
	6μm784nm,1.0s						
JAGI	**Jajag, Banyuwa**	**9.37**	**103**	P	**Pn**	08 32 21.7	+0.3
KSM	**Kuching**	**9.46**	**35**	Pn	**Pn**	08 32 23.3	+0.7
KSM	**Kuching**	**9.46**	**35**	P	**Pn**	08 32 25.4	+2.8
COCO	**West Island**	**9.87**	**234**		**Pn**	08 32 25.5	-2.7
COCO	**West Island**	**9.87**	**234**	P	**Pn**	08 32 25.5	-2.7
BBKI	**Banjar Baru**	**10.28**	**74**	P	**Pn**	08 32 35.7	+1.9
SRBI	**Singaraja**	**10.33**	**100**	P	**Pn**	08 32 34.6	0.0
	4μm532nm,0.8s						
IGBI	**Denpasar**	**10.40**	**104**	P	**Pn**	08 32 34.0	-1.5
	4μm179nm,0.6s						
GSI	**Gunungsitoli**	**10.59**	**316**	Pn	**Pn**	08 32 37.9	-0.2
GSI	**Gunungsitoli**	**10.59**	**316**	P	**Pn**	08 32 37.5	-0.6
	98nm,0.8s						
GSI	**Gunungsitoli**	**10.59**	**316**	P	**Pn**	08 32 39.1	+1.0
PSI	**Prapat**	**10.91**	**326**	P	**Pn**	08 32 43.2	+0.7
	3.3nm,0.3s,baz=144,slow=8.7,SNR=2.3						
MTKI	**Muara Teweh, K**	**11.30**	**62**	P	**Pn**	08 32 50.3	+2.5
	54nm,0.5s						
SBUM	**Sibu**	**11.38**	**40**	Pn	**Pn**	08 32 51.5	+2.6
IPM	**Ipoh**	**11.46**	**340**		**Pn**	08 32 50.5	+0.5
IPM	**Ipoh**	**11.46**	**340**	P	**Pn**	08 32 52.0	+2.0
TWSI	**Taliwang, Sumb**	**12.07**	**102**	P	**Pn**	08 32 55.5	-2.8
	888nm49nm,0.5s						
PLAI	**Plampang**	**12.96**	**102**	P	**Pn**	08 33 06.7	-3.7
	2μm181nm,0.8s						
PLAI	**Plampang**	**12.96**	**102**	P	**Pn**	08 33 08.7	-1.7
WBSI	**Waikabubak, Su**	**14.67**	**104**	P	Pn	08 33 27.9	-5.3
	150nm,0.6s						
KAPI	**Kappang**	**14.80**	**86**	P	**Pn**	08 33 35.4	+0.7
	29nm,0.8s,baz=280,slow=6.5,SNR=13						
KAPI				LR	LR	08 39 53.6	
	comp=Z,931nm,19.6s,baz=251,slow=40						
KAPI	**Kappang**	**14.80**	**86**		**Pn**	08 33 33.9	-0.9
KAPI	**Kappang**	**14.80**	**86**	*i* P	**Pn**	08 33 34.0	-0.8
KAPI	**Kappang**	**14.80**	**86**	P	**P**	08 33 37.1	-1.9
SPSI	**Sidrap Palu**	**14.96**	**82**	P	**Pn**	08 33 37.7	+0.9
	33nm,0.9s						
BKSI	**Bulukumba**	**15.14**	**87**	P	**Pn**	08 33 40.8	+1.7
	2μm289nm,1.0s						
TTSI	**Tana Toraja**	**15.19**	**78**	P	**P**	08 33 43.0	-0.4
	66nm,1.1s						
BSSI	**Bau Bau, Buton**	**15.46**	**90**	P	**Pn**	08 33 43.6	+0.4
	79nm,0.9s						
BASI	**Baing, Sumba**	**15.94**	**105**	P	**Pn**	08 33 47.3	-2.0
	3μm262nm,0.7s						
MPSI	**Mapaga**	**16.35**	**66**	P	**P**	08 33 56.8	+0.6
	92nm,0.8s						
KKM	**Kota Kinabalu**	**16.69**	**43**	P	**P**	08 33 59.8	-0.3
KKM	**Kota Kinabalu**	**16.69**	**43**	P	**P**	08 34 01.0	+0.8
EDFI	**Ende, Flores**	**16.77**	**99**	P	**Pn**	08 33 53.5	-6.4
	850nm77nm,0.6s						
MMRI	**Maumere**	**17.30**	**99**		**Pn**	08 34 04.5	-1.8
MMRI	**Maumere**	**17.30**	**99**	P	**P**	08 34 06.6	-0.1
	6μm592nm,0.8s						
MMRI	**Maumere**	**17.30**	**99**	P	**P**	08 34 06.8	+0.1
TOLI2	**Tolitoli**	**17.47**	**65**		**P**	08 34 09.3	+0.6
TOLI2	**Tolitoli**	**17.47**	**65**	P	**P**	08 34 10.9	+2.2
APSI	**Ampana**	**17.53**	**73**	P	**P**	08 34 11.8	+2.5
	1μm121nm,0.9s						
BBSI	**Bau Bau**	**17.56**	**88**	P	**P**	08 34 12.1	+2.5
	20nm,1.0s						
MYLDM	**Lahad Datu**	**17.74**	**50**		**Pn**	08 34 13.8	+2.1
MRSI	**Marisa**	**18.28**	**69**	P	**Pn**	08 34 19.2	+1.0
	1μm167nm,0.8s						
GIRL	**Giralia**	**18.50**	**152**	P	**P**	08 34 17.5	-2.4
	baz=18,SNR=20						
LUWI	**Luwuk**	**18.56**	**74**	P	**P**	08 34 20.3	-0.4
LUWI				IAmb	IAmb	08 34 22.9	
	comp=Z,166nm,1.0s						
LUWI	**Luwuk**	**18.56**	**74**	P	**Pn**	08 34 22.8	+1.2
	comp=Z,5μmcomp=Z,229nm,1.0s						
LUWI	**Luwuk**	**18.56**	**74**	P	**Pn**	08 34 22.3	+0.7
BATI	**Baumata**	**18.91**	**103**	P	**P**	08 34 24.1	-0.5
	comp=Z,350nm,0.5s,baz=295,slow=3.3,SNR=18						
BATI				S	**S**	08 37 54.9	-1.2
	comp=Z,110nm,0.5s,baz=351,slow=22,SNR=8.4						
BATI	**Baumata**	**18.91**	**103**	P	**Pn**	08 34 25.6	-0.3
	comp=Z,4μmcomp=Z,301nm,0.8s						
GTOI	**Gorontalo**	**19.33**	**70**	P	**Pn**	08 34 30.8	0.0
	comp=Z,490nmcomp=Z,48nm,0.7s						
SOEI	**Soe**	**19.43**	**101**	P	**P**	08 34 28.9	-1.3
SOEI	**Soe**	**19.43**	**101**	P	**P**	08 34 30.1	-0.2
	comp=Z,6μmcomp=Z,804nm,0.9s						
SOEI	**Soe**	**19.43**	**101**	P	**P**	08 34 30.2	-0.1
MBWA	**Marble Bar**	**20.53**	**137**		**P**	08 34 41.0	-1.0
MBWA				IAmb	IAmb	08 34 45.9	
	comp=Z,43nm,0.7s						
MBWA	**Marble Bar**	**20.53**	**137**	P	**P**	08 34 42.0	0.0
PSA00	**Pilbara Seismi**	**20.89**	**138**		**P**	08 34 44.8	-1.2
PSA00				IAmb	IAmb	08 34 49.3	
	comp=Z,61nm,0.8s						
PSA00	**Pilbara Seismi**	**20.89**	**138**	P	**P**	08 34 44.6	-1.3
PSA00				IAmb	IAmb	08 34 49.4	
	comp=Z,38nm,0.9s						
PSA00	**Pilbara Seismi**	**20.89**	**138**	P	**P**	08 34 46.3	+0.4
SANI	**Sanana**	**21.42**	**79**	P	**P**	08 34 53.1	+1.4
	comp=Z,804nmcomp=Z,50nm,1.3s						
SANI	**Sanana**	**21.42**	**79**	P	**P**	08 34 52.4	+0.7
LBMI	**Labuha**	**23.22**	**77**	P	**P**	08 35 11.5	+0.9
	comp=Z,107nm,1.0s						
FITZ	**Fitzroy Crossi**	**23.31**	**122**	P	**P**	08 35 10.7	-0.8
	comp=Z,40nm,0.8s,baz=296,slow=5.4,SNR=65						
FITZ				S	**S**	08 39 21.2	+2.2
	comp=Z,1.7nm,0.5s,baz=131,slow=19,SNR=1.4						
	comp=Z,40nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.31**	**122**	P	**P**	08 35 10.5	-0.9
	baz=23,SNR=47						
FITZ	**Fitzroy Crossi**	**23.31**	**122**	P	**P**	08 35 09.9	-1.6
FITZ				IAmb	IAmb	08 35 13.0	
	comp=Z,40nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.31**	**122**	P	**P**	08 35 11.5	0.0
TNTI	**Ternate**	**23.48**	**73**	P	**P**	08 35 12.5	-0.6
TNTI				IAmb	IAmb	08 35 15.9	
	comp=Z,345nm,1.7s						
TNTI	**Ternate**	**23.48**	**73**	P	**P**	08 35 15.7	+2.6
	comp=Z,109nm,1.5s						
TNTI	**Ternate**	**23.48**	**73**	P	**P**	08 35 14.8	+1.7
MEEK	**Meekatharra**	**24.00**	**149**	P	**P**	08 35 17.2	-0.4
	baz=24,SNR=7.0						
MORW	**Morawa**	**24.89**	**156**	P	**P**	08 35 26.0	+0.3
	baz=25,SNR=6.1						
MORW	**Morawa**	**24.89**	**156**	P	**P**	08 35 24.5	-1.3
MORW	**Morawa**	**24.89**	**156**	P	**P**	08 35 25.9	+0.2
KNRA	**Kununurra**	**25.12**	**114**	P	**P**	08 35 27.0	-0.9
	baz=25,SNR=71						
KNRA	**Kununurra**	**25.12**	**114**	P	**P**	08 35 26.1	-1.8
KNRA	**Kununurra**	**25.12**	**114**	P	**P**	08 35 27.6	-0.3
CM31	**Chiang Mai Arr**	**25.37**	**347**	P	**P**	08 35 29.5	-0.7
CMAR	**Chiang Mai Arr**	**25.37**	**347**	P	**P**	08 35 28.2	-1.9
	comp=Z,15nm,0.8s,baz=183,slow=8.6,SNR=30						
CMAR				PcP	**PcP**	08 39 01.6	+0.3
	comp=Z,1.9nm,0.6s,baz=206,slow=3.4,SNR=5.0						
CMAR				LR	LR	08 44 40.4	
	comp=Z,200nm,21.6s,baz=180,slow=34						
	comp=Z,15nm,0.8s						
CMAR	**Chiang Mai Arr**	**25.37**	**347**	P	**P**	08 35 28.6	-1.5
CMAR	**Chiang Mai Arr**	**25.37**	**347**	*ceP*	**P**	08 35 28.7	-1.5
CMAR				pmax	pmax		
	comp=Z,16nm,0.8s						
CHTO	**Chiang Mai**	**25.71**	**347**	P	**P**	08 35 31.9	-1.3
CHTO	**Chiang Mai**	**25.71**	**347**	P	**P**	08 35 31.9	-1.3
CHTO				pmax	pmax		
	comp=Z,21nm,0.9s						
MTN	**Manton Dam**

QIS **Mount Isa** 36.44 116 P **P** 08 37 07.3 -0.3
baz=36,SNR=40
QIS **Mount Isa** 36.44 116 P **P** 08 37 07.4 -0.3
ENH **Enshi** 36.69 7 P **P** 08 37 09.0 -0.6
ENH IAmb IAmb 08 37 12.4
comp=Z,15nm,0.6s
CD2 **Chengdu** 37.09 358 *e*P P 08 37 22.4 +9.4
ODAN **Odare** 37.15 334 *e*P **P** 08 37 13.2 -0.6
comp=Z,39nm,0.5s
TAPN **Taplejung** 37.44 334 *e*P **P** 08 37 16.0 -0.3
RAMN **Ramite** 37.59 333 *e*P **P** 08 37 17.2 -0.3
comp=Z,54nm,0.3s
LSA **Lhasa** 38.23 340 P **P** 08 37 22.6 -0.6
LSA **Lhasa** 38.23 340 P **P** 08 37 22.6 -0.6
LSA pmax pmax
comp=Z,46nm,0.4s
LSA **Lhasa** 38.23 340 *i* P **P** 08 37 22.9 -0.3
SNR=13
COEN **Coen** 38.34 104 P **P** 08 37 23.0 -0.8
baz=38,SNR=20
COEN **Coen** 38.34 104 P **P** 08 37 23.5 -0.3
JIRN **Jiri** 38.38 333 *e*P **P** 08 37 23.9 -0.4
comp=Z,96nm,0.4s
PKI **Pulchoki** 38.67 332 *e*P **P** 08 37 25.7 -1.0
comp=Z,45nm,0.5s
PKIN **Phulchoki** 38.68 332 *e*P **P** 08 37 25.7 -1.0
comp=Z,53nm,0.4s
GUN **Gumba** 38.74 332 *e*P **P** 08 37 26.9 -0.4
comp=Z,202nm,0.5s
DMN **Daman** 38.84 331 *e*P **P** 08 37 27.1 -1.0
comp=Z,14nm,0.3s
KKN **Kakani** 38.91 332 *e*P **P** 08 37 28.6 0.0
BBOO **Buckleboo** 39.11 136 P **P** 08 37 29.7 -0.3
baz=39,SNR=13
LCRK **Leigh Creek** 39.36 132 P **P** 08 37 33.1 +1.0
GKN **Gorkha** 39.40 331 *e*P **P** 08 37 32.0 -0.6
comp=Z,98nm,0.3s
INKA **Innaminka** 40.05 126 P **P** 08 37 39.2 +1.3
DANN **Dangsing** 40.11 330 *e*P **P** 08 37 38.1 -0.6
comp=Z,182nm,0.5s
MTSU **Mount Surprise** 40.12 111 P **P** 08 37 39.0 +0.3
baz=40,SNR=45
MTSU **Mount Surprise** 40.12 111 P **P** 08 37 39.2 +0.5
WHYH **Whyalla** 40.28 136 P **P** 08 37 40.4 +0.7
XAN **Xi'an** 40.37 5 P **P** 08 37 40.0 -0.4
XAN pP pP 08 37 55.4 -1.5
XAN pmax pmax
comp=Z,18nm,0.8s
XAN pmax pmax
comp=Z,120nm,4.8s
XAN LR LR
comp=Z,190nm,14.4s
XAN LR LR
comp=Z,140nm,15.1s
XAN LR LR
comp=Z,190nm,14.3s
XAN **Xi'an** 40.37 5 P **P** 08 37 40.9 +0.5
NJ2 **Nanjing** 40.45 18 *e*P P 08 37 49.8 +8.8
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
HTT **Hallett** 41.44 135 P **P** 08 37 48.3 -1.1
baz=41,SNR=7.6
PMG **Port Moresby** 41.91 97 P **P** 08 37 53.0 -0.4
PMG **Port Moresby** 41.91 97 *ce*P **P** 08 37 52.5 -0.9
PMG pmax pmax
comp=Z,67nm,0.7s
PMG **Port Moresby** 41.91 97 P **P** 08 37 53.8 +0.4
PMG **Port Moresby** 41.91 97 P **P** 08 37 53.4 0.0
PMG **Port Moresby** 41.91 97 P **P** 08 37 53.1 -0.3
PMG x x 08 37 57.0
PMG pP **pP** 08 38 04.9 -5.2
LZH **Lanzhou** 42.24 359 *e*P **P** 08 37 57.6 +1.7
LZH pmax pmax
comp=Z,18nm,1.2s
CTA **Charters Tower** 42.33 113 P **P** 08 37 57.4 +0.7
CTAO **Charters Tower** 42.33 113 P **P** 08 37 56.5 -0.3
CTAO IAmb IAmb 08 37 58.0
comp=Z,26nm,0.8s
CTAO **Charters Tower** 42.33 113 P **P** 08 37 56.5 -0.3
CTAO pmax pmax
comp=Z,26nm,0.9s
CTAO **Charters Tower** 42.33 113 P **P** 08 37 57.6 +0.9
CTAO **Charters Tower** 42.33 113 P **P** 08 37 57.0 +0.3
CTAO x x 08 38 02.2
CTAO sP **pP** 08 38 16.3 +2.7
QLP **Quilpie** 42.45 123 P **P** 08 37 58.7 +1.1
baz=42,SNR=12
QLP **Quilpie** 42.45 123 P **P** 08 37 58.9 +1.3
STKA **Stephens Creek** 42.58 131 P **P** 08 37 59.2 +0.6
comp=Z,33nm,0.5s,baz=307,slow=8.1,SNR=133
STKA LR LR 08 56 05.1
comp=Z,182nm,21.7s,baz=279,slow=36
comp=Z,33nm,0.5s
STKA **Stephens Creek** 42.58 131 P **P** 08 37 59.3 +0.6
baz=42,SNR=101
STKA **Stephens Creek** 42.58 131 P **P** 08 37 58.6 0.0
STKA **Stephens Creek** 42.58 131 *i* P **P** 08 37 58.6 0.0
STKA **Stephens Creek** 42.58 131 P **P** 08 37 59.3 +0.6
GOMU **GeErMu** 43.40 348 P **P** 08 38 04.5 -1.0
GOMU pmax pmax
comp=Z,12nm,0.5s
GOMU pmax pmax
comp=Z,77nm,4.0s
GUMO **Guam** 44.33 63 LR LR 08 57 53.0
comp=Z,32nm,21.7s,baz=268,slow=38
HNS **HongShan** 44.49 11 ⇑P **P** 08 38 14.3 +0.6
HNS pmax pmax
comp=Z,12nm,0.7s
CMSA **Cobar Meteorol** 45.55 129 P **P** 08 38 23.2 +0.9
baz=46,SNR=58
CMSA **Cobar Meteorol** 45.55 129 P **P** 08 38 23.3 +0.9
GTA **Gaotai** 45.80 354 *e*P **P** 08 38 24.3 0.0
GTA pP pP 08 38 43.2 +2.3
GTA sP sP 08 38 50.4 +1.9
GTA PcP **PcP** 08 40 02.2 +1.3
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,90nm,6.0s
GTA LR LR
comp=Z,94nm,18.2s
GTA LR LR
comp=Z,280nm,20.7s
GTA LR LR
comp=Z,140nm,20.4s
RMQ **Roma** 46.24 121 P **P** 08 38 29.2 +1.3
baz=46,SNR=9.4
RMQ **Roma** 46.24 121 P **P** 08 38 29.3 +1.4
BJT **Baijiatuau** 47.30 12 P **P** 08 38 36.2 +0.3
BJT **Baijiatuau** 47.30 12 P **P** 08 38 36.2 +0.3
BJT pmax pmax
comp=Z,11nm,0.8s
BJI **Beijing** 47.33 12 P **P** 08 38 36.2 +0.1
BJI pmax pmax
comp=Z,9.0nm,0.7s
HHC **Hu-ho-hao-te** 47.38 7 *e*P **P** 08 38 39.7 +3.1
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,170nm,5.5s
EIDS **Eidsvold** 47.94 119 P **P** 08 38 41.7 +0.6
baz=48,SNR=5.1
EIDS **Eidsvold** 47.94 119 P **P** 08 38 39.8 -1.4
EIDS IAmb IAmb 08 38 42.8
comp=Z,33nm,1.4s
EIDS **Eidsvold** 47.94 119 P **P** 08 38 42.2 +1.1
KSCHJ **Chungju** 48.12 25 P **P** 08 38 42.3 +0.1
KSCHJ IAmb IAmb 08 38 45.0
comp=Z,29nm,1.3s
JMN **Monobe** 48.40 33 P **P** 08 38 44.2 -0.3
JMN IAmb IAmb 08 38 45.5
comp=Z,30nm,0.9s
KSAR **Wonju Array Be** 48.56 24 P **P** 08 38 46.7 +1.0
KSAR **Wonju Array Be** 48.56 24 P **P** 08 38 46.7 +1.0
KSRS **Korea Array** 48.59 24 P **P** 08 38 45.6 -0.3
comp=Z,2.9nm,0.5s,baz=202,slow=8.3,SNR=25
KSRS PcP **PcP** 08 40 10.8 +0.2
comp=Z,6.4nm,1.0s,baz=202,slow=3.5,SNR=10
KSRS ScP **ScP** 08 44 01.1 +1.4
comp=Z,2.1nm,1.0s,baz=206,slow=6.9,SNR=6.7
comp=Z,2.9nm,0.5s
JHS **Saijyo** 48.98 31 P **P** 08 38 49.0 0.0
JCJ **Chichijima** 49.05 46 LR LR 08 59 45.2
comp=Z,48nm,21.3s,baz=232,slow=36
CAN **Canberra** 49.65 132 P **P** 08 38 55.9 +1.8
CAN **Canberra** 49.65 132 P **P** 08 38 55.5 +1.3
NIL **Nilore** 49.86 325 P **P** 08 38 55.2 -0.5
NIL **Nilore** 49.86 325 P **P** 08 38 55.2 -0.5
NIL pmax pmax
comp=Z,83nm,0.6s
NIL **Nilore** 49.86 325 P **P** 08 38 55.5 -0.2
ARMA **Armidale** 49.88 125 P **P** 08 38 55.1 -0.9
baz=50,SNR=5.0
MGCD **Mangrove Creek** 50.42 128 P **P** 08 39 01.3 +1.3
baz=50,SNR=8.0
XLT **XiLinHaoTe** 51.04 10 *e*P **P** 08 39 03.7 -0.8
XLT pP sP 08 39 25.6 -3.4
XLT sP pP 08 39 34.4 +13
XLT PcP **PcP** 08 40 19.2 -0.4
XLT pmax pmax
comp=Z,9.0nm,0.9s
XLT pmax pmax
comp=Z,120nm,5.0s
XLT LR LR
comp=Z,200nm,19.2s
XLT LR LR
comp=Z,150nm,20.5s
WMQ **Urumqi** 52.34 344 *e*P **P** 08 39 15.4 +1.3
WMQ pmax pmax
comp=Z,35nm,0.9s
MAJO **Matsushiro** 52.85 34 P **P** 08 39 16.1 -1.9
MAJO IAmb IAmb 08 40 28.1
comp=Z,14nm,0.9s
MAJO **Matsushiro** 52.85 34 *i* P **P** 08 39 16.0 -2.0
MAJO pmax pmax
comp=Z,9.0nm,0.7s
MAJO **Matsushiro** 52.85 34 P **P** 08 39 16.1 -1.9
MJAR **Matsushiro Arr** 52.85 34 P **P** 08 39 16.2 -1.8
comp=Z,7.1nm,0.6s,baz=199,slow=7.3,SNR=21
MJAR PcP **PcP** 08 40 26.9 +0.5
comp=Z,6.4nm,0.7s,baz=176,slow=4.2,SNR=9.0
MJAR LR LR 09 01 57.9
comp=Z,72nm,21.6s,baz=214,slow=36
comp=Z,7.1nm,0.6s
KSH **Kashi** 52.93 332 P **P** 08 39 17.6 -1.1
KSH S **S** 08 46 40.6 -2.5
KSH pmax pmax
comp=Z,39nm,0.5s
KBL **Kabul** 52.95 323 P **P** 08 39 18.1 -0.9
KBL IAmb IAmb 08 39 20.6
comp=Z,81nm,1.6s
KBL **Kabul** 52.95 323 P **P** 08 39 18.1 -0.9
KBL pmax pmax
comp=Z,81nm,1.6s
CN2 **Changchun** 53.27 18 *e*P **P** 08 39 20.3 -0.6
CN2 *e*S **S** 08 46 44.5 -2.8
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,200nm,17.2s
WSAR **Wadi Sarin** 53.97 305 LR LR 09 00 57.7
comp=Z,142nm,19.9s,baz=136,slow=34
SONM **Songino Array** 53.99 1 P **P** 08 39 25.7 -0.6
comp=Z,4.6nm,0.5s,baz=176,slow=8.3,SNR=21
SONM PcP **PcP** 08 40 31.1 +0.4
comp=Z,7.2nm,0.6s,baz=177,slow=4.3,SNR=9.0
SONM ScP **ScP** 08 44 23.4 +0.4
comp=Z,1.7nm,0.8s,baz=161,slow=3.9,SNR=3.7
SONM LR LR 09 05 37.7
comp=Z,225nm,18.3s,baz=206,slow=40
comp=Z,4.6nm,0.5s
SONM **Songino Array** 53.99 1 P **P** 08 39 26.0 -0.3
ULN **Ulaanbaatar** 54.03 2 P **P** 08 39 26.3 -0.3
ULN **Ulaanbaatar** 54.03 2 *ce*P **P** 08 39 26.0 -0.6
ULN pmax pmax
comp=Z,10.0nm,1.4s
SHLS **Shalkode** 54.45 337 *e*P **P** 08 39 27.8 -1.9
SHLS *e*S **S** 08 47 00.9 -2.6
SHLS pmax pmax
comp=Z,6.0nm,0.3s
SHLS **Shalkode** 54.45 337 *e*P **P** 08 39 27.9 -1.9
comp=Z,5.9nm,0.3s,baz=338
SHLS *e*S **S** 08 47 00.9 -2.6
baz=338
UZB **Uzynbulak** 54.61 337 *e*P **P** 08 39 29.6 -1.3
UZB *e*S **S** 08 47 05.0 -0.7
UZB **Uzynbulak** 54.61 337 *e*P **P** 08 39 29.6 -1.3
baz=337
UZB *e*S **S** 08 47 05.1 -0.7
baz=337
SATY **Saty** 54.78 336 *e*P **P** 08 39 31.1 -1.0
SATY *e*S **S** 08 47 07.2 -0.7
SATY pmax pmax
comp=Z,5.0nm,0.4s
SATY **Saty** 54.78 336 *e*P **P** 08 39 31.1 -1.0
comp=Z,4.6nm,0.4s,baz=336
SATY *e*S **S** 08 47 07.3 -0.7
baz=336
KPKS **Kokpek** 55.01 337 *e*P **P** 08 39 32.5 -1.2
KPKS *e*S **S** 08 47 10.0 -1.0
KPKS **Kokpek** 55.01 337 *e*P **P** 08 39 32.5 -1.2
baz=337
KPKS *e*S **S** 08 47 10.0 -1.0
baz=337
GAR **Garm** 55.37 327 P **P** 08 39 35.5 -0.9
MDOK **Medeo** 55.41 335 P **P** 08 39 36.6 -0.1
MDOK **Medeo** 55.41 335 *e*P **P** 08 39 35.6 -1.1
baz=335
AAA **Alma-Ata** 55.51 335 *e*P **P** 08 39 36.6 -0.6
AAA **Alma-Ata** 55.51 335 *e*P **P** 08 39 36.7 -0.6
baz=335
BNX **BinXian** 55.63 19 ⇓P **P** 08 39 38.5 +0.5
BNX pmax pmax
comp=Z,49nm,0.8s
BNX pmax pmax
comp=Z,58nm,5.0s
CHGR **Chuyangaron** 55.76 326 P **P** 08 39 37.6 -1.5
CHGR **Chuyangaron** 55.76 326 P **P** 08 39 37.7 -1.5
CHGR pmax pmax
comp=Z,179nm,1.2s
TKM2 **Tokmak 2** 55.83 334 P **P** 08 39 40.0 +0.2
SNR=9.8
TKM2 **Tokmak 2** 55.83 334 *i* P **P** 08 39 39.0 -0.8
TKM2 pmax pmax
comp=Z,19nm,0.3s
KBK **Karagaybulak** 55.90 334 P **P** 08 39 40.5 +0.3
SNR=7.8
USRK **Ussuriysk Ar.** 55.94 23 P **P** 08 39 39.6 -0.6
comp=Z,24nm,0.8s,baz=229,slow=5.5,SNR=34
comp=Z,24nm,0.8s
USRK **Ussuriysk Ar.** 55.94 23 P **P** 08 39 40.0 -0.2
USRK **Ussuriysk Ar.** 55.94 23 P **P** 08 39 40.0 -0.2
AML **Almayashu** 56.05 332 P **P** 08 39 41.8 +0.2
SNR=5.5
SOHO **SOHO** 56.08 305 P **P** 08 39 43.1 +1.5
AAK **Ala-Archa** 56.09 333 P **P** 08 39 41.0 -0.5
comp=Z,3.9nm,0.5s,baz=161,slow=5.9,SNR=8.8
comp=Z,3.9nm,0.5s
AAK **Ala-Archa** 56.09 333 P **P** 08 39 41.6 0.0
AAK **Ala-Archa** 56.09 333 P **P** 08 39 41.6 0.0
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK **Ala-Archa** 56.09 333 P **P** 08 39 41.6 0.0
KUU **Kurty** 56.31 335 *e*P **P** 08 39 41.3 -1.6
KUU pmax pmax
comp=Z,22nm,0.4s
KUU **Kurty** 56.31 335 *e*P **P** 08 39 41.3 -1.6
comp=Z,22nm,0.4s,baz=335
TDK **Taldyqorghan** 56.41 338 *e*P **P** 08 39 42.6 -1.1
TDK pmax pmax
comp=Z,19nm,0.7s
TDK **Taldyqorghan** 56.41 338 *e*P **P** 08 39 42.6 -1.1
comp=Z,19nm,0.7s,baz=338
EKS2 **Erkin-Say** 56.43 333 P **P** 08 39 43.9 -0.1
SNR=22
ZSN **Zaisan** 56.45 344 *e*P **P** 08 39 43.2 -0.7
ZSN pmax pmax
comp=Z,6.0nm,0.5s
ZSN **Zaisan** 56.45 344 *e*P **P** 08 39 43.2 -0.7
comp=Z,6.3nm,0.5s,baz=344
USP **Ospenovka** 56.59 334 P **P** 08 39 43.5 -1.4
SNR=8.2
MK31 **Makanchi Array** 56.62 342 P **P** 08 39 44.3 -0.8
MK31 IAmb IAmb 08 39 45.5
comp=Z,16nm,0.5s
MK31 **Makanchi Array** 56.62 342 *i* P **P** 08 39 44.4 -0.8
MK31 pmax pmax
comp=Z,12nm,0.4s
MKAR **Makanchi Array** 56.62 342 P **P** 08 39 44.2 -0.9
comp=Z,24nm,0.4s,baz=153,slow=8.5,SNR=331
comp=Z,24nm,0.4s
MKAR **Makanchi Array** 56.62 342 P **P** 08 39 44.0 -1.1
SGDS **Sogindy** 56.68 334 *e*P **P** 08 39 43.4 -2.2
SGDS **Sogindy** 56.68 334 *e*P **P** 08 39 43.4 -2.2
baz=334
ALNE **Al Ain** 56.69 304 *i* P **P** 08 39 47.8 +1.8
SNR=9.7
UOSS **Minazif** 56.71 305 P **P** 08 39 46.4 +0.3
UOSS IAmb IAmb 08 39 48.6
comp=Z,42nm,1.4s
UOSS **Minazif** 56.71 305 P **P** 08 39 47.3 +1.2
ASHO **Ashiyiah** 56.72 305 *i* P **P** 08 39 47.8 +1.6
SNR=5.2
HATD **Hatta, Dubai** 56.72 305 P **P** 08 39 47.8 +1.6
MAKZ **Makanchi** 56.73 341 P **P** 08 39 45.0 -0.9
MAKZ **Makanchi** 56.73 341 P **P** 08 39 45.0 -0.9
MAKZ **Makanchi** 56.73 341 P **P** 08 39 44.7 -1.2
MDH **Madha** 56.80 306 P **P** 08 39 47.3 +0.6
MSFE **Esma-Masafi** 56.93 306 *i* P **P** 08 39 49.1 +1.3
SNR=6.9
FAQ **Al Faqa, Dubai** 57.12 305 *i* P **P** 08 39 51.0 +2.0
SNR=20
HRA **Herat** 57.17 318 P **P** 08 39 48.5 -0.9
NAZ **Nazwa, Dubai** 57.17 305 *i* P **P** 08 39 51.1 +1.7
SNR=13
SHME **Shamm** 57.26 306 P **P** 08 39 51.3 +1.3
ASUD **Al Ashush, Dub** 57.28 305 *i* P **P** 08 39 52.3 +2.1
SNR=17
DZA **Taraz** 57.75 331 *e*P **P** 08 39 51.7 -1.4
DZA pmax pmax
comp=Z,9.0nm,0.7s
DZA **Taraz** 57.75 331 *e*P **P** 08 39 51.8 -1.4
comp=Z,8.7nm,0.7s,baz=331
IUG **Iuzhnay** 57.83 330 *e*P **P** 08 39 52.7 -1.1
IUG **Iuzhnay** 57.83 330 *e*P **P** 08 39 52.7 -1.1
baz=330
MZR **Muzera** 58.15 302 *i* P **P** 08 39 58.1 +1.8
SNR=9.3
BTLS **Baital** 58.20 335 *e*P **P** 08 39 54.7 -1.5
BTLS **Baital** 58.20 335 *e*P **P** 08 39 54.7 -1.5
baz=335
KK31 **Karatay Array** 58.30 331 P **P** 08 39 56.0 -1.0
KK31 IAmb IAmb 08 39 57.5
comp=Z,6.0nm,0.5s
KK31 **Karatay Array** 58.30 331 P **P** 08 39 56.0 -1.0
KK31 pmax pmax
comp=Z,6.0nm,0.5s
KKAR **Karatay Array** 58.30 331 P **P** 08 39 55.9 -1.1
KKAR **Karatay Array** 58.30 331 P **P** 08 39 55.9 -1.1
KOUNC **Koumac, New Ca** 59.11 110 P **P** 08 40 04.8 +1.8
ERM **Erimo** 59.44 32 P **P** 08 40 04.2 -0.7
KLR **Kul'dur** 60.11 20 P **P** 08 40 07.8 -1.5
comp=Z,12nm,0.8s,baz=222,slow=6.5,SNR=20
KLR LR LR 09 07 25.5
comp=Z,78nm,18.1s,baz=223,slow=37
comp=Z,12nm,0.8s
KLR **Kul'dur** 60.11 20 *i* P **P** 08 40 07.2 -2.1
SEM **Semipalatinsk** 60.45 342 *e*P **P** 08 40 10.3 -1.6
SEM pmax pmax
comp=Z,5.0nm,0.3s
SEM **Semipalatinsk** 60.45 342 *e*P **P** 08 40 10.3 -1.6
comp=Z,5.4nm,0.3s,baz=342
KURK **Kurchatov** 61.23 341 P **P** 08 40 16.0 -0.9
KURK IAmb IAmb 08 40 17.4
comp=Z,13nm,0.8s
KURK **Kurchatov** 61.23 341 *ce*P **P** 08 40 16.6 -0.3
KURK pmax pmax
comp=Z,18nm,1.0s
KURK **Kurchatov** 61.23 341 P **P** 08 40 16.4 -0.5
YATNC **Mamie plateau,** 61.66 112 P **P** 08 40 22.5 +2.1
GEYT **Alibeck** 61.95 319 P **P** 08 40 22.6 +0.6
comp=Z,17nm,0.6s,baz=127,slow=8.6,SNR=19
GEYT LR LR 09 09 01.6
comp=Z,86nm,19.7s,baz=164,slow=38
comp=Z,17nm,0.6s
GEYT **Alibeck** 61.95 319 P **P** 08 40 22.2 +0.2
GEYT IAmb IAmb 08 40 23.6
comp=Z,17nm,0.7s
GYA0 **ALIBECK ARRAY** 61.95 319 P **P** 08 40 22.4 +0.3
GYA0B **ALIBECK ARRAY** 61.95 319 P **P** 08 40 22.1 +0.1
GYA0B IAmb IAmb 08 40 23.5
comp=Z,18nm,0.7s
ZAA0 **Zalesovo Array** 62.44 347 P **P** 08 40 23.7 -1.2
ZAA0 IAmb IAmb 08 40 25.4
comp=Z,15nm,0.5s
ZALV **Zalesovo Beam** 62.44 347 P **P** 08 40 23.8 -1.1
comp=Z,20nm,0.4s,baz=156,slow=5.6,SNR=60
comp=Z,20nm,0.4s
ZALV **Zalesovo Beam** 62.44 347 *i* P **P** 08 40 23.7 -1.2
ZALV pmax pmax
comp=Z,20nm,0.4s
BRZS **Berezniki** 62.72 337 *e*P **P** 08 40 26.1 -0.8
BRZS **Berezniki** 62.72 337 *e*P **P** 08 40 26.1 -0.8
baz=337
YSS **Yuzh-Sakhalins** 62.77 28 P **P** 08 40 26.1 -1.1
YSS IAmb IAmb 08 40 27.8
comp=Z,40nm,1.0s
YSS **Yuzh-Sakhalins** 62.77 28 *ce*P **P** 08 40 26.4 -0.9
YSS pmax pmax
comp=Z,38nm,1.3s
ZEA **Zeya** 62.77 15 *e*P **P** 08 40 27.2 0.0
ZEA pmax pmax
comp=Z,20nm,1.0s
KUR **Kuril'sk** 64.13 32 *i* P **P** 08 40 36.4 +0.1
ATD **Arta Tunnel** 64.28 286 LR LR 09 03 01.7
comp=Z,143nm,20.5s,baz=138,slow=31
BOD **Bodaibo** 64.39 5 *e*P **P** 08 40 36.9 -0.9
BOD pmax pmax
comp=Z,15nm,1.2s
DRV **Dumont d'Urvil** 64.84 165 P **P** 08 40 40.7 +0.1
RAYN **Ar Rayn** 65.16 299 P **P** 08 40 44.4 +0.9
RAYN IAmb IAmb 08 40 45.8
comp=Z,17nm,1.4s
RAYN **Ar Rayn** 65.16 299 P **P** 08 40 44.4 +0.9
RAYN pmax pmax
comp=Z,17nm,1.4s
RAYN **Ar Rayn** 65.16 299 *i* P **P** 08 40 44.7 +1.1
SNR=6.0
RAYN **Ar Rayn** 65.16 299 P **P** 08 40 44.4 +0.9
TYV **Tymovskoe** 65.61 25 *e*P **P** 08 40 47.0 +1.2
TYV *e*S **S** 08 49 29.4 +3.3
TYV pmax pmax
comp=Z,18nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.6s
TYV smax smax
comp=N,100nm,3.7s
TYV smax smax
comp=E,500nm,3.7s
BVA0 **Borovoye Array** 66.01 338 *i* P **P** 08 40 48.0 -0.3
BRVK **Borovoye** 66.07 338 P **P** 08 40 48.0 -0.8
BRVK IAmb IAmb 08 40 49.2
comp=Z,14nm,0.9s
BRVK **Borovoye** 66.07 338 *ce*P **P** 08 40 48.1 -0.7
BRVK pmax pmax
comp=Z,20nm,1.3s
BRVK **Borovoye** 66.07 338 P **P** 08 40 48.3 -0.4
MAW **Mawson** 67.39 196 P **P** 08 40 58.3 +1.5
comp=Z,4.7nm,0.6s,baz=49,slow=5.2,SNR=6.5
MAW LR LR 09 04 40.6
comp=Z,143nm,22.0s,baz=30,slow=31
comp=Z,4.7nm,0.6s
MAW **Mawson** 67.39 196 P **P** 08 40 57.1 +0.2
KMBO **Kiima Mbogo** 67.70 271 LR LR 09 05 28.6
comp=Z,188nm,21.6s,baz=92,slow=31
AB31 **Akbulak array** 67.84 330 *i* P **P** 08 40 59.8 -0.2
ABKAR **Akbulak array** 67.84 330 P **P** 08 40 59.7 -0.3
RPZ **Rata Peaks** 68.42 135 LR LR 09 09 46.9
comp=Z,193nm,20.9s,baz=269,slow=35
ODZ **Otahua Downs** 68.43 136 P **P** 08 41 04.9 +1.0
LKRN **Lenkeran, Azer** 68.63 316 P **P** 08 41 06.6 +1.4
OXZ **Oxford** 69.05 134 P **P** 08 41 07.3 -0.5
CCD **Concordia, Ant** 69.49 175 P **P** 08 41 11.9 +1.4
CCD sP **PcP** 08 41 32.3 -1.0
AKTO **Aktyubinsk** 69.55 330 P **P** 08 41 10.4 -0.3
comp=Z,16nm,0.6s,baz=122,slow=8.2,SNR=38
comp=Z,16nm,0.6s
YAK **Yakutsk** 70.83 12 P **P** 08 41 17.1 -1.2
YAK **Yakutsk** 70.83 12 *e*P **P** 08 41 16.5 -1.7
YAK *e**PP **pP** 08 41 34.5 -1.7

YAK *e* 08 41 35.9
YAK *e* 08 43 53.3
YAK *eS* **S** **08 50 27.0 -0.8**
YAK *e**SS **sS** **08 51 00.8 +2.1**
YAK *e* 08 51 18.1
YAK pmax pmax
comp=Z,82nm,0.8s
YAK pmax pmax
comp=E,13nm,1.3s
YAK pmax pmax
comp=N,17nm,1.2s
YAK pmax pmax
comp=Z,189nm,4.2s
YAK pmax pmax
comp=E,88nm,4.3s
YAK pmax pmax
comp=N,62nm,4.0s
YAK smax smax
comp=E,28nm,2.6s
YAK smax smax
comp=N,25nm,2.8s
SEKA Sheki 70.86 318 P **P** **08 41 19.7 +0.7**
NAX Nakhchivan 71.13 315 P **P** **08 41 21.4 +0.7**
GANJ Ganja 71.20 317 P **P** **08 41 21.3 +0.3**
BFZ Birch Farm 71.71 131 P **P** **08 41 22.8 -1.3**
BFZ IAmb IAmb 08 41 25.3
comp=Z,40nm,0.8s
BKZ Black Stump Fm 71.71 129 P **P** **08 41 23.8 -0.4**
BKZ Black Stump Fm 71.71 129 P **P** **08 41 24.3 +0.1**
comp=Z,243nm,0.7s
SKR Severo-Kuril's 71.86 31 *eP* **P** **08 41 23.0 -1.7**
SKR pmax pmax
comp=Z,32nm,0.9s
SKR pmax pmax
comp=Z,100nm,3.9s
SKR MLR MLR
comp=Z,100nm,15.0s
GNI Garni 72.07 316 **P** **08 41 26.6 +0.1**
GNI IAmb IAmb 08 42 48.9
comp=Z,12nm,0.8s
GNI Garni 72.07 316 *i* P **P** **08 41 27.8 +1.4**
GNI pmax pmax
comp=Z,12nm,1.0s
GEVA Gevas 72.52 313 P **P** **08 41 29.2 0.0**
GROC Groznyy 72.69 319 P **P** **08 41 33.4 +3.6**
ARU Arti 73.18 335 P **P** **08 41 32.4 0.0**
comp=Z,28nm,0.4s,baz=111,slow=4.1,SNR=46
comp=Z,28nm,0.4s
ARU Arti 73.18 335 P **P** **08 41 32.8 +0.4**
ARU Arti 73.18 335*c i*P **P** **08 41 32.6 +0.1**
ARU 08 41 48.1
ARU 08 44 16.1
ARU S **S** **08 50 56.2 +1.1**
ARU SS **SS** **08 55 32.0 -6.0**
ARU pmax pmax
comp=Z,80nm,1.3s
GURO Guroymak-BITLI 73.35 313 P **P** **08 41 34.0 -0.1**
GURO IAmb IAmb 08 41 36.3
comp=Z,18nm,0.9s
KARS Kars 73.42 316 P **P** **08 41 34.5 +0.1**
KARS Kars 73.42 316 P **P** **08 41 34.5 +0.1**
KARS pmax pmax
comp=Z,78nm,0.7s
ZEI Tsey 73.76 318 *eP* **P** **08 41 37.1 +0.7**
ZEI pmax pmax
comp=Z,14nm,0.7s
MARD Mardin 73.81 312 P **P** **08 41 36.9 +0.2**
MARD IAmb IAmb 08 41 38.9
comp=Z,36nm,1.0s
ONI Oni 73.97 318 P **P** **08 41 36.9 -0.6**
ONI Oni 73.97 318 P **P** **08 41 36.9 -0.6**
ONI pmax pmax
comp=Z,8.0nm,0.9s
PEA0B Petropavlovsk- 74.06 30 P **P** **08 41 36.9 -0.8**
PEA0B IAmb IAmb 08 41 38.1
comp=Z,20nm,0.8s
PEA0B Petropavlovsk- 74.06 30*ce*P **P** **08 41 37.8 +0.1**
PETK Petropavlovsk- 74.06 30 P **P** **08 41 36.8 -0.9**
comp=Z,11nm,0.8s,baz=211,slow=8.1,SNR=20
PETK LR LR 09 15 38.8
comp=Z,30nm,20.1s,baz=238,slow=37
comp=Z,11nm,0.8s
MBAR Mbarara 74.23 271 LR LR 09 09 27.4
comp=Z,127nm,21.2s,baz=109,slow=32
PET Petropavlovsk 74.48 30 P **P** **08 41 39.3 -0.8**
PET IAmb IAmb 08 41 40.5
comp=Z,48nm,0.8s
PET Petropavlovsk 74.48 30*ce*P **P** **08 41 40.1 0.0**
PET pmax pmax
comp=Z,51nm,1.3s
KBZ Khabaz 74.82 318 P **P** **08 41 42.6 +0.4**
comp=Z,18nm,1.0s,baz=116,slow=4.7,SNR=20
comp=Z,18nm,1.0s
KBZ Khabaz 74.82 318*ce*P **P** **08 41 43.4 +1.2**
KOPT Kop Dagi 75.01 314 P **P** **08 41 43.2 -0.7**
KOPT IAmb IAmb 08 41 47.5
comp=Z,18nm,0.8s
KIV Kislovodsk 75.05 319 P **P** **08 41 43.6 -0.1**
KIV IAmb IAmb 08 41 47.4
comp=Z,14nm,0.7s
KIV Kislovodsk 75.05 319 *eP* **P** **08 41 45.3 +1.5**
KIV pmax pmax
comp=Z,18nm,1.0s
MA2 Magadan 75.07 22 LR LR 09 18 05.0
comp=Z,56nm,18.4s,baz=233,slow=38
MA2 Magadan 75.07 22*ce*P **P** **08 41 43.5 +0.1**
MA2 pmax pmax
comp=Z,19nm,0.8s
ASF Jabal al Asfar 75.12 306 P **P** **08 41 45.9 +1.4**
comp=Z,20nm,1.0s,baz=129,slow=3.3,SNR=11
comp=Z,20nm,1.0s
LSZ Lusaka 75.60 256 LR LR 09 09 49.8
comp=Z,268nm,22.0s,baz=136,slow=31
GHAJ Ghor Haditha 75.95 304 P **P** **08 41 49.5 +0.5**
GHAJ IAmb IAmb 08 41 51.9
comp=Z,29nm,1.0s
BELG Belogornoye 76.01 328 *i* P **P** **08 41 49.3 +0.4**
BELG pmax pmax
comp=Z,13nm,1.3s
EIL Elat 76.01 303 P **P** **08 41 50.2 +0.8**
comp=Z,12nm,0.7s,baz=77,slow=3.0,SNR=5.6
EIL LR LR 09 14 35.6
comp=Z,92nm,21.7s,baz=89,slow=35
comp=Z,12nm,0.7s
NRIK Noril'sk 76.49 354 P **P** **08 41 50.8 -0.4**
comp=Z,12nm,0.3s,baz=139,slow=4.6,SNR=18
comp=Z,12nm,0.3s
NRIK Noril'sk 76.49 354*ce*P **P** **08 41 50.9 -0.4**
NRIK pmax pmax
comp=Z,25nm,1.1s
MMAI Mount Meron Ar 76.58 306 P **P** **08 41 54.7 +2.0**
comp=Z,11nm,0.7s,baz=106,slow=8.9,SNR=18
MMAI LR LR 09 15 48.3
comp=Z,81nm,21.3s,baz=240,slow=36
comp=Z,11nm,0.7s
SOC Sochi 76.88 317 *eP* **P** **08 41 53.2 -0.8**
SOC *e* 08 44 44.9
SOC *e*PPP PPP 08 46 30.8
SOC *eS* **S** **08 51 37.3 +0.6**
SOC *eSS* **SS** **08 56 39.1 +4.5**
SOC *e*SSS SSS 08 59 48.1
SOC pmax pmax
comp=Z,27nm,0.9s
SOC MLR MLR
comp=Z,78nm,21.0s
VNDA Vanda 76.96 169 P **P** **08 41 54.5 +0.5**
comp=Z,6.1nm,0.8s,baz=310,slow=5.5,SNR=35
VNDA LR LR 09 11 10.7
comp=Z,60nm,19.3s,baz=314,slow=32
comp=Z,6.1nm,0.8s
VNDA Vanda 76.96 169 P **P** **08 41 52.6 -1.4**
LBTB Lobatse 77.70 246 LR LR 09 08 43.4
comp=Z,119nm,20.2s,baz=106,slow=30
LBTB Lobatse 77.70 246 P **P** **08 41 58.4 -0.8**
LBTB Lobatse 77.70 246 P **P** **08 41 58.4 -0.8**
LBTB pmax pmax
comp=Z,9.0nm,0.9s
SEY Seymchan 77.91 20*ce*P **P** **08 41 59.5 +0.2**
SEY pmax pmax
comp=Z,16nm,1.3s
BOSA Boshof 77.94 242 P **P** **08 42 01.5 +1.0**
comp=Z,6.4nm,0.7s,baz=105,slow=4.5,SNR=18
BOSA LR LR 09 08 44.7
comp=Z,139nm,19.7s,baz=28,slow=30
comp=Z,6.4nm,0.7s
BNN Bunyan 77.99 312 P **P** **08 41 59.3 -1.3**
BNN IAmb IAmb 08 42 01.4
comp=Z,39nm,1.0s
SBA Scott Base 78.05 169 P **P** **08 42 00.9 +0.9**
SBA IAmb IAmb 08 42 02.9
comp=Z,11nm,0.8s
SBA Scott Base 78.05 169 P **P** **08 42 00.9 +0.9**
SBA pmax pmax
comp=Z,11nm,0.8s
KIRV Kirov 78.42 334 P **P** **08 42 02.5 +0.3**
comp=Z,79nm,0.6s,baz=112,slow=2.5,SNR=35
comp=Z,79nm,0.6s
KIRV Kirov 78.42 334*ce*P **P** **08 42 03.3 +1.1**
VRH Novokhopyorsk 78.69 325 *eP* **P** **08 42 03.9 0.0**
VRH pmax pmax
comp=Z,70nm,1.3s
CSS Mathiatis 78.77 307 P **P** **08 42 05.8 +1.0**
CSS IAmb IAmb 08 42 07.4
comp=Z,55nm,0.9s
TIXI Tiksi 79.44 8*ce*P **P** **08 42 07.0 -0.6**
TIXI pmax pmax
comp=Z,14nm,1.0s
BR131 Keskin Array S 79.89 312 P **P** **08 42 10.7 -0.3**
BR131 IAmb IAmb 08 42 12.3
comp=Z,42nm,0.7s
BR131 Keskin Array S 79.89 312 *i* P **P** **08 42 11.3 +0.4**
BRTR Keskin Array B 79.89 312 P **P** **08 42 11.4 +0.5**
comp=Z,23nm,0.7s,baz=136,slow=7.0,SNR=120
comp=Z,23nm,0.7s
BRTR Keskin Array B 79.89 312 P **P** **08 42 11.0 +0.1**
BRTR Keskin Array B 79.89 312 *i* P **P** **08 42 11.3 +0.4**
BRTR pmax pmax
comp=Z,23nm,0.6s
VSR Storozhevoye 80.16 324 *eP* **P** **08 42 11.9 0.0**
VSR pmax pmax
comp=Z,80nm,1.3s
BZK Bozkurt 80.29 314 ⇑P **P** **08 42 13.4 +0.5**
BZK Bozkurt 80.29 314 P **P** **08 42 12.1 -0.7**
VORR Voronezh 80.32 325 *i* P **P** **08 42 13.5 +0.7**
VORR pmax pmax
comp=Z,51nm,1.7s
ANTO Ankara 80.55 312 P **P** **08 42 14.4 0.0**
ANTO IAmb IAmb 08 42 16.3
comp=Z,22nm,0.8s
ANTO Ankara 80.55 312 P **P** **08 42 14.4 0.0**
ANTO pmax pmax
comp=Z,22nm,0.9s
BR231 Keskin MP Arra 80.56 312 P **P** **08 42 14.7 +0.2**
BR231 IAmb IAmb 08 42 16.4
comp=Z,28nm,0.9s
LPSR Galich'ya Gora 80.84 326 *eP* **P** **08 42 15.8 +0.3**
LPSR pmax pmax
comp=Z,40nm,0.7s
SIM Simferopol' 81.13 317 *eP* **P** **08 42 16.5 -0.8**
SIM *e**PP **pP** **08 42 35.0 -0.5**
SIM pmax pmax
comp=Z,46nm,1.0s
PRGR Permogore 81.64 335⇑ *i*P **P** **08 42 20.0 +0.5**
PRGR *e**PP **pP** **08 42 38.0 +0.4**
PRGR *eS* **S** **08 52 26.3 -0.1**
SUR Sutherland 81.68 238 LR LR 09 11 30.9
comp=Z,209nm,20.7s,baz=134,slow=30
BORA Eskisehir 82.29 312 P **P** **08 42 23.9 +0.3**
BORA IAmb IAmb 08 42 25.6
comp=Z,31nm,1.0s
MOS Moscow 82.77 328 *eP* **P** **08 42 25.2 -0.4**
MOS pmax pmax
comp=Z,68nm,0.9s
OBN Obninsk 83.09 327 P **P** **08 42 27.2 -0.1**
OBN Obninsk 83.09 327*c i*P **P** **08 42 28.2 +0.9**
OBN *i* 08 42 48.5
OBN *i* 08 45 40.0
OBN pmax pmax
comp=Z,53nm,0.9s
QSPA South Pole Qui 83.62 180 LR LR 09 15 06.3
comp=Z,104nm,20.5s,baz=320,slow=32
QSPA South Pole Qui 83.62 180 P **P** **08 42 30.4 +0.4**
QSPA IAmb IAmb 08 42 31.9
comp=Z,18nm,1.1s
KARP Karpathos 83.81 307 P **P** **08 42 31.6 +0.1**
KLMR Klimovskoe 83.90 333 *eP* **P** **08 42 29.2 -2.1**
KLMR *e* 08 45 44.7
KLMR pmax pmax
comp=Z,109nm,1.2s
KLMR Klimovskoe 83.90 333 *eP* **P** **08 42 29.2 -2.1**
KLMR AMP 08 42 33.7
comp=Z,109nm,1.2s
KLMR *e*PP **PP** **08 45 44.8 -0.8**
TIRR Tirgusor 84.90 316 ⇓P **P** **08 42 38.4 +1.7**
TIRR Tirgusor 84.90 316 ⇓P **P** **08 42 38.4 +1.7**
TPGR Topolog 84.99 316 ⇑P **P** **08 42 39.0 +1.7**
MILM Milestii Mici 85.23 318⇑ *i*P **P** **08 42 39.0 +0.7**
comp=Z,76nm,0.7s
MILM Milestii Mici 85.23 318 ⇑P **P** **08 42 39.4 +1.0**
MILM Milestii Mici 85.23 318*c i*P **P** **08 42 39.0 +0.7**
MILM *e* 08 43 00.0
MILM pmax pmax
comp=Z,120nm,1.1s
CFR Carcaliu 85.26 316 ⇑P **P** **08 42 40.0 +1.5**
CFR Carcaliu 85.26 316 ⇑P **P** **08 42 40.0 +1.5**
TSUM Tsumeb 85.45 251 LR LR 09 15 47.9
comp=Z,213nm,21.1s,baz=146,slow=32
BILL Bilibino 85.57 19*ce*P **P** **08 42 39.0 -0.6**
BILL pmax pmax
comp=Z,11nm,1.0s
IDI Anoyia 85.58 306 ⇑P **P** **08 42 42.4 +1.9**
IDI Anoyia 85.58 306 P **P** **08 42 42.0 +1.6**
comp=Z,11nm,0.7s,baz=103,slow=7.6,SNR=9.7
IDI LR LR 09 21 39.8
comp=Z,52nm,21.8s,baz=88,slow=36
comp=Z,11nm,0.7s
SORM Soroca 85.84 319 ⇑P **P** **08 42 42.0 +0.7**
SORM Soroca 85.84 319 ⇑P **P** **08 42 42.0 +0.7**
AKASG Malin Array Be 85.94 322 P **P** **08 42 41.9 +0.2**
comp=Z,10nm,0.7s,baz=81,slow=5.3,SNR=52
comp=Z,10nm,0.7s
AKASG Malin Array Be 85.94 322 *i* P **P** **08 42 41.9 +0.2**
AKASG pmax pmax
comp=Z,17nm,0.7s
AKBB Malin Array Si 85.94 322 P **P** **08 42 41.6 -0.2**
AKBB IAmb IAmb 08 42 43.0
comp=Z,26nm,0.7s
AKBB Malin Array Si 85.94 322*ce*P **P** **08 42 41.5 -0.2**
VRI Vrincioaia 86.39 317 ⇓P **P** **08 42 46.3 +2.2**
VRI Vrincioaia 86.39 317 ⇓P **P** **08 42 46.3 +2.2**
PLOR Plostina 86.44 317 ⇓P **P** **08 42 46.6 +2.2**
PLOR Plostina 86.44 317 ⇓P **P** **08 42 46.6 +2.2**
TESR Tescani 86.58 317 ⇑P **P** **08 42 46.7 +1.6**
NEHR Nehoiu 86.59 316 ⇓P **P** **08 42 47.2 +2.0**
COVR Voineasa-Covas 86.74 317 ⇑P **P** **08 42 47.6 +1.7**
MLR Muntele Rosu 86.84 316 ⇑P **P** **08 42 48.1 +1.6**
MLR Muntele Rosu 86.84 316 P **P** **08 42 47.4 +0.9**
comp=Z,45nm,1.0s,baz=314,slow=0.3,SNR=28
comp=Z,45nm,1.0s
MLR Muntele Rosu 86.84 316 P **P** **08 42 46.4 -0.2**
MLR Muntele Rosu 86.84 316 ⇑P **P** **08 42 48.1 +1.6**
BIZ Bicaz 87.04 318 ⇑P **P** **08 42 48.8 +1.5**
DOPR Dopca 87.32 317 ⇓P **P** **08 42 50.7 +2.0**
VOIR 87.44 316 ⇑P **P** **08 42 50.3 +0.9**
VOIR 87.44 316 ⇑P **P** **08 42 50.3 +0.9**
MNK Minsk 87.69 325 *i* P **P** **08 42 51.2 +1.1**
MNK *i* *PP **pP** **08 43 09.8 +1.0**
MNK *i* *SP **sP** **08 43 15.7 -0.4**
MNK *i* 08 46 18.5
MNK *i* PPP PPP 08 48 14.3
MNK *i* S **SKSac** **08 53 13.0 +0.8**
MNK *i* SS **SS** **08 59 11.8 -2.7**
MNK *i* SSS SSS 09 02 51.0
MNK pmax pmax
comp=N,6.0nm,1.2s
MNK pmax pmax
comp=Z,51nm,0.8s
MNK pmax pmax
comp=E,8.0nm,1.0s
MNK MLR MLR
comp=E,35nm,18.0s
MNK MLR MLR
comp=Z,61nm,19.0s
MNK Minsk 87.69 325 *i* P **P** **08 42 51.3 +1.1**
comp=E,8.0nm,1.1s
MNK *i* P **P** **08 42 51.3 +1.1**
comp=N,6.0nm,1.2s
MNK *i* P **P** **08 42 51.3 +1.1**
comp=Z,51nm,0.8s,baz=284
MNK *i* pP **pP** **08 43 09.9 +1.0**
MNK *i* sP **sP** **08 43 15.8 -0.4**
MNK *i* PP **PP** **08 46 18.6 +2.1**
MNK *i* PPP PPP 08 48 14.4
MNK *i* S **SKSac** **08 53 13.1 +0.8**
MNK *i* sS **pS** **08 53 49.5 -1.0**
MNK *i* SS **SS** **08 59 11.9 -2.7**
MNK *i* SSS SSS 09 02 51.0
MNK *i* LQ LQ 09 15 01.0
MNK *i* LR LR 09 16 42.9
MNK *i* LRM MLR 09 24 11.9
comp=E,35nm,18.1s
MNK *i* LRM MLR 09 24 15.3
comp=Z,61nm,18.9s
ARR Arges 87.72 316 ⇑P **P** **08 42 51.9 +1.2**
BURAR Bucovina Array 87.78 318 ⇑P **P** **08 42 52.9 +1.9**
BURAR Bucovina Array 87.78 318 P **P** **08 42 54.3 +3.4**
TROLL Troll, Antarti 87.80 198 P **P** **08 42 52.7 +2.1**
PUL Pulkovo 87.80 331*ce*P **P** **08 42 52.3 +1.7**
PUL pmax pmax
comp=Z,61nm,0.6s
VTS Vitosha 88.19 313 ⇑P **P** **08 42 54.6 +1.6**
VTS Vitosha 88.19 313 ⇑P **P** **08 42 54.7 +1.6**
NACGM Naroch 88.41 326⇓ *eP* **P** **08 42 55.0 +1.4**
baz=103
LVZ Lovozero 88.58 339*ce*P **P** **08 42 54.5 +0.3**
LVZ pmax pmax
comp=Z,37nm,0.8s
CJR Cluj-Napoca 88.68 317 ⇑P **P** **08 42 57.5 +2.3**
CJR Cluj-Napoca 88.68 317 ⇑P **P** **08 42 57.5 +2.3**
IIGN Ignalina 88.82 326 *eP* **P** **08 42 56.7 +1.2**
ISAL Salakas 88.92 326 *eP* **P** **08 42 57.6 +1.6**
LVV L'vov 88.98 320 *eP* **P** **08 42 57.1 +0.7**
LVV *eS* **S** **08 53 32.5 -6.8**
LVV pmax pmax
comp=Z,60nm,1.3s
DEV Deva 89.01 316 ⇓P **P** **08 42 59.3 +2.7**
DEV Deva 89.01 316 ⇓P **P** **08 42 59.3 +2.7**
GZR Gura Zlata 89.01 316 ⇓P **P** **08 42 58.9 +2.1**
GZR Gura Zlata 89.01 316 ⇓P **P** **08 42 58.9 +2.1**
HERR Herculane 89.17 315 ⇑P **P** **08 42 59.2 +1.7**
VSU Vasula 89.25 329 *i* P **P** **08 42 58.1 +0.6**
VSU pmax pmax
comp=Z,114nm,0.7s
VSU Vasula 89.25 329 *eP* **P** **08 42 58.8 +1.3**
DRGR 89.30 317 ⇑P **P** **08 42 59.7 +1.6**
DRGR 89.30 317 ⇑P **P** **08 42 59.7 +1.6**
BOVS Bovan 89.47 314 ⇑P **P** **08 43 00.0 +1.2**
SNAA Sanae 89.51 198 P **P** **08 43 00.7 +2.0**
SNAA Sanae 89.51 198 LR LR 09 16 23.6
comp=Z,117nm,21.8s,baz=46,slow=31
MDVR Moldovita 89.65 315 ⇑P **P** **08 43 01.4 +1.7**
BZS Buzias 89.85 316 ⇑P **P** **08 43 02.1 +1.5**
BZS Buzias 89.85 316 ⇑P **P** **08 43 02.1 +1.5**
UZH Uzhgorod 89.89 319 *eP* P 08 43 08.3 +7.6
SIRR Siria 89.93 316 ⇑P **P** **08 43 03.1 +2.1**
KOLS Kolonicke sedl 89.95 319 *eP* **P** **08 43 03.3 +2.3**
KOLS pmax pmax
comp=Z,42nm,0.9s
KOLS Kolonicke sedl 89.95 319 *eP* **P** **08 43 03.3 +2.3**
PABE Paberze 90.11 326 *eP* **P** **08 43 02.7 +1.2**
VSVD Vaisvydziai 90.22 326 *eP* **P** **08 43 02.7 +0.7**
FIA1 FINESS Array S 90.25 332 P **P** **08 43 01.6 -0.4**
FINES FINESS Array B 90.25 332 P **P** **08 43 02.2 +0.2**
comp=Z,20nm,0.7s,baz=104,slow=8.0,SNR=47
comp=Z,20nm,0.7s
FINES FINESS Array B 90.25 332 *i* P **P** **08 43 03.0 +0.9**
FINES pmax pmax
comp=Z,20nm,0.7s
MEF Metsahovi 90.80 330 *eP* **P** **08 43 05.6 +1.0**
MTSE Matsula 90.80 329 *eP* **P** **08 43 05.6 +0.9**
KECS Kecovo 91.05 319 *eP* **P** **08 43 07.3 +1.2**
KECS Kecovo 91.05 319 *eP* **P** **08 43 07.3 +1.2**
VNA2 Neumayer--Watz 91.15 198 P **P** **08 43 08.3 +2.1**
baz=104,slow=5.0
PSZ Piszkesteto 91.36 318 ⇑P **P** **08 43 08.9 +1.2**
PSZ Piszkesteto 91.36 318 P **P** **08 43 08.2 +0.5**
PSZ IAmb IAmb 08 43 09.9
comp=Z,15nm,1.2s
PSZ Piszkesteto 91.36 318 ⇑P **P** **08 43 08.9 +1.2**
SLIT Slitere, Latvi 91.40 328 *eP* **P** **08 43 05.5 -2.0**
VNA1 Neumayer--Stat 91.53 198 P **P** **08 43 10.3 +2.4**
VNA3 Neumayer Olymp 91.70 197 P **P** **08 43 09.9 +1.2**
MORH Mrgy, Hungar 91.99 316 ⇑P **P** **08 43 11.8 +1.3**
RAF Rauma 92.22 331 *eP* **P** **08 43 11.2 0.0**
ARA0 ARCESS Array S 92.24 340 *eP* **P** **08 43 11.6 +0.4**
ARA0 IAmb IAmb 08 43 12.0
comp=Z,11nm,0.8s
ARCES ARCESS Array B 92.24 340 P **P** **08 43 11.5 +0.3**
comp=Z,15nm,0.7s,baz=90,slow=5.5,SNR=74
comp=Z,15nm,0.7s
SPIA Saint Paul Isl 92.49 33 P **P** **08 43 11.6 -0.9**
baz=262
GAMB Gambell 92.73 26 P **P** **08 43 14.1 +0.6**
baz=261
NIKH Nikolski High 92.75 37 P **P** **08 43 13.3 -0.5**
baz=263
JAVC Velka Javorina 92.95 319 *e*PKP **P** **08 43 16.0 +1.0**
BELA Belgrano 2 92.99 188 P **P** **08 43 14.4 -0.2**
BELA IAmb IAmb 08 43 16.4
comp=Z,3.9nm,0.7s
MORC Moravsky Berou 93.13 320 ⇑P **P** **08 43 16.9 +1.1**
MORC Moravsky Berou 93.13 320 P **P** **08 43 16.3 +0.5**
MORC IAmb IAmb 08 43 18.0
comp=Z,6.7nm,0.9s
MORC Moravsky Berou 93.13 320 ⇑P **P** **08 43 16.9 +1.1**
MORC Moravsky Berou 93.13 320 *e*PKP **P** **08 43 16.7 +0.9**
JETT Jettan, Norway 94.01 339 *eP* **P** **08 43 19.6 +0.2**
JETT IAmb IAmb 08 43 22.1
comp=Z,15nm,0.6s
TRO Tromso 94.53 339 *eP* **P** **08 43 21.8 +0.1**
TNA Tin City 94.56 25 P **P** **08 43 22.5 +0.6**
baz=265
BRG Berggiesshubel 95.52 320 Amp 08 43 29.2
comp=Z,3.9nm,0.9s
BRG Berggiesshubel 95.52 320 *eP* **P** **08 43 27.9 +1.3**
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG Berggiesshubel 95.52 320 *e*(P) **P** **08 43 28.0 +1.3**
GERES GERESS Array B 95.56 318 P **P** **08 43 27.6 +0.5**
comp=Z,1.8nm,0.9s,baz=104,slow=4.5,SNR=9.3
GERES PP **PP** **08 47 18.8 -0.1**
comp=Z,0.6nm,0.7s,baz=91,slow=7.9,SNR=4.2
comp=Z,1.8nm,0.9s
GERES GERESS Array B 95.56 318 P **P** **08 43 27.1 +0.1**
FAUS Fauske 95.70 337 *eP* **P** **08 43 27.1 0.0**
FAUS IAmb IAmb 08 43 27.7
comp=Z,15nm,0.8s
STEI Steigen 95.74 338 *eP* **P** **08 43 27.6 +0.3**
SPA0 Spitsbergen Ar 95.90 348 *eP* **P** **08 43 27.5 -0.3**
SPA0 IAmb IAmb 08 43 28.8
comp=Z,16nm,0.9s
SPITS Spitsbergen Ar 95.90 348 P **P** **08 43 27.4 -0.5**
comp=Z,7.8nm,0.7s,baz=101,slow=8.8,SNR=12
comp=Z,7.8nm,0.7s
MOR8 Moi Rana 95.98 336 *eP* **P** **08 43 28.5 +0.1**
HFS Hagfors 96.10 330 P **P** **08 43 29.1 +0.1**
comp=Z,12nm,0.9s,baz=95,slow=5.1,SNR=12
comp=Z,12nm,0.9s
CLL Collm 96.14 321 *eP* **P** **08 43 30.0 +0.6**
comp=Z,8.0nm,1.4s
LOF Lofoten 96.39 338 *eP* **P** **08 43 30.1 -0.1**
NB2 NORSAR Subarra 97.34 331 P **P** **08 43 34.3 -0.4**
comp=Z,0.4nm,0.5s,baz=90,slow=4.6
NB2 NORSAR Subarra 97.34 331 P **P** **08 43 34.3 -0.4**
baz=90,slow=4.6
NOA NORSAR Array B 97.34 331 P **P** **08 43 34.2 -0.4**
comp=Z,1.8nm,0.9s,baz=89,slow=4.8,SNR=5.9
NOA PP **PP** **08 47 32.2 +0.1**
comp=Z,0.6nm,0.6s,baz=96,slow=7.4,SNR=3.6
comp=Z,1.8nm,0.9s
SDPT Sand Point 97.81 35 P **P** **08 43 36.1 -0.7**
baz=270
CHNA Chernabura Isl 98.32 36 P Pdif 08 43 39.3 +0.1
baz=271
N16K Nishlik Lake 98.61 30 P Pdif 08 43 40.8 +0.4
baz=272
O16K Kokwok River B 98.99 31 P **P** **08 43 41.9 -0.1**
baz=273
P16K Nushagak River 99.07 31 P **Pdif** **08 43 42.5 +0.1**
baz=273
GCSA Galena City Sc 99.22 25 P **Pdif** **08 43 43.5 +0.6**
baz=275
P17K Kvichak River 99.86 31 P **Pdif** **08 43 46.4 +0.5**
baz=274

R17K	Ugashik Creek baz=274	99.99	33	P		Pdif	08 43 46.8	+0.2
N18K	Kilae Creek baz=275	100.01	30	P		Pdif	08 43 47.0	+0.4
F21K	Alatna River baz=278	100.32	23	P		Pdif	08 43 48.3	+0.4
G21K	Allakaket baz=278	100.41	24	P		Pdif	08 43 48.5	+0.2
N19K	Bonanza Creek baz=276	100.69	29	P		Pdif	08 43 49.9	+0.1
F22K	John River baz=280	100.78	22	P		Pdif	08 43 50.2	+0.3
L20K	Farewell, AK baz=277	100.78	28	P		Pdif	08 43 50.3	+0.3
E22K	Anaktuvuk Pass baz=280	100.81	22	P		Pdif	08 43 50.3	+0.2
H21K	Melozitna Rive baz=276	100.82	24	P		Pdif	08 43 50.2	0.0
M20K	Styx River baz=278	101.21	28	P		Pdif	08 43 52.4	+0.4
I21K	Tanana baz=279	101.23	25	P		Pdif	08 43 52.2	+0.3
H22K	Ishtalitna Cre baz=280	101.36	24	P		Pdif	08 43 52.9	+0.3
CAST	Castle Rocks baz=279	101.47	27	P		Pdif	08 43 53.6	+0.5
TOLK	Toolik Lake Re baz=282	101.52	21	P		Pdif	08 43 53.2	-0.1
C24K	Franklin Bluff baz=283	101.59	20	P		Pdif	08 43 53.7	+0.2
D24K	Happy Valley baz=283	101.68	21	P		Pdif	08 43 53.4	-0.5
O20K	Slope Mountain baz=278	101.69	30	P		Pdif	08 43 53.5	-0.7
OHAK	Old Harbor baz=276	101.70	33	P		Pdif	08 43 54.6	+0.4
G23K	Bananza Creek baz=281	101.75	23	P		Pdif	08 43 54.7	+0.4
MLY	Manley baz=280	101.78	25	P		Pdif	08 43 54.3	-0.2
BPAW	Bear Paw Mtn. baz=280	101.84	26	P		Pdif	08 43 54.8	0.0
SKT	Skwentna baz=279	101.94	28	P		Pdif	08 43 55.2	0.0
KDAK	Kodiak Island baz=277	102.01	32	P		Pdif	08 43 55.5	0.0
H23K	Yukon River baz=282	102.12	24	P		Pdif	08 43 56.2	+0.3
TRF	Thorofare Moun baz=280	102.26	26	P		Pdif	08 43 56.8	+0.1
CAPN	Captain Cook N baz=279	102.31	29	P		Pdif	08 43 57.4	+0.6
F24K	Squaw Lake baz=284	102.39	22	P		Pdif	08 43 57.8	+0.6
CUT	Chulitna baz=280	102.46	27	P		Pdif	08 43 58.5	+1.1
D25K	Kavik River baz=285	102.48	20	P		Pdif	08 43 58.3	+0.8
BRSE	Bradley Lake S baz=279	102.68	30	P		Pdif	08 43 58.7	+0.1
G24K	Hadweenzic Riv baz=284	102.74	23	P		Pdif	08 43 59.6	+0.9
H24K	Noodor Dome baz=283	102.78	24	P		Pdif	08 43 59.2	+0.2
SEW	Seward baz=280	103.26	30	P		Pdif	08 44 00.5	-0.6
C27K	Jago River baz=288	103.29	20	P		Pdif	08 44 01.5	+0.5
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=302,slow=4.1,SNR=4.0	103.44	25	PKiKP		PKiKP	08 48 20.5	+0.2
SML	Sawmill baz=282	103.46	28	P		Pdif	08 44 01.7	-0.3
KNK	Knik Glacier baz=282	103.49	28	P		Pdif	08 44 02.5	+0.4
WAT6	Susitna Watana baz=282	103.57	27	P		Pdif	08 44 02.8	+0.1
TORD	Torodi Ar. Bea comp=Z,1.1nm,0.7s,baz=70,slow=2.2,SNR=7.7	104.28	282	PKiKP		PKiKP	08 48 23.5	+0.3
DAWY	Dawson baz=291	106.76	24	P		PKiKP	08 48 27.0	+0.5
EPYK	Eagle Plains baz=294	106.92	22	P		PKiKP	08 48 26.5	-0.2
P30M	Million Dollar baz=292	109.26	28	P		PKiKP	08 48 30.4	-0.9
N31M	Braeburn, Yuko baz=293	109.27	26	P		PKiKP	08 48 31.5	+0.2
O30N	Mendenhall baz=293	109.41	27	P		PKiKP	08 48 31.2	-0.4
R33M	Jennings River baz=297	112.32	27	P		PKiKP	08 48 37.3	+0.1
CRAG	Craig baz=294	112.95	32	P		PKiKP	08 48 37.8	-0.5
WRAK	Wrangell Islan baz=295	112.96	31	P		PKiKP	08 48 37.4	-0.9
YKA	Yellowknife Ar comp=Z,2.7nm,0.8s,baz=333,slow=2.4,SNR=7.9	116.97	19	PKP		PKPdf	08 48 45.6	-0.2
G03D	McMinnville, O baz=298	123.11	39	P		PKPdf	08 48 57.8	-0.4
J01E	Myrtle Point baz=296	123.61	41	P		PKPdf	08 48 58.5	-0.7
I03D	Drain, OR baz=297	123.75	41	P		PKiKP	08 49 00.5	+0.8
H04D	Lebanon baz=298	123.76	40	P		PKiKP	08 49 00.6	+0.9
K02D	Willamette Mer baz=296	123.98	42	P		PKiKP	08 49 01.2	+0.8
G05D	Wamic, OR baz=300	124.30	38	P		PKiKP	08 49 02.0	+1.2
L02F	Cave Junction baz=296	124.30	42	P		PKiKP	08 49 01.5	+0.6
I04A	Tendick Farm, baz=298	124.31	40	P		PKiKP	08 49 01.0	+0.1
I05D	Terrebonne, OR baz=299	124.73	39	P		PKiKP	08 49 02.2	+0.5
J04D	Umpqua Nationa baz=298	124.76	41	P		PKiKP	08 49 02.2	+0.2
L04D	Klamath Falls baz=297	125.10	42	P		PKiKP	08 49 02.9	+0.3
NEW	Newport baz=306	125.10	33	P		PKiKP	08 49 02.7	+0.4
J05D	Fort Rock, OR baz=298	125.30	40	P		PKiKP	08 49 03.6	+0.5
MSO	Missoula baz=308,SNR=8.9	127.69	33	P		PKPdf	08 49 06.9	-0.2
EGMT	Eagleton baz=313	129.07	29	P		PKPdf	08 49 09.9	+0.2
HLID	Hailey baz=305	129.37	37	P		PKiKP	08 49 11.7	+0.5
NVAR	Mina Array Bea comp=Z,1.5nm,0.8s,baz=287,slow=1.7,SNR=12	129.56	44	PKP		PKiKP	08 49 12.5	+0.7
SMMC	Simmler baz=294	129.70	49	P		PKiKP	08 49 12.5	+0.5
BOZ	Bozeman (W) baz=310,SNR=8.0	129.71	33	P		PKiKP	08 49 11.8	0.0
PKM	Mcpherson Peak baz=294	130.01	49	P		PKPdf	08 49 11.6	-0.4
SBC	Santa Barbara baz=294	130.27	50	P		PKPdf	08 49 11.8	-0.4
SCZ2	Santa Cruz Isl baz=293	130.51	50	P		PKPdf	08 49 12.4	-0.3
CWC	Cottonwood Cre baz=297	130.63	46	P		PKiKP	08 49 13.5	-0.4
ARVC	Arvin baz=295	130.65	48	P		PKiKP	08 49 13.4	-0.4
ISA	Isabella, Lake baz=296	130.68	48	P		PKiKP	08 49 13.6	-0.3
GRAC	Grapevine Rang baz=298	130.88	45	P		PKiKP	08 49 14.3	+0.1
SNCC	San Nicolas Is baz=293	130.89	51	P		PKiKP	08 49 14.3	0.0
MPMC	Manual Prospec baz=297	131.23	47	P		PKiKP	08 49 15.2	0.0
RLMT	Red Lodge baz=312	131.28	32	P		PKiKP	08 49 15.5	+0.4
DGMT	Dagmar baz=320	131.30	26	P		PKiKP	08 49 15.0	+0.2
LRMC	Laurel Mtn Rad baz=296	131.34	47	P		PKiKP	08 49 15.3	-0.1
EDW2	Edwards Air Fo baz=296	131.38	48	P		PKiKP	08 49 15.4	0.0
R11A	Troy Canyon, C baz=300	131.46	43	P		PKiKP	08 49 15.9	+0.3
FURC	Furnace Creek, baz=298	131.49	46	P		PKiKP	08 49 16.0	+0.6
CIS	Catalina Islan baz=294	131.68	50	P		PKiKP	08 49 15.7	-0.2
TPNV	Topopah Spring baz=299	131.69	45	P		PKiKP	08 49 15.7	-0.3
LAO	LASA Array baz=316	131.71	29	P		PKiKP	08 49 15.7	+0.1
SCI2	San Clemente I baz=294	131.75	51	P		PKiKP	08 49 15.9	-0.1
BFSC	Mount Baldy Ra baz=295	131.90	49	P		PKiKP	08 49 16.6	+0.1
GSC	Goldstone, Bar baz=297	132.06	47	P		PKiKP	08 49 16.9	+0.1
SHOC	Shoshone, Teco baz=298	132.17	46	P		PKiKP	08 49 17.1	+0.2
DUG	Dugway, Tooele baz=305	132.28	39	P		PKiKP	08 49 16.9	-0.2
BBRC	Big Bear Solar baz=296	132.44	48	P		PKiKP	08 49 17.6	-0.2
HEC	Hector,Ludlow baz=297	132.62	48	P		PKiKP	08 49 17.3	-0.5
TUQ	Turquoise Moun baz=298	132.64	47	P		PKiKP	08 49 17.7	-0.3
BW06	Boulder Array baz=310	132.67	35	P		PKiKP	08 49 18.3	+0.4
PDAR	Pinedale Array comp=Z,0.8nm,0.6s,baz=122,slow=1.2,SNR=4.3	132.67	35	PKP		PKPdf	08 49 17.1	+0.3
PDAR				SKPab		SKPbc	08 52 39.0	+0.6
PLCA	comp=Z,1.4nm,0.8s,baz=270,slow=1.4,SNR=7.2 Paso Flores comp=Z,1.1nm,0.7s,baz=282,slow=4.3,SNR=5.5	132.95	185	PKP		PKiKP	08 49 18.2	-0.2
PFO	Pinyon Flats O baz=296	133.07	49	P		PKiKP	08 49 19.4	+0.5
GMRC	Granite Mounta baz=298	133.13	47	P		PKiKP	08 49 19.4	+0.4
BELC	Belle Mtn. Jos baz=297	133.24	48	P		PKiKP	08 49 19.4	+0.2
MONP2	Monument Peak baz=295	133.41	50	P		PKiKP	08 49 20.5	+0.8
IKP	In-Ko-Pah, Jac baz=295	133.75	50	P		PKiKP	08 49 20.0	-0.2
IRM	Iron Mountain baz=298	133.80	48	P		PKiKP	08 49 20.2	0.0
BC3	Big Chuckawall baz=297	133.80	48	P		PKiKP	08 49 20.3	0.0
SWSC	Sam W. Stewart baz=296	133.86	50	P		PKiKP	08 49 20.7	+0.4
K22A	Casper baz=313	134.41	33	P		PKiKP	08 49 21.2	-0.2
AGMN	Agassiz Nation baz=330	134.62	19	P		PKPdf	08 49 20.0	0.0
RSSD	Black Hills baz=317	134.64	29	P		PKPdf	08 49 20.4	-0.1
O20A	White River Ci baz=310	135.11	36	P		PKPdf	08 49 21.6	+0.2
WUAZ	Wupatki baz=302	135.81	44	P		PKPdf	08 49 23.3	+0.4
N23A	Red Feather La baz=313	135.93	34	P		PKPdf	08 49 23.1	+0.1
EYMN	Ely baz=336	136.26	16	P		PKPdf	08 49 23.9	+0.8
214A	Organ Pipe Nat baz=298	136.56	49	P		PKPdf	08 49 24.3	+0.1
SUSD	Miller baz=324	136.70	25	P		PKPdf	08 49 24.5	+0.5
MVCO	Mesa Verde baz=307	136.76	40	P		PKPdf	08 49 25.4	+0.7
ISCO	Idaho Springs baz=312	136.86	35	P		PKPdf	08 49 25.5	+0.7
W18A	Petrified Fore baz=304	137.15	43	P		PKiKP	08 49 26.4	-0.8
S22A	4UR Ranch, Cre baz=309	137.48	38	P		PKiKP	08 49 27.4	-0.5
Q24A	Divide baz=312	137.69	35	P		PKiKP	08 49 27.8	-0.6
TUC	Tucson baz=300	137.89	48	P		PKPdf	08 49 27.4	+0.7
OGNE	Ogallala baz=318	137.98	31	P		PKPdf	08 49 26.3	-0.3
ECSD	EROS Data Cent baz=327	138.25	24	P		PKPdf	08 49 27.1	+0.2
SDCO	Great Sand Dun baz=311	138.28	37	P		PKPdf	08 49 28.1	+0.6
T25A	Trinidad baz=312	139.34	37	P		PKPdf	08 49 29.9	+0.5
ANMO	Albuquerque	139.44	41	*c i* PKiKP		PKiKP	08 49 31.8	-0.1
ANMO	comp=Z,4.0nm,0.8s			pmax		pmax		
ANMO	Albuquerque baz=307	139.44	41	P		PKPdf	08 49 30.3	+0.7
BGNE	Belgrade baz=323	139.50	27	P		PKiKP	08 49 30.7	-0.9
MNTX	Cornudas Mount baz=305	142.09	44	P		PKPdf	08 49 31.6	-2.6
LBNH	Lisbon baz=5.1	142.18	356	P		PKPdf	08 49 32.0	-1.9
MSTX	Muleshoe baz=311	142.42	39	P		PKPdf	08 49 33.5	-1.4
CPUP	Villa Florida comp=Z,2.7nm,0.7s,baz=154,slow=2.2,SNR=7.4	143.22	207	PKhKP		PKPpre	08 49 34.3	
L48A	N Adams baz=344	143.61	12	P		PKPbc	08 49 34.6	+0.5
L48A	baz=344			P		PKPbc	08 49 34.6	+0.5
P40A	Paris baz=331	143.61	22	P		PKPbc	08 49 34.0	-0.1
HDIL	Hopedale baz=336	143.65	18	P		PKPbc	08 49 34.7	+0.5
K57A	Scipio Center baz=358,SNR=5.7	143.76	2	P		PKPbc	08 49 35.5	+1.0
T35B	Sooner Cattle baz=322,SNR=22	143.83	30	P		PKPbc	08 49 35.1	+0.2
HRV	Adam Dziewonsk baz=6.0	143.88	356	P		PKPbc	08 49 35.5	+0.6
WVNY	West Valley, N baz=354,SNR=5.5	143.97	4	P		PKPbc	08 49 35.2	0.0
ERPA	Erie baz=352	144.13	6	P		PKPab	08 49 35.1	0.0
QUA2	Belchertown baz=4.6	144.16	357	P		PKPbc	08 49 35.9	+0.2
O44A	Mansfield baz=337	144.27	18	P		PKPbc	08 49 36.4	+0.3
WMOK	Wichita Mounta baz=317,SNR=36	144.28	35	P		PKPbc	08 49 36.5	+0.1
WMOK	Wichita Mounta baz=317	144.28	35	P		PKPab	08 49 36.1	+0.1
BINY	Binghamton baz=358	144.31	1	P		PKPbc	08 49 36.1	-0.1
BINY	Binghamton baz=358	144.31	1	P		PKPab	08 49 36.0	+0.1
L56A	Greenwood baz=356,SNR=6.2	144.31	3	P		PKPab	08 49 35.9	0.0
L56A	baz=356,SNR=6.2			P		PKPab	08 49 35.9	0.0
L59A	Walton baz=0.1,SNR=5.1	144.33	360	P		PKPbc	08 49 36.4	+0.1
L59A	baz=0.1,SNR=5.1			P		PKPbc	08 49 36.4	+0.1
N47A	Urbana baz=342	144.34	14	P		PKPbc	08 49 36.5	+0.2
N47A	baz=342			P		PKPbc	08 49 36.5	+0.2
P43A	Skaggs, Pawnee baz=335	144.41	19	P		PKPbc	08 49 36.5	-0.1
SFIN	Lafayette baz=339	144.46	16	P		PKPbc	08 49 36.9	+0.3
SFIN	Lafayette baz=339,SNR=6.3	144.46	16	P		PKPab	08 49 35.8	-0.6
M52A	Chesterland baz=349,SNR=6.1	144.53	8	P		PKPab	08 49 36.3	-0.3
M52A	baz=349,SNR=6.1			P		PKPab	08 49 36.3	-0.3
R40A	Maddies Statio baz=330	144.60	24	P		PKPab	08 49 37.0	0.0
N49A	Columbus Grove baz=344	144.64	12	P		PKPab	08 49 36.9	-0.2
N49A	baz=344			P		PKPab	08 49 36.9	-0.2
TX31	Lajitas Ar. Si baz=305	144.65	46	P		PKPdf	08 49 38.8	-0.1
TXAR	Lajitas Array comp=Z,16nm,0.7s,baz=282,slow=1.3,SNR=240	144.65	46	PKP		PKPdf	08 49 38.7	-0.2
S39A	Bolivar baz=327,SNR=24	144.67	25	P		PKPab	08 49 37.1	-0.2
M53A	WI Miller and baz=350,SNR=9.0	144.72	7	P		PKPab	08 49 36.7	-0.7
NPNY	Mohonk Preserv baz=1.6,SNR=5.0	144.75	359	P		PKPbc	08 49 37.6	+0.1
M55A	Ridgway baz=354,SNR=9.9	144.89	5	P		PKPbc	08 49 38.1	0.0
M55A	baz=354,SNR=9.9			P		PKPbc	08 49 38.1	0.0
KSPA	Keystone Colle	144.96	1	P		PKPbc	08 49 38.5	+0.2
	baz=359,SNR=12							
TUL1	Leonard baz=322,SNR=41	144.98	30	P		PKPdf	08 49 38.8	-0.3
TUL1	Leonard baz=322	144.98	30	P		PKPab	08 49 38.6	+0.1
N51A	Ashland baz=347,SNR=15	144.98	10	P		PKPab	08 49 38.2	-0.2
N51A	baz=347,SNR=15			P		PKPab	08 49 38.2	-0.2
SLM	Saint Louis baz=333	145.06	21	P		PKPbc	08 49 38.5	-0.1
O48B	Farmland baz=342,SNR=15	145.06	14	P		PKPbc	08 49 38.5	-0.2
O48B	Farmland baz=342,SNR=15	145.06	14	P		PKPbc	08 49 37.9	-0.7
BRNY	Black Rk. Fore baz=1.9,SNR=5.4	145.09	359	P		PKPbc	08 49 38.6	-0.1
M57A	Sunshine Farm, baz=356,SNR=22	145.13	3	P		PKPdf	08 49 39.1	-0.1
M57A	baz=356,SNR=22			P		PKPdf	08 49 39.1	-0.1
P46A	Rosedale baz=339	145.14	17	P		PKPab	08 49 39.1	+0.2
CCM	Cathedral Cave baz=331,SNR=79	145.20	23	P		PKPbc	08 49 39.1	0.0
CCM	Cathedral Cave baz=331	145.20	23	P		PKPbc	08 49 39.1	0.0
PSWB	Penn State Wil baz=358	145.20	1	P		PKPbc	08 49 39.0	0.0
PSDB	Penn State Uni baz=354	145.23	5	P		PKPbc	08 49 39.2	0.0
U38A	Gravette baz=325,SNR=88	145.23	28	P		PKPbc	08 49 39.1	-0.2
Q44A	Meyer Farm, Va baz=335,SNR=30	145.24	19	P		PKPdf	08 49 39.4	-0.1
ABTX	Abilene, Hawle baz=313,SNR=26	145.27	38	P		PKPdf	08 49 40.5	+0.7
ABTX	Abilene, Hawle baz=313	145.27	38	P		PKPdf	08 49 40.1	+0.4
O49A	Covington baz=344,SNR=18	145.31	13	P		PKPbc	08 49 39.3	-0.1
O49A	baz=344,SNR=18			P		PKPbc	08 49 39.3	-0.1
N53A	Lisbon baz=350,SNR=20	145.32	8	P		PKPab	08 49 39.6	0.0
N53A	baz=350,SNR=20			P		PKPab	08 49 39.6	0.0
BDFB	Brasilia comp=Z,12nm,0.6s,baz=110,slow=3.3,SNR=21	145.42	231	PKPbc		PKPab	08 49 41.6	+0.8
ODNJ	Ogdensburg baz=0.8,SNR=12	145.43	359	P		PKPab	08 49 39.9	-0.1
PAL	Palisades baz=2.1,SNR=5.7	145.50	358	P		PKPab	08 49 40.2	0.0
PAL	Palisades baz=2.1,SNR=5.7	145.50	358	P		PKPdf	08 49 39.7	-0.1
ACSO	Alum Creek Sta baz=346,SNR=29	145.54	11	P		PKPbc	08 49 40.2	+0.1
ACSO	Alum Creek Sta baz=346,SNR=29	145.54	11	P		PKPbc	08 49 40.1	-0.1
HHAR	Hobbs baz=325	145.57	28	P		PKPdf	08 49 40.1	0.0
FVM	French Village baz=332,SNR=16	145.57	22	P		PKPbc	08 49 40.2	-0.1
FOR	Fordham baz=2.1	145.64	358	P		PKPbc	08 49 40.5	+0.1
N58A	Sunbury baz=357,SNR=25	145.65	2	P		PKPab	08 49 40.7	-0.1
N58A	baz=357,SNR=25			P		PKPab	08 49 40.7	-0.1
OLIL	Olney baz=337,SNR=31	145.69	18	P		PKPab	08 49 41.0	0.0
UPAO	U. Pittsburgh baz=351	145.75	7	P		PKPab	08 49 41.2	+0.1
P48A	Milroy baz=342,SNR=24	145.75	14	P		PKPbc	08 49 40.8	-0.1
P48A	baz=342,SNR=24			P		PKPbc	08 49 40.8	-0.1
SSPA	Standing Stone baz=355,SNR=18	145.79	4	P		PKPbc	08 49 41.0	+0.1
SSPA	Standing Stone baz=355	145.79	4	P		PKPbc	08 49 41.0	+0.1
O53A	New Philadelph baz=349,SNR=17	145.82	8	P		PKPdf	08 49 40.7	+0.2
O52A	Adamsville baz=348,SNR=17	145.85	9	P		PKPbc	08 49 40.9	-0.2
O52A	baz=348,SNR=17			P		PKPbc	08 49 40.9	-0.2
P49A	Miami Univ. Ec baz=343,SNR=40	145.85	13	P		PKPbc	08 49 41.0	-0.1
P49A	Miami Univ. Ec baz=343,SNR=40	145.85	13	P		PKPdf	08 49 40.7	+0.2
O54A	Avella baz=351,SNR=14	146.00	7	P		PKPab	08 49 42.0	-0.2
O54A	baz=351,SNR=14			P		PKPab	08 49 42.0	-0.2
Z35A	Perchaven, San baz=318,SNR=6.7	146.17	35	P		PKPbc	08 49 42.4	+0.1
X37A	Clayton baz=322,SNR=22	146.23	31	P		PKPbc	08 49 42.6	+0.1
S44A	Carbondale baz=334,SNR=7.9	146.25	20	P		PKPbc	08 49 42.6	+0.2
P51A	Williamsport baz=346,SNR=9.6	146.25	11	P		PKPdf	08 49 41.3	+0.1
P51A	baz=346,SNR=9.6			P		PKPdf	08 49 41.3	+0.1
P52A	Corning baz=347,SNR=14	146.28	10	P		PKPdf	08 49 41.1	-0.1
TUPA	Temple Univers baz=336,SNR=7.1	146.35	0	P		PKPbc	08 49 42.6	0.0
P53A	Whipple baz=349,SNR=18	146.54	9	P		PKPbc	08 49 43.2	0.0
P53A	baz=349,SNR=18			P		PKPbc	08 49 43.2	0.0
MCWV	Mont Chateau baz=351,SNR=6.0	146.58	7	P		PKPbc	08 49 43.8	+0.5
MCWV	Mont Chateau baz=351,SNR=6.0	146.58	7	P		PKPbc	08 49 42.6	-0.8
PSUB	Penn St. - Bra baz=359	146.59	1	P		PKPbc	08 49 43.3	0.0
JCT	Junction City baz=311	146.60	41	P		PKPbc	08 49 43.7	0.0
JCT	Junction City baz=311	146.60	41	P		PKPbc	08 49 43.9	+0.2
PBMO	Poplar Bluff baz=331,SNR=40	146.63	23	P		PKPbc	08 49 43.4	-0.1
Q51A	Peebles baz=345,SNR=20	146.64	12	P		PKPbc	08 49 43.4	-0.2
Q51A	baz=345,SNR=20			P		PKPbc	08 49 43.4	-0.2
GEDE	Greenville baz=359,SNR=7.5	146.70	1	P		PKPbc	08 49 43.3	-0.3
Q52A	Bidwell baz=347,SNR=10	146.91	10	P		PKPbc	08 49 44.1	-0.2
Q52A	baz=347,SNR=10			P		PKPbc	08 49 44.1	-0.2
R49A	Shelbyville baz=341,SNR=11	146.92	15	P		PKPbc	08 49 44.2	-0.1
R49A	baz=341,SNR=11			P		PKPbc	08 49 44.2	-0.1
P57A	Homestead Farm baz=355,SNR=16	146.93	4	P		PKPbc	08 49 44.5	+0.3
P57A	baz=355,SNR=16			P		PKPbc	08 49 44.5	+0.3
WHTX	Lake Whitney, baz=316,SNR=18	147.03	37	P		PKPbc	08 49 45.6	+0.8
WHTX	Lake Whitney, baz=316	147.03	37	P		PKPbc	08 49 45.3	+0.5
Q54A	Coxs Mills baz=349,SNR=21	147.11	8	P		PKPbc	08 49 44.9	+0.1
Q54A	baz=349,SNR=21			P		PKPbc	08 49 44.9	+0.1
R50A	Paris baz=343,SNR=10	147.14	14	P		PKPbc	08 49 44.3	-0.7
R50A	baz=343,SNR=10			P		PKPbc	08 49 44.3	-0.7
MIAR	Mount Ida baz=324,SNR=80	147.16	29	P		PKPbc	08 49 45.6	+0.5
MIAR	Mount Ida baz=324	147.16	29	P		PKPbc	08 49 45.4	+0.3
Q56A	Snyder Ridge, baz=352,SNR=10	147.26	6	P		PKPbc	08 49 44.2	-1.1
Q56A	baz=352,SNR=10			P		PKPbc	08 49 44.2	-1.1
R53A	Hurricane baz=347,SNR=28	147.57	10	P		PKPbc	08 49 46.4	+0.2
R53A	baz=347,SNR=28			P		PKPbc	08 49 46.4	+0.2
T47A	Sharon Grove baz=337,SNR=29	147.60	18	P		PKPbc	08 49 45.7	-0.6

435B	**Jarrell**	**147.81**	**38**	P		**PKPbc**	**08 49 47.2 +0.2**
	baz=314						
S51A	**Beattyville**	**147.92**	**13**	P		**PKPbc**	**08 49 46.9 -0.2**
	baz=344,SNR=20						
S51A				P		**PKPbc**	**08 49 46.9 -0.2**
	baz=344,SNR=20						
237A	**Washetta, Mont**	**147.97**	**35**	P		**PKiKP**	**08 49 48.6 -0.6**
	baz=318,SNR=7.6						
WVT	**Waverly**	**148.15**	**20**	P		**PKPbc**	**08 49 48.2 +0.5**
	baz=335,SNR=64						
WVT	**Waverly**	**148.15**	**20**	P		**PKPbc**	**08 49 48.1 +0.4**
	baz=335						
S54A	**Dingess, Beckl**	**148.20**	**9**	P		**PKPbc**	**08 49 47.8 -0.1**
	baz=348,SNR=11						
S54A				P		**PKPbc**	**08 49 47.8 -0.1**
	baz=348,SNR=11						
T50A	**Nancy**	**148.21**	**15**	P		**PKPbc**	**08 49 47.8 -0.1**
	baz=341						
T50A				P		**PKPbc**	**08 49 47.8 -0.1**
	baz=341						
833A	**Chaparral WMA,**	**148.26**	**44**	P		**PKiKP**	**08 49 49.2 -0.7**
	baz=309						
U49A	**Red Boiling Sp**	**148.43**	**17**	P		**PKPbc**	**08 49 48.4 -0.1**
	baz=339,SNR=17						
R58B	**Mineral**	**148.45**	**4**	P		**PKPbc**	**08 49 48.8 +0.4**
	baz=355						
R58B				P		**PKPbc**	**08 49 48.8 +0.4**
	baz=355						
S57A	**Dark Hollow, R**	**148.55**	**6**	P		**PKPbc**	**08 49 49.0 +0.3**
	baz=353,SNR=9.0						
S57A				P		**PKPbc**	**08 49 49.0 +0.3**
	baz=353,SNR=9.0						
NATX	**Nacogdoches**	**148.79**	**33**	P		**PKPbc**	**08 49 50.1 +0.5**
	baz=320						
V48A	**Smith Brothers**	**148.84**	**19**	P		**PKPbc**	**08 49 49.4 -0.1**
	baz=337,SNR=19						
BLA	**Blacksburg**	**148.91**	**8**	P		**PKPbc**	**08 49 49.0 -0.8**
	baz=350						
TZTN	**Tazewell**	**148.98**	**13**	P		**PKPbc**	**08 49 50.2 +0.3**
	baz=344,SNR=20						
TZTN	**Tazewell**	**148.98**	**13**	P		**PKPbc**	**08 49 49.7 -0.2**
	baz=344						
OXF	**Oxford**	**149.01**	**23**	P		**PKPbc**	**08 49 50.2 +0.2**
	baz=331,SNR=16						
OXF	**Oxford**	**149.01**	**23**	P		**PKPbc**	**08 49 49.7 -0.3**
	baz=331						
T57A	**Hurt**	**149.27**	**7**	P		**PKPbc**	**08 49 50.8 +0.2**
	baz=352,SNR=8.7						
T57A				P		**PKPbc**	**08 49 50.8 +0.2**
	baz=352,SNR=8.7						
U54A	**Nelsons Funny**	**149.36**	**11**	P		**PKPbc**	**08 49 50.4 -0.5**
	baz=347,SNR=7.0						
U54A				P		**PKPbc**	**08 49 50.4 -0.5**
	baz=347,SNR=7.0						
T59A	**Double "B" Far**	**149.46**	**4**	P		**PKiKP**	**08 49 51.6 -0.6**
	baz=355,SNR=11						
T59A				P		**PKiKP**	**08 49 51.6 -0.6**
	baz=355,SNR=11						
V51A	**Loudon**	**149.49**	**15**	P		**PKPbc**	**08 49 51.5 +0.3**
	baz=342,SNR=12						
Y45A	**Yeager Farm, C**	**149.53**	**24**	P		**PKiKP**	**08 49 51.9 -0.5**
	baz=331,SNR=12						
V52A	**Sevierville**	**149.64**	**14**	P		**PKPbc**	**08 49 52.0 +0.5**
	baz=343,SNR=32						
U56A	**King**	**149.77**	**9**	P		**PKPbc**	**08 49 52.1 +0.2**
	baz=350,SNR=7.2						
U56A				P		**PKPbc**	**08 49 52.1 +0.2**
	baz=350,SNR=7.2						
TKL	**Tuckaleechee C**	**149.77**	**14**	P		**PKPbc**	**08 49 52.3 +0.5**
	baz=343,SNR=23						
W50A	**Signal Mountai**	**149.79**	**17**	P		**PKPbc**	**08 49 52.2 +0.2**
	baz=339,SNR=11						
X48A	**Hartselle**	**149.94**	**20**	P		**PKPbc**	**08 49 52.0 -0.3**
	baz=336,SNR=24						
V53A	**Saluda**	**149.98**	**13**	P		**PKPbc**	**08 49 52.7 +0.2**
	baz=344,SNR=33						
V53A				P		**PKPbc**	**08 49 52.7 +0.2**
	baz=344,SNR=33						
U59A	**Littleton**	**150.05**	**4**	P		**PKPbc**	**08 49 52.9 +0.4**
	baz=355,SNR=8.7						
U59A				P		**PKPbc**	**08 49 52.9 +0.4**
	baz=355,SNR=8.7						
V55A	**Taylorsville**	**150.12**	**10**	P		**PKPbc**	**08 49 53.0 +0.3**
	baz=348,SNR=12						
V55A				P		**PKPbc**	**08 49 53.0 +0.3**
	baz=348,SNR=12						
W52A	**Murphy**	**150.27**	**15**	P		**PKiKP**	**08 49 53.6 -0.4**
	baz=342,SNR=16						
342B	**Flagon Creek P**	**150.33**	**31**	P		**PKiKP**	**08 49 54.2 +0.1**
	baz=323						
V58A	**Windy Hill, Pi**	**150.48**	**7**	P		**PKiKP**	**08 49 53.9 -0.3**
	baz=352,SNR=7.7						
V58A				P		**PKiKP**	**08 49 53.9 -0.3**
	baz=352,SNR=7.7						
VBMS	**Vicksburg**	**150.51**	**27**	P		**PKiKP**	**08 49 54.6 +0.2**
	baz=327,SNR=8.4						
VBMS	**Vicksburg**	**150.51**	**27**	P		**PKiKP**	**08 49 54.1 -0.3**
	baz=327						
X51A	**Calhoun**	**150.52**	**17**	P		**PKPbc**	**08 49 54.0 +0.3**
	baz=340						
X51A				P		**PKPbc**	**08 49 54.0 +0.3**
	baz=340						
LVC	**Limon Verde**	**150.58**	**192**	PKPbc		**PKiKP**	**08 49 55.5 +0.1**
	comp=Z,14nm,0.8s,baz=255,slow=2.5,SNR=14						
CASEE	**Lake Jocassee**	**150.60**	**13**	P		**PKiKP**	**08 49 54.5 -0.1**
	baz=344,SNR=14						
Y49A	**Blount Mountai**	**150.69**	**20**	P		**PKPbc**	**08 49 54.3 +0.1**
	baz=336,SNR=17						
Z47A	**Carrollton**	**150.69**	**23**	P		**PKiKP**	**08 49 54.5 -0.3**
	baz=333,SNR=14						
KMSC	**Kings Mountain**	**150.79**	**11**	P		**PKPbc**	**08 49 54.6 +0.3**
	baz=347,SNR=14						
KMSC	**Kings Mountain**	**150.79**	**11**	P		**PKPbc**	**08 49 54.1 -0.2**
	baz=347						
146A	**Union**	**150.79**	**25**	P		**PKiKP**	**08 49 55.6 +0.6**
	baz=330,SNR=7.8						
W57A	**Gilead**	**151.00**	**8**	P		**PKiKP**	**08 49 55.1 -0.2**
	baz=350,SNR=9.8						
W57A				P		**PKiKP**	**08 49 55.1 -0.2**
	baz=350,SNR=9.8						
PAULI	**Pauline**	**151.01**	**12**	P		**PKPbc**	**08 49 54.8 0.0**
	baz=346,SNR=15						
CNNC	**Cliffs of the**	**151.15**	**5**	P		**PKPbc**	**08 49 55.3 +0.2**
	baz=354						
LRAL	**Lakeview Retre**	**151.24**	**21**	P		**PKPbc**	**08 49 55.4 0.0**
	baz=335,SNR=8.9						
LRAL	**Lakeview Retre**	**151.24**	**21**	P		**PKPbc**	**08 49 55.5 0.0**
	baz=335						
Y52A	**Lilburn**	**151.40**	**16**	P		**PKiKP**	**08 49 56.6 +0.3**
	baz=341,SNR=13						
Y52A				P		**PKiKP**	**08 49 56.6 +0.3**
	baz=341,SNR=13						
BIRD	**Birdtown, Kers**	**151.42**	**9**	P		**PKPbc**	**08 49 56.0 +0.2**
	baz=349,SNR=10						
HODGE	**Hodges**	**151.49**	**13**	P		**PKiKP**	**08 49 56.5 +0.1**
	baz=345,SNR=13						
JSC	**Jenkinsville**	**151.64**	**11**	P		**PKiKP**	**08 49 56.7 0.0**
	baz=347,SNR=13						
GOGA	**Godfrey**	**151.98**	**15**	P		**PKiKP**	**08 49 57.7 +0.2**
	baz=342,SNR=10						
GOGA	**Godfrey**	**151.98**	**15**	P		**PKiKP**	**08 49 57.5 0.0**
	baz=342						
Y57A	**Sumter**	**152.05**	**9**	P		**PKiKP**	**08 49 57.9 +0.3**
	baz=349,SNR=6.3						
Y57A				P		**PKiKP**	**08 49 57.9 +0.3**
	baz=349,SNR=6.3						
152A	**Waverly Hall**	**152.33**	**18**	P		**PKiKP**	**08 49 58.6 +0.4**
	baz=339,SNR=10						
BRAL	**Brewton**	**152.89**	**23**	P		**PKPbc**	**08 49 58.7 -0.5**
	baz=333						
NHSC	**New Hope**	**152.97**	**9**	P		**PKiKP**	**08 49 59.6 +0.1**
	baz=349						
TIGA	**Tifton**	**153.81**	**17**	P		**PKiKP**	**08 50 01.6 +0.4**
	baz=340						
SIV	**San Ignacio**	**153.82**	**212**	PKP		**PKPdf**	**08 49 54.6 +0.8**
	comp=Z,0.8nm,0.8s,baz=170,slow=6.1,SNR=4.9						
SIV				PKPab		**PKPab**	**08 50 15.8 +1.1**
	comp=Z,7.3nm,0.6s,baz=148,slow=4.6,SNR=30						
LPAZ	**La Paz**	**156.47**	**197**	PKP		**PKPdf**	**08 49 58.5 +0.4**
	comp=Z,1.7nm,1.0s,baz=14,slow=5.4,SNR=4.9						
LPAZ				PKPab		**PKPab**	**08 50 27.2 +0.6**
	comp=Z,2.6nm,0.8s,baz=98,slow=6.8,SNR=7.1						

IDC 12 08:31:21.6±2.7, 54°.15N×86°.34E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=20.3km s-min=12.9km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**258**	*i*		08 36 25.5	
	baz=75,slow=308,SNR=1.5						
ZALV	**Zalesovo Beam**	**0.92**	**258**	Pg	Pg	08 31 38.0	-1.2
	1.5nm,0.3s,baz=75,slow=17,SNR=16						
ZALV				Lg	Lg	08 31 52.8	
	1.8nm,0.3s,baz=79,slow=32,SNR=16						
KURBB	**Kurchatov Arra**	**5.95**	**237**	Pn	Pn	08 32 52.0	+1.2
	0.1nm,0.3s,baz=53,slow=14,SNR=4.9						
KURBB				Lg	Lg	08 34 29.1	
	baz=68,slow=23,SNR=1.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.81**	**201**	Pn	Pn	08 33 17.3	+0.9
	0.1nm,0.3s,baz=19,slow=12,SNR=4.2						
	0.2nm,0.4s						

ROM 12 08:41:30.8±0.1, 42°.887N±0°.004×13°.021E±0°.009, h10km, ML1.8/4, Error ellipse: s-maj=0.7km s-min=0.3km az=72.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.08**	**16**	P	Pg	08 41 33.7	+0.4
FEMA				S	Sg	08 41 35.5	+0.3
NRCA	**Norcia**	**0.09**	**128**	P	Pg	08 41 33.8	+0.4
NRCA				S	Sg	08 41 35.6	+0.5
NRCA				AML	AML		
	comp=E,872μm,0.9s						
NRCA				AML	AML		
	comp=N,1174μm,0.1s						
CESI	**CESI - Serrava**	**0.15**	**324**	P	Pg	08 41 34.8	+0.6
CESI				S	Sg	08 41 37.3	+0.8
CESI				AML	AML		
	comp=N,599μm,0.3s						
CESI				AML	AML		
	comp=E,390μm,0.1s						
FDMO	**Fiordimonte**	**0.16**	**18**	P	Pg	08 41 34.9	+0.5
FDMO				S	Sg	08 41 37.5	+0.7
FDMO				AML	AML		
	comp=N,414μm,0.1s						
FDMO				AML	AML		
	comp=E,824μm,0.2s						
LNSS	**Leonessa**	**0.28**	**177**	P	Pg	08 41 37.1	+0.5
LNSS				S	Sb	08 41 41.9	-1.0
LNSS				AML	AML		
	comp=E,170μm,1.4s						
LNSS				AML	AML		
	comp=N,154μm,1.0s						
EL6	**Elcito**	**0.45**	**8**	P	Pg	08 41 39.8	+0.2
EL6				S	Sb	08 41 47.0	-0.6
TERO	**Teramo**	**0.50**	**121**	P	Pg	08 41 40.7	0.0
TERO				S	Sb	08 41 48.6	-0.5

IDC 12 08:42:58.7±1.6, 18°.74N×145°.54E, h211km±16km, mb3.5/12, mbtmp4.2/16, Error ellipse: s-maj=24.7km s-min=10.0km az=91.0

NEIC 12 08:42:59.3±1.4, 18°.74N±0°.08×145°.5E±0°.2, h203km±10km, mb4.4/32, Error ellipse: s-maj=28.5km s-min=11.7km az=90.0

ISC 12 08:42:58.3±0.5, 18°.77N±0°.05×145°.5E±0°.1, h200km, n63, σ1°03/59, mb4.2/25, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.18**	**187**	P	**Pn**	**08 44 16.0**	**+1.0**
	59nm,0.3s,baz=274,slow=5.0,SNR=16						
GUMO				S	**Sn**	**08 45 16.3**	**+0.7**
	58nm,0.4s,baz=29,slow=17,SNR=4.3						
GUMO	**Guam**	**5.18**	**187**		**Pn**	**08 44 16.3**	**+1.2**
JCJ	**Chichijima**	**8.83**	**341**	P	**Pn**	**08 45 02.6**	**+0.3**
	62nm,0.7s,baz=272,slow=24,SNR=9.2						
JCJ				S	**Sn**	**08 46 39.6**	**-1.8**
	20nm,0.4s,baz=307,slow=20,SNR=1.4						
JCJ	**Chichijima**	**8.83**	**341**	Pn	**Pn**	**08 45 01.7**	**-0.6**
JHJ	**Hachijo jima 2**	**15.18**	**341**	P	**Pn**	**08 46 22.8**	**+0.1**
	30nm,0.4s,baz=258,slow=20,SNR=1.6						
JOW	**Kunigami**	**17.76**	**300**	P	**Pn**	**08 46 55.9**	**+2.3**
	baz=128,slow=17						
INU	**Inuyama**	**18.14**	**337**	P	**P**	**08 46 57.9**	**+2.3**
INU				IAmb	IAmb	08 46 60.0	
	comp=Z,20nm,1.3s						
MJAR	**Matsushiro Arr**	**18.83**	**342**	P	**P**	**08 47 04.2**	**+1.1**
	comp=Z,2.7nm,0.5s,baz=169,slow=11,SNR=9.1						
MAJO	**Matsushiro**	**18.83**	**342**	P	**P**	**08 47 04.4**	**+1.3**
MAJO				IAmb	IAmb	08 47 11.4	
	comp=Z,9.0nm,0.8s						
JMM	**Marumori**	**19.47**	**349**	P	**Pn**	**08 47 13.2**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**20.11**	**87**	T	T	09 08 46.8	
	baz=274,slow=75						
H11S1	**WAKE ISLAND Hy**	**20.12**	**87**	T	T	09 08 48.8	
	baz=274,slow=75						
H11S2	**WAKE ISLAND Hy**	**20.12**	**87**	T	T	09 08 47.7	
	baz=274,slow=75						
JSD	**Sado**	**20.21**	**343**	P	**P**	**08 47 19.6**	**+1.8**
JSD				IAmb	IAmb	08 47 39.3	
	comp=Z,11nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**20.25**	**84**	T	T	09 09 01.0	
	baz=271,slow=74						
H11N2	**WAKE ISLAND Hy**	**20.25**	**84**	T	T	09 09 03.7	
	baz=271,slow=74						
H11N3	**WAKE ISLAND Hy**	**20.26**	**84**	T	T	09 08 50.4	
	baz=271,slow=74						
JTM	**Tenmabayashi**	**22.27**	**351**	P	**P**	**08 47 40.9**	**+1.9**
KSRS	**Korea Array**	**24.14**	**324**	P	**P**	**08 47 56.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=155,slow=8.6,SNR=4.5						
	comp=Z,0.4nm,0.3s						
COEN	**Coen**	**32.59**	**184**	P	**P**	**08 49 09.4**	**-1.8**
COEN				IAmb	IAmb	08 49 45.1	
	comp=Z,15nm,1.2s						
MTN	**Manton Dam**	**34.44**	**205**	P	**P**	**08 49 27.0**	**-0.1**
MTN				IAmb	IAmb	08 49 28.8	
	comp=Z,13nm,0.9s						
KNRA	**Kununurra**	**37.97**	**207**	P	**P**	**08 49 56.9**	**-0.1**
KNRA				IAmb	IAmb	08 49 58.9	
	comp=Z,7.7nm,0.8s						
WB0	**Warramunga Arr**	**39.81**	**196**	P	**P**	**08 50 11.5**	**-0.7**
WB0				IAmb	IAmb	08 50 13.1	
	comp=Z,7.7nm,0.5s						
WB2	**Warramunga Arr**	**39.98**	**196**	P	**P**	**08 50 13.6**	**0.0**
WB2				IAmb	IAmb	08 50 14.1	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**39.99**	**196**	P	**P**	**08 50 13.5**	**-0.2**
	comp=Z,2.8nm,0.3s,baz=20,slow=8.5,SNR=98						
	comp=Z,2.8nm,0.3s						
WRA	**Warramunga Arr**	**39.99**	**196**	P	**P**	**08 50 13.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**41.49**	**209**	P	**P**	**08 50 25.6**	**-0.4**
FITZ				IAmb	IAmb	08 50 27.0	
	comp=Z,10nm,1.2s						
ASAR	**Alice Springs**	**43.66**	**195**	P	**P**	**08 50 42.4**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=14,slow=6.6,SNR=18						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**43.66**	**195**	P	**P**	**08 50 42.9**	**-0.5**
GSTR	**Great Sitkin T**	**44.82**	**33**	P	**P**	**08 50 54.3**	**+2.0**
MARNC	**Mare, Loyalty**	**45.69**	**150**	P	**P**	**08 51 00.5**	**+1.1**
STKA	**Stephens Creek**	**50.49**	**184**	P	**P**	**08 51 34.1**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=351,slow=13,SNR=1.9						
	comp=Z,1.6nm,0.8s						
UNV	**Unalaska Valle**	**50.72**	**35**	P	**P**	**08 51 38.5**	**+1.1**
AKUT	**Akutan**	**51.24**	**35**	P	**P**	**08 51 41.6**	**+0.3**
BBOO	**Buckleboo**	**52.07**	**190**	P	**P**	**08 51 48.5**	**+0.8**
SDPT	**Sand Point**	**54.54**	**35**	P	**P**	**08 52 05.5**	**+0.1**
CHGN	**Chignik**	**55.95**	**34**	P	**P**	**08 52 15.8**	**+0.3**
CHGN				IAmb	IAmb	08 52 21.8	
	comp=Z,15nm,1.3s						
CHIR	**Chirikof Islan**	**57.31**	**35**	P	**P**	**08 52 25.5**	**+0.5**
MKAR	**Makanchi Array**	**58.26**	**314**	P	**P**	**08 52 30.7**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=94,slow=6.9,SNR=2.7						
	comp=Z,0.2nm,0.4s						
SII	**Sitkinak Islan**	**58.27**	**34**	P	**P**	**08 52 32.4**	**+0.6**
O18K	**Koktuh Hills**	**58.66**	**31**	P	**P**	**08 52 35.2**	**+0.8**
O18K				IAmb	IAmb	08 52 36.1	
	comp=Z,9.1nm,0.9s						
OHAK	**Old Harbor**	**58.92**	**34**	P	**P**	**08 52 37.0**	**+0.8**
OHAK				IAmb	IAmb	08 52 37.4	
	comp=Z,7.0nm,0.9s						
N19K	**Bonanza Creek**	**59.30**	**30**	P	**P**	**08 52 39.4**	**+0.5**
N19K				IAmb	IAmb	08 52 40.2	
	comp=Z,4.8nm,1.0s						
CAST	**Castle Rocks**	**61.13**	**27**	P	**P**	**08 52 51.2**	**0.0**
CAST				IAmb	IAmb	08 52 52.5	
	comp=Z,4.8nm,0.8s						
ILAR	**Eielson Array**	**63.68**	**26**	P	**P**	**08 53 06.5**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=254,slow=5.1,SNR=16						
	comp=Z,1.6nm,0.7s						
INK	**Inuvik**	**69.39**	**23**	P	**P**	**08 53 43.8**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=224,slow=2.2,SNR=5.1						
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**78.03**	**28**	P	**P**	**08 54 34.0**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=291,slow=5.6,SNR=5.4						
	comp=Z,1.6nm,0.6s						
B08A	**Colville Reser**	**79.57**	**42**	P	**P**	**08 54 42.7**	**-0.4**
PINE	**Pine Mountain**	**79.77**	**47**	P	**P**	**08 54 44.6**	**+0.1**
PINE				IAmb	IAmb	08 54 45.9	
	comp=Z,6.8nm,0.8s						
NEW	**Newport**	**81.01**	**42**	P	**P**	**08 54 50.3**	**-0.5**
PNTR	**Pine Nut**	**82.10**	**52**	P	**P**	**08 54 57.5**	**+0.5**
PNTR				IAmb	IAmb	08 54 57.9	
	comp=Z,5.4nm,0.8s						
ARCES	**ARCESS Array B**	**82.36**	**342**	P	**P**	**08 54 57.7**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=72,slow=7.0,SNR=1.4						
	comp=Z,0.9nm,0.8s						
RYN	**Ryan**	**83.04**	**52**	P	**P**	**08 55 01.5**	**-0.3**
KVN	**Kaiserville**	**83.22**	**51**	P	**P**	**08 55 02.4**	**-0.3**
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**08 55 02.5**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=262,slow=6.1,SNR=31						
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**08 55 02.9**	**-0.1**
HRY	**Holter Researc**	**84.91**	**42**	P	**P**	**08 55 11.1**	**+0.1**
DLMT	**Dillon**	**84.91**	**44**	P	**P**	**08 55 10.7**	**-0.4**
YHL	**Hebgen Lake**	**86.03**	**44**	P	**P**	**08 55 17.4**	**+0.6**
DUG	**Dugway, Tooele**	**86.66**	**49**	P	**P**	**08 55 19.5**	**-0.3**
FINES	**FINESS Array B**	**86.74**	**335**	P	**P**	**08 55 17.7**	**-1.7**
	comp=Z,1.0nm,0.6s,baz=58,slow=5.2,SNR=1.8						
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	**87.93**	**45**	P	**P**	**08 55 24.2**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=199,slow=2.5,SNR=2.5						
	comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**147.89**	**91**	PKPbc	**PKPbc**	**09 02 20.9**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=322,slow=3.2,SNR=7.9						

MEX 12 08:45:57.1±0.5, 18°.00N×100°.22W, h64km±31km, MD3.2, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.57**	**98**	*i* P	Pn	08 46 08.9	-1.4
MEIG				*i* S	Sn	08 46 19.2	-0.6
CAIG	**El Cayaco**	**0.95**	**183**	*e*P	Pn	08 46 13.4	-1.3
CAIG				*e*S	Sn	08 46 25.2	-2.5
DAIG	**Los Arroyos**	**1.11**	**151**	*e*P	Pn	08 46 15.3	-1.5
DAIG				*e*S	Sn	08 46 29.7	-1.8

MEX 12 08:46:27.7±0.4, 16°.02N×98°.71W, h17km±42km, MD3.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.68**	**56**	*i* P	Pg	08 46 38.4	-2.6
PNIG				*i* S	Sg	08 46 47.0	-3.1
PNIG	**Pinotepa**	**0.68**	**56**	*i* P	Pg	08 46 38.4	-2.6
PNIG				*i* S	Sg	08 46 47.0	-3.1
CRIG	**Cruz Grande**	**0.82**	**331**	*i* P	Pb	08 46 40.7	-2.8
CRIG				*i* S	Sb	08 46 50.8	-3.6
CRIG	**Cruz Grande**	**0.82**	**331**	*i* P	Pb	08 46 40.7	-2.8
CRIG				*i* S	Sb	08 46 50.8	-3.6
MGIG	**Malinaltepec**	**1.21**	**4**	*e*P	Pn	08 46 45.4	-4.8
MGIG				*e*S	Sb	08 47 04.2	-1.7
MGIG	**Malinaltepec**	**1.21**	**4**	*e*P	Pn	08 46 46.6	-3.5
MGIG				*e*S	Sb	08 47 01.3	-4.6
YOIG	**Yosondua**	**1.40**	**53**	*e*P	Pn	08 46 52.1	-0.7
YOIG				*e*S	Sn	08 47 10.1	-1.0
YOIG	**Yosondua**	**1.40**	**53**	*e*P	Pn	08 46 49.3	-3.5
YOIG				*e*S	Sn	08 47 10.1	-1.0

IDC 12 09:02:59.1±3.9, 53°.50N×87°.79E, h0km, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=46.7km s-min=19.9km az=87.0

NNC 12 09:03:03.3±2.0, 53°.46N×87°.21E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=20.4km s-min=7.8km az=51.0, Suspected Mining explosion.

ISC 12 09:03:00.8±4.6, 53°.5N±0°.1×87°.5E±0°.3, h0km, n7, σ1s05/9, 2C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.62**	**286**	*i*		09 14 40.0	
	0.1nm,0.8s,baz=101,slow=310,SNR=1.0						
ZAA0	**Zalesovo Array**	**1.62**	**286**	⇑P	**Pn**	**09 03 30.8**	**+0.3**
	0.7nm,0.3s						
ZAA0				⇑S	**Sn**	**09 03 51.3**	**-0.7**
	3.7nm,0.3s						
ZALV	**Zalesovo Beam**	**1.62**	**286**	Pn	**Pb**	**09 03 31.1**	**-0.4**
	2.6nm,0.3s,baz=102,slow=14,SNR=14						
KURBB	**Kurchatov Arra**	**6.23**	**246**	Pn	**Pn**	**09 04 35.2**	**+1.4**
	0.3nm,0.3s,baz=60,slow=14,SNR=6.8						
	1.8nm,0.4s						
KURBB	**Kurchatov Arra**	**6.23**	**246**	⇓Pn	**Pn**	**09 04 35.2**	**+1.4**
	2.8nm,0.4s						
MK31	**Makanchi Array**	**7.53**	**208**	⇓Pn	**Pn**	**09 04 51.7**	**0.0**
	0.1nm,0.2s,baz=28,slow=14,SNR=13						
MK31				⇓Sn	**Sn**	**09 06 17.6**	**-0.1**
	0.4nm,0.5s						
MK31				⇓Lg	Lg	09 06 57.9	
	0.8nm,0.6s,baz=40,slow=27,SNR=4.2						
MKAR	**Makanchi Array**	**7.53**	**208**	Pn	**Pn**	**09 04 52.3**	**+0.6**
	0.3nm,0.3s,baz=28,slow=13,SNR=12						
MKAR				Sn	**Sn**	**09 06 16.3**	**-1.3**
	0.1nm,0.3s,baz=28,slow=25,SNR=3.6						
MKAR				Lg	Lg	09 06 59.2	
	0.1nm,0.3s,baz=25,slow=26,SNR=2.5						
	0.4nm,0.3s						

NEIC 12 09:08:05.2±1.7, 36°.50N±0°.01×121°.29W±0°.02, h10km±1km, Error ellipse: s-maj=3.1km s-min=2.7km az=47.0

*NEIC 12 09:08:05.9, 36°.58N×121°.18W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr-0.11; Mθθ-1.44; Mφφ 1.54; Mrθ

HERM	Elkhorn Road	0.45	308			Pb	09 08 15.3	+0.1
HFEM	San Felipe	0.47	347			Pg	09 08 15.3	0.0
PMPB	Monarch Peak	0.48	129			Pg	09 08 15.2	-0.3
PMPB	Monarch Peak	0.48	129	IAML			09 08 28.9	
	comp=N,3µm,0.6s							
PMPB				IAML			09 08 31.5	
	comp=E,3µm,0.5s							
PACP	Pacheco Peak	0.49	358			Pg	09 08 15.3	-0.3
HCOM	Corn Cob Canyo	0.51	316			Pb	09 08 16.0	-0.2
HMOM	Monterey	0.53	279			Pb	09 08 17.3	+0.8
SLD	San Luis Dam	0.56	4			Pg	09 08 16.2	-0.7
PSAM	San Ardo	0.58	148			Pg	09 08 17.3	-0.1
PPTM	Peach Tree Val	0.60	133			Pg	09 08 17.3	-0.4
JELB	Ellicott, Sant	0.61	312			Pb	09 08 17.8	0.0
PAPM	Alder Peak	0.61	187			Pn	09 08 19.0	-0.7
PJUM	Juniper Ridge	0.62	118			Pb	09 08 17.9	-0.2
SCKWR	San Luis Creek	0.68	13			Pg	09 08 19.1	-0.1
CADM	Anderson Res.	0.70	336			Pg	09 08 19.4	-0.1
JTGM	Trout Gulch Ro	0.70	316			Pb	09 08 20.3	+0.8
PSMM	Smith Mountain	0.70	129			Pb	09 08 19.4	-0.2
PHSB	Hesperia Broad	0.71	166			Pb	09 08 20.2	+0.5
JLAB	Laurel Hill	0.74	330			Pb	09 08 20.2	+0.2
JHLM	Holstrom Ranch	0.74	323			Pg	09 08 20.0	-0.3
PDRM	Domengine Ranc	0.75	104			Pg	09 08 20.2	-0.2
PHPM	Hope Ranch	0.76	135			Pg	09 08 20.0	-0.6
JRGM	Rodeo Gulch Ro	0.76	313			Pg	09 08 20.3	-0.4
AMC	Almaden	0.79	324			Pg	09 08 20.6	-0.6
PANM	San Antonio Re	0.79	158			Pn	09 08 21.6	-0.5
PARM	Anticline Ridg	0.80	110			Pb	09 08 21.1	+0.1
CCOB	Coe Ranch Numb	0.81	336			Pb	09 08 22.0	+0.7
PKD	Bear Valley Ra	0.82	134			Pg	09 08 21.0	-0.7
CMPM	Mikes Peak	0.84	357			Pg	09 08 21.9	-0.2
PPO	Portuguese Can	0.84	141			Pb	09 08 22.1	+0.3
PHCM	Hearst Castle	0.84	174			Pn	09 08 22.7	-0.1
PVCM	Vineyard Canyo	0.84	135			Pg	09 08 21.5	-0.6
PSTM	Stockdale Moun	0.85	134			Pg	09 08 21.6	-0.8
ARN	Arnold Ranch	0.85	346			Pg	09 08 22.2	-0.2
PWMM	Westland Maint	0.86	95			Pb	09 08 22.6	+0.5
C054	Valleyhaven Wa	0.87	329			Pb	09 08 22.6	+0.3
MHC	Mount Hamilton	0.87	340			Pg	09 08 22.6	-0.2
JJOM	Saint Joseph's	0.89	321			Pg	09 08 22.5	-0.6
SCCB	Santa Clara Co	0.90	328			Pb	09 08 23.2	+0.3
JBNB	Ben Lomond Mou	0.93	311			Pg	09 08 23.1	-0.8
PWKM	Work Ranch	0.93	139			Pb	09 08 23.6	+0.2
RAMR	Ramage Ranch	0.94	160			Pn	09 08 24.1	0.0
PHFM	Heflinger Ranc	0.95	132			Pb	09 08 23.6	-0.1
CMMM	Mount Mocho	0.95	349			Pg	09 08 23.7	-0.5
CTM	Castle Mountai	0.95	128			Pn	09 08 24.5	+0.1
JSGM	Saratoga Golf	0.99	321			Pg	09 08 24.3	-0.6
COSM	Mount Oso	0.99	355			Pg	09 08 24.7	-0.3
PCMM	Cholame Hills	0.99	135			Pb	09 08 24.6	+0.1
CMLM	Mount Lewis	1.00	342			Pg	09 08 24.6	-0.6
GHC	Gold Hill	1.01	133			Pg	09 08 24.5	-0.8
PCBM	Cambria	1.01	170			Pn	09 08 25.3	+0.2
CALM	Calaveras Res.	1.02	336			Pg	09 08 24.8	-0.8
BLDC	Black Mountain	1.03	163			Pn	09 08 25.5	+0.2
BLDC	Black Mountain	1.03	163			Pn	09 08 25.6	+0.2
PSRM	Scobie Ranch	1.04	129			Pb	09 08 25.3	+0.1
JSJM	St Joseph	1.05	321			Pg	09 08 25.1	-0.9
PKLM	Kerr Lake	1.06	134			Pg	09 08 25.5	-0.8
JBMM	Black Mountain	1.07	319			Pg	09 08 25.4	-1.1
PSNM	Stone Corral	1.07	133			Pb	09 08 25.9	0.0
TCAS	Cass Winery, P	1.07	147			Pn	09 08 26.3	+0.4
PMCM	McMillan Canyo	1.07	137			Pn	09 08 26.4	+0.4
ARDC	Alexander Ranc	1.08	167			Pn	09 08 26.2	+0.2
TCHL	Shandon	1.09	139			Pn	09 08 26.5	+0.4
PMRM	Maxey Ranch	1.11	131			Pb	09 08 26.3	-0.2
JJRM	Joaquin Road	1.11	318			Pb	09 08 26.3	-0.2
JFP	Foothills Park	1.12	319			Pb	09 08 26.1	-0.5
PAGB	Antelope Grade	1.14	133			Pb	09 08 26.5	-0.5
JSFB	Stanford Teles	1.14	321			Pb	09 08 26.5	-0.5
THIS	South End of C	1.16	133			Pb	09 08 27.1	-0.2
TRAM	Private Proper	1.17	136			Pb	09 08 27.1	-0.3
WENL	Wente Vineyard	1.17	341			Pb	09 08 27.2	-0.2
JRSC	Jasper Ridge	1.18	319			Pb	09 08 26.7	-0.8
BGH	Bear Gulch	1.19	314			Pb	09 08 27.4	-0.4
CVLM	Vallecito	1.20	338			Pn	09 08 27.5	-0.1
PTAM	Tassajara Cree	1.21	158			Pb	09 08 27.9	-0.3
PTRM	Twissleman Ran	1.22	135			Pb	09 08 28.0	-0.2
CNIC	Niles Canyon	1.22	333			Pn	09 08 27.6	-0.4
TSCN	Private Proper	1.23	142			Pn	09 08 28.0	-0.1
JHPM	Huddart Park	1.24	318			Pn	09 08 28.0	-0.2
LSDC	Los Osos Digit	1.27	164			Pn	09 08 28.6	0.0
EFD	Emergency Oper	1.27	160			Pn	09 08 28.8	+0.1
CDOM	Doolan Road	1.29	340			Pn	09 08 29.2	+0.2
VPDC	Valencia Peak	1.32	166			Pb	09 08 29.6	-0.3
CBSNC	Byron Hot Spri	1.33	347			Pn	09 08 29.5	+0.1
JCHM	Cahill Ridge	1.33	319			Pn	09 08 29.2	-0.4
DPD	Davis Peak	1.34	163			Pn	09 08 30.0	+0.3
DCD	Diablo Creek	1.35	165			Pn	09 08 29.9	+0.1
CMOB	Morgan Territo	1.36	342			Pn	09 08 29.8	-0.1
JCPM	Coyote Point	1.36	322			Pn	09 08 29.4	-0.5
CLCB	Lake Chabot	1.37	333			Pn	09 08 29.9	-0.1
CSLM	San Leandro Hi	1.38	331			Pn	09 08 30.0	-0.2
BGC	Bolinger Road	1.44	334			Pn	09 08 30.9	-0.2
CRHM	Round Hill Res	1.46	337			Pn	09 08 31.1	-0.1
JSBM	San Bruno Moun	1.47	322			Pn	09 08 30.4	-1.0
JMGM	Milagra Ridge	1.48	320			Pn	09 08 30.8	-0.7
CRPB	Russellman Par	1.48	340			Pn	09 08 31.2	-0.3
VOG	Valley Oaks Go	1.53	97	P		Pn	09 08 31.3	-0.9
	baz=281							
VOG				S		Sn	09 08 50.4	-1.3
	baz=281							
MCUB	Copperopolis B	1.54	19			Pn	09 08 31.5	-0.9
CYBM	Yerba Buena Is	1.56	326			Pn	09 08 31.6	-1.0
BKS	Berkeley--Byer	1.56	331			Pn	09 08 32.5	-0.1
CVPM	Vollmer Peak	1.56	331			Pn	09 08 32.7	0.0
VAK	Adit at Lawren	1.57	330			Pn	09 08 32.5	-0.2
SMMC	Simmler	1.58	139			Pn	09 08 32.9	-0.1
SMMC	Simmler	1.58	139	P		Pn	09 08 32.7	-0.3
	baz=323,SNR=81							
JPRM	Presidio of Sa	1.60	323			Pn	09 08 32.0	-1.1
BCH	Branch Mountai	1.64	144			Pn	09 08 33.8	-0.1
CPIM	Pinole Ridge	1.65	333			Pn	09 08 33.9	+0.1
CMB	Columbia Colle	1.67	25			Pn	09 08 33.5	-0.7
CMB	Columbia Colle	1.67	25	Pn		Pn	09 08 33.3	-0.9
CMB	Columbia Colle	1.67	25	IAML			09 08 59.5	
	comp=N,163nm,0.7s							
CMB				IAML			09 09 00.4	
	comp=E,208nm,0.8s							
CARC	Carrizo Plain	1.67	136			Pn	09 08 34.4	+0.2
CPMM	Point Molate	1.69	328			Pn	09 08 34.1	-0.3
PMLM	Mount Lospe	1.71	161			Pn	09 08 35.3	+0.6
KCC	Kaiser Creek	1.76	62			Pn	09 08 35.8	+0.4
MRHM	Rocky Hill	1.77	97			Pn	09 08 34.3	-1.3
HELL	Mitchell Peak,	1.81	84			Pn	09 08 35.9	-0.3
FARB	Farallon Islan	1.82	311			Pn	09 08 35.7	-0.4
VES	Vestal, Richgr	1.89	110			Pn	09 08 37.1	-0.1
VES	Vestal, Richgr	1.89	110	P		Pn	09 08 36.8	-0.3
	baz=294							
VES				S		Sn	09 09 00.7	+0.1
	baz=294							
SNT	Sears Point	1.91	331			Pn	09 08 37.1	-0.4
NOLM	Olema	1.94	322			Pn	09 08 37.5	-0.4
PKM	Mcpherson Peak	2.01	144			Pn	09 08 39.5	+0.5
PKM	Mcpherson Peak	2.01	144	P		Pn	09 08 38.7	-0.3
	baz=327,SNR=43							
NBRB	Beebe Ranch Br	2.02	330			Pn	09 08 38.8	-0.1
CVS	Carmenet Viney	2.05	333			Pn	09 08 38.9	-0.6
GATR	Gnd/Air Tx Cnt	2.06	162			Pn	09 08 39.9	+0.4
FIGC	Figueroa Mtn.	2.07	149			Pn	09 08 40.0	+0.3
MCCM	Marconi Confer	2.07	322	Pn		Pn	09 08 39.0	-0.6
MCCM				IAML			09 09 18.7	
	comp=E,175nm,0.7s							
MCCM				IAML			09 09 20.7	
	comp=N,147nm,0.7s							
MRDM	Red Cones	2.07	58			Pn	09 08 40.6	+0.7
NAPC	Atlas Peak	2.07	338			Pn	09 08 39.6	-0.1
MDPB	Devils Postpil	2.07	57			Pn	09 08 40.5	+0.6
MMPM	Mammoth Pass	2.10	58			Pn	09 08 41.8	+1.5
MINS	Minaret Summit	2.10	57			Pn	09 08 41.6	+1.3
MMSM	Mammoth Summit	2.10	58			Pn	09 08 41.6	+1.1
MLIM	Lincoln Peak	2.12	58			Pn	09 08 42.5	+1.8
OMMB	Old Mammoth Mi	2.12	58			Pn	09 08 41.4	+0.8
OMMB	Old Mammoth Mi	2.12	58	IAML			09 09 09.9	
	comp=N,268nm,0.6s							
OMMB				IAML			09 09 11.8	
	comp=E,205nm,0.6s							
MDYM	Dry Creek	2.13	57			Pn	09 08 42.0	+1.2
MDCM	Deadman Creek	2.14	56			Pn	09 08 41.5	+0.6
MMLB	Mammoth Lakes	2.16	57			Pn	09 08 43.0	+1.9
NJQ	Nojoqui County	2.17	155			Pn	09 08 41.6	+0.6
NTYM	Taylor	2.17	330			Pn	09 08 40.8	-0.2
MLCM	Laurel Creek C	2.18	59			Pn	09 08 42.8	+1.4
BCW	Bitter Crk WRg	2.18	136			Pn	09 08 42.6	+1.3
BCW	Bitter Crk WRg	2.18	136	Pn		Pn	09 08 42.1	+0.8
BCW	Bitter Crk WRg	2.18	136	IAML			09 09 22.6	
	comp=N,220nm,0.5s							
MEMM	East Mammoth H	2.19	58			Pn	09 08 43.4	+1.9
MGPM	Gravel Pit	2.19	59			Pn	09 08 43.7	+2.2
MCSM	Casa Diablo Ho	2.20	58			Pn	09 08 43.6	+1.9
MCBM	Casa Benchmark	2.20	59			Pn	09 08 43.7	+2.0
MCVM	Convict Lake	2.23	61			Pn	09 08 43.4	+1.4
SCHC	Scheelite	2.23	67			Pn	09 08 43.9	+1.8
MLAC	Mammoth, Mammo	2.24	60			Pn	09 08 44.5	+2.3
MLAC	Mammoth, Mammo	2.24	60	P		Pn	09 08 43.8	+1.6
	baz=241,SNR=6.9							
MLAC				S		Sn	09 09 12.4	+2.9
	baz=241							
MDRNC	Doe Ridge	2.24	59			Pn	09 08 44.2	+1.9
SYP	Santa Ynez Pea	2.25	152			Pn	09 08 42.6	+0.3
RCCR	Rock Creek Can	2.25	64			Pn	09 08 43.7	+1.2
LUL	Lundy Lake	2.26	47			Pn	09 08 44.1	+1.6
NBPM	Berryessa Peak	2.27	341			Pn	09 08 42.8	+0.5
WMD		2.30	66			Pb	09 08 45.9	-0.8
NDHM	Dunnigan Hills	2.30	347			Pn	09 08 42.9	+0.1
MTUM	Tungsten Hills	2.32	68			Pn	09 08 44.5	+1.3
WASM	Alta Sierra Ca	2.33	109			Pn	09 08 43.5	+0.1
MAC	Mark West Spri	2.33	331			Pn	09 08 43.0	-0.3
ORC	Owens River	2.37	61			Pn	09 08 45.8	+1.8
NHSM	Mount Saint He	2.39	334			Pn	09 08 44.2	+0.1
WLHM	Little Horse	2.41	98			Pn	09 08 44.9	+0.3
ISA	Isabella, Lake	2.42	110	Pn		Pn	09 08 44.9	+0.4
ISA				IAML			09 09 19.1	
	comp=E,77nm,0.8s							
ISA				IAML			09 09 19.6	
	comp=N,112nm,0.6s							
ISA	Isabella, Lake	2.42	110	P		Pn	09 08 44.8	+0.3
	baz=294,SNR=76							
ISA				S		Sn	09 09 14.9	+1.1
	baz=294							
ARVC	Arvin	2.42	124			Pn	09 08 45.0	+0.6
ARVC	Arvin	2.42	124	P		Pn	09 08 44.8	+0.3
	baz=308,SNR=29							
ARVC				Sb		Sb	09 09 17.3	-1.0
	baz=308							
SBC	Santa Barbara	2.43	148	Pb		Pb	09 08 47.4	-1.5
	baz=331							
SBC				Sb		Sb	09 09 17.8	-0.8
	baz=331							
TEJ	El Tejon	2.46	121			Pn	09 08 45.1	+0.1
BENR	Benton	2.46	60			Pn	09 08 46.8	+1.5
MCDM	Chidago Canyon	2.48	65			Pn	09 08 47.6	+2.1
GAXM	Alexander Vall	2.49	332			Pn	09 08 44.6	-0.8
MRCM	Red Rock Canyo	2.49	62			Pn	09 08 47.8	+2.2
TIN	Tinemaha, Big	2.50	77	P		Pn	09 08 46.9	+1.3
	baz=259,SNR=13							
TIN				S		Sn	09 09 18.3	+2.5
	baz=259							
MNRC	McLaughlin Min	2.53	339			Pn	09 08 46.0	-0.1
CWC	Cottonwood Cre	2.57	91			Pn	09 08 47.7	+1.0
CWC	Cottonwood Cre	2.57	91	P		Pn	09 08 47.4	+0.7
	baz=274							
CWC				S		Sn	09 09 19.1	+1.4
	baz=274							
MLNR	Milner Canyon	2.57	64			Pn	09 08 47.7	+1.0
GSSM	Skaggs Springs	2.58	328			Pn	09 08 46.1	-0.6
GDXM	Geysers	2.59	333	Pn		Pn	09 08 46.9	0.0
BSM	San Miguel Isl	2.59	163			Pn	09 08 46.8	0.0
EMB	Emerald Bay	2.62	20			Pn	09 08 48.5	+1.1
SUTB	Sutter Butte	2.74	352			Pn	09 08 47.3	-1.5
LHV	Little Huntoon	2.80	51			Pn	09 08 49.6	0.0
HOPS	Hopland Field	2.85	330	Pn		Pn	09 08 50.4	-0.1
PNTR	Pine Nut	2.89	27			Pn	09 08 52.2	+1.1
PNTR				IAML			09 09 50.4	
	comp=E,148nm,0.9s							
MPK	Martis Peak	2.94	19			Pn	09 08 51.8	-0.1
YERR	Yerington	2.94	33			Pn	09 08 52.0	+0.2
CCAC	Calif City Air	2.97	116			Pn	09 08 53.4	+1.2
CCAC				IAML			09 09 49.0	
	comp=N,127nm,1.1s							
CCAC				IAML			09 09 51.0	
	comp=E,116nm,1.1s							
LCH	Last Change Ra	2.99	75			Pn	09 08 52.9	+0.4
LCH				IAML			09 09 43.0	
	comp=N,63nm,0.8s							
LCH				IAML			09 09 50.8	
	comp=E,75nm,0.7s							
RYN	Ryan	3.03	45	Pn		Pn	09 08 53.9	+0.9
RYN				IAML			09 09 38.5	
	comp=N,92nm,0.5s							
RYN				IAML			09 09 40.1	
	comp=E,120nm,0.6s							
NVAR	Mina Array Bea	3.03	50	Pn		Pn	09 08 53.0	-0.1
ORV	Oroville	3.04	357			Pn	09 08 53.1	+0.2
VCNR	Virginia City	3.05	24	Pn		Pn	09 08 53.4	+0.1
VCNR				IAML			09 09 45.3	
	comp=N,108nm,1.0s							
VCNR				IAML			09 09 47.9	
	comp=E,126nm,0.7s							
LRMC	Laurel Mtn Rad	3.09	109	P		Pn	09 08 53.8	0.0
	baz=292							
LRMC				Sb		Sb	09 09 38.0	+0.3
	baz=292							
MPMC	Manual Prospec	3.09	97	P		Pn	09 08 54.5	+0.6
	baz=281,SNR=37							
EDW2	Edwards Air Fo	3.13	121	P		Pn	09 08 54.3	+0.1
	baz=304,SNR=14							
EDW2				Sb		Sb	09 09 38.5	-0.1
	baz=304							
NV11	Mina Array Sit	3.13	51	Pn		Pn	09 08 56.2	+1.9
NV11				IAML			09 09 50.7	
	comp=N,41nm,1.0s							
GRAC	Grapevine Rang	3.17	80			Pn	09 08 55.8	+1.0
GRAC				IAML			09 10 02.7	
	comp=N,90nm,0.8s							
GRAC	Grapevine Rang	3.17	80	Pb		Pb	09 09 02.6	+1.0
	baz=263							
BEKR	Beckworth	3.42	12			Pn	09 08 58.0	-0.4
BEKR				IAML			09 09 54.7	
	comp=N,38nm,0.6s							
BEKR				IAML			09 09 54.9	
	comp=E,72nm,0.8s							
PASC	Pasadena Art C	3.44	132			Pn	09 08 58.8	+0.3
PAHR	Pah Rah Range	3.51	24			Pn	09 08 59.9	+0.3
PAHR				IAML			09 09 56.2	
	comp=N,32nm,0.9s							
PAHR				IAML			09 10 09.3	
	comp=E,34nm,1.8s							
FURC	Furnace Creek,	3.55	90	P		Pn	09 09 00.8	+0.9
	baz=273							
KVN	Kaiserville	3.56	44			Pn	09 09 01.6	+1.2
KVN				IAML			09 09 58.5	
	comp=E,50nm,1.5s							
KVN				IAML			09 10 01.1	
	comp=N,65nm,1.1s							
SNCC	San Nicolas Is	3.56	156	Pn		Pn	09 09 00.5	+0.3
SNCC				IAML			09 09 35.9	
	comp=E,37nm,4.1s							
SNCC				IAML			09 10 46.8	
	comp=N,40nm,4.3s							
SNCC	San Nicolas Is	3.56	156	P		Pn	09 08 59.8	-0.4
	baz=338							
TPH	Tonopah	3.58	63	Pn		Pn	09 09 00.6	0.0
QSM	Queen of Sheba	3.60	98			Pn	09 09 01.0	+0.3
QSM				IAML			09 10 08.8	
	comp=N,26nm,0.7s							
BFSC	Mount Baldy Ra	3.73	127	P		Pn	09 09 03.4	+0.9
	baz=310							
GWY	Greenwater Val	3.73	94			Pn	09 09 01.1	-1.5
GWY				IAML			09 10 09.5	
	comp=E,27nm,0.9s							
GSC	Goldstone, Bar	3.82	107			Pn	09 09 03.0	-0.8
GSC				IAML			09 10 15.4	
	comp=N,25nm,0.8s							
GSC				IAML			09 10 20.6	
	comp=E,37nm,0.7s							
GSC	Goldstone, Bar	3.82	107	P		Pn	09 09 04.3	+0.5
	baz=291							
CIS	Catalina Islan	3.89	142	P		Pn	09 09 04.5	-0.3
	baz=325							
Q09A	Carvers	3.98	53	Pn		Pn	09 09 04.5	-1.5
TPNV	Topopah Spring	4.05	82			Pn	09 09 08.1	+1.0
TPNV				IAML			09 10 25.3	
	comp=E,30nm,1.1s							
TPNV				IAML			09 10 41.3	
	comp=E,28nm,0.9s							
TPNV	Topopah Spring	4.05	82	P		Pn	09 09 08.3	+1.2
	baz=266,SNR=18							
SHOC	Shoshone, Teco	4.08	97	P		Pn	09 09 08.1	+0.7
	baz=281							
KMRM	Mail Ridge	4.17	333	Pn		Pn	09 09 08.7	+0.2
KMRM				IAML			09 10 56.4	
	comp=E,29nm,3.9s							
KMRM				IAML			09 10 58.5	
	comp=N,28nm,3.2s							
SCI2	San Clemente I	4.18	147	P		Pn	09 09 09.1	+0.4
	baz=330							
BBRC	Big Bear Solar	4.21	121	P		Pn	09 09 09.8	+0.6
	baz=305							
ELS	Elsinore Mount	4.26	131	Pn		Pn	09 09 09.7	-0.1
KSMM	Slide Mountain	4.32	329			Pn	09 08 12.8	+2.2
HEC	Hector,Ludlow	4.36	111	P		Pn	09 09 11.2	+0.1
	baz=295,SNR=14							
TUQ	Turquoise Moun	4.47	102	P		Pn	09 09 13.1	+0.4
	baz=287							
S11A	Rachel	4.55	74	Pn		Pn	09 09 12.8	-1.2
KHMM	Horse Mountain	4.76	337	Pn		Pn	09 09 17.2	+0.5
KHMM				IAML			09 10 25.7	
	comp=E,32nm,3.2s							
KHMM				IAML			09 11 02.9	
	comp=N,24nm,2.8s							
R11A	Troy Canyon, C	4.88	66	Pn		Pn	09 09 16.7	-1.7
GMRC	Granite Mounta	4.88	109	P		Pn	09 09 18.0	-0.4
	baz=293,SNR=5.6							
PFO	Pinyon Flats O	4.90	125			Pn	09 08 13.8	-0.3
PFO	Pinyon Flats O	4.90	125	P		Pn	09 09 19.6	+1.0
	baz=309							
SHPR	Sheep Range	4.92	88	Pn		Pn	09 09 20.7	+1.7
PMD	Palm Desert	4.93	124			Pn	09 09 18.2	-0.7
PMD				IAML			09 10 07.8	
	comp=N,6.6nm,4.2s							
PMD				IAML			09 10 47.3	
	comp=E,6.0nm,1.4s							
BELC	Belle Mtn. Jos	4.99	119	P		Pn	09 09 20.2	+0.3
	baz=303							
BMN	Battle Mountai	5.03	38	Pn		Pn	09 09 18.7	-1.8
BMN				IAML			09 10 45.4	
	comp=N,10nm,0.6s							
PRN	Pahroc Range	5.06	78	Pn		Pn	09 09 20.8	-0.1
PRN				IAML			09 10 57.7	
	comp=N,17nm,1.0s							
PRN				IAML			09 11 13.4	
	comp=E,21nm,1.0s							
MONP2	Monument Peak	5.39	131	P		Pn	09 09 26.1	+0.6
	baz=315							
BAR	Barrett	5.39	134	Pn		Pn	09 09 25.8	+0.5
MOD	Modoc Plateau	5.43	8	Pn		Pn	09 09 23.5	-2.4
MOD				IAML			09 11 16.8	
	comp=N,9.5nm,1.6s							
MOD				IAML			09 11 17.9	
	comp=E,7.4nm,2.4s							
IRM	Iron Mountain	5.53	113	P		Pn	09 09 26.9	-0.3
	baz=298							
CBX	Cerro Bola	5.66	136	Pn		Pn	09 09 29.1	-0.1
RMX	La Rumorosa	5.80	131	Pn		Pn	09 09 31.5	+0.5
CCUT	Cedar City	6.41	78	Pn		Pn	09 09 38.0	-1.5
LCMT	Little Creek M	6.46	83	Pn		Pn	09 09 38.0	-2.1

KRNET ***12*** *09:12:00.7±0.1, 39.°15N×74.°12E, mb3.1*
ISU ***12*** *09:12:06, 40.°07N×73.°74E, h14km*
ISC 12 09:12:09.1±2.2, 39.°61N±0.°10×73.°54E±0.°08, h29km, n7,
σ1°28/12, 8C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSTA	Tashata	1.27	320	S		Sb	09 12 47.4	-0.9
ANR	Andizhan	1.46	322	S		Sb	09 12 55.8	+2.0
FRG	Fergana	1.55	300	P		Pn	09 12 34.6	-0.2
FRG				S		Sb	09 12 55.4	-1.1
ARLS	Aral	2.33	15	⇑*i*P		Pn	09 12 45.9	+0.3
	baz=3.0							
ARLS				⇑*i*S		Sb	09 13 18.9	+0.1
	baz=3.0							
GAR	Garm	2.58	257	⇑*e*P		Pn	09 12 49.5	+0.5
	baz=68							
GAR				⇑*i*S		Sb	09 13 25.2	-0.8
	baz=68							
UCH	Uchtor	2.72	15	⇑*i*P		Pn	09 12 51.5	+0.3
	baz=5.0							
UCH				⇑*i*S		Sb	09 13 28.5	-1.8
	baz=5.0							
EKS2	Erkin-Say	3.05	3	⇑*e*P		Pn	09 12 57.0	+1.5
	baz=56							
EKS2				⇑*i*S		Sb	09

H03N2	**Juan Fernandez**	**19.57**	**188**	T		T	09 43 58.3		
	baz=9.2,slow=74,SNR=148								
H03N3	**Juan Fernandez**	**19.58**	**188**	T		T	09 43 56.7		
	baz=9.2,slow=74,SNR=123								
CLDB	**Colider**	**19.58**	**83**	*eP*		**Pn**	**09 24 30.4**	**-0.4**	
CBOC	**Ciudad Bolivar**	**19.76**	**359**	*eP*		**P**	**09 24 29.7**	**-1.3**	
RUSC	**La Rusia**	**19.94**	**7**	*eP*		**Pn**	**09 24 36.0**	**+0.5**	
CPUP	**Villa Florida**	**21.03**	**128**	P		**P**	**09 24 45.6**	**+1.1**	
	comp=Z,1.5nm,0.7s,baz=321,slow=10,SNR=3.1								
	comp=Z,1.5nm,0.7s								
NPGB	**Novo Progresso**	**21.06**	**73**	*eP*		**P**	**09 24 46.4**	**+1.5**	
ZARC	**Zaragoza, Cauc**	**21.39**	**2**	*eP*		**P**	**09 24 48.8**	**+0.5**	
ITTB	**Itaituba**	**21.81**	**66**	*eP*		**P**	**09 24 55.0**	**+2.1**	
BOAV	**Boa Vista**	**22.12**	**44**	P		**P**	**09 24 53.6**	**-2.6**	
BOAV				IAmb		IAmb	09 25 14.9		
	comp=Z,3.2nm,0.7s								
BOAV	**Boa Vista**	**22.12**	**44**	*eP*		**P**	**09 24 59.1**	**+2.8**	
SJCC	**San Jacinto, C**	**23.77**	**1**	*eP*		**P**	09 25 23.9	+11	
BAUV	**El Baul**	**24.02**	**19**	P		**P**	**09 25 12.2**	**-2.7**	
BAUV				IAmb		IAmb	09 25 32.6		
	comp=Z,22nm,1.0s								
PLCA	**Paso Flores**	**26.97**	**172**	P		**P**	**09 25 42.2**	**+0.7**	
	comp=Z,2.1nm,0.7s,baz=346,slow=8.3,SNR=7.0								
	comp=Z,2.1nm,0.7s								
TX31	**Lajitas Ar. Si**	**50.92**	**328**	P		**P**	**09 29 01.7**	**+0.8**	
TX31				IAmb		IAmb	09 29 02.8		
	comp=Z,4.4nm,0.9s								
TX32	**Lajitas Array**	**50.92**	**328**	P		**P**	**09 29 01.9**	**+1.0**	
TX32				IAmb		IAmb	09 29 02.8		
	comp=Z,1.5nm,0.9s								
TXAR	**Lajitas Array**	**50.92**	**328**	P		**P**	**09 29 02.1**	**+1.2**	
	comp=Z,1.1nm,0.7s,baz=154,slow=9.0,SNR=15								
TXAR				LR		LR	09 48 01.9		
	comp=Z,105nm,21.9s,baz=20,slow=33								
	comp=Z,1.1nm,0.7s								
TXAR	**Lajitas Array**	**50.92**	**328**	P		**P**	**09 29 01.7**	**+0.8**	
ABTX	**Abilene, Hawle**	**51.78**	**334**	P		**P**	**09 29 04.6**	**-2.6**	
Q44A	**Meyer Farm, Va**	**54.13**	**347**	P		**P**	**09 29 22.0**	**-2.3**	
NVAR	**Mina Array Bea**	**65.73**	**324**	P		**P**	**09 30 45.0**	**+0.8**	
	comp=Z,0.4nm,0.7s,baz=123,slow=5.5,SNR=6.8								
	comp=Z,0.4nm,0.7s								
SNAA	**Sanae**	**71.37**	**161**	IAmb		IAmb	09 31 20.3		
	comp=Z,1.4nm,0.7s								
SNAA				P		**P**	**09 31 20.4**	**+1.8**	
TORD	**Torodi Ar. Bea**	**81.16**	**74**	P		**P**	**09 32 16.2**	**+1.1**	
	comp=Z,3.4nm,0.7s,baz=258,slow=4.6,SNR=14								
	comp=Z,3.4nm,0.7s								
H11N3	**WAKE ISLAND Hyl**	**20.19**	**285**	T		T	11 49 51.1		
	baz=96,slow=74,SNR=39								
H11N2	**WAKE ISLAND Hyl**	**20.21**	**285**	T		T	11 49 36.7		
	baz=96,slow=74,SNR=31								
H11N1	**WAKE ISLAND Hyl**	**20.21**	**285**	T		T	11 49 53.3		
	baz=96,slow=74,SNR=18								
H11S2	**WAKE ISLAND Hyl**	**20.27**	**283**	T		T	11 49 53.2		
	baz=94,slow=74,SNR=5.6								
H11S1	**WAKE ISLAND Hyl**	**20.28**	**283**	T		T	11 49 40.5		
	baz=94,slow=74,SNR=5.7								
H11S3	**WAKE ISLAND Hyl**	**20.29**	**283**	T		T	11 49 53.1		
	baz=94,slow=74,SNR=5.1								
ASAR	**Alice Springs**	**132.72**	**218**	PKP		**PKPdf**	**09 39 14.8**	**+0.5**	
	comp=Z,0.4nm,0.6s,baz=137,slow=2.5,SNR=5.4								
WRA	**Warramunga Arr**	**135.21**	**222**	PKP		**PKPdf**	**09 39 19.5**	**+0.5**	
	comp=Z,0.7nm,0.9s,baz=134,slow=2.2,SNR=7.6								
SONM	**Songino Array**	**146.25**	**358**	PKPbc		**PKPab**	**09 39 40.7**	**+0.6**	
	comp=Z,1.6nm,0.6s,baz=343,slow=1.8,SNR=8.3								
KSRS	**Korea Array**	**148.66**	**322**	PKPbc		**PKiKP**	**09 39 47.2**	**-0.2**	
	comp=Z,1.2nm,0.6s,baz=346,slow=0.9,SNR=7.9								

*HVO **12** 09:24:34.9±1.8, 19°.184N±0°.005×155°.64W±0°.01, h2km±7km, ML3.1/23,ML3.0/52(NEIC), Error ellipse: s-maj=1.6km s-min=0.8km az=93.0*

NEIC 12 09:24:35.2±1.5, 19°.18N±0°.01×155°.64W±0°.01, h10km±1km, Error ellipse: s-maj=2.7km s-min=1.9km az=229.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHU	**Kahuku**	**0.07**	**20**	Pg	Pg	09 24 37.8	+0.1
HPO	**Honuapo**	**0.12**	**138**		Pg	09 24 38.3	+0.1
HPO					Sg	09 24 40.7	+0.5
HTC	**Hot Caves**	**0.24**	**76**		Pg	09 24 40.2	0.0
AIN	**Ainahou**	**0.26**	**42**		Pg	09 24 40.6	0.0
AIN					Sg	09 24 44.3	+0.2
AIN	**Ainahou**	**0.26**	**42**	IAML		09 24 46.5	
	comp=N,4μm,0.3s						
AIN				IAML		09 24 48.6	
	comp=E,3μm,0.3s						
MWH	**Moku'aweowe**	**0.30**	**8**		Pg	09 24 41.1	-0.5
MWH	**Moku'aweowe**	**0.30**	**8**		Sg	09 24 45.8	0.0
MWH	**Moku'aweowe**	**0.30**	**8**	IAML		09 24 47.5	
	comp=N,2μm,0.3s						
MWH				IAML		09 24 48.5	
	comp=E,3μm,0.6s						
HLP	**Hilina Pali**	**0.33**	**70**		Pg	09 24 42.4	+0.4
HLP	**Hilina Pali**	**0.33**	**70**		Sg	09 24 47.3	+0.9
HLP				IAML		09 24 51.3	
	comp=E,3μm,0.6s						
ALEP	**Alea Permanent**	**0.36**	**359**		Pg	09 24 42.1	-0.4
ALEP					Sg	09 24 48.0	+0.7
MLOA	**Mauna Loa Obse**	**0.36**	**10**		Pg	09 24 42.1	-0.5
MLOA	**Mauna Loa Obse**	**0.36**	**10**		Sg	09 24 47.1	-0.3
MLOA				IAML		09 24 48.2	
	comp=N,4μm,0.3s						
MLOA				IAML		09 24 48.3	
	comp=E,3μm,0.3s						
SDHHI	**Sand Hill**	**0.39**	**58**		Pg	09 24 43.0	0.0
SDHHI					Sg	09 24 47.6	-0.5
SDHHI				IAML		09 24 52.1	
	comp=N,2μm,0.2s						
WRMHI	**West Rim**	**0.39**	**55**		Pg	09 24 42.5	-0.6
WRMHI	**West Rim**	**0.39**	**55**		Sg	09 24 49.0	+0.7
MLH	**Mauna Loa**	**0.39**	**38**		Pg	09 24 43.1	0.0
MLH	**Mauna Loa**	**0.39**	**38**		Sg	09 24 49.5	+1.1
MLH				IAML		09 24 55.0	
	comp=E,1μm,0.4s						
MLH				IAML		09 24 55.7	
	comp=N,2μm,0.4s						
CPH	**Captain Cook**	**0.40**	**319**		Pg	09 24 42.7	-0.5
CPH					Sg	09 24 49.0	+0.5
RIM	**Rim**	**0.41**	**58**		Pg	09 24 42.1	-1.2
RIM					Sg	09 24 49.2	+0.5
RIM				IAML		09 24 52.6	
	comp=E,1μm,0.6s						
RIM				IAML		09 24 52.6	
	comp=N,1μm,0.4s						
UWE	**Uwekahuna**	**0.41**	**54**		Pg	09 24 43.1	-0.2
UWE					Sg	09 24 48.9	+0.2
UWE				IAML		09 24 56.3	
	comp=N,2μm,0.4s						
NPH	**North Pit**	**0.41**	**56**	Pg	Pg	09 24 42.3	-1.1
OBL	**Observatory Le**	**0.41**	**55**		Pg	09 24 41.7	-1.6
OBL					Sg	09 24 49.4	+0.6
KKO	**Keanakako`i**	**0.41**	**59**		Pg	09 24 42.7	-0.7
KKO				IAML		09 24 51.1	
	comp=N,2μm,1.1s						
UWB	**Uwekahuna B**	**0.42**	**55**		Pg	09 24 42.8	-0.7
UWB					Sg	09 24 48.9	-0.2
BYL	**Byron's Ledge**	**0.43**	**57**		Pg	09 24 42.7	-0.9
BYL					Sb	09 24 50.6	-0.9
SBLHI	**Steaming Bluff**	**0.43**	**55**		Pg	09 24 43.2	-0.5
SBLHI					Sg	09 24 49.5	+0.1
SBLHI				IAML		09 24 56.3	
	comp=N,2μm,0.6s						
SBLHI				IAML		09 24 57.9	
	comp=E,1μm,0.6s						
HATHI	**Halema'uma'u T**	**0.43**	**56**		Pg	09 24 43.0	-0.7
HATHI					Sg	09 24 49.8	+0.3
HATHI				IAML		09 24 50.8	
	comp=N,1μm,0.5s						
HATHI				IAML		09 24 51.7	
	comp=E,1μm,1.0s						
RSD	**Rainshed**	**0.44**	**51**		Pg	09 24 43.9	-0.1
PUH	**Pauahi**	**0.44**	**64**		Pg	09 24 43.2	-0.8
PUH					Sg	09 24 49.6	-0.3
PUH				IAML		09 24 56.7	
	comp=N,1μm,0.6s						
PUH				IAML		09 24 58.8	
	comp=E,1μm,0.4s						
HMH	**Humu'ula Sheep**	**0.45**	**19**		Pg	09 24 43.5	-0.6
HMH	**Humu'ula Sheep**	**0.45**	**19**		Sg	09 24 50.7	+0.7
HMH				IAML		09 24 52.8	
	comp=N,3μm,0.3s						
HMH				IAML		09 24 52.9	
	comp=E,3μm,0.4s						
KHLU	**Kahalu`u**	**0.47**	**330**		Pg	09 24 44.0	-0.5
KHLU					Sg	09 24 51.3	+0.5
KHLU				IAML		09 24 55.6	
	comp=E,2μm,0.2s						
KNHH	**Kane Nui o Ham**	**0.49**	**66**		Pg	09 24 44.1	-0.7
KNHH					Sg	09 24 52.1	+0.8
STCH	**Steam Cracks**	**0.53**	**67**		Pg	09 24 45.0	-0.6
HUH	**Hualalai**	**0.53**	**340**		Pg	09 24 45.4	-0.3
NPOC	**North of Pu'u**	**0.54**	**67**	Pg	Pg	09 24 44.4	-1.5
NPOC					Sg	09 24 52.0	-1.0
NPOC				IAML		09 24 57.3	
	comp=E,826nm,0.7s						
NPOC				IAML		09 24 58.6	
	comp=N,771nm,0.5s						
JCUZ	**Jacuzzi**	**0.55**	**68**	Pg	Pg	09 24 45.6	-0.3
JCUZ					Sg	09 24 53.7	+0.5
POHA	**Pohakuloa**	**0.58**	**10**		Pg	09 24 45.7	-0.9
POHA				IAML		09 24 55.2	
	comp=N,1μm,0.6s						
POHA				IAML		09 25 03.2	
	comp=N,1μm,0.6s						
JOKA	**Jonika Flow**	**0.65**	**67**		Pg	09 24 46.1	-1.7
JOKA					Sg	09 24 56.2	-0.3
HPAH	**Hawaii Prepara**	**0.85**	**356**	Pg	Pg	09 24 50.7	-0.9
HPAH				IAML		09 25 18.7	
	comp=N,714nm,1.2s						
HPAH				IAML		09 25 20.6	
	comp=E,732nm,0.6s						
MHA	**Mahukona**	**1.03**	**346**	Pg	Pg	09 24 52.2	-2.9
HLK	**Haleakala**	**1.67**	**340**	Pn	Pn	09 25 04.0	-0.8
KHLH	**Kahului Airpor**	**1.86**	**337**	Pn	Pn	09 25 05.9	-1.3
OPA	**Opana**	**3.34**	**319**	Pn	Pn	09 25 26.8	-0.7

IDC 12 09:25:05.3±3.4, 53°.62N×88°.11E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=34.9km s-min=18.9km az=86.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**281**	*i*		09 37 01.7	
	0.1nm,0.9s,baz=99,slow=312,SNR=1.7						
ZALV	**Zalesovo Beam**	**1.98**	**281**	Pn	Pn	09 25 40.0	0.0
	1.9nm,0.3s,baz=101,slow=17,SNR=12						
ZALV				Sn	Sb	09 26 07.2	-0.1
	2.5nm,0.3s,baz=94,slow=27,SNR=16						
KURBB	**Kurchatov Arra**	**6.62**	**247**	Pn	Pn	09 26 44.0	+0.3
	baz=61,slow=14,SNR=5.1						
KURBB				Lg	Lg	09 28 34.4	
	0.1nm,0.3s,baz=63,slow=35,SNR=8.4						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.79**	**211**	Pn	Pn	09 27 01.0	+1.2
	0.1nm,0.3s,baz=30,slow=13,SNR=5.0						
MKAR				Sn	Sn	09 28 29.0	+0.3
	0.1nm,0.3s,baz=28,slow=29,SNR=3.5						
MKAR				Lg	Lg	09 29 11.0	
	0.1nm,0.3s,baz=30,slow=29,SNR=5.9						
	0.2nm,0.4s						

*IDC **12** 09:39:03.9±0.9, 22°.58S×173°.32E, h0km, mb3.9/8, mbtmp3.9/10, ML5.4/1, MS3.2/5, Error ellipse: s-maj=29.7km s-min=18.6km az=148.0*

*NEIC **12** 09:39:05.1±1.4, 22°.6S±0°.2×173°.2E±0°.1, h10km±2km, mb4.3/6, Error ellipse: s-maj=34.0km s-min=14.9km az=341.0*

ISC 12 09:39:08.3±0.8, 22°.6S±0°.1×173°.25E±0°.09, h32km, n30, σ1s79/26, mb4.0/12, MS3.2/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.97**	**282**	Pn	**Pn**	**09 40 18.8**	**-1.9**
PINNC	**Pines Island,**	**5.36**	**269**	Pn	**Pn**	**09 40 23.9**	**-2.2**
OUENC	**Ouen Island, N**	**5.93**	**271**	Pn	**Pn**	**09 40 31.4**	**-2.5**
ONTNC	**Ouen Toro**	**6.29**	**271**	Pn	**Pn**	**09 40 35.5**	**-3.4**
DZM	**Mont Dzumac**	**6.32**	**274**	Pn	**Pn**	**09 40 41.0**	**+1.6**
	6.5nm,0.5s,baz=119,slow=11,SNR=17						
DZM				Sn	**Sn**	**09 41 53.7**	**+3.1**
	0.5nm,0.3s,baz=135,slow=21,SNR=1.6						
DZM	**Mont Dzumac**	**6.32**	**274**	*e*Pn	Pn	09 40 23.2	-16
	36nm,1.4s						
DZM				*e*LR	LR	09 41 46.5	
	comp=Z,504nm,24.7s						
MSVF	**Nonsavu**	**6.62**	**44**	Pn	**Pn**	**09 40 43.6**	**+0.1**
	2.6nm,0.3s,baz=230,slow=19,SNR=11						
MSVF				Sn	**Sn**	**09 41 58.9**	**+1.0**
	baz=298,slow=17						
	3.8nm,0.3s						
MSVF	**Nonsavu**	**6.62**	**44**	Pn	**Pn**	**09 40 42.0**	**-1.4**
RAR	**Rarotonga**	**25.06**	**92**	LR	LR	09 51 59.9	
	comp=Z,29nm,20.7s,baz=265,slow=31						
CTA	**Charters Tower**	**25.26**	**271**	LR	LR	09 54 02.6	
	comp=Z,50nm,19.2s,baz=84,slow=36						
STKA	**Stephens Creek**	**29.53**	**245**	P	**P**	**09 45 11.6**	**+1.6**
	2.8nm,1.0s,baz=81,slow=12,SNR=2.6						
STKA				LR	LR	09 54 49.3	
	comp=Z,48nm,19.3s,baz=40,slow=32						
	2.8nm,1.0s						
PPT2	**Papeete2**	**35.20**	**89**	*e*LR	LR	09 55 15.9	
	comp=Z,83nm,25.5s						
WR0	**Warramunga Arr**	**36.10**	**267**	P	**P**	**09 46 06.1**	**-1.4**
WR0				IAmb	IAmb	09 46 15.8	
	comp=Z,6.2nm,1.4s						
AS31	**Alice Springs**	**36.12**	**260**	P	**P**	**09 46 04.9**	**-2.8**
AS31				IAmb	IAmb	09 46 26.2	
	comp=Z,1.2nm,1.2s						
ASAR	**Alice Springs**	**36.12**	**260**	P	**P**	**09 46 08.3**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=78,slow=8.6,SNR=6.9						
	comp=Z,0.8nm,0.9s						
ASAR	**Alice Springs**	**36.12**	**260**	P	**P**	**09 46 05.0**	**-2.7**
WB2	**Warramunga Arr**	**36.28**	**267**	P	**P**	**09 46 07.3**	**-1.7**
WB2				IAmb	IAmb	09 46 12.1	
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**36.29**	**267**	P	**P**	**09 46 09.6**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=97,slow=8.5,SNR=11						
WRA				LR	LR	09 59 50.2	
	comp=Z,70nm,20.4s,baz=70,slow=34						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**36.29**	**267**	P	**P**	**09 46 08.8**	**-0.4**
FORT	**Forrest**	**40.97**	**249**	P	**P**	**09 46 47.1**	**-1.1**
FORT				IAmb	IAmb	09 47 25.0	
	comp=Z,13nm,0.9s						
FITZ	**Fitzroy Crossi**	**44.72**	**267**	P	**P**	**09 47 18.4**	**-0.5**
TAOE	**Nuku Hiva Isla**	**46.70**	**81**	*e*LR	LR	10 00 34.0	
	comp=Z,92nm,28.5s						
KAPI	**Kappang**	**54.49**	**280**	LR	LR	10 16 12.4	
	comp=Z,20nm,18.1s,baz=74,slow=41						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**09 50 01.7**	**+0.8**
	comp=Z,4.8nm,1.1s,baz=345,slow=1.2,SNR=11						
	comp=Z,4.8nm,1.1s						
QSPA	**South Pole Qui**	**67.47**	**180**	P	**P**	**09 50 01.2**	**+0.4**
PETK	**Petropavlovsk-**	**76.60**	**350**	P	**P**	**09 50 57.2**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=140,slow=9.1,SNR=2.7						
	comp=Z,1.1nm,0.8s						
NVAR	**Mina Array Bea**	**88.28**	**47**	P	**P**	**09 51 57.1**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=235,slow=7.6,SNR=2.6						
	comp=Z,0.3nm,0.8s						
SONM	**Songino Array**	**92.16**	**322**	P	**P**	**09 52 14.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=163,slow=1.5,SNR=1.6						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**92.37**	**16**	P	**P**	**09 52 14.0**	**-1.1**
	comp=Z,0.8nm,1.0s,baz=236,slow=6.5,SNR=5.6						
	comp=Z,0.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**167.63**	**222**	PKPab	**PKPab**	**10 00 19.6**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=131,slow=4.0,SNR=2.1						

*IDC **12** 09:46:54.4±1.0, 22°.59S×173°.36E, h0km, mb3.9/9, mbtmp4.0/11, ML4.8/2, MS3.4/16, Error ellipse: s-maj=27.6km s-min=19.5km az=150.0*

*NEIC **12** 09:46:55.6±1.1, 22°.7S±0°.1×173°.51E±0°.08, h10km±2km, mb4.4/11, Error ellipse: s-maj=18.5km s-min=11.3km az=16.0*

*NOU **12** 09:47:07.0, 22°.79S×172°.56E, h0km, ML4.6/9, Southeast of Loyalty Islands*

ISC 12 09:46:55.6±0.6, 22°.7S±0°.1×173°.43E±0°.08, h10km, n56, σ1s41/43, mb4.2/15, MS3.5/14, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.15**	**282**	Pn	**Pn**	**09 48 13.9**	**+1.1**
MARNC	**Mare, Loyalty**	**5.15**	**282**	P	**Pn**	**09 48 14.7**	**+1.9**
PINNC	**Pines Island,**	**5.53**	**270**	Pn	**Pn**	**09 48 18.4**	**+0.4**
PINNC	**Pines Island,**	**5.53**	**270**	P	**Pn**	**09 48 18.7**	**+0.7**
YATNC	**Mamie plateau,**	**6.09**	**275**	P	**Pn**	**09 48 26.3**	**+0.6**
OUENC	**Ouen Island, N**	**6.10**	**271**	Pn	**Pn**	**09 48 26.5**	**+0.7**
OUENC	**Ouen Island, N**	**6.10**	**271**	P	**Pn**	**09 48 26.6**	**+0.7**
ONTNC	**Ouen Toro**	**6.46**	**272**	Pn	**Pn**	**09 48 30.0**	**-0.8**
ONTNC	**Ouen Toro**	**6.46**	**272**	P	**Pn**	**09 48 33.8**	**+3.0**
DZM	**Mont Dzumac**	**6.50**	**274**	Pn	**Pn**	**09 48 31.7**	**+0.3**
	3.2nm,0.3s,baz=140,slow=16,SNR=26						
DZM					Sn	**Sn**	**09 49 43.9**	**-1.7**
	baz=181,slow=16						
	24nm,0.6s						
DZM	**Mont Dzumac**	**6.50**	**274**	*e*Pn	**Pn**	**09 48 31.5**	**+0.1**
	59nm,0.8s						
DZM				*e*Sn	Sn	09 49 36.8	-8.9
	67nm,0.8s						
DZM				*e*LR	LR	09 49 53.3	
	comp=Z,460nm,26.4s						
DZM	**Mont Dzumac**	**6.50**	**274**	Pn	**Pn**	**09 48 30.0**	**-1.4**
DZM	**Mont Dzumac**	**6.50**	**274**	P	**Pn**	**09 48 33.6**	**+2.2**
MSVF	**Nonsavu**	**6.56**	**42**	Pn	**Pn**	**09 48 34.0**	**+1.8**
	1.7nm,0.3s,baz=228,slow=20,SNR=8.3						
MSVF				LR	LR	09 50 25.7	
	comp=Z,209nm,18.9s,baz=174,slow=32						
	6.5nm,0.5s						
MSVF	**Nonsavu**	**6.56**	**42**	Pn	**Pn**	**09 48 31.6**	**-0.7**
NOUC	**Port Laguerre**	**6.62**	**274**	P	**Pn**	**09 48 35.0**	**+2.0**
DVP	**Devils Point**	**6.97**	**314**	P	Pn	09 48 44.1	+6.3
KOUNC	**Koumac, New Ca**	**8.77**	**282**	Pn	**Pn**	**09 49 04.3**	**+1.8**
RAO	**Raoul Island**	**10.16**	**132**	LR	LR	09 52 23.8	
	comp=Z,304nm,19.9s,baz=329,slow=32						
URZ	**Urewera**	**15.84**	**169**	LR	LR	09 55 22.1	
	comp=Z,219nm,21.9s,baz=32,slow=32						
RPZ	**Rata Peaks**	**21.07**	**185**	P	**P**	**09 51 42.2**	**+2.3**
	11nm,1.0s,baz=333,slow=4.5,SNR=2.2						
RPZ				LR	LR	09 59 18.2	
	comp=Z,283nm,18.8s,baz=2.0,slow=35						
	11nm,1.0s						
CTA	**Charters Tower**	**25.43**	**271**	P	**P**	**09 52 24.3**	**+0.7**
	3.0nm,0.7s,baz=78,slow=6.6,SNR=2.2						
	3.0nm,0.7s						
STKA	**Stephens Creek**	**29.65**	**245**	P	**P**	**09 53 02.0**	**+0.6**
	2.0nm,0.8s,baz=112,slow=13,SNR=3.4						
STKA				LR	LR	10 03 11.1	
	comp=Z,48nm,19.6s,baz=5.2,slow=33						
	2.0nm,0.8s						
PPT2	**Papeete2**	**35.04**	**89**	*e*LR	LR	10 03 29.6	
WR0	**Warramunga Arr**	**36.26**	**267**	P	**P**	**09 53 58.9**	**-0.4**
WR0				IAmb	IAmb	09 54 30.2	
	comp=Z,11nm,1.5s						
AS31	**Alice Springs**	**36.27**	**261**	P	**P**	**09 54 00.6**	**+1.2**
ASAR	**Alice Springs**	**36.27**	**261**	P	**P**	**09 53 59.6**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=78,slow=9.7,SNR=16						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**36.27**	**261**	P	**P**	**09 53 59.1**	**-0.3**
WB0	**Warramunga Arr**	**36.44**	**267**	P	**P**	**09 53 58.5**	**-2.4**
WB0				IAmb	IAmb	09 54 02.4	
	comp=Z,9.3nm,1.3s						
WB2	**Warramunga Arr**	**36.44**	**267**	P	**P**	**09 53 57.9**	**-3.0**
WB2				IAmb	IAmb	09 54 01.3	
	comp=Z,4.4nm,1.0s						
WRA	**Warramunga Arr**	**36.45**	**267**	P	**P**	**09 53 59.5**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=97,slow=8.4,SNR=23						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**36.45**	**267**	P	**P**	**09 53 59.7**	**-1.2**
FORT	**Forrest**	**41.09**	**249**	P	**P**	**09 54 39.2**	**-0.6**
KNRA	**Kununurra**	**42.64**	**271**	P	**P**	**09 54 51.9**	**-0.7**
KNRA				IAmb	IAmb	09 55 15.2	
	comp=Z,10nm,1.3s						
FITZ	**Fitzroy Crossi**	**44.88**	**267**	P	**P**	**09 55 10.7**	**+0.1**
FITZ				IAmb	IAmb	09 55 20.4	
	comp=Z,5.5nm,0.8s						
GUMO	**Guam**	**45.64**	**319**	LR	LR	10 12 11.9	
	comp=Z,36nm,20.4s,baz=204,slow=33						
TAOE	**Nuku Hiva Isla**	**46.54**	**80**	*e*LR	LR	10 08 48.2	
	comp=Z,35nm,27.2s						
VNDA	**Vanda**	**55.17**	**183**	P	**P**	**09 56 29.0**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=360,slow=7.8,SNR=2.5						
VNDA					LR	10 16 07.7	
	comp=Z,63nm,21.6s,baz=7.5,slow=32						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**55.17**	**183**	P	**P**	**09 56 27.2**	**-0.7**
VNDA				IAmb	IAmb	09 56 54.1	
	comp=Z,4.1nm,1.4s						
CASY	**Casey**	**58.61**	**205**	P	**P**	**09 56 52.7**	**+0.3**
JHJ	**Hachijo jima 2**	**64.11**	**329**	LR	LR	10 20 55.5	
	comp=Z,14nm,21.7s,baz=318,slow=32						
QSPA	**South Pole Qui**	**67.39**	**180**	LR	LR	10 22 43.5	
	comp=Z,31nm,20.3s,baz=52,slow=32						
QSPA	**South Pole Qui**	**67.39**	**180**	P	**P**	**09 57 50.8**	**-0.2**
QSPA				IAmb	IAmb	09 57 57.5	
	comp=Z,5.7nm,1.1s						
MJAR	**Matsushiro Arr**	**67.65**	**330**	LR	LR	10 22 53.5	
	comp=Z,26nm,21.8s,baz=193,slow=32						
PETK	**Petropavlovsk-**	**76.70**	**350**	P	**P**	**09 58 48.1**	**+1.5**
	comp=Z,1.2nm,0.6s,baz=161

ZALV	**Zalesovo Beam**	**0.91 261**	Pg		**Pb**	**10 28 13.1**	**-0.4**
	2.3nm,0.3s,baz=80,slow=17,SNR=19							
ZALV			Lg		Lg	10 28 29.2		
	3.7nm,0.3s,baz=81,slow=29,SNR=12							
ZALV			Rg		Rg	10 28 33.5		
	97nm,1.1s,baz=86,slow=31,SNR=18							
KURK	**Kurchatov**	**5.81 237**	⇑Pn		**Pn**	**10 29 20.3**	**-1.9**
	4.9nm,1.3s							
KURK			⇑Lg		Lg	10 31 04.0		
	19nm,1.1s							
KURBB	**Kurchatov Arra**	**5.92 237**	Pn		**Pn**	**10 29 25.6**	**+2.0**
	0.2nm,0.3s,baz=56,slow=14,SNR=24							
KURBB			Lg		Lg	10 31 05.2		
	0.1nm,0.3s,baz=58,slow=32,SNR=12							
	4.4nm,0.7s							
KURBB	**Kurchatov Arra**	**5.92 237**	⇓Pn		**Pn**	**10 29 23.7**	**+0.1**
	5.2nm,0.6s							
KURBB			⇑Lg		Lg	10 31 06.1		
	16nm,1.0s							
MK31	**Makanchi Array**	**7.76 201**	⇑Pn		**Pn**	**10 29 48.7**	**-0.3**
	0.5nm,0.5s,baz=25,slow=14							
MK31			⇑Sn		**Sn**	**10 31 18.0**	**+0.6**
	0.5nm,0.5s,baz=30,slow=34,SNR=3.7							
MK31			⇑Lg		Lg	10 32 01.2		
	8.5nm,1.3s,baz=33,slow=32,SNR=4.4							
MKAR	**Makanchi Array**	**7.76 201**	Pn		**Pn**	**10 29 49.3**	**+0.4**
	0.2nm,0.3s,baz=20,slow=12,SNR=7.3							
MKAR			Sn		**Sn**	**10 31 16.6**	**-0.8**
	0.1nm,0.3s,baz=23,slow=30,SNR=3.8							
MKAR			Lg		Lg	10 31 59.8		
	0.1nm,0.3s,baz=22,slow=30,SNR=6.4							
	0.7nm,0.5s							
MAKZ	**Makanchi**	**7.81 203**	⇓Lg		Lg	10 32 03.4		
	6.3nm,1.2s							

IDC ***12*** *10:27:50.7±2.3,22°.59S×173°.02E,h0km,mb3.8/4, mbtmp3.8/5, ML5.9/1, MS3.4/19, Error ellipse: s-maj=70.3km s-min=33.4km az=157.0*

ISC 12 10:27:54.6±1.8, 22°.5S±0°.3×173°.0E±0°.1, h32km, n22, σ0°.83/8, mb3.9/4, MS3.5/13, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.12 273**		Pn	**Pn**	**10 29 22.5**	**-0.4**
	12nm,0.9s,baz=124,slow=18						
DZM				Sn	**Sn**	**10 30 31.6**	**-0.4**
	0.9nm,0.3s,baz=84,slow=14,SNR=1.6						
DZM				LR	LR	10 31 05.8	
	comp=Z,49nm,20.7s,baz=86,slow=32						
MSVF	**Nonsavu**	**6.70 46**		LR	LR	10 31 39.2	
	comp=Z,691nm,18.0s,baz=190,slow=34						
RAO	**Raoul Island**	**10.54 131**		LR	LR	10 33 36.7	
	comp=Z,309nm,21.5s,baz=338,slow=33						
URZ	**Urewera**	**16.07 168**		LR	LR	10 36 40.7	
	comp=Z,215nm,18.3s,baz=31,slow=33						
AFI	**Afiamalu**	**16.77 62**		LR	LR	10 37 26.4	
	comp=Z,72nm,19.8s,baz=170,slow=34						
HNR	**Honiara**	**18.09 314**		P	**P**	**10 32 04.7**	**+1.1**
	40nm,0.3s,baz=96,slow=6.8,SNR=6.4						
HNR				LR	LR	10 37 59.7	
	comp=Z,65nm,20.7s,baz=98,slow=34						
RPZ	**Rata Peaks**	**21.19 184**		LR	LR	10 40 26.9	
	comp=Z,159nm,18.1s,baz=340,slow=36						
CTA	**Charters Tower**	**25.06 271**		LR	LR	10 43 03.9	
	comp=Z,61nm,18.0s,baz=96,slow=36						
STKA	**Stephens Creek**	**29.39 245**		LR	LR	10 44 59.2	
	comp=Z,69nm,18.3s,baz=30,slow=35						
ASAR	**Alice Springs**	**35.94 260**		P	**P**	**10 34 52.6**	**+0.2**
	0.7nm,0.8s,baz=99,slow=9.4,SNR=6.3						
ASAR				LR	LR	10 49 24.6	
	comp=Z,92nm,18.9s,baz=101,slow=36						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**36.10 267**		P	**P**	**10 34 53.2**	**-0.6**
	0.3nm,0.7s,baz=96,slow=8.6,SNR=1.9						
WRA				LR	LR	10 48 54.6	
	comp=Z,53nm,19.5s,baz=130,slow=35						
	0.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**44.53 267**		P	**P**	**10 36 04.3**	**+0.8**
	2.9nm,0.9s,baz=124,slow=10,SNR=3.6						
	2.9nm,0.9s						
VNDA	**Vanda**	**55.31 183**		LR	LR	10 58 51.3	
	comp=Z,33nm,18.1s,baz=348,slow=34						
PETK	**Petropavlovsk-**	**76.49 351**		LR	LR	11 06 25.5	
	comp=Z,26nm,21.2s,baz=156,slow=30						
MA2	**Magadan**	**83.83 349**		LR	LR	11 16 54.4	
	comp=Z,18nm,18.2s,baz=140,slow=35						
PFO	**Pinyon Flats O**	**87.27 52**		LR	LR	11 11 60.0	
	comp=Z,22nm,19.3s,baz=260,slow=30						
LPIG	**La Paz**	**87.69 63**		LR	LR	11 09 32.2	
	comp=Z,20nm,21.6s,baz=350,slow=28						
ELK	**Elko**	**91.57 46**		LR	LR	11 15 32.9	
	comp=Z,20nm,19.4s,baz=258,slow=31						
ILAR	**Eielson Array**	**92.35 16**		P	**P**	**10 41 00.9**	**-0.3**
	1.1nm,1.1s,baz=226,slow=6.1,SNR=4.5						
	1.1nm,1.1s						
PLCA	**Paso Flores**	**93.72 137**		LR	LR	11 14 04.8	
	comp=Z,24nm,18.6s,baz=240,slow=30						
TXAR	**Lajitas Array**	**95.24 61**		LR	LR	11 15 54.6	
	comp=Z,20nm,19.4s,baz=254,slow=30						
GERES	**GERESS Array B**	**149.03 333**		PKPbc	**PKPab**	**10 47 42.7**	**-0.9**
	0.8nm,0.8s,baz=76,slow=5.6,SNR=3.9						

IDC 12 10:32:36.3±4.0, 20°.92N×122°.46E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=310.9km s-min=27.6km az=60.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**41.52 318**		P	P	10 40 25.1	-0.2
	0.3nm,0.5s,baz=111,slow=10,SNR=4.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**42.25 163**		P	P	10 40 31.8	+0.4
	0.3nm,0.4s,baz=346,slow=8.6,SNR=5.5						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.70 165**		P	P	10 40 57.2	-2.0
	0.2nm,0.4s,baz=357,slow=8.9,SNR=4.5						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**55.61 160**		P	P	10 42 15.3	+1.5
	1.0nm,0.6s,baz=333,slow=16,SNR=3.0						
	1.0nm,0.6s						

IDC ***12*** *10:35:27.0±1.4,63°.04N×28°.02E,h0km,mbtmp2.9/3, ML2.2/3, Error ellipse: s-maj=19.7km s-min=6.6km az=106.0*

UPP ***12*** *10:35:27.6±3.1,63°.32N×27°.96E,h0km,ML2.0, Suspected explosion*

HEL ***12*** *10:35:27.1±0.1,63°.12N×27°.81E,h0km,ML2.1, Explosion*

BER ***12*** *10:35:28.9±3.3,63°.07N×27°.67E,h0km,ML1.7, ML2.1(HEL), Suspected explosion*

ISC 12 10:35:26.8±0.8, 63°.07N±0°.02×27°.77E±0°.03, h0km, n55, σ1§54/94, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAF	**Kangasniemi**	**1.17 216**		PG	**Pg**	**10 35 49.3**	**+0.1**
KAF				MSG		10 36 04.4	
	comp=Z,11nm,0.2s						
KAF				SB	**Sb**	**10 36 06.2**	**+0.6**
KAF	**Kangasniemi**	**1.17 216**		PG	**Pg**	**10 35 49.3**	**+0.1**
KAF				MSG		10 36 04.4	
	comp=Z,11nm,0.2s						
KAF				SB	**Sb**	**10 36 06.2**	**+0.6**
RMF	**Romuvaara**	**1.50 39**		PN	**Pn**	**10 35 54.5**	**-0.4**
RMF	**Romuvaara**	**1.50 39**		PN	**Pn**	**10 35 54.5**	**-0.4**
KEF	**Keuruu**	**1.62 237**		PG	**Pn**	**10 35 57.0**	**+0.5**
KEF				MSG		10 36 16.9	
	comp=Z,11nm,0.2s						
KEF				SG	**Sg**	**10 36 19.1**	**+0.5**
KEF	**Keuruu**	**1.62 237**		PG	**Pn**	**10 35 57.0**	**+0.5**
KEF				MSG		10 36 16.9	
	comp=Z,11nm,0.2s						
KEF				SG	**Sg**	**10 36 19.1**	**+0.5**
RUFX	**Ruokolahti**	**1.74 161**		PG	**Pb**	**10 35 59.2**	**-0.3**
RUFX				SG	**Sg**	**10 36 23.2**	**+0.7**
FIA0	**FINESS Array S**	**1.81 207**		PG	**Pn**	**10 36 00.0**	**+0.8**
FIA0				SB	**Sn**	**10 36 22.2**	**-0.6**
FIA0	**FINESS Array S**	**1.81 207**		PG	**Pn**	**10 36 00.0**	**+0.8**
FIA0				SB	**Sn**	**10 36 22.2**	**-0.6**
FINES	**FINESS Array B**	**1.81 207**		Pn	**Pb**	**10 36 00.8**	**0.0**
	comp=Z,2.0nm,0.3s,baz=25,slow=17,SNR=65						
FINES				Lg	Lg	10 36 25.2	
	comp=Z,3.6nm,0.3s,baz=24,slow=29,SNR=39						
OUF	**Merijarvi**	**1.88 315**		PG	**Pn**	**10 36 00.2**	**+0.1**
OUF				MSG		10 36 22.3	
	comp=Z,34nm,0.2s						
OUF				SG	**Sn**	**10 36 25.4**	**+1.0**
OUF	**Merijarvi**	**1.88 315**		PG	**Pn**	**10 36 00.2**	**+0.1**
OUF				MSG		10 36 22.3	
	comp=Z,34nm,0.2s						
OUF				SG	**Sn**	**10 36 25.4**	**+1.0**
OBF4	**Vikkela, Lumij**	**2.11 327**		PG	**Pn**	**10 36 04.6**	**+1.3**
OBF4				SG	**Sb**	**10 36 33.0**	**+0.5**
OBF4	**Vikkela, Lumij**	**2.11 327**		PG	**Pn**	**10 36 04.6**	**+1.3**
OBF4				SG	**Sb**	**10 36 33.0**	**+0.5**
OBF0	**Syolatti, Pyha**	**2.12 314**		PG	**Pn**	**10 36 04.5**	**+1.0**
	baz=130						
OBF0				SG	**Sb**	**10 36 33.2**	**+0.3**
OBF0	**Syolatti, Pyha**	**2.12 314**		PG	**Pn**	**10 36 04.5**	**+1.0**
	baz=130						
OBF0				SG	**Sb**	**10 36 33.2**	**+0.3**
OUL	**Oulu**	**2.19 339**		PG	**Pn**	**10 36 05.3**	**+1.0**
	baz=154						
OUL				SG	**Sn**	**10 36 33.6**	**+1.6**
OUL	**Oulu**	**2.19 339**		PG	**Pn**	**10 36 05.3**	**+1.0**
	baz=154						
OUL				SG	**Sn**	**10 36 33.6**	**+1.6**
OBF8	**Ulkokalla**	**2.30 305**		PG	**Pb**	**10 36 08.0**	**-1.1**
OBF8				SG	**Sb**	**10 36 38.7**	**+0.6**
VAF	**Ylistaro**	**2.32 272**		PB	**Pb**	**10 36 07.9**	**-1.5**
	baz=86						
VAF				MSG		10 36 36.3	
	comp=Z,22nm,0.2s						
VAF				SG	**Sb**	**10 36 38.7**	**+0.2**
VJF	**Virojoki**	**2.54 182**		PG	**Pb**	**10 36 12.1**	**-1.1**
VJF				MSG		10 36 43.8	
	comp=Z,6.0nm,0.2s						
VJF				SG	**Sb**	**10 36 46.3**	**+1.4**
PVF	**Pernaja**	**2.69 200**		PG	**Pb**	**10 36 15.0**	**-0.7**
PVF				MSG		10 36 47.9	
	comp=Z,3.7nm,0.2s						
PVF				SB	**Sb**	**10 36 49.5**	**+0.3**
MSF	**Maaselka**	**2.91 10**		PB	**Pn**	**10 36 15.5**	**+1.3**
MSF				SB	**Sn**	**10 36 51.8**	**+2.0**
NUR	**Nurmijrvi**	**2.96 211**		PG	**Pb**	**10 36 20.6**	**+0.2**
NUR				SG	**Sg**	**10 37 00.1**	**-1.8**
KU6	**Riekki**	**3.11 16**		PB	**Pn**	**10 36 18.5**	**+1.5**
	baz=199						
KU6				MSG		10 36 56.8	
	comp=Z,4.3nm,0.2s						
KU6				SG	**Sn**	**10 36 57.7**	**+2.9**
BURU	**Burvik**	**3.21 301**		PN	**Pn**	**10 36 19.0**	**+0.6**
BURU				SG	**Sb**	**10 37 07.1**	**+2.9**
MEF	**Metsahovi**	**3.28 211**		PG	**Pb**	**10 36 25.5**	**-0.3**
MEF				SG	**Sb**	**10 37 06.8**	**+0.6**
OLKF	**Oulanka, Finla**	**3.34 11**		PB	**Pn**	**10 36 21.5**	**+1.3**
OLKF				SG	**Sb**	**10 37 04.8**	**-3.1**
TOF	**Tornio**	**3.37 335**		PB	**Pn**	**10 36 22.4**	**+1.8**
TOF				SB	**Sn**	**10 37 02.4**	**+1.3**
KALU	**Kalix**	**3.39 328**		PN	**Pn**	**10 36 22.0**	**+1.2**
KALU				SG	**Sb**	**10 37 11.1**	**+1.8**
RAF	**Rauma**	**3.49 237**		PN	**Pn**	**10 36 24.6**	**+2.3**
RNF	**Rovaniemi**	**3.63 349**		PG	**Pb**	**10 36 32.4**	**+0.7**
RNF				SB	**Sb**	**10 37 13.0**	**-3.3**
HUSU	**Husum**	**3.88 278**		PN	**Pn**	**10 36 29.8**	**+2.2**
SVAU	**Svanoeiden**	**3.91 295**		P	**Pn**	**10 36 28.3**	**+0.4**
SVAU				S	**Sn**	**10 37 15.1**	**+0.7**
PAJU	**Pajala**	**4.43 336**		PN	**Pn**	**10 36 36.3**	**+1.1**
	baz=147						
PAJU				SN	**Sn**	**10 37 27.0**	**-0.4**
HEMU	**Hemsoen**	**4.47 269**		P	**Pn**	**10 36 36.6**	**+0.9**
HEMU	**Hemsoen**	**4.47 269**		PN	**Pn**	**10 36 36.9**	**+1.2**
HEMU				SN	**Sn**	**10 37 29.4**	**+1.0**
KLF	**Kolari**	**4.48 341**		PN	**Pn**	**10 36 36.6**	**+0.8**
KLF				SN	**Sn**	**10 37 28.4**	**-0.1**
VSU	**Vasula**	**4.65 187**		PB	**Pb**	**10 36 46.5**	**-2.6**
VRF	**Varrio**	**4.76 8**		SG	**Sb**	**10 37 52.9**	**+4.1**
ARNU	**Arnoeviken**	**5.03 259**		P	**Pn**	**10 36 45.6**	**+2.3**
ARNU				S	**Sn**	**10 37 43.5**	**+1.5**
HASU	**Hassela**	**5.23 265**		P	**Pn**	**10 36 47.7**	**+1.6**
HEF	**Hetta**	**5.62 344**	*eP*		**Pn**	**10 36 52.0**	**+0.5**
ARA0	**ARCESS Array S**	**6.56 353**	*eP*		**Pn**	**10 37 04.4**	**+0.1**
ARA0				*eS*	**Sn**	**10 38 15.3**	**-4.3**
ARA0				*eS*	**Sn**	**10 38 16.2**	**-3.5**
ARA0				IAML		10 38 21.6	
	comp=Z,1.5nm,0.2s						
ARCES	**ARCESS Array B**	**6.56 353**		Pn	**Pn**	**10 37 04.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=27						
ARCES				Sn	**Sn**	**10 38 17.0**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=171,slow=22,SNR=7.8						
	comp=Z,0.2nm,0.3s						
KIF	**Kilpisjarvi**	**6.60 338**	*eP*		**Pn**	**10 37 05.5**	**+0.7**
KEV	**Kevo**	**6.72 358**	*eP*		**Pn**	**10 37 06.5**	**-0.1**
KEV				*eS*	**Sn**	**10 38 19.4**	**-4.3**
FAUS	**Fauske**	**6.79 315**	*eP*		**Pn**	**10 37 08.1**	**+0.6**
FAUS				*eS*	**Sn**	**10 38 22.0**	**-3.4**
FAUS				*e*		10 38 22.0	
STEI	**Steigen**	**7.12 319**	*eP*		**Pn**	**10 37 12.0**	**-0.1**
KONS	**Konsvik**	**7.13 305**	*eP*		**Pn**	**10 37 11.8**	**-0.4**
NSS	**Namsos**	**7.14 289**	*eP*		**Pn**	**10 37 12.0**	**-0.4**
JETT	**Jettan, Norway**	**7.15 339**	*eP*		**Pn**	**10 37 13.2**	**+0.8**
HFS	**Hagfors**	**7.33 253**		Pn	**Pn**	**10 37 15.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=66,slow=15,SNR=6.7						
HFS				Sn	**Sn**	**10 38 36.2**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=54,slow=27,SNR=1.5						
	comp=Z,0.7nm,0.3s						
TRO	**Tromso**	**7.48 336**	*eP*		**Pn**	**10 37 16.9**	**0.0**
NOA	**NORSAR Array B**	**8.03 263**		Pn	**Pn**	**10 37 23.9**	**-0.7**
	baz=89,slow=19,SNR=4.0						
	comp=Z,0.2nm,0.4s						

MAN ***12*** *10:43:23.1°.01N×123°.12E,h13km,Ms4.5*

NEIC ***12*** *10:43:27.1±1.7,10°.08N±0°.05×123°.16E±0°.09,h41km±6km, mb4.6/42, Error ellipse: s-maj=12.8km s-min=7.5km az=89.0*

IDC ***12*** *10:43:29.4±3.8,9°.93N×123°.19E,h64km±35km,mb3.9/24, mbtmp4.2/25,ML4.4/1,MS3.5/16, Error ellipse: s-maj=19.7km s-min=10.9km az=77.0*

DJA ***12*** *10:43:31.1±2.8,10°.N±6°×12°.3E±°,h29km±20km,M4.8/16, mB5.0/6,mb4.6/16,MLv5.1/1,Mw(mB)4.3/6*

ISC 12 10:43:25.2±1.0, 10°.01N±0°.03×123°.14E±0°.03, h27km±7km, n129, σ1§38/143, mb4.5/50, MS3.5/17, 8C-20D, Cebu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.52 250**		⇑*iP*	**Pb**	**10 43 34.5**	**-1.3**
CNOP				*i* S	**Sb**	**10 43 43.1**	**0.0**
SNPH	**Sibulan**	**0.67 172**		⇓*iP*	**Pb**	**10 43 37.6**	**-0.7**
SNPH				*i* S	**Sb**	**10 43 48.1**	**+0.9**
TBP	**Tagbilaran**	**0.78 114**		⇓*iP*	**Pn**	**10 43 39.0**	**-1.4**
TBP				*i* S	**Sb**	**10 43 50.0**	**-0.4**
GUIM	**Jordan**	**0.82 319**		⇓*eP*	**Pn**	**10 43 38.5**	**-2.4**
LLP	**Lapu-Lapu**	**0.87 69**		⇓*eP*	**Pn**	**10 43 39.1**	**-2.5**
LLP				*eS*	**Sb**	**10 43 51.0**	**-2.0**
JAP	**San Jose, Anti**	**1.38 302**		⇑*iP*	**Pb**	**10 43 50.3**	**-0.1**
DCPH	**Dipolog City**	**1.43 171**		⇑*eP*	**Pn**	**10 43 49.3**	**0.0**
DCPH				*eS*	**Sb**	**10 44 09.6**	**+0.5**
RCP	**Roxas**	**1.59 346**		⇑*eP*	**Pn**	**10 43 51.5**	**0.0**
RCP				*i* S	**Sb**	**10 44 14.3**	**+0.7**
MSLP	**Maasin**	**1.70 86**		⇓*eP*	**Pn**	**10 43 53.5**	**+0.5**
MSLP				*eS*	**Sb**	**10 44 17.4**	**+0.6**
OCLP	**Ormoc**	**1.78 54**		⇓*eP*	**Pn**	**10 43 54.9**	**+0.8**
PAGZ	**Pagadian**	**2.16 174**		⇓*eP*	**Pn**	**10 44 01.1**	**+1.8**
PAGZ	**Pagadian**	**2.16 174**		⇓*eP*	**Pn**	**10 44 01.3**	**+1.9**
CUYO	**Cuyo Island**	**2.25 292**		⇓*eP*	**Pn**	**10 44 01.2**	**+0.6**
BUKP	**Musuan**	**2.84 138**		⇓*eP*	**Pn**	**10 44 10.0**	**+1.2**
GLSP	**General Luna,**	**2.95 94**		⇓*eP*	**Pn**	**10 44 11.5**	**+1.2**
SJMP	**San Jose**	**3.14 321**		⇓*eP*	**Pn**	**10 44 14.7**	**+1.8**
ZCP	**Zamboanga City**	**3.23 199**		⇓*eP*	**Pn**	**10 44 16.5**	**+2.3**
ZCP				*i* S	**Sb**	**10 44 59.5**	**-1.4**
AUQP	**San Andres**	**3.33 352**		⇓*eP*	**Pb**	**10 44 23.2**	**-0.2**
BUSP	**Coron**	**3.50 305**		⇓*eP*	**Pn**	**10 44 18.6**	**+0.7**
KCP	**Kidapawan**	**3.55 147**		⇓*eP*	**Pn**	**10 44 20.4**	**+1.8**
BOAC	**Boac**	**3.66 340**		⇓*eP*	**Pn**	**10 44 21.8**	**+1.8**
BIPH	**Bislig**	**3.66 119**		⇓*eP*	**Pn**	**10 44 20.9**	**+0.8**
BIPH				*eS*	**Sn**	**10 45 04.9**	**+2.5**
DAV	**Davao City (W)**	**3.79 140**		LR	LR	10 46 24.2	
	comp=Z,1μm,20.5s,baz=354,slow=47						
DAV	**Davao City (W)**	**3.79 140**		Pn	**Pn**	**10 44 22.4**	**+0.6**
GQP	**Guinayangan**	**3.93 350**		⇓*eP*	**Pn**	**10 44 27.7**	**+3.9**
PGP	**Puerto Galera**	**4.08 329**		⇓*eP*	**Pn**	**10 44 29.4**	**+3.6**
PGP				*i* S	**Sn**	**10 45 16.2**	**+3.5**
PPR	**Puerto Princes**	**4.35 267**		⇑*iP*	**Pn**	**10 44 26.1**	**-3.4**
PPR				*i* S	**Sn**	**10 45 19.2**	**-0.1**

LQP	**Lukban**	**4.37 339**	⇓*eP*		**Pn**	**10 44 29.1**	**-0.8**
DDMP	**Don Marcelino,**	**4.64 146**	⇓*eP*		**Pn**	**10 44 35.6**	**+2.0**
MYLDM	**Lahad Datu**	**6.64 224**	Pn		**Pn**	**10 45 02.5**	**+1.4**
KKM	**Kota Kinabalu**	**7.91 241**	Pn		**Pn**	**10 45 19.7**	**+1.2**
TOLI2	**Tolitoli**	**9.14 195**	Pn		**Pn**	**10 45 35.5**	**+0.1**
SBUM	**Sibu**	**13.19 236**	Pn		**Pn**	**10 46 31.2**	**+0.4**
TTSI	**Tana Toraja**	**13.38 194**	P		P	10 46 54.3	+12
KNMB	**Chin-men Tao**	**15.07 343**	Pn		**Pn**	**10 46 53.7**	**-2.7**
KNMB			IAmb		IAmb	10 47 33.7	
	comp=Z,39nm,0.8s						
KAPI	**Kappang**	**15.30 193**	P		**Pn**	**10 47 01.4**	**+2.0**
	comp=Z,1.7nm,0.3s,baz=25,slow=7.3,SNR=3.0						
KAPI			LR		LR	10 54 01.6	
	comp=Z,75nm,18.9s,baz=32,slow=42						
	comp=Z,3.6nm,0.3s						
KSM	**Kuching**	**15.31 237**	Pn		**Pn**	**10 46 58.9**	**-0.8**
KSM			IAmb		IAmb	10 47 09.2	
	comp=Z,38nm,1.0s						
BBSI	**Bau Bau**	**15.40 182**	P		**P**	**10 47 08.3**	**+3.2**
	comp=Z,305nmcomp=Z,7.4nm,1.0s						
UBPT	**Khong Chiam**	**18.01 289**			**Pn**	**10 47 34.1**	**+0.3**
UBPT			IAmb		IAmb	10 47 39.5	
	comp=Z,61nm,0.9s						
EDFI	**Ende, Flores**	**18.69 184**	P		Pn	10 47 50.9	+8.8
	comp=Z,18nm,0.8s						
NJ2	**Nanjing**	**22.29 350**	*eP*		**P**	**10 48 19.5**	**-0.9**
NJ2			pmax		pmax		
	comp=Z,22nm,0.5s						
IPM	**Ipoh**	**22.60 258**	P		**P**	**10 48 23.9**	**-0.1**
IPM			IAmb		IAmb	10 48 27.7	
	comp=Z,24nm,0.9s						
KULM	**Kulim**	**22.77 260**	P		**P**	**10 48 25.3**	**-0.4**
KULM			IAmb		IAmb	10 48 29.5	
	comp=Z,21nm,0.9s						
CRAI	**Chiangrai**	**24.18 297**	P		**P**	**10 48 39.8**	**+0.3**
CRAI			IAmb		IAmb	10 48 42.3	
	comp=Z,24nm,0.9s						
CM31	**Chiang Mai Arr**	**24.89 292**	P		**P**	**10 48 46.8**	**+0.8**
CM31			IAmb		IAmb	10 48 49.9	
	comp=Z,25nm,1.1s						
CMAR	**Chiang Mai Arr**	**24.89 292**	P		**P**	**10 48 47.8**	**+1.8**
	comp=Z,9.2nm,0.9s,baz=107,slow=7.7,SNR=33						
CMAR			PcP		**PcP**	**10 52 21.6**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=114,slow=1.1,SNR=4.7						
CMAR			LR		LR	10 58 44.3	
	comp=Z,64nm,18.1s,baz=115,slow=37						
	comp=Z,9.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**24.89 292**	P		**P**	**10 48 45.4**	**-0.6**
CHTO	**Chiang Mai**	**24.99 293**	P		**P**	**10 48 46.3**	**-0.5**
PSI	**Prapat**	**25.09 255**	P		**P**	**10 48 50.0**	**+2.0**
	comp=Z,17nm,0.8s,baz=45,slow=4.7,SNR=7.1						
	comp=Z,17nm,0.8s						
RPSI	**Rantau Prapat**	**25.12 255**	P		**P**	**10 48 46.8**	**-1.3**
RPSI			IAmb		IAmb	10 48 51.4	
	comp=Z,27nm,1.1s						
RPSI	**Rantau Prapat**	**25.12 255**	P		**P**	**10 48 50.0**	**+1.9**
PZH	**PanZhiHua**	**26.05 312**	P		**P**	**10 48 56.3**	**-0.2**
PZH			pmax		pmax		
	comp=Z,10.0nm,0.5s						
PZH			pmax		pmax		
	comp=Z,90nm,4.8s						
KNRA	**Kununurra**	**26.12 168**	P		**P**	**10 48 57.4**	**+0.3**
KNRA			IAmb		IAmb	10 49 06.6	
	comp=Z,11nm,0.8s						
XAN	**Xi'an**	**27.24 334**	P		**P**	**10 49 07.1**	**0.0**
XAN			pmax		pmax		
	comp=Z,12nm,0.9s						
XAN			pmax		pmax		
	comp=Z,87nm,4.8s						
JHJ	**Hachijo jima 2**	**27.64 31**	LR		LR	10 59 47.5	
	comp=Z,61nm,19.8s,baz=264,slow=35						
KSRS	**Korea Array**	**27.66 9**	P		**P**	**10 49 11.9**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=187,slow=10.0,SNR=10						
	comp=Z,1.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**28.04 175**	P		**P**	**10 49 13.9**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=340,slow=12,SNR=2.8						
	comp=Z,2.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.04 175**	P		**P**	**10 49 15.2**	**+0.9**
BJT	**Baijiatuao**	**30.52 349**	P		**P**	**10 49 35.0**	**-1.1**
BJT			IAmb		IAmb	10 49 39.1	
	comp=Z,8.5nm,0.9s						
BJI	**Beijing**	**30.54 349**	P		**P**	**10 49 37.7**	**+1.4**
BJI			pmax		pmax		
	comp=Z,9.0nm,1.0s						
LZH	**Lanzhou**	**31.32 329**	*eP*		**P**	**10 49 45.9**	**+2.4**
LZH			pP		sP	10 49 55.9	+0.9
LZH			sP		pP

comp=Z,31nm,19.5s,baz=193,slow=35
NWAO Narrogin (SRO) 43.06 187 P P 10 51 22.8 0.0
STKA Stephens Creek 45.24 158 P P 10 51 39.0 -1.3
comp=Z,4.4nm,1.0s,baz=14,slow=5.3,SNR=5.7
STKA LR LR 11 13 01.9
comp=Z,32nm,19.2s,baz=26,slow=39
comp=Z,4.4nm,1.0s
WMQ Urumqi 45.58 324 *eP* **P 10 51 44.7 +1.8**
WMQ LR LR
comp=Z,100nm,17.1s
MK31 Makanchi Array 50.40 324 P P 10 52 17.9 -2.4
MK31 PcP PcP **10 53 38.5 +0.1**
MKAR Makanchi Array 50.40 324 P P 10 52 20.5 +0.3
comp=Z,0.9nm,0.6s,baz=118,slow=9.7,SNR=10
MKAR PcP PcP **10 53 38.1 -0.2**
comp=Z,3.2nm,0.7s,baz=118,slow=3.7,SNR=16
MKAR LR LR 11 15 14.5
comp=Z,63nm,18.4s,baz=94,slow=38
comp=Z,0.9nm,0.6s
MKAR Makanchi Array 50.40 324 P P 10 52 18.4 -1.8
MKAR PcP PcP **10 53 38.4 0.0**
MAKZ Makanchi 50.59 324 P P 10 52 20.5 -1.1
MAKZ IAmb IAmb 10 52 24.3
comp=Z,8.8nm,1.5s
MAKZ PcP PcP **10 53 39.4 +0.3**
PETK Petropavlovsk- 51.19 26 P P 10 52 27.6 +1.6
comp=Z,1.6nm,0.7s,baz=202,slow=7.4,SNR=3.6
comp=Z,1.6nm,0.7s
NIL Nilore 51.35 305 P P 10 52 27.4 -0.2
ZAA0 Zalesovo Array 53.41 333 P P 10 52 41.7 -0.7
ZAA0 IAmb IAmb 10 52 45.5
comp=Z,2.8nm,0.7s
ZAA0 PcP PcP **10 53 49.0 -0.4**
ZALV Zalesovo Beam 53.41 333 P P 10 52 43.3 +0.9
comp=Z,1.1nm,0.4s,baz=122,slow=7.2,SNR=5.3
ZALV LR LR 11 16 35.1
comp=Z,32nm,18.3s,baz=86,slow=37
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 53.41 333 P P 10 52 41.0 -1.4
ZALV PcP PcP **10 53 49.1 -0.3**
KURBB Kurchatov Arra 54.56 327 P P 10 52 51.2 +0.3
comp=Z,4.2nm,1.0s,baz=129,slow=6.7,SNR=25
KURBB PcP PcP **10 53 53.1 -0.8**
comp=Z,0.3nm,0.6s,baz=118,slow=3.3,SNR=4.2
comp=Z,4.2nm,1.0s
KURK Kurchatov 54.57 327 P P 10 52 50.7 -0.2
KBL Kabul 54.95 305 P P 10 52 54.0 -0.3
KBL IAmb IAmb 10 52 59.6
comp=Z,3.9nm,0.8s
GAR Garm 55.11 311 P P 10 52 56.0 +0.8
CHGR Chuyangaron 55.88 310 P P 10 59.4 -1.4
CHGR IAmb IAmb 10 53 03.0
comp=Z,9.3nm,0.9s
KK31 Karatay Array 56.26 316 P P 10 53 01.9 -1.4
KK31 IAmb IAmb 10 53 05.4
comp=Z,3.6nm,0.9s
KK31 PcP PcP **10 54 00.7 0.0**
KKAR Karatay Array 56.26 316 P P 10 53 02.9 -0.4
KKAR PcP PcP **10 54 01.1 +0.4**
BRVK Borovoye 60.22 326 P P 10 53 30.3 -0.5
BRVK IAmb IAmb 10 53 37.6
comp=Z,3.2nm,0.7s
TIXI Tiksi 61.69 2 P P 10 53 40.7 +0.3
comp=Z,15nm,0.8s,baz=91,slow=24,SNR=11
comp=Z,15nm,0.8s
TIXI Tiksi 61.69 2 P P 10 53 40.3 -0.1
NRIK Noril'sk 63.53 347 P P 10 53 52.1 -0.7
comp=Z,5.4nm,0.7s,baz=114,slow=5.5,SNR=5.6
NRIK LR LR 11 24 09.7
comp=Z,43nm,18.8s,baz=354,slow=38
comp=Z,5.4nm,0.7s
NRIK Noril'sk 63.53 347 P P 10 53 52.1 -0.7
NRIK IAmb IAmb 10 53 54.5
comp=Z,7.0nm,0.8s
GEYT Alibeck 64.24 307 P P 10 53 57.2 -0.9
GEYT IAmb IAmb 10 54 00.0
comp=Z,6.4nm,1.1s
GYA0B ALIBECK ARRAY 64.24 307 P P 10 53 57.6 -0.5
GYA0B IAmb IAmb 10 53 59.9
comp=Z,8.7nm,1.2s
ABKAR Akbulak array 65.07 320 P P 10 54 03.3 0.0
AKTO Aktyubinsk 66.56 321 LR LR 11 25 08.8
comp=Z,59nm,20.2s,baz=96,slow=38
BELG Belogornoye 73.30 322 LR LR 11 28 30.3
comp=Z,27nm,18.6s,baz=147,slow=37
RAYN Ar Rayn 74.80 292 P P 10 55 01.9 -1.8
KLMR Klimovskoe 78.22 330 *eP* **P 10 55 20.4 -1.7**
KLMR AMP 10 55 22.2
comp=Z,8.0nm,1.1s
ILAR Eielson Array 81.02 26 P P 10 55 36.8 -0.5
comp=Z,0.4nm,0.8s,baz=257,slow=5.5,SNR=4.4
comp=Z,0.4nm,0.8s
BRTR Keskin Array B 83.31 309 P P 10 55 50.4 +0.4
comp=Z,1.8nm,0.9s,baz=126,slow=2.8,SNR=7.8
comp=Z,1.8nm,0.9s
ARCES ARCESS Array B 83.36 339 P P 10 55 49.9 +0.3
comp=Z,6.6nm,0.8s,baz=72,slow=7.8,SNR=13
comp=Z,6.6nm,0.8s
ARCES ARCESS Array B 83.36 339 P P 10 55 49.5 0.0
SPITS Spitsbergen Ar 83.66 349 LR LR 11 37 23.5
comp=Z,18nm,19.8s,baz=55,slow=39
FINES FINESS Array B 84.65 331 P P 10 55 55.2 -0.9
comp=Z,2.9nm,0.9s,baz=46,slow=5.5,SNR=6.1
FINES LR LR 11 36 49.3
comp=Z,44nm,20.2s,baz=73,slow=38
comp=Z,2.9nm,0.9s
AKASG Malin Array Be 84.81 320 P P 10 55 56.7 -0.5
comp=Z,1.7nm,0.7s,baz=63,slow=5.2,SNR=4.6
comp=Z,1.7nm,0.7s
INK Inuvik 85.65 21 P P 10 56 01.9 +0.8
comp=Z,2.6nm,0.9s,baz=103,slow=4.1,SNR=4.1
comp=Z,2.6nm,0.9s
ELL Elmali 86.66 307 P P 10 56 06.3 -0.6
MLR Muntele Rosu 87.94 316 LR LR 11 41 29.7
comp=Z,32nm,19.1s,baz=91,slow=40
NB2 NORSAR Subarra 91.61 333 P P 10 56 28.7 -0.9
comp=Z,0.8nm,0.8s,baz=62,slow=4.6
NOA NORSAR Array B 91.61 333 P P 10 56 28.8 -0.9
comp=Z,0.9nm,0.8s,baz=65,slow=4.7,SNR=4.9
comp=Z,0.9nm,0.8s
GERES GERESS Array B 94.98 321 P P 10 56 44.8 -0.8
comp=Z,0.8nm,0.9s,baz=64,slow=9.3,SNR=5.2
comp=Z,0.8nm,0.9s
TORD Torodi Ar. Bea 117.48 290 PKP PKPdf 11 02 08.6 -0.9
comp=Z,0.6nm,0.7s,baz=97,slow=0.8,SNR=4.7
TXAR Lajitas Array 120.30 48 PKP PKPdf 11 02 14.8 0.0
comp=Z,0.5nm,0.8s,baz=299,slow=0.9,SNR=6.8
PLCA Paso Flores 147.09 161 PKPbc PKPbc 11 03 06.2 +0.2
comp=Z,1.0nm,0.5s,baz=70,slow=0.6,SNR=5.1
LPAZ La Paz 167.38 121 PKP PKPdf 11 03 29.9 -0.6
comp=Z,1.3nm,0.8s,baz=211,slow=0.5,SNR=4.2

*NEIC **12** 11:08:59.9±1.4,2°99N±0°10×92°79E±0°08,h10km±1km, mb4.6/13, Error ellipse: s-maj=17.1km s-min=12.6km az=208.0*
*IDC **12** 11:09:01.9±1.6,3°64N×92°87E,h0km,mb3.8/6, mbtmp3.9/9,ML4.2/3, Error ellipse: s-maj=47.5km s-min=19.9km az=50.0*

ISC 12 11:09:02.8±0.8,3°1N±0°1×92°81E±0°07,h35km,n48, σ1ᵗ31/42,mb4.4/13,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**4.65**	**62**	Pn	**Pn**	**11 10 09.0**	**-1.6**
GSI	**Gunungsitoli**	**5.07**	**110**	Pn	**Pn**	**11 10 14.7**	**-1.8**
PSI	**Prapat**	**6.11**	**92**	Pn	**Pn**	**11 10 32.6**	**+1.8**
	7.3nm,0.3s,baz=319,slow=7.6,SNR=18						
PSI				Sn	**Sn**	**11 11 40.0**	**+0.4**
	9.2nm,0.3s,baz=242,slow=19,SNR=8.7						
	17nm,0.3s						
RPSI	**Rantau Prapat**	**6.11**	**93**		**Pn**	**11 10 29.9**	**-0.8**
RPSI	**Rantau Prapat**	**6.11**	**93**		**Pn**	**11 10 32.6**	**+1.8**
RPSI					**Sn**	**11 11 40.0**	**+0.5**
KULM	**Kulim**	**8.12**	**74**		**Pn**	**11 10 58.3**	**0.0**
IPM	**Ipoh**	**8.31**	**80**	Pn	**Pn**	**11 11 00.3**	**-0.7**
SRIT	**Nakonsritamara**	**8.70**	**51**	Pn	**Pn**	**11 11 06.0**	**-0.3**
MNAI	**Manna**	**12.54**	**126**	Pn	**Pn**	**11 11 58.5**	**-0.4**
PALK	**Pallekele**	**12.76**	**290**	Pn	**Pn**	**11 12 02.0**	**0.0**
	1.0nm,0.3s,baz=309,slow=12,SNR=1.7						
PALK				Sn	Sn	11 14 10.6	-12
	5.0nm,0.3s,baz=295,slow=19,SNR=13						
	3.3nm,0.3s						
PALK	**Pallekele**	**12.76**	**290**	Pn	**Pn**	**11 12 01.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**16.43**	**21**	Pn	**Pn**	**11 12 45.4**	**-5.5**
	0.3nm,0.3s,baz=202,slow=16,SNR=2.6						
	0.5nm,0.2s						
HYBB	**Hyderabad (bro**	**19.98**	**317**	*eP*	**P**	**11 13 32.0**	**-0.5**
HYBB				*eS*	**S**	**11 17 16.8**	**+1.3**
AZL	**Aizawl**	**20.55**	**360**	*eP*	Pn	11 13 49.0	+8.0
IMP	**Imphal**	**21.67**	**3**	*eP*	**P**	**11 13 52.0**	**+1.4**
KOHI	**KOHIMA**	**22.56**	**3**	*eP*	**P**	**11 14 01.0**	**+0.8**
H08S2	**Diego Garcia H**	**22.90**	**242**	T	T	11 39 28.6	
	baz=61,slow=76,SNR=84						
H08S3	**Diego Garcia H**	**22.90**	**242**	T	T	11 39 26.8	
	baz=61,slow=76,SNR=85						
H08S1	**Diego Garcia H**	**22.91**	**242**	T	T	11 39 28.0	
	baz=61,slow=76,SNR=64						
MOKO	**MOKOCHONG**	**23.18**	**4**	*eP*	**P**	**11 14 08.0**	**+1.3**
SAUI	**Saumlaki**	**39.93**	**106**	P	**P**	**11 16 33.1**	**-0.9**
KNRA	**Kununurra**	**40.14**	**119**	P	**P**	**11 16 36.5**	**+0.7**
KNRA				IAmb	IAmb	11 17 07.2	
	comp=Z,13nm,1.3s						
H01W3	**Cape Leeuwin H**	**42.73**	**154**	T	T	12 03 03.2	
	baz=328,slow=74,SNR=3.2						
H01W2	**Cape Leeuwin H**	**42.75**	**154**	T	T	12 03 04.3	
	baz=328,slow=74,SNR=3.8						
H01W1	**Cape Leeuwin H**	**42.75**	**154**	T	T	12 03 02.1	
	baz=328						
MK31	**Makanchi Array**	**44.51**	**350**	P	**P**	**11 17 11.7**	**+0.7**
MKAR	**Makanchi Array**	**44.51**	**350**	P	**P**	**11 17 11.1**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=160,slow=9.2,SNR=10						
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**44.51**	**350**	P	**P**	**11 17 12.2**	**+1.3**
KK31	**Karatay Array**	**44.53**	**337**	P	**P**	**11 17 11.4**	**+0.2**
KKAR	**Karatay Array**	**44.53**	**337**	P	**P**	**11 17 11.2**	**0.0**
SONM	**Songino Array**	**46.11**	**13**	P	**P**	**11 17 24.0**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=199,slow=8.5,SNR=2.6						
	comp=Z,0.8nm,0.7s						
KSCHJ	**Chungju**	**46.65**	**39**	P	**P**	**11 17 29.0**	**+0.9**
KSCHJ				IAmb	IAmb	11 17 58.6	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**46.72**	**121**	P	**P**	**11 17 27.9**	**-0.9**
WB0				IAmb	IAmb	11 17 31.0	
	comp=Z,7.5nm,1.3s						
WRA	**Warramunga Arr**	**46.74**	**121**	P	P	11 17 35.3	+6.3
	comp=Z,0.6nm,0.7s,baz=298,slow=8.6,SNR=7.1						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**46.74**	**121**	P	**P**	**11 17 28.5**	**-0.5**
WB2	**Warramunga Arr**	**46.75**	**121**	P	**P**	**11 17 28.8**	**-0.3**
WB2				IAmb	IAmb	11 18 12.9	
	comp=Z,9.1nm,1.5s						
WR0	**Warramunga Arr**	**46.92**	**121**	P	**P**	**11 17 29.9**	**-0.5**
WR0				IAmb	IAmb	11 18 13.7	
	comp=Z,10nm,1.5s						
KSAR	**Wonju Array Be**	**46.95**	**39**	P	**P**	**11 17 32.0**	**+1.7**
ASAR	**Alice Springs**	**48.02**	**126**	P	P	11 17 45.5	+6.5
	comp=Z,0.5nm,1.0s,baz=295,slow=7.1,SNR=2.8						
	comp=Z,0.5nm,1.0s						
KURBB	**Kurchatov Arra**	**48.90**	**348**	P	**P**	**11 17 44.4**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=169,slow=7.2,SNR=9.9						
	comp=Z,1.2nm,0.7s						
ZAA0	**Zalesovo Array**	**51.14**	**354**	P	**P**	**11 18 03.3**	**+1.1**
ZAA0				IAmb	IAmb	11 18 03.9	
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**51.14**	**354**	P	**P**	**11 18 02.9**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=189,slow=9.0,SNR=7.4						
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**51.14**	**354**	P	**P**	**11 18 03.7**	**+1.5**
JCJ	**Chichijima**	**52.86**	**58**	P	**P**	**11 18 16.6**	**+1.1**
MAJO	**Matsushiro**	**53.40**	**46**	P	**P**	**11 18 19.7**	**+0.4**
MAJO				IAmb	IAmb	11 18 20.3	
	comp=Z,7.1nm,1.2s						
ABKAR	**Akbulak array**	**53.87**	**334**	P	**P**	**11 18 22.7**	**+0.2**
FIA1	**FINESS Array S**	**76.34**	**333**	P	**P**	**11 20 47.9**	**-0.3**
FINES	**FINESS Array B**	**76.34**	**333**	P	**P**	**11 20 48.1**	**0.0**

IDC 12 11:15:47.3±9.4,15°99S×173°42W,h0km,mb3.5/3, mbtmp3.5/4,ML3.3/1,Error ellipse: s-maj=429.5km s-min=25.7km az=140.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.61**	**38**	Pn	Pn	11 16 29.2	-1.6
	6.0nm,0.3s,baz=252,slow=4.3,SNR=7.5						
AFI				Sn	Sn	11 16 58.2	-5.1
	23nm,0.3s,baz=207,slow=12,SNR=9.9						
	27nm,0.4s						
WRA	**Warramunga Arr**	**49.69**	**257**	P	P	11 24 40.9	-0.5
	0.4nm,0.8s,baz=93,slow=7.0,SNR=4.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**49.91**	**252**	P	P	11 24 42.8	-0.3
	0.8nm,0.8s,baz=86,slow=8.2,SNR=12						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**83.02**	**11**	P	P	11 28 15.2	+1.1
	0.2nm,0.5s,baz=229,slow=6.3,SNR=6.7						
	0.2nm,0.5s						

*IDC **12** 11:19:44.1±0.9,29°20S×61°11E,h0km,mb3.7/6, mbtmp3.8/7,ML4.1/1,MS3.2/3,Error ellipse: s-maj=34.2km s-min=24.8km az=30.0*
*NEIC **12** 11:19:45.2±2.6,29°2S±0°1×61°0E±0°2,h10km±1km, mb4.2/10,Error ellipse: s-maj=25.0km s-min=13.2km az=59.0*

ISC 12 11:19:45.0±0.6,29°2S±0°1×61°0E±0°1,h10km,n29, σ1ᵗ20/24,mb4.1/9,MS3.3/3,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.29**	**328**	Pn	**Pn**	**11 21 57.6**	**-1.5**
VOI	**Vohitsoka**	**14.73**	**296**	Pn	**Pn**	**11 23 12.5**	**-1.2**
ABPO	**Ambohimpanom**	**16.14**	**306**	Pn	**Pn**	**11 23 30.5**	**-1.7**
AIS	**Amsterdam Isla**	**16.25**	**126**	Pn	**Pn**	**11 23 31.9**	**-1.4**
OPO	**Ambohidratompo**	**16.46**	**307**	Pn	**P**	**11 23 38.9**	**-0.1**
	0.1nm,0.3s,baz=150,slow=6.3,SNR=3.6						
OPO				Sn	Sn	11 26 27.4	-12
	baz=277,slow=15,SNR=2.1						
	1.5nm,0.4s						
MBAR	**Mbarara**	**40.52**	**309**	LR	LR	11 42 19.5	
	comp=Z,32nm,21.4s,baz=84,slow=33						
ATD	**Arta Tunnel**	**44.10**	**334**	LR	LR	11 43 16.6	
	comp=Z,34nm,19.6s,baz=341,slow=32						
H01W2	**Cape Leeuwin H**	**44.95**	**111**	T	T	12 15 59.0	
	baz=261,slow=74,SNR=3.7						
H01W3	**Cape Leeuwin H**	**44.95**	**111**	T	T	12 16 00.6	
	baz=261,slow=74,SNR=3.7						
H01W1	**Cape Leeuwin H**	**44.97**	**111**	T	T	12 15 59.6	
	baz=261,slow=74,SNR=3.3						
SNAA	**Sanae**	**54.43**	**200**	P	**P**	**11 29 12.7**	**+0.7**
	0.5nm,0.8s,baz=98,slow=7.1,SNR=1.8						
SNAA				LR	LR	11 47 24.7	
	comp=Z,23nm,18.9s,baz=152,slow=30						
	0.5nm,0.8s						
SNAA	**Sanae**	**54.43**	**200**	P	**P**	**11 29 11.4**	**-0.6**
FITZ	**Fitzroy Crossi**	**59.58**	**95**	P	**P**	**11 29 47.3**	**-1.9**
QSPA	**South Pole Qui**	**60.99**	**180**	P	**P**	**11 29 58.3**	**-0.1**
	1.2nm,1.0s,baz=268,slow=3.4,SNR=1.9						
	1.2nm,1.0s						
QSPA	**South Pole Qui**	**60.99**	**180**	P	**P**	**11 29 58.5**	**+0.1**
QSPA				IAmb	IAmb	11 30 41.7	
	comp=Z,6.9nm,1.3s						
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**11 30 19.0**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=267,slow=7.1,SNR=2.1						
	comp=Z,0.3nm,0.7s						
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**11 30 18.9**	**+0.4**
VNDA				IAmb	IAmb	11 30 28.2	
	comp=Z,2.9nm,1.4s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**11 30 23.0**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=245,slow=5.5,SNR=13						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**11 30 21.0**	**-1.7**
AS31	**Alice Springs**	**64.56**	**104**	P	**P**	**11 30 22.3**	**-0.4**
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**	**11 30 34.8**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=248,slow=5.7,SNR=7.9						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.04**	**298**	P	**P**	**11 31 04.4**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=125,slow=4.7,SNR=4.9						
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.04**	**298**	P	**P**	**11 31 03.0**	**-0.5**
TORD				IAmb	IAmb	11 31 07.5	
	comp=Z,1.4nm,0.9s						
KK31	**Karatay Array**	**72.44**	**7**	P	**P**	**11 31 13.2**	**+1.8**
KK31				IAmb	IAmb	11 31 49.5	
	comp=Z,1.7nm,0.7s						
KKAR	**Karatay Array**	**72.44**	**7**	P	**P**	**11 31 13.2**	**+1.9**
KKAR				IAmb	IAmb	11 31 49.5	
	comp=Z,1.7nm,0.7s						
ABKAR	**Akbulak array**	**78.07**	**359**	P	**P**	**11 31 44.0**	**+0.4**
ABKAR				IAmb	IAmb	11 32 11.5	
	comp=Z,2.0nm,1.1s						
YKA	**Yellowknife Ar**	**146.54**	**356**	PKPbc	**PKPbc**	**11 39 25.2**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=350,slow=3.1,SNR=4.3						
PDAR	**Pinedale Array**	**164.45**	**333**	PKP	**PKPdf**	**11 39 49.5**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=55,slow=4.7,SNR=4.2						
TXAR	**Lajitas Array**	**166.63**	**274**	PKP	**PKPdf**	**11 39 53.5**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=116,slow=2.9,SNR=4.7						

*BJI **12** 11:25:21.4±0.0,26°99N×103°45E,h10km,mb4.3/22, mB4.6/14,ML4.3/19,Ms4.4/40,Ms7 4.0/37*
*IDC **12** 11:25:21.1±0.7,27°13N×103°70E,h0km,mb4.0/19, mbtmp4.0/20,ML4.0/1,MS3.5/26,Error ellipse: s-maj=20.2km s-min=15.2km az=57.0*
*NEIC **12** 11:25:23.3±1.8,27°09N±0°08×103°65E±0°09,h10km±1km, mb4.6/52,Error ellipse: s-maj=15.1km s-min=11.8km az=129.0*

ISC 12 11:25:22.6±0.4,27°03N±0°04×103°54E±0°04,h10km,n126, σ1ᵗ74/123,mb4.5/43,MS3.5/26,1C-5D,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**1.69**	**252**	Pg	Pn	11 25 49.4	-3.0
PZH				Sg	**Sn**	**11 26 10.9**	**-3.3**
PZH				smax	smax		
	comp=N,2μm,0.8s						
PZH				smax	smax		
	comp=E,2μm,0.9s						
KMI	**Kunming**	**2.04**	**201**	⇑Pn	**Pn**	**11 25 56.6**	**-0.6**
KMI				Sn	**Sn**	**11 26 25.5**	**+2.7**
KMI				smax	smax		
	comp=N,1μm,1.0s						
KMI				smax	smax		
	comp=E,960nm,1.2s						
GYA	**Guiyang**	**2.85**	**101**	⇓*i*Pn	**Pb**	**11 26 11.9**	**-1.8**
GYA				Sn	**Sg**	**11 26 49.6**	**-4.7**
GYA				Sg	Sb	11 26 57.9	+9.2
GYA				smax	smax		
	comp=N,930nm,0.9s						
GYA				smax	smax		
	comp=E,760nm,0.9s						
CD2	**Chengdu**	**3.87**	**3**	Pg	**Pb**	**11 26 32.5**	**+1.5**
CD2				Sn	**Sn**	**11 27 06.9**	**-0.8**
CD2				Sg	**Sg**	**11 27 22.6**	**-4.2**
CD2				smax	smax		
	comp=N,2μm,0.6s						
CD2				smax	smax		
	comp=E,2μm,0.7s						
ENH	**Enshi**	**6.14**	**57**		**Pn**	**11 26 54.1**	**+0.7**
GULI	**GuiLin**	**6.37**	**104**	Pn	**Pn**	**11 26 58.5**	**+1.9**
GULI				Sn	**Sn**	**11 28 14.7**	**+5.2**
GULI				LR	LR		
	comp=N,920nm,4.3s						
GULI				LR	LR		
	comp=E,860nm,4.2s						
GULI				LR	LR		
	comp=Z,560nm,5.9s						
CRAI	**Chiangrai**	**7.37**	**204**		**Pn**	**11 27 10.3**	**-0.1**
XAN	**Xi'an**	**8.38**	**32**	P	**Pn**	**11 27 23.8**	**-0.4**
XAN				smax	smax		
	comp=N,320nm,1.1s						
XAN				smax	smax		
	comp=E,360nm,1.2s						
XAN				LR	LR		
	comp=N,2μm,7.2s						
XAN				LR	LR		
	comp=E,1μm,6.4s						
XAN				LR	LR		
	comp=Z,1μm,8.1s						
MND	**Mandalay**	**8.40**	**235**	Pn	**Pn**	**11 27 25.5**	**+0.9**
CNSH	**ChangSha**	**8.41**	**80**	P	**Pn**	**11 27 27.8**	**+3.2**
CNSH				S	**Sn**	**11 28 57.4**	**-2.2**
CNSH				smax	smax		
	comp=N,140nm,0.9s						
CNSH				smax	smax		
	comp=E,120nm,0.8s						
LZH	**Lanzhou**	**9.03**	**2**	P	**Pn**	**11 27 32.8**	**-0.4**
LZH				smax	smax		
	comp=N,70nm,1.2s						
LZH				smax	smax		
	comp=E,110nm,0.9s						
LZH				LR	LR		
	comp=N,690nm,6.9s						
LZH				LR	LR		
	comp=E,3μm,8.3s						
LZH				LR	LR		
	comp=Z,670nm,7.9s						
CHTO	**Chiang Mai**	**9.21**	**208**	Pn	**Pn**	**11 27 39.6**	**+4.0**
CM31	**Chiang Mai Arr**	**9.53**	**207**	Pn	**Pn**	**11 27 41.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**9.53**	**207**	Pn	**Pn**	**11 27 42.0**	**+2.0**
	0.4nm,0.3s,baz=10,slow=12,SNR=12						
CMAR				LR	LR	11 31 38.9	
	comp=Z,470nm,20.1s,baz=30,slow=39						
	0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**9.53**	**207**		**Pn**	**11 27 44.4**	**+4.4**
GZH	**Guangzhou**	**9.72**	**112**	P	**Pn**	**11 27 44.7**	**+2.2**
GZH				S	**Sn**	**11 29 36.6**	**+4.8**
QIZ	**Qiongzhong**	**9.85**	**143**	P	**Pn**	**11 27 44.5**	**+0.1**
QIZ				S	**Sn**	**11 29 35.8**	**+0.6**
QIZ				LR	LR		
	comp=N,960nm,10.4s						
QIZ				LR	LR		
	comp=E,940nm,12.7s						
QIZ				LR	LR		
	comp=E,860nm,8.8s						
WHN	**Wuhan**	**10.11**	**67**	⇓P	**Pn**	**11 27 50.1**	**+2.3**
WHN				S	**Sn**	**11 29 42.1**	**+0.8**
WHN				LR	LR		
	comp=N,3μm,7.4s						
WHN				LR	LR		
	comp=E,2μm,9.0s						
WHN				LR	LR		
	comp=Z,2μm,10.6s						
LYN	**LuoYang**	**10.72**	**44**	⇓P	**Pn**	**11 27 52.1**	**-4.2**
LYN				pP		11 27 55.5	
LYN				sP		11 27 58.0	
LYN				S	**Sn**	**11 29 57.6**	**+1.2**
LYN				SS	**SnSn**	**11 30 12.1**	**+3.7**
LYN				LR	LR		
	comp=N,1μm,7.6s						
LYN				LR	LR		
	comp=E,990nm,7.8s						
LYN				LR	LR		
	comp=Z,1μm,12.8s						
GOMU	**GeErMu**	**11.77**	**323**	P	**Pn**	**11 28 09.4**	**-1.6**
GOMU				pP		11 28 13.0	
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,38nm,5.4s						
GOMU				LR	LR		
	comp=Z,530nm,10.2s						
GOMU				LR	LR		
	comp=Z,450nm,11.5s						
GOMU				LR	LR		
	comp=Z,260nm,11.4s						
GTA	**Gaotai**	**12.73**	**347**	*eP*	Pn	11 28 35.0	+11
GTA				pP		11 28 39.2	
GTA				sP		11 28 41.3	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,22nm,4.1s						
GTA				LR	LR		
	comp=N,360nm,9.5s						
GTA				LR	LR		
	comp=E,320nm,9.5s						
GTA				LR	LR		
	comp=Z,160nm,9.8s						
HNS	**HongShan**	**13.99**	**40**	⇓P	**Pn**	**11 28 41.2**	**+0.3**
HNS				*eS*	S	11 31 27.9	-10
HNS				LR	LR		
	comp=Z,400nm,12.3s						
HNS				LR	LR		
	comp=Z,490nm,17.5s						
NJ2	**Nanjing**	**14.23**	**66**	*eP*	**Pn**	**11 28 46.6**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=Z

BTO S Sn 11 31 35.8 +5.5
BTO LR LR
comp=Z,2µm,13.2s
BTO LR LR
comp=Z,3µm,11.6s
TIA Tai'an 14.74 48 ⇓P Pn 11 28 51.3 +0.1
TIA pmax pmax
comp=Z,4.0nm,0.6s
TIA LR LR
comp=Z,220nm,10.3s
TIA LR LR
comp=Z,430nm,14.3s
TIA LR LR
comp=Z,610nm,13.7s
YULB Yu-li 16.47 99 Pn Pn 11 29 11.9 -2.0
YULB IAmb IAmb 11 29 54.3
comp=Z,44nm,1.4s
NACB Ninganchiao 16.53 96 Pn Pn 11 29 12.8 -1.8
BJT Baijiatuau 16.66 36 Pn Pn 11 29 15.4 -0.9
BJI Beijing 16.68 36 P Pn 11 29 16.4 -0.1
BJI pmax pmax
comp=Z,7.0nm,1.1s
BJI LR LR
comp=Z,61nm,9.5s
BJI LR LR
comp=Z,360nm,10.0s
BJI LR LR
comp=Z,520nm,13.8s
SONM Songino Array 20.88 5 P P 11 30 04.7 -0.3
comp=Z,2.3nm,0.5s,baz=187,slow=11,SNR=14
SONM LR LR 11 38 57.4
comp=Z,110nm,20.7s,baz=212,slow=39
comp=Z,2.3nm,0.5s
SONM Songino Array 20.88 5 P P 11 30 04.1 -0.9
ULN Ulaanbaatar 20.98 7 P P 11 30 05.7 -0.3
WMQ Urumqi 21.09 327 *e*P P 11 30 06.6 -0.6
WMQ LR LR
comp=Z,360nm,9.5s
WMQ LR LR
comp=Z,400nm,14.1s
WMQ LR LR
comp=Z,68nm,15.9s
TJN Taejon 22.26 59 P P 11 30 19.8 +0.1
IPM Ipoh 22.56 187 P P 11 30 23.2 +0.1
IPM IAmb IAmb 11 30 24.4
comp=Z,14nm,1.0s
KSAR Wonju Array Be 23.00 57 P P 11 30 25.9 -1.7
KSRS Korea Array 23.03 57 P P 11 30 25.7 -2.2
comp=Z,1.9nm,0.6s,baz=242,slow=10,SNR=12
KSRS LR LR 11 39 08.0
comp=Z,106nm,20.4s,baz=245,slow=36
comp=Z,1.9nm,0.6s
PSI Prapat 24.50 191 LR LR 11 40 26.9
comp=Z,100nm,20.5s,baz=296,slow=37
MK31 Makanchi Array 25.89 325 P P 11 30 54.9 +0.3
MKAR Makanchi Array 25.89 325 P P 11 30 56.1 +1.5
comp=Z,1.1nm,0.4s,baz=134,slow=10,SNR=14
MKAR LR LR 11 40 44.6
comp=Z,96nm,18.0s,baz=144,slow=36
comp=Z,1.1nm,0.4s
MKAR Makanchi Array 25.89 325 P P 11 30 56.7 +2.1
MAKZ Makanchi 26.05 325 P P 11 30 57.0 +0.9
KSH Kashi 26.08 305 P P 11 31 00.7 +4.1
KSH pP sP 11 31 03.9 +2.2
KSH sP pP 11 31 06.9 +6.7
KSH pmax pmax
comp=Z,7.0nm,0.7s
GSI Gunungsitoli 26.22 194 P P 11 30 59.5 +1.7
NRN Naryn 26.78 310 P P 11 31 04.6 +1.5
NIL Nilore 26.90 292 P P 11 31 04.1 +0.1
NIL IAmb IAmb 11 31 22.0
comp=Z,13nm,0.8s
MDJ Mudanjiang 27.28 43 P P 11 31 06.1 -1.1
AAK Ala-Archa 28.29 311 LR LR 11 43 12.1
comp=Z,68nm,21.0s,baz=133,slow=38
USA0B Ussuriysk Arra 28.58 46 P P 11 31 17.4 -1.4
USRK Ussuriysk Ar. 28.58 46 P P 11 31 18.1 -0.6
comp=Z,3.1nm,0.7s,baz=249,slow=9.7,SNR=4.1
comp=Z,3.1nm,0.7s
USRK Ussuriysk Ar. 28.58 46 P P 11 31 17.1 -1.7
PALK Pallekele 29.27 232 LR LR 11 45 03.5
comp=Z,72nm,20.1s,baz=148,slow=40
ZALV Zalesovo Beam 30.23 338 P P 11 31 34.9 +1.6
comp=Z,1.1nm,0.4s,baz=160,slow=9.1,SNR=4.0
ZALV LR LR 11 45 34.5
comp=Z,16nm,20.6s,baz=179,slow=40
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 30.23 338 P P 11 31 32.7 -0.6
KURK Kurchatov 30.32 328 P P 11 31 35.6 +1.5
MJAR Matsushiro Arr 30.82 63 LR LR 11 45 23.3
comp=Z,172nm,18.1s,baz=262,slow=39
KLR Kul'dur 31.05 37 P P 11 31 39.9 -0.8
comp=Z,1.1nm,0.6s,baz=281,slow=7.9,SNR=4.2
KLR LR LR 11 45 57.5
comp=Z,181nm,19.8s,baz=248,slow=40
comp=Z,1.1nm,0.6s
KK31 Karatay Array 31.18 310 P P 11 31 41.7 -0.2
KKAR Karatay Array 31.18 310 P P 11 31 41.4 -0.5
JHJ Hachijo jima 2 31.84 70 LR LR 11 44 23.9
comp=Z,99nm,20.4s,baz=316,slow=36
GEYT Aibeck 39.48 298 LR LR 11 51 01.5
comp=Z,55nm,19.8s,baz=132,slow=39
ABKAR Akbulak array 40.11 315 P P 11 32 57.5 -0.9
AKTO Aktyubinsk 41.65 317 P P 11 33 12.8 +1.7
comp=Z,2.5nm,0.6s,baz=97,slow=17,SNR=4.6
comp=Z,2.5nm,0.6s
NRIK Noril'sk 43.37 352 P P 11 33 25.0 +0.2
comp=Z,2.4nm,0.4s,baz=128,slow=6.9,SNR=4.4
comp=Z,2.4nm,0.4s
PETK Petropavlovsk- 47.50 42 LR LR 11 56 36.1
comp=Z,87nm,18.2s,baz=244,slow=40
BELG Belogornoye 48.43 317 LR LR 11 54 51.4
comp=Z,38nm,19.3s,baz=125,slow=36
KIRV Kirov 48.78 326 LR LR 11 56 01.0
comp=Z,36nm,18.9s,baz=115,slow=38
KIV Kislovodsk 51.21 306 P P 11 34 27.6 +1.2
WB0 Warramunga Arr 55.31 144 P P 11 34 55.7 -0.9
WB0 IAmb IAmb 11 34 59.1
comp=Z,10nm,1.4s
WRAB Tennant Creek 55.42 144 P P 11 34 57.9 +0.5
WRA Warramunga Arr 55.42 144 P P 11 34 57.6 +0.2
comp=Z,5.4nm,0.8s,baz=332,slow=8.5,SNR=55
comp=Z,5.4nm,0.8s
WRA Warramunga Arr 55.42 144 P P 11 34 57.8 +0.4
WB2 Warramunga Arr 55.43 144 P P 11 34 57.3 -0.2
WR0 Warramunga Arr 55.54 144 P P 11 34 58.5 +0.2
WR0 IAmb IAmb 11 35 01.3
comp=Z,6.6nm,0.8s
SHEM Shemya Is, Ala 57.35 43 LR LR 12 01 32.5
comp=Z,38nm,20.8s,baz=318,slow=38
AS31 Alice Springs 58.32 147 P P 11 35 17.5 -0.5
ASAR Alice Springs 58.32 147 P P 11 35 18.6 +0.6
comp=Z,3.2nm,0.6s,baz=326,slow=6.0,SNR=27
comp=Z,3.2nm,0.6s
BR131 Keskin Array S 58.39 302 P P 11 35 19.2 +0.7
BR131 IAmb IAmb 11 35 29.9
comp=Z,8.3nm,1.5s
BRTR Keskin Array B 58.39 302 P P 11 35 20.3 +1.8
comp=Z,0.5nm,0.5s,baz=107,slow=6.9,SNR=3.6
BRTR LR LR 12 05 00.4
comp=Z,33nm,20.2s,baz=86,slow=41
comp=Z,0.5nm,0.5s
EIL Elat 59.60 290 LR LR 12 02 39.6
comp=Z,64nm,18.3s,baz=87,slow=38
AKASG Malin Array Be 59.85 315 P P 11 35 27.8 -0.5
comp=Z,0.3nm,0.4s,baz=67,slow=7.1,SNR=4.5
AKASG LR LR 12 02 04.6
comp=Z,47nm,18.2s,baz=152,slow=37
comp=Z,0.3nm,0.4s
FINES FINESS Array B 60.69 327 P P 11 35 32.9 -0.9
comp=Z,2.0nm,0.8s,baz=98,slow=10.0,SNR=2.2
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 60.77 337 P P 11 35 33.0 -1.3
comp=Z,1.3nm,0.7s,baz=67,slow=4.1,SNR=5.9
ARCES PcP PcP 11 36 18.3 +0.1
comp=Z,1.8nm,0.9s,baz=50,slow=4.9,SNR=4.2
comp=Z,1.3nm,0.7s
SPITS Spitsbergen Ar 63.16 347 LR LR 12 06 12.4
comp=Z,40nm,19.1s,baz=54,slow=39
NB2 NORSAR Subarra 67.83 328 P P 11 36 18.6 -2.2
comp=Z,6.6nm,1.2s,baz=74,slow=6.5
NOA NORSAR Array B 67.83 328 P P 11 36 18.9 -1.9
comp=Z,0.6nm,0.6s,baz=81,slow=4.4,SNR=2.8
NOA LR LR 12 05 48.4
comp=Z,26nm,18.0s,baz=75,slow=36
comp=Z,0.6nm,0.6s
NC204 NORSAR Array S 67.98 329 P P 11 36 21.5 -0.2
NAO01 NORSAR Array S 68.04 328 P P 11 36 23.6 +1.5
VRAC Vranov 68.11 315 LR LR 12 06 41.6
comp=Z,38nm,19.4s,baz=63,slow=36
GERES GERESS Array B 70.06 315 P P 11 36 33.4 -1.5
comp=Z,0.5nm,0.4s,baz=120,slow=7.9,SNR=4.0
comp=Z,0.5nm,0.4s
GERES GERESS Array B 70.06 315 P P 11 36 34.4 -0.5
IMAR Indian Mountai 70.60 25 P P 11 36 37.4 -0.4
H21K Melozitna Rive 71.08 25 P P 11 36 40.6 -0.2
H21K IAmb IAmb 11 37 02.1
comp=Z,4.3nm,1.2s
J20K Nowinta River 71.15 27 P P 11 36 42.1 +0.9
J20K IAmb IAmb 11 36 53.0
comp=Z,3.8nm,1.1s
L19K White Mountain 71.63 29 P P 11 36 45.0 +0.8
L19K IAmb IAmb 11 36 47.7
comp=Z,3.8nm,0.8s
MLY Manley 72.14 25 P P 11 36 47.3 +0.2
MLY IAmb IAmb 11 36 47.8
comp=Z,3.8nm,0.9s
H23K Yukon River 72.23 24 P P 11 36 48.0 +0.2
N19K Bonanza Creek 72.34 30 P P 11 36 48.4 -0.1
N19K IAmb IAmb 11 37 01.0
comp=Z,3.7nm,0.9s
O18K Koktuh Hills 72.39 31 P P 11 36 48.6 -0.2
O18K IAmb IAmb 11 36 53.8
comp=Z,7.2nm,1.2s
BPAW Bear Paw Mtn. 72.44 26 P P 11 36 48.8 -0.2
BPAW IAmb IAmb 11 36 54.0
comp=Z,4.3nm,0.7s
PPLA Purkeypile 72.47 28 P P 11 36 49.5 +0.1
M20K Styx River 72.50 29 P P 11 36 50.2 +0.7
M20K IAmb IAmb 11 36 53.5
comp=Z,6.0nm,1.1s
I23K Minto, Yukon-K 72.61 25 P P 11 36 50.6 +0.7
H24K Noodor Dome 72.84 24 P P 11 36 50.8 -0.6
H24K IAmb IAmb 11 36 56.3
comp=Z,5.4nm,1.2s
NEA2 Nenana 72.97 26 P P 11 36 51.9 -0.2
NEA2 IAmb IAmb 11 37 07.4
comp=Z,5.4nm,1.0s
MDM Murphy Dome 73.12 25 P P 11 36 53.2 +0.2
MDM IAmb IAmb 11 36 58.5
comp=Z,8.3nm,1.2s
SKT Skwentna 73.14 28 P P 11 36 53.0 -0.1
SKT IAmb IAmb 11 37 05.0
comp=Z,8.6nm,1.5s
DAVOX Davos/Dischmat 73.19 314 LR LR 12 11 18.1
comp=Z,32nm,18.4s,baz=83,slow=38
BMAR Burnt Mountain 73.22 22 P P 11 36 54.5 +1.0
TCOL CIGO, UAF Yank 73.30 25 P P 11 36 54.3 +0.3
TCOL IAmb IAmb 11 37 25.9
comp=Z,4.1nm,0.6s
COLA College 73.30 25 P P 11 36 54.2 +0.3
COLA IAmb IAmb 11 37 25.9
comp=Z,4.2nm,0.6s
IL31 73.72 25 P P 11 36 54.6 -1.8
IL31 IAmb IAmb 11 36 57.1
comp=Z,3.2nm,1.1s
ILAR Eielson Array 73.72 25 P P 11 36 54.9 -1.6
comp=Z,0.5nm,0.5s,baz=280,slow=4.0,SNR=14
comp=Z,0.5nm,0.5s
ILAR Eielson Array 73.72 25 P P 11 36 55.1 -1.3
PRP Porcupine Dome 73.85 24 P P 11 36 57.0 -0.4
PRP IAmb IAmb 11 36 57.9
comp=Z,4.3nm,0.6s
KDAK Kodiak Island 74.50 33 P P 11 37 00.9 -0.2
KDAK IAmb IAmb 11 37 02.5
comp=Z,4.8nm,0.9s
RIDG Independent Ri 75.00 25 P P 11 37 02.7 -1.3
RIDG IAmb IAmb 11 37 03.3
comp=Z,5.7nm,1.1s
J26L Joseph Creek 75.09 24 P P 11 37 03.6 -1.0
J26L IAmb IAmb 11 37 04.2
comp=Z,4.2nm,0.7s
KLU Klutina 75.73 28 P P 11 37 08.4 +0.1
INK Inuvik 76.15 19 P P 11 37 08.5 -1.9
comp=Z,3.5nm,0.9s,baz=218,slow=0.5,SNR=5.7
INK LR LR 12 15 41.7
comp=Z,53nm,18.2s,baz=348,slow=40
comp=Z,3.5nm,0.9s
L27K Beaver Creek, 76.52 25 P P 11 37 13.0 +0.3
L27K IAmb IAmb 11 37 46.5
comp=Z,7.5nm,1.4s
BCAR Beaver Creek A 76.53 25 P P 11 37 13.2 +0.4
BMRM Bremner River 76.54 28 P P 11 37 12.7 -0.2
MCARA McCarthy VSAT 76.97 27 P P 11 37 14.4 -0.8
SFJD Kangerlussuaq 84.25 350 LR LR 12 18 17.3
comp=Z,42nm,19.1s,baz=14,slow=38
YKA Yellowknife Ar 85.71 17 P P 11 38 01.0 -0.6
comp=Z,0.9nm,0.8s,baz=328,slow=5.7,SNR=2.2
YKA LR LR 12 21 52.1
comp=Z,18nm,18.0s,baz=326,slow=40
comp=Z,0.9nm,0.8s

*HEL **12** 11:28:49.1±0.1,63.97N×28.13E, h0km, ML1.7, Explosion*
*IDC **12** 11:28:50.3±1.4,63.89N×27.76E, h0km, mbtmp2.6/2, ML1.6/2, Error ellipse: s-maj=29.4km s-min=8.1km az=100.0*
ISC 12 11:28:48.0±0.8,**63.95N**±0.03×**28.18E**±0.03,**h0km**,**n24**, σ1°**01**/41,**Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.82**	**70**	PG	**Pb**	**11 29 04.8**	**-0.2**
RMF				SB	**Sb**	**11 29 15.6**	**-0.9**
OUL	**Oulu**	**1.51**	**320**	PN	**Pn**	**11 29 16.2**	**-0.1**
OUL				SN	**Sn**	**11 29 38.7**	**+2.1**
OUF	**Merijarvi**	**1.57**	**287**	PG	**Pn**	**11 29 17.0**	**-0.1**
OUF				MSG		11 29 35.2	
	comp=Z,6.4nm,0.2s						
OUF				SN	**Sn**	**11 29 37.5**	**-0.5**
OBF4	**Vikkela, Lumij** baz=121	**1.60**	**304**	PG	**Pn**	**11 29 17.5**	**+0.1**
JOF	**Joensuu** baz=304	**1.75**	**125**	PG	**Pg**	**11 29 21.0**	**-0.3**
JOF				SN	**Sg**	**11 29 44.8**	**+0.9**
OBF0	**Syolatti, Pyha**	**1.81**	**290**	PG	**Pb**	**11 29 21.2**	**-0.7**
OBF0				SN	**Sb**	**11 29 44.8**	**-0.3**
MSF	**Maaselka** baz=190	**2.01**	**10**	PG	**Pb**	**11 29 24.6**	**-0.7**
MSF				SG	**Sb**	**11 29 49.6**	**-1.2**
KAF	**Kangasniemi** baz=25	**2.03**	**206**	PG	**Pb**	**11 29 25.5**	**-0.2**
KAF				MSG		11 29 49.7	
	comp=Z,3.0nm,0.2s						
KAF				SG	**Sg**	**11 29 52.8**	**-0.3**
OBF8	**Ulkokalla**	**2.11**	**283**	PG	**Pb**	**11 29 27.3**	**+0.2**
KU6	**Riekki**	**2.21**	**18**	PG	**Pb**	**11 29 28.4**	**-0.3**
KU6				MSG		11 29 54.1	
	comp=Z,3.6nm,0.2s						
KU6				SG	**Sb**	**11 29 56.2**	**-0.5**
KEF	**Keuruu**	**2.34**	**222**	PG	**Pb**	**11 29 30.8**	**-0.1**
KEF				MSG		11 29 58.5	
	comp=Z,3.9nm,0.2s						
KEF				SG	**Sb**	**11 30 00.6**	**+0.3**
OLKF	**Oulanka, Finla**	**2.44**	**12**	PG	**Pb**	**11 29 32.2**	**-0.5**
OLKF				SG	**Sb**	**11 30 02.3**	**-0.9**
RUFX	**Ruokolahti**	**2.55**	**172**	PG	**Pb**	**11 29 34.4**	**-0.2**
RUFX				SG	**Sg**	**11 30 08.7**	**-1.1**
VAF	**Ylistaro**	**2.63**	**252**	PG	**Pb**	**11 29 35.2**	**-0.7**
VAF				MSG		11 30 06.3	
	comp=Z,2.6nm,0.2s						
VAF				SB	**Sb**	**11 30 08.3**	**-0.5**
FIA0	**FINESS Array S** baz=19	**2.69**	**202**	PB	**Pb**	**11 29 36.2**	**-0.8**
FIA0				SB	**Sb**	**11 30 10.2**	**-0.3**
FINES	**FINESS Array B**	**2.69**	**202**	Pn	**Pb**	**11 29 35.7**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=25,slow=14,SNR=8.8						
FINES				Lg	Lg	11 30 10.6	
	comp=Z,0.5nm,0.3s,baz=20,slow=25,SNR=34						
	comp=Z,2.0nm,0.5s						
TOF	**Tornio**	**2.70**	**324**	PB	**Pb**	**11 29 35.1**	**-1.9**
TOF				SB	**Sn**	**11 30 07.2**	**+1.4**
TOF				MSG		11 30 07.3	
	comp=Z,1.3nm,0.2s						
KALU	**Kalix**	**2.81**	**315**	SB	**Sn**	**11 30 10.0**	**+1.3**
RNF	**Rovaniemi**	**2.83**	**342**	SG	**Sb**	**11 30 13.6**	**-0.7**
BURU	**Burvik**	**3.04**	**285**	PG	**Pb**	**11 29 42.9**	**0.0**
BURU				SN	**Sn**	**11 30 15.0**	**+0.8**
KLF	**Kolari** baz=150	**3.74**	**334**	PN	**Pn**	**11 29 48.5**	**+1.7**
KLF				SN	**Sn**	**11 30 31.6**	**+0.2**
PAJU	**Pajala**	**3.74**	**328**	PN	**Pn**	**11 29 48.8**	**+1.9**
PAJU				SN	**Sn**	**11 30 31.3**	**-0.3**
ARCES	**ARCESS Array B** baz=179,slow=11,SNR=1.8	**5.71**	**351**	Pn	**Pn**	**11 30 16.4**	**+2.4**
ARCES				Sn	**Sn**	**11 31 18.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=168,slow=25,SNR=5.7						
	comp=Z,1.0nm,0.9s						
I37NO	**I37NO** baz=140,slow=324,SNR=6.6	**6.41**	**328** *i*			12 06 10.0	

*IDC **12** 11:41:10.9±1.1,22.67S×173.34E, h0km, mb3.6/5, mbtmp3.7/7, ML5.5/1, MS3.3/7, Error ellipse: s-maj=32.2km s-min=24.5km az=158.0*
*NEIC **12** 11:41:12.0±1.3,22.73S±0.06×173.25E±0.08, h10km±2km, mb4.3/5, Error ellipse: s-maj=15.8km s-min=4.0km az=48.0*
ISC 12 11:41:11.8±0.7,**22.75S**±0.1×**173.37E**±0.08,**h10km**,**n27**, σ1°**24**/22,**mb4.0**/8,**MS3.2**/5,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.10**	**283**	Pn	**Pn**	**11 42 26.6**	**-1.7**
PINNC	**Pines Island,**	**5.47**	**270**	Pn	**Pn**	**11 42 32.0**	**-1.4**
OUENC	**Ouen Island, N**	**6.04**	**271**	Pn	**Pn**	**11 42 39.8**	**-1.4**
DZM	**Mont Dzumac** 4.8nm,0.3s,baz=119,slow=22,SNR=16	**6.44**	**274**	Pn	**Pn**	**11 42 48.2**	**+1.4**
DZM				Sn	**Sn**	**11 44 02.8**	**+2.4**
	1.7nm,0.3s,baz=259,slow=5.2,SNR=3.1						
DZM	**Mont Dzumac**	**6.44**	**274**		**Pn**	**11 42 46.6**	**-0.2**
MSVF	**Nonsavu** 3.0nm,0.3s,baz=225,slow=22,SNR=14 4.3nm,0.3s	**6.61**	**42**	Pn	**Pn**	**11 42 48.9**	**-0.3**
MSVF	**Nonsavu**	**6.61**	**42**	Pn	**Pn**	**11 42 50.1**	**+0.9**
KOUNC	**Koumac, New Ca**	**8.72**	**283**	Pn	**Pn**	**11 43 15.9**	**-2.0**
RAO	**Raoul Island** comp=Z,160nm,21.6s,baz=232,slow=32	**10.20**	**132**	LR	LR	11 46 39.6	
OUZ	**Omahuta**	**12.47**	**179**	Pn	**Pn**	**11 44 08.5**	**-0.9**
URZ	**Urewera** comp=Z,156nm,21.1s,baz=31,slow=32	**15.84**	**169**	LR	LR	11 49 37.5	
RPZ	**Rata Peaks** comp=Z,263nm,18.1s,baz=357,slow=36	**21.05**	**185**	LR	LR	11 53 44.0	
CTA	**Charters Tower** comp=Z,49nm,18.8s,baz=78,slow=38	**25.37**	**271**	LR	LR	11 57 06.0	
ASAR	**Alice Springs** 0.3nm,0.6s,baz=82,slow=9.5,SNR=2.7 0.3nm,0.6s	**36.21**	**261**	P	**P**	**11 48 15.3**	**+0.2**
WB0	**Warramunga Arr**	**36.38**	**267**	P	**P**	**11 48 15.8**	**-0.7**
WB0				IAmb	IAmb	11 48 19.1	
	comp=Z,5.2nm,1.1s						
WB2	**Warramunga Arr**	**36.38**	**267**	P	**P**	**11 48 16.2**	**-0.4**
WB2				IAmb	IAmb	11 48 37.2	
	comp=Z,7.6nm,1.2s						
WRA	**Warramunga Arr** comp=Z,0.1nm,0.4s,baz=97,slow=8.5,SNR=8.5 comp=Z,0.1nm,0.4s	**36.39**	**267**	P	**P**	**11 48 15.9**	**-0.7**
WRA	**Warramunga Arr**	**36.39**	**267**	P	**P**	**11 48 16.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**44.82**	**267**	P	**P**	**11 49 24.6**	**-1.8**
FITZ				IAmb	IAmb	11 49 44.6	
	comp=Z,5.1nm,1.2s						
GUMO	**Guam** comp=Z,34nm,21.6s,baz=124,slow=32	**45.61**	**320**	LR	LR	12 05 52.7	
VNDA	**Vanda** comp=Z,0.4nm,0.6s,baz=350,slow=6.1,SNR=5.4	**55.15**	**183**	P	**P**	**11 50 45.0**	**+1.0**
VNDA				LR	LR	12 10 02.5	
	comp=Z,60nm,21.9s,baz=350,slow=31 comp=Z,0.4nm,0.6s						
DAV	**Davao City (W)** comp=Z,7.8nm,20.9s,baz=169,slow=34	**55.33**	**297**	LR	LR	12 12 44.4	
QSPA	**South Pole Qui**	**67.37**	**180**	P	**P**	**11 52 06.6**	**-0.5**
MAW	**Mawson** comp=Z,1.2nm,0.7s,baz=153,slow=9.0,SNR=2.7 comp=Z,1.2nm,0.7s	**76.67**	**202**	P	**P**	**11 53 03.8**	**+1.2**
ILAR	**Eielson Array** comp=Z,0.5nm,0.9s,baz=235,slow=3.2,SNR=3.3 comp=Z,0.5nm,0.9s	**92.43**	**16**	P	**P**	**11 54 21.9**	**-0.4**
GERES	**GERESS Array B**	**149.33**	**333**	PKPbc	**PKiKP**	**12 01 03.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=36,slow=5.2,SNR=1.4						
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.9s,baz=132,slow=2.2,SNR=3.9	**167.63**	**221**	PKPab	**PKPab**	**12 02 25.2**	**+0.2**

*NEIC **12** 11:48:50.1±1.6,23.7S±0.1×174.61W±0.1,h10km±2km, mb4.6/10, Error ellipse: s-maj=23.7km s-min=16.2km az=181.0*
*IDC **12** 11:48:52.2±1.4,23.97S×175.10W, h0km, mb4.0/7, mbtmp4.0/8, ML5.6/1, MS3.5/4, Error ellipse: s-maj=58.6km s-min=23.8km az=160.0*
ISC 12 11:48:54.4±0.7,**23.95S**±0.2×**174.91W**±0.09,**h24km**,**n27**, σ1°**40**/23,**mb4.6**/12,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.70**	**45**	Pn	Pn	11 50 23.3	-8.0
MSVF	**Nonsavu** 2.3nm,0.3s,baz=278,slow=23,SNR=11	**9.02**	**312**	Pn	**Pn**	**11 51 02.6**	**-0.7**
MSVF				LR	LR	11 54 07.3	
	comp=Z,245nm,19.3s,baz=125,slow=35 12nm,0.7s						
MSVF	**Nonsavu**	**9.02**	**312**	Pn	**Pn**	**11 51 02.4**	**-0.9**
AFI	**Afiamalu**	**10.40**	**17**	Pn	Pn	11 51 12.8	-9.4
RAR	**Rarotonga** 2.2nm,0.3s,baz=258,slow=12,SNR=8.3	**14.24**	**82**	Pn	**Pn**	**11 52 11.9**	**-2.8**
RAR				LR	LR	11 57 11.4	
	comp=Z,125nm,20.9s,baz=268,slow=35						
PPT	**Papeete** comp=Z,103nm,21.3s,baz=260,slow=31	**24.50**	**80**	LR	LR	12 01 43.1	
EIDS	**Eidsvold**	**30.90**	**260**	P	**P**	**11 55 09.9**	**+0.6**
EIDS				IAmb	IAmb	11 55 23.8	
	comp=Z,14nm,1.5s						
CTA	**Charters Tower** comp=Z,4.1nm,0.5s,baz=97,slow=9.2,SNR=9.8 comp=Z,4.1nm,0.5s	**36.13**	**268**	P	**P**	**11 55 54.5**	**-0.5**
CTAO	**Charters Tower**	**36.13**	**268**	P	**P**	**11 55 53.8**	**-1.2**
CTAO				IAmb	IAmb	11 56 35.3	
	comp=Z,14nm,1.4s						
PMG	**Port Moresby**	**38.95**	**285**	P	**P**	**11 56 17.5**	**-1.4**
STKA	**Stephens Creek** comp=Z,2.0nm,0.7s,baz=58,slow=4.0,SNR=3.0 comp=Z,2.0nm,0.7s	**39.04**	**248**	P	**P**	**11 56 19.8**	**+0.4**
AS31	**Alice Springs**	**46.62**	**259**	P	**P**	**11 57 21.1**	**0.0**
ASAR	**Alice Springs** comp=Z,1.2nm,0.6s,baz=95,slow=7.7,SNR=17 comp=Z,1.2nm,0.6s	**46.62**	**259**	P	**P**	**11 57 21.4**	**+0.4**
ASAR	**Alice Springs**	**46.62**	**259**	P	**P**	**11 57 20.3**	**-0.8**
WR0	**Warramunga Arr**	**46.86**	**265**	P	**P**	**11 57 22.6**	**-0.3**
WR0				IAmb	IAmb	11 57 57.5	
	comp=Z,8.9nm,1.3s						
WB2	**Warramunga Arr**	**47.04**	**265**	P	**P**	**11 57 23.8**	**-0.5**
WB2				IAmb	IAmb	11 57 38.9	
	comp=Z,7.5nm,1.2s						
WB0	**Warramunga Arr**	**47.04**	**265**	P	**P**	**11 57 23.1**	**-1.2**
WB0				IAmb	IAmb	11 57 27.9	
	comp=Z,7.4nm,1.2s						
WRA	**Warramunga Arr** comp=Z,1.0nm,0.4s,baz=95,slow=8.1,SNR=44 comp=Z,1.0nm,0.4s	**47.05**	**265**	P	**P**	**11 57 23.2**	**-1.2**
WRA	**Warramunga Arr**	**47.05**	**265**	P	**P**	**11 57 23.7**	**-0.7**
KNRA	**Kununurra**	**53.34**	**268**	P	**P**	**11 58 12.3**	**+0.2**
QSPA	**South Pole Qui**	**66.15**	**180**	P	**P**	**11 59 39.2**	**-0.5**
QSPA				IAmb	IAmb	12 00 05.0	
	comp=Z,6.5nm,1.3s						
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.6s,baz=219,slow=6.5,SNR=2.1 comp=Z,0.2nm,0.6s	**81.61**	**42**	P	**P**	**12 01 12.8**	**+2.1**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.7s,baz=210,slow=7.2,SNR=3.5 comp=Z,0.2nm,0.7s	**86.54**	**56**	P	**P**	**12 01 38.6**	**+2.7**
ANMO	**Albuquerque** comp=Z,49nm,20.7s,baz=278,slow=30	**87.36**	**50**	LR	LR	12 32 51.8	
CMAR	**Chiang Mai Arr** comp=Z,2.1nm,0.8s,baz=132,slow=2.8,SNR=12 comp=Z,2.1nm,0.8s	**93.93**	**288**	P	**P**	**12 02 13.1**	**+2.4**
AKASG	**Malin Array Be** comp=Z,0.8nm,0.6s,baz=42,slow=3.9,SNR=3.4	**147.39**	**331**	PKPbc	**PKPab**	**12 08 36.1**	**-1.7**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.8s,baz=96,slow=5.1,SNR=2.7	**151.25**	**310**	PKPbc	**PKiKP**	**12 08 47.3**	**+0.7**

*IDC **12** 12:11:37.3±1.1,22.53S×173.39E, h0km, mb4.1/9, mbtmp4.1/11, ML5.0/2, MS3.4/21, Error ellipse: s-maj=29.1km s-min=20.2km az=148.0*
*NEIC **12** 12:11:39.4±0.8,22.60S±0.06×173.33E±0.09, h10km±1km, mb4.4/14, Error ellipse: s-maj=14.6km s-min=9.4km az=81.0*

NOU ***12*** *12:11:53.5,22˚.77S×172˚.32E,h10km,mb4.8/13, Southeast of Loyalty Islands*
ISC 12 12:11:39.0±0.6,22˚.6S±0˚.1×173˚.44E±0˚.07,h10km,n64, σ1ᵖ57/49,mb4.2/16,MS3.4/19,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.14**	**281**			**Pn**	**12 12 55.0**	**-1.0**
PINNC	**Pines Island,**	**5.54**	**268**	Pn		**Pn**	**12 13 01.1**	**-0.4**
PINNC	**Pines Island,**	**5.54**	**268**	P		**Pn**	**12 13 02.1**	**+0.5**
YATNC	**Mamie plateau,**	**6.09**	**274**	P		**Pn**	**12 13 08.7**	**-0.4**
OUENC	**Ouen Island, N**	**6.11**	**270**	Pn		**Pn**	**12 13 06.7**	**-2.7**
OUENC	**Ouen Island, N**	**6.11**	**270**	P		**Pn**	**12 13 09.5**	**+0.2**
ONTNC	**Ouen Toro**	**6.47**	**271**	Pn		**Pn**	**12 13 13.2**	**-1.1**
ONTNC	**Ouen Toro**	**6.47**	**271**	P		**Pn**	**12 13 15.4**	**+1.1**
MSVF	**Nonsavu**	**6.47**	**43**	Pn		**Pn**	**12 13 15.3**	**+0.9**
	2.7nm,0.3s,baz=238,slow=19,SNR=12							
MSVF				LR		LR	12 15 04.5	
	comp=Z,142nm,18.6s,baz=149,slow=32 13nm,0.6s							
MSVF	**Nonsavu**	**6.47**	**43**	Pn		**Pn**	**12 13 16.0**	**+1.6**
DZM	**Mont Dzumac**	**6.50**	**273**	Pn		**Pn**	**12 13 13.7**	**-1.1**
	6.7nm,0.3s,baz=128,slow=10.0,SNR=38							
DZM				Sn		**Sn**	**12 14 29.2**	**0.0**
	6.2nm,0.3s,baz=294,slow=23,SNR=6.9 27nm,0.5s							
DZM	**Mont Dzumac** 109nm,0.8s	**6.50**	**273**	*e*Pn		**Pn**	**12 13 15.6**	**+0.8**
DZM				*e*Sn		**Sn**	**12 14 30.4**	**+1.3**
	182nm,1.2s							
DZM	**Mont Dzumac**	**6.50**	**273**	P		**Pn**	**12 13 15.1**	**+0.3**
NOUC	**Port Laguerre**	**6.63**	**273**	P		**Pn**	**12 13 16.6**	**+0.1**
KOUNC	**Koumac, New Ca**	**8.76**	**282**	Pn		**Pn**	**12 13 44.6**	**-1.1**
KOUNC	**Koumac, New Ca**	**8.76**	**282**	P		**Pn**	**12 13 47.0**	**+1.3**
RAO	**Raoul Island**	**10.23**	**132**	LR		LR	12 17 10.4	
	comp=Z,286nm,21.1s,baz=298,slow=32							
URZ	**Urewera**	**15.95**	**169**	LR		LR	12 20 07.3	
	comp=Z,218nm,21.8s,baz=32,slow=32							
AFI	**Afiamalu**	**16.46**	**61**	LR		LR	12 20 36.0	
	comp=Z,92nm,21.9s,baz=158,slow=33							
EIDS	**Eidsvold**	**20.62**	**258**	P		Pn	12 16 21.3	+0.4
RK1H	**Rockhampton Ha**	**21.14**	**263**	P		**P**	**12 16 27.3**	**+3.0**
RPZ	**Rata Peaks**	**21.18**	**185**	LR		LR	12 23 44.0	
	comp=Z,258nm,20.0s,baz=358,slow=34							
RMQ	**Roma**	**22.78**	**255**	P		**P**	**12 16 45.1**	**+3.3**
CTA	**Charters Tower**	**25.44**	**270**	P		**P**	**12 17 07.7**	**+0.6**
	1.0nm,0.3s,baz=114,slow=12,SNR=1.8							
CTA				LR		LR	12 25 38.5	
	comp=Z,85nm,19.9s,baz=86,slow=33 1.0nm,0.3s							
QLP	**Quilpie**	**26.83**	**255**	P		**P**	**12 17 24.6**	**+4.9**
STKA	**Stephens Creek**	**29.71**	**245**	P		**P**	**12 17 46.1**	**+0.7**
	2.5nm,0.6s,baz=90,slow=12,SNR=6.8							
STKA				LR		LR	12 28 19.3	
	comp=Z,82nm,20.4s,baz=38,slow=34 2.5nm,0.6s							
BBOO	**Buckleboo**	**34.48**	**245**	P		**P**	**12 18 26.1**	**-1.2**
PPT2	**Papeete2**	**35.02**	**89**	*e*LR		LR	12 27 35.9	
	comp=Z,71nm,23.5s							
PPT2				*e*LR		LR	12 27 36.4	
	comp=Z,125nm,26.0s							
PPT	**Papeete**	**35.03**	**89**	LR		LR	12 29 46.9	
	comp=Z,20nm,19.5s,baz=220,slow=31							
WR0	**Warramunga Arr**	**36.28**	**267**	P		**P**	**12 18 41.6**	**-1.3**
WR0				IAmb		IAmb	12 18 46.0	
	comp=Z,4.3nm,1.1s							
AS31	**Alice Springs**	**36.30**	**260**	P		**P**	**12 18 41.8**	**-1.3**
ASAR	**Alice Springs**	**36.30**	**260**	P		**P**	**12 18 42.1**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=74,slow=9.6,SNR=30							
ASAR				LR		LR	12 32 35.0	
	comp=Z,72nm,19.7s,baz=102,slow=35 comp=Z,2.9nm,0.8s							
ASAR	**Alice Springs**	**36.30**	**260**	P		**P**	**12 18 41.4**	**-1.7**
WB0	**Warramunga Arr**	**36.45**	**267**	P		**P**	**12 18 42.6**	**-1.7**
WB0				IAmb		IAmb	12 19 17.5	
	comp=Z,4.4nm,1.1s							
WB2	**Warramunga Arr**	**36.46**	**267**	P		**P**	**12 18 42.8**	**-1.6**
WB2				IAmb		IAmb	12 19 04.4	
	comp=Z,6.7nm,1.2s							
WRA	**Warramunga Arr**	**36.47**	**267**	P		**P**	**12 18 42.5**	**-2.0**
	comp=Z,2.2nm,1.1s,baz=98,slow=8.6,SNR=32							
WRA				LR		LR	12 32 23.3	
	comp=Z,78nm,21.6s,baz=84,slow=34 comp=Z,2.2nm,1.1s							
WRA	**Warramunga Arr**	**36.47**	**267**	P		**P**	**12 18 42.6**	**-1.9**
FORT	**Forrest**	**41.14**	**249**	P		**P**	**12 19 23.7**	**+0.1**
KNRA	**Kununurra**	**42.65**	**271**	P		**P**	**12 19 34.4**	**-1.6**
KNRA				IAmb		IAmb	12 19 36.3	
	comp=Z,6.5nm,0.8s							
FITZ	**Fitzroy Crossi**	**44.90**	**267**	P		**P**	**12 19 53.9**	**-0.3**
	comp=Z,6.8nm,0.8s,baz=126,slow=7.7,SNR=25							
FITZ				LR		LR	12 37 10.9	
	comp=Z,84nm,21.4s,baz=103,slow=34 comp=Z,6.8nm,0.8s							
FITZ	**Fitzroy Crossi**	**44.90**	**267**	P		**P**	**12 19 51.1**	**-3.0**
FITZ				IAmb		IAmb	12 19 55.6	
	comp=Z,6.9nm,0.8s							
GUMO	**Guam**	**45.56**	**319**	LR		LR	12 36 07.0	
	comp=Z,46nm,21.6s,baz=128,slow=32							
TAOE	**Nuku Hiva Isla**	**46.51**	**81**	*e*LR		LR	12 32 55.2	
	comp=Z,62nm,30.3s							
KAPI	**Kappang**	**54.66**	**280**	LR		LR	12 44 35.2	
	comp=Z,26nm,19.5s,baz=70,slow=36							
VNDA	**Vanda**	**55.28**	**183**	P		**P**	**12 21 11.2**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=5.0,slow=7.6,SNR=6.4							
VNDA				LR		LR	12 42 02.9	
	comp=Z,25nm,18.3s,baz=9.0,slow=33 comp=Z,0.5nm,0.6s							
VNDA	**Vanda**	**55.28**	**183**	P		**P**	**12 21 12.1**	**0.0**
SBA	**Scott Base**	**55.43**	**182**	P		**P**	**12 21 15.7**	**+2.5**
SBA				IAmb		IAmb	12 21 28.4	
	comp=Z,7.8nm,1.1s							
QSPA	**South Pole Qui**	**67.50**	**180**	LR		LR	12 46 44.7	
	comp=Z,40nm,21.4s,baz=36,slow=31							
QSPA	**South Pole Qui**	**67.50**	**180**	P		**P**	**12 22 34.2**	**-0.8**
MJAR	**Matsushiro Arr**	**67.56**	**330**	P		**P**	**12 22 34.3**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=149,slow=9.7,SNR=2.3 comp=Z,1.0nm,0.8s							
KSRS	**Korea Array**	**73.49**	**324**	P		**P**	**12 23 11.2**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=137,slow=6.7,SNR=4.5 comp=Z,0.9nm,0.8s							
KSRS	**Korea Array**	**73.49**	**324**	P		**P**	**12 23 11.3**	**-0.5**
BELA	**Belgrano 2**	**78.43**	**174**	P		**P**	**12 23 39.1**	**-0.4**
BELA				IAmb		IAmb	12 24 17.0	
	comp=Z,5.0nm,1.3s							
SNAA	**Sanae**	**85.97**	**181**	LR		LR	12 58 53.3	
	comp=Z,28nm,21.5s,baz=223,slow=33							
SNAA	**Sanae**	**85.97**	**181**	P		**P**	**12 24 18.4**	**-0.8**
SNAA				IAmb		IAmb	12 24 44.4	
	comp=Z,5.9nm,1.4s							
YBH	**Yreka Blue Hor**	**87.03**	**42**	LR		LR	12 55 27.0	
	comp=Z,15nm,19.0s,baz=287,slow=30							
ILAR	**Eielson Array**	**92.29**	**16**	P		**P**	**12 24 47.8**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=228,slow=6.2,SNR=7.7 comp=Z,1.0nm,0.9s							
PLCA	**Paso Flores**	**93.43**	**137**	LR		LR	13 03 09.2	
	comp=Z,13nm,18.9s,baz=202,slow=33							
TXAR	**Lajitas Array**	**94.94**	**60**	LR		LR	12 58 30.5	
	comp=Z,16nm,21.2s,baz=288,slow=30							
ANMO	**Albuquerque**	**95.00**	**54**	LR		LR	12 59 28.1	
	comp=Z,14nm,19.9s,baz=340,slow=30							
PDAR	**Pinedale Array**	**96.03**	**46**	LR		LR	13 00 00.7	
	comp=Z,12nm,19.5s,baz=314,slow=30							
CLL	**Collm**	**147.55**	**337**	*i* PKPbc		**PKPbc**	**12 31 23.9**	**+0.7**
	comp=Z,4.0nm,0.7s							
GERES	**GERESS Array B**	**149.25**	**333**	PKPbc		**PKPbc**	**12 31 28.7**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=100,slow=4.1,SNR=3.4							
TORD	**Torodi Ar. Bea**	**167.78**	**221**	PKPab		**PKPab**	**12 32 54.3**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=150,slow=1.2,SNR=1.5							

IDC ***12*** *12:15:09.0±1.0,39˚.26N×73˚.26E,h0km,mb3.8/11, mbtmp3.7/17,ML3.3/6,MS2.8/2,Error ellipse: s-maj=20.3km s-min=13.0km az=142.0*
MOS ***12*** *12:15:09.5±1.1,39˚.27N×73˚.31E,h7km,mb4.1/6,Error ellipse: s-maj=8.5km s-min=4.7km az=86.6*
MOS Felt (III) at Bordobo.
SOME ***12*** *12:15:10.4,39˚.42N×73˚.48E,h5km*
KRNET ***12*** *12:15:10.9±0.1,39˚.45N×73˚.30E,mb4.1*
NEIC ***12*** *12:15:11.2±2.3,39˚.35N±0˚.06×73˚.32E±0˚.05,h10km±1km, mb4.4/11,Error ellipse: s-maj=11.0km s-min=4.5km az=153.0*
BJI ***12*** *12:15:11.6±0.0,39˚.25N×73˚.31E,h25km,mb4.4/8, mB4.5/6,ML3.5/3,Ms7 3.4/2*

NNC ***12*** *12:15:16.4±1.4,39˚.63N×73˚.29E,h0km,mb4.4,mpv4.1, Error ellipse: s-maj=10.7km s-min=6.0km az=179.0*
ISC 12 12:15:10.3±1.2,39˚.36N±0˚.03×73˚.31E±0˚.02,h3km±8km, n163,σ2ᵖ15/205,mb4.0/19,32C-16D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.18**	**276**			**Pg**	**12 15 34.0**	**+1.1**
DRK	**Karamyk**	**1.18**	**276**	⇑	*i*P	**Pb**	**12 15 33.4**	**-0.1**
	baz=72							
DRK				⇑	*e*S	**Sg**	**12 15 49.4**	**+1.2**
	baz=72							
OHH	**Osh**	**1.23**	**341**		*i* PG	**Pn**	**12 15 32.6**	**-2.0**
OHH					*i* S	**Sb**	**12 15 49.0**	**-1.7**
OHH	**Osh**	**1.23**	**341**	⇑	*i*P	**Pn**	**12 15 32.6**	**-2.0**
	baz=40							
OHH				⇑	*i*S	**Sb**	**12 15 49.0**	**-1.7**
	baz=40							
KSH	**Kashi**	**2.07**	**85**		Pg	**Pn**	**12 15 43.0**	**-3.1**
KSH					Sg	**Sn**	**12 16 09.0**	**-3.4**
KSH					smax	smax		
	comp=N,980nm,0.9s							
KSH					smax	smax		
	comp=E,650nm,0.7s							
GAR	**Garm**	**2.35**	**262**			**Pb**	**12 15 52.2**	**-1.3**
ARLS	**Aral**	**2.62**	**17**		*i* PN	**Pn**	**12 15 55.2**	**+1.5**
ARLS					*i* S	**Sn**	**12 16 28.1**	**+2.1**
ARLS	**Aral**	**2.62**	**17**	⇑	*i*P	**Pn**	**12 15 55.2**	**+1.5**
	baz=18							
ARLS				⇑	*i*S	**Sn**	**12 16 28.1**	**+2.1**
	baz=18							
TRKS	**Terek-Say**	**2.73**	**323**		*i* PN	**Pn**	**12 15 56.2**	**+1.0**
TRKS					*i* S	**Sn**	**12 16 29.5**	**+0.7**
TRKS	**Terek-Say**	**2.73**	**323**	⇑	*i*P	**Pn**	**12 15 56.2**	**+1.0**
	baz=22							
TRKS				⇑	*i*S	**Sn**	**12 16 29.5**	**+0.7**
	baz=22							
AML	**Almayashu**	**2.78**	**6**	P		**Pn**	**12 15 58.5**	**+2.3**
	SNR=134							
AML	**Almayashu**	**2.78**	**6**	*i* PN		**Pn**	**12 15 58.0**	**+1.8**
AML				*i* S		**Sn**	**12 16 32.3**	**+1.8**
NRN	**Naryn**	**2.92**	**44**	P		**Pn**	**12 15 58.1**	**+0.2**
NRN	**Naryn**	**2.92**	**44**	PN		**Pn**	**12 15 58.1**	**+0.2**
UCH	**Uchtor**	**3.01**	**17**	P		**Pn**	**12 16 02.0**	**+2.7**
	SNR=15							
CHGR	**Chuyangaron**	**3.31**	**259**			**Pn**	**12 16 05.5**	**+2.4**
CHGR	**Chuyangaron**	**3.31**	**259**	PN		**Pn**	**12 16 05.5**	**+2.4**
EKS2	**Erkin-Say**	**3.32**	**6**	P		**Pn**	**12 16 06.2**	**+2.9**
	SNR=28							
EKS2	**Erkin-Say**	**3.32**	**6**	*i* PN		**Pn**	**12 16 05.1**	**+1.8**
EKS2				*i* S		**Sn**	**12 16 44.9**	**+1.6**
EKS2	**Erkin-Say**	**3.32**	**6**	⇓	*i*P	**Pn**	**12 16 05.1**	**+1.8**
	baz=6.0							
EKS2				⇓	*i*S	**Sn**	**12 16 44.9**	**+1.6**
	baz=6.0							
MRKS	**Merke**	**3.38**	**359**		*e*P	**Pb**	**12 16 12.2**	**+1.2**
	48nm,0.3s							
MRKS					*e*S	**Sg**	**12 16 56.8**	**-2.2**
	40nm,0.5s							
MRKS	**Merke**	**3.38**	**359**		Pg	**Pg**	**12 16 14.7**	**-0.4**
	48nm,0.3s							
MRKS					Lg	Lg	12 16 57.4	
	93nm,0.4s							
AAK	**Ala-Archa**	**3.40**	**15**	Pn		**Pn**	**12 16 07.3**	**+2.9**
	11nm,0.3s,baz=188,slow=6.5,SNR=45							
AAK					Sn	**Sb**	**12 16 50.4**	**-2.6**
	7.6nm,0.3s,baz=326,slow=22,SNR=7.9 48nm,0.5s							
AAK	**Ala-Archa** SNR=26	**3.40**	**15**	P		**Pn**	**12 16 07.3**	**+2.9**
AAK	**Ala-Archa**	**3.40**	**15**			**Pn**	**12 16 07.0**	**+2.7**
AAK	**Ala-Archa**	**3.40**	**15**	*ce*	PN	**Pn**	**12 16 07.3**	**+2.9**
AAK					pmax	pmax		
	comp=Z,123nm,1.0s							
AAK	**Ala-Archa** baz=15	**3.40**	**15**	⇑	*i*P	**Pn**	**12 16 06.3**	**+1.9**
AAK				⇑	*i*S	**Sn**	**12 16 46.9**	**+1.6**
	baz=15							
KBK	**Karagaybulak** SNR=14	**3.52**	**20**	P		**Pb**	**12 16 10.2**	**-3.1**
KBK	**Karagaybulak**	**3.52**	**20**	*i* PN		**Pn**	**12 16 08.1**	**+2.0**
KBK				*i* S		**Sn**	**12 16 49.6**	**+1.3**
KBK	**Karagaybulak**	**3.52**	**20**	⇓	*i*P	**Pn**	**12 16 08.1**	**+2.0**
	baz=21							
KBK				⇓	*i*S	**Sn**	**12 16 49.6**	**+1.3**
	baz=21							
ULHL	**Ulahol** SNR=8.7	**3.64**	**37**	P		**Pb**	**12 16 18.2**	**+2.8**
ULHL	**Ulahol**	**3.64**	**37**	*i* PN		**Pn**	**12 16 09.9**	**+2.1**
ULHL				*i* S		**Sn**	**12 16 53.1**	**+1.7**
ULHL	**Ulahol**	**3.64**	**37**	⇑	*i*P	**Pn**	**12 16 09.9**	**+2.1**
	baz=38							
ULHL				⇑	*i*S	**Sn**	**12 16 53.1**	**+1.7**
	baz=38							
TAS	**Tashkent**	**3.64**	**304**		Pn	**Pn**	**12 16 08.5**	**+0.8**
TAS	**Tashkent**	**3.64**	**304**		PN	**Pn**	**12 16 08.5**	**+0.8**
TAS	**Tashkent**	**3.64**	**304**	⇑	*i*P	**Pn**	**12 16 09.8**	**+2.1**
	baz=3.0							
TAS				⇑	*i*S	**Sn**	**12 16 53.0**	**+1.8**
	baz=3.0							
BOOM	**Boomskoye usch**	**3.71**	**32**			**Pn**	**12 16 11.3**	**+2.6**
BOOM	**Boomskoye usch**	**3.71**	**32**		PN	**Pn**	**12 16 11.3**	**+2.6**
BOOM	**Boomskoye usch**	**3.71**	**32**	⇑	*i*P	**Pn**	**12 16 11.0**	**+2.3**
	baz=32							
BOOM				⇑	*i*S	**Sn**	**12 16 54.7**	**+1.7**
	baz=32							
IUG	**luzhnay**	**3.74**	**319**		*e*P	**Pg**	**12 16 22.0**	**+0.1**
	comp=Z,1μm,0.6s							
IUG					*e*S	**Sg**	**12 17 13.8**	**+3.5**
	comp=Z,643nm,0.8s							
IUG	**luzhnay**	**3.74**	**319**		Pg	**Pb**	**12 16 20.0**	**+3.0**
	comp=Z,866nm,0.3s							
IUG					Lg	Lg	12 17 06.2	
	comp=Z,315nm,0.7s							
CHMS	**Chumysh** SNR=12	**3.79**	**16**	P		**Pn**	**12 16 12.6**	**+2.8**
CHMS	**Chumysh**	**3.79**	**16**	*i* PN		**Pn**	**12 16 11.7**	**+2.0**
CHMS				*i* S		**Sn**	**12 16 56.1**	**+1.2**
CHMS	**Chumysh**	**3.79**	**16**	⇑	Pn	**Pn**	**12 16 12.1**	**+2.4**
	comp=Z,18nm,0.6s							
CHMS				⇑	Lg	Lg	12 17 09.0	
	comp=Z,74nm,1.1s							
CHMS	**Chumysh**	**3.79**	**16**	⇑	*i*P	**Pn**	**12 16 11.7**	**+2.0**
	baz=17							
CHMS				⇑	*i*S	**Sn**	**12 16 56.1**	**+1.2**
	baz=17							
TKM2	**Tokmak 2** SNR=24	**3.95**	**25**	P		**Pn**	**12 16 14.8**	**+2.7**
TKM2	**Tokmak 2**	**3.95**	**25**	*i* PN		**Pn**	**12 16 14.2**	**+2.1**
TKM2				*i* S		**Sn**	**12 17 00.3**	**+1.2**
TKM2	**Tokmak 2**	**3.95**	**25**	⇑	Pn	**Pn**	**12 16 15.1**	**+3.0**
	comp=Z,9.8nm,0.6s							
TKM2				⇓	Pg	**Pb**	**12 16 23.7**	**+2.9**
	comp=Z,18nm,0.5s							
TKM2				⇓	Lg	Lg	12 17 13.8	
	comp=Z,100nm,1.1s							
TKM2	**Tokmak 2**	**3.95**	**25**	⇓	*i*P	**Pn**	**12 16 14.2**	**+2.1**
	baz=26							
TKM2				⇓	*i*S	**Sn**	**12 17 00.3**	**+1.2**
	baz=26							
USP	**Ospenovka** SNR=5.2	**4.00**	**13**	P		**Pn**	**12 16 15.3**	**+2.6**
USP	**Ospenovka**	**4.00**	**13**	*i* PN		**Pn**	**12 16 14.5**	**+1.8**
USP				*i* S		**Sn**	**12 17 00.9**	**+0.8**
USP	**Ospenovka**	**4.00**	**13**	⇓	*i*P	**Pn**	**12 16 14.5**	**+1.8**
	baz=13							
USP				⇓	*i*S	**Sn**	**12 17 00.9**	**+0.8**
	baz=13							
KST	**Kastek**	**4.19**	**28**		*e*P	**Pb**	**12 16 27.6**	**+2.8**
	comp=Z,11nm,0.2s							
KST					*e*S	**Sg**	**12 17 23.0**	**-1.9**
	comp=Z,79nm,0.6s							
KST	**Kastek**	**4.19**	**28**		Pg	**Pg**	**12 16 30.2**	**-0.4**
	comp=Z,11nm,0.2s							
KST					Lg	Lg	12 17 23.1	
	comp=Z,79nm,0.6s							
SGDS	**Sogindy**	**4.21**	**13**		*e*P	**Pb**	**12 16 26.3**	**+1.2**
	comp=Z,21nm,0.5s							
SGDS					*e*S	**Sb**	**12 17 21.2**	**+4.9**
	comp=Z,52nm,0.7s							
SGDS	**Sogindy**	**4.21**	**13**		Pg	**Pg**	**12 16 28.8**	**-2.1**
	comp=Z,21nm,0.5s							
SGDS					Lg	Lg	12 17 21.2	
	comp=Z,52nm,0.7s							
KK31	**Karatay Array**	**4.29**	**331**		Pn	**Pn**	**12 16 18.4**	**+1.8**
KK31	**Karatay Array**	**4.29**	**331**	⇑	Pn	**Pn**	**12 16 18.6**	**+2.0**
	comp=Z,6.0nm,0.3s,baz=137,slow=13,SNR=162							
KK31				⇓	Sn	**Sn**	**12 17 10.0**	**+2.8**
	comp=Z,23nm,0.4s,baz=160,slow=20,SNR=6.2							
KK31				⇓	Lg	Lg	12 17 22.0	
	comp=Z,74nm,0.7s,baz=142,slow=13,SNR=3.8							
KKAR	**Karatay Array**	**4.29**	**331**			**Pn**	**12 16 18.5**	**+1.9**
KKAR	**Karatay Array**	**4.29**	**331**		PN	**Pn**	**12 16 18.5**	**+1.9**
KKAR	**Karatay Array**	**4.29**	**331**	⇓	*i*P	**Pn**	**12 16 18.6**	**+2.0**
	baz=31							
KKAR				⇓	*i*S	**Sn**	**12 17 08.2**	**+0.9**
	baz=31							
KRBS	**Karabastau**	**4.68**	**21**	*e*P		**Pb**	**12 16 35.0**	**+1.9**
	comp=Z,22nm,0.3s							
KRBS				*e*S		**Sb**	**12 17 35.6**	**+5.7**
	comp=Z,25nm,1.0s							
KRBS	**Karabastau**	**4.68**	**21**	Pg		**Pb**	**12 16 36.6**	**+3.5**
	comp=Z,22nm,0.3s							
KRBS				Lg		Lg	12 17 34.1	
	comp=Z,25nm,1.0s							
AAA	**Alma-Ata**	**4.71**	**34**	Pg		**Pg**	**12 16 41.1**	**+0.6**
	comp=Z,26nm,0.2s							
AAA				Lg		Lg	12 17 41.8	
	comp=Z,138nm,0.5s							
MDOK	**Medeo**	**4.73**	**35**	*e*P		**Pb**	**12 16 37.2**	**+3.3**
	comp=Z,14nm,0.5s							
MDOK				*e*S		**Sg**	**12 17 40.1**	**-2.1**
	comp=Z,54nm,1.0s							
MDOK	**Medeo**	**4.73**	**35**	⇑	Pn	**Pn**	**12 16 26.5**	**+3.8**
	comp=Z,4.2nm,0.5s							
MDOK				⇓	Pg	**Pb**	**12 16 35.7**	**+1.7**
	comp=Z,9.6nm,0.5s							
MDOK				Pg		**Pg**	**12 16 40.1**	**-0.8**
	comp=Z,14nm,0.5s							
MDOK				Lg		Lg	12 17 40.2	
	comp=Z,54nm,1.0s							
MDOK				⇑	Lg	Lg	12 17 41.0	
	comp=Z,61nm,0.7s							
KNDC	**Almaty**	**4.74**	**34**	⇑	Lg	Lg	12 17 40.7	
	comp=Z,182nm,0.8s							
KTBS	**Karatobe**	**5.03**	**29**	*e*P		**Pb**	**12 16 41.8**	**+2.8**
	comp=Z,9.4nm,0.3s							
KTBS				*e*S		**Sg**	**12 17 47.3**	**-4.5**
	comp=Z,46nm,0.4s							
KTBS	**Karatobe**	**5.03**	**29**	Pg		**Pg**	**12 16 44.4**	**-2.3**
	comp=Z,9.4nm,0.3s							
KTBS				Lg		Lg	12 17 47.5	
	comp=Z,46nm,0.4s							
KUU	**Kurty**	**5.07**	**26**	*e*P		**Pb**	**12 16 42.1**	**+2.5**
	comp=Z,5.9nm,0.3s							
KUU				*e*S		**Sg**	**12 17 48.2**	**-4.8**
	comp=Z,55nm,0.7s							
KUU	**Kurty**	**5.07**	**26**	Pg		**Pg**	**12 16 44.8**	**-2.5**
	comp=Z,5.9nm,0.3s							
KUU				Lg		Lg	12 17 48.3	
	comp=Z,55nm,0.7s							
SATY	**Saty**	**5.33**	**44**	*e*P		**Pb**	**12 16 46.0**	**+1.9**
	comp=Z,20nm,0.7s							
SATY				*e*S		**Sb**	**12 17 55.0**	**+6.4**
	comp=Z,49nm,1.0s							
SATY	**Saty**	**5.33**	**44**	Pg		**Pg**	**12 16 49.6**	**-2.9**
	comp=Z,20nm,0.7s							
SATY				Lg		Lg	12 17 56.4	
	comp=Z,49nm,1.0s							
KURS	**Kuram**	**5.51**	**40**	*e*P		**Pb**	**12 16 51.4**	**+4.2**
	comp=Z,8.4nm,0.8s							
KURS				*e*S		**Sg**	**12 18 04.6**	**-2.6**
	comp=Z,28nm,1.5s							
KURS	**Kuram**	**5.51**	**40**	Pg		**Pg**	**12 16 55.4**	**-0.4**
	comp=Z,5.3nm,0.6s							
KURS				Lg		Lg	12 18 06.4	
	comp=Z,28nm,1.5s							
CEP	**Cherat**	**5.64**	**192**	P		Pn	12 16 40.8	+5.6
CHCP	**Chirah Chowk**	**5.69**	**180**	P		Pb	12 16 43.1	-7.2
NIL	**Nilore**	**5.70**	**181**	Pn		**Pn**	**12 16 34.9**	**-1.0**
NIL	**Nilore**	**5.70**	**181**	PN		**Pn**	**12 16 34.9**	**-1.0**
BTLS	**Baital**	**5.70**	**5**	*e*P		**Pg**	**12 16 57.0**	**-2.5**
	comp=Z,5.8nm,0.5s							
BTLS				*e*S		**Sg**	**12 18 13.9**	**+0.4**
	comp=Z,31nm,1.2s							
BTLS	**Baital**	**5.70**	**5**	Pg		Pb	12 16 55.6	+5.1
	comp=Z,5.8nm,0.5s							
BTLS				Lg		Lg	12 18 06.8	
	comp=Z,4.7nm,0.6s							
UZB	**Uzynbulak**	**5.73**	**47**	*e*P		**Pb**	**12 16 54.7**	**+3.7**
	comp=Z,8.3nm,0.5s							
UZB				*e*S		**Sg**	**12 18 10.3**	**-4.0**
	comp=Z,21nm,1.2s							
UZB	**Uzynbulak**	**5.73**	**47**	Pg		**Pg**	**12 16 58.2**	**-1.9**
	comp=Z,8.3nm,0.5s							
UZB				Lg		Lg	12 18 11.1	
	comp=Z,21nm,1.2s							
KPKS	**Kokpek**	**5.76**	**43**	*e*P		**Pb**	**12 16 54.5**	**+3.1**
	comp=Z,7.9nm,0.6s							
KPKS				*e*S		**Sg**	**12 18 09.5**	**-5.6**
	comp=Z,33nm,0.5s							
KPKS	**Kokpek**	**5.76**	**43**	Pg		**Pg**	**12 16 58.3**	**-2.3**
	comp=Z,7.9nm,0.6s							
KPKS				Lg		Lg	12 18 11.0	
	comp=Z,33nm,0.5s							
KBL	**Kabul**	**5.90**	**217**	Pn		**Pn**	**12 16 38.3**	**

BRVK	**Borovoye**	**13.86**	**352**	*i* P		**Pn**	**12 18 29.3**	**+1.7**
AKTO	**Aktyubinsk**	**15.46**	**321**	Pn		**Pn**	**12 18 48.5**	**-0.8**
	comp=N,0.7nm,0.3s,baz=120,slow=10,SNR=12							
AKTO				LR		LR	12 25 18.3	
	comp=N,42nm,19.2s,baz=76,slow=39							
	comp=N,1.1nm,0.4s							
AKTO	**Aktyubinsk**	**15.46**	**321**	⇑Pn		**Pn**	**12 18 51.4**	**+2.2**
	comp=N,5.0nm,0.7s							
ZAA0	**Zalesovo Array**	**16.56**	**24**	Pn		**Pn**	**12 19 02.1**	**-1.2**
ZALV	**Zalesovo Beam**	**16.56**	**24**	Pn		**P**	**12 19 05.3**	**-0.7**
	comp=N,0.4nm,0.3s,baz=222,slow=10.0,SNR=6.4							
	comp=N,1.4nm,0.4s							
ZALV	**Zalesovo Beam**	**16.56**	**24**	Pn		**Pn**	**12 19 03.1**	**-0.3**
ZALV	**Zalesovo Beam**	**16.56**	**24**	*i* P		**P**	**12 19 07.0**	**+1.0**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s							
GOMU	**GeErMu**	**17.29**	**94**	P		**Pn**	**12 19 13.0**	**0.0**
GOMU				pP	pP		12 19 18.3	+1.7
GOMU				pmax	pmax			
	comp=Z,2.0nm,0.8s							
GOMU				pmax	pmax			
	comp=Z,89nm,5.1s							
ARU	**Arti**	**19.66**	**335***c*	*i* P		**Pn**	**12 19 41.7**	**+0.2**
ARU				S		**Sn**	**12 23 25.5**	**+3.0**
ARU				pmax	pmax			
	comp=Z,6.0nm,1.2s							
GTA	**Gaotai**	**20.46**	**81**	⇑P		Pn	12 19 50.6	-0.7
GTA				pP	pP		12 19 53.6	+2.3
GTA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BELG	**Belogornoye**	**21.99**	**315**	LR		LR	12 30 24.6	
	comp=Z,17nm,19.0s,baz=271,slow=42							
BELG	**Belogornoye**	**21.99**	**315**	*i* P		**P**	**12 20 06.8**	**+1.5**
BELG				pmax	pmax			
	comp=Z,4.0nm,1.2s							
HYBB	**Hyderabad (bro**	**22.33**	**167**	*e*P		**P**	**12 20 08.9**	**-0.4**
KBZ	**Khabaz**	**23.11**	**291**	*i* P		**P**	**12 20 18.0**	**+0.7**
KIV	**Kislovodsk**	**23.27**	**291**	*e*P		**P**	**12 20 19.4**	**+0.4**
KIV				pmax	pmax			
	comp=Z,8.0nm,1.1s							
SONM	**Songino Array**	**25.26**	**60**	P		**P**	**12 20 39.0**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=273,slow=11,SNR=2.5							
	comp=Z,0.6nm,0.6s							
PZH	**PanZhiHua**	**26.96**	**110**	P		**P**	**12 20 52.7**	**-0.7**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
PZH				pmax	pmax			
	comp=Z,80nm,4.3s							
HHC	**Hu-ho-hao-te**	**29.14**	**75**	*e*P		**P**	**12 21 12.8**	**+0.1**
HHC				pmax	pmax			
	comp=Z,30nm,0.7s							
HHC				pmax	pmax			
	comp=Z,160nm,5.5s							
ILGA	**Ilgaz**	**30.11**	**286**	P		**P**	**12 21 19.3**	**-2.1**
BRTR	**Keskin Array B**	**30.43**	**284**	P		**P**	**12 21 23.9**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=103,slow=11,SNR=4.6							
	comp=Z,0.8nm,0.6s							
BRTR	**Keskin Array B**	**30.43**	**284**	*i* P		**P**	**12 21 23.8**	**-0.3**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**32.69**	**305**	P		**P**	**12 21 43.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=78,slow=7.5,SNR=8.2							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**32.69**	**305***c*	*e*P		**P**	**12 21 43.2**	**-0.5**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKBB	**Malin Array Si**	**32.69**	**305**	P		**P**	**12 21 42.9**	**-0.8**
AKBB	**Malin Array Si**	**32.69**	**305***c*	*e*P		**P**	**12 21 43.9**	**+0.2**
AK05	**Malin Array Si**	**32.70**	**305**	P		**P**	**12 21 43.2**	**-0.6**
AK05				lAmb	lAmb		12 21 44.0	
	comp=Z,3.4nm,0.7s							
FINES	**FINESS Array B**	**36.21**	**323**	P		**P**	**12 22 13.3**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=104,slow=9.2,SNR=9.1							
	comp=Z,1.0nm,0.4s							
FINES	**FINESS Array B**	**36.21**	**323**	P		**P**	**12 22 13.0**	**-1.0**
FINES	**FINESS Array B**	**36.21**	**323**	*i* P		**P**	**12 22 15.8**	**+1.8**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ARCES	**ARCESS Array B**	**39.25**	**336**	P		**P**	**12 22 38.5**	**-1.1**
	comp=Z,3.7nm,1.1s,baz=106,slow=7.7,SNR=7.2							
	comp=Z,3.7nm,1.1s							
ARCES	**ARCESS Array B**	**39.25**	**336**	P		**P**	**12 22 39.9**	**+0.2**
ARCES				lAmb	lAmb		12 23 09.3	
	comp=Z,12nm,1.4s							
ARCES	**ARCESS Array B**	**39.25**	**336**	P		**P**	**12 22 39.9**	**+0.2**
ARCES				pmax	pmax			
	comp=Z,12nm,1.5s							
NC303	**NORSAR Array S**	**43.18**	**321**	P		**P**	**12 23 12.2**	**+0.2**
NC303				lAmb	lAmb		12 23 37.0	
	comp=Z,14nm,1.1s							
NB2	**NORSAR Subarra**	**43.25**	**321**	P		**P**	**12 23 12.3**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=88,slow=8.6							
NOA	**NORSAR Array B**	**43.25**	**321**	P		**P**	**12 23 12.0**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=91,slow=7.8,SNR=6.5							
	comp=Z,1.4nm,0.7s							
NOA	**NORSAR Array B**	**43.25**	**321**	P		**P**	**12 23 12.0**	**-0.7**
ESDC	**Sonseca Array**	**57.76**	**297**	P		**P**	**12 25 01.2**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=54,slow=7.0,SNR=4.9							
	comp=Z,0.4nm,0.5s							
TOA0	**Torodi Ar. Sit**	**67.61**	**269**	P		**P**	**12 26 06.8**	**-1.9**
TOA0				lAmb	lAmb		12 26 11.7	
	comp=Z,5.6nm,1.5s							
TORD	**Torodi Ar. Bea**	**67.61**	**269**	P		**P**	**12 26 07.0**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=50,slow=6.5,SNR=6.6							
	comp=Z,0.4nm,0.4s							
TORD	**Torodi Ar. Bea**	**67.61**	**269**	P		**P**	**12 26 07.4**	**-1.3**
TOLK	**Toolik Lake Re**	**67.69**	**16**	P		**P**	**12 26 08.1**	**-0.3**
TOLK				lAmb	lAmb		12 26 14.0	
	comp=Z,2.9nm,0.9s							
IMAR	**Indian Mountai**	**68.89**	**19**	P		**P**	**12 26 14.8**	**-1.1**
BMAR	**Burnt Mountain**	**69.73**	**15**	P		**P**	**12 26 20.6**	**-0.6**
INK	**Inuvik**	**70.78**	**10**	P		**P**	**12 26 27.2**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=344,slow=4.1,SNR=8.7							
	comp=Z,1.7nm,0.8s							
INK	**Inuvik**	**70.78**	**10**	P		**P**	**12 26 27.2**	**-0.3**
INK				lAmb	lAmb		12 26 59.2	
	comp=Z,5.1nm,1.4s							
INK	**Inuvik**	**70.78**	**10**	P		**P**	**12 26 27.3**	**-0.3**
INK				pmax	pmax			
	comp=Z,5.0nm,1.4s							
YKA	**Yellowknife Ar**	**78.29**	**4**	P		**P**	**12 27 10.1**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=5.3,slow=6.1,SNR=2.5							
	comp=Z,0.8nm,0.7s							
WRA	**Warramunga Arr**	**82.00**	**124**	P		**P**	**12 27 30.2**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=328,slow=5.4,SNR=6.0							
	comp=Z,0.4nm,0.8s							
WRA	**Warramunga Arr**	**82.00**	**124**	*i* P		**P**	**12 27 32.7**	**+0.8**

CNRM ***12*** *12:20:01.8,36°.06N×7°.97W,h83km,ml2.4*
MDD ***12*** *12:20:02.3±0.8,36°.43N×7°.89W,h29km±8km,mb_Lg2.5/12, Error ellipse: s-maj=4.8km s-min=2.4km az=35.0*
INMG ***12*** *12:20:02.9±2.4,36°.41N×7°.90W,h31km±7km,ML2.1, Error ellipse: s-maj=6.5km s-min=4.5km az=40.0*
IGIL ***12*** *12:20:02.2,36°.38N×7°.92W,h32km,ML2.3*
ISC 12 12:20:00.3±1.2,36°.37N±0°.03×7°.84W±0°.04,h50km±29km, n47,σ2s34/79,1C,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.88**	**355**	*e*P	**Pn**	**12 20 16.9**	**+0.5**
PBDV				*e*S	**Sn**	**12 20 27.6**	**-0.6**
PBDV				A	A	12 20 31.4	
	22nm,0.5s						
PVAQ	**Vaqueiros**	**1.04**	**6**	*e*P	**Pn**	**12 20 19.2**	**+0.7**
PVAQ				*e*S	**Sn**	**12 20 31.6**	**-0.4**
PVAQ				A	A	12 20 31.8	
	28nm,0.3s						
PFVI	**Vila Bisbo**	**1.10**	**314**	P	Pn	12 20 26.1	+6.8
PFVI				S	**Sn**	**12 20 41.2**	**+7.8**
PFVI	**Vila Bisbo**	**1.10**	**314**	*e*P	**Pn**	**12 20 19.5**	**+0.2**
PFVI				*e*S	**Sn**	**12 20 32.5**	**-0.9**
PFVI				A	A	12 20 38.6	
	19nm,0.4s						
MORF	**Marmelete**	**1.14**	**326**	*e*P	**Pn**	**12 20 20.0**	**+0.1**
MORF				*e*S	**Sn**	**12 20 33.0**	**-1.5**
MORF				IAML		12 20 33.9	
	comp=N,49nm,0.1s						
MORF	**Marmelete**	**1.14**	**326**	*e*P	**Pn**	**12 20 20.1**	**+0.1**
MORF				*e*S	**Sn**	**12 20 33.4**	**-1.1**
MORF				A	A	12 20 38.0	
	comp=N,39nm,0.1s						
EGRO	**El Granado**	**1.20**	**14**	P	**Pn**	**12 20 21.8**	**+1.1**
EGRO				S	**Sn**	**12 20 35.3**	**-0.6**
EGRO				*i* Vmb_Lg		12 20 36.9	

PCVE	**Castro Verde**	**1.27**	**353**	⇑*e*P		**Pn**	**12 20 22.5**	**+0.8**
PCVE				*e*S		**Sn**	**12 20 37.2**	**-0.4**
PCVE				A		A	12 20 38.4	
	comp=N,23nm,0.1s							
PTEO	**Sao Teotonio**	**1.37**	**329**	*e*P		**Pn**	**12 20 23.6**	**+0.6**
PTEO				*e*S		**Sn**	**12 20 39.2**	**-0.8**
PTEO				A		A	12 20 39.8	
	comp=N,13nm,0.1s							
MESJ	**Messejana**	**1.50**	**349**	*e*P		**Pn**	**12 20 25.4**	**+0.6**
MESJ				*e*S		**Sn**	**12 20 42.2**	**-1.0**
MESJ				IAML			12 20 43.4	
	comp=N,30nm,0.2s							
MESJ	**Messejana**	**1.50**	**349**	*e*P		**Pn**	**12 20 25.8**	**+1.0**
MESJ				*e*S		**Sn**	**12 20 42.9**	**-0.3**
MESJ				A		A	12 20 43.3	
	comp=N,17nm,0.3s							
PBEJ	**Beja**	**1.65**	**359**	*e*S		**Sn**	**12 20 46.5**	**-0.5**
PBEJ				A		A	12 20 49.2	
	comp=N,8.0nm,0.2s							
ESPR	**Espera**	**1.68**	**72**	P		**Pn**	**12 20 28.7**	**+1.5**
ESPR				S		**Sn**	**12 20 47.6**	**+0.1**
ESPR				*i* Vmb_Lg			12 20 49.6	
EMIN	**Mina Concepcio**	**1.68**	**34**	P		**Pn**	**12 20 28.0**	**+0.7**
EMIN				S		**Sn**	**12 20 46.6**	**-1.1**
EMIN				*i* Vmb_Lg			12 20 51.8	
PNCL	**Nicolau / Gran**	**1.82**	**343**	*e*P		**Pn**	**12 20 29.7**	**+0.5**
PNCL				*e*S		**Sn**	**12 20 49.5**	**-1.6**
PNCL				A		A	12 20 53.3	
	comp=N,5.6nm,0.2s							
PBAR	**Barrancos**	**1.91**	**19**	*e*P		**Pn**	**12 20 31.9**	**+1.4**
PBAR				*e*S		**Sn**	**12 20 53.5**	**+0.1**
EBAD	**Badajoz**	**2.47**	**15**	P		**Pn**	**12 20 40.5**	**+2.4**
EBAD				S		**Sn**	**12 21 05.3**	**-1.7**
EBAD				*i* Vmb_Lg			12 21 12.9	
EMIJ	**Mijas**	**2.48**	**85**	S		**Sn**	**12 21 08.1**	**+0.7**
PESTR	**Estremoz**	**2.50**	**5**	P		Pn	12 20 44.3	+5.8
PESTR				S		**Sn**	**12 21 16.7**	**+8.8**
PESTR	**Estremoz**	**2.50**	**5**	*e*S		**Sn**	**12 21 07.0**	**-0.8**
PESTR				A		A	12 21 17.9	
	comp=N,2.5nm,0.3s							
PACT	**Alcochete**	**2.52**	**342**	*e*S		**Sn**	**12 21 08.1**	**-0.1**
PACT				A		A	12 21 09.3	
	comp=N,20nm,0.6s							
ECAB	**El Cabril**	**2.58**	**48**	P		**Pn**	**12 20 40.4**	**+0.8**
ECAB				S		**Sn**	**12 21 07.7**	**-2.0**
ECAB				*i* Vmb_Lg			12 21 09.7	
PMTG	**Montargil**	**2.71**	**354**	*e*P		**Pn**	**12 20 42.1**	**+0.7**
PMTG				*e*S		**Sn**	**12 21 11.8**	**-1.2**
PMTG				A		A	12 21 13.2	
	comp=N,8.8nm,0.1s							
PMAFR	**Mafra**	**2.82**	**337**	*e*P		**Pn**	**12 20 44.5**	**+1.6**
PMAFR				*e*S		**Sn**	**12 21 13.7**	**-2.0**
PMAFR				A		A	12 21 16.0	
	comp=N,15nm,0.2s							
PMRV	**Marv??o**	**3.08**	**7**	*e*P		**Pn**	**12 20 47.7**	**+1.3**
PMRV				*e*S		**Sn**	**12 21 21.0**	**-0.9**
ZHG	**ZHG**	**3.08**	**161**	P		**Pn**	**12 20 48.1**	**+1.6**
ZHG				S		**Sn**	**12 21 21.1**	**-1.0**
EGOR	**Sierra Gorda,**	**3.09**	**75**	P		**Pn**	**12 20 48.2**	**+1.5**
EGOR				S		**Sn**	**12 21 20.5**	**-2.0**
EGOR				*i* Vmb_Lg			12 21 25.9	
EADA	**Adamuz**	**3.16**	**54**	P		**Pn**	**12 20 49.0**	**+1.4**
EADA				S		**Sn**	**12 21 22.3**	**-1.9**
EADA				*i* Vmb_Lg			12 21 25.3	
ELGU	**Los Guajares,**	**3.43**	**80**	P		**Pn**	**12 20 53.8**	**+2.5**
ELGU				S		**Sn**	**12 21 31.4**	**+0.6**
ELGU				*i* Vmb_Lg			12 21 39.0	
PCAS	**Casmilo, Conde**	**3.71**	**352**	*e*S		**Sn**	**12 21 36.7**	**-0.9**
SRHM	**Skhour des Reh**	**3.89**	**181**	P		**Pn**	**12 20 58.5**	**+0.9**
SRHM				S		**Sn**	**12 21 42.8**	**+0.8**
EBER	**Berja**	**4.02**	**81**	S		**Sn**	**12 21 45.8**	**+0.4**
EQES	**Quesada**	**4.08**	**68**	P		**Pn**	**12 21 02.3**	**+2.1**
EQES				S		**Sn**	**12 21 45.9**	**-0.8**
EQES				*i* Vmb_Lg			12 21 51.3	
EMEL	**Melilla**	**4.11**	**104**	P		**Pn**	**12 21 04.1**	**+3.5**
PAB	**San Pablo**	**4.21**	**40**	P		**Pn**	**12 21 03.0**	**+1.0**
PAB				S		**Sn**	**12 21 46.1**	**-3.8**
MD31	**MD31**	**4.32**	**143**	P		**Pn**	**12 21 04.2**	**+0.6**
MD31				S		**Sn**	**12 21 49.5**	**-3.2**
MDT	**Midelt**	**4.44**	**142**	P		**Pn**	**12 21 06.0**	**+0.8**
MDT				S		**Sn**	**12 21 53.3**	**-2.3**
EZAR	**Zarzadilla de**	**5.14**	**71**	S		**Sn**	**12 22 11.1**	**-1.8**
OUK	**Oukaimeden**	**5.15**	**180**	P		**Pn**	**12 21 13.8**	**-1.4**
OUK				S		**Sn**	**12 22 08.0**	**-5.5**
ELOB	**Lobios**	**5.49**	**358**	S		**Sn**	**12 22 17.4**	**-4.1**
ELOB				*i* Vmb_Lg			12 22 21.2	
ETOB	**Tobarra**	**5.50**	**64**	P		**Pn**	**12 21 20.1**	**+0.5**
ETOB				S		**Sn**	**12 22 19.1**	**-2.5**
ETOB				*i* Vmb_Lg			12 22 22.6	
ECAL	**Calabor**	**5.63**	**8**	S		**Sn**	**12 22 23.2**	**-1.6**
ECAL				*i* Vmb_Lg			12 22 25.3	
TTIG	**Tnine Tigouga,**	**5.83**	**185**	P		**Pn**	**12 21 21.6**	**-2.7**
TTIG				S		**Sn**	**12 22 22.9**	**-6.9**
ETOR	**Torete**	**6.35**	**44**	P		**Pn**	**12 21 32.7**	**+1.3**
ETOR				S		**Sn**	**12 22 38.1**	**-4.3**
EAGO	**Agolada(Pontev**	**6.43**	**358**	S		**Sn**	**12 22 41.0**	**-3.4**
EMAZ	**Mazaricos**	**6.63**	**353**	S		**Sn**	**12 22 47.4**	**-1.9**
EMOS	**Mosqueruela**	**7.03**	**53**	S		**Sn**	**12 22 58.4**	**-1.0**

IDC ***12*** *12:23:19.5±0.6,34°.67N×80°.48E,h0km,mb4.1/16, mbtmp4.0/20,ML3.5/3,MS3.4/31,Error ellipse: s-maj=19.2km s-min=12.8km az=53.0*
BJI ***12*** *12:23:22.0±0.0,34°.78N×80°.49E,h5km,mb4.1/20, mB4.5/16,ML4.1/3,Ms4.0/18,Ms7 3.7/18*
MOS ***12*** *12:23:23.6±1.2,34°.78N×80°.31E,h33km,mb4.6/11,Error ellipse: s-maj=9.7km s-min=5.7km az=110.8*
NEIC ***12*** *12:23:24.5±1.3,34°.70N±0°.10×80°.4E±0°.1,h26km±6km, mb4.4/25, Error ellipse: s-maj=13.9km s-min=12.2km az=188.0*
NNC ***12*** *12:23:27.3±1.9,35°.20N×80°.48E,h0km,mb4.3,mpv4.3, Error ellipse: s-maj=18.5km s-min=14.8km az=130.0*
ISC 12 12:23:22.4±0.4,34°.78N±0°.04×80°.45E±0°.04,h10km,n157, σ2s09/148,mb4.3/32,MS3.4/32,15C-5D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**4.57**	**218**	*e*P	**Pn**	**12 24 34.7**	**+3.2**
SMLA				*e*S	**Sn**	**12 25 29.2**	**+4.5**
SMLA				IAML		12 25 34.6	
	comp=E,108nm,0.2s						
SMLA				IAML		12 25 41.1	
	comp=N,96nm,0.4s						
SMLA				IAML		12 25 51.9	
	comp=N,89nm,1.5s						
SMLA				IAML		12 25 52.8	
	comp=E,138nm,1.5s						
THN	**Thein Dam**	**4.59**	**241**	*e*P	**Pn**	**12 24 33.9**	**+2.0**
BHK	**Bhakra**	**4.76**	**226**	*e*P	**Pn**	**12 24 37.1**	**+2.8**
BHK				*e*S	**Sn**	**12 25 36.0**	**+6.5**
JMU	**Jammu**	**5.06**	**248**	*e*P	Pn	12 24 43.2	+4.9
JMU				*e*S	**Sn**	**12 25 41.7**	**+4.9**
KSH	**Kashi**	**5.93**	**324**	Pn	**Pn**	**12 24 53.0**	**+2.6**
KSH				Sn	**Sn**	**12 26 04.2**	**+5.8**
KSH				LR	LR		
	comp=E,810nm,9.7s						
KSH				LR	LR		
	comp=E,1μm,8.3s						
KSH				LR	LR		
	comp=E,660nm,7.3s						
CHCP	**Chirah Chowk**	**6.06**	**261**	P	**Pn**	**12 24 53.1**	**+1.0**
NIL	**Nilore**	**6.07**	**261**	Pn	**Pn**	**12 24 50.3**	**-1.9**
NIL	**Nilore**	**6.07**	**261**	P	**Pn**	**12 24 50.3**	**-1.9**
NDI	**New Delhi**	**6.67**	**205**	*e*P	**Pn**	**12 25 02.0**	**+1.5**
NDI				*e*S	**Sn**	**12 26 19.0**	**+2.4**
CEP	**Cherat**	**7.13**	**265**	P	**Pn**	**12 25 07.4**	**+0.5**
NRN	**Naryn**	**7.51**	**334**	Pn	**Pn**	**12 25 12.7**	**+0.4**
NRN	**Naryn**	**7.51**	**334**	P	**Pn**	**12 25 12.7**	**+0.4**
THW	**Thamme Wali**	**7.51**	**257**	P	**Pn**	**12 25 13.4**	**+1.3**
BOOM	**Boomskoye usch**	**8.47**	**337**		**Pn**	**12 25 26.6**	**+1.3**
BOOM	**Boomskoye usch**	**8.47**	**337**	P	**Pn**	**12 25 26.6**	**+1.3**
MDOK	**Medeo**	**8.78**	**343**	⇑Pn	**Pn**	**12 25 31.3**	**+1.7**
	comp=E,7.9nm,0.7s						
MDOK				⇓Pg	Pg	12 25 57.6	-13
	comp=E,16nm,0.7s						
MDOK				⇑Lg	Lg	12 27 55.8	
	comp=E,42nm,1.1s						
TKM2	**Tokmak 2**	**8.97**	**337**	⇑Pn	**Pn**	**12 25 33.2**	**+1.1**
	comp=E,8.0nm,0.9s						
TKM2				⇓Pg	Pg	12 26 03.6	-10
	comp=E,21nm,1.3s						
TKM2				⇑Lg	Lg	12 28 01.6	
	comp=E,26nm,1.4s						
AAK	**Ala-Archa**	**9.12**	**331**	Pn	**Pn**	**12 25 38.6**	**+4.4**
	comp=E,0.8nm,0.3s,baz=136,slow=16,SNR=2.7						
AAK				Lg	Lg	12 28 09.5	
	comp=E,0.3nm,0.3s,baz=320,slow=8.1,SNR=4.8						
	comp=E,3.0nm,0.4s						
AAK	**Ala-Archa**	**9.12**	**331**	Pn	**Pn**	**12 25 33.3**	**-0.9**
AAK	**Ala-Archa**	**9.12**	**331**	*i* P	**Pn**	**12 25 34.6**	**+0.4**
CHMS	**Chumysh**	**9.33**	**333**	⇑Pn	**Pn**	**12 25 39.1**	**+2.1**
	comp=E,6.5nm,0.7s						
CHMS				⇓Pg		12 26 11.5	
	comp=E,13nm,0.8s						
CHMS				⇓Lg	Lg	12 28 13.7	
	comp=E,58nm,1.8s						
KBL	**Kabul**	**9.40**	**272**	Pn	**Pn**	**12 25 36.8**	**-1.3**
KBL	**Kabul**	**9.40**	**272**	P	**Pn**	**12 25 36.8**	**-1.3**
AJM	**Ajmer**	**9.66**	**213**	*e*P	**Pn**	**12 25 43.0**	**+1.4**
AJM				*e*S	**Sn**	**12 27 30.4**	**+0.2**
CHGR	**Chuyangaron**	**9.85**	**296**		**Pn**	**12 25 43.7**	**-0.5**
CHGR	**Chuyangaron**	**9.85**	**296**	P	**Pn**	**12 25 43.7**	**-0.5**
LSA	**Lhasa**	**10.38**	**116**	P	Pn	12 26 03.1	+11
LSA				S	Sn	12 28 26.0	+38
LSA				LR	LR		
	comp=N,330nm,6.5s						
LSA				LR	LR		
	comp=E,190nm,5.3s						
LSA				LR	LR		
	comp=Z,250nm,6.7s						
WMQ	**Urumqi**	**10.63**	**30**	*e*P	Pn	12 25 59.5	+4.7
WMQ				LR	LR		
	comp=Z,600nm,15.7s						
WMQ				LR	LR		
	comp=Z,410nm,16.7s						
WMQ				LR	LR		
	comp=Z,250nm,16.7s						
KK31	**Karatay Array**	**11.35**	**320**		**Pn**	**12 26 04.3**	**-0.3**
KK31	**Karatay Array**	**11.35**	**320**	P	**Pn**	**12 26 04.3**	**-0.3**
KK31	**Karatay Array**	**11.35**	**320**	Pn	**Pn**	**12 26 05.9**	**+1.3**
	comp=Z,4.4nm,0.8s,baz=126,slow=13,SNR=25						
KK31				⇑Sn	**Sn**	**12 28 10.9**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=126,slow=12,SNR=16						
KKAR	**Karatay Array**	**11.35**	**320**		**Pn**	**12 26 04.2**	**-0.4**
KKAR	**Karatay Array**	**11.35**	**320**		**Pn**	**12 26 03.7**	**-0.9**
KKAR	**Karatay Array**	**11.35**	**320**	P	**Pn**	**12 26 03.7**	**-0.9**
JBP	**Jabalpur**	**11.58**	**182**	*e*P	**Pn**	**12 26 06.0**	**-1.8**
JBP				*e*S	**Sn**	**12 28 14.0**	**-3.1**
GOMU	**GeErMu**	**11.80**	**79**	P	**Pn**	**12 26 11.6**	**+0.5**
GOMU				pP		12 26 15.5	
GOMU				sP		12 26 16.6	
GOMU				S	**Sn**	**12 28 17.8**	**-5.2**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,46nm,3.9s						
GOMU				LR	LR		
	comp=Z,650nm,11.3s						
GOMU				LR	LR		
	comp=Z,170nm,12.2s						
GOMU				LR	LR		
	comp=Z,250nm,12.3s						
MAKZ	**Makanchi**	**12.07**	**5**		**Pn**	**12 26 15.4**	**+0.9**
MAKZ	**Makanchi**	**12.07**	**5**	P	**Pn**	**12 26 15.4**	**+0.9**
MAKZ	**Makanchi**	**12.07**	**5**	⇑Pn	**Pn**	**12 26 14.7**	**+0.2**
	comp=Z,18nm,1.3s						
MAKZ				⇑Sn	**Sn**	**12 28 27.6**	**-1.5**
	comp=Z,11nm,1.4s						
MK31	**Makanchi Array**	**12.08**	**6**		**Pn**	**12 26 15.2**	**+0.5**
MK31	**Makanchi Array**	**12.08**	**6**	*i* P	**Pn**	**12 26 15.7**	**+1.1**
MK31	**Makanchi Array**	**12.08**	**6**	⇑Pn	**Pn**	**12 26 15.0**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=180,slow=12,SNR=28						
MK31				⇑Sn	**Sn**	**12 28 26.8**	**-2.6**
	comp=Z,12nm,1.1s,baz=179,slow=31,SNR=4.1						
MKAR	**Makanchi Array**	**12.08**	**6**	Pn	**Pn**	**12 26 15.0**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=184,slow=13,SNR=20						
MKAR				Sn	**Sn**	**12 28 27.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=187,slow=23,SNR=2.2						
MKAR				LR	LR	12 31 43.5	
	comp=Z,237nm,18.9s,baz=197,slow=41						
	comp=Z,3.5nm,0.6s						
HRA	**Herat**	**15.01**	**274**		**Pn**	**12 26 53.3**	**-1.5**
KURBB	**Kurchatov Arra**	**15.90**	**356**	Pn	**Pn**	**12 27 05.1**	**-1.0**
	baz=181,slow=10,SNR=9.4						
KURBB				LR	LR	12 33 39.1	
	comp=Z,110nm,18.6s,baz=167,slow=39						
	comp=Z,1.6nm,0.9s						
KURK	**Kurchatov**	**15.98**	**356**	Pn	**Pn**	**12 27 08.0**	**+0.8**
KURK	**Kurchatov**	**15.98**	**356**	*i* P	**Pn**	**12 27 06.1**	**-1.1**
GTA	**Gaotai**	**16.12**	**68**	*e*P	**P**	**12 27 17.5**	**+4.9

comp=Z,15nm,0.9s
CMAR Chiang Mai Arr 23.12 130 P P 12 28 26.9 -1.8
comp=Z,3.2nm,0.6s,baz=311,slow=11,SNR=22
CMAR LR LR 12 37 53.1
comp=Z,77nm,20.8s,baz=325,slow=38
comp=Z,3.2nm,0.6s
CMAR Chiang Mai Arr 23.12 130 P P 12 28 28.6 -0.1
CMAR Chiang Mai Arr 23.12 130 *ce*P P 12 28 29.1 +0.4
CMAR pmax pmax
comp=Z,9.0nm,0.8s
SONM Songino Array 23.32 48 P P 12 28 30.6 -0.1
comp=Z,2.6nm,0.8s,baz=243,slow=9.5,SNR=5.5
SONM LR LR 12 38 20.2
comp=Z,80nm,19.7s,baz=240,slow=38
comp=Z,2.6nm,0.8s
SONM Songino Array 23.32 48 P P 12 28 31.5 +0.8
SONM IAmb IAmb 12 28 37.0
comp=Z,9.6nm,1.4s
XAN Xi'an 23.48 84 P P 12 28 33.2 +0.9
XAN sP sP 12 28 40.8 +2.1
XAN pmax pmax
comp=Z,6.0nm,0.9s
XAN LR LR
comp=Z,200nm,12.5s
XAN LR LR
comp=Z,200nm,13.1s
XAN LR LR
comp=Z,180nm,12.9s
ULN Ulaanbaatar 23.74 49 P P 12 28 35.1 +0.3
ULN IAmb IAmb 12 28 41.2
comp=Z,18nm,1.5s
ULN Ulaanbaatar 23.74 49 P P 12 28 35.2 +0.3
ULN pmax pmax
comp=Z,18nm,1.5s
HHC Hu-ho-hao-te 25.23 67 *e*P P 12 28 48.6 0.0
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,120nm,5.5s
ARU Arti 26.30 332 LR LR 12 39 01.6
comp=Z,24nm,18.8s,baz=151,slow=36
ARU Arti 26.30 332 P P **12 28 58.3 +0.4**
ARU IAmb IAmb 12 29 03.5
comp=Z,9.1nm,1.3s
ARU Arti 26.30 332 *d iP* P 12 28 59.1 +1.1
ARU 12 29 36.0
ARU S S **12 33 33.6 +3.1**
ARU SS SnSn **12 34 32.4 +2.3**
ARU pmax pmax
comp=Z,5.0nm,0.9s
PALK Pallekele 27.37 179 LR LR 12 40 16.3
comp=Z,52nm,20.9s,baz=109,slow=37
GNI Garni 28.71 291 LR LR 12 44 33.1
comp=Z,59nm,18.2s,baz=110,slow=44
GNI Garni 28.71 291 *i* P P 12 29 22.5 +2.5
GNI pmax pmax
comp=Z,11nm,0.8s
BELG Belogornoye 29.24 317 LR LR 12 42 35.5
comp=Z,98nm,18.1s,baz=211,slow=39
UBPT Khong Chiam 29.71 125 P P **12 29 27.9 -0.9**
KBZ Khabaz 30.21 299 LR LR 12 43 43.0
comp=Z,60nm,18.5s,baz=82,slow=40
KIV Kislovodsk 30.38 299 *e*P P 12 29 33.0 -1.6
KIV pmax pmax
comp=Z,4.0nm,0.9s
KIV MLR MLR
comp=Z,33nm,15.0s
KIRV Kirov 31.45 329 LR LR 12 42 54.9
comp=Z,107nm,18.3s,baz=132,slow=37
PRGR Permogore 34.76 331 *e*P P 12 30 11.7 -0.8
KLMR Klimovskoe 36.91 328 *e*P P 12 30 31.4 +0.4
KLMR pmax pmax
comp=Z,14nm,1.4s
KLMR Klimovskoe 36.91 328 *e*P P 12 30 31.4 +0.4
KLMR AMP 12 30 33.4
comp=Z,14nm,1.4s
NACB Ninganchiao 37.12 95 P P **12 30 33.2 -0.1**
BR131 Keskin Array S 37.26 292 P P **12 30 34.3 -0.2**
BR131 IAmb IAmb 12 30 38.4
comp=Z,5.3nm,0.8s
BR131 Keskin Array S 37.26 292 P P **12 30 34.3 -0.2**
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 37.26 292 P P **12 30 34.9 +0.4**
comp=Z,2.6nm,0.8s,baz=99,slow=8.0,SNR=11
BRTR LR LR 12 49 27.9
comp=Z,44nm,19.9s,baz=84,slow=42
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 37.26 292 P P **12 30 33.9 -0.5**
EIL Elat 38.57 275 LR LR 12 49 32.0
comp=Z,43nm,18.8s,baz=86,slow=41
KLR Kul'dur 39.99 53 LR LR 12 49 01.1
comp=Z,64nm,19.0s,baz=214,slow=38
AKASG Malin Array Be 40.00 310 P P **12 30 56.4 -0.8**
comp=Z,0.5nm,0.5s,baz=76,slow=8.0,SNR=8.4
AKASG LR LR 12 48 57.9
comp=Z,44nm,19.1s,baz=58,slow=38
comp=Z,0.5nm,0.5s
AKASG Malin Array Be 40.00 310 *ce*P P 12 30 57.9 +0.8
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 40.00 310 *ce*P P 12 31 00.1 +3.0
USA0B Ussuriysk Arra 40.30 61 P P **12 31 00.3 +0.6**
USA0B IAmb IAmb 12 31 30.4
comp=Z,6.2nm,1.2s
USA0B Ussuriysk Arra 40.30 61 P P **12 31 00.3 +0.6**
USA0B pmax pmax
comp=Z,6.0nm,1.3s
USRK Ussuriysk Ar. 40.30 61 P P **12 31 00.6 +0.9**
USRK Ussuriysk Ar. 40.30 61 P P **12 31 00.6 +0.9**
ELL Elmali 40.67 288 P P **12 31 02.7 -0.4**
ELL Elmali 40.67 288 P P **12 31 02.7 -0.4**
ELL pmax pmax
comp=Z,56nm,1.0s
MLR Muntele Rosu 42.28 302 LR LR 12 51 34.9
comp=Z,62nm,19.3s,baz=69,slow=40
MLR Muntele Rosu 42.28 302 P P **12 31 15.8 -0.4**
MLR IAmb IAmb 12 31 21.2
comp=Z,14nm,1.1s
MLR Muntele Rosu 42.28 302 P P **12 31 15.8 -0.4**
MLR pmax pmax
comp=Z,14nm,1.1s
DGAR Diego Garcia 42.64 192 *ce*P P 12 31 19.5 +0.4
DGAR pmax pmax
comp=Z,267nm,1.3s
FINES FINESS Array B 43.25 325 P P **12 31 23.1 -0.5**
comp=Z,2.6nm,0.7s,baz=111,slow=10,SNR=7.6
FINES LR LR 12 50 59.0
comp=Z,49nm,19.7s,baz=84,slow=38
comp=Z,2.6nm,0.7s
FINES FINESS Array B 43.25 325 P P **12 31 23.8 +0.2**
FINES FINESS Array B 43.25 325 *i* P P 12 31 23.8 +0.2
FINES pmax pmax
comp=Z,3.0nm,0.7s
IDI Anoyia 44.98 287 LR LR 12 56 04.3
comp=Z,19nm,18.8s,baz=60,slow=44
ARCES ARCESS Array B 45.75 336 P P **12 31 43.0 -0.5**
comp=Z,1.2nm,0.7s,baz=99,slow=7.7,SNR=4.5
ARCES LR LR 12 52 18.6
comp=Z,49nm,19.5s,baz=148,slow=38
comp=Z,1.2nm,0.7s
ARCES ARCESS Array B 45.75 336 P P **12 31 43.0 -0.5**
MJAR Matsushiro Arr 46.35 70 LR LR 12 53 22.1
comp=Z,17nm,18.7s,baz=212,slow=39
VRAC Vranov 48.19 308 LR LR 12 54 22.0
comp=Z,45nm,18.1s,baz=74,slow=39
HFS Hagfors 49.14 323 LR LR 12 53 01.8
comp=Z,44nm,18.9s,baz=80,slow=36
NC405 NORSAR Array S 50.11 324 P P **12 32 17.0 -0.4**
GEC2 GERESS Array S 50.14 308 P P **12 32 17.7 -0.2**
GEC2 IAmb IAmb 12 32 22.4
comp=Z,5.1nm,1.4s
GERES GERESS Array B 50.14 308 P P **12 32 17.1 -0.8**
comp=Z,1.2nm,0.9s,baz=77,slow=4.4,SNR=3.1
comp=Z,1.2nm,0.9s
GERES GERESS Array B 50.14 308 P P **12 32 18.0 +0.1**
KHC Kasperske Hory 50.17 308 *e*P P 12 32 19.4 +1.3
KHC Kasperske Hory 50.17 308 *e*P P 12 32 19.4 +1.3
NB2 NORSAR Subarra 50.35 324 P P **12 32 18.2 -1.1**
comp=Z,4.5nm,1.0s,baz=88,slow=7.9
NOA NORSAR Array B 50.35 324 P P **12 32 17.6 -1.6**
comp=Z,2.0nm,0.9s,baz=89,slow=7.5,SNR=4.8
NOA LR LR 12 57 03.6
comp=Z,23nm,18.2s,baz=80,slow=40
comp=Z,2.0nm,0.9s
JCJ Chichijima 52.79 80 LR LR 12 56 28.5
comp=Z,22nm,19.2s,baz=175,slow=38

DAVOX Davos/Dischmat 53.08 306 LR LR 12 57 37.4
comp=Z,44nm,18.4s,baz=80,slow=39
KMBO Kilima Mbogo 53.92 238 LR LR 12 56 59.2
comp=Z,28nm,20.5s,baz=91,slow=38
KEST Kesra 56.84 293 LR LR 13 01 27.7
comp=Z,39nm,19.1s,baz=262,slow=40
BORG Borgarnes 63.84 332 LR LR 13 01 16.2
comp=Z,50nm,20.3s,baz=9.1,slow=36
TOLK Toolik Lake Re 70.45 17 P P **12 34 37.8 +1.2**
TOLK IAmb IAmb 12 34 40.0
comp=Z,6.1nm,1.1s
IMAR Indian Mountai 71.28 21 P P **12 34 42.6 +1.0**
BMAR Burnt Mountain 72.59 17 P P **12 34 49.3 -0.2**
TOA0 Torodi Ar. Sit 73.46 275 P P **12 34 54.5 -0.9**
TOA0 IAmb IAmb 12 34 54.8
comp=Z,4.6nm,0.7s
TORD Torodi Ar. Bea 73.46 275 P P **12 34 54.4 -1.1**
comp=Z,4.9nm,0.6s,baz=48,slow=5.3,SNR=38
comp=Z,4.9nm,0.6s
IL31 74.10 19 P P **12 34 58.8 +0.5**
IL31 IAmb IAmb 12 35 09.5
comp=Z,4.0nm,1.1s
ILAR Eielson Array 74.10 19 P P **12 34 57.8 -0.6**
comp=Z,1.6nm,1.0s,baz=310,slow=5.5,SNR=9.6
ILAR LR LR 13 11 57.3
comp=Z,64nm,19.4s,baz=266,slow=39
comp=Z,1.6nm,1.0s
ILAR Eielson Array 74.10 19 P P **12 34 58.7 +0.3**
WRA Warramunga Arr 74.70 128 P P **12 35 01.0 -1.5**
comp=Z,1.3nm,0.8s,baz=321,slow=5.8,SNR=16
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 74.70 128 P P **12 35 01.2 -1.3**
WRA Warramunga Arr 74.70 128 P P **12 35 01.0 -1.5**
WRAB Tennant Creek 74.70 128 P P **12 35 01.6 -0.9**
WRAB IAmb IAmb 12 35 11.0
comp=Z,5.4nm,1.1s
WRAB Tennant Creek 74.70 128 P P **12 35 01.6 -0.9**
WRAB pmax pmax
comp=Z,5.0nm,1.1s
WB2 Warramunga Arr 74.71 128 P P **12 35 01.4 -1.2**
WR0 Warramunga Arr 74.84 128 P P **12 35 01.7 -1.6**
ASAR Alice Springs 77.13 131 P P **12 35 14.6 -1.8**
comp=Z,0.8nm,0.6s,baz=319,slow=5.7,SNR=12
comp=Z,0.8nm,0.6s
BOSA Boshof 81.80 227 P P **12 35 39.7 -2.0**
comp=Z,5.7nm,1.1s,baz=358,slow=4.6,SNR=3.9
comp=Z,5.7nm,1.1s
YKA Yellowknife Ar 82.31 7 P P **12 35 41.5 -2.3**
comp=Z,3.5nm,0.9s,baz=340,slow=5.5,SNR=6.6
comp=Z,3.5nm,0.9s
DBIC Dimbokro 82.39 273 P P **12 35 43.4 -1.8**
comp=Z,3.4nm,0.8s,baz=143,slow=1.6,SNR=3.7
comp=Z,3.4nm,0.8s
TROLL Troll, Antarti 119.09 200 PKPdf **PKPdf 12 42 09.6 -1.0**
SNAA Sanae 120.54 201 PKPdf **PKPdf 12 42 12.1 -1.2**
VNA2 Neumayer--Watz 121.74 203 PKPdf **PKPdf 12 42 14.6 -0.9**
baz=41,slow=2.0
QSPA South Pole Qui 124.57 180 PKP **PKPdf 12 42 18.6 -2.5**
comp=Z,3.5nm,1.1s,baz=319,slow=1.2,SNR=7.4
LPAZ La Paz 146.40 295 PKPbc **PKPbc 12 43 04.0 -0.9**
comp=Z,2.4nm,0.8s,baz=312,slow=2.6,SNR=6.7
LPAZ La Paz 146.40 295 PKP2 **PKPbc 12 43 04.0 -0.9**

*KRNET **12** 12:40:42.8±0.1, 40.˚48N×78.˚02E, mb3.0*
*SOME **12** 12:40:43.0, 40.˚92N×78.˚00E, h10km*
*NNC **12** 12:40:44.0±1.0, 40.˚95N×78.˚03E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=6.6km s-min=5.1km az=171.0
ISC 12 12:40:42.2±2.6, 40.˚8N±0.˚1×77.˚93E±0.˚05, h10km, n30, σ1°22/47, 6C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**1.94**	**320**	⇑*iP*	**Pb**	**12 41 18.1**	**+0.4**
ULHL	baz=23			⇑*iS*	**Sg**	**12 41 44.0**	**-0.5**
BOOM	**Boomskoye usch**	**2.27**	**320**	⇓*eP*	**Pb**	**12 41 22.9**	**-0.5**
BOOM	baz=23			⇓*iS*	**Sb**	**12 41 52.4**	**+0.8**
SATY	**Saty**	**2.31**	**9**	*eP*	**Pb**	**12 41 23.6**	**-0.4**
SATY	9.9nm,0.4s			*eS*	**Sb**	**12 41 52.9**	**+0.4**
SATY	**Saty**	**2.31**	**9**	Pg	**Pb**	**12 41 23.5**	**-0.4**
SATY	9.9nm,0.4s			Lg	Lg	12 41 53.5	
SATY	**Saty**	**2.31**	**9**	*eP*	**Pb**	**12 41 23.6**	**-0.4**
SATY	baz=6.0			*eS*	**Sb**	**12 41 52.9**	**+0.4**
MDOK	**Medeo**	**2.47**	**345**	*eP*	**Pb**	**12 41 26.9**	**+0.1**
MDOK	6.9nm,0.5s			*eS*	**Sb**	**12 41 58.4**	**+1.0**
MDOK	**Medeo**	**2.47**	**345**	⇑Pn	**Pb**	**12 41 24.9**	**-1.9**
MDOK	5.2nm,0.5s			Pg	**Pg**	**12 41 26.7**	**-2.9**
MDOK	6.9nm,0.5s			Lg	Lg	12 41 58.7	
MDOK	22nm,0.9s			Lg	Lg	12 41 59.1	
MDOK	**Medeo**	**2.47**	**345**	*eP*	**Pb**	**12 41 26.9**	**+0.1**
MDOK	33nm,0.6s baz=45			*eS*	**Sb**	**12 41 58.4**	**+1.0**
UZB	**Uzynbulak**	**2.50**	**19**	*eP*	**Pb**	**12 41 26.9**	**-0.4**
UZB	2.0nm,0.2s			*eS*	**Sb**	**12 41 58.6**	**+0.4**
UZB	**Uzynbulak**	**2.50**	**19**	Pg	**Pb**	**12 41 26.5**	**-0.8**
UZB	17nm,0.4s 2.0nm,0.2s			Lg	Lg	12 41 58.8	
SHLS	**Shalkode**	**2.64**	**25**	*eP*	**Pg**	**12 41 31.0**	**-1.7**
SHLS	8.8nm,0.4s			*eS*	**Sg**	**12 42 05.5**	**-1.4**
SHLS	**Shalkode**	**2.64**	**25**	Pg	**Pb**	**12 41 30.5**	**+0.9**
SHLS	22nm,0.4s 8.8nm,0.4s			Lg	Lg	12 42 05.4	
KST	**Kastek**	**2.70**	**328**	Pg	**Pb**	**12 41 30.8**	**+0.2**
KST	4.1nm,0.3s			Lg	Lg	12 42 06.0	
KURS	**Kuram**	**2.71**	**4**	*eP*	**Pb**	**12 41 30.7**	**-0.1**
KURS	12nm,0.4s 9.0nm,0.4s			*eS*	**Sb**	**12 42 05.0**	**+0.8**
KURS	**Kuram**	**2.71**	**4**	Pg	**Pb**	**12 41 30.4**	**-0.4**
KURS	8.8nm,0.4s 9.0nm,0.4s			Lg	Lg	12 42 05.1	
KPKS	**Kokpek**	**2.74**	**12**	*eP*	**Pb**	**12 41 31.1**	**-0.3**
KPKS	8.8nm,0.4s 16nm,0.2s			*eS*	**Sb**	**12 42 05.8**	**+0.7**
KPKS	**Kokpek**	**2.74**	**12**	Pg	**Pb**	**12 41 30.4**	**-1.0**
KPKS	17nm,0.4s 16nm,0.2s			Lg	Lg	12 42 05.0	
TKM2	**Tokmak 2**	**2.76**	**322**	⇓Pn	**Pn**	**12 41 29.2**	**+2.5**
TKM2	3.1nm,0.5s			⇓Lg	Lg	12 42 09.3	
TKM2	**Tokmak 2**	**2.76**	**322**	⇑*iP*	**Pb**	**12 41 29.5**	**-2.3**
TKM2	5.9nm,0.6s baz=24			⇑*iS*	**Sb**	**12 42 03.6**	**-2.1**
PDGK	**Podgornoye**	**2.80**	**24**	⇑Pn	**Pn**	**12 41 28.5**	**+1.4**
PDGK	3.5nm,0.5s 14nm,0.6s			⇓Lg	Lg	12 42 06.8	
KTBS	**Karatobe**	**3.08**	**343**	*eP*	**Pb**	**12 41 37.2**	**+0.2**
KTBS	5.4nm,0.5s 38nm,0.3s			*eS*	**Sb**	**12 42 16.5**	**+1.9**
KTBS	**Karatobe**	**3.08**	**343**	Pg	**Pb**	**12 41 37.0**	**0.0**
KTBS	5.4nm,0.5s 38nm,0.3s			Lg	Lg	12 42 17.1	
KUU	**Kurty**	**3.33**	**340**	*eP*	**Pb**	**12 41 41.4**	**+0.1**
KUU	2.0nm,0.5s			*eS*	**Sb**	**12 42 23.6**	**+1.7**
KUU	**Kurty**	**3.33**	**340**	Pg	**Pb**	**12 41 41.9**	**+0.6**
KUU	8.7nm,0.9s 1.2nm,0.2s			Lg	Lg	12 42 24.8	
KRBS	**Karabastau**	**3.36**	**331**	*eP*	**Pb**	**12 41 42.3**	**+0.4**
KRBS	8.7nm,0.9s 3.7nm,0.4s			*eS*	**Sb**	**12 42 25.0**	**+2.1**
KRBS	**Karabastau**	**3.36**	**331**	Pg	**Pb**	**12 41 42.5**	**+0.6**
KRBS	6.8nm,0.8s 3.7nm,0.4s			Lg	Lg	12 42 25.8	
ARXS	**Arharly**	**3.43**	**359**	*eP*	**Pb**	**12 41 43.9**	**+0.7**
ARXS	6.8nm,0.8s 5.3nm,0.5s			*eS*	**Sb**	**12 42 27.6**	**+2.6**
ARXS	**Arharly**	**3.43**	**359**	Pg	**Pb**	**12 41 43.8**	**+0.7**
ARXS	13nm,0.4s 5.3nm,0.5s			Lg	Lg	12 42 28.1	
DJR	**Jarkent**	**3.81**	**21**	*eP*	**Pb**	**12 41 49.4**	**-0.1**
DJR	1.3nm,0.3s 6.9nm,0.4s			*eS*	**Sb**	**12 42 37.1**	**+1.4**
DJR	**Jarkent**	**3.81**	**21**	Pg	**Pb**	**12 41 49.1**	**-0.4**
DJR	1.3nm,0.3s 6.9nm,0.4s			Lg	Lg	12 42 37.0	

*LVSN **12** 12:42:50.3±6.5, 58.˚12N×23.˚98E, h0km±34km, ML1.8*
HEL 12 12:42:45.9±0.5, 60.˚64N×28.˚97E, h0km, ML1.7,
Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.71**	**262**	PB	Pg	12 43 00.0	+0.6
VJF				SG	Sg	12 43 09.2	+0.7
RUFX	**Ruokolahti**	**0.79**	**359**	PG	Pg	12 43 00.7	-0.3
PVF	**Pernaja**	**1.54**	**268**	PG	Pn	12 43 13.8	-0.7
PVF				MSG		12 43 32.0	
	comp=Z,6.5nm,0.2s						
PVF				SN	Sg	12 43 36.1	+0.9
FIA0	**FINESS Array S**	**1.62**	**301**	PG	Pn	12 43 14.7	-1.0
	baz=117						
FIA0				SN	Sn	12 43 35.3	-1.9
ARBE	**Arbavere**	**1.93**	**232**	*eP*	Pn	12 43 19.6	-0.2
ARBE				*eS*	Sn	12 43 45.5	+0.7
ARBE				AML	AML	12 43 47.8	
	comp=N,92nm,0.2s						
ARBE				AML	AML	12 43 48.2	
	comp=E,96nm,0.2s						
ARBE				AML	AML	12 43 51.5	
	comp=Z,29nm,0.2s						
ARBE	**Arbavere**	**1.93**	**232**	PG	Pn	12 43 20.1	+0.3
KAF	**Kangasniemi**	**1.95**	**320**	PG	Pn	12 43 20.7	+0.4
KAF				MSG		12 43 44.0	
	comp=Z,3.3nm,0.2s						
KAF				SG	Sn	12 43 45.3	-0.2
NUR	**Nurmijrvi**	**2.14**	**268**	PG	Pb	12 43 24.5	-1.0
NUR				SG	Sb	12 43 52.5	0.0
MEF	**Metsahovi**	**2.31**	**261**	*eP*	Pb	12 43 26.8	-1.5
MEF				AML	AML	12 43 30.2	
	comp=E,3.5nm,0.7s						
MEF				AML	AML	12 43 49.6	
	comp=Z,3.7nm,0.7s						
MEF				*eS*	Sg	12 43 58.7	-1.3
MEF				AML	AML	12 43 59.5	
	comp=N,4.5nm,0.3s						
MEF	**Metsahovi**	**2.31**	**261**	PG	Pb	12 43 26.8	-1.6
MEF				MSG		12 43 54.3	
	comp=Z,3.3nm,0.2s						
MEF				SG	Sb	12 43 58.7	+1.3
VSU	**Vasula**	**2.47**	**208**	*eP*	Pn	12 43 21.6	-5.7
VSU				*eS*	Sn	12 43 37.3	-21
KEF	**Keuruu**	**2.50**	**310**	PB	Pn	12 43 28.7	+1.0
KEF				MSG		12 43 59.5	
	comp=Z,1.8nm,0.2s						
KEF				SG	Sb	12 44 01.4	-1.4
JOF	**Joensuu**	**2.54**	**25**	PG	Pb	12 43 31.4	-0.9
JOF				SG	Sb	12 44 03.6	-0.5
RAF	**Rauma**	**3.55**	**279**	*eP*	Pn	12 43 44.1	+1.9
RMF	**Romuvaara**	**3.62**	**7**	PB	Pb	12 43 47.3	-3.3
	baz=184						

*IDC **12** 12:55:11.3±2.7, 6.˚32S×149.˚42E, h63km±35km, mb3.3/2,*
mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=101.0km
s-min=16.1km az=132.0
ISC 12 12:55:10.9±1.3, 6.˚2S±0.˚3×149.˚2E±0.˚3, h50km, n6, σ1°19/7,
New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.33**	**57**	P	**Pn**	**12 56 00.3**	**-0.3**
	6.5nm,0.3s,baz=173,slow=3.1,SNR=7.2						
	16nm,0.3s						
PMG	**Port Moresby**	**3.82**	**212**	P	**Pn**	**12 56 07.0**	**-0.3**
	27nm,0.3s,baz=348,slow=3.9,SNR=41						
PMG				S	**Sn**	**12 56 51.8**	**+0.9**
	90nm,0.5s,baz=58,slow=18,SNR=14						
WRA	**Warramunga Arr**	**19.93**	**225**	P	**P**	**12 59 38.1**	**-0.6**
	0.3nm,0.3s,baz=52,slow=10,SNR=17						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**22.81**	**219**	P	**P**	**13 00 09.1**	**-0.7**
	0.4nm,0.6s,baz=54,slow=9.5,SNR=15						
	0.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**25.90**	**241**	P	**P**	**13 00 37.7**	**-0.7**
	1.2nm,0.5s,baz=55,slow=11,SNR=10						
	1.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**147.29**	**285**	PKPbc	**PKPdf**	**13 14 49.5**	**+1.8**
	0.3nm,0.4s,baz=81,slow=4.6,SNR=5.1						

*IDC **12** 13:00:30.0±0.7, 22.˚55S×172.˚96E, h0km, mb4.3/15,*
mbtmp4.3/16, ML3.8/1, MS3.8/45, Error ellipse:
s-maj=21.9km s-min=18.2km az=5.0
*NOU **12** 13:00:33.2, 22.˚99S×173.˚02E, h0km, mb4.7/11, Southeast of Loyalty Islands*
*NEIC **12** 13:00:33.8±1.8, 22.˚9S±0.˚1×172.˚94E±0.˚09, h10km±1km, mb4.8/27, Error ellipse: s-maj=17.3km s-min=13.6km az=349.0*
*GCMT **12** 13:00:37.8±0.3, 22.˚78S±0.˚02×172.˚85E±0.˚03, h21km±1km, MW5.0/67, Moment Tensor Solution. s27,c33; s67,c104; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.27±.27; Mθθ=-3.40±.16; Mθφ=0.12±.15; Mrθ=0.52±.22; Mφφ=0.93±.08; Mφr=-1.03±.34; Best double couple: M₀=3.65000×10¹⁶ NP1:φs=118.00000°, δ53.00000°, λ109.00000°. NP2: φs=269.00000°, δ41.00000°, λ67.00000°. Principal axes: T 3.5860, Plg74.0000°, Azm83.0000°; N 0.1260, Plg15.0000°, Azm287.0000°; P -3.7140, Plg6.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 12 13:00:37.0±0.4, 22.˚79S±0.˚07×172.˚81E±0.˚06, h35km, n114,
σ1°85/76, mb4.8/27, MS4.0/42, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.62**	**285**	Pn	**Pn**	**13 01 45.0**	**+0.7**
MARNC	**Mare, Loyalty**	**4.62**	**285**	P	**Pn**	**13 01 46.9**	**+2.6**
PINNC	**Pines Island,**	**4.96**	**271**		**Pn**	**13 01 50.1**	**+1.2**
PINNC	**Pines Island,**	**4.96**	**271**	P	**Pn**	**13 01 51.0**	**+2.1**
YATNC	**Mamie plateau,**	**5.53**	**276**	P	**Pn**	**13 01 59.2**	**+2.4**
OUENC	**Ouen Island, N**	**5.53**	**273**	Pn	**Pn**	**13 02 00.1**	**+3.3**
OUENC	**Ouen Island, N**	**5.53**	**273**	P	**Pn**	**13 01 59.9**	**+3.1**
ONTNC	**Ouen Toro**	**5.90**	**273**	Pn	**Pn**	**13 02 03.7**	**+1.8**
ONTNC	**Ouen Toro**	**5.90**	**273**	P	**Pn**	**13 02 05.4**	**+3.6**
DZM	**Mont Dzumac**	**5.93**	**276**	Pn	**Pn**	**13 02 01.2**	**-1.3**
DZM	2.4nm,0.3s,baz=150,slow=13,SNR=20			Sn	**Sn**	**13 03 09.7**	**+0.4**
	2.2nm,0.3s,baz=75,slow=21,SNR=1.7						
DZM				LR	LR	13 03 37.2	
	comp=Z,197nm,20.3s,baz=101,slow=31						
	4.9nm,0.3s						
DZM	**Mont Dzumac**	**5.93**	**276**	*e*Pn	Pn	13 02 07.5	+5.0
	60nm,0.9s						
DZM				*e*LR	LR	13 03 28.6	
	comp=Z,1μm,22.1s						
DZM	**Mont Dzumac**	**5.93**	**276**	Pn	**Pn**	**13 02 03.4**	**+0.9**

DZM Mont Dzumac 5.93 276 P **Pn** **13 02 05.2 +2.7**
NOUC Port Laguerre 6.06 275 P **Pn** **13 02 05.4 +1.3**
MSVF Nonsavu 7.03 45 Pn **Pn** **13 02 16.1 -1.5**
1.2nm,0.3s,baz=190,slow=8.2,SNR=15
MSVF LR LR 13 04 22.0
comp=Z,2µm,18.8s,baz=195,slow=34
MSVF Nonsavu 7.03 45 Pn **Pn** **13 02 17.4 -0.2**
YSA Yasawairara 7.54 37 P **Pn** **13 02 24.6 +0.1**
NFK Norfolk Island 7.62 214 P **Pn** **13 02 25.0 -0.5**
KOUNC **Koumac, New Ca 8.23 284** Pn **Pn** **13 02 35.0 +1.0**
KOUNC **Koumac, New Ca 8.23 284** P **Pn** **13 02 38.1 +4.1**
RAO Raoul Island 10.53 130 LR LR 13 05 33.6
comp=Z,262nm,18.2s,baz=313,slow=29
URZ Urewera 15.85 168 Pn **P** **13 04 21.6 +0.8**
0.3nm,0.3s,baz=348,slow=13,SNR=4.7
URZ LR LR 13 08 58.6
comp=Z,447nm,20.4s,baz=26,slow=32
URZ Urewera 15.85 168 Pn **Pn** **13 04 15.4 -2.1**
BKZ Black Stump Fm 16.62 170 **Pn** **13 04 24.6 -2.7**
AFI Afiamalu 17.08 62 LR LR 13 09 12.7
comp=Z,173nm,18.2s,baz=173,slow=31
TUWZ Tuamarina 18.61 177 P **Pn** **13 04 54.3 +2.6**
LTZ Lake Taylor 19.94 181 P **P** **13 05 05.8 -0.1**
EIDS Eidsvold 20.00 258 P Pn 13 05 09.0 +0.4
RPZ Rata Peaks 20.92 184 LR LR 13 12 08.4
comp=Z,733nm,20.9s,baz=3.5,slow=33
ODZ Otahua Downs 22.27 184 P **P** **13 05 30.1 -0.9**
CTA Charters Tower 24.85 271 P **P** **13 05 57.1 +0.7**
3.2nm,0.7s,baz=106,slow=6.4,SNR=2.6
3.2nm,0.7s
CTAO Charters Tower 24.85 271 P **P** **13 05 56.4 +0.1**
CTAO IAmb IAmb 13 06 20.2
comp=Z,39nm,1.6s
RAR Rarotonga 25.46 92 LR LR 13 15 45.5
comp=Z,121nm,18.2s,baz=264,slow=36
PMG Port Moresby 27.95 294 LR LR 13 15 50.7
comp=Z,152nm,21.5s,baz=144,slow=33
STKA Stephens Creek 29.09 245 P **P** **13 06 35.7 +1.3**
comp=Z,1.3nm,0.5s,baz=80,slow=9.7,SNR=4.4
comp=Z,1.3nm,0.5s
STKA Stephens Creek 29.09 245 P **P** **13 06 35.4 +1.0**
BBOO Buckleboo 33.86 245 P **P** **13 07 16.6 +0.3**
PPT2 Papeete2 35.61 89 *e*S **S** **13 13 12.3 +6.5**
comp=Z,27nm,21.0s
PPT2 *e*LR LR 13 17 02.0
comp=Z,275nm,26.8s
PPT2 *e*LR LR 13 17 05.0
comp=Z,415nm,27.0s
PPT Papeete 35.62 89 LR LR 13 18 23.4
comp=Z,213nm,19.9s,baz=270,slow=30
WR0 Warramunga Arr 35.69 267 P **P** **13 07 32.0 -0.3**
WR0 IAmb IAmb 13 08 52.3
comp=Z,19nm,1.7s
AS31 Alice Springs 35.69 261 P **P** **13 07 31.9 -0.3**
ASAR Alice Springs 35.69 261 P **P** **13 07 31.9 -0.4**
comp=Z,4.8nm,0.9s,baz=85,slow=8.4,SNR=40
ASAR LR LR 13 21 09.6
comp=Z,215nm,21.4s,baz=102,slow=35
comp=Z,4.8nm,0.9s
WB0 Warramunga Arr 35.86 267 P **P** **13 07 33.9 +0.2**
WB0 IAmb IAmb 13 08 05.0
comp=Z,22nm,1.6s
WB2 Warramunga Arr 35.86 267 P **P** **13 07 34.6 +0.8**
WB2 IAmb IAmb 13 08 00.1
comp=Z,30nm,1.9s
WRAB Tennant Creek 35.87 267 P **P** **13 07 33.4 -0.3**
WRAB IAmb IAmb 13 08 05.7
comp=Z,37nm,2.0s
WRA Warramunga Arr 35.87 267 P **P** **13 07 32.4 -1.5**
comp=Z,0.4nm,0.3s,baz=96,slow=8.5,SNR=29
WRA LR LR 13 22 15.8
comp=Z,238nm,18.1s,baz=82,slow=36
comp=Z,0.4nm,0.3s
WRA Warramunga Arr 35.87 267 P **P** **13 07 32.9 -0.9**
FORT Forrest 40.52 249 P **P** **13 08 14.2 +1.3**
FORT IAmb IAmb 13 08 17.4
comp=Z,21nm,0.8s
MTN Manton Dam 40.77 277 P **P** **13 08 16.4 +1.3**
MTN IAmb IAmb 13 09 39.6
comp=Z,28nm,1.3s
H11S2 WAKE ISLAND Hy 41.46 351 T T 13 52 33.8
baz=171,slow=76,SNR=18
H11S3 WAKE ISLAND Hy 41.47 351 T T 13 52 34.5
baz=171,slow=76,SNR=17
H11S1 WAKE ISLAND Hy 41.48 351 T T 13 52 35.4
baz=171,slow=76,SNR=19
KNRA Kununurra 42.07 272 P **P** **13 08 25.6 0.0**
KNRA IAmb IAmb 13 09 10.8
comp=Z,29nm,1.4s
H11N1 WAKE ISLAND Hy 42.64 352 T T 13 54 04.4
baz=172,slow=76,SNR=7.3
H11N3 WAKE ISLAND Hy 42.64 352 T T 13 54 07.2
baz=172,slow=76,SNR=5.5
H11N2 WAKE ISLAND Hy 42.66 352 T T 13 54 05.7
baz=172,slow=76,SNR=6.4
FITZ Fitzroy Crossi 44.30 267 P **P** **13 08 42.2 -1.5**
comp=Z,4.9nm,0.7s,baz=127,slow=5.6,SNR=11
FITZ LR LR 13 27 33.8
comp=Z,228nm,18.4s,baz=112,slow=36
comp=Z,4.9nm,0.7s
FITZ Fitzroy Crossi 44.30 267 P **P** **13 08 43.6 -0.2**
FITZ IAmb IAmb 13 08 54.3
comp=Z,15nm,1.1s
GUMO Guam 45.35 320 LR LR 13 25 42.6
comp=Z,111nm,19.4s,baz=134,slow=33
SIJI Sorong 45.86 292 LR LR 13 28 16.3
comp=Z,152nm,19.9s,baz=131,slow=36
TAOE Nuku Hiva Isla 47.12 81 *e*S **S** **13 16 02.9 +6.3**
comp=Z,50nm,24.0s
TAOE *e*LR LR 13 22 23.9
comp=Z,278nm,24.7s
MORW Morawa 51.03 250 P **P** **13 09 36.0 +0.1**
KAPI Kappang 54.13 281 LR LR 13 33 29.1
comp=Z,92nm,18.6s,baz=97,slow=36
DAV Davao City (W) 54.91 297 LR LR 13 33 20.7
comp=Z,46nm,19.7s,baz=160,slow=36
VNDA Vanda 55.04 183 P **P** **13 10 04.8 +0.1**
comp=Z,0.4nm,0.7s,baz=20,slow=11,SNR=2.2
VNDA LR LR 13 29 28.9
comp=Z,222nm,21.9s,baz=14,slow=32
comp=Z,0.4nm,0.7s
VNDA Vanda 55.04 183 P **P** **13 10 05.5 +0.9**
VNDA IAmb IAmb 13 10 28.9
comp=Z,21nm,1.9s
SBA Scott Base 55.19 182 P **P** **13 10 05.4 -0.3**
SBA IAmb IAmb 13 10 28.4
comp=Z,18nm,1.2s
JHJ Hachijo jima 2 63.90 329 LR LR 13 39 03.8
comp=Z,20nm,18.7s,baz=87,slow=36
LEM Lembang 64.53 273 LR LR 13 38 17.0
comp=Z,129nm,21.6s,baz=138,slow=35
QSPA South Pole Qui 67.28 180 P **P** **13 11 27.4 -0.6**
comp=Z,9.7nm,1.0s,baz=10,slow=3.7,SNR=6.9
QSPA LR LR 13 39 56.3
comp=Z,25nm,18.1s,baz=38,slow=35
comp=Z,9.7nm,1.0s
RPN Rapa Nui 69.65 112 LR LR 13 33 38.8
comp=Z,89nm,19.9s,baz=292,slow=29
NJ2 Nanjing 75.07 315 *e*P **P** **13 12 14.2 -1.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
SHEM Shemya Is, Ala 75.20 1 LR LR 13 40 58.0
comp=Z,57nm,18.7s,baz=288,slow=32
PSI Prapat 76.28 279 LR LR 13 48 20.6
comp=Z,106nm,18.1s,baz=109,slow=38
MAW Mawson 76.40 202 P **P** **13 12 23.3 +0.9**
comp=Z,6.4nm,1.0s,baz=110,slow=8.5,SNR=9.5
MAW LR LR 13 43 37.2
comp=Z,43nm,18.1s,baz=110,slow=34
comp=Z,6.4nm,1.0s
MAW Mawson 76.40 202 P **P** **13 12 23.3 +0.9**
PETK Petropavlovsk- 76.71 351 P **P** **13 12 22.3 -1.9**
comp=Z,2.1nm,0.9s,baz=127,slow=11,SNR=4.4
comp=Z,2.1nm,0.9s
BELA Belgrano 2 78.27 174 P **P** **13 12 31.7 -1.1**
BELA IAmb IAmb 13 12 32.6
comp=Z,11nm,0.9s
SMAI San Martin Ant 79.41 161 P **P** **13 12 40.1 +1.0**
KLR Kul'dur 80.48 334 LR LR 13 41 28.6
comp=Z,30nm,21.9s,baz=156,slow=31
PMSA Palmer Station 82.43 159 P **P** **13 12 54.6 -0.6**
comp=Z,14nm,0.9s,baz=240,slow=4.3,SNR=21
PMSA LR LR 13 44 17.0
comp=Z,25nm,18.3s,baz=352,slow=32
comp=Z,14nm,0.9s
PMSA Palmer Station 82.43 159 P **P** **13 12 55.3 +0.1**
CMAR Chiang Mai Arr 82.98 293 LR LR 13 52 10.3
comp=Z,16nm,19.9s,baz=140,slow=37
MA2 Magadan 84.04 349 LR LR 13 48 01.0
comp=Z,49nm,18.0s,baz=162,slow=34
TROLL Troll, Antarti 85.22 183 P **P** **13 13 08.7 -0.9**
SNAA Sanae 85.74 181 P **P** **13 13 10.9 -1.3**
SNAA Sanae 85.74 181 P **P** **13 13 10.9 -1.3**
comp=Z,4.5nm,0.8s,baz=231,slow=6.5,SNR=17
SNAA LR LR 13 49 17.6
comp=Z,41nm,19.4s,baz=220,slow=34
comp=Z,4.5nm,0.8s
SNAA Sanae 85.74 181 P **P** **13 13 11.1 -1.0**
SNAA IAmb IAmb 13 13 11.8
comp=Z,9.7nm,1.1s
VNA3 Neumayer Olymp 86.21 179 P **P** **13 13 12.8 -1.6**
VNA2 Neumayer--Watz 86.54 180 P **P** **13 13 14.9 -1.1**
baz=171,slow=5.0
VNA1 Neumayer--Stat 86.81 180 P **P** **13 13 16.0 -1.3**
ISA Isabella, Lake 87.18 49 P **P** **13 13 19.1 -0.6**
ISA IAmb IAmb 13 14 05.8
comp=Z,6.8nm,1.2s
YBH Yreka Blue Hor 87.58 43 LR LR 13 44 18.7
comp=Z,111nm,21.1s,baz=233,slow=30
PFO Pinyon Flats O 87.59 52 LR LR 13 46 20.6
comp=Z,54nm,18.3s,baz=246,slow=32
LPIG La Paz 87.99 63 LR LR 13 47 51.8
comp=Z,55nm,18.0s,baz=204,slow=32
NVAR Mina Array Bea 88.70 47 P **P** **13 13 24.7 -2.4**
comp=Z,0.4nm,0.8s,baz=224,slow=8.3,SNR=5.8
NVAR LR LR 13 44 15.3
comp=Z,68nm,21.8s,baz=257,slow=30
comp=Z,0.4nm,0.8s
NVAR Mina Array Bea 88.70 47 P **P** **13 13 26.9 -0.2**
KVN Kaiserville 89.15 47 P **P** **13 13 28.9 -0.3**
KVN IAmb IAmb 13 13 29.3
comp=Z,9.2nm,1.6s
BBB Bella Bella 90.66 32 LR LR 13 47 26.4
comp=Z,64nm,19.6s,baz=234,slow=31
YAK Yakutsk 91.27 341 LR LR 13 52 13.9
comp=Z,29nm,18.5s,baz=92,slow=34
ELK Elko 91.90 46 LR LR 13 46 44.7
comp=Z,83nm,21.2s,baz=242,slow=30
SONM Songino Array 92.05 322 LR LR 13 54 42.9
comp=Z,14nm,19.8s,baz=66,slow=35
ILAR Eielson Array 92.66 16 P **P** **13 13 40.8 -3.8**
comp=Z,0.7nm,0.9s,baz=222,slow=6.0,SNR=4.4
ILAR LR LR 13 49 23.9
comp=Z,77nm,20.0s,baz=224,slow=32
comp=Z,0.7nm,0.9s
PLCA Paso Flores 93.67 137 P **P** **13 13 50.5 +0.3**
comp=Z,4.0nm,0.9s,baz=266,slow=2.3,SNR=5.1
comp=Z,4.0nm,0.9s
DLBC Dease Lake 93.69 26 LR LR 13 52 02.8
comp=Z,55nm,18.1s,baz=284,slow=33
NEW Newport 94.38 39 LR LR 13 51 21.5
comp=Z,41nm,18.2s,baz=247,slow=32
PALK Palkeke 94.71 276 LR LR 13 56 04.8
comp=Z,52nm,21.9s,baz=237,slow=35
TXAR Lajitas Array 95.56 61 P **P** **13 13 57.1 -1.8**
comp=Z,0.9nm,1.2s,baz=224,slow=3.8,SNR=2.6
TXAR LR LR 13 50 22.3
comp=Z,54nm,18.1s,baz=232,slow=31
comp=Z,0.9nm,1.2s
ANMO Albuquerque 95.60 55 LR LR 13 50 28.3
comp=Z,46nm,18.6s,baz=242,slow=31
PDAR Pinedale Array 96.60 46 LR LR 13 50 27.1
comp=Z,49nm,19.3s,baz=265,slow=31
INK Inuvik 98.87 18 LR LR 13 53 00.1
comp=Z,62nm,20.5s,baz=216,slow=32
CRVS Cervenica-Dubn 145.47 326 *e*PKP **PKPdf** **13 20 10.7 -0.5**
GERES GERESS Array B 149.17 333 PKPbc **PKPdf** **13 20 18.9 +1.4**
comp=Z,0.2nm,0.3s,baz=318,slow=1.3,SNR=3.4
TORD Torodi Ar. Bea 167.22 223 PKPab **PKPab** **13 21 44.0 -0.6**
comp=Z,1.9nm,0.9s,baz=123,slow=3.3,SNR=8.2

*NEIC **12** 13:18:02.0±2.8,22.°9S±0.°1×172.°77E±0.°08,h10km±1km, mb4.4/9, Error ellipse: s-maj=26.5km s-min=3.5km az=333.0*
*IDC **12** 13:18:01.1±1.2,22.°86S×172.°65E,h0km,mb3.8/5, mbtmp3.8/7, ML5.0/1, MS3.3/4, Error ellipse: s-maj=32.5km s-min=26.2km az=146.0*
ISC 12 13:18:01.7±0.7, 22.°9S±0.°1×172.°88E±0.°08, h10km, n41, σ1°48/31, mb4.2/10, MS3.3/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
MARNC	**Mare, Loyalty**	**4.71**	**287**		Pn	**Pn**	**13 19 10.3**		**-2.6**
PINNC	**Pines Island,**	**5.02**	**272**		Pn	**Pn**	**13 19 18.0**		**+0.9**
OUENC	**Ouen Island, N**	**5.60**	**274**		Pn	**Pn**	**13 19 23.7**		**-1.3**
ONTNC	**Ouen Toro**	**5.97**	**275**		Pn	**Pn**	**13 19 29.6**		**-0.5**
DZM	**Mont Dzumac**	**6.01**	**277**		Pn	**Pn**	**13 19 30.3**		**-0.5**
	3.5nm,0.3s,baz=134,slow=16,SNR=15								
DZM					Sn	**Sn**	**13 20 41.4**		**+1.7**
	0.5nm,0.3s,baz=223,slow=24,SNR=1.8								
DZM	**Mont Dzumac**	**6.01**	**277**	*e*Pn		**Pn**	**13 19 31.3**		**+0.5**
	45nm,0.8s								
DZM				*e*Sn		**Sn**	**13 20 43.5**		**+3.8**
	65nm,0.8s								
DZM				*e*LR		LR	13 21 01.5		
	comp=Z,392nm,25.3s								
MSVF	**Nonsavu**	**7.08**	**44**	Pn		**Pn**	**13 19 46.8**		**+1.3**
	0.9nm,0.3s,baz=200,slow=5.5,SNR=5.6								
	12nm,0.8s								
MSVF	**Nonsavu**	**7.08**	**44**	Pn		**Pn**	**13 19 46.2**		**+0.7**
URZ	**Urewera**	**15.71**	**168**	LR		LR	13 26 32.6		
	comp=Z,85nm,21.2s,baz=30,slow=32								
RPZ	**Rata Peaks**	**20.79**	**184**	LR		LR	13 28 46.2		
	comp=Z,75nm,21.8s,baz=5.0,slow=31								
RAR	**Rarotonga**	**25.39**	**91**	LR		LR	13 33 32.0		
	comp=Z,24nm,18.7s,baz=258,slow=36								
PPT2	**Papeete2**	**35.55**	**88**	*e*LR		LR	13 34 03.2		
	comp=Z,65nm,24.0s								
ASAR	**Alice Springs**	**35.73**	**261**	P		**P**	**13 25 00.1**		**-0.7**
	2.2nm,0.9s,baz=88,slow=9.1,SNR=18								
	2.2nm,0.9s								
WB0	**Warramunga Arr**	**35.91**	**268**	P		**P**	**13 25 01.0**		**-1.4**
WB0				IAmb		IAmb	13 25 14.2		
	comp=Z,3.7nm,1.1s								
WB2	**Warramunga Arr**	**35.92**	**267**	P		**P**	**13 25 00.4**		**-2.1**
WB2				IAmb		IAmb	13 25 14.0		
	comp=Z,9.7nm,1.4s								
WRA	**Warramunga Arr**	**35.93**	**267**	P		**P**	**13 25 00.6**		**-2.0**
	comp=Z,0.4nm,0.7s,baz=96,slow=8.5,SNR=10.0								
	comp=Z,0.4nm,0.7s								
WRA	**Warramunga Arr**	**35.93**	**267**	P		**P**	**13 25 00.1**		**-2.5**
H11S2	**WAKE ISLAND Hy**	**41.60**	**351**	T		T	14 10 03.4		
	baz=171,slow=76,SNR=25								
H11S3	**WAKE ISLAND Hy**	**41.61**	**351**	T		T	14 10 03.3		
	baz=171,slow=76,SNR=16								
H11S1	**WAKE ISLAND Hy**	**41.62**	**351**	T		T	14 10 04.2		
	baz=171,slow=76,SNR=26								
H11N1	**WAKE ISLAND Hy**	**42.78**	**352**	T		T	14 11 33.8		
	baz=173,slow=76,SNR=6.3								
H11N3	**WAKE ISLAND Hy**	**42.78**	**352**	T		T	14 11 30.5		
	baz=173,slow=76,SNR=3.4								
H11N2	**WAKE ISLAND Hy**	**42.79**	**352**	T		T	14 11 32.4		
	baz=173,slow=76,SNR=4.8								
FITZ	**Fitzroy Crossi**	**44.36**	**267**	P		**P**	**13 26 12.0**		**-0.5**
FITZ				IAmb		IAmb	13 26 20.0		
	comp=Z,4.9nm,1.1s								
TAOE	**Nuku Hiva Isla**	**47.09**	**81**	*e*LR		LR	13 39 21.8		
	comp=Z,43nm,24.1s								
BATI	**Baumata**	**48.62**	**277**	LR		LR	13 47 33.8		
	comp=Z,109nm,18.2s,baz=128,slow=37								
MORW	**Morawa**	**51.05**	**250**	P		**P**	**13 27 03.0**		**-1.4**
VNDA	**Vanda**	**54.91**	**183**	P		**P**	**13 27 34.2**		**+2.1**
	comp=Z,0.3nm,0.5s,baz=0.0,slow=7.1,SNR=1.7								
	comp=Z,0.3nm,0.5s								
VNDA	**Vanda**	**54.91**	**183**	P		**P**	**13 27 33.5**		**+1.4**
QSPA	**South Pole Qui**	**67.15**	**180**	P		**P**	**13 28 56.3**		**+0.7**
MAW	**Mawson**	**76.30**	**202**	P		**P**	**13 29 51.1**		**+0.8**
	comp=Z,1.7nm,0.7s,baz=93,slow=7.1,SNR=3.9								
	comp=Z,1.7nm,0.7s								
PETK	**Petropavlovsk-**	**76.85**	**351**	P		**P**	**13 29 54.0**		**+0.5**
	comp=Z,0.6nm,0.7s,baz=213,slow=5.0,SNR=1.6								
	comp=Z,0.6nm,0.7s								
BELA	**Belgrano 2**	**78.13**	**174**	P		**P**	**13 29 59.8**		**-0.7**
BELA				IAmb		IAmb	13 30 00.6		
	comp=Z,2.7nm,0.7s								
TROLL	**Troll, Antarti**	**85.09**	**183**	P		**P**	**13 30 37.0**		**-0.6**
SNAA	**Sanae**	**85.61**	**181**	P		**P**	**13 30 39.2**		**-0.9**
SNAA	**Sanae**	**85.61**	**181**	P		**P**	**13 30 39.4**		**-0.7**
SNAA				IAmb		IAmb	13 30 50.4		
	comp=Z,5.7nm,1.3s								
VNA3	**Neumayer Olymp**	**86.07**	**179**	P		**P**	**13 30 41.2**		**-1.1**
VNA2	**Neumayer--Watz**	**86.41**	**180**	P		**P**	**13 30 43.2**		**-0.8**
	baz=175,slow=4.0								
VNA1	**Neumayer--Stat**	**86.68**	**180**	P		**P**	**13 30 44.4**		**-0.8**
GERES	**GERESS Array B**	**149.32**	**333**	PKPbc		**PKiKP**	**13 37 52.1**		**+0.1**
	comp=Z,0.2nm,0.5s,baz=46,slow=2.8,SNR=2.1								
TORD	**Torodi Ar. Bea**	**167.17**	**222**	PKPab		**PKPab**	**13 39 12.2**		**-0.7**
	comp=Z,0.6nm,0.9s,baz=122,slow=5.4,SNR=2.7								

*INET **12** 13:21:19.7±0.3, 12.°72N×87.°17W, h14km±1km, MW3.3*
*SNET **12** 13:21:22.0±0.6, 12.°84N×87.°15W, h20km±3km, ML3.0*
ISC 12 13:21:19.7±1.2, 12.°72N±0.°08×87.°10W±0.°07, h25km±10km, n11, σ0°54/15, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
CRIN	**San Cristobal**	**0.05**	**108**	*e*P		**Pb**	**13 21 24.2**		**-0.1**
TELN	**Telica**	**0.28**	**113**	*e*P		**Pn**	**13 21 27.6**		**-0.7**
CNGN	**Cerro Negro**	**0.44**	**119**	*e*P		**Pn**	**13 21 30.3**		**-0.2**
CSGN	**Cosiguina Volc**	**0.52**	**300**	*e*P		**Pb**	**13 21 30.4**		**0.0**
MOMN	**Momotombo**	**0.62**	**119**	*e*P		**Pn**	**13 21 33.3**		**+0.3**
COPN	**Copaltepe**	**0.72**	**137**	*e*P		**Pn**	**13 21 35.5**		**+1.1**
CNCH	**Conchagua**	**0.91**	**308**	*e*P		**Pb**	**13 21 36.7**		**-0.3**
CNCH				*e*S		**Sb**	**13 21 48.8**		**0.0**
CNCH				IAML			13 21 53.2		
	comp=Z,912nm,0.4s								
LCND	**La Caada**	**0.97**	**307**	*e*P		**Pn**	**13 21 37.8**		**-0.1**
LCND				*e*S		**Sb**	**13 21 50.0**		**-0.4**
LCND				IAML			13 21 55.8		
	comp=Z,326nm,0.3s								
RCON	**San Juan de Ri**	**1.19**	**50**	*e*P		**Pn**	**13 21 41.5**		**+0.5**
TGUH	**Tegucigalpa,Un**	**1.34**	**353**	*e*P		**Pn**	**13 21 43.8**		**+0.7**
TGUH				*e*S		**Sn**	**13 21 59.9**		**-0.3**
PACA	**Pacayal**	**1.41**	**302**	*e*P		**Pb**	**13 21 45.2**		**-0.3**
PACA				*e*S		**Sb**	**13 22 03.5**		**+0.4**

NNC 12 13:34:02.8±2.4, 38.°43N×69.°66E, h0km, mb3.7, mpv3.3, 3C-5D, Error ellipse: s-maj=18.4km s-min=14.5km az=2.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
KK31	**Karatay Array**	**4.71**	**8**	⇓Pn		Pn	13 35 16.3		+1.1
	0.3nm,0.2s,baz=186,slow=9.9,SNR=14								
KK31				⇑Pg		Pb	13 35 28.2		+2.0
	4.5nm,0.7s,baz=178,slow=13,SNR=8.2								
KK31				⇓Sn		Sn	13 36 12.3		+1.8
	1.8nm,0.5s,baz=189,slow=29,SNR=3.6								
KK31				⇓Lg		Lg	13 36 31.0		
	4.3nm,0.5s,baz=189,slow=29,SNR=4.3								
CHMS	**Chumysh**	**5.98**	**39**	⇑Pn		Pn	13 35 33.5		+0.9
	2.1nm,0.5s								
CHMS				⇓Sn		Sn	13 36 43.1		+1.2
	7.3nm,0.7s								
TKM2	**Tokmak 2**	**6.36**	**43**	⇑Pn		Pn	13 35 37.1		-0.9
	2.8nm,0.4s								
TKM2				⇓Sn		Sn	13 36 51.7		+0.2
	6.8nm,0.8s								
AB31	**Akbulak array**	**12.88**	**330**	P		Pn	13 37 05.2		-1.8
	0.4nm,0.3s,baz=266,slow=36,SNR=25								
AB31				S		Sn	13 39 29.4		-1.5
	0.3nm,0.4s,baz=155,slow=23,SNR=4.3								

*JMA **12** 13:35:41.1±0.2,24.°8N±0.°9×122.°1E±0.°5, h94km±2km, MV3.5/13, TAIWAN REGION*
*NEIC **12** 13:35:41.1±1.4,24.°86N±0.°07×122.°12E±0.°05, h103km±7km, mb4.4/13, ML4.7(TAP), Error ellipse: s-maj=11.1km s-min=4.9km az=200.0*
*TAP **12** 13:35:41.1,24.°83N×122.°14E, h96km, ML4.6, C*
*IDC **12** 13:35:42.4±6.5,24.°95N×122.°30E, h121km±69km, mb3.6/8, mbtmp3.9/8, MS3.7/1, Error ellipse: s-maj=53.6km s-min=13.6km az=61.0*
ISC 12 13:35:40.5±0.6, 24.°85N±0.°03×122.°13E±0.°02, h100km±4km, n175, σ0°99/291, mb4.2/13, 46C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
EGS		**0.18**	**270**	⇑*i*P		**Pn**	**13 35 54.9**		**+0.3**
	baz=263								
EGS				*e*S		**Sn**	**13 36 04.9**		**-0.3**
	baz=263								
TWB1	**Santiao Chiao**	**0.21**	**322**	⇑*i*P		**Pn**	**13 35 55.1**		**+0.4**
	baz=315								
TWB1				*e*S		**Sn**	**13 36 05.0**		**-0.4**
	baz=315								
NTC	**Toucheng**	**0.27**	**272**	⇑*i*P		**Pn**	**13 35 55.2**		**+0.2**
	baz=269								
NTC				*e*S		**Sn**	**13 36 05.6**		**-0.2**
	baz=269								
TIPB	**Shuangxi**	**0.30**	**295**	⇑*i*P		**Pn**	**13 35 55.6**		**+0.4**
	baz=287								
SXI1	**Grass Mountain**	**0.34**	**317**	⇑*i*P		**Pn**	**13 35 55.7**		**+0.2**
	baz=307								
SXI1				S		**Sn**	**13 36 05.8**		**-0.8**
	baz=307								
TWC	**Suao**	**0.35**	**227**	⇑*i*P		**Pn**	**13 35 55.6**		**+0.2**
	baz=230								
TWC				S		**Sn**	**13 36 06.1**		**-0.3**
	baz=230								
ILA	**Ilan**	**0.35**	**257**	⇑*i*P		**Pn**	**13 35 56.0**		**+0.6**
	baz=257								
ILA				*i* S		**Sn**	**13 36 06.8**		**+0.3**
	baz=257								
NWF	**Wu-fen Shan**	**0.39**	**305**	⇑*i*P		**Pn**	**13 35 56.1**		**+0.4**
	baz=298								
NWF				S		**Sn**	**13 36 05.5**		**-1.6**
	baz=298								
WFSB	**Wu-fen Shan**	**0.39**	**305**	⇑*i*P		**Pn**	**13 35 56.2**		**+0.6**
	baz=298								
WFSB				*e*S		**Sn**	**13 36 06.9**		**0.0**
	baz=298								
NDS	**Dongshan**	**0.43**	**241**	⇑P		**Pn**	**13 35 55.5**		**-0.4**
	baz=239								
NDS				S		**Sn**	**13 36 07.2**		**-0.1**
	baz=239								
TWE	**Neicheng**	**0.44**	**254**	⇑*i*P		**Pn**	**13 35 56.3**		**+0.4**
	baz=257								
TWE				S		**Sn**	**13 36 09.2**		**+1.8**
	baz=257								
TNOU	**National Taiwa**	**0.44**	**313**	⇑*i*P		**Pn**	**13 35 56.4**		**+0.4**
	baz=306								
TNOU				*e*S		**Sn**	**13 36 07.3**		**-0.2**
	baz=306								
FUSB	**Fushanzhiwuyua**	**0.50**	**260**	⇑*i*P		**Pn**	**13 35 56.7**		**+0.3**
	baz=266								
FUSB				*i* S		**Sn**	**13 36 08.8**		**+0.5**
	baz=266								
EWUT	**Wuta**	**0.51**	**219**	⇑*i*P		**Pn**	**13 35 56.1**		**-0.3**
	baz=217								
EWUT				*i* S		**Sn**	**13 36 07.4**		**-0.9**
	baz=217								
TWA	**Mucha**	**0.51**	**285**	*e*P		**Pn**	**13 35 56.6**		**+0.2**
	baz=286								
TWA				*e*S		**Sn**	**13 36 07.4**		**-0.9**
	baz=286								
ENA	**Nanau**	**0.55**	**220**	⇑*i*P		**Pn**	**13 35 57.4**		**+0.7**
	baz=215								
ENA				*i* S		**Sn**	**13 36 09.4**		**+0.6**
	baz=215								
ENTT	**Nioudou**	**0.55**	**248**	*e*P		**Pn**	**13 35 56.4**		**-0.3**
	baz=247								
ENTT				S		**Sn**	**13 36 09.5**		**+0.6**
	baz=247								
NHDH	**Xindian Distri**	**0.56**	**282**	⇑*i*P		**Pn**	**13 35 57.2**		**+0.4**
	baz=290								
NHDH				*e*S		**Sn**	**13 36 09.9**		**+1.0**
	baz=290								
NWLT	**Wulai**	**0.57**	**263**	⇑P		**Pn**	**13 35 57.2**		**+0.3**
	baz=264								
YM01	**YM01**	**0.59**	**301**	⇑*i*P		**Pn**	**13 35 57.5**		**+0.4**
	baz=297								
YM01				*i* S		**Sn**	**13 36 09.0**		**-0.5**
	baz=297								
TATO	**Taipei**	**0.60**	**283**	Pn		**Pn**	**13 35 57.3**		**+0.3**
TATO	**Taip

baz=251
NDT S Sn 13 36 09.4 -0.3
baz=251
LATG Datong 0.63 241 ⇑P Pn 13 35 58.5 +1.0
baz=239
LATG S Sn 13 36 11.3 +1.1
baz=239
EHP Heping Village 0.64 214 *e*P Pn 13 35 57.9 +0.4
baz=204
EHP *e*S Sn 13 36 10.9 +0.7
baz=204
BACT New Taipei Cit 0.64 284 *e*P Pn 13 35 57.7 +0.3
baz=289
TWY Chenhua 0.64 312 ⇑*i*P Pn 13 35 58.1 +0.6
baz=306
TWY S Sn 13 36 10.4 +0.3
baz=306
ANP Anpu 0.65 302 *e*P Pn 13 35 57.8 +0.2
baz=296
ANP *e*S Sn 13 36 10.1 -0.3
baz=296
NTST Danshui 0.69 297 P Pn 13 35 58.4 +0.5
baz=298
NTST S Sn 13 36 11.0 +0.1
baz=298
TWS1 Kuangyinshan 0.69 292 ⇑*i*P Pn 13 35 58.4 +0.5
baz=292
TWS1 S Sn 13 36 10.9 0.0
baz=292
YHNB Yeheng 0.71 256 Pn Pn 13 35 58.8 +0.7
YHNB Yeheng 0.71 256 ⇑*i*P Pn 13 35 58.6 +0.5
baz=256
YHNB *i* S Sn 13 36 11.6 +0.3
baz=256
NSK Sanguang 0.72 257 ⇑*i*P Pn 13 35 57.7 -0.5
baz=257
NSK *i* S Sn 13 36 10.7 -0.8
baz=257
PCYT Pengchaiyu 0.78 356 ⇑*i*P Pn 13 35 59.6 +0.8
baz=353
PCYT S Sn 13 36 12.8 +0.4
baz=353
NNSB Datong 0.80 239 ⇑*i*P Pn 13 35 59.9 +0.9
baz=246
NNSB *i* S Sn 13 36 12.9 +0.1
baz=246
NNS Nan Shan 0.80 240 ⇑*i*P Pn 13 35 59.0 0.0
baz=246
NNS *i* S Sn 13 36 12.6 -0.4
baz=246
ETL Fush Village 0.82 214 P Pn 13 35 59.4 +0.2
baz=206
ETL *e*S Sn 13 36 13.2 0.0
baz=206
NACB Ninganchiao 0.83 216 Pn Pn 13 35 59.3 +0.1
NACB Ninganchiao 0.83 216 ⇑*i*P Pn 13 35 59.2 +0.1
baz=208
NACB S Sn 13 36 13.0 -0.1
baz=208
JYNG Yonagunijimaku 0.84 118 *i* P Pn 13 35 59.7 +0.4
JYNG S Sn 13 36 13.4 +0.1
NCU National Centr 0.86 278 P Pn 13 36 00.5 +0.9
baz=285
NCU S Sn 13 36 14.8 +1.0
baz=285
NCUH Zhongli 0.87 278 *e*P Pn 13 36 00.4 +0.8
baz=285
NCUH *e*S Sn 13 36 14.8 +0.9
baz=285
ETLH Xiulin Townshi 0.87 223 ⇑*i*P Pn 13 35 59.9 +0.2
baz=230
ETLH S Sn 13 36 13.4 -0.6
baz=230
YOJ Yonaguni jima 0.89 115 Pn Pn 13 36 00.2 +0.4
YOJ Yonaguni jima 0.89 115 *e*P Pn 13 35 59.9 +0.1
baz=121
YOJ S Sn 13 36 14.1 -0.2
baz=121
YOJ Yonaguni jima 0.89 115 *i* P Pn 13 36 00.2 +0.4
YOJ S Sn 13 36 14.2 0.0
TWD Chiawan 0.90 213 ⇑*i*P Pn 13 36 00.0 +0.1
baz=222
TWD *i* S Sn 13 36 14.0 -0.5
baz=222
NFF Wufeng Townshi 0.94 257 ⇑P Pn 13 36 00.0 -0.4
baz=257
NFF S Sn 13 36 14.2 -1.2
baz=257
HWA Hwalien 0.99 209 ⇑P Pn 13 36 01.4 +0.6
baz=200
HWA S Sn 13 36 16.8 +0.8
baz=200
FUSS Fushou 1.00 234 P Pn 13 36 02.3 +1.0
baz=226
FUSS S Sn 13 36 17.2 +0.4
baz=226
LIOB Emei 1.03 259 ⇑*i*P Pn 13 36 02.1 +0.8
baz=259
LIOB *i* S Sn 13 36 17.3 +0.3
baz=259
SBCB Hsinchu 1.04 267 P Pn 13 36 02.3 +1.0
baz=259
SBCB S Sn 13 36 17.9 +0.8
baz=259
NSTT Nanjuang 1.05 258 ⇑*i*P Pn 13 36 02.1 +0.7
baz=259
NSTT *i* S Sn 13 36 17.5 +0.2
baz=259
TWT Tachien 1.05 236 ⇑*i*P Pn 13 36 03.1 +1.4
baz=229
TWT *i* S Sn 13 36 18.6 +1.0
baz=229
WHF Hehuan Shan 1.05 229 ⇑*i*P Pn 13 36 02.6 +0.6
baz=222
WHF S Sn 13 36 18.6 +0.5
baz=222
HSN Hsinchu 1.05 268 P Pn 13 36 02.0 +0.5
baz=260
HSN S Sn 13 36 17.6 +0.2
baz=260
TDCB Techi 1.06 237 ⇑*i*P Pn 13 36 03.1 +1.3
baz=229
TDCB S Sn 13 36 18.3 +0.5
baz=229
CHGB Renai 1.17 228 ⇑*i*P Pn 13 36 04.1 +1.0
baz=227
CHGB S Sn 13 36 20.1 0.0
baz=227
ESL Shilin 1.21 212 ⇑*i*P Pn 13 36 02.8 -0.5
baz=216
ESL S Sn 13 36 19.4 -1.1
baz=216
WHP Taichung City 1.22 243 ⇑P Pn 13 36 04.8 +1.3
baz=251
WHP S Sn 13 36 21.6 +0.8
baz=251
OWD Renai 1.24 225 P Pn 13 36 04.6 +0.7
baz=217
OWD S Sn 13 36 21.1 -0.3
baz=217
WUSB Renai 1.25 228 ⇑*i*P Pn 13 36 05.0 +1.1
baz=226
WUSB S Sn 13 36 21.7 +0.1
baz=226
NMLH Miaoli 1.25 256 *e*P Pn 13 36 04.6 +0.8
baz=256
NMLH *e*S Sn 13 36 21.9 +0.4
baz=256
NSY Sanyi 1.32 251 ⇓*i*P Pn 13 36 05.8 +1.2
baz=251
NSY *i* S Sn 13 36 23.7 +0.9
baz=251
TWQ1 Liyutan 1.33 248 ⇑*i*P Pn 13 36 05.5 +0.8
baz=248
TWQ1 *i* S Sn 13 36 23.7 +0.6
baz=248
EGFH Guangfu 1.33 209 *e*P Pn 13 36 04.3 -0.5
baz=213
EGFH *e*S Sn 13 36 22.3 -0.8
baz=213
WCS Beigang Elemen 1.36 235 *e*P Pn 13 36 05.4 +0.4
baz=244
WCS *e*S Sn 13 36 23.5 -0.2
baz=244
VWDT VWDT 1.41 220 ⇑P Pn 13 36 06.7 +1.0
baz=212
VWDT S Sn 13 36 25.0 +0.2
baz=212
WDJ Dajia District 1.44 250 *e*P Pn 13 36 07.2 +1.2
baz=243
WDJ S Sn 13 36 26.3 +0.8
baz=243
SMLT Sun Moon Lake 1.48 230 ⇑P Pn 13 36 07.8 +1.2
baz=236
SMLT S Sn 13 36 27.8 +1.5
baz=236
HGSD Ruisui 1.49 206 ⇑P Pn 13 36 06.8 +0.1
baz=210
HGSD S Sn 13 36 26.4 -0.2
baz=210
TCU Taichung 1.50 243 *e*P Pn 13 36 07.7 +1.0
baz=250
TCU *e*S Sn 13 36 26.9 +0.3
baz=250
SSLB Suanglung 1.50 226 Pn Pn 13 36 08.2 +1.3
SSLB Suanglung 1.50 226 *e*P Pn 13 36 08.2 +1.3
baz=228
SSLB *e*S Sn 13 36 28.1 +1.3
baz=228
EHY Hungye 1.52 209 *e*P Pn 13 36 06.2 -0.9
baz=206
EHY *e*S Sn 13 36 26.1 -1.2
baz=206
IRIF Iriomote-Funau 1.54 109 *i* P Pn 13 36 07.5 +0.2
IRIF *e*S Sn 13 36 27.8 +0.1
WCHH Zhanghua 1.62 242 *e*P Pn 13 36 08.9 +0.7
baz=250
WCHH *e*S Sn 13 36 29.8 +0.4
baz=250
WHYT Xinyi Township 1.63 226 *e*P Pn 13 36 10.7 +2.2
baz=233
WHYT *e*S Sn 13 36 30.8 +1.0
baz=233
WNT Mingjian 1.63 234 *e*P Pn 13 36 09.5 +1.0
baz=243
WNT *e*S Sn 13 36 30.8 +1.2
baz=243
YULB Yu-li 1.63 208 Pn Pn 13 36 07.8 -0.7
YULB Yu-li 1.63 208 *e*P Pn 13 36 07.6 -0.9
baz=205
YULB *e*S Sn 13 36 28.0 -1.7
baz=205
WJS Zhushan 1.64 232 *e*P Pn 13 36 09.6 +1.1
baz=241
WJS *e*S Sn 13 36 30.9 +1.2
baz=241
EYUL Yuli 1.67 207 *e*P Pn 13 36 09.3 +0.4
baz=209
EYUL *e*S Sn 13 36 30.7 +0.3
baz=209
HATJ Hateruma jima 1.72 117 P Pn 13 36 10.0 +0.5
HATJ *e*S Sn 13 36 30.6 -0.9
YUS Yu-Shan 1.73 219 ⇑*i*P Pn 13 36 11.0 +0.9
baz=207
YUS S Sn 13 36 33.9 +1.4
baz=207
ALS Alishan 1.80 223 P Pn 13 36 12.3 +1.5
baz=232
ALS S Sn 13 36 35.6 +1.8
baz=232
FULB Fuli 1.81 205 P Pn 13 36 11.0 +0.3
baz=209
FULB S Sn 13 36 33.8 +0.2
baz=209
CHN5 Tsauling 1.82 227 *e*P Pn 13 36 11.4 +0.5
baz=225
CHN5 *e*S Sn 13 36 34.1 +0.1
baz=225
JKRS Kuro-shima 1.82 109 P Pn 13 36 11.4 +0.7
JKRS *e*S Sn 13 36 34.3 +0.6
WDLH Douliu 1.85 232 *e*P Pn 13 36 12.6 +1.4
baz=242
WDLH S Sn 13 36 34.5 -0.1
baz=242
WRL Guolierlin Hig 1.85 240 *e*P Pn 13 36 10.7 -0.5
baz=246
WRL S Sn 13 36 33.5 -1.1
baz=246
JIJ Ishigaki jima 1.90 104 *i* P Pn 13 36 11.8 +0.1
JIJ *e*S Sn 13 36 35.1 -0.4
ELDTW Lidau 1.94 212 P Pn 13 36 12.2 -0.2
baz=203
ELDTW S Sn 13 36 36.5 -0.3
baz=203
WTK Tuku 1.96 234 *e*P Pn 13 36 13.5 +0.9
baz=234
WTK *e*S Sn 13 36 37.6 +0.5
baz=234
CHN2 Minshiung 2.00 229 P Pn 13 36 14.6 +1.6
baz=229
CHN2 S Sn 13 36 40.3 +2.4
baz=229
EDH Donghe 2.01 202 P Pn 13 36 13.2 -0.1
baz=206
EDH S Sn 13 36 37.0 -1.2
baz=206
CHY Chiayi 2.06 230 P Pn 13 36 15.1 +1.3
baz=229
CHY S Sn 13 36 39.8 +0.6
baz=229
TPUB Ta-pu 2.06 222 Pn Pn 13 36 15.2 +1.3
TPUB Ta-pu 2.06 222 *e*P Pn 13 36 15.0 +1.1
baz=220
TPUB *e*S Sn 13 36 40.0 +0.5
baz=220
STYH Taoyuan 2.08 217 *e*P Pn 13 36 13.8 -0.2
baz=205
STYH *e*S Sn 13 36 39.9 +0.1
baz=205
WTP Ta-pu 2.11 221 P Pn 13 36 15.8 +1.2
baz=230
WTP S Sn 13 36 41.6 +1.0
baz=230
WSF Szhu 2.12 236 P Pn 13 36 15.2 +0.6
baz=235
WSF S Sn 13 36 40.9 +0.3
baz=235
LONT Longtian 2.14 206 *e*P Pn 13 36 14.6 -0.3
baz=195
LONT *e*S Sn 13 36 39.5 -1.6
baz=195
TWK Hsinying 2.17 224 P Pn 13 36 16.4 +1.0
baz=222
TWK S Sn 13 36 43.0 +1.0
baz=222
WSL Shuilin Townsh 2.18 233 P Pn 13 36 16.5 +1.1
baz=240
WSL S Sn 13 36 42.8 +0.7
baz=240
SNST Tainan City 2.20 223 *e*P Pn 13 36 16.8 +1.0
baz=221
SNST *e*S Sn 13 36 42.7 +0.1
baz=221
CHN1 Nanshi 2.21 222 P Pn 13 36 16.6 +0.8
baz=231
CHN1 S Sn 13 36 43.8 +0.9
baz=231
ICHU Yijhu 2.25 229 *e*P Pn 13 36 16.9 +0.6
baz=229
ICHU S Sn 13 36 44.9 +1.2
baz=229
SGST Jiashian 2.25 219 P Pn 13 36 16.8 +0.4
baz=228
SGST S Sn 13 36 44.1 +0.2
baz=228
CHN8 Yiju 2.30 230 *e*P Pn 13 36 18.0 +1.0
baz=229
CHN8 S Sn 13 36 45.9 +0.9
baz=229
JTJ Tarama 2.35 94 P Pn 13 36 18.8 +1.2
JTJ S Sn 13 36 47.3 +1.2
CHN3 Shinhua 2.39 223 *e*P Pn 13 36 20.3 +2.2
baz=232
CHN3 S Sn 13 36 49.6 +2.6
baz=232
SSHA Shanhua 2.39 225 *e*S Sn 13 36 49.1 +1.9
baz=223
SCLT Jiali 2.43 227 *e*P Pn 13 36 19.5 +0.8
baz=226
SCLT S Sn 13 36 49.3 +1.4
baz=226
VWUC VWUC 2.44 274 *e*P Pn 13 36 18.7 -0.1
baz=274
SHHT Tainan City 2.44 222 *e*P Pn 13 36 19.6 +0.8
baz=230
SCST Cishan 2.46 218 *e*P Pn 13 36 20.9 +1.8
baz=228
ECL Taimali 2.48 206 *e*P Pn 13 36 19.2 -0.2
baz=197
ECL *e*S Sn 13 36 47.5 -1.7
baz=197
SSD Sandimen 2.50 214 P Pn 13 36 21.1 +1.4
baz=210
SSD S Sn 13 36 51.4 +1.7
baz=210
TSMG Majia 2.53 213 *e*P Pn 13 36 21.5 +1.5
baz=226
TWM1 Shoushan 2.55 218 P Pn 13 36 22.6 +2.2
baz=226
TWM1 *e*S Sn 13 36 55.3 +4.4
baz=226
MASBT Mashibuluo 2.61 212 *e*P Pn 13 36 22.8 +1.6
baz=208
MASBT *e*S Sn 13 36 52.0 -0.3
baz=208
PNG Penghu 2.67 242 P Pn 13 36 21.6 -0.3
baz=241
PNG S Sn 13 36 52.4 -1.4
baz=241
XPSS Dashiqiu 2.71 320 *e*P Pn 13 36 22.1 -0.3
baz=319
EAST Anshuo 2.72 206 *e*P Pn 13 36 22.8 +0.2
baz=198
LYJJ Jianjiangzhen 2.73 309 *e*P Pn 13 36 22.5 -0.1
baz=307
TAWH Dawu Township 2.74 205 *e*P Pn 13 36 23.0 +0.2
baz=199
SSPT Xinbi 2.75 212 *e*P Pn 13 36 24.8 +1.9
baz=210
WDGT Dungji 2.75 236 P Pn 13 36 23.1 +0.1
baz=235
WDGT S Sn 13 36 54.0 -1.6
baz=235
JIRB Irabujima 2.77 90 P Pn 13 36 24.5 +1.3
JIRB S Sn 13 36 57.7 +1.8
SCZT Fangliau 2.82 210 *e*P Pn 13 36 25.3 +1.3
baz=219
LAY Lan-yu 2.84 191 *e*P Pn 13 36 23.4 -0.8
baz=184
LAY *e*S Sn 13 36 55.1 -2.7
baz=184
LYUB Lan-yu 2.87 190 *e*P Pn 13 36 23.2 -1.4
baz=185
LYUB *e*S Sn 13 36 54.0 -4.6
baz=185
SLIU Shizi 2.89 205 *e*P Pn 13 36 26.0 +1.2
baz=214
JMJ2 Miyako jima3 2.91 91 P Pn 13 36 26.5 +1.5
VCHM Qimei 2.96 237 *e*P Pn 13 36 25.7 0.0
baz=236
VCHM *e*S Sn 13 36 59.0 -1.5
baz=236
JOGS Gusukube 2.98 91 P Pn 13 36 27.9 +1.9
JOGS *e*S Sn 13 37 02.6 +1.5
MHZQ Yeshan 3.07 295 *e*P Pn 13 36 27.0 -0.1
baz=293
QZH Quanzhou 3.21 272 ⇓*i*Pn Pn 13 36 29.2 +0.1
QZH Sn Sn 13 37 04.0 -2.6
QZH smax smax
comp=N,180nm,0.5s
QZH smax smax
comp=E,100nm,0.4s
KNM Kinmen 3.39 264 *e*P Pn 13 36 33.0 +1.5
baz=264
KNMB Chin-men Tao 3.42 264 Pn Pn 13 36 31.4 -0.5
KNMB Chin-men Tao 3.42 264 *e*P Pn 13 36 31.7 -0.3
baz=265
AXDP Jialang 3.78 272 *e*P Pn 13 36 36.9 +0.2
baz=272
ZPLA Ao Xicun 4.09 258 *e*P Pn 13 36 41.1 +0.1
baz=259
JOW Kunigami 5.88 69 P Pn 13 37 05.1 -0.1
baz=270,slow=20
JOW S Sn 13 38 09.5 -1.7
baz=116,slow=18
JOW Kunigami 5.88 69 Pn Pn 13 37 04.5 -0.6
KSRS Korea Array 13.51 20 P P 13 38 51.0 -2.5
comp=E,8.8nm,0.7s,baz=202,slow=12,SNR=46
KS19 Wonju Array Si 13.53 20 P P 13 38 55.6 +1.7
SONM Songino Array 26.11 335 P P 13 41 05.7 +0.7
comp=E,2.9nm,0.9s,baz=148,slow=9.8,SNR=7.5
comp=E,2.9nm,0.9s
WMQ Urumqi 33.83 313 *e*P P 13 42 18.3 +5.1
MK31 Makanchi Array 38.47 315 P P 13 42 52.8 +0.1
MKAR Makanchi Array 38.47 315 P P 13 42 53.0 +0.3
comp=E,0.7nm,0.6s,baz=102,slow=7.3,SNR=7.4
comp=E,0.7nm,0.6s
MKAR Makanchi Array 38.47 315 P P 13 42 52.5 -0.2
MTN Manton Dam 38.48 166 P P 13 42 52.0 -0.9
ZALV Zalesovo Beam 40.17 326 P P 13 43 05.2 -1.4
comp=E,0.7nm,0.4s,baz=102,slow=12,SNR=4.2
comp=E,0.7nm,0.4s
KNRA Kununurra 40.79 170 P P 13 43 11.4 -0.7
KURBB Kurchatov Arra 42.17 319 P P 13 43 22.7 -0.4
comp=E,0.2nm,0.3s,baz=110,slow=9.8,SNR=3.8
comp=E,0.2nm,0.3s
FITZ Fitzroy Crossi 42.82 175 P P 13 43 27.5 -1.1
FITZ IAmb IAmb 13 43 30.2
comp=Z,6.7nm,1.4s
COEN Coen 43.69 150 P P 13 43 36.4 +0.7
COEN IAmb IAmb 13 44 04.9
comp=Z,19nm,1.3s
WB0 Warramunga Arr 45.92 164 P P 13 43 52.8 -0.5
WB0 IAmb IAmb 13 43 54.1
comp=Z,10nm,1.2s
WRA Warramunga Arr 46.08 164 P P 13 43 54.2 -0.4
comp=Z,3.0nm,0.6s,baz=347,slow=8.7,SNR=65
comp=Z,3.0nm,0.6s
WRA Warramunga Arr 46.08 164 P P 13 43 54.0 -0.5
WB2 Warramunga Arr 46.08 164 P P 13 43 54.5 -0.1
WB2 IAmb IAmb 13 43 55.4
comp=Z,4.1nm,0.8s
WR0 Warramunga Arr 46.14 164 P P 13 43 55.2 +0.1
WR0 IAmb IAmb 13 43 55.9
comp=Z,5.6nm,0.8s
AS31 Alice Springs 49.56 166 P P 13 44 21.5 +0.1
ASAR Alice Springs 49.56 166 P P 13 44 21.9 +0.4
comp=Z,1.1nm,0.5s,baz=349,slow=6.6,SNR=40
ASAR LR LR 14 06 14.9
comp=Z,94nm,21.4s,baz=106,slow=37
comp=Z,1.1nm,0.5s
ASAR Alice Springs 49.56 166 P P 13 44 22.0 +0.6
ABKAR Akbulak array 53.60 314 P P 13 44 51.0 -0.3
BBOO Buckleboo 58.85 166 P P 13 45 28.5 -0.2
STKA Stephens Creek 59.39 161 P P 13 45 33.0 +0.5
comp=Z,1.4nm,0.7s,baz=21,slow=8.6,SNR=1.8
comp=Z,1.4nm,0.7s
STKA Stephens Creek 59.39 161 P P 13 45 32.9 +0.5
STKA IAmb IAmb 13 46 02.7
comp=Z,2.6nm,1.4s
BMAR Burnt Mountain 68.57 24 P P 13 46 32.8 +0.6
ARCES ARCESS Array B 69.25 338 P P 13 46 35.7 -0.6
comp=Z,1.6nm,0.9s,baz=60,slow=9.5,SNR=1.9
comp=Z,1.6nm,0.9s

NNC 12 13:38:05.7±2.8, 38.53N×69.51E, h0[km], mb3.6, mpv3.3, 3C-2D, Error ellipse: s-maj=32.7km s-min=21.4km az=90.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.64**	**9**	⇑Pn	Pn	Pn	13 39 17.3	+0.2
	0.4nm,0.3s,baz=197,slow=16,SNR=8.4							
KK31				⇑Pg		Pb	13 39 28.6	+0.6
	2.0nm,0.4s,baz=158,slow=12,SNR=5.1							
KK31				⇑Sn		Sn	13 40 13.3	+1.7
	1.6nm,0.4s,baz=188,slow=30,SNR=4.1							
KK31				⇓Lg		Lg	13 40 31.5	
	8.4nm,0.6s,baz=191,slow=28,SNR=4.0							
TKM2	**Tokmak 2**	**6.38**	**45**	⇓Pn		Pn	13 39 41.2	0.0
	3.8nm,0.4s							
AB31	**Akbulak array**	**12.74**	**330**	P		Pn	13 41 08.4	+0.4
	0.4nm,0.5s,baz=165,slow=11,SNR=8.1							

*NORS **12** 13:41:43.0±0.0, 41.41N×44.00E, h5[km], MPVA3.9*
*TIF **12** 13:41:43.6, 41.38N×44.13E, h16[km]*
*ISK **12** 13:41:43.8, 41.42N×44.08E, h10[km], ML2.7/6*
*MOS **12** 13:41:43.5±0.0, 41.40N×44.00E, h10[km], MPVA3.7*
*DDA **12** 13:41:46.3±0.0, 41.30N×43.87E, h7[km]±3[km], ML2.6*
ISC 12 13:41:43.8±0.8, **41.38N**±0.02×**44.10E**±0.02, **h16**[km]±6[km],

n41,σ1§10/77, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.08**	**130**	P	**Pg**	**13 41 47.2**	**0.0**
DMNI				S	**Sg**	**13 41 49.2**	**-0.2**
TRLG	**Trialeti**	**0.16**	**359**	P	**Pb**	**13 41 48.8**	**+0.3**
TRLG				S	**Sb**	**13 41 51.1**	**-0.5**
KZRT	**Kazreti**	**0.22**	**89**	P	**Pb**	**13 41 49.4**	**-0.1**
KZRT				S	**Sb**	**13 41 52.9**	**-0.5**
BRNG	**Burnasheti**	**0.32**	**319**	P	**Pb**	**13 41 51.0**	**-0.3**
BRNG				S	**Sg**	**13 41 55.9**	**+0.6**
BGD	**Bogdanovka**	**0.40**	**253**	P	**Pg**	**13 41 52.3**	**+0.3**
BGD				S	**Sg**	**13 41 57.9**	**+0.3**
AKH	**Akhalkalaki**	**0.46**	**274**	P	**Pg**	**13 41 53.2**	**+0.1**
AKH				S	**Sg**	**13 41 59.5**	**+0.1**
AKH	**Akhalkalaki**	**0.46**	**274**	PG	**Pg**	**13 41 52.9**	**-0.2**
AKH				SG	**Sg**	**13 41 59.5**	**+0.1**
BKRG	**Bakuriani**	**0.58**	**311**	P	**Pg**	**13 41 55.4**	**+0.1**
BKRG				S	**Sg**	**13 42 03.3**	**+0.3**
BTNK	**Botanikuri**	**0.60**	**60**	P	Pg	13 41 49.5	-6.2
BTNK				S	**Sg**	**13 41 58.1**	**-5.6**
SEAG	**Tbilisi Sea**	**0.65**	**54**	P	**Pb**	**13 41 56.9**	**+0.1**
SEAG				S	**Sn**	**13 42 06.4**	**-2.0**
EAK	**Akyaka**	**0.79**	**209**	P	**Pg**	**13 41 58.1**	**-1.2**
EAK				*i* AML	AML	13 42 09.0	
	comp=E,256nm,0.4s						
EAK				S	**Sg**	**13 42 09.4**	**-0.3**
DGRG	**David-gareji**	**0.96**	**85**	P	**Pn**	**13 42 02.1**	**-0.6**
DGRG				S	**Sn**	**13 42 16.8**	**+0.8**
ABS	**Abastumani**	**1.04**	**291**	P	**Pb**	**13 42 03.2**	**-0.3**
ABS				S	**Sb**	**13 42 17.4**	**+0.5**
EPOS	**Posof**	**1.04**	**277**	P	**Pb**	**13 42 02.8**	**-0.7**
EPOS				S	**Sb**	**13 42 15.2**	**-1.8**
DIGO	**Kars**	**1.11**	**210**	P	**Pb**	**13 42 03.7**	**-1.2**
DIGO				S	**Sb**	**13 42 19.0**	**-0.2**
TKB	**Tkibuli**	**1.27**	**320**	P	**Pb**	**13 42 07.8**	**+0.3**
TKB				S	**Sg**	**13 42 24.9**	**-0.2**
ONI	**Oni**	**1.30**	**338**	P	**Pb**	**13 42 07.9**	**-0.1**
ONI				S	**Sg**	**13 42 25.5**	**-0.4**
ONI	**Oni**	**1.30**	**338**	PN	**Pb**	**13 42 07.9**	**-0.1**
ONI				SN	**Sg**	**13 42 25.4**	**-0.5**
PNSH	**Pansheti**	**1.31**	**17**	P	**Pg**	**13 42 08.6**	**-0.5**
PNSH				S	**Sg**	**13 42 26.4**	**+0.2**
GNI	**Garni**	**1.32**	**158**	PN	**Pg**	**13 42 09.4**	**+0.1**
GNI				SN	**Sg**	**13 42 28.3**	**+1.7**
TASB	**TASBURUN-IGDIR**	**1.40**	**176**	PN	**Pg**	**13 42 10.2**	**-0.6**
ZEI	**Tsey**	**1.41**	**354**	*e*Pg	**Pg**	**13 42 10.7**	**-0.4**
ZEI				*e*Sg	**Sg**	**13 42 30.9**	**+1.4**
DDFL	**Dedoflistskaro**	**1.52**	**87**	P	**Pg**	**13 42 14.9**	**+1.9**
DDFL				S	**Sg**	**13 42 35.5**	**+2.7**
SENK	**Senkaya-Erzuru**	**1.56**	**239**	PN	**Pb**	**13 42 12.2**	**-0.3**
DIGR	**Digorskoe uzhe**	**1.56**	**346**	*e*Pg	**Pg**	**13 42 13.4**	**-0.6**
DIGR				*e*Sg	**Sg**	**13 42 34.9**	**+0.5**
LGD	**Lagodekhi**	**1.67**	**74**	P	**Pg**	**13 42 14.9**	**-1.0**
LGD				S	**Sg**	**13 42 37.8**	**+0.3**
DAGI	**Agillar**	**1.68**	**260**	P	**Pg**	**13 42 15.5**	**-0.6**
DAGI				S	**Sg**	**13 42 37.2**	**-0.8**
KORR	**Kora**	**1.70**	**359**	*e*Pg	**Pg**	**13 42 17.0**	**+0.5**
KORR				*e*Sg	**Sg**	**13 42 40.2**	**+1.6**
KMGR	**Komgaron**	**1.77**	**18**	*e*Pg	**Pg**	**13 42 16.9**	**-0.9**
KMGR				*e*Sg	**Sg**	**13 42 41.4**	**+0.7**
ARNR	**Ardon**	**1.80**	**4**	*e*Pg	**Pg**	**13 42 17.9**	**-0.5**
ARNR				*e*Sg	**Sg**	**13 42 43.2**	**+1.4**
DBOC	**Borcka**	**1.83**	**270**	P	**Pb**	**13 42 17.6**	**+0.6**
DBOC				S	**Sb**	**13 42 40.7**	**+0.9**
DDEM	**Demirkent**	**1.84**	**255**	P	**Pb**	**13 42 17.8**	**+0.5**
DDEM				S	**Sb**	**13 42 40.8**	**+0.7**
DDEM				*i* AML	AML	13 42 42.0	
	comp=N,131nm,0.3s						
DDEM				*i* AML	AML	13 42 44.0	
	comp=E,125nm,0.4s						
DBAD	**Bademkaya**	**1.85**	**259**	P	**Pb**	**13 42 18.3**	**+0.9**
DBAD				S	**Sg**	**13 42 42.9**	**-0.7**
DBAD				*i* AML	AML	13 42 43.0	
	comp=N,75nm,0.7s						
BCA	**Borcka**	**1.87**	**273**	PN	**Pn**	**13 42 16.4**	**+1.2**
EATA	**Eleskirt**	**1.95**	**219**	P	**Pb**	**13 42 19.9**	**+0.6**
STDR	**Stavd-Durt**	**1.98**	**359**	*i* Pg	**Pg**	**13 42 21.2**	**-0.8**
STDR				*e*Sg	**Sg**	**13 42 43.8**	**+0.7**
NEY	**Neytrino**	**2.13**	**332**	*e*Pg	**Pb**	**13 42 21.7**	**-0.4**
NEY				*e*Sg	**Sb**	**13 42 49.8**	**+1.4**
DVE	**Vedeno**	**2.18**	**43**	*e*Pn	**Pb**	**13 42 23.6**	**+0.7**
DVE				*e*Sn	**Sg**	**13 42 54.4**	**+0.6**
GROC	**Groznyy**	**2.21**	**34**	*e*Pg	**Pb**	**13 42 24.2**	**+0.8**
GROC				*e*Sg	**Sg**	**13 42 54.3**	**-0.6**
KBZ	**Khabaz**	**2.51**	**340**	*e*Pn	**Pb**	**13 42 26.8**	**-1.7**
KBZ				*e*Sn	**Sb**	**13 42 58.8**	**-0.3**
AKT	**Akhty**	**2.73**	**87**	*e*Pn	**Pb**	**13 42 31.1**	**-1.2**
AKT				*e*Sn	**Sb**	**13 43 07.4**	**+1.8**

*SNET **12** 13:49:52.4±1.8, 14°.04N×91°.86W, h20km, ML4.0*
*UCR **12** 13:49:52.1±1.3, 14°.04N×91°.89W, h20km, ML3.8*
*IDC **12** 13:49:54.0±8.7, 14°.56N×91°.65W, h56km±56km, mb3.5/4, mbtmp3.7/6, ML3.5/2, MS3.1/6, Error ellipse: s-maj=75.5km s-min=40.9km az=179.0*
*GCG **12** 13:49:54.3±3.4, 14°.32N×91°.91W, h25km, MD4.6*

ISC 12 13:49:52.8±1.2, 14°.2N±0°.1×91°.95W±0°.08, h65km±9km, n33, σ1§05/47, mb3.9/4, 3C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.65**	**34**	*e*P	**Pn**	**13 50 06.5**	**-0.5**
FUG	**Fuego 3**	**1.11**	**75**	*i*P	**Pn**	**13 50 12.2**	**-0.4**
PCG	**Pacaya**	**1.32**	**80**	*i*P	**Pn**	**13 50 15.4**	**0.0**
NBG	**Las Nubes**	**1.60**	**75**	*e*P	**Pn**	**13 50 20.7**	**+1.4**
SLOZ	**Alcaldia de Sa**	**2.10**	**94**	*e*P	**Pn**	**13 50 25.8**	**-0.1**
SLOZ				*e*S	**Sn**	**13 50 52.2**	**+1.3**
NUBE	**Las Nubes**	**2.12**	**97**	*e*P	**Pn**	**13 50 25.4**	**-0.8**
NUBE				*e*S	**Sn**	**13 50 49.9**	**-1.7**
NUBE				IAML		13 50 53.4	
	comp=Z,794nm,0.4s						
NUBE	**Las Nubes**	**2.12**	**97**	*e*P	**Pn**	**13 50 25.4**	**-0.8**
NUBE				*e*S	**Sn**	**13 50 49.9**	**-1.7**
NUBE				IAML		13 50 53.4	
	comp=Z,794nm,0.4s						
CEVE	**Cerro Verde**	**2.28**	**98**	*e*P	**Pn**	**13 50 28.3**	**-0.1**
CEVE				*e*S	**Sn**	**13 50 56.3**	**+0.8**
CEVE	**Cerro Verde**	**2.28**	**98**	*e*P	**Pn**	**13 50 28.3**	**-0.1**
CEVE				*e*S	**Sn**	**13 50 56.3**	**+0.8**
MRL	**Marmol**	**2.37**	**67**	*e*P	**Pn**	**13 50 30.4**	**+0.8**
JAYA	**Jayaque - finc**	**2.48**	**102**	*e*P	**Pn**	**13 50 30.2**	**-0.8**
JAYA				*e*S	**Sn**	**13 50 59.6**	**-0.7**
JAYA				IAML		13 51 00.2	
	comp=Z,2μm,0.2s						
JAYA	**Jayaque - finc**	**2.48**	**102**	*e*P	**Pn**	**13 50 30.2**	**-0.8**
JAYA				*e*S	**Sn**	**13 50 59.6**	**-0.7**
JAYA				IAML		13 51 00.2	
	comp=Z,2μm,0.2s						
CEDA	**San Andres**	**2.50**	**98**	*e*P	**Pn**	**13 50 30.4**	**-0.8**
CEDA				*e*S	**Sn**	**13 51 01.9**	**+1.2**
CEDA	**San Andres**	**2.50**	**98**	*e*P	**Pn**	**13 50 30.4**	**-0.8**
CEDA				*e*S	**Sn**	**13 51 01.9**	**+1.2**
PAVA	**Las Pavas**	**2.96**	**98**	*e*P	**Pn**	**13 50 37.4**	**-0.1**
PAVA	**Las Pavas**	**2.96**	**98**	*e*P	**Pn**	**13 50 37.4**	**-0.1**
COEG	**Centro de Oper**	**3.03**	**100**	*e*P	**Pn**	**13 50 38.6**	**+0.2**
COEG				*e*S	**Sn**	**13 51 14.7**	**+1.1**
COEG				IAML		13 51 26.6	
	comp=Z,534nm,0.6s						
COEG	**Centro de Oper**	**3.03**	**100**	*e*P	**Pn**	**13 50 38.6**	**+0.2**
COEG				*e*S	**Sn**	**13 51 14.7**	**+1.1**
COEG				IAML		13 51 26.6	
	comp=Z,534nm,0.6s						
COEB	**Comit de Eme**	**3.38**	**101**	*e*P	**Pn**	**13 50 43.3**	**0.0**
COEB				*e*S	**Sn**	**13 51 22.8**	**+0.4**
COEB				IAML		13 51 25.0	
	comp=Z,315nm,0.4s						
COEB	**Comit de Eme**	**3.38**	**101**	*e*P	**Pn**	**13 50 43.3**	**0.0**
COEB				*e*S	**Sn**	**13 51 22.8**	**+0.4**
COEB				IAML		13 51 25.0	
	comp=Z,315nm,0.4s						
LCND	**La Caada**	**4.03**	**102**	*e*P	**Pn**	**13 50 52.4**	**+0.3**
LCND				*e*S	**Sn**	**13 51 39.0**	**+0.9**
LCND	**La Caada**	**4.03**	**102**	*e*P	**Pn**	**13 50 52.4**	**+0.3**
LCND				*e*S	**Sn**	**13 51 39.0**	**+0.9**
CMIG	**Matias Romero**	**4.06**	**316**	P	**Pn**	**13 50 52.2**	**-0.2**
	comp=Z,3.3nm,0.3s,baz=135,slow=14,SNR=8.2						
CMIG				S	**Sn**	**13 51 39.0**	**+0.3**
	comp=Z,38nm,0.3s,baz=83,slow=22,SNR=2.5						
CMIG				LR	LR	13 52 33.4	
	comp=Z,66nm,20.2s,baz=161,slow=40						
	comp=Z,8.7nm,0.2s						
TXAR	**Lajitas Array**	**18.59**	**326**	P	**Pn**	**13 54 06.2**	**+0.4**
	baz=144,slow=9.9,SNR=6.0						
	comp=Z,0.9nm,1.0s						
TKL	**Tuckaleechee C**	**22.62**	**18**	P	**P**	**13 54 45.5**	**-2.9**
	comp=Z,1.9nm,0.5s,baz=191,slow=18,SNR=2.5						
TKL				LR	LR	14 04 16.4	
	comp=Z,82nm,19.8s,baz=250,slow=39						
	comp=Z,1.9nm,0.5s						
SJG	**San Juan**	**25.08**	**78**	LR	LR	14 05 11.9	
	comp=Z,35nm,19.5s,baz=189,slow=37						
NVAR	**Mina Array Bea**	**33.57**	**321**	P	**P**	**13 56 29.4**	**+2.4**
	comp=Z,1.0nm,0.7s,baz=138,slow=8.1,SNR=11						
NVAR				pP	**pP**	**13 56 44.3**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=133,slow=8.3,SNR=12						
	comp=Z,1.0nm,0.7s						
SCHQ	**Schefferville**	**45.05**	**20**	LR	LR	14 18 28.8	
	comp=Z,52nm,18.2s,baz=147,slow=38						
YKA	**Yellowknife Ar**	**50.88**	**347**	P	**P**	**13 58 45.1**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=171,slow=8.0,SNR=2.7						
	comp=Z,0.7nm,0.5s						
RES	**Resolute Bay**	**60.53**	**359**	LR	LR	14 27 09.8	
	comp=Z,21nm,18.7s,baz=18,slow=37						
ILAR	**Eielson Array**	**62.71**	**337**	P	**P**	**14 00 10.1**	**-0.6**
	comp=Z,5nm,0.8s,baz=103,slow=4.1,SNR=4.5						
	comp=Z,0.5nm,0.8s						
NOA	**NORSAR Array B**	**83.97**	**28**	LR	LR	14 38 12.6	
	comp=Z,10.0nm,19.9s,baz=15,slow=35						
CMAR	**Chiang Mai Arr**	**145.85**	**341**	PKPbc	**PKPdf**	**14 09 26.5**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=333,slow=3.4,SNR=8.0						
CMAR				pPKPbc	**pPKPdf**	**14 09 42.6**	**-1.3**
	comp=Z,2.7nm,0.6s,baz=339,slow=3.6,SNR=11						

IDC 12 13:54:47.2±2.0, 1°.22N×128°.44E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=145.9km s-min=23.9km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.81**	**165**	P	P	13 59 40.4	-0.7
	0.6nm,0.8s,baz=345,slow=11,SNR=7.5						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**25.30**	**168**	P	P	14 00 16.1	+0.4
	0.5nm,0.6s,baz=349,slow=13,SNR=24						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**60.58**	**325**	P	P	14 04 59.6	-0.1
	0.6nm,0.4s,baz=116,slow=8.2,SNR=14						
	0.6nm,0.4s						

*IDC **12** 14:06:58.6±2.3, 62°.4S±0°.3×158°.3W±0°.4, h10km, n43, σ0§37/7, mb4.1/5, MS3.7/23, Pacific-Antarctic Ridge*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**19.73**	**204**	P	**Pn**	**14 11 29.2**	**-0.1**
	0.3nm,0.3s,baz=72,slow=16,SNR=31						
VNDA				LR	LR	14 17 16.8	
	comp=Z,152nm,18.3s,baz=64,slow=32						
	1.2nm,0.5s						
QSPA	**South Pole Qui**	**27.75**	**180**	P	**P**	**14 12 46.8**	**-0.4**
	2.8nm,1.1s,baz=48,slow=2.2,SNR=6.1						
QSPA				LR	LR	14 22 36.6	
	comp=Z,111nm,18.7s,baz=46,slow=34						
	2.8nm,1.1s						
URZ	**Urewera**	**28.45**	**317**	LR	LR	14 21 33.7	
	comp=Z,136nm,20.5s,baz=211,slow=31						
RAO	**Raoul Island**	**35.52**	**330**	LR	LR	14 27 02.7	
	comp=Z,31nm,19.1s,baz=92,slow=34						
PMSA	**Palmer Station**	**38.33**	**136**	LR	LR	14 28 04.5	
	comp=Z,123nm,18.0s,baz=232,slow=33						
TVO	**Taravao**	**44.99**	**12**	*e*T	T	15 03 35.1	
	3.2nm,0.3s						
MEH	**Mehetia**	**45.02**	**14**	*e*T	T	15 03 36.9	
	28nm,0.2s						
PAE	**Paea**	**45.07**	**12**	*e*T	T	15 03 40.0	
	1.8nm,0.3s						
PPT2	**Papeete2**	**45.15**	**12**	*e*LR	LR	14 27 13.7	
	comp=Z,242nm,27.8s						
PPT2				*e*LR	LR	14 27 14.0	
	comp=Z,198nm,28.8s						
PPT2	**Papeete2**	**45.15**	**12**	*e*T	T	15 03 40.5	
	3.8nm,0.3s						
PPT	**Papeete**	**45.17**	**12**	LR	LR	14 29 07.9	
	comp=Z,67nm,19.7s,baz=179,slow=29						
SNAA	**Sanae**	**45.17**	**169**	P	**P**	**14 15 15.2**	**+0.4**
	3.3nm,1.3s,baz=233,slow=4.9,SNR=4.6						
SNAA				LR	LR	14 32 59.8	
	comp=Z,76nm,19.4s,baz=219,slow=35						
	3.3nm,1.3s						
TIAR	**Tiarei**	**45.20**	**12**	*e*T	T	15 03 42.0	
	1.2nm,0.2s						
DZM	**Mont Dzumac**	**46.87**	**313**	*e*LR	LR	14 29 32.6	
	comp=Z,137nm,22.9s						
MAW	**Mawson**	**46.95**	**200**	LR	LR	14 32 37.5	
	comp=Z,67nm,20.5s,baz=132,slow=33						
RPN	**Rapa Nui**	**47.62**	**66**	LR	LR	14 30 55.0	
	comp=Z,83nm,20.3s,baz=232,slow=30						
VAH	**Vaihoa**	**47.67**	**14**	*e*T	T	15 06 55.8	
	135nm,0.2s						
PMOR	**Pomariorio Ree**	**47.88**	**14**	*e*T	T	15 07 02.8	
	3.7nm,0.3s						
STKA	**Stephens Creek**	**48.50**	**280**	P	**P**	**14 15 41.6**	**+0.3**
	1.9nm,0.8s,baz=134,slow=13,SNR=3.5						
	1.9nm,0.8s						
PLCA	**Paso Flores**	**53.91**	**110**	LR	LR	14 33 19.8	
	comp=Z,45nm,21.1s,baz=208,slow=29						
TAOE	**Nuku Hiva Isla**	**55.03**	**22**	*e*LR	LR	14 31 36.7	
	comp=Z,77nm,23.8s						
H03S2	**Juan Fernandez**	**55.81**	**99**	T	T	15 17 20.9	
	baz=211,SNR=239						
H03S1	**Juan Fernandez**	**55.81**	**99**	T	T	15 17 19.9	
	baz=211,SNR=274						
H03S3	**Juan Fernandez**	**55.83**	**99**	T	T	15 17 17.5	
	baz=211,SNR=340						
H03N3	**Juan Fernandez**	**56.13**	**98**	T	T	15 17 39.6	
	baz=208,slow=73,SNR=73						
H02N2	**Juan Fernandez**	**56.14**	**98**	T	T	15 17 42.1	
	baz=208,slow=73,SNR=94						
H03N1	**Juan Fernandez**	**56.15**	**98**	T	T	15 17 44.3	
	baz=208,slow=73,SNR=56						
H01W1	**Cape Leeuwin H**	**58.66**	**254**	T	T	15 20 48.9	
	baz=147,slow=76,SNR=19						
H01W2	**Cape Leeuwin H**	**58.66**	**254**	T	T	15 20 43.0	
	baz=147,slow=76,SNR=20						
H01W3	**Cape Leeuwin H**	**58.67**	**254**	T	T	15 20 46.4	
	baz=147,slow=76,SNR=21						
ASAR	**Alice Springs**	**59.03**	**278**	P	**P**	**14 16 58.6**	**+0.1**
	1.6nm,0.9s,baz=152,slow=6.4,SNR=11						
ASAR				LR	LR	14 39 10.7	
	comp=Z,59nm,19.7s,baz=140,slow=33						
	1.6nm,0.9s						
WRA	**Warramunga Arr**	**62.05**	**281**	P	**P**	**14 17 18.8**	**-0.3**
	1.5nm,1.0s,baz=158,slow=5.9,SNR=5.3						
	1.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**67.67**	**274**	LR	LR	14 45 32.3	
	comp=Z,26nm,18.9s,baz=116,slow=34						
LVC	**Limon Verde**	**69.95**	**100**	LR	LR	14 40 03.1	
	comp=Z,59nm,20.9s,baz=237,slow=28						
CPUP	**Villa Florida**	**71.90**	**112**	LR	LR	14 47 20.4	
	comp=Z,42nm,18.2s,baz=218,slow=34						
NNA	**Nana**	**75.50**	**88**	LR	LR	14 44 04.2	
	comp=Z,33nm,18.5s,baz=198,slow=29						
SIV	**San Ignacio**	**79.29**	**104**	LR	LR	14 47 56.6	
	comp=Z,40nm,21.6s,baz=116,slow=31						
SUR	**Sutherland**	**85.58**	**179**	LR	LR	14 53 11.0	
	comp=Z,103nm,21.4s,baz=170,slow=32						
BOSA	**Boshof**	**89.30**	**183**	LR	LR	14 57 31.6	
	comp=Z,48nm,18.2s,baz=164,slow=34						
LBTB	**Lobatse**	**92.87**	**184**	LR	LR	14 59 23.0	
	comp=Z,38nm,18.1s,baz=184,slow=34						
SDV	**Santo Domingo**	**96.72**	**84**	LR	LR	14 59 44.5	
	comp=Z,29nm,18.3s,baz=204,slow=33						
TSUM	**Tsumeb**	**98.64**	**176**	LR	LR	15 01 17.7	
	comp=Z,50nm,19.4s,baz=152,slow=33						
KURBB	**Kurchatov Arra**	**147.62**	**275**	PKPbc	**PKiKP**	**14 26 43.6**	**-0.3**
	0.8nm,0.8s,baz=121,slow=2.2,SNR=5.8						

*IDC **12** 14:12:48.7±1.9, 35°.81N×140°.91E, h0km, mb3.5/3, mbtmp3.5/5, ML2.8/2, MS2.6/2, Error ellipse: s-maj=35.6km s-min=17.1km az=46.0*
*JMA **12** 14:12:55.6±0.2, 35°.8N±0°.5×140°.7E±0°.8, h47km±1km, MV2.9/34, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .

ISC 12 14:12:55.8±1.2, 35°.76N±0°.05×140°.7E±0°.1, h50km±9km, n14, σ0§64/15, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.16**	**110**	*i* P	**Pn**	**14 13 03.2**	**-0.6**
JSMT	**Sammumatsuo**	**0.22**	**239**	*i* P	**Pn**	**14 13 04.2**	**-0.1**
JIHU	**Itakohorinouch**	**0.24**	**329**	*i* P	**Pn**	**14 13 04.6**	**+0.1**
JCN	**Nagara**	**0.52**	**229**	*i* P	**Pn**	**14 13 07.5**	**+0.3**
JYT	**Yasato**	**0.61**	**320**	*i* P	**Pn**	**14 13 08.0**	**-0.4**
JYT				*e*S	**Sn**	**14 13 16.9**	**-0.6**
BSO4	**Boso 4**	**0.81**	**200**	P	**Pn**	**14 13 10.8**	**-0.2**
JHO	**Hitachi**	**0.86**	**354**	*i* P	**Pn**	**14 13 11.7**	**+0.1**
BSO3	**Boso 3**	**0.96**	**188**	P	**Pn**	**14 13 12.6**	**-0.2**
MJAR	**Matsushiro Arr**	**2.15**	**292**	Pn	**Pn**	**14 13 28.3**	**-0.8**
	1.3nm,0.3s,baz=97,slow=15,SNR=67						
MJAR				Pg		14 13 30.7	
	1.3nm,0.3s,baz=97,slow=15,SNR=48						
MJAR				Lg	Lg	14 14 00.2	
	0.8nm,0.3s,baz=161,slow=41,SNR=2.6						
MJAR				LR	LR	14 14 30.9	
	comp=Z,102nm,18.1s,baz=139,slow=44						
	5.0nm,0.3s						
JHJ	**Hachijo jima 2**	**2.73**	**196**	Pn	**Pn**	**14 13 35.8**	**-1.4**
	6.6nm,0.3s,baz=78,slow=20,SNR=4.6						
JHJ				Sn	**Sn**	**14 14 09.8**	**+0.8**
	29nm,0.3s,baz=287,slow=24,SNR=6.9						
	124nm,0.8s						
KSRS	**Korea Array**	**10.39**	**283**	LR	LR	14 19 16.5	
	comp=Z,31nm,18.3s,baz=110,slow=37						
MKAR	**Makanchi Array**	**44.30**	**303**	P	**P**	**14 21 01.0**	**+0.4**
	0.5nm,0.6s,baz=87,slow=9.9,SNR=4.8						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**46.33**	**309**	P	**P**	**14 21 16.8**	**+0.3**
	0.9nm,0.8s,baz=81,slow=7.5,SNR=3.4						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**59.45**	**187**	P	**P**	**14 22 53.6**	**+0.2**
	0.3nm,0.8s,baz=4.0,slow=6.0,SNR=6.4						
	0.3nm,0.8s						

NOU 12 14:30:13.8, 25°.29S×178°.64W, h282km, mb3.9/8, South of Fiji Islands, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**12.81**	**284**	P	P	14 33 07.4	-0.3
PINNC	**Pines Island,**	**13.00**	**279**	P	Pn	14 33 08.1	-0.8
OUENC	**Ouen Island, N**	**13.59**	**279**	P	P	14 33 16.9	+0.6
YATNC	**Mamie plateau,**	**13.64**	**281**	P	Pn	14 33 15.8	-0.9
DZM	**Mont Dzumac**	**14.04**	**280**	P	P	14 33 20.7	-0.7
NOUC	**Port Laguerre**	**14.15**	**280**	P	Pn	14 33 22.7	-0.1
BFZ	**Birch Farm**	**15.93**	**194**	P	P	14 33 42.0	+0.1

*IDC **12** 14:56:34.9±0.7, 22°.27S×172°.67E, h0km, mb4.2/15, mbtmp4.3/18, ML4.5/3, MS3.5/35, Error ellipse: s-maj=19.9km s-min=15.5km az=136.0*
*NEIC **12** 14:56:36.4±2.2, 22°.3S±0°.1×172°.8E±0°.1, h10km±1km, mb4.7/32, Error ellipse: s-maj=20.6km s-min=17.6km az=28.0*
*NOU **12** 14:56:45.5, 22°.66S×172°.10E, h10km, mb4.6/13, Southeast of Loyalty Islands*

ISC 12 14:56:39.8±0.4, 22°.34S±0°.07×172°.74E±0°.06, h35km, n133, σ1§17/105, mb4.5/34, MS3.6/33, 1C-2D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.46**	**280**	Pn	**Pn**	**14 57 43.4**	**-1.5**
PINNC	**Pines Island,**	**4.90**	**266**		**Pn**	**14 57 51.1**	**+0.1**
PINNC	**Pines Island,**	**4.90**	**266**	P	**Pn**	**14 57 51.1**	**+0.1**
YATNC	**Mamie plateau,**	**5.43**	**272**	P	**Pn**	**14 57 57.6**	**-0.7**
OUENC	**Ouen Island, N**	**5.46**	**268**	Pn	**Pn**	**14 57 58.3**	**-0.4**
OUENC	**Ouen Island, N**	**5.46**	**268**	P	**Pn**	**14 57 58.8**	**+0.1**
ONTNC	**Ouen Toro**	**5.82**	**269**	Pn	**Pn**	**14 58 02.9**	**-0.8**
ONTNC	**Ouen Toro**	**5.82**	**269**	P	**Pn**	**14 58 04.4**	**+0.7**
DZM	**Mont Dzumac**	**5.84**	**271**	Pn	**Pn**	**14 58 03.9**	**-0.1**
	3.0nm,0.3s,baz=60,slow=21,SNR=35						
DZM				Sn	**Sn**	**14 59 11.2**	**+1.4**
	2.7nm,0.3s,baz=113,slow=22,SNR=7.4						
	18nm,0.4s						
DZM	**Mont Dzumac**	**5.84**	**271**	*e*Pn	**Pn**	**14 58 04.5**	**+0.5**
	78nm,1.1s						
DZM				*e*Sn	**Sn**	**14 59 10.8**	**+1.0**
	153nm,1.1s						
DZM				*e*LR	LR	14 59 27.0	
	comp=Z,1μm,23.9s						
DZM	**Mont Dzumac**	**5.84**	**271**	P	**Pn**	**14 58 04.2**	**+0.2**
NOUC	**Port Laguerre**	**5.97**	**271**	P	**Pn**	**14 58 05.9**	**+0.2**
MSVF	**Nonsavu**	**6.77**	**48**	Pn	**Pn**	**14 58 17.5**	**+0.6**
	0.2nm,0.3s,baz=247,slow=4.4,SNR=4.3						
MS

WRAB	**Tennant Creek**	**35.83 267**	P	**P**	**15 03 34.6**	**-1.7**
WRAB			lAmb	lAmb	15 04 06.7	
	comp=Z,9.0nm,1.3s					
WRA	**Warramunga Arr**	**35.83 267**	P	**P**	**15 03 34.9**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=97,slow=7.6,SNR=9.4					
WRA			LR	LR	15 18 42.3	
	comp=Z,158nm,18.4s,baz=45,slow=37					
	comp=Z,1.3nm,0.7s					
WRA	**Warramunga Arr**	**35.83 267**	P	**P**	**15 03 34.4**	**-2.0**
FORT	**Forrest**	**40.62 248**	P	**P**	**15 04 16.2**	**-0.4**
FORT			lAmb	lAmb	15 04 17.1	
	comp=Z,17nm,0.7s					
MTN	**Manton Dam**	**40.66 276**	P	**P**	**15 04 15.9**	**-1.0**
MTN			lAmb	lAmb	15 04 16.4	
	comp=Z,18nm,1.1s					
H11S2	**WAKE ISLAND Hy**	**41.00 351**	T	T	15 47 53.0	
	baz=171,slow=76,SNR=69					
H11S3	**WAKE ISLAND Hy**	**41.01 351**	T	T	15 47 53.5	
	baz=171,slow=76,SNR=36					
H11S1	**WAKE ISLAND Hy**	**41.02 351**	T	T	15 47 54.4	
	baz=171,slow=76,SNR=49					
KNRA	**Kununurra**	**41.99 271**	P	**P**	**15 04 27.4**	**-0.5**
H11N1	**WAKE ISLAND Hy**	**42.18 352**	T	T	15 49 33.0	
	baz=173,slow=76,SNR=18					
H11N3	**WAKE ISLAND Hy**	**42.18 352**	T	T	15 49 28.6	
	baz=173,slow=76,SNR=6.7					
H11N2	**WAKE ISLAND Hy**	**42.20 352**	T	T	15 49 30.2	
	baz=173,slow=76,SNR=9.0					
FITZ	**Fitzroy Crossi**	**44.26 267**	LR	LR	15 22 56.4	
	comp=Z,51nm,18.5s,baz=102,slow=36					
FITZ	**Fitzroy Crossi**	**44.26 267**	P	**P**	**15 04 46.3**	**0.0**
FITZ			lAmb	lAmb	15 04 47.4	
	comp=Z,8.1nm,0.8s					
GUMO	**Guam**	**44.96 320**	LR	LR	15 21 13.2	
	comp=Z,134nm,20.8s,baz=124,slow=33					
SIJI	**Sorong**	**45.63 292**	LR	LR	15 23 39.1	
	comp=Z,102nm,21.1s,baz=171,slow=36					
TAOE	**Nuku Hiva Isla**	**47.12 81**	*e*LR	LR	15 18 17.3	
	comp=Z,163nm,26.6s					
BATI	**Baumata**	**48.43 276**	LR	LR	15 25 42.1	
	comp=Z,219nm,21.1s,baz=132,slow=36					
KAPI	**Kappang**	**53.98 280**	LR	LR	15 30 15.5	
	comp=Z,24nm,19.6s,baz=84,slow=38					
DAV	**Davao City (W)**	**54.65 297**	LR	LR	15 29 06.7	
	comp=Z,27nm,20.0s,baz=143,slow=36					
VNDA	**Vanda**	**55.49 183**	P	**P**	**15 06 11.3**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=8.8,slow=8.5,SNR=6.4					
VNDA			LR	LR	15 26 26.5	
	comp=Z,50nm,19.8s,baz=24,slow=32					
	comp=Z,0.6nm,0.6s					
VNDA	**Vanda**	**55.49 183**	P	**P**	**15 06 10.3**	**-0.4**
SBA	**Scott Base**	**55.64 182**	P	**P**	**15 06 13.2**	**+1.4**
TOLI2	**Tolitoli**	**55.73 288**	P	**P**	**15 06 12.9**	**-0.4**
TOLI2			lAmb	lAmb	15 06 20.1	
	comp=Z,12nm,1.1s					
JCJ	**Chichijima**	**57.34 327**	LR	LR	15 29 39.9	
	comp=Z,22nm,20.3s,baz=116,slow=35					
LEM	**Lembang**	**64.44 273**	LR	LR	15 35 05.9	
	comp=Z,74nm,20.0s,baz=102,slow=36					
MJAR	**Matsushiro Arr**	**67.03 330**	LR	LR	15 31 47.8	
	comp=Z,21nm,21.2s,baz=160,slow=32					
QSPA	**South Pole Qui**	**67.73 180**	LR	LR	15 35 13.9	
	comp=Z,31nm,18.1s,baz=58,slow=34					
QSPA	**South Pole Qui**	**67.73 180**	P	**P**	**15 07 33.4**	**-0.2**
QSPA			lAmb	lAmb	15 07 34.3	
	comp=Z,5.6nm,0.9s					
RPN	**Rapa Nui**	**69.88 112**	LR	LR	15 30 48.9	
	comp=Z,54nm,19.8s,baz=302,slow=29					
KSRS	**Korea Array**	**72.91 324**	P	**P**	**15 08 05.9**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=142,slow=6.5,SNR=17					
KSRS			LR	LR	15 36 18.3	
	comp=Z,19nm,21.3s,baz=190,slow=33					
	comp=Z,3.0nm,0.9s					
KSAR	**Wonju Array Be**	**72.92 324**	P	**P**	**15 08 05.8**	**+0.3**
KS19	**Wonju Array Si**	**72.98 324**	P	**P**	**15 08 05.9**	**+0.1**
KS19			lAmb	lAmb	15 08 15.1	
	comp=Z,11nm,1.3s					
USRK	**Ussuriysk Ar.**	**76.00 331**	P	**P**	**15 08 22.3**	**-0.9**
	comp=Z,3.3nm,0.7s,baz=63,slow=13,SNR=7.3					
USRK			LR	LR	15 37 04.2	
	comp=Z,17nm,21.6s,baz=236,slow=32					
	comp=Z,3.3nm,0.7s					
PEA0B	**Petropavlovsk-**	**76.25 351**	P	**P**	**15 08 25.8**	**+1.3**
PETK	**Petropavlovsk-**	**76.25 351**	P	**P**	**15 08 25.5**	**+1.0**
	comp=Z,20nm,0.9s,baz=159,slow=8.5,SNR=40					
PETK			LR	LR	15 37 43.4	
	comp=Z,31nm,19.2s,baz=138,slow=32					
	comp=Z,20nm,0.9s					
PETK	**Petropavlovsk-**	**76.25 351**	P	**P**	**15 08 25.3**	**+0.9**
MAW	**Mawson**	**76.80 202**	P	**P**	**15 08 28.7**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=102,slow=7.3,SNR=6.0					
	comp=Z,2.8nm,0.8s					
MAW	**Mawson**	**76.80 202**	P	**P**	**15 08 27.8**	**+0.3**
BELA	**Belgrano 2**	**78.73 174**	P	**P**	**15 08 35.9**	**-2.2**
BELA			lAmb	lAmb	15 08 42.5	
	comp=Z,4.4nm,1.0s					
CN2	**Changchun**	**78.81 327**	*e*P	**P**	**15 08 40.4**	**+1.4**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
BNX	**BinXian**	**79.28 330**	⇑P	**P**	**15 08 42.0**	**+0.5**
BNX			pmax	pmax		
	comp=Z,8.0nm,0.7s					
BNX			pmax	pmax		
	comp=Z,47nm,4.1s					
SMAI	**San Martin Ant**	**79.86 161**	P	**P**	**15 08 43.0**	**-1.5**
SMAI			lAmb	lAmb	15 08 50.8	
	comp=Z,5.1nm,0.9s					
KLR	**Kul'dur**	**80.05 334**	LR	LR	15 41 54.3	
	comp=Z,22nm,19.4s,baz=156,slow=34					
CMAR	**Chiang Mai Arr**	**82.74 293**	P	**P**	**15 09 01.9**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=131,slow=3.4,SNR=4.1					
CMAR			LR	LR	15 49 23.5	
	comp=Z,7.6nm,18.1s,baz=130,slow=38					
	comp=Z,0.7nm,0.9s					
PMSA	**Palmer Station**	**82.87 159**	LR	LR	15 38 55.5	
	comp=Z,34nm,20.3s,baz=266,slow=31					
MA2	**Magadan**	**83.58 349**	LR	LR	15 39 15.5	
	comp=Z,40nm,21.8s,baz=163,slow=31					
PZH	**PanZhiHua**	**84.12 302**	P	**P**	**15 09 07.8**	**+0.1**
PZH			pmax	pmax		
	comp=Z,10.0nm,0.8s					
PZH			pmax	pmax		
	comp=Z,110nm,5.3s					
OHAK	**Old Harbor**	**84.23 18**	P	**P**	**15 09 06.9**	**-0.3**
HHC	**Hu-ho-hao-te**	**84.70 318**	*e*P	**P**	**15 09 11.1**	**+0.9**
HHC			pmax	pmax		
	comp=Z,16nm,0.8s					
HHC			pmax	pmax		
	comp=Z,110nm,6.2s					
KDAK	**Kodiak Island**	**84.90 18**	P	**P**	**15 09 11.8**	**+1.1**
TROLL	**Troll, Antarti**	**85.66 183**	P	**P**	**15 09 12.6**	**-2.1**
O18K	**Koktuh Hills**	**85.99 16**	P	**P**	**15 09 16.1**	**0.0**
SNAA	**Sanae**	**86.19 181**	P	**P**	**15 09 15.3**	**-2.0**
SNAA	**Sanae**	**86.19 181**	LR	LR	15 44 30.8	
	comp=Z,31nm,21.5s,baz=219,slow=33					
SNAA	**Sanae**	**86.19 181**	P	**P**	**15 09 15.4**	**-1.8**
SNAA			lAmb	lAmb	15 09 18.7	
	comp=Z,4.5nm,1.0s					
VNA3	**Neumayer Olymp**	**86.66 179**	P	**P**	**15 09 17.8**	**-1.7**
VNA2	**Neumayer--Watz**	**86.99 180**	P	**P**	**15 09 19.6**	**-1.5**
	baz=176,slow=4.0					
LZH	**Lanzhou**	**87.22 311**	*e*P	**P**	**15 09 22.7**	**-0.2**
LZH			pP	pP	15 09 30.3	-3.2
LZH			sP	pwP	15 09 35.9	+0.2
LZH			pmax	pmax		
	comp=Z,22nm,0.9s					
VNA1	**Neumayer--Stat**	**87.27 180**	P	**P**	**15 09 20.7**	**-1.6**
L19K	**White Mountain**	**88.11 15**	P	**P**	**15 09 26.6**	**+0.3**
L19K			lAmb	lAmb	15 09 33.0	
	comp=Z,3.7nm,0.9s					
NVAR	**Mina Array Bea**	**88.44 47**	P	**P**	**15 09 29.1**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=226,slow=7.9,SNR=8.1					
	comp=Z,1.1nm,0.8s					
YAK	**Yakutsk**	**90.82 341**	LR	LR	15 43 49.2	
	comp=Z,24nm,20.1s,baz=89,slow=31					
ELK	**Elko**	**91.64 46**	P	**P**	**15 09 44.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=271,slow=3.3,SNR=4.8					
	comp=Z,0.4nm,0.3s					
SONM	**Songino Array**	**91.66 322**	LR	LR	15 48 15.1	
	comp=Z,19nm,22.0s,baz=77,slow=34					
WRH	**Wood River Hil**	**91.69 16**	P	**P**	**15 09 42.0**	**-1.0**
U15A	**North Rim**	**91.70 51**	P	**P**	**15 09 44.6**	**+0.5**
U15A			lAmb	lAmb	15 09 46.1	
	comp=Z,4.3nm,0.8s					
ILAR	**Eielson Array**	**92.24 16**	P	**P**	**15 09 44.8**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=235,slow=5.8,SNR=21					
	comp=Z,2.3nm,0.8s					
ILAR	**Eielson Array**	**92.24 16**	P	**P**	**15 09 43.9**	**-1.7**
EGAK	**Eagle**	**93.80 18**	P	**P**	**15 09 53.5**	**+0.7**
PLCA	**Paso Flores**	**94.05 137**	LR	LR	15 41 41.5	
	comp=Z,37nm,20.6s,baz=224,slow=29					
TXAR	**Lajitas Array**	**95.39 61**	P	**P**	**15 10 01.5**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=228,slow=6.7,SNR=3.2					
	comp=Z,0.2nm,0.7s					
CRVS	**Cervenica-Dubn**	**145.05 326**	*e*PKP	**PKPdf**	**15 16 13.2**	**-0.2**
LANS	**Liptovska Anna**	**145.89 328**	*e*PKP	**PKPab**	**15 16 16.2**	**+0.2**
MORC	**Moravsky Berou**	**146.36 331**	*e*PKP	**PKPab**	**15 16 17.1**	**-0.6**
DPC	**Dobruska-Polom**	**146.49 332**	*e*PKP	**PKPbc**	**15 16 16.4**	**-0.8**
VYHS	**Vyhne**	**146.64 328**	*e*PKP	**PKPbc**	**15 16 16.9**	**-0.8**
JAVC	**Velka Javorina**	**146.95 329**	*e*PKP	**PKPab**	**15 16 19.2**	**-0.9**
BRG	**Berggiesshubel**	**147.06 335**	*e*PKP	**PKPbc**	**15 16 18.8**	**0.0**
BRG			Amp		15 16 22.0	
	comp=Z,5.8nm,1.0s					
CLL	**Collm**	**147.07 336**	*i* PKPbc	**PKPbc**	**15 16 18.5**	**-0.3**
	comp=Z,7.0nm,0.9s					
KRUC	**Moravsky**	**147.40 331**	*e*PKP	**PKPbc**	**15 16 19.1**	**-0.7**
MODS	**Modra-Piesok**	**147.48 329**	*e*PKP	**PKPdf**	**15 16 18.4**	**+0.9**
PRU	**Pruhonice**	**147.51 333**	*e*PKP	**PKPbc**	**15 16 19.6**	**-0.5**
CKRC	**Cesky Krumlov**	**148.50 332**	*e*PKP	**PKPbc**	**15 16 22.4**	**-0.4**
KHC	**Kasperske Hory**	**148.57 333**	*e*PKP	**PKPbc**	**15 16 21.6**	**-1.4**
KHC			*e*pPKP	**PKPab**	**15 16 26.8**	**+0.3**
GERES	**GERESS Array B**	**148.74 333**	PKPbc	**PKPbc**	**15 16 23.1**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=184,slow=2.1,SNR=11					
BTNL	**Ternell**	**149.92 343**	*d*PKiKP	**PKPbc**	**15 16 25.7**	**-0.5**
BMRD	**Maredsous**	**150.53 344**	*d*PKiKP	**PKPbc**	**15 16 27.3**	**-0.4**
ESDC	**Sonseca Array**	**162.49 352**	PKPab	**PKPab**	**15 17 25.9**	**0.0**
	comp=Z,1.4nm,1.0s,baz=343,slow=4.6,SNR=5.2					
TORD	**Torodi Ar. Bea**	**167.50 224**	PKPab	**PKPab**	**15 17 48.0**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=97,slow=4.7,SNR=3.6					

*WEL **12** 15:04:10.9±0.6,45°S±4°×16°7E±°, h31km±6km, M3.7/13, ML3.9/16, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=111.3*
*NOU **12** 15:04:16.6, 44'.94S×168°.13E, h0km, MLv4.2/7, South Island, New Zealand*
ISC 12 15:04:11.9±1.4, 45°.20S±0°.04×167°.50E±0°.07, h11km±11km, n52, σ1s53/56, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.36**	**222**	P	Pg	15 04 18.8	-0.3
DCZ				S	**Sg**	**15 04 24.9**	**+0.9**
MLZ	**Mavora Lakes**	**0.47**	**111**	P	**Pn**	**15 04 24.6**	**-0.1**
MSZ	**Milford Sound**	**0.60**	**30**	P	**Pn**	**15 04 25.2**	**-1.2**
MSZ				S	**Sn**	**15 04 37.6**	**+1.5**
WHZ	**Wether Hill Ro**	**0.77**	**156**	P	**Pb**	**15 04 27.0**	**-0.3**
WHZ				S	**Sb**	**15 04 39.3**	**+1.6**
PYZ	**Puysegur Point**	**1.13**	**210**	P	Pn	15 04 28.2	-5.4
PYZ				S	Sb	15 04 42.8	-5.3
WKZ	**Wanaka**	**1.14**	**72**	P	**Pn**	**15 04 34.3**	**+0.5**
WKZ				S	**Sn**	**15 04 52.5**	**+3.0**
EAZ	**Earnscleugh**	**1.28**	**92**	P	**Pg**	**15 04 36.1**	**-0.4**
JCZ	**Jackson Bay**	**1.45**	**40**	P	**Pb**	**15 04 37.6**	**-1.3**
JCZ				S	**Sg**	**15 05 00.5**	**+1.8**
APZ	**The Paps**	**1.67**	**168**	P	Pn	15 04 38.3	-2.9
TUZ	**Tuapeka**	**1.68**	**118**	P	**Pn**	**15 04 41.0**	**-0.2**
SYZ	**Scrubby Hill**	**1.77**	**140**	P	**Pn**	**15 04 41.0**	**-1.4**
SYZ				S	**Sn**	**15 05 03.9**	**-0.8**
LBZ	**Lake Benmore**	**2.08**	**68**	P	**Pn**	**15 04 46.1**	**-0.6**
ODZ	**Otahua Downs**	**2.23**	**87**	P	**Pn**	**15 04 48.2**	**-0.6**
ODZ				S	**Sn**	**15 05 16.0**	**-0.4**
ODZ	**Otahua Downs**	**2.23**	**87**	P	**Pn**	**15 04 48.3**	**-0.6**
HHSZ	**Highcliff Hill**	**2.29**	**109**	P	**Pn**	**15 04 49.2**	**-0.4**
FOZ	**Fox Glacier**	**2.35**	**46**	P	**Pn**	**15 04 49.8**	**-0.7**
TMZ	**Timaru**	**2.63**	**73**	P	**Pn**	**15 04 53.0**	**-1.2**
GCSZ	**Gaunt Creek Bo**	**2.77**	**48**	P	**Pn**	**15 04 55.2**	**-0.9**
ARCZ	**Arundel**	**2.91**	**66**	P	**Pn**	**15 04 56.4**	**-1.7**
RPZ	**Rata Peaks**	**2.95**	**61**	P	**Pn**	**15 04 57.0**	**-1.6**
RPZ	**Rata Peaks**	**2.95**	**61**	P	**Pn**	**15 04 57.3**	**-1.3**
WVZ	**Waitaha Valley**	**3.15**	**49**	P	**Pn**	**15 05 00.8**	**-0.6**
WACZ	**Wakanui South**	**3.35**	**70**	P	**Pn**	**15 05 02.4**	**-1.7**
RACZ	**Rakaia**	**3.63**	**68**	P	**Pn**	**15 05 06.1**	**-2.0**
OXZ	**Oxford**	**3.76**	**62**	P	**Pn**	**15 05 07.3**	**-2.5**
INZ	**Inchbonnie**	**3.77**	**50**	P	**Pn**	**15 05 08.6**	**-1.4**
MQZ	**McQueen's Vall**	**3.98**	**70**	P	**Pn**	**15 05 10.7**	**-2.2**
AKCZ	**Akaroa Harbour**	**4.09**	**73**	P	**Pn**	**15 05 12.4**	**-1.9**
LTZ	**Lake Taylor**	**4.21**	**57**	P	**Pn**	**15 05 13.4**	**-2.6**
OKCZ	**Okains Bay**	**4.25**	**72**	P	**Pn**	**15 05 14.6**	**-1.9**
GVZ	**Greta Valley S**	**4.57**	**63**	P	**Pn**	**15 05 18.4**	**-2.5**
DSZ	**Denniston Nort**	**4.66**	**44**	P	**Pn**	**15 05 20.7**	**-1.5**
KHZ	**Kahutara**	**5.18**	**60**	P	**Pn**	**15 05 27.6**	**-1.7**
KHZ	**Kahutara**	**5.18**	**60**	P	**Pn**	**15 05 28.0**	**-1.3**
THZ	**Tophouse**	**5.22**	**51**	P	**Pn**	**15 05 27.7**	**-2.2**
MRNZ	**Matariki Terra**	**5.40**	**47**	P	**Pn**	**15 05 30.9**	**-1.5**
QRZ	**Quartz Range**	**5.72**	**42**	P	**Pn**	**15 05 35.9**	**-0.8**
QRZ	**Quartz Range**	**5.72**	**42**	P	**Pn**	**15 05 35.9**	**-0.8**
TKNZ	**Takaka Hill**	**5.77**	**46**	P	**Pn**	**15 05 37.0**	**-0.4**
NNZ	**Nelson**	**5.86**	**49**	P	**Pn**	**15 05 38.9**	**+0.3**
TUWZ	**Tuamarina**	**6.02**	**54**	P	**Pn**	**15 05 43.4**	**+2.5**
TCW	**Tory Channel**	**6.36**	**54**	P	**Pn**	**15 05 47.7**	**+2.3**
DUWZ	**D'Urville Isla**	**6.44**	**49**	P	**Pn**	**15 05 47.0**	**+0.3**
SNZO	**South Karori**	**6.54**	**56**	P	**Pn**	**15 05 47.7**	**-0.3**
MRZ	**Mangatainoka R**	**7.46**	**55**	P	**Pn**	**15 05 58.7**	**-1.9**
WAZ	**Wanganui**	**7.76**	**48**	P	**Pn**	**15 06 06.8**	**+2.1**
HIZ	**Hauiti**	**8.64**	**42**	P	**Pn**	**15 06 15.3**	**-1.5**
HIZ	**Hauiti**	**8.64**	**42**	P	**Pn**	**15 06 15.4**	**-1.5**
TLZ	**Tolley Road**	**9.12**	**44**	P	**Pn**	**15 06 24.4**	**+1.0**
WCZ	**Waipu Caves**	**10.61**	**32**	P	**Pn**	**15 06 42.0**	**-1.7**
OUZ	**Omahuta**	**11.00**	**27**	P	**Pn**	**15 06 47.4**	**-1.7**
OUZ	**Omahuta**	**11.00**	**27**	P	**Pn**	**15 06 49.4**	**+0.3**

IDC 12 15:13:11.9±8.2, 5°.74S×145°.73E, h75km±66km, mb3.4/2, mbtmp3.8/4, ML1.6/1, MS4.4/1, Error ellipse: s-maj=84.1km s-min=52.8km az=49.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.91**	**159**	P	Pn	15 14 09.4	-0.2
	3.3nm,0.3s,baz=346,slow=4.2,SNR=42						
PMG				S	Sn	15 14 55.0	+0.7
	9.7nm,0.5s,baz=206,slow=21,SNR=7.6						
	19nm,0.8s						
WRA	**Warramunga Arr**	**17.95**	**217**	P	P	15 17 16.4	+0.2
	1.4nm,0.4s,baz=38,slow=11,SNR=14						
ASAR	**Alice Springs**	**21.15**	**211**	P	P	15 17 49.5	-1.5
	1.3nm,0.6s,baz=49,slow=8.7,SNR=12						
	1.3nm,0.6s						
DZM	**Mont Dzumac**	**25.79**	**131**	LR	LR	15 27 04.0	
	comp=Z,841nm,21.8s,baz=98,slow=32						
STKA	**Stephens Creek**	**26.29**	**188**	P	P	15 18 41.9	+1.4
	0.7nm,0.4s,baz=359,slow=14,SNR=2.9						
	0.7nm,0.4s						

NOU 12 15:13:41.3, 19°.75S×168°.87E, h0km, MLv3.6/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.89**	**204**	P	Pn	15 14 14.7	-0.2
YATNC	**Mamie plateau,**	**2.95**	**219**	P	Pn	15 14 28.5	-1.0
PINNC	**Pines Island,**	**3.14**	**205**	P	Pn	15 14 33.0	+0.9
DZM	**Mont Dzumac**	**3.24**	**224**	P	Pn	15 14 32.7	-0.8
OUENC	**Ouen Island, N**	**3.26**	**215**	P	Pn	15 14 33.9	+0.2
NOUC	**Port Laguerre**	**3.35**	**225**	P	Pn	15 14 34.9	-0.1
KOUNC	**Koumac, New Ca**	**4.38**	**259**	P	Pn	15 14 49.5	+0.4

NNC 12 15:17:30.9±3.7, 35°.08N×73°.27E, h0km, mb3.6, mpv3.4, 1C-2D, Error ellipse: s-maj=37.8km s-min=29.4km az=113.0, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**8.04**	**12**	⇑P	Pn	15 19 29.6	+0.5
	0.9nm,0.5s						
TKM2				⇓S	Sn	15 21 01.7	+0.9
	1.8nm,0.6s						
KK31	**Karatay Array**	**8.29**	**346**	P	Pn	15 19 31.6	-0.8
	0.6nm,0.3s,baz=154,slow=11,SNR=17						
KK31				⇓S	Sn	15 21 08.5	+1.6
	1.2nm,0.5s,baz=146,slow=23,SNR=6.4						
AB31	**Akbulak array**	**17.23**	**329**	P	Pn	15 21 33.0	+0.2
	1.2nm,1.1s,baz=147,slow=12,SNR=5.5						

*IDC **12** 15:23:15.7±1.7, 22°.48S×172°.52E, h0km, mb3.7/4, mbtmp3.7/6, ML4.4/2, MS3.5/30, Error ellipse: s-maj=42.2km s-min=27.2km az=175.0*
*NEIC **12** 15:23:18.3±2.2, 22°.5S±0°.3×172°.5E±0°.3, h15km±16km, mb4.6/10, Error ellipse: s-maj=48.4km s-min=19.5km az=219.0*
*NOU **12** 15:23:41.9, 22°.63S×170°.75E, h0km, mb3.9/8, Southeast of Loyalty Islands*
ISC 12 15:23:20.0±0.9, 22°.8S±0°.1×172°.68E±0°.08, h34km, n60, σ1s58/32, mb4.1/8, MS3.6/27, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.50**	**286**	Pn	Pn	15 24 18.6	-7.2
MARNC	**Mare, Loyalty**	**4.50**	**286**	P	**Pn**	**15 24 27.0**	**+1.3**
PINNC	**Pines Island,**	**4.84**	**271**	Pn	**Pn**	**15 24 30.1**	**-0.3**
PINNC	**Pines Island,**	**4.84**	**271**	P	**Pn**	**15 24 31.2**	**+0.8**
YATNC	**Mamie plateau,**	**5.41**	**276**	P	**Pn**	**15 24 38.2**	**0.0**
OUENC	**Ouen Island, N**	**5.41**	**273**	Pn	**Pn**	**15 24 35.2**	**-3.1**
OUENC	**Ouen Island, N**	**5.41**	**273**	P	**Pn**	**15 24 38.6**	**+0.4**
ONTNC	**Ouen Toro**	**5.78**	**273**	Pn	**Pn**	**15 24 41.6**	**-1.7**
ONTNC	**Ouen Toro**	**5.78**	**273**	P	**Pn**	**15 24 45.3**	**+2.0**
DZM	**Mont Dzumac**	**5.81**	**276**	Pn	**Pn**	**15 24 43.1**	**-0.8**
	1.3nm,0.3s,baz=87,slow=11,SNR=46						
DZM				Sn	**Sn**	**15 25 50.4**	**+0.9**
	2.3nm,0.3s,baz=320,slow=22,SNR=7.0						
	7.8nm,0.6s						
DZM	**Mont Dzumac**	**5.81**	**276**	*e*Pn	**Pn**	**15 24 43.8**	**-0.1**
	31nm,0.8s						
DZM				*e*Sn	**Sn**	**15 25 48.4**	**-1.1**
	23nm,0.8s						
DZM				*e*LR	LR	15 26 04.6	
	comp=Z,1μm,24.6s						
DZM	**Mont Dzumac**	**5.81**	**276**	Pn	**Pn**	**15 24 42.2**	**-1.7**
DZM	**Mont Dzumac**	**5.81**	**276**	P	**Pn**	**15 24 44.1**	**+0.2**
NOUC	**Port Laguerre**	**5.94**	**275**	P	**Pn**	**15 24 46.6**	**+1.1**
MSVF	**Nonsavu**	**7.11**	**46**	Pn	**Pn**	**15 25 00.9**	**-0.8**
	0.8nm,0.3s,baz=226,slow=14,SNR=5.4						
MSVF				LR	LR	15 27 06.2	
	comp=Z,468nm,19.9s,baz=235,slow=33						
	5.1nm,0.6s						
KOUNC	**Koumac, New Ca**	**8.12**	**284**	Pn	Pn	15 25 09.7	-5.7
KOUNC	**Koumac, New Ca**	**8.12**	**284**	P	**Pn**	**15 25 17.5**	**+2.1**
RAO	**Raoul Island**	**10.63**	**129**	LR	LR	15 29 07.7	
	comp=Z,221nm,20.6s,baz=341,slow=32						
URZ	**Urewera**	**15.89**	**167**	LR	LR	15 32 45.0	
	comp=Z,88nm,18.1s,baz=32,slow=35						
AFI	**Afiamalu**	**17.17**	**62**	LR	LR	15 32 36.0	
	comp=Z,142nm,18.8s,baz=160,slow=33						
HNR	**Honiara**	**18.03**	**315**	LR	LR	15 33 27.2	
	comp=Z,138nm,18.0s,baz=164,slow=34						
SNZO	**South Karori**	**18.56**	**175**	P	**P**	**15 27 30.7**	**-3.1**
SNZO				lAmb	lAmb	15 27 41.3	
	comp=Z,52nm,1.2s						
LTZ	**Lake Taylor**	**19.95**	**181**	P	**Pn**	**15 27 51.8**	**+0.7**
LTZ				lAmb	lAmb	15 28 00.8	
	comp=Z,37nm,1.2s						
CAN	**Canberra**	**24.11**	**234**	P	**P**	**15 28 32.3**	**-0.4**
CAN				lAmb	lAmb	15 29 00.4	
	comp=Z,32nm,1.5s						
CTA	**Charters Tower**	**24.73**	**271**	LR	LR	15 38 19.0	
	comp=Z,172nm,18.5s,baz=82,slow=37						
RAR	**Rarotonga**	**25.58**	**92**	LR	LR	15 38 35.7	
	comp=Z,61nm,18.9s,baz=258,slow=36						
PMG	**Port Moresby**	**27.83**	**294**	LR	LR	15 38 36.1	
	comp=Z,120nm,18.7s,baz=111,slow=33						
STKA	**Stephens Creek**	**28.99**	**245**	P	**P**	**15 29 17.5**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=110,slow=14,SNR=3.1						
STKA				LR	LR	15 39 58.6	
	comp=Z,99nm,19.6s,baz=41,slow=35						
	comp=Z,0.5nm,0.4s						
BBOO	**Buckleboo**	**33.76**	**245**	P	**P**	**15 29 58.5**	**-0.1**
WR0	**Warramunga Arr**	**35.57**	**267**	P	**P**	**15 30 12.3**	**-2.1**
WR0				lAmb	lAmb	15 30 22.5	
	comp=Z,18nm,1.4s						
AS31	**Alice Springs**	**35.57**	**261**	P	**P**	**15 30 14.1**	**-0.3**
ASAR	**Alice Springs**	**35.58**	**261**	P	**P**	**15 30 14.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=91,slow=8.9,SNR=10

KUR				smax	smax			
	comp=N,92nm,0.5s							
KUR				smax	smax			
	comp=E,13nm,0.5s							
KUR	**Kuril'sk**	**3.84**	**253**	*i* P	**Pn**	**15 27 54.4**	**+0.9**	
KUR				AMB	AMB	15 27 57.7		
	comp=E,40nm,0.2s							
KUR				*e*S	**Sn**	**15 28 36.4**	**-1.0**	
KUR				A	A	15 28 53.1		
	comp=E,90nm,0.5s							
KUR				A	A	15 28 53.1		
	comp=E,10.0nm,0.5s							
SKR	**Severo-Kuril's**	**4.65**	**25**	*e*P	**Pn**	**15 28 05.2**	**+0.6**	
SKR				AMB	AMB	15 28 26.7		
	comp=E,20nm,0.6s							
SKR				*e*S	**Sn**	**15 28 56.0**	**-1.3**	
SKR				A	A	15 29 01.7		
	comp=E,20nm,0.5s							
SKR				A	A	15 29 01.7		
	comp=E,20nm,0.5s							
SHO	**Shikotan**	**5.13**	**241**	*e*PN	**Pn**	**15 28 11.7**	**+0.5**	
SHO				pmax	pmax			
	comp=Z,8.0nm,0.2s							
SHO				pmax	pmax			
	comp=N,4.0nm,0.4s							
SHO				pmax	pmax			
	comp=E,7.0nm,0.2s							
SHO	**Shikotan**	**5.13**	**241**	*e*P	**Pn**	**15 28 11.7**	**+0.5**	
SHO				AMB	AMB	15 28 19.0		
	comp=E,10.0nm,0.3s							
SHO				*e*S	**Sn**	**15 29 06.9**	**-2.2**	
SHO				A	A	15 29 30.0		
	comp=E,50nm,0.4s							
SHO				A	A	15 29 30.0		
	comp=E,60nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**5.65**	**247**	*e*PN	**Pn**	**15 28 19.7**	**+1.4**	
YUK				pmax	pmax			
	comp=Z,35nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**5.65**	**247**	*e*P	**Pn**	**15 28 19.7**	**+1.4**	
YUK				AMB	AMB	15 28 26.6		
	comp=Z,40nm,0.2s							
YUK				*e*S	**Sn**	**15 29 21.0**	**-0.8**	
YUK				A	A	15 29 41.6		
	comp=Z,70nm,0.5s							
YUK				A	A	15 29 41.6		
	comp=Z,70nm,0.5s							
RUSJ	**Misakicho**	**6.01**	**249**	*e*PN	**Pn**	**15 28 24.9**	**+1.7**	
NEM2	**Nemuro 2**	**6.07**	**242**	*e*P	**Pn**	**15 28 24.8**	**+0.8**	
NEM2				*e*S	**Sn**	**15 29 29.2**	**-2.9**	
NMR	**Nemuro--Hokkai**	**6.07**	**242**	*e*PN	**Pn**	**15 28 24.8**	**+0.7**	
NMR	**Nemuro--Hokkai**	**6.07**	**242**	*e*P	**Pn**	**15 28 24.8**	**+0.7**	
NMR				*e*S	**Sn**	**15 29 29.7**	**-2.6**	
JRA	**Rausu**	**6.16**	**248**	*e*P	**Pn**	**15 28 28.9**	**+3.5**	
JNK	**Nakash**	**6.59**	**247**	*e*P	**Pn**	**15 28 33.5**	**+2.3**	
JAK	**Akkeshi**	**6.91**	**243**	*e*P	**Pn**	**15 28 36.0**	**+0.4**	
JTKR	**Abashiri--Toko**	**6.94**	**252**	*e*P	**Pn**	**15 28 39.0**	**+3.0**	
PETK	**Petropavlovsk-**	**7.26**	**23**	P	**Pn**	**15 28 40.6**	**+0.2**	
	baz=193,slow=12,SNR=1.4							
	comp=Z,0.6nm,0.8s							
JAR	**Ashorobuto**	**7.33**	**247**	*e*P	**Pn**	**15 28 43.6**	**+2.2**	
JAR				*e*S	**Sn**	**15 30 04.4**	**+1.1**	
JOB	**Onbets**	**7.49**	**245**	*e*S	**Sn**	**15 30 03.8**	**-3.3**	
JKK2	**Kamakawa 2**	**7.75**	**254**	*e*P	**Pn**	**15 28 50.4**	**+3.4**	
JCH	**Churui**	**7.94**	**244**	*e*P	**Pn**	**15 28 50.5**	**+0.8**	
JCH				*e*S	**Sn**	**15 30 14.4**	**-3.8**	
JNBK	**Urakawa-nobuka**	**8.50**	**244**	*e*P	**Pn**	**15 28 57.6**	**+0.2**	
JNBK				*e*S	**Sn**	**15 30 26.2**	**-5.8**	
JANG	**Nango**	**10.39**	**238**	*e*S	Sn	15 31 08.2	-10	
SEY	**Seymchan**	**16.48**	**359**	P	**Pn**	**15 30 44.7**	**-0.1**	
	comp=Z,0.1nm,0.3s,baz=163,slow=20,SNR=1.3							
	comp=Z,0.9nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**29.01**	**152**	T	T	16 04 19.7		
	baz=340,slow=76,SNR=162							
H11N1	**WAKE ISLAND Hy**	**29.03**	**152**	T	T	16 04 22.1		
	baz=340,slow=76,SNR=120							
H11N3	**WAKE ISLAND Hy**	**29.03**	**152**	T	T	16 04 24.6		
	baz=340,slow=76,SNR=101							
H11S1	**WAKE ISLAND Hy**	**30.10**	**154**	T	T	16 05 44.0		
	baz=340,slow=76,SNR=125							
H11S3	**WAKE ISLAND Hy**	**30.11**	**154**	T	T	16 05 49.6		
	baz=340,slow=76,SNR=107							
H11S2	**WAKE ISLAND Hy**	**30.12**	**154**	T	T	16 05 38.8		
	baz=340,slow=76,SNR=96							
MKAR	**Makanchi Array**	**47.02**	**298**	P	**P**	**15 35 24.1**	**0.0**	
	comp=Z,0.4nm,0.8s,baz=69,slow=7.9,SNR=2.6							
	comp=Z,0.4nm,0.8s							
AAK	**Ala-Archa**	**53.91**	**296**	LR	LR	16 00 35.9		
	comp=Z,26nm,18.8s,baz=104,slow=37							
FINES	**FINESS Array B**	**64.25**	**335**	P	**P**	**15 37 25.9**	**-1.5**	
	comp=Z,0.6nm,0.4s,baz=38,slow=9.6,SNR=6.9							
	comp=Z,0.6nm,0.4s							
NOA	**NORSAR Array B**	**68.45**	**341**	P	**P**	**15 37 53.4**	**-0.9**	
	comp=Z,0.4nm,0.5s,baz=40,slow=7.0,SNR=1.4							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**71.96**	**198**	P	**P**	**15 38 19.1**	**+3.0**	
	comp=Z,0.3nm,0.7s,baz=1.4,slow=5.3,SNR=4.2							
	comp=Z,0.3nm,0.7s							
H03N2	**Juan Fernandez**	**138.78**	**91**	T	T	18 21 41.0		
	baz=308,slow=77,SNR=16							
H03N1	**Juan Fernandez**	**138.80**	**91**	T	T	18 21 41.3		
	baz=308,slow=77,SNR=19							
H03N3	**Juan Fernandez**	**138.80**	**91**	T	T	18 21 40.7		
	baz=308,slow=77,SNR=16							

IDC 12 15:32:09.7±5.5, 10°.64N×91°.93E, h0km, mb3.6/4, mbtmp3.6/4, MS3.1/2, Error ellipse: s-maj=292.5km s-min=27.5km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.53**	**228**	T	T	16 05 24.6	
	baz=47,slow=75,SNR=243						
H08S2	**Diego Garcia H**	**26.54**	**228**	T	T	16 05 21.6	
	baz=47,slow=75,SNR=124						
H08S1	**Diego Carcia H**	**26.55**	**228**	T	T	16 05 22.7	
	baz=47,slow=75,SNR=54						
MKAR	**Makanchi Array**	**36.95**	**349**	P	P	15 39 20.4	-0.2
	0.6nm,0.8s,baz=161,slow=7.7,SNR=5.3						
	0.6nm,0.8s						
MJAR	**Matsushiro Arr**	**49.02**	**50**	LR	LR	16 01 01.9	
	comp=Z,19nm,21.1s,baz=174,slow=35						
WRA	**Warramunga Arr**	**51.64**	**126**	P	P	15 41 18.1	-0.5
	0.2nm,0.5s,baz=300,slow=10,SNR=8.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**53.35**	**130**	P	P	15 41 31.1	-0.2
	0.3nm,0.5s,baz=305,slow=7.0,SNR=11						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**63.58**	**134**	P	P	15 42 43.1	+0.6
	0.9nm,0.6s,baz=321,slow=8.9,SNR=3.4						
	0.9nm,0.6s						
VRAC	**Vranov**	**72.45**	**318**	LR	LR	16 22 13.6	
	comp=Z,16nm,18.9s,baz=42,slow=42						

*ISK **12** 15:49:19.6, 37°.47N×38°.82E, h5km, ML2.5/9*
*DDA **12** 15:49:21.6±0.0, 37°.55N×38°.79E, h7km±1km, ML2.3*

ISC 12 15:49:19.9±0.0, 37°.46N±0°.03×38°.83E±0°.03, h3km±6km, n16, σ0s71/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.02**	**192**		**Pg**	**15 49 20.2**	**-0.5**
URFA				SG	**Sg**	**15 49 22.3**	**+1.0**
SANL	**SANLIURFA_Merk**	**0.32**	**156**	P	**Pn**	**15 49 29.9**	**-1.5**
SANL				S	**Sb**	**15 49 35.4**	**+1.7**
SANL				*i* AML	AML	15 49 38.0	
	comp=N,402nm,0.5s						
ATAB	**Bozova**	**0.42**	**271**	P	**Pb**	**15 49 30.1**	**+0.1**
ATAB				S	**Sb**	**15 49 36.2**	**-0.6**
SURC	**SANLIURFA_SURC**	**0.61**	**196**	P	**Pn**	**15 49 35.3**	**-0.1**
SURC				*i* AML	AML	15 49 45.0	
	comp=E,184nm,0.3s						
SURC				S	**Sn**	**15 49 45.4**	**-0.3**
SURC				*i* AML	AML	15 49 46.0	
	comp=N,107nm,0.3s						
GZT	**Gaziantep**	**1.01**	**264**	P	**Pn**	**15 49 41.1**	**0.0**
GZT				S	**Sn**	**15 49 56.7**	**+0.9**
GZT				*i* AML	AML	15 49 57.0	
	comp=E,103nm,0.3s						
GZT				*i* AML	AML	15 49 57.0	
	comp=N,133nm,0.3s						
ELZG	**Elazig**	**1.04**	**7**	P	**Pg**	**15 49 39.6**	**-0.2**
ELZG				S	**Sb**	**15 49 55.0**	**+0.3**
ELZG				*i* AML	AML	15 49 57.0	
	comp=N,136nm,0.4s						

AKCD	**Akcadag**	**1.10**	**320**	P	**Pb**	**15 49 41.1**	**-0.5**	
AKCD				S	**Sg**	**15 49 55.0**	**-0.1**	
AKCD				*i* AML	AML	15 50 00.0		
	comp=E,73nm,0.3s							
AKCD				*i* AML	AML	15 50 01.0		
	comp=N,78nm,0.6s							
DYBB	**Diyarbakir**	**1.15**	**64**	PN	**Pb**	**15 49 42.2**	**-0.2**	
DYBB				SN	**Sn**	**15 49 58.6**	**-0.6**	
MAZI	**Mazidag**	**1.29**	**90**	PN	**Pb**	**15 49 44.5**	**-0.3**	
MAZI				SN	**Sn**	**15 50 03.2**	**+0.6**	
PTK	**Pertek**	**1.49**	**17**	PN	**Pb**	**15 49 47.5**	**-0.3**	
DARE	**Darende-Malaty**	**1.53**	**317**	PN	**Pb**	**15 49 48.5**	**-0.5**	
KMRS	**Kahramanmaras**	**1.53**	**272**	PN	**Pb**	**15 49 48.1**	**-0.8**	
ARPR	**Arapgir-MALATY**	**1.67**	**347**	PN	**Pn**	**15 49 50.3**	**+0.1**	
SVAN	**Silvan-Diyarba**	**2.00**	**69**	PN	**Pn**	**15 49 55.1**	**+0.5**	
SARI	**SarD1z-Kayseri**	**2.12**	**297**	PN	**Pn**	**15 49 56.9**	**+0.5**	
TAHT	**Tahtakopru-Hat**	**2.38**	**244**	PN	**Pn**	**15 50 00.3**	**+0.6**	

IDC 12 16:13:01.7±4.9, 14°.74S×178°.04W, h386km±63km, mb3.5/3, mbtmp4.2/4, Error ellipse: s-maj=265.3km s-min=47.8km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.80**	**231**	P	Pn	16 14 21.1	+0.1
	8.3nm,0.5s,baz=67,slow=15,SNR=7.8						
CTA	**Charters Tower**	**34.44**	**256**	P	P	16 19 14.3	-0.7
	6.8nm,1.1s,baz=74,slow=15,SNR=3.3						
	6.8nm,1.1s						
WRA	**Warramunga Arr**	**45.64**	**256**	P	P	16 20 45.8	-0.1
	0.6nm,0.7s,baz=89,slow=7.8,SNR=24						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**46.07**	**251**	P	P	16 20 49.3	+0.1
	9.1nm,0.5s,baz=85,slow=8.4,SNR=386						
	9.1nm,0.5s						
ARCES	**ARCESS Array B**	**123.27**	**350**	PKP	PKPdf	16 31 12.5	-0.3
	1.4nm,0.9s,baz=32,slow=3.5,SNR=3.9						

*HVO **12** 16:22:14±0.6, 19°.42N±0°.01×155°.462W±0°.004, h9km±3km, ML2.5/22, ML2.4/47(NEIC), Error ellipse: s-maj=1.6km s-min=0.4km az=189.0*

NEIC 12 16:22:13.8±0.4, 19°.429N±0°.010×155°.468W±0°.006, h13km±3km, Error ellipse: s-maj=1.5km s-min=0.6km az=201.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIN	**Ainahou**	**0.06**	**170**	Pg	Pg	16 22 16.4	-0.1
MLH	**Mauna Loa**	**0.10**	**50**		Pg	16 22 16.9	-0.1
MLH					Sg	16 22 18.9	-0.3
MLH	**Mauna Loa**	**0.10**	**50**	IAML		16 22 19.5	
	comp=N,488nm,0.6s						
MWH	**Moku'aweowe**	**0.13**	**295**		Pg	16 22 17.6	0.0
MWH					Sg	16 22 20.3	-0.1
MWH	**Moku'aweowe**	**0.13**	**295**	IAML		16 22 20.9	
	comp=E,3μm,0.5s						
MLOA	**Mauna Loa Obse**	**0.15**	**316**		Pg	16 22 17.9	+0.1
MLOA					Sg	16 22 20.6	+0.1
MLOA	**Mauna Loa Obse**	**0.15**	**316**	IAML		16 22 20.8	
	comp=E,5μm,0.1s						
WRMHI	**West Rim**	**0.16**	**98**		Pg	16 22 17.7	0.0
WRMHI					Sg	16 22 20.4	0.0
WRMHI	**West Rim**	**0.16**	**98**	IAML		16 22 22.0	
	comp=E,3μm,0.3s						
UWE	**Uwekahuna**	**0.17**	**93**		Pg	16 22 17.9	+0.1
UWE	**Uwekahuna**	**0.17**	**93**	IAML		16 22 22.0	
	comp=E,1μm,0.2s						
UWE				IAML		16 22 22.2	
	comp=N,1μm,0.3s						
SDHHI	**Sand Hill**	**0.17**	**104**		Pg	16 22 17.9	+0.1
SDHHI					Sg	16 22 20.6	0.0
SDHHI	**Sand Hill**	**0.17**	**104**	IAML		16 22 20.7	
	comp=E,3μm,0.2s						
HMH	**Humu'ula Sheep**	**0.17**	**355**		Pg	16 22 18.4	+0.3
HMH					Sg	16 22 21.5	+0.5
HMH	**Humu'ula Sheep**	**0.17**	**355**	IAML		16 22 21.6	
	comp=E,843nm,0.1s						
OBL	**Observatory Le**	**0.17**	**94**		Pg	16 22 17.9	0.0
OBL	**Observatory Le**	**0.17**	**94**	IAML		16 22 21.0	
	comp=N,1μm,0.4s						
OBL				IAML		16 22 21.7	
	comp=E,1μm,0.3s						
NPH	**North Pit**	**0.18**	**96**		Pg	16 22 17.9	0.0
NPH					Sg	16 22 20.7	-0.1
NPH	**North Pit**	**0.18**	**96**	IAML		16 22 20.8	
	comp=N,487nm,0.4s						
UWB	**Uwekahuna B**	**0.18**	**91**		Pg	16 22 17.9	0.0
UWB					Sg	16 22 20.7	-0.2
UWB	**Uwekahuna B**	**0.18**	**91**	IAML		16 22 20.9	
	comp=N,478nm,0.2s						
RSD	**Rainshed**	**0.18**	**79**	Pg	Pg	16 22 17.7	-0.4
SBLHI	**Steaming Bluff**	**0.19**	**91**		Pg	16 22 18.0	-0.1
SBLHI					Sg	16 22 20.9	-0.2
SBLHI	**Steaming Bluff**	**0.19**	**91**	IAML		16 22 21.2	
	comp=N,907nm,0.3s						
KKO	**Keanakako`i**	**0.19**	**99**		Pg	16 22 18.0	-0.2
KKO					Sg	16 22 21.2	-0.1
KKO	**Keanakako`i**	**0.19**	**99**	IAML		16 22 21.6	
	comp=N,746nm,1.1s						
HATHI	**Halema'uma'u T**	**0.20**	**92**		Pg	16 22 18.2	-0.1
HATHI	**Halema'uma'u T**	**0.20**	**92**	IAML		16 22 21.5	
	comp=N,670nm,0.2s						
HATHI				IAML		16 22 22.0	
	comp=E,524nm,0.4s						
BYL	**Byron's Ledge**	**0.20**	**95**		Pg	16 22 18.2	-0.1
BYL	**Byron's Ledge**	**0.20**	**95**	IAML		16 22 24.5	
	comp=E,450nm,0.4s						
ALEP	**Alea Permanent**	**0.20**	**304**		Pg	16 22 18.5	0.0
ALEP					Sg	16 22 21.8	+0.1
HLP	**Hilina Pali**	**0.20**	**131**		Pg	16 22 18.4	+0.1
HLP					Sg	16 22 21.7	+0.4
HLP	**Hilina Pali**	**0.20**	**131**	IAML		16 22 22.0	
	comp=N,2μm,0.2s						
HTC	**Hot Caves**	**0.20**	**161**		Pg	16 22 18.2	0.0
KHU	**Kahuku**	**0.23**	**217**		Pg	16 22 18.6	-0.2
KHU					Sg	16 22 22.1	-0.2
KHU	**Kahuku**	**0.23**	**217**	IAML		16 22 22.2	
	comp=N,378nm,0.2s						
KHU				IAML		16 22 22.3	
	comp=E,578nm,0.4s						
PUH	**Pauahi**	**0.24**	**103**		Pg	16 22 18.8	-0.2
PUH					Sg	16 22 22.5	-0.1
PUH	**Pauahi**	**0.24**	**103**	IAML		16 22 22.7	
	comp=E,470nm,0.5s						
KNHH	**Kane Nui o Ham**	**0.29**	**100**		Pg	16 22 19.6	-0.1
STCH	**Steam Cracks**	**0.33**	**98**		Pg	16 22 20.4	0.0
STCH	**Steam Cracks**	**0.33**	**98**	IAML		16 22 26.2	
	comp=E,8.2nm,0.1s						
STCH				IAML		16 22 26.3	
	comp=N,8.3nm,0.1s						
POHA	**Pohakuloa**	**0.33**	**350**		Pg	16 22 21.0	+0.4
POHA	**Pohakuloa**	**0.33**	**350**	IAML		16 22 30.5	
	comp=N,934nm,0.6s						
POHA				IAML		16 22 31.2	
	comp=N,606nm,0.2s						
NPOC	**North of Pu'u**	**0.34**	**96**		Pg	16 22 20.9	+0.2
NPOC	**North of Pu'u**	**0.34**	**96**	IAML		16 22 21.5	
	comp=E,487nm,1.2s						
NPOC				IAML		16 22 21.7	
	comp=N,608nm,0.8s						
JCUZ	**Jacuzzi**	**0.35**	**97**		Pg	16 22 21.1	+0.2
JCUZ	**Jacuzzi**	**0.35**	**97**	IAML		16 22 27.6	
	comp=E,482nm,0.6s						
JCUZ				IAML		16 22 28.3	
	comp=N,657nm,0.9s						
CPH	**Captain Cook**	**0.43**	**278**		Pg	16 22 22.4	+0.1
HUH	**Hualalai**	**0.43**	**306**		Pb	16 22 23.1	-0.3
KHLU	**Kahalu`u**	**0.43**	**292**		Pg	16 22 22.6	+0.2
KHLU					Sg	16 22 29.0	+0.8
KHLU	**Kahalu`u**	**0.43**	**292**	IAML		16 22 35.0	
	comp=E,629nm,0.4s						
JOKA	**Jonika Flow**	**0.44**	**89**		Pg	16 22 21.9	-0.5
JOKA					Sg	16 22 28.5	+0.1
HPAH	**Hawaii Prepara**	**0.64**	**340**	Pg	Pg	16 22 25.2	-1.0
MHA	**Mahukona**	**0.86**	**332**	Pg	Pg	16 22 28.8	-1.7

IDC 12 16:49:01.8±2.2, 0°.90N×126°.22E, h0km, mb3.0/3, mbtmp3.0/3, Error ellipse: s-maj=180.2km s-min=28.4km az=65.0, Northern Molucca Sea

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

WRA	**Warramunga Arr**	**22.19**	**159**	P	P	16 53 59.3	-0.6	
	0.1nm,0.3s,baz=338,slow=11,SNR=4.6							
	0.1nm,0.3s							
ASAR	**Alice Springs**	**25.54**	**163**	P	P	16 54 32.9	+0.4	
	0.1nm,0.3s,baz=345,slow=11,SNR=9.7							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**59.59**	**326**	P	P	16 59 07.5	-0.1	
	0.1nm,0.4s,baz=120,slow=8.5,SNR=1.3							
	0.1nm,0.4s							

*IDC **12** 16:57:49.9±4.2, 5°.58S×152°.38E, h43km±35km, mb3.4/4, mbtmp3.7/5, ML1.6/1, MS3.6/1, Error ellipse: s-maj=51.5km s-min=13.8km az=105.0*

ISC 12 16:57:49.0±1.6, 5°.57S±0°.09×152°.5E±0°.2, h40km, n8, σ0s57/8, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.34**	**340**	P	**Pn**	**16 58 11.2**	**-0.1**
	597nm,0.3s,baz=202,slow=5.4,SNR=656						
KRVT				S	**Sn**	**16 58 28.1**	**+0.2**
	764nm,0.3s,baz=207,slow=16,SNR=24						
KRVT				LR	LR	16 58 39.1	
	comp=Z,101nm,21.2s,baz=280,slow=38						
PMG	**Port Moresby**	**6.51**	**234**	P	**Pn**	**16 59 22.8**	**+0.4**
	0.8nm,0.3s,baz=63,slow=4.5,SNR=2.8						
	16nm,0.9s						
WRA	**Warramunga Arr**	**22.71**	**229**	P	**P**	**17 02 46.5**	**-1.1**
	0.4nm,0.7s,baz=51,slow=9.9,SNR=8.0						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**25.38**	**223**	P	**P**	**17 03 12.7**	**-0.1**
	0.5nm,0.5s,baz=58,slow=9.1,SNR=23						
	0.5nm,0.5s						
BATI	**Baumata**	**28.91**	**259**	LR	LR	17 16 37.8	
	comp=Z,113nm,18.8s,baz=141,slow=39						
FITZ	**Fitzroy Crossi**	**29.02**	**242**	P	**P**	**17 03 45.4**	**-0.1**
	1.3nm,0.6s,baz=60,slow=8.1,SNR=5.5						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**82.99**	**22**	P	**P**	**17 10 10.1**	**+0.3**
	0.7nm,0.7s,baz=253,slow=5.4,SNR=7.7						
	0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**150.24**	**287**	PKPbc	**PKiKP**	**17 17 37.6**	**-0.1**
	0.3nm,0.8s,baz=91,slow=5.4,SNR=2.0						

NOU 12 17:05:17.5, 17°.60S×170°.07E, h107km, MLv4.1/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.58**	**263**	P	Pn	17 05 46.2	+1.1
DVP	**Devils Point**	**1.80**	**266**	P	Pn	17 05 48.2	+0.4
YATNC	**Mamie plateau,**	**5.35**	**213**	P	Pn	17 06 32.8	-2.3
DZM	**Mont Dzumac**	**5.61**	**217**	P	Pn	17 06 36.6	-2.0
OUENC	**Ouen Island, N**	**5.67**	**212**	P	Pn	17 06 41.3	+1.9
	27nm,2.2s						
NOUC	**Port Laguerre**	**5.71**	**218**	P	Pn	17 06 41.9	+2.0

*NEIC **12** 17:07:27.7±2.8, 20°.55S±0°.04×69°.35W±0°.08, h116km±6km, mb3.9/3, ML4.0(GUC), Error ellipse: s-maj=11.0km s-min=5.4km az=96.0*
*GUC **12** 17:07:29.0±0.6, 20°.57S×69°.17W, h105km±3km, ML4.1*
*VAO **12** 17:07:29.0±0.5, 20°.70S×69°.49W, h156km, mb4.2*
*IDC **12** 17:07:30.3±1.8, 20°.65S×68°.69W, h109km±15km, mb3.6/3, mbtmp3.9/5, MS3.4/2, Error ellipse: s-maj=50.8km s-min=14.5km az=104.0*

ISC 12 17:07:27.4±0.7, 20°.55S±0°.03×69°.26W±0°.07, h112km±6km, n63, σ1s39/79, mb3.9/3, 3C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.53**	**204**		**Pn**	**17 07 44.5**	**-0.4**
PB01				Sn	**Sn**	**17 07 57.6**	**-0.4**
PB01	**IPOC Station P**	**0.53**	**204**	⇑*i* P	**Pn**	**17 07 45.2**	**+0.4**
PB01				*e*S	**Sn**	**17 07 57.7**	**-0.2**
PB01				IAML		17 07 59.4	
	comp=N,10μm,0.3s						
TA02	**Huaiquique**	**0.86**	**289**		**Pn**	**17 07 48.6**	**+1.1**
TA02				Sn	**Sn**	**17 08 02.8**	**+0.2**
TA02	**Huaiquique**	**0.86**	**289**	*e*P	**Pn**	**17 07 48.5**	**+1.1**
TA02				*e*S	**Sn**	**17 08 03.6**	**+1.1**
TA02				IAML		17 08 07.0	
	comp=N,15μm,0.1s						
GO01	**Chusmiza**	**0.88**	**4**		**Pn**	**17 07 48.8**	**+0.6**
GO01				Sn	**Sn**	**17 08 03.8**	**0.0**
GO01	**Chusmiza**	**0.88**	**4**	⇓*i* P	**Pn**	**17 07 48.8**	**+0.6**
GO01				*i* S	**Sn**	**17 08 04.3**	**+0.5**
GO01				IAML		17 08 05.5	
	comp=E,17μm,0.1s						
PB02	**IPOC Station P**	**0.97**	**218**		**Pn**	**17 07 49.5**	**+0.9**
PB02				Sn	**Sn**	**17 08 05.4**	**+0.8**
PB02	**IPOC Station P**	**0.97**	**218**	⇑*i* P	**Pn**	**17 07 49.7**	**+1.1**
PB02				*i* S	**Sn**	**17 08 05.3**	**+0.8**
PB02				IAML		17 08 06.5	
	comp=E,9μm,0.2s						
PB09	**IPOC Station P**	**1.24**	**179**		**Pn**	**17 07 52.3**	**+0.8**
PB09				Sn	**Sn**	**17 08 10.2**	**+0.5**
PB09	**IPOC Station P**	**1.24**	**179**	*e*P	**Pn**	**17 07 52.4**	**+0.9**
PB09				*i* S	**Sn**	**17 08 10.3**	**+0.5**
PB09				IAML		17 08 12.3	
	comp=E,3μm,0.5s						
PB07	**IPOC Station P**	**1.31**	**206**		**Pn**	**17 07 52.7**	**+0.4**
PB07				Sn	**Sn**	**17 08 11.2**	**+0.1**
PB07	**IPOC Station P**	**1.31**	**206**	⇑*i* P	**Pn**	**17 07 53.2**	**+0.9**
PB07				*e*S	**Sn**	**17 08 11.7**	**+0.5**
PB07				IAML		17 08 12.4	
	comp=N,2μm,0.5s						
PB04	**IPOC Station P**	**1.96**	**205**		**Pn**	**17 08 00.8**	**+0.6**
PB04				Sn	**Sn**	**17 08 23.3**	**-1.8**
PB04	**IPOC Station P**	**1.96**	**205**	⇓*e*P	**Pn**	**17 08 01.0**	**+0.9**
PB04				*e*S	**Sn**	**17 08 24.6**	**-0.5**
PB04				IAML		17 08 26.3	
	comp=N,807nm,0.2s						
LVC	**Limon Verde**	**2.07**	**171**	P	**

comp=Z,12nm,1.3s
CPSB Cacapava Do Su 17.31 128 *e*P **Pn 17 11 21.9 -0.2**
CNLB Canela 18.82 121 *e*P **P 17 11 37.5 -0.9**
NPGB Novo Progresso 19.02 47 *e*P **Pn 17 11 42.1 -0.5**
SNDB Serra Nova Dou 19.23 66 *e*P **P 17 11 43.1 +0.1**
BB19B Bebedouro 19.39 95 *e*P **P 17 11 44.8 +0.1**
IPMB Ipameri, GO 20.03 86 *e*P **P 17 11 51.4 -0.3**
PLCA Paso Flores 20.15 183 P **P 17 11 55.6 +2.9**
comp=Z,3.6nm,0.9s,baz=2.4,slow=14,SNR=5.2
comp=Z,3.6nm,0.9s
PLCA Paso Flores 20.15 183 P **P 17 11 54.6 +1.9**
PLCA IAmb IAmb 17 12 37.6
comp=Z,5.6nm,1.3s
BDFB Brasilia 20.77 80 LR LR 17 20 29.3
comp=Z,135nm,20.1s,baz=176,slow=38
SMTB Santa Maria do 23.93 64 *e*P **P 17 12 31.3 0.0**
JANB Januaria 24.36 81 *e*P **P 17 12 34.8 -0.4**
BOAV Boa Vista 24.36 22 P **P 17 12 35.9 +0.8**
BOAV IAmb IAmb 17 12 38.5
comp=Z,5.4nm,1.2s
SDBA SAO DESIDERIO 24.70 75 *e*P **P 17 12 39.0 +0.8**
NBAN Anadia - AL 33.56 76 *e*P **P 17 13 57.2 +0.2**
DBIC Dimbokro 68.78 74 P **P 17 18 20.4 +0.5**
comp=Z,1.3nm,0.6s,baz=254,slow=7.0,SNR=2.0
comp=Z,1.3nm,0.6s
TORD Torodi Ar. Bea 77.35 71 P **P 17 19 11.1 +0.7**
comp=Z,0.8nm,0.5s,baz=258,slow=5.9,SNR=8.8
TORD pP **pP 17 19 38.7 -1.5**
comp=Z,0.6nm,0.6s,baz=248,slow=5.5,SNR=3.5
comp=Z,0.8nm,0.5s
YBH Yreka Blue Hor 79.27 322 LR LR 17 56 51.0
comp=Z,17nm,18.2s,baz=336,slow=37
MKAR Makanchi Array 145.05 35 PKP PKPbc 17 26 52.5 +1.3
comp=Z,0.2nm,0.7s,baz=328,slow=1.9,SNR=1.8

IDC ***12*** *17:18:36.0±50.0, 22.°01S×174.°84W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=941.9km s-min=177.9km az=86.0*
NEIC ***12*** *17:20:00.5±0.7, 23.°3S±0.°2×178.°9W±0.°3, h595km±23km, mb4.2/16, Error ellipse: s-maj=46.7km s-min=16.3km az=65.0*
ISC 12 17:19:59.1±1.8, 23.°2S±0.°2×178.°8W±0.°2, h600km, n22, σ0991/22, mb4.0/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**6.06**	**173**		**P**	**17 21 38.7**	**-1.9**
MSVF	**Nonsavu**	**6.22**	**331**	P	**P**	**17 21 42.3**	**-0.1**
URZ	**Urewera**	**15.41**	**192**	P	**P**	**17 23 11.2**	**+0.4**
URZ				IAmb	IAmb	17 23 31.8	
	comp=Z,32nm,1.2s						
QRZ	**Quartz Range**	**19.03**	**201**	P	**P**	**17 23 44.7**	**+0.8**
LTZ	**Lake Taylor**	**20.89**	**199**	P	**P**	**17 24 01.3**	**+0.6**
EIDS	**Eidsvold**	**27.55**	**259**	P	**P**	**17 24 58.4**	**-1.4**
EIDS				IAmb	IAmb	17 25 39.5	
	comp=Z,8.2nm,1.1s						
CTAO	**Charters Tower**	**32.63**	**269**	P	**P**	**17 25 43.0**	**-0.4**
STKA	**Stephens Creek**	**36.04**	**247**	P	**P**	**17 26 11.5**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=72,slow=9.6,SNR=1.6						
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**36.04**	**247**	P	**P**	**17 26 11.5**	**-0.1**
BBOO	**Buckleboo**	**40.77**	**246**	P	**P**	**17 26 48.8**	**-1.0**
BBOO				IAmb	IAmb	17 27 26.6	
	comp=Z,18nm,1.4s						
AS31	**Alice Springs**	**43.28**	**260**	P	**P**	**17 27 09.4**	**-0.2**
ASAR	**Alice Springs**	**43.28**	**260**	P	**P**	**17 27 09.6**	**0.0**
	comp=Z,0.9nm,0.4s,baz=94,slow=7.4,SNR=53						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	**43.28**	**260**	P	**P**	**17 27 09.2**	**-0.4**
WR0	**Warramunga Arr**	**43.41**	**265**	P	**P**	**17 27 10.1**	**-0.4**
WR0				IAmb	IAmb	17 27 42.1	
	comp=Z,5.1nm,1.4s						
WB0	**Warramunga Arr**	**43.59**	**265**	P	**P**	**17 27 11.4**	**-0.5**
WB0				IAmb	IAmb	17 27 52.1	
	comp=Z,8.0nm,1.4s						
WRAB	**Tennant Creek**	**43.59**	**265**	P	**P**	**17 27 11.2**	**-0.8**
WRAB				IAmb	IAmb	17 27 12.7	
	comp=Z,8.3nm,1.2s						
WRA	**Warramunga Arr**	**43.60**	**265**	P	**P**	**17 27 11.8**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=102,slow=8.2,SNR=105						
	comp=Z,1.5nm,0.4s						
WRA	**Warramunga Arr**	**43.60**	**265**	P	**P**	**17 27 11.0**	**-1.1**
FORT	**Forrest**	**47.63**	**249**	P	**P**	**17 27 42.1**	**-0.2**
KNRA	**Kununurra**	**49.84**	**269**	P	**P**	**17 27 59.7**	**+0.8**
KNRA				IAmb	IAmb	17 28 33.5	
	comp=Z,14nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.03**	**265**	P	**P**	**17 28 16.2**	**+1.5**
FITZ				IAmb	IAmb	17 28 58.0	
	comp=Z,8.5nm,1.5s						
VNDA	**Vanda**	**55.16**	**185**	P	**P**	**17 28 37.4**	**+1.6**

SOME ***12*** *17:50:09.1, 39.°33N×73.°70E, h15km*
KRNET ***12*** *17:50:10.2±0.1, 39.°15N×74.°06E, mb3.2*
ISC 12 17:50:11.3±2.0, 39.°45N±0.°09×73.°62E±0.°06, h10km, n10, σ2927/20, 6C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**2.47**	**12**	⇑*i*P	**Pb**	**17 50 55.3**	**-0.6**
	baz=4.0						
ARLS				⇑*i*S	**Sb**	**17 51 28.2**	**+1.8**
	baz=4.0						
GAR	**Garm**	**2.60**	**261**	⇑*i*P	**Pb**	**17 50 58.0**	**-0.1**
	baz=68						
GAR				⇑*i*S	**Sg**	**17 51 33.2**	**-1.7**
	baz=68						
UCH	**Uchtor**	**2.86**	**13**	⇑*i*P	**Pb**	**17 51 00.7**	**-2.0**
	baz=6.0						
UCH				⇑*i*S	**Sb**	**17 51 37.8**	**-0.1**
	baz=6.0						
MRKS	**Merke**	**3.31**	**355**	*e*P	**Pb**	**17 51 12.1**	**+2.0**
	3.2nm,0.4s						
MRKS				*e*S	**Sg**	**17 51 57.3**	**-0.2**
	11nm,0.5s						
IUG	**luzhnay**	**3.83**	**316**	*e*P	**Pb**	**17 51 20.8**	**+1.7**
	172nm,0.6s						
IUG				*e*S	**Sg**	**17 52 12.1**	**-2.1**
	16nm,0.8s						
KST	**Kastek**	**4.00**	**25**	*e*P	**Pb**	**17 51 21.3**	**-0.7**
	1.9nm,0.7s						
KST				*e*S	**Sb**	**17 52 12.9**	**+2.4**
	5.3nm,0.8s						
KRBS	**Karabastau**	**4.51**	**19**	*e*P	**Pb**	**17 51 33.0**	**+2.3**
	1.6nm,0.6s						
KRBS				*e*S	**Sg**	**17 52 33.6**	**-2.6**
	2.4nm,0.9s						
MDOK	**Medeo**	**4.52**	**34**	*e*P	**Pb**	**17 51 33.2**	**+2.4**
	2.6nm,1.0s						
MDOK				*e*S	**Sg**	**17 52 34.0**	**-2.5**
	3.5nm,0.7s						
KTBS	**Karatobe**	**4.84**	**27**	*e*P	**Pb**	**17 51 38.9**	**+2.7**
	0.8nm,1.1s						
KTBS				*e*S	**Sg**	**17 52 43.8**	**-2.8**
	1.7nm,0.3s						
KUU	**Kurty**	**4.89**	**24**	*e*P	**Pb**	**17 51 39.2**	**+2.2**
	1.6nm,0.1s						
KUU				*e*S	**Sg**	**17 52 44.2**	**-3.9**
	4.3nm,0.8s						

SOME ***12*** *18:00:54.7, 40.°67N×78.°17E, h10km*
IDC ***12*** *18:00:55.9±0.4, 40.°70N×78.°24E, h0km, mb4.8/33, mbtmp4.8/39, ML4.2/6, MS4.4/54, Error ellipse: s-maj=9.3km s-min=8.6km az=19.0*
NNC ***12*** *18:00:57.0±1.1, 40.°77N×78.°25E, h0km, mb5.7, mpv5.4, Error ellipse: s-maj=8.5km s-min=5.9km az=157.0*
BJI ***12*** *18:00:56.8±0.0, 40.°66N×78.°23E, h12km, mb4.8/61, mB4.9/41, ML5.3/9, Ms4.9/77, Ms7 4.7/71*
KRNET ***12*** *18:00:56.3±0.1, 40.°60N×78.°38E, mb5.5*
MOS ***12*** *18:00:59.4±1.0, 40.°60N×78.°31E, h40km, mb5.1/36, MS4.7/25, Error ellipse: s-maj=4.5km s-min=3.3km az=117.6*
GCMT ***12*** *18:01:00.3±0.2, 40.°70N±0.°01×78.°40E±0.°02, h21km, MW5.0/108, Moment Tensor Solution. s39,c45; s108,c160; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.67±.13; Mθθ-3.28±.09; Mφφ0.61±.07; Mre2.20±.16; Mθφ0.62±.06; Mφr1.08±.15; Best double couple: Ms3.93700×10^16 NP1:φs77.00000°, δ66.00000°, λ67.00000°. NP2:φs302.00000°, δ33.00000°, λ131.00000°. Principal axes: T 3.8540, Plg62.0000°, Azm311.0000°;*
N 0.1660, Plg21.0000°, Azm86.0000°; P -4.0190, Plg18.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC ***12*** *18:01:01.3±1.4, 40.°72N±0.°06×78.°29E±0.°07, h39km±5km, mb5.2/305 Error ellipse: s-maj=8.8km s-min=8.0km az=141.0*
ISC 12 18:00:59.0±0.3, 40.°69N±0.°02×78.°23E±0.°02, h18km±1km, h19km:pP-P, n1142, σ1980/1181, mb5.2/279, MS4.6/97, 98C-55D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.80**	**4**		**Pn**	**18 01 29.3**	**0.0**
PRZ	**Przheval'sk**	**1.80**	**4**	PN	**Pn**	**18 01 29.3**	**0.0**
PRZ	**Przheval'sk**	**1.80**	**4**	⇓*e*P	**Pn**	**18 01 29.9**	**+0.6**
	baz=0.0						
PRZ				⇓*i*S	**Sb**	**18 01 54.4**	**+0.6**
	baz=0.0						
NRN	**Naryn**	**1.84**	**295**		**Pn**	**18 01 29.9**	**-0.1**
NRN				Sn	**Sb**	**18 01 55.1**	**-0.1**
NRN	**Naryn**	**1.84**	**295**	PN	**Pn**	**18 01 29.9**	**-0.1**
NRN						18 01 55.1	
KSH	**Kashi**	**2.09**	**237**	Pn	**Pg**	**18 01 41.2**	**+2.1**
KSH				Sn	Sg	18 02 18.1	+12
KSH				smax	smax		
	comp=N,23μm,1.0s						
KSH				smax	smax		
	comp=E,15μm,0.8s						
KSH				LR	LR		
	comp=N,32μm,12.1s						
KSH				LR	LR		
	comp=E,44μm,8.7s						
KSH				LR	LR		
	comp=Z,31μm,9.3s						
ULHL	**Ulahol**	**2.16**	**317**	P	**Pb**	**18 01 35.8**	**-1.8**
	SNR=1025						
ULHL	**Ulahol**	**2.16**	**317**	⇑*e*P	**Pn**	**18 01 35.4**	**+1.2**
ULHL	baz=16			⇑*i*S	**Sb**	**18 02 04.1**	**0.0**
	baz=16						
SATY	**Saty**	**2.37**	**3**	*i* PN	**Pb**	**18 01 39.3**	**-1.9**
SATY	**Saty**	**2.37**	**3**	*e*P	**Pb**	**18 01 39.7**	**-1.6**
	9μm,0.7s						
SATY				*e*S	**Sg**	**18 02 12.8**	**-2.6**
	18μm,0.5s						
SATY	**Saty**	**2.37**	**3**	*i* Pg	**Pb**	**18 01 39.3**	**-1.9**
	baz=2.9						
SATY				*e*Lg	Lg	18 02 12.9	
	baz=2.9						
SATY	**Saty**	**2.37**	**3**	Pg	**Pb**	**18 01 39.1**	**-2.2**
	9μm,0.7s						
SATY				Lg	Lg	18 02 12.5	
	18μm,0.5s						
ZHN	**Zhinishke**	**2.48**	**4**	*i* PN	**Pb**	**18 01 41.0**	**-2.1**
ZHN	**Zhinishke**	**2.48**	**4**	*i* Pg	**Pb**	**18 01 41.0**	**-2.1**
	baz=3.3						
ZHN				*e*Lg	Lg	18 02 14.2	
	baz=3.3						
BOOM	**Boomskoye usch**	**2.49**	**317**		**Pb**	**18 01 40.8**	**-2.4**
BOOM	**Boomskoye usch**	**2.49**	**317**	PN	**Pb**	**18 01 40.8**	**-2.4**
BOOM	**Boomskoye usch**	**2.49**	**317**	⇑*e*P	**Pn**	**18 01 40.1**	**+1.4**
	baz=17						
BOOM				⇑*i*S	**Sb**	**18 02 11.9**	**-1.7**
	baz=17						
UZB	**Uzunbulak**	**2.53**	**13**	*i* PN	**Pn**	**18 01 41.2**	**+2.0**
UZB	**Uzunbulak**	**2.53**	**13**	*e*P	**Pn**	**18 01 41.1**	**+2.0**
	819nm,0.4s						
UZB				*e*S	**Sb**	**18 02 15.1**	**+0.4**
	12μm,0.7s						
UZB	**Uzunbulak**	**2.53**	**13**	*i* Pg	**Pn**	**18 01 41.3**	**+2.0**
	baz=14						
UZB				*e*Lg	Lg	18 02 14.9	
	baz=14						
UZB	**Uzunbulak**	**2.53**	**13**	Pg	**Pn**	**18 01 40.9**	**+1.7**
	819nm,0.4s						
UZB				Lg	Lg	18 02 15.2	
	12μm,0.7s						
MDOK	**Medeo**	**2.63**	**341**	*c* PN	**Pn**	**18 01 42.8**	**+2.3**
MDOK				*e*		18 02 18.6	
MDOK	**Medeo**	**2.63**	**341**	*e*P	**Pb**	**18 01 44.3**	**-1.2**
	4μm,0.5s						
MDOK				*e*S	**Sg**	**18 02 20.4**	**-3.1**
	21μm,0.6s						
MDOK	**Medeo**	**2.63**	**341**	⇑*i*Pg	**Pn**	**18 01 42.9**	**+2.3**
	baz=340						
MDOK				*e*Lg	Lg	18 02 18.6	
	baz=340						
MDOK	**Medeo**	**2.63**	**341**	⇓Pn	**Pn**	**18 01 41.7**	**+1.1**
	3μm,0.5s						
MDOK				Pg	**Pb**	**18 01 43.1**	**-2.5**
	4μm,0.5s						
MDOK				Lg	Lg	18 02 19.1	
	21μm,0.6s						
MDOK				⇑Lg	Lg	18 02 20.4	
	3μm,0.4s						
SHLS	**Shalkode**	**2.63**	**20**	*i* PN	**Pb**	**18 01 44.6**	**-1.1**
SHLS	**Shalkode**	**2.63**	**20**	*e*P	**Pb**	**18 01 44.7**	**-1.0**
	843nm,0.3s						
SHLS				*e*S	**Sg**	**18 02 21.1**	**-2.5**
	14μm,0.5s						
SHLS	**Shalkode**	**2.63**	**20**	*i* Pg	**Pb**	**18 01 44.6**	**-1.0**
	baz=27						
SHLS				*e*Lg	Lg	18 02 21.0	
	baz=27						
SHLS	**Shalkode**	**2.63**	**20**	Pg	**Pb**	**18 01 44.3**	**-1.3**
	843nm,0.3s						
SHLS				Lg	Lg	18 02 21.1	
	14μm,0.5s						
AAA	**Alma-Ata**	**2.70**	**339**	*i* PN	**Pb**	**18 01 44.4**	**-2.4**
AAA				*e*		18 02 22.2	
AAA	**Alma-Ata**	**2.70**	**339**	*e*P	**Pb**	**18 01 46.2**	**-0.6**
	4μm,0.5s						
AAA				*e*S	**Sg**	**18 02 23.4**	**-2.5**
	37μm,0.8s						
AAA	**Alma-Ata**	**2.70**	**339**	*i* Pg	**Pb**	**18 01 44.5**	**-2.4**
	baz=338						
AAA				*e*Lg	Lg	18 02 22.3	
	baz=338						
AAA	**Alma-Ata**	**2.70**	**339**	Pg	**Pb**	**18 01 45.4**	**-1.4**
	4μm,0.5s						
AAA				Lg	Lg	18 02 23.1	
	37μm,0.8s						
KPKS	**Kokpek**	**2.80**	**7**	*i* PN	**Pn**	**18 01 44.6**	**+1.7**
KPKS	**Kokpek**	**2.80**	**7**	*e*P	**Pb**	**18 01 46.4**	**-2.0**
	3μm,0.3s						
KPKS				*e*S	**Sb**	**18 02 23.9**	**+1.5**
	18μm,0.5s						
KPKS	**Kokpek**	**2.80**	**7**	*i* Pg	**Pn**	**18 01 44.6**	**+1.7**
	baz=6.8						
KPKS				*e*Lg	Lg	18 02 22.1	
	baz=6.8						
KPKS	**Kokpek**	**2.80**	**7**	Pg	**Pn**	**18 01 45.2**	**+2.3**
	3μm,0.3s						
KPKS				Lg	Lg	18 02 23.0	
	18μm,0.5s						
KURS	**Kuram**	**2.80**	**359**	*e*P	**Pb**	**18 01 47.4**	**-1.1**
	6μm,0.6s						
KURS				*e*S	**Sb**	**18 02 25.2**	**+2.8**
	11μm,0.4s						
KURS	**Kuram**	**2.80**	**359**	Pg	**Pb**	**18 01 46.6**	**-1.9**
	6μm,0.6s						
KURS				Lg	Lg	18 02 25.0	
	11μm,0.4s						
KST	**Kastek**	**2.90**	**325**	Pg	**Pn**	**18 01 44.9**	**+0.6**
	1μm,0.4s						
KST				Lg	Lg	18 02 22.4	
	14μm,0.9s						
TKM2	**Tokmak 2**	**2.98**	**319**	P	**Pn**	**18 01 47.6**	**+2.2**
	SNR=252						
TKM2	**Tokmak 2**	**2.98**	**319**	PN	**Pn**	**18 01 47.4**	**+2.0**
TKM2						18 02 31.0	
TKM2	**Tokmak 2**	**2.98**	**319**	⇓Pn	**Pn**	**18 01 47.2**	**+1.8**
	1μm,0.7s						
TKM2				⇑Lg	Lg	18 02 31.1	
	10μm,0.8s						
TKM2	**Tokmak 2**	**2.98**	**319**	⇑*e*P	**Pn**	**18 01 46.9**	**+1.5**
	baz=19						
TKM2				⇑*e*S	**Sn**	**18 02 23.6**	**+2.9**
	baz=19						
KBK	**Karagaybulak**	**3.15**	**310**	P	**Pn**	**18 01 50.1**	**+2.4**
	SNR=134						
KBK	**Karagaybulak**	**3.15**	**310**	⇑*e*P	**Pn**	**18 01 49.2**	**+1.4**
	baz=10.0						
KBK				⇑*i*S	**Sn**	**18 02 27.7**	**+2.8**
	baz=10.0						
ARLS	**Aral**	**3.17**	**293**	⇓*e*P	**Pn**	**18 01 49.4**	**+1.4**
	baz=94						
ARLS				⇓*i*S	**Sn**	**18 02 28.1**	**+2.7**
	baz=94						
KTMS	**Ketmen**	**3.18**	**29**	*e*P	**Pb**	**18 01 52.9**	**-2.0**
	377nm,0.5s						
KTMS				*e*S	**Sb**	**18 02 35.3**	**+1.9**
	2μm,0.4s						
KTMS	**Ketmen**	**3.18**	**29**	Pg	**Pb**	**18 01 52.4**	**-2.5**
	377nm,0.5s						
KTMS				Lg	Lg	18 02 35.1	
	2μm,0.4s						
UCH	**Uchtor**	**3.19**	**300**	P	**Pn**	**18 01 50.3**	**+1.8**
	SNR=50						
UCH	**Uchtor**	**3.19**	**300**	⇓*e*P	**Pn**	**18 01 49.8**	**+1.2**
	baz=0.0						
UCH				⇓*i*S	**Sn**	**18 02 29.0**	**+2.7**
	baz=0.0						
KTBS	**Karatobe**	**3.23**	**340**	*e*P	**Pb**	**18 01 54.9**	**-1.0**
	1μm,0.3s						
KTBS				*e*S	**Sb**	**18 02 38.4**	**+3.5**
	15μm,0.7s						
KTBS	**Karatobe**	**3.23**	**340**	Pg	**Pb**	**18 01 54.3**	**-1.5**
	1μm,0.3s						
KTBS				Lg	Lg	18 02 38.8	
	15μm,0.7s						
AAK	**Ala-Archa**	**3.41**	**306**	Pn	**Pn**	**18 01 53.4**	**+2.1**
	21nm,0.3s,baz=130,slow=10,SNR=56						
AAK				Pg	**Pb**	**18 01 58.5**	**-0.4**
	482nm,0.3s,baz=137,slow=15,SNR=171						
AAK				Lg	Lg	18 02 42.3	
	406nm,0.3s,baz=313,slow=22,SNR=32						
AAK				LR	LR	18 03 28.2	
	comp=Z,6μm,21.7s,baz=118,slow=45						
	56nm,0.3s						
AAK	**Ala-Archa**	**3.41**	**306**	P	**Pn**	**18 01 53.5**	**+2.1**
	SNR=67						
AAK	**Ala-Archa**	**3.41**	**306**		**Pn**	**18 01 53.1**	**+1.8**
AAK	**Ala-Archa**	**3.41**	**306**	*c*ePN	**Pn**	**18 01 53.2**	**+1.9**
AAK				pmax	pmax		
	comp=Z,67nm,0.6s						
AAK	**Ala-Archa**	**3.41**	**306**	⇑*i*P	**Pn**	**18 01 52.9**	**+1.6**
	baz=6.0						
AAK				⇑*i*S	**Sn**	**18 02 34.2**	**+2.8**
	baz=6.0						
AAK	**Ala-Archa**	**3.41**	**306**	*i* P	**Pn**	**18 01 54.5**	**+3.2**
	SNR=30						
FRU1	**Bishkek**	**3.43**	**309**	⇑*e*P	**Pn**	**18 01 53.3**	**+1.8**
	baz=9.0						
FRU1				⇑*i*S	**Sn**	**18 02 34.7**	**+3.0**
	baz=9.0						
CHMS	**Chumysh**	**3.48**	**313**	P	**Pn**	**18 01 53.9**	**+1.7**
	SNR=86						
CHMS	**Chumysh**	**3.48**	**313**	⇑Pn	**Pn**	**18 01 53.8**	**+1.7**
	comp=Z,30nm,0.3s						
CHMS				⇓Pg	**Pb**	**18 01 59.7**	**-0.3**
	comp=Z,3μm,1.4s						
CHMS				⇑Lg	Lg	18 02 45.3	
	comp=Z,5μm,0.7s						
CHMS	**Chumysh**	**3.48**	**313**	⇓*i*P	**Pn**	**18 01 53.7**	**+1.6**
	baz=13						
CHMS				⇓*i*S	**Sn**	**18 02 35.5**	**+2.7**
	baz=13						
KUU	**Kurty**	**3.50**	**337**	*i* PN	**Pn**	**18 01 54.2**	**+1.8**
KUU	**Kurty**	**3.50**	**337**	*e*P	**Pb**	**18 01 58.9**	**-1.4**
	comp=Z,501nm,0.6s						
KUU				*e*S	**Sb**	**18 02 45.2**	**+2.8**
	comp=Z,8μm,0.8s						
KUU	**Kurty**	**3.50**	**337**	*i* Pb	**Pn**	**18 01 54.3**	**+1.8**
	baz=336						
KUU				*i* Pg	**Pb**	**18 01 58.7**	**-1.6**
	baz=336						
KUU				*e*Lg	Lg	18 02 44.7	
	baz=336						
KUU	**Kurty**	**3.50**	**337**	Pg	**Pb**	**18 01 58.4**	**-1.9**
	comp=Z,501nm,0.6s						
KUU				Lg	Lg	18 02 45.1	
	comp=Z,8μm,0.8s						
ARXS	**Arharly**	**3.54**	**355**	*e*PN	**Pn**	**18 01 55.0**	**+2.0**
ARXS	**Arharly**	**3.54**	**355**	*e*P	**Pb**	**18 01 59.1**	**-2.0**
	comp=Z,975nm,0.6s						
ARXS				*e*S	**Sb**	**18 02 45.6**	**+2.0**
	comp=Z,9μm,0.5s						
ARXS	**Arharly**	**3.54**	**355**	Pg	**Pb**	**18 01 58.6**	**-2.4**
	comp=Z,975nm,0.6s						
ARXS				Lg	Lg	18 02 45.4	
	comp=Z,9μm,0.5s						
KRBS	**Karabastau**	**3.56**	**329**	*e*P	**Pb**	**18 01 60.0**	**-1.4**
	comp=Z,525nm,0.3s						
KRBS				*e*S	**Sb**	**18 02 47.3**	**+3.1**
	comp=Z,3μm,0.5s						
KRBS	**Karabastau**	**3.56**	**329**	Pg	**Pb**	**18 01 59.5**	**-1.9**
	comp=Z,525nm,0.3s						
KRBS				Lg	Lg	18 02 47.2	
	comp=Z,3μm,0.5s						
AML	**Almayashu**	**3.70**	**294**	P	**Pn**	**18 01 57.7**	**+2.1**
	SNR=72						
USP	**Ospenovka**	**3.79**	**314**	P	**Pn**	**18 01 58.1**	**+1.6**
	SNR=16						
USP	**Ospenovka**	**3.79**	**314**	⇓*e*P	**Pn**	**18 01 58.1**	**+1.6**
	baz=14						
USP				⇓*i*S	**Sn**	**18 02 43.3**	**+2.7**
	baz=14						
DJR	**Jarkent**	**3.82**	**17**	*e*P	**Pb**	**18 02 04.9**	**-1.0**
	comp=Z,504nm,0.4s						
DJR				*e*S	**Sb**	**18 02 55.7**	**+3.8**
	comp=Z,3μm,0.6s						
DJR	**Jarkent**	**3.82**	**17**	Pg	**Pb**	**18 02 04.2**	**-1.6**
	comp=Z,504nm,0.4s						
DJR				Lg	Lg	18 02 55.0	
	comp=Z,3μm,0.6s						
SGDS	**Sogindy**	**3.85**	**317**	*i* PN	**Pb**	**18 02 05.3**	**-1.0**
SGDS	**Sogindy**	**3.85**	**317**	*e*P	**Pb**	**18 02 05.0**	**-1.3**
	comp=Z,82nm,0.5s						
SGDS				*e*S	**Sb**	**18 02 55.7**	**+3.1**
	comp=Z,4μm,0.7s						
SGDS	**Sogindy**	**3.85**	**317**	*i* Pg	**Pb**	**18 02 05.4**	**-1.0**
	baz=316						
SGDS				*e*Lg	Lg	18 02 56.2	
	baz=316						
SGDS	**Sogindy**	**3.85**	**317**	Pg	**Pb**	**18 02 04.3**	**-2.0**
	comp=Z,82nm,0.5s						
SGDS				Lg	Lg	18 02 55.3	
	comp=Z,4μm,0.7s						
EKS2	**Erkin-Say**	**3.87**	**302**	P	**Pn**	**18 01 60.0**	**+2.3**
	SNR=194						
EKS2	**Erkin-Say**	**3.87**	**302**	⇑*i*P	**Pn**	**18 01 59.1**	**+1.4**
	baz=2.0						
EKS2				⇑*i*S	**Sn**	**18 02 45.1**	**+2.3**
	baz=2.0						
MRKS	**Merke**	**4.27**	**300**	Pg	**Pb**	**18 02 13.1**	**-0.5**
	comp=Z,338nm,0.6s						
MRKS				Lg	Lg	18 03 11.1	
	comp=Z,4μm,0.8s						
TDK	**Taldyqorghan**	**4.31**	**2**	*e*PN	**Pn**	**18 02 07.7**	**+4.1**
TDK	**Taldyqorghan**	**4.31**	**2**	*e*P	**Pb**	**18 02 15.3**	**+1.1**
	comp=Z,4μm,0.4s						
TDK				*e*S	**Sg**	**18 03 13.1**	**-4.3**
	comp=Z,7μm,0.6s						
TDK	**Taldyqorghan**	**4.31**	**2**	*e*Pb	**Pn**	**18 02 07.7**	**+4.1**
	baz=1.5						
TDK				*i* Pg	**Pb**	**18 02 12.0**	**-2.2**
	baz=1.5						
TDK				*e*Sn	**Sn**	**18 02 50.9**	**-2.6**
	baz=1.5						
TDK				*e*Lg	Lg	18 03 14.0	
	baz=1.5						
TDK	**Taldyqorghan**	**4.31**	**2**	Pg	**Pb**	**18 02 14.7**	**+0.4**
	comp=Z,4μm,0.4s						
TDK				Lg	Lg	18 03 13.0	
	comp=Z,7μm,0.6s						
DRK	**Karamyk**	**

DZA Taraz 5.61 295 *e*Pg **Pb** **18 02 37.8 +1.5**
baz=294
DZA *e*Lg Lg 18 03 52.7
baz=294
KK31 Karatay Array 6.24 295 Pn **Pn** **18 02 30.4 +0.2**
KK31 Karatay Array 6.24 295 *e*PN **Pn** **18 02 30.8 +0.7**
KK31 Karatay Array 6.24 295 ⇓Pn **Pn** **18 02 30.9 +0.7**
comp=Z,3.2nm,0.4s,baz=114,slow=13,SNR=97
KK31 ⇑Pg **Pb** **18 02 50.2 +3.1**
comp=Z,134nm,0.6s,baz=106,slow=16,SNR=34
KK31 ⇓Lg Lg 18 04 11.6
comp=Z,364nm,0.6s,baz=107,slow=27,SNR=5.7
KKAR Karatay Array 6.24 295 Pn **Pn** **18 02 28.9 -1.3**
KKAR Karatay Array 6.24 295 **Pn** **18 02 29.4 -0.7**
KKAR Karatay Array 6.24 295 PN **Pn** **18 02 29.5 -0.7**
GAR Garm 6.32 257 Pn **Pn** **18 02 29.9 -1.3**
IUG luzhnay 6.33 286 *i* PN **Pn** **18 02 33.2 +1.8**
IUG luzhnay 6.33 286 *i* Pn **Pn** **18 02 33.2 +1.8**
baz=285
IUG *e*Pg **Pb** **18 02 52.7 +4.0**
baz=285
IUG *e*Lg Lg 18 04 15.0
baz=285
IUG luzhnay 6.33 286 Pg **Pb** **18 02 50.9 +2.2**
comp=Z,2µm,0.5s
IUG Lg Lg 18 04 14.9
comp=Z,2µm,0.7s
MAKZ Makanchi 6.69 23 **Pn** **18 02 35.9 -0.4**
MAKZ Makanchi 6.69 23 PN **Pn** **18 02 36.2 -0.1**
MAKZ Makanchi 6.69 23 ⇑Pn **Pn** **18 02 36.3 -0.1**
comp=Z,43nm,0.5s
MAKZ ⇑Pg **Pb** **18 02 58.3 +3.6**
comp=Z,123nm,0.8s
MAKZ ⇓Lg Lg 18 04 28.9
comp=Z,248nm,0.9s
MK31 Makanchi Array 6.78 24 Pn **Pn** **18 02 36.5 -1.0**
MK31 Makanchi Array 6.78 24 *e*PN **Pn** **18 02 37.5 0.0**
MK31 Makanchi Array 6.78 24 Pn **Pn** **18 02 36.4 -1.1**
comp=Z,116nm,0.7s,baz=203,slow=12,SNR=615
MK31 ⇓Pg **Pb** **18 02 58.3 +2.2**
comp=Z,170nm,0.8s
MK31 Lg Lg 18 04 30.0
comp=Z,476nm,0.8s,baz=209,slow=25,SNR=4.0
MKAR Makanchi Array 6.78 24 Pn **Pn** **18 02 37.8 +0.3**
comp=Z,9.2nm,0.3s,baz=209,slow=14,SNR=356
MKAR Sn **Sn** **18 03 54.8 +0.7**
comp=Z,23nm,0.3s,baz=211,slow=21,SNR=5.5
MKAR Lg Lg 18 04 29.8
comp=Z,38nm,0.3s,baz=211,slow=25,SNR=5.9
comp=Z,15nm,0.3s
MKAR Makanchi Array 6.78 24 Pn **Pn** **18 02 36.8 -0.6**
TAS Tashkent 6.79 278 **Pn** **18 02 38.8 +1.2**
TAS Tashkent 6.79 278 PN **Pn** **18 02 38.8 +1.2**
CHGR Chuyangaron 7.28 257 **Pn** **18 02 44.0 -0.5**
CHGR Chuyangaron 7.28 257 P **Pn** **18 02 44.0 -0.5**
WMQ Urumqi 7.69 63 *e*Pn **Pn** **18 02 50.8 +0.8**
WMQ Sn **Sn** **18 04 21.7 +5.0**
WMQ smax smax
comp=Z,1µm,1.3s
WMQ smax smax
comp=Z,890nm,1.1s
WMQ LR LR
comp=Z,10µm,12.3s
WMQ LR LR
comp=Z,3µm,8.7s
WMQ LR LR
comp=Z,2µm,11.7s
CHCP Chirah Chowk 8.05 211 P **Pn** **18 02 55.9 +0.8**
NIL Nilore 8.07 211 **Pn** **18 02 55.6 +0.4**
NIL Nilore 8.07 211 P **Pn** **18 02 55.6 +0.4**
ZSN Zaisan 8.28 33 *e*P **Pn** **18 02 58.6 +0.6**
ZSN *e* 18 04 29.1
ZSN pmax pmax
comp=Z,3.0nm,0.5s
ZSN Zaisan 8.28 33 *e*Pn **Pn** **18 02 58.7 +0.6**
comp=Z,3.0nm,0.5s,baz=33
ZSN *e*Sn **Sn** **18 04 29.2 -1.8**
baz=33
ZSN *e*Lg Lg 18 05 12.6
baz=33
ZSN Zaisan 8.28 33 Pg **Pb** **18 03 24.2 +2.5**
comp=Z,46nm,0.7s
ZSN Lg Lg 18 05 12.1
comp=Z,553nm,1.9s
JMU Jammu 8.39 200 *e*P **Pn** **18 03 00.0 +0.4**
JMU *ex* x 18 04 34.1
THN Thein Dam 8.48 195 *e*P **Pn** **18 03 00.7 -0.1**
CEP Cherat 8.50 218 ⇓P **Pn** **18 03 01.8 +0.5**
BHK Bhakra 9.37 190 *e*P **Pn** **18 03 12.5 -0.6**
BHK *e*S Sn 18 04 49.0 -8.9
THW Thamme Wali 9.44 215 P **Pn** **18 03 13.1 -0.9**
KBL Kabul 9.52 233 Pn **Pn** **18 03 14.6 -0.7**
KBL Kabul 9.52 233 P **Pn** **18 03 14.6 -0.7**
KBL Kabul 9.52 233 P **Pn** **18 03 16.6 +1.3**
SNR=24
KBL S **Sn** **18 05 00.6 -1.3**
SEM Semipalatinsk 9.82 8 *i* P **Pn** **18 03 19.3 -0.1**
SEM pmax pmax
comp=Z,5.0nm,0.7s
SEM Semipalatinsk 9.82 8 *i* Pn **Pn** **18 03 19.4 -0.1**
comp=Z,5.1nm,0.7s,baz=7.6
SEM *e*Pg 18 03 54.8
baz=7.6
SEM *e*Lg Lg 18 06 06.7
baz=7.6
KURBB Kurchatov Arra 9.94 1 Pn **Pn** **18 03 20.5 -0.3**
comp=Z,5.2nm,0.3s,baz=188,slow=12,SNR=377
KURBB Sn **Sn** **18 05 06.2 -5.5**
comp=Z,1.0nm,0.3s,baz=178,slow=30,SNR=4.8
KURBB Lg Lg 18 06 10.6
comp=Z,3.5nm,0.3s,baz=183,slow=29,SNR=7.3
KURBB LR LR 18 07 28.9
comp=Z,3µm,21.6s,baz=164,slow=40
comp=Z,41nm,0.8s
KURBB Kurchatov Arra 9.94 1 P **Pn** **18 03 20.2 -0.6**
KURBB Kurchatov Arra 9.94 1 ⇑Pn **Pn** **18 03 20.6 -0.1**
comp=Z,59nm,0.6s
KURBB ⇑Lg Lg 18 06 11.7
comp=Z,1µm,0.8s
KURK Kurchatov 10.03 1 **Pn** **18 03 21.4 -0.7**
KURK Kurchatov 10.03 1 *ce*P **Pn** **18 03 21.8 -0.2**
KURK pmax pmax
comp=Z,143nm,0.8s
KURK Kurchatov 10.03 1 P **Pn** **18 03 21.9 -0.1**
KURK S **Sn** **18 05 14.8 +0.8**
BRZS Berezniki 10.08 339 *i* P **Pn** **18 03 22.2 -0.5**
BRZS *e* 18 05 14.9
BRZS Berezniki 10.08 339 *i* Pn **Pn** **18 03 22.3 -0.5**
baz=339
BRZS *e*Sn **Sn** **18 05 14.9 -0.3**
baz=339
PTH Pithoragarh 11.23 171 *e*P **Pn** **18 03 34.7 -4.0**
PTH *i* x x 18 08 06.3
LGTI Lohaghat 11.33 171 *e*P **Pn** **18 03 37.5 -2.4**
NDI New Delhi 12.00 184 *ex* x 18 03 50.0
NDI *ex* x 18 05 52.0
AYAN Aya Nagar 12.21 185 *e*P **Pn** **18 03 48.5 -3.5**
SONA Sohna 12.44 185 *e*P **Pn** **18 03 51.7 -3.4**
KUDL Kundal 12.59 187 *e*P **Pn** **18 03 53.3 -3.9**
DANN Dangsing 13.12 158 *e*P Pn 18 03 59.8 -4.9
comp=Z,81nm,0.3s
BVA0 Borovoye Array 13.45 339 *i* P **Pn** **18 04 06.2 -2.5**
BVA0 Borovoye Array 13.45 339 ⇓Pn **Pn** **18 04 06.2 -2.5**
comp=Z,133nm,1.4s,baz=149,slow=13,SNR=111
BVA0 Lg Lg 18 08 02.8
comp=Z,638nm,1.3s,baz=153,slow=19,SNR=12
BRVK Borovoye 13.50 339 **Pn** **18 04 07.6 -1.9**
BRVK Borovoye 13.50 339 *ce*P **Pn** **18 04 07.9 -1.6**
BRVK pmax pmax
comp=Z,46nm,0.6s
BRVK Borovoye 13.50 339 P **Pn** **18 04 08.1 -1.4**
BRVK S **Sn** **18 06 40.3 +1.4**
BRVK Borovoye 13.50 339 ⇑Pn **Pn** **18 04 07.6 -1.9**
comp=Z,89nm,0.7s
BRVK ⇑Lg Lg 18 08 04.3
comp=Z,896nm,1.1s
GKN Gorkha 13.71 155 *e*P Pn 18 04 07.9 -4.7
GOMU GeErMu 13.75 104 P **Pn** **18 04 09.9 -3.4**
GOMU S **Sn** **18 06 41.4 -4.2**
GOMU pmax pmax
comp=Z,52nm,0.9s
GOMU LR LR
comp=Z,1µm,11.9s
GOMU LR LR
comp=Z,1µm,11.7s
GOMU LR LR
comp=Z,750nm,9.7s
ZAA0 Zalesovo Array 13.99 16 **Pn** **18 04 14.1 -2.0**
ZAA0 Zalesovo Array 13.99 16 ⇓Pn **Pn** **18 04 12.6 -3.5**
comp=Z,9.6nm,0.8s
ZALV Zalesovo Beam 13.99 16 Pn **Pn** **18 04 14.5 -1.6**
comp=Z,0.8nm,0.3s,baz=208,slow=12,SNR=62
ZALV Lg Lg 18 08 21.1
comp=Z,1.2nm,0.3s,baz=216,slow=22,SNR=4.0
ZALV LR LR 18 09 49.4
comp=Z,3µm,19.6s,baz=196,slow=38
comp=Z,59nm,0.9s
ZALV Zalesovo Beam 13.99 16 **Pn** **18 04 14.0 -2.1**
KKN Kakani 14.12 154 *e*P **Pn** **18 04 13.7 -4.5**
HRA Herat 14.15 249 **Pn** **18 04 16.3 -2.3**
GUN Gumba 14.22 151 *e*P **Pn** **18 04 15.7 -4.0**
comp=Z,94nm,0.4s
DMN Daman 14.23 154 *e*P Pn 18 04 15.0 -4.7
comp=Z,89nm,0.5s
PKIN Phulchoki 14.35 153 *e*P **Pn** **18 04 17.0 -4.5**
comp=Z,136nm,0.6s
PKI Pulchoki 14.36 153 *e*P **Pn** **18 04 17.2 -4.5**
comp=Z,107nm,0.6s
AJM Ajmer 14.48 193 *e*P **Pn** **18 04 18.4 -4.6**
AJM *e*S **Sn** **18 06 55.1 -7.9**
AJM *i* x x 18 10 03.7
JIRN Jiri 14.56 151 *e*P **Pn** **18 04 20.4 -4.0**
comp=Z,192nm,0.5s
JASL Jaisalmer 15.01 206 *ex* x 18 04 25.5
JHNI Jhansi 15.18 179 *e*P **Pn** **18 04 26.0 -6.4**
JHNI *e*P P 18 04 27.5 -10
JHNI *i* x x 18 10 30.1
LSA Lhasa 15.21 132 **Pn** **18 04 30.4 -2.8**
LSA Lhasa 15.21 132 P **Pn** **18 04 32.5 -0.7**
LSA LR LR
comp=Z,1µm,11.2s
LSA LR LR
comp=Z,2µm,10.6s
LSA LR LR
comp=Z,2µm,12.5s
LSA Lhasa 15.21 132 P **Pn** **18 04 30.4 -2.8**
LSA pmax pmax
comp=Z,36nm,0.8s
LSA Lhasa 15.21 132 P **Pn** **18 04 35.0 +1.8**
RAMN Ramite 15.36 151 *e*P **Pn** **18 04 29.9 -5.0**
comp=Z,255nm,0.5s
TAPN Taplejung 15.44 147 *e*P **Pn** **18 04 32.8 -3.3**
AB31 Akbulak array 15.49 310 *e*P **Pn** **18 04 34.0 -2.3**
AB31 Akbulak array 15.49 310 ⇑Pn **Pn** **18 04 34.0 -2.3**
comp=Z,36nm,1.1s,baz=111,slow=14,SNR=115
AB31 ⇓Lg Lg 18 09 07.4
comp=Z,29nm,0.8s
ABKAR Akbulak array 15.49 310 Pn **Pn** **18 04 33.6 -2.7**
ABKAR Akbulak array 15.49 310 Pn **Pn** **18 04 33.0 -3.3**
ALBI Allahabad 15.62 168 *e*P Pn 18 04 30.8 -7.4
ALBI *ex* x 18 07 17.6
ODAN Odare 15.74 148 *e*P **Pn** **18 04 35.9 -4.1**
comp=Z,118nm,0.8s
GEYT Alibeck 15.81 266 Pn **Pn** **18 04 38.4 -2.2**
comp=Z,1.4nm,0.3s,baz=80,slow=12,SNR=8.5
GEYT LR LR 18 11 60.0
comp=Z,688nm,20.1s,baz=91,slow=42
comp=Z,8.7nm,0.6s
GEYT Alibeck 15.81 266 P **Pn** **18 04 37.4 -3.1**
GYA0B ALIBECK ARRAY 15.81 266 P **Pn** **18 04 38.1 -2.5**
GTA Gaotai 16.58 87 ⇑P **Pn** **18 04 48.7 -1.8**
GTA pP P 18 04 52.3 -0.7
GTA sP pP 18 04 54.7 -4.3
GTA S **Sn** **18 07 57.6 +3.5**
GTA sS S 18 08 07.1 +1.5
GTA pmax pmax
comp=Z,11nm,0.8s
GTA pmax pmax
comp=Z,100nm,4.9s
GTA LR LR
comp=Z,2µm,12.0s
GTA LR LR
comp=Z,2µm,11.6s
GTA LR LR
comp=Z,3µm,10.9s
KNGR Kungurtug, Tuv 16.69 47 *i* P **Pn** **18 04 51.2 -0.7**
AKTO Aktyubinsk 17.13 311 P **Pn** **18 04 56.3 -1.0**
comp=Z,0.7nm,0.3s,baz=118,slow=14,SNR=28
comp=Z,7.8nm,0.6s
AKTO Aktyubinsk 17.13 311 P **Pn** **18 04 55.0 -2.3**
AKTO Aktyubinsk 17.13 311 ⇑Pn **Pn** **18 04 55.1 -2.3**
comp=Z,30nm,0.9s
AKTO ⇓Lg Lg 18 10 00.5
comp=Z,66nm,1.1s
JBP Jabalpur 17.53 175 *ex* x 18 04 55.3
JBP IAmb IAmb 18 05 06.5
comp=Z,137nm,1.2s
JBP *ex* x 18 08 01.1
BLSP Bilaspur 18.80 169 *e*P **P** **18 05 11.5 -5.9**
BLSP *i* x x 18 12 55.9
MOY Mondy 19.13 47 *e*P **Pn** **18 05 22.1 +0.2**
MOY pmax pmax
comp=Z,135nm,2.2s
NGP Nagpur 19.49 178 *e*P **P** **18 05 21.7 -3.3**
NGP *i* x x 18 13 06.7
AKL Akola 19.95 183 *e*P **P** **18 05 26.4 -3.6**
ZAK Zakamensk 19.96 53 *e*P **P** **18 05 30.3 +0.2**
ZAK pmax pmax
comp=Z,32nm,1.1s
ARU Arti 20.32 327 P **P** **18 05 34.1 +0.4**
comp=Z,31nm,0.5s,baz=121,slow=8.6,SNR=43
ARU LR LR 18 13 44.7
comp=Z,2µm,20.4s,baz=126,slow=38
comp=Z,31nm,0.5s
ARU Arti 20.32 327 P **P** **18 05 31.9 -1.9**
ARU Arti 20.32 327 *c* *i*P **P** **18 05 33.6 -0.1**
ARU 18 05 48.1
ARU PPP PPP 18 05 57.2
ARU S Sn 18 09 24.1 +0.1
ARU SS **SnSn** **18 09 42.5 +4.0**
ARU pmax pmax
comp=Z,184nm,2.6s
ARU MLR MLR
comp=Z,1µm,10.0s
LZH Lanzhou 20.57 95 *e*P **P** **18 05 37.0 +0.1**
LZH pP Pn 18 05 40.5 +1.4
LZH sP pP 18 05 44.0 +1.1
LZH PP **PnPn** **18 06 02.8 +8.4**
LZH S **S** **18 09 27.1 +0.9**
LZH sS sS 18 09 35.5 +0.2
LZH pmax pmax
comp=Z,28nm,1.0s
LZH pmax pmax
comp=Z,200nm,4.2s
LZH LR LR
comp=Z,3µm,13.1s
LZH LR LR
comp=Z,2µm,13.4s
LZH LR LR
comp=Z,2µm,14.1s
IRK Irkutsk 21.21 48 *e*P **P** **18 05 43.6 +0.1**
IRK pmax pmax
comp=Z,574nm,2.3s
SONM Songino Array 21.32 61 P **P** **18 05 45.6 +0.8**
comp=Z,61nm,0.8s,baz=260,slow=11,SNR=198
SONM LR LR 18 14 23.6
comp=Z,608nm,20.3s,baz=265,slow=38
comp=Z,61nm,0.8s
SONM Songino Array 21.32 61 P **P** **18 05 44.7 -0.2**
SONM IAmb IAmb 18 05 50.6
comp=Z,68nm,0.8s
SONM Songino Array 21.32 61 P **P** **18 05 44.7 -0.2**
SONM pmax pmax
comp=Z,68nm,0.8s
BWNR Bhubaneshwar 21.33 160 *ex* x 18 05 45.5
ULN Ulaanbaatar 21.76 61 P **P** **18 05 49.2 -0.4**
ULN Ulaanbaatar 21.76 61 ⇑P **P** **18 05 49.8 +0.2**
ULN Ulaanbaatar 21.76 61 P **P** **18 05 50.5 +0.9**
RAGD RAYAGADA 21.84 167 *e*P **P** **18 05 49.9 -0.5**
LKRN Lenkeran, Azer 22.70 275 P **P** **18 06 00.0 +0.5**
CD2 Chengdu 22.82 107 P **P** **18 05 59.6 -1.3**
CD2 pP pP 18 06 02.5 -4.3
CD2 sP sP 18 06 05.1 -4.8
CD2 S **S** **18 10 09.1 -0.3**
CD2 sS pS 18 10 14.1 -2.5
CD2 pmax pmax
comp=Z,80nm,1.2s
CD2 pmax pmax
comp=Z,310nm,4.7s
CD2 LR LR
comp=Z,9.4s
CD2 LR LR
comp=Z,2µm,10.0s
CD2 LR LR
comp=Z,2µm,9.8s
MAK Makhachkala 22.95 286 *d* *i*P **P** **18 05 56.9 -5.1**
MAK *e*S **S** **18 10 03.6 -7.6**
MAK pmax pmax
comp=Z,31nm,0.6s
MAK MLR MLR
comp=Z,773nm,9.0s
HYBB Hyderabad (bro 23.19 179 *e*P **P** **18 06 05.1 +0.4**
HYBB *es*P **sP** **18 06 20.4 +6.7**
HYBB *e*S **S** **18 10 15.5 -0.2**
SEKA Sheki 23.39 282 P **P** **18 06 06.6 0.0**
BANOM Banah 23.42 238 P **P** **18 06 09.9 +2.8**
BANOM P **P** **18 06 09.9 +2.8**
BANOM Banah 23.42 238 P **P** **18 06 08.9 +1.9**
SHME Shamm 23.43 238 P **P** **18 06 08.3 +1.2**
SHME Shamm 23.43 238 P **P** **18 06 08.1 +1.0**
MNGR Mingechevir, A 23.54 280 P **P** **18 06 09.2 +1.1**
KAD Karad 23.56 190 *e*P **P** **18 06 07.4 -1.0**
BELG Belogornoye 23.90 310 LR LR 18 16 13.5
comp=Z,2µm,18.2s,baz=112,slow=38
WSAR Wadi Sarin 23.97 229 P **P** **18 06 13.2 +0.9**
comp=Z,17nm,0.8s,baz=49,slow=5.0,SNR=8.8
WSAR LR LR 18 18 10.6
comp=Z,430nm,18.6s,baz=69,slow=43
comp=Z,17nm,0.8s
WSAR Wadi Sarin 23.97 229 P **P** **18 06 12.3 -0.1**
BTO Baotou 24.06 80 *e*P **P** **18 06 14.6 +1.4**
PZH PanZhiHua 24.07 119 P **P** **18 06 15.0 +1.7**
PZH pP **pP** **18 06 16.8 -2.8**
PZH sP **sP** **18 06 22.2 -0.4**
PZH S **S** **18 10 32.8 +2.9**
PZH sS **sS** **18 10 39.7 -0.9**
PZH pmax pmax
comp=Z,50nm,1.6s
PZH pmax pmax
comp=Z,500nm,3.8s
PZH LR LR
comp=Z,770nm,12.9s
PZH LR LR
comp=Z,1µm,12.6s
PZH LR LR
comp=Z,1µm,12.7s
GANJ Ganja 24.14 280 P **P** **18 06 14.6 +0.8**
UOSS Minazif 24.17 236 P **P** **18 06 13.1 -1.1**
UOSS Minazif 24.17 236 P **P** **18 06 16.4 +2.2**
UOSS P **P** **18 06 16.4 +2.2**
GROC Groznyy 24.17 287 *e*P **P** **18 06 14.6 +0.6**
GROC *e*S **S** **18 10 34.1 +2.9**
GROC pmax pmax
comp=Z,54nm,0.5s
VJD Vijayawada 24.18 174 *e*P **P** **18 06 13.4 -0.8**
WBK Wadi Bani Khal 24.27 228 P **P** **18 06 16.5 +1.4**
HATD Hatta, Dubai 24.30 236 P **P** **18 06 17.6 +2.2**
HATD P **P** **18 06 17.6 +2.2**
ASHO Ashiyiah 24.45 236 P **P** **18 06 18.5 +1.8**
SNR=8.4
ASHO Ashiyiah 24.45 236 P **P** **18 06 18.6 +1.8**
SMDO Samad 24.45 230 P **P** **18 06 17.8 +0.9**
SMDO P **P** **18 06 17.8 +0.9**
HOQ Hoqain 24.49 232 P **P** **18 06 19.8 +2.7**
HOQ P **P** **18 06 19.8 +2.7**
ASUD Al Ashush, Dub 24.95 237 P **P** **18 06 22.9 +1.6**
ASUD Al Ashush, Dub 24.95 237 P **P** **18 06 22.4 +1.1**
NAX Nakhchivan 25.07 277 P **P** **18 06 22.8 +0.5**
ARQ Araqi 25.15 233 P **P** **18 06 25.2 +2.1**
SNR=8.7
ARQ P **P** **18 06 25.2 +2.1**
SNR=8.7
HHC Hu-ho-hao-te 25.17 79 *e*P **P** **18 06 25.0 +1.8**
HHC sP sP 18 06 31.6 -0.8
HHC S **S** **18 10 49.4 +1.9**
HHC pmax pmax
comp=Z,69nm,1.0s
HHC pmax pmax
comp=Z,310nm,5.5s
HHC LR LR
comp=Z,3µm,11.5s
HHC LR LR
comp=Z,3µm,10.4s
HHC LR LR
comp=Z,3µm,10.4s
BSY Bisya 25.19 231 P **P** **18 06 27.5 +4.1**
XAN Xi'an 25.20 95 P **P** **18 06 25.2 +1.7**
XAN pP pP 18 06 29.5 -0.5
XAN S **S** **18 10 54.7 +6.8**
XAN pmax pmax
comp=Z,83nm,1.0s
XAN pmax pmax
comp=Z,270nm,3.6s
XAN LR LR
comp=Z,1µm,14.6s
XAN LR LR
comp=Z,2µm,15.5s
XAN LR LR
comp=Z,2µm,13.4s
GNI Garni 25.42 280 P **P** **18 06 25.8 +0.3**
comp=Z,12nm,0.8s,baz=212,slow=7.0,SNR=8.5
GNI LR LR 18 17 54.6
comp=Z,456nm,19.1s,baz=74,slow=40
comp=Z,12nm,0.8s
GNI Garni 25.42 280 P **P** **18 06 25.8 +0.3**
GNI IAmb IAmb 18 06 53.9
comp=Z,49nm,1.1s
GNI Garni 25.42 280 *i* P **P** **18 06 27.2 +1.6**
GNI pmax pmax
comp=Z,50nm,1.6s
KIRV Kirov 25.55 324 P **P** **18 06 26.3 0.0**
comp=Z,18nm,0.7s,baz=121,slow=4.7,SNR=14
KIRV LR LR 18 16 59.2
comp=Z,2µm,21.1s,baz=124,slow=38
comp=Z,18nm,0.7s
ZEI Tsey 25.60 286 *e*P **P** **18 06 34.3 +7.0**
ZEI pmax pmax
comp=Z,8.0nm,0.6s
KMI Kunming 25.66 120 ⇑P **P** **18 06 28.1 +0.2**
KMI pP pP 18 06 32.7 -1.5
KMI S **S** **18 10 54.0 -1.6**
KMI pmax pmax
comp=Z,24nm,0.9s
KMI pmax pmax
comp=Z,230nm,7.8s
KMI LR LR
comp=Z,650nm,17.2s
KMI LR LR
comp=Z,910nm,11.6s
KMI LR LR
comp=Z,760nm,13.6s
ONI Oni 25.95 286 P **P** **18 06 31.7 +1.4**
ONI Oni 25.95 286 P **P** **18 06 31.7 +1.4**
ONI pmax pmax
comp=Z,30nm,1.0s
MHTO MHTO 26.12 227 P **P** **18 06 33.6 +1.7**
SNR=5.2
MHTO P **P** **18 06 33.6 +1.7**
SNR=5.2
KBZ Khabaz 26.23 288 P **P** **18 06 32.2 -0.4**
comp=Z,0.9nm,0.6s,baz=69,slow=6.4,SNR=1.6
KBZ LR LR 18 17 49.2
comp=Z,448nm,20.2s,baz=70,slow=39
comp=Z,0.9nm,0.6s
KBZ Khabaz 26.23 288 *ce*P **P** **18 06 34.5 +1.9**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KVAR Kislovodsk Arr 26.35 289 LR LR 18 17 43.2
comp=Z,493nm,20.7s,baz=263,slow=38
KIV Kislovodsk 26.36 289 P **P** **18 06 33.8 -0.2**
KIV Kislovodsk 26.36 289 *e*P **P** **18 06 34.9 +0.9**
KIV *e*S **S** **18 11 09.0 +2.8**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,498nm,15.0s
KIV Kislovodsk 26.36 289 P **P** **18 06 35.5 +1.5**
KIV P **P** **18 06 35.5 +1.5**
UMZA Um Al Zommool 26.45 234 P **P** **18 06 36.1 +1.3**
UMZA P **P** **18 06 36.1 +1.3**
KARS Kars 26.56 281 P **P** **18 06 36.5 +0.6**
KARS IAmb IAmb 18 06 53.9
comp=Z,77nm,1.0s
KARS Kars 26.56 281 P **P** **18 06 36.5 +0.6**
KARS pmax pmax

comp=Z,77nm,1.0s
TIY Taiyuan 26.58 85 *e*P **P 18 06 39.3 +3.3**
TIY S **S 18 11 11.7 +2.0**
TIY SS **SnSn 18 12 18.0 +5.9**
TIY pmax pmax
comp=Z,34nm,0.7s
TIY LR LR
comp=Z,470nm,9.8s
TIY LR LR
comp=Z,1µm,13.2s
TIY LR LR
comp=Z,890nm,16.2s
CIT Chita 26.62 53 *e*P **P 18 06 36.0 -0.2**
CIT *e* 18 06 47.9
CIT *e* 18 07 21.4
CIT *e* 18 07 34.3
CIT *e* 18 11 05.4
CIT *e* 18 12 14.9
CIT pmax pmax
comp=Z,109nm,2.9s
GEVA Gevas 27.13 277 P **P 18 06 41.5 +0.4**
VRH Novokhopyorsk 27.21 305 *e*P **P 18 06 41.1 -0.3**
VRH pmax pmax
comp=Z,50nm,1.6s
VRH MLR MLR
comp=Z,2µm,15.0s
MZR Muzera 27.29 237 *i* P **P 18 06 43.5 +1.0**
SNR=7.9
ENH Enshi 27.37 102 P **P 18 06 42.6 -0.5**
ENH IAmb IAmb 18 06 53.0
comp=Z,40nm,1.0s
GYA Guiyang 27.47 112 ⇑P **P 18 06 44.5 +0.3**
GYA sP pP 18 06 51.2 +0.8
GYA S **S 18 11 25.7 +1.6**
GYA SS **SnSn 18 12 45.5 +11**
GYA pmax pmax
comp=Z,12nm,0.8s
GYA LR LR
comp=Z,700nm,10.7s
GYA LR LR
comp=Z,750nm,12.9s
GYA LR LR
comp=Z,1µm,11.8s
LYN LuoYang 27.69 92 ⇑*i*P **P 18 06 48.1 +2.2**
LYN pP pP 18 06 52.5 +0.1
LYN sP sP 18 06 57.6 +2.5
LYN S **S 18 11 32.5 +5.4**
LYN pmax pmax
comp=Z,10.0nm,1.4s
LYN LR LR
comp=Z,1µm,11.8s
LYN LR LR
comp=Z,1µm,17.7s
LYN LR LR
comp=Z,1µm,13.0s
GURO Guroymak-BITLI 27.84 278 P **P 18 06 46.5 -1.0**
XLT XiLinHaoTe 28.02 71 *e*P **P 18 06 49.5 +0.6**
XLT pP pP 18 06 54.4 -1.0
XLT sP sP 18 07 02.3 +4.4
XLT S **S 18 11 39.7 +7.2**
XLT sS sS 18 11 48.6 +5.6
XLT pmax pmax
comp=Z,8.0nm,1.2s
XLT pmax pmax
comp=Z,60nm,3.5s
XLT LR LR
comp=Z,2µm,13.8s
XLT LR LR
comp=Z,2µm,13.7s
CHTO Chiang Mai 28.13 135 **P 18 06 48.2 -1.7**
CHTO Chiang Mai 28.13 135 P **P 18 06 47.5 -2.4**
CHTO IAmb IAmb 18 07 34.1
comp=Z,16nm,0.9s
CHTO Chiang Mai 28.13 135 P **P 18 06 47.5 -2.4**
CHTO pmax pmax
comp=Z,16nm,0.9s
CHTO Chiang Mai 28.13 135 P **P 18 06 48.9 -1.0**
HNS HongShan 28.39 85 ⇑P **P 18 06 54.9 +2.7**
HNS S **S 18 11 42.3 +4.1**
HNS SS **SnSn 18 13 07.3 +11**
HNS pmax pmax
comp=Z,25nm,1.1s
HNS LR LR
comp=Z,900nm,10.0s
HNS LR LR
comp=Z,730nm,9.4s
HNS LR LR
comp=Z,940nm,10.6s
CM31 Chiang Mai Arr 28.42 135 P **P 18 06 52.1 -0.4**
CM31 Chiang Mai Arr 28.42 135 P **P 18 06 56.2 +3.6**
SNR=7.3
CMAR Chiang Mai Arr 28.42 135 P **P 18 06 51.9 -0.7**
comp=Z,3.5nm,0.6s,baz=316,slow=9.0,SNR=18
CMAR LR LR 18 19 45.8
comp=Z,286nm,20.1s,baz=320,slow=40
comp=Z,3.5nm,0.6s
CMAR Chiang Mai Arr 28.42 135 P **P 18 06 51.2 -1.3**
CMAR Chiang Mai Arr 28.42 135 *i* P **P 18 06 55.7 +3.2**
CMAR pmax pmax
comp=Z,8.0nm,0.9s
BOD Bodaibo 28.51 41 *e*P **P 18 06 53.1 +0.1**
BOD pmax pmax
comp=Z,18nm,2.1s
SOC Sochi 28.53 289 *e*P **P 18 06 52.8 -0.6**
SOC *e*PPP PPP 18 07 49.9
SOC *e*S **S 18 11 43.0 +2.7**
SOC *e*SSS SSS 18 13 08.2
SOC pmax pmax
comp=Z,17nm,1.0s
SOC MLR MLR
comp=Z,211nm,10.0s
BJI Beijing 28.78 79 P **P 18 06 59.0 +3.5**
BJI S **S 18 11 51.6 +7.4**
BJI pmax pmax
comp=Z,14nm,0.8s
BJI LR LR
comp=Z,280nm,15.2s
BJI LR LR
comp=Z,1µm,17.1s
BJI LR LR
comp=Z,2µm,17.6s
BJT Baijiatuau 28.78 79 P **P 18 06 53.9 -1.7**
BJT Baijiatuau 28.78 79 P **P 18 06 53.9 -1.7**
BJT pmax pmax
comp=Z,14nm,1.0s
PRGR Permogore 28.78 328 *e*P **P 18 06 56.8 +1.5**
VSR Storozhevoye 28.81 305 *e*P **P 18 06 55.1 -0.6**
VSR pmax pmax
comp=Z,60nm,1.5s
VSR MLR MLR
comp=Z,2µm,14.0s
VORR Voronezh 28.83 306 *e*P **P 18 06 55.9 0.0**
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 29.13 307 *e*P **P 18 06 58.5 0.0**
LPSR pmax pmax
comp=Z,8.0nm,0.4s
LPSR MLR MLR
comp=Z,800nm,15.0s
NRIK Noril'sk 29.14 7 P **P 18 06 57.3 -1.2**
comp=Z,13nm,0.7s,baz=192,slow=7.6,SNR=15
comp=Z,13nm,0.7s
NRIK Noril'sk 29.14 7 P **P 18 06 57.4 -1.0**
NRIK IAmb IAmb 18 07 03.5
comp=Z,125nm,1.9s
NRIK Noril'sk 29.14 7*c**e*P **P 18 06 58.7 +0.3**
NRIK pmax pmax
comp=Z,59nm,2.0s
MARD Mardin 29.15 276 P **P 18 06 59.7 +0.6**
ANN Anapa 30.01 292 *e*P **P 18 07 06.0 -0.5**
ANN *e*S **S 18 12 04.1 +0.6**
ANN pmax pmax
comp=Z,20nm,0.7s
ANN MLR MLR
comp=N,971nm,17.0s
ANN MLR MLR
comp=Z,820nm,15.0s
ANN MLR MLR
comp=E,447nm,13.0s
PCHI Peechi 30.08 184 *e*x x 18 48 15.3
MOS Moscow 30.45 313 *e*P **P 18 07 08.6 -1.6**
MOS *e*S **S 18 12 07.2 -2.9**
MOS pmax pmax
comp=Z,51nm,1.1s
MOS MLR MLR
comp=Z,1µm,11.0s
TIA Tai'an 30.61 86 ⇓P **P 18 07 14.8 +2.9**
TIA S **S 18 12 16.5 +3.3**
TIA pmax pmax
comp=Z,31nm,1.0s
TIA pmax pmax
comp=Z,69nm,3.6s
TIA LR LR
comp=Z,750nm,12.5s
TIA LR LR
comp=Z,800nm,12.8s
TIA LR LR
comp=Z,860nm,13.1s
GULI GuiLin 30.82 110 P **P 18 07 13.6 -0.1**
GULI S **S 18 12 18.9 +2.5**
GULI pmax pmax
comp=Z,10.0nm,1.2s
GULI LR LR
comp=Z,590nm,14.2s
GULI LR LR
comp=Z,480nm,8.8s
GULI LR LR
comp=Z,610nm,10.7s
WHN Wuhan 30.87 98 ⇑P **P 18 07 15.4 +1.2**
WHN S **S 18 12 22.7 +5.5**
WHN LR LR
comp=Z,960nm,11.1s
WHN LR LR
comp=Z,1µm,11.6s
WHN LR LR
comp=Z,2µm,18.9s
OBN Obninsk 30.91 312 LR LR 18 20 19.5
comp=Z,260nm,18.6s,baz=88,slow=38
OBN Obninsk 30.91 312 P **P 18 07 13.5 -0.8**
OBN IAmb IAmb 18 07 20.3
comp=Z,67nm,1.4s
OBN Obninsk 30.91 312*c* *i*P **P 18 07 14.3 0.0**
OBN *i* 18 08 17.9
OBN *i* S **S 18 12 14.6 -2.8**
OBN pmax pmax
comp=Z,67nm,2.0s
OBN MLR MLR
comp=Z,1µm,17.0s
KLMR Klimovskoe 31.05 324 *e*P **P 18 07 15.4 +0.1**
KLMR *e* 18 08 22.3
KLMR *e*S **S 18 12 22.5 +3.2**
KLMR pmax pmax
comp=Z,50nm,1.0s
KLMR MLR MLR
comp=Z,4µm,11.0s
KLMR Klimovskoe 31.05 324 *e*P **P 18 07 15.5 +0.1**
KLMR AMP 18 07 24.9
comp=Z,50nm,1.0s
KLMR *e*PP **PP 18 08 22.4 -3.0**
KLMR *e*S **S 18 12 22.6 +3.2**
KLMR *e*S **S 18 12 22.6 +3.2**
KLMR LQ LQ 18 16 38.6
KLMR LQ LQ 18 16 38.6
KLMR LR LR 18 18 50.9
KLMR AMP 18 19 49.9
comp=Z,4µm,10.5s
DIKM Dikmen 32.12 286 ⇓P **P 18 07 26.0 +0.9**
RAYN Ar Rayn 32.34 248 P **P 18 07 27.0 -0.2**
RAYN IAmb IAmb 18 07 32.1
comp=Z,28nm,0.8s
RAYN Ar Rayn 32.34 248 ⇓P **P 18 07 28.0 +0.8**
RAYN Ar Rayn 32.34 248 *i* P **P 18 07 27.8 +0.6**
SNR=32
RAYN Ar Rayn 32.34 248 P **P 18 07 27.9 +0.8**
RAYN pP **sP 18 07 36.4 0.0**
RAYN sP **pP 18 07 40.3 +6.7**
BNN Bunyan 32.40 281 P **P 18 07 26.9 -0.8**
BNN IAmb IAmb 18 07 45.0
comp=Z,99nm,1.9s
PALK Pallekele 33.35 176 LR LR 18 21 52.6
comp=Z,1µm,20.9s,baz=101,slow=38
PALK Pallekele 33.35 176 P **P 18 07 35.7 -0.3**
PALK IAmb IAmb 18 08 35.5
comp=Z,52nm,1.4s
PALK Pallekele 33.35 176 P **P 18 07 35.7 -0.3**
PALK pmax pmax
comp=Z,52nm,1.4s
ILGA Ilgaz 33.38 286 P **P 18 07 36.2 -0.3**
ILGA IAmb IAmb 18 08 06.0
comp=Z,47nm,1.1s
NJ2 Nanjing 33.59 92 *e*P **P 18 07 35.3 -2.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
NJ2 LR LR
comp=Z,1µm,12.1s
NJ2 LR LR
comp=Z,1µm,13.3s
NJ2 LR LR
comp=Z,2µm,13.2s
BR131 Keskin Array S 33.79 283 P **P 18 07 39.3 -0.6**
BR131 IAmb IAmb 18 07 58.6
comp=Z,25nm,0.9s
BR131 Keskin Array S 33.79 283 ⇓*i*P **P 18 07 40.6 +0.7**
BR131 Keskin Array S 33.79 283 P **P 18 07 41.8 +1.8**
SNR=7.2
BRTR Keskin Array B 33.79 283 P **P 18 07 40.6 +0.7**
comp=Z,7.3nm,0.8s,baz=94,slow=7.7,SNR=33
BRTR LR LR 18 23 23.5
comp=Z,304nm,18.9s,baz=75,slow=40
comp=Z,7.3nm,0.8s
BRTR Keskin Array B 33.79 283 P **P 18 07 39.5 -0.5**
BRTR Keskin Array B 33.79 283 *i* P **P 18 07 40.5 +0.7**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
SNY Shenyang 33.81 73 ⇓P **P 18 07 40.1 +0.3**
SNY S **S 18 13 03.6 +0.8**
SNY pmax pmax
comp=Z,15nm,0.5s
SNY pmax pmax
comp=Z,180nm,4.3s
SNY LR LR
comp=Z,2µm,15.3s
SNY LR LR
comp=Z,2µm,13.7s
SNY LR LR
comp=Z,2µm,13.3s
ANTO Ankara 34.38 284 P **P 18 07 44.3 -0.6**
ANTO Ankara 34.38 284 P **P 18 07 44.3 -0.6**
ANTO pmax pmax
comp=Z,10.0nm,0.8s
BR231 Keskin MP Arra 34.40 284 P **P 18 07 44.2 -0.9**
QIZ Qiongzhong 34.60 119 P **P 18 07 45.3 -1.6**
QIZ S **S 18 13 17.0 +1.6**
QIZ LR LR
comp=Z,490nm,11.9s
QIZ LR LR
comp=Z,550nm,12.7s
QIZ LR LR
comp=Z,690nm,15.1s
UBPT Khong Chiam 34.66 129 P **P 18 07 46.4 -1.0**
UBPT IAmb IAmb 18 07 53.4
comp=Z,25nm,0.9s
CN2 Changchun 34.73 69 *e*P **P 18 07 47.7 -0.1**
CN2 *e*S **S 18 13 16.6 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,700nm,12.0s
CN2 LR LR
comp=Z,900nm,12.0s
CN2 LR LR
comp=Z,1µm,11.0s
MMAI Mount Meron Ar 34.84 271 LR LR 18 24 58.7
comp=Z,318nm,18.9s,baz=220,slow=41
ZEA Zeya 35.05 51 *e*P **P 18 07 51.4 +1.0**
ZEA *e*S **S 18 13 19.4 -2.3**
ZEA *e* 18 16 02.4
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA pmax pmax
comp=E,100nm,3.3s
ZEA pmax pmax
comp=N,100nm,5.5s
ZEA pmax pmax
comp=Z,100nm,3.5s
ZEA smax smax
comp=N,100nm,7.5s
ZEA MLR MLR
comp=E,600nm,11.0s
ZEA MLR MLR
comp=N,300nm,13.0s
ZEA MLR MLR
comp=Z,700nm,12.0s
AKASG Malin Array Be 35.07 303 P **P 18 07 50.1 -0.5**
comp=Z,7.7nm,0.9s,baz=72,slow=8.7,SNR=37
AKASG LR LR 18 24 56.5
comp=Z,1µm,18.3s,baz=82,slow=41
comp=Z,7.7nm,0.9s
AKASG Malin Array Be 35.07 303 P **P 18 07 49.5 -1.1**
AKASG IAmb IAmb 18 07 52.2
comp=Z,30nm,1.6s
AKASG Malin Array Be 35.07 303 *i* P **P 18 07 50.2 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB Malin Array Si 35.07 303 P **P 18 07 49.8 -0.9**
AKBB IAmb IAmb 18 08 01.6
comp=Z,24nm,0.9s
AKBB Malin Array Si 35.07 303*c**e*P **P 18 07 50.2 -0.5**
GHAJ Ghor Haditha 35.47 268 P **P 18 07 53.7 -0.6**
GHAJ IAmb IAmb 18 07 56.9
comp=Z,65nm,1.8s
KIS Kishinev 35.70 297 *e*P **P 18 07 55.0 -1.1**
KIS *e*L L 18 24 00.0
KIS LRM MLR 18 26 05.0
comp=Z,400nm,13.5s
KIS Kishinev 35.70 297 *e*P **P 18 07 55.0 -1.1**
KIS MLR MLR
comp=Z,400nm,13.5s
MILM Milestii Mici 35.71 297 ⇑*i*P **P 18 07 55.0 -1.2**
comp=Z,90nm,1.4s
MILM *e*L L 18 24 05.0
MILM LRM MLR 18 26 17.0
comp=Z,1µm,16.5s
MILM Milestii Mici 35.71 297 ⇑P **P 18 07 56.3 +0.1**
MILM Milestii Mici 35.71 297*c* *i*P **P 18 07 55.0 -1.2**
MILM pmax pmax
comp=Z,90nm,1.4s
MILM MLR MLR
comp=Z,1µm,16.5s
BNX BinXian 35.74 65 ⇑P **P 18 07 56.6 +0.2**
BNX pP **pP 18 07 59.7 -3.3**
BNX PP **PP 18 09 17.7 +0.1**
BNX S **S 18 13 35.0 +2.6**
BNX sS **sS 18 13 42.0 -1.1**
BNX pmax pmax
comp=Z,12nm,0.8s
BNX pmax pmax
comp=Z,75nm,5.9s
BNX LR LR
comp=Z,810nm,11.0s
BNX LR LR
comp=Z,1µm,12.9s
BNX LR LR
comp=Z,1µm,12.8s
MNK Minsk 35.85 310 *i* P **P 18 07 58.7 +1.4**
MNK *i* 18 09 18.3
MNK *i* 18 10 20.6
MNK *i* S **S 18 13 37.7 +3.8**
MNK *i* SS **SnSn 18 16 00.9 +3.9**
MNK *i* 18 18 14.3
MNK pmax pmax
comp=Z,40nm,0.9s
MNK pmax pmax
comp=E,8.0nm,1.1s
MNK pmax pmax
comp=N,11nm,1.0s
MNK MLR MLR
comp=E,110nm,16.0s
MNK MLR MLR
comp=Z,775nm,16.0s
MNK Minsk 35.85 310 *i* P **P 18 07 58.7 +1.4**
comp=E,8.0nm,1.1s
MNK *i* P **P 18 07 58.7 +1.4**
comp=N,11nm,1.0s
MNK *i* P **P 18 07 58.7 +1.4**
comp=Z,40nm,0.9s,baz=91
MNK *i* PP **PP 18 09 18.3 -0.3**
MNK *i* PPP PPP 18 09 32.6
MNK *i* S **S 18 13 37.7 +3.8**
MNK *i* SS **SnSn 18 16 00.9 +3.9**
MNK *i* LQ LQ 18 19 20.0
MNK *i* LR LR 18 21 55.5
MNK *i* LRM MLR 18 23 15.6
comp=E,110nm,16.3s
MNK *i* LRM MLR 18 23 19.6
comp=Z,775nm,16.3s
SORM Soroca 35.86 299 ⇓P **P 18 07 56.3 -1.1**
LVZ Lovozero 35.94 334 *i* P **P 18 07 57.0 -1.0**
TLCR 36.00 294 ⇑P **P 18 07 59.2 +0.6**
TLCR 36.00 294 ⇑P **P 18 07 59.2 +0.6**
APA Apatity 36.23 333 *e*P **P 18 07 56.5 -3.9**
APA pmax pmax
comp=Z,7.0nm,1.0s
APA MLR MLR
comp=Z,6µm,11.0s
TPGR Topolog 36.34 294 ⇓P **P 18 08 03.4 +1.8**
CFR Carcaliu 36.47 294 ⇑P **P 18 08 02.8 +0.1**
CFR Carcaliu 36.47 294 ⇑P **P 18 08 02.8 +0.1**
NACGM Naroch 36.50 311 ⇓*i*P **P 18 08 03.5 +0.7**
baz=92
EIL Elat 36.71 266 LR LR 18 25 56.0
comp=Z,224nm,18.6s,baz=76,slow=41
VSU Vasula 36.74 317 *i* P **P 18 08 04.8 0.0**
VSU pmax pmax
comp=Z,169nm,1.8s
VSU Vasula 36.74 317 *e*P **P 18 08 05.1 +0.3**
IIGN Ignalina 36.83 311 *e*P **P 18 08 06.4 +0.8**
ISAL Salakas 36.89 312 *e*P **P 18 08 06.7 +0.6**
SRIT Nakonsritamara 37.18 143 P **P 18 08 08.9 -0.2**
SRIT IAmb IAmb 18 08 12.3
comp=Z,55nm,1.1s
YAK Yakutsk 37.24 38 LR LR 18 24 13.3
comp=Z,640nm,21.6s,baz=263,slow=38
YAK Yakutsk 37.24 38 P **P 18 08 07.7 -1.3**
YAK IAmb IAmb 18 08 13.6
comp=Z,22nm,0.8s
YAK Yakutsk 37.24 38 *e*P **P 18 08 08.3 -0.7**
YAK *e* 18 09 37.8
YAK *e*S **S 18 13 55.9 +1.0**
YAK *e*SS **SnSn 18 16 30.4 0.0**
YAK *e* 18 18 21.6
YAK pmax pmax
comp=Z,20nm,1.5s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK pmax pmax
comp=E,12nm,1.5s
YAK pmax pmax
comp=Z,63nm,3.1s
YAK smax smax
comp=E,64nm,4.0s
YAK smax smax
comp=N,61nm,3.2s
YAK MLR MLR
comp=Z,1µm,12.0s
YAK MLR MLR
comp=N,310nm,11.0s
YAK MLR MLR
comp=E,796nm,11.0s
YAK Yakutsk 37.24 38 P **P 18 08 08.3 -0.7**
YAK pP **sP 18 08 19.3 +1.2**
TESR Tescani 37.25 297 ⇑P **P 18 08 09.7 +0.4**
VRI Vrincioaia 37.31 296 ⇑P **P 18 08 11.6 +1.7**
VRI Vrincioaia 37.31 296 ⇑P **P 18 08 11.6 +1.7**
INCN Inchon 37.34 79 P **P 18 08 09.4 -0.8**
INCN Inchon 37.34 79 P **P 18 08 09.4 -0.8**
INCN pmax pmax
comp=Z,56nm,0.9s
INCN Inchon 37.34 79 P **P 18 08 13.4 +3.2**
INCN Inchon 37.34 79 P **P 18 08 12.9 +2.7**
PLOR Plostina 37.37 296 ⇑P **P 18 08 11.4 +1.0**
PLOR Plostina 37.37 296 ⇑P **P 18 08 11.4 +1.0**
FIA1 FINESS Array S 37.46 321 P **P 18 08 10.8 -0.1**
FIA1 IAmb IAmb 18 08 18.4
comp=Z,19nm,0.7s
FINES FINESS Array B 37.47 321 P **P 18 08 11.1 +0.1**
comp=Z,18nm,0.7s,baz=102,slow=8.6,SNR=46
FINES LR LR 18 24 00.4
comp=Z,2µm,19.4s,baz=97,slow=37
comp=Z,18nm,0.7s

FINES FINESS Array B 37.47 321 P **P** **18 08 10.9 -0.1**
FINES FINESS Array B 37.47 321 *i* P **P** **18 08 11.1 +0.1**
FINES pmax pmax
comp=Z,17nm,0.7s
MDJ Mudanjiang 37.47 66 P **P** **18 08 11.5 +0.2**
BIZ Bicaz 37.54 297 ⇓P **P** **18 08 12.7 +0.9**
ISR Istrita 37.59 294 ⇓P **P** **18 08 13.0 +0.7**
ISR Istrita 37.59 294 ⇓P **P** **18 08 13.0 +0.7**
COVR Voineasa-Covas 37.67 296 ⇓P **P** **18 08 14.1 +1.1**
NEHR Nehoiu 37.70 295 ⇓P **P** **18 08 14.5 +1.3**
OZUR 37.91 296 ⇓P **P** **18 08 16.5 +1.5**
MLR Muntele Rosu 37.92 295 ⇑P **P** **18 08 16.1 +0.9**
MLR Muntele Rosu 37.92 295 LR LR 18 26 21.4
comp=Z,969nm,18.1s,baz=52,slow=40
MLR Muntele Rosu 37.92 295 P **P** **18 08 14.7 -0.6**
MLR IAmb IAmb 18 08 22.6
comp=Z,62nm,1.3s
MLR Muntele Rosu 37.92 295 ⇑P **P** **18 08 16.1 +0.9**
MANT Manisa 37.93 283 P **P** **18 08 15.2 -0.3**
BURAR Bucovina Array 38.02 299 ⇓P **P** **18 08 16.6 +0.6**
BURAR Bucovina Array 38.02 299 P **P** **18 08 15.3 -0.7**
BURAR Bucovina Array 38.02 299 ⇓P **P** **18 08 16.6 +0.6**
BUR08 Bucovina Ar. S 38.03 299 P **P** **18 08 15.4 -0.6**
KLR Kul'dur 38.12 59 *ce*P **P** **18 08 16.7 +0.1**
KLR pmax pmax
comp=Z,25nm,0.9s
PABE Paberze 38.12 312 P **P** **18 08 16.5 0.0**
PABE Paberze 38.12 312 *e*P **P** **18 08 17.0 +0.5**
MEF Metsahovi 38.12 319 *e*P **P** **18 08 16.3 -0.2**
DOPR Dopca 38.21 296 ⇓P **P** **18 08 18.9 +1.4**
KS19 Wonju Array Si 38.25 78 P **P** **18 08 16.4 -1.5**
SEHB SEOHWA 38.27 77 P **P** **18 08 16.9 -1.2**
SEHB IAmb IAmb 18 08 23.5
comp=Z,29nm,0.9s
TJN Taejon 38.28 80 P **P** **18 08 17.0 -1.1**
TJN Taejon 38.28 80 P **P** **18 08 17.0 -1.1**
TJN pmax pmax
comp=Z,66nm,1.1s
TJN Taejon 38.28 80 P **P** **18 08 18.3 +0.2**
KSAR Wonju Array Be 38.28 78 P **P** **18 08 17.0 -1.2**
KSAR **PcP** **18 10 30.8 -1.2**
KSAR Wonju Array Be 38.28 78 P **P** **18 08 17.0 -1.2**
MTSE Matsula 38.29 317 *e*P **P** **18 08 18.1 +0.2**
KSRS Korea Array 38.31 78 P **P** **18 08 17.9 -0.5**
comp=Z,111nm,0.8s,baz=279,slow=8.4,SNR=40
KSRS PcP **PcP** **18 10 31.6 -0.4**
comp=Z,4.5nm,0.9s,baz=289,slow=2.5,SNR=7.8
KSRS LR LR 18 27 14.4
comp=Z,948nm,18.0s,baz=285,slow=41
comp=Z,11nm,0.8s
LVV L'vov 38.47 302 *e*P **P** **18 08 19.6 0.0**
LVV *e*S **S** **18 14 12.6 -1.3**
LVV pmax pmax
comp=Z,150nm,1.4s
LVV MLR MLR
comp=E,1μm,13.0s
LVV MLR MLR
comp=N,400nm,11.0s
LVV MLR MLR
comp=Z,2μm,15.0s
VOIR 38.55 295 ⇑P **P** **18 08 21.5 +1.1**
VOIR 38.55 295 ⇑P **P** **18 08 21.5 +1.1**
KSCHJ Chungju 38.55 79 P **P** **18 08 19.8 -0.7**
KSCHJ IAmb IAmb 18 08 25.2
comp=Z,24nm,0.9s
ARCR ARCALIA 38.69 298 ⇓P **P** **18 08 22.3 +0.8**
STFAR Stefanesti-Arg 38.74 294 ⇓P **P** **18 08 23.0 +1.0**
ARR Arges 38.85 295 ⇓P **P** **18 08 24.3 +1.3**
KEV Kevo 39.23 335 P **P** **18 08 25.9 +0.2**
KEV IAmb IAmb 18 08 32.2
comp=Z,54nm,1.7s
KEV Kevo 39.23 335 P **P** **18 08 25.9 +0.2**
KEV pmax pmax
comp=Z,53nm,1.7s
KEV Kevo 39.23 335 P **P** **18 08 26.1 +0.4**
USRK Ussuriysk Ar. 39.24 67 P **P** **18 08 26.3 +0.2**
comp=Z,7.4nm,0.9s,baz=289,slow=7.2,SNR=9.3
USRK LR LR 18 25 16.6
comp=Z,526nm,19.4s,baz=87,slow=37
comp=Z,7.4nm,0.9s
USRK Ussuriysk Ar. 39.24 67 P **P** **18 08 25.8 -0.3**
USRK Ussuriysk Ar. 39.24 67 P **P** **18 08 25.8 -0.3**
PBUR Paburge 39.26 312 *e*P **P** **18 08 26.8 +0.7**
SSLB Suanglung 39.45 102 P **P** **18 08 28.5 +0.4**
SSLB Suanglung 39.45 102 P **P** **18 08 32.2 +4.1**
RAF Rauma 39.48 320 *e*P **P** **18 08 28.6 +0.7**
ARA0 ARCESS Array S 39.65 334 *e*P **P** **18 08 29.5 +0.2**
ARCES ARCESS Array B 39.65 334 P **P** **18 08 29.3 0.0**
comp=Z,5.7nm,0.5s,baz=102,slow=8.6,SNR=76
ARCES PcP **PcP** **18 10 35.3 -0.5**
comp=Z,6.1nm,0.7s,baz=114,slow=4.0,SNR=9.5
ARCES LR LR 18 25 36.2
comp=Z,1μm,18.7s,baz=109,slow=37
comp=Z,5.7nm,0.5s
ARCES ARCESS Array B 39.65 334 P **P** **18 08 28.3 -1.0**
ARCES ARCESS Array B 39.65 334 P **P** **18 08 28.3 -1.0**
ARCES pmax pmax
comp=Z,15nm,0.9s
KOLS Kolonicke sedl 39.74 301 *e*P **P** **18 08 31.1 +0.8**
KOLS pmax pmax
comp=Z,9.0nm,1.1s
KOLS Kolonicke sedl 39.74 301 *e*P **P** **18 08 31.0 +0.8**
TIXI Tiksi 39.76 23 LR LR 18 24 59.4
comp=Z,605nm,21.6s,baz=184,slow=36
TIXI Tiksi 39.76 23 P **P** **18 08 28.7 -1.4**
TIXI IAmb IAmb 18 08 39.5
comp=Z,20nm,0.8s
TIXI Tiksi 39.76 23 *ce*P **P** **18 08 29.8 -0.3**
TIXI pmax pmax
comp=Z,34nm,2.5s
TIXI Tiksi 39.76 23 P **P** **18 08 29.7 -0.4**
TIXI pP **sP** **18 08 38.9 -0.4**
TIXI sP pP 18 08 44.5 +7.9
UZH Uzhgorod 39.78 301 *e*P **P** **18 08 30.5 -0.1**
UZH *e* 18 08 43.1
UZH *e* 18 10 06.5
UZH *e*PPP PPP 18 10 34.7
UZH *e*S **S** **18 14 31.5 -2.1**
UZH *e*SS ScS 18 18 26.1 -11
UZH MLR MLR
comp=N,170nm,13.0s
UZH MLR MLR
comp=E,180nm,13.0s
UZH MLR MLR
comp=Z,110nm,13.0s
DRGR 39.86 298 ⇑P **P** **18 08 32.5 +1.1**
DRGR 39.86 298 ⇑P **P** **18 08 32.5 +1.1**
KSBUS Busan 40.02 81 P **P** **18 08 32.5 -0.2**
KSBUS IAmb IAmb 18 08 36.4
comp=Z,29nm,1.1s
KARP Karpathos 40.04 280 P **P** **18 08 33.5 +0.6**
KARP IAmb IAmb 18 08 40.7
comp=Z,44nm,0.9s
GZR Gura Zlata 40.12 296 ⇑P **P** **18 08 33.5 -0.1**
GZR Gura Zlata 40.12 296 P **P** **18 08 35.6 +2.1**
CRVS Cervenica-Dubn 40.27 301 *e*P **P** **18 08 35.9 +1.2**
CRVS Cervenica-Dubn 40.27 301 *e*P **P** **18 08 35.9 +1.2**
VTS Vitosha 40.52 291 ⇑P **P** **18 08 37.7 +0.7**
VTS Vitosha 40.52 291 P **P** **18 08 35.9 -1.1**
VTS Vitosha 40.52 291 ⇑P **P** **18 08 37.7 +0.7**
JTU Tsushima 40.53 82 P **P** **18 08 35.5 -0.5**
KULM Kulim 40.58 144 P **P** **18 08 37.1 -0.4**
HAMF Hammerfest 40.59 335 *e*P **P** **18 08 36.2 -0.8**
BLKB Belogradchik 40.64 293 ⇑P **P** **18 08 38.8 +1.0**
SIRR Siria 40.68 297 ⇑P **P** **18 08 39.2 +1.1**
BZS Buzias 40.86 296 ⇑P **P** **18 08 39.7 +0.1**
BZS Buzias 40.86 296 ⇑P **P** **18 08 39.7 +0.1**
GRNR Gornyy 40.87 56 ⇑*i*P **P** **18 08 40.2 +0.6**
GRNR *e* 18 10 14.3
GRNR *e*S **S** **18 14 54.4 +4.5**
GRNR pmax pmax
comp=E,7.0nm,0.8s
GRNR pmax pmax
comp=N,3.0nm,1.1s
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR smax smax
comp=E,2.0nm,1.0s
GRNR MLR MLR
comp=E,750nm,16.0s
GRNR MLR MLR
comp=N,120nm,10.0s
GRNR MLR MLR
comp=Z,790nm,13.0s
KECS Kecovo 40.99 301 *e*P **P** **18 08 41.8 +1.2**
KECS Kecovo 40.99 301 *e*P **P** **18 08 41.8 +1.2**
MDVR Moldovita 41.00 295 ⇑P **P** **18 08 41.8 +1.0**
OJC Ojcow 41.11 304 *e*P **P** **18 08 40.8 -0.8**
OJC Ojcow 41.11 304 P **P** **18 08 40.3 -1.2**
OJC IAmb IAmb 18 08 43.0
comp=Z,32nm,0.7s
OJC Ojcow 41.11 304 P **P** **18 08 40.3 -1.2**
OJC pmax pmax
comp=Z,32nm,0.7s
BOVS Bovan 41.31 293 ⇓P **P** **18 08 43.4 +0.1**
JETT Jettan, Norway 41.38 333 *e*P **P** **18 08 44.6 +1.0**
IPM Ipoh 41.47 144 P **P** **18 08 44.0 -0.8**
IPM Ipoh 41.47 144 P **P** **18 08 47.2 +2.3**
PSZ Piszkesteto 41.49 300 ⇑P **P** **18 08 45.5 +0.7**
PSZ Piszkesteto 41.49 300 P **P** **18 08 44.5 -0.3**
PSZ Piszkesteto 41.49 300 ⇑P **P** **18 08 45.5 +0.7**
PSZ Piszkesteto 41.49 300 P **P** **18 08 45.6 +0.7**
LANS Liptovska Anna 41.52 302 *e*P **P** **18 08 47.1 +2.1**
LANS pmax pmax
comp=Z,6.0nm,1.0s
LANS Liptovska Anna 41.52 302 *e*P **P** **18 08 47.1 +2.1**
IDI Anoyia 41.85 280 P **P** **18 08 46.8 -1.1**
TRO Tromso 41.91 333 *e*P **P** **18 08 48.5 +0.7**
VYHS Vyhne 42.06 301 *e*P **P** **18 08 50.6 +1.2**
VYHS pmax pmax
comp=Z,50nm,1.5s
VYHS Vyhne 42.06 301 *e*P **P** **18 08 50.6 +1.2**
GKP Gorka Klasztor 42.21 309 *e*P **P** **18 08 51.1 +0.6**
FRGS Fruska Gora 42.21 296 ⇑P **P** **18 08 51.7 +1.1**
FRGS Fruska Gora 42.21 296 ⇑*i*P **P** **18 08 50.9 +0.3**
OKC Ostrava-Krasne 42.23 303 *e*P **P** **18 08 51.8 +1.1**
OKC MLR MLR
comp=Z,700nm,18.6s
OKC Ostrava-Krasne 42.23 303 *e*P **P** **18 08 51.8 +1.1**
OKC AMS AMS 18 27 00.0
comp=Z,700nm,18.6s
DIVS Divibare 42.37 295 P **P** **18 08 52.3 +0.2**
DIVS IAmb IAmb 18 08 54.7
comp=Z,96nm,1.5s
DIVS Divibare 42.37 295 ⇑*i*P **P** **18 08 52.0 -0.1**
ATD Arta Tunnel 42.55 237 LR LR 18 28 40.9
comp=Z,232nm,19.4s,baz=39,slow=39
ATD Arta Tunnel 42.55 237 P **P** **18 08 54.8 +1.0**
MORC Moravsky Berou 42.62 303 ⇑P **P** **18 08 54.2 +0.2**
MORC Moravsky Berou 42.62 303 P **P** **18 08 53.9 -0.1**
MORC Moravsky Berou 42.62 303 ⇑P **P** **18 08 54.2 +0.2**
MORC Moravsky Berou 42.62 303 *e*P **P** **18 08 54.2 +0.2**
JSU Suzuyama 42.65 85 P **P** **18 08 53.5 -0.9**
CSKK Cskako 42.69 300 P **P** **18 08 55.5 +1.0**
MORH Mrgy, Hungar 42.72 298 ⇓P **P** **18 08 55.1 +0.4**
MORH Mrgy, Hungar 42.72 298 P **P** **18 08 55.5 +0.8**
JAVC Velka Javorina 42.73 302 *e*P **P** **18 08 56.6 +1.7**
BBLS Lazići 42.85 294 ⇑*i*P **P** **18 08 56.2 +0.3**
FAUS Fauske 42.89 330 *e*P **P** **18 08 56.6 +0.8**
RUDO Rudo 42.94 294 *e*P **P** **18 08 56.3 -0.3**
GSI Gunungsitoli 42.95 151 P **P** **18 08 57.5 +0.7**
STEI Steigen 42.96 330 *e*P **P** **18 08 57.0 +0.6**
SMOL Smolenice 42.97 302 *e*P **P** **18 08 57.6 +0.8**
SMOL pmax pmax
comp=Z,18nm,1.4s
KRLC Kraliky 43.04 304 *e*P **P** **18 08 58.2 +0.8**
KRLC MLR MLR
comp=Z,800nm,18.5s
KRLC Kraliky 43.04 304 *e*P **P** **18 08 58.2 +0.8**
KRLC AMS AMS 18 27 20.0
comp=Z,800nm,18.5s
MODS Modra-Piesok 43.10 301 *e*P **P** **18 08 59.1 +1.3**
MODS pmax pmax
comp=Z,48nm,1.2s
MODS Modra-Piesok 43.10 301 *e*P **P** **18 08 59.1 +1.3**
BJO1 Bjornoya 43.10 340 *e*P **P** **18 08 58.3 +0.8**
KOVH Kovagotottos 43.12 298 P **P** **18 08 57.9 -0.1**
JHS Saijyo 43.12 79 P **P** **18 08 58.2 0.0**
JHS IAmb IAmb 18 09 01.2
comp=Z,28nm,0.8s
MOR8 Moi Rana 43.12 328 *e*P **P** **18 08 57.6 -0.2**
KSP Ksiaz 43.19 305 *e*P **P** **18 08 58.9 +0.3**
MPLH Magyarpolny 43.22 300 P **P** **18 08 59.2 +0.4**
ZST Bratislava 43.25 301 *e*P **P** **18 08 59.9 +0.9**
ZST pmax pmax
comp=Z,67nm,1.5s
ZST Bratislava 43.25 301 *e*P **P** **18 08 59.9 +0.9**
DPC Dobruska-Polom 43.27 304 *e*P **P** **18 09 00.1 +0.8**
DPC MLR MLR
comp=Z,1μm,15.6s
DPC Dobruska-Polom 43.27 304 *e*P **P** **18 09 00.1 +0.8**
DPC *e*SS SS 18 18 45.0 +6.4
DPC AMS AMS 18 27 40.0
comp=Z,1μm,15.6s
JOW Kunigami 43.29 93 P **P** **18 08 59.2 -0.4**
JOW IAmb IAmb 18 09 12.2
comp=Z,47nm,1.3s
EGYH Egyhazaskeszo 43.29 300 P **P** **18 08 59.6 +0.2**
OSTC Ostas 43.30 305 *e*P **P** **18 09 00.3 +0.9**
OSTC AMS AMS 18 27 50.0
comp=Z,1μm,15.0s
ITM Ithomi 43.30 284 P **P** **18 08 57.9 -1.8**
VRAC Vranov 43.33 303 ⇑P **P** **18 09 00.2 +0.6**
VRAC Vranov 43.33 303 LR LR 18 30 47.6
comp=Z,705nm,18.4s,baz=79,slow=41
VRAC Vranov 43.33 303 ⇑P **P** **18 09 00.2 +0.6**
VRAC Vranov 43.33 303 *e*P **P** **18 09 00.4 +0.7**
PDG Podgorica 43.39 293 ⇑P **P** **18 09 01.1 +0.9**
PDG Podgorica 43.39 293 P **P** **18 09 00.7 +0.5**
PDG IAmb IAmb 18 09 06.1
comp=Z,45nm,1.0s
PDG Podgorica 43.39 293 ⇑*i*P **P** **18 09 00.1 -0.1**
CHVC Chvalec 43.39 305 *e*P **P** **18 09 01.6 +1.4**
UPC Upice 43.44 305 *e*P **P** **18 09 01.3 +0.8**
UPC MLR MLR
comp=Z,1μm,15.0s
UPC Upice 43.44 305 *e*P **P** **18 09 01.3 +0.8**
UPC AMS AMS 18 27 40.0
comp=Z,1μm,15.0s
HFS Hagfors 43.46 319 LR LR 18 27 37.6
comp=Z,1μm,19.2s,baz=84,slow=37
KRUC Moravsky 43.51 303 *e*P **P** **18 09 01.5 +0.4**
DRME Dracevica, Mon 43.51 292 *e*P **P** **18 09 02.1 +0.9**
KONS Konsvik 43.68 328 *e*P **P** **18 09 01.0 -1.2**
SOP Sopron 43.73 301 P **P** **18 09 03.4 +0.5**
RONA Rosalia, Austr 43.90 301 *e*P **P** **18 09 04.7 +0.3**
comp=Z,23nm,1.0s,SNR=15
KEK Kerkira 43.91 289 P **P** **18 09 02.3 -2.1**
TREB Trebinje 43.93 293 *e*P **P** **18 09 04.7 +0.1**
TREC Trest 44.03 303 AMS AMS 18 30 30.0
comp=Z,800nm,17.0s
BLY Banja Luka 44.11 296 ⇑*i*P **P** **18 09 06.2 +0.2**
CONA Conrad Observa 44.13 301 *e*P **P** **18 09 06.7 +0.5**
comp=Z,52nm,1.2s,SNR=26
MOSL Moslavina 44.15 298 *i* P **P** **18 09 06.3 -0.1**
MNSI Mandailing Nat 44.18 149 P **P** **18 09 09.2 +2.4**
KALN Kalnik 44.21 299 *i* P **P** **18 09 06.9 0.0**
A051A Mrakovica 44.22 297 *e*P **P** **18 09 06.8 -0.2**
JMN Monobe 44.23 81 P **P** **18 09 06.0 -1.2**
JMN IAmb IAmb 18 09 13.0
comp=Z,29nm,0.8s
MGRS Mrkonjic Grad 44.28 296 *e*P **P** **18 09 08.7 +1.3**
SRKY Kupres RS 44.33 295 *e*P **P** **18 09 07.4 -0.5**
PVCC Panska Ves 44.33 305 *e*P **P** **18 09 09.1 +1.4**
PVCC MLR MLR
comp=Z,1μm,15.6s
PVCC Panska Ves 44.33 305 *e*P **P** **18 09 09.1 +1.4**
PVCC AMS AMS 18 28 20.0
comp=Z,1μm,15.6s
STON Ston 44.33 294 *e*P **P** **18 09 07.1 -0.7**
STON Ston 44.33 294 *i* P **P** **18 09 06.5 -1.3**
NC405 NORSAR Array S 44.37 320 P **P** **18 09 06.7 -1.2**
LOBO Lobor 44.46 299 *i* P **P** **18 09 09.3 +0.5**
PRU Pruhonice 44.47 304 *e*P **P** **18 09 09.9 +1.1**
PRU *e*SS SS 18 19 01.0 -1.0
PRU MLR MLR
comp=Z,1μm,14.3s
PRU Pruhonice 44.47 304 *e*P **P** **18 09 09.9 +1.1**
PRU *e*SS SS 18 19 01.0 -1.0
PRU AMS AMS 18 28 30.0
comp=Z,1μm,14.3s
NC602 NORSAR Array S 44.48 320 P **P** **18 09 07.8 -0.9**
ARSA Arzberg 44.52 300 *e*P **P** **18 09 09.3 0.0**
comp=Z,21nm,1.3s,SNR=8.2
ARSA Arzberg 44.52 300 ⇑P **P** **18 09 09.3 0.0**
ARSA Arzberg 44.52 300 AML AML
comp=N,11μm,1.5s
ARSA Arzberg 44.52 300 AML AML
comp=E,12μm,1.3s
NC303 NORSAR Array S 44.53 321 P **P** **18 09 08.2 -0.9**
NC303 IAmb IAmb 18 09 14.1
comp=Z,28nm,0.9s
RICI Ricice 44.53 295 *i* P **P** **18 09 08.9 -0.5**
NB201 NORSAR Array S 44.58 320 P **P** **18 09 09.4 -0.1**
PTJ Puntijarka 44.60 298 *i* P **P** **18 09 10.2 +0.2**
NB2 NORSAR Subarra 44.62 320 P **P** **18 09 09.1 -0.8**
comp=Z,63nm,1.4s,baz=85,slow=7.9
NB2 NORSAR Subarra 44.62 320 P **P** **18 09 09.1 -0.8**
baz=85,slow=7.9
NOA NORSAR Array B 44.62 320 P **P** **18 09 08.9 -0.9**
comp=Z,5.1nm,0.6s,baz=86,slow=7.9,SNR=28
NOA LR LR 18 28 12.6
comp=Z,1μm,20.3s,baz=85,slow=37
comp=Z,5.1nm,0.6s
BRG Berggiesshubel 44.64 306 *e*P **P** **18 09 11.0 +0.8**
BRG Amp 18 09 12.9
comp=Z,26nm,1.1s
BRG *ex* x 18 09 16.4
BRG Amp 18 09 17.1
comp=Z,24nm,0.9s
BRG Amp 18 31 12.0
comp=Z,1.1nm,16.5s
BRG Amp 18 31 18.0
comp=N,0.1nm,13.1s
BRG Amp 18 31 25.0
comp=E,0.9nm,18.7s
BRG Berggiesshubel 44.64 306 *e*P **P** **18 09 10.9 +0.8**
BRG pmax pmax
comp=Z,26nm,1.1s
BRG pmax pmax
comp=Z,24nm,0.9s
BRG MLR MLR
comp=Z,1μm,16.5s
BRG MLR MLR
comp=N,107nm,13.1s
BRG MLR MLR
comp=E,860nm,18.7s
NAO01 NORSAR Array S 44.79 320 P **P** **18 09 10.4 -0.8**
NAO01 NORSAR Array S 44.79 320 *e*P **P** **18 09 10.7 -0.5**
GOLS Golise 44.80 299 *e*P **P** **18 09 11.7 +0.2**
SPITS Spitsbergen Ar 44.81 345 LR LR 18 31 23.4
comp=E,1μm,18.4s,baz=80,slow=41
SPITS Spitsbergen Ar 44.81 345 P **P** **18 09 10.1 -1.1**
SPITS pmax pmax
comp=Z,110nm,2.0s
NC204 NORSAR Array S 44.81 321 P **P** **18 09 10.8 -0.6**
NBO00 NORSAR Array S 44.83 320 P **P** **18 09 10.9 -0.7**
CKRC Cesky Krumlov 44.90 303 *e*P **P** **18 09 13.3 +1.0**
CKRC *e*SS SS 18 19 15.2 +4.8
PERS Pernice 44.96 300 *e*P **P** **18 09 13.0 +0.1**
OSL Oslo 44.96 319 *e*P **P** **18 09 12.4 -0.1**
CRES Cresnjev 44.96 298 ⇑*i*P **P** **18 09 12.9 +0.1**
SOKA Soboth 45.00 300 *e*P **P** **18 09 13.3 +0.1**
comp=Z,69nm,1.4s,SNR=39
OZLJ Ozalj 45.02 298 *i* P **P** **18 09 13.8 +0.6**
CLL Collm 45.12 306 P **P** **18 09 13.5 -0.5**
CLL IAmb IAmb 18 09 16.1
comp=Z,34nm,1.0s
CLL Collm 45.12 306 P **P** **18 09 13.5 -0.5**
CLL pmax pmax
comp=Z,34nm,1.0s
CLL Collm 45.12 306 *i* P **P** **18 09 14.4 +0.4**
comp=Z,59nm,1.4s
CLL *e*Pmax 18 09 15.0
CLL *e*PP **PP** **18 11 01.0 +1.6**
CLL *e*S **S** **18 15 58.0 +5.7**
CLL *e*SS **SS** **18 19 12.0 -2.3**
PLIT Plitvice 45.13 297 *i* P **P** **18 09 14.4 +0.2**
UDBI Udbina 45.15 297 *i* P **P** **18 09 14.1 -0.2**
MOA Molln 45.18 301 *i* P **P** **18 09 14.6 +0.1**
comp=Z,26nm,1.2s,SNR=8.8
BOJS Bojanci 45.20 298 ⇑*i*P **P** **18 09 14.5 -0.1**
GEC2 GERESS Array S 45.28 303 P **P** **18 09 15.1 -0.4**
GEC2 IAmb IAmb 18 09 18.2
comp=Z,52nm,1.1s
GERES GERESS Array B 45.28 303 P **P** **18 09 16.1 +0.7**
comp=Z,14nm,0.7s,baz=74,slow=5.7,SNR=103
comp=Z,14nm,0.7s
GERES GERESS Array B 45.28 303 P **P** **18 09 15.4 0.0**
GERES GERESS Array B 45.28 303 P **P** **18 09 15.4 0.0**
KHC Kasperske Hory 45.29 303 P **P** **18 09 15.3 -0.1**
KHC IAmb IAmb 18 09 17.5
comp=Z,46nm,1.5s
KHC Kasperske Hory 45.29 303 *e*P **P** **18 09 15.6 +0.2**
KHC *e* 18 09 30.0
KHC MLR MLR
comp=Z,1μm,14.4s
KHC Kasperske Hory 45.29 303 *e*P **P** **18 09 15.6 +0.2**
KHC *ex* x 18 09 30.0
KHC *e*SS SS 18 19 26.5 +9.0
KHC AMS AMS 18 31 10.0
comp=Z,1μm,14.4s
OBKA Obir 45.37 300 ⇑*i*P **P** **18 09 16.1 0.0**
OBKA Obir 45.37 300 *i* P **P** **18 09 16.4 +0.3**
comp=Z,39nm,1.2s,SNR=8.8
MORI Morici 45.39 296 *i* P **P** **18 09 15.7 -0.5**
LJU Ljubljana 45.52 299 *i* P **P** **18 09 17.6 +0.3**
DOMB Dombas 45.55 322 *e*P **P** **18 09 17.3 0.0**
KONO Kongsberg 45.56 319 P **P** **18 09 17.2 -0.1**
KONO Kongsberg 45.56 319 P **P** **18 09 17.2 -0.1**
KONO pmax pmax
comp=Z,126nm,1.9s
KONO Kongsberg 45.56 319 *e*P **P** **18 09 17.9 +0.6**
BIOA Bad Ischl, Aus 45.63 301 *e*P **P** **18 09 18.1 0.0**
comp=Z,24nm,1.2s,SNR=10
CEY Cerknica 45.68 299 ⇑*i*P **P** **18 09 18.4 -0.1**
JSD Sado 45.70 73 P **P** **18 09 17.9 -0.9**
JSD IAmb IAmb 18 09 22.6
comp=Z,16nm,0.8s
VIRC Vir 45.70 296 *i* P **P** **18 09 17.8 -0.8**
MATE Matera 45.79 291 ⇑P **P** **18 09 19.9 +0.5**
YSS Yuzh-Sakhalins 45.80 60 P **P** **18 09 18.3 -1.1**
KBS Kingsbay 45.87 346 P **P** **18 09 18.8 -0.8**
KBS IAmb IAmb 18 09 25.9
comp=Z,72nm,1.8s
KBS Kingsbay 45.87 346 P **P** **18 09 18.8 -0.8**
KBS pmax pmax
comp=Z,72nm,1.8s
KBS Kingsbay 45.87 346 *i* P **P** **18 09 18.4 -1.1**
KBS Kingsbay 45.87 346 *e*P **P** **18 09 21.1 +1.5**
INU Inuyama 45.88 77 P **P** **18 09 19.5 -0.7**
INU IAmb IAmb 18 09 25.4
comp=Z,25nm,0.8s
INU Inuyama 45.88 77 P **P** **18 09 22.7 +2.5**
INU Inuyama 45.88 77 P **P** **18 09 22.1 +2.0**
INU pP **sP** **18 09 32.6 +3.0**
MYKA Terra Mystica 45.94 300 *i* P **P** **18 09 20.8 +0.2**
comp=Z,6.1nm,0.7s
SKDS Skadanscina 46.01 298 ⇑*i*P **P** **18 09 20.7 -0.5**
JGF Kuroka 46.03 76 P **P** **18 09 19.3 -2.1**
JGF IAmb IAmb 18 09 24.2
comp=Z,18nm,0.9s
PRED Cave del Predi 46.04 300 P **P** **18 09 20.7 -0.7**
PRED IAmb IAmb 18 09 26.8
comp=Z,22nm,1.2s
SKAR Skarslia 46.07 320 *e*P **P** **18 09 22.2 +0.8**
SMRN Sveta Marina 46.08 298 *i* P **P** **18 09 21.3 -0.3**
TRI Trieste 46.13 299 P **P** **18 09 21.0 -1.0**
TRI Trieste 46.13 299 P **P** **18 09 21.0 -1.0**
TRI pmax pmax
comp=Z,60nm,0.9s
SABO M.te Sabotino 46.16 299 P **P** **18 09 21.2 -1.1**
SABO IAmb IAmb 18 09 23.2
comp=Z,87nm,1.3s
MOL Molde 46.20 323 *e*P **P** **18 09 22.0 -0.4**
MAJO Matsushiro 46.26 75 P **P** **18 09 21.5 -1.7**
MAJO Matsushiro 46.26 75 ⇑P **P** **18 09 22.8 -0.4**
MAJO Matsushiro 46.26 75 P **P** **18 09 25.5 +2.3**
MAJO Matsushiro 46.26 75 P **P** **18 09 25.0 +1.8**
MJAR Matsushiro Arr 46.26 75 P **P** **18 09 24.2 +0.9**
comp=Z,8.1nm,0.8s,baz=298,slow=8.3,SNR=24
MJAR PcP **PcP** **18 10 58.4 -0.2**
comp=Z,2.7nm,0.9s,baz=297,slow=2.0,SNR=4.2
comp=Z,8.1nm,0.8s
TIP Timpagrande 46.30 289 ⇑P **P** **18 09 24.2 +0.7**
TIP Timpagrande 46.30 289 P **P** **18 09 22.1 -1.4**
TIP IAmb IAmb 18 09 25.3
comp=Z,45nm,1.1s
BRJN Brijuni 46.39 298 *i* P **P** **18 09 23.6 -0.4**

CLUD Cludinico 46.49 300 P P 18 09 23.4 -1.4
AKN Aaknes 46.50 322 eP P 18 09 26.8 +2.0
GRA1 Grafenberg Arr 46.63 305 P P 18 09 25.3 -0.6
GRF Grafenberg Arr 46.63 305 P P 18 09 25.3 -0.6
GRF pmax pmax
comp=Z,62nm,0.8s
GRFO Grafenberg 46.63 305 P P 18 09 25.4 -0.5
GRFO Grafenberg 46.63 305 P P 18 09 25.4 -0.5
GRFO pmax pmax
comp=Z,58nm,0.8s
ABTA Abfaltersbach 46.64 300 *i* P **P 18 09 25.0 -1.2**
comp=Z,8.1nm,0.6s,SNR=9.8
STAL STALIGIAL 46.66 300 P P 18 09 25.0 -1.2
CUC Castrocucco 46.66 291 P P 18 09 26.3 -0.1
CUC IAmb IAmb 18 09 32.9
comp=Z,28nm,0.8s
JTM Tenmabayashi 46.67 68 P P 18 09 25.1 -1.2
JTM IAmb IAmb 18 09 25.2
comp=Z,44nm,1.3s
CIMO Cimolais 46.82 300 P P 18 09 25.9 -1.6
CIMO IAmb IAmb 18 09 28.6
comp=Z,39nm,1.3s
WTTA Wattenberg 47.06 301 *eP* **P 18 09 29.2 -0.3**
comp=Z,67nm,1.6s,SNR=16
WATA Walderalm 47.07 301 *eP* **P 18 09 29.3 -0.3**
comp=Z,45nm,1.4s,SNR=15
CEL Celeste 47.28 288 P P 18 09 30.2 -1.0
SQTA Sankt Quirin 47.35 301 *eP* **P 18 09 31.3 -0.4**
comp=Z,16nm,0.5s,SNR=16
MOTA Moosalm 47.38 302 *i* P **P 18 09 31.6 -0.4**
comp=Z,57nm,1.3s,SNR=20
CTI Castel Tesino 47.43 300 P P 18 09 30.8 -1.5
CTI IAmb IAmb 18 09 37.4
comp=Z,15nm,0.9s
CTI Castel Tesino 47.43 300 P P 18 09 30.8 -1.5
CTI pmax pmax
comp=Z,15nm,0.9s
AQU L'Aquila 47.49 294 P P 18 09 32.7 -0.1
AQU L'Aquila 47.49 294 P P 18 09 32.7 -0.1
AQU pmax pmax
comp=Z,36nm,0.9s
NRCA Norcia 47.52 295 P P 18 09 32.0 -1.0
MA2 Magadan 47.54 41 LR LR 18 29 37.3
comp=Z,169nm,18.7s,baz=282,slow=36
MA2 Magadan 47.54 41 P P 18 09 32.4 -0.4
MA2 IAmb IAmb 18 10 43.3
comp=Z,27nm,1.3s
MA2 Magadan 47.54 41 P P 18 09 32.4 -0.4
MA2 pmax pmax
comp=Z,27nm,1.3s
RETA Reutte 47.55 302 *eP* **P 18 09 33.2 -0.1**
comp=Z,30nm,0.8s,SNR=20
BER Bergen 47.57 320 *eP* **P 18 09 34.0 +1.0**
JMM Marumori 47.60 72 P P 18 09 32.4 -1.2
JMM IAmb IAmb 18 09 36.6
comp=Z,41nm,1.2s
ASK Askoy 47.62 320 *eP* **P 18 09 34.5 +1.1**
TEOL Teolo 47.64 299 P P 18 09 32.9 -1.0
ERM Erimo 47.69 66 P P 18 09 33.3 -0.9
ERM IAmb IAmb 18 09 37.9
comp=Z,23nm,0.8s
ERM Erimo 47.69 66 P P 18 09 33.3 -0.9
ERM pmax pmax
comp=Z,23nm,0.9s
ERM Erimo 47.69 66 P P 18 09 35.7 +1.5
FETA Feichten 47.72 301 *eP* **P 18 09 34.2 -0.5**
comp=Z,35nm,1.2s,SNR=16
MURB Monte Urbino 47.77 296 P P 18 09 34.6 -0.4
JYT Yasato 47.85 74 P P 18 09 34.5 -1.1
FUORN Ofenpass-Fuorn 48.15 301 P P 18 09 37.3 -0.9
FUORN IAmb IAmb 18 09 43.6
comp=Z,18nm,0.7s
STU Stuttgart 48.16 304 P P 18 09 37.7 -0.2
STU IAmb IAmb 18 09 44.7
comp=Z,31nm,0.9s
STU Stuttgart 48.16 304 P P 18 09 37.7 -0.2
STU pmax pmax
comp=Z,31nm,0.9s
DAVA Damuels 48.19 302 *eP* **P 18 09 38.2 -0.1**
comp=Z,47nm,0.7s,SNR=27
SALO Salr 48.31 300 P P 18 09 38.4 -0.7
SALO IAmb IAmb 18 09 40.7
comp=Z,32nm,1.0s
DAVOX Davos/Dischmat 48.35 301 LR LR 18 32 19.8
comp=Z,807nm,20.3s,baz=68,slow=39
KKM Kota Kinabalu 48.40 125 P P 18 09 38.6 -1.5
KKM IAmb IAmb 18 09 44.5
comp=Z,53nm,1.5s
ZCCA Zocca 48.44 298 P P 18 09 39.8 -0.4
LATE Laterza 48.50 295 P P 18 09 39.6 -0.9
OSSC Osservatorio P 48.55 297 P P 18 09 40.6 -0.3
KSM Kuching 48.65 135 P P 18 09 41.3 -0.6
KSM IAmb IAmb 18 09 46.0
comp=Z,23nm,1.2s
KSM Kuching 48.65 135 P P 18 09 45.0 +3.1
VAE Valguarnera 48.67 288 LR LR 18 34 06.3
comp=Z,171nm,18.3s,baz=38,slow=41
RAFF Raffo Rosso 48.81 288 P P 18 09 43.8 +0.8
BFO Black Forest 48.85 304 P P 18 09 42.9 -0.2
BFO IAmb IAmb 18 09 45.3
comp=Z,27nm,1.0s
BFO Black Forest 48.85 304 P P 18 09 42.9 -0.2
BFO pmax pmax
comp=Z,27nm,1.0s
BFO Black Forest 48.85 304 P P 18 09 43.3 +0.2
SBUM Sibu 48.89 132 P P 18 09 43.9 +0.1
SBUM IAmb IAmb 18 09 51.2
comp=Z,18nm,1.2s
VLC Villacollemand 48.91 298 P P 18 09 44.2 +0.6
MSSA Maissana 49.43 298 P P 18 09 47.4 -0.4
BTNL Ternell 49.51 307 *dP* **P 18 09 48.9 +0.8**
comp=Z,13nm,0.9s
MEM Membach 49.57 307 *dP* **P 18 09 49.1 +0.4**
ECH Echery 49.62 304 P P 18 09 48.8 -0.3
ECH IAmb IAmb 18 09 51.0
comp=Z,31nm,1.0s
ECH Echery 49.62 304 P P 18 09 48.8 -0.3
ECH pmax pmax
comp=Z,31nm,1.0s
ECH Echery 49.62 304 P P 18 09 49.0 -0.1
ECH pP **sP 18 09 59.6 +1.4**
WLF Walferdange 49.78 306 P P 18 09 49.7 -0.5
WLF IAmb IAmb 18 09 52.9
comp=Z,31nm,0.9s
WLF Walferdange 49.78 306 P P 18 09 49.7 -0.5
WLF pmax pmax
comp=Z,31nm,0.9s
WLF Walferdange 49.78 306 *dP* **P 18 09 51.2 +1.0**
comp=Z,24nm,1.0s
BSTI Sart Tilman 49.85 307 *dP* **P 18 09 52.1 +1.4**
BCLA Clavier 50.06 307 *dP* **P 18 09 53.1 +0.8**
SENIN Lac Senin/Sane 50.17 302 P P 18 09 52.5 -1.0
SENIN IAmb IAmb 18 09 55.0
comp=Z,42nm,1.3s
RCHB Rochefort 50.19 307 *dP* **P 18 09 54.0 +0.7**
comp=Z,8.9nm,0.8s
BMRD Maredsous 50.42 307 *dP* **P 18 09 56.2 +1.2**
comp=Z,14nm,1.1s
STKI Sintang 50.45 135 P P 18 10 02.4 +6.7
MYLDM Lahad Datu 50.50 123 P P 18 09 55.0 -1.1
DOU Dourbes 50.59 307 *dP* **P 18 09 56.5 +0.1**
comp=Z,14nm,1.2s
BNI Bardonecchia 51.05 300 P P 18 09 59.0 -1.1
BNI Bardonecchia 51.05 300 P P 18 09 59.0 -1.1
BNI pmax pmax
comp=Z,43nm,0.8s
JMIC Jan Mayen 51.12 335 LR LR 18 33 36.1
comp=Z,124nm,18.2s,baz=78,slow=38
BILL Bilibino 52.30 28 P P 18 10 08.2 -0.7
BILL IAmb IAmb 18 10 18.9
comp=Z,18nm,1.1s
BILL Bilibino 52.30 28 *i* P **P 18 10 08.6 -0.3**
BILL *i* 18 11 19.0
BILL *i* 18 12 05.9
BILL *i* S **S 18 17 32.5 -0.4**
BILL *i* SS **SS 18 21 06.4 -3.6**
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,465nm,16.0s
DAG Danmarks Havn 52.34 343 *i* P **P 18 10 08.0 -1.1**
DAG IAmb IAmb 18 10 13.4
comp=Z,22nm,0.9s
SSB Saint Sauveur 52.36 301 P P 18 10 08.4 -1.3
SSB IAmb IAmb 18 10 11.1
comp=Z,53nm,1.3s
SSB Saint Sauveur 52.36 301 P P 18 10 08.4 -1.3
SSB pmax pmax
comp=Z,53nm,1.3s
SSB Saint Sauveur 52.36 301 P P 18 10 10.0 +0.2
CLF Chambon-Foret 52.76 305 P P 18 10 11.2 -1.4
CLF Chambon-Foret 52.76 305 P P 18 10 13.1 +0.5
PEA0B Petropavlovsk- 52.99 48 P P 18 10 13.4 -0.8
PEA0B IAmb IAmb 18 10 24.5
comp=Z,38nm,1.5s
PEA0B Petropavlovsk- 52.99 48 P P 18 10 13.4 -0.8
PEA0B pmax pmax
comp=Z,38nm,1.5s
PETK Petropavlovsk- 52.99 48 P P 18 10 14.0 -0.2
comp=Z,4.1nm,1.0s,baz=299,slow=1.5,SNR=8.2
PETK LR LR 18 35 21.3
comp=Z,135nm,18.0s,baz=296,slow=39
comp=Z,4.1nm,1.0s
PETK Petropavlovsk- 52.99 48 P P 18 10 13.9 -0.4
PETK Petropavlovsk- 52.99 48 P P 18 10 13.9 -0.4
KEST Kesra 53.09 288 P P 18 10 15.8 +0.4
comp=Z,14nm,0.8s,baz=330,slow=3.9,SNR=10
KEST LR LR 18 37 35.2
comp=Z,277nm,18.4s,baz=283,slow=41
comp=Z,14nm,0.8s
KEST Kesra 53.09 288 P P 18 10 14.6 -0.8
KEST IAmb IAmb 18 10 17.3
comp=Z,23nm,1.1s
EKA Eskdalemuir Ar 53.27 315 LR LR 18 34 17.5
comp=Z,556nm,20.1s,baz=58,slow=38
LODK Lodwar 53.50 238 P P 18 10 17.9 -0.6
DBG Daneborg 53.52 340 *i* P **P 18 10 14.1 -3.7**
TOLI2 Tolitoli 55.07 124 P P 18 10 29.6 -0.3
TOLI2 IAmb IAmb 18 10 34.7
comp=Z,46nm,1.6s
TOLI2 Tolitoli 55.07 124 P P 18 10 32.9 +3.1
MPSI Mapaga 55.12 126 P P 18 10 32.5 +2.3
KMBO Kilima Mbogo 55.85 232 P P 18 10 36.5 +0.8
comp=Z,7.2nm,0.9s,baz=31,slow=9.7,SNR=15
KMBO LR LR 18 35 12.0
comp=Z,205nm,20.8s,baz=86,slow=37
comp=Z,7.2nm,0.9s
KMBO Kilima Mbogo 55.85 232 P P 18 10 35.0 -0.8
KMBO Kilima Mbogo 55.85 232 *i* P **P 18 10 36.3 +0.5**
SNR=7.2
KMBO Kilima Mbogo 55.85 232 P P 18 10 36.1 +0.4
MRSI Marisa 56.29 124 P P 18 10 42.3 +3.7
KIBK Kibwezi 56.35 231 P P 18 10 39.0 -0.1
TTSI Tana Toraja 57.75 128 P P 18 10 55.5 +6.6
BORG Borgarnes 57.83 330 LR LR 18 35 13.0
comp=Z,777nm,18.3s,baz=59,slow=36
EUNU Eureka 59.20 357 P P 18 10 58.7 +0.4
MBAR Mbarara 59.53 239 LR LR 18 38 44.5
comp=Z,136nm,19.5s,baz=28,slow=38
MBAR Mbarara 59.53 239 P P 18 11 00.0 -1.6
MBAR IAmb IAmb 18 11 05.0
comp=Z,18nm,0.9s
MBAR Mbarara 59.53 239 P P 18 11 00.0 -1.6
MBAR pmax pmax
comp=Z,18nm,1.0s
MBAR Mbarara 59.53 239 P P 18 11 01.4 -0.1
MBAR pP **sP 18 11 11.4 +0.4**
TNTI Ternate 59.59 119 P P 18 10 59.2 -2.6
ESBB Sonseca Array 60.48 299 P P 18 11 06.5 -1.2
ESDC Sonseca Array 60.48 299 P P 18 11 07.8 +0.1
comp=Z,12nm,0.6s,baz=55,slow=6.8,SNR=91
ESDC LR LR 18 40 03.2
comp=Z,239nm,19.0s,baz=52,slow=39
comp=Z,12nm,0.6s
ESDC Sonseca Array 60.48 299 P P 18 11 06.6 -1.1
ESDC IAmb IAmb 18 11 08.5
comp=Z,37nm,1.4s
PAB San Pablo 60.80 299 P P 18 11 08.6 -1.4
PAB San Pablo 60.80 299 JP P 18 11 09.5 -0.4
PAB San Pablo 60.80 299 P P 18 11 09.8 -0.2
PBRG Braganca 61.24 302 *eP* **P 18 11 12.6 -0.2**
comp=Z,26nm,1.5s
ICESG Greenland Ices 61.41 339 *i* P **P 18 11 15.1 +1.2**
ICESG IAmb IAmb 18 11 15.6
comp=Z,36nm,0.7s
A21K Barrow 61.72 17 P P 18 11 12.8 -2.7
baz=315
MVO Moncorvo 61.75 301 *eP* **P 18 11 16.6 +0.3**
comp=Z,38nm,1.4s
MVO *eS* **S 18 19 39.8 +1.4**
MVO Moncorvo 61.75 301 *e*LR LR 18 32 58.7
comp=Z,213nm,18.0s
PCAB Cabril 62.12 302 *eP* **P 18 11 19.7 +1.0**
comp=Z,73nm,1.7s
POLO Lamas de Olo 62.14 302 *eP* **P 18 11 18.5 -0.5**
comp=Z,12nm,1.7s
PVRL Vila Real 62.14 302 *eP* **P 18 11 19.4 +0.5**
comp=Z,25nm,1.4s
PGAV Gavieira, Arco 62.14 303 *eP* **P 18 11 19.6 +0.6**
comp=Z,46nm,1.5s
PGAV Gavieira, Arco 62.14 303 *e*LR LR 18 34 33.6
comp=Z,191nm,20.0s
GAMB Gambell 62.23 28 P P 18 11 17.1 -1.9
baz=306
RDOG Red Dog Mine 62.37 22 P P 18 11 17.3 -2.7
baz=311
MTE Manteigas 62.48 301 P P 18 11 20.1 -1.1
MTE Manteigas 62.48 301 *eP* **P 18 11 22.2 +1.0**
comp=Z,44nm,1.6s
MTE Manteigas 62.48 301 *e*LR LR 18 31 51.7
comp=Z,224nm,18.0s
PVIS Viseu 62.54 301 *eP* **P 18 11 22.4 +0.8**
comp=Z,51nm,1.5s
TAM Tamanrasset 62.69 277 P P 18 11 17.2 -5.8
PCBR Castelo Branco 62.73 300 *eP* **P 18 11 23.4 +0.6**
comp=Z,22nm,1.4s
PMRV Marv??o 62.88 300 *eP* **P 18 11 24.3 +0.4**
comp=Z,54nm,1.2s
PMRV Marv??o 62.88 300 *e*LR LR 18 33 42.8
comp=Z,125nm,18.0s
ANGG Ammassalik, Gr 63.06 335 P P 18 11 24.9 +0.3
COI Coimbra 63.15 301 P P 18 11 25.1 -0.5
COI Coimbra 63.15 301 P P 18 11 25.1 -0.5
COI pmax pmax
comp=Z,76nm,1.2s
COI Coimbra 63.15 301 *eP* **P 18 11 26.6 +1.1**
comp=Z,82nm,0.8s
PCAS Casmilo, Conde 63.28 301 *eP* **P 18 11 27.3 +0.8**
comp=Z,49nm,1.3s
PBAR Barcos 63.31 298 *eP* **P 18 11 27.3 +0.6**
comp=Z,71nm,1.5s
PESTR Estremoz 63.31 299 P P 18 11 25.4 -1.3
PESTR Estremoz 63.31 299 *eP* **P 18 11 27.1 +0.4**
PMTG Montargil 63.62 300 *eP* **P 18 11 28.6 -0.1**
comp=Z,33nm,1.2s
PSBE So Bento 63.76 301 *eP* **P 18 11 29.7 0.0**
comp=Z,54nm,1.7s
EVO Evora 63.77 299 *eP* **P 18 11 29.6 -0.1**
comp=Z,30nm,1.7s
ANM Nome 63.91 26 P P 18 11 27.5 -2.8
baz=311
PBEJ Beja 63.94 299 *eP* **P 18 11 31.3 +0.4**
comp=Z,40nm,1.3s
PVAQ Vaqueiros 64.17 298 P P 18 11 31.7 -0.7
PVAQ IAmb IAmb 18 11 34.2
comp=Z,26nm,1.0s
PVAQ Vaqueiros 64.17 298 *eP* **P 18 11 32.4 0.0**
comp=Z,59nm,1.4s
PVAQ *eS* **S 18 20 11.3 +2.6**
PVAQ Vaqueiros 64.17 298 *e*LR LR 18 33 40.7
comp=Z,207nm,16.0s
C23K Itkillik River 64.18 17 P P 18 11 29.8 -2.0
baz=320
ILULI Ilulissat 64.24 342 P P 18 11 31.4 -0.9
ILULI Ilulissat 64.24 342 P P 18 11 31.4 -0.9
ILULI pmax pmax
comp=Z,27nm,0.7s
ILULI Ilulissat 64.24 342 *i* P **P 18 11 31.6 -0.6**
ILULI IAmb IAmb 18 11 33.6
comp=Z,26nm,0.7s
PCVE Castro Verde 64.27 298 *eP* **P 18 11 33.1 +0.1**
comp=Z,39nm,1.5s
MESJ Messejana 64.28 299 *eP* **P 18 11 33.0 -0.1**
MESJ IAmb IAmb 18 11 39.0
comp=Z,70nm,1.5s
MESJ Messejana 64.28 299 *eP* **P 18 11 32.9 -0.1**
MESJ pmax pmax
comp=Z,70nm,1.5s
MESJ Messejana 64.28 299 *eP* **P 18 11 32.4 -0.6**
comp=Z,61nm,1.5s
PNCL Nicolau / Gran 64.34 299 *eP* **P 18 11 34.0 +0.6**
PBDV Barranco-do-Ve 64.41 298 *eP* **P 18 11 34.6 +0.7**
comp=Z,106nm,1.2s
MDT Midelt 64.52 292 LR LR 18 44 34.1
comp=Z,67nm,18.1s,baz=14,slow=41
C24K Franklin Bluff 64.69 16 P P 18 11 33.9 -1.2
baz=322
RES Resolute Bay 64.82 358 LR LR 18 44 17.5
comp=Z,236nm,18.4s,baz=20,slow=40
D23K Nanushuk River 64.84 17 P P 18 11 34.9 -1.3
baz=321
MORF Marmelete 64.85 298 *eP* **P 18 11 38.5 +1.6**
DY2G Dye2 65.04 339 *i* P **P 18 11 37.5 -0.4**
DY2G IAmb IAmb 18 11 42.4
comp=Z,30nm,0.7s
E22K Anaktuvuk Pass 65.22 18 P P 18 11 37.5 -1.2
baz=320
C26K Camden Bay 65.31 15 P P 18 11 36.7 -2.5
baz=325
TOLK Toolik Lake Re 65.35 17 P P 18 11 38.2 -1.4
TOLK IAmb IAmb 18 11 43.9
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 65.35 17 P P 18 11 37.1 -2.4
baz=322,SNR=8.2
D25K Kavik River 65.50 16 P P 18 11 39.1 -1.5
baz=324,SNR=7.0
F21K Alatna River 65.50 20 P P 18 11 38.8 -1.8
baz=319,SNR=18
F22K John River 65.61 19 P P 18 11 39.2 -2.1
baz=320,SNR=22
C27K Jago River 65.78 15 P P 18 11 41.1 -1.3
baz=326
SFJD Kangerlussuaq 65.81 340 LR LR 18 44 44.3
comp=Z,340nm,18.1s,baz=29,slow=40
SFJD Kangerlussuaq 65.81 340 P P 18 11 42.2 -0.3
SFJD Kangerlussuaq 65.81 340 P P 18 11 42.2 -0.3
SFJD pmax pmax
comp=Z,69nm,1.4s
SFJD Kangerlussuaq 65.81 340 *i* P **P 18 11 42.0 -0.5**
SFJD IAmb IAmb 18 11 46.1
comp=Z,64nm,1.4s
ABPO Ambohimpanom 66.03 212 P P 18 11 43.8 -0.9
ABPO IAmb IAmb 18 11 45.6
comp=Z,57nm,1.8s
ABPO Ambohimpanom 66.03 212 P P 18 11 43.8 -0.9
ABPO pmax pmax
comp=Z,57nm,1.8s
G21K Allakaket 66.03 20 P P 18 11 42.5 -1.5
baz=319,SNR=14
E24K Your Creek 66.04 17 P P 18 11 42.4 -1.7
baz=323,SNR=8.3
AVE Averroes 66.22 294 P P 18 11 45.0 -0.7
COLD Coldfoot 66.31 19 P P 18 11 45.1 -0.7
COLD IAmb IAmb 18 11 47.2
comp=Z,18nm,0.9s
COLD Coldfoot 66.31 19 P P 18 11 44.1 -1.6
baz=322
IMAR Indian Mountai 66.37 21 P P 18 11 44.8 -1.4
F24K Squaw Lake 66.63 18 P P 18 11 46.2 -1.6
baz=323,SNR=6.8
E25K Arctic Village 66.65 16 P P 18 11 47.0 -1.0
baz=325
G23K Bananza Creek 66.76 19 P P 18 11 46.5 -2.2
baz=322,SNR=5.8
H21K Melozitna Rive 66.87 21 P P 18 11 48.8 -0.6
H21K IAmb IAmb 18 11 50.2
comp=Z,19nm,1.2s
H21K Melozitna Rive 66.87 21 P P 18 11 47.8 -1.6
baz=320,SNR=17
H22K Ishtalina Cre 67.06 20 P P 18 11 49.1 -1.5
baz=321,SNR=7.7
F25K Christian Rive 67.07 17 P P 18 11 48.8 -1.8
baz=325,SNR=15
F26K Sheenjek River 67.31 16 P P 18 11 50.9 -1.2
baz=326
G24K Hadweenzic Riv 67.38 18 P P 18 11 51.5 -1.1
baz=324,SNR=15
E27K Coleen River 67.41 15 P P 18 11 51.6 -1.2
baz=328,SNR=9.0
BMAR Burnt Mountain 67.44 17 P P 18 11 52.8 -0.2
I21K Tanana 67.46 21 P P 18 11 52.6 -0.4
I21K IAmb IAmb 18 11 54.1
comp=Z,20nm,1.3s
I21K Tanana 67.46 21 P P 18 11 50.5 -2.6
baz=321
H23K Yukon River 67.58 19 P P 18 11 53.1 -0.8
H23K IAmb IAmb 18 11 55.9
comp=Z,14nm,0.9s
H23K Yukon River 67.58 19 P P 18 11 51.5 -2.4
baz=322,SNR=8.0
J20K Nowinta River 67.64 22 P P 18 11 53.9 -0.4
J20K IAmb IAmb 18 11 56.0
comp=Z,16nm,0.8s
J20K Nowinta River 67.64 22 P P 18 11 51.6 -2.7
baz=319,SNR=16
G25K Bearman Lake 67.65 17 P P 18 11 51.8 -2.4
baz=325,SNR=6.7
MLY Manley 67.91 20 P P 18 11 55.9 -0.1
MLY Manley 67.91 20 P P 18 11 53.4 -2.6
baz=322,SNR=9.4
H24K Noodor Dome 67.99 19 P P 18 11 56.1 -0.4
H24K Noodor Dome 67.99 19 P P 18 11 55.3 -1.2
baz=324,SNR=6.6
G26K Porcupine Rive 68.01 17 P P 18 11 55.2 -1.3
baz=327
FYU Fort Yukon 68.01 17 IAmb IAmb 18 11 58.1
comp=Z,29nm,1.3s
TTA Tatalina 68.03 24 P P 18 11 55.6 -1.1
TTA IAmb IAmb 18 11 58.9
comp=Z,37nm,1.7s
TTA Tatalina 68.03 24 P P 18 11 55.7 -1.1
TTA pmax pmax
comp=Z,37nm,1.7s
TTA Tatalina 68.03 24 P P 18 11 55.4 -1.4
baz=318,SNR=6.2
H25K Birch Creek 68.12 18 P P 18 11 55.7 -1.5
baz=325
I23K Minto, Yukon-K 68.17 20 IAmb IAmb 18 11 59.2
comp=Z,16nm,1.1s
I23K Minto, Yukon-K 68.17 20 P P 18 11 56.0 -1.5
baz=323,SNR=9.0
K20K Telida 68.28 23 IAmb IAmb 18 12 00.3
comp=Z,15nm,0.7s
K20K Telida 68.28 23 P P 18 11 57.0 -1.3
baz=320,SNR=19
CHUM Lake Minchumin 68.38 22 P P 18 11 57.4 -1.5
baz=321,SNR=6.0
BPAW Bear Paw Mtn. 68.58 21 P P 18 11 59.0 -1.2
BPAW IAmb IAmb 18 12 01.2
comp=Z,14nm,0.9s
BPAW Bear Paw Mtn. 68.58 21 P P 18 11 59.2 -1.0
baz=322,SNR=14
G27K Doyon Strip 68.58 16 P P 18 11 58.3 -1.8
baz=328,SNR=9.4
MDM Murphy Dome 68.61 19 IAmb IAmb 18 12 01.1
comp=Z,18nm,1.3s
NRS Narsarsuaq 68.67 334 *i* P **P 18 11 59.0 -1.7**
NRS IAmb IAmb 18 12 08.2
comp=Z,91nm,1.6s
POKR Poker Plat Res 68.68 19 P P 18 11 60.0 -0.8
POKR IAmb IAmb 18 12 01.9
comp=Z,40nm,1.4s
POKR Poker Plat Res 68.68 19 P P 18 12 00.1 -0.7
baz=324
NEA2 Nenana 68.69 20 IAmb IAmb 18 12 02.0
comp=Z,22nm,1.2s
NEA2 Nenana 68.69 20 P P 18 12 00.5 -0.4
baz=323,SNR=5.5
INK Inuvik 68.75 12 LR LR 18 44 48.2
comp=Z,126nm,20.3s,baz=306,slow=38
INK Inuvik 68.75 12 P P 18 12 00.8 -0.2
INK IAmb IAmb 18 12 02.5
comp=Z,19nm,1.1s
INK Inuvik 68.75 12 P P 18 12 00.9 -0.2
INK pmax pmax
comp=Z,19nm,1.1s
INK Inuvik 68.75 12 P P 18 12 00.3 -0.8
baz=334,SNR=11
TCOL CIGO, UAF Yank 68.77 19 P P 18 12 00.3 -1.0
TCOL IAmb IAmb 18 12 02.1
comp=Z,35nm,1.2s
TCOL CIGO, UAF Yank 68.77 19 P P 18 11 59.3 -2.0
baz=324
COLA College 68.78 19 P P 18 11 59.7 -1.6
baz=324
VOI Vohitsoka 68.80 211 P P 18 12 02.0 -0.1
VOI IAmb IAmb 18 12 05.4
comp=Z,54nm,1.5s

VOI	Vohitsoka	68.80	211	P	P	18 12 03.3	+1.2		
CAST	Castle Rocks	68.81	22	IAmb	IAmb	18 12 03.2			
	comp=Z,18nm,0.9s								
CAST	Castle Rocks	68.81	22	P	P	18 12 00.2	-1.4		
	baz=321,SNR=20								
PRP	Porcupine Dome	68.81	18	P	P	18 12 00.0	-1.7		
	baz=326,SNR=6.4								
BWN	Browne	68.93	20	P	P	18 12 02.0	-0.3		
L19K	White Mountain	68.95	24	IAmb	IAmb	18 12 07.7			
	comp=Z,57nm,1.9s								
L19K	White Mountain	68.95	24	P	P	18 12 01.0	-1.5		
	baz=319,SNR=9.4								
N16K	Nishlik Lake	68.96	26	P	P	18 12 01.3	-1.3		
	baz=317,SNR=13								
L20K	Farewell, AK	69.01	23	P	P	18 12 01.5	-1.5		
	baz=320,SNR=9.5								
KTH	Kantishna Hill	69.03	21	P	P	18 12 01.8	-1.3		
KTH				IAmb	IAmb	18 12 04.3			
	comp=Z,31nm,0.9s								
C36M	Paulatuk	69.05	8	IAmb	IAmb	18 12 03.5			
	comp=Z,36nm,1.1s								
C36M	Paulatuk	69.05	8	P	P	18 12 01.3	-1.7		
	baz=342,SNR=6.0								
ILAR	Eielson Array	69.10	19	P	P	18 12 02.5	-0.8		
	comp=Z,6.4nm,0.8s,baz=314,slow=5.0,SNR=53								
ILAR				LR	LR	18 46 26.6			
	comp=Z,683nm,18.0s,baz=296,slow=40								
	comp=Z,6.4nm,0.8s								
ILAR	Eielson Array	69.10	19	P	P	18 12 02.2	-1.2		
ILAR	Eielson Array	69.10	19	P	P	18 12 02.2	-1.2		
H27K	Steamboat Moun	69.10	16	P	P	18 12 02.7	-0.7		
	baz=329								
PPLA	Purkeypile	69.19	22	P	P	18 12 02.9	-1.3		
	baz=321,SNR=9.4								
TRF	Thorofare Moun	69.28	21	P	P	18 12 02.8	-2.0		
	baz=322								
M19K	Big River Lodg	69.30	24	P	P	18 12 03.0	-1.7		
	baz=320								
HDA	Harding Lake	69.38	19	P	P	18 12 03.9	-1.2		
	baz=325								
SMPI	Sarmi	69.39	112	P	P	18 12 09.5	+3.6		
MCK	McKinley	69.42	20	P	P	18 12 03.7	-1.7		
	baz=323								
IVI	Ivigtut	69.53	335	P	P	18 12 05.3	-0.7		
I26K	Coal Creek Min	69.53	17	P	P	18 12 04.9	-1.1		
I26K	Coal Creek Min	69.53	17	P	P	18 12 04.4	-1.6		
	baz=328								
SVW2	Sparrevohn	69.55	25	IAmb	IAmb	18 12 10.3			
	comp=Z,28nm,1.5s								
J25K	Salcha River,	69.60	18	P	P	18 12 04.5	-2.0		
	baz=326,SNR=7.2								
I27K	Kandik River	69.62	16	P	P	18 12 04.8	-1.9		
	baz=329								
M20K	Styx River	69.70	23	P	P	18 12 06.2	-1.1		
	baz=321								
N18K	Kilae Creek	69.76	25	P	P	18 12 06.3	-1.3		
	baz=319								
O16K	Kokwok River B	69.84	27	P	P	18 12 05.9	-2.1		
	baz=318,SNR=8.1								
EPYK	Eagle Plains	69.94	14	P	P	18 12 07.9	-0.7		
EPYK	Eagle Plains	69.94	14	P	P	18 12 07.0	-1.6		
	baz=332,SNR=5.7								
O17K	Koliganek Bris	70.05	26	P	P	18 12 07.3	-2.0		
	baz=318								
N19K	Bonanza Creek	70.11	25	P	P	18 12 07.6	-2.2		
	baz=320								
CUT	Chulitna	70.12	22	P	P	18 12 07.9	-1.7		
	baz=323								
J26L	Joseph Creek	70.12	18	P	P	18 12 08.6	-1.3		
J26L				IAmb	IAmb	18 12 16.1			
	comp=Z,12nm,0.8s								
J26L	Joseph Creek	70.12	18	P	P	18 12 08.5	-1.3		
	baz=327,SNR=16								
K24K	Donnelly Dome	70.17	19	P	P	18 12 08.3	-1.7		
	baz=326								
WAT1	Susitna Watana	70.25	21	P	P	18 12 08.5	-2.1		
	baz=324								
DHY	Denali Highway	70.37	20	P	P	18 12 10.3	-1.1		
	baz=325,SNR=6.2								
EGAK	Eagle	70.43	17	P	P	18 12 10.6	-1.0		
EGAK				IAmb	IAmb	18 12 12.1			
	comp=Z,23nm,1.6s								
EGAK	Eagle	70.43	17	P	P	18 12 09.6	-2.0		
	baz=329								
RIDG	Independent Ri	70.46	19	IAmb	IAmb	18 12 12.2			
	comp=Z,20nm,0.8s								
RIDG	Independent Ri	70.46	19	P	P	18 12 10.2	-1.7		
	baz=326,SNR=10.0								
SCRK	Sand Creek	70.47	18	P	P	18 12 10.0	-1.9		
	baz=327,SNR=5.6								
I29M	Ogilvie Camp,	70.52	15	P	P	18 12 10.8	-1.4		
	baz=331,SNR=8.7								
O18K	Koktuh Hills	70.61	25	P	P	18 12 13.4	+0.6		
O18K	Koktuh Hills	70.61	25	P	P	18 12 11.3	-1.5		
	baz=320								
WAT6	Susitna Watana	70.67	21	P	P	18 12 11.0	-2.3		
	baz=325,SNR=8.1								
UNV	Unalaska Valle	70.68	35	P	P	18 12 11.4	-1.8		
	baz=313								
P17K	Kvichak River	70.70	26	P	P	18 12 11.7	-1.6		
	baz=319,SNR=5.6								
GENI	Genyem	70.84	111	P	P	18 12 19.1	+4.3		
GENI	Genyem	70.84	111	P	P	18 12 17.6	+2.8		
K27K	Chicken	70.87	18	P	P	18 12 13.7	-0.6		
K27K				IAmb	IAmb	18 12 15.3			
	comp=Z,17nm,1.1s								
PAX	Paxson	70.94	20	IAmb	IAmb	18 12 15.7			
	comp=Z,24nm,1.2s								
PAX	Paxson	70.94	20	P	P	18 12 13.5	-1.3		
	baz=326,SNR=10								
GHO	Glory Hole Cre	71.01	22	P	P	18 12 14.3	-0.9		
GHO				IAmb	IAmb	18 12 21.2			
	comp=Z,30nm,1.0s								
Q16K	King Salmon	71.02	27	P	P	18 12 13.9	-1.3		
	baz=319								
PMR	Palmer	71.09	22	IAmb	IAmb	18 12 15.8			
	comp=Z,35nm,1.3s								
PMR	Palmer	71.09	22	P	P	18 12 14.1	-1.5		
	baz=324								
SML	Sawmill	71.14	21	P	P	18 12 15.0	-1.0		
	baz=324,SNR=13								
O20K	Slope Mountain	71.26	24	P	P	18 12 15.4	-1.3		
	baz=322								
M23K	Glacier View	71.32	21	P	P	18 12 15.7	-1.4		
	baz=325,SNR=10								
RC01	Rabbit Creek A	71.33	22	P	P	18 12 16.0	-1.1		
RC01				IAmb	IAmb	18 12 17.8			
	comp=Z,22nm,0.6s								
RC01	Rabbit Creek A	71.33	22	P	P	18 12 16.3	-0.7		
	baz=323,SNR=6.9								
TOA0	Torodi Ar. Sit	71.38	271	P	P	18 12 16.4	-1.6		
TOA0				IAmb	IAmb	18 12 30.1			
	comp=Z,17nm,0.8s								
TOA0	Torodi Ar. Sit	71.38	271	P	P	18 12 17.6	-0.5		
	SNR=5.5								
TORD	Torodi Ar. Bea	71.38	271	P	P	18 12 16.8	-1.3		
	comp=Z,11nm,0.5s,baz=46,slow=5.5,SNR=143								
	comp=Z,11nm,0.5s								
TORD	Torodi Ar. Bea	71.38	271	IAmb	IAmb	18 12 18.0			
	comp=Z,60nm,1.6s								
SCM	Sheep Creek Mo	71.40	21	P	P	18 12 16.4	-1.2		
	baz=325,SNR=12								
P19K	Oil Pt	71.41	25	P	P	18 12 16.9	-0.7		
	baz=321								
KNK	Knik Glacier	71.43	22	P	P	18 12 17.2	-0.5		
KNK				IAmb	IAmb	18 12 18.5			
	comp=Z,49nm,1.4s								
KNK	Knik Glacier	71.43	22	P	P	18 12 16.2	-1.6		
	baz=324,SNR=5.6								
DAWY	Dawson	71.43	16	P	P	18 12 16.9	-0.9		
DAWY	Dawson	71.43	16	P	P	18 12 15.8	-2.0		
	baz=331,SNR=7.1								
M24K	Tolsona, Glenn	71.48	20	P	P	18 12 18.2	+0.1		
M24K	Tolsona, Glenn	71.48	20	P	P	18 12 16.1	-2.0		
	baz=326,SNR=6.7								
HARP	HAARP	71.50	20	P	P	18 12 16.3	-1.8		
	baz=327,SNR=10								
L27K	Beaver Creek,	71.76	18	IAmb	IAmb	18 12 21.4			
	comp=Z,18nm,1.1s								
L27K	Beaver Creek,	71.76	18	P	P	18 12 18.1	-1.6		
	baz=329,SNR=12								
PWL	Port Wells	71.92	22	IAmb	IAmb	18 12 21.4			
	comp=Z,17nm,0.7s								
PWL	Port Wells	71.92	22	P	P	18 12 19.1	-1.6		
	baz=324								
M26K	Nabesna, AK	72.04	19	P	P	18 12 20.8	-0.7		
M26K	Nabesna, AK	72.04	19	P	P	18 12 20.3	-1.2		
	baz=328,SNR=7.3								
KLU	Klutina	72.06	21	IAmb	IAmb	18 12 22.9			
	comp=Z,20nm,1.1s								
KLU	Klutina	72.06	21	P	P	18 12 21.0	-0.6		
	baz=326								
SDPT	Sand Point	72.09	31	P	P	18 12 20.6	-1.1		
	baz=317								
BRSE	Bradley Lake S	72.11	24	P	P	18 12 20.1	-1.7		
	baz=323								
CHGN	Chignik	72.18	29	P	P	18 12 21.9	-0.3		
CHGN				IAmb	IAmb	18 12 23.3			
	comp=Z,36nm,1.3s								
CHGN	Chignik	72.18	29	P	P	18 12 19.7	-2.5		
	baz=318								
SEW	Seward	72.21	23	P	P	18 12 20.1	-2.2		
	baz=324								
GLI	Glacier Island	72.25	21	P	P	18 12 20.3	-2.4		
	baz=325								
N25K	Chitina, Valde	72.31	20	P	P	18 12 22.9	-0.3		
N25K	Chitina, Valde	72.31	20	P	P	18 12 21.1	-2.0		
	baz=327,SNR=12								
M27K	Edge Creek, AK	72.35	18	IAmb	IAmb	18 12 25.2			
	comp=Z,16nm,0.9s								
M27K	Edge Creek, AK	72.35	18	P	P	18 12 21.0	-2.4		
	baz=329,SNR=8.0								
Q20K	Shuyak Island	72.49	25	P	P	18 12 22.9	-1.2		
	baz=322								
FID	Port Fidalgo	72.53	21	P	P	18 12 23.6	-0.7		
BVCY	Beaver Creek	72.54	18	P	P	18 12 22.6	-1.8		
	baz=330								
FRB	Frobisher Bay	72.62	345	LR	LR	18 49 50.1			
	comp=Z,318nm,18.1s,baz=20,slow=40								
MBWA	Marble Bar	72.63	140	P	P	18 12 26.8	+1.5		
BMRM	Bremner River	72.85	20	P	P	18 12 25.1	-1.1		
BMRM				IAmb	IAmb	18 12 27.7			
	comp=Z,27nm,1.0s								
BMRM	Bremner River	72.85	20	P	P	18 12 24.3	-2.0		
	baz=327,SNR=6.4								
EYAK	Cordova Ski Ar	72.89	21	P	P	18 12 25.0	-1.4		
	baz=326								
MCARA	McCarthy VSAT	72.91	19	P	P	18 12 25.4	-1.1		
	baz=328								
PSA00	Pilbara Seismi	73.04	140	IAmb	IAmb	18 12 30.7			
	comp=Z,23nm,1.0s								
PSA00	Pilbara Seismi	73.04	140	IAmb	IAmb	18 12 30.8			
	comp=Z,12nm,1.1s								
PSA00	Pilbara Seismi	73.04	140	P	P	18 12 28.7	+1.0		
M29M	Somme Creek	73.06	17	P	P	18 12 26.1	-1.5		
	baz=332								
KNRA	Kununurra	73.07	129	IAmb	IAmb	18 12 35.0			
	comp=Z,30nm,1.1s								
KNRA	Kununurra	73.07	129	P	P	18 12 28.8	+0.8		
KDAK	Kodiak Island	73.08	26	P	P	18 12 27.2	-0.4		
KDAK				IAmb	IAmb	18 12 28.5			
	comp=Z,48nm,1.2s								
KDAK	Kodiak Island	73.08	26	P	P	18 12 27.2	-0.4		
KDAK				pmax	pmax				
	comp=Z,48nm,1.2s								
KDAK	Kodiak Island	73.08	26	P	P	18 12 25.5	-2.1		
	baz=322								
YUK3	Moose Creek	73.19	18	P	P	18 12 26.3	-2.2		
	baz=330								
FITZ	Fitzroy Crossi	73.21	133	P	P	18 12 27.9	-0.9		
FITZ	Fitzroy Crossi	73.21	133	P	P	18 12 29.0	+0.2		
OHAK	Old Harbor	73.29	26	P	P	18 12 28.7	-0.2		
OHAK				IAmb	IAmb	18 12 33.5			
	comp=Z,41nm,1.3s								
OHAK	Old Harbor	73.29	26	P	P	18 12 27.4	-1.4		
	baz=322,SNR=6.6								
SII	Sitkinak Islan	73.50	27	P	P	18 12 29.6	-0.6		
SII				IAmb	IAmb	18 12 32.0			
	comp=Z,39nm,1.2s								
SII	Sitkinak Islan	73.50	27	P	P	18 12 28.6	-1.6		
	baz=321,SNR=5.1								
CHIR	Chirikof Islan	73.56	28	P	P	18 12 29.2	-1.3		
	baz=320								
Q23K	Middleton Isla	73.66	22	P	P	18 12 29.6	-1.4		
	baz=325								
CTG	Chitna Glacier	73.69	19	P	P	18 12 30.1	-1.2		
	baz=330								
KAIM	Kayak Island	73.78	21	P	P	18 12 29.8	-1.9		
	baz=328								
O28M	Mount Upton	74.13	18	P	P	18 12 32.0	-2.2		
	baz=331								
M31M	Drury Creek, Y	74.14	15	P	P	18 12 31.9	-1.8		
	baz=335,SNR=6.6								
N30M	Aishlik Lake	74.24	17	P	P	18 12 32.5	-2.0		
	baz=333								
YUK6	Outpost Mounta	74.41	18	P	P	18 12 34.3	-1.4		
	baz=332								
N31M	Braeburn, Yuko	74.50	16	P	P	18 12 35.6	-0.3		
N31M				IAmb	IAmb	18 12 37.2			
	comp=Z,25nm,0.9s								
N31M	Braeburn, Yuko	74.50	16	P	P	18 12 34.8	-1.2		
	baz=334,SNR=6.7								
PINM	Pinnacle	74.71	19	P	P	18 12 35.1	-2.1		
	baz=331								
HYT	Haines Junctio	74.71	17	IAmb	IAmb	18 12 38.9			
	comp=Z,22nm,0.9s								
HYT	Haines Junctio	74.71	17	P	P	18 12 35.3	-2.0		
	baz=333,SNR=9.2								
KOWA	Kowa	74.87	276	P	P	18 12 37.5	-1.2		
O29M	Mount Kennedy	74.93	18	P	P	18 12 35.5	-3.1		
	baz=332								
O30N	Mendenhall	75.08	17	P	P	18 12 37.5	-1.7		
	baz=334,SNR=6.7								
WHY	Whitehorse	75.44	16	P	P	18 12 38.9	-2.5		
	baz=335								
P29M	Windy Craggy	75.72	18	P	P	18 12 41.2	-1.8		
	baz=333								
PLBC	Pleasant Camp	76.19	17	P	P	18 12 43.8	-1.8		
	baz=334								
P33M	Teslin, Yukon	76.27	15	IAmb	IAmb	18 12 46.5			
	comp=Z,18nm,1.1s								
P33M	Teslin, Yukon	76.27	15	P	P	18 12 44.4	-1.8		
	baz=336								
YKA	Yellowknife Ar	76.65	6	P	P	18 12 46.9	-1.3		
	comp=Z,13nm,0.8s,baz=346,slow=5.7,SNR=29								
YKA				LR	LR	18 51 40.2			
	comp=Z,145nm,18.7s,baz=331,slow=40								
	comp=Z,13nm,0.8s								
R33M	Jennings River	77.39	15	P	P	18 12 51.7	-0.8		
	baz=338								
DLBC	Dease Lake	78.46	15	P	P	18 12 58.0	-0.5		
	baz=338								
SIT	Sitka	78.60	18	P	P	18 12 58.2	-0.9		
	baz=335								
WRA	Warramunga Arr	79.71	127	P	P	18 13 05.0	-0.6		
	comp=Z,16nm,1.1s,baz=325,slow=5.0,SNR=38								
	comp=Z,16nm,1.1s								
WRAB	Tennant Creek	79.71	127	P	P	18 13 04.5	-1.2		
WRAB	Tennant Creek	79.71	127	P	P	18 13 04.5	-1.2		
WRAB				pmax	pmax				
	comp=Z,65nm,1.5s								
WRAB	Tennant Creek	79.71	127	P	P	18 13 07.0	+1.4		
T35M	Bob Quinn	79.78	15	P	P	18 13 04.8	-0.8		
	baz=338								
WR0	Warramunga Arr	79.84	127	IAmb	IAmb	18 13 09.6			
	comp=Z,40nm,1.4s								
WRAK	Wrangell Islan	79.86	17	IAmb	IAmb	18 13 07.9			
	comp=Z,16nm,0.9s								
WRAK	Wrangell Islan	79.86	17	P	P	18 13 04.9	-1.1		
	baz=337								
WRKA	Warakurna	80.24	135	P	P	18 13 09.8	+1.3		
SCHQ	Schefferville	80.27	340	P	P	18 13 07.5	-0.8		
	comp=Z,7.8nm,0.8s,baz=343,slow=4.3,SNR=7.7								
SCHQ				LR	LR	18 52 30.2			
	comp=Z,143nm,18.3s,baz=85,slow=39								
	comp=Z,7.8nm,0.8s								
DBIC	Dimbokro	80.45	271	P	P	18 13 08.9	-1.0		
	comp=Z,4.6nm,0.7s,baz=352,slow=3.5,SNR=4.4								
	comp=Z,4.6nm,0.7s								
DBIC	Dimbokro	80.45	271	P	P	18 13 09.1	-0.7		
DBIC				IAmb	IAmb	18 13 09.7			
	comp=Z,40nm,1.6s								
CRAG	Craig	80.56	17	P	P	18 13 09.0	-0.7		
	baz=336								
KIC	Kosan Boka	80.56	270	⇓*i*	P	18 13 09.6	-0.9		
	comp=Z,4.6nm,0.4s								
TIC	Toumodi	80.59	271	⇑*e*	P	18 13 05.8	-4.9		
	comp=Z,2.9nm,0.2s								
RABL	Rabaul	80.64	104	P	P	18 13 13.6	+2.7		
KLBR	Kellerberrin	80.68	147	P	P	18 13 11.2	+0.6		
FCC	Fort Churchill	80.70	356	P	P	18 13 09.0	-1.5		
FCC				IAmb	IAmb	18 13 14.4			
	comp=Z,50nm,1.6s								
FCC	Fort Churchill	80.70	356	P	P	18 13 09.0	-1.5		
FCC				pmax	pmax				
	comp=Z,50nm,1.7s								
LIC	Lamto	80.87	270	⇑*i*	P	18 13 09.2	-2.9		
	comp=Z,15nm,0.6s								
LBTB	Lobatse	81.62	227	IAmb	IAmb	18 13 19.8			
	comp=Z,18nm,0.9s								
TSUM	Tsumeb	81.95	236	P	P	18 13 17.4	-0.4		
TSUM				IAmb	IAmb	18 13 22.7			
	comp=Z,16nm,1.1s								
ASAR	Alice Springs	82.30	130	P	P	18 13 18.9	-0.5		
	comp=Z,12nm,1.0s,baz=324,slow=4.7,SNR=37								
	comp=Z,12nm,1.0s								
ASAR	Alice Springs	82.30	130	P	P	18 13 19.0	-0.5		
QIS	Mount Isa	83.42	124	P	P	18 13 25.7	+0.4		
BBTS	Babate	84.13	284	LR	LR	18 54 17.4			
	comp=Z,80nm,21.0s,baz=39,slow=38								
BOSA	Boshof	84.65	225	P	P	18 13 31.2	-0.3		
	comp=Z,7.4nm,0.9s,baz=38,slow=6.4,SNR=9.1								
	comp=Z,7.4nm,0.9s								
BOSA	Boshof	84.65	225	P	P	18 13 30.2	-1.3		
BOSA				IAmb	IAmb	18 13 35.2			
	comp=Z,13nm,1.0s								
BOSA	Boshof	84.65	225	P	P	18 13 30.2	-1.3		
BOSA				pmax	pmax				
	comp=Z,13nm,1.0s								
MTSU	Mount Surprise	84.71	119	P	P	18 13 33.1	+1.2		
FORT	Forrest	84.75	139	P	P	18 13 31.0	-0.8		
FORT	Forrest	84.75	139	P	P	18 13 33.6	+1.8		
OOD	Oodnadatta	86.50	132	P	P	18 13 40.1	-0.4		
BATG	Bathurst New B	86.84	337	P	P	18 13 41.3	-0.8		
BATG				IAmb	IAmb	18 13 43.3			
	comp=Z,24nm,1.1s								
CTAO	Charters Tower	87.38	119	P	P	18 13 41.3	-3.8		
CTAO	Charters Tower	87.38	119	P	P	18 13 41.3	-3.8		
CTAO				pmax	pmax				
	comp=Z,78nm,1.7s								
MULG	Mulgathing	87.50	134	P	P	18 13 46.3	+0.9		
LMQ	La Malbaie	87.81	339	IAmb	IAmb	18 13 47.6			
	comp=Z,13nm,1.1s								
PQI	Presque Isle	87.96	337	P	P	18 13 45.9	-1.7		
PQI				IAmb	IAmb	18 13 48.9			
	comp=Z,22nm,1.1s								
PKME	Peaks-Kenny Pk	89.61	338	P	P	18 13 54.1	-1.3		
	baz=24								
B08A	Colville Reser	89.98	12	IAmb	IAmb	18 13 58.2			
	comp=Z,14nm,1.1s								
WALA	Waterton Lakes	89.99	8	IAmb	IAmb	18 13 57.8			
	comp=Z,14nm,1.1s								
G62A	West of Eustis	90.01	338	P	P	18 13 55.4	-1.9		
TRQ	Mont Tremblant	90.12	341	IAmb	IAmb	18 13 58.5			
	comp=Z,16nm,1.1s								
NEW	Newport	90.39	10	P	P	18 13 58.5	-0.5		
	comp=Z,5.5nm,0.7s,baz=343,slow=5.1,SNR=8.9								
	comp=Z,5.5nm,0.7s								
NEW	Newport	90.39	10	P	P	18 13 57.4	-1.6		
NEW				IAmb	IAmb	18 13 59.5			
	comp=Z,13nm,1.2s								
NEW	Newport	90.39	10	P	P	18 13 57.4	-1.6		
NEW				pmax	pmax				
	comp=Z,13nm,1.2s								
NEW	Newport	90.39	10	P	P	18 13 57.8	-1.2		
	baz=348								
BBOO	Buckleboo	90.53	135	P	P	18 14 00.0	+0.4		
C09A	Chrisman Ranch	90.68	11	IAmb	IAmb	18 14 01.6			
	comp=Z,13nm,0.9s								
QLP	Quilpie	90.70	125	P	P	18 14 02.5	+2.0		
DGMT	Dagmar	91.20	2	P	P	18 14 00.9	-1.8		
	baz=358								
AGMN	Agassiz Nation	91.24	356	IAmb	IAmb	18 14 03.5			
	comp=Z,11nm,0.9s								
AGMN	Agassiz Nation	91.24	356	P	P	18 14 01.0	-1.9		
	baz=4.4								
JTMT	Jette	91.25	8	IAmb	IAmb	18 14 04.2			
	comp=Z,15nm,0.9s								
EYMN	Ely	91.28	353	P	P	18 14 01.3	-1.8		
	baz=7.7								
LBNH	Lisbon	91.29	339	P	P	18 14 01.6	-1.6		
	baz=22								
EGMT	Eagleton	91.39	5	P	P	18 14 02.2	-1.5		
EGMT	Eagleton	91.39	5	P	P	18 14 01.5	-2.2		
	baz=354								
LONY	Lake Ozonia	91.63	341	P	P	18 14 04.0	-0.8		
	baz=20								
E09A	Wood Farm, Sta	91.96	11	P	P	18 14 05.0	-1.2		
E09A				IAmb	IAmb	18 14 07.3			
	comp=Z,15nm,1.1s								
MSO	Missoula	92.19	8	IAmb	IAmb	18 14 07.5			
	comp=Z,7.9nm,1.2s								
MSO	Missoula	92.19	8	P	P	18 14 05.3	-2.2		
	baz=351								
RK1H	Rockhampton Ha	92.49	119	P	P	18 14 11.5	+2.6		
SADO	Sadowa	92.53	344	LR	LR	18 59 52.3			
	comp=Z,356nm,20.0s,baz=357,slow=38								
F10A	Beach Ranch, E	92.62	11	IAmb	IAmb	18 14 14.4			
	comp=Z,15nm,1.4s								
J59A	Piesco	92.69	340	P	P	18 14 08.2	-1.6		
LAO	LASA Array	92.92	3	P	P	18 14 09.4	-1.3		
	baz=357								
STKA	Stephens Creek	92.94	130	P	P	18 14 10.8	+0.1		
	comp=Z,2.0nm,0.7s,baz=346,slow=5.2,SNR=5.0								
	comp=Z,2.0nm,0.7s								
E28A	Huff	93.11	359	P	P	18 14 10.1	-1.6		
RMQ	Roma	93.49	122	P	P	18 14 16.4	+2.9		
BOZ	Bozeman (W)	93.65	7	IAmb	IAmb	18 14 14.7			
	comp=Z,8.2nm,1.1s								
BOZ	Bozeman (W)	93.65	7	P	P	18 14 12.0	-2.3		
	baz=352								
PLID	Pearl Lake	93.66	10	P	P	18 14 12.6	-1.9		
PLID				IAmb	IAmb	18 14 14.9			
	comp=Z,10nm,1.4s								
F33A	5 Mile Ranch,	93.72	356	P	P	18 14 13.1	-1.3		
F33A				IAmb	IAmb	18 14 14.7			
	comp=Z,10nm,1.1s								
G40A	Rib Lake	93.80	352	IAmb	I

baz=16
HWUT Hardware Ranch 97.61 7 IAmb IAmb 18 14 33.9
comp=Z,9.3nm,1.1s
DUG Dugway, Tooele 98.87 9 P **P** **18 14 37.1 -1.0**
DUG Dugway, Tooele 98.87 9 P **P** **18 14 37.1 -1.0**
DUG pmax pmax
comp=Z,4.0nm,1.1s
DUG Dugway, Tooele 98.87 9 P **P** **18 14 37.5 -0.6**
baz=352
NVAR Mina Array Bea 99.82 13 P **Pdif** **18 14 43.0 +0.5**
comp=Z,0.5nm,0.7s,baz=357,slow=3.0,SNR=4.6
NVAR LR LR 19 06 08.5
comp=Z,92nm,20.5s,baz=314,slow=39
comp=Z,0.5nm,0.7s
TROLL Troll, Antarti 123.98 201 P **PKiKP** **18 19 55.3 +0.2**
SNAA Sanae 125.36 203 P **PKPdf** **18 19 52.9 -4.5**
SNAA Sanae 125.36 203 **PKPdf** **18 19 55.4 -2.0**
SNAA Sanae 125.36 203 PKIKP **PKPdf** **18 19 55.4 -2.0**
VNA2 Neumayer--Watz 126.46 204 P **PKiKP** **18 20 00.1 +0.1**
baz=36,slow=3.0
VNA1 Neumayer--Stat 126.64 204 P **PKiKP** **18 20 00.1 -0.1**
VNA3 Neumayer Olymp 127.26 204 P **PKPdf** **18 19 59.1 -2.0**
VNDA Vanda 127.99 164 PKP **PKiKP** **18 20 02.7 -0.2**
comp=Z,2.0nm,0.9s,baz=272,slow=5.8,SNR=10
SBA Scott Base 129.09 164 PKPdf **PKPdf** **18 20 03.9 -0.4**
SBA Scott Base 129.09 164 PKIKP **PKPdf** **18 20 03.9 -0.4**
QSPA South Pole Qui 130.47 180 PKPdf **PKPdf** **18 20 07.1 -0.2**
CPUP Villa Florida 140.69 277 PKP **PKPdf** **18 20 28.4 +0.9**
comp=Z,1.4nm,0.5s,baz=32,slow=2.5,SNR=4.9
LPAZ La Paz 142.09 300 PKP **PKPdf** **18 20 29.9 -1.2**
comp=Z,0.7nm,0.5s,baz=81,slow=2.3,SNR=2.5
SMAI San Martin Ant 146.77 203 **PKPdf** **18 20 36.7 -0.1**
PMSA Palmer Station 147.62 209 **PKPdf** **18 20 38.4 +0.1**
TRQA Tornquist 149.31 262 **PKPdf** **18 20 43.4 +1.3**
TRQA Tornquist 149.31 262 PKHKP PKPpre 18 20 43.4
CO01 Juntas del Tor 152.17 283 **PKPdf** **18 20 48.8 +1.8**

ROM 12 18:08:25.9±0.1, **42.528N**±0.009×**13.191E**±0.007, **h12**km, **Md0.9/3, Error ellipse: s-maj=1.0km s-min=0.6km az=195.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.03**	**138**	P	Pg	18 08 28.5	+0.3
RM33				S	Sg	18 08 29.9	+0.1
LNSS	**Leonessa**	**0.13**	**304**	P	Pg	18 08 29.8	+0.4
LNSS				S	Sg	18 08 32.3	+0.6
LNSS				END			
SMA1	**SAN MARTINO**	**0.15**	**46**	P	Pb	18 08 30.2	-0.5
SMA1				S	Sg	18 08 32.8	+0.7
NRCA	**Norcia**	**0.31**	**349**	AML	AML		
	comp=E,104μm,0.0s						
NRCA				AML	AML		
	comp=N,100μm,0.1s						
NRCA				AML	AML		
	comp=E,104μm,0.0s						
NRCA				AML	AML		
	comp=N,100μm,0.1s						
TERO	**Teramo**	**0.32**	**73**	P	Pg	18 08 32.8	+0.3
TERO				S	Sg	18 08 37.5	+0.7
TERO				END			

*IDC **12** 18:13:15.6±0.5, 27.83N×140.18E, h480km±10km, mb3.2/12, mbtmp4.0/14, Error ellipse: s-maj=30.0km s-min=11.1km az=76.0*
*NEIC **12** 18:13:16.7±2.1, 27.72N±0.07×140.1E±0.1, h487km±8km, mb4.0/26, Error ellipse: s-maj=17.6km s-min=3.9km az=58.0*
*JMA **12** 18:13:16.9±0.3, 28°N±2'×14°1E±', h492km±4km, MV3.6/22, W OFF OGASAWARA*

ISC 12 18:13:15.8±0.5, **27.78N**±0.08×**140.11E**±0.08, **h478**km, **n68**, σ1**s25/73**, **mb3.8/23, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.97**	**110**	P	**P**	**18 14 20.2**	**+1.4**
CBIJ				S	**S**	**18 15 10.4**	**+0.5**
JCJ	**Chichijima**	**1.97**	**110**	P	**P**	**18 14 20.1**	**+1.3**
	182nm,0.3s,baz=93,slow=23,SNR=49						
JCJ				S	**S**	**18 15 09.6**	**-0.2**
	247nm,0.3s,baz=324,slow=23,SNR=20						
JCJ	**Chichijima**	**1.97**	**110**	P	**P**	**18 14 20.3**	**+1.5**
JCJ				S	**S**	**18 15 08.8**	**-1.0**
JHH2	**Haha-jima-NKT2**	**2.17**	**121**	*eP*	**P**	**18 14 21.5**	**+1.7**
JHH2				*eS*	**S**	**18 15 12.3**	**+0.5**
JIE	**Ise**	**7.21**	**337**	*eP*	**P**	**18 15 06.7**	**+3.4**
JKN2	**Miekihoku**	**7.23**	**334**	*eP*	**P**	**18 15 06.6**	**+3.1**
JMN	**Monobe**	**7.99**	**319**	P	**P**	**18 15 13.7**	**+2.2**
INU	**Inuyama**	**7.99**	**342**	P	**P**	**18 15 11.6**	**+0.2**
JRY	**Ryogami san**	**8.28**	**353**	*eP*	**P**	**18 15 16.0**	**+1.4**
JHO	**Hitachi**	**8.81**	**2**	P	**P**	**18 15 21.4**	**+1.2**
JHO				*eS*	**S**	**18 17 00.6**	**-1.8**
MJAR	**Matsushiro Arr**	**8.88**	**350**	P	**P**	**18 15 19.8**	**-1.1**
	0.7nm,0.4s,baz=175,slow=12,SNR=7.8						
MAJO	**Matsushiro**	**8.88**	**350**	P	**P**	**18 15 21.7**	**+0.7**
JSU	**Suzuyama**	**9.18**	**296**	P	**P**	**18 15 26.0**	**+1.7**
JHS	**Saijyo**	**9.35**	**322**	P	**P**	**18 15 27.8**	**+1.8**
JNU	**Nakatsue**	**9.58**	**306**	P	**P**	**18 15 31.4**	**+2.9**
JFK	**Kawauchi**	**9.58**	**4**	*eP*	**P**	**18 15 30.1**	**+1.7**
JMM	**Marumori**	**10.07**	**3**	P	**P**	**18 15 34.8**	**+1.2**
JOW	**Kunigami**	**10.57**	**268**	P	**P**	**18 15 40.3**	**+1.2**
JMK	**Ichinoseki**	**11.18**	**4**	P	**P**	**18 15 47.7**	**+2.2**
JTU	**Tsushima**	**11.37**	**309**	P	**P**	**18 15 47.4**	**-0.2**
KSBUS	**Busan**	**11.97**	**311**	P	**P**	**18 15 55.1**	**+1.1**
KSRS	**Korea Array**	**14.07**	**316**	P	**P**	**18 16 14.8**	**-1.7**
	0.6nm,0.5s,baz=132,slow=11,SNR=3.8						
SEHB	**SEOHWA**	**14.42**	**320**	P	**P**	**18 16 19.7**	**-0.4**
YULB	**Yu-li**	**17.52**	**260**	P	**P**	**18 16 51.7**	**-1.0**
SSLB	**Suanglung**	**17.70**	**261**	P	**P**	**18 16 54.6**	**0.0**
SONM	**Songino Array**	**32.95**	**317**	P	**P**	**18 19 09.4**	**-0.4**
	0.8nm,0.5s,baz=129,slow=9.9,SNR=4.2						
	0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**38.83**	**265**	P	**P**	**18 19 58.9**	**0.0**
	0.4nm,0.7s,baz=63,slow=6.4,SNR=4.7						
	0.4nm,0.7s						
WB0	**Warramunga Arr**	**47.59**	**187**	P	**P**	**18 21 07.4**	**-0.1**
WB0				IAmb	IAmb	18 21 49.2	
	comp=Z,9.4nm,1.4s						
ZALV	**Zalesovo Beam**	**47.76**	**319**	P	**P**	**18 21 08.1**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=111,slow=7.5,SNR=7.1						
	comp=Z,1.4nm,0.4s						
WR0	**Warramunga Arr**	**47.76**	**187**	P	**P**	**18 21 08.6**	**-0.2**
WR0				IAmb	IAmb	18 21 25.0	
	comp=Z,8.9nm,1.4s						
WB2	**Warramunga Arr**	**47.77**	**187**	P	**P**	**18 21 08.3**	**-0.5**
WB2				IAmb	IAmb	18 21 17.1	
	comp=Z,6.7nm,1.4s						
WRA	**Warramunga Arr**	**47.77**	**187**	P	**P**	**18 21 08.8**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=4.0,slow=7.7,SNR=43						
	comp=Z,1.0nm,0.4s						
MK31	**Makanchi Array**	**48.61**	**309**	P	**P**	**18 21 14.3**	**-0.6**
MKAR	**Makanchi Array**	**48.61**	**309**	P	**P**	**18 21 14.9**	**0.0**
	comp=Z,0.9nm,0.5s,baz=88,slow=10.0,SNR=16						
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**48.61**	**309**	P	**P**	**18 21 14.4**	**-0.5**
MAKZ	**Makanchi**	**48.83**	**309**	P	**P**	**18 21 16.7**	**+0.2**
KURK	**Kurchatov**	**51.19**	**314**	P	**P**	**18 21 33.4**	**-0.3**
KURK				IAmb	IAmb	18 21 35.0	
	comp=Z,8.2nm,1.4s						
ASAR	**Alice Springs**	**51.50**	**187**	P	**P**	**18 21 36.3**	**0.0**
	comp=Z,0.5nm,0.4s,baz=0.7,slow=5.2,SNR=24						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**51.50**	**187**	P	**P**	**18 21 35.6**	**-0.7**
BOOM	**Boomskoye usch**	**53.30**	**304**	P	**P**	**18 21 50.1**	**+0.7**
J20K	**Nowinta River**	**54.82**	**29**	P	**P**	**18 22 01.7**	**+2.2**
KDAK	**Kodiak Island**	**54.93**	**37**	P	**P**	**18 22 01.4**	**+1.1**
KDAK				IAmb	IAmb	18 22 06.4	
	comp=Z,18nm,1.4s						
IMAR	**Indian Mountai**	**55.27**	**27**	P	**P**	**18 22 03.9**	**+1.2**
BRVK	**Borovoye**	**56.35**	**317**	P	**P**	**18 22 10.4**	**0.0**
NIL	**Nilore**	**56.89**	**294**	P	**P**	**18 22 15.3**	**+0.8**
NIL				IAmb	IAmb	18 22 16.0	
	comp=Z,4.7nm,0.6s						
KK31	**Karatay Array**	**57.19**	**305**	P	**P**	**18 22 16.4**	**+0.1**
KK31				IAmb	IAmb	18 22 17.3	
	comp=Z,2.9nm,0.7s						
KKAR	**Karatay Array**	**57.19**	**305**	P	**P**	**18 22 16.4**	**0.0**
KKAR	**Karatay Array**	**57.19**	**305**	P	**P**	**18 22 16.3**	**0.0**
KKAR				IAmb	IAmb	18 22 17.3	
	comp=Z,2.9nm,0.7s						
MDM	**Murphy Dome**	**57.44**	**29**	P	**P**	**18 22 19.6**	**+1.9**
MDM				IAmb	IAmb	18 22 27.2	
	comp=Z,7.8nm,1.4s						
WRH	**Wood River Hil**	**57.47**	**29**	P	**P**	**18 22 19.3**	**+1.4**
H24K	**Noodor Dome**	**57.65**	**28**	P	**P**	**18 22 20.6**	**+1.5**
RIDG	**Independent Ri**	**58.87**	**30**	P	**P**	**18 22 27.6**	**+0.1**
RIDG				IAmb	IAmb	18 22 52.0	
	comp=Z,7.1nm,1.4s						
CHGR	**Chuyangaron**	**59.01**	**300**	P	**P**	**18 22 29.0**	**0.0**
BMAR	**Burnt Mountain**	**59.04**	**26**	P	**P**	**18 22 31.1**	**+2.5**
STKA	**Stephens Creek**	**59.34**	**179**	P	**P**	**18 22 30.6**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=346,slow=10,SNR=3.7						
	comp=Z,0.7nm,0.3s						
FORT	**Forrest**	**59.36**	**192**	P	**P**	**18 22 29.7**	**-1.4**
ARU	**Arti**	**62.75**	**322**	P	**P**	**18 22 52.9**	**-0.2**
ARU				IAmb	IAmb	18 22 53.6	
	comp=Z,8.3nm,1.4s						
ABKAR	**Akbulak array**	**63.29**	**314**	P	**P**	**18 22 56.5**	**-0.3**
ABKAR	**Akbulak array**	**63.29**	**314**	P	**P**	**18 22 56.2**	**-0.6**
ABKAR				IAmb	IAmb	18 22 57.1	
	comp=Z,2.1nm,0.8s						
ARCES	**ARCESS Array B**	**72.28**	**340**	P	**P**	**18 23 51.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=69,slow=6.8,SNR=6.0						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**72.28**	**340**	P	**P**	**18 23 51.2**	**-0.4**
ARCES				IAmb	IAmb	18 24 07.1	
	comp=Z,8.8nm,1.4s						
YKA	**Yellowknife Ar**	**72.41**	**28**	P	**P**	**18 23 52.5**	**+0.1**
FIA1	**FINESS Array S**	**76.51**	**333**	P	**P**	**18 24 15.3**	**-0.3**
FINES	**FINESS Array B**	**76.51**	**333**	P	**P**	**18 24 15.3**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=71,slow=4.9,SNR=31						
	comp=Z,1.7nm,0.3s						
KHMM	**Hose Mountain**	**76.70**	**51**	P	**P**	**18 24 15.4**	**-1.9**
AKASG	**Malin Array Be**	**80.97**	**323**	P	**P**	**18 24 38.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=50,slow=5.9,SNR=5.8						
	comp=Z,0.3nm,0.3s						
HFS	**Hagfors**	**82.06**	**336**	P	**P**	**18 24 44.0**	**-1.0**
	comp=Z,6.9nm,1.2s,baz=69,slow=7.9,SNR=6.2						
	comp=Z,6.9nm,1.2s						
NOA	**NORSAR Array B**	**82.28**	**338**	P	**P**	**18 24 45.0**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=44,slow=5.2,SNR=3.4						
	comp=Z,0.7nm,0.6s						

*MOS **12** 18:20:09.1±1.2, 9.39S×120.03E, h39km, mb5.4/43, MS4.2/8, Error ellipse: s-maj=8.3km s-min=4.6km az=117.8*
*BJI **12** 18:20:10.0±0.0, 9.60S×120.00E, h50km, mb5.2/76, mB5.4/46, Ms4.7/62, Ms7 4.5/60*
*NEIC **12** 18:20:11.8, 9.72S×119.90E, h48km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=0.96; Mθθ=0.67; Mφφ=0.29; Mrθ=1.04; Mrφ=0.70; Mθφ=-0.21; Fault plane solution: M0=1.53000×10^17^ NP1:ϕs=262.09000°, δ=68.33000°, λ=-62.18000°. NP2:ϕs=27.07000°, δ=34.72000°, λ=-139.60000°. Principal axes: T 1.4460, Plg=19.0000°, Azm=332.0000°; N 0.1550, Plg=26.0000°, Azm=71.0000°; P =-1.6010, Plg=57.0000°, Azm=210.0000°;*
*IDC **12** 18:20:12.2±1.0, 9.33S×119.96E, h46km±8km, mb4.9/41, mbtmp5.1/44, ML5.2/4, MS4.3/63 Error ellipse: s-maj=10.7km s-min=7.4km az=39.0*
*NEIC **12** 18:20:12.2±2.6, 9.65S±0.06×119.91E±0.05, h49km±3km, mb5.4/171, Mwb5.4/17, Mww5.4, Error ellipse: s-maj=8.5km s-min=7.0km az=202.0*
*KLM **12** 18:20:13, 9.78S×119.79E, h46km, mb5.5*
*DJA **12** 18:20:14.1±0.1, 10°S±1'×12°0E±', h55km±2km, M5.2/103, mB5.7/74, mb5.5/103, MLv5.8/25, Mw(mB)5.3/74, MwMwp5.0/28, Mwp5.3/28*
*GCMT **12** 18:20:14.2±0.1, 9.61S±0.01×119.80E±0.01, h76km±1km, MW5.4/139, Moment Tensor Solution. s133,c227; s139,c259; Duration: 1s2 Moment tensor: Scale 10^17^ Nm; Mrr=0.49±.02; Mθθ=0.19±.02; Mφφ=0.29±.02; Mrθ=0.84±.01; Mθφ=0.99±.01; Mrr=0.19±.02; Best double couple: M0=1.37800×10^17^ NP1:ϕs=262.00000°, δ74.00000°, λ=-43.00000°. NP2:ϕs=6.00000°, δ49.00000°, λ=-159.00000°. Principal axes: T 1.3570, Plg=16.0000°, Azm=319.0000°; N 0.0420, Plg=45.0000°, Azm=65.0000°; P -1.3980, Plg=41.0000°, Azm=215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **12** 18:20:17, 9.72S×119.94E, h36km, Moment Tensor Solution. Duration: 12s6 Moment tensor: Scale 10^17^Nm; Mrr=0.91; Mθθ=0.56; Mφφ=0.34; Mrθ=1.33; Mθφ=1.01; Mrr=0.25; Fault plane solution: M0=1.87000×10^17^ NP1:ϕs=17.00000°, δ38.00000°, λ=-150.00000°. NP2:ϕs=262.00000°, δ72.00000°, λ=-56.00000°. Principal axes: T 1.7784, Plg=20.0000°, Azm=328.0000°; N 0.1634, Plg=32.0000°, Azm=71.0000°; P -1.9419, Plg=51.0000°, Azm=211.0000°;*

ISC 12 18:20:12.6±0.3, **9.54S**±0.03×**119.94E**±0.03, **h58**km±2km, **h58**km:**pP-P, n1072**, σ1**s58**/1114, **mb5.3**/183, **MS4.4**/85, **45C-8D, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.55**	**260**	P	**Pn**	**18 20 25.0**	**0.0**
WBSI				S	**Sn**	**18 20 34.3**	**+0.3**
BASI	**Baing, Sumba**	**0.92**	**137**	P	**Pn**	**18 20 29.4**	**-0.1**
EDFI	**Ende, Flores**	**1.90**	**66**	P	**Pn**	**18 20 43.1**	**+0.3**
PLAI	**Plampang**	**2.25**	**288**	P	**Pn**	**18 20 49.2**	**+1.8**
PLAI				S	**Sn**	**18 21 17.1**	**+3.0**
PLAI	**Plampang**	**2.25**	**288**	P	**Pn**	**18 20 49.7**	**+2.3**
MMRI	**Maumere**	**2.44**	**69**	Pn	**Pn**	**18 20 51.5**	**+1.4**
MMRI				Sn	**Sn**	**18 21 19.9**	**+1.1**
MMRI	**Maumere**	**2.44**	**69**	P	**Pn**	**18 20 51.6**	**+1.5**
MMRI	**Maumere**	**2.44**	**69**	P	**Pn**	**18 20 52.3**	**+2.2**
TWSI	**Taliwang, Sumb**	**3.12**	**285**	P	**Pn**	**18 21 02.1**	**+2.7**
TWSI				S	**Sn**	**18 21 38.1**	**+2.6**
BSSI	**Bau Bau, Buton**	**3.42**	**9**	P	**Pn**	**18 21 06.8**	**+3.3**
BATI	**Baumata**	**3.73**	**101**	P	**Pn**	**18 21 09.3**	**+1.6**
	380nm,0.3s,baz=41,slow=1.0,SNR=152						
BATI				S	**Sn**	**18 21 51.7**	**+1.3**
	3μm,0.3s,baz=23,slow=23,SNR=27						
BATI				LR	LR	18 23 24.4	
	comp=Z,5μm,20.0s,baz=280,slow=51						
BATI	**Baumata**	**3.73**	**101**	P	**Pn**	**18 21 09.5**	**+1.8**
BKSI	**Bulukumba**	**4.20**	**2**	P	**Pn**	**18 21 17.0**	**+2.9**
KAPI	**Kappang**	**4.50**	**358**	P	**Pn**	**18 21 22.3**	**+4.0**
	836nm,0.5s,baz=179,slow=5.6,SNR=139						
KAPI				S	**Sn**	**18 22 11.4**	**+2.0**
	1μm,0.4s,baz=108,slow=21,SNR=10.0						
KAPI				LR	LR	18 23 17.3	
	comp=Z,23μm,19.8s,baz=164,slow=43						
KAPI	**Kappang**	**4.50**	**358**		**Pn**	**18 21 22.1**	**+3.8**
KAPI				Sn	**Sn**	**18 22 12.5**	**+3.1**
KAPI	**Kappang**	**4.50**	**358**	*c iP*	**Pn**	**18 21 22.1**	**+3.8**
KAPI	**Kappang**	**4.50**	**358**	P	**Pn**	**18 21 22.5**	**+4.2**
DNP	**Denpasar**	**4.75**	**280**	P	**Pn**	**18 21 25.3**	**+3.7**
IGBI	**Denpasar**	**4.79**	**278**	P	**Pn**	**18 21 23.6**	**+1.4**
BBSI	**Bau Bau**	**4.80**	**33**	P	**Pn**	**18 21 26.3**	**+3.9**
	1.4nm4μm515nm,0.8s						
SRBI	**Singaraja**	**4.89**	**287**	P	**Pn**	**18 21 24.2**	**+0.6**
SPSI	**Sidrap Palu**	**5.54**	**358**	P	Pn	18 21 37.5	+4.9
	7.4nm15μm1μm,1.6s						
JAGI	**Jajag, Banyuwa**	**5.81**	**280**	Pn	**Pn**	**18 21 36.4**	**+0.1**
JAGI				Sn	**Sn**	**18 22 41.2**	**-0.4**
JAGI	**Jajag, Banyuwa**	**5.81**	**280**	P	**Pn**	**18 21 37.5**	**+1.2**
	7.9nm8μm27μm1μm,0.6s						
JAGI	**Jajag, Banyuwa**	**5.81**	**280**	P	**Pn**	**18 21 37.5**	**+1.2**
ABJI	**Asem Bagus**	**5.90**	**287**	P	**Pn**	**18 21 42.0**	**+4.5**
	7.3nm11μm12μm763nm,0.7s						
KMMI	**Kalianget**	**6.41**	**292**	P	**Pn**	**18 21 48.4**	**+4.0**
	2.3nm10μm6μm279nm,1.3s						
TTSI	**Tana Toraja**	**6.46**	**359**	P	Pn	18 21 50.4	+5.3
	4.7nm5μm11μm1μm,0.9s						
BLJI	**Banyuglugur**	**6.52**	**285**	P	**Pn**	**18 21 49.5**	**+3.5**
	3.4nm4μm7μm421nm,0.5s						
GMJI	**Gumukmas**	**6.54**	**281**	P	**Pn**	**18 21 47.1**	**+0.9**
	5.8nm9μm762nm,0.9s						
BBKI	**Banjar Baru**	**7.88**	**320**	P	**Pn**	**18 22 09.2**	**+4.6**
	2.0nm6μm689nm,1.1s						
PWJI	**Pagerwojo**	**8.18**	**280**	P	**Pn**	**18 22 10.2**	**+1.5**
	6μm437nm,0.6s						
TBJI	**Tambak Boyo**	**8.45**	**288**	P	Pn	18 22 23.1	+11
NGJI	**Ngawi**	**8.66**	**284**	P	Pn	18 22 20.3	+5.0
	6μm245nm,1.4s						
APSI	**Ampana**	**8.74**	**11**	P	Pn	18 22 22.0	+5.6
	0.9nm3μm275nm,1.1s						
PCJI	**Pacitan**	**8.76**	**278**	P	**Pn**	**18 22 19.7**	**+3.0**
	3.7nm6μm333nm,0.5s						
BKB	**Balikpapan**	**8.77**	**340**	Pn	Pn	18 22 23.8	+7.0
BKB	**Balikpapan**	**8.77**	**340**	P	Pn	18 22 23.1	+6.4
	6μm16μm1μm,1.2s						
BKB	**Balikpapan**	**8.77**	**340**	P	Pn	18 22 24.4	+7.7
LUWI	**Luwuk**	**8.90**	**19**	Pn	**Pn**	**18 22 22.3**	**+3.7**
LUWI	**Luwuk**	**8.90**	**19**	P	Pn	18 22 24.0	+5.4
	3μm10μm1μm,0.8s						
LUWI	**Luwuk**	**8.90**	**19**	P	Pn	18 22 24.3	+5.7
SMKI	**Samarinda**	**9.44**	**343**	P	Pn	18 22 33.3	+7.4
	6μm15μm876nm,1.0s						
UGM	**Wanagama**	**9.45**	**279**	Pn	**Pn**	**18 22 26.4**	**+0.3**
UGM	**Wanagama**	**9.45**	**279**	P	**Pn**	**18 22 27.7**	**+1.6**
	360nm,0.8s						
UGM	**Wanagama**	**9.45**	**279**	P	**Pn**	**18 22 27.3**	**+1.2**
NLAI	**Namlea**	**9.48**	**49**	P	Pn	18 22 32.6	+6.2
	4μm462nm,0.9s						
SANI	**Sanana**	**9.57**	**39**	P	**Pn**	**18 22 32.4**	**+4.7**
	2μm152nm,1.1s						
SANI	**Sanana**	**9.57**	**39**	P	Pn	18 22 32.7	+5.0
MPSI	**Mapaga**	**9.81**	**360**	P	Pn	18 22 38.2	+7.1
	4μm2μm90nm,1.1s						
MTKI	**Muara Teweh, K**	**9.91**	**329**	P	Pn	18 22 37.8	+5.4
	3μm7μm316nm,0.9s						
AAI	**Ambon**	**10.05**	**55**	P	Pn	18 22 41.0	+6.7
	4μm316nm,1.5s						
FITZ	**Fitzroy Crossi**	**10.14**	**148**	P	**Pn**	**18 22 32.2**	**-3.3**
	113nm,0.6s,baz=337,slow=7.6,SNR=354						
FITZ				S	Sn	18 24 18.1	-10
	1μm,0.5s,baz=177,slow=18,SNR=27						
FITZ				LR	LR	18 26 54.9	
	comp=Z,6μm,21.2s,baz=326,slow=39						
FITZ	**Fitzroy Crossi**	**10.14**	**148**	P	**Pn**	**18 22 32.2**	**-3.3**
	baz=10.0,SNR=488						
FITZ				S	Sn	18 24 16.2	-12
	baz=10.0						
FITZ	**Fitzroy Crossi**	**10.14**	**148**		**Pn**	**18 22 31.8**	**-3.8**
FITZ	**Fitzroy Crossi**	**10.14**	**148**	P	**Pn**	**18 22 32.3**	**-3.3**
MRSI	**Marisa**	**10.15**	**11**	P	**Pn**	**18 22 39.9**	**+4.2**
	3μm2μm171nm,0.8s						
KNRA	**Kununurra**	**10.55**	**126**	P	**Pn**	**18 22 39.0**	**-2.1**
	baz=10,SNR=981						
KNRA	**Kununurra**	**10.55**	**126**	Pn	**Pn**	**18 22 38.8**	**-2.3**
KNRA	**Kununurra**	**10.55**	**126**	P	**Pn**	**18 22 39.5**	**-1.6**
GTOI	**Gorontalo**	**10.56**	**17**	P	Pn	18 22 48.3	+7.0
	1μm818nm58nm,1.1s						
TOLI2	**Tolitoli**	**10.62**	**5**	Pn	**Pn**	**18 22 45.2**	**+3.1**
TOLI2	**Tolitoli**	**10.62**	**5**	P	**Pn**	**18 22 45.3**	**+3.2**
PBKI	**Pangkalan Bun**	**10.66**	**309**	P	**Pn**	**18 22 46.2**	**+3.5**
	14μm1μm,1.9s						
KMSI	**Cibinong**	**10.83**	**22**	P	Pn	18 22 50.1	+5.2
	3μm352nm,0.8s						
MSAI	**Masohi**	**10.85**	**56**	P	Pn	18 22 56.0	+11
BNDI	**Bandanaira**	**11.07**	**64**	P	Pn	18 23 01.8	+14
BNDI	**Bandanaira**	**11.07**	**64**	P	Pn	18 22 53.4	+5.1
SAUI	**Saumlaki**	**11.34**	**83**	Pn	**Pn**	**18 22 52.4**	**+0.6**
SAUI	**Saumlaki**	**11.34**	**83**	P	**Pn**	**18 22 52.8**	**+0.9**
	17μm2μm,0.8s						
SAUI	**Saumlaki**	**11.34**	**83**	P	**Pn**	**18 22 52.2**	**+0.3**
MTN	**Manton Dam**	**11.46**	**108**	P	**Pn**	**18 22 50.3**	**-3.3**
	baz=11,SNR=674						
MTN	**Manton Dam**	**11.46**	**108**	Pn	**Pn**	**18 22 50.0**	**-3.6**
MTN	**Manton Dam**	**11.46**	**108**	P	**Pn**	**18 22 51.8**	**-1.8**
MBWA	**Marble Bar**	**11.55**	**181**		**Pn**	**18 22 51.3**	**-3.5**
MBWA	**Marble Bar**	**11.55**	**181**	P	**Pn**	**18 22 51.7**	**-3.1**
LBMI	**Labuha**	**11.61**	**41**	P	Pn	18 23 02.7	+7.0
	2μm3μm301nm,1.1s						
PSA00	**Pilbara Seismi**	**11.96**	**180**		**Pn**	**18 22 57.0**	**-3.4**
PSA00	**Pilbara Seismi**	**11.96**	**180**		Pn	**18 22 55.3**	**-5.1**
PSA00	**Pilbara Seismi**	**11.96**	**180**	P	**Pn**	**18 22 57.4**	**-3.0**
LEM	**Lembang**	**12.49**	**282**	P	**Pn**	**18 23 07.6**	**-0.2**
	8.7nm,0.3s,baz=86,slow=9.6,SNR=15						
LEM				LR	LR	18 28 38.0	
	comp=Z,1μm,21.1s,baz=64,slow=41						
	70nm,0.7s						
TNTI	**Ternate**	**12.64**	**36**		**Pn**	**18 23 10.9**	**+1.3**
TNTI	**Ternate**	**12.64**	**36**	P	**P**	**18 23 15.5**	**-3.7**
	1μm2μm182nm,1.4s						
TNTI	**Ternate**	**12.64**	**36**	P	**Pn**	**18 23 11.4**	**+1.8**
KDU	**Kakadu**	**12.69**	**105**	P	**Pn**	**18 23 08.2**	**-2.1**
	baz=13,SNR=99						
KDU	**Kakadu**	**12.69**	**105**	P	**Pn**	**18 23 09.1**	**-1.2**
STKI	**Sintang**	**12.73**	**318**	P	**P**	**18 23 16.6**	**-3.6**
	3μm105nm,1.1s						
CNJI	**Cibinong**	**12.87**	**279**	P	**Pn**	**18 23 12.3**	**-0.5**
	3μm223nm,0.8s						
CBJI	**Citeko**	**13.33**	**282**	P	**Pn**	**18 23 17.2**	**-1.9**
	12μm419nm,0.6s						
DBJI	**Dramaga**	**13.39**	**282**	P	**Pn**	**18 23 19.7**	**-0.3**
	3μm341nm,1.0s						
SKJI	**Sukabumi**	**13.48**	**280**	P	**Pn**	**18 23 22.4**	**+1.2**
	3μm212nm,1.0s						
FAKI	**Fak Fak**	**13.89**	**63**		**Pn**

BAKI **Biak** 18.10 64 P Pn 18 24 21.6 +1.5
comp=Z,4µmcomp=Z,384nm,0.9s
TPRI **Tanjung Pinang** 18.54 303 P Pn 18 24 34.4 +9.0
MASI **Maura Åman, Be** 18.70 289 P Pn 18 24 27.3 -0.1
comp=Z,683nm,0.9s
BIPH **Bislig** 18.74 20⇑e P P 18 24 26.9 +0.2
PPR **Puerto Princes** 19.23 356⇓i P Pn 18 24 34.6 +1.0
AS31 **Alice Springs** 19.37 138 P P 18 24 33.0 -0.8
ASAR **Alice Springs** 19.37 138 P P 18 24 34.4 +0.6
comp=Z,12nm,0.3s,baz=323,slow=12,SNR=679
ASAR S S 18 27 58.0 -12
comp=Z,58nm,0.6s,baz=317,slow=25,SNR=9.3
ASAR LR LR 18 33 38.7
comp=Z,952nm,19.5s,baz=315,slow=41
comp=Z,84nm,0.8s
ASAR **Alice Springs** 19.37 138 P P 18 24 33.5 -0.3
CNOP **Candoni, Negro** 19.43 8⇑i P Pn 18 24 35.5 -0.5
WAMI **Wamena** 19.46 74 P Pn 18 24 37.4 +0.9
comp=Z,2µmcomp=Z,243nm,0.8s
TBP **Tagbilaran** 19.50 12⇓e P P 18 24 36.0 +0.9
MYKOM **Kota Tinggi** 19.59 304 P P 18 24 36.2 +0.1
MYKOM IAmb IAmb 18 24 46.0
comp=Z,330nm,2.0s
MYKOM **Kota Tinggi** 19.59 304 P Pn 18 24 38.0 +0.1
MORW **Morawa** 19.77 190 P P 18 24 37.8 -0.1
baz=20,SNR=71
MORW **Morawa** 19.77 190 P P 18 24 35.5 -2.4
MORW **Morawa** 19.77 190 P P 18 24 38.4 +0.5
KRJI **Kerinci** 19.80 291 P P 18 24 38.5 -0.1
comp=Z,9µmcomp=Z,894nm,0.7s
SMPI **Sarmi** 20.11 69 P P 18 24 41.1 -0.7
comp=Z,844nmcomp=Z,75nm,1.0s
BLDU **Ballidu** 21.18 188 P P 18 24 53.1 -0.1
baz=21,SNR=30
BLDU **Ballidu** 21.18 188 P P 18 24 53.1 -0.1
BKNI **Bangkinang** 21.22 296 P P 18 24 54.3 +0.6
BKNI IAmb IAmb 18 24 58.8
comp=Z,171nm,1.1s
BKNI **Bangkinang** 21.22 296 P P 18 24 50.9 -2.9
comp=Z,2µmcomp=Z,139nm,1.1s
BKNI **Bangkinang** 21.22 296 P P 18 24 55.7 +1.9
comp=Z,141nm,1.1s
GENI **Genyem** 21.25 72 P P 18 24 52.9 -1.3
comp=Z,3µmcomp=Z,186nm,1.0s
GENI **Genyem** 21.25 72 P P 18 24 59.1 +4.9
PPI **Padang Panjang** 21.44 294 P P 18 24 59.5 +3.4
comp=Z,40nm,1.3s
QIS **Mount Isa** 21.89 122 P P 18 25 01.5 +0.5
baz=22,SNR=117
QIS **Mount Isa** 21.89 122 P P 18 25 01.8 +0.8
KLBR **Kellerberrin** 22.03 185 P P 18 25 01.9 -0.5
baz=22,SNR=53
KLBR **Kellerberrin** 22.03 185 P P 18 25 03.4 +1.1
FORT **Forrest** 22.44 161 P P 18 25 06.4 -0.3
baz=22,SNR=65
FORT **Forrest** 22.44 161 P P 18 25 05.1 -1.6
FORT **Forrest** 22.44 161 P P 18 25 07.7 +0.9
MUN **Mundaring** 22.59 188 P P 18 25 07.6 -0.7
baz=22,SNR=11
MUN **Mundaring** 22.59 188 P P 18 25 07.8 -0.5
MNSI **Mandailing Nat** 22.73 296 P P 18 25 12.6 +2.7
comp=Z,36nm,0.7s
COCO **West Island** 22.84 261 P P 18 25 11.9 +0.8
COCO **West Island** 22.84 261 P P 18 25 11.9 +0.8
COCO pmax pmax
comp=Z,439nm,1.4s
PGP **Puerto Galera** 22.92 3⇓e P P 18 25 15.4 +3.5
COEN **Coen** 23.16 103 P P 18 25 14.6 +0.3
baz=23,SNR=26
COEN **Coen** 23.16 103 P P 18 25 13.7 -0.7
COEN IAmb IAmb 18 25 33.9
comp=Z,181nm,1.2s
COEN **Coen** 23.16 103 P P 18 25 15.0 +0.7
NWAO **Narrogin (SRO)** 23.41 186 P P 18 25 12.9 -3.6
NWAO **Narrogin (SRO)** 23.41 186 P P 18 25 12.9 -3.6
NWAO pmax pmax
comp=Z,402nm,1.3s
NWAO **Narrogin (SRO)** 23.41 186 P P 18 25 16.5 0.0
IPM **Ipoh** 23.44 306 P P 18 25 16.3 -0.7
IPM **Ipoh** 23.44 306 P P 18 25 18.5 +1.5
OOD **Öodnadatta** 23.45 143 P P 18 25 17.1 +0.2
LQP **Lukban** 23.55 4⇓e P P 18 25 22.1 +3.9
LQP **Lukban** 23.55 4⇓e P ScP 18 32 36.1 +0.4
JCNP **Jose Panganiba** 23.84 7⇑i P P 18 25 19.5 -1.0
RPSI **Rantau Prapat** 24.21 299 P P 18 25 24.0 -0.1
RPSI **Rantau Prapat** 24.21 299 IAmb IAmb 18 25 26.4
comp=Z,218nm,1.2s
KULM **Kulim** 24.22 307 P P 18 25 22.2 -1.9
KULM ScP ScP 18 32 38.9 +1.5
PSI **Prapat** 24.27 299 P P 18 25 24.0 -0.7
comp=Z,230nm,1.2s,baz=145,slow=7.9,SNR=40
PSI LR LR 18 36 38.2
comp=Z,2µm,19.0s,baz=130,slow=41
comp=Z,230nm,1.2s
PSI **Prapat** 24.27 299 P P 18 25 24.0 -0.7
MULG **Mulgathing** 24.48 149 P P 18 25 26.8 +0.4
GSI **Gunungsitoli** 24.74 295 P P 18 25 29.5 +0.6
GSI IAmb IAmb 18 25 52.5
comp=Z,247nm,1.8s
TSI **Tuntungan** 24.93 300 P P 18 25 34.1 +3.5
comp=Z,158nm,0.9s
PCPH **Palayan** 24.97 3⇑e P P 18 25 32.0 +1.2
RKGY **Rocky Gully** 25.10 186 P P 18 25 33.7 +1.8
baz=25,SNR=7.9
RKGY **Rocky Gully** 25.10 186 P P 18 25 33.5 +1.6
MTSU **Mount Surprise** 25.14 112 P P 18 25 33.8 +1.3
baz=25,SNR=216
MTSU **Mount Surprise** 25.14 112 P P 18 25 33.8 +1.3
KCSI **Kotacane, Aceh** 25.62 299 P P 18 25 38.1 +1.2
comp=Z,65nm,1.2s
INKA **Innaminka** 26.68 135 P P 18 25 48.0 +1.7
PMG **Port Moresby** 26.85 92 P P 18 25 49.2 +1.3
comp=Z,19nm,0.8s,baz=96,slow=2.3,SNR=7.0
PMG ScP ScP 18 32 45.8 +0.9
comp=Z,18nm,0.8s,baz=340,slow=4.8,SNR=5.2
PMG LR LR 18 38 29.2
comp=Z,2µm,19.1s,baz=290,slow=41
comp=Z,19nm,0.8s
LCRK **Leigh Creek** 26.89 143 P P 18 25 49.4 +1.2
SRIT **Nakonsritamara** 27.11 311 P P 18 25 50.3 +0.1
SRIT IAmb IAmb 18 26 17.9
comp=Z,116nm,1.5s
LHMI **Lhok Sumawe** 27.21 302 P P 18 25 52.2 +1.1
LHMI IAmb IAmb 18 26 14.8
comp=Z,99nm,0.9s
CTA **Charters Tower** 27.47 115 P P 18 25 54.7 +1.2
comp=Z,44nm,1.0s,baz=284,slow=10,SNR=19
CTA LR LR 18 37 56.4
comp=Z,2µm,20.8s,baz=284,slow=39
comp=Z,44nm,1.0s
CTA **Charters Tower** 27.47 115 P P 18 25 56.0 +2.4
CTAO **Charters Tower** 27.47 115 P P 18 25 52.2 -1.3
CTAO IAmb IAmb 18 26 33.9
comp=Z,119nm,1.3s
CTAO **Charters Tower** 27.47 115 P P 18 25 52.2 -1.3
CTAO pmax pmax
comp=Z,119nm,1.3s
CTAO **Charters Tower** 27.47 115 P P 18 25 55.9 +2.4
BBOO **Buckleboo** 27.53 150 P P 18 25 53.7 -0.2
baz=27,SNR=137
BBOO **Buckleboo** 27.53 150 P P 18 25 52.3 -1.6
BBOO IAmb IAmb 18 25 55.7
comp=Z,80nm,0.8s
BBOO **Buckleboo** 27.53 150 P P 18 25 55.0 +1.1
MANU **Manus Island** 28.27 76 P P 18 26 01.5 +0.8
WHYH **Whyalla** 28.48 148 P P 18 26 03.5 +1.2
comp=Z,27nm,0.6s
UBPT **Khong Chiam** 28.53 330 P P 18 26 03.9 +1.0
UBPT IAmb IAmb 18 26 09.8
comp=Z,110nm,1.3s
UBPT ScP ScP 18 32 51.8 +1.9
QLP **Quilpie** 28.56 130 P P 18 26 04.6 +1.5
baz=28,SNR=22
QLP **Quilpie** 28.56 130 P P 18 26 04.3 +1.2
comp=Z,247nm,1.4s
HTT **Hallett** 29.51 146 P P 18 26 12.6 +1.1
baz=29,SNR=49
HTT **Hallett** 29.51 146 P P 18 26 13.2 +1.7
STKA **Stephens Creek** 29.95 141 P P 18 26 16.1 +0.7
comp=Z,42nm,0.7s,baz=313,slow=9.6,SNR=87
STKA LR LR 18 39 48.4
comp=Z,1µm,21.3s,baz=300,slow=39
comp=Z,42nm,0.7s
STKA **Stephens Creek** 29.95 141 P P 18 26 16.2 +0.7
baz=30,SNR=68

STKA **Stephens Creek** 29.95 141 P P 18 26 14.7 -0.7
STKA **Stephens Creek** 29.95 141 *i* P P 18 26 15.9 +0.5
STKA **Stephens Creek** 29.95 141 P P 18 26 16.9 +1.5
QIZ **Qiongzhong** 30.09 341 P P 18 26 17.8 +1.1
QIZ IAmb IAmb 18 26 19.1
comp=Z,99nm,1.1s
QIZ **Qiongzhong** 30.09 341 P P 18 26 17.8 +1.1
QIZ PP PnPn 18 27 20.1 +4.1
QIZ S S 18 31 13.4 +2.1
QIZ pmax pmax
comp=Z,81nm,1.2s
QIZ LR LR
comp=Z,730nm,16.7s
QIZ LR LR
comp=Z,550nm,21.5s
QIZ LR LR
comp=Z,1µm,25.6s
QIZ **Qiongzhong** 30.09 341 P P 18 26 18.6 +1.9
QIZ **Qiongzhong** 30.09 341 P P 18 26 17.7 +1.1
QIZ pP pP 18 26 28.8 -2.1
QIZ ScP ScP 18 32 56.3 +1.4
TWOA **Tennyson Woods** 30.56 149 P P 18 26 22.8 +2.1
comp=Z,34nm,1.1s
RMQ **Roma** 32.05 126 P P 18 26 35.7 +1.6
baz=32,SNR=12
RMQ **Roma** 32.05 126 P P 18 26 36.2 +2.2
KRVT **Keravat (AS076** 32.26 83 P P 18 26 35.9 -0.1
comp=Z,19nm,0.8s,baz=259,slow=4.4,SNR=3.9
KRVT LR LR 18 42 19.7
comp=Z,345nm,21.5s,baz=25,slow=41
comp=Z,19nm,0.8s
RK1H **Rockhampton Ha** 32.28 119 P P 18 26 37.1 +1.1
comp=Z,30nm,1.0s
CMSA **Cobar Meteorol** 32.41 136 P P 18 26 38.5 +1.4
baz=32,SNR=34
CMSA **Cobar Meteorol** 32.41 136 P P 18 26 39.1 +2.1
TPUB **Ta-pu** 32.65 1 P P 18 26 38.8 -0.5
TPUB IAmb IAmb 18 27 11.7
comp=Z,54nm,1.1s
TPUB **Ta-pu** 32.65 1 P P 18 26 41.6 +2.4
comp=Z,34nm,0.9s
YULB **Yu-li** 32.76 2 P P 18 26 38.9 -1.3
SSLB **Suanglung** 33.14 2 P P 18 26 43.0 -0.5
SSLB **Suanglung** 33.14 2 P P 18 26 47.6 +4.1
EIDS **Eidsvold** 33.50 122 P P 18 26 48.7 +2.0
baz=33,SNR=3.6
EIDS **Eidsvold** 33.50 122 P P 18 26 43.4 -3.3
EIDS IAmb IAmb 18 27 58.8
comp=Z,66nm,1.8s
EIDS **Eidsvold** 33.50 122 P P 18 26 48.2 +1.5
ARPS **Mount Arapiles** 33.59 147 P P 18 26 48.6 +1.3
baz=34,SNR=34
ARPS **Mount Arapiles** 33.59 147 P P 18 26 49.2 +1.9
KNMB **Chin-men Tao** 33.83 357 P P 18 26 50.6 +1.2
KNMB IAmb IAmb 18 27 25.6
comp=Z,39nm,0.9s
YOJ **Yonaguni jima** 33.93 5 P P 18 26 51.8 +1.5
YOJ **Yonaguni jima** 33.93 5 P P 18 26 51.8 +1.5
YOJ pmax pmax
comp=Z,130nm,1.2s
YHNB **Yeheng** 34.03 2 P P 18 26 52.1 +0.8
CM31 **Chiang Mai Arr** 34.69 323 P P 18 26 57.8 +0.7
CM31 IAmb IAmb 18 27 00.5
comp=Z,93nm,1.4s
CMAR **Chiang Mai Arr** 34.69 323 P P 18 26 58.2 +1.2
comp=Z,28nm,1.0s,baz=156,slow=7.2,SNR=105
CMAR PcP PcP 18 29 32.0 +1.9
comp=Z,13nm,0.9s,baz=170,slow=3.0,SNR=7.1
CMAR ScP ScP 18 33 12.4 +1.7
comp=Z,3.1nm,0.6s,baz=159,slow=2.4,SNR=8.9
comp=Z,28nm,1.0s
CMAR **Chiang Mai Arr** 34.69 323 P P 18 26 57.8 +0.7
CMAR ScP ScP 18 33 11.7 +1.0
CHTO **Chiang Mai** 34.97 324 P P 18 27 00.3 +0.9
CHTO IAmb IAmb 18 27 02.7
comp=Z,87nm,1.3s
CHTO **Chiang Mai** 34.97 324 P P 18 27 00.3 +0.9
CHTO pmax pmax
comp=Z,87nm,1.3s
CHTO **Chiang Mai** 34.97 324 P P 18 27 00.9 +1.5
CHTO **Chiang Mai** 34.97 324 P P 18 27 00.4 +0.9
CHTO sP sP 18 27 18.0 -2.7
CHTO ScP ScP 18 33 12.9 +1.2
BRAT **Ballarat** 35.30 146 P P 18 27 04.8 +2.8
comp=Z,20nm,1.0s
GULI **GuiLin** 35.86 345 P P 18 27 08.6 +1.7
GULI S S 18 32 35.7 -5.1
GULI pmax pmax
comp=Z,80nm,1.2s
GULI LR LR
comp=Z,680nm,21.6s
GULI LR LR
comp=Z,330nm,18.5s
GULI LR LR
comp=Z,990nm,18.5s
GEXS **Deakin Univers** 35.96 146 P P 18 27 10.3 +2.6
MLBS **Spotswood, Mel** 36.03 145 P P 18 27 10.3 +2.0
ARMA **Armidale** 36.10 130 P P 18 27 11.8 +2.6
baz=36,SNR=28
ARMA **Armidale** 36.10 130 P P 18 27 09.0 -0.2
ARMA IAmb IAmb 18 27 14.1
comp=Z,39nm,0.8s
ARMA **Armidale** 36.10 130 P P 18 27 12.3 +3.1
TOO **Toolangi** 36.19 145 P P 18 27 07.1 -2.7
baz=36,SNR=18
TOO **Toolangi** 36.19 145 P P 18 27 08.7 -1.1
TOO IAmb IAmb 18 27 13.2
comp=Z,94nm,1.1s
TOO **Toolangi** 36.19 145 P P 18 27 08.7 -1.1
TOO pmax pmax
comp=Z,94nm,1.1s
TOO **Toolangi** 36.19 145 P P 18 27 12.4 +2.6
CAN **Canberra** 36.88 139 P P 18 27 14.3 -1.4
CAN IAmb IAmb 18 27 18.7
comp=Z,74nm,1.2s
CAN **Canberra** 36.88 139 P P 18 27 14.3 -1.4
CAN pmax pmax
comp=Z,74nm,1.2s
CAN **Canberra** 36.88 139 P P 18 27 17.7 +2.0
CAN **Canberra** 36.88 139 P P 18 27 17.3 +1.5
CNB **Canberra Magne** 37.12 138 P P 18 27 16.1 -1.7
baz=37,SNR=12
CNB **Canberra Magne** 37.12 138 P P 18 27 19.7 +1.9
MGCD **Mangrove Creek** 37.12 134 P P 18 27 16.7 -1.1
baz=37,SNR=17
MGCD **Mangrove Creek** 37.12 134 P P 18 27 21.2 +3.5
GYA **Guiyang** 38.04 340⇑i P P 18 27 26.5 +0.9
GYA S S 18 33 16.6 +2.4
GYA ScS ScS 18 37 33.5 +0.8
GYA pmax pmax
comp=Z,90nm,1.2s
GYA pmax pmax
comp=Z,470nm,5.5s
GYA LR LR
comp=Z,660nm,24.0s
GYA LR LR
comp=Z,440nm,22.8s
GYA LR LR
comp=Z,1µm,22.8s
CNSH **ChangSha** 38.11 350⇓ P P 18 27 27.2 +1.2
CNSH S S 18 33 12.7 -2.3
CNSH pmax pmax
comp=Z,44nm,1.1s
CNSH LR LR
comp=Z,520nm,27.9s
CNSH LR LR
comp=Z,360nm,31.4s
CNSH LR LR
comp=Z,880nm,30.8s
KMI **Kunming** 38.32 334 ⇑P P 18 27 30.2 +2.1
KMI pP pP 18 27 43.6 +0.9
KMI PP PP 18 28 55.1 -1.7
KMI S S 18 33 20.5 +1.8
KMI ScP ScP 18 33 26.0 +1.7
KMI ScS ScS 18 37 36.7 +2.1
KMI pmax pmax
comp=Z,94nm,1.2s
KMI pmax pmax
comp=Z,350nm,5.0s
KMI LR LR
comp=Z,410nm,22.5s
KMI LR LR
comp=Z,370nm,17.6s
KMI LR LR
comp=Z,630nm,26.8s

KMI **Kunming** 38.32 334 P P 18 27 30.5 +2.4
KMI pP pP 18 27 42.9 +0.3
HNR **Honiara** 39.45 93 P P 18 27 38.0 +0.5
comp=Z,67nm,0.7s,baz=302,slow=2.2,SNR=4.3
HNR LR LR 18 46 02.7
comp=Z,378nm,20.1s,baz=274,slow=39
comp=Z,67nm,0.7s
HNR **Honiara** 39.45 93 P P 18 27 36.8 -0.7
PZH **PanZhiHua** 39.95 334 P P 18 27 43.0 +1.4
PZH pP pP 18 27 59.5 +3.1
PZH ScP ScP 18 33 31.2 +0.8
PZH S S 18 33 42.3 -0.8
PZH pmax pmax
comp=Z,80nm,1.0s
PZH pmax pmax
comp=Z,240nm,3.9s
PZH LR LR
comp=Z,1µm,18.6s
PZH LR LR
comp=Z,1µm,21.6s
PZH LR LR
comp=Z,2µm,22.4s
WHN **Wuhan** 40.22 353 ⇑P P 18 27 44.5 +0.9
WHN pP pP 18 27 59.9 +1.7
WHN S S 18 33 47.0 +0.5
WHN pmax pmax
comp=Z,200nm,1.1s
WHN LR LR
comp=Z,2µm,21.9s
MOO **Moorlands** 40.55 149 P P 18 27 48.8 +2.5
baz=40,SNR=4.9
ENH **Enshi** 40.84 346 P P 18 27 48.5 -0.3
ENH IAmb IAmb 18 27 52.4
comp=Z,76nm,0.7s
ENH **Enshi** 40.84 346 P P 18 27 49.1 +0.3
ENH ScP ScP 18 33 34.3 +0.6
TAU **Tasmania Unive** 40.95 149 P P 18 27 48.9 -0.7
TAU IAmb IAmb 18 27 53.4
comp=Z,217nm,1.7s
TAU **Tasmania Unive** 40.95 149 P P 18 27 48.9 -0.7
TAU pmax pmax
comp=Z,217nm,1.7s
NJ2 **Nanjing** 41.37 359 eP P 18 27 54.8 +1.7
NJ2 pmax pmax
comp=Z,39nm,0.9s
PATS **Pohnpei** 41.55 68 P P 18 27 53.5 -1.3
JSU **Suzuyama** 42.04 13 ScP ScP 18 33 37.6 -0.8
JCJ **Chichijima** 42.33 30 P P 18 28 01.0 0.0
comp=Z,70nm,0.7s,baz=273,slow=23,SNR=6.3
JCJ LR LR 18 45 20.5
comp=Z,140nm,21.8s,baz=227,slow=36
comp=Z,70nm,0.7s
JCJ **Chichijima** 42.33 30 P P 18 28 01.0 0.0
JCJ IAmb IAmb 18 28 28.4
comp=Z,106nm,0.8s
PALK **Pallekele** 42.51 292 P P 18 28 03.6 +0.9
comp=Z,14nm,0.9s,baz=219,slow=11,SNR=5.3
PALK LR LR 18 45 45.1
comp=Z,567nm,21.6s,baz=221,slow=36
comp=Z,14nm,0.9s
CD2 **Chengdu** 43.12 339 P P 18 28 07.3 -0.1
CD2 pP pP 18 28 24.9 +2.8
CD2 sP sP 18 28 30.5 +1.7
CD2 S S 18 34 34.8 +5.2
CD2 pmax pmax
comp=Z,210nm,1.1s
CD2 LR LR
comp=Z,720nm,17.9s
CD2 LR LR
comp=Z,790nm,14.3s
CD2 LR LR
comp=Z,940nm,17.3s
KOUNC **Koumac, New Ca** 44.07 110 P P 18 28 13.4 -1.8
KOUNC **Koumac, New Ca** 44.07 110 P P 18 28 17.2 +2.0
LYN **LuoYang** 44.42 351⇑i P P 18 28 16.6 -1.1
LYN PP PP 18 30 02.1 -0.3
LYN S S 18 34 46.4 -2.0
LYN sS sS 18 35 06.6 -7.3
LYN pmax pmax
comp=Z,30nm,0.9s
LYN LR LR
comp=Z,410nm,16.4s
LYN LR LR
comp=Z,650nm,14.9s
LYN LR LR
comp=Z,680nm,32.8s
XAN **Xi'an** 44.59 347 ⇑P P 18 28 18.8 -0.3
XAN S S 18 34 46.9 -4.0
XAN ScS SS 18 38 14.7 +1.7
XAN pmax pmax
comp=Z,110nm,1.3s
XAN pmax pmax
comp=Z,310nm,3.7s
XAN LR LR
comp=Z,690nm,17.4s
XAN LR LR
comp=Z,470nm,17.7s
XAN LR LR
comp=Z,890nm,18.7s
XAN **Xi'an** 44.59 347 P P 18 28 18.8 -0.3
XAN pP pP 18 28 32.3 -1.7
JTU **Tsushima** 44.73 11 P P 18 28 20.2 0.0
JTU IAmb IAmb 18 28 24.5
comp=Z,37nm,0.9s
JMN **Monobe** 45.03 16 P P 18 28 22.8 +0.2
JMN ScP ScP 18 33 50.9 +0.4
KSBUS **Busan** 45.38 11 P P 18 28 25.7 +0.3
KSBUS IAmb IAmb 18 28 34.9
comp=Z,27nm,0.8s
TIA **Tai'an** 45.59 357 ⇑P P 18 28 25.8 -1.2
TIA pmax pmax
comp=Z,9.0nm,0.9s
JHS **Saijyo** 46.02 15 P P 18 28 30.2 -0.2
JHS ScP ScP 18 33 54.8 +0.2
TJN **Taejon** 46.21 8 P P 18 28 31.1 -0.7
TJN IAmb IAmb 18 28 38.8
comp=Z,67nm,1.0s
TJN **Taejon** 46.21 8 ceP P 18 28 32.6 +0.8
TJN **Taejon** 46.21 8 P P 18 28 34.1 +2.3
comp=Z,70nm,1.0s
DZM **Mont Dzumac** 46.27 111 P P 18 28 33.6 +0.8
comp=Z,6.2nm,0.6s,baz=252,slow=10,SNR=10.0
DZM LR LR 18 48 45.0
comp=Z,973nm,20.6s,baz=274,slow=37
comp=Z,6.2nm,0.6s
DZM **Mont Dzumac** 46.27 111 eLR LR 18 41 36.1
comp=Z,2µm,24.1s
DZM **Mont Dzumac** 46.27 111 P P 18 28 31.2 -1.5
DZM **Mont Dzumac** 46.27 111 P P 18 28 35.3 +2.5
DZM **Mont Dzumac** 46.27 111 P P 18 28 34.0 +1.2
JHJ **Hachijo jima 2** 46.45 23 LR LR 18 47 42.9
comp=Z,170nm,21.6s,baz=223,slow=36
YATNC **Mamie plateau,** 46.68 111 P P 18 28 39.1 +3.2
OUENC **Ouen Island, N** 46.68 112 P P 18 28 33.8 -2.1
OUENC IAmb IAmb 18 28 39.2
comp=Z,120nm,1.8s
KSCHJ **Chungju** 46.78 9 P P 18 28 35.9 -0.4
H08S2 **Diego Garcia H** 46.92 268 T T 19 19 11.2
baz=97,slow=75,SNR=45
H08S3 **Diego Garcia H** 46.94 268 T T 19 19 02.2
baz=97,slow=75,SNR=42
H08S1 **Diego Carcia H** 46.94 268 T T 19 19 12.6
baz=97,slow=75,SNR=37
HNS **HongShan** 46.95 354 ⇑P P 18 28 37.0 -0.6
HNS S S 18 35 22.1 -2.6
HNS pmax pmax
comp=Z,27nm,1.3s
HNS LR LR
comp=Z,280nm,17.3s
HNS LR LR
comp=Z,620nm,15.7s
HNS LR LR
comp=Z,460nm,17.5s
PINNC **Pines Island,** 47.26 112 P P 18 28 40.4 0.0
PINNC IAmb IAmb 18 30 24.2
comp=Z,32nm,0.8s
KSAR **Wonju Array Be** 47.33 9 P P 18 28 40.2 -0.3
KSAR PcP PcP 18 30 10.9 +0.2
KSAR ScP ScP 18 34 00.2 +0.3
KSAR **Wonju Array Be** 47.33 9 P P 18 28 40.2 -0.3
KSAR 18 30 10.9
KSRS **Korea Array** 47.34 9 P P 18 28 39.5 -1.2
comp=Z,9.5nm,0.7s,baz=185,slow=8.6,SNR=32
KSRS PcP PcP 18 30 11.9 +1.2
comp=Z,4.4nm,0.8s,baz=191,slow=3.9,SNR=5.2

KSRS ScP **ScP** **18 34 00.5 +0.5**
comp=Z,4.4nm,0.7s,baz=185,slow=3.8,SNR=12
KSRS LR LR 18 48 51.8
comp=Z,265nm,22.0s,baz=195,slow=36
comp=Z,9.5nm,0.7s
KS19 Wonju Array Si 47.38 9 P **P** **18 28 40.5 -0.5**
INU Inuyama 47.48 19 P **P** **18 28 41.7 -0.1**
MARNC Mare, Loyalty 47.66 110 P **P** **18 28 43.4 0.0**
KAAM Kaadhehdhoo 47.78 279 P **P** **18 28 42.8 -1.8**
LZH Lanzhou 47.85 342 ⇑P **P** **18 28 46.0 +1.1**
LZH pP pP 18 28 57.2 -2.9
LZH sP sP 18 29 01.3 -5.4
LZH S **S** **18 35 36.7 -1.3**
LZH sS sS 18 35 59.6 -4.1
LZH pmax pmax
comp=Z,110nm,1.5s
LZH pmax pmax
comp=Z,620nm,5.1s
LZH LR LR
comp=Z,980nm,19.9s
LZH LR LR
comp=Z,990nm,19.5s
LZH LR LR
comp=Z,2μm,20.7s
LSA Lhasa 47.86 326 P **P** **18 28 45.0 -0.4**
LSA Lhasa 47.86 326 P **P** **18 28 45.1 -0.4**
LSA pmax pmax
comp=Z,53nm,0.7s
LSA Lhasa 47.86 326 P **P** **18 28 46.5 +1.0**
LSA Lhasa 47.86 326 P **P** **18 28 46.2 +0.7**
LSA pP **pP** **18 28 59.0 -1.5**
ODAN Odare 48.03 320 *e*P **P** **18 28 46.5 0.0**
TAPN Taplejung 48.17 320 *e*P **P** **18 28 47.7 0.0**
SEHB SEOHWA 48.19 9 P **P** **18 28 46.5 -0.8**
RAMN Ramite 48.60 319 *e*P **P** **18 28 50.7 -0.2**
comp=Z,97nm,0.6s
HYBB Hyderabad (bro 48.89 303 *e*P **P** **18 28 51.9 -1.2**
HYBB *es*P **pP** **18 29 11.4 +3.2**
HYBB *e*S **S** **18 35 54.8 +1.8**
NFK Norfolk Island 48.89 120 P **P** **18 28 56.0 +3.1**
MAJO Matsushiro 48.95 20 P **P** **18 28 51.2 -2.0**
MAJO IAmb IAmb 18 29 13.0
comp=Z,26nm,0.8s
MAJO ScP **ScP** **18 34 06.8 -0.2**
MAJO Matsushiro 48.95 20 *i*P **P** **18 28 52.1 -1.1**
MAJO pmax pmax
comp=Z,22nm,1.2s
MJAR Matsushiro Arr 48.95 20 P **P** **18 28 50.8 -2.4**
comp=Z,17nm,1.0s,baz=188,slow=7.1,SNR=25
MJAR ScP **ScP** **18 34 06.8 -0.1**
comp=Z,7.5nm,0.9s,baz=178,slow=4.8,SNR=10
MJAR LR LR 18 47 36.6
comp=Z,261nm,21.3s,baz=202,slow=34
comp=Z,17nm,1.0s
JIRN Jiri 49.35 319 *e*P **P** **18 28 56.8 0.0**
comp=Z,204nm,0.6s
BJT Baijiatuan 49.43 356 P **P** **18 28 56.2 -0.6**
BJT IAmb IAmb 18 28 57.5
comp=Z,35nm,0.9s
BJT Baijiatuan 49.43 356 P **P** **18 28 56.2 -0.6**
BJT pmax pmax
comp=Z,35nm,0.9s
BJT Baijiatuan 49.43 356 P **P** **18 28 56.4 -0.4**
BJT ScP **ScP** **18 34 09.7 +0.8**
BJI Beijing 49.45 356 P **P** **18 28 56.8 -0.1**
BJI sP **pP** **18 29 12.0 -0.1**
BJI S **S** **18 36 00.7 +0.7**
BJI pmax pmax
comp=Z,40nm,0.9s
BJI LR LR
comp=Z,94nm,17.6s
BJI LR LR
comp=Z,210nm,18.7s
BJI LR LR
comp=Z,470nm,20.4s
GUN Gumba 49.73 319 *e*P **P** **18 28 59.5 -0.1**
comp=Z,247nm,0.8s
PKI Pulchoki 49.80 319 *e*P **P** **18 28 59.2 -1.0**
comp=Z,73nm,0.6s
PKIN Phulchoki 49.81 319 *e*P **P** **18 28 59.3 -0.9**
comp=Z,81nm,0.5s
DMN Daman 50.02 319 *e*P **P** **18 29 01.3 -0.5**
comp=Z,220nm,0.9s
KKN Kakani 50.03 319 *e*P **P** **18 29 01.4 -0.4**
JSD Sado 50.34 19 P **P** **18 29 02.2 -1.4**
JSD IAmb IAmb 18 29 25.3
comp=Z,41nm,0.7s
JSD ScP **ScP** **18 34 13.0 +0.2**
GKN Gorkha 50.59 319 *e*P **P** **18 29 05.1 -0.9**
comp=Z,224nm,0.9s
BTO Baotou 50.73 350 *e*P **P** **18 29 07.3 +0.6**
HHC Hu-ho-hao-te 50.73 352 *e*P **P** **18 29 07.1 +0.4**
HHC pmax pmax
comp=Z,54nm,0.9s
HHC pmax pmax
comp=Z,430nm,6.9s
JMM Marumori 51.04 21 P **P** **18 29 07.2 -1.7**
JMM IAmb IAmb 18 29 30.1
comp=Z,47nm,1.0s
SNY Shenyang 51.23 3 ⇓P **P** **18 29 09.4 -0.8**
SNY pmax pmax
comp=Z,13nm,0.5s
SNY pmax pmax
comp=Z,230nm,6.5s
SNY LR LR
comp=Z,380nm,19.4s
SNY LR LR
comp=Z,290nm,20.5s
SNY LR LR
comp=Z,850nm,20.8s
GOMU GeErMu 51.28 334 P **P** **18 29 11.5 +0.2**
GOMU S **S** **18 36 26.0 -0.3**
GOMU pmax pmax
comp=Z,19nm,1.0s
GOMU pmax pmax
comp=Z,210nm,4.6s
GOMU LR LR
comp=Z,380nm,17.6s
GOMU LR LR
comp=Z,290nm,15.6s
GOMU LR LR
comp=Z,330nm,22.6s
DANN Dangsing 51.40 318 *e*P **P** **18 29 11.6 -0.6**
comp=Z,353nm,0.7s
GTA Gaotai 52.17 340 ⇑P **P** **18 29 18.0 +0.5**
GTA pP pP 18 29 32.2 -0.7
GTA sP sP 18 29 38.1 -1.4
GTA ScP **ScP** **18 34 21.9 +1.1**
GTA S **S** **18 36 38.0 +0.1**
GTA ScS **ScS** **18 39 00.4 -2.1**
GTA pmax pmax
comp=Z,15nm,1.0s
GTA pmax pmax
comp=Z,210nm,6.3s
GTA LR LR
comp=Z,400nm,18.9s
GTA LR LR
comp=Z,380nm,21.1s
GTA LR LR
comp=Z,700nm,22.5s
MSHR Mys Shultsa 52.88 10 *i*P **P** **18 29 22.0 -0.5**
XLT XiLinHaoTe 53.30 357 ⇑*i*P **P** **18 29 25.2 -0.5**
XLT pP pP 18 29 41.1 0.0
XLT sP sP 18 29 48.3 +0.6
XLT PcP **PcP** **18 30 31.7 -1.0**
XLT ScP **ScP** **18 34 26.2 +0.6**
XLT S **S** **18 36 52.8 -0.3**
XLT sS sS 18 37 22.2 +5.6
XLT SS **SS** **18 40 27.3 -6.6**
XLT pmax pmax
comp=Z,42nm,1.0s
XLT pmax pmax
comp=Z,210nm,6.5s
XLT LR LR
comp=Z,290nm,19.3s
XLT LR LR
comp=Z,330nm,17.7s
CN2 Changchun 53.33 5 *e*P **P** **18 29 25.9 +0.1**
CN2 *e*S **S** **18 36 55.5 +2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,100nm,18.0s
CN2 LR LR
comp=Z,200nm,19.0s
JTM Tenmabayashi 53.74 20 P **P** **18 29 27.8 -1.1**
JTM IAmb IAmb 18 29 55.4
comp=Z,43nm,1.0s
DCZ Deep Cove 53.95 140 IAmb IAmb 18 29 33.2
comp=Z,102nm,1.4s
WAKE Wake Island 54.22 58 P **P** **18 29 31.7 -1.0**
MLZ Mavora Lakes 54.52 140 P **P** **18 29 34.8 +0.2**
USRK Ussuriysk Ar. 54.59 11 P **P** **18 29 34.4 -0.7**
comp=Z,11nm,0.7s,baz=178,slow=6.7,SNR=17
USRK ScP **ScP** **18 34 31.5 +0.4**
comp=Z,4.2nm,0.8s,baz=207,slow=4.7,SNR=4.2
comp=Z,11nm,0.7s
USRK Ussuriysk Ar. 54.59 11 P **P** **18 29 34.6 -0.4**
USRK Ussuriysk Ar. 54.59 11 P **P** **18 29 34.6 -0.4**
MDJ Mudanjiang 54.61 8 IAmb IAmb 18 29 45.3
comp=Z,21nm,0.7s
MDJ Mudanjiang 54.61 8 P **P** **18 29 36.3 +1.2**
MDJ pmax pmax
comp=Z,24nm,0.7s
MDJ pmax pmax
comp=Z,360nm,6.4s
WHZ Wether Hill Ro 54.64 140 P **P** **18 29 35.7 +0.2**
WHZ IAmb IAmb 18 29 37.7
comp=Z,41nm,0.6s
WKZ Wanaka 54.87 139 P **P** **18 29 38.5 +1.3**
FOZ Fox Glacier 54.88 137 P **P** **18 29 37.1 -0.1**
OUZ Omahuta 55.03 126 P **P** **18 29 37.5 -0.9**
OUZ IAmb IAmb 18 29 42.3
comp=Z,55nm,1.2s
BNX BinXian 55.44 6 ⇓P **P** **18 29 41.6 +0.5**
BNX pmax pmax
comp=Z,7.0nm,0.5s
BNX pmax pmax
comp=Z,320nm,9.3s
ROCAM Rodrigues Isla 55.45 253 P **P** **18 29 39.4 -2.3**
LBZ Lake Benmore 55.45 138 P **P** **18 29 40.2 -1.2**
LBZ IAmb IAmb 18 29 43.1
comp=Z,84nm,1.3s
ERM Érimo 55.55 21 P **P** **18 29 42.5 +0.5**
ERM Érimo 55.55 21 P **P** **18 29 42.5 +0.5**
ERM pmax pmax
comp=Z,19nm,1.0s
RPZ Rata Peaks 55.78 137 P **P** **18 29 44.3 +0.6**
comp=Z,106nm,0.8s,baz=304,slow=3.9,SNR=62
RPZ LR LR 18 53 34.9
comp=Z,988nm,21.7s,baz=282,slow=36
comp=Z,106nm,0.8s
RPZ Rata Peaks 55.78 137 P **P** **18 29 42.3 -1.4**
QRZ Quartz Range 55.81 133 P **P** **18 29 44.9 +1.0**
ODZ Otahua Downs 56.01 139 P **P** **18 29 44.7 -0.6**
ODZ IAmb IAmb 18 30 36.1
comp=Z,58nm,1.5s
LTZ Lake Taylor 56.27 136 P **P** **18 29 47.5 +0.2**
LTZ IAmb IAmb 18 29 49.3
comp=Z,57nm,1.1s
OXZ Oxford 56.30 136 P **P** **18 29 47.5 0.0**
THZ Tophouse 56.38 134 P **P** **18 29 48.5 +0.4**
NNZ Nelson 56.54 133 P **P** **18 29 49.6 +0.4**
MSVF Nonsavu 56.87 105 LR LR 18 53 57.0
comp=Z,251nm,20.7s,baz=259,slow=36
MSVF Nonsavu 56.87 105 P **P** **18 29 54.1 +2.1**
TUWZ Tuamarina 57.01 134 P **P** **18 29 52.1 -0.4**
TUWZ PcP **PcP** **18 30 46.5 -0.6**
CASY Casey 57.02 185 P **P** **18 29 52.5 +0.4**
CASY IAmb IAmb 18 29 54.1
comp=Z,72nm,1.1s
CASY Casey 57.02 185 P **P** **18 29 52.6 +0.4**
CASY pP **pP** **18 30 05.3 -2.6**
KHZ Kahutara 57.03 135 P **P** **18 29 52.7 +0.1**
KHZ Kahutara 57.03 135 P **P** **18 29 54.1 +1.5**
SNZO South Karori 57.52 133 P **P** **18 29 54.9 -1.2**
SNZO South Karori 57.52 133 P **P** **18 29 57.3 +1.2**
SNZO South Karori 57.52 133 P **P** **18 29 56.4 +0.3**
MSWZ Moikau Station 57.94 133 P **P** **18 29 57.9 -1.3**
MSWZ PcP **PcP** **18 30 51.3 +0.5**
PLWZ Palliser 57.99 133 P **P** **18 29 56.8 -2.7**
PLWZ PcP **PcP** **18 30 51.3 +0.3**
BKZ Black Stump Fm 58.25 130 P **P** **18 30 01.4 +0.1**
BKZ Black Stump Fm 58.25 130 P **P** **18 30 02.5 +1.2**
ULN Ulaanbaatar 58.29 350 P **P** **18 30 01.5 +0.1**
ULN ScP **ScP** **18 34 48.6 +1.1**
ULN Ulaanbaatar 58.29 350 *ce*P **P** **18 30 01.5 +0.1**
ULN pmax pmax
comp=Z,105nm,1.0s
ULN Ulaanbaatar 58.29 350 P **P** **18 30 01.7 +0.2**
ULN ScP **ScP** **18 34 47.7 +0.2**
SONM Songino Array 58.38 349 P **P** **18 30 02.2 +0.1**
comp=Z,49nm,0.7s,baz=170,slow=7.3,SNR=221
SONM ScP **ScP** **18 34 48.8 +0.9**
comp=Z,6.6nm,1.0s,baz=170,slow=4.0,SNR=7.5
SONM S **S** **18 37 58.9 -1.7**
comp=Z,1.8nm,1.1s,baz=198,slow=9.1,SNR=4.5
SONM LR LR 18 58 14.2
comp=Z,365nm,19.9s,baz=172,slow=39
SONM PKPPKP **P'P'df** **18 59 38.2 -0.5**
comp=Z,0.3nm,0.4s,baz=259,slow=1.5,SNR=3.9
comp=Z,49nm,0.7s
SONM Songino Array 58.38 349 ScP **ScP** **18 34 48.2 +0.4**
BFZ Birch Farm 58.46 132 IAmb IAmb 18 30 06.3
comp=Z,46nm,0.8s
URZ Urewera 58.50 129 P **P** **18 30 04.0 +1.0**
comp=Z,7.5nm,0.3s,baz=253,slow=5.1,SNR=14
URZ LR LR 18 57 40.4
comp=Z,404nm,18.3s,baz=289,slow=38
comp=Z,7.5nm,0.3s
URZ Urewera 58.50 129 P **P** **18 30 03.6 +0.6**
DGTI Dogotuki 58.50 103 P **P** **18 30 06.3 +2.9**
DRV Dumont d'Urvil 58.66 171 P **P** **18 30 04.7 +1.1**
MWZ Matawai 58.84 129 P **P** **18 30 06.6 +1.2**
RUGZ Raukumara Rang 58.87 129 P **P** **18 30 06.6 +0.8**
HAZ Te Kaha 58.90 128 P **P** **18 30 06.9 +1.1**
RIGZ Rimuhau 59.10 129 P **P** **18 30 08.8 +1.6**
TKGZ Te Karaka 59.10 129 P **P** **18 30 08.8 +1.6**
TWGZ Tauwhareparae 59.15 129 P **P** **18 30 09.8 +2.2**
PKGZ Pakihiroa 59.16 128 P **P** **18 30 09.2 +1.5**
MXZ Matakaoa Point 59.27 128 P **P** **18 30 10.6 +2.3**
WMGZ Waiomatatini S 59.40 128 P **P** **18 30 10.9 +1.6**
KLR Kul'dur 59.44 9 P **P** **18 30 08.0 -1.2**
comp=Z,2.5nm,0.6s,baz=186,slow=2.7,SNR=8.8
KLR LR LR 18 55 21.5
comp=Z,205nm,21.8s,baz=204,slow=36
comp=Z,2.5nm,0.6s
KLR Kul'dur 59.44 9 *ce*P **P** **18 30 08.2 -1.0**
KLR pmax pmax
comp=Z,14nm,1.6s
YSS Yuzh-Sakhalins 59.81 18 P **P** **18 30 12.3 +0.5**
YSS IAmb IAmb 18 30 25.3
comp=Z,23nm,0.9s
YSS Yuzh-Sakhalins 59.81 18 *i*P **P** **18 30 11.3 -0.5**
YSS pmax pmax
comp=Z,31nm,1.3s
KUR Kuril'sk 60.05 22 *i*P **P** **18 30 13.1 -0.4**
WMQ Urumqi 60.65 334 *e*P **P** **18 30 18.4 +0.7**
WMQ pP pP 18 30 36.1 +2.9
WMQ pmax pmax
comp=Z,40nm,1.1s
WMQ pmax pmax
comp=Z,290nm,4.5s
WMQ LR LR
comp=Z,450nm,21.5s
WMQ LR LR
comp=Z,390nm,20.1s
WMQ LR LR
comp=Z,320nm,21.5s
RAO Raoul Island 61.13 118 LR LR 18 55 57.6
comp=Z,758nm,21.5s,baz=241,slow=35
ZAK Zakamensk 61.42 348 *e*P **P** **18 30 22.7 -0.1**
ZAK *e* 18 38 35.0
ZAK pmax pmax
comp=Z,58nm,1.1s
ZAK pmax pmax
comp=Z,7.0nm,1.3s
CIT Chita 61.56 356 *e*P **P** **18 30 23.3 -0.4**
CIT *e* 18 30 32.2
CIT *e* 18 31 08.0
CIT *e* 18 34 11.1
CIT *e*S **S** **18 38 33.4 -7.8**
CIT pmax pmax
comp=Z,98nm,1.9s
NIL Nilore 61.73 316 P **P** **18 30 23.7 -1.6**
NIL Nilore 61.73 316 P **P** **18 30 23.7 -1.6**
NIL pmax pmax
comp=Z,83nm,1.3s
NIL Nilore 61.73 316 P **P** **18 30 23.9 -1.3**
NIL pP **pP** **18 30 39.5 -1.4**
GRNR Gornyy 61.75 12 ⇑*i*P **P** **18 30 24.2 -0.7**
GRNR pmax pmax
comp=Z,9.0nm,1.0s
IRK Irkutsk 63.00 349 *e*P **P** **18 30 30.3 -2.9**
IRK *e*S **S** **18 38 58.8 -0.3**
IRK pmax pmax
comp=Z,102nm,1.5s
KNGR Kungurtug, Tuv 63.00 344 *i*P **P** **18 30 33.8 +0.4**
MOY Mondy 63.12 347 *e*P **P** **18 30 34.7 +0.5**
MOY pmax pmax
comp=Z,110nm,1.7s
TYV Tymovskoe 63.31 16 *e*P P 18 30 43.2 +7.9
TYV *e*S S 18 39 19.7 +17
TYV pmax pmax
comp=Z,100nm,2.8s
TYV pmax pmax
comp=Z,14nm,1.0s
TYV smax smax
comp=N,100nm,4.0s
TYV smax smax
comp=E,100nm,4.0s
ZEA Zeya 63.34 5 *e*P **P** **18 30 35.1 -0.3**
ZEA pmax pmax
comp=Z,30nm,1.1s
ZEA MLR MLR
comp=Z,100nm,16.0s
KSH Kashi 63.59 323 P **P** **18 30 37.5 -0.1**
KSH pP pP 18 30 49.9 -3.5
KSH PcP **PcP** **18 31 09.5 -4.1**
KSH S **S** **18 39 04.4 -2.9**
KSH pmax pmax
comp=Z,19nm,0.8s
KSH LR LR
comp=Z,500nm,20.3s
KSH LR LR
comp=Z,570nm,21.6s
KSH LR LR
comp=Z,720nm,23.2s
SHLS Shalkode 64.10 328 *e*P **P** **18 30 39.4 -1.4**
SHLS *e*S **S** **18 39 11.8 -1.7**
SHLS Shalkode 64.10 328 *e*P **P** **18 30 39.5 -1.4**
baz=328
SHLS *e*S **S** **18 39 11.8 -1.7**
baz=328
PRZ Przheval'sk 64.20 327 IAmb IAmb 18 31 22.0
comp=Z,40nm,1.1s
UZB Uzynbulak 64.33 328 *e*P **P** **18 30 41.5 -0.8**
UZB Uzynbulak 64.33 328 *e*P **P** **18 30 41.6 -0.8**
baz=328
SATY Saty 64.59 327 *c i*P **P** **18 30 43.8 -0.3**
SATY pmax pmax
comp=Z,12nm,1.1s
SATY Saty 64.59 327 ⇑*i*P **P** **18 30 43.8 -0.3**
comp=Z,12nm,1.1s,baz=328
ZHN Zhinishke 64.65 328 *e*P **P** **18 30 43.5 -0.9**
ZHN Zhinishke 64.65 328 *e*P **P** **18 30 43.5 -0.9**
baz=328
KPKS Kokpek 64.72 328 *c i*P **P** **18 30 44.4 -0.5**
KPKS pmax pmax
comp=Z,11nm,1.1s
KPKS Kokpek 64.72 328 ⇑*i*P **P** **18 30 44.4 -0.5**
comp=Z,11nm,1.1s,baz=328
ZSN Zaisan 64.73 334 *e*P **P** **18 30 44.4 -0.3**
ZSN Zaisan 64.73 334 *e*P **P** **18 30 44.5 -0.3**
baz=334
KBL Kabul 65.13 315 P **P** **18 30 46.3 -1.6**
KBL IAmb IAmb 18 30 53.5
comp=Z,54nm,0.9s
KBL Kabul 65.13 315 P **P** **18 30 46.3 -1.6**
KBL pmax pmax
comp=Z,54nm,1.0s
MK31 Makanchi Array 65.36 333 *i*P **P** **18 30 48.2 -0.7**
MK31 pmax pmax
comp=Z,21nm,0.7s
MKAR Makanchi Array 65.36 333 P **P** **18 30 48.4 -0.5**
comp=Z,6.1nm,0.3s,baz=143,slow=7.2,SNR=84
MKAR S **S** **18 39 24.1 -4.6**
comp=Z,2.4nm,1.0s,baz=137,slow=13,SNR=6.2
MKAR PKPPKP P'P'df 18 59 36.3 +8.1
comp=Z,2.6nm,1.0s,baz=290,slow=3.5,SNR=10
MKAR LR LR 19 01 44.7
comp=Z,274nm,21.3s,baz=150,slow=38
comp=Z,6.1nm,0.3s
MDOK Medeo 65.39 327 *e*P **P** **18 30 48.7 -0.6**
MDOK Medeo 65.39 327 *e*P **P** **18 30 48.7 -0.6**
baz=327
AAA Alma-Ata 65.49 327 *e*P **P** **18 30 49.4 -0.4**
AAA Alma-Ata 65.49 327 *e*P **P** **18 30 49.4 -0.4**
baz=327
MAKZ Makanchi 65.52 332 P **P** **18 30 49.1 -0.7**
MAKZ Makanchi 65.52 332 P **P** **18 30 49.2 -0.7**
MAKZ pmax pmax
comp=Z,13nm,0.9s
MAKZ Makanchi 65.52 332 P **P** **18 30 48.7 -1.2**
BOOM Boomskoye usch 65.55 326 IAmb IAmb 18 30 57.5
comp=Z,51nm,1.2s
CCD Concordia, Ant 65.56 179 P **P** **18 30 52.1 +2.0**
CCD pP **pP** **18 31 06.4 +0.2**
TDK Taldyqorghan 65.94 329 *e*P **P** **18 30 54.9 +2.3**
TDK pmax pmax
comp=Z,13nm,0.8s
TDK Taldyqorghan 65.94 329 *e*P **P** **18 30 55.0 +2.3**
comp=Z,13nm,0.8s,baz=329
TKM2 Tokmak 2 66.02 326 *i*P **P** **18 30 52.3 -1.1**
TKM2 pmax pmax
comp=Z,8.0nm,0.6s
KUU Kurty 66.26 327 *c i*P **P** **18 30 54.1 -0.6**
KUU pmax pmax
comp=Z,15nm,0.9s
KUU Kurty 66.26 327 ⇑*i*P **P** **18 30 54.1 -0.6**
comp=Z,15nm,0.9s,baz=327
AAK Ala-Archa 66.45 325 P **P** **18 30 55.9 -0.2**
comp=Z,13nm,0.7s,baz=132,slow=3.4,SNR=14
AAK LR LR 19 04 41.7
comp=Z,176nm,18.8s,baz=141,slow=40
comp=Z,13nm,0.7s
AAK Ala-Archa 66.45 325 P **P** **18 30 55.3 -0.9**
AAK IAmb IAmb 18 31 11.7
comp=Z,25nm,0.9s
AAK Ala-Archa 66.45 325 *ce*P **P** **18 30 56.1 -0.1**
AAK pmax pmax
comp=Z,39nm,1.3s
AAK Ala-Archa 66.45 325 *i*P **P** **18 30 57.1 +1.0**
SNR=7.4
CHMS Chumysh 66.54 325 *i*P **P** **18 30 57.4 +0.8**
CHMS pmax pmax
comp=Z,13nm,1.2s
GAR Garm 66.75 320 P **P** **18 30 57.4 -0.7**
SGDS Sogindy 66.90 326 *e*P **P** **18 30 57.9 -1.0**
SGDS Sogindy 66.90 326 *e*P **P** **18 30 57.9 -1.0**
baz=326
BOD Bodaibo 67.30 357 *e*P **P** **18 31 00.8 -0.2**
BOD pmax pmax
comp=Z,80nm,1.1s
SKR Severo-Kuril's 67.70 24 *e*P **P** **18 31 02.7 -0.9**
SKR *e*S **S** **18 39 58.5 +1.8**
SKR pmax pmax
comp=Z,25nm,1.0s
SKR pmax pmax
comp=Z,100nm,3.6s
SKR MLR MLR
comp=Z,100nm,16.0s
MHTO MHTO 68.01 297 P **P** **18 31 05.3 -0.9**
WSAR Wadi Sarin 68.23 300 P **P** **18 31 07.5 0.0**
comp=Z,15nm,0.5s,baz=149,slow=5.4,SNR=9.8
WSAR LR LR 19 00 16.9
comp=Z,177nm,21.4s,baz=132,slow=35
comp=Z,15nm,0.5s
WSAR Wadi Sarin 68.23 300 P **P** **18 31 07.6 0.0**
BTLS Baital 68.25 327 *e*P **P** **18 31 06.5 -0.7**
BTLS Baital 68.25 327 *e*P **P** **18 31 06.6 -0.7**
baz=327
DZA Taraz 68.43 324 *e*P **P** **18 31 07.3 -1.2**
DZA Taraz 68.43 324 *e*P **P** **18 31 07.4 -1.2**
baz=324
SMDO Samad 68.66 299 P **P** **18 31 10.1 -0.3**
BIDO Bidbid 68.76 300 P **P** **18 31 10.6 -0.3**
IUG Iuzhnay 68.76 322 *e*P **P** **18 31 10.2 -0.4**
IUG Iuzhnay 68.76 322 *e*P **P** **18 31 10.3 -0.4**
baz=322
SEM Semipalatinsk 68.96 334 *e*P **P** **18 31 10.5 -1.3**
SEM pmax pmax
comp=Z,11nm,1.1s
SEM Semipalatinsk 68.96 334 *e*P **P** **18 31 10.5 -1.3**

comp=Z,11nm,1.1s,baz=334
KK31 Karatay Array 69.04 323 *i* P **P** **18 31 11.3 -1.0**
MAW Mawson 69.05 200 P **P** **18 31 13.8 +2.0**
comp=Z,33nm,1.1s,baz=53,slow=8.5,SNR=12
MAW LR LR 18 58 27.5
comp=Z,326nm,19.5s,baz=42,slow=33
comp=Z,33nm,1.1s
MAW Mawson 69.05 200 P **P** **18 31 13.8 +2.0**
baz=69,SNR=23
MAW Mawson 69.05 200 P **P** **18 31 11.7 -0.1**
BSY Bisya 69.28 299 P **P** **18 31 13.9 -0.3**
HOQ Hoqain 69.48 300 P **P** **18 31 15.3 0.0**
KURBB Kurchatov Arra 69.86 333 P **P** **18 31 16.4 -0.7**
comp=Z,5.0nm,0.5s,baz=140,slow=5.7,SNR=40
KURBB LR LR 19 05 07.7
comp=Z,354nm,21.1s,baz=131,slow=39
comp=Z,5.0nm,0.5s
ZAA0 Zalesovo Array 69.88 339 P **P** **18 31 15.5 -1.7**
ZALV Zalesovo Beam 69.88 339 P **P** **18 31 16.2 -0.9**
comp=Z,66nm,0.7s,baz=143,slow=4.4,SNR=57
ZALV S **S** **18 40 20.7 -1.7**
comp=Z,8.4nm,1.0s,baz=139,slow=9.6,SNR=14
ZALV PKPPKP **P'P'df** **18 59 23.7 +3.5**
comp=Z,1.3nm,0.8s,baz=291,slow=6.2,SNR=6.8
ZALV LR LR 19 04 42.9
comp=Z,109nm,18.1s,baz=150,slow=38
comp=Z,66nm,0.7s
KURK Kurchatov 69.89 333 P **P** **18 31 16.2 -1.1**
KURK IAmb IAmb 18 31 30.3
comp=Z,36nm,1.1s
KURK Kurchatov 69.89 333 *ce*P **P** **18 31 16.4 -0.9**
KURK pmax pmax
comp=Z,33nm,1.1s
KURK Kurchatov 69.89 333 P **P** **18 31 16.8 -0.5**
ARQ Araqi 70.07 299 P **P** **18 31 18.8 -0.2**
PEA0B Petropavlovsk- 70.20 23 *ce*P **P** **18 31 19.4 +0.2**
PETK Petropavlovsk- 70.20 23 P **P** **18 31 18.2 -1.0**
comp=Z,46nm,0.9s,baz=93,slow=3.0,SNR=42
PETK LR LR 19 03 23.8
comp=Z,71nm,20.2s,baz=220,slow=37
comp=Z,46nm,0.9s
PET Petropavlovsk 70.51 24 P **P** **18 31 20.8 -0.2**
PET IAmb IAmb 18 31 24.5
comp=Z,59nm,1.1s
PET Petropavlovsk 70.51 24 *e*P **P** **18 31 21.3 +0.4**
PET *e*S **S** **18 40 31.7 +1.9**
PET pmax pmax
comp=Z,70nm,1.2s
PET MLR MLR
comp=Z,200nm,19.0s
PET Petropavlovsk 70.51 24 P **P** **18 31 21.4 +0.4**
FOMA Nahampoana Res 70.64 247 IAmb IAmb 18 31 26.0
comp=Z,94nm,1.4s
ABPO Ambohimpanom 70.69 253 P **P** **18 31 23.0 -0.1**
ABPO IAmb IAmb 18 31 26.0
comp=Z,42nm,1.1s
ABPO Ambohimpanom 70.69 253 P **P** **18 31 23.0 -0.1**
ABPO pmax pmax
comp=Z,43nm,1.2s
ABPO Ambohimpanom 70.69 253 P **P** **18 31 25.4 +2.3**
ABPO pP **pP** **18 31 39.5 +0.2**
OPO Ambohidratompo 70.76 254 P **P** **18 31 25.4 +1.9**
comp=Z,19nm,0.8s,baz=90,slow=4.7,SNR=22
comp=Z,19nm,0.8s
WHFO Wadi Hawf 70.79 293 P **P** **18 31 22.9 -0.6**
SNR=6.5
UOSS Minazif 70.90 301 P **P** **18 31 22.8 -1.2**
UOSS IAmb IAmb 18 31 38.6
comp=Z,85nm,1.8s
UOSS Minazif 70.90 301 P **P** **18 31 23.3 -0.7**
UOSS Minazif 70.90 301 P **P** **18 31 23.4 -0.7**
HATD Hatta, Dubai 70.92 300 P **P** **18 31 24.0 -0.2**
HATD Hatta, Dubai 70.92 300 P **P** **18 31 24.2 +0.1**
VOI Vohitsoka 70.93 250 IAmb IAmb 18 31 27.9
comp=Z,73nm,1.4s
VOI Vohitsoka 70.93 250 P **P** **18 31 27.1 +2.6**
ASHO Ashiyiah 70.94 300 P **P** **18 31 24.2 -0.1**
SNR=11
ASHO Ashiyiah 70.94 300 *i* P **P** **18 31 24.2 -0.1**
SNR=11
MSFE Esma-Masafi 71.09 301 P **P** **18 31 26.0 +0.8**
VNDA Vanda 71.31 171 P **P** **18 31 27.0 +1.4**
comp=Z,30nm,1.1s,baz=317,slow=5.9,SNR=61
VNDA LR LR 19 03 00.2
comp=Z,264nm,18.1s,baz=334,slow=36
comp=Z,30nm,1.1s
VNDA Vanda 71.31 171 IAmb IAmb 18 31 28.6
comp=Z,91nm,1.4s
VNDA Vanda 71.31 171 P **P** **18 31 27.0 +1.4**
SHME Shamm 71.35 302 P **P** **18 31 26.8 +0.1**
FAQ Al Faqa, Dubai 71.36 300 P **P** **18 31 26.4 -0.4**
FAQ Al Faqa, Dubai 71.36 300 *i* P **P** **18 31 26.5 -0.4**
SNR=29
ASUD Al Ashush, Dub 71.54 300 P **P** **18 31 29.0 +1.1**
SNR=22
ASUD Al Ashush, Dub 71.54 300 *i* P **P** **18 31 28.1 +0.2**
SNR=18
YAK Yakutsk 71.76 5 P **P** **18 31 27.1 -1.3**
comp=Z,32nm,0.7s,baz=1.7,slow=2.6,SNR=31
YAK LR LR 19 03 25.3
comp=Z,162nm,21.9s,baz=198,slow=36
comp=Z,32nm,0.7s
YAK Yakutsk 71.76 5 P **P** **18 31 27.4 -0.9**
YAK Yakutsk 71.76 5 *c* *i*P **P** **18 31 27.4 -0.9**
YAK *e* 18 31 47.0
YAK *e* 18 34 12.4
YAK *e*S **S** **18 40 38.5 -5.3**
YAK *e**SS **sS** **18 41 15.7 +5.3**
YAK *e* 18 41 21.6
YAK pmax pmax
comp=Z,94nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=N,15nm,0.9s
YAK pmax pmax
comp=Z,127nm,3.5s
YAK pmax pmax
comp=N,98nm,3.7s
YAK pmax pmax
comp=E,94nm,4.9s
YAK smax smax
comp=E,107nm,2.0s
YAK smax smax
comp=N,87nm,2.0s
YAK Yakutsk 71.76 5 P **P** **18 31 27.3 -1.0**
BRZS Berezniki 72.16 330 *e*P **P** **18 31 30.5 -0.6**
BRZS pmax pmax
comp=Z,12nm,0.9s
BRZS Berezniki 72.16 330 *e*P **P** **18 31 30.6 -0.6**
comp=Z,12nm,0.9s,baz=330
SBA Scott Base 72.31 171 P **P** **18 31 31.9 +0.4**
SBA IAmb IAmb 18 31 35.5
comp=Z,40nm,1.1s
SBA Scott Base 72.31 171 P **P** **18 31 31.9 +0.4**
SBA pmax pmax
comp=Z,40nm,1.2s
MZR Muzera 72.60 298 P **P** **18 31 35.3 +1.0**
SNR=7.1
MZR Muzera 72.60 298 *i* P **P** **18 31 34.3 0.0**
SNR=6.9
MA2 Magadan 73.19 16 P **P** **18 31 37.4 +0.5**
MA2 Magadan 73.19 16 *ce*P **P** **18 31 37.3 +0.4**
MA2 pmax pmax
comp=Z,131nm,0.9s
GEYT Alibeck 74.48 314 P **P** **18 31 45.4 +0.3**
comp=Z,12nm,0.9s,baz=202,slow=16,SNR=10
GEYT LR LR 19 08 52.7
comp=Z,111nm,20.9s,baz=113,slow=39
comp=Z,12nm,0.9s
GYA0B ALIBECK ARRAY 74.48 314 IAmb IAmb 18 31 58.9
comp=Z,29nm,0.9s
BVA0 Borovoye Array 75.21 332 *i* P **P** **18 31 47.0 -1.9**
BRVK Borovoye 75.28 332 P **P** **18 31 48.4 -0.9**
BRVK Borovoye 75.28 332 *ce*P **P** **18 31 48.9 -0.4**
BRVK pmax pmax
comp=Z,14nm,0.8s
SEY Seymchan 76.45 15 *ce*P **P** **18 31 56.2 +0.5**
SEY pmax pmax
comp=Z,104nm,0.9s
RAR Rarotonga 77.61 110 LR LR 19 05 31.6
comp=Z,102nm,20.9s,baz=272,slow=35
AB31 Akbulak array 78.54 325 *i* P **P** **18 32 06.6 -1.1**
ATD Arta Tunnel 79.44 284 LR LR 19 04 29.9
comp=Z,33nm,20.4s,baz=70,slow=34
RAYN Ar Rayn 79.77 296 P **P** **18 32 15.1 0.0**
RAYN Ar Rayn 79.77 296 P **P** **18 32 15.1 0.0**
RAYN pmax pmax
comp=Z,17nm,0.9s
RAYN Ar Rayn 79.77 296 *i* P **P** **18 32 15.6 +0.5**
SNR=24
AKTO Aktyubinsk 80.20 325 P **P** **18 32 16.2 -0.5**
comp=Z,8.3nm,0.6s,baz=104,slow=5.8,SNR=20
AKTO LR LR 19 11 37.7
comp=Z,201nm,20.9s,baz=124,slow=38
comp=Z,8.3nm,0.6s
QSPA South Pole Qui 80.45 180 P **P** **18 32 19.3 +1.2**
comp=Z,131nm,1.0s,baz=303,slow=1.0,SNR=226
QSPA LR LR 19 07 49.1
comp=Z,422nm,19.0s,baz=346,slow=35
comp=Z,131nm,1.0s
QSPA South Pole Qui 80.45 180 P **P** **18 32 18.4 +0.4**
TIXI Tiksi 81.23 3 P **P** **18 32 20.8 -1.0**
TIXI IAmb IAmb 18 32 27.9
comp=Z,26nm,0.8s
TIXI Tiksi 81.23 3 *ce*P **P** **18 32 21.3 -0.5**
TIXI pmax pmax
comp=Z,26nm,0.8s
NRIK Noril'sk 81.86 349 P **P** **18 32 24.4 -0.7**
comp=Z,10nm,0.9s,baz=133,slow=7.5,SNR=9.4
NRIK PP **PP** **18 35 35.2 +2.0**
comp=Z,9.8nm,1.0s,baz=168,slow=8.5,SNR=7.1
NRIK LR LR 19 11 45.7
comp=Z,221nm,21.8s,baz=154,slow=38
comp=Z,10nm,0.9s
NRIK Noril'sk 81.86 349 *ce*P **P** **18 32 24.9 -0.2**
NRIK pmax pmax
comp=Z,21nm,1.2s
KMBO Kilima Mbogo 82.60 270 P **P** **18 32 31.8 +1.2**
comp=Z,9.0nm,0.9s,baz=54,slow=6.9,SNR=18
KMBO LR LR 19 04 02.1
comp=Z,187nm,21.3s,baz=96,slow=32
comp=Z,9.0nm,0.9s
KMBO Kilima Mbogo 82.60 270 P **P** **18 32 29.7 -0.9**
KMBO Kilima Mbogo 82.60 270 *i* P **P** **18 32 32.9 +2.3**
KMBO pmax pmax
comp=Z,9.0nm,0.9s
KMBO Kilima Mbogo 82.60 270 *i* P **P** **18 32 32.6 +2.0**
SNR=6.2
ARU Arti 82.79 331 P **P** **18 32 29.6 -0.6**
comp=Z,5.0nm,0.6s,baz=126,slow=3.7,SNR=15
ARU LR LR 19 12 39.0
comp=Z,226nm,21.0s,baz=122,slow=38
comp=Z,5.0nm,0.6s
ARU Arti 82.79 331 P **P** **18 32 28.1 -2.2**
ARU Arti 82.79 331 *c* *i*P **P** **18 32 27.8 -2.5**
ARU *PP **pP** **18 32 41.4 -5.3**
ARU 18 35 39.4
ARU PPP PPP 18 37 27.3
ARU S **S** **18 42 41.7 -2.1**
ARU pmax pmax
comp=Z,23nm,1.9s
ARU MLR MLR
comp=Z,226nm,20.0s
MNGR Mingechevir, A 83.47 313 P **P** **18 32 35.5 +1.4**
SEKA Sheki 83.53 314 P **P** **18 32 35.3 +0.8**
GANJ Ganja 83.98 313 P **P** **18 32 37.6 +0.8**
BILL Bilibino 84.06 16 *i* P **P** **18 32 37.4 +0.9**
BILL *i* PPP PPP 18 32 44.1
BILL *i* 18 35 50.4
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,116nm,20.0s
NAX Nakhchivan 84.15 311 P **P** **18 32 39.7 +1.9**
GNI Garni 84.99 312 LR LR 19 14 51.8
comp=Z,122nm,21.6s,baz=111,slow=39
GNI Garni 84.99 312 *i* P **P** **18 32 42.6 +0.5**
GNI pmax pmax
comp=Z,26nm,1.2s
GEVA Gevas 85.73 310 IAmb IAmb 18 33 09.5
comp=Z,49nm,1.1s
KARS Kars 86.34 312 P **P** **18 32 48.1 -0.7**
KARS Kars 86.34 312 P **P** **18 32 48.1 -0.7**
KARS pmax pmax
comp=Z,122nm,1.2s
ZEI Tsey 86.35 314 *e*P **P** **18 32 51.1 +2.3**
ZEI pmax pmax
comp=Z,29nm,1.3s
GURO Guroymak-BITLI 86.57 310 IAmb IAmb 18 33 07.6
comp=Z,34nm,1.2s
ONI Oni 86.61 314 IAmb IAmb 18 33 05.9
comp=Z,36nm,1.4s
TBI Tubuai 86.82 113 *e*S **S** **18 43 21.7 -3.5**
comp=Z,133nm,26.0s
TBI Tubuai 86.82 113 *e*LR LR 19 00 22.8
comp=Z,468nm,25.5s
TBI *e*LR LR 19 00 23.0
comp=Z,8µm,24.8s
NVL N'lazarevskaya 86.92 198 *e*P **P** **18 32 52.7 +1.9**
NVL pmax pmax
comp=Z,22nm,0.8s
BELG Belogornoye 86.94 324 LR LR 19 17 36.9
comp=Z,237nm,20.5s,baz=138,slow=40
MARD Mardin 87.22 308 IAmb IAmb 18 33 20.3
comp=Z,14nm,0.7s
KBZ Khabaz 87.31 315 P **P** **18 32 53.2 0.0**
comp=Z,6.5nm,0.8s,baz=147,slow=3.5,SNR=9.5
KBZ PKPPKP 18 58 56.5
comp=Z,0.9nm,0.5s,baz=315,slow=2.4,SNR=3.5
comp=Z,6.5nm,0.8s
KBZ Khabaz 87.31 315 *ce*P **P** **18 32 53.9 +0.7**
KBZ pmax pmax
comp=Z,11nm,1.1s
KVAR Kislovodsk Arr 87.52 315 LR LR 19 17 04.5
comp=Z,46nm,20.8s,baz=60,slow=39
KIV Kislovodsk 87.52 315 P **P** **18 32 53.2 -1.1**
KIV Kislovodsk 87.52 315 *e*P **P** **18 32 54.4 0.0**
KIV *e* 18 43 16.3
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,134nm,20.0s
KIV Kislovodsk 87.52 315 P P 18 32 59.5 +5.1
PPT2 Papeete2 87.62 107 *e*S **S** **18 43 30.3 -2.9**
comp=Z,158nm,26.0s
PPT2 Papeete2 87.62 107 *e*LR LR 19 00 46.3
comp=Z,769nm,26.2s
PPT2 *e*LR LR 19 00 46.4
comp=Z,514nm,26.8s
PPT Papeete 87.62 107 LR LR 19 08 21.2
comp=Z,74nm,21.7s,baz=200,slow=33
KIRV Kirov 88.17 330 P **P** **18 32 57.4 +0.5**
comp=Z,9.3nm,0.7s,baz=340,slow=2.1,SNR=5.9
KIRV LR LR 19 17 59.0
comp=Z,146nm,20.3s,baz=117,slow=39
comp=Z,9.3nm,0.7s
KIRV Kirov 88.17 330 *ce*P **P** **18 32 56.9 0.0**
MBAR Mbarara 89.11 270 LR LR 19 07 42.5
comp=Z,168nm,20.9s,baz=76,slow=32
MBAR Mbarara 89.11 270 P **P** **18 33 01.3 -1.4**
MBAR IAmb IAmb 18 33 19.1
comp=Z,33nm,1.7s
MBAR Mbarara 89.11 270 P **P** **18 33 01.3 -1.4**
MBAR pmax pmax
comp=Z,33nm,1.7s
TROLL Troll, Antarti 89.11 196 PcP **PcP** **18 33 03.5 +0.6**
GAMB Gambell 89.19 24 P **P** **18 33 03.5 +1.8**
baz=246
LSZ Lusaka 89.20 255 LR LR 19 06 32.5
comp=Z,270nm,21.8s,baz=122,slow=31
SOC Sochi 89.51 314 *e*P **P** **18 32 59.1 -4.5**
SOC *e* 18 36 31.0
SOC *e*PPP PPP 18 38 29.8
SOC *e*S **SKSac** **18 43 26.4 -2.7**
SOC *e*SS **SS** **18 49 44.9 -1.9**
SOC *e*SSS SSS 18 53 19.6
SOC MLR MLR
comp=Z,79nm,21.0s
BOSA Boshof 89.56 241 P **P** **18 33 05.2 +0.7**
comp=Z,10nm,0.9s,baz=115,slow=4.9,SNR=16
BOSA LR LR 19 07 59.1
comp=Z,104nm,18.6s,baz=96,slow=32
comp=Z,10nm,0.9s
BOSA Boshof 89.56 241 P **P** **18 33 05.5 +1.0**
BOSA IAmb IAmb 18 33 06.7
comp=Z,13nm,0.9s
BOSA Boshof 89.56 241 P **P** **18 33 05.5 +1.0**
BOSA pmax pmax
comp=Z,13nm,0.9s
LBTB Lobatse 89.91 245 LR LR 19 06 58.2
comp=Z,360nm,21.3s,baz=104,slow=31
VRH Novokhopyorsk 90.08 322 *e*P **P** **18 33 06.2 +0.1**
VRH pmax pmax
comp=Z,30nm,1.0s
GHAJ Ghor Haditha 90.14 302 IAmb IAmb 18 33 19.6
comp=Z,16nm,0.7s
EIL Elat 90.35 300 LR LR 19 14 27.6
comp=Z,236nm,21.5s,baz=93,slow=36
MMAI Mount Meron Ar 90.60 303 LR LR 19 20 57.3
comp=Z,128nm,18.3s,baz=265,slow=40
SNAA Sanae 90.73 195 PcP **PcP** **18 33 10.7 +0.7**
SNAA Sanae 90.73 195 LR LR 19 09 54.5
comp=Z,584nm,21.8s,baz=79,slow=33
PRGR Permogore 90.99 333 *e*P **P** **18 33 08.5 -1.6**
PRGR *e**PP **pP** **18 33 22.3 -4.4**
PRGR *e* 18 36 47.6
PRGR *e*S **SKSac** **18 43 35.5 -1.4**
ANN Anapa 91.38 315 *e*P **P** **18 33 11.8 -0.5**
ANN *e**PP **pP** **18 33 26.7 -2.2**
ANN *e*S **SKSac** **18 43 36.5 -3.3**
ANN pmax pmax
comp=Z,19nm,0.8s
BELA Belgrano 2 91.56 185 P **P** **18 33 12.5 -0.1**
VSR Storozhevoye 91.64 322 *e*P **P** **18 33 12.5 -0.8**
VSR pmax pmax
comp=Z,9.0nm,0.6s
VORR Voronezh 91.72 322 *e*P **P** **18 33 14.2 +0.5**
VORR pmax pmax
comp=Z,40nm,0.5s
LPSR Galich'ya Gora 92.09 323 *e*P **P** **18 33 16.2 +0.8**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VNA2 Neumayer--Watz 92.36 195 PcP **PcP** **18 33 18.3 +1.2**
baz=134,slow=5.0
SUR Sutherland 92.56 237 LR LR 19 06 52.2
comp=Z,144nm,22.0s,baz=104,slow=30
VNA3 Neumayer Olymp 92.73 194 PcP **PcP** **18 33 19.7 +0.9**
VNA1 Neumayer--Stat 92.75 195 PcP **PcP** **18 33 20.1 +1.3**
BR131 Keskin Array S 93.20 310 IAmb IAmb 18 33 25.5
comp=Z,10nm,0.9s
BRTR Keskin Array B 93.20 310 P **P** **18 33 20.6 -0.4**
comp=Z,4.6nm,0.9s,baz=128,slow=5.5,SNR=12
BRTR LR LR 19 18 55.4
comp=Z,100nm,21.3s,baz=112,slow=38
comp=Z,4.6nm,0.9s
BRTR Keskin Array B 93.20 310 *i* P **P** **18 33 23.0 +2.0**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
MOS Moscow 93.51 326 *e*P P 18 33 30.8 +8.9
MOS *e* 18 33 41.1
MOS *e* 18 37 11.6
MOS *e* 18 43 49.5
MOS *e*S **S** **18 44 21.9 -3.6**
KLMR Klimovskoe 93.63 331 *e*P **P** **18 33 18.5 -3.8**
KLMR *e* 18 37 04.7
KLMR pmax pmax
comp=Z,24nm,1.4s
KLMR Klimovskoe 93.63 331 *e*P **P** **18 33 18.5 -3.8**
KLMR AMP 18 33 35.2
comp=Z,24nm,1.4s
KLMR *e*PP **PP** **18 37 04.7 -3.1**
N16K Nishlik Lake 93.96 29 P **P** **18 33 24.4 +0.5**
baz=258,SNR=5.7
OBN Obninsk 93.98 325 P **P** **18 33 23.8 -0.2**
comp=Z,2.4nm,0.4s,baz=304,slow=6.5,SNR=5.0
OBN LR LR 19 19 54.1
comp=Z,40nm,21.8s,baz=166,slow=38
comp=Z,2.4nm,0.4s
OBN Obninsk 93.98 325 *i* P **P** **18 33 25.1 +1.1**
OBN *i* 18 33 35.9
OBN *i* 18 37 09.7
OBN pmax pmax
comp=Z,28nm,1.3s
OBN MLR MLR
comp=Z,149nm,21.0s
O16K Kokwok River B 94.11 30 P **P** **18 33 25.6 +1.1**
baz=258
R17K Ugashik Creek 94.61 32 P **P** **18 33 27.8 +0.9**
baz=260
O17K Koliganek Bris 94.64 30 P **P** **18 33 27.9 +0.9**
baz=259
N18K Kilae Creek 95.40 29 P **P** **18 33 31.5 +1.0**
baz=260
SII Sitkinak Islan 95.62 34 P **P** **18 33 32.1 +0.5**
baz=261
TTA Tatalina 95.72 27 IAmb IAmb 18 33 33.9
comp=Z,27nm,1.8s
TTA Tatalina 95.72 27 P **P** **18 33 31.0 -1.0**
baz=260
N19K Bonanza Creek 96.10 29 IAmb IAmb 18 33 38.5
comp=Z,9.6nm,0.9s
N19K Bonanza Creek 96.10 29 P **P** **18 33 33.3 -0.5**
baz=261
L19K White Mountain 96.13 28 IAmb IAmb 18 33 34.7
comp=Z,9.9nm,1.1s
L19K White Mountain 96.13 28 P **P** **18 33 33.6 -0.2**
baz=261,SNR=5.3
OHAK Old Harbor 96.20 33 P **P** **18 33 33.7 -0.5**
baz=262
M19K Big River Lodg 96.31 28 IAmb IAmb 18 33 40.7
comp=Z,9.5nm,1.1s
M19K Big River Lodg 96.31 28 P **P** **18 33 34.6 +0.1**
baz=262
L20K Farewell, AK 96.62 28 P **P** **18 33 35.8 -0.2**
baz=262,SNR=5.6
K20K Telida 96.66 27 P **P** **18 33 36.2 +0.1**
K20K Telida 96.66 27 P **P** **18 33 35.9 -0.3**
baz=262,SNR=5.3
J20K Nowinta River 96.74 26 P **P** **18 33 36.7 +0.3**
J20K Nowinta River 96.74 26 P **P** **18 33 36.2 -0.3**
baz=262,SNR=5.3
M20K Styx River 96.89 28 IAmb IAmb 18 33 41.5
comp=Z,11nm,1.0s
M20K Styx River 96.89 28 P **P** **18 33 37.2 -0.2**
baz=263,SNR=6.3
G21K Allakaket 97.31 24 P **P** **18 33 38.7 -0.3**
baz=263,SNR=7.8
F21K Alatna River 97.40 23 P **P** **18 33 39.4 0.0**
baz=263
PPLA Purkeypile 97.45 27 P Pdif 18 33 40.1 +0.1
baz=264
H21K Melozitna Rive 97.49 25 P Pdif 18 33 40.3 +0.4
baz=264
CHUM Lake Minchumin 97.50 26 P Pdif 18 33 40.4 +0.5
baz=264
CAST Castle Rocks 97.55 27 IAmb IAmb 18 33 45.4
comp=Z,7.6nm,0.9s
CAST Castle Rocks 97.55 27 P Pdif 18 33 40.7 +0.4
baz=264,SNR=9.7
AKASG Malin Array Be 97.75 320 P **P** **18 33 40.3 -1.1**
comp=Z,0.6nm,0.5s,baz=74,slow=5.6,SNR=6.5
AKASG PP **PP** **18 37 41.7 +1.6**
comp=Z,1.0nm,0.8s,baz=87,slow=5.9,SNR=6.9
AKASG LR LR 19 25 06.0
comp=Z,102nm,20.5s,baz=100,slow=40
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 97.75 320 *i* P Pdif 18 33 42.7 +1.3
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 97.75 320 *ce*P Pdif 18 33 42.5 +1.1
I21K Tanana 97.78 25 P Pdif 18 33 41.5 +0.3
baz=264
F22K John River 97.93 23 P Pdif 18 33 42.6 +0.8
baz=264,SNR=11
KTH Kantishna Hill 98.08 27 IAmb IAmb 18 33 48.3
comp=Z,9.2nm,1.0s
H22K Ishtalitna Cre 98.10 25 P Pdif 18 33 43.3 +0.7
baz=265
BPAW Bear Paw Mtn. 98.10 26 P **P** **18 33 42.5 -0.2**
baz=265
E22K Anaktuvuk Pass 98.13 22 P Pdif 18 33 43.1 +0.4
baz=265
TAOE Nuku Hiva Isla 98.20 100 *e*LR LR 19 05 40.6
comp=Z,469nm,23.6s
MLY Manley 98.29 25 P **P** **18 33 43.4 -0.2**
MLY Manley 98.29 25 P Pdif 18 33 43.6 +0.1
baz=265,SNR=5.9
TRF Thorofare Moun 98.36 27 P Pdif 18 33 44.2 +0.2
baz=266
TSUM Tsumeb 98.37 249 LR LR 19 15 09.6
comp=Z,237nm,18.4s,baz=98,slow=34
RC01 Rabbit Creek A 98.43 29 P **P** **18 33 43.7 -0.4**
baz=266
SEW Seward 98.50 30 P **P** **18 33 43.9 -0.5**
baz=266
D23K Nanushuk River 98.61 21 P Pdif 18 33 44.9 +0.1
baz=266
COLD Coldfoot 98.67 23 IAmb IAmb 18 33 47.0

comp=Z,8.6nm,1.1s
COLD Coldfoot 98.67 23 P Pdif 18 33 45.5 +0.4
baz=266
C23K Itkillik River 98.70 21 P Pdif 18 33 45.8 +0.6
baz=266
G23K Bananza Creek 98.71 24 P Pdif 18 33 45.8 +0.4
baz=266,SNR=11
H23K Yukon River 98.84 25 P Pdif 18 33 46.2 +0.3
baz=266,SNR=7.9
I23K Minto, Yukon-K 98.88 25 P **P** **18 33 45.8 -0.2**
I23K Minto, Yukon-K 98.88 25 P Pdif 18 33 46.2 +0.1
baz=267,SNR=6.8
MNK Minsk 98.88 324 *i* P **P** **18 33 44.5 -1.8**
MNK *i* *PP **pP** **18 34 00.1 -2.9**
MNK *i* 18 37 46.9
MNK *i* PPP PPP 18 39 53.1
MNK *i* S **SKSac** **18 44 17.2 -2.2**
MNK *i* SS **SS** **18 51 59.7 -0.1**
MNK *i* SSS SSS 18 55 48.4
MNK pmax pmax
comp=E,3.0nm,1.5s
MNK pmax pmax
comp=Z,14nm,0.9s
MNK MLR MLR
comp=E,47nm,27.0s
MNK Minsk 98.88 324 *i* P **P** **18 33 44.6 -1.8**
comp=E,3.0nm,1.4s
MNK *i* P **P** **18 33 44.6 -1.8**
MNK *i* P **P** **18 33 44.6 -1.8**
comp=Z,14nm,0.9s,baz=274
MNK *i* pP **pP** **18 34 00.2 -2.9**
MNK *i* PP **PP** **18 37 46.9 -1.7**
MNK *i* PPP PPP 18 39 53.1
MNK *i* S **SKSac** **18 44 17.2 -2.2**
MNK *i* SS **SS** **18 51 59.8 -0.1**
MNK *i* SSS SSS 18 55 48.4
MNK *i* LQ LQ 19 12 34.5
MNK *i* LR LR 19 15 06.3
MNK *i* LRM MLR 19 19 05.5
MNK *i* LRM MLR 19 21 33.7
comp=E,47nm,26.9s
MNK *i* LRM MLR 19 22 21.2
NEA2 Nenana 98.97 26 P Pdif 18 33 46.8 +0.3
baz=267
MCK McKinley 98.98 27 IAmb IAmb 18 33 49.0
comp=Z,13nm,1.1s
MCK McKinley 98.98 27 P **P** **18 33 46.2 -0.4**
baz=267
TOLK Toolik Lake Re 98.99 22 IAmb IAmb 18 33 49.1
comp=Z,38nm,1.9s
TOLK PKKPdf 18 50 14.4 -4.8
TOLK Toolik Lake Re 98.99 22 P **P** **18 33 46.5 -0.1**
baz=267
RND Reindeer 99.00 27 IAmb IAmb 18 33 46.8
comp=Z,14nm,0.8s
KNK Knik Glacier 99.07 29 IAmb IAmb 18 33 48.0
comp=Z,15nm,0.9s
KNK Knik Glacier 99.07 29 P **Pdif** **18 33 46.7 -0.3**
baz=267
WAT1 Susitna Watana 99.11 28 P **Pdif** **18 33 47.2 0.0**
baz=267
SML Sawmill 99.15 29 IAmb IAmb 18 33 50.2
comp=Z,16nm,0.9s
SML Sawmill 99.15 29 P **Pdif** **18 33 47.1 -0.3**
baz=267
D24K Happy Valley 99.29 21 P **Pdif** **18 33 48.4 +0.6**
baz=268
C24K Franklin Bluff 99.35 21 P **Pdif** **18 33 48.4 +0.4**
baz=268
E24K Your Creek 99.37 22 P **Pdif** **18 33 48.4 +0.1**
baz=268
M23K Glacier View 99.44 29 P **Pdif** **18 33 48.4 -0.3**
baz=268
WAT6 Susitna Watana 99.47 28 P **Pdif** **18 33 48.5 -0.4**
baz=268
MLR Muntele Rosu 99.52 315 LR LR 19 27 09.0
comp=Z,100nm,20.2s,baz=70,slow=40
H24K Noodor Dome 99.53 25 IAmb IAmb 18 33 55.5
comp=Z,21nm,1.6s
H24K Noodor Dome 99.53 25 P **Pdif** **18 33 49.1 0.0**
baz=268,SNR=5.2
IDI Anoyia 99.54 304 LR LR 19 24 22.8
comp=Z,73nm,21.4s,baz=78,slow=39
NACGM Naroch 99.55 324 *eP* **Pdif** **18 33 51.7 +2.5**
baz=94
F24K Squaw Lake 99.58 23 P **Pdif** **18 33 49.6 +0.4**
baz=268
SCM Sheep Creek Mo 99.63 29 P **Pdif** **18 33 49.6 0.0**
baz=268
DHY Denali Highway 99.65 27 P **Pdif** **18 33 49.7 -0.1**
baz=268
G24K Hadweenzic Riv 99.72 24 P **Pdif** **18 33 50.0 +0.2**
baz=268
ILAR Eielson Array 99.92 26 P **Pdif** **18 33 49.3 -1.4**
comp=Z,1.0nm,0.5s,baz=240,slow=4.9,SNR=16
ILAR PKKPbc **PKKPbc** **18 50 12.0 -0.9**
comp=Z,2.2nm,0.9s,baz=72,slow=1.9,SNR=12
comp=Z,1.0nm,0.5s
BURAR Bucovina Array 100.15 317 Pdif **Pdif** **18 33 51.8 -0.5**
FINES FINESS Array B 100.16 331 P **Pdif** **18 33 51.1 -0.7**
comp=Z,1.8nm,0.8s,baz=90,slow=4.4,SNR=6.5
FINES PKiKP **PKiKP** **18 38 19.8 +0.8**
comp=Z,1.1nm,0.8s,baz=90,slow=3.8,SNR=5.2
FINES LR LR 19 23 22.2
comp=Z,110nm,21.0s,baz=100,slow=38
comp=Z,1.8nm,0.8s
FINES FINESS Array B 100.16 331 *i* P **Pdif** **18 33 54.2 +2.4**
FINES pmax pmax
comp=Z,1.0nm,0.6s
D25K Kavik River 100.17 21 P **Pdif** **18 33 52.0 +0.2**
baz=270
G25K Bearman Lake 100.27 24 P **Pdif** **18 33 52.1 -0.1**
baz=270
H25K Birch Creek 100.38 24 P **Pdif** **18 33 52.9 +0.2**
baz=270
ARCES ARCESS Array B 100.43 339 P **Pdif** **18 33 52.0 -0.9**
comp=Z,2.9nm,0.9s,baz=96,slow=6.2,SNR=5.9
ARCES PKiKP **PKiKP** **18 38 20.9 +1.5**
comp=Z,3.7nm,0.9s,baz=139,slow=1.2,SNR=6.9
F25K Christian Rive 100.44 23 P **Pdif** **18 33 52.9 -0.2**
baz=270,SNR=7.6
E25K Arctic Village 100.47 22 P **Pdif** **18 33 53.6 +0.4**
baz=270
PRP Porcupine Dome 100.50 25 P **Pdif** **18 33 53.4 -0.1**
baz=270
PAX Paxson 100.52 28 P **Pdif** **18 33 53.5 0.0**
baz=270
J25K Salcha River, 100.57 26 P **Pdif** **18 33 53.5 -0.2**
baz=270
RIDG Independent Ri 100.80 27 **Pdif** **18 33 53.9 -0.8**
RIDG Independent Ri 100.80 27 P **Pdif** **18 33 54.2 -0.5**
baz=270
BMAR Burnt Mountain 100.85 23 Pdif **Pdif** **18 33 55.4 +0.5**
BMRM Bremner River 100.92 30 P **Pdif** **18 33 55.3 0.0**
baz=270
F26K Sheenjek River 101.01 23 P **Pdif** **18 33 55.9 +0.3**
baz=272
KAIM Kayak Island 101.02 31 P **Pdif** **18 33 55.9 +0.2**
baz=270
C27K Jago River 101.10 21 P **Pdif** **18 33 55.9 0.0**
baz=273
G26K Porcupine Rive 101.18 24 P **Pdif** **18 33 56.4 +0.1**
baz=272
SCRK Sand Creek 101.18 27 P **Pdif** **18 33 56.7 +0.2**
baz=271
J26L Joseph Creek 101.35 26 P **Pdif** **18 33 57.2 0.0**
baz=272
I26K Coal Creek Min 101.50 25 P **Pdif** **18 33 58.0 +0.3**
baz=272
E27K Coleen River 101.95 22 P **Pdif** **18 33 59.4 -0.3**
baz=274
K27K Chicken 102.02 26 P **Pdif** **18 34 00.0 0.0**
baz=273
G27K Doyon Strip 102.03 24 P **Pdif** **18 34 00.1 0.0**
baz=274
H27K Steamboat Moun 102.12 24 P **Pdif** **18 34 00.7 +0.2**
baz=274
I27K Kandik River 102.12 25 P **Pdif** **18 34 00.4 -0.2**
baz=274
L27K Beaver Creek, 102.18 27 P **Pdif** **18 34 00.4 -0.5**
baz=273
CRVS Cervenica-Dubn 102.69 318 *eP* **PKiKP** **18 38 16.8 -7.3**
EPYK Eagle Plains 104.03 24 P **Pdif** **18 34 09.0 -0.1**
baz=278
N30M Aishikik Lake 104.53 29 P **Pdif** **18 34 10.6 -0.7**
baz=277
GERES GERESS Array B 107.81 318 PKiKP **PKiKP** **18 38 34.2 +0.6**
comp=Z,0.4nm,0.5s,baz=174,slow=3.6,SNR=3.6
GERES PKKPbc **PKKPbc** **18 49 49.6 +0.8**
comp=Z,0.5nm,0.6s,baz=298,slow=2.9,SNR=7.3
CLL Collm 107.97 321 *e*SP SP 18 48 10.0 -3.0
CLL LmV 19 30 00.0
comp=Z,100nm,21.5s
YKA Yellowknife Ar 114.30 25 PKP **PKiKP** **18 38 45.7 +0.4**
comp=Z,2.1nm,0.5s,baz=309,slow=2.1,SNR=5.1
YKA PKKPbc **PKKPbc** **18 49 27.1 -0.7**
comp=Z,2.5nm,0.9s,baz=94,slow=3.9,SNR=6.5
K02D Willamette Mer 115.76 47 P **PKPdf** **18 38 47.4 -1.5**
baz=281
I03D Drain, OR 115.78 46 P **PKPdf** **18 38 48.2 -0.5**
baz=282
J04D Umpqua Nationa 116.76 46 P **PKPdf** **18 38 49.4 -1.5**
baz=283
J05D Fort Rock, OR 117.38 46 P **PKPdf** **18 38 51.6 -0.4**
baz=283
TOA0 Torodi Ar. Sit 119.47 280 **PKiKP** **18 38 56.9 +0.2**
TORD Torodi Ar. Bea 119.47 280 PKP **PKiKP** **18 38 57.5 +0.8**
comp=Z,3.5nm,0.5s,baz=57,slow=2.0,SNR=59
BMO Blue Mountains 119.69 44 **PKPdf** **18 38 56.1 -0.3**
BMO Blue Mountains 119.69 44 PKIKP **PKPdf** **18 38 56.1 -0.3**
PKM Mcpherson Peak 120.15 55 P **PKPdf** **18 38 57.6 -0.1**
baz=280
NVAR Mina Array Bea 120.64 51 PKP **PKiKP** **18 39 00.6 +1.8**
comp=Z,2.1nm,0.8s,baz=249,slow=1.7,SNR=16
NVAR SKP 18 42 31.9
comp=Z,2.8nm,1.0s,baz=251,slow=2.6,SNR=5.1
NVAR PKKPbc **PKKPab** **18 49 07.8 +3.0**
comp=Z,1.1nm,0.9s,baz=145,slow=3.6,SNR=5.9
CWC Cottonwood Cre 121.24 53 P **PKPdf** **18 38 59.6 -0.2**
baz=282
MSO Missoula 121.26 40 P **PKPdf** **18 38 58.9 -0.4**
baz=291
EDW2 Edwards Air Fo 121.62 55 P **PKiKP** **18 39 00.5 0.0**
baz=281
GRAC Grapevine Rang 121.68 52 P **PKiKP** **18 39 00.8 +0.2**
baz=283
LRMC Laurel Mtn Rad 121.75 54 P **PKiKP** **18 39 01.2 +0.4**
baz=282
MPMC Manual Prospec 121.79 53 P **PKiKP** **18 39 01.4 +0.4**
baz=282
ESDC Sonseca Array 121.96 311 PKP **PKiKP** **18 39 02.7 +1.7**
comp=Z,1.3nm,0.7s,baz=14,slow=2.3,SNR=7.8
ESDC PP **PP** **18 40 31.9 -3.5**
comp=Z,0.4nm,0.7s,baz=76,slow=6.3,SNR=4.4
ESDC PKKPbc **PKKPbc** **18 48 59.3 -0.2**
comp=Z,1.5nm,1.0s,baz=263,slow=4.1,SNR=7.5
BFSC Mount Baldy Ra 122.01 56 P **PKiKP** **18 39 01.9 +0.5**
baz=281
HLID Hailey 122.07 44 P **PKiKP** **18 39 01.6 +0.3**
baz=289
FURC Furnace Creek, 122.19 53 P **PKiKP** **18 39 01.9 +0.5**
baz=283
ELK Elko 122.34 48 PKPdf **PKPdf** **18 39 01.9 0.0**
ELK Elko 122.34 48 PKIKP **PKPdf** **18 39 01.9 0.0**
GSC Goldstone, Bar 122.49 54 P **PKiKP** **18 39 02.7 +0.5**
baz=282
TPNV Topopah Spring 122.57 52 P **PKiKP** **18 39 02.9 +0.4**
baz=284
R11A Troy Canyon, C 122.73 50 P **PKiKP** **18 39 04.2 +1.5**
baz=285
HEC Hector,Ludlow 122.97 55 P **PKiKP** **18 39 04.3 +1.1**
baz=282
PFO Pinyon Flats O 123.11 56 P **PKiKP** **18 39 04.7 +1.1**
baz=281
TPFO Pinon Flats 123.12 56 P **PKiKP** **18 39 04.3 +0.7**
baz=281
BOZ Bozeman (W) 123.21 41 P **PKiKP** **18 39 04.7 +1.2**
baz=293
MONP2 Monument Peak 123.28 57 P **PKiKP** **18 39 04.3 +0.3**
baz=281
EGMT Eagleton 123.39 38 P **PKiKP** **18 39 04.8 +1.2**
baz=296
BELC Belle Mtn. Jos 123.41 56 P **PKiKP** **18 39 05.2 +1.0**
baz=282
GMRC Granite Mounta 123.52 55 P **PKiKP** **18 39 05.0 +0.7**
baz=282
IKP In-Ko-Pah, Jac 123.58 57 P **PKiKP** **18 39 04.9 +0.4**
baz=281
BC3 Big Chuckawall 123.92 56 P **PKiKP** **18 39 05.2 +0.1**
baz=282
IRM Iron Mountain 124.07 55 P **PKiKP** **18 39 06.0 +0.6**
baz=282
COYC Coyhaique 124.08 170 **PKPdf** **18 39 04.1 -0.6**
DUG Dugway, Tooele 124.28 48 P **PKiKP** **18 39 06.0 +0.3**
baz=288
W13A Hualapai Mount 124.87 54 **PKPdf** **18 39 06.1 -0.7**
RLMT Red Lodge 124.93 41 P **PKiKP** **18 39 07.8 +0.8**
baz=294
KOWA Kowa 125.07 281 PKPdf **PKPdf** **18 39 06.3 -1.1**
KIC Kosan Boka 125.17 271 *i* *iP* **PKiKP** **18 39 11.0 +3.0**
comp=Z,5.1nm,0.4s
DBIC Diboll 125.32 271 PKP **PKiKP** **18 39 09.7 +1.4**
comp=Z,4.0nm,0.5s,baz=74,slow=1.5,SNR=10
LIC Lamto 125.43 271 *i* *iP* **PKiKP** **18 39 09.4 +0.8**
comp=Z,11nm,0.4s
TIC Toumodi 125.48 271 *i* *eP* **PKiKP** **18 39 09.6 +0.9**
comp=Z,4.6nm,0.2s
BW06 Boulder Array 125.67 44 P **PKiKP** **18 39 08.5 -0.1**
baz=293
PDAR Pinedale Array 125.67 44 PKP **PKiKP** **18 39 09.6 +1.0**
comp=Z,0.8nm,0.5s,baz=222,slow=2.0,SNR=12
PDAR SKPbc SKPbc 18 42 18.4
comp=Z,0.9nm,0.7s,baz=239,slow=1.8,SNR=4.7
PDAR PKKPbc **PKKPbc** **18 48 46.6 +1.3**
comp=Z,0.4nm,0.7s,baz=116,slow=6.8,SNR=3.6
PDAR Pinedale Array 125.67 44 **PKPdf** **18 39 07.1 -1.0**
WUAZ Wupatki 126.74 53 **PKPdf** **18 39 09.6 -0.8**
WUAZ Wupatki 126.74 53 P **PKiKP** **18 39 10.9 +0.1**
baz=286
O20A White River Ci 127.59 46 P **PKiKP** **18 39 12.3 -0.1**
baz=292
K22A Casper 127.77 43 P **PKiKP** **18 39 12.5 -0.1**
baz=295
TUC Tucson 128.05 56 P **PKPdf** **18 39 12.8 0.0**
baz=284
MVCO Mesa Verde 128.43 50 P **PKPdf** **18 39 13.6 0.0**
baz=290
RSSD Black Hills 128.72 40 **PKPdf** **18 39 13.5 -0.4**
RSSD Black Hills 128.72 40 PKIKP **PKPdf** **18 39 13.5 -0.4**
RSSD Black Hills 128.72 40 P **PKPdf** **18 39 13.7 -0.2**
baz=299
PLCA Paso Flores 129.05 170 PKP **PKiKP** **18 39 17.0 +1.8**
comp=Z,18nm,1.2s,baz=196,slow=4.4,SNR=7.5
PLCA Paso Flores 129.05 170 *eP* **PKiKP** **18 39 16.9 +1.8**
S22A 4UR Ranch, Cre 129.49 48 P **PKPdf** **18 39 15.5 -0.2**
baz=291
GO06 Curarrehue 129.99 168 **PKPdf** **18 39 15.5 -0.9**
SDCO Great Sand Dun 130.47 48 P **PKPdf** **18 39 18.0 +0.4**
baz=292
ANMO Albuquerque 130.75 52 PKPdf **PKPdf** **18 39 17.8 -0.2**
ANMO **SKPab** **18 42 37.7 +0.3**
ANMO Albuquerque 130.75 52 PKIKP **PKPdf** **18 39 17.8 -0.2**
ANMO Albuquerque 130.75 52 P **PKPdf** **18 39 17.9 -0.1**
baz=290
T25A Trinidad 131.50 48 PKPdf **PKPdf** **18 39 19.7 +0.3**
T25A **SKPbc** **18 42 39.4 -0.5**
MNTX Cornudas Mount 132.63 55 P **PKPdf** **18 39 20.3 -1.1**
baz=288
EYMN Ely 133.45 29 P **PKPdf** **18 39 22.5 0.0**
baz=315
ECSD EROS Data Cent 133.46 36 PKPdf **PKPdf** **18 39 22.0 -0.6**
ECSD **SKPbc** **18 42 45.4 -0.8**
ECSD EROS Data Cent 133.46 36 P **PKPdf** **18 39 22.9 +0.2**
baz=306
BGNE Belgrade 133.83 40 P **PKPdf** **18 39 22.9 -0.5**
baz=302
F36A Milaca 133.85 32 **PKPdf** **18 39 23.6 +0.3**
F36A **SKPbc** **18 42 46.0 -1.5**
SCHQ Schefferville 134.51 5 PKP **PKiKP** **18 39 26.6 +1.0**
comp=Z,10nm,0.8s,baz=322,slow=1.3,SNR=5.4
SCHQ SKPbc **SKPbc** **18 42 50.2 +0.9**
comp=Z,35nm,0.8s,baz=3.0,slow=5.8,SNR=22
TXAR Lajitas Array 134.74 58 PKiKP PKPpre 18 39 15.5
comp=Z,1.0nm,0.8s,baz=282,slow=2.4,SNR=3.4
TXAR PKP **PKiKP** **18 39 26.9 -0.1**
comp=Z,0.6nm,0.4s,baz=195,slow=3.3,SNR=6.4
TXAR SKPbc **SKPbc** **18 42 52.0 +1.0**
comp=Z,16nm,0.9s,baz=264,slow=2.5,SNR=40
TXAR Lajitas Array 134.74 58 PKPpre PKPpre 18 39 09.5
TXAR PKPdf **PKPdf** **18 39 20.7 -4.9**
TXAR SKPbc **SKPbc** **18 42 50.5 -0.5**
BO02 Sierra Bellavi 134.75 168 PKPdf **PKiKP** **18 39 26.7 -0.2**
I37A Lemond, Waseca 135.12 34 **PKiKP** **18 39 26.5 -0.7**
I37A **SKPbc** **18 42 51.3 -0.4**
T35A Sooner Cattle 137.25 45 PKPdf **PKPdf** **18 39 27.0 -2.9**
T35A **SKPbc** **18 42 58.1 -0.3**
ZON Zonda 138.32 169 **PKPdf** **18 39 33.2 +1.0**
ZON Zonda 138.32 169 PKIKP **PKPdf** **18 39 33.2 +1.0**
PLTB Pedras Altas 138.47 188 PKPpre 18 39 22.5
833A Chaparral WMA, 138.62 58 P **PKPdf** **18 39 31.9 -0.7**
baz=289
VLDQ Val d'Or 138.85 18 PKPdf **PKPdf** **18 39 32.0 -0.4**
MGMO Mountain Grove 139.98 41 PKPpre 18 39 26.8
CCM Cathedral Cave 140.11 40 P **PKPdf** **18 39 34.6 -0.5**
baz=307
MIAR Mount Ida 140.51 46 PKPpre 18 39 26.2
MIAR PKPdf **PKPdf** **18 39 34.0 -1.9**
MIAR **SKPbc** **18 43 05.8 -1.7**
MIAR Mount Ida 140.51 46 P **PKPdf** **18 39 34.9 -1.0**
baz=301
AC05 El Transito 140.59 166 PKPpre 18 39 27.4
AC05 PKPdf **PKPdf** **18 39 31.9 -4.6**
TER01 Tubaro-SC 140.70 195 *eP* **PKiKP** **18 39 38.4 -0.7**
SFIN Lafayette 141.03 34 P **PKPdf** **18 39 35.3 -1.4**
baz=315
LCAR Lake Charles 141.34 42 PKPdf **PKPdf** **18 39 32.9 -4.5**
LCAR SKPbc **SKPbc** **18 43 08.4 -1.2**
AC02 Maricunga 142.78 167 **PKPdf** **18 39 37.7 -3.2**
LONY Lake Ozonia 142.86 17 P **PKPdf** **18 39 39.2 -0.7**
baz=336
T47A Sharon Grove 143.33 38 PKPbc 18 39 37.8 -0.3
M53A WI Miller and 143.39 26 P **PKPdf** **18 39 40.2 -0.6**
baz=324
OXF Oxford 143.40 43 PKPbc 18 39 39.0 +0.7
OXF Oxford 143.40 43 PKIKP PKPbc 18 39 39.0 +0.7
OXF Oxford 143.40 43 P PKPbc 18 39 39.6 +1.3
baz=306
WVT Waverly 143.44 39 PKPab 18 39 37.5 +0.1
WVT **SKPbc** **18 43 13.2 -1.6**
WVT Waverly 143.44 39 PKIKP PKPab 18 39 37.5 +0.2
WVT Waverly 143.44 39 P PKPbc 18 39 38.5 +0.1
baz=310,SNR=6.2
WVT Waverly 143.44 39 P PKPbc 18 39 39.5 +1.1
baz=310
AHML Horco Molle 143.53 172 *i* P **PKPdf** **18 39 40.9 -0.7**
R49A Shelbyville 143.56 34 P PKPbc 18 39 39.2 +0.6
baz=315
R49A P PKPbc 18 39 39.2 +0.6
baz=315
P51A Williamsport 143.80 31 PKPab 18 39 38.6 0.0
P51A Williamsport 143.80 31 P PKPbc 18 39 39.2 -0.2
baz=319
P51A P PKPbc 18 39 39.2 -0.2
baz=319
O52A Adamsville 143.91 29 P **PKPdf** **18 39 41.5 -0.3**
baz=322
O52A P **PKPdf** **18 39 41.5 -0.3**
baz=322
LBNH Lisbon 143.93 15 P **PKPdf** **18 39 41.5 -0.2**
baz=340
K57A Scipio Center 143.93 21 P PKPbc 18 39 40.0 +0.3
baz=332
J59A Piesco 143.94 18 P PKPbc 18 39 39.8 +0.2
baz=335,SNR=6.3
J59A P PKPbc 18 39 39.8 +0.2
baz=335,SNR=6.3
Q51A Peebles 144.00 32 P PKPbc 18 39 40.3 +0.3
baz=318
Q51A P PKPbc 18 39 40.3 +0.3
baz=318
R50A Paris 144.03 33 **PKPab** **18 39 39.4 -0.1**
R50A Paris 144.03 33 P PKPbc 18 39 40.3 +0.2
baz=316
R50A P PKPbc 18 39 40.3 +0.2
baz=316
L56A Greenwood 144.07 22 P PKPbc 18 39 40.6 +0.4
baz=330
L56A P PKPbc 18 39 40.6 +0.4
baz=330
O53A New Philadelph 144.10 28 PKPbc 18 39 40.4 +0.2
O53A New Philadelph 144.10 28 P **PKPdf** **18 39 41.3 -0.8**
baz=323,SNR=6.1
PET01 Itanhaem-SP 144.13 200 *eP* **PKiKP** **18 39 45.0 -1.2**
WVL Waterville 144.13 12 P PKPbc 18 39 40.9 +0.8
baz=344
P52A Corning 144.15 30 P PKPbc 18 39 41.2 +0.8
baz=321,SNR=6.0
M55A Ridgway 144.17 24 P PKPbc 18 39 41.2 +0.8
baz=327,SNR=8.4
M55A P PKPbc 18 39 41.2 +0.8
baz=327,SNR=8.4
CPUP Villa Florida 144.24 184 PKP **PKPdf** **18 39 42.5 -0.3**
comp=Z,81nm,1.1s,baz=181,slow=3.1,SNR=73
CPUP Villa Florida 144.24 184 *eP* **PKPdf** **18 39 42.9 +0.1**
ACCN Adirondack Com 144.26 17 P PKPbc 18 39 40.8 +0.2
baz=337
GO02 Mina Guanaco 144.28 165 **PKPab** **18 39 40.4 -0.9**
V48A Smith Brothers 144.32 39 P PKPbc 18 39 41.1 +0.1
baz=310,SNR=5.6
HNH Hanover 144.34 15 **PKPab** **18 39 40.5 0.0**
CLTN Cedars of Leba 144.39 38 PKPdf **PKPab** **18 39 40.9 0.0**
CLTN SKPbc **SKPbc** **18 43 14.6 -2.5**
PARB Paraibuna 144.40 203 *eP* **PKPdf** **18 39 44.7 +1.4**
VAS01 Vassouras-RJ 144.42 207 *eP* **PKiKP** **18 39 46.2 -0.7**
I63A Otisfield 144.43 13 P PKPbc 18 39 41.8 +0.7
baz=342
I63A P PKPbc 18 39 41.8 +0.7
baz=342
U49A Red Boiling Sp 144.44 37 P PKPbc 18 39 41.9 +0.5
baz=313,SNR=19
PSDB Penn State Uni 144.46 25 P **PKPdf** **18 39 42.1 -0.7**
baz=327
ALF01 Guarapari-ES 144.50 212 *eP* **PKPdf** **18 39 45.0 +1.6**
BINY Binghamton 144.59 21 **PKPab** **18 39 41.4 -0.1**
BINY Binghamton 144.59 21 P **PKPdf** **18 39 42.5 -0.4**
baz=332,SNR=6.0
BINY Binghamton 144.59 21 P PKPbc 18 39 41.9 +0.2
baz=332,SNR=6.0
Q52A Bidwell 144.60 31 **PKPab** **18 39 41.5 -0.1**
Q52A Bidwell 144.60 31 P PKPbc 18 39 41.9 +0.1
baz=320,SNR=11
Q52A P PKPbc 18 39 41.9 +0.1
baz=320,SNR=11
P53A Whipple 144.62 29 PKPbc 18 39 41.9 0.0
P53A **SKPbc** **18 43 12.6 -4.9**
P53A Whipple 144.62 29 P **PKPdf** **18 39 42.8 -0.3**
baz=322,SNR=15
P53A P **PKPdf** **18 39 42.8 -0.3**
baz=322,SNR=15
T50A Nancy 144.64 35 P PKPbc 18 39 42.1 +0.1
baz=314
T50A P PKPbc 18 39 42.1 +0.1
baz=314
HCNY Howe Caverns 144.66 18 P **PKPab** **18 39 41.8 +0.1**
baz=335
S51A Beattyville 144.89 33 P PKPbc 18 39 43.0 +0.2
baz=317,SNR=8.8
S51A P PKPbc 18 39 43.0 +0.2
baz=317,SNR=8.8
L59A Walton 144.91 20 **PKPab** **18 39 42.4 -0.3**
L59A **SKPbc** **18 43 16.3 -1.9**
L59A Walton 144.91 20 P **PKPdf** **18 39 43.4 -0.1**
baz=334,SNR=8.4
L59A P **PKPdf** **18 39 43.4 -0.1**
baz=334,SNR=8.4
M57A Sunshine Farm, 144.93 23 **PKPab** **18 39 42.7 -0.1**
M57A SKPbc **SKPbc** **18 43 17.4 -0.8**
M57A Sunshine Farm, 144.93 23 P **PKPdf** **18 39 43.6 0.0**
baz=330,SNR=27
M57A P **PKPdf** **18 39 43.6 0.0**
baz=330,SNR=27
X48A Hartselle 144.99 41 PKPbc 18 39 42.6 -0.6
X48A **SKPbc** **18 43 17.0 -1.5**
X48A Hartselle 144.99 41 P PKPbc 18 39 43.2 0.0
baz=309,SNR=13
PTGB Pitanga 145.07 193 *eP* **PKPdf** **18 39 45.0 +0.6**
MCWV Mont Chateau 145.20 27 P **PKPdf** **18 39 44.7 +0.6**
baz=324,SNR=14
MCWV Mont Chateau 145.20 27 P **PKPdf** **18 39 44.3 +0.3**
baz=324
VAO Valinhos 145.21 201 *eP* **PKPdf** **18 39 45.0 +0.3**
SSPA Standing Stone 145.23 24 **PKPbc** **18 39 43.6 -0.1**
SSPA **SKPbc** **18 43 14.8 -4.1**
SSPA Standing Stone 145.23 24 P **PKPdf** **18 39 44.2 +0.1**
baz=328,SNR=31
SSPA Standing Stone 145.23 24 P **PKPdf** **18 39 44.3 +0.2**
baz=328
KSPA Keystone Colle 145.23 21 P **PKPdf** **18 39 44.4 +0.3**
baz=332,SNR=10
R53A Hurricane 145.24 31 P **PKPdf** **18 39 44.4 +0.2**

	baz=320,SNR=11							
R53A				P		PKPdf	18 39 44.4	+0.2
	baz=320,SNR=11							
UNH	University of	145.27	14	P		PKPdf	18 39 44.8	+0.8
	baz=341,SNR=7.9							
Q54A	Coxs Mills	145.28	29	P		PKPbc	18 39 44.0	0.0
	baz=322,SNR=51							
Q54A				P		PKPbc	18 39 44.0	0.0
	baz=322,SNR=51							
K62A	Royalston	145.32	16	P		PKPdf	18 39 45.3	+1.1
	baz=339,SNR=7.6							
K62A				P		PKPdf	18 39 45.3	+1.1
	baz=339,SNR=7.6							
PSWB	Penn State Wil	145.37	21	P		PKPab	18 39 44.8	+0.4
	baz=332							
RIB01	Linhares ES	145.39	214	*e*P		PKPab	18 39 46.2	+1.1
L61B	Northampton	145.40	17	P		PKPdf	18 39 44.3	0.0
	baz=338							
N58A	Sunbury	145.51	23	P		PKPab	18 39 45.5	+0.6
	baz=330,SNR=23							
N58A				P		PKPab	18 39 45.5	+0.6
	baz=330,SNR=23							
NPNY	Mohonk Preserv	145.60	19	P		PKPab	18 39 45.7	+0.5
	baz=335,SNR=20							
W50A	Signal Mountai	145.60	38	P		PKPab	18 39 45.7	+0.2
	baz=312,SNR=17							
HRV	Adam Dziewonsk	145.65	15	PKPdf		PKPdf	18 39 44.5	-0.2
HRV	Adam Dziewonsk	145.65	15	PKIKP		PKPdf	18 39 44.5	-0.2
HRV	Adam Dziewonsk	145.65	15	P		PKPab	18 39 46.1	+0.7
	baz=340,SNR=7.8							
HRV	Adam Dziewonsk	145.65	15	P		PKPab	18 39 45.9	+0.5
	baz=340							
QUA2	Belchertown	145.65	16	P		PKPab	18 39 45.7	+0.3
	baz=338,SNR=9.2							
TZTN	Tazewell	145.70	35	P		PKPab	18 39 46.3	+0.4
	baz=316,SNR=43							
TZTN	Tazewell	145.70	35	P		PKPab	18 39 46.2	+0.4
	baz=316,SNR=43							
V51A	Loudon	145.76	36	P		PKPab	18 39 46.2	+0.2
	baz=314,SNR=30							
Y49A	Blount Mountai	145.78	41			PKPdf	18 39 44.2	-1.0
Y49A						SKPbc	18 43 19.5	-0.9
Y49A	Blount Mountai	145.78	41	P		PKPab	18 39 46.2	+0.1
	baz=309,SNR=25							
LRAL	Lakeview Retre	145.90	43			PKPbc	18 39 46.0	-0.1
LRAL						SKPbc	18 43 17.3	-3.3
LRAL	Lakeview Retre	145.90	43	P		PKPab	18 39 47.0	+0.4
	baz=307,SNR=49							
LRAL	Lakeview Retre	145.90	43	P		PKPab	18 39 46.9	+0.3
	baz=307							
RCLB	Rio Claro- Sao	145.94	201	*e*P		PKPab	18 39 48.3	+1.2
BRNY	Black Rk. Fore	145.95	19	P		PKPab	18 39 46.6	0.0
	baz=335,SNR=12							
S54A	Dingess, Beckl	145.97	31	P		PKPab	18 39 46.6	-0.2
	baz=320,SNR=43							
S54A				P		PKPab	18 39 46.6	-0.2
	baz=320,SNR=43							
Q56A	Snyder Ridge,	146.00	27	P		PKPbc	18 39 46.4	+0.1
	baz=325,SNR=41							
Q56A				P		PKPbc	18 39 46.4	+0.1
	baz=325,SNR=41							
ODNJ	Ogdensburg	146.05	20	P		PKPab	18 39 47.0	+0.1
	baz=334,SNR=14							
AZAP	Zapla	146.09	172	*i* P		PKPab	18 39 48.8	+1.0
P57A	Homestead Farm	146.15	25	PKPdf		PKPdf	18 39 45.5	-0.1
P57A				SKPbc		SKPbc	18 43 18.2	-2.8
P57A	Homestead Farm	146.15	25	P		PKPab	18 39 47.1	-0.3
	baz=327,SNR=22							
P57A				P		PKPab	18 39 47.1	-0.3
	baz=327,SNR=22							
PB15	IPOC Station P	146.17	164	*i* P		PKiKP	18 39 49.8	-0.9
V52A	Sevierville	146.18	36	P		PKPab	18 39 47.8	+0.2
	baz=315,SNR=44							
R55A	Marlinton	146.18	29	P		PKPab	18 39 47.5	-0.1
	baz=323,SNR=58							
R55A				P		PKPab	18 39 47.5	-0.1
	baz=323,SNR=58							
TKL	Tuckaleechee C	146.20	36	P		PKPab	18 39 47.7	0.0
	baz=315,SNR=36							
LUPA	Lehigh Univers	146.22	21			PKPbc	18 39 46.5	-0.3
X51A	Calhoun	146.30	39	P		PKPbc	18 39 47.7	+0.4
	baz=312,SNR=20							
X51A				P		PKPbc	18 39 47.7	+0.4
	baz=312,SNR=20							
SJMB	Sao Joao De Ma	146.32	214	*e*P		PKPab	18 39 48.6	0.0
PAL	Palisades	146.35	19	P		PKPab	18 39 48.2	+0.2
	baz=335,SNR=30							
PAL	Palisades	146.35	19	P		PKPab	18 39 48.2	+0.2
	baz=335							
L64A	Middleborough	146.37	15	P		PKPab	18 39 47.7	-0.3
	baz=341,SNR=6.9							
L64A				P		PKPab	18 39 47.7	-0.3
	baz=341,SNR=6.9							
NAN01	Guarapari, ES	146.41	216	*e*P		PKPab	18 39 49.2	+0.2
BRNJ	Basking Ridge	146.42	20	P		PKPab	18 39 48.4	0.0
	baz=334,SNR=20							
ASTB	Santa Barbara	146.44	173	*i* P		PKPab	18 39 48.8	+0.7
FOR	Fordham	146.49	19	P		PKPab	18 39 48.3	-0.3
	baz=335,SNR=7.5							
W52A	Murphy	146.50	37	P		PKPab	18 39 48.6	-0.3
	baz=314							
PB06	IPOC Station P	146.62	164	*i* P		PKiKP	18 39 50.9	-0.7
ALOL	LOMAS DE OLMED	146.63	173	*i* P		PKPab	18 39 50.2	+0.5
PANJ	Princeton	146.65	21	P		PKPab	18 39 48.9	-0.3
	baz=333,SNR=23							
TUPA	Temple Univers	146.66	21	P		PKPbc	18 39 48.6	+0.5
	baz=332,SNR=20							
U54A	Nelsons Funny	146.67	33	P		PKPab	18 39 49.2	-0.4
	baz=318,SNR=21							
U54A				P		PKPab	18 39 49.2	-0.4
	baz=318,SNR=21							
SDMD	Soldier's Deli	146.69	24	P		PKPbc	18 39 48.3	0.0
	baz=329,SNR=9.4							
WUPA	West Chester U	146.72	22			PKPdf	18 39 46.4	-0.2
V53A	Saluda	146.75	35	P		PKPab	18 39 49.5	-0.4
	baz=316,SNR=56							
V53A				P		PKPab	18 39 49.5	-0.4
	baz=316,SNR=56							
PB04	IPOC Station P	146.81	163	*i* P		PKiKP	18 39 51.7	-0.3
GEDE	Greenville	146.81	22	P		PKPab	18 39 49.4	-0.5
	baz=331,SNR=18							
BLA	Blacksburg	146.87	31	P		PKPab	18 39 49.7	-0.6
	baz=321,SNR=5.5							
BLA	Blacksburg	146.87	31	P		PKPbc	18 39 49.4	+0.5
	baz=321,SNR=5.5							
LVC	Limon Verde	146.89	165			PKPab	18 39 51.1	0.0
LVC	Limon Verde	146.89	165	PKP2		PKPab	18 39 51.1	0.0
LVC	Limon Verde	146.89	165	*e*P		PKPbc	18 39 50.1	+0.3
Z51A	Franklin	146.91	41	P		PKPbc	18 39 49.8	+0.7
	baz=310							
BRAL	Brewton	146.95	46	P		PKPab	18 39 50.5	-0.3
	baz=305							
HJA	Humahuaca	147.03	171	*i* P		PKPab	18 39 51.3	-0.4
S57A	Dark Hollow, R	147.15	28	P		PKPab	18 39 51.7	+0.4
	baz=324,SNR=13							
S57A				P		PKPab	18 39 51.7	+0.4
	baz=324,SNR=13							
CASEE	Lake Jocassee	147.16	36	P		PKPbc	18 39 49.7	-0.1
	baz=315,SNR=22							
GUA01	Guaratinga, BA	147.21	218	*e*P		PKPbc	18 39 50.4	0.0
Y52A	Lilburn	147.26	39	P		PKPbc	18 39 49.9	-0.1
	baz=312,SNR=7.1							
Y52A				P		PKPbc	18 39 49.9	-0.1
	baz=312,SNR=7.1							
PB07	IPOC Station P	147.46	163	*i* P		PKPbc	18 39 50.9	-0.3
R58B	Mineral	147.47	27	P		PKPbc	18 39 50.9	+0.4
	baz=326,SNR=15							
R58B				P		PKPbc	18 39 50.9	+0.4
	baz=326,SNR=15							
V55A	Taylorsville	147.50	33	P		PKPbc	18 39 51.1	+0.4
	baz=319,SNR=24							
V55A				P		PKPbc	18 39 51.1	+0.4
	baz=319,SNR=24							
BB19B	Bebedouro	147.54	200	*e*P		PKPbc	18 39 50.4	-0.9
U56A	King	147.56	32	P		PKPbc	18 39 51.4	+0.6
	baz=320,SNR=7.6							
U56A				P		PKPbc	18 39 51.4	+0.6
	baz=320,SNR=7.6							
PB09	IPOC Station P	147.58	164	*i* P		PKPbc	18 39 51.1	-0.4
T57A	Hurt	147.61	29	P		PKPbc	18 39 51.4	+0.5
	baz=323,SNR=18							
T57A				P		PKPbc	18 39 51.4	+0.5
	baz=323,SNR=18							
152A	Waverly Hall	147.62	41	P		PKPbc	18 39 50.6	-0.5
	baz=310							
PB02	IPOC Station P	147.84	163	*i* P		PKiKP	18 39 53.2	-0.8
PCMB	Pacaembu	147.86	196	*e*P		PKPbc	18 39 52.5	+0.4
PAULI	Pauline	147.92	35	P		PKPbc	18 39 51.2	-0.7
	baz=316,SNR=12							
GOGA	Godfrey	147.93	39			PKPdf	18 39 49.2	+0.4
GOGA				PKPbc		PKPbc	18 39 52.4	+0.5
GOGA	Godfrey	147.93	39	PKP2		PKPbc	18 39 52.4	+0.5
GOGA	Godfrey	147.93	39	P		PKPbc	18 39 50.5	-1.3
	baz=312,SNR=11							
GOGA	Godfrey	147.93	39	P		PKiKP	18 39 53.0	-0.7
	baz=312							
DIAM	Diamantina, MG	147.95	210	*e*P		PKPbc	18 39 51.9	-0.7
KMSC	Kings Mountain	147.96	34	P		PKPbc	18 39 52.8	+0.9
	baz=318,SNR=15							
KMSC	Kings Mountain	147.96	34	P		PKPbc	18 39 52.8	+0.9
	baz=318,SNR=15							
CMC01	Camacan, BA	147.96	220	*e*P		PKPbc	18 39 51.9	-0.6
HODGE	Hodges	148.09	36	P		PKPbc	18 39 52.5	+0.2
	baz=315,SNR=16							
PB01	IPOC Station P	148.22	163	*i* P		PKPbc	18 39 53.2	+0.1
PAYG	Puerto Ayora	148.24	107			PKPdf	18 39 51.5	+1.5
PAYG	Puerto Ayora	148.24	107	*e*P		PKiKP	18 39 55.0	+0.1
T59A	Double "B" Far	148.43	27	P		PKiKP	18 39 54.0	-0.6
	baz=326,SNR=26							
T59A				P		PKiKP	18 39 54.0	-0.6
	baz=326,SNR=26							
V58A	Windy Hill, Pi	148.63	31	P		PKPbc	18 39 54.2	+0.6
	baz=322,SNR=8.3							
V58A				P		PKPbc	18 39 54.2	+0.6
	baz=322,SNR=8.3							
W57A	Gilead	148.68	33			PKPbc	18 39 52.4	-1.4
W57A	Gilead	148.68	33	P		PKPbc	18 39 54.3	+0.5
	baz=320,SNR=14							
W57A				P		PKPbc	18 39 54.3	+0.5
	baz=320,SNR=14							
TA02	Huaiquique	148.76	162			PKPbc	18 39 52.6	-1.8
TA02				PKPab		PKiKP	18 39 56.0	+0.2
PMNB	Patos De Minas	149.03	206	*e*P		PKPbc	18 39 54.0	-1.3
GDU01	Guandu, BA	149.22	222	*e*P		PKPbc	18 39 54.9	-0.8
NBRF	Rio Formoso -	149.27	235	*e*P		PKPdf	18 39 53.4	+1.8
ITRB	Iturama	149.41	198	*e*P		PKPdf	18 39 53.4	+1.7
MC01	Montes Claros	149.43	212	*e*P		PKPbc	18 39 54.6	-1.7
NBAN	Anadia - AL	149.59	232	*e*P		PKPbc	18 39 55.2	-1.5
GO01	Chusmiza	149.61	163			PKPdf	18 39 54.2	+1.7
GO01				PKPab		PKiKP	18 39 59.4	+1.2
AQDB	Aquidauana	149.86	188	*e*P		PKPdf	18 39 54.6	+2.2
NBLA	Lagarto - SE	149.89	228	*e*P		PKPbc	18 39 55.5	-1.9
IPMB	Ipameri, GO	150.25	203	*e*P		PKPbc	18 39 56.1	-2.2
TEIG	Tepich	150.79	65			PKPdf	18 39 55.3	+1.6
C2SB	Chapadao do Su	150.98	194	*e*P		PKPdf	18 39 56.6	+2.5
JANB	Januaria	151.00	213	*e*P		PKPdf	18 39 56.2	+1.9
BDFB	Brasilia	152.28	206	PKP		PKPdf	18 39 57.9	+1.6
	comp=Z,5.0nm,0.8s,baz=124,slow=4.2,SNR=7.3							
BDFB				PKPbc		PKiKP	18 40 05.4	+2.1
	comp=Z,14nm,0.4s,baz=96,slow=0.8,SNR=20							
BDFB				PKKP			18 48 37.3	
	comp=Z,16nm,1.0s,baz=86,slow=1.8,SNR=9.4							
BDFB	Brasilia	152.28	206			PKPdf	18 39 58.2	+1.9
BDFB	Brasilia	152.28	206	*e*P		PKPdf	18 39 58.1	+1.8
NNA	Nana	152.88	142			PKPdf	18 39 58.8	+1.7
NNA	Nana	152.88	142	PKIKP		PKPdf	18 39 58.8	+1.7
NNA	Nana	152.88	142	*e*P		PKiKP	18 40 05.8	+1.2
LPAZ	La Paz	153.12	163	PKP		PKPdf	18 39 59.9	+1.8
	comp=Z,2.4nm,0.8s,baz=292,slow=0.3,SNR=10							
LPAZ				PKPbc		PKiKP	18 40 07.8	+2.1
	comp=Z,18nm,0.9s,baz=111,slow=1.8,SNR=30							
LPAZ				PKPab		sPKPdf	18 40 19.6	-2.2
	comp=Z,60nm,0.8s,baz=143,slow=3.1,SNR=31							
LPAZ	La Paz	153.12	163	*e*P		PKiKP	18 40 07.4	+1.7
LPAZ	La Paz	153.12	163	*e*P		PKPdf	18 39 59.7	+1.6
SDBA	SAO DESIDERIO	153.50	215	*e*P		PKPdf	18 39 59.7	+1.7
SALV	Santo Antonio	154.35	190	*e*P		PKPdf	18 40 01.1	+1.9
PTLB	Pontes e Lacer	155.15	182	*e*P		PKPdf	18 40 02.4	+2.2
JTS	Las Juntas de	155.47	86	*e*P		PKPdf	18 40 00.8	+0.1
SNDB	Serra Nova Dou	156.92	202	*e*P		PKPdf	18 40 04.4	+1.8
SRBA	San Rafael, Bu	157.01	89			PKPdf	18 40 04.4	+1.5
VILB	Vilhena	157.65	180	PKPdf		PKPdf	18 40 03.9	+0.3
VILB				PKPab		PKPab	18 40 37.3	+1.7
VILB	Vilhena	157.65	180	*e*P		PKPdf	18 40 05.3	+1.8
SMTB	Santa Maria do	157.90	215	*e*P		PKPdf	18 40 06.1	+2.2
CZSB	Cruzeiro do Su	158.71	143			PKPdf	18 40 05.5	+0.6
CZSB				PKPab		PKPab	18 40 41.5	+1.1
CZSB	Cruzeiro do Su	158.71	143	*e*P		PKPdf	18 40 07.1	+2.2
PDRB	Porto dos Gac	158.72	189	*e*P		PKPdf	18 40 06.8	+1.9
CLDB	Colider	159.28	192	*e*P		PKPdf	18 40 07.5	+2.0
OTAV	Otavalo	159.50	116			PKPdf	18 40 06.1	-0.3
OTAV	Otavalo	159.50	116	PKIKP		PKPdf	18 40 06.1	-0.3
OTAV	Otavalo	159.50	116	*e*P		PKPdf	18 40 08.2	+1.8
OTAV	Otavalo	159.50	116	*e*P		PKPdf	18 40 08.4	+2.1
ETMB	Extrema	159.82	162	PKPdf		PKPdf	18 40 03.2	-2.9
ETMB				PKPab		PKPab	18 40 46.1	+1.2
ETMB	Extrema	159.82	162	*e*P		PKPdf	18 40 08.3	+2.2
ROSB	Rosrio	159.88	233	*e*P		PKPdf	18 40 08.3	+2.1
PRPB	Parauapebas	161.35	214	*e*P		PKPdf	18 40 09.5	+1.7
SAML	Samuel	161.37	170			PKPdf	18 40 07.8	0.0
SAML						PKPab	18 40 52.8	+1.1
SAML	Samuel	161.37	170	PKP2		PKPab	18 40 52.8	+1.1
SAML							19 40 07.8	
POPC	Popayan, Colom	162.08	112	*e*P		PKPdf	18 40 09.9	+1.0
SOLC	Bahia Solano	162.50	100	*e*P		PKPdf	18 40 10.7	+1.7
NPGB	Novo Progresso	162.87	196	*e*P		PKPdf	18 40 11.4	+2.1
PLMC	San Jos del P	163.26	105	*e*P		PKPdf	18 40 10.7	+0.8
CBOC	Ciudad Bolivar	163.78	102	*e*P		PKPdf	18 40 11.5	+1.1
GUY2C	Guyana, Caldas	164.23	105	*e*P		PKPdf	18 40 12.3	+1.1
MACC	Macarena, Meta	164.45	117	*e*P		PKPdf	18 40 12.3	+1.5
UREC	San Jos de Ur	164.60	95	*e*P		PKPab	18 41 08.2	+1.8
SJCC	San Jacinto, C	165.09	87	*e*P		PKPdf	18 40 11.5	+0.1
ZARC	Zaragoza, Cauc	165.22	97	*e*P		PKPdf	18 40 12.3	+0.8
PTBC	PUERTO BERRIO	165.44	101	*e*P		PKPdf	18 40 12.3	+0.6
ITTB	Itaituba	165.53	198	*e*P		PKPdf	18 40 14.7	+3.0
CHIC	Chingaza	165.59	109	*e*P		PKPdf	18 40 12.3	0.0
SPBC	San Pablo de B	165.59	105	*e*P		PKPdf	18 40 13.2	+1.2
SDDR	Presa de Saban	165.64	48	*e*P		PKPab	18 41 10.7	0.0
RUSC	La Rusia	166.60	105	*e*P		PKPdf	18 40 12.3	-0.9
PAMC	Pamplona, Colo	167.31	99	*e*P		PKPdf	18 40 15.6	+1.9
SOCV	Socops	169.26	96	*e*P		PKPdf	18 40 12.3	-2.2
BOAV	Boa Vista	172.88	176			PKPdf	18 40 16.4	+0.1
BOAV				PKPab		PKPab	18 41 43.9	+1.3
BOAV	Boa Vista	172.88	176	*e*P		PKPdf	18 40 18.5	+2.1

SOME **12** *18:23:03.0,40˙.75N×78˙.25E,h10km*
KRNET **12** *18:23:03.7±0.1,40˙.60N×78˙.28E,mb3.2*
NNC **12** *18:23:05.0±1.6,40˙.81N×78˙.25E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=10.9km s-min=6.9km az=167.0

ISC 12 18:22:58.8±2.6,40˙.5N±0˙.1×78˙.24E±0˙.04,h10km,n36,
σ1§89/59,10C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PRZ	Przheval'sk	2.01	3	⇑*i*P		P	Pg	18 23 38.9	+1.6
	baz=3.0								
PRZ				⇑*i*S		S	Sg	18 24 04.6	+1.2
	baz=3.0								
ULHL	Ulahol	2.32	320	⇑*i*P		P	Pg	18 23 43.9	+0.6
	baz=18								
ULHL				⇑*i*S		S	Sg	18 24 13.2	-0.2
	baz=18								
SATY	Saty	2.58	3	*e*P		P	Pg	18 23 46.8	-1.5
	36nm,0.4s								
SATY				*e*S		S	Sb	18 24 18.5	+1.4
	31nm,0.3s								
SATY	Saty	2.58	3	Pg		Pg	Pg	18 23 46.8	-1.5
	36nm,0.4s								
SATY				Lg		Lg	Lg	18 24 16.5	
	31nm,0.3s								
SATY	Saty	2.58	3	*e*P		Pg	Pg	18 23 46.8	-1.5
	baz=2.0								
SATY				*e*S		S	Sb	18 24 18.5	+1.4
	baz=2.0								
BOOM	Boomskoye usch	2.65	320	⇓*e*P		P	Pg	18 23 48.4	-1.2
	baz=18								
BOOM				⇓*i*S		S	Sb	18 24 21.0	+1.8
	baz=18								
UZB	Uzynbulak	2.73	12	*e*P		P	Pb	18 23 48.6	+0.7
	3.2nm,0.3s								
UZB				*e*S		S	Sb	18 24 21.5	+0.1
	29nm,1.0s								
UZB	Uzynbulak	2.73	12	Pg		Pg	Pg	18 23 49.7	-1.5
	3.2nm,0.3s								
UZB				Lg		Lg	Lg	18 24 21.6	
	29nm,1.0s								
UZB	Uzynbulak	2.73	12	*e*P		P	Pb	18 23 48.6	+0.7
	baz=12								
UZB				*e*S		S	Sb	18 24 21.5	+0.1
	baz=12								
MDOK	Medeo	2.83	342	*e*P		P	Pg	18 23 50.9	-2.1
	7.1nm,0.5s								
MDOK				*e*S		S	Sb	18 24 25.2	+0.9
	39nm,0.5s								
MDOK	Medeo	2.83	342	⇑Pg		P	Pg	18 23 50.8	-2.1
	9.1nm,0.5s								
MDOK				Pg		P	Pb	18 23 52.8	+3.3
	7.1nm,0.5s								
MDOK				Lg		Lg	Lg	18 24 27.0	
	38nm,0.6s								
MDOK				Lg		Lg	Lg	18 24 27.0	
	39nm,0.5s								
MDOK	Medeo	2.83	342	*e*P		P	Pg	18 23 50.9	-2.1
	baz=41								
MDOK				*e*S		S	Sb	18 24 25.2	+0.9
	baz=41								
SHLS	Shalkode	2.83	18	*e*P		P	Pg	18 23 52.3	-0.7
	5.5nm,0.4s								
SHLS				*e*S		S	Sg	18 24 27.7	-2.0
	19nm,0.8s								
SHLS	Shalkode	2.83	18	Pg		P	Pg	18 23 51.8	-1.2
	5.5nm,0.4s								
SHLS				Lg		Lg	Lg	18 24 25.3	
	19nm,0.8s								
SHLS	Shalkode	2.83	18	*e*P		P	Pg	18 23 52.3	-0.7
	baz=25								
SHLS				*e*S		S	Sg	18 24 27.7	-2.0
	baz=25								
KPKS	Kokpek	3.00	6	*e*P		P	Pb	18 23 53.3	+0.8
	25nm,0.3s								
KPKS				*e*S		S	Sb	18 24 29.3	0.0
	47nm,0.5s								
KPKS	Kokpek	3.00	6	Pg		Pg	Pg	18 23 54.0	-2.4
	25nm,0.3s								
KPKS				Lg		Lg	Lg	18 24 29.4	
	47nm,0.5s								
KPKS	Kokpek	3.00	6	*e*P		P	Pb	18 23 53.3	+0.8
	baz=6.0								
KPKS				*e*S		S	Sb	18 24 29.3	0.0
	baz=6.0								
KURS	Kuram	3.01	359	*e*P		P	Pg	18 23 54.4	-2.1
	11nm,0.5s								
KURS				*e*S		S	Sb	18 24 31.3	+2.0
	19nm,0.7s								
KURS	Kuram	3.01	359	Pg		Pg	Pg	18 23 55.4	-1.1
	11nm,0.5s								
KURS				Lg		Lg	Lg	18 24 31.4	
	19nm,0.7s								
KST	Kastek	3.08	327	*e*P		P	Pg	18 23 55.9	-1.9
	12nm,0.6s								
KST				*e*S		S	Sb	18 24 33.7	+2.3
	35nm,0.7s								
KST	Kastek	3.08	327	Pg		Pg	Pg	18 23 55.8	-2.0
	12nm,0.6s								
KST				Lg		Lg	Lg	18 24 32.5	
	35nm,0.7s								
TKM2	Tokmak 2	3.14	322	⇑Pg		Pg	Pg	18 23 57.6	-1.5
	3.5nm,0.5s								
TKM2				⇑Lg		Lg	Lg	18 24 37.0	
	24nm,1.4s								
TKM2	Tokmak 2	3.14	322	⇑*i*P		P	Pb	18 23 55.2	+0.3
	baz=20								
TKM2				⇑*i*S		S	Sb	18 24 33.0	-0.3
	baz=20								
KTMS	Ketmen	3.36	27	*e*P		P	Pb	18 24 00.1	+1.6
	1.7nm,0.5s								
KTMS				*e*S		S	Sb	18 24 41.5	+2.0
	6.7nm,0.6s								
KTMS	Ketmen	3.36	27	Pg		Pg	Pg	18 24 01.5	-1.7
	1.7nm,0.5s								
KTMS				Lg		Lg	Lg	18 24 41.9	
	6.7nm,0.6s								
KTBS	Karatobe	3.43	341	*e*P		P	Pb	18 24 01.2	+1.4
	4.5nm,0.3s								
KTBS				*e*S		S	Sb	18 24 43.4	+1.8
	25nm,0.3s								
KTBS	Karatobe	3.43	341	Pg		Pg	Pg	18 24 02.9	-1.7
	4.5nm,0.3s								
KTBS				Lg		Lg	Lg	18 24 44.4	
	25nm,0.3s								
CHMS	Chumysh	3.63	315	⇓Pg		Pg	Pg	18 24 06.4	-1.9
	4.6nm,0.7s								
CHMS				⇓Lg		Lg	Lg	18 24 53.1	
	22nm,1.0s								
KUU	Kurty	3.69	338	*e*P		P	Pb	18 24 06.1	+2.0
	3.0nm,0.6s								
KUU				*e*S		S	Sb	18 24 51.3	+2.3
	14nm,0.8s								
KUU	Kurty	3.69	338	Pg		Pg	Pg	18 24 07.2	-2.4
	1.8nm,0.3s								
KUU				Lg		Lg	Lg	18 24 51.7	
	14nm,0.8s								
KRBS	Karabastau	3.74	330	*e*P		Pg	Pg	18 24 07.3	-3.2
	2.7nm,0.3s								
KRBS				*e*S		S	Sb	18 24 53.9	+3.

LUWI	**Luwuk**	**5.14 297**	Pn	**Pn**	**18 39 57.1 0.0**			
LUWI	**Luwuk**	**5.14 297**	P	**Pn**	**18 39 57.1 0.0**			
	8.2nm10µm1µm,0.7s							
LUWI	**Luwuk**	**5.14 297**	P	**Pn**	**18 39 57.6 +0.5**			
BBSI	**Bau Bau**	**5.19 246**	P	**Pn**	**18 40 01.6 +3.8**			
	0.3nm855nm93nm,1.0s							
KMSI	**Cibinong**	**5.20 320**	P	**Pn**	**18 39 57.6 -0.3**			
	15nm9µm656nm,1.0s							
SAUI	**Saumlaki**	**6.01 139**		**Pn**	**18 40 12.9 +4.0**			
SAUI	**Saumlaki**	**6.01 139**	P	Pn	18 40 15.0 +6.0			
	7.3nm16µm2µm,0.9s							
SAUI	**Saumlaki**	**6.01 139**	P	Pn	18 40 14.1 +5.1			
APSI	**Ampana**	**6.21 293**	P	**Pn**	**18 40 12.8 +1.0**			
	2.3nm6µm681nm,0.8s							
MRSI	**Marisa**	**6.64 305**	P	**Pn**	**18 40 17.9 +0.2**			
	1.9nm6µm497nm,1.0s							
MMRI	**Maumere**	**7.26 224**		**Pn**	**18 40 26.9 +0.8**			
MMRI	**Maumere**	**7.26 224**	P	**Pn**	**18 40 30.3 +4.2**			
	0.8nm2µm211nm,1.1s							
MMRI	**Maumere**	**7.26 224**	P	**Pn**	**18 40 30.1 +4.0**			
SGSI	**Sangihe**	**7.28 346**	P	**Pn**	**18 40 26.1 -0.4**			
	3.0nm6µm528nm,0.7s							
BSSI	**Bau Bau, Buton**	**7.35 248**	P	**Pn**	**18 40 31.8 +4.4**			
	1.0nm3µm254nm,1.2s							
BKSI	**Bulukumba**	**7.45 255**	P	**Pn**	**18 40 31.7 +3.0**			
	1.8nm6µm299nm,1.7s							
TTSI	**Tana Toraja**	**7.52 273**	P	**Pn**	**18 40 31.9 +2.2**			
	0.5nm1µm84nm,0.5s							
SPSI	**Sidrap Palu**	**7.58 266**	P	**Pn**	**18 40 34.6 +4.1**			
	0.5nm2µm157nm,0.9s							
BATI	**Baumata**	**7.67 208**	P	**Pn**	**18 40 33.9 +2.1**			
	78nm,0.8s,baz=252,slow=2.1,SNR=13							
BATI			LR	LR	18 44 19.3			
	comp=Z,1µm,18.2s,baz=22,slow=44							
BATI	**Baumata**	**7.67 208**	P	**Pn**	**18 40 36.3 +4.5**			
	0.7nm2µm179nm,0.9s							
EDFI	**Ende, Flores**	**7.72 226**	P	**Pn**	**18 40 35.1 +2.5**			
	0.5nm2µm119nm,0.7s							
KAPI	**Kappang**	**7.74 258**	P	**Pn**	**18 40 35.1 +2.4**			
	183nm,0.6s,baz=110,slow=7.5,SNR=53							
KAPI			S	**Sn**	**18 41 59.4 +0.6**			
	49nm,0.7s,baz=27,slow=23,SNR=6.2							
KAPI			LR	LR	18 44 18.6			
	comp=Z,441nm,18.7s,baz=66,slow=44							
KAPI	**Kappang**	**7.74 258**	Pn	**Pn**	**18 40 34.2 +1.6**			
KAPI	**Kappang**	**7.74 258***c i*	P	**Pn**	**18 40 35.6 +2.9**			
KAPI	**Kappang**	**7.74 258**	P	**Pn**	**18 40 36.5 +3.8**			
TOLI2	**Tolitoli**	**7.95 304**	Pn	**Pn**	**18 40 35.2 -0.5**			
TOLI2	**Tolitoli**	**7.95 304**	P	**Pn**	**18 40 37.9 +2.3**			
MPSI	**Mapaga**	**8.32 296**	P	**Pn**	**18 40 42.6 +1.9**			
	0.5nm2µm141nm,0.7s							
SRPI	**Serui, Papua**	**9.02 80**	P	**Pn**	**18 40 50.2 0.0**			
	1.5nm2µm89nm,0.6s							
BAKI	**Biak**	**9.03 76**	P	**Pn**	**18 40 51.4 +1.0**			
	0.7nm2µm216nm,0.8s							
BASI	**Baing, Sumba**	**9.53 224**	P	Pn	18 41 04.0 +6.8			
	3µm231nm,1.1s							
WBSI	**Waikabubak, Su**	**10.03 232**	P	Pn	18 41 11.7 +7.6			
	2µm148nm,0.8s							
MTN	**Manton Dam**	**10.09 158**	P	**Pn**	**18 41 06.5 +1.7**			
	baz=10,SNR=63							
MTN	**Manton Dam**	**10.09 158**	Pn	**Pn**	**18 41 05.3 +0.5**			
MTN	**Manton Dam**	**10.09 158**	P	**Pn**	**18 41 06.6 +1.8**			
KDU	**Kakadu**	**10.52 151**	P	**Pn**	**18 41 11.7 +1.1**			
	baz=11,SNR=36							
KDU	**Kakadu**	**10.52 151**	P	**Pn**	**18 41 12.0 +1.3**			
DAV	**Davao City (W)**	**10.56 350**	P	**Pn**	**18 41 11.1 -0.2**			
	207nm,0.5s,baz=205,slow=8.8,SNR=3.9							
PLAI	**Plampang**	**10.93 240**	P	Pn	18 41 21.5 +5.2			
	2µm187nm,0.8s							
PLAI	**Plampang**	**10.93 240**	P	Pn	18 41 20.9 +4.6			
SMPI	**Sarmi**	**11.44 83**	P	Pn	18 41 28.6 +5.3			
TWSI	**Taliwang, Sumb**	**11.67 243**	P	**Pn**	**18 41 30.1 +3.7**			
	1µm118nm,1.2s							
KNRA	**Kununurra**	**12.26 174**	P	**Pn**	**18 41 34.4 -0.2**			
	baz=12,SNR=95							
KNRA	**Kununurra**	**12.26 174**	Pn	**Pn**	**18 41 34.4 -0.2**			
KNRA	**Kununurra**	**12.26 174**	P	**Pn**	**18 41 35.1 +0.6**			
MYLDM	**Lahad Datu**	**12.29 314**	Pn	**Pn**	**18 41 35.0 +0.2**			
BBKI	**Banjar Baru**	**12.48 269**	P	P	18 41 53.1 +6.2			
GENI	**Genyem**	**12.83 87**	P	**Pn**	**18 41 44.4 +2.1**			
	4µm117nm,0.9s							
GENI	**Genyem**	**12.83 87**	Pn	**Pn**	**18 41 44.8 +2.5**			
SRBI	**Singaraja**	**12.93 248**	P	**P**	**18 41 50.2 -1.6**			
	134nm,1.1s							
ABJI	**Asem Bagus**	**13.75 251**	P	**P**	**18 42 04.7 +3.7**			
KMMI	**Kalianget**	**13.80 254**	P	**P**	**18 42 05.0 +3.4**			
JAGI	**Jajag, Banyuwa**	**14.05 248**	Pn	**Pn**	**18 41 58.1 -0.4**			
JAGI	**Jajag, Banyuwa**	**14.05 248**	P	**P**	**18 42 02.4 -1.9**			
	3µm250nm,1.2s							
JAGI	**Jajag, Banyuwa**	**14.05 248**	P	**P**	**18 42 03.1 -1.2**			
BLJI	**Banyuglugur**	**14.34 252**	P	**P**	**18 42 10.9 +3.3**			
GMJI	**Gumukmas**	**14.64 250**	P	**P**	**18 42 10.5 -0.4**			
	3µm170nm,1.3s							
FITZ	**Fitzroy Crossi**	**14.69 186**	P	**Pn**	**18 42 06.2 -0.6**			
	52nm,0.9s,baz=21,slow=12,SNR=50							
FITZ			S	**Sn**	**18 44 45.5 -3.1**			
	44nm,1.0s,baz=294,slow=9.8,SNR=6.4							
FITZ			LR	LR	18 48 23.1			
	comp=Z,621nm,20.4s,baz=16,slow=40							
FITZ	**Fitzroy Crossi**	**14.69 186**	P	**Pn**	**18 42 06.3 -0.6**			
	baz=15,SNR=59							
FITZ	**Fitzroy Crossi**	**14.69 186**	Pn	**Pn**	**18 42 05.1 -1.8**			
FITZ	**Fitzroy Crossi**	**14.69 186**	P	**Pn**	**18 42 06.9 0.0**			
PWJI	**Pagerwojo**	**16.12 253**	P	**P**	**18 42 29.5 +2.1**			
	127nm,1.4s							
SBUM	**Sibu**	**16.20 291**	P	**Pn**	**18 42 26.2 0.0**			
STKI	**Sintang**	**16.23 282**	P	**P**	**18 42 33.7 +5.1**			
	2µm22nm,0.6s							
NGJI	**Ngawi**	**16.29 255**	P	**P**	**18 42 33.9 +4.7**			
	162nm,1.1s							
PCJI	**Pacitan**	**16.77 253**	P	**P**	**18 42 37.3 +2.8**			
	293nm,0.9s							
WB0	**Warramunga Arr**	**17.65 158**	P	**Pn**	**18 42 43.2 -0.9**			
WB0			IAmb	IAmb	18 42 47.4			
	comp=Z,178nm,0.8s							
KSM	**Kuching**	**17.71 286**	P	**Pn**	**18 42 44.7 -0.2**			
KSM	**Kuching**	**17.71 286**	P	**P**	**18 42 47.2 +2.3**			
	comp=Z,49nm,0.9s							
WRAB	**Tennant Creek**	**17.78 158**	P	**P**	**18 42 44.7 -1.0**			
WRAB			IAmb	IAmb	18 42 49.0			
	comp=Z,166nm,0.8s							
WRAB	**Tennant Creek**	**17.78 158***ce*	P	**P**	**18 42 44.2 -1.5**			
WRAB			pmax	pmax				
	comp=Z,184nm,0.8s							
WRAB	**Tennant Creek**	**17.78 158**	P	**Pn**	**18 42 46.4 +0.6**			
WRA	**Warramunga Arr**	**17.79 158**	P	**P**	**18 42 44.5 -1.3**			
	comp=Z,168nm,0.8s,baz=338,slow=12,SNR=147							
WRA			S	**Sn**	**18 46 03.1 -0.6**			
	comp=Z,9.0nm,0.6s,baz=339,slow=21,SNR=4.7							
WRA			ScP	**ScP**	**18 50 49.3 -0.4**			
	comp=Z,1.4nm,0.6s,baz=342,slow=2.0,SNR=5.1							
WRA			LR	LR	18 50 50.4			
	comp=Z,408nm,18.8s,baz=344,slow=41							
WRA			P3KPbc		19 17 33.2			
	comp=Z,0.8nm,1.0s,baz=150,slow=3.9,SNR=4.7							
WRA	**Warramunga Arr**	**17.79 158**	P	**P**	**18 42 43.9 -1.8**			
WRA	**Warramunga Arr**	**17.79 158** *i*	P	**P**	**18 42 44.5 -1.3**			
WRA			pmax	pmax				
	comp=Z,174nm,0.9s							
WB2	**Warramunga Arr**	**17.79 158**	P	**P**	**18 42 44.6 -1.3**			
WB2			IAmb	IAmb	18 42 49.1			
	comp=Z,185nm,0.8s							
WR0	**Warramunga Arr**	**17.88 157**	P	**P**	**18 42 45.3 -1.5**			
COEN	**Coen**	**18.81 125**	P	**Pn**	**18 42 57.8 -0.4**			
	baz=19,SNR=190							
COEN	**Coen**	**18.81 125**	P	**P**	**18 42 56.9 -0.2**			
COEN			IAmb	IAmb	18 43 01.0			
	comp=Z,192nm,0.8s							
COEN	**Coen**	**18.81 125**	P	**Pn**	**18 42 58.0 -0.2**			
MBWA	**Marble Bar**	**19.13 202**	P	**P**	**18 43 00.0 -0.4**			
MBWA	**Marble Bar**	**19.13 202**	P	**P**	**18 43 00.7 +0.2**			
PSA00	**Pilbara Seismi**	**19.46 201**	P	**P**	**18 43 03.9 -0.2**			
PSA00	**Pilbara Seismi**	**19.46 201**	P	**P**	**18 43 03.7 -0.4**			
PSA00			IAmb	IAmb	18 43 08.8			
	comp=Z,32nm,0.9s							
PSA00	**Pilbara Seismi**	**19.46 201**	P	**Pn**	**18 43 05.6 -0.3**			
TPI	**Tanjungpandan**	**19.67 271**	P	**Pn**	**18 43 11.8 +3.3**			
	comp=Z,24nm,0.8s							
LEM	**Lembang**	**19.94 259**	P	**Pn**	**18 43 11.1 -0.6**			
	comp=Z,130nm,0.8s,baz=30,slow=10,SNR=21							
LEM			S	**S**	**18 46 52.0 +1.6**			
	comp=Z,38nm,0.9s,baz=8.7,slow=8.5,SNR=4.1							
LEM			LR	LR	18 51 31.1			
	comp=Z,514nm,19.2s,baz=92,slow=39							
MANU	**Manus Island**	**20.05 87**	P	**P**	**18 43 11.0 +0.5**			
CNJI	**Cibinong**	**20.49 258**	P	**P**	**18 43 15.8 +0.5**			
	comp=Z,4µmcomp=Z,383nm,0.9s							
PMG	**Port Moresby**	**20.56 108**	P	**P**	**18 43 17.2 +1.1**			
	comp=Z,90nm,0.8s,baz=288,slow=7.6,SNR=18							
PMG			LR	LR	18 52 49.5			
	comp=Z,566nm,20.1s,baz=286,slow=41							
	comp=Z,90nm,0.8s							
CBJI	**Citeko**	**20.63 261**	P	Pn	18 43 20.0 +0.2			
	comp=Z,101nm,0.7s							
DBJI	**Dramaga**	**20.75 261**	P	Pn	18 43 21.2 0.0			
	comp=Z,59nm,1.2s							
QIS	**Mount Isa**	**20.81 146**	P	**P**	**18 43 19.8 +1.1**			
	baz=21,SNR=73							
QIS	**Mount Isa**	**20.81 146**	P	Pn	18 43 20.3 -1.5			
SKJI	**Sukabumi**	**21.00 259**	P	**P**	**18 43 24.8 +3.9**			
	comp=Z,1µmcomp=Z,110nm,0.5s							
AS31	**Alice Springs**	**21.11 163**	P	**P**	**18 43 22.3 +0.4**			
ASAR	**Alice Springs**	**21.11 163**	P	**P**	**18 43 22.4 +0.5**			
	comp=Z,191nm,0.8s,baz=345,slow=11,SNR=416							
ASAR			S	**S**	**18 47 12.4 -0.9**			
	comp=Z,83nm,1.0s,baz=345,slow=22,SNR=27							
ASAR			ScP	**ScP**	**18 50 56.6 -0.6**			
	comp=Z,4.6nm,0.7s,baz=352,slow=2.2,SNR=8.5							
ASAR			LR	LR	18 52 00.1			
	comp=Z,458nm,19.8s,baz=4.5,slow=38							
	comp=Z,191nm,0.8s							
ASAR	**Alice Springs**	**21.11 163**	P	**P**	**18 43 21.9 -0.1**			
PPBI	**Pangkal Pinang**	**21.22 273**	P	**P**	**18 43 27.6 +4.4**			
	comp=Z,41nm,0.9s							
WRKA	**Warakurna**	**21.52 178**	P	**P**	**18 43 27.6 +1.3**			
	baz=22,SNR=83							
WRKA	**Warakurna**	**21.52 178**	P	**P**	**18 43 27.8 +1.5**			
MTSU	**Mount Surprise**	**22.14 133**	P	**P**	**18 43 33.2 +0.2**			
	baz=22,SNR=37							
MTSU	**Mount Surprise**	**22.14 133**	P	**P**	**18 43 33.8 +0.7**			
KLI	**Kotabumi**	**22.48 266**	P	**P**	**18 43 39.3 +2.6**			
	comp=Z,93nm,0.7s							
DSRI	**Dabo**	**22.94 277**	P	**P**	**18 43 43.3 +1.8**			
	comp=Z,604nmcomp=Z,46nm,1.1s							
GIRL	**Giralia**	**22.95 213**	P	**P**	**18 43 41.4 -0.1**			
	baz=23,SNR=5.4							
LWLI	**Liwa**	**23.28 265**	P	P	18 43 55.5 +11			
JMBI	**JAMBI**	**23.75 274**	P	**P**	**18 43 53.6 +4.5**			
	comp=Z,55nm,1.0s							
MYKOM	**Kota Tinggi**	**24.05 282**	P	**P**	**18 43 51.0 -0.8**			
GUMO	**Guam**	**24.25 45**	LR	LR	18 52 48.6			
	comp=Z,188nm,22.0s,baz=222,slow=35							
MEEK	**Meekatharra**	**24.56 199**	P	**P**	**18 43 55.0 -1.4**			
	baz=25,SNR=86							
MEEK	**Meekatharra**	**24.56 199**	P	**P**	**18 43 55.6 -0.8**			
KRVT	**Keravat (AS076**	**24.64 93**	P	**P**	**18 43 58.8 +1.6**			
	comp=Z,281nm,0.9s,baz=100,slow=0.4,SNR=34							
KRVT			LR	LR	18 54 18.9			
	comp=Z,226nm,20.7s,baz=47,slow=38							
	comp=Z,281nm,0.9s							
KSI	**Kapahiang**	**24.71 269**	P	**P**	**18 44 00.9 +3.0**			
	comp=Z,73nm,1.1s							
RABL	**Rabaul**	**24.78 93**	P	**P**	**18 43 58.4 -0.1**			
RABL	**Rabaul**	**24.78 93**	P	**P**	**18 43 59.7 +1.2**			
	comp=Z,227nm,0.9s							
CTA	**Charters Tower**	**24.79 133**	P	**P**	**18 43 59.9 +1.3**			
	comp=Z,34nm,0.8s,baz=312,slow=11,SNR=37							
CTA			LR	LR	18 54 51.3			
	comp=Z,303nm,19.2s,baz=310,slow=39							
	comp=Z,34nm,0.8s							
CTA	**Charters Tower**	**24.79 133**	P	**P**	**18 44 00.6 +2.0**			
CTAO	**Charters Tower**	**24.79 133**	P	**P**	**18 43 59.2 +0.6**			
CTAO	**Charters Tower**	**24.79 133**	P	**P**	**18 43 59.2 +0.6**			
CTAO			pmax	pmax				
	comp=Z,46nm,1.1s							
CTAO	**Charters Tower**	**24.79 133**	P	**P**	**18 44 00.5 +2.0**			
OOD	**Oodnadatta**	**25.52 163**	P	**P**	**18 44 04.5 -0.5**			
KRJI	**Kerinci**	**25.89 272**	P	**P**	**18 44 12.6 +3.9**			
	comp=Z,7µmcomp=Z,279nm,0.6s							
BKNI	**Bangkinang**	**26.55 278**	P	**P**	**18 44 14.2 -0.4**			
BKNI			IAmb	IAmb	18 44 18.9			
	comp=Z,105nm,0.9s							
BKNI	**Bangkinang**	**26.55 278**	P	**P**	**18 44 17.6 +3.0**			
	comp=Z,145nm,1.0s							
BKNI	**Bangkinang**	**26.55 278**	P	**P**	**18 44 17.6 +3.0**			
	comp=Z,145nm,1.0s							
PPI	**Padang Panjang**	**27.09 276**	P	**P**	**18 44 20.3 +0.9**			
	comp=Z,48nm,0.8s							
FORT	**Forrest**	**27.23 179**	P	**P**	**18 44 20.1 -0.3**			
	baz=27,SNR=92							
FORT	**Forrest**	**27.23 179**	P	**P**	**18 44 20.0 -0.3**			
FORT			IAmb	IAmb	18 44 28.8			
	comp=Z,63nm,0.7s							
FORT	**Forrest**	**27.23 179**	P	**P**	**18 44 20.4 0.0**			
TPUB	**Ta-pu**	**27.35 346**	P	**P**	**18 44 20.9 -0.7**			
TPUB	**Ta-pu**	**27.35 346**	P	**P**	**18 44 25.5 +3.9**			
INKA	**Innaminka**	**27.36 153**	P	**P**	**18 44 23.2 +1.5**			
IPM	**Ipoh**	**27.44 286**	P	**P**	**18 44 22.8 +0.3**			
IPM	**Ipoh**	**27.44 286**	P	**P**	**18 44 24.3 +1.7**			
	comp=Z,32nm,1.1s							
MULG	**Mulgathing**	**27.47 167**	P	**P**	**18 44 23.8 +1.2**			
MORW	**Morawa**	**27.68 202**	P	**P**	**18 44 25.6 +1.1**			
	baz=28,SNR=7.0							
MORW	**Morawa**	**27.68 202**	P	**P**	**18 44 23.5 -1.0**			
MORW	**Morawa**	**27.68 202**	P	**P**	**18 44 24.0 -0.5**			
SSLB	**Suanglung**	**27.75 347**	P	**P**	**18 44 24.3 -0.8**			
SSLB	**Suanglung**	**27.75 347**	P	**P**	**18 44 27.8 +2.7**			
KULM	**Kulim**	**28.03 288**	P	**P**	**18 44 26.5 -1.3**			
MNSI	**Mandailing Nat**	**28.07 278**	P	**P**	**18 44 28.8 +0.7**			
	comp=Z,63nm,0.7s							
QLP	**Quilpie**	**28.15 147**	P	**P**	**18 44 29.4 +0.7**			
	baz=28,SNR=5.0							
QLP	**Quilpie**	**28.15 147**	P	**P**	**18 44 30.8 +2.1**			
UBPT	**Khong Chiam**	**28.53 311**	P	**P**	**18 44 30.7 -1.5**			
LCRK	**Leigh Creek**	**28.79 160**	P	**P**	**18 44 33.7 -0.6**			
BLDU	**Ballidu**	**28.86 199**	P	**P**	**18 44 34.9 -0.1**			
	baz=29,SNR=17							
PSI	**Prapat**	**29.07 282**	P	**P**	**18 44 37.1 -0.1**			
	comp=Z,30nm,0.8s,baz=112,slow=2.3,SNR=20							
PSI			LR	LR	18 57 34.1			
	comp=Z,283nm,20.9s,baz=112,slow=39							
	comp=Z,30nm,0.8s							
QZH	**Quanzhou**	**29.44 344**	*eP*	**P**	**18 44 41.3 +1.2**			
QZH			pmax	pmax				
	comp=Z,340nm,4.4s							
KLBR	**Kellerberrin**	**29.45 197**	P	**P**	**18 44 39.8 -0.4**			
	baz=30,SNR=16							
KLBR	**Kellerberrin**	**29.45 197**	P	**P**	**18 44 39.3 -0.9**			
RK1H	**Rockhampton Ha**	**29.92 134**	P	**P**	**18 44 45.5 +1.0**			
	comp=Z,49nm,0.8s							
JOW	**Kunigami**	**30.08 2**	P	**P**	**18 44 44.7 -1.1**			
JOW			IAmb	IAmb	18 44 47.9			
	comp=Z,69nm,1.0s							
JOW	**Kunigami**	**30.08 2**	P	**P**	**18 44 47.6 +1.8**			
	comp=Z,87nm,1.2s							
GSI	**Gunungsitoli**	**30.12 278**	P	**P**	**18 44 45.0 -1.4**			
GSI	**Gunungsitoli**	**30.12 278**	P	**P**	**18 44 46.6 +0.2**			
	comp=Z,118nm,0.9s							
GSI	**Gunungsitoli**	**30.12 278**	P	**P**	**18 44 46.6 +0.2**			
	comp=Z,120nm,0.9s							
MUN	**Mundaring**	**30.28 199**	P	**P**	**18 44 47.6 +0.1**			
	baz=30,SNR=6.0							
BBOO	**Buckleboo**	**30.36 165**	P	**P**	**18 44 47.6 -0.6**			
	baz=30,SNR=91							
BBOO	**Buckleboo**	**30.36 165**	P	**P**	**18 44 47.0 -1.2**			
BBOO			IAmb	IAmb	18 45 58.7			
	comp=Z,49nm,0.8s							
BBOO	**Buckleboo**	**30.36 165**	P	**P**	**18 44 47.9 -0.3**			
RMQ	**Roma**	**30.78 140**	P	**P**	**18 44 52.4 +0.4**			
	baz=31,SNR=4.5							
RMQ	**Roma**	**30.78 140**	P	**P**	**18 44 52.6 +0.6**			
	comp=Z,12nm,0.6s							
NWAO	**Narrogin (SRO)**	**30.85 197**	P	**P**	**18 44 51.5 -1.0**			
NWAO			IAmb	IAmb	18 44 53.4			
	comp=Z,37nm,0.7s							
NWAO	**Narrogin (SRO)**	**30.85 197**	P	**P**	**18 44 51.5 -1.0**			
NWAO			pmax	pmax				
	comp=Z,37nm,0.7s							
NWAO	**Narrogin (SRO)**	**30.85 197**	P	**P**	**18 44 52.5 0.0**			
WHYH	**Whyalla**	**30.98 163**	P	**P**	**18 44 53.7 0.0**			
	comp=Z,44nm,0.6s							
PTPS	**Port Pirie**	**31.24 163**	P	**P**	**18 44 57.9 +2.0**			
	comp=Z,181nm,0.6s							
STKA	**Stephens Creek**	**31.32 156**	P	**P**	**18 44 56.8 0.0**			
	comp=Z,16nm,0.7s,baz=323,slow=9.6,SNR=38							
STKA			LR	LR	18 58 17.5			
	comp=Z,257nm,21.2s,baz=332,slow=38							
	comp=Z,16nm,0.7s							
STKA	**Stephens Creek**	**31.32 156**	P	**P**	**18 44 56.4 -0.4**			
	baz=31,SNR=24							
STKA	**Stephens Creek**	**31.32 156**	P	**P**	**18 44 56.0 -0.8**			
STKA	**Stephens Creek**	**31.32 156**	*i*P	**P**	**18 44 56.2 -0.5**			
STKA	**Stephens Creek**	**31.32 156**	P	**P**	**18 44 57.4 +0.7**			
EIDS	**Eidsvold**	**31.58 136**	P	**P**	**18 44 58.7 -0.4**			
	baz=32,SNR=4.7							
EIDS	**Eidsvold**	**31.58 136**	P	**P**	**18 44 58.2 -0.8**			
EIDS	**Eidsvold**	**31.58 136**	P	**P**	**18 45 01.6 +2.5**			
	comp=Z,16nm,1.3s							
HTT	**Hallett**	**31.76 161**	P	**P**	**18 45 00.4 -0.2**			
	baz=32,SNR=40							
HTT	**Hallett**	**31.76 161**	P	**P**	**18 45 02.3 +1.7**			
CMSA	**Cobar Meteorol**	**32.88 150**	P	**P**	**18 45 10.7 +0.3**			
	baz=33,SNR=23							
CMSA	**Cobar Meteorol**	**32.88 150**	P	**P**	**18 45 11.2 +0.8**			
HNR	**Honiara**	**32.93 102**	LR	LR	19 01 01.0			
	comp=Z,97nm,19.2s,baz=272,slow=41							
TWOA	**Tennyson Woods**	**33.14 163**	P	**P**	**18 45 14.2 +1.6**			
	comp=Z,27nm,0.7s							
JCJ	**Chichijima**	**33.55 24**	P	**P**	**18 45 15.8 -0.4**			
	comp=Z,71nm,0.6s,baz=282,slow=22,SNR=8.0							
JCJ			LR	LR	18 58 01.7			
	comp=Z,49nm,21.1s,baz=228,slow=34							
	comp=Z,71nm,0.6s							
JSU	**Suzuyama**	**34.85 5**	P	**P**	**18 45 26.3 -1.2**			
JSU				**PcP**	**18 47 59.5 +0.1**			
ARMA	**Armidale**	**35.33 142**	P	**P**	**18 45 32.7 +0.9**			
	baz=35,SNR=24							
ARMA	**Armidale**	**35.33 142**	P	**P**	**18 45 32.1 +0.3**			
ARMA			IAmb	IAmb	18 45 33.5			
	comp=Z,15nm,0.6s							
ARMA	**Armidale**	**35.33 142**	P	**P**	**18 45 32.8 +1.0**			
CMAR	**Chiang Mai Arr**	**35.43 309**	P	**P**	**18 45 33.7 +1.1**			
	comp=Z,3.5nm,0.8s,baz=139,slow=7.5,SNR=26							
CMAR			PcP	**PcP**	**18 48 02.9 +1.6**			
	comp=Z,4.3nm,0.8s,baz=168,slow=2.3,SNR=15							
CMAR			ScP	**ScP**	**18 51 43.0 +1.4**			
	comp=Z,4.0nm,0.8s,baz=158,slow=3.1,SNR=21							
CMAR			LR	LR	19 01 32.0			
	comp=Z,130nm,21.6s,baz=115,slow=39							
	comp=Z,3.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**35.43 309**	P	**P**	**18 45 32.4 -0.2**			
CMAR			PcP	**PcP**	**18 48 01.9 +0.6**			
CHTO	**Chiang Mai**	**35.63 309**	P	**P**	**18 45 35.9 +1.5**			
	comp=Z,9.1nm,1.0s							
CHTO	**Chiang Mai**	**35.63 309**	P	**P**	**18 45 35.1 +0.8**			
CHTO			pP	**pP**	**18 45 50.7 -0.1**			
ARPS	**Mount Arapiles**	**35.77 160**	P	**P**	**18 45 35.6 +0.3**			
	baz=36,SNR=28							
ARPS	**Mount Arapiles**	**35.77 160**	P	**P**	**18 45 35.9 +0.5**			
GYA	**Guiyang**	**35.81 327**	⇑P	**P**	**18 45 37.1 +1.2**			
GYA			pP	pP	18 45 53.1 +1.1			
GYA			pmax	pmax				
	comp=Z,28nm,1.2s							
WHN	**Wuhan**	**35.98 341**	⇑P	**P**	**18 45 38.8 +1.7**			
WHN			pP	**pP**	**18 45 55.3 +2.1**			
WHN			pmax	pmax				
	comp=Z,86nm,1.2s							
NJ2	**Nanjing**	**36.18 348**	*eP*	**P**	**18 45 39.9 +1.0**			
NJ2			pmax	pmax				
	comp=Z,27nm,1.0s							
KMI	**Kunming**	**37.08 321**	⇓P	**P**	**18 45 49.5 +2.6**			
KMI			pP	pP	18 46 05.0 +1.7			
KMI			pmax	pmax				
	comp=Z,16nm,1.3s							
BRAT	**Ballarat**	**37.22 158**	P	**P**	**18 45 49.3 +1.7**			
	comp=Z,29nm,0.8s							
JMN	**Monobe**	**37.45 9**	P	**P**	**18 45 49.0 -0.7**			
JMN			IAmb	IAmb	18 45 53.9			
	comp=Z,23nm,0.8s							
CAN	**Canberra**	**37.55 150**	P	**P**	**18 45 50.6 0.0**			
CAN			IAmb	IAmb	18 45 52.7			
	comp=Z,37nm,0.6s							
CAN	**Canberra**	**37.55 150**	P	**P**	**18 45 50.6 0.0**			
CAN			pmax	pmax				
	comp=Z,37nm,0.6s							
CAN	**Canberra**	**37.55 150**	P	**P**	**18 45 52.0 +1.4**			
CAN	**Canberra**	**37.55 150**	P	**P**	**18 45 51.6 +1.0**			
CAN			pP	**pwP**	**18 46 09.0 -1.3**			
ENH	**Enshi**	**37.60 334**	P	**P**	**18 45 51.8 +0.8**			
ENH			pP	**pwP**	**18 46 09.1 -0.2**			
CNB	**Canberra Magne**	**37.73 150**	P

SEHB IAmb IAmb 18 46 25.9
comp=Z,43nm,1.1s
HNS HongShan 42.27 345 ⇑P **P** **18 46 29.9 +0.3**
HNS pmax pmax
comp=Z,30nm,1.1s
JSD Sado 42.47 13 P **P** **18 46 30.7 -0.5**
JSD IAmb IAmb 18 46 33.9
comp=Z,27nm,0.7s
JSD **PcP** **18 48 21.3 -1.7**
MOO Moorlands 42.71 158 P **P** **18 46 34.5 +1.4**
baz=43,SNR=3.7
JMM Marumori 42.93 16 P **P** **18 46 34.6 -0.2**
TIY Taiyuan 43.20 343 *e*P **P** **18 46 37.5 +0.3**
TIY pmax pmax
comp=Z,19nm,0.5s
BJT Baijiatuau 44.42 348 P **P** **18 46 46.8 -0.1**
BJI Beijing 44.44 348 P **P** **18 46 46.9 -0.1**
BJI pmax pmax
comp=Z,22nm,1.0s
LZH Lanzhou 45.02 333 ⇓P **P** **18 46 53.4 +1.5**
LZH pmax pmax
comp=Z,62nm,0.9s
SNY Shenyang 45.16 356 ⇓P **P** **18 46 52.4 -0.3**
SNY pmax pmax
comp=Z,20nm,0.5s
JTM Tenmabayashi 45.75 15 P **P** **18 46 57.0 -0.3**
JTM IAmb IAmb 18 46 59.7
comp=Z,57nm,1.1s
JTM PcP **PcP** **18 48 35.1 +1.0**
MSHR Mys Shultsa 45.91 4*ce*P **P** **18 46 59.9 +1.3**
MSHR pmax pmax
comp=Z,37nm,0.9s
HHC Hu-ho-hao-te 46.36 343 *e*P **P** **18 47 05.6 +3.3**
HHC pmax pmax
comp=Z,47nm,1.0s
HHC pmax pmax
comp=Z,430nm,5.5s
VLA Vladivostok 46.50 5*c i*P **P** **18 47 03.1 -0.1**
VLA pmax pmax
comp=Z,53nm,1.0s
CN2 Changchun 47.03 358 *e*P **P** **18 47 08.0 +0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
USRK Ussuriysk Ar. 47.58 5 P **P** **18 47 12.7 +1.0**
comp=Z,33nm,0.7s,baz=187,slow=6.6,SNR=41
USRK LR LR 19 04 37.4
comp=Z,97nm,21.7s,baz=230,slow=33
comp=Z,33nm,0.7s
USRK Ussuriysk Ar. 47.58 5 P **P** **18 47 12.3 +0.7**
USRK PcP **PcP** **18 48 40.6 +0.1**
PALK Pallekele 47.74 283 LR LR 19 07 58.5
comp=Z,141nm,21.4s,baz=213,slow=37
LSA Lhasa 47.80 316 P **P** **18 47 15.8 +1.7**
MDJ Mudanjiang 47.86 2 P **P** **18 47 14.9 +1.1**
MDJ pmax pmax
comp=Z,64nm,1.1s
MDJ pmax pmax
comp=Z,120nm,4.3s
MDJ Mudanjiang 47.86 2 P **P** **18 47 14.8 +1.0**
comp=Z,62nm,1.1s
MDJ Mudanjiang 47.86 2 P **P** **18 47 14.8 +1.0**
XLT XiLinHaoTe 48.18 349 ⇑*i*P **P** **18 47 16.4 0.0**
XLT pP pP 18 47 33.0 +0.1
XLT sP sP 18 47 38.1 -2.3
XLT PP **PP** **18 49 06.4 -2.9**
XLT S **S** **18 54 09.8 -0.9**
XLT sS sS 18 54 37.4 -0.9
XLT ScS **ScS** **18 57 01.1 -2.1**
XLT pmax pmax
comp=Z,17nm,0.8s
XLT pmax pmax
comp=Z,190nm,7.6s
XLT LR LR
comp=Z,16nm,17.3s
XLT LR LR
comp=Z,140nm,14.1s
XLT LR LR
comp=Z,210nm,15.9s
ODAN Odare 48.93 310 *e*P **P** **18 47 22.3 -0.3**
BNX BinXian 48.94 0 ⇑P **P** **18 47 21.5 -0.6**
BNX pmax pmax
comp=Z,17nm,0.9s
BNX pmax pmax
comp=Z,190nm,9.9s
TAPN Taplejung 48.95 311 *e*P **P** **18 47 23.1 +0.3**
comp=Z,31nm,0.4s
RAMN Ramite 49.58 310 *e*P **P** **18 47 28.0 +0.4**
comp=Z,215nm,0.9s
GTA Gaotai 49.58 332 ⇑P **P** **18 47 28.0 +0.7**
GTA pP pP 18 47 43.3 -0.8
GTA sP sP 18 47 50.1 -1.5
GTA PcP **PcP** **18 48 49.6 +1.5**
GTA ScP **ScP** **18 52 40.1 +2.2**
GTA PcS **PcS** **18 52 41.8 -3.1**
GTA pmax pmax
comp=Z,21nm,1.2s
GOMU GeErMu 49.76 325 P **P** **18 47 30.3 +1.3**
GOMU pmax pmax
comp=Z,6.0nm,1.3s
GOMU pmax pmax
comp=Z,99nm,4.1s
JIRN Jiri 50.26 311 *e*P **P** **18 47 33.3 +0.4**
comp=Z,75nm,0.8s
GUN Gumba 50.62 311 *e*P **P** **18 47 36.0 +0.4**
PKI Pulchoki 50.80 310 *e*P **P** **18 47 36.9 -0.1**
PKIN Phulchoki 50.82 310 *e*P **P** **18 47 37.0 0.0**
comp=Z,26nm,0.6s
KKN Kakani 51.02 310 *e*P **P** **18 47 38.7 +0.3**
DMN Daman 51.06 310 *e*P **P** **18 47 38.9 +0.1**
GKN Gorkha 51.61 310 *e*P **P** **18 47 43.0 +0.2**
comp=Z,72nm,0.7s
YSS Yuzh-Sakhalins 51.97 13 P **P** **18 47 44.0 -0.9**
YSS IAmb IAmb 18 47 46.1
comp=Z,82nm,1.9s
YSS PcP **PcP** **18 48 56.9 +0.4**
YSS Yuzh-Sakhalins 51.97 13 *i*P **P** **18 47 45.0 +0.2**
YSS pmax pmax
comp=Z,34nm,1.9s
HYBB Hyderabad (bro 52.39 295 *e*P **P** **18 47 47.5 -1.1**
HYBB epP **pP** **18 48 03.9 -2.0**
HYBB eS **S** **18 55 08.6 -1.3**
DANN Dangsing 52.46 310 *e*P **P** **18 47 49.5 +0.3**
comp=Z,168nm,0.7s
KLR Kul'dur 52.57 4 P **P** **18 47 49.9 +0.6**
comp=Z,13nm,1.1s,baz=224,slow=4.8,SNR=21
KLR PcP **PcP** **18 48 59.7 +0.9**
comp=Z,13nm,0.8s,baz=194,slow=4.1,SNR=14
KLR LR LR 19 07 54.3
comp=Z,90nm,20.5s,baz=210,slow=33
comp=Z,13nm,1.1s
KLR Kul'dur 52.57 4*ce*P **P** **18 47 49.9 +0.6**
KLR pmax pmax
comp=Z,23nm,1.1s
DGTI Dogotuki 53.02 108 P **P** **18 47 55.3 +2.0**
ULN Ulaanbaatar 54.08 343 P **P** **18 48 00.2 -0.4**
ULN IAmb IAmb 18 48 02.3
comp=Z,37nm,1.1s
ULN PcP **PcP** **18 49 04.9 +0.1**
ULN Ulaanbaatar 54.08 343*ce*P **P** **18 48 00.9 +0.3**
ULN pmax pmax
comp=Z,40nm,1.1s
ULN Ulaanbaatar 54.08 343 P **P** **18 48 01.3 +0.7**
ULN pP **pP** **18 48 18.2 +0.6**
SONM Songino Array 54.24 343 P **P** **18 48 02.1 +0.3**
comp=Z,15nm,0.9s,baz=162,slow=8.0,SNR=67
SONM PcP **PcP** **18 49 06.1 +0.8**
comp=Z,6.0nm,0.7s,baz=166,slow=3.8,SNR=8.2
SONM ScP **ScP** **18 52 58.9 +1.0**
comp=Z,0.6nm,0.7s,baz=166,slow=2.6,SNR=3.7
comp=Z,15nm,0.9s
SONM Songino Array 54.24 343 P **P** **18 48 01.6 -0.2**
SONM IAmb IAmb 18 48 03.4
comp=Z,25nm,1.1s
SONM PcP **PcP** **18 49 05.4 0.0**
GRNR Gornyy 54.53 7⇑*i*P **P** **18 48 04.9 +1.2**
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=E,70nm,14.0s
TYV Tymovskoe 55.64 12 *e*P **P** **18 48 08.9 -2.7**
TYV pmax pmax
comp=Z,100nm,3.5s
TYV pmax pmax
comp=Z,10.0nm,1.2s
RPZ Rata Peaks 55.67 143 LR LR 19 11 42.7
comp=Z,97nm,18.3s,baz=300,slow=36
RPZ Rata Peaks 55.67 143 P **P** **18 48 12.3 +0.3**
RPZ IAmb IAmb 18 48 15.7
comp=Z,46nm,1.1s
TUWZ Tuamarina 56.30 139 P **P** **18 48 16.3 -0.3**
ZEA Zeya 56.95 360 *e*P **P** **18 48 21.2 +0.3**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=N,100nm,15.0s
BKZ Black Stump Fm 56.99 135 P **P** **18 48 20.9 -0.7**
BKZ Black Stump Fm 56.99 135 P **P** **18 48 22.3 +0.7**
ZAK Zakamensk 57.45 342 *e*P **P** **18 48 23.8 -0.8**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
WMQ Urumqi 58.97 327 *e*P **P** **18 48 36.4 +1.1**
WMQ pP pP 18 48 53.3 +0.8
WMQ pmax pmax
comp=Z,46nm,0.9s
MOY Mondy 59.28 341 *e*P **P** **18 48 38.1 +0.7**
MOY pmax pmax
comp=Z,32nm,1.5s
PEA0B Petropavlovsk- 61.83 20 P **P** **18 48 55.5 +1.0**
PEA0B IAmb IAmb 18 48 57.2
comp=Z,20nm,0.9s
PEA0B PcP **PcP** **18 49 35.2 +0.2**
PEA0B Petropavlovsk- 61.83 20*ce*P **P** **18 48 55.5 +1.0**
PETK Petropavlovsk- 61.83 20 P **P** **18 48 55.9 +1.3**
comp=Z,14nm,0.9s,baz=205,slow=6.6,SNR=23
PETK PcP **PcP** **18 49 35.5 +0.4**
comp=Z,10nm,0.8s,baz=194,slow=5.6,SNR=8.1
comp=Z,14nm,0.9s
PETK Petropavlovsk- 61.83 20 P **P** **18 48 54.9 +0.3**
PETK PcP **PcP** **18 49 35.0 0.0**
BOD Bodaibo 61.98 352 *e*P **P** **18 48 56.3 +0.9**
BOD pmax pmax
comp=Z,53nm,1.1s
PET Petropavlovsk 62.09 21 P **P** **18 48 56.9 +0.6**
PET IAmb IAmb 18 48 58.8
comp=Z,44nm,1.1s
PET Petropavlovsk 62.09 21 *e*P **P** **18 48 57.9 +1.6**
PET pmax pmax
comp=Z,53nm,1.1s
PET Petropavlovsk 62.09 21 P **P** **18 48 58.4 +2.1**
comp=Z,161nm,1.1s
PET Petropavlovsk 62.09 21 P **P** **18 48 58.1 +1.8**
ZSN Zaisan 62.86 329 *i*P **P** **18 49 01.1 -0.5**
ZSN Zaisan 62.86 329 *i*P **P** **18 49 01.1 -0.5**
baz=329
NIL Nilore 62.89 311 P **P** **18 49 01.0 -1.1**
NIL IAmb IAmb 18 49 02.4
comp=Z,14nm,0.7s
NIL Nilore 62.89 311 P **P** **18 49 01.0 -1.1**
NIL pmax pmax
comp=Z,14nm,0.7s
NIL Nilore 62.89 311 P **P** **18 49 02.0 -0.1**
SHLS Shalkode 63.28 323 *i*P **P** **18 49 03.0 -1.6**
SHLS pmax pmax
comp=Z,15nm,0.9s
SHLS Shalkode 63.28 323 *i*P **P** **18 49 03.0 -1.6**
comp=Z,15nm,0.9s,baz=323
UZB Uzynbulak 63.55 322 *e*P **P** **18 49 06.4 0.0**
UZB Uzynbulak 63.55 322 *e*P **P** **18 49 06.5 0.0**
baz=322
KSH Kashi 63.61 318 P **P** **18 49 08.3 +1.4**
KSH pP pP 18 49 24.2 -0.4
KSH sP sP 18 49 31.2 -0.9
KSH PcP **PcP** **18 49 44.8 +2.1**
KSH pmax pmax
comp=Z,20nm,0.9s
DRV Dumont d'Urvil 63.75 174 P **P** **18 49 06.1 -1.0**
MK31 Makanchi Array 63.80 327 P **P** **18 49 07.2 -0.7**
MK31 IAmb IAmb 18 49 08.9
comp=Z,23nm,0.9s
MK31 PcP **PcP** **18 49 41.5 -1.7**
MK31 Makanchi Array 63.80 327 *i*P **P** **18 49 07.5 -0.3**
MK31 pmax pmax
comp=Z,33nm,0.8s
MKAR Makanchi Array 63.80 327 P **P** **18 49 07.9 +0.1**
comp=Z,27nm,0.8s,baz=127,slow=8.1,SNR=211
MKAR PcP **PcP** **18 49 43.8 +0.6**
comp=Z,8.6nm,0.8s,baz=136,slow=4.7,SNR=7.6
comp=Z,27nm,0.8s
MKAR Makanchi Array 63.80 327 P **P** **18 49 07.4 -0.4**
MKAR PcP **PcP** **18 49 41.8 -1.4**
SATY Saty 63.87 322 *i*P **P** **18 49 08.6 0.0**
SATY pmax pmax
comp=Z,18nm,0.8s
SATY Saty 63.87 322 *i*P **P** **18 49 08.6 0.0**
comp=Z,18nm,0.8s,baz=322
ZHN Zhinishke 63.92 322 *e*P **P** **18 49 08.7 -0.1**
ZHN Zhinishke 63.92 322 *e*P **P** **18 49 08.7 -0.1**
baz=322
KPKS Kokpek 63.93 323 *i*P **P** **18 49 08.6 -0.2**
KPKS pmax pmax
comp=Z,17nm,0.8s
KPKS Kokpek 63.93 323 *i*P **P** **18 49 08.7 -0.2**
comp=Z,17nm,0.8s,baz=322
MAKZ Makanchi 63.98 327 P **P** **18 49 08.2 -0.8**
MAKZ IAmb IAmb 18 49 10.0
comp=Z,55nm,1.4s
MAKZ Makanchi 63.98 327 P **P** **18 49 08.5 -0.5**
MAKZ Makanchi 63.98 327 P **P** **18 49 08.9 -0.1**
MAKZ pP **pP** **18 49 28.1 +1.5**
MDOK Medeo 64.77 322 *i*P **P** **18 49 14.7 +0.3**
MDOK Medeo 64.77 322 *i*P **P** **18 49 14.7 +0.3**
baz=322
ARXS Arharly 64.86 323 *e*P **P** **18 49 14.0 -0.9**
AAA Alma-Ata 64.88 322 *e*P **P** **18 49 14.9 -0.1**
AAA pmax pmax
comp=Z,25nm,1.3s
AAA Alma-Ata 64.88 322 *e*P **P** **18 49 14.1 -0.9**
comp=Z,25nm,1.3s,baz=322
TDK Taldyqorghan 64.94 324 *i*P **P** **18 49 18.6 +3.2**
TDK pmax pmax
comp=Z,38nm,1.1s
TDK Taldyqorghan 64.94 324 *i*P **P** **18 49 18.6 +3.2**
comp=Z,38nm,1.1s,baz=324
YAK Yakutsk 65.29 1 P **P** **18 49 17.2 +0.1**
comp=Z,57nm,0.7s,baz=348,slow=0.8,SNR=70
YAK LR LR 19 21 09.2
comp=Z,57nm,19.7s,baz=170,slow=39
comp=Z,57nm,0.7s
YAK Yakutsk 65.29 1 P **P** **18 49 17.4 +0.2**
YAK PcP **PcP** **18 49 48.8 -0.1**
YAK Yakutsk 65.29 1*c i*P **P** **18 49 17.6 +0.4**
YAK *e**PP **pP** **18 49 37.1 +2.4**
YAK *e* 18 49 49.2
YAK *e* 18 51 38.5
YAK eS **S** **18 57 55.5 0.0**
YAK *e**SS sS 18 58 33.9 +10
YAK *e* 18 59 09.1
YAK eSS **SS** **19 02 08.9 -0.8**
YAK pmax pmax
comp=Z,88nm,0.8s
YAK pmax pmax
comp=N,36nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.0s
YAK pmax pmax
comp=Z,50nm,3.0s
YAK pmax pmax
comp=N,42nm,2.6s
YAK pmax pmax
comp=E,43nm,2.7s
YAK smax smax
comp=N,81nm,4.3s
YAK smax smax
comp=E,19nm,2.0s
YAK Yakutsk 65.29 1 P **P** **18 49 17.7 +0.6**
YAK pP **pP** **18 49 37.3 +2.6**
MA2 Magadan 65.47 13 P **P** **18 49 18.5 +0.2**
comp=E,23nm,0.7s,baz=198,slow=4.8,SNR=14
comp=E,23nm,0.7s
MA2 Magadan 65.47 13*ce*P **P** **18 49 19.9 +1.5**
MA2 pmax pmax
comp=Z,35nm,0.8s
MA2 Magadan 65.47 13 P **P** **18 49 20.0 +1.5**
MA2 Magadan 65.47 13 P **P** **18 49 19.9 +1.5**
TKM2 Tokmak 2 65.55 321 P **P** **18 49 19.9 +0.3**
SNR=22
TKM2 Tokmak 2 65.55 321 *i*P **P** **18 49 19.5 -0.1**
TKM2 pmax pmax
comp=Z,19nm,0.7s
KUU Kurty 65.59 322 *i*P **P** **18 49 19.2 -0.4**
KUU pmax pmax
comp=Z,40nm,0.7s
KUU Kurty 65.59 322 *i*P **P** **18 49 19.2 -0.4**
comp=Z,40nm,0.7s,baz=322
KBK Karagaybulak 65.83 320 P **P** **18 49 21.9 +0.5**
SNR=6.5
AAK Ala-Archa 66.11 320 P **P** **18 49 23.8 +0.6**
SNR=5.9
AAK Ala-Archa 66.11 320 P **P** **18 49 22.7 -0.5**
AAK Ala-Archa 66.11 320*c i*P **P** **18 49 23.7 +0.6**
AAK pmax pmax
comp=Z,23nm,1.2s
AAK Ala-Archa 66.11 320 P **P** **18 49 23.6 +0.4**
AML Almayashu 66.39 319 P **P** **18 49 25.6 +0.4**
SNR=15
USP Ospenovka 66.42 321 P **P** **18 49 25.1 +0.2**
SNR=21
SGDS Sogindy 66.43 321 *i*P **P** **18 49 24.4 -0.6**
SGDS Sogindy 66.43 321 *i*P **P** **18 49 24.4 -0.6**
baz=321
KBL Kabul 66.45 310 P **P** **18 49 24.4 -1.1**
KBL IAmb IAmb 18 49 26.3
comp=Z,40nm,1.5s
KBL Kabul 66.45 310 P **P** **18 49 24.4 -1.1**
KBL pmax pmax
comp=Z,40nm,1.5s
EKS2 Erkin-Say 66.59 320 P **P** **18 49 26.7 +0.6**
SNR=24
SEM Semipalatinsk 67.08 329 *e*P **P** **18 49 27.7 -1.5**
SEM Semipalatinsk 67.08 329 *e*P **P** **18 49 27.8 -1.5**
baz=329
ZAA0 Zalesovo Array 67.22 334 P **P** **18 49 28.4 -1.3**
ZAA0 IAmb IAmb 18 49 30.0
comp=Z,30nm,1.0s
ZALV Zalesovo Beam 67.22 334 P **P** **18 49 28.9 -0.9**
comp=Z,28nm,1.0s,baz=108,slow=4.8,SNR=79
ZALV PcP **PcP** **18 49 58.2 +1.1**
comp=Z,3.4nm,0.8s,baz=81,slow=4.7,SNR=3.7
comp=Z,28nm,1.0s
ZALV Zalesovo Beam 67.22 334 P **P** **18 49 28.4 -1.3**
ZALV Zalesovo Beam 67.22 334 *i*P **P** **18 49 28.8 -0.9**
ZALV pmax pmax
comp=Z,29nm,1.0s
GAR Garm 67.28 315 P **P** **18 49 29.6 -0.9**
BTLS Baital 67.59 322 *i*P **P** **18 49 31.5 -0.7**
BTLS Baital 67.59 322 *i*P **P** **18 49 31.5 -0.7**
baz=322
CHGR Chuyangaron 67.96 314 P **P** **18 49 33.6 -1.3**
CHGR Chuyangaron 67.96 314 P **P** **18 49 33.6 -1.3**
CHGR pmax pmax
comp=Z,76nm,1.2s
KURBB Kurchatov Arra 68.09 329 P **P** **18 49 34.6 -0.7**
KURK Kurchatov 68.10 329 P **P** **18 49 34.8 -0.5**
KURK Kurchatov 68.10 329*ce*P **P** **18 49 35.0 -0.3**
KURK pmax pmax
comp=Z,92nm,1.3s
KURK Kurchatov 68.10 329 ⇑P **P** **18 49 35.2 -0.1**
DZA Taraz 68.29 319 *e*P **P** **18 49 36.1 -0.6**
DZA Taraz 68.29 319 *e*P **P** **18 49 36.1 -0.6**
baz=319
SHEM Shemya Is, Ala 68.35 28 LR LR 19 14 55.6
comp=Z,95nm,21.8s,baz=222,slow=32
IUG Iuzhnay 68.82 318 *i*P **P** **18 49 39.9 -0.2**
IUG Iuzhnay 68.82 318 *i*P **P** **18 49 39.9 -0.2**
baz=318
SEY Seymchan 68.83 12 P **P** **18 49 41.5 +1.8**
comp=Z,36nm,0.7s,baz=212,slow=5.3,SNR=200
comp=Z,36nm,0.7s
SEY Seymchan 68.83 12*ce*P **P** **18 49 41.3 +1.7**
SEY pmax pmax
comp=Z,47nm,0.8s
KK31 Karatay Array 68.92 319 P **P** **18 49 39.5 -1.2**
KK31 Karatay Array 68.92 319 *i*P **P** **18 49 39.7 -0.9**
KKAR Karatay Array 68.92 319 P **P** **18 49 39.5 -1.2**
KKAR Karatay Array 68.92 319 P **P** **18 49 39.5 -1.2**
KKAR pmax pmax
comp=Z,19nm,1.1s
BRZS Berezniki 70.88 326 *i*P **P** **18 49 51.9 -0.6**
BRZS Berezniki 70.88 326 *i*P **P** **18 49 51.9 -0.6**
baz=326
CCD Concordia, Ant 71.66 181 P **P** **18 49 57.0 -0.3**
BRVK Borovoye 73.71 328 P **P** **18 50 08.6 -0.7**
BRVK IAmb IAmb 18 50 10.1
comp=Z,28nm,1.0s
BRVK Borovoye 73.71 328 *i*P **P** **18 50 08.6 -0.7**
BRVK pmax pmax
comp=Z,27nm,1.0s
TIXI Tiksi 74.93 0 P **P** **18 50 16.4 +0.4**
comp=Z,25nm,0.8s,baz=92,slow=21,SNR=14
comp=Z,25nm,0.8s
TIXI Tiksi 74.93 0 P **P** **18 50 15.0 -1.0**
TIXI IAmb IAmb 18 50 17.2
comp=Z,25nm,0.8s
TIXI Tiksi 74.93 0*ce*P **P** **18 50 16.2 +0.2**
TIXI pmax pmax
comp=Z,28nm,0.8s
GEYT Alibeck 75.89 310 P **P** **18 50 21.7 -0.7**
comp=Z,10nm,1.0s,baz=188,slow=9.0,SNR=13
comp=Z,10nm,1.0s
GEYT Alibeck 75.89 310 P **P** **18 50 21.6 -0.7**
GYA0B ALIBECK ARRAY 75.89 310 P **P** **18 50 21.8 -0.5**
BILL Bilibino 76.27 14 *i*P **P** **18 50 24.0 +0.2**
BILL *i* 18 50 34.8
BILL pmax pmax
comp=Z,6.0nm,1.0s
VNDA Vanda 76.31 173 P **P** **18 50 23.0 -0.8**
comp=Z,15nm,0.8s,baz=317,slow=6.3,SNR=86
VNDA LR LR 19 23 50.4
comp=Z,116nm,18.4s,baz=316,slow=36
comp=Z,15nm,0.8s
VNDA Vanda 76.31 173 P **P** **18 50 22.3 -1.5**
SBA Scott Base 77.22 172 P **P** **18 50 28.4 -0.6**
SBA Scott Base 77.22 172 P **P** **18 50 28.4 -0.6**
SBA pmax pmax
comp=Z,15nm,0.8s
MAW Mawson 77.32 201 P **P** **18 50 30.9 +1.2**
comp=Z,2.7nm,0.8s,baz=59,slow=8.1,SNR=5.2
MAW LR LR 19 23 04.1
comp=Z,41nm,18.5s,baz=51,slow=34
comp=Z,2.7nm,0.8s
NIKH Nikolski High 77.33 34 P **P** **18 50 30.5 +0.6**
baz=247
NRIK Noril'sk 77.47 347 P **P** **18 50 31.2 +0.7**
comp=Z,21nm,0.7s,baz=136,slow=5.0,SNR=29
comp=Z,21nm,0.7s
NRIK Noril'sk 77.47 347 P **P** **18 50 29.9 -0.6**
NRIK IAmb IAmb 18 50 32.2
comp=Z,36nm,0.9s
NRIK Noril'sk 77.47 347*ce*P **P** **18 50 31.0 +0.5**
NRIK pmax pmax
comp=Z,38nm,0.9s
AB31 Akbulak array 78.08 322 *i*P **P** **18 50 33.0 -1.2**
ABKAR Akbulak array 78.08 322 P **P** **18 50 33.1 -1.1**
ABKAR Akbulak array 78.08 322 P **P** **18 50 33.0 -1.2**
SPIA Saint Paul Isl 78.33 30 P **P** **18 50 35.4 -0.1**
baz=245
UNV Unalaska Valle 78.96 34 P **P** **18 50 39.3 +0.3**
baz=248
GAMB Gambell 80.66 23 P **P** **18 50 49.7 +1.8**
baz=242
ARU Arti 81.29 328 P **P** **18 50 50.2 -1.2**
ARU IAmb IAmb 18 50 53.8
comp=Z,48nm,1.2s
ARU Arti 81.29 328*c i*P **P** **18 50 50.3 -1.2**
ARU *PP **pP** **18 51 04.7 -5.1**
ARU 18 53 55.7
ARU S **S** **19 00 57.8 +1.1**
ARU pmax pmax
comp=Z,47nm,1.2s
S12K Black Hills 82.01 33 P **P** **18 50 55.5 +0.2**
baz=252
SDPT Sand Point 82.77 33 P **P** **18 50 59.0 -0.2**
SDPT Sand Point 82.77 33 P **P** **18 50 59.4 +0.2**
baz=253,SNR=5.8
TNA Tin City 82.91 22 P **P** **18 50 59.0 -0.8**
TNA IAmb IAmb 18 51 02.6
comp=Z,43nm,1.0s
TNA Tin City 82.91 22 P **P** **18 51 01.1 +1.3**
baz=246
CNBA Chernabura Isl 83.11 34 P **P** **18 51 00.8 -0.2**
CNBA IAmb IAmb 18 51 03.0
comp=Z,31nm,0.8s
CHNA Chernabura Isl 83.11 34 P **P** **18 51 01.7 +0.7**
baz=254

LKRN Lenkeran, Azer 83.22 309 P P 18 51 02.1 +0.1
ANM Nome 83.50 24 P P 18 51 04.6 +1.7
baz=248
S14K Fog Glacier 83.53 32 P P 18 51 04.2 +0.9
baz=254
RAYN Ar Rayn 83.88 294 P P 18 51 05.2 -0.6
RAYN Ar Rayn 83.88 294 P P 18 51 05.2 -0.6
RAYN pmax pmax
comp=Z,10.0nm,0.7s
CHGN Chignik 84.15 33 P P 18 51 06.9 +0.7
baz=255
SEKA Sheki 84.83 312 P P 18 51 10.4 +0.1
MNGR Mingechevir, A 84.85 311 P P 18 51 10.3 +0.1
P16K Nushagak River 85.07 30 P P 18 51 12.4 +1.5
baz=255,SNR=7.0
N16K Nishlik Lake 85.08 29 P P 18 51 13.2 +2.2
baz=254,SNR=29
O16K Kokwok River B 85.17 29 P P 18 51 12.7 +1.3
baz=255,SNR=22
GANJ Ganja 85.40 311 P P 18 51 13.0 -0.1
CHIR Chirikof Islan 85.55 33 P P 18 51 13.6 +0.2
baz=257
R17K Ugashik Creek 85.55 32 P P 18 51 13.5 +0.1
baz=257,SNR=6.7
Q16K King Salmon 85.66 31 P P 18 51 14.5 +0.7
baz=256
O17K Koliganek Bris 85.70 29 P P 18 51 15.6 +1.5
baz=256,SNR=14
NAX Nakhchivan 85.83 310 P P 18 51 15.1 -0.2
P17K Kvichak River 85.89 30 P P 18 51 15.7 +0.7
baz=256
BELG Belogornoye 86.42 323 *c i* P P 18 51 17.2 -0.5
BELG pmax pmax
comp=Z,18nm,1.0s
SII Sitkinak Islan 86.49 33 P P 18 51 18.9 +0.8
SII Sitkinak Islan 86.49 33 P P 18 51 19.6 +1.6
baz=258,SNR=14
N18K Kilae Creek 86.50 29 P P 18 51 17.8 -0.2
N18K IAmb IAmb 18 51 20.9
comp=Z,26nm,1.4s
N18K Kilae Creek 86.50 29 P P 18 51 19.3 +1.3
baz=257,SNR=6.2
QSPA South Pole Qui 86.54 180 P P 18 51 16.2 -2.0
QSPA IAmb IAmb 18 51 18.9
comp=Z,21nm,0.8s
KIRV Kirov 86.62 329 *ce* P P 18 51 17.9 -0.7
O18K Koktuh Hills 86.65 30 P P 18 51 19.5 +0.8
baz=257
SVW2 Sparrevohn 86.75 28 P P 18 51 19.5 +0.3
SVW2 IAmb IAmb 18 51 21.3
comp=Z,12nm,0.8s
TTA Tatalina 86.97 26 P P 18 51 20.5 +0.2
TTA IAmb IAmb 18 51 22.3
comp=Z,16nm,0.8s
TTA Tatalina 86.97 26 P P 18 51 20.5 +0.2
TTA pmax pmax
comp=Z,16nm,0.8s
TTA Tatalina 86.97 26 P P 18 51 20.8 +0.4
baz=257,SNR=16
GCSA Galena City Sc 87.03 25 P P 18 51 21.3 +0.8
baz=256
OHAK Old Harbor 87.10 32 P P 18 51 21.3 +0.4
OHAK Old Harbor 87.10 32 P P 18 51 22.1 +1.1
baz=259,SNR=22
N19K Bonanza Creek 87.21 29 P P 18 51 22.7 +1.2
N19K IAmb IAmb 18 51 23.9
comp=Z,16nm,0.8s
N19K Bonanza Creek 87.21 29 P P 18 51 22.6 +1.0
baz=258,SNR=11
Q19K Cape Douglas, 87.24 31 P P 18 51 21.5 -0.2
baz=259
L19K White Mountain 87.32 27 P P 18 51 22.8 +0.8
L19K IAmb IAmb 18 51 24.3
comp=Z,20nm,0.8s
L19K White Mountain 87.32 27 P P 18 51 23.2 +1.2
baz=258,SNR=19
M19K Big River Lodg 87.48 28 P P 18 51 23.7 +0.9
M19K IAmb IAmb 18 51 29.2
comp=Z,18nm,0.8s
M19K Big River Lodg 87.48 28 P P 18 51 23.8 +1.1
baz=258,SNR=17
ZEI Tsey 87.49 313 *eP* P 18 51 23.4 -0.1
ZEI pmax pmax
comp=Z,18nm,1.0s
KDAK Kodiak Island 87.58 32 P P 18 51 23.7 +0.5
KDAK Kodiak Island 87.58 32 P P 18 51 23.7 +0.5
KDAK pmax pmax
comp=Z,36nm,1.0s
KDAK Kodiak Island 87.58 32 P P 18 51 24.4 +1.2
baz=260
P19K Oil Pt 87.59 30 P P 18 51 23.6 +0.3
baz=259
GEVA Gevas 87.61 308 P P 18 51 23.8 -0.3
ONI Oni 87.79 313 P P 18 51 24.3 -0.4
ONI Oni 87.79 313 P P 18 51 24.3 -0.4
ONI pmax pmax
comp=Z,6.0nm,0.7s
Q20K Shuyak Island 87.82 31 P P 18 51 24.0 -0.4
baz=260
L20K Farewell, AK 87.83 27 P P 18 51 24.7 +0.3
baz=258,SNR=22
KARS Kars 87.85 311 P P 18 51 24.9 -0.3
KARS Kars 87.85 311 P P 18 51 24.9 -0.3
KARS pmax pmax
comp=Z,105nm,1.2s
K20K Telida 87.92 26 P P 18 51 24.6 -0.2
K20K IAmb IAmb 18 51 27.0
comp=Z,16nm,0.9s
K20K Telida 87.92 26 P P 18 51 25.4 +0.6
baz=258,SNR=13
O20K Slope Mountain 87.97 30 P P 18 51 25.2 0.0
baz=260
RSO Redoubt South 87.97 29 P P 18 51 24.5 -0.9
J20K Nowinta River 88.06 25 P P 18 51 25.6 +0.2
J20K IAmb IAmb 18 51 27.6
comp=Z,15nm,1.0s
J20K Nowinta River 88.06 25 P P 18 51 26.1 +0.7
baz=258,SNR=10
M20K Styx River 88.06 28 P P 18 51 25.8 +0.2
M20K IAmb IAmb 18 51 27.6
comp=Z,18nm,0.8s
M20K Styx River 88.06 28 P P 18 51 26.2 +0.6
baz=259,SNR=18
KBZ Khabaz 88.32 314 P P 18 51 26.8 -0.3
comp=Z,8.2nm,0.9s,baz=112,slow=3.4,SNR=13
comp=Z,8.2nm,0.9s
KBZ Khabaz 88.32 314 *ce* P P 18 51 26.5 -0.6
KBZ pmax pmax
comp=Z,17nm,1.1s
GOF Gofitskoye 88.37 315 ⇑ *eP* P 18 51 27.8 +0.5
SPCR Spurr Chakacha 88.37 29 P P 18 51 26.3 -0.8
baz=260
HOM Homer 88.38 30 P P 18 51 26.9 -0.1
baz=260
GURO Guroymak-BITLI 88.44 309 P P 18 51 28.3 +0.3
SPU Mount Spurr 88.44 29 P P 18 51 27.2 -0.2
KIV Kislovodsk 88.50 314 *eP* P 18 51 27.6 -0.5
KIV pmax pmax
comp=Z,6.0nm,1.0s
IMAR Indian Mountai 88.59 24 P P 18 51 28.0 +0.1
PPLA Purkeypile 88.67 27 P P 18 51 28.9 +0.3
PPLA IAmb IAmb 18 51 36.5
comp=Z,11nm,0.9s
PPLA Purkeypile 88.67 27 P P 18 51 28.4 -0.1
baz=260
BRLK Bradley Lake 88.78 30 P P 18 51 29.3 +0.3
BRLK IAmb IAmb 18 51 32.1
comp=Z,21nm,1.1s
G21K Allakaket 88.79 23 P P 18 51 29.4 +0.5
baz=259,SNR=12
CHUM Lake Minchumin 88.79 26 P P 18 51 28.9 0.0
baz=260,SNR=8.6
CAST Castle Rocks 88.81 26 P P 18 51 28.9 -0.1
CAST Castle Rocks 88.81 26 P P 18 51 29.1 +0.1
baz=260,SNR=5.7
BRSE Bradley Lake S 88.85 30 P P 18 51 29.8 +0.5
baz=261
H21K Melozitna Rive 88.91 24 P P 18 51 29.8 +0.3
H21K IAmb IAmb 18 51 31.4
comp=Z,12nm,1.1s
H21K Melozitna Rive 88.91 24 P P 18 51 30.6 +1.1
baz=259,SNR=8.4
F21K Alatna River 88.94 22 P P 18 51 30.1 +0.5
baz=259
BCA Borcka 89.03 311 ⇓ P P 18 51 31.1 +0.6
PRGR Permogore 89.04 332 *eP* P 18 51 27.6 -2.5

I21K Tanana 89.16 25 P P 18 51 31.1 +0.5
I21K IAmb IAmb 18 51 38.0
comp=Z,11nm,1.1s
I21K Tanana 89.16 25 P P 18 51 31.0 +0.4
baz=260
MARD Mardin 89.31 307 P P 18 51 31.6 -0.5
MARD IAmb IAmb 18 51 33.5
comp=Z,29nm,1.3s
KTH Kantishna Hill 89.35 26 P P 18 51 31.4 -0.2
KTH IAmb IAmb 18 51 32.6
comp=Z,11nm,1.0s
BPAW Bear Paw Mtn. 89.41 26 P P 18 51 31.8 0.0
BPAW Bear Paw Mtn. 89.41 26 P P 18 51 32.5 +0.7
baz=261,SNR=6.7
M22K Willow 89.45 28 P P 18 51 31.6 -0.4
M22K Willow 89.45 28 P P 18 51 32.7 +0.7
baz=262
F22K John River 89.49 22 P P 18 51 33.3 +1.1
baz=260,SNR=12
H22K Ishtalitna Cre 89.53 24 P P 18 51 33.4 +1.0
baz=261,SNR=7.8
RC01 Rabbit Creek A 89.54 29 P P 18 51 32.3 -0.1
RC01 IAmb IAmb 18 51 33.5
comp=Z,30nm,1.0s
RC01 Rabbit Creek A 89.54 29 P P 18 51 32.6 +0.1
baz=262
SEW Seward 89.54 30 P P 18 51 32.9 +0.4
SEW IAmb IAmb 18 51 33.9
comp=Z,21nm,0.9s
SEW Seward 89.54 30 P P 18 51 33.3 +0.8
baz=262,SNR=5.4
TRF Thorofare Moun 89.61 26 P P 18 51 31.9 -1.1
baz=262
MLY Manley 89.66 25 P P 18 51 33.0 0.0
MLY IAmb IAmb 18 51 35.4
comp=Z,12nm,1.0s
MLY Manley 89.66 25 P P 18 51 33.5 +0.5
baz=261,SNR=15
E22K Anaktuvuk Pass 89.73 22 P P 18 51 33.7 +0.4
baz=260
KOPT Kop Dagi 89.76 310 P P 18 51 34.6 +0.2
KOPT IAmb IAmb 18 51 39.8
comp=Z,21nm,1.0s
VRH Novokhopyorsk 89.89 321 *eP* P 18 51 32.7 -1.6
VRH pmax pmax
comp=Z,30nm,0.9s
PMR Palmer 89.89 28 P P 18 51 33.9 -0.2
PMR IAmb IAmb 18 51 35.2
comp=Z,32nm,1.4s
PMR Palmer 89.89 28 P P 18 51 33.9 -0.2
PMR pmax pmax
comp=Z,32nm,1.4s
PMR Palmer 89.89 28 P P 18 51 34.1 +0.1
baz=263
KMBO Kilima Mbogo 90.03 269 LR LR 19 29 43.6
comp=Z,44nm,19.0s,baz=95,slow=34
PWL Port Wells 90.19 29 P P 18 51 35.9 +0.4
PWL IAmb IAmb 18 51 38.0
comp=Z,18nm,0.9s
PWL Port Wells 90.19 29 P P 18 51 35.5 0.0
baz=263
KNK Knik Glacier 90.19 29 P P 18 51 35.5 -0.1
KNK Knik Glacier 90.19 29 P P 18 51 35.8 +0.2
baz=263,SNR=9.2
G23K Bananza Creek 90.19 23 P P 18 51 36.0 +0.6
baz=262,SNR=12
COLD Coldfoot 90.20 23 P P 18 51 36.0 +0.6
baz=262
RND Reindeer 90.25 27 P P 18 51 35.0 -0.8
RND Reindeer 90.25 27 P P 18 51 35.0 -0.8
RND pmax pmax
comp=Z,22nm,0.8s
I23K Minto, Yukon-K 90.25 25 P P 18 51 35.9 +0.3
I23K Minto, Yukon-K 90.25 25 P P 18 51 35.9 +0.3
baz=262,SNR=18
MCK McKinley 90.25 26 P P 18 51 34.6 -1.2
MCK IAmb IAmb 18 51 36.6
comp=Z,14nm,0.9s
MCK McKinley 90.25 26 P P 18 51 34.6 -1.2
MCK pmax pmax
comp=Z,14nm,0.9s
MCK McKinley 90.25 26 P P 18 51 35.6 -0.1
baz=263,SNR=5.3
H23K Yukon River 90.27 24 P P 18 51 35.9 +0.1
H23K IAmb IAmb 18 51 37.7
comp=Z,12nm,0.9s
H23K Yukon River 90.27 24 P P 18 51 36.5 +0.7
baz=262,SNR=13
D23K Nanushuk River 90.28 21 P P 18 51 36.9 +1.1
baz=261,SNR=10
SML Sawmill 90.30 28 P P 18 51 35.9 -0.1
SML Sawmill 90.30 28 P P 18 51 36.4 +0.3
baz=263,SNR=7.7
NEA2 Nenana 90.30 25 P P 18 51 35.3 -0.7
NEA2 Nenana 90.30 25 P P 18 51 36.1 +0.2
baz=263
WAT1 Susitna Watana 90.31 27 P P 18 51 35.8 -0.3
baz=263
C23K Itkillik River 90.43 20 P P 18 51 36.9 +0.4
baz=261,SNR=7.5
P23K Montague Islan 90.55 30 P P 18 51 37.4 +0.2
baz=264
M23K Glacier View 90.58 28 P P 18 51 37.4 +0.1
baz=264
TOLK Toolik Lake Re 90.63 21 IAmb IAmb 18 51 38.9
comp=Z,8.8nm,0.7s
TOLK Toolik Lake Re 90.63 21 P P 18 51 38.4 +0.9
baz=262,SNR=7.7
WAT6 Susitna Watana 90.66 27 P P 18 51 38.0 +0.2
baz=264
WRH Wood River Hil 90.71 26 P P 18 51 36.8 -1.0
WRH IAmb IAmb 18 51 38.4
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 90.77 28 P P 18 51 38.7 +0.4
baz=264
GLI Glacier Island 90.79 29 P P 18 51 38.5 +0.2
baz=264
CCB Clear Creek Bu 90.85 25 P P 18 51 37.5 -1.0
CCB IAmb IAmb 18 51 38.9
comp=Z,16nm,0.9s
DHY Denali Highway 90.88 27 IAmb IAmb 18 51 40.2
comp=Z,7.1nm,0.7s
DHY Denali Highway 90.88 27 P P 18 51 38.8 -0.1
baz=264
H24K Noodor Dome 90.95 24 IAmb IAmb 18 51 40.9
comp=Z,17nm,0.9s
H24K Noodor Dome 90.95 24 P P 18 51 39.5 +0.5
baz=264,SNR=16
E24K Your Creek 90.96 22 P P 18 51 39.6 +0.5
baz=263,SNR=6.0
D24K Happy Valley 90.97 21 P P 18 51 39.6 +0.7
baz=263
Q23K Middleton Isla 91.03 31 P P 18 51 40.2 +0.8
baz=265
POKR Poker Plat Res 91.06 25 P P 18 51 40.0 +0.5
baz=264
C24K Franklin Bluff 91.08 20 P P 18 51 39.9 +0.5
baz=263
F24K Squaw Lake 91.12 23 P P 18 51 40.4 +0.7
baz=264,SNR=7.4
HDA Harding Lake 91.19 26 P P 18 51 39.0 -1.1
HDA IAmb IAmb 18 51 41.0
comp=Z,16nm,0.8s
HDA Harding Lake 91.19 26 P P 18 51 38.7 -1.4
baz=265,SNR=12
G24K Hadweenzic Riv 91.20 23 P P 18 51 40.7 +0.6
baz=264,SNR=7.3
ILAR Eielson Array 91.25 25 P P 18 51 39.4 -1.0
comp=Z,5.2nm,0.8s,baz=274,slow=4.3,SNR=38
comp=Z,5.2nm,0.8s
M24K Tolsona, Glenn 91.34 28 P P 18 51 42.0 +1.0
baz=265
KLU Klutina 91.41 29 IAmb IAmb 18 51 42.9
comp=Z,11nm,0.9s
KLU Klutina 91.41 29 P P 18 51 41.8 +0.5
baz=266
EYAK Cordova Ski Ar 91.42 30 P P 18 51 41.6 +0.4
baz=266
DIV Divide 91.45 29 P P 18 51 40.7 -0.8
VSR Storozhevoye 91.49 321 *eP* P 18 51 40.0 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORR Voronezh 91.50 321 *eP* P 18 51 40.9 -0.8
VORR pmax pmax
comp=Z,20nm,0.4s
K24K Donnelly Dome 91.66 26 P P 18 51 42.3 -0.1
baz=266

LPSR Galich'ya Gora 91.72 322 *eP* P 18 51 41.8 -1.0
LPSR pmax pmax
comp=Z,20nm,1.0s
PAX Paxson 91.73 27 P P 18 51 42.6 -0.1
PAX Paxson 91.73 27 P P 18 51 42.6 -0.1
PAX pmax pmax
comp=Z,60nm,1.9s
PAX Paxson 91.73 27 P P 18 51 43.2 +0.5
baz=266,SNR=9.2
G25K Bearman Lake 91.75 23 P P 18 51 43.6 +1.0
baz=266
H25K Birch Creek 91.82 24 P P 18 51 44.0 +1.1
baz=266
HARP HAARP 91.84 28 P P 18 51 43.5 +0.3
baz=266
D25K Kavik River 91.85 21 P P 18 51 43.4 +0.3
baz=265
PRP Porcupine Dome 91.89 25 P P 18 51 42.6 -0.8
baz=266
J25K Salcha River, 91.89 26 P P 18 51 42.8 -0.6
baz=266,SNR=5.6
KLMR Klimovskoe 91.89 331 *eP* P 18 51 39.2 -4.1
KLMR *e* 18 55 20.7
KLMR pmax pmax
comp=Z,33nm,1.4s
KLMR Klimovskoe 91.89 331 *eP* P 18 51 39.3 -4.1
KLMR AMP 18 51 42.8
comp=Z,33nm,1.4s
KLMR *e*PP PP 18 55 20.8 -2.5
F25K Christian Rive 91.99 23 P P 18 51 44.0 +0.2
baz=266
BMRM Bremner River 92.01 29 P P 18 51 44.5 +0.5
baz=267,SNR=5.1
N25K Chitina, Valde 92.05 29 IAmb IAmb 18 51 46.2
comp=Z,12nm,0.9s
N25K Chitina, Valde 92.05 29 P P 18 51 44.8 +0.6
baz=267
E25K Arctic Village 92.05 22 P P 18 51 44.4 +0.4
baz=266
RIDG Independent Ri 92.06 26 P P 18 51 43.8 -0.5
RIDG IAmb IAmb 18 51 45.4
comp=Z,13nm,0.7s
RIDG Independent Ri 92.06 26 P P 18 51 44.4 +0.2
baz=267,SNR=7.5
ANN Anapa 92.32 315 *eP* P 18 51 44.6 -1.1
ANN pmax pmax
comp=Z,43nm,1.0s
DOT Dot Lake 92.41 27 P P 18 51 44.9 -0.8
DOT IAmb IAmb 18 51 47.1
comp=Z,9.6nm,0.8s
SCRK Sand Creek 92.46 26 P P 18 51 46.6 +0.4
baz=267
F26K Sheenjek River 92.57 22 P P 18 51 47.3 +0.9
baz=267
J26L Joseph Creek 92.67 26 P P 18 51 47.3 +0.2
baz=268,SNR=22
G26K Porcupine Rive 92.67 23 P P 18 51 47.5 +0.7
baz=268,SNR=8.1
MCARA McCarthy VSAT 92.80 29 P P 18 51 48.2 +0.7
baz=268
C27K Jago River 92.81 21 P P 18 51 48.3 +0.8
baz=268,SNR=5.0
M26K Nabesna, AK 92.84 28 P P 18 51 47.8 0.0
baz=268
I26K Coal Creek Min 92.87 25 P P 18 51 48.4 +0.6
baz=268,SNR=6.3
OBN Obninsk 93.22 325 *i* P P 18 51 48.4 -1.2
OBN pmax pmax
comp=Z,15nm,0.7s
K27K Chicken 93.30 26 P P 18 51 51.4 +1.5
baz=269
M27K Edge Creek, AK 93.36 28 IAmb IAmb 18 51 53.5
comp=Z,10nm,1.1s
M27K Edge Creek, AK 93.36 28 P P 18 51 50.8 +0.5
baz=269
L27K Beaver Creek, 93.40 27 IAmb IAmb 18 51 52.6
comp=Z,14nm,0.9s
L27K Beaver Creek, 93.40 27 P P 18 51 51.5 +1.1
baz=269,SNR=15
G27K Doyon Strip 93.51 23 P P 18 51 52.0 +1.2
baz=270,SNR=5.2
I27K Kandik River 93.52 25 P P 18 51 51.9 +1.0
baz=270
E27K Coleen River 93.54 22 P P 18 51 51.6 +0.7
baz=270,SNR=5.7
H27K Steamboat Moun 93.56 24 P P 18 51 51.8 +0.8
baz=270
CTG Chitna Glacier 93.60 29 P P 18 51 51.5 +0.1
baz=270,SNR=7.7
CTGM Chitina Glacie 93.61 29 P P 18 51 52.2 +0.7
EGAK Eagle 93.71 25 IAmb IAmb 18 51 53.3
comp=Z,16nm,1.0s
EGAK Eagle 93.71 25 P P 18 51 52.6 +1.0
baz=270
BVCY Beaver Creek 93.84 28 P P 18 51 52.6 +0.2
baz=270
YUK3 Moose Creek 94.03 28 P P 18 51 54.1 +0.6
baz=270,SNR=6.5
PINM Pinnacle 94.14 30 P P 18 51 54.8 +0.9
baz=270
LVZ Lovozero 94.16 338 *i* P P 18 51 51.2 -2.6
LVZ pmax pmax
comp=Z,9.0nm,0.9s
O28M Mount Upton 94.17 29 P P 18 51 55.0 +0.7
baz=270,SNR=11
DAWY Dawson 94.48 26 P P 18 51 56.6 +1.2
baz=272,SNR=17
I29M Ogilvie Camp, 94.90 25 P P 18 51 58.0 +0.8
baz=273,SNR=23
M29M Somme Creek 94.95 28 P P 18 51 58.7 +1.1
baz=272
O29M Mount Kennedy 94.97 30 P P 18 51 58.5 +0.8
baz=272
BR131 Keskin Array S 95.02 309 P P 18 51 56.7 -1.8
BR131 Keskin Array S 95.02 309 *i* P P 18 51 57.6 -0.9
BRTR Keskin Array B 95.02 309 P P 18 51 57.7 -0.8
comp=Z,2.2nm,1.0s,baz=123,slow=4.6,SNR=7.5
comp=Z,2.2nm,1.0s
P29M Windy Craggy 95.42 31 P P 18 52 00.7 +1.0
baz=273
HYT Haines Junctio 95.48 29 P P 18 52 00.8 +0.8
baz=273,SNR=9.9
EPYK Eagle Plains 95.50 24 P P 18 52 00.3 +0.4
baz=274,SNR=9.6
N30M Aishikik Lake 95.65 29 P P 18 52 01.3 +0.6
baz=273,SNR=7.5
PLBC Pleasant Camp 96.13 31 P P 18 52 03.5 +0.6
baz=274
O30N Mendenhall 96.17 29 P P 18 52 03.8 +0.7
baz=274
N31M Braeburn, Yuko 96.27 29 P P 18 52 04.6 +1.1
baz=274
INK Inuvik 96.54 22 P P 18 52 04.6 +0.1
comp=Z,4.4nm,0.3s,baz=266,slow=4.1,SNR=11
comp=Z,4.4nm,0.3s
INK Inuvik 96.54 22 P P 18 52 03.3 -1.2
INK IAmb IAmb 18 52 05.5
comp=Z,13nm,1.1s
INK Inuvik 96.54 22 P P 18 52 04.4 -0.1
baz=277
WHY Whitehorse 96.78 29 P P 18 52 05.2 -0.8
WHY Whitehorse 96.78 29 P P 18 52 06.9 +0.9
baz=275
M31M Drury Creek, Y 96.86 28 P P 18 52 06.8 +0.6
baz=276
ARCES ARCESS Array B 97.32 340 P P 18 52 07.3 -0.8
comp=Z,14nm,0.8s,baz=80,slow=5.8,SNR=35
ARCES PKKPbc **PKKPbc** 19 08 46.3 -3.1
comp=Z,1.0nm,0.7s,baz=255,slow=3.3,SNR=4.3
comp=Z,14nm,0.8s
ARCES ARCESS Array B 97.32 340 P P 18 52 06.5 -1.6
FARO Faro, Yukon 97.35 28 P Pdif 18 52 08.7 +0.3
P32M Atlin 97.46 30 P Pdif 18 52 09.3 +0.3
baz=276
SPITS Spitsbergen Ar 97.56 349 P P 18 52 08.1 -0.9
comp=Z,19nm,0.8s,baz=80,slow=9.2,SNR=8.9
comp=Z,19nm,0.8s
AKASG Malin Array Be 97.78 321 P P 18 52 09.0 -1.5
comp=Z,3.2nm,1.0s,baz=76,slow=4.6,SNR=11
comp=Z,3.2nm,1.0s
AKASG Malin Array Be 97.78 321 *ce* P P 18 52 09.0 -1.5
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 97.78 321 *ce* P P 18 52 09.4 -1.1
LSZ Lusaka 97.92 254 LR LR 19 32 54.9
comp=Z,51nm,18.8s,baz=130,slow=33
CRAG Craig 98.21 35 P Pdif 18 52 12.9 +0.6
baz=276

MNK	**Minsk**	**98.27**	**324**	*i* P		**P**	18 52 10.6	-2.0
MNK				*i* *PP		**pP**	18 52 27.7	-3.6
MNK				*i* S		**SKSac**	19 02 42.9	-1.6
MNK				*i* SS		**SS**	19 10 19.6	+0.2
MNK				pmax	pmax			
	comp=E,3.0nm,0.7s							
MNK				pmax	pmax			
	comp=Z,20nm,0.7s							
MNK	**Minsk**	**98.27**	**324**	*i* P		**P**	18 52 10.7	-2.0
	comp=E,3.0nm,0.7s,baz=265							
MNK				*i* P		**P**	18 52 10.7	-2.0
MNK				*i* P		**P**	18 52 10.7	-2.0
	comp=Z,20nm,0.7s							
MNK				*i* pP		**pP**	18 52 27.7	-3.6
MNK				*i* PP		PP	18 55 55.0	-18
MNK				*i* PPP		PPP	18 57 52.0	
MNK				*i* S		**SKSac**	19 02 43.0	-1.6
MNK				*i* SS		**SS**	19 10 19.7	+0.2
MNK				*i* SSS		SSS	19 14 47.7	
MNK				*i* LQ		LQ	19 30 42.8	
MNK				*i* LR		LR	19 34 16.1	
FINES	**FINES Array B**	**98.37**	**332**	P		**P**	18 52 12.2	-0.7
	comp=Z,1.9nm,0.8s,baz=52,slow=3.1,SNR=4.1							
FINES				PKiKP		**PKiKP**	18 56 45.3	+0.4
	comp=Z,1.6nm,0.7s,baz=27,slow=4.7,SNR=5.0							
	comp=Z,1.9nm,0.8s							
SNAA	**Sanae**	**98.49**	**194**	LR		LR	19 35 31.2	
	comp=Z,93nm,20.6s,baz=144,slow=35							
SORM	**Soroca**	**98.54**	**318**	⇑P		**P**	18 52 12.0	-2.0
SORM	**Soroca**	**98.54**	**318**	⇑P		**P**	18 52 12.0	-2.0
WRAK	**Wrangell Islan**	**98.54**	**34**	P		Pdif	18 52 14.7	+0.9
	baz=277							
NACGM	**Naroch**	**98.86**	**325**	⇑*eP*		**P**	18 52 15.2	0.0
	baz=83							
R33M	**Jennings River**	**98.88**	**30**	P		**P**	18 52 14.9	-0.5
	baz=278							
CFR	**Carcaliu**	**98.91**	**315**	⇑P		**P**	18 52 15.5	-0.2
CFR	**Carcaliu**	**98.91**	**315**	⇑P		**P**	18 52 15.5	-0.2
BOSA	**Boshof**	**98.95**	**240**	LR		LR	19 32 49.3	
	comp=Z,36nm,19.8s,baz=104,slow=33							
LBTB	**Lobatse**	**99.18**	**244**	LR		LR	19 32 44.1	
	comp=Z,53nm,19.1s,baz=99,slow=33							
DLBC	**Dease Lake**	**99.50**	**31**	LR		LR	19 31 53.4	
	comp=Z,54nm,21.7s,baz=298,slow=32							
DLBC	**Dease Lake**	**99.50**	**31**	P		**Pdif**	18 52 17.8	-0.4
	baz=279							
C36M	**Paulatuk**	**99.68**	**20**	P		**Pdif**	18 52 18.2	-0.4
	baz=286							
TESR	**Tescani**	**99.83**	**316**	⇓P		**Pdif**	18 52 19.0	-0.8
VRI	**Vrincioaia**	**99.84**	**316**	⇑P		**Pdif**	18 52 19.9	0.0
VRI				⇓P		**Pdif**	18 52 20.3	+0.4
VRI	**Vrincioaia**	**99.84**	**316**	⇓P		**Pdif**	18 52 20.3	+0.4
BIZ	**Bicaz**	**100.16**	**317**	⇑P		**Pdif**	18 52 21.2	-0.1
MLR	**Muntele Rosu**	**100.42**	**315**	⇓P		**Pdif**	18 52 22.0	-0.6
MLR	**Muntele Rosu**	**100.42**	**315**	⇓P		**Pdif**	18 52 22.0	-0.6
BURAR	**Bucovina Array**	**100.69**	**318**	⇓P		**Pdif**	18 52 23.7	-0.1
BURAR	**Bucovina Array**	**100.69**	**318**	Pdif		**Pdif**	18 52 23.6	-0.1
BURAR	**Bucovina Array**	**100.69**	**318**	⇓P		**Pdif**	18 52 23.7	-0.1
BUR08	**Bucovina Ar. S**	**100.70**	**318**	Pdif		**Pdif**	18 52 23.5	-0.3
KOLS	**Kolonicke sedl**	**102.45**	**319**	*eP*		**Pdif**	18 52 33.1	+1.6
KOLS	**Kolonicke sedl**	**102.45**	**319**	*e*PDIFF		**Pdif**	18 52 33.1	+1.6
UZH	**Uzhgorod**	**102.49**	**319**	*eP*		**Pdif**	18 52 29.1	-2.5
DRGR		**102.49**	**317**	⇑P		**Pdif**	18 52 31.7	-0.1
DRGR		**102.49**	**317**	⇑P		**Pdif**	18 52 31.7	-0.1
BLKB	**Belogradchik**	**102.96**	**314**	⇑P		**Pdif**	18 52 33.9	0.0
CRVS	**Cervenica-Dubn**	**102.99**	**319**	*eP*		**Pdif**	18 52 35.0	+1.2
CRVS	**Cervenica-Dubn**	**102.99**	**319**	*e*PDIFF		**Pdif**	18 52 35.0	+1.2
BZS	**Buzias**	**103.42**	**316**	⇓P		**Pdif**	18 52 35.6	-0.2
BZS	**Buzias**	**103.42**	**316**	⇓P		**Pdif**	18 52 35.6	-0.2
NB2	**NORSAR Subarra**	**105.41**	**333**	P		**Pdif**	18 52 42.6	-1.7
	comp=Z,5.2nm,1.0s,baz=73,slow=4.4							
NB2	**NORSAR Subarra**	**105.41**	**333**	P		**Pdif**	18 52 42.6	-1.7
	baz=73,slow=4.4							
NOA	**NORSAR Array B**	**105.41**	**333**	Pdiff		**Pdif**	18 52 43.1	-1.2
	comp=Z,2.1nm,0.9s,baz=67,slow=4.6,SNR=4.4							
YKA	**Yellowknife Ar**	**105.69**	**25**	PKiKP		**PKiKP**	18 56 58.2	+0.1
	comp=Z,1.5nm,0.8s,baz=293,slow=2.9,SNR=3.7							
J05D	**Fort Rock, OR**	**107.86**	**46**	P		**PKiKP**	18 57 02.9	-0.1
	baz=283							
GERES	**GERESS Array B**	**107.99**	**320**	PKiKP		**PKiKP**	18 57 02.9	-0.1
	comp=Z,1.2nm,0.6s,baz=78,slow=1.9,SNR=13							
ABTA	**Abfaltersbach**	**109.34**	**319**	*i* P		**PKiKP**	18 57 05.6	0.0
	comp=Z,4.1nm,0.7s							
WTTA	**Wattenberg**	**109.77**	**319**	*i* P		**PKiKP**	18 57 05.9	-0.6
	comp=Z,4.9nm,0.6s							
WATA	**Walderalm**	**109.79**	**319**	*i* P		**PKiKP**	18 57 05.8	-0.7
	comp=Z,4.8nm,1.2s							
MOTA	**Moosalm**	**110.09**	**319**	*i* P		**PKiKP**	18 57 06.5	-0.5
	comp=Z,2.7nm,0.7s							
DAVA	**Damuels**	**110.90**	**320**	*i* P		**PKiKP**	18 57 08.4	-0.2
	comp=Z,4.7nm,0.6s							
DAVOX	**Davos/Dischmat**	**111.06**	**319**	PKiKP		**PKiKP**	18 57 08.6	-0.4
	comp=Z,2.9nm,0.7s,baz=39,slow=1.9,SNR=7.9							
NVAR	**Mina Array Bea**	**111.09**	**50**	PKiKP		**PKiKP**	18 57 10.6	+1.2
	comp=Z,0.8nm,0.7s,baz=250,slow=2.1,SNR=6.2							
EDW2	**Edwards Air Fo**	**112.09**	**54**	P		**PKiKP**	18 57 11.6	+0.5
	baz=282							
HLID	**Hailey**	**112.58**	**44**	PKiKP		**PKiKP**	18 57 12.7	+0.7
HLID	**Hailey**	**112.58**	**44**	P		**PKiKP**	18 57 12.6	+0.7
	baz=288							
PFO	**Pinyon Flats O**	**113.60**	**55**	P		**PKiKP**	18 57 14.5	+0.4
	baz=282							
TPFO	**Pinon Flats**	**113.61**	**55**	P		**PKiKP**	18 57 13.9	-0.2
	baz=282							
TUQ	**Turquoise Moun**	**113.63**	**53**	P		**PKiKP**	18 57 14.1	-0.1
	baz=283							
MONP2	**Monument Peak**	**113.78**	**56**	P		**PKiKP**	18 57 15.0	+0.4
	baz=282							
BOZ	**Bozeman (W)**	**113.79**	**41**	P		**PKiKP**	18 57 15.1	+0.9
	baz=291							
BELC	**Belle Mtn. Jos**	**113.89**	**54**	P		**PKiKP**	18 57 15.1	+0.4
	baz=283							
GMRC	**Granite Mounta**	**113.99**	**53**	P		**PKiKP**	18 57 16.0	+1.2
	baz=283							
IKP	**In-Ko-Pah, Jac**	**114.09**	**56**	P		**PKiKP**	18 57 16.1	+1.1
	baz=282							
BC3	**Big Chuckawall**	**114.41**	**55**	P		**PKiKP**	18 57 17.0	+1.3
	baz=283							
IRM	**Iron Mountain**	**114.55**	**54**	P		**PKiKP**	18 57 17.0	+1.2
	baz=283							
DUG	**Dugway, Tooele**	**114.74**	**47**	PKiKP		PKPdf	18 57 16.8	+0.7
DUG	**Dugway, Tooele**	**114.74**	**47**	*i* PKIKP		PKPdf	18 57 16.8	+0.7
DUG	**Dugway, Tooele**	**114.74**	**47**	P		PKPdf	18 57 17.2	+1.0
	baz=288							
EKA	**Eskdalemuir Ar**	**114.77**	**331**	PKP		PKPdf	18 57 15.8	+0.3
	comp=Z,0.7nm,0.5s,baz=20,slow=2.7,SNR=4.0							
RLMT	**Red Lodge**	**115.51**	**41**	P		**PKPdf**	18 57 18.0	+0.4
	baz=293							
BW06	**Boulder Array**	**116.20**	**43**	P		**PKiKP**	18 57 19.3	+0.3
	baz=291							
PDAR	**Pinedale Array**	**116.20**	**43**	PKP		**PKiKP**	18 57 19.4	+0.4
	comp=Z,0.8nm,0.6s,baz=90,slow=1.8,SNR=9.8							
PDAR				PKKPbc		**PKKPab**	19 07 54.4	+0.7
	comp=Z,0.1nm,0.5s,baz=140,slow=4.8,SNR=3.6							
PDAR	**Pinedale Array**	**116.20**	**43**			**PKPdf**	18 57 18.6	-0.4
U15A	**North Rim**	**116.23**	**51**			**PKiKP**	18 57 20.5	+1.2
LAO	**LASA Array**	**116.81**	**38**	P		**PKiKP**	18 57 20.8	+1.0
	baz=296							
WUAZ	**Wupatki**	**117.20**	**52**	P		**PKiKP**	18 57 21.8	+0.7
	baz=286							
O20A	**White River Ci**	**118.07**	**46**	P		**PKiKP**	18 57 23.3	+0.6
	baz=291							
K22A	**Casper**	**118.31**	**43**	P		**PKiKP**	18 57 23.3	+0.3
	baz=294							
TUC	**Tucson**	**118.54**	**55**	P		**PKiKP**	18 57 24.1	+0.5
	baz=285							
MVCO	**Mesa Verde**	**118.89**	**49**	P		**PKiKP**	18 57 24.9	+0.5
	baz=290							
RSSD	**Black Hills**	**119.33**	**40**	PKPdf		**PKPdf**	18 57 24.3	-0.6
RSSD	**Black Hills**	**119.33**	**40**	PKIKP		**PKPdf**	18 57 24.3	-0.6
RSSD	**Black Hills**	**119.33**	**40**	P		**PKPdf**	18 57 24.2	-0.8
	baz=297							
RSSD	**Black Hills**	**119.33**	**40**	P		**PKiKP**	18 57 25.1	+0.1
	baz=297							
N23A	**Red Feather La**	**119.40**	**44**	P		**PKiKP**	18 57 25.4	+0.1
	baz=293							
S22A	**4UR Ranch, Cre**	**119.95**	**48**	PKPdf		**PKiKP**	18 57 27.4	+0.9
S22A	**4UR Ranch, Cre**	**119.95**	**48**	P		**PKiKP**	18 57 27.3	+0.9
	baz=291							
ISCO	**Idaho Springs**	**120.07**	**45**	P		**PKiKP**	18 57 26.8	+0.1
	baz=293							
SDCO	**Great Sand Dun**	**120.93**	**47**	P		**PKiKP**	18 57 29.6	+1.2
	baz=292							
SDCO	**Great Sand Dun**	**120.93**	**47**	P		**PKPdf**	18 57 28.3	+0.1
	baz=292							
Y22A	**Socorro**	**121.14**	**52**	P		**PKiKP**	18 57 30.0	+1.3
	baz=289							
ANMO	**Albuquerque**	**121.20**	**51**	PKPdf		**PKiKP**	18 57 29.3	+0.4
ANMO	**Albuquerque**	**121.20**	**51**	*c i* PKIKP		**PKiKP**	18 57 30.2	+1.3
ANMO				pmax	pmax			
	comp=Z,5.0nm,1.0s							
ANMO	**Albuquerque**	**121.20**	**51**	P		**PKiKP**	18 57 29.9	+1.0
	baz=290							
ANMO	**Albuquerque**	**121.20**	**51**	P		**PKiKP**	18 57 29.0	+0.1
	baz=290							
T25A	**Trinidad**	**121.96**	**48**	P		**PKiKP**	18 57 31.0	+0.6
	baz=293,SNR=5.0							
OGNE	**Ogallala**	**122.07**	**43**	P		**PKiKP**	18 57 30.4	+0.1
	baz=297							
KSCO	**Kaye Shedlock'**	**122.50**	**45**	P		**PKiKP**	18 57 31.5	+0.2
	baz=295							
B35A	**Bob, Littlefor**	**123.09**	**32**	P		**PKPdf**	18 57 31.1	-0.6
	baz=309							
ESDC	**Fonseca Array**	**123.11**	**316**	PKP		**PKPdf**	18 57 31.9	-0.2
	comp=Z,0.5nm,0.6s,baz=12,slow=3.6,SNR=8.2							
MNTX	**Cornudas Mount**	**123.11**	**54**	P		**PKiKP**	18 57 33.5	+1.0
	baz=289							
MNTX	**Cornudas Mount**	**123.11**	**54**	P		**PKiKP**	18 57 32.9	+0.4
	baz=289							
F33A	**5 Mile Ranch,**	**123.19**	**35**	P		**PKPdf**	18 57 31.8	-0.2
	baz=305							
ECSD	**EROS Data Cent**	**124.17**	**37**	PKPdf		**PKPdf**	18 57 33.9	-0.1
ECSD	**EROS Data Cent**	**124.17**	**37**	P		**PKPdf**	18 57 34.1	+0.1
	baz=303							
ECSD	**EROS Data Cent**	**124.17**	**37**	P		**PKiKP**	18 57 34.2	-0.1
	baz=303							
MSTX	**Muleshoe**	**124.39**	**51**	P		**PKPdf**	18 57 34.8	0.0
	baz=292							
BGNE	**Belgrade**	**124.43**	**41**	P		**PKPdf**	18 57 34.2	-0.3
	baz=300							
EYMN	**Ely**	**124.51**	**31**	P		**PKiKP**	18 57 34.8	0.0
	baz=311							
CBKS	**Cedar Bluff**	**124.61**	**44**	P		**PKPdf**	18 57 35.2	+0.2
	baz=298							
F36A	**Milaca**	**124.74**	**34**	P		**PKPdf**	18 57 35.2	+0.2
	baz=308							
AMTX	**Amarillo**	**124.88**	**49**	P		**PKPdf**	18 57 35.4	-0.3
	baz=293							
TXAR	**Lajitas Array**	**125.26**	**56**	PKP		**PKiKP**	18 57 37.6	+0.6
	comp=Z,1.9nm,0.8s,baz=195,slow=2.0,SNR=19							
E38A	**The Farm, Brul**	**125.34**	**32**	P		**PKiKP**	18 57 36.5	+0.1
	baz=310							
TOA0	**Torodi Ar. Sit**	**125.46**	**284**	PKPdf		**PKPdf**	18 57 36.2	-0.9
TORD	**Torodi Ar. Bea**	**125.46**	**284**	PKP		**PKPdf**	18 57 37.0	-0.2
	comp=Z,5.9nm,0.8s,baz=62,slow=1.8,SNR=30							
TORD				PKKPbc		**PKKPbc**	19 07 16.1	+1.8
	comp=Z,0.6nm,0.9s,baz=319,slow=2.4,SNR=4.2							
SPMN	**Marine on St.**	**125.53**	**34**	P		**PKPdf**	18 57 36.7	+0.2
	baz=308							
I37B	**Waseca**	**125.92**	**36**	P		**PKiKP**	18 57 37.7	0.0
	baz=307							
KSU1	**Kansas State U**	**126.61**	**42**	P		**PKPdf**	18 57 39.0	+0.2
	baz=300							
G40A	**Rib Lake**	**126.93**	**33**	P		**PKPdf**	18 57 39.2	0.0
	baz=311							
COWI	**Conover**	**126.94**	**31**	P		**PKPdf**	18 57 39.4	+0.2
	baz=312							
WMOK	**Wichita Mounta**	**127.11**	**48**	P		**PKPdf**	18 57 40.0	+0.1
	baz=296							
SCIA	**State Center**	**127.26**	**38**	P		**PKPdf**	18 57 39.6	-0.4
	baz=306							
SCHQ	**Schefferville**	**127.46**	**10**	PKP		**PKiKP**	18 57 40.8	+0.4
	comp=Z,4.8nm,0.5s,baz=36,slow=5.6,SNR=4.6							
JCT	**Junction City**	**128.02**	**53**	P		**PKPdf**	18 57 41.4	-0.4
	baz=292							
L40A	**Anamosa**	**128.37**	**36**	P		**PKiKP**	18 57 42.5	-0.1
	baz=308							
JFWS	**Jewell Farm**	**128.41**	**35**	P		**PKPdf**	18 57 42.0	-0.1
	baz=309							
TUL1	**Leonard**	**128.75**	**45**	P		**PKPdf**	18 57 43.0	+0.1
	baz=299							
833A	**Chaparral WMA,**	**129.13**	**56**	P		**PKPdf**	18 57 44.1	+0.3
	baz=291							
WHTX	**Lake Whitney,**	**129.28**	**51**	P		**PKPdf**	18 57 44.2	+0.1
	baz=295							
R40A	**Maddies Statio**	**129.91**	**41**	P		**PKiKP**	18 57 45.6	-0.2
	baz=304							
HDIL	**Hopedale**	**130.44**	**37**	P		**PKiKP**	18 57 45.9	-0.1
	baz=309							
CCM	**Cathedral Cave**	**130.71**	**41**	PKPdf		**PKiKP**	18 57 47.1	-0.4
CCM	**Cathedral Cave**	**130.71**	**41**	PKIKP		**PKiKP**	18 57 47.1	-0.4
CCM	**Cathedral Cave**	**130.71**	**41**	P		**PKPdf**	18 57 46.6	0.0
	baz=305							
KOWA	**Kowa**	**130.82**	**286**	SKPbc		**SKPbc**	19 01 06.3	+0.4
MIAR	**Mount Ida**	**131.00**	**46**	PKPdf		**PKiKP**	18 57 48.1	-0.1
MIAR	**Mount Ida**	**131.00**	**46**	PKIKP		**PKiKP**	18 57 48.1	-0.1
MIAR	**Mount Ida**	**131.00**	**46**	P		**PKiKP**	18 57 47.9	-0.2
	baz=300							
L48A	**N Adams**	**132.26**	**32**	P		**PKiKP**	18 57 50.3	-0.2
	baz=315							
L48A				P		**PKiKP**	18 57 50.3	-0.2
	baz=315							
DBIC	**Dimbokro**	**132.29**	**276**	PKP		**PKPdf**	18 57 50.0	-0.2
	comp=Z,2.3nm,0.6s,baz=104,slow=7.3,SNR=3.3							
DBIC				SKPbc		**SKPbc**	19 01 11.3	+0.1
	comp=Z,9.7nm,0.9s,baz=104,slow=4.1,SNR=8.7							
DBIC	**Dimbokro**	**132.29**	**276**	SKPbc		**SKPbc**	19 01 09.5	-1.8
N49A	**Columbus Grove**	**133.11**	**33**	P		**PKPdf**	18 57 51.6	+0.6
	baz=314							
N49A				P		**PKPdf**	18 57 51.6	+0.6
	baz=314							
PLCA	**Paso Flores**	**133.11**	**161**	PKP		**PKPdf**	18 57 51.8	+0.6
	comp=Z,1.2nm,0.6s,baz=271,slow=1.2,SNR=5.4							
PLCA				SKPbc		**SKPbc**	19 01 13.2	-0.3
	comp=Z,2.8nm,1.0s,baz=180,slow=5.1,SNR=3.6							
WVT	**Waverly**	**134.05**	**40**	P		**PKPdf**	18 57 53.0	0.0
	baz=307							
ACSO	**Alum Creek Sta**	**134.24**	**33**	P		**PKPdf**	18 57 53.6	+0.4
	baz=315							
LONY	**Lake Ozonia**	**134.65**	**22**	P		**PKPdf**	18 57 53.9	+0.1
	baz=328							
PKME	**Peaks-Kenny Pk**	**135.84**	**17**	P		**PKPdf**	18 57 56.0	0.0
	baz=336							
LBNH	**Lisbon**	**135.93**	**20**	P		**PKPdf**	18 57 55.7	-0.6
	baz=332							
BINY	**Binghamton**	**136.11**	**25**	P		**PKPdf**	18 57 56.0	-0.6
	baz=325							
MCWV	**Mont Chateau**	**136.31**	**31**	P		**PKPdf**	18 57 56.8	-0.3
	baz=319							
LRAL	**Lakeview Retre**	**136.43**	**43**	P		**PKPdf**	18 57 57.5	0.0
	baz=305							
TZTN	**Tazewell**	**136.46**	**37**	P		**PKPdf**	18 57 57.4	-0.1
	baz=312							
SSPA	**Standing Stone**	**136.52**	**28**	P		**PKPdf**	18 57 57.2	-0.3
	baz=322							
HRV	**Adam Dziewonsk**	**137.58**	**21**	P		**PKPdf**	18 57 59.3	0.0
	baz=332							
PAL	**Palisades**	**137.97**	**24**	P		**PKPdf**	18 57 59.8	-0.3
	baz=327							
GOGA	**Godfrey**	**138.55**	**40**	P		**PKPdf**	18 58 01.9	+0.5
	baz=310							
SOR	**Soroa**	**144.86**	**54**	PKPdf		**PKPab**	18 58 11.3	-0.8
SOR	**Soroa**	**144.86**	**54**	PKIKP		**PKPab**	18 58 11.3	-0.8
PLTB	**Pedras Altas**	**145.00**	**179**			**PKPbc**	18 58 11.6	-0.7
ORTG	**Ortega, Santa**	**146.73**	**76**			**PKPdf**	18 58 15.9	-0.6
ORTG				PKPbc		**PKPab**	18 58 19.7	+0.1
ITQB	**Itaqui**	**146.88**	**174**	PKPdf		**PKPdf**	18 58 15.1	-1.1
ITQB						**PKPab**	18 58 19.7	+0.2
JTS	**Las Juntas de**	**147.24**	**76**	PKPdf		**PKPdf**	18 58 14.9	-2.3
JTS						**PKPbc**	18 58 19.7	+0.1
JTS	**Las Juntas de**	**147.24**	**76**	PKP2		**PKPbc**	18 58 19.7	+0.1
CPUP	**Villa Florida**	**150.09**	**172**	PKPbc		**PKPbc**	18 58 25.5	-1.0
	comp=Z,5.7nm,0.8s,baz=172,slow=1.8,SNR=3.0							
NNA	**Nana**	**151.50**	**123**	*c i* PKIKP		**PKiKP**	18 58 31.4	+0.7
NNA				pmax	pmax			
	comp=Z,88nm,1.7s							
OTAV	**Otavalo**	**154.03**	**96**	PKPdf		**PKPdf**	18 58 28.4	0.0
OTAV	**Otavalo**	**154.03**	**96**	PKIKP		**PKPdf**	18 58 28.4	0.0
LPAZ	**La Paz**	**155.15**	**142**	PKP		**PKPdf**	18 58 30.5	+0.5
	comp=Z,1.2nm,0.7s,baz=133,slow=1.5,SNR=7.4							
LPAZ				PKPab		**PKPab**	18 58 55.1	+0.3
	comp=Z,3.4nm,0.5s,baz=135,slow=3.6,SNR=7.3							
PTLB	**Pontes e Lacer**	**160.19**	**161**	PKPab		**PKPab**	18 59 13.7	-1.9
ETMB	**Extrema**	**161.15**	**134**	PKPdf		**PKPdf**	18 58 35.6	-0.9

*NEIC **12** 18:49:02.0±3.0, 40.30S±0.03×72.96W±0.06, h67km±6km, mb4.2/5, ML4.1(GUC), Error ellipse: s-maj=7.0km s-min=2.8km az=59.0*

*GUC **12** 18:49:03.3±0.7, 40.36S×72.95W, h60km±4km, ML4.2*

ISC 12 18:49:01.6±0.8, **40.30S**±0.03×**73.10W**±0.05, **h71**km±8km, **n54**, σ1§**73**/73, **5C-3D**, **Near coast of central Chile**

*IDC **12** 18:59:40.6±1.2, 6.83S×128.10E, h260km±14km, mb3.3/5, mbtmp4.2/9, Error ellipse: s-maj=17.6km s-min=10.0km az=94.0*

*NEIC **12** 18:59:41.9±1.1, 6.89S±0.10×128.13E±0.09, h270km±13km, mb4.5/11, Error ellipse: s-maj=15.1km s-min=11.2km az=144.0*

*DJA **12** 18:59:43.0±0.4, 7.5S±4.4×12.8E±.5, h238km±12km, M4.2/7, mb4.2/7, mB5.5/1, MLv4.2/6, Mw(mB)5.0/1*

ISC 12 18:59:40.1±0.6, **6.83S**±0.05×**128.12E**±0.06, **h250**km, **n61**, σ1§**54**/67, **mb3.8**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LR04	**Corral**	**0.49**	**329**		**Pn**	**18 49 16.0**	**+1.6**
LR04				Sn	**Sn**	**18 49 24.5**	**+0.8**
LR04	**Corral**	**0.49**	**329**	⇑*iP*	**Pn**	**18 49 16.0**	**+1.6**
LR04				*eS*	**Sn**	**18 49 25.4**	**+1.6**
LR04				IAML		18 49 26.2	
	comp=E,26μm,0.2s						
LR02	**Universidad Au**	**0.51**	**347**	⇑*eP*	**Pn**	**18 49 16.3**	**+1.8**
LR02				*i* S	**Sn**	**18 49 25.7**	**+1.6**
LL04	**Puerto Octay**	**0.81**	**140**		**Pn**	**18 49 16.7**	**-1.1**
LL04				Sn	**Sn**	**18 49 27.2**	**-2.5**
LL04	**Puerto Octay**	**0.81**	**140**	⇓*iP*	**Pn**	**18 49 17.0**	**-0.8**
LL04				*i* S	**Sn**	**18 49 27.3**	**-2.5**
LL04				IAML		18 49 27.9	
	comp=E,30μm,0.2s						
LR03	**Panguipulli**	**0.88**	**41**		**Pn**	**18 49 18.1**	**-0.6**
LR03	**Panguipulli**	**0.88**	**41**	*eP*	**Pn**	**18 49 19.2**	**+0.5**
LR03				*eS*	**Sn**	**18 49 31.3**	**-0.1**
LL03	**Petrohue**	**0.99**	**148**		**Pn**	**18 49 19.8**	**-0.3**
LL03				Sn	**Sn**	**18 49 31.5**	**-2.3**
LL03	**Petrohue**	**0.99**	**148**	*eP*	**Pn**	**18 49 19.7**	**-0.3**
LL03				*eS*	**Sn**	**18 49 32.2**	**-1.6**
LL03				IAML		18 49 38.3	
	comp=E,6μm,0.4s						
LL05	**Los Muermos**	**1.14**	**194**		**Pn**	**18 49 22.2**	**+0.2**
LL05				Sn	**Sn**	**18 49 38.2**	**+1.1**
LL05	**Los Muermos**	**1.14**	**194**	⇓*iP*	**Pn**	**18 49 22.3**	**+0.4**
LL05				*i* S	**Sn**	**18 49 37.8**	**+0.6**
GO06	**Curarrehue**	**1.44**	**61**		**Pn**	**18 49 26.5**	**+0.6**
GO06	**Curarrehue**	**1.44**	**61**	⇑*iP*	**Pn**	**18 49 26.6**	**+0.7**
GO06				*eS*	**Sn**	**18 49 43.8**	**-0.4**
PLCA	**Paso Flores**	**1.99**	**103**		**Pn**	**18 49 33.1**	**-0.1**
PLCA	**Paso Flores**	**1.99**	**103**	*eP*	**Pn**	**18 49 33.5**	**+0.3**
PLCA				*eS*	**Sn**	**18 50 00.3**	**+3.0**
LL01	**San Ignacio de**	**2.14**	**166**		**Pn**	**18 49 36.2**	**+1.0**
LL01	**San Ignacio de**	**2.14**	**166**	⇓*eP*	**Pn**	**18 49 36.6**	**+1.5**
LL01				*eS*	**Sn**	**18 50 02.6**	**+1.8**
LL07	**Hotel Espejo d**	**2.55**	**186**	Pn	**Pn**	**18 49 41.1**	**+0.4**
LL07				Sn	**Sn**	**18 50 09.1**	**-1.5**
LL07	**Hotel Espejo d**	**2.55**	**186**	⇑*iP*	**Pn**	**18 49 41.2**	**+0.6**
LL07				*eS*	**Sn**	**18 50 09.2**	**-1.5**
LL07				IAML		18 50 12.5	
	comp=N,790nm,0.3s						
GO07	**Milladeo Hill,**	**2.85**	**188**		**Pn**	**18 49 44.7**	**0.0**
GO07				Sn	**Sn**	**18 50 15.4**

COEN				IAmb	IAmb	19 03 19.8
	comp=Z,34nm,1.5s					
COEN	**Coen**	**16.40 117**		P	**P**	**19 03 17.6 +2.1**
PSA00	**Pilbara Seismi**	**16.69 208**		P	**P**	**19 03 18.0 -0.6**
PSA00				IAmb	IAmb	19 03 57.0
	comp=Z,20nm,1.3s					
PSA00	**Pilbara Seismi**	**16.69 208**		P	**P**	**19 03 17.3 -1.4**
PSA00				IAmb	IAmb	19 03 32.1
	comp=Z,11nm,1.5s					
PSA00	**Pilbara Seismi**	**16.69 208**		P	**P**	**19 03 18.9 +0.3**
QIS	**Mount Isa**	**17.61 142**		P	**P**	**19 03 30.4 +1.8**
AS31	**Alice Springs**	**17.64 162**		P	**P**	**19 03 29.8 +0.9**
AS31				IAmb	IAmb	19 03 30.6
	comp=Z,6.9nm,0.8s					
ASAR	**Alice Springs**	**17.64 162**		P	**P**	**19 03 29.9 +1.0**
	comp=Z,20nm,0.7s,baz=342,slow=11,SNR=316					
ASAR				S	**S**	**19 06 37.6 -1.4**
	comp=Z,1.6nm,0.8s,baz=338,slow=22,SNR=7.0					
ASAR	**Alice Springs**	**17.64 162**		P	**P**	**19 03 29.8 +0.9**
WRKA	**Warakurna**	**18.10 179**		P	**P**	**19 03 34.7 +0.7**
MEEK	**Meekatharra**	**21.68 204**		P	**P**	**19 04 10.8 -0.5**
OOD	**Oodnadatta**	**22.05 162**		P	**P**	**19 04 14.6 0.0**
FORT	**Forrest**	**23.82 180**		P	**P**	**19 04 30.1 -0.6**
FORT				IAmb	IAmb	19 04 31.2
	comp=Z,19nm,0.8s					
FORT	**Forrest**	**23.82 180**		P	**P**	**19 04 30.5 -0.2**
MULG	**Mulgathing**	**23.98 167**		P	**P**	**19 04 32.8 +0.6**
MORW	**Morawa**	**24.88 206**		P	**P**	**19 04 39.1 -1.2**
MORW				IAmb	IAmb	19 05 21.0
	comp=Z,32nm,1.5s					
LCRK	**Leigh Creek**	**25.33 159**		P	**P**	**19 04 44.8 +0.4**
GUMO	**Guam**	**26.23 39**		P	**P**	**19 04 52.5 -0.1**
BBOO	**Buckleboo**	**26.88 165**		P	**P**	**19 04 58.1 -0.1**
BBOO				IAmb	IAmb	19 04 58.3
	comp=Z,21nm,1.2s					
BBOO	**Buckleboo**	**26.88 165**		P	**P**	**19 04 58.4 +0.2**
NWAO	**Narrogin (SRO)**	**27.87 200**		P	**P**	**19 05 05.6 -1.3**
STKA	**Stephens Creek**	**27.91 155**		P	**P**	**19 05 07.5 +0.1**
	comp=Z,2.0nm,0.5s,baz=322,slow=9.1,SNR=8.3					
	comp=Z,2.0nm,0.5s					
STKA	**Stephens Creek**	**27.91 155**		P	**P**	**19 05 07.2 -0.2**
HTT	**Hallett**	**28.30 161**		P	**P**	**19 05 11.5 +0.7**
CMSA	**Cobar Meteorol**	**29.56 149**		P	**P**	**19 05 22.9 +1.0**
SONM	**Songino Array**	**57.71 343**		P	**P**	**19 09 05.5 +0.5**
	comp=Z,1.0nm,0.6s,baz=176,slow=8.3,SNR=6.1					
	comp=Z,1.0nm,0.6s					
PETK	**Petropavlovsk-**	**64.76 19**		P	**P**	**19 09 51.4 -0.4**
	comp=Z,0.9nm,0.6s,baz=191,slow=14,SNR=4.3					
	comp=Z,0.9nm,0.6s					
PETK	**Petropavlovsk-**	**64.76 19**		P	**P**	**19 09 51.6 -0.3**
MKAR	**Makanchi Array**	**67.08 328**		P	**P**	**19 10 05.3 -1.4**
	comp=Z,0.4nm,0.5s,baz=119,slow=7.6,SNR=3.6					
	comp=Z,0.4nm,0.5s					
ZALV	**Zalesovo Beam**	**70.62 335**		P	**P**	**19 10 26.8 -1.6**
	comp=Z,0.6nm,0.5s,baz=111,slow=6.5,SNR=4.1					
	comp=Z,0.6nm,0.5s					

NEIC ***12*** *19:04:48.1±2.5,24°.23S±0°.03×67°.2W±0°.2,h201km±18km, ML4.3(GUC),Error ellipse: s-maj=23.1km s-min=3.4km az=98.0*

IDC ***12*** *19:04:50.5±4.1,24°.11S×67°.08W,h174km±43km,mb3.2/1, mbtmp3.9/5,Error ellipse: s-maj=67.3km s-min=37.4km az=165.0*

GUC ***12*** *19:04:51.0±0.7,24°.19S×67°.52W,h193km±6km,ML4.3*

ISC 12 19:04:49.1±0.8,24°.23S±0°.04×67°.35W±0°.08, h199km±11km,n48,σ1$33/74,10C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
AF01	**San Pedro de A**	**1.48**	**329**	Pn		**Pn**	**19 05 23.6**	**+0.6**
AF01				Sn		**Sn**	**19 05 47.4**	**-1.8**
AF01	**San Pedro de A**	**1.48**	**329**	⇓*i*	P	**Pn**	**19 05 24.2**	**+1.3**
AF01				*i*	S	**Sn**	**19 05 49.8**	**+0.6**
LVC	**Limon Verde**	**2.16**	**318**	P		**Pn**	**19 05 31.0**	**+1.3**
	55nm,0.3s,baz=106,slow=9.8,SNR=417							
LVC				S		**Sn**	**19 06 01.1**	**-0.1**
	58nm,0.3s,baz=59,slow=23,SNR=24							
LVC	**Limon Verde**	**2.16**	**318**			**Pn**	**19 05 30.5**	**+0.8**
LVC				Sn		**Sn**	**19 06 01.0**	**-0.1**
LVC	**Limon Verde**	**2.16**	**318**	⇑*i*	P	**Pn**	**19 05 30.9**	**+1.3**
LVC				*i*	S	**Sn**	**19 06 01.1**	**-0.1**
PB15	**IPOC Station P**	**2.19**	**297**			**Pn**	**19 05 30.8**	**+0.9**
PB15	**IPOC Station P**	**2.19**	**297**	⇑*i*	P	**Pn**	**19 05 31.5**	**+1.7**
PB15				*i*	S	**Sn**	**19 06 01.7**	**+0.3**
GO02	**Mina Guanaco**	**2.24**	**245**	Pn		**Pn**	**19 05 31.7**	**+1.4**
GO02	**Mina Guanaco**	**2.24**	**245**	⇑*i*	P	**Pn**	**19 05 31.8**	**+1.4**
GO02				*i*	S	**Sn**	**19 06 03.5**	**+1.0**
GO02				IAML			19 06 04.3	
	comp=N,1μm,0.5s							
PB06	**IPOC Station P**	**2.54**	**306**			**Pn**	**19 05 34.5**	**+0.9**
PB06				Sn		**Sn**	**19 06 07.9**	**-0.4**
PB06	**IPOC Station P**	**2.54**	**306**	⇑*i*	P	**Pn**	**19 05 35.2**	**+1.6**
PB06				*i*	S	**Sn**	**19 06 08.3**	**0.0**
PB06				IAML			19 06 10.4	
	comp=N,633nm,0.1s							
PB14	**IPOC Station P**	**2.81**	**261**			**Pn**	**19 05 37.7**	**+0.9**
PB14				Sn		**Sn**	**19 06 14.1**	**+0.1**
PB14	**IPOC Station P**	**2.81**	**261**	⇑*i*	P	**Pn**	**19 05 38.2**	**+1.5**
PB14				*i*	S	**Sn**	**19 06 14.7**	**-0.3**
PB09	**IPOC Station P**	**2.99**	**324**			**Pn**	**19 05 40.4**	**+1.7**
PB09	**IPOC Station P**	**2.99**	**324**	⇑*i*	P	**Pn**	**19 05 40.7**	**+2.0**
PB09				*i*	S	**Sn**	**19 06 17.8**	**+0.3**
PB09				IAML			19 06 19.2	
	comp=N,316nm,0.4s							
PB10	**IPOC Station P**	**3.02**	**283**	Pn		**Pn**	**19 05 40.5**	**+1.6**
PB10	**IPOC Station P**	**3.02**	**283**	⇑*i*	P	**Pn**	**19 05 40.6**	**+1.7**
PB10				*i*	S	**Sn**	**19 06 17.2**	**-0.6**
AC02	**Maricunga**	**3.05**	**211**			**Pn**	**19 05 40.9**	**+1.2**
PB04	**IPOC Station P**	**3.19**	**306**			**Pn**	**19 05 42.3**	**+1.1**
PB04	**IPOC Station P**	**3.19**	**306**	⇓*i*	P	**Pn**	**19 05 42.7**	**+1.5**
PB04				*i*	S	**Sn**	**19 06 20.0**	**-1.9**
PB04				IAML			19 06 23.4	
	comp=N,510nm,0.3s							
PB07	**IPOC Station P**	**3.42**	**316**			**Pn**	**19 05 45.0**	**+1.1**
PB07	**IPOC Station P**	**3.42**	**316**	⇑*i*	P	**Pn**	**19 05 45.2**	**+1.4**
PB07				*i*	S	**Sn**	**19 06 25.1**	**-1.7**
PB07				IAML			19 06 28.0	
	comp=N,497nm,0.5s							
AC01	**Pan de Azucar**	**3.51**	**236**			**Pn**	**19 05 45.2**	**+0.4**
AC01				Sn		**Sn**	**19 06 27.2**	**-1.2**
PB02	**IPOC Station P**	**3.73**	**320**			**Pn**	**19 05 48.3**	**+0.6**
PB02				Sn		**Sn**	**19 06 31.4**	**-2.1**
PB02	**IPOC Station P**	**3.73**	**320**	⇑*i*	P	**Pn**	**19 05 48.7**	**+1.0**
PB02				*i*	S	**Sn**	**19 06 31.2**	**-2.3**
PB01	**IPOC Station P**	**3.74**	**328**			**Pn**	**19 05 48.3**	**+0.6**
PB01				Sn		**Sn**	**19 06 32.4**	**-1.3**
PB01	**IPOC Station P**	**3.74**	**328**	⇑*i*	P	**Pn**	**19 05 48.4**	**+0.6**
PB01				*i*	S	**Sn**	**19 06 32.2**	**-1.5**
PB01				IAML			19 06 32.9	
	comp=E,254nm,0.2s							
AC06	**Mina Casimiro**	**4.12**	**220**	Pn		**Pn**	**19 05 52.5**	**+0.1**
AC06						**Sn**	**19 06 40.7**	**-1.5**
GO03	**Copiap**	**4.24**	**217**	Pn		**Pn**	**19 05 53.9**	**+0.1**
GO03				Sn		**Sn**	**19 06 43.5**	**-1.3**
TA01	**Diego Aracena**	**4.49**	**324**	Pn		**Pn**	**19 05 57.9**	**+0.9**
TA02	**Huaiquique**	**4.71**	**326**	Pn		**Pn**	**19 05 59.8**	**0.0**
GO01	**Chusmiza**	**4.85**	**339**			**Pn**	**19 06 02.7**	**+0.6**
AC04	**Llanos de Chal**	**5.18**	**219**	Pn		**Pn**	**19 06 05.2**	**-0.6**
AC05	**El Transito**	**5.28**	**209**	Pn		**Pn**	**19 06 07.1**	**-0.1**
AC05						**Sn**	**19 07 07.0**	**-1.9**
LCO	**Las Campanas**	**5.62**	**211**	Pn		**Pn**	**19 06 11.1**	**-0.6**
LCO						**Sn**	**19 07 14.7**	**-2.4**
PB16	**IPOC Station P**	**6.20**	**341**	Pn		**Pn**	**19 06 20.4**	**+0.8**
CO01	**Juntas del Tor**	**6.22**	**203**	Pn		**Pn**	**19 06 20.2**	**+0.8**
CO01						**Sn**	**19 07 30.4**	**-0.5**
PB12	**IPOC Station P**	**6.24**	**333**	Pn		**Pn**	**19 06 19.6**	**0.0**
PB12						**Sn**	**19 07 27.8**	**-3.4**
GO04	**Tololo Observa**	**6.67**	**207**	Pn		**Pn**	**19 06 23.8**	**-1.4**
CO03	**El Pedregal**	**7.22**	**204**	Pn		**Pn**	**19 06 31.8**	**-0.4**
CO02	**Combarbal**	**7.66**	**204**	Pn		**Pn**	**19 06 35.3**	**-2.6**
LPAZ	**La Paz**	**7.94**	**355**	P		**Pn**	**19 06 43.7**	**+1.5**
	comp=E,3.2nm,0.3s,baz=194,slow=14,SNR=15							
LPAZ	**La Paz**	**7.94**	**355**	Pn		**Pn**	**19 06 41.3**	**-0.9**
SIV	**San Ignacio**	**10.10**	**37**	P		**Pn**	**19 07 06.9**	**-2.8**
	comp=E,1.6nm,0.4s,baz=214,slow=14,SNR=4.7							
PLTB	**Pedras Altas**	**14.27**	**125**			**Pn**	**19 08 02.7**	**+0.4**
TRQA	**Tornquist**	**14.52**	**163**			**Pn**	**19 08 05.9**	**+0.5**
BDFB	**Brasilia**	**20.07**	**68**	P		**P**	**19 09 08.1**	**+0.6**
	comp=E,4.1nm,0.6s,baz=242,slow=9.6,SNR=6.1							
TORD	**Torodi Ar. Bea**	**76.95**	**69**	P		**P**	**19 16 22.4**	**+2.3**

comp=E,0.3nm,0.4s,baz=257,slow=5.4,SNR=4.3
comp=E,0.3nm,0.4s

IDC 12 19:12:00.6±2.7,4°.81S×134°.11E,h0km,mb3.3/1, mbtmp3.5/5,ML3.5/4,Error ellipse: s-maj=91.1km s-min=25.8km az=78.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**4.84**	**324**	Pn		Pn	19 13 13.7	-1.1
	1.2nm,0.3s,baz=268,slow=22,SNR=10							
SIJI				Sn		Sn	19 14 02.1	-9.4
	2.6nm,0.3s,baz=105,slow=23,SNR=6.5							
	2.8nm,0.3s							
WRA	**Warramunga Arr**	**15.04**	**179**	Pn		Pn	19 15 32.9	-1.8
	0.1nm,0.3s,baz=0.2,slow=12,SNR=17							
WRA				Sn		Sn	19 18 13.3	-8.9
	0.4nm,0.3s,baz=351,slow=24,SNR=7.4							
	0.3nm,0.5s							
FITZ	**Fitzroy Crossi**	**15.59**	**211**	Pn		Pn	19 15 39.8	-2.1
	0.2nm,0.3s,baz=30,slow=8.8,SNR=20							
FITZ				Sn		Sn	19 18 22.7	-13
	0.5nm,0.3s,baz=175,slow=18,SNR=8.4							
	3.1nm,1.1s							
ASAR	**Alice Springs**	**18.75**	**181**	P		Pn	19 16 22.5	+0.9
	0.4nm,0.3s,baz=5.7,slow=10.0,SNR=30							
ASAR				S		Sn	19 19 43.1	-9.0
	0.4nm,0.7s,baz=347,slow=13,SNR=5.5							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**68.73**	**325**	P		P	19 23 06.8	+0.4
	0.2nm,0.5s,baz=114,slow=7.0,SNR=4.5							
	0.2nm,0.5s							

IDC 12 19:15:43.1±5.2,21°.81S×173°.38E,h0km,mb3.6/3, mbtmp3.7/4,ML3.3/1,Error ellipse: s-maj=144.9km s-min=67.6km az=7.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.44**	**266**	Pn		Pn	19 17 21.1	+1.7
	0.6nm,0.3s,baz=114,slow=12,SNR=22							
DZM				Sn		Sn	19 18 32.0	-1.6
	0.9nm,0.3s,baz=344,slow=24,SNR=8.8							
	5.4nm,0.5s							
STKA	**Stephens Creek**	**29.98**	**244**	P		P	19 21 52.9	-0.6
	0.7nm,0.5s,baz=79,slow=16,SNR=1.8							
	0.7nm,0.5s							
ASAR	**Alice Springs**	**36.37**	**259**	P		P	19 22 49.5	+0.1
	0.4nm,0.5s,baz=102,slow=8.6,SNR=8.6							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**36.46**	**266**	P		P	19 22 49.8	-0.3
	0.3nm,0.5s,baz=96,slow=8.4,SNR=7.9							
	0.3nm,0.5s							

KRNET ***12*** *19:21:25.1±0.1,40°.26N×78°.46E,mb3.4*

SOME ***12*** *19:21:28.6,40°.67N×78°.32E,h15km*

NNC ***12*** *19:21:31.8±1.0,40°.82N×78°.32E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=7.5km s-min=5.1km az=163.0*

ISC 12 19:21:30.4±3.0,40°.63N±0°.10×78°.31E±0°.04,h3km±17km, n45,σ1$44/69,14C-17D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op		ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.86**	**2**	⇓*i*	P	**Pn**	**19 22 03.1**	**-0.2**
	baz=59							
PRZ				⇓*i*	S	**Sg**	**19 22 31.1**	**+1.0**
	baz=59							
ULHL	**Ulahol**	**2.24**	**317**	⇓*i*	P	**Pn**	**19 22 08.3**	**-0.3**
ULHL				⇓*i*	S	**Sb**	**19 22 39.6**	**-0.3**
	baz=21							
SATY	**Saty**	**2.43**	**2**	*eP*		**Pb**	**19 22 13.5**	**-1.4**
SATY	79nm,0.4s			*eS*		**Sb**	**19 22 45.9**	**+0.5**
	163nm,0.4s							
SATY	**Saty**	**2.43**	**2**	Pg		**Pb**	**19 22 13.5**	**-1.4**
	79nm,0.4s							
SATY				Lg		Lg	19 22 45.8	
	163nm,0.4s							
BOOM	**Boomskoye usch**	**2.57**	**317**	⇑*eP*		**Pn**	**19 22 12.9**	**-0.3**
	baz=20							
BOOM				⇑*iS*		**Sb**	**19 22 47.5**	**-1.9**
	baz=20							
UZB	**Uzynbulak**	**2.58**	**12**	*eP*		**Pn**	**19 22 14.9**	**+1.8**
	12nm,0.3s							
UZB				*eS*		**Sb**	**19 22 48.2**	**-1.2**
	133nm,0.5s							
UZB	**Uzynbulak**	**2.58**	**12**	Pg		**Pn**	**19 22 14.9**	**+1.8**
	12nm,0.3s							
UZB				Lg		Lg	19 22 48.8	
	133nm,0.5s							
SHLS	**Shalkode**	**2.67**	**18**	*eP*		**Pb**	**19 22 18.6**	**-0.3**
	18nm,0.5s							
SHLS				*eS*		**Sb**	**19 22 54.4**	**+2.2**
	121nm,0.4s							
SHLS	**Shalkode**	**2.67**	**18**	Pg		**Pb**	**19 22 17.6**	**-1.4**
	8.6nm,0.2s							
SHLS				Lg		Lg	19 22 52.9	
	121nm,0.4s							
MDOK	**Medeo**	**2.70**	**340**	*eP*		**Pb**	**19 22 17.9**	**-1.6**
	38nm,0.4s							
MDOK				*eS*		**Sb**	**19 22 53.6**	**+0.4**
	127nm,0.5s							
MDOK	**Medeo**	**2.70**	**340**	⇓Pn		**Pn**	**19 22 15.7**	**+0.8**
	26nm,0.5s							
MDOK				Pg		**Pb**	**19 22 17.9**	**-1.6**
	38nm,0.4s							
MDOK				⇑Lg		Lg	19 22 52.0	
	146nm,0.7s							
MDOK				Lg		Lg	19 22 53.5	
	127nm,0.5s							
KPKS	**Kokpek**	**2.85**	**6**	*eP*		**Pb**	**19 22 20.7**	**-1.3**
	77nm,0.3s							
KPKS				*eS*		**Sb**	**19 22 58.3**	**+0.9**
	163nm,0.5s							
KPKS	**Kokpek**	**2.85**	**6**	Pg		**Pb**	**19 22 19.7**	**-2.3**
	77nm,0.3s							
KPKS				Lg		Lg	19 22 56.3	
	163nm,0.5s							
KURS	**Kuram**	**2.86**	**358**	*eP*		**Pb**	**19 22 21.0**	**-1.2**
	43nm,0.5s							
KURS				*eS*		**Sb**	**19 22 58.4**	**+0.8**
	85nm,0.9s							
KURS	**Kuram**	**2.86**	**358**	Pg		**Pb**	**19 22 20.9**	**-1.2**
	43nm,0.5s							
KURS				Lg		Lg	19 22 58.5	
	85nm,0.9s							
KST	**Kastek**	**2.98**	**325**	*eP*		**Pb**	**19 22 22.4**	**-1.9**
	27nm,0.4s							
KST				*eS*		**Sb**	**19 23 01.3**	**+0.2**
	95nm,0.6s							
KST	**Kastek**	**2.98**	**325**	Pg		**Pb**	**19 22 22.6**	**-1.7**
	27nm,0.4s							
KST				Lg		Lg	19 23 01.3	
	95nm,0.6s							
TKM2	**Tokmak 2**	**3.06**	**319**	P		Pn	19 22 21.5	+1.6
	SNR=5.8							
TKM2	**Tokmak 2**	**3.06**	**319**	⇓Pn		Pn	19 22 20.9	+1.0
	4.4nm,0.4s							
TKM2				⇓Lg		Lg	19 23 04.3	
	40nm,0.7s							
TKM2	**Tokmak 2**	**3.06**	**319**	⇑*i*	P	**Pn**	**19 22 19.7**	**-0.2**
	baz=22							
TKM2				⇑*iS*		**Sn**	**19 22 59.4**	**+2.3**
	baz=22							
KTMS	**Ketmen**	**3.20**	**28**	*eP*		**Pb**	**19 22 26.8**	**-1.2**
	4.0nm,0.3s							
KTMS				*eS*		**Sb**	**19 23 08.5**	**+1.0**
	30nm,0.6s							
KTMS	**Ketmen**	**3.20**	**28**	Pg		**Pb**	**19 22 26.8**	**-1.2**
	4.0nm,0.3s							
KTMS				Lg		Lg	19 23 08.6	
	30nm,0.6s							
KBK	**Karagaybulak**	**3.23**	**310**	P		**Pb**	**19 22 27.7**	**-0.8**
	SNR=13							
KBK	**Karagaybulak**	**3.23**	**310**	⇑*eP*		**Pn**	**19 22 21.6**	**-0.6**
	baz=13							
KBK				⇑*iS*		**Sn**	**19 23 02.9**	**+1.6**
	baz=13							
ARLS	**Aral**	**3.25**	**294**	⇓*eP*		**Pn**	**19 22 20.9**	**-1.5**
	baz=98							
ARLS				⇓*iS*		**Sn**	**19 23 01.7**	**0.0**
	baz=98							
KTBS	**Karatobe**	**3.31**	**339**	*eP*		**Pb**	**19 22 28.0**	**-1.8**
	20nm,0.5s							
KTBS				*eS*		**Sb**	**19 23 10.6**	**0.0**
	123nm,0.3s							
KTBS	**Karatobe**	**3.31**	**339**	Pg		**Pb**	**19 22 28.0**	**-1.8**
	20nm,0.5s							
KTBS				Lg		Lg	19 23 11.1	
	123nm,0.3s							
AAK	**Ala-Archa**	**3.49**	**306**	P		**Pb**	**19 22 32.3**	**-0.7**
	SNR=7.5							
CHMS	**Chumysh**	**3.56**	**313**	P		**Pb**	**19 22 33.8**	**-0.3**
	SNR=10							
CHMS	**Chumysh**	**3.56**	**313**	⇑Pg		**Pb**	**19 22 33.4**	**-0.6**
	16nm,0.9s							
CHMS				⇑Lg		Lg	19 23 19.1	
	40nm,0.6s							
KUU	**Kurty**	**3.58**	**337**	*eP*		**Pb**	**19 22 32.7**	**-1.7**
	7.5nm,0.6s							
KUU				*eS*		**Sb**	**19 23 18.9**	**+0.8**
	41nm,0.7s							
KUU	**Kurty**	**3.58**	**337**	Pg		**Pb**	**19 22 33.0**	**-1.3**
	7.5nm,0.6s							
KUU				Lg		Lg	19 23 19.2	
	41nm,0.7s							
ARXS	**Arharly**	**3.60**	**354**	*eP*		**Pb**	**19 22 33.5**	**-1.3**
	12nm,0.3s							
ARXS				*eS*		**Sb**	**19 23 20.3**	**+1.4**
	35nm,0.8s							
ARXS	**Arharly**	**3.60**	**354**	Pg		**Pb**	**19 22 33.8**	**-1.0**
	12nm,0.3s							
ARXS				Lg		Lg	19 23 20.3	
	35nm,0.8s							
KRBS	**Karabastau**	**3.64**	**328**	*eP*		**Pb**	**19 22 33.7**	**-1.7**
	7.9nm,0.2s							
KRBS				*eS*		**Sb**	**19 23 20.7**	**+0.7**
	26nm,0.7s							
KRBS	**Karabastau**	**3.64**	**328**	Pg		**Pb**	**19 22 34.0**	**-1.4**
	7.9nm,0.2s							
KRBS				Lg		Lg	19 23 20.8	
	26nm,0.7s							
DJR	**Jarkent**	**3.86**	**16**	*eP*		**Pb**	**19 22 38.0**	**-1.2**
	4.3nm,0.2s							
DJR				*eS*		**Sb**	**19 23 27.8**	**+1.4**
	23nm,0.3s							
DJR	**Jarkent**	**3.86**	**16**	Pg		**Pb**	**19 22 38.2**	**-1.0**
	4.3nm,0.2s							
DJR				Lg		Lg	19 23 27.8	
	23nm,0.3s							
USP	**Ospenovka**	**3.88**	**314**	P		**Pb**	**19 22 37.9**	**-1.6**
	SNR=7.5							
EKS2	**Erkin-Say**	**3.96**	**302**	P		**Pb**	**19 22 41.6**	**+0.8**
	SNR=8.3							
EKS2	**Erkin-Say**	**3.96**	**302**	⇓*i*	P	**Pn**	**19 22 31.3**	**-0.8**
	baz=6.0							
EKS2				⇓*iS*		**Sn**	**19 23 19.6**	**+0.5**
	baz=6.0							
KK31	**Karatay Array**	**6.33**	**296**	⇑Pg		**Pb**	**19 23 25.2**	**+4.1**
	0.6nm,0.5s,baz=106,slow=15,SNR=12							
KK31				⇓Lg		Lg	19 24 48.0	
	2.3nm,0.6s,baz=108,slow=27,SNR=6.7							
MAKZ	**Makanchi**	**6.73**	**22**	⇓Pn		**Pn**	**19 23 10.2**	**+0.2**
	1.4nm,0.9s							
MAKZ				⇓Sn		**Sn**	**19 24 25.4**	**-1.7**
	1.8nm,0.5s							
MAKZ				⇑Lg		Lg	19 25 00.4	
	2.9nm,0.8s							
MK31	**Makanchi Array**	**6.81**	**24**	⇓Pn		**Pn**	**19 23 11.1**	**-0.1**
	0.5nm,0.5s,baz=204,slow=14,SNR=8.8							
MK31				⇓Pg		**Pb**	**19 23 32.7**	**+3.4**
	0.9nm,0.6s							
MK31				⇑Sn		**Sn**	**19 24 26.8**	**-2.3**
	2.1nm,0.7s,baz=200,slow=21,SNR=4.0							
MK31				⇑Lg		Lg	19 25 02.2	
	2.9nm,0.8s,baz=201,slow=30,SNR=4.2							
KURBB	**Kurchatov Arra**	**10.00**	**1**	⇓Pn		**Pn**	**19 23 53.9**	**-0.9**
	2.1nm,1.1s							
KURBB				⇑Lg		Lg	19 26 43.9	
	8.9nm,0.8s							

IDC ***12*** *19:39:45.6±0.5,26°.90N×140°.46E,h420km±4km,mb3.7/29, mbtmp4.5/34,Error ellipse: s-maj=11.0km s-min=8.5km az=72.0*

NEIC ***12*** *19:39:47.2±1.4,26°.97N±0°.07×140°.4E±0°.1,h430km±7km, mb4.2/142,Error ellipse: s-maj=15.1km s-min=10.6km az=82.0*

JMA ***12*** *19:39:48.3±0.1,27°N±1°×14°1E±°,h418km,MV4.1/26,W OFF OGASAWARA*

ISC 12 19:39:46.5±0.5,26°.96N±0°.05×140°.49E±0°.06,h428km±5km, n399,σ1$10/443,mb4.2/107,2C,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.52**	**85**	P		**P**	**19 40 43.1**	**+0.6**
CBIJ				S		**S**	**19 41 26.1**	**-1.7**
JCJ	**Chichijima**	**1.52**	**85**	P		**P**	**19 40 42.7**	**+0.2**
	842nm,0.3s,baz=350,slow=21,SNR=525							
JCJ				S		**S**	**19 41 25.3**	**-2.5**
	1μm,0.4s,baz=309,slow=23,SNR=12							
JCJ	**Chichijima**	**1.52**	**85**			**P**	**19 40 43.0**	**+0.5**
JCJ				S		**S**	**19 41 24.9**	**-3.0**
JHH2	**Haha-jima-NKT2**	**1.54**	**102**	P		**P**	**19 40 43.8**	**+1.2**
JHH2				*eS*		**S**	**19 41 27.0**	**-1.0**
JHH2	**Haha-jima-NKT2**	**1.54**	**102**	A		A	19 40 43.8	
	comp=E,12nm,0.4s,comp=E,12nm,0.4s							
JHCJ	**Hachijojimakas**	**6.12**	**355**	*eP*		**P**	**19 41 23.0**	**+2.0**
JHJ2	**Mitsune**	**6.16**	**355**	P		**P**	**19 41 22.2**	**+0.8**
JHJ2				S		**S**

HHC Hu-ho-hao-te 27.57 308 *e*P **P** **19 44 58.3 +1.3**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,170nm,5.3s
PEA0B Petropavlovsk- 29.09 22 P **P** **19 45 11.1 +1.0**
PEA0B IAmb IAmb 19 45 15.1
comp=Z,26nm,1.5s
PETK Petropavlovsk- 29.09 22 P **P** **19 45 11.6 +1.5**
comp=Z,1.9nm,0.6s,baz=201,slow=5.6,SNR=9.8
PETK PcP **PcP** **19 48 04.8 -0.3**
comp=Z,1.0nm,0.8s,baz=225,slow=5.1,SNR=2.5
comp=Z,1.9nm,0.6s
PETK Petropavlovsk- 29.09 22 P **P** **19 45 11.0 +0.9**
MA2 Magadan 33.37 10 P **P** **19 45 46.6 -0.3**
MA2 IAmb IAmb 19 46 13.4
comp=Z,16nm,1.1s
SONM Songino Array 33.77 317 P **P** **19 45 50.8 0.0**
comp=Z,1.1nm,0.9s,baz=132,slow=7.7,SNR=5.1
SONM PcP **PcP** **19 48 18.1 -0.2**
comp=Z,0.4nm,0.4s,baz=113,slow=2.0,SNR=5.2
comp=Z,1.1nm,0.9s
KMI Kunming 33.89 276 ⇑P **P** **19 45 53.2 +1.1**
KMI pmax pmax
comp=Z,7.0nm,0.9s
PZH PanZhiHua 34.52 278 P **P** **19 45 57.9 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,70nm,3.6s
YAK Yakutsk 35.80 351 P **P** **19 46 07.2 -0.2**
comp=Z,2.5nm,0.5s,baz=354,slow=4.5,SNR=4.5
comp=Z,2.5nm,0.5s
GTA Gaotai 35.95 301 *e*P **P** **19 46 08.6 -0.5**
GTA pP pP 19 47 27.0 +0.5
GTA PcP **PcP** **19 48 24.2 -0.7**
GTA pmax pmax
comp=Z,2.0nm,1.2s
SEY Seymchan 36.82 9 P **P** **19 46 16.4 +0.6**
comp=Z,5.7nm,0.6s,baz=195,slow=7.6,SNR=37
comp=Z,5.7nm,0.6s
CRAI Chiangrai 37.25 268 P **P** **19 46 20.7 +0.6**
CHTO Chiang Mai 38.99 267 P **P** **19 46 33.9 -0.5**
CM31 Chiang Mai Arr 39.11 266 P **P** **19 46 34.9 -0.5**
CMAR Chiang Mai Arr 39.11 266 P **P** **19 46 35.9 +0.6**
comp=Z,1.1nm,0.5s,baz=74,slow=5.3,SNR=15
CMAR PcP **PcP** **19 48 35.0 0.0**
comp=Z,0.6nm,1.0s,baz=249,slow=1.5,SNR=4.3
comp=Z,1.1nm,0.5s
CMAR Chiang Mai Arr 39.11 266 P **P** **19 46 36.6 +1.3**
MMRI Maumere 39.57 209 P **P** **19 46 40.6 +1.5**
GOMU GeErMu 39.68 295 P **P** **19 46 40.3 +0.1**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
GOMU pmax pmax
comp=Z,37nm,4.4s
MTN Manton Dam 40.60 194 P **P** **19 46 46.6 -0.8**
MTN IAmb IAmb 19 46 47.8
comp=Z,25nm,1.5s
KULM Kulim 43.64 248 P **P** **19 47 12.1 +0.5**
KULM IAmb IAmb 19 47 38.7
comp=Z,24nm,1.4s
KULM PcP **PcP** **19 48 48.6 -1.4**
IPM Ipoh 43.78 246 P **P** **19 47 12.8 0.0**
IPM IAmb IAmb 19 47 13.4
comp=Z,7.6nm,0.7s
KNRA Kununurra 43.89 196 P **P** **19 47 13.2 -0.2**
KNRA IAmb IAmb 19 47 22.7
comp=Z,22nm,1.5s
WMQ Urumqi 45.43 306 *e*P **P** **19 47 26.5 +1.3**
WB0 Warramunga Arr 46.83 188 P **P** **19 47 35.4 -0.6**
WRAB Tennant Creek 46.99 188 P **P** **19 47 36.8 -0.6**
WR0 Warramunga Arr 47.00 188 P **P** **19 47 36.7 -0.7**
WR0 IAmb IAmb 19 48 07.7
comp=Z,12nm,1.4s
WB2 Warramunga Arr 47.01 188 P **P** **19 47 36.9 -0.6**
WRA Warramunga Arr 47.01 188 P **P** **19 47 36.6 -0.8**
comp=Z,1.4nm,0.4s,baz=6.5,slow=7.8,SNR=47
WRA pP **PcP** **19 49 02.4 +0.8**
comp=Z,1.5nm,0.5s,baz=9.8,slow=8.6,SNR=4.2
WRA ScP **ScP** **19 52 12.1 -1.7**
comp=Z,0.9nm,0.6s,baz=359,slow=4.4,SNR=8.1
comp=Z,1.4nm,0.4s
WRA Warramunga Arr 47.01 188 P **P** **19 47 36.0 -1.4**
FITZ Fitzroy Crossi 47.05 199 P **P** **19 47 38.1 +0.3**
CTAO Charters Tower 47.10 173 P **P** **19 47 38.0 -0.1**
CTAO IAmb IAmb 19 47 50.4
comp=Z,17nm,1.4s
AKUT Akutan 47.52 40 P **P** **19 47 40.9 0.0**
ZAA0 Zalesovo Array 48.60 319 P **P** **19 47 48.5 -0.6**
ZAA0 **PcP** **19 49 06.3 -0.7**
ZALV Zalesovo Beam 48.60 319 P **P** **19 47 48.8 -0.3**
comp=Z,6.1nm,0.8s,baz=101,slow=6.8,SNR=22
ZALV PcP **PcP** **19 49 06.2 -0.7**
comp=Z,4.4nm,0.6s,baz=114,slow=3.5,SNR=17
comp=Z,6.1nm,0.8s
ZALV Zalesovo Beam 48.60 319 P **P** **19 47 48.8 -0.3**
ZALV **PcP** **19 49 05.8 -1.1**
MK31 Makanchi Array 49.40 310 P **P** **19 47 55.2 0.0**
MK31 PcP **PcP** **19 49 09.7 -0.4**
MKAR Makanchi Array 49.40 310 P **P** **19 47 55.4 +0.2**
comp=Z,1.4nm,0.6s,baz=95,slow=9.3,SNR=16
MKAR PcP **PcP** **19 49 09.7 -0.4**
comp=Z,2.7nm,0.7s,baz=84,slow=6.7,SNR=16
MKAR ScP **ScP** **19 52 22.3 -1.5**
comp=Z,0.5nm,0.7s,baz=79,slow=5.7,SNR=4.7
comp=Z,1.4nm,0.6s
MKAR Makanchi Array 49.40 310 P **P** **19 47 54.5 -0.7**
MKAR PcP **PcP** **19 49 09.7 -0.4**
MAKZ Makanchi 49.61 310 P **P** **19 47 57.2 +0.4**
ASAR Alice Springs 50.73 188 P **P** **19 48 04.5 -0.8**
comp=Z,0.3nm,0.5s,baz=359,slow=4.2,SNR=7.1
ASAR PcP **PcP** **19 49 15.1 -0.1**
comp=Z,0.3nm,0.7s,baz=20,slow=4.5,SNR=5.4
ASAR pP **pwP** **19 49 33.7 -1.4**
comp=Z,0.4nm,0.6s,baz=16,slow=12,SNR=4.7
ASAR ScP **ScP** **19 52 27.9 -1.8**
comp=Z,0.5nm,0.8s,baz=9.6,slow=4.4,SNR=6.4
CNBA Chernabura Isl 51.20 40 P **P** **19 48 08.2 0.0**
CHNA Chernabura Isl 51.20 40 P **P** **19 48 08.0 -0.2**
baz=262
KURK Kurchatov 52.00 315 P **P** **19 48 14.1 -0.1**
KURK IAmb IAmb 19 48 15.7
comp=Z,9.2nm,0.8s
KURK PcP **PcP** **19 49 19.1 -0.5**
CHGN Chignik 52.06 38 P **P** **19 48 14.2 -0.2**
CHGN Chignik 52.06 38 P **P** **19 48 14.9 +0.4**
baz=262
KURBB Kurchatov Arra 52.06 315 P **P** **19 48 14.6 0.0**
comp=Z,7.7nm,0.7s,baz=92,slow=7.7,SNR=62
KURBB PcP **PcP** **19 49 19.0 -0.9**
comp=Z,1.7nm,0.6s,baz=93,slow=4.1,SNR=9.3
comp=Z,7.7nm,0.7s
NRIK Noril'sk 52.23 339 P **P** **19 48 15.3 -0.3**
comp=Z,8.1nm,0.7s,baz=115,slow=10,SNR=6.0
comp=Z,8.1nm,0.7s
NRIK Noril'sk 52.23 339 P **P** **19 48 14.7 -0.8**
NRIK IAmb IAmb 19 48 16.5
comp=Z,11nm,0.9s
N16K Nishlik Lake 52.56 33 P **P** **19 48 18.8 +0.7**
baz=259
O16K Kokwok River B 52.74 34 P **P** **19 48 19.9 +0.6**
baz=260
RDOG Red Dog Mine 52.95 23 P **P** **19 48 20.8 0.0**
baz=249
O17K Koliganek Bris 53.27 34 P **P** **19 48 23.7 +0.6**
baz=261
P17K Kvichak River 53.51 35 P **P** **19 48 25.4 +0.6**
baz=262
CHIR Chirikof Islan 53.56 39 P **P** **19 48 26.1 +0.8**
CHIR Chirikof Islan 53.56 39 P **P** **19 48 26.0 +0.8**
baz=265
N18K Kilae Creek 54.00 33 P **P** **19 48 29.6 +1.2**
N18K Kilae Creek 54.00 33 P **P** **19 48 28.4 0.0**
baz=261
SVW2 Sparrevohn 54.21 33 P **P** **19 48 30.8 +0.8**
GCSA Galena City Sc 54.31 28 P **P** **19 48 30.1 -0.4**
baz=257
TTA Tatalina 54.32 30 P **P** **19 48 31.7 +0.9**
baz=260
KSH Kashi 54.35 301 P **P** **19 48 35.9 +4.5**
KSH pmax pmax
comp=Z,8.0nm,0.8s
SII Sitkinak Islan 54.42 38 P **P** **19 48 32.0 +0.6**
SII Sitkinak Islan 54.42 38 P **P** **19 48 32.3 +0.8**
baz=266

N19K Bonanza Creek 54.70 33 P **P** **19 48 33.6 +0.1**
N19K PcP **PcP** **19 49 29.1 -0.9**
N19K Bonanza Creek 54.70 33 P **P** **19 48 34.3 +0.8**
baz=262
L19K White Mountain 54.72 31 P **P** **19 48 33.5 -0.1**
L19K White Mountain 54.72 31 P **P** **19 48 34.8 +1.2**
baz=261
M19K Big River Lodg 54.90 32 P **P** **19 48 35.9 +1.1**
M19K Big River Lodg 54.90 32 P **P** **19 48 35.3 +0.5**
baz=262
Q19K Cape Douglas, 54.91 35 P **P** **19 48 35.2 +0.3**
baz=265
OHAK Old Harbor 54.96 37 P **P** **19 48 35.6 +0.4**
OHAK IAmb IAmb 19 48 37.4
comp=Z,11nm,1.1s
OHAK Old Harbor 54.96 37 P **P** **19 48 35.6 +0.4**
baz=266
P19K Oil Pt 55.19 34 P **P** **19 48 36.8 0.0**
P19K IAmb IAmb 19 48 37.9
comp=Z,20nm,1.0s
P19K Oil Pt 55.19 34 P **P** **19 48 37.2 +0.3**
baz=264
L20K Farewell, AK 55.22 31 P **P** **19 48 37.7 +0.6**
baz=262
K20K Telida 55.26 30 P **P** **19 48 38.7 +1.4**
K20K IAmb IAmb 19 48 40.1
comp=Z,8.8nm,0.9s
K20K PcP **PcP** **19 49 33.5 +1.5**
K20K Telida 55.26 30 P **P** **19 48 38.4 +1.1**
baz=261,SNR=7.3
J20K Nowinta River 55.36 29 P **P** **19 48 39.6 +1.7**
J20K IAmb IAmb 19 48 40.6
comp=Z,13nm,0.9s
J20K PcP **PcP** **19 49 34.4 +2.1**
J20K Nowinta River 55.36 29 P **P** **19 48 39.0 +1.1**
baz=260,SNR=9.7
KDAK Kodiak Island 55.38 37 P **P** **19 48 38.6 +0.5**
KDAK IAmb IAmb 19 48 40.2
comp=Z,16nm,1.3s
KDAK Kodiak Island 55.38 37 P **P** **19 48 38.5 +0.4**
baz=266
M20K Styx River 55.49 32 P **P** **19 48 39.2 +0.2**
baz=263
Q20K Shuyak Island 55.53 36 P **P** **19 48 39.3 +0.1**
baz=266
O20K Slope Mountain 55.54 34 P **P** **19 48 40.3 +0.9**
baz=265
IMAR Indian Mountai 55.84 27 P **P** **19 48 42.6 +1.3**
IMAR PcP **PcP** **19 49 36.0 +1.8**
G21K Allakaket 56.04 26 P **P** **19 48 44.1 +1.4**
baz=260,SNR=5.2
PPLA Purkeypile 56.05 31 P **P** **19 48 43.8 +0.8**
PPLA IAmb IAmb 19 49 20.7
comp=Z,13nm,1.3s
CAST Castle Rocks 56.16 30 P **P** **19 48 45.0 +1.5**
CAST IAmb IAmb 19 48 45.5
comp=Z,6.2nm,0.6s
CAST Castle Rocks 56.16 30 P **P** **19 48 45.1 +1.5**
baz=263,SNR=8.2
H21K Melozitna Rive 56.17 27 P **P** **19 48 45.3 +1.7**
H21K IAmb IAmb 19 48 46.2
comp=Z,9.0nm,0.8s
H21K Melozitna Rive 56.17 27 P **P** **19 48 45.5 +1.9**
baz=261,SNR=14
F21K Alatna River 56.18 25 P **P** **19 48 44.4 +0.7**
baz=259
CNPM China Poot 56.19 35 P **P** **19 48 44.0 +0.2**
SKT Skwentna 56.25 32 P **P** **19 48 44.7 +0.4**
baz=264
I21K Tanana 56.44 28 P **P** **19 48 46.7 +1.3**
I21K IAmb IAmb 19 48 48.1
comp=Z,11nm,0.9s
I21K Tanana 56.44 28 P **P** **19 48 46.8 +1.3**
baz=262
KTH Kantishna Hill 56.69 30 P **P** **19 48 48.8 +1.4**
KTH IAmb IAmb 19 48 54.8
comp=Z,12nm,1.5s
KTH PcP **PcP** **19 49 38.2 +0.5**
BPAW Bear Paw Mtn. 56.72 29 P **P** **19 48 48.3 +0.8**
BPAW IAmb IAmb 19 48 49.6
comp=Z,5.4nm,0.6s
BPAW PcP **PcP** **19 49 38.5 +0.8**
BPAW Bear Paw Mtn. 56.72 29 P **P** **19 48 49.0 +1.5**
baz=264,SNR=6.6
F22K John River 56.73 25 P **P** **19 48 49.3 +1.8**
baz=260,SNR=8.7
H22K Ishtalitna Cre 56.79 27 P **P** **19 48 49.9 +2.0**
baz=262,SNR=6.5
MLY Manley 56.94 28 P **P** **19 48 50.4 +1.4**
MLY IAmb IAmb 19 48 51.2
comp=Z,8.7nm,0.6s
MLY PcP **PcP** **19 49 39.6 +1.1**
MLY Manley 56.94 28 P **P** **19 48 50.6 +1.6**
baz=263,SNR=12
TRF Thorofare Moun 56.96 30 P **P** **19 48 49.8 +0.5**
TRF IAmb IAmb 19 48 51.4
comp=Z,11nm,1.0s
TRF Thorofare Moun 56.96 30 P **P** **19 48 50.5 +1.2**
baz=265
E22K Anaktuvuk Pass 56.97 24 P **P** **19 48 50.3 +1.1**
baz=260
BRVK Borovoye 57.18 317 P **P** **19 48 50.9 0.0**
BRVK IAmb IAmb 19 48 52.0
comp=Z,11nm,0.8s
BRVK PcP **PcP** **19 49 38.5 -1.2**
BWN Browne 57.40 29 P **P** **19 48 53.3 +1.2**
COLD Coldfoot 57.44 26 P **P** **19 48 53.7 +1.3**
baz=262
G23K Bananza Creek 57.44 26 P **P** **19 48 54.3 +1.9**
baz=263,SNR=8.1
GHO Glory Hole Cre 57.47 32 P **P** **19 48 53.1 +0.4**
GHO IAmb IAmb 19 48 53.9
comp=Z,12nm,1.0s
D23K Nanushuk River 57.52 24 P **P** **19 48 54.9 +2.0**
baz=261,SNR=14
H23K Yukon River 57.53 27 P **P** **19 48 54.8 +1.8**
H23K IAmb IAmb 19 48 55.6
comp=Z,6.0nm,0.8s
H23K Yukon River 57.53 27 P **P** **19 48 54.7 +1.6**
baz=264,SNR=6.6
I23K Minto, Yukon-K 57.53 28 P **P** **19 48 53.8 +0.8**
I23K **PcP** **19 49 41.8 +1.0**
I23K Minto, Yukon-K 57.53 28 P **P** **19 48 54.6 +1.6**
baz=264,SNR=6.8
NIL Nilore 57.54 294 P **P** **19 48 53.4 -0.3**
NIL IAmb IAmb 19 48 56.0
comp=Z,7.1nm,0.7s
MCK McKinley 57.59 30 P **P** **19 48 54.1 +0.6**
MCK McKinley 57.59 30 P **P** **19 48 54.4 +0.9**
baz=266,SNR=9.9
RND Reindeer 57.60 30 P **P** **19 48 53.9 +0.2**
NEA2 Nenana 57.60 29 P **P** **19 48 54.6 +1.1**
NEA2 Nenana 57.60 29 P **P** **19 48 55.0 +1.4**
baz=265,SNR=13
KNK Knik Glacier 57.67 33 P **P** **19 48 54.6 +0.5**
baz=268
C23K Itkillik River 57.70 23 P **P** **19 48 55.7 +1.6**
baz=260,SNR=5.9
WAT1 Susitna Watana 57.70 31 P **P** **19 48 54.7 +0.4**
baz=266
PWL Port Wells 57.71 33 P **P** **19 48 54.8 +0.5**
baz=268
SML Sawmill 57.75 32 P **P** **19 48 55.3 +0.6**
baz=267
TOLK Toolik Lake Re 57.87 24 P **P** **19 48 56.6 +1.3**
TOLK Toolik Lake Re 57.87 24 P **P** **19 48 56.8 +1.4**
baz=262
KK31 Karatay Array 57.94 306 P **P** **19 48 56.3 +0.1**
KK31 IAmb IAmb 19 48 57.5
comp=Z,7.2nm,0.9s
KKAR Karatay Array 57.94 306 P **P** **19 48 56.2 0.0**
KKAR IAmb IAmb 19 48 57.5
comp=Z,7.2nm,0.9s
KKAR Karatay Array 57.94 306 P **P** **19 48 56.3 0.0**
KKAR PcP **PcP** **19 49 42.4 -0.5**
MDM Murphy Dome 57.99 28 P **P** **19 48 56.9 +0.7**
MDM IAmb IAmb 19 48 58.1
comp=Z,8.0nm,0.6s
MDM PcP **PcP** **19 49 43.4 +0.7**
WRH Wood River Hil 58.02 29 P **P** **19 48 56.8 +0.4**
WRH PcP **PcP** **19 49 42.1 -0.7**
WAT6 Susitna Watana 58.06 31 P **P** **19 48 57.7 +0.8**
baz=267
CCB Clear Creek Bu 58.15 29 P **P** **19 48 57.4 +0.2**
CCB PcP **PcP** **19 49 42.9 -0.4**
E24K Your Creek 58.20 25 P **P** **19 48 59.5 +1.8**
baz=263,SNR=8.3
H24K Noodor Dome 58.21 27 P **P** **19 48 59.3 +1.6**
baz=265
D24K Happy Valley 58.21 23 P **P** **19 48 59.0 +1.4**
baz=262
SCM Sheep Creek Mo 58.23 32 P **P** **19 48 58.7 +0.8**
SCM IAmb IAmb 19 49 01.1
comp=Z,13nm,1.0s
SCM Sheep Creek Mo 58.23 32 P **P** **19 48 58.8 +0.8**
baz=268
DHY Denali Highway 58.25 31 P **P** **19 48 59.5 +1.3**
baz=267
GLI Glacier Island 58.31 33 P **P** **19 48 59.1 +0.6**
baz=269
POKR Poker Plat Res 58.34 28 P **P** **19 48 59.8 +1.2**
baz=266
F24K Squaw Lake 58.36 25 P **P** **19 49 00.3 +1.6**
baz=264,SNR=10
G24K Hadweenzic Riv 58.45 26 P **P** **19 49 01.0 +1.7**
baz=265,SNR=8.2
HDA Harding Lake 58.51 29 P **P** **19 48 59.1 -0.6**
HDA IAmb IAmb 19 49 00.3
comp=Z,6.9nm,0.6s
HDA Harding Lake 58.51 29 P **P** **19 48 59.8 +0.1**
baz=267,SNR=5.6
IL31 58.55 29 P **P** **19 48 59.6 -0.3**
ILAR Eielson Array 58.55 29 P **P** **19 48 59.6 -0.4**
comp=Z,3.4nm,0.7s,baz=254,slow=5.8,SNR=37
comp=Z,3.4nm,0.7s
ILAR Eielson Array 58.55 29 P **P** **19 48 59.5 -0.5**
ILAR PcP **PcP** **19 49 44.5 -0.4**
Q23K Middleton Isla 58.68 35 P **P** **19 49 01.3 +0.4**
baz=271
GAR Garm 58.77 301 P **P** **19 49 01.8 -0.3**
GAR IAmb IAmb 19 49 03.2
comp=Z,8.2nm,0.8s
KLU Klutina 58.89 33 P **P** **19 49 03.1 +0.7**
baz=270
EYAK Cordova Ski Ar 58.97 34 P **P** **19 49 03.7 +0.8**
baz=270
K24K Donnelly Dome 58.99 30 P **P** **19 49 03.4 +0.4**
baz=268
G25K Bearman Lake 59.00 26 P **P** **19 49 04.5 +1.5**
baz=266
H25K Birch Creek 59.08 27 P **P** **19 49 05.2 +1.7**
baz=267
D25K Kavik River 59.10 23 P **P** **19 49 05.1 +1.4**
baz=265,SNR=13
PAX Paxson 59.12 31 P **P** **19 49 04.5 +0.6**
PAX Paxson 59.12 31 P **P** **19 49 05.1 +1.1**
baz=269
PRP Porcupine Dome 59.16 28 P **P** **19 49 04.0 -0.3**
baz=268
J25K Salcha River, 59.20 29 P **P** **19 49 04.3 -0.1**
J25K Salcha River, 59.20 29 P **P** **19 49 04.6 +0.1**
baz=268
F25K Christian Rive 59.23 25 P **P** **19 49 06.0 +1.4**
baz=266,SNR=7.2
HARP HAARP 59.26 31 P **P** **19 49 06.0 +1.1**
baz=270,SNR=5.2
E25K Arctic Village 59.29 25 P **P** **19 49 06.9 +1.9**
baz=266,SNR=8.6
RIDG Independent Ri 59.41 30 P **P** **19 49 06.2 +0.3**
RIDG Independent Ri 59.41 30 P **P** **19 49 06.2 +0.3**
baz=269,SNR=7.2
N25K Chitina, Valde 59.52 32 P **P** **19 49 07.7 +0.9**
baz=271
BMRM Bremner River 59.53 33 P **P** **19 49 06.9 +0.1**
BMRM Bremner River 59.53 33 P **P** **19 49 07.8 +1.0**
baz=271
BMAR Burnt Mountain 59.63 26 P **P** **19 49 08.4 +1.2**
C26K Camden Bay 59.66 23 P **P** **19 49 08.6 +1.2**
baz=266
CHGR Chuyangaron 59.72 301 P **P** **19 49 08.1 -0.4**
DOT Dot Lake 59.76 30 P **P** **19 49 08.6 +0.4**
DOT IAmb IAmb 19 49 09.5
comp=Z,9.9nm,0.8s
SCRK Sand Creek 59.79 30 P **P** **19 49 08.9 +0.4**
SCRK Sand Creek 59.79 30 P **P** **19 49 09.0 +0.4**
baz=270,SNR=19
F26K Sheenjek River 59.81 25 P **P** **19 49 10.4 +2.0**
baz=268,SNR=6.5
G26K Porcupine Rive 59.92 26 P **P** **19 49 10.5 +1.3**
baz=268
J26L Joseph Creek 59.98 29 P **P** **19 49 10.2 +0.5**
J26L Joseph Creek 59.98 29 P **P** **19 49 09.9 +0.2**
baz=270,SNR=17
C27K Jago River 60.06 23 P **P** **19 49 11.7 +1.6**
baz=267,SNR=5.7
L26K Log Cabin Wild 60.09 31 P **P** **19 49 11.2 +0.8**
L26K Log Cabin Wild 60.09 31 P **P** **19 49 11.8 +1.4**
baz=271
I26K Coal Creek Min 60.15 28 P **P** **19 49 10.7 0.0**
baz=270
M26K Nabesna, AK 60.26 31 P **P** **19 49 12.7 +1.1**
baz=272
MCARA McCarthy VSAT 60.28 33 P **P** **19 49 12.6 +0.9**
baz=272
K27K Chicken 60.63 30 P **P** **19 49 14.8 +0.9**
baz=272
G27K Doyon Strip 60.76 26 P **P** **19 49 16.2 +1.3**
baz=270
L27K Beaver Creek, 60.78 31 P **P** **19 49 15.7 +0.6**
L27K PcP **PcP** **19 49 54.5 +0.5**
L27K Beaver Creek, 60.78 31 P **P** **19 49 16.2 +1.2**
baz=272
E27K Coleen River 60.78 25 P **P** **19 49 16.3 +1.4**
baz=270
M27K Edge Creek, AK 60.78 31 P **P** **19 49 15.9 +0.7**
baz=273
I27K Kandik River 60.79 28 P **P** **19 49 16.4 +1.3**
baz=271
BCAR Beaver Creek A 60.80 31 P **P** **19 49 16.0 +0.8**
H27K Steamboat Moun 60.82 27 P **P** **19 49 16.6 +1.4**
baz=271
YUK3 Moose Creek 61.49 32 P **P** **19 49 20.9 +1.0**
baz=274
O28M Mount Upton 61.70 33 P **P** **19 49 22.2 +0.7**
baz=275
PINM Pinnacle 61.73 34 P **P** **19 49 22.1 +0.7**
baz=275
I29M Ogilvie Camp, 62.18 28 P **P** **19 49 25.8 +1.6**
baz=274
M29M Somme Creek 62.37 31 P **P** **19 49 27.1 +1.5**
baz=276
YUK4 Talbot Arm 62.39 32 P **P** **19 49 27.6 +1.7**
baz=276
O29M Mount Kennedy 62.54 34 P **P** **19 49 28.4 +1.6**
baz=277
EPYK Eagle Plains 62.75 27 P **P** **19 49 28.7 +0.8**
EPYK Eagle Plains 62.75 27 P **P** **19 49 29.1 +1.1**
baz=275
HYT Haines Junctio 63.00 33 P **P** **19 49 31.1 +1.3**
baz=277
P29M Windy Craggy 63.04 34 P **P** **19 49 31.4 +1.5**
baz=278
N30M Aishikik Lake 63.12 32 P **P** **19 49 31.7 +1.2**
baz=277
P30M Million Dollar 63.36 34 P **P** **19 49 33.7 +1.7**
baz=278
ARU Arti 63.60 322 P **P** **19 49 33.4 -0.2**
comp=Z,11nm,0.6s,baz=84,slow=2.9,SNR=27
comp=Z,11nm,0.6s
ARU Arti 63.60 322 P **P** **19 49 33.1 -0.4**
O30N Mendenhall 63.70 33 P **P** **19 49 35.7 +1.6**
baz=278
N31M Braeburn, Yuko 63.74 32 P **P** **19 49 36.1 +1.6**
baz=278
PLBC Pleasant Camp 63.76 34 P **P** **19 49 35.9 +1.4**
baz=279
INK Inuvik 63.77 24 P **P** **19 49 34.5 +0.1**
comp=Z,2.4nm,0.5s,baz=293,slow=19,SNR=4.9
comp=Z,2.4nm,0.5s
INK Inuvik 63.77 24 P **P** **19 49 35.1 +0.6**
baz=277
ABKAR Akbulak array 64.11 314 P **P** **19 49 36.4 -0.5**
ABKAR IAmb IAmb 19 49 37.6
comp=Z,7.8nm,0.8s
ABKAR Akbulak array 64.11 314 P **P** **19 49 36.4 -0.5**
ABKAR PcP **PcP** **19 50 06.4 -1.4**
M31M Drury Creek, Y 64.28 31 P **P** **19 49 38.1 +0.2**
M31M Drury Creek, Y 64.28 31 P **P** **19 49 38.9 +1.1**
baz=279
WHY Whitehorse 64.30 33 P **P** **19 49 39.2 +1.1**
baz=280
AKTO Aktyubinsk 65.07 316 P **P** **19 49 42.6 -0.5**
comp=Z,3.7nm,0.7s,baz=86,slow=7.0,SNR=18

comp=Z,3.7nm,0.7s
C36M Paulatuk 66.94 23 P P 19 49 54.5 +0.1
baz=285
T35M Bob Quinn 67.44 36 P P 19 49 58.9 +1.1
baz=285
KIRV Kirov 67.95 326 P P 19 50 00.8 0.0
comp=Z,13nm,0.6s,baz=66,slow=13,SNR=4.6
comp=Z,13nm,0.6s
BELG Belogornoye 70.79 320 P P 19 50 17.5 -0.6
comp=Z,19nm,0.8s,baz=18,slow=2.2,SNR=15
comp=Z,19nm,0.8s
TLCB Telegraph Cove 71.29 42 P P 19 50 23.2 +2.1
KLMR Klimovskoe 71.94 330 eP P 19 50 22.7 -2.0
KLMR AMP 19 50 25.2
comp=Z,8.0nm,0.9s
YKA Yellowknife Ar 72.97 28 P P 19 50 30.9 +0.1
comp=Z,5.6nm,0.8s,baz=296,slow=5.7,SNR=12
comp=Z,5.6nm,0.8s
ARCES ARCESS Array B 73.17 341 P P 19 50 31.6 -0.1
comp=Z,2.7nm,0.8s,baz=61,slow=7.6,SNR=6.7
comp=Z,2.7nm,0.8s
I02E Swisshome, OR 75.56 48 P P 19 50 47.6 +1.8
baz=294
J01E Myrtle Point 75.88 49 P P 19 50 48.7 +1.1
baz=294
K02D Willamette Mer 76.25 49 P P 19 50 50.7 +0.9
baz=294
L02F Cave Junction 76.55 50 P P 19 50 52.5 +1.2
baz=294
I04A Tendick Farm, 76.64 48 P P 19 50 53.0 +1.1
baz=295
B08A Colville Reser 76.65 42 P P 19 50 52.2 +0.4
B08A IAmb IAmb 19 50 53.7
comp=Z,6.9nm,0.8s
G05D Wamic, OR 76.74 46 P P 19 50 53.5 +1.1
baz=295
KBZ Khabaz 76.99 312 P P 19 50 54.2 +0.5
comp=Z,8.8nm,0.7s,baz=80,slow=3.4,SNR=18
comp=Z,8.8nm,0.7s
J04D Umpqua Nationa 77.06 48 P P 19 50 55.6 +1.2
baz=295
ONI Oni 77.10 311 P P 19 50 54.4 -0.1
ONI IAmb IAmb 19 50 56.9
comp=Z,4.8nm,0.9s
L04D Klamath Falls 77.36 49 P P 19 50 57.2 +1.2
baz=295
FINES FINESS Array B 77.39 333 P P 19 50 55.2 -0.4
comp=Z,7.3nm,0.5s,baz=68,slow=5.1,SNR=90
comp=Z,7.3nm,0.5s
PINE Pine Mountain 77.60 47 P P 19 50 57.4 0.0
J05D Fort Rock, OR 77.62 48 P P 19 50 58.9 +1.4
baz=295
NEW Newport 78.02 42 P P 19 50 59.8 +0.4
NEW IAmb IAmb 19 51 01.2
comp=Z,6.5nm,0.8s
NEW Newport 78.02 42 P P 19 51 00.1 +0.7
baz=297
K05A Summer Lake 78.09 48 P P 19 51 01.0 +0.9
K05A IAmb IAmb 19 51 02.5
comp=Z,5.5nm,0.8s
E09A Wood Farm, Sta 78.19 44 P P 19 51 01.3 +1.0
E09A IAmb IAmb 19 51 02.2
comp=Z,6.2nm,0.9s
G08A Pilot Rock 78.22 45 P P 19 51 01.0 +0.4
MOD Modoc Plateau 78.84 49 P P 19 51 04.0 -0.1
MOD IAmb IAmb 19 51 05.9
comp=Z,3.6nm,0.8s
F10A Beach Ranch, E 79.00 44 P P 19 51 05.2 +0.4
J08A Circle Bar Ran 79.40 47 P P 19 51 08.0 +1.1
J08A IAmb IAmb 19 51 09.1
comp=Z,4.9nm,0.6s
BMO Blue Mountains 79.47 45 P P 19 51 07.6 +0.3
BMO IAmb IAmb 19 51 09.2
comp=Z,4.8nm,0.9s
WALA Waterton Lakes 79.52 40 P P 19 51 07.7 +0.2
BEKR Beckworth 79.70 51 P P 19 51 08.4 -0.3
GURO Guroymak-BITLI 79.81 308 P P 19 51 09.8 +0.6
PAHR Pah Rah Range 80.45 50 P P 19 51 12.8 +0.2
PAHR IAmb IAmb 19 51 14.2
comp=Z,4.4nm,0.8s
MSO Missoula 80.60 42 P P 19 51 14.5 +1.3
baz=300
YERR Yerington 80.88 51 P P 19 51 15.1 +0.2
MFID Camas Ranch 81.08 46 P P 19 51 16.5 +0.7
MFID IAmb IAmb 19 51 17.9
comp=Z,4.2nm,0.9s
MARD Mardin 81.25 307 P P 19 51 16.6 -0.2
RYN Ryan 81.54 51 P P 19 51 19.0 +0.7
RYN IAmb IAmb 19 51 20.1
comp=Z,3.9nm,0.6s
KVN Kaiserville 81.63 50 P P 19 51 18.9 0.0
KVN IAmb IAmb 19 51 20.6
comp=Z,4.1nm,0.6s
LHV Little Huntoon 81.73 51 P P 19 51 20.1 +1.0
LHV IAmb IAmb 19 51 21.5
comp=Z,4.8nm,1.1s
NVAR Mina Array Bea 81.78 51 P P 19 51 20.9 +1.2
comp=Z,2.9nm,0.6s,baz=296,slow=5.7,SNR=29
comp=Z,2.9nm,0.6s
NVAR Mina Array Bea 81.78 51 P P 19 51 20.0 +0.3
AKASG Malin Array Be 81.83 323 P P 19 51 18.6 -0.7
comp=Z,10nm,0.7s,baz=52,slow=5.5,SNR=42
comp=Z,10nm,0.7s
AKASG Malin Array Be 81.83 323 P P 19 51 18.5 -0.8
AKASG IAmb IAmb 19 51 19.7
comp=Z,4.3nm,0.8s
AKBB Malin Array Si 81.83 323 P P 19 51 18.0 -1.3
HLID Hailey 81.91 45 P P 19 51 20.9 +0.7
HLID Hailey 81.91 45 P P 19 51 21.7 +1.6
baz=300
LRM Limekiln Ridge 81.99 42 P P 19 51 21.2 +0.5
PKM Mcpherson Peak 82.34 55 P P 19 51 23.9 +1.3
baz=298
EGMT Eagleton 82.43 40 P P 19 51 24.0 +1.4
baz=302
BOZ Bozeman (W) 82.60 42 P P 19 51 23.2 -0.4
BOZ Bozeman (W) 82.60 42 P P 19 51 24.5 +0.9
baz=301
TPH Tonopah 82.70 51 P P 19 51 24.4 0.0
ELK Elko 82.76 48 P P 19 51 25.2 +0.6
LCH Last Change Ra 82.80 52 P P 19 51 24.3 -0.5
NC405 NORSAR Array S 82.95 338 P P 19 51 23.4 -1.5
NC204 NORSAR Array S 83.15 338 P P 19 51 24.9 -1.0
NOA NORSAR Array B 83.17 338 P P 19 51 24.9 -1.1
comp=Z,4.4nm,0.7s,baz=46,slow=4.8,SNR=14
comp=Z,4.4nm,0.7s
YHL Hebgen Lake 83.26 43 P P 19 51 27.8 +0.6
YHL IAmb IAmb 19 51 29.5
comp=Z,5.4nm,0.8s
MPMC Manual Prospec 83.47 53 P P 19 51 28.7 +0.5
baz=299
LRMC Laurel Mtn Rad 83.61 53 P P 19 51 29.7 +0.9
baz=299
EDW2 Edwards Air Fo 83.67 54 P P 19 51 30.1 +1.0
baz=298
R11A Troy Canyon, C 83.70 50 P P 19 51 29.9 +0.6
R11A Troy Canyon, C 83.70 50 P P 19 51 29.9 +0.6
baz=300
FURC Furnace Creek, 83.72 52 P P 19 51 30.5 +1.3
baz=299
RAYN Ar Rayn 83.81 293 P P 19 51 30.1 +0.1
HVU Hansel Valley 83.85 46 P P 19 51 30.9 +0.9
HVU IAmb IAmb 19 51 32.1
comp=Z,3.2nm,0.6s
IMW Indian Meadow 83.91 44 P P 19 51 30.8 +0.4
IMW IAmb IAmb 19 51 32.9
comp=Z,5.0nm,0.8s
TPNV Topopah Spring 83.92 52 P P 19 51 31.0 +0.6
TPNV IAmb IAmb 19 51 32.0
comp=Z,5.0nm,0.8s
TPNV Topopah Spring 83.92 52 P P 19 51 31.0 +0.6
baz=299
QSM Queen of Sheba 83.96 53 P P 19 51 31.1 +0.7
QSM IAmb IAmb 19 51 32.1
comp=Z,5.3nm,0.8s
GWY Greenwater Val 83.99 52 P P 19 51 31.2 +0.4
GWY IAmb IAmb 19 51 32.3
comp=Z,4.1nm,0.8s
CIS Catalina Islan 84.06 56 P P 19 51 31.9 +0.8
baz=298
MOOW Moose Ponds 84.11 44 P P 19 51 32.4 +1.1
TPAW Teton Pass 84.11 44 P P 19 51 31.2 -0.2
TPAW IAmb IAmb 19 51 32.7
comp=Z,3.8nm,0.8s
LOHW Long Hollow 84.26 44 P P 19 51 33.0 +0.9
RLMT Red Lodge 84.27 42 P P 19 51 32.5 +0.4
RLMT Red Lodge 84.27 42 P P 19 51 33.0 +0.9
baz=303
GSC Goldstone, Bar 84.32 53 P P 19 51 32.7 +0.3
GSC IAmb IAmb 19 51 34.0
comp=Z,5.2nm,0.9s
GSC Goldstone, Bar 84.32 53 P P 19 51 33.6 +1.2
baz=299
PRN Pahroc Range 84.53 51 P P 19 51 34.0 +0.6
PRN IAmb IAmb 19 51 35.8
comp=Z,4.5nm,1.1s
DUG Dugway, Tooele 84.63 47 P P 19 51 34.3 +0.4
DUG Dugway, Tooele 84.63 47 P P 19 51 34.7 +0.8
baz=301
PSUT Pine Spring 84.78 49 P P 19 51 35.4 +0.7
PSUT IAmb IAmb 19 51 36.2
comp=Z,2.5nm,0.7s
TUQ Turquoise Moun 84.89 53 P P 19 51 36.0 +0.7
baz=300
BR131 Keskin Array S 84.98 312 P P 19 51 34.3 -1.3
BR131 IAmb IAmb 19 51 37.3
comp=Z,4.7nm,0.8s
BRTR Keskin Array B 84.98 312 P P 19 51 34.9 -0.7
comp=Z,1.9nm,0.7s,baz=75,slow=2.7,SNR=11
comp=Z,1.9nm,0.7s
PDAR Pinedale Array 85.36 44 P P 19 51 37.9 +0.4
comp=Z,0.5nm,0.3s,baz=319,slow=5.9,SNR=5.4
comp=Z,0.5nm,0.3s
PFO Pinyon Flats O 85.39 55 P P 19 51 37.2 -0.5
PFO IAmb IAmb 19 51 39.2
comp=Z,6.0nm,0.8s
PFO Pinyon Flats O 85.39 55 P P 19 51 38.5 +0.8
baz=299
GMRC Granite Mounta 85.40 53 P P 19 51 38.4 +0.6
baz=300
TPFO Pinon Flats 85.40 55 P P 19 51 38.5 +0.8
baz=299
BELC Belle Mtn. Jos 85.54 54 P P 19 51 38.7 +0.3
baz=300
BUR08 Bucovina Ar. S 85.73 322 P P 19 51 38.2 -0.9
BUR08 IAmb IAmb 19 51 39.5
comp=Z,2.8nm,0.8s
BURAR Bucovina Array 85.74 322 P P 19 51 37.8 -1.3
BURAR IAmb IAmb 19 51 39.8
comp=Z,3.1nm,0.8s
MONP2 Monument Peak 85.77 55 P P 19 51 40.4 +0.7
baz=300
IRM Iron Mountain 86.08 54 P P 19 51 41.7 +0.8
baz=300
BC3 Big Chuckawall 86.10 54 P P 19 51 41.6 +0.4
baz=300
IKP In-Ko-Pah, Jac 86.12 55 P P 19 51 41.8 +0.6
baz=300
PDMCI Parker Dam,Lak 86.72 53 P P 19 51 45.1 +1.2
baz=301
MMAI Mount Meron Ar 87.17 306 P P 19 51 45.2 -1.0
comp=Z,2.0nm,0.6s,baz=46,slow=6.0,SNR=7.5
comp=Z,2.0nm,0.6s
MORC Moravsky Berou 88.36 327 eP P 19 51 50.9 -0.4
DPC Dobruska-Polom 88.56 328 eP P 19 51 51.8 -0.5
JAVC Velka Javorina 88.90 326 eP P 19 51 54.8 +0.9
VRAC Vranov 89.13 327 eP P 19 51 54.8 -0.1
KRUC Moravsky 89.39 327 eP P 19 51 55.7 -0.4
CLL Collm 89.42 330 i P P 19 51 55.2 -1.0
comp=Z,4.0nm,0.9s
S22A 4UR Ranch, Cre 89.88 47 P P 19 51 59.2 +0.2
baz=305
TUC Tucson 90.16 53 P P 19 52 00.9 +0.8
baz=302
RONA Rosalia, Austr 90.36 326 i P P 19 52 00.6 -0.1
comp=Z,5.4nm,1.5s
CONA Conrad Observa 90.42 326 eP P 19 52 01.1 0.0
comp=Z,3.3nm,0.9s
CKRC Cesky Krumlov 90.56 328 eP P 19 52 01.1 -0.5
KHC Kasperske Hory 90.69 328 P P 19 52 01.3 -0.8
KHC IAmb IAmb 19 52 02.4
comp=Z,3.2nm,0.9s
KHC Kasperske Hory 90.69 328 eP P 19 52 01.7 -0.5
SDCO Great Sand Dun 90.74 46 P P 19 52 03.8 +0.8
baz=306
GEC2 GERESS Array S 90.83 328 P P 19 52 01.9 -1.0
GEC2 IAmb IAmb 19 52 03.2
comp=Z,2.7nm,0.8s
GERES GERESS Array B 90.83 328 P P 19 52 02.1 -0.8
comp=Z,1.3nm,0.8s,baz=45,slow=4.0,SNR=16
comp=Z,1.3nm,0.8s
BIOA Bad Ischl, Aus 91.67 327 i P P 19 52 06.2 -0.5
comp=Z,3.1nm,0.7s
SOKA Soboth 91.69 326 eP P 19 52 06.3 -0.6
comp=Z,5.8nm,1.6s
ANMO Albuquerque 91.72 49 P P 19 52 08.0 +0.5
ANMO IAmb IAmb 19 52 09.8
comp=Z,3.6nm,1.1s
ANMO Albuquerque 91.72 49 P P 19 52 08.5 +1.1
baz=305
MYKA Terra Mystica 92.41 326 i P P 19 52 08.9 -1.3
comp=Z,1.9nm,0.5s
ABTA Abfaltersbach 92.88 327 i P P 19 52 10.7 -1.7
comp=Z,1.9nm,0.7s
FETA Feichten 93.54 328 i P P 19 52 14.5 -0.9
comp=Z,3.9nm,1.3s
TXAR Lajitas Array 96.89 52 P P 19 52 31.9 +0.9
comp=Z,0.7nm,0.7s,baz=307,slow=3.0,SNR=9.3
comp=Z,0.7nm,0.7s
TORD Torodi Ar. Bea 123.52 310 PKP PKPdf 19 57 54.0 -0.7
comp=Z,1.3nm,0.6s,baz=52,slow=1.2,SNR=11
TROLL Troll, Antarti 129.39 196 PKPdf PKPdf 19 58 04.3 -0.2
DBIC Dimbokro 132.63 310 PKP PKiKP 19 58 12.8 -0.5
comp=Z,2.5nm,0.6s,baz=3.2,slow=4.6,SNR=3.5
PLCA Paso Flores 150.96 126 PKPbc PKPbc 19 58 50.0 +0.2
comp=Z,0.7nm,0.5s,baz=219,slow=6.2,SNR=7.4
LPAZ La Paz 151.42 74 PKPbc PKiKP 19 58 52.6 0.0
comp=Z,2.9nm,0.7s,baz=348,slow=1.7,SNR=11

*IDC **12** 19:47:10.9±2.6, 22°.41S×173°.06E, h0km, mb3.8/3, mbtmp3.8/3, MS3.0/4, Error ellipse: s-maj=92.5km s-min=52.4km az=155.0*
*NEIC **12** 19:47:13.4±1.2, 21°.6S±0°.4×172°.9E±0°.1, h15km±7km, mb4.4/5, Error ellipse: s-maj=58.5km s-min=3.5km az=162.0*

ISC 12 19:47:10.2±0.9, 22°.1S±0°.2×173°.1E±0°.1, h10km, n25, σ1s79/20, mb4.0/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.73**	**277**	Pn	**Pn**	**19 48 20.4**	**-1.2**
PINNC	**Pines Island,**	**5.23**	**263**	Pn	**Pn**	**19 48 24.6**	**-3.9**
OUENC	**Ouen Island, N**	**5.78**	**266**	Pn	**Pn**	**19 48 33.8**	**-2.3**
DZM	**Mont Dzumac**	**6.15**	**269**	LR	LR	19 50 19.0	
comp=Z,60nm,19.6s,baz=189,slow=31							
DZM	**Mont Dzumac**	**6.15**	**269**	Pn	Pn	19 48 35.9	-5.3
MSVF	**Nonsavu**	**6.39**	**48**	LR	LR	19 51 02.7	
comp=Z,164nm,20.0s,baz=245,slow=35							
MSVF	**Nonsavu**	**6.39**	**48**	Pn	**Pn**	**19 48 43.8**	**-0.8**
URZ	**Urunova**	**16.47**	**169**	LR	LR	19 56 34.1	
comp=Z,69nm,18.1s,baz=32,slow=35							
CTA	**Charters Tower**	**25.09**	**270**	LR	LR	20 00 47.4	
comp=Z,54nm,18.9s,baz=88,slow=33							
STKA	**Stephens Creek**	**29.60**	**244**	P	**P**	**19 53 17.4**	**+1.8**
0.8nm,0.5s,baz=57,slow=11,SNR=2.9							
0.8nm,0.5s							
BBOO	**Buckleboo**	**34.37**	**244**	P	**P**	**19 53 58.6**	**+1.1**
WR0	**Warramunga Arr**	**35.97**	**266**	P	**P**	**19 54 13.5**	**+2.1**
WR0				IAmb	IAmb	19 54 29.9	
comp=Z,10nm,1.5s							
ASAR	**Alice Springs**	**36.04**	**260**	P	**P**	**19 54 13.7**	**+1.6**
comp=Z,1.8nm,0.8s,baz=88,slow=9.2,SNR=18							
comp=Z,1.8nm,0.8s							
ASAR	**Alice Springs**	**36.04**	**260**	P	**P**	**19 54 13.0**	**+0.9**
WB0	**Warramunga Arr**	**36.14**	**266**	P	**P**	**19 54 14.4**	**+1.5**
WB0				IAmb	IAmb	19 54 51.5	
comp=Z,5.3nm,1.4s							
WRA	**Warramunga Arr**	**36.16**	**266**	P	**P**	**19 54 14.4**	**+1.3**
comp=Z,0.3nm,0.5s,baz=97,slow=8.6,SNR=3.2							
comp=Z,0.3nm,0.5s							
WRA	**Warramunga Arr**	**36.16**	**266**	P	**P**	**19 54 13.5**	**+0.5**
FORT	**Forrest**	**40.99**	**248**	P	**P**	**19 54 55.8**	**+2.2**
FITZ	**Fitzroy Crossi**	**44.59**	**266**	P	**P**	**19 55 22.9**	**+0.1**
TROLL	**Troll, Antarti**	**85.90**	**183**	pPKPdf	**P**	**19 59 50.2**	**0.0**
SNAA	**Sanae**	**86.43**	**181**	pPKPdf	**P**	**19 59 51.2**	**-1.5**
VNA3	**Neumayer Olymp**	**86.88**	**179**	pPKPdf	**P**	**19 59 54.9**	**+0.1**
VNA2	**Neumayer--Watz**	**87.22**	**180**	pPKPdf	**P**	**19 59 54.1**	**-2.4**
GERES	**GERESS Array B**	**148.68**	**333**	PKPbc	**PKiKP**	**20 07 01.0**	**+1.8**
comp=Z,0.3nm,0.6s,baz=64,slow=2.3,SNR=2.3							
TORD	**Torodi Ar. Bea**	**167.88**	**224**	PKPab	**PKPab**	**20 08 24.3**	**-0.3**
comp=Z,0.5nm,0.7s,baz=121,slow=4.1,SNR=3.9							

*INET **12** 19:51:19.9±0.5, 13°.79N×91°.10W, h15km±8km, MW3.9*
*SNET **12** 19:51:32.9±1.5, 13°.19N×90°.10W, h13km±14km, ML4.1*
*UCR **12** 19:51:33.4±1.7, 13°.28N×90°.02W, h0km±6km, ML4.0, MW3.1*
*GCG **12** 19:51:34.7±4.6, 13°.94N×90°.21W, h122km±43km, MD3.7*

ISC 12 19:51:32.6±1.6, 13°.35N±0°.06×90°.14W±0°.06, h7km±12km, n41, σ1s41/58, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.65**	**32**	eP	**Pg**	**19 51 47.1**	**+1.9**
NUBE				eS	**Sb**	**19 51 58.2**	**+2.4**
NUBE	**Las Nubes**	**0.65**	**32**	eP	**Pg**	**19 51 47.1**	**+1.9**
NUBE				eS	**Sb**	**19 51 58.2**	**+2.4**
CEVE	**Cerro Verde**	**0.69**	**46**	eP	**Pb**	**19 51 47.9**	**+0.8**
CEVE				eS	**Sb**	**19 51 59.7**	**+2.7**
CEVE				IAML		19 52 01.0	
comp=Z,9μm,0.3s							
CEVE	**Cerro Verde**	**0.69**	**46**	eP	**Pb**	**19 51 47.9**	**+0.8**
CEVE				eS	**Sb**	**19 51 59.7**	**+2.7**
CEVE				IAML		19 52 01.0	
comp=Z,9μm,0.3s							
JAYA	**Jayaque - finc**	**0.74**	**65**	eP	**Pb**	**19 51 48.6**	**+0.7**
JAYA				eS	**Sb**	**19 51 59.5**	**+1.3**
JAYA				IAML		19 52 01.7	
comp=Z,12μm,0.2s							
JAYA	**Jayaque - finc**	**0.74**	**65**	eP	**Pb**	**19 51 48.6**	**+0.7**
JAYA				eS	**Sb**	**19 51 59.5**	**+1.3**
JAYA				IAML		19 52 01.7	
comp=Z,12μm,0.2s							
CEDA	**San Andres**	**0.85**	**58**	eP	**Pg**	**19 51 49.3**	**+0.3**
CEDA				eS	**Sb**	**19 52 02.6**	**+1.1**
CEDA				IAML		19 52 05.5	
comp=Z,2μm,0.3s							
CEDA	**San Andres**	**0.85**	**58**	eP	**Pg**	**19 51 49.3**	**+0.3**
CEDA				eS	**Sb**	**19 52 02.6**	**+1.1**
CEDA				IAML		19 52 05.5	
comp=Z,2μm,0.3s							
PMON	**Piamonte**	**0.88**	**66**	eP	**Pb**	**19 51 50.2**	**-0.1**
PMON				eS	**Sn**	**19 52 03.7**	**-0.9**
PMON	**Piamonte**	**0.88**	**66**	eP	**Pb**	**19 51 50.2**	**-0.1**
PMON				eS	**Sn**	**19 52 03.7**	**-0.9**
BOQS	**Boqueron**	**0.92**	**65**	eP	**Pb**	**19 51 50.8**	**-0.2**
BOQS				eS	**Sn**	**19 52 05.1**	**-0.7**
BOQS	**Boqueron**	**0.92**	**65**	eP	**Pb**	**19 51 50.8**	**-0.2**
BOQS				eS	**Sn**	**19 52 05.1**	**-0.7**
LFRS	**El Faro**	**1.08**	**75**	eP	**Pb**	**19 51 53.2**	**-0.6**
LFRS	**El Faro**	**1.08**	**75**	eP	**Pb**	**19 51 53.2**	**-0.6**
PCG	**Pacaya**	**1.13**	**336**	eP	**Pg**	**19 51 53.3**	**-1.0**
PCG				eS	**Sg**	**19 52 07.8**	**-1.4**
PAVA	**Las Pavas**	**1.23**	**73**	eP	**Pg**	**19 51 55.0**	**-1.2**
PAVA	**Las Pavas**	**1.23**	**73**	eP	**Pg**	**19 51 55.0**	**-1.2**
NBG	**Las Nubes**	**1.25**	**351**	eP	**Pg**	**19 51 55.0**	**-1.6**
NBG				eS	**Sg**	**19 52 10.7**	**-2.1**
COEG	**Centro de Oper**	**1.25**	**77**	eP	**Pg**	**19 51 55.3**	**-1.4**
COEG				eS	**Sb**	**19 52 11.6**	**-1.4**
COEG	**Centro de Oper**	**1.25**	**77**	eP	**Pg**	**19 51 55.3**	**-1.4**
COEG				eS	**Sb**	**19 52 11.6**	**-1.4**
FUG	**Fuego 3**	**1.29**	**328**	eP	Pg	19 51 55.1	-2.3
FUG				eS	**Sg**	**19 52 16.6**	**+2.5**
MRL	**Marmol**	**1.78**	**14**	eP	**Pn**	**19 52 01.6**	**-2.3**
MRL				eS	Sn	19 52 19.9	-7.1
STG3	**Santiaguito 3,**	**1.94**	**314**	eP	Pn	19 52 04.3	-1.9
STG3				eS	Sn	19 52 24.2	-6.7
CNCH	**Conchagua**	**2.25**	**92**	eP	**Pn**	**19 52 08.8**	**-1.5**
CNCH				eS	**Sn**	**19 52 38.3**	**0.0**
CNCH	**Conchagua**	**2.25**	**92**	eP	**Pn**	**19 52 08.8**	**-1.5**
CNCH				eS	**Sn**	**19 52 38.3**	**0.0**
CSGN	**Cosiguina Volc**	**2.54**	**98**	eP	**Pn**	**19 52 13.2**	**-1.1**
CRIN	**San Cristobal**	**3.08**	**102**	eP	**Pn**	**19 52 21.2**	**-0.5**
TEL3	**Telica 3**	**3.30**	**103**	eP	**Pn**	**19 52 23.5**	**-1.2**
CNGN	**Cerro Negro**	**3.46**	**104**	eP	**Pn**	**19 52 25.4**	**-1.5**
MOMN	**Momotombo**	**3.63**	**104**	eP	**Pn**	**19 52 28.6**	**-0.7**
COPN	**Copaltepe**	**3.65**	**108**	eP	**Pn**	**19 52 28.5**	**-1.0**
HZTE	**Horizontes, Gu**	**5.16**	**120**	eP	**Pn**	**19 52 51.3**	**+1.0**
SAJU	**San Juanillo,**	**5.43**	**126**	eP	**Pn**	**19 52 54.4**	**+0.5**
VMAR	**Armenia, Volca**	**5.52**	**117**	eP	**Pn**	**19 52 55.5**	**+0.2**
INDI	**Punta indio, G**	**5.71**	**127**	eP	**Pn**	**19 52 58.7**	**+0.8**
JTS	**Las Juntas de**	**5.92**	**120**	eP	**Pn**	**19 53 01.3**	**+0.6**
LAFE	**Finca La Fe, P**	**6.21**	**124**	eP	**Pn**	**19 53 05.0**	**+0.3**
JACO	**JACO, Garabito**	**6.50**	**124**	eP	**Pn**	**19 53 10.0**	**+1.3**
LCR2	**La Lucha 2**	**7.00**	**120**	eP	**Pn**	**19 53 19.1**	**+3.4**
RIMA	**Rio Macho**	**7.11**	**119**	eP	**Pn**	**19 53 18.9**	**+1.7**
CDM	**Cerro de Muert**	**7.30**	**120**	eP	**Pn**	**19 53 21.4**	**+1.3**

GUC 12 20:00:07.8±0.8, 30°.23S×71°.95W, h25km±5km, ML3.6, 5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.52**	**148**	↓↓ iP	Pb	20 00 18.9	+0.5
CO06				eS	Sn	20 00 27.2	-0.5
CO06				IAML		20 00 30.7	
comp=E,4μm,0.2s							
CO05	**La Serena**	**0.69**	**64**	↓↓ iP	Pb	20 00 21.6	+0.3
CO05				eS	Sn	20 00 31.9	-0.1
CO05				IAML		20 00 36.0	
comp=E,3μm,0.4s							
GO04	**Tololo Observa**	**1.00**	**87**	↓↓ iP	Pb	20 00 27.0	+0.3
GO04				eS	Sn	20 00 41.5	+1.6
CO03	**El Pedregal**	**1.25**	**119**	↓↓ iP	Pb	20 00 30.9	+0.1
CO03				eS	Sb	20 00 48.9	+2.4
CO03				IAML		20 00 51.3	
comp=E,3μm,0.2s							
CO02	**Combarbal**	**1.27**	**140**	↓↓ eP	Pb	20 00 31.3	+0.2
CO02				eS	Sb	20 00 49.6	+2.5
CO02				IAML		20 00 52.3	
comp=N,4μm,0.2s							
CO01	**Juntas del Tor**	**1.63**	**82**	eP	Pb	20 00 37.3	0.0
CO01				eS	Sb	20 01 00.6	+3.0
LCO	**Las Campanas**	**1.63**	**42**	eP	Pn	20 00 35.6	+0.4
LCO				eS	Sb	20 00 59.2	+1.5
AC05	**El Transito**	**2.02**	**47**	eP	Pn	20 00 41.7	+1.3
AC05				eS	Sb	20 01 10.7	+2.0
AC05				IAML		20 01 17.1	
comp=E,553nm,0.4s							
AC04	**Llanos de Chal**	**2.16**	**21**	eP	Pn	20 00 41.1	-1.1
AC04				IAML		20 01 24.0	
comp=E,356nm,0.4s							
VA06	**Catapilco**	**2.39**	**167**	i P	Pn	20 00 46.4	+1.1
VA06				IAML		20 01 34.8	
comp=E,570nm,0.7s							
VA03	**San Esteban**	**2.79**	**155**	eP	Pn	20 00 53.8	+2.8
VA03				IAML		20 01 43.8	
comp=E,461nm,0.3s							
ROCH	**El Roble**	**2.85**	**164**	eP	Pn	20 00 53.4	+1.5
ROCH				eS	Sn	20 01 27.7	+2.2
ROCH				IAML		20 01 44.7	
comp=N,300nm,0.5s							
GO03	**Copiap**	**3.03**	**30**	eP	Pn	20 00 53.9	-0.3
PEL	**Peldehue**	**3.10**	**160**	eP	Pn	20 00 57.7	+2.5
PEL				IAML		20 01 52.0	
comp=E,134nm,0.3s							
AC06	**Mina Casimiro**	**3.19**	**27**	eP	Pn	20 00 56.3	-0.1
FCH	**Farellones**	**3.40**	**156**	eP	Pn	20 01 02.9	+3.4
FCH				IAML		20 02 04.3	
comp=E,69nm,0.3s							
MT03	**Universidad Ad**	**3.48**	**160**	eP	Pn	20 01 03.0	+2.6
MT03				IAML		20 02 09.4	
comp=E,206nm,0.4s							
MT09	**Talagante**	**3.63**	**167**	eP	Pn	20 01 04.7	+2.1
MT01	**Popeta**	**3.67**	**171**	eP	Pn	20 01 03.1	+0.1
LMEL	**Las Melosas**	**3.90**	**158**	eP	Pn	20 01 09.3	+3.0
AC02	**Maricunga**	**4.20**	**37**	eP	Pn	20 01 11.8	+1.1
BO01	**Tunca**	**4.21**	**170**	eP	Pn	20 01 11.4	+1.0
GO02	**Mina Guanaco**	**5.46**	**23**	eP	Pn	20 01 26.9	-1.0

NOU 12 20:06:54.5, 15°.37S×167°.42E, h58km, MLv4.1/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.46**	**163**	P	Pn	20 07 31.5	-0.7
DZM	**Mont Dzumac**	**6.73**	**188**	P	Pn	20 08 30.6	-0.2
NOUC	**Port Laguerre**	**6.78**	**189**	P	Pn	20 08 31.9	+0.5
OUENC	**Ouen Island, N**	**7.03**	**184**	P	Pn	20 08 34.5	-0.4

*KRNET **12** 20:10:04.4±0.1, 40°.34N×78°.36E, mb2.9*

SOME ***12*** *20:10:08.8, 40.82N×78.23E, h10km*
NNC ***12*** *20:10:09.4±1.1, 40.85N×78.20E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=7.3km s-min=4.7km az=168.0*

ISC 12 20:10:08.7±3.6, **40.7N**±0.1×**78.15E**±0.05, **h1**km±22km, **n35**, σ1°**31**/54, **9C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.80**	**6**	⇑*i*P	**Pb**	**20 10 41.3**	**-1.2**
	baz=1.0						
PRZ				⇑*i*S	**Sg**	**20 11 08.3**	**+1.8**
	baz=1.0						
ULHL	**Ulahol**	**2.11**	**318**	⇓*i*P	**Pn**	**20 10 45.9**	**+0.6**
	baz=21						
ULHL				⇓*i*S	**Sb**	**20 11 16.1**	**+1.4**
	baz=21						
SATY	**Saty**	**2.37**	**5**	*e*P	**Pb**	**20 10 50.6**	**-1.7**
	28nm,0.4s						
SATY				*e*S	**Sb**	**20 11 20.8**	**-1.2**
	35nm,0.4s						
SATY	**Saty**	**2.37**	**5**	Pg	**Pb**	**20 10 50.6**	**-1.7**
	28nm,0.4s						
SATY				Lg	Lg	20 11 20.8	
	35nm,0.4s						
BOOM	**Boomskoye usch**	**2.44**	**318**	⇑*i*P	**Pn**	**20 10 50.4**	**+0.6**
	baz=21						
BOOM				⇑*i*S	**Sb**	**20 11 24.0**	**-0.1**
	baz=21						
UZB	**Uzynbulak**	**2.54**	**15**	*e*P	**Pb**	**20 10 53.1**	**-1.9**
	2.7nm,0.2s						
UZB				*e*S	**Sb**	**20 11 25.3**	**-1.5**
	18nm,0.5s						
UZB	**Uzynbulak**	**2.54**	**15**	Pg	**Pb**	**20 10 53.1**	**-1.9**
	2.7nm,0.2s						
UZB				Lg	Lg	20 11 25.3	
	18nm,0.5s						
MDOK	**Medeo**	**2.60**	**342**	*e*P	**Pb**	**20 10 54.8**	**-1.4**
	9.8nm,0.4s						
MDOK				*e*S	**Sb**	**20 11 28.0**	**-0.7**
	23nm,1.2s						
MDOK	**Medeo**	**2.60**	**342**	Pg	**Pb**	**20 10 54.8**	**-1.4**
	9.8nm,0.4s						
MDOK				⇑Pg	**Pb**	**20 10 54.8**	**-1.4**
	6.7nm,0.5s						
MDOK				Lg	Lg	20 11 27.8	
	21nm,0.6s						
MDOK				Lg	Lg	20 11 28.0	
	23nm,1.2s						
SHLS	**Shalkode**	**2.65**	**21**	*e*P	**Pb**	**20 10 56.1**	**-0.8**
	3.7nm,0.3s						
SHLS				*e*S	**Sb**	**20 11 30.5**	**+0.5**
	22nm,0.5s						
SHLS	**Shalkode**	**2.65**	**21**	Pg	**Pb**	**20 10 56.1**	**-0.8**
	3.7nm,0.3s						
SHLS				Lg	Lg	20 11 30.5	
	22nm,0.5s						
KURS	**Kuram**	**2.79**	**0**	*e*P	**Pb**	**20 10 58.3**	**-1.1**
	11nm,0.4s						
KURS				*e*S	**Sb**	**20 11 33.6**	**-0.4**
	11nm,0.7s						
KURS	**Kuram**	**2.79**	**0**	Pg	**Pb**	**20 10 58.3**	**-1.1**
	11nm,0.4s						
KURS				Lg	Lg	20 11 34.7	
	11nm,0.7s						
KPKS	**Kokpek**	**2.80**	**8**	*e*P	**Pb**	**20 10 57.7**	**-1.8**
	21nm,0.3s						
KPKS				*e*S	**Sb**	**20 11 33.0**	**-1.4**
	18nm,0.4s						
KPKS	**Kokpek**	**2.80**	**8**	Pg	**Pb**	**20 10 57.7**	**-1.8**
	21nm,0.3s						
KPKS				Lg	Lg	20 11 33.0	
	18nm,0.4s						
KST	**Kastek**	**2.86**	**326**	*e*P	**Pb**	**20 10 59.6**	**-1.0**
	10nm,0.4s						
KST				*e*S	**Sb**	**20 11 35.8**	**-0.3**
	19nm,0.8s						
KST	**Kastek**	**2.86**	**326**	Pg	**Pb**	**20 10 59.6**	**-1.0**
	10nm,0.4s						
KST				Lg	Lg	20 11 36.7	
	19nm,0.8s						
TKM2	**Tokmak 2**	**2.93**	**320**	⇓Pg	**Pb**	**20 11 01.3**	**-0.6**
	2.9nm,0.5s						
TKM2				⇓Lg	Lg	20 11 40.2	
	7.6nm,0.6s						
TKM2	**Tokmak 2**	**2.93**	**320**	⇓*i*P	**Pn**	**20 10 57.3**	**+0.7**
	baz=22						
TKM2				⇓*i*S	**Sb**	**20 11 36.0**	**-2.2**
	baz=22						
KBK	**Karagaybulak**	**3.10**	**310**	⇓*e*P	**Pn**	**20 10 59.4**	**+0.6**
	baz=13						
KBK				⇓*i*S	**Sb**	**20 11 39.4**	**-3.6**
	baz=13						
ARLS	**Aral**	**3.11**	**293**	⇑*i*P	**Pn**	**20 10 58.7**	**-0.3**
	baz=98						
ARLS				⇑*i*S	**Sn**	**20 11 38.2**	**+1.3**
	baz=98						
KTMS	**Ketmen**	**3.20**	**30**	*e*P	**Pb**	**20 11 05.3**	**-1.1**
	1.2nm,0.4s						
KTMS				*e*S	**Sb**	**20 11 46.0**	**0.0**
	6.1nm,0.5s						
KTMS	**Ketmen**	**3.20**	**30**	Pg	**Pb**	**20 11 05.3**	**-1.1**
	1.2nm,0.4s						
KTMS				Lg	Lg	20 11 46.0	
	6.1nm,0.5s						
KTBS	**Karatobe**	**3.21**	**341**	*e*P	**Pb**	**20 11 05.2**	**-1.2**
	4.4nm,0.4s						
KTBS				*e*S	**Sb**	**20 11 45.8**	**-0.2**
	20nm,0.4s						
KTBS	**Karatobe**	**3.21**	**341**	Pg	**Pb**	**20 11 05.2**	**-1.2**
	4.4nm,0.4s						
KTBS				Lg	Lg	20 11 45.8	
	20nm,0.4s						
CHMS	**Chumysh**	**3.43**	**313**	⇓Pg	**Pb**	**20 11 10.7**	**+0.5**
	3.9nm,0.8s						
CHMS				⇑Lg	Lg	20 11 56.2	
	10.0nm,0.8s						
KUU	**Kurty**	**3.47**	**338**	*e*P	**Pb**	**20 11 09.9**	**-0.9**
	2.3nm,0.5s						
KUU				*e*S	**Sb**	**20 11 54.1**	**+0.6**
	8.8nm,0.8s						
KUU	**Kurty**	**3.47**	**338**	Pg	**Pb**	**20 11 09.7**	**-1.1**
	2.3nm,0.5s						
KUU				Lg	Lg	20 11 54.1	
	8.8nm,0.8s						
KRBS	**Karabastau**	**3.52**	**329**	*e*P	**Pb**	**20 11 10.9**	**-0.8**
	2.3nm,0.3s						
KRBS				*e*S	**Sb**	**20 11 55.9**	**+0.9**
	8.9nm,0.7s						
KRBS	**Karabastau**	**3.52**	**329**	Pg	**Pb**	**20 11 10.8**	**-1.0**
	2.3nm,0.3s						
KRBS				Lg	Lg	20 11 55.9	
	8.9nm,0.7s						
ARXS	**Arharly**	**3.52**	**356**	*e*P	**Pb**	**20 11 10.4**	**-1.4**
	2.9nm,0.5s						
ARXS				*e*S	**Sb**	**20 11 54.8**	**-0.4**
	6.1nm,0.6s						
ARXS	**Arharly**	**3.52**	**356**	Pg	**Pb**	**20 11 10.4**	**-1.4**
	2.9nm,0.5s						
ARXS				Lg	Lg	20 11 54.8	
	6.1nm,0.6s						
DJR	**Jarkent**	**3.83**	**18**	*e*P	**Pb**	**20 11 17.1**	**0.0**
	1.5nm,0.3s						
DJR				*e*S	**Sb**	**20 12 06.2**	**+2.2**
	5.7nm,0.3s						
DJR	**Jarkent**	**3.83**	**18**	Pg	**Pb**	**20 11 17.1**	**0.0**
	1.5nm,0.3s						
DJR				Lg	Lg	20 12 06.2	
	5.7nm,0.3s						
KK31	**Karatay Array**	**6.19**	**295**	⇑Lg	Lg	20 13 25.1	
	1.3nm,0.7s,baz=111,slow=27						

IDC ***12*** *20:25:01.2±3.4, 34.88S×70.48W, h0km, mb3.8/2, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=135.1km s-min=21.0km az=97.0*
GUC ***12*** *20:25:02.6±0.7, 34.91S×71.83W, h42km±1km, ML3.9*
NEIC ***12*** *20:25:02.3±1.9, 34.91S±0.04×71.85W±0.10, h40km±5km, Error ellipse: s-maj=12.0km s-min=4.4km az=101.0*

ISC 12 20:25:02.0±0.9, **34.93S**±0.03×**71.86W**±0.06, **h44**km±8km, **n60**, σ1°**09**/83, **7C-9D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.10**	**214**		**Pn**	**20 25 09.6**	**+0.4**
GO05				Sn	**Sn**	**20 25 14.7**	**+0.5**
GO05	**Huala**	**0.10**	**214**	⇑*i*P	**Pn**	**20 25 09.8**	**+0.6**
GO05				*i* S	**Sn**	**20 25 14.8**	**+0.5**
GO05				IAML		20 25 17.0	
	comp=N,15μm,0.3s						
BO03	**Pichilemu**	**0.44**	**349**	⇓*i*P	**Pn**	**20 25 12.4**	**+0.2**
BO03				*i* S	**Sn**	**20 25 19.1**	**-0.2**
BO03				IAML		20 25 20.8	
	comp=N,8μm,0.3s						
BO01	**Tunca**	**0.83**	**50**	Pn	**Pn**	**20 25 17.2**	**-0.1**
BO01				Sn	**Sn**	**20 25 27.9**	**-0.6**
BO01	**Tunca**	**0.83**	**50**	⇓*i*P	**Pn**	**20 25 17.2**	**-0.1**
BO01				*i* S	**Sn**	**20 25 28.0**	**-0.6**
BO01				IAML		20 25 29.4	
	comp=N,4μm,0.4s						
BO02	**Sierra Bellavi**	**0.90**	**82**	Pn	**Pn**	**20 25 18.1**	**-0.3**
BO02	**Sierra Bellavi**	**0.90**	**82**	⇓*i*P	**Pn**	**20 25 18.3**	**0.0**
BO02				*i* S	**Sn**	**20 25 30.0**	**-0.2**
BO02				IAML		20 25 31.2	
	comp=N,15μm,0.3s						
ML02	**Panimavida**	**0.91**	**157**	Pn	**Pn**	**20 25 18.0**	**-0.4**
ML02				Sn	**Sn**	**20 25 30.8**	**+0.4**
ML02	**Panimavida**	**0.91**	**157**	⇓*i*P	**Pn**	**20 25 18.7**	**+0.3**
ML02				*i* S	**Sn**	**20 25 31.3**	**+0.9**
ML02				IAML		20 25 33.5	
	comp=E,3μm,0.2s						
MT01	**Popeta**	**1.18**	**26**		**Pn**	**20 25 22.2**	**+0.2**
MT01				Sn	**Sn**	**20 25 37.3**	**+0.4**
MT01	**Popeta**	**1.18**	**26**	⇓*i*P	**Pn**	**20 25 22.3**	**+0.2**
MT01				*i* S	**Sn**	**20 25 37.3**	**+0.4**
MT01				IAML		20 25 42.6	
	comp=E,4μm,0.2s						
VA05	**Santo Domingo**	**1.28**	**9**	Pn	**Pn**	**20 25 23.0**	**-0.5**
VA05	**Santo Domingo**	**1.28**	**9**	⇓*i*P	**Pn**	**20 25 23.5**	**0.0**
VA05				*i* S	**Sn**	**20 25 39.5**	**0.0**
VA05				IAML		20 25 47.3	
	comp=E,2μm,0.2s						
MT09	**Talagante**	**1.36**	**32**		**Pn**	**20 25 25.3**	**+0.7**
MT09				Sn	**Sn**	**20 25 43.1**	**+1.6**
MT09	**Talagante**	**1.36**	**32**	⇓*i*P	**Pn**	**20 25 25.4**	**+0.7**
MT09				*i* S	**Sn**	**20 25 42.9**	**+1.3**
MT09				IAML		20 25 46.7	
	comp=N,5μm,0.2s						
LMEL	**Las Melosas**	**1.74**	**52**		**Pn**	**20 25 30.4**	**+0.4**
LMEL	**Las Melosas**	**1.74**	**52**	⇑*i*P	**Pn**	**20 25 30.8**	**+0.8**
LMEL				*i* S	**Sn**	**20 25 51.8**	**+0.7**
LMEL				IAML		20 25 57.1	
	comp=N,3μm,0.1s						
MT02	**Curacav**	**1.77**	**20**		**Pn**	**20 25 30.4**	**+0.2**
MT02	**Curacav**	**1.77**	**20**	⇑*i*P	**Pn**	**20 25 30.5**	**+0.3**
MT02				*i* S	**Sn**	**20 25 52.4**	**+0.9**
MT05	**Renca**	**1.79**	**32**		**Pn**	**20 25 30.9**	**+0.3**
MT05	**Renca**	**1.79**	**32**	⇓*i*P	**Pn**	**20 25 31.4**	**+0.8**
MT05				*i* S	**Sn**	**20 25 55.1**	**+3.0**
MT05				IAML		20 26 00.9	
	comp=E,3μm,0.3s						
MT03	**Universidad Ad**	**1.82**	**38**		**Pn**	**20 25 31.2**	**+0.3**
MT03	**Universidad Ad**	**1.82**	**38**	⇑*i*P	**Pn**	**20 25 31.5**	**+0.6**
MT03				*i* S	**Sn**	**20 25 54.1**	**+1.3**
MT03				IAML		20 26 00.3	
	comp=N,3μm,0.2s						
VA01	**Torpederas**	**1.91**	**5**		**Pn**	**20 25 32.4**	**+0.3**
VA01	**Torpederas**	**1.91**	**5**	*e*P	**Pn**	**20 25 32.4**	**+0.3**
VA01				IAML		20 26 02.4	
	comp=N,632nm,0.1s						
PEL	**Peldehue**	**2.03**	**29**		**Pn**	**20 25 34.1**	**+0.3**
PEL	**Peldehue**	**2.03**	**29**	⇑*i*P	**Pn**	**20 25 34.4**	**+0.6**
PEL				*i* S	**Sn**	**20 25 60.0**	**+2.0**
PEL				IAML		20 26 08.3	
	comp=E,1μm,0.4s						
FCH	**Farellones**	**2.06**	**40**	⇑*i*P	**Pn**	**20 25 35.2**	**+0.7**
FCH				*i* S	**Sn**	**20 26 00.4**	**+1.3**
FCH				IAML		20 26 07.3	
	comp=N,2μm,0.2s						
ROC1	**El Roble**	**2.07**	**20**		**Pn**	**20 25 34.9**	**+0.3**
ROCH	**El Roble**	**2.08**	**20**	*e*P	**Pn**	**20 25 35.4**	**+0.8**
ROCH				*i* P	**Pn**	**20 25 35.3**	**+0.8**
ROCH				*e*S	**Sn**	**20 26 01.1**	**+1.8**
ROCH				*i* S	**Sn**	**20 26 02.1**	**+2.8**
ROCH				IAML		20 26 08.4	
	comp=N,1μm,0.1s						
ROCH				IAML		20 26 09.5	
	comp=E,1μm,0.4s						
BI05	**Punta Hualpn**	**2.11**	**210**		**Pn**	**20 25 36.0**	**+1.1**
VA06	**Catapilco**	**2.41**	**11**		**Pn**	**20 25 39.1**	**+0.2**
VA03	**San Esteban**	**2.42**	**27**		**Pn**	**20 25 39.8**	**+0.6**
CO02	**Combarbal**	**3.78**	**11**		**Pn**	**20 25 57.8**	**-0.1**
CO02	**Combarbal**	**3.78**	**11**	⇑*i*P	**Pn**	**20 25 57.9**	**-0.1**
CO03	**El Pedregal**	**4.20**	**14**		**Pn**	**20 26 03.8**	**+0.3**
CO03	**El Pedregal**	**4.20**	**14**	⇓*i*P	**Pn**	**20 26 03.9**	**+0.3**
CO03				*i* S	**Sn**	**20 26 51.5**	**+0.1**
CO06	**Fray Jorge**	**4.25**	**3**	Pn	**Pn**	**20 26 03.0**	**-1.2**
ZON	**Zonda**	**4.30**	**39**		**Pn**	**20 26 02.5**	**-2.5**
GO08	**Curarrehue**	**4.66**	**176**		**Pn**	**20 26 11.7**	**+1.7**
LR03	**Panguipulli**	**4.71**	**185**	Pn	**Pn**	**20 26 12.1**	**+1.5**
GO04	**Tololo Observa**	**4.83**	**11**		**Pn**	**20 26 12.0**	**-0.4**
CO05	**La Serena**	**5.02**	**6**	Pn	**Pn**	**20 26 14.0**	**-0.9**
LR04	**Corral**	**5.10**	**194**	Pn	**Pn**	**20 26 14.2**	**-1.6**
CO01	**Juntas del Tor**	**5.16**	**17**		**Pn**	**20 26 17.0**	**+0.1**
PLCA	**Paso Flores**	**5.89**	**170**	Pn	**Pn**	**20 26 28.6**	**+1.8**
	comp=E,0.6nm,0.3s,baz=338,slow=10,SNR=24						
PLCA				Lg	Lg	20 28 08.2	
	comp=E,0.4nm,0.3s,baz=48,slow=13,SNR=2.8						
	comp=E,1.5nm,0.3s						
LCO	**Las Campanas**	**5.98**	**10**	Pn	**Pn**	**20 26 27.4**	**-0.9**
LL04	**Puerto Octay**	**5.99**	**184**	Pn	**Pn**	**20 26 27.1**	**-1.0**
LL03	**Petrohue**	**6.22**	**184**	Pn	**Pn**	**20 26 28.9**	**-2.3**
AC05	**El Transito**	**6.22**	**13**	Pn	**Pn**	**20 26 30.8**	**-0.7**
GO03	**Copiap**	**7.44**	**11**	Pn	**Pn**	**20 26 46.2**	**-1.9**
AC06	**Mina Casimiro**	**7.66**	**10**	Pn	**Pn**	**20 26 48.2**	**-2.8**
GO07	**Milladeo Hill,**	**8.29**	**189**	Pn	**Pn**	**20 26 60.0**	**+0.3**
AC02	**Maricunga**	**8.40**	**17**	Pn	**Pn**	**20 26 59.8**	**-1.9**
TRQA	**Tornquist**	**8.55**	**114**	Pn	**Pn**	**20 27 02.3**	**-0.9**
LPAZ	**La Paz**	**18.86**	**11**	P	**Pn**	**20 29 21.1**	**+1.0**
	comp=E,0.1nm,0.3s,baz=177,slow=8.0,SNR=4.2						
	comp=E,0.9nm,0.6s						
LPAZ	**La Paz**	**18.86**	**11**	P	**P**	**20 29 17.4**	**-1.8**
SIV	**San Ignacio**	**21.20**	**30**	P	**P**	**20 29 42.7**	**-1.3**
	comp=E,1.3nm,0.4s,baz=230,slow=9.3,SNR=8.6						
	comp=E,1.3nm,0.4s						
SNAA	**Sanae**	**50.67**	**158**	P	**P**	**20 33 56.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**84.39**	**70**	P	**P**	**20 37 30.0**	**-0.1**
	comp=E,0.9nm,0.9s,baz=231,slow=5.6,SNR=6.1						
	comp=E,0.9nm,0.9s						

KRNET ***12*** *20:32:29.5±0.1, 40.32N×78.53E, mb3.2*
NNC ***12*** *20:32:32.1±1.3, 40.73N×78.25E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=8.9km s-min=5.5km az=163.0*
SOME ***12*** *20:32:32.1, 40.73N×78.22E, h10km*

ISC 12 20:32:33.1±1.9, **40.75N**±0.09×**78.12E**±0.04, **h10**km, **n38**, σ1°**64**/58, **14C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.74**	**7**	⇓*i*P	**Pg**	**20 33 05.2**	**-1.4**
	baz=57						
PRZ				⇓*i*S	**Sg**	**20 33 31.3**	**+2.1**
	baz=57						
ULHL	**Ulahol**	**2.06**	**317**	⇑*e*P	**Pb**	**20 33 10.8**	**+0.1**
	baz=19						
ULHL				⇑*i*S	**Sg**	**20 33 41.0**	**+1.8**
	baz=19						
SATY	**Saty**	**2.31**	**5**	*e*P	**Pg**	**20 33 15.8**	**-1.7**
	60nm,0.5s						
SATY				*e*S	**Sg**	**20 33 47.4**	**-0.1**
	62nm,0.4s						
SATY	**Saty**	**2.31**	**5**	Pg	**Pg**	**20 33 15.8**	**-1.7**
	60nm,0.5s						
SATY				Lg	Lg	20 33 48.5	
	62nm,0.4s						
BOOM	**Boomskoye usch**	**2.39**	**317**	⇑*i*P	**Pb**	**20 33 15.5**	**-0.8**
	baz=19						
BOOM				⇑*i*S	**Sg**	**20 33 48.8**	**-1.0**
	baz=19						
UZB	**Uzynbulak**	**2.48**	**15**	*e*P	**Pb**	**20 33 17.9**	**0.0**
	5.9nm,0.4s						
UZB				*e*S	**Sg**	**20 33 50.9**	**-2.0**
	44nm,0.4s						
UZB	**Uzynbulak**	**2.48**	**15**	Pg	**Pb**	**20 33 17.0**	**-1.0**
	5.9nm,0.4s						
UZB				Lg	Lg	20 33 50.3	
	44nm,0.4s						
MDOK	**Medeo**	**2.54**	**342**	⇑Pg	**Pg**	**20 33 20.1**	**-1.7**
	12nm,0.5s						
MDOK				Lg	Lg	20 33 54.8	
	54nm,0.6s						
SHLS	**Shalkode**	**2.60**	**22**	*e*P	**Pg**	**20 33 21.4**	**-1.6**
	14nm,0.4s						
SHLS				*e*S	**Sg**	**20 33 56.8**	**+0.1**
	31nm,0.5s						
SHLS	**Shalkode**	**2.60**	**22**	Pg	**Pb**	**20 33 20.2**	**+0.2**
	2.7nm,0.3s						
SHLS				Lg	Lg	20 33 55.9	
	31nm,0.5s						
AAA	**Alma-Ata**	**2.62**	**340**	*e*P	**Pg**	**20 33 22.2**	**-1.0**
	43nm,0.2s						
AAA				*e*S	**Sg**	**20 33 58.4**	**+1.2**
	99nm,0.3s						
AAA	**Alma-Ata**	**2.62**	**340**	Pg	**Pg**	**20 33 22.0**	**-1.3**
	43nm,0.2s						
AAA				Lg	Lg	20 33 58.7	
	99nm,0.3s						
KURS	**Kuram**	**2.73**	**1**	*e*P	**Pg**	**20 33 23.6**	**-2.0**
	24nm,0.5s						
KURS				*e*S	**Sg**	**20 34 00.6**	**-0.3**
	27nm,0.5s						
KURS	**Kuram**	**2.73**	**1**	Pg	**Pb**	**20 33 22.8**	**+0.6**
	24nm,0.5s						
KURS				Lg	Lg	20 34 00.2	
	27nm,0.5s						
KPKS	**Kokpek**	**2.74**	**9**	*e*P	**Pb**	**20 33 23.0**	**+0.6**
	50nm,0.3s						
KPKS				*e*S	**Sg**	**20 33 59.6**	**-1.7**
	48nm,0.6s						
KPKS	**Kokpek**	**2.74**	**9**	Pg	**Pb**	**20 33 22.9**	**+0.5**
	50nm,0.3s						
KPKS				Lg	Lg	20 34 00.2	
	48nm,0.6s						
KST	**Kastek**	**2.80**	**326**	*e*P	**Pb**	**20 33 24.9**	**+1.5**
	17nm,0.5s						
KST				*e*S	**Sg**	**20 34 02.6**	**-0.5**
	46nm,0.8s						
KST	**Kastek**	**2.80**	**326**	Pg	**Pb**	**20 33 24.7**	**+1.4**
	17nm,0.5s						
KST				Lg	Lg	20 34 03.5	
	46nm,0.8s						
TKM2	**Tokmak 2**	**2.87**	**320**	⇓Pg	**Pg**	**20 33 26.6**	**-1.6**
	4.9nm,0.6s						
TKM2				⇓Lg	Lg	20 34 06.4	
	17nm,0.6s						
TKM2	**Tokmak 2**	**2.87**	**320**	⇑*i*P	**Pb**	**20 33 22.3**	**-2.3**
	baz=21						
TKM2				⇑*i*S	**Sb**	**20 34 00.8**	**+0.9**
	baz=21						
KBK	**Karagaybulak**	**3.04**	**310**	⇑*i*P	**Pn**	**20 33 24.3**	**+2.8**
	baz=12						
KBK				⇑*i*S	**Sb**	**20 34 04.6**	**-0.2**
	baz=12						
ARLS	**Aral**	**3.07**	**292**	⇑*i*P	**Pn**	**20 33 23.8**	**+1.9**
	baz=97						
ARLS				⇑*i*S	**Sb**	**20 34 03.5**	**-2.0**
	baz=97						
KTBS	**Karatobe**	**3.15**	**341**	*e*P	**Pb**	**20 33 30.4**	**+1.3**
	9.2nm,0.3s						
KTBS				*e*S	**Sg**	**20 34 12.6**	**-1.6**
	54nm,0.2s						
KTBS	**Karatobe**	**3.15**	**341**	Pg	**Pb**	**20 33 30.1**	**+0.9**
	9.2nm,0.3s						
KTBS				Lg	Lg	20 34 13.6	
	54nm,0.2s						
CHMS	**Chumysh**	**3.37**	**313**	⇓Pg	**Pg**	**20 33 35.8**	**-1.9**
	6.5nm,0.7s						
CHMS				⇓Lg	Lg	20 34 22.1	
	27nm,1.0s						
KUU	**Kurty**	**3.41**	**338**	*e*P	**Pb**	**20 33 35.2**	**+1.6**
	4.5nm,0.6s						
KUU				*e*S	**Sg**	**20 34 20.5**	**-2.0**
	8.5nm,0.6s						
KUU	**Kurty**	**3.41**	**338**	Pg	**Pb**	**20 33 34.4**	**+0.8**
	4.5nm,0.6s						
KUU				Lg	Lg	20 34 20.2	
	8.5nm,0.6s						
KRBS	**Karabastau**	**3.46**	**329**	*e*P	**Pb**	**20 33 36.6**	**+2.1**
	4.9nm,0.6s						
KRBS				*e*S	**Sg**	**20 34 23.0**	**-1.2**
	18nm,0.6s						
KRBS	**Karabastau**	**3.46**	**329**	Pg	**Pb**	**20 33 36.1**	**+1.6**
	4.9nm,0.3s						
KRBS				Lg	Lg	20 34 22.9	
	18nm,0.6s						
ARXS	**Arharly**	**3.46**	**356**	*e*P	**Pb**	**20 33 36.1**	**+1.5**
	7.2nm,0.6s						
ARXS				*e*S	**Sg**	**20 34 22.1**	**-2.4**
	16nm,0.6s						
ARXS	**Arharly**	**3.46**	**356**	Pg	**Pb**	**20 33 35.4**	**+0.8**
	4.9nm,0.5s						
ARXS				Lg	Lg	20 34 21.8	
	16nm,0.6s						
SGDS	**Sogindy**	**3.75**	**317**	*e*P	**Pb**	**20 33 41.7**	**+2.3**
	1.4nm,0.3s						
SGDS				*e*S	**Sg**	**20 34 31.7**	**-1.7**
	12nm,0.7s						
SGDS	**Sogindy**	**3.75**	**317**	Pg	**Pb**	**20 33 40.7**	**+1.3**
	1.3nm,0.3s						
SGDS				Lg	Lg	20 34 30.7	
	12nm,0.7s						
DJR	**Jarkent**	**3.78**	**18**	*e*P	**Pb**	**20 33 41.2**	**+1.2**
	3.9nm,0.3s						
DJR				*e*S	**Sg**	**20 34 30.8**	**-3.9**
	11nm,0.4s						
DJR	**Jarkent**	**3.78**	**18**	Pg	**Pb**	**20 33 40.7**	**+0.6**
	3.9nm,0.3s						
DJR				Lg	Lg	20 34 30.8	
	11nm,0.4s						
MRKS	**Merke**	**4.17**	**300**	Pg	**Pb**	**20 33 48.2**	**+1.5**
	1.5nm,0.2s						
MRKS				Lg	Lg	20 34 44.1	
	7.8nm,0.9s						
KK31	**Karatay Array**	**6.14**	**295**	⇑Pg	**Pg**	**20 34 27.2**	**-3.6**
	0.6nm,0.7s,baz=104,slow=16,SNR=4.8						
KK31				⇓Lg	Lg	20 35 51.0	
	1.2nm,0.6s,baz=108,slow=26,SNR=4.9						
MK31	**Makanchi Array**	**6.75**	**25**	⇑Pn	**Pn**	**20 34 13.7**	**+1.4**
	0.1nm,0.2s,baz=203,slow=13,SNR=4.6						
MK31				⇑Sn	**Sn**	**20 35 30.9**	**+1.7**
	1.1nm,0.6s,baz=222,slow=14,SNR=3.6						

BJI ***12*** *20:47:30.0±0.0, 84.10N×2.20W, h10km, mb4.9/67, mB5.2/48, Ms4.7/55, Ms7 4.4/54*
NEIC ***12*** *20:47:31.7, 84.03N×1.75W, h4km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=2.50; Mθθ=0.07; Mϕϕ=2.57; Mrθ=1.10; Mrϕ=2.77; Mθϕ=1.13; Fault plane solution: Mo4.07000×10¹⁶ NP1:ϕ=244.56000°, δ=53.63000°, λ=-39.55000°. NP2:ϕ=0.65000°, δ=59.15000°, λ=-136.32000°. Principal axes: T 4.3341, Plg3.0000°,

NOR **Nord** 3.01 225 Pn **Pn** 20 48 23.6 +3.1
NOR Sn **Sn** 20 49 00.9 +4.4
NOR Nord 3.01 225 ⇑ *i*P **Pn** 20 48 22.5 +2.1
NOR *i* S **Sn** 20 48 50.2 -6.3
NOR IAML 20 50 34.2
comp=Z,253nm,4.9s
NOR Nord 3.01 225 Pn **Pn** 20 48 23.6 +3.1
NOR *e*P **Pb** 20 48 23.8 -2.6
NOR Sn **Sn** 20 49 00.9 +4.4
KBS Kingsbay 5.46 151 Pn **Pn** 20 48 53.3 -0.7
KBS Sn **Sn** 20 49 51.5 -5.3
KBS Kingsbay 5.46 151 **Pn** 20 48 52.5 -1.4
KBS Sn **Sn** 20 49 51.3 -5.5
KBS Kingsbay 5.46 151 *c i*P **Pn** 20 48 53.6 -0.4
KBS Kingsbay 5.46 151 *i* P **Pn** 20 48 53.6 -0.4
KBS *i* S **Sn** 20 49 50.0 -6.8
KBS Kingsbay 5.46 151 *e*P **Pn** 20 48 53.5 -0.4
KBS *e*S **Sn** 20 49 51.5 -5.3
KBS IAML 20 49 53.5
comp=Z,59nm,0.4s
KBS Kingsbay 5.46 151 *e*P **Pn** 20 48 53.1 -0.9
KBS *e*S **Sn** 20 49 50.2 -6.5
BRBB Barentsburg B 6.39 149 Pn **Pn** 20 49 05.4 -1.4
BRBB Sn **Sn** 20 50 13.5 -6.1
BRBB Barentsburg B 6.39 149 Pn **Pn** 20 49 05.4 -1.4
BRBB Sn **Sn** 20 50 13.5 -6.1
BRBA Barentsburg A 6.42 149 Pn **Pn** 20 49 08.1 +0.9
BRBA Sn **Sn** 20 50 13.8 -6.6
BRBA Barentsburg A 6.42 149 Pn **Pn** 20 49 08.1 +0.9
BRBA Sn **Sn** 20 50 13.8 -6.6
SPA0 Spitsbergen Ar 6.43 145 Pn **Pn** 20 49 07.1 -0.2
baz=354,slow=9.3
SPA0 Sn **Sn** 20 50 13.0 -7.7
baz=11,slow=22
SPA0 Spitsbergen Ar 6.43 145 Pn **Pn** 20 49 07.1 -0.2
baz=354,slow=9.3
SPA0 Sn **Sn** 20 50 13.0 -7.7
baz=11,slow=22
SPA0 Spitsbergen Ar 6.43 145 *e*P **Pn** 20 49 06.1 -1.3
SPA0 *e*S Sn 20 50 11.5 -9.2
SPITS Spitsbergen Ar 6.43 145 Pn **Pn** 20 49 06.3 -1.1
baz=355,slow=9.3
SPITS Sn **Sn** 20 50 14.5 -6.2
baz=27,slow=11
SPITS LR LR 20 51 28.3
comp=Z,4μm,19.9s,baz=314,slow=36
comp=Z,4.6nm,0.4s
SPB2 Spitsbergen Ar 6.44 145 **Pn** 20 49 05.9 -1.5
SPB2 Sn **Sn** 20 50 14.5 -6.3
ZFI2 Zemlya Franca- 7.04 90 *e*P **Pn** 20 49 13.0 -2.5
ZFI2 *e*S Sn 20 50 23.2 -12
comp=Z,307nm,1.2s
ZFI Zemlya Franca- 7.04 90 *e*P **Pn** 20 49 13.0 -2.6
ZFI *e*S Sn 20 50 23.7 -12
HSPB Hornsund (broa 7.52 149 Pn **Pn** 20 49 23.4 +1.1
HSPB Sn **Sn** 20 50 40.5 -7.0
HSPB Hornsund (broa 7.52 149 *e*P **Pn** 20 49 23.0 +0.8
HSPB Hornsund (broa 7.52 149 *e*P **Pn** 20 49 23.9 +1.6
HSPB *e*S **Sn** 20 50 40.9 -6.6
HSPB IAML 20 50 59.7
comp=Z,7.2nm,0.5s
HSPB Hornsund (broa 7.52 149 *e*P **Pn** 20 49 23.4 +1.1
HSPB *e*S **Sn** 20 50 41.5 -6.0
DAG Danmarks Havn 7.70 210 *i* P **Pn** 20 49 26.0 +1.2
DAG IAML 20 52 33.9
comp=Z,27nm,6.0s
HOPEN Hopen 8.62 135 Pn **Pn** 20 49 36.5 -0.8
HOPEN Sn Sn 20 51 04.9 -9.5
HOPEN Hopen 8.62 135 *e*P **Pn** 20 49 36.5 -0.8
HOPEN *e*S Sn 20 51 03.2 -11
HOPEN IAML 20 51 07.6
comp=Z,12nm,0.2s
HOPEN Hopen 8.62 135 *e*P **Pn** 20 49 35.9 -1.4
HOPEN *e*S Sn 20 51 03.0 -11
BJO1 Bjornoya 10.17 147 Pn **Pn** 20 49 59.2 +0.8
BJO1 Bjornoya 10.17 147 *e*P **Pn** 20 49 59.4 +0.9
BJO1 Bjornoya 10.17 147 P **Pn** 20 49 58.8 +0.3
BJO1 S Sn 20 51 40.7 -12
DBG Daneborg 10.21 209 Pn **Pn** 20 50 01.1 +2.0
DBG Daneborg 10.21 209 *i* P **Pn** 20 50 00.2 +1.2
DBG IAML 20 55 19.0
comp=Z,36nm,2.8s
DBG Daneborg 10.21 209 *e*P **Pn** 20 50 01.1 +2.0
EUNU Eureka 11.17 297 **Pn** 20 50 10.2 -2.1
TULEG Thule 12.46 273 Pn **Pn** 20 50 27.9 -1.8
TULEG Sn **Sn** 20 52 41.1 -7.2
JMIC Jan Mayen 13.13 189 Pn **Pn** 20 50 42.2 +3.3
comp=Z,2.7nm,0.3s,baz=86,slow=12,SNR=3.3
comp=Z,18nm,0.6s
JMIC Jan Mayen 13.13 189 IAML 20 50 49.4
comp=Z,14nm,0.5s
SUMG Summit 13.15 232 Pn **Pn** 20 50 37.7 -1.8
SUMG Summit 13.15 232 P **Pn** 20 50 37.7 -1.8
SUMG Summit 13.15 232 *i* P **Pn** 20 50 39.6 +0.1
SCO Scoresbysund 14.09 208 Pn **Pn** 20 50 53.0 +1.0
SCO Scoresbysund 14.09 208 P **Pn** 20 50 53.0 +1.0
HAMF Hammerfest 14.25 144 P **Pn** 20 50 53.5 -0.7
TRO Tromso 14.98 151 *e*P **Pn** 20 51 03.7 -0.5
JETT Jettan, Norway 15.14 149 P **Pn** 20 51 07.6 +1.3
KEV Kevo 15.34 140 **Pn** 20 51 07.6 -1.3
KEV Kevo 15.34 140 P **Pn** 20 51 07.6 -1.3
KEV pmax pmax
comp=Z,66nm,1.2s
ARA0 ARCESS Array S 15.46 142 P **Pn** 20 51 09.4 -1.1
baz=358,slow=10
ARA0 ARCESS Array S 15.46 142 P **Pn** 20 51 10.0 -0.5
baz=358,slow=10
ARA0 *e*P **Pn** 20 51 10.1 -0.5
ARCES ARCESS Array B 15.46 142 Pn **Pn** 20 51 09.4 -1.0
comp=Z,0.4nm,0.3s,baz=0.0,slow=2.9,SNR=24
ARCES LR LR 20 57 04.0
comp=Z,2μm,19.4s,baz=338,slow=37
comp=Z,8.5nm,0.6s
ARCES ARCESS Array B 15.46 142 **Pn** 20 51 07.1 -3.4
ARCES IAmb IAmb 20 51 13.2
comp=Z,174nm,1.9s
KIF Kilpisjarvi 15.71 149 P **Pn** 20 51 15.1 +1.4
KIF Kilpisjarvi 15.71 149 *e*P **Pn** 20 51 15.1 +1.4
HEF Hetta 16.46 146 *e*P **Pn** 20 51 22.6 -0.7
STEI Steigen 16.51 157 *e*P **P** 20 51 26.3 -0.3
RES Resolute Bay 16.82 293 Pn **Pn** 20 51 27.2 -0.7
comp=Z,1.1nm,0.3s,baz=40,slow=11,SNR=4.3
RES LR LR 20 58 18.7
comp=Z,3μm,19.7s,baz=18,slow=38
comp=Z,18nm,0.8s
RES Resolute Bay 16.82 293 Pn **Pn** 20 51 22.5 -5.4
FAUS Fauske 17.06 157 *e*P **P** 20 51 35.5 +2.8
ILULI Ilulissat 17.53 244 P **Pn** 20 51 31.0 -5.8
ILULI Ilulissat 17.53 244 P **Pn** 20 51 31.0 -5.8
ILULI pmax pmax
comp=Z,55nm,1.2s
LVZ Lovozero 17.73 132 P **Pn** 20 51 38.0 -1.2
LVZ Lovozero 17.73 132 *ce*P **P** 20 51 41.4 +1.3
LVZ pmax pmax
comp=Z,336nm,1.7s
APA0 Apatity Array 17.89 134 P **Pn** 20 51 40.4 -0.8
baz=7.1,slow=18
APA0 Apatity Array 17.89 134 P **Pn** 20 51 39.2 -1.9
baz=7.1,slow=18
APA Apatity 17.95 134 ⇓ *i*P **Pn** 20 51 39.8 -2.2
APA *i* S **Sn** 20 54 56.0 -5.9
APA pmax pmax
comp=Z,26nm,1.1s
APA MLR MLR
comp=Z,2μm,16.0s
MOR8 Moi Rana 18.23 158 *e*P **P** 20 51 48.0 +2.3
AMDE Amderma 18.46 100 *e*P **P** 20 51 46.4 -1.6
SFJD Kangerlussuaq 19.64 241 P **Pn** 20 52 02.5 +0.1
comp=Z,1.6nm,0.3s,baz=12,slow=13,SNR=10
SFJD LR LR 20 59 57.6
comp=Z,1μm,19.7s,baz=14,slow=38
comp=Z,12nm,0.7s
SFJD Kangerlussuaq 19.64 241 **P** 20 52 00.3 -0.7
SFJD IAmb IAmb 20 52 08.6
comp=Z,190nm,1.6s
BORG Borgarnes 19.78 205 LR LR 20 59 31.2
comp=Z,262nm,19.3s,baz=358,slow=36
NRIK Noril'sk 21.57 75 P **P** 20 52 20.0 -1.9
comp=Z,15nm,0.9s,baz=352,slow=7.9,SNR=13
comp=Z,15nm,0.9s
NRIK Noril'sk 21.57 75 P **P** 20 52 20.4 -1.4
NRIK IAmb IAmb 20 52 27.7
comp=Z,138nm,1.4s
NRIK Noril'sk 21.57 75 *ce*P **P** 20 52 21.1 -0.8
NRIK pmax pmax
comp=Z,120nm,1.4s
LSH Leshukonskoye 21.63 121 *e*P **P** 20 52 22.5 -0.1
comp=Z,48nm,1.2s
LSH *e*S S 20 56 04.2 -17
ADZR Andozero 21.93 130 *e*P **P** 20 52 27.1 +1.4
comp=Z,106nm,1.8s
TIXI Tiksi 22.88 38 LR LR 21 00 18.5
comp=Z,388nm,20.9s,baz=359,slow=34
TIXI Tiksi 22.88 38 P **P** 20 52 33.2 -2.6
TIXI Tiksi 22.88 38 P **P** 20 52 33.2 -2.6
TIXI pmax pmax
comp=Z,19nm,1.2s
NC204 NORSAR Array S 23.01 164 P **P** 20 52 34.7 -2.7
NC303 NORSAR Array S 23.08 163 P **P** 20 52 36.6 -1.5
NC303 IAmb IAmb 20 52 50.4
comp=Z,111nm,1.4s
NC405 NORSAR Array S 23.20 163 P **P** 20 52 36.9 -2.4
NB201 NORSAR Array S 23.25 164 P **P** 20 52 37.8 -2.0
NBO00 NORSAR Array S 23.26 164 P **P** 20 52 38.1 -1.7
NB2 NORSAR Subarra 23.26 164 P **P** 20 52 41.8 +1.9
comp=Z,167nm,2.0s,baz=357,slow=11
NB2 NORSAR Subarra 23.26 164 P **P** 20 52 42.3 +2.4
baz=347,slow=9.3
NB2 NORSAR Subarra 23.26 164 P **P** 20 52 42.3 +2.4
baz=347,slow=9.3
NOA NORSAR Array B 23.26 164 P **P** 20 52 40.8 +0.9
comp=Z,13nm,1.2s,baz=355,slow=8.6,SNR=9.9
NOA LR LR 21 00 25.2
comp=Z,708nm,21.4s,baz=355,slow=33
comp=Z,13nm,1.2s
NAO01 NORSAR Array S 23.45 164 P **P** 20 52 40.2 -1.5
FIA1 FINESS Array S 23.53 146 P **P** 20 52 41.2 -1.2
FIA0 FINESS Array S 23.53 146 P **P** 20 52 42.6 +0.1
FIA0 FINESS Array S 23.53 146 P **P** 20 52 42.6 +0.1
FINES FINESS Array B 23.53 146 P **P** 20 52 43.0 +0.5
comp=Z,4.6nm,0.9s,baz=324,slow=9.4,SNR=7.2
FINES LR LR 21 01 52.0
comp=Z,986nm,18.2s,baz=356,slow=36
comp=Z,4.6nm,0.9s
FINES FINESS Array B 23.53 146 P **P** 20 52 42.4 -0.1
FINES FINESS Array B 23.53 146 P **P** 20 52 43.0 +0.5
NC602 NORSAR Array S 23.57 163 P **P** 20 52 43.0 0.0
NRA0 NORESS Array S 23.57 163 P **P** 20 52 44.7 +1.7
baz=354,slow=14
NRA0 NORESS Array S 23.57 163 P **P** 20 52 44.7 +1.7
baz=354,slow=14
HFS Hagfors 24.25 161 P **P** 20 52 51.1 +1.6
comp=Z,4.9nm,0.9s,baz=26,slow=18,SNR=3.4
HFS LR LR 21 01 06.6
comp=Z,922nm,21.5s,baz=358,slow=34
comp=Z,4.9nm,0.9s
HFS Hagfors 24.25 161 P **P** 20 52 51.0 +1.6
baz=350,slow=12
HFS Hagfors 24.25 161 P **P** 20 52 51.0 +1.6
baz=350,slow=12
A21K Barrow 24.41 340 P **P** 20 52 50.6 -0.1
C36M Paulatuk 24.52 314 P **P** 20 52 50.8 -0.9
C36M IAmb IAmb 20 52 54.6
comp=Z,97nm,1.6s
C36M Paulatuk 24.52 314 P **P** 20 52 50.4 -1.3
baz=12
FRB Frobisher Bay 24.59 259 P **P** 20 52 54.7 +2.3
comp=Z,5.8nm,0.6s,baz=25,slow=9.9,SNR=3.9
FRB LR LR 21 02 29.0
comp=Z,831nm,19.9s,baz=10,slow=36
comp=Z,5.8nm,0.6s
KONO Kongsberg 24.61 166 P **P** 20 52 53.3 +0.6
KONO IAmb IAmb 20 53 07.8
comp=Z,113nm,1.9s
KONO Kongsberg 24.61 166 P **P** 20 52 53.3 +0.6
KONO pmax pmax
comp=Z,113nm,1.9s
PRGR Permogore 24.81 123 ⇓ *i*P **P** 20 52 55.9 +1.5
PRGR *e* 20 53 30.9
PRGR Permogore 24.81 123 *e*P **P** 20 52 55.9 +1.5
NRS Narsarsuaq 24.92 232 P **P** 20 52 57.3 +1.8
NRS Narsarsuaq 24.92 232 P **P** 20 52 57.3 +1.8
NRS pmax pmax
comp=Z,109nm,1.6s
KLMR Klimovskoe 25.07 130 *e*P **P** 20 52 56.6 -0.1
KLMR *e*S **S** 20 57 21.4 +0.8
KLMR pmax pmax
comp=Z,81nm,1.3s
KLMR MLR MLR
comp=Z,1μm,16.0s
KLMR Klimovskoe 25.07 130 *e*P **P** 20 52 56.7 -0.1
comp=Z,81nm,1.3s
KLMR *e*S **S** 20 57 15.0 -5.6
KLMR Klimovskoe 25.07 130 *e*P **P** 20 52 56.7 0.0
KLMR AMP 20 53 02.7
comp=Z,81nm,1.3s
KLMR *e*S **S** 20 57 21.4 +0.8
KLMR *e*S **S** 20 57 21.4 +0.8
KLMR LQ LQ 20 59 57.1
KLMR LQ LQ 20 59 57.1
KLMR LR LR 21 00 37.4
KLMR AMP 21 02 45.2
comp=Z,1μm,16.4s
IVI Ivigtut 25.11 235 P **P** 20 52 58.0 +0.8
IVI IAmb IAmb 20 53 26.9
comp=Z,46nm,1.2s
C26K Camden Bay 25.30 331 P **P** 20 52 57.5 -1.3
baz=8.4
C27K Jago River 25.52 330 P **P** 20 52 60.0 -0.9
baz=8.6,SNR=9.6
C23K Itkillik River 25.65 335 P **P** 20 53 00.7 -1.3
baz=7.2,SNR=29
C24K Franklin Bluff 25.68 334 P **P** 20 53 00.5 -1.7
baz=7.6
D25K Kavik River 25.96 332 P **P** 20 53 04.1 -0.8
baz=8.0,SNR=34
INK Inuvik 26.22 321 P **P** 20 53 07.7 +0.5
comp=Z,16nm,0.8s,baz=7.0,slow=12,SNR=18
INK LR LR 21 06 35.4
comp=Z,687nm,18.6s,baz=12,slow=44
comp=Z,16nm,0.8s
INK Inuvik 26.22 321 P **P** 20 53 05.8 -1.3
INK Inuvik 26.22 321 P **P** 20 53 05.5 -1.6
baz=10,SNR=21
D24K Happy Valley 26.25 334 P **P** 20 53 05.3 -2.1
baz=7.4
D23K Nanushuk River 26.52 335 P **P** 20 53 08.1 -1.8
baz=7.0,SNR=9.8
TOLK Toolik Lake Re 26.80 334 P **P** 20 53 11.1 -1.4
TOLK IAmb IAmb 20 53 28.7
comp=Z,48nm,1.4s
TOLK Toolik Lake Re 26.80 334 P **P** 20 53 10.7 -1.7
baz=7.1,SNR=8.8
E27K Coleen River 26.84 328 P **P** 20 53 10.9 -1.9
baz=8.6,SNR=16
E25K Arctic Village 27.12 331 P **P** 20 53 14.0 -1.3
baz=7.8,SNR=35
E24K Your Creek 27.31 333 P **P** 20 53 15.1 -2.0
baz=7.2,SNR=21
E22K Anaktuvuk Pass 27.40 336 P **P** 20 53 16.0 -1.9
baz=6.5
F26K Sheenjek River 27.47 329 P **P** 20 53 16.8 -1.7
baz=8.0,SNR=9.1
F25K Christian River 27.65 331 P **P** 20 53 18.8 -1.3
baz=7.6,SNR=17
BMAR Burnt Mountain 27.75 330 P **P** 20 53 20.1 -1.0
F24K Squaw Lake 27.83 333 P **P** 20 53 20.5 -1.3
baz=7.2,SNR=9.3
BILL Bilibino 28.05 9 *e*P **P** 20 53 21.5 -2.1
BILL *i* S S 20 57 56.5 -11
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,342nm,17.0s
KIRV Kirov 28.16 120 P **P** 20 53 25.6 +1.0
comp=Z,7.8nm,0.8s,baz=64,slow=5.7,SNR=4.8
KIRV LR LR 21 05 56.0
comp=Z,2μm,18.2s,baz=360,slow=39
comp=Z,7.8nm,0.8s
KIRV Kirov 28.16 120 *ce*P **P** 20 53 27.2 +2.6
G26K Porcupine Rive 28.19 329 P **P** 20 53 23.6 -1.2
baz=7.8,SNR=35
G27K Doyon Strip 28.21 327 P **P** 20 53 23.5 -1.6
baz=8.2,SNR=14
COLD Coldfoot 28.23 334 P **P** 20 53 24.4 -0.9
COLD Coldfoot 28.23 334 P **P** 20 53 23.2 -2.0
baz=6.7
EPYK Eagle Plains 28.35 323 P **P** 20 53 26.1 -0.2
EPYK Eagle Plains 28.35 323 P **P** 20 53 23.1 -3.2
baz=9.0
F21K Alatna River 28.38 337 P **P** 20 53 23.8 -2.8
baz=6.0,SNR=11
G25K Bearman Lake 28.50 331 P **P** 20 53 24.4 -3.1
baz=7.3,SNR=36
G22K Bettles 28.60 335 P **P** 20 53 24.9 -3.5
baz=6.3
G24K Hadweenzic Riv 28.63 332 P **P** 20 53 26.5 -2.2
baz=7.1,SNR=20
FYU Fort Yukon 28.65 330 P **P** 20 53 29.7 +0.8
G23K Bananza Creek 28.74 334 P **P** 20 53 26.4 -3.5
baz=6.6
H27K Steamboat Moun 28.78 327 P **P** 20 53 26.2 -4.0
baz=8.1
EKA Eskdalemuir Ar 28.79 181 LR LR 21 02 57.2
comp=Z,184nm,20.8s,baz=9.0,slow=32
G21K Allakaket 29.09 337 P **P** 20 53 29.4 -3.4
baz=5.8,SNR=14
PABE Paberze 29.33 149 P **P** 20 53 36.7 +1.7
PABE IAmb IAmb 20 54 05.0
comp=Z,52nm,1.2s
I27K Kandik River 29.41 327 P **P** 20 53 32.1 -3.6
baz=7.9
H24K Noodor Dome 29.51 332 P **P** 20 53 37.3 +0.7
H24K Noodor Dome 29.51 332 P **P** 20 53 33.2 -3.5
baz=6.8,SNR=11
H23K Yukon River 29.60 333 P **P** 20 53 37.8 +0.3
H23K IAmb IAmb 20 53 50.2
comp=Z,48nm,1.8s
H23K Yukon River 29.60 333 P **P** 20 53 34.8 -2.7
baz=6.5,SNR=6.2
H22K Ishtalitna Cre 29.62 335 P **P** 20 53 34.6 -3.0
baz=6.2,SNR=14
IMAR Indian Mountai 29.63 337 P **P** 20 53 37.6 0.0
PRP Porcupine Dome 29.71 330 P **P** 20 53 38.5 0.0
PRP IAmb IAmb 20 54 10.5
comp=Z,36nm,1.5s
PRP Porcupine Dome 29.71 330 P **P** 20 53 35.2 -3.3
baz=7.2,SNR=11
I26K Coal Creek Min 29.79 328 P **P** 20 53 36.8 -2.2
baz=7.5
RGN Rugen 29.83 162 P **P** 20 53 40.3 +0.9
H21K Melozitna Rive 29.92 336 P **P** 20 53 40.2 0.0
H21K Melozitna Rive 29.92 336 P **P** 20 53 36.9 -3.3
baz=5.8,SNR=13
MOS Moscow 29.99 134 *e*P P 20 53 53.7 +13
MOS *e* 20 54 34.9
MOS MLR MLR
comp=Z,1μm,18.0s
EGAK Eagle 30.20 326 P **P** 20 53 42.6 -0.1
EGAK IAmb IAmb 20 53 46.2
comp=Z,32nm,1.3s
EGAK Eagle 30.20 326 P **P** 20 53 40.1 -2.6
baz=7.8
POKR Poker Plat Res 30.21 332 P **P** 20 53 42.5 -0.2
POKR IAmb IAmb 20 53 47.1
comp=Z,22nm,1.1s
POKR Poker Plat Res 30.21 332 P **P** 20 53 40.5 -2.3
baz=6.7
I23K Minto, Yukon-K 30.27 333 P **P** 20 53 44.1 +0.9
I23K Minto, Yukon-K 30.27 333 P **P** 20 53 41.1 -2.2
baz=6.4,SNR=7.8
J29M Klondike Camp 30.34 324 P **P** 20 53 44.8 +0.7
I21K Tanana 30.36 335 P **P** 20 53 44.4 +0.4
I21K IAmb IAmb 20 54 01.2
comp=Z,42nm,1.4s
I21K Tanana 30.36 335 P **P** 20 53 42.6 -1.5
baz=5.9
MDM Murphy Dome 30.40 332 P **P** 20 53 44.3 -0.3
MDM IAmb IAmb 20 53 49.0
comp=Z,22nm,1.1s
MLY Manley 30.45 334 P **P** 20 53 44.4 -0.6
MLY Manley 30.45 334 P **P** 20 53 42.0 -2.9
baz=6.1
COLA College 30.47 332 P **P** 20 53 45.7 +0.7
COLA IAmb IAmb 20 53 49.2
comp=Z,31nm,1.1s
COLA College 30.47 332 P **P** 20 53 45.7 +0.7
COLA pmax pmax
comp=Z,31nm,1.1s
TCOL CIGO, UAF Yank 30.47 332 **P** 20 53 45.8 +0.7
TCOL IAmb IAmb 20 53 49.1
comp=Z,30nm,1.1s
YKA Yellowknife Ar 30.47 302 P **P** 20 53 46.6 +1.5
comp=Z,3.8nm,0.9s,baz=7.2,slow=8.7,SNR=11
YKA PcP **PcP** 20 56 45.7 +2.0
comp=Z,1.4nm,0.9s,baz=1.0,slow=3.4,SNR=3.7
YKA LR LR 21 06 46.6
comp=Z,1μm,18.4s,baz=349,slow=38
comp=Z,3.8nm,0.9s
YKA Yellowknife Ar 30.47 302 P **P** 20 53 45.5 +0.4
YKA Yellowknife Ar 30.47 302 *i* P **P** 20 53 46.5 +1.4
YKA pmax pmax
comp=Z,4.0nm,0.9s
IL31 30.52 331 P **P** 20 53 45.2 -0.2
IL31 IAmb IAmb 20 53 50.0
comp=Z,18nm,1.0s
ILAR Eielson Array 30.52 331 P **P** 20 53 47.2 +1.7
comp=Z,11nm,1.0s,baz=4.2,slow=7.4,SNR=44
ILAR PcP **PcP** 20 56 44.2 +0.3
comp=Z,5.0nm,1.3s,baz=342,slow=4.8,SNR=4.4
ILAR LR LR 21 05 10.6
comp=Z,766nm,21.3s,baz=356,slow=35
comp=Z,11nm,1.0s
ILAR Eielson Array 30.52 331 P **P** 20 53 45.5 -0.1
OBN Obninsk 30.53 135 LR LR 21 06 41.4
comp=Z,241nm,18.1s,baz=3.0,slow=38
OBN Obninsk 30.53 135 P **P** 20 53 46.1 +0.5
OBN Obninsk 30.53 135 *i* P **P** 20 53 48.0 +2.4
OBN *i* 20 53 52.1
OBN *i* 20 54 52.2
OBN *i* S **S** 20 58 41.9 -4.8
OBN pmax pmax
comp=Z,27nm,1.3s
OBN MLR MLR
comp=Z,907nm,17.0s
MNK Minsk 30.55 145 *i* P **P** 20 53 46.0 +0.1
MNK *i* 20 54 45.6
MNK *i* S **S** 20 58 50.2 +3.1
MNK *i* SS **ScP** 21 00 28.9 +2.8
MNK MLR MLR
comp=Z,797nm,17.0s
MNK MLR MLR
comp=E,43nm,17.0s
MNK Minsk 30.55 145 *i* P **P** 20 53 46.0 +0.1
MNK *i* P **P** 20 53 46.0 +0.1
MNK *i* P **P** 20 53 46.0 +0.1
baz=175
MNK *i* PP **PnPn** 20 54 45.7 +1.1
MNK *i* S **S** 20 58 50.2 +3.1
MNK *i* SS **ScP** 21 00 28.9 +2.8
MNK *i* LQ LQ 21 03 10.9
MNK *i* LR LR 21 05 04.0
MNK *i* LRM MLR 21 05 46.1
comp=Z,797nm,17.5s
MNK *i* LRM MLR 21 05 51.3
MNK *i* LRM MLR 21 05 53.8
comp=E,43nm,17.5s
J25K Salcha River, 30.60 330 P **P** 20 53 46.9 +0.5
J25K Salcha River, 30.60 330 P **P** 20 53 43.5 -2.8
baz=7.0,SNR=11
J26L Joseph Creek 30.61 328 P **P** 20 53 47.0 +0.5
J26L Joseph Creek 30.61 328 P **P** 20 53 45.2 -1.3
baz=7.3
CCB Clear Creek Bu 30.69 332 P **P** 20 53 47.1 +0.1
CCB IAmb IAmb 20 53 50.8
comp=Z,28nm,1.3s
DAWY Dawson 30.80 324 P **P** 20 53 47.1 -1.0
DAWY Dawson 30.80 324 P **P** 20 53 46.3 -1.8
baz=7.9,SNR=5.7
NEA2 Nenana 30.81 333 P **P** 20 53 47.0 -1.1
NEA2 Nenana 30.81 333 P **P** 20 53 46.8 -1.3
baz=6.3,SNR=8.1
WRH Wood River Hil 30.88 332 P **P** 20 53 48.8 0.0
WRH IAmb IAmb 20 53 52.5
comp=Z,50nm,1.4s
HDA Harding Lake 30.89 331 P **P** 20 53 48.0 -0.8
HDA IAmb IAmb 20 53 51.6
comp=Z,57nm,1.8s
HDA Harding Lake 30.89 331 P **P** 20 53 45.7 -3.1
baz=6.7,SNR=7.7
GCSA Galena City Sc 30.99 339 P **P** 20 53 47.1 -2.5
baz=4.9
K27K Chicken 31.00 327 P **P** 20 53 48.0 -1.7
baz=7.5
SCRK Sand Creek 31.16 328 P **P** 20 53 51.7 +0.4
SCRK Sand Creek 31.16 328 P **P** 20 53 49.7 -1.6

baz=7.1
ARU Arti 31.16 111 LR LR 21 08 41.3
comp=Z,1µm,19.0s,baz=346,slow=41
ARU Arti 31.16 111 P **P** **20 53 51.0 -0.3**
ARU IAmb IAmb 20 54 25.9
comp=Z,26nm,1.3s
ARU Arti 31.16 111 *d iP* **P** **20 53 52.1 +0.9**
ARU 20 54 53.5
ARU 20 56 43.7
ARU S **S** **20 59 00.7 +4.0**
ARU SS **SnSn** **21 00 43.1 +5.2**
ARU pmax pmax
comp=Z,20nm,1.8s
ARU MLR MLR
comp=Z,1µm,18.0s
BWN Browne 31.25 333 P **P** **20 53 51.5 -0.4**
BWN IAmb IAmb 20 53 58.2
comp=Z,30nm,1.0s
BPAW Bear Paw Mtn. 31.39 334 P **P** **20 53 51.6 -1.6**
BPAW IAmb IAmb 20 53 56.2
comp=Z,34nm,1.5s
BPAW Bear Paw Mtn. 31.39 334 P **P** **20 53 52.0 -1.3**
baz=5.9,SNR=9.0
ANM Nome 31.44 346 P **P** **20 53 53.4 -0.2**
ANM Nome 31.44 346 P **P** **20 53 53.4 -0.2**
ANM pmax pmax
comp=Z,42nm,1.2s
RIDG Independent Ri 31.44 329 P **P** **20 53 52.6 -1.2**
RIDG Independent Ri 31.44 329 P **P** **20 53 52.4 -1.3**
baz=6.9,SNR=5.1
J20K Nowinta River 31.45 337 P **P** **20 53 52.9 -0.8**
J20K IAmb IAmb 20 54 07.5
comp=Z,25nm,1.5s
J20K Nowinta River 31.45 337 P **P** **20 53 50.9 -2.8**
baz=5.3
DOT Dot Lake 31.49 328 P **P** **20 53 54.1 0.0**
MCK McKinley 31.66 332 P **P** **20 53 55.3 -0.3**
MCK IAmb IAmb 20 54 13.1
comp=Z,37nm,1.6s
MCK McKinley 31.66 332 P **P** **20 53 55.3 -0.3**
MCK pmax pmax
comp=Z,37nm,1.6s
MCK McKinley 31.66 332 P **P** **20 53 54.2 -1.4**
baz=6.2
CHUM Lake Minchumin 31.67 335 P **P** **20 53 54.1 -1.5**
baz=5.6,SNR=5.8
KTH Kantishna Hill 31.93 334 P **P** **20 53 58.6 +0.5**
KTH IAmb IAmb 20 54 02.2
comp=Z,25nm,1.2s
BCAR Beaver Creek A 31.94 326 P **P** **20 53 58.4 +0.2**
L27K Beaver Creek, 31.95 326 P **P** **20 53 58.8 +0.6**
L27K IAmb IAmb 20 54 02.5
comp=Z,34nm,1.4s
L27K Beaver Creek, 31.95 326 P **P** **20 53 56.6 -1.5**
baz=7.3,SNR=12
RND Reindeer 31.98 332 P **P** **20 53 58.1 -0.4**
RND IAmb IAmb 20 54 25.6
comp=Z,28nm,1.7s
RND Reindeer 31.98 332 P **P** **20 53 58.1 -0.4**
RND pmax pmax
comp=Z,28nm,1.7s
TRF Thorofare Moun 32.01 334 P **P** **20 53 58.2 -0.6**
TRF IAmb IAmb 20 54 20.7
comp=Z,20nm,1.3s
TRF Thorofare Moun 32.01 334 P **P** **20 53 56.6 -2.3**
baz=5.9
L26K Log Cabin Wild 32.07 328 P **P** **20 53 58.7 -0.5**
L26K IAmb IAmb 20 54 03.8
comp=Z,28nm,1.4s
L26K Log Cabin Wild 32.07 328 P **P** **20 53 58.0 -1.3**
baz=7.0
CAST Castle Rocks 32.12 335 P **P** **20 53 59.2 -0.5**
CAST Castle Rocks 32.12 335 P **P** **20 53 57.7 -2.0**
baz=5.6,SNR=5.6
MENT Mentasta 32.18 328 P **P** **20 53 59.4 -0.8**
FARO Faro, Yukon 32.23 319 P **P** **20 54 01.4 +0.8**
FARO IAmb IAmb 20 54 05.9
comp=Z,30nm,1.2s
DHY Denali Highway 32.24 331 P **P** **20 54 00.1 -0.7**
DHY IAmb IAmb 20 54 04.2
comp=Z,47nm,1.7s
DHY Denali Highway 32.24 331 P **P** **20 53 58.9 -2.0**
baz=6.4,SNR=5.4
PAX Paxson 32.24 329 P **P** **20 54 01.1 +0.3**
PAX Paxson 32.24 329 P **P** **20 54 01.1 +0.3**
PAX pmax pmax
comp=Z,14nm,1.2s
PAX Paxson 32.24 329 P **P** **20 53 58.4 -2.5**
baz=6.7,SNR=6.1
K20K Telida 32.27 337 P **P** **20 53 59.8 -1.2**
K20K IAmb IAmb 20 54 04.1
comp=Z,24nm,1.5s
K20K Telida 32.27 337 P **P** **20 53 59.0 -2.0**
baz=5.2,SNR=6.3
M31M Drury Creek, Y 32.33 320 P **P** **20 54 00.8 -0.7**
M31M IAmb IAmb 20 54 05.4
comp=Z,26nm,1.4s
M31M Drury Creek, Y 32.33 320 P **P** **20 53 59.2 -2.3**
baz=8.3,SNR=6.0
GAMB Gambell 32.36 351 P **P** **20 54 01.3 -0.3**
GAMB IAmb IAmb 20 54 29.3
comp=Z,31nm,1.2s
M29M Somme Creek 32.36 323 P **P** **20 53 59.7 -2.1**
baz=7.7
YAK Yakutsk 32.45 41 LR LR 21 07 19.9
comp=Z,454nm,18.8s,baz=78,slow=37
YAK Yakutsk 32.45 41 P **P** **20 54 00.8 -1.7**
YAK IAmb IAmb 20 54 09.5
comp=Z,22nm,0.9s
YAK Yakutsk 32.45 41 *d iP* **P** **20 54 00.8 -1.7**
YAK *e**PP **sP** **20 54 04.9 -0.3**
YAK *e* 20 56 49.6
YAK *e*S **S** **20 59 15.2 -1.4**
YAK *e*SS **SnSn** **21 01 10.0 +1.1**
YAK *e* 21 04 32.0
YAK pmax pmax
comp=Z,28nm,1.3s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=Z,40nm,2.6s
YAK smax smax
comp=E,75nm,3.5s
YAK smax smax
comp=N,58nm,3.2s
YAK MLR MLR
comp=Z,491nm,19.0s
BVCY Beaver Creek 32.54 325 P **P** **20 53 59.2 -4.1**
baz=7.3
WAT1 Susitna Watana 32.54 332 P **P** **20 54 01.3 -2.1**
baz=6.1
PPLA Purkeypile 32.65 335 P **P** **20 54 03.7 -0.7**
PPLA IAmb IAmb 20 54 12.0
comp=Z,39nm,1.2s
PPLA Purkeypile 32.65 335 P **P** **20 54 01.9 -2.5**
baz=5.5,SNR=7.2
M27K Edge Creek, AK 32.65 326 P **P** **20 54 03.5 -0.9**
M27K Edge Creek, AK 32.65 326 P **P** **20 54 02.5 -1.9**
baz=7.1
M26K Nabesna, AK 32.67 327 P **P** **20 54 04.3 -0.2**
M26K IAmb IAmb 20 54 07.9
comp=Z,19nm,1.2s
M26K Nabesna, AK 32.67 327 P **P** **20 54 02.2 -2.4**
baz=7.0,SNR=7.4
WAT6 Susitna Watana 32.75 331 P **P** **20 54 04.1 -1.2**
baz=6.2
TTA Tatalina 32.77 338 P **P** **20 54 04.0 -1.4**
TTA Tatalina 32.77 338 P **P** **20 54 04.0 -1.4**
TTA pmax pmax
comp=Z,10.0nm,1.1s
TTA Tatalina 32.77 338 P **P** **20 54 04.9 -0.5**
baz=4.8,SNR=7.1
SEY Seymchan 32.78 21 *i* P **P** **20 54 05.4 0.0**
SEY pmax pmax
comp=Z,14nm,1.8s
CUT Chulitna 33.05 333 P **P** **20 54 06.3 -1.4**
CUT Chulitna 33.05 333 P **P** **20 54 06.0 -1.7**
baz=5.8
CLL Collm 33.06 163 P **P** **20 54 07.6 -0.3**
CLL IAmb IAmb 20 54 17.4
comp=Z,31nm,1.7s
CLL Collm 33.06 163 *i* P **P** **20 54 10.1 +2.2**
CLL *e*S **S** **20 59 31.0 +4.8**
CLL pmax pmax
comp=Z,28nm,1.7s
CLL MLR MLR
comp=Z,500nm,19.4s
CLL Collm 33.06 163 *i* P **P** **20 54 10.1 +2.2**
comp=Z,28nm,1.7s
CLL *i* x x 20 54 13.4
CLL *e*PPP PPP 20 55 28.0
comp=Z,44nm,2.2s
CLL *e*S **S** **20 59 31.0 +4.8**
comp=N,200nm,15.7s
CLL *e*S **S** **20 59 31.0 +4.8**
comp=E,100nm,15.1s
CLL *e*SSS SSS 21 01 40.0
CLL Lm MLR 21 07 00.0
comp=N,400nm,19.1s
CLL Lm MLR 21 07 00.0
comp=E,300nm,21.8s
CLL Lm MLR 21 07 00.0
comp=Z,500nm,19.4s
N31M Braeburn, Yuko 33.14 321 P **P** **20 54 07.8 -0.7**
N31M IAmb IAmb 20 54 20.8
comp=Z,22nm,1.1s
N31M Braeburn, Yuko 33.14 321 P **P** **20 54 06.2 -2.4**
baz=7.9
L20K Farewell, AK 33.14 336 P **P** **20 54 06.1 -2.4**
baz=5.1,SNR=12
M24K Tolsona, Glenn 33.14 330 P **P** **20 54 07.1 -1.5**
M24K Tolsona, Glenn 33.14 330 P **P** **20 54 07.3 -1.4**
baz=6.4
YUK3 Moose Creek 33.15 325 P **P** **20 54 06.8 -2.0**
baz=7.3
SCHQ Schefferville 33.17 253 LR LR 21 07 28.6
comp=Z,306nm,18.6s,baz=358,slow=36
SCHQ Schefferville 33.17 253 P **P** **20 54 08.9 0.0**
SCHQ IAmb IAmb 20 54 19.2
comp=Z,51nm,1.8s
LPSR Galich'ya Gora 33.21 133 *eP* **P** **20 54 11.1 +1.9**
LPSR pmax pmax
comp=Z,20nm,1.5s
LPSR MLR MLR
comp=Z,670nm,19.0s
N30M Aishikik Lake 33.25 322 P **P** **20 54 07.2 -2.4**
baz=7.7,SNR=10
SCM Sheep Creek Mo 33.48 331 P **P** **20 54 11.5 -0.1**
SCM Sheep Creek Mo 33.48 331 P **P** **20 54 11.5 -0.1**
SCM pmax pmax
comp=Z,91nm,1.9s
SCM Sheep Creek Mo 33.48 331 P **P** **20 54 09.6 -1.9**
baz=6.2
L19K White Mountain 33.48 337 P **P** **20 54 10.3 -1.2**
L19K IAmb IAmb 20 54 15.0
comp=Z,23nm,1.2s
L19K White Mountain 33.48 337 P **P** **20 54 09.0 -2.5**
baz=4.9,SNR=9.9
BRG Berggiesshubel 33.52 162 *eP* **P** **20 54 14.6 +2.7**
BRG Amp 20 54 20.9
comp=Z,18nm,1.4s
BRG Amp 21 06 13.0
comp=E,0.2nm,21.0s
BRG Amp 21 06 17.0
comp=Z,0.5nm,21.7s
BRG Amp 21 06 22.0
comp=N,0.4nm,18.9s
BRG Berggiesshubel 33.52 162 *eP* **P** **20 54 14.6 +2.7**
BRG pmax pmax
comp=Z,18nm,1.4s
BRG MLR MLR
comp=E,191nm,21.0s
BRG MLR MLR
comp=Z,549nm,21.7s
BRG MLR MLR
comp=N,440nm,18.9s
SKT Skwentna 33.53 334 P **P** **20 54 10.3 -1.7**
baz=5.5
M23K Glacier View 33.54 331 P **P** **20 54 10.2 -1.9**
baz=6.1
SML Sawmill 33.55 332 P **P** **20 54 10.7 -1.5**
SML IAmb IAmb 20 54 20.2
comp=Z,23nm,0.9s
SML Sawmill 33.55 332 P **P** **20 54 10.6 -1.6**
baz=6.0
N25K Chitina, Valde 33.56 328 P **P** **20 54 11.6 -0.7**
N25K IAmb IAmb 20 54 14.8
comp=Z,18nm,1.1s
N25K Chitina, Valde 33.56 328 P **P** **20 54 11.4 -0.9**
baz=6.6,SNR=5.6
GHO Glory Hole Cre 33.62 332 P **P** **20 54 11.9 -0.8**
KSP Ksiaz 33.64 159 *eP* **P** **20 54 15.3 +2.3**
GLB Gilahina Butte 33.68 328 P **P** **20 54 12.3 -1.0**
GLB IAmb IAmb 20 54 16.6
comp=Z,40nm,1.3s
MCARA McCarthy VSAT 33.69 327 P **P** **20 54 11.7 -1.6**
baz=6.8
M20K Styx River 33.70 336 P **P** **20 54 12.4 -1.2**
baz=5.2
M19K Big River Lodg 33.74 337 P **P** **20 54 12.8 -0.9**
M19K IAmb IAmb 20 54 17.8
comp=Z,17nm,0.9s
M19K Big River Lodg 33.74 337 P **P** **20 54 13.1 -0.7**
baz=5.0,SNR=11
YUK6 Outpost Mounta 33.84 323 P **P** **20 54 13.4 -1.6**
baz=7.4,SNR=9.1
O30N Mendenhall 33.87 321 P **P** **20 54 12.3 -2.6**
baz=7.7,SNR=9.8
CHVC Chvalec 33.88 159 AMS AMS 21 06 30.0
comp=Z,100nm,21.4s
PVCC Panska Ves 33.89 161 AMS AMS 21 06 10.0
comp=Z,600nm,23.6s
WHY Whitehorse 33.90 320 P **P** **20 54 14.4 -0.8**
baz=7.9
HYT Haines Junctio 33.91 322 P **P** **20 54 14.2 -1.2**
HYT IAmb IAmb 20 54 19.1
comp=Z,36nm,1.2s
HYT Haines Junctio 33.91 322 P **P** **20 54 13.5 -1.9**
baz=7.5,SNR=12
OSTC Ostas 33.92 159 AMS AMS 21 06 20.0
comp=Z,800nm,26.4s
KNK Knik Glacier 33.95 332 P **P** **20 54 13.9 -1.8**
baz=5.9
UPC Upice 33.96 159 *eP* **P** **20 54 18.4 +2.6**
UPC MLR MLR
comp=Z,700nm,19.3s
UPC Upice 33.96 159 *eP* **P** **20 54 18.4 +2.6**
UPC AMS AMS 21 06 20.0
comp=Z,700nm,19.3s
CTG Chitna Glacier 34.01 325 P **P** **20 54 14.3 -2.0**
baz=7.0
DPC Dobruska-Polom 34.13 159 *eP* **P** **20 54 18.8 +1.5**
DPC MLR MLR
comp=Z,700nm,20.5s
DPC Dobruska-Polom 34.13 159 *eP* **P** **20 54 18.8 +1.5**
DPC AMS AMS 21 06 30.0
comp=Z,700nm,20.5s
O28M Mount Upton 34.13 324 P **P** **20 54 15.4 -2.1**
baz=7.1
VORR Voronezh 34.15 133 *eP* **P** **20 54 20.3 +2.9**
VORR pmax pmax
comp=Z,16nm,1.3s
BMRM Bremner River 34.19 328 P **P** **20 54 15.9 -1.9**
baz=6.5
P33M Teslin, Yukon 34.20 318 P **P** **20 54 17.1 -0.7**
P33M IAmb IAmb 20 54 22.5
comp=Z,38nm,1.4s
P33M Teslin, Yukon 34.20 318 P **P** **20 54 15.8 -2.1**
baz=8.1,SNR=7.6
OJC Ojcow 34.40 155 *eP* **P** **20 54 21.3 +1.6**
OJC Ojcow 34.40 155 P **P** **20 54 19.2 -0.4**
OJC IAmb IAmb 20 54 29.3
comp=Z,40nm,1.3s
OJC Ojcow 34.40 155 P **P** **20 54 19.2 -0.4**
OJC pmax pmax
comp=Z,40nm,1.3s
KRLC Kraliky 34.42 159 *eP* **P** **20 54 21.4 +1.6**
KRLC MLR MLR
comp=Z,600nm,21.5s
KRLC Kraliky 34.42 159 *eP* **P** **20 54 21.4 +1.6**
KRLC AMS AMS 21 07 00.0
comp=Z,600nm,21.5s
AKASG Malin Array Be 34.42 144 P **P** **20 54 20.2 +0.5**
comp=Z,0.8nm,0.4s,baz=356,slow=9.1,SNR=23
AKASG LR LR 21 08 34.3
comp=Z,990nm,18.9s,baz=350,slow=37
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 34.42 144 *i* P **P** **20 54 21.7 +1.9**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 34.42 144 P **P** **20 54 19.6 -0.1**
AKBB Malin Array Si 34.42 144 *ce*P **P** **20 54 21.2 +1.4**
PRU Pruhonice 34.43 161 *eP* **P** **20 54 22.5 +2.7**
PRU MLR MLR
comp=Z,600nm,23.2s
PRU Pruhonice 34.43 161 *eP* **P** **20 54 22.5 +2.7**
PRU AMS AMS 21 06 20.0
comp=Z,600nm,23.2s
ISLE Juniper Island 34.43 326 P **P** **20 54 18.9 -1.0**
O29M Mount Kennedy 34.50 323 P **P** **20 54 17.5 -3.0**
baz=7.3
PWL Port Wells 34.50 331 P **P** **20 54 19.9 -0.5**
PWL IAmb IAmb 20 54 23.4
comp=Z,44nm,1.5s
PWL Port Wells 34.50 331 P **P** **20 54 17.9 -2.5**
baz=5.8
WLF Walferdange 34.53 171 P **P** **20 54 19.6 -1.2**
WLF Walferdange 34.53 171 P **P** **20 54 19.6 -1.2**
WLF pmax pmax
comp=Z,20nm,1.4s
SVW2 Sparrevohn 34.59 338 P **P** **20 54 20.3 -0.9**
SVW2 IAmb IAmb 20 54 28.8
comp=Z,43nm,1.8s
VSR Storozhevoye 34.60 133 *eP* **P** **20 54 22.3 +1.0**
VSR pmax pmax
comp=Z,8.0nm,1.0s
VSR MLR MLR
comp=Z,1µm,20.0s
WAX Waxell Ridge 34.61 327 P **P** **20 54 20.4 -1.0**
OKC Ostrava-Krasne 34.71 157 AMS AMS 21 07 30.0
comp=Z,800nm,21.9s
MORC Moravsky Berou 34.75 158 ⇑P **P** **20 54 25.4 +2.7**
MORC Moravsky Berou 34.75 158 P **P** **20 54 21.9 -0.8**
MORC Moravsky Berou 34.75 158 ⇑P **P** **20 54 25.4 +2.7**
MORC Moravsky Berou 34.75 158 *eP* **P** **20 54 24.8 +2.1**
PCA Pinnacle 34.81 324 P **P** **20 54 23.3 +0.2**
VRH Novokhopyorsk 34.82 130 *eP* **P** **20 54 23.1 0.0**
VRH pmax pmax
comp=Z,20nm,1.5s
VRH MLR MLR
comp=Z,820nm,18.0s
MESA MESA 34.83 326 P **P** **20 54 23.4 0.0**
N19K Bonanza Creek 34.83 337 P **P** **20 54 22.9 -0.4**
N19K Bonanza Creek 34.83 337 P **P** **20 54 21.0 -2.3**
baz=4.8
R33M Jennings River 34.88 316 P **P** **20 54 22.1 -1.6**
baz=8.2
P32M Atlin 34.88 318 P **P** **20 54 22.4 -1.3**
baz=7.8
LVV L'vov 35.01 150 *eP* **P** **20 54 26.4 +1.6**
LVV *eS* **S** **20 59 57.5 +1.1**
LVV pmax pmax
comp=Z,40nm,1.6s
LVV MLR MLR
comp=E,100nm,13.0s
LVV MLR MLR
comp=N,700nm,17.0s
LVV MLR MLR
comp=Z,800nm,17.0s
N18K Kilae Creek 35.02 338 P **P** **20 54 23.9 -0.9**
N18K IAmb IAmb 20 54 44.0
comp=Z,40nm,1.7s
N18K Kilae Creek 35.02 338 P **P** **20 54 23.4 -1.4**
baz=4.6
P29M Windy Craggy 35.11 322 P **P** **20 54 25.3 -0.3**
P29M IAmb IAmb 20 54 28.8
comp=Z,24nm,1.4s
KWP Kalwaria Pacla 35.13 152 P **P** **20 54 25.9 0.0**
KWP Kalwaria Pacla 35.13 152 P **P** **20 54 25.9 0.0**
KWP pmax pmax
comp=Z,352nm,0.5s
TREC Trest 35.15 160 AMS AMS 21 07 00.0
comp=Z,700nm,20.6s
VRAC Vranov 35.18 159 ⇓P **P** **20 54 29.1 +2.8**
VRAC Vranov 35.18 159 LR LR 21 08 08.7
comp=Z,635nm,21.9s,baz=350,slow=35
VRAC Vranov 35.18 159 ⇓P **P** **20 54 29.1 +2.8**
VRAC 20 54 37.3
VRAC Vranov 35.18 159 *eP* **P** **20 54 29.0 +2.6**
PLBC Pleasant Camp 35.19 321 P **P** **20 54 25.7 -0.7**
baz=7.4
KAIM Kayak Island 35.22 328 P **P** **20 54 26.4 -0.1**
NIE Niedzica 35.23 155 *eP* **P** **20 54 29.5 +2.7**
KHC Kasperske Hory 35.25 162 P **P** **20 54 27.5 +0.5**
KHC Kasperske Hory 35.25 162 *eP* **P** **20 54 29.9 +2.9**
KHC MLR MLR
comp=Z,500nm,24.1s
KHC Kasperske Hory 35.25 162 *eP* **P** **20 54 29.9 +2.9**
KHC *ex* x 20 54 47.5
KHC AMS AMS 21 07 00.0
comp=Z,500nm,24.1s
SEW Seward 35.31 332 P **P** **20 54 26.0 -1.3**
baz=5.5
P23K Montague Islan 35.31 330 P **P** **20 54 26.8 -0.5**
baz=5.9
N16K Nishlik Lake 35.34 340 P **P** **20 54 26.1 -1.5**
baz=4.0,SNR=7.8
BOD Bodaibo 35.38 56 *eP* **P** **20 54 25.9 -2.1**
BOD pmax pmax
comp=Z,36nm,1.7s
KRUC Moravsky 35.42 159 *eP* **P** **20 54 31.1 +2.7**
LANS Liptovska Anna 35.46 156 *eP* **P** **20 54 31.9 +3.1**
LANS pmax pmax
comp=Z,7.0nm,1.0s
LANS Liptovska Anna 35.46 156 *eP* **P** **20 54 31.9 +3.1**
STU Stuttgart 35.49 167 P **P** **20 54 30.9 +1.9**
STU IAmb IAmb 20 54 33.3
comp=Z,25nm,1.1s
STU Stuttgart 35.49 167 P **P** **20 54 30.9 +1.9**
STU pmax pmax
comp=Z,25nm,1.1s
GEC2 GERESS Array S 35.54 162 P **P** **20 54 30.8 +1.3**
GEC2 IAmb IAmb 20 54 34.0
comp=Z,23nm,1.3s
GERES GERESS Array B 35.54 162 P **P** **20 54 31.6 +2.1**
comp=Z,4.6nm,1.0s,baz=12,slow=6.8,SNR=31
GERES PcP **PcP** **20 56 59.9 +1.6**
comp=Z,0.6nm,0.9s,baz=14,slow=6.1,SNR=3.7
comp=Z,4.6nm,1.0s
GERES GERESS Array B 35.54 162 P **P** **20 54 30.6 +1.0**
CKRC Cesky Krumlov 35.59 161 *eP* **P** **20 54 32.3 +2.4**
ILSW Iliamna Southw 35.60 335 P **P** **20 54 29.6 -0.4**
ILSW IAmb IAmb 20 54 41.7
comp=Z,27nm,1.6s
JAVC Velka Javorina 35.67 158 *eP* **P** **20 54 33.9 +3.3**
BRVK Borovoye 35.68 100 P **P** **20 54 31.1 +0.5**
BRVK IAmb IAmb 20 54 37.1
comp=Z,30nm,1.4s
BRVK Borovoye 35.68 100 *ce*P **P** **20 54 31.3 +0.7**
BRVK pmax pmax
comp=Z,27nm,1.5s
DLBC Dease Lake 35.76 315 LR LR 21 10 39.2
comp=Z,332nm,18.8s,baz=21,slow=39
DLBC Dease Lake 35.76 315 P **P** **20 54 32.5 +1.2**
DLBC IAmb IAmb 20 54 36.4
comp=Z,35nm,1.4s
DLBC Dease Lake 35.76 315 P **P** **20 54 30.2 -1.1**
baz=8.1,SNR=7.7
CRVS Cervenica-Dubn 35.80 153 *eP* **P** **20 54 34.2 +2.6**
CRVS Cervenica-Dubn 35.80 153 *eP* **P** **20 54 34.2 +2.6**
KOLS Kolonicke sedl 35.80 152 *eP* **P** **20 54 34.2 +2.5**
KOLS pmax pmax
comp=Z,15nm,1.2s
KOLS Kolonicke sedl 35.80 152 *eP* **P** **20 54 34.2 +2.5**
BFO Black Forest 35.91 168 P **P** **20 54 32.7 0.0**
BFO IAmb IAmb 20 54 46.6
comp=Z,23nm,1.3s
BFO Black Forest 35.91 168 P **P** **20 54 32.7 0.0**
BFO pmax pmax
comp=Z,23nm,1.3s
BESE Bessie Mountai 35.96 319 P **P** **20 54 33.0 0.0**
BESE IAmb IAmb 20 54 38.7
comp=Z,35nm,1.3s
O17K Koliganek Bris 35.97 339 P **P** **20 54 31.4 -1.7**
baz=4.3
ECH Echery 36.00 170 P **P** **20 54 33.5 0.0**
ECH Echery 36.00 170 P **P** **20 54 33.5 0.0**
ECH pmax pmax
comp=Z,16nm,1.2s
SMOL Smolenice 36.01 158 *eP* **P** **20 54 37.1 +3.7**
SMOL pmax pmax
comp=Z,15nm,1.3s
MA2 Magadan 36.08 23 LR LR 21 09 22.0
comp=Z,210nm,18.8s,baz=360,slow=36
MA2 Magadan 36.08 23 P **P** **20 54 33.0 -0.9**
MA2 IAmb IAmb 20 54 40.2

comp=Z,29nm,1.2s
MA2 Magadan 36.08 23 *i* P **P** **20 54 32.9 -1.0**
MA2 pmax pmax
comp=Z,34nm,1.2s
VYHS Vyhne 36.08 156 *eP* **P** **20 54 36.7 +2.6**
VYHS pmax pmax
comp=Z,18nm,1.3s
VYHS Vyhne 36.08 156 *eP* **P** **20 54 36.7 +2.6**
UZH Uzhgorod 36.10 152 *eP* **P** **20 54 35.9 +1.6**
UZH *e* 20 54 39.5
UZH *e* 20 54 41.5
CLF Chambon-Foret 36.12 175 P **P** **20 54 35.3 +0.9**
MODS Modra-Piesok 36.14 158 *eP* **P** **20 54 37.9 +3.3**
MODS pmax pmax
comp=Z,47nm,1.2s
MODS Modra-Piesok 36.14 158 *eP* **P** **20 54 37.9 +3.3**
O16K Kokwok River B 36.19 340 P **P** **20 54 33.4 -1.5**
baz=4.1
JIS Juneau Island 36.23 319 P **P** **20 54 35.6 +0.4**
JIS IAmb IAmb 20 54 39.8
comp=Z,48nm,1.5s
ZST Bratislava 36.31 158 *eP* **P** **20 54 39.0 +3.0**
ZST pmax pmax
comp=Z,106nm,1.8s
ZST Bratislava 36.31 158 *eP* **P** **20 54 39.0 +3.0**
ZAA0 Zalesovo Array 36.33 85 P **P** **20 54 35.2 -1.0**
ZALV Zalesovo Beam 36.33 85 P **P** **20 54 36.4 +0.3**
comp=Z,7.9nm,1.0s,baz=343,slow=8.1,SNR=23
ZALV PcP **PcP** **20 57 00.5 +0.1**
comp=Z,1.2nm,0.8s,baz=225,slow=4.0,SNR=3.6
ZALV LR LR 21 12 07.8
comp=Z,945nm,20.1s,baz=334,slow=41
comp=Z,7.9nm,1.0s
ZALV Zalesovo Beam 36.33 85 P **P** **20 54 34.7 -1.4**
ZALV Zalesovo Beam 36.33 85 *i* P **P** **20 54 37.2 +1.0**
ZALV pmax pmax
comp=Z,8.0nm,1.0s
P17K Kvichak River 36.53 338 P **P** **20 54 36.1 -1.7**
baz=4.3
CONA Conrad Observa 36.53 160 *i* P **P** **20 54 40.8 +2.7**
comp=Z,20nm,1.2s,SNR=8.6
MOA Molln 36.55 162 *eP* **P** **20 54 40.8 +2.7**
comp=Z,15nm,1.3s,SNR=6.7
BIOA Bad Ischl, Aus 36.69 162 *eP* **P** **20 54 43.1 +3.7**
comp=Z,5.9nm,1.2s
PSZ Piszkesteto 36.70 155 ⇓P **P** **20 54 43.1 +3.6**
PSZ Piszkesteto 36.70 155 P **P** **20 54 39.1 -0.4**
PSZ IAmb IAmb 20 54 50.3
comp=Z,35nm,1.3s
PSZ Piszkesteto 36.70 155 ⇓P **P** **20 54 43.1 +3.6**
PSZ Piszkesteto 36.70 155 P **P** **20 54 42.2 +2.7**
SRO Srobarova 36.74 157 *eP* **P** **20 54 42.8 +3.1**
SRO pmax pmax
comp=Z,17nm,1.2s
SRO Srobarova 36.74 157 *eP* **P** **20 54 42.8 +3.1**
RONA Rosalia, Austr 36.78 159 *eP* **P** **20 54 43.1 +3.0**
comp=Z,20nm,1.2s,SNR=9.5
SRO2 Moca 36.80 157 *eP* **P** **20 54 42.2 +2.1**
SRO2 Moca 36.80 157 *eP* **P** **20 54 42.2 +2.1**
SOP Sopron 36.80 159 P **P** **20 54 43.7 +3.5**
SORM Soroca 36.93 146 ⇑P **P** **20 54 42.9 +1.6**
SORM Soroca 36.93 146 ⇑P **P** **20 54 42.9 +1.6**
MOTA Moosalm 36.96 165 *eP* **P** **20 54 43.2 +1.4**
comp=Z,11nm,1.2s,SNR=5.3
WATA Walderalm 36.99 165 *i* P **P** **20 54 44.7 +2.8**
comp=Z,10nm,1.2s
DAVA Damuels 36.99 167 *eP* **P** **20 54 46.0 +4.0**
comp=Z,11nm,1.4s
AKTO Aktyubinsk 37.03 113 LR LR 21 12 05.5
comp=Z,2µm,19.4s,baz=3.2,slow=40
Q16K King Salmon 37.05 338 P **P** **20 54 40.8 -1.4**
baz=4.2
WTTA Wattenberg 37.06 165 *eP* **P** **20 54 44.7 +2.0**
comp=Z,12nm,1.5s
SQTA Sankt Quirin 37.09 165 *i* P **P** **20 54 46.3 +3.4**
comp=Z,8.5nm,1.5s
EGYH Egyhazaskeszo 37.10 158 P **P** **20 54 45.2 +2.5**
CSKK Cskako 37.19 157 P **P** **20 54 46.5 +3.0**
ARSA Arzberg 37.20 160 *eP* **P** **20 54 46.6 +3.0**
comp=Z,9.4nm,1.4s
T35M Bob Quinn 37.22 315 P **P** **20 54 43.0 -0.8**
baz=7.8
BUR08 Bucovina Ar. S 37.24 149 P **P** **20 54 43.9 -0.1**
BURAR Bucovina Array 37.27 149 ⇑P **P** **20 54 46.5 +2.2**
BURAR Bucovina Array 37.27 149 P **P** **20 54 44.9 +0.6**
BURAR Bucovina Array 37.27 149 ⇑P **P** **20 54 46.5 +2.2**
LTVH Ltavrtes, Hu 37.33 153 P **P** **20 54 47.1 +2.4**
BSZH Besenyszg 37.34 155 P **P** **20 54 47.6 +2.9**
MPLH Magyarpolny 37.35 158 P **P** **20 54 47.4 +2.5**
DAVOX Davos/Dischmat 37.50 167 LR LR 21 11 45.4
comp=Z,418nm,19.0s,baz=350,slow=39
SOKA Soboth 37.75 161 *eP* **P** **20 54 51.2 +2.8**
comp=Z,18nm,1.2s,SNR=9.6
MYKA Terra Mystica 37.75 162 *i* P **P** **20 54 51.7 +3.3**
comp=Z,16nm,1.1s
KDAK Kodiak Island 37.78 335 P **P** **20 54 48.0 -0.4**
KDAK Kodiak Island 37.78 335 P **P** **20 54 48.0 -0.4**
KDAK pmax pmax
comp=Z,55nm,0.5s
DRLN Deer Lake 37.78 242 P **P** **20 54 48.7 +0.2**
DRLN IAmb IAmb 20 55 18.4
comp=Z,69nm,1.5s
SENIN Lac Senin/Sane 37.86 170 P **P** **20 54 49.7 +0.2**
CLUD Cludinico 37.90 163 P **P** **20 54 49.8 +0.2**
OBKA Obir 37.90 161 *eP* **P** **20 54 53.0 +3.3**
comp=Z,28nm,1.1s,SNR=6.7
WRAK Wrangell Islan 37.93 316 P **P** **20 54 50.5 +0.8**
WRAK IAmb IAmb 20 56 02.2
comp=Z,18nm,0.6s
PRED Cave del Predi 37.94 162 P **P** **20 54 50.9 +0.9**
DRGR 37.96 152 ⇑P **P** **20 54 52.1 +2.0**
DRGR 37.96 152 ⇑P **P** **20 54 52.1 +2.0**
BIZ Bicaz 37.99 148 ⇑P **P** **20 54 52.8 +2.5**
BEHE Becsehely 38.02 159 P **P** **20 54 53.8 +3.2**
CIMO Cimolais 38.04 164 P **P** **20 54 51.4 +0.6**
CIMO IAmb IAmb 20 55 13.3
comp=Z,19nm,1.3s
STAL STALIGIAL 38.09 163 P **P** **20 54 52.1 +0.9**
STAL IAmb IAmb 20 55 01.6
comp=Z,44nm,1.6s
CTI Castel Tesino 38.27 165 P **P** **20 54 53.5 +0.7**
CTI Castel Tesino 38.27 165 P **P** **20 54 53.5 +0.7**
CTI pmax pmax
comp=Z,26nm,1.2s
MORH Mrgy, Hungar 38.35 157 ⇑P **P** **20 54 56.0 +2.7**
MORH Mrgy, Hungar 38.35 157 P **P** **20 54 55.1 +1.7**
OHAK Old Harbor 38.37 335 P **P** **20 54 53.1 -0.3**
ABKAR Akbulak array 38.39 111 P **P** **20 54 53.2 -0.4**
ABKAR **PP** **20 56 15.9 -5.2**
SABO M.te Sabotino 38.40 162 P **P** **20 54 52.5 -1.3**
SABO IAmb IAmb 20 55 01.1
comp=Z,34nm,1.3s
SIRR Siria 38.43 153 ⇑P **P** **20 54 57.2 +3.1**
KOVH Kovagotottos 38.46 157 P **P** **20 54 56.0 +1.8**
KURK Kurchatov 38.87 92 P **P** **20 54 57.5 -0.1**
KURK PP **PP** **20 56 23.9 -2.4**
KURK Kurchatov 38.87 92 *ceP* **P** **20 54 57.9 +0.3**
KURK pmax pmax
comp=Z,15nm,1.1s
SSB Saint Sauveur 38.90 173 P **P** **20 54 58.1 +0.1**
SSB Saint Sauveur 38.90 173 P **P** **20 54 58.1 +0.1**
SSB pmax pmax
comp=Z,18nm,1.4s
KURBB Kurchatov Arra 38.95 92 LR LR 21 14 37.6
comp=Z,708nm,19.0s,baz=321,slow=42
TEOL Teolo 38.96 165 P **P** **20 54 59.0 +0.5**
BRZS Berezniki 38.97 98 *eP* **P** **20 54 58.4 -0.1**
BRZS *eS* **S** **21 00 58.7 +2.0**
BRZS pmax pmax
comp=Z,17nm,1.6s
BRZS Berezniki 38.97 98 *eP* **P** **20 54 58.4 -0.1**
comp=Z,17nm,1.6s,baz=98
BRZS *eS* **S** **21 00 58.8 +2.0**
baz=98
SII Sitkinak Islan 39.07 336 P **P** **20 54 57.5 -1.8**
BZS Buzias 39.08 154 ⇑P **P** **20 55 02.6 +3.1**
BZS Buzias 39.08 154 ⇑P **P** **20 55 02.6 +3.1**
BZS 20 55 03.4
SEM Semipalatinsk 39.34 90 *eP* **P** **20 55 01.1 -0.8**
SEM Semipalatinsk 39.34 90 *eP* **P** **20 55 01.2 -0.8**
baz=91
GZR Gura Zlata 39.36 152 ⇓P **P** **20 55 05.0 +3.1**
MLR Muntele Rosu 39.43 149 LR LR 21 11 40.5
comp=Z,2µm,20.3s,baz=351,slow=37

VOIR 39.43 150 ⇑P **P** **20 55 05.6 +3.1**
VOIR 39.43 150 ⇑P **P** **20 55 05.6 +3.1**
FRGS Fruska Gora 39.46 156 ⇑P **P** **20 55 06.0 +3.3**
ARR Arges 39.48 150 ⇓P **P** **20 55 05.6 +2.7**
HERR Herculane 39.85 153 ⇑P **P** **20 55 08.7 +2.8**
CFR Carcaliu 39.86 146 ⇑P **P** **20 55 07.8 +1.9**
CFR Carcaliu 39.86 146 ⇑P **P** **20 55 07.8 +1.9**
MDVR Moldovita 39.92 154 ⇑P **P** **20 55 09.3 +2.8**
IRK Irkutsk 40.00 67 *eP* **P** **20 55 05.7 -1.4**
IRK pmax pmax
comp=Z,66nm,1.4s
VLC Villacollemand 40.13 166 P **P** **20 55 08.6 +0.4**
VLC IAmb IAmb 20 55 12.5
comp=Z,35nm,1.2s
TPGR Topolog 40.20 146 ⇓P **P** **20 55 11.3 +2.4**
MOY Mondy 40.25 70 *eP* **P** **20 55 09.9 +0.6**
MOY pmax pmax
comp=Z,55nm,1.6s
SIM Simferopol' 40.47 140 P P 20 54 57.5 -14
SIM pmax pmax
comp=Z,30nm,17.9s
SIM pmax pmax
comp=Z,50nm,15.0s
SIM MLR MLR
comp=Z,740nm,18.0s
ZEA Zeya 40.51 45 *eP* **P** **20 55 11.4 +0.1**
ZEA *eS* **S** **21 01 15.1 -4.6**
ZEA pmax pmax
comp=Z,100nm,2.1s
ZEA pmax pmax
comp=Z,20nm,1.3s
ZEA smax smax
comp=N,100nm,4.2s
ZEA smax smax
comp=E,100nm,5.9s
ZEA MLR MLR
comp=E,100nm,14.0s
ZEA MLR MLR
comp=N,100nm,10.0s
ZEA MLR MLR
comp=Z,100nm,16.0s
LMQ La Malbaie 40.72 255 P **P** **20 55 13.2 +0.1**
LMQ IAmb IAmb 20 55 20.0
comp=Z,46nm,1.3s
OSSC Osservatorio P 40.79 165 P **P** **20 55 14.2 +0.5**
OSSC IAmb IAmb 20 55 17.5
comp=Z,44nm,1.2s
ANN Anapa 40.85 136 *eP* **P** **20 55 15.3 +1.2**
ANN *eS* **S** **21 01 25.5 +0.6**
ANN pmax pmax
comp=Z,29nm,1.1s
ANN MLR MLR
comp=Z,417nm,14.0s
VLDQ Val d'Or 40.90 262 P **P** **20 55 13.9 -0.6**
GOF Gofitskoye 41.03 130 ⇑*eP* **P** **20 55 18.4 +2.8**
MURB Monte Urbino 41.08 164 P **P** **20 55 16.0 -0.2**
MURB IAmb IAmb 20 55 32.0
comp=Z,46nm,1.3s
CIT Chita 41.09 58 *eP* **P** **20 55 16.2 +0.1**
CIT pmax pmax
comp=Z,58nm,2.6s
LATQ La Tuque 41.14 257 P **P** **20 55 16.6 +0.1**
NRCA Norcia 41.53 163 P **P** **20 55 20.4 +0.6**
NRCA IAmb IAmb 20 55 23.9
comp=Z,47nm,1.2s
E62A Clayton Lake 41.56 254 P **P** **20 55 20.7 +0.7**
E62A IAmb IAmb 20 55 26.4
comp=Z,34nm,1.4s
ZAK Zakamensk 41.74 68 *eP* **P** **20 55 21.2 -0.4**
ZAK pmax pmax
comp=Z,11nm,1.4s
BBB Bella Bella 41.82 312 LR LR 21 14 24.4
comp=Z,429nm,19.2s,baz=16,slow=39
KIV Kislovodsk 42.09 131 ⇓P **P** **20 55 26.3 +1.9**
KIV Kislovodsk 42.09 131 P **P** **20 55 24.8 +0.3**
KIV Kislovodsk 42.09 131 *eP* **P** **20 55 26.7 +2.2**
KIV *e* 20 57 04.5
KIV *eS* **S** **21 01 46.9 +3.3**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,321nm,16.0s
KVAR Kislovodsk Arr 42.09 131 LR LR 21 13 29.7
comp=Z,468nm,18.8s,baz=260,slow=37
VTS Vitosha 42.15 152 ⇑P **P** **20 55 26.5 +1.4**
VTS Vitosha 42.15 152 ⇑P **P** **20 55 26.5 +1.4**
SOC Sochi 42.23 134 *eP* **P** **20 55 22.9 -2.6**
SOC *e*PPP PPP 20 57 38.4
SOC *eS* **S** **21 01 43.1 -2.3**
SOC *eSS* **SS** **21 04 57.7 +4.7**
SOC *e*SSS SSS 21 05 28.1
SOC MLR MLR
comp=Z,340nm,16.0s
KBZ Khabaz 42.34 131 P **P** **20 55 28.0 +1.7**
comp=Z,11nm,1.0s,baz=337,slow=6.5,SNR=18
KBZ LR LR 21 13 33.9
comp=Z,531nm,19.2s,baz=356,slow=37
comp=Z,11nm,1.0s
KBZ Khabaz 42.34 131 *ceP* **P** **20 55 28.6 +2.3**
B35A Bob, Littlefor 42.37 278 P **P** **20 55 26.0 -0.6**
TRQ Mont Tremblant 42.47 259 P **P** **20 55 27.6 +0.1**
EYMN Ely 42.55 276 P **P** **20 55 29.1 +1.0**
EYMN IAmb IAmb 20 55 33.3
comp=Z,32nm,1.4s
EYMN Ely 42.55 276 P **P** **20 55 27.2 -0.9**
baz=8.9
AGMN Agassiz Nation 42.66 281 P **P** **20 55 28.9 0.0**
AGMN IAmb IAmb 20 55 33.9
comp=Z,37nm,1.4s
AGMN Agassiz Nation 42.66 281 P **P** **20 55 28.3 -0.6**
baz=8.8,SNR=8.7
ZSN Zaisan 42.76 87 *eP* **P** **20 55 29.7 0.0**
ZSN pmax pmax
comp=Z,10.0nm,0.9s
ZSN Zaisan 42.76 87 *eP* **P** **20 55 29.8 0.0**
comp=Z,10nm,0.9s,baz=87
PETK Petropavlovsk- 42.80 18 P **P** **20 55 28.7 -1.3**
comp=Z,1.3nm,0.5s,baz=47,slow=6.5,SNR=5.1
PETK LR LR 21 13 43.4
comp=Z,146nm,18.2s,baz=7.1,slow=37
comp=Z,1.3nm,0.5s
LLLB Lillooet 42.87 306 P **P** **20 55 30.0 -0.7**
MAKZ Makanchi 43.08 90 P **P** **20 55 32.1 -0.3**
MAKZ IAmb IAmb 20 55 38.0
comp=Z,27nm,1.1s
MAKZ Makanchi 43.08 90 ⇓P **P** **20 55 32.7 +0.3**
MK31 Makanchi Array 43.13 89 P **P** **20 55 32.5 -0.3**
MK31 PP **PP** **20 57 15.2 +2.6**
MK31 Makanchi Array 43.13 89 *i* P **P** **20 55 32.8 0.0**
MKAR Makanchi Array 43.13 89 P **P** **20 55 33.2 +0.4**
comp=Z,3.1nm,0.8s,baz=350,slow=7.5,SNR=25
MKAR LR LR 21 17 21.4
comp=Z,341nm,18.2s,baz=356,slow=42
comp=Z,3.1nm,0.8s
MKAR Makanchi Array 43.13 89 P **P** **20 55 32.3 -0.5**
E46A Sault Ste Mari 43.35 269 P **P** **20 55 35.1 +0.6**
E46A IAmb IAmb 20 55 40.3
comp=Z,64nm,1.4s
ZEI Tsey 43.35 130 *eP* **P** **20 55 37.4 +2.6**
ZEI pmax pmax
comp=Z,32nm,1.5s
MAK Makhachkala 43.48 126 *eP* P 20 55 30.8 -4.8
MAK *e* 20 57 13.5
MAK *eS* **S** **21 01 57.0 -6.7**
MAK *eSS* **SS** **21 05 19.3 +1.9**
MAK pmax pmax
comp=Z,107nm,1.9s
MAK MLR MLR
comp=Z,683nm,17.0s
SHEM Shemya Is, Ala 43.50 3 LR LR 21 12 57.4
comp=Z,164nm,19.3s,baz=191,slow=35
WALA Waterton Lakes 43.69 298 P **P** **20 55 37.1 -0.3**
WALA IAmb IAmb 20 55 41.9
comp=Z,30nm,1.1s
BTLS Baital 44.00 98 *eP* **P** **20 55 40.3 +0.6**
BTLS pmax pmax
comp=Z,16nm,1.5s
BTLS Baital 44.00 98 *eP* **P** **20 55 40.3 +0.6**
comp=Z,16nm,1.5s,baz=98
LONY Lake Ozonia 44.06 259 IAmb IAmb 20 55 46.8
comp=Z,23nm,1.2s
LONY Lake Ozonia 44.06 259 P **P** **20 55 39.6 -0.6**
baz=8.2
GRNR Gornyy 44.10 37 ⇑*iP* **P** **20 55 38.6 -2.0**
GRNR pmax pmax
comp=Z,6.0nm,1.0s
GRNR MLR MLR
comp=E,260nm,16.0s
GRNR MLR MLR
comp=N,120nm,17.0s
GRNR MLR MLR
comp=Z,160nm,19.0s
COWI Conover 44.12 273 IAmb IAmb 20 55 45.7
comp=Z,36nm,1.6s
LBNH Lisbon 44.16 256 P **P** **20 55 40.5 -0.6**
baz=8.1
EGMT Eagleton 44.32 294 P **P** **20 55 39.8 -2.6**
baz=8.2
HIA Hailar 44.36 53 IAmb IAmb 20 55 44.0
comp=Z,32nm,1.1s
SADO Sadowa 44.39 263 LR LR 21 14 06.3
comp=Z,348nm,20.8s,baz=2.0,slow=36
ESDC Sonseca Array 44.46 182 P **P** **20 55 45.8 +2.2**
comp=Z,1.8nm,1.1s,baz=354,slow=9.3,SNR=8.1
comp=Z,1.8nm,1.1s
TDK Taldyqorghan 44.49 94 *eP* **P** **20 55 44.4 +0.7**
TDK pmax pmax
comp=Z,14nm,1.0s
TDK Taldyqorghan 44.49 94 *eP* **P** **20 55 44.4 +0.7**
comp=Z,14nm,1.0s,baz=94
TDK LR LR 21 14 50.3
baz=94
SONM Songino Array 44.57 66 P **P** **20 55 45.1 +0.6**
comp=Z,21nm,1.1s,baz=337,slow=7.0,SNR=74
SONM PcP **PP** **20 57 27.7 -0.4**
comp=Z,5.7nm,1.2s,baz=126,slow=2.0,SNR=3.5
SONM LR LR 21 14 32.6
comp=Z,385nm,21.6s,baz=348,slow=36
comp=Z,21nm,1.1s
SONM Songino Array 44.57 66 P **P** **20 55 44.5 0.0**
SONM IAmb IAmb 20 55 46.3
comp=Z,45nm,1.2s
SONM PP **PP** **20 57 26.9 -1.2**
SONM Songino Array 44.57 66 P **P** **20 55 44.5 0.0**
SONM 20 57 26.9
SONM pmax pmax
comp=Z,45nm,1.2s
PAB San Pablo 44.59 183 ⇑P **P** **20 55 46.6 +2.0**
ULN Ulaanbaatar 44.60 65 P **P** **20 55 44.5 -0.2**
ULN Ulaanbaatar 44.60 65 *ceP* **P** **20 55 45.4 +0.6**
ULN pmax pmax
comp=Z,57nm,1.1s
NEW Newport 44.78 301 LR LR 21 15 21.9
comp=Z,716nm,19.0s,baz=7.0,slow=37
NEW Newport 44.78 301 IAmb IAmb 20 55 50.6
comp=Z,26nm,1.4s
NEW Newport 44.78 301 P **P** **20 55 41.9 -4.1**
baz=7.7,SNR=7.5
B08A Colville Reser 44.88 303 IAmb IAmb 20 55 51.7
comp=Z,22nm,1.4s
JTMT Jette 45.03 298 P **P** **20 55 47.0 -1.1**
JTMT IAmb IAmb 20 55 52.8
comp=Z,17nm,1.1s
G40A Rib Lake 45.06 274 IAmb IAmb 20 55 53.6
comp=Z,31nm,1.6s
F33A 5 Mile Ranch, 45.13 280 P **P** **20 55 49.1 +0.3**
F33A IAmb IAmb 20 56 01.9
comp=Z,17nm,1.1s
SKR Severo-Kuril's 45.18 20 *eP* **P** **20 55 52.3 +3.3**
SKR pmax pmax
comp=Z,200nm,4.6s
SKR MLR MLR
comp=Z,100nm,19.0s
SEKA Sheki 45.19 126 P **P** **20 55 51.3 +1.9**
LAO LASA Array 45.30 290 IAmb IAmb 20 56 03.6
comp=Z,24nm,1.1s
LAO LASA Array 45.30 290 P **P** **20 55 49.7 -0.6**
baz=8.2
KLR Kul'dur 45.32 42 LR LR 21 15 11.3
comp=Z,316nm,18.0s,baz=7.5,slow=37
KLR Kul'dur 45.32 42 *ceP* **P** **20 55 49.4 -0.9**
KLR pmax pmax
comp=Z,17nm,1.3s
KUU Kurty 45.37 96 *eP* **P** **20 55 51.0 +0.2**
KUU pmax pmax
comp=Z,24nm,1.3s
KUU Kurty 45.37 96 *eP* **P** **20 55 51.0 +0.2**
comp=Z,24nm,1.3s,baz=96
KK31 Karatay Array 45.55 102 P **P** **20 55 52.3 +0.1**
KK31 IAmb IAmb 20 55 57.5
comp=Z,38nm,1.7s
KK31 Karatay Array 45.55 102 P **P** **20 55 52.3 +0.1**
KK31 pmax pmax
comp=Z,38nm,1.7s
KKAR Karatay Array 45.55 102 P **P** **20 55 52.0 -0.1**
KKAR IAmb IAmb 20 55 57.5
comp=Z,38nm,1.7s
KKAR Karatay Array 45.55 102 P **P** **20 55 52.0 -0.1**
KKAR pmax pmax
comp=Z,38nm,1.7s
MNGR Mingechevir, A 45.62 127 P **P** **20 55 54.6 +1.9**
SGDS Sogindy 45.63 98 *eP* **P** **20 55 53.7 +0.8**
SGDS Sogindy 45.63 98 *eP* **P** **20 55 53.7 +0.8**
baz=98
BR131 Keskin Array S 45.64 141 IAmb IAmb 20 55 56.6
comp=Z,26nm,1.2s
BR131 Keskin Array S 45.64 141 ⇑*iP* **P** **20 55 54.9 +1.9**
BRTR Keskin Array B 45.64 141 P **P** **20 55 54.8 +1.8**
comp=Z,7.8nm,1.1s,baz=335,slow=5.5,SNR=19
BRTR LR LR 21 16 31.6
comp=Z,684nm,20.7s,baz=350,slow=38
comp=Z,7.8nm,1.1s
BRTR Keskin Array B 45.64 141 *i* P **P** **20 55 55.2 +2.2**
BRTR pmax pmax
comp=Z,8.0nm,1.1s
GANJ Ganja 45.68 127 P **P** **20 55 54.6 +1.4**
DZA Taraz 45.84 101 *eP* **P** **20 55 55.0 +0.5**
DZA Taraz 45.84 101 *eP* **P** **20 55 55.0 +0.5**
baz=101
MSO Missoula 45.91 298 P **P** **20 55 55.9 +0.8**
MSO IAmb IAmb 20 55 59.9
comp=Z,32nm,1.3s
MSO Missoula 45.91 298 P **P** **20 55 55.4 +0.4**
baz=7.7,SNR=11
GNI Garni 46.04 129 LR LR 21 16 04.1
comp=Z,523nm,21.1s,baz=350,slow=37
KPKS Kokpek 46.04 94 *eP* **P** **20 55 56.7 +0.6**
KPKS Kokpek 46.04 94 *eP* **P** **20 55 56.7 +0.6**
baz=94
AAA Alma-Ata 46.11 95 *eP* **P** **20 55 57.6 +0.9**
AAA pmax pmax
comp=Z,15nm,1.1s
AAA Alma-Ata 46.11 95 *eP* **P** **20 55 57.6 +0.9**
comp=Z,15nm,1.1s,baz=96
MDOK Medeo 46.17 95 *eP* **P** **20 55 57.5 +0.3**
MDOK Medeo 46.17 95 *eP* **P** **20 55 57.5 +0.3**
baz=96
MDOK LR LR 21 15 31.7
baz=96
NLWA Neilton Lookou 46.23 307 IAmb IAmb 20 56 01.3
comp=Z,26nm,1.4s
ZHN Zhinishke 46.31 94 *eP* **P** **20 55 59.1 +0.8**
ZHN Zhinishke 46.31 94 *eP* **P** **20 55 59.1 +0.8**
baz=94
UZB Uzynbulak 46.39 93 *eP* **P** **20 56 01.9 +3.0**
UZB Uzynbulak 46.39 93 *eP* **P** **20 56 02.0 +3.0**
baz=94
SATY Saty 46.41 94 *eP* **P** **20 55 59.0 -0.1**
SATY pmax pmax
comp=Z,31nm,1.5s
SATY Saty 46.41 94 *eP* **P** **20 55 59.0 -0.1**
comp=Z,31nm,1.5s,baz=94
AAK Ala-Archa 46.42 98 LR LR 21 18 53.9
comp=Z,522nm,18.1s,baz=354,slow=41
AAK Ala-Archa 46.42 98 P **P** **20 55 59.8 +0.5**
AAK Ala-Archa 46.42 98 *ceP* **P** **20 56 01.4 +2.2**
AAK pmax pmax
comp=Z,27nm,1.3s
SHLS Shalkode 46.43 93 *eP* **P** **20 55 59.9 +0.7**
SHLS pmax pmax
comp=Z,10.0nm,1.3s
SHLS Shalkode 46.43 93 *eP* **P** **20 55 59.9 +0.7**
comp=Z,10nm,1.3s,baz=93
IUG Iuzhnay 46.44 103 *eP* **P** **20 55 59.3 0.0**
IUG Iuzhnay 46.44 103 *eP* **P** **20 55 59.4 0.0**
baz=103
BINY Binghamton 46.60 259 P **P** **20 56 00.9 +0.4**
baz=7.9,SNR=7.1
WMQ Urumqi 46.64 85 *eP* **P** **20 56 02.2 +1.4**
WMQ PcP **PcP** **20 57 37.2 +2.8**
WMQ PP **PP** **20 57 53.2 +3.1**

WMQ S **S** **21 02 55.0 +5.4**
WMQ pmax pmax
comp=Z,29nm,1.1s
WMQ pmax pmax
comp=Z,330nm,4.5s
WMQ LR LR
comp=Z,760nm,20.9s
WMQ LR LR
comp=Z,580nm,16.5s
WMQ LR LR
comp=Z,650nm,21.7s
E08A Dider Farm, El 46.71 302 P **P** **20 56 01.0 -0.2**
E08A IAmb IAmb 20 56 05.7
comp=Z,20nm,1.4s
LRM Limekiln Ridge 46.76 296 P **P** **20 56 01.0 -1.0**
HAWA Hanford 46.85 303 IAmb IAmb 20 56 06.2
comp=Z,16nm,1.4s
BOZ Bozeman (W) 46.91 295 P **P** **20 56 03.0 0.0**
BOZ IAmb IAmb 20 56 07.8
comp=Z,15nm,1.1s
BOZ Bozeman (W) 46.91 295 P **P** **20 56 03.0 0.0**
BOZ pmax pmax
comp=Z,15nm,1.1s
BOZ Bozeman (W) 46.91 295 P **P** **20 56 02.6 -0.4**
baz=7.7,SNR=20
VAE Valguarnera 46.91 162 LR LR 21 16 29.0
comp=Z,329nm,18.2s,baz=20,slow=37
NAX Nakhchivan 47.07 129 P **P** **20 56 07.0 +2.8**
RLMT Red Lodge 47.15 293 P **P** **20 56 04.5 -0.5**
baz=7.8
ECSD EROS Data Cent 47.25 280 P **P** **20 56 05.0 -0.5**
ECSD IAmb IAmb 20 56 10.6
comp=Z,29nm,1.3s
ECSD EROS Data Cent 47.25 280 P **P** **20 56 05.7 +0.2**
baz=8.1,SNR=11
PAL Palisades 47.57 257 P **P** **20 56 08.7 +0.8**
baz=7.7
YHL Hebgen Lake 47.60 295 IAmb IAmb 20 56 21.1
comp=Z,15nm,1.2s
RSSD Black Hills 47.62 288 P **P** **20 56 08.8 +0.1**
RSSD IAmb IAmb 20 56 13.6
comp=Z,18nm,1.4s
RSSD Black Hills 47.62 288 P **P** **20 56 08.8 +0.1**
RSSD pmax pmax
comp=Z,18nm,1.5s
RSSD Black Hills 47.62 288 P **P** **20 56 10.7 +2.0**
baz=7.9
LKRN Lenkeran, Azer 47.81 125 P **P** **20 56 11.6 +1.8**
M53A Wt Miller and 47.84 264 P **P** **20 56 12.3 +2.2**
baz=7.9
G08A Pilot Rock 47.89 302 P **P** **20 56 10.1 -0.5**
G08A IAmb IAmb 20 56 15.6
comp=Z,15nm,1.3s
BMO Blue Mountains 48.18 300 IAmb IAmb 20 56 25.9
comp=Z,31nm,1.4s
YSS Yuzh-Sakhalins 48.29 32 *ce* P **P** **20 56 12.7 -0.8**
YSS pmax pmax
comp=Z,30nm,1.7s
FLWY Flagg Ranch 48.32 294 IAmb IAmb 20 56 27.1
comp=Z,28nm,1.4s
SSPA Standing Stone 48.34 261 P **P** **20 56 10.8 -3.2**
baz=7.8
BCYI Bear Canyon 48.35 297 P **P** **20 56 13.2 -1.1**
ELL Elmali 48.36 145 P **P** **20 56 15.2 +0.9**
ELL Elmali 48.36 145 P **P** **20 56 15.3 +0.9**
ELL pmax pmax
comp=Z,105nm,1.4s
BNX BinXian 48.48 46 ⇓P **P** **20 56 14.1 -0.8**
BNX pP **pwP** **20 56 21.7 +0.9**
BNX sP sP 20 56 24.8 +7.1
BNX PP **PP** **20 58 05.8 -1.5**
BNX S **S** **21 03 08.4 -7.1**
BNX sS **sS** **21 03 25.0 +6.3**
BNX pmax pmax
comp=Z,29nm,1.0s
BNX pmax pmax
comp=Z,180nm,4.8s
BNX LR LR
comp=Z,170nm,14.6s
BNX LR LR
comp=Z,180nm,14.6s
BNX LR LR
comp=Z,170nm,13.7s
KEST Kesra 48.52 168 P **P** **20 56 18.6 +3.1**
comp=Z,8.6nm,1.2s,baz=30,slow=17,SNR=4.6
KEST LR LR 21 16 45.9
comp=Z,208nm,21.8s,baz=294,slow=36
comp=Z,8.6nm,1.2s
IMW Indian Meadow 48.53 294 IAmb IAmb 20 56 20.7
comp=Z,13nm,1.2s
MOOW Moose Ponds 48.66 294 P **P** **20 56 16.1 -0.6**
MOOW IAmb IAmb 20 56 21.8
comp=Z,20nm,1.5s
FXWY Fox Creek 48.79 294 P **P** **20 56 16.4 -1.3**
FXWY IAmb IAmb 20 56 24.6
comp=Z,18nm,1.4s
TPAW Teton Pass 48.93 294 IAmb IAmb 20 56 31.4
comp=Z,25nm,1.6s
REDW Red Top Meadow 49.05 294 P **P** **20 56 19.0 -0.7**
REDW IAmb IAmb 20 56 24.8
comp=Z,22nm,1.6s
O53A New Philadelph 49.08 264 P **P** **20 56 17.5 -2.1**
baz=7.8
HLID Hailey 49.19 297 P **P** **20 56 20.4 -0.3**
HLID IAmb IAmb 20 56 37.9
comp=Z,28nm,2.0s
HLID Hailey 49.19 297 P **P** **20 56 17.6 -3.1**
baz=7.3,SNR=7.1
ACSO Alum Creek Sta 49.28 266 P **P** **20 56 21.8 +0.6**
baz=7.8
K22A Casper 49.33 290 P **P** **20 56 20.9 -0.9**
baz=7.6
XLT XiLinHaoTe 49.37 57 *e* P **P** **20 56 22.6 +0.7**
XLT S S 21 03 35.9 +7.7
XLT pmax pmax
comp=Z,13nm,1.5s
XLT pmax pmax
comp=Z,180nm,5.3s
XLT LR LR
comp=Z,290nm,13.2s
XLT LR LR
comp=Z,190nm,18.7s
GEYT Alibeck 49.43 116 P **P** **20 56 24.0 +1.5**
comp=Z,11nm,1.0s,baz=325,slow=7.6,SNR=11
GEYT LR LR 21 20 30.5
comp=Z,949nm,20.9s,baz=4.5,slow=40
comp=Z,11nm,1.0s
GEYT Alibeck 49.43 116 IAmb IAmb 20 56 29.6
comp=Z,33nm,1.4s
GYA0B ALIBECK ARRAY 49.43 116 IAmb IAmb 20 56 28.8
comp=Z,21nm,1.1s
MFID Camas Ranch 49.47 299 IAmb IAmb 20 57 50.2
comp=Z,22nm,1.8s
O48B Farmland 49.48 268 P **P** **20 56 22.6 -0.1**
baz=7.8
BW06 Boulder Array 49.51 293 P **P** **20 56 23.0 -0.2**
BW06 Boulder Array 49.51 293 P **P** **20 56 21.5 -1.8**
baz=7.5
PD31 Pinedale Array 49.51 293 P **P** **20 56 23.3 0.0**
PDAR Pinedale Array 49.51 293 P **P** **20 56 25.1 +1.9**
comp=Z,2.7nm,0.9s,baz=4.3,slow=5.9,SNR=19
PDAR LR LR 21 17 53.4
comp=Z,2µm,19.1s,baz=358,slow=37
comp=Z,2.7nm,0.9s
MCWV Mont Chateau 49.52 263 P **P** **20 56 22.7 -0.3**
baz=7.7
IDI Anoyia 49.54 151 LR LR 21 18 40.8
comp=Z,407nm,19.8s,baz=333,slow=38
SFIN Lafayette 49.57 270 P **P** **20 56 24.3 +0.9**
baz=7.8
KSH Kashi 49.66 97 P P 20 56 28.8 +4.5
KSH pmax pmax
comp=Z,5.0nm,1.3s
KSH LR LR
comp=Z,530nm,16.5s
KSH LR LR
comp=Z,580nm,15.1s
KSH LR LR
comp=Z,870nm,18.7s
I04A Tendick Farm, 49.68 305 P **P** **20 56 22.7 -1.6**
baz=6.8
MDJ Mudanjiang 49.76 44 P **P** **20 56 24.2 -0.6**
MDJ pmax pmax
comp=Z,44nm,1.1s
MDJ pmax pmax
comp=Z,130nm,3.6s
P52A Corning 49.78 265 P **P** **20 56 25.2 +0.2**
baz=7.7
I03D Drain, OR 49.86 306 P **P** **20 56 22.6 -2.9**
baz=6.7
J05D Fort Rock, OR 50.08 304 P **P** **20 56 24.7 -2.7**
baz=6.8,SNR=8.0
P49A Miami Univ. Ec 50.15 268 P **P** **20 56 28.6 +0.8**
P49A IAmb IAmb 20 56 32.8
comp=Z,37nm,1.3s
P49A Miami Univ. Ec 50.15 268 P **P** **20 56 28.5 +0.7**
baz=7.8
USRK Ussuriysk Ar. 50.35 42 P **P** **20 56 28.5 -0.7**
comp=Z,12nm,0.9s,baz=346,slow=5.9,SNR=19
USRK LR LR 21 18 22.7
comp=Z,142nm,18.0s,baz=50,slow=37
comp=Z,12nm,0.9s
USRK Ussuriysk Ar. 50.35 42 P **P** **20 56 28.0 -1.2**
RWWY Rawlins 50.35 290 P **P** **20 56 29.4 -0.2**
RWWY IAmb IAmb 20 56 33.4
comp=Z,24nm,1.4s
DBO Dodson Butte 50.42 306 IAmb IAmb 20 56 35.1
comp=Z,45nm,1.6s
OGNE Ogallala 50.56 285 IAmb IAmb 20 56 35.5
comp=Z,20nm,1.1s
OGNE Ogallala 50.56 285 P **P** **20 56 29.7 -1.3**
baz=7.6
HVU Hansel Valley 50.80 296 P **P** **20 56 32.3 -0.6**
HVU Hansel Valley 50.80 296 P **P** **20 56 32.3 -0.6**
HVU pmax pmax
comp=Z,15nm,1.4s
HWUT Hardware Ranch 50.86 294 P **P** **20 56 33.6 +0.2**
K02D Willamette Mer 50.88 306 P **P** **20 56 31.8 -1.5**
baz=6.6
R55A Marlinton 50.91 263 IAmb IAmb 20 56 38.0
comp=Z,36nm,1.8s
P40A Paris 50.93 275 IAmb IAmb 20 56 37.9
comp=Z,24nm,1.4s
P38A Dawn 50.99 276 P **P** **20 56 34.9 +0.8**
P38A IAmb IAmb 20 56 38.2
comp=Z,27nm,1.4s
N23A Red Feather La 51.01 289 IAmb IAmb 20 56 39.6
comp=Z,28nm,1.4s
N23A Red Feather La 51.01 289 P **P** **20 56 32.7 -1.9**
baz=7.5,SNR=5.1
L04D Klamath Falls 51.23 305 IAmb IAmb 20 58 04.4
comp=Z,28nm,1.6s
L04D Klamath Falls 51.23 305 P **P** **20 56 36.7 +0.6**
baz=6.6
R50A Paris 51.35 267 IAmb IAmb 20 56 41.7
comp=Z,31nm,1.4s
MOD Modoc Plateau 51.37 303 P **P** **20 56 36.3 -0.9**
VLA Vladivostok 51.41 42 *i* P **P** **20 56 35.1 -2.1**
VLA pmax pmax
comp=Z,33nm,1.1s
R49A Shelbyville 51.43 268 IAmb IAmb 20 56 43.1
comp=Z,36nm,1.2s
L02F Cave Junction 51.44 306 P **P** **20 56 37.2 -0.3**
baz=6.5
BGU Big Grassy Mou 51.67 296 IAmb IAmb 20 56 51.5
comp=Z,23nm,1.4s
RDMU Red Mountain 51.69 292 P **P** **20 56 38.7 -1.0**
RDMU IAmb IAmb 20 56 48.6
comp=Z,38nm,1.8s
YBH Yreka Blue Hor 51.75 305 LR LR 21 20 40.3
comp=Z,482nm,18.1s,baz=2.5,slow=38
KSU1 Kansas State U 51.83 279 P **P** **20 56 41.6 +1.1**
baz=7.6
S51A Beattyville 51.91 266 P **P** **20 56 41.4 +0.3**
S51A IAmb IAmb 20 56 45.9
comp=Z,24nm,1.4s
HHC Hu-ho-hao-te 51.98 62 *e* P P 20 56 49.5 +7.8
HHC S **S** **21 04 06.3 +1.7**
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.5s
HHC LR LR
comp=N,390nm,16.5s
HHC LR LR
comp=E,320nm,13.7s
HHC LR LR
comp=Z,600nm,15.2s
O20A White River Ci 51.99 291 IAmb IAmb 20 56 48.5
comp=Z,17nm,1.1s
O20A White River Ci 51.99 291 P **P** **20 56 40.0 -1.9**
baz=7.3
BLA Blacksburg 52.00 263 P **P** **20 56 41.2 -0.6**
baz=7.5
ELK Elko 52.06 298 LR LR 21 20 37.9
comp=Z,433nm,19.9s,baz=14,slow=38
ISCO Idaho Springs 52.06 288 P **P** **20 56 40.6 -2.0**
baz=7.4
SNY Shenyang 52.06 50 ⇓P **P** **20 56 41.5 -0.6**
SNY S **S** **21 04 11.5 +6.1**
SNY pmax pmax
comp=Z,27nm,1.5s
SNY pmax pmax
comp=Z,240nm,3.5s
SNY LR LR
comp=Z,180nm,13.5s
SNY LR LR
comp=Z,190nm,16.7s
SNY LR LR
comp=Z,250nm,17.7s
R40A Maddies Statio 52.18 275 P **P** **20 56 42.7 -0.3**
R40A IAmb IAmb 20 56 47.8
comp=Z,23nm,1.6s
GTA Gaotai 52.26 74 ⇓P **P** **20 56 43.9 +0.1**
GTA pP pwP 20 56 48.0 -1.8
GTA sP sP 20 56 51.0 +4.4
GTA S **S** **21 04 10.0 +1.5**
GTA sS sS 21 04 23.4 +12
GTA SS **SS** **21 07 44.0 -1.3**
GTA pmax pmax
comp=Z,16nm,1.3s
GTA pmax pmax
comp=Z,200nm,4.8s
GTA LR LR
comp=Z,460nm,16.0s
GTA LR LR
comp=Z,160nm,14.9s
GTA LR LR
comp=Z,610nm,17.4s
CCM Cathedral Cave 52.30 274 P **P** **20 56 43.6 -0.3**
CCM Cathedral Cave 52.30 274 P **P** **20 56 43.6 -0.3**
CCM pmax pmax
comp=Z,20nm,1.4s
CCM Cathedral Cave 52.30 274 P **P** **20 56 41.5 -2.5**
baz=7.6
DUG Dugway, Tooele 52.38 295 P **P** **20 56 42.5 -2.2**
baz=7.1
SIUC Southern Illin 52.43 272 IAmb IAmb 20 56 49.9
comp=Z,32nm,1.3s
MMAI Mount Meron Ar 52.43 140 LR LR 21 22 16.3
comp=Z,216nm,18.1s,baz=148,slow=40
T50A Nancy 52.65 267 P **P** **20 56 46.3 -0.3**
T50A IAmb IAmb 20 56 52.0
comp=Z,20nm,1.3s
U54A Nelsons Funny 52.83 264 P **P** **20 56 48.2 +0.2**
U54A IAmb IAmb 20 56 54.0
comp=Z,34nm,1.3s
Q24A Divide 52.84 288 P **P** **20 56 46.4 -1.9**
baz=7.3
P17A Butcher Ranch, 52.89 293 IAmb IAmb 20 57 01.5
comp=Z,28nm,1.7s
TZTN Tazewell 52.99 266 IAmb IAmb 20 56 55.0
comp=Z,24nm,1.2s
TZTN Tazewell 52.99 266 P **P** **20 56 48.9 -0.2**
baz=7.4
TMUT Trail Mountain 53.11 294 IAmb IAmb 20 56 56.3
comp=Z,31nm,1.6s
BJI Beijing 53.20 58 P **P** **20 56 51.3 +0.7**
BJI S **S** **21 04 24.8 +3.8**
BJI pmax pmax
comp=Z,36nm,1.1s
BJI pmax pmax
comp=Z,270nm,3.8s
BJI LR LR
comp=Z,49nm,20.1s
BJI LR LR
comp=Z,240nm,16.2s
BJI LR LR
comp=Z,240nm,19.0s
ERM Erimo 53.23 32 P **P** **20 56 48.5 -2.3**
ERM Erimo 53.23 32 P **P** **20 56 48.5 -2.3**
ERM pmax pmax
comp=Z,31nm,1.0s
HRA Herat 53.34 112 P **P** **20 56 51.5 -0.5**
HRA IAmb IAmb 20 56 57.6
comp=Z,42nm,1.9s
V55A Taylorsville 53.43 264 IAmb IAmb 20 56 57.7
comp=Z,18nm,1.2s
PBMO Poplar Bluff 53.48 273 IAmb IAmb 20 56 56.6
comp=Z,28nm,1.4s
V52A Sevierville 53.69 266 P **P** **20 56 54.0 -0.2**
V52A IAmb IAmb 20 56 60.0
comp=Z,15nm,1.2s
SPR3 Spring Creek 3 53.70 297 IAmb IAmb 20 57 08.0
comp=Z,16nm,1.5s
CLTN Cedars of Leba 53.73 269 IAmb IAmb 20 56 59.9
comp=Z,32nm,1.4s
PV23 Carpenter Ridg 53.73 291 IAmb IAmb 20 57 11.2
comp=Z,16nm,1.2s
V53A Saluda 53.77 265 IAmb IAmb 20 57 00.2
comp=Z,22nm,1.4s
PV15 Paradox Valley 53.79 291 IAmb IAmb 20 57 10.8
comp=Z,15nm,1.2s
KAN06 Argonia West S 53.80 280 P **P** **20 56 54.6 -0.4**
WVT Waverly 53.85 270 P **P** **20 56 54.2 -1.2**
WVT Waverly 53.85 270 P **P** **20 56 54.2 -1.2**
WVT pmax pmax
comp=Z,11nm,1.3s
WVT Waverly 53.85 270 P **P** **20 56 54.8 -0.5**
baz=7.4
KBL Kabul 53.87 105 P **P** **20 56 55.9 +0.1**
KBL IAmb IAmb 20 56 57.8
comp=Z,21nm,1.1s
KBL Kabul 53.87 105 P **P** **20 56 55.9 +0.1**
KBL pmax pmax
comp=Z,21nm,1.2s
TKL Tuckaleechee C 53.89 266 LR LR 21 19 33.1
comp=Z,347nm,19.5s,baz=11,slow=36
TKL Tuckaleechee C 53.89 266 IAmb IAmb 20 57 00.4
comp=Z,18nm,1.2s
T35A Sooner Cattle 53.98 279 IAmb IAmb 20 57 01.2
comp=Z,22nm,1.1s
W57A Gilead 53.99 262 IAmb IAmb 20 57 02.3
comp=Z,16nm,1.2s
MVU Marysvale 53.99 294 P **P** **20 56 55.2 -1.5**
PV13 Radium Mtn., P 54.01 291 P **P** **20 56 56.5 -0.3**
PV13 IAmb IAmb 20 57 01.8
comp=Z,28nm,1.2s
SDCO Great Sand Dun 54.08 288 P **P** **20 56 54.5 -3.0**
baz=7.2
PSUT Pine Spring 54.12 296 P **P** **20 56 56.8 -0.8**
V48A Smith Brothers 54.13 269 IAmb IAmb 20 57 02.5
comp=Z,22nm,1.2s
KMSC Kings Mountain 54.14 264 P **P** **20 56 57.3 -0.2**
KMSC IAmb IAmb 20 57 03.4
comp=Z,23nm,1.1s
KMSC Kings Mountain 54.14 264 P **P** **20 56 56.3 -1.2**
baz=7.3,SNR=5.4
YERR Yerington 54.17 301 P **P** **20 56 57.6 -0.3**
S22A 4UR Ranch, Cre 54.22 289 IAmb IAmb 20 57 04.7
comp=Z,45nm,1.8s
S22A 4UR Ranch, Cre 54.22 289 P **P** **20 56 55.4 -3.0**
baz=7.1,SNR=11
U38A Gravette 54.23 277 IAmb IAmb 20 57 01.5
comp=Z,16nm,1.2s
LCAR Lake Charles 54.26 274 P **P** **20 56 58.5 +0.2**
LCAR IAmb IAmb 20 57 02.7
comp=Z,32nm,1.5s
HHAR Hobbs 54.34 276 IAmb IAmb 20 57 02.5
comp=Z,22nm,1.3s
R11A Troy Canyon, C 54.47 298 P **P** **20 56 59.8 -0.3**
R11A Troy Canyon, C 54.47 298 P **P** **20 56 58.6 -1.5**
baz=6.7,SNR=9.6
BIRD Birdtown, Kers 54.54 263 IAmb IAmb 20 57 06.5
comp=Z,24nm,1.2s
T25A Trinidad 54.58 287 P **P** **20 57 00.7 -0.2**
baz=7.2
NV11 Mina Array Sit 54.62 300 IAmb IAmb 20 57 15.1
comp=Z,30nm,1.9s
NVAR Mina Array Bea 54.64 300 P **P** **20 57 02.7 +1.3**
comp=Z,2.1nm,1.1s,baz=13,slow=4.8,SNR=8.9
NVAR LR LR 21 21 17.0
comp=Z,329nm,18.6s,baz=1.0,slow=37
comp=Z,2.1nm,1.1s
NVAR Mina Array Bea 54.64 300 P **P** **20 57 00.6 -0.7**
QUOK Quay 54.74 279 IAmb IAmb 20 57 06.3
comp=Z,43nm,1.3s
TUL1 Leonard 54.90 278 P **P** **20 57 03.2 +0.1**
TUL1 IAmb IAmb 20 57 07.2
comp=Z,20nm,1.1s
TUL1 Leonard 54.90 278 P **P** **20 57 01.7 -1.4**
baz=7.3
MVCO Mesa Verde 54.91 291 IAmb IAmb 20 57 20.3
comp=Z,23nm,1.1s
MVCO Mesa Verde 54.91 291 P **P** **20 57 02.8 -0.6**
baz=7.0
GOMU GeErMu 54.93 79 P **P** **20 57 02.4 -1.3**
GOMU pP sP 20 57 06.5 0.0
GOMU S **S** **21 04 51.8 +6.6**
GOMU pmax pmax
comp=Z,15nm,1.1s
GOMU pmax pmax
comp=Z,69nm,4.2s
GOMU LR LR
comp=Z,190nm,21.9s
GOMU LR LR
comp=Z,310nm,17.6s
GOMU LR LR
comp=Z,180nm,21.2s
JSC Jenkinsville 54.98 263 IAmb IAmb 20 57 09.5
comp=Z,13nm,1.0s
PLAL Pickwick Lake 55.01 270 P **P** **20 57 03.6 -0.2**
PLAL IAmb IAmb 20 57 08.1
comp=Z,25nm,1.6s
DEOK Depew 55.04 279 IAmb IAmb 20 57 08.4
comp=Z,72nm,1.6s
X51A Calhoun 55.08 267 IAmb IAmb 20 57 07.8
comp=Z,32nm,1.5s
ELIS Ellis County 55.13 282 IAmb IAmb 20 57 10.1
comp=Z,58nm,1.5s
WHAR Wooly Hollow 55.15 275 P **P** **20 57 04.6 -0.2**
WHAR IAmb IAmb 20 57 08.9
comp=Z,33nm,1.4s
NIL Nilore 55.19 101 P **P** **20 57 04.7 -0.5**
NIL Nilore 55.19 101 P **P** **20 57 04.7 -0.5**
NIL pmax pmax
comp=Z,12nm,1.1s
PRN Pahroc Range 55.35 297 P **P** **20 57 06.2 -0.3**
X48A Hartselle 55.43 269 P **P** **20 57 05.7 -1.2**
OXF Oxford 55.62 272 P **P** **20 57 09.5 +1.3**
baz=7.2
HNS HongShan 55.69 59 ⇓P **P** **20 57 09.4 +0.7**
HNS pmax pmax
comp=Z,29nm,1.4s
HNS LR LR
comp=Z,230nm,18.6s
HNS LR LR
comp=Z,190nm,15.2s
HNS LR LR
comp=Z,200nm,15.7s
Y52A Lilburn 55.69 266 P **P** **20 57 08.4 -0.3**
Y52A IAmb IAmb 20 57 13.4
comp=Z,25nm,1.4s
EIL Elat 55.72 141 LR LR 21 22 00.2
comp=Z,190nm,21.7s,baz=280,slow=37
TPNV Topopah Spring 55.92 298 P **P** **20 57 10.2 -0.3**
TPNV Topopah Spring 55.92 298 P **P** **20 57 10.3 -0.3**
TPNV pmax pmax
comp=Z,16nm,1.5s
TPNV Topopah Spring 55.92 298 P **P** **20 57 10.8 +0.2**
baz=6.6
LZH Lanzhou 55.95 70 *e* P **P** **20 57 11.0 +0.2**
LZH sP pwP 20 57 20.0 +3.3
LZH sS sS 21 05 04.0 +2.1
LZH pmax pmax
comp=Z,40nm,1.2s
LZH pmax pmax
comp=Z,280nm,4.4s
LZH LR LR
comp=Z,730nm,18.2s
LZH LR LR
comp=Z,420nm,15.8s
LZH LR LR
comp=Z,690nm,18.2s
MIAR Mount Ida 56.02 276 IAmb IAmb 20 57 16.3
comp=Z,30nm,1.3s
MIAR Mount Ida 56.02 276 P **P** **20 57 11.9 +0.7**
baz=7.2,SNR=8.7
U15A North Rim 56.06 294 IAmb IAmb 20 57 23.4
comp=Z,25nm,1.9s
GOGA Godfrey 56.08 265 P **P** **20 57 10.5 -1.0**

GOGA					IAmb	IAmb	20 57 16.0		
	comp=Z,20nm,1.4s								
GOGA	**Godfrey**	**56.08**	**265**		P	**P**	**20 57 10.5**	**-1.0**	
GOGA					pmax	pmax			
	comp=Z,20nm,1.4s								
GOGA	**Godfrey**	**56.08**	**265**		P	**P**	**20 57 13.0**	**+1.5**	
	baz=7.1								
X37A	**Clayton**	**56.17**	**277**		P	**P**	**20 57 11.8**	**-0.4**	
X37A					IAmb	IAmb	20 57 16.9		
	comp=Z,18nm,1.3s								
SHPR	**Sheep Range**	**56.25**	**297**		IAmb	IAmb	20 57 26.4		
	comp=Z,31nm,1.8s								
WMOK	**Wichita Mounta**	**56.38**	**281**		IAmb	IAmb	20 57 18.3		
	comp=Z,18nm,1.4s								
WMOK	**Wichita Mounta**	**56.38**	**281**		P	**P**	**20 57 14.8**	**+1.2**	
	baz=7.1,SNR=6.5								
FURC	**Furnace Creek,**	**56.45**	**299**		P	**P**	**20 57 15.2**	**+1.0**	
	baz=6.5								
CWC	**Cottonwood Cre**	**56.59**	**300**		P	**P**	**20 57 16.1**	**+0.8**	
	baz=6.4								
KSRS	**Korea Array**	**56.75**	**47**		P	**P**	**20 57 15.7**	**-0.6**	
	comp=Z,8.2nm,1.0s,baz=353,slow=6.8,SNR=36								
KSRS					LR	LR	21 22 29.8		
	comp=Z,90nm,20.6s,baz=0.0,slow=37								
	comp=Z,8.2nm,1.0s								
LRAL	**Lakeview Retre**	**56.82**	**269**		P	**P**	**20 57 17.9**	**+1.0**	
	baz=7.1								
WUAZ	**Wupatki**	**56.87**	**293**		IAmb	IAmb	20 57 32.0		
	comp=Z,22nm,1.4s								
WUAZ	**Wupatki**	**56.87**	**293**		P	**P**	**20 57 18.2**	**+0.9**	
	baz=6.7								
JSD	**Sado**	**56.90**	**37**		P	**P**	**20 57 16.3**	**-1.1**	
MPMC	**Manual Prospec**	**56.91**	**299**		P	**P**	**20 57 19.2**	**+1.5**	
	baz=6.4,SNR=12								
QSM	**Queen of Sheba**	**56.95**	**299**		IAmb	IAmb	20 57 34.8		
	comp=Z,29nm,1.3s								
ANMO	**Albuquerque**	**56.95**	**288**		LR	LR	21 22 34.5		
	comp=Z,2μm,18.2s,baz=18,slow=37								
ANMO	**Albuquerque**	**56.95**	**288**		P	**P**	**20 57 17.3**	**-0.7**	
ANMO	**Albuquerque**	**56.95**	**288**	*ce*	P	**P**	**20 57 19.9**	**+1.9**	
ANMO					pmax	pmax			
	comp=Z,10.0nm,1.6s								
ANMO	**Albuquerque**	**56.95**	**288**		P	**P**	**20 57 20.2**	**+2.2**	
	baz=6.9								
TIA	**Tai'an**	**57.09**	**57**	⇓	P	**P**	**20 57 18.7**	**0.0**	
TIA					pmax	pmax			
	comp=Z,31nm,1.1s								
TIA					LR	LR			
	comp=Z,81nm,8.2s								
TIA					LR	LR			
	comp=Z,170nm,12.4s								
TIA					LR	LR			
	comp=Z,170nm,14.9s								
KSCHJ	**Chungju**	**57.33**	**47**		IAmb	IAmb	20 57 20.9		
	comp=Z,21nm,1.1s								
TUQ	**Turquoise Moun**	**57.39**	**298**		P	**P**	**20 57 22.2**	**+1.3**	
	baz=6.5								
ISA	**Isabella, Lake**	**57.40**	**300**		IAmb	IAmb	20 57 35.2		
	comp=Z,24nm,1.8s								
ISA	**Isabella, Lake**	**57.40**	**300**		P	**P**	**20 57 23.6**	**+2.6**	
	baz=6.3								
MSTX	**Muleshoe**	**57.55**	**285**		P	**P**	**20 57 23.9**	**+1.8**	
	baz=7.0								
GSC	**Goldstone, Bar**	**57.60**	**298**		P	**P**	**20 57 25.4**	**+2.9**	
	baz=6.4								
TJN	**Taejon**	**57.78**	**48**		P	**P**	**20 57 22.5**	**-1.0**	
TJN	**Taejon**	**57.78**	**48**	*ce*	P	**P**	**20 57 22.9**	**-0.6**	
GMRC	**Granite Mounta**	**58.01**	**297**		P	**P**	**20 57 27.5**	**+2.2**	
	baz=6.5								
HEC	**Hector,Ludlow**	**58.02**	**298**		P	**P**	**20 57 26.4**	**+0.9**	
	baz=6.4								
EDW2	**Edwards Air Fo**	**58.13**	**300**		P	**P**	**20 57 25.5**	**-0.6**	
	baz=6.3								
PKM	**Mcpherson Peak**	**58.29**	**301**		P	**P**	**20 57 27.9**	**+0.5**	
	baz=6.2								
LYN	**LuoYang**	**58.31**	**62**	⇑	*i*P	**P**	**20 57 27.5**	**+0.2**	
LYN					pmax	pmax			
	comp=Z,10.0nm,1.2s								
PDMCI	**Parker Dam,Lak**	**58.34**	**296**		P	**P**	**20 57 29.0**	**+1.5**	
	baz=6.5								
MAJO	**Matsushiro**	**58.38**	**37**		P	**P**	**20 57 26.2**	**-1.6**	
MAJO	**Matsushiro**	**58.38**	**37**	*i*	P	**P**	**20 57 26.3**	**-1.6**	
MAJO					pmax	pmax			
	comp=Z,27nm,1.3s								
MJAR	**Matsushiro Arr**	**58.38**	**37**		P	**P**	**20 57 27.0**	**-0.8**	
	comp=Z,16nm,1.1s,baz=5.9,slow=6.5,SNR=34								
MJAR					LR	LR	21 22 18.1		
	comp=Z,110nm,20.7s,baz=6.0,slow=36								
	comp=Z,16nm,1.1s								
MJAR	**Matsushiro Arr**	**58.38**	**37**		P	**P**	**20 57 27.0**	**-0.8**	
XAN	**Xi'an**	**58.48**	**66**	⇑	P	**P**	**20 57 28.8**	**+0.2**	
XAN					pP	pwP	20 57 36.4	+2.0	
XAN					sP	sP	20 57 41.0	+10	
XAN					PP	**PP**	**20 59 39.8**	**+2.3**	
XAN					S	**S**	**21 05 31.3**	**-0.3**	
XAN					sS	sS	21 05 41.8	+6.9	
XAN					SS	**SS**	**21 09 26.3**	**+3.1**	
XAN					pmax	pmax			
	comp=Z,19nm,1.1s								
XAN					pmax	pmax			
	comp=Z,310nm,4.6s								
XAN					LR	LR			
	comp=Z,230nm,17.0s								
XAN					LR	LR			
	comp=Z,200nm,15.6s								
XAN					LR	LR			
	comp=Z,340nm,16.8s								
IRM	**Iron Mountain**	**58.58**	**297**		P	**P**	**20 57 30.3**	**+1.1**	
	baz=6.4								
BFSC	**Mount Baldy Ra**	**58.73**	**299**		P	**P**	**20 57 32.3**	**+1.9**	
	baz=6.3								
BELC	**Belle Mtn. Jos**	**58.81**	**298**		P	**P**	**20 57 32.7**	**+1.7**	
	baz=6.4								
WHTX	**Lake Whitney,**	**58.95**	**279**		P	**P**	**20 57 29.8**	**-2.0**	
	baz=7.0								
BC3	**Big Chuckawall**	**59.11**	**297**		P	**P**	**20 57 31.8**	**-1.2**	
	baz=6.4								
PFO	**Pinyon Flats O**	**59.24**	**298**		LR	LR	21 24 01.8		
	comp=Z,305nm,21.6s,baz=359,slow=37								
PFO	**Pinyon Flats O**	**59.24**	**298**		P	**P**	**20 57 32.0**	**-2.0**	
	baz=6.3								
TPFO	**Pinon Flats**	**59.25**	**298**		P	**P**	**20 57 32.0**	**-2.0**	
	baz=6.3								
MONP2	**Monument Peak**	**59.95**	**298**		P	**P**	**20 57 38.7**	**-0.2**	
	baz=6.3								
TUC	**Tucson**	**59.99**	**292**		P	**P**	**20 57 40.0**	**+0.9**	
TUC					IAmb	IAmb	20 57 51.7		
	comp=Z,14nm,1.2s								
TUC	**Tucson**	**59.99**	**292**		P	**P**	**20 57 40.0**	**+0.9**	
TUC					pmax	pmax			
	comp=Z,14nm,1.2s								
TUC	**Tucson**	**59.99**	**292**		P	**P**	**20 57 37.6**	**-1.5**	
	baz=6.5								
JCT	**Junction City**	**60.70**	**281**		P	**P**	**20 57 46.2**	**+2.4**	
	baz=6.8,SNR=8.3								
319A	**Douglas**	**60.77**	**291**		IAmb	IAmb	20 57 49.4		
	comp=Z,28nm,1.4s								
JMN	**Monobe**	**60.89**	**42**		P	**P**	**20 57 44.5**	**-0.6**	
CD2	**Chengdu**	**61.07**	**71**		P	**P**	**20 57 44.8**	**-1.6**	
CD2					S	**S**	**21 06 04.1**	**-0.9**	
CD2					LR	LR			
	comp=Z,450nm,15.7s								
CD2					LR	LR			
	comp=Z,430nm,18.6s								
CD2					LR	LR			
	comp=Z,510nm,17.7s								
TAM	**Tamanrasset**	**61.34**	**172**		IAmb	IAmb	20 57 46.9		
	comp=Z,22nm,1.9s								
NJ2	**Nanjing**	**61.37**	**56**	*eP*		**P**	**20 57 48.3**	**0.0**	
NJ2					pmax	pmax			
	comp=Z,9.0nm,0.6s								
DANN	**Dangsing**	**61.53**	**91**	*eP*		**P**	**20 57 50.3**	**+0.4**	
	comp=Z,248nm,1.1s								
JHJ	**Hachijo jima 2**	**61.89**	**36**		LR	LR	21 25 09.9		
	comp=Z,104nm,20.1s,baz=32,slow=37								
GKN	**Gorkha**	**61.97**	**90**	*eP*		**P**	**20 57 52.7**	**+0.1**	
	comp=Z,245nm,1.1s								
GUN	**Gumba**	**62.19**	**89**	*eP*		**P**	**20 57 54.7**	**+0.3**	
	comp=Z,184nm,1.1s								
TX31	**Lajitas Ar. Si**	**62.23**	**285**		P	**P**	**20 57 53.8**	**-0.5**	
TX32	**Lajitas Array**	**62.23**	**285**		IAmb	IAmb	20 57 58.6		
	comp=Z,13nm,1.5s								
TXAR	**Lajitas Array**	**62.23**	**285**		P	**P**	**20 57 55.8**	**+1.5**	
	comp=Z,2.2nm,1.1s,baz=21,slow=5.3,SNR=17								
TXAR					LR	LR	21 25 45.6		
	comp=Z,1μm,19.1s,baz=11,slow=37								
	comp=Z,2.2nm,1.1s								
TXAR	**Lajitas Array**	**62.23**	**285**		P	**P**	**20 57 54.5**	**+0.2**	
KKN	**Kakani**	**62.25**	**90**	*eP*		**P**	**20 57 55.0**	**+0.4**	
	comp=Z,100nm,1.3s								
DMN	**Daman**	**62.41**	**90**	*eP*		**P**	**20 57 56.1**	**+0.4**	
WHN	**Wuhan**	**62.45**	**61**	⇑	P	**P**	**20 57 55.7**	**+0.1**	
WHN					sP	**pwP**	**20 58 03.0**	**+1.4**	
PKIN	**Phulchoki**	**62.47**	**89**	*eP*		**P**	**20 57 56.1**	**0.0**	
	comp=Z,116nm,1.1s								
JIRN	**Jiri**	**62.47**	**89**	*eP*		**P**	**20 57 56.7**	**+0.4**	
	comp=Z,193nm,1.2s								
PKI	**Pulchoki**	**62.48**	**89**	*eP*		**P**	**20 57 56.1**	**-0.2**	
	comp=Z,145nm,1.2s								
RAYN	**Ar Rayn**	**62.60**	**130**		P	**P**	**20 57 56.4**	**-0.4**	
RAYN					IAmb	IAmb	20 58 03.4		
	comp=Z,15nm,1.3s								
RAYN	**Ar Rayn**	**62.60**	**130**		P	**P**	**20 57 56.4**	**-0.4**	
RAYN					pmax	pmax			
	comp=Z,15nm,1.3s								
ODAN	**Odare**	**63.39**	**88**	*eP*		**P**	**20 58 02.4**	**+0.2**	
	comp=Z,61nm,1.4s								
WSAR	**Wadi Sarin**	**64.04**	**117**		LR	LR	21 31 03.7		
	comp=Z,228nm,20.3s,baz=7.0,slow=41								
PZH	**PanZhiHua**	**65.23**	**73**		P	**P**	**20 58 14.1**	**-0.1**	
PZH					S	**S**	**21 07 01.3**	**+4.0**	
PZH					pmax	pmax			
	comp=Z,30nm,1.3s								
PZH					pmax	pmax			
	comp=Z,160nm,5.9s								
PZH					LR	LR			
	comp=Z,690nm,24.7s								
PZH					LR	LR			
	comp=Z,580nm,23.3s								
PZH					LR	LR			
	comp=Z,1μm,23.3s								
GYA	**Guiyang**	**65.77**	**69**	⇓	*i*P	**P**	**20 58 18.1**	**+0.5**	
GYA					PP	**PP**	**21 00 44.6**	**+2.7**	
GYA					S	**S**	**21 07 10.1**	**+6.3**	
GYA					pmax	pmax			
	comp=Z,52nm,1.2s								
GYA					pmax	pmax			
	comp=Z,200nm,3.5s								
GYA					LR	LR			
	comp=Z,250nm,15.6s								
GYA					LR	LR			
	comp=Z,190nm,13.5s								
GYA					LR	LR			
	comp=Z,280nm,20.2s								
KMI	**Kunming**	**66.70**	**73**	⇓	P	**P**	**20 58 23.1**	**-0.6**	
KMI					S	**S**	**21 07 15.1**	**-0.3**	
KMI					pmax	pmax			
	comp=Z,19nm,1.8s								
KMI					pmax	pmax			
	comp=Z,130nm,5.2s								
KMI					LR	LR			
	comp=Z,490nm,18.3s								
KMI					LR	LR			
	comp=Z,100nm,12.7s								
KMI					LR	LR			
	comp=Z,590nm,24.5s								
JCJ	**Chichijima**	**68.02**	**34**		LR	LR	21 29 07.2		
	comp=Z,32nm,20.9s,baz=330,slow=37								
LPIG	**La Paz**	**68.07**	**291**		LR	LR	21 29 48.8		
	comp=Z,773nm,18.3s,baz=16,slow=37								
SJG	**San Juan**	**69.45**	**246**		LR	LR	21 28 06.4		
	comp=Z,78nm,21.7s,baz=52,slow=35								
KOWA	**Kowa**	**69.54**	**182**		P	**P**	**20 58 41.8**	**+0.4**	
KOWA					IAmb	IAmb	20 58 44.4		
	comp=Z,17nm,1.3s								
TOA0	**Torodi Ar. Sit**	**70.89**	**176**		IAmb	IAmb	20 58 52.1		
	comp=Z,25nm,1.4s								
TORD	**Torodi Ar. Bea**	**70.89**	**176**		P	**P**	**20 58 50.7**	**+1.1**	
	comp=Z,6.6nm,1.1s,baz=351,slow=4.9,SNR=24								
TORD					LR	LR	21 29 59.1		
	comp=Z,106nm,20.5s,baz=206,slow=36								
	comp=Z,6.6nm,1.1s								
TORD	**Torodi Ar. Bea**	**70.89**	**176**		IAmb	IAmb	20 58 52.1		
	comp=Z,19nm,1.4s								
CRAI	**Chiangrai**	**71.30**	**76**		IAmb	IAmb	20 58 52.7		
	comp=Z,21nm,1.2s								
HYBB	**Hyderabad (bro**	**71.79**	**98**	*eP*		**P**	**20 58 54.2**	**-0.9**	
HYBB				*ePcP*		**PcP**	**20 59 13.7**	**-0.4**	
CM31	**Chiang Mai Arr**	**72.91**	**77**		P	**P**	**20 59 00.6**	**-1.2**	
CMAR	**Chiang Mai Arr**	**72.91**	**77**		P	**P**	**20 59 01.1**	**-0.5**	
	comp=Z,25nm,1.0s,baz=347,slow=7.1,SNR=88								
CMAR					LR	LR	21 33 41.1		
	comp=Z,274nm,21.2s,baz=355,slow=38								
	comp=Z,25nm,1.0s								
CMAR	**Chiang Mai Arr**	**72.91**	**77**	*i*	P	**P**	**20 59 01.2**	**-0.5**	
CMAR					pmax	pmax			
	comp=Z,24nm,1.0s								
CMIG	**Matias Romero**	**73.42**	**275**		LR	LR	21 36 25.5		
	comp=Z,136nm,18.8s,baz=356,slow=40								
QIZ	**Qiongzhong**	**73.43**	**66**		P	**P**	**20 59 04.9**	**+0.1**	
QIZ					S	**S**	**21 08 33.0**	**-0.9**	
QIZ					pmax	pmax			
	comp=Z,17nm,1.5s								
QIZ					LR	LR			
	comp=Z,190nm,13.2s								
QIZ					LR	LR			
	comp=Z,190nm,18.1s								
QIZ					LR	LR			
	comp=Z,250nm,18.6s								
ATD	**Arta Tunnel**	**74.28**	**134**		LR	LR	21 34 14.6		
	comp=Z,91nm,18.9s,baz=357,slow=38								
UBPT	**Khong Chiam**	**76.71**	**71**		P	**P**	**20 59 22.3**	**-1.4**	
BAUV	**El Baul**	**78.70**	**247**		P	**P**	**20 59 33.6**	**-1.2**	
PALK	**Pallekele**	**82.04**	**97**		LR	LR	21 41 31.8		
	comp=Z,234nm,18.7s,baz=89,slow=40								
PALK	**Pallekele**	**82.04**	**97**		P	**P**	**20 59 52.1**	**-0.7**	
PALK	**Pallekele**	**82.04**	**97**		P	**P**	**20 59 52.2**	**-0.7**	
PALK					pmax	pmax			
	comp=Z,65nm,1.4s								
ROSC	**El Rosal**	**83.38**	**253**		LR	LR	21 39 15.7		
	comp=Z,84nm,18.9s,baz=44,slow=37								
BOAV	**Boa Vista**	**84.47**	**239**		P	**P**	**21 00 05.6**	**+0.3**	
BOAV					IAmb	IAmb	21 00 16.7		
	comp=Z,37nm,1.5s								
MBAR	**Mbarara**	**85.50**	**147**		LR	LR	21 41 11.0		
	comp=Z,68nm,18.3s,baz=346,slow=38								
MBAR	**Mbarara**	**85.50**	**147**	*ceP*		**P**	**21 00 15.1**	**+4.4**	
MBAR					pmax	pmax			
	comp=Z,5.0nm,1.3s								
KMBO	**Kilima Mbogo**	**86.42**	**141**		LR	LR	21 40 06.3		
	comp=Z,57nm,20.9s,baz=87,slow=36								
KMBO	**Kilima Mbogo**	**86.42**	**141**	*i*	P	P	21 00 26.2	+11	
KMBO					pmax	pmax			
	comp=Z,2.0nm,0.9s								
IPM	**Ipoh**	**86.94**	**77**		P	**P**	**21 00 15.5**	**-2.2**	
OTAV	**Otavalo**	**88.35**	**257**		P	**P**	**21 00 22.2**	**-2.7**	
OTAV	**Otavalo**	**88.35**	**257**		P	**P**	**21 00 22.2**	**-2.7**	
OTAV					pmax	pmax			
	comp=Z,25nm,1.5s								
PSI	**Prapat**	**88.38**	**79**		LR	LR	21 43 44.1		
	comp=Z,105nm,18.2s,baz=330,slow=38								
RCBR	**Riachuelo**	**90.75**	**214**		LR	LR	21 33 48.3		
	comp=Z,72nm,21.5s,baz=136,slow=30								
KSM	**Kuching**	**90.84**	**68**		P	**P**	**21 00 34.2**	**-1.8**	
KSM					IAmb	IAmb	21 00 39.1		
	comp=Z,8.9nm,0.9s								
ATAH	**Atahualpa**	**95.63**	**256**		LR	LR	21 44 38.2		
	comp=Z,126nm,22.0s,baz=34,slow=36								
LSZ	**Lusaka**	**99.92**	**151**		LR	LR	21 51 05.1		
	comp=Z,50nm,18.0s,baz=5.0,slow=38								
ASAR	**Alice Springs**	**117.80**	**46**		PKP	**PKiKP**	**21 06 18.0**	**-0.6**	
	comp=Z,1.0nm,1.2s,baz=264,slow=3.4,SNR=4.7								
PMSA	**Palmer Station**	**151.32**	**232**		PKPbc	**PKiKP**	**21 07 26.1**	**+1.2**	
	comp=Z,3.2nm,0.8s,baz=81,slow=3.0,SNR=2.3								
MAW	**Mawson**	**154.33**	**127**		PKPbc	**PKiKP**	**21 07 31.3**	**+0.3**	
	comp=Z,4.6nm,1.0s,baz=313,slow=2.8,SNR=6.2								
SNAA	**Sanae**	**155.50**	**181**		PKPab	**PKPab**	**21 07 52.4**	**+2.1**	
TROLL	**Troll, Antarti**	**155.85**	**177**		PKPab	**PKPab**	**21 07 54.0**	**+2.1**	

WEL 12 20:53:30.5±0.7, 32°S±7° × 17°9E±1°5, h33km, M4.4/14, mB5.0/13, ML4.7/19, MLv4.5/14, Mw(mB)4.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.79**	**38**	S		S	Sn	20 55 07.9	-2.0
MXZ	**Matakaoa Point**	**5.36**	**189**	P		P	Pn	20 54 50.9	+2.8
MXZ				S		S	Sn	20 55 50.1	+1.5
WMGZ	**Waiomatatini S**	**5.60**	**188**	P		P	Pn	20 54 53.6	+2.2
WMGZ				S		S	Sn	20 55 56.6	+2.0
HAZ	**Te Kaha**	**5.63**	**193**	P		P	Pn	20 54 53.4	+1.5
HAZ				S		S	Sn	20 55 58.6	+3.2
PKGZ	**Pakihiroa**	**5.71**	**190**	P		P	Pn	20 54 53.7	+0.6
PKGZ				S		S	Sn	20 56 00.0	+2.5
RUGZ	**Raukumara Rang**	**5.86**	**193**	P		P	Pn	20 54 55.7	+0.6
RUGZ				S		S	Sn	20 56 00.5	-0.7
PUZ	**Puketiti**	**5.87**	**189**	P		P	Pn	20 54 56.4	+1.3
PUZ				S		S	Sn	20 56 01.6	+0.4
TWGZ	**Tauwhareparae**	**6.01**	**191**	P		P	Pn	20 54 59.4	+2.3
TWGZ				S		S	Sn	20 56 06.2	+1.4
MWZ	**Matawai**	**6.24**	**194**	P		P	Pn	20 55 02.1	+1.8
MWZ				S		S	Sn	20 56 09.3	-1.2
URZ	**Urewera**	**6.26**	**197**	P		P	Pn	20 55 01.8	+1.3
URZ				S		S	Sn	20 56 11.5	+0.6
CNGZ	**Carnagh Statio**	**6.28**	**188**	P		P	Pn	20 55 01.6	+0.9
TKGZ	**Te Karaka**	**6.29**	**191**	P		P	Pn	20 55 01.4	+0.6
TKGZ				S		S	Sn	20 56 10.7	-0.8
MKRZ	**Makatiti**	**6.33**	**201**	P		P	Pn	20 54 59.9	-1.6
RAGZ	**Rawiri**	**6.42**	**194**	P		P	Pn	20 55 03.6	+0.8
RIGZ	**Rimuhau**	**6.56**	**191**	P		P	Pn	20 55 05.0	+0.4
RIGZ				S		S	Sn	20 56 16.5	-1.8
SNGZ	**Shannon Statio**	**6.71**	**194**	P		P	Pn	20 55 07.0	+0.2
SNGZ				S		S	Sn	20 56 21.8	-0.2
MTHZ	**Maungataniwha**	**6.89**	**197**	P		P	Pn	20 55 09.3	+0.1
MTHZ				S		S	Sn	20 56 26.1	-0.4
MHGZ	**Mahia Peninsul**	**6.98**	**189**	P		P	Pn	20 55 10.0	-0.4
ARHZ	**Aropaoanui**	**7.25**	**195**	P		P	Pn	20 55 13.2	-0.8
ARHZ				S		S	Sn	20 56 34.3	-0.8
BKZ	**Black Stump Fm**	**7.28**	**198**	P		P	Pn	20 55 14.5	0.0
NTVZ	**North Tongarir**	**7.46**	**203**	P		P	Pn	20 55 17.7	+0.6
TMVZ	**Te Maari**	**7.46**	**203**	P		P	Pn	20 55 17.6	+0.5
OTVZ	**Oturere**	**7.52**	**203**	P		P	Pn	20 55 16.2	-1.7
KWHZ	**Kaweka Forest**	**7.54**	**198**	P		P	Pn	20 55 16.8	-1.3
KWHZ				S		S	Sn	20 56 39.2	-3.2
FWVZ	**Far West T-bar**	**7.64**	**203**	P		P	Pn	20 55 19.4	-0.3
WHVZ	**Whangaehu Hut**	**7.65**	**203**	P		P	Pn	20 55 19.5	-0.3
BHHZ	**Black Hill Sta**	**7.70**	**200**	P		P	Pn	20 55 18.2	-2.1
MOVZ	**Moawhango**	**7.71**	**201**	P		P	Pn	20 55 18.7	-1.8
PXZ	**Pawanui**	**8.01**	**194**	P		P	Pn	20 55 18.3	-6.2

SOME **12** *20:56:39.8, 40°.73N×78°.25E, h10km*
KRNET **12** *20:56:40.0±0.1, 40°.59N×78°.39E, mb3.5*
NNC **12** *20:56:41.4±1.4, 40°.75N×78°.28E, h0km, mb4.2, mpv3.8,*
Error ellipse: s-maj=9.3km s-min=6.7km az=164.0

ISC 12 20:56:36.9±2.4, 40°.61N±0°.09×78°.22E±0°.04, h7km±18km, n45, σ1°34/66, 12C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.88**	**4**	⇑	*i*P		**Pg**	**20 57 14.4**	**+1.5**
	baz=0.0								
PRZ				⇑	*i*S		**Sg**	**20 57 39.6**	**+2.3**
	baz=0.0								
ULHL	**Ulahol**	**2.21**	**318**	⇓	*i*P		**Pg**	**20 57 20.1**	**+0.8**
	baz=16								
ULHL				⇓	*i*S		**Sg**	**20 57 49.3**	**+1.4**
	baz=16								
SATY	**Saty**	**2.45**	**3**	*eP*			**Pg**	**20 57 24.8**	**+0.9**
	79nm,0.5s								
SATY				*eS*			**Sg**	**20 57 57.5**	**+1.7**
	138nm,0.4s								
SATY	**Saty**	**2.45**	**3**	Pg			**Pg**	**20 57 24.8**	**+0.9**
	79nm,0.5s								
SATY				Lg			Lg	20 57 57.5	
	138nm,0.4s								
BOOM	**Boomskoye usch**	**2.54**	**318**	⇑	*e*P		**Pg**	**20 57 24.8**	**-0.8**
	baz=17								
BOOM				⇑	*i*S		**Sg**	**20 57 57.3**	**-1.2**
	baz=17								
UZB	**Uzynbulak**	**2.61**	**13**	*eP*			**Pg**	**20 57 26.1**	**-0.7**
	7.5nm,0.5s								
UZB				*eS*			**Sg**	**20 57 59.5**	**-1.1**
	96nm,0.4s								
UZB	**Uzynbulak**	**2.61**	**13**	Pg			**Pg**	**20 57 26.1**	**-0.7**
	7.5nm,0.5s								
UZB				Lg			Lg	20 57 59.8	
	96nm,0.4s								
MDOK	**Medeo**	**2.70**	**342**	*eP*			**Pg**	**20 57 29.1**	**+0.5**
	46nm,0.4s								
MDOK				*eS*			**Sg**	**20 58 04.3**	**+0.7**
	119nm,0.7s								
MDOK	**Medeo**	**2.70**	**342**	Pg			**Pg**	**20 57 28.6**	**0.0**
	30nm,0.5s								
MDOK				Pg			**Pb**	**20 57 28.8**	**+3.1**
	46nm,0.4s								
MDOK				Lg			Lg	20 58 04.3	
	119nm,0.7s								
MDOK				Lg			Lg	20 58 04.6	
	107nm,0.6s								
SHLS	**Shalkode**	**2.71**	**20**	*eP*			**Pg**	**20 57 28.9**	**0.0**
	6.0nm,0.3s								
SHLS				*eS*			**Sg**	**20 58 04.4**	**+0.4**
	51nm,0.5s								
SHLS	**Shalkode**	**2.71**	**20**	Pg			**Pg**	**20 57 28.9**	**0.0**
	6.0nm,0.3s								
SHLS				Lg			Lg	20 58 04.4	
	51nm,0.5s								
AAA	**Alma-Ata**	**2.77**	**340**	*eP*			**Pg**	**20 57 30.8**	**+0.7**

81nm,0.3s
AAK Ala-Archa 3.45 307 P Pg 20 57 43.3 +0.3
SNR=12
CHMS Chumysh 3.52 314 P Pg 20 57 44.5 +0.1
SNR=12
CHMS Chumysh 3.52 314 ⇑Pg Pg 20 57 44.1 -0.3
23nm,0.8s
CHMS ⇑Lg Lg 20 58 31.2
53nm,0.8s
KUU Kurty 3.57 338 *eP* **Pg 20 57 43.8 -1.4**
9.0nm,0.8s
KUU *eS* **Sg 20 58 29.3 -2.1**
33nm,0.8s
KUU Kurty 3.57 338 Pg **Pb 20 57 42.3 +2.0**
5.6nm,0.3s
KUU Lg Lg 20 58 27.6
33nm,0.8s
ARXS Arharly 3.62 356 *eP* **Pg 20 57 44.8 -1.4**
13nm,0.4s
ARXS *eS* **Sg 20 58 31.4 -1.6**
46nm,0.7s
ARXS Arharly 3.62 356 Pg **Pg 20 57 44.8 -1.4**
13nm,0.4s
ARXS Lg Lg 20 58 31.4
46nm,0.7s
KRBS Karabastau 3.62 329 *eP* **Pg 20 57 45.0 -1.2**
9.5nm,0.3s
KRBS *eS* **Sg 20 58 31.7 -1.3**
48nm,0.8s
KRBS Karabastau 3.62 329 Pg **Pg 20 57 45.0 -1.2**
9.5nm,0.3s
KRBS Lg Lg 20 58 31.7
48nm,0.8s
AML Almayashu 3.73 296 P **Pg 20 57 49.6 +1.3**
SNR=9.4
USP Ospenovka 3.84 315 P **Pg 20 57 49.9 -0.6**
SNR=6.3
EKS2 Erkin-Say 3.91 303 P **Pg 20 57 52.4 +0.6**
SNR=6.2
BTLS Baital 5.39 327 *eP* **Pg 20 58 16.7 -3.4**
2.8nm,0.5s
BTLS *eS* **Sg 20 59 26.1 -3.8**
7.3nm,0.8s
BTLS Baital 5.39 327 Pg **Pg 20 58 16.7 -3.4**
2.8nm,0.5s
BTLS Lg Lg 20 59 26.1
7.3nm,0.8s
KK31 Karatay Array 6.27 296 Pg **Pg 20 58 35.1 -1.8**
1.9nm,0.7s,baz=105,slow=16,SNR=13
KK31 ⇓Lg Lg 20 59 59.1
1.9nm,0.5s,baz=110,slow=26,SNR=7.7

IDC 12 21:02:29.4±6.5, 24°58N×143°27E, h0km, mb3.7/2, mbtmp3.6/3, ML2.7/1, Error ellipse: s-maj=338.2km s-min=37.9km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**12.69**	**341**	Pn	Pn	21 05 30.9	-0.3
	baz=147,slow=14,SNR=4.7						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**45.10**	**192**	P	P	21 10 46.6	-1.0
	0.7nm,0.3s,baz=12,slow=8.3,SNR=43						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**48.81**	**191**	P	P	21 11 17.6	+1.0
	0.1nm,0.3s,baz=19,slow=12,SNR=5.8						
	0.1nm,0.3s						

*IDC **12** 21:05:28.6±1.2, 14°.45S×76°.19W, h0km, mb3.9/5, mbtmp4.0/9, ML3.7/4, MS3.3/10, Error ellipse: s-maj=41.6km s-min=15.0km az=61.0*
*ARE **12** 21:05:29±2.3, 14°.56S±0°.09×76°.3W±0°.1, h10km±5km, Error ellipse: s-maj=18.9km s-min=8.4km az=55.0*
*NEIC **12** 21:05:31.0±2.3, 14°.58S±0°.09×76°.6W±0°.1, h35km±7km, mb4.4/10, ML4.4(ARE), Error ellipse: s-maj=18.7km s-min=9.3km az=52.0*

ISC 12 21:05:30.3±0.8, 14°.52S±0°.09×76°.5W±0°.1, h23km, n62, σ1§38/48, mb4.4/9, MS3.6/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.55**	**352**	Pn	**Pn**	**21 06 12.0**	**+1.7**
	19nm,0.3s,baz=204,slow=18,SNR=15						
NNA				Lg	Lg	21 06 47.6	
	54nm,0.3s,baz=274,slow=14,SNR=9.7						
NNA				LR	LR	21 07 20.5	
	comp=Z,311nm,18.4s,baz=135,slow=44						
	34nm,0.3s						
NNA	**Nana**	**2.55**	**352**	Pn	**Pn**	**21 06 10.3**	**0.0**
PB12	**IPOC Station P**	**7.15**	**126**	Pn	**Pn**	**21 07 11.7**	**-1.9**
PB18	**Visviri**	**7.37**	**115**	Pn	**Pn**	**21 07 16.8**	**-0.2**
ATAH	**Atahualpa**	**7.58**	**345**	Pn	**Pn**	**21 07 21.3**	**+1.4**
	1.0nm,0.3s,baz=104,slow=11,SNR=8.2						
ATAH				LR	LR	21 10 22.3	
	comp=Z,103nm,20.4s,baz=180,slow=39						
	3.1nm,0.5s						
PB16	**IPOC Station P**	**7.67**	**121**		**Pn**	**21 07 22.1**	**+0.9**
CZSB	**Cruzeiro do Su**	**7.69**	**29**	Pn	**Pn**	**21 07 23.0**	**+2.0**
LPAZ	**La Paz**	**8.22**	**103**	Pn	**Pn**	**21 07 31.0**	**+2.2**
	3.7nm,0.3s,baz=280,slow=5.3,SNR=54						
LPAZ				LR	LR	21 11 14.8	
	comp=Z,165nm,18.3s,baz=286,slow=43						
LPAZ	**La Paz**	**8.22**	**103**	Pn	**Pn**	**21 07 31.3**	**+2.5**
TA01	**Diego Aracena**	**8.48**	**136**		**Pn**	**21 07 30.6**	**-1.2**
GO01	**Chusmiza**	**8.63**	**127**	Pn	**Pn**	**21 07 33.3**	**-0.9**
PB02	**IPOC Station P**	**9.20**	**138**		**Pn**	**21 07 41.3**	**-0.5**
PB01	**IPOC Station P**	**9.28**	**135**		**Pn**	**21 07 42.5**	**-0.3**
PB07	**IPOC Station P**	**9.51**	**140**	Pn	**Pn**	**21 07 45.3**	**-0.7**
PB04	**IPOC Station P**	**9.81**	**143**	Pn	**Pn**	**21 07 49.2**	**-0.9**
PB09	**IPOC Station P**	**9.97**	**138**		**Pn**	**21 07 52.1**	**-0.2**
PB06	**IPOC Station P**	**10.43**	**142**	Pn	**Pn**	**21 07 57.8**	**-0.9**
MCRA	**Macar, Loja**	**10.66**	**341**	Pn	**Pn**	**21 08 02.1**	**+0.4**
LVC	**Limon Verde**	**10.77**	**139**	Pn	**Pn**	**21 08 04.0**	**+0.6**
	0.9nm,0.3s,baz=320,slow=11,SNR=7.8						
LVC				LR	LR	21 11 35.1	
	comp=Z,69nm,21.5s,baz=299,slow=34						
	5.8nm,0.6s						
LVC	**Limon Verde**	**10.77**	**139**		**Pn**	**21 08 02.8**	**-0.6**
PB15	**IPOC Station P**	**10.88**	**144**		**Pn**	**21 08 04.3**	**-0.5**
ETMB	**Extrema**	**11.06**	**66**	Pn	**Pn**	**21 08 07.2**	**+0.1**
BOSC	**San Juan Bosco**	**11.48**	**350**		**Pn**	**21 08 12.8**	**-0.2**
GO02	**Mina Guanaco**	**12.40**	**150**	Pn	**Pn**	**21 08 25.2**	**-0.5**
CHSH	**Refugio Sur-Vo**	**13.18**	**349**	Pn	**Pn**	**21 08 37.4**	**+0.9**
PORT	**Chimborazo Vol**	**13.18**	**350**	Pn	**Pn**	**21 08 35.5**	**-1.1**
SLOR	**San Lorenzo -**	**13.85**	**351**		**P**	**21 08 52.5**	**-1.5**
SAML	**Samuel**	**14.13**	**68**	Pn	**Pn**	**21 08 47.7**	**-1.4**
IMBA	**Imbabura, San**	**14.80**	**353**	Pn	**Pn**	**21 08 55.6**	**-3.1**
SIV	**San Ignacio**	**14.92**	**98**	Pn	**Pn**	**21 08 56.9**	**-3.0**
	baz=242,slow=16,SNR=2.4						
SIV				LR	LR	21 15 06.6	
	comp=Z,310nm,21.7s,baz=292,slow=39						
	1.1nm,0.4s						
VILB	**Vilhena**	**15.88**	**86**	Pn	**Pn**	**21 09 11.6**	**-0.9**
VILB				IAmb	IAmb	21 09 31.0	
	comp=Z,23nm,1.3s						
H03N1	**Juan Fernandez**	**18.96**	**186**	T	T	21 29 25.9	
	baz=8.3,slow=75,SNR=644						
H03N2	**Juan Fernandez**	**18.97**	**186**	T	T	21 29 22.0	
	baz=8.3,slow=75,SNR=782						
H03N3	**Juan Fernandez**	**18.98**	**186**	T	T	21 29 23.4	
	baz=8.3,slow=75,SNR=639						
ROSC	**El Rosal**	**19.36**	**6**	LR	LR	21 18 48.2	
	comp=Z,96nm,19.2s,baz=224,slow=42						
CPUP	**Villa Florida**	**21.40**	**126**	P	**P**	**21 10 15.6**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=330,slow=10.0,SNR=4.9						
CPUP				LR	LR	21 20 07.1	
	comp=Z,60nm,19.1s,baz=276,slow=41						
	comp=Z,1.5nm,0.3s						
BOAV	**Boa Vista**	**23.06**	**44**	P	**P**	**21 10 33.8**	**-0.5**
BOAV				IAmb	IAmb	21 10 37.1	
	comp=Z,3.2nm,0.9s						
ITQB	**Itaqui**	**23.71**	**133**	P	**P**	**21 10 40.5**	**-0.1**
ITQB				IAmb	IAmb	21 10 43.5	
	comp=Z,20nm,1.1s						
SDV	**Santo Domingo**	**23.97**	**14**	P	**P**	**21 10 44.7**	**+1.4**
	comp=Z,5.4nm,0.4s,baz=236,slow=7.9,SNR=3.2						
	comp=Z,5.4nm,0.4s						
BDFB	**Brasilia**	**27.48**	**96**	LR	LR	21 22 48.7	
	comp=Z,166nm,19.3s,baz=282,slow=38						
SOR	**Soroa**	**37.63**	**350**	P	**P**	**21 12 44.0**	**+0.4**
SOR				IAmb	IAmb	21 12 53.4	
	comp=Z,24nm,1.2s						
545A	**Edgard**	**46.33**	**343**	P	**P**	**21 13 52.2**	**-2.3**
TXAR	**Lajitas Array**	**50.90**	**329**	P	**P**	**21 14 32.8**	**+2.8**
	comp=Z,0.5nm,0.6s,baz=146,slow=9.0,SNR=7.2						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**50.90**	**329**	P	**P**	**21 14 28.8**	**-1.1**
TX31	**Lajitas Ar. Si**	**50.91**	**329**	P	**P**	**21 14 28.9**	**-1.0**
TX31				IAmb	IAmb	21 14 53.6	
	comp=Z,3.1nm,0.8s						
TX32	**Lajitas Array**	**50.91**	**329**	P	**P**	**21 14 28.8**	**-1.1**
NVAR	**Mina Array Bea**	**65.64**	**325**	P	**P**	**21 16 14.8**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=182,slow=6.3,SNR=1.9						
	comp=Z,0.1nm,0.3s						
RLMT	**Red Lodge**	**66.40**	**335**	P	P	21 16 12.8	-5.0
FRB	**Frobisher Bay**	**78.27**	**4**	LR	LR	21 54 24.6	
	comp=Z,36nm,20.5s,baz=192,slow=38						
TOA0	**Torodi Ar. Sit**	**82.11**	**74**	P	**P**	**21 17 49.3**	**-0.4**
TOA0				IAmb	IAmb	21 17 53.5	
	comp=Z,3.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.11**	**74**	P	**P**	**21 17 50.3**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=267,slow=4.6,SNR=23						
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**82.11**	**74**	P	**P**	**21 17 48.9**	**-0.8**
TORD				IAmb	IAmb	21 17 53.5	
	comp=Z,2.9nm,0.8s						
MDT	**Midelt**	**83.13**	**54**	LR	LR	21 53 37.4	
	comp=Z,31nm,18.0s,baz=29,slow=35						
H11N3	**WAKE ISLAND Hyl**	**19.50**	**285**	T	T	23 35 17.5	
	baz=96,slow=74,SNR=169						
H11N2	**WAKE ISLAND Hyl**	**19.52**	**285**	T	T	23 35 19.2	
	baz=96,slow=74,SNR=302						
H11N1	**WAKE ISLAND Hyl**	**19.52**	**285**	T	T	23 35 18.7	
	baz=96,slow=74,SNR=60						
H11S2	**WAKE ISLAND Hyl**	**19.56**	**283**	T	T	23 35 21.1	
	baz=97,slow=75,SNR=49						
H11S1	**WAKE ISLAND Hyl**	**19.57**	**283**	T	T	23 35 18.1	
	baz=97,slow=75,SNR=97						
H11S3	**WAKE ISLAND Hyl**	**19.58**	**283**	T	T	23 35 18.9	
	baz=97,slow=75,SNR=82						
WRA	**Warramunga Arr**	**134.27**	**222**	PKP	**PKiKP**	**21 24 49.1**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=127,slow=1.9,SNR=5.4						
KURBB	**Kurchatov Arra**	**138.69**	**24**	PKP	**PKPdf**	**21 24 55.6**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=316,slow=2.5,SNR=2.6						
SONM	**Songino Array**	**146.70**	**356**	PKPbc	**PKPbc**	**21 25 12.0**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=326,slow=2.1,SNR=5.8						

*KRNET **12** 21:08:15.6±0.1, 39°.33N×73°.36E, mb2.8*
*ISU **12** 21:08:18, 39°.82N×73°.76E, h10km*

ISC 12 21:08:09.4±2.7, 39°.0N±0°.1×73°.56E±0°.09, h20km±6km, n7, σ2§03/13, 6C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.67**	**339**	⇑*iP*	**Pb**	**21 08 39.9**	**+0.3**
	baz=40						
OHH				⇑*iS*	**Sn**	**21 08 57.8**	**-0.8**
	baz=40						
OHH	**Osh**	**1.67**	**339**	P	**Pg**	**21 08 41.3**	**-0.3**
OHH				S	**Sn**	**21 08 56.5**	**-2.1**
FRG	**Fergana**	**1.97**	**316**	P	**Pg**	**21 08 48.4**	**+1.1**
FRG				S	**Sb**	**21 09 10.1**	**+1.4**
MINT	**Mingtut**	**2.50**	**308**	S	**Sg**	**21 09 29.8**	**0.0**
GAR	**Garm**	**2.53**	**272**	⇓*eP*	**Pg**	**21 08 58.3**	**+0.3**
	baz=63						
GAR				⇓*iS*	**Sg**	**21 09 29.4**	**-1.4**
	baz=63						
ARLS	**Aral**	**2.95**	**11**	⇑*iP*	**Pb**	**21 09 01.6**	**+0.1**
	baz=16						
ARLS				⇑*iS*	**Sb**	**21 09 35.1**	**-2.2**
	baz=16						
UCH	**Uchtor**	**3.34**	**12**	⇑*iP*	**Pb**	**21 09 07.2**	**-1.1**
	baz=16						
UCH				⇑*iS*	**Sn**	**21 09 44.9**	**+4.5**
	baz=16						

RSNC 12 21:11:25.5±1.0, 6°.85N×76°.71W, h16km±3km, ML3.1, Mw3.5, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.53**	**71**	⇑*eP*	Pg	21 11 34.8	-1.3
DBBC				*eS*	Sg	21 11 43.0	-0.2
DBBC				*i*		21 11 43.8	
	comp=Z,726nm,0.5s						
SOLC	**Bahia Solano**	**0.93**	**228**	*eP*	Pb	21 11 41.6	-1.5
SOLC				*eS*	Sb	21 11 54.9	-0.3
SOLC				*i*		21 11 58.6	
	comp=Z,258nm,0.2s						
PTAC	**Punta Ardita,**	**1.13**	**285**	*eP*	Pn	21 11 45.0	-1.6
PTAC				*eS*	Sb	21 12 01.0	-0.1
PTAC				*i*		21 12 02.7	
	comp=Z,570nm,0.3s						
CBOC	**Ciudad Bolivar**	**1.20**	**144**	*eP*	Pn	21 11 44.8	-3.0
CBOC				*eS*	Sb	21 12 00.5	-2.7
CBOC				*i*		21 12 10.7	
	comp=Z,487nm,0.7s						
HELC	**Santa Helena**	**1.34**	**119**	*eP*	Pn	21 11 48.1	-1.8
HELC				*eS*	Sn	21 12 06.5	-1.2
HELC				*i*		21 12 11.0	
	comp=Z,272nm,0.8s						
UREC	**San Jos de Ur**	**1.48**	**52**	⇑*eP*	Pn	21 11 50.6	-0.8
UREC				*eS*	Sn	21 12 09.6	-0.8
UREC				*i*		21 12 11.0	
	comp=Z,336nm,0.4s						
CAPC	**Capurgana**	**1.89**	**340**	*eP*	Pn	21 11 54.7	-2.4
CAPC				*eS*	Sn	21 12 20.0	-0.5
CAPC				*i*		21 12 32.8	
	comp=Z,82nm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.95**	**71**	*eP*	Pn	21 11 57.5	-0.5
ZARC				*eS*	Sn	21 12 21.7	-0.4
ZARC				*i*		21 12 25.7	
	comp=Z,221nm,0.6s						
PLMC	**San Jos del P**	**1.98**	**167**	*eP*	Pn	21 11 54.2	-4.2
PLMC				*eS*	Sn	21 12 17.0	-5.8
PLMC				*i*		21 12 30.4	
	comp=Z,170nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.10**	**140**	*eP*	Pn	21 11 59.8	-0.6
GUY2C				*eS*	Sn	21 12 27.1	+0.8
GUY2C				*i*		21 12 37.0	
	comp=Z,165nm,0.7s						
NORC	**Norcasia**	**2.23**	**125**	*eP*	Pn	21 12 02.1	+0.2
NORC				*eS*	Sn	21 12 29.8	+0.7
NORC				*i*		21 12 32.7	
	comp=Z,166nm,0.6s						
PTBC	**PUERTO BERRIO,**	**2.26**	**98**	*eP*	Pn	21 12 02.5	+0.2
PTBC				*eS*	Sn	21 12 31.1	+1.3
PTBC				*i*		21 12 36.6	
	comp=Z,107nm,0.4s						
ANIL	**Santa Ana**	**2.68**	**151**	*eP*	Pn	21 12 08.4	+0.2
ANIL				*eS*	Sb	21 12 44.3	-1.7
YOTC	**Yotoco, Valle**	**2.87**	**173**	*eP*	Pn	21 12 06.7	-4.0
YOTC				*eS*	Sn	21 12 38.6	-6.3
YOTC				*i*		21 12 42.5	
	comp=Z,47nm,0.4s						
SPBC	**San Pablo de B**	**2.88**	**114**	*eP*	Pn	21 12 11.8	+1.0
SPBC				*eS*	Sn	21 12 44.1	-1.1
MALC	**Bahia Malaga**	**2.88**	**192**	*eP*	Pn	21 12 10.6	-0.2
BRRC	**Barranca, Sant**	**2.99**	**85**	*eP*	Pn	21 12 14.9	+2.6
BRRC				*eS*	Sb	21 12 52.8	-1.9
SJCC	**San Jacinto, C**	**3.39**	**26**	*eP*	Pn	21 12 20.1	+2.3
SJCC				*eS*	Sn	21 12 54.8	-3.0
SJCC				*i*		21 12 57.8	
	comp=Z,19nm,0.3s						
BARC	**Barichara**	**3.52**	**94**	*eP*	Pn	21 12 20.6	+0.9
BARC				*eS*	Sn	21 12 58.8	-2.3
BARC				*i*		21 13 20.4	
	comp=Z,99nm,0.7s						
PRAC	**Prado**	**3.60**	**150**	*eP*	Pn	21 12 22.8	+2.1
PRAC				*eS*	Sn	21 13 07.5	+4.5
AZU	**Azuero**	**3.66**	**285**	*eS*	Sn	21 12 58.3	-5.9
CHIC	**Chingaza**	**3.69**	**126**	*eP*	Pn	21 12 24.1	+1.8
CHIC				*eS*	Sb	21 13 11.0	-4.4
RUSC	**La Rusia**	**3.73**	**105**	*eP*	Pn	21 12 23.7	+0.9
RUSC				*eS*	Sn	21 13 09.8	+3.0
RUSC				*i*		21 13 21.1	
	comp=Z,28nm,0.7s						
BCIP	**Isla Barro Col**	**3.86**	**307**	*eP*	Pn	21 12 21.6	-2.6
BCIP				*eS*	Sn	21 13 05.1	-4.1
BCIP				*i*		21 13 09.7	
	comp=Z,22nm,0.5s						
PAMC	**Pamplona, Colo**	**4.01**	**83**	*eP*	Pn	21 12 28.2	+1.4
PAMC				*eS*	Sn	21 13 13.6	-0.1
PAMC				*i*		21 13 31.9	
	comp=Z,49nm,0.5s						
POPC	**Popayan, Colom**	**4.28**	**180**	*eP*	Pn	21 12 28.6	-1.6
POPC				*eS*	Sn	21 13 14.6	-5.3
POPC				*i*		21 13 19.6	
	comp=Z,11nm,0.3s						
CRJC	**Cerrejon, Guaj**	**5.61**	**42**	*eP*	Pn	21 12 47.6	-0.8
CRJC				*eS*	Sn	21 13 47.9	-4.8
CRJC				*i*		21 13 50.6	
	comp=Z,19nm,0.4s						
SOCV	**Socops**	**5.98**	**76**	*eP*	Pn	21 12 54.5	+1.1
SOCV				*eS*	Sn	21 13 58.8	-2.8

IDC 12 21:16:06.6±1.2, 19°.20N×144°.90E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=48.1km s-min=24.9km az=86.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.26**	**195**	P	P	21 23 45.3	-0.1
	0.7nm,0.8s,baz=15,slow=8.0,SNR=7.8						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**43.94**	**195**	P	P	21 24 15.2	-0.3
	0.3nm,1.0s,baz=15,slow=7.7,SNR=2.1						
	0.3nm,1.0s						
MKAR	**Makanchi Array**	**57.57**	**314**	P	P	21 25 58.9	+0.7
	0.1nm,0.3s,baz=91,slow=8.7,SNR=4.7						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**60.44**	**318**	P	P	21 26 17.0	-1.0
	0.2nm,0.3s,baz=90,slow=7.0,SNR=5.7						
	0.2nm,0.3s						
NVAR	**Mina Array Bea**	**83.42**	**52**	P	P	21 28 36.0	-0.5
	0.4nm,0.6s,baz=276,slow=6.0,SNR=4.2						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**86.11**	**335**	P	P	21 28 50.1	+0.9
	1.8nm,0.9s,baz=82,slow=4.0,SNR=5.1						
	1.8nm,0.9s						

*JMA **12** 21:18:24.6±0.2, 33°.N±3°.×13°.8E±°, h361km, MV3.2/15, FAR S OFF TOKAI DISTRICT*
*IDC **12** 21:18:26.6±1.5, 33°.46N×137°.94E, h364km±26km, mb2.5/1, mbtmp3.0/3, Error ellipse: s-maj=76.8km s-min=24.0km az=52.0*

ISC 12 21:18:26.7±1.2, 33°.3N±0°.1×137°.83E±0°.09, h350km, n11, σ1§08/14, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.66**	**97**	P	**Pn**	**21 19 16.5**	**+0.7**
	90nm,0.8s,baz=229,slow=20,SNR=6.0						
JHJ				S	**S**	**21 19 57.4**	**+2.3**
	64nm,0.8s,baz=43,slow=19,SNR=2.5						
JTNC	**Tanabenakahech**	**1.91**	**285**	P	**Pn**	**21 19 17.1**	**-0.3**
JWY	**Kouya**	**2.06**	**296**	P	**Pn**	**21 19 18.7**	**+0.2**
JOD2	**Odawara 2**	**2.19**	**28**	P	**Pn**	**21 19 19.9**	**+0.5**
JRY	**Ryogami san**	**2.82**	**18**	P	**Pn**	**21 19 25.3**	**+0.9**
JRY				S	**S**	**21 20 11.8**	**+0.9**
JAI	**Aioi**	**2.85**	**280**	P	**Pn**	**21 19 24.3**	**-0.5**
BSO1	**Boso 1**	**2.93**	**62**	P	**Pn**	**21 19 23.9**	**-0.9**
BSO1				*eS*	**S**	**21 20 09.8**	**-1.7**
MJAR	**Matsushiro Arr**	**3.21**	**6**	P	**Pn**	**21 19 27.3**	**-0.6**
	1.6nm,0.7s,baz=182,slow=11,SNR=9.8						
JMN	**Monobe**	**3.32**	**278**	P	**Pn**	**21 19 28.8**	**-0.2**
KSRS	**Korea Array**	**9.07**	**300**	P	**Pn**	**21 20 34.1**	**+0.7**
	0.8nm,0.6s,baz=119,slow=9.8,SNR=5.2						
WRA	**Warramunga Arr**	**53.08**	**184**	P	**P**	**21 27 08.8**	**-0.6**
	0.3nm,0.8s,baz=1.1,slow=7.6,SNR=1.6						
	0.3nm,0.8s						

*IDC **12** 21:22:43.7±1.1, 22°.74S×173°.12E, h0km, mb3.8/6, mbtmp3.8/8, ML4.8/2, MS3.5/2, Error ellipse: s-maj=33.4km s-min=22.9km az=150.0*
*NEIC **12** 21:22:46.7±1.2, 22°.7S±0°.1×173°.18E±0°.06, h10km±1km, mb4.6/12, Error ellipse: s-maj=21.6km s-min=3.1km az=153.0*

ISC 12 21:22:48.9±0.6, 22°.7S±0°.1×173°.16E±0°.07, h32km, n31, σ1§02/32, mb4.4/12, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.90**	**283**		**Pn**	**21 24 00.7**	**+0.4**
MARNC				Sn	**Sn**	**21 24 58.4**	**+2.4**
PINNC	**Pines Island,**	**5.28**	**270**		**Pn**	**21 24 05.6**	**0.0**
PINNC				Sn	**Sn**	**21 25 05.3**	**+0.1**
OUENC	**Ouen Island, N**	**5.84**	**271**	Pn	**Pn**	**21 24 12.9**	**-0.4**
DZM	**Mont Dzumac**	**6.24**	**274**	Pn	**Pn**	**21 24 18.3**	**-0.6**
	2.9nm,0.3s,baz=201,slow=17,SNR=7.9						
DZM				Sn	**Sn**	**21 25 26.8**	**-2.4**
	3.8nm,0.3s,baz=151,slow=18,SNR=4.1						
	7.8nm,0.4s						
DZM	**Mont Dzumac**	**6.24**	**274**		**Pn**	**21 24 19.3**	**+0.4**
MSVF	**Nonsavu**	**6.72**	**44**	Pn	**Pn**	**21 24 25.1**	**-0.4**
	1.7nm,0.3s,baz=94,slow=23,SNR=2.8						
MSVF				LR	LR	21 26 25.4	
	comp=Z,438nm,19.2s,baz=193,slow=33						
	4.7nm,0.5s						
RAO	**Raoul Island**	**10.36**	**131**	LR	LR	21 28 28.7	
	comp=Z,234nm,18.4s,baz=20,slow=33						
EIDS	**Eidsvold**	**20.34**	**258**	P	Pn	21 27 24.2	-0.6
BBOO	**Buckleboo**	**34.20**	**245**	P	**P**	**21 29 31.5**	**-0.1**
BBOO				IAmb	IAmb	21 29 50.3	
	comp=Z,31nm,1.4s						
WR0	**Warramunga Arr**	**36.01**	**267**	P	**P**	**21 29 48.0**	**+0.6**
WR0				IAmb	IAmb	21 30 23.3	
	comp=Z,7.0nm,1.4s						
ASAR	**Alice Springs**	**36.03**	**261**	P	**P**	**21 29 47.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=73,slow=9.5,SNR=5.8						
	comp=Z,0.3nm,0.5s						
WB0	**Warramunga Arr**	**36.19**	**267**	P	**P**	**21 29 48.3**	**-0.5**
WB0				IAmb	IAmb	21 30 22.9	
	comp=Z,9.3nm,1.2s						
WB2	**Warramunga Arr**	**36.19**	**267**	P	**P**	**21 29 49.4**	**+0.5**
WRA	**Warramunga Arr**	**36.20**	**267**	P	**P**	**21 29 47.1**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=98,slow=8.4,SNR=7.7						
	comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**36.20**	**267**	P	**P**	**21 29 48.6**	**-0.4**
FORT	**Forrest**	**40.86**	**249**	P	**P**	**21 30 28.1**	**+0.2**
FORT				IAmb	IAmb	21 30 39.7	
	comp=Z,14nm,0.9s						
VNDA	**Vanda**	**55.18**	**183**	P	**P**	**21 32 17.3**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=344,slow=5.8,SNR=3.9						
	comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**67.40**	**180**	P	**P**	**21 33 42.2**	**+1.2**
QSPA				IAmb	IAmb	21 33 42.9	
	comp=Z,8.5nm,1.2s						
MJAR	**Matsushiro Arr**	**67.51**	**330**	P	**P**	**21 33 41.9**	**0.0**
	comp=Z,0.9nm,0.8s,baz=147,slow=5.3,SNR=1.9			

SATY				*e*S		**Sg**	**21 31 50.5**	**-1.0**	
	10.0nm,0.8s								
UZB	**Uzynbulak**	**2.40**	**14**	*e*P		**Pb**	**21 31 20.1**	**-2.6**	
	0.6nm,0.2s								
UZB				*e*S		**Sb**	**21 31 53.4**	**+1.0**	
	5.7nm,0.7s								
BOOM	**Boomskoye usch**	**2.41**	**315⇑**	*e*P		**Pn**	**21 31 19.7**	**+0.8**	
	baz=14								
BOOM				⇑*i*S		**Sb**	**21 31 50.5**	**-2.2**	
	baz=14								
SHLS	**Shalkode**	**2.51**	**21**	*e*P		**Pb**	**21 31 23.7**	**-0.8**	
	1.3nm,0.1s								
SHLS				*e*S		**Sg**	**21 31 59.5**	**-0.5**	
	6.7nm,0.7s								
MDOK	**Medeo**	**2.52**	**340**	*e*P		**Pb**	**21 31 23.1**	**-1.5**	
	2.7nm,0.3s								
MDOK				*e*S		**Sg**	**21 31 58.6**	**-1.5**	
	9.4nm,0.6s								
KPKS	**Kokpek**	**2.67**	**7**	*e*P		**Pb**	**21 31 25.4**	**-1.8**	
	4.6nm,0.2s								
KPKS				*e*S		**Sg**	**21 32 02.8**	**-2.3**	
	17nm,0.4s								
KURS	**Kuram**	**2.67**	**359**	*e*P		**Pb**	**21 31 24.4**	**-2.9**	
	4.2nm,0.5s								
KURS				*e*S		**Sb**	**21 32 00.4**	**+0.2**	
	4.3nm,0.6s								
KST	**Kastek**	**2.81**	**323**	*e*P		**Pb**	**21 31 27.7**	**-1.9**	
	2.7nm,0.2s								
KST				*e*S		**Sb**	**21 32 06.2**	**+2.1**	
	5.4nm,0.5s								
TKM2	**Tokmak 2**	**2.89**	**318⇑**	*i*P		**Pn**	**21 31 26.6**	**+1.0**	
	baz=17								
TKM2				⇑*i*S		**Sn**	**21 32 02.2**	**+1.6**	
	baz=17								
KTMS	**Ketmen**	**3.06**	**30**	*e*P		**Pb**	**21 31 32.1**	**-1.8**	
	0.5nm,0.3s								
KTMS				*e*S		**Sb**	**21 32 13.5**	**+2.2**	
	2.2nm,0.2s								
KBK	**Karagaybulak**	**3.08**	**308⇑**	*e*P		**Pn**	**21 31 29.5**	**+1.3**	
	baz=8.0								
KBK				⇑*e*S		**Sn**	**21 32 06.5**	**+1.3**	
	baz=8.0								
KTBS	**Karatobe**	**3.12**	**339**	*e*P		**Pb**	**21 31 33.4**	**-1.5**	
	1.7nm,0.3s								
KTBS				*e*S		**Sb**	**21 32 15.9**	**+2.8**	
	13nm,0.3s								
ARLS	**Aral**	**3.14**	**291⇑**	*e*P		**Pn**	**21 31 29.8**	**+0.9**	
	baz=91								
ARLS				⇑*e*S		**Sn**	**21 32 07.8**	**+1.3**	
	baz=91								
KUU	**Kurty**	**3.39**	**336**	*e*P		**Pb**	**21 31 37.8**	**-1.7**	
	0.9nm,0.1s								
KUU				*e*S		**Sb**	**21 32 23.6**	**+2.9**	
	3.0nm,0.7s								
ARXS	**Arharly**	**3.41**	**355**	*e*P		**Pb**	**21 31 38.6**	**-1.3**	
	1.8nm,0.4s								
ARXS				*e*S		**Sb**	**21 32 24.8**	**+3.3**	
	7.0nm,0.3s								
KRBS	**Karabastau**	**3.46**	**327**	*e*P		**Pb**	**21 31 38.3**	**-2.4**	
	1.7nm,0.4s								
KRBS				*e*S		**Sb**	**21 32 24.2**	**+1.5**	
	4.2nm,0.6s								

IDC ***12*** *21:32:55.2±0.5,22.˙62S×173.˙26E, h0km, mb4.7/20, mbtmp4.7/24, ML5.4/3, MS4.3/52, Error ellipse: s-maj=15.9km s-min=13.6km az=90.0*

NEIC ***12*** *21:32:57.3±1.7,22.˙60S±0.˙07×173.˙42E±0.˙07, h10km±1km, mb5.2/129, Error ellipse: s-maj=12.7km s-min=11.1km az=24.0*

MOS ***12*** *21:32:58.8±1.6,22.˙63S×173.˙16E, h25km, mb5.2/13, MS4.4/4, Error ellipse: s-maj=10.3km s-min=9.1km az=111.8*

NOU ***12*** *21:33:01.4,22.˙73S×173.˙38E, h29km, mb5.3/58, Southeast of Loyalty Islands*

GCMT ***12*** *21:33:02.3±0.1,22.˙67S±0.˙01×173.˙30E±0.˙01, h21km, MW5.2/145, Moment Tensor Solution. s95,c145; s145,c227; Duration: 1s0 Moment tensor: Scale 1017 Nm; Mrr0.24±.01; Mθθ-0.68±.01; Mϕϕ0.43±.01; Mrθ0.07±.02; Mrϕ-0.45±.01; Mθϕ0.35±.03; Best double couple: M0 0.82400×1017 NP1:ϕ=30.00000°, δ76.00000°, λ30.00000°. NP2:ϕ=292.00000°, δ61.00000°, λ164.00000°. Principal axes: T 0.7800, Plg31.0000°, Azm254.0000°; N 0.0890, Plg57.0000°, Azm53.0000°; P -0.8690, Plg10.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 21:32:58.0±0.6, 22.˙71S±0.˙05×173.˙36E±0.˙05, h15km±3km, h15km:pP-P, n564, σ1.936/528, mb5.1/105, MS4.3/62, 36C-40D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.09**	**283**	Pn		**Pn**	**21 34 13.6**	**-0.3**
MARNC	**Mare, Loyalty**	**5.09**	**283**	P		**Pn**	**21 34 14.9**	**+1.0**
PINNC	**Pines Island,**	**5.46**	**270**			**Pn**	**21 34 19.3**	**+0.4**
PINNC	**Pines Island,**	**5.46**	**270**	P		**Pn**	**21 34 19.4**	**+0.4**
YATNC	**Mamie plateau,**	**6.02**	**275**	P		**Pn**	**21 34 26.7**	**0.0**
OUENC	**Ouen Island, N**	**6.03**	**272**	Pn		**Pn**	**21 34 26.6**	**-0.2**
OUENC	**Ouen Island, N**	**6.03**	**272**	P		**Pn**	**21 34 26.7**	**-0.1**
DZM	**Mont Dzumac**	**6.43**	**274**	Pn		**Pn**	**21 34 31.6**	**-0.8**
	12nm,0.3s,baz=122,slow=13,SNR=108							
DZM				Sn		**Sn**	**21 35 45.0**	**-0.7**
	37nm,0.3s,baz=318,slow=20,SNR=6.6							
DZM	**Mont Dzumac**	**6.43**	**274**	*e*Pn		**Pn**	**21 34 32.5**	**+0.1**
	87nm,0.5s							
DZM	582nm,1.1s			*e*Sn		**Sn**	**21 35 42.8**	**-2.9**
	2μm,1.1s							
DZM				*e*LR		LR	21 35 56.3	
DZM	**Mont Dzumac**	**6.43**	**274**	Pn		**Pn**	**21 34 32.1**	**-0.2**
DZM	**Mont Dzumac**	**6.43**	**274**	P		**Pn**	**21 34 32.4**	**+0.1**
NOUC	**Port Laguerre**	**6.56**	**274**	P		**Pn**	**21 34 34.7**	**+0.7**
MSVF	**Nonsavu**	**6.63**	**42**	Pn		**Pn**	**21 34 33.5**	**-1.5**
	9.3nm,0.3s,baz=236,slow=22,SNR=37							
MSVF				LR		LR	21 36 21.5	
	comp=Z,1μm,21.9s,baz=166,slow=31							
	116nm,0.8s							
MSVF	**Nonsavu**	**6.63**	**42**	Pn		**Pn**	**21 34 32.8**	**-2.3**
MSVF	**Nonsavu**	**6.63**	**42**	P		**Pn**	**21 34 35.3**	**+0.2**
RTV	**Rentapao**	**6.74**	**316**	P		Pn	21 34 41.3	+4.8
DVP	**Devils Point**	**6.94**	**315**	P		**Pn**	**21 34 41.5**	**+2.2**
NFK	**Norfolk Island**	**7.97**	**217**	P		**Pn**	**21 34 54.3**	**+0.8**
	baz=8.1,SNR=24							
NFK	**Norfolk Island**	**7.97**	**217**	P		**Pn**	**21 34 54.8**	**+1.4**
LKBA	**Tubou, Lakemba**	**8.58**	**60**	P		**Pn**	**21 35 02.9**	**+1.1**
KOUNC	**Koumac, New Ca**	**8.71**	**283**	Pn		**Pn**	**21 35 02.4**	**-1.1**
KOUNC	**Koumac, New Ca**	**8.71**	**283**	P		**Pn**	**21 35 05.9**	**+2.3**
TAVE	**Taveuni**	**8.71**	**48**	P		**Pn**	**21 35 04.6**	**+1.0**
DGTI	**Dogotuki**	**8.76**	**44**	P		**Pn**	**21 35 06.1**	**+1.7**
RAO	**Raoul Island**	**10.19**	**132**	LR		LR	21 38 28.7	
	comp=Z,4μm,21.4s,baz=308,slow=32							
OUZ	**Omahuta**	**12.46**	**179**	Pn		**Pn**	**21 35 56.4**	**+1.4**
URZ	**Urewera**	**15.83**	**169**	Pn		**P**	**21 36 42.9**	**-1.2**
	34nm,1.0s,baz=24,slow=6.8,SNR=6.8							
URZ				LR		LR	21 41 24.6	
	comp=Z,3μm,21.6s,baz=23,slow=32							
URZ	**Urewera**	**15.83**	**169**			**P**	**21 36 43.8**	**-0.3**
URZ				IAmb		IAmb	21 36 48.2	
	comp=Z,263nm,1.7s							
AFI	**Afiamalu**	**16.59**	**61**	LR		LR	21 41 49.8	
	comp=Z,1μm,21.0s,baz=254,slow=32							
BKZ	**Black Stump Fm**	**16.62**	**171**	Pn		**P**	**21 36 51.9**	**-1.1**
BKZ	**Black Stump Fm**	**16.62**	**171**	P		**P**	**21 36 53.6**	**+0.6**
QRZ	**Quartz Range**	**18.07**	**182**			**P**	**21 37 10.4**	**+1.4**
QRZ				IAmb		IAmb	21 37 13.6	
	comp=Z,236nm,1.4s							
BFZ	**Birch Farm**	**18.08**	**173**	P		**P**	**21 37 10.3**	**+1.2**
BFZ	**Birch Farm**	**18.08**	**173**	P		**P**	**21 37 11.1**	**+2.0**
HNR	**Honiara**	**18.43**	**314**	P		**P**	**21 37 12.4**	**-0.7**
	comp=Z,8.0nm,0.3s,baz=237,slow=6.2,SNR=27							
HNR				LR		LR	21 43 10.5	
	comp=Z,870nm,20.5s,baz=144,slow=34							
	comp=Z,254nm,0.9s							
HNR	**Honiara**	**18.43**	**314**	P		**P**	**21 37 12.8**	**-0.3**
HNR	**Honiara**	**18.43**	**314**	P		**Pn**	**21 37 15.5**	**+2.3**
TUWZ	**Tuamarina**	**18.67**	**179**	P		**Pn**	**21 37 17.4**	**+1.5**
PLWZ	**Palliser**	**18.87**	**176**	P		**Pn**	**21 37 18.2**	**-0.2**
BSWZ	**Blackbirch Sta**	**18.95**	**179**	P		**Pn**	**21 37 19.9**	**+0.6**
CMWZ	**Cape Campbell**	**19.00**	**178**	P		**Pn**	**21 37 20.1**	**+0.3**
THZ	**Tophouse**	**19.00**	**181**	P		**Pn**	**21 37 20.2**	**+0.2**
THZ				IAmb		IAmb	21 37 23.8	
	comp=Z,414nm,1.8s							
KHZ	**Kahutara**	**19.65**	**180**	P		**Pn**	**21 37 27.4**	**-0.2**
KHZ				IAmb		IAmb	21 37 30.8	
	comp=Z,149nm,1.1s							
LTZ	**Lake Taylor**	**20.04**	**182**			Pn	21 37 33.0	+0.7
EIDS	**Eidsvold**	**20.52**	**258**	P		Pn	21 37 37.5	-0.6
	baz=21,SNR=20							
EIDS	**Eidsvold**	**20.52**	**258**	P		**P**	**21 37 36.3**	**+0.4**
EIDS				IAmb		IAmb	21 37 51.1	
	comp=Z,123nm,1.1s							
EIDS	**Eidsvold**	**20.52**	**258**	P		Pn	21 37 39.2	+1.1
OXZ	**Oxford**	**20.59**	**183**	P		**P**	**21 37 37.2**	**+0.7**
ARMA	**Armidale**	**20.88**	**244**	P		**P**	**21 37 40.9**	**+1.0**
	baz=21,SNR=9.6							
ARMA	**Armidale**	**20.88**	**244**	P		**P**	**21 37 40.4**	**+0.6**
ARMA				IAmb		IAmb	21 37 48.6	
	comp=Z,180nm,1.8s							
ARMA	**Armidale**	**20.88**	**244**	P		Pn	21 37 41.6	-0.8
MQZ	**McQueen's Vall**	**20.95**	**181**	P		**P**	**21 37 41.1**	**+0.8**
FOZ	**Fox Glacier**	**20.97**	**187**	P		Pn	21 37 42.7	-0.5
FOZ				IAmb		IAmb	21 37 47.3	
	comp=Z,122nm,0.9s							
RPZ	**Rata Peaks**	**21.03**	**185**	P		**P**	**21 37 42.6**	**+1.3**
	comp=Z,61nm,0.8s,baz=345,slow=7.6,SNR=17							
RPZ				LR		LR	21 45 29.7	
	comp=Z,3μm,18.1s,baz=359,slow=36							
	comp=Z,61nm,0.8s							
RPZ	**Rata Peaks**	**21.03**	**185**	P		**P**	**21 37 43.2**	**+1.9**
RPZ				IAmb		IAmb	21 37 47.5	
	comp=Z,116nm,1.0s							
RK1H	**Rockhampton Ha**	**21.05**	**264**	P		**P**	**21 37 44.9**	**+3.2**
	comp=Z,41nm,1.0s							
NTLH	**Newcastle Hard**	**21.64**	**237**	P		**P**	**21 37 51.2**	**+3.3**
LBZ	**Lake Benmore**	**21.77**	**186**	P		**P**	**21 37 50.6**	**+1.3**
LBZ				IAmb		IAmb	21 38 06.0	
	comp=Z,225nm,1.6s							
ODZ	**Otahua Downs**	**22.39**	**185**	P		**P**	**21 37 57.1**	**+1.3**
ODZ				IAmb		IAmb	21 38 12.9	
	comp=Z,101nm,1.4s							
RMQ	**Roma**	**22.67**	**255**	P		**P**	**21 38 00.8**	**+1.8**
	baz=23,SNR=32							
RMQ	**Roma**	**22.67**	**255**	P		**P**	**21 38 03.2**	**+4.1**
MLZ	**Mavora Lakes**	**23.00**	**189**	P		**P**	**21 38 04.8**	**+2.4**
MLZ				IAmb		IAmb	21 38 21.7	
	comp=Z,146nm,1.3s							
WHZ	**Wether Hill Ro**	**23.54**	**189**	P		**P**	**21 38 09.8**	**+2.1**
CNB	**Canberra Magne**	**24.38**	**234**	P		**P**	**21 38 17.8**	**+1.9**
	baz=24,SNR=8.1							
CNB	**Canberra Magne**	**24.38**	**234**	P		**P**	**21 38 18.0**	**+2.1**
CAN	**Canberra**	**24.66**	**234**	P		**P**	**21 38 18.4**	**+0.1**
CAN				IAmb		IAmb	21 38 38.2	
	comp=Z,53nm,1.1s							
CAN	**Canberra**	**24.66**	**234**	P		**P**	**21 38 18.4**	**+0.1**
CAN				pmax		pmax		
	comp=Z,53nm,1.1s							
CAN	**Canberra**	**24.66**	**234**	P		**P**	**21 38 20.1**	**+1.7**
CTA	**Charters Tower**	**25.36**	**271**	P		**P**	**21 38 24.5**	**-0.3**
	comp=Z,6.7nm,0.5s,baz=93,slow=11,SNR=17							
CTA				LR		LR	21 48 18.9	
	comp=Z,689nm,18.9s,baz=91,slow=37							
	comp=Z,6.7nm,0.5s							
CTA	**Charters Tower**	**25.36**	**271**	P		**P**	**21 38 27.2**	**+2.4**
CTAO	**Charters Tower**	**25.36**	**271**	P		**P**	**21 38 22.4**	**-2.4**
CTAO	**Charters Tower**	**25.36**	**271**	P		**P**	**21 38 22.4**	**-2.4**
CTAO				pmax		pmax		
	comp=Z,33nm,1.3s							
CTAO	**Charters Tower**	**25.36**	**271**	P		**P**	**21 38 27.4**	**+2.6**
CMSA	**Cobar Meteorol**	**26.09**	**244**	P		**P**	**21 38 32.4**	**+1.0**
	baz=26,SNR=14							
CMSA	**Cobar Meteorol**	**26.09**	**244**	P		**P**	**21 38 33.0**	**+1.7**
QLP	**Quilpie**	**26.72**	**256**	P		**P**	**21 38 36.8**	**-0.3**
	baz=27,SNR=10							
QLP	**Quilpie**	**26.72**	**256**	P		**P**	**21 38 39.6**	**+2.5**
RABL	**Rabaul**	**27.56**	**309**	P		**P**	**21 38 42.2**	**-2.5**
MTSU	**Mount Surprise**	**27.57**	**274**	P		**P**	**21 38 44.3**	**-0.5**
	baz=28,SNR=32							
MTSU	**Mount Surprise**	**27.57**	**274**	P		**P**	**21 38 46.7**	**+1.9**
KRVT	**Keravat (AS076**	**27.58**	**308**	P		**P**	**21 38 41.6**	**-3.2**
	comp=Z,45nm,0.8s,baz=337,slow=13,SNR=4.5							
	comp=Z,45nm,0.8s							
TOO	**Toolangi**	**28.15**	**232**	P		**P**	**21 38 51.6**	**+1.7**
	baz=28,SNR=4.7							
PMG	**Port Moresby**	**28.38**	**294**	LR		LR	21 48 25.3	
	comp=Z,569nm,18.2s,baz=68,slow=33							
BRAT	**Ballarat**	**29.29**	**233**	P		**P**	**21 39 02.7**	**+2.8**
	comp=Z,22nm,0.9s							
STKA	**Stephens Creek**	**29.58**	**245**	P		**P**	**21 39 01.7**	**-0.8**
	comp=Z,10nm,0.9s,baz=85,slow=11,SNR=14							
STKA				LR		LR	21 49 28.8	
	comp=Z,767nm,20.9s,baz=72,slow=34							
	comp=Z,10nm,0.9s							
STKA	**Stephens Creek**	**29.58**	**245**	P		**P**	**21 39 02.9**	**+0.4**
	baz=30,SNR=11							
STKA	**Stephens Creek**	**29.58**	**245**	P		**P**	**21 39 02.3**	**-0.2**
STKA	**Stephens Creek**	**29.58**	**245**	P	*i*	**P**	**21 39 02.6**	**0.0**
STKA	**Stephens Creek**	**29.58**	**245**	P		**P**	**21 39 05.6**	**+3.0**
INKA	**Innaminka**	**29.87**	**254**	P		**P**	**21 39 07.6**	**+2.4**
COEN	**Coen**	**29.90**	**282**	P		**P**	**21 39 05.7**	**+0.1**
COEN				IAmb		IAmb	21 39 21.5	
	comp=Z,53nm,1.4s							
QIS	**Mount Isa**	**31.41**	**267**	P		**P**	**21 39 18.2**	**-0.7**
	baz=31,SNR=3.1							
QIS	**Mount Isa**	**31.41**	**267**	P		**P**	**21 39 19.9**	**+1.0**
KWAJ	**Kwajalein Atol**	**31.82**	**349**	P		**P**	**21 39 20.6**	**-1.8**
KWAJ	**Kwajalein Atol**	**31.82**	**349**	P		**P**	**21 39 20.6**	**-1.8**
KWAJ				pmax		pmax		
	comp=Z,69nm,0.8s							
HTT	**Hallett**	**32.08**	**243**	P		**P**	**21 39 24.3**	**-0.3**
	baz=32,SNR=7.5							
HTT	**Hallett**	**32.08**	**243**	P		**P**	**21 39 25.8**	**+1.2**
LCRK	**Leigh Creek**	**32.26**	**249**	P		**P**	**21 39 27.1**	**+0.9**
TWOA	**Tennyson Woods**	**32.67**	**240**	P		**P**	**21 39 31.3**	**+1.5**
WHYH	**Whyalla**	**33.12**	**244**	P		**P**	**21 39 36.2**	**+2.5**
	comp=Z,40nm,1.0s							
MCQ	**Macquarie Isla**	**33.54**	**195**	P		**P**	**21 39 37.1**	**0.0**
MCQ	**Macquarie Isla**	**33.54**	**195**	P		**P**	**21 39 37.1**	**0.0**
MCQ				pmax		pmax		
	comp=Z,593nm,1.7s							
TBI	**Tubuai**	**34.16**	**98**	*e*LQ		LQ	21 47 20.0	
	comp=Z,1μm,27.0s							
TBI				*e*LR		LR	21 48 46.8	
	comp=Z,12μm,23.8s							
TBI				*e*LR		LR	21 48 46.8	
	comp=Z,722nm,25.8s							
BBOO	**Buckleboo**	**34.35**	**245**	P		**P**	**21 39 44.1**	**-0.4**
	baz=34,SNR=12							
BBOO	**Buckleboo**	**34.35**	**245**	P		**P**	**21 39 43.8**	**-0.6**
BBOO				IAmb		IAmb	21 40 07.3	
	comp=Z,42nm,1.1s							
BBOO	**Buckleboo**	**34.35**	**245**	P		**P**	**21 39 47.7**	**+3.2**
OOD	**Oodnadatta**	**34.35**	**254**	P		**P**	**21 39 45.2**	**+0.7**
PPT2	**Papeete2**	**35.10**	**89**	*e*LQ		LQ	21 47 44.1	
	comp=Z,1μm,27.0s							
PPT2				*e*LR		LR	21 49 12.5	
	comp=Z,713nm,25.5s							
PPT2				*e*LR		LR	21 49 12.8	
	comp=Z,906nm,24.0s							
PPT	**Papeete**	**35.11**	**88**	LR		LR	21 50 24.0	
	comp=Z,391nm,19.9s,baz=261,slow=30							
MULG	**Mulgathing**	**35.84**	**249**	P		**P**	**21 39 57.5**	**+0.2**
WR0	**Warramunga Arr**	**36.20**	**267**	P		**P**	**21 39 58.1**	**-2.4**
AS31	**Alice Springs**	**36.20**	**261**	P		**P**	**21 39 59.1**	**-1.5**
ASAR	**Alice Springs**	**36.20**	**261**	P		**P**	**21 39 59.0**	**-1.6**
	comp=Z,13nm,0.9s,baz=88,slow=8.9,SNR=63							
ASAR				LR		LR	21 54 41.4	
	comp=Z,673nm,19.8s,baz=98,slow=36							
	comp=Z,13nm,0.9s							
ASAR	**Alice Springs**	**36.20**	**261**	P		**P**	**21 39 58.6**	**-2.0**
WB0	**Warramunga Arr**	**36.37**	**267**	P		**P**	**21 39 59.9**	**-2.1**
WB2	**Warramunga Arr**	**36.37**	**267**	P		**P**	**21 40 00.2**	**-1.8**
WRAB	**Tennant Creek**	**36.38**	**267**	P		**P**	**21 40 00.8**	**-1.2**
WRAB	**Tennant Creek**	**36.38**	**267**	*i* P		**P**	**21 39 59.9**	**-2.1**
WRAB				pmax		pmax		
	comp=Z,15nm,1.1s							
WRAB	**Tennant Creek**	**36.38**	**267**	P		**P**	**21 40 00.7**	**-1.3**
WRA	**Warramunga Arr**	**36.38**	**267**	P		**P**	**21 39 59.5**	**-2.6**
	comp=Z,5.8nm,0.7s,baz=96,slow=8.6,SNR=34							
WRA				LR		LR	21 54 40.3	
	comp=Z,453nm,19.6s,baz=50,slow=36							
	comp=Z,5.8nm,0.7s							
WRA	**Warramunga Arr**	**36.38**	**267**	P		**P**	**21 39 59.4**	**-2.8**
GENI	**Genyem**	**37.89**	**297**	P		**P**	**21 40 19.0**	**+4.1**
KDU	**Kakadu**	**40.09**	**277**	P		**P**	**21 40 32.7**	**-0.6**
FORT	**Forrest**	**41.02**	**249**	P		**P**	**21 40 40.6**	**-0.3**
	baz=41,SNR=17							
FORT	**Forrest**	**41.02**	**249**	P		**P**	**21 40 39.8**	**-1.1**
FORT	**Forrest**	**41.02**	**249**	P		**P**	**21 40 40.3**	**-0.6**
WRKA	**Warakurna**	**41.13**	**257**	P		**P**	**21 40 40.8**	**-1.1**
	baz=41,SNR=16							
WRKA	**Warakurna**	**41.13**	**257**	P		**P**	**21 40 41.6**	**-0.3**
MTN	**Manton Dam**	**41.27**	**276**	P		**P**	**21 40 42.2**	**-0.9**
	baz=41,SNR=3.9							
MTN	**Manton Dam**	**41.27**	**276**	P		**P**	**21 40 41.3**	**-1.8**
H11S2	**WAKE ISLAND Hy**	**41.46**	**350**	T		T	22 24 42.1	
	baz=171,slow=76,SNR=16							
H11S3	**WAKE ISLAND Hy**	**41.47**	**350**	T		T	22 24 43.3	
	baz=171,slow=76,SNR=14							
H11S1	**WAKE ISLAND Hy**	**41.48**	**350**	T		T	22 24 45.8	
	baz=171,slow=76,SNR=6.4							
KNRA	**Kununurra**	**42.57**	**271**	P		**P**	**21 40 53.0**	**-0.7**
	baz=43,SNR=5.7							
KNRA	**Kununurra**	**42.57**	**271**	P		**P**	**21 40 52.0**	**-1.8**
KNRA	**Kununurra**	**42.57**	**271**	P		**P**	**21 40 56.8**	**+3.1**
H11N1	**WAKE ISLAND Hy**	**42.64**	**351**	T		T	22 26 11.5	
	baz=174,slow=74,SNR=9.3							
H11N3	**WAKE ISLAND Hy**	**42.64**	**351**	T		T	22 26 05.3	
	baz=174							
H11N2	**WAKE ISLAND Hy**	**42.65**	**351**	T		T	22 26 12.5	
	baz=174,slow=74,SNR=5.6							
FAKI	**Fak Fak**	**44.42**	**290**	P		**P**	**21 41 06.7**	**-1.9**
FITZ	**Fitzroy Crossi**	**44.81**	**267**	LR		LR	21 59 22.9	
	comp=Z,286nm,19.2s,baz=104,slow=36							
FITZ	**Fitzroy Crossi**	**44.81**	**267**	P		**P**	**21 41 11.1**	**-0.7**
	baz=45,SNR=32							
FITZ	**Fitzroy Crossi**	**44.81**	**267**	P		**P**	**21 41 11.1**	**-0.7**
FITZ				IAmb		IAmb	21 41 13.2	
	comp=Z,27nm,0.8s							
FITZ	**Fitzroy Crossi**	**44.81**	**267**	P		**P**	**21 41 11.4**	**-0.4**
GUMO	**Guam**	**45.61**	**320**	LR		LR	21 58 22.0	
	comp=Z,344nm,21.7s,baz=134,slow=34							
SIJI	**Sorong**	**46.30**	**292**	LR		LR	22 00 04.0	
	comp=Z,481nm,20.8s,baz=100,slow=35							
TAOE	**Nuku Hiva Isla**	**46.61**	**80**	*e*LR		LR	21 54 32.0	
	comp=Z,766nm,26.6s							
BATI	**Baumata**	**49.04**	**276**	LR		LR	22 03 15.6	
	comp=Z,1μm,19.2s,baz=127,slow=37							
PSA00	**Pilbara Seismi**	**49.35**	**261**	P		**P**	**21 41 46.1**	**-1.1**
PSA00				IAmb		IAmb	21 41 50.4	
	comp=Z,19nm,1.0s							
PSA00	**Pilbara Seismi**	**49.35**	**261**	P		**P**	**21 41 46.0**	**-1.2**
PSA00				IAmb		IAmb	21 41 48.3	
	comp=Z,12nm,1.2s							
PSA00	**Pilbara Seismi**	**49.35**	**261**	P		**P**	**21 41 47.7**	**+0.5**
MBWA	**Marble Bar**	**49.54**	**261**			**P**	**21 41 47.6**	**-1.1**
MBWA	**Marble Bar**	**49.54**	**261**	P		**P**	**21 41 47.3**	**-1.4**
MBWA				IAmb		IAmb	21 41 49.7	
	comp=Z,26nm,0.8s							
MBWA	**Marble Bar**	**49.54**	**261**	P		**P**	**21 41 48.7**	**0.0**
MEEK	**Meekatharra**	**49.59**	**254**	P		**P**	**21 41 47.6**	**-1.4**
	baz=50,SNR=8.4							
MEEK	**Meekatharra**	**49.59**	**254**	P		**P**	**21 41 47.8**	**-1.2**
KLBR	**Kellerberrin**	**49.81**	**247**	P		**P**	**21 41 51.7**	**+1.1**
	baz=50,SNR=6.2							
KLBR	**Kellerberrin**	**49.81**	**247**	P		**P**	**21 41 51.8**	**+1.2**
	comp=Z,68nm,1.1s							
NWAO	**Narrogin (SRO)**	**50.17**	**245**	P		**P**	**21 41 52.4**	**-0.9**
NWAO				IAmb		IAmb	21 42 04.3	
	comp=Z,26nm,0.8s							
NWAO	**Narrogin (SRO)**	**50.17**	**245**	P		**P**	**21 41 52.4**	**-0.9**
NWAO				pmax		pmax		
	comp=Z,26nm,0.8s							
SANI	**Sanana**	**50.31**	**287**	P		**P**	**21 41 54.0**	**-0.6**
BLDU	**Ballidu**	**50.79**	**248**	P		**P**	**21 41 59.6**	**+1.6**
	baz=51,SNR=5.4							
MORW	**Morawa**	**51.54**	**250**	P		**P**	**21 42 04.2**	**+0.5**
	baz=52,SNR=6.4							
MORW	**Morawa**	**51.54**	**250**	P		**P**	**21 42 03.2**	**-0.4**
MORW				IAmb		IAmb	21 42 12.7	
	comp=Z,27nm,1.0s							
MORW	**Morawa**	**51.54**	**250**	P		**P**	**21 42 04.8**	**+1.1**
LUWI	**Luwuk**	**53.62**	**286**	P		**P**	**21 42 17.5**	**-1.8**
BKSI	**Bulukumba**	**54.15**	**280**	P		P	21 42 32.6	+9.5
KAPI	**Kappang**	**54.61**

comp=N,200nm,22.3s
QIZ LR LR
comp=E,160nm,27.1s
QIZ LR LR
comp=Z,170nm,23.1s
YSS Yuzh-Sakhalins 74.65 339 P **P** **21 44 36.4 -0.2**
YSS Yuzh-Sakhalins 74.65 339 *i* P **P** **21 44 37.5 +0.9**
YSS pmax pmax
comp=Z,54nm,1.2s
SHEM Shemya Is, Ala 75.12 0 LR LR 22 12 57.6
comp=Z,120nm,20.2s,baz=187,slow=32
NJ2 Nanjing 75.37 314 *e*P **P** **21 44 42.5 +1.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
IPM Ipoh 75.55 281 P **P** **21 44 42.1 -0.6**
KULM Kulim 76.22 282 P **P** **21 44 45.5 -1.0**
KULM IAmb IAmb 21 45 14.6
comp=Z,50nm,1.7s
PET Petropavlovsk 76.49 351 P **P** **21 44 46.5 -0.5**
PET IAmb IAmb 21 44 56.5
comp=Z,32nm,1.0s
PET Petropavlovsk 76.49 351 *e*P P 21 44 56.2 +9.1
PET *e*S **S** **21 54 38.5 +6.4**
PET pmax pmax
comp=Z,27nm,0.7s
PET MLR MLR
comp=Z,100nm,16.0s
PET MLR MLR
comp=Z,200nm,16.0s
USRK Ussuriysk Ar. 76.60 331 P **P** **21 44 47.4 -0.5**
comp=Z,6.0nm,0.9s,baz=118,slow=3.5,SNR=9.4
USRK LR LR 22 13 38.1
comp=Z,159nm,21.3s,baz=230,slow=32
comp=Z,6.0nm,0.9s
USRK Ussuriysk Ar. 76.60 331 P **P** **21 44 47.7 -0.2**
MAW Mawson 76.66 202 P **P** **21 44 47.6 -0.4**
comp=Z,6.0nm,0.7s,baz=116,slow=6.7,SNR=16
MAW LR LR 22 15 24.5
comp=Z,218nm,18.4s,baz=90,slow=33
comp=Z,6.0nm,0.7s
MAW Mawson 76.66 202 P **P** **21 44 48.7 +0.7**
baz=77,SNR=8.0
MAW Mawson 76.66 202 P **P** **21 44 48.0 0.0**
MAW Mawson 76.66 202 P **P** **21 44 48.0 0.0**
MAW pmax pmax
comp=Z,8.0nm,1.2s
PEA0B Petropavlovsk- 76.72 350 P **P** **21 44 47.9 -0.5**
PEA0B Petropavlovsk- 76.72 350 *i* P **P** **21 44 47.7 -0.7**
PETK Petropavlovsk- 76.72 350 P **P** **21 44 48.4 0.0**
comp=Z,22nm,1.1s,baz=93,slow=7.4,SNR=24
PETK LR LR 22 13 36.1
comp=Z,318nm,20.3s,baz=150,slow=32
comp=Z,22nm,1.1s
PETK Petropavlovsk- 76.72 350 P **P** **21 44 47.8 -0.6**
PETK Petropavlovsk- 76.72 350 P **P** **21 44 47.8 -0.6**
PSI Prapat 76.77 279 LR LR 22 21 14.2
comp=Z,298nm,18.3s,baz=125,slow=38
MDJ Mudanjiang 78.02 330 P **P** **21 44 55.6 -0.3**
MDJ IAmb IAmb 21 45 06.5
comp=Z,22nm,1.1s
MDJ Mudanjiang 78.02 330 P **P** **21 44 55.7 -0.2**
MDJ pmax pmax
comp=Z,7.0nm,0.8s
MDJ pmax pmax
comp=Z,110nm,6.3s
BELA Belgrano 2 78.30 174 P **P** **21 44 55.6 -1.5**
BELA IAmb IAmb 21 44 57.2
comp=Z,21nm,1.0s
SMAI San Martin Ant 79.31 161 P **P** **21 45 03.0 +0.3**
CN2 Changchun 79.44 327 *e*P **P** **21 45 01.9 -1.8**
CN2 *e*S **S** **21 55 01.0 -3.3**
CN2 SS **SS** **22 00 11.3 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,100nm,19.0s
BNX BinXian 79.89 329 ⇑P P 21 45 11.2 +5.1
BNX pmax pmax
comp=Z,11nm,0.8s
BNX pmax pmax
comp=Z,73nm,5.0s
GRNR Gornyy 80.09 337 *e*P P 21 44 59.4 -7.7
GRNR MLR MLR
comp=E,90nm,17.0s
KLR Kul'dur 80.64 334 LR LR 22 18 56.0
comp=E,70nm,19.4s,baz=182,slow=34
KLR Kul'dur 80.64 334 *i* P **P** **21 45 11.1 +1.0**
KLR pmax pmax
comp=Z,11nm,1.9s
SPIA Saint Paul Isl 80.77 9 P **P** **21 45 11.5 +1.0**
baz=195
HNS HongShan 81.35 317 ⇑P P 21 45 22.0 +7.9
HNS HongShan 81.35 317 S **S** **21 55 27.2 +2.6**
HNS LR LR
comp=N,120nm,19.1s
HNS LR LR
comp=E,110nm,16.7s
HNS LR LR
comp=Z,180nm,19.1s
BJI Beijing 82.06 319 P **P** **21 45 18.1 +0.3**
BJI S **S** **21 55 38.9 +7.1**
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI LR LR
comp=Z,28nm,22.3s
BJI LR LR
comp=Z,140nm,22.8s
BJI LR LR
comp=Z,370nm,29.4s
PMSA Palmer Station 82.31 159 LR LR 22 14 44.6
comp=Z,152nm,22.0s,baz=252,slow=30
PMSA Palmer Station 82.31 159 P **P** **21 45 18.8 -0.1**
XAN Xi'an 83.28 311 P P 21 45 30.3 +5.9
XAN pmax pmax
comp=Z,7.0nm,1.1s
KMI Kunming 83.36 301 ⇑P **P** **21 45 27.8 +2.6**
KMI pmax pmax
comp=Z,5.0nm,0.8s
CMAR Chiang Mai Arr 83.42 293 P **P** **21 45 23.5 -1.9**
comp=Z,1.6nm,1.0s,baz=148,slow=7.1,SNR=3.1
comp=Z,1.6nm,1.0s
CMAR Chiang Mai Arr 83.42 293 P **P** **21 45 24.4 -1.0**
CMAR Chiang Mai Arr 83.42 293 P **P** **21 45 24.4 -1.0**
SII Sitkinak Islan 83.59 17 P **P** **21 45 27.0 +1.6**
baz=210
MA2 Magadan 84.06 349 LR LR 22 16 53.4
comp=Z,259nm,20.6s,baz=149,slow=31
OHAK Old Harbor 84.41 17 P **P** **21 45 28.0 -1.5**
OHAK Old Harbor 84.41 17 P **P** **21 45 28.9 -0.6**
baz=211
SNCC San Nicolas Is 84.75 51 P **P** **21 45 28.8 -3.1**
SNCC IAmb IAmb 21 45 32.7
comp=Z,24nm,1.1s
PZH PanZhiHua 84.81 301 P **P** **21 45 33.5 +1.1**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,60nm,3.8s
O16K Kokwok River B 85.29 14 P **P** **21 45 33.3 -0.6**
baz=206
TROLL Troll, Antarti 85.32 183 P **P** **21 45 33.4 -0.9**
HHC Hu-ho-hao-te 85.36 318 *e*P **P** **21 45 35.1 +0.2**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,220nm,6.2s
CD2 Chengdu 85.39 306 *e*P **P** **21 45 35.0 -0.2**
SNAA Sanae 85.83 181 P **P** **21 45 35.5 -1.3**
SNAA Sanae 85.83 181 LR LR 22 20 21.3
comp=Z,276nm,21.6s,baz=204,slow=33
SNAA Sanae 85.83 181 P **P** **21 45 35.3 -1.5**
SNAA IAmb IAmb 21 45 41.0
comp=Z,13nm,1.0s
SNAA Sanae 85.83 181 P **P** **21 45 35.3 -1.5**
SNAA pmax pmax
comp=Z,13nm,1.0s
Q20K Shuyak Island 85.85 17 P **P** **21 45 37.8 +1.1**
baz=211
ZEA Zeya 85.90 335 *e*P **P** **21 45 37.5 +0.4**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
N16K Nishlik Lake 85.94 13 P **P** **21 45 37.8 +0.6**
baz=206
VNA3 Neumayer Olymp 86.28 179 P **P** **21 45 37.6 -1.4**
VNA2 Neumayer--Watz 86.62 180 P **P** **21 45 39.5 -1.1**
baz=171,slow=5.0
CMB Columbia Colle 86.67 46 P **P** **21 45 40.4 -1.0**
CMB IAmb IAmb 21 45 52.2
comp=Z,14nm,1.1s
CMB Columbia Colle 86.67 46 P **P** **21 45 40.4 -1.0**
CMB pmax pmax
comp=Z,14nm,1.1s
EDW2 Edwards Air Fo 86.68 50 P **P** **21 45 41.1 -0.4**
baz=239
ISA Isabella, Lake 86.74 49 P **P** **21 45 41.1 -0.7**
ISA IAmb IAmb 21 45 52.9
comp=Z,18nm,0.9s
ISA Isabella, Lake 86.74 49 P **P** **21 45 41.1 -0.7**
ISA pmax pmax
comp=Z,18nm,1.0s
ISA Isabella, Lake 86.74 49 P **P** **21 45 42.1 +0.3**
baz=239
MONP2 Monument Peak 86.82 52 P **P** **21 45 42.6 +0.2**
baz=240
VNA1 Neumayer--Stat 86.89 179 P **P** **21 45 40.8 -1.1**
SEY Seymchan 86.96 351 *i* P **P** **21 45 41.6 -0.5**
SEY pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 87.15 52 LR LR 22 17 19.7
comp=Z,89nm,20.1s,baz=226,slow=31
YBH Yreka Blue Hor 87.18 42 LR LR 22 16 11.4
comp=Z,115nm,22.0s,baz=236,slow=30
LPIG La Paz 87.51 63 LR LR 22 16 30.4
comp=Z,95nm,20.0s,baz=235,slow=30
HUMO Hull Mountain 87.52 41 P **P** **21 45 45.1 -0.3**
HUMO IAmb IAmb 21 45 56.4
comp=Z,10nm,1.0s
MPMC Manual Prospec 87.63 49 P **P** **21 45 45.5 -0.7**
baz=240
BEKR Beckworth 87.66 45 P **P** **21 45 45.0 -1.3**
BELC Belle Mtn. Jos 87.67 52 P **P** **21 45 46.2 -0.2**
baz=241
L04D Klamath Falls 87.70 42 P **P** **21 45 46.3 -0.1**
baz=236
PNTR Pine Nut 87.75 46 P **P** **21 45 45.8 -1.0**
PNTR IAmb IAmb 21 45 57.5
comp=Z,11nm,0.8s
HEC Hector,Ludlow 87.84 51 P **P** **21 45 47.0 -0.1**
baz=240
LZH Lanzhou 87.90 311 *e*P **P** **21 45 51.2 +3.7**
LZH pP pwP 21 45 57.1 -0.6
LZH pmax pmax
comp=Z,30nm,1.3s
LCH Last Change Ra 88.12 48 P **P** **21 45 48.0 -0.5**
FURC Furnace Creek, 88.27 49 P **P** **21 45 50.1 +1.1**
baz=240
NVAR Mina Array Bea 88.28 47 P **P** **21 45 49.4 +0.1**
comp=Z,1.1nm,0.6s,baz=223,slow=9.2,SNR=0.8
NVAR LR LR 22 16 37.4
comp=Z,137nm,21.8s,baz=259,slow=30
comp=Z,1.1nm,0.6s
L19K White Mountain 88.33 14 P **P** **21 45 48.3 -0.4**
L19K IAmb IAmb 21 45 58.1
comp=Z,29nm,1.7s
L19K White Mountain 88.33 14 P **P** **21 45 48.9 +0.2**
baz=209
IRM Iron Mountain 88.37 52 P **P** **21 45 48.1 -1.5**
baz=241
NV11 Mina Array Sit 88.38 47 P **P** **21 45 48.8 -0.9**
KVN Kaiserville 88.73 46 P **P** **21 45 50.6 -0.8**
KVN Kaiserville 88.73 46 P **P** **21 45 50.6 -0.8**
KVN pmax pmax
comp=Z,9.0nm,1.0s
MOD Modoc Plateau 88.78 43 P **P** **21 45 51.0 -0.6**
MOD IAmb IAmb 21 46 02.6
comp=Z,12nm,1.1s
L20K Farewell, AK 88.81 15 P **P** **21 45 50.3 -0.7**
baz=210
TPH Tonopah 88.83 48 P **P** **21 45 50.9 -1.0**
TPH Tonopah 88.83 48 P **P** **21 45 50.9 -1.0**
TPH pmax pmax
comp=Z,49nm,1.1s
K05A Summer Lake 88.86 42 P **P** **21 45 51.4 -0.5**
K05A IAmb IAmb 21 46 02.8
comp=Z,16nm,1.1s
TPNV Topopah Spring 88.94 49 P **P** **21 45 51.7 -0.7**
TPNV Topopah Spring 88.94 49 P **P** **21 45 51.7 -0.7**
TPNV pmax pmax
comp=Z,7.0nm,0.9s
J05D Fort Rock, OR 88.95 42 P **P** **21 45 52.4 +0.1**
baz=237
PINE Pine Mountain 89.40 41 P **P** **21 45 53.6 -0.9**
PINE IAmb IAmb 21 46 05.3
comp=Z,16nm,0.9s
PRN Pahroc Range 90.00 49 P **P** **21 45 57.3 -0.1**
BMN Battle Mountai 90.01 46 P **P** **21 45 56.7 -0.6**
BMN IAmb IAmb 21 46 08.4
comp=Z,22nm,1.0s
BMN Battle Mountai 90.01 46 P **P** **21 45 56.7 -0.6**
BMN pmax pmax
comp=Z,22nm,1.0s
CAST Castle Rocks 90.04 15 P **P** **21 45 54.8 -2.0**
baz=212
KLU Klutina 90.06 18 P **P** **21 45 58.1 +1.2**
baz=217
R11A Troy Canyon, C 90.09 48 P **P** **21 45 56.9 -0.9**
baz=241
J20K Nowinta River 90.23 14 P **P** **21 45 57.1 -0.5**
baz=210
BBB Bella Bella 90.33 32 LR LR 22 19 15.3
comp=Z,115nm,20.6s,baz=248,slow=31
CRQE Cirque 90.33 20 P **P** **21 45 57.3 -1.0**
baz=219
CHUM Lake Minchumin 90.39 14 P **P** **21 45 56.9 -1.4**
baz=211
I07A Izee 90.44 42 P **P** **21 45 58.3 -0.9**
I07A IAmb IAmb 21 46 09.8
comp=Z,9.9nm,1.0s
WAT6 Susitna Watana 90.44 17 P **P** **21 45 58.5 -0.3**
baz=215
BILL Bilibino 90.63 357 *i* P **P** **21 45 59.1 -0.2**
BILL *i* 21 46 02.9
BILL *i* 21 49 29.9
BILL pmax pmax
comp=Z,9.0nm,1.1s
BILL MLR MLR
comp=Z,133nm,18.0s
J08A Circle Bar Ran 90.70 43 P **P** **21 45 59.9 -0.5**
J08A IAmb IAmb 21 46 10.8
comp=Z,10nm,0.9s
MCARA McCarthy VSAT 90.84 19 P **P** **21 46 01.2 +0.7**
baz=220
BPAW Bear Paw Mtn. 90.88 15 P **P** **21 46 02.0 +1.3**
baz=212
DHY Denali Highway 90.94 17 P **P** **21 46 01.7 +0.6**
baz=216
LCMT Little Creek M 91.08 50 P **P** **21 46 01.8 -0.6**
CCUT Cedar City 91.25 50 P **P** **21 46 02.2 -1.0**
CCUT IAmb IAmb 21 46 14.3
comp=Z,8.7nm,1.0s
ORCD Orcadas 91.30 162 IAmb IAmb 21 46 02.7
comp=Z,16nm,0.9s
YAK Yakutsk 91.36 341 LR LR 22 26 41.2
comp=Z,134nm,18.1s,baz=89,slow=35
YAK Yakutsk 91.36 341 *i* P **P** **21 46 02.7 -0.1**
YAK pmax pmax
comp=Z,9.0nm,0.9s
PSUT Pine Spring 91.37 49 P **P** **21 46 03.1 -0.7**
G08A Pilot Rock 91.40 41 P **P** **21 46 02.7 -0.9**
G08A IAmb IAmb 21 46 14.4
comp=Z,9.1nm,0.9s
ELK Elko 91.48 46 LR LR 22 18 46.9
comp=Z,108nm,21.6s,baz=248,slow=30
ELK Elko 91.48 46 P **P** **21 46 03.3 -1.0**
ELK IAmb IAmb 21 46 15.2
comp=Z,8.9nm,1.0s
ELK Elko 91.48 46 P **P** **21 46 03.3 -1.0**
ELK pmax pmax
comp=Z,9.0nm,1.0s
U15A North Rim 91.49 51 P **P** **21 46 03.9 -0.5**
U15A IAmb IAmb 21 46 15.5
comp=Z,16nm,0.9s
I21K Tanana 91.57 14 P **P** **21 46 04.5 +0.7**
baz=212
M26K Nabesna, AK 91.64 19 IAmb IAmb 21 46 14.1
comp=Z,12nm,0.9s
M26K Nabesna, AK 91.64 19 P **P** **21 46 03.3 -0.9**
baz=220
MLY Manley 91.73 14 P **P** **21 46 03.9 -0.6**
baz=213
NEA2 Nenana 91.75 15 P **P** **21 46 04.2 -0.4**
baz=214
H21K Melozitna Rive 91.80 13 P **P** **21 46 05.0 +0.1**
baz=211
WRH Wood River Hil 91.89 16 P **P** **21 46 04.0 -1.3**
WRH IAmb IAmb 21 46 13.7
comp=Z,20nm,1.3s
P30M Million Dollar 91.90 22 P **P** **21 46 04.7 -0.8**
baz=225
M27K Edge Creek, AK 91.94 19 P **P** **21 46 04.9 -0.8**
M27K IAmb IAmb 21 46 16.0
comp=Z,14nm,1.1s
M27K Edge Creek, AK 91.94 19 P **P** **21 46 05.7 0.0**
baz=220
ULN Ulaanbaatar 91.95 322 *ce*P **P** **21 46 05.5 -0.6**
ULN pmax pmax
comp=Z,3.0nm,0.8s
K24K Donnelly Dome 91.95 17 P **P** **21 46 05.5 -0.1**
baz=217
L26K Log Cabin Wild 92.02 18 P **P** **21 46 04.8 -1.1**
L26K IAmb IAmb 21 46 09.5
comp=Z,15nm,1.4s
L26K Log Cabin Wild 92.02 18 P **P** **21 46 05.8 -0.2**
baz=219
CCB Clear Creek Bu 92.11 16 P **P** **21 46 04.3 -2.0**
HDA Harding Lake 92.13 16 IAmb IAmb 21 46 15.1
comp=Z,16nm,1.2s
HDA Harding Lake 92.13 16 P **P** **21 46 06.3 -0.1**
baz=216
I23K Minto, Yukon-K 92.15 15 P **P** **21 46 06.4 0.0**
baz=214
RIDG Independent Ri 92.15 17 P **P** **21 46 05.4 -1.1**
RIDG IAmb IAmb 21 46 10.5
comp=Z,20nm,1.2s
RIDG Independent Ri 92.15 17 P **P** **21 46 05.5 -1.0**
baz=218
BMO Blue Mountains 92.18 42 P **P** **21 46 05.2 -2.0**
BMO Blue Mountains 92.18 42 P **P** **21 46 05.3 -2.0**
BMO pmax pmax
comp=Z,8.0nm,1.4s
MDM Murphy Dome 92.26 15 IAmb IAmb 21 46 10.8
comp=Z,15nm,1.2s
DOT Dot Lake 92.30 18 IAmb IAmb 21 46 07.9
comp=Z,8.7nm,1.0s
GTA Gaotai 92.30 312 *e*P **P** **21 46 08.2 +0.2**
GTA pP sP 21 46 12.4 +0.2
GTA sP pwP 21 46 15.6 -2.6
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,190nm,5.0s
GTA LR LR
comp=Z,87nm,17.1s
GTA LR LR
comp=Z,110nm,16.7s
GTA LR LR
comp=Z,130nm,17.8s
MTPU Mount Pierson 92.31 50 P **P** **21 46 07.4 -0.9**
MTPU IAmb IAmb 21 46 19.7
comp=Z,10nm,1.0s
SONM Songino Array 92.31 322 P **P** **21 46 05.6 -2.2**
comp=Z,1.1nm,0.6s,baz=125,slow=2.9,SNR=7.9
SONM LR LR 22 25 45.2
comp=Z,61nm,21.4s,baz=118,slow=34
comp=Z,1.1nm,0.6s
SONM Songino Array 92.31 322 P **P** **21 46 07.2 -0.6**
SONM Songino Array 92.31 322 P **P** **21 46 07.2 -0.6**
SONM pmax pmax
comp=Z,8.0nm,1.4s
H22K Ishtalitna Cre 92.31 14 P **P** **21 46 07.7 +0.5**
baz=212
G21K Allakaket 92.40 13 P **P** **21 46 07.2 -0.4**
baz=210
IL31 92.44 16 P **P** **21 46 06.4 -1.4**
ILAR Eielson Array 92.44 16 P **P** **21 46 05.4 -2.4**
comp=Z,4.0nm,0.9s,baz=232,slow=5.4,SNR=20
ILAR LR LR 22 20 31.6
comp=Z,210nm,21.7s,baz=220,slow=31
comp=Z,4.0nm,0.9s
L27K Beaver Creek, 92.49 19 P **P** **21 46 06.7 -1.4**
L27K IAmb IAmb 21 47 42.4
comp=Z,28nm,1.9s
L27K Beaver Creek, 92.49 19 P **P** **21 46 08.1 0.0**
baz=221
BCAR Beaver Creek A 92.50 19 P **P** **21 46 07.8 -0.4**
SCRK Sand Creek 92.58 17 P **P** **21 46 08.0 -0.6**
baz=219
O30N Mendenhall 92.67 22 P **P** **21 46 08.5 -0.5**
baz=226
J25K Salcha River, 92.71 17 P **P** **21 46 07.6 -1.5**
J25K Salcha River, 92.71 17 P **P** **21 46 08.1 -1.1**
baz=218
N30M Aishikik Lake 92.81 21 P **P** **21 46 09.6 -0.1**
baz=225
J26L Joseph Creek 93.10 17 IAmb IAmb 21 46 12.3
comp=Z,8.6nm,0.9s
J26L Joseph Creek 93.10 17 P **P** **21 46 09.9 -1.1**
baz=219
K27K Chicken 93.16 18 P **P** **21 46 10.5 -0.6**
K27K Chicken 93.16 18 P **P** **21 46 11.0 -0.1**
baz=220
G23K Bananza Creek 93.30 14 P **P** **21 46 11.2 -0.6**
baz=213
PLCA Paso Flores 93.39 137 P **P** **21 46 12.4 -0.7**
comp=Z,4.1nm,0.9s,baz=208,slow=8.1,SNR=5.6
PLCA LR LR 22 18 26.4
comp=Z,122nm,21.4s,baz=234,slow=29
comp=Z,4.1nm,0.9s
PRP Porcupine Dome 93.39 16 P **P** **21 46 11.6 -0.8**
PRP IAmb IAmb 21 46 31.4
comp=Z,23nm,1.8s
PRP Porcupine Dome 93.39 16 P **P** **21 46 12.1 -0.3**
baz=217
DLBC Dease Lake 93.40 26 LR LR 22 20 24.0
comp=Z,193nm,21.0s,baz=268,slow=30
F22K John River 93.52 13 P **P** **21 46 12.3 -0.4**
baz=212
R33M Jennings River 93.64 25 P **P** **21 46 14.2 +0.6**
baz=230
L29M L29M 93.66 20 P **P** **21 46 13.1 -0.4**
baz=224
COLD Coldfoot 93.69 13 P **P** **21 46 12.6 -1.0**
COLD Coldfoot 93.69 13 P **P** **21 46 12.8 -0.8**
baz=213
I26K Coal Creek Min 93.84 17 IAmb IAmb 21 46 19.3
comp=Z,21nm,1.4s
I26K Coal Creek Min 93.84 17 P **P** **21 46 13.2 -1.0**
baz=220
G24K Hadweenzic Riv 93.87 15 P **P** **21 46 14.3 -0.1**
baz=216
EGAK Eagle 93.98 18 P **P** **21 46 14.3 -0.6**
EGAK IAmb IAmb 21 46 24.2
comp=Z,17nm,1.2s
NEW Newport 94.00 39 LR LR 22 24 00.0
comp=Z,147nm,18.1s,baz=238,slow=33
E22K Anaktuvuk Pass 94.13 12 P **P** **21 46 15.5 -0.1**
baz=212
GOMU GeErMu 94.44 307 P **P** **21 46 17.5 -0.7**
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,40nm,3.8s
F24K Squaw Lake 94.44 14 P **P** **21 46 16.0 -1.0**
baz=215
I27K Kandik River 94.48 17 P **P** **21 46 16.5 -0.8**
baz=221
E24K Your Creek 94.77 13 P **P** **21 46 17.8 -0.7**
baz=215
G26K Porcupine Rive 94.95 16 P **P** **21 46 20.1 +0.8**
baz=219
H27K Steamboat Moun 94.98 17 P **P** **21 46 19.5 -0.1**
baz=221
F25K Christian Rive 95.01 15 P **P** **21 46 18.6 -1.1**
baz=217
D23K Nanushuk River 95.06 12 P **P** **21 46 18.8 -1.0**
baz=213
TXAR Lajitas Array 95.08 60 P **P** **21 46 21.1 +0.1**
comp=Z,1.1nm,1.1s,baz=234,slow=4.3,SNR=2.5
TXAR LR LR 22 19 57.6
comp=Z,147nm,21.9s,baz=248,slow=30
comp=Z,1.1nm,1.1s
BMAR Burnt Mountain 95.14 15 P **P** **21 46 19.2 -1.0**
ANMO Albuquerque 95.14 54 LR LR 22 22 04.1

comp=Z,76nm,19.6s,baz=263,slow=31
ANMO Albuquerque 95.14 54 *i* P **P** **21 46 21.7 +0.5**
ANMO pmax pmax
comp=Z,5.0nm,1.1s
PALK Pallekele 95.21 276 LR LR 22 28 29.0
comp=Z,177nm,21.8s,baz=223,slow=35
I29M Ogilvie Camp, 95.23 18 P **P** **21 46 21.3 +0.6**
baz=224
G27K Doyon Strip 95.39 16 P **P** **21 46 21.7 +0.3**
baz=221
F26K Sheenjek River 95.45 15 P **P** **21 46 21.8 +0.1**
baz=219
E25K Arctic Village 95.45 14 P **P** **21 46 22.5 +0.8**
baz=218
C23K Itkillik River 95.81 12 P **P** **21 46 24.3 +1.1**
baz=213
C24K Franklin Bluff 96.08 12 P **P** **21 46 25.1 +0.8**
baz=215
PDAR Pinedale Array 96.18 46 P **P** **21 46 26.2 +0.4**
comp=Z,0.1nm,0.4s,baz=294,slow=4.5,SNR=1.3
PDAR LR LR 22 21 38.8
comp=Z,81nm,21.3s,baz=254,slow=30
comp=Z,0.1nm,0.4s
CMIG Matias Romero 98.00 75 LR LR 22 20 30.9
comp=Z,129nm,21.6s,baz=234,slow=29
INK Inuvik 98.65 18 LR LR 22 24 28.3
comp=Z,95nm,20.9s,baz=212,slow=31
TIXI Tiksi 98.95 347 LR LR 22 27 53.1
comp=Z,114nm,19.5s,baz=181,slow=33
WMQ Urumqi 102.38 312 *e*P **Pdif** **21 46 54.1 +0.8**
WMQ LR LR
comp=Z,92nm,22.7s
MKAR Makanchi Array 106.91 314 Pdiff **Pdif** **21 47 11.1 -2.2**
MKAR PP **PP** **21 51 45.9 +6.0**
comp=Z,1.1nm,1.0s,baz=90,slow=9.7,SNR=4.3
ARU Arti 122.30 323 *i* PKIKP **PKPdf** **21 51 51.5 -0.7**
ARU 21 53 28.4
ARU 21 59 03.2
ARU SS SS 22 10 02.1 -5.4
ARU MLR MLR
comp=Z,121nm,20.0s
ARCES ARCESS Array B 129.37 346 PKP **PKPdf** **21 52 02.5 -2.9**
comp=Z,1.2nm,0.6s,baz=5.7,slow=1.2,SNR=7.7
KLMR Klimovskoe 130.38 332 *e*PKIKP **PKiKP** **21 52 14.5 +6.2**
KLMR pmax pmax
comp=Z,15nm,1.5s
KLMR Klimovskoe 130.38 332 *e*PKPdf **PKiKP** **21 52 14.5 +6.2**
KLMR AMP 21 52 17.6
comp=Z,15nm,1.5s
KIV Kislovodsk 134.44 310 *i* PKIKP **PKPdf** **21 52 15.5 -0.3**
KIV pmax pmax
comp=Z,2.0nm,1.0s
KIV MLR MLR
comp=Z,54nm,24.0s
FINES FINESS Array B 135.23 338 PKP **PKiKP** **21 52 17.4 -0.7**
comp=Z,2.6nm,0.8s,baz=256,slow=5.3,SNR=3.6
SOC Sochi 136.62 310 *i* PKIKP **PKPdf** **21 52 18.7 -1.0**
SOC *e* 21 54 58.2
SOC *e*PS **PS** **22 05 26.3 -1.4**
NACGM Naroch 139.33 331 ⇓ *e*PKP **PKiKP** **21 52 28.7 +2.0**
baz=51
AKASG Malin Array Be 140.55 324 PKP **PKPdf** **21 52 26.2 -0.5**
comp=Z,0.2nm,0.3s,baz=47,slow=1.5,SNR=3.3
CFR Carcaliu 143.88 317 ⇑P **PKiKP** **21 52 36.5 +0.2**
CFR Carcaliu 143.88 317 ⇑PKIKP **PKiKP** **21 52 36.5 +0.2**
TESR Tescani 144.17 320 ⇓P **PKiKP** **21 52 38.9 +2.1**
PANC Panciu 144.18 318 ⇓P **PKPab** **21 52 30.9 -0.1**
BIZ Bicaz 144.27 321 ⇓P **PKPab** **21 52 30.8 -0.6**
BUR08 Bucovina Ar. S 144.42 322 PKPdf PKPbc 21 52 32.4 +0.1
BURAR Bucovina Array 144.42 322 ⇑P PKPbc 21 52 32.5 +0.2
BURAR Bucovina Array 144.42 322 PKPbc 21 52 32.5 +0.1
BURAR Bucovina Array 144.42 322 ⇑PKIKP PKPbc 21 52 32.5 +0.2
VRI Vrincioaia 144.44 319 ⇓P PKPbc 21 52 32.5 +0.2
VRI Vrincioaia 144.44 319 ⇓PKIKP PKPbc 21 52 32.5 +0.2
PLOR Plostina 144.49 319 ⇑P PKPbc 21 52 33.0 +0.5
PLOR Plostina 144.49 319 ⇑PKIKP PKPbc 21 52 33.0 +0.5
COVR Voineasa-Covas 144.77 319 ⇑P PKPbc 21 52 33.5 +0.2
MLR Muntele Rosu 145.10 319 ⇓P **PKPbc** **21 52 32.8 -1.8**
MLR Muntele Rosu 145.10 319 **PKPbc** **21 52 33.5 -1.1**
MLR Muntele Rosu 145.10 319 ⇓PKIKP **PKPbc** **21 52 32.8 -1.8**
DOPR Dopca 145.20 320 ⇑P **PKPdf** **21 52 35.8 +0.7**
ARCR ARCALIA 145.20 322 ⇑P **PKPbc** **21 52 34.3 -0.4**
KOLS Kolonicke sedl 145.25 326 *e*PKIKP **PKPbc** **21 52 34.4 -0.4**
KOLS Kolonicke sedl 145.25 326 *e*PKP **PKPbc** **21 52 34.3 -0.5**
SECR 145.25 318 ⇑P **PKPbc** **21 52 34.4 -0.5**
BMR Baia Mare 145.35 323 ⇑P **PKPab** **21 52 36.1 +0.8**
BMR Baia Mare 145.35 323 ⇑PKIKP **PKPab** **21 52 36.1 +0.8**
UZH Uzhgorod 145.42 326 *e*PKP2 **PKPbc** **21 52 33.9 -1.4**
ELL Elmali 145.54 302 **PKPdf** **21 52 35.2 -1.0**
ELL Elmali 145.54 302 PKIKP **PKPdf** **21 52 35.2 -1.0**
OJC Ojcow 145.62 330 PKPdf **PKPdf** **21 52 34.6 -1.1**
OJC Ojcow 145.62 330 PKIKP **PKPdf** **21 52 34.6 -1.1**
VOIR 145.67 319 ⇑P **PKPbc** **21 52 36.4 0.0**
VOIR 145.67 319 ⇑PKIKP **PKPbc** **21 52 36.4 0.0**
CRVS Cervenica-Dubn 145.68 327 *e*PKIKP **PKPbc** **21 52 36.1 -0.1**
CRVS Cervenica-Dubn 145.68 327 *e*PKP **PKPbc** **21 52 36.1 -0.1**
CBBR Cluj-Babes-Bol 145.84 322 ⇑P **PKPab** **21 52 37.8 +0.6**
CJR Cluj-Napoca 145.84 322 ⇓P **PKPab** **21 52 37.2 0.0**
CJR Cluj-Napoca 145.84 322 ⇓PKP2 **PKPab** **21 52 37.2 0.0**
MESR Meseneni 145.96 323 ⇓P **PKPab** **21 52 37.4 -0.2**
ARR Arges 145.96 319 ⇓P **PKPbc** **21 52 36.8 -0.4**
HUMR Humele 146.17 318 ⇑P **PKPdf** **21 52 37.0 +0.2**
DRGR 146.30 323 ⇓P **PKPdf** **21 52 37.3 +0.2**
DRGR 146.30 323 ⇓PKP2 **PKPdf** **21 52 37.3 +0.2**
LANS Liptovska Anna 146.51 328 *e*PKP2 **PKPbc** **21 52 38.0 -0.7**
LANS Liptovska Anna 146.51 328 *e*PKP **PKPbc** **21 52 38.0 -0.7**
DEV Deva 146.71 321 ⇑P **PKPdf** **21 52 38.4 +0.7**
DEV Deva 146.71 321 ⇑PKP2 **PKPdf** **21 52 38.4 +0.7**
MORC Moravsky Berou 146.97 331 ⇑P **PKPbc** **21 52 39.9 -0.2**
MORC Moravsky Berou 146.97 331 ⇑PKP2 **PKPbc** **21 52 39.9 -0.2**
MORC Moravsky Berou 146.97 331 *e*PKP **PKPbc** **21 52 39.6 -0.4**
OSTC Ostas 146.97 333 *e*PKP **PKPdf** **21 52 38.2 +0.2**
OSTC *ex* x 21 52 48.9
CHVC Chvalec 147.02 333 *e*PKP **PKPbc** **21 52 39.9 -0.2**
CHVC *ex* x 21 52 51.6
GZR Gura Zlata 147.05 320 ⇑P **PKPbc** **21 52 39.7 -0.8**
GZR Gura Zlata 147.05 320 ⇑PKIKP **PKPbc** **21 52 39.7 -0.8**
DPC Dobruska-Polom 147.08 333 *e*PKP2 **PKPbc** **21 52 40.1 -0.2**
DPC Dobruska-Polom 147.08 333 *e*PKP **PKPbc** **21 52 40.1 -0.2**
DPC *ex* x 21 52 47.6
KRLC Kraliky 147.09 332 *e*PKIKP **PKPdf** **21 52 37.5 -0.8**
KRLC *e* 21 52 47.9
KRLC Kraliky 147.09 332 *e*PKP **PKPdf** **21 52 37.5 -0.8**
KRLC *ex* x 21 52 47.9
UPC Upice 147.09 333 *e*PKP2 **PKPbc** **21 52 40.0 -0.3**
UPC Upice 147.09 333 *e*PKP **PKPbc** **21 52 40.0 -0.3**
UPC *ex* x 21 52 48.9
PSZ Piszkesteto 147.12 326 ⇑P **PKPbc** **21 52 40.7 +0.2**
PSZ Piszkesteto 147.12 326 ⇑PKP2 **PKPbc** **21 52 40.7 +0.2**
SIRR Siria 147.19 323 ⇑P **PKPbc** **21 52 40.2 -0.5**
VYHS Vyhne 147.26 328 *e*PKP2 **PKPbc** **21 52 40.8 -0.1**
VYHS Vyhne 147.26 328 *e*PKP **PKPbc** **21 52 40.8 -0.1**
HERR Herculane 147.55 320 ⇑P **PKPbc** **21 52 40.8 -0.9**
JAVC Velka Javorina 147.57 330 *e*PKP **PKPbc** **21 52 42.4 +0.7**
BZS Buzias 147.60 322 ⇓P **PKPbc** **21 52 42.8 +0.9**
BZS Buzias 147.60 322 ⇓PKP2 **PKPbc** **21 52 42.8 +0.9**
BRG Berggiesshubel 147.64 335 *e*PKP **PKPbc** **21 52 41.4 -0.4**
BRG Amp 21 52 42.2
comp=Z,9.4nm,0.8s
BRG *ex* x 21 52 47.7
BRG Amp 21 52 51.0
comp=Z,24nm,0.9s
BRG Berggiesshubel 147.64 335 *e*PKP2 **PKPbc** **21 52 41.4 -0.4**
BRG pmax pmax
comp=Z,9.0nm,0.8s
BRG pmax pmax
comp=Z,24nm,0.9s
CLL Collm 147.64 337 *i* PKIKP **PKPdf** **21 52 39.3 +0.2**
CLL pmax pmax
comp=Z,14nm,0.9s
CLL Collm 147.64 337 *i* PKPdf **PKPdf** **21 52 39.3 +0.2**
CLL *i* PKPbc **PKPbc** **21 52 40.9 -0.9**
comp=Z,14nm,0.9s
CLL *i* x x 21 52 49.8
comp=Z,29nm,0.9s
CLL *e*SSS SSS 22 20 48.0
CLL Lm MLR 22 59 00.0
comp=Z,100nm,21.0s
PVCC Panska Ves 147.67 334 *e*PKP2 **PKPbc** **21 52 41.3 -0.6**
PVCC Panska Ves 147.67 334 *e*PKP **PKPbc** **21 52 41.3 -0.6**
PVCC *ex* x 21 52 49.5
VRAC Vranov 147.74 331 ⇓P **PKPbc** **21 52 42.3 +0.2**
VRAC Vranov 147.74 331 ⇓PKP2 **PKPbc** **21 52 42.3 +0.2**
VRAC Vranov 147.74 331 *e*PKP **PKPbc** **21 52 41.5 -0.6**
SMOL Smolenice 147.92 329 *e*PKP2 **PKPbc** **21 52 43.4 +0.7**
KRUC Moravsky 148.00 331 *e*PKP **PKPbc** **21 52 42.3 -0.5**
BLKB Belogradchik 148.06 318 ⇑P **PKPdf** **21 52 41.1 +1.0**
MODS Modra-Piesok 148.09 329 *e*PKIKP **PKPdf** **21 52 40.6 +0.7**
MODS Modra-Piesok 148.09 329 *e*PKP **PKPdf** **21 52 40.6 +0.7**
PRU Pruhonice 148.10 334 *e*PKP2 **PKPdf** **21 52 41.3 +1.4**
PRU Pruhonice 148.10 334 *e*PKP **PKPdf** **21 52 41.3 +1.4**
PRU *ex* x 21 52 50.8
VTS Vitosha 148.21 316 ⇑P **PKPab** **21 52 47.7 +0.9**
VTS Vitosha 148.21 316 ⇑PKP2 **PKPab** **21 52 47.7 +0.9**
TREC Trest 148.23 332 *e*PKP2 **PKPbc** **21 52 43.0 -0.5**
TREC Trest 148.23 332 *e*PKP **PKPbc** **21 52 43.0 -0.5**
TREC *ex* x 21 52 51.4
BOVS Bovan 148.65 318 ⇑P **PKPdf** **21 52 41.3 +0.4**
MORH Mrgy, Hungar 148.87 325 ⇑P **PKPbc** **21 52 44.4 -0.7**
MORH Mrgy, Hungar 148.87 325 PKP **PKPbc** **21 52 44.5 -0.7**
FRGS Fruska Gora 148.90 322 ⇓P **PKPbc** **21 52 45.0 -0.3**
RONA Rosalia, Austr 149.04 329 *i* P **PKPbc** **21 52 45.2 -0.4**
comp=Z,6.8nm,0.9s
RONA *i* P **pPKPab** **21 52 53.4 +0.5**
comp=Z,21nm,1.2s
CONA Conrad Observa 149.07 330 *e*P **PKPbc** **21 52 45.2 -0.6**
comp=Z,6.7nm,1.0s,SNR=4.5
CONA *e*P **pPKPab** **21 52 53.7 +0.6**
comp=Z,25nm,1.6s
CKRC Cesky Krumlov 149.10 333 *e*PKP **PKPdf** **21 52 43.5 +1.9**
CKRC *ex* x 21 52 53.9
KHC Kasperske Hory 149.16 334 PKPab **PKPab** **21 52 53.2 +3.0**
KHC Kasperske Hory 149.16 334 *e*PKP2 **PKPbc** **21 52 44.7 -1.2**
KHC Kasperske Hory 149.16 334 *e*PKP **PKPbc** **21 52 44.7 -1.2**
KHC *ex* x 21 52 52.0
KOVH Kovagotottos 149.24 325 PKP **PKPbc** **21 52 45.5 -0.6**
GEC2 GERESS Array S 149.33 333 **PKPbc** **21 52 46.2 -0.2**
GEC2 pPKPab **pPKPab** **21 52 54.7 +0.6**
GERES GERESS Array B 149.33 333 PKPbc **PKPbc** **21 52 45.6 -0.8**
comp=Z,3.2nm,0.9s,baz=48,slow=2.0,SNR=23
DIVS Divibare 149.42 321 PKPab **PKPab** **21 52 54.5 +2.9**
ARSA Arzberg 149.72 329 *i* P **PKPbc** **21 52 46.0 -1.3**
comp=Z,0.9nm,0.5s
ARSA *i* P **pPKPab** **21 52 54.9 -0.8**
comp=Z,5.8nm,0.9s
MOA Molln 149.85 331 *e*P **PKPbc** **21 52 46.8 -0.8**
comp=Z,9.1nm,1.8s
MOA *i* P **pPKPab** **21 52 55.1 -1.1**
comp=Z,12nm,1.0s
BIOA Bad Ischl, Aus 150.25 332 *e*P **PKPbc** **21 52 47.4 -1.1**
comp=Z,6.4nm,1.3s
BIOA *i* P **pPKPab** **21 52 56.6 -1.2**
comp=Z,21nm,1.5s
SOKA Soboth 150.37 329 *i* P **PKPbc** **21 52 48.1 -0.9**
comp=Z,5.1nm,1.2s
SOKA *i* P **pPKPab** **21 52 57.5 -0.9**
comp=Z,23nm,1.2s
BTNL Ternell 150.44 343 *d*PKiKP **PKPbc** **21 52 48.4 -0.6**
BTNL *d*PKPab **PKPab** **21 52 54.3 -1.0**
BTNL *dp*PKPab **pPKPab** **21 52 57.1 -1.4**
MEM Membach 150.45 344 *d*PKPbc **PKPbc** **21 52 48.4 -0.5**
MEM *dp*PKPbc **pPKPbc** **21 52 51.1 -1.0**
MEM *d*PKPab **sPKPbc** **21 52 53.0 +1.1**
BSTI Sart Tilman 150.59 344 *d*PKiKP **PKPbc** **21 52 49.0 -0.2**
BSTI *d*PKPab **sPKPbc** **21 52 54.1 +0.6**
BSTI *dp*PKPab **pPKPab** **21 52 57.6 -1.4**
BHOU Houvegnez 150.69 343 *ds*PKP 21 52 47.9
BHOU *d*PKP **PKPab** **21 52 54.8 -1.6**
BHOU *dp*PKP pPKPab 21 52 57.9 -1.6
OBKA Obir 150.72 329 *i* P **PKPab** **21 52 56.1 -0.7**
comp=Z,8.2nm,0.8s
BCLA Clavier 150.81 344 *d*PKP **PKPbc** **21 52 48.7 -1.0**
SNF Seneffe 150.97 346 *d*PKiKP **PKPbc** **21 52 49.9 -0.2**
SNF *d*PKPab **sPKPbc** **21 52 55.9 +1.5**
BMRD Maredsous 151.05 345 *d*PKiKP **PKPbc** **21 52 50.0 -0.3**
BMRD *d*PKPab **sPKPbc** **21 52 56.0 +1.3**
MYKA Terra Mystica 151.05 330 *i* P **PKPbc** **21 52 48.9 -1.7**
comp=Z,4.1nm,1.0s
RCHB Rochefort 151.07 344 *d*PKiKP **PKPbc** **21 52 49.7 -0.6**
RCHB *d*PKPab **PKPab** **21 52 58.1 +0.2**
DOU Dourbes 151.28 345 *d*PKiKP **PKPbc** **21 52 50.8 -0.1**
WATA Walderalm 151.40 334 *i* P **PKPbc** **21 52 50.4 -1.0**
comp=Z,6.6nm,1.0s
WATA *i* P **PKPab** **21 52 59.2 -0.4**
comp=Z,14nm,1.2s
WTTA Wattenberg 151.43 333 *i* P **PKPbc** **21 52 50.4 -1.1**
comp=Z,10nm,1.1s
ABTA Abfaltersbach 151.47 332 *e*P **PKPbc** **21 52 50.1 -1.5**
comp=Z,5.7nm,0.7s,SNR=5.3
ABTA *e*P **PKPab** **21 52 58.3 -1.6**
comp=Z,17nm,1.2s
CLUD Cludinico 151.53 331 **PKPbc** **21 52 50.8 -0.9**
CLUD PKPab **PKPab** **21 52 59.3 -0.8**
MOTA Moosalm 151.59 334 *e*P **PKPbc** **21 52 49.1 -2.8**
comp=Z,4.1nm,0.7s
MOTA *i* P **PKPab** **21 52 59.7 -0.7**
comp=Z,27nm,1.1s
RETA Reutte 151.61 335 *i* P **PKPbc** **21 52 50.8 -1.0**
comp=Z,2.6nm,1.0s
RETA *i* P **PKPab** **21 52 59.9 -0.5**
comp=Z,12nm,1.2s
SQTA Sankt Quirin 151.64 334 *i* P **PKPbc** **21 52 51.6 -0.4**
comp=Z,3.7nm,0.6s
SQTA *i* P **PKPab** **21 52 59.2 -1.4**
comp=Z,20nm,1.1s
BFO Black Forest 151.79 339 **PKPbc** **21 52 51.8 -0.3**
BFO Black Forest 151.79 339 PKIKP **PKPbc** **21 52 51.8 -0.3**
CIMO Cimolais 151.84 331 PKPab **PKPab** **21 52 59.3 -2.0**
FETA Feichten 152.00 334 *i* P **PKPbc** **21 52 51.4 -1.4**
comp=Z,5.5nm,1.1s
FETA *i* P **PKPab** **21 53 00.9 -1.2**
comp=Z,20nm,1.0s
DAVA Damuels 152.11 336 *i* P **PKPbc** **21 52 52.0 -1.1**
comp=Z,6.1nm,1.4s
ECH Echery 152.27 340 PKPab **PKPab** **21 53 01.5 -1.6**
ECH Echery 152.27 340 PKIKP **PKPab** **21 53 01.5 -1.6**
CLF Chambon-Foret 153.76 346 PKPab **PKPab** **21 53 05.5 -3.8**
ESDC Sonseca Array 162.94 353 PKPab **PKPab** **21 53 49.4 +0.1**
comp=Z,0.9nm,1.1s,baz=1.6,slow=10,SNR=4.0
TORD Torodi Ar. Bea 167.62 221 PKP **PKPdf** **21 53 03.3 -1.3**
comp=Z,0.2nm,0.7s,baz=289,slow=4.4,SNR=2.0
TORD PKPab **PKPab** **21 54 09.1 -1.4**
comp=Z,1.6nm,0.9s,baz=115,slow=3.5,SNR=4.8
TORD Torodi Ar. Bea 167.62 221 PKPab **PKPab** **21 54 09.8 -0.7**

DJA 12 21:35:48.3±0.3, 0°N±3°×12°1E±°, h10km, M4.2/9, mb4.6/1, MLv4.1/9, 1C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.79**	**84**	P	Pg	21 36 03.8	+0.2
MPSI	**Mapaga**	**1.25**	**267**	P	Pn	21 36 09.8	-2.1
APSI	**Ampana**	**1.39**	**159**	P	Pn	21 36 13.0	-0.8
GTOI	**Gorontalo**	**1.88**	**83**	P	Pn	21 36 16.6	-3.9
LUWI	**Luwuk**	**2.16**	**131**	P	Pb	21 36 27.1	-0.5
KMSI	**Cibinong**	**2.84**	**86**	P	Pn	21 36 33.2	-0.5
TTSI	**Tana Toraja**	**3.67**	**201**	P	Pn	21 36 43.0	-2.2
SPSI	**Sidrap Palu**	**4.55**	**198**	P	Pn	21 36 58.0	+0.7
PAGZ	**Pagadian**	**7.73**	**17**	⇑ *e*P	Pn	21 37 36.0	-4.9
GENI	**Genyem**	**19.24**	**99**	P	Pn	21 40 15.7	+1.7

*VIE **12** 21:54:22.1±0.7, 47°.62N×17°.97E, h14km±5km, ml1.7/4, Error ellipse: s-maj=6.1km s-min=2.2km az=149.0 17 km SW of Komarom*
*IPEC **12** 21:54:25.1±0.2, 47°.74N×18°.01E, h18km±1km, ML1.2/3, Error ellipse: s-maj=2.1km s-min=0.7km az=162.0*

KRSZO 12 21:54:23.0±1.0, 47°.65N×18°.03E, h10km±6km, ML1.8/19, Error ellipse: s-maj=3.3km s-min=2.7km az=105.0, Hungary

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A268A	**Rede**	**0.23**	**198**	Pg	Pg	21 54 27.6	-0.2
	comp=Z,0.2nm,SNR=11						
A268A				Lg	Lg	21 54 32.1	
A269A	**Baj**	**0.24**	**93**	Pg	Pg	21 54 28.2	+0.3
	comp=Z,0.5nm,SNR=19						
A269A				Lg	Lg	21 54 31.6	
SRO	**Srobarova**	**0.25**	**50**	Pg	Pg	21 54 29.5	+1.4
	comp=Z,0.8nm,SNR=7.4						
SRO				Lg	Lg	21 54 34.1	
SRO	**Srobarova**	**0.25**	**50**	*e*PG	Pg	21 54 29.5	+1.4
SRO				*e*SG	Sg	21 54 33.9	+2.4
SRO				*e*LG	Lg	21 54 34.5	
A339A	**Balon**	**0.31**	**305**	Pg	Pb	21 54 30.5	-0.2
	comp=Z,0.4nm,SNR=3.9						
A339A				Lg	Lg	21 54 36.2	
CSKK	**Cskako**	**0.33**	**152**	Pg	Pg	21 54 28.9	-0.7
	comp=Z,2.1nm,SNR=11						
CSKK	**Cskako**	**0.33**	**152**	P	Pg	21 54 28.9	-0.7
A338A	**Semerovo**	**0.42**	**31**	Pg	Pb	21 54 32.8	+0.1
	comp=Z,0.2nm,SNR=3.6						
EGYH	**Egyhazaskeszo**	**0.53**	**244**	Pg	Pb	21 54 34.0	-0.4
	comp=Z,0.2nm,SNR=4.0						
EGYH				Lg	Lg	21 54 42.2	
EGYH	**Egyhazaskeszo**	**0.53**	**244**	P	Pb	21 54 34.0	-0.4
EGYH				S	Sb	21 54 42.2	+0.1
MPLH	**Magyarpolny**	**0.59**	**215**	Pg	Pg	21 54 34.7	+0.3
	SNR=2.8						
MPLH	**Magyarpolny**	**0.59**	**215**	P	Pg	21 54 34.7	+0.3
TIH	**Tihany**	**0.76**	**187**	Pg	Pb	21 54 38.9	+0.6
	comp=Z,0.4nm,SNR=5.0						
TIH				Lg	Lg	21 54 49.6	
TIH	**Tihany**	**0.76**	**187**	P	Pb	21 54 38.9	+0.6
TIH				S	Sb	21 54 49.6	+0.9
ZST	**Bratislava**	**0.83**	**311**	Pg	Pn	21 54 40.3	-0.5
	comp=Z,0.6nm,SNR=1.3						
ZST				Lg	Lg	21 54 51.8	
ZST	**Bratislava**	**0.83**	**311**	*e*PG	Pn	21 54 40.4	-0.4
ZST				*e*SG	Sb	21 54 51.6	+0.8
ZST				*e*LG	Lg	21 54 53.8	
A336A	**Medovarce**	**0.87**	**48**	Pn	Pn	21 54 40.9	-0.5
	comp=Z,0.1nm,SNR=3.8						
A336A				Sn	Sb	21 54 52.8	+0.8
MODS	**Modra-Piesok**	**0.88**	**325**	Pg	Pn	21 54 41.4	-0.2
	comp=Z,46nm,SNR=3.1						
MODS				Lg	Lg	21 54 53.6	
MODS	**Modra-Piesok**	**0.88**	**325**	*e*PG	Pn	21 54 41.2	-0.4
MODS				*e*SG	Sn	21 54 53.6	-0.9
MODS				*e*LG	Lg	21 54 54.4	
A261A	**Ohid**	**0.92**	**221**	Pg	Pn	21 54 42.7	+0.6
	comp=Z,0.1nm,SNR=2.0						
A334A	**Sterusy**	**0.98**	**346**	Lg	Lg	21 54 57.0	
VYHS	**Vyhne**	**1.00**	**32**	Pn	Pb	21 54 42.7	+0.2
	SNR=3.1						
VYHS				Sn	Sb	21 54 56.5	+0.7
VYHS	**Vyhne**	**1.00**	**32**	*e*PG	Pb	21 54 42.8	+0.3
VYHS				*e*SG	Sn	21 54 57.1	-0.3
VYHS				*e*LG	Lg	21 54 57.6	
RONA	**Rosalia, Austr**	**1.17**	**273**	*i* Pg	Pb	21 54 45.0	-0.4
	comp=Z,0.4nm,0.1s						
RONA				*e*Sg	Sb	21 55 00.2	-0.6
	comp=Z,5.4nm,0.3s						
A332A	**Rudnianska**	**1.19**	**14**	Lg	Lg	21 55 03.0	
JAVC	**Velka Javorina**	**1.23**	**349**	*e*Pg	Pg	21 54 46.8	+0.1
	baz=168						
JAVC				*e*Sg	Sb	21 55 01.5	-1.0
	comp=Z,5.0nm,0.6s,baz=168						
JAVC	**Velka Javorina**	**1.23**	**349**	*e*PG	Pg	21 54 46.8	+0.1
JAVC				*e*SG	Sb	21 55 01.5	-1.0
JAVC	**Velka Javorina**	**1.23**	**349**	Pg	Pg	21 54 47.1	+0.4
	SNR=1.6						
JAVC				Lg	Lg	21 55 05.0	
PSZ	**Piszkesteto**	**1.28**	**77**	Sn	Sn	21 55 05.6	+1.1
PSZ	**Piszkesteto**	**1.28**	**77**	S	Sn	21 55 05.6	+1.1
A009A	**Wartmannstette**	**1.31**	**272**	Pn	Pn	21 54 47.1	-0.4
	SNR=1.7						
A009A				Lg	Lg	21 55 05.2	
BEHE	**Becsehely**	**1.46**	**216**	Pn	Pn	21 54 49.8	+0.3
	comp=Z,0.1nm,SNR=2.2						
BEHE	**Becsehely**	**1.46**	**216**	P	Pn	21 54 49.8	+0.3
CONA	**Conrad Observa**	**1.49**	**281**	*e*Pg	Pb	21 54 50.7	-0.1
	comp=Z,0.2nm,0.1s						
CONA				*e*Sg	Sn	21 55 09.6	0.0
	comp=Z,0.9nm,0.2s						
CONA	**Conrad Observa**	**1.49**	**281**	Pg	Pg	21 54 51.4	-0.2
	SNR=1.7						
MORH	**Mrgy, Hungar**	**1.50**	**164**	Pn	Pn	21 54 49.6	-0.4
	SNR=1.8						
MORH				Sn	Sn	21 55 08.5	-1.1
MORH	**Mrgy, Hungar**	**1.50**	**164**	P	Pn	21 54 49.6	-0.4
MORH				S	Sn	21 55 08.5	-1.1
KOVH	**Kovagotottos**	**1.56**	**178**	Lg	Lg	21 55 14.0	
KOVH	**Kovagotottos**	**1.56**	**178**	S	Sg	21 55 14.0	+0.7
ARSA	**Arzberg**	**1.75**	**258**	Sg	Sg	21 55 18.6	-0.6
	comp=Z,1.7nm,0.5s						
ARSA	**Arzberg**	**1.75**	**258**	Sg	Sg	21 55 18.4	-0.8
KRUC	**Moravsky**	**1.78**	**323**	*e*Pn	Pn	21 54 53.4	-0.6
	baz=140						
KRUC				*e*Sn	Sn	21 55 15.5	-1.2
	comp=Z,1.2nm,0.4s,baz=140						
KRUC	**Moravsky**	**1.78**	**323**	*e*PN	Pn	21 54 53.5	-0.5
KRUC				*e*SN	Sn	21 55 15.5	-1.2
MORC	**Moravsky Berou**	**2.15**	**352**	*e*Sn	Sn	21 55 24.5	-1.3
	comp=Z,1.2nm,0.3s,baz=171						
MORC	**Moravsky Berou**	**2.15**	**352**	*e*SN	Sn	21 55 24.6	-1.2
MORC	**Moravsky Berou**	**2.15**	**352**	Sn	Sn	21 55 26.1	+0.3

*SKO **12** 22:08:47.1, 41°.84N×22°.08E, h0km*
BEO 12 22:08:48.1±0.9, 41°.90N×22°.07E, h0km±4km, ML1.4/7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRVS	**Prvonek**	**0.61**	**1**	*e*Pg	Pg	22 08 58.1	-1.7
PRVS				*e*Sg	Sg	22 09 06.9	-0.8
BOSS	**Bosilegrad**	**0.67**	**27**	*e*Pg	Pg	22 08 59.3	-1.7
BOSS				*e*Sg	Sg	22 09 09.3	-0.4
VAY	**Valandovo**	**0.69**	**147**	*i* Pg	Pg	22 08 58.5	-2.8
VAY				*i* Sg	Sg	22 09 07.0	-3.3
VAY				*e*Lg	Lg	22 09 07.3	
	comp=N,51nm,0.3s						
BARS	**Barje**	**0.94**	**349**	*e*Pg	Pg	22 09 04.7	-1.3
BARS				*e*Sg	Sg	22 09 18.6	+0.4
BARS	**Barje**	**0.94**	**349**	*i* Pg	Pg	22 09 04.5	-1.5
BARS				*i* Sg	Sg	22 09 18.3	+0.1
KNT	**Kendrikon**	**0.97**	**139**	*i* Pg	Pg	22 09 03.8	-2.8
KNT				*i* Sg	Sg	22 09 15.8	-3.3
GRG	**Griva**	**0.97**	**165**	*i* Pg	Pg	22 09 04.2	-2.5
VTS	**Vitosha**	**1.13**	**50**	*e*Pg	Pg	22 09 08.3	-1.4
VTS				*e*Sg	Sg	22 09 22.6	-1.7
VTS	**Vitosha**	**1.13**	**50**	*i* Sg	Sg	22 09 22.7	-1.6
VTS				*i* Pg	Pg	22 09 08.4	-1.3
ZAPS	**Zavoj**	**1.44**	**17**	*e*Pg	Pn	22 09 14.4	-1.1
ZAPS				*e*Sg	Sg	22 09 34.0	-0.3
SELS	**Selova**	**1.49**	**332**	*e*Pn	Pn	22 09 15.4	-0.8
BLKB	**Belogradchik**	**1.78**	**14**	*e*Pg	Pn	22 09 20.4	+0.2
BLKB				*e*Sg	Sb	22 09 44.7	+0.2
ZAGS	**Zajecar**	**1.92**	**4**	*e*Pn	Pn	22 09 22.4	+0.4
ZAGS				*e*Sn	Sn	22 09 46.5	-0.3

*MOS **12** 22:12:58.7±1.3, 45°.45N×150°.95E, h57km, mb4.4/7, Error ellipse: s-maj=11.9km s-min=8.8km az=71.1*
*SK

comp=Z,26nm,0.3s
SHO pmax pmax
comp=N,18nm,0.4s
SHO pmax pmax
comp=E,16nm,0.2s
SHO smax smax
comp=N,149nm,0.4s
SHO smax smax
comp=E,148nm,0.2s
SHO Shikotan 3.29 242 *e*P **Pn 22 13 49.1 +0.2**
SHO AMB AMB 22 13 55.1
comp=E,30nm,0.3s
SHO *e*S **Sn 22 14 27.5 +0.7**
SHO A A 22 14 30.6
comp=E,150nm,0.3s
SHO A A 22 14 30.6
comp=E,150nm,0.3s
YUK Yuzh-Kuril'sk 3.84 250 *e*PN **Pn 22 13 57.3 +0.9**
YUK *e*S **Sn 22 14 39.4 -0.9**
YUK pmax pmax
comp=Z,155nm,0.4s
YUK pmax pmax
comp=E,140nm,0.3s
YUK pmax pmax
comp=N,105nm,0.2s
YUK smax smax
comp=N,236nm,0.5s
YUK smax smax
comp=E,213nm,0.2s
YUK Yuzh-Kuril'sk 3.84 250 *e*P **Pn 22 13 57.3 +0.9**
YUK AMB AMB 22 14 03.3
comp=E,160nm,0.4s
YUK *e*S **Sn 22 14 40.2 -0.1**
YUK A A 22 14 43.8
comp=E,240nm,0.4s
YUK A A 22 14 43.8
comp=E,210nm,0.4s
RUSJ Misakicho 4.22 253 *e*PN **Pn 22 14 02.4 +0.7**
RUSJ *e*S **Sn 22 14 49.0 -0.7**
NMR Nemuro--Hokkai 4.24 242 *e*PN **Pn 22 14 02.0 +0.1**
NMR *e*S **Sn 22 14 48.1 -1.9**
NMR Nemuro--Hokkai 4.24 242 *e*P **Pn 22 14 02.0 +0.1**
NMR *e*S **Sn 22 14 48.1 -1.9**
SKR Severo-Kuril's 6.29 32 *e*PN **Pn 22 14 31.5 +1.4**
SKR pmax pmax
comp=Z,18nm,0.6s
SKR Severo-Kuril's 6.29 32 *e*P **Pn 22 14 31.5 +1.4**
SKR AMB AMB 22 14 33.1
comp=Z,30nm,0.3s
SKR *e*S **Sn 22 15 38.9 -1.7**
SKR A A 22 15 43.6
comp=Z,30nm,0.4s
SKR A A 22 15 43.6
comp=Z,60nm,0.4s
PEA0B Petropavlovsk- 8.85 28 Pn **Pn 22 15 06.4 +1.3**
PEA0B Petropavlovsk- 8.85 28 PN **Pn 22 15 06.4 +1.3**
PETK Petropavlovsk- 8.85 28 P **Pn 22 15 06.3 +1.1**
comp=Z,0.4nm,0.3s,baz=184,slow=10,SNR=7.4
PETK S **Sn 22 16 41.7 -1.7**
comp=Z,0.5nm,0.5s,baz=338,slow=8.5,SNR=1.3
comp=Z,1.8nm,0.5s
SEY Seymchan 17.52 2 P **Pn 22 16 59.2 -1.5**
comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=3.0
H11N2 WAKE ISLAND Hy 28.89 147 T T 22 50 15.4
baz=337,slow=76,SNR=5.0
H11N1 WAKE ISLAND Hy 28.91 147 T T 22 50 16.1
baz=337,slow=76,SNR=260
H11N3 WAKE ISLAND Hy 28.91 147 T T 22 50 15.5
baz=337,slow=76,SNR=4.7
H11S1 WAKE ISLAND Hy 29.94 149 T T 22 50 56.2
baz=338,slow=76,SNR=90
H11S3 WAKE ISLAND Hy 29.95 149 T T 22 50 51.8
baz=338,slow=76,SNR=69
H11S2 WAKE ISLAND Hy 29.96 149 T T 22 50 56.2
baz=338,slow=76,SNR=69
CHIR Chirikof Islan 34.65 53 P **P 22 19 46.0 +1.1**
J20K Nowinta River 35.36 38 P **P 22 19 51.7 +0.7**
J20K IAmb IAmb 22 20 16.9
comp=Z,5.3nm,1.4s
IMAR Indian Mountai 35.72 35 P **P 22 19 54.2 +0.2**
H21K Melozitna Rive 36.07 36 P **P 22 19 57.3 +0.2**
BPAW Bear Paw Mtn. 36.73 39 P **P 22 20 03.5 +0.7**
BPAW IAmb IAmb 22 20 14.7
comp=Z,8.5nm,1.5s
MLY Manley 36.88 37 P **P 22 20 04.3 +0.2**
H23K Yukon River 37.42 36 P **P 22 20 09.3 +0.8**
I23K Minto, Yukon-K 37.47 37 P **P 22 20 09.4 +0.4**
I23K IAmb IAmb 22 20 16.4
comp=Z,8.3nm,1.5s
MDM Murphy Dome 37.95 37 P **P 22 20 13.8 +0.8**
SML Sawmill 37.97 42 P **P 22 20 13.1 -0.2**
SML IAmb IAmb 22 20 14.1
comp=Z,6.0nm,0.9s
WRH Wood River Hil 38.01 38 P **P 22 20 13.2 -0.3**
WRH IAmb IAmb 22 20 34.2
comp=Z,5.6nm,1.3s
H24K Noodor Dome 38.11 36 P **P 22 20 15.5 +1.1**
H24K IAmb IAmb 22 20 18.1
comp=Z,6.2nm,1.4s
CCB Clear Creek Bu 38.13 38 P **P 22 20 15.0 +0.6**
CCB IAmb IAmb 22 20 37.5
comp=Z,4.4nm,1.4s
ILAR Eielson Array 38.52 38 P **P 22 20 16.0 -1.8**
comp=Z,0.5nm,0.8s,baz=282,slow=9.0,SNR=4.3
comp=Z,0.5nm,0.8s
ILAR Eielson Array 38.52 38 P **P 22 20 16.0 -1.8**
J25K Salcha River, 39.18 38 P **P 22 20 23.9 +0.5**
BMAR Burnt Mountain 39.45 33 P **P 22 20 26.9 +1.3**
L27K Beaver Creek, 40.87 40 P **P 22 20 38.7 +1.3**
L27K IAmb IAmb 22 20 38.9
comp=Z,10nm,1.4s
BCAR Beaver Creek A 40.89 40 P **P 22 20 39.0 +1.4**
M27K Edge Creek, AK 40.94 41 P **P 22 20 39.6 +1.5**
M27K IAmb IAmb 22 21 17.7
comp=Z,10nm,1.4s
PCA Pinnacle 42.10 44 P **P 22 20 50.2 +2.6**
MK31 Makanchi Array 46.14 297 P **P 22 21 20.2 +0.2**
MK31 Makanchi Array 46.14 297 P **P 22 21 20.2 +0.2**
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 46.14 297 P **P 22 21 20.1 +0.1**
comp=Z,0.8nm,0.6s,baz=72,slow=8.2,SNR=12
MKAR PcP **PcP 22 22 54.0 -1.4**
comp=Z,0.4nm,0.7s,baz=79,slow=3.1,SNR=3.2
comp=Z,0.8nm,0.6s
MKAR Makanchi Array 46.14 297 P **P 22 21 20.5 +0.5**
MAKZ Makanchi 46.33 298 P **P 22 21 22.0 +0.5**
MAKZ IAmb IAmb 22 21 53.7
comp=Z,7.1nm,1.5s
MAKZ Makanchi 46.33 298 P **P 22 21 22.0 +0.5**
MAKZ pmax pmax
comp=Z,7.0nm,1.5s
KURK Kurchatov 46.77 304 P **P 22 21 23.8 -1.0**
KURK Kurchatov 46.77 304 P **P 22 21 23.8 -1.0**
KURK pmax pmax
comp=Z,1.0nm,1.0s
KURK Kurchatov 46.77 304 *e*P **P 22 21 23.8 -1.0**
EUNU Eureka 50.69 11 P **P 22 21 54.8 +0.2**
EUNU IAmb IAmb 22 22 26.6
comp=Z,18nm,1.5s
BOOM Boomskoye usch 52.15 295 P **P 22 22 07.5 +1.3**
BOOM IAmb IAmb 22 22 18.5
comp=Z,2.7nm,0.8s
BOOM Boomskoye usch 52.15 295 P **P 22 22 07.5 +1.3**
BOOM pmax pmax
comp=Z,3.0nm,0.8s
TLCB Telegraph Cove 52.61 53 P **P 22 22 10.3 +1.1**
TLCB IAmb IAmb 22 22 13.8
comp=Z,14nm,1.2s
ARU Arti 54.89 317 P **P 22 22 24.3 -1.6**
comp=Z,1.1nm,0.4s,baz=271,slow=22,SNR=4.5
comp=Z,1.1nm,0.4s
ARU Arti 54.89 317 P **P 22 22 25.2 -0.6**
ARU IAmb IAmb 22 22 43.3
comp=Z,5.3nm,1.5s
KK31 Karatay Array 55.24 298 P **P 22 22 28.4 -0.2**
KK31 Karatay Array 55.24 298 P **P 22 22 28.4 -0.2**
KK31 pmax pmax
comp=Z,1.0nm,0.8s
KKAR Karatay Array 55.24 298 P **P 22 22 28.6 0.0**
KKAR Karatay Array 55.24 298 P **P 22 22 28.6 0.0**
ABKAR Akbulak array 58.04 309 P **P 22 22 48.2 -0.1**
ARCES ARCESS Array B 58.54 340 P **P 22 22 49.7 -1.9**
comp=Z,1.1nm,0.8s,baz=35,slow=6.6,SNR=1.3
comp=Z,1.1nm,0.8s
HOPS Hopland Field 61.12 63 P **P 22 23 13.0 +3.2**

BELG Belogornoye 62.44 318 P **P 22 23 17.2 -1.1**
comp=Z,11nm,0.7s,baz=332,slow=1.2,SNR=2.3
comp=Z,11nm,0.7s
FINES FINESS Array B 64.52 334 P **P 22 23 30.1 -1.8**
comp=Z,1.9nm,0.4s,baz=46,slow=7.7,SNR=12
comp=Z,1.9nm,0.4s
FINES FINESS Array B 64.52 334 P **P 22 23 31.0 -0.9**
PDAR Pinedale Array 66.77 52 P **P 22 23 44.8 -2.3**
comp=Z,0.3nm,0.3s,baz=284,slow=3.6,SNR=3.1
comp=Z,0.3nm,0.3s
WRA Warramunga Arr 66.81 197 P **P 22 23 45.4 -1.8**
comp=Z,0.7nm,0.9s,baz=14,slow=6.5,SNR=4.8
comp=Z,0.7nm,0.9s
NC303 NORSAR Array S 68.72 340 P **P 22 23 58.6 -0.1**
NC405 NORSAR Array S 68.73 340 P **P 22 23 58.4 -0.4**
NB201 NORSAR Array S 68.89 340 P **P 22 23 59.5 -0.3**
NB2 NORSAR Subarra 68.92 340 P **P 22 23 59.4 -0.6**
comp=Z,2.1nm,0.4s,baz=30,slow=6.5
NOA NORSAR Array B 68.92 340 P **P 22 23 59.1 -1.0**
comp=Z,1.7nm,0.4s,baz=28,slow=6.5,SNR=6.0
comp=Z,1.7nm,0.4s
NC602 NORSAR Array S 69.11 340 P **P 22 24 00.2 -0.9**
NAO01 NORSAR Array S 69.17 340 P **P 22 24 01.1 -0.4**
KBZ Khabaz 70.60 313 P **P 22 24 09.8 -0.8**
comp=Z,3.1nm,0.8s,baz=40,slow=4.5,SNR=7.4
comp=Z,3.1nm,0.8s
AKASG Malin Array Be 71.72 325 P **P 22 24 16.5 -0.8**
comp=Z,1.4nm,0.4s,baz=36,slow=6.5,SNR=7.1
comp=Z,1.4nm,0.4s
BUR08 Bucovina Ar. S 75.75 325 P **P 22 24 41.6 +0.5**
BUR08 IAmb IAmb 22 24 42.3
comp=Z,2.7nm,0.6s
BURAR Bucovina Array 75.77 325 P **P 22 24 41.1 -0.1**
MLR Muntele Rosu 77.19 324 P **P 22 24 50.5 +1.2**
MLR IAmb IAmb 22 24 54.0
comp=Z,8.5nm,1.4s
MLR Muntele Rosu 77.19 324 P **P 22 24 50.5 +1.2**
MLR pmax pmax
comp=Z,9.0nm,1.4s
KHC Kasperske Hory 78.69 333 P **P 22 24 57.4 0.0**
KHC Kasperske Hory 78.69 333 *e*P **P 22 24 58.0 +0.6**
KHC Kasperske Hory 78.69 333 *e*P **P 22 24 58.0 +0.6**
GERES GERESS Array B 78.90 333 P **P 22 24 57.5 -1.2**
comp=Z,0.3nm,0.4s,baz=40,slow=6.0,SNR=7.3
comp=Z,0.3nm,0.4s
GERES GERESS Array B 78.90 333 P **P 22 24 58.5 -0.2**
TXAR Lajitas Array 79.49 59 P **P 22 24 59.2 -3.0**
comp=Z,0.7nm,0.7s,baz=289,slow=6.6,SNR=2.3
comp=Z,0.5nm,0.7s
VTS Vitosha 80.66 324 P **P 22 25 09.5 +1.1**
VTS IAmb IAmb 22 25 10.4
comp=Z,3.7nm,1.0s
VTS Vitosha 80.66 324 P **P 22 25 09.5 +1.1**
VTS pmax pmax
comp=Z,4.0nm,1.0s
PRED Cave del Predi 81.04 332 P **P 22 25 09.9 -0.4**
PRED IAmb IAmb 22 25 16.8
comp=Z,7.5nm,1.4s
S44A Carbondale 81.11 44 P **P 22 25 12.5 +1.8**
S44A IAmb IAmb 22 25 13.4
comp=Z,8.2nm,1.1s
KAAM Kaadhehdhoo 81.14 262 P **P 22 25 14.3 +3.1**
J57A Williamstown 82.19 32 P **P 22 25 16.6 +0.4**
J57A IAmb IAmb 22 25 36.2
comp=Z,9.7nm,1.0s
H03N2 Juan Fernandez 140.31 90 T T 01 09 11.1
baz=307,slow=77,SNR=14
H03N1 Juan Fernandez 140.33 90 T T 01 09 12.2
baz=307,slow=77,SNR=14
H03N3 Juan Fernandez 140.33 90 T T 01 09 12.8
baz=307,slow=77,SNR=15
PLCA Paso Flores 149.64 96 PKPbc **PKPdf 22 32 39.6 -0.2**
comp=Z,4.3nm,1.1s,baz=251,slow=9.6,SNR=5.7

*HEL **12** 22:19:37.1±0.2, 67°.83N×20°.14E, h0km, ML1.9, Explosion*
*IDC **12** 22:19:38.6±1.4, 67°.83N×20°.76E, h0km, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=21.3km s-min=8.4km az=113.0*
ISC 12 22:19:36.3±0.9, 67°.76N±0°.03×20°.33E±0°.05, h0km, n20, σ1§37/34, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIF	**Kilpisjarvi**	**1.26**	**8**	*e*P	**Pb**	**22 20 01.1**	**+0.1**
KIF	**Kilpisjarvi**	**1.26**	**8**	PG	**Pg**	**22 19 59.6**	**-0.9**
KIF				MSG		22 20 14.9	
	comp=Z,14nm,0.2s						
KIF				SB	**Sg**	**22 20 15.7**	**-1.1**
PAJU	**Pajala**	**1.31**	**123**	PG	**Pn**	**22 20 02.2**	**+0.4**
	baz=304						
PAJU				SG	**Sn**	**22 20 20.7**	**+0.7**
HEF	**Hetta**	**1.41**	**61**	*e*P	**Pb**	**22 20 03.3**	**-0.2**
HEF	**Hetta**	**1.41**	**61**	PG	**Pn**	**22 20 03.0**	**-0.2**
	baz=248						
HEF				MSG		22 20 20.6	
	comp=Z,10nm,0.2s						
HEF				SG	**Sn**	**22 20 22.0**	**-0.4**
KLF	**Kolari**	**1.50**	**109**	PG	**Pb**	**22 20 05.7**	**+0.8**
KLF				SN	**Sn**	**22 20 27.6**	**+3.0**
TRO	**Tromso**	**1.95**	**345**	PG	**Pn**	**22 20 10.7**	**+0.1**
TRO				SG	**Sn**	**22 20 35.6**	**-0.1**
KALU	**Kalix**	**2.25**	**146**	PB	**Pb**	**22 20 17.8**	**0.0**
KALU				SG	**Sg**	**22 20 48.9**	**+0.2**
TOF	**Tornio**	**2.31**	**135**	PB	**Pb**	**22 20 18.7**	**0.0**
TOF				MSG		22 20 48.4	
	comp=Z,7.0nm,0.2s						
TOF				SG	**Sg**	**22 20 50.9**	**+0.5**
SGF	**Sodankyl**	**2.40**	**95**	PG	**Pb**	**22 20 19.8**	**-0.4**
SGF				SG	**Sg**	**22 20 51.2**	**-2.0**
RNF	**Rovaniemi**	**2.50**	**115**	PB	**Pb**	**22 20 21.7**	**-0.3**
RNF				SG	**Sg**	**22 20 55.9**	**-0.6**
ARA0	**ARCESS Array S**	**2.60**	**44**	PN	**Pn**	**22 20 20.5**	**+0.9**
	baz=230						
ARA0				SN	**Sn**	**22 20 53.4**	**+1.5**
ARCES	**ARCESS Array B**	**2.60**	**44**	Pn	**Pn**	**22 20 20.7**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=232,slow=14,SNR=19						
ARCES				Lg	Lg	22 20 54.8	
	comp=Z,1.3nm,0.3s,baz=231,slow=19,SNR=6.4						
	comp=Z,0.7nm,0.3s						
KEV	**Kevo**	**3.15**	**47**	SN	**Sn**	**22 21 07.3**	**+2.0**
KEV				MSG		22 21 09.9	
	comp=Z,3.2nm,0.2s						
BURU	**Burvik**	**3.22**	**172**	PB	**Pb**	**22 20 32.1**	**-2.2**
BURU				SB	**Sb**	**22 21 13.2**	**-0.8**
OLKF	**Oulanka, Finla**	**3.84**	**108**	PG	**Pg**	**22 20 49.1**	**-0.7**
OLKF				SG	**Sg**	**22 21 40.3**	**+0.9**
MSF	**Maaselka**	**3.91**	**114**	PG	**Pg**	**22 20 49.6**	**-1.6**
	baz=304						
KU6	**Riekki**	**4.15**	**110**	PG	**Pg**	**22 20 53.1**	**-2.7**
	baz=296						
KU6				SG	**Sg**	**22 21 48.0**	**-1.6**
FINES	**FINESS Array B**	**6.80**	**156**	Pn	**Pn**	**22 21 20.0**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=337,slow=14,SNR=4.0						
FINES				Sn	**Sn**	**22 22 35.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=340,slow=16,SNR=1.9						
FINES				Lg	Lg	22 23 12.3	
	comp=Z,0.2nm,0.3s,baz=340,slow=27,SNR=4.3						
	comp=Z,0.9nm,0.6s						
NOA	**NORSAR Array B**	**7.81**	**215**	Pn	**Pn**	**22 21 33.4**	**+2.3**
	baz=28,slow=14,SNR=2.0						
	comp=Z,0.8nm,0.8s						

*IDC **12** 22:24:39.8±5.5, 19°.95N×145°.29E, h191km±52km, mb3.6/14, mbtmp4.1/15, MS2.3/1, Error ellipse: s-maj=26.7km s-min=13.1km az=88.0*
*NEIC **12** 22:24:40.2±1.7, 20°.0N±0°.1×145°.2E±0°.2, h182km±8km, mb4.3/38, Error ellipse: s-maj=23.5km s-min=15.5km az=87.0*
*JMA **12** 22:25:22.6±0.3, 23°N±2°×14°4E±°, h426km, IOTO ISLANDS REGION*
ISC 12 22:24:41.6±0.6, 20°.08N±0°.07×145°.1E±0°.1, h200km, n70, σ1§38/67, mb4.2/29, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.45**	**182**	LR	LR	22 28 12.1	
	comp=Z,29nm,21.3s,baz=238,slow=34						
JHH2	**Haha-jima-NKT2**	**7.05**	**338**	*e*S	**Sn**	**22 27 36.9**	**-5.8**
JCJ	**Chichijima**	**7.48**	**340**	S	Sn	22 27 45.6	-7.1
	86nm,0.6s,baz=112,slow=24,SNR=6.9						
CBIJ	**Chichi jima**	**7.48**	**340**	*e*S	Sn	22 27 44.5	-8.2
JOD2	**Odawara 2**	**16.03**	**342**	*e*P	**P**	**22 28 15.6**	**-0.2**
JOD2				*e*S	S	22 30 34.5	-39

JIE Ise 16.08 334 *e*P **Pn 22 28 17.2 +0.3**
JNY Yasuok 16.50 339 *e*P **P 22 28 21.4 +0.2**
JHU Hanno 16.53 343 *e*P **P 22 28 21.3 0.0**
JRY Ryogami san 16.79 342 *e*P **P 22 28 24.4 +0.2**
INU Inuyama 16.80 337 P **Pn 22 28 26.1 +0.7**
JTO Tosashimizu 16.81 322 P **Pn 22 28 26.7 +1.1**
JMN Monobe 16.86 326 P **Pn 22 28 26.5 +0.2**
JMN IAmb IAmb 22 28 34.0
comp=Z,26nm,1.3s
JGF Kuroka 16.90 338 P **P 22 28 26.3 +0.9**
JGF IAmb IAmb 22 28 56.6
comp=Z,9.5nm,1.0s
JAG Ashikaga 17.02 344 P **P 22 28 27.0 +0.2**
MJAR Matsushiro Art 17.48 341 P **P 22 28 30.4 -1.3**
comp=Z,2.8nm,0.4s,baz=178,slow=11,SNR=22
MAJO Matsushiro 17.48 341 P **P 22 28 32.1 +0.3**
MAJO IAmb IAmb 22 28 33.5
comp=Z,15nm,0.8s
JNU Nakatsue 18.15 319 P **Pn 22 28 42.6 +1.2**
JNU IAmb IAmb 22 28 44.5
comp=Z,5.1nm,0.6s
JHS Saijyo 18.24 327 P **P 22 28 40.5 +0.4**
JHS IAmb IAmb 22 28 47.2
comp=Z,10nm,1.3s
JSD Sado 18.86 343 P **P 22 28 47.7 +1.0**
JTU Tsushima 20.00 319 P **P 22 28 59.3 +0.3**
JTM Tenmabayashi 20.93 351 P **P 22 29 09.3 +0.6**
ERM Erimo 21.93 356 P **P 22 29 20.9 +1.9**
ERM IAmb IAmb 22 29 23.1
comp=Z,12nm,0.8s
KSCHJ Chungju 22.44 322 P **P 22 29 24.0 +0.1**
KSCHJ IAmb IAmb 22 29 24.7
comp=Z,11nm,0.9s
KSRS Korea Array 22.88 323 P **P 22 29 28.9 +1.1**
comp=Z,11nm,0.7s,baz=149,slow=9.1,SNR=61
comp=Z,11nm,0.7s
KSAR Wonju Array Be 22.89 323 P **P 22 29 28.5 +0.6**
KS19 Wonju Array Si 22.94 323 P **P 22 29 28.9 +0.5**
KS19 IAmb IAmb 22 29 29.6
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 26.42 339 P **P 22 30 00.6 +0.9**
comp=Z,2.2nm,0.6s,baz=153,slow=9.2,SNR=9.5
comp=Z,2.2nm,0.6s
SBUM Sibu 36.56 246 P **P 22 31 28.6 +0.1**
SBUM IAmb IAmb 22 31 32.0
comp=Z,6.4nm,1.3s
WB0 Warramunga Arr 40.96 195 P **P 22 32 03.3 -1.7**
WR0 Warramunga Arr 41.11 195 P **P 22 32 05.0 -1.2**
WR0 IAmb IAmb 22 32 43.6
comp=Z,11nm,1.4s
WB2 Warramunga Arr 41.14 195 P **P 22 32 05.2 -1.2**
WB2 IAmb IAmb 22 32 30.7
comp=Z,8.1nm,1.4s
WRA Warramunga Arr 41.14 195 P **P 22 32 05.0 -1.5**
comp=Z,0.3nm,0.4s,baz=18,slow=8.6,SNR=12
comp=Z,0.3nm,0.4s
WRA Warramunga Arr 41.14 195 P **P 22 32 05.0 -1.5**
SONM Songino Array 41.72 321 P **P 22 32 10.7 -0.4**
comp=Z,1.2nm,0.6s,baz=132,slow=9.2,SNR=5.6
comp=Z,1.2nm,0.6s
FITZ Fitzroy Crossi 42.47 208 P **P 22 32 16.0 -1.2**
SEY Seymchan 43.12 5 P **P 22 32 22.6 +0.8**
comp=Z,1.7nm,0.6s,baz=190,slow=8.2,SNR=9.2
comp=Z,1.7nm,0.6s
ASAR Alice Springs 44.82 195 P **P 22 32 34.1 -1.9**
comp=Z,0.3nm,0.4s,baz=14,slow=6.4,SNR=6.3
comp=Z,0.3nm,0.4s
ZAA0 Zalesovo Array 56.58 322 **P 22 34 03.4 0.0**
ZALV Zalesovo Beam 56.58 322 P **P 22 34 03.9 +0.5**
comp=Z,2.0nm,0.5s,baz=110,slow=8.1,SNR=7.7
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 56.58 322 P **P 22 34 03.4 0.0**
MK31 Makanchi Array 57.10 313 P **P 22 34 09.0 +1.8**
MKAR Makanchi Array 57.10 313 P **P 22 34 08.5 +1.3**
comp=Z,1.1nm,0.5s,baz=89,slow=8.3,SNR=25
comp=Z,1.1nm,0.5s
MKAR Makanchi Array 57.10 313 P **P 22 34 08.8 +1.5**
MAKZ Makanchi 57.32 313 P **P 22 34 10.3 +1.6**
MAKZ IAmb IAmb 22 34 11.3
comp=Z,3.4nm,0.4s
NWAO Narrogin (SRO) 59.05 207 P **P 22 34 19.5 -1.2**
J20K Nowinta River 59.48 26 P **P 22 34 24.6 +1.3**
J20K IAmb IAmb 22 34 58.3
comp=Z,4.9nm,1.4s
PRZ Przheval'sk 59.69 308 P **P 22 34 27.7 +2.4**
KURK Kurchatov 59.87 318 P **P 22 34 27.0 +0.8**
KURBB Kurchatov Arra 59.92 318 P **P 22 34 27.2 +0.7**
comp=Z,3.9nm,0.5s,baz=93,slow=7.5,SNR=93
comp=Z,3.9nm,0.5s
NRIK Noril'sk 60.13 340 P **P 22 34 27.9 +0.3**
NRIK IAmb IAmb 22 34 29.2
comp=Z,2.7nm,0.6s
MLY Manley 61.13 26 P **P 22 34 34.6 0.0**
BOOM Boomskoye usch 61.50 308 P **P 22 34 39.6 +2.0**
BOOM IAmb IAmb 22 34 40.2
comp=Z,5.8nm,0.6s
I23K Minto, Yukon-K 61.73 26 P **P 22 34 39.2 +0.8**
I23K IAmb IAmb 22 35 01.8
comp=Z,4.0nm,1.3s
H24K Noodor Dome 62.49 25 P **P 22 34 45.1 +1.6**
H24K IAmb IAmb 22 34 47.8
comp=Z,6.1nm,1.5s
TOLK Toolik Lake Re 62.54 22 P **P 22 34 46.0 +2.1**
TOLK IAmb IAmb 22 35 13.1
comp=Z,5.9nm,1.2s
ILAR Eielson Array 62.67 27 P **P 22 34 44.1 -0.7**
comp=Z,0.4nm,0.7s,baz=265,slow=5.8,SNR=3.8
comp=Z,0.4nm,0.7s
TAU Tasmania Unive 62.70 178 P **P 22 34 44.7 -0.4**
BMAR Burnt Mountain 64.09 24 P **P 22 34 56.4 +2.3**
LOGN Logan Glacier 64.84 31 P **P 22 34 56.9 -2.3**
BRVK Borovoye 65.12 320 P **P 22 35 02.2 +1.3**
URZ Urewera 65.36 153 P **P 22 35 01.9 -0.6**
KK31 Karatay Array 65.46 309 P **P 22 35 04.7 +1.4**
KK31 IAmb IAmb 22 35 05.3
comp=Z,4.0nm,0.7s
KKAR Karatay Array 65.46 309 P **P 22 35 04.9 +1.6**
GAR Garm 66.03 305 P **P 22 35 08.6 +1.4**
GAR IAmb IAmb 22 35 18.5
comp=Z,2.8nm,0.6s
LTZ Lake Taylor 67.38 159 P **P 22 35 16.5 +1.2**
ABKAR Akbulak array 71.95 317 P **P 22 35 44.4 +1.2**
YKA Yellowknife Ar 77.05 28 P **P 22 36 11.3 -1.0**
comp=Z,1.1nm,0.6s,baz=291,slow=5.2,SNR=5.5
comp=Z,1.1nm,0.6s
ARCES ARCESS Array B 81.01 342 P **P 22 36 33.9 +0.1**
comp=Z,0.6nm,0.4s,baz=89,slow=8.4,SNR=8.3
comp=Z,0.6nm,0.4s
FINES FINESS Array B 85.40 335 P **P 22 36 55.4 -0.8**
comp=Z,2.1nm,0.3s,baz=68,slow=4.4,SNR=51
comp=Z,2.1nm,0.3s
HFS Hagfors 90.90 338 P **P 22 37 21.1 -1.3**
comp=Z,3.3nm,0.9s,baz=91,slow=5.5,SNR=11
comp=Z,3.3nm,0.9s

*SOME **12** 22:29:09.9, 40°.68N×78°.30E, h10km*
*KRNET **12** 22:29:10.2±0.1, 40°.59N×78°.32E, mb2.6*
ISC 12 22:29:11.5±2.4, 40°.6N±0°.1×78°.29E±0°.06, h10km, n16, σ1§31/32, 8C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.86**	**3⇑**	*e*P	**Pb**	**22 29 44.1**	**-1.7**
	baz=2.0						
PRZ			⇑	*e*S	**Sb**	**22 30 08.8**	**-0.5**
	baz=2.0						
ULHL	**Ulahol**	**2.24**	**317⇓**	*e*P	**Pn**	**22 29 49.2**	**+0.3**
	baz=17						
ULHL			⇓	*e*S	**Sb**	**22 30 17.6**	**-2.5**
	baz=17						
SATY	**Saty**	**2.44**	**2**	*e*P	**Pb**	**22 29 55.0**	**-0.6**
	12nm,0.6s						
SATY				*e*S	**Sb**	**22 30 27.2**	**+1.5**
	10nm,0.5s						
BOOM	**Boomskoye usch**	**2.57**	**317⇑**	*e*P	**Pn**	**22 29 53.6**	**+0.2**
	baz=18						
BOOM			⇑	*i*S	**Sn**	**22 30 25.7**	**+0.9**
	baz=18						
UZB	**Uzynbulak**	**2.58**	**12**	*e*P	**Pb**	**22 29 56.4**	**-1.6**
	1.3nm,0.2s						
UZB				*e*S	**Sb**	**22 30 29.8**	**-0.1**
	8.0nm,0.6s						
SHLS	**Shalkode**	**2.68**	**19**	*e*P	**Pb**	**22 29 60.0**	**+0.3**
	2.2nm,0.2s						
SHLS				*e*S	**Sg**	**22 30 36.0**	**-1.7**

	5.4nm,0.7s								
MDOK	**Medeo**	**2.71**	**340**	*e*P		**Pb**	**22 29 59.4**	**-0.7**	
	1.8nm,0.3s								
MDOK				*e*S		**Sb**	**22 30 35.0**	**+1.5**	
	10nm,0.6s								
KPKS	**Kokpek**	**2.86**	**6**	*e*P		**Pb**	**22 30 00.8**	**-1.9**	
	7.8nm,0.4s								
KPKS				*e*S		**Sb**	**22 30 37.6**	**-0.2**	
	8.4nm,0.6s								
KURS	**Kuram**	**2.87**	**358**	*e*P		**Pb**	**22 30 02.1**	**-0.7**	
	4.7nm,0.4s								
KURS				*e*S		**Sb**	**22 30 39.8**	**+1.8**	
	5.0nm,0.5s								
KST	**Kastek**	**2.98**	**325**	*e*P		**Pb**	**22 30 04.1**	**-0.7**	
	4.9nm,0.4s								
KST				*e*S		**Sb**	**22 30 42.9**	**+1.6**	
	9.5nm,0.8s								
TKM2	**Tokmak 2**	**3.06**	**320⇑**	*e*P		**Pn**	**22 30 00.8**	**+0.7**	
	baz=20								
TKM2				⇑*e*S		**Sn**	**22 30 37.3**	**+0.4**	
	baz=20								
KTMS	**Ketmen**	**3.21**	**28**	*e*P		**Pb**	**22 30 08.3**	**-0.5**	
	0.8nm,0.5s								
KTMS				*e*S		**Sb**	**22 30 50.5**	**+2.4**	
	2.9nm,0.4s								
ARLS	**Aral**	**3.24**	**294⇑**	*e*P		**Pn**	**22 30 03.0**	**+0.4**	
	baz=94								
ARLS				⇑*i*S		**Sn**	**22 30 41.4**	**+0.1**	
	baz=94								
KTBS	**Karatobe**	**3.31**	**339**	*e*P		**Pb**	**22 30 09.4**	**-1.0**	
	1.1nm,0.3s								
KTBS				*e*S		**Sb**	**22 30 52.5**	**+1.7**	
	8.4nm,0.3s								
KUU	**Kurty**	**3.58**	**337**	*e*P		**Pb**	**22 30 13.5**	**-1.4**	
	1.5nm,0.5s								
KUU				*e*S		**Sb**	**22 30 59.2**	**+0.9**	
	1.3nm,0.5s								
KRBS	**Karabastau**	**3.64**	**329**	*e*P		**Pb**	**22 30 15.4**	**-0.6**	
	1.3nm,0.4s								
KRBS				*e*S		**Sb**	**22 31 02.4**	**+2.2**	
	4.4nm,1.1s								

IDC 12 22:30:32.5±5.1, 21°68S×173°86E, h0km, mb3.5/3, mbtmp3.6/4, ML3.6/1, MS3.1/6, Error ellipse: s-maj=233.0km s-min=35.5km az=154.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.57**	**46**	LR	LR	22 34 05.5	
	comp=Z,46nm,20.1s,baz=249,slow=38						
DZM	**Mont Dzumac**	**6.90**	**265**	Pn	Pn	22 32 14.8	-0.2
	1.1nm,0.3s,baz=79,slow=18,SNR=2.9						
DZM				Sn	Sn	22 33 26.2	-8.2
	0.2nm,0.3s,baz=89,slow=21,SNR=1.4						
	6.3nm,0.7s						
RPZ	**Rata Peaks**	**22.09**	**185**	LR	LR	22 41 57.1	
	comp=Z,80nm,21.4s,baz=332,slow=31						
CTA	**Charters Tower**	**25.83**	**268**	LR	LR	22 44 32.6	
	comp=Z,49nm,18.7s,baz=110,slow=32						
STKA	**Stephens Creek**	**30.44**	**244**	LR	LR	22 48 11.5	
	comp=Z,34nm,18.9s,baz=152,slow=35						
ASAR	**Alice Springs**	**36.84**	**259**	P	P	22 37 42.1	-0.6
	0.6nm,0.7s,baz=96,slow=8.6,SNR=4.5						
ASAR				LR	LR	22 51 48.3	
	comp=Z,65nm,20.3s,baz=152,slow=35						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**36.92**	**265**	P	P	22 37 43.5	+0.1
	0.5nm,0.9s,baz=101,slow=8.3,SNR=2.5						
	0.5nm,0.9s						
DAV	**Davao City (W)**	**55.29**	**296**	LR	LR	23 03 49.3	
	comp=Z,10nm,18.1s,baz=45,slow=36						
ILAR	**Eielson Array**	**91.33**	**16**	P	P	22 43 38.3	-1.3
	0.4nm,0.8s,baz=224,slow=5.0,SNR=2.0						
	0.4nm,0.8s						
GERES	**GERESS Array B**	**148.62**	**334**	PKPbc	PKiKP	22 50 22.6	-0.5
	0.1nm,0.4s,baz=56,slow=2.5,SNR=1.4						

IDC 12 23:00:30.2±1.1, 8°67S×147°72E, h0km, mb3.7/8, mbtmp3.8/12, ML3.9/4, MS3.0/3, Error ellipse: s-maj=32.9km s-min=9.8km az=118.0

ISC 12 23:00:36.1±0.7, 8°73S±0°09×147°5E±0°1, h35km, n14, σ1§11/14, mb3.8/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**0.75**	**207**	Pg	**Pn**	**23 00 48.1**	**-2.2**
	1μm,0.3s,baz=34,slow=8.8,SNR=1620						
PMG				Lg	Lg	23 01 00.3	
	791nm,0.3s,baz=44,slow=20,SNR=32						
KRVT	**Keravat (AS076**	**6.28**	**46**	Pn	Pn	23 01 59.8	-6.6
	3.0nm,0.3s,baz=192,slow=18,SNR=1.7						
KRVT				Sn	**Sn**	**23 03 17.9**	**+0.9**
	3.1nm,0.3s,baz=137,slow=18,SNR=1.4						
	17nm,0.5s						
CTA	**Charters Tower**	**11.35**	**186**	Pn	**Pn**	**23 03 17.2**	**+1.3**
	1.2nm,0.3s,baz=4.3,slow=15,SNR=11						
CTA				LR	LR	23 07 12.8	
	comp=Z,48nm,20.2s,baz=277,slow=35						
	3.0nm,0.3s						
WRA	**Warramunga Arr**	**16.92**	**227**	P	**Pn**	**23 04 30.9**	**+0.6**
	0.2nm,0.3s,baz=39,slow=14,SNR=8.8						
WRA				S	Sn	23 07 27.4	-10
	0.7nm,1.1s,baz=41,slow=19,SNR=2.5						
WRA				LR	LR	23 12 10.2	
	comp=Z,44nm,18.4s,baz=96,slow=41						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**19.75**	**220**	P	**P**	**23 05 04.0**	**+0.9**
	0.4nm,0.3s,baz=50,slow=10,SNR=22						
ASAR				LR	LR	23 13 30.4	
	comp=Z,58nm,18.2s,baz=262,slow=39						
	2.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.19**	**244**	P	**P**	**23 05 40.7**	**+0.7**
	1.6nm,0.9s,baz=62,slow=9.2,SNR=2.2						
	1.6nm,0.9s						
KSRS	**Korea Array**	**49.47**	**339**	P	**P**	**23 09 22.6**	**-0.4**
	0.9nm,0.7s,baz=156,slow=8.6,SNR=1.7						
	0.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**55.01**	**300**	P	**P**	**23 10 05.5**	**+1.0**
	0.4nm,0.3s,baz=138,slow=3.7,SNR=4.5						
	0.4nm,0.3s						
SONM	**Songino Array**	**67.02**	**331**	P	**P**	**23 11 26.0**	**+0.3**
	0.7nm,0.8s,baz=150,slow=6.1,SNR=2.1						
	0.7nm,0.8s						
VNDA	**Vanda**	**69.17**	**177**	P	**P**	**23 11 38.6**	**0.0**
	0.4nm,0.7s,baz=31,slow=9.5,SNR=1.9						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**79.92**	**321**	P	**P**	**23 12 41.9**	**+0.4**
	0.8nm,0.6s,baz=100,slow=7.3,SNR=7.5						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**81.58**	**328**	P	**P**	**23 12 49.0**	**-1.2**
	0.9nm,0.6s,baz=120,slow=8.8,SNR=3.8						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**87.78**	**23**	P	**P**	**23 13 19.8**	**-1.5**
	0.4nm,0.8s,baz=249,slow=4.7,SNR=3.1						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**146.17**	**281**	PKPbc	**PKPbc**	**23 20 13.9**	**+0.1**
	0.9nm,0.9s,baz=68,slow=3.9,SNR=6.4						

NEIC 12 23:13:57.6±1.6, 29°66N±0°06×129°3E±0°1, h173km±7km, mb4.3/45, Error ellipse: s-maj=14.1km s-min=7.9km az=116.0

JMA 12 23:13:58.8±0.2, 29°7N±0°7×13°0E±°, h171km±2km, MV3.9/36, NEAR TOKARA ISLANDS

NIED 12 23:13:58.8, 29°65N×129°51E, h171km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.91; Mθθ0.17; Mφφ-1.08; Mrθ0.11; Mθφ-0.02; Mφr0.52; Fault plane solution: M0 1.13000×10^15 NP1: φs174.00000°, δ32.00000°, λ79.00000°. NP2: φs7.00000°, δ59.00000°, λ97.00000°.

IDC 12 23:14:00.3±2.4, 29°86N×129°53E, h213km±23km, mb3.3/15, mbtmp3.8/17 Error ellipse: s-maj=19.4km s-min=11.5km az=73.0

ISC 12 23:13:57.1±0.6, 29°62N±0°06×129°39E±0°07, h181km±6km, n101, σ1§36/118, mb4.1/38, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.47**	**63**	*i* P	**Pn**	**23 14 22.3**	**+0.4**
JTAJ	**Takarajima**	**0.50**	**200**	*i* P	**Pn**	**23 14 23.0**	**+1.0**
JTAJ				S	**Sn**	**23 14 42.0**	**+0.8**
JKC	**Kuchinoerabu**	**1.09**	**40**	P	**Pn**	**23 14 25.7**	**+0.2**
JYAK	**Yakushimahirau**	**1.15**	**57**	*i* P	**Pn**	**23 14 25.8**	**-0.2**
JYAK				S	**Sn**	**23 14 46.5**	**-1.8**
JAM	**Amami Oshima**	**1.22**	**171**	*i* P	**Pn**	**23 14 27.7**	**+1.0**
JAM				S	**Sn**	**23 14 49.3**	**-0.2**
JAMN	**Amaminishikomi**	**1.39**	**188**	*i* P	**Pn**	**23 14 29.1**	**+1.0**
JAMN				S	**Sn**	**23 14 52.1**	**0.0**
JZK	**Kikaishima**	**1.40**	**159**	P	**Pn**	**23 14 30.4**	**+2.2**
JZK				S	**Sn**	**23 14 55.4**	**+3.1**
JMTN	**Minamitane**	**1.52**	**59**	*i* P	**Pn**	**23 14 29.2**	**-0.1**
JTN	**Tanegashima 3**	**1.71**	**53**	*e*P	**Pn**	**23 14 31.1**	**-0.1**
JTN				*e*S	**Sn**	**23 14 55.8**	**-2.0**
JTK	**Tokunoshima**	**1.87**	**192**	*i* P	**Pn**	**23 14 34.2**	**+1.3**
JTK				S	**Sn**	**23 15 01.0**	**+0.4**
JTSR	**Tashiro 2**	**2.03**	**40**	*i* P	**Pn**	**23 14 34.6**	**+0.1**
JTSR				S	**Sn**	**23 15 01.4**	**-2.2**
JSJ	**Shimokoshiki**	**2.07**	**8**	P	**Pn**	**23 14 35.0**	**+0.1**
JSU	**Suzuyama**	**2.09**	**26**	Pn	**Pn**	**23 14 35.2**	**0.0**
JSU				Sn	**Sn**	**23 15 04.6**	**-0.3**
JSU	**Suzuyama**	**2.09**	**26**	P	**Pn**	**23 14 35.8**	**+0.6**
JOKE	**Okinoerabujima**	**2.37**	**198**	P	**Pn**	**23 14 39.1**	**+0.8**
JOKE				S	**Sn**	**23 15 10.0**	**-0.5**
JNAR	**Kushima--Naru**	**2.49**	**40**	*e*P	**Pn**	**23 14 40.4**	**+0.7**
JTZ	**Takazaki**	**2.70**	**32**	*i* P	**Pn**	**23 14 42.9**	**+0.8**
JTZ				S	**Sn**	**23 15 15.9**	**-1.4**
JZO	**Okuchi**	**2.71**	**22**	P	**Pn**	**23 14 43.6**	**+1.3**
JOW	**Kunigami**	**2.95**	**200**	Pn	**Pn**	**23 14 45.2**	**-0.1**
JOW				Sn	**Sn**	**23 15 21.4**	**-1.4**
JTU	**Tsushima**	**4.89**	**0**	Pn	**Pn**	**23 15 11.3**	**+1.8**
JMN	**Monobe**	**5.60**	**42**		**Pn**	**23 15 18.6**	**-0.2**
JMN				Sn	**Sn**	**23 16 20.1**	**-3.2**
JHS	**Saijyo**	**6.22**	**29**	Pn	**Pn**	**23 15 25.8**	**-1.2**
KSRS	**Korea Array**	**7.91**	**351**	P	**Pn**	**23 15 49.6**	**+0.6**
	1.6nm,0.7s,baz=172,slow=14,SNR=8.6						
INU	**Inuyama**	**8.60**	**46**	Pn	**Pn**	**23 16 02.3**	**+4.0**
INU				Sn	**Sn**	**23 17 38.1**	**+3.7**
SSLB	**Suanglung**	**9.52**	**234**	Pn	**Pn**	**23 16 09.6**	**-0.9**
YULB	**Yu-li**	**9.54**	**231**	Pn	**Pn**	**23 16 09.5**	**-1.2**
MJAR	**Matsushiro Arr**	**10.11**	**45**	P	**Pn**	**23 16 18.0**	**0.0**
	1.0nm,0.5s,baz=242,slow=12,SNR=5.3						
MJAR				S	**Sn**	**23 18 09.6**	**-0.9**
	1.6nm,0.5s,baz=233,slow=18,SNR=4.8						
BJT	**Baijiatuan**	**15.00**	**317**	P	**P**	**23 17 22.5**	**+1.4**
ERM	**Erimo**	**16.63**	**38**	P	**P**	**23 17 39.2**	**+0.1**
ERM				IAmb	IAmb	23 18 19.4	
	comp=Z,18nm,1.1s						
SONM	**Songino Array**	**25.39**	**322**	P	**P**	**23 19 06.9**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=147,slow=10.0,SNR=7.2						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	**25.39**	**322**		**P**	**23 19 08.5**	**+0.8**
KULM	**Kulim**	**36.37**	**234**	P	**P**	**23 20 45.4**	**+1.3**
MKAR	**Makanchi Array**	**40.13**	**309**	P	**P**	**23 21 14.9**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=94,slow=13,SNR=4.3						
MKAR				PcP	**PcP**	**23 23 16.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=86,slow=2.9,SNR=8.6						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**40.13**	**309**	P	**P**	**23 21 14.6**	**-0.6**
ZALV	**Zalesovo Beam**	**40.24**	**320**	P	**P**	**23 21 14.8**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=119,slow=9.2,SNR=3.7						
ZALV				PcP	**PcP**	**23 23 15.8**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=108,slow=4.7,SNR=2.8						
	comp=Z,0.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**47.58**	**185**	P	**P**	**23 22 16.4**	**+1.7**
KKAR	**Karatay Array**	**48.36**	**303**	P	**P**	**23 22 21.4**	**+0.8**
BRVK	**Borovoye**	**48.55**	**316**	P	**P**	**23 22 22.1**	**+0.2**
GAR	**Garm**	**48.94**	**298**	P	**P**	**23 22 25.8**	**+0.6**
GAR				IAmb	IAmb	23 23 09.5	
	comp=Z,11nm,0.7s						
WB0	**Warramunga Arr**	**49.34**	**174**	P	**P**	**23 22 29.7**	**+1.6**
WB0				IAmb	IAmb	23 22 36.5	
	comp=Z,7.5nm,1.4s						
WRA	**Warramunga Arr**	**49.51**	**174**	P	**P**	**23 22 30.8**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=354,slow=8.2,SNR=17						
	comp=Z,1.6nm,0.7s						
WRA	**Warramunga Arr**	**49.51**	**174**	P	**P**	**23 22 31.0**	**+1.6**
WB2	**Warramunga Arr**	**49.51**	**174**	P	**P**	**23 22 30.0**	**+0.5**
WB2				IAmb	IAmb	23 22 48.5	
	comp=Z,10nm,1.4s						
WR0	**Warramunga Arr**	**49.55**	**174**	P	**P**	**23 22 30.4**	**+0.8**
WR0				IAmb	IAmb	23 22 45.8	
	comp=Z,7.2nm,1.4s						
ASAR	**Alice Springs**	**53.16**	**175**	P	**P**	**23 22 58.1**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=5.6,slow=14,SNR=14						
	comp=Z,0.7nm,0.7s						
ABKAR	**Akbulak array**	**55.12**	**312**	P	**P**	**23 23 10.7**	**+0.2**
J20K	**Nowinta River**	**57.90**	**30**	P	**P**	**23 23 31.8**	**+2.0**
K20K	**Telida**	**57.97**	**31**	P	**P**	**23 23 32.5**	**+2.1**
IMAR	**Indian Mountai**	**58.01**	**28**	P	**P**	**23 23 31.8**	**+1.2**
H21K	**Melozitna Rive**	**58.41**	**28**	P	**P**	**23 23 33.8**	**+0.5**
H21K				IAmb	IAmb	23 23 49.7	
	comp=Z,4.6nm,1.4s						
PPLA	**Purkeypile**	**58.85**	**32**	P	**P**	**23 23 38.3**	**+1.7**
KDAK	**Kodiak Island**	**59.20**	**38**	P	**P**	**23 23 39.6**	**+0.8**
BPAW	**Bear Paw Mtn.**	**59.29**	**30**	P	**P**	**23 23 41.3**	**+1.9**
BPAW				IAmb	IAmb	23 23 41.7	
	comp=Z,4.7nm,1.4s						
MLY	**Manley**	**59.31**	**29**	P	**P**	**23 23 41.4**	**+1.7**
MLY				IAmb	IAmb	23 23 41.8	
	comp=Z,1.7nm,0.5s						
H23K	**Yukon River**	**59.74**	**28**	P	**P**	**23 23 44.8**	**+2.3**
H23K				IAmb	IAmb	23 23 46.1	
	comp=Z,12nm,1.5s						
I23K	**Minto, Yukon-K**	**59.89**	**29**	P	**P**	**23 23 45.0**	**+1.6**
I23K				IAmb	IAmb	23 24 26.7	
	comp=Z,6.1nm,1.5s						
H24K	**Noodor Dome**	**60.42**	**28**	P	**P**	**23 23 49.0**	**+1.8**
WRH	**Wood River Hil**	**60.50**	**30**	P	**P**	**23 23 49.2**	**+1.6**
WRH				IAmb	IAmb	23 23 57.0	
	comp=Z,4.4nm,1.4s						
CCB	**Clear Creek Bu**	**60.60**	**29**	P	**P**	**23 23 49.7**	**+1.4**
POKR	**Poker Plat Res**	**60.70**	**29**	P	**P**	**23 23 50.2**	**+1.2**
POKR				IAmb	IAmb	23 23 51.5	
	comp=Z,3.1nm,0.6s						
IL31		**60.98**	**29**	P	**P**	**23 23 52.5**	**+1.8**
ILAR	**Eielson Array**	**60.98**	**29**	P	**P**	**23 23 48.7**	**-2.2**
	comp=Z,0.6nm,0.7s,baz=261,slow=5.1,SNR=8.6						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**60.98**	**29**	P	**P**	**23 23 51.7**	**+0.9**
SCM	**Sheep Creek Mo**	**61.23**	**33**	P	**P**	**23 23 54.0**	**+1.3**
PRP	**Porcupine Dome**	**61.43**	**28**	P	**P**	**23 23 55.5**	**+1.4**
PRP				IAmb	IAmb	23 23 56.9	
	comp=Z,2.9nm,1.0s						
BMAR	**Burnt Mountain**	**61.51**	**26**	P	**P**	**23 23 56.2**	**+1.8**
J25K	**Salcha River,**	**61.65**	**29**	P	**P**	**23 23 54.8**	**-0.7**
PAX	**Paxson**	**61.89**	**31**	P	**P**	**23 23 58.7**	**+1.6**
PAX				IAmb	IAmb	23 24 13.2	
	comp=Z,5.9nm,1.5s						
KLU	**Klutina**	**61.95**	**33**	P	**P**	**23 23 58.7**	**+1.1**
J26L	**Joseph Creek**	**62.43**	**29**	P	**P**	**23 24 01.1**	**+0.4**
J26L				IAmb	IAmb	23 24 02.9	
	comp=Z,2.2nm,0.8s						
I26K	**Coal Creek Min**	**62.45**	**28**	P	**P**	**23 24 01.2**	**+0.5**
I26K				IAmb	IAmb	23 24 29.6	
	comp=Z,7.2nm,1.5s						
M26K	**Nabesna, AK**	**63.12**	**31**	P	**P**	**23 24 06.7**	**+1.5**
M26K				IAmb	IAmb	23 24 08.4	
	comp=Z,5.3nm,1.0s						
K27K	**Chicken**	**63.17**	**30**	P	**P**	**23 24 07.1**	**+1.7**
K27K				IAmb	IAmb	23 24 21.7	
	comp=Z,7.4nm,1.5s						
L27K	**Beaver Creek,**	**63.49**	**31**	P	**P**	**23 24 08.2**	**+0.5**
L27K				IAmb	IAmb	23 24 26.9	
	comp=Z,3.9nm,1.4s						
BCAR	**Beaver Creek A**	**63.51**	**31**	P	**P**	**23 24 09.5**	**+1.7**
M27K	**Edge Creek, AK**	**63.64**	**31**	P	**P**	**23 24 09.9**	**+1.2**
EPYK	**Eagle Plains**	**64.77**	**26**	P	**P**	**23 24 17.3**	**+1.4**
EPYK				IAmb	IAmb	23 24 17.8	
	comp=Z,4.4nm,0.6s						
ARCES	**ARCESS Array B**	**67.24**	**338**	P	**P**	**23 24 29.2**	**-2.3**
	comp=Z,2.7nm,1.1s,baz=49,slow=2.2,SNR=4.1						
	comp=Z,2.7nm,1.1s						
WHY	**Whitehorse**	**67.34**	**32**	P	**P**	**23 24 34.1**	**+1.7**
WHY				IAmb	IAmb	23 24 45.1	
	comp=Z,5.3nm,1.1s						
FARO	**Faro, Yukon**	**67.48**	**30**	P	**P**	**23 24 35.1**	**+1.9**
FARO				IAmb	IAmb	23 24 35.8	
	comp=Z,3.5nm,0.8s						
KBZ	**Khabaz**	**67.83**	**309**	P	**P**	**23 24 35.5**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=7.3,slow=4.5,SNR=4.1						
	comp=Z,1.4nm,0.9s						
FIA1	**FINESS Array S**	**70.43**	**330**	P	**P**	**23 24 50.8**	**-0.5**
FINES	**FINESS Array B**	**70.43**	**330**	P	**P**	**23 24 50.6**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=60,slow=5.7,SNR=11						
	comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**70.43**	**330**	P	**P**	**23 24 50.8**	**-0.5**
AKASG	**Malin Array Be**	**73.63**	**319**	P	**P**	**23 25 09.7**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=52,slow=5.1,SNR=4.4						
	comp=Z,0.8nm,0.4s						
YKA	**Yellowknife Ar**	**75.03**	**26**	P	**P**	**23 25 17.2**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=338,slow=5.0,SNR=5.0						
	comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**75.78**	**308**	P	**P**	**23 25 22.2**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=104,slow=4.0,SNR=5.4						
	comp=Z,1.0nm,0.9s						
NC405	**NORSAR Array S**	**76.49**	**334**	P	**P**	**23 25 26.2**	**-0.5**
NB201	**NORSAR Array S**	**76.69**	**334**	P	**P**	**23 25 27.6**	**-0.3**
NB2	**NORSAR Subarra**	**76.73**	**334**	P	**P**	**23 25 26.8**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=51,slow=5.3						
NB2	**NORSAR Subarra**	**76.73**	**334**	P	**P**	**23 25 27.0**	**-1.1**
	comp=Z,5.0nm,0.9s,baz=51,slow=5.6						
NOA	**NORSAR Array B**	**76.73**	**334**	P	**P**	**23 25 26.5**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=51,slow=5.3,SNR=5.2						
	comp=Z,1.4nm,0.7s						
BUR08	**Bucovina Ar. S**	**77.41**	**318**	P	**P**	**23 25 33.1**	**+0.9**
BURAR	**Bucovina Array**	**77.42**	**318**	P	**P**	**23 25 32.9**	**+0.6**
ELL	**Elmali**	**79.76**	**306**	P	**P**	**23 25 45.7**	**+0.3**
CLL	**Collm**	**81.96**	**325**	*i* P	**P**	**23 25 56.8**	**+0.3**
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**83.12**	**323**	P	**P**	**23 26 02.2**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=46,slow=5.8,SNR=11						
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**83.12**	**323**	P	**P**	**23 26 03.6**	**+0.9**
GRA1	**Grafenberg Arr**	**83.86**	**325**	P	**P**	**23 26 06.0**	**-0.4**
GRFO	**Grafenberg**	**83.86**	**325**	P	**P**	**23 26 05.8**	**-0.5**
GRFO				IAmb	IAmb	23 26 06.7	
	comp=Z,14nm,1.4s						
NVAR	**Mina Array Bea**	**87.43**	**47**	P	**P**	**23 26 21.8**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=309,slow=5.7,SNR=1.4						
	comp=Z,0.1nm,0.3s						

IDC 12 23:18:05.6±1.1, 34°65S×179°71W, h0km, mb4.0/2, mbtmp4.2/3, ML4.8/1, MS3.0/2, Error ellipse: s-maj=40.0km s-min=34.1km az=176.0

WEL 12 23:18:11.0±0.5, 35°S±4°×17°9W±°, h33km, M4.5/39, mB5.1/16, ML4.8/45, MLv4.7/39, Mw(mB)4.4/16, Error ellipse: s-maj=0.0km s-min=0.0km az=117.2

NEIC 12 23:18:16.9±2.0, 35°3S±0°1×179°9E±0°2, h68km±14km, mb4.3/9, Error ellipse: s-maj=21.2km s-min=15.7km az=224.0

ISC 12 23:18:10.4±0.7, 34°94S±0°05×179°43W±0°08, h43km, n134, σ1§88/141, mb4.3/7, 2C-1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.20**	**214**		**Pn**	**23 18 59.4**	**+1.3**
MXZ	**Matakaoa Point**	**3.20**	**214**	P	**Pn**	**23 18 59.2**	**+1.1**
MXZ				S	**Sn**	**23 19 35.1**	**+0.1**
WMGZ	**Waiomatatini S**	**3.36**	**211**	P	**Pn**	**23 19 02.4**	**+2.0**
WMGZ				S	**Sn**	**23 19 42.4**	**+3.3**
PKGZ	**Pakihiroa**	**3.57**	**214**	P	**Pn**	**23 19 04.8**	**+1.5**
PKGZ				S	**Sn**	**23 19 45.4**	**+1.1**
HAZ	**Te Kaha**	**3.61**	**218**	P	**Pn**	**23 19 05.0**	**+1.3**
HAZ				S	**Sn**	**23 19 47.1**	**+2.1**
PUZ	**Puketiti**	**3.64**	**210**	P	**Pn**	**23 19 05.8**	**+1.5**
PUZ				S	**Sn**	**23 19 46.8**	**+0.7**
RUGZ	**Raukumara Rang**	**3.82**	**217**	P	**Pn**	**23 19 07.9**	**+1.1**
RUGZ				S	**Sn**	**23 19 51.9**	**+1.4**
TWGZ	**Tauwhareparae**	**3.85**	**212**	P	**Pn**	**23 19 08.5**	**+1.4**
TWGZ				S	**Sn**	**23 19 52.2**	**+1.1**
CNGZ	**Carnagh Statio**	**4.02**	**208**	P	**Pn**	**23 19 11.1**	**+1.7**
WHRZ	**Whale Island**	**4.11**	**224**	P	**Pn**	**23 19 13.0**	**+2.3**
WHRZ				S	**Sn**	**23 19 59.1**	**+1.5**
TKGZ	**Te Karaka**	**4.13**	**211**	P	**Pn**	**23 19 11.9**	**+1.1**
TKGZ				S	**Sn**	**23 19 58.4**	**+0.6**
MWZ	**Matawai**	**4.18**	**215**	P	**Pn**	**23 19 12.4**	**+0.7**
MWZ				S	**Sn**	**23 19 59.3**	**0.0**
URZ	**Urewera**	**4.33**	**219**	Pn	**Pn**	**23 19 14.2**	**+0.5**
	49nm,0.3s,baz=275,slow=3.5,SNR=325						
URZ				Sn	**Sn**	**23 20 01.6**	**-1.3**
	39nm,0.3s,baz=283,slow=5.9,SNR=10						
	107nm,0.2s						
URZ	**Urewera**	**4.33**	**219**	P	**Pn**	**23 19 14.2**	**+0.5**
URZ				S	**Sn**	**23 20 02.2**	**-0.7**
KUZ	**Kuaotunu**	**4.34**	**244**	P	**Pn**	**23 19 14.2**	**+0.4**
KUZ				S	**Sn**	**23 20 02.3**	**-0.7**
OPRZ	**Ohinepanea**	**4.35**	**227**	P	**Pn**	**23 19 15.0**	**+1.1**
RAGZ	**Rawiri**	**4.37**	**215**	P	**Pn**	**23 19 15.2**	**+1.0

BSWZ	Blackbirch Sta	8.57	216	Pn	Pn	23 20 09.3	-2.5
BSWZ	Blackbirch Sta	8.57	216	P	Pn	23 20 09.0	-2.9
QRZ	Quartz Range	8.66	225	Pn	Pn	23 20 10.1	-2.9
THZ	Tophouse	9.09	219	Pn	Pn	23 20 15.8	-3.2
KHZ	Kahutara	9.27	214	Pn	Pn	23 20 18.1	-3.3
LTZ	Lake Taylor	10.16	217	Pn	Pn	23 20 30.3	-3.3
MQZ	McQueen's Vall	10.69	213	Pn	Pn	23 20 35.8	-5.0
RPZ	Rata Peaks	11.45	217	Pn	Pn	23 20 45.4	-5.8
	0.6nm,0.3s,baz=268,slow=16,SNR=1.9						
RPZ				Sn	Sn	23 22 42.6	-15
	1.8nm,0.3s,baz=128,slow=23,SNR=9.8						
RPZ	Rata Peaks	11.45	217	Pn	Pn	23 20 46.2	-5.0
FOZ	Fox Glacier	11.96	221	Pn	Pn	23 20 55.2	-3.0
LBZ	Lake Benmore	12.37	217	Pn	Pn	23 20 59.5	-4.2
ODZ	Otahua Downs	12.63	214	Pn	Pn	23 21 01.2	-6.1
WKZ	Wanaka	13.27	218	Pn	Pn	23 21 12.4	-3.6
MLZ	Mavora Lakes	14.10	219	P	Pn	23 21 25.4	-2.0
WHZ	Wether Hill Ro	14.55	217	Pn	Pn	23 21 31.6	-1.8
DCZ	Deep Cove	14.67	220	P	P	23 21 38.6	-1.8
MSVF	Nonsavu	17.28	352	LR	LR	23 27 18.7	
	comp=Z,35nm,21.4s,baz=184,slow=33						
DZM	Mont Dzumac	17.82	312	LR	LR	23 27 30.4	
	comp=Z,90nm,21.0s,baz=51,slow=32						
EIDS	Eidsvold	27.14	283	P	P	23 23 51.9	+2.2
EIDS				IAmb	IAmb	23 24 20.1	
	comp=Z,11nm,1.4s						
TOO	Toolangi	28.32	254	P	P	23 23 58.6	-1.4
AS31	Alice Springs	41.89	273	P	P	23 25 55.8	-1.0
ASAR	Alice Springs	41.89	273	P	P	23 25 55.9	-0.8
	comp=Z,0.7nm,0.5s,baz=116,slow=7.8,SNR=20						
	comp=Z,0.7nm,0.5s						
ASAR	Alice Springs	41.89	273	P	P	23 25 55.6	-1.1
WR0	Warramunga Arr	43.12	278	P	P	23 26 06.0	-0.6
WR0				IAmb	IAmb	23 26 25.6	
	comp=Z,9.3nm,1.4s						
WB2	Warramunga Arr	43.28	278	P	P	23 26 07.3	-0.7
WB2				IAmb	IAmb	23 26 45.6	
	comp=Z,9.2nm,1.2s						
WRA	Warramunga Arr	43.29	278	P	P	23 26 06.9	-1.2
	comp=Z,1.1nm,0.3s,baz=118,slow=7.6,SNR=34						
	comp=Z,1.1nm,0.3s						
WRA	Warramunga Arr	43.29	278	P	P	23 26 06.7	-1.4
WB0	Warramunga Arr	43.33	278	P	P	23 26 07.3	-1.2
WB0				IAmb	IAmb	23 26 11.8	
	comp=Z,5.6nm,1.1s						
FORT	Forrest	43.90	260	P	P	23 26 10.7	-2.1
QSPA	South Pole Qui	55.19	180	P	P	23 27 41.2	+2.7
QSPA				IAmb	IAmb	23 28 07.8	
	comp=Z,3.7nm,1.1s						
H03S2	Juan Fernandez	78.97	124	T	T	00 58 38.3	
	baz=233						
H03S1	Juan Fernandez	78.98	124	T	T	00 58 31.0	
	baz=233						
H03S3	Juan Fernandez	78.99	124	T	T	00 58 29.2	
	baz=233						
H03N3	Juan Fernandez	79.19	123	T	T	00 58 40.9	
	baz=237,slow=72,SNR=11						
H03N2	Juan Fernandez	79.19	123	T	T	00 58 41.7	
	baz=237,slow=72,SNR=12						
H03N1	Juan Fernandez	79.20	123	T	T	00 58 40.5	
	baz=237,slow=72,SNR=11						
ARCES	ARCESS Array B	142.72	346	PKhKP	PKPpre	23 37 35.1	
	comp=Z,0.5nm,0.5s,baz=60,slow=2.2,SNR=6.3						
FINES	FINESS Array B	148.90	336	PKPbc	PKiKP	23 37 53.4	-0.5
	comp=Z,4.3nm,0.8s,baz=40,slow=2.9,SNR=19						
LIC	Lamto	150.96	168	⇓*i*PKIKP	PKiKP	23 38 01.9	+2.2
	comp=Z,16nm,0.4s						
KIC	Kosan Boka	151.14	169	⇑*e*PKIKP	PKiKP	23 38 02.1	+2.0
	comp=Z,7.9nm,0.3s						
TIC	Toumodi	151.38	168	⇑*i*PKIKP	PKiKP	23 38 02.6	+2.0
	comp=Z,4.5nm,0.2s						
DBIC	Dimbokro	151.43	169	PKPbc	PKiKP	23 38 03.0	+2.4
	comp=Z,2.8nm,0.5s,baz=106,slow=2.1,SNR=9.7						
NOA	NORSAR Array B	153.00	349	PKPbc	PKiKP	23 38 03.6	+1.1
	comp=Z,0.7nm,0.6s,baz=20,slow=3.9,SNR=2.4						
BRTR	Keskin Array B	153.37	290	PKPbc	PKiKP	23 38 03.5	-0.6
	comp=Z,0.4nm,0.4s,baz=158,slow=4.3,SNR=4.3						
AKASG	Malin Array Be	153.96	316	PKPbc	PKiKP	23 38 05.9	+1.2
	comp=Z,0.3nm,0.4s,baz=72,slow=2.4,SNR=1.4						
TORD	Torodi Ar. Bea	158.28	183	PKPab	PKPab	23 38 39.5	+2.0
	comp=Z,0.5nm,0.9s,baz=151,slow=3.3,SNR=2.6						

IDC ***12*** *23:35:20.0±0.8, 13°.62S×66°.30E, h0km, mb3.8/9, mbtmp3.9/10, ML4.2/1, MS3.7/46, Error ellipse: s-maj=28.8km s-min=20.2km az=177.0*

NEIC ***12*** *23:35:25.0±1.8, 14°.2S±0°.1×66°.17E±0°.04, h10km±1km, mb4.8/14, Error ellipse: s-maj=18.0km s-min=7.4km az=184.0*

GCMT ***12*** *23:35:26.0±0.4, 13°.60S±0°.02×66°.05E±0°.02, h15km, MW4.8/93, Moment Tensor Solution. s10,c10; s93,c115; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.38±.08; Mθθ=1.29±.06; Mϕϕ 1.67±.06; Mrθ=1.14±.25; Mθϕ 0.40±.07; Mϕr=0.34±.24; Best double couple: M0 1.93800×10^16 NP1:ϕs 147.00000°, δ71.00000°, λ=-150.00000°. NP2: ϕs 47.00000°, δ62.00000°, λ=-21.00000°. Principal axes: T 1.7430, Plg6.0000°, Azm275.0000°; N 0.3940, Plg55.0000°, Azm176.0000°; P -2.1320, Plg34.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 23:35:23.8±0.7, 14°.19S±0°.09×66°.2E±0°.1, h10km, n73, σ1=65/25, mb4.3/16, MS3.7/46, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCAM	Rodrigues Isla	6.15	206	Pn	Pn	23 36 55.1	+0.3
H08S1	Diego Garcia H	8.97	44	T	T	23 46 06.0	
	baz=226,slow=76,SNR=792						
H08S2	Diego Garcia H	8.98	44	T	T	23 46 07.1	
	baz=226,slow=76,SNR=1226						
H08S3	Diego Garcia H	8.99	44	T	T	23 46 07.5	
	baz=226,slow=76,SNR=1000						
MSEY	Mahe Island	14.16	311	Pn	Pn	23 38 45.4	+0.7
OPO	Ambohidratompo	18.73	254	P	Pn	23 39 45.1	+1.7
	0.1nm,0.3s,baz=55,slow=12,SNR=4.8						
OPO				S	Sn	23 43 02.2	-11
	3.6nm,1.1s,baz=99,slow=8.2,SNR=1.8						
	5.0nm,0.8s						
ABPO	Ambohimpanom	18.78	253	P	P	23 39 43.4	-0.2
VOI	Vohitsoka	19.95	245	P	P	23 39 56.5	+0.1
PALK	Pallekele	25.74	35	LR	LR	23 48 43.2	
	comp=Z,131nm,20.0s,baz=316,slow=32						
KMBO	Kilima Mbogo	31.41	292	P	P	23 41 42.9	-2.8
	1.3nm,0.8s,baz=90,slow=7.1,SNR=5.8						
KMBO				LR	LR	23 51 52.5	
	comp=Z,98nm,18.4s,baz=92,slow=32						
	1.3nm,0.8s						
HYBB	Hyderabad (bro	33.70	22	*e*P	P	23 42 06.6	+1.2
CRZF	Crozet Islands	34.32	198	P	P	23 42 11.7	+1.2
ATD	Arta Tunnel	34.47	317	LR	LR	23 53 55.2	
	comp=Z,69nm,21.8s,baz=240,slow=33						
PSI	Prapat	36.59	65	LR	LR	23 54 15.0	
	comp=Z,121nm,19.8s,baz=236,slow=31						
LSZ	Lusaka	36.73	263	LR	LR	23 56 04.4	
	comp=Z,207nm,19.2s,baz=119,slow=34						
MBAR	Mbarara	37.56	288	LR	LR	23 55 32.3	
	comp=Z,147nm,19.2s,baz=76,slow=32						
WSAR	Wadi Sarin	37.92	349	LR	LR	23 53 25.4	
	comp=Z,66nm,18.4s,baz=190,slow=29						
LBTB	Lobatse	39.58	248	LR	LR	23 57 51.5	
	comp=Z,100nm,18.3s,baz=82,slow=34						
BOSA	Boshof	40.50	242	P	P	23 43 03.5	+0.2
	3.7nm,1.0s,baz=46,slow=2.2,SNR=3.7						
BOSA				LR	LR	23 57 28.0	
	comp=Z,85nm,18.2s,baz=50,slow=32						
	3.7nm,1.0s						
LEM	Lembang	41.34	84	LR	LR	23 57 34.6	
	comp=Z,80nm,19.6s,baz=186,slow=32						
CMAR	Chiang Mai Arr	45.77	46	LR	LR	00 01 22.2	
	comp=Z,29nm,18.4s,baz=230,slow=34						
TSUM	Tsumeb	46.70	257	LR	LR	00 02 58.7	
	comp=Z,171nm,18.1s,baz=128,slow=35						
H01W3	Cape Leeuwin H	47.73	124	T	T	00 35 56.1	
	baz=284,slow=75,SNR=57						
H01W2	Cape Leeuwin H	47.73	124	T	T	00 35 42.3	
	baz=284,slow=75,SNR=44						
H01W1	Cape Leeuwin H	47.74	124	T	T	00 35 57.3	
	baz=284,slow=75,SNR=56						
EIL	Elat	53.00	326	LR	LR	00 04 30.6	
	comp=Z,103nm,18.8s,baz=84,slow=33						
MAW	Mawson	53.41	182	LR	LR	00 02 04.7	
	comp=Z,69nm,19.8s,baz=17,slow=30						
KAPI	Kappang	53.49	86	LR	LR	00 04 24.9	
	comp=Z,72nm,20.7s,baz=284,slow=33						
BATI	Baumata	56.21	93	LR	LR	00 05 40.4	
	comp=Z,100nm,20.3s,baz=140,slow=32						
FITZ	Fitzroy Crossi	57.05	103	LR	LR	00 05 44.2	
	comp=Z,115nm,21.1s,baz=248,slow=32						
AAK	Ala-Archa	57.06	7	LR	LR	00 07 20.0	
	comp=Z,124nm,20.2s,baz=206,slow=34						
GNI	Garni	57.62	341	LR	LR	00 10 38.9	
	comp=Z,30nm,18.0s,baz=197,slow=37						
AKAS	Kas	60.90	327	P	P	23 45 38.3	+1.3
KBZ	Khabaz	61.44	341	LR	LR	00 10 42.9	
	comp=Z,42nm,19.8s,baz=169,slow=35						
BR131	Keskin Array S	61.61	332	P	P	23 45 41.5	-0.3
BR131				IAmb	IAmb	23 45 44.3	
	comp=Z,5.8nm,1.2s						
ARG	Arkhangelos	61.69	326	P	P	23 45 43.4	+1.2
KIV	Kislovodsk	61.71	341	P	P	23 45 43.9	+1.6
KIV				IAmb	IAmb	23 45 54.7	
	comp=Z,8.7nm,1.5s						
MKAR	Makanchi Array	62.41	12	P	P	23 45 41.2	-5.6
	comp=Z,0.6nm,0.6s,baz=208,slow=7.6,SNR=7.5						
MKAR				LR	LR	00 11 21.9	
	comp=Z,55nm,20.6s,baz=228,slow=35						
	comp=Z,0.6nm,0.6s						
DAV	Davao City (W)	62.60	74	LR	LR	00 10 44.1	
	comp=Z,32nm,20.0s,baz=66,slow=34						
ABKAR	Akbulak array	63.41	355	P	P	23 45 52.2	-1.2
ASAR	Alice Springs	64.26	110	P	P	23 45 57.2	-2.6
	comp=Z,0.5nm,0.8s,baz=272,slow=5.7,SNR=4.3						
ASAR				LR	LR	00 11 35.1	
	comp=Z,99nm,18.1s,baz=280,slow=34						
	comp=Z,0.5nm,0.8s						
WRA	Warramunga Arr	65.04	106	P	P	23 46 03.8	-1.1
	comp=Z,0.9nm,0.9s,baz=271,slow=5.8,SNR=6.9						
WRA				LR	LR	00 12 37.8	
	comp=Z,48nm,19.1s,baz=58,slow=34						
	comp=Z,0.9nm,0.9s						
KURBB	Kurchatov Arra	65.44	9	LR	LR	00 12 29.8	
	comp=Z,83nm,19.4s,baz=162,slow=34						
SSLB	Suanglung	65.50	55	P	P	23 46 07.6	-0.1
SSLB				IAmb	IAmb	23 46 29.4	
	comp=Z,9.4nm,1.1s						
BRVK	Borovoye	67.06	3	P	P	23 46 18.2	+1.1
TORD	Torodi Ar. Bea	69.40	290	P	P	23 46 29.5	-3.0
	comp=Z,1.5nm,1.1s,baz=68,slow=4.0,SNR=5.9						
TORD				LR	LR	00 14 00.2	
	comp=Z,43nm,21.7s,baz=231,slow=34						
	comp=Z,1.5nm,1.1s						
TORD	Torodi Ar. Bea	69.40	290	P	P	23 46 30.1	-2.4
TORD				IAmb	IAmb	23 46 30.6	
	comp=Z,7.5nm,1.5s						
MLR	Muntele Rosu	69.66	331	LR	LR	00 15 06.7	
	comp=Z,21nm,19.9s,baz=120,slow=34						
MLR	Muntele Rosu	69.66	331	P	P	23 46 34.8	+1.2
MLR				IAmb	IAmb	23 46 40.8	
	comp=Z,12nm,1.5s						
ZALV	Zalesovo Beam	69.71	12	P	P	23 46 27.9	-5.8
	comp=Z,1.0nm,0.5s,baz=212,slow=5.3,SNR=4.3						
ZALV				LR	LR	00 15 44.1	
	comp=Z,54nm,20.0s,baz=215,slow=35						
	comp=Z,1.0nm,0.5s						
SNAA	Sanae	70.06	198	LR	LR	00 10 05.3	
	comp=Z,39nm,20.3s,baz=26,slow=30						
STKA	Stephens Creek	70.38	119	LR	LR	00 12 46.9	
	comp=Z,80nm,20.9s,baz=210,slow=32						
ARU	Arti	70.64	356	LR	LR	00 17 24.7	
	comp=Z,13nm,18.2s,baz=158,slow=36						
SONM	Songino Array	71.40	27	P	P	23 46 38.5	-5.8
	comp=Z,0.4nm,0.8s,baz=212,slow=5.1,SNR=2.0						
SONM				LR	LR	00 17 42.6	
	comp=Z,52nm,20.1s,baz=231,slow=36						
	comp=Z,0.4nm,0.8s						
CLTB	Caltabellotta	71.57	318	P	P	23 46 44.0	-1.4
CLTB				IAmb	IAmb	23 46 44.7	
	comp=Z,28nm,1.3s						
AKASG	Malin Array Be	72.25	336	P	P	23 46 43.4	-5.7
	comp=Z,0.3nm,0.3s,baz=130,slow=5.4,SNR=1.4						
	comp=Z,0.3nm,0.3s						
KEST	Kesra	73.14	315	LR	LR	00 18 32.5	
	comp=Z,68nm,19.8s,baz=277,slow=36						
DBIC	Dimbokro	73.44	281	LR	LR	00 16 29.9	
	comp=Z,28nm,20.4s,baz=140,slow=34						
CTA	Charters Tower	76.10	107	LR	LR	00 18 41.7	
	comp=Z,88nm,19.1s,baz=258,slow=34						
ZCCA	Zocca	76.86	323	P	P	23 47 17.2	+1.0
ZCCA				IAmb	IAmb	23 47 21.0	
	comp=Z,20nm,1.5s						
KSRS	Korea Array	77.42	46	LR	LR	00 20 48.5	
	comp=Z,30nm,20.5s,baz=220,slow=36						
VNDA	Vanda	77.47	167	LR	LR	00 17 27.6	
	comp=Z,50nm,19.3s,baz=258,slow=32						
MSSA	Maissana	77.70	322	P	P	23 47 22.2	+1.3
MSSA				IAmb	IAmb	23 47 28.0	
	comp=Z,14nm,1.1s						
DAVOX	Davos/Dischmat	78.88	324	LR	LR	00 23 29.5	
	comp=Z,14nm,18.2s,baz=96,slow=37						
MDT	Midelt	82.10	307	LR	LR	00 25 53.1	
	comp=Z,37nm,18.2s,baz=138,slow=37						
ESDC	Sonseca Array	84.30	313	LR	LR	00 25 27.9	
	comp=Z,43nm,19.8s,baz=118,slow=36						
MJAR	Matsushiro Arr	84.46	50	LR	LR	00 25 34.9	
	comp=Z,19nm,19.5s,baz=256,slow=36						
BBTS	Babate	86.69	286	LR	LR	00 25 44.7	
	comp=Z,78nm,18.8s,baz=116,slow=35						
YAK	Yakutsk	90.62	25	LR	LR	00 28 53.0	
	comp=Z,40nm,19.1s,baz=264,slow=36						
DZM	Mont Dzumac	93.97	114	LR	LR	00 29 08.3	
	comp=Z,51nm,19.1s,baz=46,slow=34						
SPITS	Spitsbergen Ar	96.28	351	LR	LR	00 34 44.5	
	comp=Z,17nm,20.6s,baz=87,slow=37						
JMIC	Jan Mayen	98.41	341	LR	LR	00 33 40.9	
	comp=Z,16nm,18.2s,baz=94,slow=36						
PDAR	Pinedale Array	151.29	353	PKPbc	PKPdf	23 55 15.1	+2.8
	comp=Z,1.4nm,0.6s,baz=75,slow=1.0,SNR=12						

GUC ***12*** *23:42:35.0±0.7, 22°.42S×67°.90W, h183km±5km, ML3.4*

SCB ***12*** *23:42:36.2±1.3, 22°.36S×67°.74W, h164km, ML2.9/2, Error ellipse: s-maj=14.8km s-min=8.4km az=0.0*

ISC 12 23:42:32.9±1.8, 22°.43S±0°.05×67°.71W±0°.06, h174km±14km, n20, σ1=39/37, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.12	260	⇑*i*P	Pn	23 43 02.1	+0.7
LVC				*i* S	Sn	23 43 23.3	-0.1
PB09	IPOC Station P	1.55	294	*e*P	Pn	23 43 06.5	+1.3
PB09				*i* S	Sn	23 43 30.3	+0.4
PB06	IPOC Station P	1.74	260	*e*P	Pn	23 43 08.0	+1.0
PB06				*i* S	Sn	23 43 32.9	-0.4
PB06				IAML		23 43 35.1	
	comp=E,193nm,0.1s						
PB06	IPOC Station P	1.74	260	P	Pn	23 43 07.7	+0.7
PB15	IPOC Station P	1.80	244	⇑*i*P	Pn	23 43 08.6	+1.0
PB15				*i* S	Sn	23 43 34.7	+0.1
PB15	IPOC Station P	1.80	244	P	Pn	23 43 09.2	+1.5
PB07	IPOC Station P	2.13	289	⇑*i*P	Pn	23 43 12.3	+1.0
PB07				*i* S	Sn	23 43 40.0	-1.0
PB07				IAML		23 43 40.6	
	comp=N,260nm,0.2s						
PB01	IPOC Station P	2.15	309	⇑*i*P	Pn	23 43 12.4	+1.0
PB01				*i* S	Sn	23 43 40.3	-0.9
PB01				IAML		23 43 43.8	
	comp=N,154nm,0.1s						
MOCB	Mochara	2.25	59	P	Pn	23 43 14.3	+1.4
MOCB				S	Sn	23 43 40.7	-3.2
MOCB				IAML		23 43 50.8	
	comp=N,23nm,0.5s						
PB04	IPOC Station P	2.26	272	⇑*i*P	Pn	23 43 13.5	+0.8
PB04				*i* S	Sn	23 43 42.4	-1.1
PB04				IAML		23 43 45.6	
	comp=N,201nm,0.1s						
PB04	IPOC Station P	2.26	272	P	Pn	23 43 12.3	-0.4
PB02	IPOC Station P	2.31	298	⇑*i*P	Pn	23 43 14.1	+0.8
PB02				*i* S	Sn	23 43 43.4	-1.0
PB02				IAML		23 43 44.2	
	comp=N,186nm,0.3s						
PB02	IPOC Station P	2.31	298	P	Pn	23 43 13.5	+0.3
PB02				S	Sn	23 43 41.0	-3.4
PB02				IAML		23 43 44.1	
	comp=N,109nm,0.4s						
PB10	IPOC Station P	2.83	247	⇓*i*P	Pn	23 43 19.9	+0.6
PB10				*i* S	Sn	23 43 53.7	-1.7
PB10				IAML		23 43 54.9	
	comp=E,40nm,0.3s						
TA01	Diego Aracena	2.95	308	*e*P	Pn	23 43 22.1	+1.3
TA01				*i* S	Sn	23 43 56.3	-1.7
TA01				IAML		23 43 58.2	
	comp=E,80nm,0.2s						
GO01	Chusmiza	3.08	333	*e*P	Pn	23 43 24.2	+1.5
GO01				*i* S	Sn	23 44 01.9	+0.5
GO02	Mina Guanaco	3.22	212	*e*P	Pn	23 43 25.2	+0.9
GO02				*i* S	Sn	23 44 03.5	-0.9
GO02				IAML		23 44 04.7	
	comp=N,103nm,0.1s						
PB14	IPOC Station P	3.30	228	*e*P	Pn	23 43 26.7	+1.3
PB14				*i* S	Sn	23 44 04.4	-1.8
PB16	IPOC Station P	4.41	337	*e*P	Pn	23 43 41.2	+1.5
PB16				*i* S	Sn	23 44 31.4	-0.4
PB12	IPOC Station P	4.52	327	*e*P	Pn	23 43 41.6	+0.9
PB12				*e*S	Sn	23 44 31.3	-2.3

SOME ***13*** *00:04:54.8, 39°.42N×73°.57E, h5km*

IDC ***13*** *00:04:55.9±0.8, 39°.34N×73°.47E, h0km, mb3.7/17, mbtmp3.7/24, ML3.0/7, MS3.3/4, Error ellipse: s-maj=15.2km s-min=11.8km az=163.0*

KRNET ***13*** *00:04:55.0±0.1, 39°.39N×73°.54E, mb4.2*

BJI ***13*** *00:04:56.9±0.0, 39°.33N×73°.50E, h9km, mb4.4/7, mB4.7/5, ML3.5/5, Ms3.7/2, Ms7 3.5/1*

NEIC ***13*** *00:04:59.1±1.7, 39°.39N±0°.06×73°.40E±0°.08, h10km±2km, mb4.5/9, Error ellipse: s-maj=11.2km s-min=8.9km az=302.0*

MOS ***13*** *00:04:59.6±1.6, 39°.46N×73°.50E, h34km, mb4.3/11, Error ellipse: s-maj=6.9km s-min=4.5km az=78.3*

NNC ***13*** *00:05:00.5±1.9, 39°.65N×73°.46E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=16.3km s-min=8.9km az=167.0*

ISC 13 00:04:56.9±1.2, 39°.39N±0°.03×73°.43E±0°.02, h1km±8km, n195, σ2=44/240, mb3.9/27, MS3.1/6, 29C-16D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	1.24	337	⇑*i*P	Pn	00 05 19.1	-2.3
	baz=33						
OHH				⇑*i*S	Sb	00 05 36.9	-0.7
	baz=33						
DRK	Karamyk	1.26	275		Pn	00 05 20.5	-1.4
DRK	Karamyk	1.26	275	⇑*i*P	Pn	00 05 20.6	-1.4
	baz=75						
DRK				⇑*i*S	Sg	00 05 39.3	+1.8
	baz=75						
KSH	Kashi	1.98	85	Pg	Pn	00 05 25.4	-6.2
KSH				Sg	Sn	00 05 50.2	-6.8
KSH				smax	smax		
	comp=N,620nm,0.9s						
KSH				smax	smax		
	comp=E,490nm,1.0s						
GAR	Garm	2.45	262	Pn	Pn	00 05 40.3	+2.2
GAR	Garm	2.45	262	⇓*i*P	Pn	00 05 39.4	+1.3
	baz=62						
GAR				⇓*i*S	Sb	00 06 11.9	-0.6
	baz=62						
ARLS	Aral	2.56	15	⇑*i*P	Pn	00 05 39.5	-0.2
	baz=13						
ARLS				⇑*i*S	Sn	00 06 12.0	+0.4
	baz=13						
AML	Almayashu	2.75	4	P	Pn	00 05 43.3	+0.9
	SNR=59						
TRKS	Terek-Say	2.76	322	⇓*i*P	Pn	00 05 42.5	+0.1
	baz=20						
TRKS				⇓*i*S	Sn	00 06 17.0	+0.5
	baz=20						
NRN	Naryn	2.83	43	Pn	Pn	00 05 45.1	+1.5
NRN	Naryn	2.83	43	PN	Pn	00 05 45.1	+1.5
UCH	Uchtor	2.96	16	P	Pb	00 05 49.7	-1.0
	SNR=28						
EKS2	Erkin-Say	3.28	5	P	Pn	00 05 51.3	+1.7
	SNR=9.8						
EKS2	Erkin-Say	3.28	5	⇑*i*P	Pn	00 05 49.8	+0.2
	baz=3.0						
EKS2				⇑*i*S	Sn	00 06 29.8	+0.5
	baz=3.0						
AAK	Ala-Archa	3.35	14	Pn	Pn	00 05 53.9	+3.4
	5.2nm,0.3s,baz=194,slow=12,SNR=17						
AAK				Lg	Lg	00 06 40.1	
	7.5nm,0.3s,baz=162,slow=20,SNR=10						
	29nm,0.5s						
AAK	Ala-Archa	3.35	14	P	Pn	00 05 54.0	+3.5
	SNR=25						
AAK	Ala-Archa	3.35	14	Pn	Pn	00 05 52.5	+2.0
AAK	Ala-Archa	3.35	14	*ce*PN	Pn	00 05 52.1	+1.6
AAK				pmax	pmax		
	comp=Z,50nm,0.8s						
AAK	Ala-Archa	3.35	14	⇓*i*P	Pn	00 05 50.5	0.0
	baz=12						
AAK				⇓*i*S	Sn	00 06 31.0	+0.1
	baz=12						
MRKS	Merke	3.36	357	*e*P	Pb	00 05 58.0	+0.7
	comp=Z,15nm,0.6s						
MRKS				*e*S	Sg	00 06 43.7	-1.1
	comp=Z,238nm,0.8s						
CHGR	Chuyangaron	3.40	259		Pn	00 05 53.6	+2.4
CHGR	Chuyangaron	3.40	259	PN	Pn	00 05 53.6	+2.4
CHGR	Chuyangaron	3.40	259	⇑*e*P	Pn	00 05 52.6	+1.4
	baz=59						
CHGR				⇑*i*S	Sn	00 06 34.6	+2.4
	baz=59						
KBK	Karagaybulak	3.46	19	P	Pn	00 05 55.4	+3.3
	SNR=5.7						
KBK	Karagaybulak	3.46	19	⇓*i*P	Pn	00 05 52.0	-0.1
	baz=18						
KBK				⇓*i*S	Sn	00 06 33.5	-0.3
	baz=18						
ULHL	Ulahol	3.57	36	P	Pb	00 05 58.7	-2.2
	SNR=30						
ULHL	Ulahol	3.57	36	⇑*i*P	Pn	00 05 53.2	-0.3
	baz=35						
ULHL				⇑*i*S	Sn	00 06 35.6	-0.8
	baz=35						

comp=Z,14nm,0.8s
TKM2 ⇑Pg **Pg** **00 06 12.0 +0.4**
comp=Z,15nm,0.6s
TKM2 ⇑Lg Lg 00 06 58.1
comp=Z,48nm,0.8s
USP Ospenovka **3.96 11** P **Pn** **00 06 00.4 +1.6**
SNR=11
KST Kastek **4.12 27** *e*P **Pb** **00 06 09.7 -0.6**
comp=Z,15nm,0.6s
KST *e*S **Sb** **00 07 04.7 +4.0**
comp=Z,118nm,0.7s
KST Kastek **4.12 27** Pg **Pb** **00 06 09.7 -0.6**
comp=Z,15nm,0.6s
KST Lg Lg 00 07 04.7
comp=Z,118nm,0.7s
SGDS Sogindy **4.16 12** *e*PN **Pn** **00 06 03.1 +1.6**
SGDS Sogindy **4.16 12** *e*P **Pb** **00 06 10.4 -0.5**
comp=Z,9.9nm,0.6s
SGDS *e*S **Sb** **00 07 05.6 +3.9**
comp=Z,31nm,0.7s
SGDS Sogindy **4.16 12** *e*Pn **Pn** **00 06 03.2 +1.6**
baz=12
SGDS *e*Pg **Pb** **00 06 10.3 -0.7**
baz=12
SGDS *e*Lg Lg 00 07 06.2
baz=12
SGDS Sogindy **4.16 12** Pg **Pb** **00 06 10.4 -0.5**
comp=Z,9.9nm,0.6s
SGDS Lg Lg 00 07 05.6
comp=Z,31nm,0.7s
KK31 Karatay Array **4.32 330** **Pn** **00 06 05.7 +2.0**
KK31 Karatay Array **4.32 330** PN **Pn** **00 06 05.7 +2.0**
KK31 Karatay Array **4.32 330** Pn **Pn** **00 06 05.7 +2.0**
comp=Z,1.5nm,0.3s,baz=136,slow=12,SNR=107
KK31 ⇑Pg **Pb** **00 06 16.1 +2.5**
comp=Z,6.5nm,0.4s,baz=138,slow=15,SNR=13
KK31 ⇓Lg Lg 00 07 10.1
comp=Z,52nm,0.6s,baz=147,slow=26,SNR=5.2
KKAR Karatay Array **4.32 330** **Pn** **00 06 05.4 +1.8**
KKAR Karatay Array **4.32 330** Pn **Pn** **00 06 05.0 +1.3**
KKAR Karatay Array **4.32 330** PN **Pn** **00 06 05.0 +1.3**
MTBS Maitube **4.37 30** *e*P **Pb** **00 06 14.8 +0.3**
comp=Z,24nm,0.6s
MTBS *e*S **Sb** **00 07 12.6 +4.9**
comp=Z,37nm,0.8s
MTBS Maitube **4.37 30** Pg **Pb** **00 06 14.8 +0.3**
comp=Z,24nm,0.6s
MTBS Lg Lg 00 07 12.6
comp=Z,37nm,0.8s
KRBS Karabastau **4.62 21** *e*P **Pb** **00 06 19.1 +0.3**
comp=Z,18nm,0.5s
KRBS *e*S **Sb** **00 07 20.1 +5.0**
comp=Z,37nm,1.1s
KRBS Karabastau **4.62 21** Pg **Pb** **00 06 19.1 +0.3**
comp=Z,18nm,0.5s
KRBS Lg Lg 00 07 20.1
comp=Z,37nm,1.1s
AAA Alma-Ata **4.63 33** *e*PN **Pn** **00 06 04.9 -3.2**
AAA Alma-Ata **4.63 33** *e*P **Pb** **00 06 19.0 0.0**
comp=Z,14nm,0.1s
AAA *e*S **Sb** **00 07 20.1 +4.7**
comp=Z,150nm,1.4s
AAA Alma-Ata **4.63 33** *e*Pn **Pn** **00 06 05.0 -3.2**
baz=34
AAA *e*Pg **Pb** **00 06 19.0 0.0**
baz=34
AAA *e*Lg Lg 00 07 21.0
baz=34
AAA Alma-Ata **4.63 33** Pg **Pb** **00 06 19.0 0.0**
comp=Z,14nm,0.1s
AAA Lg Lg 00 07 20.1
comp=Z,150nm,1.4s
MDOK Medeo **4.66 35** *e*PN **Pn** **00 06 09.3 +0.9**
MDOK Medeo **4.66 35** *e*P **Pb** **00 06 19.9 +0.5**
comp=Z,22nm,0.5s
MDOK *e*S **Sb** **00 07 21.4 +5.4**
comp=Z,72nm,0.7s
MDOK Medeo **4.66 35** *e*Pn **Pn** **00 06 09.4 +0.9**
baz=35
MDOK *e*Lg Lg 00 07 22.6
baz=35
MDOK Medeo **4.66 35** ⇑Pn **Pn** **00 06 12.6 +4.2**
comp=Z,5.2nm,0.6s
MDOK Pg **Pb** **00 06 19.9 +0.5**
comp=Z,22nm,0.5s
MDOK ⇑Pg Pg 00 06 22.1 -4.0
comp=Z,17nm,0.6s
MDOK Lg Lg 00 07 21.4
comp=Z,72nm,0.7s
MDOK Lg Lg 00 07 23.5
comp=Z,179nm,1.1s
PRZ Przheval'sk **4.87 49** **Pn** **00 06 12.8 +1.3**
PRZ Przheval'sk **4.87 49** PN **Pn** **00 06 12.8 +1.3**
KTBS Karatobe **4.96 28** *e*P **Pb** **00 06 25.2 +0.6**
comp=Z,10nm,0.6s
KTBS *e*S **Sb** **00 07 31.0 +6.3**
comp=Z,28nm,0.4s
KTBS Karatobe **4.96 28** Pg **Pb** **00 06 25.2 +0.6**
comp=Z,10nm,0.6s
KTBS Lg Lg 00 07 31.0
comp=Z,28nm,0.4s
KUU Kurty **5.00 25** *e*PN **Pb** **00 06 25.1 -0.2**
KUU Kurty **5.00 25** *e*P **Pb** **00 06 25.3 0.0**
comp=Z,8.9nm,0.6s
KUU *e*S **Sb** **00 07 30.6 +4.7**
comp=Z,80nm,0.7s
KUU Kurty **5.00 25** *e*Pg **Pb** **00 06 25.1 -0.2**
baz=25
KUU *e*Lg Lg 00 07 32.6
baz=25
KUU Kurty **5.00 25** Pg **Pb** **00 06 25.3 0.0**
comp=Z,8.9nm,0.6s
KUU Lg Lg 00 07 30.6
comp=Z,80nm,0.7s
SATY Saty **5.25 44** *e*PN **Pn** **00 06 13.4 -3.2**
SATY Saty **5.25 44** *e*P **Pb** **00 06 30.4 +0.8**
comp=Z,12nm,0.7s
SATY *e*S **Sb** **00 07 38.9 +5.9**
comp=Z,48nm,0.9s
SATY Saty **5.25 44** *e*Pn **Pn** **00 06 13.4 -3.2**
baz=44
SATY *e*Pg **Pb** **00 06 30.2 +0.7**
baz=44
SATY *e*Sn **Sn** **00 07 14.7 -3.1**
baz=44
SATY *e*Lg Lg 00 07 40.7
baz=44
SATY Saty **5.25 44** Pg **Pb** **00 06 30.4 +0.8**
comp=Z,12nm,0.7s
SATY Lg Lg 00 07 38.9
comp=Z,48nm,0.9s
ZHN Zhinishke **5.34 43** *e*PN **Pn** **00 06 14.5 -3.3**
ZHN Zhinishke **5.34 43** *e*P **Pb** **00 06 31.7 +0.7**
comp=Z,6.4nm,0.1s
ZHN *e*S **Sb** **00 07 41.1 +5.5**
comp=Z,31nm,0.9s
ZHN Zhinishke **5.34 43** *e*Pn **Pn** **00 06 14.6 -3.3**
baz=44
ZHN *e*Pg **Pb** **00 06 32.2 +1.2**
baz=44
ZHN *e*Sn **Sn** **00 07 17.0 -3.0**
baz=44
ZHN *e*Lg Lg 00 07 42.7
baz=44
ZHN Zhinishke **5.34 43** Pg **Pb** **00 06 31.7 +0.7**
comp=Z,6.4nm,0.1s
ZHN Lg Lg 00 07 41.1
comp=Z,31nm,0.9s
KURS Kuram **5.43 39** *e*P **Pb** **00 06 33.0 +0.4**
comp=Z,13nm,0.9s
KURS *e*S **Sb** **00 07 43.8 +5.6**
comp=Z,26nm,1.7s
KURS Kuram **5.43 39** Pg **Pb** **00 06 33.0 +0.4**
comp=Z,13nm,0.9s
KURS Lg Lg 00 07 43.8
comp=Z,26nm,1.7s
UZB Uzynbulak **5.65 46** *e*PN **Pn** **00 06 18.7 -3.4**
UZB Uzynbulak **5.65 46** *e*P **Pb** **00 06 38.0 +1.7**
comp=Z,5.5nm,0.7s
UZB *e*S **Sb** **00 07 52.0 +7.5**
comp=Z,28nm,0.8s
UZB Uzynbulak **5.65 46** *e*Pn **Pn** **00 06 18.7 -3.4**
baz=47
UZB *e*Pg **Pb** **00 06 37.9 +1.6**
baz=47
UZB Uzynbulak **5.65 46** Pg Pb 00 06 41.7 +5.4
comp=Z,5.5nm,0.7s
UZB Lg Lg 00 07 58.2
comp=Z,28nm,0.8s
BTLS Baital **5.67 4** *e*PN **Pn** **00 06 19.7 -2.5**
BTLS Baital **5.67 4** *e*P **Pb** **00 06 39.1 +2.5**
comp=Z,11nm,0.7s
BTLS *e*S **Sg** **00 07 54.3 -4.7**
comp=Z,31nm,0.7s
BTLS Baital **5.67 4** *e*Pn **Pn** **00 06 19.7 -2.5**
baz=4.3
BTLS *e*Pg **Pb** **00 06 38.8 +2.2**
baz=4.3
BTLS Baital **5.67 4** Pg **Pb** **00 06 39.1 +2.5**
comp=Z,11nm,0.7s
BTLS Lg Lg 00 07 54.3
comp=Z,31nm,0.7s
KPKS Kokpek **5.67 42** *e*PN **Pn** **00 06 19.7 -2.7**
KPKS Kokpek **5.67 42** *e*P **Pb** **00 06 39.1 +2.3**
comp=Z,16nm,0.4s
KPKS *e*S **Sg** **00 07 54.3 -4.9**
comp=Z,42nm,1.1s
KPKS Kokpek **5.67 42** *e*Pn **Pn** **00 06 19.7 -2.7**
baz=43
KPKS *e*Pg **Pb** **00 06 39.0 +2.2**
baz=43
KPKS *e*Lg Lg 00 07 54.3
baz=43
KPKS Kokpek **5.67 42** Pg **Pb** **00 06 39.1 +2.3**
comp=Z,16nm,0.4s
KPKS Lg Lg 00 07 54.3
comp=Z,42nm,1.1s
CEP Cherat **5.69 193** P Pn 00 06 27.5 +4.9
CHCP Chirak Chowk **5.72 181** P Pn 00 06 29.2 +6.2
NIL Nilore **5.73 181** **Pn** **00 06 26.1 +3.0**
NIL Nilore **5.73 181** PN **Pn** **00 06 26.1 +3.0**
ARXS Arharly **5.84 33** *e*P **Pb** **00 06 41.0 +1.5**
comp=Z,15nm,0.7s
ARXS *e*S **Sb** **00 07 57.8 +7.9**
comp=Z,40nm,0.7s
ARXS Arharly **5.84 33** Pg **Pb** **00 06 41.0 +1.5**
comp=Z,15nm,0.7s
ARXS Lg Lg 00 07 57.8
comp=Z,40nm,0.7s
SHLS Shalkode **5.90 48** *e*PN **Pn** **00 06 26.2 +0.7**
SHLS Shalkode **5.90 48** *e*P **Pg** **00 06 48.5 -1.5**
comp=Z,12nm,0.7s
SHLS *e*S **Sg** **00 08 10.1 +3.6**
comp=Z,20nm,0.8s
SHLS Shalkode **5.90 48** *e*Pn **Pn** **00 06 26.3 +0.7**
baz=51
SHLS *e*Pg **Pg** **00 06 47.6 -2.4**
baz=51
SHLS *e*Lg Lg 00 08 08.9
baz=51
SHLS Shalkode **5.90 48** Pg **Pg** **00 06 48.5 -1.5**
comp=Z,12nm,0.7s
SHLS Lg Lg 00 08 10.1
comp=Z,20nm,0.8s
KBL Kabul **5.97 217** Pn **Pn** **00 06 27.6 +1.0**
KBL Kabul **5.97 217** PN **Pn** **00 06 27.7 +1.0**
KTMS Ketmen **6.60 50** *e*P **Pb** **00 06 56.5 +4.0**
comp=Z,2.4nm,0.6s
KTMS *e*S **Sg** **00 08 24.1 -4.6**
comp=Z,5.8nm,0.4s
KTMS Ketmen **6.60 50** Pg **Pb** **00 06 56.5 +4.0**
comp=Z,2.4nm,0.6s
KTMS Lg Lg 00 08 24.1
comp=Z,5.8nm,0.4s
TDK Taldyqorghan **6.72 32** *e*P **Pb** **00 06 56.1 +1.6**
comp=Z,36nm,0.4s
TDK *e*S **Sb** **00 08 22.9 +7.7**
comp=Z,103nm,0.8s
TDK Taldyqorghan **6.72 32** *e*Pg **Pb** **00 06 56.9 +2.4**
baz=32
TDK *e*Lg Lg 00 08 26.1
baz=32
TDK Taldyqorghan **6.72 32** Pg **Pb** **00 06 54.4 -0.1**
comp=Z,36nm,0.4s
TDK Lg Lg 00 08 20.2
comp=Z,22nm,0.0s
THW Thamme Wali **6.72 192** P **Pn** **00 06 40.6 +3.9**
DJR Jarkent **6.85 42** *e*P **Pb** **00 07 01.4 +4.6**
comp=Z,2.3nm,0.4s
DJR *e*S **Sg** **00 08 32.5 -4.5**
comp=Z,19nm,1.2s
DJR Jarkent **6.85 42** Pg **Pb** **00 07 01.4 +4.6**
comp=Z,2.3nm,0.4s
DJR Lg Lg 00 08 32.5
comp=Z,19nm,1.2s
THN Thein Dam **7.18 164** *e*P Pn 00 06 49.8 +6.8
THN *e*S **Sn** **00 08 11.5 +6.3**
BHK Bhakra **8.32 162** *e*P **Pb** **00 07 19.9 -1.8**
MK31 Makanchi Array **9.83 38** Pn **Pn** **00 07 21.8 +2.4**
MK31 Makanchi Array **9.83 38** *i* P **Pn** **00 07 19.1 -0.3**
MKAR Makanchi Array **9.83 38** Pn **Pn** **00 07 19.3 0.0**
comp=Z,0.1nm,0.3s,baz=221,slow=13,SNR=2.8
MKAR Lg Lg 00 10 07.5
baz=216,slow=30,SNR=4.3
comp=Z,0.5nm,0.9s
HRA Herat **10.25 244** Pn **Pn** **00 07 24.6 -0.7**
BRZS Berezniki **10.61 357** *e*P Pn 00 08 12.8 +43
comp=Z,0.9nm,0.3s
BRZS *e*S 00 10 34.9
comp=Z,15nm,1.2s
WMQ Urumqi **11.56 63** *e*P **Pn** **00 07 42.1 -1.0**
KURBB Kurchatov Arra **11.80 16** Pn **Pn** **00 07 46.1 0.0**
baz=207,slow=12,SNR=3.4
KURBB Lg Lg 00 11 09.6
baz=205,slow=31,SNR=10
comp=Z,0.2nm,0.6s
KURBB Kurchatov Arra **11.80 16** ⇑Lg Lg 00 11 04.5
comp=Z,30nm,0.9s
KURK Kurchatov **11.90 16** *i* P **Pn** **00 07 46.5 -1.1**
KURK Kurchatov **11.90 16** ⇓Lg Lg 00 11 04.9
comp=Z,40nm,1.3s
GEYT Alibeck **12.06 268** Pn **Pn** **00 07 49.7 -0.1**
comp=Z,0.4nm,0.3s,baz=90,slow=15,SNR=4.7
GEYT Sn **Sn** **00 10 06.0 +1.0**
comp=Z,0.4nm,0.3s,baz=69,slow=31,SNR=3.7
GEYT LR LR 00 13 25.4
comp=Z,63nm,18.1s,baz=196,slow=42
comp=Z,2.1nm,0.4s
GEYT Alibeck **12.06 268** Pn **Pn** **00 07 50.0 +0.1**
GYA0B ALIBECK ARRAY **12.06 268** Pn **Pn** **00 07 50.3 +0.4**
AB31 Akbulak array **13.78 320** P **Pn** **00 08 10.3 -3.0**
AB31 S **Sn** **00 10 45.5 -1.4**
AB31 Akbulak array **13.78 320** ⇑P **Pn** **00 08 10.3 -3.0**
comp=Z,1.4nm,0.6s,baz=130,slow=12,SNR=18
AB31 S **Sn** **00 10 45.5 -1.4**
comp=Z,1.9nm,0.6s,baz=134,slow=24,SNR=4.0
ABKAR Akbulak array **13.78 320** Pn **Pn** **00 08 11.0 -2.3**
ABKAR Akbulak array **13.78 320** Pn **Pn** **00 08 11.2 -2.1**
BRVK Borovoye **13.84 352** Pn **Pn** **00 08 13.6 -0.6**
BRVK Borovoye **13.84 352** *ce*P **Pn** **00 08 13.5 -0.6**
BRVK pmax pmax
comp=Z,8.0nm,2.5s
AKTO Aktyubinsk **15.50 320** Pn **Pn** **00 08 33.9 -2.6**
comp=Z,0.1nm,0.3s,baz=125,slow=14,SNR=4.6
AKTO Sn **Sn** **00 11 20.6 -8.0**
comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=1.5
comp=Z,1.8nm,0.7s
AKTO Aktyubinsk **15.50 320** ⇑P **Pn** **00 08 36.2 -0.3**
comp=Z,6.3nm,0.8s
ZAA0 Zalesovo Array **16.50 24** Pn **Pn** **00 08 50.2 +0.8**
ZALV Zalesovo Beam **16.50 24** Pn **Pn** **00 08 49.1 -0.3**
comp=Z,0.2nm,0.3s,baz=217,slow=9.7,SNR=3.4
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam **16.50 24** Pn **Pn** **00 08 50.1 +0.7**
ZALV Zalesovo Beam **16.50 24** *i* P **P** **00 08 53.7 +1.6**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
GOMU GeErMu **17.20 94** P **Pn** **00 08 55.2 -3.5**
GOMU pP P 00 08 58.6 -1.8
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,61nm,4.3s
ARU Arti **19.67 335** P **P** **00 09 25.9 -1.2**
baz=152,slow=14,SNR=5.0
comp=Z,1.4nm,0.5s
ARU Arti **19.67 335** *d* i P **P** **00 09 28.3 +1.2**
ARU pmax pmax
comp=Z,4.0nm,1.1s
GROC Groznyy **21.07 289** *e*P **P** **00 09 41.8 -0.6**
GROC pmax pmax
comp=Z,19nm,0.6s
GNI Garni **22.03 281** P **P** **00 09 53.6 +0.7**
comp=Z,2.7nm,0.6s,baz=119,slow=13,SNR=2.8
comp=Z,2.7nm,0.6s
GNI Garni **22.03 281** P **P** **00 09 53.4 +0.5**
GNI IAmb IAmb 00 09 59.8
comp=Z,19nm,1.3s
GNI Garni **22.03 281** *ce*P **P** **00 09 54.1 +1.2**
GNI pmax pmax
comp=Z,17nm,1.3s
HYBB Hyderabad (bro **22.34 167** *e*P **P** **00 09 56.9 +0.7**
NCK Nalchik **22.68 290** *i* P **P** **00 09 58.5 -1.1**
NCK pmax pmax
comp=Z,6.0nm,0.8s
ONI Oni **22.80 288** P **P** **00 10 01.3 +0.3**
ONI IAmb IAmb 00 10 05.4
comp=Z,17nm,0.9s
ONI Oni **22.80 288** P **P** **00 10 01.3 +0.3**
ONI pmax pmax
comp=Z,17nm,0.9s
KBZ Khabaz **23.18 291** P **P** **00 10 04.8 0.0**
comp=Z,0.8nm,0.6s,baz=112,slow=6.8,SNR=2.2
comp=Z,0.8nm,0.6s
KBZ Khabaz **23.18 291** *ce*P **P** **00 10 04.9 0.0**
KBZ pmax pmax
comp=Z,3.0nm,1.1s
KARS Kars **23.23 283** P **P** **00 10 05.2 -0.4**
KARS IAmb IAmb 00 10 09.8
comp=Z,38nm,1.0s
KARS Kars **23.23 283** P **P** **00 10 05.2 -0.4**
KARS pmax pmax
comp=Z,38nm,1.0s
KVAR Kislovodsk Arr **23.33 291** P **P** **00 10 05.4 -1.1**
comp=Z,1.2nm,0.7s,baz=68,slow=18,SNR=2.2
comp=Z,1.2nm,0.7s
KIV Kislovodsk **23.34 291** P **P** **00 10 06.3 -0.3**
KIV IAmb IAmb 00 10 20.5
comp=Z,6.2nm,0.6s
KIV Kislovodsk **23.34 291** *e*P **P** **00 10 07.3 +0.7**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,17nm,14.0s
SONM Songino Array **25.17 60** P **P** **00 10 23.6 -0.1**
comp=Z,0.9nm,0.8s,baz=260,slow=9.7,SNR=6.1
comp=Z,0.9nm,0.8s
SONM Songino Array **25.17 60** P **P** **00 10 24.2 +0.5**
ULN Ulaanbaatar **25.61 60** *ce*P **P** **00 10 29.3 +1.5**
ULN pmax pmax
comp=Z,2.0nm,0.9s
PZH PanZhiHua **26.89 110** P **P** **00 10 40.5 +1.0**
PZH pmax pmax
comp=Z,20nm,0.6s
PZH pmax pmax
comp=Z,80nm,5.5s
HHC Hu-ho-hao-te **29.05 75** *e*P **P** **00 10 59.4 +0.7**
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,82nm,6.0s
OBN Obninsk **29.13 315** *e*P **P** **00 10 57.7 -1.3**
OBN *e* 00 11 53.0
OBN *e*PPP PPP 00 11 59.8
OBN pmax pmax
comp=Z,4.0nm,1.0s
OBN MLR MLR
comp=Z,23nm,19.0s
BZK Bozkurt **29.83 288** P **P** **00 11 05.3 -0.1**
BR131 Keskin Array S **30.51 284** P **P** **00 11 11.1 -0.5**
BR131 IAmb IAmb 00 11 19.3
comp=Z,4.0nm,0.8s
BR131 Keskin Array S **30.51 284** P **P** **00 11 11.1 -0.5**
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B **30.51 284** P **P** **00 11 11.5 -0.2**
comp=Z,1.4nm,0.7s,baz=82,slow=7.6,SNR=8.9
comp=Z,1.4nm,0.7s
BRTR Keskin Array B **30.51 284** P **P** **00 11 11.3 -0.4**
BRTR Keskin Array B **30.51 284** *ce*P **P** **00 11 12.3 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
NRIK Noril'sk **30.95 10** LR LR 00 24 06.5
comp=Z,52nm,20.5s,baz=196,slow=37
AKASG Malin Array Be **32.75 305** P **P** **00 11 30.2 -0.8**
comp=Z,0.2nm,0.3s,baz=80,slow=7.3,SNR=2.9
comp=Z,0.2nm,0.3s
EIL Elat **32.94 265** LR LR 00 27 32.9
comp=Z,33nm,19.6s,baz=82,slow=41
FINES FINESS Array B **36.24 323** P **P** **00 12 01.2 +0.1**
comp=Z,1.9nm,0.9s,baz=120,slow=8.5,SNR=8.9
comp=Z,1.9nm,0.9s
FINES FINESS Array B **36.24 323** *i* P **P** **00 11 59.5 -1.6**
FINES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B **39.26 336** P **P** **00 12 27.9 +1.3**
comp=Z,1.7nm,0.7s,baz=103,slow=7.7,SNR=7.6
comp=Z,1.7nm,0.7s
LHMI Lhok Sumawe **40.10 142** P **P** **00 12 32.5 -1.7**
GERES GERESS Array B **42.90 303** P **P** **00 12 57.3 +0.4**
comp=Z,0.2nm,0.5s,baz=81,slow=6.1,SNR=3.6
comp=Z,0.2nm,0.5s
NB2 NORSAR Subarra **43.29 321** P **P** **00 12 58.7 -1.1**
comp=Z,1.0nm,0.7s,baz=92,slow=7.9
NOA NORSAR Array B **43.29 321** P **P** **00 12 58.5 -1.3**
comp=Z,1.2nm,0.7s,baz=92,slow=8.3,SNR=4.7
comp=Z,1.2nm,0.7s
MJAR Matsushiro Arr **50.16 72** P **P** **00 13 53.0 -1.0**
comp=Z,0.4nm,0.4s,baz=298,slow=7.5,SNR=4.3
comp=Z,0.4nm,0.4s
BILL Bilibino **55.17 27** *e*P **P** **00 14 33.0 +2.4**
BILL *e*PPP PPP 00 17 46.8
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,32nm,18.0s
ESDC Sonseca Array **57.83 297** P **P** **00 14 49.5 -0.5**
comp=Z,0.5nm,0.8s,baz=50,slow=7.5,SNR=5.3
comp=Z,0.5nm,0.8s
TORD Torodi Ar. Bea **67.70 269** P **P** **00 15 54.4 -1.7**
comp=Z,0.6nm,0.6s,baz=48,slow=5.1,SNR=8.6
comp=Z,0.6nm,0.6s
ILAR Eielson Array **71.47 17** P **P** **00 16 17.1 -1.5**
comp=Z,0.4nm,0.8s,baz=336,slow=4.0,SNR=3.0
ILAR LR LR 00 51 43.0
comp=Z,42nm,18.1s,baz=270,slow=39
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar **78.26 4** P **P** **00 16 56.5 -1.4**
comp=Z,1.0nm,0.9s,baz=357,slow=19,SNR=2.5
comp=Z,1.0nm,0.9s
WRA Warramunga Arr **81.94 124** P **P** **00 17 17.6 -0.8**
comp=Z,0.7nm,0.7s,baz=326,slow=5.1,SNR=7.1
comp=Z,0.7nm,0.7s
ASAR Alice Springs **84.38 127** P **P** **00 17 30.3 -0.7**
comp=Z,0.4nm,0.6s,baz=313,slow=4.8,SNR=5.8
comp=Z,0.4nm,0.6s

IDC 13 00:26:22.6±4.9, 6°62S×148°89E, h90km±46km, mb3.3/3, mbtmp3.6/5, Error ellipse: s-maj=87.1km s-min=33.9km az=133.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.26**	**212**	P		Pn	00 27 12.2	+0.6
	29nm,0.3s,baz=23,slow=13,SNR=10.0							
PMG				S		Sn	00 27 49.9	+0.4
	20nm,0.3s,baz=18,slow=20,SNR=3.0							
WRA	**Warramunga Arr**	**19.37**	**225**	P		P	00 30 41.4	+0.1
	0.5nm,0.3s,baz=53,slow=11,SNR=11							
ASAR	**Alice Springs**	**22.25**	**219**	P		P	00 31 12.6	+0.4
	1.2nm,0.7s,baz=50,slow=9.7,SNR=18							
	1.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**25.38**	**241**	P		P	00 31 40.9	-0.7
	1.0nm,0.5s,baz=64,slow=10,SNR=7.9							
	1.0nm,0.5s							
ILAR	**Eielson Array**	**85.31**	**23**	P		P	00 38 48.8	-0.4
	0.4nm,0.7s,baz=259,slow=5.2,SNR=3.2							
	0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**147.07**	**284**	PKPbc		PKPbc	00 45 55.9	-0.2
	0.4nm,1.0s,baz=92,slow=2.9,SNR=5.2							

*NEIC **13** 00:30:55.9±0.5, 54°33N±0°05×161°39W±0°02, h5km±13km, Error ellipse: s-maj=6.6km s-min=1.5km az=177.0*
AEIC 13 00:30:58.3±0.8, 54°44N±0°04×161°48W±0°05, h9km±4km, ML2.5/12, Error ellipse: s-maj=5.8km s-min=3.6km az=198.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DT1	**Dutton Round H**	**0.81**	**325**			Pg	00 31 13.8	-0.2
PS4A	**Pavlof South-4**	**0.93**	**347**			Pg	00 31 16.3	+0.1

PVV	**Pavlof Volcano**	**0.95**	**349**		Pg	00 31 16.8	+0.2
PVV					Sn	00 31 30.8	-0.8
PN7A	**Pavlof North-7**	**1.04**	**343**		Pn	00 31 19.0	-0.1
SDPT	**Sand Point**	**1.08**	**32**		Pg	00 31 18.0	-1.0
SDPT					Sg	00 31 32.7	-0.3
CNBA	**Chernabura Isl**	**1.16**	**70**		Pb	00 31 18.0	-2.5
S12K	**Black Hills**	**1.31**	**345**		Pn	00 31 22.3	-0.5

HVO ***13*** *00:33:13.7±0.8, 19°.24N±0°.07×155°.24W±0°.07, h30km±7km, ML3.1/31, ML2.9/49(NEIC), Error ellipse: s-maj=12.7km s-min=7.1km az=140.0*

NEIC 13 00:33:12.7±0.7, 19°.32N±0°.10×155°.24W±0°.08, h35km±8km, Error ellipse: s-maj=15.6km s-min=8.7km az=208.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUH	**Pauahi**	**0.06**	**22**		Pn	00 33 18.8	0.0
PUH					Sn	00 33 22.3	-0.6
HLP	**Hilina Pali**	**0.07**	**249**		Pn	00 33 18.6	-0.1
HLP					Sn	00 33 22.4	-0.5
KKO	**Keanakako`i**	**0.08**	**341**		Pn	00 33 19.0	+0.1
KKO				IAML		00 33 19.8	
	comp=E,3μm,0.1s						
KKO					Sn	00 33 22.7	-0.3
RIM	**Rim**	**0.08**	**335**		Pn	00 33 18.9	0.0
RIM				IAML		00 33 19.5	
	comp=N,2μm,0.1s						
RIM				IAML		00 33 19.6	
	comp=E,2μm,0.1s						
RIM					Sn	00 33 22.7	-0.3
SDHHI	**Sand Hill**	**0.09**	**322**		Pn	00 33 18.9	0.0
SDHHI				IAML		00 33 19.8	
	comp=E,3μm,0.2s						
SDHHI				IAML		00 33 19.8	
	comp=N,4μm,0.2s						
KNHH	**Kane Nui o Ham**	**0.09**	**49**		Pn	00 33 18.9	+0.1
BYL	**Byron's Ledge**	**0.09**	**347**		Pn	00 33 19.0	+0.1
BYL					Sn	00 33 22.8	-0.3
BYL				IAML		00 33 23.2	
	comp=N,4μm,0.2s						
NPH	**North Pit**	**0.10**	**336**	Pg	Pn	00 33 18.9	0.0
WRMHI	**West Rim**	**0.10**	**325**		Pn	00 33 19.0	-0.4
WRMHI				IAML		00 33 23.4	
	comp=E,4μm,0.5s						
HATHI	**Halema'uma'u T**	**0.10**	**348**	Pg	Pn	00 33 19.0	-0.4
HATHI					Sn	00 33 23.0	-1.1
HATHI				IAML		00 33 23.3	
	comp=N,4μm,0.1s						
HATHI				IAML		00 33 23.4	
	comp=E,3μm,0.3s						
OBL	**Observatory Le**	**0.10**	**336**	Pg	Pn	00 33 19.0	-0.4
OBL				IAML		00 33 23.6	
	comp=N,4μm,0.5s						
OBL				IAML		00 33 23.6	
	comp=E,4μm,0.4s						
SBLHI	**Steaming Bluff**	**0.11**	**345**		Pn	00 33 19.1	-0.3
SBLHI				IAML		00 33 23.4	
	comp=N,4μm,0.3s						
SBLHI	**Steaming Bluff**	**0.11**	**345**		Sn	00 33 23.2	-1.0
UWB	**Uwekahuna B**	**0.11**	**340**		Pn	00 33 18.9	-0.5
UWE	**Uwekahuna**	**0.11**	**332**		Pn	00 33 19.1	-0.3
UWE	**Uwekahuna**	**0.11**	**332**	IAML		00 33 23.2	
	comp=E,3μm,0.3s						
UWE				IAML		00 33 24.1	
	comp=N,2μm,0.3s						
STCH	**Steam Cracks**	**0.12**	**60**	Pg	Pn	00 33 19.1	-0.3
STCH					Sn	00 33 23.0	-1.2
NPOC	**North of Pu'u**	**0.14**	**60**		Pn	00 33 19.2	-0.2
NPOC					Sn	00 33 23.3	-1.0
NPOC				IAML		00 33 23.6	
	comp=E,3μm,0.3s						
JCUZ	**Jacuzzi**	**0.14**	**64**		Pn	00 33 19.2	-0.2
JCUZ	**Jacuzzi**	**0.14**	**64**		Sn	00 33 23.5	-0.8
JCUZ				IAML		00 33 23.6	
	comp=E,4μm,0.3s						
JCUZ				IAML		00 33 23.7	
	comp=N,4μm,0.5s						
RSD	**Rainshed**	**0.14**	**345**		Pn	00 33 19.4	-0.2
RSD					Sn	00 33 23.5	-0.9
HTC	**Hot Caves**	**0.17**	**241**		Pn	00 33 19.0	-0.5
HTC					Sn	00 33 22.5	-1.8
AIN	**Ainahou**	**0.21**	**284**		Pn	00 33 20.0	0.0
AIN	**Ainahou**	**0.21**	**284**		Sn	00 33 24.7	-0.4
MLH	**Mauna Loa**	**0.22**	**321**		Pn	00 33 20.1	0.0
MLH				IAML		00 33 26.0	
	comp=N,2μm,0.2s						
MLH					Sn	00 33 28.1	+2.7
MLH				IAML		00 33 28.3	
	comp=E,1μm,0.1s						
JOKA	**Jonika Flow**	**0.25**	**63**		Pn	00 33 20.2	0.0
HMH	**Humu'ula Sheep**	**0.36**	**320**		Pn	00 33 22.3	+0.5
HMH	**Humu'ula Sheep**	**0.36**	**320**		Sn	00 33 28.3	+0.3
HMH				IAML		00 33 28.6	
	comp=E,3μm,0.4s						
HMH				IAML		00 33 29.0	
	comp=N,3μm,0.2s						
KHU	**Kahuku**	**0.36**	**258**		Pn	00 33 20.9	-0.8
KHU				IAML		00 33 26.3	
	comp=N,1μm,0.2s						
KHU	**Kahuku**	**0.36**	**258**		Sn	00 33 26.2	-1.7
MWH	**Moku'aweowe**	**0.38**	**296**		Pn	00 33 21.8	-0.3
MWH	**Moku'aweowe**	**0.38**	**296**	IAML		00 33 28.2	
	comp=E,1μm,0.6s						
MWH				IAML		00 33 31.0	
	comp=N,1μm,0.4s						
HPO	**Honuapo**	**0.38**	**232**		Pn	00 33 20.5	-1.2
MLOA	**Mauna Loa Obse**	**0.38**	**304**		Pn	00 33 22.2	0.0
MLOA	**Mauna Loa Obse**	**0.38**	**304**		Sn	00 33 27.9	-0.7
MLOA				IAML		00 33 28.5	
	comp=N,2μm,0.2s						
MLOA				IAML		00 33 28.5	
	comp=E,3μm,0.2s						
ALEP	**Alea Permanent**	**0.44**	**300**		Pn	00 33 22.5	-0.4
POHA	**Pohakuloa**	**0.51**	**327**	IAML		00 33 31.6	
	comp=E,466nm,0.2s						
POHA	**Pohakuloa**	**0.51**	**327**		Pn	00 33 23.9	+0.1
POHA					Sn	00 33 31.5	0.0
HUH	**Hualalai**	**0.67**	**303**		Pn	00 33 26.0	+0.1
HUH					Sn	00 33 34.8	-0.6
KHLU	**Kahalu`u**	**0.67**	**294**		Pn	00 33 29.4	-0.5
KHLU					Sn	00 33 33.8	-1.5
HPAH	**Hawaii Prepara**	**0.83**	**329**		Pn	00 33 27.9	0.0
MHA	**Mahukona**	**1.06**	**324**	Pn	Pn	00 33 31.2	+0.1
MHA				Sn	Sn	00 33 44.2	-0.5
HLK	**Haleakala**	**1.71**	**327**	Pn	Pn	00 33 41.8	+1.5
HLK				Sn	Sn	00 33 60.0	-1.2
KHLH	**Kahului Airpor**	**1.92**	**325**	Pn	Pn	00 33 43.3	+0.3
KHLH				Sn	Sn	00 34 04.8	-1.1

IDC 13 00:41:49.8±4.8, 5°.57S×152°.28E, h55km±38km, mb2.9/2, mbtmp3.2/2, Error ellipse: s-maj=74.2km s-min=24.9km az=102.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.28**	**349**	P	Pn	00 42 10.8	-0.6
	481nm,0.4s,baz=177,slow=17,SNR=78						
KRVT				S	Sn	00 42 27.6	0.0
	1μm,0.4s,baz=163,slow=20,SNR=41						
WRA	**Warramunga Arr**	**22.55**	**229**	P	P	00 46 45.0	-0.6
	0.3nm,0.5s,baz=52,slow=9.6,SNR=2.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**25.24**	**223**	P	P	00 47 11.3	+0.4
	0.4nm,0.5s,baz=56,slow=8.7,SNR=6.1						
	0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.04**	**287**	PKPbc	PKPbc	01 01 34.9	-0.5
	1.0nm,0.9s,baz=74,slow=2.1,SNR=6.2						

SOME ***13*** *01:08:31.0, 39°.75N×73°.17E, h0km*
KRNET ***13*** *01:08:31.1±0.1, 39°.48N×73°.47E, mb3.2*
NNC ***13*** *01:08:33.3±3.9, 39°.65N×73°.38E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=30.7km s-min=14.2km az=169.0*
ISU ***13*** *01:08:43, 39°.54N×73°.54E, h4km*

ISC 13 01:08:30.0±1.5, 39°.61N±0°.06×73°.54E±0°.04, h1km±12km, n36, σ1§62/55, 19C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.08**	**328**	⇑*i*P	**Pn**	**01 08 53.5**	**+1.1**
	baz=34						
OHH				⇑*i*S	**Sn**	**01 09 09.8**	**+1.7**
	baz=34						
OHH	**Osh**	**1.08**	**328**	P	**Pn**	**01 08 53.2**	**+0.8**
OHH				S	**Sn**	**01 09 10.0**	**+1.9**
TSTA	**Tashata**	**1.27**	**320**	P	Pg	01 09 14.4	+20
TSTA				S	Sn	01 09 33.5	+21
DRK	**Karamyk**	**1.35**	**265**	⇓*i*P	**Pb**	**01 08 55.7**	**-0.6**
	baz=71						
DRK				⇓*i*S	**Sg**	**01 09 13.6**	**+0.1**
	baz=71						
FRG	**Fergana**	**1.55**	**300**	P	Pg	01 09 18.3	+19
FRG				S	Sg	01 09 41.0	+21
BTK	**Batken**	**2.15**	**283**	P	**Pg**	**01 09 12.5**	**+1.4**
BTK				S	**Sg**	**01 09 43.5**	**+4.6**
MINT	**Mingtut**	**2.15**	**294**	P	Pg	01 09 30.0	+19
MINT				S	Sg	01 10 00.4	+21
ARLS	**Aral**	**2.33**	**15**	⇑*i*P	**Pg**	**01 09 14.5**	**-0.1**
	baz=15						
ARLS				⇑*i*S	**Sg**	**01 09 46.3**	**+1.5**
	baz=15						
CHDK	**Chadak**	**2.53**	**303**	P	Pg	01 09 35.9	+17
CHDK				S	Sg	01 10 12.7	+21
GAR	**Garm**	**2.57**	**257**	⇑*i*P	**Pb**	**01 09 15.0**	**-2.0**
	baz=60						
GAR				⇑*i*S	**Sb**	**01 09 47.0**	**-2.2**
	baz=60						
TRKS	**Terek-Say**	**2.65**	**317**	⇑*i*P	**Pb**	**01 09 17.1**	**-1.3**
	baz=19						
TRKS				⇑*i*S	**Sb**	**01 09 50.8**	**-0.7**
	baz=19						
EKS2	**Erkin-Say**	**3.06**	**3**	⇑*i*P	**Pb**	**01 09 24.7**	**-0.6**
	baz=4.0						
EKS2				⇑*i*S	**Sb**	**01 10 03.8**	**+0.7**
	baz=4.0						
MRKS	**Merke**	**3.14**	**356**	*e*P	**Pb**	**01 09 27.9**	**+1.1**
	1.7nm,0.3s						
MRKS				*e*S	**Sg**	**01 10 09.3**	**-1.7**
	14nm,0.5s						
KBK	**Karagaybulak**	**3.23**	**19**	⇑*i*P	**Pb**	**01 09 27.2**	**-1.0**
	baz=19						
KBK				⇑*i*S	**Sb**	**01 10 08.2**	**+0.2**
	baz=19						
ULHL	**Ulahol**	**3.34**	**37**	⇑*i*P	**Pb**	**01 09 28.8**	**-1.3**
	baz=36						
ULHL				⇑*i*S	**Sb**	**01 10 10.9**	**-0.3**
	baz=36						
BOOM	**Boomskoye usch**	**3.40**	**31**	⇑*i*P	**Pb**	**01 09 29.7**	**-1.5**
	baz=31						
BOOM				⇑*i*S	**Sb**	**01 10 12.4**	**-0.7**
	baz=31						
TKM2	**Tokmak 2**	**3.66**	**24**	⇑Pg	**Pg**	**01 09 40.7**	**+0.7**
	1.4nm,0.4s						
TKM2				⇑Lg	Lg	01 10 30.0	
	5.0nm,0.5s						
IUG	**Iuzhnay**	**3.68**	**315**	*e*P	**Pb**	**01 09 34.0**	**-1.8**
	130nm,0.4s						
IUG				*e*S	**Sb**	**01 10 19.5**	**-1.4**
	18nm,0.5s						
IUG	**Iuzhnay**	**3.68**	**315**	Pg	**Pb**	**01 09 34.0**	**-1.8**
	130nm,0.4s						
IUG				Lg	Lg	01 10 19.5	
	18nm,0.5s						
KST	**Kastek**	**3.89**	**27**	*e*P	**Pg**	**01 09 44.0**	**-0.5**
	2.3nm,0.3s						
KST				*e*S	**Sg**	**01 10 36.7**	**+1.8**
	17nm,0.6s						
KST	**Kastek**	**3.89**	**27**	Pg	**Pg**	**01 09 44.0**	**-0.5**
	2.3nm,0.3s						
KST				Lg	Lg	01 10 36.7	
	17nm,0.6s						
MTBS	**Maitube**	**4.14**	**31**	*e*P	**Pg**	**01 09 49.1**	**-0.1**
	2.5nm,0.1s						
MTBS				*e*S	**Sg**	**01 10 45.3**	**+2.4**
	5.4nm,0.2s						
MTBS	**Maitube**	**4.14**	**31**	Pg	**Pg**	**01 09 49.1**	**-0.1**
	2.5nm,0.1s						
MTBS				Lg	Lg	01 10 45.3	
	5.4nm,0.2s						
KK31	**Karatay Array**	**4.17**	**328**	Pn	**Pb**	**01 09 41.3**	**-2.9**
	0.2nm,0.2s,baz=131,slow=12,SNR=14						
KK31				Pg	**Pg**	**01 09 50.2**	**+0.3**
	0.5nm,0.3s,baz=150,slow=16,SNR=5.4						
KK31				⇑Sn	**Sb**	**01 10 32.0**	**-3.1**
	1.8nm,0.3s,baz=147,slow=25,SNR=6.1						
KK31				Lg	Lg	01 10 46.1	
KRBS	**Karabastau**	**4.39**	**21**	*e*P	**Pg**	**01 09 53.2**	**-0.9**
	2.7nm,0.4s						
KRBS				*e*S	**Sg**	**01 10 52.6**	**+1.7**
	6.2nm,0.6s						
KRBS	**Karabastau**	**4.39**	**21**	Pg	**Pg**	**01 09 53.2**	**-0.9**
	2.7nm,0.4s						
KRBS				Lg	Lg	01 10 53.4	
	6.2nm,0.6s						
MDOK	**Medeo**	**4.42**	**35**	*e*P	**Pg**	**01 09 54.4**	**-0.4**
	2.6nm,0.4s						
MDOK				*e*S	**Sg**	**01 10 54.3**	**+2.2**
	5.4nm,1.0s						
MDOK	**Medeo**	**4.42**	**35**	Pg	**Pg**	**01 09 54.3**	**-0.4**
	2.6nm,0.4s						
MDOK				Lg	Lg	01 10 54.3	
	5.4nm,1.0s						
KTBS	**Karatobe**	**4.73**	**29**	*e*P	**Pg**	**01 10 00.0**	**-0.6**
	1.7nm,0.4s						
KTBS				*e*S	**Sg**	**01 11 04.2**	**+2.4**
	6.6nm,0.5s						
KTBS	**Karatobe**	**4.73**	**29**	Pg	**Pg**	**01 10 00.0**	**-0.6**
	1.7nm,0.4s						
KTBS				Lg	Lg	01 11 04.6	
	6.6nm,0.5s						
KUU	**Kurty**	**4.77**	**25**	*e*P	**Pg**	**01 09 59.9**	**-1.5**
	1.0nm,0.3s						
KUU				*e*S	**Sg**	**01 11 03.8**	**+0.7**
	12nm,0.6s						
KUU	**Kurty**	**4.77**	**25**	Pg	**Pg**	**01 09 59.9**	**-1.5**
	1.0nm,0.3s						
KUU				Lg	Lg	01 11 03.8	
	12nm,0.6s						
BTLS	**Baital**	**5.44**	**4**	*e*P	**Pg**	**01 10 11.9**	**-2.4**
	4.0nm,1.1s						
BTLS				*e*S	**Sg**	**01 11 24.9**	**+0.1**
	2.8nm,0.6s						
BTLS	**Baital**	**5.44**	**4**	Pg	**Pg**	**01 10 11.9**	**-2.4**
	4.0nm,1.1s						
BTLS				Lg	Lg	01 11 24.8	
	2.8nm,0.6s						
ARXS	**Arharly**	**5.60**	**33**	*e*P	**Pg**	**01 10 16.1**	**-1.2**
	2.7nm,0.7s						
ARXS				*e*S	**Sg**	**01 11 31.4**	**+1.5**
	5.0nm,0.5s						
ARXS	**Arharly**	**5.60**	**33**	Pg	**Pg**	**01 10 14.8**	**-2.6**
	2.7nm,0.7s						
ARXS				Lg	Lg	01 11 30.4	
	5.0nm,0.5s						

NNC ***13*** *01:12:55.6±7.4, 37°.63N×71°.75E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=69.6km s-min=41.9km az=158.0*

ISC 13 01:12:56.8±3.4, 37°.4N±0°.2×71°.8E±0°.1, h100km, n9, σ1§04/11, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.99**	**17**	P	**Pn**	**01 14 10.8**	**+1.0**
	SNR=95						
EKS2	**Erkin-Say**	**5.52**	**16**	P	**Pn**	**01 14 18.2**	**+1.6**
	SNR=5.6						
AAK	**Ala-Archa**	**5.67**	**21**	P	**Pn**	**01 14 19.6**	**+0.8**
	SNR=8.0						
KK31	**Karatay Array**	**5.81**	**351**	P	**Pn**	**01 14 21.3**	**+0.7**
	1.4nm,0.3s,baz=173,slow=12,SNR=47						
KK31				⇓S	**Sn**	**01 15 25.6**	**-0.2**
	5.0nm,0.6s,baz=184,slow=28,SNR=8.4						
KBK	**Karagaybulak**	**5.83**	**24**	P	**Pn**	**01 14 22.1**	**+1.2**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.28**	**27**	P	**Pn**	**01 14 27.3**	**+0.2**
	SNR=7.8						
TKM2	**Tokmak 2**	**6.28**	**27**	⇑P	**Pn**	**01 14 26.5**	**-0.6**
	2.7nm,0.5s						
TKM2				⇑S	**Sn**	**01 15 36.9**	**-0.7**
	1.8nm,0.5s						
AB31	**Akbulak array**	**14.65**	**328**	⇓P	**Pn**	**01 16 17.7**	**-1.2**
	0.1nm,0.3s,baz=150,slow=11,SNR=8.7						
AKTO	**Aktyubinsk**	**16.36**	**327**	⇑P	**P**	**01 16 41.9**	**+0.5**
	0.5nm,0.4s						

NEIC 13 02:21:36.1±1.0, 32°.97N±0°.05×100°.78W±0°.05, h4km±8km, mb_Lg2.5/32, Error ellipse: s-maj=7.8km s-min=5.7km az=202.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABTX	**Abilene, Hawle**	**1.02**	**110**	Pg	Pg	02 21 55.5	-0.2
MSTX	**Muleshoe**	**1.94**	**301**	Pn	Pn	02 22 09.3	-0.7
AMTX	**Amarillo**	**2.05**	**339**	Pn	Pn	02 22 11.6	+0.1
WMOK	**Wichita Mounta**	**2.43**	**43**		Pn	02 22 16.6	0.0
HTMS	**Hat Mesa**	**2.45**	**259**		Pn	02 22 17.2	+0.2
CPRX	**Cap Rock**	**2.59**	**272**		Pn	02 22 19.3	+0.3
CLN7	**Carlsbad 7**	**2.61**	**259**	Pn	Pn	02 22 19.2	0.0
JCT	**Junction City**	**2.62**	**161**		Pn	02 22 19.4	+0.1
CLNB	**Carlsbad**	**2.71**	**256**		Pn	02 22 20.7	+0.2
WHTX	**Lake Whitney,**	**2.98**	**108**	Pn	Pn	02 22 23.5	-0.6
Z35A	**Perchaven, San**	**2.98**	**82**	Pn	Pn	02 22 23.6	-0.6
GDL2	**Guadalupe Moun**	**3.12**	**257**		Pn	02 22 26.6	+0.4
LOOK	**Love County**	**3.18**	**70**	Pn	Pn	02 22 27.1	+0.2
LOOK				IAmb_Lg		02 23 20.5	
	comp=Z,19nm,0.7s						
435B	**Jarrell**	**3.49**	**128**	Pn	Pn	02 22 31.6	+0.5
FNO	**Franklin**	**3.62**	**50**	IAmb_Lg		02 23 39.0	
	comp=Z,14nm,0.8s						
BCOK	**Bluff Creek, N**	**3.75**	**44**	Pn	Pn	02 22 34.9	+0.1
BCOK				IAmb_Lg		02 23 39.0	
	comp=Z,9.5nm,0.8s						
OK025	**Westminster Rd**	**3.86**	**47**	Pn	Pn	02 22 35.9	-0.5
OK025				IAmb_Lg		02 23 40.6	
	comp=Z,9.7nm,0.8s						
NOKA	**Waynoka**	**3.96**	**22**	IAmb_Lg		02 23 51.0	
	comp=Z,11nm,0.7s						
MNTX	**Cornudas Mount**	**4.09**	**253**	Pn	Pn	02 22 39.3	-0.2
OK035	**E0210 Rd and N**	**4.10**	**24**	IAmb_Lg		02 23 56.3	
	comp=Z,12nm,0.8s						
TX31	**Lajitas Ar. Si**	**4.39**	**215**		Pn	02 22 42.6	-1.0
TX32	**Lajitas Array**	**4.39**	**215**		Pn	02 22 42.6	-1.0
TXAR	**Lajitas Array**	**4.39**	**215**	Pn	Pn	02 22 42.8	-0.8
OK031	**S. Brethren Rd**	**4.41**	**47**	Pn	Pn	02 22 43.2	-0.7
OK031				IAmb_Lg		02 24 01.4	
	comp=Z,11nm,1.1s						
OK034	**N. Norfolk Rd.**	**4.53**	**47**	IAmb_Lg		02 24 04.4	
	comp=Z,8.4nm,0.8s						
X37A	**Clayton**	**4.79**	**69**	IAmb_Lg		02 24 14.0	
	comp=Z,11nm,0.8s						
BNM	**Barren Site**	**5.02**	**285**		Pn	02 22 52.5	+0.1
ANMO	**Albuquerque**	**5.11**	**294**	Pn	Pn	02 22 53.8	+0.1
ANMO				IAmb_Lg		02 24 18.4	
	comp=Z,8.1nm,0.8s						
T25A	**Trinidad**	**5.11**	**325**		Pn	02 22 53.1	-0.6
T25A				IAmb_Lg		02 24 30.8	
	comp=Z,9.6nm,0.9s						
LENM	**Lemitar**	**5.30**	**285**	Pn	Pn	02 22 56.2	-0.1
R32A	**Long Quarter,**	**5.70**	**17**	IAmb_Lg		02 24 44.2	
	comp=Z,7.4nm,0.8s						
121A	**Cookes Peak, D**	**5.92**	**268**	IAmb_Lg		02 24 55.6	
	comp=Z,7.6nm,0.9s						
MIAR	**Mount Ida**	**6.21**	**73**	IAmb_Lg		02 25 09.2	
	comp=Z,6.7nm,0.8s						
U38A	**Gravette**	**6.30**	**55**	IAmb_Lg		02 24 57.5	
	comp=Z,5.5nm,0.9s						
Q24A	**Divide**	**6.95**	**331**	IAmb_Lg		02 25 21.3	
	comp=Z,5.8nm,1.0s						

KRSC ***13*** *02:25:48.9±1.3, 51°.99N×158°.24E, h112km±11km, ML4.5*
MOS ***13*** *02:25:49.5±0.8, 52°.04N×157°.95E, h117km, mb3.7/5, Error ellipse: s-maj=12.4km s-min=4.9km az=76.4*
NEIC ***13*** *02:25:50.8±1.4, 52°.2N±0°.1×157°.9E±0°.2, h114km±8km, mb4.2/14, Error ellipse: s-maj=19.1km s-min=13.6km az=168.0*
IDC ***13*** *02:25:51.9±0.8, 52°.28N×157°.52E, h124km±5km, mb3.5/19, mbtmp3.9/19, MS2.4/1, Error ellipse: s-maj=18.0km s-min=11.7km az=151.0*

ISC 13 02:25:50.1±0.6, 52°.05N±0°.04×158°.05E±0°.04, h114km±4km, n119, σ1§26/146, mb3.9/26, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.24**	**176**	PN	**Pn**	**02 26 06.0**	**-0.1**
KDTR				S	**Sn**	**02 26 17.5**	**-0.6**
KDTR	**Khodutka, Kamc**	**0.24**	**176**	*i* P	**Pn**	**02 26 06.0**	**-0.1**
KDTR				*e*S	**Sn**	**02 26 17.5**	**-0.6**
MTVR	**Mutnovka**	**0.44**	**10**	PN	**Pn**	**02 26 07.2**	**-0.1**
MTVR				S	**Sn**	**02 26 20.3**	**+0.1**
MTVR	**Mutnovka**	**0.44**	**10**	*e*P	**Pn**	**02 26 07.2**	**-0.1**
MTVR				*e*S	**Sn**	**02 26 20.3**	**+0.1**
RUS	**Russkaya**	**0.48**	**36**	PN	**Pn**	**02 26 07.3**	**+0.1**
RUS				S	**Sn**	**02 26 20.0**	**-0.2**
RUS	**Russkaya**	**0.48**	**36**	*e*P	**Pn**	**02 26 07.3**	**+0.1**
RUS				*e*S	**Sn**	**02 26 20.0**	**-0.2**
GRL	**Gorelyy**	**0.51**	**1**	PN	**Pn**	**02 26 07.8**	**+0.2**
GRL	**Gorelyy**	**0.51**	**1**	*e*P	**Pn**	**02 26 07.8**	**+0.2**
KRMR	**Karymshinskiy**	**0.78**	**3**	PN	**Pn**	**02 26 09.7**	**+0.1**
KRMR				S	**Sn**	**02 26 24.8**	**+0.5**
KRMR	**Karymshinskiy**	**0.78**	**3**	*i* P	**Pn**	**02 26 09.7**	**+0.1**
KRMR				*e*S	**Sn**	**02 26 24.8**	**+0.5**
PAU	**Pauzhetka**	**0.97**	**233**	PN	**Pn**	**02 26 11.7**	**+0.4**
PAU				S	**Sn**	**02 26 27.9**	**+0.7**
PAU	**Pauzhetka**	**0.97**	**233**	*i* P	**Pn**	**02 26 11.7**	**+0.4**
PAU				*e*S	**Sn**	**02 26 27.9**	**+0.7**
APC	**Apacha**	**1.03**	**328**	PN	**Pn**	**02 26 11.8**	**-0.1**
APC				S	**Sn**	**02 26 27.8**	**-0.7**
APC	**Apacha**	**1.03**	**328**	*i* P	**Pn**	**02 26 11.8**	**-0.1**
APC				*e*S	**Sn**	**02 26 27.8**	**-0.7**
PET	**Petropavlovsk**	**1.04**	**20**		**Pn**	**02 26 12.1**	**+0.1**
PET	**Petropavlovsk**	**1.04**	**20**	*e*PN	**Pn**	**02 26 12.1**	**+0.1**
PET				*e*S	**Sn**	**02 26 28.4**	**-0.2**
PET				pmax	pmax		
	comp=Z,195nm,0.3s						
PET				smax	smax		
	comp=N,1μm,0.5s						
PET				smax	smax		
	comp=E,835nm,0.5s						
PET	**Petropavlovsk**	**1.04**	**20**	*e*P	**Pn**	**02 26 12.2**	**+0.2**
PET				*e*S	**Sn**	**02 26 28.9**	**+0.2**
DALK	**Dalny**	**1.07**	**23**	PN	**Pn**	**02 26 12.8**	**+0.5**
DALK				S	**Sn**	**02 26 29.1**	**-0.1**
DALK	**Dalny**	**1.07**	**23**	*e*P	**Pn**	**02 26 12.8**	**+0.5**
DALK				*e*S	**Sn**	**02 26 29.1**	**-0.1**
PEA0B	**Petropavlovsk-**	**1.08**	**349**		**Pn**	**02 26 12.7**	**+0.2**
PEA0B	**Petropavlovsk-**	**1.08**	**349**	*c* iPN	**Pn**	**

SKR	Severo-Kuril's	1.83	222	*e*P		Pn	02 26 21.8	+0.7
SKR				*e*S		Sn	02 26 45.1	+0.3
KII	Karymskiy	2.16	22	PN		Pn	02 26 26.9	+1.5
KII	Karymskiy	2.16	22	*e*P		Pn	02 26 26.9	+1.5
MKZ	Mys Kozlova	3.34	40	PN		Pn	02 26 40.8	+0.1
MKZ				S		Sn	02 27 18.5	-1.2
MKZ	Mys Kozlova	3.34	40	*e*P		Pn	02 26 40.8	+0.1
MKZ				*e*S		Sn	02 27 18.5	-1.2
TUMR	Tumrok	3.47	20	PN		Pn	02 26 44.6	+2.1
TUMR	Tumrok	3.47	20	*e*P		Pn	02 26 44.6	+2.1
SRKR	Sorokina	4.96	20	PN		Pn	02 27 05.0	+2.6
SRKR	Sorokina	4.96	20	*e*P		Pn	02 27 05.0	+2.6
KBTR	Krutoberegovo	5.02	32	PN		Pn	02 27 04.1	+0.9
KBTR				S		Sn	02 27 57.3	-2.7
KBTR	Krutoberegovo	5.02	32	*e*P		Pn	02 27 04.1	+0.9
KBTR				*e*S		Sn	02 27 57.3	-2.7
BKI	Bering	5.67	53	PN		Pn	02 27 12.1	+0.2
BKI	Bering	5.67	53	*e*P		Pn	02 27 12.1	+0.2
BKI				*e*S		Sn	02 28 09.6	-6.1
SHEM	Shemya Is, Ala	9.84	80	P		Pn	02 28 10.7	+2.4
	comp=N,32nm,0.4s,baz=287,slow=20,SNR=4.1							
SHEM				S		Sn	02 29 53.9	-2.8
	comp=N,21nm,0.3s,baz=319,slow=20,SNR=8.4							
YSS	Yuzh-Sakhalins	11.17	249	*i* PN		Pn	02 28 26.2	-0.1
SEY	Seymchan	11.33	347	*i* PN		Pn	02 28 30.3	+2.1
SEY				pmax	pmax			
	comp=Z,6.0nm,1.5s							
KLR	Kul'dur	16.89	271	LR	LR		02 36 52.2	
	comp=Z,14nm,19.2s,baz=306,slow=40							
KLR	Kul'dur	16.89	271	*i* P		P	02 29 40.3	+0.8
KLR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
YAK	Yakutsk	18.23	314	*i* P		Pn	02 29 55.4	+0.1
YAK				pmax	pmax			
	comp=Z,25nm,1.0s							
USRK	Ussuriysk Ar.	19.01	256	P		P	02 30 01.7	-1.1
USRK	Ussuriysk Ar.	19.01	256	P		P	02 30 01.7	-1.1
MJA0	Matsu Arr-Jizo	20.90	230	*e*P		P	02 30 24.5	+1.2
MJA0				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MAJO	Matsushiro	20.92	230	P		P	02 30 22.7	-0.7
MAJO				IAmb	IAmb		02 30 25.1	
	comp=Z,9.8nm,1.1s							
MAJO	Matsushiro	20.92	230	*i* P		P	02 30 23.9	+0.5
MAJO				pmax	pmax			
	comp=Z,7.0nm,0.7s							
MJAR	Matsushiro Arr	20.92	230	P		P	02 30 23.4	0.0
	comp=Z,2.7nm,0.7s,baz=34,slow=12,SNR=12							
	comp=Z,2.7nm,0.7s							
KS19	Wonju Array Si	25.66	247	P		P	02 31 08.8	-0.3
KS19				IAmb	IAmb		02 31 25.3	
	comp=Z,13nm,1.4s							
IL31		30.43	44	P		P	02 31 51.3	+0.1
ILAR	Eielson Array	30.43	44	P		P	02 31 51.8	+0.4
ILAR				PcP		PcP	02 34 46.5	-1.2
	comp=Z,1.2nm,0.7s,baz=265,slow=7.2,SNR=17							
	comp=Z,0.3nm,0.4s,baz=284,slow=3.9,SNR=4.6							
	comp=Z,1.2nm,0.7s							
PRP	Porcupine Dome	30.98	42	P		P	02 31 56.7	+0.4
PRP				IAmb	IAmb		02 31 57.9	
	comp=Z,4.0nm,0.7s							
L27K	Beaver Creek,	32.83	47	P		P	02 32 12.3	0.0
BCAR	Beaver Creek A	32.84	47	P		P	02 32 12.5	0.0
SONM	Songino Array	32.93	284	P		P	02 32 12.4	-1.1
	comp=Z,0.2nm,0.3s,baz=60,slow=7.7,SNR=2.1							
	comp=Z,0.2nm,0.3s							
H11N2	WAKE ISLAND Hy	32.99	165	T		T	03 07 37.9	
	baz=351,slow=76,SNR=56							
H11N3	WAKE ISLAND Hy	33.00	165	T		T	03 07 39.2	
	baz=351,slow=76,SNR=60							
H11N1	WAKE ISLAND Hy	33.00	165	T		T	03 07 37.0	
	baz=351,slow=76,SNR=100							
H11S1	WAKE ISLAND Hy	34.16	165	T		T	03 09 04.7	
	baz=351,slow=76,SNR=29							
H11S3	WAKE ISLAND Hy	34.17	165	T		T	03 09 07.9	
	baz=351,slow=76,SNR=51							
H11S2	WAKE ISLAND Hy	34.17	165	T		T	03 08 58.0	
	baz=351,slow=76,SNR=20							
INK	Inuvik	35.45	37	P		P	02 32 35.6	+0.8
	comp=Z,0.6nm,0.4s,baz=268,slow=3.2,SNR=2.0							
	comp=Z,0.6nm,0.4s							
ZALV	Zalesovo Beam	42.29	303	PcP		PcP	02 35 22.9	-0.6
	comp=Z,1.1nm,0.4s,baz=71,slow=3.2,SNR=5.5							
YKA	Yellowknife Ar	44.77	41	P		P	02 33 52.6	+0.9
	comp=Z,0.8nm,0.7s,baz=302,slow=7.6,SNR=6.4							
	comp=Z,0.8nm,0.7s							
KURK	Kurchatov	47.22	302	P		P	02 34 09.1	-2.0
KURK	Kurchatov	47.22	302	*i* P		P	02 34 10.0	-1.1
KURK				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KURBB	Kurchatov Arra	47.32	302	P		P	02 34 08.5	-3.4
	comp=Z,0.7nm,0.2s,baz=61,slow=7.9,SNR=3.9							
KURBB				pP		pP	02 34 38.3	-0.2
	comp=Z,2.0nm,0.8s,baz=60,slow=7.7,SNR=7.1							
KURBB				PcP		PcP	02 35 39.8	-1.1
	comp=Z,1.2nm,0.9s,baz=49,slow=3.8,SNR=5.4							
	comp=Z,0.7nm,0.2s							
MK31	Makanchi Array	47.48	295	*i* P		P	02 34 13.7	+0.5
MKAR	Makanchi Array	47.48	295	P		P	02 34 10.5	-2.7
MKAR				pP		pP	02 34 40.1	+0.3
	comp=Z,0.2nm,0.4s,baz=64,slow=7.1,SNR=2.8							
	comp=Z,0.4nm,0.5s,baz=60,slow=8.7,SNR=3.9							
	comp=Z,0.2nm,0.4s							
MKAR	Makanchi Array	47.48	295	P		P	02 34 13.5	+0.3
MKAR	Makanchi Array	47.48	295	P		P	02 34 13.5	+0.3
MAKZ	Makanchi	47.65	296	P		P	02 34 14.3	-0.2
MAKZ	Makanchi	47.65	296	P		P	02 34 14.3	-0.2
MAKZ				pmax	pmax			
	comp=Z,4.0nm,1.5s							
YBH	Yreka Blue Hor	52.56	68	P		P	02 34 54.8	+3.1
	comp=Z,0.8nm,0.6s,baz=352,slow=7.1							
	comp=Z,0.8nm,0.6s							
MOD	Modoc Plateau	53.82	66	P		P	02 35 02.3	+1.3
NVAR	Mina Array Bea	57.28	68	P		P	02 35 28.1	+2.2
	comp=Z,1.1nm,0.6s,baz=301,slow=7.4,SNR=16							
	comp=Z,1.1nm,0.6s							
NVAR	Mina Array Bea	57.28	68	P		P	02 35 26.8	+0.9
ELK	Elko	57.43	64	P		P	02 35 29.6	+2.6
	comp=Z,0.9nm,0.8s,baz=248,slow=5.4,SNR=4.0							
	comp=Z,0.9nm,0.8s							
BW06	Boulder Array	59.12	59	P		P	02 35 39.6	+0.9
BW06				IAmb	IAmb		02 35 41.4	
	comp=Z,3.1nm,1.1s							
PD31	Pinedale Array	59.12	59	P		P	02 35 38.8	+0.1
PD31				IAmb	IAmb		02 35 41.4	
	comp=Z,2.2nm,1.0s							
PDAR	Pinedale Array	59.12	59	P		P	02 35 40.7	+2.0
	comp=Z,1.4nm,0.8s,baz=336,slow=3.3,SNR=9.1							
	comp=Z,1.4nm,0.8s							
SPR3	Spring Creek 3	59.14	65	P		P	02 35 40.8	+1.9
SPR3				IAmb	IAmb		02 35 42.5	
	comp=Z,2.2nm,0.9s							
FINES	FINESS Array B	60.57	336	P		P	02 35 46.3	-1.6
	comp=Z,2.6nm,1.0s,baz=38,slow=7.0,SNR=1.6							
	comp=Z,2.6nm,1.0s							
SRU	San Rafael Swe	61.17	63	P		P	02 35 53.3	+0.7
SRU				IAmb	IAmb		02 35 55.4	
	comp=Z,2.7nm,0.7s							
SRU	San Rafael Swe	61.17	63	P		P	02 35 53.3	+0.7
SRU				pmax	pmax			
	comp=Z,3.0nm,0.7s							
PV13	Radium Mtn., P	62.78	62	P		P	02 36 04.0	+0.6
NOA	NORSAR Array B	64.19	343	P		P	02 36 10.2	-1.9
	comp=Z,0.4nm,0.7s,baz=16,slow=5.4,SNR=1.8							
	comp=Z,0.4nm,0.7s							
ECSD	EROS Data Cent	64.95	51	P		P	02 36 18.2	+1.0
ECSD				IAmb	IAmb		02 36 18.6	
	comp=Z,3.2nm,0.9s							
TXAR	Lajitas Array	72.20	65	P		P	02 37 04.2	+1.5
	comp=Z,1.3nm,0.6s,baz=299,slow=5.0,SNR=23							
	comp=Z,1.3nm,0.6s							
WRA	Warramunga Arr	74.62	203	P		P	02 37 17.4	+0.7
	comp=Z,0.7nm,0.7s,baz=17,slow=6.1,SNR=9.9							
	comp=Z,0.7nm,0.7s							
WRA	Warramunga Arr	74.62	203	*e*P		P	02 37 17.0	+0.4
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
GERES	GERESS Array B	74.99	337	P		P	02 37 18.2	-0.5
	comp=Z,0.2nm,0.3s,baz=34,slow=7.2,SNR=1.7							
	comp=Z,0.2nm,0.3s							
ASAR	Alice Springs	78.30	203	P		P	02 37 38.9	+1.6
	comp=Z,1.0nm,0.5s,baz=13,slow=5.2,SNR=15							
	comp=Z,1.0nm,0.5s							
ESDC	Sonseca Array	87.32	346	P		P	02 38 22.9	-1.1
	comp=Z,0.8nm,0.6s,baz=0.0,slow=4.8,SNR=11							
	comp=Z,0.8nm,0.6s							
KEST	Kesra	88.40	335	P		P	02 38 28.4	-0.8
	comp=Z,1.5nm,0.7s,baz=312,slow=2.5,SNR=7.1							
	comp=Z,1.5nm,0.7s							
H03N2	Juan Fernandez	135.46	88	T	T		05 15 37.3	
	baz=314,slow=77,SNR=34							
H03N1	Juan Fernandez	135.47	88	T	T		05 15 38.6	
	baz=314,slow=77,SNR=28							
H03N3	Juan Fernandez	135.47	88	T	T		05 15 33.3	
	baz=314,slow=77,SNR=24							
PLCA	Paso Flores	145.24	91	PKPbc		PKPab	02 45 14.4	+0.5
	comp=Z,1.2nm,0.6s,baz=276,slow=9.2,SNR=5.2							

IDC 13 02:35:25.7±433.0, 50.93N×45.67E, h0km, Error ellipse: s-maj=154.5km s-min=56.3km az=154.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	7.66	323	*i*		03 23 10.0	
	baz=133,slow=332,SNR=0.9						
I31KZ	AKTYUBINSK INF	7.88	89	*i*		03 21 50.0	
	baz=281,slow=308,SNR=2.9						
I37NO	I37NO	22.33	335	*i*		04 53 40.0	
	baz=131,slow=327,SNR=2.6						

*GII **13** 03:06:11.3±0.0, 28.50N×34.79E, h1km, mb4.0/2, MD3.8/3, Mm3.4/4*
*HLW **13** 03:06:14.4, 28.49N×34.82E, h19km±1km, Md3.9*
*SGS **13** 03:06:15.4, 28.55N×34.79E, h19km, Ml3.9*

ISC 13 03:06:14.9±1.0, 28.53N±0.02×34.77E±0.02, h18km±5km, n100, σ0.982/111, Egypt

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSHS		0.23	174	P	Pg	03 06 20.9	+0.7
RSHS		0.23	174	S	Sg	03 06 25.0	+1.1
HDHB	Dhahab	0.24	326	P	Pb	03 06 20.9	+0.4
	baz=323						
BDAS	Al Bad`	0.31	108	S	Sg	03 06 26.2	+0.1
BDAS	Al Bad`	0.31	108	P	Pb	03 06 21.5	-0.4
NUB	Nuweibaa	0.51	348	P	Pb	03 06 24.2	-1.1
	baz=343						
HAQS	Haql	0.54	14	S	Sb	03 06 32.7	-0.5
HAQS				P	Pb	03 06 25.2	-0.6
AYUS	`Aynunah	0.55	127	P	Pg	03 06 25.7	-0.2
KRABS	KRABS	0.60	135	P	Pg	03 06 26.5	-0.3
JLOS		0.67	72	P	Pb	03 06 27.3	-0.8
HKAT	Jabal Katrina	0.68	270	P	Pg	03 06 28.4	0.0
	baz=273						
HKAT				S	Sg	03 06 38.1	+0.6
	baz=273						
HBST	Basata	0.69	357	P	Pb	03 06 27.9	-0.5
	baz=355						
HBST				S	Sg	03 06 38.0	+0.4
	baz=355						
JMOS	Jabal al Moall	0.70	25	P	Pb	03 06 28.1	-0.6
HQLS		0.81	18	P	Pb	03 06 29.9	-0.6
TR1	Tor 1	0.89	235	P	Pg	03 06 31.6	-0.6
	baz=238						
TR2	Tor 2	0.93	262	P	Pb	03 06 32.3	-0.2
	baz=264						
MWLHS	Alquwaylih	1.02	140	P	Pb	03 06 32.8	-1.2
WTBKS	WTBKS	1.10	113	P	Pb	03 06 34.4	-1.0
EIL	Elat	1.15	8	Pg	Pn	03 06 34.3	-1.8
EIL				Sg	Sn	03 06 51.5	+0.1
MBRI	Mt Berech	1.27	6	Pg	Pn	03 06 36.3	-1.5
HRDS	Abu Rudays	1.31	278	P	Pn	03 06 37.7	-0.6
	baz=280						
HRFI	Mount Harif	1.52	9	Pn	Pn	03 06 39.6	-1.7
HRFI				Sn	Sb	03 07 02.6	+1.0
KRMI	Paran Flat	1.58	359	Pn	Pn	03 06 41.1	-1.0
KRMI				Sn	Sb	03 07 04.1	+0.7
TBKS	Tabuk	1.59	101	P	Pn	03 06 41.7	-0.5
HHRG	Al Ghardaqah	1.68	219	P	Pn	03 06 43.4	-0.1
	baz=218						
HHRG				S	Sb	03 07 04.5	-1.7
	baz=218						
GRB	Gharib	1.77	262	P	Pn	03 06 43.3	-1.3
	baz=264						
URD07	Al Anba	1.82	117	P	Pn	03 06 45.3	-0.2
PRNI	Paran	1.83	6	Pn	Pn	03 06 44.5	-1.0
PRNI				Sn	Sb	03 07 10.1	-0.4
ZNM	Zenema	1.86	297	P	Pn	03 06 45.9	0.0
	baz=298						
ZFRI	Zfri	2.05	10	Pn	Pn	03 06 47.6	-0.9
ZFRI				Sn	Sb	03 07 15.7	-1.1
URD06	Shuwaq	2.06	121	P	Pn	03 06 48.6	-0.3
URD10	Hayder	2.08	99	P	Pn	03 06 48.5	-0.5
ZAF	Zafarana	2.09	292	P	Pn	03 06 48.4	-0.6
	baz=293						
SUZ	Suez	2.14	308	P	Pn	03 06 49.7	0.0
	baz=309						
WJHS		2.30	141	P	Pn	03 06 51.1	-0.8
KZIT	Kziot	2.39	352	Pn	Pn	03 06 52.6	-0.6
KZIT				Sn	Sn	03 07 24.3	+2.2
URD11	Tayma	2.44	103	P	Pn	03 06 53.5	-0.5
URD13	Abu Rakah	2.59	112	P	Pn	03 06 55.8	-0.2
URD04	Abu Rakah	2.63	123	P	Pn	03 06 56.3	-0.3
URD15	Abu Rakah	2.69	118	P	Pn	03 06 57.5	0.0
HHAG	Hagoal	2.73	302	P	Pn	03 06 57.8	-0.2
	baz=303						
URD14	Abu Rakah	2.84	112	P	Pn	03 06 59.5	0.0
YTIR	Yattir	2.84	6	Pn	Pn	03 06 58.8	-0.7
YTIR				Sn	Sn	03 07 35.7	+2.4
GHAJ	Ghor Haditha	2.85	14	Pn	Pn	03 06 59.4	-0.1
QLABS	Al Qalibar	2.87	103	P	Pn	03 06 59.5	-0.3
GLL	Jalalah	2.88	292	P	Pn	03 07 00.0	+0.1
	baz=293						
EWJHS	Al Wajh	2.90	144	P	Pn	03 06 59.0	-1.1
KOT	Kottamia	2.92	299	P	Pn	03 07 00.3	-0.3
	baz=300						
AMAZ	Amatzia	3.00	2	Pn	Pn	03 07 01.1	-0.5
URD01	URD01	3.00	121	P	Pn	03 07 02.2	+0.4
URD03	Al Ula	3.01	127	P	Pn	03 07 02.0	+0.1
ASUT		3.05	249	P	Pn	03 07 01.9	-0.4
	baz=251						
DSI	Dead Sea	3.08	10	Pn	Pn	03 07 02.1	-0.5
NADB	Abo Dabab	3.18	184	P	Pn	03 07 03.1	-1.0
	baz=186						
URD02	Al Ula	3.34	124	P	Pn	03 07 06.7	+0.4
NTAIM	NTAIM	3.63	95	P	Pn	03 07 09.7	-0.5
NUMJS	Khuff	3.65	142	P	Pn	03 07 09.5	-1.0
SLTI	Sal'it	3.71	4	Pn	Pn	03 07 10.8	-0.5
HMDT	Nahal Hemdat	3.77	10	Pn	Pn	03 07 11.3	-0.9
STAIM	STAIM	3.84	110	P	Pn	03 07 13.4	+0.3
MMLI	Mount Malkishu	3.94	8	Pn	Pn	03 07 14.3	-0.2
UMJS	Umm Lajj	3.99	145	P	Pn	03 07 14.0	-1.2
LNY09	LNY09	4.04	140	P	Pn	03 07 15.3	-0.7
LNY16	LNY16	4.05	141	P	Pn	03 07 15.5	-0.5
LNY04	LNY04	4.13	141	P	Pn	03 07 16.6	-0.7
LNY11	LNY11	4.17	139	P	Pn	03 07 17.2	-0.6
HANO	Al Hamad	4.21	46	P	Pn	03 07 17.0	-1.2
LNY12	LNY12	4.21	140	P	Pn	03 07 17.6	-0.6
LNY07	LNY07	4.21	143	P	Pn	03 07 17.8	-0.4
LNY13	LNY13	4.21	142	P	Pn	03 07 17.3	-0.9
LNY14	LNY14	4.22	140	P	Pn	03 07 18.2	-0.2
LNY15	LNY15	4.23	140	P	Pn	03 07 18.1	-0.4
LNY17	LNY17	4.25	140	P	Pn	03 07 18.3	-0.5
LNY06	LNY06	4.26	140	P	Pn	03 07 18.5	-0.5
LNY10	LNY10	4.26	139	P	Pn	03 07 18.5	-0.5
LNY01	LNY01	4.36	138	P	Pn	03 07 20.8	+0.6
LNY08	LNY08	4.44	141	P	Pn	03 07 21.4	0.0
LNYS	LNYS	4.45	140	P	Pn	03 07 21.3	-0.3
KBR13	Birmah	4.56	126	P	Pn	03 07 23.3	+0.2
TRAS	Al Qrash	4.84	135	P	Pn	03 07 27.6	+0.7
ETH06	ETH06	4.94	111	P	Pn	03 07 28.9	+0.6
ETH07	ETH07	4.94	114	P	Pn	03 07 29.3	+0.9
KBR09	Khaybar	5.01	119	P	Pn	03 07 30.0	+0.7
KBR08	Khaybar	5.04	123	P	Pn	03 07 31.3	+1.6
YNBS	Yanbu` al Bahr	5.07	145	P	Pn	03 07 30.3	+0.2
ETH05	ETH05	5.08	108	P	Pn	03 07 30.6	+0.3
ETH08	ETH08	5.15	110	P	Pn	03 07 31.8	+0.6
KBR11	Shajwa	5.25	131	P	Pn	03 07 34.3	+1.7
KBR03	Khaybar	5.34	119	P	Pn	03 07 35.2	+1.3
ETH04	ETH04	5.35	109	P	Pn	03 07 34.4	+0.5
KBR01	Khaybar	5.42	123	P	Pn	03 07 35.9	+1.0
RHT07	RHT07	5.42	134	P	Pn	03 07 35.3	+0.3
YOBS		5.47	138	P	Pn	03 07 36.7	+1.1
HIL03	Ash Shuqayq	5.48	102	P	Pn	03 07 35.9	+0.1
KBR04	Khaybar	5.52	116	P	Pn	03 07 37.3	+0.9
RHT11	RHT11	5.68	128	P	Pn	03 07 39.6	+1.0
KBR10	Khaybar	5.72	125	P	Pn	03 07 39.9	+0.7
KBR05	Khaybar	5.75	120	P	Pn	03 07 40.5	+1.1
KBR02	Khaybar	5.89	123	P	Pn	03 07 42.2	+0.9
RHT09	RHT09	5.92	128	P	Pn	03 07 43.2	+1.4

IDC 13 03:33:28.3±17.0, 6.21S×130.00E, h122km±176km, mb3.5/1, mbtmp3.6/4, ML3.2/3, Error ellipse: s-maj=128.5km s-min=59.5km az=42.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.56	199	P	Pn	03 36 23.4	+0.6
	baz=22,slow=11,SNR=6.5						
FITZ				S	Sn	03 38 32.6	-8.5
	0.6nm,0.6s,baz=344,slow=19,SNR=1.3						
	0.9nm,0.9s						
WRA	Warramunga Arr	14.29	163	P	Pn	03 36 43.3	-1.8
	0.1nm,0.3s,baz=344,slow=12,SNR=1.8						
WRA				S	Sn	03 39 12.6	-10
	0.7nm,0.5s,baz=333,slow=24,SNR=3.6						
	0.3nm,0.4s						
ASAR	Alice Springs	17.76	168	P	Pn	03 37 27.6	-0.4
	0.4nm,0.3s,baz=351,slow=9.5,SNR=25						
	1.8nm,0.5s						
MKAR	Makanchi Array	67.57	327	P	P	03 44 11.8	0.0
	0.5nm,0.4s,baz=116,slow=6.6,SNR=7.2						
	0.5nm,0.4s						

IDC 13 03:34:44.0±7.4, 5.45S×141.85E, h0km, mb3.5/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=265.4km s-min=36.8km az=93.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.15	206	Pn	Pn	03 38 31.8	-0.7
	0.2nm,0.3s,baz=26,slow=14,SNR=3.8						
WRA				Sn	Sn	03 41 19.7	-13
	baz=13,slow=21,SNR=2.7						
WRA				Lg	Lg	03 43 09.2	
	baz=17,slow=26						
	0.6nm,0.7s						
ASAR	Alice Springs	19.66	202	P	P	03 39 14.9	+0.3
	0.2nm,0.3s,baz=34,slow=9.8,SNR=10.0						
ASAR				S	S	03 42 42.1	-15
	0.7nm,1.0s,baz=13,slow=29,SNR=2.0						
ASAR				Lg	Lg	03 45 03.8	
	baz=17,slow=30						
	1.0nm,0.7s						
MKAR	Makanchi Array	73.86	322	P	P	03 46 20.8	0.0
	0.3nm,0.6s,baz=116,slow=6.7,SNR=2.8						
	0.3nm,0.6s						

*IDC **13** 03:43:07.0±1.1, 35.29S×104.87W, h0km, mb3.8/4, mbtmp3.8/4, MS3.7/28, Error ellipse: s-maj=120.8km s-min=28.7km az=86.0*

ISC 13 03:43:09.3±1.1, 35.3S±0.2×105.0W±0.8, h13km, n45, σ0.960/11, mb3.9/4, MS3.7/27, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	8.96	334	LR	LR	03 47 45.1	
	comp=Z,543nm,18.8s,baz=200,slow=31						
H03S2	Juan Fernandez	21.52	94	T	T	04 10 57.4	
	baz=257						
H03S1	Juan Fernandez	21.54	94	T	T	04 11 00.3	
	baz=257						
H03S3	Juan Fernandez	21.54	94	T	T	04 10 59.0	
	baz=257						
LVC	Limon Verde	33.85	78	LR	LR	04 00 03.2	
	comp=Z,210nm,21.3s,baz=254,slow=30						
NNA	Nana	34.50	55	LR	LR	04 00 34.2	
	comp=Z,325nm,19.7s,baz=236,slow=30						
ATAH	Atahualpa	37.20	47	LR	LR	04 01 53.2	
	comp=Z,196nm,19.4s,baz=228,slow=30						
LPAZ	La Paz	37.95	70	LR	LR	04 03 04.5	
	comp=Z,80nm,20.9s,baz=270,slow=32						
PMSA	Palmer Station	38.32	153	LR	LR	04 01 42.5	
	comp=Z,225nm,19.1s,baz=308,slow=29						
CPUP	Villa Florida	41.59	91	LR	LR	04 04 51.4	
	comp=Z,104nm,21.3s,baz=245,slow=32						
PPT	Papeete	43.23	282	LR	LR	04 03 46.1	
	comp=Z,51nm,20.7s,baz=96,slow=29						
SIV	San Ignacio	43.63	75	LR	LR	04 07 16.7	
	comp=Z,64nm,18.9s,baz=292,slow=33						
ROSC	El Rosal	49.27	42	LR	LR	04 09 11.1	
	comp=Z,136nm,20.1s,baz=228,slow=32						
CMIG	Matias Romero	53.00	12	LR	LR	04 09 12.5	
	comp=Z,46nm,21.4s,baz=200,slow=30						
SDV	Santo Domingo	54.65	43	LR	LR	04 12 52.3	
	comp=Z,76nm,19.3s,baz=260,slow=33						
QSPA	South Pole Qui	54.89	180	P	P	03 52 39.4	0.0
	0.6nm,0.6s,baz=114,slow=1.7,SNR=5.4						
	0.6nm,0.6s						
VNDA	Vanda	56.49	195	LR	LR	04 12 37.0	
	comp=Z,35nm,18.5s,baz=100,slow=31						
VNA3	Neumayer Olymp	58.68	158	P	P	03 53 06.1	+0.1
VNA1	Neumayer--Stat	59.30	157	P	P	03 53 09.9	-0.4
VNA2	Neumayer--Watz	59.48	158	P	P	03 53 11.5	-0.1
	baz=262,slow=6.0						
SNAA	Sanae	60.57	159	P	P

Fault plane solution: $M_0$1.57000×10^{15} NP1:ϕ_s80.00000°, δ53.00000°, λ-45.00000°. NP2:ϕ_s201.00000°, δ56.00000°, λ-134.00000°.

ISC 13 03:56:47.3±0.6, 37.11N±0.04×141.39E±0.06, h83km±5km, n88, σ1.52/74, mb4.0/14, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.48**	**269**	⇓P		**Pn**		**03 57 00.9**	**-0.2**
ONAJ				⇓S		**Sn**		**03 57 10.7**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.48**	**269**	A		A		03 57 00.9	
	comp=E,23nm,0.3s,comp=E,22nm,0.3s								
JFK	**Kawauchi**	**0.49**	**302**	⇓P		**Pn**		**03 57 00.7**	**-0.5**
JFK				⇓S		**Sn**		**03 57 10.2**	**-1.4**
JFK	**Kawauchi**	**0.49**	**302**	A		A		03 57 00.7	
	comp=E,13nm,1.1s,comp=E,18nm,0.7s								
JFFD	**Fukushimafurud**	**0.67**	**268**	⇓P		**Pn**		**03 57 02.7**	**-0.1**
JFFD				⇓S		**Sn**		**03 57 13.8**	**-0.6**
JFFD	**Fukushimafurud**	**0.67**	**268**	A		A		03 57 02.7	
	comp=E,7.0nm,2.1s,comp=E,12nm,1.0s								
JMST	**Minamisoumatoc**	**0.73**	**327**	*i* P		**Pn**		**03 57 02.7**	**-0.8**
JMST				S		**Sn**		**03 57 14.0**	**-1.5**
JMST	**Minamisoumatoc**	**0.73**	**327**	A		A		03 57 02.7	
	comp=E,13nm,0.4s,comp=E,23nm,0.4s								
JHO	**Hitachi**	**0.83**	**233**	A		A		03 57 04.9	
	comp=E,6.0nm,0.2s,comp=E,7.0nm,0.2s								
JMM	**Marumori**	**0.89**	**328**			**Pn**		**03 57 04.5**	**-0.7**
JMM	**Marumori**	**0.89**	**328**	P		**Pn**		**03 57 04.5**	**-0.7**
JMM				S		**Sn**		**03 57 17.3**	**-1.3**
JMM	**Marumori**	**0.89**	**328**	A		A		03 57 04.5	
	comp=E,12nm,1.7s,comp=E,17nm,1.8s								
JFT	**Otama**	**0.94**	**296**	P		**Pn**		**03 57 05.5**	**-0.3**
JFT				S		**Sn**		**03 57 18.6**	**-1.0**
JFT	**Otama**	**0.94**	**296**	A		A		03 57 05.5	
	comp=E,21nm,1.0s,comp=E,33nm,1.2s								
JHYU	**Hitachinakayam**	**1.01**	**220**	A		A		03 57 07.2	
	comp=E,7.0nm,0.6s,comp=E,5.0nm,0.6s								
JSB	**Shiboa**	**1.19**	**263**	A		A		03 57 08.7	
	comp=E,9.0nm,3.1s,comp=E,9.0nm,3.9s								
JYAR	**Yonezawaarcadi**	**1.28**	**309**	A		A		03 57 09.1	
	comp=E,21nm,1.2s,comp=E,18nm,1.1s								
JYT	**Yasato**	**1.31**	**228**			**Pn**		**03 57 10.2**	**0.0**
JYT	**Yasato**	**1.31**	**228**	A		A		03 57 10.8	
	comp=E,7.0nm,0.5s,comp=E,6.0nm,0.8s								
JIO	**Ouri**	**1.34**	**358**	P		**Pn**		**03 57 09.6**	**-1.1**
JIO				S		**Sn**		**03 57 25.8**	**-2.5**
JOU	**Okura**	**1.38**	**335**	P		**Pn**		**03 57 10.0**	**-1.1**
JOU	**Okura**	**1.38**	**335**	A		A		03 57 10.0	
	comp=E,6.0nm,2.3s,comp=E,7.0nm,1.6s								
JFY	**Yanaizu**	**1.38**	**283**	P		**Pn**		**03 57 10.8**	**-0.4**
JFY				*e*S		**Sn**		**03 57 28.4**	**-0.8**
JFY	**Yanaizu**	**1.38**	**283**	A		A		03 57 10.8	
	comp=E,5.0nm,4.6s,comp=E,7.0nm,1.0s								
JYS	**Shirataka**	**1.53**	**317**	P		**Pn**		**03 57 12.4**	**-0.7**
JYS	**Shirataka**	**1.53**	**317**	A		A		03 57 12.4	
	comp=E,16nm,0.6s,comp=E,14nm,2.9s								
JOFO	**Osakifurukawao**	**1.54**	**346**	A		A		03 57 12.4	
	comp=E,17nm,0.5s,comp=E,11nm,0.2s								
JAG	**Ashikaga**	**1.70**	**247**	⇓P		**Pn**		**03 57 15.4**	**+0.1**
JAG	**Ashikaga**	**1.70**	**247**	A		A		03 57 15.4	
	comp=E,3.0nm,0.2s,comp=E,4.0nm,1.3s								
JKT	**Katashina**	**1.75**	**259**	⇓P		**Pn**		**03 57 16.6**	**+0.6**
JKT				⇓*e*S		**Sn**		**03 57 39.2**	**+1.3**
JNS	**Sasagawa**	**1.80**	**294**	P		**Pn**		**03 57 15.6**	**-0.9**
JNS				*e*S		**Sn**		**03 57 35.2**	**-3.6**
JMK	**Ichinoseki**	**1.84**	**356**	P		**Pn**		**03 57 16.0**	**-1.1**
JMK				S		**Sn**		**03 57 37.5**	**-2.3**
JYA	**Atsumi**	**1.99**	**319**	A		A		03 57 18.5	
	comp=E,4.0nm,1.1s,comp=E,6.0nm,1.3s								
MJAR	**Matsushiro Arr**	**2.62**	**258**	P		**Pn**		**03 57 27.8**	**+0.3**
	34nm,0.4s,baz=82,slow=15,SNR=192								
MJAR				S		**Sn**		**03 57 51.5**	**-7.0**
	38nm,0.4s,baz=83,slow=17,SNR=6.9								
MJAR				LR		LR		03 58 51.1	
	comp=Z,119nm,18.1s,baz=345,slow=48								
MAJO	**Matsushiro**	**2.62**	**258**	Pn		**Pn**		**03 57 28.4**	**+0.9**
JSD	**Sado**	**2.66**	**291**	Pn		**Pn**		**03 57 27.1**	**-0.9**
JGF	**Kuroka**	**3.59**	**246**			**Pn**		**03 57 41.5**	**+0.8**
JTM	**Tenmabayashi**	**3.68**	**356**	Pn		**Pn**		**03 57 40.6**	**-1.2**
INU	**Inuyama**	**3.95**	**245**	Pn		**Pn**		**03 57 46.0**	**+0.5**
JHJ2	**Mitsune**	**4.20**	**198**	Pn		**Pn**		**03 57 48.0**	**-0.9**
JHJ	**Hachijo jima 2**	**4.20**	**199**	P		**Pn**		**03 57 48.9**	**0.0**
	62nm,0.2s,baz=332,slow=17,SNR=32								
JHJ				S		**Sn**		**03 58 33.0**	**-3.7**
	263nm,0.3s,baz=53,slow=20,SNR=16								
JHS	**Saijyo**	**7.03**	**255**	Pn		**Pn**		**03 58 28.1**	**+0.6**
JCJ	**Chichijima**	**10.01**	**176**	P		**Pn**		**03 59 04.4**	**-3.8**
	21nm,0.5s,baz=319,slow=18,SNR=7.5								
JCJ				S		Sn		04 00 48.7	-10
	21nm,0.3s,baz=84,slow=23,SNR=8.0								
USRK	**Ussuriysk Ar.**	**10.05**	**318**	P		**Pn**		**03 59 08.9**	**+0.3**
	8.1nm,0.7s,baz=139,slow=15,SNR=15								
USA0B	**Ussuriysk Arra**	**10.05**	**318**			**Pn**		**03 59 10.5**	**+1.8**
KSRS	**Korea Array**	**10.74**	**276**	P		**Pn**		**03 59 19.9**	**+1.8**
	6.7nm,1.0s,baz=90,slow=14,SNR=21								
KSRS				LR		LR		04 03 06.7	
	comp=Z,39nm,19.7s,baz=60,slow=35								
KSAR	**Wonju Array Be**	**10.77**	**276**	Pn		**Pn**		**03 59 18.1**	**-0.4**
MDJ	**Mudanjiang**	**11.65**	**314**	Pn		**Pn**		**03 59 31.8**	**+1.3**
KLR	**Kul'dur**	**13.99**	**233**	P		**Pn**		**04 00 02.7**	**+1.2**
	1.5nm,0.6s,baz=151,slow=9.7,SNR=3.5								
KLR				LR		LR		04 04 45.4	
	comp=Z,32nm,21.1s,baz=188,slow=34								
PEA0B	**Petropavlovsk-**	**19.63**	**30**	P		**P**		**04 01 07.0**	**-2.0**
PEA0B				IAmb		IAmb		04 01 10.5	
	comp=Z,10.0nm,1.1s								
PETK	**Petropavlovsk-**	**19.63**	**30**	P		**P**		**04 01 08.9**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=159,slow=8.7,SNR=6.0								
PETK	**Petropavlovsk-**	**19.63**	**30**	P		**P**		**04 01 08.0**	**-0.9**
SEY	**Seymchan**	**26.72**	**11**	P		**P**		**04 02 21.4**	**+2.9**
	comp=Z,1.5nm,0.7s,baz=185,slow=7.6,SNR=4.5								
SONM	**Songino Array**	**27.73**	**304**	P		**P**		**04 02 27.1**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=106,slow=8.5,SNR=14								
SONM				LR		LR		04 14 01.6	
	comp=Z,24nm,18.1s,baz=32,slow=37								
	comp=Z,2.6nm,0.8s								
SONM	**Songino Array**	**27.73**	**304**	P		**P**		**04 02 27.3**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**28.20**	**121**	T		T		04 32 26.0	
	baz=315,slow=74								
H11N1	**WAKE ISLAND Hy**	**28.21**	**121**	T		T		04 32 10.6	
	baz=315,slow=74								
H11N3	**WAKE ISLAND Hy**	**28.22**	**121**	T		T		04 32 11.5	
	baz=315								
H11S1	**WAKE ISLAND Hy**	**28.91**	**123**	T		T		04 33 45.0	
	baz=315,slow=75,SNR=80								
H11S3	**WAKE ISLAND Hy**	**28.92**	**123**	T		T		04 33 43.1	
	baz=315,slow=75,SNR=93								
H11S2	**WAKE ISLAND Hy**	**28.93**	**123**	T		T		04 33 43.8	
	baz=315,slow=75,SNR=54								
CMAR	**Chiang Mai Arr**	**41.50**	**255**	LR		LR		04 22 52.4	
	comp=Z,12nm,19.8s,baz=170,slow=38								
ZAA0	**Zalesovo Array**	**41.85**	**312**	P		**P**		**04 04 28.6**	**-0.2**
ZAA0				IAmb		IAmb		04 04 31.1	
	comp=Z,3.4nm,1.1s								
ZALV	**Zalesovo Beam**	**41.85**	**312**	P		**P**		**04 04 27.7**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=76,slow=9.3,SNR=5.8								
	comp=Z,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**41.85**	**312**	P		**P**		**04 04 28.1**	**-0.8**
MK31	**Makanchi Array**	**44.06**	**302**	P		**P**		**04 04 47.4**	**+0.5**
MKAR	**Makanchi Array**	**44.06**	**302**	P		**P**		**04 04 46.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=86,slow=9.9,SNR=12								
	comp=Z,1.0nm,0.6s								
MAKZ	**Makanchi**	**44.27**	**302**	P		**P**		**04 04 48.2**	**-0.3**
MAKZ				IAmb		IAmb		04 04 50.9	
	comp=Z,2.0nm,0.8s								
K20K	**Telida**	**46.27**	**34**	P		**P**		**04 05 05.0**	**+0.9**
IMAR	**Indian Mountai**	**46.59**	**31**	P		**P**		**04 05 06.2**	**-0.3**
H23K	**Yukon River**	**48.31**	**31**	P		**P**		**04 05 19.0**	**-0.9**
H23K				IAmb		IAmb		04 05 22.5	
	comp=Z,3.6nm,0.8s								
IL31		**49.44**	**32**	IAmb		IAmb		04 05 29.3	
	comp=Z,2.6nm,0.8s								
ILAR	**Eielson Array**	**49.44**	**32**	P		**P**		**04 05 28.4**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=266,slow=6.8,SNR=24								
	comp=Z,2.2nm,0.7s								
ILAR	**Eielson Array**	**49.44**	**32**	P		**P**		**04 05 28.1**	**-0.3**
AAK	**Ala-Archa**	**50.44**	**298**	LR		LR		04 28 23.0	
	comp=Z,28nm,19.1s,baz=308,slow=38								
BCAR	**Beaver Creek A**	**51.84**	**34**	P		**P**		**04 05 47.3**	**+0.6**
ARU	**Arti**	**56.29**	**319**	P		**P**		**04 06 19.8**	**+0.8**
WRA	**Warramunga Arr**	**57.14**	**188**	P		**P**		**04 06 25.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=7.6,slow=7.2,SNR=12								
WRA				pP		**pP**		**04 06 47.2**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=3.5,slow=7.5,SNR=6.8								
	comp=Z,0.5nm,0.5s								
ABKAR	**Akbulak array**	**57.88**	**310**	P		**P**		**04 06 29.2**	**-1.1**
ASAR	**Alice Springs**	**60.86**	**188**	P		**P**		**04 06 51.2**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=4.0,slow=6.4,SNR=4.4								
ASAR				pP		**pP**		**04 07 12.7**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=12,slow=6.9,SNR=5.6								
	comp=Z,0.4nm,0.7s								
NOA	**NORSAR Array B**	**74.11**	**337**	LR		LR		04 44 23.1	
	comp=Z,7.2nm,20.7s,baz=235,slow=38								
NVAR	**Mina Array Bea**	**74.95**	**53**	P		**P**		**04 08 21.1**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=284,slow=5.0,SNR=9.9								
	comp=Z,0.7nm,0.6s								
PDAR	**Pinedale Array**	**77.62**	**45**	P		**P**		**04 08 35.4**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=270,slow=1.4,SNR=9.2								
	comp=Z,0.8nm,0.7s								
TXAR	**Lajitas Array**	**90.08**	**52**	P		**P**		**04 09 39.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=306,slow=3.4,SNR=12								
TXAR				pP		**pP**		**04 10 02.2**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=294,slow=3.4,SNR=4.3								
	comp=Z,0.8nm,0.7s								
LPAZ	**La Paz**	**146.67**	**59**	PKPbc		**PKPbc**		**04 16 20.9**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=358,slow=2.4,SNR=14								
H03N2	**Juan Fernandez**	**147.05**	**96**	T		T		07 01 22.8	
	baz=290								
H03N3	**Juan Fernandez**	**147.06**	**96**	T		T		07 01 19.7	
	baz=290								
H03N1	**Juan Fernandez**	**147.06**	**96**	T		T		07 01 21.4	
	baz=290								

*IDC **13** 04:04:08.0±1.4, 38.65N×22.66E, h0km, mb3.4/4, mbtmp3.3/5, ML2.6/1, MS2.8/2, Error ellipse: s-maj=56.9km s-min=22.6km az=154.0*
*ATH **13** 04:04:09.1, 38.79N×22.50E, h6km±2km, ML3.2/24, Error ellipse: s-maj=2.0km s-min=0.5km az=306.0*
*THE **13** 04:04:09.1, 38.79N×22.51E, h0km±1km, ML3.2/27, Error ellipse: s-maj=1.2km s-min=0.4km az=315.0*

ISC 13 04:04:08.4±0.8, 38.81N±0.02×22.51E±0.02, h12km±6km, n67, σ0.87/116, mb3.5/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.12**	**111**	P		**Pb**		**04 04 12.1**	**-0.6**
AXAR				S		**Sg**		**04 04 13.9**	**0.0**
	33µm,0.2s								
AXAR	**Agios Charalam**	**0.12**	**111**	P		**Pb**		**04 04 12.1**	**-0.6**
AXAR				S		**Sg**		**04 04 14.3**	**+0.4**
AXAR				AML		AML		04 04 16.0	
	comp=E,62493µm,0.2s								
AXAR				AML		AML		04 04 16.9	
	comp=N,68852µm,0.2s								
AGG	**Agios Georgios**	**0.26**	**326**	P		**Pb**		**04 04 14.3**	**-0.8**
AGG				S		**Sb**		**04 04 19.1**	**-0.4**
	comp=N,13µm,0.4s								
AGG	**Agios Georgios**	**0.26**	**326**	P		**Pb**		**04 04 14.3**	**-0.8**
AGG				S		**Sg**		**04 04 18.2**	**+0.7**
AGG				AML		AML		04 04 20.6	
	comp=N,18639µm,0.5s								
AGG				AML		AML		04 04 21.0	
	comp=E,32031µm,0.3s								
DLFA	**Delphi**	**0.33**	**183**	P		**Pg**		**04 04 15.2**	**+0.1**
DLFA				S		**Sg**		**04 04 19.8**	**+0.2**
DLFA				AML		AML		04 04 21.3	
	comp=E,30389µm,0.5s								
DLFA				AML		AML		04 04 23.1	
	comp=N,22023µm,0.4s								
MAKR	**Makrakomi, Fth**	**0.36**	**304**	P		**Pb**		**04 04 16.1**	**-0.7**
MAKR				S		**Sb**		**04 04 22.5**	**0.0**
	comp=N,9µm,0.3s								
MAKR	**Makrakomi, Fth**	**0.36**	**304**	P		**Pb**		**04 04 16.2**	**-0.7**
MAKR				S		**Sb**		**04 04 21.4**	**-1.1**
MAKR				AML		AML		04 04 23.0	
	comp=E,17880µm,0.4s								
MAKR				AML		AML		04 04 24.2	
	comp=N,19107µm,0.3s								
LKR	**Lokris**	**0.41**	**113**	P		**Pg**		**04 04 16.1**	**-0.6**
LKR				S		**Sb**		**04 04 22.8**	**-1.1**
LKR				AML		AML		04 04 23.5	
	comp=N,16252µm,0.3s								
LKR				AML		AML		04 04 23.5	
	comp=E,11484µm,0.2s								
ATAL	**Atalanti**	**0.41**	**106**	P		**Pb**		**04 04 17.1**	**-0.6**
ATAL				S		**Sb**		**04 04 23.5**	**-0.4**
	comp=E,2µm,0.2s								
ATAL	**Atalanti**	**0.41**	**106**	P		**Pb**		**04 04 17.1**	**-0.6**
ATAL				S		**Sb**		**04 04 23.2**	**-0.7**
ATAL				AML		AML		04 04 23.9	
	comp=N,6130µm,0.4s								
ATAL				AML		AML		04 04 24.8	
	comp=E,3302µm,0.2s								
ANX	**Ano Chora**	**0.51**	**245**	P		**Pg**		**04 04 18.4**	**-0.1**
ANX				S		**Sb**		**04 04 26.2**	**-0.7**
	comp=E,4µm,0.3s								
ANX	**Ano Chora**	**0.51**	**245**	P		**Pg**		**04 04 18.4**	**-0.1**
ANX				S		**Sg**		**04 04 25.5**	**+0.2**
ANX				AML		AML		04 04 28.3	
	comp=E,6931µm,0.3s								
ANX				AML		AML		04 04 31.1	
	comp=N,10985µm,0.4s								
SERG	**Sergoula**	**0.53**	**222**	P		**Pg**		**04 04 18.6**	**-0.3**
SERG				S		**Sb**		**04 04 26.7**	**-0.7**
	comp=N,7µm,0.2s								
SERG	**Sergoula**	**0.53**	**222**	P		**Pg**		**04 04 18.6**	**-0.3**
SERG				S		**Sg**		**04 04 26.4**	**+0.4**
SERG				AML		AML		04 04 28.1	
	comp=N,18649µm,0.3s								
SERG				AML		AML		04 04 28.2	
	comp=E,18784µm,0.2s								
EVR	**Evrytania**	**0.56**	**281**	P		**Pg**		**04 04 19.3**	**-0.1**
EVR				S		**Sb**		**04 04 28.8**	**+0.5**
	comp=E,1µm,0.3s								
EVR	**Evrytania**	**0.56**	**281**	P		**Pg**		**04 04 19.5**	**+0.1**
EVR				S		**Sb**		**04 04 27.4**	**-0.9**
EVR				AML		AML		04 04 31.8	
	comp=E,2198µm,0.3s								
EVR				AML		AML		04 04 32.8	
	comp=N,1928µm,0.4s								
EFP	**Efpalio**	**0.61**	**232**	P		**Pg**		**04 04 19.9**	**-0.4**
EFP				S		**Sb**		**04 04 29.2**	**-0.4**
	comp=N,3µm,0.2s								
EFP	**Efpalio**	**0.61**	**232**	P		**Pg**		**04 04 20.0**	**-0.4**
EFP				S		**Sg**		**04 04 28.1**	**-0.3**
EFP				AML		AML		04 04 30.6	
	comp=E,6644µm,0.3s								
EFP				AML		AML		04 04 30.7	
	comp=N,4867µm,0.2s								
ALIK	**Aliki, Aigiali**	**0.63**	**210**	P		**Pg**		**04 04 20.9**	**+0.2**
ALIK				S		**Sb**		**04 04 30.5**	**+0.3**
LAKA	**Lakka**	**0.71**	**217**	P		**Pb**		**04 04 21.6**	**-1.1**
LAKA				S		**Sg**		**04 04 31.8**	**+0.3**
	comp=N,2µm,0.4s								
LAKA	**Lakka**	**0.71**	**217**	P		**Pb**		**04 04 21.6**	**-1.1**
LAKA				S		**Sg**		**04 04 31.8**	**+0.3**
LAKA				AML		AML		04 04 39.0	
	comp=N,1077µm,0.3s								
LAKA				AML		AML		04 04 40.9	
	comp=E,1394µm,0.5s								
NEO	**Neokhori**	**0.74**	**48**	P		**Pn**		**04 04 23.4**	**-1.4**
NEO				S		**Sn**		**04 04 34.8**	**-1.2**
	comp=E,3µm,0.3s								
NEO	**Neokhori**	**0.74**	**48**	P		**Pn**		**04 04 23.5**	**-1.4**
NEO				S		**Sn**		**04 04 34.4**	**-1.6**
NEO				AML		AML		04 04 37.1	
	comp=N,6113µm,0.2s								
NEO				AML		AML		04 04 38.6	
	comp=E,4075µm,0.4s								
XOR	**Xorichti**	**0.77**	**43**	P		**Pn**		**04 04 23.6**	**-1.5**
XOR				S		**Sn**		**04 04 34.6**	**-2.0**
	comp=E,4µm,0.5s								
XOR	**Xorichti**	**0.77**	**43**	P		**Pg**		**04 04 23.5**	**+0.2**
XOR				S		**Sn**		**04 04 34.4**	**-2.2**
XOR				AML		AML		04 04 40.3	
	comp=N,9224µm,0.5s								
XOR				AML		AML		04 04 40.3	
	comp=E,5324µm,0.5s								
UPR	**University Cam**	**0.78**	**228**	P		**Pg**		**04 04 23.7**	**+0.2**
THAL	**Thalero**	**0.78**	**171**	P		**Pb**		**04 04 23.5**	**-0.4**
THAL				S		**Sn**		**04 04 35.5**	**-1.3**
	comp=E,4µm,0.4s								
THAL	**Thalero**	**0.78**	**171**	P		**Pg**		**04 04 23.8**	**+0.3**
THAL				S		**Sg**		**04 04 34.2**	**+0.5**
THAL				AML		AML		04 04 38.6	
	comp=N,6203µm,0.4s								
THAL				AML		AML		04 04 39.4	
	comp=E,6772µm,0.4s								
PVO	**Paravola**	**0.80**	**256**	P		**Pb**		**04 04 23.7**	**-0.5**
PVO				S		**Sg**		**04 04 35.4**	**+1.1**
	comp=E,812nm,0.4s								
PVO	**Paravola**	**0.80**	**256**	P		**Pb**		**04 04 23.7**	**-0.5**
KLV	**Kalavryta, Ach**	**0.82**	**201**	P		**Pb**		**04 04 23.6**	**-1.0**
KLV				S		**Sn**		**04 04 36.2**	**-1.7**
	comp=E,545nm,0.6s								
KLV	**Kalavryta, Ach**	**0.82**	**201**	P		**Pb**		**04 04 23.6**	**-1.0**
KLV				S		**Sb**		**04 04 34.4**	**-1.2**
KLV				AML		AML		04 04 40.3	
	comp=N,884µm,0.6s								
KLV				AML		AML		04 04 40.4	
	comp=E,1285µm,0.6s								
VIL2	**Platees**	**0.84**	**135**	P		**Pn**		**04 04 25.5**	**-0.6**
VIL2				S		**Sn**		**04 04 37.8**	**-0.6**
VIL2				AML		AML		04 04 42.5	
	comp=N,3562µm,0.5s								
VIL2				AML		AML		04 04 45.8	
	comp=E,6423µm,0.6s								
THL	**Klokotos Trika**	**0.85**	**333**	P		**Pg**		**04 04 24.8**	**-0.1**
THL				S		**Sn**		**04 04 38.0**	**-0.6**
	comp=E,588nm,0.4s								
THL	**Klokotos Trika**	**0.85**	**333**	P		**Pn**		**04 04 25.0**	**-1.2**
THL				S		**Sn**		**04 04 37.3**	**-1.3**
THL				AML		AML		04 04 41.6	
	comp=N,1327µm,0.5s								
THL				AML		AML		04 04 44.1	
	comp=E,1013µm,0.4s								
LTK	**Loutraki**	**0.86**	**155**	P		**Pb**		**04 04 24.9**	**-0.4**
LTK				S		**Sn**		**04 04 38.1**	**-0.8**
	comp=E,4µm,0.5s								
LTK	**Loutraki**	**0.86**	**155**	P		**Pb**		**04 04 24.9**	**-0.4**
LTK				S		**Sg**		**04 04 37.1**	**+0.7**
LTK				AML		AML		04 04 42.4	
	comp=E,7294µm,0.5s								
LTK				AML		AML		04 04 42.7	
	comp=N,15522µm,0.6s								
LOUT	**Loutraki**	**0.90**	**156**	P		**Pg**		**04 04 25.6**	**-0.1**
LOUT				S		**Sn**		**04 04 38.8**	**-1.0**
	comp=N,2µm,0.3s								
LOUT	**Loutraki**	**0.90**	**156**	P		**Pb**		**04 04 25.5**	**-0.4**
LOUT				S		**Sg**		**04 04 37.5**	**+0.1**
LOUT				AML		AML		04 04 42.8	
	comp=E,708µm,0.3s								
LOUT				AML		AML		04 04 43.5	
	comp=N,880µm,0.4s								
VILL	**Villia**	**0.90**	**136**	P		**Pg**		**04 04 25.6**	**-0.2**
VILL				S		**Sn**		**04 04 39.0**	**-0.9**
	comp=N,3µm,0.5s								
ACOR	**Acrocorinthos**	**0.96**	**163**	P		**Pg**		**04 04 26.9**	**-0.1**
DRO	**Drossia**	**1.06**	**217**	P		**Pb**		**04 04 28.1**	**-0.7**
DRO				S		**Sg**		**04 04 44.3**	**+1.5**
	comp=N,1µm,0.4s								
DRO	**Drossia**	**1.06**	**217**	P		**Pb**		**04 04 28.4**	**-0.4**
RLS	**Riolos of Patr**	**1.11**	**228**	P		**Pb**		**04 04 29.5**	**-0.1**
RLS				S		**Sg**		**04 04 45.0**	**+0.6**
RLS				AML		AML		04 04 49.0	
	comp=N,1195µm,0.4s								
RLS				AML		AML		04 04 51.6	
	comp=E,665µm,0.3s								
ATH	**Athens Observa**	**1.26**	**131**	P		**Pg**		**04 04 33.1**	**+0.4**
ATH				S		**Sg**		**04 04 50.5**	**+1.4**
	comp=E,1µm,0.5s								
ATH	**Athens Observa**	**1.26**	**131**	P		**Pg**		**04 04 33.0**	**+0.4**
ATH				S		**Sg**		**04 04 49.6**	**+0.5**
ATH				AML		AML		04 04 55.0	
	comp=N,2174µm,0.4s								
ATH				AML		AML		04 04 56.8	
	comp=E,2269µm,0.9s								
EPID	**Epidavros**	**1.28**	**158**	P		**Pg**		**04 04 33.0**	**-0.1**
LIT	**Litokhoron**	**1.29**	**359**	P		**Pg**		**04 04 33.4**	**+0.1**
LIT				S		**Sg**		**04 04 53.1**	**+3.1**
	comp=E,412nm,0.4s								
ATHU	**Athens Univers**	**1.30**	**130**	P		**Pg**		**04 04 33.2**	**-0.3**
ATHU				S		**Sg**		**04 04 51.9**	**+1.4**
ATHU	**Athens Univers**	**1.30**	**130**	P		**Pg**		**04 04 33.4**	**-0.1**
ATHU				S		**Sg**		**04 04 51.1**	**+0.6**
ATHU				AML		AML		04 04 57.1	
	comp=N,831µm,0.5s								
ATHU				AML		AML		04 04 57.4	
	com

comp=Z,0.1nm,0.3s,baz=24,slow=4.6,SNR=2.1
comp=Z,1.6nm,0.3s

WRA	**Warramunga Arr**	**39.93**	**197**	P		**P**	**04 21 44.3**	**-2.2**
FITZ	**Fitzroy Crossi**	**41.45**	**209**	LR		LR	04 41 36.0	
	comp=Z,51nn,18.4s,baz=134,slow=39							
FITZ	**Fitzroy Crossi**	**41.45**	**209**	P		**P**	**04 21 58.5**	**-0.4**
FITZ				IAmb		IAmb	04 22 31.1	
	comp=Z,9.5nn,1.5s							
ASAR	**Alice Springs**	**43.60**	**196**	P		**P**	**04 22 15.7**	**-0.4**
	comp=Z,0.4nn,0.4s,baz=18,slow=6.6,SNR=11							
	comp=Z,0.4nn,0.4s							
DZM	**Mont Dzumac**	**45.39**	**152**	P		**P**	**04 22 29.1**	**-1.3**
	comp=Z,3.1nn,0.8s,baz=343,slow=14,SNR=1.7							
	comp=Z,3.1nn,0.8s							
DZM	**Mont Dzumac**	**45.39**	**152**	P		**P**	**04 22 29.0**	**-1.3**
MBWA	**Marble Bar**	**46.97**	**214**	P		**P**	**04 22 41.8**	**-0.9**
MBWA				IAmb		IAmb	04 22 45.1	
	comp=Z,14nm,1.2s							
PSA00	**Pilbara Seismi**	**47.25**	**213**	P		**P**	**04 22 44.2**	**-0.6**
PSA00				IAmb		IAmb	04 23 22.2	
	comp=Z,12nn,1.1s							
BBOO	**Buckleboo**	**52.00**	**190**	P		**P**	**04 23 20.6**	**+0.1**
MKAR	**Makanchi Array**	**58.35**	**314**	P		**P**	**04 24 06.7**	**+1.0**
	comp=Z,0.2nn,0.4s,baz=94,slow=7.9,SNR=5.6							
	comp=Z,0.2nn,0.4s							
MKAR	**Makanchi Array**	**58.35**	**314**	P		**P**	**04 24 07.0**	**+1.2**
MAKZ	**Makanchi**	**58.56**	**314**	P		**P**	**04 24 07.8**	**+0.5**
J20K	**Nowinta River**	**60.54**	**26**	P		**P**	**04 24 08.9**	**+0.5**
J20K				IAmb		IAmb	04 25 06.0	
	comp=Z,8.6nn,1.5s							
SKT	**Skwentna**	**61.03**	**29**	P		**P**	**04 24 24.0**	**+0.3**
SKT				IAmb		IAmb	04 24 25.8	
	comp=Z,8.8nn,1.4s							
CAST	**Castle Rocks**	**61.18**	**27**	P		**P**	**04 24 26.0**	**+1.2**
IMAR	**Indian Mountai**	**61.30**	**24**	P		**P**	**04 24 25.8**	**+0.3**
H21K	**Melozitna Rive**	**61.56**	**25**	P		**P**	**04 24 28.4**	**+1.2**
BPAW	**Bear Paw Mtn.**	**61.84**	**26**	P		**P**	**04 24 29.9**	**+0.8**
BPAW				IAmb		IAmb	04 24 54.8	
	comp=Z,5.0nn,1.3s							
MLY	**Manley**	**62.20**	**25**	P		**P**	**04 24 32.3**	**+0.8**
MLY				IAmb		IAmb	04 24 33.9	
	comp=Z,4.1nn,1.4s							
MDM	**Murphy Dome**	**63.21**	**26**	P		**P**	**04 24 40.0**	**+1.8**
H24K	**Noodor Dome**	**63.56**	**25**	P		**P**	**04 24 41.7**	**+1.2**
H24K				IAmb		IAmb	04 24 58.7	
	comp=Z,4.6nn,1.5s							
IL31		**63.73**	**26**	P		**P**	**04 24 41.6**	**+0.1**
IL31				IAmb		IAmb	04 24 54.0	
	comp=Z,4.4nn,1.3s							
ILAR	**Eielson Array**	**63.73**	**26**	P		**P**	**04 24 40.9**	**-0.7**
	comp=Z,0.2nn,0.4s,baz=255,slow=5.7,SNR=4.8							
	comp=Z,0.2nn,0.4s							
J25K	**Salcha River,**	**64.34**	**27**	P		**P**	**04 24 45.2**	**-0.4**
J25K				IAmb		IAmb	04 25 00.6	
	comp=Z,3.9nn,1.4s							
BMAR	**Burnt Mountain**	**65.19**	**24**	P		**P**	**04 24 52.5**	**+1.4**
NIL	**Nilore**	**65.39**	**299**	P		**P**	**04 24 53.5**	**+0.5**
BCAR	**Beaver Creek A**	**65.67**	**28**	P		**P**	**04 24 54.7**	**+0.5**
EGAK	**Eagle**	**66.15**	**27**	P		**P**	**04 24 58.5**	**+1.4**
EGAK				IAmb		IAmb	04 25 13.1	
	comp=Z,5.5nn,1.4s							
INK	**Inuvik**	**69.45**	**23**	P		**P**	**04 25 17.9**	**+0.2**
	comp=Z,1.6nn,0.9s,baz=288,slow=11,SNR=4.8							
	comp=Z,1.6nn,0.9s							
INK	**Inuvik**	**69.45**	**23**	P		**P**	**04 25 18.1**	**+0.4**
INK				IAmb		IAmb	04 25 56.1	
	comp=Z,6.8nn,1.4s							
ABKAR	**Akbulak array**	**73.23**	**317**	P		**P**	**04 25 40.1**	**-0.6**
YKA	**Yellowknife Ar**	**78.08**	**28**	P		**P**	**04 26 07.8**	**-0.1**
	comp=Z,0.7nn,0.8s,baz=275,slow=8.7,SNR=2.0							
	comp=Z,0.7nn,0.8s							
NVAR	**Mina Array Bea**	**83.28**	**52**	P		**P**	**04 26 36.6**	**+0.3**
	comp=Z,0.3nn,0.5s,baz=279,slow=5.1,SNR=4.3							
	comp=Z,0.3nn,0.5s							
FINES	**FINESS Array B**	**86.82**	**335**	P		**P**	**04 26 52.2**	**-0.9**
	comp=Z,3.4nn,0.9s,baz=66,slow=4.7,SNR=3.7							
	comp=Z,3.4nn,0.9s							
LPAZ	**La Paz**	**147.84**	**91**	PKPbc		**PKPdf**	**04 33 52.9**	**+1.6**
	comp=Z,0.5nn,0.4s,baz=286,slow=5.6,SNR=7.1							

IDC ***13*** *04:34:06.1±2.4,6°.37S×130°.58E, h112km±26km, mb3.8/1, mbtmp4.5/6, MS3.2/1, Error ellipse: s-maj=42.8km s-min=20.6km az=92.0*

ISC 13 04:34:03.3±1.0,6°.48S±0°.06×130°.7E±0°.1, h90km, n7, σ3≋66/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.60**	**6**	P	**Pn**	**04 35 25.6**	**+1.5**
	112nm,0.2s,baz=198,slow=20,SNR=41						
SIJI				S	**Sn**	**04 36 22.4**	**-4.7**
	36nm,0.3s,baz=51,slow=23,SNR=11						
BATI	**Baumata**	**7.90**	**242**	P	**Pn**	**04 35 59.1**	**+3.6**
	13nm,0.3s,baz=72,slow=20,SNR=1.3						
BATI				S	**Sn**	**04 37 20.2**	**-3.2**
	11nm,0.3s,baz=115,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**12.57**	**203**	P	**Pn**	**04 36 59.7**	**+0.9**
	3.7nm,0.3s,baz=22,slow=11,SNR=41						
FITZ				S	**Sn**	**04 39 13.2**	**-3.8**
	3.3nm,0.4s,baz=49,slow=20,SNR=6.9						
WRA	**Warramunga Arr**	**13.84**	**166**	P	**Pn**	**04 37 17.8**	**+2.2**
	2.7nm,0.3s,baz=345,slow=13,SNR=47						
WRA				S	**Sn**	**04 39 45.7**	**-2.3**
	1.6nm,0.4s,baz=345,slow=22,SNR=6.8						
ASAR	**Alice Springs**	**17.36**	**170**	P	**Pn**	**04 38 04.2**	**+4.1**
	3.0nm,0.4s,baz=349,slow=10.0,SNR=56						
ASAR				S	**Sn**	**04 41 09.0**	**-4.1**
	0.4nm,0.5s,baz=356,slow=29,SNR=2.1						
URZ	**Urewera**	**52.51**	**134**	LR	LR	05 09 18.9	
	comp=Z,24nm,18.2s,baz=33,slow=40						
MKAR	**Makanchi Array**	**68.18**	**326**	P	**P**	**04 44 53.4**	**-0.7**
	0.8nm,0.4s,baz=115,slow=7.5,SNR=16						
	0.8nm,0.4s						

IDC ***13*** *04:35:06.5±4.9,8°.44S×74°.79W, h261km±68km, mb2.9/3, mbtmp3.6/6, Error ellipse: s-maj=78.3km s-min=22.1km az=27.0*

VAO ***13*** *04:35:07.6±1.8,7°.83S×73°.79W, h159km±5km, mbR3.7*

ISC 13 04:34:58.6±0.8,7°.79S±0°.08×74°.53W±0°.08, h151km, n24, σ2≋37/26, mb3.3/3, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	**Cruzeiro do Su**	**1.81**	**88**	*eP*	**Pn**	**04 35 33.9**	**+2.3**
NNA	**Nana**	**4.75**	**208**	P	**Pn**	**04 36 11.5**	**+2.6**
	14nm,0.3s,baz=35,slow=5.8,SNR=14						
NNA				S	**Sn**	**04 37 03.9**	**+0.2**
	32nm,0.3s,baz=109,slow=9.6,SNR=6.8						
ETMB	**Extrema**	**8.46**	**104**	*eP*	**Pn**	**04 36 57.0**	**-1.2**
LPAZ	**La Paz**	**10.51**	**144**	P	**Pn**	**04 37 27.6**	**+1.6**
	0.3nm,0.4s,baz=329,slow=12,SNR=1.6						
LPAZ				S	**Sn**	**04 39 16.1**	**-6.5**
	1.0nm,0.7s,baz=49,slow=9.3,SNR=2.0						
LPAZ	**La Paz**	**10.51**	**144**	*eP*	**Pn**	**04 37 28.4**	**+2.5**
MACA	**Manacapuru-AM**	**14.52**	**72**	*eP*	**Pn**	**04 38 17.2**	**0.0**
VILB	**Vilhena**	**14.99**	**111**	*eP*	**Pn**	**04 38 23.3**	**+0.2**
SIV	**San Ignacio**	**15.48**	**123**	P	**Pn**	**04 38 29.4**	**+0.4**
	0.6nm,0.2s,baz=300,slow=14,SNR=1.6						
PTLB	**Pontes e Lacer**	**16.88**	**118**	*eP*	**P**	**04 38 46.8**	**+1.1**
BOAV	**Boa Vista**	**17.25**	**55**	*eP*	**Pn**	**04 38 52.2**	**+1.6**
PDRB	**Porto dos Gac**	**17.95**	**104**	*eP*	**P**	**04 38 58.7**	**+1.3**
CLDB	**Colider**	**18.73**	**101**	*eP*	**P**	**04 39 06.6**	**+0.6**
ITTB	**Itaituba**	**18.99**	**81**	*eP*	**P**	**04 39 09.5**	**+0.7**
NPGB	**Novo Progresso**	**19.02**	**89**	*eP*	**P**	**04 39 09.5**	**+0.3**
SALV	**Santo Antonio**	**20.10**	**115**	*eP*	**P**	**04 39 21.1**	**+0.3**
MALB	**Monte Alegre**	**21.03**	**75**	*eP*	**P**	**04 39 31.5**	**+0.8**
AQDB	**Aquidauana**	**22.16**	**127**	*eP*	**P**	**04 39 44.7**	**+2.3**
SNDB	**Serra Nova Dou**	**23.26**	**102**	*eP*	**P**	**04 39 53.5**	**+0.6**
MCPB	**Macapa, AP**	**23.58**	**73**	*eP*	**P**	**04 39 57.4**	**+1.5**
DUB01	**Friburgo-RJ**	**34.06**	**118**	*eP*	**P**	**04 41 31.1**	**+2.2**
TXAR	**Lajitas Array**	**46.36**	**324**	P	**P**	**04 43 10.8**	**+0.9**
	0.2nm,0.5s,baz=149,slow=8.5,SNR=6.3						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**76.54**	**342**	P	**P**	**04 46 28.9**	**-2.9**
	0.5nm,0.8s,baz=140,slow=5.8,SNR=2.4						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.50**	**75**	P	**P**	**04 46 42.3**	**-1.4**
	0.2nm,0.3s,baz=260,slow=5.6,SNR=6.7						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**140.42**	**225**	PKP	**PKPdf**	**04 54 05.0**	**-5.8**
	0.6nm,1.1s,baz=131,slow=2.6,SNR=5.6						

IDC ***13*** *05:11:51.9±0.7,56°.06S×26°.47W, h0km, mb4.1/8, mbtmp4.0/9, ML3.7/1, MS3.2/1, Error ellipse: s-maj=27.8km s-min=17.6km az=73.0*

NEIC ***13*** *05:11:55.0±1.9,56°.2S±0°.1×26°.8W±0°.2, h13km±5km, mb4.5/33, Error ellipse: s-maj=19.0km s-min=14.8km az=52.0*

ISC 13 05:11:57.4±0.6,56°.14S±0°.09×26°.8W±0°.1, h35km, n62, σ0≋94/55, mb4.4/20, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.85**	**284**	Pn	**Pn**	**05 13 21.0**	**-0.4**
VNA1	**Neumayer--Stat**	**16.64**	**158**	P	**P**	**05 15 49.3**	**-0.2**
ESPZ	**Base Esperanza**	**16.72**	**232**	Pn	**Pn**	**05 15 48.0**	**-0.4**
ESPZ				IAmb	IAmb	05 16 02.4	
	comp=Z,45nn,1.5s						
VNA3	**Neumayer Olymp**	**16.84**	**161**	P	**P**	**05 15 51.2**	**-0.6**
VNA2	**Neumayer--Watz**	**17.03**	**158**	P	**P**	**05 15 56.1**	**+2.2**
	baz=317,slow=13						
SNAA	**Sanae**	**18.58**	**156**	P	**P**	**05 16 10.8**	**-0.2**
SNAA	**Sanae**	**18.58**	**156**	P	**P**	**05 16 10.6**	**-0.4**
	comp=Z,0.2nn,0.3s,baz=295,slow=12,SNR=14						
	comp=Z,0.7nn,0.5s						
SNAA	**Sanae**	**18.58**	**156**	P	**P**	**05 16 10.7**	**-0.2**
PMSA	**Palmer Station**	**20.01**	**229**	P	Pn	05 16 29.0	+0.6
	comp=Z,5.0nn,0.5s,baz=61,slow=6.8,SNR=13						
PMSA				LR	LR	05 22 57.2	
	comp=Z,61nn,18.1s,baz=46,slow=33						
	comp=Z,5.0nn,0.5s						
PMSA	**Palmer Station**	**20.01**	**229**	P	Pn	05 16 29.1	+0.6
BELA	**Belgrano 2**	**22.01**	**184**	P	**P**	**05 16 46.5**	**-1.6**
GO09	**Cerro Castillo**	**26.99**	**261**	P	**P**	**05 17 35.4**	**-0.2**
TRQA	**Tornquist**	**29.55**	**293**	P	**P**	**05 17 57.9**	**-0.6**
PLTB	**Pedras Altas**	**30.72**	**311**	P	**P**	**05 18 09.8**	**+1.0**
PLTB				IAmb	IAmb	05 18 11.1	
	comp=Z,3.8nn,0.7s						
QSPA	**South Pole Qui**	**34.11**	**180**	P	**P**	**05 18 38.1**	**-0.3**
	comp=Z,1.6nn,0.5s,baz=217,slow=0.8,SNR=18						
	comp=Z,1.6nn,0.5s						
QSPA	**South Pole Qui**	**34.11**	**180**	P	**P**	**05 18 38.5**	**0.0**
QSPA				IAmb	IAmb	05 18 41.5	
	comp=Z,7.5nn,1.2s						
ITAB	**Concordia**	**34.13**	**317**	P	**P**	**05 18 40.0**	**+1.3**
CPUP	**Villa Florida**	**37.03**	**311**	P	**P**	**05 19 03.5**	**-0.1**
	comp=Z,1.1nn,0.6s,baz=166,slow=8.9,SNR=4.5						
	comp=Z,1.1nn,0.6s						
CPUP	**Villa Florida**	**37.03**	**311**	P	**P**	**05 19 04.1**	**+0.5**
MT09	**Talagante**	**37.54**	**288**	P	**P**	**05 19 07.1**	**-0.9**
MT09				IAmb	IAmb	05 19 25.8	
	comp=Z,19nm,1.5s						
MT02	**Curacav**	**38.02**	**288**	P	**P**	**05 19 11.4**	**-0.5**
MT02				IAmb	IAmb	05 19 16.0	
	comp=Z,12nm,1.1s						
CO02	**Combarbal**	**39.55**	**290**	P	**P**	**05 19 25.5**	**+0.6**
MAW	**Mawson**	**39.95**	**143**	P	**P**	**05 19 27.5**	**-0.2**
	comp=Z,1.0nn,0.7s,baz=243,slow=6.8,SNR=1.4						
	comp=Z,1.0nn,0.7s						
MAW	**Mawson**	**39.95**	**143**	P	**P**	**05 19 27.6**	**-0.1**
AC05	**El Transito**	**41.06**	**293**	P	**P**	**05 19 37.2**	**-0.2**
AC05				IAmb	IAmb	05 20 12.4	
	comp=Z,19nm,1.3s						
AQDB	**Aquidauana**	**41.61**	**317**	P	**P**	**05 19 42.0**	**+0.2**
AC02	**Maricunga**	**42.11**	**296**	P	**P**	**05 19 47.2**	**+0.7**
AC02				IAmb	IAmb	05 20 10.5	
	comp=Z,10nm,1.4s						
GO02	**Mina Guanaco**	**43.72**	**297**	P	**P**	**05 20 00.5**	**+1.2**
GO02				IAmb	IAmb	05 20 06.9	
	comp=Z,19nm,1.4s						
LVC	**Limon Verde**	**45.53**	**300**	P	**P**	**05 20 14.7**	**+0.9**
LVC				IAmb	IAmb	05 20 19.3	
	comp=Z,4.4nn,0.9s						
VNDA	**Vanda**	**46.50**	**183**	P	**P**	**05 20 20.8**	**+0.4**
	comp=Z,0.5nn,0.5s,baz=179,slow=4.9,SNR=6.2						
	comp=Z,0.5nn,0.5s						
PB07	**IPOC Station P**	**46.75**	**299**	P	**P**	**05 20 23.4**	**+0.1**
PB01	**IPOC Station P**	**47.14**	**300**	P	**P**	**05 20 26.9**	**+0.8**
PTLB	**Pontes e Lacer**	**47.51**	**316**	P	**P**	**05 20 29.3**	**+0.4**
PTLB				IAmb	IAmb	05 20 30.4	
	comp=Z,3.5nn,0.7s						
H10S2	**ASCENSION HYDR**	**48.02**	**16**	T	T	06 13 11.2	
	baz=31,slow=74,SNR=2.5						
H10S3	**ASCENSION HYDR**	**48.02**	**16**	T	T	06 12 53.1	
	baz=189,slow=74,SNR=21						
H10N1	**ASCENSION HYDR**	**49.14**	**16**	T	T	06 14 17.0	
	baz=191,SNR=5.0						
H10N3	**ASCENSION HYDR**	**49.14**	**16**	T	T	06 14 17.1	
	baz=191,SNR=32						
H10N2	**ASCENSION HYDR**	**49.16**	**16**	T	T	06 14 18.6	
	baz=191,SNR=14						
PB16	**IPOC Station P**	**49.47**	**302**	P	**P**	**05 20 45.4**	**+0.7**
PB16				IAmb	IAmb	05 20 57.6	
	comp=Z,8.6nn,1.4s						
AP01	**Chacalluta**	**49.84**	**301**	P	**P**	**05 20 48.8**	**+2.0**
PB18	**Visviri**	**50.10**	**303**	P	**P**	**05 20 50.8**	**+1.4**
PB18				IAmb	IAmb	05 21 16.6	
	comp=Z,8.5nn,1.1s						
LPAZ	**La Paz**	**50.60**	**305**	P	**P**	**05 20 54.3**	**+0.9**
	comp=Z,3.9nn,0.5s,baz=117,slow=5.3,SNR=33						
	comp=Z,3.9nn,0.5s						
LPAZ	**La Paz**	**50.60**	**305**	P	**P**	**05 20 54.5**	**+1.1**
LPAZ				IAmb	IAmb	05 20 55.1	
	comp=Z,4.1nn,0.6s						
BOAV	**Boa Vista**	**64.48**	**322**	P	**P**	**05 22 29.7**	**-0.5**
BOAV				IAmb	IAmb	05 22 31.4	
	comp=Z,7.6nn,1.3s						
MCRA	**Macar, Loja**	**66.58**	**300**	P	**P**	**05 22 42.9**	**-1.1**
MCRA				IAmb	IAmb	05 22 44.8	
	comp=Z,2.6nn,0.8s						
MCQ	**Macquarie Isla**	**69.62**	**184**	P	**P**	**05 23 05.5**	**+3.1**
TOA0	**Torodi Ar. Sit**	**73.03**	**29**	P	**P**	**05 23 23.2**	**-0.2**
TOA0				IAmb	IAmb	05 23 48.2	
	comp=Z,7.4nn,1.5s						
TORD	**Torodi Ar. Bea**	**73.03**	**29**	P	**P**	**05 23 23.5**	**+0.1**
	comp=Z,0.7nn,0.4s,baz=198,slow=6.3,SNR=19						
	comp=Z,0.7nn,0.4s						
TORD	**Torodi Ar. Bea**	**73.03**	**29**	P	**P**	**05 23 23.8**	**+0.4**
TEIG	**Tepich**	**91.93**	**304**	P	**P**	**05 25 02.1**	**+0.2**
ASAR	**Alice Springs**	**99.84**	**162**	P	**P**	**05 25 33.0**	**-0.6**
	comp=Z,0.4nn,0.8s,baz=167,slow=4.4,SNR=1.7						
	comp=Z,0.4nn,0.8s						
NVAR	**Mina Array Bea**	**121.63**	**293**	PKP	**PKiKP**	**05 30 47.5**	**+0.5**
	comp=Z,0.2nn,0.6s,baz=123,slow=3.0,SNR=2.0						
FINES	**FINESS Array B**	**124.36**	**28**	PKP	**PKPdf**	**05 30 50.0**	**-1.0**
	comp=Z,2.7nn,0.9s,baz=197,slow=3.2,SNR=4.4						
ARCES	**ARCESS Array B**	**130.94**	**22**	PKP	**PKPdf**	**05 31 01.8**	**-1.5**
	comp=Z,4.8nn,1.2s,baz=259,slow=1.8,SNR=3.7						
YKA	**Yellowknife Ar**	**136.38**	**318**	PKP	**PKPdf**	**05 31 13.3**	**-0.4**
	comp=Z,0.2nn,0.6s,baz=108,slow=6.0,SNR=2.1						
INK	**Inuvik**	**146.01**	**320**	PKPbc	**PKPbc**	**05 31 31.5**	**-0.2**
	comp=Z,0.7nn,0.3s,baz=106,slow=1.7,SNR=9.7						
EPYK	**Eagle Plains**	**146.63**	**316**		**PKPbc**	**05 31 33.3**	**-0.4**
DAWY	**Dawson**	**147.01**	**312**	PKPdf	**PKPbc**	**05 31 33.9**	**-0.9**
BCAR	**Beaver Creek A**	**147.71**	**309**	PKPdf	**PKPdf**	**05 31 35.2**	**+1.3**
I26K	**Coal Creek Min**	**148.91**	**313**	PKPdf	**PKPbc**	**05 31 39.0**	**-0.7**
ILAR	**Eielson Array**	**150.33**	**311**	PKPbc	**PKPbc**	**05 31 42.7**	**-0.6**
	comp=Z,1.2nn,0.6s,baz=144,slow=3.0,SNR=16						
SONM	**Songino Array**	**150.52**	**86**	PKPbc	**PKPbc**	**05 31 43.1**	**-1.3**
	comp=Z,0.3nn,0.4s,baz=242,slow=2.8,SNR=1.5						

IDC ***13*** *05:22:31.3±0.8,13°.86N×144°.72E, h179km±4km, mb3.2/5, mbtmp3.7/5, Error ellipse: s-maj=44.1km s-min=20.7km az=100.0*

NEIC ***13*** *05:22:32.6±1.5,13°.74N±0°.05×145°.0E±0°.2, h176km±6km, mb4.3/11, Error ellipse: s-maj=28.3km s-min=7.6km az=91.0*

ISC 13 05:22:32.1±0.7,13°.75N±0°.09×144°.7E±0°.2, h176km, n22, σ0≋97/23, mb3.7/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.23**	**135**	P	**Pn**	**05 22 56.1**	**+0.5**
	133nm,0.3s,baz=336,slow=1.6,SNR=11						
GUMO				S	**Sn**	**05 23 14.9**	**+1.3**
	194nm,0.2s,baz=345,slow=20,SNR=19						
GUMO	**Guam**	**0.23**	**135**	Pn	**Pn**	**05 22 55.9**	**+0.3**
JCJ	**Chichijima**	**13.48**	**350**	Pn	**Pn**	**05 25 37.5**	**+1.0**
MANU	**Manus Island**	**15.91**	**170**	P	**P**	**05 26 07.3**	**+0.4**
FAKI	**Fak Fak**	**20.66**	**218**	P	**P**	**05 26 59.1**	**+0.6**
FAKI				IAmb	IAmb	05 27 27.9	
	comp=Z,52nn,1.4s						
JGF	**Kuroka**	**22.74**	**344**	P	**P**	**05 27 21.4**	**+2.2**
JGF				IAmb	IAmb	05 27 23.0	
	comp=Z,7.6nn,0.9s						
WB0	**Warramunga Arr**	**34.82**	**197**	P	**P**	**05 29 05.8**	**-0.6**
WB0				IAmb	IAmb	05 29 47.9	
	comp=Z,16nm,1.4s						
WB2	**Warramunga Arr**	**35.00**	**197**	P	**P**	**05 29 07.5**	**-0.4**
WB2				IAmb	IAmb	05 29 38.8	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**35.00**	**197**	P	**P**	**05 29 07.5**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=17,slow=9.7,SNR=23						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**35.00**	**197**	P	**P**	**05 29 07.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**36.81**	**211**	P	**P**	**05 29 22.9**	**-0.5**
FITZ				IAmb	IAmb	05 29 41.7	
	comp=Z,8.1nm,1.4s						
AS31	**Alice Springs**	**38.66**	**196**	P	**P**	**05 29 39.6**	**+0.8**
AS31				IAmb	IAmb	05 29 58.7	
	comp=Z,1.1nm,1.1s						
ASAR	**Alice Springs**	**38.66**	**196**	P	**P**	**05 29 38.7**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=30,slow=8.5,SNR=4.1						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**38.66**	**196**	P	**P**	**05 29 39.2**	**+0.4**
STKA	**Stephens Creek**	**45.47**	**184**	P	**P**	**05 30 33.4**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=0.5,slow=5.0,SNR=3.2						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**45.47**	**184**	P	**P**	**05 30 33.6**	**-0.1**
SONM	**Songino Array**	**46.51**	**325**	P	**P**	**05 30 39.8**	**-2.1**
	comp=Z,0.3nn,0.3s,baz=115,slow=6.8,SNR=1.9						
	comp=Z,0.3nn,0.3s						
MCK	**McKinley**	**67.36**	**26**	P	**P**	**05 33 07.5**	**-0.6**
MCK				IAmb	IAmb	05 33 12.7	
	comp=Z,3.8nm,0.4s						
MESA	**MESA**	**69.89**	**31**	P	**P**	**05 33 23.8**	**-0.2**
BMAR	**Burnt Mountain**	**70.01**	**23**	P	**P**	**05 33 23.9**	**-0.6**
NVAR	**Mina Array Bea**	**86.94**	**51**	P	**P**	**05 34 56.4**	**-1.5**
	comp=Z,0.3nn,0.6s,baz=260,slow=6.3,SNR=4.7						
	comp=Z,0.3nn,0.6s						
LPAZ	**La Paz**	**148.21**	**99**	PKPbc	**PKPdf**	**05 41 56.6**	**+1.1**
	comp=Z,0.4nn,0.6s,baz=236,slow=3.6,SNR=2.2						

IDC ***13*** *05:41:48.6±37.0, 30°.69S×176°.95W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=678.8km s-min=179.7km az=98.0*

NEIC ***13*** *05:41:52.5±2.1, 31°.17S±0°.09×177°.26W±0°.06, h10km±1km, mb4.4/10, Error ellipse: s-maj=15.1km s-min=8.6km az=159.0*

WEL ***13*** *05:42:09.9±1.3, 31°.5S±22°×17°.8W±5°.1, h142km±38km, M4.3/3, mB4.5/1, MLv4.3/3, Mw(mB)3.7/1, Error ellipse: s-maj=0.1km s-min=0.0km az=112.2*

ISC 13 05:42:10.1±1.3, 31°.61S±0°.07×177°.9W±0°.2, h150km, n32, σ2≋51/32, mb4.2/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.34**	**358**	P	**Pn**	**05 42 49.7**	**+0.3**
GLKZ				S	**Sn**	**05 43 15.5**	**-4.0**
RAO	**Raoul Island**	**2.35**	**358**	Pn	Pn	05 42 25.7	-24
RIZ	**Raoul Island**	**2.36**	**358**	S	**Sn**	**05 43 17.2**	**-2.7**
PKGZ	**Pakihiroa**	**7.10**	**207**	P	**Pn**	**05 43 52.5**	**+1.0**
PKGZ				S	**Sn**	**05 45 08.8**	**-2.2**
HAZ	**Te Kaha**	**7.11**	**209**	P	**Pn**	**05 43 52.3**	**+0.8**
HAZ				S	**Sn**	**05 45 13.3**	**+2.3**
PUZ	**Puketiti**	**7.20**	**205**	P	**Pn**	**05 43 49.7**	**-3.0**
PUZ				S	**Sn**	**05 45 09.9**	**-3.3**
RUGZ	**Raukumara Rang**	**7.33**	**209**	P	**Pn**	**05 43 54.7**	**+0.2**
RUGZ				S	**Sn**	**05 45 13.6**	**-2.9**
CNGZ	**Carnagh Statio**	**7.58**	**204**	S	**Sn**	**05 45 20.4**	**-2.0**
TKGZ	**Te Karaka**	**7.67**	**206**	S	**Sn**	**05 45 26.3**	**+1.7**
MWZ	**Matawai**	**7.70**	**208**	P	**Pn**	**05 43 55.8**	**-3.7**
MWZ				S	**Sn**	**05 45 25.9**	**+0.5**
URZ	**Urewera**	**7.82**	**211**	Pn	Pn	05 43 53.5	-7.4
URZ	**Urewera**	**7.82**	**211**	S	**Sn**	**05 45 28.2**	**+0.1**
**R

ESDC	**Sonseca Array**	**57.11**	**298**	P		**P**	**05 56 31.6**	**+1.5**
	0.2nm,0.5s,baz=76,slow=5.4,SNR=1.9							
	0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**65.18**	**268**	P		**P**	**05 57 24.0**	**-0.5**
	0.3nm,0.9s,baz=54,slow=6.1,SNR=1.6							
	0.3nm,0.9s							

IDC 13 05:48:23.4±18.0, 23°66S×178°88E, h650km±230km, mb2.8/5, mbtmp3.9/5, Error ellipse: s-maj=217.4km s-min=72.3km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**30.45**	**270**	P		P	05 53 48.0	+1.3
	1.5nm,0.3s,baz=109,slow=9.5,SNR=1.6							
	1.5nm,0.3s							
ASAR	**Alice Springs**	**41.06**	**261**	P		P	05 55 12.1	-1.4
	0.3nm,0.3s,baz=102,slow=6.8,SNR=6.1							
	0.3nm,0.3s							
WRA	**Warramunga Arr**	**41.40**	**266**	P		P	05 55 16.2	+0.1
	0.8nm,0.3s,baz=101,slow=8.4,SNR=72							
	0.8nm,0.3s							
FITZ	**Fitzroy Crossi**	**49.83**	**266**	P		P	05 56 20.8	+1.1
	1.6nm,0.7s,baz=90,slow=7.1,SNR=2.3							
	1.6nm,0.7s							
TXAR	**Lajitas Array**	**91.18**	**58**	P		P	06 00 21.4	0.0
	0.1nm,0.6s,baz=235,slow=4.3,SNR=2.4							
	0.1nm,0.6s							

SSNC 13 05:48:43.8±1.7, 19°.37N×73°.01W, h20km±31km, MD2.7, ML1.5, MW2.6
OSPL 13 05:48:44.3±1.7, 19°.50N×72°.97W, h27km±31km, ML1.9
ISC 13 05:48:39.8±1.3, 19°.51N±0°.09×72°.99W±0°.05, h14km±11km, n7, σ1°75/13, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAPH	**Port-au-Prince**	**1.18**	**146**	*i* P		**Pb**	**05 49 03.3**	**+1.4**
PAPH				*eS*		**Sg**	**05 49 17.0**	**-0.8**
PAPH				IAML			05 49 21.7	
	comp=Z,19nm,0.5s							
LODA1	**ITESIL, Dajabo**	**1.21**	**88**	*eS*		**Sg**	**05 49 17.4**	**-1.5**
MASC	**Masc**	**1.34**	**300**	*eP*		**Pg**	**05 49 05.8**	**+0.2**
MASC				*eS*		**Sb**	**05 49 22.1**	**+0.2**
MASC				IAML			05 49 23.6	
	comp=E,4.2nm,0.1s							
MASC				IAML			05 49 23.8	
	comp=N,5.3nm,0.1s							
MASC	**Masc**	**1.34**	**300**	*i* P		**Pg**	**05 49 06.2**	**+0.6**
MASC				*eS*		**Sb**	**05 49 22.3**	**+0.5**
MASC				IAML			05 49 29.4	
	comp=Z,24nm,1.1s							
SDDR	**Presa de Saban**	**1.69**	**108**	*eP*		**Pn**	**05 49 08.8**	**-0.2**
SDDR				*eS*		**Sn**	**05 49 30.1**	**-0.4**
SDDR	**Presa de Saban**	**1.69**	**108**	*eS*		**Sn**	**05 49 31.1**	**+0.5**
RCC	**Rio Carpintero**	**2.59**	**281**	*eP*		**Pn**	**05 49 22.4**	**+1.1**
RCC				*eS*		**Sn**	**05 49 52.2**	**-0.5**
RCC				*eSg*		**Sb**	**05 49 53.4**	**-4.5**
RCC				IAML			05 49 53.5	
	comp=N,2.3nm,0.2s							
RCC				IAML			05 49 53.7	
	comp=E,3.8nm,0.2s							

IDC 13 05:54:16.1±1.1, 5°.01S×151°.00E, h0km, mb3.5/4, mbtmp3.6/4, Error ellipse: s-maj=76.7km s-min=15.9km az=142.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.24**	**56**	Pn		Pn	05 54 40.8	0.0
	302nm,0.3s,baz=267,slow=1.6,SNR=110							
KRVT				Sn		Sn	05 54 58.6	+0.5
	449nm,0.3s,baz=200,slow=9.7,SNR=11							
WRA	**Warramunga Arr**	**21.99**	**226**	P		P	05 59 13.4	+1.4
	0.6nm,0.5s,baz=51,slow=9.9,SNR=9.9							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**24.81**	**220**	P		P	05 59 40.0	-0.3
	0.4nm,0.5s,baz=59,slow=8.9,SNR=5.7							
	0.4nm,0.5s							
FITZ	**Fitzroy Crossi**	**27.99**	**240**	P		P	06 00 08.9	0.0
	0.6nm,0.3s,baz=57,slow=8.9,SNR=2.3							
	0.6nm,0.3s							
ILAR	**Eielson Array**	**83.03**	**22**	P		P	06 06 45.0	+1.8
	0.4nm,0.7s,baz=238,slow=5.2,SNR=3.0							
	0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**148.66**	**287**	PKPbc		PKPdf	06 14 03.9	+1.2
	1.4nm,0.7s,baz=75,slow=3.0,SNR=9.1							

KOLA 13 05:57:02.9, 67°.56N×34°.03E, h0km, ML2.3
HEL 13 05:57:03.7±0.2, 67°.64N×33°.93E, h0km, ML2.1, Explosion
IDC 13 05:57:09.4±2.3, 67°.67N×33°.06E, h0km, mbtmp3.5/3, ML2.2/3, Error ellipse: s-maj=23.4km s-min=10.7km az=79.0
ISC 13 05:57:03.3±0.9, 67°.64N±0°.05×33°.90E±0°.04, h0km, n23, σ1°03/39, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
APA	**Apatity**	**0.20**	**249**	P		**Pg**	**05 57 07.1**	**0.0**
APA				S		**Sg**	**05 57 10.1**	**+0.4**
APA0	**Apatity Array**	**0.35**	**265**	P		**Pg**	**05 57 09.7**	**-0.2**
APA0				S		**Sg**	**05 57 15.5**	**+1.1**
LVZ	**Lovozero**	**0.39**	**48**	PG		**Pg**	**05 57 10.8**	**+0.1**
	baz=225							
LVZ				SG		**Sg**	**05 57 14.4**	**-1.2**
TERR	**Teriberka**	**1.63**	**15**	P		**Pn**	**05 57 33.0**	**-0.2**
TERR				S		**Sn**	**05 57 54.5**	**-0.4**
VRF	**Varrio**	**1.64**	**276**	PG		**Pn**	**05 57 33.0**	**-0.3**
	baz=89							
VRF				MSG			05 57 53.0	
	comp=Z,17nm,0.2s							
VRF				SG		**Sn**	**05 57 55.0**	**-0.1**
OLKF	**Oulanka, Finla**	**2.21**	**235**	PG		**Pb**	**05 57 43.3**	**-0.7**
OLKF				SG		**Sb**	**05 58 12.2**	**+0.3**
KU6	**Riekki**	**2.27**	**226**	PG		**Pb**	**05 57 44.2**	**-0.8**
	baz=45							
KU6				MSG			05 58 11.1	
	comp=Z,8.0nm,0.2s							
KU6				SG		**Sb**	**05 58 13.8**	**+0.3**
MSF	**Maaselka**	**2.59**	**230**	PG		**Pb**	**05 57 49.7**	**-0.9**
	baz=50							
MSF				SG		**Sb**	**05 58 23.2**	**+0.3**
SGF	**Sodankyl**	**2.84**	**269**	PB		**Pb**	**05 57 53.5**	**-1.2**
SGF				SB		**Sb**	**05 58 28.9**	**-1.0**
RNF	**Rovaniemi**	**3.25**	**255**	PN		**Pn**	**05 57 55.7**	**+0.3**
RNF				SB		**Sb**	**05 58 39.4**	**-2.3**
KEV	**Kevo**	**3.29**	**313**	PN		**Pn**	**05 57 56.9**	**+0.9**
KEV				SN		**Sn**	**05 58 36.6**	**+0.9**
ARA0	**ARCESS Array S**	**3.62**	**306**	PN		**Pn**	**05 58 00.5**	**0.0**
ARCES	**ARCESS Array B**	**3.62**	**306**	Pn		**Pn**	**05 58 00.5**	**0.0**
	comp=Z,1.3nm,0.3s,baz=120,slow=15,SNR=62							
ARCES				Pg		**Pb**	**05 58 09.6**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=118,slow=16,SNR=4.2							
ARCES				Sn		**Sn**	**05 58 43.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=120,slow=26,SNR=7.1							
ARCES				Lg		Lg	05 58 53.9	
	comp=Z,1.4nm,0.3s,baz=112,slow=26,SNR=10							
	comp=Z,2.4nm,0.3s							
ARCES	**ARCESS Array B**	**3.62**	**306**	P		**Pn**	**05 58 00.5**	**0.0**
ARCES				S		**Sn**	**05 58 44.0**	**+0.2**
RMF	**Romuvaara**	**3.80**	**207**	PN		**Pn**	**05 58 03.3**	**+0.3**
KLF	**Kolari**	**3.85**	**269**	PG		**Pb**	**05 58 12.0**	**0.0**
KLF				SG		**Sg**	**05 59 03.8**	**-3.0**
HEF	**Hetta**	**3.92**	**286**	PN		**Pn**	**05 58 05.5**	**+0.8**
	baz=95							
HEF				SN		**Sn**	**05 58 51.5**	**+0.1**
TOF	**Tornio**	**4.09**	**252**	PG		**Pb**	**05 58 17.1**	**+1.1**
PAJU	**Pajala**	**4.22**	**267**	PN		**Pn**	**05 58 09.8**	**+1.1**
PAJU				SN		**Sn**	**05 58 59.1**	**+0.4**
OBF4	**Vikkela, Lumij**	**4.55**	**236**	PN		**Pn**	**05 58 15.0**	**+1.7**
	baz=51							
I37NO	**I37NO**	**5.83**	**291**	*i*			06 30 10.0	
	baz=99,slow=323,SNR=4.1							
FINES	**FINESS Array B**	**7.07**	**212**	Pn		**Pn**	**05 58 50.1**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=26,slow=13,SNR=1.8							
	comp=Z,3.6nm,1.1s							
HFS	**Hagfors**	**11.60**	**239**	Pn		**Pn**	**05 59 50.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=40,slow=11,SNR=1.2							
	comp=Z,5.2nm,1.2s							

NAO 13 06:19:38.2±1.0, 71°.40N×4°.07W, ML4.4
IDC 13 06:19:40.1±0.6, 71°.42N×4°.17W, h0km, mb3.8/13, mbtmp3.9/18, ML3.0/3, MS3.5/41, Error ellipse: s-maj=18.0km s-min=13.2km az=44.0
NEIC 13 06:19:41.5±1.7, 71°.50N±0°.09×3°.8W±0°.2, h10km±1km, mb4.3/17, Error ellipse: s-maj=15.1km s-min=12.8km az=180.0
BER 13 06:19:42.7±2.7, 71°.40N×4°.07W, h15km, MW4.4, ML4.4(NAO)
DNK 13 06:19:43.7±5.0, 71°.69N×5°.38W, h0km±164km, ML2.3
ISC 13 06:19:40.9±0.4, 71°.53N±0°.05×3°.84W±0°.04, h12km, n161, σ2°49/145, mb4.2/35, MS3.5/43, 3C-1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNW	**Jan Mayen West**	**1.56**	**253**	*eP*		**Pn**	**06 20 07.0**	**-1.4**
JMIC	**Jan Mayen**	**1.60**	**252**	Pn		**Pn**	**06 20 07.1**	**-1.8**
	6.9nm,0.3s,baz=41,slow=4.9,SNR=8.7							
JMIC				Sn		**Sn**	**06 20 25.6**	**-4.0**
	14nm,0.3s,baz=91,slow=20,SNR=9.1							
JMIC				LR		LR	06 20 35.7	
	comp=Z,204nm,20.9s,baz=51,slow=38							
JMIC	**Jan Mayen**	**1.60**	**252**	Pg		**Pn**	**06 20 06.5**	**-2.5**
JMIC				Lg		Lg	06 20 24.6	
JMIC	**Jan Mayen**	**1.60**	**252**	*eP*		**Pn**	**06 20 07.0**	**-1.9**
JMI	**Jan Mayen**	**1.69**	**251**	*eP*		**Pn**	**06 20 08.6**	**-1.6**
JMI				*eS*		**Sn**	**06 20 28.4**	**-3.4**
DBG	**Daneborg**	**5.56**	**308**	Pn		**Pn**	**06 21 01.1**	**-2.2**
DBG				Sn		**Sn**	**06 21 58.5**	**-8.4**
DBG	**Daneborg**	**5.56**	**308**	*i* P		**Pn**	**06 21 01.4**	**-1.8**
DBG				*eS*		Sn	06 21 55.1	-12
DBG				*i* S		Sb	06 21 56.1	-28
DBG				IAML			06 22 00.7	
	comp=Z,6.6nm,0.4s							
DBG	**Daneborg**	**5.56**	**308**	*eP*		**Pn**	**06 21 01.5**	**-1.8**
DBG				*eS*		**Sn**	**06 21 58.6**	**-8.4**
SCO	**Scoresbysund**	**6.00**	**269**	Pn		**Pn**	**06 21 08.8**	**-0.4**
DAG	**Danmarks Havn**	**6.62**	**329**	*i* P		**Pn**	**06 21 16.0**	**-1.8**
DAG	**Danmarks Havn**	**6.62**	**329**	*i* P		**Pn**	**06 21 16.4**	**-1.3**
DAG				*i* S		Sn	06 22 22.1	-11
DAG				IAML			06 22 28.0	
	comp=Z,21nm,0.7s							
DAG	**Danmarks Havn**	**6.62**	**329**	*eP*		**Pn**	**06 21 16.4**	**-1.3**
DAG				*eS*		Sn	06 22 20.4	-13
LOF	**Lofoten**	**6.89**	**111**	*eP*		**Pn**	**06 21 19.5**	**-2.0**
BJO1	**Bjornoya**	**7.29**	**55**	Pn		**Pn**	**06 21 28.5**	**+1.6**
BJO1	**Bjornoya**	**7.29**	**55**	*eP*		**Pn**	**06 21 28.6**	**+1.6**
STEI	**Steigen**	**7.53**	**109**	*eP*		**Pn**	**06 21 29.1**	**-1.0**
HSPB	**Hornsund (broa**	**7.56**	**35**	Pn		**Pn**	**06 21 30.5**	**-0.2**
HSPB	**Hornsund (broa**	**7.56**	**35**	*eP*		**Pn**	**06 21 31.4**	**+0.7**
TRO	**Tromso**	**7.80**	**93**	Pn		**Pn**	**06 21 32.2**	**-1.7**
TRO	**Tromso**	**7.80**	**93**	*eP*		**Pn**	**06 21 32.4**	**-1.6**
KONS	**Konsvik**	**7.88**	**121**	Pn		**Pn**	**06 21 33.7**	**-1.5**
KONS	**Konsvik**	**7.88**	**121**	*eP*		**Pn**	**06 21 33.6**	**-1.5**
FAUS	**Fauske**	**7.88**	**112**	*eP*		**Pn**	**06 21 32.8**	**-2.3**
FAUS				*eS*		**Sn**	**06 22 56.5**	**-7.6**
STOK	**Stokkvaagen**	**7.98**	**123**	Pn		**Pn**	**06 21 35.4**	**-1.0**
STOK	**Stokkvaagen**	**7.98**	**123**	*eP*		**Pn**	**06 21 34.9**	**-1.6**
STOK				*eS*		**Sn**	**06 22 58.3**	**-8.1**
BRBB	**Barentsburg B**	**8.06**	**27**	Pn		**Pn**	**06 21 39.9**	**+2.4**
BRBB	**Barentsburg B**	**8.06**	**27**	*eP*		**Pn**	**06 21 38.0**	**+0.4**
JETT	**Jettan, Norway**	**8.30**	**92**	*eP*		**Pn**	**06 21 39.8**	**-1.1**
KBS	**Kingsbay**	**8.40**	**21**	Pn		**Pn**	**06 21 43.0**	**+0.8**
KBS	**Kingsbay**	**8.40**	**21**			**Pn**	**06 21 42.3**	**+0.1**
KBS	**Kingsbay**	**8.40**	**21**	*i* P			**06 21 43.4**	**+1.2**
KBS	**Kingsbay**	**8.40**	**21**	*eP*		**Pn**	**06 21 42.7**	**+0.5**
SPA0	**Spitsbergen Ar**	**8.45**	**29**	Pn		**Pn**	**06 21 44.3**	**+1.4**
	baz=223,slow=14							
SPA0	**Spitsbergen Ar**	**8.45**	**29**	Pn		**Pn**	**06 21 44.3**	**+1.4**
	baz=223,slow=14							
SPB2	**Spitsbergen Ar**	**8.45**	**29**			**Pn**	**06 21 43.8**	**+1.0**
SPITS	**Spitsbergen Ar**	**8.45**	**29**	Pn		**Pn**	**06 21 43.9**	**+1.1**
	comp=Z,7.0nm,0.5s,baz=214,slow=15,SNR=73							
SPITS				Sn		**Sn**	**06 23 10.9**	**-7.0**
	baz=316,slow=12							
KIF	**Kilpisjarvi**	**8.68**	**95**	Pn		**Pn**	**06 21 44.7**	**-1.3**
KIF	**Kilpisjarvi**	**8.68**	**95**	*eP*		**Pn**	**06 21 45.0**	**-0.9**
HAMF	**Hammerfest**	**8.94**	**83**	*eP*		**Pn**	**06 21 49.1**	**-0.5**
NSS	**Namsos**	**9.15**	**132**	*eP*		**Pn**	**06 21 51.8**	**-0.7**
BORG	**Borgarnes**	**9.38**	**232**	LR		LR	06 24 50.3	
	comp=Z,74nm,18.7s,baz=4.6,slow=34							
HEF	**Hetta**	**9.88**	**95**	*eP*		**Pn**	**06 22 01.7**	**-0.7**
ARA0	**ARCESS Array S**	**9.94**	**87**	Pn		**Pn**	**06 22 01.8**	**-1.5**
	baz=288,slow=11							
ARA0	**ARCESS Array S**	**9.94**	**87**	Pn		**Pn**	**06 22 01.8**	**-1.5**
	baz=288,slow=11							
ARCES	**ARCESS Array B**	**9.94**	**87**	Pn		**Pn**	**06 22 01.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=294,slow=11,SNR=21							
ARCES				LR		LR	06 25 24.9	
	comp=Z,174nm,19.4s,baz=310,slow=34							
ARCES	**ARCESS Array B**	**9.94**	**87**			**Pn**	**06 22 03.3**	**+0.1**
AKN	**Aaknes**	**10.29**	**150**	Pn		**Pn**	**06 22 07.2**	**-0.9**
AKN				Sn		**Sn**	**06 23 55.9**	**-7.3**
AKN	**Aaknes**	**10.29**	**150**	Pn		**Pn**	**06 22 07.2**	**-0.9**
AKN				Sn		**Sn**	**06 23 55.9**	**-7.3**
KEV	**Kevo**	**10.32**	**85**	Pn		**Pn**	**06 22 07.9**	**-0.6**
NC204	**NORSAR Array S**	**11.79**	**143**	Pn		**Pn**	**06 22 27.1**	**-1.5**
NB2	**NORSAR Subarra**	**12.09**	**143**	Pn		**Pn**	**06 22 32.3**	**-0.5**
	baz=332,slow=16							
NB2	**NORSAR Subarra**	**12.09**	**143**	Pn		**Pn**	**06 22 32.3**	**-0.5**
	baz=332,slow=16							
NOA	**NORSAR Array B**	**12.09**	**143**	Pn		**Pn**	**06 22 32.1**	**-0.7**
	baz=336,slow=13,SNR=2.5							
NOA				Sn		**Sn**	**06 24 41.3**	**-6.1**
	baz=327,slow=22,SNR=2.5							
NOA				LR		LR	06 27 27.1	
	comp=Z,244nm,18.1s,baz=335,slow=39							
	comp=Z,0.4nm,0.5s							
KONO	**Kongsberg**	**13.11**	**149**	Pn		**Pn**	**06 22 46.9**	**+0.4**
HFS	**Hagfors**	**13.42**	**139**	Pn		**Pn**	**06 22 50.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=343,slow=9.6,SNR=15							
HFS				Sn		**Sn**	**06 25 11.5**	**-8.2**
	comp=Z,0.4nm,0.3s,baz=342,slow=23,SNR=5.1							
HFS				LR		LR	06 27 39.3	
	comp=Z,302nm,21.4s,baz=334,slow=36							
	comp=Z,5.3nm,0.7s							
HFS	**Hagfors**	**13.42**	**139**	Pn		**Pn**	**06 22 49.8**	**-1.0**
	baz=335,slow=10							
HFS	**Hagfors**	**13.42**	**139**	Pn		**Pn**	**06 22 49.8**	**-1.0**
	baz=335,slow=10							
LVZ	**Lovozero**	**13.65**	**87**	Pn		**Pn**	**06 22 52.0**	**-2.0**
FIA0	**FINESS Array S**	**15.42**	**116**	P		**Pn**	**06 23 16.7**	**-1.1**
	baz=324,slow=12							
FIA0	**FINESS Array S**	**15.42**	**116**	P		**Pn**	**06 23 16.7**	**-1.1**
	baz=324,slow=12							
FIA1	**FINESS Array S**	**15.42**	**116**	Pn		**Pn**	**06 23 18.8**	**+0.9**
FINES	**FINESS Array B**	**15.42**	**116**	Pn		**Pn**	**06 23 16.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=325,slow=12,SNR=6.8							
FINES				LR		LR	06 28 36.2	
	comp=Z,262nm,19.0s,baz=282,slow=35							
	comp=Z,15nm,1.0s							
FINES	**FINESS Array B**	**15.42**	**116**	Pn		**Pn**	**06 23 16.6**	**-1.2**
EKA	**Eskdalemuir Ar**	**16.26**	**179**	Pn		**Pn**	**06 23 28.3**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=1.3,slow=11,SNR=15							
EKA				LR		LR	06 28 54.8	
	comp=Z,105nm,19.5s,baz=360,slow=34							
EKA	**Eskdalemuir Ar**	**16.26**	**179**	P		**Pn**	**06 23 27.9**	**-0.9**
EKA	**Eskdalemuir Ar**	**16.26**	**179**	P		**Pn**	**06 23 27.9**	**-0.9**
SFJD	**Kangerlussuaq**	**16.79**	**278**	LR		LR	06 29 19.7	
	comp=Z,201nm,18.4s,baz=54,slow=35							
LSH	**Leshukonskoye**	**19.03**	**85**	*eP*		**Pn**	**06 24 05.5**	**+2.6**
	comp=Z,48nm,1.8s							
NRS	**Narsarsuaq**	**19.16**	**259**	P		**Pn**	**06 24 04.1**	**-0.5**
NRS				IAmb		IAmb	06 24 07.9	
	comp=Z,17nm,0.9s							
KLMR	**Klimovskoe**	**19.96**	**100**	*eP*		**P**	**06 24 10.9**	**-1.5**
	comp=Z,39nm,1.3s							
KLMR	**Klimovskoe**	**19.96**	**100**	*eP*		**P**	**06 24 11.0**	**-1.4**
KLMR				AMP			06 24 21.1	
	comp=Z,34nm,1.1s							
PRGR	**Permogore**	**21.30**	**92**	P		**P**	**06 24 25.2**	**-1.7**
CLL	**Collm**	**21.67**	**150**	*eP*		**P**	**06 24 30.0**	**-0.9**
	comp=Z,9.0nm,1.2s							
CLL				*ex*		x	06 24 39.0	
BRG	**Berggiesshubel**	**22.24**	**149**	*eP*		**P**	**06 24 39.6**	**+2.5**
BRG				Amp			06 24 43.8	
	comp=Z,8.4nm,1.1s							
BRG				*ex*		x	06 24 47.0	
BRG				Amp			06 24 49.5	
	comp=Z,9.5nm,1.1s							
PVCC	**Panska Ves**	**22.68**	**148**	AMS		AMS	06 33 40.0	
	comp=Z,100nm,17.6s							

CHVC	**Chvalec**	**22.88**	**146**	*eP*		**P**	**06 24 45.5**	**+1.6**
OSTC	**Ostas**	**22.93**	**146**	*eP*		**P**	**06 24 45.3**	**+0.8**
OSTC				AMS		AMS	06 35 00.0	
	comp=Z,200nm,13.2s							
UPC	**Upice**	**22.95**	**146**	*eP*		**P**	**06 24 46.3**	**+1.7**
UPC				AMS		AMS	06 34 40.0	
	comp=Z,200nm,14.3s							
DPC	**Dobruska-Polom**	**23.15**	**146**	*eP*		**P**	**06 24 47.5**	**+0.8**
DPC				AMS		AMS	06 34 50.0	
	comp=Z,100nm,20.2s							
PRU	**Pruhonice**	**23.19**	**149**	*eP*		**P**	**06 24 48.8**	**+1.7**
PRU				AMS		AMS	06 34 00.0	
	comp=Z,100nm,15.2s							
KRLC	**Kraliky**	**23.50**	**145**	*eP*		**P**	**06 24 50.6**	**+0.4**
KRLC				AMS		AMS	06 35 10.0	
	comp=Z,200nm,19.6s							
CLF	**Chambon-Foret**	**23.75**	**170**	P		**P**	**06 24 53.8**	**+1.2**
KHC	**Kasperske Hory**	**23.87**	**151**	P		**P**	**06 24 55.1**	**+1.3**
KHC	**Kasperske Hory**	**23.87**	**151**	*eP*		**P**	**06 24 55.2**	**+1.4**
KHC				AMS		AMS	06 33 10.0	
	comp=Z,100nm,14.2s							
MORC	**Moravsky Berou**	**23.92**	**144**	P		**P**	**06 24 55.2**	**+0.9**
MORC	**Moravsky Berou**	**23.92**	**144**	*eP*		**P**	**06 24 54.7**	**+0.4**
OJC	**Ojcow**	**23.94**	**141**	P		**P**	**06 24 55.3**	**+0.9**
OJC				IAmb		IAmb	06 25 00.8	
	comp=Z,7.6nm,1.0s							
BFO	**Black Forest**	**23.96**	**160**	P		**P**	**06 24 54.9**	**+0.2**
BFO				IAmb		IAmb	06 24 57.2	
	comp=Z,7.6nm,1.0s							
OKC	**Ostrava-Krasne**	**23.98**	**143**	AMS		AMS	06 35 30.0	
	comp=Z,200nm,16.7s							
TREC	**Trest**	**24.02**	**148**	AMS		AMS	06 35 40.0	
	comp=Z,100nm,10.8s							
GEC2	**GERESS Array S**	**24.17**	**151**			**P**	**06 24 56.8**	**+0.1**
GERES	**GERESS Array B**	**24.17**	**151**	P		**P**	**06 24 57.9**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=338,slow=9.5,SNR=14							
	comp=Z,1.3nm,0.7s							
GERES	**GERESS Array B**	**24.17**	**151**	P		**P**	**06 24 57.5**	**+0.8**
RES	**Resolute Bay**	**24.19**	**320**	LR		LR	06 34 01.0	
	comp=Z,161nm,19.7s,baz=10,slow=36							
VRAC	**Vranov**	**24.20**	**146**	P		**P**	**06 24 58.1**	**+1.2**
	comp=Z,1.5nm,0.4s,baz=338,slow=12,SNR=4.4							
VRAC				LR		LR	06 34 40.3	
	comp=Z,71nm,18.3s,baz=343,slow=37							
	comp=Z,1.5nm,0.4s							
VRAC	**Vranov**	**24.20**	**146**	*eP*		**P**	**06 24 58.0**	**+1.1**
KRUC	**Moravsky**	**24.41**	**147**	*eP*		**P**	**06 25 00.0**	**+1.3**
FRB	**Frobisher Bay**	**24.56**	**285**	LR		LR	06 34 04.7	
	comp=Z,110nm,19.5s,baz=42,slow=35							
DAVA	**Damuels**	**25.17**	**158**	*i* P		**P**	**06 25 08.8**	**+2.9**
	comp=Z,9.9nm,1.1s							
MOA	**Molln**	**25.23**	**151**	*eP*		**P**	**06 25 08.7**	**+2.5**
	comp=Z,6.2nm,1.2s							
MOTA	**Moosalm**	**25.27**	**156**	*i* P		**P**	**06 25 09.5**	**+2.8**
	comp=Z,11nm,1.3s							
WATA	**Walderalm**	**25.34**	**155**	*i* P		**P**	**06 25 10.3**	**+3.0**
	comp=Z,10nm,1.1s							
SQTA	**Sankt Quirin**	**25.40**	**156**	*i* P		**P**	**06 25 11.3**	**+3.4**
	comp=Z,6.3nm,1.0s							
CONA	**Conrad Observa**	**25.41**	**148**	*eP*		**P**	**06 25 11.4**	**+3.5**
	comp=Z,10nm,0.9s							
WTTA	**Wattenberg**	**25.41**	**155**	*i* P		**P**	**06 25 11.4**	**+3.3**
	comp=Z,19nm,1.4s							
FETA	**Feichten**	**25.53**	**156**	*eP*		**P**	**06 25 12.8**	**+3.7**
	comp=Z,5.7nm,1.4s							
AKASG	**Malin Array Be**	**25.66**	**127**	P		**P**	**06 25 10.2**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=336,slow=9.9,SNR=11							
AKASG				LR		LR	06 34 57.1	
	comp=Z,160nm,18.7s,baz=313,slow=36							
	comp=Z,2.7nm,0.6s							
AKBB	**Malin Array Si**	**25.66**	**127**			**P**	**06 25 10.0**	**-0.1**
AKBB				IAmb		IAmb	06 25 16.9	
	comp=Z,9.4nm,0.8s							
DAVOX	**Davos/Dischmat**	**25.67**	**158**	LR		LR	06 36 36.9	
	comp=Z,34nm,18.5s,baz=3.5,slow=40							
RONA	**Rosalia, Austr**	**25.70**	**148**	*eP*		**P**	**06 25 14.1**	**+3.5**
	comp=Z,7.4nm,1.1s							
AK05	**Malin Array Si**	**25.73**	**127**	P		**P**	**06 25

NEW Newport 51.61 308 LR LR 06 50 45.0
comp=Z,57nm,20.0s,baz=311,slow=36
TKL Tuckaleechee C 53.45 274 LR LR 06 50 57.9
comp=Z,60nm,18.3s,baz=35,slow=35
PDAR Pinedale Array 54.71 300 LR LR 06 52 32.0
comp=Z,78nm,18.1s,baz=44,slow=36
MGMO Mountain Grove 54.76 282 P P 06 29 11.0 +1.1
MGMO IAmb IAmb 06 29 15.8
comp=Z,4.9nm,0.9s
ELK Elko 58.13 304 LR LR 06 54 43.7
comp=Z,44nm,18.6s,baz=14,slow=36
TORD Torodi Ar. Bea 58.45 174 P P 06 29 36.8 +0.5
comp=Z,2.1nm,0.7s,baz=343,slow=7.0,SNR=15
comp=Z,2.1nm,0.7s
YBH Yreka Blue Hor 59.11 310 LR LR 06 54 56.2
comp=Z,70nm,19.9s,baz=39,slow=36
WSAR Wadi Sarin 59.51 109 LR LR 07 00 43.0
comp=Z,17nm,19.7s,baz=350,slow=41
NVAR Mina Array Bea 61.12 305 LR LR 06 56 17.1
comp=Z,46nm,19.4s,baz=36,slow=36
DBIC Dimbokro 64.79 181 P P 06 30 19.3 +0.2
comp=Z,1.4nm,0.6s,baz=338,slow=5.4,SNR=3.5
comp=Z,1.4nm,0.6s
TIC Toumodi 64.82 181⇑ *iP* P 06 30 19.6 +0.4
comp=Z,1.7nm,0.3s
KIC Kosan Boka 65.10 181⇑ *iP* P 06 30 21.7 +0.6
comp=Z,5.0nm,0.5s
LIC Lamto 65.24 181⇑ *iP* P 06 30 22.6 +0.7
comp=Z,5.4nm,0.5s
TXAR Lajitas Array 65.51 289 P P 06 30 24.6 +0.9
comp=Z,0.2nm,0.6s,baz=45,slow=5.3,SNR=4.4
TXAR LR LR 06 57 56.4
comp=Z,64nm,21.8s,baz=47,slow=35
comp=Z,0.2nm,0.6s
WRA Warramunga Arr 123.01 48 PKP PKiKP 06 38 36.5 -0.3
comp=Z,0.7nm,1.0s,baz=333,slow=2.3,SNR=2.1
ASAR Alice Springs 126.49 50 PKP PKiKP 06 38 43.1 -0.4
comp=Z,0.5nm,0.7s,baz=348,slow=1.7,SNR=11
MAW Mawson 145.81 141 PKPbc PKiKP 06 39 19.3 -2.0
comp=Z,3.1nm,0.9s,baz=7.8,slow=2.3,SNR=6.6

SJA ***13*** *06:20:58.9±0.7, 33.57°S×72.78°W, h12km±4km, ML4.6, MW4.5*

NEIC ***13*** *06:21:05.6, 33.37°S×72.42°W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.18; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-4.08; $M_{r\theta}$1.13; $M_{\theta\phi}$-1.02; $M_{\phi r}$-1.88; Fault plane solution: $M_0$4.79000×10^{15} NP1:ϕ_s175.94000°, δ57.74000°, λ70.11000°. NP2:ϕ_s30.07000°, δ37.33000°, λ118.33000°. Principal axes: T 4.9409, Plg70.0000°, Azm41.0000°; N -0.3213, Plg17.0000°, Azm187.0000°; P -4.6196, Plg11.0000°, Azm280.0000°;*

NEIC ***13*** *06:21:05.5±1.3, 33.38S±0.03×72.43W±0.05, h14km±6km, mb4.5/6, Mwr4.4/67, ML4.3(GUC) Error ellipse: s-maj=6.9km s-min=1.5km az=59.0*

GUC ***13*** *06:21:06.8±0.8, 33.44S×72.34W, h47km±3km, ML4.3*

VAO ***13*** *06:21:07.8±0.6, 33.44S×72.13W, h12km, mb4.2*

IDC ***13*** *06:21:08.1±1.1, 33.56S×71.00W, h0km, mb4.0/4, mbtmp4.0/7, ML4.1/3, MS3.7/13, Error ellipse: s-maj=50.1km s-min=16.9km az=92.0*

ISC 13 06:21:04.5±1.4, 33°41'S±0.02×72°33'W±0.04, h3km±9km, n147, σ1§44/161, mb4.4/6, MS3.8/10, 13C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VA05	Santo Domingo	0.65	112				Pn	06 21 19.2	-1.4
VA05	Santo Domingo	0.65	112	⇓ *iP*			Pn	06 21 19.4	-1.2
VA05				*eS*			Sb	06 21 28.2	+0.2
VA05				IAML				06 21 33.2	
	comp=E,25μm,0.4s								
VA01	Torpederas	0.69	56				Pn	06 21 20.1	-1.2
VA01	Torpederas	0.69	56	⇓ *iP*			Pn	06 21 20.2	-1.1
VA01				*i S*			Sn	06 21 31.1	-1.4
VA01	Torpederas	0.69	56	*eP*			Pn	06 21 20.0	-1.2
MT01	Popeta	1.01	117				Pn	06 21 25.1	-0.5
MT01	Popeta	1.01	117	⇑ *iP*			Pn	06 21 25.0	-0.7
MT01				*eS*			Sn	06 21 38.8	-1.6
MT01				IAML				06 21 40.5	
	comp=N,14μm,0.3s								
MT02	Curacav	1.01	82				Pn	06 21 24.9	-0.7
MT02	Curacav	1.01	82	⇓ *iP*			Pn	06 21 25.2	-0.4
MT02				*eS*			Sn	06 21 39.0	-1.5
MT02				IAML				06 21 40.9	
	comp=E,9μm,0.4s								
MT02	Curacav	1.01	82	*eP*			Pn	06 21 25.0	-0.7
MT02				IAML				06 21 46.0	
	comp=Z,4μm,1.4s								
BO03	Pichilemu	1.12	164	⇑ *iP*			Pn	06 21 26.8	-0.4
BO03				*i S*			Sg	06 21 41.5	+0.8
BO03				IAML				06 21 50.3	
	comp=E,5μm,0.5s								
MT09	Talagante	1.18	108				Pg	06 21 27.9	+0.8
MT09	Talagante	1.18	108	⇑ *eP*			Pg	06 21 27.6	+0.5
MT09				*i S*			Sg	06 21 43.4	+0.9
MT09				IAML				06 21 46.0	
	comp=N,15μm,0.6s								
ROC1	El Roble	1.19	69				Pg	06 21 28.1	+0.7
ROC1	El Roble	1.19	69	*eP*			Pg	06 21 28.0	+0.7
ROCH	El Roble	1.19	69	⇑ *eP*			Pg	06 21 28.3	+0.9
ROCH				*eS*			Sn	06 21 44.6	-0.6
ROCH				IAML				06 21 52.3	
	comp=N,8μm,0.5s								
VA06	Catapilco	1.22	46	Pn			Pg	06 21 28.0	+0.2
VA06	Catapilco	1.22	46	⇑ *iP*			Pg	06 21 28.0	+0.2
VA06				*eS*			Sn	06 21 44.7	-0.7
VA06				IAML				06 21 51.9	
	comp=N,14μm,0.3s								
MT05	Renca	1.33	90	Pn			Pg	06 21 30.4	+0.3
MT05	Renca	1.33	90	⇓ *iP*			Pg	06 21 30.8	+0.6
MT05				*eS*			Sn	06 21 47.8	-0.7
MT05				IAML				06 21 53.3	
	comp=E,10μm,0.3s								
MT05	Renca	1.33	90	*eP*			Pg	06 21 31.0	+0.9
MT05				IAML				06 22 01.0	
	comp=Z,5μm,0.7s								
PEL	Peldehue	1.41	79				Pg	06 21 32.1	+0.5
PEL	Peldehue	1.41	79	⇑ *iP*			Pg	06 21 31.8	+0.3
PEL				*eS*			Sg	06 21 51.1	+1.4
PEL				IAML				06 22 00.7	
	comp=N,7μm,0.5s								
PEL	Peldehue	1.41	79	*eP*			Pg	06 21 32.0	+0.5
BO01	Tunca	1.43	134	Pn			Pb	06 21 31.7	-0.1
BO01	Tunca	1.43	134	⇑ *eP*			Pn	06 21 30.9	-0.4
BO01				*eS*			Sn	06 21 49.2	-1.5
BO01	Tunca	1.43	134	*eP*			Pn	06 21 31.0	-0.4
MT03	Universidad Ad	1.53	94				Pg	06 21 33.6	-0.1
MT03	Universidad Ad	1.53	94	⇑ *iP*			Pg	06 21 34.0	+0.2
MT03				*eS*			Sg	06 21 54.7	+1.1
MT03				IAML				06 22 03.2	
	comp=N,8μm,0.7s								
MT03	Universidad Ad	1.53	94	*eP*			Pn	06 21 28.2	-4.7
MT03				*eP*			Pg	06 21 34.0	+0.2
MT03				IAML				06 22 05.9	
	comp=Z,7μm,0.8s								
GO05	Huala	1.63	168				Pb	06 21 34.1	-1.2
GO05	Huala	1.63	168	⇑ *iP*			Pn	06 21 33.9	-0.2
GO05				*eS*			Sn	06 21 54.0	-1.7
GO05				IAML				06 22 09.8	
	comp=E,2μm,0.5s								
GO05	Huala	1.63	168	*eP*			Pn	06 21 28.7	-5.5
GO05				*eP*			Pn	06 21 34.0	-0.2
VA03	San Esteban	1.63	67				Pg	06 21 35.4	-0.4
VA03	San Esteban	1.63	67	⇑ *iP*			Pb	06 21 34.7	-0.6
VA03				*eS*			Sb	06 21 56.0	-0.3
VA03				IAML				06 22 06.0	
	comp=E,10μm,0.5s								
VA03	San Esteban	1.63	67	*eP*			Pn	06 21 34.0	-0.3
VA03				IAML				06 22 05.5	
	comp=Z,4μm,0.5s								
FCH	Farellones	1.71	88	⇑ *iP*			Pb	06 21 36.6	-0.2
FCH				*eS*			Sb	06 21 58.2	-0.7
FCH				IAML				06 22 04.9	
	comp=E,4μm,0.6s								
LMEL	Las Melosas	1.83	104				Pb	06 21 37.8	-0.9
LMEL	Las Melosas	1.83	104	⇑ *iP*			Pb	06 21 37.9	-0.9
LMEL				*i S*			Sb	06 22 02.5	+0.3
LMEL				IAML				06 22 09.4	
	comp=N,4μm,0.3s								
BO02	Sierra Bellavi	1.89	137				Pn	06 21 37.7	-0.1
CO02	Combarbal	2.47	27				Pn	06 21 46.3	+0.4
CO02	Combarbal	2.47	27	⇑ *iP*			Pn	06 21 46.0	+0.1
CO02				*eS*			Sn	06 21 59.2	+0.4
CO02	Combarbal	2.47	27	*eP*			Pn	06 21 46.0	+0.1
CO02				*eS*			Sn	06 22 16.9	+0.2
CO02				IAML				06 22 33.5	
	comp=Z,2μm,0.8s								
CO06	Fray Jorge	2.79	12	Pn			Pn	06 21 49.1	-1.1
CO06	Fray Jorge	2.79	12	*eP*			Pn	06 21 49.2	-1.0
ARCO	CERRO ARCO	2.91	80	*eP*			Pb	06 21 56.0	-1.2
ARCO				IAML				06 22 45.9	
	comp=Z,1μm,1.1s								
CO03	El Pedregal	2.92	29	*eP*			Pn	06 21 52.4	+0.4
CO03	El Pedregal	2.92	29	*eP*			Pn	06 21 52.6	+0.6
CO03				*eS*			Sb	06 22 35.2	+1.7
CO03				IAML				06 22 43.6	
	comp=Z,1μm,0.8s								
AAGR	Agrelo	2.95	85	*eP*			Pn	06 21 51.7	-0.8
AAGR				*eS*			Sg	06 22 43.2	+3.7
RTLS	Leoncito	3.02	59	*eP*			Pb	06 21 56.9	-2.4
RTLS				*eS*			Sb	06 22 37.7	+1.0
RTLS				IAML				06 22 49.1	
	comp=Z,1μm,0.8s								
ASAL	Salagasta	3.05	75	*eP*			Pb	06 21 58.0	-1.6
ASAL				*eS*			Sb	06 22 37.2	-0.1
GO04	Tololo Observa	3.48	22	*eP*			Pn	06 21 59.9	0.0
GO04	Tololo Observa	3.48	22	*eP*			Pn	06 22 00.0	+0.1
GO04				*eS*			Sg	06 22 55.2	-1.3
RFA	San Rafael	3.48	114	*eP*			Pn	06 21 59.7	-0.1
RFA				*eS*			Sn	06 22 44.2	+2.6
RFA				*eS*			Sg	06 22 55.2	-1.3
RFA				IAML				06 23 00.9	
	comp=Z,818nm,1.1s								
CO05	La Serena	3.60	15				Pn	06 22 00.6	-0.7
CO05	La Serena	3.60	15	*eP*			Pn	06 22 01.2	-0.1
RTLL	Cerro Villicun	3.87	59	*eP*			Pn	06 22 08.0	+3.0
RTLL				*eS*			Sb	06 23 02.2	+1.4
CO01	Juntas del Tor	3.92	30	*eP*			Pn	06 22 07.3	+1.4
CO01	Juntas del Tor	3.92	30	*eP*			Pn	06 22 07.0	+1.1
CO01				*eS*			Sb	06 23 05.2	+2.8
CO01				IAML				06 23 14.0	
	comp=Z,475nm,0.9s								
ACCO	Cerro Coronel	3.95	45	*eP*			Pn	06 22 09.0	+2.6
ACCO				*eS*			Sg	06 23 09.7	-1.9
AROD	Rodeo	4.05	38	*eP*			Pn	06 22 05.2	-2.6
AROD				*eP*			Pb	06 22 10.0	-6.7
AROD				*eS*			Sb	06 23 08.2	+2.0
ACDV	Cuesta del Vie	4.23	41	*eP*			Pn	06 22 13.0	+2.9
ACDV				*eS*			Sg	06 23 16.2	-4.4
ACDV				IAML				06 23 24.3	
	comp=Z,529nm,0.8s								
LCO	Las Campanas	4.60	18	Pn			Pn	06 22 15.1	-0.3
LCO	Las Campanas	4.60	18	*eP*			Pn	06 22 15.0	-0.3
AC05	El Transito	4.89	22				Pn	06 22 20.0	+0.9
AC05	El Transito	4.89	22	*eP*			Pn	06 22 19.9	+0.7
AC05				*eS*			Sb	06 23 34.7	+4.4
AC05				IAML				06 23 52.0	
	comp=Z,748nm,1.2s								
AVFE	Valle Fertil	4.97	58	*eP*			Pn	06 22 22.0	+1.8
AVFE				*eS*			Sb	06 23 28.2	-4.2
AVFE				IAML				06 23 47.0	
	comp=Z,385nm,0.8s								
AC04	Llanos de Chal	5.30	12	*eP*			Pn	06 22 23.5	-1.2
AC04				*eS*			Sb	06 23 46.7	+4.7
H03S1	Juan Fernandez	5.50	264	T			T	06 28 46.7	
	baz=89								
H03N1	Juan Fernandez	5.50	268	T			T	06 29 37.0	
	baz=87,slow=73,SNR=39								
H03S3	Juan Fernandez	5.50	264	T			T	06 28 50.2	
	baz=89								
H03N3	Juan Fernandez	5.51	268	T			T	06 29 43.0	
	baz=87,slow=73,SNR=115								
H03S2	Juan Fernandez	5.52	264	T			T	06 28 38.8	
	baz=89								
H03N2	Juan Fernandez	5.52	268	T			T	06 29 26.6	
	baz=87,slow=73,SNR=38								
GO03	Copiap	6.07	18				Pn	06 22 34.3	-1.1
GO06	Curarrehue	6.20	174				Pn	06 22 38.0	+0.9
AC06	Mina Casimiro	6.27	16				Pn	06 22 37.2	-0.8
LR04	Corral	6.52	187	Pn			Pn	06 22 40.5	-0.8
AC02	Maricunga	7.12	24	Pn			Pn	06 22 49.6	-0.4
PLCA	Paso Flores	7.45	169	Pn			Pn	06 22 56.0	+1.9
	comp=Z,1.0nm,0.3s,baz=328,slow=12,SNR=38								
PLCA						Sn	Sn	06 24 17.9	-1.3
	baz=21,slow=16								
PLCA						Lg	Lg	06 24 55.5	
	comp=Z,0.1nm,0.3s,baz=321,slow=22,SNR=3.2								
PLCA						LR	LR	06 25 40.2	
	comp=Z,165nm,20.8s,baz=348,slow=38								
	comp=Z,2.4nm,0.4s								
PLCA	Paso Flores	7.45	169	*eP*			Pn	06 22 55.2	+1.1
LL05	Los Muermos	8.03	186	Pn			Pn	06 23 01.7	-0.4
GO02	Mina Guanaco	8.56	17	Pn			Pn	06 23 07.3	-2.5
TRQA	Tornquist	9.61	122				Pn	06 23 24.4	+0.6
LVC	Limon Verde	11.18	17	Pn			Pn	06 23 42.2	-3.4
	comp=Z,0.2nm,0.3s,baz=152,slow=12,SNR=1.6								
LVC						LR	LR	06 28 21.4	
	comp=Z,263nm,18.9s,baz=207,slow=39								
LVC	Limon Verde	11.18	17	*eP*			Pn	06 23 46.3	+0.7
ITQB	Itaqui	13.90	79	*eP*			Pn	06 24 21.2	-1.3
CPUP	Villa Florida	14.80	65	Pn			Pn	06 24 33.4	-1.4
	baz=161,slow=17,SNR=1.6								
CPUP						Lg	Lg	06 28 29.0	
	comp=Z,0.1nm,0.3s,baz=331,slow=20,SNR=2.8								
CPUP						LR	LR	06 30 15.0	
	comp=Z,173nm,18.4s,baz=244,slow=40								
CPUP	Villa Florida	14.80	65	*eP*			Pn	06 24 36.4	+1.6
PLTB	Pedras Altas	15.87	89	*eP*			Pn	06 24 49.0	0.0
CPSB	Cacapava Do Su	16.32	85	*eP*			Pn	06 24 54.4	-0.4
CRSM	Crissiumal (Br	16.83	74	*eP*			P	06 25 02.1	-1.4
ALGR	Alto Alegre (B	17.16	88	*eP*			P	06 25 05.5	-1.7
LPAZ	La Paz	17.47	14	P			P	06 25 11.3	+0.1
	comp=Z,0.2nm,0.3s,baz=182,slow=9.6,SNR=14								
	comp=Z,9.0nm,1.2s								
LPAZ	La Paz	17.47	14	P			Pn	06 25 08.7	-1.2
LPAZ	La Paz	17.47	14	*eP*			P	06 25 10.7	-0.5
FRBT	Francisco Belt	18.29	71	*eP*			P	06 25 20.0	+0.3
MCR1	Marechal Candi	18.31	66	*eP*			P	06 25 20.4	+0.6
ANTJ	Antonio Joao (	18.36	56	*eP*			P	06 25 21.6	+1.1
ITAB	Concordia	18.48	76	*eP*			Pn	06 25 22.3	+0.5
CNLB	Canela	18.79	83	*eP*			Pn	06 25 25.5	0.0
AQDB	Aquidauana	19.61	53	P			P	06 25 33.4	-0.8
AQDB						IAmb	IAmb	06 25 37.1	
	comp=Z,14nm,1.0s								
AQDB	Aquidauana	19.61	53	*eP*			Pn	06 25 34.3	-1.1
PTGB	Pitanga	19.70	69	*eP*			Pn	06 25 35.6	-1.0
SIV	San Ignacio	20.11	33	P			P	06 25 38.7	-0.9
	baz=216,slow=12,SNR=12								
SIV						LR	LR	06 34 49.4	
	comp=Z,377nm,18.7s,baz=240,slow=42								
	comp=Z,5.3nm,1.0s								
TER01	Tubaro-SC	20.47	82	*eP*			P	06 25 43.4	-0.1
PTLB	Pontes e Lacer	21.51	37	P			P	06 25 54.5	-0.2
PTLB						IAmb	IAmb	06 25 56.2	
	comp=Z,34nm,1.4s								
PTLB	Pontes e Lacer	21.51	37	*eP*			P	06 25 55.3	+0.6
TIJ01	Guaruva-PR	21.84	74	*eP*			P	06 25 57.7	-0.7
PCMB	Pacaembu	22.03	63	*eP*			P	06 25 59.2	-1.2
VILB	Vilhena	23.18	31	P			P	06 26 11.7	-0.8
VILB						IAmb	IAmb	06 26 29.0	
	comp=Z,30nm,1.3s								
VILB	Vilhena	23.18	31	*eP*			P	06 26 12.9	+0.4
ITRB	Iturama	23.86	61	*eP*			P	06 26 19.1	-0.2
BB19B	Bebedouro	24.41	66	*eP*			P	06 26 24.4	0.0
CZSB	Cruzeiro do Su	25.56	359	P			P	06 26 34.0	-0.8
CZSB						IAmb	IAmb	06 26 53.4	
	comp=Z,21nm,1.2s								
CZSB	Cruzeiro do Su	25.56	359	*eP*			P	06 26 38.2	+3.4
PDRB	Porto dos Gac	25.98	37	*eP*			P	06 26 39.0	+0.3
CLDB	Colider	27.08	38	*eP*			P	06 26 49.8	+1.2
BDFB	Brasilia	28.21	57	LR			LR	06 37 37.9	
	comp=Z,179nm,19.6s,baz=127,slow=36								
SNDB	Serra Nova Dou	28.73	47	*eP*			P	06 27 04.0	+0.7
PMSA	Palmer Station	31.80	173	LR			LR	06 40 37.3	
	comp=Z,161nm,18.9s,baz=322,slow=37								
SMTB	Santa Maria do	33.43	49	*eP*			P	06 27 46.2	+1.4
PRPB	Parauapebas	34.23	43	*eP*			P	06 27 53.0	+1.2
GDU01	Guandu, BA	35.63	65	*eP*			P	06 28 03.7	-0.2
MALB	Monte Alegre	35.67	32	*eP*			P	06 28 05.6	+1.4
ROSB	Rosrio	40.21	47	*eP*			P	06 28 44.4	+1.8
MDP	Montagnes des	42.60	30	LR			LR	06 48 46.3	
	comp=Z,265nm,18.3s,baz=196,slow=39								
RCBR	Riachuelo	43.55	59	LR			LR	06 49 15.0	
	comp=Z,197nm,18.4s,baz=6.0,slow=40								
VNA3	Neumayer Olymp	49.99	158	P			P	06 30 06.2	+6.4
VNA1	Neumayer--Stat	50.31	157	P			P	06 30 06.0	+0.4
VNA2	Neumayer--Watz	50.65	157	P			P	06 30 04.7	+0.1
	baz=282,slow=8.0								
SJG	San Juan	51.57	8	LR			LR	06 55 19.4	
	comp=Z,51nm,19.4s,baz=155,slow=40								
SNAA	Sanae	52.22	158	P			P	06 30 13.6	-2.9
SNAA	Sanae	52.22	158	P			P	06 30 16.7	+0.2
	comp=Z,3.2nm,1.1s,baz=267,slow=9.0,SNR=6.4								
	comp=Z,3.2nm,1.1s								
QSPA	South Pole Qui	56.82	180	P			P	06 30 51.8	+1.7
	comp=Z,2.8nm,0.9s,baz=133,slow=4.3,SNR=6.5								
	comp=Z,2.8nm,0.9s								
QSPA	South Pole Qui	56.82	180	P			P	06 30 51.2	+1.1
QSPA						IAmb	IAmb	06 30 52.6	
	comp=Z,8.8nm,1.3s								
TXAR	Lajitas Array	69.10	331	P			P	06 32 21.0	+8.9
	comp=Z,0.2nm,0.6s,baz=159,slow=8.2,SNR=4.1								
	comp=Z,0.2nm,0.6s								
DBIC	Dimbokro	75.22	72	LR			LR	07 04 07.9	
	comp=Z,29nm,18.6s,baz=171,slow=35								
TSUM	Tsumeb	79.61	106	LR			LR	07 03 37.8	
	comp=Z,57nm,19.4s,baz=298,slow=32								
TORD	Torodi Ar. Bea	84.24	70	P			P	06 33 37.2	-0.7
	comp=Z,2.2nm,1.1s,baz=245,slow=5.3,SNR=5.9								
	comp=Z,2.2nm,1.1s								
MDT	Midelt	91.64	51	LR			LR	07 14 49.8	
	comp=Z,45nm,20.0s,baz=274,slow=36								
ESDC	Sonseca Array	96.35	46	LR			LR	07 17 28.5	
	comp=Z,24nm,18.6s,baz=200,slow=35								
H11S2	WAKE ISLAND Hyd	25.53	270	T			T	08 59 06.0	
	baz=118,slow=74,SNR=14								
H11S1	WAKE ISLAND Hyd	25.54	270	T			T	08 58 56.2	
	baz=118,slow=74,SNR=6.9								
H11S3	WAKE ISLAND Hyd	25.55	270	T			T	08 59 07.2	
	baz=118,slow=74,SNR=7.9								
MKAR	Makanchi Array	156.56	48	PKPab			PKPab	06 41 30.0	+0.3
	comp=Z,1.6nm,1.1s,baz=316,slow=3.3,SNR=5.6								
PZH	PanZhiHua	171.41	142	PKP			PKPdf	06 41 14.0	-1.0

IDC ***13*** *06:37:52.6±0.7, 22.09°S×172.74°E, h0km, mb4.2/17, mbtmp4.3/18, ML3.8/1, MS4.1/40, Error ellipse: s-maj=21.3km s-min=17.2km az=117.0*

NEIC ***13*** *06:37:54.3±1.3, 22.25°S±0.17°×172.96°E±0.10, h10km±1km, mb4.7/37, Error ellipse: s-maj=19.7km s-min=15.5km az=41.0*

GCMT ***13*** *06:37:57.3±0.2, 22.27°S±0.01°×172.98°E±0.01, h16km±1km, MW5.0/116, Moment Tensor Solution. s40,c48; s116,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.46±.09; $M_{\theta\theta}$1.99±.11; $M_{\phi\phi}$-1.53±.10; $M_{r\theta}$-0.60±.26; $M_{\theta\phi}$2.77±.08; $M_{\phi r}$0.49±.27; Best double couple: $M_0$3.38600×10^{16} NP1:ϕ_s105.00000°, δ83.00000°, λ-13.00000°. NP2:ϕ_s197.00000°, δ77.00000°, λ-173.00000°. Principal axes: T 3.5330, Plg4.0000°, Azm152.0000°; N -0.2900, Plg75.0000°, Azm257.0000°; P -3.2400, Plg15.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***13*** *06:38:15.8, 21.83S×171.13E, h0km, mb5.1/8, Southeast of Loyalty Islands*

ISC 13 06:37:54.0±0.4, 22°21'S±0.07×172°85'E±0.07, h10km, n151, σ1§58/113, mb4.6/38, MS4.2/39, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.54	278	Pn			Pn	06 39 03.2	+0.4
PINNC	Pines Island,	5.02	264				Pn	06 39 09.9	+0.5
PINNC	Pines Island,	5.02	264	P			Pn	06 39 11.5	+2.1
YATNC	Mamie plateau,	5.53	270	P			Pn	06 39 17.1	+0.7
OUENC	Ouen Island, N	5.57	267	Pn			Pn	06 39 16.3	-0.7
OUENC	Ouen Island, N	5.57	267	P			Pn	06 39 18.5	+1.5
ONTNC	Ouen Toro	5.93	268	Pn			Pn	06 39 22.5	+0.6
ONTNC	Ouen Toro	5.93	268	P			Pn	06 39 23.4	+1.5
DZM	Mont Dzumac	5.94	270	Pn			Pn	06 39 23.3	+1.0
	7.8nm,0.3s,baz=86,slow=19,SNR=127								
DZM						Sn	Sn	06 40 30.8	+0.4
	4.8nm,0.3s,baz=107,slow=20,SNR=3.1								
DZM						LR	LR	06 41 18.2	
	comp=Z,1μm,20.1s,baz=92,slow=35								
DZM	Mont Dzumac	5.94	270	*e*Pn			Pn	06 39 22.0	-0.2
	95nm,0.9s								
DZM					*e*LR		LR	06 40 40.0	
	comp=Z,3μm,26.9s								
DZM	Mont Dzumac	5.94	270	Pn			Pn	06 39 23.1	+0.9
DZM	Mont Dzumac	5.94	270	P			Pn	06 39 23.5	+1.3
NOUC	Port Laguerre	6.07	270	P			Pn	06 39 25.0	+1.1
MSVF	Nonsavu	6.51	49	Pn			Pn	06 39 33.7	+2.3
	0.5nm,0.3s,baz=99,slow=8.8,SNR=4.1								
MSVF						LR	LR	06 41 39.9	
	comp=Z,6μm,18.4s,baz=245,slow=34								
KOUNC

baz=173,slow=76,SNR=18
H11N3 WAKE ISLAND Hy 42.07 352 T T 07 30 36.0
baz=173,slow=76,SNR=8.2
H11N2 WAKE ISLAND Hy 42.09 352 T T 07 30 38.4
baz=173,slow=76,SNR=10
FITZ Fitzroy Crossi 44.38 266 LR LR 07 04 55.3
comp=Z,396nm,18.2s,baz=104,slow=37
FITZ Fitzroy Crossi 44.38 266 P **P** **06 46 04.4 -0.6**
FITZ IAmb IAmb 06 46 11.6
comp=Z,9.7nm,1.1s
GUMO Guam 44.93 320 LR LR 07 03 04.4
comp=Z,155nm,20.4s,baz=125,slow=34
SIJI Sorong 45.67 292 LR LR 07 05 15.8
comp=Z,4μm,21.5s,baz=307,slow=36
TAOE Nuku Hiva Isla 47.00 81 *e*LR LR 06 59 40.0
comp=Z,127nm,24.4s
MBWA Marble Bar 49.16 261 P **P** **06 46 42.1 -0.4**
KAPI Kappang 54.06 280 LR LR 07 11 08.3
comp=Z,98nm,19.2s,baz=111,slow=37
VNDA Vanda 55.62 183 P **P** **06 47 31.1 +1.6**
VNDA LR LR 07 08 52.9
comp=Z,237nm,18.3s,baz=16,slow=33
comp=Z,0.9nm,0.6s
VNDA Vanda 55.62 183 P **P** **06 47 30.7 +1.1**
SBA Scott Base 55.77 182 P **P** **06 47 30.6 -0.1**
MPSI Mapaga 56.21 286 P **P** **06 47 35.8 +1.0**
comp=Z,536nmcomp=Z,20nm,1.4s
JCJ Chichijima 57.29 327 LR LR 07 07 45.2
comp=Z,142nm,21.9s,baz=134,slow=31
JHJ Hachijo jima 2 63.43 329 LR LR 07 12 53.8
comp=Z,48nm,20.3s,baz=112,slow=33
SBUM Sibu 64.02 284 P **P** **06 48 29.2 +0.9**
SBUM IAmb IAmb 06 48 36.0
comp=Z,6.4nm,0.9s
MJAR Matsushiro Arr 66.97 330 P **P** **06 48 45.9 -1.1**
comp=Z,0.8nm,0.8s,baz=164,slow=7.5,SNR=2.2
MJAR LR LR 07 13 03.0
comp=Z,136nm,21.9s,baz=159,slow=32
comp=Z,0.8nm,0.8s
QSPA South Pole Qui 67.86 180 LR LR 07 15 40.4
comp=Z,168nm,18.9s,baz=38,slow=33
QSPA South Pole Qui 67.86 180 P **P** **06 48 50.4 -2.0**
RPN Rapa Nui 69.83 112 LR LR 07 11 14.8
comp=Z,185nm,20.0s,baz=280,slow=29
KSRS Korea Array 72.87 324 P **P** **06 49 22.3 -0.9**
comp=Z,0.3nm,0.2s,baz=146,slow=7.1,SNR=1.7
KSRS LR LR 07 17 57.1
comp=Z,99nm,21.2s,baz=135,slow=33
comp=Z,0.3nm,0.2s
SHEM Shemya Is, Ala 74.63 1 LR LR 07 14 32.8
comp=Z,77nm,20.8s,baz=168,slow=30
PEA0B Petropavlovsk- 76.15 351 P **P** **06 49 42.7 +0.7**
PETK Petropavlovsk- 76.15 351 P **P** **06 49 42.4 +0.5**
comp=Z,3.3nm,0.9s,baz=157,slow=4.7,SNR=4.7
PETK LR LR 07 18 09.6
comp=Z,141nm,20.8s,baz=157,slow=32
comp=Z,3.3nm,0.9s
PETK Petropavlovsk- 76.15 351 P **P** **06 49 42.1 +0.2**
PSI Prapat 76.23 279 LR LR 07 25 58.4
comp=Z,163nm,18.6s,slow=38
MAW Mawson 76.95 202 P **P** **06 49 46.4 -0.1**
comp=Z,1.0nm,0.4s,baz=90,slow=5.1,SNR=3.8
comp=Z,1.0nm,0.4s
BELA Belgrano 2 78.84 174 P **P** **06 49 53.8 -3.0**
KLR Kul'dur 79.98 334 LR LR 07 22 42.7
comp=Z,69nm,18.9s,baz=178,slow=34
XAN Xi'an 82.60 311 P **P** **06 50 20.4 +2.7**
XAN pmax pmax
comp=Z,5.0nm,1.1s
CMAR Chiang Mai Arr 82.79 293 P **P** **06 50 19.1 +0.2**
comp=Z,1.3nm,0.3s,baz=151,slow=5.0,SNR=4.1
comp=Z,1.3nm,0.3s
PMSA Palmer Station 82.95 159 LR LR 07 20 03.8
comp=Z,118nm,20.3s,baz=261,slow=30
PZH PanZhiHua 84.14 302 P **P** **06 50 26.0 +0.1**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,110nm,4.5s
HHC Hu-ho-hao-te 84.67 318 *e*P **P** **06 50 28.4 +0.2**
HHC pmax pmax
comp=Z,38nm,1.0s
HHC pmax pmax
comp=Z,170nm,6.5s
HHC LR LR
comp=N,270nm,17.8s
HHC LR LR
comp=E,250nm,18.4s
HHC LR LR
comp=Z,520nm,19.0s
SAO San Andreas Ge 85.28 47 P **P** **06 50 31.3 +0.1**
SAO IAmb IAmb 06 50 33.4
comp=Z,5.4nm,0.9s
TROLL Troll, Antarti 85.80 183 P **P** **06 50 30.5 -3.0**
SNAA Sanae 86.32 181 P **P** **06 50 32.7 -3.3**
SNAA Sanae 86.32 181 LR LR 07 25 06.7
comp=Z,152nm,21.9s,baz=200,slow=33
SEY Seymchan 86.39 351 P **P** **06 50 35.9 -0.2**
comp=Z,4.0nm,0.8s,baz=146,slow=6.0,SNR=12
comp=Z,4.0nm,0.8s
ISA Isabella, Lake 86.77 49 P **P** **06 50 38.3 -0.5**
ISA IAmb IAmb 06 50 40.2
comp=Z,6.7nm,1.0s
VNA3 Neumayer Olymp 86.78 179 P **P** **06 50 34.5 -3.7**
VNA2 Neumayer--Watz 87.12 180 P **P** **06 50 36.1 -3.7**
baz=178,slow=5.0
YBH Yreka Blue Hor 87.13 43 LR LR 07 22 39.0
comp=Z,60nm,19.8s,baz=237,slow=31
PFO Pinyon Flats O 87.21 52 LR LR 07 21 00.1
comp=Z,167nm,20.9s,baz=258,slow=30
VNA1 Neumayer--Stat 87.39 180 P **P** **06 50 38.0 -3.1**
HUMO Hull Mountain 87.46 42 P **P** **06 50 42.1 +0.3**
HUMO IAmb IAmb 06 50 48.4
comp=Z,3.8nm,1.0s
MPK Martis Peak 87.56 46 P **P** **06 50 42.1 -0.7**
LPIG La Paz 87.70 63 LR LR 07 23 02.5
comp=Z,87nm,18.4s,baz=203,slow=31
PAHR Pah Rah Range 88.20 46 P **P** **06 50 45.0 -0.6**
PAHR IAmb IAmb 06 50 53.4
comp=Z,6.1nm,1.2s
NVAR Mina Array Bea 88.28 47 P **P** **06 50 45.9 -0.2**
comp=Z,1.7nm,1.0s,baz=227,slow=7.0,SNR=9.5
comp=Z,1.7nm,1.0s
NVAR Mina Array Bea 88.28 47 P **P** **06 50 45.4 -0.7**
NV11 Mina Array Sit 88.38 47 P **P** **06 50 46.4 -0.1**
NV11 IAmb IAmb 06 50 54.4
comp=Z,6.7nm,1.4s
KVN Kaiserville 88.73 47 P **P** **06 50 48.0 -0.2**
KVN IAmb IAmb 06 50 55.9
comp=Z,3.7nm,1.2s
TPH Tonopah 88.84 48 P **P** **06 50 48.7 0.0**
TPNV Topopah Spring 88.97 49 P **P** **06 50 48.6 -0.7**
TPNV IAmb IAmb 06 51 01.2
comp=Z,4.3nm,1.1s
PINE Pine Mountain 89.34 42 P **P** **06 50 51.6 +0.7**
PINE IAmb IAmb 06 51 01.1
comp=Z,8.8nm,1.3s
BMN Battle Mountai 90.00 46 P **P** **06 50 54.2 +0.1**
BMN IAmb IAmb 06 51 01.1
comp=Z,5.8nm,1.0s
PRN Pahroc Range 90.03 49 P **P** **06 50 54.0 -0.2**
PRN IAmb IAmb 06 51 02.1
comp=Z,6.1nm,1.3s
BBB Bella Bella 90.15 32 LR LR 07 22 58.5
comp=Z,85nm,21.1s,baz=237,slow=30
J08A Circle Bar Ran 90.65 43 P **P** **06 50 56.6 -0.4**
J08A IAmb IAmb 06 51 06.2
comp=Z,3.8nm,1.0s
LCMT Little Creek M 91.12 50 P **P** **06 50 59.1 -0.2**
CCUT Cedar City 91.28 50 P **P** **06 50 59.6 -0.6**
G08A Pilot Rock 91.33 41 P **P** **06 50 59.7 -0.3**
G08A IAmb IAmb 06 51 02.5
comp=Z,7.2nm,1.2s
ELK Elko 91.47 46 LR LR 07 25 23.7
comp=Z,176nm,19.5s,baz=248,slow=31
ELK Elko 91.47 46 P **P** **06 51 00.3 -0.7**
ELK IAmb IAmb 06 51 10.8
comp=Z,5.7nm,1.5s
U15A North Rim 91.55 51 P **P** **06 51 01.1 -0.4**
U15A IAmb IAmb 06 51 13.4
comp=Z,4.6nm,0.9s
SONM Songino Array 91.62 322 P **P** **06 51 02.3 +0.9**
comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=1.9
SONM LR LR 07 29 20.8
comp=Z,63nm,22.0s,baz=157,slow=34
comp=Z,0.3nm,0.4s
H03S2 Juan Fernandez 91.89 128 T T 08 32 38.6
baz=238
H03S1 Juan Fernandez 91.90 128 T T 08 32 39.8
baz=238
H03S3 Juan Fernandez 91.90 128 T T 08 32 38.7
baz=238
ILAR Eielson Array 92.09 16 P **P** **06 51 01.6 -1.4**
comp=Z,1.6nm,1.0s,baz=236,slow=5.7,SNR=8.5
comp=Z,1.6nm,1.0s
ILAR Eielson Array 92.09 16 P **P** **06 51 01.4 -1.6**
DLBC Dease Lake 93.15 26 LR LR 07 27 05.4
comp=Z,64nm,19.2s,baz=220,slow=32
PLCA Paso Flores 94.07 137 LR LR 07 29 52.3
comp=Z,76nm,18.1s,baz=243,slow=33
ANMO Albuquerque 95.23 54 LR LR 07 25 43.5
comp=Z,121nm,21.6s,baz=236,slow=30
TXAR Lajitas Array 95.24 61 P **P** **06 51 18.2 -0.2**
comp=Z,0.4nm,1.0s,baz=251,slow=3.8,SNR=4.2
TXAR LR LR 07 25 53.0
comp=Z,149nm,20.6s,baz=231,slow=30
comp=Z,0.4nm,1.0s
PDAR Pinedale Array 96.18 46 LR LR 07 27 07.0
comp=Z,106nm,20.6s,baz=256,slow=31
CMIG Matias Romero 98.33 75 LR LR 07 27 55.2
comp=Z,34nm,18.4s,baz=256,slow=30
ARCES ARCESS Array B 128.77 346 PKP **PKPdf** **06 57 00.8 -0.3**
comp=Z,1.3nm,0.7s,baz=46,slow=2.6,SNR=6.4
CRVS Cervenica-Dubn 145.00 327 *e*PKP **PKiKP** **06 57 34.1 -1.2**
MORC Moravsky Berou 146.30 331 *e*PKP **PKPbc** **06 57 34.9 0.0**
DPC Dobruska-Polom 146.42 333 *e*PKP **PKPab** **06 57 36.6 +0.5**
KRLC Kraliky 146.43 332 *e*PKP **PKiKP** **06 57 45.4 +7.1**
VYHS Vyhne 146.59 328 *e*PKP **PKPab** **06 57 37.8 +1.0**
JAVC Velka Javorina 146.90 329 *e*PKP **PKPbc** **06 57 37.3 +0.6**
BRG Berggiesshubel 146.99 335 *e*PKP **PKiKP** **06 57 42.9 +3.6**
BRG Amp 06 57 44.7
comp=Z,14nm,1.3s
CLL Collm 147.00 337 *e*PKPbc **PKPdf** **06 57 35.0 +0.2**
comp=Z,5.0nm,0.9s
CLL *e*PKPab **pPKPdf** **06 57 38.0 +0.5**
CLL *ex* x 06 57 42.0
VRAC Vranov 147.07 331 *e*PKP **PKPbc** **06 57 37.0 -0.1**
KRUC Moravsky 147.34 331 *e*PKP **PKPbc** **06 57 38.1 +0.3**
PRU Pruhonice 147.44 334 *e*PKP **PKiKP** **06 57 42.8 +2.5**
PRU *ex* x 06 57 45.7
RONA Rosalia, Austr 148.37 329 *e*P **PKPab** **06 57 45.5 +1.7**
comp=Z,4.6nm,1.0s
CONA Conrad Observa 148.41 330 *e*P **PKPab** **06 57 46.3 +2.3**
comp=Z,9.0nm,1.3s
KHC Kasperske Hory 148.50 334 *e*PKP **PKPbc** **06 57 40.7 -0.3**
GERES GERESS Array B 148.67 333 PKPbc **PKPbc** **06 57 40.6 -1.0**
comp=Z,1.8nm,0.8s,baz=329,slow=1.6,SNR=11
MOA Molln 149.19 331 *e*P **PKPab** **06 57 49.1 +1.9**
comp=Z,6.0nm,1.3s
SOKA Soboth 149.70 329 *e*P **PKPab** **06 57 49.9 +0.5**
comp=Z,7.1nm,1.6s
MYKA Terra Mystica 150.38 330 *e*P **PKPab** **06 57 49.8 -2.4**
comp=Z,3.6nm,0.7s
WLF Walferdange 150.65 342 *d*PKPab **PKPab** **06 57 51.3 -1.7**
WATA Walderalm 150.74 333 *i* P **PKiKP** **06 57 50.2 +2.8**
comp=Z,1.5nm,0.5s
ABTA Abfaltersbach 150.80 332 *e*P **PKiKP** **06 57 49.0 +1.5**
comp=Z,2.8nm,0.7s
MOTA Moosalm 150.93 334 *i* P **PKPab** **06 57 52.6 -1.9**
comp=Z,6.4nm,1.2s
SQTA Sankt Quirin 150.99 334 *i* P **PKPab** **06 57 51.8 -2.9**
comp=Z,3.7nm,0.8s
DAVOX Davos/Dischmat 151.88 335 PKPbc **PKPbc** **06 57 49.0 -0.4**
comp=Z,1.2nm,0.7s,baz=42,slow=4.1,SNR=1.4
ESDC Sonseca Array 162.38 352 PKPab **PKPab** **06 58 43.3 -0.3**
comp=Z,0.6nm,0.9s,baz=1.7,slow=6.0,SNR=2.4
TORD Torodi Ar. Bea 167.67 225 PKPab **PKPab** **06 59 07.5 -0.1**
comp=Z,0.6nm,0.9s,baz=105,slow=5.1,SNR=2.9

IDC ***13*** *07:03:22.3±0.8, 22.2°80S×172.2°93E, h0km, mb4.2/12, mbtmp4.2/15, ML4.5/3, MS3.7/32, Error ellipse: s-maj=22.7km s-min=16.9km az=142.0*

NEIC ***13*** *07:03:25.4±2.7, 22.7°70S±0.0°9×172.8°86E±0.0°09, h10km±1km, mb4.8/27, Error ellipse: s-maj=15.6km s-min=13.3km az=352.0*

GCMT ***13*** *07:03:30.4±0.3, 22.75°S±0.02°×172.93°E±0.03°, h24km, MW4.9/66, Moment Tensor Solution. s37,c40; s66,c82; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.69±.16; Mθθ-2.55±.11; Mϕϕ-0.14±.10; Mrθ0.45±.14; Mθϕ-0.28±.07; Mϕr0.28±.14; Best double couple: M₀2.68800×10^16 NP1:ϕs268.00000°, δ50.00000°, λ84.00000°. NP2: ϕs268.00000°, δ40.00000°, λ97.00000°. Principal axes: T 2.7510, Plg83.0000°, Azm312.0000°; N -0.1250, Plg4.0000°, Azm83.0000°; P -2.6260, Plg5.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***13*** *07:04:26.4, 22.2°10S×168.2°6E, h0km, MLv3.0/6, New Caledonia*

ISC 13 07:03:28.4±0.4, 22.8°80S±0.0°07×172.9°91E±0.0°06, h35km, n107, σ1.1s56/78, mb4.8/23, MS3.8/31, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.71**	**285**	Pn	**Pn**	**07 04 37.1**	**+0.1**
MARNC	**Mare, Loyalty**	**4.71**	**285**	P	**Pn**	**07 04 38.8**	**+1.8**
PINNC	**Pines Island,**	**5.05**	**271**		**Pn**	**07 04 40.5**	**-1.2**
YATNC	**Mamie plateau,**	**5.62**	**276**	P	**Pn**	**07 04 49.9**	**+0.4**
OUENC	**Ouen Island, N**	**5.62**	**273**	Pn	**Pn**	**07 04 48.9**	**-0.7**
OUENC	**Ouen Island, N**	**5.62**	**273**	P	**Pn**	**07 04 50.6**	**+1.0**
ONTNC	**Ouen Toro**	**5.99**	**273**	Pn	**Pn**	**07 04 54.3**	**-0.3**
ONTNC	**Ouen Toro**	**5.99**	**273**	P	**Pn**	**07 04 57.4**	**+2.8**
DZM	**Mont Dzumac** 3.8nm,0.3s,baz=101,slow=17,SNR=43	**6.03**	**276**	Pn	**Pn**	**07 04 54.6**	**-0.6**
DZM	6.4nm,0.3s,baz=83,slow=13,SNR=3.5 23nm,0.5s			Sn	**Sn**	**07 06 05.3**	**+2.2**
DZM	**Mont Dzumac** 88nm,0.8s	**6.03**	**276**	*e*Pn	**Pn**	**07 04 54.2**	**-1.0**
DZM	266nm,0.9s			*e*Sn	**Sn**	**07 05 58.0**	**-5.1**
DZM	comp=Z,571nm,22.4s			*e*LR	LR	07 06 11.8	
DZM	**Mont Dzumac**	**6.03**	**276**	Pn	**Pn**	**07 04 54.8**	**-0.4**
DZM	**Mont Dzumac**	**6.03**	**276**	P	**Pn**	**07 04 55.7**	**+0.5**
NOUC	**Port Laguerre**	**6.15**	**275**	P	**Pn**	**07 04 59.6**	**+2.7**
MSVF	**Nonsavu** 1.5nm,0.3s,baz=198,slow=12,SNR=6.3	**6.97**	**45**	Pn	**Pn**	**07 05 07.4**	**-0.8**
MSVF	comp=Z,823nm,19.3s,baz=248,slow=33 18nm,0.7s			LR	LR	07 07 11.1	
MSVF	**Nonsavu**	**6.97**	**45**	Pn	**Pn**	**07 05 08.2**	**-0.1**
KOUNC	**Koumac, New Ca**	**8.33**	**284**		**Pn**	**07 05 27.0**	**+0.3**
RAO	**Raoul Island** comp=Z,426nm,18.3s,baz=320,slow=34	**10.45**	**130**	LR	LR	07 09 12.5	
OUZ	**Omahuta**	**12.39**	**177**	Pn	**Pn**	**07 06 23.6**	**+1.3**
URZ	**Urewera** 0.2nm,0.3s,baz=0.0,slow=8.1,SNR=2.1	**15.83**	**168**	Pn	**Pn**	**07 07 08.1**	**-0.4**
URZ	comp=Z,259nm,19.7s,baz=30,slow=33 15nm,1.2s			LR	LR	07 12 10.8	
URZ	**Urewera**	**15.83**	**168**	P	**Pn**	**07 07 11.3**	**+2.8**
URZ	comp=Z,81nm,1.4s			IAmb	IAmb	07 07 15.5	
AFI	**Afiamalu** comp=Z,178nm,19.4s,baz=130,slow=33	**17.00**	**61**	LR	LR	07 12 44.0	
HNR	**Honiara**	**18.20**	**315**	P	**Pn**	**07 07 38.4**	**+0.1**
HNR	comp=Z,91nm,0.9s			IAmb	IAmb	07 07 47.6	
TUWZ	**Tuamarina**	**18.60**	**178**	P	**Pn**	**07 07 44.8**	**+1.8**
LTZ	**Lake Taylor**	**19.94**	**181**	P	**Pn**	**07 08 00.0**	**+0.9**
LTZ	comp=Z,53nm,1.1s			IAmb	IAmb	07 08 02.8	
EIDS	**Eidsvold**	**20.09**	**258**	P	**P**	**07 08 01.0**	**+1.9**
EIDS	comp=Z,48nm,1.1s			IAmb	IAmb	07 08 05.1	
RPZ	**Rata Peaks** comp=Z,5.4nm,0.9s,baz=0.0,slow=12,SNR=1.5	**20.92**	**184**	P	**P**	**07 08 05.5**	**-2.4**
RPZ	comp=Z,415nm,20.9s,baz=348,slow=34 comp=Z,5.4nm,0.9s			LR	LR	07 15 14.0	
RPZ	**Rata Peaks**	**20.92**	**184**	P	Pn	07 08 11.5	+0.9
RPZ	comp=Z,56nm,1.2s			IAmb	IAmb	07 08 26.0	
CAN	**Canberra**	**24.27**	**234**	P	**P**	**07 08 43.7**	**+1.2**
CTA	**Charters Tower** comp=Z,5.4nm,0.7s,baz=110,slow=9.7,SNR=5.7	**24.95**	**271**	P	**P**	**07 08 47.5**	**-1.2**
CTA				LR	LR	07 17 46.1	
	comp=Z,206nm,19.3s,baz=96,slow=35 comp=Z,5.4nm,0.7s						
TOO	**Toolangi**	**27.78**	**232**	P	**P**	**07 09 14.9**	**+0.8**
TOO	comp=Z,44nm,1.6s			IAmb	IAmb	07 09 48.8	
PMG	**Port Moresby** comp=Z,167nm,18.7s,baz=144,slow=34	**28.03**	**294**	LR	LR	07 19 05.1	
STKA	**Stephens Creek** comp=Z,5.1nm,0.7s,baz=76,slow=9.8,SNR=9.7	**29.17**	**245**	P	**P**	**07 09 26.4**	**-0.1**
STKA	comp=Z,129nm,18.4s,baz=61,slow=35 comp=Z,5.1nm,0.7s			LR	LR	07 20 18.7	
PPT2	**Papeete2** comp=Z,78nm,27.0s	**35.52**	**89**	*e*LR	LR	07 19 53.7	
WR0	**Warramunga Arr**	**35.78**	**267**	P	**P**	**07 10 22.4**	**-2.1**
AS31	**Alice Springs**	**35.78**	**261**	P	**P**	**07 10 24.1**	**-0.5**
ASAR	**Alice Springs** comp=Z,11nm,0.9s,baz=86,slow=8.7,SNR=74 comp=Z,11nm,0.9s	**35.78**	**261**	P	**P**	**07 10 24.3**	**-1.1**
ASAR	**Alice Springs**	**35.78**	**261**	P	**P**	**07 10 23.4**	**-1.2**
WRA	**Warramunga Arr** comp=Z,1.5nm,0.4s,baz=96,slow=8.4,SNR=39	**35.97**	**267**	P	**P**	**07 10 24.1**	**-2.0**
WRA	comp=Z,188nm,19.6s,baz=87,slow=35 comp=Z,1.5nm,0.4s			LR	LR	07 24 30.0	
WRA	**Warramunga Arr**	**35.97**	**267**	P	**P**	**07 10 23.6**	**-2.5**
FORT	**Forrest**	**40.61**	**249**	P	**P**	**07 11 04.7**	**-0.3**
H11S2	**WAKE ISLAND Hy** baz=171,slow=76,SNR=15	**41.48**	**351**	T	T	07 55 19.9	
H11S3	**WAKE ISLAND Hy** baz=171,slow=76,SNR=13	**41.49**	**351**	T	T	07 55 20.5	
H11S1	**WAKE ISLAND Hy** baz=171,slow=76,SNR=17	**41.50**	**351**	T	T	07 55 21.3	
KNRA	**Kununurra**	**42.16**	**272**	P	**P**	**07 11 16.3**	**-1.6**
H11N1	**WAKE ISLAND Hy** baz=173,slow=76,SNR=8.0	**42.66**	**352**	T	T	07 57 03.9	
H11N3	**WAKE ISLAND Hy** baz=173,slow=76,SNR=3.9	**42.66**	**352**	T	T	07 56 55.7	
H11N2	**WAKE ISLAND Hy** baz=173,slow=76,SNR=4.7	**42.68**	**352**	T	T	07 57 02.2	
FITZ	**Fitzroy Crossi** comp=Z,98nm,20.3s,baz=107,slow=35	**44.40**	**267**	LR	LR	07 28 57.5	
FITZ	**Fitzroy Crossi**	**44.40**	**267**	P	**P**	**07 11 35.2**	**-0.8**
FITZ	comp=Z,11nm,0.8s			IAmb	IAmb	07 11 36.5	
GUMO	**Guam** comp=Z,79nm,20.9s,baz=170,slow=32	**45.41**	**320**	LR	LR	07 27 57.3	
TAOE	**Nuku Hiva Isla** comp=Z,82nm,23.0s	**47.03**	**81**	*e*LR	LR	07 25 13.1	
NWAO	**Narrogin (SRO)**	**49.76**	**246**	P	**P**	**07 12 17.2**	**-0.4**
MORW	**Morawa**	**51.12**	**250**	P	**P**	**07 12 27.3**	**-0.7**
KAPI	**Kappang** comp=Z,41nm,21.6s,baz=89,slow=35	**54.22**	**281**	LR	LR	07 34 40.3	
VNDA	**Vanda** comp=Z,143nm,21.8s,baz=12,slow=32	**55.04**	**183**	LR	LR	07 32 22.7	
SBA	**Scott Base**	**55.19**	**182**	P	**P**	**07 12 59.3**	**+2.2**
SBA	comp=Z,11nm,1.0s			IAmb	IAmb	07 13 12.4	
TOLI2	**Tolitoli**	**56.02**	**288**	P	**P**	**07 13 02.4**	**-1.6**
TOLI2	comp=Z,10nm,0.8s			IAmb	IAmb	07 13 03.4	
JHJ	**Hachijo jima 2** comp=Z,15nm,18.0s,baz=107,slow=37	**63.96**	**329**	LR	LR	07 43 15.0	
QSPA	**South Pole Qui** comp=Z,28nm,19.0s,baz=50,slow=34	**67.28**	**180**	LR	LR	07 41 19.8	
QSPA	**South Pole Qui**	**67.28**	**180**	P	**P**	**07 14 19.2**	**-0.2**
MJAR	**Matsushiro Arr** comp=Z,1.8nm,0.9s,baz=155,slow=7.9,SNR=5.1 comp=Z,1.8nm,0.9s	**67.51**	**330**	P	**P**	**07 14 20.7**	**-0.3**
RGRI	**Rengat**	**71.99**	**277**	P	P	07 15 01.8	+13
KSRS	**Korea Array** comp=Z,0.4nm,0.3s,baz=146,slow=7.1,SNR=5.3	**73.38**	**324**	P	**P**	**07 14 56.4**	**-0.4**
KSRS	comp=Z,16nm,19.6s,baz=190,slow=34 comp=Z,0.4nm,0.3s			LR	LR	07 44 45.9	
SHEM	**Shemya Is, Ala** comp=Z,15nm,19.3s,baz=114,slow=32	**75.21**	**1**	LR	LR	07 43 14.6	
MAW	**Mawson** comp=Z,3.8nm,0.8s,baz=141,slow=5.3,SNR=8.2	**76.43**	**202**	P	**P**	**07 15 14.1**	**+0.1**
MAW	comp=Z,61nm,18.1s,baz=102,slow=34 comp=Z,3.8nm,0.8s			LR	LR	07 47 07.3	
PETK	**Petropavlovsk-** comp=Z,2.4nm,0.7s,baz=159,slow=8.6,SNR=6.0	**76.73**	**351**	P	**P**	**07 15 15.6**	**-0.2**
PETK	comp=Z,35nm,19.8s,baz=152,slow=31 comp=Z,2.4nm,0.7s			LR	LR	07 42 33.6	
BELA	**Belgrano 2**	**78.25**	**174**	P	**P**	**07 15 22.9**	**-1.2**
SMAI	**San Martin Ant**	**79.37**	**161**	P	**P**	**07 15 30.9**	**+0.6**
SMAI	comp=Z,13nm,1.1s			IAmb	IAmb	07 15 32.5	
PMSA	**Palmer Station** comp=Z,42nm,21.8s,baz=212,slow=30	**82.39**	**159**	LR	LR	07 45 12.4	
PZH	**PanZhiHua**	**84.50**	**302**	P	**P**	**07 16 01.8**	**+3.6**
PZH	**PanZhiHua**	**84.50**	**302**	S	**S**	**07 26 25.5**	**+2.8**
PZH	comp=Z,20nm,0.8s			pmax	pmax		
PZH	comp=Z,100nm,4.9s			pmax	pmax		
PZH	comp=N,250nm,17.3s			LR	LR		
PZH	comp=E,200nm,16.5s			LR	LR		
HHC	**Hu-ho-hao-te** comp=Z,230nm,16.1s	**85.14**	**318**	*e*P	**P**	**07 16 01.9**	**+0.8**
HHC	comp=Z,23nm,0.6s			pmax	pmax		
HHC	comp=Z,140nm,4.6s			pmax	pmax		
TROLL	**Troll, Antarti**	**85.21**	**183**	P	**P**	**07 16 00.1**	**-0.9**
SNAA	**Sanae**	**85.74**	**181**	P	**P**	**07 16 02.3**	**-1.4**
SNAA	**Sanae** comp=Z,50nm,21.7s,baz=202,slow=33	**85.74**	**181**	LR	LR	07 50 35.6	
SNAA	**Sanae**	**85.74**	**181**	P	**P**	**07 16 02.2**	**-1.4**
SNAA	comp=Z,3.6nm,0.7s			IAmb	IAmb	07 16 02.9	
VNA3	**Neumayer Olymp**	**86.20**	**179**	P	**P**	**07 16 04.1**	**-1.7**
VNA2	**Neumayer--Watz** baz=178,slow=5.0	**86.53**	**180**	P	**P**	**07 16 06.4**	**-1.1**
VNA1	**Neumayer--Stat**	**86.81**	**180**	P	**P**	**07 16 07.4**	**-1.4**
SEY	**Seymchan** comp=Z,249nm,18.0s,baz=160,slow=35	**86.98**	**351**	LR	LR	07 54 23.5	
YBH	**Yreka Blue Hor** comp=Z,39nm,18.5s,baz=253,slow=31	**87.52**	**42**	LR	LR	07 49 25.0	
PFO	**Pinyon Flats O** comp=Z,41nm,18.4s,baz=262,slow=33	**87.53**	**52**	LR	LR	07 51 32.3	
LZH	**Lanzhou**	**87.64**	**311**	*e*P	**P**	**07 16 17.9**	**+4.3**
LZH				sP	pP	07 16 24.3	+0.9
LZH	comp=Z,17nm,1.0s			pmax	pmax		
LZH	comp=Z,180nm,5.8s			pmax	pmax		
NVAR	**Mina Array Bea** comp=Z,0.7nm,0.8s,baz=206,slow=5.1,SNR=7.4 comp=Z,0.7nm,0.8s	**88.64**	**47**	P	**P**	**07 16 17.7**	**-0.6**
TPH	**Tonopah**	**89.19**	**48**	P	**P**	**07 16 20.3**	**-0.6**
BMN	**Battle Mountai**	**90.37**	**46**	P	**P**	**07 16 26.0**	**-0.3**
BMN	comp=Z,6.7nm,1.3s			IAmb	IAmb	07 16 35.6	
BBB	**Bella Bella** comp=Z,42nm,19.9s,baz=232,slow=31	**90.62**	**32**	LR	LR	07 50 36.6	
J08A	**Circle Bar Ran**	**91.04**	**43**	P	**P**	**07 16 29.0**	**-0.3**
J08A	comp=Z,5.7nm,1.4s			IAmb	IAmb	07 16 38.6	
ELK	**Elko** comp=Z,45nm,18.9s,baz=306,slow=31	**91.84**	**46**	LR	LR	07 50 54.7	
U15A	**North Rim**	**91.87**	**51**	P	**P**	**07 16 32.6**	**-0.9**
ILAR	**Eielson Array** comp=Z,0.7nm,0.8s,baz=258,slow=5.2,SNR=4.6	**92.64**	**16**	P	**P**	**07 16 34.3**	**-1.7**
ILAR	comp=Z,63nm,19.5s,baz=228,slow=32 comp=Z,0.7nm,0.8s			LR	LR	07 52 24.4	
MTPU	**Mount Pierson** comp=Z,0.1nm,0.6s,baz=233,slow=7.5,SNR=2.3 comp=Z,0.1nm,0.6s	**92.67**	**50**	P	**P**	**07 16 37.5**	**+0.3**
MTPU	comp=Z,6.2nm,1.5s			IAmb	IAmb	07 16 40.2	
PLCA	**Paso Flores** comp=Z,28nm,19.9s,baz=214,slow=29	**93.60**	**137**	LR	LR	07 48 34.7	
DLBC	**Dease Lake** comp=Z,59nm,18.5s,baz=167,slow=33	**93.65**	**26**	LR	LR	07 54 16.7	
NEW	**Newport** comp=Z,33nm,18.1s,baz=267,slow=35	**94.32**	**39**	LR	LR	07 58 09.9	
TXAR	**Lajitas Array**	**95.48**	**61**	P	**P**	**07 16 48.9**	**-1.2**
ANMO	**Albuquerque**	**95.52**	**55**	LR	LR	07 54 11.1	

comp=Z,41nm,18.1s,baz=152,slow=32
INK Inuvik 98.85 18 LR LR 07 56 00.7
comp=Z,33nm,20.3s,baz=167,slow=32
CRVS Cervenica-Dubn 145.52 326 *e*PKP **PKPdf 07 23 02.1 -0.7**
DPC Dobruska-Polom 146.97 332 *e*PKP **PKPdf 07 23 05.3 +0.1**
KRLC Kraliky 146.97 331 *e*PKP **PKPdf 07 23 05.4 +0.2**
BRG Berggiesshubel 147.54 335 *e*PKP **PKPbc 07 23 09.6 +0.9**
BRG Amp 07 23 12.9
comp=Z,6.8nm,1.1s
BRG *ex* x 07 23 15.8
BRG Amp 07 23 17.9
comp=Z,4.3nm,1.0s
CLL Collm 147.56 336 *i* PKPbc **PKPdf 07 23 06.7 +0.6**
comp=Z,7.0nm,1.2s
CLL *e*PKPab **PKPbc 07 23 09.0 +0.3**
CLL *ex* x 07 23 12.0
CKRC Cesky Krumlov 148.98 332 *e*PKP **PKPbc 07 23 14.2 +1.6**
KHC Kasperske Hory 149.05 333 *e*PKP **PKPbc 07 23 13.8 +1.0**
GERES GERESS Array B 149.22 333 PKPbc **PKPdf 07 23 11.8 +2.7**
comp=Z,0.9nm,0.6s,baz=45,slow=2.6,SNR=8.9
TORD Torodi Ar. Bea 167.28 222 PKPab **PKPab 07 24 35.2 -1.1**
comp=Z,1.8nm,0.8s,baz=129,slow=3.2,SNR=8.2

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*NEIC **13** 07:12:59.8±1.2, 57.°82N±0.°05×137.°66W±0.°10, h4km±3km, ML3.6/45, ML3.5/43(AEIC), Error ellipse: s-maj=9.0km s-min=4.4km az=49.0*
*AEIC **13** 07:13:00±2.3, 57.°74N±0.°05×137.°84W±0.°07, h25km±8km, Error ellipse: s-maj=7.3km s-min=4.7km az=199.0*
*ANF **13** 07:13:02.1±0.8, 57.°79N×137.°68W, h30km±11km, ML4.0/23, ML4.0/23, Error ellipse: s-maj=6.1km s-min=2.6km az=31.0*

ISC 13 07:13:00.8±4.3, 57.°81N±0.°05×137.°67W±0.°05, h16km±20km, n106, σ0s74/121, Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIT	**Sitka**	**1.47**	**120**	Pn	**Pn**	**07 13 24.9**	**-1.8**
SIT	**Sitka**	**1.47**	**120**		**Sn**	**07 13 46.3**	**+0.6**
SIT	**Sitka**	**1.47**	**120**	P	**Pn**	**07 13 25.0**	**-1.7**
baz=298,SNR=6.7							
SIT				S	**Sb**	**07 13 47.4**	**+1.2**
baz=298							
BESE	**Bessie Mountai**	**1.68**	**61**	Pn	**Pn**	**07 13 29.5**	**-0.1**
BESE	**Bessie Mountai**	**1.68**	**61**		**Sn**	**07 13 51.2**	**+0.4**
PLBC	**Pleasant Camp**	**1.79**	**22**		**Pn**	**07 13 30.7**	**-0.4**
PLBC					**Sn**	**07 13 53.3**	**-0.1**
PLBC	**Pleasant Camp**	**1.79**	**22**	P	**Pn**	**07 13 30.6**	**-0.4**
baz=205,SNR=120							
PLBC				S	**Sn**	**07 13 52.6**	**-0.8**
baz=205							
JIS	**Juneau Island**	**1.81**	**74**		**Pn**	**07 13 30.5**	**-0.8**
P29M	**Windy Craggy**	**1.83**	**359**		**Pn**	**07 13 30.4**	**-1.2**
P29M	**Windy Craggy**	**1.83**	**359**		**Sn**	**07 13 54.7**	**+0.2**
P29M	**Windy Craggy**	**1.83**	**359**	P	**Pn**	**07 13 30.4**	**-1.2**
baz=182,SNR=107							
P29M				S	**Sn**	**07 13 54.6**	**+0.2**
baz=182							
SKAG	**Skagway**	**2.06**	**35**		**Pn**	**07 13 34.4**	**-0.3**
SKAG	**Skagway**	**2.06**	**35**		**Sb**	**07 14 03.4**	**+0.3**
SKAG	**Skagway**	**2.06**	**35**	P	**Pn**	**07 13 34.7**	**0.0**
baz=218,SNR=100							
SKAG				S	**Sn**	**07 14 00.2**	**+0.2**
baz=218							
PNL	**Peninsula**	**2.07**	**335**		**Pn**	**07 13 33.1**	**-1.9**
PNL					**Sn**	**07 14 00.1**	**-0.4**
PNL	**Peninsula**	**2.07**	**335**	P	**Pn**	**07 13 33.0**	**-1.9**
baz=157							
PNL				S	**Sn**	**07 14 01.1**	**+0.6**
baz=157							
P30M	**Million Dollar**	**2.35**	**9**	P	**Pn**	**07 13 38.5**	**-0.3**
baz=191							
P30M				S	**Sn**	**07 14 08.0**	**+0.7**
baz=191							
BCPM	**Bancas Point**	**2.38**	**335**		**Pn**	**07 13 38.9**	**-0.3**
BCPM				IAML		07 14 17.7	
comp=E,508nm,0.3s							
BCPM				IAML		07 14 21.4	
comp=N,501nm,0.4s							
O29M	**Mount Kennedy**	**2.54**	**350**		**Pn**	**07 13 41.0**	**-0.6**
O29M					**Sn**	**07 14 12.4**	**+0.1**
O29M	**Mount Kennedy**	**2.54**	**350**	P	**Pn**	**07 13 41.1**	**-0.4**
baz=171,SNR=41							
PINM	**Pinnacle**	**2.66**	**331**	P	**Pn**	**07 13 43.0**	**-0.1**
baz=151							
PCA	**Pinnacle**	**2.66**	**331**	Pn	**Pn**	**07 13 43.3**	**+0.2**
P32M	**Atlin**	**2.73**	**47**		**Pn**	**07 13 44.4**	**+0.4**
P32M	**Atlin**	**2.73**	**47**	P	**Pn**	**07 13 44.4**	**+0.4**
baz=231,SNR=13							
P32M				S	**Sn**	**07 14 15.9**	**-0.8**
baz=231							
HYT	**Haines Junctio**	**3.03**	**2**	Pn	**Pn**	**07 13 48.3**	**+0.1**
HYT				IAML		07 14 37.4	
comp=E,245nm,0.7s							
HYT				IAML		07 14 43.4	
comp=N,153nm,0.9s							
HYT	**Haines Junctio**	**3.03**	**2**	P	**Pn**	**07 13 48.0**	**-0.1**
baz=183,SNR=30							
HYT				S	**Sn**	**07 14 24.0**	**-0.2**
baz=183							
O30N	**Mendenhall**	**3.08**	**15**		**Pn**	**07 13 49.0**	**+0.2**
O30N	**Mendenhall**	**3.08**	**15**	P	**Pn**	**07 13 49.0**	**+0.2**
baz=197,SNR=27							
YUK6	**Outpost Mounta**	**3.16**	**354**		**Pn**	**07 13 50.2**	**0.0**
YUK6	**Outpost Mounta**	**3.16**	**354**	P	**Pn**	**07 13 50.2**	**0.0**
baz=175							
WHY	**Whitehorse**	**3.20**	**25**		**Pn**	**07 13 50.3**	**-0.2**
WHY	**Whitehorse**	**3.20**	**25**	P	**Pn**	**07 13 50.7**	**+0.2**
baz=209,SNR=33							
WHY				S	**Sn**	**07 14 28.0**	**-0.4**
baz=209							
WRAK	**Wrangell Islan**	**3.22**	**113**		**Pn**	**07 13 49.5**	**-1.1**
WRAK				IAML		07 14 49.7	
comp=N,144nm,0.6s							
WRAK	**Wrangell Islan**	**3.22**	**113**	P	**Pn**	**07 13 50.0**	**-0.7**
baz=296							
O28M	**Mount Upton**	**3.24**	**338**		**Pn**	**07 13 50.9**	**-0.4**
O28M	**Mount Upton**	**3.24**	**338**	P	**Pn**	**07 13 50.9**	**-0.4**
baz=157,SNR=37							
CRAG	**Craig**	**3.44**	**131**	Pn	**Pn**	**07 13 51.9**	**-1.7**
LOGN	**Logan Glacier**	**3.47**	**332**		**Pn**	**07 13 54.8**	**+0.5**
LOGN				IAML		07 14 51.4	
comp=E,125nm,0.9s							
LOGN				IAML		07 14 52.1	
comp=N,108nm,0.9s							
P33M	**Teslin, Yukon**	**3.48**	**44**		**Pn**	**07 13 54.4**	**0.0**
P33M				IAML		07 14 52.0	
comp=E,112nm,0.9s							
P33M				IAML		07 14 54.6	
comp=N,180nm,0.8s							
P33M	**Teslin, Yukon**	**3.48**	**44**	P	**Pn**	**07 13 54.3**	**-0.1**
baz=228,SNR=58							
GRNC	**Granite Creek**	**3.60**	**326**		**Pn**	**07 13 56.7**	**+0.5**
GRNC				IAML		07 15 07.7	
comp=N,91nm,0.8s							
N30M	**Aishikik Lake**	**3.67**	**4**		**Pn**	**07 13 57.1**	**+0.1**
N30M	**Aishikik Lake**	**3.67**	**4**	P	**Pn**	**07 13 57.1**	**+0.1**
baz=186,SNR=11							
CTGM	**Chitina Glacie**	**3.68**	**331**		**Pn**	**07 13 57.8**	**+0.7**
CTGM				IAML		07 14 56.0	
comp=N,86nm,0.6s							
CTGM				IAML		07 15 03.3	
comp=E,81nm,0.8s							
CTG	**Chitna Glacier**	**3.68**	**331**	P	**Pn**	**07 13 57.4**	**+0.2**
baz=150							
WAX	**Waxell Ridge**	**3.76**	**317**		**Pn**	**07 13 57.7**	**-0.5**
N31M	**Braeburn, Yuko**	**3.81**	**14**		**Pn**	**07 13 59.0**	**+0.2**
N31M				IAML		07 15 02.7	
comp=N,151nm,0.7s							
N31M	**Braeburn, Yuko**	**3.81**	**14**	P	**Pn**	**07 13 59.3**	**+0.4**
baz=196,SNR=21							
N31M				S	**Sn**	**07 14 43.4**	**+0.1**
baz=196							
R33M	**Jennings River**	**3.85**	**63**		**Pn**	**07 14 00.4**	**+0.9**
R33M	**Jennings River**	**3.85**	**63**	P	**Pn**	**07 14 00.3**	**+0.8**
baz=248,SNR=13							
R33M				S	**Sn**	**07 14 44.8**	**+0.4**
baz=248							
CRQM	**Cirque**	**4.08**	**319**		**Pn**	**07 14 00.7**	**-2.0**
CRQM				IAML		07 15 17.9	
comp=E,114nm,1.1s							
N32M	**Quiet Lake**	**4.09**	**33**	P	**Pn**	**07 14 02.6**	**0.0**
baz=217							
N32M				S	**Sn**	**07 14 49.4**	**-0.7**
baz=217							
DLBC	**Dease Lake**	**4.10**	**78**		**Pn**	**07 14 03.1**	**+0.2**
DLBC				IAML		07 15 13.9	
comp=E,74nm,0.6s							
DLBC	**Dease Lake**	**4.10**	**78**	P	**Pn**	**07 14 03.4**	**+0.5**
baz=264							
YUK3	**Moose Creek**	**4.22**	**342**		**Pn**	**07 14 04.9**	**+0.2**
YUK3	**Moose Creek**	**4.22**	**342**	P	**Pn**	**07 14 04.6**	**-0.1**
baz=161							
YUK2	**White River**	**4.30**	**339**		**Pn**	**07 14 06.1**	**+0.4**
MCARA	**McCarthy VSAT**	**4.50**	**325**		**Pn**	**07 14 09.3**	**+1.0**
MCARA				IAML		07 15 33.3	
comp=E,93nm,0.8s							
MCARA				IAML		07 15 50.0	
comp=N,78nm,1.8s							
MCARA	**McCarthy VSAT**	**4.50**	**325**	P	**Pn**	**07 14 08.6**	**+0.3**
baz=142							
M29M	**Somme Creek**	**4.67**	**355**		**Pn**	**07 14 11.2**	**+0.5**
M29M	**Somme Creek**	**4.67**	**355**	P	**Pn**	**07 14 11.3**	**+0.5**
baz=176							
M31M	**Drury Creek, Y**	**4.70**	**19**		**Pn**	**07 14 11.9**	**+0.8**
M31M				IAML		07 15 35.9	
comp=N,53nm,0.8s							
M31M				IAML		07 15 40.8	
comp=E,62nm,1.3s							
M31M	**Drury Creek, Y**	**4.70**	**19**	P	**Pn**	**07 14 12.0**	**+0.8**
baz=203,SNR=14							
BMRM	**Bremner River**	**4.75**	**315**	Pn	**Pn**	**07 14 13.4**	**+1.6**
GLB	**Gilahina Butte**	**4.79**	**322**	Pn	**Pn**	**07 14 12.7**	**+0.3**
GLB				IAML		07 15 33.9	
comp=N,36nm,1.7s							
FARO	**Faro, Yukon**	**4.93**	**24**		**Pn**	**07 14 14.9**	**+0.6**
FARO				IAML		07 15 49.1	
comp=N,61nm,1.1s							
M27K	**Edge Creek, AK**	**5.03**	**337**		**Pn**	**07 14 16.2**	**+0.6**
M27K				IAML		07 15 42.7	
comp=E,31nm,1.2s							
N25K	**Chitina, Valde**	**5.18**	**320**	Pn	**Pn**	**07 14 18.1**	**+0.4**
N25K				IAML		07 15 57.3	
comp=E,26nm,2.9s							
M26K	**Nabesna, AK**	**5.32**	**332**		**Pn**	**07 14 20.2**	**+0.6**
M26K	**Nabesna, AK**	**5.32**	**332**	P	**Pn**	**07 14 19.7**	**+0.1**
baz=149							
DIB	**Dawson Inlet,**	**5.48**	**145**		**Pn**	**07 14 20.9**	**-0.8**
KLU	**Klutina**	**5.58**	**315**	Pn	**Pn**	**07 14 23.8**	**+0.6**
BC03		**5.65**	**341**		**Pn**	**07 14 23.6**	**-0.5**
L27K	**Beaver Creek,**	**5.66**	**340**		**Pn**	**07 14 24.1**	**-0.1**
L27K	**Beaver Creek,**	**5.66**	**340**	P	**Pn**	**07 14 23.7**	**-0.5**
baz=158							
MAYO	**Mayo, Yukon**	**5.87**	**8**		**Pn**	**07 14 27.5**	**+0.4**
L26K	**Log Cabin Wild**	**5.94**	**334**		**Pn**	**07 14 28.1**	**0.0**
L26K	**Log Cabin Wild**	**5.94**	**334**	P	**Pn**	**07 14 28.3**	**+0.2**
baz=150,SNR=7.0							
DAWY	**Dawson**	**6.33**	**353**		**Pn**	**07 14 34.0**	**+0.4**
DAWY	**Dawson**	**6.33**	**353**	P	**Pn**	**07 14 33.9**	**+0.4**
baz=172,SNR=28							
PAX	**Paxson**	**6.46**	**327**	Pn	**Pn**	**07 14 35.9**	**+0.7**
K27K	**Chicken**	**6.60**	**343**		**Pn**	**07 14 36.9**	**-0.2**
K27K	**Chicken**	**6.60**	**343**	P	**Pn**	**07 14 36.9**	**-0.2**
baz=160							
DOT	**Dot Lake**	**6.64**	**335**		**Pn**	**07 14 37.8**	**+0.1**
SCRK	**Sand Creek**	**6.91**	**336**	Pn	**Pn**	**07 14 41.4**	**-0.1**
SCRK	**Sand Creek**	**6.91**	**336**	P	**Pn**	**07 14 41.3**	**-0.1**
baz=152							
PMR	**Palmer**	**6.93**	**308**	Pn	**Pn**	**07 14 42.8**	**+1.2**
GHO	**Glory Hole Cre**	**6.93**	**310**	Pn	**Pn**	**07 14 44.2**	**+2.5**
EGAK	**Eagle**	**7.19**	**348**		**Pn**	**07 14 45.3**	**+0.1**
EGAK	**Eagle**	**7.19**	**348**	P	**Pn**	**07 14 45.4**	**+0.1**
baz=166,SNR=15							
J26L	**Joseph Creek**	**7.29**	**339**		**Pn**	**07 14 46.6**	**-0.1**
J26L	**Joseph Creek**	**7.29**	**339**	P	**Pn**	**07 14 46.7**	**0.0**
baz=155,SNR=8.4							
I29M	**Ogilvie Camp,**	**7.58**	**358**		**Pn**	**07 14 51.7**	**+1.1**
J25K	**Salcha River,**	**7.77**	**335**		**Pn**	**07 14 53.0**	**-0.1**
J25K	**Salcha River,**	**7.77**	**335**	P	**Pn**	**07 14 52.8**	**-0.4**
baz=149							
I26K	**Coal Creek Min**	**7.96**	**343**		**Pn**	**07 14 56.1**	**+0.4**
I26K	**Coal Creek Min**	**7.96**	**343**	P	**Pn**	**07 14 56.4**	**+0.7**
baz=159							
CCB	**Clear Creek Bu**	**8.41**	**329**	Pn	**Pn**	**07 15 03.1**	**+1.2**
PRP	**Porcupine Dome**	**8.58**	**338**	Pn	**Pn**	**07 15 04.6**	**+0.2**
EPYK	**Eagle Plains**	**8.60**	**3**	Pn	**Pn**	**07 15 05.0**	**+0.4**
KTH	**Kantishna Hill**	**8.68**	**317**		**Pn**	**07 15 07.2**	**+1.6**
MDM	**Murphy Dome**	**8.77**	**329**	Pn	**Pn**	**07 15 08.2**	**+1.3**
BPAW	**Bear Paw Mtn.**	**9.03**	**320**	Pn	**Pn**	**07 15 11.4**	**+1.0**
L19K	**White Mountain**	**9.65**	**304**	Pn	**Pn**	**07 15 19.9**	**+1.1**
J20K	**Nowinta River**	**10.21**	**316**	Pn	**Pn**	**07 15 27.0**	**+0.4**
IMAR	**Indian Mountai**	**11.13**	**324**	Pn	**Pn**	**07 15 39.3**	**+0.2**

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*SOME **13** 07:20:11.7, 39.°43N×73.°75E, h15km*
*IDC **13** 07:20:11.5±0.8, 39.°23N×73.°58E, h0km, mb3.8/16, mbtmp3.9/20, ML3.2/6, MS3.6/3, Error ellipse: s-maj=15.3km s-min=12.9km az=159.0*
*KRNET **13** 07:20:11.8±0.1, 39.°42N×73.°65E, mb4.4*
*NEIC **13** 07:20:16.3±2.4, 39.°45N±0.°06×73.°54E±0.°09, h10km±2km, mb4.3/5, Error ellipse: s-maj=12.3km s-min=9.3km az=125.0*
*NNC **13** 07:20:17.7±1.7, 39.°71N×73.°58E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=15.3km s-min=8.7km az=161.0*

ISC 13 07:20:14.0±0.5, 39.°44N±0.°03×73.°52E±0.°02, h10km, n121, σ2s70/157, mb3.8/17, MS3.6/3, 22C-17D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.22**	**333**	⇑*i*P	**Pn**	**07 20 36.3**	**-0.9**
baz=29							
OHH				⇑*i*S	**Sn**	**07 20 54.1**	**+0.3**
baz=29							
DRK	**Karamyk**	**1.33**	**272**		**Pn**	**07 20 37.9**	**-1.0**
DRK	**Karamyk**	**1.33**	**272**	⇑*i*P	**Pg**	**07 20 38.9**	**-0.7**
baz=73							
DRK				⇑*i*S	**Sn**	**07 20 58.6**	**+1.7**
baz=73							
ARLS	**Aral**	**2.49**	**14**	⇑*i*P	**Pn**	**07 20 55.7**	**+1.0**
baz=12							
ARLS				⇑*i*S	**Sb**	**07 21 27.3**	**-2.4**
baz=12							
GAR	**Garm**	**2.53**	**261**		**Pb**	**07 20 58.0**	**-1.5**
GAR	**Garm**	**2.53**	**261**	⇑*i*P	**Pb**	**07 20 57.2**	**-2.3**
baz=62							
GAR				⇑*i*S	**Sb**	**07 21 30.6**	**-0.1**
baz=62							
ARK	**Arkit**	**2.63**	**334**	⇑*i*P	**Pb**	**07 20 58.5**	**-2.8**
baz=32							
ARK				⇑*i*S	**Sb**	**07 21 32.9**	**-0.9**
baz=32							
AML	**Almayashu**	**2.69**	**3**	P	**Pb**	**07 20 59.6**	**-2.8**
SNR=71							
NRN	**Naryn**	**2.74**	**43**	Pn	**Pn**	**07 20 59.9**	**+1.5**
UCH	**Uchtor**	**2.88**	**15**	P	**Pb**	**07 21 03.5**	**-2.3**
SNR=73							
UCH	**Uchtor**	**2.88**	**15**	⇓*i*P	**Pn**	**07 21 01.2**	**+0.8**
baz=13							
UCH				⇓*i*S	**Sn**	**07 21 37.2**	**+1.9**
baz=13							
EKS2	**Erkin-Say**	**3.22**	**3**	P	**Pb**	**07 21 07.7**	**-3.6**
SNR=15							
EKS2	**Erkin-Say**	**3.22**	**3**	⇓*i*P	**Pn**	**07 21 05.9**	**+1.2**
baz=2.0							
EKS2				⇓*i*S	**Sn**	**07 21 45.6**	**+2.4**
baz=2.0							
AAK	**Ala-Archa**	**3.27**	**13**	Pn	**Pb**	**07 21 09.9**	**-2.4**
13nm,0.3s,baz=180,slow=5.6,SNR=28							
AAK				Sn	**Sb**	**07 21 53.8**	**+1.6**
9.7nm,0.3s,baz=317,slow=21,SNR=10							
40nm,0.5s							
AAK	**Ala-Archa**	**3.27**	**13**	P	**Pb**	**07 21 09.5**	**-2.8**
SNR=25							
AAK	**Ala-Archa**	**3.27**	**13**	Pn	**Pn**	**07 21 08.0**	**+2.5**
AAK	**Ala-Archa**	**3.27**	**13**	⇓*i*P	**Pn**	**07 21 06.5**	**+1.0**
baz=11							
AAK				⇓*i*S	**Sn**	**07 21 46.6**	**+2.0**
baz=11							
MRKS	**Merke**	**3.31**	**356**	*e*P	**Pg**	**07 21 16.2**	**-1.1**
21nm,0.4s							
MRKS				*e*S	**Sg**	**07 22 02.9**	**+2.8**
243nm,0.7s							
KBK	**Karagaybulak**	**3.39**	**18**	P	**Pb**	**07 21 12.2**	**-2.0**
SNR=17							
KBK	**Karagaybulak**	**3.39**	**18**	⇓*i*P	**Pn**	**07 21 08.0**	**+0.9**
baz=16							
KBK				⇓*i*S	**Sn**	**07 21 49.1**	**+1.7**
baz=16							
ULHL	**Ulahol**	**3.48**	**36**	P	**Pn**	**07 21 10.6**	**+2.3**
SNR=9.1							
ULHL	**Ulahol**	**3.48**	**36**	⇑*i*P	**Pn**	**07 21 09.0**	**+0.6**
baz=34							
ULHL				⇑*i*S	**Sn**	**07 21 50.4**	**+0.7**
baz=34							
CHGR	**Chuyangaron**	**3.49**	**258**		**Pn**	**07 21 10.5**	**+2.1**
CHGR	**Chuyangaron**	**3.49**	**258**	⇓*i*P	**Pn**	**07 21 10.8**	**+2.4**
baz=59							
CHGR				⇓*i*S	**Sb**	**07 21 53.8**	**-4.5**
baz=59							
BOOM	**Boomskoye usch**	**3.55**	**30**		**Pn**	**07 21 11.2**	**+1.9**
BOOM	**Boomskoye usch**	**3.55**	**30**	⇓*i*P	**Pn**	**07 21 10.1**	**+0.8**
baz=29							
BOOM				⇓*i*S	**Sn**	**07 21 52.5**	**+1.0**
baz=29							
CHMS	**Chumysh**	**3.67**	**14**	P	**Pb**	**07 21 14.2**	**-4.8**
SNR=16							
CHMS	**Chumysh**	**3.67**	**14**	Pg	Pg	07 21 34.8	+10
7.1nm,0.3s							
CHMS				Lg	Lg	07 22 33.4	
456nm,0.3s							
CHMS	**Chumysh**	**3.67**	**14**	⇑*i*P	**Pn**	**07 21 12.0**	**+1.2**
baz=13							
CHMS				⇑*i*S	**Sn**	**07 21 55.8**	**+1.6**
baz=13							
TAS	**Tashkent**	**3.73**	**302**		**Pn**	**07 21 14.8**	**+3.1**
IUG	**Iuzhnay**	**3.78**	**317**	*e*P	**Pg**	**07 21 25.2**	**-1.2**
2μm,0.6s							
IUG				*e*S	**Sg**	**07 22 18.4**	**+2.9**
308nm,0.6s							
TKM2	**Tokmak 2**	**3.81**	**24**	P	**Pn**	**07 21 15.3**	**+2.4**
SNR=22							
TKM2	**Tokmak 2**	**3.81**	**24**	⇓Pn	**Pn**	**07 21 15.0**	**+2.1**
16nm,0.5s							
TKM2				⇓Lg	Lg	07 22 12.2	
52nm,0.6s							
TKM2	**Tokmak 2**	**3.81**	**24**	⇑*i*P	**Pn**	**07 21 13.8**	**+0.9**
baz=22							
TKM2				⇑*i*S	**Sn**	**07 21 59.1**	**+1.2**
baz=22							
USP	**Ospenovka**	**3.89**	**11**	P	**Pn**	**07 21 16.1**	**+2.3**
SNR=13							
USP	**Ospenovka**	**3.89**	**11**	⇑*i*P	**Pn**	**07 21 15.1**	**+1.2**
baz=9.0							
USP				⇑*i*S	**Sn**	**07 22 01.5**	**+1.9**
baz=9.0							
KST	**Kastek**	**4.04**	**26**	*e*P	**Pb**	**07 21 24.8**	**-0.5**
26nm,0.5s							
KST				*e*S	**Sb**	**07 22 17.7**	**+3.5**
95nm,0.7s							
KST	**Kastek**	**4.04**	**26**	Pg	**Pb**	**07 21 25.9**	**+0.6**
26nm,0.5s							
KST				Lg	Lg	07 22 19.0	
95nm,0.7s							
SGDS	**Sogindy**	**4.09**	**11**	*e*P	**Pb**	**07 21 26.0**	**-0.2**
30nm,0.7s							
SGDS				*e*S	**Sg**	**07 22 20.2**	**-5.1**
83nm,0.7s							
SGDS	**Sogindy**	**4.09**	**11**	Pg	**Pb**	**07 21 27.1**	**+1.0**
30nm,0.7s							
SGDS				Lg	Lg	07 22 20.8	
83nm,0.7s							
CHM	**Chimkent**	**4.13**	**315**	*e*P	**Pg**	**07 21 30.4**	**-2.7**
11nm,0.9s							
CHM				*e*S	**Sg**	**07 22 26.9**	**+0.2**
456nm,0.3s							
MTBS	**Maitube**	**4.29**	**30**	*e*P	**Pb**	**07 21 29.5**	**+0.1**
45nm,0.5s							
MTBS				*e*S	**Sb**	**07 22 25.6**	**+4.3**
82nm,0.4s							
MTBS	**Maitube**	**4.29**	**30**	Pg	**Pb**	**07 21 30.2**	**+0.7**
45nm,0.5s							
MTBS				Lg	Lg	07 22 25.6	
82nm,0.4s							
KK31	**Karatay Array**	**4.30**	**329**		**Pn**	**07 21 22.0**	**+2.5**
KK31	**Karatay Array**	**4.30**	**329**	Pn	**Pn**	**07 21 22.3**	**+2.8**
3.8nm,0.3s,baz=138,slow=12,SNR=69							
KK31				⇑Pg	**Pg**	**07 21 34.6**	**-1.8**
6.4nm,0.3s,baz=152,slow=15,SNR=16							
KK31				Lg	Lg	07 22 28.4	
59nm,0.6s,baz=161,slow=31,SNR=4.9							
KKAR	**Karatay Array**	**4.30**	**329**		**Pn**	**07 21 22.3**	**+2.8**
KKAR	**Karatay Array**	**4.30**	**329**	⇓*i*P	**Pn**	**07 21 21.6**	**+2.1**
baz=28							
KKAR				⇓*i*S	**Sn**	**07 22 12.8**	**+3.1**
baz=28							
KRBS	**Karabastau**	**4.54**	**20**	*e*P	**Pb**	**07 21 34.5**	**+0.7**
33nm,0.5s							
KRBS				*e*S	**Sg**	**07 22 35.3**	**-4.6**
33nm,0.6s							
KRBS	**Karabastau**	**4.54**	**20**	Pg	**Pb**	**07 21 34.6**	**+0.7**
33nm,0.5s							
KRBS				Lg	Lg	07 22 33.1	
33nm,0.6s							
AAA	**Alma-Ata**	**4.55**	**33**	*e*P	**Pb**	**07 21 34.9**	**+1.0**
56nm,0.3s							
AAA				*e*S	**Sg**	**07 22 35.2**	**-4.8**
159nm,0.5s							
AAA	**Alma-Ata**	**4.55**	**33**	Pg	**Pb**	**07 21 35.8**	**+1.9**
56nm,0.3s							
AAA				Lg	Lg	07 22 35.2	
159nm,0.5s							
MDOK	**Medeo**	**4.57**	**34**	*e*P	**Pb**	**07 21 34.6**	**+0.3**
19nm,0.4s							
MDOK				*e*S	**Sg**	**07 22 34.6**	**-6.1**
71nm,0.5s							
MDOK	**Medeo**	**4.57**	**34**	Pn	**Pn**	**07 21 26.9**	**+3.6**
6.4nm,0.6s							
MDOK				Pg	**Pb**	**07 21 35.2**	**+0.9**
20nm,0.5s							
MDOK				Pg	Pg	07 21 35.4	-6.0
19nm,0.4s							
MDOK				Lg	Lg	07 22 34.6	
71nm,0.5s							
MDOK				Lg	Lg	07 22 36.1	
110nm,0.9s							
KNDC	**Almaty**	**4.58**	**33**	⇑Pg	**Pg**	**07 21 42.9**	**+1.3**
81nm,0.6s							
KNDC				⇑Lg	Lg	07 22 37.1	
118nm,0.5s							
PRZ	**Przheval'sk**	**4.78**	**49**		**Pn**	**07 21 30.2**	**+4.0**
KTBS	**Karatobe**	**4.88**	**28**	*e*P	**Pb**	**07 21 40.7**	**+1.1**
23nm,0.7s							
KTBS				*e*S	**Sg**	**07 22 44.9**	**-5.7**
96nm,0.4s							
KTBS	**Karatobe**	**4.88**	**28**	Pg	**

9.8nm,0.5s
UZB Lg Lg 07 23 05.3
18nm,0.5s
KPKS Kokpek 5.58 42 *e*P **Pb 07 21 54.0 +2.4**
14nm,0.6s
KPKS *e*S **Sg 07 23 07.9 -5.4**
42nm,0.5s
KPKS Kokpek 5.58 42 Pg **Pb 07 21 54.9 +3.3**
14nm,0.6s
KPKS Lg Lg 07 23 07.9
42nm,0.5s
BTLS Baital 5.61 4 *e*P **Pb 07 21 55.3 +3.4**
12nm,0.8s
BTLS *e*S **Sg 07 23 09.8 -4.1**
33nm,0.5s
BTLS Baital 5.61 4 Pg **Pb 07 21 54.6 +2.7**
12nm,0.8s
BTLS Lg Lg 07 23 07.1
6.6nm,0.7s
ARXS Arharly 5.75 33 *e*P **Pb 07 21 56.3 +1.9**
28nm,0.6s
ARXS *e*S **Sg 07 23 11.6 -6.9**
63nm,0.5s
ARXS Arharly 5.75 33 Pg **Pb 07 21 57.2 +2.8**
28nm,0.6s
ARXS Lg Lg 07 23 12.5
63nm,0.5s
NIL Nilore 5.79 182 Pn 07 21 43.1 +3.2
SHLS Shalkode 5.81 48 *e*P **Pg 07 22 03.4 -1.9**
9.8nm,0.5s
SHLS *e*S **Sg 07 23 23.0 +2.5**
51nm,0.8s
SHLS Shalkode 5.81 48 Pg **Pg 07 22 07.1 +1.9**
12nm,0.5s
SHLS Lg Lg 07 23 28.4
51nm,0.8s
PDGK Podgornoye 5.93 47 Pg **Pb 07 21 59.9 +2.4**
4.9nm,0.6s
PDGK Lg Lg 07 23 16.6
14nm,1.0s
PDGK Podgornoye 5.93 47 Pg Pb 07 22 01.9 +4.3
PDGK Lg Lg 07 23 14.4
KBL Kabul 6.06 218 Pn 07 21 47.5 +3.6
DJR Jarkent 6.76 42 *e*P **Pb 07 22 15.1 +3.4**
5.8nm,0.5s
DJR *e*S **Sg 07 23 44.1 -6.9**
13nm,0.8s
DJR Jarkent 6.76 42 Pg Pb 07 22 16.0 +4.3
5.8nm,0.5s
DJR Lg Lg 07 23 44.1
13nm,0.8s
THN Thein Dam 7.22 165 *e*P **Pn 07 22 02.3 +2.8**
THN *e*S **Sn 07 23 25.2 +3.6**
SMLA Simla 8.81 159 *e*P **Pn 07 22 22.5 +1.1**
SMLA *e*S Sn 07 23 37.0 -24
SMLA IAML 07 24 04.4
comp=E,30nm,0.9s
SMLA IAML 07 24 04.6
comp=N,43nm,0.3s
MK31 Makanchi Array 9.74 38 Pn 07 22 38.0 +3.8
MKAR Makanchi Array 9.74 38 Pn **Pn 07 22 36.7 +2.5**
comp=N,0.1nm,0.3s,baz=217,slow=12,SNR=3.4
KUDL Kundal 11.54 167 *e*P **Pn 07 22 57.7 -1.0**
KUDL *e*S **Sn 07 24 59.4 -8.3**
KURBB Kurchatov Arra 11.72 16 Pn **Pn 07 23 02.6 +1.4**
baz=207,slow=11,SNR=2.8
GEYT Alibeck 12.13 268 Pn **Pn 07 23 06.0 -0.9**
comp=N,0.4nm,0.3s,baz=205,slow=7.2,SNR=2.2
GEYT Sn **Sn 07 25 23.7 +1.4**
comp=N,0.5nm,0.3s,baz=110,slow=17,SNR=2.2
comp=N,2.5nm,0.4s
AB31 Akbulak array 13.78 320 P **Pn 07 23 28.4 -0.9**
comp=N,1.4nm,0.5s,baz=128,slow=12,SNR=41
ABKAR Akbulak array 13.78 320 Pn 07 23 29.5 +0.2
BRVK Borovoye 13.80 352 Pn **Pn 07 23 30.6 +1.0**
BRVK Borovoye 13.80 352 ⇓P **Pn 07 23 28.6 -0.9**
comp=N,5.4nm,0.7s
AKTO Aktyubinsk 15.50 320 Pn **Pn 07 23 52.5 0.0**
comp=N,0.3nm,0.3s,baz=134,slow=13,SNR=9.0
comp=N,1.8nm,0.6s
AKTO Aktyubinsk 15.50 320 ⇑P **Pn 07 23 52.9 +0.3**
comp=N,9.6nm,0.8s
ZAA0 Zalesovo Array 16.42 24 P 07 24 05.6 -1.5
ZALV Zalesovo Beam 16.42 24 Pn **P 07 24 05.5 -1.6**
comp=N,0.4nm,0.3s,baz=212,slow=11,SNR=8.3
comp=N,2.1nm,0.6s
ZALV Zalesovo Beam 16.42 24 Pn **P 07 24 05.0 -2.1**
ARU Arti 19.65 335 P **Pn 07 24 44.3 +0.2**
ARU IAmb IAmb 07 24 46.7
comp=Z,5.1nm,0.7s
BELG Belogornoye 22.04 315 P **P 07 25 09.5 +1.0**
comp=Z,14nm,0.7s,baz=107,slow=11,SNR=2.6
comp=Z,14nm,0.7s
GNI Garni 22.09 281 P **P 07 25 14.2 +4.8**
GNI IAmb IAmb 07 25 18.0
comp=Z,16nm,1.1s
HYBB Hyderabad (bro 22.38 167 *e*P **P 07 25 14.2 +1.7**
ONI Oni 22.85 288 P **P 07 25 19.3 +1.9**
KBZ Khabaz 23.23 291 P **P 07 25 22.2 +1.1**
comp=Z,0.5nm,0.3s,baz=56,slow=7.3,SNR=1.4
comp=Z,0.5nm,0.3s
SONM Songino Array 25.07 60 P **P 07 25 38.9 +0.3**
comp=Z,1.3nm,1.0s,baz=267,slow=8.6,SNR=4.8
comp=Z,1.3nm,1.0s
BRTR Keskin Array B 30.56 283 P **P 07 26 28.8 +0.9**
comp=Z,1.2nm,0.7s,baz=97,slow=11,SNR=4.5
comp=Z,1.2nm,0.7s
AKASG Malin Array Be 32.78 305 P **P 07 26 47.4 +0.3**
comp=Z,0.4nm,0.3s,baz=77,slow=7.7,SNR=5.4
comp=Z,0.4nm,0.3s
FINES FINESS Array B 36.24 323 P **P 07 27 17.3 +0.5**
comp=Z,1.7nm,0.4s,baz=112,slow=9.2,SNR=19
comp=Z,1.7nm,0.4s
ATD Arta Tunnel 38.89 233 LR LR 07 46 48.3
comp=Z,96nm,19.3s,baz=228,slow=41
ARCES ARCESS Array B 39.24 336 P **P 07 27 42.6 +0.5**
comp=Z,2.3nm,0.7s,baz=109,slow=8.9,SNR=12
comp=Z,2.3nm,0.7s
GERES GERESS Array B 42.93 303 P **P 07 28 13.8 +0.9**
comp=Z,0.8nm,0.5s,baz=68,slow=7.6,SNR=7.3
comp=Z,0.8nm,0.5s
NB2 NORSAR Subarra 43.29 321 P **P 07 28 15.3 -0.2**
comp=Z,1.5nm,0.6s,baz=91,slow=8.6
NOA NORSAR Array B 43.29 321 P **P 07 28 15.4 -0.1**
comp=Z,2.1nm,0.6s,baz=91,slow=7.9,SNR=9.2
comp=Z,2.1nm,0.6s
MJAR Matsushiro Arr 50.08 72 P **P 07 29 09.3 +0.3**
comp=Z,0.3nm,0.3s,baz=288,slow=7.2,SNR=1.3
comp=Z,0.3nm,0.3s
EKA Eskdalemuir Ar 51.59 315 LR LR 07 53 14.2
comp=Z,37nm,19.9s,baz=0.5,slow=38
ESDC Sonseca Array 57.87 297 P **P 07 30 05.7 -0.3**
comp=Z,0.5nm,0.7s,baz=50,slow=6.0,SNR=5.9
comp=Z,0.5nm,0.7s
TORD Torodi Ar. Bea 67.77 269 P **P 07 31 11.1 -1.1**
comp=Z,0.4nm,0.5s,baz=62,slow=4.4,SNR=5.5
comp=Z,0.4nm,0.5s
ILAR Eielson Array 71.40 17 P **P 07 31 32.7 -1.1**
comp=Z,0.5nm,0.9s,baz=329,slow=3.4,SNR=4.4
comp=Z,0.5nm,0.9s
YKA Yellowknife Ar 78.20 4 P **P 07 32 13.5 +0.3**
comp=Z,0.7nm,0.8s,baz=348,slow=5.7,SNR=3.1
comp=Z,0.7nm,0.8s
SCHQ Schefferville 80.14 338 LR LR 08 08 22.2
comp=Z,44nm,18.4s,baz=170,slow=36
WRA Warramunga Arr 81.92 124 P **P 07 32 32.2 -1.7**
comp=Z,0.9nm,0.9s,baz=326,slow=4.9,SNR=9.9
comp=Z,0.9nm,0.9s
ASAR Alice Springs 84.36 127 P **P 07 32 44.6 -1.9**
comp=Z,0.4nm,0.6s,baz=313,slow=4.9,SNR=6.9
comp=Z,0.4nm,0.6s

TAP ***13*** *07:54:58.5,25.56N×122.03E,h193km,ML2.9,C*
JMA ***13*** *07:55:02.1±0.3,25°N±2.2°×12°2E±°,h181km,MV2.5/9,NW OFF ISHIGAKIJIMA IS*

ISC 13 07:54:57.6±2.2,25°39N±0.08×122°22E±0.04,
h198km±12km,n61,σ1§13/92,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	
						h m s	ISC
PCYT	**Pengchaiyu**	**0.27**	**330**	*e*P		**Pn**	**07 55 23.4 -0.3**
	baz=21						
SXI1	**Grass Mountain**	**0.43**	**227**	*e*P		**Pn**	**07 55 24.9 +0.6**
	baz=206						
TWB1	**Santiao Chiao**	**0.44**	**209**	P		**Pn**	**07 55 25.9 +1.8**
	baz=183						
TWB1				*e*S		**Sn**	**07 55 44.5 -0.2**
WFSB	**Wu-fen Shan**	**0.51**	**231**	*e*P		**Pn**	**07 55 26.2 +1.7**
	baz=213						
TIPB	**Shuangxi**	**0.55**	**221**	*e*P		**Pn**	**07 55 25.3 +0.6**
	baz=205						
TWY	**Chenhua**	**0.58**	**258**	*e*P		**Pn**	**07 55 25.9 +1.3**
	baz=234						
EGS		**0.61**	**206**	*e*P		**Pn**	**07 55 22.9 -2.0**
	baz=186						
YM08	**YM08**	**0.61**	**250**	*e*P		**Pn**	**07 55 25.3 +0.5**
	baz=228						
YM01	**YM01**	**0.64**	**248**	*e*P		**Pn**	**07 55 25.6 +0.5**
	baz=226						
TWE	**Neicheng**	**0.84**	**217**	*e*P		**Pn**	**07 55 28.0 +2.0**
	baz=204						
TWC	**Suao**	**0.85**	**204**	*e*P		**Pn**	**07 55 27.3 +1.1**
	baz=183						
TWC				*e*S		**Sn**	**07 55 48.8 +0.6**
	baz=183						
FUSB	**Fushanzhiwuyua**	**0.86**	**223**	*e*P		**Pn**	**07 55 28.1 +1.8**
	baz=207						
FUSB				*e*S		**Sn**	**07 55 48.5 +0.1**
	baz=207						
NDS	**Dongshan**	**0.89**	**211**	*e*P		**Pn**	**07 55 27.5 +1.1**
	baz=197						
NDS				S		**Sn**	**07 55 48.6 -0.1**
	baz=197						
ENTT	**Nioudou**	**0.96**	**219**	P		**Pn**	**07 55 27.5 +0.7**
	baz=204						
ENTT				*e*S		**Sn**	**07 55 49.4 -0.1**
	baz=204						
NDT	**Datong Townshi**	**1.02**	**219**	*e*P		**Pn**	**07 55 27.4 +0.2**
	baz=216						
NDT				*e*S		**Sn**	**07 55 49.5 -0.6**
	baz=216						
EWUT	**Wuta**	**1.03**	**203**	*e*P		**Pn**	**07 55 27.5 +0.2**
	baz=190						
EWUT				*e*S		**Sn**	**07 55 49.1 -1.2**
	baz=190						
YHNB	**Yeheng**	**1.05**	**227**	*e*P		**Pn**	**07 55 28.8 +1.2**
	baz=221						
YHNB				*e*S		**Sn**	**07 55 50.0 -0.8**
	baz=221						
ENA	**Nanau**	**1.06**	**205**	P		**Pn**	**07 55 29.0 +1.5**
	baz=193						
ENA				*e*S		**Sn**	**07 55 50.4 -0.3**
	baz=193						
NSK	**Sanguang**	**1.06**	**228**	*i* P		**Pn**	**07 55 27.9 +0.3**
	baz=221						
NSK				*e*S		**Sn**	**07 55 49.0 -1.8**
	baz=221						
LATG	**Datong**	**1.06**	**217**	P		**Pn**	**07 55 29.3 +1.6**
	baz=212						
LATG				S		**Sn**	**07 55 51.0 0.0**
	baz=212						
YOJ	**Yonaguni jima**	**1.17**	**142**	*e*P		**Pn**	**07 55 29.3 +1.0**
	baz=148						
YOJ	**Yonaguni jima**	**1.17**	**142**	*e*S		**Sn**	**07 55 51.5 -0.7**
NNS	**Nan Shan**	**1.23**	**219**	*i* P		**Pn**	**07 55 29.5 +0.6**
	baz=210						
NNS				*e*S		**Sn**	**07 55 52.5 -0.6**
	baz=210						
NNSB	**Datong**	**1.23**	**219**	*i* P		**Pn**	**07 55 30.3 +1.4**
	baz=210						
NNSB				*e*S		**Sn**	**07 55 52.5 -0.7**
	baz=210						
NNSH	**Datong**	**1.23**	**219**	*e*P		**Pn**	**07 55 30.1 +1.2**
	baz=212						
NFF	**Wufeng Townshi**	**1.26**	**233**	P		**Pn**	**07 55 29.3 +0.2**
	baz=227						
NFF				*e*S		**Sn**	**07 55 51.4 -2.1**
	baz=227						
SBCB	**Hsinchu**	**1.27**	**242**	*e*P		**Pn**	**07 55 30.1 +1.0**
	baz=236						
LIOB	**Emei**	**1.33**	**236**	*e*P		**Pn**	**07 55 31.1 +1.5**
	baz=220						
LIOB				*e*S		**Sn**	**07 55 54.2 -0.1**
	baz=220						
NACB	**Ninganchiao**	**1.34**	**205**	*e*P		**Pn**	**07 55 30.2 +0.4**
	baz=204						
NACB				*e*S		**Sn**	**07 55 53.0 -1.6**
	baz=204						
NSTT	**Nanjuang**	**1.34**	**236**	*e*P		**Pn**	**07 55 30.8 +1.1**
	baz=220						
NSTT				*e*S		**Sn**	**07 55 54.3 -0.3**
	baz=220						
ETL	**Fush Village**	**1.35**	**204**	P		**Pn**	**07 55 30.5 +0.7**
	baz=202						
ETLH	**Xiulin Townshi**	**1.36**	**210**	*e*P		**Pn**	**07 55 30.9 +0.9**
	baz=200						
ETLH				*e*S		**Sn**	**07 55 53.8 -1.3**
	baz=200						
TWD	**Chiawan**	**1.43**	**204**	*e*P		**Pn**	**07 55 30.8 +0.4**
	baz=204						
TWD				*e*S		**Sn**	**07 55 54.1 -1.8**
	baz=204						
FUSS	**Fushou**	**1.45**	**218**	*e*P		**Pn**	**07 55 32.2 +1.3**
	baz=214						
FUSS				*e*S		**Sn**	**07 55 56.1 -0.6**
	baz=214						
TWT	**Tachien**	**1.48**	**220**	*e*P		**Pn**	**07 55 32.5 +1.3**
	baz=216						
TWT				*e*S		**Sn**	**07 55 56.8 -0.3**
	baz=216						
TDCB	**Techi**	**1.49**	**221**	*e*P		**Pn**	**07 55 32.6 +1.4**
	baz=215						
TDCB				*e*S		**Sn**	**07 55 56.5 -0.8**
	baz=215						
WHF	**Hehuan Shan**	**1.52**	**215**	P		**Pn**	**07 55 32.8 +1.1**
	baz=200						
WHF				*e*S		**Sn**	**07 55 57.3 -0.9**
	baz=200						
WHP	**Taichung City**	**1.61**	**227**	P		**Pn**	**07 55 33.5 +1.3**
	baz=224						
CHGB	**Renai**	**1.64**	**216**	*e*P		**Pn**	**07 55 33.9 +1.3**
	baz=202						
CHGB				*e*S		**Sn**	**07 55 59.0 -0.7**
	baz=202						
WUSB	**Renai**	**1.72**	**216**	P		**Pn**	**07 55 34.8 +1.5**
	baz=203						
WUSB				S		**Sn**	**07 56 00.5 -0.5**
	baz=203						
OWD	**Renai**	**1.72**	**214**	*e*P		**Pn**	**07 55 34.6 +1.3**
	baz=203						
OWD				*e*S		**Sn**	**07 56 00.0 -1.0**
	baz=203						
IRIF	**Iriomote-Funau**	**1.73**	**127**	*e*P		**Pn**	**07 55 34.7 +1.5**
ESL	**Shilin**	**1.73**	**205**	*e*P		**Pn**	**07 55 34.1 +0.8**
	baz=194						
VWDT	**VWDT**	**1.91**	**211**	*e*P		**Pn**	**07 55 36.3 +1.4**
	baz=197						
SMLT	**Sun Moon Lake**	**1.93**	**219**	P		**Pn**	**07 55 36.3 +0.9**
	baz=212						
HATJ	**Hateruma jima**	**1.96**	**132**	*e*S		**Sn**	**07 56 03.2 -1.7**
SSLB	**Suanglung**	**1.97**	**216**	P		**Pn**	**07 55 36.5 +0.8**
	baz=216						
SSLB				*e*S		**Sn**	**07 56 03.0 -2.4**
	baz=216						
JKRS	**Kuro-shima**	**1.99**	**125**	*e*P		**Pn**	**07 55 37.1 +1.3**
JKRS				*e*S		**Sn**	**07 56 04.6 -0.9**
JIJ	**Ishigaki jima**	**2.02**	**120**	*e*P		**Pn**	**07 55 37.3 +1.1**
JIJ				S		**Sn**	**07 56 04.0 -2.1**
HGSD	**Ruisui**	**2.03**	**201**	*e*P		**Pn**	**07 55 37.2 +1.0**
	baz=195						
WNT1	**Nantou City**	**2.04**	**224**	*e*P		**Pn**	**07 55 37.4 +1.1**
	baz=224						
JISG	**Ishigakijimahi**	**2.06**	**113**	P		**Pn**	**07 55 37.8 +1.3**
JISG				S		**Sn**	**07 56 05.6 -1.1**
YULB	**Yu-li**	**2.17**	**203**	*e*P		**Pn**	**07 55 37.7 0.0**
	baz=191						
ALS	**Alishan**	**2.28**	**215**	P		**Pn**	**07 55 40.2 +1.0**
	baz=209						
JTJ	**Tarama**	**2.37**	**108**	P		**Pn**	**07 55 40.9 +1.1**
JTJ				S		**Sn**	**07 56 11.8 -1.0**
XPSS	**Dashiqiu**	**2.38**	**310**	*e*P		**Pn**	**07 55 40.1 +0.2**
	baz=309						
CHN4	**Tsaushan**	**2.52**	**217**	*e*P		**Pn**	**07 55 41.3 -0.3**
	baz=205						
TPUB	**Ta-pu**	**2.54**	**215**	*e*P		**Pn**	**07 55 43.3 +1.5**
	baz=210						
STYT	**Tauyuan**	**2.59**	**211**	*e*P		**Pn**	**07 55 43.2 +0.7**
	baz=206						
WTP	**Ta-pu**	**2.59**	**215**	*e*P		**Pn**	**07 55 42.8 +0.3**
	baz=209						
CHN1	**Nanshi**	**2.69**	**215**	*e*P		**Pn**	**07 55 43.9 +0.4**
	baz=210						

NEIC ***13*** *07:55:05.1±2.7,16.10N±0.02×98.84W±0.03,h10km±1km, mb4.2/11,Md4.5/86(MEX),Error ellipse: s-maj=4.8km s-min=4.1km az=155.0*
MEX ***13*** *07:55:06.9±1.3,16.05N×98.82W,h17km±999km,MD4.5*
IDC ***13*** *07:55:08.6±5.3,16.50N×98.45W,h0km,mb3.7/3, mbtmp3.5/5,ML3.3/2,MS3.1/4,Error ellipse: s-maj=108.1km s-min=27.8km az=15.0*

ISC 13 07:55:03.3±1.4,16.14N±0.04×98.81W±0.02,h5km±9km,
n87,σ1§92/135,mb4.0/7,MS2.9/3,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	
						h m s	ISC
CRIG	**Cruz Grande**	**0.67**	**332**			**Pn**	**07 55 18.6 -0.9**
CRIG						**Sb**	**07 55 27.9 +0.7**
CRIG	**Cruz Grande**	**0.67**	**332**	*e*P		**Pn**	**07 55 18.6 -0.9**
CRIG				*e*S		**Sb**	**07 55 27.8 +0.7**
PNIG	**Pinotepa**	**0.70**	**69**			**Pb**	**07 55 18.5 +0.5**
PNIG						**Sb**	**07 55 28.0 0.0**
PNIG	**Pinotepa**	**0.70**	**69**	*e*P		**Pb**	**07 55 18.5 +0.5**
PNIG				*e*S		**Sb**	**07 55 28.0 0.0**
MGIG	**Malinaltepec**	**1.10**	**9**	*e*P		**Pn**	**07 55 25.6 0.0**
MGIG				*e*S		**Sn**	**07 55 40.6 -0.6**
DAIG	**Los Arroyos**	**1.19**	**317**			**Pb**	**07 55 26.1 -0.3**
DAIG						**Sg**	**07 55 42.3 +0.6**
DAIG	**Los Arroyos**	**1.19**	**317**	*e*P		**Pb**	**07 55 26.1 -0.3**
DAIG				*e*S		**Sg**	**07 55 42.3 +0.6**
YOIG	**Yosondua**	**1.40**	**59**	*e*P		**Pb**	**07 55 29.6 -0.6**
YOIG				*e*S		**Sg**	**07 55 48.7 +0.1**
TLIG	**Tlapa**	**1.43**	**9**			**Pg**	**07 55 31.5 +0.7**
TLIG	**Tlapa**	**1.43**	**9**	*e*P		**Pg**	**07 55 30.6 -0.2**
TLIG				*e*S		**Sn**	**07 55 48.4 -0.9**
TXIG	**Tlaxiaco**	**1.49**	**42**	*e*P		**Pb**	**07 55 31.1 -0.5**
TXIG				*e*S		**Sn**	**07 55 49.7 -1.3**
PEIG	**Puerto Escondi**	**1.60**	**95**	*e*P		**Pn**	**07 55 31.3 -1.0**
PEIG				*i* S		**Sn**	**07 55 49.7 -3.8**
CAIG	**El Cayaco**	**1.67**	**303**			**Pn**	**07 55 32.8 -0.4**
CAIG						**Sb**	**07 55 56.6 +0.9**
CAIG	**El Cayaco**	**1.67**	**303**	*e*P		**Pn**	**07 55 32.8 -0.4**
CAIG				*e*S		**Sn**	**07 55 51.7 -3.3**
FTIG	**Fresnillo de T**	**1.87**	**20**	*e*P		**Pb**	**07 55 36.9 -1.1**
FTIG				*e*S		**Sn**	**07 55 59.6 -0.6**
HLIG	**Huajuapan de L**	**1.93**	**30**	*e*P		**Pb**	**07 55 38.3 -1.0**
HLIG				*e*S		**Sb**	**07 56 02.8 -1.0**
MEIG	**Mezcala**	**1.94**	**336**			**Pb**	**07 55 38.3 -0.8**
MEIG						**Sn**	**07 56 01.8 0.0**
MEIG	**Mezcala**	**1.94**	**336**	*e*P		**Pb**	**07 55 38.3 -0.8**
MEIG				*e*S		**Sn**	**07 56 00.7 -1.1**
VHO	**Vista Hermosa**	**2.19**	**65**	*e*P		**Pn**	**07 55 40.9 +0.3**
VHO				*e*S		**Sb**	**07 56 09.6 -1.6**
PLIG	**Platanillo**	**2.33**	**344**			**Pb**	**07 55 44.9 -1.1**
PLIG						**Sg**	**07 56 17.7 -0.7**
PLIG	**Platanillo**	**2.33**	**344**	*e*P		**Pb**	**07 55 44.9 -1.1**
PLIG				*e*S		**Sn**	**07 56 10.8 -0.9**
ARIG	**Puente Sto Nin**	**2.59**	**326**			**Pb**	**07 55 48.0 -2.2**
ARIG	**Puente Sto Nin**	**2.59**	**326**	*e*P		**Pb**	**07 55 48.0 -2.2**
ARIG				*e*S		**Sn**	**07 56 15.0 -2.8**
HUIG	**Huatulco**	**2.62**	**98**			**Pn**	**07 55 46.2 -0.2**
HUIG						**Sb**	**07 56 20.9 -2.5**
HUIG	**Huatulco**	**2.62**	**98**	*e*P		**Pn**	**07 55 46.2 -0.2**
HUIG				*e*S		**Sb**	**07 56 20.9 -2.5**
YAIG	**Yautepec**	**2.72**	**355**			**Pb**	**07 55 50.5 -2.0**
YAIG						**Sb**	**07 56 23.0 -3.3**
YAIG	**Yautepec**	**2.72**	**355**	*e*P		**Pb**	**07 55 50.5 -2.0**
YAIG				*e*S		**Sb**	**07 56 23.0 -3.3**
MAVM	**Malinalco, Edo**	**2.88**	**347**			**Pn**	**07 55 51.9 +1.9**
MAVM						**Sn**	**07 56 25.4 +0.3**
MAVM	**Malinalco, Edo**	**2.88**	**347**	*e*P		**Pn**	**07 55 51.9 +1.9**
MAVM				*i* S		**Sn**	**07 56 25.4 +0.3**
PPM	**Popocatepetl**	**2.91**	**3**	*e*P		**Pb**	**07 55 57.2 +1.1**
PPM				*e*S		**Sb**	**07 56 29.8 -2.5**
ZIIG	**Zihuatanejo**	**2.93**	**300**			**Pg**	**07 55 59.5 0.0**
ZIIG						**Sn**	**07 56 25.2 -1.0**
ZIIG	**Zihuatanejo**	**2.93**	**300**	*e*P		**Pg**	**07 55 59.5 0.0**
ZIIG				*e*S		**Sn**	**07 56 25.2 -1.0**
TLVM	**San Miguel Top**	**3.07**	**354**	*e*P		**Pn**	**07 55 55.3 +2.5**
TLVM				*i* S		**Sb**	**07 56 37.5 +0.9**
XCVM	**Xochimilco**	**3.11**	**355**	*e*P		**Pb**	**07 55 58.4 -0.9**
XCVM				*i* S		**Sb**	**07 56 37.4 -0.2**
AOVM	**Tlapan**	**3.15**	**351**	*e*P		**Pb**	**07 55 57.3 -2.8**
AOVM				*i* S		**Sb**	**07 56 38.5 -0.5**
THVM	**De Xico**	**3.16**	**357**	*e*P		**Pb**	**07 55 59.4 -0.7**
THVM				*i* S		**Sb**	**07 56 38.9 -0.1**
INVM	**La Marquesa**	**3.18**	**350**	*e*P		**Pn**	**07 55 52.3 -2.1**
INVM				*i* S		**Sn**	**07 56 24.8 -8.2**
UNM	**Universidad Na**	**3.19**	**354**			**Pn**	**07 55 57.6 -3.1**
UNM	**Universidad Na**	**3.19**	**354**	*e*P		**Pb**	**07 56 02.4 -1.8**
UNM				*e*S		**Sb**	**07 56 39.2 -0.7**
BJVM	**Benito Juarez**	**3.23**	**354**	*e*P		**Pb**	**07 56 01.4 -0.1**
BJVM				*e*S		**Sb**	**07 56 36.9 -4.3**
CJVM	**Cuajimalpa**	**3.23**	**352**	*e*P		**Pg**	**07 56 05.3 0.0**
CJVM				*i* S		**Sb**	**07 56 37.0 -4.2**
NEUV	**Arroyo Zacate**	**3.27**	**61**	*e*P		**Pn**	**07 55 56.0 +0.6**
NEUV				*i* S		**Sn**	**07 56 37.0 +2.3**
TXVM	**Universitario**	**3.27**	**358**	*e*P		**Pg**	**07 56 05.7 -0.4**
TXVM				*i* S		**Sn**	**07 56 35.8 +0.6**
GMVM	**Gustavo A Made**	**3.34**	**355**	*e*P		**Pb**	**07 56 01.9 -1.5**
GMVM				*i* S		**Sb**	**07 56 42.1 -2.4**
APVM	**Azcapotzalco**	**3.35**	**354**	*e*P		**Pg**	**07 56 05.6 -2.0**
APVM				*i* S		**Sb**	**07 56 43.5 -1.0**
JAUV	**Jalcomulco**	**3.73**	**30**	*e*P		**Pn**	**07 56 02.5 +0.8**
JAUV				*i* S		**Sn**	**07 56 43.0 -3.1**
CMIG	**Matias Romero**	**3.88**	**75**	Pn		**Pn**	**07 56 03.5 -0.2**
	baz=246,slow=15						
CMIG				Sn		**Sn**	**07 56 47.2 -2.4**
	6.5nm,0.3s,baz=307,slow=18,SNR=1.3						
CMIG	**Matias Romero**	**3.88**	**75**			**Pn**	**07 56 04.5 +0.9**
CMIG	**Matias Romero**	**3.88**	**75**	*e*P		**Pn**	**07 56 04.5 +0.9**
CMIG				*e*S		**Sn**	**07 56 48.3 -1.3**
ACIG	**Acambay**	**3.95**	**345**	*e*P		**Pn**	**07 56 06.3 +1.5**
ACIG				*e*S		**Sb**	**07 57 00.6 -1.3**
DEIG	**Demacu**	**4.14**	**357**	*e*P		**Pb**	**07 56 14.7 -2.2**
DEIG				*e*S		**Sn**	**07 56 58.8 +2.3**
CXUV	**Coxquihui**	**4.17**	**16**	*e*P		Pb	07 56 12.4 -4.9
CXUV				*e*S		**Sn**	**07 56 55.5 -1.5**
MOIG	**Morelia**	**4.18**	**328**			**Pn**	**07 56 10.4 +2.4**
LVIG	**Laguna Verde**	**4.23**	**32**	*e*P		**Pn**	**07 56 06.0 -2.4**
LVIG				*i* S		**Sn**	**07 56 58.1 -0.1**
UXUV	**UXUV**	**4.62**	**75**	*e*P		**Pn**	**07 56 13.9 +0.1**
UXUV				*e*S		**Sn**	**07 57 04.7 -3.2**
PCIG		**5.39**	**94**	*e*		**Pn**	**07 56 23.2 -1.2**
PCIG				*e*			07 57 21.7
TGIG		**5.49**	**83**			**Pn**	**07 56 26.1 +0.2**
TGIG						**Sn**	**07 57 30.6 +1.0**
TGIG		**5.49**	**83**	*e*P		**Pn**	**07 56 26.1 +0.2**
TGIG				*e*S		**Sn**	**07 57 30.6 +1.0**
CCIG	**Comitan**	**6.41**	**88**	Pn		**Pn**	**07 56 41.6 +3.0**
CCIG	**Comitan**	**6.41**	**88**	*e*P		**Pn**	**07 56 40.5 +1.8**
CCIG				*e*S		**Sn**	**07 57 50.8 -1.5**
PATR	**El Naranjo**	**6.42**	**98**	*e*P		**Pn**	**07 56 39.6 +0.8**
PATR				*e*S		**Sn**	**07 57 47.2 -5.3**
PAVE	**Pavencul**	**6.46**	**97**	*e*P		**Pn**	**07 56 41.5 +2.2**
PAVE				*e*S		**Sn**	**07 57 51.5 -2.0**
CHUJ	**Union Juarez**	**6.54**	**98**	*e*P		**Pn**	**07 56 41.8 +1.4**
CHUJ				*i* S		**Sn**	**07 57 52.7 -2.9**
TXI1	**Lajitas Ar. Si**	**13.87**	**342**	Pn		**Pn**	**07 58 23.2 +2.4**
TXAR	**Lajitas Array**	**13.87**	**342**	Pn		**P**	**07 58 25.3 -4.0**
	baz=155,slow=11,SNR=2.6						
	0.4nm,0.9s						
TXAR	**Lajitas Array**

CPCT					IAmb	IAmb	08 00 13.9	
	comp=Z,5.3nm,0.9s							
P40A	**Paris**	**24.04**	**13**	P	**P**	**08 00 20.3**	**+0.9**	
P40A				IAmb	IAmb	08 00 30.1		
	comp=Z,12nm,1.1s							
ISCO	**Idaho Springs**	**24.31**	**347**		**P**	**08 00 23.8**	**+1.6**	
ISCO				IAmb	IAmb	08 00 28.6		
	comp=Z,9.8nm,1.4s							
NVAR	**Mina Array Bea**	**28.05**	**326**	P	P	08 01 00.8	+4.9	
	comp=Z,0.8nm,0.9s,baz=142,slow=11,SNR=6.1							
	comp=Z,0.8nm,0.9s							
PDAR	**Pinedale Array**	**28.09**	**343**	P	**P**	**08 01 00.2**	**+4.0**	
	comp=Z,1.1nm,0.9s,baz=146,slow=8.2,SNR=7.6							
PDAR				LR	LR	08 10 58.3		
	comp=Z,14nm,21.7s,baz=166,slow=34							
	comp=Z,1.1nm,0.9s							
SDV	**Santo Domingo**	**28.41**	**101**	LR	LR	08 11 52.2		
	comp=Z,35nm,21.5s,baz=74,slow=36							
H03N2	**Juan Fernandez**	**52.83**	**159**	T	T	09 01 17.4		
	baz=337,slow=77,SNR=107							
H03N1	**Juan Fernandez**	**52.84**	**159**	T	T	09 01 12.7		
	baz=337,slow=77,SNR=161							
H03N3	**Juan Fernandez**	**52.85**	**159**	T	T	09 01 11.7		
	baz=337,slow=77,SNR=140							
ILAR	**Eielson Array**	**58.34**	**338**	P	P	08 05 03.9	+4.7	
	comp=Z,1.0nm,1.1s,baz=148,slow=5.8,SNR=5.8							
	comp=Z,1.0nm,1.1s							
MDT	**Midelt**	**84.85**	**57**	LR	LR	08 40 33.7		
	comp=Z,34nm,21.7s,baz=234,slow=32							

*TUL **13** 07:57:07.6±0.5,36°.48N±0°.02×98°.82W±0°.05,h5km±3km, ML2.5,mb_Lg2.4/35(NEIC),Error ellipse: s-maj=5.4km s-min=2.3km az=97.0*

NEIC 13 07:57:08.3±0.5,36°.483N±0°.007×98°.83W±0°.06,h5km±1km, Error ellipse: s-maj=8.2km s-min=2.9km az=91.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.07**	**94**		Pg	07 57 08.5	-1.4
NOKA	**Waynoka**	**0.17**	**331**	Pg	Pg	07 57 11.6	-0.2
U32A	**Winter Ranch,**	**0.17**	**234**	Pg	Pg	07 57 11.4	-0.4
OK035	**E0210 Rd and N**	**0.24**	**23**	Pg	Pg	07 57 12.9	-0.2
KAN14	**Manchester OK**	**0.84**	**55**	Pg	Pg	07 57 23.4	-1.0
CSTR	**Hydro, Custer**	**0.84**	**172**	Pg	Pg	07 57 23.7	-0.8
CSTR				IAmb_Lg		07 57 34.8	
	comp=Z,2.8nm,0.8s						
GC02	**Grant County #**	**0.86**	**64**	Pg	Pg	07 57 23.9	-0.9
KAN10	**Anthony SW Sta**	**0.87**	**42**	Pg	Pg	07 57 24.4	-0.5
KAN16	**Harper SW Stat**	**0.96**	**39**	Pg	Pg	07 57 25.9	-0.8
KAN05	**Bluff City Nor**	**0.99**	**51**	Pg	Pg	07 57 26.3	-1.0
KAN08	**Anthony NE Sta**	**1.01**	**43**	Pg	Pg	07 57 26.7	-1.0
KAN12	**Harper NE Stat**	**1.05**	**39**	Pg	Pg	07 57 27.4	-1.0
KAN01	**Argonia South**	**1.09**	**52**	Pg	Pg	07 57 28.1	-1.0
KAN06	**Argonia West S**	**1.09**	**45**	Pg	Pg	07 57 28.4	-0.8
KAN13	**South Haven SW**	**1.21**	**64**	Pg	Pg	07 57 30.1	-1.3
KS21	**Milan North St**	**1.23**	**49**	Pg	Pg	07 57 30.6	-1.3
BCOK	**Bluff Creek, N**	**1.29**	**130**		Pn	07 57 31.7	-1.2
OK029	**Liberty Lake**	**1.30**	**121**	Pg	Pn	07 57 31.7	-1.5
AMTX	**Amarillo**	**2.82**	**236**	IAmb_Lg		07 58 38.0	
	comp=Z,15nm,0.7s						
LOOK	**Love County**	**2.83**	**151**	IAmb_Lg		07 58 44.0	
	comp=Z,10nm,0.9s						
X37A	**Clayton**	**3.39**	**123**	IAmb_Lg		07 59 00.1	
	comp=Z,11nm,0.9s						
HHAR	**Hobbs**	**3.95**	**91**	IAmb_Lg		07 59 11.2	
	comp=Z,7.9nm,1.2s						
MSTX	**Muleshoe**	**4.09**	**233**	IAmb_Lg		07 59 24.8	
	comp=Z,12nm,1.0s						
T25A	**Trinidad**	**4.53**	**280**	IAmb_Lg		07 59 32.9	
	comp=Z,10nm,1.1s						
S39A	**Bolivar**	**4.56**	**73**	IAmb_Lg		07 59 37.1	
	comp=Z,5.3nm,0.9s						
P38A	**Dawn**	**5.22**	**52**	IAmb_Lg		07 59 55.0	
	comp=Z,7.2nm,1.1s						
WLAR	**White Oak Lake**	**5.45**	**119**	IAmb_Lg		08 00 14.5	
	comp=Z,10nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.45**	**94**	IAmb_Lg		08 00 02.1	
	comp=Z,4.9nm,0.8s						
R40A	**Maddies Statio**	**5.53**	**69**	IAmb_Lg		08 00 10.1	
	comp=Z,5.8nm,0.8s						
Q24A	**Divide**	**5.59**	**298**	IAmb_Lg		08 00 19.8	
	comp=Z,4.1nm,0.9s						
435B	**Jarrell**	**5.78**	**169**	IAmb_Lg		08 00 15.2	
	comp=Z,9.5nm,1.1s						
JCT	**Junction City**	**6.04**	**188**	IAmb_Lg		08 00 26.2	
	comp=Z,6.3nm,0.8s						
P40A	**Paris**	**6.16**	**58**	IAmb_Lg		08 00 22.5	
	comp=Z,9.7nm,1.1s						
LCAR	**Lake Charles**	**6.21**	**92**	IAmb_Lg		08 00 36.3	
	comp=Z,4.0nm,0.9s						
CCM	**Cathedral Cave**	**6.25**	**73**	IAmb_Lg		08 00 24.7	
	comp=Z,4.3nm,0.8s						
PHWY	**Pilot Hill**	**7.06**	**315**	IAmb_Lg		08 01 09.6	
	comp=Z,5.7nm,1.1s						
SUSD	**Miller**	**7.95**	**359**	IAmb_Lg		08 01 29.5	
	comp=Z,6.2nm,0.9s						
HDIL	**Hopedale**	**8.51**	**59**	IAmb_Lg		08 01 48.9	
	comp=Z,6.1nm,0.8s						

*IDC **13** 08:19:39.1±1.7,0°.10S×123°.33E,h129km±15km,mb3.6/12, mbtmp4.1/15,Error ellipse: s-maj=20.2km s-min=10.6km az=77.0*

*NEIC **13** 08:19:39.3±2.1,0°.22S±0°.05×123°.26E±0°.07,h114km±4km, mb4.2/12,Error ellipse: s-maj=10.6km s-min=8.0km az=89.0*

*DJA **13** 08:19:39.5±0.2,0°S±3°×12°.3E±°,h99km±4km,M4.5/17, mb4.7/9,mB4.8/5,MLv4.7/17,Mw(mB)4.0/5*

ISC 13 08:19:36.6±0.5,0°.08S±0°.06×123°.33E±0°.05,h100km,n53, σ1$82/56,mb4.0/17,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.92**	**45**	P	Pn	08 20 01.1	+4.9
LUWI	**Luwuk**	**1.10**	**210**		**Pn**	**08 19 59.3**	**+1.2**
LUWI	**Luwuk**	**1.10**	**210**	P	**Pn**	**08 19 59.9**	**+1.8**
MRSI	**Marisa**	**1.49**	**292**	P	**Pn**	**08 20 05.4**	**+2.7**
APSI	**Ampana**	**1.87**	**244**	P	**Pn**	**08 20 09.3**	**+1.9**
TOLI2	**Tolitoli**	**2.81**	**295**	Pn	**Pn**	**08 20 21.6**	**+1.9**
SANI	**Sanana**	**3.30**	**126**	P	**Pn**	**08 20 26.2**	**-0.2**
MPSI	**Mapaga**	**3.45**	**277**	P	**Pn**	**08 20 31.9**	**+3.5**
TNTI	**Ternate**	**4.13**	**78**		**Pn**	**08 20 40.7**	**+3.2**
LBMI	**Labuha**	**4.21**	**98**	P	**Pn**	**08 20 41.9**	**+3.3**
TTSI	**Tana Toraja**	**4.58**	**230**	P	**Pn**	**08 20 45.3**	**+1.7**
NLAI	**Namlea**	**4.91**	**130**	P	**Pn**	**08 20 50.0**	**+2.0**
SPSI	**Sidrap Palu** 0.8nm3µm203nm,0.8s	**5.24**	**223**	P	**Pn**	**08 20 54.7**	**+2.1**
BBSI	**Bau Bau** 0.1nm372nm16nm,0.6s	**5.42**	**188**	P	**Pn**	**08 20 56.8**	**+1.7**
KAPI	**Kappang** 90nm,0.4s,baz=4.8,slow=8.1,SNR=30	**6.06**	**216**	P	**Pn**	**08 21 05.9**	**+2.1**
KAPI				S	**Sn**	**08 22 10.7**	**-1.0**
	24nm,0.4s,baz=208,slow=19,SNR=1.5						
KAPI	**Kappang**	**6.06**	**216**	Pn	**Pn**	**08 21 04.9**	**+1.1**
BKSI	**Bulukumba** 0.2nm618nm54nm,0.6s	**6.11**	**212**	P	**Pn**	**08 21 05.7**	**+1.3**
BSSI	**Bau Bau, Buton** 0.4nm122nm,0.8s	**6.65**	**205**	P	**Pn**	**08 21 14.6**	**+2.8**
MYLDM	**Lahad Datu**	**7.11**	**317**	Pn	Pn	08 21 23.6	+5.6
SIJI	**Sorong** 9.5nm,0.4s,baz=252,slow=20,SNR=1.8	**7.98**	**96**	P	**Pn**	**08 21 33.8**	**+3.9**
EDFI	**Ende, Flores**	**8.76**	**191**	P	**Pn**	**08 21 42.1**	**+1.5**
KSM	**Kuching**	**13.11**	**277**	Pn	**Pn**	**08 22 40.0**	**+1.0**
KNRA	**Kununurra**	**16.40**	**161**	P	**Pn**	**08 23 21.3**	**+0.4**
KNRA				IAmb	IAmb	08 23 51.0	
	comp=Z,8.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.05**	**173**	P	**P**	**08 23 40.3**	**+0.3**
	comp=Z,3.8nm,0.4s,baz=4.4,slow=7.7,SNR=20						
FITZ	**Fitzroy Crossi**	**18.05**	**173**		**P**	**08 23 39.7**	**-0.3**
FITZ				IAmb	IAmb	08 23 41.8	
	comp=Z,5.2nm,0.6s						
DSRI	**Dabo**	**18.75**	**269**	P	**P**	**08 23 50.0**	**+2.1**
	comp=Z,32nm,0.6s						
MYKOM	**Kota Tinggi**	**19.56**	**276**	P	**P**	**08 23 57.7**	**+1.0**
MBWA	**Marble Bar**	**21.24**	**189**	P	**P**	**08 24 14.2**	**-0.5**
MASI	**Maura Aman, Be**	**21.29**	**262**	P	P	08 24 23.8	+8.4
WB0	**Warramunga Arr**	**22.37**	**152**	P	**P**	**08 24 25.9**	**-0.8**
WB0				IAmb	IAmb	08 25 05.8	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**22.49**	**152**	P	**P**	**08 24 27.0**	**-1.0**
	comp=Z,3.5nm,0.5s,baz=333,slow=10,SNR=60						
WRA				PcP	**PcP**	**08 28 17.0**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=327,slow=2.1,SNR=1.8						
WRA				ScP	**ScP**	**08 31 43.1**	**-4.3**
	comp=Z,0.6nm,0.9s,baz=329,slow=2.4,SNR=5.6						
	comp=Z,3.5nm,0.5s						
WRA	**Warramunga Arr**	**22.49**	**152**	P	**P**	**08 24 26.1**	**-1.9**
KULM	**Kulim**	**23.26**	**284**	P	**P**	**08 24 36.1**	**+0.5**
YULB	**Yu-li**	**23.42**	**355**	P	**P**	**08 24 38.9**	**+2.0**
YULB				IAmb	IAmb	08 25 03.8	
	comp=Z,21nm,1.3s						
MANU	**Manus Island**	**24.11**	**95**	P	**P**	**08 24 44.9**	**+1.6**
MANU				IAmb	IAmb	08 25 21.2	
	comp=Z,14nm,1.1s						
AS31	**Alice Springs**	**25.59**	**157**	P	**P**	**08 24 57.0**	**+0.4**
ASAR	**Alice Springs**	**25.59**	**157**	P	**P**	**08 24 56.7**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=348,slow=14,SNR=14						
ASAR				PcP	**PcP**	**08 28 24.3**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=350,slow=2.2,SNR=8.4						
ASAR				ScP	**ScP**	**08 31 51.9**	**-4.0**
	comp=Z,0.6nm,0.4s,baz=338,slow=2.9,SNR=7.4						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**25.59**	**157**	P	**P**	**08 24 57.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**30.22**	**309**	P	**P**	**08 25 38.9**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=137,slow=7.2,SNR=7.1						
	comp=Z,1.1nm,0.3s						
JCJ	**Chichijima**	**32.54**	**32**	P	**P**	**08 25 57.7**	**-0.6**
	comp=Z,42nm,0.5s,baz=279,slow=9.9,SNR=7.9						
STKA	**Stephens Creek**	**36.04**	**153**	P	**P**	**08 26 28.1**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=334,slow=8.4,SNR=13						
STKA				PcP	**PcP**	**08 28 51.6**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=2.0,slow=3.0,SNR=3.8						
	comp=Z,2.2nm,0.4s						
KSRS	**Korea Array**	**37.59**	**6**	P	**P**	**08 26 43.1**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=176,slow=9.1,SNR=2.6						
	comp=Z,0.6nm,0.6s						
MJAR	**Matsushiro Arr**	**38.97**	**19**	P	**P**	**08 26 51.8**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=186,slow=9.4,SNR=6.5						
	comp=Z,1.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**44.76**	**9**	P	**P**	**08 27 39.2**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=178,slow=7.6,SNR=2.8						
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**49.95**	**345**	P	**P**	**08 28 20.7**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=162,slow=8.0,SNR=5.3						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**58.85**	**328**	P	**P**	**08 29 24.0**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=124,slow=7.8,SNR=11						
	comp=Z,0.6nm,0.5s						
PETK	**Petropavlovsk-**	**60.23**	**23**	P	**P**	**08 29 34.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=202,slow=3.2,SNR=4.1						
	comp=Z,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**63.20**	**330**	P	**P**	**08 29 52.8**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=122,slow=5.3,SNR=5.1						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**80.12**	**172**	P	**P**	**08 31 34.4**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=311,slow=7.3,SNR=5.5						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**80.12**	**172**	P	**P**	**08 31 34.2**	**-0.8**
QSPA	**South Pole Qui**	**89.85**	**180**	P	**P**	**08 32 23.2**	**-0.9**
QSPA				IAmb	IAmb	08 32 44.2	
	comp=Z,5.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**120.74**	**285**	PKP	**PKPdf**	**08 38 16.3**	**-1.7**
	comp=Z,0.3nm,0.9s,baz=71,slow=2.4,SNR=2.1						
TXAR	**Lajitas Array**	**126.60**	**53**	PKP	**PKPdf**	**08 38 27.9**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=256,slow=3.6,SNR=3.1						

*IDC **13** 08:23:00.1±2.0,2°.70S×76°.84W,h112km±21km,mb3.5/12, mbtmp3.9/17,MS4.3/1,Error ellipse: s-maj=20.3km s-min=13.2km az=63.0*

*VAO **13** 08:23:01.2±0.5,2°.69S×76°.59W,h91km,mb4.0*

ISC 13 08:22:59.2±0.6,2°.74S±0°.06×76°.87W±0°.08,h100km,n38, σ1$08/38,mb3.5/11,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**3.35**	**332**	*eP*	**Pn**	**08 23 52.8**	**+2.6**
ATAH	**Atahualpa**	**4.62**	**199**	P	**Pn**	**08 24 08.0**	**+0.7**
	135nm,0.6s,baz=34,slow=10,SNR=112						
ATAH				S	**Sn**	**08 24 58.5**	**-1.6**
	42nm,0.4s,baz=12,slow=20,SNR=5.6						
CZSB	**Cruzeiro do Su**	**6.47**	**140**	*eP*	**Pn**	**08 24 32.3**	**+0.4**
ROSC	**El Rosal**	**7.95**	**19**	P	**Pn**	**08 24 53.7**	**+1.2**
	4.0nm,0.3s,baz=137,slow=20,SNR=2.1						
NNA	**Nana**	**9.19**	**180**	P	**Pn**	**08 25 08.9**	**-0.1**
	6.5nm,0.3s,baz=3.8,slow=7.6,SNR=9.5						
NNA				S	Sn	08 26 40.6	-10
	13nm,0.3s,baz=54,slow=17,SNR=7.5						
SDV	**Santo Domingo**	**13.12**	**28**	P	**Pn**	**08 26 02.6**	**+0.7**
	3.6nm,0.4s,baz=196,slow=7.4,SNR=3.8						
LPAZ	**La Paz**	**15.98**	**148**	P	**Pn**	**08 26 39.5**	**+0.6**
	1.1nm,0.5s,baz=329,slow=9.8,SNR=7.1						
LPAZ	**La Paz**	**15.98**	**148**	*eP*	**Pn**	**08 26 39.7**	**+0.8**
MACA	**Manacapuru-AM**	**16.17**	**92**	*eP*	**Pn**	**08 26 39.1**	**-1.7**
BOAV	**Boa Vista**	**17.12**	**73**	*eP*	**Pn**	**08 26 51.7**	**-0.8**
VILB	**Vilhena**	**19.37**	**122**	*eP*	**P**	**08 27 17.9**	**+0.6**
SIV	**San Ignacio**	**20.38**	**131**	P	**P**	**08 27 28.2**	**-0.1**
	2.3nm,0.3s,baz=315,slow=11,SNR=21						
	2.3nm,0.3s						
ITTB	**Itaituba**	**21.16**	**95**	*eP*	**P**	**08 27 36.0**	**-0.6**
LVC	**Limon Verde**	**21.21**	**159**	P	**P**	**08 27 39.5**	**+2.0**
	3.0nm,0.6s,baz=357,slow=11,SNR=3.0						
	3.0nm,0.6s						
LVC	**Limon Verde**	**21.21**	**159**	*eP*	**P**	**08 27 38.9**	**+1.4**
PTLB	**Pontes e Lacer**	**21.56**	**127**	*eP*	**P**	**08 27 40.7**	**-0.1**
NPGB	**Novo Progresso**	**21.86**	**102**	*eP*	**P**	**08 27 44.7**	**+0.6**
CLDB	**Colider**	**22.42**	**112**	*eP*	**P**	**08 27 48.4**	**-1.6**
MALB	**Monte Alegre**	**22.61**	**88**	*eP*	**P**	**08 27 51.7**	**-0.2**
MCPB	**Macapa, AP**	**24.92**	**85**	*eP*	**P**	**08 28 13.4**	**+0.1**
MDP	**Montagnes des**	**25.43**	**72**	P	**P**	**08 28 16.9**	**-1.0**
	7.8nm,0.8s,baz=244,slow=9.2,SNR=4.6						
	7.8nm,0.8s						
CMIG	**Matias Romero**	**26.54**	**319**	P	**P**	**08 28 28.1**	**+0.3**
	1.2nm,0.8s,baz=151,slow=13,SNR=1.9						
	1.2nm,0.8s						
SNDB	**Serra Nova Dou**	**26.95**	**111**	*eP*	**P**	**08 28 32.5**	**+0.9**
BDFB	**Brasilia**	**31.18**	**116**	P	**P**	**08 29 09.2**	**0.0**
	1.0nm,0.4s,baz=243,slow=9.0,SNR=2.3						
	1.0nm,0.4s						
BDFB	**Brasilia**	**31.18**	**116**	*eP*	**P**	**08 29 09.3**	**+0.1**
IPMB	**Ipameri, GO**	**31.92**	**120**	*eP*	**P**	**08 29 15.3**	**-0.4**
JANB	**Januaria**	**34.35**	**113**	*eP*	**P**	**08 29 38.7**	**+1.8**
PLCA	**Paso Flores**	**38.25**	**172**	P	**P**	**08 30 10.0**	**+0.2**
	0.9nm,0.5s,baz=335,slow=7.7,SNR=6.6						
	0.9nm,0.5s						
RIB01	**Linhares ES**	**39.27**	**118**	*eP*	**P**	**08 30 19.9**	**+1.4**
NBLA	**Lagarto - SE**	**39.62**	**104**	*eP*	**P**	**08 30 22.5**	**+1.0**
NBAN	**Anadia - AL**	**40.91**	**102**	*eP*	**P**	**08 30 33.3**	**+1.1**
TXAR	**Lajitas Array**	**40.94**	**323**	P	**P**	**08 30 31.6**	**-0.6**
	0.5nm,0.9s,baz=139,slow=8.4,SNR=3.2						
	0.5nm,0.9s						
USHA	**Ushuaia**	**52.38**	**174**	LR	LR	08 55 12.0	
	comp=Z,268nm,19.5s,baz=150,slow=37						
PDAR	**Pinedale Array**	**54.06**	**331**	P	**P**	**08 32 13.1**	**-0.8**
	0.2nm,0.6s,baz=131,slow=9.7,SNR=4.0						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**56.03**	**321**	P	**P**	**08 32 28.1**	**+0.1**
	0.3nm,0.6s,baz=119,slow=7.3,SNR=2.1						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**71.05**	**343**	P	**P**	**08 34 04.8**	**-1.4**
	0.5nm,0.7s,baz=136,slow=6.8,SNR=4.3						
	0.5nm,0.7s						
DBIC	**Dimbokro**	**72.49**	**82**	P	**P**	**08 34 14.9**	**-0.9**
	2.3nm,0.7s,baz=278,slow=7.1,SNR=2.0						
	2.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**79.51**	**76**	P	**P**	**08 34 54.6**	**-1.0**
	0.2nm,0.4s,baz=280,slow=4.9,SNR=5.6						
	0.2nm,0.4s						

*IDC **13** 08:29:47.3±0.3,37°.76N×101°.63E,h0km,mb4.9/55, mbtmp4.9/58,ML4.6/3,MS3.9/58,Error ellipse: s-maj=9.4km s-min=7.3km az=48.0*

*MOS **13** 08:29:48.8±0.9,37°.72N×101°.57E,h22km,mb5.4/52, MS4.2/18,Error ellipse: s-maj=5.8km s-min=3.6km az=132.5*

*BJI **13** 08:29:48.0±0.0,37°.69N×101°.56E,h9km,mb4.7/49, mB4.9/36,ML5.0/23,Ms4.7/73,Ms7 4.6/66*

*GCMT **13** 08:29:49.9±0.3,37°.72N±0°.03×101°.70E±0°.03,h23km, MW4.8/69,Moment Tensor Solution. s38,c42; s69,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.17±.13; $M_{\theta\theta}$-1.08±.09; $M_{\phi\phi}$-1.09±.09; $M_{r\theta}$-0.10±.12; $M_{\theta\phi}$1.17±.05; $M_{r\phi}$0.53±.12; Best double couple: M_o2.27900×10^{16} NP1:ϕ_s323.00000°,δ51.00000°,λ100.00000°. NP2: ϕ_s127.00000°,δ40.00000°,λ78.00000°. Principal axes: T 2.2570, Plg80.0000°, Azm280.0000°; N 0.0430, Plg8.0000°, Azm137.0000°; P -2.3000, Plg6.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 08:29:50.9±1.5,37°.71N±0°.07×101°.55E±0°.09,h21km±4km, mb5.2/119 Error ellipse: s-maj=10.7km s-min=10.0km az=62.0*

ISC 13 08:29:50.0±0.4,37°.72N±0°.03×101°.49E±0°.02,h17km±2km, h17km:pP-P,n773,σ1$40/837,mb5.2/179,MS4.0/73, 55C-38D,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**2.50**	**130**	Pn	**Pn**	**08 30 31.4**	**+1.4**
LZH				Pg	**Pb**	**08 30 34.8**	**+0.4**
LZH				Sg	**Sb**	**08 31 06.3**	**+1.4**
LZH				smax	smax		
	comp=N,15µm,1.2s						
LZH				smax	smax		
	comp=E,9µm,1.1s						
GOMU	**GeErMu**	**5.55**	**256**	*e*Pn	**Pn**	**08 31 13.5**	**+1.3**
GOMU				Sn	**Sn**	**08 32 12.1**	**-3.7**
GOMU				Sg	**Sb**	**08 32 36.6**	**+3.4**
GOMU				smax	smax		
	comp=N,850nm,0.7s						
GOMU				smax	smax		
	comp=E,640nm,1.0s						
GOMU				LR	LR		
	comp=N,1µm,8.2s						
GOMU				LR	LR		
	comp=E,3µm,7.2s						
GOMU				LR	LR		
	comp=Z,3µm,11.6s						
CD2	**Chengdu**	**7.05**	**164**	Pn	**Pn**	**08 31 32.3**	**-0.1**
CD2				Sg	**Sg**	**08 33 31.3**	**-4.8**
CD2				smax	smax		
	comp=N,290nm,1.3s						
CD2				smax	smax		
	comp=E,240nm,1.4s						
XAN	**Xi'an**	**7.06**	**119**	Pn	**Pn**	**08 31 31.3**	**-1.3**
XAN				Sg	**Sg**	**08 33 30.9**	**-5.7**
XAN				smax	smax		
	comp=N,770nm,1.1s						
XAN				smax	smax		
	comp=E,460nm,0.9s						
XAN				LR	LR		
	comp=N,3µm,7.0s						
XAN				LR	LR		
	comp=E,3µm,6.7s						
XAN				LR	LR		
	comp=Z,2µm,7.6s						
BTO	**Baotou**	**7.23**	**64**	Pn	**Pn**	**08 31 34.6**	**-0.3**
BTO				Pg	**Pb**	**08 31 57.9**	**+2.9**
BTO				Sn	**Sn**	**08 32 53.3**	**-3.4**
BTO				Sg	**Sb**	**08 33 28.4**	**+7.4**
BTO				smax	smax		
	comp=N,4µm,0.9s						
BTO				smax	smax		
	comp=E,3µm,0.5s						
HHC	**Hu-ho-hao-te**	**8.42**	**65**	*e*P	**Pn**	**08 31 50.9**	**-0.3**
HHC				pmax	pmax		
	comp=Z,76nm,0.7s						
HHC				LR	LR		
	comp=N,7µm,6.5s						
HHC				LR	LR		
	comp=E,6µm,6.7s						
HHC				LR	LR		
	comp=Z,4µm,6.8s						
TIY	**Taiyuan**	**8.68**	**87**	P	**Pn**	**08 31 56.0**	**+1.2**
TIY				smax	smax		
	comp=N,960nm,0.9s						
TIY				smax	smax		
	comp=E,580nm,0.6s						
LYN	**LuoYang**	**9.43**	**106**	⇓P	**Pn**	**08 32 03.8**	**-1.2**
LYN				sP		08 32 10.8	
LYN				sS	Sn	08 33 59.4	+8.8
LYN				SS	**SnSn**	**08 34 05.6**	**+3.6**
LYN				pmax	pmax		
	comp=Z,20nm,0.5s						
LYN				pmax	pmax		
	comp=Z,60nm,7.7s						
LYN				LR	LR		
	comp=N,6µm,9.4s						
LYN				LR	LR		
	comp=E,2µm,10.9s						
LYN				LR	LR		
	comp=Z,4µm,11.6s						
ENH	**Enshi**	**9.96**	**136**	Pn	**Pn**	**08 32 11.1**	**-1.2**
HNS	**HongShan**	**10.50**	**88**	⇑P	**Pn**	**08 32 19.0**	**-0.7**
HNS				S	**Sn**	**08 34 17.6**	**+0.7**
HNS				LR	LR		
	comp=E,5µm,10.8s						
HNS				LR	LR		
	comp=Z,5µm,11.4s						
SONM	**Songino Array**	**10.73**	**18**	Pn	**Pn**	**08 32 23.0**	**+0.1**
	11nm,0.3s,baz=200,slow=14,SNR=123						
SONM				Sn	**Sn**	**08 34 16.7**	**-5.9**
	3.2nm,0.3s,baz=208,slow=24,SNR=2.3						
SONM				Lg	Lg	08 35 22.7	
	4.5nm,0.3s,baz=206,slow=26,SNR=4.1						
SONM				LR	LR	08 37 05.8	
	comp=Z,719nm,21.8s,baz=197,slow=41						
	17nm,0.3s						
SONM	**Songino Array**	**10.73**	**18**	Pn	**Pn**	**08 32 22.6**	**-

WMQ LR LR
comp=Z,660nm,14.3s
TIA Tai'an 12.60 92 ⇑P Pn 08 32 46.3 -2.1
TIA S Sn 08 35 16.8 +8.5
TIA pmax pmax
comp=Z,7.0nm,0.6s
TIA LR LR
comp=Z,1μm,8.1s
TIA LR LR
comp=Z,2μm,12.2s
TIA LR LR
comp=Z,2μm,12.6s
KMI Kunming 12.60 175 ⇑P Pn 08 32 48.5 -0.2
KMI pP P 08 32 52.1 -8.1
KMI S Sn 08 35 10.3 +1.5
KMI pmax pmax
comp=Z,38nm,0.9s
KMI pmax pmax
comp=Z,110nm,3.5s
KMI LR LR
comp=Z,1μm,8.6s
KMI LR LR
comp=Z,1μm,9.5s
KMI LR LR
comp=Z,2μm,11.1s
XLT XiLinHaoTe 12.65 56⇑*i*P Pn 08 32 47.9 -1.3
XLT pP P 08 32 52.6 -7.9
XLT sP 08 32 56.4
XLT PP PnPn 08 32 58.1 +1.2
XLT pmax pmax
comp=Z,18nm,1.2s
XLT pmax pmax
comp=Z,92nm,3.7s
XLT LR LR
comp=Z,2μm,13.2s
XLT LR LR
comp=Z,2μm,13.9s
ZAK Zakamensk 12.72 5 *e*P Pn 08 32 51.0 +0.9
ZAK pmax pmax
comp=Z,27nm,0.8s
WHN Wuhan 12.83 120 ⇑P Pn 08 32 53.3 +1.8
WHN pP P 08 32 55.5 -6.9
WHN S Sn 08 35 17.4 +3.5
WHN LR LR
comp=Z,3μm,6.0s
WHN LR LR
comp=Z,2μm,6.6s
WHN LR LR
comp=Z,4μm,10.9s
CNSH ChangSha 13.51 131 ⇓P Pn 08 32 58.8 -2.0
CNSH S Sn 08 35 27.3 -3.3
CNSH LR LR
comp=Z,2μm,10.0s
CNSH LR LR
comp=Z,2μm,9.3s
GULI GuiLin 14.51 146 ⇑P Pn 08 33 10.8 -3.8
GULI pmax pmax
comp=Z,30nm,0.8s
GULI LR LR
comp=Z,1μm,12.6s
GULI LR LR
comp=Z,590nm,11.2s
GULI LR LR
comp=Z,2μm,10.7s
IRK Irkutsk 14.65 7 *e*P Pn 08 33 17.7 +1.3
IRK pmax pmax
comp=Z,86nm,2.4s
NJ2 Nanjing 15.33 106 *e*P Pn 08 33 24.5 -1.0
NJ2 S Sn 08 36 16.4 +1.6
NJ2 pmax pmax
comp=Z,13nm,0.6s
NJ2 LR LR
comp=Z,2μm,8.9s
NJ2 LR LR
comp=Z,3μm,10.6s
NJ2 LR LR
comp=Z,4μm,8.5s
TAPN Taplejung 15.54 232 *e*P Pn 08 33 26.4 -2.1
ZSN Zaisan 15.60 314 *e*P Pn 08 33 28.5 -0.5
ZSN *e*S Sn 08 36 22.2 +0.8
ZSN Zaisan 15.60 314 *e*P Pn 08 33 28.6 -0.5
baz=314
ZSN *e*S Sn 08 36 22.2 +0.8
baz=314
DL2 Dalian 15.86 80 P P 08 33 35.8 -0.2
DL2 S S 08 36 37.8 -4.0
DL2 pmax pmax
comp=Z,39nm,0.9s
DL2 pmax pmax
comp=Z,250nm,4.8s
DL2 LR LR
comp=Z,910nm,14.7s
DL2 LR LR
comp=Z,1μm,13.4s
DL2 LR LR
comp=Z,2μm,14.1s
JIRN Jiri 16.30 236 *e*P Pn 08 33 38.1 -0.4
comp=Z,42nm,0.6s
GUN Gumba 16.34 238 *e*P Pn 08 33 38.4 -0.6
comp=Z,86nm,0.7s
RAMN Ramite 16.52 234 *e*P Pn 08 33 37.8 -3.3
comp=Z,36nm,0.6s
CIT Chita 16.63 27 *e*P P 08 33 43.4 -1.1
CIT pmax pmax
comp=Z,132nm,1.6s
MK31 Makanchi Array 16.82 309 Pn 08 33 43.8 -0.8
MK31 Makanchi Array 16.82 309 *i* P Pn 08 33 43.8 -0.8
MK31 pmax pmax
comp=Z,56nm,1.1s
MKAR Makanchi Array 16.82 309 Pn Pn 08 33 44.2 -0.4
comp=Z,0.6nm,0.3s,baz=112,slow=13,SNR=44
MKAR Lg Lg 08 38 34.5
comp=Z,0.1nm,0.3s,baz=138,slow=28,SNR=1.8
MKAR LR LR 08 41 12.2
comp=Z,511nm,22.0s,baz=109,slow=41
MKAR Makanchi Array 16.82 309 Pn Pn 08 33 44.1 -0.5
MKAR Makanchi Array 16.82 309 P Pn 08 33 44.1 -0.5
PKI Pulchoki 16.88 238 *e*P Pn 08 33 44.2 -1.6
PKIN Phulchoki 16.89 238 *e*P Pn 08 33 44.0 -1.8
MAKZ Makanchi 17.02 308 Pn 08 33 46.6 -0.6
MAKZ Makanchi 17.02 308 P Pn 08 33 46.5 -0.6
DMN Daman 17.06 239 *e*P Pn 08 33 46.8 -1.2
GKN Gorkha 17.13 240 *e*P Pn 08 33 48.1 -0.7
CRAI Chiangrai 17.46 183 P P 08 33 53.3 -0.5
SNY Shenyang 17.46 70 ⇓P Pn 08 33 51.1 -1.5
SNY S Sn 08 37 09.1 +2.6
SNY pmax pmax
comp=Z,8.0nm,0.7s
SNY pmax pmax
comp=Z,230nm,3.5s
SNY LR LR
comp=Z,690nm,7.6s
SNY LR LR
comp=Z,490nm,5.7s
SNY LR LR
comp=Z,2μm,13.5s
DANN Dangsing 17.53 243 *e*P P 08 33 54.5 -0.5
comp=Z,59nm,0.7s
SSE Sheshan 17.53 106 P Pn 08 33 54.0 +0.4
SSE S Sn 08 37 10.4 +2.0
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,68nm,3.9s
SSE LR LR
comp=Z,770nm,16.7s
SSE LR LR
comp=Z,300nm,17.0s
SHLS Shalkode 17.61 295*ce*P Pn 08 33 51.4 -3.1
SHLS Shalkode 17.61 295⇑*e*P Pn 08 33 51.5 -3.1
baz=295
UZB Uzynbulak 17.92 295*ce*P Pn 08 33 58.4 0.0
UZB Uzynbulak 17.92 295⇑*e*P Pn 08 33 58.5 0.0
baz=294
KPKS Kokpek 18.22 296*ce*P Pn 08 34 02.0 0.0
KPKS Kokpek 18.22 296⇑*e*P Pn 08 34 02.1 0.0
baz=295
PRZ Przheval'sk 18.27 292 P P 08 34 03.5 +0.6
PRZ Przheval'sk 18.27 292 P P 08 34 03.5 +0.6
PRZ pmax pmax
comp=Z,79nm,0.9s
ZHN Zhinishke 18.35 294 *e*P P 08 34 03.7 +0.1
ZHN Zhinishke 18.35 294 *e*P P 08 34 03.7 +0.1
baz=294
SATY Saty 18.35 294 *e*P P 08 34 03.9 +0.2
SATY Saty 18.35 294 *e*P P 08 34 03.9 +0.2
baz=294
TDK Taldyqorghan 18.75 300 *e*P Pn 08 34 13.4 +5.0
TDK Taldyqorghan 18.75 300 *e*P Pn 08 34 13.4 +5.0
baz=300
CHTO Chiang Mai 18.97 187 P P 08 34 10.5 0.0
CHTO Chiang Mai 18.97 187 P P 08 34 10.5 0.0
CHTO pmax pmax
comp=Z,27nm,0.7s
CHTO Chiang Mai 18.97 187 P Pn 08 34 11.6 +0.4
ARXS Arharly 18.97 297 *e*P Pn 08 34 11.3 +0.1
CN2 Changchun 19.11 64 *e*P Pn 08 34 12.3 -0.4
CN2 S Sn 08 37 40.8 -5.5
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 LR LR
comp=Z,2μm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
CN2 LR LR
comp=Z,1μm,11.0s
CM31 Chiang Mai Arr 19.32 187 P P 08 34 14.8 +0.4
CMAR Chiang Mai Arr 19.32 187 P P 08 34 14.8 +0.4
comp=Z,1.4nm,0.3s,baz=356,slow=9.4,SNR=50
CMAR S S 08 37 56.8 +4.4
comp=Z,1.7nm,0.4s,baz=4.3,slow=29,SNR=1.8
CMAR PcP PcP 08 38 36.9 +0.4
comp=Z,1.7nm,0.5s,baz=280,slow=1.6,SNR=6.1
CMAR LR LR 08 42 18.5
comp=Z,1μm,18.4s,baz=5.0,slow=39
comp=Z,14nm,0.9s
CMAR Chiang Mai Arr 19.32 187 P P 08 34 14.9 +0.6
QZH Quanzhou 19.34 126⇓*i*P Pn 08 34 16.8 +1.1
QZH S S 08 37 56.3 +3.4
QZH pmax pmax
comp=Z,200nm,7.4s
QZH LR LR
comp=Z,650nm,6.6s
QZH LR LR
comp=Z,880nm,5.3s
QZH LR LR
comp=Z,780nm,9.5s
MDOK Medeo 19.35 294 *e*P Pn 08 34 15.4 -0.4
MDOK *e*S S 08 37 53.3 +0.3
MDOK Medeo 19.35 294 *e*P Pn 08 34 15.4 -0.4
baz=294
MDOK *e*S S 08 37 53.4 +0.3
baz=294
AAA Alma-Ata 19.45 294 *e*P Pn 08 34 17.7 +0.8
AAA Alma-Ata 19.45 294 *e*P Pn 08 34 17.8 +0.8
baz=294
SEM Semipalatinsk 19.76 317 *e*P P 08 34 18.5 -0.6
SEM Semipalatinsk 19.76 317 *e*P P 08 34 18.5 -0.6
baz=316
ULHL Ulahol 19.84 291 P Pn 08 34 22.1 +0.4
SNR=10
ZAA0 Zalesovo Array 19.87 330 P P 08 34 19.1 -1.0
ZALV Zalesovo Beam 19.87 330 P P 08 34 19.9 -0.2
comp=Z,1.8nm,0.3s,baz=147,slow=12,SNR=46
ZALV S Sn 08 38 06.1 +1.5
comp=Z,0.6nm,0.4s,baz=142,slow=22,SNR=1.3
ZALV PcP PcP 08 38 36.6 -0.2
comp=Z,0.9nm,0.5s,baz=132,slow=2.1,SNR=2.0
ZALV LR LR 08 41 17.9
comp=Z,89nm,20.2s,baz=204,slow=35
comp=Z,43nm,0.8s
ZALV Zalesovo Beam 19.87 330 P P 08 34 19.7 -0.4
ZALV Zalesovo Beam 19.87 330 P P 08 34 19.7 -0.4
INCN Inchon 19.91 83 P P 08 34 20.8 0.0
INCN Inchon 19.91 83 P P 08 34 20.8 0.0
INCN pmax pmax
comp=Z,17nm,0.9s
INCN Inchon 19.91 83 P Pn 08 34 22.1 -0.3
KUU Kurty 19.97 296*ce*P P 08 34 21.6 +0.3
KUU pmax pmax
comp=Z,56nm,1.0s
KUU Kurty 19.97 296⇑*e*P P 08 34 21.6 +0.3
comp=Z,56nm,1.0s,baz=296
KSH Kashi 20.00 283 P Pn 08 34 27.6 +4.0
KSH PcP PcP 08 38 39.5 +1.9
KSH pmax pmax
comp=Z,16nm,1.4s
KSH pmax pmax
comp=Z,420nm,5.4s
KSH LR LR
comp=Z,610nm,12.7s
KSH LR LR
comp=Z,720nm,13.3s
KSH LR LR
comp=Z,1μm,14.0s
BOOM Boomskoye usch 20.08 292 P P 08 34 23.6 +0.9
BOOM Boomskoye usch 20.08 292 P P 08 34 23.6 +0.9
BOOM pmax pmax
comp=Z,28nm,0.8s
TKM2 Tokmak 2 20.38 293 P Pn 08 34 28.0 -0.1
SNR=55
TKM2 Tokmak 2 20.38 293 *i* P Pn 08 34 27.5 -0.5
TKM2 pmax pmax
comp=Z,193nm,0.9s
TJN Taejon 20.68 86 P P 08 34 28.8 -0.3
TJN Taejon 20.68 86*ce*P P 08 34 29.1 0.0
TJN Taejon 20.68 86 P P 08 34 29.4 +0.3
KURK Kurchatov 20.81 316 P 08 34 30.1 -0.2
KURK IAmb IAmb 08 34 32.7
comp=Z,120nm,0.9s
KURK Kurchatov 20.81 316*ce*P P 08 34 30.8 +0.5
KURK pmax pmax
comp=Z,190nm,1.3s
KURBB Kurchatov Arra 20.81 316 P P 08 34 30.9 +0.6
comp=Z,68nm,0.8s,baz=119,slow=11,SNR=195
KURBB S S 08 38 24.4 +2.6
comp=Z,0.4nm,0.3s,baz=126,slow=14,SNR=1.4
KURBB PcP PcP 08 38 38.0 -0.6
comp=Z,3.3nm,0.6s,baz=121,slow=1.5,SNR=7.0
KURBB LR LR 08 43 08.9
comp=Z,416nm,18.7s,baz=115,slow=38
comp=Z,68nm,0.8s
KBK Karagaybulak 20.83 292 P Pn 08 34 32.7 -0.5
SNR=35
BNX BinXian 20.87 59 ⇑P P 08 34 31.3 +0.3
BNX pP pP 08 34 35.3 -1.5
BNX sP sP 08 34 39.8 +0.2
BNX PP PnPn 08 34 50.8 +1.3
BNX S S 08 38 24.4 +1.3
BNX sS sS 08 38 33.3 +1.0
BNX pmax pmax
comp=Z,31nm,0.9s
BNX pmax pmax
comp=Z,220nm,7.0s
BNX LR LR
comp=Z,910nm,9.7s
BNX LR LR
comp=Z,1μm,8.0s
BNX LR LR
comp=Z,1μm,11.7s
KS19 Wonju Array Si 20.88 82 P P 08 34 31.8 +0.5
KS19 IAmb IAmb 08 34 45.3
comp=Z,55nm,0.8s
KSAR Wonju Array Be 20.91 83 P P 08 34 31.7 +0.2
KSAR Wonju Array Be 20.91 83 P P 08 34 31.7 +0.2
NAWB Namwon 20.92 88 P P 08 34 31.2 -0.4
KSRS Korea Array 20.93 83 P P 08 34 31.4 -0.4
comp=Z,18nm,0.7s,baz=280,slow=9.7,SNR=44
KSRS LR LR 08 43 57.3
comp=Z,598nm,18.0s,baz=280,slow=41
comp=Z,18nm,0.7s
CHMS Chumysh 21.00 293 P P 08 34 38.0 +5.4
SNR=11
CHMS Chumysh 21.00 293 *i* P P 08 34 36.1 +3.6
CHMS pmax pmax
comp=Z,64nm,1.1s
KSCHJ Chungju 21.07 84 P P 08 34 33.3 0.0
SEHB SEOHWA 21.08 80 P P 08 34 33.7 +0.3
SGDS Sogindy 21.14 294 *e*P P 08 34 34.4 +0.4
SGDS Sogindy 21.14 294 *e*P P 08 34 34.5 +0.4
baz=294
AAK Ala-Archa 21.16 292 P P 08 34 36.0 +1.6
comp=Z,19nm,0.7s,baz=96,slow=7.2,SNR=10
AAK LR LR 08 44 32.4
comp=Z,432nm,21.0s,baz=94,slow=42
comp=Z,19nm,0.7s
AAK Ala-Archa 21.16 292 P P 08 34 36.2 +1.8
SNR=5.1
AAK Ala-Archa 21.16 292 P P 08 34 35.3 +0.9
AAK Ala-Archa 21.16 292*ce*P P 08 34 36.3 +2.0
AAK pmax pmax
comp=Z,24nm,0.8s
AAK Ala-Archa 21.16 292 *i* Pn P 08 34 36.4 +2.0
SNR=12
USP Ospenovka 21.21 294 P P 08 34 36.1 +1.3
SNR=15
YHNB Yeheng 21.36 122 P P 08 34 37.2 +0.6
SSLB Suanglung 21.68 124 P P 08 34 42.2 +2.2
EKS2 Erkin-Say 21.69 292 P P 08 34 42.2 +2.1
SNR=23
AML Almayashu 21.72 290 P P 08 34 42.4 +1.7
SNR=38
BOD Bodaibo 21.73 18 *e*P P 08 34 40.6 +0.5
BOD pmax pmax
comp=Z,49nm,1.0s
BTLS Baital 21.78 298*ce*P P 08 34 40.6 -0.2
BTLS pmax pmax
comp=Z,38nm,0.7s
BTLS Baital 21.78 298⇑*e*P P 08 34 40.7 -0.2
comp=Z,38nm,0.7s,baz=298
TPUB Ta-pu 21.82 126 P P 08 34 42.3 +0.9
NACB Ninganchiao 21.84 122 P P 08 34 40.3 -1.3
NACB IAmb IAmb 08 34 47.9
comp=Z,89nm,1.4s
YULB Yu-li 22.18 124 P P 08 34 44.6 -0.7
UBPT Khong Chiam 22.63 170 P P 08 34 48.9 -1.2
DRK Karamyk 23.22 284 P P 08 34 56.9 +0.4
NIL Nilore 23.25 268 P P 08 34 56.3 -0.2
NIL IAmb IAmb 08 35 05.2
comp=Z,76nm,0.9s
NIL Nilore 23.25 268 P P 08 34 56.3 -0.2
NIL pmax pmax
comp=Z,76nm,1.0s
DZA Taraz 23.50 292 *e*P P 08 34 59.3 +0.4
DZA Taraz 23.50 292 *e*P P 08 34 59.4 +0.4
baz=292
USRK Ussuriysk Ar. 23.84 65 P P 08 35 02.1 0.0
comp=Z,4.1nm,0.8s,baz=261,slow=9.2,SNR=7.2
USRK Ussuriysk Ar. 23.84 65 P P 08 35 01.8 -0.3
USRK Ussuriysk Ar. 23.84 65 P P 08 35 01.8 -0.3
ZEA Zeya 23.89 40 *e*P P 08 35 03.8 +1.3
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=E,40nm,0.9s
ZEA pmax pmax
comp=Z,50nm,0.9s
ZEA pmax pmax
comp=Z,100nm,6.2s
ZEA MLR MLR
comp=E,1μm,11.0s
ZEA MLR MLR
comp=N,1μm,8.0s
ZEA MLR MLR
comp=Z,2μm,10.0s
BRZS Berezniki 23.96 310 *e*P P 08 35 03.3 +0.1
BRZS pmax pmax
comp=Z,30nm,0.8s
BRZS Berezniki 23.96 310 *e*P P 08 35 03.4 +0.1
comp=Z,30nm,0.8s,baz=310
KK31 Karatay Array 24.11 293 P P 08 35 04.8 +0.1
KK31 Karatay Array 24.11 293 *i* P P 08 35 05.3 +0.6
KKAR Karatay Array 24.11 293 P P 08 35 05.1 +0.4
KKAR Karatay Array 24.11 293 P P 08 35 05.1 +0.4
KKAR pmax pmax
comp=Z,16nm,0.8s
GAR Garm 24.42 283 P P 08 35 08.1 +0.3
GAR IAmb IAmb 08 35 16.6
comp=Z,43nm,0.8s
IUG Iuzhnay 24.44 290 *e*P P 08 35 08.4 +0.5
IUG Iuzhnay 24.44 290 *e*P P 08 35 08.4 +0.5
baz=290
JSU Suzuyama 24.58 96 P P 08 35 07.4 -1.6
JSU IAmb IAmb 08 35 12.6
comp=Z,58nm,1.5s
KLR Kul'dur 24.62 52 PcP PcP 08 38 46.3 -0.2
comp=Z,4.1nm,0.9s,baz=289,slow=4.2,SNR=4.8
CHGR Chuyangaron 25.36 282 P P 08 35 16.9 +0.7
CHGR IAmb IAmb 08 35 19.2
comp=Z,84nm,0.9s
CHGR Chuyangaron 25.36 282 P P 08 35 16.9 +0.7
CHGR pmax pmax
comp=Z,84nm,0.9s
KBL Kabul 26.32 273 P P 08 35 25.8 +0.7
KBL IAmb IAmb 08 35 35.5
comp=Z,68nm,1.2s
KBL Kabul 26.32 273 P P 08 35 25.8 +0.7
KBL pmax pmax
comp=Z,68nm,1.3s
BVA0 Borovoye Array 26.40 315 *i* P P 08 35 26.1 +0.7
BRVK Borovoye 26.47 315 P P 08 35 26.3 +0.3
BRVK IAmb IAmb 08 35 28.3
comp=Z,48nm,1.0s
BRVK Borovoye 26.47 315*ce*P P 08 35 27.1 +1.1
BRVK pmax pmax
comp=Z,66nm,1.3s
GRNR Gornyy 27.94 51⇓*i*P P 08 35 39.5 +0.3
GRNR *e*S S 08 40 23.8 +1.6
GRNR pmax pmax
comp=Z,4.0nm,0.7s
GRNR smax smax
comp=E,4.0nm,0.5s
GRNR MLR MLR
comp=E,570nm,12.0s
GRNR MLR MLR
comp=N,210nm,19.0s
GRNR MLR MLR
comp=Z,980nm,12.0s
HYBB Hyderabad (bro 28.54 231 *e*P P 08 35 44.9 0.0
HYBB *e*S S 08 40 33.1 +0.9
JSD Sado 28.91 78 P P 08 35 47.5 -0.4
MJAR Matsushiro Arr 29.18 81 P P 08 35 49.2 -1.2
comp=Z,1.4nm,0.8s,baz=300,slow=8.8,SNR=6.8
MJAR PcP PcP 08 38 56.8 -0.8
comp=Z,2.3nm,0.8s,baz=293,slow=1.7,SNR=7.3
MJAR LR LR 08 47 24.0
comp=Z,146nm,19.0s,baz=256,slow=36
comp=Z,1.4nm,0.8s
YAK Yakutsk 29.91 27 *e*P P 08 35 59.7 +3.1
YAK *e**PP **sP 08 36 10.6 +5.2**
YAK *e* 08 36 55.1
YAK *e*PPP PPP 08 37 02.4
YAK *e*S S 08 40 54.0 +1.1
YAK *e*SS SnSn 08 42 26.8 +2.7
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=Z,8.0nm,0.6s
YAK smax smax
comp=E,30nm,2.3s
YAK MLR MLR
comp=Z,874nm,11.0s
YAK MLR MLR
comp=N,451nm,11.0s
YAK MLR MLR
comp=E,556nm,11.0s
JMM Marumori 30.91 77 P P 08 36 03.2 -2.4
JMM IAmb IAmb 08 36 08.4
comp=Z,51nm,1.6s
JHJ Hachijo jima 2 31.40 87 LR LR 08 49 27.5
comp=Z,242nm,18.4s,baz=313,slow=38
AB31 Akbulak array 31.88 305 *i* P P 08 36 15.0 +0.9
ABKAR Akbulak array 31.88 305 P P 08 36 14.8 +0.7
ABKAR Akbulak array 31.88 305 P P 08 36 14.6 +0.4
ABKAR IAmb IAmb 08 36 16.4
comp=Z,28nm,0.8s
ERM Erimo 32.04 69*ce*P P 08 36 14.7 -0.9
ERM pmax pmax
comp=Z,16nm,0.5s
NRIK Noril'sk 32.57 351 P P 08 36 20.3 +0.4
comp=Z,23nm,0.9s,baz=146,slow=7.4,SNR=22
NRIK LR LR 08 50 14.2
comp=Z,403nm,18.3s,baz=169,slow=38
comp=Z,23nm,0.9s
NRIK Noril'sk 32.57 351 P P 08 36 19.7 -0.2
NRIK IAmb IAmb 08 36 21.2
comp=Z,50nm,1.2s
NRIK Noril'sk 32.57 351*ce*P P 08 36 18.2 -1.7
NRIK pmax pmax
comp=Z,52nm,1.3s
AKTO Aktyubinsk 33.24 307 PcP PcP 08 39 07.7 -0.4
comp=Z,3.1nm,0.7s,baz=72,slow=3.9,SNR=2.8
AKTO PKiKP PKiKP 08 46 34.1 +0.4
comp=Z,0.8nm,0.6s,baz=108,slow=3.2,SNR=3.8
AKTO LR LR 08 51 03.9
comp=Z,512nm,19.1s,baz=100,slow=38

ARU Arti 33.99 317 P **P** **08 36 33.5 +1.1**
comp=Z,82nm,0.8s,baz=102,slow=4.4,SNR=66
ARU LR LR 08 51 04.2
comp=Z,194nm,18.9s,baz=113,slow=38
comp=Z,82nm,0.8s
ARU Arti 33.99 317 P **P** **08 36 31.8 -0.7**
ARU Arti 33.99 317*d iP* **P** **08 36 30.5 -1.9**
ARU 08 37 41.4
ARU 08 39 08.2
ARU S **S** **08 41 54.4 -2.2**
ARU pmax pmax
comp=Z,161nm,1.0s
ARU MLR MLR
comp=Z,241nm,13.0s
GEYT Alibeck 34.03 284 P **P** **08 36 35.4 +2.3**
comp=Z,45nm,0.8s,baz=93,slow=5.9,SNR=38
GEYT LR LR 08 53 25.2
comp=Z,389nm,18.1s,baz=120,slow=42
comp=Z,45nm,0.8s
GEYT Alibeck 34.03 284 P **P** **08 36 34.7 +1.6**
GYA0 ALIBECK ARRAY 34.03 284 P **P** **08 36 34.0 +0.9**
GYA0B ALIBECK ARRAY 34.03 284 P **P** **08 36 34.0 +1.0**
PSI Prapat 34.83 184 LR LR 08 51 08.6
comp=Z,293nm,20.2s,baz=342,slow=37
PCHI Peechi 35.26 226 *eP* P 08 36 38.1 -5.7
PCHI *eS* **S** **08 42 23.6 +6.8**
PALK Pallekele 35.70 217 P **P** **08 36 48.4 +0.7**
comp=Z,10nm,1.0s,baz=304,slow=7.3,SNR=2.6
PALK LR LR 08 52 40.4
comp=Z,87nm,19.9s,baz=145,slow=38
comp=Z,10nm,1.0s
JCJ Chichijima 35.71 95 LR LR 08 50 51.4
comp=Z,155nm,21.5s,baz=300,slow=36
MYLDM Lahad Datu 35.92 150 P **P** **08 36 47.5 -1.9**
MYLDM IAmb IAmb 08 36 55.9
comp=Z,42nm,1.0s
SBSI Sibolga 36.07 184 P **P** **08 36 48.8 -2.0**
comp=Z,69nm,0.5s
SBUM Sibu 36.46 162 P **P** **08 36 54.2 +0.1**
TIXI Tiksi 36.78 14 P **P** **08 36 55.6 -0.7**
comp=Z,13nm,0.4s,baz=149,slow=6.4,SNR=16
comp=Z,13nm,0.4s
TIXI Tiksi 36.78 14 P **P** **08 36 55.5 -0.7**
TIXI IAmb IAmb 08 36 56.3
comp=Z,18nm,0.5s
TIXI Tiksi 36.78 14*c iP* **P** **08 36 55.3 -1.0**
TIXI pmax pmax
comp=Z,11nm,0.5s
DAV Davao City (W) 37.54 138 LR LR 08 53 55.7
comp=Z,350nm,18.7s,baz=334,slow=39
MA2 Magadan 38.03 39 P **P** **08 37 06.6 -0.4**
comp=Z,9.7nm,0.6s,baz=227,slow=10,SNR=4.3
MA2 LR LR 08 53 40.1
comp=Z,242nm,18.0s,baz=236,slow=38
comp=Z,9.7nm,0.6s
MA2 Magadan 38.03 39 *i* P **P** **08 37 05.6 -1.4**
MA2 pmax pmax
comp=Z,42nm,1.3s
KIRV Kirov 39.26 319 P **P** **08 37 18.1 +0.8**
comp=Z,76nm,0.7s,baz=101,slow=7.2
KIRV LR LR 08 54 39.3
comp=Z,138nm,18.4s,baz=106,slow=38
comp=Z,76nm,0.7s
KIRV Kirov 39.26 319*d iP* **P** **08 37 17.8 +0.5**
WSAR Wadi Sarin 39.31 261 PcP **PcP** **08 39 27.4 +0.7**
comp=Z,6.6nm,0.8s,baz=45,slow=2.9,SNR=2.8
WSAR LR LR 08 56 26.1
comp=Z,115nm,19.4s,baz=74,slow=41
SEY Seymchan 39.60 34 P **P** **08 37 19.9 -0.2**
comp=Z,1.8nm,0.6s,baz=273,slow=8.3,SNR=6.5
SEY PcP **PcP** **08 39 26.9 0.0**
comp=Z,7.8nm,0.9s,baz=248,slow=2.5,SNR=7.3
comp=Z,1.8nm,0.6s
KRJI Kerinci 39.61 180 P P 08 37 36.0 +15
BANOM Banah 39.81 266 P **P** **08 37 24.0 +1.7**
BELG Belogornoye 39.82 309 P **P** **08 37 23.0 +0.9**
comp=Z,177nm,0.9s,baz=80,slow=11,SNR=48
BELG PcP **PcP** **08 39 27.5 -0.3**
comp=Z,20nm,0.7s,baz=76,slow=4.2,SNR=3.1
BELG LR LR 08 54 34.7
comp=Z,343nm,18.5s,baz=125,slow=37
comp=Z,177nm,0.9s
SHME Shamm 39.87 267 *i* P **P** **08 37 24.4 +1.5**
SNR=6.3
MSFE Esma-Masafi 40.19 266 P **P** **08 37 28.0 +2.5**
SOHO SOHO 40.50 264 *i* P **P** **08 37 29.9 +1.8**
SNR=6.1
TOLI2 Tolitoli 40.53 149 P **P** **08 37 27.2 -1.1**
TOLI2 Tolitoli 40.53 149 P **P** **08 37 28.0 -0.3**
ASHO Ashiyiah 40.60 265 *i* P **P** **08 37 30.8 +1.9**
SNR=6.6
ASUD Al Ashush, Dub 41.20 265 P **P** **08 37 35.9 +2.1**
PETK Petropavlovsk- 41.24 49 P **P** **08 37 33.2 -0.6**
comp=Z,5.6nm,0.7s,baz=253,slow=6.6,SNR=15
comp=Z,5.6nm,0.7s
PETK Petropavlovsk- 41.24 49 P **P** **08 37 32.9 -0.9**
MRSI Marisa 41.58 148 P P 08 37 44.8 +7.8
PRGR Permogore 41.60 323⇑ *iP* **P** **08 37 37.0 +0.4**
PRGR *e* 08 37 40.4
GTOI Gorontalo 41.90 147 P **P** **08 37 39.0 -0.5**
comp=Z,290nmcomp=Z,28nm,1.1s
APSI Ampana 42.72 149 P **P** **08 37 50.5 +4.3**
MZR Muzera 43.48 264 *i* P **P** **08 37 52.9 +0.5**
SNR=8.7
ZEI Tsey 43.51 295 *eP* **P** **08 37 52.1 -0.6**
ZEI pmax pmax
comp=Z,28nm,0.9s
VRH Novokhopyorsk 43.55 308 *eP* **P** **08 37 53.3 +0.7**
VRH pmax pmax
comp=Z,140nm,0.7s
GNI Garni 43.56 292 P **P** **08 37 53.8 +0.7**
comp=Z,7.8nm,0.5s,baz=168,slow=4.9,SNR=12
GNI LR LR 09 00 32.2
comp=Z,68nm,20.4s,baz=74,slow=42
comp=Z,7.8nm,0.5s
GNI Garni 43.56 292 P **P** **08 37 53.7 +0.6**
GNI IAmb IAmb 08 38 02.0
comp=Z,29nm,0.8s
GNI Garni 43.56 292*ce* **P** **08 37 55.7 +2.6**
GNI pmax pmax
comp=Z,50nm,1.7s
NCK Nalchik 43.56 297 *i* P **P** **08 37 54.1 +1.2**
NCK pmax pmax
comp=Z,22nm,0.4s
GOF Gofitskoye 43.62 299⇑ *eP* **P** **08 37 55.3 +2.0**
GOF pmax pmax
comp=Z,226nm,0.6s
TNTI Ternate 43.82 141 P **P** **08 37 54.6 -0.5**
TNTI IAmb IAmb 08 38 03.1
comp=Z,41nm,0.9s
ONI Oni 43.88 295 P **P** **08 37 55.9 +0.4**
ONI IAmb IAmb 08 38 07.7
comp=Z,22nm,0.9s
ONI Oni 43.88 295 P **P** **08 37 55.9 +0.4**
ONI pmax pmax
comp=Z,22nm,0.9s
TTSI Tana Toraja 43.98 153 P **P** **08 37 57.1 +0.7**
comp=Z,1µmcomp=Z,61nm,1.1s
KBZ Khabaz 44.01 297 P **P** **08 37 57.6 +1.3**
comp=Z,13nm,0.7s,baz=97,slow=6.6,SNR=33
KBZ LR LR 09 00 44.8
comp=Z,127nm,20.0s,baz=84,slow=42
comp=Z,13nm,0.7s
KBZ Khabaz 44.01 297*c iP* **P** **08 37 57.5 +1.1**
KVAR Kislovodsk Arr 44.10 297 P **P** **08 37 59.1 +1.8**
comp=Z,10.0nm,0.7s,baz=34,slow=3.6,SNR=5.1
comp=Z,10.0nm,0.7s
KIV Kislovodsk 44.10 297 P **P** **08 37 57.9 +0.6**
KIV IAmb IAmb 08 38 00.6
comp=Z,45nm,0.8s
KIV Kislovodsk 44.10 297 *eP* **P** **08 37 58.7 +1.4**
KIV pmax pmax
comp=Z,63nm,1.1s
KIV MLR MLR
comp=Z,106nm,16.0s
KIV Kislovodsk 44.10 297 *i* P **P** **08 37 59.4 +2.1**
SNR=9.0
SHA1 Shidzhatmaz 44.17 297*c iP* **P** **08 37 59.6 +1.6**
NEY Neytrino 44.24 296 *i* P **P** **08 38 01.0 +2.5**
NEY pmax pmax
comp=Z,1.0nm,0.8s
KLMR Klimovskoe 44.47 322 *eP* **P** **08 37 57.6 -2.2**
KLMR *e* 08 39 41.0
KLMR pmax pmax
comp=Z,80nm,0.7s
KLMR Klimovskoe 44.47 322 *eP* **P** **08 37 57.7 -2.1**
KLMR AMP 08 38 05.5
comp=Z,80nm,0.7s
KLMR *e*PP **PcP** **08 39 41.0 -2.0**
SPSI Sidrap Palu 44.82 154 P **P** **08 38 03.2 +0.1**
comp=Z,946nmcomp=Z,103nm,1.0s
VORR Voronezh 45.06 309 *eP* **P** **08 38 05.7 +1.0**
VORR pmax pmax
comp=Z,100nm,0.6s
LPSR Galich'ya Gora 45.12 310 *eP* **P** **08 38 05.8 +0.7**
LPSR pmax pmax
comp=Z,150nm,0.8s
VSR Storozhevoye 45.14 308 *eP* **P** **08 38 06.0 +0.6**
VSR pmax pmax
comp=Z,150nm,0.8s
GEVA Gevas 45.35 290 P **P** **08 38 08.8 +1.4**
GEVA IAmb IAmb 08 38 10.5
comp=Z,28nm,1.1s
MOS Moscow 45.57 315 *eP* **P** **08 38 08.1 -0.6**
MOS *e* 08 38 12.7
MOS pmax pmax
comp=Z,187nm,0.9s
SANI Sanana 45.62 145 P **P** **08 38 09.2 -0.2**
comp=Z,55nm,0.8s
SANI Sanana 45.62 145 P **P** **08 38 08.4 -1.0**
KAPI Kappang 45.79 154 P **P** **08 38 10.4 -0.5**
comp=Z,36nm,0.9s,baz=313,slow=7.5,SNR=12
KAPI LR LR 08 59 44.7
comp=Z,42nm,18.9s,baz=62,slow=39
comp=Z,36nm,0.9s
KAPI Kappang 45.79 154 P **P** **08 38 10.0 -0.8**
KAPI IAmb IAmb 08 38 11.4
comp=Z,52nm,1.0s
KAPI Kappang 45.79 154 P **P** **08 38 10.0 -0.8**
KAPI pmax pmax
comp=Z,52nm,1.0s
KAPI Kappang 45.79 154 P **P** **08 38 10.3 -0.5**
GURO Guroymak-BITLI 46.04 290 P **P** **08 38 13.7 +0.9**
GURO IAmb IAmb 08 38 16.2
comp=Z,19nm,0.9s
OBN Obninsk 46.23 314 P **P** **08 38 14.5 +0.7**
comp=Z,21nm,0.9s,baz=43,slow=5.9,SNR=18
comp=Z,21nm,0.9s
OBN Obninsk 46.23 314 P **P** **08 38 13.8 0.0**
OBN Obninsk 46.23 314*ce* **P** **08 38 14.4 +0.5**
OBN *e* 08 39 50.1
OBN *e* 08 40 01.7
OBN *e*PPP PPP 08 40 47.4
OBN *eS* **S** **08 45 00.9 +1.5**
OBN pmax pmax
comp=Z,149nm,1.3s
OBN MLR MLR
comp=Z,199nm,13.0s
BILL Bilibino 46.25 28 P **P** **08 38 14.1 +0.3**
BILL IAmb IAmb 08 39 24.9
comp=Z,20nm,0.4s
BILL Bilibino 46.25 28*de* **P** **08 38 14.4 +0.5**
BILL *e* 08 39 48.3
BILL *e* 08 40 02.2
BILL *e*PPP PPP 08 40 44.0
BILL *eS* **S** **08 44 58.7 -0.7**
BILL *e*SSS SSS 08 49 19.5
BILL pmax pmax
comp=Z,20nm,1.0s
BILL MLR MLR
comp=Z,269nm,10.0s
SOC Sochi 46.28 298 *eP* **P** **08 38 13.1 -1.4**
SOC *e* 08 39 59.7
SOC *e*PPP PPP 08 40 44.8
SOC *eS* **S** **08 44 58.7 -1.8**
SOC *e*SS **SS** **08 48 24.5 -1.3**
SOC *e*SSS SSS 08 49 19.8
SOC pmax pmax
comp=Z,31nm,0.8s
SOC MLR MLR
comp=Z,131nm,15.0s
KOPT Kop Dagi 46.72 293 P **P** **08 38 19.6 +1.3**
KOPT IAmb IAmb 08 38 23.8
comp=Z,38nm,1.3s
MARD Mardin 47.38 289 P **P** **08 38 24.1 +0.7**
MARD IAmb IAmb 08 38 25.8
comp=Z,31nm,0.7s
ANN Anapa 47.56 300 *eP* **P** **08 38 22.2 -2.2**
ANN *e**PP **sP** **08 38 32.6 -1.1**
ANN *eS* **S** **08 45 15.6 -3.1**
ANN pmax pmax
comp=Z,69nm,0.9s
PUL Pulkovo 49.08 321*ce* **P** **08 38 36.5 +0.6**
PUL pmax pmax
comp=Z,142nm,0.4s
SOCY Socotra 49.34 252 P **P** **08 38 36.4 -2.2**
RAYN Ar Rayn 49.54 270 P **P** **08 38 39.5 -0.4**
RAYN Ar Rayn 49.54 270 P **P** **08 38 39.6 -0.4**
RAYN pmax pmax
comp=Z,8.0nm,1.1s
RAYN Ar Rayn 49.54 270 P **P** **08 38 39.7 -0.3**
SIM Simferopol' 49.79 301 *eP* **P** **08 38 40.7 -0.9**
SIM pmax pmax
comp=Z,39nm,0.8s
WBSI Waikabubak, Su 50.01 157 P **P** **08 38 41.5 -2.0**
comp=Z,1µmcomp=Z,150nm,0.8s
ARA0 ARCESS Array S 50.37 334 *eP* **P** **08 38 46.1 +0.5**
ARCES ARCESS Array B 50.37 334 P **P** **08 38 45.8 +0.1**
comp=Z,5.9nm,0.7s,baz=84,slow=5.8,SNR=23
ARCES LR LR 09 01 25.6
comp=Z,84nm,20.8s,baz=18,slow=38
comp=Z,5.9nm,0.7s
BNN Bunyan 50.51 293 P **P** **08 38 47.4 +0.1**
BNN IAmb IAmb 08 38 58.3
comp=Z,40nm,1.2s
FINES FINESS Array B 50.93 323 P **P** **08 38 50.1 +0.1**
comp=Z,12nm,0.7s,baz=76,slow=7.8,SNR=30
FINES PcP **PcP** **08 40 05.4 -0.7**
comp=Z,7.8nm,0.8s,baz=72,slow=4.5,SNR=3.8
FINES LR LR 09 01 43.8
comp=Z,83nm,21.7s,baz=68,slow=38
comp=Z,12nm,0.7s
FINES FINESS Array B 50.93 323 *i* P **P** **08 38 49.7 -0.2**
FINES pmax pmax
comp=Z,15nm,0.8s
HAMF Hammerfest 50.93 335 *eP* **P** **08 38 50.4 +0.5**
VSU Vasula 51.10 319 *eP* **P** **08 38 52.2 +0.9**
SHEM Shemya Is, Ala 51.12 48 P **P** **08 38 50.8 -0.7**
comp=Z,22nm,0.5s,baz=261,slow=3.1,SNR=5.7
SHEM LR LR 09 02 39.7
comp=Z,90nm,19.6s,baz=315,slow=39
comp=Z,22nm,0.5s
ILGA Ilgaz 51.28 296 P **P** **08 38 54.0 +0.8**
MNK Minsk 51.29 314 *i* P **P** **08 38 52.0 -0.7**
MNK *i* 08 40 06.4
MNK *i* 08 40 49.0
MNK *i* PPP PPP 08 41 49.3
MNK *i* S **S** **08 46 09.0 -1.6**
MNK *i* SS **SS** **08 49 36.7 -9.1**
MNK pmax pmax
comp=E,7.0nm,0.8s
MNK pmax pmax
comp=Z,50nm,0.8s
MNK MLR MLR
comp=Z,131nm,16.0s
MNK MLR MLR
comp=E,21nm,16.0s
MNK Minsk 51.29 314 *i* P **P** **08 38 52.0 -0.7**
comp=E,7.0nm,0.8s
MNK *i* P **P** **08 38 52.0 -0.7**
MNK *i* P **P** **08 38 52.0 -0.7**
comp=Z,50nm,0.8s,baz=77
MNK *i* PcP **PcP** **08 40 06.4 -1.1**
MNK *i* PP **PP** **08 40 49.0 -0.4**
MNK *i* PPP PPP 08 41 49.3
MNK *i* S **S** **08 46 09.1 -1.6**
MNK *i* SS **SS** **08 49 36.8 -9.1**
MNK *i* SSS SSS 08 50 44.4
MNK *i* LQ LQ 08 57 02.6
MNK *i* LR LR 09 00 57.2
MNK *i* LRM MLR 09 02 28.3
MNK comp=Z,131nm,16.1s *i* LRM MLR 09 02 34.4
comp=E,21nm,16.1s
AKASG Malin Array Be 51.41 309 P **P** **08 38 54.0 +0.3**
AKASG PcP **PcP** **08 40 07.5 -0.6**
comp=E,4.1nm,0.8s,baz=66,slow=3.9,SNR=2.0
AKASG LR LR 09 01 37.5
comp=E,280nm,18.9s,baz=62,slow=37
comp=E,27nm,0.8s
AKASG Malin Array Be 51.41 309 P **P** **08 38 53.6 -0.1**
AKASG pmax pmax
comp=Z,50nm,0.9s
AKBB Malin Array Si 51.41 309 P **P** **08 38 53.5 -0.2**
AKBB IAmb IAmb 08 38 59.3
comp=Z,42nm,0.8s
AKBB Malin Array Si 51.41 309*c iP* **P** **08 38 53.9 +0.2**
AKBB pmax pmax
comp=Z,51nm,0.9s
BR131 Keskin Array S 51.80 295 P **P** **08 38 57.2 +0.2**
BR131 IAmb IAmb 08 38 58.9
comp=Z,25nm,0.7s
BR131 Keskin Array S 51.80 295*c iP* **P** **08 38 57.7 +0.7**
BRTR Keskin Array B 51.80 295 P **P** **08 38 57.9 +0.9**
comp=Z,12nm,0.6s,baz=100,slow=7.4,SNR=64
BRTR LR LR 09 05 26.1
comp=Z,102nm,18.5s,baz=80,slow=41
comp=Z,12nm,0.6s
BRTR Keskin Array B 51.80 295 P **P** **08 38 57.5 +0.4**
BRTR Keskin Array B 51.80 295 *i* P **P** **08 38 57.9 +0.9**
BRTR pmax pmax
comp=Z,13nm,0.6s
NACGM Naroch 51.82 315⇓ *eP* **P** **08 38 57.9 +1.2**
baz=76
SOEI Soe 51.82 151 P P 08 39 04.6 +7.3
SOEI Soe 51.82 151 P **P** **08 38 56.8 -0.5**
MEF Metsahovi 51.95 322 *eP* **P** **08 38 58.2 +0.6**
IIGN Ignalina 52.03 316 *eP* **P** **08 38 59.4 +1.1**
ISAL Salakas 52.03 316 *eP* **P** **08 38 59.7 +1.4**
BJO1 Bjornoya 52.07 340 *eP* **P** **08 38 58.4 +0.1**
JETT Jettan, Norway 52.15 334 *eP* **P** **08 38 56.9 -2.1**
ASF Jabal al Asfar 52.31 285 P **P** **08 39 01.6 +0.8**
comp=Z,14nm,0.9s,baz=123,slow=6.0,SNR=17
comp=Z,14nm,0.9s
SPA0 Spitsbergen Ar 52.41 345 *eP* **P** **08 39 01.4 +0.5**
SPITS Spitsbergen Ar 52.41 345 LR LR 09 04 48.1
comp=Z,215nm,18.9s,baz=44,slow=40
SPITS Spitsbergen Ar 52.41 345 P **P** **08 39 00.6 -0.2**
SPITS pmax pmax
comp=Z,40nm,1.3s
TRO Tromso 52.65 334 *eP* **P** **08 39 02.5 -0.1**
TRO Tromso 52.65 334 SG **P** **08 39 02.7 0.0**
SORM Soroca 52.67 306⇑ P **P** **08 39 02.6 -0.5**
HSPB Hornsund (broa 52.69 344 *eP* **P** **08 39 03.4 +0.5**
MILM Milestii Mici 52.74 305⇑ *iP* **P** **08 39 03.6 -0.1**
comp=Z,100nm,1.5s
MILM Milestii Mici 52.74 305 *i* P **P** **08 39 03.6 -0.1**
MILM pmax pmax
comp=Z,100nm,1.5s
RAF Rauma 53.06 323 *eP* **P** **08 39 05.9 +0.1**
MMAI Mount Meron Ar 53.09 286 P **P** **08 39 07.3 +0.7**
comp=Z,9.4nm,0.9s,baz=56,slow=8.2,SNR=19
MMAI PcP **PcP** **08 40 15.4 +0.5**
comp=Z,4.4nm,0.7s,baz=74,slow=6.2,SNR=4.9
MMAI LR LR 09 06 04.2
comp=Z,101nm,19.0s,baz=259,slow=41
comp=Z,9.4nm,0.9s
VSVD Vaisvydziai 53.13 317 *eP* **P** **08 39 07.2 +0.8**
PABE Paberze 53.23 316 P **P** **08 39 08.0 +0.8**
PABE Paberze 53.23 316 *eP* **P** **08 39 07.8 +0.7**
TLCR 53.29 303⇓ P **P** **08 39 08.6 +0.9**
TPGR Topolog 53.66 302⇑ P **P** **08 39 11.3 +0.8**
CFR Carcaliu 53.74 303⇓ P **P** **08 39 12.0 +0.9**
TESR Tescani 54.28 305⇓ P **P** **08 39 15.9 +0.9**
ICOR Ion Corvin 54.33 302⇑ P **P** **08 39 16.9 +1.5**
VRI Vrincioaia 54.44 304⇓ P **P** **08 39 17.8 +1.6**
BIZ Bicaz 54.49 305⇑ P **P** **08 39 17.9 +1.0**
PLOR Plostina 54.50 304⇑ P **P** **08 39 18.0 +1.3**
ISP Isparta 54.77 294 P **P** **08 39 19.0 +0.2**
ISP Isparta 54.77 294 P **P** **08 39 19.0 +0.2**
ISP pmax pmax
comp=Z,61nm,0.8s
COVR Voineasa-Covas 54.80 304⇑ P **P** **08 39 20.7 +1.9**
ISR Istrita 54.82 303⇑ P **P** **08 39 21.4 +2.3**
BUR08 Bucovina Ar. S 54.83 307 P **P** **08 39 19.6 +0.4**
BUR08 IAmb IAmb 08 39 25.4
comp=Z,21nm,1.2s
BURAR Bucovina Array 54.83 306⇑ P **P** **08 39 19.8 +0.7**
BURAR Bucovina Array 54.83 306 P **P** **08 39 19.6 +0.4**
LVV L'vov 54.85 309 *eP* **P** **08 39 19.9 +0.8**
LOF Lofoten 54.86 333 *eP* **P** **08 39 16.7 -2.2**
EIL Elat 54.91 283 P **P** **08 39 20.6 +0.8**
comp=Z,17nm,1.0s,baz=19,slow=3.9,SNR=8.7
EIL LR LR 09 07 36.6
comp=Z,146nm,18.3s,baz=90,slow=41
comp=Z,17nm,1.0s
OZUR 54.98 305⇑ P **P** **08 39 21.5 +1.3**
MOR8 Moi Rana 55.02 330 *eP* **P** **08 39 18.9 -1.2**
MLR Muntele Rosu 55.09 304⇓ P **P** **08 39 22.5 +1.5**
MLR Muntele Rosu 55.09 304 P **P** **08 39 22.1 +1.1**
comp=Z,12nm,0.8s,baz=325,slow=4.2,SNR=11
MLR LR LR 09 04 45.2
comp=Z,174nm,21.2s,baz=80,slow=38
comp=Z,12nm,0.8s
DOPR Dopca 55.29 305⇓ P **P** **08 39 24.0 +1.7**
ARCR ARCALIA 55.56 306⇓ P **P** **08 39 26.4 +2.0**
VOIR 55.70 304⇑ P **P** **08 39 26.7 +1.3**
KWP Kalwaria Pacla 55.72 309 P **P** **08 39 26.0 +0.6**
KWP Kalwaria Pacla 55.72 309 P **P** **08 39 26.0 +0.6**
KWP pmax pmax
comp=Z,950nm,0.9s
BMR Baia Mare 55.91 307⇓ P **P** **08 39 28.5 +1.7**
ARR Arges 56.00 304⇓ P **P** **08 39 29.0 +1.5**
HUMR Humele 56.07 303⇓ P **P** **08 39 28.9 +0.9**
KOLS Kolonicke sedl 56.23 309 *eP* **P** **08 39 30.2 +1.1**
KOLS pmax pmax
comp=Z,20nm,0.9s
KOLS Kolonicke sedl 56.23 309 *eP* **P** **08 39 30.2 +1.1**
UZH Uzhgorod 56.32 308 *eP* **P** **08 39 29.4 -0.3**
UZH *e* 08 39 37.1
NSS Namsos 56.48 329 *eP* **P** **08 39 29.5 -1.0**
DRGR 56.72 306⇑ P **P** **08 39 33.8 +1.2**
CRVS Cervenica-Dubn 56.74 309 *eP* **P** **08 39 33.6 +0.9**
CRVS Cervenica-Dubn 56.74 309 *eP* **P** **08 39 33.6 +0.9**
HFS Hagfors 57.13 323 P **P** **08 39 35.1 -0.1**
comp=Z,28nm,0.8s,baz=103,slow=6.7,SNR=57
HFS PcP **PcP** **08 40 29.4 -0.4**
comp=Z,10.0nm,0.7s,baz=68,slow=3.9,SNR=1.9
HFS LR LR 09 04 37.2
comp=Z,75nm,18.2s,baz=68,slow=37
comp=Z,28nm,0.8s
GZR Gura Zlata 57.20 305⇓ P **P** **08 39 37.4 +1.3**
NIE Niedzica 57.27 310 *eP* **P** **08 39 38.2 +1.7**
OJC Ojcow 57.28 311 *eP* **P** **08 39 36.5 0.0**
OJC Ojcow 57.28 311 P **P** **08 39 36.1 -0.4**
OJC Ojcow 57.28 311 P **P** **08 39 36.1 -0.4**
OJC pmax pmax
comp=Z,65nm,0.9s
SIRR Siria 57.59 306⇓ P **P** **08 39 40.4 +1.6**
HERR Herculane 57.63 304⇓ P **P** **08 39 39.8 +0.7**
BZS Buzias 57.87 305⇑ P **P** **08 39 41.5 +0.8**
LANS Liptovska Anna 57.87 310 *eP* **P** **08 39 43.6 +2.8**
LANS Liptovska Anna 57.87 310 *eP* **P** **08 39 43.5 +2.8**
NC602 NORSAR Array S 57.93 325 *eP* **P** **08 39 40.4 -0.5**
ANM Nome 57.95 31 P **P** **08 39 41.0 0.0**
baz=291
BLKB Belogradchik 57.96 303⇑ P **P** **08 39 42.4 +1.0**
NB2 NORSAR Subarra 57.97 325 P **P** **08 39 40.4 -0.8**
comp=Z,32nm,1.0s,baz=70,slow=7.4
NB2 NORSAR Subarra 57.97 325 P **P** **08 39 40.4 -0.8**
baz=70,slow=7.4
NOA NORSAR Array B 57.97 325 P **P** **08 39 40.7 -0.5**
comp=Z,13nm,0.7s,baz=71,slow=7.1,SNR=30
NOA PcP **PcP** **08 40 32.2 -0.9**
comp=Z,3.6nm,0.9s,baz=77,slow=3.9,SNR=2.1
NOA LR LR 09 06 06.5
comp=Z,102nm,19.9s,baz=70,slow=38
comp=Z,13nm,0.7s
VTS Vitosha 57.98 302⇓ P **P** **08 39 43.4 +1.7**
VTS Vitosha 57.98 302 P **P** **08 39 42.4 +0.7**
VTS IAmb IAmb 08 39 44.1
comp=Z,26nm,1.0s
VTS Vitosha 57.98 302 P **P** **08 39 42.4 +0.7**
VTS pmax pmax
comp=Z,26nm,1.0s
PSZ Piszkesteto 58.08 308 P **P** **08 39 43.2 +1.0**
PSZ IAmb IAmb 08 39 48.8
comp=Z,30nm,1.2s
PSZ Piszkesteto 58.08 308 P **P** **08 39 43.2 +1.0**
PSZ pmax pmax
comp=Z,30nm,1.2s
MDVR Moldovita 58.13 304⇑ P **P** **08 39 43.7 +1.0**
DEL Delary 58.32 319 *iP* P 08 39 34.0 -10
OKC Ostrava-Krasne 58.41 311 *eP* **P** **08 39 45.1 +0.7**

OKC *e* 08 39 49.2
OKC MLR MLR
comp=Z,200nm,25.0s
OKC Ostrava-Krasne 58.41 311 *e*P **P** **08 39 45.1 +0.7**
OKC *ep*P **pP** **08 39 49.2 -1.9**
OKC AMS AMS 09 05 20.0
comp=Z,200nm,25.0s
VYHS Vyhne 58.51 309 *e*P **P** **08 39 46.3 +1.2**
VYHS pmax pmax
comp=Z,37nm,1.3s
VYHS Vyhne 58.51 309 *e*P **P** **08 39 46.3 +1.2**
DOMB Dombas 58.56 327 *e*P **P** **08 39 44.9 -0.5**
BOVS Bovan 58.59 303 ⇑P **P** **08 39 46.1 +0.3**
OSL Oslo 58.60 324 *e*P **P** **08 39 45.8 +0.3**
MORC Moravsky Berou 58.80 311 ⇑P **P** **08 39 48.3 +1.1**
MORC Moravsky Berou 58.80 311 *e*P **P** **08 39 47.9 +0.7**
KNRA Kununurra 58.98 149 P **P** **08 39 48.2 -0.4**
JAVC Velka Javorina 59.08 310 *e*P **P** **08 39 51.1 +2.0**
SRO Srobarova 59.10 309 *e*P **P** **08 39 50.7 +1.5**
SRO Srobarova 59.10 309 *e*P **P** **08 39 50.7 +1.5**
KSP Ksiaz 59.12 313 *e*P **P** **08 39 50.2 +0.9**
KRLC Kraliky 59.13 312 *e*P **P** **08 39 50.3 +0.8**
KRLC *e* 08 39 54.9
KRLC MLR MLR
comp=Z,200nm,14.9s
KRLC Kraliky 59.13 312 *e*P **P** **08 39 50.3 +0.8**
KRLC *ep*P **pP** **08 39 54.9 -1.3**
KRLC AMS AMS 09 05 40.0
comp=Z,200nm,14.9s
FRGS Fruska Gora 59.22 305 ⇓P **P** **08 39 51.1 +0.9**
KONO Kongsberg 59.23 324 *e*P **P** **08 39 48.5 -1.5**
OSTC Ostas 59.28 312 *e*P **P** **08 39 51.3 +0.8**
OSTC *ex* x 08 39 55.9
OSTC AMS AMS 09 06 50.0
comp=Z,200nm,13.8s
DPC Dobruska-Polom 59.29 312 *e*P **P** **08 39 51.4 +0.8**
DPC *e* 08 39 56.5
DPC MLR MLR
comp=Z,200nm,19.5s
DPC Dobruska-Polom 59.29 312 *e*P **P** **08 39 51.4 +0.8**
DPC *ep*P **pP** **08 39 56.5 -0.8**
DPC AMS AMS 09 05 40.0
comp=Z,200nm,19.5s
CSKK Cskako 59.31 308 P **P** **08 39 52.0 +1.3**
CHVC Chvalec 59.36 312 *e*P **P** **08 39 51.8 +0.8**
CHVC *ep*P **pP** **08 39 56.7 -1.0**
SMOL Smolenice 59.36 310 *e*P **P** **08 39 52.8 +1.7**
AKN Aaknes 59.41 327 *e*P **P** **08 39 50.5 -0.7**
UPC Upice 59.41 312 *e*P **P** **08 39 52.4 +1.0**
UPC *e* 08 39 56.0
UPC MLR MLR
comp=Z,200nm,17.9s
UPC Upice 59.41 312 *e*P **P** **08 39 52.4 +1.0**
UPC *ep*P **pP** **08 39 56.0 -2.1**
UPC AMS AMS 09 07 00.0
comp=Z,200nm,17.9s
SKAR Skarslia 59.42 325 *e*P **P** **08 39 51.9 +0.6**
MODS Modra-Piesok 59.51 310 *e*P **P** **08 39 53.5 +1.4**
MODS pmax pmax
comp=Z,67nm,1.3s
MODS Modra-Piesok 59.51 310 *e*P **P** **08 39 53.5 +1.4**
MORH Mrgy, Hungar 59.53 307 ⇑P **P** **08 39 52.9 +0.7**
MORH Mrgy, Hungar 59.53 307 P **P** **08 39 52.7 +0.5**
VRAC Vranov 59.55 311 ⇑P **P** **08 39 53.5 +1.1**
VRAC Vranov 59.55 311 P **P** **08 39 53.4 +1.1**
comp=Z,9.9nm,0.7s,baz=69,slow=7.6,SNR=5.9
VRAC LR LR 09 06 42.7
comp=Z,114nm,18.3s,baz=80,slow=37
comp=Z,9.9nm,0.7s
VRAC Vranov 59.55 311 *e*P **P** **08 39 53.3 +1.0**
ZST Bratislava 59.69 310 *e*P **P** **08 39 54.9 +1.6**
ZST pmax pmax
comp=Z,111nm,1.9s
ZST Bratislava 59.69 310 *e*P **P** **08 39 54.9 +1.6**
KRUC Moravsky 59.77 311 *e*P **P** **08 39 54.8 +1.0**
MPLH Magyarpolny 59.84 308 P **P** **08 39 54.6 +0.2**
KOVH Kovagotottos 59.93 307 P **P** **08 39 55.4 +0.4**
IDI Anoyia 59.95 293 P **P** **08 39 54.6 -0.8**
comp=Z,10nm,0.7s,baz=44,slow=11,SNR=5.5
comp=Z,10nm,0.7s
FITZ Fitzroy Crossi 59.99 153 P **P** **08 39 55.0 -0.6**
comp=Z,8.9nm,0.8s,baz=324,slow=8.5,SNR=14
comp=Z,8.9nm,0.8s
FITZ Fitzroy Crossi 59.99 153 P **P** **08 39 54.8 -0.8**
FITZ IAmb IAmb 08 39 55.6
comp=Z,8.4nm,0.8s
FITZ Fitzroy Crossi 59.99 153 P **P** **08 39 55.3 -0.3**
TREC Trest 60.22 311 *e*P **P** **08 39 58.3 +1.4**
TREC MLR MLR
comp=Z,200nm,18.6s
TREC Trest 60.22 311 *e*P **P** **08 39 58.3 +1.4**
TREC AMS AMS 09 06 40.0
comp=Z,200nm,18.6s
SOP Sopron 60.23 309 P **P** **08 39 58.0 +1.0**
PVCC Panska Ves 60.25 313 *e*P **P** **08 39 58.1 +1.0**
PVCC *e* 08 40 02.8
PVCC MLR MLR
comp=Z,200nm,27.6s
PVCC Panska Ves 60.25 313 *e*P **P** **08 39 58.1 +1.0**
PVCC *ex* x 08 40 02.8
PVCC AMS AMS 09 06 50.0
comp=Z,200nm,27.6s
RONA Rosalia, Austr 60.39 309 *i*P **P** **08 39 59.2 +1.0**
comp=Z,14nm,0.8s,SNR=7.6
BRG Berggiesshubel 60.47 313 *i*P **P** **08 39 59.4 +0.8**
BRG Amp 08 40 01.3
comp=Z,18nm,1.0s
BRG *i*x x 08 40 03.9
BRG Amp 08 40 04.7
comp=Z,24nm,0.9s
BRG Amp 09 07 17.0
comp=N,0.1nm,14.9s
BRG Amp 09 07 23.0
comp=E,0.1nm,13.4s
BRG Amp 09 07 27.0
comp=Z,0.2nm,21.6s
BRG Berggiesshubel 60.47 313 *i*P **P** **08 39 59.4 +0.8**
BRG *i* 08 40 03.9
BRG pmax pmax
comp=Z,18nm,1.0s
BRG pmax pmax
comp=Z,24nm,0.9s
BRG MLR MLR
comp=N,73nm,14.9s
BRG MLR MLR
comp=E,91nm,13.4s
BRG MLR MLR
comp=Z,193nm,21.6s
PRU Pruhonice 60.49 312 *e*P **P** **08 39 59.5 +0.7**
PRU *e* 08 40 03.8
PRU MLR MLR
comp=Z,200nm,16.5s
PRU Pruhonice 60.49 312 *e*P **P** **08 39 59.5 +0.7**
PRU *ep*P **pP** **08 40 03.8 -1.7**
PRU AMS AMS 09 06 20.0
comp=Z,200nm,16.5s
CONA Conrad Observa 60.56 310 *e*P **P** **08 40 00.7 +1.3**
comp=Z,24nm,1.1s,SNR=11
PDG Podgorica 60.73 303 ⇓P **P** **08 40 01.3 +0.8**
BLS5 Blasjo 60.79 324 *e*P **P** **08 40 01.0 +0.3**
CLL Collm 60.83 314 P **P** **08 40 01.1 +0.1**
CLL IAmb IAmb 08 40 06.7
comp=Z,25nm,0.9s
CLL Collm 60.83 314 P **P** **08 40 01.1 +0.1**
CLL pmax pmax
comp=Z,25nm,0.9s
CLL Collm 60.83 314 *i*P **P** **08 40 01.4 +0.4**
comp=Z,22nm,0.9s
CLL *i*x x 08 40 05.1
comp=Z,28nm,0.9s
C23K Itkillik River 60.86 22 P **P** **08 40 01.5 +0.6**
baz=300,SNR=12
JMIC Jan Mayen 60.87 339 LR LR 09 08 58.0
comp=Z,72nm,19.6s,baz=47,slow=39
ARSA Arzberg 61.05 309 *e*P **P** **08 40 03.2 +0.5**
comp=Z,10nm,0.9s
CKRC Cesky Krumlov 61.12 311 *e*P **P** **08 40 04.2 +1.1**
CKRC *ep*P **pP** **08 40 08.3 -1.5**
GCSA Galena City Sc 61.20 29 P **P** **08 40 03.5 +0.2**
baz=298,SNR=11
F21K Alatna River 61.24 25 P **P** **08 40 03.9 +0.2**
baz=299,SNR=28
D23K Nanushuk River 61.28 23 P **P** **08 40 04.5 +0.6**
baz=301,SNR=12
E22K Anaktuvuk Pass 61.35 24 P **P** **08 40 04.6 +0.2**
baz=300
GROS Grobnik 61.41 308 *i*P **P** **08 40 05.4 +0.2**
GROS *i* 08 40 06.3
comp=Z,18nm,0.9s
KHC Kasperske Hory 61.42 312 *e*P **P** **08 40 05.6 +0.4**
KHC *e* 08 40 10.2
KHC *e* 08 40 18.5
KHC MLR MLR
comp=Z,200nm,19.8s
KHC Kasperske Hory 61.42 312 *e*P **P** **08 40 05.6 +0.4**
KHC *ep*P **pP** **08 40 10.2 -1.7**
KHC *ex* x 08 40 18.5
KHC AMS AMS 09 07 10.0
comp=Z,200nm,19.8s
GEC2 GERESS Array S 61.47 311 P **P** **08 40 05.8 +0.2**
GEC2 IAmb IAmb 08 40 11.7
comp=Z,16nm,1.0s
GERES GERESS Array B 61.47 311 P **P** **08 40 06.1 +0.5**
comp=Z,7.7nm,0.9s,baz=69,slow=7.3,SNR=47
GERES PP **PP** **08 42 21.0 +0.4**
comp=Z,0.5nm,0.6s,baz=68,slow=8.6,SNR=2.9
comp=Z,7.7nm,0.9s
C24K Franklin Bluff 61.49 22 P **P** **08 40 05.4 +0.2**
baz=302
F22K John River 61.54 25 P **P** **08 40 06.3 +0.6**
baz=300
MOA Molln 61.56 310 *i*P **P** **08 40 07.2 +1.0**
comp=Z,14nm,0.9s,SNR=8.5
G21K Allakaket 61.58 26 P **P** **08 40 06.0 0.0**
baz=299
SOKA Soboth 61.60 309 *i*P **P** **08 40 07.0 +0.5**
comp=Z,30nm,1.1s,SNR=10
D24K Happy Valley 61.76 22 P **P** **08 40 07.3 +0.2**
baz=302
TOLK Toolik Lake Re 61.80 23 P **P** **08 40 06.9 -0.5**
TOLK IAmb IAmb 08 40 08.7
comp=Z,18nm,0.6s
TOLK Toolik Lake Re 61.80 23 P **P** **08 40 07.6 +0.2**
baz=302,SNR=16
OBKA Obir 61.98 309 *i*P **P** **08 40 09.3 +0.3**
comp=Z,26nm,1.6s
BOJS Bojanci 61.98 307 *i*P **P** **08 40 09.7 +0.8**
BOJS *i* 08 40 10.5
comp=Z,12nm,0.8s
BIOA Bad Ischl, Aus 62.01 310 *i*P **P** **08 40 10.1 +1.0**
comp=Z,31nm,1.1s,SNR=12
G22K Bettles 62.06 25 P **P** **08 40 09.2 +0.1**
baz=301
H21K Melozitna Rive 62.26 27 P **P** **08 40 10.3 -0.3**
H21K Melozitna Rive 62.26 27 P **P** **08 40 10.8 +0.3**
baz=300,SNR=65
COLD Coldfoot 62.34 25 P **P** **08 40 10.7 -0.3**
COLD Coldfoot 62.34 25 P **P** **08 40 11.5 +0.5**
baz=302
D25K Kavik River 62.40 22 P **P** **08 40 11.5 +0.1**
baz=304,SNR=10
TTA Tatalina 62.41 30 P **P** **08 40 11.5 -0.1**
baz=299
N16K Nishlik Lake 62.43 33 P **P** **08 40 11.9 +0.1**
baz=298
E24K Your Creek 62.44 23 P **P** **08 40 12.2 +0.4**
baz=303,SNR=20
KBA Koelnbreinsper 62.46 310 *e*P **P** **08 40 12.9 +0.6**
comp=Z,19nm,0.8s,SNR=6.7
C26K Camden Bay 62.48 21 P **P** **08 40 12.7 +0.8**
baz=305
MYKA Terra Mystica 62.48 309 *i*P **P** **08 40 11.9 -0.5**
comp=Z,5.5nm,0.9s
J20K Nowinta River 62.52 29 P **P** **08 40 12.5 +0.3**
J20K Nowinta River 62.52 29 P **P** **08 40 12.8 +0.6**
baz=300,SNR=28
H22K Ishtalitna Cre 62.64 26 P **P** **08 40 13.3 +0.2**
baz=301,SNR=9.5
G23K Bananza Creek 62.68 25 P **P** **08 40 13.4 +0.1**
baz=302,SNR=14
KRVT Keravat (AS076 62.80 120 P **P** **08 40 15.5 +0.7**
comp=Z,25nm,0.4s,baz=242,slow=2.9,SNR=6.5
comp=Z,25nm,0.4s
I21K Tanana 62.80 27 P **P** **08 40 14.4 +0.3**
I21K IAmb IAmb 08 40 15.8
comp=Z,24nm,1.0s
I21K Tanana 62.80 27 P **P** **08 40 14.6 +0.5**
baz=301,SNR=14
F24K Squaw Lake 62.94 24 P **P** **08 40 15.4 +0.3**
baz=304,SNR=7.7
K20K Tetlin 62.96 29 P **P** **08 40 15.7 +0.5**
baz=300,SNR=11
C27K Jago River 62.99 21 P **P** **08 40 16.1 +0.8**
baz=306,SNR=13
ABTA Abfaltersbach 63.12 310 *i*P **P** **08 40 16.3 -0.4**
comp=Z,17nm,1.2s,SNR=6.7
O16K Kokwok River B 63.16 34 P **P** **08 40 16.6 0.0**
baz=299
L19K White Mountain 63.24 31 P **P** **08 40 17.5 +0.4**
baz=300,SNR=5.9
H23K Yukon River 63.32 26 P **P** **08 40 17.8 +0.3**
H23K Yukon River 63.32 26 P **P** **08 40 18.2 +0.6**
baz=303,SNR=42
E25K Arctic Village 63.32 23 P **P** **08 40 17.9 +0.3**
baz=305,SNR=6.5
MLY Manley 63.33 27 P **P** **08 40 18.0 +0.3**
baz=302,SNR=28
CHUM Lake Minchumin 63.36 28 P **P** **08 40 18.4 +0.6**
baz=302,SNR=6.3
CIMO Cimolais 63.37 309 P **P** **08 40 17.9 -0.3**
CIMO IAmb IAmb 08 40 18.8
comp=Z,68nm,1.9s
PMG Port Moresby 63.40 128 P **P** **08 40 19.1 +0.5**
comp=Z,12nm,0.9s,baz=280,slow=11,SNR=2.0
comp=Z,12nm,0.9s
WTTA Wattenberg 63.42 310 *e*P **P** **08 40 19.2 +0.5**
comp=Z,40nm,1.0s,SNR=17
WATA Walderalm 63.42 310 *e*P **P** **08 40 19.0 +0.3**
comp=Z,33nm,1.2s,SNR=10
L20K Farewell, AK 63.48 30 P **P** **08 40 19.3 +0.5**
baz=301,SNR=6.3
O17K Koliganek Bris 63.51 34 P **P** **08 40 18.9 0.0**
baz=300
G24K Hadweenzic Riv 63.53 25 P **P** **08 40 19.4 +0.4**
baz=304,SNR=16
M19K Big River Lodg 63.57 31 P **P** **08 40 20.0 +0.7**
baz=301,SNR=6.2
N18K Kilae Creek 63.57 32 P **P** **08 40 19.8 +0.5**
baz=300
F25K Christian Rive 63.61 23 P **P** **08 40 20.2 +0.7**
baz=305,SNR=28
CAST Castle Rocks 63.69 29 P **P** **08 40 19.9 -0.1**
baz=302,SNR=21
SQTA Sankt Quirin 63.70 311 *i*P **P** **08 40 20.9 +0.4**
comp=Z,26nm,0.9s,SNR=12
MOTA Moosalm 63.70 311 *e*P **P** **08 40 20.8 +0.2**
comp=Z,26nm,0.9s,SNR=12
BPAW Bear Paw Mtn. 63.74 28 P **P** **08 40 20.5 +0.1**
baz=302,SNR=12
I23K Minto, Yukon-K 63.76 26 P **P** **08 40 20.8 +0.4**
baz=303,SNR=18
RETA Reutte 63.84 311 *e*P **P** **08 40 21.8 +0.4**
comp=Z,9.9nm,0.9s,SNR=8.4
H24K Noodor Dome 63.88 25 P **P** **08 40 21.5 +0.2**
baz=304,SNR=13
PPLA Purkeypile 63.93 29 P **P** **08 40 22.0 +0.2**
baz=302,SNR=10
G25K Bearman Lake 63.94 24 P **P** **08 40 22.5 +0.9**
baz=305,SNR=10.0
F26K Sheenjek River 64.01 23 P **P** **08 40 22.6 +0.5**
baz=306,SNR=7.2
KTH Kantishna Hill 64.06 28 P **P** **08 40 22.6 +0.1**
FETA Feichten 64.08 310 *i*P **P** **08 40 23.3 +0.2**
comp=Z,25nm,1.2s,SNR=8.7
M20K Styx River 64.09 31 P **P** **08 40 23.1 +0.2**
baz=302,SNR=9.5
N19K Bonanza Creek 64.10 32 P **P** **08 40 23.1 +0.2**
baz=301,SNR=5.4
NEA2 Nenana 64.17 27 P **P** **08 40 23.2 0.0**
baz=304,SNR=18
MDM Murphy Dome 64.26 26 P **P** **08 40 23.8 0.0**
O18K Koktuh Hills 64.29 33 P **P** **08 40 24.0 -0.1**
baz=301
H25K Birch Creek 64.32 24 P **P** **08 40 24.6 +0.5**
baz=306
FYU Fort Yukon 64.34 24 P **P** **08 40 24.9 +0.7**
FYU IAmb IAmb 08 40 26.1
comp=Z,54nm,1.8s
R16K Pilot Point 64.40 36 P **P** **08 40 25.5 +0.8**
baz=300
TCOL CIGO, UAF Yank 64.44 26 P **P** **08 40 25.1 +0.3**
baz=305,SNR=29
COLA College 64.44 26*c* *i*P **P** **08 40 25.0 +0.2**
COLA pmax pmax
comp=Z,50nm,0.8s
COLA College 64.44 26 P **P** **08 40 25.1 +0.2**
baz=305
POKR Poker Plat Res 64.45 26 P **P** **08 40 25.0 0.0**
POKR IAmb IAmb 08 40 26.5
comp=Z,23nm,0.7s
POKR Poker Plat Res 64.45 26 P **P** **08 40 25.3 +0.3**
baz=305,SNR=7.1
DAVA Damuels 64.46 311 *i*P **P** **08 40 25.4 -0.2**
comp=Z,9.2nm,1.0s
E27K Coleen River 64.47 22 P **P** **08 40 25.4 +0.2**
baz=308,SNR=14
G26K Porcupine Rive 64.57 23 P **P** **08 40 26.4 +0.7**
baz=307,SNR=16
WRH Wood River Hil 64.59 27 P **P** **08 40 25.4 -0.5**
WRH IAmb IAmb 08 40 27.0
comp=Z,19nm,0.6s
COEN Coen 64.60 134 P **P** **08 40 26.7 +0.1**
MCK McKinley 64.70 28 P **P** **08 40 26.7 0.0**
baz=304
DAVOX Davos/Dischmat 64.70 311 P **P** **08 40 27.4 +0.2**
comp=Z,17nm,0.8s,baz=68,slow=5.4,SNR=11
DAVOX PP **PP** **08 42 49.9 +0.7**
comp=Z,2.6nm,0.6s,baz=53,slow=11,SNR=3.2
DAVOX LR LR 09 11 43.4
comp=Z,102nm,18.6s,baz=78,slow=39
comp=Z,17nm,0.8s
IL31 64.84 26 P **P** **08 40 26.6 -0.9**
ILAR Eielson Array 64.84 26 P **P** **08 40 27.0 -0.5**
comp=Z,18nm,0.7s,baz=288,slow=5.7,SNR=182
ILAR PKPPKP **P'P'df** **09 09 12.5 -7.4**
comp=Z,0.6nm,0.9s,baz=195,slow=1.5,SNR=5.1
comp=Z,18nm,0.7s
ILAR Eielson Array 64.84 26 P **P** **08 40 26.4 -1.1**
ILAR Eielson Array 64.84 26 P **P** **08 40 26.4 -1.1**
PRP Porcupine Dome 64.86 25 P **P** **08 40 28.1 +0.2**
baz=306,SNR=7.6
CUT Chulitna 64.94 29 P **P** **08 40 27.8 -0.4**
baz=304,SNR=7.6
BTNL Ternell 65.03 316 *d*P **P** **08 40 30.5 +1.5**
BTNL *dp*P **pP** **08 40 33.9 -1.8**
HDA Harding Lake 65.03 26 P **P** **08 40 27.4 -1.3**
baz=306,SNR=8.3
MEM Membach 65.08 316 *d*P **P** **08 40 29.8 +0.5**
WRAB Tennant Creek 65.15 146 P **P** **08 40 29.1 -1.0**
WRAB IAmb IAmb 08 40 30.4
comp=Z,26nm,0.8s
WRAB Tennant Creek 65.15 146 *i*P **P** **08 40 28.9 -1.2**
WRAB pmax pmax
comp=Z,23nm,0.9s
WRAB Tennant Creek 65.15 146 P **P** **08 40 29.5 -0.6**
WRA Warramunga Arr 65.16 146 P **P** **08 40 29.4 -0.8**
comp=Z,14nm,0.8s,baz=342,slow=6.9,SNR=71
WRA PKPPKP **P'P'df** **09 09 13.2 +5.9**
comp=Z,1.1nm,1.0s,baz=161,slow=2.5,SNR=4.0
comp=Z,14nm,0.8s
WRA Warramunga Arr 65.16 146 *i*P **P** **08 40 29.3 -0.8**
WRA pmax pmax
comp=Z,15nm,0.7s
WB2 Warramunga Arr 65.16 146 P **P** **08 40 29.2 -1.0**
WB2 IAmb IAmb 08 40 30.4
comp=Z,27nm,0.8s
BHOU Houvegnez 65.21 315 *d*P **P** **08 40 31.1 +0.9**
SUA Susitna One 65.28 30 P **P** **08 40 29.7 -0.9**
SUA Susitna One 65.28 30 P **P** **08 40 30.2 -0.4**
baz=304
G27K Doyon Strip 65.32 23 P **P** **08 40 31.1 +0.4**
baz=309,SNR=19
WAT1 Susitna Watana 65.36 28 P **P** **08 40 30.0 -1.0**
baz=305
M22K Willow 65.36 30 P **P** **08 40 30.1 -0.9**
baz=304
J25K Salcha River, 65.46 26 P **P** **08 40 30.2 -1.4**
J25K IAmb IAmb 08 40 31.3
comp=Z,9.0nm,0.8s
J25K Salcha River, 65.46 26 P **P** **08 40 30.2 -1.4**
baz=307,SNR=8.9
Q19K Cape Douglas, 65.46 33 P **P** **08 40 30.6 -1.1**
baz=303
WLF Walferdange 65.47 315 P **P** **08 40 32.5 +0.6**
WLF Walferdange 65.47 315 P **P** **08 40 32.5 +0.6**
WLF Walferdange 65.47 315 *d*P **P** **08 40 32.9 +1.0**
comp=Z,20nm,1.1s
BCLA Clavier 65.57 316 *d*P **P** **08 40 32.9 +0.5**
comp=Z,13nm,0.9s
DHY Denali Highway 65.65 28 P **P** **08 40 32.4 -0.6**
baz=306,SNR=7.3
H27K Steamboat Moun 65.73 23 P **P** **08 40 34.0 +0.7**
baz=309
RCHB Rochefort 65.74 315 *d*P **P** **08 40 34.1 +0.5**
RCHB *dp*P **pP** **08 40 38.5 -1.9**
I26K Coal Creek Min 65.78 25 P **P** **08 40 33.1 -0.5**
I26K IAmb IAmb 08 40 34.7
comp=Z,14nm,0.9s
I26K Coal Creek Min 65.78 25 P **P** **08 40 33.6 -0.1**
baz=308
K24K Donnelly Dome 65.80 27 P **P** **08 40 32.9 -0.9**
baz=307,SNR=11
WAT6 Susitna Watana 65.81 28 P **P** **08 40 33.5 -0.6**
baz=306
PMR Palmer 65.84 30 P **P** **08 40 33.4 -0.6**
baz=305
RC01 Rabbit Creek A 65.89 30 P **P** **08 40 33.5 -0.9**
baz=305
BMRD Maredsous 65.92 316 *d*P **P** **08 40 35.1 +0.3**
comp=Z,12nm,1.0s
BMRD *dp*P **pP** **08 40 39.6 -1.9**
BMRD *ds*P **sP** **08 40 42.8 -1.5**
SML Sawmill 66.03 29 P **P** **08 40 34.9 -0.4**
baz=305,SNR=7.5
SNF Seneffe 66.08 316 *dp*P pP 08 40 40.8 -1.8
I27K Kandik River 66.10 24 P **P** **08 40 36.1 +0.3**
baz=309
DOU Dourbes 66.12 316 *d*P **P** **08 40 36.4 +0.4**
comp=Z,11nm,0.9s
J26L Joseph Creek 66.14 25 P **P** **08 40 35.0 -1.1**
baz=308,SNR=20
RIDG Independent Ri 66.17 26 P **P** **08 40 35.3 -1.0**
baz=307,SNR=28
Q20K Shuyak Island 66.18 33 P **P** **08 40 36.5 +0.3**
baz=304
KNK Knik Glacier 66.21 30 P **P** **08 40 36.3 -0.2**
baz=306,SNR=5.5
BRSE Bradley Lake S 66.25 32 P **P** **08 40 35.7 -1.0**
baz=304
M23K Glacier View 66.27 29 P **P** **08 40 36.5 -0.4**
baz=306,SNR=9.1
SCRK Sand Creek 66.33 26 P **P** **08 40 36.6 -0.7**
baz=308,SNR=28
VAE Valguarnera 66.34 300 P **P** **08 40 40.2 +2.4**
comp=Z,13nm,0.9s,baz=72,slow=3.2,SNR=1.7
comp=Z,13nm,0.9s
SCM Sheep Creek Mo 66.40 29 P **P** **08 40 37.6 -0.2**
baz=306,SNR=6.9
PAX Paxson 66.42 27 P **P** **08 40 37.1 -0.8**
baz=307,SNR=13
DOT Dot Lake 66.50 26 P **P** **08 40 37.5 -0.9**
DOT IAmb IAmb 08 40 39.6
comp=Z,15nm,0.7s
SII Sitkinak Islan 66.50 36 P **P** **08 40 37.5 -0.9**
baz=303
OHAK Old Harbor 66.55 35 P **P** **08 40 37.3 -1.3**
baz=304
KDAK Kodiak Island 66.56 34 P **P** **08 40 37.5 -1.2**
baz=304
SEW Seward 66.58 31 P **P** **08 40 37.6 -1.2**
baz=305
INK Inuvik 66.64 19 P **P** **08 40 38.9 -0.2**
comp=Z,16nm,0.7s,baz=329,slow=8.0,SNR=56
INK LR LR 09 14 21.0
comp=Z,104nm,18.4s,baz=221,slow=40
comp=Z,16nm,0.7s
INK Inuvik 66.64 19 P **P** **08 40 38.9 -0.2**
baz=315,SNR=20
M24K Tolsona, Glenn 66.68 28 P **P** **08 40 39.9 +0.3**
baz=307,SNR=7.9
EGAK Eagle 66.78 24 P **P** **08 40 39.8 -0.2**
EGAK IAmb IAmb 08 40 40.7
comp=Z,9.9nm,0.9s
EGAK Eagle 66.78 24 P **P** **08 40 39.6 -0.4**
baz=310,SNR=6.0
HARP HAARP 66.88 28 P **P** **08 40 41.1 +0.3**
baz=308,SNR=8.3
K27K Chicken 66.95 25 P **P** **08 40 41.0 -0.1**
K27K IAmb IAmb 08 40 42.4

comp=Z,43nm,1.7s
K27K Chicken 66.95 25 P **P 08 40 41.0 -0.1**
baz=310
EPYK Eagle Plains 67.10 22 P **P 08 40 41.4 -0.7**
baz=313,SNR=15
L26K Log Cabin Wild 67.14 27 P **P 08 40 42.0 -0.4**
baz=309
KLU Klutina 67.14 29 P **P 08 40 42.4 -0.1**
baz=307,SNR=22
I29M Ogilvie Camp, 67.30 23 P **P 08 40 42.8 -0.6**
baz=312,SNR=13
WRKA Warakurna 67.32 154 P **P 08 40 44.0 +0.1**
EKA Eskdalemuir Ar 67.33 323 P **P 08 40 43.3 -0.4**
comp=Z,11nn,0.9s,baz=61,slow=6.2,SNR=14
EKA LR LR 09 10 59.6
comp=Z,74nn,19.7s,baz=24,slow=37
comp=Z,11nn,0.9s
RES Resolute Bay 67.35 5 LR LR 09 11 29.1
comp=Z,66nn,19.8s,baz=4.5,slow=37
N25K Chitina, Valde 67.58 28 P **P 08 40 45.6 +0.3**
N25K Chitina, Valde 67.58 28 P **P 08 40 45.9 +0.7**
baz=308,SNR=12
L27K Beaver Creek, 67.66 26 P **P 08 40 45.6 -0.1**
L27K IAmb IAmb 08 40 47.1
comp=Z,16nm,0.8s
L27K Beaver Creek, 67.66 26 P **P 08 40 45.8 +0.1**
baz=310,SNR=16
M26K Nabesna, AK 67.66 27 P **P 08 40 46.2 +0.4**
baz=309,SNR=18
DAWY Dawson 67.82 25 P **P 08 40 46.0 -0.7**
DAWY IAmb IAmb 08 40 47.4
comp=Z,12nm,0.8s
DAWY Dawson 67.82 25 P **P 08 40 46.4 -0.4**
baz=312,SNR=11
BMRM Bremner River 67.97 29 P **P 08 40 47.8 +0.1**
baz=309
M27K Edge Creek, AK 68.09 27 P **P 08 40 49.1 +0.6**
baz=310,SNR=8.3
C36M Paulatuk 68.12 16 P **P 08 40 47.9 -0.5**
baz=322,SNR=7.9
QIS Mount Isa 68.16 141 P **P 08 40 48.6 -0.7**
ASAR Alice Springs 68.25 148 P **P 08 40 49.5 -0.4**
comp=Z,9.6nm,0.7s,baz=340,slow=6.8,SNR=111
ASAR PKP2bc 09 09 06.7
comp=Z,0.9nm,0.8s,baz=139,slow=3.4,SNR=7.4
comp=Z,9.6nm,0.7s
MCARA McCarthy VSAT 68.30 28 P **P 08 40 50.1 +0.3**
baz=310,SNR=5.1
BVCY Beaver Creek 68.42 26 P **P 08 40 51.2 +0.8**
baz=311,SNR=8.1
BORG Borgarnes 68.53 337 LR LR 09 13 12.1
comp=Z,55nm,20.5s,baz=39,slow=38
MTSU Mount Surprise 68.62 136 P **P 08 40 52.6 +0.4**
CRQE Cirque 68.68 28 P **P 08 40 52.3 0.0**
baz=310
YUK3 Moose Creek 68.98 27 P **P 08 40 54.6 +0.4**
baz=311,SNR=6.1
CTG Chitna Glacier 69.20 28 P **P 08 40 55.8 +0.3**
baz=311
M29M Somme Creek 69.23 26 P **P 08 40 56.0 +0.4**
baz=313
O28M Mount Upton 69.75 27 P **P 08 40 59.3 +0.3**
baz=312
N30M Aishikik Lake 70.38 26 P **P 08 41 03.1 +0.5**
baz=314,SNR=6.2
KMBO Kilima Mbogo 70.56 253 P **P 08 41 05.3 +0.6**
comp=Z,6.9nm,0.8s,baz=42,slow=9.9,SNR=13
KMBO LR LR 09 12 34.5
comp=Z,90nm,20.0s,baz=90,slow=36
comp=Z,6.9nm,0.8s
KMBO Kilima Mbogo 70.56 253 *i* P **P 08 41 04.9 +0.3**
SNR=6.5
O29M Mount Kennedy 70.65 27 P **P 08 41 04.6 +0.1**
baz=313
HYT Haines Junctio 70.67 26 P **P 08 41 05.2 +0.6**
HYT IAmb IAmb 08 41 06.1
comp=Z,26nm,0.8s
HYT Haines Junctio 70.67 26 P **P 08 41 05.0 +0.5**
baz=314,SNR=13
KEST Kesra 70.72 301 P **P 08 41 05.9 +0.7**
comp=Z,5.8nm,0.8s,baz=261,slow=4.7,SNR=5.9
KEST LR LR 09 17 46.3
comp=Z,18nm,18.8s,baz=234,slow=41
comp=Z,5.8nm,0.8s
M31M Drury Creek, Y 70.76 24 P **P 08 41 05.0 +0.1**
baz=316
N31M Braeburn, Yuko 70.81 25 P **P 08 41 05.2 -0.1**
N31M IAmb IAmb 08 41 06.6
comp=Z,27nm,0.8s
N31M Braeburn, Yuko 70.81 25 P **P 08 41 05.7 +0.4**
baz=315,SNR=6.8
O30N Mendenhall 71.21 26 P **P 08 41 08.2 +0.5**
baz=315,SNR=8.0
CTA Charters Tower 71.27 136 P **P 08 41 08.2 -0.3**
comp=Z,6.9nm,0.8s,baz=336,slow=6.6,SNR=6.6
comp=Z,6.9nm,0.8s
P30M Million Dollar 71.36 27 P **P 08 41 08.5 -0.1**
baz=314
P29M Windy Craggy 71.42 27 P **P 08 41 08.9 -0.1**
baz=314
WHY Whitehorse 71.70 26 P **P 08 41 10.3 -0.5**
baz=316
N32M Quiet Lake 71.95 25 P **P 08 41 11.8 -0.4**
baz=317
PLBC Pleasant Camp 72.04 27 P **P 08 41 12.6 -0.1**
baz=315,SNR=5.1
SKAG Skagway 72.41 27 P **P 08 41 15.5 +0.7**
baz=316,SNR=9.1
FORT Forrest 72.53 156 P **P 08 41 16.6 +0.8**
OOD Oodnadatta 72.64 149 P **P 08 41 16.4 -0.1**
P33M Teslin, Yukon 72.73 25 P **P 08 41 16.6 -0.3**
P33M IAmb IAmb 08 41 18.1
comp=Z,63nm,1.9s
P33M Teslin, Yukon 72.73 25 P **P 08 41 16.6 -0.3**
baz=318,SNR=7.5
P32M Atlin 72.89 26 P **P 08 41 17.8 +0.1**
baz=317,SNR=6.3
SFJD Kangerlussuaq 73.46 349 LR LR 09 15 14.6
comp=Z,152nm,20.6s,baz=20,slow=37
R33M Jennings River 73.97 25 P **P 08 41 24.7 +0.4**
baz=319
SIT Sitka 74.15 28 P **P 08 41 25.8 +0.7**
baz=316
INKA Innaminka 74.80 144 P **P 08 41 30.0 +0.8**
DLBC Dease Lake 75.01 25 LR LR 09 15 51.3
comp=Z,101nn,18.2s,baz=311,slow=37
DLBC Dease Lake 75.01 25 P **P 08 41 30.4 +0.1**
DLBC Dease Lake 75.01 25 P **P 08 41 31.0 +0.7**
baz=320
QLP Quilpie 75.50 141 P **P 08 41 34.1 +0.8**
WRAK Wrangell Islan 75.73 28 P **P 08 41 34.9 +0.6**
baz=319
YKA Yellowknife Ar 75.99 16 P **P 08 41 35.4 -0.2**
comp=Z,20nm,0.8s,baz=329,slow=5.4,SNR=75
comp=Z,20nm,0.8s
YKA Yellowknife Ar 75.99 16 P **P 08 41 34.9 -0.8**
YKA Yellowknife Ar 75.99 16 P **P 08 41 34.9 -0.8**
LCRK Leigh Creek 76.02 148 P **P 08 41 36.4 +0.3**
T35M Bob Quinn 76.06 26 P **P 08 41 37.5 +1.3**
baz=320
CRAG Craig 76.16 29 P **P 08 41 37.1 +0.4**
baz=318
RK1H Rockhampton Ha 76.26 134 P **P 08 41 38.3 +0.6**
ESDC Sonseca Array 77.03 310 P **P 08 41 42.4 +0.3**
comp=Z,8.2nm,0.9s,baz=48,slow=5.5,SNR=56
ESDC PP **PP 08 44 38.8 +3.8**
comp=Z,0.8nm,0.9s,baz=53,slow=6.3,SNR=4.4
ESDC LR LR 09 18 36.7
comp=Z,82nm,18.5s,baz=320,slow=38
comp=Z,8.2nm,0.9s
ESDC Sonseca Array 77.03 310 P **P 08 41 41.4 -0.7**
BBOO Buckleboo 77.21 151 P **P 08 41 42.7 -0.1**
PBRG Braganca 77.34 313 *eP* **P 08 41 44.4 +0.6**
RMQ Roma 77.76 138 P **P 08 41 47.2 +1.1**
MVO Moncorvo 77.92 313 *eP* **P 08 41 47.6 +0.6**
comp=Z,25nm,1.8s
PGAV Gavieira, Arco 78.11 314 *eP* **P 08 41 48.8 +0.7**
comp=Z,37nm,1.2s
PCAB Cabril 78.14 314 *eP* **P 08 41 49.0 +0.8**
comp=Z,58nm,1.3s
EIDS Eidsvold 78.15 135 P **P 08 41 48.9 +0.7**
POLO Lamas de Olo 78.22 313 *eP* **P 08 41 49.3 +0.6**
comp=Z,7.9nm,1.3s
PVIS Viseu 78.71 313 *eP* **P 08 41 52.6 +1.2**
comp=Z,32nm,1.7s
STKA Stephens Creek 78.71 146 P **P 08 41 50.9 -0.3**
comp=Z,13nm,0.7s,baz=325,slow=6.5,SNR=26
comp=Z,13nm,0.7s

STKA Stephens Creek 78.71 146 P **P 08 41 51.2 0.0**
PMRV Marv??o 79.24 312 *eP* **P 08 41 55.8 +1.5**
comp=Z,41nn,1.5s
COI Coimbra 79.34 313 P **P 08 41 55.1 +0.4**
COI Coimbra 79.34 313 P **P 08 41 55.1 +0.4**
COI pmax pmax
comp=Z,55nn,0.9s
COI Coimbra 79.34 313 *eP* **P 08 41 56.3 +1.6**
comp=Z,74nn,1.1s
PCAS Cassnilo, Conde 79.49 313 *eP* **P 08 41 56.7 +1.1**
comp=Z,27nn,1.1s
PESTR Estremoz 79.72 311 *eP* **P 08 41 57.9 +1.0**
comp=Z,26nn,1.3s
PBAR Barrancos 79.84 311 *eP* **P 08 41 58.6 +1.1**
comp=Z,21nn,1.2s
PMTG Montargil 79.97 312 *eP* **P 08 41 59.2 +1.0**
comp=Z,21nn,1.5s
PSBE So Bento 80.01 313 *eP* **P 08 41 59.4 +0.9**
comp=Z,56nn,1.1s
EVO Evora 80.19 311 *eP* **P 08 42 00.1 +0.7**
CMSA Cobar Meteorol 80.31 143 P **P 08 42 00.8 +0.9**
PBEJ Beja 80.43 311 *eP* **P 08 42 01.9 +1.2**
comp=Z,34nn,1.3s
MESJ Messejana 80.77 311 *eP* **P 08 42 03.1 +0.6**
MESJ IAmb IAmb 08 42 03.7
comp=Z,22nn,1.0s
MESJ Messejana 80.77 311 *eP* **P 08 42 03.1 +0.6**
MESJ pmax pmax
comp=Z,22nn,1.0s
MESJ Messejana 80.77 311 *eP* **P 08 42 03.3 +0.8**
comp=Z,52nn,1.3s
PNCL Nicolau / Gran 80.77 311 *eP* **P 08 42 03.3 +0.8**
MDT Midelt 81.75 305 P **P 08 42 08.6 +0.6**
comp=Z,3.4nn,0.9s,baz=117,slow=3.7,SNR=5.8
MDT PP **PP 08 45 14.7 +0.2**
comp=Z,3.3nn,0.8s,baz=66,slow=9.0,SNR=4.8
comp=Z,3.4nn,0.9s
KOUNC Koumac, New Ca 82.70 123 P **P 08 42 14.4 +1.6**
LLLB Lillooet 84.13 26 P **P 08 42 20.0 0.0**
LLLB IAmb IAmb 08 42 21.4
comp=Z,15nn,0.9s
NOUC Port Laguerre 85.12 123 P **P 08 42 26.2 +1.1**
DZM Mont Dzumac 85.20 123 P **P 08 42 25.8 +0.1**
comp=Z,22nn,1.0s,baz=27,slow=7.2,SNR=12
comp=Z,22nn,1.0s
DZM Mont Dzumac 85.20 123 P **P 08 42 26.6 +1.0**
YATNC Mamie plateau, 85.49 122 P **P 08 42 28.5 +1.5**
LSZ Lusaka 86.54 248 LR LR 09 19 39.3
comp=Z,67nn,21.0s,baz=14,slow=34
B08A Colville Reser 86.92 26 P **P 08 42 33.7 -0.1**
B08A IAmb IAmb 08 42 35.4
comp=Z,17nn,1.0s
SCHQ Schefferville 87.27 353 P **P 08 42 34.7 -0.7**
comp=Z,6.5nn,0.8s,baz=38,slow=6.1,SNR=4.1
comp=Z,6.5nn,0.8s
NEW Newport 87.75 25 LR LR 09 24 59.6
comp=Z,107nn,19.7s,baz=334,slow=38
NEW Newport 87.75 25 P **P 08 42 37.8 -0.1**
NEW IAmb IAmb 08 42 39.7
comp=Z,15nn,1.2s
NEW Newport 87.75 25 P **P 08 42 37.8 -0.1**
NEW pmax pmax
comp=Z,15nn,1.2s
NEW Newport 87.75 25 P **P 08 42 38.5 +0.6**
baz=330
JTMT Jette 89.12 23 P **P 08 42 45.1 +0.6**
I03D Drain, OR 89.34 31 P **P 08 42 46.3 +1.0**
baz=326
I05D Terrebonne, OR 89.60 29 P **P 08 42 47.5 +0.8**
baz=327,SNR=5.8
I04A Tendick Farm, 89.64 30 P **P 08 42 46.9 +0.1**
baz=327,SNR=8.2
TOA0 Torodi Ar. Sit 89.64 286 P **P 08 42 46.9 -0.4**
TOA0 IAmb IAmb 08 42 48.2
comp=Z,15nn,1.2s
TORD Torodi Ar. Bea 89.64 286 P **P 08 42 47.0 -0.3**
comp=Z,6.6nm,1.0s,baz=35,slow=4.5,SNR=26
comp=Z,6.6nm,1.0s
K02D Willamette Mer 90.04 32 P **P 08 42 49.5 +0.7**
baz=326
MSO Missoula 90.04 23 P **P 08 42 48.9 +0.1**
baz=333
EGMT Eagleton 90.20 20 P **P 08 42 49.2 -0.3**
baz=336
PINE Pine Mountain 90.21 29 P **P 08 42 50.5 +0.7**
PINE IAmb IAmb 08 42 52.3
comp=Z,24nn,0.9s
J04D Umpqua Nationa 90.22 30 P **P 08 42 50.4 +0.6**
baz=327,SNR=10
J05D Fort Rock, OR 90.53 30 P **P 08 42 52.5 +1.3**
baz=328,SNR=14
L02F Cave Junction 90.55 32 P **P 08 42 52.0 +0.9**
baz=326
HRY Holter Researc 90.80 22 P **P 08 42 52.5 +0.2**
L04D Klamath Falls 90.99 31 P **P 08 42 54.1 +0.7**
baz=327
DGMT Dagmar 91.20 17 P **P 08 42 53.9 -0.1**
baz=340
DGMT Dagmar 91.20 17 P **P 08 42 54.2 +0.2**
baz=340,SNR=8.9
YBH Yreka Blue Hor 91.23 31 LR LR 09 25 14.4
comp=Z,59nn,18.5s,baz=342,slow=36
BOZ Bozeman (W) 91.86 23 P **P 08 42 57.5 +0.2**
baz=334,SNR=14
MCMT McKenzie Canyo 92.17 24 P **P 08 42 58.7 -0.2**
LAO LASA Array 92.37 19 P **P 08 42 59.3 -0.2**
baz=338
LAO LASA Array 92.37 19 P **P 08 42 59.7 +0.2**
baz=338,SNR=6.5
HLID Hailey 92.78 25 P **P 08 43 02.6 +0.9**
baz=332,SNR=12
AGMN Agassiz Nation 92.98 12 P **P 08 43 01.5 -0.7**
baz=346
RLMT Red Lodge 92.99 21 P **P 08 43 02.9 +0.3**
baz=336
B35A Bob, Littlefor 93.23 10 P **P 08 43 02.3 -1.0**
B35A Bob, Littlefor 93.23 10 P **P 08 43 02.6 -0.8**
baz=346
H17A Grant Village 93.27 22 P **P 08 43 05.8 +1.8**
baz=335,SNR=6.0
IMW Indian Meadow 93.61 23 P **P 08 43 05.5 -0.1**
IMW IAmb IAmb 08 43 08.2
comp=Z,10.0nm,1.0s
EYMN Ely 93.93 9 P **P 08 43 05.6 -1.0**
baz=350
LBTB Lobatse 94.63 242 LR LR 09 23 08.8
comp=Z,64nn,21.8s,baz=38,slow=34
ELK Elko 94.98 27 LR LR 09 31 10.9
comp=Z,25nn,18.4s,baz=347,slow=39
BW06 Boulder Array 95.06 22 P **P 08 43 11.3 -0.9**
baz=336
PD31 Pinedale Array 95.06 22 P **P 08 43 11.2 -0.9**
PDAR Pinedale Array 95.06 22 P **P 08 43 11.4 -0.7**
comp=Z,1.1nn,1.0s,baz=26,slow=3.8,SNR=6.4
PDAR LR LR 09 29 43.5
comp=Z,76nn,18.2s,baz=348,slow=38
comp=Z,1.1nn,1.0s
RSSD Black Hills 95.32 18 P **P 08 43 13.2 -0.1**
RSSD Black Hills 95.32 18 P **P 08 43 13.2 -0.1**
RSSD pmax pmax
comp=Z,18nn,1.1s
RSSD Black Hills 95.32 18 P **P 08 43 13.7 +0.4**
baz=340
RSSD Black Hills 95.32 18 P **P 08 43 13.3 0.0**
baz=340
F36A Milaca 95.71 10 P **P 08 43 13.5 -1.2**
baz=348
NVAR Mina Array Bea 95.82 30 P **P 08 43 16.5 +0.8**
comp=Z,1.3nn,0.8s,baz=319,slow=3.1,SNR=12
NVAR LR LR 09 28 28.8
comp=Z,64nn,18.4s,baz=333,slow=37
comp=Z,1.3nn,0.8s
AFI Afiamalu 95.84 103 LR LR 09 23 05.0
comp=Z,51nn,19.3s,baz=102,slow=33
K22A Casper 96.04 20 P **P 08 43 15.6 -0.9**
baz=338
E46A Sault Ste Mari 96.13 4 P **P 08 43 15.7 -0.9**
baz=355
SUSD Miller 96.15 15 P **P 08 43 16.0 -0.8**
baz=344
TSUM Tsumeb 96.87 251 LR LR 09 28 13.6
comp=Z,50nn,18.5s,baz=320,slow=36
R11A Troy Canyon, C 96.95 29 P **P 08 43 21.1 +0.3**
baz=331
BOSA Boshof 97.14 239 LR LR 09 25 23.1
comp=Z,78nn,20.3s,baz=12,slow=34
ECSD EROS Data Cent 97.28 13 P **P 08 43 21.3 -0.7**
baz=346
P17A Butcher Ranch, 97.67 25 P **P 08 43 23.3 -0.8**
P17A IAmb IAmb 08 43 25.5
comp=Z,8.7nm,1.2s
SADO Sadowa 97.89 0 LR LR 09 29 39.8
comp=Z,70nn,18.7s,baz=12,slow=37
LONY Lake Ozonia 97.96 357 P **P 08 43 24.7 -0.3**
baz=3.1
EDW2 Edwards Air Fo 99.00 32 P **P 08 43 28.8 -1.1**
baz=329
JFWS Jewell Farm 99.04 9 P **Pdif 08 43 29.1 -0.7**
baz=351
P52A Corning 102.95 3 P **Pdif 08 43 46.0 -1.4**
baz=357
TXAR Lajitas Array 109.26 23 PKiKP **PKiKP 08 48 18.5 -0.9**
comp=Z,0.5nm,0.9s,baz=5.4,slow=1.9,SNR=4.8
VNDA Vanda 120.62 167 PKP **PKPdf 08 48 38.4 -1.0**
comp=Z,2.5nn,0.7s,baz=297,slow=5.0,SNR=14
TROLL Troll, Antarti 128.13 203 PKPdf **PKPdf 08 48 53.8 -0.3**
SNAA Sanae 129.79 204 PKPdf **PKPdf 08 48 56.3 -1.0**
VNA2 Neumayer--Watz 131.28 204 PKPdf **PKPdf 08 48 59.4 -0.6**
baz=83,slow=2.0
VNA3 Neumayer Olymp 131.99 204 PKPdf **PKPdf 08 49 00.2 -1.1**
BDFB Brasilia 145.24 301 PKPbc **PKPbc 08 49 26.6 -0.3**
comp=Z,9.7nm,0.6s,baz=71,slow=2.1,SNR=21
PMSA Palmer Station 151.58 193 PKPbc **PKPbc 08 49 41.4 -0.7**
comp=Z,5.8nm,0.8s,baz=191,slow=5.2,SNR=4.7
SIV San Ignacio 153.44 320 PKPbc **PKPbc 08 49 47.3 -0.6**
comp=Z,3.0nm,0.6s,baz=88,slow=5.6,SNR=17
SIV PKPab **PKPab 08 50 00.2 +0.2**
comp=Z,10.0nm,0.9s,baz=51,slow=5.8,SNR=10
LPAZ La Paz 156.77 334 PKP **PKPdf 08 49 45.2 -0.3**
comp=Z,3.2nn,0.9s,baz=20,slow=4.4,SNR=8.7
CPUP Villa Florida 158.80 296 PKP **PKPdf 08 49 46.4 -0.5**
comp=Z,3.2nn,1.2s,baz=56,slow=3.6,SNR=3.2
CPUP PKPab **PKPab 08 50 22.2 -0.6**
comp=Z,3.6nn,0.8s,baz=96,slow=2.8,SNR=9.9

IDC 13 08:33:17.0±3.8, 22°.46S×173°.22E, h0km, mb3.9/3, mbtmp3.8/4, ML3.2/1, MS3.2/6, Error ellipse: s-maj=1.22.1km s-min=37.9km az=149.0

ISC 13 08:33:22.1±2.2, 22°.24S×173°.1E±0°.2, h32km, n19, σ0s.99/6, mb4.1/3, MS3.2/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.16**	**272**		Pn	**Pn**	**08 34 51.2**	**+0.2**
	0.6nm,0.3s,baz=104,slow=18,SNR=5.8							
DZM					Sn	**Sn**	**08 35 60.0**	**-0.5**
	0.1nm,0.3s,baz=90,slow=20,SNR=1.2							
DZM					LR	LR	08 37 00.3	
	comp=Z,243nm,21.5s,baz=184,slow=36							
	3.7nm,0.6s							
DZM	**Mont Dzumac**	**6.16**	**272**	*e*LR		LR	08 36 26.5	
	comp=Z,308nm,23.3s							
URZ	**Urewera**	**16.14**	**169**		LR	LR	08 42 16.9	
	comp=Z,124nm,19.4s,baz=30,slow=34							
HNR	**Honiara**	**18.06**	**314**		LR	LR	08 44 05.7	
	comp=Z,19nm,18.5s,baz=151,slow=36							
CTA	**Charters Tower**	**25.10**	**270**		LR	LR	08 47 37.3	
	comp=Z,79nm,20.8s,baz=86,slow=34							
RAR	**Rarotonga**	**25.22**	**92**		LR	LR	08 46 33.9	
	comp=Z,29nm,20.0s,baz=254,slow=32							
PPT2	**Papeete2**	**35.35**	**89**	*e*LR		LR	08 49 12.8	
	comp=Z,42nm,23.0s							
ASAR	**Alice Springs**	**36.00**	**260**		P	**P**	**08 40 20.7**	**+0.3**
	0.7nm,0.9s,baz=98,slow=10,SNR=5.6							
	0.7nm,0.9s							
TAOE	**Nuku Hiva Isla**	**46.82**	**81**	*e*LR		LR	08 54 31.1	
	comp=Z,40nm,24.3s							
VNDA	**Vanda**	**55.40**	**183**		LR	LR	09 03 54.5	
	comp=Z,39nm,18.6s,baz=22,slow=33							
PETK	**Petropavlovsk-**	**76.41**	**351**		P	**P**	**08 45 08.0**	**-0.1**
	1.9nm,0.8s,baz=185,slow=8.7,SNR=5.5							
	1.9nm,0.8s							
H03S2	**Juan Fernandez**	**91.58**	**128**		T	T	10 28 16.1	
	baz=240							
H03S1	**Juan Fernandez**	**91.59**	**128**		T	T	10 28 11.2	
	baz=240							
H03S3	**Juan Fernandez**	**91.59**	**128**		T	T	10 28 00.9	
	baz=240							
H03N3	**Juan Fernandez**	**91.76**	**127**		T	T	10 28 14.0	
	baz=246,slow=72							
H03N2	**Juan Fernandez**	**91.76**	**127**		T	T	10 28 12.7	
	baz=246,slow=72							
H03N1	**Juan Fernandez**	**91.77**	**127**		T	T	10 28 11.6	
	baz=246,slow=72							
SONM	**Songino Array**	**91.93**	**322**		P	**P**	**08 46 28.3**	**+0.8**
	0.5nm,0.5s,baz=134,slow=6.2,SNR=2.2							
	0.5nm,0.5s							
GERES	**GERESS Array B**	**148.97**	**333**		PKPbc	**PKiKP**	**08 53 06.8**	**-1.4**
	0.5nm,0.7s,baz=32,slow=3.8,SNR=4.4							

HEL 13 08:38:03.1±0.5, 67°.78N×20°.10E, h0km, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KIF	**Kilpisjarvi**	**1.26**	**12**	*eP*	Pg	Pg	08 38 26.5	-0.7
KIF	**Kilpisjarvi**	**1.26**	**12**	PG	Pg	Pg	08 38 26.8	-0.4
	baz=196							
KIF				MSG			08 38 42.2	
	comp=Z,8.8nm,0.2s							
KIF				SG	Sg	Sg	08 38 42.4	-1.1
PAJU	**Pajala**	**1.39**	**122**	PN	Pg	Pg	08 38 29.1	-0.6
	baz=303							
PAJU				SN	Sn	Sn	08 38 48.5	-0.2
HEF	**Hetta**	**1.48**	**63**	*eP*	Pn	Pn	08 38 29.8	-1.1
HEF	**Hetta**	**1.48**	**63**	PG	Pn	Pn	08 38 30.0	-1.0
HEF				MSG			08 38 47.4	
	comp=Z,4.9nm,0.2s							
HEF				SG	Sg	Sg	08 38 49.6	-0.9
KLF	**Kolari**	**1.58**	**108**	PN	Pn	Pn	08 38 32.5	+0.2
KLF				SN	Sg	Sg	08 38 54.6	+0.7
KALU	**Kalix**	**2.32**	**145**	PG	Pb	Pb	08 38 44.8	-0.9
	baz=328							
TOF	**Tornio**	**2.38**	**134**	PG	Pb		08 38 45.8	-1.0
TOF				MSG			08 39 13.6	
	comp=Z,3.2nm,0.2s							
SGF	**Sodankyl**	**2.48**	**95**	PN	Pn	Pn	08 38 43.7	-1.0
SGF				SG	Sg	Sg	08 39 21.2	-1.5
RNF	**Rovaniemi**	**2.59**	**114**	PN	Pn	Pn	08 38 45.7	-0.4
RNF				SG	Sb	Sb	08 39 22.8	+0.3
ARA0	**ARCESS Array S**	**2.65**	**46**	PB	Pn	Pn	08 38 48.0	+1.0
	baz=230							
ARA0				SG	Sb	Sb	08 39 23.6	-0.8
KEV	**Kevo**	**3.20**	**49**	SN	Sn	Sn	08 39 33.9	+0.5
KEV				MSG			08 39 37.1	
	comp=Z,1.5nm,0.2s							
VRF	**Varrio**	**3.62**	**86**	PN	Pn	Pn	08 38 58.4	-1.9

IDC 13 08:45:22.0±3.7, 22°.72S×173°.08E, h0km, mb3.5/3, mbtmp3.6/4, ML3.4/1, MS3.2/4, Error ellipse: s-maj=119.0km s-min=38.1km az=152.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.17**	**275**		Pn	Pn	08 46 55.3	+0.8
	1.0nm,0.3s,baz=124,slow=15,SNR=14							
DZM					Sn	Sn	08 48 07.7	+1.8
	0.1nm,0.3s,baz=126,slow=18,SNR=1.7							
DZM					LR	LR	08 49 05.3	
	comp=Z,134nm,18.5s,baz=170,slow=36							
	5.1nm,0.6s							
MSVF	**Nonsavu**	**6.81**	**44**		LR	LR	08 49 10.1	
	comp=Z,123nm,20.6s,baz=220,slow=34							
RAO	**Raoul Island**	**10.39**	**131**		LR	LR	08 50 54.8	
	comp=Z,196nm,21.9s,baz=350,slow=32							
URZ	**Urewera**	**15.87**	**168**		LR	LR	08 54 02.1	
	comp=Z,127nm,20.4s,baz=31,slow=33							
ASAR	**Alice Springs**	**35.94**	**261**		P	P	08 52 24.3	-0.2
	0.6nm,1.0s,baz=91,slow=8.7,SNR=3.4							
	0.6nm,1.0s							
WRA	**Warramunga Arr**	**36.12**	**267**		P	P	08 52 25.5	-0.6
	0.3nm,0.8s,baz=96,slow=8.0,SNR=1.5							
	0.3nm,0.8s							
H11S2	**WAKE ISLAND Hy**	**41.43**	**351**		T	T	09 36 34.2	
	baz=171,slow=76,SNR=18							
H11S3	**WAKE ISLAND Hy**	**41.44**	**351**		T	T	09 36 34.8	
	baz=171,slow=76,SNR=14							
H11S1	**WAKE ISLAND Hy**	**41.45**	**351**		T	T	09 36 35.6	

baz=171,slow=76,SNR=19
PETK Petropavlovsk- 76.68 351 P P 08 57 14.7 +0.2
0.5nm,0.4s,baz=148,slow=8.4,SNR=3.0
0.5nm,0.4s
H03S2 Juan Fernandez 91.41 128 T T 10 40 05.4
baz=236
H03S1 Juan Fernandez 91.42 128 T T 10 40 07.3
baz=236
H03S3 Juan Fernandez 91.43 128 T T 10 40 05.5
baz=236
GERES GERESS Array B 149.22 333 PKPbc PKPbc 09 05 12.1 -0.5
0.2nm,0.2s,baz=19,slow=4.2,SNR=1.6

MOS ***13*** *08:49:40.3±1.1,38.89N×142.13E,h58km,mb4.5/13,Error ellipse: s-maj=10.7km s-min=6.8km az=79.9*
JMA ***13*** *08:49:42.0±0.1,38.9N±0.3×142.0E±0.6,h50km,MD3.9/40, MV4.2/40,KINKAZAN REGION*
JMA Felt II J1 at KINKAZAN REGION .
NIED ***13*** *08:49:42.0,38.89N×141.97E,h50km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.42; Mθθ-0.08; Mφφ-3.34; Mrθ2.58; Mθφ-1.28; Mφr7.10; Fault plane solution: M08.37000×10¹⁴ NP1: φs198.00000°,δ13.00000°,λ88.00000°. NP2:φs20.00000°, δ77.00000°,λ90.00000°.*
NEIC ***13*** *08:49:42.9±2.0,38.84N±0.06×141.9E±0.1,h58km±9km, mb4.4/6 Error ellipse: s-maj=14.7km s-min=7.7km az=103.0*
IDC ***13*** *08:49:45.9±2.3,38.81N×141.84E,h85km±21km,mb3.6/18, mbtmp3.9/22,MS3.0/1,Error ellipse: s-maj=20.1km s-min=14.0km az=83.0*
ISC 13 08:49:41.2±0.9,38.86N±0.04×142.12E±0.06,h49km±7km, n102,σ1°66/101,mb4.1/28,3C-19D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.42**	**302**	⇓*iP*	**Pn**	**08 49 51.2**	**-0.3**
OFUJ				⇓S	**Sn**	**08 49 57.5**	**-1.3**
OFUJ	**Ofunato**	**0.42**	**302**	A	A	08 49 51.2	
	comp=E,45nm,0.7s,comp=E,11nm,0.4s						
JKMT	**Kesennumamotoy**	**0.51**	**265**	⇓*iP*	**Pn**	**08 49 52.0**	**-0.5**
JKMT				⇓S	**Sn**	**08 49 58.9**	**-1.8**
JKMT	**Kesennumamotoy**	**0.51**	**265**	A	A	08 49 52.0	
	comp=E,18nm,0.3s,comp=E,15nm,0.3s						
JMK	**Ichinoseki**	**0.71**	**278**	⇓*iP*	**Pn**	**08 49 54.4**	**-0.7**
JMK				⇓S	**Sn**	**08 50 03.0**	**-2.1**
JMK	**Ichinoseki**	**0.71**	**278**	A	A	08 49 54.4	
	comp=E,15nm,0.3s,comp=E,6.0nm,0.2s						
JIO	**Ouri**	**0.73**	**237**	⇓*iP*	**Pn**	**08 49 54.9**	**-0.4**
JIO				⇓S	**Sn**	**08 50 03.6**	**-1.9**
JIO	**Ouri**	**0.73**	**237**	A	A	08 49 54.9	
	comp=E,12nm,0.3s,comp=E,7.0nm,7.0s						
MIYJ	**Miyakonagasawa**	**0.76**	**342**	A	A	08 49 55.7	
	comp=E,11nm,0.5s,comp=E,8.0nm,0.5s						
JOM	**Ohasama**	**0.89**	**314**	⇓*iP*	**Pn**	**08 49 56.9**	**-0.6**
JOM				⇓S	**Sn**	**08 50 07.8**	**-1.6**
JOM	**Ohasama**	**0.89**	**314**	A	A	08 49 56.9	
	comp=E,19nm,0.4s,comp=E,14nm,0.3s						
JOFO	**Osakifurukawao**	**0.98**	**255**	A	A	08 49 58.2	
	comp=E,15nm,0.3s,comp=E,18nm,0.3s						
JTH	**Tanohata**	**1.10**	**349**	P	**Pn**	**08 50 00.4**	**+0.1**
JTH				S	**Sn**	**08 50 14.2**	**-0.1**
JOU	**Okura**	**1.25**	**247**	⇓*iP*	**Pn**	**08 50 01.6**	**-0.7**
JOU				⇓S	**Sn**	**08 50 16.2**	**-1.7**
JOU	**Okura**	**1.25**	**247**	A	A	08 50 01.6	
	comp=E,4.0nm,0.5s,comp=E,5.0nm,0.6s						
JRG	**Rokugo**	**1.28**	**295**	⇓*iP*	**Pn**	**08 50 01.8**	**-0.9**
JRG				⇓S	**Sn**	**08 50 15.9**	**-2.8**
JRG	**Rokugo**	**1.28**	**295**	A	A	08 50 01.8	
	comp=E,3.0nm,0.4s,comp=E,3.0nm,0.7s						
JYK	**Kaneyama**	**1.38**	**273**	⇓*iP*	**Pn**	**08 50 03.3**	**-0.8**
JYK				⇓S	**Sn**	**08 50 18.6**	**-2.6**
JKEN	**Kujiedanarisaw**	**1.38**	**347**	A	A	08 50 04.6	
	comp=E,7.0nm,0.9s,comp=E,7.0nm,1.1s						
JMM	**Marumori**	**1.44**	**227**	Pn	**Pn**	**08 50 04.1**	**-0.8**
JMM	**Marumori**	**1.44**	**227**	⇓*iP*	**Pn**	**08 50 04.3**	**-0.7**
JMM				⇓S	**Sn**	**08 50 21.2**	**-1.5**
JANG	**Nango**	**1.58**	**343**	P	**Pn**	**08 50 06.8**	**-0.1**
JANG				*e*S	**Sn**	**08 50 25.5**	**-0.7**
JYW	**Yuwa**	**1.64**	**295**	A	A	08 50 07.3	
	comp=E,5.0nm,0.6s,comp=E,5.0nm,1.7s						
JYA	**Atsumi**	**1.90**	**263**	A	A	08 50 11.2	
	comp=E,3.0nm,0.5s,comp=E,3.0nm,0.6s						
JTM	**Tenmabayashi**	**2.09**	**337**	Pn	**Pn**	**08 50 14.5**	**+0.7**
JYT	**Yasato**	**3.04**	**211**	Pn	**Pn**	**08 50 27.1**	**+0.3**
JSD	**Sado**	**3.14**	**256**	Pn	**Pn**	**08 50 27.5**	**-0.7**
ERM	**Erimo**	**3.25**	**14**		**Pn**	**08 50 30.6**	**+1.0**
ERM	**Erimo**	**3.25**	**14**	P	**Pn**	**08 50 30.7**	**+1.0**
MJAR	**Matsushiro Arr**	**3.87**	**235**	P	**Pn**	**08 50 39.2**	**+0.9**
	9.2nm,0.5s,baz=36,slow=12,SNR=48						
MJAR				S	**Sn**	**08 51 22.5**	**+0.1**
	7.7nm,0.7s,baz=38,slow=22,SNR=5.4						
MAJO	**Matsushiro**	**3.87**	**235**	Pn	**Pn**	**08 50 38.7**	**+0.5**
MAJO	**Matsushiro**	**3.87**	**235**	*i* P	**Pn**	**08 50 39.5**	**+1.2**
JEW	**Eniwo**	**4.01**	**353**		**Pn**	**08 50 41.6**	**+1.5**
JGF	**Kuroka**	**5.00**	**231**	Pn	**Pn**	**08 50 56.5**	**+2.7**
NMR	**Nemuro--Hokkai**	**5.26**	**30**	*e*P	**Pn**	**08 50 56.8**	**-0.5**
NMR				*e*S	**Sn**	**08 51 52.4**	**-4.2**
INU	**Inuyama**	**5.38**	**231**	Pn	**Pn**	**08 51 01.2**	**+2.3**
RUSJ	**Misakicho**	**5.74**	**23**	*e*P	**Pn**	**08 51 04.6**	**+0.8**
RUSJ				*e*S	**Sn**	**08 52 07.0**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**5.88**	**27**	*e*P	**Pn**	**08 51 06.3**	**+0.5**
YUK				*e*S	**Sn**	**08 52 09.5**	**-2.3**
YUK				smax	smax		
	comp=E,194nm,0.4s						
YUK				smax	smax		
	comp=N,200nm,0.3s						
JHJ	**Hachijo jima 2**	**6.03**	**199**	P	**Pn**	**08 51 10.4**	**+2.5**
	comp=N,46nm,0.5s,baz=70,slow=20,SNR=2.2						
JHJ				S	**Sn**	**08 52 13.0**	**-2.6**
	comp=N,80nm,0.5s,baz=55,slow=18,SNR=1.9						
SHO	**Shikotan**	**6.13**	**34**	*e*P	**Pn**	**08 51 08.2**	**-1.0**
SHO				*e*S	**Sn**	**08 52 13.0**	**-4.9**
SHO				smax	smax		
	comp=E,95nm,0.3s						
SHO				smax	smax		
	comp=N,112nm,0.2s						
KUR	**Kuril'sk**	**7.67**	**32**	*e*P	**Pn**	**08 51 31.3**	**+1.1**
KUR				*e*S	**Sn**	**08 52 52.6**	**-3.1**
JHS	**Saijyo**	**8.18**	**245**		**Pn**	**08 51 39.8**	**+2.5**
JMN	**Monobe**	**8.39**	**235**	Pn	**Pn**	**08 51 40.6**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.28**	**308**	P	**Pn**	**08 51 55.0**	**+2.6**
	comp=N,9.8nm,0.7s,baz=116,slow=15,SNR=15						
USRK	**Ussuriysk Ar.**	**9.28**	**308**	P	**Pn**	**08 51 55.0**	**+2.6**
JNU	**Nakatsue**	**10.76**	**241**	Pn	**Pn**	**08 52 10.5**	**-2.1**
SEHB	**SEOHWA**	**10.88**	**271**	Pn	**Pn**	**08 52 16.6**	**+2.3**
KSRS	**Korea Array**	**11.27**	**267**	P	**Pn**	**08 52 22.8**	**+3.3**
	comp=N,1.2nm,0.5s,baz=81,slow=14,SNR=8.2						
KSCHJ	**Chungju**	**11.36**	**264**	Pn	**Pn**	**08 52 23.8**	**+3.0**
KLR	**Kul'dur**	**12.76**	**328**	LR	LR	08 57 30.9	
	comp=N,65nm,18.9s,baz=190,slow=37						
SEY	**Seymchan**	**24.89**	**11**	P	**P**	**08 55 01.5**	**+2.4**
	comp=N,1.6nm,0.7s,baz=176,slow=8.7,SNR=5.2						
	comp=N,1.6nm,0.7s						
SEY	**Seymchan**	**24.89**	**11**	*i* P	**P**	**08 54 59.3**	**+0.2**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
SONM	**Songino Array**	**27.28**	**301**	P	**P**	**08 55 21.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=94,slow=10.0,SNR=2.9						
	comp=Z,0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.66**	**125**	T	T	09 26 10.4	
	baz=317,slow=75,SNR=867						
H11N1	**WAKE ISLAND Hy**	**28.67**	**125**	T	T	09 25 59.4	
	baz=317,slow=75,SNR=867						
H11N3	**WAKE ISLAND Hy**	**28.68**	**125**	T	T	09 25 59.1	
	baz=317,slow=75,SNR=931						
H11S1	**WAKE ISLAND Hy**	**29.44**	**127**	T	T	09 26 55.8	
	baz=319,slow=76,SNR=164						
H11S3	**WAKE ISLAND Hy**	**29.44**	**127**	T	T	09 27 07.5	
	baz=319,slow=76,SNR=284						
H11S2	**WAKE ISLAND Hy**	**29.45**	**127**	T	T	09 26 58.0	
	baz=319,slow=76,SNR=89						
BILL	**Bilibino**	**32.12**	**17**	*e*P	**P**	**08 56 03.6**	**+0.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZALV	**Zalesovo Beam**	**41.12**	**311**	P	**P**	**08 57 20.0**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=83,slow=6.8,SNR=8.8						
ZALV				PcP	**PcP**	**08 59 19.1**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=87,slow=3.2,SNR=2.0						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**41.12**	**311**	P	**P**	**08 57 20.3**	**+0.1**
MK31	**Makanchi Array**	**43.65**	**301**	P	**P**	**08 57 40.0**	**-0.9**
MK31				lAmb	lAmb	08 57 41.4	
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**43.65**	**301**	*i* P	**P**	**08 57 40.3**	**-0.6**
MKAR	**Makanchi Array**	**43.65**	**301**	P	**P**	**08 57 40.6**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=84,slow=9.8,SNR=33						
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**43.65**	**301**	P	**P**	**08 57 40.4**	**-0.5**
KURK	**Kurchatov**	**45.27**	**307**	P	**P**	**08 57 53.0**	**-0.7**
KURK				lAmb	lAmb	08 57 53.9	
	comp=Z,8.7nm,0.9s						
KURK	**Kurchatov**	**45.27**	**307**	*ce*P	**P**	**08 57 53.0**	**-0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ILAR	**Eielson Array**	**47.66**	**33**	P	**P**	**08 58 14.1**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=273,slow=6.3,SNR=6.7						
	comp=Z,0.5nm,0.6s						
BOOM	**Boomskoye usch**	**49.18**	**297**	P	**P**	**08 58 25.0**	**+0.5**
BOOM	**Boomskoye usch**	**49.18**	**297**	P	**P**	**08 58 25.0**	**+0.5**
BRVK	**Borovoye**	**49.83**	**311**	*ce*P	**P**	**08 58 28.0**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
AAK	**Ala-Archa**	**50.14**	**297**	*i* P	**P**	**08 58 30.4**	**-1.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**52.51**	**28**	P	**P**	**08 58 50.9**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=353,slow=4.1,SNR=3.2						
	comp=Z,1.2nm,0.8s						
ARU	**Arti**	**55.38**	**318**	*d* P	**P**	**08 59 09.9**	**-0.1**
ARU				S	**S**	**08 59 50.9**	**+0.3**
ARU				SS	**SS**	**09 10 28.4**	**-6.6**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ABKAR	**Akbulak array**	**57.20**	**309**	P	**P**	**08 59 22.2**	**-0.9**
WB2	**Warramunga Arr**	**58.94**	**189**	P	**P**	**08 59 35.2**	**-0.3**
WB2				lAmb	lAmb	09 00 12.8	
	comp=Z,9.0nm,1.1s						
WRA	**Warramunga Arr**	**58.94**	**189**	P	**P**	**08 59 35.4**	**0.0**
	comp=Z,0.9nm,0.5s,baz=5.2,slow=7.1,SNR=34						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**58.94**	**189**	P	**P**	**08 59 35.5**	**0.0**
KIRV	**Kirov**	**59.14**	**322**	*i* P	**P**	**08 59 35.2**	**-1.2**
ARCES	**ARCESS Array B**	**62.49**	**339**	P	**P**	**08 59 59.6**	**+0.5**
	comp=Z,6.4nm,1.0s,baz=45,slow=9.1,SNR=3.4						
	comp=Z,6.4nm,1.0s						
AS31	**Alice Springs**	**62.67**	**188**	P	**P**	**09 00 01.6**	**+0.7**
AS31				lAmb	lAmb	09 00 02.2	
	comp=Z,1.1nm,1.0s						
ASAR	**Alice Springs**	**62.67**	**188**	P	**P**	**09 00 01.4**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=7.7,slow=5.5,SNR=9.9						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**62.67**	**188**	P	**P**	**09 00 01.3**	**+0.5**
OBN	**Obninsk**	**66.97**	**323**	*e*P	**P**	**09 00 28.8**	**+0.3**
OBN				*e*		09 02 59.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FIA1	**FINESS Array S**	**67.46**	**332**	P	**P**	**09 00 31.3**	**-0.2**
FINES	**FINESS Array B**	**67.47**	**332**	P	**P**	**09 00 31.3**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=37,slow=9.8,SNR=8.4						
	comp=Z,1.9nm,0.6s						
FINES	**FINESS Array B**	**67.47**	**332**	*i* P	**P**	**09 00 31.2**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIV	**Kislovodsk**	**70.14**	**311**	*e*P	**P**	**09 00 46.4**	**-2.2**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	**Khabaz**	**70.14**	**310**	P	**P**	**09 00 49.0**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=101,slow=5.2,SNR=5.2						
	comp=Z,2.3nm,0.8s						
KBZ	**Khabaz**	**70.14**	**310**	*ce*P	**P**	**09 00 48.5**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	**Hagfors**	**72.66**	**336**	P	**P**	**09 01 03.5**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=34,slow=8.7,SNR=6.8						
	comp=Z,2.1nm,0.8s						
NOA	**NORSAR Array B**	**72.72**	**337**	P	**P**	**09 01 03.6**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=39,slow=5.7,SNR=3.5						
	comp=Z,0.8nm,0.7s						
AKASG	**Malin Array Be**	**73.20**	**322**	P	**P**	**09 01 06.3**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=44,slow=6.7,SNR=7.7						
	comp=Z,0.6nm,0.4s						
NVAR	**Mina Array Bea**	**73.45**	**54**	P	**P**	**09 01 11.3**	**+2.6**
	comp=Z,0.1nm,0.6s,baz=293,slow=10,SNR=1.6						
	comp=Z,0.1nm,0.6s						
BRTR	**Keskin Array B**	**78.06**	**312**	P	**P**	**09 01 34.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=64,slow=5.3,SNR=2.1						
	comp=Z,0.5nm,0.6s						
CLL	**Collm**	**79.79**	**330**	*i* P	**P**	**09 01 44.2**	**+0.2**
GERES	**GERESS Array B**	**81.46**	**328**	P	**P**	**09 01 52.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=50,slow=6.5,SNR=3.8						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**88.57**	**53**	P	**P**	**09 02 30.6**	**+1.5**
	comp=Z,0.1nm,0.6s,baz=294,slow=8.8,SNR=2.2						
	comp=Z,0.1nm,0.6s						
H03N2	**Juan Fernandez**	**146.62**	**94**	T	T	11 53 49.2	
	baz=291,slow=76,SNR=5.0						
H03N3	**Juan Fernandez**	**146.63**	**94**	T	T	11 53 54.4	
	baz=291,slow=76,SNR=5.0						
H03N1	**Juan Fernandez**	**146.63**	**94**	T	T	11 53 52.4	
	baz=291,slow=76,SNR=5.7						

IDC ***13*** *08:58:15.2±5.2,22.00S×173.29E,h0km,mb4.0/3, mbtmp4.0/4,ML3.9/1,Error ellipse: s-maj=132.2km s-min=62.0km az=22.0*
NEIC ***13*** *08:58:17.6±1.3,22.2S±0.1×173.39E±0.08,h10km±1km, mb4.4/14,Error ellipse: s-maj=24.3km s-min=3.1km az=331.0*
NOU ***13*** *08:59:43.9,22.26S×166.93E,h0km,MLv1.5/5,New Caledonia*
ISC 13 08:58:21.3±0.8,22.2S±0.1×173.27E±0.08,h40km,n43, σ1°56/34,mb4.2/9,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.91**	**277**	Pn	**Pn**	**08 59 33.7**	**+1.0**
PINNC	**Pines Island,**	**5.40**	**264**		**Pn**	**08 59 38.1**	**-1.4**
YATNC	**Mamie plateau,**	**5.91**	**270**	P	**Pn**	**08 59 48.4**	**+2.0**
OUENC	**Ouen Island, N**	**5.96**	**266**		**Pn**	**08 59 46.4**	**-0.6**
OUENC	**Ouen Island, N**	**5.96**	**266**	P	**Pn**	**08 59 47.1**	**+0.1**
MSVF	**Nonsavu**	**6.30**	**46**	Pn	**Pn**	**08 59 49.7**	**-2.1**
ONTNC	**Ouen Toro**	**6.31**	**267**		**Pn**	**08 59 51.9**	**0.0**
ONTNC	**Ouen Toro**	**6.31**	**267**	P	**Pn**	**08 59 54.0**	**+2.1**
DZM	**Mont Dzumac**	**6.33**	**270**	Pn	**Pn**	**08 59 51.4**	**-0.8**
	2.8nm,0.3s,baz=99,slow=16,SNR=27						
DZM				Sn	**Sn**	**09 00 59.4**	**-3.9**
	1.5nm,0.3s,baz=77,slow=22,SNR=1.4						
	6.6nm,0.3s						
DZM	**Mont Dzumac**	**6.33**	**270**		**Pn**	**08 59 52.7**	**+0.5**
DZM	**Mont Dzumac**	**6.33**	**270**	P	**Pn**	**08 59 52.1**	**-0.1**
NOUC	**Port Laguerre**	**6.46**	**269**	P	**Pn**	**08 59 55.6**	**+1.7**
BKZ	**Black Stump Fm**	**17.17**	**171**		**Pn**	**09 02 17.6**	**-0.6**
QRZ	**Quartz Range**	**18.61**	**182**	P	**P**	**09 02 34.0**	**-1.3**
QRZ				lAmb	lAmb	09 02 44.7	
	comp=Z,76nm,1.4s						
SNZO	**South Karori**	**19.12**	**177**	P	**P**	**09 02 39.1**	**-1.8**
EIDS	**Eidsvold**	**20.55**	**257**	P	Pn	09 02 58.0	-1.0
EIDS				lAmb	lAmb	09 03 01.8	
	comp=Z,8.8nm,0.7s						
ARMA	**Armidale**	**21.04**	**243**	P	**P**	**09 03 05.3**	**+3.3**
CTAO	**Charters Tower**	**25.27**	**270**	P	**P**	**09 03 45.6**	**+1.6**
STKA	**Stephens Creek**	**29.73**	**244**	P	**P**	**09 04 23.7**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=71,slow=11,SNR=7.0						
	comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**29.73**	**244**	P	**P**	**09 04 24.4**	**+0.5**
WR0	**Warramunga Arr**	**36.14**	**266**	P	**P**	**09 05 18.5**	**-1.5**
WR0				lAmb	lAmb	09 05 35.3	
	comp=Z,7.9nm,1.2s						
ASAR	**Alice Springs**	**36.21**	**260**	P	**P**	**09 05 20.4**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=89,slow=9.3,SNR=26						
	comp=Z,2.8nm,0.9s						
ASAR	**Alice Springs**	**36.21**	**260**	P	**P**	**09 05 21.1**	**+0.5**
WB0	**Warramunga Arr**	**36.31**	**266**	P	**P**	**09 05 20.7**	**-0.8**
WB0				lAmb	lAmb	09 05 23.6	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**36.33**	**266**	P	**P**	**09 05 20.9**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=100,slow=8.5,SNR=20						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**36.33**	**266**	P	**P**	**09 05 20.6**	**-1.0**
H11S2	**WAKE ISLAND Hy**	**40.91**	**350**	T	T	09 49 50.4	
	baz=171,slow=76,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**40.92**	**350**	T	T	09 49 51.7	
	baz=171,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**40.93**	**350**	T	T	09 49 51.7	
	baz=171,slow=76,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**42.09**	**351**	T	T	09 51 21.7	
	baz=173						
H11N3	**WAKE ISLAND Hy**	**42.09**	**351**	T	T	09 51 19.9	
	baz=173						
H11N2	**WAKE ISLAND Hy**	**42.10**	**351**	T	T	09 51 23.0	
	baz=173						
FITZ	**Fitzroy Crossi**	**44.76**	**266**	P	**P**	**09 06 32.2**	**+1.0**
MORW	**Morawa**	**51.64**	**250**	P	**P**	**09 07 24.0**	**-0.3**
MORW				lAmb	lAmb	09 07 33.6	
	comp=Z,14nm,1.2s						
VNDA	**Vanda**	**55.68**	**183**	P	**P**	**09 07 52.9**	**-0.2**
VNDA				lAmb	lAmb	09 08 05.1	
	comp=Z,2.3nm,1.3s						
QSPA	**South Pole Qui**	**67.90**	**180**	P	**P**	**09 09 16.4**	**+0.8**
BELA	**Belgrano 2**	**78.84**	**174**	P	**P**	**09 10 20.1**	**+0.3**
BELA				lAmb	lAmb	09 10 21.1	
	comp=Z,2.4nm,0.9s						
SNAA	**Sanae**	**86.37**	**181**	P	**P**	**09 10 59.4**	**+0.3**
SNAA				lAmb	lAmb	09 11 14.6	
	comp=Z,4.9nm,1.5s						
H03S2	**Juan Fernandez**	**91.61**	**128**	T	T	10 53 23.7	
	baz=238						
H03S1	**Juan Fernandez**	**91.62**	**128**	T	T	10 53 26.0	
	baz=238						
H03S3	**Juan Fernandez**	**91.62**	**128**	T	T	10 53 24.2	
	baz=238						
CLL	**Collm**	**147.11**	**337**	*e*(PKP)	**PKiKP**	**09 18 06.0**	**+3.8**
TORD	**Torodi Ar. Bea**	**167.96**	**223**	PKPab	**PKPab**	**09 19 32.5**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=116,slow=4.1,SNR=3.5						

IDC ***13*** *09:05:04.0±2.1,22.52S×173.15E,h0km,mb4.0/7, mbtmp3.9/8,ML3.4/1,MS3.2/3,Error ellipse: s-maj=84.5km s-min=25.4km az=156.0*
ISC 13 09:05:09.1±2.0,22.5S±0.5×173.1E±0.2,h32km,n25, σ0°86/10,mb4.1/7,MS3.7/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.15**	**273**	Pn	**Pn**	**09 06 38.1**	**+0.1**
	1.0nm,0.3s,baz=136,slow=13,SNR=7.9						
	5.3nm,0.6s						
DZM	**Mont Dzumac**	**6.15**	**273**	*e*LR	LR	09 07 33.1	
	comp=Z,476nm,25.8s						
AFI	**Afiamalu**	**16.71**	**62**	LR	LR	09 13 23.3	
	comp=Z,34nm,19.2s,baz=115,slow=30						
TBI	**Tubuai**	**34.46**	**99**	*e*LR	LR	09 21 11.4	
	comp=Z,235nm,31.5s						
PPT2	**Papeete2**	**35.36**	**89**	*e*LR	LR	09 21 37.3	
	comp=Z,192nm,28.5s						
PPT	**Papeete**	**35.37**	**89**	LR	LR	09 25 45.5	
	comp=Z,36nm,18.2s,baz=246,slow=35						
ASAR	**Alice Springs**	**35.98**	**260**	P	**P**	**09 12 07.8**	**+0.5**
	1.1nm,1.0s,baz=86,slow=8.0,SNR=5.6						
ASAR				LR	LR	09 27 47.1	
	comp=Z,88nm,18.3s,baz=138,slow=38						
	1.1nm,1.0s						
WRA	**Warramunga Arr**	**36.13**	**267**	P	**P**	**09 12 07.8**	**-0.8**
	0.3nm,0.5s,baz=92,slow=8.4,SNR=7.1						
	0.3nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**41.19**	**351**	T	T	09 56 15.6	
	baz=171,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**41.20**	**351**	T	T	09 56 15.7	
	baz=171,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**41.21**	**351**	T	T	09 56 16.6	
	baz=171,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**42.37**	**351**	T	T	09 57 45.0	
	baz=172,slow=76,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**42.37**	**351**	T	T	09 57 45.8	
	baz=172,slow=76,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**42.38**	**351**	T	T	09 57 49.0	
	baz=172,slow=76,SNR=5.6						
TAOE	**Nuku Hiva Isla**	**46.84**	**81**	*e*LR	LR	09 26 55.7	
	comp=Z,134nm,27.9s						
PETK	**Petropavlovsk-**	**76.45**	**351**	P	**P**	**09 16 55.9**	**+0.6**
	2.5nm,0.9s,baz=189,slow=8.0,SNR=4.1						
	2.5nm,0.9s						
SEY	**Seymchan**	**86.69**	**351**	P	**P**	**09 17 48.9**	**-0.3**
	3.3nm,1.0s,baz=128,slow=8.0,SNR=4.8						
	3.3nm,1.0s						
NVAR	**Mina Array Bea**	**88.31**	**47**	P	**P**	**09 17 58.8**	**+0.9**
	0.4nm,0.8s,baz=213,slow=7.6,SNR=4.3						
	0.4nm,0.8s						
H03N3	**Juan Fernandez**	**91.74**	**127**	T	T	10 59 57.1	
	baz=245,slow=72,SNR=12						
H03N2	**Juan Fernandez**	**91.74**	**127**	T	T	10 59 55.9	
	baz=245,slow=72,SNR=6.8						
H03N1	**Juan Fernandez**	**91.76**	**127**	T

*NEIC **13** 09:06:27.8±0.8, 18°.92N×109°.09×146°.8E±0°.2, h86km±12km, mb4.2/5, Error ellipse: s-maj=26.0km s-min=12.6km az=93.0.*
*IDC **13** 09:06:32.3±3.4, 18°.85N×146°.06E, h111km±33km, mb3.4/10, mbtmp3.9/11, MS4.0/1, Error ellipse: s-maj=40.0km s-min=18.8km az=104.0*

ISC 13 09:06:28.7±0.6, 18°.88N±0°.07×146°.5E±0°.2, h83km, n20, σ1$66/20, mb3.8/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.49**	**197**	P	**Pn**	**09 07 50.6**	**+2.6**
	32nm,0.3s,baz=204,slow=19,SNR=1.3						
GUMO				S	**Sn**	**09 08 50.3**	**+0.4**
	37nm,0.5s,baz=142,slow=12,SNR=1.6						
GUMO	**Guam**	**5.49**	**197**	Pn	**Pn**	**09 07 48.6**	**+0.5**
JCJ	**Chichijima**	**9.09**	**335**	Pn	**Pn**	**09 08 36.5**	**-0.6**
JGF	**Kuroka**	**18.52**	**336**	P	**P**	**09 10 37.8**	**-0.7**
JGF				IAmb	IAmb	09 10 46.5	
	comp=Z,12nm,1.1s						
KLR	**Kul'dur**	**32.53**	**342**	P	**P**	**09 12 52.4**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=131,slow=11,SNR=4.6						
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	**40.21**	**198**	P	**P**	**09 13 56.4**	**-0.8**
WB0				IAmb	IAmb	09 14 08.3	
	comp=Z,4.6nm,1.1s						
WB2	**Warramunga Arr**	**40.38**	**198**	P	**P**	**09 13 57.5**	**-1.2**
WB2				IAmb	IAmb	09 14 01.1	
	comp=Z,5.5nm,1.1s						
WRA	**Warramunga Arr**	**40.39**	**198**	P	**P**	**09 13 58.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=14,slow=8.4,SNR=5.5						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**40.39**	**198**	P	**P**	**09 13 57.2**	**-1.5**
FITZ	**Fitzroy Crossi**	**42.08**	**210**	P	**P**	**09 14 11.5**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=40,slow=11,SNR=1.3						
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**44.04**	**197**	P	**P**	**09 14 28.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=19,slow=8.8,SNR=1.7						
	comp=Z,0.2nm,0.5s						
GSTR	**Great Sitkin T**	**44.19**	**33**	P	**P**	**09 14 26.6**	**-2.7**
OUENC	**Ouen Island, N**	**45.61**	**153**	P	**P**	**09 14 38.0**	**-2.8**
RAO	**Raoul Island**	**59.89**	**144**	LR	LR	09 40 45.6	
	comp=Z,114nm,18.1s,baz=321,slow=35						
ILAR	**Eielson Array**	**63.14**	**26**	P	**P**	**09 16 48.5**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=262,slow=5.7,SNR=3.6						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**77.47**	**28**	P	**P**	**09 18 16.5**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=288,slow=4.9,SNR=4.9						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**82.42**	**52**	P	**P**	**09 18 45.2**	**+2.9**
	comp=Z,0.6nm,0.7s,baz=271,slow=6.0,SNR=6.2						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**82.55**	**342**	P	**P**	**09 18 42.1**	**0.0**
	comp=Z,2.0nm,0.9s,baz=64,slow=8.1,SNR=4.3						
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**87.04**	**335**	P	**P**	**09 19 03.6**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=75,slow=6.1,SNR=7.4						
	comp=Z,1.6nm,0.7s						
PDAR	**Pinedale Array**	**87.15**	**46**	P	**P**	**09 19 08.0**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=165,slow=0.5,SNR=6.4						
	comp=Z,0.2nm,0.3s						

*IDC **13** 09:08:30.5±2.5, 22°.65S×173°.15E, h0km, mb3.9/6, mbtmp3.9/7, ML2.8/1, Error ellipse: s-maj=92.2km s-min=27.9km az=155.0*

ISC 13 09:08:35.8±2.2, 22°.6S±0°.5×173°.0E±0°.2, h32km, n8, σ1$28/8, mb4.0/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.11**	**274**	Pn	**Pn**	**09 10 03.7**	**-0.3**
	0.2nm,0.3s,baz=157,slow=23,SNR=1.0						
	4.0nm,0.7s						
ASAR	**Alice Springs**	**35.91**	**260**	P	**P**	**09 15 34.7**	**+1.3**
	0.7nm,0.8s,baz=84,slow=8.5,SNR=5.2						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**36.08**	**267**	P	**P**	**09 15 34.0**	**-0.9**
	0.9nm,0.9s,baz=98,slow=8.7,SNR=4.4						
	0.9nm,0.9s						
PETK	**Petropavlovsk-**	**76.54**	**351**	P	**P**	**09 20 23.9**	**+1.4**
	1.9nm,0.7s,baz=184,slow=13,SNR=4.1						
	1.9nm,0.7s						
SEY	**Seymchan**	**86.78**	**351**	P	**P**	**09 21 15.1**	**-1.2**
	2.6nm,0.8s,baz=166,slow=6.7,SNR=5.8						
	2.6nm,0.8s						
NVAR	**Mina Array Bea**	**88.42**	**47**	P	**P**	**09 21 25.0**	**-0.1**
	0.5nm,0.9s,baz=221,slow=5.4,SNR=4.0						
	0.5nm,0.9s						
SONM	**Songino Array**	**92.01**	**322**	P	**P**	**09 21 42.4**	**+0.9**
	0.7nm,0.9s,baz=142,slow=5.1,SNR=3.5						
	0.7nm,0.9s						
GERES	**GERESS Array B**	**149.07**	**333**	PKPbc	**PKPbc**	**09 28 19.5**	**-1.3**
	0.2nm,0.2s,baz=106,slow=3.5,SNR=1.7						

*IDC **13** 09:12:26.3±3.0, 22°.17S×172°.96E, h0km, mb3.9/5, mbtmp3.9/6, ML3.8/1, MS3.4/3, Error ellipse: s-maj=100.2km s-min=27.5km az=153.0*
*NEIC **13** 09:12:28.6±1.3, 22°.20S±0°.09×173°.0E±0°.1, h10km±1km, mb4.5/14, Error ellipse: s-maj=20.8km s-min=13.8km az=109.0*

ISC 13 09:12:31.7±1.0, 22°.2S±0°.1×173°.0E±0°.1, h35km, n34, σ0$73/26, mb4.4/11, MS3.4/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.63**	**277**	Pn	**Pn**	**09 13 38.5**	**-0.6**
PINNC	**Pines Island,**	**5.12**	**264**		**Pn**	**09 13 46.0**	**+0.1**
OUENC	**Ouen Island, N**	**5.67**	**266**	Pn	**Pn**	**09 13 53.4**	**-0.1**
DZM	**Mont Dzumac**	**6.04**	**270**	Pn	**Pn**	**09 13 58.8**	**+0.1**
	2.1nm,0.3s,baz=56,slow=21,SNR=20						
DZM				Sn	**Sn**	**09 15 07.0**	**+0.3**
	0.1nm,0.3s,baz=151,slow=20,SNR=1.0						
	7.8nm,0.5s						
KOUNC	**Koumac, New Ca**	**8.24**	**280**	Pn	**Pn**	**09 14 29.0**	**+0.2**
EIDS	**Eidsvold**	**20.27**	**257**	P	**P**	**09 17 04.2**	**-0.1**
ARMA	**Armidale**	**20.80**	**242**	P	**P**	**09 17 09.3**	**-0.8**
ARMA				IAmb	IAmb	09 17 16.1	
	comp=Z,16nm,1.4s						
RPZ	**Rata Peaks**	**21.56**	**184**	LR	LR	09 25 02.3	
	comp=Z,132nm,18.3s,baz=7.5,slow=35						
CAN	**Canberra**	**24.69**	**233**	P	**P**	**09 17 49.7**	**+0.2**
CTA	**Charters Tower**	**24.99**	**270**	P	**P**	**09 17 52.8**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=68,slow=11,SNR=1.7						
	comp=Z,2.0nm,0.6s						
CTAO	**Charters Tower**	**24.99**	**270**	P	**P**	**09 17 53.4**	**+1.1**
CTAO				IAmb	IAmb	09 17 59.2	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**29.48**	**244**	LR	LR	09 30 41.0	
	comp=Z,69nm,18.1s,baz=29,slow=37						
STKA	**Stephens Creek**	**29.48**	**244**	P	**P**	**09 18 32.3**	**-0.3**
BBOO	**Buckleboo**	**34.26**	**244**	P	**P**	**09 19 15.1**	**+0.5**
WR0	**Warramunga Arr**	**35.86**	**266**	P	**P**	**09 19 27.7**	**-0.7**
WR0				IAmb	IAmb	09 19 56.2	
	comp=Z,6.9nm,1.4s						
ASAR	**Alice Springs**	**35.93**	**260**	P	**P**	**09 19 28.0**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=95,slow=7.8,SNR=4.5						
	comp=Z,0.8nm,0.9s						
WB0	**Warramunga Arr**	**36.03**	**267**	P	**P**	**09 19 29.3**	**-0.6**
WB0				IAmb	IAmb	09 19 53.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**36.05**	**266**	P	**P**	**09 19 28.8**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=99,slow=7.6,SNR=6.2						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**36.05**	**266**	P	**P**	**09 19 28.9**	**-1.1**
H11S2	**WAKE ISLAND Hy**	**40.85**	**351**	T	T	10 03 36.6	
	baz=171,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**40.86**	**351**	T	T	10 03 37.7	
	baz=171,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**40.87**	**351**	T	T	10 03 37.5	
	baz=171,slow=76,SNR=16						
FORT	**Forrest**	**40.88**	**248**	P	**P**	**09 20 10.8**	**+0.3**
FORT				IAmb	IAmb	09 20 22.1	
	comp=Z,16nm,1.1s						
FITZ	**Fitzroy Crossi**	**44.48**	**266**	P	**P**	**09 20 40.3**	**+0.4**
FITZ				IAmb	IAmb	09 20 48.5	
	comp=Z,5.5nm,1.2s						
SBA	**Scott Base**	**55.83**	**182**	P	**P**	**09 22 05.8**	**+0.7**
SBA				IAmb	IAmb	09 22 07.9	
	comp=Z,6.7nm,1.4s						
CASY	**Casey**	**58.90**	**205**	P	**P**	**09 22 26.9**	**0.0**
QSPA	**South Pole Qui**	**67.92**	**180**	P	**P**	**09 23 25.8**	**-0.9**
QSPA				IAmb	IAmb	09 23 54.3	
	comp=Z,5.0nm,1.3s						

PETK	**Petropavlovsk-**	**76.11**	**351**	P	**P**	**09 24 14.4**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=198,slow=9.1,SNR=3.2						
	comp=Z,1.5nm,0.9s						
KLR	**Kul'dur**	**79.97**	**334**	LR	LR	09 53 27.7	
	comp=Z,20nm,20.9s,baz=258,slow=31						
SEY	**Seymchan**	**86.35**	**351**	P	**P**	**09 25 10.8**	**+1.2**
	comp=Z,1.4nm,0.6s,baz=138,slow=23,SNR=4.4						
	comp=Z,1.4nm,0.6s						
H03S2	**Juan Fernandez**	**91.84**	**128**	T	T	11 07 07.1	
	baz=241,SNR=4.2						
H03S1	**Juan Fernandez**	**91.85**	**128**	T	T	11 07 08.8	
	baz=241,SNR=4.2						
H03S3	**Juan Fernandez**	**91.86**	**128**	T	T	11 07 07.7	
	baz=241,SNR=4.3						
GERES	**GERESS Array B**	**148.67**	**333**	PKPbc	**PKPbc**	**09 32 15.4**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=42,slow=7.9,SNR=6.0						

IDC 13 09:18:54.0±5.8, 53°.65N×90°.93E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=58.1km s-min=27.9km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.63**	**277**	*i*		09 40 40.0	
	0.1nm,1.0s,baz=92,slow=316,SNR=1.8						
ZALV	**Zalesovo Beam**	**3.63**	**277**	Pn	Pn	09 19 50.0	-1.5
	0.5nm,0.3s,baz=91,slow=16,SNR=6.2						
ZALV				Sn	Sn	09 20 37.6	+2.5
	0.4nm,0.3s,baz=97,slow=21,SNR=2.7						
ZALV				Lg	Lg	09 20 49.9	
	0.9nm,0.3s,baz=97,slow=25,SNR=5.3						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**8.81**	**222**	Pn	Pn	09 21 03.5	+0.9
	0.1nm,0.3s,baz=33,slow=14,SNR=5.3						
MKAR				Lg	Lg	09 23 29.0	
	0.1nm,0.3s,baz=28,slow=35,SNR=5.5						
	0.2nm,0.4s						

*IDC **13** 09:29:43.4±0.7, 6°.78N×73°.02W, h159km±7km, mb3.5/11, mbtmp4.0/13, Error ellipse: s-maj=18.1km s-min=7.7km az=129.0*
*NEIC **13** 09:29:44.5±1.9, 6°.84N±0°.08×73°.00W±0°.08, h154km±10km, Error ellipse: s-maj=13.3km s-min=10.2km az=126.0*
*RSNC **13** 09:29:44.3±1.0, 6°.80N×73°.15W, h148km±3km, ML4.0, Mw4.1*

ISC 13 09:29:43.3±0.6, 6°.85N±0°.03×73°.10W±0°.04, h153km±5km, n148, σ1$56/171, mb4.2/53, 8C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**197**	*i*P	**Pn**	**09 30 04.3**	**-0.1**
BARC				*e*S	**Sn**	**09 30 19.2**	**-1.3**
BARC				*i*		09 30 20.8	
	comp=Z,4μm,0.4s						
PAMC	**Pamplona, Colo**	**0.63**	**40**	*i*P	**Pn**	**09 30 07.0**	**+0.8**
PAMC				*e*S	**Sn**	**09 30 24.2**	**+0.5**
PAMC				*i*		09 30 26.3	
	comp=Z,2μm,0.5s						
BRRC	**Barranca, Sant**	**0.65**	**293**	*i*P	**Pn**	**09 30 06.1**	**+0.3**
BRRC				*e*S	**Sn**	**09 30 22.9**	**0.0**
BRRC				*i*		09 30 26.2	
	comp=Z,2μm,0.4s						
RUSC	**La Rusia**	**0.95**	**179**	*i*P	**Pn**	**09 30 08.3**	**-0.3**
RUSC				*e*S	**Sn**	**09 30 26.5**	**-1.3**
RUSC				*i*		09 30 29.2	
	comp=Z,722nm,0.3s						
TAMC	**Tame, Arauca**	**1.37**	**108**	*e*P	**Pn**	**09 30 12.7**	**+0.9**
TAMC				*e*S	**Sn**	**09 30 34.4**	**+0.8**
TAMC				*i*		09 30 35.7	
	comp=Z,675nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	*e*P	**Pn**	**09 30 10.8**	**-1.1**
PTBC				*e*S	**Sn**	**09 30 31.8**	**-1.9**
PTBC				*i*		09 30 39.4	
	comp=Z,2μm,0.3s						
SPBC	**San Pablo de B**	**1.53**	**219**	*e*P	**Pn**	**09 30 13.2**	**-0.4**
SPBC				*e*S	**Sn**	**09 30 36.0**	**-0.8**
SPBC				*i*		09 30 40.4	
	comp=Z,2μm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**290**	*e*P	**Pn**	**09 30 16.7**	**-0.2**
ZARC				*e*S	**Sn**	**09 30 42.1**	**-0.7**
ZARC				*i*		09 30 48.3	
	comp=Z,2μm,0.5s						
NORC	**Norcasia**	**2.17**	**234**	*e*P	**Pn**	**09 30 20.1**	**-0.7**
NORC				*e*S	**Sn**	**09 30 48.8**	**-0.7**
NORC				*i*		09 30 53.5	
	comp=Z,2μm,0.2s						
CHIC	**Chingaza**	**2.30**	**196**	*e*P	**Pn**	**09 30 22.4**	**-0.2**
CHIC				*e*S	**Sn**	**09 30 51.5**	**-1.3**
CHIC				*i*		09 30 57.2	
	comp=Z,806nm,0.3s						
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**	**09 30 24.6**	**+1.5**
	comp=Z,595nm,0.3s,baz=340,slow=4.6,SNR=406						
ROSC				S	**Sn**	**09 30 54.0**	**+0.4**
	comp=Z,2μm,0.4s,baz=26,slow=23,SNR=7.1						
ROSC	**El Rosal**	**2.34**	**211**		**Pn**	**09 30 24.2**	**+1.1**
ROSC				Sn	**Sn**	**09 30 54.1**	**+0.4**
ROSC	**El Rosal**	**2.34**	**211**	*e*P	**Pn**	**09 30 24.1**	**+1.1**
ROSC				*e*S	**Sn**	**09 30 53.9**	**+0.4**
ROSC				*i*		09 31 01.1	
	comp=Z,1μm,0.3s						
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**09 30 24.5**	**-0.4**
HELC				*i*		09 31 02.7	
	comp=Z,924nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**290**	*e*P	**Pn**	**09 30 24.3**	**-1.1**
UREC				*e*S	**Sn**	**09 30 55.2**	**-2.7**
UREC				*i*		09 31 06.2	
	comp=Z,631nm,0.2s						
SOCV	**Socops**	**2.64**	**57**	*i*P	**Pn**	**09 30 27.1**	**+0.8**
SOCV				*e*S	**Sn**	**09 30 59.0**	**-0.6**
LL1C	**La Loma 1 Cana**	**2.71**	**351**	*e*P	**Pn**	**09 30 28.7**	**+1.5**
LL1C				*e*S	**Sn**	**09 31 03.9**	**+2.8**
LL1C				*i*		09 31 11.6	
	comp=Z,2μm,0.4s						
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*e*P	**Pn**	**09 30 28.6**	**+0.2**
GUY2C				*e*S	**Sn**	**09 31 03.6**	**+0.5**
GUY2C				*i*		09 31 13.4	
	comp=Z,777nm,0.5s						
VILC	**Villavicencio,**	**2.79**	**192**	*e*P	**Pn**	**09 30 27.9**	**-0.5**
VILC				*e*S	**Sn**	**09 31 02.3**	**-0.8**
VILC				*i*		09 31 13.2	
	comp=Z,1μm,0.4s						
PTGC	**Puerto Gaitan,**	**2.81**	**160**	*i*P	**Pn**	**09 30 27.5**	**-0.9**
PTGC				*e*S	**Sn**	**09 31 00.6**	**-2.7**
PTGC				*i*		09 31 06.1	
	comp=Z,396nm,0.5s						
LL6C	**La Loma 6 Bece**	**2.87**	**357**	*e*P	**Pn**	**09 30 28.9**	**-0.3**
LL6C				*e*S	**Sn**	**09 31 02.2**	**-2.4**
LL6C				*i*		09 31 14.3	
	comp=Z,151nm,0.5s						
LL5C	**La Loma 5 El P**	**2.94**	**348**	*e*P	**Pn**	**09 30 31.1**	**+1.0**
LL5C				*i*		09 31 20.3	
	comp=Z,244nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.05**	**251**	*e*P	**Pn**	**09 30 32.1**	**+0.5**
CBOC				*e*S	**Sn**	**09 31 04.7**	**-4.3**
CBOC				*i*		09 31 17.8	
	comp=Z,301nm,0.3s						
DBBC	**Dabeiba**	**3.09**	**273**	*e*P	**Pn**	**09 30 32.1**	**+0.1**
DBBC				*i*		09 31 14.0	
	comp=Z,223nm,0.3s						
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**09 30 33.8**	**+0.6**
	comp=Z,166nm,0.4s,baz=232,slow=9.8,SNR=98						
SDV				S	**Sn**	**09 31 12.3**	**+0.5**
	comp=Z,138nm,0.4s,baz=65,slow=22,SNR=18						
SDV	**Santo Domingo**	**3.17**	**50**	Pn	**Pn**	**09 30 33.7**	**+0.5**
ARGC	**Ariguani, Magd**	**3.19**	**339**	*e*P	**Pn**	**09 30 34.6**	**+1.4**
ARGC				*i*		09 31 20.1	
	comp=Z,115nm,0.5s						
ANIL	**Santa Ana**	**3.28**	**224**	*e*P	**Pn**	**09 30 34.9**	**+0.2**
ANIL				*e*S	**Sn**	**09 31 14.8**	**+0.5**
PRAC	**Prado**	**3.59**	**210**	*e*P	**Pn**	**09 30 37.5**	**-1.0**
PRAC				*e*S	**Sn**	**09 31 20.1**	**-1.1**
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**	**09 30 38.2**	**-1.0**
SJCC				*e*S	**Sn**	**09 31 18.6**	**-4.1**
SJCC				*i*		09 31 24.1	
	comp=Z,324nm,0.5s						
PLMC	**San Jos del P**	**3.71**	**239**	*e*P	**Pn**	**09 30 40.2**	**+0.3**
PLMC				*i*		09 31 33.0	
	comp=Z,258nm,0.4s						
LCBC	**Los crdobas,**	**3.80**	**302**	*e*P	**Pn**	**09 30 40.9**	**-0.1**
LCBC				*i*		09 31 32.6	
	comp=Z,171nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*e*P	**Pn**	**09 30 44.5**	**-1.2**
CRJC				*e*S	**Sn**	**09 31 30.4**	**-3.8**
CRJC				*i*		09 31 44.8	
	comp=Z,109nm,0.5s						
YOTC	**Yotoco, Valle**	**4.31**	**229**	*e*P	**Pn**	**09 30 47.1**	**-0.7**
YOTC				*i*		09 31 50.3	
	comp=Z,58nm,0.5s						
GUVC	**San Jose del G**	**4.31**	**174**	*e*P	**Pn**	**09 30 46.8**	**-1.0**
GUVC				*e*S	**Sn**	**09 31 35.4**	**-2.5**
GUVC				*i*		09 31 41.2	
	comp=Z,233nm,0.2s						
SOLC	**Bahia Solano**	**4.32**	**262**	*e*P	**Pn**	**09 30 48.0**	**+0.1**
SMRC	**Santa Marta, M**	**4.42**	**346**	*e*P	**Pn**	**09 30 50.1**	**+0.9**
SMRC				*e*S	**Sn**	**09 31 35.6**	**-5.0**
SMRC				*i*		09 31 40.1	
	comp=Z,77nm,0.6s						
CAPC	**Capurgana**	**4.57**	**293**	*e*P	**Pn**	**09 30 49.0**	**-2.2**
CAPC				*i*		09 31 47.7	
	comp=Z,70nm,0.2s						
PIZC	**Pizarro, Choco**	**4.63**	**246**	*e*P	**Pn**	**09 30 53.0**	**+1.0**
PIZC				*e*S	**Sn**	**09 31 47.6**	**+2.2**
PIZC				*i*		09 31 56.3	
	comp=Z,102nm,0.4s						
PTAC	**Punta Ardita,**	**4.68**	**274**	*e*P	**Pn**	**09 30 52.0**	**-0.5**
DABV	**Dabajuro**	**4.72**	**31**	*e*P	**Pn**	**09 30 53.7**	**+0.6**
DABV				*e*S	**Sn**	**09 31 41.9**	**-5.7**
MACC	**Macarena, Meta**	**4.74**	**189**	*e*P	**Pn**	**09 30 51.6**	**-1.8**
MACC				*e*S	**Sn**	**09 31 43.7**	**-4.3**
BETC	**Betania**	**4.75**	**209**	*e*P	**Pn**	**09 30 52.6**	**-1.1**
BETC				*i*		09 31 52.8	
	comp=Z,160nm,0.4s						
URIC	**Uribia, Colomb**	**4.94**	**13**	*e*P	**Pn**	**09 30 54.6**	**-1.4**
URIC				*e*S	**Sn**	**09 31 49.1**	**-3.7**
URIC				*i*		09 31 56.4	
	comp=Z,38nm,0.3s						
MALC	**Bahia Malaga**	**5.07**	**236**	*e*P	**Pn**	**09 30 59.0**	**+1.2**
UPD2	**Meteti**	**5.15**	**289**	*e*P	**Pn**	**09 30 57.6**	**-1.2**
GARC	**Garzon, Huila**	**5.21**	**207**	*e*P	**Pn**	**09 30 58.8**	**-1.1**
GARC				*e*S	**Sn**	**09 31 55.6**	**-4.1**
GARC				*i*		09 32 01.9	
	comp=Z,214nm,0.3s						
BAUV	**El Baul**	**5.43**	**67**	Pn	**Pn**	**09 31 00.5**	**-2.0**
POPC	**Popayan, Colom**	**5.57**	**220**	*e*P	**Pn**	**09 31 04.1**	**-0.5**
POPC				*e*S	**Sn**	**09 32 04.5**	**-3.7**
FLOC	**Florencia**	**5.82**	**206**	*e*P	**Pn**	**09 31 07.0**	**-0.8**
FLOC				*i*		09 32 18.7	
	comp=Z,39nm,0.5s						
GR1C	**Gorgona, Isla**	**6.33**	**233**	*e*P	**Pn**	**09 31 13.7**	**-0.8**
BBAC	**Balboa, Cauca**	**6.33**	**221**	*e*P	**Pn**	**09 31 14.3**	**-0.5**
BBAC				*e*S	**Sn**	**09 32 22.9**	**-3.4**
BBAC				*i*		09 32 32.3	
	comp=Z,42nm,0.3s						
CRUC	**La Cruz**	**6.50**	**216**	*e*P	**Pn**	**09 31 18.9**	**+1.8**
PTLC	**Puerto Leguiza**	**6.85**	**194**	*e*P	**Pn**	**09 31 23.7**	**+2.2**
GCUF	**Volcan Galeras**	**7.01**	**217**	*e*P	**Pn**	**09 31 24.7**	**+0.7**
GCUF				*e*S	**Sn**	**09 32 40.6**	**-2.4**
GCUF				*i*		09 32 49.0	
	comp=Z,24nm,0.4s						
BCIP	**Isla Barro Col**	**7.05**	**289**	Pn	**Pn**	**09 31 22.3**	**-1.8**
BIRV	**Birongo**	**7.66**	**61**		**Pn**	**09 31 30.6**	**-1.6**
TULM	**Tulcn-Chalpat**	**7.68**	**218**		**Pn**	**09 31 34.2**	**+1.2**
OTAV	**Otavalo**	**8.46**	**219**	Pn	**Pn**	**09 31 43.6**	**+0.2**
BRU2	**Volcan**	**9.69**	**282**	Pn	**Pn**	**09 32 00.6**	**+1.1**
BOSC	**San Juan Bosco**	**11.30**	**209**	Pn	**Pn**	**09 32 22.5**	**+1.8**
MTDJ	**Mount Denham**	**12.10**	**339**	Pn	**Pn**	**09 32 33.0**	**+2.0**
MTDJ	**Mount Denham**	**12.10**	**339**	*e*P	**Pn**	**09 32 33.0**	**+2.0**
BOAV	**Boa Vista**	**13.30**	**109**	Pn	**Pn**	**09 32 44.8**	**-1.6**
CZSB	**Cruzeiro do Su**	**14.49**	**178**	Pn	**Pn**	**09 33 01.7**	**+0.3**
CNGN	**Cerro Negro**	**14.52**	**294**	Pn	**Pn**	**09 33 02.8**	**+0.9**
ETMB	**Extrema**	**17.93**	**157**		**P**	**09 33 41.5**	**-0.2**
ETMB				IAmb	IAmb	09 33 41.9	
	comp=Z,4.2nm,0.7s						
PAYG	**Puerto Ayora**	**18.70**	**247**	P	**Pn**	**09 33 52.6**	**+0.1**
VILB	**Vilhena**	**23.49**	**147**	P	**P**	**09 34 38.3**	**-1.2**
VILB				IAmb	IAmb	09 34 40.4	
	comp=Z,8.1nm,0.7s						
LPAZ	**La Paz**	**23.51**	**168**	P	**P**	**09 34 38.8**	**-1.6**
	comp=Z,1.4nm,0.6s,baz=342,slow=9.6,SNR=5.5						
	comp=Z,1.4nm,0.6s						
LPAZ	**La Paz**	**23.51**	**168**	P	**P**	**09 34 39.6**	**-0.8**
PB16	**IPOC Station P**	**25.28**	**172**	P	**P**	**09 34 56.0**	**-0.3**
352A	**Blakely**	**26.88**	**337**	P	**P**	**09 35 11.3**	**+1.3**
HODGE	**Hodges**	**28.53**	**344**	P	**P**	**09 35 26.1**	**+1.5**
HODGE				IAmb	IAmb	09 35 27.0	
	comp=Z,3.4nm,0.6s						
Z51A	**Franklin**	**28.61**	**339**	IAmb	IAmb	09 35 28.5	
	comp=Z,7.2nm,0.8s						
LRAL	**Lakeview Retre**	**29.07**	**335**	P	**P**	**09 35 31.4**	**+1.9**
LRAL				IAmb	IAmb	09 35 51.7	
	comp=Z,7.2nm,1.4s						
Y49A	**Blount Mountai**	**29.56**	**337**	P	**P**	**09 35 35.6**	**+1.8**

LMN	**Caledonia Moun**	**39.51**	**9**	P	**P**	**09 36 59.8**	**+0.8**
LMN	comp=Z,6.8nm,0.8s			IAmb	IAmb	09 37 00.5	
E62A	**Clayton Lake**	**39.74**	**4**	P	**P**	**09 37 02.5**	**+1.6**
E62A	comp=Z,9.7nm,1.1s			IAmb	IAmb	09 37 03.2	
BATG	**Bathurst New B**	**40.73**	**7**	P	**P**	**09 37 10.0**	**+1.0**
ECSD	**EROS Data Cent**	**42.12**	**334**	P	**P**	**09 37 21.0**	**+0.4**
ECSD	comp=Z,10.0nm,1.5s			IAmb	IAmb	09 37 21.4	
SDCO	**Great Sand Dun**	**42.53**	**321**	P	**P**	**09 37 26.0**	**+1.7**
EYMN	**Ely**	**43.84**	**342**	P	**P**	**09 37 34.4**	**+0.1**
PV15	**Paradox Valley**	**44.78**	**320**	IAmb	IAmb	09 37 44.6	
	comp=Z,4.9nm,0.8s						
PV13	**Radium Mtn., P**	**44.89**	**319**	IAmb	IAmb	09 37 45.1	
	comp=Z,4.2nm,0.8s						
B35A	**Bob, Littlefor**	**44.92**	**341**	IAmb	IAmb	09 37 43.4	
	comp=Z,4.5nm,0.7s						
WUAZ	**Wupatki**	**45.21**	**315**	IAmb	IAmb	09 37 48.3	
	comp=Z,4.2nm,0.9s						
AGMN	**Agassiz Nation**	**45.60**	**339**	IAmb	IAmb	09 37 48.9	
	comp=Z,4.1nm,0.6s						
E28A	**Huff**	**46.14**	**334**	P	**P**	**09 37 53.0**	**+0.6**
U15A	**North Rim**	**46.31**	**315**	P	**P**	**09 37 56.0**	**+1.7**
MPU	**Maple Canyon**	**47.74**	**320**	P	**P**	**09 38 06.0**	**+0.7**
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**09 38 07.8**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=130,slow=8.5,SNR=11						
PDAR				PcP	**PcP**	**09 39 32.8**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=124,slow=4.9,SNR=2.2						
	comp=Z,0.8nm,0.5s						
SCHQ	**Schefferville**	**48.11**	**5**	P	**P**	**09 38 07.6**	**0.0**
	comp=Z,7.1nm,0.8s,baz=208,slow=3.7,SNR=6.6						
	comp=Z,7.1nm,0.8s						
BGU	**Big Grassy Mou**	**49.13**	**320**	IAmb	IAmb	09 38 17.2	
	comp=Z,3.2nm,0.7s						
REDW	**Red Top Meadow**	**49.18**	**324**	IAmb	IAmb	09 38 17.7	
	comp=Z,3.3nm,0.6s						
TPAW	**Teton Pass**	**49.31**	**324**	P	**P**	**09 38 17.3**	**0.0**
MOOW	**Moose Ponds**	**49.35**	**324**	P	**P**	**09 38 17.9**	**+0.4**
ELK	**Elko**	**50.47**	**319**	P	**P**	**09 38 25.3**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=131,slow=9.4,SNR=2.1						
	comp=Z,0.5nm,0.5s						
NVAR	**Mina Array Bea**	**51.47**	**315**	P	**P**	**09 38 34.1**	**+0.6**
	comp=Z,0.3nm,0.2s,baz=115,slow=7.5,SNR=22						
NVAR				PcP	**PcP**	**09 39 46.1**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=132,slow=5.3,SNR=2.4						
	comp=Z,0.3nm,0.2s						
MFID	**Camas Ranch**	**52.21**	**321**	IAmb	IAmb	09 38 41.4	
	comp=Z,2.8nm,0.8s						
YERR	**Yerington**	**52.37**	**315**	IAmb	IAmb	09 38 43.6	
	comp=Z,5.3nm,1.4s						
WVOR	**Wild Horse Val**	**53.51**	**319**	IAmb	IAmb	09 38 49.6	
	comp=Z,1.9nm,0.6s						
F10A	**Beach Ranch, E**	**54.41**	**323**	IAmb	IAmb	09 38 55.4	
	comp=Z,2.5nm,0.8s						
G08A	**Pilot Rock**	**55.10**	**322**	P	**P**	**09 39 00.7**	**+0.9**
G08A				IAmb	IAmb	09 39 01.1	
	comp=Z,3.7nm,0.7s						
PINE	**Pine Mountain**	**55.64**	**319**	P	**P**	**09 39 04.8**	**+1.0**
PINE				IAmb	IAmb	09 39 05.8	
	comp=Z,4.3nm,0.8s						
YBH	**Yreka Blue Hor**	**55.93**	**317**	P	**P**	**09 39 04.5**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=94,slow=1.2,SNR=7.6						
	comp=Z,0.8nm,0.5s						
YBH	**Yreka Blue Hor**	**55.93**	**317**	P	**P**	**09 39 05.0**	**-0.7**
B08A	**Colville Reser**	**56.88**	**325**	IAmb	IAmb	09 39 13.1	
	comp=Z,2.7nm,1.0s						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**09 39 55.1**	**-0.2**
	comp=Z,3.7nm,0.6s,baz=131,slow=6.6,SNR=32						
	comp=Z,3.7nm,0.6s						
DLBC	**Dease Lake**	**67.30**	**331**	P	**P**	**09 40 22.3**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=154,slow=24,SNR=1.8						
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	**76.94**	**335**	P	**P**	**09 41 18.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=92,slow=4.6,SNR=5.8						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**86.64**	**20**	P	**P**	**09 42 08.8**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=309,slow=4.3,SNR=4.3						
	comp=Z,1.2nm,0.8s						
KURBB	**Kurchatov Arra**	**117.72**	**20**	PKP	**PKPdf**	**09 48 10.5**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=341,slow=2.0,SNR=2.1						
MKAR	**Makanchi Array**	**122.28**	**20**	PKP	**PKPdf**	**09 48 19.2**	**-1.3**
	comp=Z,0.3nm,0.9s,baz=228,slow=3.3,SNR=4.1						
PZH	**PanZhiHua**	**146.47**	**8**	PKPbc	**PKPdf**	**09 49 04.3**	**-1.6**
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**09 49 13.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=114,slow=3.8,SNR=4.1						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**09 49 16.5**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=107,slow=2.8,SNR=47						

IDC 13 09:42:01.4±3.2, 42°21N×129°43E, h0km, mbtmp2.5/2, ML1.8/2, Error ellipse: s-maj=55.9km s-min=21.0km az=122.0, North Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I45RU	**USSURIYSK INFR**	**2.73**	**42**	*i*		10 01 31.2	
	baz=223,slow=302,SNR=3.2						
USRK	**Ussuriysk Ar.**	**2.74**	**42**	Pn	Pn	09 42 46.5	-0.2
	0.3nm,0.3s,baz=238,slow=15,SNR=2.0						
USRK				Pg	Pb	09 42 51.3	+0.1
	0.5nm,0.3s,baz=226,slow=16,SNR=7.5						
USRK				Lg	Lg	09 43 28.4	
	0.8nm,0.3s,baz=235,slow=26,SNR=4.6						
	1.4nm,0.6s						
KSRS	**Korea Array**	**4.88**	**194**	Pn	Pn	09 43 16.6	+0.5
	0.2nm,0.3s,baz=15,slow=14,SNR=2.7						
	0.5nm,0.5s						

*IDC **13** 09:46:14.8±3.4, 36°37N×70°97E, h196km±30km, mb3.6/12, mbtmp4.1/16, MS3.2/1, Error ellipse: s-maj=22.4km s-min=13.6km az=18.0*

*MOS **13** 09:46:16.8±0.7, 36°63N×71°02E, h220km, mb4.1/10, Error ellipse: s-maj=10.8km s-min=4.3km az=79.3*

*NEIC **13** 09:46:18.1±1.6, 36°62N±0°06×70°89E±0°09, h218km±5km, mb4.2/28, Error ellipse: s-maj=10.5km s-min=8.7km az=56.0*

*NNC **13** 09:46:23.6±5.2, 37°13N×71°12E, h226km±60km, mb3.3, mpv4.5, Error ellipse: s-maj=49.6km s-min=28.3km az=5.0*

ISC 13 09:46:16.6±0.5, 36°66N±0°05×71°11E±0°05, h200km, n163, σ1§67/171, mb4.1/27, 8C-13D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.42**	**345**	Pn	**Pn**	**09 47 02.0**	**+2.2**
CHGR	**Chuyangaron**	**2.53**	**323**		**Pn**	**09 47 02.4**	**+1.5**
CHGR	**Chuyangaron**	**2.53**	**323**	PN	**Pn**	**09 47 02.4**	**+1.5**
KBL	**Kabul**	**2.70**	**219**	Pn	**Pn**	**09 47 03.8**	**+0.7**
KBL	**Kabul**	**2.70**	**219**	PN	**Pn**	**09 47 03.8**	**+0.7**
DRK	**Karamyk**	**2.87**	**11**		**Pn**	**09 47 08.3**	**+3.3**
CEP	**Cherat**	**2.90**	**167**	⇓P	**Pn**	**09 47 07.6**	**+2.3**
CEP				S	**Sn**	**09 47 45.0**	**+1.7**
CHCP	**Chirah Chowk**	**3.47**	**149**	P	**Pn**	**09 47 14.7**	**+2.7**
NIL	**Nilore**	**3.48**	**149**		**Pn**	**09 47 14.8**	**+2.8**
NIL	**Nilore**	**3.48**	**149**	PN	**Pn**	**09 47 14.8**	**+2.8**
THW	**Thamme Wali**	**3.89**	**172**	P	**Pn**	**09 47 18.6**	**+1.5**
KSH	**Kashi**	**4.78**	**52**	Pn	**Pn**	**09 47 27.0**	**-1.3**
KSH				sP		09 47 31.3	
KSH				Sn	**Sn**	**09 48 18.5**	**-6.3**
KSH				pmax	pmax		
	comp=Z,120nm,0.6s						
KSH				smax	smax		
	comp=N,210nm,0.6s						
KSH				smax	smax		
	comp=E,150nm,0.7s						
TAS	**Tashkent**	**4.87**	**344**	Pn	**Pn**	**09 47 31.1**	**+1.8**
TAS	**Tashkent**	**4.87**	**344**	PN	**Pn**	**09 47 31.1**	**+1.8**
JMU	**Jammu**	**5.02**	**140**	*e*S	**Sn**	**09 48 27.8**	**-2.4**
IUG	**luzhnay**	**5.55**	**352**	*d*/*i*PN	**Pn**	**09 47 39.9**	**+1.9**
IUG	**luzhnay**	**5.55**	**352**	⇓*i*P	**Pn**	**09 47 40.0**	**+1.9**
	baz=353						
THN	**Thein Dam**	**5.67**	**137**	*e*P	**Pn**	**09 47 42.0**	**+2.3**
THN				*e*S	**Sn**	**09 48 44.6**	**-0.7**
CHM	**Chimkent**	**5.77**	**349**	*e*PN	**Pn**	**09 47 42.0**	**+1.1**
CHM	**Chimkent**	**5.77**	**349**	*e*P	**Pn**	**09 47 42.0**	**+1.1**
	baz=350						
AML	**Almayashu**	**5.82**	**19**	P	**Pn**	**09 47 44.0**	**+2.2**
	SNR=54						
UCH	**Uchtor**	**6.16**	**24**	P	**Pn**	**09 47 48.7**	**+2.4**
	SNR=33						
DZA	**Taraz**	**6.23**	**2**	*e*PN	**Pn**	**09 47 47.8**	**+1.0**
DZA	**Taraz**	**6.23**	**2**	*e*P	**Pn**	**09 47 47.8**	**+1.0**
	baz=2.2						
EKS2	**Erkin-Say**	**6.34**	**18**	P	**Pn**	**09 47 50.6**	**+2.2**
	SNR=22						
KK31	**Karatay Array**	**6.46**	**356**	Pn	**Pn**	**09 47 51.2**	**+1.5**
KK31	**Karatay Array**	**6.46**	**356**	PN	**Pn**	**09 47 51.2**	**+1.5**
KK31	**Karatay Array**	**6.46**	**356**	P	**Pn**	**09 47 50.6**	**+0.9**
	comp=E,23nm,0.5s,baz=184,slow=13,SNR=186						
KK31				⇓S	**Sn**	**09 49 01.1**	**-2.5**
	comp=E,8.5nm,0.3s,baz=138,slow=20,SNR=5.4						
KKAR	**Karatay Array**	**6.46**	**356**		**Pn**	**09 47 50.9**	**+1.2**
KKAR	**Karatay Array**	**6.46**	**356**		**Pn**	**09 47 51.2**	**+1.5**
KKAR	**Karatay Array**	**6.46**	**356**	PN	**Pn**	**09 47 50.9**	**+1.2**
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**09 47 53.1**	**+2.4**
	comp=E,40nm,0.3s,baz=203,slow=6.7,SNR=63						
AAK				S	**Sn**	**09 49 07.0**	**+1.7**
	comp=E,11nm,0.3s,baz=147,slow=23,SNR=20						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**09 47 53.0**	**+2.4**
	SNR=26						
AAK	**Ala-Archa**	**6.52**	**23**	Pn	**Pn**	**09 47 52.8**	**+2.2**
AAK	**Ala-Archa**	**6.52**	**23**	*ce*PN	**Pn**	**09 47 53.1**	**+2.4**
AAK				pmax	pmax		
	comp=Z,47nm,0.6s						
KBK	**Karagaybulak**	**6.68**	**25**	P	**Pn**	**09 47 55.4**	**+2.6**
	SNR=6.2						
BHK	**Bhakra**	**6.83**	**138**	*e*P	**Pn**	**09 47 56.5**	**+1.8**
BHK				*e*S	**Sn**	**09 49 10.1**	**-2.5**
CHMS	**Chumysh**	**6.92**	**23**	P	**Pn**	**09 47 58.5**	**+2.6**
	SNR=9.5						
CHMS	**Chumysh**	**6.92**	**23**	*i* PN	**Pn**	**09 47 57.2**	**+1.4**
CHMS				pmax	pmax		
	comp=Z,18nm,0.4s						
CHMS	**Chumysh**	**6.92**	**23**	⇑P	**Pn**	**09 47 57.3**	**+1.4**
	comp=Z,18nm,0.5s						
CHMS				⇓S	**Sn**	**09 49 13.7**	**-0.9**
	comp=Z,14nm,0.6s						
USP	**Ospenovka**	**7.10**	**20**	P	**Pn**	**09 47 59.5**	**+1.4**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.14**	**28**	P	**Pn**	**09 48 01.2**	**+2.4**
	SNR=52						
TKM2	**Tokmak 2**	**7.14**	**28**	*i* PN	**Pn**	**09 48 00.6**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,49nm,0.8s						
TKM2	**Tokmak 2**	**7.14**	**28**	⇓P	**Pn**	**09 48 00.9**	**+2.1**
	comp=Z,46nm,0.8s						
TKM2				⇓S	**Sn**	**09 49 20.7**	**+0.7**
	comp=Z,31nm,0.9s						
SGDS	**Sogindy**	**7.30**	**21**	*d*/*i*PN	**Pn**	**09 48 02.0**	**+1.2**
SGDS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SGDS	**Sogindy**	**7.30**	**21**	⇓*i*P	**Pn**	**09 48 02.0**	**+1.2**
	comp=Z,5.2nm,0.5s,baz=21						
SMLA	**Simla**	**7.47**	**136**	*e*P	**Pn**	**09 48 04.0**	**+1.1**
SMLA				*e*S	**Sn**	**09 49 24.0**	**-3.4**
SMLA				IAML		09 49 26.8	
	comp=N,156nm,0.5s						
SMLA				IAML		09 49 27.1	
	comp=E,109nm,0.2s						
AAA	**Alma-Ata**	**7.92**	**32**	*e*PN	**Pn**	**09 48 11.6**	**+2.9**
AAA	**Alma-Ata**	**7.92**	**32**	*e*P	**Pn**	**09 48 11.7**	**+2.9**
	baz=32						
MDOK	**Medeo**	**7.94**	**33**	*e*PN	**Pn**	**09 48 11.4**	**+2.3**
MDOK	**Medeo**	**7.94**	**33**	*e*P	**Pn**	**09 48 11.5**	**+2.3**
	baz=33						
MDOK	**Medeo**	**7.94**	**33**	⇑P	**Pn**	**09 48 11.2**	**+2.0**
	comp=E,16nm,0.6s						
MDOK				S	**Sn**	**09 49 32.8**	**-5.9**
	comp=E,4.8nm,0.6s						
PRZ	**Przheval'sk**	**8.09**	**42**		**Pn**	**09 48 14.1**	**+2.9**
PRZ	**Przheval'sk**	**8.09**	**42**	PN	**Pn**	**09 48 14.1**	**+2.9**
KUU	**Kurty**	**8.26**	**27**	*e*PN	**Pn**	**09 48 14.3**	**+1.2**
KUU	**Kurty**	**8.26**	**27**	*e*P	**Pn**	**09 48 14.3**	**+1.2**
	baz=27						
SATY	**Saty**	**8.50**	**39**	*e*PN	**Pn**	**09 48 16.4**	**-0.1**
SATY	**Saty**	**8.50**	**39**	*e*P	**Pn**	**09 48 16.4**	**-0.1**
	baz=38						
ZHN	**Zhinishke**	**8.60**	**39**	*e*PN	**Pn**	**09 48 18.8**	**+1.2**
ZHN	**Zhinishke**	**8.60**	**39**	*e*P	**Pn**	**09 48 18.9**	**+1.2**
	baz=38						
BTLS	**Baital**	**8.66**	**14**	*e*PN	**Pn**	**09 48 19.1**	**+0.7**
BTLS	**Baital**	**8.66**	**14**	*e*P	**Pn**	**09 48 19.2**	**+0.7**
	baz=14						
UZB	**Uzynbulak**	**8.88**	**41**	*e*PN	**Pn**	**09 48 23.1**	**+1.7**
UZB	**Uzynbulak**	**8.88**	**41**	*e*P	**Pn**	**09 48 23.1**	**+1.7**
	baz=40						
KPKS	**Kokpek**	**8.94**	**38**	*e*P	**Pn**	**09 48 22.8**	**+0.7**
KPKS	**Kokpek**	**8.94**	**38**	*e*P	**Pn**	**09 48 22.8**	**+0.7**
	baz=38						
ARXS	**Arharly**	**9.12**	**32**	*e*P	**Pn**	**09 48 25.6**	**+1.2**
SHLS	**Shalkode**	**9.12**	**42**	*e*P	Pn	09 48 29.1	+4.6
SHLS	**Shalkode**	**9.12**	**42**	*e*P	Pn	09 48 29.1	+4.6
	baz=43						
MAKZ	**Makanchi**	**12.98**	**35**		**P**	**09 49 15.0**	**-2.0**
MAKZ	**Makanchi**	**12.98**	**35**	P	**P**	**09 49 15.4**	**-1.5**
MAKZ	**Makanchi**	**12.98**	**35**	⇓P	**P**	**09 49 15.4**	**-1.5**
	comp=E,6.3nm,0.5s						
MK31	**Makanchi Array**	**13.11**	**36**	P	**P**	**09 49 17.4**	**-1.1**
MK31	**Makanchi Array**	**13.11**	**36**	*i* P	**P**	**09 49 17.6**	**-0.9**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	**Makanchi Array**	**13.11**	**36**	P	**P**	**09 49 17.6**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=211,slow=11,SNR=21						
MKAR	**Makanchi Array**	**13.11**	**36**	P	**P**	**09 49 17.1**	**-1.3**
	comp=Z,1.4nm,0.4s,baz=215,slow=8.5,SNR=21						
MKAR	**Makanchi Array**	**13.11**	**36**		**P**	**09 49 17.4**	**-1.0**
MKAR	**Makanchi Array**	**13.11**	**36**	*ce*P	**P**	**09 49 20.2**	**+1.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DANN	**Dangsing**	**13.50**	**124**	*e*P	**P**	**09 49 21.5**	**-1.8**
	comp=Z,9.9nm,0.3s						
GKN	**Gorkha**	**14.31**	**123**	*e*P	**P**	**09 49 31.9**	**-0.2**
	comp=Z,12nm,0.4s						
WMQ	**Urumqi**	**14.54**	**55**	*e*P	**P**	**09 49 36.9**	**+2.6**
DMN	**Daman**	**14.88**	**123**	*e*P	**P**	**09 49 38.1**	**-0.5**
	comp=Z,6.7nm,0.3s						
KKN	**Kakani**	**14.89**	**122**	*e*P	**P**	**09 49 38.1**	**-0.4**
	comp=Z,13nm,0.6s						
KURBB	**Kurchatov Arra**	**14.95**	**19**	P	**P**	**09 49 38.2**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=210,slow=11,SNR=9.8						
AB31	**Akbulak array**	**14.99**	**331**	*e*P	**Pn**	**09 49 37.6**	**-0.9**
AB31	**Akbulak array**	**14.99**	**331**	P	**Pn**	**09 49 37.7**	**-0.9**
	comp=Z,5.5nm,0.6s,baz=146,slow=11,SNR=86						
ABKAR	**Akbulak array**	**14.99**	**331**	P	**P**	**09 49 38.1**	**-1.1**
KURK	**Kurchatov**	**15.05**	**19**	P	**P**	**09 49 39.1**	**-0.8**
KURK				IAmb	IAmb	09 49 45.7	
	comp=Z,6.9nm,0.6s						
KURK	**Kurchatov**	**15.05**	**19**	*ce*P	**Pn**	**09 49 38.4**	**-0.9**
KURK				pmax	pmax		
	comp=Z,18nm,0.6s						
PKIN	**Phulchoki**	**15.10**	**123**	*e*P	**P**	**09 49 40.7**	**-0.3**
PKI	**Pulchoki**	**15.11**	**123**	*e*P	**P**	**09 49 41.1**	**-0.1**
	comp=Z,9.4nm,0.4s						
GUN	**Gumba**	**15.22**	**121**	*e*P	**P**	**09 49 41.8**	**-0.6**
JIRN	**Jiri**	**15.59**	**121**	*e*P	**P**	**09 49 46.7**	**+0.2**
	comp=Z,19nm,0.3s						
RAMN	**Ramite**	**16.32**	**122**	*e*P	**Pn**	**09 49 55.6**	**+0.5**
	comp=Z,15nm,0.4s						
BVA0	**Borovoye Array**	**16.38**	**358**	*i* P	**Pn**	**09 49 55.4**	**+0.2**
BVA0	**Borovoye Array**	**16.38**	**358**	⇑P	**Pn**	**09 49 55.9**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=176,slow=11,SNR=15						
BRVK	**Borovoye**	**16.41**	**358**	P	**Pn**	**09 49 55.0**	**-0.6**
BRVK	**Borovoye**	**16.41**	**358**	*ce*P	**Pn**	**09 49 56.3**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTO	**Aktyubinsk**	**16.69**	**330**	P	**Pn**	**09 49 59.2**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=136,slow=11,SNR=24						
AKTO	**Aktyubinsk**	**16.69**	**330**	⇓P	**Pn**	**09 49 59.0**	**0.0**
	comp=Z,4.8nm,0.6s						
ODAN	**Odare**	**16.92**	**121**	*e*P	**Pn**	**09 50 02.8**	**+0.5**
	comp=Z,11nm,0.7s						
GOMU	**GeErMu**	**19.07**	**84**	P	**P**	**09 50 22.3**	**-2.2**
GOMU				pP	Pn	09 50 26.1	-1.5
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,120nm,4.9s						
ZAA0	**Zalesovo Array**	**19.74**	**25**	P	**P**	**09 50 31.7**	**+0.8**
ZAA0				IAmb	IAmb	09 50 35.0	
	comp=Z,5.6nm,0.7s						
ZALV	**Zalesovo Beam**	**19.74**	**25**	P	**P**	**09 50 31.9**	**+1.0**
	comp=Z,4.9nm,0.4s,baz=220,slow=12,SNR=20						
	comp=Z,4.9nm,0.4s						
HYBB	**Hyderabad (bro**	**20.26**	**159**	*e*P	**P**	**09 50 37.4**	**+0.5**
ARU	**Arti**	**21.51**	**341**	P	**P**	**09 50 50.1**	**+0.5**
	comp=Z,2.6nm,0.3s,baz=15,slow=8.0,SNR=3.5						
	comp=Z,2.6nm,0.3s						
ARU	**Arti**	**21.51**	**341**	*d*/*i*P	**P**	**09 50 50.2**	**+0.5**
ARU						09 51 28.7	
ARU				S	**S**	**09 54 38.3**	**+3.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KVAR	**Kislovodsk Arr**	**22.79**	**297**	LR	LR	10 04 08.4	
	comp=Z,59nm,19.1s,baz=269,slow=47						
BELG	**Belogornoye**	**22.82**	**321**	*i* P	**P**	**09 51 01.9**	**-0.2**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CD2	**Chengdu**	**27.65**	**92**	*e*P	**P**	**09 51 46.4**	**+0.5**
PZH	**PanZhiHua**	**27.89**	**103**	P	**P**	**09 51 50.4**	**+2.3**
PZH				pmax	pmax		
	comp=Z,20nm,0.5s						
PZH				pmax	pmax		
	comp=Z,90nm,5.4s						
SONM	**Songino Array**	**28.17**	**56**	P	**P**	**09 51 51.9**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=268,slow=9.2,SNR=5.4						
	comp=Z,0.9nm,0.5s						
KMI	**Kunming**	**29.35**	**104**	⇓P	**P**	**09 52 01.8**	**+0.6**
KMI				pmax	pmax		
	comp=Z,1nm,0.7s						
BRTR	**Keskin Array B**	**29.47**	**288**	P	**P**	**09 52 01.0**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=100,slow=9.5,SNR=2.1						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**29.47**	**288**	P	**P**	**09 52 01.0**	**-1.0**
OBN	**Obninsk**	**29.88**	**319**	*e*P	**P**	**09 52 01.8**	**-3.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**31.63**	**70**	*e*P	**P**	**09 52 23.6**	**+2.7**
PBKT	**Sadao Pong**	**33.15**	**119**	P	**P**	**09 52 34.8**	**+0.6**
NRIK	**Noril'sk**	**33.96**	**10**	*ce*P	**P**	**09 52 41.7**	**+1.1**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FIA1	**FINESS Array S**	**37.40**	**326**	P	**P**	**09 53 10.3**	**+0.3**
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**09 53 10.3**	**+0.4**
	comp=Z,2.4nm,0.4s,baz=122,slow=9.2,SNR=22						
	comp=Z,2.4nm,0.4s						
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**09 53 10.1**	**+0.2**
FINES	**FINESS Array B**	**37.40**	**326**	*i* P	**P**	**09 53 10.3**	**+0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HFS	**Hagfors**	**43.00**	**322**	P	**P**	**09 53 55.9**	**0.0**
	comp=Z,2.4nm,0.5s,baz=99,slow=9.2,SNR=11						
	comp=Z,2.4nm,0.5s						
NB201	**NORSAR Array S**	**44.27**	**323**	P	**P**	**09 54 05.7**	**-0.4**
NB2	**NORSAR Subarra**	**44.31**	**323**	P	**P**	**09 54 05.9**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**09 54 06.0**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=97,slow=7.7,SNR=7.8						
	comp=Z,1.5nm,0.6s						
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**09 54 06.0**	**-0.4**
TIXI	**Tiksi**	**45.59**	**22**	P	**P**	**09 54 17.1**	**+0.8**
TIXI				IAmb	IAmb	09 54 21.6	
	comp=Z,9.1nm,1.1s						
TIXI	**Tiksi**	**45.59**	**22**	P	**P**	**09 54 17.1**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**09 56 37.8**	**-2.9**
	comp=Z,1.0nm,0.4s,baz=58,slow=6.6,SNR=22						
	comp=Z,1.0nm,0.4s						
KOWA	**Kowa**	**69.65**	**273**	P	**P**	**09 57 02.8**	**-1.9**
TOLK	**Toolik Lake Re**	**70.75**	**15**	P	**P**	**09 57 11.6**	**+0.9**
IMAR	**Indian Mountai**	**72.00**	**18**	P	**P**	**09 57 18.2**	**+0.2**
BMAR	**Burnt Mountain**	**72.77**	**14**	P	**P**	**09 57 23.8**	**+1.2**
J20K	**Nowinta River**	**73.35**	**19**	P	**P**	**09 57 27.0**	**+1.0**
C36M	**Paulatuk**	**73.71**	**6**	P	**P**	**09 57 28.2**	**+0.2**
INK	**Inuvik**	**73.74**	**9**	P	**P**	**09 57 29.1**	**+0.9**
INK				IAmb	IAmb	09 57 34.4	
	comp=Z,6.0nm,1.4s						
INK	**Inuvik**	**73.74**	**9**	P	**P**	**09 57 29.1**	**+0.9**
INK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
K20K	**Telida**	**74.03**	**19**	P	**P**	**09 57 31.1**	**+1.1**
K20K				IAmb	IAmb	09 57 31.7	
	comp=Z,3.0nm,0.8s						
MDM	**Murphy Dome**	**74.14**	**16**	P	**P**	**09 57 32.1**	**+1.4**

HEF				MSG			09 53 35.8
	comp=Z,25nm,0.1s						
KLF	**Kolari**	**1.51**	**110**	*e*P		**Pg**	**09 53 14.0 +0.1**
HARU	**Harads**	**1.66**	**171**	*e*P		**Pb**	**09 53 16.2 -0.3**
JETT	**Jettan, Norway**	**1.77**	**1**	*e*P		**Pn**	**09 53 17.2 +0.3**
JETT				*e*S		**Sn**	**09 53 40.4 +0.3**
JETT				IAML			09 53 42.3
	comp=Z,122nm,0.4s						
TRO	**Tromso**	**1.91**	**345**	Pn		**Pn**	**09 53 19.2 +0.3**
TRO				Sn		**Sn**	**09 53 44.3 +0.7**
TRO	**Tromso**	**1.91**	**345**	*e*P		**Pn**	**09 53 19.1 +0.3**
TRO				*e*S		**Sb**	**09 53 45.0 -0.2**
TRO				IAML			09 53 46.9
	comp=Z,36nm,0.3s						
TRO	**Tromso**	**1.91**	**345**	*e*P		**Pn**	**09 53 19.1 +0.3**
TRO				*e*SG		**Sb**	**09 53 44.4 -0.7**
STEI	**Steigen**	**1.93**	**276**	*e*P		**Pn**	**09 53 20.0 +1.0**
STEI				*e*S		**Sb**	**09 53 45.6 0.0**
STEI				IAML			09 53 49.4
	comp=Z,37nm,0.6s						
STEI	**Steigen**	**1.93**	**276**	*e*PG		**Pn**	**09 53 20.1 +1.0**
STEI				*e*SG		**Sn**	**09 53 44.6 +0.7**
FAUS	**Fauske**	**1.98**	**260**	*e*P		**Pn**	**09 53 20.8 +1.1**
FAUS				*e*S		**Sb**	**09 53 47.0 +0.1**
FAUS				IAML			09 53 49.9
	comp=Z,51nm,0.4s						
KALU	**Kalix**	**2.29**	**147**	*e*P		**Pb**	**09 53 25.8 -1.3**
TOF	**Tornio**	**2.34**	**136**	*e*SB		**Sb**	**09 53 58.0 +0.7**
TOF				MSG			09 54 00.8
	comp=Z,19nm,0.2s						
SGF	**Sodankyl**	**2.40**	**96**	*e*P		**Pb**	**09 53 27.5 -1.5**
SGF				*e*SG		**Sg**	**09 54 01.4 -0.6**
RNF	**Rovaniemi**	**2.52**	**116**	*e*PB		**Pb**	**09 53 30.2 -0.8**
ARCES	**ARCESS Array B**	**2.58**	**45**	Pn		**Pn**	**09 53 29.0 +1.0**
	comp=Z,1.6nm,0.3s,baz=225,slow=14,SNR=143						
ARCES				Lg		Lg	09 54 03.2
	comp=Z,3.6nm,0.3s,baz=226,slow=23,SNR=10						
	comp=Z,3.0nm,0.3s						
ARCES	**ARCESS Array B**	**2.58**	**45**	P		**Pn**	**09 53 29.0 +1.0**
ARA0	**ARCESS Array S**	**2.58**	**45**	Pn		**Pn**	**09 53 29.1 +1.1**
	baz=225,slow=14						
ARA0				Sn		**Sb**	**09 54 02.7 -1.5**
	baz=223,slow=22						
ARA0	**ARCESS Array S**	**2.58**	**45**	*e*P		**Pn**	**09 53 29.3 +1.3**
ARA0				*e*S		**Sn**	**09 53 59.9 0.0**
ARA0				IAML			09 54 11.9
	comp=Z,9.1nm,0.3s						
ARA0	**ARCESS Array S**	**2.58**	**45**	*e*P		**Pn**	**09 53 29.8 +1.8**
LOF	**Lofoten**	**2.58**	**281**	*e*P		**Pn**	**09 53 29.5 +1.5**
LOF				*e*			09 54 05.3
LOF				IAML			09 54 06.6
	comp=Z,38nm,0.4s						
MOR8	**Moi Rana**	**2.83**	**237**	*e*P		**Pn**	**09 53 32.1 +0.6**
MOR8				*e*			09 54 08.3
MOR8				IAML			09 54 09.9
	comp=Z,52nm,0.3s						
HAMF	**Hammerfest**	**3.10**	**21**	*e*P		**Pn**	**09 53 36.2 +1.1**
HAMF				*e*S		**Sn**	**09 54 12.8 0.0**
HAMF				IAML			09 54 17.0
	comp=Z,20nm,0.5s						
KONS	**Konsvik**	**3.10**	**248**	*e*P		**Pn**	**09 53 36.0 +0.9**
KONS				IAML			09 54 24.5
	comp=Z,22nm,0.3s						
KEV	**Kevo**	**3.13**	**48**	*e*P		**Pn**	**09 53 36.7 +1.2**
KEV				*e*			09 54 15.1
BURU	**Burvik**	**3.26**	**172**	*e*P		**Pn**	**09 53 39.7 +2.4**
HUSU	**Husum**	**4.50**	**186**	*e*P		**Pn**	**09 53 56.4 +2.0**
NSS	**Namsos**	**4.72**	**230**	*e*P		**Pn**	**09 53 59.1 +1.8**
APA0	**Apatity Array**	**4.83**	**86**	Pn		**Pn**	**09 53 59.1 +0.2**
	baz=287,slow=12						
APA0				Sn		**Sn**	**09 54 55.4 -0.1**
	baz=287,slow=28						
APA0				Lg		Lg	09 55 14.1
	baz=285,slow=28						
NOD	**Norderasen**	**4.92**	**210**	*e*P		**Pn**	**09 54 01.2 +1.0**
FIA0	**FINESS Array S**	**6.84**	**156**	Pn		**Pn**	**09 54 28.1 +1.6**
	baz=345,slow=14						
FIA0				Sn		**Sn**	**09 55 44.3 -0.6**
	baz=340,slow=28						
FIA0				Lg		Lg	09 56 17.1
	baz=345,slow=28						
FINES	**FINESS Array B**	**6.84**	**156**	Pn		**Pn**	**09 54 28.5 +2.0**
	comp=Z,0.1nm,0.3s,baz=344,slow=11,SNR=6.8						
FINES				Sn		**Sn**	**09 55 44.2 -0.7**
	comp=Z,0.3nm,0.3s,baz=346,slow=22,SNR=2.1						
FINES				Lg		Lg	09 56 17.7
	comp=Z,0.9nm,0.3s,baz=346,slow=26,SNR=6.3						
	comp=Z,1.4nm,0.8s						
NB2	**NORSAR Subarra**	**7.84**	**214**	Pn		**Pn**	**09 54 40.6 +0.4**
	baz=26,slow=12						
NOA	**NORSAR Array B**	**7.84**	**214**	Pn		**Pn**	**09 54 40.6 +0.4**
	baz=24,slow=11,SNR=4.8						
NOA				Sn		**Sn**	**09 56 06.7 -2.8**
	baz=212,slow=11,SNR=1.4						
NOA				Lg		Lg	09 56 50.5
	comp=Z,0.1nm,0.3s,baz=91,slow=12,SNR=5.1						
	comp=Z,0.3nm,0.6s						
NRA0	**NORESS Array S**	**8.04**	**212**	Pn		**Pn**	**09 54 43.4 +0.3**
	baz=19,slow=18						
HFS	**Hagfors**	**8.22**	**204**	Pn		**Pn**	**09 54 45.6 +0.2**
	comp=Z,0.1nm,0.3s,baz=18,slow=16,SNR=6.0						
HFS				Sn		**Sn**	**09 56 15.7 -3.3**
	comp=Z,0.4nm,0.3s,baz=35,slow=24,SNR=7.2						
HFS				Lg		Lg	09 57 04.0
	comp=Z,0.8nm,0.3s,baz=22,slow=28,SNR=6.4						
	comp=Z,1.3nm,0.6s						
HFS	**Hagfors**	**8.22**	**204**	Pn		**Pn**	**09 54 45.4 -0.1**
	baz=10,slow=14						
HFS				Lg		Lg	09 57 06.3
	baz=21,slow=37						
SPITS	**Spitsbergen Ar**	**10.50**	**356**	Pn		**Pn**	**09 55 17.8 +1.3**
	baz=152,slow=13						
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**45.49**	**70**	LR		LR	10 23 22.4
	comp=Z,23nm,18.1s,baz=112,slow=40						
ILAR	**Eielson Array**	**47.40**	**353**	P		**P**	**10 01 21.2 +0.8**
	comp=Z,0.2nm,0.6s,baz=353,slow=6.4,SNR=4.2						
	comp=Z,0.2nm,0.6s						

AUST ***13*** *10:16:45.1±1.0,30.57S×121.61E,h0km, Error ellipse: s-maj=25.9km s-min=10.7km az=175.0*
NOU ***13*** *10:16:46.7,30.47S×121.49E,h0km,MLv4.0/6, Western Australia*

ISC 13 10:16:46.2±1.1,30.52S±0.10×121.54E±0.06,h11km,n16, σ18.38/18,Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLBR	**Kellerberrin**	**3.42**	**251**	P	**Pn**	**10 17 40.1**	**+0.5**
	baz=3.5						
KLBR	**Kellerberrin**	**3.42**	**251**	P	**Pn**	**10 17 40.8**	**+1.3**
BLDU	**Ballidu**	**4.17**	**268**	P	**Pn**	**10 17 50.3**	**+0.4**
	baz=4.2						
BLDU				S	**Sn**	**10 18 37.3**	**-1.3**
	baz=4.2						
BLDU	**Ballidu**	**4.17**	**268**	P	**Pn**	**10 17 51.4**	**+1.6**
MEEK	**Meekatharra**	**4.65**	**326**	P	**Pn**	**10 17 57.5**	**+1.1**
	baz=4.7						
MEEK	**Meekatharra**	**4.65**	**326**	P	**Pn**	**10 17 57.4**	**+0.9**
MUN	**Mundaring**	**4.79**	**251**	P	**Pn**	**10 17 58.4**	**0.0**
	baz=4.8						
MORW	**Morawa**	**5.00**	**285**	P	**Pn**	**10 18 01.3**	**+0.1**
	baz=5.1						
MORW	**Morawa**	**5.00**	**285**	P	**Pn**	**10 18 01.0**	**-0.2**
RKGY	**Rocky Gully**	**5.61**	**222**	P	**Pn**	**10 18 11.3**	**+1.7**
	baz=5.6						
FORT	**Forrest**	**5.62**	**94**	P	**Pn**	**10 18 10.0**	**+0.3**
	baz=5.6						
FORT				S	**Sn**	**10 19 13.2**	**-1.1**
	baz=5.6						
FORT	**Forrest**	**5.62**	**94**	P	**Pn**	**10 18 12.1**	**+2.3**
WRKA	**Warakurna**	**8.10**	**49**	P	**Pn**	**10 18 46.0**	**+2.1**
	baz=8.1						
WRKA	**Warakurna**	**8.10**	**49**	P	**Pn**	**10 18 45.4**	**+1.5**
MULG	**Mulgathing**	**10.81**	**92**	P	**Pn**	**10 19 20.7**	**-0.2**
	baz=11						
OOD	**Oodnadatta**	**12.66**	**81**	P	**Pn**	**10 19 44.3**	**-2.0**
	baz=13						

IDC ***13*** *10:29:16.4±1.4,22.30S×172.98E,h0km,mb3.8/6, mbtmp3.8/7,ML3.5/1,MS3.1/3,Error ellipse: s-maj=55.1km s-min=24.1km az=154.0*

ISC 13 10:29:21.3±1.1,22.45S±0.3×173.0E±0.1,h32km,n19, σ0.99/11,mb3.8/6,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.07**	**271**	Pn	**Pn**	**10 30 48.5**	**-0.4**
	1.1nm,0.3s,baz=36,slow=13,SNR=15						
DZM				Sn	**Sn**	**10 31 58.3**	**+1.0**
	baz=172,slow=24						
	4.3nm,0.5s						
MSVF	**Nonsavu**	**6.62**	**47**	LR	LR	10 32 53.1	
	comp=Z,10nm,18.5s,baz=256,slow=33						
STKA	**Stephens Creek**	**29.42**	**244**	P	**P**	**10 35 22.8**	**+0.8**
	1.3nm,0.6s,baz=72,slow=13,SNR=2.8						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**35.92**	**260**	P	**P**	**10 36 18.5**	**-0.5**
	0.8nm,1.0s,baz=91,slow=9.3,SNR=5.4						
	0.8nm,1.0s						
WRA	**Warramunga Arr**	**36.06**	**266**	P	**P**	**10 36 18.8**	**-1.3**
	0.3nm,0.6s,baz=100,slow=8.2,SNR=2.6						
	0.3nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**41.06**	**351**	T	T	11 20 28.0	
	baz=171,slow=76,SNR=8.9						
H11S3	**WAKE ISLAND Hy**	**41.06**	**351**	T	T	11 20 27.5	
	baz=171,slow=76,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**41.08**	**351**	T	T	11 20 27.4	
	baz=171,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**42.23**	**351**	T	T	11 21 56.4	
	baz=176						
H11N3	**WAKE ISLAND Hy**	**42.23**	**351**	T	T	11 21 58.0	
	baz=176						
H11N2	**WAKE ISLAND Hy**	**42.25**	**351**	T	T	11 21 58.5	
	baz=176						
MJAR	**Matsushiro Arr**	**67.16**	**330**	LR	LR	11 05 18.7	
	comp=Z,14nm,21.4s,baz=200,slow=32						
PETK	**Petropavlovsk-**	**76.31**	**351**	P	**P**	**10 41 06.6**	**0.0**
	2.1nm,0.9s,baz=141,slow=9.3,SNR=4.8						
	2.1nm,0.9s						
MA2	**Magadan**	**83.65**	**349**	LR	LR	11 14 19.0	
	comp=Z,16nm,19.2s,baz=184,slow=32						
NVAR	**Mina Array Bea**	**88.28**	**47**	P	**P**	**10 42 11.1**	**+1.2**
	0.3nm,0.8s,baz=203,slow=4.4,SNR=2.3						
	0.3nm,0.8s						
SONM	**Songino Array**	**91.81**	**322**	P	**P**	**10 42 26.4**	**+0.4**
	0.8nm,1.0s,baz=90,slow=2.9,SNR=4.8						
	0.8nm,1.0s						
ARCES	**ARCESS Array B**	**128.94**	**346**	PKP	**PKPdf**	**10 48 23.5**	**-1.5**
	3.7nm,1.0s,baz=69,slow=6.2,SNR=4.8						
GERES	**GERESS Array B**	**148.86**	**333**	PKPbc	**PKPbc**	**10 49 05.2**	**-0.5**
	0.3nm,0.6s,baz=40,slow=5.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**167.65**	**224**	PKPab	**PKPab**	**10 50 31.1**	**-0.1**
	0.3nm,0.7s,baz=108,slow=4.7,SNR=2.4						

IDC ***13*** *10:35:32.3±2.6,22.93S×172.92E,h0km,mb3.6/4, mbtmp3.5/5,ML3.0/1,MS3.2/3,Error ellipse: s-maj=123.1km s-min=31.0km az=163.0*

ISC 13 10:35:37.4±2.2,23.0S±0.7×172.9E±0.2,h35km,n14, σ0.89/6,mb3.5/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.04**	**278**	Pn	**Pn**	**10 37 04.7**	**+0.3**
	0.4nm,0.3s,baz=55,slow=19,SNR=6.3						
DZM				LR	LR	10 39 04.4	
	comp=Z,82nm,19.6s,baz=202,slow=35						
	2.9nm,0.6s						
RAO	**Raoul Island**	**10.33**	**129**	LR	LR	10 41 15.3	
	comp=Z,179nm,20.1s,baz=334,slow=33						
ASAR	**Alice Springs**	**35.73**	**261**	P	**P**	**10 42 32.7**	**-0.4**
	0.4nm,0.9s,baz=90,slow=8.3,SNR=4.2						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**35.94**	**267**	P	**P**	**10 42 34.7**	**-0.1**
	0.6nm,0.9s,baz=100,slow=8.7,SNR=3.2						
	0.6nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**41.70**	**351**	T	T	11 26 41.7	
	baz=171,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**41.70**	**351**	T	T	11 26 42.0	
	baz=171,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**41.71**	**351**	T	T	11 26 42.9	
	baz=171,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**42.87**	**352**	T	T	11 28 10.2	
	baz=174						
H11N3	**WAKE ISLAND Hy**	**42.88**	**352**	T	T	11 28 11.4	
	baz=174						
H11N2	**WAKE ISLAND Hy**	**42.89**	**352**	T	T	11 28 13.3	
	baz=174						
SIJI	**Sorong**	**46.02**	**293**	LR	LR	11 03 13.4	
	comp=Z,58nm,18.1s,baz=142,slow=36						
NVAR	**Mina Array Bea**	**88.80**	**47**	P	**P**	**10 48 28.1**	**0.0**
	0.1nm,0.4s,baz=224,slow=6.3,SNR=4.5						
	0.1nm,0.4s						
SONM	**Songino Array**	**92.28**	**322**	P	**P**	**10 48 43.1**	**-0.8**
	0.5nm,0.6s,baz=150,slow=4.7,SNR=5.6						
	0.5nm,0.6s						
GERES	**GERESS Array B**	**149.41**	**333**	PKPbc	**PKPbc**	**10 55 24.0**	**+1.2**
	0.1nm,0.3s,baz=64,slow=2.3,SNR=2.2						

NIED ***13*** *10:52:48.8,42.96N×144.81E,h59km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.74; Mϑϑ-0.64; Mϕϕ-1.10; Mrϑ2.58; Mϑϕ-0.47; Mϕr0.27; Fault plane solution: M₀2.95000×10¹⁴ NP1: ϕs214.00000°,δ18.00000°,λ50.00000°. NP2:ϕs75.00000°, δ76.00000°,λ102.00000°.*
JMA ***13*** *10:52:48.8±0.1,43.0N±0.5×144.8E±0.4,h59km,MV3.5/36, OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .
SKHL ***13*** *10:52:49.6±0.3,42.90N×144.90E,h60km±3km,mb4.2/3*

ISC 13 10:52:48.4±1.6,42.94N±0.08×144.84E±0.04,h60km±10km, n13,σ0.66/25,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**0.12**	**298**	*e*P	**Pn**	**10 52 57.7**	**+0.2**
JAK				*e*S	**Sn**	**10 53 04.2**	**+0.1**
JKHN	**Kushirohamanak**	**0.28**	**59**	*e*P	**Pn**	**10 52 59.0**	**+0.6**
JKHN				*e*S	**Sn**	**10 53 06.0**	**+0.4**
JNK	**Nakash**	**0.65**	**352**	*e*P	**Pn**	**10 53 01.6**	**-0.5**
JNK				*e*S	**Sn**	**10 53 11.0**	**-1.1**
JOB	**Onbets**	**0.74**	**267**	*e*P	**Pn**	**10 53 03.3**	**+0.1**
JOB				*e*S	**Sn**	**10 53 13.8**	**-0.1**
NMR	**Nemuro--Hokkai**	**0.78**	**56**	*e*P	**Pn**	**10 53 03.6**	**-0.1**
NMR				*e*S	**Sn**	**10 53 14.0**	**-0.8**
NEM2	**Nemuro 2**	**0.79**	**57**	*e*P	**Pn**	**10 53 03.6**	**-0.1**
NEM2				*e*S	**Sn**	**10 53 14.1**	**-0.9**
JAR	**Ashorobuto**	**0.86**	**295**	*e*P	**Pn**	**10 53 04.7**	**0.0**
JAR				*e*S	**Sn**	**10 53 16.4**	**-0.2**
JRA	**Rausu**	**1.02**	**12**	*e*P	**Pn**	**10 53 06.9**	**+0.2**
JRA				*e*S	**Sn**	**10 53 20.2**	**0.0**
JCH	**Churui**	**1.13**	**254**	*e*P	**Pn**	**10 53 08.1**	**-0.1**
JCH				*e*S	**Sn**	**10 53 22.6**	**-0.3**
JTKR	**Abashiri--Toko**	**1.23**	**327**	*e*P	**Pn**	**10 53 10.0**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**1.32**	**34**	*e*P	**Pn**	**10 53 11.3**	**+0.6**
YUK				AMB	AMB	10 53 14.1	
	150nm,0.4s						
YUK				*e*S	**Sn**	**10 53 27.9**	**+0.5**
YUK				A	A	10 53 28.6	
	2μm,0.4s						
YUK				A	A	10 53 28.6	
	1μm,0.4s						
SHO	**Shikotan**	**1.73**	**57**	*e*P	**Pn**	**10 53 16.2**	**+0.1**
SHO				AMB	AMB	10 53 18.2	
	30nm,0.3s						
SHO				*e*S	**Sn**	**10 53 35.3**	**-1.8**
SHO				A	A	10 53 37.8	
	560nm,0.3s						
SHO				A	A	10 53 37.8	
	390nm,0.3s						
KUR	**Kuril'sk**	**3.17**	**43**	*e*P	**Pn**	**10 53 37.0**	**+1.3**
KUR				AMB	AMB	10 53 42.2	
	40nm,0.4s						
KUR				*e*S	**Sn**	**10 54 12.4**	**+0.1**
KUR				A	A	10 54 17.1	
	40nm,0.4s						
KUR				A	A	10 54 17.1	
	60nm,0.4s						

NOU 13 11:05:53.3,20.74S×169.69E,h61km,MLv4.2/12, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.72**	**244**	P	Pn	11 06 20.6	-0.3
PINNC	**Pines Island,**	**2.80**	**228**	P	Pn	11 06 35.3	-0.3
YATNC	**Mamie plateau,**	**2.92**	**243**	P	Pn	11 06 36.1	-1.2
OUENC	**Ouen Island, N**	**3.13**	**237**	P	Pn	11 06 40.3	+0.1
RTV	**Rentapao**	**3.17**	**338**	P	Pn	11 06 40.6	-0.1
DZM	**Mont Dzumac**	**3.30**	**246**	P	Pn	11 06 42.7	+0.1
DVP	**Devils Point**	**3.32**	**334**	P	Pn	11 06 43.9	+1.1
NOUC	**Port Laguerre**	**3.43**	**246**	P	Pn	11 06 45.3	+0.9
KOUNC	**Koumac, New Ca**	**5.06**	**271**	P	Pn	11 07 07.3	+0.6
NFK	**Norfolk Island**	**8.42**	**191**	P	Pn	11 07 52.9	+0.3

NEIC ***13*** *11:07:05.8±2.0,55.48N±0.04×158.52W±0.08,h18km±4km, ML3.0/16,ML2.8/21(AEIC),Error ellipse: s-maj=7.6km s-min=3.3km az=127.0*

AEIC 13 11:07:05.7±1.7,55.49N±0.02×158.50W±0.06,h13km±5km, Error ellipse: s-maj=5.5km s-min=2.4km az=114.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNSG	**Veniaminof 6**	**0.72**	**333**		Pg	11 07 19.6	+0.1
CHGN	**Chignik**	**0.81**	**3**		Pg	11 07 20.6	-0.8
CHGN					Sg	11 07 31.6	-0.4
VNHG	**Veniaminof 1**	**0.82**	**333**		Pg	11 07 21.6	0.0
CNBA	**Chernabura Isl**	**0.92**	**223**		Pg	11 07 21.5	-1.9
CNBA					Sg	11 07 34.4	-1.0
CNBA	**Chernabura Isl**	**0.92**	**223**	IAML		11 07 35.2	
	comp=E,441nm,0.7s						
CNBA				IAML		11 07 36.1	
	comp=N,446nm,0.6s						
VNFG	**Fog Glacier, M**	**0.99**	**324**		Pg	11 07 24.9	+0.1
VNFG					Sb	11 07 38.5	+0.7
SDPT	**Sand Point**	**1.14**	**264**		Pb	11 07 25.6	-1.6
SDPT					Sb	11 07 40.8	-1.1
ANPB	**Aniakchak Plen**	**1.32**	**5**		Pn	11 07 29.5	-0.3
ANPB					Sb	11 07 47.1	0.0
ANPK	**Aniakchak Peak**	**1.37**	**9**		Pn	11 07 30.5	0.0
AZAC	**Aniakchak**	**1.42**	**6**		Pn	11 07 31.4	+0.2
ANNE	**Aniakchak Nort**	**1.45**	**10**		Pn	11 07 31.4	-0.2
CHIR	**Chirikof Islan**	**1.66**	**77**		Pn	11 07 33.8	-0.7
PS4A	**Pavlof South-4**	**1.92**	**267**		Pn	11 07 38.1	+0.1
HAG	**Hague Volcano**	**1.95**	**266**		Pn	11 07 38.9	+0.4
S12K	**Black Hills**	**2.03**	**277**		Pn	11 07 40.7	+1.1
SII	**Sitkinak Islan**	**2.65**	**64**	Pn	Pn	11 07 46.9	-1.1
SII				IAML		11 08 10.3	
	comp=E,86nm,1.9s						
OHAK	**Old Harbor**	**3.38**	**57**	Pn	Pn	11 07 56.6	-1.4
OHAK				IAML		11 08 53.1	
	comp=E,25nm,2.9s						
OHAK				IAML		11 08 58.8	
	comp=N,25nm,2.4s						
KDAK	**Kodiak Island**	**3.99**	**52**	Pn	Pn	11 08 05.1	-1.3
KDAK				IAML		11 10 00.5	
	comp=N,25nm,2.3s						
KDAK				IAML		11 10 32.5	
	comp=N,19nm,2.9s						
O18K	**Koktuh Hills**	**4.72**	**21**	Pn	Pn	11 08 17.5	+1.0
O18K				IAML		11 10 51.8	
	comp=E,16nm,2.8s						
SVW2	**Sparrevohn**	**5.83**	**14**	Pn	Pn	11 08 31.6	-0.1

TAP 13 11:26:58.4,24.28N×121.90E,h38km±1km,ML1.6,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.20**	**326**	*e*P	Pn	11 27 05.3	-2.1
	baz=326						
EWUT				*e*S	Sn	11 27 10.7	-5.2
	baz=326						
NACB	**Ninganchiao**	**0.30**	**249**	*e*P	Pn	11 27 06.8	+0.1
	baz=249						
NACB				*e*S	Sn	11 27 13.4	-0.2
	baz=249						
TWC	**Suao**	**0.33**	**352**	*e*P	Pn	11 27 07.8	+1.0
	baz=353						
TWC				*e*S	Sn	11 27 15.0	+1.4
	baz=353						
TWD	**Chiawan**	**0.34**	**234**	*e*S	Sn	11 27 14.2	+0.6
	baz=233						
ETLH	**Xiulin Townshi**	**0.39**	**259**	*e*P	Pn	11 27 07.9	+0.5
	baz=259						
ETLH				*e*S	Sn	11 27 15.4	+1.1
	baz=259						
NDS	**Dongshan**	**0.39**	**335**	*e*P	Pn	11 27 07.8	+0.4
	baz=334						
NDS				*e*S	Sn	11 27 15.1	+0.9
	baz=334						
LATG	**Datong**	**0.42**	**307**	*e*P	Pn	11 27 08.7	+0.6
	baz=306						
LATG				*e*S	Sn	11 27 15.9	+0.9
	baz=306						
ENTT	**Nioudou**	**0.47**	**320**	*e*P	Pn	11 27 08.9	+0.2
	baz=320						
ENTT				*e*S	Sn	11 27 16.9	+1.1
	baz=320						
NDT	**Datong Townshi**	**0.48**	**313**	*e*P	Pn	11 27 09.1	+0.3
	baz=312						
NDT				*e*S	Sn	11 27 17.1	+1.1
	baz=312						
NNSB	**Datong**	**0.49**	**288**	*e*P	Pn	11 27 09.6	+0.5
	baz=287						
NNSB				*e*S	Sn	11 27 17.6	+1.1
	baz=287						
NNS	**Nan Shan**	**0.51**	**289**	*e*P	Pn	11 27 09.5	+0.2
	baz=288						
NNS				*e*S	Sn	11 27 17.6	+0.7
	baz=288						
FUSB	**Fushanzhiwuyua**	**0.56**	**329**	*e*P	Pn	11 27 10.5	+0.5
	baz=329						
FUSB				*e*S	Sn	11 27 20.0	+1.9
	baz=329						
WHF	**Hehuan Shan**	**0.59**	**257**	*e*P	Pn	11 27 10.8	0.0
	baz=256						
WHF				*e*S	Sn	11 27 20.1	+0.6
	baz=256						
FUSS	**Fushou**	**0.60**	**267**	*e*P	Pn	11 27 10.9	+0.1
	baz=266						
FUSS				*e*S	Sn	11 27 20.6	+1.3
	baz=266						
YHNB	**Yeheng**	**0.61**	**309**	*e*P	Pn	11 27 10.7	-0.2
	baz=309						
YHNB				*e*S	Sn	11 27 20.8	+1.2
	baz=309						
NSK	**Sanguang**	**0.63**	**309**	*e*P	Pn	11 27 11.2	+0.2
	baz=308						
NSK				*e*S	Sn	11 27 20.6	+0.7
	baz=308						
TDCB	**Techi**	**0.68**	**268**	*e*P	Pn	11 27 12.1	+0.4
	baz=267						
TDCB				*e*S	Sn	11 27 21.9	+0.8
	baz=267						
**T

KRNET ***13*** *11:30:32.6±0.1, 40.48N×78.64E, mb4.0*
SOME ***13*** *11:30:32.9, 40.72N×78.18E, h5km*
IDC ***13*** *11:30:33.6±2.2, 40.78N×78.09E, h0km, mb3.3/3, mbtmp3.3/5, ML2.8/2, MS2.9/1, Error ellipse: s-maj=50.7km s-min=18.3km az=135.0*
NNC ***13*** *11:30:34.2±0.9, 40.73N×78.24E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=6.3km s-min=4.3km az=171.0*

ISC 13 11:30:35.8±2.0, 40.80N±0.07×78.19E±0.03, h8km±11km, n69, σ1°72/99, mb3.2/3, 13C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.69**	**5**	⇓*i*P		**Pn**	**11 31 07.1**	**+1.2**
	baz=55							
PRZ				⇓*i*S		**Sg**	**11 31 32.0**	**+1.7**
	baz=55							
ULHL	**Ulahol**	**2.06**	**315**	⇓*e*P		**Pb**	**11 31 13.5**	**0.0**
	baz=15							
ULHL				⇓*i*S		**Sg**	**11 31 44.3**	**+2.4**
	baz=15							
SATY	**Saty**	**2.27**	**4**	*e*P		**Pb**	**11 31 17.6**	**+0.5**
SATY	133nm,0.5s			*e*S		**Sg**	**11 31 49.7**	**+1.0**
	211nm,0.4s							
SATY	**Saty**	**2.27**	**4**	Pg		**Pb**	**11 31 17.6**	**+0.5**
SATY	133nm,0.5s			Lg		Lg	11 31 49.7	
	211nm,0.4s							
ZHN	**Zhinishke**	**2.38**	**4**	*e*P		**Pb**	**11 31 19.5**	**+0.6**
	72nm,0.3s							
ZHN				*e*S		**Sg**	**11 31 53.0**	**+0.8**
	258nm,0.3s							
ZHN	**Zhinishke**	**2.38**	**4**	Pg		**Pb**	**11 31 19.5**	**+0.6**
	72nm,0.3s							
ZHN				Lg		Lg	11 31 53.0	
	258nm,0.3s							
UZB	**Uzynbulak**	**2.43**	**15**	*e*P		**Pb**	**11 31 19.2**	**-0.6**
	18nm,0.5s							
UZB				*e*S		**Sg**	**11 31 52.7**	**-1.2**
	185nm,0.6s							
UZB	**Uzynbulak**	**2.43**	**15**	Pg		**Pb**	**11 31 19.2**	**-0.6**
	18nm,0.5s							
UZB				Lg		Lg	11 31 52.7	
	185nm,0.6s							
MDOK	**Medeo**	**2.51**	**341**	*e*P		**Pb**	**11 31 21.8**	**+0.5**
	95nm,0.4s							
MDOK				*e*S		**Sg**	**11 31 56.9**	**+0.3**
	276nm,0.6s							
MDOK	**Medeo**	**2.51**	**341**	Pg		**Pb**	**11 31 21.8**	**+0.5**
	95nm,0.4s							
MDOK				⇓Pg		**Pb**	**11 31 21.8**	**+0.5**
	57nm,0.4s							
MDOK				Lg		Lg	11 31 55.8	
	258nm,0.8s							
MDOK				Lg		Lg	11 31 56.9	
	276nm,0.6s							
IZV	**Izvestkoviy**	**2.53**	**333**	*e*P		**Pb**	**11 31 22.4**	**+0.8**
	44nm,0.2s							
IZV				*e*S		**Sg**	**11 31 57.9**	**+0.8**
	137nm,0.3s							
IZV	**Izvestkoviy**	**2.53**	**333**	Pg		**Pb**	**11 31 22.4**	**+0.8**
	44nm,0.2s							
IZV				Lg		Lg	11 31 57.9	
	137nm,0.3s							
SHLS	**Shalkode**	**2.54**	**21**	*e*P		**Pg**	**11 31 24.4**	**-0.2**
	26nm,0.3s							
SHLS				*e*S		**Sg**	**11 32 01.1**	**+3.6**
	133nm,0.6s							
SHLS	**Shalkode**	**2.54**	**21**	Pg		**Pg**	**11 31 24.4**	**-0.2**
	26nm,0.3s							
SHLS				Lg		Lg	11 32 01.1	
	133nm,0.6s							
AAA	**Alma-Ata**	**2.59**	**339**	*e*P		**Pb**	**11 31 23.9**	**+1.4**
	192nm,0.3s							
AAA				*e*S		**Sg**	**11 32 00.4**	**+1.4**
	413nm,0.4s							
AAA	**Alma-Ata**	**2.59**	**339**	Pg		**Pb**	**11 31 23.9**	**+1.4**
	192nm,0.3s							
AAA				Lg		Lg	11 32 00.4	
	413nm,0.4s							
MTBS	**Maitube**	**2.68**	**331**	*e*P		**Pb**	**11 31 24.8**	**+0.8**
	30nm,0.2s							
MTBS				*e*S		**Sg**	**11 32 02.0**	**+0.3**
	202nm,0.4s							
MTBS	**Maitube**	**2.68**	**331**	Pg		**Pb**	**11 31 24.8**	**+0.8**
	30nm,0.2s							
MTBS				Lg		Lg	11 32 02.1	
	202nm,0.4s							
KURS	**Kuram**	**2.69**	**360**	*e*P		**Pb**	**11 31 25.3**	**+1.0**
	102nm,0.5s							
KURS				*e*S		**Sg**	**11 32 02.6**	**+0.4**
	129nm,0.7s							
KURS	**Kuram**	**2.69**	**360**	Pg		**Pb**	**11 31 25.3**	**+1.0**
	102nm,0.5s							
KURS				Lg		Lg	11 32 02.6	
	129nm,0.7s							
KPKS	**Kokpek**	**2.69**	**8**	*e*P		**Pb**	**11 31 24.6**	**+0.3**
	142nm,0.3s							
KPKS				*e*S		**Sg**	**11 32 01.7**	**-0.6**
	310nm,0.5s							
KPKS	**Kokpek**	**2.69**	**8**	Pg		**Pb**	**11 31 24.6**	**+0.3**
	142nm,0.3s							
KPKS				Lg		Lg	11 32 01.7	
	310nm,0.5s							
KST	**Kastek**	**2.79**	**324**	*e*P		**Pb**	**11 31 26.6**	**+0.6**
	67nm,0.5s							
KST				*e*S		**Sg**	**11 32 05.4**	**-0.1**
	185nm,0.6s							
KST	**Kastek**	**2.79**	**324**	Pg		**Pb**	**11 31 26.6**	**+0.6**
	87nm,0.5s							
KST				Lg		Lg	11 32 05.4	
	185nm,0.6s							
TKM2	**Tokmak 2**	**2.87**	**319**	P		**Pn**	**11 31 25.1**	**+3.1**
	SNR=54							
TKM2	**Tokmak 2**	**2.87**	**319**	⇓Pg		**Pb**	**11 31 28.3**	**+0.9**
	26nm,0.5s							
TKM2				⇑Lg		Lg	11 32 08.0	
	127nm,0.7s							
TKM2	**Tokmak 2**	**2.87**	**319**	⇑*i*P		**Pn**	**11 31 25.3**	**+3.2**
	baz=18							
TKM2				⇑*i*S		**Sb**	**11 32 03.6**	**+0.8**
	baz=18							
KBK	**Karagaybulak**	**3.06**	**309**	P		**Pb**	**11 31 32.1**	**+1.5**
	SNR=30							
KBK	**Karagaybulak**	**3.06**	**309**	⇑*i*P		**Pn**	**11 31 27.8**	**+3.2**
	baz=9.0							
KBK				⇑*i*S		**Sb**	**11 32 08.1**	**0.0**
	baz=9.0							
ARLS	**Aral**	**3.10**	**291**	⇑*i*P		**Pn**	**11 31 27.8**	**+2.6**
	baz=94							
ARLS				⇑*i*S		**Sb**	**11 32 08.1**	**-1.2**
	baz=94							
KTMS	**Ketmen**	**3.10**	**31**	*e*P		**Pb**	**11 31 30.8**	**-0.5**
	4.5nm,0.3s							
KTMS				*e*S		**Sb**	**11 32 12.1**	**+2.9**
	49nm,0.5s							
KTMS	**Ketmen**	**3.10**	**31**	Pg		**Pb**	**11 31 30.8**	**-0.5**
	4.5nm,0.3s							
KTMS				Lg		Lg	11 32 12.1	
	49nm,0.5s							
KTBS	**Karatobe**	**3.12**	**340**	*e*P		**Pb**	**11 31 32.3**	**+0.7**
	37nm,0.4s							
KTBS				*e*S		**Sg**	**11 32 15.0**	**-1.1**
	189nm,0.3s							
KTBS	**Karatobe**	**3.12**	**340**	Pg		**Pb**	**11 31 32.3**	**+0.7**
	37nm,0.4s							
KTBS				Lg		Lg	11 32 15.0	
	189nm,0.3s							
AAK	**Ala-Archa**	**3.32**	**305**	P		**Pb**	**11 31 36.2**	**+1.2**
	SNR=34							
AAK	**Ala-Archa**	**3.32**	**305**	⇓*i*P		**Pn**	**11 31 31.4**	**+3.2**
	baz=6.0							
AAK				⇓*i*S		**Sb**	**11 32 14.3**	**-1.4**
	baz=6.0							
CHMS	**Chumysh**	**3.38**	**312**	P		**Pb**	**11 31 37.3**	**+1.3**
	SNR=24							
CHMS	**Chumysh**	**3.38**	**312**	⇓Pg		**Pb**	**11 31 36.7**	**+0.7**
	61nm,0.9s							
CHMS				⇓Lg		Lg	11 32 23.2	
	113nm,0.8s							
CHMS	**Chumysh**	**3.38**	**312**	⇓*i*P		**Pn**	**11 31 32.2**	**+3.3**
	baz=12							
CHMS				⇓*i*S		**Sb**	**11 32 15.6**	**-1.6**
	baz=12							
KUU	**Kurty**	**3.39**	**337**	*e*P		**Pb**	**11 31 36.5**	**+0.5**
	18nm,0.3s							
KUU				*e*S		**Sg**	**11 32 22.7**	**-1.8**
	52nm,0.5s							
KUU	**Kurty**	**3.39**	**337**	Pg		**Pb**	**11 31 36.5**	**+0.5**
	18nm,0.3s							
KUU				Lg		Lg	11 32 22.7	
	52nm,0.5s							
ARXS	**Arharly**	**3.43**	**356**	*e*P		**Pb**	**11 31 37.2**	**+0.4**
	18nm,0.4s							
ARXS				*e*S		**Sg**	**11 32 24.0**	**-1.8**
	82nm,0.5s							
ARXS	**Arharly**	**3.43**	**356**	Pg		**Pb**	**11 31 37.2**	**+0.4**
	18nm,0.4s							
ARXS				Lg		Lg	11 32 24.0	
	82nm,0.5s							
KRBS	**Karabastau**	**3.45**	**328**	*e*P		**Pb**	**11 31 37.7**	**+0.6**
	23nm,0.3s							
KRBS				*e*S		**Sg**	**11 32 24.7**	**-1.8**
	103nm,0.6s							
KRBS	**Karabastau**	**3.45**	**328**	Pg		**Pb**	**11 31 37.7**	**+0.6**
	23nm,0.3s							
KRBS				Lg		Lg	11 32 24.7	
	103nm,0.6s							
AML	**Almayashu**	**3.63**	**293**	P		**Pb**	**11 31 42.3**	**+1.9**
	SNR=18							
USP	**Ospenovka**	**3.69**	**313**	P		**Pb**	**11 31 41.6**	**+0.3**
	SNR=32							
USP	**Ospenovka**	**3.69**	**313**	⇑*i*P		**Pn**	**11 31 36.5**	**+3.3**
	baz=13							
USP				⇑*i*S		**Sb**	**11 32 23.2**	**-3.1**
	baz=13							
DJR	**Jarkent**	**3.73**	**18**	*e*P		**Pb**	**11 31 42.1**	**+0.2**
	8.3nm,0.3s							
DJR				*e*S		**Sg**	**11 32 31.9**	**-3.6**
	42nm,0.4s							
DJR	**Jarkent**	**3.73**	**18**	Pg		**Pb**	**11 31 42.1**	**+0.2**
	8.3nm,0.3s							
DJR				Lg		Lg	11 32 31.9	
	42nm,0.4s							
SGDS	**Sogindy**	**3.75**	**316**	*e*P		**Pb**	**11 31 42.7**	**+0.5**
	8.0nm,0.4s							
SGDS				*e*S		**Sg**	**11 32 33.3**	**-2.9**
	66nm,0.6s							
SGDS	**Sogindy**	**3.75**	**316**	Pg		**Pb**	**11 31 42.7**	**+0.5**
	8.0nm,0.4s							
SGDS				Lg		Lg	11 32 33.3	
	66nm,0.6s							
EKS2	**Erkin-Say**	**3.79**	**301**	P		**Pb**	**11 31 45.2**	**+2.2**
	SNR=11							
EKS2	**Erkin-Say**	**3.79**	**301**	⇓*i*P		**Pn**	**11 31 37.8**	**+3.2**
	baz=2.0							
EKS2				⇓*i*S		**Sb**	**11 32 25.3**	**-3.9**
	baz=2.0							
MRKS	**Merke**	**4.19**	**299**	*e*P		**Pg**	**11 31 53.6**	**-2.4**
	17nm,0.6s							
MRKS				*e*S		**Sg**	**11 32 51.5**	**+1.1**
	45nm,0.8s							
TDK	**Taldyqorghan**	**4.21**	**2**	*e*P		**Pg**	**11 31 54.5**	**-1.8**
	78nm,0.5s							
TDK				*e*S		**Sg**	**11 32 52.9**	**+2.0**
	248nm,1.2s							
BTLS	**Baital**	**5.22**	**326**	*e*P		**Pb**	**11 32 11.1**	**+3.8**
	6.2nm,0.6s							
BTLS				*e*S		**Sg**	**11 33 22.4**	**-0.9**
	23nm,0.8s							
BTLS	**Baital**	**5.22**	**326**	Pg		**Pb**	**11 32 11.1**	**+3.8**
	6.2nm,0.6s							
BTLS				Lg		Lg	11 33 22.4	
	23nm,0.8s							
KK31	**Karatay Array**	**6.17**	**294**	⇓Pg		**Pb**	**11 32 27.2**	**+3.7**
	1.9nm,0.5s,baz=106,slow=18,SNR=33							
KK31				Lg		Lg	11 33 48.8	
	5.4nm,0.5s,baz=125,slow=27,SNR=8.8							
IUG	**Iuzhnay**	**6.28**	**285**	*e*P		Pb	11 32 30.7	+5.4
	94nm,0.3s							
IUG				*e*S		**Sg**	**11 33 54.8**	**-2.4**
	22nm,0.7s							
MK31	**Makanchi Array**	**6.69**	**25**	Pn		**Pn**	**11 32 14.5**	**+0.2**
	0.3nm,0.3s,baz=204,slow=13,SNR=12							
MK31				⇑Sn		**Sn**	**11 33 30.8**	**0.0**
	3.9nm,0.7s							
MK31				⇑Lg		Lg	11 34 03.1	
	2.2nm,0.5s,baz=210,slow=28,SNR=3.8							
MKAR	**Makanchi Array**	**6.69**	**25**	Pn		**Pn**	**11 32 14.9**	**+0.6**
	0.3nm,0.3s,baz=207,slow=14,SNR=12							
MKAR				Sn		**Sn**	**11 33 30.8**	**+0.1**
	0.5nm,0.3s,baz=195,slow=19,SNR=6.5							
MKAR				Lg		Lg	11 34 06.8	
	0.4nm,0.3s,baz=215,slow=28,SNR=2.6							
	0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**9.83**	**1**	⇑Lg		Lg	11 35 48.3	
	24nm,1.0s							
KURK	**Kurchatov**	**9.93**	**2**	⇑Lg		Lg	11 35 46.9	
	10nm,1.0s							
ZALV	**Zalesovo Beam**	**13.89**	**17**	Pn		**Pn**	**11 33 53.4**	**+0.5**
	0.1nm,0.3s,baz=207,slow=18,SNR=1.9							
	0.5nm,0.4s							
SONM	**Songino Array**	**21.30**	**61**	P		**P**	**11 35 22.9**	**+0.1**
	0.5nm,0.5s,baz=262,slow=9.9,SNR=2.5							
	0.5nm,0.5s							
OBN	**Obninsk**	**30.82**	**312**	LR		LR	11 51 23.4	
	comp=Z,25nm,21.1s,baz=141,slow=41							
GERES	**GERESS Array B**	**45.20**	**303**	P		**P**	**11 38 53.0**	**-0.2**
	0.6nm,0.8s,baz=63,slow=9.1,SNR=3.6							
	0.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**71.35**	**271**	P		**P**	**11 41 54.1**	**-2.3**
	0.1nm,0.5s,baz=48,slow=6.8,SNR=4.2							
	0.1nm,0.5s							

IDC ***13*** *11:35:20.2±1.9, 4.36S×139.07E, h0km, mb3.7/3, mbtmp3.8/5, ML4.0/2, MS3.0/1, Error ellipse: s-maj=55.2km s-min=29.1km az=99.0*
NEIC ***13*** *11:35:28.9±1.0, 4.7S±0.2×138.9E±0.1, h35km±2km, mb4.0/9, Error ellipse: s-maj=27.1km s-min=23.7km az=329.0*

ISC 13 11:35:27.2±1.0, 4.67S±0.09×138.8E±0.1, h44km, n20, σ2°75/21, mb3.8/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.18**	**155**	Pn		**Pn**	**11 37 51.0**	**+0.3**
MTN	**Manton Dam**	**11.12**	**223**	Pn		**Pn**	**11 38 05.9**	**+2.2**
KNRA	**Kununurra**	**14.75**	**221**	Pn		**Pn**	**11 38 53.2**	**+0.2**
WB0	**Warramunga Arr**	**15.62**	**196**	P		**P**	**11 39 10.0**	**+2.1**
WB0				IAmb		IAmb	11 39 11.5	
	comp=Z,14nm,1.1s							
WR0	**Warramunga Arr**	**15.76**	**195**	P		**P**	**11 39 11.5**	**+2.0**
WR0				IAmb		IAmb	11 39 12.3	
	comp=Z,6.5nm,0.7s							
WRAB	**Tennant Creek**	**15.79**	**196**	P		**P**	**11 39 12.2**	**+2.4**
WRAB				IAmb		IAmb	11 39 13.0	
	comp=Z,11nm,0.6s							
WB2	**Warramunga Arr**	**15.79**	**196**	P		**P**	**11 39 12.3**	**+2.4**
WB2				IAmb		IAmb	11 39 13.1	
	comp=Z,13nm,0.6s							
WRA	**Warramunga Arr**	**15.80**	**196**	Pn		**Pn**	**11 39 04.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=15,slow=14,SNR=2.8							
WRA				Sn		**Sn**	**11 41 54.4**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=12,slow=21,SNR=2.5							
WRA	**Warramunga Arr**	**15.80**	**196**	P		**P**	**11 39 11.8**	**+1.8**
FITZ	**Fitzroy Crossi**	**18.56**	**223**	P		**Pn**	**11 39 42.2**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=53,slow=11,SNR=9.9							
FITZ				S		**Sn**	**11 43 01.3**	**-6.4**
	comp=Z,2.5nm,0.8s,baz=177,slow=15,SNR=4.7							
	comp=Z,1.0nm,0.4s							
FITZ	**Fitzroy Crossi**	**18.56**	**223**	P		**Pn**	**11 39 42.2**	**+1.2**
AS31	**Alice Springs**	**19.47**	**194**	P		**Pn**	**11 39 53.7**	**+1.7**
AS31				IAmb		IAmb	11 40 02.8	
	comp=Z,2.3nm,0.5s							
ASAR	**Alice Springs**	**19.47**	**194**	P		**Pn**	**11 39 53.4**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=22,slow=8.5,SNR=98							
	comp=Z,5.9nm,0.7s							
ASAR	**Alice Springs**	**19.47**	**194**	P		**Pn**	**11 39 53.2**	**+1.2**
MBWA	**Marble Bar**	**24.75**	**227**	P		**P**	**11 40 46.9**	**+2.2**
STKA	**Stephens Creek**	**27.19**	**175**	LR		LR	11 52 02.1	
	comp=Z,28nm,20.1s,baz=199,slow=36							
FORT	**Forrest**	**27.88**	**200**	P		**P**	**11 41 12.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**45.53**	**301**	P		**P**	**11 43 42.5**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=114,slow=6.1,SNR=5.6							
	comp=Z,1.2nm,0.7s							
MKAR	**Makanchi Array**	**71.41**	**323**	P		**P**	**11 46 42.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=120,slow=8.5,SNR=3.2							
	comp=Z,0.1nm,0.3s							
ILAR	**Eielson Array**	**87.56**	**24**	P		**P**	**11 48 07.8**	**-2.5**
	comp=Z,0.6nm,1.1s,baz=256,slow=3.6,SNR=3.0							
	comp=Z,0.6nm,1.1s							

LDG ***13*** *12:00:55.1±0.1, 51.53N×16.18E, h1km, Ml4.8/38, Error ellipse: s-maj=4.0km s-min=2.2km az=5.0, Suspected Mining induced.*
IPEC ***13*** *12:00:55.5±0.2, 51.60N×16.21E, h1km, ML4.2/5, Error ellipse: s-maj=2.0km s-min=1.2km az=36.0*
MOS ***13*** *12:00:55.5±1.3, 51.58N×16.11E, h10km, mb4.7/26, Error ellipse: s-maj=5.7km s-min=3.3km az=85.1*
MCSM ***13*** *12:00:55.5±0.8, 52°N±3°×1°6E±°, h9km±2km, ML4.5*
BGR ***13*** *12:00:56.7±0.3, 51.55N×16.15E, h1km, ML4.4/14, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
PRU ***13*** *12:00:56.9±0.0, 51.54N×16.16E, h0km, M4.3*
IDC ***13*** *12:00:56.5±0.4, 51.52N×16.06E, h0km, mb4.2/22, mbtmp4.2/32, ML3.7/10, MS2.6/6, Error ellipse: s-maj=8.2km s-min=5.1km az=110.0*
NEIC ***13*** *12:00:57.3±2.5, 51.56N±0.05×16.12E±0.08, h5km±1km, mb4.7/66, ML4.4 (BGR), ML4.0/17(VIE), Error ellipse: s-maj=9.0km s-min=7.9km az=240.0*
DNK ***13*** *12:00:58.3±2.5, 51.82N×16.20E, h0km, ML3.9, Suspected explosion*
VIE ***13*** *12:00:58.9±0.3, 51.37N×16.02E, h0km, mb3.9/22, ml4.0/17, ms4.4/4, Error ellipse: s-maj=3.1km s-min=2.6km az=58.0 75 km WNW of Wroclaw Suspected Mining induced.*
UPP ***13*** *12:01:00.2±2.8, 51.81N×15.60E, h0km, ML3.6, Suspected explosion*

ISC 13 12:00:55.5±0.3, 51.62N±0.02×16.09E±0.02, h0km, n496, σ1°96/623, mb4.6/70, 17C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.79**	**171**	*i*Pg		**Pg**	**12 01 10.2**	**-0.4**
KSP				*e*Sg		**Sg**	**12 01 19.7**	**-1.0**
KSP	**Ksiaz**	**0.79**	**171**	*e*Pg		**Pg**	**12 01 10.3**	**-0.4**
KSP				*e*Sg		**Sg**	**12 01 20.0**	**-0.7**
KSP	**Ksiaz**	**0.79**	**171**	Pg		**Pg**	**12 01 10.1**	**-0.5**
KSP				Sg		**Sg**	**12 01 20.2**	**-0.6**
CHVC	**Chvalec**	**1.03**	**181**	*e*PG		**Pg**	**12 01 14.9**	**-0.3**
CHVC				*e*SG		**Sg**	**12 01 27.7**	**-0.9**
CHVC	**Chvalec**	**1.03**	**181**	Pg		**Pg**	**12 01 15.0**	**-0.3**
CHVC				Sg		**Sg**	**12 01 28.5**	**-0.1**
OSTC	**Ostas**	**1.07**	**176**	*e*PG		**Pg**	**12 01 15.3**	**-0.6**
OSTC				*e*SG		**Sg**	**12 01 28.5**	**-1.2**
	comp=Z,3μm,0.6s							
OSTC	**Ostas**	**1.07**	**176**	Pg		**Pg**	**12 01 15.7**	**-0.2**
OSTC				Sg		**Sg**	**12 01 30.1**	**+0.4**
UPC	**Upice**	**1.11**	**183**	*e*P		**Pg**	**12 01 16.2**	**-0.6**
UPC				*e*			12 01 30.5	
UPC				smax		smax		
	comp=N,3μm,0.5s							
UPC	**Upice**	**1.11**	**183**	*e*PG		**Pg**	**12 01 16.2**	**-0.6**
UPC				*e*SG		**Sg**	**12 01 30.5**	**-0.8**
	comp=N,3μm,0.5s							
UPC	**Upice**	**1.11**	**183**	Pg		**Pg**	**12 01 16.1**	**-0.7**
DPC	**Dobruska-Polom**	**1.28**	**173**	*e*P		**Pg**	**12 01 19.2**	**-0.8**
DPC				*e*			12 01 34.2	
DPC				smax		smax		
	comp=N,2μm,0.8s							
DPC	**Dobruska-Polom**	**1.28**	**173**	*e*PG		**Pg**	**12 01 19.2**	**-0.8**
DPC				*e*SG		**Sg**	**12 01 34.2**	**-2.3**
	comp=N,2μm,0.8s							
DPC	**Dobruska-Polom**	**1.28**	**173**	*e*Pg		**Pg**	**12 01 19.0**	**-1.0**
DPC				*e*Sg		**Sg**	**12 01 34.8**	**-1.8**
DPC	**Dobruska-Polom**	**1.28**	**173**	Pg		**Pg**	**12 01 18.9**	**-1.1**
PVCC	**Panska Ves**	**1.45**	**222**	*e*P		**Pn**	**12 01 22.8**	**-0.3**
PVCC				*e*			12 01 42.6	
PVCC				smax		smax		
	comp=N,4μm,0.6s							
PVCC	**Panska Ves**	**1.45**	**222**	*e*PG		**Pn**	**12 01 22.8**	**-0.3**
PVCC				*e*SG		**Sn**	**12 01 42.6**	**-0.2**
	comp=N,4μm,0.6s							
BRG	**Berggiesshubel**	**1.54**	**242**	Pn		**Pn**	**12 01 23.9**	**-0.4**
BRG				Pg		**Pg**	**12 01 25.9**	**+0.8**
BRG				Sg		**Sg**	**12 01 46.0**	**+1.0**
BRG				Amp			12 01 46.4	
	comp=Z,2μm,0.4s							
BRG				Amp			12 01 57.0	
	comp=N,2.2nm,3.2s							
BRG				Amp			12 01 57.0	
	comp=E,3.7nm,3.7s							
BRG				Amp			12 02 01.0	
	comp=Z,4.2nm,4.8s							
BRG	**Berggiesshubel**	**1.54**	**242**	P		**Pn**	**12 01 23.8**	**-0.4**
BRG							12 01 46.0	
BRG	**Berggiesshubel**	**1.54**	**242**	*e*Pn		**Pn**	**12 01 24.0**	**-0.4**
BRG				*e*Pg		**Pg**	**12 01 25.9**	**+0.8**
BRG				*e*Sg		**Sg**	**12 01 46.0**	**+1.0**
KRLC	**Kraliky**	**1.60**	**164**	*e*P		**Pn**	**12 01 24.4**	**-0.8**
KRLC				*e*			12 01 45.0	
KRLC				smax		smax		
	comp=N,2μm,0.6s							
KRLC	**Kraliky**	**1.60**	**164**	*e*PG		**Pn**	**12 01 24.4**	**-0.8**
KRLC				*e*SG		**Sn**	**12 01 45.0**	**-1.6**
	comp=N,2μm,0.6s							
GKP	**Gorka Klasztor**	**1.80**	**23**	*e*P		**Pg**	**12 01 30.3**	**+0.4**
GKP				*e*S		Sg	12 02 04.9	+12
FBE	**Freiberg**	**1.86**	**249**	*e*Pn		**Pn**	**12 01 28.7**	**+0.2**
FBE				*e*Pg		**Pg**	**12 01 31.2**	**+0.1**
FBE				*e*Sg		**Sg**	**12 01 55.6**	**+0.5**
PRU	**Pruhonice**	**1.91**	**212**	*e*P		**Pn**	**12 01 29.2**	**-0.1**
PRU				*e*			12 01 55.0	
PRU				smax		smax		
	comp=N,1μm,0.5s							
PRU	**Pruhonice**	**1.91**	**212**	*e*PG		**Pn**	**12 01 29.2**	**-0.1**
PRU				*e*SG		**Sb**	**12 01 55.0**	**-0.5**
	comp=N,1μm,0.5s							
CLL	**Collm**	**1.96**	**262**	Pn		**Pn**	**12 01 29.8**	**-0.2**
CLL	**Collm**	**1.96**	**262**	*e*P		**Pn**	**12 01 30.0**	**0.0**
CLL				*i*			12 01 59.3	
CLL	**Collm**	**1.96**	**262**	*e*Pn		**Pn**	**12 01 30.0**	**0.0**
CLL				*e*Pg		**Pg**	**12 01 33.0**	**0.0**
CLL				*i* x		x	12 01 36.4	
CLL				*i* Sg		**Sg**	**12 01 59.3**	**+0.9**
	comp=Z,1μm,0.6s							
CLL				*e*Lmax			12 02 01.0	
CLL	**Collm**	**1.96**	**262**	*e*Pn		**Pn**	**12 01 30.0**	**0.0**
CLL				*e*Pg		**Pg**	**12 01 33.5**	**+0.5**
RAC	**Raciborz**	**2.03**	**138**	*e*PN		**Pn**	**12 01 29.8**	**-1.2**
RAC				*e*PG		**Pg**	**12 01 34.1**	**-0.4**
RAC				*e*SN		**Sn**	**12 01 54.

VRAC eSG Sb 12 02 07.9 +0.1
TREC Trest 2.36 190 eP Pn 12 01 35.3 -0.2
TREC e 12 02 09.2
TREC smax smax
comp=N,986nm,0.6s
TREC Trest 2.36 190 ePN Pn 12 01 35.3 -0.2
TREC eSG Sb 12 02 09.2 +0.7
comp=N,986nm,0.6s
KRUC Moravsky 2.57 176 ePn Pn 12 01 37.8 -0.6
baz=358
KRUC eSg Sb 12 02 15.2 +0.7
comp=N,1µm,1.6s,baz=358
KRUC Moravsky 2.57 176 ePN Pn 12 01 37.8 -0.6
KRUC eSG Sb 12 02 15.2 +0.7
TANN Tannenbergstha 2.59 244 ePn Pn 12 01 38.9 +0.2
TANN ePg Pg 12 01 45.4 +0.3
TANN eSg Sg 12 02 18.4 -0.3
WERD Werda 2.66 245 ePn Pn 12 01 40.1 +0.4
WERD ePg Pg 12 01 47.0 +0.5
WERD eSg Sg 12 02 19.8 -1.2
OJC Ojcow 2.73 119 ePn Pn 12 01 38.0 -2.6
OJC ePg Pg 12 01 46.8 -1.0
OJC eSg Sg 12 02 22.0 -1.2
OJC Ojcow 2.73 119 Pn Pn 12 01 38.9 -1.7
OJC Ojcow 2.73 119 P Pn 12 01 38.9 -1.7
OJC Ojcow 2.73 119 ePn Pn 12 01 38.1 -2.5
OJC ePg Pb 12 01 46.0 +0.8
OJC eSn Sn 12 02 10.3 -4.0
OJC eSg Sg 12 02 22.1 -1.2
JAVC Velka Javorina 2.94 159 ePn Pn 12 01 42.8 -0.8
baz=342
JAVC Velka Javorina 2.94 159 ePN Pn 12 01 42.8 -0.8
KHC Kasperske Hory 2.96 214 Pn Pn 12 01 43.6 -0.3
KHC Kasperske Hory 2.96 214 eP Pn 12 01 43.9 0.0
KHC e 12 02 20.7
KHC smax smax
comp=N,459nm,0.6s
KHC Kasperske Hory 2.96 214 ePN Pn 12 01 43.9 0.0
KHC ePG Pb 12 01 49.8 +0.6
KHC eSN Sn 12 02 20.7 +0.6
KHC eSG Sg 12 02 29.4 -1.3
comp=N,459nm,0.6s
MOX Moxa 2.98 253 ePn Pn 12 01 44.4 +0.3
MOX ePg Pg 12 01 53.0 +0.3
MOX eSg Sg 12 02 32.7 +1.3
CKRC Cesky Krumlov 3.03 203 ePN Pn 12 01 45.3 +0.6
CKRC ePG Pb 12 01 51.0 +0.7
CKRC eSG Sg 12 02 31.2 -1.5
I26DE FREYUNG INFRAS 3.16 210 *i* 12 20 10.0
baz=27,slow=318,SNR=0.5
GEC2 GERESS Array S 3.17 210 Pn Pn 12 01 46.4 -0.4
GEC2 GERESS Array S 3.17 210 ePn Pn 12 01 46.3 -0.4
GEC2 ePg Pg 12 01 55.1 -1.2
GERES GERESS Array B 3.17 210 Pn Pn 12 01 46.3 -0.4
comp=N,22nm,0.3s,baz=32,slow=11,SNR=376
GERES Pg Pb 12 01 53.3 +0.5
comp=N,35nm,0.3s,baz=28,slow=15,SNR=47
GERES Sn Sn 12 02 22.7 -2.6
comp=N,35nm,0.3s,baz=24,slow=26,SNR=5.7
GERES Lg Lg 12 02 34.8
comp=N,87nm,0.3s,baz=45,slow=28,SNR=14
comp=N,60nm,0.4s
GERES GERESS Array B 3.17 210 Pn Pn 12 01 46.5 -0.3
WET Wettzell 3.22 221 ePn Pn 12 01 47.3 -0.1
WET eSg Sg 12 02 36.8 -2.1
SMOL Smolenice 3.23 164 eP Pn 12 01 48.1 +0.7
SMOL pmax pmax
comp=N,436nm,0.8s
LANS Liptovska Anna 3.28 138 eP Pn 12 01 48.2 0.0
LANS pmax pmax
comp=N,296nm,0.7s
LANS Liptovska Anna 3.28 138 ePN Pn 12 01 48.2 0.0
LANS ePG Pg 12 01 57.3 -1.1
LANS eSG Sg 12 02 40.1 -0.8
LANS eLG Lg 12 02 49.6
MODS Modra-Piesok 3.34 166 eP Pn 12 01 49.6 +0.6
MODS pmax pmax
comp=N,941nm,0.7s
MODS Modra-Piesok 3.34 166 ePN Pn 12 01 49.5 +0.6
MODS ePG Pg 12 01 58.3 -1.2
MODS eSG Sg 12 02 41.9 -0.8
MODS eLG Lg 12 02 49.7
RGN Rugen 3.38 331 Pn 12 01 49.4 0.0
NIE Niedzica 3.47 128 eP Pg 12 02 00.9 -1.2
NIE eS Sg 12 02 47.4 +0.4
ZST Bratislava 3.49 169 eP Pn 12 01 51.0 0.0
ZST pmax pmax
comp=N,766nm,0.7s
ZST Bratislava 3.49 169 ePN Pn 12 01 51.0 0.0
ZST ePG Pg 12 02 00.9 -1.4
ZST eSG Sg 12 02 45.6 -1.9
ZST eLG Lg 12 02 53.5
CLZ Clausthal 3.56 276 ePn Pn 12 01 53.2 +1.1
CLZ ePg Pg 12 02 04.4 +0.6
CLZ eSn Sn 12 02 31.6 -3.3
BSD Bornholm Skovb 3.57 349 eP Pn 12 01 52.9 +0.7
BSD IAML 12 03 06.1
comp=Z,18µm,1.1s
BSD Bornholm Skovb 3.57 349 *i* P Pn 12 01 53.1 +1.0
BSD *i* S Sn 12 02 32.0 -3.0
BSD IAML 12 03 05.3
comp=Z,158nm,1.1s
VYHS Vyhne 3.59 149 eP Pn 12 01 51.8 -0.7
VYHS Vyhne 3.59 149 ePN Pn 12 01 51.8 -0.7
VYHS ePG Pg 12 02 03.1 -1.3
VYHS eSG Sg 12 02 48.9 -2.0
GRA1 Grafenberg Arr 3.65 240 Pn Pn 12 01 53.5 +0.3
GRF Grafenberg Arr 3.65 240 P Pn 12 01 53.6 +0.3
GRF Grafenberg Arr 3.65 240 ePn Pn 12 01 53.8 +0.5
GRF ePg Pg 12 02 06.4 +1.0
GRF eSn Sn 12 02 33.6 -3.4
GRF eSg Sg 12 02 52.9 +0.1
GRFO Grafenberg 3.65 240 Pn 12 01 53.3 0.0
GRFO Grafenberg 3.65 240 P Pn 12 01 53.3 0.0
CONA Conrad Observa 3.70 182 *i* Pn Pn 12 01 53.8 -0.2
comp=Z,35nm,0.5s,SNR=54
CONA Sg Sg 12 02 53.8 -0.5
comp=Z,1µm,0.8s
KLNR Kaliningrad 3.89 38 *i* P Pn 12 01 51.7 -4.7
RONA Rosalia, Austr 3.92 178 Pn 12 01 56.6 -0.5
RONA Sg 12 02 59.7 -1.9
RONA Rosalia, Austr 3.92 178 *i* Pn Pn 12 01 56.6 -0.5
comp=Z,12nm,0.3s,SNR=21
RONA Sg Sg 12 02 59.7 -1.9
comp=Z,287nm,0.5s
SOP Sopron 3.95 175 P Pn 12 01 57.6 +0.2
MOA Molln 3.95 198 *i* Pn Pn 12 01 57.3 -0.2
comp=Z,71nm,0.4s,SNR=117
MOA eSg Sg 12 03 01.5 -1.0
comp=Z,608nm,0.6s
SRO Srobarova 4.07 158 ePG Pg 12 02 12.9 -0.6
KECS Kecovo 4.23 136 eP Pn 12 02 00.9 -0.3
KECS Kecovo 4.23 136 ePN Pn 12 02 00.9 -0.3
KECS ePG Pg 12 02 16.4 -0.1
BIOA Bad Ischl, Aus 4.24 203 Pn 12 02 01.6 +0.2
BIOA Sg 12 03 10.8 -1.0
BIOA Bad Ischl, Aus 4.24 203 *i* Pn Pn 12 02 01.6 +0.2
comp=Z,62nm,0.4s,SNR=45
BIOA eSg Sg 12 03 10.8 -1.0
comp=Z,628nm,0.7s
EGYH Egyhazaskeszo 4.28 169 P Pn 12 02 02.6 +0.7
LUNU Lund 4.32 340 *i* P Pn 12 02 02.7 +0.3
LUNU P Pb 12 02 03.1 -9.1
LUNU S Sn 12 02 50.6 -2.8
LUNU *i* S Sb 12 02 51.5 -13
LUNU Lund 4.32 340 P Pn 12 02 03.1 +0.7
LUNU S Sn 12 02 50.6 -2.8
ARSA Arzberg 4.39 185 *i* Pn Pn 12 02 04.0 +0.6
comp=Z,21nm,0.3s,SNR=20
ARSA eSg Sg 12 03 15.6 -0.8
comp=Z,689nm,0.8s
CRVS Cervenica-Dubn 4.39 126 eP Pn 12 02 04.0 +0.6
CRVS Cervenica-Dubn 4.39 126 ePN Pn 12 02 04.0 +0.6
CRVS ePG Pg 12 02 19.3 -0.3
CRVS eSG Sg 12 02 39.6 -0.8
PSZ Piszkesteto 4.45 145 ⇑P Pn 12 02 04.4 +0.1
PSZ Piszkesteto 4.45 145 Pn Pn 12 02 03.3 -1.0
PSZ Piszkesteto 4.45 145 P Pn 12 02 03.3 -1.0
PSZ Piszkesteto 4.45 145 P Pn 12 02 04.7 +0.5
CSKK Cskako 4.49 161 P Pn 12 02 04.7 -0.1
MPLH Magyarpolny 4.55 167 P Pn 12 02 05.8 +0.2
BUD Budapest 4.56 154 P Pn 12 02 05.7 0.0

COP Copenhagen 4.62 333 *i* P Pn 12 02 06.2 -0.3
COP *i* S Sn 12 02 59.2 -1.6
COP IAML 12 03 57.9
comp=Z,228nm,0.9s
KWP Kalwaria Pacla 4.66 113 Pn 12 02 05.2 -1.9
KWP Kalwaria Pacla 4.66 113 P Pn 12 02 05.2 -1.9
BLEU Blekinge 4.70 358 *i* P Pn 12 02 08.2 +0.6
BLEU P Pn 12 02 08.6 +1.0
BLEU *i* S Sn 12 02 57.6 -5.2
BLEU S Sn 12 03 00.0 -2.7
BLEU Blekinge 4.70 358 P Pn 12 02 08.6 +1.0
BLEU S Sn 12 03 00.0 -2.7
KOLS Kolonicke sedl 4.79 122 eP Pn 12 02 08.7 -0.3
KOLS Kolonicke sedl 4.79 122 ePN Pn 12 02 08.6 -0.3
KOLS ePG Pg 12 02 26.7 -0.6
KOLS eSG Sg 12 03 27.1 -2.2
BJUU Bjuv 4.82 339 P Pn 12 02 08.9 -0.4
BJUU *i* P Pn 12 02 09.6 +0.3
BJUU *i* S Sn 12 03 01.3 -4.4
BJUU S Sn 12 03 02.5 -3.2
BJUU Bjuv 4.82 339 P Pn 12 02 08.9 -0.4
BJUU S Sn 12 03 02.5 -3.2
TIH Tihany 4.87 165 P Pn 12 02 10.3 +0.4
KBA Koelnbreinsper 4.88 203 ePn Pn 12 02 10.9 +0.5
comp=Z,55nm,0.4s,SNR=50
KBA eSg Sg 12 03 32.5 +0.1
comp=Z,218nm,0.6s
UZH Uzhgorod 4.99 124 eP Pn 12 02 15.5 +3.9
UZH eS Sn 12 03 14.4 +4.6
UZH smax smax
comp=E,62nm,1.2s
UZH MLR MLR
comp=N,72nm,1.2s
UZH MLR MLR
comp=E,87nm,1.2s
UZH MLR MLR
comp=Z,45nm,1.2s
SOKA Soboth 4.99 188 *i* Pn Pn 12 02 12.3 +0.5
comp=Z,4.2nm,0.2s,SNR=9.3
SOKA Sg Sg 12 03 35.7 -0.2
comp=Z,117nm,0.7s
PERS Pernice 5.03 188 ePn Pn 12 02 12.5 +0.3
PERS eSn Sn 12 03 15.8 +4.8
PERS *e* 12 03 34.5
PERS IAML 12 03 39.1
comp=Z,204nm,0.6s
DEL Delary 5.04 346 *i* P Pn 12 02 12.0 -0.2
DEL P Pn 12 02 12.6 +0.4
DEL *i* S Sn 12 03 06.4 -4.7
DEL Delary 5.04 346 P Pn 12 02 12.6 +0.4
BSZH Besenyszg 5.11 146 ⇓P Pn 12 02 13.0 -0.3
BSZH Besenyszg 5.11 146 P Pn 12 02 13.6 +0.3
BEHE Becsehely 5.17 175 P Pn 12 02 15.4 +1.2
WATA Walderalm 5.20 216 Pn 12 02 14.8 +0.2
WATA Walderalm 5.20 216 P Pn 12 02 14.9 +0.2
WATA Walderalm 5.20 216 *i* Pn Pn 12 02 14.8 +0.2
comp=Z,78nm,0.6s,SNR=73
OBKA Obir 5.21 192 *i* Pn Pn 12 02 14.9 +0.1
comp=Z,12nm,0.5s,SNR=9.3
OBKA Sg Sg 12 03 41.3 -1.6
comp=Z,278nm,0.8s
WTTA Wattenberg 5.24 215 ePn Pn 12 02 15.9 +0.7
comp=Z,49nm,0.6s,SNR=39
WTTA Sg Sg 12 03 44.8 +1.1
comp=Z,216nm,0.5s
MYKA Terra Mystica 5.25 199 *i* Pn Pn 12 02 15.2 0.0
comp=Z,4.1nm,0.3s
MYKA Sg Sg 12 03 42.6 -1.4
comp=Z,274nm,0.8s
STU Stuttgart 5.27 240 Pn 12 02 14.7 -0.7
STU Stuttgart 5.27 240 P Pn 12 02 14.7 -0.7
LVV L'vov 5.36 107 eP Pn 12 02 15.9 -0.8
LVV eS Sn 12 03 16.5 -2.5
LVV MLR MLR
comp=E,800nm,1.8s
LVV MLR MLR
comp=N,700nm,2.5s
LVV MLR MLR
comp=Z,600nm,2.0s
VXJU Vaexsjoe 5.36 353 P Pn 12 02 17.9 +1.2
VXJU Vaexsjoe 5.36 353 P Pn 12 02 17.9 +1.2
MOTA Moosalm 5.37 219 Pn 12 02 16.8 -0.3
MOTA Sg 12 03 46.2 +0.2
MOTA Moosalm 5.37 219 P Pn 12 02 16.8 -0.3
MOTA Moosalm 5.37 219 ePn Pn 12 02 16.8 -0.3
comp=Z,32nm,0.5s,SNR=31
MOTA eSg Sg 12 03 48.3 +0.2
comp=Z,167nm,0.7s
RETA Reutte 5.40 222 *i* Pn Pn 12 02 17.1 -0.2
comp=Z,31nm,0.6s,SNR=17
ABTA Abfaltersbach 5.41 207 *i* Pn Pn 12 02 18.2 +0.7
comp=Z,72nm,0.8s,SNR=42
ABTA Sg Sg 12 03 46.6 -2.6
comp=Z,215nm,0.7s
SQTA Sankt Quirin 5.43 218 Pn 12 02 18.4 +0.6
SQTA Sankt Quirin 5.43 218 P Pn 12 02 18.4 +0.6
SQTA Sankt Quirin 5.43 218 *i* Pn Pn 12 02 18.4 +0.6
comp=Z,55nm,0.6s,SNR=34
PRED Cave del Predi 5.44 199 Pn 12 02 18.0 +0.1
CLUD Cludinico 5.58 203 Pn Pn 12 02 19.6 -0.2
PBUR Paburge 5.61 36 eP Pn 12 02 21.9 +1.9
PBUR eS Sn 12 03 24.1 -1.0
MORH Mrgy, Hungar 5.66 162 ⇑P Pn 12 02 20.7 -0.2
MORH Mrgy, Hungar 5.66 162 P Pn 12 02 21.2 +0.4
LTVH Ltavrtes, Hu 5.68 136 ⇓P Pn 12 02 21.1 0.0
LTVH Ltavrtes, Hu 5.68 136 P Pn 12 02 21.8 +0.7
KOVH Kovagotottos 5.69 166 P Pn 12 02 21.5 +0.2
BYXU Byxelkrok 5.71 5 P Pn 12 02 23.0 +1.5
BYXU Byxelkrok 5.71 5 P Pn 12 02 23.0 +1.5
PTJ Puntijarka 5.72 181 ePn Pn 12 02 21.4 -0.4
FABU Falkenberg 5.74 341 *i* P Pn 12 02 21.7 -0.3
FABU *i* S Sn 12 03 24.3 -4.2
FETA Feichten 5.78 219 *i* Pn Pn 12 02 23.2 +0.5
comp=Z,10.0nm,0.5s,SNR=17
FETA Sg Sg 12 04 01.0 -0.3
comp=Z,195nm,1.2s
STAL STALIGIAL 5.81 204 Pn 12 02 23.0 +0.1
CIMO Cimolais 5.83 206 Pn Pn 12 02 22.6 -0.6
SABO M.te Sabotino 5.88 197 Pn 12 02 23.4 -0.4
DAVA Damuels 5.93 225 *i* Pn Pn 12 02 24.4 -0.3
comp=Z,9.9nm,0.3s,SNR=12
DAVA Sg Sg 12 04 08.2 +2.2
comp=Z,192nm,0.7s
BFO Black Forest 5.99 240 Pn 12 02 24.6 -0.8
BFO Black Forest 5.99 240 P Pn 12 02 24.6 -0.8
OZLJ Ozalj 6.02 184 ePn Pn 12 02 26.0 +0.2
MOSL Moslavina 6.03 176 ePn Pn 12 02 25.5 -0.4
RNPP1 Kostyukhnivka 6.05 89 Pn Pn 12 02 25.5 -0.7
PABE Paberze 6.10 47 Pn Pn 12 02 27.7 +0.9
PABE Paberze 6.10 47 eP Pn 12 02 28.2 +1.4
PABE IAML 12 04 34.9
comp=Z,72nm,0.5s
RNPP8 Varash 6.11 89 Pn Pn 12 02 26.8 -0.2
RNPP8 pP Pn 12 02 28.1 +1.1
RNPP9 Sopachiv 6.12 88 Pn Pn 12 02 26.8 -0.4
RNPP9 pP Pn 12 02 28.1 +0.9
RNPP9 Sn Sn 12 03 37.3 -0.5
BMR Baia Mare 6.22 127 ⇓P Pn 12 02 28.6 +0.1
ONAU Onsala 6.28 339 *i* P Pn 12 02 30.7 +1.4
ONAU *i* S Sn 12 03 34.4 -7.3
FUORN Ofenpass-Fuorn 6.29 220 Pn 12 02 30.5 +0.7
CTI Castel Tesino 6.30 209 Pn Pn 12 02 30.4 +0.7
CTI Castel Tesino 6.30 209 P Pn 12 02 30.4 +0.7
DAVOS Davos/Dischmat 6.32 222 Pn Pn 12 02 29.4 -0.8
comp=Z,2.6nm,0.3s,baz=16,slow=11,SNR=41
DAVOX Sn Sn 12 03 39.0 -4.1
comp=Z,1.4nm,0.3s,baz=59,slow=20,SNR=1.1
DAVOX Lg Lg 12 04 15.7
comp=Z,5.5nm,0.3s,baz=90,slow=21,SNR=4.5
comp=Z,19nm,0.6s
BORU Boraas 6.33 344 *i* P Pn 12 02 30.5 +0.5
BORU eS Sn 12 03 41.0 -1.9
MUD Monsted U'grnd 6.33 323 *i* P Pn 12 02 31.7 +1.7
MUD IAML 12 04 48.6
comp=Z,61nm,1.3s
SIRR Siria 6.49 143 ⇑P Pn 12 02 31.9 -0.4
DRGR 6.49 136 ⇑P Pn 12 02 31.9 -0.4
CDF Champ du Feu 6.52 244 ePn Pn 12 02 31.1 -1.7
CDF Champ du Feu 6.52 244 ePg Pg 12 02 59.4 -1.1
CDF eSg Sg 12 04 21.9 -3.1
comp=Z,313nm,0.8s
WLF Walferdange 6.62 257 Pn Pn 12 02 33.8 -0.2
WLF Walferdange 6.62 257 P Pn 12 02 33.8 -0.2

ECH Echery 6.70 243 Pn Pn 12 02 32.8 -2.3
ECH Echery 6.70 243 P Pn 12 02 32.8 -2.3
SMRN Sveta Marina 6.71 192 ePn Pn 12 02 34.5 -0.8
PLIT Plitvice 6.75 183 ePn Pn 12 02 35.4 -0.5
BRJN Brijuni 6.90 194 ePn Pn 12 02 37.2 -0.6
TEOL Teolo 6.92 207 Pn Pn 12 02 37.4 -0.8
RABC Rab 6.93 188 ePn Pn 12 02 38.1 -0.1
SLIT Slitere, Latvi 7.01 28 eP Pn 12 02 39.5 +0.1
SLIT IAML 12 03 56.3
comp=Z,104nm,0.6s
HINF Hinteralfeld 7.09 241 ePn Pn 12 02 39.8 -0.8
HINF Hinteralfeld 7.09 241 ePg Pg 12 03 09.6 -1.8
HINF eSg Sg 12 04 37.3 -5.9
comp=Z,240nm,0.8s
NVLJ Novalja 7.11 187 ePn Pn 12 02 40.1 -0.5
BUR08 Bucovina Ar. S 7.13 120 Pn Pn 12 02 41.4 +0.3
BURAR Bucovina Array 7.15 120 ⇑P Pn 12 02 41.1 -0.3
BURAR Bucovina Array 7.15 120 Pn 12 02 41.5 +0.1
ISAL Salakas 7.16 53 eP Pn 12 02 41.5 +0.1
ISAL IAML 12 03 28.3
comp=Z,9.5nm,0.5s
NACGM Naroch 7.21 59 ⇓eP Pn 12 02 43.1 +1.1
baz=251
HAU Haudompre 7.27 244 ePn Pn 12 02 40.5 -2.4
HAU Haudompre 7.27 244 ePg Pg 12 03 11.2 -3.5
HAU eSg Sg 12 04 43.9 -4.9
comp=Z,355nm,1.1s
GIVF Givet 7.29 262 ePn Pn 12 02 44.3 +1.0
GIVF eSg Sg 12 04 42.0 -7.6
comp=Z,205nm,0.9s
MI28 Mi28,Pidlybu 7.30 91 Pn Pn 12 02 42.2 -1.1
MI28 pP Pn 12 02 44.2 +0.9
MI28 Sn Sn 12 04 06.3 -0.5
PAGF Fort de Pagny 7.34 249 ePn Pn 12 02 42.7 -1.2
baz=68
PAGF Fort de Pagny 7.34 249 ePg Pg 12 03 16.4 +0.3
PAGF eSg Sg 12 04 43.8 -7.3
comp=Z,544nm,1.3s
VIRC Vir 7.36 186 ePn Pn 12 02 44.6 +0.4
LUBAR Lubar, Ukraine 7.59 98 Pn Pn 12 02 45.2 -2.1
LUBAR pP Pn 12 02 48.7 +1.4
KIJV Kijevo 7.62 178 ePn Pn 12 02 49.5 +1.8
GZR Gura Zlata 7.65 142 ⇓P Pn 12 02 48.9 +0.7
DUGI Dugi Otok 7.66 186 ePn Pn 12 02 49.2 +0.9
SAVF Savonnieres en 7.66 251 ePn Pn 12 02 47.8 -0.5
SAVF Savonnieres en 7.66 251 ePg Pg 12 03 17.8 -4.5
SAVF eSn Sn 12 04 08.9 -6.9
SAVF eSg Sg 12 05 00.9 -0.6
comp=Z,216nm,0.9s
MNK Minsk 7.67 63 *i* P Pn 12 02 45.4 -3.0
MNK *i* S Sn 12 04 11.7 -4.2
MNK pmax pmax
comp=Z,11nm,0.8s
MNK pmax pmax
comp=E,28nm,13.6s
MNK MLR MLR
comp=E,31nm,14.0s
MNK MLR MLR
comp=Z,51nm,15.0s
MNK Minsk 7.67 63 *i* P Pn 12 02 45.4 -3.0
comp=E,28nm,13.6s
MNK *i* P Pn 12 02 45.4 -3.0
MNK *i* P Pn 12 02 45.4 -3.0
comp=Z,11nm,0.8s,baz=253
MNK *i* S Sn 12 04 11.8 -4.2
MNK *i* LRM MLR 12 06 13.1
comp=E,31nm,13.6s
MNK *i* LRM MLR 12 06 14.0
comp=Z,51nm,14.6s
BAIF Baives 7.69 263 ePn Pn 12 02 49.4 +0.8
BAIF eSg Sg 12 04 58.0 -4.2
comp=Z,363nm,1.4s
MEZF Maizieres J'vi 7.76 251 ePg Pg 12 03 18.6 -5.5
MEZF eSg Sg 12 04 58.2 -6.3
comp=Z,194nm,0.9s
MORI Morici 7.76 182 ePn Pn 12 02 51.5 +1.9
MDVR Moldovita 7.80 149 ⇑P Pn 12 02 50.1 -0.2
SENIN Lac Senin/Sane 7.81 231 Pn Pn 12 02 50.0 -0.6
PRMA PARMA 7.87 212 Pn 12 02 52.9 +1.7
SFTF Sexfontaines 7.91 249 ePn Pn 12 02 50.1 -1.6
SFTF eSg Sg 12 05 04.9 -4.5
comp=Z,317nm,1.0s
STRU Stroemstad 7.94 341 *i* P Pn 12 02 51.6 -0.4
STRU *i* S Sn 12 04 17.7 -4.8
HOMB Homborsund 7.96 330 *i* S Sn 12 04 17.2 -5.9
DIVS Divibare 7.97 159 Pn Pn 12 02 50.7 -1.9
ZCCA Zocca 8.04 207 Pn Pn 12 02 53.8 +0.3
BIZ Bicaz 8.05 122 ⇓P Pn 12 02 54.2 +0.6
AK20 Malin Array Si 8.17 91 Pn Pn 12 02 54.0 -1.2
AK21 Malin Array Si 8.18 91 Pn Pn 12 02 54.2 -1.2
AK22 Malin Array Si 8.20 91 Pn Pn 12 02 54.5 -1.2
AK18 Malin Array Si 8.21 91 Pn Pn 12 02 54.5 -1.3
AK17 Malin Array Si 8.21 91 Pn Pn 12 02 54.6 -1.2
AK13 Malin Array Si 8.22 92 Pn Pn 12 02 54.8 -1.2
AK23 Malin Array Si 8.24 91 Pn Pn 12 02 54.9 -1.3
AK16 Malin Array Si 8.24 92 Pn Pn 12 02 55.0 -1.2
AK15 Malin Array Si 8.25 91 Pn Pn 12 02 55.1 -1.2
AK14 Malin Array Si 8.25 92 Pn Pn 12 02 55.1 -1.3
CABF La Chapelle 8.25 237 ePn Pn 12 02 55.8 -0.7
CABF La Chapelle 8.25 237 ePg Pg 12 03 27.5 -6.1
CABF eSg Sg 12 05 16.4 -4.0
comp=Z,285nm,0.9s
AK04 Malin Array Si 8.27 91 Pn Pn 12 02 55.4 -1.2
AK03 Malin Array Si 8.30 91 Pn Pn 12 02 55.7 -1.4
AK01 Malin Array Si 8.30 91 Pn Pn 12 02 56.0 -1.1
AK02 Malin Array Si 8.31 92 Pn Pn 12 02 55.9 -1.2
AKASG Malin Array Be 8.31 91 Pn Pn 12 02 55.0 -2.1
comp=Z,5.0nm,0.3s,baz=284,slow=12,SNR=27
AKASG Sn Sn 12 04 27.2 -4.5
comp=Z,4.8nm,0.3s,baz=286,slow=12,SNR=6.1
AKASG Lg Lg 12 05 23.1
comp=Z,1.2nm,0.3s,baz=278,slow=30,SNR=4.6
AKASG LR LR 12 06 41.3
comp=Z,62nm,20.5s,baz=346,slow=41
comp=Z,16nm,0.6s
AKASG Malin Array Be 8.31 91 Pn Pn 12 02 55.3 -1.9
AKASG Malin Array Be 8.31 91 P Pn 12 02 55.3 -1.9
AKBB Malin Array Si 8.31 91 Pn 12 02 56.2 -1.0
AKBB Malin Array Si 8.31 91 *ce*P Pn 12 02 55.3 -1.9
AKBB Malin Array Si 8.31 91 Pn Pn 12 02 56.0 -1.2
AK05 Malin Array Si 8.31 92 Pn Pn 12 02 56.0 -1.2
AK06 Malin Array Si 8.32 92 Pn Pn 12 02 55.9 -1.4
AK07 Malin Array Si 8.33 92 Pn Pn 12 02 56.1 -1.3
AK08 Malin Array Si 8.34 92 Pn Pn 12 02 56.3 -1.3
DOPR Dopca 8.34 129 ⇑P Pn 12 02 57.3 -0.4
AK09 Malin Array Si 8.36 92 Pn Pn 12 02 56.6 -1.3
MTSE Matsula 8.37 29 eP Pn 12 03 00.7 +2.7
VLC Villacollemand 8.39 209 Pn 12 02 59.0 +0.7
MSSA Maissana 8.53 214 Pn 12 03 00.6 +0.3
VOIR 8.57 133 ⇑P Pn 12 03 01.1 +0.2
HFS Hagfors 8.64 352 Pn Pn 12 03 02.0 +0.3
comp=Z,0.9nm,0.3s,baz=173,slow=13,SNR=25
HFS Sn Sn 12 04 36.7 -3.1
comp=Z,0.5nm,0.3s,baz=169,slow=20,SNR=2.3
HFS Lg Lg 12 05 31.7
comp=Z,0.4nm,0.3s,baz=181,slow=26,SNR=2.5
HFS LR LR 12 06 22.3
comp=Z,17nm,21.5s,baz=160,slow=37
comp=Z,6.3nm,0.7s
MURB Monte Urbino 8.70 197 Pn 12 03 01.7 -0.9
LPL La Plagne 8.70 229 ePn Pn 12 03 02.1 -0.7
LPL La Plagne 8.70 229 ePg Pg 12 03 39.8 -2.3
LPL eSg Sg 12 05 27.2 -7.6
comp=Z,160nm,1.2s
LPG La Plagne 8.71 229 ePn Pn 12 03 03.3 +0.4
LPG La Plagne 8.71 229 ePg Pg 12 03 41.9 -0.3
LPG eSg Sg 12 05 28.2 -6.8
comp=Z,279nm,1.1s
OSSC Osservatorio P 8.73 204 Pn 12 03 02.1 -1.0
KONO Kongsberg 8.84 338 Pn Pn 12 03 05.8 +1.3
KONO Kongsberg 8.84 338 *i* P Pn 12 03 06.5 +2.0
MLR Muntele Rosu 8.96 129 ⇓P Pn 12 03 05.8 -0.4
NRCA Norcia 9.02 194 Pn 12 03 05.8 -1.2
BNI Bardonecchia 9.08 227 Pn 12 03 08.2 +0.4
BNI Bardonecchia 9.08 227 P Pn 12 03 08.2 +0.4
LOR Lormes 9.08 246 ePn Pn 12 03 06.1 -1.7
baz=67
LOR Lormes 9.08 246 ePg Pn 12 03 45.2 +37
LOR eSg Sn 12 05 39.2 +49
comp=Z,78nm,0.8s
BLKB Belogradchik 9.15 148 ⇑P Pn 12 03 08.5 -0.3
VSU Vasula 9.18 38 *i* P Pn 12 03 06.9 -2.1
VSU Vasula 9.18 38 eP Pn 12 03 10.0 +1.0

MBDF Montbardon 9.29 226 *e*Pn **Pn** **12 03 09.9 -0.8**
MBDF Montbardon 9.29 226 *e*Pg Pn 12 03 52.0 +41
MBDF *e*Sg Sn 12 05 47.6 +52
comp=Z,164nm,1.4s
SSF Saint Saulge 9.39 246 *e*Pn **Pn** **12 03 10.2 -1.9**
SSF Saint Saulge 9.39 246 *e*Pg Pn 12 03 48.6 +37
SSF *e*Sn Sn 12 04 45.2 -13
SSF *e*Sg 12 05 49.7
comp=Z,78nm,0.8s
SMF Signal de Mont 9.44 243 *e*Pn **Pn** **12 03 10.4 -2.4**
SMF Signal de Mont 9.44 243 *e*Pg Pn 12 03 49.0 +36
SMF *e*Sg Sn 12 05 48.3 +49
comp=Z,162nm,1.0s
NC602 NORSAR Array S 9.48 346 **Pn** **12 03 13.9 +0.7**
ORIF Oris-en-Rattie 9.55 229 *e*Pn **Pn** **12 03 14.2 -0.1**
ORIF *e*Sg Sn 12 05 55.2 +53
comp=Z,68nm,0.8s
MILM Milestii Mici 9.55 115 *e*P **Pn** **12 03 14.0 -0.2**
MILM *e*L L 12 06 59.0
MILM LRM MLR 12 07 08.0
comp=Z,200nm,5.0s
MILM Milestii Mici 9.55 115 *e*P **Pn** **12 03 14.0 -0.2**
MILM MLR MLR
comp=Z,200nm,5.0s
AVF Avril sur Loir 9.63 245 *e*Pn **Pn** **12 03 13.3 -2.0**
AVF Avril sur Loir 9.63 245 *e*Pg Pn 12 03 54.1 +39
AVF *e*Sn **Sn** **12 04 55.4 -8.8**
AVF *e*Sg 12 05 55.2
comp=Z,99nm,0.9s
CLF Chambon-Foret 9.63 254 Pn **Pn** **12 03 15.5 +0.2**
SBF Sospel 9.70 220 *e*Pn **Pn** **12 03 14.7 -1.6**
HYF Humbligny 9.78 249 *e*Sg Sn 12 06 02.4 +55
comp=Z,320nm,0.6s
MEF Metsahovi 9.79 25 *e*P **Pn** **12 03 18.8 +1.4**
MEF *e*S **Sn** **12 05 04.4 -3.5**
NOA NORSAR Array B 9.82 346 Pn **Pn** **12 03 16.7 -1.2**
comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=11
NOA LR LR 12 07 51.3
comp=Z,34nm,20.7s,baz=165,slow=42
comp=Z,1.1nm,0.8s
RAF Rauma 9.94 16 *e*P **Pn** **12 03 20.4 +1.0**
RAF IAML 12 04 32.3
comp=Z,5.8nm,0.8s
SSB Saint Sauveur 9.95 235 Pn **Pn** **12 03 19.6 -0.1**
SSB Saint Sauveur 9.95 235 P **Pn** **12 03 19.6 -0.1**
BGF Bois d'Agland 10.05 245 *e*Pn **Pn** **12 03 18.7 -2.4**
BGF Bois d'Agland 10.05 245 *e*Pg Pn 12 04 03.6 +43
BGF *e*Sg Sn 12 06 07.1 +53
comp=Z,111nm,0.8s
NC204 NORSAR Array S 10.12 345 Pn **Pn** **12 03 21.9 -0.1**
VIVF Saint-Julien-l 10.18 233 *e*Pn **Pn** **12 03 22.1 -0.8**
VIVF Saint-Julien-l 10.18 233 *e*Pg Pn 12 04 04.4 +42
VIVF *e*Sg Sn 12 06 14.2 +57
comp=Z,125nm,1.3s
PGF Pioggiola 10.28 211 *e*Pn **Pn** **12 03 22.5 -1.8**
SMRF Simiane la Rot 10.41 227 *e*Pn **Pn** **12 03 27.5 +1.5**
SMRF *e*Sn Sn 12 05 11.6 -12
SMRF *e*Sg 12 06 19.8
comp=Z,138nm,1.4s
LMR La Mourre 10.52 222 *e*Pn **Pn** **12 03 22.8 -4.6**
LMR *e*Sn Sn 12 05 16.4 -9.4
TCF Toulx Ste Croi 10.57 245 *e*Pn **Pn** **12 03 25.6 -2.6**
TCF *e*Sg Sn 12 06 25.6 +58
comp=Z,83nm,0.9s
LDF La Druitiere 10.85 260 *e*Pn **Pn** **12 03 32.3 +0.4**
LDF *e*Sg 12 06 37.1
comp=Z,78nm,1.2s
FLN La Foliniere 11.00 261 *e*Pn **Pn** **12 03 30.7 -3.4**
FLN *e*Sg 12 06 43.0
comp=Z,101nm,1.1s
FINES FINESS Array B 11.27 25 Pn **Pn** **12 03 37.0 -0.7**
comp=Z,1.2nm,0.3s,baz=198,slow=11,SNR=37
FINES Sn **Sn** **12 05 36.8 -7.4**
comp=Z,1.0nm,0.3s,baz=203,slow=19,SNR=2.7
FINES Lg Lg 12 06 48.4
comp=Z,0.4nm,0.3s,baz=195,slow=22,SNR=2.3
FINES LR LR 12 08 21.4
comp=Z,39nm,19.0s,baz=82,slow=39
comp=Z,9.1nm,0.6s
FINES FINESS Array B 11.27 25 Pn **Pn** **12 03 37.5 -0.1**
FINES FINESS Array B 11.27 25 P **Pn** **12 03 37.5 -0.1**
FIA1 FINESS Array S 11.27 25 Pn **Pn** **12 03 37.2 -0.5**
GRR Gorron 11.38 260 *e*Pn **Pn** **12 03 38.2 -1.0**
GRR *e*Sn Sn 12 05 35.8 -11
GRR *e*Sg 12 06 54.8
comp=Z,42nm,1.0s
CAF Calviac 11.49 240 *e*Pn **Pn** **12 03 38.5 -2.3**
CAF *e*Sg 12 06 57.9
comp=Z,42nm,1.1s
RJF Les Rejaudoux 11.55 243 *e*Pn **Pn** **12 03 38.6 -2.9**
RJF *e*Sg 12 06 57.5
comp=Z,144nm,1.4s
MFF Saint Martin d 11.76 251 *e*Pn **Pn** **12 03 43.2 -1.2**
MFF Saint Martin d 11.76 251 *e*Pg Pn 12 04 31.1 +47
MFF *e*Sn Sn 12 05 43.1 -13
MFF *e*Sg 12 07 03.1
comp=Z,41nm,0.9s
EKA Eskdalemuir Ar 12.05 296 Pn **Pn** **12 03 45.3 -3.0**
baz=103,slow=14
EKA Sn **Sn** **12 05 58.5 -4.8**
baz=102,slow=26
LFF La Frestale 12.20 243 *e*Sg 12 07 21.1
comp=Z,78nm,1.0s
SGMF Saint Gilles 12.47 262 *e*Pn **Pn** **12 03 51.3 -2.9**
SGMF *e*Sg 12 07 23.1
comp=Z,59nm,1.2s
MTLF Montolieu 12.50 234 *e*Pn **Pn** **12 03 50.6 -4.0**
MTLF *e*Sg 12 07 27.0
comp=Z,107nm,1.4s
OBN Obninsk 12.71 66 *e*P **Pn** **12 03 53.7 -3.6**
OBN pmax pmax
comp=Z,36nm,1.3s
OBN MLR MLR
comp=Z,33nm,14.0s
ROSF Rostrenen 12.88 263 *e*Pn Pn 12 03 53.0 -6.8
ROSF *e*Sg 12 07 39.8
comp=Z,86nm,1.4s
QUIF Quistinic 12.98 261 *e*Pn **Pn** **12 03 59.1 -2.0**
QUIF *e*Sg 12 07 43.9
MOS Moscow 13.39 64 *e*P Pn 12 04 01.1 -5.6
MOS pmax pmax
comp=Z,38nm,0.9s
EPF Esparros 13.69 237 *e*Pn **Pn** **12 04 10.7 -0.1**
EPF *e*Sg S 12 08 04.0 +57
LPSR Galich'ya Gora 14.06 77 *e*P Pn 12 04 11.2 -4.6
LPSR pmax pmax
comp=Z,70nm,1.8s
ETSF Etsaut 14.25 239 *e*Pn **Pn** **12 04 18.6 0.0**
ETSF *e*Sg 12 08 19.6
comp=Z,40nm,1.4s
VORR Voronezh 14.34 81 *e*P Pn 12 04 14.7 -5.0
VORR pmax pmax
comp=Z,20nm,0.3s
VSR Storozhevoye 14.39 83 *e*P Pn 12 04 14.2 -6.2
VSR pmax pmax
comp=Z,30nm,1.4s
SJPF Ste Jean 14.46 241 *e*Sg 12 08 27.5
comp=Z,64nm,1.4s
ANN Anapa 15.74 107 *e*P **Pn** **12 04 32.2 -6.2**
ANN *e*S **Sn** **12 07 22.8 -11**
ANN pmax pmax
comp=Z,50nm,1.1s
KLMR Klimovskoe 15.89 45 *e*P Pn 12 04 33.1 -7.1
KLMR pmax pmax
comp=Z,18nm,1.1s
KLMR Klimovskoe 15.89 45 *e*Pn Pn 12 04 33.1 -7.1
KLMR AMP 12 04 47.1
comp=Z,18nm,1.1s
KLMR *e*Sn **Sn** **12 07 26.8 -10**
KLMR *e*Sn **Sn** **12 07 26.8 -10**
VRH Novokhopyorsk 15.97 81 *e*P Pn 12 04 34.4 -7.0
VRH pmax pmax
comp=Z,20nm,0.4s
KEST Kesra 16.60 200 Pn **P** **12 04 52.6 +0.3**
comp=Z,0.1nm,0.3s,baz=60,slow=5.5,SNR=6.3
BRTR Keskin Array B 17.03 127 LR LR 12 13 20.0
comp=Z,26nm,19.8s,baz=324,slow=44
SOC Sochi 17.79 108 *e*P **Pn** **12 05 04.7 +0.4**
SOC *e* 12 08 24.4
SOC MLR MLR
comp=Z,26nm,15.0s
ESDC Sonseca Array 18.35 237 Pn **Pn** **12 05 11.4 +0.1**
baz=45,slow=9.4,SNR=13
comp=Z,2.1nm,1.0s
ARCES ARCESS Array B 18.52 10 Pn **P** **12 05 11.1 -2.0**
comp=Z,0.8nm,0.3s,baz=194,slow=11,SNR=36
ARCES Sn Sn 12 08 26.7 -14
comp=Z,0.2nm,0.3s,baz=196,slow=22,SNR=1.9
ARCES Lg Lg 12 10 42.0
comp=Z,0.2nm,0.3s,baz=178,slow=33,SNR=20
comp=Z,5.4nm,0.5s
ARCES ARCESS Array B 18.52 10 P **P** **12 05 11.4 -1.7**
ARCES ARCESS Array B 18.52 10 P **P** **12 05 11.4 -1.7**
ARCES pmax pmax
comp=Z,20nm,1.4s
LVZ Lovozero 18.67 22 P **P** **12 05 13.9 -0.9**
LVZ IAmb IAmb 12 05 24.3
comp=Z,79nm,1.4s
LVZ Lovozero 18.67 22 P **P** **12 05 13.9 -0.9**
LVZ pmax pmax
comp=Z,79nm,1.4s
KEV Kevo 18.91 12 P **P** **12 05 16.3 -1.0**
KEV Kevo 18.91 12 P **P** **12 05 16.3 -1.0**
KEV pmax pmax
comp=Z,17nm,0.9s
PRGR Permogore 18.92 47 *e*P **P** **12 05 13.0 -4.5**
MVO Moncorvo 18.99 246 *e*P **Pn** **12 05 22.4 +3.3**
BELG Belogornoye 19.35 75 P **P** **12 05 19.2 -3.1**
comp=Z,13nm,0.6s,baz=142,slow=9.4,SNR=4.3
BELG Lg Lg 12 11 10.5
comp=Z,0.5nm,0.3s,baz=336,slow=22,SNR=4.3
BELG Belogornoye 19.35 75 *i*P **P** **12 05 22.1 -0.2**
KIV Kislovodsk 19.37 103 *e*P **Pn** **12 05 23.8 +0.1**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,7.0nm,14.0s
SHA1 Shidzhatmaz 19.47 103 *i*P **Pn** **12 05 24.8 -0.3**
KBZ Khabaz 19.62 103 P **P** **12 05 24.7 -0.6**
comp=Z,0.1nm,0.3s,baz=318,slow=11,SNR=5.3
KBZ Lg Lg 12 11 31.4
comp=Z,0.1nm,0.3s,baz=216,slow=10,SNR=5.0
comp=Z,2.3nm,1.0s
KBZ Khabaz 19.62 103 *ce*P **P** **12 05 25.6 +0.3**
KBZ pmax pmax
comp=Z,7.0nm,1.5s
PCBR Castelo Branco 20.13 243 *e*P Pn 12 05 35.4 +2.7
comp=Z,23nm,2.0s
KIRV Kirov 20.14 57 P **P** **12 05 31.9 +1.0**
comp=Z,13nm,0.4s,baz=276,slow=12,SNR=5.4
comp=Z,13nm,0.4s
KIRV Kirov 20.14 57 *i*P **P** **12 05 30.8 0.0**
PMRV Marv??o 20.37 242 *e*P Pn 12 05 37.0 +1.4
ONI Oni 20.59 105 P **P** **12 05 37.3 +1.2**
ONI Oni 20.59 105 P Pn 12 05 37.3 -0.9
ONI pmax pmax
comp=Z,7.0nm,1.0s
ZEI Tsey 20.75 104 *e*P **P** **12 05 39.2 +1.3**
ZEI pmax pmax
comp=Z,15nm,1.4s
PESTR Estremoz 20.88 242 *e*P **P** **12 05 40.0 +0.9**
PMTG Montargil 21.09 243 *e*P **P** **12 05 42.6 +1.3**
GNI Garni 22.85 109 P **P** **12 06 01.7 +1.4**
comp=Z,4.4nm,0.4s,baz=175,slow=4.9,SNR=8.3
comp=Z,4.4nm,0.4s
GNI Garni 22.85 109 *ce*P **P** **12 06 02.8 +2.4**
GNI pmax pmax
comp=Z,38nm,1.7s
ARU Arti 25.10 62 P **P** **12 06 21.4 -0.1**
comp=Z,9.4nm,0.6s,baz=278,slow=8.8,SNR=14
comp=Z,9.4nm,0.6s
ARU Arti 25.10 62 P **P** **12 06 21.5 -0.1**
ARU IAmb IAmb 12 06 26.6
comp=Z,12nm,0.8s
ARU Arti 25.10 62 *d*P **P** **12 06 21.5 -0.1**
ARU 12 06 52.3
ARU S **S** **12 10 47.0 +0.2**
ARU pmax pmax
comp=Z,19nm,1.1s
AKTO Aktyubinsk 26.14 76 P **P** **12 06 31.2 +0.2**
comp=Z,6.6nm,0.7s,baz=290,slow=10,SNR=16
comp=Z,6.6nm,0.7s
SPITS Spitsbergen Ar 26.67 0 P **P** **12 06 36.5 +0.9**
comp=Z,1.9nm,0.6s,baz=143,slow=12,SNR=2.3
comp=Z,1.9nm,0.6s
ABKAR Akkulak array 27.72 77 P **P** **12 06 44.4 -0.9**
BRVK Borovoye 32.48 66 P **P** **12 07 29.0 +1.6**
BRVK IAmb IAmb 12 07 30.1
comp=Z,8.0nm,0.8s
BRVK Borovoye 32.48 66 *d*P **P** **12 07 27.0 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
NRIK Noril'sk 36.75 34 P **P** **12 08 05.2 +1.2**
comp=Z,1.5nm,0.3s,baz=278,slow=1.9,SNR=1.9
comp=Z,1.5nm,0.3s
NRIK Noril'sk 36.75 34 *i*P **P** **12 08 03.3 -0.8**
NRIK pmax pmax
comp=Z,10.0nm,1.4s
KK31 Karatay Array 37.06 81 P **P** **12 08 08.8 +1.7**
KK31 Karatay Array 37.06 81 P **P** **12 08 08.8 +1.7**
KK31 pmax pmax
comp=Z,8.0nm,1.2s
KKAR Karatay Array 37.06 81 P **P** **12 08 08.9 +1.9**
KKAR Karatay Array 37.06 81 P **P** **12 08 08.6 +1.5**
KKAR Karatay Array 37.06 81 P **P** **12 08 08.6 +1.5**
KURK Kurchatov 38.15 66 P **P** **12 08 16.6 +0.4**
KURK Kurchatov 38.15 66 *ce*P **P** **12 08 18.0 +1.8**
KURK pmax pmax
comp=Z,5.0nm,0.6s
CHGR Chuyangaron 38.77 88 P **P** **12 08 22.4 +0.8**
CHGR IAmb IAmb 12 08 25.0
comp=Z,29nm,1.3s
CHGR Chuyangaron 38.77 88 P **P** **12 08 22.4 +0.8**
CHGR pmax pmax
comp=Z,29nm,1.3s
GAR Garm 39.28 87 P **P** **12 08 25.9 -0.1**
AAK Ala-Archa 39.76 79 P **P** **12 08 32.0 +2.0**
AAK IAmb IAmb 12 08 34.1
comp=Z,15nm,1.2s
AAK Ala-Archa 39.76 79 *i*P **P** **12 08 32.2 +2.2**
AAK pmax pmax
comp=Z,14nm,1.2s
TOA0 Torodi Ar. Sit 40.10 202 P **P** **12 08 32.8 +0.1**
TORD Torodi Ar. Bea 40.10 202 P **P** **12 08 32.4 -0.3**
comp=Z,4.4nm,0.9s,baz=13,slow=7.9,SNR=21
TORD PcP **PcP** **12 10 37.5 +0.1**
comp=Z,0.5nm,0.7s,baz=340,slow=3.7,SNR=2.7
comp=Z,4.4nm,0.9s
TORD Torodi Ar. Bea 40.10 202 P **P** **12 08 32.8 +0.1**
ZAA0 Zalesovo Array 40.15 59 P **P** **12 08 33.8 +0.9**
ZALV Zalesovo Beam 40.15 59 P **P** **12 08 34.6 +1.7**
comp=Z,3.5nm,1.0s,baz=302,slow=8.5,SNR=11
ZALV PP **PP** **12 10 01.8 -3.0**
comp=Z,0.6nm,0.5s,baz=313,slow=14,SNR=3.6
comp=Z,3.5nm,1.0s
ZALV Zalesovo Beam 40.15 59 P **P** **12 08 34.2 +1.3**
MAKZ Makanchi 42.00 70 P **P** **12 08 49.0 +0.8**
MAKZ Makanchi 42.00 70 P **P** **12 08 49.0 +0.8**
MAKZ pmax pmax
comp=Z,2.0nm,1.0s
MK31 Makanchi Array 42.19 69 P **P** **12 08 50.9 +1.2**
MK31 Makanchi Array 42.19 69 *i*P **P** **12 08 51.1 +1.3**
MKAR Makanchi Array 42.19 69 P **P** **12 08 51.2 +1.5**
comp=Z,1.9nm,0.8s,baz=300,slow=6.4,SNR=14
MKAR PP **PP** **12 10 26.4 -0.6**
comp=Z,0.8nm,0.9s,baz=339,slow=9.1,SNR=4.1
comp=Z,1.9nm,0.8s
KSH Kashi 42.48 82 P **P** **12 08 55.1 +2.7**
KSH PP **PP** **12 10 36.3 +5.8**
KSH pmax pmax
comp=Z,10.0nm,1.1s
SCHQ Schefferville 46.99 308 P **P** **12 09 28.2 +0.3**
SCHQ IAmb IAmb 12 09 56.2
comp=Z,9.8nm,1.2s
BATG Bathurst New B 50.91 300 **P** **12 09 58.9 +0.8**
ZAK Zakamensk 51.67 55 *e*P **P** **12 10 04.0 +0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.5s
BOD Bodaibo 52.08 42 *e*P **P** **12 10 06.9 +0.2**
BOD pmax pmax
comp=Z,7.0nm,1.2s
SONM Songino Array 54.86 55 P **P** **12 10 29.8 +2.3**
comp=Z,2.5nm,0.7s,baz=289,slow=8.6,SNR=12
comp=Z,2.5nm,0.7s
SONM Songino Array 54.86 55 P **P** **12 10 29.4 +1.9**
SONM IAmb IAmb 12 10 31.3
comp=Z,13nm,1.5s
SONM Songino Array 54.86 55 P **P** **12 10 29.4 +1.9**
SONM pmax pmax
comp=Z,13nm,1.5s
YAK Yakutsk 55.12 32 P **P** **12 10 28.7 -0.2**
YAK Yakutsk 55.12 32 *i*P **P** **12 10 29.0 +0.1**
YAK pmax pmax
comp=Z,18nm,0.7s
ULN Ulaanbaatar 55.18 55 P **P** **12 10 30.4 +0.6**
ULN IAmb IAmb 12 10 33.9
comp=Z,8.0nm,1.4s
ULN Ulaanbaatar 55.18 55 *ce*P **P** **12 10 31.7 +1.9**
ULN pmax pmax
comp=Z,8.0nm,1.7s
GOMU GeErMu 56.06 73 P **P** **12 10 38.4 +1.9**
GOMU pP PcP 12 10 43.0 -52
GOMU sP 12 10 43.9
GOMU pmax pmax
comp=Z,4.0nm,0.9s
GOMU pmax pmax
comp=Z,60nm,4.0s
LSA Lhasa 58.31 81 P **P** **12 10 53.9 +1.2**
LSA Lhasa 58.31 81 P **P** **12 10 53.9 +1.2**
LSA pmax pmax
comp=Z,6.0nm,0.5s
BILL Bilibino 58.60 13 *e*P **P** **12 10 54.3 +0.7**
BILL *e* 12 11 45.3
BILL pmax pmax
comp=Z,2.0nm,1.1s
BILL MLR MLR
comp=Z,13nm,14.0s
YKA Yellowknife Ar 59.75 336 P **P** **12 11 03.2 +1.6**
comp=Z,4.3nm,0.7s,baz=29,slow=6.9,SNR=20
comp=Z,4.3nm,0.7s
YKA Yellowknife Ar 59.75 336 P **P** **12 11 03.0 +1.4**
ZEA Zeya 60.31 40 *e*P **P** **12 11 07.1 +1.5**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
SEY Seymchan 60.72 21 *i*P **P** **12 11 07.7 -0.5**
SEY pmax pmax
comp=Z,7.0nm,1.8s
J26L Joseph Creek 63.14 350 P **P** **12 11 26.8 +2.2**
J26L IAmb IAmb 12 11 28.2
comp=Z,2.9nm,0.8s
ILAR Eielson Array 63.20 352 P **P** **12 11 26.6 +1.7**
comp=Z,0.3nm,0.6s,baz=8.5,slow=5.5,SNR=5.9
comp=Z,0.3nm,0.6s
K27K Chicken 63.44 349 P **P** **12 11 28.8 +2.3**
BCAR Beaver Creek A 64.34 349 P **P** **12 11 34.9 +2.4**
L27K Beaver Creek, 64.35 349 P **P** **12 11 34.8 +2.2**
L27K IAmb IAmb 12 11 38.6
comp=Z,4.7nm,1.2s
KLR Kul'dur 65.58 40 P **P** **12 11 41.8 +1.1**
comp=Z,2.9nm,0.7s,baz=328,slow=8.4,SNR=11
comp=Z,2.9nm,0.7s
KLR Kul'dur 65.58 40 *i*P **P** **12 11 41.5 +0.8**
KLR pmax pmax
comp=Z,3.0nm,1.0s
P33M Teslin, Yukon 65.74 344 P **P** **12 11 43.6 +1.9**
P33M IAmb IAmb 12 12 08.5
comp=Z,7.2nm,1.4s
XAN Xi'an 65.79 65 P P 12 11 36.1 -6.3
XAN pmax pmax
comp=Z,6.0nm,0.8s
SCM Sheep Creek Mo 66.13 351 P **P** **12 11 46.3 +2.2**
SCM Sheep Creek Mo 66.13 351 P **P** **12 11 46.3 +2.2**
SCM pmax pmax
comp=Z,19nm,1.0s
L19K White Mountain 66.32 355 P **P** **12 11 47.1 +1.8**
L19K IAmb IAmb 12 11 49.8
comp=Z,5.4nm,0.9s
SKT Skwentna 66.32 354 P **P** **12 11 46.2 +0.9**
SKT IAmb IAmb 12 11 46.8
comp=Z,2.9nm,0.8s
SUA Susitna One 66.78 353 P **P** **12 11 49.8 +1.5**
PZH PanZhiHua 67.08 76 P **P** **12 11 52.1 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,110nm,4.9s
ECSD EROS Data Cent 68.64 314 P **P** **12 12 02.0 +1.7**
ECSD IAmb IAmb 12 12 02.6
comp=Z,10nm,1.4s
USRK Ussuriysk Ar. 69.67 44 P **P** **12 12 07.9 +1.3**
comp=Z,2.1nm,0.8s,baz=354,slow=12,SNR=2.9
comp=Z,2.1nm,0.8s
USRK Ussuriysk Ar. 69.67 44 P **P** **12 12 08.3 +1.7**
USRK Ussuriysk Ar. 69.67 44 P **P** **12 12 08.3 +1.7**
LAO LASA Array 70.27 322 P **P** **12 12 13.0 +2.6**
EGMT Eagleton 70.46 325 P **P** **12 12 13.4 +1.9**
PETK Petropavlovsk- 70.78 23 P **P** **12 12 14.4 +1.1**
comp=Z,1.9nm,1.0s,baz=298,slow=7.5,SNR=2.6
comp=Z,1.9nm,1.0s
CMAR Chiang Mai Arr 71.36 84 P **P** **12 12 18.2 +1.0**
comp=Z,1.9nm,0.6s,baz=309,slow=7.2,SNR=10
comp=Z,1.9nm,0.6s
MSO Missoula 72.96 327 P **P** **12 12 27.4 +0.8**
MSO IAmb IAmb 12 12 30.5
comp=Z,10nm,1.2s
KSAR Wonju Array Be 73.20 51 P **P** **12 12 29.1 +1.1**
KSAR Wonju Array Be 73.20 51 P **P** **12 12 29.1 +1.1**
BOZ Bozeman (W) 73.21 325 P **P** **12 12 29.5 +1.3**
BOZ IAmb IAmb 12 12 32.0
comp=Z,12nm,1.3s
BOZ Bozeman (W) 73.21 325 P **P** **12 12 29.5 +1.3**
BOZ pmax pmax
comp=Z,12nm,1.3s
KSRS Korea Array 73.21 51 P **P** **12 12 28.5 +0.5**
comp=Z,1.4nm,0.9s,baz=339,slow=6.3,SNR=4.7
comp=Z,1.4nm,0.9s
MOOW Moose Ponds 74.46 323 P **P** **12 12 38.0 +2.4**
MOOW IAmb IAmb 12 12 40.2
comp=Z,9.9nm,1.4s
E09A Wood Farm, Sta 74.63 329 P **P** **12 12 38.2 +1.9**
TPAW Teton Pass 74.76 323 P **P** **12 12 39.4 +1.9**
TPAW IAmb IAmb 12 12 41.1
comp=Z,11nm,1.2s
BW06 Boulder Array 74.85 322 P **P** **12 12 38.9 +1.0**
PD31 Pinedale Array 74.85 322 P **P** **12 12 39.0 +1.0**
PD31 IAmb IAmb 12 12 40.3
comp=Z,7.0nm,1.4s
PDAR Pinedale Array 74.85 322 P **P** **12 12 39.4 +1.5**
comp=Z,1.4nm,0.7s,baz=51,slow=4.9,SNR=11
comp=Z,1.4nm,0.7s
PDAR Pinedale Array 74.85 322 P **P** **12 12 38.5 +0.5**
E08A Dider Farm, El 74.94 330 P **P** **12 12 40.5 +2.4**
ISCO Idaho Springs 75.76 317 P **P** **12 12 44.8 +1.5**
ISCO Idaho Springs 75.76 317 P **P** **12 12 44.8 +1.5**
ISCO pmax pmax
comp=Z,4.0nm,1.3s
BMO Blue Mountains 75.83 328 P **P** **12 12 44.9 +1.6**
BMO Blue Mountains 75.83 328 P **P** **12 12 44.9 +1.6**
BMO pmax pmax
comp=Z,14nm,1.1s
HLID Hailey 75.96 325 P **P** **12 12 45.9 +1.7**
HLID IAmb IAmb 12 12 47.4
comp=Z,5.3nm,1.0s
O20A White River Ci 76.56 319 P **P** **12 12 50.1 +2.4**
O20A IAmb IAmb 12 12 51.6
comp=Z,7.5nm,1.0s
MFID Camas Ranch 76.59 326 P **P** **12 12 49.3 +1.5**
MFID IAmb IAmb 12 12 50.3
comp=Z,3.3nm,0.8s
HWUT Hardware Ranch 76.61 322 P **P** **12 12 49.6 +1.6**
HWUT IAmb IAmb 12 12 51.8
comp=Z,6.7nm,1.1s
RDMU Red Mountain 76.72 321 P **P** **12 12 50.7 +2.0**
HVU Hansel Valley 76.92 323 P **P** **12 12 52.2 +2.5**
HVU Hansel Valley 76.92 323 P **P** **12 12 52.2 +2.5**
HVU pmax pmax
comp=Z,4.0nm,1.1s
TCUT Toone Canyon 76.97 322 P **P** **12 12 52.7 +2.6**
SDCO Great Sand Dun 77.43 316 P **P** **12 12 54.7 +1.9**
SDCO IAmb IAmb 12 12 56.5
comp=Z,6.3nm,1.4s
T25A Trinidad 77.46 315 P **P** **12 12 55.0 +2.1**
T25A IAmb IAmb 12 12 57.1
comp=Z,4.6nm,0.8s
CTU Camp Tracy 77.47 322 P **P** **12 12 54.9 +2.1**
CTU IAmb IAmb 12 12 55.9
comp=Z,4.1nm,0.9s
BGU Big Grassy Mou 77.75 323 P **P** **12 12 56.0 +1.6**
P18A Preston Nutter 77.80 320 P **P** **12 12 56.7 +1.9**
P18A IAmb IAmb 12 12 57.7
comp=Z,7.9nm,1.1s
MPU Maple Canyon 78.01 322 P **P** **12 12 57.2 +1.4**
PV07 Paradox Valley 78.17 319 P **P** **12 12 58.8 +2.0**
PV07 IAmb IAmb 12 12 59.9
comp=Z,5.9nm,0.8s
DUG Dugway, Tooele 78.31 323 P **P** **12 13 00.1 +2.7**

DUG					IAmb	IAmb	12 13 00.9		
	comp=Z,7.3nm,0.8s								
DUG	**Dugway, Tooele**	**78.31**	**323**		P	**P**	**12 13 00.1**	**+2.7**	
DUG					pmax	pmax			
	comp=Z,7.0nm,0.9s								
SRU	**San Rafael Swe**	**78.35**	**320**		P	**P**	**12 12 59.3**	**+1.6**	
SRU					IAmb	IAmb	12 13 00.4		
	comp=Z,7.1nm,0.9s								
SRU	**San Rafael Swe**	**78.35**	**320**		P	**P**	**12 12 59.3**	**+1.6**	
SRU					pmax	pmax			
	comp=Z,7.0nm,0.9s								
PV13	**Radium Mtn., P**	**78.48**	**319**		P	**P**	**12 13 00.7**	**+2.1**	
PV13					IAmb	IAmb	12 13 01.8		
	comp=Z,8.4nm,1.1s								
MJAR	**Matsushiro Arr**	**78.66**	**44**		P	**P**	**12 12 59.5**	**+0.2**	
	comp=Z,2.0nm,1.1s,baz=332,slow=5.5,SNR=6.7								
	comp=Z,2.0nm,1.1s								
TCU	**Taichung**	**79.94**	**64**		P	P	12 12 52.7	-14	
TCU					pmax	pmax			
	comp=Z,24nm,1.4s								
BOSA	**Boshof**	**80.29**	**172**		P	**P**	**12 13 08.9**	**+0.8**	
	comp=Z,3.8nm,1.0s,baz=0.1,slow=6.9,SNR=5.8								
	comp=Z,3.8nm,1.0s								
R11A	**Troy Canyon, C**	**80.96**	**324**		P	**P**	**12 13 14.1**	**+2.2**	
U15A	**North Rim**	**81.37**	**320**		P	**P**	**12 13 15.9**	**+1.6**	
NVAR	**Mina Array Bea**	**81.87**	**325**		P	**P**	**12 13 18.9**	**+2.0**	
	comp=Z,1.3nm,1.0s,baz=50,slow=5.0,SNR=9.9								
	comp=Z,1.3nm,1.0s								
TPNV	**Topopah Spring**	**82.44**	**323**		P	**P**	**12 13 21.6**	**+1.8**	
TPNV	**Topopah Spring**	**82.44**	**323**		P	**P**	**12 13 21.6**	**+1.8**	
TPNV					pmax	pmax			
	comp=Z,3.0nm,1.0s								
MNTX	**Cornudas Mount**	**82.45**	**313**		P	**P**	**12 13 21.8**	**+2.1**	
MNTX					IAmb	IAmb	12 13 24.0		
	comp=Z,9.9nm,1.5s								
TX31	**Lajitas Ar. Si**	**83.64**	**310**		P	**P**	**12 13 27.9**	**+1.9**	
TX32	**Lajitas Array**	**83.64**	**310**		P	**P**	**12 13 28.1**	**+2.2**	
TX32					IAmb	IAmb	12 13 29.9		
	comp=Z,10nm,1.5s								
TXAR	**Lajitas Array**	**83.64**	**310**		P	**P**	**12 13 28.0**	**+2.1**	
	comp=Z,0.6nm,0.7s,baz=46,slow=3.6,SNR=11								
	comp=Z,0.6nm,0.7s								
ASAR	**Alice Springs**	**125.37**	**84**		PKP	**PKPdf**	**12 19 57.5**	**-0.7**	
	comp=Z,0.6nm,0.7s,baz=336,slow=1.5,SNR=9.4								

*NEIC **13** 12:14:07.3±2.3, 18°.2N±0°.2×68°.01W±0°.06, h99km±9km, Error ellipse: s-maj=25.2km s-min=7.4km az=187.0*
*RSPR **13** 12:14:08.1, 18°.19N×68°.11W, h88km±1km, MD2.8/7*
*OSPL **13** 12:14:09.2±1.3, 18°.28N×67°.71W, h124km±12km, ML2.5*

ISC 13 12:14:08.3±1.3, 18°.3N±0°.1×67°.98W±0°.05, h99km, n38, σ1§14/43, 6C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.46**	**304**	P	**Pn**	**12 14 21.1**	**-2.6**
PCDR	**Punta Cana, DR**	**0.46**	**304**	*i* P	**Pn**	**12 14 22.2**	**-1.4**
PCDR				*e*S	**Sn**	**12 14 35.0**	**-0.1**
PCDR				IAML		12 14 42.1	
	comp=Z,133nm,1.7s						
IDE	**Isla Desecheo**	**0.50**	**75**	*e*P	**Pn**	**12 14 23.5**	**-0.5**
IDE	**Isla Desecheo**	**0.50**	**75**	*e*S	**Sn**	**12 14 35.2**	**-0.5**
PRSN	**Puerto Rico Se**	**0.80**	**93**	Pn	**Pn**	**12 14 26.6**	**+0.2**
AGPR	**Aguadilla, PR**	**0.85**	**76**	*e*P	**Pn**	**12 14 27.1**	**+0.1**
AGPR	**Aguadilla, PR**	**0.85**	**76**		**Pn**	**12 14 26.8**	**-0.3**
AGPR				IAML		12 14 42.8	
	comp=N,166nm,0.3s						
AGPR				IAML		12 14 45.0	
	comp=E,222nm,0.4s						
AGPR	**Aguadilla, PR**	**0.85**	**76**	*i* P	**Pn**	**12 14 27.1**	**+0.1**
AGPR				*e*S	**Sn**	**12 14 41.1**	**-0.1**
AGPR				IAML		12 14 44.9	
	comp=Z,92nm,0.2s						
CRPR	**Cabo Rojo, PR**	**0.86**	**107**	*e*P	**Pn**	**12 14 26.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.86**	**107**		**Pn**	**12 14 26.6**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.86**	**107**	*i* P	**Pn**	**12 14 26.8**	**-0.5**
CRPR				*e*S	**Sn**	**12 14 41.1**	**-0.3**
CRPR				IAML		12 14 43.1	
	comp=Z,43nm,0.4s						
MLPR	**Magueyes Islan**	**0.94**	**108**	*e*P	**Pn**	**12 14 26.8**	**-1.2**
MLPR	**Magueyes Islan**	**0.94**	**108**	*e*S	**Sn**	**12 14 42.4**	**-0.3**
MLPR	**Magueyes Islan**	**0.94**	**108**		**Pn**	**12 14 26.3**	**-1.6**
AOPR	**Arecibo Observ**	**1.17**	**86**	*e*P	**Pn**	**12 14 30.2**	**-0.3**
AOPR	**Arecibo Observ**	**1.17**	**86**	*e*S	**Sn**	**12 14 48.3**	**+0.9**
AOPR	**Arecibo Observ**	**1.17**	**86**		**Pn**	**12 14 30.2**	**-0.3**
AOPR					**Sn**	**12 14 48.3**	**+0.9**
UUPR	**Utuado, UPR, P**	**1.20**	**90**	*e*P	**Pn**	**12 14 31.0**	**+0.1**
UUPR	**Utuado, UPR, P**	**1.20**	**90**	*e*S	**Sn**	**12 14 48.7**	**+0.8**
UUPR	**Utuado, UPR, P**	**1.20**	**90**		**Pn**	**12 14 31.0**	**+0.1**
UUPR					**Sn**	**12 14 48.7**	**+0.8**
OBIP	**Obispado Ponce**	**1.32**	**99**	Pn	**Pn**	**12 14 31.2**	**-1.2**
OBIP				IAML		12 14 54.9	
	comp=N,37nm,0.3s						
EMPR	**Esperanza - Ma**	**1.39**	**81**	*e*P	**Pn**	**12 14 33.1**	**0.0**
EMPR	**Esperanza - Ma**	**1.39**	**81**	*e*S	**Sn**	**12 14 53.1**	**+1.1**
EMPR	**Esperanza - Ma**	**1.39**	**81**	Pn	**Pn**	**12 14 32.3**	**-0.9**
EMPR				IAML		12 15 16.1	
	comp=E,90nm,1.3s						
EMPR	**Esperanza - Ma**	**1.39**	**81**		**Sn**	**12 14 53.1**	**+1.1**
DR12	**Loma Pena Alta**	**1.43**	**292**	Pn	**Pn**	**12 14 31.8**	**-1.9**
SJG	**San Juan**	**1.75**	**95**	Pn	**Pn**	**12 14 36.0**	**-1.5**
SJG				IAML		12 15 02.6	
	comp=E,42nm,0.4s						
SJG				IAML		12 15 04.2	
	comp=E,36nm,0.2s						
GCPR	**Guaynabo City**	**1.80**	**88**	Pn	**Pn**	**12 14 36.9**	**-1.4**
GCPR				IAML		12 15 04.4	
	comp=N,17nm,0.2s						
GCPR				IAML		12 15 05.4	
	comp=E,23nm,0.2s						
IGPR	**InterUniversit**	**1.81**	**99**	*e*P	**Pn**	**12 14 38.8**	**+0.5**
IGPR	**InterUniversit**	**1.81**	**99**	*e*S	**Sn**	**12 15 02.8**	**+1.6**
IGPR	**InterUniversit**	**1.81**	**99**		**Sn**	**12 15 02.8**	**+1.6**
PDPR	**Patillas Dam,**	**1.88**	**97**	Pn	**Pn**	**12 14 38.5**	**-0.7**
CBYP	**Canovanas**	**2.02**	**89**	Pn	**Pn**	**12 14 39.7**	**-1.4**
HUMP	**Col San Antoni**	**2.03**	**93**	Pn	**Pn**	**12 14 40.0**	**-1.2**
HUMP				IAML		12 15 11.9	
	comp=N,50nm,0.2s						
CUPR	**Culebra, Puert**	**2.56**	**89**	Pn	**Pn**	**12 14 46.7**	**-1.5**
CUPR				IAML		12 15 21.6	
	comp=E,14nm,0.9s						
CUPR				IAML		12 15 23.2	
	comp=N,11nm,1.0s						
STVI	**Saint Thomas**	**2.88**	**88**	Pn	**Pn**	**12 14 51.5**	**-0.9**
STVI				IAML		12 15 44.0	
	comp=N,22nm,1.7s						
SDDR	**Presa de Saban**	**3.22**	**283**		**Pn**	**12 14 57.9**	**+0.9**
SDDR				IAML		12 15 43.6	
	comp=N,16nm,0.6s						
SDDR				IAML		12 15 44.6	
	comp=N,17nm,1.0s						
SDDR	**Presa de Saban**	**3.22**	**283**	*i* P	**Pn**	**12 14 59.9**	**+2.9**

DJA 13 12:44:07.4±0.5, 9°S±6°×107°8E±°, h10km, M4.1/10, mb4.4/2, MLv3.9/10, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOGI	**Yogyakarta**	**2.19**	**55**	P	Pn	12 44 44.0	+0.1
CNJI	**Cibinong**	**2.22**	**323**	P	Pn	12 44 45.0	+0.7
UGM	**Wanagama**	**2.33**	**60**	P	Pn	12 44 45.8	0.0
LEM	**Lembang**	**2.41**	**339**	P	Pn	12 44 47.0	-0.1
PCJI	**Pacitan**	**2.80**	**72**	P	Pn	12 44 52.4	+0.1
PWJI	**Pagerwojo**	**3.44**	**72**	P	Pn	12 45 01.3	+0.1
GMJI	**Gumukmas**	**4.96**	**81**	P	Pn	12 45 22.2	+0.1
JAGI	**Jajag, Banyuwa**	**5.63**	**84**	P	Pn	12 45 30.9	-0.3
	0.3nm49nm,1.7s						
SRBI	**Singaraja**	**6.72**	**82**	P	Pn	12 45 46.8	+0.6

*IDC **13** 12:58:03.3±18.0, 4°.48S×145°.20E, h160km±182km, mb3.2/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=79.8km s-min=53.6km az=156.0*

ISC 13 12:57:49.8±1.2, 4°.4S±0°.1×145°.6E±0°.2, h35km, n6, σ1§16/6, mb3.6/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.24**	**162**	S	**Sn**	**13 00 05.0**	**+0.2**
	9.9nm,0.5s,baz=145,slow=23,SNR=6.6						
WRA	**Warramunga Arr**	**18.94**	**214**	P	**Pn**	**13 02 08.9**	**+0.1**
	0.2nm,0.3s,baz=33,slow=11,SNR=28						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**22.23**	**209**	P	**P**	**13 02 43.9**	**+0.3**
	0.4nm,0.4s,baz=39,slow=8.0,SNR=18						
	0.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**23.78**	**233**	P	**P**	**13 02 58.9**	**-0.6**
	1.1nm,0.5s,baz=50,slow=7.6,SNR=13						
	1.1nm,0.5s						
ILAR	**Eielson Array**	**84.57**	**23**	P	**P**	**13 10 20.6**	**+1.4**
	0.4nm,0.7s,baz=257,slow=3.6,SNR=2.8						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**97.51**	**52**	P	**P**	**13 11 19.5**	**-1.3**
	0.1nm,0.5s,baz=267,slow=6.1,SNR=2.1						
	0.1nm,0.5s						

WEL 13 13:03:50.1±0.5, 33°S±5°×18°0W±1°3, h12km, M4.3/25, mB5.0/18, ML4.7/43, MLv4.6/25, Mw(mB)4.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.69**	**24**	S	Sn	13 05 32.6	+2.3
MXZ	**Matakaoa Point**	**5.18**	**198**	P	Pn	13 05 10.9	+3.4
WMGZ	**Waiomatatini S**	**5.40**	**197**	P	Pn	13 05 11.3	+0.9
WMGZ				S	Sn	13 06 17.7	+5.2
GRZ	**Great Barrier**	**5.41**	**227**	P	Pn	13 05 13.6	+3.0
HAZ	**Te Kaha**	**5.51**	**202**	P	Pn	13 05 13.6	+1.6
HAZ				S	Sn	13 06 18.2	+2.8
PKGZ	**Pakihiroa**	**5.55**	**199**	P	Pn	13 05 14.7	+2.1
PKGZ				S	Sn	13 06 20.9	+4.5
KUZ	**Kuaotunu**	**5.59**	**222**	P	Pn	13 05 17.8	+4.7
PUZ	**Puketiti**	**5.68**	**197**	P	Pn	13 05 14.3	0.0
PUZ				S	Sn	13 06 23.0	+3.6
RUGZ	**Raukumara Rang**	**5.74**	**202**	P	Pn	13 05 16.2	+0.9
RUGZ				S	Sn	13 06 21.4	+0.3
TWGZ	**Tauwhareparae**	**5.85**	**199**	P	Pn	13 05 17.9	+1.2
TWGZ				S	Sn	13 06 27.6	+3.9
OPRZ	**Ohinepanea**	**6.04**	**210**	P	Pn	13 05 21.5	+2.2
CNGZ	**Carnagh Statio**	**6.08**	**196**	P	Pn	13 05 22.2	+2.4
MWZ	**Matawai**	**6.12**	**201**	P	Pn	13 05 19.7	-0.8
MWZ				S	Sn	13 06 32.6	+2.1
TKGZ	**Te Karaka**	**6.13**	**199**	P	Pn	13 05 22.4	+1.9
TKGZ				S	Sn	13 06 32.5	+2.0
MKAZ	**Moumakai**	**6.16**	**222**	P	Pn	13 05 23.6	+2.6
URZ	**Urewera**	**6.19**	**204**	P	Pn	13 05 21.0	-0.4
URZ				S	Sn	13 06 33.2	+1.1
RAGZ	**Rawiri**	**6.31**	**201**	P	Pn	13 05 25.8	+2.7
RIGZ	**Rimuhau**	**6.40**	**198**	P	Pn	13 05 24.8	+0.5
RIGZ				S	Sn	13 06 37.5	+0.1
RRRZ	**Republican Roa**	**6.48**	**208**	P	Pn	13 05 29.7	+4.3
MUGZ	**Murupara**	**6.51**	**206**	P	Pn	13 05 27.3	+1.6
MUGZ				S	Sn	13 06 42.0	+2.1
PRGZ	**Paritu Road**	**6.58**	**197**	P	Pn	13 05 28.6	+1.9
PRGZ				S	Sn	13 06 43.5	+1.9
SNGZ	**Shannon Statio**	**6.59**	**201**	P	Pn	13 05 27.5	+0.6
SNGZ				S	Sn	13 06 43.0	+0.9
PRRZ	**Plateau Road**	**6.67**	**208**	P	Pn	13 05 29.6	+1.7
ALRZ	**Allen Road**	**6.74**	**208**	P	Pn	13 05 30.5	+1.5
MHGZ	**Mahia Peninsul**	**6.79**	**196**	P	Pn	13 05 30.9	+1.3
MTHZ	**Maungataniwha**	**6.82**	**204**	P	Pn	13 05 29.1	-0.9
MTHZ				S	Sn	13 06 48.5	+0.9
TLZ	**Tolley Road**	**6.89**	**213**	P	Pn	13 05 33.2	+2.1
MRHZ	**Matea Rd**	**6.95**	**206**	P	Pn	13 05 29.9	-2.0
MRHZ				S	Sn	13 06 50.4	-0.5
NMHZ	**Naumai**	**7.05**	**203**	P	Pn	13 05 33.4	+0.2
NMHZ				S	Sn	13 06 54.8	+1.5
ARHZ	**Aropaoanui**	**7.14**	**201**	P	Pn	13 05 31.7	-2.7
ARHZ				S	Sn	13 06 54.5	-0.9
BKZ	**Black Stump Fm**	**7.22**	**205**	P	Pn	13 05 33.9	-1.6
BKZ				S	Sn	13 06 56.3	-1.2
HIZ	**Hauiti**	**7.37**	**216**	P	Pn	13 05 38.6	+1.1
KWHZ	**Kaweka Forest**	**7.47**	**204**	P	Pn	13 05 38.1	-1.0
KWHZ				S	Sn	13 07 00.9	-2.9
TMVZ	**Te Maari**	**7.47**	**209**	P	Pn	13 05 38.2	-0.9
CKHZ	**Cape Kidnapper**	**7.48**	**200**	P	Pn	13 05 38.3	-0.7
CKHZ				S	Sn	13 07 00.7	-3.1
ETVZ	**East Tongariro**	**7.49**	**209**	P	Pn	13 05 38.7	-0.6
NNVZ	**North Ngauruho**	**7.53**	**209**	P	Pn	13 05 40.1	+0.3
OTVZ	**Oturere**	**7.53**	**209**	P	Pn	13 05 39.6	-0.3
TWVZ	**Taurewa**	**7.55**	**210**	P	Pn	13 05 39.8	-0.3
SNVZ	**South Ngauruho**	**7.56**	**209**	P	Pn	13 05 39.3	-1.0
NGZ	**Ngauruhoe**	**7.57**	**209**	P	Pn	13 05 40.4	-0.1
TUVZ	**Tukino**	**7.62**	**209**	P	Pn	13 05 39.7	-1.5
FWVZ	**Far West T-bar**	**7.66**	**209**	P	Pn	13 05 39.1	-2.6
BHHZ	**Black Hill Sta**	**7.66**	**206**	P	Pn	13 05 39.8	-1.8
WHVZ	**Whangaehu Hut**	**7.66**	**209**	P	Pn	13 05 40.7	-1.1
WNVZ	**Wahianoa**	**7.70**	**209**	P	Pn	13 05 40.4	-1.8
MOVZ	**Moawhango**	**7.71**	**208**	P	Pn	13 05 39.6	-2.7
PKVZ	**Pokaka**	**7.77**	**210**	P	Pn	13 05 41.0	-2.1
PXZ	**Pawanui**	**7.89**	**200**	P	Pn	13 05 42.3	-2.3
WPHZ	**Waipukurau**	**8.05**	**202**	P	Pn	13 05 44.5	-2.4
PRHZ	**Porangahau**	**8.17**	**200**	P	Pn	13 05 45.9	-2.6
TSZ	**Takapari Road**	**8.20**	**204**	P	Pn	13 05 45.5	-3.5
WAZ	**Wanganui**	**8.31**	**210**	P	Pn	13 05 47.8	-2.6
ANWZ	**Angora Road**	**8.40**	**201**	P	Pn	13 05 47.8	-3.8
POWZ	**Post Office Ro**	**8.56**	**204**	P	Pn	13 05 50.4	-3.6
PRWZ	**Pori Road**	**8.64**	**203**	P	Pn	13 05 51.2	-3.8
BFZ	**Birch Farm**	**8.67**	**201**	P	Pn	13 05 51.3	-4.1
CPWZ	**Castlepoint**	**8.89**	**201**	P	Pn	13 05 55.6	-2.8
CTZ	**Chatham Island**	**11.32**	**169**	P	Pn	13 06 45.7	+14

*IDC **13** 13:11:46.5±2.1, 23°.82S×179°.98E, h501km±18km, mb2.9/4, mbtmp4.0/6, Error ellipse: s-maj=33.7km s-min=25.7km az=133.0*

ISC 13 13:11:46.9±0.9, 23°.78S±0°.08×179°.9E±0°.2, h500km, n29, σ1§98/36, mb3.2/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.79**	**161**	P	**P**	**13 13 24.2**	**+3.1**
MSVF	**Nonsavu**	**6.27**	**343**	P	**P**	**13 13 26.3**	**+0.2**
	5.5nm,0.5s,baz=266,slow=23,SNR=11						
OUZ	**Omahuta**	**12.67**	**204**	P	**P**	**13 14 35.8**	**+3.4**
KUZ	**Kuaotunu**	**13.43**	**195**	P	**P**	**13 14 42.6**	**+2.2**
MBAZ	**Motutapu North**	**13.66**	**197**	P	**P**	13 14 52.9	+10
RVAZ	**Riverhead Bore**	**13.75**	**198**	P	**P**	**13 14 45.0**	**+1.2**
ETAZ	**East Tamaki Re**	**13.83**	**197**	P	**P**	13 14 53.8	+9.2
MKAZ	**Moumakai**	**13.91**	**196**	P	**P**	13 14 53.4	+8.0
HAZ	**Te Kaha**	**14.06**	**187**	P	**P**	**13 14 46.5**	**-0.5**
HAZ				S	**S**	**13 17 15.1**	**-0.5**
PKGZ	**Pakihiroa**	**14.16**	**186**	P	**P**	**13 14 50.1**	**+2.0**
PKGZ				S	**S**	**13 17 15.3**	**-2.4**
RUGZ	**Raukumara Rang**	**14.28**	**187**	P	**P**	**13 14 51.8**	**+2.3**
PUZ	**Puketiti**	**14.32**	**185**	P	P	13 14 56.2	+6.3
PUZ				S	**S**	**13 17 20.6**	**-0.2**
TWGZ	**Tauwhareparae**	**14.46**	**186**	P	**P**	**13 14 52.5**	**+1.2**
URZ	**Urewera**	**14.64**	**189**	P	**P**	**13 14 52.0**	**-1.2**
	25nm,0.5s,baz=24,slow=1.9,SNR=34						
URZ				S	**S**	**13 17 25.4**	**-1.3**
	8.6nm,0.7s,baz=140,slow=22,SNR=7.1						
URZ	**Urewera**	**14.64**	**189**	P	**P**	**13 14 53.4**	**+0.3**
URZ				S	**S**	**13 17 23.7**	**-3.0**
MWZ	**Matawai**	**14.66**	**188**	P	**P**	**13 14 53.7**	**+0.2**
MWZ				S	**S**	**13 17 26.6**	**-0.7**
HIZ	**Hauiti**	**15.32**	**195**	P	**P**	**13 15 06.6**	**+6.3**
ETVZ	**East Tongariro**	**15.73**	**192**	P	**P**	**13 15 06.0**	**+1.3**
OTVZ	**Oturere**	**15.77**	**192**	P	**P**	**13 15 06.1**	**+1.0**
BHHZ	**Black Hill Sta**	**16.01**	**191**	P	**P**	**13 15 06.8**	**-0.7**
KRHZ	**Kereru**	**16.11**	**190**	P	**P**	**13 15 08.6**	**0.0**
KRHZ				S	**S**	**13 17 55.3**	**+0.6**
PNHZ	**Pukenui**	**16.40**	**190**	P	**P**	**13 15 10.8**	**-0.8**
PNHZ				S	**S**	**13 17 56.7**	**-3.3**
MRZ	**Mangatainoka R**	**17.23**	**191**	P	**P**	**13 15 19.4**	**-0.6**
MRZ				S	**S**	**13 18 11.3**	**-3.0**
CTA	**Charters Tower**	**31.42**	**270**	P	**P**	**13 17 27.3**	**+0.6**
	3.6nm,0.4s,baz=90,slow=10,SNR=16						
	3.6nm,0.4s						
ASAR	**Alice Springs**	**42.01**	**260**	P	**P**	**13 18 53.3**	**-0.7**
	0.1nm,0.3s,baz=92,slow=7.0,SNR=1.6						
ASAR				ScP	**ScP**	**13 23 39.7**	**-0.7**
	0.8nm,0.7s,baz=102,slow=4.4,SNR=6.9						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**42.36**	**266**	P	**P**	**13 18 56.0**	**-0.9**
	0.5nm,0.4s,baz=95,slow=8.2,SNR=19						
WRA				ScP	**ScP**	**13 23 40.8**	**-1.0**
	0.8nm,1.0s,baz=101,slow=5.1,SNR=3.3						
	0.5nm,0.4s						
TROLL	**Troll, Antarti**	**84.46**	**181**	P	**P**	**13 23 25.0**	**-1.1**
NVAR	**Mina Array Bea**	**84.70**	**44**	P	**P**	**13 23 27.6**	**-0.4**
	0.3nm,0.7s,baz=232,slow=5.6,SNR=2.8						
	0.3nm,0.7s						
SNAA	**Sanae**	**84.79**	**179**	P	**P**	**13 23 25.7**	**-2.0**

*IDC **13** 13:13:12.7±1.0, 22°.83S×172°.78E, h0km, mb4.1/7, mbtmp4.2/9, ML4.8/2, Error ellipse: s-maj=35.8km s-min=18.1km az=149.0*
*NEIC **13** 13:13:13.3±1.9, 22°.6S±0°.1×172°.93E±0°.09, h10km±1km, mb4.6/21, Error ellipse: s-maj=20.1km s-min=13.4km az=344.0*

ISC 13 13:13:17.7±0.5, 22°.81S±0°.08×172°.77E±0°.07, h35km, n55, σ1§31/48, mb4.5/16, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.59**	**286**		**Pn**	**13 14 24.8**	**+0.2**
PINNC	**Pines Island,**	**4.92**	**271**		**Pn**	**13 14 30.3**	**+1.1**
OUENC	**Ouen Island, N**	**5.50**	**273**		**Pn**	**13 14 39.3**	**+2.3**
ONTNC	**Ouen Toro**	**5.86**	**274**		**Pn**	**13 14 43.3**	**+1.2**
DZM	**Mont Dzumac**	**5.90**	**276**	Pn	**Pn**	**13 14 43.6**	**+0.9**
	4.3nm,0.3s,baz=137,slow=13,SNR=40						
DZM				Sn	**Sn**	**13 15 51.7**	**+2.5**
	2.6nm,0.3s,baz=80,slow=23,SNR=1.4						
	10nm,0.3s						
DZM	**Mont Dzumac**	**5.90**	**276**	*e*Pn	**Pn**	**13 14 44.1**	**+1.3**
	60nm,0.8s						
DZM				*e*LR	LR	13 16 16.5	
	comp=Z,622nm,23.6s						
DZM	**Mont Dzumac**	**5.90**	**276**		**Pn**	**13 14 42.6**	**-0.2**
MSVF	**Nonsavu**	**7.07**	**45**	Pn	**Pn**	**13 14 58.5**	**-0.4**
	1.3nm,0.3s,baz=214,slow=7.3,SNR=8.7						
MSVF				Sn	**Sn**	**13 16 20.7**	**+2.6**
	1.3nm,0.3s,baz=91,slow=21,SNR=0.7						
	23nm,0.8s						
MSVF	**Nonsavu**	**7.07**	**45**	Pn	**Pn**	**13 14 58.0**	**-0.8**
KOUNC	**Koumac, New Ca**	**8.21**	**284**	Pn	**Pn**	**13 15 13.2**	**-1.1**
TUWZ	**Tuamarina**	**18.59**	**177**	P	**Pn**	**13 17 34.3**	**+2.1**
LTZ	**Lake Taylor**	**19.92**	**181**	P	**Pn**	**13 17 47.6**	**-0.6**
LTZ				IAmb	IAmb	13 17 51.5	
	comp=Z,43nm,1.3s						
EIDS	**Eidsvold**	**19.96**	**258**	P	**Pn**	**13 17 47.7**	**-1.2**
EIDS				IAmb	IAmb	13 17 54.5	
	comp=Z,25nm,1.1s						
ARMA	**Armidale**	**20.35**	**244**		Pn	13 17 53.5	+0.1
ARMA				IAmb	IAmb	13 17 59.5	
	comp=Z,20nm,1.1s						
TOO	**Toolangi**	**27.67**	**232**	P	**P**	**13 19 02.5**	**+0.1**
STKA	**Stephens Creek**	**29.05**	**245**	P	**P**	**13 19 15.5**	**+0.8**
	comp=Z,3.9nm,0.7s,baz=74,slow=12,SNR=5.1						
	comp=Z,2.3nm,0.7s						
STKA	**Stephens Creek**	**29.05**	**245**	P	**P**	**13 19 15.9**	**+1.1**
PATS	**Pohnpei**	**32.69**	**333**	P	**P**	**13 19 43.5**	**-3.3**
PPT2	**Papeete2**	**35.65**	**89**	*e*LR	LR	13 29 10.0	
	comp=Z,114nm,28.0s						
WR0	**Warramunga Arr**	**35.65**	**267**	P	**P**	**13 20 11.5**	**-1.2**
AS31	**Alice Springs**	**35.65**	**261**	P	**P**	**13 20 12.2**	**-0.5**
ASAR	**Alice Springs**	**35.65**	**261**	P	**P**	**13 20 12.8**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=83,slow=8.9,SNR=39						
	comp=Z,5.9nm,0.9s						
ASAR	**Alice Springs**	**35.65**	**261**	P	**P**	**13 20 11.9**	**-0.8**
WB0	**Warramunga Arr**	**35.83**	**267**	P	**P**	**13 20 13.5**	**-0.6**
WB0				IAmb	IAmb	13 20 15.4	
	comp=Z,7.0nm,1.1s						
WB2	**Warramunga Arr**	**35.83**	**267**	P	**P**	**13 20 13.2**	**-1.0**
WRA	**Warramunga Arr**	**35.84**	**267**	P	**P**	**13 20 13.2**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=97,slow=8.5,SNR=11						
	comp=Z,1.5nm,0.9s						
WRA	**Warramunga Arr**	**35.84**	**267**	P	**P**	**13 20 13.9**	**-0.4**
FORT	**Forrest**	**40.48**	**249**	P	**P**	**13 20 53.4**	**+0.1**
MTN	**Manton Dam**	**40.74**	**277**	P	**P**	**13 20 54.4**	**-1.1**
MTN				IAmb	IAmb	13 21 14.4	
	comp=Z,26nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**41.48

comp=Z,231nm,19.3s,baz=107,slow=30
46nm,0.5s
DZM Mont Dzumac 5.91 274 *e*Pn **Pn 13 22 22.5 -2.0**
144nm,0.8s
DZM *e*Sn **Sn 13 23 28.9 -2.3**
300nm,0.8s
DZM *e*LR LR 13 23 38.9
comp=Z,3µm,24.0s
DZM Mont Dzumac 5.91 274 Pn **Pn 13 22 24.1 -0.4**
MSVF Nonsavu 6.94 46 P **Pn 13 22 39.9 +1.3**
2.9nm,0.3s,baz=204,slow=8.8,SNR=31
MSVF LR LR 13 24 44.4
comp=Z,2µm,19.5s,baz=241,slow=33
104nm,0.9s
MSVF Nonsavu 6.94 46 Pn 13 22 39.7 +1.1
KOUNC Koumac, New Ca 8.19 283 Pn **Pn 13 22 58.8 +3.1**
RAO Raoul Island 10.63 130 LR LR 13 26 37.2
comp=Z,694nm,20.5s,baz=326,slow=31
URZ Urewera 15.99 168 P **P 13 24 44.9 +0.2**
0.3nm,0.3s,baz=354,slow=6.5,SNR=3.8
URZ LR LR 13 29 47.2
comp=Z,518nm,18.0s,baz=26,slow=32
10.0nm,0.9s
AFI Afiamalu 17.02 62 LR LR 13 30 11.2
comp=Z,898nm,19.6s,baz=237,slow=32
HNR Honiara 18.02 315 LR LR 13 31 11.9
comp=Z,307nm,18.6s,baz=157,slow=34
TUWZ Tuamarina 18.75 177 P **Pn 13 25 16.8 +0.9**
EIDS Eidsvold 20.02 258 Pn 13 25 31.4 +0.2
EIDS IAmb IAmb 13 25 36.3
comp=Z,76nm,1.1s
LTZ Lake Taylor 20.08 181 P **P 13 25 30.5 +0.7**
LTZ IAmb IAmb 13 25 35.4
comp=Z,61nm,1.0s
ARMA Armidale 20.44 243 P **P 13 25 33.9 0.0**
ARMA IAmb IAmb 13 25 41.0
comp=Z,34nm,0.8s
OXZ Oxford 20.63 182 P **P 13 25 36.1 +0.3**
OXZ IAmb IAmb 13 25 40.9
comp=Z,65nm,1.0s
RPZ Rata Peaks 21.06 184 P **P 13 25 44.0 +3.7**
comp=Z,37nm,1.0s,baz=356,slow=5.8,SNR=5.2
RPZ LR LR 13 33 29.4
comp=Z,473nm,18.1s,baz=5.0,slow=35
comp=Z,37nm,1.0s
CAN Canberra 24.28 233 P **P 13 26 13.3 -0.2**
CAN IAmb IAmb 13 26 24.3
comp=Z,45nm,1.3s
CTA Charters Tower 24.84 271 P **P 13 26 19.6 +0.9**
comp=Z,4.8nm,0.6s,baz=106,slow=8.7,SNR=9.6
CTA LR LR 13 35 34.4
comp=Z,554nm,19.4s,baz=96,slow=35
comp=Z,4.8nm,0.6s
CTAO Charters Tower 24.84 271 P **P 13 26 18.5 -0.2**
CTAO IAmb IAmb 13 26 29.9
comp=Z,31nm,1.6s
RAR Rarotonga 25.47 92 LR LR 13 36 23.3
comp=Z,176nm,18.2s,baz=246,slow=36
TOO Toolangi 27.79 231 P **P 13 26 45.4 +0.3**
PMG Port Moresby 27.88 294 LR LR 13 35 43.8
comp=Z,215nm,20.5s,baz=143,slow=32
STKA Stephens Creek 29.14 245 P **P 13 26 58.5 +1.3**
comp=Z,6.0nm,0.8s,baz=85,slow=10,SNR=13
STKA LR LR 13 37 48.0
comp=Z,508nm,19.7s,baz=65,slow=34
comp=Z,6.0nm,0.8s
STKA Stephens Creek 29.14 245 P **P 13 26 57.5 +0.2**
BBOO Buckleboo 33.91 245 P **P 13 27 38.3 -0.9**
TBI Tubuai 34.68 99 *e*LR LR 13 37 01.9
comp=Z,7µm,26.0s
TBI *e*LR LR 13 37 02.0
comp=Z,505nm,28.8s
PPT2 Papeete2 35.62 89 *e*LR LR 13 37 28.0
comp=Z,515nm,25.0s
PPT2 *e*LR LR 13 37 28.0
comp=Z,376nm,27.0s
PPT Papeete 35.62 89 LR LR 13 39 43.4
comp=Z,131nm,18.9s,baz=262,slow=32
WR0 Warramunga Arr 35.68 267 P **P 13 27 53.1 -1.5**
AS31 Alice Springs 35.70 261 P **P 13 27 54.5 -0.3**
ASAR Alice Springs 35.70 261 P **P 13 27 54.6 -0.2**
comp=Z,9.1nm,0.9s,baz=88,slow=9.0,SNR=59
ASAR LR LR 13 42 18.1
comp=Z,387nm,21.5s,baz=122,slow=36
comp=Z,9.1nm,0.9s
ASAR Alice Springs 35.70 261 P **P 13 27 53.9 -0.9**
WB0 Warramunga Arr 35.86 267 P **P 13 27 54.8 -1.4**
WB0 IAmb IAmb 13 29 11.8
comp=Z,15nm,1.4s
WB2 Warramunga Arr 35.86 267 P **P 13 27 54.7 -1.4**
WB2 IAmb IAmb 13 28 06.1
comp=Z,21nm,1.7s
WRA Warramunga Arr 35.87 267 P **P 13 27 54.8 -1.5**
comp=Z,2.3nm,0.7s,baz=96,slow=8.5,SNR=32
WRA LR LR 13 42 56.8
comp=Z,622nm,18.1s,baz=74,slow=37
comp=Z,2.3nm,0.7s
WRA Warramunga Arr 35.87 267 P **P 13 27 54.2 -2.0**
FORT Forrest 40.56 249 P **P 13 28 34.3 -1.3**
MTN Manton Dam 40.75 277 P **P 13 28 36.0 -1.3**
H11S2 WAKE ISLAND Hy 41.32 351 T T 14 12 56.6
baz=171,slow=76,SNR=21
H11S3 WAKE ISLAND Hy 41.33 351 T T 14 13 00.1
baz=171,slow=76,SNR=13
H11S1 WAKE ISLAND Hy 41.34 351 T T 14 12 54.4
baz=171,slow=76,SNR=18
KNRA Kununurra 42.05 271 P **P 13 28 46.0 -2.1**
KNRA IAmb IAmb 13 29 44.1
comp=Z,26nm,1.4s
H11N1 WAKE ISLAND Hy 42.50 352 T T 14 14 27.4
baz=173,slow=74,SNR=8.8
H11N3 WAKE ISLAND Hy 42.50 352 T T 14 14 31.9
baz=173
H11N2 WAKE ISLAND Hy 42.51 352 T T 14 14 33.1
baz=173,slow=74,SNR=6.2
FITZ Fitzroy Crossi 44.30 267 LR LR 13 47 57.1
comp=Z,291nm,18.1s,baz=108,slow=36
FITZ Fitzroy Crossi 44.30 267 P **P 13 29 05.9 -0.3**
FITZ IAmb IAmb 13 29 17.1
comp=Z,23nm,1.0s
SIJI Sorong 45.80 292 LR LR 13 48 14.3
comp=Z,156nm,20.9s,baz=60,slow=36
TAOE Nuku Hiva Isla 47.11 81 *e*LR LR 13 42 47.1
comp=Z,396nm,25.9s
MBWA Marble Bar 49.04 261 P **P 13 29 42.4 -0.9**
MBWA IAmb IAmb 13 29 53.7
comp=Z,14nm,1.0s
NWAO Narrogin (SRO) 49.73 245 P **P 13 29 48.3 -0.1**
MORW Morawa 51.07 250 P **P 13 29 58.3 -0.3**
MORW IAmb IAmb 13 29 59.6
comp=Z,15nm,0.8s
KAPI Kappang 54.09 281 LR LR 13 54 00.6
comp=Z,99nm,18.8s,baz=96,slow=37
VNDA Vanda 55.18 183 LR LR 13 50 10.1
comp=Z,165nm,21.9s,baz=12,slow=32
VNDA Vanda 55.18 183 P **P 13 30 28.5 +0.4**
SBA Scott Base 55.34 182 P **P 13 30 30.7 +1.5**
SBA IAmb IAmb 13 30 46.6
comp=Z,11nm,0.9s
QSPA South Pole Qui 67.42 180 LR LR 13 59 47.9
comp=Z,49nm,18.1s,baz=39,slow=34
QSPA South Pole Qui 67.42 180 P **P 13 31 51.4 +0.1**
QSPA IAmb IAmb 13 31 54.8
comp=Z,13nm,0.9s
YHNB Yeheng 68.58 310 P **P 13 31 59.4 +0.3**
RPN Rapa Nui 69.71 112 LR LR 13 54 19.4
comp=Z,126nm,20.4s,baz=308,slow=29
JEW Eniwo 71.28 336 P **P 13 32 15.2 0.0**
MAW Mawson 76.53 202 P **P 13 32 46.2 +0.6**
comp=Z,6.6nm,0.7s,baz=107,slow=9.4,SNR=14
MAW LR LR 14 03 48.4
comp=Z,60nm,18.1s,baz=118,slow=34
comp=Z,6.6nm,0.7s
PETK Petropavlovsk- 76.57 351 P **P 13 32 46.5 +0.6**
comp=Z,3.7nm,0.9s,baz=181,slow=12,SNR=7.3
comp=Z,3.7nm,0.9s
PZH PanZhiHua 84.33 302 P **P 13 33 28.4 0.0**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,120nm,5.5s
HHC Hu-ho-hao-te 84.97 318 *e*P **P 13 33 34.3 +3.1**
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,180nm,5.4s
TROLL Troll, Antarti 85.36 183 P **P 13 33 32.0 -0.8**

SNAA Sanae 85.89 181 P **P 13 33 34.2 -1.1**
VNA3 Neumayer Olymp 86.35 179 P **P 13 33 36.8 -0.7**
VNA2 Neumayer--Watz 86.68 180 P **P 13 33 36.5 -2.7**
baz=177,slow=5.0
VNA1 Neumayer--Stat 86.96 180 P **P 13 33 39.8 -0.7**
LPIG La Paz 87.94 63 LR LR 14 06 42.5
comp=Z,105nm,18.1s,baz=195,slow=31
NVAR Mina Array Bea 88.61 47 P **P 13 33 47.4 -1.7**
comp=Z,0.9nm,0.9s,baz=227,slow=8.1,SNR=7.0
NVAR LR LR 14 05 10.2
comp=Z,231nm,21.4s,baz=219,slow=30
comp=Z,0.9nm,0.9s
BBB Bella Bella 90.54 32 LR LR 14 06 18.9
comp=Z,108nm,20.9s,baz=216,slow=30
ELK Elko 91.81 46 LR LR 14 08 38.7
comp=Z,169nm,19.5s,baz=231,slow=31
ILAR Eielson Array 92.52 16 P **P 13 34 03.6 -2.9**
comp=Z,0.9nm,0.9s,baz=228,slow=5.3,SNR=6.6
comp=Z,0.9nm,0.9s
ILAR Eielson Array 92.52 16 P **P 13 34 03.6 -2.9**
PLCA Paso Flores 93.78 137 P **P 13 34 12.7 -0.5**
comp=Z,1.0nm,0.8s,baz=199,slow=9.7,SNR=3.8
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 95.49 61 LR LR 14 08 30.4
comp=Z,113nm,21.7s,baz=228,slow=30
ANMO Albuquerque 95.52 55 LR LR 14 10 04.8
comp=Z,75nm,19.6s,baz=230,slow=31
PDAR Pinedale Array 96.51 46 LR LR 14 12 09.3
comp=Z,106nm,19.6s,baz=206,slow=32
CMIG Matias Romero 98.48 75 LR LR 14 11 10.7
comp=Z,56nm,18.6s,baz=227,slow=31
WMQ Urumqi 101.95 313 *e*P **Pdif 13 34 52.3 +2.6**
EKA Eskdalemuir Ar 147.22 356 PKPbc **PKPdf 13 40 37.4 +1.0**
comp=Z,2.7nm,0.7s,baz=2.5,slow=2.6,SNR=8.6
TORD Torodi Ar. Bea 167.32 223 PKPab **PKPab 13 42 07.0 -0.4**
comp=Z,0.3nm,0.8s,baz=123,slow=5.3,SNR=2.5

MOS ***13*** *13:22:35.3± 1.1, 27.˚15N× 103.˚43E, h9km, mb4.7/12, Error ellipse: s-maj=11.2km s-min=7.0km az=103.6*
BJI ***13*** *13:22:36.8± 0.0, 27.˚04N× 103.˚45E, h10km, mb4.2/21, mB4.5/9, ML4.2/16, Ms4.2/26, Ms7 3.8/24*
NEIC ***13*** *13:22:38.5± 1.7, 27.˚2N± 0.˚1× 103.˚5E± 0.˚1, h10km± 1km, mb4.3/9, Error ellipse: s-maj=20.8km s-min=13.8km az=309.0*
IDC ***13*** *13:22:40.7± 4.3, 27.˚14N× 103.˚49E, h33km± 34km, mb3.9/19, mbtmp4.0/20, ML3.6/1, MS3.4/16, Error ellipse: s-maj=18.5km s-min=12.8km az=63.0*
ISC 13 13:22:37.4± 0.4, 27.07N± 0.˚04× 103.˚46E± 0.˚04, h10km, n84, σ2s02/93, mb4.2/36, MS3.4/18, 10C, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**1.63**	**250**	Pg	**Pn**	**13 23 05.0**	**-1.3**
PZH				Sg	**Sn**	**13 23 26.3**	**-1.2**
PZH				smax	smax		
	comp=N,1µm,0.8s						
PZH				smax	smax		
	comp=E,1µm,0.8s						
KMI	**Kunming**	**2.04**	**199**	⇑Pn	**Pn**	**13 23 11.8**	**-0.2**
KMI				Pg	**Pb**	**13 23 13.3**	**-1.4**
KMI				Sg	**Sg**	**13 23 41.8**	**-1.2**
KMI				smax	smax		
	comp=N,500nm,1.1s						
KMI				smax	smax		
	comp=E,710nm,0.9s						
GYA	**Guiyang**	**2.93**	**101**	⇑*i*Pn	**Pb**	**13 23 27.1**	**-2.7**
GYA				Sn	**Sn**	**13 24 01.0**	**+1.6**
GYA				Sg	**Sg**	**13 24 08.8**	**-2.7**
GYA				smax	smax		
	comp=N,1µm,0.8s						
GYA				smax	smax		
	comp=E,510nm,1.0s						
CD2	**Chengdu**	**3.84**	**4**	*e*Pn	**Pn**	**13 23 38.5**	**+1.9**
CD2				Pg	**Pg**	**13 23 49.3**	**-1.7**
CD2				Sg	**Sg**	**13 24 37.1**	**-3.6**
CD2				smax	smax		
	comp=N,1µm,0.7s						
CD2				smax	smax		
	comp=E,1µm,0.7s						
ENH	**Enshi**	**6.18**	**57**	Pn	**Pn**	**13 24 11.6**	**+2.8**
XAN	**Xi'an**	**8.39**	**33**	P	**Pn**	**13 24 39.6**	**+0.5**
XAN				S	**Sn**	**13 26 23.0**	**+9.0**
XAN				smax	smax		
	comp=N,340nm,1.1s						
XAN				smax	smax		
	comp=E,220nm,1.2s						
XAN				LR	LR		
	comp=N,1µm,6.4s						
XAN				LR	LR		
	comp=E,1µm,5.5s						
XAN				LR	LR		
	comp=Z,1µm,13.6s						
CNSH	**ChangSha**	**8.47**	**80**	⇑P	**Pn**	**13 24 43.3**	**+3.1**
CNSH				S	**Sn**	**13 26 13.1**	**-2.9**
CNSH				smax	smax		
	comp=N,100nm,1.2s						
CNSH				smax	smax		
	comp=E,80nm,1.3s						
CHTO	**Chiang Mai**	**9.21**	**208**	Pn	**Pn**	**13 24 53.8**	**+3.5**
CHTO	**Chiang Mai**	**9.21**	**208**	P	**Pn**	**13 24 53.8**	**+3.5**
CMAR	**Chiang Mai Arr**	**9.53**	**207**	Pn	**Pn**	**13 24 57.8**	**+3.1**
	0.2nm,0.3s,baz=19,slow=12,SNR=7.1						
CMAR				Pg		13 25 36.5	
	0.5nm,0.3s,baz=16,slow=15,SNR=4.7						
CMAR				Lg	Lg	13 27 46.0	
	0.4nm,0.3s,baz=19,slow=30,SNR=2.2						
CMAR				LR	LR	13 28 54.5	
	comp=Z,297nm,19.6s,baz=25,slow=39						
	0.5nm,0.3s						
WHN	**Wuhan**	**10.16**	**68**	P	**Pn**	**13 25 05.4**	**+2.1**
WHN				S	**Sn**	**13 26 57.3**	**-0.1**
WHN				LR	LR		
	comp=N,3µm,8.1s						
WHN				LR	LR		
	comp=E,1µm,9.3s						
WHN				LR	LR		
	comp=Z,1µm,11.3s						
LYN	**LuoYang**	**10.75**	**44**	*e*P	**Pn**	**13 25 12.0**	**+0.6**
LYN				PP	**PnPn**	**13 25 20.3**	**+1.1**
LYN				S	**Sn**	**13 27 16.3**	**+4.5**
LYN				SS	**SnSn**	**13 27 26.3**	**+2.5**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LYN				pmax	pmax		
	comp=Z,80nm,6.5s						
LYN				LR	LR		
	comp=N,890nm,8.4s						
LYN				LR	LR		
	comp=E,990nm,8.2s						
LYN				LR	LR		
	comp=Z,830nm,13.2s						
GOMU	**GeErMu**	**11.71**	**323**	P	**Pn**	**13 25 27.9**	**+3.1**
GOMU				pP		13 25 31.3	
GOMU				sP		13 25 32.6	
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,53nm,5.2s						
GOMU				LR	LR		
	comp=N,480nm,10.2s						
GOMU				LR	LR		
	comp=E,360nm,12.8s						
GOMU				LR	LR		
	comp=Z,280nm,9.4s						
UBPT	**Khong Chiam**	**11.88**	**171**	Pn	**Pn**	**13 25 29.8**	**+3.0**
GTA	**Gaotai**	**12.68**	**347**	*e*P	**Pn**	**13 25 40.5**	**+2.6**
GTA				pP		13 25 47.8	
GTA				sP		13 25 52.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,38nm,5.7s						
GTA				LR	LR		
	comp=N,120nm,8.0s						
GTA				LR	LR		
	comp=E,190nm,6.9s						
GTA				LR	LR		
	comp=Z,210nm,9.1s						
NJ2	**Nanjing**	**14.29**	**66**	*e*P	**Pn**	**13 25 58.3**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,1µm,10.2s						
NJ2				LR	LR		
	comp=E,500nm,10.2s						
NJ2				LR	LR		
	comp=Z,420nm,7.7s						
TIA	**Tai'an**	**14.77**	**49**	*e*P	**Pn**	**13 26 07.0**	**+0.6**
TIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIA				LR	LR		
	comp=N,330nm,10.9s						
TIA				LR	LR		
	comp=E,270nm,5.8s						
TIA				LR	LR		
	comp=Z,400nm,14.1s						
YOJ	**Yonaguni jima**	**17.80**	**94**	Pn	**Pn**	**13 26 44.1**	**-1.2**
YOJ	**Yonaguni jima**	**17.80**	**94**	P	**Pn**	**13 26 44.1**	**-1.2**
YOJ				pmax	pmax		
	comp=Z,76nm,1.4s						
SONM	**Songino Array**	**20.86**	**6**	P	Pn	13 27 20.5	-1.5
	comp=Z,1.4nm,0.4s,baz=178,slow=15,SNR=4.8						
SONM				LR	LR	13 36 12.4	
	comp=Z,110nm,19.7s,baz=254,slow=39						
	comp=Z,1.4nm,0.4s						
ULN	**Ulaanbaatar**	**20.95**	**7**	*ce*P	**P**	**13 27 21.1**	**+0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMQ	**Urumqi**	**21.02**	**327**	*e*P	**P**	**13 27 21.0**	**-0.2**
NAWB	**Namwon**	**22.06**	**62**	P	**P**	**13 27 31.7**	**-0.7**
NAWB				IAmb	IAmb	13 27 41.2	
	comp=Z,14nm,1.1s						
TJN	**Taejon**	**22.31**	**59**	*ce*P	**P**	**13 27 34.9**	**-0.1**
KSRS	**Korea Array**	**23.07**	**57**	P	**P**	**13 27 42.2**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=246,slow=10,SNR=15						
KSRS				LR	LR	13 36 23.5	
	comp=Z,79nm,18.3s,baz=260,slow=36						
	comp=Z,1.9nm,0.6s						
ZAK	**Zakamensk**	**23.28**	**360**	*e*P	**P**	**13 27 45.7**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
JSU	**Suzuyama**	**23.93**	**73**	P	**P**	**13 27 51.7**	**0.0**
JSU				IAmb	IAmb	13 28 10.6	
	comp=Z,8.4nm,1.1s						
CN2	**Changchun**	**24.38**	**41**	*e*P	**P**	**13 27 57.0**	**+1.3**
CN2				S	**S**	**13 32 13.5**	**-1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
PSI	**Prapat**	**24.52**	**191**	P	**P**	**13 27 58.6**	**+1.4**
	comp=Z,4.8nm,0.5s,baz=221,slow=2.8,SNR=5.3						
	comp=Z,4.8nm,0.5s						
HYBB	**Hyderabad (bro**	**24.93**	**253**	*e*P	**P**	**13 28 02.2**	**+1.3**
MK31	**Makanchi Array**	**25.82**	**325**	P	**P**	**13 28 08.3**	**-0.5**
MK31	**Makanchi Array**	**25.82**	**325**	*i* P	**P**	**13 28 08.5**	**-0.3**
MKAR	**Makanchi Array**	**25.82**	**325**	P	**P**	**13 28 08.7**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=127,slow=9.3,SNR=12						
MKAR				PcP	**PcP**	**13 31 37.0**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=103,slow=6.2,SNR=3.2						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**25.82**	**325**	P	**P**	**13 28 06.8**	**-2.0**
MAKZ	**Makanchi**	**25.99**	**325**	P	**P**	**13 28 10.2**	**-0.1**
MAKZ	**Makanchi**	**25.99**	**325**	P	**P**	**13 28 10.2**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH	**Kashi**	**26.01**	**305**	P	**P**	**13 28 14.0**	**+3.3**
KSH				S	**S**	**13 32 37.4**	**-4.1**
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AAK	**Ala-Archa**	**28.22**	**311**	LR	LR	13 41 23.2	
	comp=Z,66nm,19.1s,baz=137,slow=40						
PALK	**Pallekele**	**29.23**	**232**	LR	LR	13 42 17.3	
	comp=Z,50nm,19.9s,baz=143,slow=40						
ZALV	**Zalesovo Beam**	**30.17**	**338**	P	**P**	**13 28 47.5**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=145,slow=9.1,SNR=7.9						
ZALV				LR	LR	13 41 14.4	
	comp=Z,44nm,21.7s,baz=158,slow=37						
	comp=Z,2.3nm,0.7s						
ZALV	**Zalesovo Beam**	**30.17**	**338**	*i* P	**P**	**13 28 47.7**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**30.23**	**328**	P	**P**	**13 28 47.3**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=134,slow=9.7,SNR=22						
KURBB				PcP	**PcP**	**13 31 47.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=139,slow=2.3,SNR=4.3						
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**30.25**	**328**	P	**P**	**13 28 47.1**	**-1.2**
KURK				IAmb	IAmb	13 28 49.6	
	comp=Z,3.3nm,0.7s						
KURK	**Kurchatov**	**30.25**	**328**	*ce*P	**P**	**13 28 48.9**	**+0.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**30.87**	**63**	P	**P**	**13 28 53.2**	**-0.7**
	comp=Z,1.2nm,1.1s,baz=257,slow=12,SNR=4.7						
MJAR				LR	LR	13 42 19.2	
	comp=Z,72nm,19.7s,baz=254,slow=38						
	comp=Z,1.2nm,1.1s						
KLR	**Kul'dur**	**31.07**	**37**	LR	LR	13 43 02.8	
	comp=Z,118nm,19.9s,baz=261,slow=39						
ZEA	**Zeya**	**31.92**	**27**	*e*P	**P**	**13 29 04.2**	**+1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
BRVK	**Borovoye**	**35.77**	**326**	*ce*P	**P**	**13 29 36.4**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**39.08**	**19**	LR	LR	13 47 26.8	
	comp=Z,106nm,19.2s,baz=168,slow=38						
GEYT	**Alibeck**	**39.41**	**298**	P	**P**	**13 30 08.4**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=87,slow=7.4,SNR=2.4						
GEYT				LR	LR	13 49 30.3	
	comp=Z,26nm,21.0s,baz=151,slow=41						
	comp=Z,1.6nm,0.4s						
ABKAR	**Akbulak array**	**40.04**	**315**	P	**P**	**13 30 12.1**	**-0.4**
ABKAR				IAmb	IAmb	13 30 13.7	
	comp=Z,4.2nm,0.7s						
ABKAR	**Akbulak array**	**40.04**	**315**	P	**P**	**13 30 12.8**	**+0.3**
AKTO	**Aktyubinsk**	**41.58**	**317**	P	**P**	**13 30 25.2**	**0.0**
	comp=Z,2.9nm,0.7s,baz=104,slow=11,SNR=9.8						
	comp=Z,2.9nm,0.7s						
NRIK	**Noril'sk**	**43.32**	**352**	P	**P**	**13 30 39.1**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=130,slow=9.1,SNR=2.4						
NRIK				LR	LR	13 50 32.8	
	comp=Z,50nm,18.7s,baz=158,slow=39						
	comp=Z,3.9nm,0.7s						
NRIK	**Noril'sk**	**43.32**	**352**	*i* P	**P**	**13 30 38.1**	**-1.0**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	**Arti**	**43.34**	**325**	LR	LR	13 48 50.1	
	comp=Z,37nm,19.7s,baz=105,slow=36						
ARU	**Arti**	**43.34**	**325**	P	**P**	**13 30 38.6**	**-0.9**
ARU				IAmb	IAmb	13 30 40.3	
	comp=Z,8.9nm,0.8s						
ARU	**Arti**	**43.34**	**325**	*c* P	**P**	**13 30 39.1**	**-0.4**
ARU						13 32 16.6	
ARU				S	**S**	**13 37 11.4**	**+4.4**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	**Tiksi**	**46.81**	**11**	LR	LR	13 52 21.6	
	comp=Z,88nm,19.5s,baz=181,slow=38						
KIRV	**Kirov**	**48.72**	**326**	LR	LR	13 52 08.5	
	comp=Z,38nm,20.4s,baz=110,slow=36						
KIRV	**Kirov**	**48.72**	**326**	*ce*P	**P**	**13 31 21.3**	**-0.5**
GNI	**Garni**	**49.79**	**301**	*ce*P	**P**	**13 31 26.6**	**-3.9**
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIV	**Kislovodsk**	**51.13**	**306**	*e*P	**P**	**13 31 38.0**	**-2.6**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,17nm,17.0s						
SHA1	**Shidzhatmaz**	**51.16**	**306**	*i* P	**P**	**13 31 40.4**	**-0.5**
VORR	**Voronezh**	**53.46**	**316**	*e*P	**P**	**13 31 56.2**	**-1.4**
VORR				pmax	pmax		
	comp=Z,70nm,0.5s						
KLMR	**Klimovskoe**	**54.10**	**327**	*e*P	**P**	**13 32 00.9**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,11nm,0.8s						
KLMR	**Klimovskoe**	**54.10**	**327**	*e*P	**P**	**13 32 00.9**	**-1.2**
KLMR				AMP		13 32 02.8	
	comp=Z,11nm,0.8s						
OBN	**Obninsk**	**55.14**	**320**	*e*P	**P**	**13 32 08.7**	**-1.0**
OBN				*e*		13 33 08.4	
OBN				*e*PPP	PPP	13 35 24.2	
OBN				pmax	pmax		

	comp=E,5.0nm,0.9s								
WRAB	**Tennant Creek**		**55.49**	**144**	*i* P		**P**	**13 32 09.7**	**-3.0**
WRAB					pmax		pmax		
	comp=E,9.0nm,0.9s								
WRA	**Warramunga Arr**		**55.49**	**144**	P		**P**	**13 32 12.8**	**+0.1**
	comp=E,4.0nm,0.9s,baz=331,slow=8.6,SNR=28								
	comp=E,4.0nm,0.9s								
WB2	**Warramunga Arr**		**55.50**	**144**	P		**P**	**13 32 12.8**	**+0.1**
BRTR	**Keskin Array B**		**58.31**	**302**	P		**P**	**13 32 32.0**	**-0.7**
	comp=E,1.3nm,0.7s,baz=125,slow=7.6,SNR=6.9								
	comp=E,1.3nm,0.7s								
ASAR	**Alice Springs**		**58.38**	**147**	P		**P**	**13 32 34.0**	**+0.8**
	comp=E,2.1nm,0.8s,baz=325,slow=6.2,SNR=12								
	comp=E,2.1nm,0.8s								
ASAR	**Alice Springs**		**58.38**	**147**	P		**P**	**13 32 34.0**	**+0.8**
AKASG	**Malin Array Be**		**59.78**	**315**	P		**P**	**13 32 41.6**	**-0.9**
	comp=E,0.3nm,0.3s,baz=71,slow=7.4,SNR=4.4								
	comp=E,0.3nm,0.3s								
AKBB	**Malin Array Si**		**59.78**	**315**	*i* P		**P**	**13 32 40.5**	**-2.0**
AKBB					pmax		pmax		
	comp=E,9.0nm,2.2s								
FINES	**FINESS Array B**		**60.63**	**327**	P		**P**	**13 32 47.2**	**-1.0**
	comp=E,3.4nm,0.8s,baz=116,slow=6.5,SNR=5.5								
FINES					LR		LR	14 00 29.8	
	comp=E,35nm,18.0s,baz=42,slow=38								
	comp=E,3.4nm,0.8s								
ARCES	**ARCESS Array B**		**60.72**	**337**	P		**P**	**13 32 47.9**	**-0.8**
	comp=E,3.5nm,0.8s,baz=88,slow=7.0,SNR=7.8								
	comp=E,3.5nm,0.8s								
SPITS	**Spitsbergen Ar**		**63.12**	**347**	LR		LR	14 04 24.8	
	comp=E,47nm,20.2s,baz=48,slow=40								
NB2	**NORSAR Subarra**		**67.77**	**328**	P		**P**	**13 33 33.7**	**-1.4**
	comp=E,0.5nm,0.6s,baz=75,slow=6.5								
NOA	**NORSAR Array B**		**67.77**	**328**	P		**P**	**13 33 33.8**	**-1.4**
	comp=E,1.1nm,0.8s,baz=75,slow=6.2,SNR=4.0								
	comp=E,1.1nm,0.8s								
GERES	**GERESS Array B**		**69.98**	**315**	P		**P**	**13 33 48.7**	**-0.5**
	comp=E,0.5nm,0.5s,baz=57,slow=4.9,SNR=4.7								
	comp=E,0.5nm,0.5s								
COLA	**College**		**73.31**	**25**	*i* P		**P**	**13 34 07.9**	**-0.8**
COLA					pmax		pmax		
	comp=E,19nm,3.0s								
YKA	**Yellowknife Ar**		**85.71**	**17**	P		**P**	**13 35 16.6**	**+0.3**
	comp=E,1.0nm,0.8s,baz=325,slow=4.1,SNR=3.3								
	comp=E,1.0nm,0.8s								

IDC ***13*** *13:36:24.7±0.9,35.25N×26.85E,h0km,mb4.1/16, mbtmp4.0/21,ML3.7/5,MS3.1/8,Error ellipse: s-maj=20.5km s-min=14.9km az=8.0*

DDA ***13*** *13:36:27.6±0.0,35.21N×27.06E,h9km±2km,MW3.9*

ATH ***13*** *13:36:28.1,35.03N×26.99E,h14km±3km,ML3.6/5,Error ellipse: s-maj=6.4km s-min=1.3km az=330.0*

NIC ***13*** *13:36:28.1±0.0,35.13N×26.93E,h31km±2km,MI3.9/4*

ISK ***13*** *13:36:28.1,35.08N×26.96E,h17km,ML3.8/30*

THE ***13*** *13:36:29.2,35.12N×26.92E,h0km±1km,ML3.6/11,Error ellipse: s-maj=3.6km s-min=0.8km az=149.0*

NEIC ***13*** *13:36:29.0±2.4,35.10N±0.04×27.04E±0.06,h18km±3km, mb4.1/10,ML3.8(ATH),ML3.6(THE),ML3.8(ISK),Error ellipse: s-maj=7.5km s-min=5.4km az=134.0*

HLW ***13*** *13:36:30.2,35.01N×27.14E,h32km±36km,Md4.0*

GII ***13*** *13:36:32.1±0.0,34.67N×27.31E,h10km,mb4.0/2, MD3.7/4,Mm3.9/2*

ISC 13 13:36:28.0±1.0,35.02N±0.03×26.97E±0.02,h28km±7km, n191,σ1§68/246,mb4.1/20,MS3.8/3,1C,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.56**	**17**	P	**Pb**	**13 36 38.4**	**-0.9**
KARP				S	**Sb**	**13 36 46.7**	**-0.3**
	27µm,0.4s						
KARP	**Karpathos**	**0.56**	**17**	PG	**Pb**	**13 36 38.5**	**-0.9**
KARP				SG	**Sb**	**13 36 45.9**	**-1.1**
KARP	**Karpathos**	**0.56**	**17**	Pg	**Pb**	**13 36 38.4**	**-0.9**
KARP	**Karpathos**	**0.56**	**17**	↑P	**Pb**	**13 36 38.5**	**-0.9**
KARP				S	**Sb**	**13 36 46.1**	**-0.9**
KARP				AML	AML	13 36 47.4	
	50nm,0.5s						
KARP				AML	AML	13 36 47.4	
	50nm,0.5s						
KARP				AML	AML	13 36 48.2	
	66nm,0.4s						
KARP				AML	AML	13 36 48.2	
	66nm,0.4s						
KARP	**Karpathos**	**0.56**	**17**	P	**Pb**	**13 36 38.3**	**-0.9**
KARP				S	**Sb**	**13 36 45.9**	**-1.1**
KARP				AML	AML	13 36 48.0	
	comp=E,50720µm,0.5s						
KARP				AML	AML	13 36 48.7	
	comp=N,58356µm,0.2s						
ZKR	**Zakros**	**0.62**	**279**	P	**Pb**	**13 36 40.1**	**-0.3**
ZKR				S	**Sn**	**13 36 51.5**	**+1.4**
	comp=N,4µm,0.4s						
ZKR	**Zakros**	**0.62**	**279**	PG	**Pb**	**13 36 40.1**	**-0.3**
ZKR				SG	**Sn**	**13 36 49.9**	**-0.2**
ZKR	**Zakros**	**0.62**	**279**	P	**Pb**	**13 36 40.0**	**-0.4**
ZKR				P	**Sn**	**13 36 49.9**	**-0.2**
ZKR	**Zakros**	**0.62**	**279**	P	**Pb**	**13 36 40.1**	**-0.3**
ZKR				S	**Sb**	**13 36 49.3**	**+0.5**
ZKR				AML	AML	13 36 53.3	
	comp=E,7407µm,0.5s						
ZKR				AML	AML	13 36 58.1	
	comp=N,6152µm,0.4s						
STIA	**Sitia Lasithi**	**0.74**	**285**	P	**Pb**	**13 36 42.3**	**-0.1**
STIA				S	**Sn**	**13 36 54.1**	**+1.1**
STIA	**Sitia Lasithi**	**0.74**	**285**	P	**Pb**	**13 36 41.9**	**-0.5**
STIA				S	**Sn**	**13 36 53.1**	**0.0**
STIA				AML	AML	13 36 59.5	
	comp=E,11742µm,0.8s						
STIA				AML	AML	13 37 01.6	
	comp=N,11325µm,0.5s						
FRMA	**Ierapetra Chan**	**1.01**	**270**	P	**Pb**	**13 36 45.5**	**-1.5**
FRMA				S	**Sn**	**13 37 00.8**	**+1.1**
	comp=N,982nm,0.6s						
FRMA	**Ierapetra Chan**	**1.01**	**270**	P	**Pb**	**13 36 45.5**	**-1.5**
FRMA				S	**Sb**	**13 36 57.8**	**-2.0**
FRMA				AML	AML	13 37 09.0	
	comp=N,6801µm,0.7s						
FRMA				AML	AML	13 37 09.2	
	comp=E,5235µm,0.5s						
ARG	**Arkhangelos**	**1.53**	**38**	P	**Pb**	**13 36 56.0**	**+0.4**
ARG				S	**Sb**	**13 37 16.7**	**+2.1**
	comp=E,2µm,0.8s						
ARG	**Arkhangelos**	**1.53**	**38**	PN	**Pb**	**13 36 55.2**	**-0.5**
ARG				SN	**Sb**	**13 37 13.9**	**-0.7**
ARG	**Arkhangelos**	**1.53**	**38**		**Pb**	**13 36 56.1**	**+0.4**
ARG	**Arkhangelos**	**1.53**	**38**	P	**Pb**	**13 36 56.1**	**+0.4**
ARG				S	**Sb**	**13 37 14.8**	**+0.2**
ARG				AML	AML	13 37 19.4	
	comp=N,2504µm,0.9s						
ARG				AML	AML	13 37 21.5	
	comp=E,5809µm,0.6s						
HRKL	**Herakleio**	**1.56**	**282**	P	**Pb**	**13 36 56.9**	**+0.7**
HRKL				S	**Sb**	**13 37 17.6**	**+2.1**
	comp=E,3µm,1.1s						
HRKL	**Herakleio**	**1.56**	**282**	PN	**Pb**	**13 36 55.7**	**-0.5**
IACM	**Heraklion**	**1.58**	**281**	P	**Pb**	**13 36 57.8**	**+1.2**
NIS1	**Nisyros Isl.**	**1.59**	**6**	P	**Pb**	**13 36 55.6**	**-1.3**
NIS1				S	**Sb**	**13 37 16.2**	**-0.4**
	comp=E,3µm,0.5s						
NIS1	**Nisyros Isl.**	**1.59**	**6**	PN	**Pb**	**13 36 55.5**	**-1.3**
NIS1				SN	**Sb**	**13 37 15.1**	**-1.5**
NIS1	**Nisyros Isl.**	**1.59**	**6**	P	**Pb**	**13 36 55.4**	**-1.4**
IDI	**Anoyia**	**1.72**	**280**	Pn	**Pb**	**13 36 58.4**	**-0.7**
	comp=E,27nm,0.3s,baz=108,slow=18,SNR=78						
IDI				Sn	**Sb**	**13 37 23.3**	**+2.9**
	comp=E,65nm,0.3s,baz=343,slow=15,SNR=9.2						
IDI				LR	LR	13 37 51.8	
	comp=E,201nm,18.1s,baz=91,slow=54						
IDI	**Anoyia**	**1.72**	**280**	P	**Pb**	**13 36 58.4**	**-0.7**
IDI				S	**Sb**	**13 37 20.5**	**+0.2**
	comp=E,555nm,0.6s						
IDI	**Anoyia**	**1.72**	**280**	PN	**Pb**	**13 36 58.4**	**-0.7**
IDI	**Anoyia**	**1.72**	**280**		**Pb**	**13 37 00.5**	**+1.4**
IDI	**Anoyia**	**1.72**	**280**	P	**Pb**	**13 36 60.0**	**+0.9**
KOSK	**Kos Island**	**1.73**	**0**	P	**Pb**	**13 36 57.7**	**-1.5**
KOSK				S	**Sb**	**13 37 19.1**	**-1.4**
	comp=E,1µm,0.7s						
SANT	**Santorini**	**1.83**	**318**	P	**Pb**	**13 36 59.2**	**-1.6**
SANT				S	**Sb**	**13 37 21.9**	**-1.4**
	comp=E,958nm,0.4s						
SANT	**Santorini**	**1.83**	**318**	PN	**Pb**	**13 36 59.1**	**-1.8**
SANT	**Santorini**	**1.83**	**318**	Pn	**Pb**	**13 36 59.0**	**-1.8**
THR8	**Santorini-Mono**	**1.84**	**319**	P	**Pb**	**13 36 59.2**	**-1.9**
THR6	**Thira Island,**	**1.85**	**317**	P	**Pb**	**13 36 59.4**	**-1.8**
THR3	**Thira Island,**	**1.89**	**318**	P	**Pb**	**13 36 59.9**	**-1.9**
THR5	**Thira Island,**	**1.92**	**317**	P	**Pb**	**13 37 00.5**	**-1.9**
CMBO	**Columbo, Santo**	**1.93**	**319**	P	**Pb**	**13 37 00.6**	**-1.9**
CMBO				S	**Sb**	**13 37 24.7**	**-1.5**
	comp=E,2µm,0.5s						
TURN	**Turunc**	**2.04**	**30**	PN	**Pb**	**13 37 02.1**	**-2.3**
TURN	**Turunc**	**2.04**	**30**	P	**Pb**	**13 37 02.3**	**-2.1**
TURN				S	**Sb**	**13 37 30.1**	**+0.7**
TURN				*i* AML	AML	13 37 37.0	
	comp=E,226nm,0.4s						
TURN				*i* AML	AML	13 37 37.0	
	comp=E,304nm,0.4s						
TURN				*i* AML	AML	13 37 40.0	
	comp=E,313nm,0.7s						
BODT	**Bodrum**	**2.06**	**8**	P	**Pn**	**13 37 01.9**	**+1.1**
BODT				S	**Sb**	**13 37 29.1**	**-0.9**
BODT	**Bodrum**	**2.06**	**8**	PN	**Pn**	**13 37 01.4**	**+0.6**
BDRM	**Kayabasi**	**2.08**	**11**	P	**Pn**	**13 37 02.2**	**+1.1**
BDRM				*i* AML	AML	13 37 27.0	
	comp=E,0.4nm,0.8s						
BDRM				S	**Sb**	**13 37 30.2**	**-0.4**
BDRM				*i* AML	AML	13 37 39.0	
	comp=E,135nm,0.6s						
BDRM				*i* AML	AML	13 37 44.0	
	comp=E,107nm,0.7s						
DALY	**Dalyan (Mula)**	**2.26**	**37**	PN	**Pb**	**13 37 05.6**	**-2.5**
APE	**Apeiranthos**	**2.36**	**331**	P	**Pn**	**13 37 06.1**	**+1.2**
APE				S	**Sn**	**13 37 34.6**	**+1.6**
	comp=E,388nm,0.5s						
APE	**Apeiranthos**	**2.36**	**331**	PN	**Pn**	**13 37 05.9**	**+1.0**
FETY	**Fethiye**	**2.36**	**46**	PN	**Pn**	**13 37 05.7**	**+0.7**
FETY	**Fethiye**	**2.36**	**46**	P	**Pn**	**13 37 06.5**	**+1.6**
YER	**Yerkesik**	**2.37**	**26**	P	**Pn**	**13 37 07.0**	**+1.9**
YER	**Yerkesik**	**2.37**	**26**	PN	**Pn**	**13 37 06.8**	**+1.7**
GVD	**Gavdhos**	**2.37**	**267**	PN	**Pn**	**13 37 06.8**	**+1.7**
GVD	**Gavdhos**	**2.37**	**267**	P	**Pb**	**13 37 08.6**	**-1.4**
DDIM	**Aydin, Didim**	**2.45**	**5**	P	**Pn**	**13 37 07.8**	**+1.7**
DDIM				S	**Sb**	**13 37 43.3**	**+2.3**
DDIM				*i* AML	AML	13 37 55.0	
	comp=E,293nm,0.8s						
DDIM				*i* AML	AML	13 38 02.0	
	comp=E,246nm,0.8s						
DDIM				*i* AML	AML	13 38 21.0	
	comp=E,167nm,1.4s						
AKAS	**Kas**	**2.47**	**60**	PN	**Pn**	**13 37 07.5**	**+0.9**
AKAS	**Kas**	**2.47**	**60**		**Pn**	**13 37 07.4**	**+0.9**
AKAS	**Kas**	**2.47**	**60**	P	**Pn**	**13 37 07.3**	**+0.8**
AKAS				*i* AML	AML	13 37 40.0	
	comp=E,117nm,0.5s						
AKAS				*i* AML	AML	13 37 46.0	
	comp=E,193nm,0.4s						
AKAS				S	Sb	13 38 01.7	+20
AKAS				*i* AML	AML	13 38 09.0	
	comp=E,212nm,0.7s						
IMMV	**Iera Moni Meta**	**2.48**	**281**	PN	**Pb**	**13 37 09.3**	**-2.7**
MULA	**Mugla, Merkez-**	**2.49**	**26**	P	**Pb**	**13 37 09.2**	**-2.9**
MULA				S	**Sb**	**13 37 44.5**	**+2.0**
MULA				*i* AML	AML	13 37 56.0	
	comp=E,130nm,0.4s						
MULA				*i* AML	AML	13 37 59.0	
	comp=E,105nm,0.6s						
MULA				*i* AML	AML	13 38 00.0	
	comp=E,129nm,0.8s						
GCAM	**G?zelcaml?**	**2.69**	**5**	PN	**Pn**	**13 37 11.3**	**+1.9**
GCAM	**G?zelcaml?**	**2.69**	**5**	P	**Pn**	**13 37 11.1**	**+1.7**
GCAM				S	**Sb**	**13 37 50.4**	**+2.4**
GCAM				*i* AML	AML	13 38 05.0	
	comp=E,90nm,0.5s						
GCAM				*i* AML	AML	13 38 06.0	
	comp=E,100nm,0.5s						
GCAM				*i* AML	AML	13 38 09.0	
	comp=E,73nm,0.7s						
CAME	**Cameli-Denizli**	**2.70**	**44**	PN	**Pn**	**13 37 11.5**	**+1.8**
AYDN	**Tasoluk**	**2.74**	**15**	P	**Pn**	**13 37 12.2**	**+2.0**
AYDN				S	**Sb**	**13 37 47.9**	**-1.7**
AYDN				*i* AML	AML	13 37 49.0	
	comp=E,123nm,0.7s						
AYDN				*i* AML	AML	13 38 02.0	
	comp=E,55nm,0.6s						
AYDN				*i* AML	AML	13 38 04.0	
	comp=E,107nm,0.8s						
CAEL	**Denizli, Camel**	**2.84**	**41**	P	**Pn**	**13 37 13.2**	**+1.6**
CAEL				S	Sb	13 38 02.0	+10
CAEL				*i* AML	AML	13 38 08.0	
	comp=E,374nm,0.8s						
CAEL				*i* AML	AML	13 38 16.0	
	comp=E,415nm,0.7s						
CAEL				*i* AML	AML	13 38 18.0	
	comp=E,360nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.91**	**32**	P	**Pn**	**13 37 14.5**	**+1.9**
TAVA				S	**Sb**	**13 37 54.5**	**+0.1**
TAVA				*i* AML	AML	13 38 02.0	
	comp=E,195nm,0.8s						
TAVA				*i* AML	AML	13 38 04.0	
	comp=E,86nm,0.4s						
TAVA				*i* AML	AML	13 38 09.0	
	comp=E,149nm,1.0s						
ELL	**Elmali**	**2.95**	**53**	PN	**Pn**	**13 37 15.3**	**+2.2**
ELL	**Elmali**	**2.95**	**53**	Pn	**Pn**	**13 37 15.6**	**+2.4**
AYDB	**Zeytinkoy-Aydi**	**3.02**	**14**	PN	**Pn**	**13 37 15.8**	**+1.7**
AKUM	**Antalya-Kumluc**	**3.04**	**64**	P	**Pn**	**13 37 16.1**	**+1.8**
AKUM				S	**Sb**	**13 37 53.5**	**-4.7**
AKUM				*i* AML	AML	13 37 56.0	
	comp=E,43nm,0.7s						
AKUM				*i* AML	AML	13 38 04.0	
	comp=E,64nm,0.5s						
AKUM				*i* AML	AML	13 38 07.0	
	comp=E,56nm,0.7s						
GOLH	**Golhisar**	**3.05**	**43**	P	**Pn**	**13 37 17.2**	**+2.6**
GOLH				S	**Sb**	**13 38 05.2**	**+6.6**
GOLH				*i* AML	AML	13 38 13.0	
	comp=E,65nm,0.6s						
GOLH				*i* AML	AML	13 38 18.0	
	comp=E,152nm,0.7s						
GOLH				*i* AML	AML	13 38 23.0	
	comp=E,191nm,1.0s						
APMY	**Acipayam-Deniz**	**3.09**	**37**	PN	**Pn**	**13 37 16.9**	**+1.8**
ZEYE	**Izmir, Urla-Ze**	**3.24**	**354**	P	**Pn**	**13 37 17.5**	**+0.5**
ZEYE				*i* AML	AML	13 38 17.0	
	comp=E,51nm,0.7s						
ZEYE				*i* AML	AML	13 38 17.0	
	comp=E,95nm,0.8s						
ZEYE				*i* AML	AML	13 38 22.0	
	comp=E,86nm,1.0s						
URLA	**Izmir**	**3.35**	**355**	PN	**Pn**	**13 37 18.7**	**+0.1**
URLA	**Izmir**	**3.35**	**355**	P	**Pn**	**13 37 18.5**	**-0.1**
URLA				*i* AML	AML	13 38 24.0	
	comp=E,83nm,1.2s						
URLA				*i* AML	AML	13 38 25.0	
	comp=E,198nm,1.7s						
URLA				*i* AML	AML	13 38 45.0	
	comp=E,168nm,1.6s						
BLCB	**Balcova**	**3.37**	**1**	PN	**Pn**	**13 37 20.6**	**+1.9**
KORT	**Korkueli**	**3.38**	**53**	PN	**Pn**	**13 37 21.4**	**+2.3**
KORT	**Korkueli**	**3.38**	**53**	P	**Pn**	**13 37 21.7**	**+2.5**
KORT				S	**Sn**	**13 38 01.2**	**+2.8**
KORT				*i* AML	AML	13 38 05.0	
	comp=E,96nm,0.6s						
KORT				*i* AML	AML	13 38 07.0	
	comp=E,60nm,0.5s						
KORT				*i* AML	AML	13 38 26.0	
	comp=E,26nm,1.0s						
CHOS	**Chios island**	**3.44**	**348**	PN	**Pn**	**13 37 21.1**	**+1.2**
BRDR	**BURDUR-Merkez**	**3.66**	**42**	P	**Pn**	**13 37 25.4**	**+2.5**
BRDR				S	**Sb**	**13 38 18.7**	**+2.7**
BRDR				*i* AML	AML	13 38 30.0	
	comp=E,64nm,0.7s						
BRDR				*i* AML	AML	13 38 37.0	
	comp=E,64nm,0.9s						
BRDR				*i* AML	AML	13 38 38.0	
	comp=E,36nm,0.9s						
MANT	**Manisa**	**3.70**	**20**	P	**Pn**	**13 37 24.5**	**+1.0**
MANT				S	**Sn**	**13 38 07.5**	**+1.3**
MANT				*i* AML	AML	13 38 11.0	
	comp=E,25nm,0.9s						
MANT				*i* AML	AML	13 38 47.0	
	comp=E,15nm,0.7s						
MANT				*i* AML	AML	13 38 54.0	
	comp=E,28nm,1.1s						
BUCA	**Burdur, Bucak-**	**3.71**	**50**	P	**Pn**	**13 37 26.3**	**+2.7**
BUCA				*i* AML	AML	13 38 19.0	
	comp=E,32nm,0.8s						
BUCA				*i* AML	AML	13 38 48.0	
	comp=E,46nm,1.0s						
BUCA				*i* AML	AML	13 38 48.0	
	comp=E,44nm,1.0s						
KULA	**Kula-Manisa**	**3.75**	**21**	PN	**Pn**	**13 37 25.6**	**+1.5**
SLUM	**Salum**	**3.81**	**203**	P	**Pn**	**13 37 27.5**	**+2.7**
	baz=206						
SLUM				S	**Sn**	**13 38 08.8**	**+0.1**
	baz=206						
BCK	**Bucak**	**3.81**	**49**	PN	**Pn**	**13 37 27.3**	**+2.3**
OSC1	**CSNet OBS 1**	**3.88**	**112**	P	**Pn**	**13 37 26.7**	**+1.0**
OSC1				S	**Sn**	**13 38 13.2**	**+2.9**
PASA	**Karahalli, USA**	**3.90**	**31**	P	**Pn**	**13 37 26.7**	**+0.6**
PASA				S	**Sb**	**13 38 24.5**	**+1.7**
PASA				*i* AML	AML	13 38 37.0	
	comp=E,26nm,0.9s						
PASA				*i* AML	AML	13 38 46.0	
	comp=E,17nm,0.9s						
PASA				*i* AML	AML	13 39 00.0	
	comp=E,19nm,1.7s						
AKHS	**Akhisar**	**3.92**	**10**	P	**Pn**	**13 37 28.5**	**+2.2**
AKHS				*i* AML	AML	13 38 28.0	
	comp=E,18nm,1.0s						
AKHS				*i* AML	AML	13 38 56.0	
	comp=E,50nm,0.9s						
AKHS				*i* AML	AML	13 39 43.0	
	comp=E,0.2nm,0.9s						
ISP	**Isparta**	**4.01**	**45**		**Pn**	**13 37 28.1**	**+0.4**
USAK	**Uak-Merkez**	**4.04**	**23**	P	**Pn**	**13 37 29.1**	**+1.0**
USAK				*i* AML	AML	13 38 48.0	
	comp=E,22nm,0.9s						
USAK				*i* AML	AML	13 38 50.0	
	comp=E,20nm,1.0s						
USAK				*i* AML	AML	13 38 59.0	
	comp=E,18nm,2.0s						
DKL	**Dikili**	**4.05**	**359**	PN	**Pn**	**13 37 30.1**	**+2.0**
SUTC	**Sutluce-Ispart**	**4.08**	**52**	PN	**Pn**	**13 37 31.2**	**+2.5**
KZIL	**AFYON_Kizioren**	**4.12**	**37**	P	**Pn**	**13 37 29.6**	**+0.3**
KZIL				*i* AML	AML	13 38 46.0	
	comp=E,29nm,0.7s						
KZIL				*i* AML	AML	13 38 47.0	
	comp=E,38nm,1.0s						
KZIL				*i* AML	AML	13 38 48.0	
	comp=E,22nm,1.2s						
KEPZ	**Antalya-Kepez**	**4.21**	**62**	P	**Pn**	**13 37 32.3**	**+2.0**
KEPZ				S	**Sn**	**13 38 21.0**	**+2.4**
KEPZ				*i* AML	AML	13 38 23.0	
	comp=E,41nm,0.5s						
KEPZ				*i* AML	AML	13 38 25.0	
	comp=E,28nm,0.4s						
KEPZ				*i* AML	AML	13 38 26.0	
	comp=E,64nm,0.5s						
SIGR	**SIGRI**	**4.28**	**348**	PN	**Pn**	**13 37 32.4**	**+1.1**
STEP	**BALIKESIR_Sava**	**4.39**	**8**	P	**Pn**	**13 37 34.8**	**+1.9**
STEP				*i* AML	AML	13 38 38.0	
	comp=E,29nm,0.6s						
STEP				*i* AML	AML	13 39 05.0	
	comp=E,40nm,0.7s						
STEP				*i* AML	AML	13 39 11.0	
	comp=E,54nm,0.8s						
AKMS	**Akamas**	**4.41**	**88**	P	**Pn**	**13 37 33.8**	**+0.7**
AKMS				S	**Sn**	**13 38 25.2**	**+1.8**
AKMS				AML	AML	13 38 27.5	
	comp=E,1.4nm,0.6s						
AKMS				AML	AML	13 38 27.5	
	comp=E,1.4nm,0.6s						
AKMS				AML	AML	13 38 29.7	
	comp=E,1.7nm,0.4s						
AKMS				AML	AML	13 38 29.7	
	comp=E,1.7nm,0.4s						
BUHA	**Balikesir, Bur**	**4.48**	**1**	P	**Pn**	**13 37 35.7**	**+1.7**
BUHA				*i* AML	AML	13 38 59.0	
	comp=E,30nm,1.0s						
BUHA				*i* AML	AML	13 39 11.0	
	comp=E,41nm,2.2s						
BUHA				*i* AML	AML	13 39 14.0	
	comp=E,28nm,1.4s						
GAZI	**Gazipasa**	**4.52**	**73**	P	**Pn**	**13 37 35.0**	**+0.3**
GAZI				S	**Sn**	**13 38 25.2**	**-1.2**
GAZI				*i* AML	AML	13 38 26.0	
	comp=E,123nm,0.6s						
GAZI				*i* AML	AML	13 38 28.0	
	comp=E,64nm,0.4s						
GAZI				*i* AML	AML	13 38 28.0	
	comp=E,140nm,0.6s						
GDZ	**Gediz**	**4.54**	**26**	P	**Pn**	**13 37 35.1**	**+0.1**
GDZ				*i* AML	AML	13 38 47.0	
	comp=E,11nm,1.5s						
GDZ				*i* AML	AML	13 39 08.0	
	comp=E,22nm,2.0s						
GDZ				*i* AML	AML	13 39 25.0	
	comp=E,12nm,1.4s						
SEDI	**Konya, Seydise**	**4.57**	**56**	P	**Pn**	**13 37 38.7**	**+3.3**
SEDI				S	**Sn**	**13 38 30.8**	**+3.2**
SEDI				*i* AML	AML	13 38 35.0	
	comp=E,48nm,0.9s						
SEDI				*i* AML	AML	13 38 38.0	
	comp=E,37nm,0.6s						
SEDI				*i* AML	AML	13 38 40.0	
	comp=E,50nm,0.6s						
SEYD	**Seydisehir-KON**	**4.61**	**57**	PN	**Pn**	**13 37 38.8**	**+2.9**
NATA	**Nata**	**4.61**	**91**	P	**Pn**	**13 37 36.9**	**+1.1**
ITM	**Ithomi**	**4.62**	**299**	Pn	**Pn**	**13 37 39.1**	**+3.2**
ALFC	**Alefka**	**4.62**	**87**	P	**Pn**	**13 37 36.8**	**+0.8**
ALFC				AML	AML	13 38 30.8	
	comp=E,2.7nm,0.8s						
ALFC				AML	AML	13 38 31.1	
	comp=E,2.8nm,0.6s						
YVAC	**Isparta, Yalva**	**4.73**	**45**	P	**Pn**	**13 37 39.3**	**+1.7**
YVAC				*i* AML	AML	13 39 14.0	
	comp=E,9.7nm,2.1s						
YVAC				*i* AML	AML	13 39 34.0	
	comp=E,17nm,2.4s						
YVAC				*i* AML	AML	13 39 35.0	
	comp=E,14nm,2.6s						
BAYC	**CANAKKALE_Bayr**	**4.73**	**356**	P	**Pn**	**13 37 38.5**	**+1.0**
BAYC				*i* AML	AML	13 38 36.0	
	comp=E,14nm,1.4s						
BAYC				*i* AML	AML	13 39 21.0	
	comp=E,25nm,2.6s						
BAYC				*i* AML	AML	13 39 39.0	
	comp=E,27nm,2.6s						
DURS	**Dursunbey**	**4.73**	**14**	P	**Pn**	**13 37 39.0**	**+1.3**
DURS				*i* AML	AML	13 39 14.0	
	comp=E,50nm,1.2s						
DURS				*i* AML	AML	13 39 14.0	
	comp=E,16nm,0.4s						
DURS			

KKBE *i* AML AML 13 38 52.0
comp=E,24nm,0.4s
KKBE *i* AML AML 13 38 59.0
comp=E,29nm,0.7s
KKBE *i* AML AML 13 39 00.0
comp=E,24nm,1.0s
KDHN Kadinhani 5.42 48 P **Pn** **13 37 48.4 +1.4**
KDHN *i* AML AML 13 39 10.0
comp=E,5.7nm,1.0s
KDHN *i* AML AML 13 39 11.0
comp=E,5.0nm,1.1s
KDHN *i* AML AML 13 39 49.0
comp=E,6.8nm,1.8s
AGG Agios Georgios 5.46 319 Pn **Pn** **13 37 50.1 +2.6**
MVOU Mavrovouni 5.47 88 P **Pn** **13 37 48.5 +0.8**
GULN MERSIN_Gulnar 5.48 76 P **Pn** **13 37 49.4 +1.6**
GULN S **Sn** **13 38 49.7 -0.3**
GULN *i* AML AML 13 38 53.0
comp=E,28nm,0.4s
GULN *i* AML AML 13 38 53.0
comp=E,49nm,0.5s
GULN *i* AML AML 13 38 56.0
comp=E,25nm,1.0s
SWA2 5.89 193 P **Pn** **13 37 55.9 +2.4**
baz=195
SWA2 S **Sn** **13 38 59.0 -1.2**
baz=195
ALN Alexandroupoli 5.92 353 Pn **Pn** **13 37 55.3 +1.5**
HMYD Mayadein 6.13 147 P **Pn** **13 37 57.4 +0.6**
baz=148
HNAT Natroun 6.19 149 P **Pn** **13 37 58.8 +1.2**
baz=150
LIT Litokhoron 6.20 326 Pn **Pn** **13 38 00.2 +2.5**
RDO Rodhopi 6.22 350 Pn **Pn** **13 37 59.3 +1.3**
HSAF As Saff 6.63 143 P **Pn** **13 38 04.7 +1.0**
baz=144
BRTR Keskin Array B 7.09 47 Pn **Pn** **13 38 10.8 +0.8**
comp=E,0.4nm,0.3s,baz=231,slow=15,SNR=5.9
BRTR LR LR 13 41 43.2
comp=E,281nm,19.1s,baz=234,slow=46
comp=E,1.1nm,0.4s
SUZ Suez 7.15 135 P **Pn** **13 38 12.5 +1.6**
baz=135
MMA0B Mount Meron ar 7.28 104 Pn **Pn** **13 38 13.7 +1.1**
MMA0B Sn **Sn** **13 39 33.6 -0.8**
MMAI Mount Meron Ar 7.28 104 Pn **Pn** **13 38 12.9 +0.2**
comp=E,3.6nm,0.3s,baz=296,slow=10,SNR=16
MMAI Sn **Sn** **13 39 33.0 -1.4**
comp=E,7.1nm,0.3s,baz=298,slow=27,SNR=8.8
comp=E,1.6nm,0.2s
GEM Giv'at Ha'Em 7.43 102 Pn **Pn** **13 38 16.1 +1.5**
SALP Salfit 7.47 111 Pn **Pn** **13 38 16.0 +0.9**
SALP Sn **Sn** **13 39 37.1 -1.8**
NATI Neve Ativ 7.48 101 Pn **Pn** **13 38 16.3 +1.1**
NATI Sn **Sn** **13 39 38.2 -0.9**
HMDT Nahal Hemdat 7.65 109 Pn **Pn** **13 38 19.1 +1.5**
HMDT Sn **Sn** **13 39 41.6 -1.8**
YTIR Yattir 7.74 116 Pn **Pn** **13 38 19.6 +0.7**
DSI Dead Sea 7.83 114 Pn **Pn** **13 38 21.1 +0.9**
DSI Sn **Sn** **13 39 46.1 -1.8**
TAMRE El Minia 8.05 154 P **Pn** **13 38 24.7 +1.6**
baz=155
KRMI Paran Flat 8.17 125 Pn **Pn** **13 38 25.7 +1.0**
PRNI Paran 8.21 122 Pn **Pn** **13 38 26.1 +0.7**
PRNI Sn **Sn** **13 39 53.9 -3.4**
ZFRI Zfri 8.22 120 Pn **Pn** **13 38 25.6 +0.2**
ZFRI Sn **Sn** **13 39 53.9 -3.4**
GRB Gharib 8.35 142 P **Pn** **13 38 27.7 +0.4**
baz=142
HRFI Mount Harif 8.43 124 Pn **Pn** **13 38 28.6 +0.3**
HRFI Sn **Sn** **13 39 59.5 -3.1**
EIL Elat 8.60 126 Pn **Pn** **13 38 32.2 +1.5**
comp=E,1.1nm,0.3s,baz=271,slow=2.0,SNR=18
EIL Sn **Sn** **13 40 03.3 -3.5**
comp=E,4.7nm,0.3s,baz=352,slow=16,SNR=10
comp=E,2.9nm,0.3s
EIL Elat 8.60 126 Pn **Pn** **13 38 31.7 +1.0**
EIL Sn **Sn** **13 40 03.0 -3.8**
ASF Jabal al Asfar 8.76 106 Pn **Pn** **13 38 34.1 +1.3**
comp=E,0.4nm,0.3s,baz=308,slow=11,SNR=2.1
ASF Sn **Sn** **13 40 10.6 -0.1**
comp=E,0.5nm,0.3s,baz=352,slow=22,SNR=2.4
comp=E,1.4nm,0.3s
HBST Basata 8.76 129 P **Pn** **13 38 34.9 +2.0**
baz=129
HKAT Jabal Katrina 8.81 135 P **Pn** **13 38 34.8 +1.0**
baz=136
TIP Timpagrande 9.15 300 Pn **Pn** **13 38 37.8 -0.5**
HHRG Al Ghardaqah 9.61 142 P **Pn** **13 38 48.2 +3.7**
baz=143
HDK1 Dakhla 9.67 167 P **Pn** **13 38 47.5 +2.1**
baz=167
CUC Castrocucco 10.15 303 Pn **Pn** **13 38 52.9 +0.9**
RAFF Raffo Rosso 10.43 286 Pn **Pn** **13 38 55.8 +0.1**
MLR Muntele Roua 10.49 356 LR LR 13 43 46.3
comp=E,88nm,18.4s,baz=194,slow=43
KARS Kars 13.91 61 Pn **Pn** **13 39 41.7 -1.7**
KBZ Khabaz 15.06 50 Pn **P** **13 40 05.0 +1.2**
comp=E,0.3nm,0.3s,baz=237,slow=9.9,SNR=10.0
KBZ LR LR 13 47 34.6
comp=E,24nm,20.2s,baz=204,slow=45
AK05 Malin Array Si 15.68 5 Pn **Pn** **13 40 08.7 +1.8**
AK05 IAmb IAmb 13 40 10.4
comp=E,6.8nm,0.6s
AKASG Malin Array Be 15.76 5 Pn **P** **13 40 10.4 -1.2**
comp=Z,1.5nm,0.3s,baz=197,slow=11,SNR=9.7
AKASG LR LR 13 47 10.2
comp=Z,37nm,19.0s,baz=222,slow=42
AKASG Malin Array Be 15.76 5 Pn **Pn** **13 40 08.4 +0.4**
AKBB Malin Array Si 15.76 5 **Pn** **13 40 09.2 +1.2**
AKBB IAmb IAmb 13 40 13.2
comp=Z,5.7nm,0.6s
VRAC Vranov 16.20 335 LR LR 13 47 42.2
comp=Z,33nm,18.1s,baz=144,slow=42
GERES GERESS Array B 16.95 329 Pn **Pn** **13 40 21.9 -1.2**
comp=Z,0.1nm,0.3s,baz=134,slow=17,SNR=5.3
comp=Z,0.6nm,0.6s
DPC Dobruska-Polom 17.18 336 *eP* **P** **13 40 27.4 0.0**
KHC Kasperske Hory 17.22 329 *eP* **P** **13 40 28.4 +0.6**
KHC *ex* x 13 40 44.5
BNI Bardonecchia 18.44 309 P **Pn** **13 40 43.6 +1.9**
SENIN Lac Senin/Sane 18.68 313 P **P** **13 40 43.4 -0.7**
SENIN IAmb IAmb 13 41 13.1
comp=Z,2.7nm,0.6s
ESDC Sonseca Array 24.96 290 P **P** **13 41 48.8 -0.3**
comp=Z,0.8nm,0.6s,baz=82,slow=9.2,SNR=10.0
comp=Z,0.8nm,0.6s
FINES FINESS Array B 26.45 359 P **P** **13 42 00.5 -1.8**
comp=Z,2.5nm,0.8s,baz=157,slow=12,SNR=7.7
comp=Z,2.5nm,0.8s
HFS Hagfors 26.57 345 P **P** **13 42 01.5 -1.9**
comp=Z,2.5nm,0.7s,baz=133,slow=8.2,SNR=20
comp=Z,2.5nm,0.7s
AKTO Aktyubinsk 27.27 46 P **P** **13 42 10.1 +0.3**
comp=Z,0.7nm,0.3s,baz=255,slow=11,SNR=5.0
comp=Z,0.7nm,0.3s
NB2 NORSAR Subarra 27.94 344 P **P** **13 42 13.1 -2.6**
comp=Z,1.5nm,0.7s,baz=156,slow=9.3
NOA NORSAR Array B 27.94 344 LR LR 13 54 42.3
comp=Z,15nm,18.9s,baz=60,slow=40
EKA Eskdalemuir Ar 29.02 324 P **P** **13 42 23.8 -1.6**
comp=Z,0.5nm,0.3s,baz=120,slow=10,SNR=6.7
comp=Z,0.5nm,0.3s
TORD Torodi Ar. Bea 31.55 233 P **P** **13 42 50.0 +1.8**
comp=Z,1.4nm,0.5s,baz=36,slow=8.9,SNR=17
comp=Z,1.4nm,0.5s
KK31 Karatay Array 34.45 63 P **P** **13 43 13.0 -0.2**
KK31 IAmb IAmb 13 43 15.7
comp=Z,2.4nm,0.9s
KKAR Karatay Array 34.45 63 P **P** **13 43 13.2 -0.1**
KKAR IAmb IAmb 13 43 15.7
comp=Z,2.4nm,0.9s
ARCES ARCESS Array B 34.58 359 P **P** **13 43 12.1 -2.0**
comp=Z,0.5nm,0.3s,baz=176,slow=8.3,SNR=24
comp=Z,0.5nm,0.3s
KURK Kurchatov 40.12 51 P **P** **13 44 02.0 +0.8**
KURK IAmb IAmb 13 44 02.8
comp=Z,5.1nm,0.6s
MKAR Makanchi Array 42.62 57 P **P** **13 44 23.5 +1.7**
comp=Z,6.7nm,0.6s,baz=277,slow=7.3,SNR=62
comp=Z,6.7nm,0.6s
MKAR Makanchi Array 42.62 57 **P** **13 44 23.2 +1.4**
MK31 Makanchi Array 42.62 57 **P** **13 44 23.3 +1.5**
SPITS Spitsbergen Ar 43.51 357 P **P** **13 44 27.0 -1.6**
comp=Z,1.6nm,0.5s,baz=152,slow=11,SNR=6.7
comp=Z,1.6nm,0.5s
ZAA0 Zalesovo Array 44.04 46 **P** **13 44 32.4 -0.7**
ZALV Zalesovo Beam 44.04 46 P **P** **13 44 33.7 +0.7**
comp=Z,6.8nm,0.6s,baz=268,slow=8.2,SNR=26
comp=Z,6.8nm,0.6s
ZALV Zalesovo Beam 44.04 46 **P** **13 44 33.4 +0.3**
SONM Songino Array 58.43 51 P **P** **13 46 23.2 +1.9**
comp=Z,1.5nm,0.5s,baz=286,slow=7.6,SNR=3.6
comp=Z,1.5nm,0.5s
SCHQ Schefferville 64.25 320 P **P** **13 46 59.8 -0.6**
comp=Z,3.1nm,0.6s,baz=43,slow=3.5,SNR=3.6
comp=Z,3.1nm,0.6s
USRK Ussuriysk Ar. 75.89 46 P **P** **13 48 11.8 -0.1**
comp=Z,1.5nm,0.5s,baz=264,slow=6.3,SNR=4.6
comp=Z,1.5nm,0.5s
SADO Sadowa 76.19 315 LR LR 14 24 47.3
comp=Z,81nm,18.7s,baz=218,slow=38
KSRS Sadowa Array 77.19 53 P **P** **13 48 19.5 +0.1**
comp=Z,0.4nm,0.6s,baz=302,slow=4.9,SNR=4.4
KSRS LR LR 14 28 24.0
comp=Z,47nm,20.1s,baz=170,slow=40
comp=Z,0.4nm,0.6s
YKA Yellowknife Ar 78.03 343 P **P** **13 48 23.1 -0.5**
comp=Z,1.1nm,0.6s,baz=32,slow=5.2,SNR=7.9
comp=Z,1.1nm,0.6s
ILAR Eielson Array 80.43 357 P **P** **13 48 36.0 -0.6**
comp=Z,0.3nm,0.7s,baz=336,slow=5.0,SNR=2.0
comp=Z,0.3nm,0.7s

*IDC **13** 13:38:05.0±0.9, 11.71N×86.43W, h0km, mb4.2/12, mbtmp4.2/12, MS3.7/14, Error ellipse: s-maj=42.0km s-min=18.1km az=44.0*
*INET **13** 13:38:09.6±1.0, 11.38N×86.97W, h17km±8km, ML4.8*
*UCR **13** 13:38:10.9±1.8, 11.49N×86.98W, h37km±644km, ML4.4, MW4.6, mb4.5(NEIC)*
*NEIC **13** 13:38:12.7±2.5, 11.60N±0.05×86.74W±0.07, h49km±10km, mb4.5/50, Error ellipse: s-maj=11.1km s-min=6.8km az=67.0*
*SNET **13** 13:38:13.9±1.1, 11.56N×87.23W, h34km±68km, ML4.6*
ISC 13 13:38:10.9±1.0, **11.49N**±0.04×**86.95W**±0.04, **h44**km±10km, **n293**,σ1°**15**/314, **mb4.4**/39, **MS3.8**/16, **1C**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
					Op	ISC		
COPN	**Copaltepe**	**0.77**	**27**	*eP*		**Pn**	**13 38 25.6**	**+0.2**
MASN	**Masaya**	**0.92**	**57**	*eP*		**Pn**	**13 38 27.2**	**-0.4**
TISN	**Laguna Tiscapa**	**0.93**	**45**	*eP*		**Pn**	**13 38 27.6**	**+0.1**
MGAN	**Managua**	**0.95**	**46**	*eP*		**Pn**	**13 38 28.0**	**+0.1**
MOMN	**Momotombo**	**1.00**	**23**	*eP*		**Pn**	**13 38 28.8**	**+0.2**
WILN	**Americas 2**	**1.00**	**48**	*eP*		**Pn**	**13 38 28.6**	**+0.1**
CNGN	**Cerro Negro**	**1.04**	**13**			**Pn**	**13 38 29.2**	**+0.1**
CNGN					Sn	**Sn**	**13 38 40.3**	**-2.2**
CNGN	**Cerro Negro**	**1.04**	**13**	*eP*		**Pn**	**13 38 29.1**	**+0.1**
CNGN				*eS*		**Sn**	**13 38 45.0**	**+2.6**
CNGN					IAML		13 38 49.3	
	comp=E,12μm,0.3s							
TEL3	**Telica 3**	**1.08**	**5**	*eP*		**Pn**	**13 38 29.9**	**+0.2**
HUEN		**1.14**	**42**	*eP*		**Pn**	**13 38 30.5**	**+0.1**
CRIN	**San Cristobal**	**1.21**	**355**			**Pn**	**13 38 32.1**	**+0.6**
CRIN	**San Cristobal**	**1.21**	**355**	*eP*		**Pn**	**13 38 32.1**	**+0.6**
CRIN	**San Cristobal**	**1.21**	**355**	*eP*		**Pn**	**13 38 32.0**	**+0.6**
CRIN				*eS*		**Sn**	**13 38 50.0**	**+3.2**
CRIN					IAML		13 38 56.7	
	comp=N,27μm,0.4s							
HZTE	**Horizontes, Gu**	**1.53**	**120**			**Pn**	**13 38 35.8**	**0.0**
HZTE	**Horizontes, Gu**	**1.53**	**120**	*eP*		**Pn**	**13 38 35.6**	**-0.2**
BOAB	**BOACO BROADBAN**	**1.58**	**52**	Pn		**Pn**	**13 38 36.2**	**-0.2**
BOAB	**BOACO BROADBAN**	**1.58**	**52**	*eP*		**Pn**	**13 38 36.1**	**-0.4**
CSGN	**Cosiguina Volc**	**1.60**	**338**	*eP*		**Pn**	**13 38 37.2**	**+0.4**
GBS3	**Finca Las Img**	**1.62**	**115**	*eP*		**Pn**	**13 38 37.4**	**+0.3**
LAPC	**Finca la Perla**	**1.65**	**116**	*eP*		**Pn**	**13 38 37.7**	**+0.3**
BUEV	**Buena Vista**	**1.66**	**114**	*eP*		**Pn**	**13 38 37.5**	**-0.1**
GB1A	**Borinquen Arri**	**1.66**	**113**	*eP*		**Pn**	**13 38 37.2**	**-0.4**
BUAI	**Buenos Aires**	**1.69**	**111**	*eP*		**Pn**	**13 38 37.6**	**-0.5**
VRLE	**La Escondida,**	**1.70**	**114**	*eP*		**Pn**	**13 38 38.3**	**+0.1**
GPS2	**Hotel Rincn d**	**1.73**	**115**	*eP*		**Pn**	**13 38 39.3**	**+0.8**
MATN	**Matagalpa**	**1.75**	**35**			**Pn**	**13 38 39.2**	**+0.4**
MATN	**Matagalpa**	**1.75**	**35**	*eP*		**Pn**	**13 38 39.1**	**+0.2**
ACON	**Acoyapa**	**1.80**	**74**			**Pn**	**13 38 38.8**	**-0.7**
ACON	**Acoyapa**	**1.80**	**74**	*eP*		**Pn**	**13 38 38.8**	**-0.7**
ACON	**Acoyapa**	**1.80**	**74**	*eP*		**Pn**	**13 38 38.7**	**-0.8**
LIM1	**Limonal**	**1.84**	**115**	*eP*		**Pn**	**13 38 39.3**	**-0.8**
ORTG	**Ortega, Santa**	**1.84**	**127**	Pn		**Pn**	**13 38 39.4**	**-0.7**
ORTG	**Ortega, Santa**	**1.84**	**127**	*eP*		**Pn**	**13 38 39.4**	**-0.7**
GUAB	**Guayabo de Bag**	**1.85**	**114**	*eP*		**Pn**	**13 38 41.2**	**+0.9**
GUAI	**GUAI**	**1.86**	**130**	*eP*		**Pn**	**13 38 39.4**	**-0.8**
SAJU	**San Juanillo,**	**1.86**	**139**	*eP*		**Pn**	**13 38 38.5**	**-1.8**
COLC	**Colonia**	**1.89**	**115**	*eP*		**Pn**	**13 38 41.6**	**+0.8**
HORNC	**Hornillas**	**1.90**	**114**	*eP*		**Pn**	**13 38 41.3**	**+0.4**
VMAR	**Armenia, Volca**	**1.91**	**110**	*eP*		**Pn**	**13 38 41.4**	**+0.3**
PLVR	**Palo Verde**	**1.93**	**126**	*eP*		**Pn**	**13 38 39.8**	**-1.6**
CUI	**Cuipilapa**	**1.93**	**115**	*eP*		**Pn**	**13 38 41.9**	**+0.5**
CNCH	**Conchagua**	**1.98**	**334**	*eP*		**Pn**	**13 38 42.6**	**+0.5**
CNCH				*eS*		**Sn**	**13 39 05.0**	**-0.7**
CNCH					IAML		13 39 18.4	
	comp=Z,10μm,0.4s							
CNCH	**Conchagua**	**1.98**	**334**	*eP*		**Pn**	**13 38 42.6**	**+0.5**
CNCH				*eS*		**Sn**	**13 39 05.0**	**-0.7**
CNCH					IAML		13 39 18.4	
	comp=Z,10μm,0.4s							
NICO	**Nicoya**	**1.99**	**132**	*eP*		**Pn**	**13 38 46.4**	**+4.2**
LCND	**La Caada**	**2.03**	**333**	*eP*		**Pn**	**13 38 43.2**	**+0.5**
LCND				*eS*		**Sn**	**13 39 05.8**	**-1.1**
LCND					IAML		13 39 13.0	
	comp=Z,6μm,0.5s							
LCND	**La Caada**	**2.03**	**333**	*eP*		**Pn**	**13 38 43.2**	**+0.5**
LCND				*eS*		**Sn**	**13 39 05.8**	**-1.1**
LCND					IAML		13 39 13.0	
	comp=Z,6μm,0.5s							
ACAL	**Aguas Claras**	**2.06**	**114**	*eP*		**Pn**	**13 38 43.6**	**+0.5**
VERA	**Finca Concepci**	**2.13**	**107**	*eP*		**Pn**	**13 38 44.2**	**+0.1**
INDI	**Punta indio, G**	**2.15**	**138**	*eP*		**Pn**	**13 38 42.8**	**-1.4**
JTS	**Las Juntas de**	**2.29**	**121**	Pn		**Pn**	**13 38 46.8**	**+0.6**
JTS	**Las Juntas de**	**2.29**	**121**	*eP*		**Pn**	**13 38 47.6**	**+1.3**
VSM	**San Miguel**	**2.33**	**326**	*eP*		**Pn**	**13 38 47.7**	**+0.7**
VSM				*eS*		**Sn**	**13 39 14.7**	**+0.2**
VSM	**San Miguel**	**2.33**	**326**	*eP*		**Pn**	**13 38 47.7**	**+0.7**
VSM				*eS*		**Sn**	**13 39 14.7**	**+0.2**
LCY	**Lacayo**	**2.33**	**326**	*eP*		**Pn**	**13 38 47.8**	**+0.9**
LCY	**Lacayo**	**2.33**	**326**	*eP*		**Pn**	**13 38 47.8**	**+0.9**
RANC	**El Ranchito**	**2.34**	**326**	*eP*		**Pn**	**13 38 47.4**	**+0.4**
RANC				*eS*		**Sn**	**13 39 14.4**	**-0.2**
RANC	**El Ranchito**	**2.34**	**326**	*eP*		**Pn**	**13 38 47.4**	**+0.4**
RANC				*eS*		**Sn**	**13 39 14.4**	**-0.2**
PACA	**Pacayal**	**2.39**	**326**	*eP*		**Pn**	**13 38 48.2**	**+0.6**
PACA				*eS*		**Sn**	**13 39 15.1**	**-0.7**
PACA					IAML		13 39 24.0	
	comp=Z,19μm,0.3s							
PACA	**Pacayal**	**2.39**	**326**	*eP*		**Pn**	**13 38 48.2**	**+0.6**
PACA				*eS*		**Sn**	**13 39 15.1**	**-0.7**
PACA					IAML		13 39 24.0	
	comp=Z,19μm,0.3s							
ARE1	**Arenal 1**	**2.41**	**115**	*eP*		**Pn**	**13 38 49.0**	**+1.1**
CEDE	**Laguna Cedeo**	**2.42**	**114**	*eP*		**Pn**	**13 38 49.2**	**+1.2**
COEB	**Comit de Eme**	**2.53**	**322**	*eP*		**Pn**	**13 38 50.5**	**+0.9**
COEB	**Comit de Eme**	**2.53**	**322**	*eP*		**Pn**	**13 38 50.5**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.58**	**353**	Pn		**Pn**	**13 38 51.6**	**+1.3**
TGUH	**Tegucigalpa,Un**	**2.58**	**353**	*eP*		**Pn**	**13 38 51.6**	**+1.3**
TGUH				*eS*		**Sn**	**13 39 22.1**	**+1.7**
TGUH	**Tegucigalpa,Un**	**2.58**	**353**	*eP*		**Pn**	**13 38 51.6**	**+1.3**
TGUH				*eS*		**Sn**	**13 39 22.1**	**+1.7**
TGUH	**Tegucigalpa,Un**	**2.58**	**353**	*eP*		**Pn**	**13 38 51.5**	**+1.2**
LAFE	**Finca La Fe, P**	**2.60**	**130**	*eP*		**Pn**	**13 38 49.1**	**-1.4**
COVE	**Coope Vega, Sa**	**2.61**	**107**	Pn		**Pn**	**13 38 51.2**	**+0.6**
COVE	**Coope Vega, Sa**	**2.61**	**107**	*eP*		**Pn**	**13 38 50.5**	**-0.2**
PQSS	**Presa 15 de Se**	**2.65**	**324**	*eP*		**Pn**	**13 38 50.7**	**-0.4**
PQSS	**Presa 15 de Se**	**2.65**	**324**	*eP*		**Pn**	**13 38 50.7**	**-0.4**
ESPN	**Las Esperanzas**	**2.68**	**75**	Pn		**Pn**	**13 38 50.1**	**-1.5**
ESPN	**Las Esperanzas**	**2.68**	**75**	*eP*		**Pn**	**13 38 51.6**	**0.0**
UESV	**Universidad de**	**2.79**	**320**	*eP*		**Pn**	**13 38 53.4**	**+0.2**
UESV				*eS*		**Sn**	**13 39 24.9**	**-0.8**
UESV					IAML		13 39 38.7	
	comp=Z,2μm,0.5s							
UESV	**Universidad de**	**2.79**	**320**	*eP*		**Pn**	**13 38 53.4**	**+0.2**
UESV				*eS*		**Sn**	**13 39 24.9**	**-0.8**
UESV					IAML		13 39 38.7	
	comp=Z,2μm,0.5s							
SCLA	**Alcaldia de Sa**	**2.81**	**322**	*eP*		**Pn**	**13 38 54.1**	**+0.7**
SCLA	**Alcaldia de Sa**	**2.81**	**322**	*eP*		**Pn**	**13 38 54.1**	**+0.7**
COEG	**Centro de Oper**	**2.84**	**319**	*eP*		**Pn**	**13 38 54.7**	**+0.9**
COEG					IAML		13 39 39.4	
	comp=Z,2μm,0.5s							
COEG	**Centro de Oper**	**2.84**	**319**	*eP*		**Pn**	**13 38 54.7**	**+0.9**
COEG					IAML		13 39 39.4	
	comp=Z,2μm,0.5s							
JACO	**JACO, Garabito**	**2.89**	**129**	Pn		**Pn**	**13 38 56.1**	**+1.7**
JACO	**JACO, Garabito**	**2.89**	**129**	*eP*		**Pn**	**13 38 54.5**	**+0.1**
PAVA	**Las Pavas**	**2.95**	**319**	*eP*		**Pn**	**13 38 55.4**	**+0.1**
PAVA					IAML		13 39 43.3	
	comp=Z,1μm,0.5s							
PAVA	**Las Pavas**	**2.95**	**319**	*eP*		**Pn**	**13 38 55.4**	**+0.1**
PAVA					IAML		13 39 43.3	
	comp=Z,1μm,0.5s							
LFRS	**El Faro**	**2.96**	**316**	*eP*		**Pn**	**13 38 55.6**	**+0.1**
LFRS				*eS*		**Sn**	**13 39 28.0**	**-2.0**
LFRS	**El Faro**	**2.96**	**316**	*eP*		**Pn**	**13 38 55.6**	**+0.1**
LFRS				*eS*		**Sn**	**13 39 28.0**	**-2.0**
P5NO	**Presa 5 de nov**	**3.05**	**325**	*eP*		**Pn**	**13 38 57.2**	**+0.6**
P5NO				*eS*		**Sn**	**13 39 30.8**	**-1.2**
BOQS	**Boqueron**	**3.19**	**315**	*eP*		**Pn**	**13 38 59.7**	**+0.9**
BOQS				*eS*		**Sn**	**13 39 35.1**	**-0.7**
BOQS	**Boqueron**	**3.19**	**315**	*eP*		**Pn**	**13 38 59.7**	**+0.9**
BOQS				*eS*		**Sn**	**13 39 35.1**	**-0.7**
PMON	**Piamonte**	**3.20**	**314**	*eP*		**Pn**	**13 38 59.4**	**+0.6**
PMON				*eS*		**Sn**	**13 39 33.5**	**-2.3**
PMON	**Piamonte**	**3.20**	**314**	*eP*		**Pn**	**13 38 59.4**	**+0.6**
PMON				*eS*		**Sn**	**13 39 33.5**	**-2.3**
JAYA	**Jayaque - finc**	**3.26**	**312**	*eP*		**Pn**	**13 38 59.7**	**+0.1**
JAYA				*eS*		**Sn**	**13 39 34.1**	**-3.2**
JAYA					IAML		13 39 46.7	
	comp=Z,961nm,0.2s							
JAYA	**Jayaque - finc**	**3.26**	**312**	*eP*		**Pn**	**13 38 59.7**	**+0.1**
JAYA				*eS*		**Sn**	**13 39 34.1**	**-3.2**
JAYA					IAML		13 39 46.7	
	comp=Z,961nm,0.2s							
LCR2	**La Lucha 2**	**3.37**	**121**	*eP*		**Pn**	**13 39 04.7**	**+3.4**
CPAN	**Cartago Paso A**	**3.43**	**118**	*eP*		Pn	13 38 26.7	-35
RIMA	**Rio Macho**	**3.48**	**119**			**Pn**	**13 39 04.2**	**+1.5**
RIMA	**Rio Macho**	**3.48**	**119**	*eP*		**Pn**	**13 39 04.2**	**+1.5**
CEVE	**Cerro Verde**	**3.50**	**312**	*eP*		**Pn**	**13 39 03.5**	**+0.4**
CEVE					IAML		13 40 05.4	
	comp=Z,1μm,0.5s							
CEVE	**Cerro Verde**	**3.50**	**312**	*eP*		**Pn**	**13 39 03.5**	**+0.4**
CEVE					IAML		13 40 05.4	
	comp=Z,1μm,0.5s							
NUBE	**Las Nubes**	**3.66**	**311**	*eP*		**Pn**	**13 39 04.6**	**-0.7**
NUBE	**Las Nubes**	**3.66**	**311**	*eP*		**Pn**	**13 39 04.6**	**-0.7**
CDM	**Cerro de Muert**	**3.67**	**121**	*eP*		**Pn**	**13 39 07.2**	**+1.6**
CDM				⇑*eS*		**Sn**	**13 39 50.2**	**+2.3**
MRVA	**Moravia de Chi**	**3.82**	**115**	*eP*		**Pn**	**13 39 10.3**	**+2.9**
ESQI	**Esquipulas**	**3.85**	**323**			**Pn**	**13 39 10.8**	**+3.1**
SRBA	**San Rafael, Bu**	**4.18**	**122**	Pn		**Pn**	**13 39 14.3**	**+2.0**
SRBA	**San Rafael, Bu**	**4.18**	**122**	*eP*		**Pn**	**13 39 15.0**	**+2.7**
CMIG	**Matias Romero**	**9.50**	**307**	Pn		**Pn**	**13 40 27.3**	**+2.1**
	baz=210,slow=9.6							
CMIG					Sn	**Sn**	**13 42 14.5**	**+3.8**
	comp=Z,0.5nm,0.3s,baz=109,slow=18,SNR=1.4							
TLIG	**Tlapa**	**12.77**	**300**			**Pn**	**13 41 12.3**	**+2.3**
SDV	**Santo Domingo**	**16.26**	**98**	Pn		**Pn**	**13 41 53.9**	**-2.6**
	comp=Z,1.3nm,0.3s,baz=350,slow=14,SNR=1.8							
SDV					LR	LR	13 48 41.1	
	comp=Z,125nm,20.5s,baz=32,slow=40							
BAUV	**El Baul**	**18.77**	**96**	P		**P**	**13 42 25.0**	**-1.7**
TIGA	**Tifton**	**20.10**	**8**	P		**P**	**13 42 41.6**	**+0.7**
	baz=189							
344A	**Westbrook Farm**	**20.18**	**351**	P		Pn	13 42 43.9	-0.1
ATAH	**Atahualpa**	**20.36**	**155**	LR		LR	13 49 34.7	
	comp=Z,482nm,21.3s,baz=340,slow=34							
833A	**Chaparral WMA,**	**20.41**	**327**	P		**P**	**13 42 44.2**	**-0.1**
833A	**Chaparral WMA,**	**20.41**	**327**	P		**P**	**13 42 45.1**	**+0.7**
	baz=142,SNR=15							
VBMS	**Vicksburg**	**20.89**	**351**	P		**P**	**13 42 50.3**	**+0.8**
	baz=170							
SJG	**San Juan**	**21.15**	**69**	P		**P**	**13 42 49.4**	**-3.0**
	comp=Z,2.7nm,0.2s,baz=254,slow=1.9,SNR=3.5							
SJG					LR	LR	13 50 46.2	
	comp=Z,152nm,19.9s,baz=216,slow=37							
NATX	**Nacogdoches**	**21.40**	**342**	P		**P**	**13 42 56.1**	**+1.1**
	baz=158,SNR=5.6							
LRAL	**Lakeview Retre**	**21.45**	**360**	P		**P**	**13 42 56.0**	**+0.5**
	baz=179,SNR=8.9							
435B	**Jarrell**	**21.59**	**334**	P		**P**	**13 42 57.5**	**+0.5**
	baz=150							
GOGA	**Godfrey**	**22.06**	**8**	P		**P**	**13 43 01.0**	**-0.9**
GOGA					IAmb	IAmb	13 43 05.7	
	comp=Z,9.8nm,0.6s							
GOGA	**Godfrey**	**22.06**	**8**	P		**P**	**13 43 02.5**	**+0.5**
	baz=189,SNR=9.7							
Y49A	**Blount Mountai**	**22.27**	**1**	P		**P**	**13 43 03.2**	**-1.2**
Y49A					IAmb	IAmb	13 43 12.6	
	comp=Z,9.3nm,0.7s							
JCT	**Junction City**	**22.35**	**330**	P		**P**	**13 43 06.2**	**+0.9**
	baz=144,SNR=6.0							
WHTX	**Lake Whitney,**	**22.59**	**336**	P		**P**	**13 43 08.0**	**+0.3**
	baz=152							
X48A	**Hartselle**	**22.86**	**360**	P		**P**	**13 43 09.6**	**-0.9**
OXF	**Oxford**	**23.03**	**355**	P		**P**	**13 43 12.0**	**-0.2**
	baz=173							
TX31	**Lajitas Ar. Si**	**23.63**	**321**	P		**P**	**13 43 19.1**	**+0.8**
TX32	**Lajitas Array**	**23.63**	**321**	P		**P**	**13 43 19.1**	**+0.8**
TX32					IAmb	IAmb	13 43 23.7	
	comp=Z,12nm,0.8s							
**TX

MGMO	**Mountain Grove**	**26.00**	**350**	P	**P**	**13 43 38.9**	**-0.8**
MGMO				IAmb	IAmb	13 43 40.3	
	comp=Z,19nm,1.2s						
MSTX	**Muleshoe**	**26.65**	**330**	P	**P**	**13 43 45.5**	**-0.3**
MSTX	**Muleshoe**	**26.65**	**330**	P	**P**	**13 43 45.8**	**+0.1**
	baz=143,SNR=8.7						
S39A	**Bolivar**	**26.71**	**349**	P	**P**	**13 43 44.9**	**-1.3**
CCM	**Cathedral Cave**	**26.74**	**352**	P	**P**	**13 43 44.8**	**-1.6**
CCM				IAmb	IAmb	13 43 46.5	
	comp=Z,14nm,0.9s						
CCM	**Cathedral Cave**	**26.74**	**352**	P	**P**	**13 43 45.0**	**-1.3**
	baz=170						
AMTX	**Amarillo**	**26.88**	**332**	P	**P**	**13 43 47.2**	**-0.6**
AMTX				IAmb	IAmb	13 43 52.2	
	comp=Z,15nm,0.8s						
AMTX	**Amarillo**	**26.88**	**332**	P	**P**	**13 43 48.5**	**+0.8**
	baz=146						
R40A	**Maddies Statio**	**27.11**	**351**	P	**P**	**13 43 48.2**	**-1.5**
R40A				IAmb	IAmb	13 43 49.5	
	comp=Z,7.8nm,0.7s						
Q54A	**Coxs Mills**	**27.92**	**10**	P	**P**	**13 43 56.4**	**-0.6**
Q54A				IAmb	IAmb	13 43 58.8	
	comp=Z,8.0nm,0.8s						
P49A	**Miami Univ. Ec**	**28.00**	**4**	P	**P**	**13 43 56.9**	**-0.8**
	baz=184						
P52A	**Corning**	**28.36**	**8**	P	**P**	**13 44 00.4**	**-0.4**
	baz=190						
P38A	**Dawn**	**28.63**	**349**	P	**P**	**13 44 02.3**	**-0.9**
O48B	**Farmland**	**28.70**	**3**	P	**P**	**13 44 03.2**	**-0.7**
	baz=183						
KSU1	**Kansas State U**	**28.82**	**344**	P	**P**	**13 44 04.0**	**-0.9**
	baz=160						
ACSO	**Alum Creek Sta**	**28.85**	**6**	P	**P**	**13 44 05.2**	**0.0**
	baz=188						
HDIL	**Hopedale**	**29.03**	**356**	P	**P**	**13 44 05.4**	**-1.4**
	baz=175						
O53A	**New Philadelph**	**29.09**	**9**	P	**P**	**13 44 06.7**	**-0.7**
	baz=191						
ANMO	**Albuquerque**	**29.33**	**326**	P	**P**	**13 44 11.4**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=131,slow=8.0,SNR=7.4						
ANMO				PcP	**PcP**	**13 47 15.9**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=140,slow=1.4,SNR=4.6						
	comp=Z,2.4nm,0.8s						
ANMO	**Albuquerque**	**29.33**	**326**	P	**P**	**13 44 09.7**	**-0.1**
ANMO	**Albuquerque**	**29.33**	**326**	P	**P**	**13 44 10.2**	**+0.4**
	baz=138						
ETMB	**Extrema**	**29.54**	**135**	P	**P**	**13 44 11.9**	**+0.3**
ETMB				IAmb	IAmb	13 44 13.0	
	comp=Z,12nm,0.8s						
T25A	**Trinidad**	**29.99**	**331**	P	**P**	**13 44 16.0**	**+0.4**
	baz=144						
SSPA	**Standing Stone**	**30.11**	**14**	P	**P**	**13 44 16.7**	**+0.3**
	baz=198						
SDCO	**Great Sand Dun**	**30.99**	**331**	P	**P**	**13 44 25.4**	**+0.9**
SDCO				IAmb	IAmb	13 44 27.3	
	comp=Z,3.7nm,0.7s						
SDCO				PcP	**PcP**	**13 47 19.4**	**-0.6**
SDCO	**Great Sand Dun**	**30.99**	**331**	P	**P**	**13 44 25.9**	**+1.3**
	baz=142,SNR=14						
ERPA	**Erie**	**31.12**	**10**	P	**P**	**13 44 25.8**	**+0.6**
	baz=193						
214A	**Organ Pipe Nat**	**31.35**	**315**	P	**P**	**13 44 29.8**	**+2.3**
	baz=124						
JFWS	**Jewell Farm**	**31.44**	**355**	P	**P**	**13 44 27.3**	**-0.8**
	baz=173						
S22A	**4UR Ranch, Cre**	**31.64**	**329**	P	**P**	**13 44 31.0**	**+0.7**
S22A	**4UR Ranch, Cre**	**31.64**	**329**	P	**P**	**13 44 30.9**	**+0.6**
	baz=140,SNR=6.8						
ISCO	**Idaho Springs**	**32.69**	**333**	P	**P**	**13 44 39.8**	**+0.3**
	baz=144						
PV13	**Radium Mtn., P**	**32.98**	**327**	P	**P**	**13 44 44.0**	**+2.0**
PV13				IAmb	IAmb	13 44 52.5	
	comp=Z,6.7nm,0.9s						
ECSD	**EROS Data Cent**	**33.20**	**347**	P	**P**	**13 44 42.1**	**-1.4**
	baz=162,SNR=13						
LPAZ	**La Paz**	**33.29**	**146**	LR	LR	13 58 36.9	
	comp=Z,131nm,18.9s,baz=315,slow=37						
PDMCI	**Parker Dam,Lak**	**33.62**	**317**	P	**P**	**13 44 48.5**	**+1.2**
	baz=126						
SADO	**Sadowa**	**33.84**	**10**	LR	LR	13 58 27.8	
	comp=Z,87nm,21.3s,baz=200,slow=36						
SPMN	**Marine on St.**	**33.99**	**353**	P	**P**	**13 44 49.4**	**-1.0**
	baz=169						
O20A	**White River Ci**	**34.19**	**330**	P	**P**	**13 44 52.9**	**+0.5**
	baz=140,SNR=6.6						
SUSD	**Miller**	**34.43**	**345**	P	**P**	**13 44 53.4**	**-0.8**
	baz=158						
MDP	**Montagnes des**	**34.51**	**98**	LR	LR	14 00 24.2	
	comp=Z,206nm,18.1s,baz=286,slow=39						
SRU	**San Rafael Swe**	**34.59**	**327**	P	**P**	**13 44 55.9**	**0.0**
SRU				IAmb	IAmb	13 45 05.1	
	comp=Z,7.1nm,0.8s						
MTPU	**Mount Pierson**	**34.77**	**324**	P	**P**	**13 44 59.4**	**+1.7**
MTPU				IAmb	IAmb	13 45 02.4	
	comp=Z,5.3nm,0.7s						
PFO	**Pinyon Flats O**	**34.83**	**314**	PcP	**PcP**	**13 47 32.7**	**+2.2**
	comp=Z,3.7nm,0.9s,baz=31,slow=3.6,SNR=5.2						
MSU	**Marysvale**	**35.08**	**324**	P	**P**	**13 45 01.7**	**+1.5**
EDW2	**Edwards Air Fo**	**36.58**	**315**	P	**P**	**13 45 14.5**	**+1.6**
	baz=122						
DUG	**Dugway, Tooele**	**36.60**	**326**	P	**P**	**13 45 15.7**	**+2.6**
DUG	**Dugway, Tooele**	**36.60**	**326**	P	**P**	**13 45 14.9**	**+1.8**
	baz=134						
SPR3	**Spring Creek 3**	**36.66**	**323**	P	**P**	**13 45 15.1**	**+1.3**
SPR3				IAmb	IAmb	13 45 23.7	
	comp=Z,4.4nm,1.0s						
BW06	**Boulder Array**	**36.85**	**332**	P	**P**	**13 45 15.6**	**+0.3**
BW06	**Boulder Array**	**36.85**	**332**	P	**P**	**13 45 15.8**	**+0.5**
	baz=141						
PD31	**Pinedale Array**	**36.85**	**332**	P	**P**	**13 45 14.8**	**-0.4**
PDAR	**Pinedale Array**	**36.85**	**332**	P	**P**	**13 45 15.4**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=129,slow=9.8,SNR=25						
PDAR				PcP	**PcP**	**13 47 37.1**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=145,slow=5.4,SNR=3.9						
	comp=Z,2.2nm,0.6s						
PDAR	**Pinedale Array**	**36.85**	**332**	P	**P**	**13 45 14.9**	**-0.4**
SIV	**San Ignacio**	**37.43**	**136**	LR	LR	14 01 22.8	
	comp=Z,172nm,19.7s,baz=294,slow=38						
AGMN	**Agassiz Nation**	**37.45**	**350**	P	**P**	**13 45 18.4**	**-1.5**
	baz=165,SNR=6.2						
MDND	**Maddock**	**37.77**	**346**	P	**P**	**13 45 22.4**	**-0.3**
	baz=159						
REDW	**Red Top Meadow**	**37.91**	**331**	P	**P**	**13 45 24.8**	**+0.6**
LOHW	**Long Hollow**	**37.99**	**332**	P	**P**	**13 45 25.0**	**+0.1**
LOHW				IAmb	IAmb	13 45 37.9	
	comp=Z,7.2nm,1.3s						
TPAW	**Teton Pass**	**38.06**	**331**	P	**P**	**13 45 24.5**	**-1.1**
TPAW				IAmb	IAmb	13 45 34.8	
	comp=Z,6.6nm,0.9s						
LVC	**Limon Verde**	**38.22**	**152**	LR	LR	14 02 01.5	
	comp=Z,76nm,18.4s,baz=296,slow=38						
RLMT	**Red Lodge**	**38.58**	**334**	P	**P**	**13 45 30.0**	**+0.1**
	baz=143						
NVAR	**Mina Array Bea**	**38.75**	**319**	P	**P**	**13 45 33.2**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=138,slow=7.0,SNR=13						
NVAR				PcP	**PcP**	**13 47 44.2**	**+1.9**
	comp=Z,1.7nm,0.6s,baz=129,slow=3.9,SNR=12						
	comp=Z,1.5nm,0.8s						
LHV	**Little Huntoon**	**38.78**	**319**	P	**P**	**13 45 33.9**	**+2.6**
LHV				IAmb	IAmb	13 45 37.8	
	comp=Z,4.7nm,0.9s						
LHV				PcP	**PcP**	**13 47 44.9**	**+2.8**
DGMT	**Dagmar**	**39.59**	**342**	P	**P**	**13 45 38.6**	**+0.6**
	baz=153						
HLID	**Hailey**	**39.82**	**328**	P	**P**	**13 45 41.8**	**+1.6**
HLID	**Hailey**	**39.82**	**328**	P	**P**	**13 45 40.6**	**+0.4**
	baz=135,SNR=6.4						
PNTR	**Pine Nut**	**39.96**	**319**	P	**P**	**13 45 43.2**	**+1.7**
MCMT	**McKenzie Canyo**	**39.96**	**331**	P	**P**	**13 45 43.3**	**+1.8**
BOZ	**Bozeman (W)**	**39.98**	**333**	P	**P**	**13 45 42.4**	**+0.9**
BOZ	**Bozeman (W)**	**39.98**	**333**	P	**P**	**13 45 41.7**	**+0.2**
	baz=140,SNR=8.3						
LRM	**Limekiln Ridge**	**40.53**	**332**	P	**P**	**13 45 47.0**	**+0.9**
LRM				PcP	**PcP**	**13 47 50.2**	**+2.3**
EGMT	**Eagleton**	**41.13**	**337**	P	**P**	**13 45 51.1**	**+0.2**
	baz=144						
MSO	**Missoula**	**41.97**	**332**	P	**P**	**13 45 57.9**	**+0.2**
	baz=138						
NEW	**Newport**	**44.49**	**331**	P	**P**	**13 46 19.6**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=122,slow=7.5,SNR=3.6						
	comp=Z,1.2nm,0.6s						
SCHQ	**Schefferville**	**46.06**	**16**	P	**P**	**13 46 28.6**	**-1.7**
	comp=Z,2.3nm,0.6s,baz=230,slow=5.9,SNR=5.4						
SCHQ				LR	LR	14 05 30.2	
	comp=Z,141nm,21.7s,baz=240,slow=36						
	comp=Z,2.3nm,0.6s						
F04D	**Rainier, OR**	**46.09**	**325**	P	**P**	**13 46 31.2**	**+0.6**
	baz=126						
BDFB	**Brasilia**	**47.03**	**124**	P	**P**	**13 46 35.8**	**-2.7**
	comp=Z,4.9nm,0.7s,baz=313,slow=6.5,SNR=7.1						
	comp=Z,4.9nm,0.7s						
RCBR	**Riachuelo**	**53.62**	**106**	LR	LR	14 11 45.3	
	comp=Z,180nm,18.2s,baz=85,slow=38						
YKA	**Yellowknife Ar**	**54.67**	**345**	P	**P**	**13 47 34.0**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=137,slow=7.3,SNR=19						
YKA				PcP	**PcP**	**13 48 37.7**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=145,slow=4.3,SNR=6.3						
	comp=Z,3.4nm,0.8s						
TAOE	**Nuku Hiva Isla**	**56.63**	**251**	*e*LR	LR	14 04 32.0	
	comp=Z,78nm,22.1s						
DLBC	**Dease Lake**	**56.99**	**335**	P	**P**	**13 47 52.6**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=107,slow=5.4,SNR=6.6						
	comp=Z,3.3nm,0.8s						
DLBC	**Dease Lake**	**56.99**	**335**	P	**P**	**13 47 52.5**	**+0.5**
	baz=127						
R33M	**Jennings River**	**57.95**	**335**	P	**P**	**13 47 59.6**	**+0.7**
	baz=126						
M29M	**Somme Creek**	**62.69**	**336**	P	**P**	**13 48 30.6**	**-0.6**
	baz=120						
DAWY	**Dawson**	**63.87**	**337**	P	**P**	**13 48 38.0**	**-0.8**
	baz=120						
EPYK	**Eagle Plains**	**64.14**	**340**	P	**P**	**13 48 39.6**	**-1.0**
	baz=124						
INK	**Inuvik**	**64.27**	**343**	P	**P**	**13 48 40.2**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=112,slow=8.2,SNR=5.6						
	comp=Z,2.8nm,0.9s						
INK	**Inuvik**	**64.27**	**343**	P	**P**	**13 48 40.6**	**-0.7**
	baz=128						
L27K	**Beaver Creek,**	**64.34**	**336**	P	**P**	**13 48 41.7**	**-0.3**
	baz=117						
K27K	**Chicken**	**64.89**	**336**	P	**P**	**13 48 46.0**	**+0.6**
	baz=117						
I27K	**Kandik River**	**65.45**	**338**	P	**P**	**13 48 49.1**	**-0.1**
	baz=118						
J26L	**Joseph Creek**	**65.68**	**337**	P	**P**	**13 48 50.9**	**+0.2**
	baz=116						
H27K	**Steamboat Moun**	**65.72**	**339**	P	**P**	**13 48 50.7**	**-0.2**
	baz=119						
PMOR	**Pomariorio Ree**	**65.85**	**248**	*e*T	T	15 00 35.8	
	comp=Z,1.8nm,0.3s						
I26K	**Coal Creek Min**	**65.89**	**338**	P	**P**	**13 48 51.6**	**-0.2**
	baz=117						
J25K	**Salcha River,**	**66.44**	**336**	P	**P**	**13 48 55.8**	**+0.3**
	baz=114						
E27K	**Coleen River**	**66.70**	**341**	P	**P**	**13 48 56.5**	**-0.6**
	baz=119						
G26K	**Porcupine Rive**	**66.86**	**339**	P	**P**	**13 48 57.6**	**-0.5**
	baz=117						
PRP	**Porcupine Dome**	**66.87**	**337**	P	**P**	**13 48 58.0**	**-0.3**
	baz=114						
HDA	**Harding Lake**	**66.98**	**336**	P	**P**	**13 48 58.5**	**-0.4**
	baz=112						
ILAR	**Eielson Array**	**67.10**	**336**	P	**P**	**13 48 58.8**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=147,slow=4.3,SNR=15						
ILAR				PP	**PP**	**13 51 25.6**	**-2.0**
	comp=Z,0.6nm,0.9s,baz=118,slow=8.1,SNR=4.3						
	comp=Z,1.2nm,0.8s						
H25K	**Birch Creek**	**67.29**	**338**	P	**P**	**13 49 01.2**	**+0.4**
	baz=114						
G25K	**Bearman Lake**	**67.61**	**338**	P	**P**	**13 49 02.7**	**0.0**
	baz=114						
F25K	**Christian Rive**	**67.79**	**339**	P	**P**	**13 49 04.0**	**0.0**
	baz=115						
H24K	**Noodor Dome**	**67.89**	**337**	P	**P**	**13 49 04.6**	**-0.1**
	baz=112						
G24K	**Hadweenzic Riv**	**68.08**	**338**	P	**P**	**13 49 05.6**	**-0.2**
	baz=113						
I23K	**Minto, Yukon-K**	**68.22**	**336**	P	**P**	**13 49 06.5**	**-0.1**
	baz=110						
PPT2	**Papeete2**	**68.26**	**246**	*e*LR	LR	14 09 55.2	
	comp=Z,97nm,24.8s						
Q19K	**Cape Douglas,**	**68.27**	**329**	P	**P**	**13 49 06.4**	**-0.8**
	baz=104						
BPAW	**Bear Paw Mtn.**	**68.52**	**335**	P	**P**	**13 49 07.9**	**-0.7**
	baz=108						
H23K	**Yukon River**	**68.53**	**337**	P	**P**	**13 49 08.7**	**+0.1**
	baz=110						
MLY	**Manley**	**68.72**	**336**	P	**P**	**13 49 09.5**	**-0.4**
	baz=109						
CAST	**Castle Rocks**	**68.77**	**334**	P	**P**	**13 49 09.3**	**-0.9**
	baz=107						
D25K	**Kavik River**	**68.78**	**341**	P	**P**	**13 49 09.6**	**-0.5**
	baz=115						
G23K	**Bananza Creek**	**69.02**	**338**	P	**P**	**13 49 12.1**	**+0.4**
	baz=110						
H22K	**Ishtalitna Cre**	**69.26**	**337**	P	**P**	**13 49 12.9**	**-0.2**
	baz=109						
COLD	**Coldfoot**	**69.27**	**338**	P	**P**	**13 49 13.7**	**+0.5**
	baz=110						
L20K	**Farewell, AK**	**69.29**	**333**	P	**P**	**13 49 12.9**	**-0.6**
	baz=105						
R17K	**Ugashik Creek**	**69.39**	**327**	P	**P**	**13 49 14.8**	**+0.6**
	baz=101						
J20K	**Nowata River**	**69.87**	**335**	P	**P**	**13 49 16.4**	**-0.5**
	baz=106						
D23K	**Nanushuk River**	**70.06**	**340**	P	**P**	**13 49 18.2**	**+0.2**
	baz=110						
F22K	**John River**	**70.09**	**338**	P	**P**	**13 49 18.2**	**0.0**
	baz=109						
E22K	**Anaktuvuk Pass**	**70.16**	**339**	P	**P**	**13 49 18.5**	**-0.2**
	baz=109						
O17K	**Koliganek Bris**	**70.18**	**330**	P	**P**	**13 49 19.6**	**+0.7**
	baz=101						
TBI	**Tubuai**	**70.26**	**240**	*e*LR	LR	14 10 50.3	
	comp=Z,103nm,26.5s						
G21K	**Allakaket**	**70.27**	**337**	P	**P**	**13 49 19.6**	**+0.2**
	baz=107						
F21K	**Alatna River**	**70.48**	**338**	P	**P**	**13 49 21.2**	**+0.5**
	baz=107						
ESDC	**Sonseca Array**	**77.39**	**52**	P	**P**	**13 49 59.8**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=281,slow=5.6,SNR=4.9						
	comp=Z,0.5nm,0.7s						
MA2	**Mapaz**	**95.52**	**334**	LR	LR	14 40 22.9	
	comp=Z,162nm,18.4s,baz=209,slow=39						
MATP	**Matopo**	**117.62**	**107**	PKP	**PKPdf**	**13 56 53.1**	**0.0**
	comp=Z,1.4nm,0.6s,baz=347,slow=2.2,SNR=4.8						
KSRS	**Korea Array**	**121.35**	**328**	PKP	**PKiKP**	**13 57 00.6**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=8.4,slow=1.6,SNR=22						
LZH	**Lanzhou**	**131.60**	**348**	*e*PKP	**PKiKP**	**13 57 22.9**	**+2.3**
LZH				pPKP	pPKPdf	13 57 29.0	-4.3
ASAR	**Alice Springs**	**139.36**	**247**	PKhKP	PKPpre	13 57 28.2	
	comp=Z,0.4nm,0.7s,baz=119,slow=2.7,SNR=4.9						
WRA	**Warramunga Arr**	**139.47**	**253**	PKP	**PKPdf**	**13 57 34.6**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=91,slow=2.1,SNR=18						
CMAR	**Chiang Mai Arr**	**149.69**	**349**	PKP	**PKPdf**	**13 57 53.1**	**+0.9**
	comp=Z,3.4nm,0.7s,baz=311,slow=2.5,SNR=10						
CMAR				PKPbc	**PKiKP**	**13 57 57.6**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=18,slow=8.0,SNR=8.5						

*MDD **13** 13:49:50.7±0.7,35°.52N×3°.74W,h13km±6km,mb_Lg2.2/8, Error ellipse: s-maj=4.1km s-min=3.2km az=177.0*
*CNRM **13** 13:49:50.3,35°.47N×3°.65W,h16km,ml2.6*
*SFS **13** 13:49:51.0,35°.51N×3°.72W,ML2.1,ALBORAN SUR*
ISC 13 13:49:47.8±1.2,35°.59N±0°.02×3°.70W±0°.03,h4km±10km, n27,σ1°38/48,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.42**	**208**	P	**Pb**	**13 49 57.4**	**-0.4**
PALE				S	**Sg**	**13 50 02.0**	**+0.7**
WMELI	**Melilla**	**0.67**	**114**	P	**Pn**	**13 50 03.6**	**-0.5**
WMELI				S	**Sb**	**13 50 12.5**	**+0.7**
EMEL	**Melilla**	**0.67**	**115**	Pg	**Pn**	**13 50 03.4**	**-0.8**
EMEL				Sg	**Sb**	**13 50 12.6**	**+0.7**
CHAS	**Isla Isabel II**	**1.11**	**111**	P	**Pb**	**13 50 09.7**	**0.0**
CHAS				S	**Sg**	**13 50 24.1**	**+0.4**
ELGU	**Los Guajares,**	**1.28**	**3**	Pn	**Pg**	**13 50 12.3**	**-0.1**
ELGU				Sn	**Sb**	**13 50 29.6**	**+0.2**
ELGU				*i* Vmb_Lg		13 50 33.4	
EMIJ	**Mijas**	**1.30**	**319**	Pn	**Pn**	**13 50 12.7**	**-0.2**
EMIJ				Sn	**Sg**	**13 50 29.1**	**-0.7**
EMIJ				*i* Vmb_Lg		13 50 34.7	
TAF	**Taforalt**	**1.31**	**126**	P	**Pg**	**13 50 12.7**	**-0.2**
TAF				S	**Sg**	**13 50 27.9**	**-1.9**
CHEFC	**Chefchaouen**	**1.42**	**251**	P	**Pb**	**13 50 15.6**	**+0.6**
EBER	**Berja**	**1.46**	**26**	Pn	**Pn**	**13 50 15.6**	**+0.4**
EBER				Sn	**Sg**	**13 50 34.7**	**-0.1**
EBER				*i* Vmb_Lg		13 50 55.3	
EGOR	**Sierra Gorda,**	**1.55**	**348**	Pn	**Pg**	**13 50 17.3**	**-0.3**
EGOR				Sn	**Sn**	**13 50 36.5**	**-0.6**
EGOR				*i* Vmb_Lg		13 50 42.1	
JBK	**JBK**	**1.56**	**143**	P	**Pn**	**13 50 16.0**	**-0.5**
JBK				S	**Sn**	**13 50 34.8**	**-2.5**
EQUE	**Quentar**	**1.63**	**7**	Pn	**Pg**	**13 50 19.3**	**+0.3**
EQUE				Sn	**Sn**	**13 50 38.2**	**-0.7**
ENIJ	**Nijar**	**1.83**	**41**	Sn	**Sn**	**13 50 41.9**	**-2.0**
LCRM	**LCR**	**2.12**	**207**	P	**Pg**	**13 50 28.7**	**+0.2**
LCRM				S	**Sn**	**13 50 51.5**	**+0.2**
EQES	**Quesada**	**2.27**	**13**	Pn	**Pb**	**13 50 29.5**	**+0.1**
EQES				Sn	**Sb**	**13 50 58.2**	**+0.3**
EQES				*i* Vmb_Lg		13 51 00.3	
EADA	**Adamuz**	**2.67**	**345**	Pn	**Pn**	**13 50 33.8**	**+2.2**
EADA				Sn	**Sn**	**13 51 06.4**	**+1.9**
EADA				*i* Vmb_Lg		13 51 12.2	
ECAB	**El Cabril**	**2.84**	**331**	Pn	**Pb**	**13 50 36.6**	**-2.5**
ECAB				Sn	**Sn**	**13 51 08.9**	**+0.2**
ECAB				*i* Vmb_Lg		13 51 21.2	
MD31	**MD31**	**2.85**	**198**	P	**Pn**	**13 50 36.0**	**+1.8**
MDT	**Midelt**	**2.87**	**195**	P	**Pn**	**13 50 35.9**	**+1.4**
EMUR	**La Murta**	**3.00**	**41**	Pn	**Pn**	**13 50 38.1**	**+2.0**
EMUR				Sn	**Sn**	**13 51 12.1**	**-0.4**
EMIN	**Mina Concepcio**	**3.23**	**313**	Pn	**Pn**	**13 50 38.1**	**-1.3**
EMIN				Sn	**Sn**	**13 51 17.6**	**-0.7**
ZHG	**ZHG**	**3.23**	**229**	P	**Pn**	**13 50 41.2**	**+1.8**
ETOB	**Tobarra**	**3.50**	**29**	Pn	**Pn**	**13 50 46.1**	**+2.9**
ETOB				Sn	**Sn**	**13 51 27.6**	**+2.4**
EGRO	**El Granado**	**3.61**	**304**	Pn	**Pn**	**13 50 44.5**	**-0.1**
EGRO				Sn	**Sn**	**13 51 25.6**	**-2.1**
PVAQ	**Vaqueiros**	**3.71**	**300**	P	**Pn**	**13 50 46.9**	**+1.0**
PAB	**San Pablo**	**3.98**	**353**	Pn	**Pn**	**13 50 51.8**	**+2.0**
PAB				Sn	**Sn**	**13 51 34.7**	**-2.3**
EBAD	**Badajoz**	**4.12**	**321**	Pn	**Pn**	**13 50 52.4**	**+0.8**
EBAD				Sn	**Sn**	**13 51 38.0**	**-2.3**
EBAD				*i* Vmb_Lg		13 51 42.4	

*IDC **13** 13:53:25.9±1.5,4°.37N×62°.52E,h0km,mb3.7/6, mbtmp3.7/6,MS3.6/3,Error ellipse: s-maj=53.0km s-min=26.3km az=45.0*
ISC 13 13:53:29.5±1.6,4°.4N±0°.3×62°.5E±0°.3,h22km,n9,σ0°29/6, mb3.7/6,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**18.29**	**80**	LR	LR	14 02 54.2	
	comp=Z,106nm,20.5s,baz=311,slow=31						
KMBO	**Kilima Mbogo**	**25.85**	**258**	LR	LR	14 07 49.2	
	comp=Z,40nm,21.3s,baz=90,slow=33						
BRTR	**Keskin Array B**	**43.80**	**327**	P	**P**	**14 01 34.3**	**+0.3**
	0.8nm,0.8s,baz=158,slow=13,SNR=4.5						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**45.56**	**19**	P	**P**	**14 01 47.7**	**-0.1**
	0.4nm,0.7s,baz=198,slow=7.6,SNR=4.0						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**52.64**	**16**	P	**P**	**14 02 41.7**	**-0.1**
	0.9nm,0.7s,baz=224,slow=4.1,SNR=4.2						
	0.9nm,0.7s						
ESDC	**Sonseca Array**	**69.19**	**311**	P	**P**	**14 04 34.5**	**-0.2**
	0.7nm,0.8s,baz=94,slow=5.2,SNR=5.7						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**74.51**	**112**	P	**P**	**14 05 07.3**	**+0.3**
	1.1nm,1.0s,baz=286,slow=5.0,SNR=5.0						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**74.83**	**116**	P	**P**	**14 05 08.8**	**-0.1**
	0.7nm,1.0s,baz=300,slow=4.8,SNR=4.0						
	0.7nm,1.0s						
YAK	**Yakutsk**	**75.53**	**27**	LR	LR	14 39 20.7	
	comp=Z,198nm,18.0s,baz=264,slow=36						

*IDC **13** 14:04:58.5±0.3,11°.54N×124°.41E,h0km,mb4.8/47, mbtmp4.8/48,ML4.0/1,MS4.2/59,Error ellipse: s-maj=12.7km s-min=8.6km az=75.0*
*MAN **13** 14:04:59,11°.59N×124°.34E,h5km,Ms5.0*
*BJI **13** 14:05:00.6±0.0,11°.39N×124°.65E,h38km,mb4.7/72, mB5.1/63,Ms4.8/80,Ms7 4.5/73*
*MOS **13** 14:05:02.6±0.8,11°.54N×124°.43E,h39km,mb5.3/58, MS4.2/9,Error ellipse: s-maj=10.0km s-min=4.7km az=112.4*
*NEIC **13** 14:05:04.2±1.4,11°.54N±0°.07×124°.49E±0°.09,h30km±5km, mb5.1/75,Error ellipse: s-maj=13.3km s-min=10.0km az=89.0*
*GCMT **13** 14:05:04.2±0.1,11°.62N±0°.01×124°.40E±0°.01,h12km, MW5.1/133,Moment Tensor Solution. s77,c98; s133,c219; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.15±.09; Mθθ0.88±.08; Mϕϕ-6.03±.08; Mrθ-0.12±.28; Mθϕ1.07±.07; Mϕr-0.59±.22; Best double couple: M₀5.70400×10¹⁶ NP1,ϕs174.00000°,δ48.00000°, λ94.00000°. NP2,ϕs348.00000°,δ42.00000°,λ86.00000°. Principal axes: T 5.1890, Plg86.0000°, Azm126.0000°; N 1.0270, Plg3.0000°, Azm352.0000°; P -6.2200, Plg3.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **13** 14:05:05.6±1.1,12°N±8°×12°4E±°,h55km±8km,M4.8/33, mb5.0/33,mB5.3/26,Mw(mB)4.7/26,MwMwp4.8/3, Mwp5.1/3*
**ISC 13 14:05:04.1±0.4,11°.54N±0°.02×124°.38E±0°.03,h34km±1km, h34km:pP-P,n629,σ1

PCPH	**Palayan**	**5.12 322**	⇑	*e*	P		Pn	14 06 23.2 +4.9
DDMP	**Don Marcelino,**	**5.56 166**	⇑	*e*	P		**Pn**	**14 06 27.8 +3.3**
DDMP				*e*	S		Sb	14 07 59.1 +12
PALP	**Palanan**	**5.81 341**	⇓	*e*	P		**Pn**	**14 06 28.9 +1.0**
CAUP	**Cauayan**	**5.92 335**	⇑	*e*	P		**Pn**	**14 06 30.6 +1.2**
SAMP	**Sagada Mountai**	**6.46 329**	⇓	*e*	P		**Pn**	**14 06 36.5 -0.3**
MYLDM	**Lahad Datu**	**8.59 223**			Pn		**Pn**	**14 07 07.6 +1.5**
KKM	**Kota Kinabalu**	**9.74 237**			Pn		**Pn**	**14 07 23.5 +1.5**
GTOI	**Gorontalo**	**10.92 187**			P		**Pn**	**14 07 37.9 -0.2**
	273nm31nm,1.1s							
TOLI2	**Tolitoli**	**10.96 199**			P		Pn	14 07 47.8 +9.2
TNTI	**Ternate**	**11.10 164**					**Pn**	**14 07 39.2 -1.3**
TNTI	**Ternate**	**11.10 164**			P		**Pn**	**14 07 40.7 +0.1**
	2µm84nm,1.2s							
MPSI	**Mapaga**	**11.99 202**			P		**Pn**	**14 07 55.1 +2.4**
	395nm16nm,0.9s							
YULB	**Yu-li**	**12.15 346**			Pn		**Pn**	**14 07 56.1 +1.3**
TPUB	**Ta-pu**	**12.23 343**			Pn		**Pn**	**14 07 56.9 +1.0**
TPUB	**Ta-pu**	**12.23 343**			P		Pn	14 08 01.3 +5.4
LUWI	**Luwuk**	**12.60 187**			P		**Pn**	**14 08 03.1 +2.0**
	3µm143nm,1.3s							
LUWI	**Luwuk**	**12.60 187**			P		**P**	**14 08 09.1 -3.0**
APSI	**Ampana**	**12.67 193**			P		**Pn**	**14 08 04.3 +2.4**
	1µm66nm,1.2s							
YOJ	**Yonaguni jima**	**12.92 354**			Pn		**Pn**	**14 08 05.3 0.0**
YOJ	**Yonaguni jima**	**12.92 354**			P		**Pn**	**14 08 05.3 0.0**
YHNB	**Yeheng**	**13.37 348**			P		**P**	**14 08 19.0 -1.6**
SANI	**Sanana**	**13.60 173**			P		**Pn**	**14 08 14.5 -0.2**
	1µm103nm,1.6s							
SIJI	**Sorong**	**14.10 151**			LR		LR	14 13 39.6
	comp=Z,860nm,21.6s,baz=324,slow=37							
QZH	**Quanzhou**	**14.41 338**	⇓	*i*	P		**Pn**	**14 08 27.3 +1.5**
QZH					sP		P	14 08 40.4 +8.2
QZH					S		**Sn**	**14 11 07.0 +2.5**
QZH					pmax		pmax	
	comp=Z,270nm,6.4s							
QZH					LR		LR	
	comp=N,910nm,16.7s							
QZH					LR		LR	
	comp=E,620nm,16.8s							
QZH					LR		LR	
	comp=Z,1µm,15.3s							
NLAI	**Namlea**	**14.93 169**			P		**Pn**	**14 08 33.9 +1.1**
	2µm58nm,1.1s							
SBUM	**Sibu**	**15.07 234**			P		**P**	**14 08 42.0 +2.5**
TTSI	**Tana Toraja**	**15.19 198**			P		**Pn**	**14 08 37.9 +1.7**
	2µm142nm,0.9s							
MSAI	**Masohi**	**15.47 163**			P		**P**	**14 08 42.1 -1.9**
	34nm,1.1s							
MTKI	**Muara Teweh, K**	**15.58 218**			P		**Pn**	**14 08 42.3 +1.0**
	1µm3µm114nm,0.9s							
JOW	**Kunigami**	**15.65 13**					**P**	**14 08 44.0 -1.9**
JOW					IAmb		IAmb	14 08 51.1
	comp=Z,137nm,1.4s							
JOW	**Kunigami**	**15.65 13**			P		**P**	**14 08 47.9 +2.0**
QIZ	**Qiongzhong**	**15.87 300**			P		**P**	**14 08 48.0 -0.5**
QIZ					S		**S**	**14 11 47.3 -6.2**
QIZ					pmax		pmax	
	comp=Z,44nm,1.9s							
QIZ					pmax		pmax	
	comp=Z,520nm,5.6s							
QIZ					LR		LR	
	comp=Z,2µm,13.9s							
QIZ					LR		LR	
	comp=Z,1µm,19.9s							
QIZ					LR		LR	
	comp=Z,2µm,22.3s							
SPSI	**Sidrap Palu**	**16.07 197**			P		**P**	**14 08 49.5 -1.2**
	comp=Z,2µmcomp=Z,100nm,0.8s							
KAPI	**Kappang**	**17.08 196**			P		**Pn**	**14 09 00.2 -0.2**
	comp=Z,0.5nm,0.3s,baz=37,slow=6.7,SNR=13							
	comp=Z,57nm,0.9s							
KAPI	**Kappang**	**17.08 196**		*i*	P		**Pn**	**14 08 59.8 -0.6**
KAPI	**Kappang**	**17.08 196**			P		**P**	**14 09 03.1 +1.2**
STKI	**Sintang**	**17.16 229**			P		**P**	**14 09 02.4 -0.3**
	comp=Z,55nm,1.4s							
KSM	**Kuching**	**17.18 235**			P		**P**	**14 09 05.4 +2.4**
BKSI	**Bulukumba**	**17.28 194**			P		**Pn**	**14 09 02.8 -0.1**
	comp=Z,753nmcomp=Z,44nm,1.0s							
BBKI	**Banjar Baru**	**17.67 213**			P		**P**	**14 09 08.6 +0.2**
	comp=Z,2µmcomp=Z,63nm,1.7s							
SRPI	**Serui, Papua**	**17.79 138**			P		**Pn**	**14 09 09.2 0.0**
	comp=Z,90nm,0.9s							
UBPT	**Khong Chiam**	**18.77 284**					**Pn**	**14 09 21.7 +0.6**
UBPT					IAmb		IAmb	14 09 22.8
	comp=Z,94nm,0.9s							
PBKI	**Pangkalan Bun**	**18.98 223**			P		**Pn**	**14 09 23.7 0.0**
	comp=Z,7µmcomp=Z,160nm,1.6s							
SMPI	**Sarmi**	**19.59 132**			P		**P**	**14 09 30.0 +0.5**
	comp=Z,2µmcomp=Z,95nm,1.5s							
SSE	**Sheshan**	**19.68 352**			P		**Pn**	**14 09 32.3 +0.3**
SSE					S		**Sn**	**14 13 14.0 +1.9**
SSE					pmax		pmax	
	comp=Z,29nm,1.1s							
SSE					pmax		pmax	
	comp=Z,160nm,3.5s							
SSE					LR		LR	
	comp=Z,290nm,16.9s							
SSE					LR		LR	
	comp=Z,750nm,16.2s							
CNSH	**ChangSha**	**19.73 329**		⇑	P		**P**	**14 09 31.1 +0.2**
CNSH					S		**Sn**	**14 13 13.5 +0.3**
CNSH					pmax		pmax	
	comp=Z,450nm,3.9s							
CNSH					LR		LR	
	comp=Z,1µm,20.2s							
CNSH					LR		LR	
	comp=Z,2µm,19.0s							
CNSH					LR		LR	
	comp=Z,1µm,18.5s							
GUMO	**Guam**	**20.10 82**			LR		LR	14 15 33.6
	comp=Z,1µm,20.8s,baz=278,slow=32							
MMRI	**Maumere**	**20.16 186**			P		**P**	**14 09 36.0 +0.3**
	comp=Z,2µmcomp=Z,150nm,1.4s							
MMRI	**Maumere**	**20.16 186**			P		Pn	14 09 37.6 -0.1
EDFI	**Ende, Flores**	**20.34 188**			P		**P**	**14 09 37.8 +0.1**
	comp=Z,411nmcomp=Z,21nm,0.9s							
JSU	**Suzuyama**	**20.64 15**			P		**P**	**14 09 39.2 -1.7**
JSU					IAmb		IAmb	14 09 56.8
	comp=Z,104nm,1.3s							
NJ2	**Nanjing**	**21.04 347**	⇑	*i*	P		**P**	**14 09 45.6 +0.5**
NJ2					sS		**sS**	**14 13 51.4 -0.5**
NJ2					pmax		pmax	
	comp=Z,30nm,1.6s							
NJ2					pmax		pmax	
	comp=Z,460nm,6.2s							
NJ2					LR		LR	
	comp=Z,740nm,10.2s							
NJ2					LR		LR	
	comp=Z,1µm,9.4s							
NJ2					LR		LR	
	comp=Z,1µm,17.0s							
GENI	**Genyem**	**21.06 131**			P		**P**	**14 09 50.9 +5.4**
WHN	**Wuhan**	**21.07 335**		⇑	P		**P**	**14 09 45.1 -0.4**
WHN					pmax		pmax	
	comp=Z,1µm,3.6s							
WHN					LR		LR	
	comp=Z,2µm,12.5s							
WHN					LR		LR	
	comp=Z,1µm,12.3s							
WHN					LR		LR	
	comp=Z,2µm,15.2s							
PLAI	**Plampang**	**21.28 198**			P		**P**	**14 09 47.9 +0.1**
	comp=Z,1µmcomp=Z,133nm,1.2s							
PLAI	**Plampang**	**21.28 198**			P		**P**	**14 09 51.8 +4.0**
TWSI	**Taliwang, Sumb**	**21.48 201**			P		**P**	**14 09 50.1 +0.1**
	comp=Z,56nm,1.3s							
BATI	**Baumata**	**21.62 182**			P		**P**	**14 09 51.7 +0.3**
	comp=Z,115nm,0.9s,baz=21,slow=5.3,SNR=9.3							
BATI					LR		LR	14 20 41.9
	comp=Z,565nm,18.0s,baz=352,slow=44							
	comp=Z,115nm,0.9s							
BATI	**Baumata**	**21.62 182**			P		**P**	**14 09 51.8 +0.3**
	comp=Z,2µmcomp=Z,178nm,1.1s							
TPI	**Tanjungpandan**	**21.88 231**			P		**P**	**14 09 54.3 +0.1**
	comp=Z,686nmcomp=Z,76nm,1.2s							
BLJI	**Banyuglugur**	**21.96 210**			P		**P**	**14 09 54.5 -0.6**
	comp=Z,62nm,0.9s							
JAGI	**Jajag, Banyuwa**	**22.33 208**			P		**P**	**14 09 59.5 +0.4**
JAGI	**Jajag, Banyuwa**	**22.33 208**			P		**P**	**14 09 59.2 +0.1**
	comp=Z,3µmcomp=Z,210nm,1.6s							
JAGI	**Jajag, Banyuwa**	**22.33 208**			P		**P**	**14 10 01.6 +2.5**
GYA	**Guiyang**	**22.34 314**		⇑	P		**P**	**14 10 00.8 +1.6**
GYA					sP		sP	14 10 17.3 +4.7
GYA					S		**S**	**14 14 06.8 +3.8**
GYA					pmax		pmax	
	comp=Z,14nm,1.5s							
GYA					pmax		pmax	
	comp=Z,300nm,4.2s							
GYA					LR		LR	
	comp=Z,840nm,13.1s							
GYA					LR		LR	
	comp=Z,1µm,14.1s							
GYA					LR		LR	
	comp=Z,1µm,13.5s							
GMJI	**Gumukmas**	**22.49 209**			P		**P**	**14 10 01.0 +0.2**
	comp=Z,136nm,1.1s							
MYKOM	**Kota Tinggi**	**22.55 246**			P		**P**	**14 10 01.6 0.0**
MYKOM					IAmb		IAmb	14 10 04.5
	comp=Z,38nm,0.8s							
PPBI	**Pangkal Pinang**	**22.68 234**			P		**P**	**14 10 01.4 -1.5**
	comp=Z,60nm,1.2s							
NGJI	**Ngawi**	**22.76 215**			P		**P**	**14 10 04.1 +0.4**
	comp=Z,158nm,1.3s							
JCJ	**Chichijima**	**22.79 45**			P		**P**	**14 10 03.3 -0.6**
	comp=Z,94nm,0.9s,baz=180,slow=3.0,SNR=6.8							
JCJ					LR		LR	14 17 02.4
	comp=Z,810nm,21.5s,baz=238,slow=32							
	comp=Z,94nm,0.9s							
JCJ	**Chichijima**	**22.79 45**			P		**P**	**14 10 05.7 +1.8**
	comp=Z,202nm,1.1s							
DSRI	**Dabo**	**23.02 240**			P		**P**	**14 10 06.0 -0.4**
JMN	**Monobe**	**23.73 20**			P		**P**	**14 10 13.5 +0.2**
JMN					IAmb		IAmb	14 10 23.1
	comp=Z,83nm,1.3s							
NAWB	**Namwon**	**23.93 6**			P		**P**	**14 10 15.4 +0.4**
NAWB					IAmb		IAmb	14 10 16.4
	comp=Z,76nm,1.0s							
IPM	**Ipoh**	**24.16 255**			P		**P**	**14 10 17.1 -0.3**
IPM					IAmb		IAmb	14 10 18.0
	comp=Z,83nm,1.0s							
IPM	**Ipoh**	**24.16 255**			P		**P**	**14 10 17.2 -0.2**
KULM	**Kulim**	**24.27 257**			P		**P**	**14 10 17.6 -0.9**
KULM					IAmb		IAmb	14 10 34.2
	comp=Z,109nm,1.4s							
KMI	**Kunming**	**24.54 306**		⇑	P		**P**	**14 10 21.5 +0.5**
KMI					pP		sP	14 10 32.9 -1.9
KMI					S		**S**	**14 14 37.3 -2.5**
KMI					pmax		pmax	
	comp=Z,18nm,1.4s							
KMI					pmax		pmax	
	comp=Z,330nm,4.6s							
KMI					LR		LR	
	comp=Z,740nm,15.1s							
KMI					LR		LR	
	comp=Z,730nm,23.3s							
KMI					LR		LR	
	comp=Z,1µm,19.9s							
CRAI	**Chiangrai**	**24.63 294**			P		**P**	**14 10 19.5 -2.2**
LEM	**Lembang**	**24.72 223**			P		**P**	**14 10 21.9 -0.8**
	comp=Z,26nm,0.7s,baz=349,slow=18,SNR=5.0							
LEM					LR		LR	14 20 58.7
	comp=Z,1µm,20.6s,baz=9.0,slow=39							
	comp=Z,26nm,0.7s							
TJN	**Taejon**	**24.87 6**			P		**P**	**14 10 23.3 -0.3**
TJN	**Taejon**	**24.87 6**		*ce*	P		**P**	**14 10 23.1 -0.5**
TJN	**Taejon**	**24.87 6**			P		**P**	**14 10 23.8 +0.2**
MTN	**Manton Dam**	**25.14 164**			P		**P**	**14 10 25.9 -0.3**
MTN					IAmb		IAmb	14 10 47.4
	comp=Z,50nm,1.1s							
MTN	**Manton Dam**	**25.14 164**			P		**P**	**14 10 26.2 0.0**
LYN	**LuoYang**	**25.35 337**		⇑	P		**P**	**14 10 27.4 -0.6**
LYN					pP		pP	14 10 36.3 -1.3
LYN					S		**S**	**14 14 54.8 +2.6**
LYN					sS		sS	14 15 11.3 +3.2
LYN					SS		**SnSn**	**14 15 59.5 +14**
LYN					pmax		pmax	
	comp=Z,30nm,1.8s							
LYN					pmax		pmax	
	comp=Z,380nm,4.1s							
LYN					LR		LR	
	comp=Z,650nm,21.2s							
LYN					LR		LR	
	comp=Z,880nm,20.8s							
LYN					LR		LR	
	comp=Z,520nm,20.1s							
KDU	**Kakadu**	**25.38 161**			P		**P**	**14 10 28.1 -0.2**
TIA	**Tai'an**	**25.42 346**		⇑	P		**P**	**14 10 28.3 -0.3**
TIA					pmax		pmax	
	comp=Z,18nm,1.1s							
TIA					pmax		pmax	
	comp=Z,260nm,3.8s							
TIA					LR		LR	
	comp=Z,710nm,15.9s							
TIA					LR		LR	
	comp=Z,560nm,12.7s							
TIA					LR		LR	
	comp=Z,650nm,19.0s							
KSCHJ	**Chungju**	**25.43 7**			P		**P**	**14 10 28.0 -0.7**
CMAR	**Chiang Mai Arr**	**25.50 289**			P		**P**	**14 10 30.3 +0.8**
	comp=Z,6.8nm,0.8s,baz=98,slow=7.8,SNR=32							
CMAR					LR		LR	14 20 59.0
	comp=Z,589nm,18.8s,baz=105,slow=38							
	comp=Z,6.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**25.50 289**		*i*	P		**P**	**14 10 30.5 +1.0**
CMAR					pmax		pmax	
	comp=Z,7.0nm,0.9s							
CHTO	**Chiang Mai**	**25.57 290**			P		**P**	**14 10 30.7 +0.5**
JHJ	**Hachijo jima 2**	**25.71 31**			LR		LR	14 19 37.4
	comp=Z,496nm,19.3s,baz=246,slow=34							
BKNI	**Bangkinang**	**25.72 246**			P		**P**	**14 10 31.8 +0.2**
KSRS	**Korea Array**	**26.00 6**			P		**P**	**14 10 33.5 -0.2**
	comp=Z,5.9nm,0.8s,baz=186,slow=10,SNR=39							
KSRS					LR		LR	14 19 47.2
	comp=Z,426nm,21.6s,baz=185,slow=34							
	comp=Z,5.9nm,0.8s							
PZH	**PanZhiHua**	**26.00 308**			P		**P**	**14 10 34.4 +0.2**
PZH					S		**S**	**14 14 57.5 -5.5**
PZH					sS		**sS**	**14 15 22.6 +3.6**
PZH					pmax		pmax	
	comp=Z,20nm,1.2s							
PZH					pmax		pmax	
	comp=Z,160nm,7.3s							
PZH					LR		LR	
	comp=Z,3µm,18.8s							
PZH					LR		LR	
	comp=Z,1µm,19.8s							
PZH					LR		LR	
	comp=Z,3µm,23.0s							
KS19	**Wonju Array Si**	**26.04 6**			P		**P**	**14 10 34.8 +0.6**
INU	**Inuyama**	**26.33 24**			P		**P**	**14 10 36.0 -0.9**
INU					IAmb		IAmb	14 10 39.7
	comp=Z,45nm,1.0s							
INU	**Inuyama**	**26.33 24**			P		**P**	**14 10 36.9 0.0**
XAN	**Xi'an**	**26.47 330**		⇑	P		**P**	**14 10 37.0 -1.3**
XAN					pP		pP	14 10 46.4 -1.5
XAN					sP		sP	14 10 51.0 -1.0
XAN					PP		PP	14 11 22.9 -16
XAN					S		**S**	**14 15 10.4 +0.3**
XAN					sS		sS	14 15 27.4 +1.3
XAN					PcS		**PcS**	**14 17 37.3 -6.8**
XAN					pmax		pmax	
	comp=Z,55nm,1.2s							
XAN					pmax		pmax	
	comp=Z,260nm,4.8s							
XAN					LR		LR	
	comp=Z,980nm,15.3s							
XAN					LR		LR	
	comp=Z,1µm,15.3s							
XAN					LR		LR	
	comp=Z,1µm,15.6s							
PSI	**Prapat**	**26.69 253**			P		**P**	**14 10 40.3 -0.2**
	comp=Z,23nm,1.0s,baz=88,slow=4.1,SNR=9.8							
PSI					LR		LR	14 22 01.0
	comp=Z,1µm,19.1s,baz=98,slow=38							
	comp=Z,23nm,1.0s							
CD2	**Chengdu**	**27.13 318**			P		**P**	**14 10 45.6 +1.4**
CD2					pP		sP	14 10 56.0 -2.0
CD2					sP		pP	14 11 00.3 +6.4
CD2					S		**S**	**14 15 22.5 +1.9**
CD2					sS		sS	14 15 41.0 +4.4
CD2					pmax		pmax	
	comp=Z,40nm,0.9s							
CD2					LR		LR	
	comp=Z,2µm,13.7s							
CD2					LR		LR	
	comp=Z,2µm,14.7s							
CD2					LR		LR	
	comp=Z,2µm,12.7s							
HNS	**HongShan**	**27.17 343**		⇑	P		**P**	**14 10 44.3 -0.1**
HNS					pmax		pmax	
	comp=Z,27nm,1.3s							
HNS					LR		LR	
	comp=Z,470nm,16.5s							
HNS					LR		LR	
	comp=Z,1µm,15.5s							
HNS					LR		LR	
	comp=Z,820nm,16.5s							
DL2	**Dalian**	**27.36 355**			P		**P**	**14 10 45.3 -0.8**
DL2					S		**S**	**14 15 25.0 +1.2**
DL2					pmax		pmax	
	comp=Z,21nm,1.6s							
DL2					pmax		pmax	
	comp=Z,170nm,6.5s							
DL2					LR		LR	
	comp=Z,350nm,15.4s							
DL2					LR		LR	
	comp=Z,950nm,15.8s							
DL2					LR		LR	
	comp=Z,820nm,14.3s							
KNRA	**Kununurra**	**27.39 171**			P		**P**	**14 10 46.2 -0.3**
KNRA					IAmb		IAmb	14 10 56.3
	comp=Z,72nm,1.2s							
KNRA	**Kununurra**	**27.39 171**			P		**P**	**14 10 49.0 +2.5**
MAJO	**Matsushiro**	**27.84 24**			P		**P**	**14 10 49.4 -1.1**
MAJO	**Matsushiro**	**27.84 24**		*i*	P		**P**	**14 10 46.0 -4.5**
MAJO					pmax		pmax	
	comp=Z,17nm,1.2s							
MAJO	**Matsushiro**	**27.84 24**			P		**P**	**14 10 48.8 -1.7**
MJAR	**Matsushiro Arr**	**27.84 24**			P		**P**	**14 10 48.2 -2.2**
	comp=Z,5.3nm,0.9s,baz=189,slow=9.2,SNR=28							
MJAR					PcP		**PcP**	**14 14 05.4 -0.7**
	comp=Z,1.1nm,0.8s,baz=154,slow=3.0,SNR=4.2							
MJAR					LR		LR	14 21 16.1
	comp=Z,496nm,18.6s,baz=208,slow=35							
	comp=Z,5.3nm,0.9s							
JSD	**Sado**	**29.16 23**			P		**P**	**14 11 00.4 -1.8**
BJI	**Beijing**	**29.30 347**			P		**P**	**14 11 02.9 -0.4**
BJI					S		**S**	**14 15 54.0 -0.3**
BJI					pmax		pmax	
	comp=Z,21nm,1.3s							
BJI					pmax		pmax	
	comp=Z,160nm,4.4s							
BJI					LR		LR	
	comp=Z,70nm,15.9s							
BJI					LR		LR	
	comp=Z,640nm,16.9s							
BJI					LR		LR	
	comp=Z,390nm,17.6s							
FITZ	**Fitzroy Crossi**	**29.48 178**			P		**P**	**14 11 03.9 -1.2**
	comp=Z,10nm,0.8s,baz=6.8,slow=8.5,SNR=20							
	comp=Z,10nm,0.8s							
FITZ	**Fitzroy Crossi**	**29.48 178**			P		**P**	**14 11 05.6 +0.5**
FITZ	**Fitzroy Crossi**	**29.48 178**			P		**P**	**14 11 05.0 -0.1**
JMM	**Marumori**	**30.05 27**			P		**P**	**14 11 09.2 -0.9**
JMM					IAmb		IAmb	14 11 15.2
	comp=Z,24nm,0.9s							
SNY	**Shenyang**	**30.18 359**		⇓	P		**P**	**14 11 11.4 +0.3**
SNY					pmax		pmax	
	comp=Z,26nm,0.7s							
SNY					pmax		pmax	
	comp=Z,230nm,3.9s							
SNY					LR		LR	
	comp=Z,670nm,13.3s							
SNY					LR		LR	
	comp=Z,1µm,13.9s							
SNY					LR		LR	
	comp=Z,1µm,15.5s							
LZH	**Lanzhou**	**30.69 326**		⇑	P		**P**	**14 11 16.8 +0.9**
LZH					pP		pP	14 11 23.9 -1.7
LZH					sP		sP	14 11 29.3 -0.5
LZH					PP		**PnPn**	**14 12 19.3 +3.0**
LZH					S		**S**	**14 16 20.6 +4.0**
LZH					sS		sS	14 16 33.8 +1.1
LZH					SS		**SnSn**	**14 18 02.4 +6.4**
LZH					pmax		pmax	
	comp=Z,26nm,1.2s							
LZH					pmax		pmax	
	comp=Z,350nm,5.1s							
LZH					LR		LR	
	comp=Z,2µm,17.9s							
LZH					LR		LR	
	comp=Z,2µm,18.2s							
LZH					LR		LR	
	comp=Z,1µm,18.6s							
PMG	**Port Moresby**	**30.76 132**			LR		LR	14 26 15.0
	comp=Z,201nm,18.8s,baz=332,slow=42							
HHC	**Hu-ho-hao-te**	**31.30 341**		*e*	P		**P**	**14 11 22.3 +1.1**
HHC					S		**S**	**14 16 27.4 +1.4**
HHC					SS		**SnSn**	**14 18 10.3 -0.4**
HHC					pmax		pmax	
	comp=Z,40nm,0.8s							
HHC					pmax		pmax	
	comp=Z,440nm,4.8s							
HHC					LR		LR	
	comp=Z,1µm,14.0s							
HHC					LR		LR	
	comp=Z,620nm,14.6s							
HHC					LR		LR	
	comp=Z,1µm,14.6s							
COEN	**Coen**	**31.45 143**			P		**P**	**14 11 20.8 -1.8**
COEN					IAmb		IAmb	14 11 34.6
	comp=Z,42nm,1.1s							
COEN	**Coen**	**31.45 143**			P		**P**	**14 11 23.2 +0.6**
KRVT	**Keravat (AS076**	**31.69 118**			LR		LR	14 24 30.4
	comp=Z,452nm,18.5s,baz=81,slow=37							
CN2	**Changchun**	**32.16 1**		*e*	P		**P**	**14 11 29.0 +0.5**
CN2					pmax		pmax	
	comp=Z,20nm,1.0s							
CN2					LR		LR	
	comp=Z,500nm,14.0s							
CN2					LR		LR	
	comp=Z,600nm,14.0s							
CN2					LR		LR	
	comp=Z,400nm,14.0s							
WB0	**Warramunga Arr**	**32.64 162**			P		**P**	**14 11 31.9 -1.1**
WRAB	**Tennant Creek**	**32.78 162**		*i*	P		**P**	**14 11 30.0 -4.3**
WRAB					pmax		pmax	
	comp=Z,30nm,1.1s							
WRAB	**Tennant Creek**	**32.78 162**			P		**P**	**14 11 33.0 -1.3**
WRA	**Warramunga Arr**	**32.79 163**			P		**P**	**14 11 32.8 -1.5**
	comp=Z,11nm,0.9s,baz=341,slow=9.1,SNR=29							
WRA					PcP		**PcP**	**14 14 17.8 -1.3**
	comp=Z,1.9nm,0.8s,baz=340,slow=2.9,SNR=4.9							
WRA					LR		LR	14 26 22.9
	comp=Z,272nm,21.0s,baz=308,slow=39							
	comp=Z,11nm,0.9s							
WRA	**Warramunga Arr**	**32.79 163**			P		**P**	**14 11 33.6 -0.7**
WRA					PcP		**PcP**	**14 14 17.9 -1.3**
WB2	**Warramunga Arr**	**32.79 162**			P		**P**	**14 11 33.3 -1.0**
WB2					IAmb		IAmb	14 11 35.8
	comp=Z,25nm,1.1s							
MBWA	**Marble Bar**	**32.82 188**			P		**P**	**14 11 33.0 -1.5**
MBWA					IAmb		IAmb	14 11 48.1
	comp=Z,33nm,1.4s							
WR0	**Warramunga Arr**	**32.86 162**			P		**P**	**14 11 33.9 -1.1**
WR0					IAmb		IAmb	14 11 36.5
	comp=Z,16nm,0.9s							
XLT	**XiLinHaoTe**	**33.03 349**	⇑	*i*	P		**P**	**14 11 36.0 -0.3**
XLT					pP		pP	14 11 45.3 -0.8
XLT					sP		sP	14 11 49.3 -0.9
XLT					sS		sS	14 17 09.3 +0.4
XLT					pmax		pmax	
	comp=Z,24nm,1.8s							
XLT					pmax		pmax	
	comp=Z,150nm,3.7s							
XLT					LR		LR	
	comp=Z,840nm,15.7s							
XLT					LR		LR	
	comp=Z,450nm,16.9s							
USRK	**Ussuriysk Ar.**	**33.20 10**			P		**P**	**14 11 37.3 -0.3**
	comp=Z,5.0nm,0.6s,baz=191,slow=7.8,SNR=15							
	comp=Z,5.0nm,0.6

comp=Z,110nm,4.0s
BNX LR LR
comp=Z,220nm,14.5s
BNX LR LR
comp=Z,360nm,10.7s
BNX LR LR
comp=Z,440nm,12.1s
QIS Mount Isa 35.24 155 P P 14 11 54.7 -0.9
GTA Gaotai 35.29 326 ⇑P P 14 11 56.6 +0.5
GTA pP pP 14 12 03.8 -2.0
GTA PcP PcP **14 14 26.4 +0.2**
GTA S S **14 17 31.4 +3.4**
GTA pmax pmax
comp=Z,12nm,1.6s
GTA pmax pmax
comp=Z,230nm,5.1s
GTA LR LR
comp=Z,1μm,19.3s
GTA LR LR
comp=Z,850nm,19.6s
GTA LR LR
comp=Z,1μm,16.4s
AS31 Alice Springs 36.21 165 P P 14 12 04.1 +0.2
ASAR Alice Springs 36.21 165 P P 14 12 03.6 -0.3
comp=Z,12nm,0.8s,baz=349,slow=7.4,SNR=151
ASAR PcP PcP **14 14 27.6 -1.4**
comp=Z,1.8nm,0.8s,baz=350,slow=2.7,SNR=2.9
ASAR LR LR 14 27 43.2
comp=Z,257nm,19.7s,baz=346,slow=38
comp=Z,12nm,0.8s
ASAR Alice Springs 36.21 165 P P 14 12 03.4 -0.5
GOMU GeErMu 36.26 318 P P 14 12 05.9 +1.2
GOMU S S **14 17 37.5 -5.8**
GOMU pmax pmax
comp=Z,16nm,1.1s
GOMU pmax pmax
comp=Z,130nm,7.3s
GOMU LR LR
comp=Z,350nm,13.9s
GOMU LR LR
comp=Z,320nm,15.8s
GOMU LR LR
comp=Z,330nm,19.1s
WRKA Warakurna 36.56 174 P P 14 12 06.7 -0.2
TAPN Taplejung 37.81 300 *e*P **P 14 12 18.7 +0.8**
KLR Kul'dur 38.07 8 P P 14 12 18.9 -0.5
comp=Z,3.3nm,0.8s,baz=199,slow=6.7,SNR=15
KLR PcP **PcP 14 14 32.9 -1.3**
comp=Z,2.2nm,0.8s,baz=291,slow=2.2,SNR=3.6
comp=Z,3.3nm,0.8s
CTA Charters Tower 38.10 145 LR LR 14 27 19.1
comp=Z,313nm,21.2s,baz=330,slow=35
CTA Charters Tower 38.10 145 P P 14 12 22.1 +2.1
CTAO Charters Tower 38.10 145 P P 14 12 22.0 +2.1
MEEK Meekatharra 38.36 188 P P 14 12 23.6 +1.5
comp=Z,29nm,1.6s
YSS Yuzh-Sakhalins 38.56 20 P P 14 12 23.3 -0.3
YSS IAmb IAmb 14 12 27.7
comp=Z,25nm,0.9s
YSS Yuzh-Sakhalins 38.56 20 *e*P **P 14 12 23.4 -0.1**
YSS *e*S **S 14 18 13.3 -3.9**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS pmax pmax
comp=Z,300nm,3.3s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 38.56 20 P P 14 12 23.5 -0.1
YSS Yuzh-Sakhalins 38.56 20 P P 14 12 23.4 -0.1
RAMN Ramite 38.65 299 *e*P **P 14 12 23.2 -1.7**
ULN Ulaanbaatar 39.02 341 P P 14 12 28.0 +0.3
ULN Ulaanbaatar 39.02 341 *ce*P **P 14 12 27.9 +0.3**
ULN pmax pmax
comp=Z,26nm,1.3s
ULN Ulaanbaatar 39.02 341 P P 14 12 28.0 +0.3
KUR Kuril'sk 39.12 27 *i* P **P 14 12 25.9 -2.4**
KUR pmax pmax
comp=Z,54nm,1.1s
JIRN Jiri 39.19 300 *e*P **P 14 12 29.2 -0.4**
comp=Z,16nm,0.4s
SONM Songino Array 39.20 341 P P 14 12 29.3 +0.2
comp=Z,7.8nm,1.0s,baz=163,slow=10,SNR=16
comp=Z,7.8nm,1.0s
GUN Gumba 39.53 300 *e*P **P 14 12 32.9 +0.5**
PKI Pulchoki 39.84 299 *e*P **P 14 12 33.7 -1.2**
PKIN Phulchoki 39.85 299 *e*P **P 14 12 33.6 -1.4**
DMN Daman 40.10 299 *e*P **P 14 12 36.4 -0.7**
comp=Z,75nm,1.2s
GRNR Gornyy 40.34 12⇑ *i*P **P 14 12 38.8 +0.4**
GRNR *e*S **S 14 18 47.9 +3.9**
GRNR pmax pmax
comp=N,3.0nm,0.9s
GRNR pmax pmax
comp=Z,7.0nm,0.6s
GRNR smax smax
comp=E,2.0nm,0.8s
GRNR MLR MLR
comp=N,220nm,20.0s
GRNR MLR MLR
comp=Z,220nm,18.0s
OOD Oodnadatta 40.61 165 P P 14 12 40.8 0.0
GKN Gorkha 40.61 300 *e*P **P 14 12 40.8 -0.3**
HNR Honiara 41.04 119 LR LR 14 27 49.8
comp=Z,382nm,21.9s,baz=293,slow=33
MORW Morawa 41.17 191 P P 14 12 45.3 -0.1
MORW IAmb IAmb 14 12 46.5
comp=Z,30nm,1.1s
DANN Dangsing 41.45 300 *e*P **P 14 12 48.4 +0.2**
comp=Z,89nm,1.0s
TYV Tymovskoe 41.97 17 *e*P **P 14 12 53.2 +1.5**
TYV *e*S **S 14 19 13.3 +5.3**
TYV pmax pmax
comp=Z,7.0nm,1.0s
TYV pmax pmax
comp=Z,300nm,3.0s
TYV smax smax
comp=N,300nm,3.8s
INKA Innaminka 42.15 158 P P 14 12 55.6 +2.2
ZEA Zeya 42.15 3 *e*P **P 14 12 52.6 -0.6**
ZEA pmax pmax
comp=N,10.0nm,1.5s
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA MLR MLR
comp=Z,200nm,16.0s
FORT Forrest 42.23 175 P P 14 12 54.0 -0.1
FORT IAmb IAmb 14 12 56.9
comp=Z,36nm,0.7s
FORT Forrest 42.23 175 P P 14 12 54.2 +0.2
ZAK Zakamensk 42.43 340 *e*P **P 14 12 54.6 -1.1**
ZAK pmax pmax
comp=Z,8.0nm,1.4s
QLP Quilpie 42.52 153 P P 14 12 56.2 -0.3
PALK Pallekele 43.27 268 LR LR 14 31 54.5
comp=Z,339nm,18.8s,baz=190,slow=37
IRK Irkutsk 43.73 342 *e*P **P 14 13 05.7 -0.3**
IRK pmax pmax
comp=Z,48nm,3.5s
LCRK Leigh Creek 43.82 163 P P 14 13 08.2 +1.3
MUN Mundaring 43.98 190 P P 14 13 09.0 +0.8
MOY Mondy 44.30 339 *e*P **P 14 13 09.8 -0.9**
MOY pmax pmax
comp=Z,91nm,2.7s
HYBB Hyderabad (bro 44.67 283 *e*P **P 14 13 14.4 +0.2**
HYBB *ep*P **pP 14 13 24.1 -0.1**
NWAO Narrogin (SRO) 44.74 189 P P 14 13 13.9 -0.4
NWAO Narrogin (SRO) 44.74 189 P P 14 13 13.9 -0.4
NWAO pmax pmax
comp=Z,60nm,1.4s
WMQ Urumqi 45.09 322⇑ *i*P **P 14 13 18.0 +0.9**
WMQ sP sP 14 13 33.3 +2.2
WMQ ScP **ScP 14 18 47.0 -0.6**
WMQ S S **14 19 57.9 +3.8**
WMQ pmax pmax
comp=Z,35nm,2.3s
WMQ pmax pmax
comp=Z,430nm,3.7s
WMQ LR LR
comp=Z,2μm,21.3s
WMQ LR LR
comp=Z,940nm,14.7s
WMQ LR LR
comp=Z,910nm,18.7s
BBOO Buckleboo 45.49 166 P P 14 13 20.6 +0.3
BBOO Buckleboo 45.49 166 P P 14 13 21.3 +1.0
WHYH Whyalla 46.08 165 P P 14 13 25.7 +0.8
comp=Z,48nm,0.8s
STKA Stephens Creek 46.21 160 P P 14 13 26.1 +0.2
comp=Z,44nm,1.0s,baz=333,slow=8.7,SNR=27
STKA LR LR 14 35 38.4
comp=Z,190nm,19.9s,baz=344,slow=40
comp=Z,44nm,1.0s
STKA Stephens Creek 46.21 160 P P 14 13 26.4 +0.4
STKA Stephens Creek 46.21 160 *i* P **P 14 13 25.3 -0.7**
STKA Stephens Creek 46.21 160 P P 14 13 27.5 +1.5
HTT Hallett 46.82 163 P P 14 13 32.5 +1.7
BOD Bodaibo 46.86 352 *e*P **P 14 13 30.9 +0.2**
BOD pmax pmax
comp=Z,39nm,1.8s
SKR Severo-Kuril's 46.87 27 *i* P **P 14 13 30.3 -0.6**
CMSA Cobar Meteorol 47.46 155 P P 14 13 36.9 +1.2
TWOA Tennyson Woods 48.23 164 P P 14 13 43.2 +1.5
comp=Z,91nm,0.8s
ZSN Zaisan 48.77 325 *e*P **P 14 13 46.0 +0.3**
ZSN pmax pmax
comp=Z,29nm,2.0s
ZSN Zaisan 48.77 325 *e*P **P 14 13 46.0 +0.3**
comp=Z,29nm,2.0s,baz=325
TARA Tarawa 49.20 98 P P 14 13 51.2 +1.7
ARMA Armidale 49.27 149 P P 14 13 49.9 0.0
ARMA IAmb IAmb 14 14 01.4
comp=Z,23nm,1.1s
ARMA Armidale 49.27 149 P P 14 13 51.2 +1.3
PEA0B Petropavlovsk- 49.28 26 P P 14 13 50.2 +0.7
PEA0B Petropavlovsk- 49.28 26 *ce*P **P 14 13 50.0 +0.5**
PETK Petropavlovsk- 49.28 26 P P 14 13 49.6 0.0
comp=Z,19nm,1.0s,baz=194,slow=3.2,SNR=28
comp=Z,19nm,1.0s
PETK Petropavlovsk- 49.28 26 P P 14 13 50.9 +1.4
PETK Petropavlovsk- 49.28 26 P P 14 13 50.9 +1.4
PET Petropavlovsk 49.63 27 P P 14 13 53.4 +1.2
PET Petropavlovsk 49.63 27 *e*P **P 14 13 52.6 +0.4**
PET *e*S **S 14 20 57.2 -1.1**
PET pmax pmax
comp=Z,77nm,1.7s
PET MLR MLR
comp=Z,300nm,14.0s
PET Petropavlovsk 49.63 27 P P 14 13 53.3 +1.1
comp=Z,246nm,1.5s
PET Petropavlovsk 49.63 27 P P 14 13 52.8 +0.6
MK31 Makanchi Array 49.90 323 P P 14 13 55.6 +1.2
MK31 Makanchi Array 49.90 323 *i* P **P 14 13 54.7 +0.3**
MK31 pmax pmax
comp=Z,94nm,1.0s
MKAR Makanchi Array 49.90 323 P P 14 13 55.2 +0.8
comp=Z,44nm,0.8s,baz=120,slow=8.5,SNR=215
comp=Z,44nm,0.8s
SHLS Shalkode 49.96 318 *c i*P **P 14 13 53.9 -1.1**
SHLS pmax pmax
comp=Z,79nm,2.5s
SHLS Shalkode 49.96 318⇑ *i*P **P 14 13 53.9 -1.1**
comp=Z,79nm,2.5s,baz=318
MAKZ Makanchi 50.09 323 P P 14 13 57.2 +1.3
MAKZ Makanchi 50.09 323 P P 14 13 56.4 +0.5
MAKZ Makanchi 50.09 323 P P 14 13 56.8 +0.9
MAKZ pP **pP 14 14 06.6 +0.6**
UZB Uzynbulak 50.25 317 *e*P **P 14 13 58.2 +0.9**
UZB *e*S **S 14 21 09.8 +2.2**
UZB pmax pmax
comp=Z,38nm,2.0s
UZB Uzynbulak 50.25 317 *e*P **P 14 13 58.2 +0.9**
comp=Z,38nm,2.0s,baz=317
UZB *e*S **S 14 21 09.9 +2.2**
baz=317
YAK Yakutsk 50.55 3 P **P 14 13 58.4 -0.6**
comp=Z,20nm,0.7s,baz=135,slow=5.2,SNR=23
comp=Z,20nm,0.7s
YAK Yakutsk 50.55 3 *c i*P **P 14 13 58.4 -0.6**
YAK *e* 14 15 17.3
YAK *e* 14 15 54.8
YAK *e*S **S 14 21 04.2 -6.6**
YAK pmax pmax
comp=Z,63nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=N,35nm,1.3s
YAK pmax pmax
comp=Z,51nm,2.2s
YAK pmax pmax
comp=N,92nm,3.3s
YAK pmax pmax
comp=E,25nm,1.9s
YAK smax smax
comp=E,26nm,2.5s
YAK smax smax
comp=N,60nm,3.3s
YAK MLR MLR
comp=Z,288nm,14.0s
YAK MLR MLR
comp=N,230nm,13.0s
YAK MLR MLR
comp=E,174nm,12.0s
YAK Yakutsk 50.55 3 P **P 14 13 58.6 -0.4**
YAK pP **pP 14 14 06.2 -2.9**
KPKS Kokpek 50.61 318 *c i*P **P 14 14 00.6 +0.7**
KPKS *e*S **S 14 21 14.7 +2.3**
KPKS pmax pmax
comp=Z,50nm,1.4s
KPKS Kokpek 50.61 318⇑ *i*P **P 14 14 00.7 +0.7**
comp=Z,50nm,1.4s,baz=318
KPKS *e*S **S 14 21 14.7 +2.3**
baz=318
SATY Saty 50.62 317 *c i*P **P 14 14 01.1 +1.0**
SATY pmax pmax
comp=Z,42nm,1.2s
SATY Saty 50.62 317⇑ *i*P **P 14 14 01.2 +1.1**
comp=Z,42nm,1.2s,baz=317
ZHN Zhinishke 50.65 317 *e*P **P 14 14 00.9 +0.7**
ZHN Zhinishke 50.65 317 *e*P **P 14 14 00.9 +0.7**
baz=317
ARPS Mount Arapiles 50.79 162 P P 14 14 01.8 +0.7
KSH Kashi 51.01 312 P P 14 14 05.9 +2.9
KSH S **S 14 21 23.3 +5.1**
KSH pmax pmax
comp=Z,20nm,1.8s
KSH pmax pmax
comp=Z,290nm,4.2s
KSH LR LR
comp=Z,1μm,20.6s
KSH LR LR
comp=Z,540nm,17.7s
KSH LR LR
comp=Z,440nm,19.7s
TDK Taldyqorghan 51.44 319 *c i*P **P 14 14 06.9 +0.9**
TDK pmax pmax
comp=Z,77nm,0.8s
TDK Taldyqorghan 51.44 319⇑ *i*P **P 14 14 07.0 +0.9**
comp=Z,77nm,0.8s,baz=319
ARXS Arharly 51.48 318 *e*P **P 14 14 06.8 +0.4**
NIL Nilore 51.49 304 P P 14 14 07.1 +0.5
MDOK Medeo 51.57 317 *i* P **P 14 14 08.4 +1.2**
MDOK *e*S **S 14 21 28.4 +2.5**
MDOK Medeo 51.57 317 *i* P **P 14 14 08.4 +1.2**
baz=317
MDOK *e*S **S 14 21 28.5 +2.5**
baz=317
AAA Alma-Ata 51.68 317 *e*P **P 14 14 09.1 +1.2**
AAA *e*S **S 14 21 29.8 +2.5**
AAA Alma-Ata 51.68 317 *e*P **P 14 14 09.1 +1.2**
baz=317
AAA *e*S **S 14 21 29.8 +2.5**
baz=317
MA2 Magadan 51.83 17 *i* P **P 14 14 08.6 -0.1**
MA2 pmax pmax
comp=Z,32nm,1.2s
CAN Canberra 52.11 154 P P 14 14 12.3 +1.2
CAN IAmb IAmb 14 14 25.6
comp=Z,32nm,1.0s
CAN Canberra 52.11 154 P P 14 14 12.3 +1.2
CAN pmax pmax
comp=Z,32nm,1.0s
CAN Canberra 52.11 154 P P 14 14 13.0 +1.9
CAN Canberra 52.11 154 P P 14 14 11.9 +0.8
CAN pP **pP 14 14 21.6 +0.3**
BRAT Ballarat 52.17 160 P P 14 14 10.2 -1.2
CNB Canberra Magne 52.26 154 P P 14 14 11.5 -0.7
KUU Kurty 52.34 317 *c i*P **P 14 14 13.4 +0.7**
KUU *e*S **S 14 21 38.8 +2.7**
KUU Kurty 52.34 317⇑ *i*P **P 14 14 13.5 +0.7**
baz=317
KUU *e*S **S 14 21 38.9 +2.8**
baz=317
TKM2 Tokmak 2 52.47 316 P P 14 14 15.0 +1.0
SNR=14
TKM2 Tokmak 2 52.47 316 *i* P **P 14 14 13.8 -0.2**
TKM2 pmax pmax
comp=Z,29nm,1.2s
ZAA0 Zalesovo Array 52.63 332 P P 14 14 14.6 0.0
ZAA0 IAmb IAmb 14 14 15.2
comp=Z,23nm,1.1s
ZALV Zalesovo Beam 52.63 332 P P 14 14 14.3 -0.4
comp=Z,10nm,0.8s,baz=116,slow=6.8,SNR=33
comp=Z,10nm,0.8s
ZALV Zalesovo Beam 52.63 332 P P 14 14 14.7 0.0
ZALV Zalesovo Beam 52.63 332 *i* P **P 14 14 14.5 -0.2**
ZALV pmax pmax
comp=Z,10.0nm,0.9s
TOO Toolangi 52.72 159 P P 14 14 16.4 +0.8
TOO Toolangi 52.72 159 P P 14 14 16.4 +0.8
TOO pmax pmax
comp=Z,58nm,1.3s
TOO Toolangi 52.72 159 P P 14 14 16.6 +1.0
KBK Karagaybulak 52.82 315 P P 14 14 18.4 +1.8
SNR=12
SEM Semipalatinsk 52.92 326 *e*P **P 14 14 16.9 -0.3**
SEM pmax pmax
comp=Z,39nm,1.4s
SEM Semipalatinsk 52.92 326 *e*P **P 14 14 17.0 -0.3**
comp=Z,39nm,1.4s,baz=326
NOUC Port Laguerre 52.99 129 P P 14 14 20.2 +2.4
comp=Z,29nm,1.2s
NOUC Port Laguerre 52.99 129 P P 14 14 17.6 -0.2
CHMS Chumysh 53.07 316 P P 14 14 18.8 +0.6
SNR=9.0
CHMS Chumysh 53.07 316 *i* P **P 14 14 18.3 +0.1**
CHMS pmax pmax
comp=Z,64nm,1.5s
DZM Mont Dzumac 53.08 129 P P 14 14 18.7 +0.1
comp=Z,20nm,0.8s,baz=260,slow=7.0,SNR=32
DZM LR LR 14 34 45.0
comp=Z,153nm,21.6s,baz=312,slow=34
comp=Z,20nm,0.8s
DZM Mont Dzumac 53.08 129 *e*LR LR 14 29 38.5
comp=Z,550nm,24.8s
DZM Mont Dzumac 53.08 129 P P 14 14 17.4 -1.3
DZM IAmb IAmb 14 14 23.1
comp=Z,22nm,0.9s
DZM Mont Dzumac 53.08 129 P P 14 14 19.3 +0.7
DZM Mont Dzumac 53.08 129 P P 14 14 19.2 +0.6
AAK Ala-Archa 53.12 315 P P 14 14 19.4 +0.6
comp=Z,1.3nm,0.3s,baz=108,slow=8.5,SNR=21
AAK LR LR 14 36 24.6
comp=Z,516nm,20.0s,baz=87,slow=36
comp=Z,1.3nm,0.3s
AAK Ala-Archa 53.12 315 *ce*P **P 14 14 19.8 +1.0**
AAK pmax pmax
comp=Z,57nm,2.5s
SGDS Sogindy 53.32 316 *c i*P **P 14 14 20.4 +0.3**
SGDS Sogindy 53.32 316⇑ *i*P **P 14 14 20.4 +0.3**
baz=316
USP Ospenovka 53.34 316 P P 14 14 21.5 +1.3
SNR=14
YATNC Mamie plateau, 53.42 129 P P 14 14 22.5 +1.5
AML Almayashu 53.51 314 P P 14 14 23.2 +1.3
SNR=20
OUENC Ouen Island, N 53.58 129 P P 14 14 21.1 -1.0
OUENC IAmb IAmb 14 14 25.9
comp=Z,30nm,1.2s
OUENC Ouen Island, N 53.58 129 P P 14 14 24.9 +2.7
comp=Z,26nm,1.1s
EKS2 Erkin-Say 53.63 315 P P 14 14 24.1 +1.7
SNR=15
KURK Kurchatov 53.98 326 P P 14 14 25.4 +0.7
KURK Kurchatov 53.98 326 *ce*P **P 14 14 25.2 +0.6**
KURK pmax pmax
comp=Z,192nm,1.3s
KURK Kurchatov 53.98 326 P P 14 14 25.3 +0.7
KURBB Kurchatov Arra 53.98 326 P P 14 14 24.9 +0.2
comp=Z,42nm,1.0s,baz=128,slow=7.2,SNR=5.3
comp=Z,42nm,1.0s
PINNC Pines Island, 54.15 129 P P 14 14 25.1 -1.3
PINNC Pines Island, 54.15 129 P P 14 14 28.4 +2.1
BTLS Baital 54.29 318 *c i*P **P 14 14 27.3 +0.3**
BTLS pmax pmax
comp=Z,25nm,1.3s
BTLS Baital 54.29 318⇑ *i*P **P 14 14 27.4 +0.3**
comp=Z,25nm,1.3s,baz=318
GAR Garm 55.06 310 P P 14 14 33.2 +0.3
SEY Seymchan 55.07 15 P P 14 14 33.1 +0.8
comp=Z,1.7nm,0.5s,baz=221,slow=11,SNR=3.8
comp=Z,1.7nm,0.5s
SEY Seymchan 55.07 15 *ce*P **P 14 14 33.5 +1.2**
SEY pmax pmax
comp=Z,28nm,1.6s
DZA Taraz 55.41 314⇑ *i*P **P 14 14 35.7 +0.5**
DZA Taraz 55.41 314⇑ *i*P **P 14 14 35.7 +0.5**
baz=314
KK31 Karatay Array 56.04 315 P P 14 14 40.1 +0.4
KK31 IAmb IAmb 14 14 41.5
comp=Z,30nm,1.0s
KK31 Karatay Array 56.04 315 *i* P **P 14 14 39.8 0.0**
KKAR Karatay Array 56.04 315 P P 14 14 40.5 +0.7
KKAR PcP **PcP 14 15 37.7 0.0**
KKAR Karatay Array 56.04 315 P P 14 14 40.2 +0.4
KKAR IAmb IAmb 14 14 41.5
comp=Z,30nm,1.0s
KKAR Karatay Array 56.04 315 P P 14 14 40.2 +0.4
KKAR pmax pmax
comp=Z,30nm,1.0s
IUG Iuzhnay 56.10 313 *c i*P **P 14 14 41.2 +0.9**
IUG Iuzhnay 56.10 313⇑ *i*P **P 14 14 41.2 +0.9**
baz=313
BRZS Berezniki 57.05 323 *c i*P **P 14 14 47.2 +0.4**
BRZS pmax pmax
comp=Z,33nm,1.5s
BRZS Berezniki 57.05 323⇑ *i*P **P 14 14 47.3 +0.4**
comp=Z,33nm,1.5s,baz=323
SHEM Shemya Is, Ala 57.10 34 P P 14 14 47.7 +0.7
comp=Z,47nm,1.0s,baz=291,slow=3.3,SNR=4.1
SHEM LR LR 14 34 10.0
comp=Z,172nm,21.9s,baz=224,slow=31
comp=Z,47nm,1.0s
TAU Tasmania Unive 58.11 160 P P 14 14 53.8 -0.4
TAU Tasmania Unive 58.11 160 P P 14 14 53.8 -0.4
TAU pmax pmax
comp=Z,127nm,1.5s
AMKA Amchitka 59.47 37 P P 14 15 03.8 +0.1
BVA0 Borovoye Array 59.57 325 *i* P **P 14 15 04.2 -0.2**
BRVK Borovoye 59.64 325 P P 14 15 05.8 +1.0
BRVK Borovoye 59.64 325 *ce*P **P 14 15 05.0 +0.2**
BRVK pmax pmax
comp=Z,97nm,2.5s
BRVK Borovoye 59.64 325 P P 14 15 05.1 +0.3
TIXI Tiksi 60.13 2 P P 14 15 07.0 -0.8
comp=Z,12nm,0.8s,baz=90,slow=20,SNR=8.3
comp=Z,12nm,0.8s
TIXI Tiksi 60.13 2 P P 14 15 07.4 -0.4
TIXI IAmb IAmb 14 15 09.5
comp=Z,25nm,1.0s
TIXI Tiksi 60.13 2 *ce*P **P 14 15 07.0 -0.8**
TIXI pmax pmax
comp=Z,85nm,2.5s
TIXI Tiksi 60.13 2 P P 14 15 07.2 -0.6
MSVF Nonsavu 60.45 118 P P 14 15 11.0 0.0
comp=Z,22nm,0.8s,baz=264,slow=8.6,SNR=13
MSVF LR LR 14 37 40.4
comp=Z,240nm,21.6s,baz=285,slow=32
comp=Z,22nm,0.8s
MSVF Nonsavu 60.45 118 P P 14 15 11.4 +0.4
MSVF Nonsavu 60.45 118 *e*P **P 14 15 09.8 -1.2**
MSVF pmax pmax
comp=Z,40nm,1.0s
MSVF Nonsavu 60.45 118 P P 14 15 12.3 +1.3
NRIK Noril'sk 62.34 346 P P 14 15 22.8 0.0
comp=Z,31nm,1.1s,baz=128,slow=6.3,SNR=19
comp=Z,31nm,1.1s
BILL Bilibino 62.70 16 *de*P **P 14 15 24.7 -0.6**
BILL *e**SP **pP 14 15 35.8 +0.2**
BILL *e* 14 16 03.9
BILL *e* 14 17 45.8
BILL pmax pmax
comp=Z,53nm,1.7s
BILL MLR MLR
comp=Z,99nm,17.0s

WSAR Wadi Sarin 63.37 290 LR LR 14 46 47.4
comp=Z,163nm,18.9s,baz=101,slow=40
GEYT Alibeck 64.30 307 P **P** **14 15 36.7 +0.2**
comp=Z,17nm,0.9s,baz=156,slow=6.2,SNR=23
GEYT LR LR 14 45 43.9
comp=Z,266nm,18.5s,baz=68,slow=38
comp=Z,17nm,0.9s
GEYT Alibeck 64.30 307 P **P** **14 15 37.2 +0.7**
AB31 Akbulak array 64.71 319 *i* P **P** **14 15 38.5 -0.3**
ABKAR Akbulak array 64.71 319 P **P** **14 15 39.0 +0.1**
AKTO Aktyubinsk 66.17 320 P **P** **14 15 48.0 -0.2**
comp=Z,3.6nm,0.6s,baz=101,slow=6.3,SNR=22
AKTO LR LR 14 47 02.8
comp=Z,494nm,18.2s,baz=109,slow=38
comp=Z,3.6nm,0.6s
SPIA Saint Paul Isl 67.10 33 P **P** **14 15 53.3 -0.7**
ARU Arti 67.15 327 P **P** **14 15 53.4 -1.1**
comp=Z,5.2nm,0.4s,baz=141,slow=6.1,SNR=9.4
ARU LR LR 14 44 38.1
comp=Z,330nm,21.6s,baz=110,slow=35
comp=Z,5.2nm,0.4s
ARU Arti 67.15 327 *c i* P **P** **14 15 53.7 -0.7**
ARU S **S** **14 24 48.6 +2.2**
ARU SS **SS** **14 29 04.8 -1.0**
ARU pmax pmax
comp=Z,38nm,1.8s
ARU Arti 67.15 327 P **P** **14 15 53.8 -0.6**
AFI Afiamalu 68.16 110 LR LR 14 42 07.5
comp=Z,247nm,20.8s,baz=317,slow=33
GAMB Gambell 68.31 25 P **P** **14 16 01.5 -0.1**
baz=251
RAO Raoul Island 68.84 128 LR LR 14 41 33.8
comp=Z,66nm,20.6s,baz=317,slow=32
RPZ Rata Peaks 69.47 146 LR LR 14 47 00.9
comp=Z,112nm,20.1s,baz=298,slow=36
URZ Urewera 69.84 138 LR LR 14 49 27.4
comp=Z,187nm,18.1s,baz=27,slow=38
SDPT Sand Point 72.14 35 P **P** **14 16 25.0 -0.2**
baz=264
KIRV Kirov 72.39 328 P **P** **14 16 25.4 -1.2**
comp=Z,5.5nm,0.5s,baz=84,slow=5.8,SNR=6.9
KIRV LR LR 14 48 06.8
comp=Z,279nm,21.2s,baz=100,slow=36
comp=Z,5.5nm,0.5s
KIRV Kirov 72.39 328 *i* P **P** **14 16 26.5 -0.1**
BELG Belogornoye 72.86 321 LR LR 14 48 26.2
comp=Z,175nm,19.1s,baz=132,slow=36
N16K Nishlik Lake 73.55 30 P **P** **14 16 33.3 -0.2**
baz=264
O16K Kokwok River B 73.81 31 P **P** **14 16 35.0 0.0**
baz=265
O17K Koliganek Bris 74.33 31 P **P** **14 16 38.0 0.0**
baz=266
P17K Kvichak River 74.62 32 P **P** **14 16 40.1 +0.4**
baz=267
GNI Garni 74.77 309 P **P** **14 16 42.0 +0.8**
comp=Z,2.7nm,0.3s,baz=65,slow=17,SNR=5.7
GNI LR LR 14 53 52.6
comp=Z,114nm,21.4s,baz=90,slow=39
comp=Z,2.7nm,0.3s
GNI Garni 74.77 309 *i* P **P** **14 16 41.5 +0.3**
GNI pmax pmax
comp=Z,36nm,1.6s
GCSA Galena City Sc 74.83 26 P **P** **14 16 41.3 +0.5**
baz=265
CHIR Chirikof Islan 74.92 35 P **P** **14 16 41.9 +0.4**
baz=268
N18K Kilae Creek 74.98 30 P **P** **14 16 42.4 +0.5**
baz=267
TTA Tatalina 75.07 28 P **P** **14 16 42.7 +0.4**
baz=266
O18K Koktuh Hills 75.28 31 P **P** **14 16 43.4 -0.2**
O18K IAmb IAmb 14 16 46.4
comp=Z,31nm,1.1s
O18K Koktuh Hills 75.28 31 P **P** **14 16 44.0 +0.4**
baz=268
ZEI Tsey 75.29 311 *e* P **P** **14 16 43.5 -0.8**
ZEI pmax pmax
comp=Z,16nm,1.0s
NCK Nalchik 75.49 312 *i* P **P** **14 16 44.9 -0.2**
NCK pmax pmax
comp=Z,7.0nm,1.0s
L19K White Mountain 75.56 29 P **P** **14 16 46.0 +0.8**
L19K IAmb IAmb 14 16 55.8
comp=Z,23nm,1.4s
L19K White Mountain 75.56 29 P **P** **14 16 45.5 +0.4**
baz=267
N19K Bonanza Creek 75.68 30 P **P** **14 16 46.3 +0.3**
N19K IAmb IAmb 14 16 47.1
comp=Z,35nm,1.5s
N19K Bonanza Creek 75.68 30 P **P** **14 16 46.0 0.0**
baz=268
O19K Port Alsworth 75.74 31 P **P** **14 16 46.6 +0.5**
baz=268
M19K Big River Lodg 75.77 29 P **P** **14 16 46.6 +0.3**
baz=268
PYA1 Pyatigorsk 75.83 313 *i* P **P** **14 16 46.5 -0.6**
K20K Telida 75.97 27 P **P** **14 16 47.6 +0.1**
baz=268
J20K Nowinta River 75.97 27 P **P** **14 16 47.9 +0.5**
baz=267,SNR=6.1
KBZ Khabaz 75.99 312 P **P** **14 16 47.3 -0.6**
comp=Z,7.0nm,0.9s,baz=126,slow=7.0,SNR=14
KBZ LR LR 14 53 10.8
comp=Z,103nm,20.4s,baz=82,slow=38
comp=Z,7.0nm,0.9s
KBZ Khabaz 75.99 312 *c e* P **P** **14 16 47.4 -0.5**
KBZ pmax pmax
comp=Z,15nm,1.1s
KVAR Kislovodsk Arr 76.12 313 P **P** **14 16 49.7 +0.9**
comp=Z,6.2nm,0.7s,baz=126,slow=19,SNR=2.0
comp=Z,6.2nm,0.7s
KIV Kislovodsk 76.13 313 *e* P **P** **14 16 48.7 -0.2**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,170nm,19.0s
IMAR Indian Mountai 76.22 25 P **P** **14 16 48.5 -0.4**
OHAK Old Harbor 76.23 34 P **P** **14 16 49.1 +0.1**
baz=270
G21K Allakaket 76.35 24 P **P** **14 16 50.0 +0.4**
baz=267
M20K Styx River 76.36 29 P **P** **14 16 50.0 +0.2**
baz=269
F21K Alatna River 76.39 23 P **P** **14 16 49.4 -0.4**
baz=267
VRH Novokhopyorsk 76.51 320 *e* P **P** **14 16 48.9 -1.8**
VRH pmax pmax
comp=Z,10.0nm,0.7s
H21K Melozitna Rive 76.60 25 P **P** **14 16 51.1 +0.1**
H21K IAmb IAmb 14 16 54.0
comp=Z,28nm,1.4s
H21K Melozitna Rive 76.60 25 P **P** **14 16 51.5 +0.5**
baz=268,SNR=12
KDAK Kodiak Island 76.61 33 P **P** **14 16 51.0 -0.2**
KDAK Kodiak Island 76.61 33 P **P** **14 16 51.0 -0.2**
KDAK pmax pmax
comp=Z,57nm,1.5s
KDAK Kodiak Island 76.61 33 P **P** **14 16 51.4 +0.2**
baz=270
Q20K Shuyak Island 76.71 32 P **P** **14 16 51.7 0.0**
baz=270
CHUM Lake Minchumin 76.77 27 P **P** **14 16 52.6 +0.6**
baz=269
PPLA Purkeypile 76.81 28 P **P** **14 16 52.5 +0.1**
baz=269
CAST Castle Rocks 76.87 27 P **P** **14 16 52.7 +0.1**
baz=269,SNR=11
F22K John River 76.90 23 P **P** **14 16 53.5 +0.8**
baz=268,SNR=8.8
I21K Tanana 76.93 26 P **P** **14 16 53.5 +0.7**
baz=269,SNR=7.5
E22K Anaktuvuk Pass 77.06 22 P **P** **14 16 54.1 +0.5**
baz=268
H22K Ishtalitna Cre 77.19 25 P **P** **14 16 55.2 +0.9**
baz=269,SNR=9.8
BPAW Bear Paw Mtn. 77.36 27 P **P** **14 16 55.5 +0.2**
BPAW IAmb IAmb 14 16 57.7
comp=Z,34nm,1.2s
BPAW Bear Paw Mtn. 77.36 27 P **P** **14 16 55.3 0.0**
baz=270,SNR=14
MLY Manley 77.46 26 P **P** **14 16 56.0 +0.1**
baz=270,SNR=9.9
D23K Nanushuk River 77.49 22 P **P** **14 16 56.8 +0.9**
baz=269,SNR=6.9
SUA Susitna One 77.50 29 P **P** **14 16 56.3 0.0**
baz=271

KLMR Klimovskoe 77.51 330 *e* P **P** **14 16 53.3 -2.8**
KLMR pmax pmax
comp=Z,17nm,1.1s
KLMR Klimovskoe 77.51 330 *e* P **P** **14 16 53.4 -2.7**
KLMR AMP 14 17 04.2
comp=Z,17nm,1.1s
KLMR LQ LQ 14 46 05.5
KLMR LQ LQ 14 46 05.5
KLMR LR LR 14 48 46.6
C23K Itkillik River 77.52 21 P **P** **14 16 56.2 +0.2**
baz=269,SNR=7.0
BRSE Bradley Lake S 77.54 31 P **P** **14 16 56.7 +0.3**
baz=271
COLD Coldfoot 77.67 23 P **P** **14 16 57.6 +0.6**
baz=270
CUT Chulitna 77.70 28 P **P** **14 16 57.7 +0.5**
baz=271
G23K Bananza Creek 77.74 24 P **P** **14 16 58.1 +0.7**
baz=270,SNR=7.5
M22K Willow 77.79 29 P **P** **14 16 56.7 -1.0**
baz=272
TOLK Toolik Lake Re 77.89 22 P **P** **14 16 59.0 +0.7**
TOLK IAmb IAmb 14 17 01.2
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 77.89 22 P **P** **14 16 58.8 +0.5**
baz=270,SNR=9.4
H23K Yukon River 77.95 25 P **P** **14 16 59.2 +0.6**
baz=271,SNR=9.3
I23K Minto, Yukon-K 78.04 26 P **P** **14 16 59.1 +0.1**
baz=271,SNR=5.8
VORR Voronezh 78.06 321 *e* P **P** **14 16 58.4 -1.0**
VORR pmax pmax
comp=Z,50nm,0.4s
VSR Storozhevoye 78.11 320 *e* P **P** **14 16 58.3 -1.4**
VSR pmax pmax
comp=Z,10.0nm,1.1s
D24K Happy Valley 78.16 21 P **P** **14 16 59.9 +0.3**
baz=271
LPSR Galich'ya Gora 78.17 322 *e* P **P** **14 16 58.1 -1.9**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
SEW Seward 78.18 31 P **P** **14 17 00.6 +0.7**
baz=272
NEA2 Nenana 78.18 26 P **P** **14 16 59.6 -0.2**
baz=272
C24K Franklin Bluff 78.19 21 P **P** **14 16 59.6 -0.1**
baz=271
PMR Palmer 78.27 29 P **P** **14 16 59.9 -0.4**
baz=272
MCK McKinley 78.27 27 P **P** **14 16 60.0 -0.4**
MCK IAmb IAmb 14 17 08.4
comp=Z,42nm,1.4s
MCK McKinley 78.27 27 P **P** **14 17 00.0 -0.4**
MCK pmax pmax
comp=Z,42nm,1.4s
MCK McKinley 78.27 27 P **P** **14 16 59.6 -0.8**
baz=272,SNR=6.1
E24K Your Creek 78.31 23 P **P** **14 17 00.9 +0.3**
baz=272,SNR=9.3
MDM Murphy Dome 78.53 26 P **P** **14 17 00.8 -1.0**
F24K Squaw Lake 78.55 23 P **P** **14 17 02.3 +0.4**
baz=272,SNR=15
KNK Knik Glacier 78.60 29 P **P** **14 17 01.6 -0.6**
baz=273
H24K Noodor Dome 78.63 25 P **P** **14 17 02.8 +0.4**
H24K Noodor Dome 78.63 25 P **P** **14 17 02.6 +0.2**
baz=273,SNR=5.0
SML Sawmill 78.64 29 P **P** **14 17 01.9 -0.6**
baz=273
COLA College 78.69 26 *i* P **P** **14 16 59.2 -3.4**
COLA pmax pmax
comp=Z,8.0nm,1.2s
CCB Clear Creek Bu 78.72 26 P **P** **14 17 02.2 -0.6**
MOS Moscow 78.74 325 *e* P **P** **14 17 00.1 -2.9**
MOS *e* 14 20 03.1
G24K Hadweenzic Riv 78.75 24 P **P** **14 17 03.7 +0.7**
baz=273,SNR=12
WAT6 Susitna Watana 78.87 28 P **P** **14 17 03.4 -0.5**
baz=273
M23K Glacier View 78.93 29 P **P** **14 17 03.7 -0.4**
baz=274
DHY Denali Highway 79.01 28 P **P** **14 17 04.5 -0.1**
baz=274
D25K Kavik River 79.02 21 P **P** **14 17 04.8 +0.4**
baz=273,SNR=8.3
HDA Harding Lake 79.11 26 P **P** **14 17 04.9 -0.1**
baz=274
ILAR Eielson Array 79.11 26 P **P** **14 17 03.9 -1.1**
comp=Z,1.3nm,0.7s,baz=249,slow=5.5,SNR=14
ILAR PP **PP** **14 20 06.9 +2.7**
comp=Z,0.3nm,0.6s,baz=279,slow=6.3,SNR=1.7
ILAR LR LR 14 49 52.1
comp=Z,81nm,21.8s,baz=255,slow=34
comp=Z,1.3nm,0.7s
ILAR Eielson Array 79.11 26 P **P** **14 17 03.7 -1.2**
ILAR Eielson Array 79.11 26 P **P** **14 17 03.7 -1.2**
SCM Sheep Creek Mo 79.11 29 P **P** **14 17 04.9 -0.2**
baz=274
G25K Bearman Lake 79.29 24 P **P** **14 17 06.2 +0.3**
baz=274,SNR=7.7
OBN Obninsk 79.39 324 *e* P **P** **14 17 06.4 -0.2**
OBN *e* 14 17 14.5
OBN *e* PP **pP** **14 17 17.1 -0.1**
OBN *e* SP **sP** **14 17 22.2 +1.0**
OBN *e* 14 20 06.5
OBN *e* PPP PPP 14 21 56.7
OBN pmax pmax
comp=Z,25nm,1.1s
OBN MLR MLR
comp=Z,165nm,17.0s
E25K Arctic Village 79.40 22 P **P** **14 17 06.9 +0.4**
baz=274,SNR=6.6
F25K Christian Rive 79.41 23 P **P** **14 17 07.2 +0.5**
baz=274,SNR=8.9
H25K Birch Creek 79.44 24 P **P** **14 17 07.2 +0.5**
baz=274
ATD Arta Tunnel 79.58 280 LR LR 14 49 51.0
comp=Z,63nm,21.1s,baz=120,slow=34
M24K Tolsona, Glenn 79.63 29 P **P** **14 17 07.5 -0.4**
baz=275
K24K Donnelly Dome 79.67 27 P **P** **14 17 07.2 -0.9**
baz=275
J25K Salcha River, 79.77 26 P **P** **14 17 07.1 -1.5**
baz=275
APA Apatity 79.80 337 *i* P **P** **14 17 10.5 +1.9**
APA pmax pmax
comp=Z,12nm,1.1s
APA MLR MLR
comp=Z,500nm,15.0s
ANN Anapa 79.82 314 *e* P **P** **14 17 07.1 -2.1**
ANN *e* PP **PcP** **14 17 17.2 +0.4**
ANN *e* S **S** **14 27 09.4 -0.7**
ANN pmax pmax
comp=Z,29nm,0.8s
BMAR Burnt Mountain 79.83 23 P **P** **14 17 09.8 +0.9**
PAX Paxson 79.88 28 P **P** **14 17 08.9 -0.4**
baz=275
C27K Jago River 79.93 21 P **P** **14 17 10.1 +0.7**
baz=276
F26K Sheenjek River 79.97 23 P **P** **14 17 10.4 +0.7**
baz=276
HARP HAARP 80.08 28 P **P** **14 17 10.5 +0.2**
baz=276
RIDG Independent Ri 80.09 27 P **P** **14 17 09.9 -0.4**
RIDG Independent Ri 80.09 27 P **P** **14 17 09.7 -0.7**
baz=276
G26K Porcupine Rive 80.19 24 P **P** **14 17 11.5 +0.8**
baz=276,SNR=8.1
N25K Chitina, Valde 80.43 29 P **P** **14 17 12.4 +0.1**
baz=276
SCRK Sand Creek 80.44 27 P **P** **14 17 12.2 -0.1**
baz=276
BMRM Bremner River 80.50 30 P **P** **14 17 12.5 -0.1**
baz=276
J26L Joseph Creek 80.56 26 P **P** **14 17 12.4 -0.5**
J26L Joseph Creek 80.56 26 P **P** **14 17 12.3 -0.6**
baz=277
I26K Coal Creek Min 80.64 25 P **P** **14 17 13.0 -0.2**
baz=277
L26K Log Cabin Wild 80.84 27 P **P** **14 17 14.3 0.0**
baz=277
E27K Coleen River 80.87 22 P **P** **14 17 14.6 +0.1**
baz=278,SNR=9.1
G27K Doyon Strip 81.04 24 P **P** **14 17 16.0 +0.6**
baz=278,SNR=6.8
M26K Nabesna, AK 81.08 28 P **P** **14 17 15.9 +0.2**
baz=278

H27K Steamboat Moun 81.18 24 P **P** **14 17 16.8 +0.7**
baz=278
I27K Kandik River 81.23 25 P **P** **14 17 17.0 +0.6**
baz=278
RAR Rarotonga 81.25 114 LR LR 14 46 14.9
comp=Z,254nm,21.9s,baz=273,slow=30
K27K Chicken 81.27 26 P **P** **14 17 17.0 +0.5**
baz=278
L27K Beaver Creek, 81.52 27 P **P** **14 17 18.3 +0.3**
baz=278
BCAR Beaver Creek A 81.54 27 P **P** **14 17 18.6 +0.4**
EGAK Eagle 81.55 26 P **P** **14 17 18.5 +0.5**
EGAK Eagle 81.55 26 P **P** **14 17 17.8 -0.3**
baz=279
M27K Edge Creek, AK 81.60 28 P **P** **14 17 18.7 +0.1**
baz=279
ASF Jabal al Asfar 81.85 301 P **P** **14 17 20.6 +0.2**
comp=Z,11nm,1.1s,baz=355,slow=0.8,SNR=15
comp=Z,11nm,1.1s
BVCY Beaver Creek 82.06 28 P **P** **14 17 21.3 +0.4**
baz=280
CTG Chitna Glacier 82.08 29 P **P** **14 17 21.8 +0.7**
baz=279
YUK3 Moose Creek 82.36 29 P **P** **14 17 23.1 +0.4**
baz=280
ARCES ARCESS Array B 82.36 339 P **P** **14 17 21.3 -1.0**
comp=Z,7.6nm,1.0s,baz=68,slow=4.3,SNR=8.0
ARCES LR LR 14 56 37.7
comp=Z,172nm,21.3s,baz=80,slow=38
comp=Z,7.6nm,1.0s
ARCES ARCESS Array B 82.36 339 P **P** **14 17 21.6 -0.7**
ARCES IAmb IAmb 14 17 26.4
comp=Z,18nm,1.1s
ARCES ARCESS Array B 82.36 339 P **P** **14 17 21.6 -0.7**
ARCES pmax pmax
comp=Z,18nm,1.2s
DAWY Dawson 82.43 26 P **P** **14 17 22.7 0.0**
baz=281
I29M Ogilvie Camp, 82.63 25 P **P** **14 17 24.0 +0.2**
baz=281
O28M Mount Upton 82.66 30 P **P** **14 17 24.0 -0.3**
baz=280
MMAI Mount Meron Ar 82.97 302 P **P** **14 17 26.7 +0.5**
comp=Z,7.0nm,1.1s,baz=161,slow=5.3,SNR=6.4
MMAI LR LR 14 58 49.0
comp=Z,131nm,21.2s,baz=231,slow=39
comp=Z,7.0nm,1.1s
EPYK Eagle Plains 83.06 24 P **P** **14 17 25.9 -0.1**
baz=283
BR131 Keskin Array S 83.30 309 *i* P **P** **14 17 27.0 -0.9**
BRTR Keskin Array B 83.30 309 P **P** **14 17 26.8 -1.1**
comp=Z,1.9nm,0.8s,baz=124,slow=6.4,SNR=7.2
BRTR LR LR 15 00 07.1
comp=Z,87nm,19.9s,baz=97,slow=40
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 83.30 309 *i* P **P** **14 17 27.1 -0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 83.79 21 LR LR 14 55 29.9
comp=Z,51nm,21.9s,baz=288,slow=36
INK Inuvik 83.79 21 P **P** **14 17 29.9 +0.3**
INK IAmb IAmb 14 17 30.1
comp=Z,16nm,1.2s
INK Inuvik 83.79 21 P **P** **14 17 29.9 +0.3**
INK pmax pmax
comp=Z,16nm,1.3s
INK Inuvik 83.79 21 P **P** **14 17 29.5 -0.1**
baz=285
EIL Elat 83.89 299 P **P** **14 17 31.4 +0.4**
comp=Z,3.1nm,0.7s,baz=156,slow=2.0,SNR=5.9
EIL LR LR 14 58 45.8
comp=Z,151nm,21.7s,baz=88,slow=38
comp=Z,3.1nm,0.7s
FINES FINESS Array B 83.90 331 P **P** **14 17 29.7 -0.6**
comp=Z,4.2nm,0.8s,baz=86,slow=4.3,SNR=12
comp=Z,4.2nm,0.8s
FINES FINESS Array B 83.90 331 P **P** **14 17 30.6 +0.3**
FINES FINESS Array B 83.90 331 *i* P **P** **14 17 29.5 -0.8**
FINES pmax pmax
comp=Z,4.0nm,0.8s
HYT Haines Junctio 83.94 29 P **P** **14 17 31.0 +0.3**
baz=283
N30M Aishikik Lake 84.00 29 P **P** **14 17 31.6 +0.7**
baz=283
P29M Windy Craggy 84.09 30 P **P** **14 17 31.5 +0.1**
baz=282
VSU Vasula 84.23 328 *i* P **P** **14 17 31.7 -0.3**
P30M Million Dollar 84.36 30 P **P** **14 17 33.2 +0.4**
baz=283
AKASG Malin Array Be 84.41 320 P **P** **14 17 32.1 -1.0**
comp=Z,2.6nm,0.8s,baz=63,slow=5.0,SNR=24
AKASG PP **PP** **14 20 49.3 +1.1**
comp=Z,0.1nm,0.3s,baz=72,slow=9.6,SNR=5.3
AKASG LR LR 14 58 09.5
comp=Z,186nm,18.7s,baz=73,slow=38
comp=Z,2.6nm,0.8s
AKASG Malin Array Be 84.41 320 *i* P **P** **14 17 32.5 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 84.41 320 *i* P **P** **14 17 31.8 -1.3**
AKBB pmax pmax
comp=Z,39nm,1.8s
MNK Minsk 84.45 324 *i* P **P** **14 17 31.1 -2.1**
MNK *i* 14 20 47.1
MNK *i* PPP PPP 14 22 41.2
MNK *i* S **S** **14 27 51.3 -5.9**
MNK *i* SS **SS** **14 33 30.8 +3.3**
MNK *i* SSS SSS 14 36 59.2
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK MLR MLR
comp=Z,164nm,18.0s
MNK MLR MLR
comp=E,135nm,18.0s
MNK Minsk 84.45 324 *i* P **P** **14 17 31.2 -2.1**
comp=E,1.0nm,0.8s
MNK *i* P **P** **14 17 31.2 -2.1**
MNK *i* P **P** **14 17 31.2 -2.1**
comp=Z,10.0nm,0.8s,baz=78
MNK *i* PcP **PcP** **14 17 35.2 -1.7**
MNK *i* PP **PP** **14 20 47.1 -1.2**
MNK *i* PPP PPP 14 22 41.2
MNK *i* S **S** **14 27 51.4 -5.9**
MNK *i* SS **SS** **14 33 30.8 +3.3**
MNK *i* SSS SSS 14 36 59.2
MNK *i* LQ LQ 14 47 18.2
MNK *i* LR LR 14 53 24.8
MNK *i* LRM MLR 14 57 59.6
comp=Z,164nm,18.4s
MNK *i* LRM MLR 14 58 03.6
comp=E,135nm,18.4s
N31M Braeburn, Yuko 84.60 28 P **P** **14 17 34.5 +0.6**
baz=284
O30N Mendenhall 84.63 29 P **P** **14 17 34.6 +0.4**
baz=284
NACGM Naroch 84.98 325 *e* P **P** **14 17 36.3 +0.4**
baz=77
M31M Drury Creek, Y 85.06 27 P **P** **14 17 36.4 +0.2**
baz=285
WHY Whitehorse 85.23 29 P **P** **14 17 37.5 +0.2**
baz=285
SKAG Skagway 85.32 30 P **P** **14 17 38.2 +0.6**
baz=285
N32M Quiet Lake 85.95 28 P **P** **14 17 41.2 +0.5**
baz=286
P33M Teslin, Yukon 86.34 29 P **P** **14 17 42.8 +0.1**
baz=287
C36M Paulatuk 86.67 19 P **P** **14 17 43.8 -0.1**
C36M IAmb IAmb 14 18 05.6
comp=Z,16nm,0.9s
C36M Paulatuk 86.67 19 P **P** **14 17 44.6 +0.6**
baz=294
KMBO Kilima Mbogo 87.41 268 P **P** **14 17 48.9 -0.1**
comp=Z,4.8nm,0.9s,baz=33,slow=4.6,SNR=7.9
KMBO LR LR 14 52 53.3
comp=Z,217nm,21.6s,baz=90,slow=33
comp=Z,4.8nm,0.9s
KMBO Kilima Mbogo 87.41 268 *i* P **P** **14 17 49.7 +0.7**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
R33M Jennings River 87.48 30 P **P** **14 17 48.0 -0.4**
baz=288
BURAR Bucovina Array 87.66 318 P **P** **14 17 49.0 -0.5**
BURAR IAmb IAmb 14 17 50.6
comp=Z,8.3nm,1.0s

MLR Muntele Rosu 87.70 316 P **P** 14 17 48.8 -0.8
comp=Z,2.1nm,0.5s,baz=35,slow=8.6,SNR=5.0
MLR LR LR 15 01 54.9
comp=Z,263nm,20.5s,baz=58,slow=39
comp=Z,2.1nm,0.5s
DLBC Dease Lake 88.25 30 LR LR 14 54 57.0
comp=Z,32nm,20.6s,baz=304,slow=34
UZH Uzhgorod 89.28 320⇓*e*P **P** 14 17 55.0 -1.9
UZH *i* 14 18 04.5
UZH *e* 14 18 12.5
PPT2 Papeete2 89.72 108 *e*LR LR 14 46 37.6
comp=Z,611nm,31.8s
CRVS Cervenica-Dubn 89.73 320 *e*P **P** 14 17 59.7 +0.7
CRVS Cervenica-Dubn 89.73 320 *e* **P** 14 17 59.7 +0.7
MAW Mawson 90.26 200 LR LR 14 56 15.6
comp=Z,56nm,19.0s,baz=43,slow=34
RES Resolute Bay 90.57 10 LR LR 15 00 40.6
comp=Z,62nm,20.3s,baz=351,slow=37
NOA NORSAR Array B 90.80 333 P **P** 14 18 02.9 -0.9
comp=Z,1.0nm,0.8s,baz=62,slow=4.9,SNR=3.0
NOA LR LR 15 03 03.4
comp=Z,151nm,19.5s,baz=60,slow=38
comp=Z,1.0nm,0.8s
IDI Anoyia 91.03 306 LR LR 15 03 06.0
comp=Z,40nm,21.4s,baz=88,slow=38
TBI Tubuai 91.03 113 *e*LR LR 14 47 13.2
comp=Z,414nm,25.8s
BBB Bella Bella 91.42 36 LR LR 14 57 22.2
comp=Z,70nm,19.2s,baz=272,slow=34
VNDA Vanda 91.42 172 P **P** 14 18 05.1 -1.1
comp=Z,3.5nm,0.9s,baz=303,slow=5.1,SNR=9.9
comp=Z,3.5nm,0.9s
VNDA Vanda 91.42 172 P **P** 14 18 06.9 +0.7
VNDA IAmb IAmb 14 18 15.6
comp=Z,6.7nm,1.1s
VNDA Vanda 91.42 172 P **P** 14 18 06.9 +0.7
VNDA pmax pmax
comp=Z,7.0nm,1.1s
VYHS Vyhne 91.51 320 *e*P **P** 14 18 07.6 +0.2
VYHS Vyhne 91.51 320 *e* **P** 14 18 07.5 +0.2
JMIC Jan Mayen 91.76 346 LR LR 15 03 10.1
comp=Z,95nm,20.1s,baz=54,slow=38
MORC Moravsky Berou 91.87 322 *e*P **P** 14 18 08.8 -0.2
JAVC Velka Javorina 92.11 321 *e*P **P** 14 18 10.7 +0.5
VRAC Vranov 92.62 321 LR LR 15 01 26.8
comp=Z,188nm,21.0s,baz=84,slow=37
VRAC Vranov 92.62 321 *e*P **P** 14 18 12.2 -0.2
KRUC Moravsky 92.83 321 *e*P **P** 14 18 13.0 -0.4
YKA Yellowknife Ar 93.35 23 P **P** 14 18 14.3 -1.2
comp=Z,1.0nm,0.6s,baz=301,slow=4.8,SNR=7.4
YKA LR LR 15 05 55.4
comp=Z,56nm,18.4s,baz=321,slow=39
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 93.35 23 *i* P **P** 14 18 15.3 -0.2
YKA pmax pmax
comp=Z,1.0nm,0.5s
BRG Berggiesshubel 93.61 323 *e*(P) **P** 14 18 17.2 +0.2
BRG Amp 14 18 18.8
comp=Z,19nm,1.8s
BRG Berggiesshubel 93.61 323 *e*P **P** 14 18 17.1 +0.2
BRG pmax pmax
comp=Z,19nm,1.8s
BRG MLR MLR
comp=E,176nm,22.6s
BRG MLR MLR
comp=Z,195nm,18.5s
BRG MLR MLR
comp=N,87nm,23.3s
MBAR Mbarara 93.69 270 LR LR 14 56 52.8
comp=N,224nm,21.6s,baz=47,slow=33
CLL Collm 93.98 324 *e*P **P** 14 18 17.0 -1.7
CLL *e* 14 22 04.0
CLL pmax pmax
comp=Z,23nm,1.8s
CLL pmax pmax
comp=Z,15nm,1.5s
CLL Collm 93.98 324 *e*P **P** 14 18 17.0 -1.7
comp=Z,23nm,1.8s
CLL *e*PP **PP** 14 22 04.0 -0.5
comp=Z,15nm,1.5s
CLL LmV 14 26 00.0
comp=Z,100nm,18.7s
CLL LmV 14 46 00.0
comp=Z,100nm,19.1s
CLL LmV 15 07 00.0
comp=Z,200nm,20.6s
GERES GERESS Array B 94.55 322 P **P** 14 18 20.4 -1.1
comp=Z,1.9nm,1.1s,baz=77,slow=5.8,SNR=10
GERES PP **PP** 14 22 09.9 +0.7
comp=Z,0.1nm,0.3s,baz=23,slow=7.2,SNR=3.4
comp=Z,1.9nm,1.1s
TAOE Nuku Hiva Isla 97.05 98 *e*LR LR 14 50 01.1
comp=Z,480nm,24.2s
DAVOX Davos/Dischmat 97.75 321 LR LR 15 05 43.6
comp=Z,130nm,21.8s,baz=80,slow=37
J04D Umpqua Nationa 98.62 43 P **P** 14 18 40.0 -0.2
baz=295
YBH Yreka Blue Hor 98.84 44 LR LR 14 59 42.8
comp=Z,88nm,19.1s,baz=296,slow=33
LSZ Lusaka 98.86 256 LR LR 15 00 09.9
comp=Z,180nm,20.2s,baz=92,slow=34
L04D Klamath Falls 98.92 44 P **P** 14 18 40.7 -0.8
baz=294
J05D Fort Rock, OR 99.19 42 P **Pdif** 14 18 42.3 -0.3
baz=295
NEW Newport 99.47 37 LR LR 14 57 19.0
comp=Z,88nm,21.6s,baz=300,slow=32
NEW Newport 99.47 37 P **Pdif** 14 18 43.4 -0.2
baz=299
NVAR Mina Array Bea 103.31 46 Pdiff **Pdif** 14 19 01.2 0.0
comp=Z,0.5nm,0.7s,baz=256,slow=4.6,SNR=4.3
HLID Hailey 103.45 40 P **Pdif** 14 19 01.0 -0.7
baz=300
ESDC Sonseca Array 110.05 320 PP **PP** 14 24 08.4 +2.9
comp=Z,1.4nm,1.1s,baz=34,slow=9.6,SNR=4.8
TXAR Lajitas Array 118.37 48 PKP **PKPdf** 14 23 48.1 -0.8
comp=Z,1.2nm,0.8s,baz=260,slow=1.2,SNR=13
JCT Junction City 120.42 44 P **PKPdf** 14 23 52.0 -0.7
baz=308
MIAR Mount Ida 121.71 37 P **PKPdf** 14 23 54.6 -0.4
baz=315
WVT Waverly 123.68 31 P **PKPdf** 14 23 58.0 -0.7
baz=321
JTS Las Juntas de 143.66 54 *e*P PKPab 14 24 31.5 -1.7
BCIP Isla Barro Col 148.33 50 *e*P **PKPdf** 14 24 43.7 -0.9
AZU Azuero 148.85 53 *e*P **PKPdf** 14 24 40.2 -5.1
CAPC Capurgana 150.52 48 *e*P **PKPdf** 14 24 44.2 -3.8
SJCC San Jacinto, C 151.16 43 *e*P **PKPbc** 14 24 54.8 -0.2
UREC San Jos de Ur 152.44 47 *e*P **PKPdf** 14 24 52.9 +1.9
ZARC Zaragoza, Cauc 153.09 46 *e*P **PKPdf** 14 24 53.2 +1.2
CBOC Ciudad Bolivar 153.34 51 *e*P **PKPbc** 14 24 56.7 -3.4
FLF1 Flavio Alfaro- 153.50 67 *e*P **PKPbc** 14 24 57.4 -2.9
OCAC Ocana 153.62 43 *e*P **PKiKP** 14 25 01.4 +0.7
PLMC San Jos del P 153.74 53 *e*P **PKPdf** 14 24 49.5 -3.4
PTBC PUERTO BERRIO 154.04 47 *e*P **PKPbc** 14 24 59.4 -2.0
GUY2C Guyana, Caldas 154.24 51 *e*P **PKPdf** 14 24 55.4 +1.2
YOTC Yotoco, Valle 154.25 54 *e*P **PKPdf** 14 24 52.5 -1.3
NORC Norcasia 154.39 49 *e*P **PKPdf** 14 24 54.8 +0.9
OTAV Otavalo 154.48 64 *e*P **PKPdf** 14 24 56.1 +1.6
BBAC Balboa, Cauca 154.62 59 *e*P **PKPdf** 14 24 52.3 -2.1
POPC Popayan, Colom 154.82 58 *e*P **PKPdf** 14 24 53.5 -1.2
BARC Barichara 154.90 45 *e*P **PKPdf** 14 24 55.0 +0.2
SPBC San Pablo de B 154.92 48 *e*P **PKiKP** 14 25 04.5 +1.1
SOCV Socops 155.15 38 *e*P **PKPdf** 14 24 57.5 +2.6
RUSC La Rusia 155.47 46 *e*P **PKPdf** 14 24 59.0 +3.1
PRAC Prado 155.56 53 *e*P **PKPdf** 14 24 55.9 +0.4
CHIC Chingaza 155.86 49 *e*P **PKPdf** 14 24 59.3 +3.0
LPAZ La Paz 166.97 113 PKP **PKPdf** 14 25 07.4 -0.7
comp=Z,3.2nm,1.1s,baz=270,slow=3.0,SNR=4.8
LPAZ PKPab **PKPab** 14 26 11.8 -0.1
comp=Z,3.2nm,0.9s,baz=315,slow=2.6,SNR=7.0
LPAZ La Paz 166.97 113 *e*P **PKPdf** 14 25 05.7 -2.4
SIV San Ignacio 173.10 130 PKP **PKPdf** 14 25 09.7 -1.2
comp=Z,0.6nm,0.3s,baz=260,slow=2.5,SNR=7.0

NOU 13 14:05:45.2, 23°.19S×174°.84E, h0km, ML4.5/8, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	6.53	284	P		Pn	14 07 21.1	-1.5
PINNC	Pines Island,	6.84	273	P		Pn	14 07 25.9	-0.9
OUENC	Ouen Island, N	7.42	274	P		Pn	14 07 35.1	+0.3
YATNC	Mamie plateau,	7.43	277	P		Pn	14 07 34.9	0.0
ONTNC	Ouen Toro	7.79	275	P		Pn	14 07 40.1	+0.2
DZM	Mont Dzumac	7.84	277	P		Pn	14 07 41.1	+0.5
NOUC	Port Laguerre	7.96	276	P		Pn	14 07 41.1	-1.1
KOUNC	Koumac, New Ca	10.15	283	P		Pn	14 08 13.3	+1.1
MULG	Mulgathing	36.95	250	P		P	14 12 58.5	+2.3

*IDC **13** 14:06:48.0±1.5, 4°.30N×62°.40E, h0km, mb3.9/7, mbtmp3.9/7, MS3.8/6, Error ellipse: s-maj=50.0km s-min=24.5km az=37.0*
ISC 13 14:06:51.7±1.6, 4°.4N±0°.3×62°.4E±0°.2, h22km, n13, σ0.95/7, mb3.8/7, MS3.8/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	25.73	258	LR		LR	14 21 20.8	
MBAR	Mbarara	32.03	262	LR		LR	14 27 21.5	
CMAR	Chiang Mai Arr	38.34	66	P		P	14 14 12.4	+1.0
BRTR	Keskin Array B	43.77	328	P		P	14 14 56.6	+0.7
MKAR	Makanchi Array	45.65	19	LR		LR	14 37 01.6	
AKTO	Aktyubinsk	46.07	356	P		P	14 15 14.1	+0.2
LBTB	Lobatse	46.17	229	LR		LR	14 31 16.7	
KURBB	Kurchatov Arra	48.06	14	LR		LR	14 36 23.4	
TSUM	Tsumeb	49.94	241	LR		LR	14 36 14.7	
ZALV	Zalesovo Beam	52.72	16	P		P	14 16 03.2	-1.4
ESDC	Sonseca Array	69.12	311	P		P	14 17 56.5	0.0
WRA	Warramunga Arr	74.60	112	P		P	14 18 29.6	-0.2
ASAR	Alice Springs	74.92	116	P		P	14 18 31.2	-0.4

*IDC **13** 14:18:35.7±1.1, 22°.41S×172°.98E, h0km, mb3.8/5, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=33.8km s-min=27.3km az=159.0*
ISC 13 14:18:40.6±1.0, 22°.4S±0°.2×173°.0E±0°.1, h32km, n12, σ1.9s29/10, mb4.0/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.09	272	Pn		Pn	14 20 08.3	-0.2
DZM				Sn		Sn	14 21 18.2	+1.0
ASAR	Alice Springs	35.92	260	P		P	14 25 37.8	-0.5
WRA	Warramunga Arr	36.07	267	P		P	14 25 38.3	-1.3
H11S2	WAKE ISLAND Hy	41.14	351	T		T	15 09 52.8	
H11S3	WAKE ISLAND Hy	41.15	351	T		T	15 09 55.1	
H11S1	WAKE ISLAND Hy	41.16	351	T		T	15 09 54.0	
QSPA	South Pole Qui	67.63	180	P		P	14 29 35.3	+1.2
PETK	Petropavlovsk-	76.40	351	P		P	14 30 28.3	+1.8
ILAR	Eielson Array	92.27	16	P		P	14 31 46.7	-0.2
ARCES	ARCESS Array B	129.03	346	PKP		PKPdf	14 37 43.8	-0.7
GERES	GERESS Array B	148.94	333	PKPbc		PKPbc	14 38 23.4	-1.8
TORD	Torodi Ar. Bea	167.60	223	PKPab		PKPab	14 39 49.8	-0.4

*IDC **13** 14:21:40.4±1.4, 32°.25S×71°.86W, h0km, mb4.2/4, mbtmp4.2/5, ML4.6/1, MS3.6/6, Error ellipse: s-maj=63.9km s-min=25.3km az=104.0*
*SJA **13** 14:21:43.2±0.7, 32°.46S×71°.81W, h15km±3km, ML4.0, MW3.9*
*GUC **13** 14:21:44.5±0.9, 32°.41S×71°.66W, h36km±5km, ML4.1*
*NEIC **13** 14:21:45.6±2.3, 32°.41S±0°.04×71°.81W±0°.06, h35km±2km, mb4.3/3, Mwr3.8/33, ML4.1(GUC), Error ellipse: s-maj=9.2km s-min=4.6km az=61.0*
*NEIC **13** 14:21:45.6, 32°.41S×71°.81W, h35km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=4.67; Mθθ=0.65; Mφφ=-5.32; Mrθ=-2.35; Mrφ=-1.82; Mθφ=-2.27; Fault plane solution: Mw=6.27000×10^14 NP1:φ1=356.06000°, δ=34.03000°, λ=57.97000°. NP2:φ2=213.11000°, δ=61.68000°, λ=109.70000°. Principal axes: T 5.9159, Plg=67.0000°, Azm=161.0000°; N 0.6488, Plg=17.0000°, Azm=23.0000°; P -6.5647, Plg=15.0000°, Azm=289.0000°;*
ISC 13 14:21:41.6±1.2, 32°.35S±0°.02×71°.82W±0°.03, h8km±8km, n111, σ1.9s39/141, mb4.4/4, MS4.2/5, 1C-9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VA06	Catapilco	0.49	116			Pb	14 21 53.5	+1.0
VA06	Catapilco	0.49	116	⇓*i*P		Pn	14 21 53.8	-1.2
VA06				*i* S		Sb	14 21 59.8	0.0
VA06				IAML			14 22 00.4	
	comp=E,31μm,0.3s							
VA01	Torpederas	0.69	168			Pn	14 21 57.1	-0.6
VA01	Torpederas	0.69	168	⇓*i*P		Pn	14 21 57.1	-0.6
VA01				*i* S		Sb	14 22 06.0	+0.4
VA01				IAML			14 22 08.7	
	comp=E,10μm,0.2s							
VA01	Torpederas	0.69	168	*e*P		Pg	14 21 42.7	-12
VA01				*e*P		Pn	14 21 57.0	-0.6
VA01				*e*S		Pn	14 21 57.0	-0.6
VA01				*e*S		Sb	14 22 06.5	+0.9
ROC1	El Roble	0.93	133			Pb	14 21 59.8	-0.2
ROC1	El Roble	0.93	133	*e*P		Pb	14 22 00.0	0.0
ROC1				*e*S		Sb	14 22 12.0	-0.5
ROCH	El Roble	0.93	133	*i* P		Pb	14 22 00.5	+0.5
ROCH				*i* S		Sg	14 22 11.7	+0.3
ROCH				IAML			14 22 15.0	
	comp=N,9μm,0.4s							
MT02	Curacav	1.08	148	Pn		Pb	14 22 02.6	+0.2
MT02	Curacav	1.08	148	⇓*i*P		Pn	14 22 02.8	-0.2
MT02				*i* S		Sg	14 22 15.9	-0.3
MT02	Curacav	1.08	148	*e*P		Pg	14 21 57.0	-5.2
MT02				*e*P		Pg	14 22 02.0	-0.2
MT02				*e*S		Sg	14 22 16.2	0.0
MT02				IAML			14 22 18.5	
	comp=Z,4μm,0.6s							
VA03	San Esteban	1.15	112			Pb	14 22 03.7	0.0
VA03	San Esteban	1.15	112	⇓*i*P		Pb	14 22 03.8	0.0
VA03				*i* S		Sg	14 22 18.0	-0.6
VA03				IAML			14 22 20.8	
	comp=N,11μm,0.4s							
PEL	Peldehue	1.24	130			Pn	14 22 05.2	-0.2
PEL	Peldehue	1.24	130	*e*P		Pg	14 22 05.5	0.0
PEL				*e*S		Sb	14 22 20.8	-0.8
PEL				IAML			14 22 23.3	
	comp=N,13μm,0.4s							
PEL	Peldehue	1.24	130	*e*P		Pg	14 22 00.0	-5.4
PEL				*e*P		Pg	14 22 05.4	0.0
PEL				*e*S		Sn	14 22 22.0	-0.3
VA05	Santo Domingo	1.32	172			Pg	14 22 07.0	+0.2
VA05	Santo Domingo	1.32	172	*e*P		Pg	14 22 07.1	+0.3
VA05				*e*S		Sb	14 22 23.8	+0.1
VA05				IAML			14 22 32.2	
	comp=E,11μm,0.3s							
CO02	Combarbal	1.34	32			Pg	14 22 07.9	+0.7
CO02	Combarbal	1.34	32	⇓*i*P		Pg	14 22 08.0	+0.8
CO02				*e*S		Sn	14 22 26.7	+2.0
CO02				IAML			14 22 31.3	
	comp=E,7μm,0.3s							
CO02	Combarbal	1.34	32	*e*P		Pg	14 22 08.0	+0.8
CO02				*e*S		Sn	14 22 27.0	+2.3
CO02				*e*S		Sn	14 22 28.8	+4.1
CO02				IAML			14 22 29.4	
	comp=Z,2μm,0.4s							
MT05	Renca	1.39	139	Pn		Pb	14 22 07.5	-0.2
MT05	Renca	1.39	139	⇓*i*P		Pb	14 22 07.5	-0.2
MT05				*i* S		Sb	14 22 24.9	-0.7
MT05				IAML			14 22 27.9	
	comp=E,14μm,0.5s							
MT05	Renca	1.39	139	*e*P		Pn	14 22 02.0	-5.3
MT05				*e*P		Pn	14 22 07.8	+0.5
MT05				*e*S		Sg	14 22 26.0	-0.1
MT05				IAML			14 22 27.9	
	comp=Z,3μm,0.3s							
MT01	Popeta	1.59	163			Pb	14 22 11.1	-0.1
MT01	Popeta	1.59	163	⇓*i*P		Pb	14 22 11.1	-0.1
MT01				*i* S		Sn	14 22 30.4	-0.3
MT01				IAML			14 22 36.3	
	comp=N,2μm,0.2s							
MT01	Popeta	1.59	163	*e*P		Pb	14 22 11.0	-0.1
MT01				*e*S		Sb	14 22 31.4	0.0
MT01				IAML			14 22 37.5	
	comp=Z,2μm,0.3s							
MT09	Talagante	1.59	154			Pb	14 22 11.1	-0.2
MT09	Talagante	1.59	154	⇓*i*P		Pb	14 22 11.2	0.0
MT09				*i* S		Sn	14 22 31.1	+0.2
MT09				IAML			14 22 40.7	
	comp=N,4μm,0.4s							
MT03	Universidad Ad	1.59	136			Pn	14 22 10.2	0.0
MT03	Universidad Ad	1.59	136	*i* P		Pb	14 22 10.7	-0.5
MT03				*e*S		Sn	14 22 30.5	-0.4
MT03				IAML			14 22 37.1	
	comp=N,7μm,0.1s							
MT03	Universidad Ad	1.59	136	*e*P		Pb	14 22 10.8	-0.4
MT03				*e*S		Sg	14 22 33.5	+0.8
MT03				IAML			14 22 36.9	
	comp=Z,2μm,0.2s							
FCH	Farellones	1.62	128	⇓*i*P		Pn	14 22 11.1	+0.4
FCH				*i* S		Sn	14 22 30.9	-1.0
FCH				IAML			14 22 33.1	
	comp=E,6μm,0.4s							
CO06	Fray Jorge	1.68	5			Pb	14 22 12.8	+0.2
CO06	Fray Jorge	1.68	5	*i* P		Pb	14 22 12.9	+0.2
CO03	El Pedregal	1.79	33			Pg	14 22 15.0	-0.8
CO03	El Pedregal	1.79	33	*e*P		Pg	14 22 15.0	-0.8
CO03	El Pedregal	1.79	33	*e*P		Pn	14 22 09.5	-3.3
CO03				*e*P		Pg	14 22 15.3	-0.5
CO03				*e*S		Sg	14 22 42.0	+3.0
LMEL	Las Melosas	2.02	138			Pn	14 22 17.3	+1.2
LMEL	Las Melosas	2.02	138	*i* P		Pn	14 22 17.3	+1.2
LMEL				IAML			14 22 49.0	
	comp=N,3μm,0.4s							
BO01	Tunca	2.13	163			Pn	14 22 18.8	+1.4
BO01	Tunca	2.13	163	*e*P		Pn	14 22 19.0	+1.5
BO01				IAML			14 22 54.5	
	comp=Z,883nm,1.1s							
RTLS	Leoncito	2.21	76	*e*P		Pg	14 22 22.9	-1.0
RTLS				*e*P		Pg	14 22 23.0	-1.0
RTLS				*e*S		Sg	14 22 55.3	+2.7
RTLS				IAML			14 22 58.9	
	comp=Z,969nm,0.8s							
GO04	Tololo Observa	2.34	22			Pb	14 22 23.0	-1.1
GO04	Tololo Observa	2.34	22	*e*P		Pb	14 22 22.8	-1.3
GO04				*e*S		Sb	14 22 53.6	+0.3
GO04				IAML			14 23 03.1	
	comp=N,3μm,0.4s							
GO04	Tololo Observa	2.34	22	*e*P		Pb	14 22 23.0	-1.1
GO04				*e*S		Sg	14 22 58.2	+1.6
CO05	La Serena	2.47	12			Pb	14 22 24.1	-2.2
CO05	La Serena	2.47	12	*e*P		Pn	14 22 22.0	-0.2
CO05				IAML			14 23 10.0	
	comp=E,714nm,0.5s							
ARCO	CERRO ARCO	2.49	102	*e*P		Pb	14 22 27.0	+0.4
ARCO				*e*S		Sn	14 22 54.0	+0.8
ARCO				IAML			14 23 07.2	
	comp=Z,649nm,0.9s							
ASAL	Salagasta	2.54	96	*e*P		Pb	14 22 28.0	+0.6
ASAL				*e*S		Sb	14 22 57.0	-1.8
ASAL				*e*S		Sb	14 22 57.5	-1.3
BO02	Sierra Bellavi	2.59	161			Pn	14 22 25.2	+1.4
BO02	Sierra Bellavi	2.59	161	*e*P		Pn	14 22 25.0	+1.1
BO02				*e*P		Pn	14 22 25.5	+1.6
BO02				*e*S		Sn	14 22 57.0	+1.4
BO02				IAML			14 23 02.9	
	comp=Z,1μm,0.4s							
AAGR	Agrelo	2.63	107	*e*P		Pb	14 22 29.0	0.0
AAGR				*e*S		Sg	14 23 05.4	-0.6
GO05	Huala	2.66	182			Pn	14 22 25.1	+0.3
GO05	Huala	2.66	182	⇑*i*P		Pn	14 22 25.1	+0.3
GO05	Huala	2.66	182	*e*P		Pn	14 22 25.0	+0.3
GO05				*e*S		Sn	14 22 56.5	-0.7
CO01	Juntas del Tor	2.79	33			Pn	14 22 30.7	-1.1
CO01	Juntas del Tor	2.79	33	*e*P		Pb	14 22 30.4	-1.4
CO01				*e*S		Sg	14 23 09.5	-1.6
CO01				IAML			14 23 17.1	
	comp=Z,266nm,0.5s							
ZON	Zonda	2.79	74	Pn		Pb	14 22 31.2	-0.5
ACCO	Cerro Coronel	2.94	54	*e*P		Pb	14 22 33.8	-0.6
ACCO				*e*P		Pb	14 22 34.0	-0.4
ACCO				*e*S		Sb	14 23 11.0	+0.5
ACCO				*e*S		Sb	14 23 12.0	+1.4
RTLL	Cerro Villicun	3.02	71	*e*P		Pb	14 22 34.0	-1.7
RTLL				*e*S		Sn	14 23 06.5	+0.2
RTLL				*e*S		Sb	14 23 11.0	-1.8
ML02	Panimavida	3.42	175	Pn		Pn	14 22 36.3	+1.1
ML02	Panimavida	3.42	175	*e*P		Pn	14 22 36.5	+1.2
LCO	Las Campanas	3.46	16	Pn		Pn	14 22 37.9	+1.8
LCO	Las Campanas	3.46	16	*e*P		Pn	14 22 38.0	+2.0
RFA	San Rafael	3.70	132	*e*P		Pn	14 22 42.0	+2.9
RFA				*e*P		Pn	14 22 42.2	+3.1
RFA				*e*S		Sg	14 23 43.7	+3.3
AC05	El Transito	3.74	21			Pn	14 22 43.0	+3.2
AC05	El Transito	3.74	21	*e*P		Pn	14 22 42.8	+3.0
AC05				*e*P		Pn	14 22 43.0	+3.2
AC05				*e*S		Sb	14 23 30.0	-3.6
AC05				IAML			14 23 39.0	
	comp=Z,226nm,1.1s							
AVFE	Valle Fertil	4.09	67	*e*P		Pn	14 22 43.0	-1.5
AVFE				*e*P		Pn	14 22 48.4	+3.9
AVFE				*e*S		Sb	14 23 43.0	-0.5
AVFE				IAML			14 23 47.4	
	comp=Z,225nm,0.5s							
AC04	Llanos de Chal	4.18	9	Pn		Pn	14 22 46.8	+1.1
BI05	Punta Hualpn	4.53	194	Pn		Pn	14 22 49.5	-1.0
ACHE	Chepes	4.55	76	*e*P		Pn	14 22 54.0	+3.1
AC02	Maricunga	5.97	24	Pn		Pn	14 23 13.2	+2.5
H03N1	Juan Fernandez	6.06	258	T		T	14 29 47.6	
	baz=87,slow=73,SNR=3268							
H03N3	Juan Fernandez	6.08	258	T		T	14 29 47.3	
	baz=87,slow=73,SNR=4354							
H03N2	Juan Fernandez	6.08	258	T		T	14 29 48.5	
	baz=87,slow=73,SNR=3376							
H03S3	Juan Fernandez	6.13	254	T		T	14 29 44.6	
	baz=82							
H03S1	Juan Fernandez	6.13	254	T		T	14 29 43.3	
	baz=82							
H03S2	Juan Fernandez	6.14	254	T		T	14 29 40.3	
	baz=82							
AC01	Pan de Azucar	6.27	10	Pn		Pn	14 23 16.3	+1.9
GO06	Curarrehue	7.23	178	Pn		Pn	14 23 28.2	+0.5
PLCA	Paso Flores	8.43	173	Pn		Pn	14 23 45.7	+1.6
	comp=Z,1.6nm,0.3s,baz=336,slow=9.9,SNR=72							
	comp=Z,4.2nm,0.3s							
PLCA	Paso Flores	8.43	173	Pn		Pn	14 23 45.6	+1.5
LL04	Puerto Octay	8.56	183	Pn		Pn	14 23 44.9	-0.9
TRQA	Tornquist	9.86	128			Pn	14 24 04.0	+0.3
LVC	Limon Verde	10.04	16	LR		LR	14 28 21.8	
	comp=Z,113nm,21.7s,baz=178,slow=40							
PB07	IPOC Station P	10.72	10	Pn		Pn	14 24 15.6	0.0
PLTB	Pedras Altas	15.46	93	Pn		Pn	14 25 16.5	-3.5
PLTB				IAmb		IAmb	14 25 47.3	
	comp=Z,15nm,1.5s							
NNA	Nana	20.78	346	LR		LR	14 32 20.7	
	comp=Z,33nm,19.3s,baz=194,slow=31							
PMSA	Palmer Station	32.81	174	LR		LR	14 40 16.1	
	comp=Z,72nm,19.3s,baz=52,slow=34							
VNA2	Neumayer--Watz	51.47	158	P		P	14 30 48.1	+1.2
	baz=278,slow=6.0							
SNAA	Sanae	53.05	158	P		P	14 30 59.4	+0.6

SNAA	**Sanae**		53.05	158	P	**P**		14 30 59.3	+0.5
	comp=Z,0.8nm,0.5s,baz=266,slow=11,SNR=20								
	comp=Z,0.8nm,0.5s								
TROLL	**Troll, Antarti**		54.76	159	P	**P**		14 31 12.3	+0.9
QSPA	**South Pole Qui**		57.88	180	P	**P**		14 31 35.1	+1.3
	comp=Z,1.4nm,0.6s,baz=161,slow=3.1,SNR=15								
	comp=Z,1.4nm,0.6s								
QSPA	**South Pole Qui**		57.88	180	P	**P**		14 31 34.3	+0.5
QSPA					IAmb	IAmb		14 31 35.3	
	comp=Z,10nm,1.5s								
ANMO	**Albuquerque**		74.42	331	LR	LR		15 02 53.0	
	comp=Z,127nm,21.6s,baz=300,slow=33								
DBIC	**Dimbokro**		74.48	72	P	**P**		14 33 20.8	-0.1
	comp=Z,2.5nm,0.6s,baz=220,slow=5.9,SNR=4.2								
	comp=Z,2.5nm,0.6s								
SUR	**Sutherland**		75.47	119	LR	LR		15 02 12.1	
	comp=Z,155nm,21.0s,baz=108,slow=32								
TORD	**Torodi Ar. Bea**		83.48	70	P	**P**		14 34 10.3	+0.1
	comp=Z,1.4nm,0.7s,baz=252,slow=4.1,SNR=7.8								
	comp=Z,1.4nm,0.7s								
TORD	**Torodi Ar. Bea**		83.48	70	P	**P**		14 34 08.4	-1.8
TORD					IAmb	IAmb		14 34 11.0	
	comp=Z,2.0nm,0.8s								
SCHQ	**Schefferville**		86.93	3	LR	LR		15 12 20.9	
	comp=Z,113nm,22.0s,baz=328,slow=35								
WRA	**Warramunga Arr**		122.29	209	PKP	**PKPdf**		14 40 36.9	-1.0
	comp=Z,0.4nm,0.4s,baz=154,slow=1.6,SNR=5.9								
H11S2	**WAKE ISLAND Hy**		25.96	270	T	T		16 59 44.7	
	baz=118,slow=74,SNR=69								
H11S1	**WAKE ISLAND Hy**		25.97	270	T	T		16 59 45.1	
	baz=118,slow=74,SNR=93								
H11S3	**WAKE ISLAND Hy**		25.98	270	T	T		16 59 45.4	
	baz=118,slow=74,SNR=77								
H11N3	**WAKE ISLAND Hy**		26.33	272	T	T		17 00 11.6	
	baz=118,slow=75,SNR=14								
H11N1	**WAKE ISLAND Hy**		26.35	272	T	T		17 00 12.1	
	baz=118,slow=75,SNR=14								
H11N2	**WAKE ISLAND Hy**		26.35	272	T	T		17 00 15.4	
	baz=118,slow=75,SNR=27								
ZALV	**Zalesovo Beam**		152.72	31	PKPbc	**PKiKP**		14 41 38.8	+0.1
	comp=Z,2.0nm,0.6s,baz=307,slow=3.8,SNR=9.7								
MKAR	**Makanchi Array**		155.52	46	PKPab	**PKPab**		14 42 01.6	+0.2
	comp=Z,0.5nm,0.5s,baz=300,slow=4.1,SNR=5.1								

REN ***13*** *14:30:23.3±1.1, 37°.48N±0°.02×118°.78W±0°.04, h6km±6km, Error ellipse: s-maj=4.6km s-min=3.0km az=116.0*
NCEDC ***13*** *14:30:23.3±1.2, 37°.48N±0°.02×118°.78W±0°.04, h6km±5km, ML3.0/12, ML2.7/8(REN), ML2.7/64(NEIC), Error ellipse: s-maj=4.2km s-min=3.3km az=109.0*

NEIC 13 14:30:23.8±1.3, 37°.50N±0°.01×118°.77W±0°.04, h4km±7km, Error ellipse: s-maj=5.1km s-min=1.9km az=94.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCCR	**Rock Creek Can**	0.04	105		Pg	14 30 25.0	-0.1
MCVM	**Convict Lake**	0.10	333		Pg	14 30 26.0	0.0
WMD		0.12	119		Pg	14 30 25.9	-0.2
MLAC	**Mammoth, Mammo**	0.14	338		Pg	14 30 27.1	+0.4
MLAC					Sg	14 30 30.0	+1.3
MDRNC	**Doe Ridge**	0.15	340		Pg	14 30 27.2	+0.3
SCHCA	**Scheelite**	0.15	155		Pg	14 30 26.4	-0.5
MLCM	**Laurel Creek C**	0.16	315		Pg	14 30 27.0	-0.1
ORC	**Owens River**	0.17	33		Pg	14 30 27.4	+0.2
MGPM	**Gravel Pit**	0.17	321		Pg	14 30 27.2	+0.1
MCBM	**Casa Benchmark**	0.18	326		Pg	14 30 27.5	+0.1
MCBM					Sg	14 30 30.8	+1.0
MCSM	**Casa Diablo Ho**	0.19	326		Pg	14 30 27.8	+0.2
MEMM	**East Mammoth H**	0.22	321		Pg	14 30 28.2	+0.2
OMMB	**Old Mammoth Mi**	0.22	302		Pg	14 30 27.8	-0.3
OMMB					Sg	14 30 30.9	-0.1
OMMB	**Old Mammoth Mi**	0.22	302	IAML		14 30 31.1	
	comp=E,807nm,0.4s						
OMMB				IAML		14 30 31.1	
	comp=N,900nm,0.2s						
MTUM	**Tungsten Hills**	0.22	131		Pg	14 30 27.8	-0.3
MMLB	**Mammoth Lakes**	0.23	314		Pg	14 30 28.5	+0.1
MMLB					Sg	14 30 32.3	+0.9
MMPM	**Mammoth Pass**	0.23	299		Pg	14 30 28.1	-0.2
MLIM	**Lincoln Peak**	0.24	305		Pg	14 30 28.7	+0.2
MLIM					Sg	14 30 32.6	+0.9
MMSM	**Mammoth Summit**	0.25	303		Pg	14 30 28.6	-0.1
MDYM	**Dry Creek**	0.25	310		Pg	14 30 28.8	+0.1
MDYM					Sg	14 30 32.9	+0.9
MRDM	**Red Cones**	0.25	294		Pg	14 30 28.5	-0.2
MCDM	**Chidago Canyon**	0.27	79		Pg	14 30 29.2	+0.2
BENR	**Benton**	0.27	36		Pg	14 30 29.1	0.0
MRCM	**Red Rock Canyo**	0.27	50		Pg	14 30 29.2	+0.1
MFBM	**Five Bridges**	0.28	104		Pg	14 30 29.5	+0.3
MINS	**Minaret Summit**	0.28	304		Sg	14 30 33.1	+0.1
MDPB	**Devils Postpil**	0.28	299		Pg	14 30 29.0	-0.3
MDPB					Sg	14 30 32.9	-0.2
MDPB	**Devils Postpil**	0.28	299	IAML		14 30 33.7	
	comp=N,1μm,0.8s						
MDPB				IAML		14 30 34.1	
	comp=E,975nm,0.4s						
BHPR	**Bishop**	0.30	131		Pg	14 30 29.3	-0.3
MDCM	**Deadman Creek**	0.30	315		Pg	14 30 29.5	-0.2
MLNR	**Milner Canyon**	0.35	74		Pg	14 30 30.7	+0.1
POCCA	**Poleta Canyon**	0.41	109		Pg	14 30 31.6	-0.2
KCC	**Kaiser Creek**	0.47	249		Pg	14 30 32.0	-0.8
KCC	**Kaiser Creek**	0.47	249		Sg	14 30 38.2	-0.7
HCK	**Huntoon Valley**	0.59	14		Pg	14 30 35.5	+0.3
TIN	**Tinemaha, Big**	0.62	136		Pg	14 30 35.3	-0.4
LUL	**Lundy Lake**	0.64	330		Pg	14 30 36.0	-0.2
LUL					Sg	14 30 45.2	+0.6
DSP	**Deep Springs**	0.65	101		Pg	14 30 35.8	-0.5
DSP					Sg	14 30 44.7	+0.1
LHV	**Little Huntoon**	0.78	16		Pg	14 30 38.7	-0.1
LHV	**Little Huntoon**	0.78	16	IAML		14 30 56.3	
	comp=N,388nm,0.7s						
LHV				IAML		14 30 59.3	
	comp=E,371nm,0.7s						
LCH	**Last Change Ra**	0.93	106		Pg	14 30 40.8	-0.9
LCH	**Last Change Ra**	0.93	106	IAML		14 30 54.0	
	comp=N,175nm,0.5s						
LCH				IAML		14 30 54.2	
	comp=E,152nm,0.4s						
NV08	**Mina Array Sit**	0.97	21		Pg	14 30 42.1	-0.4
NV09	**Mina Array Sit**	1.00	20		Pg	14 30 42.6	-0.4
NVAR	**Mina Array Bea**	1.00	21		Pg	14 30 42.5	-0.5
NV11	**Mina Array Sit**	1.05	27		Pg	14 30 43.5	-0.5
RYN	**Ryan**	1.15	10		Pg	14 30 45.5	-0.3
RYN	**Ryan**	1.15	10	IAML		14 31 01.7	
	comp=E,163nm,0.3s						
RYN				IAML		14 31 02.1	
	comp=N,116nm,0.2s						
CWC	**Cottonwood Cre**	1.19	152		Pg	14 30 45.4	-1.2
GRAC	**Grapevine Rang**	1.23	114		Pg	14 30 47.1	-0.1
GRAC	**Grapevine Rang**	1.23	114	IAML		14 31 07.8	
	comp=N,187nm,0.7s						
MRHM	**Rocky Hill**	1.23	192		Pg	14 30 45.4	-2.0
SPG2	**Springville 2**	1.29	180		Pg	14 30 46.8	-1.8
TPH	**Tonopah**	1.35	64		Pn	14 30 49.2	-0.5
CMB	**Columbia Colle**	1.39	293		Pn	14 30 48.5	-1.5
WLHM	**Little Horse**	1.39	165		Pn	14 30 48.7	-1.6
SGV	**South Grapevin**	1.48	110		Pn	14 30 51.0	-0.4
YERR	**Yerington**	1.53	346		Pn	14 30 52.0	-0.1
MCUB	**Copperopolis B**	1.54	289		Pn	14 30 51.4	-0.7
KVN	**Kaiserville**	1.64	19		Pn	14 30 53.3	-0.3
KVN	**Kaiserville**	1.64	19	IAML		14 31 17.6	
	comp=E,71nm,0.6s						
KVN				IAML		14 31 19.1	
	comp=N,78nm,0.6s						
PNTR	**Pine Nut**	1.72	338		Pn	14 30 55.0	+0.2
PNTR	**Pine Nut**	1.72	338	IAML		14 31 27.2	
	comp=E,44nm,0.8s						
PDRM	**Domengine Ranc**	1.73	228		Pn	14 30 55.0	+0.3
WASM	**Alta Sierra Ca**	1.76	174		Pn	14 30 55.0	-0.4
PARM	**Anticline Ridg**	1.77	226		Pn	14 30 55.5	+0.3
PKEM	**Kettleman Hill**	1.79	217		Pn	14 30 56.1	+0.6
EMB	**Emerald Bay**	1.81	325		Pn	14 30 56.4	+0.4
EMB	**Emerald Bay**	1.81	325	IAML		14 31 30.0	
	comp=E,52nm,0.5s						
EMB				IAML		14 31 30.6	
	comp=N,62nm,0.4s						
BMSM	**Mercy Hot Spri**	1.82	243		Pn	14 30 56.3	+0.3
Q09A	**Carvers**	1.83	43		Pb	14 30 57.8	-0.1
ISA	**Isabella, Lake**	1.85	173		Pn	14 30 56.8	+0.5
ISA				IAML		14 31 22.9	
	comp=N,63nm,0.2s						
ISA				IAML		14 31 26.3	
	comp=E,97nm,0.8s						
VCNR	**Virginia City**	1.93	339		Pn	14 30 58.3	+0.7
PJUM	**Juniper Ridge**	1.94	230		Pn	14 30 57.8	+0.2
BAVM	**Antelope Valle**	2.00	246		Pn	14 30 58.7	+0.4
SLD	**San Luis Dam**	2.00	259		Pn	14 30 58.8	+0.3
CMPM	**Mikes Peak**	2.03	267		Pn	14 30 59.9	+1.0
BBGB	**Big Mountain B**	2.03	244		Pn	14 30 59.6	+0.7
PSRM	**Scobie Ranch**	2.04	217		Pn	14 30 59.4	+0.5
PSMM	**Smith Mountain**	2.04	226		Pn	14 30 59.2	+0.2
MPK	**Martis Peak**	2.05	332		Pn	14 30 57.1	-2.3
MPK				IAML		14 31 47.3	
	comp=N,48nm,0.7s						
MPK				IAML		14 32 02.8	
	comp=E,46nm,0.9s						
COSM	**Mount Oso**	2.07	271		Pn	14 31 00.3	+0.8
PMPB	**Monarch Peak**	2.07	232		Pn	14 30 59.8	+0.4
PHFM	**Heflinger Ranc**	2.08	220		Pn	14 30 59.7	+0.2
TPNV	**Topopah Spring**	2.08	104		Pn	14 30 59.2	-0.5
TPNV	**Topopah Spring**	2.08	104	IAML		14 31 35.3	
	comp=E,41nm,0.8s						
TPNV				IAML		14 31 35.4	
	comp=E,46nm,0.8s						
BBNM	**San Benito**	2.09	243		Pn	14 31 00.8	+1.1
PSTM	**Stockdale Moun**	2.10	222		Pn	14 31 00.0	+0.2
PKD	**Bear Valley Ra**	2.10	223		Pn	14 30 59.9	+0.1
PHPM	**Hope Ranch**	2.11	225		Pn	14 31 00.1	+0.1
PVCM	**Vineyard Canyo**	2.12	223		Pn	14 31 00.1	+0.1
THIS	**South End of C**	2.12	214		Pn	14 31 00.3	+0.1
PAGB	**Antelope Grade**	2.13	214		Pn	14 31 00.2	0.0
PAGB	**Antelope Grade**	2.13	214	IAML		14 31 41.7	
	comp=E,72nm,0.8s						
GWY	**Greenwater Val**	2.13	127		Pn	14 30 59.5	-0.8
PKLM	**Kerr Lake**	2.13	217		Pn	14 31 00.5	+0.2
PCMM	**Cholame Hills**	2.14	218		Pn	14 31 00.0	-0.4
BVL	**Bear Valley**	2.14	245		Pn	14 31 01.1	+0.7
HFEM	**San Felipe**	2.16	257		Pn	14 31 01.8	+1.2
QSM	**Queen of Sheba**	2.16	134		Pb	14 31 03.7	+0.2
QSM				IAML		14 31 33.9	
	comp=N,33nm,0.7s						
BPIM	**Pinnacles**	2.17	243		Pn	14 31 01.1	+0.5
CMMM	**Mount Mocho**	2.17	270		Pn	14 31 01.4	+0.7
PTRM	**Twissleman Ran**	2.17	213		Pn	14 31 01.2	+0.4
TRAM	**Private Proper**	2.18	214		Pn	14 31 01.2	+0.2
PWKM	**Work Ranch**	2.19	220		Pn	14 31 01.2	+0.2
PPO	**Portuguese Can**	2.20	223		Pn	14 31 01.4	+0.3
AMDNV	**Amargosa**	2.25	117		Pn	14 31 01.6	-0.2
PAHR	**Pah Rah Range**	2.26	348		Pn	14 31 00.7	-1.4
SAO	**San Andreas Ge**	2.26	252		Pn	14 31 02.3	+0.3
SCZ	**Santa Cruz**	2.29	248		Pn	14 31 02.6	+0.3
CMLM	**Mount Lewis**	2.29	270		Pn	14 31 03.8	+1.3
PEAR	**Peavine Mounta**	2.31	336		Pn	14 31 03.2	+0.4
S11A	**Rachel**	2.41	86		Pb	14 31 08.3	+0.6
S11A				IAML		14 31 57.2	
	comp=N,48nm,1.2s						
HAST	**Hastings Reser**	2.49	244		Pn	14 31 05.5	+0.4
BCWM	**Chews Ridge**	2.54	243		Pn	14 31 06.4	+0.5
BCW	**Bitter Crk WRg**	2.60	192		Pn	14 31 05.6	-1.1
PRN	**Pahroc Range**	2.96	91		Pn	14 31 11.3	-0.5
PRN				IAML		14 32 02.9	
	comp=N,27nm,0.7s						
PRN				IAML		14 32 02.9	
	comp=E,22nm,0.6s						
SHPR	**Sheep Range**	3.05	108		Pn	14 31 11.8	-1.3
SPR3	**Spring Creek 3**	3.80	65		Pn	14 31 22.8	-0.6
ELK	**Elko**	4.25	39	Pn	Pn	14 31 28.3	-1.3
ELK				IAML		14 32 40.5	
	comp=E,7.0nm,0.4s						
ELK				IAML		14 32 40.6	
	comp=E,5.0nm,0.5s						
MVU	**Marysvale**	5.28	77		Pg	14 32 02.2	-2.7

JMA ***13*** *14:41:26.0±0.2, 44°.1N×14°.8E, h0km, MV3.7/23, SE OFF EROFU*
SKHL ***13*** *14:41:27.9±0.4, 44°.30N×148°.00E, h54km±7km, mb4.2/3*

ISC 13 14:41:22.7±3.7, 44°.23N±0°.10×148°.2E±0°.2, h11km±16km, n14, σ1s73/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	1.04	346	*i* P	**Pn**	**14 41 43.7**	**+0.6**
KUR				AMB	AMB	14 41 44.4	
	130nm,0.2s						
KUR				*i* S	**Sb**	**14 41 55.8**	**-0.4**
KUR				A	A	14 41 58.1	
	370nm,0.3s						
KUR				A	A	14 41 58.1	
	270nm,0.3s						
SHO	**Shikotan**	1.06	251	*i* P	**Pn**	**14 41 44.3**	**+0.9**
SHO				AMB	AMB	14 41 44.5	
	40nm,0.3s						
SHO				*e*S	**Sg**	**14 41 56.3**	**-0.5**
SHO				A	A	14 41 56.7	
	280nm,0.3s						
SHO				A	A	14 41 56.7	
	530nm,0.3s						
YUK	**Yuzh-Kuril'sk**	1.70	264	*e*P	**Pb**	**14 41 53.6**	**-0.4**
YUK				AMB	AMB	14 41 55.1	
	110nm,0.2s						
YUK				*e*S	**Sn**	**14 42 12.0**	**-2.0**
YUK				A	A	14 42 16.7	
	350nm,0.3s						
YUK				A	A	14 42 16.7	
	380nm,0.3s						
NEM2	**Nemuro 2**	1.98	245	*e*P	**Pn**	**14 41 57.0**	**+0.8**
NEM2				*e*S	**Sn**	**14 42 18.8**	**-2.1**
NMR	**Nemuro--Hokkai**	1.99	245	*e*P	**Pn**	**14 41 56.8**	**+0.6**
NMR				*e*S	**Sn**	**14 42 18.0**	**-3.1**
JRA	**Rausu**	2.25	264	*e*P	**Pb**	**14 42 02.0**	**-1.2**
JRA				*e*S	**Sn**	**14 42 27.9**	**+0.6**
JNSB	**Nemuroshibetsu**	2.36	260	*e*S	**Sn**	**14 42 30.7**	**+0.5**
JKHN	**Kushirohamanak**	2.49	244	*e*P	**Pn**	**14 42 04.5**	**+1.3**
JNK	**Nakash**	2.80	257	*e*P	**Pn**	**14 42 06.5**	**+1.9**
JAK	**Akkeshi**	2.83	245	*e*P	**Pn**	**14 42 09.1**	**+1.3**
JAK				*e*S	**Sn**	**14 42 40.5**	**-1.5**
JAR	**Ashorobuto**	3.35	255	*e*P	**Pn**	**14 42 17.4**	**+2.5**
JAR				*e*S	**Sn**	**14 42 55.1**	**+0.4**
JOB	**Onbets**	3.45	249	*e*P	**Pn**	**14 42 18.4**	**+2.1**
JOB				*e*S	**Sn**	**14 42 56.9**	**-0.1**
JMP	**Maruseppu**	3.50	268	*e*P	**Pn**	**14 42 19.8**	**+2.8**
JNBK	**Urakawa-nobuka**	4.44	246	*e*P	**Pn**	**14 42 32.2**	**+2.4**

ISK ***13*** *14:46:23.1, 39°.23N×26°.43E, h5km, ML2.5/13*
ATH ***13*** *14:46:24.4, 39°.24N×26°.44E, h21km±2km, ML1.9/2, Error ellipse: s-maj=3.5km s-min=2.4km az=258.0*
DDA ***13*** *14:46:24.1±0.0, 39°.24N×26°.51E, h7km±3km, ML1.7*

ISC 13 14:46:24.0±0.9, 39°.23N±0°.02×26°.47E±0°.03, h16km±6km, n26, σ0s90/37, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	0.15	278	P	**Pg**	**14 46 28.7**	**+0.7**
PRK				S	**Sg**	**14 46 31.6**	**+0.9**
PRK				AML	AML	14 46 32.1	
	comp=E,2638μm,0.2s						
PRK				AML	AML	14 46 32.2	
	comp=N,899μm,0.3s						
AYVA	**Ayvalik**	0.19	64	P	**Pg**	**14 46 27.8**	**-0.7**
AYVA				S	**Sg**	**14 46 30.4**	**-1.1**
AYVA				*i* AML	AML	14 46 31.0	
	comp=N,267nm,0.3s						
AYVA				*i* AML	AML	14 46 32.0	
	comp=N,233nm,0.4s						
DKL	**Dikili**	0.37	114	PG	**Pg**	**14 46 31.5**	**-0.1**
KOCA	**Canakkale, Ayv**	0.38	317	P	**Pb**	**14 46 32.2**	**-0.1**
KOCA				S	**Sb**	**14 46 37.7**	**-0.3**
SIGR	**SIGRI**	0.48	268	PG	**Pg**	**14 46 32.4**	**-1.1**
SIGR				SG	**Sg**	**14 46 38.9**	**-1.0**
SIGR	**SIGRI**	0.48	268	P	**Pb**	**14 46 33.7**	**-0.4**
SIGR				S	**Sg**	**14 46 39.9**	**0.0**
SIGR				AML	AML	14 46 40.1	
	comp=E,257μm,0.2s						
SIGR				AML	AML	14 46 41.4	
	comp=N,160μm,0.3s						
BAYC	**CANAKKALE_Bayr**	0.52	7	P	**Pg**	**14 46 33.6**	**-0.7**
BAYC				S	**Sg**	**14 46 39.8**	**-1.4**
BAYC				*i* AML	AML	14 46 42.0	
	comp=N,39nm,0.5s						
BAYC				*i* AML	AML	14 46 45.0	
	comp=N,61nm,0.2s						
ZEDA	**zmir-Bergama**	0.54	118	P	**Pg**	**14 46 34.1**	**-0.5**
ZEDA				*i* AML	AML	14 46 45.0	
	comp=N,47nm,0.3s						
BUHA	**Balikesir, Bur**	0.55	60	P	**Pg**	**14 46 34.0**	**-0.8**
BUHA				S	**Sg**	**14 46 41.5**	**-0.6**
BUHA				*i* AML	AML	14 46 43.0	
	comp=N,56nm,0.3s						
BUHA				*i* AML	AML	14 46 44.0	
	comp=N,46nm,0.6s						
EZN	**Ezine**	0.61	350	PG	**Pg**	**14 46 35.4**	**-0.6**
EZN				SG	**Sg**	**14 46 44.1**	**0.0**
BOZC	**Bozcaada**	0.69	333	PG	**Pg**	**14 46 36.8**	**-0.8**
BOZC	**Bozcaada**	0.69	333	P	**Pb**	**14 46 38.6**	**+0.8**
URLA	**Izmir**	0.87	173	PG	**Pg**	**14 46 39.4**	**-1.5**
CHOS	**Chios island**	0.90	201	PG	**Pg**	**14 46 40.7**	**-0.7**
CHOS				SG	**Sg**	**14 46 53.3**	**+0.1**
CHOS	**Chios island**	0.90	201	P	**Pg**	**14 46 40.7**	**-0.7**
BLCB	**Balcova**	0.95	152	PG	**Pg**	**14 46 41.9**	**-0.5**
GADA	**Gvkgeada**	1.06	336	PG	**Pg**	**14 46 43.8**	**-0.7**
GELI	**Tayfur-Gelibol**	1.17	0	PN	**Pg**	**14 46 45.9**	**-0.7**
GELI				SN	**Sn**	**14 47 02.3**	**+0.9**
GONE	**Gonen-Balikesi**	1.25	49	PN	**Pn**	**14 46 47.9**	**+1.1**
SMTH	**Samothraki Isl**	1.44	330	P	**Pn**	**14 46 50.2**	**+0.7**
SMTH				S	**Sb**	**14 47 07.3**	**-1.3**
ERIK	**Erikli-Kesan**	1.44	1	PN	**Pn**	**14 46 50.3**	**+0.8**
RKY	**Sarkoy-Tekirda**	1.56	20	PN	**Pn**	**14 46 52.2**	**+1.0**
MRMT	**Marmara Adasi**	1.63	32	PN	**Pn**	**14 46 53.3**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	1.69	138	PN	**Pn**	**14 46 53.9**	**+0.8**
ALN	**Alexandroupoli**	1.70	349	PN	**Pn**	**14 46 53.9**	**+0.8**
TVSB	**Tavsanli**	2.33	84	PN	**Pn**	**14 47 03.5**	**+1.7**

IDC ***13*** *14:52:39.6±9.2, 39°.34N×142°.78E, h0km, mb3.5/2, mbtmp3.4/3, ML2.3/1, Error ellipse: s-maj=213.1km s-min=46.9km az=165.0*
JMA ***13*** *14:52:44.8±0.1, 39°.3N±0°.2×142°.4E±0°.6, h27km, MV3.4/40, E OFF IWATE PREF*

ISC 13 14:52:42.8±2.1, 39°.27N±0°.04×142°.51E±0°.09, h14km±10km, n19, σ1s49/24, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	0.62	300	⇓P	**Pb**	**14 52 55.8**	**+0.4**
MIYJ				⇓S	**Sg**	**14 53 03.3**	**+0.2**
OFUJ	**Ofunato**	0.68	254	*i* P	**Pg**	**14 52 56.5**	**+0.5**
OFUJ				S	**Sg**	**14 53 04.6**	**-0.5**
JTH	**Tanohata**	0.84	323	*i* P	**Pn**	**14 52 59.9**	**-0.3**
JTH				*e*S	**Sg**	**14 53 10.2**	**+0.2**
JKMT	**Kesennumamotoy**	0.93	241	*i* P	**Pb**	**14 53 00.2**	**-0.5**
JKMT				S	**Sb**	**14 53 11.2**	**-1.7**
JOM	**Ohasama**	0.97	283	*i* P	**Pb**	**14 53 01.4**	**0.0**
JOM				S	**Sb**	**14 53 13.2**	**-0.9**
JMK	**Ichinoseki**	1.05	253	*i* P	**Pb**	**14 53 02.3**	**-0.5**
JMK				S	**Sb**	**14 53 14.8**	**-1.7**
JKZ	**Kuzumaki**	1.16	308	*i* P	**Pb**	**14 53 04.8**	**+0.1**
JKZ				S	**Sb**	**14 53 19.2**	**-0.4**
JIO	**Ouri**	1.22	229	*i* P	**Pn**	**14 53 04.2**	**-1.2**
JIO				S	**Sb**	**14 53 19.1**	**-2.1**
JANG	**Nango**	1.34	325	P	**Pb**	**14 53 07.7**	**-0.1**
JANG				S	**Sn**	**14 53 24.7**	**-0.2**
JRG	**Rokugo**	1.46	276	P	**Pn**	**14 53 09.5**	**+0.7**
JRG				*e*S	**Sn**	**14 53 26.9**	**-0.9**
MJAR	**Matsushiro Arr**	4.36	233	Pn	**Pn**	**14 53 50.5**	**+1.8**
MJAR	0.1nm,0.3s,baz=53,slow=11,SNR=18						
				Sn	**Sn**	**14 54 44.3**	**+5.1**
	baz=76,slow=20						
	4.4nm,1.0s						
H11N2	**WAKE ISLAND Hy**	28.65	126	T	T	15 29 00.2	
	baz=318,slow=75,SNR=56						
H11N1	**WAKE ISLAND Hy**	28.66	126	T	T	15 29 17.3	
	baz=318,slow=75,SNR=58						
H11N3	**WAKE ISLAND Hy**	28.67	126	T	T	15 29 11.0	
	baz=318,slow=75,SNR=69						
H11S1	**WAKE ISLAND Hy**	29.44	128	T	T	15 30 14.1	
	baz=320,slow=76,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	29.44	128	T	T	15 30 15.6	
	baz=320,slow=76,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	29.46	128	T	T	15 30 16.0	
	baz=320,slow=76,SNR=6.6						
WRA	**Warramunga Arr**	59.40	189	P	**P**	**15 02 44.2**	**-0.6**
	0.6nm,0.6s,baz=2.8,slow=7.1,SNR=10						
	0.6nm,0.6s						
ASAR	**Alice Springs**	63.12	189	P	**P**	**15 03 09.8**	**-0.2**
	0.3nm,0.8s,baz=6.0,slow=7.0,SNR=5.2						
	0.3nm,0.8s						

NOU ***13*** *15:11:54.6, 17°.66S×178°.61W, h569km, MLv3.4/9, Fiji Islands Region*
IDC ***13*** *15:11:56.1±1.1, 17°.79S×178°.77W, h567km±9km, mb3.3/13, mbtmp4.2/15, Error ellipse: s-maj=24.6km s-min=13.3km az=140.0*

**ISC 13 15:11:54.4±0.6, 17°.8S±0°.1×178°.61W±0°.09, h547km

s-min=11.5km az=332.0
*AUST **13** 15:31:13.3±1.1,23°.82S×152°.87E,h10km,Error ellipse:*
s-maj=13.6km s-min=7.6km az=54.0
*NOU **13** 15:31:16.7,23°.92S×152°.55E,h0km,mb4.5/7,*
Queensland, Australia

ISC 13 15:31:13.0±0.4,23°.88S±0'.05×152°.88E±0'.05,h10km,n100,
σ1971/101,mb4.7/29,MS3.3/8,3C,Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**2.21 228**		**P**	**Pn**	**15 31 50.5**	**+0.8**
	baz=2.2,SNR=650						
EIDS				S	**Sn**	**15 32 19.3**	**+2.3**
	baz=2.2						
EIDS	**Eidsvold**	**2.21 228**		Pn	**Pn**	**15 31 49.6**	**-0.1**
EIDS				Sn	**Sn**	**15 32 16.7**	**-0.3**
EIDS	**Eidsvold**	**2.21 228**		P	**Pn**	**15 31 50.9**	**+1.2**
AUNRC	**North Rockhamp**	**2.22 283**		P	**Pn**	**15 31 48.7**	**-1.1**
	baz=2.2						
AUNRC				S	**Sn**	**15 32 17.3**	**0.0**
	baz=2.2						
RK1H	**Rockhampton Ha**	**2.24 282**		P	**Pn**	**15 31 51.2**	**+1.0**
AUBSH	**Beerwah State**	**2.96 179**		P	**Pn**	**15 32 01.5**	**+1.4**
	baz=3.0						
AUTOO	**Toowoomba Stat**	**3.74 192**		P	**Pn**	**15 32 12.4**	**+1.6**
	baz=3.8						
RMQ	**Roma**	**4.54 234**		P	**Pn**	**15 32 22.5**	**+0.6**
	baz=4.6,SNR=81						
ARMA	**Armidale**	**6.60 189**		P	**Pn**	**15 32 51.9**	**+1.6**
	baz=6.7,SNR=24						
ARMA	**Armidale**	**6.60 189**		Pn	**Pn**	**15 32 51.7**	**+1.5**
ARMA	**Armidale**	**6.60 189**		P	**Pn**	**15 32 53.2**	**+3.0**
CTA	**Charters Tower**	**7.21 300**		Pn	**Pn**	**15 32 58.2**	**-0.4**
	1.4nm,0.3s,baz=109,slow=15,SNR=18						
CTA				Sn	**Sn**	**15 34 18.2**	**-2.4**
	3.0nm,0.3s,baz=28,slow=18,SNR=3.7						
CTA				Lg	Lg	15 34 49.2	
	14nm,0.3s,baz=46,slow=21,SNR=12						
CTA				LR	LR	15 35 60.0	
	comp=Z,196nm,20.5s,baz=103,slow=40						
	4.9nm,0.5s						
CTA	**Charters Tower**	**7.21 300**		P	**Pn**	**15 32 59.8**	**+1.2**
CTAO	**Charters Tower**	**7.21 300**		Pn	**Pn**	**15 32 56.9**	**-1.7**
CTAO	**Charters Tower**	**7.21 300**		P	**Pn**	**15 33 00.0**	**+1.4**
QLP	**Quilpie**	**8.28 249**		P	**Pn**	**15 33 14.1**	**+1.0**
	baz=8.3,SNR=41						
QLP	**Quilpie**	**8.28 249**		P	**Pn**	**15 33 13.9**	**+0.8**
LHI	**Lord Howe Isla**	**9.37 146**		P	**Pn**	**15 33 28.0**	**-0.1**
	baz=9.4,SNR=5.3						
LHI	**Lord Howe Isla**	**9.37 146**		Pn	**Pn**	**15 33 27.5**	**-0.6**
MGCD	**Mangrove Creek**	**9.42 189**		P	**Pn**	**15 33 33.2**	**+4.4**
MTSU	**Mount Surprise**	**9.83 304**		P	**Pn**	**15 33 35.4**	**+0.9**
	baz=9.8,SNR=4.9						
CMSA	**Cobar Meteorol**	**9.93 218**		P	**Pn**	**15 33 36.3**	**+0.5**
	baz=10.0,SNR=173						
KOUNC	**Koumac, New Ca**	**11.07 75**		Pn	**Pn**	**15 33 51.2**	**-0.3**
INKA	**Innaminka**	**11.58 248**		P	**Pn**	**15 34 00.5**	**+2.1**
	baz=12,SNR=5.0						
DZM	**Mont Dzumac**	**12.63 84**		Pn	**Pn**	**15 34 13.0**	**+0.1**
	0.2nm,0.3s,baz=279,slow=19,SNR=2.1						
	2.4nm,0.7s						
QIS	**Mount Isa**	**12.73 282**		P	**Pn**	**15 34 15.5**	**+1.3**
	baz=13,SNR=4.1						
STKA	**Stephens Creek**	**12.76 229**		Pn	**Pn**	**15 34 14.0**	**-0.5**
	0.8nm,0.3s,baz=48,slow=13,SNR=27						
STKA				Sn	**Sn**	**15 36 31.4**	**-5.3**
	1.4nm,0.3s,baz=324,slow=18,SNR=3.9						
STKA				Lg	Lg	15 37 53.2	
	2.3nm,0.3s,baz=143,slow=20,SNR=1.2						
STKA				LR	LR	15 39 48.0	
	comp=Z,213nm,19.9s,baz=33,slow=40						
	8.7nm,0.7s						
STKA	**Stephens Creek**	**12.76 229**		P	**Pn**	**15 34 16.4**	**+1.9**
	baz=13,SNR=17						
STKA	**Stephens Creek**	**12.76 229**		Pn	**Pn**	**15 34 14.2**	**-0.3**
COEN	**Coen**	**13.47 315**		P	**Pn**	**15 34 26.0**	**+1.6**
	baz=14,SNR=3.9						
COEN	**Coen**	**13.47 315**		Pn	**Pn**	**15 34 27.1**	**+2.7**
LCRK	**Leigh Creek**	**14.59 240**		P	**Pn**	**15 34 40.3**	**+0.8**
	baz=15,SNR=13						
TOO	**Toolangi**	**15.04 203**		Pn	**Pn**	**15 34 42.7**	**-3.0**
TOO				IAmb	IAmb	15 34 59.3	
	comp=Z,28nm,1.1s						
PMG	**Port Moresby**	**15.40 338**		Pn	**Pn**	**15 34 48.9**	**-1.5**
	comp=Z,10nm,0.9s,baz=115,slow=17,SNR=1.5						
HTT	**Hallett**	**15.49 229**		P	**Pn**	**15 34 52.7**	**+1.0**
	baz=16,SNR=11						
HNR	**Honiara**	**15.88 26**		LR	LR	15 40 24.8	
	comp=Z,216nm,19.1s,baz=202,slow=35						
OOD	**Oodnadatta**	**15.96 252**		P	**Pn**	**15 34 59.5**	**+1.9**
	baz=16,SNR=28						
ARPS	**Mount Arapiles**	**15.98 214**		P	**Pn**	**15 34 59.4**	**+1.5**
	baz=16,SNR=9.7						
BBOO	**Buckleboo**	**17.25 235**		P	**P**	**15 35 15.7**	**+0.1**
	baz=17,SNR=8.0						
BBOO	**Buckleboo**	**17.25 235**		P	**Pn**	**15 35 15.0**	**+0.9**
BBOO				IAmb	IAmb	15 35 24.6	
	comp=Z,26nm,0.9s						
AS31	**Alice Springs**	**17.37 267**			**Pn**	**15 35 15.1**	**-0.6**
ASAR	**Alice Springs**	**17.37 267**		P	**Pn**	**15 35 15.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=90,slow=12,SNR=48						
ASAR				S	**Sn**	**15 38 31.1**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=95,slow=22,SNR=2.4						
ASAR				Lg	Lg	15 40 20.6	
	comp=Z,0.1nm,0.3s,baz=96,slow=29,SNR=4.8						
ASAR				LR	LR	15 42 16.1	
	comp=Z,178nm,18.8s,baz=87,slow=38						
	comp=Z,26nm,1.1s						
ASAR	**Alice Springs**	**17.37 267**		P	**P**	**15 35 16.9**	**-0.1**
WR0	**Warramunga Arr**	**17.45 279**		P	**Pn**	**15 35 17.4**	**+0.7**
WB2	**Warramunga Arr**	**17.63 279**			**P**	**15 35 19.8**	**-0.1**
WRA	**Warramunga Arr**	**17.64 279**		P	**Pn**	**15 35 19.4**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=102,slow=11,SNR=97						
WRA				Lg	Lg	15 40 21.1	
	comp=Z,0.2nm,0.3s,baz=103,slow=28,SNR=6.2						
WRA	**Warramunga Arr**	**17.64 279**		P	**Pn**	**15 35 19.3**	**+0.3**
WB0	**Warramunga Arr**	**17.64 280**			**Pn**	**15 35 18.7**	**-0.4**
MULG	**Mulgathing**	**17.92 245**		P	**P**	**15 35 23.3**	**+0.3**
	baz=18,SNR=23						
KDU	**Kakadu**	**22.32 296**		P	**P**	**15 36 11.7**	**+0.8**
	baz=22,SNR=13						
WRKA	**Warakurna**	**22.40 262**		P	**P**	**15 36 11.4**	**-0.4**
	baz=22,SNR=6.8						
FORT	**Forrest**	**23.07 247**		P	**P**	**15 36 18.1**	**-0.6**
	baz=23,SNR=8.6						
FORT	**Forrest**	**23.07 247**		P	**P**	**15 36 21.2**	**+2.5**
MTN	**Manton Dam**	**23.34 294**		P	**P**	**15 36 23.1**	**+1.5**
	baz=23,SNR=6.5						
MTN	**Manton Dam**	**23.34 294**		P	**P**	**15 36 20.4**	**-1.3**
MTN				IAmb	IAmb	15 36 23.6	
	comp=Z,24nm,0.8s						
KNRA	**Kununurra**	**24.09 285**		P	**P**	**15 36 28.5**	**-0.3**
	baz=24,SNR=7.6						
KNRA	**Kununurra**	**24.09 285**		P	**P**	**15 36 27.8**	**-1.1**
KNRA				IAmb	IAmb	15 36 38.2	
	comp=Z,15nm,0.7s						
MSVF	**Nonsavu**	**24.29 80**		P	**P**	**15 36 31.8**	**+0.9**
	comp=Z,21nm,0.9s,baz=237,slow=5.7,SNR=7.8						
MSVF				LR	LR	15 44 39.7	
	comp=Z,71nm,20.2s,baz=214,slow=33						
	comp=Z,21nm,0.9s						
MSVF	**Nonsavu**	**24.29 80**		P	**P**	**15 36 25.9**	**-5.0**
RPZ	**Rata Peaks**	**24.79 147**		P	**P**	**15 36 37.1**	**+2.1**
	comp=Z,27nm,1.0s,baz=303,slow=3.2,SNR=13						
RPZ				LR	LR	15 44 59.7	
	comp=Z,146nm,19.3s,baz=314,slow=33						
	comp=Z,27nm,1.0s						
RPZ	**Rata Peaks**	**24.79 147**		P	**P**	**15 36 35.3**	**+0.3**
URZ	**Urewera**	**25.12 130**		P	**P**	**15 36 40.2**	**+2.1**
	comp=Z,9.8nm,1.0s,baz=331,slow=18,SNR=2.3						
URZ				LR	LR	15 47 01.4	
	comp=Z,78nm,18.2s,baz=31,slow=38						
	comp=Z,9.8nm,1.0s						
KHZ	**Kahutara**	**25.20 142**		P	**P**	**15 36 37.4**	**-1.3**
MQZ	**McQueen's Vall**	**25.59 145**		P	**P**	**15 36 42.1**	**-0.1**
MQZ				IAmb	IAmb	15 37 00.8	
	comp=Z,31nm,1.3s						
SMPI	**Sarmi**	**25.73 326**		P	**P**	**15 36 46.7**	**+3.0**
	comp=Z,58nm,1.2s						
FITZ	**Fitzroy Crossi**	**26.05 278**		P	**P**	**15 36 47.8**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=79,slow=4.0,SNR=7.0						
FITZ				Lg	Lg	15 44 54.9	
	baz=25,slow=19,SNR=3.9						
FITZ				LR	LR	15 46 45.3	
	comp=Z,103nm,18.9s,baz=104,slow=36						
	comp=Z,2.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**26.05 278**		P	**P**	**15 36 47.9**	**+1.2**
	baz=26						
FITZ	**Fitzroy Crossi**	**26.05 278**		P	**P**	**15 36 47.3**	**+0.6**
FITZ				IAmb	IAmb	15 37 02.2	
	comp=Z,8.7nm,1.1s						
SIJI	**Sorong**	**31.02 314**		LR	LR	15 49 12.4	
	comp=Z,44nm,21.5s,baz=86,slow=35						
AFI	**Afiamalu**	**34.79 80**		LR	LR	15 49 30.8	
	comp=Z,56nm,21.6s,baz=192,slow=32						
SBUM	**Sibu**	**47.41 298**		P	**P**	**15 39 45.3**	**-2.6**
SBUM				IAmb	IAmb	15 39 51.4	
	comp=Z,7.2nm,1.0s						
KSM	**Kuching**	**48.42 295**		P	**P**	**15 39 54.4**	**-1.4**
KSM				IAmb	IAmb	15 39 57.4	
	comp=Z,6.3nm,0.8s						
CASY	**Casey**	**50.07 201**		P	**P**	**15 40 04.8**	**-2.8**
CASY				IAmb	IAmb	15 40 12.7	
	comp=Z,12nm,1.4s						
VNDA	**Vanda**	**53.87 178**		P	**P**	**15 40 36.0**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=325,slow=7.7,SNR=6.4						
VNDA				LR	LR	15 59 36.7	
	comp=Z,32nm,19.9s,baz=296,slow=32						
	comp=Z,2.1nm,0.9s						
MJAR	**Matsushiro Arr**	**61.67 347**		P	**P**	**15 41 28.8**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=162,slow=7.1,SNR=6.6						
	comp=Z,0.9nm,0.7s						
KSRS	**Korea Array**	**65.38 338**		P	**P**	**15 41 54.7**	**-0.9**
	comp=Z,3.4nm,0.9s,baz=153,slow=6.8,SNR=15						
	comp=Z,3.4nm,0.9s						
QSPA	**South Pole Qui**	**66.19 180**		P	**P**	**15 42 00.9**	**+0.2**
	comp=Z,6.0nm,1.0s,baz=344,slow=4.3,SNR=12						
	comp=Z,6.0nm,1.0s						
QSPA	**South Pole Qui**	**66.19 180**		P	P	15 41 56.5	-4.2
CMAR	**Chiang Mai Arr**	**67.37 304**		P	**P**	**15 42 08.0**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=136,slow=4.8,SNR=7.5						
	comp=Z,1.8nm,0.8s						
MAW	**Mawson**	**68.17 204**		P	**P**	**15 42 13.6**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=94,slow=8.6,SNR=3.7						
	comp=Z,1.7nm,0.7s						
KMI	**Kunming**	**68.79 312**		⇑P	**P**	**15 42 21.5**	**+3.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HNS	**HongShan**	**70.75 329**		⇑P	**P**	**15 42 32.3**	**+2.9**
HNS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN	**Xi'an**	**71.17 322**		P	**P**	**15 42 33.4**	**+1.4**
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
BNX	**BinXian**	**73.06 342**		⇑P	**P**	**15 42 46.0**	**+2.9**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BNX				pmax	pmax		
	comp=Z,58nm,5.0s						
HHC	**Hu-ho-hao-te**	**74.97 329**		*e*P	**P**	**15 42 56.3**	**+1.8**
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
LZH	**Lanzhou**	**75.52 321**		*e*P	**P**	**15 43 00.8**	**+2.9**
LZH				pP	sP	15 43 05.8	+3.6
LZH				sP	PcP	15 43 10.0	-0.8
LZH				pmax	pmax		
	comp=Z,22nm,0.9s						
BELA	**Belgrano 2**	**78.37 178**		P	**P**	**15 43 12.6**	**-0.5**
BELA				IAmb	IAmb	15 43 14.1	
	comp=Z,9.3nm,1.3s						
SHEM	**Shemya Is, Ala**	**78.50 13**		LR	LR	16 12 21.1	
	comp=Z,46nm,21.0s,baz=310,slow=32						
GTA	**Gaotai**	**80.12 321**		*e*P	**P**	**15 43 25.9**	**+2.5**
GTA				pP	PcP	15 43 33.0	+2.3
GTA				sP	sP	15 43 37.4	+10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**82.70 330**		P	**P**	**15 43 36.8**	**0.0**
	comp=Z,2.3nm,0.7s,baz=161,slow=4.9,SNR=12						
	comp=Z,2.3nm,0.7s						
SNAA	**Sanae**	**83.23 188**		P	**P**	**15 43 38.6**	**-0.7**
	comp=Z,2.6nm,1.1s,baz=173,slow=3.5,SNR=7.2						
	comp=Z,2.6nm,1.1s						
WMQ	**Urumqi**	**89.98 319**		*e*P	**P**	**15 44 13.6**	**+0.9**
MK31	**Makanchi Array**	**94.79 319**			**P**	**15 44 32.7**	**-2.1**
MK31				IAmb	IAmb	15 44 39.1	
	comp=Z,1.8nm,1.1s						
MKAR	**Makanchi Array**	**94.79 319**		P	**P**	**15 44 33.7**	**-1.1**
	comp=Z,2.0nm,0.9s,baz=114,slow=5.6,SNR=9.6						
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**94.79 319**			**P**	**15 44 32.9**	**-1.9**
BRTR	**Keskin Array B**	**126.95 303**		PKP	**PKPdf**	**15 50 16.6**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=98,slow=2.9,SNR=3.8						
GERES	**GERESS Array B**	**139.45 318**		PKP	**PKPdf**	**15 50 41.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=325,slow=1.6,SNR=5.0						
KEST	**Kesra**	**146.41 299**		PKPbc	**PKPbc**	**15 50 54.7**	**+0.1**
	comp=Z,11nm,1.1s,baz=22,slow=1.5,SNR=7.4						
TORD	**Torodi Ar. Bea**	**150.72 254**		PKPbc	**PKPbc**	**15 51 05.5**	**-0.9**
	comp=Z,6.2nm,0.8s,baz=97,slow=1.8,SNR=28						
ESDC	**Sonseca Array**	**154.90 314**		PKPab	**PKPab**	**15 51 28.8**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=11,slow=2.6,SNR=2.7						

*ANF **13** 15:37:55.2±0.3,37°.45N×118°.78W,h1km±2km,ML3.2/17,*
Error ellipse: s-maj=2.7km s-min=1.8km az=87.0
*REN **13** 15:37:55.3±1.4,37°.48N±0°.02×118°.79W±0°.05,h6km±6km,*
Error ellipse: s-maj=5.4km s-min=3.4km az=81.0
*NEIC **13** 15:37:55.6±1.3,37°.48N±0°.03×118°.73W±0°.04,h1km±8km,*
Error ellipse: s-maj=5.4km s-min=2.0km az=53.0
*NCEDC **13** 15:37:55.3±1.2,37°.48N±0°.03×118°.78W±0°.05,h5km±6km,*
Mwr3.4/3,ML3.0/78(NEIC),Mwr3.2(REN),Error ellipse:
s-maj=5.4km s-min=3.6km az=72.0
*NEIC **13** 15:37:57,37°.48N×118°.79W,h6km,Moment Tensor*
Solution. Moment tensor: Scale 10^13Nm; Mrr=7.00;
Mθθ=0.35; Mφφ=6.65; Mrθ=1.01; Mrφ=-3.02; Mθφ=-3.72; Fault
plane solution: M0=8.41000×10^13 NP1:φs=355.00000°,
δ=59.00000°,λ=-71.00000°. NP2:φs=141.00000°,δ=36.00000°,
λ=-118.00000°. Principal axes: T 8.4976, Plg=12.0000°,
Azm=71.0000°; N -0.1873, Plg=16.0000°, Azm=164.0000°; P
-8.3102, Plg=70.0000°, Azm=307.0000°;
*NEIC **13** 15:37:57,37°.48N×118°.78W,h8km,Moment Tensor*
Solution. Moment tensor: Scale 10^14Nm; Mrr=0.97;
Mθθ=0.29; Mφφ=1.26; Mrθ=0.62; Mrφ=-0.25; Mθφ=0.73; Fault
plane solution: M0=1.51000×10^14 NP1:φs=144.00000°,
δ=38.00000°,λ=-139.00000°. NP2:φs=19.00000°,δ=66.00000°,
λ=-60.00000°. Principal axes: T 1.4815, Plg=16.0000°,
Azm=88.0000°; N 0.0569, Plg=27.0000°, Azm=186.0000°; P
-1.5384, Plg=58.0000°, Azm=331.0000°;

ISC 13 15:37:55.6±0.8,37°.48N±0°.02×118°.75W±0°.02,h7km±6km,
n197,σ0°.90/199,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCCR	**Rock Creek Can**	**0.02 71**			**Pg**	**15 37 57.0**	**-0.3**
WMD		**0.10 114**			**Pg**	**15 37 58.0**	**+0.3**
MCVM	**Convict Lake**	**0.13 330**			**Pg**	**15 37 58.0**	**-0.4**
SCHCA	**Scheelite**	**0.13 158**			**Pg**	**15 37 58.4**	**-0.1**
MLAC	**Mammoth, Mammo**	**0.17 336**			**Pg**	**15 37 59.0**	**0.0**
MLAC	**Mammoth, Mammo**	**0.17 336**		P	**Pg**	**15 37 59.0**	**0.0**
	baz=164,SNR=981						
MLAC				S	**Sg**	**15 38 01.7**	**+0.2**
	baz=164						
MDRNC	**Doe Ridge**	**0.17 337**			**Pg**	**15 37 59.2**	**0.0**
ORC	**Owens River**	**0.17 26**			**Pg**	**15 37 59.4**	**+0.2**
MLCM	**Laurel Creek C**	**0.19 315**			**Pg**	**15 37 59.0**	**-0.4**
MGPM	**Gravel Pit**	**0.19 320**			**Pg**	**15 37 59.2**	**-0.3**
MTUM	**Tungsten Hills**	**0.19 130**			**Pg**	**15 37 59.8**	**+0.3**
MCBM	**Casa Benchmark**	**0.20 325**			**Pg**	**15 37 59.5**	**-0.2**
MCBM	**Casa Benchmark**	**0.20 325**			**Sg**	**15 38 02.5**	**0.0**
MCSM	**Casa Diablo Ho**	**0.21 325**			**Pg**	**15 37 59.8**	**-0.1**
MEMM	**East Mammoth H**	**0.24 321**			**Pg**	**15 38 00.2**	**-0.2**
OMMB	**Old Mammoth Mi**	**0.24 304**			**Pg**	**15 37 59.8**	**-0.6**
OMMB					**Sg**	**15 38 02.8**	**-0.9**
OMMB	**Old Mammoth Mi**	**0.24 304**		IAML		15 38 03.0	
	comp=E,2μm,0.4s						
OMMB				IAML		15 38 03.0	
	comp=N,3μm,0.2s						
MCDM	**Chidago Canyon**	**0.25 74**			**Pg**	**15 38 01.2**	**+0.6**
MMLB	**Mammoth Lakes**	**0.26 315**			**Pg**	**15 38 00.5**	**-0.2**
MMPM	**Mammoth Pass**	**0.26 301**			**Pg**	**15 38 00.2**	**-0.6**
MFBM	**Five Bridges**	**0.26 101**			**Pg**	**15 38 01.5**	**+0.8**
MLIM	**Lincoln Peak**	**0.27 306**			**Pg**	**15 38 00.6**	**-0.3**
MMSM	**Mammoth Summit**	**0.27 304**			**Pg**	**15 38 00.6**	**-0.5**
MRDM	**Red Cones**	**0.27 296**			**Pg**	**15 38 00.5**	**-0.5**
MRCM	**Red Rock Canyo**	**0.27 45**			**Pg**	**15 38 01.2**	**+0.2**
BENR	**Benton**	**0.27 31**			**Pg**	**15 38 01.1**	**0.0**
MDYM	**Dry Creek**	**0.27 311**			**Pg**	**15 38 00.8**	**-0.3**
MDYM					**Sg**	**15 38 04.8**	**0.0**
BHPR	**Bishop**	**0.28 131**			**Pg**	**15 38 01.4**	**+0.3**
LMCR	**Lookout Mounta**	**0.29 328**			**Pg**	**15 38 01.6**	**+0.2**
MINS	**Minaret Summit**	**0.30 305**			**Pg**	**15 38 01.0**	**-0.6**
MDPB	**Devils Postpil**	**0.30 300**			**Pg**	**15 38 01.0**	**-0.6**
MDPB				IAML		15 38 05.6	
	comp=N,3μm,0.4s						
MDPB	**Devils Postpil**	**0.30 300**			**Sg**	**15 38 04.8**	**-0.9**
MDCM	**Deadman Creek**	**0.33 315**			**Pg**	**15 38 01.5**	**-0.6**
MGNR	**McGee Canyon**	**0.34 7**			**Pg**	**15 38 02.4**	**+0.1**
MLNR	**Milner Canyon**	**0.34 70**			**Pg**	**15 38 02.7**	**+0.4**
BCRK	**Birch Creek**	**0.37 54**			**Pg**	**15 38 03.3**	**+0.4**
POCCA	**Poleta Canyon**	**0.39 107**			**Pg**	**15 38 03.6**	**+0.3**
ANTCA	**Antelope Range**	**0.46 18**			**Pg**	**15 38 04.5**	**0.0**
KCC	**Kaiser Creek**	**0.48 251**			**Pg**	**15 38 04.1**	**-0.7**
TIN	**Tinemaha, Big**	**0.59 136**			**Pg**	**15 38 07.3**	**+0.3**
TIN	**Tinemaha, Big**	**0.59 136**		P	**Pg**	**15 38 07.2**	**+0.1**
	baz=314,SNR=21						
TIN				S	**Sb**	**15 38 15.9**	**-1.1**
	baz=314						
HCK	**Huntoon Valley**	**0.61 12**			**Pg**	**15 38 07.4**	**+0.1**
DSP	**Deep Springs**	**0.63 100**			**Pg**	**15 38 07.8**	**+0.1**
DSP					**Sb**	**15 38 16.7**	**-1.2**
LUL	**Lundy Lake**	**0.67 329**			**Pg**	**15 38 08.1**	**-0.3**
LHV	**Little Huntoon**	**0.80 14**			**Pg**	**15 38 10.8**	**-0.1**
LHV				IAML		15 38 24.4	
	comp=N,726nm,0.5s						
LHV	**Little Huntoon**	**0.80 14**			**Sg**	**15 38 21.9**	**+0.8**
HELL	**Mitchell Peak,**	**0.83 195**			**Pg**	**15 38 10.8**	**-0.7**
LCH	**Last Change Ra**	**0.91 105**			**Pg**	**15 38 12.9**	**-0.2**
LCH	**Last Change Ra**	**0.91 105**		IAML		15 38 25.8	
	comp=N,315nm,0.6s						
LCH				IAML		15 38 26.2	
	comp=E,341nm,0.3s						
TVH1	**TV Hill, Hawth**	**0.98 359**			**Pg**	**15 38 14.0**	**-0.3**
NV08	**Mina Array Sit**	**0.98 20**			**Pg**	**15 38 14.1**	**-0.4**
NV09	**Mina Array Sit**	**1.01 19**			**Pg**	**15 38 14.6**	**-0.4**
NVAR	**Mina Array Bea**	**1.01 20**			**Pg**	**15 38 14.6**	**-0.5**
NV11	**Mina Array Sit**	**1.06 26**			**Pg**	**15 38 15.5**	**-0.4**
RYN	**Ryan**	**1.16 9**			**Pg**	**15 38 17.5**	**-0.4**
RYN	**Ryan**	**1.16 9**		IAML		15 38 34.0	
	comp=N,232nm,0.2s						
RYN				IAML		15 38 37.6	
	comp=E,327nm,0.8s						
CWC	**Cottonwood Cre**	**1.17 152**			**Pg**	**15 38 17.3**	**-0.7**
CWC	**Cottonwood Cre**	**1.17 152**		P	**Pg**	**15 38 17.2**	**-0.7**
	baz=332						
CWC				S	**Sg**	**15 38 32.5**	**-0.6**
	baz=332						
CGO	**Cerro Gordo**	**1.20 140**			**Pg**	**15 38 17.8**	**-0.8**
GRAC	**Grapevine Rang**	**1.21 113**			**Pb**	**15 38 18.7**	**0.0**
GRAC	**Grapevine Rang**	**1.21 113**		P	**Pb**	**15 38 18.7**	**0.0**
	baz=294,SNR=334						
MRHM	**Rocky Hill**	**1.22 193**			**Pg**	**15 38 17.5**	**-1.5**
SPG2	**Springville 2**	**1.28 181**			**Pg**	**15 38 18.8**	**-1.3**
MYLM	**Yosemite Lake**	**1.33 266**			**Pg**	**15 38 19.6**	**-1.5**
TPH	**Tonopah**	**1.35 63**			**Pg**	**15 38 21.1**	**-0.4**
WLHM	**Little Horse**	**1.37 165**			**Pg**	**15 38 20.7**	**-1.1**
CMB	**Columbia Colle**	**1.41 294**			**Pn**	**15 38 20.5**	**-1.2**
MCA	**Marble Canyon**	**1.44 125**			**Pn**	**15 38 22.1**	**+0.1**
SGV	**South Grapevin**	**1.46 109**			**Pg**	**15 38 23.1**	**-0.5**
YERR	**Yerington**	**1.55 346**			**Pn**	**15 38 24.0**	**+0.1**
YERR	**Yerington**	**1.55 346**		IAML		15 38 52.0	
	comp=E,127nm,0.6s						
MCUB	**Copperopolis B**	**1.56 289**			**Pn**	**15 38 23.0**	**-0.8**
KVN	**Kaiserville**	**1.65 18**			**Pn**	**15 38 25.2**	**0.0**
KVN	**Kaiserville**	**1.65 18**		IAML		15 38 49.3	
	comp=E,134nm,0.6s						
KVN				IAML		15 38 51.4	
	comp=N,166nm,0.6s						
VES	**Vestal, Richgr**	**1.66 189**			**Pn**	**15 38 25.7**	**+0.6**
VES	**Vestal, Richgr**	**1.66 189**		P	**Pn**	**15 38 25.4**	**+0.3**
	baz=8.3,SNR=17						
VES				S	**Sn**	**15 38 47.2**	**+0.6**
	baz=8.3						
PDRM	**Domengine Ranc**	**1.73 229**			**Pn**	**15 38 26.9**	**+0.8**
PNTR	**Pine Nut**	**1.74 338**			**Pn**	**15 38 26.9**	**+0.4**
MPMC	**Manual Prospec**	**1.74 144**		P	**Pn**	**15 38 26.5**	**+0.1**
	baz=324,SNR=65				

PAHR	**Pah Rah Range**	**2.28**	**348**			**Pn**	**15 38 34.3**	**+0.5**	
SCZ	**Santa Cruz**	**2.30**	**248**			**Pn**	**15 38 34.7**	**+0.8**	
FRP	**Fremont Peak**	**2.31**	**253**			**Pn**	**15 38 34.8**	**+0.7**	
MHC	**Mount Hamilton**	**2.31**	**267**			**Pn**	**15 38 35.5**	**+1.4**	
CMLM	**Mount Lewis**	**2.31**	**271**			**Pn**	**15 38 35.6**	**+1.5**	
BJCM	**Johnson Can.**	**2.31**	**247**			**Pn**	**15 38 35.0**	**+1.0**	
TSCN	**Private Proper**	**2.32**	**214**			**Pn**	**15 38 35.5**	**+1.3**	
PEAR	**Peavine Mounta**	**2.33**	**336**			**Pn**	**15 38 35.6**	**+1.1**	
CCOB	**Coe Ranch Numb**	**2.34**	**265**			**Pn**	**15 38 36.8**	**+2.3**	
ANZ	**Anzar Road**	**2.34**	**256**			**Pn**	**15 38 35.8**	**+1.3**	
ARVC	**Arvin**	**2.35**	**182**	Pb		**Pb**	**15 38 37.7**	**-0.6**	
ARVC	baz=0.9			Sb		**Sb**	**15 39 08.2**	**+0.7**	
	baz=0.9								
BSRM	**Salinas Radio**	**2.36**	**251**			**Pn**	**15 38 36.0**	**+1.2**	
CRGC	**Crocker Grade**	**2.37**	**200**			**Pn**	**15 38 36.6**	**+1.6**	
BABR	**Babbit Peak**	**2.37**	**334**			**Pn**	**15 38 36.5**	**+1.3**	
PCCM	**Crazy Canyon**	**2.38**	**235**			**Pn**	**15 38 36.2**	**+1.1**	
SMMC	**Simmler**	**2.38**	**205**	S		**Sn**	**15 39 05.7**	**+1.1**	
	baz=24								
S11A	**Rachel**	**2.39**	**85**			**Pn**	**15 38 35.3**	**0.0**	
S11A				IAML			15 39 29.2		
	comp=N,94nm,1.2s								
WENL	**Wente Vineyard**	**2.39**	**274**			**Pn**	**15 38 35.8**	**+0.6**	
CCAC	**Calif City Air**	**2.40**	**165**			**Pb**	**15 38 39.7**	**+0.7**	
CCAC				IAML			15 39 18.2		
	comp=N,118nm,0.6s								
JLAB	**Laurel Hill**	**2.40**	**263**			**Pn**	**15 38 37.0**	**+1.7**	
BSMM	**Soledad Missio**	**2.41**	**244**			**Pn**	**15 38 36.4**	**+0.9**	
PHSB	**Hesperia Broad**	**2.48**	**229**			**Pn**	**15 38 37.2**	**+0.8**	
AMC	**Almaden**	**2.49**	**264**			**Pn**	**15 38 37.4**	**+0.9**	
HAST	**Hastings Reser**	**2.50**	**245**			**Pn**	**15 38 37.4**	**+0.8**	
BCH	**Branch Mountai**	**2.53**	**206**			**Pn**	**15 38 38.2**	**+1.0**	
SHOC	**Shoshone, Teco**	**2.54**	**128**	Pb		**Pb**	**15 38 42.1**	**+0.7**	
	baz=309,SNR=14								
BCWM	**Chews Ridge**	**2.54**	**243**			**Pn**	**15 38 38.2**	**+0.8**	
BCW	**Bitter Crk WRg**	**2.59**	**192**			**Pn**	**15 38 39.5**	**+1.5**	
WVA	**Winnemucca Val**	**2.60**	**341**			**Pn**	**15 38 38.9**	**+0.7**	
BLDC	**Black Mountain**	**2.61**	**222**			**Pn**	**15 38 39.0**	**+0.9**	
BLDC	**Black Mountain**	**2.61**	**222**			**Pn**	**15 38 39.2**	**+1.1**	
PAPM	**Alder Peak**	**2.62**	**234**			**Pn**	**15 38 38.9**	**+0.5**	
R11A	**Troy Canyon, C**	**2.65**	**70**			**Pn**	**15 38 39.1**	**+0.2**	
R11A	**Troy Canyon, C**	**2.65**	**70**	Pb		**Pb**	**15 38 43.7**	**+0.2**	
	baz=252,SNR=71								
R11A				Sb		**Sg**	**15 39 19.4**	**-1.2**	
	baz=252								
EDW2	**Edwards Air Fo**	**2.66**	**167**	Pb		**Pb**	**15 38 43.7**	**+0.1**	
	baz=346,SNR=14								
EDW2				Sb		**Sb**	**15 39 18.7**	**+2.1**	
	baz=346								
GSC	**Goldstone, Bar**	**2.68**	**144**			**Pn**	**15 38 39.4**	**+0.2**	
BEKR	**Beckworth**	**2.70**	**333**			**Pn**	**15 38 40.0**	**+0.4**	
BEKR	**Beckworth**	**2.70**	**333**	IAML			15 39 31.8		
	comp=N,52nm,0.5s								
BEKR				IAML			15 39 32.4		
	comp=E,82nm,0.7s								
OSI	**Osito Audit: C**	**2.86**	**180**	Sb		**Sb**	**15 39 23.5**	**+1.4**	
	baz=359								
PRN	**Pahroc Range**	**2.94**	**90**			**Pn**	**15 38 43.5**	**+0.6**	
PRN	**Pahroc Range**	**2.94**	**90**	IAML			15 39 34.9		
	comp=N,53nm,0.7s								
PRN				IAML			15 39 38.9		
	comp=E,39nm,0.7s								
OSUM	**Sutter Buttes**	**3.02**	**307**			**Pn**	**15 38 45.4**	**+1.5**	
SHPR	**Sheep Range**	**3.03**	**108**			**Pn**	**15 38 44.1**	**-0.1**	
TUQ	**Turquoise Moun**	**3.06**	**131**	Pb		**Pb**	**15 38 51.3**	**+0.9**	
	baz=312,SNR=8.0								
BMN	**Battle Mountai**	**3.18**	**22**			**Pn**	**15 38 45.9**	**-0.2**	
BMN				IAML			15 39 39.0		
	comp=E,24nm,0.6s								
BMN				IAML			15 39 40.8		
	comp=N,28nm,0.6s								
MCCM	**Marconi Confer**	**3.34**	**283**			**Pn**	**15 38 48.4**	**+0.3**	
MCCM				IAML			15 39 42.1		
	comp=E,47nm,1.3s								
MCCM				IAML			15 39 57.4		
	comp=N,43nm,1.8s								
GDXM	**Geysers**	**3.45**	**294**			**Pn**	**15 38 49.6**	**-0.3**	
SPR3	**Spring Creek 3**	**3.79**	**65**			**Pb**	**15 39 03.2**	**+0.1**	
PSUT	**Pine Spring**	**4.01**	**73**			**Pg**	**15 39 10.0**	**-2.3**	
ELK	**Elko**	**4.25**	**39**	Pn		**Pn**	**15 39 01.7**	**+0.7**	
ELK				IAML			15 40 12.1		
	comp=N,12nm,0.3s								
ELK				IAML			15 40 12.5		
	comp=N,15nm,0.4s								
CCUT	**Cedar City**	**4.28**	**87**			**Pn**	**15 39 01.8**	**+0.3**	
LCMT	**Little Creek M**	**4.42**	**94**			**Pn**	**15 39 04.1**	**+0.9**	
SZCU	**Shurtz Canyon**	**4.50**	**87**	Pn		**Pn**	**15 39 04.6**	**+0.2**	
W13A	**Hualapai Mount**	**4.59**	**120**	Pg		**Pg**	**15 39 20.7**	**-2.9**	
TCRU	**Three Creeks R**	**5.10**	**75**	Pg		**Pg**	**15 39 32.2**	**-1.1**	
PKCU	**Pink Cliffs**	**5.12**	**88**			**Pn**	**15 39 11.3**	**-1.7**	
MSU	**Marysvale**	**5.29**	**77**	Pg		**Pg**	**15 39 34.0**	**-3.0**	
DUG	**Dugway, Tooele**	**5.37**	**58**			**Pg**	**15 39 36.5**	**-1.9**	
DUG				IAML			15 40 57.1		
	comp=N,9.1nm,0.9s								
DUG				IAML			15 41 02.0		
	comp=N,8.1nm,1.6s								

IDC ***13*** *15:39:51.6±2.3,22.˚08S×172.˚88E,h0km,mb3.7/4, mbtmp3.7/5,ML3.3/1,Error ellipse: s-maj=95.5km s-min=29.1km az=156.0*

ISC 13 15:39:55.4±1.6,22.˚1S±0.˚4×173.˚0E±0.˚2,h35km,n9, σ0.86/7,mb3.6/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.08**	**269**	Pn	**Pn**	**15 41 23.1**	**+0.2**
	0.7nm,0.3s,baz=94,slow=19,SNR=10.0						
DZM				Sn	**Sn**	**15 42 31.8**	**+0.4**
	0.3nm,0.3s,baz=66,slow=19,SNR=2.2						
	2.7nm,0.5s						
STKA	**Stephens Creek**	**29.56**	**244**	P	**P**	**15 45 57.4**	**+0.3**
	1.2nm,0.6s,baz=99,slow=14,SNR=1.7						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**35.99**	**260**	P	**P**	**15 46 53.2**	**-0.1**
	0.3nm,0.7s,baz=92,slow=8.7,SNR=3.1						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**36.09**	**266**	P	**P**	**15 46 52.7**	**-1.5**
	0.5nm,0.9s,baz=97,slow=8.2,SNR=2.2						
	0.5nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**40.76**	**351**	T	T	16 31 04.6	
	baz=171,slow=76,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**40.77**	**351**	T	T	16 31 06.4	
	baz=171,slow=76,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**40.78**	**351**	T	T	16 31 06.4	
	baz=171,slow=76,SNR=8.2						
ILAR	**Eielson Array**	**91.91**	**16**	P	**P**	**15 53 00.2**	**+0.6**
	0.8nm,0.9s,baz=231,slow=5.7,SNR=4.9						
	0.8nm,0.9s						
GERES	**GERESS Array B**	**148.60**	**333**	PKPbc	**PKPab**	**15 59 42.0**	**-0.4**
	0.5nm,0.7s,baz=35,slow=3.6,SNR=5.4						

IDC ***13*** *16:15:28.1±4.1,5.˚69S×105.˚45W,h0km,mb3.7/5, mbtmp3.7/5,MS4.1/46,Error ellipse: s-maj=222.1km s-min=67.3km az=95.0*

GCMT ***13*** *16:15:42.0±0.2,4.˚51S±0.˚01×105.˚96W±0.˚01,h23km±1km, MW5.0/114,Moment Tensor Solution. s39,c48; s114,c162; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.32±.12; Mθθ1.07±.10; Mϕϕ-0.75±.10; Mrθ0.15±.14; Mθϕ3.39±.09; Mϕr-0.39±.15; Best double couple: M₀3.53800×10¹⁶ NP1:ϕs8.00000°,δ86.00000°, λ-174.00000°. NP2:ϕs277.00000°,δ84.00000°, λ-4.00000°. Principal axes: T 3.6740, Plg2.0000°, Azm142.0000°; N -0.2690, Plg82.0000°, Azm39.0000°; P -3.4020, Plg7.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 13 16:15:29.5±3.8,5.˚7S±0.˚5×10.˚5W±.˚,h10km,n63,σ0.97/6, mb3.8/5,MS4.2/50,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**21.68**	**190**	LR	LR	16 25 10.7	
	comp=Z,38nm,21.9s,baz=348,slow=27						
CMIG	**Matias Romero**	**24.86**	**24**	LR	LR	16 28 12.2	
	comp=Z,345nm,21.1s,baz=202,slow=31						
H06S1	**SOCORRO T**	**24.88**	**347**	T	T	16 45 25.9	
	SNR=10						
H06E1	**SOCORRO T-PHAS**	**24.92**	**347**	T	T	16 45 23.4	
	SNR=7.4						

ATAH	**Atahualpa**	**26.80**	**95**	LR		LR	16 29 41.0		
	comp=Z,237nm,19.8s,baz=275,slow=32								
NNA	**Nana**	**28.82**	**105**	LR		LR	16 30 20.2		
	comp=Z,327nm,21.8s,baz=268,slow=31								
LPIG	**La Paz**	**29.99**	**351**	LR		LR	16 30 06.8		
	comp=Z,515nm,20.5s,baz=188,slow=29								
ROSC	**El Rosal**	**32.67**	**72**	LR		LR	16 33 02.7		
	comp=Z,287nm,20.5s,baz=235,slow=32								
TAOE	**Nuku Hiva Isla**	**34.68**	**263**	eLR		LR	16 31 13.8		
	comp=Z,620nm,26.8s								
TXAR	**Lajitas Array**	**34.84**	**3**	LR		LR	16 34 43.7		
	comp=Z,200nm,18.1s,baz=182,slow=33								
H03N2	**Juan Fernandez**	**36.94**	**142**	T		T	17 03 31.6		
	baz=314								
H03N1	**Juan Fernandez**	**36.95**	**142**	T		T	17 03 33.2		
	baz=314								
H03N3	**Juan Fernandez**	**36.96**	**142**	T		T	17 03 32.8		
	baz=314								
SDV	**Santo Domingo**	**37.48**	**68**	LR		LR	16 35 41.0		
	comp=Z,370nm,20.2s,baz=245,slow=32								
LPAZ	**La Paz**	**37.93**	**109**	LR		LR	16 35 02.7		
	comp=Z,164nm,21.8s,baz=272,slow=31								
LVC	**Limon Verde**	**38.96**	**119**	LR		LR	16 35 24.9		
	comp=Z,329nm,19.5s,baz=291,slow=31								
ANMO	**Albuquerque**	**40.41**	**359**	LR		LR	16 36 44.2		
	comp=Z,175nm,20.1s,baz=183,slow=32								
PFO	**Pinyon Flats O**	**40.47**	**346**	P		**P**	**16 23 08.9**	**+0.2**	
	1.3nm,0.6s,baz=190,slow=6.7,SNR=2.0								
PFO				LR		LR	16 35 22.9		
	comp=Z,497nm,21.3s,baz=164,slow=30								
	1.3nm,0.6s								
SIV	**San Ignacio**	**44.56**	**107**	LR		LR	16 40 03.0		
	comp=Z,343nm,21.7s,baz=292,slow=33								
PPT	**Papeete**	**44.81**	**251**	LR		LR	16 37 38.6		
	comp=Z,228nm,18.5s,baz=94,slow=30								
PPT2	**Papeete2**	**44.82**	**251**	eLR		LR	16 36 03.7		
	comp=Z,639nm,26.2s								
SJG	**San Juan**	**45.30**	**58**	LR		LR	16 40 58.9		
	comp=Z,151nm,21.3s,baz=253,slow=34								
NVAR	**Mina Array Bea**	**45.50**	**346**	P		**P**	**16 23 49.6**	**+0.1**	
	0.1nm,0.3s,baz=167,slow=9.3,SNR=4.2								
NVAR				LR		LR	16 38 30.1		
	comp=Z,239nm,18.8s,baz=168,slow=30								
	0.1nm,0.3s								
TKL	**Tuckaleechee C**	**45.83**	**25**	LR		LR	16 43 10.1		
	comp=Z,80nm,18.9s,baz=212,slow=36								
TBI	**Tubuai**	**45.97**	**243**	eLR		LR	16 36 40.9		
	comp=Z,456nm,28.0s								
PLCA	**Paso Flores**	**46.76**	**143**	LR		LR	16 39 33.0		
	comp=Z,426nm,19.5s,baz=330,slow=31								
ELK	**Elko**	**47.08**	**350**	LR		LR	16 40 06.7		
	comp=Z,401nm,19.3s,baz=174,slow=31								
PDAR	**Pinedale Array**	**48.36**	**356**	P		**P**	**16 24 10.9**	**-0.9**	
	0.3nm,0.4s,baz=172,slow=7.7,SNR=3.6								
PDAR				LR		LR	16 41 40.0		
	comp=Z,232nm,18.6s,baz=184,slow=32								
	0.3nm,0.4s								
YBH	**Yreka Blue Hor**	**49.78**	**343**	LR		LR	16 41 12.4		
	comp=Z,249nm,19.1s,baz=167,slow=31								
CPUP	**Villa Florida**	**50.13**	**120**	LR		LR	16 42 43.8		
	comp=Z,150nm,20.8s,baz=277,slow=33								
MDP	**Mesas des**	**53.68**	**79**	LR		LR	16 45 46.2		
	comp=Z,235nm,18.5s,baz=266,slow=34								
NEW	**Newport**	**54.70**	**350**	LR		LR	16 44 47.2		
	comp=Z,258nm,19.0s,baz=167,slow=32								
RAR	**Rarotonga**	**54.89**	**248**	LR		LR	16 42 52.9		
	comp=Z,116nm,19.4s,baz=82,slow=30								
SADO	**Sadowa**	**55.44**	**22**	LR		LR	16 48 43.3		
	comp=Z,137nm,18.3s,baz=238,slow=36								
BBB	**Bella Bella**	**60.82**	**344**	LR		LR	16 48 17.9		
	comp=Z,120nm,18.5s,baz=150,slow=32								
AFI	**Afiamalu**	**65.83**	**257**	LR		LR	16 46 43.6		
	comp=Z,101nm,21.7s,baz=91,slow=28								
PMSA	**Palmer Station**	**65.84**	**162**	LR		LR	16 47 42.1		
	comp=Z,539nm,20.6s,baz=294,slow=29								
DLBC	**Dease Lake**	**66.92**	**346**	LR		LR	16 52 39.3		
	comp=Z,134nm,18.6s,baz=144,slow=33								
SCHQ	**Schefferville**	**68.25**	**23**	LR		LR	16 54 56.8		
	comp=Z,68nm,20.7s,baz=258,slow=35								
YKA	**Yellowknife Ar**	**68.34**	**355**	P		**P**	**16 26 32.0**	**+1.3**	
	1.6nm,0.9s,baz=164,slow=6.0,SNR=6.7								
YKA				LR		LR	16 53 45.4		
	comp=Z,187nm,18.9s,baz=146,slow=34								
	1.6nm,0.9s								
RCBR	**Riachuelo**	**69.03**	**94**	LR		LR	16 55 30.2		
	comp=Z,212nm,20.1s,baz=56,slow=35								
RAO	**Raoul Island**	**72.07**	**241**	LR		LR	16 50 52.8		
	comp=Z,79nm,19.0s,baz=94,slow=30								
FRB	**Frobisher Bay**	**74.54**	**16**	LR		LR	16 59 07.9		
	comp=Z,81nm,18.9s,baz=48,slow=35								
INK	**Inuvik**	**76.41**	**350**	LR		LR	16 58 04.4		
	comp=Z,202nm,18.1s,baz=169,slow=34								
ILAR	**Eielson Array**	**76.68**	**343**	P		**P**	**16 27 19.9**	**-0.6**	
	0.7nm,0.9s,baz=134,slow=4.9,SNR=4.6								
	0.7nm,0.9s								
URZ	**Urewera**	**76.75**	**232**	LR		LR	16 52 50.8		
	comp=Z,168nm,18.8s,baz=30,slow=29								
RES	**Resolute Bay**	**80.47**	**3**	LR		LR	17 01 02.9		
	comp=Z,120nm,20.8s,baz=200,slow=34								
RPZ	**Rata Peaks**	**81.51**	**227**	LR		LR	16 58 37.6		
	comp=Z,141nm,18.5s,baz=84,slow=32								
SFJD	**Kangerlussuaq**	**82.20**	**19**	LR		LR	17 03 39.5		
	comp=Z,61nm,20.4s,baz=247,slow=35								
QSPA	**South Pole Qui**	**84.39**	**180**	LR		LR	16 58 41.5		
	comp=Z,106nm,19.6s,baz=105,slow=31								
DZM	**Mont Dzumac**	**86.22**	**248**	LR		LR	16 59 42.7		
	comp=Z,56nm,19.0s,baz=84,slow=31								
SNAA	**Sanae**	**88.56**	**162**	LR		LR	17 02 04.2		
	comp=Z,123nm,18.8s,baz=205,slow=32								
SHEM	**Shemya Is, Ala**	**88.79**	**323**	LR		LR	16 58 40.1		
	comp=Z,155nm,21.8s,baz=118,slow=29								
H11N3	**WAKE ISLAND Hy**	**89.80**	**290**	T		T	18 06 51.4		
	baz=96,slow=74,SNR=56								
H11N2	**WAKE ISLAND Hy**	**89.81**	**290**	T		T	18 06 46.5		
	baz=96,slow=74,SNR=93								
H11N1	**WAKE ISLAND Hy**	**89.81**	**290**	T		T	18 06 55.4		
	baz=96,slow=74,SNR=52								
H11S2	**WAKE ISLAND Hy**	**89.86**	**288**	T		T	18 06 59.8		
	baz=93,slow=74,SNR=34								
H11S1	**WAKE ISLAND Hy**	**89.87**	**288**	T		T	18 07 00.4		
	baz=93,slow=74,SNR=38								
H11S3	**WAKE ISLAND Hy**	**89.88**	**288**	T		T	18 07 01.2		
	baz=93,slow=74,SNR=37								
BBTS	**Babate**	**90.25**	**75**	LR		LR	17 03 41.0		
	comp=Z,55nm,18.8s,baz=250,slow=32								
BORG	**Borgarnes**	**92.52**	**25**	LR		LR	17 09 56.0		
	comp=Z,43nm,18.3s,baz=277,slow=35								
PETK	**Petropavlovsk-**	**98.70**	**323**	LR		LR	17 04 55.8		
	comp=Z,78nm,20.8s,baz=87,slow=30								
CMAR	**Chiang Mai Arr**	**153.13**	**300**	PKPbc		**PKiKP**	**16 35 28.6**	**-0.1**	
	0.3nm,0.5s,baz=90,slow=1.8,SNR=1.7								

IDC ***13*** *16:17:18.5±1.7,33.˚56S×71.˚71W,h0km,mb3.8/3, mbtmp3.7/6,ML3.7/3,MS3.5/4,Error ellipse: s-maj=43.4km s-min=32.4km az=90.0*

SJA ***13*** *16:17:18.2±0.8,33.˚41S×72.˚36W,h29km±2km,ML4.0, MW4.2*

GUC ***13*** *16:17:20.2±0.8,33.˚45S×72.˚30W,h41km±2km,ML3.9*

ISC 13 16:17:17.6±1.4,33.˚36S±0.˚02×72.˚34W±0.˚05,h11km±9km, n52,σ1.977/77,mb4.0/3,14C-3D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.67**	**60**	⇓eP	**Pn**	**16 17 33.3**	**+0.3**
VA01				eS	**Sn**	**16 17 43.5**	**0.0**
VA01	**Torpederas**	**0.67**	**60**	eP	**Pn**	**16 17 33.0**	**0.0**
VA05	**Santo Domingo**	**0.67**	**117**	⇑eP	**Pb**	**16 17 32.2**	**+0.8**
VA05				eS	**Sb**	**16 17 41.2**	**+0.4**
VA05				IAML		16 17 45.9	
	comp=N,15μm,0.3s						
MT02	**Curacav**	**1.01**	**85**	⇓eP	**Pn**	**16 17 38.1**	**+0.4**
MT02				eS	**Sn**	**16 17 51.3**	**-0.6**
MT02				IAML		16 17 53.2	
	comp=E,5μm,0.4s						
MT02	**Curacav**	**1.01**	**85**	eP	**Pn**	**16 17 38.0**	**+0.3**
MT02				eS	**Sn**	**16 17 52.8**	**+0.8**
MT02				IAML		16 17 54.1	
	comp=Z,6μm,0.5s						
MT01	**Popeta**	**1.04**	**120**	⇑eP	**Pg**	**16 17 37.9**	**+0.3**
MT01				eS	**Sb**	**16 17 51.2**	**0.0**
MT01				IAML		16 17 53.0	
	comp=E,12μm,0.2s						
MT01	**Popeta**	**1.04**	**120**	eP	**Pb**	**16 17 38.0**	**+0.4**
MT01				eP	**Pb**	**16 17 38.0**	**+0.4**
MT01				IAML		16 17 52.7	
	comp=Z,6μm,0.5s						
MT01				eS	**Sn**	**16 17 52.8**	**+0.1**
ROC1	**El Roble**	**1.17**	**71**	eP	**Pn**	**16 17 41.0**	**+0.8**
ROC1				eS	**Sn**	**16 17 58.3**	**+2.0**
ROCH	**El Roble**	**1.18**	**71**	⇑eP	**Pn**	**16 17 41.2**	**+1.0**
ROCH				⇑eP	**Pn**	**16 17 41.3**	**+1.0**
ROCH				eS	**Sg**	**16 17 55.4**	**-0.1**
ROCH				eS	**Sn**	**16 17 57.3**	**+0.9**
ROCH				IAML		16 18 08.2	
	comp=E,3μm,0.5s						
ROCH				IAML		16 18 08.4	
	comp=N,3μm,0.5s						
VA06	**Catapilco**	**1.18**	**48**	⇑eP	**Pg**	**16 17 41.2**	**+1.0**
VA06				eS	**Sn**	**16 17 57.8**	**+1.7**
VA06				IAML		16 18 02.7	
	comp=E,6μm,0.5s						
BO03	**Pichilemu**	**1.18**	**165**	⇑eP	**Pb**	**16 17 39.7**	**-0.3**
BO03				eS	**Sb**	**16 17 54.2**	**-1.1**
BO03				IAML		16 18 01.6	
	comp=E,2μm,0.3s						
MT09	**Talagante**	**1.20**	**111**	⇑eP	**Pb**	**16 17 40.5**	**0.0**
MT09				eS	**Sg**	**16 17 55.7**	**-0.6**
MT09				IAML		16 17 57.9	
	comp=N,8μm,0.3s						
MT05	**Renca**	**1.34**	**92**	⇓eP	**Pg**	**16 17 43.6**	**+0.3**
MT05				eS	**Sg**	**16 18 00.6**	**-0.1**
MT05				IAML		16 18 05.6	
	comp=E,5μm,0.3s						
MT05	**Renca**	**1.34**	**92**	eP	**Pg**	**16 17 43.7**	**+0.3**
MT05				eS	**Sg**	**16 18 02.6**	**+1.9**
MT05				IAML		16 18 03.8	
	comp=Z,2μm,0.5s						
BO01	**Tunca**	**1.47**	**135**	⇑eP	**Pn**	**16 17 43.9**	**-0.2**
BO01				eS	**Sn**	**16 18 02.6**	**-0.7**
BO01				IAML		16 18 05.1	
	comp=N,1μm,0.2s						
MT03	**Universidad Ad**	**1.53**	**96**	⇑eP	**Pb**	**16 17 46.6**	**+0.5**
MT03				eS	**Sg**	**16 18 06.2**	**-0.8**
MT03				IAML		16 18 16.0	
	comp=E,4μm,0.4s						
VA03	**San Esteban**	**1.61**	**69**	⇑eP	**Pb**	**16 17 47.7**	**+0.2**
VA03				eS	**Sg**	**16 18 09.0**	**-0.4**
VA03				IAML		16 18 18.8	
	comp=E,3μm,0.6s						
VA03	**San Esteban**	**1.61**	**69**	eP	**Pb**	**16 17 48.0**	**+0.6**
VA03				eS	**Sb**	**16 18 07.1**	**-0.8**
VA03				IAML		16 18 18.0	
	comp=Z,2μm,0.5s						
GO05	**Huala**	**1.68**	**169**	⇑eP	**Pn**	**16 17 46.8**	**-0.3**
GO05				eS	**Sn**	**16 18 07.1**	**-1.6**
GO05				IAML		16 18 17.1	
	comp=N,1μm,0.6s						
GO05	**Huala**	**1.68**	**169**	eP	**Pn**	**16 17 46.8**	**-0.3**
GO05				eS	**Sg**	**16 18 15.2**	**+3.4**
FCH	**Farellones**	**1.71**	**90**	⇑eP	**Pb**	**16 17 49.5**	**+0.2**
FCH				eS	**Sg**	**16 18 11.8**	**-0.9**
FCH				IAML		16 18 14.3	
	comp=E,1μm,0.4s						
LMEL	**Las Melosas**	**1.85**	**106**	⇑eP	**Pn**	**16 17 50.8**	**+1.3**
LMEL				eS	**Sn**	**16 18 13.0**	**+0.1**
LMEL				IAML		16 18 17.1	
	comp=N,2μm,0.4s						
BO02	**Sierra Bellavi**	**1.93**	**138**	⇑eP	**Pn**	**16 17 51.2**	**+0.7**
BO02				eS	**Sn**	**16 18 14.5**	**-0.3**
BO02				IAML		16 18 26.1	
	comp=E,3μm,0.6s						
BO02	**Sierra Bellavi**	**1.93**	**138**	eP	**Pn**	**16 17 51.5**	**+1.0**
BO02				eS	**Sn**	**16 18 15.1**	**+0.3**
BO02				IAML		16 18 21.3	
	comp=Z,2μm,0.6s						
CO02	**Combarbal**	**2.43**	**28**	eP	**Pn**	**16 17 59.3**	**+1.9**
CO02				eS	**Sg**	**16 18 36.1**	**+0.5**
CO02				IAML		16 18 46.1	
	comp=Z,896nm,0.6s						
ML02	**Panimavida**	**2.52**	**163**	IAML		16 18 45.7	
	comp=N,2μm,0.7s						
CO03	**El Pedregal**	**2.87**	**30**	eP	**Pn**	**16 18 05.7**	**+2.2**
CO03				eS	**Sb**	**16 18 42.6**	**-1.6**
CO03				IAML		16 18 56.0	
	comp=Z,433nm,0.7s						
RTLS	**Leoncito**	**3.00**	**60**	eP	**Pb**	**16 18 09.2**	**-2.1**
RTLS				IAML		16 19 06.4	
	comp=Z,283nm,0.7s						
GO04	**Tololo Observa**	**3.43**	**23**	eP	**Pn**	**16 18 13.3**	**+2.0**
GO04				eS	**Sg**	**16 19 10.1**	**+2.2**
RFA	**San Rafael**	**3.51**	**115**	eP	**Pn**	**16 18 14.1**	**+1.9**
RFA				eS	**Sg**	**16

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.15**	**273**	Pn	Pn	16 33 32.3	+0.9
	0.6nm,0.3s,baz=86,slow=19,SNR=12						
DZM				Sn	Sn	16 34 31.4	-11
	baz=282,slow=20 3.7nm,0.5s						
MSVF	**Nonsavu**	**6.65**	**46**	LR	LR	16 35 35.6	
	comp=Z,96nm,18.5s,baz=168,slow=33						
ASAR	**Alice Springs**	**35.98**	**260**	P	P	16 39 01.5	-0.5
	0.4nm,0.8s,baz=84,slow=8.9,SNR=2.9 0.4nm,0.8s						
WRA	**Warramunga Arr**	**36.13**	**267**	P	P	16 39 02.8	-0.5
	0.3nm,0.7s,baz=100,slow=8.0,SNR=2.0 0.3nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**41.20**	**351**	T	T	17 23 09.6	
	baz=171,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**41.20**	**351**	T	T	17 23 11.2	
	baz=171,slow=76,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	**41.21**	**351**	T	T	17 23 12.2	
	baz=171,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**42.37**	**351**	T	T	17 24 39.5	
	baz=173						
H11N3	**WAKE ISLAND Hy**	**42.37**	**351**	T	T	17 24 41.4	
	baz=173						
H11N2	**WAKE ISLAND Hy**	**42.39**	**351**	T	T	17 24 41.2	
	baz=173						
ARCES	**ARCESS Array B**	**129.09**	**346**	PKP	PKPdf	16 51 07.8	-0.7
	3.2nm,1.1s,baz=48,slow=1.3,SNR=4.6						
GERES	**GERESS Array B**	**149.01**	**333**	PKPbc	PKPbc	16 51 49.4	+0.2
	0.2nm,0.6s,baz=44,slow=3.0,SNR=1.9						

*SKHL **13** 16:33:01.7±0.5, 44°.30N×151°.00E, h46km±3km, mb4.4/3*
*JMA **13** 16:33:02.7±0.8, 45°.N±3°×15°.1E±°, h30km, MV4.1/15, KURILE ISLANDS REGION*
*IDC **13** 16:33:09.6±4.2, 44°.65N×150°.19E, h69km±38km, mb3.4/14, mbtmp3.6/17, ML2.6/3, MS3.1/3, Error ellipse: s-maj=22.2km s-min=20.5km az=116.0*
*MOS **13** 16:33:09.4±0.9, 44°.53N×150°.07E, h80km, mb3.9/1, Error ellipse: s-maj=14.7km s-min=10.7km az=176.7*
ISC 13 16:33:05.1±0.7, 44°.39N±0°.08×150°.57E±0°.07, h35km, n51, σ1s80/54, mb3.7/14, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.10**	**295**	*e*PN	Pn	**16 33 37.4**	**-0.3**
KUR				pmax	pmax		
	comp=Z,82nm,0.4s						
KUR				pmax	pmax		
	comp=N,60nm,0.2s						
KUR				pmax	pmax		
	comp=E,66nm,0.2s						
KUR	**Kuril'sk**	**2.10**	**295**	*e*P	Pn	**16 33 37.3**	**-0.4**
KUR				AMB	AMB	16 33 43.5	
	comp=E,60nm,0.4s						
KUR				*e*S	Sn	**16 34 04.3**	**+1.7**
KUR				A	A	16 34 10.0	
	comp=E,300nm,0.5s						
KUR				A	A	16 34 10.0	
	comp=E,180nm,0.5s						
SHO	**Shikotan**	**2.75**	**260**	*e*PN	Pn	**16 33 47.1**	**+0.5**
SHO				pmax	pmax		
	comp=N,17nm,0.2s						
SHO				pmax	pmax		
	comp=E,21nm,0.2s						
SHO				pmax	pmax		
	comp=Z,34nm,0.2s						
SHO	**Shikotan**	**2.75**	**260**	*e*P	Pn	**16 33 46.9**	**+0.3**
SHO				AMB	AMB	16 33 51.8	
	comp=Z,70nm,0.8s						
SHO				*e*S	Sn	**16 34 20.4**	**+1.9**
SHO				A	A	16 34 23.6	
	comp=Z,100nm,0.3s						
SHO				A	A	16 34 23.6	
	comp=Z,130nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.41**	**266**	*e*PN	Pn	**16 33 56.7**	**+1.0**
YUK				pmax	pmax		
	comp=Z,86nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.41**	**266**	*e*P	Pn	**16 33 57.8**	**+2.1**
YUK				AMB	AMB	16 33 59.9	
	comp=Z,70nm,0.3s						
YUK				*e*S	Sn	**16 34 37.2**	**+2.4**
YUK				A	A	16 34 45.0	
	comp=Z,140nm,0.4s						
YUK				A	A	16 34 45.0	
	comp=Z,130nm,0.4s						
NEM2	**Nemuro 2**	**3.64**	**255**	*e*P	Pn	**16 33 59.4**	**+0.5**
NEM2				*e*S	Sn	**16 34 41.4**	**+0.8**
NMR	**Nemuro--Hokkai**	**3.65**	**255**	*e*PN	Pn	**16 33 59.5**	**+0.5**
NMR	**Nemuro--Hokkai**	**3.65**	**255**	*e*P	Pn	**16 33 59.5**	**+0.5**
NMR				*e*S	Sn	**16 34 43.7**	**+2.9**
RUSJ	**Misakicho**	**3.84**	**268**	*e*PN	Pn	**16 34 03.2**	**+1.6**
JRA	**Rausu**	**3.95**	**265**	*e*P	Pn	**16 34 05.3**	**+2.2**
JNK	**Nakash**	**4.30**	**261**	*e*P	Pn	**16 34 09.4**	**+1.4**
JNK				*e*S	Sn	**16 34 58.5**	**+1.6**
JAK	**Akkeshi**	**4.49**	**254**	*e*P	Pn	**16 34 11.4**	**+0.9**
JAK				*e*S	Sn	**16 35 02.2**	**+0.8**
JTKR	**Abashiri--Toko**	**4.81**	**267**	*e*P	Pn	**16 34 17.6**	**+2.6**
JAR	**Ashorobuto**	**5.04**	**260**	*e*P	Pn	**16 34 20.2**	**+2.1**
JOB	**Onbets**	**5.11**	**255**	*e*P	Pn	**16 34 20.6**	**+1.5**
JCH	**Churui**	**5.54**	**254**	*e*P	Pn	**16 34 26.2**	**+1.3**
JCH				*e*S	Sn	**16 35 28.4**	**+1.1**
JKK2	**Kamakawa 2**	**5.66**	**267**	*e*P	Pn	**16 34 29.4**	**+2.8**
YSS	**Yuzh-Sakhalins**	**6.05**	**298**	*e*PN	Pn	**16 34 35.3**	**+3.4**
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.05**	**298**	*e*P	Pn	**16 34 35.3**	**+3.4**
JNBK	**Urakawa-nobuka**	**6.08**	**252**	*e*P	Pn	**16 34 33.5**	**+1.1**
JANG	**Nango**	**7.81**	**242**	*e*P	Pn	**16 34 56.9**	**+0.6**
JANG				*e*S	Sn	**16 36 20.2**	**-3.3**
PETK	**Petropavlovsk-**	**9.91**	**26**	S	Sn	**16 37 16.3**	**+1.7**
	comp=Z,1.2nm,1.0s,baz=226,slow=16,SNR=0.8						
PETK				LR	LR	16 39 45.0	
	comp=Z,61nm,18.1s,baz=180,slow=40						
MJAR	**Matsushiro Arr**	**12.24**	**234**	P	Pn	**16 35 59.8**	**+2.9**
	baz=34,slow=13,SNR=1.9 comp=Z,0.5nm,1.0s						
USRK	**Ussuriysk Ar.**	**13.32**	**276**	P	Pn	**16 36 11.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=86,slow=13,SNR=12 comp=Z,3.1nm,0.6s						
KSRS	**Korea Array**	**18.43**	**256**	P	P	**16 37 17.4**	**0.0**
	comp=Z,0.1nm,0.3s,baz=63,slow=10,SNR=2.3 comp=Z,0.2nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.11**	**146**	T	T	17 10 01.7	
	baz=335,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**28.12**	**146**	T	T	17 10 01.4	
	baz=335,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	**28.12**	**146**	T	T	17 09 59.2	
	baz=335,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.13**	**147**	T	T	17 11 11.9	
	baz=336,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**29.14**	**147**	T	T	17 11 12.2	
	baz=336,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**29.15**	**147**	T	T	17 11 13.6	
	baz=336,slow=76,SNR=27						
SONM	**Songino Array**	**30.51**	**292**	P	P	**16 39 13.3**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=85,slow=10,SNR=4.7 comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**39.51**	**37**	P	P	**16 40 33.5**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=278,slow=6.3,SNR=2.1 comp=Z,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**42.58**	**307**	P	P	**16 40 54.1**	**-3.1**
	comp=Z,0.6nm,0.4s,baz=78,slow=7.0,SNR=3.1 comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**46.46**	**298**	P	P	**16 41 27.6**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=75,slow=6.8,SNR=9.9						
MKAR				PcP	PcP	**16 43 00.9**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=58,slow=3.6,SNR=2.3 comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**50.08**	**256**	P	P	**16 41 56.0**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=42,slow=8.5,SNR=1.5 comp=Z,0.6nm,0.3s						
CTA	**Charters Tower**	**64.28**	**185**	LR	LR	17 09 52.9	
	comp=Z,27nm,19.6s,baz=79,slow=34						
NVAR	**Mina Array Bea**	**65.13**	**60**	P	P	**16 43 42.5**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=298,slow=8.1,SNR=1.8 comp=Z,0.1nm,0.4s						
FINES	**FINESS Array B**	**65.40**	**334**	P	P	**16 43 41.2**	**-2.4**
	comp=Z,1.2nm,0.5s,baz=22,slow=11,SNR=10 comp=Z,1.2nm,0.5s						
WRA	**Warramunga Arr**	**65.72**	**197**	P	P	**16 43 48.0**	**+1.9**
	comp=Z,0.5nm,0.9s,baz=18,slow=6.5,SNR=3.7 comp=Z,0.5nm,0.9s						
WRA	**Warramunga Arr**	**65.72**	**197**	P	P	**16 43 48.0**	**+1.9**
ASAR	**Alice Springs**	**69.42**	**196**	P	P	**16 44 10.9**	**+1.4**
	comp=Z,0.1nm,0.5s,baz=15,slow=7.7,SNR=2.9 comp=Z,0.1nm,0.5s						
NB2	**NORSAR Subarra**	**69.86**	**340**	P	P	**16 44 10.1**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.86**	**340**	P	P	**16 44 09.6**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=30,slow=6.6,SNR=7.6						
NOA				LR	LR	17 19 31.1	
	comp=Z,13nm,18.5s,baz=295,slow=40 comp=Z,0.4nm,0.5s						
KBZ	**Khabaz**	**71.19**	**313**	P	P	**16 44 19.4**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=44,slow=2.7,SNR=5.6 comp=Z,2.1nm,0.7s						
AKASG	**Malin Array Be**	**72.49**	**325**	P	P	**16 44 26.1**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=36,slow=6.6,SNR=7.9 comp=Z,0.9nm,0.4s						
KHC	**Kasperske Hory**	**79.56**	**333**	*e*P	P	**16 45 07.7**	**-0.5**
KHC	**Kasperske Hory**	**79.56**	**333**	*e*P	P	**16 45 07.7**	**-0.5**
GERES	**GERESS Array B**	**79.76**	**333**	P	P	**16 45 09.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=38,slow=6.8,SNR=5.7 comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**80.22**	**59**	P	P	**16 45 15.1**	**+2.9**
	comp=Z,0.1nm,0.6s,baz=316,slow=3.8,SNR=2.4 comp=Z,0.1nm,0.6s						

*IDC **13** 16:45:10.7±3.5, 35°.78N×71°.42E, h50km±31km, mb3.6/10, mbtmp3.9/15, ML3.8/5, MS3.7/5, Error ellipse: s-maj=32.2km s-min=21.7km az=170.0*
*NNC **13** 16:45:19.9±12.0, 36°.79N×69°.96E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=164.1km s-min=82.7km az=122.0*
ISC 13 16:45:17.3±1.1, 36°.3N±0°.1×71°.4E±0°.1, h100km, n31, σ1s63/26, mb3.9/9, 1C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.12**	**16**	P	Pn	**16 46 46.0**	**+0.4**
	SNR=38						
EKS2	**Erkin-Say**	**6.65**	**15**	P	Pn	**16 46 53.8**	**+1.3**
	SNR=19						
AAK	**Ala-Archa**	**6.80**	**20**	P	Pn	**16 46 55.4**	**+0.9**
	7.2nm,0.3s,baz=184,slow=5.4,SNR=22						
AAK				S	Sn	**16 48 09.4**	**-1.1**
	9.3nm,0.8s,baz=330,slow=21,SNR=0.9 20nm,0.4s						
AAK	**Ala-Archa**	**6.80**	**20**	P	Pn	**16 46 55.7**	**+1.2**
	SNR=13						
KK31	**Karatay Array**	**6.87**	**354**	P	Pn	**16 46 54.6**	**-0.7**
	2.6nm,0.3s,baz=179,slow=13,SNR=119						
KK31				⇑S	Sn	**16 48 08.1**	**-3.8**
	6.1nm,0.4s,baz=181,slow=24,SNR=6.1						
KBK	**Karagaybulak**	**6.95**	**22**	P	Pn	**16 46 57.7**	**+1.2**
	SNR=5.2						
CHMS	**Chumysh**	**7.21**	**20**	P	Pn	**16 47 00.2**	**+0.3**
	SNR=12						
USP	**Ospenovka**	**7.39**	**18**	P	Pn	**16 47 03.5**	**+1.1**
	SNR=7.2						
TKM2	**Tokmak 2**	**7.39**	**25**	P	Pn	**16 47 03.3**	**+0.7**
	SNR=14						
GEYT	**Alibeck**	**10.75**	**283**	P	Pn	16 47 43.9	-4.3
	2.4nm,0.3s,baz=96,slow=12,SNR=12						
GEYT				S	Sn	16 49 38.2	-8.3
	4.6nm,0.4s,baz=94,slow=19,SNR=5.9 4.6nm,0.3s						
MKAR	**Makanchi Array**	**13.29**	**34**	P	Pn	**16 48 21.2**	**-0.7**
	0.1nm,0.3s,baz=231,slow=14,SNR=4.8 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**15.25**	**17**	P	Pn	**16 48 49.4**	**+2.5**
	baz=206,slow=10,SNR=11 1.4nm,0.7s						
AB31	**Akbulak array**	**15.46**	**331**	⇓P	Pn	**16 48 47.4**	**-2.1**
	1.2nm,0.5s,baz=143,slow=14,SNR=49						
AKTO	**Aktyubinsk**	**17.16**	**330**	P	P	**16 49 10.7**	**+0.1**
	0.6nm,0.3s,baz=144,slow=10,SNR=7.4 1.8nm,0.5s						
AKTO	**Aktyubinsk**	**17.16**	**330**	⇓P	P	16 49 04.8	-5.9
	4.9nm,1.0s						
ZALV	**Zalesovo Beam**	**20.00**	**24**	P	P	**16 49 42.5**	**+0.9**
	1.2nm,0.4s,baz=224,slow=11,SNR=8.5 1.2nm,0.4s						
GNI	**Garni**	**21.29**	**289**	P	P	**16 49 54.6**	**-1.2**
	2.0nm,0.4s,baz=122,slow=9.5,SNR=1.1 2.0nm,0.4s						
BELG	**Belogornoye**	**23.29**	**321**	P	P	**16 50 17.3**	**+1.3**
	6.2nm,0.7s,baz=27,slow=4.5,SNR=1.9 6.2nm,0.7s						
BRTR	**Keskin Array B**	**29.83**	**288**	P	P	**16 51 13.7**	**-1.3**
	0.3nm,0.6s,baz=88,slow=11,SNR=1.4 0.3nm,0.6s						
AKASG	**Malin Array Be**	**33.36**	**309**	P	P	**16 51 47.2**	**+1.5**
	0.9nm,0.5s,baz=80,slow=7.3,SNR=7.4 0.9nm,0.5s						
FINES	**FINESS Array B**	**37.87**	**326**	P	P	**16 52 26.3**	**+2.2**
	6.1nm,1.1s,baz=142,slow=9.6,SNR=5.9 6.1nm,1.1s						
ARCES	**ARCESS Array B**	**41.49**	**338**	P	P	**16 52 56.1**	**+2.1**
	4.0nm,1.1s,baz=111,slow=6.9,SNR=4.9 4.0nm,1.1s						
HFS	**Hagfors**	**43.46**	**322**	LR	LR	17 14 23.7	
	comp=Z,53nm,18.2s,baz=293,slow=40						
YAK	**Yakutsk**	**43.97**	**35**	LR	LR	17 13 13.7	
	comp=Z,71nm,21.5s,baz=88,slow=38						
NB2	**NORSAR Subarra**	**44.77**	**323**	P	P	**16 53 21.9**	**+1.3**
	comp=Z,1.2nm,0.6s,baz=95,slow=8.6						
NOA	**NORSAR Array B**	**44.77**	**323**	P	P	**16 53 22.1**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=97,slow=7.7,SNR=4.0 comp=Z,0.4nm,0.5s						
VAE	**Valguarnera**	**45.01**	**289**	LR	LR	17 15 57.5	
	comp=Z,90nm,19.8s,baz=338,slow=41						
KLR	**Kul'dur**	**45.02**	**54**	LR	LR	17 13 40.5	
	comp=Z,75nm,20.9s,baz=66,slow=38						
LSZ	**Lusaka**	**65.53**	**227**	LR	LR	17 25 11.7	
	comp=Z,98nm,19.8s,baz=247,slow=37						
TORD	**Torodi Ar. Bea**	**66.05**	**269**	P	P	**16 55 52.7**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=60,slow=6.0,SNR=8.6 comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**81.58**	**122**	P	P	**16 57 22.1**	**-2.0**
	comp=Z,0.4nm,1.0s,baz=320,slow=4.9,SNR=1.7 comp=Z,0.4nm,1.0s						

*ANF **13** 16:51:39.2±0.2, 37°.44N×118°.80W, h5km±2km, ML3.1/14, Error ellipse: s-maj=2.2km s-min=1.8km az=107.0*
*REN **13** 16:51:39.4±1.1, 37°.48N±0°.03×118°.79W±0°.03, h6km±5km, Error ellipse: s-maj=4.4km s-min=2.5km az=222.0*
*NEIC **13** 16:51:39.6±1.3, 37°.47N±0°.02×118°.72W±0°.02, h1km±8km, Error ellipse: s-maj=3.0km s-min=1.9km az=45.0*
*NEIC **13** 16:51:39, 37°.48N×118°.79W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}=3.92; $M_{\theta\theta}$=0.53; $M_{\phi\phi}$=3.39; $M_{r\theta}$=-1.19; $M_{\theta\phi}$=2.14; $M_{r\phi}$=-1.15; Fault plane solution: M_{ϕ}=4.57000×10^{13} NP1:ϕ_s352.00000°, δ52.00000°, λ-62.00000°. NP2:ϕ_s131.00000°, δ46.00000°, λ-121.00000°. Principal axes: T 4.5595, Plg3.0000°, Azm63.0000°; N 0.0215, Plg22.0000°, Azm154.0000°; P -4.5811, Plg68.0000°, Azm325.0000°.*
*NCEDC **13** 16:51:39.4±1.2, 37°.48N±0°.02×118°.78W±0°.02, h6km±5km, ML3.3/26, ML2.8/70(NEIC), Mwr3.0(REN) Error ellipse: s-maj=3.4km s-min=2.5km az=213.0*
ISC 13 16:51:39.7±0.8, 37°.47N±0°.02×118°.76W±0°.02, h7km±6km, n199, σ0s91/204, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCCR	**Rock Creek Can**	**0.03**	**64**		Pg	**16 51 41.1**	**-0.4**
WMD		**0.10**	**109**		Pg	**16 51 42.1**	**+0.2**
SCHCA	**Scheelite**	**0.13**	**154**		Pg	**16 51 42.5**	**0.0**
MCVM	**Convict Lake**	**0.13**	**334**		Pg	**16 51 42.2**	**-0.5**
MLAC	**Mammoth, Mammo**	**0.17**	**339**		Pg	**16 51 43.1**	**-0.2**
MLAC					Sg	**16 51 45.7**	**0.0**
MLAC	**Mammoth, Mammo**	**0.17**	**339**	P	Pg	**16 51 43.1**	**-0.2**
	baz=163,SNR=634						
MLAC				S	Sg	**16 51 45.7**	**0.0**
	baz=163						
MDRNC	**Doe Ridge**	**0.18**	**340**		Pg	**16 51 43.3**	**-0.1**
ORC	**Owens River**	**0.18**	**27**		Pg	**16 51 43.4**	**-0.1**
MLCM	**Laurel Creek C**	**0.19**	**318**		Pg	**16 51 43.1**	**-0.4**
MGPM	**Gravel Pit**	**0.19**	**323**		Pg	**16 51 43.4**	**-0.3**
MTUM	**Tungsten Hills**	**0.20**	**128**		Pg	**16 51 43.9**	**+0.2**
MCBM	**Casa Benchmark**	**0.20**	**327**		Pg	**16 51 43.7**	**-0.2**
MCBM					Sg	**16 51 46.5**	**-0.2**
MCSM	**Casa Diablo Ho**	**0.22**	**327**		Pg	**16 51 43.9**	**-0.2**
OMMB	**Old Mammoth Mi**	**0.24**	**306**		Pg	**16 51 43.9**	**-0.6**
OMMB					Sg	**16 51 46.9**	**-0.9**
OMMB	**Old Mammoth Mi**	**0.24**	**306**	IAML		16 51 47.1	
	comp=E,1μm,0.4s						
MEMM	**East Mammoth H**	**0.24**	**323**		Pg	**16 51 44.4**	**-0.2**
MMPM	**Mammoth Pass**	**0.25**	**303**		Pg	**16 51 44.3**	**-0.5**
MMLB	**Mammoth Lakes**	**0.26**	**317**		Pg	**16 51 44.6**	**-0.3**
MCDM	**Chidago Canyon**	**0.26**	**73**		Pg	**16 51 45.3**	**+0.3**
MLIM	**Lincoln Peak**	**0.26**	**309**		Pg	**16 51 44.8**	**-0.3**
MLIM					Sg	**16 51 49.0**	**+0.4**
MFBM	**Five Bridges**	**0.27**	**99**		Pg	**16 51 45.6**	**+0.6**
MMSM	**Mammoth Summit**	**0.27**	**306**		Pg	**16 51 44.7**	**-0.4**
MRDM	**Red Cones**	**0.27**	**298**		Pg	**16 51 44.7**	**-0.5**
MDYM	**Dry Creek**	**0.27**	**313**		Pg	**16 51 45.0**	**-0.3**
MDYM					Sg	**16 51 49.0**	**+0.1**
BHPR	**Bishop**	**0.28**	**129**		Pg	**16 51 45.5**	**+0.3**
BENR	**Benton**	**0.28**	**31**		Pg	**16 51 45.2**	**-0.3**
MRCM	**Red Rock Canyo**	**0.28**	**45**		Pg	**16 51 45.3**	**-0.1**
LMCR	**Lookout Mounta**	**0.29**	**330**		Pg	**16 51 45.6**	**0.0**
MDPB	**Devils Postpil**	**0.30**	**302**		Pg	**16 51 45.2**	**-0.6**
MDPB					Sg	**16 51 48.9**	**-0.9**
MDPB	**Devils Postpil**	**0.30**	**302**	IAML		16 51 49.4	
	comp=E,2μm,0.4s						
MDPB				IAML		16 51 49.7	
	comp=N,2μm,0.4s						
MDCM	**Deadman Creek**	**0.33**	**316**		Pg	**16 51 45.7**	**-0.6**
MGNR	**McGee Canyon**	**0.34**	**8**		Pg	**16 51 46.5**	**-0.1**
MLNR	**Milner Canyon**	**0.35**	**70**		Pg	**16 51 46.8**	**+0.1**
BCKR	**Birch Creek**	**0.38**	**54**		Pg	**16 51 47.4**	**+0.2**
POCCA	**Poleta Canyon**	**0.40**	**106**		Pg	**16 51 47.6**	**+0.2**
ANTCA	**Antelope Range**	**0.47**	**19**		Pg	**16 51 48.6**	**-0.3**
KCC	**Kaiser Creek**	**0.47**	**252**		Pg	**16 51 48.3**	**-0.6**
KCC					Sg	**16 51 54.2**	**-0.7**
TIN	**Tinemaha, Big**	**0.59**	**135**		Pg	**16 51 51.4**	**+0.2**
TIN	**Tinemaha, Big**	**0.59**	**135**	P	Pg	**16 51 51.1**	**-0.1**
	baz=315						
TIN				S	Sb	**16 51 59.7**	**-1.5**
	baz=315						
BONR	**Boundary Peak**	**0.60**	**37**		Pg	**16 51 51.2**	**-0.2**
HCK	**Huntoon Valley**	**0.62**	**12**		Pg	**16 51 51.5**	**-0.1**
DSP	**Deep Springs**	**0.64**	**99**		Pg	**16 51 51.9**	**0.0**
DSP					Sb	**16 52 00.8**	**-1.5**
LUL	**Lundy Lake**	**0.67**	**330**		Pg	**16 51 52.5**	**-0.1**
LHV	**Little Huntoon**	**0.80**	**14**		Pg	**16 51 54.9**	**-0.3**
LHV	**Little Huntoon**	**0.80**	**14**	IAML		16 52 12.3	
	comp=N,471nm,0.7s						
LHV				IAML		16 52 15.2	
	comp=E,468nm,0.7s						
LCH	**Last Change Ra**	**0.92**	**105**		Pg	**16 51 57.0**	**-0.4**
LCH	**Last Change Ra**	**0.92**	**105**	IAML		16 52 09.8	
	comp=N,313nm,0.4s						
LCH				IAML		16 52 10.2	
	comp=E,473nm,0.3s						
NV08	**Mina Array Sit**	**0.99**	**20**		Pg	**16 51 58.2**	**-0.6**
NV09	**Mina Array Sit**	**1.02**	**19**		Pg	**16 51 58.6**	**-0.6**
NVAR	**Mina Array Bea**	**1.02**	**21**		Pg	**16 51 58.6**	**-0.7**
NV11	**Mina Array Sit**	**1.07**	**26**		Pg	**16 51 59.3**	**-0.7**
CWC	**Cottonwood Cre**	**1.17**	**152**		Pg	**16 52 01.4**	**-0.8**
CWC	**Cottonwood Cre**	**1.17**	**152**	P	Pg	**16 52 01.3**	**-0.8**
	baz=332						
CWC				S	Sg	**16 52 16.6**	**-0.6**
	baz=332						
RYN	**Ryan**	**1.17**	**9**		Pg	**16 52 01.5**	**-0.6**
RYN	**Ryan**	**1.17**	**9**	IAML		16 52 19.6	
	comp=N,135nm,0.3s						
RYN				IAML		16 52 21.6	
	comp=E,178nm,0.7s						
GRAC	**Grapevine Rang**	**1.21**	**113**		Pb	**16 52 03.0**	**+0.1**
GRAC	**Grapevine Rang**	**1.21**	**113**	IAML		16 52 25.8	
	comp=N,311nm,0.3s						
GRAC	**Grapevine Rang**	**1.21**	**113**	P	Pb	**16 52 02.7**	**-0.2**
	baz=294,SNR=177						
GRAC				S	Sn	**16 52 19.5**	**-0.3**
	baz=294						
MRHM	**Rocky Hill**	**1.21**	**193**		Pg	**16 52 01.6**	**-1.4**
RCTC	**Rector, Farmer**	**1.23**	**199**		Pg	**16 52 02.2**	**-1.1**
VOG	**Valley Oaks Go**	**1.25**	**204**		Pg	**16 52 02.8**	**-1.0**
VOG	**Valley Oaks Go**	**1.25**	**204**	P	Pg	**16 52 02.7**	**-1.0**
	baz=22						
VOG				S	Sg	**16 52 18.9**	**-1.1**
	baz=22						
SPG2	**Springville 2**	**1.27**	**180**		Pg	**16 52 03.2**	**-0.9**
MYLM	**Yosemite Lake**	**1.33**	**267**		Pg	**16 52 03.8**	**-1.3**
TPH	**Tonopah**	**1.36**	**63**		Pg	**16 52 05.2**	**-0.6**
WLHM	**Little Horse**	**1.37**	**165**		Pg	**16 52 04.9**	**-1.0**
CMB	**Columbia Colle**	**1.41**	**294**		Pn	**16 52 04.7**	**-1.1**
MCA	**Marble Canyon**	**1.44**	**124**		Pn	**16 52 06.2**	**0.0**
SGV	**South Grapevin**	**1.46**	**109**		Pg	**16 52 07.1**	**-0.6**
YERR	**Yerington**	**1.56**	**346**		Pn	**16 52 08.1**	**0.0**
YERR	**Yerington**	**1.56**	**346**	IAML		16 52 58.2	
	comp=E,82nm,0.3s						
MCUB	**Copperopolis B**	**1.56**	**289**		Pn	**16 52 07.6**	**-0.3**
PWMM	**Westland Maint**	**1.56**	**229**		Pn	**16 52 08.6**	**+0.8**
VES	**Vestal, Richgr**	**1.65**	**189**		Pn	**16 52 09.8**	**+0.7**
VES	**Vestal, Richgr**	**1.65**	**189**	Pb	Pn	**16 52 09.5**	**+0.4**
	baz=8.4						
VES				Sb	Sn	**16 52 31.5**	**+1.0**
	baz=8.4						
KVN	**Kaiserville**	**1.66**	**18**		Pn	**16 52 09.4**	**0.0**
KVN	**Kaiserville**	**1.66**	**18**	IAML		16 52 33.3	
	comp=E,79nm,0.6s						
KVN				IAML		16 52 35.4	
	comp=N,103nm,0.6s						
WASM	**Alta Sierra Ca**	**1.74**	**175**		Pn	**16 52 11.5**	**+1.0**
MPMC	**Manual Prospec**

QSM	**Queen of Sheba**	2.14	134			Pn	16 52 17.3	+1.4
QSM	comp=N,51nm,0.7s				IAML		16 52 50.0	
BVL	**Bear Valley**	2.14	246			Pn	16 52 17.2	+1.3
PTRM	**Twissleman Ran**	2.16	213			Pn	16 52 17.9	+1.8
BPIM	**Pinnacles**	2.16	244			Pn	16 52 17.1	+0.9
HFEM	**San Felipe**	2.17	258			Pn	16 52 17.6	+1.4
TRAM	**Private Proper**	2.17	215			Pn	16 52 17.4	+1.1
LRMC	**Laurel Mtn Rad**	2.17	156		Pb	Pb	16 52 19.3	-0.1
LRMC	baz=337				Sb	Sg	16 52 48.1	-1.4
PWKM	**Work Ranch**	2.17	221			Pn	16 52 17.1	+0.7
CMMM	**Mount Mocho**	2.18	270			Pn	16 52 17.5	+1.1
GHS	**Gilroy Hot Spr**	2.18	261			Pn	16 52 17.5	+1.1
BSLM	**Silva Ranch**	2.18	252			Pn	16 52 17.6	+1.2
PPO	**Portuguese Can**	2.19	224			Pn	16 52 17.5	+0.9
BJOM	**Mount Johnson**	2.21	248			Pn	16 52 18.3	+1.6
TCHL	**Shandon**	2.22	217			Pn	16 52 18.3	+1.4
AMDNV	**Amargosa**	2.23	116			Pn	16 52 17.8	+0.7
VPK	**Verdi Peak**	2.24	334			Pb	16 52 21.6	+0.9
TEJ	**El Tejon**	2.24	179			Pb	16 52 19.8	-0.7
DONR	**Donner Summit**	2.24	327			Pb	16 52 21.1	+0.4
YEG	**Yeguas Mountai**	2.25	206			Pn	16 52 18.8	+1.4
BSGM	**Shirttail Gulc**	2.26	243			Pn	16 52 18.6	+1.1
SAO	**San Andreas Ge**	2.26	253			Pn	16 52 18.8	+1.2
PAHR	**Pah Rah Range**	2.28	348			Pn	16 52 17.4	-0.6
HSFM	**Saint Francis**	2.29	254			Pn	16 52 19.4	+1.5
SCZ	**Santa Cruz**	2.29	248			Pn	16 52 18.9	+1.0
FRP	**Fremont Peak**	2.30	253			Pn	16 52 18.9	+0.8
MHC	**Mount Hamilton**	2.30	268			Pn	16 52 19.8	+1.6
CMLM	**Mount Lewis**	2.30	271			Pn	16 52 19.8	+1.6
BJCM	**Johnson Can.**	2.30	247			Pn	16 52 19.2	+1.1
TSCN	**Private Proper**	2.31	214			Pn	16 52 19.5	+1.3
CSR	**Chase Ranch**	2.31	258			Pn	16 52 17.8	-0.4
HBTM	**San Juan Bauti**	2.32	255			Pn	16 52 19.8	+1.5
PEAR	**Peavine Mounta**	2.33	337			Pn	16 52 19.6	+0.9
CARC	**Carrizo Plain**	2.33	202			Pn	16 52 19.7	+1.2
ARVC	**Arvin**	2.34	181			Pb	16 52 21.9	-0.3
ARVC	**Arvin**	2.34	181		Pb	Pb	16 52 21.7	-0.5
ARVC	baz=1.0				Sb	Sb	16 52 52.2	+0.8
BSRM	**Salinas Radio**	2.35	251			Pn	16 52 20.0	+1.3
CRGC	**Crocker Grade**	2.36	200			Pn	16 52 21.3	+2.3
PCCM	**Crazy Canyon**	2.37	235			Pn	16 52 20.2	+1.2
JLAB	**Laurel Hill**	2.39	263			Pn	16 52 21.1	+1.7
BSMM	**Soledad Missio**	2.40	244			Pn	16 52 20.5	+1.0
PANM	**San Antonio Re**	2.42	226			Pn	16 52 20.8	+1.1
CALM	**Calaveras Res.**	2.42	270			Pn	16 52 21.0	+1.4
BPCNC	**Pine Canyon**	2.46	250			Pn	16 52 21.7	+1.4
JHLM	**Holstrom Ranch**	2.48	262			Pn	16 52 21.9	+1.3
HAST	**Hastings Reser**	2.49	245			Pn	16 52 21.5	+0.9
BCWM	**Chews Ridge**	2.53	243			Pn	16 52 22.3	+0.9
BCW	**Bitter Crk WRg**	2.58	192			Pn	16 52 23.7	+1.7
BLDC	**Black Mountain**	2.60	222			Pn	16 52 23.3	+1.1
BLDC	**Black Mountain**	2.60	222			Pn	16 52 23.3	+1.1
PTAM	**Tassajara Cree**	2.60	218			Pn	16 52 23.9	+1.6
PAPM	**Alder Peak**	2.61	234			Pn	16 52 23.2	+0.8
R11A	**Troy Canyon, C**	2.66	70			Pn	16 52 23.3	+0.2
R11A	**Troy Canyon, C** baz=252,SNR=53	2.66	70		P	Pn	16 52 23.0	-0.2
R11A	baz=252				Sb	Sg	16 53 04.3	-0.8
EDW2	**Edwards Air Fo** baz=346	2.66	166		Sb	Sb	16 53 02.3	+1.7
GSC	**Goldstone, Bar**	2.68	143			Pg	16 52 30.9	-0.1
ARDC	**Alexander Ranc**	2.69	222			Pn	16 52 24.5	+1.1
PCBM	**Cambria**	2.69	224			Pn	16 52 24.5	+1.0
BEKR	**Beckworth**	2.70	333			Pn	16 52 24.6	+0.9
BEKR	**Beckworth** comp=N,29nm,0.5s	2.70	333		IAML		16 53 15.9	
BEKR	comp=E,44nm,0.6s				IAML		16 53 16.5	
JBNB	**Ben Lomond Mou**	2.73	264			Pn	16 52 25.3	+1.2
JJRM	**Joaquin Road**	2.74	268			Pn	16 52 25.5	+1.3
DPD	**Davis Peak**	2.77	217			Pn	16 52 25.9	+1.4
OSI	**Osito Audit: C** baz=359	2.85	179		Sb	Sb	16 53 06.8	+0.7
BMRR	**Black Mountain**	2.89	336			Pn	16 52 27.3	+0.9
FIGC	**Figueroa Mtn.**	2.91	200			Pn	16 52 28.8	+2.2
NAPC	**Atlas Peak**	2.92	290			Pb	16 52 32.5	+0.3
PRN	**Pahroc Range**	2.95	90			Pn	16 52 27.6	+0.5
PRN	**Pahroc Range** comp=E,25nm,0.5s	2.95	90		IAML		16 53 18.6	
PRN	comp=N,36nm,0.7s				IAML		16 53 18.9	
SUTB	**Sutter Butte**	2.96	307			Pb	16 52 32.5	-0.2
SHPR	**Sheep Range**	3.04	107			Pn	16 52 28.5	+0.2
BMN	**Battle Mountai**	3.19	22			Pn	16 52 30.2	-0.3
BMN	comp=E,15nm,0.6s				IAML		16 53 23.0	
BMN	comp=N,19nm,0.4s				IAML		16 53 24.8	
ELK	**Elko**	4.26	39		Pn	Pn	16 52 45.7	+0.4
ELK	comp=N,6.8nm,0.3s				IAML		16 53 56.1	
ELK	comp=N,9.2nm,0.4s				IAML		16 53 56.5	
CCUT	**Cedar City**	4.29	87		Pn	Pn	16 52 46.6	+1.0
LCMT	**Little Creek M**	4.42	94			Pn	16 52 48.1	+0.7
PKCU	**Pink Cliffs**	5.13	88			Pn	16 52 58.6	+1.3

NSSP ***13*** *16:53:13.5,41°.73N×46°.65E,h10km,Ms3.5*
IDC ***13*** *16:53:13.5±1.6,41°.61N×46°.88E,h0km,mb3.4/2,*
mbtmp3.4/4,ML2.5/2,MS3.2/2,Error ellipse: s-maj=25.8km
s-min=14.7km az=123.0
TIF ***13*** *16:53:16.4,41°.78N×46°.67E,h21km*
AZER ***13*** *16:53:16.9±0.1,41°.74N×46°.51E,h12km,Error ellipse:*
s-maj=0.9km s-min=0.5km az=342.0
DRS ***13*** *16:53:18.2±0.0,41°.73N×46°.58E,h16km*
MOS ***13*** *16:53:18.2±0.0,41°.89N×46°.69E,h8km,MPVA4.3*
ISC 13 16:53:18.0±0.8, 41°.74N±0°.01×46°.61E±0°.01, h20km±2km, n120, σ1§82/220, 7C-8D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala** SNR=3866	0.10	176	P	Pb	16 53 21.9	0.0
ZKTA				S	Sg	16 53 25.3	+0.7
LGD	**Lagodekhi**	0.29	290	P	Pg	16 53 23.9	-0.7
LGD				S	Sg	16 53 28.9	-0.3
LGD	**Lagodekhi**	0.29	290	*e*PG	Pg	16 53 23.9	-0.7
DDFL	**Dedoflistskaro**	0.47	232	P	Pn	16 53 30.3	+0.5
DDFL				S	Sn	16 53 42.8	+5.2
DDFL	**Dedoflistskaro**	0.47	232	*e*PG	Pn	16 53 30.2	+0.5
KMKR	**Kumukh**	0.54	42	⇓*i*PG	Pb	16 53 27.8	-1.1
KMKR				*i* S	Sb	16 53 35.1	-1.2
KMKR	comp=Z,2μm,0.1s			pmax	pmax		
KMKR	comp=E,8μm,0.2s			smax	smax		
KMKR	**Kumukh**	0.54	42	*i* Pg	Pb	16 53 27.8	-1.1
KMKR				*e*Sg	Sb	16 53 34.8	-1.4
SEKA	**Sheki** SNR=87	0.69	140	Pg	Pb	16 53 30.9	-0.4
SEKA				Sg	Sn	16 53 41.8	-1.1
XNZR	**Khunzakh**	0.81	5	*e*PG	Pb	16 53 32.7	-0.8
XNZR				*e*S	Sg	16 53 43.1	-1.6
XNZR	**Khunzakh**	0.81	5	*e*Pg	Pb	16 53 32.7	-0.8
XNZ				*e*Sg	Sg	16 53 43.1	-1.6
URKR	**Urkarakh**	0.87	60	*e*PG	Pb	16 53 33.9	-0.7
URKR				*i* S	Sn	16 53 46.1	-1.5
URKR	comp=Z,244nm,0.2s			pmax	pmax		
URKR	comp=N,555nm,0.2s			smax	smax		
URKR	**Urkarakh**	0.87	60	*e*Pg	Pb	16 53 33.9	-0.7
URKR				*e*Sg	Sb	16 53 45.8	-0.2
AKT	**Akhty**	0.88	107	*e*PG	Pb	16 53 34.0	-0.7
AKT				*e*S	Sn	16 53 46.1	-1.5
AKT	comp=Z,152nm,0.2s			pmax	pmax		
AKT	comp=E,783nm,0.2s			smax	smax		
AKT	comp=N,423nm,0.3s			smax	smax		
AKT	comp=E,732nm,0.2s			smax	smax		
AKT	**Akhty**	0.88	107	*e*Pg	Pb	16 53 34.0	-0.7
AKT				*e*Sg	Sn	16 53 46.5	-1.1
ARKR	**Arakani**	0.91	18	*e*PG	Pb	16 53 34.4	-0.8
ARKR				*i* S	Sb	16 53 46.5	-0.5
ARKR	comp=Z,181nm,0.3s			pmax	pmax		
ARKR	comp=E,762nm,0.3s			smax	smax		
ARKR	**Arakani**	0.91	18	*e*Pg	Pb	16 53 34.4	-0.8
ARKR				*e*Sg	Sb	16 53 46.2	-0.8
DGRG	**David-gareji**	0.97	253	P	Pg	16 53 36.0	-1.0
DGRG				S	Sn	16 53 51.1	+1.1
DGRG	**David-gareji**	0.97	253	*e*PG	Pg	16 53 35.9	-1.0
DGRG				*e*S	Sn	16 53 51.0	+1.1
UNCR	**Uncukul**	0.99	8	*e*PG	Pb	16 53 36.0	-0.5
UNCR				*i* S	Sb	16 53 49.1	0.0
UNCR	comp=Z,284nm,0.2s			pmax	pmax		
UNCR	comp=N,981nm,0.4s			smax	smax		
UNCR	**Uncukul**	0.99	8	*e*Pg	Pb	16 53 36.0	-0.5
UNCR				*e*Sg	Sb	16 53 48.9	-0.3
MNGR	**Mingechevir, A** SNR=27	1.03	160	P	Pn	16 53 38.0	+0.7
MNGR				S	Sn	16 53 54.4	+3.3
SGKR	**Sergokala**	1.06	47	*e*PG	Pn	16 53 37.8	-0.1
SGKR				*i* S	Sn	16 53 52.3	+0.2
SGKR	comp=Z,173nm,0.3s			pmax	pmax		
SGKR	comp=N,606nm,0.3s			smax	smax		
SGKR	**Sergokala**	1.06	47	*e*Pg	Pn	16 53 37.8	-0.1
SGKR				*e*Sg	Sn	16 53 51.9	-0.2
GANJ	**Ganja** SNR=163	1.11	191	P	Pb	16 53 38.1	-0.5
GANJ				S	Sn	16 53 53.6	+0.3
KRNR	**Karanay**	1.11	11	*e*PG	Pb	16 53 37.9	-0.8
KRNR				*i* S	Sg	16 53 52.5	-1.8
KRNR	comp=Z,20nm,0.1s			pmax	pmax		
KRNR	comp=E,421nm,0.3s			smax	smax		
KRNR	**Karanay**	1.11	11	*e*Pg	Pb	16 53 37.9	-0.8
KRNR				*e*Sg	Sb	16 53 52.1	-0.6
BUJR	**Buynaksk**	1.15	19	*e*PG	Pb	16 53 38.4	-0.8
BUJR				*i* S	Sn	16 53 54.2	0.0
BUJR	comp=Z,171nm,0.4s			pmax	pmax		
BUJR	comp=N,1μm,0.3s			smax	smax		
BUJR	**Buynaksk**	1.15	19	*e*Pg	Pb	16 53 38.4	-0.8
BUJR				*e*Sg	Sg	16 53 53.8	-1.6
QZX	**Qazax, Azerbai** SNR=326	1.15	234	P	Pb	16 53 38.5	-0.8
QZX				S	Sg	16 53 55.1	-0.4
GDB	**GEDABAY** SNR=527	1.20	213	P	Pn	16 53 39.0	-0.9
GDB				S	Sb	16 53 56.1	+0.7
QBL	**Gabala** SNR=8.4	1.21	130	P	Pg	16 53 40.5	-1.0
QBL				S	Sn	16 53 58.3	+2.5
QSAR	**Qusar** SNR=58	1.26	100	Pn	Pg	16 53 41.4	-0.9
QSAR				Sn	Sn	16 54 04.2	+7.3
DVE	**Vedeno**	1.27	344	*e*PG	Pg	16 53 41.4	-1.2
DVE	**Vedeno**	1.27	344	*e*Pg	Pg	16 53 41.4	-1.2
DVE				*e*Sg	Sb	16 53 57.1	-0.2
XNQ	**Khinaliq** SNR=28	1.28	116	Pn	Pg	16 53 41.7	-1.1
XNQ				Sn	Sn	16 54 04.2	+6.5
DBC	**Dubki**	1.29	7	*e*PG	Pg	16 53 41.4	-1.7
DBC				*e*S	Sg	16 53 58.4	-1.6
DBC	**Dubki**	1.29	7	*e*Pg	Pg	16 53 41.4	-1.7
DBC				*e*Sg	Sg	16 53 58.4	-1.0
DLMR	**Dylym**	1.33	1	*e*PG	Pg	16 53 42.2	-1.6
DLMR				*e*S	Sg	16 54 00.7	-0.5
DLMR	**Dylym**	1.33	1	*e*Pg	Pg	16 53 42.1	-1.6
DLMR				*e*Sg	Sg	16 54 00.7	-0.5
SEAG	**Tbilisi Sea**	1.35	272	P	Pn	16 53 42.2	+0.3
SEAG				S	Sg	16 54 01.2	-0.7
SEAG	**Tbilisi Sea**	1.35	272	*e*PG	Pn	16 53 42.2	+0.3
SEAG				*e*S	Sg	16 54 01.2	-0.7
BTNK	**Botanikuri**	1.36	268	P	Pn	16 53 35.4	-6.5
BTNK				S	Sn	16 53 54.3	-5.1
BTNK	**Botanikuri**	1.36	268	*e*PG	Pn	16 53 35.3	-6.6
MAK	**Makhachkala**	1.39	28	*e*PG	Pg	16 53 45.8	+0.9
MAK				*e*S	Sg	16 54 04.2	+1.1
MAK	**Makhachkala**	1.39	28	*e*Pg	Pg	16 53 45.8	+0.9
MAK				*e*Sg	Sg	16 54 04.2	+1.1
QUBA	**Quba, Azerbaij** SNR=16	1.46	104	Pn	Pg	16 53 45.6	-0.6
QUBA				Sn	Sg	16 54 09.3	+4.0
IML	**Ismayilli** SNR=7.8	1.51	128	Pn	Pg	16 53 46.1	-1.1
IML				Sn	Sg	16 54 08.1	+1.2
BRDA	**Brd** SNR=18	1.53	164	Pn	Pg	16 53 46.5	-1.1
BRDA				Sn	Sg	16 54 07.5	0.0
GROC	**Groznyy**	1.58	338	*i* PN	Pg	16 53 47.6	-1.0
GROC				*e*S	Sg	16 54 09.2	0.0
GROC	**Groznyy**	1.58	338	*i* Pg	Pg	16 53 47.6	-1.0
GROC				*e*Sg	Sg	16 54 09.2	0.0
ZRD	**Zardab** SNR=25	1.67	151	Pn	Pg	16 53 48.3	-1.8
ZRD				Sn	Sg	16 54 13.8	+2.0
AGDM	**Agdam** SNR=43	1.67	167	Pn	Pb	16 53 47.9	-0.2
AGDM				Sn	Sg	16 54 11.1	-0.8
KZRT	**Kazreti**	1.70	259	P	Pn	16 53 46.0	-0.7
KZRT				S	Sn	16 54 08.9	+1.1
KZRT	**Kazreti**	1.70	259	*e*PN	Pn	16 53 45.9	-0.7
PNSH	**Pansheti**	1.73	302	P	Pb	16 53 48.6	-0.7
PNSH				S	Sn	16 54 10.8	+1.9
PNSH	**Pansheti**	1.73	302	*e*PN	Pb	16 53 48.6	-0.7
GUDG	**Gudauri**	1.75	295	P	Pn	16 53 48.4	+0.9
GUDG				S	Sn	16 54 11.1	+1.8
GUDG	**Gudauri**	1.75	295	*e*PN	Pn	16 53 48.3	+0.9
PQL	**Pirkuli** SNR=17	1.77	122	Pn	Pg	16 53 50.6	-1.5
PQL				Sn	Sg	16 54 18.7	+3.6
KDMR	**Kurdemir**	1.81	138	Pn	Pb	16 53 49.8	-0.6
KDMR				Sn	Sg	16 54 16.1	-0.2
STE	**Stepanavan**	1.84	247	⇓*i*P	Pn	16 53 49.3	+0.7
STE				⇓*i*S	Sb	16 54 14.2	+0.4
SIZA	**Siyzn** SNR=15	1.84	110	Pn	Pg	16 53 54.2	+0.7
SIZA				Sn	Sg	16 54 20.0	+2.6
KMGR	**Komgaron**	1.85	316	*e*PN	Pb	16 53 50.8	-0.4
KMGR	**Komgaron**	1.85	316	*e*Pg	Pb	16 53 50.8	-0.4
KMGR				*e*Sg	Sg	16 54 16.2	-1.6
DMNI	**Dmanisi**	1.86	258	P	Pn	16 53 48.7	-0.3
DMNI				S	Sn	16 54 13.3	+1.3
DMNI	**Dmanisi**	1.86	258	*e*PN	Pn	16 53 48.6	-0.3
TRLG	**Trialeti**	1.89	265	P	Pn	16 53 50.5	+1.1
TRLG				S	Sb	16 54 16.2	+0.9
TRLG	**Trialeti**	1.89	265	*e*PN	Pn	16 53 50.5	+1.1
STKZ		1.93	177	⇑*i*P	Pn	16 53 50.5	+0.7
STKZ				⇑*i*S	Sb	16 54 16.0	-0.1
VLKR	**Vladikavkaz**	1.94	313	*i* PN	Pg	16 53 54.8	-0.6
VLKR				*e*S	Sg	16 54 21.3	+0.7
VLKR	**Vladikavkaz**	1.94	313	*i* Pg	Pg	16 53 54.8	-0.6
VLKR				*e*Sg	Sg	16 54 21.3	+0.7
ATGJ	**Altiaghaj** SNR=4.6	1.96	116	Pn	Pg	16 53 54.8	-0.9
ATGJ				Sn	Sg	16 54 23.3	+2.1
KAPZ	**Kaputan**	2.02	226	⇑*i*P	Pn	16 53 52.6	+1.4
KAPZ				⇑*i*S	Sb	16 54 20.6	+1.6
LACR	**Lac**	2.04	303	*e*PN	Pb	16 53 55.2	+0.8
LACR				*e*S	Sg	16 54 24.1	+0.5
LACR	**Lac**	2.04	303	*e*Pg	Pb	16 53 55.2	+0.8
LACR				*e*Sg	Sg	16 54 24.1	+0.5
BRNG	**Burnasheti**	2.09	268	P	Pn	16 53 53.1	+1.0
BRNG				S	Sn	16 54 19.9	+2.2
GNI	**Garni**	2.13	222	Pn	Pn	16 53 53.9	+1.3
GNI	comp=N,44nm,0.3s,baz=15,slow=1.4,SNR=79			Lg	Lg	16 54 24.3	
GNI	comp=N,14nm,0.3s,baz=249,slow=12,SNR=4.3 comp=N,187nm,0.5s						
GNI	**Garni**	2.13	222	*e*P	Pb	16 53 55.5	-0.5
GNI				*e*S	Sg	16 54 25.8	-0.7
GBS	**Qobustan**	2.13	124	Pn	Pg	16 53 57.1	-1.9
GBS				Sn	Sg	16 54 24.5	-2.1
BLQ	**Beylaqan**	2.14	160	Pn	Pb	16 53 54.1	-2.0
BLQ				Sn	Sg	16 54 24.4	-2.5
AMBZ	**Amberd**	2.23	234	⇓*i*P	Pb	16 53 57.3	-0.6
AMBZ				⇓*i*S	Sg	16 54 30.2	+0.3
GRS	**Goris**	2.24	186	⇑*i*P	Pn	16 53 50.0	-4.2
GRS				⇓*i*S	Sn	16 54 20.0	-1.4
ARNR	**Ardon**	2.25	311	*e*PN	Pb	16 53 58.5	+0.5
ARNR				*e*S	Sg	16 54 29.1	-1.3
ARNR	**Ardon**	2.25	311	*e*Pg	Pb	16 53 58.5	+0.5
ARNR				*e*Sg	Sg	16 54 29.1	-1.3
ZEI	**Tsey**	2.27	298	*e*PN	Pg	16 53 59.9	-1.7
ZEI				*e*S	Sb	16 54 28.8	+2.6
ZEI	**Tsey**	2.27	298	*e*Pn	Pg	16 53 59.9	-1.7
ZEI				*e*Sn	Sb	16 54 28.8	+2.6
BKRG	**Bakuriani**	2.31	272	P	Pn	16 53 56.6	+1.4
BKRG				S	Sb	16 54 27.0	-0.5
BKRG	**Bakuriani**	2.31	272	*e*PN	Pn	16 53 56.5	+1.4
BKRG				*e*S	Sb	16 54 26.9	-0.5
KORR	**Kora**	2.32	306	*i* PN	Pb	16 54 00.4	+1.2
KORR				*e*S	Sg	16 54 30.4	-2.2
KORR	**Kora**	2.32	306	*i* Pn	Pb	16 54 00.4	+1.2
KORR				*e*Sn	Sg	16 54 30.4	-2.2
QRD	**Qoradiz** SNR=6.0	2.33	166	Pn	Pb	16 53 57.9	-1.5
QRD				Sn	Sb	16 54 29.5	+1.7
AKH	**Akhalkalaki**	2.36	263	P	Pb	16 53 58.4	-1.7
AKH				S	Sb	16 54 28.4	-0.4
AKH	**Akhalkalaki**	2.36	263	*e*PN	Pb	16 53 58.3	-1.7
AKH				*e*S	Sb	16 54 28.4	-0.5
HYR	**Heyderabad** SNR=9.2	2.42	214	Pn	Pn	16 53 58.3	+1.7
HYR				Sn	Sn	16 54 26.9	+1.2
SBZ	**Shahbuz** SNR=5.8	2.47	199	Pg	Pb	16 54 01.5	-0.3
SBZ				Sg	Sb	16 54 32.3	+0.3
METS	**Metsamor**	2.49	231	⇑*i*P	Pb	16 54 00.6	-1.5
METS				⇓*i*S	Sb	16 54 35.4	+3.1
STDR	**Stavd-Durt**	2.49	312	*i* PN	Pb	16 54 02.4	+0.3
STDR				*e*S	Sb	16 54 34.6	+2.2
STDR	**Stavd-Durt**	2.49	312	*i* Pn	Pb	16 54 02.4	+0.3
STDR				*e*Sn	Sb	16 54 34.6	+2.2
ONI	**Oni**	2.50	291	P	Pb	16 54 01.9	-0.4
ONI				S	Sb	16 54 33.1	+0.4
ONI	**Oni**	2.50	291	*e*PN	Pb	16 54 01.8	-0.4
ONI				*e*S	Sb	16 54 33.1	+0.4
LSNR	**Lesken**	2.57	308	*e*PN	Pg	16 54 06.2	-1.2
LSNR				*e*S	Sg	16 54 39.1	-1.7
LSNR	**Lesken**	2.57	308	*e*Pn	Pg	16 54 06.2	-1.2
LSNR				*e*Sn	Sg	16 54 39.1	-1.7
VNNZ	**Vanand**	2.67	233	⇓*i*P	Pb	16 54 04.3	-0.9
VNNZ				⇑*i*S	Sg	16 54 42.4	-1.5
TKB	**Tkibuli**	2.76	284	P	Pn	16 54 02.9	+1.6
TKB				S	Sb	16 54 40.0	-0.3
TKB	**Tkibuli**	2.76	284	*e*PN	Pn	16 54 02.8	+1.6
TKB				*e*S	Sb	16 54 39.9	-0.3
GLBA	**Clilabad** SNR=5.0	2.84	151	Pn	Pb	16 54 04.7	-3.3
GLBA				Sn	Sb	16 54 41.8	-0.5
ORD	**Ordubad**	2.84	190	Pg	Pb	16 54 07.8	-0.4
ORD				Sg	Sb	16 54 43.9	+1.3
YRD	**Yardimli** SNR=9.5	3.08	156	Pn	Pn	16 54 06.9	+1.1
YRD				Sn	Sn	16 54 45.0	+2.9
LRK	**Lerik** SNR=13	3.36	156	Pn	Pn	16 54 11.1	+1.5
LRK				Sn	Sn	16 54 51.2	+2.2
KBZ	**Khabaz** comp=N,0.6nm,0.3s,baz=129,slow=6.5,SNR=5.8	3.38	307	Pn	Pb	16 54 14.0	-3.3
KBZ	comp=N,0.6nm,0.3s,baz=117,slow=17,SNR=1.8 comp=N,0.8nm,0.3s			Sn	Sb	16 55 01.9	+3.8
KBZ	**Khabaz**	3.38	307	*i* PN	Pb	16 54 13.8	-3.5
KBZ				*e*S	Sn	16 54 54.2	+4.9
KBZ	**Khabaz**	3.38	307	*i* Pn	Pb	16 54 13.8	-3.5
KBZ				*e*Sn	Sn	16 54 54.2	+4.9
SHA1	**Shidzhatmaz**	3.53	306	*e*PN	Pn	16 54 15.9	+3.9
SHA1				*e*S	Sn	16 54 58.2	+4.8
SHA1	**Shidzhatmaz**	3.53	306	*e*Pn	Pn	16 54 15.9	+3.9
SHA1				*e*Sn	Sn	16 54 58.2	+4.8
KIV	**Kislovodsk**	3.64	309	*e*PN	Pn	16 54 16.9	+3.6
KIV				*i* S	Sn	16 55 00.4	+4.6
KIV	**Kislovodsk**	3.64	309	*e*Pn	Pn	16 54 16.9	+3.6
KIV				*i* Sn	Sn	16 55 00.4	+4.6
FINES	**FINESS Array B** comp=N,2.8nm,0.9s,baz=134,slow=9.9,SNR=1.5	23.31	335	P	P	16 58 22.9	-1.5
MKAR	**Makanchi Array** comp=N,0.2nm,0.6s,baz=283,slow=7.2,SNR=1.8 comp=N,0.2nm,0.6s	25.90	67	P	P	16 58 46.8	-1.7
DAVOX	**Davos/Dischmat** comp=N,57nm,21.7s,baz=265,slow=43	26.62	293	LR	LR	17 12 36.1	
KEST	**Kesra** comp=N,54nm,21.7s,baz=251,slow=40	29.52	271	LR	LR	17 12 46.2	

GUC ***13*** *16:57:24.7±0.8,33°.46S×72°.28W,h31km±4km,ML3.9*
IDC ***13*** *16:57:25.8±1.6,33°.51S×71°.06W,h0km,mb3.7/2,*
mbtmp3.7/6,ML3.7/3,MS3.5/11,Error ellipse:
s-maj=52.8km s-min=28.5km az=92.0
ISC 13 16:57:24.1±1.6, 33°.43S±0°.04×72°.37W±0°.07, h15km±9km, n41, σ0§82/39, MS3.5/8, 10C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	0.67	110	*e*P	Pg	16 57 36.8	-0.3
VA05				*i* S	Sg	16 57 45.7	-0.2
VA05	comp=N,12μm,0.2s			IAML		16 57 50.5	
VA01	**Torpederas**	0.73	56	⇓*i*P	Pg	16 57 38.4	+0.2
VA01				*i* S	Sg	16 57 48.7	+0.9
MT01	**Popeta**	1.02	115	⇑*i*P	Pb	16 57 43.0	-0.5
MT01				*i* S	Sb	16 57 56.4

CO03	**El Pedregal**	**2.95**	**29**	*e*P		**Pn**	**16 58 10.6**	**+0.1**
CO03				IAML			16 59 01.3	
	comp=E,440nm,0.3s							
H03S1	**Juan Fernandez**	**5.47**	**264**	T		T	17 05 07.0	
	baz=86							
H03N1	**Juan Fernandez**	**5.47**	**268**	T		T	17 05 46.0	
	baz=87,slow=73,SNR=48							
H03S3	**Juan Fernandez**	**5.47**	**264**	T		T	17 05 08.3	
	baz=86							
H03N3	**Juan Fernandez**	**5.48**	**268**	T		T	17 05 51.1	
	baz=87,slow=73,SNR=67							
H03S2	**Juan Fernandez**	**5.49**	**264**	T		T	17 05 06.8	
	baz=86							
H03N2	**Juan Fernandez**	**5.49**	**268**	T		T	17 06 00.7	
	baz=87,slow=73,SNR=44							
PLCA	**Paso Flores**	**7.43**	**169**	Pn		**Pn**	**16 59 12.8**	**+0.8**
	comp=E,0.3nm,0.3s,baz=354,slow=15,SNR=10.0							
PLCA				Lg		Lg	17 01 11.1	
	baz=305,slow=12,SNR=2.8							
PLCA				LR		LR	17 02 33.3	
	comp=E,202nm,19.5s,baz=347,slow=43							
	comp=E,2.1nm,0.6s							
LVC	**Limon Verde**	**11.20**	**17**	Pn		**Pn**	**17 00 05.5**	**+1.4**
	comp=E,0.3nm,0.3s,baz=201,slow=17,SNR=1.7							
LVC				LR		LR	17 04 26.2	
	comp=E,135nm,18.6s,baz=204,slow=38							
	comp=E,0.8nm,0.3s							
CPUP	**Villa Florida**	**14.83**	**65**	Lg		Lg	17 04 46.4	
	baz=176,slow=19							
CPUP				LR		LR	17 06 56.9	
	comp=E,134nm,20.3s,baz=238,slow=41							
LPAZ	**La Paz**	**17.49**	**14**	P		**Pn**	**17 01 29.3**	**+1.1**
	comp=E,2.6nm,0.9s,baz=179,slow=11,SNR=3.5							
SIV	**San Ignacio**	**20.14**	**33**	P		**P**	**17 01 56.5**	**-1.3**
	baz=218,slow=12,SNR=12							
	comp=E,2.5nm,0.7s							
BDFB	**Brasilia**	**28.25**	**57**	LR		LR	17 15 34.8	
	comp=E,142nm,20.7s,baz=211,slow=40							
PMSA	**Palmer Station**	**31.78**	**173**	LR		LR	17 16 45.7	
	comp=E,92nm,18.4s,baz=315,slow=37							
SDV	**Santo Domingo**	**42.12**	**3**	LR		LR	17 24 29.0	
	comp=E,33nm,18.6s,baz=217,slow=38							
MDP	**Montagnes des**	**42.64**	**30**	LR		LR	17 24 44.3	
	comp=E,110nm,19.1s,baz=175,slow=39							
RCBR	**Riachuelo**	**43.58**	**59**	LR		LR	17 24 45.7	
	comp=E,125nm,18.8s,baz=352,slow=38							
TXAR	**Lajitas Array**	**69.11**	**331**	P		P	17 08 37.6	+7.9
	comp=E,0.3nm,0.7s,baz=143,slow=7.9,SNR=5.0							
	comp=E,0.3nm,0.7s							
ANMO	**Albuquerque**	**75.15**	**332**	LR		LR	17 37 18.6	
	comp=E,34nm,19.0s,baz=147,slow=32							
DBIC	**Limbokro**	**75.26**	**72**	LR		LR	17 40 45.2	
	comp=E,24nm,18.4s,baz=145,slow=35							
TORD	**Torodi Ar. Bea**	**84.27**	**70**	P		**P**	**17 09 54.5**	**-1.2**
	comp=E,1.2nm,1.0s,baz=231,slow=5.5,SNR=4.6							
TORD				LR		LR	17 45 06.4	
	comp=E,15nm,19.3s,baz=214,slow=34							
	comp=E,1.2nm,1.0s							
H11S2	**WAKE ISLAND Hyl**	**25.50**	**270**	T		T	19 35 22.9	
	baz=118,slow=74,SNR=3.8							
H11S1	**WAKE ISLAND Hyl**	**25.52**	**270**	T		T	19 35 21.6	
	baz=118,slow=74,SNR=3.8							
H11S3	**WAKE ISLAND Hyl**	**25.52**	**270**	T		T	19 35 22.3	
	baz=118,slow=74,SNR=3.3							

GUC 13 17:15:10.5±0.7, 31°40S×71°79W, h27km±6km, ML2.8, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.70**	**74**	⇓*i*P	Pb	17 15 23.8	-0.4
CO02				*i* S	Sb	17 15 33.2	-0.4
CO02				IAML		17 15 35.4	
	comp=N,2μm,0.2s						
CO06	**Fray Jorge**	**0.73**	**10**	⇓*i*P	Pb	17 15 24.2	-0.5
CO06				*i* S	Sb	17 15 33.7	-0.7
CO06				IAML		17 15 36.3	
	comp=E,456nm,0.2s						
CO03	**El Pedregal**	**1.10**	**60**	⇓*i*P	Pn	17 15 30.1	-0.1
CO03				*i* S	Sb	17 15 44.9	+0.1
CO03				IAML		17 15 48.2	
	comp=N,488nm,0.1s						
VA06	**Catapilco**	**1.23**	**160**	*e*P	Pn	17 15 32.1	+0.1
VA06				*e*S	Sn	17 15 48.1	+0.3
VA06				IAML		17 15 50.9	
	comp=N,380nm,0.3s						
GO04	**Tololo Observa**	**1.49**	**35**	*e*P	Pn	17 15 36.3	+0.5
GO04				*e*S	Sb	17 15 56.0	-0.2
CO05	**La Serena**	**1.55**	**18**	*e*P	Pn	17 15 37.0	+0.7
CO05				IAML		17 16 04.3	
	comp=E,125nm,0.3s						
ROCH	**El Roble**	**1.70**	**157**	*e*P	Pn	17 15 39.4	+0.7
ROCH				*e*S	Sb	17 16 02.1	-0.3
ROCH				IAML		17 16 06.4	
	comp=N,188nm,0.4s						
ROCH	**El Roble**	**1.70**	**157**	*i* S	Sb	17 16 01.7	-0.7
ROCH				IAML		17 16 06.4	
	comp=N,188nm,0.4s						
CO01	**Juntas del Tor**	**2.03**	**46**	*e*P	Pb	17 15 45.3	-1.6
CO01				*e*S	Sb	17 16 11.0	-0.9
CO01				IAML		17 16 13.6	
	comp=N,77nm,0.4s						
LCO	**Las Campanas**	**2.56**	**22**	*e*P	Pn	17 15 51.0	+0.5
LCO				*e*S	Sb	17 16 24.3	-2.7

GUC 13 17:15:24.8±0.6, 33°43S×72°24W, h40km±7km, ML2.4, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	**0.57**	**114**	*e*P	Pn	17 15 36.8	+0.3
VA05				*i* S	Sn	17 15 46.5	+1.8
VA05				IAML		17 15 48.5	
	comp=N,325nm,0.3s						
VA01	**Torpederas**	**0.64**	**51**	*e*P	Pn	17 15 38.0	+0.6
VA01				*e*S	Sn	17 15 48.1	+1.6
MT01	**Popeta**	**0.93**	**118**	*e*P	Pn	17 15 42.7	+1.3
MT01				*e*S	Sn	17 15 56.2	+2.6
MT02	**Curacav**	**0.94**	**80**	*e*P	Pn	17 15 42.6	+1.1
MT02				*e*S	Sn	17 15 56.2	+2.5
MT09	**Talagante**	**1.10**	**109**	*e*P	Pn	17 15 45.5	+1.6
MT09				*i* S	Sn	17 16 01.2	+3.3
MT09				IAML		17 16 03.0	
	comp=N,153nm,0.6s						
PEL	**Peldehue**	**1.33**	**78**	*e*P	Pn	17 15 43.5	-3.5
PEL				*e*S	Sn	17 16 07.8	+4.3
PEL				IAML		17 16 12.4	
	comp=E,121nm,0.1s						
MT03	**Universidad Ad**	**1.45**	**93**	*e*P	Pn	17 15 48.8	+0.2
MT03				IAML		17 16 22.8	
	comp=E,148nm,0.4s						

GUC 13 17:27:02.8±0.7, 19°27S×70°09W, h51km±14km, ML3.9
IDC 13 17:27:06.9±2.7, 19°40S×69°64W, h104km±23km, mb3.6/2, mbtmp3.9/5, MS2.5/2, Error ellipse: s-maj=48.9km s-min=26.2km az=101.0

ISC 13 17:27:01.8±1.0, 19°23S±0°04×70°09W±0°08, h63km±10km, n19, σ1°91/27, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.66**	**340**	⇑*i*P	**Pn**	**17 27 16.1**	**+0.3**
PB12				*i* S	**Sn**	**17 27 26.1**	**0.0**
PB12				IAML		17 27 26.8	
	comp=E,14μm,0.1s						
AP01	**Chacalluta**	**0.89**	**344**	*i* P	**Pn**	**17 27 19.2**	**+0.7**
AP01				*e*S	**Sn**	**17 27 32.1**	**+1.1**
AP01				IAML		17 27 36.0	
	comp=E,14μm,0.5s						
GO01	**Chusmiza**	**0.95**	**117**	*e*P	**Pn**	**17 27 20.6**	**+0.8**
GO01				*e*S	**Sn**	**17 27 33.8**	**+0.8**
GO01				IAML		17 27 36.7	
	comp=N,10μm,0.1s						
PB16	**IPOC Station P**	**1.05**	**32**	⇓*i*P	**Pn**	**17 27 22.2**	**+1.1**
PB16				*i* S	**Sn**	**17 27 36.5**	**+1.1**
TA01	**Diego Aracena**	**1.33**	**184**	⇑*i*P	**Pn**	**17 27 23.6**	**-0.6**
TA01				*i* S	**Sn**	**17 27 39.6**	**-1.5**
TA01				IAML		17 27 46.0	
	comp=N,2μm,0.1s						
PB01	**IPOC Station P**	**1.89**	**163**	*i* P	**Pn**	**17 27 31.8**	**-0.1**
PB01				*i* S	**Sn**	**17 27 54.1**	**-0.6**
PB02	**IPOC Station P**	**2.08**	**175**	*e*P	**Pn**	**17 27 34.4**	**-0.1**
PB02				IAML		17 28 15.4	
	comp=E,1μm,0.7s						
PB07	**IPOC Station P**	**2.49**	**176**	*e*P	**Pn**	**17 27 40.6**	**+0.5**
PB07				*e*S	**Sn**	**17 28 09.3**	**-0.1**
PB07				IAML		17 28 20.0	
	comp=E,464nm,0.3s						
PB09	**IPOC Station P**	**2.67**	**163**	*e*P	**Pn**	**17 27 43.9**	**+1.3**
PB09				IAML		17 28 25.2	
	comp=E,500nm,0.4s						
PB04	**IPOC Station P**	**3.08**	**181**	⇓*e*P	**Pn**	**17 27 47.7**	**-0.5**
PB04				IAML		17 28 39.4	
	comp=N,249nm,0.1s						
LPAZ	**La Paz**	**3.47**	**33**	P	Pn	17 27 59.1	+5.2
	comp=N,7.7nm,0.3s,baz=200,slow=1.5,SNR=68						
LPAZ				S	Sn	17 28 47.8	+14
	comp=N,5.4nm,0.5s,baz=87,slow=21,SNR=1.0						
LPAZ				LR	LR	17 29 52.7	
	comp=N,64nm,20.0s,baz=238,slow=49						
PB06	**IPOC Station P**	**3.49**	**172**	*e*P	**Pn**	**17 27 53.9**	**+0.1**
PB06				IAML		17 28 46.9	
	comp=E,171nm,0.3s						
LVC	**Limon Verde**	**3.54**	**162**	P	**Pn**	**17 27 56.5**	**+2.0**
	comp=E,33nm,0.3s,baz=353,slow=9.8,SNR=39						
LVC				S	**Sn**	**17 28 40.8**	**+5.4**
	comp=E,38nm,0.4s,baz=204,slow=13,SNR=4.9						
LVC				LR	LR	17 29 25.7	
	comp=E,64nm,19.4s,baz=351,slow=42						
LVC	**Limon Verde**	**3.54**	**162**	*e*P	**Pn**	**17 27 56.2**	**+1.6**
PB15	**IPOC Station P**	**4.00**	**172**	*e*P	**Pn**	**17 28 02.1**	**+1.4**
SIV	**San Ignacio**	**9.18**	**71**	P	**Pn**	**17 29 11.8**	**+0.2**
	comp=E,2.4nm,0.4s,baz=255,slow=12,SNR=10						
SIV				S	**Sn**	**17 30 48.1**	**-5.3**
	comp=E,0.6nm,0.3s,baz=234,slow=23,SNR=1.4						
TORD	**Torodi Ar. Bea**	**77.66**	**71**	P	**P**	**17 38 50.3**	**-1.7**
	comp=E,0.6nm,0.8s,baz=255,slow=5.4,SNR=2.2						
	comp=E,0.6nm,0.8s						
YKA	**Yellowknife Ar**	**88.69**	**341**	P	**P**	**17 39 48.6**	**+0.8**
	comp=E,1.1nm,0.8s,baz=129,slow=4.0,SNR=6.7						
	comp=E,1.1nm,0.8s						
SONM	**Songino Array**	**151.33**	**5**	PKPbc	**PKPbc**	**17 46 50.1**	**+1.7**
	comp=E,0.4nm,0.4s,baz=8.7,slow=3.0,SNR=4.0						

NNC 13 17:37:13.0±10.0, 38°60N×70°16E, h27km±216km, mb4.2, mpv3.9, Error ellipse: s-maj=181.7km s-min=43.9km az=10.0
IDC 13 17:37:15.7±2.4, 40°07N×69°45E, h0km, mb3.3/1, mbtmp3.4/5, ML2.9/4, MS3.2/1, Error ellipse: s-maj=69.4km s-min=21.2km az=151.0

ISC 13 17:37:10.0±3.0, 38°4N±0°2×70°2E±0°1, h35km, n17, σ2°00/17, 4C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.62**	**34**	P	**Pn**	**17 38 18.7**	**+1.1**
	SNR=30						
KK31	**Karatay Array**	**4.74**	**3**	P	**Pn**	**17 38 18.9**	**-0.1**
	1.6nm,0.2s,baz=173,slow=12,SNR=113						
KK31				⇑S	**Sn**	**17 39 12.1**	**-0.7**
	5.4nm,0.4s,baz=185,slow=35,SNR=4.6						
EKS2	**Erkin-Say**	**5.08**	**31**	P	**Pn**	**17 38 25.5**	**+1.7**
	SNR=11						
AAK	**Ala-Archa**	**5.38**	**36**	Pn	**Pn**	**17 38 29.4**	**+1.5**
	4.8nm,0.3s,baz=248,slow=14,SNR=15						
AAK				Sn	**Sn**	**17 39 28.9**	**+0.3**
	1.1nm,0.3s,baz=350,slow=18,SNR=1.9						
	13nm,0.4s						
AAK	**Ala-Archa**	**5.38**	**36**	P	**Pn**	**17 38 29.7**	**+1.8**
	SNR=9.9						
KBK	**Karagaybulak**	**5.61**	**39**	P	**Pn**	**17 38 33.5**	**+2.4**
	SNR=21						
CHMS	**Chumysh**	**5.78**	**35**	P	**Pn**	**17 38 34.7**	**+1.5**
	SNR=15						
USP	**Ospenovka**	**5.88**	**32**	P	**Pn**	**17 38 35.9**	**+1.2**
	SNR=17						
TKM2	**Tokmak 2**	**6.13**	**40**	P	**Pn**	**17 38 40.1**	**+1.9**
	SNR=28						
TKM2	**Tokmak 2**	**6.13**	**40**	⇑P	**Pn**	**17 38 40.0**	**+1.7**
	17nm,0.5s						
TKM2				⇑S	**Sn**	**17 39 47.6**	**+0.4**
	7.9nm,0.6s						
MKAR	**Makanchi Array**	**12.25**	**43**	Pn	**Pn**	**17 40 00.3**	**-1.6**
	0.1nm,0.3s,baz=232,slow=14,SNR=5.7						
MKAR				Lg	Lg	17 43 26.1	
	baz=240,slow=26,SNR=1.7						
	0.4nm,0.6s						
AB31	**Akbulak array**	**13.16**	**329**	P	**Pn**	**17 40 12.6**	**-1.7**
	1.6nm,0.4s,baz=149,slow=10,SNR=82						
KURBB	**Kurchatov Arra**	**13.61**	**23**	Pn	Pn	17 40 09.5	-11
	baz=216,slow=12,SNR=4.8						
	0.2nm,0.6s						
AKTO	**Aktyubinsk**	**14.86**	**328**	⇑P	**Pn**	**17 40 40.3**	**+2.8**
	1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**18.53**	**28**	P	**P**	**17 41 19.3**	**-4.0**
	0.1nm,0.3s,baz=215,slow=12,SNR=2.4						
	0.6nm,0.5s						
DAVOX	**Davos/Dischmat**	**44.24**	**301**	LR	LR	18 03 38.3	
	comp=Z,24nm,18.3s,baz=266,slow=37						
TORD	**Torodi Ar. Bea**	**65.15**	**267**	P	P	17 47 55.6	+7.8
	0.2nm,0.4s,baz=54,slow=7.3,SNR=1.8						
	0.2nm,0.4s						

IDC 13 17:41:03.7±1.9, 7°88S×103°44E, h0km, mb3.9/8, mbtmp3.9/9, ML4.0/1, MS2.8/1, Error ellipse: s-maj=57.3km s-min=18.7km az=46.0
NEIC 13 17:41:05.6±2.9, 7°74S±0°07×103°74E±0°09, h15km±5km, mb4.5/28, Error ellipse: s-maj=14.6km s-min=8.8km az=61.0

ISC 13 17:41:07.5±0.6, 7°83S±0°06×103°68E±0°07, h35km, n51, σ1°89/48, mb4.2/17, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**3.27**	**144**	Pn	**Pn**	**17 41 57.5**	**+1.1**
XMIS				Sn	**Sn**	**17 42 31.8**	**-2.4**
MNAI	**Manna**	**3.52**	**348**	Pn	**Pn**	**17 41 57.4**	**-2.4**
MNAI				Sn	**Sn**	**17 42 36.8**	**-3.5**
LEM	**Lembang**	**4.04**	**76**	Pn	**Pn**	**17 42 10.1**	**+3.1**
	8.2nm,0.3s,baz=320,slow=21,SNR=6.4						
LEM				Sn	**Sn**	**17 42 54.2**	**+1.1**
	3.7nm,0.3s,baz=84,slow=23,SNR=1.8						
	21nm,0.4s						
PMBI	**Palembang**	**5.00**	**13**	Pn	**Pn**	**17 42 17.3**	**-2.8**
UGM	**Wanagama**	**6.78**	**91**	Pn	**Pn**	**17 42 46.4**	**+1.7**
UGM				Sn	**Sn**	**17 43 57.5**	**-3.3**
JAGI	**Jajag, Banyuwa**	**10.39**	**94**	Pn	**Pn**	**17 43 32.6**	**-1.5**
GSI	**Gunungsitoli**	**10.93**	**326**	Pn	**Pn**	**17 43 37.9**	**-3.6**
KAPI	**Kappang**	**16.22**	**81**	LR	LR	17 51 32.8	
	comp=Z,38nm,20.5s,baz=72,slow=38						
GIRL	**Giralia**	**17.89**	**147**		**P**	**17 45 14.3**	**+0.3**
MMRI	**Maumere**	**18.39**	**94**		**P**	**17 45 17.8**	**-1.9**
MMRI				IAmb	IAmb	17 45 49.2	
	comp=Z,33nm,1.1s						
TOLI2	**Tolitoli**	**19.23**	**63**		**P**	**17 45 26.9**	**-2.0**
MYLDM	**Lahad Datu**	**19.64**	**49**		**P**	**17 45 32.2**	**-1.1**
BATI	**Baumata**	**19.88**	**98**	P	**Pn**	**17 45 40.0**	**+2.1**
	comp=Z,9.1nm,0.6s,baz=146,slow=22,SNR=1.7						
	comp=Z,9.1nm,0.6s						
LUWI	**Luwuk**	**20.19**	**71**		**P**	**17 45 38.9**	**-0.4**
LUWI				IAmb	IAmb	17 45 46.2	
	comp=Z,29nm,1.1s						
MBWA	**Marble Bar**	**20.39**	**132**	P	**P**	**17 45 38.6**	**-3.0**
PSA00	**Pilbara Seismi**	**20.73**	**133**	P	**P**	**17 45 44.0**	**-1.3**
PSA00				IAmb	IAmb	17 46 03.9	
	comp=Z,22nm,1.5s						
FITZ	**Fitzroy Crossi**	**23.68**	**118**	P	**P**	**17 46 14.6**	**-1.5**
MORW	**Morawa**	**24.12**	**153**	P	**P**	**17 46 19.7**	**-0.5**
MORW				IAmb	IAmb	17 46 59.6	
	comp=Z,28nm,1.4s						
KNRA	**Kununurra**	**25.75**	**110**	P	**P**	**17 46 33.6**	**-1.5**
KNRA				IAmb	IAmb	17 46 52.7	
	comp=Z,5.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**26.54**	**350**	P	**P**	**17 46 43.2**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=182,slow=8.1,SNR=12						
	comp=Z,1.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**26.54**	**350**	P	**P**	**17 46 42.7**	**+0.5**
MTN	**Manton Dam**	**27.45**	**103**	P	**P**	**17 46 49.2**	**-1.3**
MTN				IAmb	IAmb	17 47 22.7	
	comp=Z,24nm,1.4s						
NWAO	**Narrogin (SRO)**	**27.96**	**155**	P	**P**	**17 46 55.4**	**+0.6**
CRAI	**Chiangrai**	**28.07**	**353**	P	**P**	**17 46 56.7**	**+0.8**
CRAI				IAmb	IAmb	17 46 57.8	
	comp=Z,6.6nm,1.3s						
H01W3	**Cape Leeuwin H**	**28.59**	**162**	T	T	18 17 39.2	
	baz=340,slow=76,SNR=5.5						
H01W2	**Cape Leeuwin H**	**28.60**	**162**	T	T	18 17 54.6	
	baz=340,slow=76,SNR=6.9						
H01W1	**Cape Leeuwin H**	**28.60**	**162**	T	T	18 18 07.3	
	baz=340,slow=76,SNR=6.8						
H08S2	**Diego Garcia H**	**30.90**	**268**	T	T	18 20 20.4	
	baz=91,slow=74,SNR=14						
H08S3	**Diego Garcia H**	**30.91**	**268**	T	T	18 20 23.9	
	baz=91,slow=74,SNR=12						
H08S1	**Diego Garcia H**	**30.91**	**268**	T	T	18 20 17.5	
	baz=91,slow=74,SNR=9.6						
WB0	**Warramunga Arr**	**32.03**	**115**	P	**P**	**17 47 29.8**	**-1.3**
WB0				IAmb	IAmb	17 47 30.6	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**32.04**	**115**	P	**P**	**17 47 34.4**	**+3.2**
	comp=Z,0.8nm,0.9s,baz=288,slow=12,SNR=5.2						
	comp=Z,0.8nm,0.9s						
WRA	**Warramunga Arr**	**32.04**	**115**	P	**P**	**17 47 30.7**	**-0.4**
WB2	**Warramunga Arr**	**32.05**	**115**	P	**P**	**17 47 30.1**	**-1.2**
WB2				IAmb	IAmb	17 47 33.4	
	comp=Z,8.0nm,1.3s						
ASAR	**Alice Springs**	**32.97**	**122**	P	**P**	**17 47 41.3**	**+2.0**
	comp=Z,0.3nm,0.9s,baz=296,slow=8.0,SNR=7.6						
	comp=Z,0.3nm,0.9s						
KSRS	**Korea Array**	**50.44**	**25**	P	**P**	**17 50 03.6**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=220,slow=6.9,SNR=2.4						
	comp=Z,0.5nm,0.8s						
JHS	**Saijyo**	**50.87**	**31**	P	**P**	**17 50 04.5**	**-0.6**
JHS				IAmb	IAmb	17 50 14.7	
	comp=Z,14nm,1.4s						
SONM	**Songino Array**	**55.48**	**2**	P	**P**	**17 50 40.9**	**+2.0**
	comp=Z,1.4nm,0.6s,baz=181,slow=8.7,SNR=12						
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**55.48**	**2**	P	**P**	**17 50 40.7**	**+1.8**
MK31	**Makanchi Array**	**57.62**	**343**	P	**P**	**17 50 55.6**	**+1.6**
MKAR	**Makanchi Array**	**57.62**	**343**	P	**P**	**17 50 55.3**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=149,slow=8.1,SNR=9.8						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**57.62**	**343**	P	**P**	**17 50 55.6**	**+1.5**
KURK	**Kurchatov**	**62.22**	**342**	P	**P**	**17 51 24.9**	**-0.6**
KURK				IAmb	IAmb	17 51 28.3	
	comp=Z,3.0nm,1.2s						
ZAA0	**Zalesovo Array**	**63.58**	**348**	P	**P**	**17 51 36.0**	**+1.5**
ZAA0				IAmb	IAmb	17 51 37.1	
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**63.58**	**348**	P	**P**	**17 51 36.1**	**+1.6**
	comp=Z,1.9nm,0.5s,baz=155,slow=5.4,SNR=11						
	comp=Z,1.9nm,0.5s						
KWAJ	**Kwajalein Atol**	**65.82**	**77**	P	**P**	**17 51 48.6**	**-1.3**
ABKAR	**Akbulak array**	**68.48**	**331**	P	**P**	**17 52 08.4**	**+2.4**
ABKAR	**Akbulak array**	**68.48**	**331**	P	**P**	**17 52 08.5**	**+2.4**
ABKAR				IAmb	IAmb	17 52 08.9	
	comp=Z,1.5nm,0.7s						
SOE	**Somerset East**	**75.83**	**238**	P	**P**	**17 52 51.1**	**+0.5**
TIRR	**Tirgusor**	**85.07**	**316**	P	**P**	**17 53 41.1**	**+1.4**
TXAR	**Lajitas Array**	**146.56**	**47**	PKPbc	**PKiKP**	**18 00 48.3**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=280,slow=1.3,SNR=7.7						

IDC 13 17:42:32.7±5.4, 33°35S×71°87W, h0km, mb3.7/1, mbtmp3.7/3, ML4.0/2, MS3.2/7, Error ellipse: s-maj=213.2km s-min=35.3km az=93.0
GUC 13 17:42:33.8±0.8, 33°43S×72°24W, h34km±3km, ML3.7

ISC 13 17:42:33.0±1.8, 33°38S±0°04×72°28W±0°07, h13km±10km, n32, σ0°78/39, MS3.4/4, 7C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA05	**Santo Domingo**	**0.62**	**116**	⇓*i*P	**Pb**	**17 42 46.0**	**+0.4**
VA05				*i* S	**Sb**	**17 42 54.9**	**+0.6**
VA05				IAML		17 42 59.8	
	comp=N,10μm,0.4s						
VA01	**Torpederas**	**0.64**	**56**	⇓*i*P	**Pn**	**17 42 46.9**	**-0.8**
VA01				*i* S	**Sn**	**17 42 57.0**	**-0.9**
VA01				IAML		17 42 59.0	
	comp=E,4μm,0.1s						
MT02	**Curacav**	**0.96**	**83**	*i* P	**Pg**	**17 42 51.8**	**+0.2**
MT02				*i* S	**Sn**	**17 43 05.0**	**-0.9**
MT02				IAML		17 43 06.7	
	comp=E,3μm,0.3s						
MT01	**Popeta**	**0.98**	**119**	*e*P	**Pb**	**17 42 51.7**	**-0.2**
MT01				*e*S	**Sg**	**17 43 05.0**	**+0.3**
MT01				IAML		17 43 07.2	
	comp=E,4μm,0.2s						
BO03	**Pichilemu**	**1.14**	**167**	⇑*i*P	**Pn**	**17 42 53.7**	**-0.9**
BO03				*i* S	**Sb**	**17 43 08.3**	**-1.0**
ROCH	**El Roble**	**1.14**	**69**	⇓*i*P	**Pg**	**17 42 55.0**	**+0.1**
ROCH				*i* S	**Sn**	**17 43 11.4**	**+0.9**
ROCH				IAML		17 43 17.6	
	comp=N,3μm,0.3s						
MT09	**Talagante**	**1.15**	**110**	⇓*i*P	**Pb**	**17 42 54.4**	**-0.3**
MT09				*i* S	**Sn**	**17 43 10.6**	**0.0**
MT09				IAML		17 43 12.4	
	comp=N,6μm,0.2s						
VA06	**Catapilco**	**1.16**	**45**	⇑*i*P	**Pb**	**17 42 54.9**	**-0.1**
VA06				*i* S	**Sg**	**17 43 11.3**	**+0.8**
VA06				IAML		17 43 15.3	
	comp=N,5μm,0.4s						
MT05	**Renca**	**1.29**	**91**	⇓*i*P	**Pb**	**17 42 57.2**	**+0.1**
MT05				*i* S	**Sg**	**17 43 14.6**	**0.0**
MT05				IAML		17 43 16.8	
	comp=N,4μm,0.4s						
PEL	**Peldehue**	**1.36**	**80**	⇑*i*P	**Pb**	**17 42 58.6**	**+0.3**
PEL				IAML		17 43 23.6	
	comp=E,1μm,0.4s						
BO01	**Tunca**	**1.41**	**136**	⇑*i*P	**Pn**	**17 42 57.7**	**-0.7**
BO01				*e*S	**Sn**	**17 43 16.9**	**-0.1**
MT03	**Universidad Ad**	**1.48**	**95**	⇓*i*P	**Pb**	**17 43 00.4**	**-0.1**
MT03				*i* S	**Sg**	**17 43 20.0**	**-0.8**
M

comp=N,20nm,18.0s,baz=130,slow=30
MKAR Makanchi Array 156.51 48 PKPab **PKPab 18 02 56.4 +0.2**
comp=N,0.2nm,0.8s,baz=276,slow=2.5,SNR=2.2

JMA 13 17:49:46.9±0.0, 34°1'N±0'.1×133°3'E±0'.1, h13km, MV0.8/32, HIUCHINADA SETONAIKAI, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JET	**Tanbara**	**0.33**	**211**	*i* P		Pg	17 49 53.5	-0.1
JET				*e*S		Sg	17 49 57.9	-0.2
JJG	**Jouge**	**0.59**	**352**	*e*P		Pg	17 49 58.3	-0.2
JJG				*e*S		Sg	17 50 06.1	-0.2
JHM	**Kurahashi**	**0.60**	**278**	*e*P		Pg	17 49 58.4	-0.3
JHM				*e*S		Sg	17 50 06.9	+0.2
JMN	**Monobe**	**0.62**	**122**	*e*P		Pg	17 49 59.0	0.0
JMN	**Monobe**	**0.62**	**122**	P		Pg	17 49 58.7	-0.3
JJS	**Sakaide**	**0.65**	**61**	*e*P		Pg	17 49 59.3	-0.3
JJS				*e*S		Sg	17 50 07.8	-0.2
JKU	**Kubokawa**	**0.76**	**192**	P		Pb	17 50 01.9	-0.1
JKU				*e*S		Sg	17 50 11.6	-0.1
JNA	**Nagahama**	**0.81**	**232**	P		Pg	17 50 02.4	-0.3
JHT	**Toyohira**	**0.91**	**312**	*e*S		Sg	17 50 16.2	-0.4
JHS	**Saijyo**	**0.94**	**353**	*e*S		Sg	17 50 16.8	-0.7

*IDC **13** 17:58:47.3±4.6, 33°.32S×71°.93W, h0km, mb3.7/2, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=172.5km s-min=21.6km az=93.0*
*GUC **13** 17:58:50.2±0.7, 33°.43S×72°.33W, h38km±2km, ML3.6*
ISC 13 17:58:48.8±1.4, 33°.41S±0'.04×72°.42W±0'.06, h19km±4km, n31, σ0°.96/46, 17C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA05	**Santo Domingo**	**0.71**	**111**	*e*P		**Pb**	**17 59 02.6**	**0.0**
VA05				*i* S		**Sb**	**17 59 12.0**	**-0.1**
VA05				IAML			17 59 15.0	
	comp=E,5μm,0.4s							
VA01	**Torpederas**	**0.75**	**59**	*e*P		**Pg**	**17 59 03.5**	**0.0**
VA01				*e*S		**Sg**	**17 59 13.7**	**+0.1**
MT01	**Popeta**	**1.07**	**116**	*e*P		**Pb**	**17 59 08.3**	**-0.5**
MT01				*e*S		**Sb**	**17 59 21.7**	**-0.7**
MT01				IAML			17 59 23.0	
	comp=N,4μm,0.2s							
MT02	**Curacav**	**1.08**	**83**	*e*P		**Pb**	**17 59 08.4**	**-0.5**
MT02				*e*S		**Sb**	**17 59 21.8**	**-0.8**
BO03	**Pichilemu**	**1.15**	**161**	*e*P		**Pn**	**17 59 09.8**	**-0.1**
BO03				*e*S		**Sb**	**17 59 24.6**	**-0.1**
MT09	**Talagante**	**1.25**	**108**	*e*P		**Pn**	**17 59 11.0**	**-0.4**
MT09				*e*S		**Sb**	**17 59 26.6**	**-0.9**
MT09				IAML			17 59 28.0	
	comp=N,3μm,0.3s							
ROCH	**El Roble**	**1.25**	**70**	*e*P		**Pn**	**17 59 11.5**	**-0.1**
ROCH				*e*P		**Pn**	**17 59 11.5**	**-0.1**
ROCH				*i* S		**Sb**	**17 59 27.6**	**-0.2**
ROCH				*i* S		**Sb**	**17 59 27.7**	**-0.2**
ROCH				IAML			17 59 33.8	
	comp=N,1μm,0.3s							
ROCH				IAML			17 59 33.8	
	comp=N,2μm,0.5s							
VA06	**Catapilco**	**1.26**	**48**	*e*P		**Pn**	**17 59 11.6**	**+0.2**
VA06				*e*S		**Sb**	**17 59 27.8**	**-0.1**
VA06				IAML			17 59 34.8	
	comp=E,4μm,0.4s							
MT05	**Renca**	**1.40**	**90**	*e*P		**Pn**	**17 59 13.7**	**+0.3**
MT05				*e*S		**Sn**	**17 59 30.9**	**-0.5**
MT05				IAML			17 59 33.0	
	comp=E,2μm,0.4s							
PEL	**Peldehue**	**1.47**	**80**	*e*P		**Pn**	**17 59 15.2**	**+0.8**
PEL				*e*S		**Sn**	**17 59 33.8**	**+0.6**
PEL				IAML			17 59 42.5	
	comp=E,1μm,0.6s							
BO01	**Tunca**	**1.48**	**132**	*e*P		**Pn**	**17 59 14.4**	**-0.1**
BO01				*e*S		**Sn**	**17 59 32.8**	**-0.4**
MT03	**Universidad Ad**	**1.59**	**94**	*e*P		**Pn**	**17 59 16.7**	**+0.6**
MT03				*e*S		**Sn**	**17 59 36.7**	**+0.4**
MT03				IAML			17 59 43.8	
	comp=N,3μm,0.2s							
GO05	**Huala**	**1.65**	**166**	*e*P		**Pn**	**17 59 17.5**	**+0.7**
GO05				*i* S		**Sn**	**17 59 38.2**	**+0.7**
GO05				IAML			17 59 49.4	
	comp=N,388nm,0.3s							
VA03	**San Esteban**	**1.69**	**68**	*e*P		**Pn**	**17 59 18.0**	**+0.6**
VA03				*e*S		**Sn**	**17 59 39.7**	**+1.1**
VA03				IAML			17 59 43.6	
	comp=E,2μm,0.2s							
VA03				IAML			17 59 46.6	
	comp=N,1μm,0.4s							
FCH	**Farellones**	**1.78**	**88**	*e*P		**Pn**	**17 59 19.9**	**+1.1**
FCH				*e*S		**Sn**	**17 59 42.0**	**+0.9**
FCH				IAML			17 59 47.5	
	comp=N,1μm,0.2s							
LMEL	**Las Melosas**	**1.90**	**104**	*e*P		**Pn**	**17 59 21.3**	**+0.9**
LMEL				*e*S		**Sn**	**17 59 45.0**	**+1.2**
LMEL				IAML			17 59 52.2	
	comp=N,2μm,0.2s							
BO02	**Sierra Bellavi**	**1.94**	**136**	*e*P		**Pn**	**17 59 21.6**	**+0.8**
BO02				*e*S		**Sn**	**17 59 45.3**	**+0.7**
BO02				IAML			17 59 54.4	
	comp=E,1μm,0.4s							
CO02	**Combarbal**	**2.50**	**29**	*e*P		**Pn**	**17 59 29.7**	**+1.1**
CO02				*e*S		**Sn**	**17 59 59.5**	**+0.8**
CO02				IAML			18 00 11.3	
	comp=E,861nm,0.4s							
CO03	**El Pedregal**	**2.95**	**30**	*e*P		**Pn**	**17 59 36.2**	**+1.4**
CO03				*e*S		**Sn**	**18 00 11.2**	**+1.5**
CO03				IAML			18 00 13.7	
	comp=N,152nm,0.3s							
H03N1	**Juan Fernandez**	**5.43**	**268**	T		T	18 07 24.0	
	baz=88,slow=74,SNR=18							
H03S1	**Juan Fernandez**	**5.43**	**264**	T		T	18 06 25.6	
	baz=84							
H03S3	**Juan Fernandez**	**5.43**	**264**	T		T	18 06 21.1	
	baz=84							
H03N3	**Juan Fernandez**	**5.44**	**268**	T		T	18 06 55.1	
	baz=88,slow=74,SNR=15							
H03S2	**Juan Fernandez**	**5.45**	**264**	T		T	18 06 01.9	
	baz=84							
H03N2	**Juan Fernandez**	**5.45**	**268**	T		T	18 07 26.6	
	baz=88,slow=74,SNR=16							
PLCA	**Paso Flores**	**7.46**	**169**	Pn		**Pn**	**18 00 38.0**	**+1.2**
	comp=N,0.3nm,0.3s,baz=343,slow=11,SNR=9.0							
PLCA				Lg		Lg	18 02 44.0	
	comp=N,0.1nm,0.3s,baz=290,slow=6.8,SNR=3.0							
	comp=N,1.0nm,0.4s							
LPAZ	**La Paz**	**17.48**	**14**	P		**Pn**	**18 02 51.9**	**-0.3**
	comp=N,0.1nm,0.3s,baz=217,slow=8.2,SNR=5.0							
	comp=N,0.8nm,0.6s							
SIV	**San Ignacio**	**20.14**	**33**	P		**P**	**18 03 18.2**	**-3.8**
	baz=224,slow=13,SNR=1.5							
	comp=N,1.0nm,0.2s							
SNAA	**Sanae**	**52.25**	**158**	P		**P**	**18 07 59.2**	**+0.8**
	comp=N,1.6nm,1.1s,baz=290,slow=6.3,SNR=3.2							
	comp=N,1.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**84.30**	**70**	P		**P**	**18 11 21.0**	**+1.1**
	comp=N,0.3nm,0.5s,baz=251,slow=6.4,SNR=1.8							
	comp=N,0.3nm,0.5s							
MKAR	**Makanchi Array**	**156.60**	**48**	PKPab		**PKPab**	**18 19 10.3**	**-1.1**
	comp=N,0.2nm,0.6s,baz=275,slow=2.7,SNR=2.4							

NOU 13 18:31:35.9, 23°.30S×169°.94E, h0km, mb4.4/11, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**2.40**	**286**	P		Pn	18 32 16.4	0.0
MARNC	**Mare, Loyalty**	**2.53**	**315**	P		Pn	18 32 18.1	-0.1
OUENC	**Ouen Island, N**	**2.99**	**286**	P		Pn	18 32 24.4	-0.2
YATNC	**Mamie plateau,**	**3.08**	**293**	P		Pn	18 32 25.8	0.0
ONTNC	**Ouen Toro**	**3.37**	**286**	P		Pn	18 32 29.7	0.0
DZM	**Mont Dzumac**	**3.45**	**290**	P		Pn	18 32 30.4	-0.6
NOUC	**Port Laguerre**	**3.56**	**289**	P		Pn	18 32 31.8	-0.7
RTV	**Rentapao**	**5.66**	**345**	P		Pn	18 33 00.9	-0.4
KOUNC	**Koumac, New Ca**	**5.92**	**296**	P		Pn	18 33 05.9	+1.0

*NEIC **13** 18:53:45.7±0.9, 19°.40N±0°.02×66°.58W±0°.05, h30km±10km, Error ellipse: s-maj=6.7km s-min=3.4km az=92.0*
*RSPR **13** 18:53:46.7, 19°.42N×66°.56W, h54km±10km, MD3.2/9*

ISC 13 18:53:43.5±1.5, 19°.45N±0°.07×66°.53W±0°.03, h19km, n53, σ0°.60/56, 12C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.96**	**180**	*e*P		**Pg**	**18 54 02.9**	**+0.6**
EMPR	**Esperanza - Ma**	**0.96**	**180**	*e*S		**Sn**	**18 54 15.3**	**0.0**
EMPR	**Esperanza - Ma**	**0.96**	**180**			**Pg**	**18 54 02.9**	**+0.6**
EMPR						**Sn**	**18 54 15.3**	**0.0**
EMPR	**Esperanza - Ma**	**0.96**	**180**	IAML			18 54 16.1	
	comp=N,247nm,0.4s							
EMPR				IAML			18 54 16.4	
	comp=E,371nm,0.5s							
AOPR	**Arecibo Observ**	**1.11**	**191**	*e*P		**Pn**	**18 54 04.0**	**-0.2**
AOPR	**Arecibo Observ**	**1.11**	**191**	*e*S		**Sn**	**18 54 18.9**	**-0.1**
AOPR	**Arecibo Observ**	**1.11**	**191**			**Pn**	**18 54 04.0**	**-0.2**
AOPR						**Sn**	**18 54 18.9**	**-0.1**
AOPR	**Arecibo Observ**	**1.11**	**191**	IAML			18 54 19.9	
	comp=N,463nm,0.3s							
AGPR	**Aguadilla, PR**	**1.12**	**210**	Pn		**Pn**	**18 54 03.2**	**-1.0**
AGPR				IAML			18 54 23.8	
	comp=N,117nm,0.4s							
AGPR				IAML			18 54 31.8	
	comp=E,112nm,0.4s							
UUPR	**Utuado, UPR, P**	**1.20**	**189**	*e*P		**Pb**	**18 54 05.8**	**+0.1**
UUPR	**Utuado, UPR, P**	**1.20**	**189**			**Pb**	**18 54 05.8**	**+0.1**
GCPR	**Guaynabo City**	**1.21**	**159**	*e*P		**Pb**	**18 54 05.8**	**0.0**
GCPR	**Guaynabo City**	**1.21**	**159**	*e*S		**Sb**	**18 54 21.1**	**0.0**
GCPR	**Guaynabo City**	**1.21**	**159**			**Pb**	**18 54 05.8**	**0.0**
GCPR						**Sb**	**18 54 21.1**	**0.0**
GCPR	**Guaynabo City**	**1.21**	**159**	IAML			18 54 21.8	
	comp=N,118nm,0.5s							
GCPR				IAML			18 54 30.4	
	comp=E,106nm,0.6s							
CBYP	**Canovanas**	**1.33**	**151**	*e*P		**Pb**	**18 54 07.8**	**-0.2**
CBYP	**Canovanas**	**1.33**	**151**	*e*S		**Sb**	**18 54 24.6**	**0.0**
CBYP	**Canovanas**	**1.33**	**151**			**Pb**	**18 54 07.8**	**-0.2**
CBYP						**Sb**	**18 54 24.6**	**0.0**
PRSN	**Puerto Rico Se**	**1.35**	**206**			**Pn**	**18 54 06.8**	**-0.7**
LSP	**Las Mesas**	**1.37**	**203**	*e*P		**Pn**	**18 54 07.7**	**0.0**
LSP	**Las Mesas**	**1.37**	**203**	*e*S		**Sb**	**18 54 25.9**	**+0.1**
SJG	**San Juan**	**1.38**	**165**			**Pb**	**18 54 08.7**	**0.0**
SJG				IAML			18 54 26.8	
	comp=E,139nm,0.6s							
SJG				IAML			18 54 28.0	
	comp=E,128nm,0.5s							
IDE	**Isla Desecheo**	**1.38**	**220**	*e*P		**Pb**	**18 54 08.4**	**-0.4**
IDE	**Isla Desecheo**	**1.38**	**220**	*e*S		**Sb**	**18 54 26.0**	**-0.1**
OBIP	**Obispado Ponce**	**1.40**	**183**	*e*P		**Pb**	**18 54 08.5**	**-0.6**
OBIP	**Obispado Ponce**	**1.40**	**183**			**Pn**	**18 54 07.7**	**-0.3**
HUMP	**Col San Antoni**	**1.45**	**153**	*e*P		**Pb**	**18 54 09.4**	**-0.6**
HUMP	**Col San Antoni**	**1.45**	**153**	*e*S		**Sn**	**18 54 27.4**	**+0.1**
HUMP	**Col San Antoni**	**1.45**	**153**			**Pb**	**18 54 09.4**	**-0.6**
HUMP						**Sn**	**18 54 27.4**	**+0.1**
HUMP	**Col San Antoni**	**1.45**	**153**	IAML			18 54 35.8	
	comp=N,154nm,0.6s							
PDPR	**Patillas Dam,**	**1.50**	**161**			**Pb**	**18 54 10.3**	**-0.5**
IGPR	**InterUniversit**	**1.53**	**165**	*e*P		**Pb**	**18 54 11.2**	**0.0**
IGPR	**InterUniversit**	**1.53**	**165**	*e*S		**Sn**	**18 54 29.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.53**	**201**	*e*P		**Pn**	**18 54 10.4**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.53**	**201**	*e*S		**Sn**	**18 54 28.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.53**	**201**			**Pn**	**18 54 09.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.53**	**201**			**Sn**	**18 54 28.9**	**-0.4**
MLPR	**Magueyes Islan**	**1.55**	**198**	*e*P		**Pn**	**18 54 10.4**	**+0.3**
MLPR	**Magueyes Islan**	**1.55**	**198**	*e*S		**Sn**	**18 54 29.1**	**-0.5**
MLPR	**Magueyes Islan**	**1.55**	**198**			**Pn**	**18 54 09.5**	**-0.6**
MLPR				IAML			18 54 31.0	
	comp=E,66nm,0.7s							
MLPR	**Magueyes Islan**	**1.55**	**198**			**Sn**	**18 54 29.1**	**-0.5**
CUPR	**Culebra, Puert**	**1.64**	**134**	*e*P		**Pb**	**18 54 12.5**	**-0.6**
CUPR	**Culebra, Puert**	**1.64**	**134**	*e*S		**Sn**	**18 54 32.6**	**+0.7**
CUPR	**Culebra, Puert**	**1.64**	**134**			**Pb**	**18 54 12.5**	**-0.6**
CUPR						**Sn**	**18 54 32.6**	**+0.7**
STVI	**Saint Thomas**	**1.85**	**126**	*e*S		**Sb**	**18 54 38.6**	**-0.9**
STVI	**Saint Thomas**	**1.85**	**126**			**Sb**	**18 54 38.6**	**-0.9**
STVI	**Saint Thomas**	**1.85**	**126**	Pn		**Pn**	**18 54 14.1**	**-0.2**
STVI				IAML			18 54 45.4	
	comp=N,51nm,0.4s							
SJVI	**Gifft Hill Sch**	**2.00**	**123**	*e*P		**Pb**	**18 54 18.3**	**-1.1**
SJVI	**Gifft Hill Sch**	**2.00**	**123**	*e*S		**Sn**	**18 54 41.0**	**+0.1**
SJVI	**Gifft Hill Sch**	**2.00**	**123**			**Pb**	**18 54 18.3**	**-1.1**
SJVI						**Sn**	**18 54 41.0**	**+0.1**
CDVI	**St. Croix**	**2.38**	**135**	Pn		**Pn**	**18 54 23.5**	**+2.0**
CDVI				IAML			18 55 18.2	
	comp=N,107nm,0.6s							
DR12	**Loma Pena Alta**	**2.77**	**257**	Pn		**Pn**	**18 54 28.9**	**+1.8**
SDDR	**Presa de Saban**	**4.52**	**265**	Pn		**Pn**	**18 54 50.3**	**-0.7**
SDDR				IAML			18 56 09.6	
	comp=N,18nm,2.5s							
SDDR				IAML			18 56 10.8	
	comp=N,17nm,1.6s							

ASRS 13 19:23:18.6±0.5, 50°N±3°×98°E±°, h5km, MLh3.7/6, Error ellipse: s-maj=6.8km s-min=2.7km az=5.3, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**0.65**	**353**	Pg	Pn	19 23 39.1	+4.4
KNGR				Sg	Sn	19 23 53.0	+7.6
ERNS	**Erzin**	**1.63**	**282**	Pg	Pg	19 23 50.1	+0.3
ERNS				Sg	Sg	19 24 12.8	+1.9
KZLR	**Kyzyl**	**2.67**	**312**	Pg	Pg	19 24 11.3	+1.5
KZLR				Sg	Sg	19 24 49.6	+5.2
MOY	**Mondy**	**2.73**	**50**	Pg	Pg	19 24 12.3	+1.4
MOY				Sg	Sg	19 24 52.7	+6.5
ZAK	**Zakamensk**	**3.65**	**81**	Pg	Pg	19 24 27.2	-1.3
ZAK				Sg	Sg	19 25 17.3	+1.5
ARDR	**Aradan**	**3.73**	**316**	Pg	Pg	19 24 28.8	-1.2
ARDR				Sg	Sg	19 25 22.3	+4.1
IRK	**Irkutsk**	**4.76**	**59**	Sg	Sg	19 25 55.5	+4.0
DJOS	**Djoyskaya Sosn**	**4.83**	**308**	Sg	Sg	19 25 58.5	+4.8
DJO	**Djoy, Khakassi**	**4.92**	**308**	Pg	Pg	19 24 51.8	-1.0
DJO				Sg	Sg	19 25 60.0	+3.6
ORY	**Orie**	**5.29**	**344**	Sg	Sg	19 26 10.9	+2.7
CUR	**Chagan-Uzun**	**5.99**	**275**	Pg	Pg	19 25 13.6	+0.3
CUR				Sg	Sg	19 26 26.9	-3.9
AKAR	**Aktash**	**6.45**	**277**	Pg	Pb	19 25 16.0	+4.7
AKAR				Sg	Sg	19 26 41.8	-3.9
CHBI	**Chibit, Altay**	**6.53**	**277**	Sg	Sg	19 26 41.7	-6.4
ULN	**Ulaanbaatar**	**6.55**	**105**	Pg	Pb	19 25 16.8	+3.8
ULN				Sg	Sg	19 26 43.6	-5.1
LUZB	**Luzhba, Kemero**	**6.57**	**308**	Pg	Pn	19 25 02.4	+6.7
LUZB				Sg	Sg	19 26 47.8	-1.4
TASR	**Tashtagol**	**6.72**	**298**	Sg	Sg	19 26 56.2	+1.8

*NCEDC **13** 19:24:05.5±1.5, 37°.49N±0°.01×118°.78W±0°.01, h5km±4km, Mwr3.4/6, ML3.4/86(NEIC), Mwr3.5(REN), Error ellipse: s-maj=1.9km s-min=1.4km az=222.0*
*REN **13** 19:24:05.5±1.8, 37°.48N±0°.01×118°.78W±0°.02, h6km±4km, Error ellipse: s-maj=2.1km s-min=1.6km az=64.0*
*ANF **13** 19:24:05.3±0.3, 37°.45N×118°.80W, h4km±2km, ML3.6/21, Error ellipse: s-maj=2.6km s-min=1.7km az=73.0*
*NEIC **13** 19:24:05.5, 37°.49N×118°.78W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.59; $M_{\theta\theta}$=0.04; $M_{\phi\phi}$=1.54; $M_{r\theta}$=-0.52; $M_{\theta\phi}$=-0.70; $M_{\phi r}$=0.32; Fault plane solution: M_0=1.82000×10^{14} NP1:ϕ_s=145.51000°, δ=54.48000°, λ=-106.27000°. NP2:ϕ_s=352.19000°, δ=38.62000°, λ=-68.56000°. Principal axes: T 1.8878, Plg8.0000°, Azm247.0000°; N -0.1448, Plg13.0000°, Azm155.0000°; P -1.7430, Plg74.0000°, Azm8.0000°;*
*NEIC **13** 19:24:06±1.1, 37°.47N±0°.01×118°.76W±0°.02, h1km±7km Error ellipse: s-maj=2.1km s-min=1.5km az=55.0*
*NEIC **13** 19:24:06, 37°.48N×118°.78W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.44; $M_{\theta\theta}$=0.28; $M_{\phi\phi}$=1.72; $M_{r\theta}$=-0.77; $M_{\theta\phi}$=-0.60; $M_{\phi r}$=0.25; Fault plane solution: M_0=1.89000×10^{14} NP1:ϕ_s=10.00000°, δ=52.00000°, λ=-52.00000°. NP2:ϕ_s=139.00000°, δ=51.00000°, λ=-129.00000°. Principal axes: T 1.8866, Plg1.0000°, Azm75.0000°; N 0.0060, Plg29.0000°, Azm165.0000°; P -1.8926, Plg61.0000°, Azm344.0000°;*

ISC 13 19:24:05.7±0.8, 37°.48N±0°.01×118°.78W±0°.02, h7km±6km, n266, σ0°.96/272, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCCR	**Rock Creek Can**	**0.04**	**82**		**Pg**	**19 24 07.2**	**-0.4**
MCVM	**Convict Lake**	**0.12**	**340**		**Pg**	**19 24 08.2**	**-0.3**
WMD		**0.12**	**110**		**Pg**	**19 24 08.2**	**0.0**
SCHCA	**Scheelite**	**0.14**	**150**		**Pg**	**19 24 08.7**	**-0.1**
MLAC	**Mammoth, Mammo**	**0.16**	**343**		**Pg**	**19 24 09.2**	**+0.1**
MLAC	**Mammoth, Mammo**	**0.16**	**343**	P	**Pg**	**19 24 09.1**	**+0.1**
	baz=163,SNR=1000						
MLAC				S	**Sg**	**19 24 11.6**	**+0.2**
	baz=163						
MDRNC	**Doe Ridge**	**0.16**	**344**		**Pg**	**19 24 09.3**	**+0.1**
MLCM	**Laurel Creek C**	**0.17**	**320**		**Pg**	**19 24 09.2**	**-0.1**
MGPM	**Gravel Pit**	**0.18**	**326**		**Pg**	**19 24 09.4**	**0.0**
ORC	**Owens River**	**0.18**	**32**		**Pg**	**19 24 09.5**	**0.0**
MCBM	**Casa Benchmark**	**0.19**	**330**		**Pg**	**19 24 09.7**	**+0.1**
MCBM	**Casa Benchmark**	**0.19**	**330**		**Sg**	**19 24 12.7**	**+0.3**
MCSM	**Casa Diablo Ho**	**0.20**	**330**		**Pg**	**19 24 09.9**	**+0.1**
MTUM	**Tungsten Hills**	**0.21**	**127**		**Pg**	**19 24 10.0**	**0.0**
OMMB	**Old Mammoth Mi**	**0.22**	**307**		**Pg**	**19 24 10.0**	**-0.2**
OMMB	**Old Mammoth Mi**	**0.22**	**307**	Sg	**Sg**	**19 24 13.0**	**-0.3**
OMMB				IAML		19 24 13.4	
	comp=E,4μm,0.5s						
OMMB				IAML		19 24 15.9	
	comp=N,5μm,0.5s						
MEMM	**East Mammoth H**	**0.23**	**325**		**Pg**	**19 24 10.4**	**+0.1**
MMPM	**Mammoth Pass**	**0.24**	**303**		**Pg**	**19 24 10.3**	**-0.2**
MMLB	**Mammoth Lakes**	**0.24**	**318**		**Pg**	**19 24 10.7**	**+0.1**
MLIM	**Lincoln Peak**	**0.25**	**309**		**Pg**	**19 24 10.8**	**+0.1**
MMSM	**Mammoth Summit**	**0.25**	**307**		**Pg**	**19 24 10.8**	**0.0**
MRDM	**Red Cones**	**0.25**	**298**		**Pg**	**19 24 10.7**	**-0.1**
MDYM	**Dry Creek**	**0.26**	**314**		**Pg**	**19 24 11.0**	**+0.1**
MDYM	**Dry Creek**	**0.26**	**314**		**Sg**	**19 24 14.9**	**+0.5**
MCDM	**Chidago Canyon**	**0.27**	**76**		**Pg**	**19 24 11.4**	**+0.2**
MFBM	**Five Bridges**	**0.28**	**100**		**Pg**	**19 24 11.7**	**+0.4**
MDPB	**Devils Postpil**	**0.28**	**302**		**Pg**	**19 24 11.2**	**-0.2**
MDPB				IAML		19 24 15.8	
	comp=N,5μm,0.8s						
MDPB	**Devils Postpil**	**0.28**	**302**		**Sg**	**19 24 15.2**	**0.0**
BENR	**Benton**	**0.29**	**35**		**Sg**	**19 24 11.2**	**-0.2**
MRCM	**Red Rock Canyo**	**0.29**	**48**		**Pg**	**19 24 11.4**	**-0.1**
MDCM	**Deadman Creek**	**0.31**	**318**		**Pg**	**19 24 11.7**	**-0.2**
MGNR	**McGee Canyon**	**0.34**	**11**		**Pg**	**19 24 12.5**	**+0.1**
MLIN	**Milner Canyon**	**0.36**	**72**		**Pg**	**19 24 12.9**	**0.0**
BCKR	**Birch Creek**	**0.39**	**56**		**Pg**	**19 24 13.4**	**+0.1**
POCCA	**Poleta Canyon**	**0.41**	**106**		**Pg**	**19 24 13.8**	**0.0**
KCC	**Kaiser Creek**	**0.46**	**250**		**Pg**	**19 24 14.3**	**-0.2**
KCC	**Kaiser Creek**	**0.46**	**250**		**Sg**	**19 24 20.6**	**0.0**
ANTCA	**Antelope Range**	**0.47**	**21**		**Pg**	**19 24 14.6**	**-0.2**
BONR	**Boundary Peak**	**0.61**	**38**		**Pg**	**19 24 17.3**	**-0.2**
TIN	**Tinemaha, Big**	**0.61**	**134**		**Pg**	**19 24 17.5**	**0.0**
TIN	**Tinemaha, Big**	**0.61**	**134**	P	**Pg**	**19 24 17.5**	**0.0**
	baz=315,SNR=98						
TIN				S	**Sg**	**19 24 25.9**	**+0.5**
	baz=315						
HCK	**Huntoon Valley**	**0.61**	**14**		**Pg**	**19 24 17.5**	**0.0**
DSP	**Deep Springs**	**0.65**	**99**		**Pg**	**19 24 18.0**	**-0.2**
LUL	**Lundy Lake**	**0.65**	**331**		**Pg**	**19 24 18.3**	**0.0**
LHV	**Little Huntoon**	**0.80**	**16**		**Pg**	**19 24 20.9**	**-0.2**
LHV	**Little Huntoon**	**0.80**	**16**		**Sb**	**19 24 32.4**	**-0.4**
LHV				IAML		19 24 34.4	
	comp=N,2μm,0.5s						
HELL	**Mitchell Peak,**	**0.82**	**194**		**Pg**	**19 24 20.9**	**-0.5**
HELL					**Sg**	**19 24 31.9**	**-0.3**
LCH	**Last Change Ra**	**0.94**	**105**		**Pg**	**19 24 23.1**	**-0.6**
LCH	**Last Change Ra**	**0.94**	**105**	IAML		19 24 36.1	
	comp=N,2μm,0.5s						
TVH1	**TV Hill, Hawth**	**0.97**	**1**		**Pg**	**19 24 24.2**	**-0.2**
TVH1					**Sg**	**19 24 37.3**	**+0.2**
NV08	**Mina Array Sit**	**0.99**	**21**		**Pg**	**19 24 24.3**	**-0.5**
NV09	**Mina Array Sit**	**1.02**	**20**		**Pg**	**19 24 24.8**	**-0.5**
NV4R	**Mina Array Rea**	**1.02**	**21**		**Pg**	**19 24 24.5**	**-0.5**
NV11	**Mina Array Sit**	**1.07**	**27**		**Pg**	**19 24 25.7**	**-0.6**
NV11	**Mina Array Sit**	**1.07**	**27**	IAML		19 24 41.6	
	comp=E,502nm,0.7s						
NV11				IAML		19 24 45.1	
	comp=N,598nm,1.3s						
RYN	**Ryan**	**1.16**	**10**		**Pg

WOFM	Oak Flat	1.94	178		Pb	19 24 40.8 -0.7
CTM	Castle Mountai	1.99	219		Pb	19 24 41.3 -1.0
SLD	San Luis Dam	1.99	259		Pn	19 24 40.9 +1.1
PSRM	Scobie Ranch	2.02	217		Pn	19 24 41.4 +1.2
BBGB	Big Mountain B	2.02	244		Pn	19 24 41.6 -1.2
BEMM	Emmet	2.03	247		Pb	19 24 42.2 -0.6
CMPM	Mikes Peak	2.03	267		Pn	19 24 41.5 +1.2
PSMM	Smith Mountain	2.03	227		Pn	19 24 41.5 +1.2
HPCM	Pacheco Lake	2.04	259		Pn	19 24 41.5 +1.1
PMPB	Monarch Peak	2.06	233		Pn	19 24 41.9 +1.3
PACP	Pacheco Peak	2.06	258		Pn	19 24 42.0 +1.3
PMRM	Maxey Ranch	2.06	215		Pn	19 24 41.8 +1.1
MPK	Martis Peak	2.06	232		Pb	19 24 42.7 -0.9
MPK	Martis Peak comp=N,313nm,0.9s	2.06	332	IAML		19 25 21.7
MPK				IAML		19 25 26.6
	comp=E,321nm,0.9s					
PHFM	Heflinger Ranc	2.06	220		Pn	19 24 41.7 +1.0
COSM	Mount Oso	2.06	272		Pn	19 24 42.1 +1.3
PPTM	Peach Tree Val	2.08	229		Pn	19 24 41.8 +0.9
GHC	Gold Hill	2.08	218		Pn	19 24 41.6 +0.7
BBNM	San Benito	2.08	243		Pn	19 24 42.3 +1.3
LRV	Little Rabbit	2.08	240		Pn	19 24 42.3 +1.4
PSTM	Stockdale Moun	2.08	222		Pn	19 24 42.0 +1.0
PKD	Bear Valley Ra	2.09	223		Pn	19 24 42.0 +0.9
TPNV	Topopah Spring	2.09	104		Pn	19 24 41.4 +0.2
TPNV	Topopah Spring comp=E,258nm,0.7s	2.09	104	IAML		19 25 17.1
TPNV				IAML		19 25 20.6
	comp=E,262nm,0.9s					
TPNV	Topopah Spring baz=286,SNR=376	2.09	104	P	Pn	19 24 41.4 +0.2
PHAM	Harlan Ranch	2.10	219		Pn	19 24 42.2 +1.1
PHPM	Hope Ranch	2.10	225		Pn	19 24 42.2 +1.0
PVCM	Vineyard Canyo	2.10	223		Pn	19 24 42.2 +0.9
THIS	South End of C	2.11	214		Pn	19 24 42.5 +1.2
PAGB	Antelope Grade	2.11	215		Pn	19 24 42.4 +1.0
PKLM	Kerr Lake	2.12	217		Pn	19 24 42.6 +1.1
MAGC	SCE Magundon P	2.12	183		Pb	19 24 43.9 -0.4
HJSM	John Smith Roa	2.12	253		Pb	19 24 43.3 -1.1
TNK	Tinkers Knob	2.12	328		Pb	19 24 43.4 -1.2
SDH	Striped Hills	2.12	112		Pn	19 24 42.3 +0.7
PCMM	Cholame Hills	2.12	219		Pn	19 24 42.6 +1.0
GWY	Greenwater Val	2.13	127		Pn	19 24 41.5 -0.3
GWY	Greenwater Val comp=N,143nm,0.5s	2.13	127	IAML		19 25 19.7
BVL	Bear Valley	2.13	246		Pn	19 24 42.4 +0.7
HFEM	San Felipe	2.15	257		Pn	19 24 43.3 +1.4
BPIM	Pinnacles	2.15	243		Pn	19 24 43.1 +1.1
BLRM	Lewis Ranch	2.15	249		Pb	19 24 44.5 -0.5
QSM	Queen of Sheba	2.15	134		Pn	19 24 42.4 +0.4
QSM	Queen of Sheba comp=N,208nm,0.7s	2.15	134	IAML		19 25 16.3
QSM				IAML		19 25 23.5
	comp=E,144nm,0.7s					
PTRM	Twissleman Ran	2.16	213		Pn	19 24 43.4 +1.3
CMMM	Mount Mocho	2.16	270		Pn	19 24 43.3 +1.2
GHS	Gilroy Hot Spr	2.16	261		Pn	19 24 43.5 +1.4
TRAM	Private Proper	2.16	214		Pn	19 24 43.1 +1.0
PWKM	Work Ranch	2.17	220		Pn	19 24 43.1 +0.9
PMCM	McMillan Canyo	2.17	217		Pn	19 24 43.3 +1.1
BSLM	Silva Ranch	2.17	252		Pb	19 24 44.0 -1.2
LRMC	Laurel Mtn Rad baz=337	2.18	156	Pb	Pb	19 24 45.6 0.0
LRMC				Sb	Sg	19 25 14.5 -1.3
	baz=337					
PPO	Portuguese Can	2.19	223		Pn	19 24 43.5 +1.1
ARN	Arnold Ranch	2.20	267		Pb	19 24 44.3 -1.4
BJOM	Mount Johnson	2.20	248		Pn	19 24 44.0 +1.5
TCHL	Shandon	2.21	217		Pn	19 24 44.3 +1.5
DONR	Donner Summit	2.23	328		Pn	19 24 44.2 +1.0
PSAM	San Ardo	2.23	230		Pb	19 24 44.8 -1.5
TEJ	El Tejon	2.25	178		Pb	19 24 45.9 -0.7
AMDNV	Amargosa	2.25	116		Pn	19 24 43.4 +0.2
SAO	San Andreas Ge	2.25	252		Pn	19 24 44.7 +1.4
BSGM	Shirttail Gulc	2.25	243		Pn	19 24 44.6 +1.3
YEG	Yeguas Mountai	2.25	205		Pb	19 24 45.3 -1.4
CCCA	Chr Cany lake	2.26	149		Pg	19 24 47.9 -1.0
PAHR	Pah Rah Range	2.27	348		Pn	19 24 44.2 +0.4
HSFM	Saint Francis	2.27	254		Pb	19 24 45.5 -1.5
SCZ	Santa Cruz	2.28	248		Pn	19 24 44.9 +1.3
MHC	Mount Hamilton	2.29	267		Pb	19 24 45.7 -1.6
CMLM	Mount Lewis	2.29	271		Pn	19 24 45.5 +1.6
FRP	Fremont Peak	2.29	252		Pn	19 24 45.0 +1.1
BJCM	Johnson Can. BJCM	2.29	247		Pn Pb	19 24 40.7 -3.1 19 24 45.3 -1.9
CADM	Anderson Res.	2.29	263		Pb	19 24 46.3 -1.0
CBSNC	Byron Hot Spri	2.30	279		Pn	19 24 45.5 +1.6
CSR	Chase Ranch	2.30	258		Pn	19 24 43.4 -0.5
HBTM	San Juan Bauti	2.30	255		Pn	19 24 45.7 +1.7
TSCN	Private Proper	2.31	214		Pn	19 24 45.8 +1.7
CCOB	Coe Ranch Numb	2.32	265		Pb	19 24 46.7 -1.1
PEAR	Peavine Mounta	2.32	337		Pn	19 24 45.2 +0.8
ANZ	Anzar Road	2.32	256		Pn	19 24 45.9 +1.6
CARC	Carrizo Plain	2.33	202		Pn	19 24 45.9 +1.4
BSRM	Salinas Radio	2.34	250		Pn	19 24 45.8 +1.3
ARVC	Arvin	2.35	181		Pb	19 24 47.8 -0.5
ARVC	Arvin baz=1.0,SNR=14	2.35	181	Pb	Pb	19 24 48.0 -0.3
ARVC				Sb	Sb	19 25 18.1 +0.6
	baz=1.0					
TCAS	Cass Winery, P	2.35	218		Pn	19 24 46.0 +1.3
BABR	Babbit Peak	2.36	334		Pn	19 24 46.5 +1.4
CRGC	Crocker Grade	2.36	199		Pn	19 24 46.5 +1.6
PCCM	Crazy Canyon	2.37	235		Pn	19 24 46.3 +1.4
WENL	Wente Vineyard	2.37	274		Pn	19 24 45.0 0.0
JLAB	Laurel Hill	2.38	263		Pn	19 24 46.8 +1.7
HTUM	Tustin Road	2.38	255		Pn	19 24 45.9 +0.8
BSMM	Soledad Missio	2.39	244		Pn	19 24 46.6 +1.4
CALM	Calaveras Res.	2.40	270		Pn	19 24 47.3 +1.9
PANM	San Antonio Re	2.41	226		Pn	19 24 46.8 +1.3
HCOM	Corn Cob Canyo	2.41	257		Pn	19 24 47.0 +1.5
S11A	Rachel	2.41	85		Pn	19 24 46.5 +0.8
CMOB	Morgan Territo	2.42	279		Pn	19 24 47.2 +1.5
CVLM	Vallecito	2.44	274		Pn	19 24 48.0 -1.8
HERM	Elkhorn Road	2.44	255		Pn	19 24 46.9 +1.0
BPCNC	Pine Canyon	2.45	249		Pn	19 24 47.5 +1.4
LOY	Loyalton	2.46	333		Pn	19 24 47.6 +1.3
JHLM	Holstrom Ranch	2.46	262		Pn	19 24 47.5 +1.2
PHSB	Hesperia Broad	2.47	229		Pn	19 24 47.3 +1.0
AMC	Almaden	2.47	263		Pn	19 24 47.7 +1.4
HAST	Hastings Reser	2.48	245		Pn	19 24 47.5 +1.1
BDM	Black Diamond	2.49	282		Pn	19 24 47.9 +1.3
RAMR	Ramage Ranch	2.50	223		Pn	19 24 48.0 +1.3
JTGM	Trout Gulch Ro	2.51	261		Pb	19 24 49.1 -2.0
BCH	Branch Mountai	2.52	205		Pn	19 24 48.3 +1.2
BCWM	Chews Ridge	2.52	243		Pn	19 24 48.3 +1.1
CNIC	Niles Canyon	2.54	274		Pb	19 24 49.7 -1.8
SHOC	Shoshone, Teco	2.56	127		Pn	19 24 48.6 +1.1
SHOC	Shoshone, Teco baz=309	2.56	127	Pb	Pb	19 24 52.1 +0.2
JRGM	Rodeo Gulch Ro	2.58	261		Pn	19 24 49.5 +1.6
BCW	Bitter Crk WRg	2.59	192		Pn	19 24 49.5 +1.5
BLDC	Black Mountain	2.59	222		Pn	19 24 49.2 +1.3
BLDC	Black Mountain	2.59	222		Pn	19 24 49.3 +1.3
WVA	Winnemucca Val	2.59	342		Pn	19 24 48.8 +0.6
PAPM	Alder Peak	2.60	234		Pn	19 24 49.1 +0.9
PTAM	Tassajara Cree	2.60	217		Pn	19 24 49.5 +1.3
JSGM	Saratoga Golf	2.61	267		Pn	19 24 50.0 +1.7
PHCM	Hearst Castle	2.62	228		Pn	19 24 49.7 +1.2
BGC	Bolinger Road	2.63	278		Pn	19 24 50.2 +1.7
JSJM	St Joseph	2.64	268		Pn	19 24 50.4 +1.8
HMOM	Monterey	2.66	252		Pn	19 24 50.1 +1.1
CSLM	San Leandro Hi	2.67	276		Pn	19 24 50.2 +1.2
EFD	Emergency Oper	2.67	217		Pn	19 24 50.1 +1.1
EDW2	Edwards Air Fo baz=346	2.67	166	Pb	Pb	19 24 54.1 +0.3
EDW2				Sb	Sb	19 25 28.9 +2.1
	baz=346					
R11A	Troy Canyon, C	2.67	70		Pn	19 24 48.9 -0.3
R11A	Troy Canyon, C baz=252,SNR=207	2.67	70	P	Pn	19 24 49.0 -0.3
R11A				Sb	Sg	19 25 29.5 -1.9
	baz=252					
ARDC	Alexander Ranc	2.68	222		Pn	19 24 50.5 +1.3
BEKR	Beckworth	2.69	333		Pn	19 24 50.6 +1.2
BEKR	Beckworth comp=E,156nm,0.6s	2.69	333	IAML		19 25 41.9
BEKR				IAML		19 25 46.4
	comp=N,89nm,0.5s					
PCBM	Cambria	2.69	224		Pn	19 24 50.4 +1.1
GSC	Goldstone, Bar	2.69	143		Pn	19 24 49.8 +0.3
GSC	comp=E,103nm,0.9s			IAML		19 25 46.0
PKM	Mcpherson Peak baz=18	2.72	198	P	Pn	19 24 50.7 +0.8
OSI	Osito Audit: C baz=359	2.86	179	Pb	Pb	19 24 56.2 -0.9
OSI				Sb	Sb	19 25 33.1 +0.9
	baz=359					
BMRR	Black Mountain	2.88	336		Pn	19 24 53.2 +1.1
SUTB	Sutter Butte	2.94	307		Pb	19 24 57.1 -1.3
PRN	Pahroc Range	2.97	90		Pn	19 24 53.7 +0.4
PRN	comp=E,140nm,0.5s			IAML		19 25 49.2
SHPR	Sheep Range	3.06	107		Pn	19 24 55.0 +0.5
TUQ	Turquoise Moun baz=313	3.08	131	P	Pn	19 24 55.0 +0.3
BMN	Battle Mountai	3.19	22		Pn	19 24 56.2 -0.1
BMN	comp=E,71nm,0.6s			IAML		19 25 49.0
BMN				IAML		19 25 49.4
	comp=N,73nm,0.4s					
HEC	Hector,Ludlow baz=324	3.30	143	P	Pn	19 24 58.1 +0.3
Q12A	Willow Creek R	3.48	62		Pn	19 25 00.8 +0.5
GMRC	Granite Mounta	3.69	136		Pn	19 25 05.8 +2.6
GMRC	Granite Mounta baz=318	3.69	136	P	Pn	19 25 03.4 +0.3
LMEM	Manzanita Entr	3.75	325		Pn	19 25 04.2 +0.1
PSUT	Pine Spring	4.03	73		Pn	19 25 08.4 +0.5
BELC	Belle Mtn. Jos baz=328	4.14	146	P	Pn	19 25 10.0 +0.5
LTIM	Timbered Crate	4.25	331		Pn	19 25 11.5 +0.7
ELK	Elko	4.27	39	Pn	Pn	19 25 11.6 +0.4
ELK	comp=N,43nm,0.3s			IAML		19 26 22.2
ELK				IAML		19 26 22.6
	comp=N,54nm,0.4s					
PMD	Palm Desert	4.29	152		Pn	19 25 12.7 +1.3
PMD	comp=N,16nm,0.8s			IAML		19 26 38.9
PMD				IAML		19 26 43.6
	comp=E,16nm,1.2s					
PFO	Pinyon Flats O	4.30	153		Pn	19 25 12.8 +1.2
LCMT	Little Creek M	4.44	94		Pn	19 25 14.2 +0.7
WVOR	Wild Horse Val	4.95	1		Pn	19 25 21.7 +1.2
BAR	Barrett	5.09	160	Pn	Pn	19 25 23.0 +0.6
BAR	comp=E,14nm,0.8s			IAML		19 26 53.0
PKCU	Pink Cliffs	5.14	88		Pn	19 25 24.8 +1.4
YBH	Yreka Blue Hor	5.22	326		Pn	19 25 25.1 +0.9
U15A	North Rim	5.30	99	Pn	Pn	19 25 26.6 +1.1
DUG	Dugway, Tooele	5.39	58	Pn	Pn	19 25 27.8 +1.2
DUG	comp=E,26nm,1.2s			IAML		19 27 00.4
DUG				IAML		19 27 05.3
	comp=E,24nm,1.0s					

IDC ***13*** *19:41:07.5±13.0, 18°.36S×169°.88E, h0km, mb4.2/5, mbtmp4.2/5, MS2.8/1, Error ellipse: s-maj=226.2km s-min=103.5km az=69.0*
NOU ***13*** *19:41:42.7, 18°.87S×168°.97E, h174km, MLv3.8/10, Vanuatu Islands*

ISC 13 19:41:36.5±3.5, 18°.7S±0°.1×169°.3E±0°.4, h240km, n14, σ1°00/13, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.44	312	P	Pn	19 42 13.4	-0.1
MARNC	Mare, Loyalty	3.02	203	P	Pn	19 42 27.4	-1.2
YATNC	Mamie plateau,	4.05	214	P	Pn	19 42 39.1	-1.4
PINNC	Pines Island,	4.28	204	P	Pn	19 42 43.9	+0.8
DZM	Mont Dzumac	4.31	218	P	Pn	19 42 43.7	+0.1
OUENC	Ouen Island, N	4.37	212	P	Pn	19 42 44.7	+0.4
NOUC	Port Laguerre	4.41	219	P	Pn	19 42 44.9	+0.1
ONTNC	Ouen Toro	4.49	216	P	Pn	19 42 45.8	+0.1
RAO	Raoul Island comp=Z,38nm,20.3s,baz=44,slow=30	15.69	134	LR	LR	19 48 51.7	
CTA	Charters Tower 3.0nm,0.7s,baz=95,slow=11,SNR=2.2 3.0nm,0.7s	21.80	263	P	P	19 46 07.7	-1.9
STKA	Stephens Creek 2.1nm,0.6s,baz=64,slow=9.0,SNR=6.8 2.1nm,0.6s	28.20	237	P	P	19 47 08.2	+1.0
WRA	Warramunga Arr 0.6nm,0.4s,baz=96,slow=8.3,SNR=16 0.6nm,0.4s	33.00	262	P	P	19 47 48.9	-0.6
ASAR	Alice Springs 7.3nm,0.5s,baz=85,slow=8.9,SNR=200 7.3nm,0.5s	33.33	255	P	P	19 47 52.5	+0.2
FITZ	Fitzroy Crossi 2.3nm,0.6s,baz=91,slow=8.9,SNR=10.0 2.3nm,0.6s	41.37	264	P	P	19 49 00.6	+0.9

LDG 13 19:49:55.2±0.2, 43°.11N×1°.11W, h15km, Md0.5/2, Ml1.1/1, Error ellipse: s-maj=14.5km s-min=3.3km az=10.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJPF	Ste Jean	0.09	273	*e*Pg	Pg	19 49 58.6	+0.2
SJPF				*e*Sg	Sg	19 50 00.4	-0.1
	1.2nm,0.2s						
ETSF	Etsaut	0.45	117	*e*Pg	Pg	19 50 04.3	0.0
EPF	Esparros	1.06	94	*e*Pg	Pb	19 50 15.1	-0.2
EPF				*e*Sg	Sn	19 50 29.9	-0.2
	0.3nm,0.2s						

IDC ***13*** *20:04:36.0±1.7, 33°.84N×133°.31E, h0km, mb3.3/2, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=32.4km s-min=23.3km az=153.0*
NIED ***13*** *20:04:38.5, 34°.06N×133°.25E, h14km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.02; Mθθ1.76; Mϕϕ-1.78; Mrθ-0.22; Mθϕ-2.20; Mϕr-0.10; Fault plane solution: M₀2.83000×10¹⁴ NP1: ϕs341.00000°, δ85.00000°, λ0.00000°. NP2:ϕs71.00000°, δ90.00000°, λ-175.00000°.*
JMA ***13*** *20:04:38.5±0.0, 34°.1N±0°.1×133°.3E±0°.1, h14km, MD3.8/20, MV4.0/20, HIUCHINADA SETONAIKAI*
JMA Felt II J1 at HIUCHINADA SETONAIKAI .

ISC 13 20:04:38.0±0.8, 33°.99N±0°.04×133°.28E±0°.04, h15km, n27, σ1§14/19, 4D, Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JET	Tanbara	0.29	222	P	Pb	20 04 45.1	+0.3
JET				*e*S	Sb	20 04 49.8	+0.2
JET	Tanbara	0.29	222	A	A	20 04 45.1	
	comp=E,8.0nm,0.3s,comp=E,7.0nm,0.3s						
JKHR	Kochiharuno	0.52	159	A	A	20 04 49.9	
	comp=E,18nm,0.6s,comp=E,11nm,0.3s						
JMN	Monobe	0.56	118	||P	Pn	20 04 50.5	-1.0
JMN	Monobe	0.56	118	A	A	20 04 50.5	
	comp=E,4.0nm,1.7s,comp=E,3.0nm,1.1s						
JHM	Kurahashi	0.64	283	||*i*P	Pg	20 04 50.0	-0.6
JJG	Jouge	0.65	351	P	Pg	20 04 49.9	-0.9
JJG				S	Sg	20 04 58.0	-1.5
JJG	Jouge	0.65	351	A	A	20 04 49.9	
	comp=E,11nm,0.3s,comp=E,7.0nm,2.0s						
JJS	Sakaide	0.66	55	P	Pg	20 04 50.5	-0.4
JJS	Sakaide	0.66	55	A	A	20 04 50.5	
	comp=E,4.0nm,0.5s,comp=E,7.0nm,0.6s						
JKU	Kubokawa	0.71	195	*i* P	Pn	20 04 53.3	-0.2
JNA	Nagahama	0.80	237	*i* P	Pn	20 04 53.9	-0.8
MRT2	Murotomisaki 2	0.94	130	A	A	20 04 57.1	
	comp=E,3.0nm,0.6s,comp=E,4.0nm,0.5s						
UWA2	Uwa jima 2	0.95	215	*i* P	Pn	20 04 57.2	+0.3
JHT	Toyohira	0.98	313	||*i*P	Pb	20 04 55.4	-1.3
JHT	Toyohira	0.98	313	A	A	20 04 55.4	
	comp=E,3.0nm,0.2s,comp=E,3.0nm,0.2s						
JAI	Aioi	0.99	101	||*i*P	Pn	20 04 57.9	+0.5
JHS	Saijyo	1.01	352	*i* P	Pb	20 04 55.9	-1.3
JKI	Kunimi	1.47	256	A	A	20 05 04.7	
	comp=E,3.0nm,1.8s,comp=E,5.0nm,1.1s						
JISK	Izumosakaura	1.54	347	A	A	20 05 04.9	
	comp=E,3.0nm,2.1s,comp=E,5.0nm,0.6s						
JMIK	Miki	1.68	61	A	A	20 05 07.8	
	comp=E,4.0nm,0.6s,comp=E,6.0nm,0.7s						
JBEP	Beppuamama	1.69	248	A	A	20 05 08.2	
	comp=E,5.0nm,4.2s,comp=E,4.0nm,3.1s						
MJAR	Matsushiro Arr	4.76	56	Pn	Pn	20 05 51.1	+1.8
	0.3nm,0.3s,baz=240,slow=13,SNR=36						
MJAR				Lg	Lg	20 07 09.7	
	0.1nm,0.3s,baz=221,slow=24,SNR=5.6 3.5nm,0.4s						
KSRS	Korea Array	5.56	310	Pn	Pn	20 06 02.0	+1.9
	0.3nm,0.3s,baz=128,slow=14,SNR=5.9						
KSRS				Sn	Sn	20 07 04.6	+0.8
	1.3nm,0.3s,baz=125,slow=24,SNR=11 0.8nm,0.4s						
KLR	Kul'dur	15.27	356	Pn	P	20 08 19.3	+1.6
	0.1nm,0.3s,baz=173,slow=13,SNR=4.5						
MKAR	Makanchi Array 0.3nm,0.7s,baz=79,slow=7.5,SNR=3.0 0.3nm,0.7s	40.21	304	P	P	20 12 14.7	+0.9
WRA	Warramunga Arr 0.4nm,1.1s,baz=1.2,slow=8.2,SNR=1.9 0.4nm,1.1s	53.65	179	P	P	20 13 58.1	-0.9

IDC 13 20:12:59.8±31.0, 21°.00S×67°.33E, h0km, mb4.0/3, mbtmp4.0/3, MS3.6/11, Error ellipse: s-maj=810.8km s-min=43.3km az=138.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H baz=204,slow=75	14.18	21	T	T	20 30 20.3	
H08S2	Diego Garcia H baz=204,slow=75	14.18	21	T	T	20 30 29.3	
H08S3	Diego Garcia H baz=204,slow=75	14.20	21	T	T	20 30 21.2	
KMBO	Kilima Mbogo comp=Z,70nm,18.7s,baz=94,slow=32	35.38	300	LR	LR	20 31 49.3	
LSZ	Lusaka comp=Z,80nm,19.9s,baz=136,slow=32	37.56	272	LR	LR	20 33 09.3	
LBTB	Lobatse comp=Z,84nm,20.4s,baz=95,slow=31	38.52	256	LR	LR	20 33 03.2	
BOSA	Boshof comp=Z,94nm,18.2s,baz=47,slow=30	38.78	250	LR	LR	20 32 40.5	
MBAR	Mbarara comp=Z,55nm,19.6s,baz=122,slow=32	41.08	295	LR	LR	20 34 40.5	
SUR	Sutherland comp=Z,121nm,20.7s,baz=128,slow=31	42.79	245	LR	LR	20 34 56.5	
TSUM	Tsumeb comp=Z,111nm,18.5s,baz=140,slow=33	46.60	263	LR	LR	20 38 31.1	
MAW	Mawson 2.9nm,0.9s,baz=6.2,slow=6.8,SNR=8.2	46.68	182	P	P	20 21 29.8	-0.1
MAW	comp=Z,57nm,20.0s,baz=6.0,slow=30 2.9nm,0.9s			LR	LR	20 36 31.9	
ASAR	Alice Springs 0.9nm,1.0s,baz=268,slow=6.0,SNR=5.9 0.9nm,1.0s	61.13	106	P	P	20 23 15.7	-0.7
WRA	Warramunga Arr 2.4nm,1.1s,baz=260,slow=6.4,SNR=7.5 2.4nm,1.1s	62.34	102	P	P	20 23 25.2	+0.6
DBIC	Dimbokro comp=Z,47nm,21.6s,baz=137,slow=33	75.95	283	LR	LR	20 54 59.4	
SONM	Songimo Array comp=Z,34nm,19.8s,baz=155,slow=36	76.97	26	LR	LR	20 58 59.8	
KSRS	Korea Array comp=Z,30nm,19.0s,baz=105,slow=36	81.41	45	LR	LR	21 01 21.4	

BJI ***13*** *20:15:05.0±0.0, 34°.60N×140°.30E, h33km, mb4.9/73, mB4.8/53, Ms4.3/73, Ms7 4.1/72*
MOS ***13*** *20:15:06.2±0.9, 34°.47N×140°.28E, h48km, mb5.6/50, MS4.2/17, Error ellipse: s-maj=6.8km s-min=3.5km az=123.3*
JMA ***13*** *20:15:07.5±0.2, 34°.5N±0°.5×140°.4E±0°.6, h57km±2km, MD4.9/38, MW5.0/38, SE OFF BOSO PENINSULA*
JMA Felt II J1 at SE OFF BOSO PENINSULA .
NIED ***13*** *20:15:07.5, 34°.53N×140°.40E, h57km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.32; Mθθ-0.09; Mϕϕ-1.23; Mrθ0.19; Mθϕ0.04; Mϕr2.72; Fault plane solution: M₀3.01000×10¹⁶ NP1: ϕs174.00000°, δ13.00000°, λ81.00000°. NP2:ϕs3.00000°, δ77.00000°, λ92.00000°.*
NEIC ***13*** *20:15:07.2±1.8, 34°.52N±0°.04×140°.37E±0°.08, h38km±4km, mb5.2/243 Error ellipse: s-maj=9.4km s-min=6.3km az=100.0*
IDC ***13*** *20:15:09.6±0.8, 34°.43N×140°.29E, h68km±6km, mb4.9/47, mbtmp5.2/49, MS3.9/68, Error ellipse: s-maj=10.9km s-min=5.7km az=94.0*
GCMT ***13*** *20:15:10.2±0.2, 34°.49N±0°.01×140°.55E±0°.02, h57km, MW5.0/126, Moment Tensor Solution. s76,c103; s126,c199; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.09±.12; Mθθ0.11±.09; Mϕϕ-4.21±.08; Mrθ0.47±.07; Mθϕ0.17±.06; Mϕr1.83±.07; Best double couple: M₀4.56300×10¹⁶ NP1:ϕs5.00000°, δ57.00000°, λ98.00000°. NP2:ϕs171.00000°, δ34.00000°, λ78.00000°. Principal axes: T 4.5300, Plg77.0000°, Azm298.0000°; N 0.0590, Plg6.0000°, Azm181.0000°; P -4.5970, Plg12.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 20:15:06.7±0.3, 34°.49N±0°.02×140°.38E±0°.03, h44km±2km, h44km:pP-P, n1282, σ1§13/1302, mb5.3/293, MS4.1/102, 116C-86D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO3	Boso 3	0.33	18	*i* P	Pn	20 15 17.4	+2.0
BSO4	Boso 4	0.51	356	||*i*P	Pn	20 15 19.4	+1.8
BSO1	Boso 1	0.52	71	*i* P	Pn	20 15 18.8	+1.5
KTR	Katsuura	0.66	355	||P	Pn	20 15 20.9	+1.1
KTR				||S	Sn	20 15 30.5	+1.4
JKUC	kamogawauchiur	0.69	347	||*i*P	Pn	20 15 21.3	+1.2
JKUC				||*e*S	Sn	20 15 31.2	+1.4
JKUC	kamogawauchiur comp=E,267nm,1.0s,comp=E,75nm,0.6s	0.69	347	A	A	20 15 21.3	
JIM2	Oshima 3	0.82	287	||*i*P	Pn	20 15 23.3	+1.4
JIM2				||S	Sn	20 15 34.1	+1.2
JIM2	Oshima 3 comp=E,282nm,0.6s,comp=E,142nm,0.6s	0.82	287	A	A	20 15 23.3	
JMKN	Mikurajimanish	0.88	228	||*i*P	Pn	20 15 24.9	+2.2
JMKN				||S	Sn	20 15 37.1	+2.7
JMKN	Mikurajimanish comp=E,109nm,2.1s,comp=E,73nm,0.9s	0.88	228	A	A	20 15 24.9	
JTHY	Toshimahigashi	0.91	273	*i* P	Pn	20 15 25.0	+2.0
JTHY				S	Sn	20 15 37.2	+2.

2µm,0.3s,baz=27,slow=2.3,SNR=177
JHJ S **Sn** **20 15 50.5 +2.2**
9µm,0.4s,baz=286,slow=23,SNR=9.8
JSGW Sagamiharawaka 1.47 319 A A 20 15 31.8
comp=E,26nm,2.6s,comp=E,20nm,1.2s
JIHU Itakohorinouch 1.48 4 A A 20 15 31.7
comp=E,76nm,3.0s,comp=E,80nm,1.9s
JHCJ Hachijojimakas 1.49 199 A A 20 15 33.0
comp=E,33nm,4.8s,comp=E,28nm,2.3s
JFNN Fujinakano 1.57 297 ⇓*iP* **Pn** **20 15 33.7 +1.7**
JFNN ⇓*eS* **Sn** **20 15 52.5 +1.4**
JFNN Fujinakano 1.57 297 A A 20 15 33.7
comp=E,23nm,3.8s,comp=E,29nm,2.1s
JHU Hanno 1.64 327 A A 20 15 34.1
comp=E,17nm,1.5s,comp=E,22nm,1.7s
JYT Yasato 1.75 355 Pn **Pn** **20 15 34.6 +0.1**
JYT Yasato 1.75 355 A A 20 15 35.5
comp=E,22nm,0.9s,comp=E,16nm,1.3s
JYN Shimob 1.82 304 A A 20 15 36.8
comp=E,20nm,0.9s,comp=E,19nm,2.7s
JSG Sagara 1.82 277 A A 20 15 37.2
comp=E,27nm,1.0s,comp=E,22nm,0.8s
JHYU Hitachinakayam 1.86 5 A A 20 15 37.0
comp=E,13nm,3.0s,comp=E,15nm,3.7s
SHZ3 Shizuoka 3 1.88 289 A A 20 15 38.0
comp=E,21nm,1.4s,comp=E,31nm,1.1s
JRY Ryogami san 1.95 322 A A 20 15 38.6
comp=E,16nm,3.0s,comp=E,11nm,1.8s
JKKS Kakegawashinom 2.00 278 A A 20 15 39.6
comp=E,19nm,2.8s,comp=E,16nm,2.0s
JAG Ashikaga 2.08 339 A A 20 15 40.2
comp=E,13nm,3.9s,comp=E,11nm,1.0s
JAOM Aogashimamukai 2.08 195 A A 20 15 41.4
comp=E,38nm,0.7s,comp=E,37nm,1.3s
JHO Hitachi 2.13 4 A A 20 15 40.9
comp=E,8.0nm,2.3s,comp=E,7.0nm,2.4s
HMMJ Hamamatsu 2 2.23 280 A A 20 15 42.9
comp=E,5.0nm,5.2s,comp=E,3.0nm,3.6s
JNY Yasuok 2.25 294 A A 20 15 43.0
comp=E,14nm,0.8s,comp=E,17nm,1.4s
JNT Takato 2.30 308 A A 20 15 43.7
comp=E,9.0nm,1.1s,comp=E,10.0nm,1.8s
JKT Katashina 2.46 338 A A 20 15 45.6
comp=E,13nm,0.4s,comp=E,15nm,1.5s
JSB Shiboa 2.51 351 A A 20 15 46.2
comp=E,19nm,1.5s,comp=E,19nm,1.2s
JGK Kuni 2.51 326 A A 20 15 46.5
comp=E,14nm,2.6s,comp=E,17nm,2.2s
ONAJ Iwakimizuishiy 2.63 7 A A 20 15 48.0
comp=E,10.0nm,3.8s,comp=E,5.0nm,3.2s
JNG Nsakai 2.67 316 A A 20 15 48.9
comp=E,16nm,1.0s,comp=E,14nm,1.1s
JAA Atsumi 2.68 274 A A 20 15 49.4
comp=E,3.0nm,3.6s,comp=E,3.0nm,4.0s
JAO Obara 2.69 288 A A 20 15 49.4
comp=E,6.0nm,3.8s,comp=E,5.0nm,1.5s
MJAR Matsushiro Arr 2.71 320 P **Pn** **20 15 47.4 -0.4**
498nm,0.6s,baz=153,slow=12,SNR=1050
MJAR S **Sn** **20 16 20.6 +1.2**
693nm,0.7s,baz=136,slow=27,SNR=5.3
MJAR LR LR 20 17 10.3
comp=Z,5µm,20.9s,baz=159,slow=44
MAJO Matsushiro 2.71 320 Pn **Pn** **20 15 49.6 +1.7**
MAJO Matsushiro 2.71 320*d iP* **Pn** **20 15 49.7 +1.9**
MAJO Matsushiro 2.71 320 P **Pn** **20 15 50.5 +2.7**
JGF Kuroka 2.72 295 **Pn** **20 15 50.7 +2.8**
JGF Kuroka 2.72 295 A A 20 15 49.7
comp=E,8.0nm,1.9s,comp=E,5.0nm,4.9s
INU Inuyama 2.90 288 Pn **Pn** **20 15 53.0 +2.7**
INU Inuyama 2.90 288 P **Pn** **20 15 53.8 +3.5**
JFY Yanaizu 2.97 350 A A 20 15 52.7
comp=E,7.0nm,1.6s,comp=E,5.0nm,2.5s
JICN Ichinomiyachia 3.02 287 A A 20 15 54.0
comp=E,12nm,2.1s,comp=E,13nm,2.5s
JFT Otama 3.03 359 A A 20 15 53.5
comp=E,14nm,1.8s,comp=E,14nm,1.4s
JJN Nakama 3.17 326 A A 20 15 55.9
comp=E,10.0nm,2.2s,comp=E,9.0nm,3.0s
JTT Ttatey 3.27 311 A A 20 15 57.2
comp=E,10.0nm,2.4s,comp=E,8.0nm,2.4s
JIZZ Izumozaki 3.33 336 A A 20 15 58.0
comp=E,19nm,2.2s,comp=E,17nm,4.7s
JMM Marumori 3.39 5 Pn **Pn** **20 15 57.9 +0.8**
JMM Marumori 3.39 5 A A 20 15 58.6
comp=E,5.0nm,2.3s,comp=E,5.0nm,1.0s
JYS Shirataka 3.74 356 A A 20 16 03.5
comp=E,14nm,1.4s,comp=E,9.0nm,1.5s
JKG Kaga 3.76 300 A A 20 16 04.3
comp=E,5.0nm,3.1s,comp=E,6.0nm,4.6s
JOU Okura 3.88 3 A A 20 16 05.5
comp=E,6.0nm,2.0s,comp=E,8.0nm,2.0s
JSD Sado 3.94 335 Pn **Pn** **20 16 04.8 +0.2**
JOFO Osakifurukawao 4.13 6 A A 20 16 09.0
comp=E,30nm,2.1s,comp=E,23nm,2.2s
JRG Rokugo 4.91 2 A A 20 16 19.9
comp=E,4.0nm,3.1s,comp=E,4.0nm,1.4s
JYW Yuwa 5.05 358 A A 20 16 21.9
comp=E,8.0nm,1.7s,comp=E,8.0nm,1.7s
JSZI Iwateshizukuis 5.27 5 A A 20 16 24.9
comp=E,9.0nm,2.0s,comp=E,7.0nm,2.0s
JMN Monobe 5.45 264 Pn **Pn** **20 16 25.7 +0.3**
JHS Saijyo 6.00 277 **Pn** **20 16 33.5 +0.5**
JTM Tenmabayashi 6.32 5 Pn **Pn** **20 16 37.1 0.0**
JCJ Chichijima 7.53 168 P **Pn** **20 16 52.8 -1.1**
95nm,0.3s,baz=324,slow=8.7,SNR=22
JCJ S **Sn** **20 18 12.0 -5.9**
139nm,0.7s,baz=134,slow=22,SNR=2.1
JCJ Chichijima 7.53 168 Pn **Pn** **20 16 53.2 -0.7**
JCJ Chichijima 7.53 168 P **Pn** **20 16 54.4 +0.5**
ERM Erimo 7.83 15 Pn **Pn** **20 16 56.9 -1.1**
ERM Erimo 7.83 15*ceP* **Pn** **20 16 55.8 -2.1**
ERM pmax pmax
comp=Z,57nm,0.7s
ERM Erimo 7.83 15 P **Pn** **20 16 58.2 +0.3**
JEW Eniwo 8.38 5 Pn **Pn** **20 17 04.1 -1.4**
JTU Tsushima 9.07 273 **Pn** **20 17 15.2 +0.2**
KSBUS Busan 9.29 278 Pn **Pn** **20 17 17.6 -0.5**
NMR Nemuro--Hokkai 9.80 24 *eP* **Pn** **20 17 21.8 -3.1**
RUSJ Misakicho 10.32 20 *eP* **Pn** **20 17 30.4 -1.6**
KSCHJ Chungju 10.37 287 **Pn** **20 17 34.8 +1.9**
YUK Yuzh-Kuril'sk 10.44 22 *eP* **Pn** **20 17 31.5 -2.1**
YUK pmax pmax
comp=Z,110nm,0.3s
YUK pmax pmax
comp=N,91nm,0.6s
YUK pmax pmax
comp=E,66nm,0.6s
SEHB SEOHWA 10.48 295 **Pn** **20 17 34.6 +0.3**
KSRS Korea Array 10.52 290 P **Pn** **20 17 38.1 +3.3**
comp=E,16nm,0.9s,baz=105,slow=14,SNR=55
KSRS LR LR 20 21 39.5
comp=E,1µm,18.4s,baz=100,slow=37
KSRS PcP **PcP** **20 23 37.8 +1.0**
comp=E,1.1nm,0.7s,baz=133,slow=0.6,SNR=5.0
KSAR Wonju Array Be 10.55 290 **Pn** **20 17 36.3 +1.0**
KSAR Wonju Array Be 10.55 290 P **Pn** **20 17 36.3 +1.0**
KS19 Wonju Array Si 10.58 290 **Pn** **20 17 35.3 -0.4**
SHO Shikotan 10.62 26 *eP* **Pn** **20 17 33.1 -3.0**
SHO pmax pmax
comp=Z,15nm,0.6s
SHO pmax pmax
comp=N,16nm,0.3s
NAWB Namwon 10.70 279 **Pn** **20 17 36.8 -0.5**
TJN Taejon 10.79 284 **Pn** **20 17 39.0 +0.5**
TJN Taejon 10.79 284 *i* P **Pn** **20 17 41.3 +2.8**
MSHR Mys Shultsa 10.84 321 *i* P **Pn** **20 17 38.1 -1.0**
VLA Vladivostok 10.87 325 *i* P **Pn** **20 17 39.5 -0.1**
INCN Inchon 11.54 289 **Pn** **20 17 48.9 +0.2**
INCN Inchon 11.54 289 P **Pn** **20 17 48.9 +0.2**
USA0B Ussuriysk Arra 11.67 329 **Pn** **20 17 51.4 +0.9**
USA0B Ussuriysk Arra 11.67 329 P **Pn** **20 17 51.4 +0.9**
USRK Ussuriysk Ar. 11.67 329 P **Pn** **20 17 52.5 +2.0**
comp=N,32nm,1.0s,baz=141,slow=12,SNR=23
USRK LR LR 20 22 24.5
comp=N,378nm,18.8s,baz=242,slow=37
USRK Ussuriysk Ar. 11.67 329 Pn **Pn** **20 17 50.3 -0.2**
KUR Kuril'sk 12.17 26 *eP* **Pn** **20 17 56.1 -1.2**
KUR pmax pmax
comp=N,13nm,0.8s
KUR pmax pmax
comp=Z,45nm,0.8s
KUR MLR MLR
comp=Z,797nm,20.0s
YSS Yuzh-Sakhalins 12.59 7 Pn **Pn** **20 18 01.3 -1.6**
YSS Yuzh-Sakhalins 12.59 7 *eP* **Pn** **20 18 00.2 -2.8**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,700nm,15.0s
MDJ Mudanjiang 13.09 324 Pn **Pn** **20 18 09.9 0.0**
MDJ Mudanjiang 13.09 324 P **Pn** **20 18 11.3 +1.4**
MDJ S **Sn** **20 20 34.8 +0.8**
MDJ pmax pmax
comp=Z,48nm,0.8s
MDJ pmax pmax
comp=Z,170nm,3.7s
MDJ LR LR
comp=Z,540nm,16.5s
MDJ LR LR
comp=Z,810nm,14.9s
MDJ LR LR
comp=Z,1µm,17.4s
UGL Uglegorsk 14.63 4 *eP* **P** **20 18 36.7 +0.5**
UGL S **Sn** **20 21 14.6 +3.0**
UGL pmax pmax
comp=Z,60nm,1.3s
UGL MLR MLR
comp=N,800nm,19.0s
UGL MLR MLR
comp=Z,1µm,19.0s
UGL MLR MLR
comp=E,1µm,22.0s
CN2 Changchun 14.84 313 *eP* **Pn** **20 18 35.3 +1.7**
CN2 pmax pmax
comp=E,30nm,0.9s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=E,700nm,15.0s
CN2 LR LR
comp=E,800nm,18.0s
BNX BinXian 14.98 323 ⇓P **Pn** **20 18 34.9 -0.4**
BNX pP **P** **20 18 42.3 +2.2**
BNX sP 20 18 47.4
BNX S **Sn** **20 21 22.1 +2.2**
BNX sS **S** **20 21 35.1 -0.9**
BNX pmax pmax
comp=E,22nm,1.1s
BNX pmax pmax
comp=E,140nm,4.0s
BNX LR LR
comp=E,400nm,14.3s
BNX LR LR
comp=E,540nm,17.6s
BNX LR LR
comp=E,700nm,16.1s
SNY Shenyang 15.10 304 ⇑P **P** **20 18 41.8 +0.3**
SNY S **S** **20 21 31.4 -7.2**
SNY pmax pmax
comp=Z,15nm,0.5s
SNY pmax pmax
comp=Z,150nm,3.5s
SNY LR LR
comp=N,440nm,14.9s
SNY LR LR
comp=E,620nm,19.0s
SNY LR LR
comp=Z,1µm,19.8s
DL2 Dalian 15.68 292 P **P** **20 18 47.3 -0.6**
DL2 S **S** **20 21 44.0 -6.4**
DL2 pmax pmax
comp=Z,58nm,1.0s
DL2 pmax pmax
comp=Z,160nm,6.5s
DL2 LR LR
comp=Z,370nm,16.3s
DL2 LR LR
comp=Z,570nm,24.9s
DL2 LR LR
comp=Z,870nm,17.0s
KLR Kul'dur 16.06 339 P **Pn** **20 18 47.5 -1.8**
comp=Z,18nm,0.5s,baz=144,slow=9.9,SNR=79
KLR LR LR 20 25 00.6
comp=Z,452nm,19.2s,baz=154,slow=37
KLR Kul'dur 16.06 339*ceP* **Pn** **20 18 47.9 -1.4**
KLR pmax pmax
comp=Z,22nm,0.7s
TYV Tymovskoe 16.45 5 *eP* **Pn** **20 18 52.2 -2.0**
TYV *eS* **Sn** **20 21 54.3 -1.4**
SSE Sheshan 16.49 264 P Pn 20 18 46.4 -8.5
SSE S Sn 20 21 40.5 -16
SSE pmax pmax
comp=Z,6.0nm,0.6s
SSE pmax pmax
comp=Z,56nm,9.0s
SSE LR LR
comp=N,290nm,20.6s
SSE LR LR
comp=E,190nm,21.4s
GRNR Gornyy 16.53 351 ⇑*iP* **Pn** **20 18 52.9 -2.3**
GRNR *eS* **Sn** **20 21 56.0 -1.6**
GRNR pmax pmax
comp=E,5.0nm,0.7s
GRNR pmax pmax
comp=N,6.0nm,0.5s
GRNR pmax pmax
comp=Z,6.0nm,0.7s
GRNR smax smax
comp=N,1.0nm,0.6s
GRNR MLR MLR
comp=N,130nm,18.0s
GRNR MLR MLR
comp=E,220nm,18.0s
GRNR MLR MLR
comp=Z,270nm,20.0s
YOJ Yonaguni jima 18.10 241 **Pn** **20 19 15.1 +0.2**
YOJ Yonaguni jima 18.10 241 P **Pn** **20 19 15.1 +0.2**
YOJ pmax pmax
comp=Z,64nm,1.1s
NJ2 Nanjing 18.16 268 ⇓P **Pn** **20 19 16.6 +1.0**
NJ2 pmax pmax
comp=Z,21nm,0.6s
NJ2 pmax pmax
comp=Z,520nm,5.5s
NJ2 LR LR
comp=Z,680nm,17.9s
NJ2 LR LR
comp=Z,370nm,18.7s
NJ2 LR LR
comp=Z,490nm,14.5s
TIA Tai'an 19.05 282 ⇓P **P** **20 19 25.6 +0.4**
TIA pmax pmax
comp=Z,6.0nm,0.7s
TIA pmax pmax
comp=Z,130nm,8.0s
TIA LR LR
comp=Z,440nm,17.3s
TIA LR LR
comp=Z,410nm,24.9s
TIA LR LR
comp=Z,630nm,24.2s
YHNB Yeheng 19.18 244 P **P** **20 19 26.7 -0.1**
YHNB Yeheng 19.18 244 P **Pn** **20 19 29.1 +1.1**
YULB Yu-li 19.99 241 P **P** **20 19 35.0 -0.6**
SSLB Suanglung 20.01 243 P Pn 20 19 37.5 -0.2
BJI Beijing 20.02 293 P **P** **20 19 35.0 -0.7**
BJI S **S** **20 23 16.4 -2.0**
BJI LR LR
comp=Z,74nm,15.7s
BJI LR LR
comp=Z,410nm,23.7s
BJI LR LR
comp=Z,770nm,24.2s
BJT Baijiatuau 20.03 293 **P** **20 19 34.8 -1.0**
BJT Baijiatuau 20.03 293 P **P** **20 19 34.8 -1.0**
BJT pmax pmax
comp=Z,14nm,0.7s
TPUB Ta-pu 20.54 242 P **P** **20 19 40.6 -0.8**
TPUB Ta-pu 20.54 242 P **P** **20 19 42.1 +0.6**
HNS HongShan 20.97 285 ⇑P **P** **20 19 45.5 -0.5**
HNS sP **pP** **20 19 57.3 +1.1**
HNS pmax pmax
comp=Z,45nm,0.8s
HNS LR LR
comp=Z,400nm,16.1s
HNS LR LR
comp=Z,240nm,16.7s
HNS LR LR
comp=Z,320nm,21.5s
XLT XiLinHaoTe 20.99 304 ⇑*iP* Pn 20 19 50.9 +1.6
XLT pP pwP 20 19 59.4 -0.1
XLT S **S** **20 23 40.6 +2.9**
XLT pmax pmax
comp=Z,78nm,1.0s
XLT pmax pmax
comp=Z,170nm,4.3s
XLT LR LR
comp=Z,360nm,18.4s
XLT LR LR
comp=Z,470nm,20.3s
HIA Hailar 21.22 320 P **P** **20 19 46.2 -2.4**
HIA Hailar 21.22 320 P **P** **20 19 46.2 -2.4**
HIA pmax pmax
comp=Z,13nm,0.6s
ZEA Zeya 21.37 338 *eP* **P** **20 19 48.2 -1.9**
ZEA *eS* S 20 23 32.1 -13
ZEA pmax pmax
comp=Z,100nm,0.7s
ZEA pmax pmax
comp=E,50nm,0.6s
ZEA pmax pmax
comp=N,100nm,0.7s
ZEA pmax pmax
comp=Z,190nm,0.7s
ZEA smax smax
comp=E,200nm,8.6s
ZEA smax smax
comp=N,200nm,7.4s
ZEA MLR MLR
comp=E,200nm,20.0s
ZEA MLR MLR
comp=Z,200nm,17.0s
WHN Wuhan 22.28 267 ⇑P **P** **20 19 59.9 -0.2**
WHN S **S** **20 24 01.9 -0.7**
WHN pmax pmax
comp=Z,60nm,0.6s
WHN LR LR
comp=Z,1µm,14.1s
PEA0B Petropavlovsk- 22.32 28 P **P** **20 19 59.1 -1.2**
PEA0B Petropavlovsk- 22.32 28 *i* P **P** **20 20 00.9 +0.6**
PETK Petropavlovsk- 22.32 28 P **P** **20 20 00.3 0.0**
comp=Z,3.2nm,0.8s,baz=215,slow=9.8,SNR=4.6
PETK LR LR 20 30 21.1
comp=Z,184nm,18.9s,baz=233,slow=41
PETK Petropavlovsk- 22.32 28 P **P** **20 19 59.7 -0.6**
PET Petropavlovsk 22.63 29 P **P** **20 20 03.5 -0.2**
PET Petropavlovsk 22.63 29 *eP* **P** **20 20 05.7 +2.0**
PET *eS* **S** **20 24 06.7 -1.7**
PET pmax pmax
comp=Z,29nm,1.3s
PET MLR MLR
comp=Z,400nm,15.0s
PET MLR MLR
comp=Z,500nm,14.0s
LYN LuoYang 22.98 278 ⇓P **P** **20 20 05.8 -1.7**
LYN pP pP 20 20 15.8 -1.9
LYN sP pwP 20 20 21.1 +0.9
LYN PP **PnPn** **20 20 36.1 +2.7**
LYN S **S** **20 24 10.3 -4.3**
LYN SS **SnSn** **20 24 50.6 +1.4**
LYN pmax pmax
comp=Z,10.0nm,0.9s
LYN pmax pmax
comp=Z,150nm,5.3s
LYN LR LR
comp=Z,230nm,14.9s
LYN LR LR
comp=Z,470nm,21.1s
LYN LR LR
comp=Z,830nm,18.2s
HHC Hu-ho-hao-te 23.62 294 *eP* **P** **20 20 12.3 -1.5**
HHC S **S** **20 24 24.3 -0.9**
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,210nm,4.4s
HHC LR LR
comp=Z,500nm,17.1s
HHC LR LR
comp=Z,620nm,16.5s
HHC LR LR
comp=Z,1µm,17.1s
CNSH ChangSha 24.23 263 ⇓P **P** **20 20 19.9 +0.5**
CNSH S **S** **20 24 36.5 +1.4**
CNSH pmax pmax
comp=Z,23nm,0.6s
CNSH LR LR
comp=Z,350nm,13.9s
CNSH LR LR
comp=Z,630nm,15.8s
CNSH LR LR
comp=Z,530nm,15.9s
XAN Xi'an 25.96 278 P **P** **20 20 33.6 -1.5**
XAN pP pP 20 20 43.8 -2.3
XAN sP pwP 20 20 47.9 -1.0
XAN PP **PnPn** **20 21 15.3 +1.2**
XAN S **S** **20 24 59.6 -3.0**
XAN sS 20 25 15.1 -5.6
XAN SS **SnSn** **20 26 03.8 +1.6**
XAN pmax pmax
comp=Z,72nm,1.0s
XAN pmax pmax
comp=Z,180nm,5.5s
XAN LR LR
comp=Z,350nm,14.4s
XAN LR LR
comp=Z,510nm,16.5s
XAN LR LR
comp=Z,780nm,16.0s
MA2 Magadan 26.02 12 P **P** **20 20 36.4 +1.1**
comp=Z,69nm,0.8s,baz=200,slow=8.6,SNR=58
MA2 LR LR 20 31 12.6
comp=Z,206nm,21.7s,baz=197,slow=37
comp=Z,69nm,0.8s
MA2 Magadan 26.02 12 P **P** **20 20 36.1 +0.8**
MA2 lAmb lAmb 20 20 37.7
comp=Z,80nm,0.8s
MA2 Magadan 26.02 12*ceP* **P** **20 20 36.0 +0.7**
MA2 pmax pmax
comp=Z,83nm,0.7s
MA2 Magadan 26.02 12 P **P** **20 20 36.4 +1.1**
CIT Chita 26.02 321 *eP* **P** **20 20 35.3 -0.2**
CIT *e* 20 20 46.0
CIT *e* 20 21 27.7
CIT pmax pmax
comp=Z,94nm,1.0s
ENH Enshi 26.38 269 P **P** **20 20 37.0 -1.9**
ENH lAmb lAmb 20 20 39.2
comp=Z,51nm,0.6s
H11N2 WAKE ISLAND Hy 27.69 115 T T 20 50 49.9
baz=308,slow=75,SNR=695
H11N1 WAKE ISLAND Hy 27.70 115 T T 20 50 43.7
baz=308,slow=75,SNR=584
H11N3 WAKE ISLAND Hy 27.71 115 T T 20 50 51.3
baz=308,slow=75,SNR=530
ULN Ulaanbaatar 28.19 308 P **P** **20 20 55.4 +0.2**
ULN lAmb lAmb 20 20 59.2
comp=Z,32nm,1.1s
ULN Ulaanbaatar 28.19 308*ceP* **P** **20 20 54.7 -0.4**
ULN pmax pmax
comp=Z,38nm,1.3s
ULN Ulaanbaatar 28.19 308 P **P** **20 20 56.1 +1.0**
ULN P **P** **20 20 56.1 +1.0**
ULN Ulaanbaatar 28.19 308 P **P** **20 20 55.6 +0.4**
ULN pP **pP** **20 21 04.5 -1.6**
H11S3 WAKE ISLAND Hy 28.30 118 T T 20 51 34.4
baz=310,slow=76,SNR=190
H11S1 WAKE ISLAND Hy 28.30 117 T T 20 51 30.4
baz=310,slow=76,SNR=113
H11S2 WAKE ISLAND Hy 28.32 117 T T 20 51 28.3
baz=310,slow=76,SNR=135
YAK Yakutsk 28.39 349 P **P** **20 20 56.5 0.0**
comp=Z,52nm,0.6s,baz=179,slow=1.2,SNR=53
YAK LR LR 20 32 41.0
comp=Z,351nm,18.4s,baz=200,slow=37
comp=Z,52nm,0.6s
YAK Yakutsk 28.39 349 P **P** **20 20 56.5 0.0**
YAK Yakutsk 28.39 349*ceP* **P** **20 20 56.5 0.0**
YAK pmax pmax
comp=Z,89nm,0.6s
YAK Yakutsk 28.39 349 P **P** **20 20 56.6 0.0**
YAK pP **pP** **20 21 05.9 -1.6**
SONM Songino Array 28.61 308 P **P** **20 20 58.7 -0.1**
comp=Z,12nm,0.6s,baz=110,slow=7.3,SNR=70
SONM PcP **PcP** **20 24 09.5 +0.6**
comp=Z,3.8nm,0.8s,baz=132,slow=2.2,SNR=5.3
SONM ScP **ScP** **20 27 42.0 -4.6**
comp=Z,2.8nm,1.0s,baz=144,slow=2.8,SNR=9.7

SONM LR LR 20 33 01.9
comp=Z,842nm,19.5s,baz=108,slow=38
comp=Z,12nm,0.6s
SONM Songino Array 28.61 308 P **P** **20 20 58.6 -0.3**
SONM IAmb IAmb 20 21 01.1
comp=Z,48nm,1.4s
BOD Bodaibo 29.29 331 *e*P **P** **20 21 04.6 0.0**
BOD pmax pmax
comp=Z,60nm,1.0s
SEY Seymchan 29.45 11 P **P** **20 21 06.8 +0.8**
comp=Z,8.3nm,0.8s,baz=202,slow=6.9,SNR=27
comp=Z,8.3nm,0.8s
SEY Seymchan 29.45 11*ce*P **P** **20 21 06.8 +0.8**
SEY pmax pmax
comp=Z,14nm,1.3s
LZH Lanzhou 29.76 284 ⇑P **P** **20 21 09.3 0.0**
LZH pP pP 20 21 18.8 -1.4
LZH sP sP 20 21 24.6 -0.5
LZH PcP **PcP** **20 24 13.6 +1.4**
LZH sS sS 20 26 23.4 +2.5
LZH SS **SnSn** **20 27 38.3 +3.1**
LZH pmax pmax
comp=Z,21nm,1.5s
LZH LR LR
comp=Z,300nm,18.9s
LZH LR LR
comp=Z,310nm,17.2s
LZH LR LR
comp=Z,350nm,18.2s
GYA Guiyang 30.04 264 ⇑*i*P **P** **20 21 10.3 -1.4**
GYA sP sP 20 21 27.4 -0.2
GYA S **S** **20 26 04.1 -3.0**
GYA pmax pmax
comp=Z,13nm,0.9s
GYA LR LR
comp=Z,240nm,19.0s
GYA LR LR
comp=Z,350nm,16.1s
GYA LR LR
comp=Z,420nm,19.7s
SHEM Shemya Is, Ala 30.09 42 LR LR 20 31 35.2
comp=Z,303nm,20.6s,baz=287,slow=33
DAV Davao City (W) 30.51 210 LR LR 20 31 38.0
comp=Z,209nm,21.4s,baz=45,slow=32
CD2 Chengdu 30.92 274 P **P** **20 21 18.9 -0.5**
CD2 pP pP 20 21 28.8 -1.5
CD2 sP pwP 20 21 33.0 -1.0
CD2 S **S** **20 26 21.3 +0.6**
CD2 sS sS 20 26 37.4 -1.5
CD2 pmax pmax
comp=Z,80nm,1.0s
CD2 pmax pmax
comp=Z,280nm,4.5s
CD2 LR LR
comp=Z,580nm,11.6s
CD2 LR LR
comp=Z,970nm,16.7s
CD2 LR LR
comp=Z,900nm,18.4s
QIZ Qiongzhong 31.16 248 P **P** **20 21 22.9 +1.4**
QIZ S **S** **20 26 26.5 +2.0**
QIZ LR LR
comp=Z,430nm,23.9s
QIZ LR LR
comp=Z,310nm,21.5s
QIZ LR LR
comp=Z,490nm,39.0s
IRK Irkutsk 31.26 316 *e*P **P** **20 21 21.8 -0.3**
IRK pmax pmax
comp=Z,24nm,3.6s
ZAK Zakamensk 31.27 312 *e*P **P** **20 21 21.1 -1.2**
ZAK pmax pmax
comp=Z,12nm,0.9s
GTA Gaotai 32.60 291 ⇑P **P** **20 21 33.6 -0.5**
GTA pP pP 20 21 45.6 +0.5
GTA sP sP 20 21 49.8 -0.2
GTA PcP **PcP** **20 24 20.5 +0.9**
GTA S **S** **20 26 45.3 -1.6**
GTA ScP **ScP** **20 27 58.8 -1.1**
GTA PcS **PcS** **20 28 04.9 0.0**
GTA ScS **ScS** **20 31 55.8 -3.8**
GTA pmax pmax
comp=Z,30nm,0.8s
GTA pmax pmax
comp=Z,54nm,4.5s
GTA LR LR
comp=Z,220nm,14.9s
GTA LR LR
comp=Z,230nm,16.0s
GTA LR LR
comp=Z,260nm,18.2s
MOY Mondy 33.01 313 *e*P **P** **20 21 38.2 +0.6**
MOY pmax pmax
comp=Z,22nm,1.4s
KMI Kunming 33.81 264 ⇑P **P** **20 21 44.8 -0.2**
KMI pP pP 20 21 55.6 -0.4
KMI sP sP 20 22 01.3 +0.4
KMI pmax pmax
comp=Z,19nm,0.7s
KMI pmax pmax
comp=Z,170nm,5.4s
KMI LR LR
comp=Z,270nm,14.6s
KMI LR LR
comp=Z,530nm,17.6s
KMI LR LR
comp=Z,550nm,16.2s
PZH PanZhiHua 34.07 267 P **P** **20 21 46.0 -1.1**
PZH pP **pP** **20 21 57.0 -1.2**
PZH S **S** **20 27 06.6 -3.4**
PZH pmax pmax
comp=Z,30nm,0.8s
PZH pmax pmax
comp=Z,100nm,6.5s
PZH LR LR
comp=Z,1μm,21.5s
PZH LR LR
comp=Z,500nm,20.0s
PZH LR LR
comp=Z,900nm,21.6s
SIJI Sorong 36.19 196 LR LR 20 33 35.4
comp=Z,237nm,21.7s,baz=292,slow=31
BILL Bilibino 36.70 16 P **P** **20 22 09.2 +0.1**
UBPT Khong Chiam 36.74 247 P **P** **20 22 08.9 -1.0**
UBPT IAmb IAmb 20 22 33.5
comp=Z,66nm,1.7s
GENI Genyem 36.88 180 P **P** **20 22 11.8 +0.7**
comp=Z,98nm,0.9s
GOMU GeErMu 36.95 286 P **P** **20 22 12.5 +0.5**
GOMU pP pP 20 22 17.4 -5.7
GOMU S **S** **20 27 53.0 -1.5**
GOMU pmax pmax
comp=Z,23nm,1.1s
GOMU pmax pmax
comp=Z,110nm,4.5s
GOMU LR LR
comp=Z,95nm,14.0s
GOMU LR LR
comp=Z,120nm,18.8s
GOMU LR LR
comp=Z,140nm,18.5s
GTOI Gorontalo 37.39 209 P **P** **20 22 12.5 -2.9**
comp=Z,6.0nm,1.1s
TIXI Tiksi 37.72 354 P **P** **20 22 17.4 -0.2**
comp=Z,15nm,0.7s,baz=83,slow=21,SNR=17
TIXI LR LR 20 39 29.8
comp=Z,221nm,19.3s,baz=180,slow=39
comp=Z,15nm,0.7s
TIXI Tiksi 37.72 354 P **P** **20 22 17.5 -0.2**
TIXI IAmb IAmb 20 22 18.8
comp=Z,17nm,0.7s
TIXI Tiksi 37.72 354*ce*P **P** **20 22 17.8 +0.2**
TIXI pmax pmax
comp=Z,12nm,0.7s
TIXI Tiksi 37.72 354 P **P** **20 22 17.8 +0.2**
TIXI x x 20 22 25.2
TIXI pP **pP** **20 22 28.4 -0.4**
TOLI2 Tolitoli 37.92 213 P **P** **20 22 18.3 -1.6**
MRSI Marisa 37.98 211 P **P** **20 22 18.9 -1.5**
comp=Z,19nm,1.1s
FAKI Fak Fak 37.98 193 P **P** **20 22 19.8 -0.6**
FAKI IAmb IAmb 20 22 46.8
comp=Z,144nm,1.8s
FAKI Fak Fak 37.98 193 P **P** **20 22 22.0 +1.6**
MPSI Mapaga 39.01 214 P **P** **20 22 26.3 -2.7**
comp=Z,9.2nm,0.9s

CHTO Chiang Mai 39.89 258 P **P** **20 22 35.7 -0.8**
CHTO P **P** **20 22 35.7 -0.8**
CHTO Chiang Mai 39.89 258 P **P** **20 22 35.4 -1.1**
CHTO Chiang Mai 39.89 258 P **P** **20 22 35.1 -1.4**
CHTO pP **pP** **20 22 46.0 -1.7**
SPIA Saint Paul Isl 40.04 40 P **P** **20 22 37.7 +0.5**
baz=257
CM31 Chiang Mai Arr 40.08 257 P **P** **20 22 37.2 -0.8**
CM31 IAmb IAmb 20 22 39.5
comp=Z,20nm,0.7s
CM31 Chiang Mai Arr 40.08 257 P **P** **20 22 39.0 +1.0**
CMAR Chiang Mai Arr 40.08 257 P **P** **20 22 37.0 -1.1**
comp=Z,14nm,0.7s,baz=48,slow=7.4,SNR=94
CMAR PcP **PcP** **20 24 43.5 +1.3**
comp=Z,12nm,1.0s,baz=16,slow=2.3,SNR=12
comp=Z,14nm,0.7s
CMAR Chiang Mai Arr 40.08 257 *i* P **P** **20 22 37.0 -1.1**
CMAR pmax pmax
comp=Z,15nm,0.7s
KRVT Keravat (AS076 40.12 162 LR LR 20 39 00.5
comp=Z,42nm,19.5s,baz=179,slow=36
WMQ Urumqi 41.30 299 ⇑*i*P **P** **20 22 49.3 +1.4**
WMQ pP pwP 20 23 00.9 -1.7
WMQ PcP **PcP** **20 24 46.8 +1.0**
WMQ pmax pmax
comp=Z,74nm,1.3s
WMQ pmax pmax
comp=Z,150nm,4.5s
WMQ LR LR
comp=Z,220nm,15.1s
WMQ LR LR
comp=Z,270nm,21.5s
WMQ LR LR
comp=Z,210nm,19.1s
LSA Lhasa 41.66 278 P **P** **20 22 51.3 -0.2**
LSA Lhasa 41.66 278 P **P** **20 22 51.8 +0.3**
LSA pmax pmax
comp=Z,20nm,0.8s
LSA Lhasa 41.66 278 P **P** **20 22 51.3 -0.2**
LSA pmax pmax
comp=Z,14nm,0.7s
LSA Lhasa 41.66 278 P **P** **20 22 51.8 +0.3**
LSA P **P** **20 22 51.8 +0.3**
LSA Lhasa 41.66 278 *i* P **P** **20 22 51.3 -0.2**
SNR=10
LSA Lhasa 41.66 278 P **P** **20 22 51.5 0.0**
ZSN Zaisan 43.00 305*c* *i*P **P** **20 23 02.5 +0.9**
ZSN pmax pmax
comp=Z,32nm,1.0s
ZSN Zaisan 43.00 305 ⇑*i*P **P** **20 23 02.6 +0.9**
comp=Z,32nm,1.0s,baz=305
ZAA0 Zalesovo Array 43.05 314 P **P** **20 23 02.4 +0.5**
ZAA0 IAmb IAmb 20 23 03.7
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 43.05 314 P **P** **20 23 02.0 +0.1**
comp=Z,21nm,0.7s,baz=95,slow=6.8,SNR=84
ZALV PcP **PcP** **20 24 51.1 -0.2**
comp=Z,18nm,0.7s,baz=101,slow=2.9,SNR=15
ZALV ScP **ScP** **20 28 37.0 -1.8**
comp=Z,4.3nm,0.9s,baz=92,slow=4.5,SNR=6.2
ZALV LR LR 20 41 45.2
comp=Z,172nm,18.4s,baz=84,slow=37
comp=Z,21nm,0.7s
ZALV Zalesovo Beam 43.05 314 P **P** **20 23 02.2 +0.3**
ZALV Zalesovo Beam 43.05 314 *i* P **P** **20 23 02.5 +0.6**
ZALV pmax pmax
comp=Z,21nm,0.7s
KSM Kuching 43.20 227 P **P** **20 23 02.4 -1.2**
KSM Kuching 43.20 227 P **P** **20 23 02.4 -1.2**
KAPI Kappang 43.84 210 P **P** **20 23 07.0 -1.7**
comp=Z,6.4nm,0.8s,baz=22,slow=14,SNR=3.5
comp=Z,6.4nm,0.8s
KAPI Kappang 43.84 210 P **P** **20 23 08.9 +0.2**
KAPI Kappang 43.84 210 P **P** **20 23 08.9 +0.2**
KAPI pmax pmax
comp=Z,17nm,1.1s
S12K Black Hills 44.32 43 P **P** **20 23 12.3 +0.2**
baz=266
BBKI Banjar Baru 44.75 218 P **P** **20 23 13.8 -2.2**
comp=Z,17nm,0.9s
MK31 Makanchi Array 44.81 304 P **P** **20 23 16.6 +0.4**
MK31 IAmb IAmb 20 23 18.3
comp=Z,58nm,0.9s
MK31 Makanchi Array 44.81 304*c* *i*P **P** **20 23 16.6 +0.4**
MKAR Makanchi Array 44.81 304 P **P** **20 23 16.7 +0.6**
comp=Z,54nm,0.7s,baz=90,slow=9.9,SNR=457
MKAR PcP **PcP** **20 24 57.6 +0.1**
comp=Z,12nm,0.8s,baz=74,slow=5.2,SNR=6.0
MKAR ScP **ScP** **20 28 44.5 -1.7**
comp=Z,1.6nm,0.7s,baz=73,slow=5.3,SNR=5.4
MKAR LR LR 20 42 34.7
comp=Z,428nm,21.8s,baz=88,slow=37
comp=Z,54nm,0.7s
MKAR Makanchi Array 44.81 304 P **P** **20 23 16.4 +0.2**
MAKZ Makanchi 45.02 304 P **P** **20 23 18.2 +0.3**
MAKZ IAmb IAmb 20 23 19.6
comp=Z,56nm,0.8s
MAKZ Makanchi 45.02 304 P **P** **20 23 18.2 +0.3**
MAKZ pmax pmax
comp=Z,56nm,0.8s
MAKZ Makanchi 45.02 304 P **P** **20 23 18.5 +0.6**
NRIK Noril'sk 45.25 337 P **P** **20 23 19.3 0.0**
comp=Z,21nm,0.8s,baz=102,slow=10,SNR=22
NRIK LR LR 20 43 19.1
comp=Z,124nm,18.8s,baz=114,slow=37
comp=Z,21nm,0.8s
NRIK Noril'sk 45.25 337 P **P** **20 23 19.8 +0.5**
NRIK IAmb IAmb 20 23 20.6
comp=Z,29nm,1.0s
NRIK Noril'sk 45.25 337*ce*P **P** **20 23 19.3 0.0**
NRIK pmax pmax
comp=Z,26nm,0.9s
TAPN Taplejung 45.33 276 *e*P **P** **20 23 20.3 -0.6**
comp=Z,36nm,0.4s
ODAN Odare 45.78 275 *e*P **P** **20 23 23.2 -1.2**
comp=Z,14nm,0.6s
SEM Semipalatinsk 45.87 309 *e*P **P** **20 23 24.2 -0.5**
SEM pmax pmax
comp=Z,26nm,1.4s
SEM Semipalatinsk 45.87 309 *e*P **P** **20 23 24.3 -0.5**
comp=Z,26nm,1.4s,baz=309
RAMN Ramite 46.39 276 *e*P **P** **20 23 28.6 -0.6**
comp=Z,102nm,0.6s
JIRN Jiri 46.45 277 *e*P **P** **20 23 29.4 -0.4**
N16K Nishlik Lake 46.45 37 P **P** **20 23 29.7 +0.8**
baz=264
GUN Gumba 46.61 278 *e*P **P** **20 23 30.6 -0.5**
comp=Z,144nm,0.7s
O16K Kokwok River B 46.72 38 P **P** **20 23 31.3 +0.4**
baz=266
KULM Kulim 46.83 241 P **P** **20 23 31.8 -0.6**
KULM IAmb IAmb 20 23 36.4
comp=Z,33nm,1.4s
KURK Kurchatov 46.88 310 P **P** **20 23 32.5 +0.1**
KURK Kurchatov 46.88 310*ce*P **P** **20 23 32.5 +0.1**
KURK pmax pmax
comp=Z,64nm,0.8s
KURK Kurchatov 46.88 310 P **P** **20 23 32.9 +0.5**
KURK P **P** **20 23 32.9 +0.5**
KURK Kurchatov 46.88 310 P **P** **20 23 32.4 +0.1**
KURBB Kurchatov Arra 46.95 310 P **P** **20 23 33.0 0.0**
comp=Z,18nm,0.6s,baz=86,slow=7.7,SNR=161
KURBB PcP **PcP** **20 25 04.5 -0.4**
comp=Z,8.0nm,0.7s,baz=89,slow=3.9,SNR=7.1
KURBB ScP **ScP** **20 28 53.8 -1.2**
comp=Z,1.1nm,0.9s,baz=104,slow=3.0,SNR=4.0
KURBB LR LR 20 44 09.6
comp=Z,836nm,20.4s,baz=61,slow=37
comp=Z,18nm,0.6s
MYKOM Kota Tinggi 47.09 234 P **P** **20 23 34.3 -0.1**
MYKOM IAmb IAmb 20 24 52.2
comp=Z,18nm,1.2s
IPM Ipoh 47.12 240 P **P** **20 23 32.9 -1.8**
IPM IAmb IAmb 20 23 34.8
comp=Z,25nm,1.1s
IPM Ipoh 47.12 240 P **P** **20 23 33.8 -0.9**
PKI Pulchoki 47.13 277 *e*P **P** **20 23 34.1 -1.0**
comp=Z,89nm,0.7s
PKIN Phulchoki 47.14 277 *e*P **P** **20 23 34.0 -1.1**
comp=Z,78nm,0.7s
KKN Kakani 47.15 278 *e*P **P** **20 23 34.3 -0.8**
comp=Z,45nm,0.7s
BATI Baumata 47.19 203 P **P** **20 23 34.2 -0.9**
comp=Z,46nm,0.7s,baz=26,slow=2.0,SNR=10
comp=Z,46nm,0.7s
BATI Baumata 47.19 203 P **P** **20 23 33.9 -1.3**

comp=Z,33nm,0.8s
SHLS Shalkode 47.32 300*c* *i*P **P** **20 23 34.2 -1.9**
SHLS pmax pmax
comp=Z,16nm,0.8s
SHLS Shalkode 47.32 300 ⇑*i*P **P** **20 23 34.3 -1.9**
comp=Z,16nm,0.8s,baz=300
DMN Daman 47.36 277 *e*P **P** **20 23 35.9 -0.9**
comp=Z,68nm,0.8s
HNR Honiara 47.45 153 LR LR 20 42 28.4
comp=Z,68nm,20.9s,baz=348,slow=34
KDU Kakadu 47.51 190 P **P** **20 23 37.4 -0.2**
GKN Gorkha 47.60 278 *e*P **P** **20 23 37.9 -0.6**
UZB Uzynbulak 47.64 300 *e*P **P** **20 23 39.0 +0.4**
UZB Uzynbulak 47.64 300 *e*P **P** **20 23 39.0 +0.4**
baz=300
TDK Taldyqorghan 47.74 302*c* *i*P **P** **20 23 40.2 +1.0**
TDK pmax pmax
comp=Z,45nm,0.8s
TDK Taldyqorghan 47.74 302 ⇑*i*P **P** **20 23 40.3 +1.0**
comp=Z,45nm,0.8s,baz=302
KPKS Kokpek 47.82 300*c* *i*P **P** **20 23 40.4 +0.5**
KPKS pmax pmax
comp=Z,24nm,1.0s
KPKS Kokpek 47.82 300 ⇑*i*P **P** **20 23 40.5 +0.5**
comp=Z,24nm,1.0s,baz=300
MTN Manton Dam 47.88 192 P **P** **20 23 40.0 -0.4**
MTN IAmb IAmb 20 23 42.1
comp=Z,51nm,1.0s
MTN Manton Dam 47.88 192 P **P** **20 23 40.3 -0.2**
N18K Kilae Creek 47.89 37 P **P** **20 23 41.5 +1.4**
N18K IAmb IAmb 20 24 26.7
comp=Z,23nm,1.3s
TTA Tatalina 48.00 33 P **P** **20 23 41.6 +0.6**
baz=265
ZHN Zhinishke 48.05 300 *e*P **P** **20 23 42.1 +0.3**
ZHN Zhinishke 48.05 300 *e*P **P** **20 23 42.2 +0.3**
baz=300
SVW2 Sparrevohn 48.06 36 P **P** **20 23 42.7 +1.2**
SVW2 IAmb IAmb 20 24 07.7
comp=Z,79nm,2.0s
SATY Saty 48.10 300*c* *i*P **P** **20 23 42.9 +0.8**
SATY pmax pmax
comp=Z,36nm,1.9s
SATY Saty 48.10 300 ⇑*i*P **P** **20 23 43.0 +0.8**
comp=Z,36nm,1.9s,baz=300
PLAI Plampang 48.11 211 P **P** **20 23 42.5 +0.2**
comp=Z,38nm,1.2s
DANN Dangsing 48.18 279 *e*P **P** **20 23 43.0 -0.2**
O18K Koktuh Hills 48.19 38 P **P** **20 23 42.9 +0.4**
baz=268
PRZ Przheval'sk 48.22 299 P **P** **20 23 44.7 +1.5**
PRZ Przheval'sk 48.22 299 P **P** **20 23 44.7 +1.5**
PRZ pmax pmax
comp=Z,185nm,1.2s
COEN Coen 48.25 176 P **P** **20 23 44.0 +0.7**
COEN IAmb IAmb 20 24 01.6
comp=Z,19nm,0.9s
COEN Coen 48.25 176 P **P** **20 23 43.9 +0.6**
ARXS Arharly 48.29 301 *e*P **P** **20 23 44.1 +0.6**
N19K Bonanza Creek 48.58 36 P **P** **20 23 46.6 +1.0**
baz=268
M19K Big River Lodg 48.68 35 P **P** **20 23 47.1 +1.0**
baz=267
K20K Telida 48.91 33 P **P** **20 23 49.4 +1.4**
K20K IAmb IAmb 20 23 51.3
comp=Z,8.7nm,0.8s
K20K Telida 48.91 33 P **P** **20 23 48.1 +0.2**
baz=266,SNR=5.5
J20K Nowinta River 48.94 32 P **P** **20 23 49.2 +1.1**
J20K Nowinta River 48.94 32 P **P** **20 23 48.2 +0.1**
baz=265,SNR=5.1
L20K Farewell, AK 48.95 34 P **P** **20 23 49.0 +0.7**
baz=267
MDOK Medeo 49.05 300 *i* P **P** **20 23 50.6 +1.1**
MDOK Medeo 49.05 300 *i* P **P** **20 23 50.6 +1.1**
baz=300
AAA Alma-Ata 49.13 300 *e*P **P** **20 23 51.4 +1.4**
AAA pmax pmax
comp=Z,65nm,0.6s
AAA Alma-Ata 49.13 300 *e*P **P** **20 23 51.4 +1.4**
comp=Z,66nm,0.6s,baz=300
M20K Styx River 49.27 35 P **P** **20 23 51.8 +1.0**
baz=268
IMAR Indian Mountai 49.27 30 P **P** **20 23 52.1 +1.5**
KUU Kurty 49.40 301*c* *i*P **P** **20 23 52.3 +0.3**
KUU pmax pmax
comp=Z,70nm,0.8s
KUU Kurty 49.40 301 ⇑*i*P **P** **20 23 52.4 +0.3**
comp=Z,70nm,0.8s,baz=301
G21K Allakaket 49.43 29 P **P** **20 23 53.1 +1.2**
baz=264,SNR=8.6
O20K Slope Mountain 49.49 37 P **P** **20 23 52.9 +0.4**
baz=270
KDAK Kodiak Island 49.56 40 P **P** **20 23 53.9 +0.9**
KDAK Kodiak Island 49.56 40 P **P** **20 23 53.9 +0.9**
KDAK pmax pmax
comp=Z,145nm,1.9s
KDAK Kodiak Island 49.56 40 P **P** **20 23 54.0 +0.9**
baz=272
H21K Melozitna Rive 49.63 30 P **P** **20 23 54.7 +1.3**
H21K Melozitna Rive 49.63 30 P **P** **20 23 54.6 +1.3**
baz=265,SNR=6.4
SPCR Spurr Chakacha 49.70 36 P **P** **20 23 54.8 +0.8**
baz=270
CHUM Lake Minchumin 49.72 32 P **P** **20 23 55.4 +1.3**
baz=267
PPLA Purkeypile 49.74 34 P **P** **20 23 53.9 -0.6**
baz=268
PSI Prapat 49.78 240 P **P** **20 23 53.8 -1.6**
comp=Z,22nm,0.9s,baz=30,slow=2.7,SNR=12
PSI PcP **PcP** **20 25 16.3 +0.5**
comp=Z,4.4nm,0.3s,baz=333,slow=4.9,SNR=5.7
comp=Z,22nm,0.9s
I21K Tanana 49.94 31 P **P** **20 23 55.4 -0.3**
baz=266
HOM Homer 49.99 38 P **P** **20 23 56.5 +0.3**
baz=272
F22K John River 50.05 28 P **P** **20 23 57.3 +0.8**
baz=264,SNR=7.7
TKM2 Tokmak 2 50.14 300 P **P** **20 23 59.1 +1.2**
SNR=59
TKM2 Tokmak 2 50.14 300 *i* P **P** **20 23 58.7 +0.8**
TKM2 pmax pmax
comp=Z,83nm,0.7s
NRN Naryn 50.20 298 P **P** **20 23 58.9 +0.4**
NRN IAmb IAmb 20 24 00.4
comp=Z,32nm,0.8s
NRN Naryn 50.20 298 P **P** **20 23 58.9 +0.4**
NRN pmax pmax
comp=Z,33nm,0.8s
H22K Ishtalitna Cre 50.23 30 P **P** **20 23 59.5 +1.5**
baz=266,SNR=13
E22K Anaktuvuk Pass 50.25 27 P **P** **20 23 59.4 +1.3**
baz=264
BPAW Bear Paw Mtn. 50.32 32 P **P** **20 23 59.5 +0.8**
BPAW IAmb IAmb 20 25 09.5
comp=Z,36nm,1.9s
BPAW Bear Paw Mtn. 50.32 32 P **P** **20 24 00.1 +1.4**
baz=268
MLY Manley 50.46 31 P **P** **20 24 01.3 +1.6**
MLY IAmb IAmb 20 24 21.1
comp=Z,13nm,0.9s
MLY Manley 50.46 31 P **P** **20 24 01.0 +1.3**
baz=268,SNR=14
KBK Karagaybulak 50.67 300 P **P** **20 24 03.0 +1.2**
SNR=54
SGDS Sogindy 50.71 301*c* *i*P **P** **20 24 02.5 +0.6**
SGDS pmax pmax
comp=Z,15nm,0.8s
SGDS Sogindy 50.71 301 ⇑*i*P **P** **20 24 02.6 +0.6**
comp=Z,15nm,0.8s,baz=301
KSH Kashi 50.72 296 P **P** **20 24 06.9 +4.7**
KSH sP sP 20 24 21.8 +3.5
KSH PcS **PcS** **20 29 19.3 +2.9**
KSH pmax pmax
comp=Z,96nm,0.8s
KSH LR LR
comp=Z,220nm,18.6s
KSH LR LR
comp=Z,260nm,21.6s
KSH LR LR
comp=Z,250nm,22.2s
CHMS Chumysh 50.73 300 P **P** **20 24 02.9 +0.8**
SNR=24
CHMS Chumysh 50.73 300 *i* P **P** **20 24 01.9 -0.2**
CHMS pmax pmax

comp=Z,72nm,1.4s
D23K **Nanushuk River** **50.74 26** P **P** **20 24 03.2 +1.4**
baz=265
BRZS **Berezniki** **50.75 310***c i*P **P** **20 24 02.0 -0.1**
BRZS pmax pmax
comp=Z,19nm,1.3s
BRZS **Berezniki** **50.75 310**⇑*i*P **P** **20 24 02.0 -0.1**
comp=Z,19nm,1.3s,baz=310
UGM **Wanagama** **50.76 220** P **P** **20 24 01.1 -1.4**
BTLS **Baital** **50.76 303***c i*P **P** **20 24 02.7 +0.4**
BTLS pmax pmax
comp=Z,39nm,0.8s
BTLS **Baital** **50.76 303**⇑*i*P **P** **20 24 02.7 +0.4**
comp=Z,38nm,0.8s,baz=303
COLD **Coldfoot** **50.79 28** P **P** **20 24 03.4 +1.2**
baz=266
G23K **Bananza Creek** **50.83 29** P **P** **20 24 04.0 +1.5**
baz=267,SNR=5.5
USP **Ospenovka** **50.84 301** P **P** **20 24 03.8 +0.8**
SNR=35
C23K **Itkillik River** **50.86 25** P **P** **20 24 03.6 +1.1**
baz=264
H23K **Yukon River** **50.98 30** P **P** **20 24 05.1 +1.5**
H23K IAmb IAmb 20 24 25.4
comp=Z,13nm,0.9s
H23K **Yukon River** **50.98 30** P **P** **20 24 04.6 +1.0**
baz=268,SNR=9.8
AAK **Ala-Archa** **51.00 300** P **P** **20 24 04.4 +0.1**
comp=Z,18nm,0.6s,baz=85,slow=5.3,SNR=20
comp=Z,18nm,0.6s
AAK **Ala-Archa** **51.00 300** P **P** **20 24 05.2 +0.9**
SNR=13
AAK **Ala-Archa** **51.00 300** P **P** **20 24 04.4 +0.1**
AAK IAmb IAmb 20 24 06.0
comp=Z,26nm,0.8s
AAK **Ala-Archa** **51.00 300** P **P** **20 24 05.0 +0.7**
I23K **Minto, Yukon-K** **51.04 31** P **P** **20 24 05.5 +1.4**
I23K **Minto, Yukon-K** **51.04 31** P **P** **20 24 05.0 +0.9**
baz=269
KNRA **Kununurra** **51.09 194** P **P** **20 24 04.4 -0.5**
KNRA IAmb IAmb 20 24 06.4
comp=Z,45nm,0.8s
KNRA **Kununurra** **51.09 194** P **P** **20 24 04.6 -0.3**
TOLK **Toolik Lake Re** **51.12 26** P **P** **20 24 06.3 +1.6**
TOLK IAmb IAmb 20 24 47.3
comp=Z,16nm,1.1s
TOLK **Toolik Lake Re** **51.12 26** P **P** **20 24 05.8 +1.2**
baz=266
NEA2 **Nenana** **51.16 31** P **P** **20 24 06.4 +1.4**
baz=270,SNR=13
MCK **McKinley** **51.22 33** P **P** **20 24 06.3 +0.8**
baz=270
WAT1 **Susitna Watana** **51.41 34** P **P** **20 24 07.1 +0.2**
baz=272
D24K **Happy Valley** **51.42 26** P **P** **20 24 07.9 +1.0**
baz=266
LEM **Lembang** **51.45 223** P **P** **20 24 06.8 -1.1**
comp=Z,40nm,0.7s,baz=72,slow=9.6,SNR=5.4
comp=Z,40nm,0.7s
E24K **Your Creek** **51.49 27** P **P** **20 24 07.9 +0.5**
baz=267
EKS2 **Erkin-Say** **51.50 300** P **P** **20 24 08.8 +0.7**
SNR=14
KNK **Knik Glacier** **51.51 36** P **P** **20 24 07.5 -0.1**
baz=273
C24K **Franklin Bluff** **51.51 25** P **P** **20 24 08.4 +0.9**
baz=266
MDM **Murphy Dome** **51.52 31** P **P** **20 24 09.5 +1.8**
MDM IAmb IAmb 20 24 28.9
comp=Z,23nm,0.9s
SML **Sawmill** **51.55 35** P **P** **20 24 07.9 0.0**
baz=273
PWL **Port Wells** **51.59 36** P **P** **20 24 08.9 +0.6**
baz=273
H24K **Noodor Dome** **51.67 30** P **P** **20 24 09.6 +0.8**
baz=270,SNR=7.4
COLA **College** **51.68 31** *i*P **P** **20 24 09.9 +1.1**
COLA pmax pmax
comp=Z,6.0nm,0.8s
F24K **Squaw Lake** **51.70 28** P **P** **20 24 09.9 +0.9**
baz=268
AML **Almayashu** **51.70 299** P **P** **20 24 11.3 +1.5**
SNR=19
CCB **Clear Creek Bu** **51.70 31** P **P** **20 24 10.5 +1.5**
BRVK **Borovoye** **51.75 314** P **P** **20 24 10.4 +0.9**
BRVK IAmb IAmb 20 24 13.9
comp=Z,22nm,0.9s
BRVK **Borovoye** **51.75 314***ce*P **P** **20 24 09.6 0.0**
BRVK pmax pmax
comp=Z,36nm,1.3s
BRVK **Borovoye** **51.75 314** P **P** **20 24 10.4 +0.9**
BRVK P **P** **20 24 10.4 +0.9**
BRVK **Borovoye** **51.75 314** P **P** **20 24 09.8 +0.3**
GSI **Gunungsitoli** **51.79 240** P **P** **20 24 09.1 -1.2**
GSI **Gunungsitoli** **51.79 240** P **P** **20 24 09.3 -1.0**
M23K **Glacier View** **51.84 35** P **P** **20 24 10.9 +0.8**
baz=273
G24K **Hadweenzic Riv** **51.84 29** P **P** **20 24 11.0 +1.0**
baz=269,SNR=5.5
POKR **Poker Plat Res** **51.86 31** P **P** **20 24 12.0 +1.8**
POKR IAmb IAmb 20 24 13.4
comp=Z,16nm,0.8s
POKR **Poker Plat Res** **51.86 31** P **P** **20 24 10.9 +0.7**
baz=271
DHY **Denali Highway** **51.94 33** P **P** **20 24 12.0 +1.0**
baz=272
SCM **Sheep Creek Mo** **52.02 35** P **P** **20 24 11.7 +0.1**
SCM IAmb IAmb 20 24 31.1
comp=Z,34nm,1.2s
SCM **Sheep Creek Mo** **52.02 35** P **P** **20 24 11.7 +0.1**
SCM pmax pmax
comp=Z,35nm,1.2s
SCM **Sheep Creek Mo** **52.02 35** P **P** **20 24 11.7 +0.1**
baz=273
HDA **Harding Lake** **52.08 32** P **P** **20 24 12.5 +0.6**
HDA IAmb IAmb 20 24 37.9
comp=Z,12nm,0.8s
HDA **Harding Lake** **52.08 32** P **P** **20 24 12.4 +0.6**
baz=272,SNR=5.3
IL31 **52.10 31** P **P** **20 24 12.6 +0.7**
ILAR **Eielson Array** **52.10 31** P **P** **20 24 12.4 +0.5**
comp=Z,4.8nm,0.7s,baz=267,slow=6.0,SNR=58
ILAR LR LR 20 47 31.1
comp=Z,76nm,20.8s,baz=264,slow=37
comp=Z,4.8nm,0.7s
ILAR **Eielson Array** **52.10 31** P **P** **20 24 12.0 0.0**
P23K **Montague Islan** **52.12 37** P **P** **20 24 13.0 +0.8**
baz=275
GLI **Glacier Island** **52.20 36** P **P** **20 24 13.6 +0.8**
baz=274
D25K **Kavik River** **52.30 25** P **P** **20 24 14.8 +1.3**
baz=268,SNR=7.9
G25K **Bearman Lake** **52.39 29** P **P** **20 24 15.2 +1.1**
baz=271
H25K **Birch Creek** **52.51 29** P **P** **20 24 16.4 +1.5**
baz=271
M24K **Tolsona, Glenn** **52.55 35** P **P** **20 24 15.9 +0.5**
baz=274
F25K **Christian Rive** **52.56 28** P **P** **20 24 16.8 +1.4**
baz=270,SNR=9.3
E25K **Arctic Village** **52.58 27** P **P** **20 24 17.3 +1.7**
baz=270,SNR=5.8
K24K **Donnelly Dome** **52.62 32** P **P** **20 24 16.9 +1.0**
baz=273
PRP **Porcupine Dome** **52.65 30** P **P** **20 24 17.5 +1.3**
PRP **Porcupine Dome** **52.65 30** P **P** **20 24 17.1 +0.9**
baz=272
KLU **Klutina** **52.72 35** P **P** **20 24 17.8 +1.2**
baz=275
J25K **Salcha River,** **52.76 31** P **P** **20 24 18.0 +1.1**
baz=273
PAX **Paxson** **52.81 33** P **P** **20 24 18.7 +1.3**
baz=274
EYAK **Cordova Ski Ar** **52.89 37** P **P** **20 24 18.8 +1.0**
baz=276
BMAR **Burnt Mountain** **52.97 28** P **P** **20 24 20.7 +2.3**
HARP **HAARP** **53.00 34** P **P** **20 24 19.4 +0.7**
baz=275
RIDG **Independent Ri** **53.04 32** P **P** **20 24 19.7 +0.7**
baz=274
F26K **Sheenjek River** **53.13 28** P **P** **20 24 21.5 +1.9**
baz=272,SNR=10
DZA **Taraz** **53.18 301** *i*P **P** **20 24 20.6 +0.2**
DZA pmax pmax
comp=Z,20nm,0.7s
DZA **Taraz** **53.18 301** *i*P **P** **20 24 20.6 +0.2**
comp=Z,20nm,0.7s,baz=301

C27K **Jago River** **53.25 25** P **P** **20 24 21.7 +1.3**
baz=271
G26K **Porcupine Rive** **53.30 28** P **P** **20 24 22.8 +2.0**
baz=273
N25K **Chitina, Valde** **53.34 35** P **P** **20 24 22.3 +1.0**
baz=276
SCRK **Sand Creek** **53.40 32** P **P** **20 24 22.4 +0.7**
baz=275,SNR=8.2
BMRM **Bremner River** **53.40 36** P **P** **20 24 22.7 +0.9**
baz=276
J26L **Joseph Creek** **53.54 31** P **P** **20 24 23.5 +0.8**
J26L IAmb IAmb 20 24 43.6
comp=Z,37nm,2.0s
J26L **Joseph Creek** **53.54 31** P **P** **20 24 23.4 +0.8**
baz=275,SNR=5.9
KAIM **Kayak Island** **53.62 37** P **P** **20 24 24.3 +1.1**
baz=277
I26K **Coal Creek Min** **53.65 30** P **P** **20 24 24.1 +0.8**
I26K **Coal Creek Min** **53.65 30** P **P** **20 24 24.9 +1.5**
baz=274
KK31 **Karatay Array** **53.71 301** P **P** **20 24 24.9 +0.7**
KK31 **Karatay Array** **53.71 301** P **P** **20 24 24.9 +0.7**
KK31 pmax pmax
comp=Z,61nm,0.9s
KKAR **Karatay Array** **53.71 301** P **P** **20 24 24.7 +0.5**
KKAR **Karatay Array** **53.71 301** P **P** **20 24 24.7 +0.5**
L26K **Log Cabin Wild** **53.77 33** P **P** **20 24 25.7 +1.3**
baz=276
DRK **Karamyk** **53.82 297** P **P** **20 24 26.0 +0.6**
M26K **Nabesna, AK** **54.00 34** P **P** **20 24 27.1 +1.1**
baz=277
E27K **Coleen River** **54.07 27** P **P** **20 24 28.0 +1.6**
baz=274
MCARA **McCarthy VSAT** **54.11 35** P **P** **20 24 28.1 +1.2**
baz=277
FITZ **Fitzroy Crossi** **54.14 197** LR LR 20 48 51.6
comp=Z,46nm,18.9s,baz=38,slow=37
FITZ **Fitzroy Crossi** **54.14 197** P **P** **20 24 27.4 0.0**
FITZ IAmb IAmb 20 24 28.8
comp=Z,19nm,0.8s
FITZ **Fitzroy Crossi** **54.14 197** P **P** **20 24 27.7 +0.3**
G27K **Doyon Strip** **54.14 29** P **P** **20 24 28.7 +1.7**
baz=275
K27K **Chicken** **54.23 32** P **P** **20 24 29.3 +1.6**
K27K IAmb IAmb 20 24 48.2
comp=Z,18nm,1.2s
K27K **Chicken** **54.23 32** P **P** **20 24 29.3 +1.6**
baz=276
H27K **Steamboat Moun** **54.24 29** P **P** **20 24 29.7 +1.9**
baz=275
WB0 **Warramunga Arr** **54.25 187** P **P** **20 24 28.2 -0.1**
I27K **Kandik River** **54.27 30** P **P** **20 24 29.5 +1.5**
baz=276
IUG **luzhnay** **54.31 300***c i*P **P** **20 24 29.7 +1.0**
IUG **luzhnay** **54.31 300**⇑*i*P **P** **20 24 29.7 +1.0**
baz=300
WRAB **Tennant Creek** **54.42 187***ce*P **P** **20 24 29.4 -0.1**
WRAB pmax pmax
comp=Z,126nm,1.0s
WRAB **Tennant Creek** **54.42 187** P **P** **20 24 29.6 +0.1**
WRAB **Tennant Creek** **54.42 187** P **P** **20 24 29.0 -0.5**
WRAB pP **pP** **20 24 39.4 -1.7**
WRA **Warramunga Arr** **54.43 187** P **P** **20 24 28.7 -0.9**
comp=Z,86nm,0.8s,baz=3.7,slow=7.6,SNR=222
WRA PcP **PcP** **20 25 33.6 +0.8**
comp=Z,4.5nm,0.7s,baz=359,slow=4.2,SNR=1.4
WRA ScP **ScP** **20 29 25.6 -1.9**
comp=Z,6.0nm,0.9s,baz=4.2,slow=4.6,SNR=11
WRA S **S** **20 32 00.1 -5.0**
comp=Z,1.1nm,0.8s,baz=13,slow=15,SNR=5.1
comp=Z,86nm,0.8s
WRA **Warramunga Arr** **54.43 187** P **P** **20 24 28.6 -0.9**
WRA **Warramunga Arr** **54.43 187** *i* P **P** **20 24 28.7 -0.9**
WRA pmax pmax
comp=Z,88nm,0.8s
L27K **Beaver Creek,** **54.46 33** P **P** **20 24 31.2 +1.9**
baz=277,SNR=6.1
BCAR **Beaver Creek A** **54.47 33** P **P** **20 24 31.0 +1.5**
M27K **Edge Creek, AK** **54.52 34** P **P** **20 24 31.6 +1.6**
baz=278
EGAK **Eagle** **54.55 31** P **P** **20 24 30.5 +0.6**
EGAK **Eagle** **54.55 31** P **P** **20 24 30.8 +0.9**
baz=276
CTA **Charters Tower** **54.56 173** P **P** **20 24 30.9 +0.5**
CTAO **Charters Tower** **54.56 173** P **P** **20 24 31.4 +0.9**
CTAO IAmb IAmb 20 24 57.2
comp=Z,25nm,1.2s
CTAO **Charters Tower** **54.56 173** P **P** **20 24 31.4 +0.9**
CTAO pmax pmax
comp=Z,25nm,1.3s
CTAO **Charters Tower** **54.56 173** P **P** **20 24 31.0 +0.5**
NIL **Nilore** **54.65 290** P **P** **20 24 31.4 +0.2**
NIL **Nilore** **54.65 290** P **P** **20 24 31.4 +0.2**
NIL pmax pmax
comp=Z,97nm,0.9s
NIL **Nilore** **54.65 290** P **P** **20 24 32.3 +1.2**
NIL **Nilore** **54.65 290** P **P** **20 24 31.3 +0.1**
QIS **Mount Isa** **54.74 181** P **P** **20 24 31.8 0.0**
MESA **MESA** **54.81 37** P **P** **20 24 32.5 +0.4**
baz=279
GAR **Garm** **55.06 297** P **P** **20 24 34.4 +0.1**
TAS **Tashkent** **55.08 300** P **P** **20 24 34.9 +0.7**
TAS **Tashkent** **55.08 300** P **P** **20 24 34.9 +0.7**
TAS pmax pmax
comp=Z,88nm,0.6s
YUK3 **Moose Creek** **55.27 35** P **P** **20 24 36.1 +0.6**
baz=279
DAWY **Dawson** **55.40 32** P **P** **20 24 37.0 +0.8**
baz=279
PINM **Pinnacle** **55.66 37** P **P** **20 24 38.7 +0.5**
baz=281
I29M **Ogilvie Camp,** **55.67 30** P **P** **20 24 39.7 +1.6**
I29M IAmb IAmb 20 24 59.0
comp=Z,10nm,0.9s
I29M **Ogilvie Camp,** **55.67 30** P **P** **20 24 39.1 +1.1**
baz=279,SNR=6.7
CHGR **Chuyangaron** **56.03 297** P **P** **20 24 41.4 +0.2**
CHGR **Chuyangaron** **56.03 297** P **P** **20 24 41.4 +0.2**
CHGR pmax pmax
comp=Z,467nm,0.9s
M29M **Somme Creek** **56.08 34** P **P** **20 24 42.3 +1.2**
baz=280
EPYK **Eagle Plains** **56.15 29** P **P** **20 24 43.3 +1.8**
EPYK IAmb IAmb 20 24 44.6
comp=Z,22nm,0.7s
EPYK **Eagle Plains** **56.15 29** P **P** **20 24 42.0 +0.5**
baz=279,SNR=16
YUK6 **Outpost Mounta** **56.41 35** P **P** **20 24 45.5 +1.8**
baz=282
O29M **Mount Kennedy** **56.44 36** P **P** **20 24 45.0 +1.3**
baz=282
HYT **Haines Junctio** **56.85 35** P **P** **20 24 48.4 +1.8**
HYT IAmb IAmb 20 25 05.5
comp=Z,41nm,1.7s
HYT **Haines Junctio** **56.85 35** P **P** **20 24 47.8 +1.2**
baz=283
P29M **Windy Craggy** **56.99 37** P **P** **20 24 48.8 +1.3**
baz=283
INK **Inuvik** **57.03 26** P **P** **20 24 48.3 +0.7**
comp=Z,4.6nm,0.7s,baz=261,slow=10,SNR=8.0
INK LR LR 20 50 10.7
comp=Z,80nm,21.6s,baz=253,slow=37
comp=Z,4.6nm,0.7s
INK **Inuvik** **57.03 26** P **P** **20 24 48.6 +0.9**
INK **Inuvik** **57.03 26** P **P** **20 24 48.6 +0.9**
INK pmax pmax
comp=Z,5.0nm,0.8s
INK **Inuvik** **57.03 26** P **P** **20 24 48.3 +0.7**
baz=281
P30M **Million Dollar** **57.27 36** P **P** **20 24 50.0 +0.4**
baz=283
HYBB **Hyderabad (bro** **57.32 269** *e*P **P** **20 24 49.8 -0.7**
HYBB *e*S **S** **20 32 45.3 +1.3**
N31M **Braeburn, Yuko** **57.52 34** P **P** **20 24 52.0 +0.7**
baz=283
KBL **Kabul** **57.57 292** P **P** **20 24 51.5 -0.8**
KBL **Kabul** **57.57 292** P **P** **20 24 51.5 -0.8**
KBL pmax pmax
comp=Z,62nm,0.9s
KBL **Kabul** **57.57 292** P **P** **20 24 52.3 0.0**
SNR=27
KBL P **P** **20 24 52.3 0.0**
SNR=27
PLBC **Pleasant Camp** **57.72 37** P **P** **20 24 53.7 +1.1**
baz=284
ARU **Arti** **57.73 319** P **P** **20 24 52.7 0.0**

comp=Z,40nm,0.5s,baz=78,slow=4.2,SNR=125
ARU LR LR 20 52 20.7
comp=Z,122nm,18.6s,baz=74,slow=39
comp=Z,40nm,0.5s
ARU **Arti** **57.73 319** P **P** **20 24 53.0 +0.2**
ARU **Arti** **57.73 319***c i*P **P** **20 24 53.0 +0.2**
ARU 20 25 43.6
ARU 20 27 00.5
ARU S **S** **20 32 50.4 +2.2**
ARU SS **SS** **20 36 34.6 -3.9**
ARU pmax pmax
comp=Z,69nm,0.8s
ARU MLR MLR
comp=Z,194nm,16.0s
ARU **Arti** **57.73 319** P **P** **20 24 53.0 +0.2**
ARU pP **pP** **20 25 04.1 -0.4**
M31M **Drury Creek, Y** **57.99 33** P **P** **20 24 55.3 +0.8**
M31M IAmb IAmb 20 25 31.8
comp=Z,12nm,1.1s
M31M **Drury Creek, Y** **57.99 33** P **P** **20 24 55.4 +0.8**
baz=284
WHY **Whitehorse** **58.14 35** P **P** **20 24 56.9 +1.2**
baz=284
AS31 **Alice Springs** **58.16 187** P **P** **20 24 56.2 +0.1**
AS31 IAmb IAmb 20 24 58.2
comp=Z,6.7nm,0.6s
ASAR **Alice Springs** **58.16 187** P **P** **20 24 56.1 0.0**
comp=Z,18nm,0.9s,baz=19,slow=12,SNR=114
ASAR PcP **PcP** **20 25 48.5 +1.2**
comp=Z,3.6nm,0.8s,baz=5.9,slow=3.3,SNR=4.8
ASAR ScP **ScP** **20 29 42.6 -1.2**
comp=Z,1.1nm,0.8s,baz=16,slow=3.1,SNR=4.5
ASAR S **S** **20 32 51.2 -3.3**
comp=Z,1.2nm,0.8s,baz=21,slow=22,SNR=9.1
comp=Z,18nm,0.9s
FARO **Faro, Yukon** **58.46 33** P **P** **20 24 59.1 +1.3**
FARO IAmb IAmb 20 25 24.8
comp=Z,9.6nm,1.0s
MBWA **Marble Bar** **58.72 203** P **P** **20 24 59.6 -0.4**
MBWA IAmb IAmb 20 25 03.6
comp=Z,12nm,0.8s
MBWA **Marble Bar** **58.72 203** P **P** **20 24 59.5 -0.4**
MBWA **Marble Bar** **58.72 203** P **P** **20 24 59.8 -0.2**
MBWA **Marble Bar** **58.72 203** P **P** **20 24 57.7 -2.3**
ABKAR **Akbulak array** **58.96 311** P **P** **20 25 01.7 +0.3**
ABKAR **Akbulak array** **58.96 311** P **P** **20 25 01.8 +0.3**
ABKAR IAmb IAmb 20 25 02.8
comp=Z,64nm,0.9s
P32M **Atlin** **58.98 36** P **P** **20 25 02.1 +0.5**
baz=286
PSA00 **Pilbara Seismi** **59.07 202** P **P** **20 25 02.0 -0.4**
PSA00 IAmb IAmb 20 25 09.4
comp=Z,11nm,0.8s
PSA00 **Pilbara Seismi** **59.07 202** P **P** **20 25 01.3 -1.1**
PSA00 IAmb IAmb 20 25 03.5
comp=Z,9.5nm,1.1s
PSA00 **Pilbara Seismi** **59.07 202** P **P** **20 25 03.0 +0.6**
AKTO **Aktyubinsk** **59.77 313** P **P** **20 25 06.8 -0.3**
comp=Z,34nm,0.9s,baz=80,slow=5.8,SNR=48
comp=Z,34nm,0.9s
C36M **Paulatuk** **60.09 24** P **P** **20 25 10.0 +1.1**
C36M IAmb IAmb 20 25 11.4
comp=Z,17nm,0.7s
C36M **Paulatuk** **60.09 24** P **P** **20 25 09.8 +0.9**
baz=288
WRKA **Warakurna** **60.30 193** P **P** **20 25 11.3 +0.4**
EIDS **Eidsvold** **60.39 169** P **P** **20 25 11.2 -0.3**
CRAG **Craig** **60.52 41** P **P** **20 25 12.9 +0.9**
baz=289
PALK **Pallekele** **61.02 258** P **P** **20 25 14.2 -1.9**
comp=Z,7.3nm,0.7s,baz=110,slow=6.0,SNR=4.7
PALK LR LR 20 52 34.3
comp=Z,48nm,19.7s,baz=159,slow=37
comp=Z,7.3nm,0.7s
PALK **Pallekele** **61.02 258** P **P** **20 25 15.8 -0.3**
PALK IAmb IAmb 20 25 44.1
comp=Z,74nm,1.6s
PALK **Pallekele** **61.02 258** P **P** **20 25 15.8 -0.3**
PALK pmax pmax
comp=Z,75nm,1.6s
DLBC **Dease Lake** **61.15 37** LR LR 20 51 51.6
comp=Z,31nm,21.4s,baz=301,slow=36
DLBC **Dease Lake** **61.15 37** P **P** **20 25 17.2 +0.7**
baz=290
DZM **Mont Dzumac** **61.46 152** *e*LR LR 20 43 34.9
comp=Z,928nm,24.9s
T35M **Bob Quinn** **61.53 39** P **P** **20 25 20.3 +1.3**
baz=290
KIRV **Kirov** **61.78 324** P **P** **20 25 20.8 +0.3**
comp=Z,124nm,0.6s,baz=69,slow=2.2,SNR=56
KIRV LR LR 20 54 18.4
comp=Z,198nm,19.6s,baz=66,slow=38
comp=Z,124nm,0.6s
KIRV **Kirov** **61.78 324***ce*P **P** **20 25 21.0 +0.5**
INKA **Innaminka** **61.89 180** P **P** **20 25 22.3 +0.8**
OUENC **Ouen Island, N** **61.93 152** P **P** **20 25 24.2 +2.3**
OUENC IAmb IAmb 20 25 26.8
comp=Z,10nm,0.8s
OOD **Oodnadatta** **62.10 185** P **P** **20 25 23.6 +0.7**
HOPEN **Hopen** **62.31 346** *e*P **P** **20 25 24.7 +0.9**
PRGR **Permogore** **62.45 328** *e*P **P** **20 25 24.8 -0.2**
PRGR *e**SP **pwP** **20 25 39.5 -1.1**
ALE **Alert** **62.70 3** P **P** **20 25 27.3 +0.9**
ALE sP **sP** **20 25 43.5 +0.7**
PCHI **Peechi** **62.74 264** *e*P **P** **20 25 26.9 -0.7**
HRA **Herat** **62.79 294** P **P** **20 25 28.3 +0.3**
EUNU **Eureka** **62.83 8** P **P** **20 25 28.1 +0.7**
EUNU IAmb IAmb 20 25 28.8
comp=Z,15nm,0.8s
SPA0 **Spitsbergen Ar** **62.86 349** *e*P **P** **20 25 28.6 +1.1**
SPB2 **Spitsbergen Ar** **62.86 349** P **P** **20 25 28.4 +0.9**
SPB2 IAmb IAmb 20 25 30.6
comp=Z,26nm,0.7s
SPITS **Spitsbergen Ar** **62.86 349** LR LR 20 55 40.1
comp=Z,144nm,18.8s,baz=14,slow=39
SPITS **Spitsbergen Ar** **62.86 349** P **P** **20 25 28.9 +1.4**
SPITS pmax pmax
comp=Z,21nm,0.8s
KBS **Kingsbay** **63.02 350** P **P** **20 25 30.0 +1.4**
KBS IAmb IAmb 20 25 31.1
comp=Z,33nm,0.8s
KBS **Kingsbay** **63.02 350***ce*P **P** **20 25 29.6 +1.1**
KBS pmax pmax
comp=Z,27nm,0.7s
KBS **Kingsbay** **63.02 350** *i* P **P** **20 25 28.0 -0.6**
KBS **Kingsbay** **63.02 350** *e*P **P** **20 25 29.6 +1.1**
KBS **Kingsbay** **63.02 350** P **P** **20 25 28.5 -0.1**
NOR **Nord** **63.54 356** *i* P **P** **20 25 30.8 -1.1**
NOR IAmb IAmb 20 25 32.9
comp=Z,6.9nm,0.8s
HSPB **Hornsund (broa** **63.76 348** *e*P **P** **20 25 34.4 +1.0**
LVZ **Lovozero** **64.09 336** P **P** **20 25 35.7 -0.1**
LVZ **Lovozero** **64.09 336** P **P** **20 25 35.7 -0.1**
LVZ pmax pmax
comp=Z,100nm,1.8s
MEEK **Meekatharra** **64.20 202** P **P** **20 25 36.4 -0.5**
GEYT **Alibeck** **64.35 300** P **P** **20 25 37.6 -0.4**
comp=Z,36nm,0.8s,baz=59,slow=5.7,SNR=42
GEYT LR LR 20 55 42.7
comp=Z,216nm,20.0s,baz=64,slow=38
comp=Z,36nm,0.8s
GEYT **Alibeck** **64.35 300** P **P** **20 25 38.6 +0.6**
GEYT IAmb IAmb 20 25 39.7
comp=Z,39nm,0.8s
GYA0B **ALIBECK ARRAY** **64.35 300** P **P** **20 25 38.6 +0.6**
GYA0B IAmb IAmb 20 25 39.7
comp=Z,34nm,0.8s
BBB **Bella Bella** **64.48 43** LR LR 20 49 17.3
comp=Z,85nm,21.6s,baz=273,slow=32
LCRK **Leigh Creek** **64.62 182** P **P** **20 25 40.7 +1.2**
APA **Apatity** **64.67 336**⇑*i*P **P** **20 25 38.5 -1.0**
APA pmax pmax
comp=Z,22nm,0.8s
APA MLR MLR
comp=Z,400nm,15.0s
MULG **Mulgathing** **64.70 186** P **P** **20 25 40.7 +0.6**
BJO1 **Bjornoya** **64.71 345** *e*P **P** **20 25 40.4 +0.7**
BELG **Belogornoye** **65.10 318** P **P** **20 25 42.5 -0.1**
comp=Z,137nm,0.9s,baz=64,slow=0.8,SNR=26
comp=Z,137nm,0.9s
RES **Resolute Bay** **65.27 14** LR LR 20 56 57.2
comp=Z,58nm,20.3s,baz=264,slow=38
RES **Resolute Bay** **65.27 14** P **P** **20 25 43.9 +0.6**
RES IAmb IAmb 20 25 47.1
comp=Z,17nm,0.7s
RES **Resolute Bay** **65.27 14** P **P** **20 25 43.9 +0.6**

RES pmax pmax
comp=Z,17nm,0.7s
KLMR Klimovskoe 65.47 328 *e*P **P 20 25 43.9 -0.9**
KLMR *e* 20 28 07.3
KLMR pmax pmax
comp=Z,32nm,0.7s
KLMR Klimovskoe 65.47 328 *e*P **P 20 25 43.9 -0.9**
KLMR AMP 20 25 45.5
comp=Z,32nm,0.7s
KLMR *e*PP **PP 20 28 07.4 -1.3**
KEV Kevo 65.53 339 P **P 20 25 45.3 +0.3**
KEV IAmb IAmb 20 27 36.5
comp=Z,62nm,1.7s
KEV Kevo 65.53 339 P **P 20 25 45.3 +0.3**
KEV pmax pmax
comp=Z,62nm,1.7s
CMSA Cobar Meteorol 65.86 175 P **P 20 25 48.7 +1.1**
HAMF Hammerfest 65.95 341 *e*P **P 20 25 47.3 -0.4**
FORT Forrest 65.95 192 P **P 20 25 49.0 +0.8**
FORT Forrest 65.95 192 P **P 20 25 48.6 +0.4**
STKA Stephens Creek 66.02 179 P **P 20 25 48.9 +0.2**
comp=Z,17nm,0.8s,baz=341,slow=7.3,SNR=20
comp=Z,17nm,0.8s
STKA Stephens Creek 66.02 179 P **P 20 25 49.4 +0.7**
STKA Stephens Creek 66.02 179 *i*P **P 20 25 48.6 0.0**
STKA Stephens Creek 66.02 179 P **P 20 25 49.2 +0.6**
ARA0 ARCESS Array S 66.08 340 *e*P **P 20 25 49.4 +0.7**
ARCES ARCESS Array B 66.08 340 P **P 20 25 49.0 +0.3**
comp=Z,11nm,0.7s,baz=60,slow=7.6,SNR=33
ARCES LR LR 20 57 50.6
comp=Z,104nm,21.5s,baz=59,slow=39
comp=Z,11nm,0.7s
ARCES ARCESS Array B 66.08 340 P **P 20 25 49.2 +0.5**
ARCES IAmb IAmb 20 25 49.7
comp=Z,15nm,0.8s
ARCES ARCESS Array B 66.08 340 P **P 20 25 49.2 +0.5**
ARCES pmax pmax
comp=Z,15nm,0.9s
AFI Afiamalu 66.19 128 LR LR 20 50 45.1
comp=Z,198nm,18.9s,baz=312,slow=32
YKA Yellowknife Ar 66.43 29 P **P 20 25 50.9 -0.1**
comp=Z,3.9nm,0.7s,baz=300,slow=6.3,SNR=28
YKA LR LR 20 57 18.3
comp=Z,22nm,20.4s,baz=303,slow=38
comp=Z,3.9nm,0.7s
YKA Yellowknife Ar 66.43 29 P **P 20 25 51.0 0.0**
YKA Yellowknife Ar 66.43 29 *i*P **P 20 25 51.5 +0.5**
YKA pmax pmax
comp=Z,4.0nm,0.7s
BBOO Buckleboo 67.06 184 P **P 20 25 55.7 +0.5**
BBOO IAmb IAmb 20 25 57.9
comp=Z,28nm,0.8s
BBOO Buckleboo 67.06 184 P **P 20 25 55.9 +0.6**
MORW Morawa 67.27 203 P **P 20 25 56.4 -0.2**
MORW IAmb IAmb 20 25 58.2
comp=Z,34nm,0.8s
MORW Morawa 67.27 203 P **P 20 25 56.8 +0.2**
JETT Jettan, Norway 67.50 341 *e*P **P 20 25 58.1 +0.4**
HTT Hallett 67.57 181 P **P 20 25 59.4 +0.9**
TULEG Thule 67.73 7 P **P 20 25 58.7 -0.3**
TULEG Thule 67.73 7 *i*P **P 20 25 57.9 -1.1**
TULEG IAmb IAmb 20 26 18.2
comp=Z,67nm,1.3s
TRO Tromso 67.85 341 *e*P **P 20 25 59.9 0.0**
DAG Danmarks Havn 68.23 355 *i*P **P 20 26 01.4 -0.7**
DAG IAmb IAmb 20 26 03.2
comp=Z,22nm,0.8s
CLRS Cowichan Lake 68.24 45 P **P 20 26 04.0 +1.3**
CLRS IAmb IAmb 20 26 21.8
comp=Z,24nm,1.4s
BLDU Ballidu 68.49 202 P **P 20 26 04.5 +0.2**
MOS Moscow 68.80 324 *e*P **P 20 26 05.6 -0.4**
MOS *e* 20 26 17.5
MOS *e*S **S 20 35 03.7 -2.6**
MOS pmax pmax
comp=Z,101nm,1.0s
MOS pmax pmax
comp=Z,100nm,1.2s
NLWA Neilton Lookou 69.06 46 P **P 20 26 09.6 +1.7**
NLWA IAmb IAmb 20 26 24.1
comp=Z,33nm,1.5s
KLBR Kellerberrin 69.09 201 P **P 20 26 08.3 +0.3**
MAK Makhachkala 69.37 308 *e*P **P 20 26 09.5 -0.3**
MAK *e*S **S 20 35 13.9 +0.4**
MAK *e*SS **SS 20 39 40.4 -0.1**
MAK pmax pmax
comp=Z,106nm,1.5s
MAK MLR MLR
comp=Z,407nm,19.0s
OBN Obninsk 69.64 323 P **P 20 26 11.1 -0.1**
LPSR Galich'ya Gora 69.72 320 *e*P **P 20 26 11.5 -0.3**
LPSR pmax pmax
comp=Z,120nm,0.8s
CAN Canberra 69.91 173 P **P 20 26 14.7 +1.6**
CAN IAmb IAmb 20 28 42.7
comp=Z,68nm,1.7s
CAN Canberra 69.91 173 P **P 20 26 14.7 +1.6**
CAN pmax pmax
comp=Z,68nm,1.7s
MUN Mundaring 69.92 202 P **P 20 26 13.3 +0.2**
STEI Steigen 69.99 341 *e*P **P 20 26 13.5 +0.3**
VORR Voronezh 70.05 319⇓ *i*P **P 20 26 14.2 +0.4**
VORR pmax pmax
comp=Z,31nm,1.1s
VSR Storozhevoye 70.30 319 *e*P **P 20 26 15.4 0.0**
VSR pmax pmax
comp=Z,100nm,0.8s
GROC Groznyy 70.36 309 *e*P **P 20 26 16.0 +0.1**
GROC *e**PP **sP 20 26 32.2 -0.2**
GROC *e* 20 26 37.0
FAUS Fauske 70.36 340 *e*P **P 20 26 15.9 +0.4**
NWAO Narrogin (SRO) 70.50 201 P **P 20 26 17.1 +0.5**
NWAO Narrogin (SRO) 70.50 201 P **P 20 26 17.1 +0.5**
NWAO pmax pmax
comp=Z,71nm,0.7s
NWAO Narrogin (SRO) 70.50 201 P **P 20 26 16.9 +0.3**
NWAO Narrogin (SRO) 70.50 201 P **P 20 26 16.4 -0.2**
NWAO Narrogin (SRO) 70.50 201 P **P 20 26 16.5 -0.1**
FIA1 FINESS Array S 70.67 332 P **P 20 26 17.6 +0.1**
FIA1 IAmb IAmb 20 26 18.6
comp=Z,34nm,0.8s
FINES FINESS Array B 70.68 332 P **P 20 26 17.6 +0.2**
comp=Z,24nm,0.7s,baz=64,slow=6.3,SNR=78
FINES LR LR 21 00 14.6
comp=Z,91nm,18.8s,baz=43,slow=38
comp=Z,24nm,0.7s
WSAR Wadi Sarin 70.72 285 P **P 20 26 18.8 +0.4**
comp=Z,43nm,0.8s,baz=98,slow=8.1,SNR=27
WSAR LR LR 21 01 16.6
comp=Z,75nm,19.5s,baz=150,slow=39
comp=Z,43nm,0.8s
WSAR Wadi Sarin 70.72 285 P **P 20 26 19.4 +1.0**
WBK Wadi Bani Khal 70.77 285 P **P 20 26 19.4 +0.7**
BIDO Bidbid 70.98 286 P **P 20 26 21.5 +1.5**
SNR=8.4
BIDO P **P 20 26 21.5 +1.5**
SNR=8.4
LTY Liberty 71.03 45 P **P 20 26 21.1 +1.1**
H04D Lebanon 71.15 49 P **P 20 26 21.8 +1.1**
baz=300
GOF Gofitskoye 71.17 312⇓ *i*P **P 20 26 21.4 +0.6**
GOF pmax pmax
comp=Z,276nm,0.7s
I03D Drain, OR 71.18 50 P **P 20 26 22.1 +1.2**
baz=300
BANOM Banah 71.23 289 P **P 20 26 22.2 +0.7**
BANOM P **P 20 26 22.2 +0.7**
BANOM Banah 71.23 289 *i*P **P 20 26 22.3 +0.7**
SNR=6.2
SMDO Samad 71.28 285 P **P 20 26 22.5 +0.5**
SMDO P **P 20 26 22.5 +0.5**
SHME Shamm 71.29 289 P **P 20 26 22.7 +0.8**
SNR=5.5
SHME Shamm 71.29 289 *i*P **P 20 26 22.4 +0.6**
SNR=14
MOR8 Moi Rana 71.46 340 *e*P **P 20 26 21.4 -0.7**
K02D Willamette Mer 71.48 51 P **P 20 26 23.6 +0.8**
baz=300
KONS Konsvik 71.59 340 *e*P **P 20 26 24.1 +1.1**
HOQ Hoqain 71.60 286 P **P 20 26 24.4 +0.6**
SNR=8.6
NCK Nalchik 71.61 310 *i*P **P 20 26 23.7 +0.2**
NCK pmax pmax
comp=Z,62nm,0.9s
MASF Masafi 71.62 288 P **P 20 26 24.8 +0.9**
MSFE Esma-Masafi 71.62 288 *i*P **P 20 26 24.6 +0.7**
SNR=7.0
I04A Tendick Farm, 71.72 49 P **P 20 26 24.1 -0.1**
baz=300
ZEI Tsey 71.77 310 *e*P **P 20 26 24.1 -0.6**
ZEI pmax pmax
comp=Z,51nm,0.9s
UOSS Minazif 71.79 288 P **P 20 26 25.0 +0.1**
UOSS IAmb IAmb 20 26 26.5
comp=Z,31nm,0.8s
UOSS Minazif 71.79 288 P **P 20 26 25.4 +0.5**
UOSS P **P 20 26 25.4 +0.5**
UOSS Minazif 71.79 288 *i*P **P 20 26 25.0 +0.1**
SNR=9.5
UOSS Minazif 71.79 288 P **P 20 26 24.9 +0.1**
L02F Cave Junction 71.83 51 P **P 20 26 25.1 +0.3**
baz=300
HATD Hatta, Dubai 71.91 288 P **P 20 26 26.6 +1.0**
SNR=6.9
HATD P **P 20 26 26.6 +1.0**
SNR=6.9
HATD Hatta, Dubai 71.91 288 *i*P **P 20 26 26.1 +0.5**
SNR=16
KBZ Khabaz 71.93 311 P **P 20 26 26.3 +0.9**
comp=Z,122nm,0.8s,baz=67,slow=2.9,SNR=197
KBZ LR LR 21 02 08.8
comp=Z,142nm,19.5s,baz=47,slow=39
KBZ Khabaz 71.93 311 *ce*P **P 20 26 26.2 +0.9**
KBZ pmax pmax
comp=Z,154nm,0.9s
KVAR Kislovodsk Arr 71.94 311 P **P 20 26 26.7 +1.1**
comp=Z,52nm,0.8s,baz=263,slow=22,SNR=36
KVAR LR LR 21 01 33.3
comp=Z,92nm,20.6s,baz=272,slow=39
comp=Z,52nm,0.8s
KIV Kislovodsk 71.94 311⇑ P **P 20 26 26.6 +1.0**
KIV Kislovodsk 71.94 311 P **P 20 26 26.6 +1.0**
KIV Kislovodsk 71.94 311 *e*P **P 20 26 25.7 +0.1**
KIV pmax pmax
comp=Z,208nm,1.0s
KIV MLR MLR
comp=Z,50nm,18.0s
KIV Kislovodsk 71.94 311 P **P 20 26 26.9 +1.3**
KIV P **P 20 26 26.9 +1.3**
KIV Kislovodsk 71.94 311 *i*P **P 20 26 26.7 +1.0**
SNR=69
ASHO Ashiyiah 72.04 288 P **P 20 26 27.0 +0.6**
SNR=6.8
ASHO Ashiyiah 72.04 288 *i*P **P 20 26 26.8 +0.4**
SNR=16
SHA1 Shidzhatmaz 72.07 311 *c*/P **P 20 26 27.0 +0.4**
MEF Metsahovi 72.08 332 *e*P **P 20 26 26.5 +0.6**
I05D Terrebonne, OR 72.11 48 P **P 20 26 27.3 +0.8**
baz=301
BSY Bisya 72.11 286 P **P 20 26 27.7 +0.8**
SNR=6.3
C09A Chrisman Ranch 72.14 44 P **P 20 26 27.6 +1.0**
ONI Oni 72.16 310 P **P 20 26 27.8 +0.9**
ONI IAmb IAmb 20 26 29.3
comp=Z,51nm,0.9s
ONI Oni 72.16 310 P **P 20 26 27.8 +0.9**
ONI pmax pmax
comp=Z,51nm,0.9s
J04D Umpqua Nationa 72.19 50 P **P 20 26 28.3 +1.1**
baz=301
NAZ Nazwa, Dubai 72.20 288 P **P 20 26 28.0 +0.7**
NAZ Nazwa, Dubai 72.20 288 *i*P **P 20 26 27.5 +0.2**
SNR=6.4
VSU Vasula 72.22 330 P **P 20 26 27.2 +0.4**
VSU Vasula 72.22 330 *e*P **P 20 26 27.5 +0.7**
NEY Neytrino 72.28 311 *i*P **P 20 26 27.8 0.0**
NEY pmax pmax
comp=Z,1.0nm,0.7s
ARQ Araqi 72.35 286 P **P 20 26 29.2 +0.9**
SNR=7.9
ARQ P **P 20 26 29.2 +0.9**
SNR=7.9
FAQ Al Faqa, Dubai 72.37 288 P **P 20 26 28.6 +0.2**
FAQ P **P 20 26 28.6 +0.2**
FAQ Al Faqa, Dubai 72.37 288 *i*P **P 20 26 28.5 +0.1**
SNR=13
MHTO MHTO 72.39 284 P **P 20 26 29.0 +0.5**
SNR=5.9
JMIC Jan Mayen 72.50 350 LR LR 20 59 31.8
comp=Z,23nm,22.0s,baz=302,slow=37
NEW Newport 72.55 43 LR LR 20 53 58.3
comp=Z,48nm,21.5s,baz=320,slow=32
NEW Newport 72.55 43 P **P 20 26 29.5 +0.4**
NEW Newport 72.55 43 P **P 20 26 29.5 +0.4**
NEW pmax pmax
comp=Z,7.0nm,0.7s
NEW Newport 72.55 43 P **P 20 26 30.0 +0.9**
baz=302,SNR=6.8
GNI Garni 72.56 307 P **P 20 26 30.7 +1.2**
comp=Z,27nm,0.8s,baz=91,slow=2.1,SNR=18
GNI LR LR 21 01 11.5
comp=Z,256nm,20.1s,baz=60,slow=38
comp=Z,27nm,0.8s
GNI Garni 72.56 307 P **P 20 26 30.1 +0.7**
GNI IAmb IAmb 20 26 36.8
comp=Z,47nm,0.9s
GNI Garni 72.56 307 *ce*P **P 20 26 30.5 +1.1**
GNI pmax pmax
comp=Z,57nm,1.3s
GNI Garni 72.56 307 P **P 20 26 31.2 +1.8**
GNI P **P 20 26 31.2 +1.8**
GNI Garni 72.56 307 P **P 20 26 30.9 +1.5**
RAF Rauma 72.57 333 *e*P **P 20 26 29.9 +1.1**
YBH Yreka Blue Hor 72.58 51 LR LR 20 52 42.9
comp=Z,46nm,21.8s,baz=278,slow=31
L04D Klamath Falls 72.59 51 P **P 20 26 30.8 +1.3**
baz=301
ALNE Al Ain 72.60 287 P **P 20 26 30.4 +0.7**
SNR=8.9
ALNE P **P 20 26 30.4 +0.7**
SNR=8.9
ALNE Al Ain 72.60 287 *i*P **P 20 26 30.0 +0.3**
SNR=15
PINE Pine Mountain 72.64 49 P **P 20 26 31.5 +1.6**
PINE IAmb IAmb 20 26 33.2
comp=Z,11nm,0.7s
ASUD Al Ashush, Dub 72.64 288 P **P 20 26 30.7 +0.7**
SNR=5.8
ASUD Al Ashush, Dub 72.64 288 *i*P **P 20 26 30.3 +0.4**
SNR=13
J05D Fort Rock, OR 72.72 49 P **P 20 26 31.3 +1.0**
baz=301
K05A Summer Lake 73.22 50 P **P 20 26 35.0 +1.6**
SUMG Summit 73.22 360 P **P 20 26 34.5 +1.4**
SUMG IAmb IAmb 20 26 35.5
comp=Z,28nm,0.8s
SUMG Summit 73.22 360 P **P 20 26 34.5 +1.4**
SUMG pmax pmax
comp=Z,28nm,0.8s
MTSE Matsula 73.26 331 *e*P **P 20 26 33.9 +0.9**
DQM Dqm 73.28 283 P **P 20 26 34.0 +0.2**
NSS Namsos 73.37 339 *e*P **P 20 26 33.7 +0.2**
KARS Kars 73.40 308 P **P 20 26 35.5 +1.1**
KARS Kars 73.40 308 P **P 20 26 35.5 +1.1**
KARS pmax pmax
comp=Z,92nm,0.8s
UMZA Um Al Zommool 73.75 287 P **P 20 26 36.5 0.0**
UMZA P **P 20 26 36.5 0.0**
WALA Waterton Lakes 73.89 41 P **P 20 26 38.1 +1.0**
SOC Sochi 73.97 312 *e*P **P 20 26 36.9 -0.6**
SOC *e*PPP PPP 20 31 05.6
SOC *e*S **S 20 36 09.3 +2.8**
SOC *e*SS **SS 20 40 50.9 +0.1**
SOC pmax pmax
comp=Z,67nm,0.8s
MOD Modoc Plateau 74.03 50 P **P 20 26 39.1 +1.1**
MNK Minsk 74.13 326 *i*P **P 20 26 39.5 +1.4**
MNK *i* 20 26 54.2
MNK *i* 20 29 26.7
MNK *i* PPP PPP 20 31 10.4
MNK *i* S **S 20 36 11.5 +3.7**
MNK *i* SS **SS 20 40 55.3 +2.7**
MNK pmax pmax
comp=E,11nm,1.0s
MNK pmax pmax
comp=Z,151nm,1.0s
MNK MLR MLR
comp=Z,90nm,17.0s
MNK MLR MLR
comp=E,14nm,17.0s
MNK Minsk 74.13 326 *i*P **P 20 26 39.6 +1.4**
comp=E,11nm,1.0s
MNK *i*P **P 20 26 39.6 +1.4**
MNK *i*P **P 20 26 39.6 +1.4**
comp=Z,151nm,1.0s,baz=52
MNK *i* PcP **pwP 20 26 54.3 +0.3**
MNK *i* PP **PP 20 29 26.8 +3.3**
MNK *i* PPP PPP 20 31 10.4
MNK *i* S **S 20 36 11.5 +3.7**
MNK *i* SS **SS 20 40 55.3 +2.7**
MNK *i* SSS SSS 20 44 21.6
MNK *i* LQ 20 52 59.0
MNK *i* LR LR 20 56 12.6
comp=Z,90nm,17.0s
MNK *i* LRM MLR 21 01 41.3
MNK *i* LRM MLR 21 01 47.5
comp=E,14nm,17.0s
MZWR Madinat Zayed 74.22 288 P **P 20 26 39.0 -0.2**
ISAL Salakas 74.27 327 *e*P **P 20 26 40.1 +1.1**
BMO Blue Mountains 74.28 46 P **P 20 26 40.6 +1.2**
BMO Blue Mountains 74.28 46 P **P 20 26 40.6 +1.2**
BMO pmax pmax
comp=Z,3.0nm,0.8s
J08A Circle Bar Ran 74.39 48 P **P 20 26 41.5 +1.5**
NACGM Naroch 74.39 327 *i*P **P 20 26 40.2 +0.5**
baz=52
JRN Qarnain Island 74.42 290 P **P 20 26 39.9 -0.4**
JRN P **P 20 26 39.9 -0.4**
JTMT Jette 74.43 43 P **P 20 26 41.9 +1.7**
JTMT IAmb IAmb 20 26 43.2
comp=Z,14nm,0.7s
SCO Scoresbysund 74.56 354 *i*P **P 20 26 41.9 +1.6**
SCO IAmb IAmb 20 26 43.5
comp=Z,55nm,1.0s
GEVA Gevas 74.63 306 P **P 20 26 42.5 +0.9**
GEVA IAmb IAmb 20 26 44.5
comp=Z,53nm,1.5s
ANN Anapa 74.69 314 *e*P **P 20 26 40.6 -1.0**
ANN *e**PP **pP 20 26 50.3 -3.3**
ANN *e* 20 26 55.9
ANN *e*S **S 20 36 13.6 -0.8**
ANN pmax pmax
comp=Z,85nm,0.9s
TBLU Trondheim 74.83 339 *e*P **P 20 26 40.8 -1.2**
GHWR Ruwais 74.90 289 P **P 20 26 43.2 +0.1**
GHWR P **P 20 26 43.2 +0.1**
MZR Muzera 74.92 288 P **P 20 26 43.3 -0.1**
SNR=5.6
MZR P **P 20 26 43.3 -0.1**
SNR=5.6
MZR Muzera 74.92 288 *i*P **P 20 26 43.1 -0.2**
SNR=19
VSVD Vaisvydziai 74.97 329 *e*P **P 20 26 43.6 +0.7**
MSO Missoula 75.14 43 P **P 20 26 45.1 +0.8**
baz=305
GURO Guroymak-BITLI 75.18 307 P **P 20 26 45.7 +0.9**
GURO IAmb IAmb 20 26 47.2
comp=Z,37nm,0.8s
PABE Paberze 75.26 328 P **P 20 26 45.2 +0.5**
PABE Paberze 75.26 328 *e*P **P 20 26 45.6 +1.0**
KTUT Trabzon 75.34 310⇓ P **P 20 26 46.2 +0.7**
KOPT Kop Dagi 75.40 309 P **P 20 26 47.5 +1.3**
KOPT IAmb IAmb 20 26 51.5
comp=Z,20nm,0.8s
SHMA Al-Shehemyia 75.40 291 P **P 20 26 45.8 -0.2**
SLWR Sila 75.77 289 P **P 20 26 48.3 +0.1**
SLWR P **P 20 26 48.3 +0.1**
AKASG Malin Array Be 75.80 322 P **P 20 26 47.2 -0.7**
comp=Z,67nm,0.7s,baz=49,slow=6.4,SNR=280
AKASG LR LR 21 03 16.7
comp=Z,208nm,18.3s,baz=48,slow=38
comp=Z,67nm,0.7s
AKASG Malin Array Be 75.80 322 P **P 20 26 47.9 0.0**
AKASG Malin Array Be 75.80 322 P **P 20 26 47.9 0.0**
AKASG pmax pmax
comp=Z,86nm,0.8s
AKBB Malin Array Si 75.80 322 P **P 20 26 47.9 +0.1**
AKBB Malin Array Si 75.80 322 P **P 20 26 47.9 +0.1**
AKBB pmax pmax
comp=Z,109nm,0.8s
SHAO Shalim 75.81 282 P **P 20 26 49.0 +0.5**
SHAO Shalim 75.81 282 *i*P **P 20 26 47.9 -0.6**
SNR=7.3
AK05 Malin Array Si 75.86 322 P **P 20 26 48.1 -0.1**
MFID Camas Ranch 75.97 47 P **P 20 26 50.6 +1.5**
NC405 NORSAR Array S 75.99 337 P **P 20 26 49.1 +0.3**
CMB Columbia Colle 76.04 53 P **P 20 26 51.0 +1.4**
CMB Columbia Colle 76.04 53 P **P 20 26 51.0 +1.4**
CMB pmax pmax
comp=Z,9.0nm,1.0s
HFS Hagfors 76.06 336 LR LR 21 05 33.2
comp=Z,77nm,19.3s,baz=46,slow=40
SMRA Abu-Samra 76.09 290 P **P 20 26 49.7 -0.3**
DOMB Dombas 76.11 339 *e*P **P 20 26 49.9 +0.4**
MOL Molde 76.15 340 *e*P **P 20 26 49.6 -0.1**
NB201 NORSAR Array S 76.17 337 *e*P **P 20 26 50.2 +0.3**
NB2 NORSAR Subarra 76.21 337 P **P 20 26 50.0 -0.1**
comp=Z,32nm,0.8s,baz=42,slow=5.9
NB2 NORSAR Subarra 76.21 337 P **P 20 26 50.0 -0.1**
baz=42,slow=5.9
NOA NORSAR Array B 76.21 337 P **P 20 26 50.3 +0.2**
comp=Z,20nm,0.8s,baz=40,slow=5.7,SNR=76
NOA PP **PP 20 29 38.7 -2.2**
comp=Z,1.9nm,0.8s,baz=46,slow=8.4,SNR=5.4
NOA LR LR 21 03 54.8
comp=Z,116nm,20.5s,baz=35,slow=38
comp=Z,20nm,0.8s
ILULI Ilulissat 76.26 4 *i*P **P 20 26 50.1 0.0**
ILULI IAmb IAmb 20 27 20.5
comp=Z,28nm,1.1s
HRY Holter Researc 76.39 42 P **P 20 26 52.8 +1.3**
DMTO DMTO 76.52 282 P **P 20 26 52.8 +0.2**
DMTO P **P 20 26 52.8 +0.2**
SIM Simferopol' 76.56 316 *e*P **P 20 26 51.0 -1.3**
SIM pmax pmax
comp=Z,66nm,0.8s
AKN Aaknes 76.61 339 *e*P **P 20 26 53.2 +0.9**
FCC Fort Churchill 76.65 26 P **P 20 26 53.1 +0.6**
FCC IAmb IAmb 20 27 13.3
comp=Z,21nm,1.3s
FCC Fort Churchill 76.65 26 P **P 20 26 53.1 +0.6**
FCC pmax pmax
comp=Z,21nm,1.3s
MARD Mardin 76.69 306 P **P 20 26 54.0 +0.7**
HLID Hailey 76.73 46 P **P 20 26 54.5 +1.0**
HLID Hailey 76.73 46 P **P 20 26 54.1 +0.5**
baz=305
ICESG Greenland Ices 76.73 0 *i*P **P 20 26 53.2 -0.1**
ICESG IAmb IAmb 20 26 55.4
comp=Z,21nm,0.8s
EGMT Eagleton 76.74 40 P **P 20 26 54.4 +0.9**
EGMT IAmb IAmb 20 26 57.9
comp=Z,20nm,0.9s
EGMT Eagleton 76.74 40 P **P 20 26 54.0 +0.6**
baz=307,SNR=5.1
MDPB Devils Postpil 77.13 53 P **P 20 26 57.1 +1.1**
BOZ Bozeman (W) 77.16 43 P **P 20 26 56.8 +0.9**
BOZ Bozeman (W) 77.16 43 P **P 20 26 56.8 +0.9**
BOZ pmax pmax
comp=Z,6.0nm,0.9s
BOZ Bozeman (W) 77.16 43 P **P 20 26 56.3 +0.4**
baz=306,SNR=9.3
NVAR Mina Array Bea 77.20 52 P **P 20 26 57.9 +1.6**
comp=Z,9.7nm,0.7s,baz=289,slow=5.6,SNR=82
NVAR LR LR 20 56 18.5
comp=Z,80nm,19.9s,baz=271,slow=32
comp=Z,9.7nm,0.7s
NVAR Mina Array Bea 77.20 52 P **P 20 26 57.7 +1.3**
OSL Oslo 77.20 337 *e*P **P 20 26 56.4 +0.8**
RBK Rabkut 77.23 282 P **P 20 26 56.5 -0.1**
RBK P **P 20 26 56.5 -0.1**
NV11 Mina Array Sit 77.29 52 P **P 20 26 57.9 +1.1**
WHFO Wadi Hawf 77.36 283 P **P 20 26 57.0 -0.3**
WHFO P **P 20 26 57.0 -0.3**
PAGB Antelope Grade 77.39 55 P **P 20 26 58.8 +1.6**
PAGB IAmb IAmb 20 27 00.3
comp=Z,12nm,0.7s
SKAR Skarslia 77.40 338 *e*P **P 20 26 57.6 +0.8**
SOEG Soedalen 77.44 357 *i*P **P 20 26 57.1 +0.3**
SOEG IAmb IAmb 20 26 59.2
comp=Z,24nm,0.9s
FOO Floro 77.64 340 *e*P **P 20 26 58.7 +0.7**
HYA Hoyanger 77.66 339 *e*P **P 20 26 58.6 +0.5**
DIKM Dikmen 77.78 312⇑ P **P 20 27 00.9 +1.6**

KONO Kongsberg 77.79 337 P P 20 26 59.2 +0.3
KONO IAmb IAmb 20 27 00.8
comp=Z,30nm,1.1s
KONO Kongsberg 77.79 337 ⇓P P 20 26 59.5 +0.5
KONO Kongsberg 77.79 337 eP P 20 26 59.4 +0.5
TOKA Tokat 77.79 311 P P 20 27 00.8 +1.4
TOKA IAmb IAmb 20 27 02.1
comp=Z,43nm,0.9s
SORM Soroca 77.83 321 ⇓P P 20 26 58.7 -0.6
SORM Soroca 77.83 321 ⇓P P 20 26 58.7 -0.6
ELK Elko 77.84 49 P P 20 27 01.4 +1.5
ELK Elko 77.84 49 P P 20 27 01.4 +1.5
ELK pmax pmax
comp=Z,16nm,1.6s
ABTO Aybut 78.04 283 P P 20 27 01.0 -0.1
ABTO P P 20 27 01.0 -0.1
TPH Tonopah 78.10 52 P P 20 27 02.7 +1.3
TPH Tonopah 78.10 52 P P 20 27 02.7 +1.3
TPH pmax pmax
comp=Z,123nm,1.6s
VES Vestal, Richgr 78.12 55 P P 20 27 01.7 +0.5
baz=304
MILM Milestii Mici 78.34 319 ⇑ iP P 20 27 01.6 -0.6
comp=Z,37nm,0.8s
MILM Milestii Mici 78.34 319 ⇑P P 20 27 02.6 +0.4
MILM Milestii Mici 78.34 319 ⇑P P 20 27 02.6 +0.4
CWC Cottonwood Cre 78.46 54 P P 20 27 04.0 +0.7
baz=304
SFJD Kangerlussuaq 78.49 4 LR LR 21 03 05.7
comp=Z,52nm,21.6s,baz=344,slow=37
ASK Askoy 78.50 339 eP P 20 27 04.0 +1.2
ODD1 Odda 78.52 338 eP P 20 27 04.1 +1.1
BER Bergen 78.53 339 eP P 20 27 04.2 +1.2
GRAC Grapevine Rang 78.62 53 P P 20 27 05.2 +1.2
baz=305,SNR=5.9
RLMT Red Lodge 78.77 43 P P 20 27 06.3 +1.3
RLMT Red Lodge 78.77 43 P P 20 27 05.2 +0.2
baz=308
IAS Iasi 78.84 320 ⇓P P 20 27 05.5 +0.5
IAS Iasi 78.84 320 ⇓P P 20 27 05.5 +0.5
LVV L'vov 78.94 324 eP P 20 27 05.7 +0.2
BLS5 Blasjo 78.97 338 eP P 20 27 06.5 +1.0
R11A Troy Canyon, C 79.00 51 P P 20 27 07.5 +1.2
R11A Troy Canyon, C 79.00 51 P P 20 27 07.0 +0.7
baz=305,SNR=15
BNN Bunyan 79.03 310 P P 20 27 06.8 +0.4
VASR Vaslui 79.06 320 ⇓P P 20 27 07.0 +0.8
MPMC Manual Prospec 79.07 54 P P 20 27 07.9 +1.2
baz=305,SNR=9.6
ILGA Ilgaz 79.07 312 P P 20 27 07.8 +1.2
BGU Big Grassy Mou 79.10 48 P P 20 27 08.0 +1.3
BEL Belsk 79.11 327 eP P 20 27 07.4 +1.0
DY2G Dye2 79.23 3 i P P 20 27 06.8 -0.3
DY2G IAmb IAmb 20 27 08.3
comp=Z,24nm,1.0s
FURC Furnace Creek, 79.25 53 P P 20 27 08.6 +1.2
baz=305,SNR=6.2
LRMC Laurel Mtn Rad 79.27 54 P P 20 27 08.9 +1.2
baz=305
RAR Rarotonga 79.37 125 LR LR 20 56 29.0
comp=Z,69nm,20.0s,baz=338,slow=31
TPNV Topopah Spring 79.38 52 P P 20 27 09.5 +1.2
TPNV Topopah Spring 79.38 52 P P 20 27 09.5 +1.2
TPNV pmax pmax
comp=Z,8.0nm,0.8s
TPNV Topopah Spring 79.38 52 P P 20 27 09.4 +1.0
baz=305,SNR=14
EDW2 Edwards Air Fo 79.39 55 P P 20 27 09.5 +1.2
baz=305,SNR=7.9
VLDR Vladesti 79.40 319 ⇓P P 20 27 09.2 +1.1
TLCR 79.41 318 ⇓P P 20 27 08.8 +0.7
TLCR 79.41 318 ⇓P P 20 27 08.8 +0.7
FRB Frobisher Bay 79.44 13 LR LR 21 07 21.2
comp=Z,69nm,19.0s,baz=12,slow=39
LAO LASA Array 79.45 40 P P 20 27 09.8 +1.3
LAO IAmb IAmb 20 27 35.9
comp=Z,67nm,1.9s
LAO LASA Array 79.45 40 P P 20 27 10.3 +1.8
baz=310
LAO LASA Array 79.45 40 P P 20 27 09.3 +0.8
baz=310
VARL Varlezi 79.49 319 ⇑P P 20 27 09.9 +1.4
SCTR Scanteiesti 79.56 319 ⇓P P 20 27 10.1 +1.2
TATR Tatarca 79.58 319 ⇑P P 20 27 10.4 +1.4
HWUT Hardware Ranch 79.58 46 P P 20 27 10.7 +1.3
HWUT IAmb IAmb 20 27 37.4
comp=Z,34nm,1.6s
GHRR 79.63 319 ⇑P P 20 27 11.2 +1.9
DUG Dugway, Tooele 79.67 48 P P 20 27 10.9 +1.1
DUG IAmb IAmb 20 27 38.0
comp=Z,17nm,1.3s
DUG Dugway, Tooele 79.67 48 P P 20 27 10.9 +1.1
DUG pmax pmax
comp=Z,17nm,1.3s
DUG Dugway, Tooele 79.67 48 P P 20 27 10.6 +0.8
baz=307,SNR=11
GKP Gorka Klasztor 79.67 329 eP P 20 27 10.2 +0.8
GKP Gorka Klasztor 79.67 329 eP P 20 27 10.5 +1.1
TESR Tescani 79.75 320 ⇓P P 20 27 10.8 +0.9
BIZ Bicaz 79.76 321 ⇓P P 20 27 11.2 +1.1
BUR08 Bucovina Ar. S 79.77 322 P P 20 27 11.0 +0.8
BUR08 IAmb IAmb 20 27 12.0
comp=Z,27nm,0.8s
BURAR Bucovina Array 79.78 322 ⇑P P 20 27 11.0 +0.7
BURAR Bucovina Array 79.78 322 P P 20 27 10.9 +0.6
BURAR IAmb IAmb 20 27 12.8
comp=Z,39nm,0.8s
BURAR Bucovina Array 79.78 322 ⇑P P 20 27 11.0 +0.7
TUDR 79.78 319 ⇑P P 20 27 11.2 +1.0
CFR Carcaliu 79.79 318 ⇑P P 20 27 10.5 +0.3
CFR Carcaliu 79.79 318 ⇑P P 20 27 10.5 +0.3
COP Copenhagen 79.82 333 i P P 20 27 10.2 +0.1
COP IAmb IAmb 20 27 11.7
comp=Z,170nm,0.9s
TPGR Topolog 79.84 318 ⇓P P 20 27 11.5 +0.9
PANC Panciu 79.89 319 ⇓P P 20 27 12.4 +1.7
BR131 Keskin Array S 79.91 311 P P 20 27 11.3 +0.2
BR131 IAmb IAmb 20 27 13.3
comp=Z,50nm,0.8s
BR131 Keskin Array S 79.91 311 c iP P 20 27 11.3 +0.2
BR131 Keskin Array S 79.91 311 P P 20 27 11.9 +0.8
SNR=12
BR131 P P 20 27 11.9 +0.8
SNR=12
BRTR Keskin Array B 79.91 311 P P 20 27 11.5 +0.4
comp=Z,31nm,0.9s,baz=90,slow=3.4,SNR=112
BRTR LR LR 21 07 01.9
comp=Z,78nm,18.4s,baz=61,slow=39
comp=Z,31nm,0.9s
BRTR Keskin Array B 79.91 311 P P 20 27 11.3 +0.2
BRTR Keskin Array B 79.91 311 i P P 20 27 11.6 +0.4
BRTR pmax pmax
comp=Z,32nm,0.9s
GSC Goldstone, Bar 79.95 54 P P 20 27 12.0 +0.6
baz=305
PSUT Pine Spring 80.00 50 P P 20 27 12.7 +0.9
ODBI Odobesti 80.01 319 ⇑P P 20 27 13.5 +2.1
BORG Borgarnes 80.06 352 LR LR 21 02 37.3
comp=Z,31nm,21.3s,baz=16,slow=36
BORG Borgarnes 80.06 352 P P 20 27 13.2 +2.0
BORG Borgarnes 80.06 352 P P 20 27 13.2 +2.0
BORG pmax pmax
comp=Z,157nm,1.9s
BW06 Boulder Array 80.06 45 P P 20 27 12.2 +0.2
baz=308,SNR=7.8
PD31 Pinedale Array 80.06 45 P P 20 27 12.7 +0.7
PDAR Pinedale Array 80.06 45 P P 20 27 12.6 +0.5
comp=Z,3.5nm,0.7s,baz=270,slow=1.8,SNR=45
PDAR LR LR 20 57 54.4
comp=Z,28nm,21.7s,baz=317,slow=32
comp=Z,3.5nm,0.7s
TIRR Tirgusor 80.09 318 ⇑P P 20 27 12.9 +1.1
TIRR Tirgusor 80.09 318 P P 20 27 11.5 -0.3
TIRR Tirgusor 80.09 318 ⇑P P 20 27 12.9 +1.1
VRI Vrincioaia 80.12 319 ⇓P P 20 27 13.2 +1.3
VRI Vrincioaia 80.12 319 ⇓P P 20 27 13.3 +1.3
PLOR Plostina 80.17 320 ⇑P P 20 27 13.7 +1.4
PLOR Plostina 80.17 320 ⇑P P 20 27 13.7 +1.4
HARR Harsova 80.21 318 ⇓P P 20 27 13.3 +0.8
HARR Harsova 80.21 318 ⇓P P 20 27 13.3 +0.8
TLBR Topalu 80.24 318 ⇓P P 20 27 13.8 +1.2
MFTR Murfatlar 80.26 317 ⇓P P 20 27 13.3 +0.6
GRER 80.30 319 ⇑P P 20 27 15.7 +2.8
ANTO Ankara 80.34 312 ⇓P P 20 27 14.3 +0.8
ANTO Ankara 80.34 312 P P 20 27 14.2 +0.8
ANTO IAmb IAmb 20 27 15.2
comp=Z,47nm,0.8s
ANTO Ankara 80.34 312 ⇓P P 20 27 14.3 +0.8
ANTO Ankara 80.34 312 P P 20 27 14.2 +0.8
BR231 Keskin MP Arra 80.37 312 P P 20 27 14.5 +0.9
BR231 IAmb IAmb 20 27 15.4
comp=Z,32nm,0.8s
KOLS Kolonicke sedl 80.39 324 eP P 20 27 13.7 +0.3
KOLS pmax pmax
comp=Z,24nm,0.9s
KOLS Kolonicke sedl 80.39 324 eP P 20 27 13.7 +0.3
MUD Monsted U'grnd 80.41 335 i P P 20 27 13.4 +0.1
MUD IAmb IAmb 20 27 15.7
comp=Z,615nm,2.8s
COVR Voineasa-Covas 80.41 320 ⇑P P 20 27 14.9 +1.3
TUQ Turquoise Moun 80.47 54 P P 20 27 14.9 +0.7
baz=306
OZUR 80.47 320 ⇑P P 20 27 15.4 +1.5
BBRC Big Bear Solar 80.47 55 P P 20 27 15.1 +0.7
baz=305
HEC Hector,Ludlow 80.54 54 P P 20 27 15.1 +0.6
baz=306
ARCR ARCALIA 80.58 322 ⇓P P 20 27 16.6 +2.2
QRZ Quartz Range 80.58 156 P P 20 27 15.4 +1.2
UZH Uzhgorod 80.58 324 ⇑ eP P 20 27 14.6 +0.2
UZH e 20 27 27.2
UZH e 20 27 36.5
AMRR Amara 80.59 318 ⇑P P 20 27 16.4 +1.9
AMRR Amara 80.59 318 ⇑P P 20 27 16.4 +1.9
PGOR Pogoanele 80.59 319 ⇑P P 20 27 16.6 +2.1
BMR Baia Mare 80.62 322 ⇓P P 20 27 16.0 +1.3
BMR Baia Mare 80.62 322 ⇓P P 20 27 16.0 +1.3
NEHR Nehoiu 80.63 319 ⇑P P 20 27 17.7 +2.9
ICOR Ion Corvin 80.65 318 ⇓P P 20 27 16.3 +1.4
MURC Murrieta 80.67 56 P P 20 27 16.0 +0.8
baz=305
OJC Ojcow 80.68 326 eP P 20 27 14.9 0.0
OJC Ojcow 80.68 326 P P 20 27 14.7 -0.2
OJC IAmb IAmb 20 27 15.9
comp=Z,54nm,1.0s
OJC Ojcow 80.68 326 P P 20 27 14.7 -0.2
OJC pmax pmax
comp=Z,54nm,1.0s
ISR Istrita 80.70 319 ⇓P P 20 27 16.7 +1.5
ISR Istrita 80.70 319 ⇓P P 20 27 16.7 +1.5
DOPR Dopca 80.77 320 ⇑P P 20 27 16.4 +0.9
MLR Muntele Rosu 80.78 320 ⇓P P 20 27 17.3 +1.6
MLR Muntele Rosu 80.78 320 LR LR 21 07 19.8
comp=Z,140nm,18.4s,baz=51,slow=39
MLR Muntele Rosu 80.78 320 P P 20 27 15.8 +0.1
MLR IAmb IAmb 20 27 18.0
comp=Z,19nm,1.1s
MLR Muntele Rosu 80.78 320 ⇓P P 20 27 17.3 +1.6
CRVS Cervenica-Dubn 80.80 324 eP P 20 27 16.5 +0.9
CRVS pmax pmax
comp=Z,30nm,1.0s
CRVS Cervenica-Dubn 80.80 324 eP P 20 27 16.5 +0.9
RAYN Ar Rayn 80.84 292 P P 20 27 16.6 +0.3
RAYN Ar Rayn 80.84 292 ⇑P P 20 27 16.7 +0.4
RAYN Ar Rayn 80.84 292 P P 20 27 16.8 +0.5
RAYN Ar Rayn 80.84 292 i P P 20 27 16.8 +0.4
SNR=68
CCUT Cedar City 80.89 51 P P 20 27 17.4 +0.8
MDUB Mudurnu 80.95 313 P P 20 27 16.6 -0.1
NIE Niedzica 81.00 325 eP P 20 27 17.9 +1.2
SECR 81.01 319 ⇑P P 20 27 18.4 +1.6
GMRC Granite Mounta 81.02 54 P P 20 27 18.1 +0.9
baz=306,SNR=5.6
MSU Marysvale 81.07 49 P P 20 27 18.9 +1.4
MSU Marysvale 81.07 49 P P 20 27 18.9 +1.4
SULR 81.14 319 ⇑P P 20 27 19.0 +1.6
PFO Pinyon Flats O 81.16 55 LR LR 20 58 19.2
comp=Z,130nm,19.3s,baz=292,slow=32
PFO Pinyon Flats O 81.16 55 P P 20 27 18.6 +0.6
PFO Pinyon Flats O 81.16 55 P P 20 27 18.6 +0.6
PFO pmax pmax
comp=Z,13nm,1.2s
PFO Pinyon Flats O 81.16 55 P P 20 27 18.6 +0.6
baz=306
TPFO Pinon Flats 81.17 55 P P 20 27 18.3 +0.3
baz=306
CBBR Cluj-Babes-Bol 81.20 322 ⇑P P 20 27 19.6 +1.8
CJR Cluj-Napoca 81.21 322 ⇓P P 20 27 19.4 +1.5
CJR Cluj-Napoca 81.21 322 ⇓P P 20 27 19.4 +1.5
MESR Meseseni 81.25 322 ⇑P P 20 27 21.1 +3.1
BELC Belle Mtn. Jos 81.25 55 P P 20 27 18.9 +0.5
baz=306
VOIR 81.29 320 ⇓P P 20 27 20.3 +1.9
VOIR 81.29 320 ⇓P P 20 27 20.3 +1.9
PRD Provadia 81.46 317 P P 20 27 19.0 -0.1
ARR Arges 81.56 320 ⇑P P 20 27 21.3 +1.5
LANS Liptovska Anna 81.58 325 eP P 20 27 21.2 +1.4
LANS pmax pmax
comp=Z,14nm,1.0s
LANS Liptovska Anna 81.58 325 eP P 20 27 21.2 +1.4
P18A Preston Nutter 81.58 47 P P 20 27 22.1 +1.8
MONP2 Monument Peak 81.61 56 P P 20 27 20.8 +0.4
baz=306
DRGR 81.61 322 ⇑P P 20 27 20.6 +0.6
DRGR 81.61 322 ⇑P P 20 27 20.6 +0.6
RUE Ruedersdorf 81.68 330 eP P 20 27 20.8 +0.6
OKC Ostrava-Krasne 81.71 326 eP P 20 27 20.8 +0.4
OKC MLR MLR
comp=Z,200nm,22.8s
OKC Ostrava-Krasne 81.71 326 eP P 20 27 20.8 +0.4
OKC AMS AMS 21 06 20.0
comp=Z,200nm,22.8s
RAZG Razgrad 81.72 318 ⇓P P 20 27 21.4 +0.9
IRM Iron Mountain 81.73 54 P P 20 27 21.2 +0.4
baz=306
BFZ Birch Farm 81.77 153 P P 20 27 20.6 0.0
KSP Ksiaz 81.82 328 eP P 20 27 21.7 +0.8
BC3 Big Chuckawall 81.82 55 P P 20 27 21.9 +0.5
baz=306,SNR=5.1
K22A Casper 81.87 43 P P 20 27 22.0 +0.4
K22A Casper 81.87 43 P P 20 27 23.0 +1.4
baz=310
K22A Casper 81.87 43 P P 20 27 21.6 0.0
baz=310
HUMR Humele 81.93 319 ⇓P P 20 27 22.7 +1.1
IKP In-Ko-Pah, Jac 81.96 56 P P 20 27 22.6 +0.5
baz=306
SWSC Sam W. Stewart 82.00 56 P P 20 27 22.6 +0.4
baz=306
MORC Moravsky Berou 82.03 327 ⇑P P 20 27 22.8 +0.7
MORC Moravsky Berou 82.03 327 P P 20 27 22.3 +0.2
MORC IAmb IAmb 20 27 23.9
comp=Z,22nm,0.9s
MORC Moravsky Berou 82.03 327 ⇑P P 20 27 22.8 +0.7
MORC Moravsky Berou 82.03 327 eP P 20 27 22.6 +0.5
MDND Maddock 82.05 36 P P 20 27 22.4 +0.2
baz=314
OSTC Ostas 82.06 328 eP P 20 27 22.7 +0.5
OSTC AMS AMS 21 07 20.0
comp=Z,100nm,21.5s
CHVC Chvalec 82.11 328 eP P 20 27 23.2 +0.7
DEV Deva 82.12 321 ⇓P P 20 27 23.9 +1.3
DEV Deva 82.12 321 ⇓P P 20 27 23.9 +1.3
KRLC Kraliky 82.16 327 eP P 20 27 23.2 +0.4
KRLC MLR MLR
comp=Z,200nm,17.7s
KRLC Kraliky 82.16 327 eP P 20 27 23.2 +0.4
KRLC AMS AMS 21 07 30.0
comp=Z,200nm,17.7s
DPC Dobruska-Polom 82.16 328 eP P 20 27 23.7 +0.9
DPC MLR MLR
comp=Z,200nm,19.0s
DPC Dobruska-Polom 82.16 328 eP P 20 27 23.7 +0.9
DPC AMS AMS 21 07 40.0
comp=Z,200nm,19.0s
UPC Upice 82.19 328 eP P 20 27 23.4 +0.5
UPC MLR MLR
comp=Z,100nm,25.5s
UPC Upice 82.19 328 eP P 20 27 23.4 +0.5
UPC AMS AMS 21 07 20.0
comp=Z,100nm,25.5s
ASF Jabal al Asfar 82.22 304 P P 20 27 23.8 +0.2
comp=Z,34nm,0.8s,baz=49,slow=2.7,SNR=80
comp=Z,34nm,0.8s
SZH Strazhica 82.23 318 P P 20 27 23.0 -0.3
PSZ Piszkesteto 82.23 324 ⇑P P 20 27 24.0 +0.7
PSZ Piszkesteto 82.23 324 P P 20 27 24.6 +1.4
PSZ IAmb IAmb 20 27 25.3
comp=Z,45nm,0.9s
PSZ Piszkesteto 82.23 324 ⇑P P 20 27 24.0 +0.7
PSZ Piszkesteto 82.23 324 P P 20 27 24.0 +0.7
U15A North Rim 82.25 51 P P 20 27 24.7 +0.9
RSSD Black Hills 82.29 41 P P 20 27 24.9 +1.0
RSSD Black Hills 82.29 41 P P 20 27 24.9 +1.0
RSSD pmax pmax
comp=Z,11nm,1.5s
RSSD Black Hills 82.29 41 P P 20 27 24.3 +0.5
baz=311
VYHS Vyhne 82.34 325 eP P 20 27 24.7 +1.0
VYHS pmax pmax
comp=Z,31nm,0.9s
VYHS Vyhne 82.34 325 eP P 20 27 24.7 +1.0
O20A White River Ci 82.47 46 P P 20 27 25.1 +0.3
baz=309
BSZH Besenyszg 82.48 324 ⇓P P 20 27 26.2 +1.8
SIRR Siria 82.50 322 ⇓P P 20 27 25.7 +1.1
GZR Gura Zlata 82.52 321 ⇑P P 20 27 25.3 +0.5
GZR Gura Zlata 82.52 321 ⇑P P 20 27 25.3 +0.5
VLAD Vladila 82.59 319 ⇓P P 20 27 25.8 +0.7
JAVC Velka Javorina 82.62 326 eP P 20 27 26.9 +1.6
MMAI Mount Meron Ar 82.75 305 P P 20 27 27.2 +1.0
comp=Z,38nm,0.9s,baz=49,slow=6.7,SNR=67
MMAI LR LR 21 07 41.2
comp=Z,170nm,20.6s,baz=218,slow=38
comp=Z,38nm,0.9s
SRE Strehaia 82.79 320 ⇓P P 20 27 27.9 +1.8
SRE Strehaia 82.79 320 ⇓P P 20 27 27.9 +1.8
VRAC Vranov 82.79 327 ⇑P P 20 27 27.3 +1.2
VRAC Vranov 82.79 327 LR LR 21 07 35.7
comp=Z,136nm,20.7s,baz=39,slow=38
VRAC Vranov 82.79 327 ⇑P P 20 27 27.3 +1.2
VRAC Vranov 82.79 327 eP P 20 27 26.8 +0.7
PVCC Panska Ves 82.80 329 eP P 20 27 26.9 +0.8
PVCC MLR MLR
comp=Z,100nm,19.8s
PVCC Panska Ves 82.80 329 eP P 20 27 26.9 +0.8
PVCC AMS AMS 21 07 30.0
comp=Z,100nm,19.8s
BRG Berggiesshubel 82.81 329 eP P 20 27 26.5 +0.4
BRG Amp 20 27 27.6
comp=Z,14nm,0.9s
BRG ex x 20 27 31.9
BRG Amp 20 27 33.3
comp=Z,7.5nm,0.8s
BRG Amp 21 11 43.0
comp=Z,0.1nm,17.3s
BRG Amp 21 11 48.0
comp=N,0.1nm,14.5s
BRG Amp 21 11 48.0
comp=E,0.1nm,18.6s
BRG Berggiesshubel 82.81 329 eP P 20 27 26.5 +0.4
BRG pmax pmax
comp=Z,14nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,0.8s
BRG MLR MLR
comp=Z,138nm,17.3s
BRG MLR MLR
comp=N,96nm,14.5s
BRG MLR MLR
comp=E,82nm,18.6s
CLL Collm 82.88 330 P P 20 27 26.8 +0.4
CLL IAmb IAmb 20 27 27.6
comp=Z,32nm,0.9s
CLL Collm 82.88 330 P P 20 27 26.8 +0.4
CLL pmax pmax
comp=Z,32nm,0.9s
CLL Collm 82.88 330 ⇑ iP P 20 27 26.6 +0.1
comp=Z,35nm,0.9s
CLL es P sP 20 27 44.0 +0.8
CLL ex x 20 27 50.0
CLL eP P PP 20 30 36.0 -0.5
CLL LmH 21 04 00.0
comp=N,100nm,20.6s
CLL LmH 21 04 00.0
comp=E,100nm,20.7s
CLL LmV 21 08 00.0
comp=Z,100nm,19.6s
CSS Mathiatis 82.96 308 P P 20 27 27.5 +0.3
BZS Buzias 82.97 322 ⇑P P 20 27 27.3 +0.3
BZS Buzias 82.97 322 ⇑P P 20 27 27.3 +0.3
SMOL Smolenice 82.98 326 eP P 20 27 28.4 +1.3
SMOL pmax pmax
comp=Z,15nm,0.8s
HERR Herculane 83.05 321 ⇑P P 20 27 27.9 +0.4
KRUC Moravsky 83.06 327 eP P 20 27 28.0 +0.5
SRO Srobarova 83.07 325 eP P 20 27 29.1 +1.6
SRO pmax pmax
comp=Z,45nm,0.8s
SRO Srobarova 83.07 325 eP P 20 27 29.1 +1.6
BAIL Bailesti 83.14 320 ⇓P P 20 27 29.6 +1.7
DJES Djerdap 83.14 321 ⇓P P 20 27 28.5 +0.5
MODS Modra-Piesok 83.15 326 eP P 20 27 29.2 +1.2
MODS pmax pmax
comp=Z,63nm,1.3s
MODS Modra-Piesok 83.15 326 eP P 20 27 29.2 +1.2
PRU Pruhonice 83.21 328 eP P 20 27 28.5 +0.3
PRU MLR MLR
comp=Z,200nm,15.9s
PRU Pruhonice 83.21 328 eP P 20 27 28.5 +0.3
PRU AMS AMS 21 08 20.0
comp=Z,200nm,15.9s
DIM Dimitrovgrad 83.25 317 P P 20 27 29.0 +0.5
TREC Trest 83.30 327 eP P 20 27 30.0 +1.3
TREC MLR MLR
comp=Z,200nm,20.7s
TREC Trest 83.30 327 eP P 20 27 30.0 +1.3
TREC AMS AMS 21 07 30.0
comp=Z,200nm,20.7s
N23A Red Feather La 83.33 44 P P 20 27 29.5 +0.1
baz=310,SNR=6.7
ZST Bratislava 83.36 326 eP P 20 27 30.4 +1.4
ZST pmax pmax
comp=Z,109nm,1.7s
ZST Bratislava 83.36 326 eP P 20 27 30.4 +1.4
WUAZ Wupatki 83.39 51 P P 20 27 30.7 +1.0
WUAZ Wupatki 83.39 51 P P 20 27 29.4 -0.3
baz=308
CSKK Cskako 83.41 325 P P 20 27 29.7 +0.4
MDVR Moldovita 83.49 321 ⇑P P 20 27 30.3 +0.5
AGMN Agassiz Nation 83.51 34 P P 20 27 29.9 +0.2
baz=316
GHAJ Ghor Haditha 83.65 304 P P 20 27 31.5 +0.7
BLKB Belogradchik 83.77 320 ⇓P P 20 27 32.0 +0.7
MANT Manisa 83.78 313 P P 20 27 31.9 +0.2
MANT IAmb IAmb 20 27 33.5
comp=Z,44nm,0.9s
EGYH Egyhazaskeszo 83.81 325 P P 20 27 32.4 +1.1
RDO Rodhopi 83.84 316 P P 20 27 32.4 +0.9
RDO IAmb IAmb 20 27 33.2
comp=Z,30nm,0.9s
MPLH Magyarpolny 83.89 325 P P 20 27 31.9 +0.1
KAC Achnashellach 83.91 342 eP P 20 27 32.2 +0.6
TIH Tihany 83.92 324 P P 20 27 32.2 +0.4
RZN Rozhen 83.95 317 P P 20 27 33.0 +0.6
PMOR Pomariorio Ree 83.95 113 eT T 22 00 09.9
comp=Z,8.6nm,0.2s
SOP Sopron 83.99 326 P P 20 27 32.9 +0.7
X16A Lo Mia Camp, P 84.03 52 P P 20 27 34.0 +1.1
MORH Mrgy, Hungar 84.04 324 ⇑P P 20 27 32.8 +0.3
MORH Mrgy, Hungar 84.04 324 P P 20 27 32.4 -0.1
ELL Elmali 84.05 311 P P 20 27 33.2 +0.3
ELL Elmali 84.05 311 P P 20 27 33.3 +0.3
ELL pmax pmax
comp=Z,150nm,0.9s
RONA Rosalia, Austr 84.10 326 i P P 20 27 33.9 +1.0
comp=Z,62nm,0.9s,SNR=33
CONA Conrad Observa 84.13 326 i P P 20 27 34.1 +1.0
comp=Z,39nm,0.8s,SNR=30
KPL Plockton 84.14 342 eP P 20 27 33.4 +0.6
KPL IAmb IAmb 20 27 34.5
comp=Z,32nm,1.0s
VTS Vitosha 84.14 319 ⇑P P 20 27 34.5 +1.2
VTS Vitosha 84.14 319 P P 20 27 34.0 +0.7
VTS Vitosha 84.14 319 ⇑P P 20 27 34.5 +1.2
VTS Vitosha 84.14 319 P P 20 27 34.0 +0.7
MVCO Mesa Verde 84.16 48 P P 20 27 33.5 -0.1
baz=309
CKRC Cesky Krumlov 84.18 328 eP P 20 27 33.3 +0.1
FRGS Fruska Gora 84.20 322 ⇓P P 20 27 34.4 +1.0
FRGS Fruska Gora 84.20 322 ⇑P P 20 27 33.7 +0.3
ISCO Idaho Springs 84.23 45 P P 20 27 35.3 +1.3

ISCO	**Idaho Springs**	**84.23**	**45**	P	**P**	**20 27 35.3**	**+1.3**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ISCO	**Idaho Springs**	**84.23**	**45**	P	**P**	**20 27 34.8**	**+0.8**
	baz=311						
ISCO	**Idaho Springs**	**84.23**	**45**	P	**P**	**20 27 33.5**	**-0.5**
	baz=311						
KHC	**Kasperske Hory**	**84.27**	**328**	P	**P**	**20 27 34.0**	**+0.4**
KHC				IAmb	IAmb	20 27 35.3	
	comp=Z,35nm,0.8s						
KHC	**Kasperske Hory**	**84.27**	**328**	*e*P	**P**	**20 27 33.9**	**+0.2**
KHC				*e*		20 27 50.5	
KHC				*e*		20 30 43.5	
KHC				MLR	MLR		
	comp=Z,100nm,15.5s						
KHC	**Kasperske Hory**	**84.27**	**328**	*e*P	**P**	**20 27 33.9**	**+0.2**
KHC				*ex*	x	20 27 50.5	
KHC				*e*PP	**PP**	**20 30 43.5**	**-4.4**
KHC				AMS	AMS	21 08 50.0	
	comp=Z,100nm,15.5s						
PPT	**Papeete**	**84.27**	**116**	LR	LR	20 57 09.0	
	comp=Z,99nm,20.6s,baz=354,slow=30						
BOVS	**Bovan**	**84.28**	**320**	⇑P	**P**	**20 27 33.4**	**-0.3**
PPT2	**Papeete2**	**84.28**	**116**	*e*LR	LR	20 54 09.5	
	comp=Z,393nm,29.5s						
KOVH	**Kovagotottos**	**84.40**	**324**	P	**P**	**20 27 34.4**	**0.0**
GEC2	**GERESS Array S**	**84.42**	**328**	P	**P**	**20 27 34.7**	**+0.1**
GEC2				IAmb	IAmb	20 27 35.7	
	comp=Z,23nm,0.8s						
GERES	**GERESS Array B**	**84.42**	**328**	P	**P**	**20 27 34.9**	**+0.3**
	comp=Z,16nm,0.7s,baz=36,slow=5.0,SNR=147						
GERES				PP	**PP**	**20 30 49.0**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=47,slow=5.9,SNR=5.1						
	comp=Z,16nm,0.7s						
GERES	**GERESS Array B**	**84.42**	**328**	P	**P**	**20 27 34.6**	**+0.1**
INVG	**Invergeldie, C**	**84.53**	**341**	*e*P	**P**	**20 27 35.1**	**+0.3**
AKAS	**Kas**	**84.56**	**311**	P	**P**	**20 27 34.1**	**-1.5**
214A	**Organ Pipe Nat**	**84.61**	**55**	P	**P**	**20 27 35.9**	**+0.2**
	baz=308						
BEHE	**Becsehely**	**84.76**	**325**	P	**P**	**20 27 36.5**	**+0.3**
ARSA	**Arzberg**	**84.78**	**326**	*i* P	**P**	**20 27 36.8**	**+0.5**
	comp=Z,21nm,0.8s,SNR=16						
EAB	**Aberfoyle**	**84.82**	**341**	*e*P	**P**	**20 27 36.1**	**-0.2**
S22A	**4UR Ranch, Cre**	**84.84**	**47**	P	**P**	**20 27 38.1**	**+0.9**
S22A				IAmb	IAmb	20 28 05.3	
	comp=Z,7.8nm,0.9s						
S22A	**4UR Ranch, Cre**	**84.84**	**47**	P	**P**	**20 27 37.2**	**+0.1**
	baz=310,SNR=6.5						
GRA1	**Grafenberg Arr**	**84.85**	**330**	P	**P**	**20 27 37.1**	**+0.5**
GRF	**Grafenberg Arr**	**84.85**	**330**	P	**P**	**20 27 37.1**	**+0.5**
GRF				pmax	pmax		
	comp=Z,54nm,0.8s						
GRFO	**Grafenberg**	**84.85**	**330**	P	**P**	**20 27 37.1**	**+0.5**
GRFO	**Grafenberg**	**84.85**	**330**	P	**P**	**20 27 37.1**	**+0.5**
GRFO				pmax	pmax		
	comp=Z,54nm,0.9s						
DIVS	**Divibare**	**84.85**	**321**	P	**P**	**20 27 37.1**	**+0.3**
DIVS	**Divibare**	**84.85**	**321**	⇑*i*P	**P**	**20 27 36.8**	**0.0**
MOA	**Molln**	**84.92**	**327**	*i* P	**P**	**20 27 37.5**	**+0.5**
	comp=Z,24nm,0.8s,SNR=19						
EIL	**Elat**	**85.05**	**303**	P	**P**	**20 27 38.1**	**+0.2**
	comp=Z,54nm,0.8s,baz=55,slow=3.9,SNR=42						
EIL				LR	LR	21 09 35.6	
	comp=Z,114nm,21.2s,baz=80,slow=38						
	comp=Z,54nm,0.8s						
F33A	**5 Mile Ranch,**	**85.08**	**36**	P	**P**	**20 27 38.5**	**+0.7**
F33A				IAmb	IAmb	20 27 39.1	
	comp=Z,11nm,0.8s						
F33A	**5 Mile Ranch,**	**85.08**	**36**	P	**P**	**20 27 37.9**	**+0.1**
	baz=316						
KALN	**Kalnik**	**85.16**	**325**	*i* P	**P**	**20 27 37.9**	**-0.3**
PGBU	**Glenifferbraes**	**85.19**	**341**	*e*P	**P**	**20 27 39.3**	**+1.2**
PGBU				IAmb	IAmb	20 27 39.7	
	comp=Z,91nm,1.1s						
BBLS	**Lazići**	**85.31**	**322**	⇑*i*P	**P**	**20 27 39.6**	**+0.5**
BIOA	**Bad Ischl, Aus**	**85.32**	**327**	*i* P	**P**	**20 27 39.4**	**+0.4**
	comp=Z,27nm,0.8s,SNR=20						
LOBO	**Lobor**	**85.33**	**325**	*i* P	**P**	**20 27 38.6**	**-0.4**
MOSL	**Moslavina**	**85.39**	**324**	*i* P	**P**	**20 27 39.0**	**-0.4**
SOKA	**Soboth**	**85.43**	**326**	*i* P	**P**	**20 27 39.9**	**+0.2**
	comp=Z,63nm,1.0s,SNR=33						
RUDO	**Rudo**	**85.51**	**321**	⇑*i*P	**P**	**20 27 39.8**	**-0.2**
OGNE	**Ogallala**	**85.52**	**42**	P	**P**	**20 27 40.5**	**+0.3**
	baz=313						
PTJ	**Puntijarka**	**85.56**	**325**	P	**P**	**20 27 39.5**	**-0.7**
SDCO	**Great Sand Dun**	**85.64**	**47**	P	**P**	**20 27 42.2**	**+1.1**
SDCO				IAmb	IAmb	20 28 19.2	
	comp=Z,4.9nm,0.2s						
SDCO	**Great Sand Dun**	**85.64**	**47**	P	**P**	**20 27 42.3**	**+1.2**
	baz=311						
SDCO	**Great Sand Dun**	**85.64**	**47**	P	**P**	**20 27 42.0**	**+0.9**
	baz=311						
EYMN	**Ely**	**85.73**	**32**	P	**P**	**20 27 40.7**	**-0.3**
	baz=319						
A051A	**Mrakovica**	**85.75**	**324**	⇑*i*P	**P**	**20 27 40.5**	**-0.7**
TUC	**Tucson**	**85.75**	**53**	P	**P**	**20 27 42.3**	**+0.8**
	baz=308						
OBKA	**Obir**	**85.78**	**326**	⇑*i*P	**P**	**20 27 40.8**	**-0.6**
OBKA	**Obir**	**85.78**	**326**	*i* P	**P**	**20 27 41.1**	**-0.3**
	comp=Z,16nm,0.8s,SNR=12						
BLY	**Banja Luka**	**85.81**	**323**	⇑*i*P	**P**	**20 27 41.4**	**0.0**
CRES	**Cresnjev**	**85.86**	**325**	⇑*i*P	**P**	**20 27 41.5**	**-0.2**
KESW	**Keswick, Cumbr**	**85.88**	**340**	*e*P	**P**	**20 27 42.6**	**+1.0**
KBA	**Koelnbreinsper**	**85.91**	**327**	*i* P	**P**	**20 27 41.9**	**-0.2**
	comp=Z,14nm,0.7s,SNR=12						
A251A	**Rujevac**	**85.98**	**324**	*i* P	**P**	**20 27 41.9**	**-0.4**
OZLJ	**Ozalj**	**86.01**	**325**	*i* P	**P**	**20 27 42.1**	**-0.2**
UPM	**Unac-Piva**	**86.04**	**321**	⇑*i*P	**P**	**20 27 42.1**	**-0.8**
MGRS	**Mrkonjic Grad**	**86.09**	**323**	*e*P	**P**	**20 27 44.2**	**+1.3**
HGN	**Heimansgroeve**	**86.10**	**333**	*e*P	**P**	**20 27 42.4**	**-0.3**
MYKA	**Terra Mystica**	**86.11**	**326**	*i* P	**P**	**20 27 42.4**	**-0.6**
	comp=Z,14nm,0.9s,SNR=8.6						
BEBN	**Eben Emael**	**86.17**	**333**	*d*P	**P**	**20 27 43.5**	**+0.4**
	comp=Z,65nm,0.8s						
BTNL	**Ternell**	**86.17**	**333**	*d*P	**P**	**20 27 43.1**	**-0.1**
	comp=Z,23nm,0.9s						
BOJS	**Bojanci**	**86.19**	**325**	⇑*i*P	**P**	**20 27 43.2**	**-0.1**
MEM	**Membach**	**86.20**	**333**	*d*P	**P**	**20 27 43.2**	**-0.1**
	comp=Z,25nm,0.8s						
CLGH	**Cloghs, Cushen**	**86.27**	**341**	*e*P	**P**	**20 27 44.0**	**+0.5**
CLGH				IAmb	IAmb	20 27 45.4	
	comp=Z,48nm,0.9s						
PRED	**Cave del Predi**	**86.28**	**326**	P	**P**	**20 27 43.2**	**-0.6**
PRED				IAmb	IAmb	20 27 45.2	
	comp=Z,16nm,0.8s						
SRKY	**Kupres RS**	**86.31**	**323**	⇑*i*P	**P**	**20 27 43.3**	**-0.8**
WACR	**West Acre**	**86.34**	**337**	*e*P	**P**	**20 27 44.5**	**+0.7**
WACR				IAmb	IAmb	20 27 45.3	
	comp=Z,81nm,0.9s						
BSTI	**Sart Tilman**	**86.39**	**333**	*d*P	**P**	**20 27 44.7**	**+0.5**
	comp=Z,8.7nm,0.8s						
TAOE	**Nuku Hiva Isla**	**86.39**	**103**	*e*LR	LR	20 55 08.3	
	comp=Z,257nm,23.4s						
STU	**Stuttgart**	**86.40**	**330**	P	**P**	**20 27 44.1**	**-0.2**
STU	**Stuttgart**	**86.40**	**330**	P	**P**	**20 27 44.1**	**-0.2**
STU				pmax	pmax		
	comp=Z,34nm,0.9s						
PDG	**Podgorica**	**86.40**	**321**	⇓P	**P**	**20 27 44.6**	**+0.2**
PDG	**Podgorica**	**86.40**	**321**	P	**P**	**20 27 44.2**	**-0.2**
PDG				IAmb	IAmb	20 27 45.4	
	comp=Z,20nm,0.7s						
PDG	**Podgorica**	**86.40**	**321**	*e*P	**P**	**20 27 44.2**	**-0.2**
CEY	**Cerknica**	**86.41**	**325**	⇑*i*P	**P**	**20 27 43.6**	**-0.8**
ECSD	**EROS Data Cent**	**86.44**	**38**	P	**P**	**20 27 44.8**	**+0.2**
ECSD				IAmb	IAmb	20 30 29.5	
	comp=Z,6.2nm,0.6s						
ECSD	**EROS Data Cent**	**86.44**	**38**	P	**P**	**20 27 45.0**	**+0.4**
	baz=316						
ECSD	**EROS Data Cent**	**86.44**	**38**	P	**P**	**20 27 45.1**	**+0.5**
	baz=316						
BRY	**Bratogost**	**86.44**	**321**	⇑*i*P	**P**	**20 27 44.6**	**-0.2**
KSCO	**Kaye Shedlock'**	**86.49**	**44**	P	**P**	**20 27 45.4**	**+0.4**
	baz=313						
LBWR	**Ladybower, Pea**	**86.50**	**338**	*e*P	**P**	**20 27 45.2**	**+0.5**
LBWR				IAmb	IAmb	20 27 46.5	
	comp=Z,98nm,1.0s						
WATA	**Walderalm**	**86.50**	**328**	*i* P	**P**	**20 27 44.2**	**-0.8**
	comp=Z,7.2nm,1.0s						
WTTA	**Wattenberg**	**86.53**	**328**	*i* P	**P**	**20 27 44.8**	**-0.4**
	comp=Z,7.0nm,0.9s						
ABTA	**Abfaltersbach**	**86.53**	**327**	*i* P	**P**	**20 27 44.1**	**-1.0**
	comp=Z,16nm,0.9s,SNR=10						
CLUD	**Cludinico**	**86.58**	**327**	P	**P**	**20 27 44.3**	**-1.0**
DRME	**Dracevica, Mon**	**86.61**	**320**	*e*P	**P**	**20 27 45.4**	**-0.1**
SABO	**M.te Sabotino**	**86.61**	**326**	P	**P**	**20 27 44.6**	**-0.8**
SABO				IAmb	IAmb	20 27 45.5	
	comp=Z,20nm,0.9s						
BCLA	**Clavier**	**86.62**	**333**	*d*P	**P**	**20 27 45.1**	**-0.2**
	comp=Z,25nm,0.9s						
A250A	**Rusevo Krmpots**	**86.67**	**325**	*i* P	**P**	20 27 40.1	-5.6
T25A	**Trinidad**	**86.69**	**46**	P	**P**	**20 27 46.6**	**+0.4**
	baz=312						
MOTA	**Moosalm**	**86.70**	**328**	*i* P	**P**	**20 27 45.7**	**-0.3**
	comp=Z,8.2nm,1.0s,SNR=5.8						
E38A	**The Farm, Brul**	**86.72**	**33**	P	**P**	**20 27 46.0**	**+0.1**
	baz=320						
KIJV	**Kijevo**	**86.73**	**323**	*i* P	**P**	**20 27 45.0**	**-1.0**
RICI	**Ricice**	**86.74**	**322**	*i* P	**P**	**20 27 45.7**	**-0.3**
RETA	**Reutte**	**86.74**	**328**	*i* P	**P**	**20 27 46.0**	**0.0**
	comp=Z,18nm,1.0s,SNR=7.1						
TRI	**Trieste**	**86.74**	**326**	P	**P**	**20 27 45.3**	**-0.7**
TRI				IAmb	IAmb	20 27 46.2	
	comp=Z,23nm,0.9s						
TRI	**Trieste**	**86.74**	**326**	P	**P**	**20 27 45.3**	**-0.7**
TRI				pmax	pmax		
	comp=Z,23nm,0.9s						
SKDS	**Skadanscina**	**86.75**	**325**	⇑*i*P	**P**	**20 27 44.2**	**-1.9**
SQTA	**Sankt Quirin**	**86.75**	**328**	*i* P	**P**	**20 27 46.0**	**-0.2**
	comp=Z,7.1nm,0.7s,SNR=6.1						
STAL	**STALIGIAL**	**86.81**	**327**	P	**P**	**20 27 45.3**	**-1.1**
STAL				IAmb	IAmb	20 27 46.1	
	comp=Z,21nm,0.9s						
RCHB	**Rochefort**	**86.86**	**333**	*d*P	**P**	**20 27 46.3**	**-0.2**
	comp=Z,33nm,0.9s						
ANMO	**Albuquerque**	**86.88**	**49**	LR	LR	21 03 02.4	
	comp=Z,52nm,19.8s,baz=312,slow=33						
ANMO	**Albuquerque**	**86.88**	**49**	*i* P	**P**	**20 27 46.9**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	**Albuquerque**	**86.88**	**49**	P	**P**	**20 27 47.2**	**+0.1**
	baz=311						
CIMO	**Cimolais**	**86.90**	**327**	P	**P**	**20 27 45.6**	**-1.2**
CIMO				IAmb	IAmb	20 27 46.5	
	comp=Z,17nm,1.3s						
WLF	**Walferdange**	**86.91**	**332**	P	**P**	**20 27 46.6**	**-0.1**
WLF				IAmb	IAmb	20 27 48.3	
	comp=Z,22nm,0.9s						
WLF	**Walferdange**	**86.91**	**332**	P	**P**	**20 27 46.6**	**-0.1**
WLF				pmax	pmax		
	comp=Z,22nm,0.9s						
WLF	**Walferdange**	**86.91**	**332**	*d*P	**P**	**20 27 46.9**	**+0.1**
	comp=Z,16nm,1.0s						
BMRD	**Maredsous**	**86.91**	**333**	*d*P	**P**	**20 27 46.9**	**+0.2**
	comp=Z,38nm,0.8s						
BFO	**Black Forest**	**87.11**	**330**	P	**P**	**20 27 47.4**	**-0.4**
BFO				IAmb	IAmb	20 27 48.8	
	comp=Z,44nm,1.5s						
BFO	**Black Forest**	**87.11**	**330**	P	**P**	**20 27 47.4**	**-0.4**
BFO				pmax	pmax		
	comp=Z,44nm,1.5s						
FETA	**Feichten**	**87.11**	**328**	*i* P	**P**	**20 27 47.9**	**-0.1**
	comp=Z,11nm,1.0s,SNR=6.2						
DOU	**Dourbes**	**87.14**	**333**	*d*P	**P**	**20 27 47.6**	**-0.3**
	comp=Z,11nm,0.9s						
WME	**Mynddd Eilian**	**87.27**	**340**	*e*P	**P**	**20 27 48.2**	**-0.1**
DAVA	**Damuels**	**87.27**	**329**	*i* P	**P**	**20 27 48.6**	**-0.2**
	comp=Z,13nm,0.9s,SNR=7.0						
BGNE	**Belgrade**	**87.31**	**40**	P	**P**	**20 27 49.1**	**+0.2**
	baz=315						
WLF1	**Llynfaes**	**87.39**	**340**	*e*P	**P**	**20 27 48.9**	**-0.1**
WLF1				IAmb	IAmb	20 27 50.1	
	comp=Z,72nm,0.9s						
FOEL	**Foel Wylfa**	**87.39**	**339**	*e*P	**P**	**20 27 48.5**	**-0.6**
FOEL				IAmb	IAmb	20 27 49.5	
	comp=Z,62nm,0.8s						
CTI	**Castel Tesino**	**87.45**	**327**	P	**P**	**20 27 48.4**	**-1.2**
CTI				IAmb	IAmb	20 27 55.2	
	comp=Z,8.3nm,0.7s						
CTI	**Castel Tesino**	**87.45**	**327**	P	**P**	**20 27 48.4**	**-1.2**
CTI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
YLL	**Llanberis**	**87.45**	**340**	*e*P	**P**	**20 27 49.4**	**+0.2**
YRC	**Rhoscolyn**	**87.47**	**340**	*e*P	**P**	**20 27 49.4**	**+0.1**
LLW	**Llanuwychllyn**	**87.56**	**339**	*e*P	**P**	**20 27 50.1**	**+0.3**
HLM1	**Long Mynd**	**87.62**	**339**	*e*P	**P**	**20 27 50.4**	**+0.3**
HLM1				IAmb	IAmb	20 27 51.2	
	comp=Z,14nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**87.62**	**328**	P	**P**	**20 27 51.1**	**+0.5**
FUORN				IAmb	IAmb	20 27 52.4	
	comp=Z,18nm,0.8s						
DAVOX	**Davos/Dischmat**	**87.67**	**328**	LR	LR	21 10 57.6	
	comp=Z,141nm,18.5s,baz=24,slow=38						
ECH	**Echery**	**87.67**	**331**	P	**P**	**20 27 50.3**	**-0.2**
ECH				IAmb	IAmb	20 27 51.2	
	comp=Z,7.2nm,0.8s						
ECH	**Echery**	**87.67**	**331**	P	**P**	**20 27 50.3**	**-0.2**
I37B	**Waseca**	**87.81**	**36**	P	**P**	**20 27 51.2**	**0.0**
	baz=318						
L34A	**Svendsen Farm,**	**87.83**	**39**	P	**P**	**20 27 51.3**	**-0.1**
TBI	**Tubuai**	**87.96**	**120**	*e*LR	LR	20 55 52.2	
	comp=Z,188nm,27.2s						
TEOL	**Teolo**	**87.97**	**327**	P	**P**	**20 27 51.7**	**-0.3**
TEOL				IAmb	IAmb	20 27 55.6	
	comp=Z,15nm,0.7s						
DSB	**Dublin**	**87.98**	**341**	P	**P**	**20 27 52.8**	**+1.0**
SCHQ	**Schefferville**	**88.01**	**15**	P	**P**	**20 27 52.6**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=334,slow=6.9,SNR=5.1						
SCHQ				LR	LR	21 10 10.1	
	comp=Z,65nm,20.4s,baz=346,slow=38						
	comp=Z,6.1nm,0.8s						
SCHQ	**Schefferville**	**88.01**	**15**	P	**P**	**20 27 52.5**	**+0.6**
SCHQ				IAmb	IAmb	20 29 02.3	
	comp=Z,15nm,1.1s						
STRD	**Stroud**	**88.04**	**338**	*e*P	**P**	**20 27 52.2**	**+0.1**
STRD				IAmb	IAmb	20 27 53.4	
	comp=Z,101nm,0.9s						
IDI	**Anoyia**	**88.09**	**312**	P	**P**	**20 27 53.1**	**+0.3**
	comp=Z,15nm,0.8s,baz=350,slow=4.7,SNR=2.7						
IDI				LR	LR	21 12 40.6	
	comp=Z,26nm,19.2s,baz=70,slow=39						
	comp=Z,15nm,0.8s						
IDI	**Anoyia**	**88.09**	**312**	P	**P**	**20 27 53.4**	**+0.6**
MCH1	**Michaelchurch**	**88.11**	**338**	*e*P	**P**	**20 27 52.3**	**-0.1**
MCH1				IAmb	IAmb	20 27 54.0	
	comp=Z,35nm,0.8s						
MONM	**Monmouth**	**88.18**	**338**	*e*P	**P**	**20 27 52.7**	**-0.1**
MONM				IAmb	IAmb	20 27 53.9	
	comp=Z,51nm,0.9s						
CBKS	**Cedar Bluff**	**88.26**	**43**	P	**P**	**20 27 54.1**	**+0.6**
	baz=314						
SALO	**Salr**	**88.28**	**327**	P	**P**	**20 27 52.8**	**-0.7**
SALO				IAmb	IAmb	20 27 53.9	
	comp=Z,23nm,0.7s						
G40A	**Rib Lake**	**88.36**	**33**	P	**P**	**20 27 53.4**	**-0.5**
G40A				IAmb	IAmb	20 29 41.0	
	comp=Z,26nm,1.5s						
G40A	**Rib Lake**	**88.36**	**33**	P	**P**	**20 27 54.1**	**+0.3**
	baz=320						
ITM	**Ithomi**	**88.58**	**315**	P	**P**	**20 27 53.8**	**-1.2**
SGRT	**San Giovanni R**	**88.70**	**322**	P	**P**	**20 27 55.0**	**-0.6**
ZCCA	**Zocca**	**89.06**	**326**	P	**P**	**20 27 58.2**	**+1.0**
SENIN	**Lac Senin/Sane**	**89.09**	**330**	P	**P**	**20 27 57.4**	**-0.1**
SENIN				IAmb	IAmb	20 27 59.3	
	comp=Z,7.0nm,0.8s						
NRCA	**Norcia**	**89.21**	**324**	P	**P**	**20 27 58.0**	**+0.1**
AQU	**L'Aquila**	**89.43**	**324**	P	**P**	**20 27 59.4**	**+0.5**
AQU	**L'Aquila**	**89.43**	**324**	P	**P**	**20 27 59.4**	**+0.5**
AQU				pmax	pmax		
	comp=Z,43nm,0.9s						
OSSC	**Osservatorio P**	**89.57**	**326**	P	**P**	**20 27 59.7**	**+0.2**
OSSC				IAmb	IAmb	20 28 00.3	
	comp=Z,18nm,0.9s						
ATD	**Arta Tunnel**	**89.67**	**284**	P	**P**	**20 28 01.3**	**+0.8**
	comp=Z,5.4nm,0.8s,baz=25,slow=3.5,SNR=2.5						
ATD				LR	LR	21 10 20.4	
	comp=Z,32nm,21.5s,baz=2.5,slow=37						
	comp=Z,5.4nm,0.8s						
ATD	**Arta Tunnel**	**89.67**	**284**	P	**P**	**20 28 00.7**	**+0.1**
ATD				IAmb	IAmb	20 28 04.3	
	comp=Z,18nm,1.2s						
MSSA	**Maissana**	**89.75**	**327**	P	**P**	**20 27 59.6**	**-0.8**
MSSA				IAmb	IAmb	20 28 00.3	
	comp=Z,13nm,0.9s						
KSU1	**Kansas State U**	**89.78**	**41**	P	**P**	**20 28 00.9**	**+0.4**
	baz=316						
AMTX	**Amarillo**	**89.84**	**47**	P	**P**	**20 28 01.5**	**+0.4**
	baz=313						
JQE	**Queens East**	**90.23**	**336**	*e*P	**P**	**20 28 02.4**	**0.0**
JVM	**Valle D.L. Mar**	**90.27**	**337**	*e*P	**P**	**20 28 03.3**	**+0.7**
JSA	**Saint Aubin**	**90.28**	**336**	*e*P	**P**	**20 28 02.7**	**0.0**
JSA				IAmb	IAmb	20 28 04.1	
	comp=Z,50nm,0.9s						
BNI	**Bardonecchia**	**90.40**	**329**	P	**P**	**20 28 03.3**	**-0.3**
BNI				IAmb	IAmb	20 28 05.6	
	comp=Z,9.0nm,0.9s						
BNI	**Bardonecchia**	**90.40**	**329**	P	**P**	**20 28 03.3**	**-0.3**
BNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SSB	**Saint Sauveur**	**91.11**	**331**	P	**P**	**20 28 06.5**	**-0.2**
SSB				IAmb	IAmb	20 28 07.7	
	comp=Z,9.4nm,0.8s						
SSB	**Saint Sauveur**	**91.11**	**331**	P	**P**	**20 28 06.5**	**-0.2**
SSB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CEL	**Celeste**	**91.19**	**320**	P	**P**	**20 28 06.7**	**-0.5**
LPIG	**La Paz**	**91.19**	**60**	LR	LR	21 01 44.8	
	comp=Z,66nm,21.4s,baz=223,slow=31						
ROSF	**Rostrenen**	**91.39**	**337**	*e*P	**P**	**20 28 07.8**	**-0.1**
TX31	**Lajitas Av. Si**	**92.34**	**52**	P	**P**	**20 28 13.2**	**+0.4**
TX31				IAmb	IAmb	20 28 15.9	
	comp=Z,16nm,0.8s						
TXAR	**Lajitas Array**	**92.34**	**52**	P	**P**	**20 28 13.7**	**+0.9**
	comp=Z,5.5nm,0.9s,baz=293,slow=3.1,SNR=44						
TXAR				LR	LR	21 05 27.1	
	comp=Z,77nm,19.9s,baz=309,slow=33						
	comp=Z,5.5nm,0.9s						
VAE	**Valguarnera**	**92.55**	**320**	LR	LR	21 15 02.7	
	comp=Z,88nm,18.3s,baz=21,slow=39						
ABTX	**Abilene, Hawle**	**92.63**	**47**	P	**P**	**20 28 14.6**	**+0.7**
	baz=314						
SADO	**Sadowa**	**93.34**	**27**	LR	LR	21 15 21.7	
	comp=Z,27nm,18.0s,baz=2.0,slow=39						
JCT	**Junction City**	**94.02**	**49**	P	**P**	**20 28 20.3**	**-0.1**
	baz=314						
WHTX	**Lake Whitney,**	**94.39**	**46**	P	**P**	**20 28 21.9**	**-0.1**
	baz=316						
833A	**Chaparral WMA,**	**95.77**	**50**	P	**P**	**20 28 28.3**	**-0.1**
	baz=314						
NATX	**Nacogdoches**	**96.20**	**45**	P	**P**	**20 28 29.9**	**-0.4**
	baz=317						
KEST	**Kesra**	**96.52**	**322**	P	**P**	**20 28 31.3**	**-0.5**
	comp=Z,6.6nm,1.0s,baz=20,slow=7.8,SNR=6.0						
KEST				LR	LR	21 16 41.0	
	comp=Z,126nm,19.4s,baz=298,slow=38						
	comp=Z,6.6nm,1.0s						
TKL	**Tuckaleechee C**	**98.95**	**35**	LR	LR	21 15 19.8	
	comp=Z,20nm,20.7s,baz=330,slow=36						
ESDC	**Sonseca Array**	**99.19**	**333**	P	**Pdif**	**20 28 43.1**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=30,slow=5.4,SNR=4.8						
ESDC				LR	LR	21 17 49.3	
	comp=Z,52nm,21.5s,baz=22,slow=38						
	comp=Z,0.5nm,0.8s						
KMBO	**Kilima Mbogo**	**101.46**	**277**	P	**Pdif**	**20 28 53.6**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=79,slow=16,SNR=2.3						
NHSC	**New Hope**	**102.73**	**34**	P	**Pdif**	**20 28 58.3**	**-1.1**
	baz=327						
TORD	**Torodi Ar. Bea**	**118.49**	**313**	PKP	**PKPdf**	**20 33 49.3**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=28,slow=1.9,SNR=14						
TORD				PKKPab	**PKKPab**	**20 44 11.3**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=221,slow=4.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**118.49**	**313**	PKPdf	**PKPdf**	**20 33 49.5**	**-0.7**
KOWA	**Kowa**	**120.69**	**319**		**PKPdf**	**20 33 54.3**	**-0.1**
LBTB	**Lobatse**	**123.45**	**261**	PKPdf	**PKiKP**	**20 33 59.8**	**+0.1**
LBTB	**Lobatse**	**123.45**	**261**	PKIKP	**PKiKP**	**20 33 59.8**	**+0.1**
QSPA	**South Pole Qui**	**124.23**	**180**		**PKPdf**	**20 33 59.6**	**-0.1**
BOSA	**Boshof**	**125.23**	**257**	PKP	**PKPdf**	**20 34 02.6**	**-0.2**
	comp=Z,6.1nm,0.8s,baz=36,slow=4.9,SNR=8.7						
DBIC	**Dimbokro**	**127.52**	**314**	PKP	**PKPdf**	**20 34 07.2**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=62,slow=5.0,SNR=3.5						
BELA	**Belgrano 2**	**136.46**	**182**	PKPdf	**PKPdf**	**20 34 23.2**	**+0.7**
TROLL	**Troll, Antarti**	**136.55**	**198**	PKPdf	PKPpre	20 34 13.2	
SNAA	**Sanae**	**138.07**	**196**	PKPdf	PKPpre	20 34 16.9	
VNA2	**Neumayer--Watz**	**139.64**	**196**	PKPdf	PKPpre	20 34 20.7	
	baz=128,slow=2.0						
VNA3	**Neumayer Olymp**	**139.89**	**195**	PKPdf	PKPpre	20 34 22.6	
VNA1	**Neumayer--Stat**	**140.04**	**196**	PKPdf	PKPpre	20 34 23.6	
ETMB	**Extrema**	**145.43**

ONTNC	**Ouen Toro**	**5.98 273**	P	Pn	20 43 01.0	+5.1
DZM	**Mont Dzumac**	**6.02 276**	Pn	**Pn**	**20 42 54.0**	**-2.5**
	2.6nm,0.3s,baz=186,slow=18,SNR=16					
DZM			Sn	**Sn**	**20 44 04.4**	**+0.2**
	2.7nm,0.3s,baz=97,slow=19,SNR=2.1					
	5.6nm,0.4s					
DZM	**Mont Dzumac**	**6.02 276**	Pn	**Pn**	**20 42 57.0**	**+0.5**
DZM				**Sn**	**20 44 04.7**	**+0.4**
DZM	**Mont Dzumac**	**6.02 276**	P	**Pn**	**20 42 59.3**	**+2.8**
NOUC	**Port Laguerre**	**6.14 275**	P	**Pn**	**20 43 00.7**	**+2.6**
MSVF	**Nonsavu**	**6.98 45**	Pn	**Pn**	**20 43 08.0**	**-1.7**
	2.4nm,0.3s,baz=189,slow=6.1,SNR=8.2					
MSVF			Sn	**Sn**	**20 44 30.8**	**+2.8**
	baz=67,slow=20					
MSVF			LR	LR	20 45 11.7	
	comp=Z,1μm,18.7s,baz=215,slow=33					
	13nm,0.6s					
MSVF	**Nonsavu**	**6.98 45**	Pn	**Pn**	**20 43 08.1**	**-1.6**
MSVF	**Nonsavu**	**6.98 45**	P	**Pn**	**20 43 10.9**	**+1.2**
KOUNC	**Koumac, New Ca**	**8.32 284**	Pn	**Pn**	**20 43 29.2**	**+1.2**
KOUNC	**Koumac, New Ca**	**8.32 284**	P	**Pn**	**20 43 30.7**	**+2.7**
DGTI	**Dogotuki**	**9.12 46**	P	**Pn**	**20 43 40.9**	**+1.8**
RAO	**Raoul Island**	**10.46 130**	LR	LR	20 47 14.6	
	comp=Z,322nm,18.6s,baz=66,slow=33					
OUZ	**Omahuta**	**12.40 177**	Pn	**Pn**	**20 44 24.4**	**+0.6**
URZ	**Urewera**	**15.83 168**	Pn	**P**	**20 45 14.1**	**+0.6**
	0.5nm,0.3s,baz=353,slow=15,SNR=5.1					
URZ			LR	LR	20 50 23.2	
	comp=Z,407nm,18.2s,baz=30,slow=34					
	6.6nm,0.8s					
BFZ	**Birch Farm**	**18.06 172**	P	**P**	**20 45 39.0**	**+0.9**
BFZ			IAmb	IAmb	20 46 14.0	
	comp=Z,91nm,1.5s					
HNR	**Honiara**	**18.18 315**	P	**P**	**20 45 39.9**	**+0.2**
	comp=Z,40nm,0.6s,baz=147,slow=5.2,SNR=2.2					
HNR			LR	LR	20 51 39.8	
	comp=Z,153nm,20.9s,baz=140,slow=34					
LTZ	**Lake Taylor**	**19.94 181**		**Pn**	**20 46 00.1**	**-0.6**
EIDS	**Eidsvold**	**20.08 258**	P	Pn	20 46 02.3	-0.1
ARMA	**Armidale**	**20.46 244**	P	Pn	20 46 05.9	-1.0
RPZ	**Rata Peaks**	**20.92 184**	P	Pn	20 46 12.5	+0.5
	comp=Z,111nm,0.9s,baz=34,slow=3.6,SNR=3.5					
	comp=Z,111nm,0.9s					
RPZ	**Rata Peaks**	**20.92 184**	P	**P**	**20 46 10.1**	**+0.7**
CTA	**Charters Tower**	**24.94 271**	P	**P**	**20 46 50.6**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=101,slow=10,SNR=1.8					
CTA			LR	LR	20 55 26.1	
	comp=Z,239nm,19.4s,baz=96,slow=34					
	comp=Z,2.6nm,0.6s					
CTAO	**Charters Tower**	**24.94 271**	P	**P**	**20 46 51.1**	**+1.0**
CTAO			IAmb	IAmb	20 47 13.3	
	comp=Z,24nm,1.4s					
STKA	**Stephens Creek**	**29.16 245**	P	**P**	**20 47 27.6**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=80,slow=11,SNR=1.7					
STKA			LR	LR	20 58 19.2	
	comp=Z,245nm,19.0s,baz=69,slow=35					
	comp=Z,1.1nm,0.4s					
STKA	**Stephens Creek**	**29.16 245**	P	**P**	**20 47 27.6**	**-0.3**
WR0	**Warramunga Arr**	**35.77 267**	P	**P**	**20 48 25.6**	**-0.2**
WR0			IAmb	IAmb	20 48 51.6	
	comp=Z,7.7nm,1.2s					
AS31	**Alice Springs**	**35.77 261**	P	**P**	**20 48 25.6**	**-0.2**
ASAR	**Alice Springs**	**35.77 261**	P	**P**	**20 48 24.9**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=85,slow=9.0,SNR=7.2					
ASAR			LR	LR	21 02 50.9	
	comp=Z,165nm,19.1s,baz=110,slow=36					
	comp=Z,1.4nm,0.8s					
ASAR	**Alice Springs**	**35.77 261**	P	**P**	**20 48 25.0**	**-0.9**
WB0	**Warramunga Arr**	**35.94 267**	P	**P**	**20 48 26.1**	**-1.2**
WB0			IAmb	IAmb	20 48 41.9	
	comp=Z,12nm,1.5s					
WB2	**Warramunga Arr**	**35.95 267**	P	**P**	**20 48 26.9**	**-0.5**
WB2			IAmb	IAmb	20 48 56.5	
	comp=Z,12nm,1.5s					
WRA	**Warramunga Arr**	**35.96 267**	P	**P**	**20 48 25.8**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=96,slow=8.3,SNR=11					
WRA			LR	LR	21 02 52.9	
	comp=Z,216nm,19.7s,baz=18,slow=36					
	comp=Z,0.5nm,0.6s					
WRA	**Warramunga Arr**	**35.96 267**	P	**P**	**20 48 26.0**	**-1.4**
FORT	**Forrest**	**40.60 249**	P	**P**	**20 49 06.5**	**+0.1**
FORT			IAmb	IAmb	20 49 16.0	
	comp=Z,20nm,0.8s					
MTN	**Manton Dam**	**40.85 277**	P	**P**	**20 49 07.9**	**-0.7**
MTN			IAmb	IAmb	20 49 49.1	
	comp=Z,20nm,1.2s					
KNRA	**Kununurra**	**42.15 272**	P	**P**	**20 49 18.8**	**-0.5**
KNRA			IAmb	IAmb	20 49 29.1	
	comp=Z,13nm,1.1s					
H11N1	**WAKE ISLAND Hy**	**42.65 352**	T	T	21 34 52.2	
	baz=173					
H11N3	**WAKE ISLAND Hy**	**42.66 352**	T	T	21 34 51.5	
	baz=173					
H11N2	**WAKE ISLAND Hy**	**42.67 352**	T	T	21 34 50.9	
	baz=173					
FITZ	**Fitzroy Crossi**	**44.39 267**	P	**P**	**20 49 37.1**	**-0.2**
FITZ			IAmb	IAmb	20 49 46.3	
	comp=Z,6.9nm,0.9s					
GUMO	**Guam**	**45.40 320**	LR	LR	21 05 57.2	
	comp=Z,69nm,19.4s,baz=132,slow=33					
SIJI	**Sorong**	**45.94 292**	LR	LR	21 09 00.8	
	comp=Z,50nm,18.2s,baz=32,slow=36					
BATI	**Baumata**	**48.63 277**	LR	LR	21 11 26.7	
	comp=Z,234nm,18.5s,baz=126,slow=37					
VNDA	**Vanda**	**55.04 183**	LR	LR	21 11 09.9	
	comp=Z,143nm,20.9s,baz=8.5,slow=32					
SBA	**Scott Base**	**55.19 182**	P	**P**	**20 51 00.1**	**+1.4**
SBA			IAmb	IAmb	20 51 15.0	
	comp=Z,14nm,1.2s					
TOLI2	**Tolitoli**	**56.01 288**	P	**P**	**20 51 04.7**	**-0.7**
TOLI2			IAmb	IAmb	20 51 12.3	
	comp=Z,9.3nm,0.9s					
JCJ	**Chichijima**	**57.81 327**	LR	LR	21 10 54.2	
	comp=Z,24nm,22.0s,baz=120,slow=31					
JHJ	**Hachijo jima 2**	**63.95 329**	LR	LR	21 21 58.7	
	comp=Z,12nm,18.0s,baz=233,slow=38					
LEM	**Lembang**	**64.62 273**	LR	LR	21 19 35.9	
	comp=Z,64nm,21.1s,baz=170,slow=36					
KSM	**Kuching**	**65.49 283**	P	**P**	**20 52 11.0**	**+0.9**
QSPA	**South Pole Qui**	**67.28 180**	LR	LR	21 19 48.6	
	comp=Z,66nm,18.5s,baz=24,slow=34					
QSPA	**South Pole Qui**	**67.28 180**	P	**P**	**20 52 21.1**	**+0.3**
MJAR	**Matsushiro Arr**	**67.50 330**	P	**P**	**20 52 21.2**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=148,slow=5.5,SNR=2.8					
MJAR			LR	LR	21 17 08.5	
	comp=Z,19nm,21.3s,baz=178,slow=32					
	comp=Z,0.6nm,0.7s					
JSD	**Sado**	**68.71 331**	P	**P**	**20 52 30.2**	**+0.3**
KSRS	**Korea Array**	**73.37 324**	P	**P**	**20 52 58.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=185,slow=4.5,SNR=2.2					
KSRS			LR	LR	21 25 04.7	
	comp=Z,16nm,18.0s,baz=130,slow=36					
	comp=Z,0.4nm,0.6s					
IPM	**Ipoh**	**75.15 281**	P	**P**	**20 53 08.5**	**-0.7**
SHEM	**Shemya Is, Ala**	**75.21 1**	LR	LR	21 20 50.5	
	comp=Z,17nm,20.0s,baz=116,slow=32					
MAW	**Mawson**	**76.43 202**	P	**P**	**20 53 15.8**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=136,slow=6.3,SNR=7.9					
MAW			LR	LR	21 23 29.7	
	comp=Z,27nm,19.4s,baz=82,slow=33					
	comp=Z,3.0nm,0.8s					
MAW	**Mawson**	**76.43 202**	P	**P**	**20 53 16.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**76.47 331**	P	**P**	**20 53 16.8**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=153,slow=4.5,SNR=2.9					
	comp=Z,1.7nm,0.7s					
PETK	**Petropavlovsk-**	**76.73 351**	P	**P**	**20 53 14.9**	**-2.3**
	comp=Z,3.1nm,0.8s,baz=119,slow=5.4,SNR=6.2					
PETK			LR	LR	21 20 11.7	
	comp=Z,62nm,21.9s,baz=138,slow=30					
	comp=Z,3.1nm,0.8s					
BELA	**Belgrano 2**	**78.26 174**	P	**P**	**20 53 25.3**	**-0.3**
BELA			IAmb	IAmb	20 53 40.0	
	comp=Z,6.3nm,1.3s					
KLR	**Kul'dur**	**80.53 334**	LR	LR	21 26 34.1	
	comp=Z,25nm,19.5s,baz=151,slow=34					
CMAR	**Chiang Mai Arr**	**83.06 293**	P	**P**	**20 53 53.2**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=140,slow=4.7,SNR=2.2					
	comp=Z,0.2nm,0.4s					
MA2	**Magadan**	**84.06 349**	LR	LR	21 30 00.2	
	comp=Z,45nm,18.3s,baz=164,slow=35					
PZH	**PanZhiHua**	**84.49 302**	P	**P**	**20 54 01.1**	**+1.5**
PZH			pmax	pmax		
	comp=Z,10.0nm,0.9s					
PZH			pmax	pmax		
	comp=Z,110nm,5.3s					
HHC	**Hu-ho-hao-te**	**85.14 318**	*e*P	**P**	**20 54 04.0**	**+1.5**
HHC			pmax	pmax		
	comp=Z,60nm,1.1s					
HHC			pmax	pmax		
	comp=Z,250nm,6.3s					
TROLL	**Troll, Antarti**	**85.22 183**	P	**P**	**20 54 01.8**	**-0.8**
SNAA	**Sanae**	**85.74 181**	P	**P**	**20 54 03.8**	**-1.3**
SNAA	**Sanae**	**85.74 181**	LR	LR	21 31 25.1	
	comp=Z,29nm,18.7s,baz=131,slow=35					
SNAA	**Sanae**	**85.74 181**	P	**P**	**20 54 04.0**	**-1.1**
SNAA			IAmb	IAmb	20 54 18.3	
	comp=Z,2.7nm,0.9s					
VNA3	**Neumayer Olymp**	**86.20 179**	P	**P**	**20 54 04.9**	**-2.4**
VNA2	**Neumayer--Watz**	**86.54 180**	P	**P**	**20 54 06.8**	**-2.1**
	baz=175,slow=4.0					
YBH	**Yreka Blue Hor**	**87.53 42**	LR	LR	21 26 39.1	
	comp=Z,71nm,19.8s,baz=244,slow=31					
PFO	**Pinyon Flats O**	**87.53 52**	LR	LR	21 28 59.7	
	comp=Z,46nm,18.1s,baz=166,slow=33					
LPIG	**La Paz**	**87.92 63**	LR	LR	21 25 43.5	
	comp=Z,55nm,19.2s,baz=214,slow=30					
NVAR	**Mina Array Bea**	**88.64 47**	P	**P**	**20 54 21.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=220,slow=8.3,SNR=4.2					
NVAR			LR	LR	21 25 37.0	
	comp=Z,52nm,20.0s,baz=266,slow=30					
	comp=Z,0.5nm,0.7s					
BMN	**Battle Mountai**	**90.37 46**	P	**P**	**20 54 27.7**	**0.0**
BMN			IAmb	IAmb	20 54 29.9	
	comp=Z,2.4nm,0.7s					
BBB	**Bella Bella**	**90.62 32**	LR	LR	21 28 16.6	
	comp=Z,71nm,19.2s,baz=229,slow=31					
YAK	**Yakutsk**	**91.30 341**	LR	LR	21 33 54.5	
	comp=Z,32nm,18.7s,baz=120,slow=35					
ELK	**Elko**	**91.84 46**	LR	LR	21 28 55.9	
	comp=Z,70nm,19.4s,baz=250,slow=31					
U15A	**North Rim**	**91.87 51**	P	**P**	**20 54 34.2**	**-0.7**
U15A			IAmb	IAmb	20 54 48.1	
	comp=Z,4.2nm,1.1s					
SONM	**Songino Array**	**92.11 322**	P	**P**	**20 54 33.2**	**-2.4**
	comp=Z,0.4nm,0.9s,baz=101,slow=5.5,SNR=1.9					
	comp=Z,0.4nm,0.9s					
ILAR	**Eielson Array**	**92.64 16**	P	**P**	**20 54 36.1**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=229,slow=5.5,SNR=3.6					
ILAR			LR	LR	21 30 34.2	
	comp=Z,80nm,19.2s,baz=228,slow=32					
	comp=Z,0.5nm,0.8s					
DLBC	**Dease Lake**	**93.66 26**	LR	LR	21 32 17.6	
	comp=Z,76nm,18.2s,baz=102,slow=33					
NEW	**Newport**	**94.33 39**	LR	LR	21 31 16.8	
	comp=Z,37nm,18.4s,baz=276,slow=32					
TXAR	**Lajitas Array**	**95.48 61**	LR	LR	21 29 58.3	
	comp=Z,39nm,19.6s,baz=267,slow=30					
ANMO	**Albuquerque**	**95.53 55**	LR	LR	21 29 08.5	
	comp=Z,37nm,20.6s,baz=304,slow=30					
PDAR	**Pinedale Array**	**96.55 46**	LR	LR	21 32 16.6	
	comp=Z,45nm,20.1s,baz=238,slow=32					
CMIG	**Matias Romero**	**98.43 75**	LR	LR	21 30 20.1	
	comp=Z,31nm,20.9s,baz=280,slow=30					
INK	**Inuvik**	**98.85 18**	LR	LR	21 33 08.4	
	comp=Z,58nm,21.4s,baz=206,slow=32					
DPC	**Dobruska-Polom**	**146.96 332**	*e*PKP	**PKPab**	**21 01 09.1**	**-1.0**
KRLC	**Kraliky**	**146.96 331**	*e*PKP	**PKPbc**	**21 01 08.6**	**0.0**
CLL	**Collm**	**147.55 336**	*e*PKPbc	**PKPbc**	**21 01 09.0**	**-1.1**
CLL			*e*(PKiKP)		21 01 11.0	
	comp=Z,3.0nm,0.9s					
CLL			*ex*	x	21 01 13.0	
PRU	**Pruhonice**	**147.98 333**	*e*PKP	**PKPbc**	**21 01 10.2**	**-1.2**
CKRC	**Cesky Krumlov**	**148.97 332**	*e*PKP	**PKPab**	**21 01 18.7**	**+0.6**
KHC	**Kasperske Hory**	**149.04 333**	*e*PKP	**PKiKP**	**21 01 14.7**	**-0.8**
GERES	**GERESS Array B**	**149.21 333**	PKPbc	**PKiKP**	**21 01 15.2**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=46,slow=4.2,SNR=3.8					

IDC 13 20:46:11.3±6.3, 23.73N×142.98E, h121km±91km, mb3.5/2, mbtmp3.7/4, ML2.9/2, Error ellipse: s-maj=197.5km s-min=63.4km az=80.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.43**	**348**	P	Pn	20 47 03.5	+0.1
	3.0nm,0.3s,baz=260,slow=22,SNR=8.0						
JCJ				S	Sn	20 47 44.0	+0.4
	29nm,0.4s,baz=285,slow=22,SNR=7.5						
	18nm,0.5s						
MJAR	**Matsushiro Arr**	**13.42**	**343**	P	Pn	20 49 16.8	-0.1
	baz=168,slow=12,SNR=1.5						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.21**	**192**	P	P	20 54 08.5	-0.1
	0.7nm,0.4s,baz=13,slow=8.5,SNR=14						
	0.7nm,0.4s						
STKA	**Stephens Creek**	**55.30**	**181**	P	P	20 55 32.1	-0.2
	2.0nm,1.0s,baz=342,slow=9.0,SNR=3.8						
	2.0nm,1.0s						

NOU 13 20:52:02.4, 16.47S×167.13E, h21km, MLv3.8/4, Vanuatu Islands, Vanuatu Islands

IDC ***13*** *21:11:59.0±27.0, 58.56S×26.74W, h246km±222km, mb3.7/3, mbtmp4.2/3, MS3.3/1, Error ellipse: s-maj=206.5km s-min=29.3km az=90.0*

ISC 13 21:12:00.2±1.9, 58.4S±0.2×25.9W±0.7, h250km, n11, σ1§68/9, mb3.9/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.55**	**159**	P	**P**	**21 15 17.3**	**+2.7**
SNAA	**Sanae**	**16.32**	**154**	P	**P**	**21 15 32.5**	**-1.7**
TROLL	**Troll, Antarti**	**17.85**	**151**	P	**P**	**21 15 49.1**	**-1.8**
PLCA	**Paso Flores**	**33.13**	**282**	LR	LR	21 32 12.4	
	comp=Z,50nm,18.8s,baz=262,slow=37						
MAW	**Mawson**	**37.87**	**141**	P	**P**	**21 18 53.0**	**+0.3**
	1.4nm,0.7s,baz=260,slow=6.1,SNR=2.5						
	1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**74.79**	**28**	P	**P**	**21 23 14.0**	**+1.2**
	1.5nm,0.3s,baz=198,slow=6.2,SNR=33						
	1.5nm,0.3s						
ASAR	**Alice Springs**	**96.54**	**161**	P	**P**	**21 25 00.1**	**-1.3**
	0.4nm,0.6s,baz=181,slow=4.4,SNR=7.4						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**126.14**	**28**	PKP	**PKPdf**	**21 30 30.8**	**-0.3**
	2.3nm,0.8s,baz=134,slow=4.0,SNR=6.0						
ARCES	**ARCESS Array B**	**132.87**	**22**	PKP	**PKiKP**	**21 30 44.3**	**-0.7**
	1.1nm,0.7s,baz=263,slow=0.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**142.75**	**66**	PKhKP	PKPpre	21 30 58.8	
	0.8nm,0.5s,baz=252,slow=1.4,SNR=3.8						
SONM	**Songino Array**	**150.13**	**90**	PKPbc	**PKPbc**	**21 31 20.3**	**-0.1**
	1.2nm,0.6s,baz=244,slow=3.3,SNR=4.6						

NEIC ***13*** *21:41:25±1.6, 9.94S±0.09×118.97E±0.07, h21km±9km, mb3.9/5, Error ellipse: s-maj=13.8km s-min=10.1km az=170.0*

IDC ***13*** *21:41:26.3±4.0, 9.88S×118.88E, h41km±37km, mb3.7/3, mbtmp3.9/7, ML3.9/5, MS3.1/5, Error ellipse: s-maj=34.9km s-min=13.3km az=63.0*

DJA ***13*** *21:41:26.3±0.4, 10˚S±6˚×11˚9E±˚, h10km, M4.4/14, mb4.5/1, MLv4.3/14*

ISC 13 21:41:25.9±0.6, 9.90S±0.05×118.99E±0.05, h33km, n62, σ2§32/61, mb4.0/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.47**	**57**	P	**Pb**	**21 41 35.4**	**-0.8**
BASI	**Baing, Sumba**	**1.60**	**101**	P	**Pb**	**21 41 55.7**	**+0.8**
PLAI	**Plampang**	**1.60**	**312**	P	**Pn**	**21 41 52.4**	**+0.5**
PLAI	**Plampang**	**1.60**	**312**	P	**Pn**	**21 41 52.5**	**+0.5**
TWSI	**Taliwang, Sumb**	**2.38**	**299**	P	**Pn**	**21 42 04.7**	**+2.1**
EDFI	**Ende, Flores**	**2.90**	**67**	P	**Pn**	**21 42 12.4**	**+2.4**
MMRI	**Maumere**	**3.45**	**69**		**Pn**	**21 42 20.5**	**+3.1**
MMRI	**Maumere**	**3.45**	**69**	P	**Pn**	**21 42 20.1**	**+2.8**
MMRI	**Maumere**	**3.45**	**69**	P	**Pn**	**21 42 20.4**	**+3.1**
DNP	**Denpasar**	**3.92**	**288**	P	**Pn**	**21 42 26.1**	**+2.2**
IGBI	**Denpasar**	**3.94**	**286**	P	**Pn**	**21 42 24.9**	**+0.8**
BSSI	**Bau Bau, Buton**	**4.02**	**22**	P	**Pn**	**21 42 26.7**	**+1.5**
SRBI	**Singaraja**	**4.14**	**296**	P	**Pn**	**21 42 28.3**	**+1.4**
BATI	**Baumata**	**4.62**	**94**	P	**Pn**	**21 42 36.5**	**+3.1**
BATI				S	**Sn**	**21 43 29.0**	**+3.1**
	74nm,0.3s,baz=218,slow=23,SNR=12						
BATI	**Baumata**	**4.62**	**94**	P	**Pn**	**21 42 36.3**	**+2.9**
BKSI	**Bulukumba**	**4.69**	**14**	P	**Pn**	**21 42 35.5**	**+1.1**
KAPI	**Kappang**	**4.92**	**9**	P	**Pn**	**21 42 39.0**	**+1.5**
	5.1nm,0.3s,baz=205,slow=3.5,SNR=46						
KAPI				S	**Sn**	**21 43 33.4**	**+0.1**
	30nm,0.3s,baz=78,slow=23,SNR=13						
KAPI				LR	LR	21 44 52.4	
	comp=Z,82nm,20.9s,baz=100,slow=42						
	24nm,0.2s						
KAPI	**Kappang**	**4.92**	**9**	Pn	**Pn**	**21 42 38.0**	**+0.5**
KAPI	**Kappang**	**4.92**	**9**	P	**Pn**	**21 42 39.2**	**+1.7**
JAGI	**Jajag, Banyuwa**	**4.98**	**286**		**Pn**	**21 42 38.0**	**-0.5**
JAGI	**Jajag, Banyuwa**	**4.98**	**286**	P	**Pn**	**21 42 39.1**	**+0.6**
JAGI	**Jajag, Banyuwa**	**4.98**	**286**	P	**Pn**	**21 42 39.9**	**+1.4**
GMJI	**Gumukmas**	**5.71**	**286**	P	**Pn**	**21 42 50.8**	**+2.4**
UGM	**Wanagama**	**8.59**	**283**	Pn	**Pn**	**21 43 28.7**	**+0.6**
UGM	**Wanagama**	**8.59**	**283**	P	**Pn**	**21 43 31.6**	**+3.5**
FITZ	**Fitzroy Crossi**	**10.39**	**142**	P	**Pn**	**21 43 52.2**	**-0.5**
	0.4nm,0.3s,baz=342,slow=10.0,SNR=11						
FITZ				S	**Sn**	**21 45 41.5**	**-6.7**
	3.9nm,0.5s,baz=172,slow=22,SNR=8.7						
FITZ				LR	LR	21 48 10.8	
	comp=Z,90nm,21.2s,baz=307,slow=39						
	1.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.39**	**142**	P	**Pn**	**21 43 52.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**10.39**	**142**	P	**Pn**	**21 43 55.0**	**+2.3**
KNRA	**Kununurra**	**11.13**	**122**		**Pn**	**21 44 03.1**	**+0.3**
KNRA	**Kununurra**	**11.13**	**122**	P	**Pn**	**21 44 03.9**	**+1.1**
MBWA	**Marble Bar**	**11.22**	**176**	Pn	**Pn**	**21 44 03.3**	**-0.8**
MBWA	**Marble Bar**	**11.22**	**176**	P	**Pn**	**21 44 05.2**	**+1.2**
PSA00	**Pilbara Seismi**	**11.63**	**176**	Pn	**Pn**	**21 44 08.7**	**-1.0**
PSA00	**Pilbara Seismi**	**11.63**	**176**	Pn	**Pn**	**21 44 09.0**	**-0.7**
PSA00	**Pilbara Seismi**	**11.63**	**176**	P	**Pn**	**21 44 10.1**	**+0.4**
	14nm,1.9s						
MTN	**Manton Dam**	**12.26**	**105**		**Pn**	**21 44 16.7**	**-1.6**
MTN	**Manton Dam**	**12.26**	**105**	P	**Pn**	**21 44 18.2**	**-0.2**
GIRL	**Giralia**	**13.46**	**199**	Pn	**Pn**	**21 44 35.2**	**+0.4**
GIRL	**Giralia**	**13.46**	**199**	P	**Pn**	**21 44 39.4**	**+4.7**
KDU	**Kakadu**	**13.51**	**103**	P	**Pn**	**21 44 36.2**	**+0.8**
FAKI	**Fak Fak**	**14.89**	**63**	Pn	**Pn**	**21 44 54.0**	**-0.1**
MEEK	**Meekatharra**	**16.65**	**181**	P	**Pn**	**21 45 19.3**	**+2.4**
WRKA	**Warakurna**	**17.46**	**151**	P	**P**	**21 45 30.1**	**+2.0**
WB0	**Warramunga Arr**	**17.82**	**125**	P	**Pn**	**21 45 32.3**	**+0.8**
WB0				IAmb	IAmb	21 46 01.7	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**17.86**	**126**	P	**Pn**	**21 45 31.6**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=301,slow=13,SNR=15						
WRA				S	Sn	21 48 36.5	-14
	comp=Z,0.4nm,0.5s,baz=300,slow=27,SNR=2.2						
	comp=Z,0.8nm,0.5s						
WRA	**Warramunga Arr**	**17.86**	**126**		**Pn**	**21 45 32.1**	**0.0**
WRAB	**Tennant Creek**	**17.87**	**126**	P	**P**	**21 45 35.8**	**+3.2**
MORW	**Morawa**	**19.27**	**188**	P	**Pn**	**21 45 52.3**	**+3.3**
	comp=Z,22nm,2.5s						
AS31	**Alice Springs**	**19.75**	**136**	P	**P**	**21 45 52.4**	**-0.9**
AS31				IAmb	IAmb	21 46 00.0	
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**19.75**	**136**	P	**P**	**21 45 54.7**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=316,slow=11,SNR=37						
ASAR				S	**S**	**21 49 25.1**	**-9.2**
	comp=Z,1.0nm,0.8s,baz=317,slow=24,SNR=5.6						
ASAR				LR	LR	21 53 33.8	
	comp=Z,111nm,18.5s,baz=5.5,slow=37						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**19.75**	**136**	P	**P**	**21 45 52.4**	**-0.9**
COEN	**Coen**	**24.00**	**102**	P	**P**	**21 46 36.7**	**-1.2**
H08S2	**Diego Garcia H**	**45.98**	**269**	T	T	22 38 53.5	
	baz=96,slow=76,SNR=93						
H08S3	**Diego Garcia H**	**45.99**	**269**	T	T	22 38 57.8	
	baz=96,slow=76,SNR=75						
H08S1	**Diego Carcia H**	**46.00**	**269**	T	T	22 38 55.0	
	baz=96,slow=76,SNR=76						
SONM	**Songino Array**	**58.56**	**350**	P	**P**	**21 51 18.2**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=169,slow=8.8,SNR=3.4						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**65.25**	**333**	P	**P**	**21 52 03.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=144,slow=5.8,SNR=16						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**69.77**	**334**	LR	LR	22 27 33.3	
	comp=Z,22nm,18.1s,baz=121,slow=40						
ZALV	**Zalesovo Beam**	**69.87**	**339**	P	**P**	**21 52 31.4**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=136,slow=5.3,SNR=3.0						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**80.10**	**180**	P	**P**	**21 53 33.9**	**+1.5**
QSPA				IAmb	IAmb	21 53 51.2	
	comp=Z,5.7nm,1.4s						
ARU	**Arti**	**82.64**	**331**	LR	LR	22 35 55.7	
	comp=Z,13nm,19.4s,baz=64,slow=40						
TORD	**Torodi Ar. Bea**	**118.60**	**280**	PKP	**PKPdf**	**22 00 11.8**	**+0.3**
	comp=Z,0.6nm,1.0s,baz=106,slow=1.7,SNR=4.5						

*MOS

JHS Saijyo 4.70 301 *i* P **Pn** **21 50 52.9 +1.4**
JHS S **S** **21 51 54.4 +2.1**
JOI OKI 5.36 314 P **Pn** **21 50 59.6 +0.9**
JSD Sado 5.39 2 Pn **Pn** **21 50 58.4 -0.6**
JMM Marumori 5.69 23 Pn **Pn** **21 51 01.3 -1.2**
JSU Suzuyama 6.51 262 **Pn** **21 51 13.7 +1.6**
JCJ Chichijima 6.61 146 P Pn 21 51 08.4 -4.9
186nm,0.4s,baz=273,slow=23,SNR=43
JCJ S S 21 52 23.0 -9.3
708nm,0.3s,baz=294,slow=22,SNR=16
JTU Tsushima 7.42 287 Pn **Pn** **21 51 24.1 +1.2**
KSBUS Busan 7.83 292 **Pn** **21 51 28.4 +0.6**
JTM Tenmabayashi 8.49 16 Pn **Pn** **21 51 34.8 -0.8**
NAWB Namwon 9.23 290 P **P** **21 51 46.4 -1.1**
KSCHJ Chungju 9.27 300 P **Pn** **21 51 46.5 +1.4**
TJN Taejon 9.54 296 P **P** **21 51 49.9 -1.1**
TJN Taejon 9.54 296*ce*P **P** **21 51 49.6 -1.3**
KSRS Korea Array 9.56 303 P **Pn** **21 51 49.6 +1.2**
38nm,0.8s,baz=115,slow=13,SNR=202
KSRS S **S** **21 53 41.0 +4.1**
6.7nm,0.8s,baz=105,slow=22,SNR=7.9
KSAR Wonju Array Be 9.58 303 P **P** **21 51 50.2 -1.2**
KSAR Wonju Array Be 9.58 303 P **P** **21 51 50.2 -1.2**
KS19 Wonju Array Si 9.62 303 P **Pn** **21 51 50.4 +1.1**
SEHB SEOHWA 9.74 308 P **P** **21 51 52.2 -0.9**
ERM Erimo 10.21 22 Pn **Pn** **21 51 55.9 -0.5**
ERM Erimo 10.21 22 *i* P **Pn** **21 51 56.1 -0.2**
JOW Kunigami 10.25 238 **Pn** **21 51 57.5 +0.6**
INCN Inchon 10.50 301 P **P** **21 52 00.8 -0.8**
INCN Inchon 10.50 301 P **P** **21 52 00.8 -0.8**
INCN Inchon 10.50 301 P **P** **21 52 01.7 +0.1**
MSHR Mys Shultsa 11.31 333*ce*P **Pn** **21 52 08.6 -0.9**
MSHR pmax pmax
comp=Z,28nm,1.7s
VLA Vladivostok 11.52 337*c i*P **Pn** **21 52 11.5 -0.5**
VLA pmax pmax
comp=Z,141nm,0.9s
NMR Nemuro--Hokkai 12.31 27 *e*P **P** **21 52 23.2 +1.6**
NMR *e*S **S** **21 54 32.8 -5.2**
USA0B Ussuriysk Arra 12.46 340 P **P** **21 52 23.5 +0.2**
USA0B Ussuriysk Arra 12.46 340 P **P** **21 52 23.5 +0.2**
USRK Ussuriysk Ar. 12.46 340 P **Pn** **21 52 23.2 -0.1**
comp=Z,95nm,0.6s,baz=154,slow=11,SNR=158
USRK Ussuriysk Ar. 12.46 340 P **P** **21 52 23.4 +0.1**
USRK Ussuriysk Ar. 12.46 340 P **P** **21 52 23.4 +0.1**
RUSJ Misakicho 12.77 24 *e*P Pn 21 52 32.1 +5.2
YUK Yuzh-Kuril'sk 12.93 26 *e*P **Pn** **21 52 32.7 +3.9**
YUK *e*S **S** **21 54 49.5 -1.5**
YUK pmax pmax
comp=E,41nm,0.5s
YUK pmax pmax
comp=Z,61nm,0.5s
YUK pmax pmax
comp=N,50nm,0.4s
SHO Shikotan 13.17 29 *e*P **Pn** **21 52 34.1 +2.4**
SHO *e*S **S** **21 54 53.4 -2.7**
SHO pmax pmax
comp=Z,10.0nm,0.4s
SHO pmax pmax
comp=E,9.0nm,0.5s
SHO pmax pmax
comp=N,7.0nm,0.3s
MDJ Mudanjiang 13.64 334 P **P** **21 52 36.3 +0.1**
MDJ Mudanjiang 13.64 334 P **P** **21 52 36.3 +0.1**
MDJ pmax pmax
comp=Z,53nm,0.6s
MDJ pmax pmax
comp=Z,120nm,4.2s
SNY Shenyang 14.69 313 ⇑P **P** **21 52 48.6 +0.8**
SNY pmax pmax
comp=Z,29nm,0.8s
KUR Kuril'sk 14.71 28 *i* P **Pn** **21 52 50.4 +0.6**
YSS Yuzh-Sakhalins 14.75 13 P **Pn** **21 52 50.1 -0.1**
YSS Yuzh-Sakhalins 14.75 13 *e*P **Pn** **21 52 50.3 +0.1**
YSS *e*S **S** **21 55 29.0 +0.8**
YSS pmax pmax
comp=Z,100nm,0.5s
CN2 Changchun 14.87 322 *e*P **P** **21 52 49.8 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
BNX BinXian 15.43 331 ⇓P **P** **21 52 55.5 -0.4**
BNX pmax pmax
comp=Z,44nm,0.7s
BNX pmax pmax
comp=Z,86nm,3.6s
YOJ Yonaguni jima 15.48 242 P **P** **21 52 56.0 -0.7**
YOJ IAmb IAmb 21 52 57.1
comp=Z,49nm,1.0s
YOJ Yonaguni jima 15.48 242 P **P** **21 52 56.0 -0.7**
YOJ pmax pmax
comp=Z,49nm,1.0s
YHNB Yeheng 16.60 246 P **P** **21 53 07.9 -1.1**
YHNB IAmb IAmb 21 53 49.1
comp=Z,43nm,1.4s
KLR Kul'dur 17.23 346 P **P** **21 53 14.8 -0.4**
comp=Z,25nm,0.6s,baz=166,slow=9.3,SNR=75
KLR Kul'dur 17.23 346*ce*P **P** **21 53 14.3 -1.0**
KLR pmax pmax
comp=Z,18nm,0.5s
YULB Yu-li 17.38 242 P **P** **21 53 15.8 -1.5**
YULB IAmb IAmb 21 53 21.6
comp=Z,9.5nm,0.7s
SSLB Suanglung 17.41 244 P **P** **21 53 16.2 -1.4**
SSLB IAmb IAmb 21 53 18.8
comp=Z,60nm,1.4s
TIA Tai'an 17.59 287 ⇑P **P** **21 53 18.8 -0.6**
TIA pmax pmax
comp=Z,5.0nm,1.2s
GRNR Gornyy 18.15 357 ⇓*i*P **P** **21 53 26.3 +1.1**
GRNR *e*S **S** **21 56 30.7 -4.8**
GRNR pmax pmax
comp=N,6.0nm,0.7s
GRNR pmax pmax
comp=E,5.0nm,0.7s
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR smax smax
comp=N,2.0nm,0.6s
GRNR MLR MLR
comp=E,70nm,16.0s
GRNR MLR MLR
comp=N,280nm,15.0s
GRNR MLR MLR
comp=Z,60nm,16.0s
BJT Baijiatuau 19.05 299 P **P** **21 53 34.8 -0.1**
BJT IAmb IAmb 21 53 35.5
comp=Z,37nm,0.7s
BJT Baijiatuau 19.05 299 P **P** **21 53 34.8 -0.1**
BJT pmax pmax
comp=Z,37nm,0.7s
BJI Beijing 19.05 299 P **P** **21 53 34.0 -0.8**
BJI S **S** **21 56 49.3 -3.6**
BJI pmax pmax
comp=Z,52nm,0.6s
BJI pmax pmax
comp=Z,170nm,3.5s
HNS HongShan 19.65 290 ⇑P **P** **21 53 39.8 -1.5**
HNS pmax pmax
comp=Z,17nm,0.8s
WHN Wuhan 20.25 270 ⇑P **P** **21 53 46.6 -0.9**
WHN pmax pmax
comp=Z,72nm,0.8s
XLT XiLinHaoTe 20.50 310 ⇑*i*P **P** **21 53 47.3 -2.4**
XLT pmax pmax
comp=Z,46nm,0.8s
XLT pmax pmax
comp=Z,150nm,6.3s
TIY Taiyuan 21.48 291 ⇑*i*P **P** **21 53 59.3 +0.5**
HIA Hailar 21.50 326 P **P** **21 53 59.2 +0.5**
HIA IAmb IAmb 21 54 00.3
comp=Z,62nm,1.2s
HIA Hailar 21.50 326*d i*P **P** **21 53 58.2 -0.6**
HIA pmax pmax
comp=Z,46nm,1.0s
ZEA Zeya 22.45 343 *e*P **P** **21 54 08.0 +0.7**
ZEA pmax pmax
comp=Z,100nm,0.9s
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.8s
HHC Hu-ho-hao-te 22.66 299 *e*P **P** **21 54 09.3 -0.2**
HHC pmax pmax
comp=Z,89nm,0.8s
HHC pmax pmax
comp=Z,210nm,6.1s
BTO Baotou 23.76 298 *e*P **P** **21 54 20.8 +1.4**
XAN Xi'an 24.31 281 P **P** **21 54 23.8 -0.6**
XAN pmax pmax
comp=Z,22nm,0.9s
XAN pmax pmax
comp=Z,98nm,5.2s
ENH Enshi 24.41 272 P **P** **21 54 24.2 -1.2**
ULN Ulaanbaatar 27.86 312 P **P** **21 54 57.1 +1.0**
ULN IAmb IAmb 21 54 58.2
comp=Z,51nm,1.3s
ULN Ulaanbaatar 27.86 312*ce*P **P** **21 54 57.0 +1.0**
ULN pmax pmax
comp=Z,41nm,1.3s
ULN Ulaanbaatar 27.86 312 P **P** **21 54 57.4 +1.3**
MA2 Magadan 28.25 14 P **P** **21 54 59.8 +0.7**
MA2 IAmb IAmb 21 55 00.9
comp=Z,13nm,0.9s
MA2 Magadan 28.25 14*ce*P **P** **21 54 57.6 -1.5**
MA2 pmax pmax
comp=Z,22nm,1.7s
SONM Songino Array 28.27 312 P **P** **21 55 00.5 +1.0**
comp=Z,26nm,0.7s,baz=112,slow=8.1,SNR=74
SONM ScP **ScP** **22 01 12.3 +0.2**
comp=Z,1.1nm,0.7s,baz=110,slow=0.9,SNR=5.5
comp=Z,26nm,0.7s
SONM Songino Array 28.27 312 P **P** **21 55 00.2 +0.7**
SONM IAmb IAmb 21 55 05.2
comp=Z,29nm,0.7s
LZH Lanzhou 28.32 287 *e*P **P** **21 54 58.8 -1.5**
LZH sP sP 21 56 35.9 -4.9
LZH pmax pmax
comp=Z,16nm,1.0s
CD2 Chengdu 29.10 276 P **P** **21 55 05.8 -1.2**
YAK Yakutsk 29.89 352 P **P** **21 55 13.5 0.0**
comp=Z,9.5nm,0.5s,baz=260,slow=1.5,SNR=11
comp=Z,9.5nm,0.5s
YAK Yakutsk 29.89 352 P **P** **21 55 13.3 -0.2**
YAK IAmb IAmb 21 55 14.2
comp=Z,24nm,0.8s
YAK Yakutsk 29.89 352*d i*P **P** **21 55 13.3 -0.2**
YAK *e**PP **pP** **21 56 14.1 -2.3**
YAK *e* 21 58 09.5
YAK *e*S **S** **21 59 42.1 -3.3**
YAK *e**SS **sS** **22 01 37.9 0.0**
YAK *e* 22 05 09.0
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=Z,3.0nm,0.4s
YAK smax smax
comp=E,3.0nm,0.9s
YAK smax smax
comp=N,10.0nm,1.1s
ZAK Zakamensk 31.10 315 *e*P **P** **21 55 24.5 +0.2**
ZAK pmax pmax
comp=Z,25nm,1.1s
IRK Irkutsk 31.27 319 *e*P **P** **21 55 25.6 -0.1**
IRK pmax pmax
comp=Z,25nm,1.5s
GTA Gaotai 31.45 293 ⇓P **P** **21 55 27.0 -0.5**
GTA pP pP 21 56 31.3 +0.8
GTA sP sP 21 57 04.9 -4.1
GTA ScP **ScP** **22 01 22.1 -0.6**
GTA pmax pmax
comp=Z,12nm,1.0s
SEY Seymchan 31.66 12 P **P** **21 55 29.1 +0.2**
comp=Z,2.4nm,0.6s,baz=201,slow=9.3,SNR=13
comp=Z,2.4nm,0.6s
PATS Pohnpei 31.87 139 P **P** **21 55 30.7 -0.6**
PZH PanZhiHua 32.02 269 P **P** **21 55 32.1 -0.6**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,90nm,4.8s
MOY Mondy 32.91 316 *e*P **P** **21 55 40.4 +0.4**
MOY pmax pmax
comp=Z,21nm,1.4s
SMPI Sarmi 34.45 179 P **P** **21 55 51.2 -2.2**
comp=Z,6.0nm,1.2s
KNGR Kungurtug, Tuv 34.66 313 *i* P **P** **21 55 51.5 -3.4**
GTOI Gorontalo 34.83 207 P **P** **21 55 53.2 -3.4**
comp=Z,6.0nm,1.1s
TOLI2 Tolitoli 35.31 211 P **P** **21 56 00.5 -0.2**
AMKA Amchitka 35.36 46 P **P** **21 56 01.4 +0.7**
GOMU GeErMu 35.59 288 P **P** **21 56 03.8 +0.4**
GOMU pmax pmax
comp=Z,42nm,0.9s
GOMU pmax pmax
comp=Z,69nm,4.0s
CRAI Chiangrai 35.71 259 P **P** **21 56 03.9 -0.2**
AAI Ambon 37.31 196 P **P** **21 56 14.7 -2.8**
comp=Z,2µmcomp=Z,74nm,1.1s
CHTO Chiang Mai 37.57 258 P **P** **21 56 19.8 +0.1**
CHTO Chiang Mai 37.57 258 P **P** **21 56 19.8 +0.1**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CHTO Chiang Mai 37.57 258 P **P** **21 56 20.5 +0.9**
CMAR Chiang Mai Arr 37.74 258 P **P** **21 56 19.8 -1.4**
comp=Z,2.6nm,0.8s,baz=48,slow=7.5,SNR=16
CMAR ScP **S** **22 01 46.6 0.0**
comp=Z,0.3nm,0.4s,baz=40,slow=2.4,SNR=5.0
comp=Z,2.6nm,0.8s
CMAR Chiang Mai Arr 37.74 258 P **P** **21 56 22.0 +0.9**
CMAR Chiang Mai Arr 37.74 258*ce*P **P** **21 56 22.2 +1.1**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
ADK Adak 37.91 46 P **P** **21 56 22.6 +0.6**
ADK Adak 37.91 46 P **P** **21 56 22.6 +0.6**
ADK pmax pmax
comp=Z,67nm,1.2s
MND Mandalay 38.48 265 P **P** **21 56 27.3 +0.1**
MND IAmb IAmb 21 56 28.6
comp=Z,7.1nm,1.2s
BILL Bilibino 39.02 16 P **P** **21 56 31.9 +0.9**
BILL IAmb IAmb 21 56 33.8
comp=Z,13nm,0.7s
BILL Bilibino 39.02 16 *e*P **P** **21 56 32.2 +1.2**
BILL *e* 21 58 08.9
BILL *e**SP **sP** **21 58 17.0 +2.7**
BILL pmax pmax
comp=Z,25nm,1.7s
TIXI Tiksi 39.38 355 P **P** **21 56 33.6 -0.2**
TIXI IAmb IAmb 21 56 34.5
comp=Z,24nm,1.2s
TIXI Tiksi 39.38 355*ce*P **P** **21 56 33.6 -0.2**
TIXI pmax pmax
comp=Z,13nm,1.3s
LSA Lhasa 39.95 279 P **P** **21 56 39.4 -0.3**
LSA Lhasa 39.95 279 P **P** **21 56 39.4 -0.3**
LSA pmax pmax
comp=Z,9.0nm,0.8s
LSA Lhasa 39.95 279 P **P** **21 56 38.8 -0.9**
KSM Kuching 40.49 226 P **P** **21 56 43.5 -0.1**
WMQ Urumqi 40.50 301 *e*P **P** **21 56 44.5 +0.9**
WMQ pP pP 21 58 00.0 +11
WMQ pmax pmax
comp=Z,38nm,0.7s
WMQ pmax pmax
comp=Z,220nm,4.3s
ZAA0 Zalesovo Array 42.96 316 P **P** **21 57 02.8 -0.3**
ZAA0 IAmb IAmb 21 57 03.7
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 42.96 316 P **P** **21 57 02.7 -0.3**
comp=Z,11nm,0.4s,baz=96,slow=9.0,SNR=63
ZALV PcP **PcP** **21 58 46.6 0.0**
comp=Z,5.7nm,0.6s,baz=91,slow=2.9,SNR=12
ZALV ScP **ScP** **22 02 04.6 -0.8**
comp=Z,1.6nm,0.8s,baz=116,slow=3.4,SNR=5.2
comp=Z,11nm,0.4s
TAPN Taplejung 43.55 277 *e*P **P** **21 57 08.6 +0.1**
comp=Z,36nm,0.4s
ODAN Odare 43.99 276 *e*P **P** **21 57 11.5 -0.4**
comp=Z,23nm,0.5s
KULM Kulim 44.19 240 P **P** **21 57 13.2 -0.1**
KULM IAmb IAmb 21 57 33.1
comp=Z,29nm,1.4s
MK31 Makanchi Array 44.23 306 P **P** **21 57 13.4 +0.2**
MK31 IAmb IAmb 21 57 13.9
comp=Z,13nm,0.5s
MK31 Makanchi Array 44.23 306*d i*P **P** **21 57 13.1 -0.1**
MKAR Makanchi Array 44.23 306 P **P** **21 57 13.4 +0.2**
comp=Z,12nm,0.4s,baz=87,slow=9.8,SNR=267
MKAR PcP **PcP** **21 58 51.4 +0.2**
comp=Z,1.4nm,0.4s,baz=78,slow=6.2,SNR=5.4
MKAR ScP **ScP** **22 02 10.2 -0.7**
comp=Z,0.8nm,0.7s,baz=80,slow=5.5,SNR=4.8
comp=Z,12nm,0.4s
MAKZ Makanchi 44.44 306 P **P** **21 57 15.2 +0.3**
MAKZ IAmb IAmb 21 57 15.6
comp=Z,21nm,0.5s
MAKZ Makanchi 44.44 306 P **P** **21 57 15.2 +0.3**
MAKZ pmax pmax
comp=Z,21nm,0.5s
IPM Ipoh 44.47 239 P **P** **21 57 14.7 -0.8**
RAMN Ramite 44.62 277 *e*P **P** **21 57 16.7 -0.1**
JIRN Jiri 44.72 278 *e*P **P** **21 57 18.1 +0.3**
comp=Z,169nm,0.4s
GUN Gumba 44.90 278 *e*P **P** **21 57 19.4 +0.3**
PKI Pulchoki 45.41 278 *e*P **P** **21 57 22.5 -0.5**
comp=Z,63nm,0.8s
PKIN Phulchoki 45.41 278 *e*P **P** **21 57 22.6 -0.4**
comp=Z,51nm,0.7s
KKN Kakani 45.44 278 *e*P **P** **21 57 23.2 0.0**
comp=Z,38nm,0.8s
DMN Daman 45.65 278 *e*P **P** **21 57 24.8 0.0**
MTN Manton Dam 45.70 189 P **P** **21 57 23.9 -1.0**
MTN IAmb IAmb 21 57 24.8
comp=Z,13nm,0.8s
GKN Gorkha 45.91 279 *e*P **P** **21 57 26.7 0.0**
comp=Z,110nm,0.7s
NRIK Noril'sk 46.17 338 P **P** **21 57 28.3 +0.4**
comp=Z,26nm,0.6s,baz=109,slow=9.2,SNR=24
comp=Z,26nm,0.6s
NRIK Noril'sk 46.17 338 P **P** **21 57 28.5 +0.6**
NRIK IAmb IAmb 21 57 29.2
comp=Z,60nm,1.2s
NRIK Noril'sk 46.17 338*ce*P **P** **21 57 28.0 +0.1**
NRIK pmax pmax
comp=Z,55nm,1.3s
DANN Dangsing 46.52 280 *e*P **P** **21 57 31.9 +0.3**
KURK Kurchatov 46.57 311 P **P** **21 57 31.1 -0.1**
KURK Kurchatov 46.57 311*ce*P **P** **21 57 30.9 -0.4**
KURK pmax pmax
comp=Z,61nm,0.7s
KURK Kurchatov 46.57 311 P **P** **21 57 31.3 0.0**
COEN Coen 46.59 173 P **P** **21 57 31.9 +0.1**
COEN IAmb IAmb 21 58 02.8
comp=Z,36nm,1.5s
PSI Prapat 47.14 239 P **P** **21 57 36.1 -0.2**
comp=Z,4.2nm,0.6s,baz=27,slow=4.5,SNR=3.7
comp=Z,4.2nm,0.6s
PSI Prapat 47.14 239 P **P** **21 57 36.2 -0.1**
PSI pmax pmax
comp=Z,12nm,1.3s
RPSI Rantau Prapat 47.21 239 P **P** **21 57 36.2 -0.5**
SDPT Sand Point 47.90 43 P **P** **21 57 40.7 -0.6**
UGM Wanagama 48.08 218 P **P** **21 57 42.1 -1.2**
KNRA Kununurra 48.85 192 P **P** **21 57 48.7 -0.2**
KNRA IAmb IAmb 21 57 49.5
comp=Z,20nm,0.7s
GSI Gunungsitoli 49.14 239 P **P** **21 57 51.2 -0.1**
NRN Naryn 49.34 299 P **P** **21 57 52.9 +0.1**
NRN IAmb IAmb 21 57 54.1
comp=Z,9.7nm,0.7s
NRN Naryn 49.34 299 P **P** **21 57 52.9 +0.1**
NRN pmax pmax
comp=Z,10.0nm,0.7s
TKM2 Tokmak 2 49.36 301 P **P** **21 57 53.6 +0.7**
SNR=8.0
KSH Kashi 49.74 296 P **P** **21 57 59.8 +4.1**
KSH pmax pmax
comp=Z,24nm,0.8s
KBK Karagaybulak 49.88 301 P **P** **21 57 57.3 +0.6**
SNR=15
USP Ospenovka 50.09 302 P **P** **21 57 58.4 +0.2**
SNR=7.8
AAK Ala-Archa 50.21 301 P **P** **21 57 59.4 +0.2**
SNR=5.5
AAK Ala-Archa 50.21 301 P **P** **21 57 59.4 +0.2**
AAK IAmb IAmb 21 58 00.2
comp=Z,12nm,0.8s
AAK Ala-Archa 50.21 301 P **P** **21 57 59.4 +0.2**
AAK pmax pmax
comp=Z,12nm,0.8s
N18K Kilae Creek 50.55 36 P **P** **21 58 02.6 +1.4**
N18K IAmb IAmb 21 58 20.9
comp=Z,20nm,1.4s
EKS2 Erkin-Say 50.73 301 P **P** **21 58 03.3 +0.3**
SNR=5.3
AML Almayashu 50.89 300 P **P** **21 58 05.5 +0.9**
SNR=12
N19K Bonanza Creek 51.24 36 P **P** **21 58 07.7 +1.3**
M19K Big River Lodg 51.32 34 P **P** **21 58 07.7 +0.9**
SII Sitkinak Islan 51.43 41 P **P** **21 58 08.5 +0.7**
K20K Telida 51.53 32 P **P** **21 58 10.5 +2.1**
J20K Nowinta River 51.55 31 P **P** **21 58 10.2 +1.8**
BRVK Borovoye 51.61 315 P **P** **21 58 09.2 0.0**
BRVK IAmb IAmb 21 58 10.1
comp=Z,23nm,0.7s
BRVK Borovoye 51.61 315*ce*P **P** **21 58 09.3 +0.2**
BRVK pmax pmax
comp=Z,33nm,1.0s
BRVK Borovoye 51.61 315 P **P** **21 58 09.4 +0.2**
IMAR Indian Mountai 51.85 29 P **P** **21 58 12.1 +1.4**
H21K Melozitna Rive 52.21 29 P **P** **21 58 14.8 +1.4**
WB0 Warramunga Arr 52.22 184 P **P** **21 58 13.2 -0.7**
WB0 IAmb IAmb 21 58 14.2
comp=Z,15nm,1.1s
PPLA Purkeypile 52.37 33 P **P** **21 58 16.3 +1.6**
WRAB Tennant Creek 52.39 184*ce*P **P** **21 58 14.4 -0.8**
WRAB pmax pmax
comp=Z,5.0nm,1.0s
WB2 Warramunga Arr 52.40 184 P **P** **21 58 14.7 -0.5**
WB2 IAmb IAmb 21 58 15.7
comp=Z,16nm,1.1s
WRA Warramunga Arr 52.40 184 P **P** **21 58 14.8 -0.4**
comp=Z,5.5nm,0.6s,baz=359,slow=7.7,SNR=81
WRA PcP **PcP** **21 59 21.8 +0.7**
comp=Z,1.0nm,0.5s,baz=356,slow=4.2,SNR=2.8
comp=Z,5.5nm,0.6s
WRA Warramunga Arr 52.40 184 P **P** **21 58 14.9 -0.4**
WRA Warramunga Arr 52.40 184 P **P** **21 58 14.9 -0.4**
WRA pmax pmax
comp=Z,1.0nm,1.0s
DRK Karamyk 52.89 297 P **P** **21 58 19.4 +0.3**
KK31 Karatay Array 52.99 302 P **P** **21 58 19.5 +0.2**
KK31 IAmb IAmb 21 58 20.4
comp=Z,33nm,0.8s
KK31 Karatay Array 52.99 302 P **P** **21 58 19.5 +0.2**
KK31 pmax pmax
comp=Z,33nm,0.8s
KKAR Karatay Array 52.99 302 P **P** **21 58 19.5 +0.1**
KKAR Karatay Array 52.99 302 P **P** **21 58 19.5 +0.1**
CTA Charters Tower 53.02 170 P **P** **21 58 19.8 0.0**
comp=Z,5.6nm,0.7s,baz=348,slow=6.4,SNR=7.1
comp=Z,5.6nm,0.7s
CTAO Charters Tower 53.02 170 P **P** **21 58 19.7 0.0**
CTAO Charters Tower 53.02 170 P **P** **21 58 19.7 0.0**
CTAO pmax pmax
comp=Z,9.0nm,1.0s
MLY Manley 53.05 30 P **P** **21 58 21.0 +1.5**
NIL Nilore 53.40 290 P **P** **21 58 23.0 +0.5**
NIL Nilore 53.40 290 P **P** **21 58 23.0 +0.5**
NIL pmax pmax
comp=Z,49nm,0.7s
NIL Nilore 53.40 290 P **P** **21 58 23.4 +0.9**
I23K Minto, Yukon-K 53.64 30 P **P** **21 58 25.0 +1.4**
NEA2 Nenana 53.76 31 P **P** **21 58 26.0 +1.4**
RND Reindeer 53.88 32 P **P** **21 58 26.3 +0.8**
RND IAmb IAmb 21 58 27.2
comp=Z,13nm,0.8s
RND Reindeer 53.88 32 P **P** **21 58 26.3 +0.8**
RND pmax pmax
comp=Z,13nm,0.8s
MDM Murphy Dome 54.12 30 P **P** **21 58 28.8 +1.6**
GAR Garm 54.13 297 P **P** **21 58 27.9 +0.1**
COLA College 54.28 30 *i* P **P** **21 58 28.0 -0.2**
COLA pmax pmax
comp=Z,5.0nm,0.7s
TAS Tashkent 54.28 300 P **P** **21 58 29.2 +0.5**
TAS IAmb IAmb 21 58 30.1
comp=Z,29nm,0.7s
TAS Tashkent 54.28 300 P **P** **21 58 29.2 +0.5**
TAS pmax pmax
comp=Z,29nm,0.7s

IL31 54.70 30 P P 21 58 31.9 +0.8
ILAR Eielson Array 54.70 30 P P 21 58 31.6 +0.3
comp=Z,1.9nm,0.7s,baz=279,slow=5.6,SNR=20
comp=Z,1.9nm,0.7s
CHGR Chuyangaron 55.09 297 P P 21 58 34.8 +0.2
CHGR Chuyangaron 55.09 297 P P 21 58 34.8 +0.2
CHGR pmax pmax
comp=Z,157nm,0.7s
BMAR Burnt Mountain 55.52 27 P P 21 58 39.4 +2.3
DOT Dot Lake 56.01 32 P P 21 58 41.4 +0.8
SCRK Sand Creek 56.01 31 P P 21 58 41.5 +0.8
AS31 Alice Springs 56.12 185 P P 21 58 41.6 -0.2
ASAR Alice Springs 56.13 185 P P 21 58 41.9 0.0
comp=Z,4.1nm,0.7s,baz=3.1,slow=6.7,SNR=73
comp=Z,4.1nm,0.7s
ASAR Alice Springs 56.13 185 P P 21 58 41.4 -0.5
J26L Joseph Creek 56.14 31 P P 21 58 42.1 +0.6
MBWA Marble Bar 56.28 201 P P 21 58 42.5 -0.4
MBWA IAmb IAmb 21 58 43.6
comp=Z,7.4nm,0.7s
KBL Kabul 56.43 292 P P 21 58 43.8 -0.5
KBL IAmb IAmb 21 58 44.8
comp=Z,16nm,0.8s
KBL Kabul 56.43 292 P P 21 58 43.8 -0.5
KBL pmax pmax
comp=Z,16nm,0.8s
KBL Kabul 56.43 292 P P 21 58 44.1 -0.1
PSA00 Pilbara Seismi 56.63 200 P P 21 58 45.1 -0.3
PSA00 IAmb IAmb 21 59 01.7
comp=Z,22nm,1.4s
PSA00 Pilbara Seismi 56.63 200 P P 21 58 44.5 -0.9
PSA00 IAmb IAmb 21 58 50.1
comp=Z,4.5nm,1.1s
L27K Beaver Creek, 57.08 32 P P 21 58 49.3 +1.2
BCAR Beaver Creek A 57.10 32 P P 21 58 49.7 +1.5
EGAK Eagle 57.14 30 P P 21 58 49.0 +0.6
ARU Arti 57.85 320 P P 21 58 53.1 -0.3
ARU Arti 57.85 320 *d* *i*P P 21 58 53.1 -0.3
ARU 21 59 39.7
ARU *PP pP 22 00 03.0 -1.4
ARU 22 01 04.4
ARU S S 22 06 27.7 +1.6
ARU SS SS 22 10 20.0 -2.3
ARU pmax pmax
comp=Z,26nm,0.6s
KOUNC Koumac, New Ca 58.56 151 P P 21 58 60.0 +1.3
KOUNC IAmb IAmb 21 59 01.4
comp=Z,13nm,0.9s
ABKAR Akbulak array 58.68 311 P P 21 58 59.3 +0.1
ABKAR Akbulak array 58.68 311 P P 21 58 59.4 +0.1
ABKAR IAmb IAmb 21 59 00.2
comp=Z,50nm,0.7s
PALK Pallekele 58.69 258 P P 21 59 00.1 +0.2
PALK IAmb IAmb 21 59 01.1
comp=Z,18nm,0.8s
PALK Pallekele 58.69 258 P P 21 59 00.1 +0.2
PALK pmax pmax
comp=Z,18nm,0.8s
EIDS Eidsvold 59.02 166 P P 21 59 02.0 +0.3
EIDS IAmb IAmb 21 59 26.4
comp=Z,18nm,1.4s
DZM Mont Dzumac 60.81 150 P P 21 59 15.1 +1.0
comp=Z,14nm,0.9s,baz=322,slow=19,SNR=11
comp=Z,14nm,0.9s
HRA Herat 61.75 294 P P 21 59 20.7 +0.3
HRA IAmb IAmb 21 59 21.4
comp=Z,12nm,0.6s
KIRV Kirov 62.09 324 *ce*P P 21 59 21.4 -0.5
C36M Paulatuk 62.57 23 P P 21 59 26.1 +1.2
C36M IAmb IAmb 21 59 30.5
comp=Z,10nm,1.1s
PRGR Permogore 62.94 328 *e*P P 21 59 27.0 -0.5
GEYT Alibeck 63.53 300 P P 21 59 31.4 -0.5
comp=Z,2.8nm,0.6s,baz=51,slow=28,SNR=4.3
comp=Z,2.8nm,0.6s
GEYT Alibeck 63.53 300 P P 21 59 31.6 -0.3
ARMA Armidale 64.03 167 P P 21 59 35.2 +0.2
ARMA IAmb IAmb 22 00 07.1
comp=Z,12nm,1.2s
STKA Stephens Creek 64.26 177 P P 21 59 36.2 -0.2
comp=Z,5.4nm,0.7s,baz=333,slow=7.7,SNR=13
comp=Z,5.4nm,0.7s
STKA Stephens Creek 64.26 177 P P 21 59 36.2 -0.2
SPITS Spitsbergen Ar 64.28 349 P P 21 59 36.4 +0.4
SPITS pmax pmax
comp=Z,19nm,1.1s
MORW Morawa 64.81 201 P P 21 59 40.1 +0.1
MORW IAmb IAmb 21 59 43.0
comp=Z,32nm,1.4s
EUNU Eureka 64.92 8 P P 21 59 40.6 +0.5
EUNU IAmb IAmb 21 59 41.9
comp=Z,4.2nm,0.7s
LVZ Lovozero 64.97 336 P P 21 59 40.4 -0.2
LVZ Lovozero 64.97 336 P P 21 59 40.4 -0.2
LVZ pmax pmax
comp=Z,37nm,1.4s
BELG Belogornoye 65.12 318 *i*P P 21 59 41.3 -0.4
BELG pmax pmax
comp=Z,8.0nm,0.9s
BBOO Buckleboo 65.12 182 P P 21 59 41.9 0.0
BBOO IAmb IAmb 21 59 43.5
comp=Z,22nm,1.2s
KEV Kevo 66.55 339 P P 21 59 50.5 +0.1
KEV IAmb IAmb 21 59 51.2
comp=Z,6.1nm,0.7s
KEV Kevo 66.55 339 P P 21 59 50.5 +0.1
KEV pmax pmax
comp=Z,6.0nm,0.7s
HAMF Hammerfest 67.03 341 *e*P P 21 59 53.7 +0.2
ARA0 ARCESS Array S 67.11 339 *e*P P 21 59 54.5 +0.4
ARCES ARCESS Array B 67.11 339 P P 21 59 54.0 -0.1
comp=Z,6.9nm,0.6s,baz=66,slow=8.8,SNR=106
comp=Z,6.9nm,0.6s
ARCES ARCESS Array B 67.11 339 P P 21 59 54.4 +0.4
ARCES IAmb IAmb 21 59 56.2
comp=Z,9.1nm,1.1s
ARCES ARCESS Array B 67.11 339 P P 21 59 54.4 +0.4
ARCES pmax pmax
comp=Z,9.0nm,1.1s
CAN Canberra 68.39 170 P P 22 00 03.1 +0.8
CAN Canberra 68.39 170 P P 22 00 03.1 +0.8
CAN pmax pmax
comp=Z,33nm,1.4s
JETT Jettan, Norway 68.58 340 *e*P P 22 00 03.7 +0.6
TRO Tromso 68.95 341 *e*P P 22 00 05.4 +0.1
YKA Yellowknife Ar 69.00 28 P P 22 00 06.2 +0.5
comp=Z,1.6nm,1.0s,baz=300,slow=5.9,SNR=5.3
comp=Z,1.6nm,1.0s
YKA Yellowknife Ar 69.00 28 *ce*P P 22 00 07.0 +1.2
YKA pmax pmax
comp=Z,1.0nm,0.9s
MOS Moscow 69.10 323 *e*P P 22 00 05.4 -1.1
MOS pmax pmax
comp=Z,28nm,0.9s
WSAR Wadi Sarin 69.29 285 P P 22 00 08.4 +0.2
WBK Wadi Bani Khal 69.30 284 P P 22 00 08.8 +0.5
TULEG Thule 69.79 6 P P 22 00 11.0 +0.6
SMDO Samad 69.84 285 P P 22 00 09.9 -1.8
LPSR Galich'ya Gora 69.87 320 *e*P P 22 00 10.4 -0.8
LPSR pmax pmax
comp=Z,20nm,0.8s
OBN Obninsk 69.93 323 *ce*P P 22 00 10.7 -0.8
OBN *i* 22 00 32.0
OBN *e*SP sP 22 01 58.7 -2.1
OBN pmax pmax
comp=Z,17nm,1.3s
BANOM Banah 69.94 288 P P 22 00 13.1 +0.9
BANOM Banah 69.94 288 P P 22 00 13.1 +0.9
SHME Shamm 70.01 289 P P 22 00 13.5 +0.9
SHME Shamm 70.01 289 *i*P P 22 00 13.7 +1.1
SNR=8.3
VORR Voronezh 70.15 319 *e*P P 22 00 13.9 +1.0
VORR pmax pmax
comp=Z,40nm,0.6s
HOQ Hoqain 70.20 286 P P 22 00 14.1 +0.3
MASF Masafi 70.31 288 P P 22 00 14.9 +0.5
MSFE Esma-Masafi 70.31 288 P P 22 00 15.1 +0.7
VSR Storozhevoye 70.38 319 *e*P P 22 00 13.6 -0.7
VSR pmax pmax
comp=Z,20nm,0.6s
UOSS Minazif 70.47 288 P P 22 00 15.0 -0.3
UOSS IAmb IAmb 22 00 55.3
comp=Z,20nm,1.2s
UOSS Minazif 70.47 288 P P 22 00 16.5 +1.1
UOSS Minazif 70.47 288 P P 22 00 15.8 +0.4
HATD Hatta, Dubai 70.58 287 P P 22 00 16.8 +0.8
HATD Hatta, Dubai 70.58 287 P P 22 00 16.8 +0.8
BSY Bisya 70.68 285 P P 22 00 17.2 +0.5
SNR=8.4
ASHO Ashiyiah 70.71 287 P P 22 00 17.0 +0.2
ASHO Ashiyiah 70.71 287 P P 22 00 17.1 +0.2
MHTO MHTO 70.88 283 P P 22 00 17.8 -0.1
NAZ Nazwa, Dubai 70.88 288 P P 22 00 18.0 +0.2
ARQ Araqi 70.96 286 P P 22 00 19.0 +0.6
SNR=22
FAQ Al Faqa, Dubai 71.05 288 P P 22 00 18.8 -0.1
FAQ Al Faqa, Dubai 71.05 288 P P 22 00 18.6 -0.3
STEI Steigen 71.07 340 *e*P P 22 00 18.4 +0.3
ALNE Al Ain 71.25 287 P P 22 00 20.4 +0.4
ASUD Al Ashush, Dub 71.32 288 P P 22 00 20.9 +0.5
FIA1 FINESS Array S 71.38 332 P P 22 00 20.1 0.0
FIA1 IAmb IAmb 22 00 20.8
comp=Z,16nm,1.0s
FINES FINESS Array B 71.38 332 P P 22 00 19.9 -0.2
comp=Z,7.2nm,0.5s,baz=68,slow=5.4,SNR=80
comp=Z,7.2nm,0.5s
FINES FINESS Array B 71.38 332 P P 22 00 20.1 0.0
FINES FINESS Array B 71.38 332 *i* P P 22 00 19.8 -0.3
FINES pmax pmax
comp=Z,7.0nm,0.5s
ZEI Tsey 71.41 309 *e*P P 22 00 20.1 -0.8
ZEI pmax pmax
comp=Z,17nm,0.6s
PGC Sidney 71.42 44 P P 22 00 21.4 +0.9
PGC IAmb IAmb 22 00 23.0
comp=Z,10nm,0.7s
FAUS Fauske 71.42 340 *e*P P 22 00 20.6 +0.3
KBZ Khabaz 71.62 310 P P 22 00 22.6 +0.7
comp=Z,39nm,0.8s,baz=79,slow=4.4,SNR=88
KBZ Khabaz 71.62 310 *ce*P P 22 00 22.4 +0.6
KBZ pmax pmax
comp=Z,43nm,0.9s
KIV Kislovodsk 71.65 311 P P 22 00 22.8 +0.6
KIV Kislovodsk 71.65 311 *e*P P 22 00 22.8 +0.6
KIV pmax pmax
comp=Z,66nm,1.1s
KIV Kislovodsk 71.65 311 P P 22 00 23.2 +1.0
KIV Kislovodsk 71.65 311 *i* P P 22 00 23.0 +0.8
SNR=5.3
NLWA Neilton Lookou 71.77 45 P P 22 00 24.4 +1.7
NLWA IAmb IAmb 22 00 25.4
comp=Z,7.5nm,0.7s
SHA1 Shidzhatmaz 71.77 311 *d* *i*P P 22 00 23.4 +0.3
ONI Oni 71.79 309 P P 22 00 24.1 +1.1
ONI IAmb IAmb 22 00 25.1
comp=Z,14nm,0.8s
ONI Oni 71.79 309 P P 22 00 24.1 +1.1
ONI pmax pmax
comp=Z,14nm,0.8s
GNI Garni 72.07 306 P P 22 00 25.6 +0.8
GNI IAmb IAmb 22 00 36.3
comp=Z,16nm,0.8s
GNI Garni 72.07 306 *ce*P P 22 00 26.0 +1.2
GNI pmax pmax
comp=Z,35nm,1.7s
GNI Garni 72.07 306 P P 22 00 26.3 +1.5
UMZA Um Al Zommool 72.36 286 P P 22 00 26.3 -0.2
MOR8 Moi Rana 72.48 339 *e*P P 22 00 25.7 -0.9
VSU Vasula 72.80 329 *e*P P 22 00 28.9 +0.5
KARS Kars 72.96 308 P P 22 00 30.8 +0.8
KARS Kars 72.96 308 P P 22 00 30.8 +0.8
KARS pmax pmax
comp=Z,40nm,0.7s
RAF Rauma 73.31 333 *e*P P 22 00 31.9 +0.5
F04A Amboy 73.35 46 P P 22 00 33.0 +1.1
F04A IAmb IAmb 22 00 34.4
comp=Z,11nm,0.7s
I02E Swisshome, OR 73.37 48 P P 22 00 33.6 +1.5
MZR Muzera 73.58 287 P P 22 00 33.7 -0.1
MZR Muzera 73.58 287 *i* P P 22 00 33.6 -0.1
SNR=10
KEBM Edson Butte 73.67 49 P P 22 00 34.8 +0.9
SOC Sochi 73.72 311 *e*P P 22 00 33.2 -0.9
SOC *e**PP pP 22 01 48.8 +0.4
SOC *e* 22 03 21.5
SOC *e*PPP PPP 22 05 08.4
SOC *e*S S 22 09 36.2 -0.9
SOC *e*SS SS 22 14 26.6 -1.1
SOC *e*SSS SSS 22 17 50.5
SOC pmax pmax
comp=Z,21nm,0.6s
H04D Lebanon 73.86 47 P P 22 00 36.1 +1.2
H04D IAmb IAmb 22 01 02.1
comp=Z,18nm,1.2s
BUCK Buck Mountain 73.86 48 P P 22 00 37.0 +1.9
BUCK IAmb IAmb 22 00 38.4
comp=Z,18nm,0.9s
GEVA Gevas 74.09 305 P P 22 00 37.3 +0.7
GEVA IAmb IAmb 22 00 39.0
comp=Z,15nm,0.7s
SHMA Al-Shehemyia 74.21 291 P P 22 00 36.9 -0.4
NSS Namsos 74.37 339 *e*P P 22 00 37.4 -0.1
SLWR Sila 74.50 289 P P 22 00 38.7 -0.2
ANN Anapa 74.53 313 *e*P P 22 00 36.9 -1.8
ANN *e**PP pP 22 01 53.8 +0.6
ANN *e*S S 22 09 43.8 -2.2
ANN pmax pmax
comp=Z,104nm,1.1s
MNK Minsk 74.53 325 *i* P P 22 00 39.3 +0.8
MNK *i* *PP pwP 22 01 56.7 +1.5
MNK *i* 22 03 29.8
MNK *i* PPP PPP 22 05 18.3
MNK *i* S S 22 09 46.4 +0.7
MNK *i* 22 10 19.5
MNK *i* SS SS 22 14 43.9 +4.5
MNK pmax pmax
comp=Z,20nm,0.8s
MNK Minsk 74.53 325 *i* P P 22 00 39.4 +0.8
MNK *i* pP pwP 22 01 56.7 +1.5
MNK *i* PP PP 22 03 29.9 +0.2
MNK *i* PPP PPP 22 05 18.3
MNK *i* S S 22 09 46.5 +0.7
MNK *i* sS sS 22 11 52.5 -5.1
MNK *i* SS SS 22 14 43.9 +4.5
MNK Minsk 74.53 325 *i* P P 22 00 39.5 +0.9
MNK Minsk 74.53 325 *i* P P 22 00 39.5 +0.9
comp=Z,20nm,0.8s,baz=55
GURO Guroymak-BITLI 74.67 306 P P 22 00 40.4 +0.5
GURO IAmb IAmb 22 00 42.0
comp=Z,17nm,0.8s
HUMO Hull Mountain 74.68 49 P P 22 00 41.0 +1.3
ISAL Salakas 74.74 327 *e*P P 22 00 40.5 +0.8
NACGM Naroch 74.82 326 *e*P P 22 00 41.2 +1.0
baz=54
D08A Wollman Farm, 74.86 44 P P 22 00 41.6 +1.0
D08A IAmb IAmb 22 00 42.8
comp=Z,4.4nm,0.8s
KOPT Kop Dagi 74.98 308 P P 22 00 42.9 +1.1
KOPT IAmb IAmb 22 00 52.5
comp=Z,9.2nm,0.7s
SUMG Summit 75.04 359 P P 22 00 42.7 +1.0
SUMG IAmb IAmb 22 00 44.0
comp=Z,5.9nm,0.6s
SUMG Summit 75.04 359 P P 22 00 42.7 +1.0
SUMG pmax pmax
comp=Z,6.0nm,0.6s
YBH Yreka Blue Hor 75.28 50 P P 22 00 44.5 +1.3
YBH Yreka Blue Hor 75.28 50 P P 22 00 44.5 +1.3
YBH pmax pmax
comp=Z,4.0nm,1.0s
L04D Klamath Falls 75.29 49 P P 22 00 44.4 +1.1
L04D IAmb IAmb 22 00 45.8
comp=Z,9.9nm,0.8s
PABE Paberze 75.77 328 P P 22 00 45.8 +0.3
PABE Paberze 75.77 328 *e*P P 22 00 46.0 +0.5
K05A Summer Lake 75.93 48 P P 22 00 48.9 +1.9
K05A IAmb IAmb 22 00 49.8
comp=Z,13nm,1.1s
AKASG Malin Array Be 76.02 322 P P 22 00 46.9 -0.2
comp=Z,9.0nm,0.4s,baz=51,slow=5.8,SNR=107
comp=Z,9.0nm,0.4s
AKASG Malin Array Be 76.02 322 P P 22 00 46.9 -0.2
AKASG Malin Array Be 76.02 322 *c* *i*P P 22 00 46.9 -0.2
AKASG pmax pmax
comp=Z,10.0nm,0.4s
AKBB Malin Array Si 76.02 322 P P 22 00 47.0 -0.1
AKBB Malin Array Si 76.02 322 *ce*P P 22 00 46.3 -0.8
AKBB pmax pmax
comp=Z,17nm,0.6s
MARD Mardin 76.15 305 P P 22 00 48.9 +0.6
SIM Simferopol' 76.46 315 P P 22 00 47.8 -1.9
SIM pmax pmax
comp=Z,19nm,0.8s
WALA Waterton Lakes 76.58 40 P P 22 00 51.5 +1.0
NC405 NORSAR Array S 76.89 336 P P 22 00 51.8 0.0
BMO Blue Mountains 76.99 45 P P 22 00 53.8 +1.1
BMO IAmb IAmb 22 00 54.9
comp=Z,7.8nm,1.3s
BMO Blue Mountains 76.99 45 P P 22 00 53.8 +1.1
BMO pmax pmax
comp=Z,8.0nm,1.3s
NB201 NORSAR Array S 77.08 336 *e*P P 22 00 52.8 0.0
DOMB Dombas 77.08 338 *e*P P 22 00 52.9 0.0
NB2 NORSAR Subarra 77.12 336 P P 22 00 52.6 -0.4
comp=Z,7.1nm,0.6s,baz=44,slow=5.9
NB2 NORSAR Subarra 77.12 336 P P 22 00 52.6 -0.4
baz=44,slow=5.9
NOA NORSAR Array B 77.12 336 P P 22 00 52.8 -0.3
comp=Z,7.1nm,0.6s,baz=44,slow=5.5,SNR=37
comp=Z,7.1nm,0.6s
TOKA Tokat 77.46 310 P P 22 00 56.3 +0.9
WVOR Wild Horse Val 77.49 48 P P 22 00 56.3 +0.7
WVOR IAmb IAmb 22 00 57.5
comp=Z,3.6nm,0.7s
WVOR Wild Horse Val 77.49 48 P P 22 00 56.3 +0.7
WVOR pmax pmax
comp=Z,4.0nm,0.7s
PLID Pearl Lake 77.63 44 P P 22 00 56.4 0.0
SORM Soroca 77.97 320 ⇓P P 22 00 56.7 -1.2
BNN Bunyan 78.66 309 P P 22 01 01.6 -0.4
MFID Camas Ranch 78.67 46 P P 22 01 02.8 +0.8
CMB Columbia Colle 78.74 52 P P 22 01 03.2 +0.8
CMB IAmb IAmb 22 01 03.8
comp=Z,2.8nm,0.6s
CMB Columbia Colle 78.74 52 P P 22 01 03.2 +0.8
CMB pmax pmax
comp=Z,3.0nm,0.6s
VASR Vaslui 79.16 319 ⇓P P 22 01 04.2 -0.1
VLDR Vladesti 79.46 318 ⇓P P 22 01 06.6 +0.6
VARL Varlezi 79.56 318 ⇓P P 22 01 07.7 +1.2
BR131 Keskin Array S 79.62 311 P P 22 01 07.7 +0.5
BR131 Keskin Array S 79.62 311 *c* *i*P P 22 01 07.8 +0.6
BR131 Keskin Array S 79.62 311 P P 22 01 07.7 +0.5
BRTR Keskin Array B 79.62 311 P P 22 01 07.5 +0.4
comp=Z,18nm,0.7s,baz=108,slow=4.5,SNR=85
comp=Z,18nm,0.7s
BRTR Keskin Array B 79.62 311 *ce*P P 22 01 07.5 +0.4
BRTR pmax pmax
comp=Z,19nm,0.7s
RAYN Ar Rayn 79.68 291 P P 22 01 07.6 0.0
RAYN Ar Rayn 79.68 291 P P 22 01 07.6 0.0
RAYN pmax pmax
comp=Z,21nm,0.7s
RAYN Ar Rayn 79.68 291 P P 22 01 08.1 +0.5
RAYN Ar Rayn 79.68 291 *i* P P 22 01 08.1 +0.5
SNR=34
KVN Kaiserville 79.69 50 P P 22 01 08.2 +0.6
KVN IAmb IAmb 22 01 09.7
comp=Z,5.1nm,0.7s
KVN Kaiserville 79.69 50 P P 22 01 08.2 +0.6
KVN pmax pmax
comp=Z,5.0nm,0.7s
BOZ Bozeman (W) 79.86 42 P P 22 01 09.3 +1.0
BOZ Bozeman (W) 79.86 42 P P 22 01 09.4 +1.0
BOZ pmax pmax
comp=Z,2.0nm,0.7s
BKZ Black Stump Fm 79.88 151 P P 22 01 08.1 -0.1
NVAR Mina Array Bea 79.90 51 P P 22 01 10.1 +1.3
comp=Z,2.3nm,0.7s,baz=290,slow=5.3,SNR=18
comp=Z,2.3nm,0.7s
NVAR Mina Array Bea 79.90 51 P P 22 01 09.3 +0.5
BIZ Bicaz 79.91 320 ⇑P P 22 01 09.3 +0.9
BUR08 Bucovina Ar. S 79.96 321 P P 22 01 09.2 +0.4
BUR08 IAmb IAmb 22 01 10.3
comp=Z,7.0nm,0.8s
BURAR Bucovina Array 79.97 321 ⇑P P 22 01 09.7 +0.9
BURAR Bucovina Array 79.97 321 P P 22 01 09.2 +0.4
BURAR IAmb IAmb 22 01 10.6
comp=Z,14nm,1.1s
PANC Panciu 79.97 318 ⇓P P 22 01 09.8 +1.1
ANTO Ankara 80.08 311 ⇑P P 22 01 09.6 +0.1
ANTO Ankara 80.08 311 P P 22 01 10.0 +0.5
ANTO Ankara 80.08 311 P P 22 01 10.0 +0.5
ANTO pmax pmax
comp=Z,28nm,0.7s
ANTO Ankara 80.08 311 P P 22 01 10.1 +0.6
ODBI Odobesti 80.09 318 ⇑P P 22 01 10.6 +1.3
BR231 Keskin MP Arra 80.10 311 P P 22 01 10.1 +0.4
VRI Vrincioaia 80.21 319 ⇓P P 22 01 10.6 +0.5
GKP Gorka Klasztor 80.22 328 *e*P P 22 01 10.1 +0.2
GRER 80.36 318 ⇑P P 22 01 11.2 +0.4
NNZ Nelson 80.41 154 P P 22 01 10.7 -0.1
ELK Elko 80.55 48 P P 22 01 13.5 +1.3
ELK Elko 80.55 48 P P 22 01 13.5 +1.3
ELK pmax pmax
comp=Z,3.0nm,0.6s
ICOR Ion Corvin 80.65 317 ⇑P P 22 01 13.7 +1.4
KOLS Kolonicke sedl 80.68 323 *e*P P 22 01 12.9 +0.5
KOLS pmax pmax
comp=Z,4.0nm,0.8s
KOLS Kolonicke sedl 80.68 323 *e*P P 22 01 12.9 +0.5
MDUB Mudurnu 80.74 312 P P 22 01 12.6 -0.5
ARCR ARCALIA 80.76 321 ⇑P P 22 01 14.0 +1.2
BMR Baia Mare 80.85 321 ⇑P P 22 01 13.4 0.0
UZH Uzhgorod 80.86 323 *e*P P 22 01 11.3 -2.1
MLR Muntele Rosu 80.87 319 ⇓P P 22 01 15.3 +1.6
MLR Muntele Rosu 80.87 319 P P 22 01 14.7 +1.0
MLR IAmb IAmb 22 01 16.9
comp=Z,16nm,1.5s
MLR Muntele Rosu 80.87 319 P P 22 01 14.7 +1.0
MLR pmax pmax
comp=Z,16nm,1.5s
OJC Ojcow 81.07 325 P P 22 01 14.0 -0.4
OJC IAmb IAmb 22 01 15.1
comp=Z,9.3nm,0.7s
OJC Ojcow 81.07 325 P P 22 01 14.0 -0.4
OJC pmax pmax
comp=Z,9.0nm,0.7s
CRVS Cervenica-Dubn 81.11 323 *e*P P 22 01 15.6 +0.9
CRVS pmax pmax
comp=Z,10.0nm,0.9s
CRVS Cervenica-Dubn 81.11 323 *e*P P 22 01 15.6 +0.9
VOIR 81.40 319 ⇑P P 22 01 17.2 +0.8
HVU Hansel Valley 81.46 46 P P 22 01 18.4 +1.5
HVU IAmb IAmb 22 01 19.3
comp=Z,5.0nm,0.7s
HVU Hansel Valley 81.46 46 P P 22 01 18.4 +1.5
HVU pmax pmax
comp=Z,5.0nm,0.7s
ARR Arges 81.68 319 ⇓P P 22 01 18.7 +0.9
R11A Troy Canyon, C 81.70 50 P P 22 01 19.3 +1.0
R11A IAmb IAmb 22 01 19.9
comp=Z,3.3nm,0.6s
BGU Big Grassy Mou 81.81 46 P P 22 01 19.9 +1.3
DRGR 81.82 321 ⇑P P 22 01 18.7 +0.1
LANS Liptovska Anna 81.94 324 *e*P P 22 01 20.4 +1.3
LANS Liptovska Anna 81.94 324 *e*P P 22 01 20.4 +1.3
TPNV Topopah Spring 82.08 51 P P 22 01 21.0 +0.8
TPNV IAmb IAmb 22 01 22.1
comp=Z,5.7nm,0.8s
TPNV Topopah Spring 82.08 51 P P 22 01 21.0 +0.8
TPNV pmax pmax
comp=Z,6.0nm,0.8s
OKC Ostrava-Krasne 82.12 325 *e*P P 22 01 19.8 -0.1
OKC Ostrava-Krasne 82.12 325 *e*P P 22 01 19.8 -0.1
QSM Queen of Sheba 82.23 52 P P 22 01 21.8 +1.0
QSM IAmb IAmb 22 01 22.6
comp=Z,5.3nm,0.7s
DUG Dugway, Tooele 82.37 47 P P 22 01 22.8 +1.2
DUG IAmb IAmb 22 01 24.0
comp=Z,5.3nm,0.8s
DUG Dugway, Tooele 82.37 47 P P 22 01 22.8 +1.2
DUG pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 82.45 326 ⇑P P 22 01 22.4 +0.7
MORC Moravsky Berou 82.45 326 P P 22 01 22.0 +0.3
MORC IAmb IAmb 22 01 23.0
comp=Z,7.3nm,0.9s
MORC Moravsky Berou 82.45 326 P P 22 01 22.0 +0.3
MORC pmax pmax
comp=Z,7.0nm,0.9s

MORC	**Moravsky Berou**	**82.45**	**326**	*eP*	**P**	**22 01 22.0**	**+0.3**
CSS	**Mathiatis**	**82.49**	**307**	P	**P**	**22 01 22.6**	**+0.5**
OSTC	**Ostas**	**82.54**	**327**	*eP*	**P**	**22 01 21.8**	**-0.3**
PSZ	**Piszkesteto**	**82.55**	**323**	P	**P**	**22 01 22.5**	**+0.3**
PSZ				IAmb	IAmb	22 01 23.8	
	comp=Z,5.8nm,0.9s						
PSZ	**Piszkesteto**	**82.55**	**323**	P	**P**	**22 01 22.5**	**+0.3**
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHVC	**Chvalec**	**82.59**	**327**	*eP*	**P**	**22 01 22.6**	**+0.3**
KRLC	**Kraliky**	**82.61**	**326**	*eP*	**P**	**22 01 22.3**	**-0.2**
KRLC	**Kraliky**	**82.61**	**326**	*eP*	**P**	**22 01 22.3**	**-0.2**
DPC	**Dobruska-Polom**	**82.63**	**327**	*eP*	**P**	**22 01 22.7**	**+0.1**
DPC	**Dobruska-Polom**	**82.63**	**327**	*eP*	**P**	**22 01 22.7**	**+0.1**
UPC	**Upice**	**82.67**	**327**	*eP*	**P**	**22 01 22.8**	**+0.1**
UPC	**Upice**	**82.67**	**327**	*eP*	**P**	**22 01 22.8**	**+0.1**
GZR	**Gura Zlata**	**82.68**	**320**	⇑P	**P**	**22 01 23.4**	**+0.4**
VYHS	**Vyhne**	**82.69**	**324**	*eP*	**P**	**22 01 23.8**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VYHS	**Vyhne**	**82.69**	**324**	*eP*	**P**	**22 01 23.8**	**+0.9**
SIRR	**Siria**	**82.71**	**321**	⇑P	**P**	**22 01 23.8**	**+0.8**
PDAR	**Pinedale Array**	**82.76**	**43**	P	**P**	**22 01 24.5**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=306,slow=2.5,SNR=14						
	comp=Z,1.4nm,0.7s						
SRE	**Strehaia**	**82.91**	**319**	⇑P	**P**	**22 01 25.5**	**+1.5**
GHAJ	**Ghor Haditha**	**83.00**	**303**	P	**P**	**22 01 25.2**	**+0.5**
JAVC	**Velka Javorina**	**83.01**	**325**	*eP*	**P**	**22 01 26.1**	**+1.5**
BZS	**Buzias**	**83.16**	**321**	⇑P	**P**	**22 01 25.5**	**+0.2**
VRAC	**Vranov**	**83.22**	**326**	⇓P	**P**	**22 01 26.2**	**+0.7**
VRAC	**Vranov**	**83.22**	**326**	*eP*	**P**	**22 01 26.1**	**+0.5**
BRG	**Berggiesshubel**	**83.35**	**328**	*i* P	**P**	**22 01 26.3**	**+0.2**
BRG				Amp		22 01 27.2	
	comp=Z,7.9nm,0.7s						
BRG	**Berggiesshubel**	**83.35**	**328**	*i* P	**P**	**22 01 26.3**	**+0.2**
BRG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SMOL	**Smolenice**	**83.37**	**325**	*eP*	**P**	**22 01 27.6**	**+1.3**
SMOL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	**Collm**	**83.45**	**329**	P	**P**	**22 01 26.9**	**+0.2**
CLL	**Collm**	**83.45**	**329**	⇓*i* P	**P**	**22 01 26.6**	**0.0**
CLL				pmax	pmax		
	comp=Z,20nm,1.1s						
CLL	**Collm**	**83.45**	**329**	⇓*i* P	**P**	**22 01 26.6**	**0.0**
	comp=Z,20nm,1.1s						
KRUC	**Moravsky**	**83.49**	**326**	*eP*	**P**	**22 01 27.2**	**+0.3**
MODS	**Modra-Piesok**	**83.54**	**325**	*eP*	**P**	**22 01 28.4**	**+1.2**
MODS				pmax	pmax		
	comp=Z,22nm,1.4s						
MODS	**Modra-Piesok**	**83.54**	**325**	*eP*	**P**	**22 01 28.4**	**+1.2**
MDVR	**Moldovita**	**83.65**	**320**	⇓P	**P**	**22 01 27.9**	**+0.1**
PRU	**Pruhonice**	**83.70**	**327**	*eP*	**P**	**22 01 27.9**	**-0.1**
PRU	**Pruhonice**	**83.70**	**327**	*eP*	**P**	**22 01 27.9**	**-0.1**
ELL	**Elmali**	**83.73**	**310**	P	**P**	**22 01 29.1**	**+0.6**
ELL	**Elmali**	**83.73**	**310**	P	**P**	**22 01 29.1**	**+0.6**
ELL				pmax	pmax		
	comp=Z,63nm,0.6s						
TREC	**Trest**	**83.75**	**326**	*eP*	**P**	**22 01 28.3**	**0.0**
TREC	**Trest**	**83.75**	**326**	*eP*	**P**	**22 01 28.3**	**0.0**
PFO	**Pinyon Flats O**	**83.85**	**54**	P	**P**	**22 01 29.8**	**+0.6**
PFO				IAmb	IAmb	22 01 30.8	
	comp=Z,7.3nm,0.8s						
PFO	**Pinyon Flats O**	**83.85**	**54**	P	**P**	**22 01 29.8**	**+0.6**
PFO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BLKB	**Belogradchik**	**83.87**	**319**	⇓P	**P**	**22 01 29.4**	**+0.4**
LCMT	**Little Creek M**	**83.99**	**50**	P	**P**	**22 01 30.6**	**+0.7**
LCMT				IAmb	IAmb	22 01 32.2	
	comp=Z,4.8nm,0.9s						
VTS	**Vitosha**	**84.19**	**318**	⇑P	**P**	**22 01 31.6**	**+0.8**
VTS	**Vitosha**	**84.19**	**318**	P	**P**	**22 01 31.1**	**+0.3**
VTS				IAmb	IAmb	22 01 32.7	
	comp=Z,4.6nm,0.8s						
VTS	**Vitosha**	**84.19**	**318**	P	**P**	**22 01 31.1**	**+0.3**
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MORH	**Mrgy, Hungar**	**84.32**	**323**	⇑P	**P**	**22 01 31.0**	**-0.1**
FRGS	**Fruska Gora**	**84.42**	**321**	⇑P	**P**	**22 01 31.4**	**-0.2**
RONA	**Rosalia, Austr**	**84.48**	**325**	*i* P	**P**	**22 01 32.0**	**+0.1**
	comp=Z,2.0nm,0.7s						
CONA	**Conrad Observa**	**84.53**	**325**	*i* P	**P**	**22 01 32.5**	**+0.3**
	comp=Z,3.7nm,0.8s						
CKRC	**Cesky Krumlov**	**84.64**	**326**	*eP*	**P**	**22 01 32.3**	**-0.4**
KHC	**Kasperske Hory**	**84.75**	**327**	P	**P**	**22 01 33.3**	**0.0**
KHC				IAmb	IAmb	22 01 34.2	
	comp=Z,4.3nm,0.7s						
KHC	**Kasperske Hory**	**84.75**	**327**	*eP*	**P**	**22 01 33.4**	**+0.1**
KHC	**Kasperske Hory**	**84.75**	**327**	*eP*	**P**	**22 01 33.4**	**+0.1**
GEC2	**GERESS Array S**	**84.90**	**327**	P	**P**	**22 01 33.7**	**-0.4**
GERES	**GERESS Array B**	**84.90**	**327**	P	**P**	**22 01 33.9**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=48,slow=6.0,SNR=27						
	comp=Z,2.3nm,0.7s						
GERES	**GERESS Array B**	**84.90**	**327**	P	**P**	**22 01 33.6**	**-0.4**
U15A	**North Rim**	**84.95**	**50**	P	**P**	**22 01 36.0**	**+1.2**
U15A				IAmb	IAmb	22 01 37.0	
	comp=Z,3.4nm,0.8s						
DIVS	**Divibare**	**85.03**	**320**	P	**P**	**22 01 34.6**	**-0.2**
ARG	**Arkhangelos**	**85.20**	**310**	P	**P**	**22 01 36.1**	**+0.4**
ARG	**Arkhangelos**	**85.20**	**310**	P	**P**	**22 01 36.1**	**+0.4**
ARG				pmax	pmax		
	comp=Z,78nm,1.1s						
BIOA	**Bad Ischl, Aus**	**85.76**	**326**	*i* P	**P**	**22 01 38.0**	**-0.3**
	comp=Z,2.4nm,0.5s						
ABTA	**Abfaltersbach**	**86.97**	**326**	*eP*	**P**	**22 01 43.1**	**-1.0**
	comp=Z,2.9nm,0.7s,SNR=5.3						
WATA	**Walderalm**	**86.98**	**327**	*i* P	**P**	**22 01 43.5**	**-0.7**
	comp=Z,1.6nm,0.6s						
WTTA	**Wattenberg**	**87.00**	**327**	*i* P	**P**	**22 01 43.2**	**-1.3**
	comp=Z,3.8nm,1.3s						
CLUD	**Cludinico**	**87.01**	**326**	P	**P**	**22 01 42.7**	**-1.6**
CLUD				IAmb	IAmb	22 01 43.9	
	comp=Z,6.0nm,0.8s						
MOTA	**Moosalm**	**87.19**	**327**	*i* P	**P**	**22 01 44.3**	**-0.9**
	comp=Z,1.6nm,0.5s						
STAL	**STALIGIAL**	**87.23**	**325**	P	**P**	**22 01 43.8**	**-1.5**
STAL				IAmb	IAmb	22 01 44.5	
	comp=Z,4.4nm,0.7s						
SQTA	**Sankt Quirin**	**87.23**	**327**	*i* P	**P**	**22 01 44.7**	**-0.7**
	comp=Z,2.2nm,0.6s						
RETA	**Reutte**	**87.24**	**327**	*i* P	**P**	**22 01 45.1**	**-0.3**
	comp=Z,2.3nm,0.5s						
CIMO	**Cimolais**	**87.32**	**326**	P	**P**	**22 01 44.2**	**-1.5**
CIMO				IAmb	IAmb	22 01 45.2	
	comp=Z,2.4nm,0.9s						
FETA	**Feichten**	**87.60**	**327**	*i* P	**P**	**22 01 46.7**	**-0.6**
	comp=Z,2.5nm,0.6s						
BFO	**Black Forest**	**87.69**	**329**	P	**P**	**22 01 46.9**	**-0.6**
BFO				IAmb	IAmb	22 02 13.3	
	comp=Z,7.5nm,1.4s						
BFO	**Black Forest**	**87.69**	**329**	P	**P**	**22 01 46.9**	**-0.6**
BFO				pmax	pmax		
	comp=Z,7.0nm,1.4s						
DAVA	**Damuels**	**87.79**	**328**	*i* P	**P**	**22 01 47.8**	**-0.3**
	comp=Z,4.1nm,0.6s						
CTI	**Castel Tesino**	**87.89**	**326**	P	**P**	**22 01 47.6**	**-0.9**
CTI				IAmb	IAmb	22 01 47.8	
	comp=Z,3.4nm,0.6s						
CTI	**Castel Tesino**	**87.89**	**326**	P	**P**	**22 01 47.6**	**-0.9**
CTI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**88.11**	**327**	P	**P**	**22 01 49.6**	**-0.1**
FUORN				IAmb	IAmb	22 01 50.4	
	comp=Z,7.0nm,0.6s						
TEOL	**Teolo**	**88.38**	**325**	P	**P**	**22 01 50.4**	**-0.4**
TEOL				IAmb	IAmb	22 01 52.0	
	comp=Z,8.7nm,0.7s						
ITM	**Ithomi**	**88.47**	**314**	P	**P**	**22 01 50.2**	**-1.1**
SALO	**Salr**	**88.74**	**326**	P	**P**	**22 01 51.5**	**-0.9**
DSB	**Dublin**	**89.04**	**340**	P	**P**	**22 01 53.4**	**-0.2**
TX31	**Lajitas Ar. Si**	**95.05**	**50**	P	**P**	**22 02 23.0**	**+1.1**
TX31				IAmb	IAmb	22 02 29.6	
	comp=Z,13nm,1.4s						
TXAR	**Lajitas Array**	**95.05**	**50**	P	**P**	**22 02 22.8**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=303,slow=3.0,SNR=19						
	comp=Z,1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**118.23**	**310**	PKP	**PKPdf**	**22 07 43.7**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=27,slow=2.8,SNR=4.2						
TULM	**Tulcn-Chalpat**	**132.66**	**53**	PKPdf	**PKPdf**	**22 08 11.9**	**-0.8**
TROLL	**Troll, Antarti**	**134.20**	**198**	SKPbc	**SKPbc**	**22 11 12.0**	**+1.0**
SNAA	**Sanae**	**135.74**	**197**	SKPbc	**SKPbc**	**22 11 16.2**	**+0.4**
VNA2	**Neumayer--Watz**	**137.33**	**196**	SKPbc	**SKPbc**	**22 11 21.0**	**+0.6**
	baz=115,slow=2.0						
VNA3	**Neumayer Olymp**	**137.61**	**195**	SKPbc	**SKPbc**	**22 11 21.5**	**+0.2**
VNA1	**Neumayer--Stat**	**137.73**	**196**	SKPbc	**SKPbc**	**22 11 22.3**	**+0.7**
LPAZ	**La Paz**	**151.29**	**62**	PKPbc	**PKiKP**	**22 08 52.6**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=30,slow=4.6,SNR=5.3						

IDC ***13*** *22:03:21.1±0.3,* **45.79N**×**26.68E, h77**$^{km}_{\pm 2km}$**, ml2.7**/19,
62C-38D, Error ellipse: s-maj=1.8km s-min=1.6km az=13.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.07**	**344**	⇓P	Pn	22 03 32.2	-0.1
PLOR				⇑S	Sn	22 03 40.8	+0.4
PLOR	**Plostina**	**0.07**	**344**	⇓P	Pn	22 03 32.2	-0.1
PLOR				⇑S	Sn	22 03 40.8	+0.4
VRI	**Vrincioaia**	**0.09**	**25**	⇓P	Pn	22 03 32.3	+0.1
VRI				⇑S	Sn	22 03 40.4	0.0
VRI	**Vrincioaia**	**0.09**	**25**	⇓P	Pn	22 03 32.3	+0.1
VRI	**Vrincioaia**	**0.09**	**25**	⇑S	Sn	22 03 40.4	0.0
ODBI	**Odobesti**	**0.27**	**95**	⇑P	Pn	22 03 33.8	+0.9
ODBI				⇑S	Sn	22 03 42.2	+0.7
ODBI	**Odobesti**	**0.27**	**95**	⇑P	Pn	22 03 33.8	+0.9
ODBI	**Odobesti**	**0.27**	**95**	⇑S	Sn	22 03 42.2	+0.7
COVR	**Voineasa-Covas**	**0.34**	**280**	⇑P	Pn	22 03 33.3	-0.1
COVR				⇑S	Sn	22 03 42.1	-0.3
COVR	**Voineasa-Covas**	**0.34**	**280**	⇑P	Pn	22 03 33.3	-0.1
COVR				⇑S	Sn	22 03 42.1	-0.3
PANC	**Panciu**	**0.34**	**75**	⇓P	Pn	22 03 34.0	+0.7
PANC				⇓S	Sn	22 03 43.4	+1.2
PANC	**Panciu**	**0.34**	**75**	⇓P	Pn	22 03 34.0	+0.7
PANC	**Panciu**	**0.34**	**75**	⇓S	Sn	22 03 43.4	+1.2
NEHR	**Nehoiu**	**0.45**	**217**	⇑P	Pn	22 03 34.5	+0.3
NEHR				⇑S	Sn	22 03 44.7	+0.9
NEHR	**Nehoiu**	**0.45**	**217**	⇑P	Pn	22 03 34.5	+0.3
NEHR				⇑S	Sn	22 03 44.7	+0.9
GHRR		**0.58**	**62**	⇑P	Pn	22 03 35.1	-0.2
GHRR		**0.58**	**62**	⇑P	Pn	22 03 35.1	-0.2
MLR	**Muntele Rosu**	**0.59**	**240**	⇑P	Pn	22 03 36.0	+0.4
MLR				⇑S	Sn	22 03 46.5	+0.2
MLR	**Muntele Rosu**	**0.59**	**240**	⇑P	Pn	22 03 36.0	+0.4
MLR	**Muntele Rosu**	**0.59**	**240**	⇑S	Sn	22 03 46.5	+0.2
OZUR		**0.69**	**297**	⇓P	Pn	22 03 36.3	-0.2
OZUR				⇑S	Sn	22 03 47.4	-0.5
OZUR		**0.69**	**297**	⇓P	Pn	22 03 36.3	-0.2
OZUR				⇑S	Sn	22 03 47.4	-0.5
TUDR		**0.72**	**105**	⇓P	Pn	22 03 36.7	0.0
TUDR				⇑S	Sn	22 03 49.0	+0.6
TUDR		**0.72**	**105**	⇓P	Pn	22 03 36.7	0.0
TUDR				⇑S	Sn	22 03 49.0	+0.6
TESR	**Tescani**	**0.72**	**359**	⇑P	Pn	22 03 36.9	+0.1
TESR				⇑S	Sn	22 03 48.0	-0.5
TESR	**Tescani**	**0.72**	**359**	⇑P	Pn	22 03 36.9	+0.1
TESR				⇑S	Sn	22 03 48.0	-0.5
VARL	**Varlezi**	**0.83**	**82**	⇑P	Pn	22 03 38.7	+0.8
VARL				⇓S	Sn	22 03 51.2	+0.8
VARL	**Varlezi**	**0.83**	**82**	⇑P	Pn	22 03 38.7	+0.8
VARL	**Varlezi**	**0.83**	**82**	⇓S	Sn	22 03 51.2	+0.8
DOPR	**Dopca**	**0.92**	**282**	⇑P	Pn	22 03 39.2	+0.1
DOPR				⇑S	Sn	22 03 52.8	+0.5
DOPR	**Dopca**	**0.92**	**282**	⇑P	Pn	22 03 39.2	+0.1
DOPR				⇑S	Sn	22 03 52.8	+0.5
VLDR	**Vladesti**	**0.98**	**86**	⇓P	Pn	22 03 40.5	+0.7
VLDR				⇑S	Sn	22 03 54.4	+0.7
VLDR	**Vladesti**	**0.98**	**86**	⇓P	Pn	22 03 40.5	+0.7
VLDR	**Vladesti**	**0.98**	**86**	⇑S	Sn	22 03 54.4	+0.7
SULR		**1.15**	**195**	⇓S	Sn	22 03 58.0	+0.7
SULR		**1.15**	**195**	⇓S	Sn	22 03 58.0	+0.7
VASR	**Vaslui**	**1.15**	**42**	⇓P	Pn	22 03 42.5	+0.6
VASR				⇑S	Sn	22 03 57.5	+0.1
VASR	**Vaslui**	**1.15**	**42**	⇓P	Pn	22 03 42.5	+0.6
VASR	**Vaslui**	**1.15**	**42**	⇑S	Sn	22 03 57.5	+0.1
VOIR		**1.19**	**254**	⇓P	Pn	22 03 42.6	+0.1
VOIR				⇑S	Sn	22 03 58.8	+0.3
VOIR		**1.19**	**254**	⇓P	Pn	22 03 42.6	+0.1
VOIR		**1.19**	**254**	⇑S	Sn	22 03 58.8	+0.3
CFR	**Carcaliu**	**1.20**	**120**	⇑P	Pn	22 03 42.2	-0.2
CFR				⇑S	Sn	22 03 57.7	-0.6
CFR	**Carcaliu**	**1.20**	**120**	⇑P	Pn	22 03 42.2	-0.2
CFR				⇑S	Sn	22 03 57.7	-0.6
BIZ	**Bicaz**	**1.22**	**341**	⇑P	Pn	22 03 43.4	+0.7
BIZ				⇓S	Sn	22 03 59.7	+0.8
BIZ	**Bicaz**	**1.22**	**341**	⇑P	Pn	22 03 43.4	+0.7
BIZ	**Bicaz**	**1.22**	**341**	⇓S	Sn	22 03 59.7	+0.8
AMRR	**Amara**	**1.27**	**158**	⇑S	Sn	22 04 00.7	+0.8
AMRR	**Amara**	**1.27**	**158**	⇑S	Sn	22 04 00.7	+0.8
LEOM	**Leova**	**1.29**	**57**	⇓S	Sn	22 04 00.9	+0.5
LEOM	**Leova**	**1.29**	**57**	⇓S	Sn	22 04 00.9	+0.5
HARR	**Harsova**	**1.41**	**141**	⇑P	Pn	22 03 45.2	0.0
HARR	**Harsova**	**1.41**	**141**	⇑P	Pn	22 03 45.2	0.0
TPGR	**Topolog**	**1.54**	**127**	⇑P	Pn	22 03 47.2	+0.3
TPGR				⇑S	Sn	22 04 06.4	+0.1
TPGR	**Topolog**	**1.54**	**127**	⇑P	Pn	22 03 47.2	+0.3
TPGR				⇑S	Sn	22 04 06.4	+0.1
TLBR	**Topalu**	**1.58**	**142**	⇓P	Pn	22 03 47.8	+0.5
TLBR				⇑S	Sn	22 04 06.9	-0.2
TLBR	**Topalu**	**1.58**	**142**	⇓P	Pn	22 03 47.8	+0.5
TLBR				⇑S	Sn	22 04 06.9	-0.2
TLCR		**1.62**	**111**	⇓P	Pn	22 03 48.5	+0.7
TLCR				⇑S	Sn	22 04 08.2	+0.1
TLCR		**1.62**	**111**	⇓P	Pn	22 03 48.5	+0.7
TLCR				⇑S	Sn	22 04 08.2	+0.1
TIRR	**Tirgusor**	**1.81**	**137**	⇓P	Pn	22 03 50.5	+0.1
TIRR	**Tirgusor**	**1.81**	**137**	⇓P	Pn	22 03 50.5	+0.1
ICOR	**Ion Corvin**	**1.85**	**154**	⇑P	Pn	22 03 51.0	0.0
ICOR				⇑S	Sn	22 04 13.0	-0.6
ICOR	**Ion Corvin**	**1.85**	**154**	⇑P	Pn	22 03 51.0	0.0
ICOR	**Ion Corvin**	**1.85**	**154**	⇑S	Sn	22 04 13.0	-0.6
MILM	**Milestii Mici**	**1.86**	**52**	⇓S	Sn	22 04 12.9	-0.9
MILM	**Milestii Mici**	**1.86**	**52**	⇓S	Sn	22 04 12.9	-0.9
MFTR	**Murfatlar**	**2.03**	**142**	⇓P	Pn	22 03 53.1	-0.3
MFTR	**Murfatlar**	**2.03**	**142**	⇓P	Pn	22 03 53.1	-0.3

**IDC 13 22:15:43.7±2.2, 13°21N×91°73E, h0km, mb3.7/3,
mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=67.0km
s-min=28.6km az=66.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.68**	**52**	Pn	Pn	22 17 50.5	-0.2
	0.3nm,0.3s,baz=240,slow=15,SNR=2.1						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**34.41**	**348**	P	P	22 22 32.7	-0.1
	0.5nm,0.6s,baz=156,slow=9.3,SNR=4.8						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**53.32**	**127**	P	P	22 25 04.8	-0.3
	0.6nm,0.7s,baz=303,slow=9.3,SNR=5.0						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**55.17**	**131**	P	P	22 25 18.6	+0.1
	0.5nm,0.3s,baz=310,slow=7.4,SNR=11						
	0.5nm,0.3s						

IDC ***13*** *22:19:26.2±1.9, 30°44S×177°23W, h0km, mb3.7/2,
mbtmp3.8/3, ML3.3/1, MS3.0/2, Error ellipse: s-maj=44.4km
s-min=22.5km az=92.0*

**ISC 13 22:19:29.6±1.8, 30°43S±0°08×177°2W±0°2, h24km, n8,
σ0837/9, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.33**	**332**	Pn	**Pn**	**22 19 52.9**	**+0.2**
	105nm,0.3s,baz=134,slow=15,SNR=6.2						
RAO				Sn	**Sb**	**22 20 10.4**	**0.0**
	295nm,0.3s,baz=105,slow=23,SNR=9.8						
RAO				LR	LR	22 20 17.9	
	comp=Z,314nm,21.4s,baz=193,slow=39						
URZ	**Urewera**	**9.12**	**210**	Pn	**Pn**	**22 21 40.0**	**+0.3**
	0.3nm,0.3s,baz=138,slow=12,SNR=1.8						
URZ				Sn	**Sn**	**22 23 21.5**	**-0.1**
	1.1nm,0.3s,baz=184,slow=22,SNR=12						
	7.7nm,1.1s						
RAR	**Rarotonga**	**18.16**	**64**	LR	LR	22 28 22.0	
	comp=Z,43nm,20.4s,baz=272,slow=30						
ASAR	**Alice Springs**	**43.80**	**267**	P	**P**	**22 27 33.4**	**-0.4**
	0.5nm,0.7s,baz=102,slow=6.8,SNR=6.1						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**44.79**	**272**	P	**P**	**22 27 41.6**	**-0.2**
	0.8nm,0.5s,baz=112,slow=7.3,SNR=6.9						
	0.8nm,0.5s						
VNDA	**Vanda**	**48.14**	**186**	LR	LR	22 45 36.7	
	comp=Z,24nm,20.5s,baz=20,slow=33						
FINES	**FINESS Array B**	**145.40**	**340**	PKPbc	**PKPbc**	**22 39 04.2**	**-0.6**
	4.9nm,0.9s,baz=46,slow=4.0,SNR=16						
AKASG	**Malin Array Be**	**151.74**	**323**	PKPbc	**PKiKP**	**22 39 22.6**	**+0.4**
	0.2nm,0.4s,baz=50,slow=1.4,SNR=1.7						
AKASG				PKPab	**sPKPbc**	**22 39 30.4**	**-0.1**
	0.8nm,0.6s,baz=34,slow=2.5,SNR=2.9						

IDC ***13*** *22:21:06.5±2.3, 5°51N×125°40E, h0km, mb4.1/4,
mbtmp4.1/4, Error ellipse: s-maj=126.9km s-min=11.5km
az=91.0*

NEIC ***13*** *22:21:15.3±1.8, 6°26N±0°04×125°9E±0°1, h131*$^{km}_{\pm 9km}$*,
mb4.4/12, Error ellipse: s-maj=20.0km s-min=4.6km
az=100.0*

ISC 13 22:21:14.9±0.8, 6°34N±0°05×125°85E±0°08, h150^{km}**, n26,
σ1°48/31, mb4.2/8, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.77**	**339**	Pg	**Pn**	**22 21 36.6**	**-1.3**
	126nm,0.3s,baz=249,slow=4.7,SNR=15						
DAV				Lg	Lg	22 21 54.5	
	454nm,0.3s,baz=103,slow=23,SNR=24						
DAV	**Davao City (W)**	**0.77**	**339**		**Pn**	**22 21 36.9**	**-1.0**
DAV				Sn	**Sn**	**22 21 54.1**	**-1.4**
GSPH	**General Santos**	**0.93**	**254**	⇓*i* P	**Pn**	**22 21 37.2**	**-2.0**
GSPH				*i* S	**Sn**	**22 21 54.8**	**-2.9**
KCP	**Kidapawan**	**1.00**	**311**	⇓*eP*	**Pn**	**22 21 39.0**	**-0.7**
KCP				*i* S	**Sn**	**22 21 57.1**	**-1.6**
BUKP	**Musuan**	**1.72**	**333**	⇓*eP*	**Pn**	**22 21 46.8**	**0.0**
BIPH	**Bislig**	**1.90**	**151**	*eP*	**Pn**	**22 21 48.3**	**-0.5**
BIPH				*i* S	**Sn**	**22 22 12.0**	**-3.0**
TNTI	**Ternate**	**5.74**	**165**	Pn	**Pn**	**22 22 37.3**	**-0.8**
TNTI				Sn	**Sn**	**22 23 40.0**	**-3.2**
TOLI2	**Tolitoli**	**7.25**	**224**		**Pn**	**22 22 57.8**	**-0.5**
MYLDM	**Lahad Datu**	**7.41**	**261**	Pn	**Pn**	**22 23 01.1**	**+0.7**
MTN	**Manton Dam**	**19.77**	**165**	P	**Pn**	**22 25 35.2**	**-1.3**
MTN				IAmb	IAmb	22 25 39.6	
	comp=Z,26nm,1.4s						
KNRA	**Kununurra**	**22.07**	**173**		**P**	**22 25 59.0**	**+1.1**
KNRA				IAmb	IAmb	22 26 00.5	
	comp=Z,6.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.29**	**180**	P	**P**	**22 26 19.6**	**+1.2**
	comp=Z,2.5nm,0.3s,baz=8.1,slow=11,SNR=19						
	comp=Z,2.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**24.29**	**180**	P	**P**	**22 26 19.8**	**+1.4**
FITZ				IAmb	IAmb	22 26 21.9	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**27.27**	**162**	P	**P**	**22 26 45.9**	**+0.5**
WB0				IAmb	IAmb	22 26 53.3	
	comp=Z,7.4nm,1.2s						
WRA	**Warramunga Arr**	**27.42**	**162**	P	**P**	**22 26 47.7**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=333,slow=11,SNR=11						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**27.42**	**162**	P	**P**	**22 26 46.4**	**-0.3**
MBWA	**Marble Bar**	**27.98**	**192**	P	**P**	**22 26 51.7**	**+0.1**
MBWA				IAmb	IAmb	22 27 21.0	
	comp=Z,25nm,1.5s						
PSA00	**Pilbara Seismi**	**28.36**	**192**	P	**P**	**22 26 55.2**	**+0.1**
PSA00				IAmb	IAmb	22 26 55.8	
	comp=Z,19nm,1.4s						
AS31	**Alice Springs**	**30.84**	**165**	P	**P**	**22 27 17.2**	**+0.2**
ASAR	**Alice Springs**	**30.84**	**165**	P	**P**	**22 27 18.4**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=339,slow=7.0,SNR=32						
	comp=Z,1.2nm,0.4s						
ASAR	**Alice Springs**	**30.84**	**165**

comp=Z,10nm,0.9s
SNAA Sanae 86.11 179 P **P** **22 37 13.6 +0.2**
SNAA IAmb IAmb 22 37 14.3
comp=Z,6.5nm,1.5s
CMAR Chiang Mai Arr 89.66 290 P **P** **22 37 31.1 +0.2**
comp=Z,2.2nm,0.3s,baz=140,slow=3.3,SNR=6.5
comp=Z,2.2nm,0.3s
AKASG Malin Array Be 144.09 329 PKP PKPbc 22 44 01.9 -1.4
comp=Z,0.9nm,0.4s,baz=44,slow=4.4,SNR=14
BRTR Keskin Array B 147.21 309 PKPbc **PKPbc** **22 44 11.8 -1.0**
comp=Z,0.6nm,1.0s,baz=66,slow=0.4,SNR=4.2
CLL Collm 149.64 345 *i* PKPbc **PKPbc** **22 44 17.9 -0.3**
comp=Z,4.0nm,0.8s
GERES GERESS Array B 151.70 342 PKPbc **PKPbc** **22 44 22.3 -0.8**
comp=Z,0.2nm,0.4s,baz=345,slow=3.5,SNR=2.5

IDC ***13*** *22:25:51.0±1.2,7°.19S×155°.00E, h0km, mb3.7/6, mbtmp3.7/7, ML3.8/1, MS2.9/2, Error ellipse: s-maj=35.8km s-min=25.1km az=131.0*

ISC 13 22:25:57.0±1.1, 7°.2S±0°.2×154°.9E±0°.1, h41km, n10, σ0ˢ76/9, mb3.7/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.07**	**315**	Pn	**Pn**	**22 26 55.7**	**-1.1**
KRVT	6.1nm,0.3s,baz=200,slow=15,SNR=3.3			Sn	**Sn**	**22 27 44.2**	**+1.0**
	6.3nm,0.3s,baz=42,slow=7.8,SNR=4.6 15nm,0.3s						
PMG	**Port Moresby**	**8.00**	**254**	LR	LR	22 30 46.1	
	comp=Z,54nm,21.5s,baz=62,slow=36						
CTA	**Charters Tower**	**15.34**	**212**	LR	LR	22 34 13.1	
	comp=Z,80nm,18.9s,baz=82,slow=33						
WRA	**Warramunga Arr**	**23.65**	**236**	P	**P**	**22 31 04.8**	**-0.1**
	1.1nm,0.7s,baz=60,slow=9.7,SNR=5.7 1.1nm,0.7s						
ASAR	**Alice Springs**	**26.00**	**229**	P	**P**	**22 31 26.2**	**0.0**
	0.7nm,0.8s,baz=53,slow=8.6,SNR=5.6 0.7nm,0.8s						
SONM	**Songino Array**	**69.47**	**327**	P	**P**	**22 37 01.7**	**+0.5**
	0.5nm,0.8s,baz=131,slow=5.9,SNR=3.0 0.5nm,0.8s						
ILAR	**Eielson Array**	**83.58**	**21**	P	**P**	**22 38 19.9**	**-0.7**
	0.4nm,0.5s,baz=243,slow=6.0,SNR=5.2 0.4nm,0.5s						
NVAR	**Mina Array Bea**	**91.89**	**52**	P	**P**	**22 39 01.7**	**+0.1**
	0.3nm,0.7s,baz=242,slow=5.0,SNR=3.5 0.3nm,0.7s						
YKA	**Yellowknife Ar**	**96.54**	**28**	P	**P**	**22 39 22.4**	**+0.4**
	0.4nm,0.6s,baz=274,slow=4.0,SNR=3.9 0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**153.01**	**285**	PKPbc	**PKiKP**	**22 45 51.9**	**+0.6**
	0.6nm,0.8s,baz=86,slow=3.5,SNR=2.7						

NEIC ***13*** *22:42:45.4±0.9, 18°.66N±0°.09×145°.6E±0°.2, h211km±9km, mb4.1/12, Error ellipse: s-maj=27.9km s-min=12.3km az=84.0*

IDC ***13*** *22:42:46.3±2.3, 18°.71N×145°.58E, h229km±23km, mb3.2/9, mbtmp3.9/12, Error ellipse: s-maj=25.9km s-min=12.2km az=85.0*

ISC 13 22:42:43.7±0.6, 18°.73N±0°.06×145°.6E±0°.2, h200km, n30, σ1ˢ20/33, mb3.7/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.15**	**188**	P	**Pn**	**22 44 02.6**	**+2.4**
GUMO	50nm,0.4s,baz=17,slow=19,SNR=2.0			S	**Sn**	**22 45 00.5**	**+0.1**
	48nm,0.3s,baz=197,slow=19,SNR=1.7						
GUMO	**Guam**	**5.15**	**188**	Pn	**Pn**	**22 44 01.1**	**+0.9**
JCJ	**Chichijima**	**8.89**	**340**	P	**Pn**	**22 44 51.1**	**+2.5**
JCJ	32nm,0.8s,baz=270,slow=20,SNR=1.6 33nm,0.5s,baz=287,slow=19,SNR=2.0			S	**Sn**	**22 46 26.6**	**-1.8**
JCJ	**Chichijima**	**8.89**	**340**	Pn	**Pn**	**22 44 51.6**	**+2.9**
MJAR	**Matsushiro Arr**	**18.89**	**341**	P	**P**	**22 46 50.3**	**+1.1**
	0.6nm,0.5s,baz=103,slow=4.7,SNR=1.5						
KNRA	**Kununurra**	**37.98**	**207**	P	**P**	**22 49 42.0**	**-0.5**
WB0	**Warramunga Arr**	**39.80**	**197**	P	**P**	**22 49 57.0**	**-0.6**
WB0	comp=Z,6.8nm,1.0s			IAmb	IAmb	22 49 59.1	
WRA	**Warramunga Arr**	**39.98**	**197**	P	**P**	**22 49 59.1**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=20,slow=8.5,SNR=15						
WRA	comp=Z,0.7nm,1.0s,baz=8.8,slow=3.2,SNR=1.3 comp=Z,0.9nm,0.3s			PcP	**PcP**	**22 51 58.4**	**-1.8**
WRA	**Warramunga Arr**	**39.98**	**197**	P	**P**	**22 49 58.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**41.51**	**209**	P	**P**	**22 50 11.7**	**+0.1**
FITZ	comp=Z,9.7nm,1.4s			IAmb	IAmb	22 50 55.1	
SONM	**Songino Array**	**43.05**	**321**	P	**P**	**22 50 24.0**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=130,slow=11,SNR=1.9 comp=Z,0.2nm,0.5s						
AS31	**Alice Springs**	**43.64**	**196**	P	**P**	**22 50 28.5**	**-0.3**
ASAR	**Alice Springs**	**43.65**	**196**	P	**P**	**22 50 28.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=17,slow=6.5,SNR=6.1 comp=Z,0.2nm,0.3s						
DZM	**Mont Dzumac**	**45.40**	**152**	P	**P**	**22 50 42.1**	**-0.6**
	comp=Z,4.3nm,0.9s,baz=14,slow=8.3,SNR=7.6 comp=Z,4.3nm,0.9s						
DZM	**Mont Dzumac**	**45.40**	**152**	P	**P**	**22 50 42.3**	**-0.4**
DZM	comp=Z,17nm,1.5s			IAmb	IAmb	22 51 10.0	
OUENC	**Ouen Island, N**	**45.88**	**152**	P	**P**	**22 50 46.3**	**0.0**
OUENC	comp=Z,7.7nm,0.9s			IAmb	IAmb	22 50 50.1	
MK31	**Makanchi Array**	**58.36**	**314**	P	**P**	**22 52 18.4**	**+0.4**
MKAR	**Makanchi Array**	**58.36**	**314**	P	**P**	**22 52 18.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=95,slow=7.2,SNR=6.3 comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.36**	**314**	P	**P**	**22 52 18.3**	**+0.2**
BPAW	**Bear Paw Mtn.**	**61.78**	**26**	P	**P**	**22 52 41.4**	**+0.4**
SCM	**Sheep Creek Mo**	**62.88**	**29**	P	**P**	**22 52 48.8**	**+0.4**
MDM	**Murphy Dome**	**63.16**	**26**	P	**P**	**22 52 50.8**	**+0.7**
MDM	comp=Z,4.7nm,1.4s			IAmb	IAmb	22 52 55.5	
ILAR	**Eielson Array**	**63.67**	**26**	P	**P**	**22 52 52.4**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=250,slow=6.5,SNR=4.5 comp=Z,0.4nm,0.6s						
BCAR	**Beaver Creek A**	**65.62**	**29**	P	**P**	**22 53 07.0**	**+0.9**
KKAR	**Karatay Array**	**66.66**	**310**	P	**P**	**22 53 12.8**	**-0.3**
ABKAR	**Akbulak array**	**73.24**	**317**	P	**P**	**22 53 51.8**	**-1.1**
ABKAR	**Akbulak array**	**73.24**	**317**	P	**P**	**22 53 51.9**	**-1.1**
ABKAR	comp=Z,2.4nm,1.4s			IAmb	IAmb	22 54 12.9	
YKA	**Yellowknife Ar**	**78.02**	**28**	P	**P**	**22 54 19.6**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=292,slow=5.5,SNR=4.9 comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**83.22**	**52**	P	**P**	**22 54 48.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=268,slow=6.1,SNR=10.0 comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**86.81**	**335**	P	**P**	**22 55 03.0**	**-2.3**
	comp=Z,2.2nm,0.8s,baz=88,slow=4.3,SNR=7.9 comp=Z,2.2nm,0.8s						

IDC ***13*** *22:44:15.2±0.9, 32°.67N×88°.59E, h0km, mb3.6/9, mbtmp3.6/12, ML2.9/2, MS2.9/7, Error ellipse: s-maj=29.6km s-min=17.5km az=49.0*

ISC 13 22:44:20.9±0.7, 32°.89N±0°.08×88°.7E±0°.1, h35km, n22, σ1ˢ53/19, mb3.7/8, MS2.8/3, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**5.59**	**189**	*e*P	**Pn**	**22 45 44.8**	**+2.9**
JIRN	**Jiri**	**5.65**	**203**	*e*P	**Pn**	**22 45 45.6**	**+2.9**
	16nm,0.4s						
GKN	**Gorkha**	**6.00**	**217**	*e*P	**Pn**	**22 45 47.3**	**-0.1**
PKI	**Pulchoki**	**6.02**	**209**	*e*P	**Pn**	**22 45 48.4**	**+0.6**
PKIN	**Phulchoki**	**6.02**	**209**	*e*P	**Pn**	**22 45 48.3**	**+0.6**
	7.5nm,0.4s						
DMN	**Daman**	**6.11**	**211**	*e*P	**Pn**	**22 45 49.8**	**+0.8**
ODAN	**Odare**	**6.12**	**191**	*e*P	**Pn**	**22 45 50.3**	**+1.2**
	15nm,0.6s						
MKAR	**Makanchi Array**	**14.72**	**342**	Pn	**Pn**	**22 47 45.9**	**-0.6**
MKAR	baz=141,slow=13,SNR=2.0 comp=Z,35nm,19.1s,baz=239,slow=41 0.4nm,0.8s			LR	LR	22 54 27.1	
AAK	**Ala-Archa**	**14.84**	**315**	LR	LR	22 54 01.5	
	comp=Z,23nm,19.0s,baz=185,slow=39						
CMAR	**Chiang Mai Arr**	**17.07**	**145**	Pn	**Pn**	**22 48 13.8**	**-3.1**
CMAR	1.1nm,0.3s,baz=325,slow=12,SNR=2.6 comp=Z,50nm,18.6s,baz=315,slow=40			LR	LR	22 55 40.8	

KURBB Kurchatov Arra 19.23 340 P **P** **22 48 41.6 -0.4**
0.1nm,0.3s,baz=145,slow=10,SNR=1.2
KURBB LR LR 22 57 10.8
comp=Z,70nm,18.7s,baz=186,slow=40 0.4nm,0.3s
SONM Songino Array 20.05 37 P **P** **22 48 52.3 +1.2**
0.9nm,0.8s,baz=226,slow=13,SNR=7.4 0.9nm,0.8s
ZALV Zalesovo Beam 21.23 354 P **P** **22 49 04.5 +0.9**
0.8nm,0.5s,baz=183,slow=10.0,SNR=5.3
ZALV LR LR 22 58 26.5
comp=Z,38nm,20.0s,baz=321,slow=40 0.8nm,0.5s
ARU Arti 31.39 328 LR LR 23 04 36.0
comp=Z,35nm,20.6s,baz=160,slow=39
KSRS Korea Array 32.23 71 P **P** **22 50 46.5 +0.7**
1.7nm,0.6s,baz=274,slow=8.9,SNR=12 1.7nm,0.6s
BELG Belogornoye 35.33 316 LR LR 23 07 33.8
comp=Z,16nm,18.3s,baz=358,slow=40
FINES FINESS Array B 48.70 325 P **P** **22 53 02.9 +1.4**
1.9nm,0.9s,baz=105,slow=10,SNR=5.1 1.9nm,0.9s
NOA NORSAR Array B 55.88 325 P **P** **22 53 54.0 -0.8**
0.3nm,0.7s,baz=82,slow=7.2,SNR=1.7 0.3nm,0.7s
GERES GERESS Array B 56.65 310 P **P** **22 54 00.6 -0.1**
0.5nm,0.7s,baz=77,slow=5.9,SNR=7.1 0.5nm,0.7s
WRA Warramunga Arr 68.28 134 P **P** **22 55 17.7 -0.9**
0.8nm,0.8s,baz=321,slow=6.4,SNR=5.1 0.8nm,0.8s
ASAR Alice Springs 70.87 136 P **P** **22 55 33.2 -1.3**
0.5nm,0.6s,baz=324,slow=6.0,SNR=7.5 0.5nm,0.6s
TORD Torodi Ar. Bea 80.50 279 P **P** **22 56 29.8 0.0**
0.4nm,0.8s,baz=38,slow=4.9,SNR=2.7 0.4nm,0.8s

IDC ***13*** *22:59:05.1±0.5, 22°.70S×172°.92E, h0km, mb4.5/19, mbtmp4.5/23, ML3.9/3, MS4.6/51, Error ellipse: s-maj=16.1km s-min=13.6km az=102.0*

BJI ***13*** *22:59:05.6±0.0, 22°.97S×173°.26E, h22km, mb4.9/29, mB5.2/19, Ms4.9/17, Ms7 4.6/19*

MOS ***13*** *22:59:06.4±1.5, 22°.72S×172°.95E, h13km, mb5.2/13, MS4.9/10, Error ellipse: s-maj=11.8km s-min=9.3km az=61.3*

NEIC ***13*** *22:59:07.4±1.1, 22°.73S±0°.08×173°.03E±0°.08, h10km±1km, mb5.1/89, Error ellipse: s-maj=13.7km s-min=12.7km az=152.0*

NOU ***13*** *22:59:08.1, 22°.73S×172°.95E, h0km, mb5.0/37, Southeast of Loyalty Islands*

GCMT ***13*** *22:59:14.4±0.1, 22°.70S±0°.01×172°.92E±0°.01, h18km, MW5.4/143, Moment Tensor Solution. s138,c248; s143,c260; Duration: 1ˢ2 Moment tensor: Scale 10¹⁷ Nm; Mrr1.19±.02; Mθθ-1.51±.02; Mϕϕ0.32±.02; Mrθ0.69±.04; Mθϕ-0.06±.01; Mϕr-0.30±.04; Best double couple: Mo1.55500×10¹⁷ NP1:ϕs103.00000°, δ60.00000°, λ107.00000°. NP2:ϕs251.00000°, δ34.00000°, λ63.00000°. Principal axes: T 1.4370, Plg70.0000°, Azm50.0000°; N 0.2380, Plg15.0000°, Azm274.0000°; P -1.6740, Plg13.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 22:59:07.3±0.3, 22°.75S±0°.05×172°.99E±0°.04, h10km, n521, σ1ˢ39/499, mb5.1/85, MS4.8/68, 36C-38D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.77**	**284**	Pn	**Pn**	**23 00 19.3**	**+0.1**
MARNC	**Mare, Loyalty**	**4.77**	**284**	P	**Pn**	**23 00 21.1**	**+1.9**
PINNC	**Pines Island,**	**5.12**	**271**		**Pn**	**23 00 24.2**	**+0.1**
PINNC	**Pines Island,**	**5.12**	**271**	P	**Pn**	**23 00 26.2**	**+2.2**
YATNC	**Mamie plateau,**	**5.68**	**276**	P	**Pn**	**23 00 33.2**	**+1.4**
OUENC	**Ouen Island, N**	**5.69**	**272**	Pn	**Pn**	**23 00 31.6**	**-0.2**
OUENC	**Ouen Island, N**	**5.69**	**272**	P	**Pn**	**23 00 33.4**	**+1.5**
DZM	**Mont Dzumac**	**6.09**	**275**	Pn	**Pn**	**23 00 36.7**	**-0.8**
DZM	4.2nm,0.3s,baz=122,slow=13,SNR=64 8.3nm,0.3s,baz=134,slow=24,SNR=12			Sn	**Sn**	**23 01 46.6**	**-0.8**
DZM	comp=Z,1μm,18.5s,baz=109,slow=31 19nm,0.5s			LR	LR	23 02 13.2	
DZM	**Mont Dzumac**	**6.09**	**275**	*e*Pn	**Pn**	**23 00 39.0**	**+1.5**
DZM	229nm,1.1s			*e*Sn	**Sn**	**23 01 44.4**	**-3.0**
DZM	537nm,1.2s comp=Z,8μm,23.4s			*e*LR	LR	23 01 57.2	
DZM	**Mont Dzumac**	**6.09**	**275**	Pn	**Pn**	**23 00 37.7**	**+0.2**
DZM	**Mont Dzumac**	**6.09**	**275**	P	**Pn**	**23 00 38.4**	**+0.9**
NOUC	**Port Laguerre**	**6.22**	**275**	P	**Pn**	**23 00 41.7**	**+2.5**
DVP	**Devils Point**	**6.73**	**317**	P	**Pn**	**23 00 49.0**	**+2.8**
MSVF	**Nonsavu**	**6.89**	**44**	Pn	**Pn**	**23 00 47.8**	**-0.7**
MSVF	13nm,0.5s,baz=238,slow=13,SNR=18 comp=Z,13μm,18.7s,baz=233,slow=33			LR	LR	23 02 52.6	
MSVF	**Nonsavu**	**6.89**	**44**	Pn	**Pn**	**23 00 48.0**	**-0.5**
MSVF	**Nonsavu**	**6.89**	**44**	P	**Pn**	**23 00 48.0**	**-0.5**
MSVF	**Nonsavu**	**6.89**	**44**	P	**Pn**	**23 00 49.6**	**+1.1**
NFK	**Norfolk Island**	**7.74**	**215**	P	**Pn**	**23 01 00.5**	**+0.5**
	baz=7.8,SNR=5.7						
NFK	**Norfolk Island**	**7.74**	**215**	P	**Pn**	**23 01 01.1**	**+1.1**
KOUNC	**Koumac, New Ca**	**8.38**	**284**	Pn	**Pn**	**23 01 11.3**	**+2.3**
KOUNC	**Koumac, New Ca**	**8.38**	**284**	P	**Pn**	**23 01 12.1**	**+3.2**
LKBA	**Tubou, Lakemba**	**8.90**	**61**	P	**Pn**	**23 01 17.9**	**+1.9**
TAVE	**Taveuni**	**8.99**	**49**	P	**Pn**	**23 01 20.9**	**+3.6**
RAO	**Raoul Island**	**10.43**	**130**	LR	LR	23 04 56.1	
	comp=Z,3μm,18.3s,baz=346,slow=33						
OUZ	**Omahuta**	**12.43**	**178**	Pn	**Pn**	**23 02 05.3**	**+0.9**
OUZ	**Omahuta**	**12.43**	**178**	P	**Pn**	**23 02 08.0**	**+3.7**
URZ	**Urewera**	**15.86**	**168**	Pn	**Pn**	**23 02 51.8**	**+1.3**
URZ	0.2nm,0.3s,baz=12,slow=10,SNR=8.3 comp=Z,5μm,22.0s,baz=9.5,slow=32 21nm,0.9s			LR	LR	23 07 37.1	
URZ	**Urewera**	**15.86**	**168**	Pn	**Pn**	**23 02 52.1**	**+1.6**
URZ	comp=Z,231nm,1.8s			IAmb	IAmb	23 02 58.1	
URZ	**Urewera**	**15.86**	**168**	P	**P**	**23 02 54.8**	**+0.5**
BKZ	**Black Stump Fm**	**16.63**	**170**	Pn	**Pn**	**23 03 01.0**	**+0.5**
AFI	**Afiamalu**	**16.91**	**61**	Pn	**Pn**	**23 03 03.6**	**-0.7**
AFI	comp=Z,0.7nm,0.3s,baz=135,slow=4.3,SNR=2.3 comp=Z,3μm,19.4s,baz=239,slow=33 comp=Z,14nm,0.4s			LR	LR	23 08 18.1	
BFZ	**Birch Farm**	**18.09**	**172**	P	**P**	**23 03 19.6**	**+0.6**
BFZ	**Birch Farm**	**18.09**	**172**	P	**P**	**23 03 20.5**	**+1.5**
HNR	**Honiara**	**18.21**	**315**	P	**P**	**23 03 24.1**	**+3.6**
HNR	comp=Z,204nm,0.8s,baz=257,slow=10.0,SNR=4.3 comp=Z,2μm,19.7s,baz=146,slow=34			LR	LR	23 09 21.3	
KHZ	**Kahutara**	**19.61**	**179**	P	**Pn**	**23 03 38.2**	**+1.1**
EIDS	**Eidsvold**	**20.17**	**258**	P	**P**	**23 03 41.9**	**-0.1**
	baz=20,SNR=12						
EIDS	**Eidsvold**	**20.17**	**258**	P	Pn	23 03 44.2	+0.3
EIDS	**Eidsvold**	**20.17**	**258**	P	Pn	23 03 43.8	-0.1
ARMA	**Armidale**	**20.55**	**244**	P	**P**	**23 03 47.3**	**+1.1**
	baz=21,SNR=9.1						
ARMA	**Armidale**	**20.55**	**244**	P	**P**	**23 03 47.0**	**+0.8**
ARMA	**Armidale**	**20.55**	**244**	P	Pn	23 03 50.4	+2.0
RPZ	**Rata Peaks**	**20.97**	**184**	P	**P**	**23 03 49.5**	**-1.0**
RPZ	comp=Z,3.8nm,0.4s,baz=2.6,slow=2.8,SNR=2.9 comp=Z,5μm,19.8s,baz=7.5,slow=35 comp=Z,3.8nm,0.4s			LR	LR	23 11 21.1	
RMQ	**Roma**	**22.33**	**255**	P	**P**	**23 04 06.9**	**+1.6**
	baz=22,SNR=18						
RMQ	**Roma**	**22.33**	**255**	P	**P**	**23 04 07.6**	**+2.3**
TARA	**Tarawa**	**23.96**	**360**	P	**P**	**23 04 20.8**	**-1.2**
CNB	**Canberra Magne**	**24.08**	**233**	P	**P**	**23 04 24.9**	**+1.8**
	baz=24						
CAN	**Canberra**	**24.36**	**234**	P	**P**	**23 04 25.6**	**0.0**
CAN	comp=Z,56nm,1.2s			IAmb	IAmb	23 04 39.3	
CAN	**Canberra**	**24.36**	**234**	P	**P**	**23 04 25.6**	**0.0**
CAN	comp=Z,56nm,1.2s			pmax	pmax		
CTA	**Charters Tower**	**25.02**	**271**	P	**P**	**23 04 30.4**	**-1.2**
CTA	comp=Z,5.1nm,0.7s,baz=85,slow=11,SNR=6.6			LR	LR	23 13 39.7	
	comp=Z,2μm,20.0s,baz=89,slow=35 comp=Z,5.1nm,0.7s						
CTA	**Charters Tower**	**25.02**	**271**	P	**P**	**23 04 33.4**	**+1.8**
CTAO	**Charters Tower**	**25.02**	**271**	P	**P**	**23 04 31.1**	**-0.6**
CTAO	comp=Z,51nm,1.6s			IAmb	IAmb	23 04 59.6	
CTAO	**Charters Tower**	**25.02**	**271**	P	**P**	**23 04 31.1**	**-0.6**
CTAO	comp=Z,51nm,1.6s			pmax	pmax		
CTAO	**Charters Tower**	**25.02**	**271**	P	**P**	**23 04 33.7**	**+2.1**
RAR	**Rarotonga**	**25.29**	**92**	LR	LR	23 12 41.5	
	comp=Z,494nm,20.1s,baz=260,slow=32						
CMSA	**Cobar Meteorol**	**25.76**	**244**	P	**P**	**23 04 39.7**	**+1.4**
	baz=26,SNR=16						
CMSA	**Cobar Meteorol**	**25.76**	**244**	P	**P**	**23 04 39.5**	**+1.2**
QLP	**Quilpie**	**26.38**	**256**	P	**P**	**23 04 44.2**	**+0.3**
	baz=26,SNR=5.8						
MTSU	**Mount Surprise**	**27.23**	**274**	P	**P**	**23 04 51.6**	**-0.1**
	baz=27,SNR=12						
TOO	**Toolangi**	**27.86**	**232**	P	**P**	**23 04 57.8**	**+0.6**
TOO	comp=Z,57nm,1.5s			IAmb	IAmb	23 05 32.5	
TOO	**Toolangi**	**27.86**	**232**	P	**P**	**23 04 57.8**	**+0.6**
TOO	comp=Z,57nm,1.5s			pmax	pmax		
STKA	**Stephens Creek**	**29.25**	**245**	P	**P**	**23 05 09.8**	**+0.2**
	comp=Z,7.5nm,0.8s,baz=79,slow=7.9,SNR=12						
STKA	comp=Z,2μm,19.4s,baz=72,slow=35 comp=Z,7.5nm,0.8s			LR	LR	23 16 02.2	
STKA	**Stephens Creek**	**29.25**	**245**	P	**P**	**23 05 11.5**	**+1.8**
	baz=29,SNR=6.7						
STKA	**Stephens Creek**	**29.25**	**245**	P	**P**	**23 05 09.9**	**+0.3**
STKA	**Stephens Creek**	**29.25**	**245**	*i* P	**P**	**23 05 12.2**	**+2.6**
HTT	**Hallett**	**31.75**	**243**	P	**P**	**23 05 32.4**	**+0.6**
	baz=32,SNR=4.7						
LCRK	**Leigh Creek**	**31.93**	**249**	P	**P**	**23 05 34.4**	**+1.1**
BBOO	**Buckleboo**	**34.02**	**245**	P	**P**	**23 05 52.0**	**+0.5**
	baz=34,SNR=7.9						
BBOO	**Buckleboo**	**34.02**	**245**	P	**P**	**23 05 51.8**	**+0.2**
BBOO	comp=Z,30nm,0.9s			IAmb	IAmb	23 05 55.3	
TBI	**Tubuai**	**34.50**	**98**	*e*S	**S**	**23 11 25.0**	**+0.5**
TBI	comp=Z,165nm,22.2s			*e*LQ	LQ	23 13 38.6	
TBI	comp=Z,1μm,27.0s comp=Z,911nm,27.5s			*e*LR	LR	23 15 05.3	
PPT2	**Papeete2**	**35.45**	**89**	*e*P	**P**	**23 06 05.5**	**+1.4**
	comp=Z,56nm,23.2s						
PPT2	comp=Z,187nm,24.2s			*e*S	**S**	**23 11 39.6**	**+0.2**
PPT2	comp=Z,1μm,26.2s			*e*LQ	LQ	23 14 02.4	
PPT2	comp=Z,1μm,26.2s			*e*LR	LR	23 15 31.2	
PPT	**Papeete**	**35.45**	**89**	LR	LR	23 16 47.9	
	comp=Z,536nm,19.7s,baz=254,slow=30						
MULG	**Mulgathing**	**35.50**	**249**	P	**P**	**23 06 04.4**	**0.0**
WR0	**Warramunga Arr**	**35.85**	**267**	P	**P**	**23 06 06.2**	**-1.3**
AS31	**Alice Springs**	**35.86**	**261**	P	**P**	**23 06 06.8**	**-0.8**
ASAR	**Alice Springs**	**35.86**	**261**	P	**P**	**23 06 06.0**	**-1.6**
	comp=Z,11nm,0.8s,baz=90,slow=8.3,SNR=45						
ASAR	comp=Z,1μm,21.2s,baz=100,slow=36 comp=Z,11nm,0.8s			LR	LR	23 20 21.9	
ASAR	**Alice Springs**	**35.86**	**261**	P	**P**	**23 06 06.3**	**-1.3**
ASAR	**Alice Springs**	**35.86**	**261**	P	**P**	**23 06 06.3**	**-1.3**
WC3	**Warramunga Arr**	**36.01**	**267**	P	**P**	**23 06 08.2**	**-0.6**
	baz=36						
WB0	**Warramunga Arr**	**36.02**	**267**	P	**P**	**23 06 07.7**	**-1.3**
WRAB	**Tennant Creek**	**36.03**	**267**	*ce*P	**P**	**23 06 06.7**	**-2.3**
WRAB	comp=Z,4.0nm,0.8s			pmax	pmax		
WRAB	**Tennant Creek**	**36.03**	**267**	P	**P**	**23 06 08.5**	**-0.5**
WRA	**Warramunga Arr**	**36.04**	**267**	P	**P**	**23 06 06.4**	**-2.7**
WRA	comp=Z,4.4nm,0.9s,baz=96,slow=8.5,SNR=20 comp=Z,2μm,18.0s,baz=98,slow=37 comp=Z,4.4nm,0.9s			LR	LR	23 21 12.0	
WRA	**Warramunga Arr**	**36.04**	**267**	P	**P**	**23 06 07.2**	**-1.9**
WRA	**Warramunga Arr**	**36.04**	**267**	P	**P**	**23 06 07.2**	**-1.9**
WRA	comp=Z,2.0nm,1.8s			pmax	pmax		
FORT	**Forrest**	**40.69**	**249**	P	**P**	**23 06 47.3**	**-0.8**
FORT	comp=Z,40nm,0.8s			IAmb	IAmb	23 06 57.1	
WRKA	**Warakurna**	**40.79**	**258**	P	**P**	**23 06 48.7**	**-0.4**
	baz=41,SNR=17						
WRKA	**Warakurna**	**40.79**	**258**	P	**P**	**23 06 51.1**	**+2.0**
MTN	**Manton Dam**	**40.93**	**277**	P	**P**	**23 06 49.7**	**-0.5**
	baz=41,SNR=7.1						
MTN	**Manton Dam**	**40.93**	**277**	P	**P**	**23 06 49.0**	**-1.3**
MTN	**Manton Dam**	**40.93**	**277**	P	**P**	**23 06 51.1**	**+0.8**
H11S2	**WAKE ISLAND Hy**	**41.45**	**351**	T	T	23 51 04.7	
	baz=171,slow=76						
H11S3	**WAKE ISLAND Hy**	**41.46**	**351**	T	T	23 51 04.0	
	baz=171,slow=76						
H11S1	**WAKE ISLAND Hy**	**41.47**	**351**	T	T	23 51 04.9	
	baz=171,slow=76						
KNRA	**Kununurra**	**42.23**	**271**	P	**P**	**23 07 00.8**	**-0.1**
	baz=42,SNR=5.4						
KNRA	**Kununurra**	**42.23**	**271**	P	**P**	**23 06 59.3**	**-1.6**
KNRA	**Kununurra**	**42.23**	**271**	P	**P**	**23 07 01.1**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**42.63**	**352**	T	T	23 52 28.6	
	baz=173,slow=76						
H11N3	**WAKE ISLAND Hy**	**42.63**	**352**	T	T	23 52 33.2	
	baz=173,slow=76						
H11N2	**WAKE ISLAND Hy**	**42.64**	**352**	T	T	23 52 30.1	
	baz=173,slow=76						
FITZ	**Fitzroy Crossi**	**44.47**	**267**	LR	LR	23 26 12.2	
	comp=Z,1μm,18.0s,baz=105,slow=37						
FITZ	**Fitzroy Crossi**	**44.47**	**267**	P	**P**	**23 07 18.6**	**-0.4**
	baz=44,SNR=12						
FITZ	**Fitzroy Crossi**	**44.47**	**267**	P	**P**	**23 07 18.1**	**-0.9**
FITZ	comp=Z,19nm,0.9s			IAmb	IAmb	23 07 21.9	
FITZ	**Fitzroy Crossi**	**44.47**	**267**	P	**P**	**23 07 19.2**	**+0.2**
GUMO	**Guam**	**45.42**	**320**	LR	LR	23 23 51.3	
	comp=Z,627nm,21.5s,baz=128,slow=33						
SIJI	**Sorong**	**46.00**	**292**	LR	LR	23 26 41.7	
	comp=Z,356nm,19.0s,baz=219,slow=36						
TAOE	**Nuku Hiva Isla**	**46.96**	**81**	*e*P	**P**	**23 07 39.6**	**+0.8**
TAOE	comp=Z,64nm,25.3s comp=Z,196nm,23.8s			*e*S	**

VNDA IAmb IAmb 23 09 20.4
comp=Z,27nm,1.6s
VNDA Vanda 55.08 183 P **P** **23 08 39.1 +0.1**
VNDA pmax pmax
comp=Z,27nm,1.7s
SBA Scott Base 55.23 182 P **P** **23 08 40.5 +0.5**
SBA IAmb IAmb 23 08 55.9
comp=Z,32nm,1.0s
SBA Scott Base 55.23 182 P **P** **23 08 40.5 +0.5**
SBA pmax pmax
comp=Z,32nm,1.0s
TOLI2 Tolitoli 56.07 288 P **P** **23 08 45.5 -1.4**
TOLI2 Tolitoli 56.07 288 P **P** **23 08 45.6 -1.4**
MPSI Mapaga 56.49 286 P **P** **23 08 48.0 -2.0**
comp=Z,26nm,0.9s
CASY Casey 58.37 205 P **P** **23 09 03.1 +0.6**
CASY IAmb IAmb 23 09 15.7
comp=Z,41nm,1.6s
STKI Sintang 63.90 282 P **P** **23 09 38.1 -2.7**
JHJ Hachijo jima 2 63.96 329 LR LR 23 39 05.5
comp=Z,113nm,18.1s,baz=112,slow=38
LEM Lembang 64.70 273 LR LR 23 37 28.5
comp=Z,562nm,22.0s,baz=150,slow=36
KSM Kuching 65.56 283 P **P** **23 09 51.2 -0.5**
QSPA South Pole Qui 67.32 180 P **P** **23 10 02.1 -0.1**
comp=Z,7.5nm,0.7s,baz=8.3,slow=1.4,SNR=40
comp=Z,7.5nm,0.7s
QSPA South Pole Qui 67.32 180 P **P** **23 10 02.0 -0.3**
JMN Monobe 67.39 325 P **P** **23 10 02.1 -0.9**
JMN IAmb IAmb 23 10 15.2
comp=Z,17nm,1.1s
JMM Marumori 67.47 333 P **P** **23 10 02.8 -0.5**
MJAR Matsushiro Arr 67.50 330 P **P** **23 10 02.1 -1.5**
comp=Z,5.4nm,0.9s,baz=132,slow=6.4,SNR=11
MJAR LR LR 23 35 11.8
comp=Z,233nm,22.0s,baz=130,slow=32
comp=Z,5.4nm,0.9s
MAJO Matsushiro 67.51 330 P **P** **23 10 03.3 -0.3**
MAJO IAmb IAmb 23 10 07.7
comp=Z,11nm,0.9s
MAJO Matsushiro 67.51 330 *i* P **P** **23 10 03.7 +0.1**
MAJO pmax pmax
comp=Z,14nm,1.1s
TPUB Ta-pu 68.47 308 P **P** **23 10 08.6 -1.3**
JSD Sado 68.71 331 P **P** **23 10 10.7 -0.4**
RPN Rapa Nui 69.51 112 LR LR 23 34 29.4
comp=Z,177nm,21.2s,baz=356,slow=30
ERM Erimo 70.10 337 P **P** **23 10 21.2 +1.6**
ERM Erimo 70.10 337 *i* P **P** **23 10 20.5 +0.9**
ERM pmax pmax
comp=Z,18nm,0.9s
KSI Kapahiang 70.52 274 P **P** **23 10 20.7 -2.3**
TJN Taejon 72.91 323 *ce*P **P** **23 10 34.8 -1.9**
KSRS Korea Array 73.38 324 P **P** **23 10 38.5 -0.9**
comp=Z,2.7nm,0.8s,baz=146,slow=6.2,SNR=18
KSRS LR LR 23 42 54.9
comp=Z,132nm,18.0s,baz=130,slow=36
comp=Z,2.7nm,0.8s
KSAR Wonju Array Be 73.39 324 P **P** **23 10 39.0 -0.6**
KSAR Wonju Array Be 73.39 324 P **P** **23 10 39.0 -0.6**
KS19 Wonju Array Si 73.45 324 P **P** **23 10 39.2 -0.6**
KS19 IAmb IAmb 23 11 18.3
comp=Z,19nm,1.5s
AMKA Amchitka 74.02 4 P **P** **23 10 42.8 0.0**
QIZ Qiongzhong 74.34 299 P **P** **23 10 42.9 -2.6**
QIZ S **S** **23 20 24.3 +4.1**
QIZ LR LR
comp=Z,330nm,30.3s
QIZ LR LR
comp=Z,270nm,27.1s
QIZ LR LR
comp=Z,270nm,19.9s
YSS Yuzh-Sakhalins 74.56 339 P **P** **23 10 46.5 +0.4**
YSS Yuzh-Sakhalins 74.56 339 *e*P **P** **23 10 47.1 +1.0**
YSS *e*S **S** **23 20 23.3 +1.8**
YSS *e*PS **PnS** **23 20 46.0 -10**
YSS *e*SS **SS** **23 25 07.9 -1.1**
YSS pmax pmax
comp=Z,80nm,0.9s
SKR Severo-Kuril's 74.62 349 *e*P P 23 10 41.4 -5.0
SKR *e*S **SKiKP** **23 20 12.5 +0.1**
SKR pmax pmax
comp=Z,45nm,0.9s
SKR pmax pmax
comp=Z,100nm,6.5s
ADK Adak 74.86 7 P **P** **23 10 47.7 0.0**
ADK Adak 74.86 7 P **P** **23 10 47.7 0.0**
ADK pmax pmax
comp=Z,44nm,1.0s
NJ2 Nanjing 75.16 315 *e*P **P** **23 10 52.0 +2.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
SHEM Shemya Is, Ala 75.17 1 LR LR 23 38 44.4
comp=Z,174nm,21.1s,baz=180,slow=32
IPM Ipoh 75.22 281 P **P** **23 10 50.5 -0.3**
IPM IAmb IAmb 23 11 02.4
comp=Z,29nm,1.2s
KULM Kulim 75.90 282 P **P** **23 10 53.9 -0.7**
PSI Prapat 76.44 279 LR LR 23 48 15.8
comp=Z,281nm,18.2s,baz=140,slow=39
USRK Ussuriysk Ar. 76.47 331 P **P** **23 10 57.3 +0.1**
comp=Z,7.5nm,0.7s,baz=116,slow=4.0,SNR=10
comp=Z,7.5nm,0.7s
PET Petropavlovsk 76.48 351 P **P** **23 10 56.6 -0.4**
PET Petropavlovsk 76.48 351 *e*P **P** **23 10 57.4 +0.4**
PET *e* 23 13 51.6
PET *e*S **S** **23 20 41.1 -1.3**
PET *e*PS **PnS** **23 21 21.5 +1.0**
PET *e*PPS PPS 23 21 37.0
PET *e*SS **SS** **23 25 40.0 +2.1**
PET pmax pmax
comp=Z,200nm,11.3s
PET pmax pmax
comp=Z,300nm,16.0s
PET pmax pmax
comp=Z,22nm,1.4s
PET MLR MLR
comp=Z,400nm,17.0s
MAW Mawson 76.49 202 P **P** **23 10 57.3 +0.2**
comp=Z,11nm,1.0s,baz=141,slow=9.7,SNR=10
MAW LR LR 23 41 60.0
comp=Z,361nm,18.3s,baz=88,slow=34
comp=Z,11nm,1.0s
MAW Mawson 76.49 202 P **P** **23 10 57.8 +0.7**
baz=76,SNR=6.3
MAW Mawson 76.49 202 P **P** **23 10 57.2 +0.1**
MAW Mawson 76.49 202 P **P** **23 10 57.2 +0.1**
MAW pmax pmax
comp=Z,2.0nm,0.9s
PEA0B Petropavlovsk- 76.70 351 P **P** **23 10 58.0 -0.3**
PEA0B Petropavlovsk- 76.70 351 *ce*P **P** **23 10 58.0 -0.3**
PETK Petropavlovsk- 76.70 351 P **P** **23 10 57.6 -0.7**
comp=Z,14nm,0.8s,baz=181,slow=10,SNR=24
PETK LR LR 23 38 15.4
comp=Z,381nm,21.1s,baz=158,slow=31
comp=Z,14nm,0.8s
PETK Petropavlovsk- 76.70 351 P **P** **23 10 58.0 -0.3**
PETK Petropavlovsk- 76.70 351 P **P** **23 10 58.0 -0.3**
NIKH Nikolski High 77.04 11 P **P** **23 11 00.7 +0.6**
baz=197
GSI Gunungsitoli 77.07 277 P **P** **23 11 00.9 -0.4**
MDJ Mudanjiang 77.89 330 P **P** **23 11 04.5 -0.7**
MDJ IAmb IAmb 23 11 07.0
comp=Z,16nm,1.1s
BELA Belgrano 2 78.29 174 P **P** **23 11 06.2 -0.9**
BELA IAmb IAmb 23 11 20.6
comp=Z,27nm,1.4s
TIA Tai'an 78.89 317 *e*P **P** **23 11 11.1 +0.2**
TIA pmax pmax
comp=Z,11nm,0.8s
CN2 Changchun 79.28 327 *e*P **P** **23 11 13.3 +0.4**
CN2 S **S** **23 21 09.1 -4.1**
CN2 SS **SS** **23 26 19.3 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
SMAI San Martin Ant 79.39 161 P **P** **23 11 13.2 0.0**
SMAI IAmb IAmb 23 11 20.5
comp=Z,44nm,1.3s
BNX BinXian 79.75 329 ⇓P **P** **23 11 14.9 -0.5**
BNX pP **PcP** **23 11 26.5 +3.5**
BNX sP **pwP** **23 11 29.8 +7.4**
BNX PP **PP** **23 14 17.3 +0.4**
BNX S **S** **23 21 20.3 +2.3**
BNX pmax pmax
comp=Z,18nm,0.7s
BNX pmax pmax
comp=Z,130nm,6.9s
BNX LR LR
comp=Z,150nm,17.4s
BNX LR LR
comp=Z,160nm,17.4s
BNX LR LR
comp=Z,280nm,18.1s
GRNR Gornyy 80.00 337 ⇓*i*P **P** **23 11 18.1 +1.5**
GRNR pmax pmax
comp=Z,30nm,0.8s
KLR Kul'dur 80.52 334 LR LR 23 44 44.6
comp=Z,264nm,19.6s,baz=138,slow=34
KLR Kul'dur 80.52 334 *ce*P **P** **23 11 20.4 +1.0**
KLR pmax pmax
comp=Z,4.0nm,0.6s
CHNA Chernabura Isl 80.77 16 P **P** **23 11 22.2 +1.7**
baz=206
LYN LuoYang 80.92 313 *e*P **P** **23 11 23.3 +1.4**
LYN PP **PP** **23 14 28.4 +1.6**
LYN S **S** **23 21 28.1 -2.7**
LYN pmax pmax
comp=Z,160nm,11.8s
LYN LR LR
comp=Z,180nm,16.1s
LYN LR LR
comp=Z,250nm,19.8s
HNS HongShan 81.14 317 ⇓P **P** **23 11 24.1 +1.1**
HNS S **S** **23 21 35.4 +2.4**
HNS SS **SS** **23 26 51.8 +3.1**
HNS LR LR
comp=Z,260nm,20.0s
HNS LR LR
comp=Z,320nm,20.1s
BJI Beijing 81.87 320 P **P** **23 11 28.8 +2.0**
BJI SKS **S** **23 21 37.3 -3.0**
BJI S **SKSac** **23 21 48.0 +1.0**
BJI SS **SS** **23 27 04.8 +5.5**
BJI pmax pmax
comp=Z,4.0nm,0.6s
BJI LR LR
comp=Z,40nm,18.0s
BJI LR LR
comp=Z,140nm,19.0s
BJI LR LR
comp=Z,410nm,25.2s
CHGN Chignik 82.39 16 P **P** **23 11 30.1 +1.0**
baz=206
PMSA Palmer Station 82.40 159 P **P** **23 11 30.0 +0.7**
comp=Z,17nm,1.0s,baz=212,slow=6.3,SNR=5.0
PMSA LR LR 23 41 20.3
comp=Z,296nm,21.6s,baz=236,slow=31
comp=Z,17nm,1.0s
PMSA Palmer Station 82.40 159 P **P** **23 11 29.5 +0.2**
CRAI Chiangrai 82.71 295 P **P** **23 11 32.0 +0.3**
XAN Xi'an 83.05 311 P **P** **23 11 33.4 +0.2**
XAN pP pwP 23 11 43.9 +3.6
XAN sP PcP 23 11 49.3 +11
XAN pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 83.12 293 P **P** **23 11 33.8 -0.1**
comp=Z,0.8nm,0.4s,baz=128,slow=4.4,SNR=4.5
comp=Z,0.8nm,0.4s
MA2 Magadan 84.04 349 LR LR 23 47 31.9
comp=Z,479nm,18.6s,baz=161,slow=35
PZH PanZhiHua 84.53 302 P **P** **23 11 40.6 -0.5**
PZH S **S** **23 22 08.9 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,6.5s
PZH LR LR
comp=Z,330nm,19.1s
PZH LR LR
comp=Z,330nm,20.1s
PZH LR LR
comp=Z,590nm,25.0s
OHAK Old Harbor 84.55 18 P **P** **23 11 41.6 +1.3**
baz=211
CD2 Chengdu 85.14 306 *e*P **P** **23 11 43.9 0.0**
HHC Hu-ho-hao-te 85.16 318 *e*P **P** **23 11 44.9 +1.0**
HHC S **S** **23 22 10.1 -3.8**
HHC SS **SS** **23 27 49.9 +1.5**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,220nm,7.1s
HHC LR LR
comp=Z,320nm,17.1s
HHC LR LR
comp=Z,310nm,17.6s
HHC LR LR
comp=Z,610nm,19.0s
TROLL Troll, Antarti 85.26 183 P **P** **23 11 43.1 -0.9**
SCI2 San Clemente I 85.61 52 P **P** **23 11 47.2 +1.0**
baz=239
PKM Mcpherson Peak 85.69 49 P **P** **23 11 48.1 +1.3**
baz=238
SNAA Sanae 85.78 181 P **P** **23 11 45.2 -1.3**
SNAA Sanae 85.78 181 P **P** **23 11 44.7 -1.9**
comp=Z,2.0nm,0.7s,baz=223,slow=7.9,SNR=24
SNAA LR LR 23 46 32.0
comp=Z,449nm,21.8s,baz=182,slow=33
comp=Z,2.0nm,0.7s
SNAA Sanae 85.78 181 P **P** **23 11 45.4 -1.1**
SNAA IAmb IAmb 23 12 01.3
comp=Z,9.5nm,1.0s
SNAA Sanae 85.78 181 P **P** **23 11 45.4 -1.1**
SNAA pmax pmax
comp=Z,9.0nm,1.0s
ZEA Zeya 85.79 335 *e*P **P** **23 11 47.2 +0.6**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
O17K Koliganek Bris 85.81 15 P **P** **23 11 48.0 +1.6**
baz=207
PAGB Antelope Grade 85.83 49 P **P** **23 11 47.1 -0.2**
PAGB IAmb IAmb 23 11 50.0
comp=Z,9.4nm,0.8s
N16K Nishlik Lake 86.06 14 P **P** **23 11 49.1 +1.3**
baz=206
VNA3 Neumayer Olymp 86.24 179 P **P** **23 11 47.4 -1.3**
MG05 Puerto Natales 86.42 145 P **P** **23 11 50.0 0.0**
ARVC Arvin 86.51 50 P **P** **23 11 51.8 +1.2**
baz=239
VNA2 Neumayer--Watz 86.58 180 P **P** **23 11 49.4 -1.0**
baz=181,slow=5.0
VES Vestal, Richgr 86.69 49 P **P** **23 11 53.0 +1.5**
baz=239
VNA1 Neumayer--Stat 86.85 180 P **P** **23 11 50.8 -0.9**
SEY Seymchan 86.94 351 *ce*P **P** **23 11 50.4 -1.6**
SEY pmax pmax
comp=Z,13nm,0.8s
CMB Columbia Colle 86.95 47 P **P** **23 11 52.2 -0.5**
CMB IAmb IAmb 23 11 55.1
comp=Z,6.5nm,0.8s
CMB Columbia Colle 86.95 47 P **P** **23 11 52.2 -0.5**
CMB pmax pmax
comp=Z,7.0nm,0.8s
EDW2 Edwards Air Fo 86.97 50 P **P** **23 11 53.8 +0.8**
baz=240
ISA Isabella, Lake 87.03 49 P **P** **23 11 52.8 -0.4**
ISA IAmb IAmb 23 11 55.9
comp=Z,13nm,0.8s
ISA Isabella, Lake 87.03 49 P **P** **23 11 52.8 -0.4**
ISA pmax pmax
comp=Z,13nm,0.8s
ISA Isabella, Lake 87.03 49 P **P** **23 11 54.0 +0.8**
baz=239
MONP2 Monument Peak 87.12 53 P **P** **23 11 55.2 +1.3**
baz=241
PFO Pinyon Flats O 87.44 52 LR LR 23 45 20.9
comp=Z,400nm,18.1s,baz=246,slow=32
YBH Yreka Blue Hor 87.44 42 LR LR 23 42 59.7
comp=Z,754nm,21.1s,baz=237,slow=30
YBH Yreka Blue Hor 87.44 42 P **P** **23 11 54.5 -0.5**
YBH IAmb IAmb 23 12 07.8
comp=Z,33nm,2.0s
YBH Yreka Blue Hor 87.44 42 P **P** **23 11 54.6 -0.5**
YBH pmax pmax
comp=Z,33nm,2.0s
LZH Lanzhou 87.67 311 ⇓P **P** **23 11 57.8 +1.4**
LZH pP pwP 23 12 03.5 0.0
LZH pmax pmax
comp=Z,20nm,1.2s
LZH pmax pmax
comp=Z,210nm,6.4s
CWC Cottonwood Cre 87.70 49 P **P** **23 11 57.3 +0.7**
baz=240
LPIG La Paz 87.83 63 LR LR 23 44 40.0
comp=Z,441nm,18.4s,baz=226,slow=31
MPMC Manual Prospec 87.92 49 P **P** **23 11 57.5 -0.2**
baz=240
BEKR Beckworth 87.94 45 P **P** **23 11 57.4 -0.2**
BEKR IAmb IAmb 23 11 60.0
comp=Z,4.7nm,0.7s
L04D Klamath Falls 87.97 42 P **P** **23 11 58.4 +0.7**
L04D IAmb IAmb 23 12 00.1
comp=Z,8.2nm,0.7s
L04D Klamath Falls 87.97 42 P **P** **23 11 58.3 +0.7**
baz=237
BELC Belle Mtn. Jos 87.97 52 P **P** **23 11 57.7 -0.2**
baz=241
HEC Hector,Ludlow 88.13 51 P **P** **23 11 59.4 +0.9**
baz=241
I03D Drain, OR 88.15 41 P **P** **23 11 59.5 +1.2**
baz=236
YERR Yerington 88.21 46 P **P** **23 11 57.9 -1.1**
LHV Little Huntoon 88.33 47 P **P** **23 11 58.8 -0.4**
LHV IAmb IAmb 23 12 04.3
comp=Z,5.9nm,0.9s
LCH Last Change Ra 88.40 48 P **P** **23 11 58.8 -1.0**
LCH IAmb IAmb 23 12 02.9
comp=Z,21nm,1.9s
L19K White Mountain 88.45 14 P **P** **23 12 00.2 +0.9**
baz=209
NVAR Mina Array Bea 88.56 47 P **P** **23 12 00.0 -0.6**
comp=Z,1.7nm,0.7s,baz=223,slow=6.9,SNR=18
NVAR LR LR 23 43 39.3
comp=Z,570nm,21.0s,baz=249,slow=30
comp=Z,1.7nm,0.7s
NVAR Mina Array Bea 88.56 47 P **P** **23 11 59.7 -0.9**
FURC Furnace Creek, 88.56 49 P **P** **23 11 60.0 -0.4**
baz=240
GMRC Granite Mounta 88.59 51 P **P** **23 12 01.2 +0.4**
baz=241
NV11 Mina Array Sit 88.66 47 P **P** **23 12 00.2 -0.9**
IRM Iron Mountain 88.66 52 P **P** **23 12 01.0 -0.1**
baz=241
BLYC Blythe 88.92 53 P **P** **23 12 01.1 -1.1**
L20K Farewell, AK 88.94 15 P **P** **23 12 01.3 -0.3**
baz=210
KVN Kaiserville 89.01 47 P **P** **23 12 01.9 -0.8**
KVN Kaiserville 89.01 47 P **P** **23 12 01.9 -0.8**
KVN pmax pmax
comp=Z,4.0nm,0.7s
MOD Modoc Plateau 89.05 43 P **P** **23 12 02.2 -0.6**
MOD IAmb IAmb 23 12 07.9
comp=Z,14nm,1.5s
J05D Fort Rock, OR 89.21 42 P **P** **23 12 03.1 -0.4**
baz=237
TPNV Topopah Spring 89.23 49 P **P** **23 12 03.1 -0.7**
TPNV IAmb IAmb 23 12 06.3
comp=Z,7.8nm,0.8s
TPNV Topopah Spring 89.23 49 P **P** **23 12 03.1 -0.7**
TPNV pmax pmax
comp=Z,8.0nm,0.8s
214A Organ Pipe Nat 89.36 55 P **P** **23 12 03.5 -0.8**
baz=243
HSIG 89.48 58 P **P** **23 12 04.9 0.0**
HSIG IAmb IAmb 23 13 13.4
comp=Z,6.6nm,0.5s
PINE Pine Mountain 89.66 41 P **P** **23 12 05.8 +0.1**
PINE IAmb IAmb 23 12 08.5
comp=Z,7.5nm,0.8s
I05D Terrebonne, OR 89.71 41 P **P** **23 12 06.9 +1.2**
baz=237
SHPR Sheep Range 89.78 50 P **P** **23 12 05.3 -1.0**
CAST Castle Rocks 90.17 15 P **P** **23 12 07.3 -0.1**
baz=212
PRN Pahroc Range 90.29 49 P **P** **23 12 08.0 -0.7**
PRN IAmb IAmb 23 12 22.2
comp=Z,33nm,1.9s
R11A Troy Canyon, C 90.37 48 P **P** **23 12 07.9 -1.2**
R11A Troy Canyon, C 90.37 48 P **P** **23 12 09.2 +0.1**
baz=241
BILL Bilibino 90.66 357 *e*P **P** **23 12 10.0 +0.5**
BILL *e*PPP PPP 23 17 40.9
BILL pmax pmax
comp=Z,6.0nm,1.1s
TUC Tucson 91.06 55 P **P** **23 12 11.4 -0.9**
TUC IAmb IAmb 23 12 26.0
comp=Z,16nm,1.8s
TUC Tucson 91.06 55 P **P** **23 12 11.4 -0.9**
TUC pmax pmax
comp=Z,16nm,1.8s
YAK Yakutsk 91.29 341 LR LR 23 53 06.3
comp=Z,306nm,18.0s,baz=90,slow=36
YAK Yakutsk 91.29 341 *e*P **P** **23 12 12.2 -0.3**
YAK pmax pmax
comp=Z,15nm,0.9s
H03S2 Juan Fernandez 91.45 128 T T 00 53 59.1
baz=240
H03S1 Juan Fernandez 91.47 128 T T 00 53 54.8
baz=240
H03S3 Juan Fernandez 91.47 128 T T 00 53 49.0
baz=240
X16A Lo Mia Camp, P 91.50 53 P **P** **23 12 13.6 -0.9**
H03N3 Juan Fernandez 91.64 127 T T 00 54 32.8
baz=238
H03N2 Juan Fernandez 91.64 127 T T 00 54 38.8
baz=238
H03N1 Juan Fernandez 91.65 127 T T 00 54 28.7
baz=238
I21K Tanana 91.69 14 P **P** **23 12 14.7 +0.4**
baz=212
SZCU Shurtz Canyon 91.75 50 P **P** **23 12 14.4 -1.2**
SZCU IAmb IAmb 23 12 19.1
comp=Z,21nm,1.8s
ELK Elko 91.76 46 LR LR 23 45 56.9
comp=Z,733nm,20.5s,baz=238,slow=31
ELK Elko 91.76 46 P **P** **23 12 14.7 -0.9**
ELK Elko 91.76 46 P **P** **23 12 14.7 -0.9**
ELK pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 91.77 322 *ce*P **P** **23 12 15.1 -0.2**
ULN pmax pmax
comp=Z,1.0nm,0.8s
M26K Nabesna, AK 91.78 19 P **P** **23 12 14.7 -0.2**
baz=220
U15A North Rim 91.79 51 P **P** **23 12 15.3 -0.5**
U15A IAmb IAmb 23 12 18.9
comp=Z,9.7nm,0.7s
MLY Manley 91.85 15 P **P** **23 12 14.9 -0.3**
baz=213
H21K Melozitna Rive 91.92 13 P **P** **23 12 16.6 +1.1**
baz=211
IMAR Indian Mountai 92.00 13 P **P** **23 12 14.9 -0.9**
WRH Wood River Hil 92.03 16 P **P** **23 12 15.6 -0.3**
WRH IAmb IAmb 23 12 26.7
comp=Z,14nm,1.2s
WUAZ Wupatki 92.04 52 P **P** **23 12 16.0 -0.9**
M27K Edge Creek, AK 92.09 19 P **P** **23 12 16.4 0.0**
M27K Edge Creek, AK 92.09 19 P **P** **23 12 16.6 +0.2**
baz=221
SONM Songino Array 92.13 322 P **P** **23 12 14.7 -2.2**
comp=Z,0.7nm,0.6s,baz=140,slow=5.0,SNR=5.4
SONM LR LR 23 52 50.2
comp=Z,88nm,20.4s,baz=118,slow=35
comp=Z,0.7nm,0.6s
HDA Harding Lake 92.27 16 P **P** **23 12 17.5 +0.4**
baz=216
RIDG Independent Ri 92.30 17 P **P** **23 12 16.8 -0.5**
baz=218
MDM Murphy Dome 92.39 15 P **P** **23 12 17.4 -0.2**
MDM IAmb IAmb 23 12 28.0
comp=Z,12nm,1.2s
COLA College 92.42 16 *i* P **P** **23 12 18.6 +0.9**
COLA pmax pmax
comp=Z,11nm,1.3s
H22K Ishtalitna Cre 92.44 14 P **P** **23 12 17.8 0.0**
baz=212
G21K Allakaket 92.51 13 P **P** **23 12 18.6 +0.5**
baz=211
IL31 92.58 16 P **P** **23 12 18.5 +0.1**
IL31 IAmb IAmb 23 12 28.5
comp=Z,8.7nm,1.1s

ILAR	**Eielson Array**	**92.58**	**16**	P		**P**	**23 12 16.6**	**-1.9**	
	comp=Z,1.2nm,0.7s,baz=228,slow=4.8,SNR=11								
ILAR				LR		LR	23 48 05.6		
	comp=Z,822nm,20.2s,baz=218,slow=32								
	comp=Z,1.2nm,0.7s								
MTPU	**Mount Pierson**	**92.59**	**50**	P		**P**	**23 12 19.8**	**+0.1**	
MTPU				IAmb		IAmb	23 12 23.0		
	comp=Z,5.2nm,0.9s								
L27K	**Beaver Creek,**	**92.64**	**19**	P		**P**	**23 12 19.0**	**+0.2**	
	baz=221								
SCRK	**Sand Creek**	**92.72**	**18**	P		**P**	**23 12 18.9**	**-0.4**	
SCRK				IAmb		IAmb	23 12 30.1		
	comp=Z,8.6nm,1.2s								
SCRK	**Sand Creek**	**92.72**	**18**	P		**P**	**23 12 19.4**	**+0.1**	
	baz=219								
J25K	**Salcha River,**	**92.84**	**17**	P		**P**	**23 12 19.6**	**-0.2**	
J25K	**Salcha River,**	**92.84**	**17**	P		**P**	**23 12 19.4**	**-0.4**	
	baz=218								
F10A	**Beach Ranch, E**	**93.05**	**41**	P		**P**	**23 12 21.8**	**+0.6**	
M29M	**Somme Creek**	**93.22**	**20**	P		**P**	**23 12 22.5**	**+0.8**	
	baz=224								
J26L	**Joseph Creek**	**93.24**	**17**	P		**P**	**23 12 21.6**	**0.0**	
J26L				IAmb		IAmb	23 12 23.9		
	comp=Z,6.7nm,0.8s								
J26L	**Joseph Creek**	**93.24**	**17**	P		**P**	**23 12 22.0**	**+0.4**	
	baz=219								
K27K	**Chicken**	**93.30**	**18**	P		**P**	**23 12 23.2**	**+1.4**	
	baz=221								
DLBC	**Dease Lake**	**93.58**	**26**	LR		LR	23 49 40.7		
	comp=Z,650nm,18.8s,baz=264,slow=32								
PLCA	**Paso Flores**	**93.59**	**137**	LR		LR	23 43 55.5		
	comp=Z,144nm,21.6s,baz=234,slow=29								
HLID	**Hailey**	**93.64**	**44**	P		**P**	**23 12 24.7**	**+0.6**	
F22K	**John River**	**93.64**	**13**	P		**P**	**23 12 24.7**	**+1.3**	
	baz=212								
L29M	**L29M**	**93.81**	**20**	P		**P**	**23 12 25.2**	**+0.9**	
	baz=224								
COLD	**Coldfoot**	**93.81**	**14**	P		**P**	**23 12 25.3**	**+1.2**	
	baz=214								
I26K	**Coal Creek Min**	**93.98**	**17**	P		**P**	**23 12 24.8**	**-0.1**	
I26K				IAmb		IAmb	23 12 36.7		
	comp=Z,19nm,1.4s								
I26K	**Coal Creek Min**	**93.98**	**17**	P		**P**	**23 12 25.8**	**+0.9**	
	baz=220								
DAWY	**Dawson**	**94.12**	**19**	P		**P**	**23 12 26.8**	**+1.2**	
	baz=223								
EGAK	**Eagle**	**94.13**	**18**	P		**P**	**23 12 25.5**	**-0.1**	
EGAK				IAmb		IAmb	23 12 31.5		
	comp=Z,12nm,1.2s								
E22K	**Anaktuvuk Pass**	**94.24**	**13**	P		**P**	**23 12 27.0**	**+0.9**	
	baz=212								
NEW	**Newport**	**94.25**	**39**	LR		LR	23 50 03.1		
	comp=Z,473nm,18.4s,baz=246,slow=32								
F24K	**Squaw Lake**	**94.56**	**14**	P		**P**	**23 12 28.5**	**+0.9**	
	baz=216								
I27K	**Kandik River**	**94.62**	**17**	P		**P**	**23 12 28.5**	**+0.5**	
	baz=221								
PALK	**Pallekele**	**94.87**	**276**	LR		LR	23 54 20.9		
	comp=Z,454nm,21.9s,baz=226,slow=35								
E24K	**Your Creek**	**94.89**	**14**	P		**P**	**23 12 30.2**	**+1.1**	
	baz=215								
G26K	**Porcupine Rive**	**95.08**	**16**	P		**P**	**23 12 31.2**	**+1.3**	
	baz=219								
H27K	**Steamboat Moun**	**95.12**	**17**	P		**P**	**23 12 31.0**	**+0.8**	
	baz=221								
F25K	**Christian Rive**	**95.14**	**15**	P		**P**	**23 12 31.8**	**+1.5**	
	baz=218								
D23K	**Nanushuk River**	**95.17**	**12**	P		**P**	**23 12 32.2**	**+1.9**	
	baz=213								
I29M	**Ogilvie Camp,**	**95.38**	**18**	P		**P**	**23 12 32.8**	**+1.4**	
	baz=224								
TXAR	**Lajitas Array**	**95.39**	**61**	LR		LR	23 47 49.0		
	comp=Z,330nm,19.8s,baz=256,slow=31								
ANMO	**Albuquerque**	**95.44**	**54**	LR		LR	23 48 50.5		
	comp=Z,313nm,19.0s,baz=248,slow=31								
ANMO	**Albuquerque**	**95.44**	**54**	*ceP*		**P**	**23 12 30.6**	**-2.0**	
ANMO				pmax		pmax			
	comp=Z,1.0nm,1.0s								
G27K	**Doyon Strip**	**95.52**	**16**	P		**P**	**23 12 33.1**	**+1.1**	
	baz=221								
E25K	**Arctic Village**	**95.58**	**14**	P		**P**	**23 12 32.9**	**+0.7**	
	baz=218								
F26K	**Sheenjek River**	**95.58**	**15**	P		**P**	**23 12 33.3**	**+1.1**	
	baz=219								
D24K	**Happy Valley**	**95.70**	**13**	P		**P**	**23 12 33.9**	**+1.2**	
	baz=215								
C24K	**Franklin Bluff**	**96.19**	**13**	P		**P**	**23 12 34.9**	**0.0**	
	baz=215								
O20A	**White River Ci**	**96.26**	**49**	P		**P**	**23 12 37.0**	**+0.8**	
	baz=246								
S22A	**4UR Ranch, Cre**	**96.30**	**52**	P		**P**	**23 12 36.1**	**-0.5**	
	baz=246								
PDAR	**Pinedale Array**	**96.46**	**46**	P		**P**	**23 12 37.0**	**-0.2**	
	comp=Z,0.8nm,0.8s,baz=226,slow=2.9,SNR=7.2								
PDAR				LR		LR	23 49 58.1		
	comp=Z,468nm,19.6s,baz=254,slow=32								
	comp=Z,0.8nm,0.8s								
E27K	**Coleen River**	**96.58**	**16**	P		**P**	**23 12 38.6**	**+1.8**	
	baz=221								
C26K	**Camden Bay**	**97.14**	**13**	P		Pdif	23 12 40.1	+0.8	
	baz=219								
C27K	**Jago River**	**97.18**	**14**	P		Pdif	23 12 40.5	+1.0	
	baz=220								
CMIG	**Matias Romero**	**98.34**	**75**	LR		LR	23 46 59.0		
	comp=Z,185nm,21.6s,baz=229,slow=29								
INK	**Inuvik**	**98.79**	**18**	LR		LR	23 51 10.9		
	comp=Z,531nm,21.0s,baz=214,slow=32								
TIXI	**Tiksi**	**98.91**	**347**	LR		LR	23 52 00.4		
	comp=Z,336nm,21.6s,baz=179,slow=32								
PCHI	**Peechi**	**100.07**	**277**	*eP*		Pdif	23 13 10.8	+17	
WMQ	**Urumqi**	**102.15**	**312**	*eP*		**Pdif**	**23 13 04.3**	**+2.0**	
WMQ				LR		LR			
	comp=Z,180nm,20.3s								
MKAR	**Makanchi Array**	**106.69**	**314**	Pdiff		**Pdif**	**23 13 24.2**	**+1.8**	
	comp=Z,0.5nm,0.7s,baz=92,slow=7.0,SNR=5.1								
ARCES	**ARCESS Array B**	**129.33**	**346**	PKP		**PKPdf**	**23 18 14.8**	**-0.5**	
	comp=Z,1.8nm,0.7s,baz=54,slow=2.0,SNR=14								
KIV	**Kislovodsk**	**134.20**	**310**	*i* PKIKP		**PKPdf**	**23 18 24.3**	**-1.1**	
KIV				pmax		pmax			
	comp=Z,3.0nm,1.1s								
OBN	**Obninsk**	**134.34**	**326**	*e*PKIKP		**PKPdf**	**23 18 24.6**	**-0.5**	
OBN				*e*			23 20 54.5		
OBN				*e*PPP		PPP	23 23 52.5		
OBN				pmax		pmax			
	comp=Z,3.0nm,0.8s								
FINES	**FINESS Array B**	**135.14**	**338**	PKhKP		PKPpre	23 18 21.1		
	comp=Z,3.8nm,1.0s,baz=114,slow=3.5,SNR=2.2								
NOA	**NORSAR Array B**	**139.70**	**346**	PKhKP		PKPpre	23 18 27.2		
	comp=Z,0.3nm,0.7s,baz=270,slow=13,SNR=1.5								
NOA				PKP		**PKPdf**	**23 18 34.7**	**-0.3**	
	comp=Z,0.5nm,0.7s,baz=36,slow=2.2,SNR=3.4								
SORM	**Soroca**	**142.17**	**321**	⇓P		**PKPdf**	**23 18 35.4**	**-4.3**	
SORM	**Soroca**	**142.17**	**321**	⇓PKIKP		**PKPdf**	**23 18 35.4**	**-4.3**	
GHRR		**143.73**	**318**	⇑P		PKPab	23 18 39.6	+0.2	
TESR	**Tescani**	**143.97**	**319**	⇑P		PKPbc	23 18 41.0	+0.1	
PANC	**Panciu**	**143.98**	**318**	⇑P		**PKPdf**	**23 18 42.7**	**-0.3**	
HARR	**Harsova**	**144.02**	**316**	⇓P		**PKPab**	**23 18 40.9**	**+0.4**	
HARR	**Harsova**	**144.02**	**316**	⇓PKIKP		PKPbc	23 18 40.9	-0.1	
BIZ	**Bicaz**	**144.08**	**320**	⇑P		**PKPab**	**23 18 40.2**	**-0.5**	
ODBI	**Odobesti**	**144.09**	**318**	⇑P		**PKPdf**	**23 18 43.3**	**+0.1**	
BUR08	**Bucovina Ar. S**	**144.24**	**322**	PKPdf		**PKPab**	**23 18 40.9**	**-0.5**	
VRI	**Vrincioaia**	**144.24**	**318**	⇑P		**PKPab**	**23 18 40.1**	**-1.2**	
VRI	**Vrincioaia**	**144.24**	**318**	⇑PKIKP		**PKPab**	**23 18 40.1**	**-1.2**	
BURAR	**Bucovina Array**	**144.24**	**322**	⇑P		**PKPab**	**23 18 40.3**	**-1.1**	
BURAR	**Bucovina Array**	**144.24**	**322**	⇑PKIKP		**PKPab**	**23 18 40.3**	**-1.1**	
PLOR	**Plostina**	**144.29**	**318**	⇑P		**PKPab**	**23 18 40.2**	**-1.4**	
PLOR	**Plostina**	**144.29**	**318**	⇑PKIKP		**PKPab**	**23 18 40.2**	**-1.4**	
PGOR	**Pogoanele**	**144.53**	**317**	⇓P		**PKPdf**	**23 18 44.9**	**+0.9**	
COVR	**Voineasa-Covas**	**144.57**	**319**	⇓P		**PKPab**	**23 18 41.0**	**-1.6**	
OZUR		**144.70**	**319**	⇑P		**PKPab**	**23 18 41.0**	**-2.1**	
NEHR	**Nehoiu**	**144.72**	**318**	⇓P		**PKPab**	**23 18 42.7**	**-0.4**	
MLR	**Muntele Rosu**	**144.90**	**318**	⇑P		**PKPab**	**23 18 41.3**	**-2.7**	
MLR	**Muntele Rosu**	**144.90**	**318**	PKPdf		PKPbc	23 18 44.4	+0.4	
MLR	**Muntele Rosu**	**144.90**	**318**	⇑PKIKP		**PKPab**	**23 18 41.3**	**-2.7**	
ARCR	**ARCALIA**	**145.02**	**322**	⇓P		**PKPdf**	**23 18 44.7**	**-0.1**	
SECR		**145.04**	**318**	⇓P		**PKPbc**	**23 18 43.9**	**-0.5**	
KOLS	**Kolonicke sedl**	**145.09**	**326**	*e*PKIKP		**PKPbc**	**23 18 44.4**	**+0.1**	
KOLS	**Kolonicke sedl**	**145.09**	**326**	*e*PKP		**PKPbc**	**23 18 44.4**	**+0.1**	
SULR		**145.10**	**317**	⇑P		**PKPbc**	**23 18 43.0**	**-1.4**	
MCD	**Coleburn Disti**	**145.10**	**356**	*e*P		**PKPbc**	**23 18 40.3**	**-3.7**	
BMR	**Baia Mare**	**145.18**	**323**	⇑P		**PKPdf**	**23 18 45.0**	**0.0**	
BMR	**Baia Mare**	**145.18**	**323**	⇑PKIKP		**PKPdf**	**23 18 45.0**	**0.0**	
UZH	**Uzhgorod**	**145.26**	**325**	*e*PKP2		**PKPbc**	**23 18 41.8**	**-3.0**	
UZH				*e*			23 18 44.1		
UZH				*e*			23 18 49.2		
KAC	**Achnashellach**	**145.27**	**358**	*e*P		**PKPbc**	**23 18 41.8**	**-2.8**	
VOIR		**145.48**	**319**	⇓P		**PKPdf**	**23 18 45.5**	**-0.2**	
VOIR		**145.48**	**319**	⇓PKIKP		**PKPdf**	**23 18 45.5**	**-0.2**	
OJC	**Ojcow**	**145.48**	**329**	PKPdf		**PKPdf**	**23 18 44.6**	**-0.9**	
OJC	**Ojcow**	**145.48**	**329**	PKIKP		**PKPdf**	**23 18 44.6**	**-0.9**	
CRVS	**Cervenica-Dubn**	**145.53**	**326**	*e*PKIKP		**PKPdf**	**23 18 45.4**	**-0.2**	
CRVS	**Cervenica-Dubn**	**145.53**	**326**	*e*PKP		**PKPdf**	**23 18 45.4**	**-0.2**	
CBBR	**Cluj-Babes-Bol**	**145.66**	**322**	⇑P		**PKPab**	**23 18 47.3**	**+0.7**	
CJR	**Cluj-Napoca**	**145.66**	**322**	⇑P		**PKPdf**	**23 18 44.8**	**-1.2**	
CJR	**Cluj-Napoca**	**145.66**	**322**	⇑PKIKP		**PKPdf**	**23 18 44.8**	**-1.2**	
ARR	**Arges**	**145.76**	**319**	⇓P		**PKPdf**	**23 18 45.9**	**-0.3**	
MESR	**Meseseni**	**145.78**	**323**	⇓P		**PKPbc**	**23 18 46.5**	**-0.1**	
HUMR	**Humele**	**145.97**	**317**	⇓P		**PKPbc**	**23 18 47.1**	**-0.1**	
DRGR		**146.12**	**322**	⇑P		**PKPdf**	**23 18 45.8**	**-1.0**	
DRGR		**146.12**	**322**	⇑PKP2		**PKPdf**	**23 18 45.8**	**-1.0**	
INVG	**Invergeldie, C**	**146.30**	**357**	*e*P		**PKPdf**	**23 18 44.9**	**-1.8**	
LANS	**Liptovska Anna**	**146.36**	**328**	*e*PKP2		**PKPab**	**23 18 49.7**	**+0.5**	
LANS	**Liptovska Anna**	**146.36**	**328**	*e*PKP		**PKPab**	**23 18 49.7**	**+0.5**	
OKC	**Ostrava-Krasne**	**146.52**	**330**	*e*PKP2		**PKPdf**	**23 18 46.9**	**-0.4**	
OKC				MLR		MLR			
	comp=Z,200nm,18.6s								
OKC	**Ostrava-Krasne**	**146.52**	**330**	*e*PKP		**PKPdf**	**23 18 46.9**	**-0.4**	
OKC				AMS		AMS	00 22 00.0		
	comp=Z,200nm,18.6s								
EAB	**Aberfoyle**	**146.55**	**357**	*e*P		**PKPdf**	**23 18 45.8**	**-1.3**	
MORC	**Moravsky Berou**	**146.84**	**330**	⇓P		**PKPbc**	**23 18 49.0**	**-0.7**	
MORC	**Moravsky Berou**	**146.84**	**330**	PKPdf		**PKPdf**	**23 18 47.8**	**-0.1**	
MORC	**Moravsky Berou**	**146.84**	**330**	⇓PKP2		**PKPbc**	**23 18 49.0**	**-0.7**	
MORC	**Moravsky Berou**	**146.84**	**330**	*e*PKP		**PKPdf**	**23 18 47.1**	**-0.8**	
OSTC	**Ostas**	**146.85**	**333**	*e*PKP		**PKPbc**	**23 18 49.6**	**-0.1**	
OSTC				*ex*		x	23 18 57.3		
OSTC				AMS		AMS	00 21 00.0		
	comp=Z,300nm,25.0s								
GZR	**Gura Zlata**	**146.86**	**320**	⇓P		**PKPdf**	**23 18 47.2**	**-0.9**	
GZR	**Gura Zlata**	**146.86**	**320**	⇓PKHKP		PKPpre	23 18 47.2		
EBL	**Broad Law**	**146.89**	**356**	*e*P		**PKPdf**	**23 18 47.3**	**-0.4**	
PGBU	**Glenifferbraes**	**146.93**	**357**	*e*P		**PKPbc**	**23 18 48.9**	**-0.7**	
PSZ	**Piszkesteto**	**146.96**	**326**	PKP		**PKiKP**	**23 18 55.1**	**+2.4**	
DPC	**Dobruska-Polom**	**146.96**	**332**	*e*PKP2		**PKPbc**	**23 18 49.5**	**-0.5**	
DPC				MLR		MLR			
	comp=Z,300nm,19.7s								
DPC	**Dobruska-Polom**	**146.96**	**332**	*e*PKP		**PKPbc**	**23 18 49.5**	**-0.5**	
DPC				AMS		AMS	00 20 10.0		
	comp=Z,300nm,19.7s								
KRLC	**Kraliky**	**146.96**	**332**	*e*PKP2		**PKPbc**	**23 18 49.6**	**-0.4**	
KRLC				MLR		MLR			
	comp=Z,300nm,22.3s								
KRLC	**Kraliky**	**146.96**	**332**	*e*PKP		**PKPbc**	**23 18 49.6**	**-0.4**	
KRLC				AMS		AMS	00 24 20.0		
	comp=Z,300nm,22.3s								
UPC	**Upice**	**146.97**	**333**	*e*PKP2		**PKPdf**	**23 18 49.1**	**+1.1**	
UPC				MLR		MLR			
	comp=Z,300nm,23.4s								
UPC	**Upice**	**146.97**	**333**	*e*PKP		**PKPdf**	**23 18 49.1**	**+1.1**	
UPC				AMS		AMS	00 20 30.0		
	comp=Z,300nm,23.4s								
SIRR	**Siria**	**147.02**	**322**	⇑P		**PKPdf**	**23 18 48.5**	**+0.2**	
VYHS	**Vyhne**	**147.11**	**328**	*e*PKP2		**PKPbc**	**23 18 49.8**	**-0.7**	
VYHS	**Vyhne**	**147.11**	**328**	*e*PKP		**PKPbc**	**23 18 49.8**	**-0.7**	
HERR	**Herculane**	**147.36**	**320**	⇓P		**PKPbc**	**23 18 50.9**	**-0.3**	
BZS	**Buzias**	**147.42**	**321**	⇓P		**PKPbc**	**23 18 50.3**	**-1.1**	
BZS	**Buzias**	**147.42**	**321**	⇓PKP2		**PKPbc**	**23 18 50.3**	**-1.1**	
JAVC	**Velka Javorina**	**147.43**	**329**	*e*PKP		**PKPdf**	**23 18 49.9**	**+1.0**	
BRG	**Berggiesshubel**	**147.53**	**335**	*e*PKP		**PKPbc**	**23 18 51.5**	**0.0**	
BRG				Amp			23 18 55.1		
	comp=Z,9.7nm,0.8s								
BRG	**Berggiesshubel**	**147.53**	**335**	*e*PKP2		**PKPbc**	**23 18 51.5**	**0.0**	
BRG				pmax		pmax			
	comp=Z,10.0nm,0.8s								
CLL	**Collm**	**147.54**	**336**			**PKPbc**	**23 18 51.6**	**+0.1**	
CLL	**Collm**	**147.54**	**336**	PKP2		**PKPbc**	**23 18 51.6**	**+0.1**	
CLL	**Collm**	**147.54**	**336**	*e*PKPdf		**PKPdf**	**23 18 49.0**	**+0.1**	
	comp=Z,5.0nm,1.1s								
CLL				*i* PKPbc		**PKPbc**	**23 18 51.4**	**-0.1**	
	comp=Z,12nm,0.8s								
CLL				*e*PKiKP		**PKiKP**	**23 18 54.0**	**+0.3**	
CLL				*e*PKPlp			23 18 55.0		
	comp=Z,200nm,16.7s								
CLL				*e*PP		**PP**	**23 22 15.0**	**-2.3**	
CLL				*e*PPP		PPP	23 25 34.0		
CLL				*e*SKKSac		SKKSac	23 29 18.0	+8.6	
CLL				*e*PSKS			23 32 36.0		
CLL				*e*(SKKSdf)			23 34 48.0		
CLL				*ex*		x	23 37 30.0		
CLL				*e*SS		**SS**	**23 41 24.0**	**+3.7**	
CLL				*e*SSS		SSS	23 46 56.0		
CLL				*e*SSSS			23 51 06.0		
CLL				Lm		MLR	00 28 00.0		
	comp=N,200nm,20.1s								
CLL				Lm		MLR	00 28 00.0		
	comp=E,100nm,20.4s								
CLL				Lm		MLR	00 28 00.0		
	comp=Z,200nm,20.7s								
PVCC	**Panska Ves**	**147.56**	**334**	*e*PKP2		**PKPbc**	**23 18 51.7**	**+0.1**	
PVCC				MLR		MLR			
	comp=Z,200nm,18.0s								
PVCC	**Panska Ves**	**147.56**	**334**	*e*PKP		**PKPbc**	**23 18 51.7**	**+0.1**	
PVCC				AMS		AMS	00 30 00.0		
	comp=Z,200nm,18.0s								
VRAC	**Vranov**	**147.60**	**331**	⇑P		**PKPbc**	**23 18 52.2**	**+0.4**	
VRAC	**Vranov**	**147.60**	**331**	⇑PKP2		**PKPbc**	**23 18 52.2**	**+0.4**	
VRAC	**Vranov**	**147.60**	**331**	*e*PKP		**PKPdf**	**23 18 48.5**	**-0.6**	
NEWG	**New Galloway**	**147.61**	**357**	*e*P		**PKPdf**	**23 18 48.6**	**-0.3**	
EDMD	**Edmundbyers**	**147.74**	**355**	*e*P		**PKPdf**	**23 18 49.4**	**+0.3**	
MDVR	**Moldovita**	**147.83**	**320**	⇑P		**PKPbc**	**23 18 52.1**	**-0.5**	
BLKB	**Belogradchik**	**147.86**	**317**	⇑P		**PKPdf**	**23 18 49.8**	**0.0**	
KRUC	**Moravsky**	**147.87**	**331**	*e*PKP		**PKPdf**	**23 18 49.7**	**+0.1**	
MODS	**Modra-Piesok**	**147.95**	**329**	*e*PKIKP		**PKPdf**	**23 18 50.5**	**+0.8**	
MODS	**Modra-Piesok**	**147.95**	**329**	*e*PKP		**PKPdf**	**23 18 50.5**	**+0.8**	
PRU	**Pruhonice**	**147.98**	**333**	*e*PKP2		**PKPbc**	**23 18 52.3**	**-0.5**	
PRU				MLR		MLR			
	comp=Z,200nm,21.7s								
PRU	**Pruhonice**	**147.98**	**333**	*e*PKP		**PKPbc**	**23 18 52.3**	**-0.5**	
PRU				AMS		AMS	00 24 30.0		
	comp=Z,200nm,21.7s								
VTS	**Vitosha**	**148.00**	**315**	⇓P		**PKPdf**	**23 18 50.2**	**0.0**	
VTS	**Vitosha**	**148.00**	**315**	⇓PKIKP		**PKPdf**	**23 18 50.2**	**0.0**	
TREC	**Trest**	**148.11**	**332**	*e*PKP2		**PKPbc**	**23 18 52.5**	**-0.7**	
TREC				MLR		MLR			
	comp=Z,500nm,28.9s								
TREC	**Trest**	**148.11**	**332**	*e*PKP		**PKPbc**	**23 18 52.5**	**-0.7**	
TREC				AMS		AMS	00 21 30.0		
	comp=Z,500nm,28.9s								
CSKK	**Cskako**	**148.16**	**327**	PKP		**PKPbc**	**23 18 53.2**	**-0.2**	
BOVS	**Bovan**	**148.45**	**318**	⇑P		**PKPdf**	**23 18 51.4**	**+0.7**	
WIM	**Isle of Man**	**148.60**	**357**	*e*P		**PKPbc**	**23 18 53.6**	**-0.7**	
MPLH	**Magyarpolny**	**148.65**	**327**	PKP		**PKPab**	**23 18 58.7**	**+0.5**	
MORH	**Mrgy, Hungar**	**148.71**	**325**	⇓P		**PKPdf**	**23 18 52.4**	**+1.4**	
MORH	**Mrgy, Hungar**	**148.71**	**325**	PKP		**PKPbc**	**23 18 54.0**	**-0.7**	
FRGS	**Fruska Gora**	**148.72**	**322**	⇑P		**PKPbc**	**23 18 54.5**	**-0.4**	
SOP	**Sopron**	**148.78**	**329**	PKP		**PKiKP**	**23 18 56.7**	**+0.3**	
RONA	**Rosalia, Austr**	**148.90**	**329**	*e*P		**PKPbc**	**23 18 54.9**	**-0.4**	
	comp=Z,4.5nm,0.6s								
CONA	**Conrad Observa**	**148.94**	**330**	*e*P		**PKPbc**	**23 18 54.9**	**-0.6**	
	comp=Z,5.9nm,0.8s								
CKRC	**Cesky Krumlov**	**148.97**	**332**	*e*PKP		**PKPdf**	**23 18 52.4**	**+1.0**	
CKRC				*ex*		x	23 19 00.0		
KHC	**Kasperske Hory**	**149.04**	**333**	*e*PKP2		**PKPbc**	**23 18 55.4**	**-0.2**	
KHC				MLR		MLR			
	comp=Z,200nm,19.6s								
KHC	**Kasperske Hory**	**149.04**	**333**	*e*PKP		**PKPbc**	**23 18 55.4**	**-0.2**	
KHC				*e*pPKP		**PKPab**	**23 18 59.9**	**+0.1**	
KHC				*ex*		x	23 19 08.5		
KHC				AMS		AMS	00 18 10.0		
	comp=Z,200nm,19.6s								
GEC2	**GERESS Array S**	**149.21**	**333**			**PKPbc**	**23 18 54.7**	**-1.4**	
GERES	**GERESS Array B**	**149.21**	**333**	PKPbc		**PKPbc**	**23 18 54.2**	**-1.9**	
	comp=Z,5.0nm,0.8s,baz=17,slow=1.8,SNR=16								
GERES				PKPab		**PKPab**	**23 19 00.1**	**-0.5**	
	comp=Z,4.8nm,0.7s,baz=41,slow=5.2,SNR=23								
GERES	**GERESS Array B**	**149.21**	**333**			**PKPbc**	**23 18 55.3**	**-0.9**	
GERES	**GERESS Array B**	**149.21**	**333**	PKP2		**PKPbc**	**23 18 55.3**	**-0.9**	
WME	**Myndd Eilian**	**149.34**	**357**	*e*P		**PKPbc**	**23 18 55.6**	**-0.5**	
YRC	**Rhoscolyn**	**149.49**	**357**	*e*P		**PKPbc**	**23 18 56.0**	**-0.5**	
MOA	**Molln**	**149.72**	**331**	*e*P		**PKPbc**	**23 18 57.0**	**-0.3**	
	comp=Z,3.6nm,0.6s,SNR=4.6								
FOEL	**Foel Wylfa**	**149.77**	**355**	*e*P		**PKPdf**	**23 18 53.6**	**+1.1**	
HLM1	**Long Mynd**	**150.12**	**355**	*e*P		**PKPdf**	**23 18 53.9**	**+0.8**	
SOKA	**Soboth**	**150.23**	**329**	*e*P		**PKPbc**	**23 18 57.9**	**-0.8**	
	comp=Z,2.7nm,0.7s								
BTNL	**Ternell**	**150.38**	**343**	*d*PKiKP		**PKPbc**	**23 18 58.7**	**-0.1**	
MEM	**Membach**	**150.39**	**343**	*d*PKiKP		**PKPbc**	**23 18 58.0**	**-0.8**	
BSTI	**Sart Tilman**	**150.53**	**344**	*d*PKiKP		**PKPbc**	**23 18 59.0**	**-0.1**	
OBKA	**Obir**	**150.58**	**329**	*e*P		**PKPbc**	**23 18 58.8**	**-0.8**	
	comp=Z,2.8nm,0.7s								
BHOU	**Houvegnez**	**150.62**	**343**	*d*PKPdf		**PKPdf**	**23 18 56.7**	**+2.8**	
BHOU				*d*PKPbc		**PKPab**	**23 19 04.6**	**-1.6**	
MCH1	**Michaelchurch**	**150.64**	**355**	*e*P		**PKPbc**	**23 18 56.8**	**-2.6**	
KBA	**Koelnbreinsper**	**150.72**	**331**	*e*P		**PKPbc**	**23 18 58.8**	**-1.2**	
	comp=Z,4.9nm,0.7s								
BCLA	**Clavier**	**150.75**	**344**	*d*PKP		**PKPab**	**23 19 03.9**	**-2.8**	
MONM	**Monmouth**	**150.78**	**355**	*e*P		**PKPbc**	**23 18 57.2**	**-2.4**	
MYKA	**Terra Mystica**	**150.92**	**330**	*e*P		**PKPbc**	**23 18 59.2**	**-1.1**	
	comp=Z,3.5nm,0.6s								
BMRD	**Maredsous**	**150.99**	**344**	*d*PKiKP		**PKPbc**	**23 18 59.1**	**-1.1**	
SWN1	**Swindon**	**151.01**	**353**	*e*P		**PKPbc**	**23 18 59.7**	**-0.5**	
RCHB	**Rochefort**	**151.01**	**344**	*d*PKiKP		**PKPbc**	**23 18 59.8**	**-0.4**	
PRED	**Cave del Predi**	**151.09**	**330**			**PKPbc**	**23 18 58.7**	**-2.0**	
WLF	**Walferdange**	**151.21**	**342**			**PKPbc**	**23 19 00.8**	**0.0**	
WLF	**Walferdange**	**151.21**	**342**	PKIKP		**PKPbc**	**23 19 00.8**	**0.0**	
WLF	**Walferdange**	**151.21**	**342**	*d*PKiKP		**PKPbc**	**23 19 00.7**	**0.0**	
DOU	**Dourbes**	**151.23**	**344**	*d*PKPdf		**PKPdf**	**23 18 56.5**	**+1.7**	
WATA	**Walderalm**	**151.28**	**333**	*i* P		**PKPbc**	**23 19 00.4**	**-0.8**	
	comp=Z,4.2nm,0.7s								
WTTA	**Wattenberg**	**151.31**	**333**	*e*P		**PKPbc**	**23 19 00.8**	**-0.6**	
	comp=Z,3.2nm,0.5s,SNR=7.4								
ABTA	**Abfaltersbach**	**151.34**	**331**	*e*P

PV13	Radium Mtn., P	3.52	131		Pn		23 26 50.7	+1.2
PV15	Paradox Valley	3.60	126		Pn		23 26 51.5	+0.8
YPP	Pitchstone Pla	3.90	15		Pn		23 26 55.9	+1.1
YPP				IAML			23 27 23.1	
	comp=E,3.7nm,2.7s							
YPP				IAML			23 28 19.1	
	comp=N,4.0nm,2.7s							
NVAR	Mina Array Bea	5.16	248	Pg	Pg		23 27 30.9	-1.5
	comp=N,0.2nm,0.3s,baz=72,slow=16,SNR=7.6							
NVAR				Lg	Lg		23 28 40.0	
	comp=N,0.1nm,0.3s,baz=76,slow=16,SNR=2.9							
I56US	NEWPORT INFRAS	8.52	337	*i*			00 17 40.0	
	baz=157,slow=316,SNR=3.1							

IDC ***14*** *00:00:50.0±1.0,9.64S×114.02E,h0km,mb4.1/10, mbtmp4.1/11,ML3.7/1,MS3.3/8,Error ellipse: s-maj=52.7km s-min=15.3km az=50.0*

DJA ***14*** *00:00:54.9±0.5,10°S±5°×11°4E±°,h10km,M4.4/13, mb4.7/1,MLv4.2/13*

NEIC ***14*** *00:00:54.4±2.9,9.88S±0.05×113.94E±0.06,h35km±2km, mb4.3/15,Error ellipse: s-maj=12.4km s-min=4.6km az=130.0*

ISC 14 00:00:54.2±0.5,9.86S±0.06×113.93E±0.05,h35km,n67, σ1s52/69,mb4.3/16,MS3.2/4,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.40	9	P	Pn	00 01 17.7	+0.4
JAGI				S	Sn	00 01 35.4	+0.9
JAGI	Jajag, Banyuwa	1.40	9	P	Pn	00 01 17.6	+0.3
JAGI				S	Sn	00 01 34.2	-0.3
IGBI	Denpasar	1.59	49	P	Pn	00 01 20.4	+0.6
IGBI				S	Sn	00 01 40.7	+1.6
GMJI	Gumukmas	1.65	343	P	Pn	00 01 21.1	+0.4
DNP	Denpasar	1.73	47	P	Pn	00 01 23.9	+2.1
ABJI	Asem Bagus	2.07	8	P	Pn	00 01 29.8	+3.3
BLJI	Banyuglugur	2.12	351	P	Pn	00 01 30.4	+3.1
SRBI	Singaraja	2.17	36	P	Pn	00 01 30.5	+2.6
PWJI	Pagerwojo	2.78	311	P	Pn	00 01 38.3	+2.0
KMMI	Kalianget	2.79	1	P	Pn	00 01 38.5	+2.1
TWSI	Taliwang, Sumb	3.12	69	P	Pn	00 01 42.8	+1.8
PCJI	Pacitan	3.18	301	P	Pn	00 01 43.6	+1.9
NGJI	Ngawi	3.47	315	P	Pn	00 01 48.0	+2.2
UGM	Wanagama	3.88	300	P	Pn	00 01 54.0	+2.6
PLAI	Plampang	3.94	75	P	Pn	00 01 54.0	+1.8
LEM	Lembang	6.93	295	LR	LR	00 06 02.5	
	comp=Z,108nm,20.0s,baz=166,slow=45						
KAPI	Kappang	7.52	51	Pn	Pn	00 02 43.0	+1.5
	0.5nm,0.3s,baz=197,slow=4.8,SNR=3.0						
KAPI				Sn	Sn	00 04 04.4	-1.1
	0.9nm,0.3s,baz=84,slow=20,SNR=3.7						
KAPI				LR	LR	00 05 59.3	
	comp=Z,118nm,21.2s,baz=262,slow=42						
KAPI	Kappang	7.52	51	Pn	Pn	00 02 42.3	+0.8
MBWA	Marble Bar	12.55	154	Pn	Pn	00 03 47.5	-2.9
GIRL	Giralia	12.72	179	Pn	Pn	00 03 51.9	-0.7
PSA00	Pilbara Seismi	12.96	155	Pn	Pn	00 03 54.8	-1.3
PSA00	Pilbara Seismi	12.96	155	Pn	Pn	00 03 55.6	-0.4
FITZ	Fitzroy Crossi	14.01	127	Pn	Pn	00 04 08.6	-1.7
	0.3nm,0.3s,baz=314,slow=9.5,SNR=2.8						
FITZ				Sn	Sn	00 06 32.2	-12
	0.4nm,0.3s,baz=159,slow=22,SNR=10						
FITZ				LR	LR	00 09 13.1	
	comp=Z,136nm,19.5s,baz=318,slow=36 1.7nm,0.6s						
FITZ	Fitzroy Crossi	14.01	127	Pn	Pn	00 04 07.3	-2.9
KNRA	Kununurra	15.58	113	Pn	Pn	00 04 31.4	0.0
MTN	Manton Dam	17.13	102	Pn	Pn	00 04 48.1	-2.9
MTN				IAmb	IAmb	00 04 56.4	
	comp=Z,27nm,1.3s						
MORW	Morawa	19.21	174	P	Pn	00 05 16.6	+0.2
MORW				IAmb	IAmb	00 05 24.2	
	comp=Z,30nm,1.5s						
PSI	Prapat	19.53	309	LR	LR	00 13 41.1	
	comp=Z,87nm,19.9s,baz=117,slow=40						
WB0	Warramunga Arr	22.08	119	P	P	00 05 47.0	+0.6
WB0				IAmb	IAmb	00 06 11.2	
	comp=Z,9.8nm,1.2s						
WRA	Warramunga Arr	22.10	119	P	P	00 05 48.4	+1.7
	comp=Z,1.2nm,0.6s,baz=295,slow=12,SNR=8.5 comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	22.10	119	P	P	00 05 47.0	+0.3
AS31	Alice Springs	23.50	128	P	P	00 06 02.2	+1.0
ASAR	Alice Springs	23.50	128	P	P	00 06 03.0	+1.8
	comp=Z,2.0nm,0.6s,baz=304,slow=9.2,SNR=33						
ASAR				PcP	PcP	00 09 48.1	+1.7
	comp=Z,0.3nm,0.4s,baz=314,slow=1.7,SNR=4.6						
ASAR				S	S	00 10 17.4	+4.6
	comp=Z,0.5nm,0.8s,baz=299,slow=24,SNR=3.8						
ASAR				LR	LR	00 15 35.2	
	comp=Z,105nm,18.9s,baz=344,slow=38 comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	23.50	128	P	P	00 06 01.4	+0.2
FORT	Forrest	24.63	150	P	P	00 06 12.5	+1.0
COEN	Coen	28.90	101	P	P	00 06 50.2	+0.1
CMAR	Chiang Mai Arr	31.78	332	P	P	00 07 16.2	+0.7
	comp=Z,1.9nm,0.6s,baz=165,slow=8.4,SNR=11						
CMAR				LR	LR	00 19 47.4	
	comp=Z,13nm,18.9s,baz=125,slow=36 comp=Z,1.9nm,0.6s						
CTA	Charters Tower	32.78	112	LR	LR	00 20 15.6	
	comp=Z,42nm,18.0s,baz=259,slow=36						
STKA	Stephens Creek	33.71	135	P	P	00 07 33.2	+0.9
	comp=Z,1.6nm,0.4s,baz=287,slow=9.7,SNR=5.6 comp=Z,1.6nm,0.4s						
TAPN	Taplejung	44.88	326	*e*P	P	00 09 06.1	+0.2
RAMN	Ramite	45.19	325	*e*P	P	00 09 07.2	-1.1
	comp=Z,2.1nm,0.3s						
JIRN	Jiri	45.97	325	*e*P	P	00 09 14.6	0.0
	comp=Z,25nm,0.7s						
GUN	Gumba	46.33	325	*e*P	P	00 09 16.8	-0.6
PKI	Pulchoki	46.34	324	*e*P	P	00 09 16.0	-1.5
PKIN	Phulchoki	46.35	324	*e*P	P	00 09 16.4	-1.1
	comp=Z,5.7nm,0.5s						
DMN	Daman	46.55	324	*e*P	P	00 09 18.3	-0.7
	comp=Z,17nm,0.5s						
GKN	Gorkha	47.12	324	*e*P	P	00 09 22.7	-0.6
	comp=Z,18nm,0.5s						
DANN	Dangsing	47.89	323	*e*P	P	00 09 29.1	-0.4
	comp=Z,22nm,0.6s						
KSRS	Korea Array	48.86	15	P	P	00 09 34.9	-1.5
	comp=Z,0.3nm,0.3s,baz=178,slow=7.5,SNR=4.7 comp=Z,0.3nm,0.3s						
SONM	Songino Array	57.82	354	P	P	00 10 42.2	-0.1
	comp=Z,4.9nm,0.6s,baz=177,slow=8.6,SNR=27 comp=Z,4.9nm,0.6s						
MK31	Makanchi Array	63.07	336	P	P	00 11 17.9	-0.2
MK31				IAmb	IAmb	00 11 18.7	
	comp=Z,4.0nm,1.1s						
MKAR	Makanchi Array	63.07	336	P	P	00 11 17.8	-0.2
	comp=Z,1.6nm,0.5s,baz=150,slow=6.8,SNR=16 comp=Z,1.6nm,0.5s						
MKAR	Makanchi Array	63.07	336	P	P	00 11 17.3	-0.7
KK31	Karatay Array	65.89	327	P	P	00 11 35.3	-1.2
KK31				IAmb	IAmb	00 12 02.1	
	comp=Z,2.4nm,1.3s						
KKAR	Karatay Array	65.89	327	P	P	00 11 35.3	-1.2
ZALV	Zalesovo Beam	68.18	342	P	P	00 11 49.9	-0.9
	comp=Z,0.9nm,0.5s,baz=150,slow=4.6,SNR=5.0 comp=Z,0.9nm,0.5s						
GEYT	Alibeck	70.50	316	P	P	00 12 06.2	+0.6
	comp=Z,3.8nm,0.8s,baz=152,slow=9.6,SNR=6.6 comp=Z,3.8nm,0.8s						
GEYT	Alibeck	70.50	316	P	P	00 12 05.4	-0.2
GEYT				IAmb	IAmb	00 12 07.6	
	comp=Z,4.9nm,0.9s						
YAK	Yakutsk	72.72	8	P	P	00 12 17.2	-1.1
ATD	Arta Tunnel	73.78	285	LR	LR	00 42 28.3	
	comp=Z,82nm,18.4s,baz=336,slow=34						
ABKAR	Akbulak array	75.45	327	P	P	00 12 34.2	-0.4
ABKAR	Akbulak array	75.45	327	P	P	00 12 34.3	-0.3
ABKAR				IAmb	IAmb	00 12 36.2	
	comp=Z,5.1nm,0.9s						
ARU	Arti	80.23	332	P	P	00 13 00.6	-0.5
ARU				IAmb	IAmb	00 13 03.5	
	comp=Z,3.2nm,1.0s						
SNAA	Sanae	88.80	196	P	P	00 13 42.9	-1.3
SNAA				IAmb	IAmb	00 14 22.4	
	comp=Z,3.7nm,1.4s						
BRTR	Keskin Array B	88.86	311	P	P	00 13 46.2	+1.0
	comp=Z,1.6nm,0.9s,baz=120,slow=4.9,SNR=7.4 comp=Z,1.6nm,0.9s						
BRTR	Keskin Array B	88.86	311	P	P	00 13 45.7	+0.5
YKA	Yellowknife Ar	116.98	23	PKP	PKiKP	00 19 35.3	+0.3

comp=Z,0.5nm,0.8s,baz=327,slow=1.0,SNR=3.6

IDC 14 00:06:54.2±2.2,5.16S×125.65E,h0km,mb3.4/2, mbtmp3.5/3,ML3.0/1,Error ellipse: s-maj=349.0km s-min=30.4km az=63.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.96	151	Pn	Pn	00 10 51.4	-1.7
	0.1nm,0.3s,baz=325,slow=12,SNR=4.5 1.1nm,0.9s						
ASAR	Alice Springs	20.05	157	P	P	00 11 29.9	+0.8
	1.9nm,0.7s,baz=336,slow=11,SNR=13 1.9nm,0.7s						
MKAR	Makanchi Array	64.36	328	P	P	00 17 31.9	0.0
	0.1nm,0.4s,baz=120,slow=8.5,SNR=1.9 0.1nm,0.4s						

IDC ***14*** *00:33:50.9±9.3,36.41N×71.23E,h262km±101km,mb3.1/4, mbtmp3.7/7,Error ellipse: s-maj=58.7km s-min=52.0km az=122.0*

SOME ***14*** *00:33:52.0,38.03N×71.83E,h0km*

ISC 14 00:33:48.8±1.7,36.6N±0.1×70.4E±0.1,h200km,n13, σ2s34/15,mb3.6/4,3C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.50	357	*e*P	Pn	00 35 10.4	+0.8
IUG	417nm,0.7s			*e*S	Sn	00 36 10.9	-2.7
	81nm,1.1s						
KK31	Karatay Array	6.45	1	⇓Pn	Pn	00 35 18.2	-3.6
	1.6nm,0.4s,baz=178,slow=12,SNR=33			⇑Pg			
KK31						00 35 29.9	
	1.9nm,0.5s,baz=174,slow=12,SNR=6.0			⇓Lg	Lg	00 36 31.6	
KK31	3.3nm,0.4s,baz=159,slow=15,SNR=14						
MRKS	Merke	6.47	19	*e*P	Pn	00 35 25.0	+2.8
MRKS	2.0nm,0.2s			*e*S	Sn	00 36 35.9	-0.3
	21nm,0.9s						
TKM2	Tokmak 2	7.44	31	⇑Pn	Pn	00 35 34.8	0.0
TKM2	2.6nm,0.7s			⇓Sn	Sn	00 36 46.3	-13
	5.4nm,0.9s			⇑Lg	Lg	00 37 15.2	
TKM2	5.9nm,0.9s						
KRBS	Karabastau	8.12	28	*e*P	Pn	00 35 50.3	+6.8
KRBS	0.5nm,0.1s			*e*S	Sn	00 37 18.8	+3.8
	1.5nm,0.4s						
MKAR	Makanchi Array	13.47	37	P	Pn	00 36 51.0	-1.0
	1.5nm,1.1s,baz=207,slow=10,SNR=2.0						
AKTO	Aktyubinsk	16.41	331	P	Pn	00 37 29.9	+2.0
	0.8nm,0.3s,baz=114,slow=5.9,SNR=4.6						
ZALV	Zalesovo Beam	19.99	26	P	P	00 38 02.4	-3.4
	0.4nm,0.3s,baz=225,slow=10,SNR=2.9						
FINES	FINESS Array B	37.09	326	P	P	00 40 41.3	+1.8
	0.8nm,0.6s,baz=116,slow=8.7,SNR=5.8 0.8nm,0.6s						
ARCES	ARCESS Array B	40.83	338	P	P	00 41 10.1	-0.3
	2.7nm,1.1s,baz=115,slow=8.7,SNR=4.0 2.7nm,1.1s						
NB2	NORSAR Subarra	43.97	323	P	P	00 41 36.7	+0.9
	comp=Z,3.2nm,1.0s,baz=99,slow=7.9						
NOA	NORSAR Array B	43.97	323	P	P	00 41 36.8	+0.9
	comp=Z,0.9nm,0.7s,baz=98,slow=7.9,SNR=4.1 comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	65.23	268	P	P	00 44 08.9	-0.2
	comp=Z,0.3nm,0.5s,baz=54,slow=6.8,SNR=4.5 comp=Z,0.3nm,0.5s						

JMA ***14*** *00:46:48.5±0.3,23.2N±1.0×121.6E±1.0,h24km,MV3.0/11, TAIWAN REGION*

TAP ***14*** *00:46:48.2,23.21N×121.48E,h43km,ML3.3,C*

ISC 14 00:46:48.6±0.9,23.17N±0.02×121.55E±0.02,h32km±7km, n107,σ1s24/190,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	Changbin	0.17	329	P	Pn	00 46 55.5	+0.5
ECBN	baz=346			S	Sb	00 47 00.7	+1.8
	baz=346						
FULB	Fuli	0.24	277	*i* P	Pn	00 46 55.6	-0.3
FULB	baz=265			S	Sb	00 47 02.0	+1.9
	baz=265						
EYUL	Yuli	0.28	310	*i* P	Pn	00 46 55.7	-0.7
EYUL	baz=298			S	Sn	00 47 02.0	+0.4
	baz=298						
TWF1	Yuli	0.29	308	P	Pn	00 46 55.8	-1.0
TWF1	baz=297			S	Sn	00 47 01.4	-0.7
	baz=297						
EDH	Donghe	0.30	229	*i* P	Pn	00 46 56.5	-0.2
EDH	baz=221			*i* S	Sn	00 47 02.9	+0.8
	baz=221						
ECS	Chishang	0.31	256	P	Pn	00 46 56.5	-0.5
ECS	baz=255			S	Sn	00 47 03.0	+0.5
	baz=255						
YULB	Yu-li	0.32	314	P	Pb	00 46 55.9	-0.6
YULB	baz=304			S	Sn	00 47 01.2	-1.5
	baz=304						
HGSD	Ruisui	0.34	340	P	Pb	00 46 56.6	-0.2
HGSD	baz=348			S	Sn	00 47 04.2	+1.1
	baz=348						
EHY	Hungye	0.40	328	*i* P	Pb	00 46 56.7	-0.9
EHY	baz=324			*i* S	Sb	00 47 02.7	-0.9
	baz=324						
LONT	Longtian	0.47	236	*i* P	Pb	00 46 57.8	-0.8
LONT	baz=235			*i* S	Sb	00 47 04.8	-0.6
	baz=235						
ELDTW	Lidau	0.49	272	*i* P	Pn	00 46 57.8	-1.7
ELDTW	baz=266			S	Sb	00 47 04.8	-1.5
	baz=266						
EGFH	Guangfu	0.51	347	*i* P	Pn	00 46 58.4	-1.3
EGFH	baz=343			S	Sn	00 47 05.6	-1.7
	baz=343						
TEGC	Jichi Village	0.54	359	P	Pn	00 46 59.6	-0.5
TEGC	baz=15			S	Sn	00 47 08.6	+0.6
	baz=15						
TTN	Taitung	0.55	222	*i* S	Sn	00 47 09.2	+0.7
	baz=222						
YUS	Yu-Shan	0.63	300	*i* P	Pn	00 47 00.6	-1.2
YUS	baz=299			*i* S	Sn	00 47 09.0	-2.1
	baz=299						
ESL	Shilin	0.65	351	*i* P	Pn	00 46 59.8	-1.8
ESL	baz=349			S	Sn	00 47 08.1	-2.8
	baz=349						
VWDT	VWDT	0.69	327	P	Pn	00 47 01.2	-1.0
VWDT	baz=334			S	Sn	00 47 09.5	-2.3
	baz=334						
TEYL	Yanliau Villag	0.70	4	P	Pn	00 47 02.2	-0.1
TEYL	baz=21			*e*S	Sb	00 47 13.6	+1.9
	baz=21						
STYH	Taoyuan	0.71	270	P	Pn	00 47 00.3	-2.1
STYH	baz=261			S	Sn	00 47 10.1	-2.2
	baz=261						
STYT	Tauyuan	0.73	270	P	Pn	00 47 01.8	-1.0
STYT	baz=261			S	Sn	00 47 11.4	-1.5
	baz=261						
ALS	Alishan	0.76	297	*i* P	Pn	00 47 02.8	-0.7
ALS	baz=292			*i* S	Sn	00 47 13.1	-0.9
	baz=292						
ECL	Taimali	0.79	224	*i* P	Pn	00 47 01.5	-2.1
ECL	baz=218			*e*S	Sn	00 47 11.4	-2.9
	baz=218						
ETM	Tongmen	0.79	356	P	Pn	00 47 02.0	-1.7
	baz=353						
HWA	Hwalien	0.81	4	P	Pn	00 47 03.1	-0.6
	baz=18						
SSLB	Suanglung	0.82	319	P	Pn	00 47 03.0	-1.0
SSLB	baz=322			S	Sn	00 47 12.8	-2.3
	baz=322						
WHYT	Xinyi Township	0.83	310	*i* P	Pn	00 47 03.6	-0.5
WHYT	baz=308			*i* S	Sn	00 47 13.9	-1.4
	baz=308						
OWD	Renai	0.85	336	*i* P	Pn	00 47 03.4	-1.2
OWD	baz=337			*i* S	Sn	00 47 12.8	-3.2
	baz=337						
TPUB	Ta-pu	0.85	279	P	Pn	00 47 04.2	-0.2
TPUB	baz=276			S	Sn	00 47 15.5	-0.4
	baz=276						
WTP	Ta-pu	0.86	275	*i* P	Pn	00 47 04.4	-0.2
WTP	baz=272			*i* S	Sn	00 47 16.6	+0.4
	baz=272						
SGST	Jiashian	0.89	265	*i* P	Pn	00 47 04.1	-0.9
SGST	baz=260			*i* S	Sn	00 47 16.2	-0.6
	baz=260						
CHN4	Tsaushan	0.90	282	*i* P	Pn	00 47 04.0	-1.0
CHN4	baz=279			*i* S	Sn	00 47 17.0	+0.1
	baz=279						
TWD	Chiawan	0.91	3	*i* P	Pn	00 47 03.8	-1.3
TWD	baz=355			S	Sn	00 47 15.8	-1.3
	baz=355						
WUSB	Renai	0.91	334	P	Pn	00 47 04.3	-1.0
WUSB	baz=335			S	Sn	00 47 15.1	-2.3
	baz=335						
SMLT	Sun Moon Lake	0.93	320	*i* P	Pn	00 47 05.0	-0.5
SMLT	baz=322			*i* S	Sn	00 47 16.6	-1.2
	baz=322						
CHN1	Nanshi	0.94	271	*i* P	Pn	00 47 05.7	+0.1
CHN1	baz=268			*i* S	Sn	00 47 18.8	+0.9
	baz=268						
SSD	Sandimen	0.94	244	*i* P	Pn	00 47 05.1	-0.6
SSD	baz=239			S	Sn	00 47 16.5	-1.5
	baz=239						
CHGB	Renai	0.95	339	P	Pn	00 47 05.0	-1.0
CHGB	baz=340			S	Sn	00 47 15.9	-2.7
	baz=340						
TSMG	Majia	0.95	241	*i* P	Pn	00 47 05.2	-0.5
TSMG	baz=235			S	Sn	00 47 16.1	-2.2
	baz=235						
SNST	Tainan City	0.97	273	*i* P	Pn	00 47 06.0	0.0
SNST	baz=270			*i* S	Sn	00 47 19.0	+0.3
	baz=270						
TWK	Hsinying	0.98	276	*i* P	Pn	00 47 06.0	-0.2
TWK	baz=273			*i* S	Sn	00 47 19.2	+0.1
	baz=273						
ETL	Fush Village	0.99	4	P	Pn	00 47 05.7	-0.6
ETL	baz=357			S	Sn	00 47 17.4	-1.8
	baz=357						
WJS	Zhushan	0.99	311	*i* P	Pn	00 47 06.8	+0.4
WJS	baz=310			*i* S	Sn	00 47 19.6	+0.3
	baz=310						
WPL	Puli Township	1.00	327	P	Pn	00 47 06.1	-0.4
NACB	baz=334 Ninganchiao	1.00	2	P	Pn	00 47 04.9	-1.5
NACB	baz=355			S	Sn	00 47 16.7	-2.8
	baz=355						
WHF	Hehuan Shan	1.01	345	*i* P	Pn	00 47 05.4	-1.5
WHF	baz=346			*i* S	Sn	00 47 17.9	-2.3
	baz=346						
TAW	Tawu	1.01	217	P	Pn	00 47 05.3	-1.2
TAW	baz=212			*i* S	Sn	00 47 17.5	-2.1
	baz=212						
MASBT	Mashibuluo	1.01	237	P	Pn	00 47 05.6	-1.0
MASBT	baz=229			S	Sn	00 47 18.3	-1.4
	baz=229						
SCST	Cishan	1.01	254	*i* P	Pn	00 47 07.3	+0.8
SCST	baz=250			*i* S	Sn	00 47 21.5	+1.8
	baz=250						
EAST	Anshuo	1.01	220	*i* P	Pn	00 47 05.2	-1.5
EAST	baz=210			*i* S	Sn	00 47 17.8	-2.1
	baz=210						
TAWH	Dawu Township	1.03	217	P	Pn	00 47 05.6	-1.2
TAWH	baz=207			S	Sn	00 47 17.0	-3.0
	baz=207						
DPDB	Guoxing	1.03	327	P	Pn	00 47 06.7	-0.2
DPDB	baz=331			S	Sn	00 47 19.9	-0.5
	baz=331						
ETLH	Xiulin Townshi	1.03	357	P	Pn	00 47 05.2	-1.8
WGK	baz=359 Gukeng	1.04	300	P	Pn	00 47 07.6	+0.6
WGK	baz=307			*i* S	Sn	00 47 21.4	+0.9
	baz=307						
WCS	Beigang Elemen	1.06	327	P	Pn	00 47 06.1	-1.1
WCS	baz=330			*i* S	Sn	00 47 19.1	-1.8
	baz=330						
WDLH	Douliu	1.06	299	*i* P	Pn	00 47 07.6	+0.3
WDLH	baz=305			*i* S	Sn	00 47 21.4	+0.4
	baz=305						
WNT	Mingjian	1.06	312	*i* P	Pn	00 47 07.5	+0.2
WNT	baz=310			*i* S	Sn	00 47 21.2	+0.2
	baz=310						
SGLT	Jiouru	1.07	246	*e*P	Pn	00 47 09.0	+1.6
CHY	baz=242 Chiayi	1.08	288	*i* P	Pn	00 47 07.9	+0.3
CHY	baz=285			*i* S	Sn	00 47 21.8	+0.3
	baz=285						
CHN3	Shinhua	1.09	265	S	Sb	00 47 25.5	+2.6
TWM1	baz=272 Shoushan	1.09	252	*i* P	Pn	00 47 08.9	+1.2
TWM1	baz=248			S	Sb	00 47 24.2	+1.3
	baz=248						
FUSS	Fushou	1.11	345	*i* P	Pn	00 47 07.4	-0.8
FUSS	baz=353			S	Sn	00 47 20.5	-2.0
	baz=353						
SHHT	Tainan City	1.11	263	P	Pn	00 47 09.0	+1.0
SHHT	baz=259			S	Sb	00 47 25.0	+1.5
	baz=259						
LAY	Lan-yu	1.12	180	*i* P	Pn	00 47 07.3	-0.9
LAY	baz=171			*i* S	Sn	00 47 22.1	-0.5
	baz=171						
TWT	Tachien	1.13	343	*i* P	Pn	00 47 08.0	-0.4
SSPT	baz=335 Xinbi	1.13	233	*i* P	Pn	00 47 08.4	+0.1
TDCB	baz=223 Techi	1.14	342	P	Pn	00 47 07.8	-0.6
SSHA	baz=335 Shanhua	1.16	269	S	Sb	00 47 25.6	+0.7
LYUB	baz=265 Lan-yu	1.16	178	P	Pn	00 47 07.5	-1.1
LYUB	baz=170			S	Sn	00 47 22.2	-1.3
	baz=170						
SCZT	Fangliau	1.17	227	*i* P	Pn	00 47 08.8	0.0
SCZT	baz=215			*i* S	Sn	00 47 22.6	-0.9
	baz=215						

WWF	**Wufeng**	**1.17**	**318**	P		**Pn**	**00 47 08.5**	**-0.3**
	baz=306								
WWF				*i* S		**Sn**	**00 47 23.7**	**+0.1**
	baz=306								
SLIU	**Shizi**	**1.17**	**216**	*i* P		**Pn**	**00 47 08.1**	**-0.8**
	baz=207								
SLIU				S		**Sn**	**00 47 22.2**	**-1.5**
	baz=207								
ICHU	**Yijhu**	**1.18**	**280**	P		**Pn**	**00 47 08.8**	**-0.1**
	baz=277								
ICHU				*i* S		**Sn**	**00 47 23.9**	**0.0**
	baz=277								
WTK	**Tuku**	**1.18**	**296**	*i* P		**Pn**	**00 47 08.9**	**0.0**
	baz=294								
WTK				*i* S		**Sn**	**00 47 23.4**	**-0.6**
	baz=294								
WYL	**Yuanlin Townsh**	**1.19**	**312**	S		**Sn**	**00 47 25.1**	**+1.1**
	baz=310								
WHP	**Taichung City**	**1.23**	**334**	*i* P		**Pn**	**00 47 10.2**	**+0.5**
	baz=338								
WHP				S		**Sn**	**00 47 25.4**	**0.0**
	baz=338								
CHN8	**Yiju**	**1.24**	**278**	*i* P		**Pn**	**00 47 09.9**	**+0.2**
	baz=276								
CHN8				*i* S		**Sn**	**00 47 25.9**	**+0.5**
	baz=276								
TCU	**Taichung**	**1.26**	**321**	*i* P		**Pn**	**00 47 11.1**	**+1.1**
	baz=308								
TCU				*i* S		**Sn**	**00 47 26.2**	**+0.4**
	baz=308								
NNSB	**Datong**	**1.26**	**353**	P		**Pn**	**00 47 09.3**	**-0.9**
	baz=4.0								
NNSH	**Datong**	**1.26**	**353**	*i* P		**Pn**	**00 47 09.2**	**-1.0**
	baz=4.0								
WSL	**Shuilin Townsh**	**1.26**	**286**	P		**Pn**	**00 47 10.2**	**+0.1**
	baz=284								
WSL				S		**Sn**	**00 47 25.4**	**-0.6**
	baz=284								
ENA	**Nanau**	**1.27**	**8**	P		**Pn**	**00 47 09.0**	**-1.1**
	baz=360								
ENA				*e*S		**Sn**	**00 47 24.8**	**-1.3**
	baz=360								
NNS	**Nan Shan**	**1.27**	**353**	*i* P		**Pn**	**00 47 08.9**	**-1.5**
	baz=4.0								
WCHH	**Zhanghua**	**1.28**	**315**	*i* P		**Pn**	**00 47 10.7**	**+0.4**
	baz=313								
WCHH				*i* S		**Sn**	**00 47 27.3**	**+0.9**
	baz=313								
EWUT	**Wuta**	**1.29**	**9**	P		**Pn**	**00 47 09.0**	**-1.4**
	baz=359								
EWUT				S		**Sn**	**00 47 26.9**	**+0.3**
	baz=359								
WSSB	**Gushan**	**1.30**	**246**	*e*P		**Pb**	**00 47 13.1**	**+0.6**
	baz=243								
WRL	**Guolierlin Hig**	**1.30**	**304**	P		**Pn**	**00 47 09.8**	**-0.7**
	baz=302								
WRL				S		**Sn**	**00 47 25.0**	**-1.8**
	baz=302								
WSF	**Szhu**	**1.30**	**291**	*i* S		**Sn**	**00 47 27.1**	**+0.1**
	baz=289								
SMST	**Manzhou Townsh**	**1.32**	**210**	P		**Pn**	**00 47 10.3**	**-0.5**
	baz=197								
SMST				S		**Sn**	**00 47 25.6**	**-1.7**
	baz=197								
WLCH	**Liuqiu**	**1.35**	**233**	*e*S		**Sb**	**00 47 33.3**	**+3.0**
	baz=229								
LATG	**Datong**	**1.36**	**359**	P		**Pn**	**00 47 10.7**	**-0.8**
	baz=1.0								
TWQ1	**Liyutan**	**1.37**	**329**	*i* P		**Pn**	**00 47 12.4**	**+0.9**
	baz=327								
TWQ1				*i* S		**Sn**	**00 47 30.0**	**+1.4**
	baz=327								
HEN	**Hengchun**	**1.38**	**213**	P		**Pn**	**00 47 12.8**	**+1.2**
	baz=200								
HEN				S		**Sn**	**00 47 29.1**	**+0.3**
	baz=200								
TSEB	**Hengchuen, Pin**	**1.40**	**206**	S		**Sn**	**00 47 29.3**	**0.0**
	baz=196								
TWKBT	**Hengchun**	**1.40**	**209**	P		**Pn**	**00 47 11.0**	**-0.9**
	baz=197								
TWKBT				S		**Sn**	**00 47 28.4**	**-0.9**
	baz=197								
TWK1	**Hengchun**	**1.40**	**210**	P		**Pn**	**00 47 10.8**	**-1.1**
	baz=197								
TWK1				S		**Sn**	**00 47 28.4**	**-0.9**
	baz=197								
NDT	**Datong Townshi**	**1.43**	**359**	*i* P		**Pn**	**00 47 11.0**	**-1.3**
	baz=10.0								
NSY	**Sanyi**	**1.44**	**330**	*i* P		**Pn**	**00 47 13.3**	**+0.8**
	baz=328								
NSY				*i* S		**Sn**	**00 47 32.5**	**+2.3**
	baz=328								
WDJ	**Dajia District**	**1.44**	**325**	P		**Pn**	**00 47 13.3**	**+0.9**
	baz=322								
WDJ				*i* S		**Sn**	**00 47 32.6**	**+2.4**
	baz=322								
ENTT	**Nioudou**	**1.46**	**1**	*i* P		**Pn**	**00 47 11.2**	**-1.7**
	baz=3.0								
JYNG	**Yonaguni jima**	**1.81**	**45**	P		**Pn**	**00 47 18.2**	**+0.7**
JYNG				*e*S		**Sn**	**00 47 39.7**	**+0.3**
YOJ	**Yonaguni jima**	**1.86**	**46**	P		**Pn**	**00 47 19.1**	**+0.8**
YOJ				*e*S		**Sn**	**00 47 41.0**	**+0.4**
HATJ	**Hateruma jima**	**2.25**	**66**	*e*S		**Sn**	**00 47 50.6**	**+0.3**
IRIF	**Iriomote-Funau**	**2.31**	**59**	P		**Pn**	**00 47 25.4**	**+1.0**
JKRS	**Kuro-shima**	**2.49**	**64**	P		**Pn**	**00 47 27.9**	**+0.9**
JKRS				*e*S		**Sn**	**00 47 57.1**	**+0.8**
JIJ	**Ishigaki jima**	**2.66**	**63**	P		**Pn**	**00 47 29.5**	**+0.3**
JIJ				S		**Sn**	**00 47 59.9**	**-0.5**
JISG	**Ishigakijimahi**	**2.90**	**60**	*e*P		**Pn**	**00 47 32.4**	**-0.1**
JISG				S		**Sn**	**00 48 05.5**	**-0.7**
JTJ	**Tarama**	**3.24**	**62**	P		**Pn**	**00 47 38.0**	**+0.8**
JTJ				S		**Sn**	**00 48 15.0**	**+0.3**

IDC 14 00:48:37.8±2.2, 6°71′S×129°20′E, h0km, mb3.5/1, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=123.6km s-min=32.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.07**	**160**	Pn	Pn	00 51 58.8	+0.2
	0.4nm,0.3s,baz=338,slow=13,SNR=12						
WRA				Sn	Sn	00 54 19.4	-16
	0.6nm,0.3s,baz=328,slow=22,SNR=6.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**17.45**	**165**	P	Pn	00 52 42.6	-0.2
	0.1nm,0.3s,baz=344,slow=12,SNR=7.7						
ASAR				S	Sn	00 55 46.0	-12
	0.2nm,0.3s,baz=347,slow=27,SNR=1.9						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**67.55**	**327**	P	P	00 59 36.1	0.0
	0.3nm,0.5s,baz=112,slow=7.8,SNR=4.2						
	0.3nm,0.5s						

*NEIC **14** 01:04:22.5±1.4, 37°.48N±0°.03×118°.75W±0°.01, h10km±1km, Error ellipse: s-maj=4.7km s-min=2.9km az=4.0*
*REN **14** 01:04:22.1±1.3, 37°.48N±0°.02×118°.80W±0°.02, h6km±4km, Error ellipse: s-maj=3.0km s-min=2.0km az=192.0*
NCEDC 14 01:04:22.6±1.0, 37°.48N±0°.02×118°.78W±0°.03, h5km±4km, Md3.0/61, ML2.3/17(REN), ML2.3/60(NEIC), Error ellipse: s-maj=3.5km s-min=1.9km az=59.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCCR	**Rock Creek Can**	**0.05**	**87**		Pg	01 04 24.2	+0.1
MCVM	**Convict Lake**	**0.11**	**341**		Pg	01 04 25.2	+0.2
WMD		**0.12**	**111**		Pg	01 04 25.3	+0.2
SCHCA	**Scheelite**	**0.15**	**149**		Pg	01 04 25.7	+0.1
MLAC	**Mammoth, Mammo**	**0.15**	**344**		Pg	01 04 26.2	+0.5
MLAC					Sg	01 04 28.9	+1.1
MLCM	**Laurel Creek C**	**0.17**	**321**		Pg	01 04 26.2	+0.2
MGPM	**Gravel Pit**	**0.17**	**326**		Pg	01 04 26.4	+0.4
ORC	**Owens River**	**0.18**	**34**		Pg	01 04 26.6	+0.3
MCBM	**Casa Benchmark**	**0.18**	**331**		Pg	01 04 26.7	+0.4
MCBM					Sg	01 04 29.7	+1.0
MCSM	**Casa Diablo Ho**	**0.20**	**330**		Pg	01 04 27.0	+0.5
OMMB	**Old Mammoth Mi**	**0.22**	**307**		Pg	01 04 27.0	+0.1
OMMB					Sg	01 04 30.0	+0.2
OMMB	**Old Mammoth Mi**	**0.22**	**307**	IAML		01 04 30.2	
	comp=E,401nm,0.4s						
MTUM	**Tungsten Hills**	**0.22**	**127**		Pg	01 04 27.1	+0.2
MEMM	**East Mammoth H**	**0.22**	**326**		Pg	01 04 27.4	+0.4
MMPM	**Mammoth Pass**	**0.23**	**303**		Pg	01 04 27.4	+0.2
MMLB	**Mammoth Lakes**	**0.23**	**318**		Pg	01 04 27.7	+0.5
MMLB					Sg	01 04 31.4	+1.0
MLIM	**Lincoln Peak**	**0.24**	**309**		Pg	01 04 27.8	+0.4
MLIM					Sg	01 04 31.9	+1.3
MMSM	**Mammoth Summit**	**0.25**	**307**		Pg	01 04 27.8	+0.3
MRDM	**Red Cones**	**0.25**	**297**		Pg	01 04 27.7	+0.2
MDYM	**Dry Creek**	**0.25**	**314**		Pg	01 04 28.0	+0.5
MDYM					Sg	01 04 31.9	+1.0
MCDM	**Chidago Canyon**	**0.28**	**77**		Pg	01 04 28.5	+0.5
MDPB	**Devils Postpil**	**0.28**	**302**		Pg	01 04 28.3	+0.2
MDPB					Sg	01 04 32.1	+0.3
MDPB	**Devils Postpil**	**0.28**	**302**	IAML		01 04 32.8	
	comp=N,498nm,0.4s						
MINS	**Minaret Summit**	**0.28**	**308**		Pg	01 04 28.2	+0.2
BENR	**Benton**	**0.28**	**36**		Pg	01 04 28.3	+0.1
MFBM	**Five Bridges**	**0.29**	**101**		Pg	01 04 28.8	+0.6
MRCM	**Red Rock Canyo**	**0.29**	**49**		Pg	01 04 28.5	+0.2
BHPR	**Bishop**	**0.30**	**128**		Pg	01 04 28.3	-0.1
MDCM	**Deadman Creek**	**0.30**	**318**		Pg	01 04 28.7	+0.1
MGNR	**McGee Canyon**	**0.34**	**12**		Pg	01 04 29.6	+0.4
MLNR	**Milner Canyon**	**0.37**	**72**		Pg	01 04 29.9	+0.2
BCKR	**Birch Creek**	**0.39**	**57**		Pg	01 04 30.5	+0.3
POCCA	**Poleta Canyon**	**0.42**	**107**		Pg	01 04 30.9	+0.2
KCC	**Kaiser Creek**	**0.46**	**250**		Pg	01 04 31.4	0.0
KCC	**Kaiser Creek**	**0.46**	**250**		Sg	01 04 37.4	0.0
ANTCA	**Antelope Range**	**0.47**	**22**		Pg	01 04 31.7	+0.1
MCCR	**Mono Craters**	**0.47**	**336**		Pb	01 04 34.6	+1.0
HCK	**Huntoon Valley**	**0.61**	**14**		Pg	01 04 34.5	+0.3
TIN	**Tinemaha, Big**	**0.61**	**134**		Pg	01 04 34.6	+0.2
LUL	**Lundy Lake**	**0.65**	**331**		Pb	01 04 37.1	+0.6
DSP	**Deep Springs**	**0.66**	**100**		Pg	01 04 35.1	-0.1
LHV	**Little Huntoon**	**0.80**	**16**		Pg	01 04 38.0	+0.1
LHV				IAML		01 04 51.5	
	comp=N,134nm,0.5s						
LHV				IAML		01 04 58.3	
	comp=E,162nm,0.7s						
LHV	**Little Huntoon**	**0.80**	**16**		Sb	01 04 49.2	-0.8
LCH	**Last Change Ra**	**0.94**	**105**		Pg	01 04 40.1	-0.5
LCH					Sg	01 04 52.8	-0.1
LCH	**Last Change Ra**	**0.94**	**105**	IAML		01 04 53.1	
	comp=N,90nm,0.2s						
NV08	**Mina Array Sit**	**0.99**	**22**		Pg	01 04 41.2	-0.4
NV09	**Mina Array Sit**	**1.01**	**20**		Pg	01 04 41.7	-0.3
NV4R	**Mina Array Bea**	**1.02**	**22**		Pg	01 04 41.7	-0.4
NV11	**Mina Array Sit**	**1.07**	**27**		Pg	01 04 42.6	-0.5
NV11					Sg	01 04 57.1	+0.2
MZP	**Montezuma Peak**	**1.13**	**79**		Pg	01 04 43.8	-0.5
RYN	**Ryan**	**1.16**	**10**		Pg	01 04 43.9	-1.0
RYN				IAML		01 05 01.7	
	comp=N,57nm,0.1s						
RYN	**Ryan**	**1.16**	**10**		Sg	01 05 00.3	+0.4
CWC	**Cottonwood Cre**	**1.19**	**151**		Pg	01 04 44.6	-0.7
MRHM	**Rocky Hill**	**1.22**	**192**		Pg	01 04 44.9	-1.1
GMN	**Gold Mountain**	**1.23**	**98**		Pg	01 04 45.7	-0.4
GRAC	**Grapevine Rang**	**1.23**	**113**		Pg	01 04 46.1	-0.1
GRAC	**Grapevine Rang**	**1.23**	**113**	Pg	Pg	01 04 45.5	-0.7
GRAC	**Grapevine Rang**	**1.23**	**113**	IAML		01 05 07.1	
	comp=N,105nm,0.6s						
VOG	**Valley Oaks Go**	**1.26**	**203**		Pg	01 04 46.0	-0.7
SPG2	**Springville 2**	**1.28**	**179**		Pg	01 04 46.5	-0.6
MYLM	**Yosemite Lake**	**1.31**	**266**		Pn	01 04 46.9	-0.6
TPH	**Tonopah**	**1.37**	**64**		Pn	01 04 48.3	-0.3
WLHM	**Little Horse**	**1.38**	**164**		Pn	01 04 48.1	-0.7
CMB	**Columbia Colle**	**1.39**	**294**		Pn	01 04 47.8	-0.8
CMB	**Columbia Colle**	**1.39**	**294**	Pn	Pn	01 04 47.3	-1.3
MCA	**Marble Canyon**	**1.46**	**124**		Pn	01 04 49.6	-0.1
SGV	**South Grapevin**	**1.48**	**109**		Pn	01 04 50.2	+0.1
MCUB	**Copperopolis B**	**1.54**	**289**		Pn	01 04 50.6	-0.1
YERR	**Yerington**	**1.54**	**347**		Pn	01 04 51.3	+0.4
YERR	**Yerington**	**1.54**	**347**	IAML		01 05 02.5	
	comp=E,24nm,0.5s						
KVN	**Kaiserville**	**1.65**	**19**		Pn	01 04 52.5	+0.1
KVN	**Kaiserville**	**1.65**	**19**	IAML		01 05 16.7	
	comp=E,24nm,0.6s						
KVN				IAML		01 05 18.5	
	comp=N,32nm,0.6s						
PDRM	**Domengine Ranc**	**1.71**	**228**		Pb	01 04 54.3	-0.2
BRMM	**Rolling Bench**	**1.75**	**249**		Pb	01 04 55.0	-0.2
PARM	**Anticline Ridg**	**1.76**	**226**		Pb	01 04 55.0	-0.3
PKEM	**Kettleman Hill**	**1.77**	**217**		Pb	01 04 55.3	-0.3
BMSM	**Mercy Hot Spri**	**1.81**	**243**		Pb	01 04 55.6	-0.6
ISA	**Isabella, Lake**	**1.83**	**172**		Pn	01 04 55.3	+0.5
ISA				IAML		01 05 21.2	
	comp=N,48nm,0.3s						
Q09A	**Carvers**	**1.85**	**43**		Pn	01 04 55.8	+0.7
PJUM	**Juniper Ridge**	**1.92**	**230**		Pb	01 04 57.5	-0.6
VCNR	**Virginia City**	**1.93**	**340**	IAML		01 05 43.9	
	comp=E,14nm,0.6s						
BAVM	**Antelope Valle**	**1.98**	**246**		Pb	01 04 58.2	-0.9
CTM	**Castle Mountai**	**1.99**	**219**		Pb	01 04 58.5	-0.8
BBGB	**Big Mountain B**	**2.02**	**244**		Pb	01 04 59.2	-0.6
PSRM	**Scobie Ranch**	**2.02**	**217**		Pb	01 04 59.1	-0.7
CMPM	**Mikes Peak**	**2.02**	**267**		Pb	01 04 58.8	-1.1
HPCM	**Pacheco Lake**	**2.03**	**259**		Pn	01 04 58.7	+1.2
PMPB	**Monarch Peak**	**2.06**	**233**	Pn	Pn	01 04 57.8	0.0
PHFM	**Heflinger Ranc**	**2.06**	**220**		Pb	01 05 00.2	-0.3
BBNM	**San Benito**	**2.08**	**243**		Pb	01 05 00.8	0.0
LRV	**Little Rabbit**	**2.08**	**240**		Pb	01 05 00.4	-0.4
TPNV	**Topopah Spring**	**2.09**	**104**		Pn	01 04 57.8	-0.6
TPNV				IAML		01 05 34.5	
	comp=E,16nm,0.9s						
TPNV				IAML		01 05 38.2	
	comp=E,17nm,1.3s						
PAGB	**Antelope Grade**	**2.11**	**214**	Pn	Pn	01 04 57.8	-0.8
HJSM	**John Smith Roa**	**2.12**	**252**		Pb	01 05 00.3	-1.1
BVL	**Bear Valley**	**2.13**	**245**		Pb	01 05 01.5	-0.1
GWY	**Greenwater Val**	**2.13**	**127**	Pn	Pn	01 04 58.4	-0.6
HFEM	**San Felipe**	**2.15**	**257**		Pb	01 05 00.9	-1.0
BPIM	**Pinnacles**	**2.15**	**243**		Pb	01 05 00.8	-1.2
QSM	**Queen of Sheba**	**2.16**	**134**	Pn	Pn	01 04 59.3	0.0
QSM				IAML		01 05 33.2	
	comp=N,15nm,0.7s						
TRAM	**Private Proper**	**2.17**	**214**		Pn	01 05 00.6	+1.2
BJOM	**Mount Johnson**	**2.20**	**248**		Pb	01 05 01.6	-1.2
SAO	**San Andreas Ge**	**2.25**	**252**	Pn	Pn	01 04 59.7	-0.7
SAO	**San Andreas Ge**	**2.25**	**252**		Pn	01 05 01.9	+1.5
PAHR	**Pah Rah Range**	**2.27**	**348**	Pn	Pn	01 05 01.4	+0.5
SCZ	**Santa Cruz**	**2.27**	**248**		Pn	01 05 02.0	+1.2
BJCM	**Johnson Can.**	**2.29**	**247**		Pn	01 05 02.3	+1.3
BSMM	**Soledad Missio**	**2.39**	**243**		Pn	01 05 03.8	+1.4
BCWM	**Chews Ridge**	**2.52**	**243**		Pn	01 05 05.3	+0.9
R11A	**Troy Canyon, C**	**2.67**	**70**	Pn	Pn	01 05 04.5	-2.0
BEKR	**Beckworth**	**2.68**	**333**	Pn	Pn	01 05 06.2	-0.4
BEKR				IAML		01 05 59.0	
	comp=N,9.1nm,0.6s						
BEKR				IAML		01 05 59.5	
	comp=E,13nm,0.7s						
PRN	**Pahroc Range**	**2.97**	**90**		Pn	01 05 10.4	-0.1
PRN				IAML		01 06 02.0	
	comp=N,9.7nm,0.7s						
PRN				IAML		01 06 03.0	
	comp=E,7.9nm,1.2s						
SHPR	**Sheep Range**	**3.06**	**108**	Pn	Pn	01 05 11.2	-0.6
BMN	**Battle Mountai**	**3.19**	**22**	Pn	Pn	01 05 12.8	-0.6
BMN				IAML		01 06 05.7	
	comp=E,4.4nm,0.5s						
BMN				IAML		01 06 06.5	
	comp=N,5.0nm,0.3s						
SPR3	**Spring Creek 3**	**3.82**	**65**	Pn	Pn	01 05 22.1	-0.2
ELK	**Elko**	**4.27**	**39**	Pn	Pn	01 05 28.2	-0.2
ELK				IAML		01 06 39.2	
	comp=N,2.5nm,0.3s						
ELK				IAML		01 06 39.6	
	comp=N,3.1nm,0.4s						
LMHM	**Little Mount H**	**4.65**	**332**		Pn	01 05 29.1	-4.7

*SOME **14** 01:08:49.7, 39°.47N×73°.53E, h10km*
*KRNET **14** 01:08:50.8±0.1, 39°.55N×73°.39E, mb3.3*
*NNC **14** 01:08:51.7±1.7, 39°.52N×73°.62E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=12.9km s-min=7.3km az=169.0*
ISC 14 01:08:53.4±1.2, 39°.62N±0°.06×73°.34E±0°.04, h10km, n35, σ2s15/59, 18C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.00**	**335**	⇑*i*P	**Pg**	**01 09 11.1**	**-1.6**
	baz=35						
OHH				⇑*i*S	**Sb**	**01 09 26.3**	**+0.1**
	baz=35						
DRK	**Karamyk**	**1.20**	**264**	⇑*i*P	**Pg**	**01 09 14.1**	**-2.3**
	baz=68						
DRK				⇑*i*S	**Sg**	**01 09 30.8**	**-1.2**
	baz=68						
ARLS	**Aral**	**2.36**	**18**	⇑*i*P	**Pn**	**01 09 33.1**	**+0.7**
	baz=17						
ARLS				⇑*i*S	**Sb**	**01 10 04.0**	**-1.5**
	baz=17						
GAR	**Garm**	**2.42**	**256**	⇑*i*P	**Pn**	**01 09 33.5**	**+0.3**
	baz=58						
GAR				⇑*i*S	**Sn**	**01 10 04.8**	**+1.8**
	baz=58						
TRKS	**Terek-Say**	**2.54**	**319**	⇑*i*P	**Pn**	**01 09 35.4**	**+0.5**
	baz=19						
TRKS				⇑*i*S	**Sn**	**01 10 07.5**	**+1.6**
	baz=19						
EKS2	**Erkin-Say**	**3.06**	**6**	⇓*i*P	**Pn**	**01 09 43.2**	**+1.2**
	baz=5.0						
EKS2				⇓*i*S	**Sn**	**01 10 21.1**	**+2.4**
	baz=5.0						
MRKS	**Merke**	**3.13**	**358**	*e*P	**Pg**	**01 09 51.7**	**-1.6**
	1.8nm,0.2s						
MRKS				*e*S	**Sg**	**01 10 36.3**	**+2.5**
	18nm,0.3s						
MRKS	**Merke**	**3.13**	**358**	Pg	**Pg**	**01 09 51.7**	**-1.6**
	3.9nm,0.3s						
MRKS				Lg	Lg	01 10 36.3	
	18nm,0.8s						
AAK	**Ala-Archa**	**3.14**	**16**	⇓*e*P	**Pn**	**01 09 44.1**	**+1.0**
	baz=15						
AAK				⇓*i*S	**Sn**	**01 10 23.1**	**+2.3**
	baz=15						
KBK	**Karagaybulak**	**3.27**	**21**	⇓*i*P	**Pn**	**01 09 45.9**	**+1.0**
	baz=20						
KBK				⇓*i*S	**Sn**	**01 10 26.2**	**+2.2**
	baz=20						
CHMS	**Chumysh**	**3.54**	**17**	⇓Pn	**Pn**	**01 09 49.1**	**+0.6**
	1.8nm,0.6s						
CHMS				⇓Lg	Lg	01 10 43.2	
	12nm,0.7s						
CHMS	**Chumysh**	**3.54**	**17**	⇑*i*P	**Pn**	**01 09 49.4**	**+0.9**
	baz=16						
CHMS				⇑*i*S	**Sn**	**01 10 32.7**	**+2.2**
	baz=16						
IUG	**luzhnay**	**3.56**	**316**	*e*P	**Pb**	**01 09 57.8**	**+1.2**
	270nm,0.3s						
IUG				*e*S	**Sg**	**01 10 46.3**	**-1.4**
	31nm,0.4s						
IUG	**luzhnay**	**3.56**	**316**	Pg	**Pb**	**01 09 57.8**	**+1.2**
	252nm,0.4s						
IUG				Lg	Lg	01 10 46.3	
	31nm,0.7s						
TKM2	**Tokmak 2**	**3.71**	**27**	⇓Pg	**Pb**	**01 09 57.8**	**-1.4**
	2.7nm,0.6s						
TKM2				⇑Lg	Lg	01 10 47.9	
	9.1nm,0.8s						
TKM2	**Tokmak 2**	**3.71**	**27**	⇓*e*P	**Pn**	**01 09 51.9**	**+0.9**
	baz=26						
TKM2				⇓*i*S	**Sn**	**01 10 36.6**	**+1.7**
	baz=26						
USP	**Ospenovka**	**3.75**	**13**	⇑*i*P	**Pn**	**01 09 52.3**	**+0.9**
	baz=12						
USP				⇑*i*S	**Sn**	**01 10 37.7**	**+2.1**
	baz=12						
KST	**Kastek**	**3.95**	**29**	*e*P	**Pb**	**01 10 03.3**	**0.0**
	3.7nm,1.0s						
KST				*e*S	**Sb**	**01 10 56.1**	**+4.9**
	13nm,0.2s						
KST	**Kastek**	**3.95**	**29**	Pg	**Pb**	**01 10 03.3**	**0.0**
	3.7nm,1.0s						
KST				Lg	Lg	01 10 56.1	
	10nm,0.9s						
SGDS	**Sogindy**	**3.95**	**14**	*e*P	**Pb**	**01 10 04.2**	**+1.0**
	1.3nm,0.2s						
SGDS				*e*S	**Sg**	**01 10 57.9**	**-2.4**
	5.3nm,0.7s						
SGDS	**Sogindy**	**3.95**	**14**	Pg	**Pb**	**01 10 04.2**	**+1.0**
	1.3nm,0.2s						
SGDS				Lg	Lg	01 10 57.9	
	5.3nm,0.7s						
KK31	**Karatay Array**	**4.08**	**329**	⇓Pn	**Pn**	**01 09 58.3**	**+2.5**
	0.4nm,0.3s,baz=38,slow=53,SNR=12						
KK31				⇑Pg	**Pg**	**01 10 08.9**	**-2.6**
	1.3nm,0.3s,baz=132,slow=14,SNR=8.8						
KK31				⇓Sn	**Sb**	**01 10 51.2**	**-3.5**
	2.5nm,0.5s,baz=150,slow=23,SNR=4.8						
KK31				⇓Lg	Lg	01 11 06.5	
	2.3nm,0.5s,baz=150,slow=23,SNR=4.8						
KKAR	**Karatay Array**	**4.08**	**329**	⇑*i*P	**Pn**	**01 09 57.4**	**+1.5**
	baz=30						
KKAR				⇑*i*S	**Sn**	**01 10 45.8**	**+2.1**
	baz=30						
MTBS	**Maitube**	**4.21**	**33**	*e*P	**Pb**	**01 10 08.8**	**+1.1**
	2.6nm,0.1s						
MTBS				*e*S	**Sg**	**01 11 05.3**	**-3.3**
	8.0nm,0.6s						
MTBS	**Maitube**	**4.21**	**33**	Pg	**Pb**	**01 10 08.7**	**+1.1**
	2.6nm,0.1s						
MTBS				Lg	Lg	01 11 05.3	
	8.0nm,0.6s						
KRBS	**Karabastau**	**4.43**	**22**	*e*P	**Pb**	**01 10 12.9**	**+1.5**
	2.0nm,0.6s						
KRBS				*e*S	**Sg**	**01 11 13.0**	**-2.8**
	5.3nm,0.8s						
KRBS	**Karabastau**	**4.43**	**22**	Pg	**Pb**	**01 10 12.9**	**+1.5**
	2.0nm,0.6s						
KRBS				Lg	Lg	01 11 13.0	
	5.3nm,0.8s						
MDOK	**Medeo**	**4.51**	**37**	*e*P	**Pb**	**01 10 14.7**	**+2.0**
	1.4nm,0.6s						
MDOK				*e*S	**Sg**	**01 11 15.8**

baz=62
GAR ⇑*i*S **Sn 01 25 32.2 +2.3**
baz=62
ARLS Aral 2.45 17⇑*i*P **Pn**
baz=14
ARLS ⇑*i*S **Sb 01 25 32.9 -1.3**
baz=14
ARK Arkit 2.52 335⇓*i*P **Pn 01 25 02.6 +1.8**
baz=35
ARK ⇓*i*S **Sb 01 25 36.1 -0.2**
baz=35
TRKS Terek-Say 2.64 320⇓*i*P **Pn 01 25 03.3 +0.9**
baz=20
TRKS ⇓*i*S **Sb 01 25 37.2 -2.5**
baz=20
NRN Naryn 2.77 45 Pn **Pb 01 25 09.6 +0.6**
EKS2 Erkin-Say 3.16 5⇑*i*P **Pn 01 25 10.7 +1.2**
baz=4.0
EKS2 ⇑*i*S **Sb 01 25 50.8 -3.7**
baz=4.0
MRKS Merke 3.23 358 *e*P **Pb 01 25 18.4 +1.6**
1.2nm,0.1s
MRKS *e*S **Sg 01 26 02.3 -0.2**
71nm,0.7s
AAK Ala-Archa 3.23 15 Pn **Pn 01 25 13.7 +3.2**
KBK Karagaybulak 3.35 20⇑*i*P **Pn 01 25 13.1 +0.9**
baz=18
KBK ⇑*i*S **Sn 01 25 54.7 +2.1**
baz=18
CHGR Chuyangaron 3.40 257 Pn 01 25 14.0 +1.3
CHGR Chuyangaron 3.40 257⇑*i*P **Pn 01 25 13.3 +0.5**
baz=59
CHGR ⇑*i*S **Sn 01 25 55.0 +1.4**
baz=59
ULHL Ulahol 3.48 38⇓*i*P **Pn 01 25 14.6 +0.6**
baz=36
ULHL ⇓*i*S **Sn 01 25 56.9 +1.0**
baz=36
TAS Tashkent 3.61 301 Pn **Pn 01 25 16.5 +0.9**
CHMS Chumysh 3.63 16 ⇑Pn **Pn 01 25 18.7 +2.8**
16nm,0.7s
CHMS ⇓Lg Lg 01 26 13.3
45nm,0.7s
CHMS Chumysh 3.63 16⇑*i*P **Pn 01 25 17.0 +1.1**
baz=14
CHMS ⇑*i*S **Sn 01 26 01.1 +1.9**
baz=14
IUG Iuzhnay 3.66 317 *e*P **Pg 01 25 26.8 -2.0**
1µm,0.7s
IUG *e*S **Sg 01 26 17.6 +1.3**
148nm,0.9s
TKM2 Tokmak 2 3.79 25 ⇑Pn **Pn 01 25 19.1 +0.8**
7.3nm,0.5s
TKM2 ⇓Lg Lg 01 26 18.3
41nm,0.8s
TKM2 Tokmak 2 3.79 25⇓*i*P **Pn 01 25 19.3 +1.1**
baz=24
TKM2 ⇓*i*S **Sn 01 26 05.0 +1.6**
baz=24
USP Ospenovka 3.84 12⇑*i*P **Pn 01 25 19.9 +1.1**
baz=11
USP ⇑*i*S **Sn 01 26 06.7 +2.2**
baz=11
CHM Chimkent 4.01 316 *e*P **Pg 01 25 34.0 -1.5**
13nm,0.3s
CHM *e*S **Sg 01 26 29.5 +2.1**
185nm,0.1s
KST Kastek 4.03 28 *e*P **Pb 01 25 30.3 -0.1**
9.0nm,0.6s
KST *e*S **Sb 01 26 23.4 +3.9**
49nm,1.0s
KST Kastek 4.03 28 Pg **Pb 01 25 30.3 -0.1**
9.0nm,0.6s
KST Lg Lg 01 26 23.4
49nm,1.0s
SGDS Sogindy 4.04 13 *e*P **Pb 01 25 32.2 +1.6**
9.0nm,0.4s
SGDS *e*S **Sg 01 26 26.7 -1.9**
22nm,0.9s
SGDS Sogindy 4.04 13 Pg **Pb 01 25 31.8 +1.2**
9.1nm,0.9s
SGDS Lg Lg 01 26 25.9
22nm,0.9s
KK31 Karatay Array 4.19 330 Pn **Pn 01 25 26.4 +2.8**
KK31 Karatay Array 4.19 330 ⇑Pn **Pn 01 25 26.3 +2.8**
2.4nm,0.4s,baz=139,slow=11,SNR=92
KK31 ⇑Pg **Pg 01 25 38.4 -0.6**
9.1nm,0.5s,baz=134,slow=14,SNR=29
KK31 ⇑Sn **Sb 01 26 20.4 -3.7**
6.2nm,0.4s,baz=147,slow=19,SNR=3.3
KK31 ⇑Lg Lg 01 26 36.0
12nm,0.5s,baz=166,slow=31,SNR=4.4
KKAR Karatay Array 4.19 330 Pn 01 25 26.1 +2.6
KKAR Karatay Array 4.19 330 Pn **Pn 01 25 26.2 +2.7**
KKAR Karatay Array 4.19 330⇑*i*P **Pn 01 25 25.5 +2.0**
baz=30
KKAR ⇑*i*S **Sn 01 26 15.8 +2.8**
baz=30
MTBS Maitube 4.28 31 *e*P **Pb 01 25 36.7 +2.1**
10nm,0.3s
MTBS *e*S **Sg 01 26 33.8 -2.3**
25nm,0.3s
MTBS Maitube 4.28 31 Pg **Pb 01 25 36.9 +2.2**
7.3nm,0.6s
MTBS Lg Lg 01 26 34.8
26nm,0.9s
KRBS Karabastau 4.52 22 *e*P **Pb 01 25 41.0 +2.3**
9.0nm,0.3s
KRBS *e*S **Sg 01 26 41.5 -2.3**
43nm,0.3s
KRBS Karabastau 4.52 22 Pg **Pb 01 25 40.7 +2.0**
9.0nm,0.8s
KRBS Lg Lg 01 26 41.6
18nm,0.9s
MDOK Medeo 4.57 36 *e*P **Pb 01 25 41.3 +1.6**
8.0nm,0.6s
MDOK *e*S **Sg 01 26 41.7 -3.9**
38nm,1.6s
MDOK Medeo 4.57 36 Pg **Pb 01 25 40.2 +0.5**
9.5nm,0.6s
MDOK Pg Pg 01 25 40.8 -5.5
8.0nm,0.6s
MDOK ⇓Lg Lg 01 26 41.8
90nm,1.3s
MDOK Lg Lg 01 26 41.9
38nm,1.6s
KTBS Karatobe 4.87 29 *e*P **Pb 01 25 46.9 +2.3**
5.8nm,0.6s
KTBS *e*S **Sg 01 26 51.8 -3.3**
16nm,0.7s
KTBS Karatobe 4.87 29 Pg **Pb 01 25 46.9 +2.3**
5.8nm,0.6s
KTBS Lg Lg 01 26 52.5
16nm,0.7s
KUU Kurty 4.90 26 *e*P **Pb 01 25 46.9 +1.7**
6.5nm,0.4s
KUU *e*S **Sg 01 26 51.8 -4.3**
35nm,0.6s
KUU Kurty 4.90 26 Pg **Pb 01 25 47.5 +2.3**
6.4nm,1.1s
KUU Lg Lg 01 26 53.1
25nm,1.0s
SATY Saty 5.18 45 *e*P **Pb 01 25 49.0 -1.0**
17nm,0.5s
SATY *e*S **Sb 01 26 55.7 +3.0**
28nm,0.5s
SATY Saty 5.18 45 Pg Pb 01 25 55.1 +5.0
18nm,1.3s
KURS Kuram 5.35 41 *e*P **Pb 01 25 55.9 +3.0**
8.8nm,0.4s
KURS *e*S **Sg 01 27 07.4 -3.3**
18nm,0.5s
KURS Kuram 5.35 41 Pg **Pb 01 25 55.5 +2.5**
8.8nm,0.9s
KURS Lg Lg 01 27 07.3
14nm,1.0s
BTLS Baital 5.54 5 *e*P Pb 01 26 00.8 +4.6
5.0nm,0.5s
BTLS *e*S **Sg 01 27 15.8 -0.9**
12nm,0.4s
BTLS Baital 5.54 5 Pg **Pg 01 26 02.5 -2.5**
5.6nm,0.8s
UZB Uzynbulak 5.58 48 *e*P **Pb 01 25 59.8 +2.9**
1.4nm,0.1s
UZB *e*S **Sg 01 27 13.9 -4.1**
11nm,0.9s
UZB Uzynbulak 5.58 48 Pg **Pb 01 25 59.8 +2.9**
1.4nm,0.4s
UZB Lg Lg 01 27 14.1
11nm,0.9s
KPKS Kokpek 5.60 44 *e*P **Pb 01 26 00.3 +3.1**
1.8nm,0.1s
KPKS *e*S **Sg 01 27 14.7 -4.0**
21nm,0.4s
KPKS Kokpek 5.60 44 Pg **Pb 01 26 00.4 +3.1**
3.1nm,0.6s
KPKS Lg Lg 01 27 15.3
17nm,1.0s
ARXS Arharly 5.75 34 *e*P **Pb 01 26 02.1 +2.5**
9.5nm,1.0s
ARXS *e*S **Sg 01 27 17.9 -5.4**
28nm,0.6s
ARXS Arharly 5.75 34 Pg **Pb 01 26 01.8 +2.1**
9.5nm,1.0s
ARXS Lg Lg 01 27 18.2
25nm,1.0s
SHLS Shalkode 5.84 50 *e*P **Pg 01 26 09.6 -1.1**
2.6nm,0.0s
SHLS *e*S **Sg 01 27 30.6 +4.1**
9.3nm,0.5s
NIL Nilore 5.85 181 Pn **Pn 01 25 48.8 +2.4**
KBL Kabul 6.06 216 Pn **Pn 01 25 51.1 +1.7**
THN Thein Dam 7.31 164 *e*P Pn 01 26 13.7 +7.2
THN *e*S **Sn 01 27 33.8 +3.8**
SMLA Simla 8.92 159 *e*S **Sn 01 28 07.2 -2.2**
MKAR Makanchi Array 9.76 39 Pn **Pn 01 26 42.2 +2.2**
baz=218,slow=15,SNR=2.6
0.9nm,0.9s
KURBB Kurchatov Arra 11.68 16 Pn **Pn 01 27 06.7 +0.5**
0.1nm,0.3s,baz=204,slow=11,SNR=4.3
KURBB Lg Lg 01 30 26.9
baz=201,slow=28,SNR=2.5
0.3nm,0.3s
GEYT Alibeck 12.03 267 Pn **Pn 01 27 10.3 -0.8**
ABKAR Akbulak array 13.66 320 Pn **Pn 01 27 32.4 -0.9**
BRVK Borovoye 13.71 353 Pn **Pn 01 27 36.2 +2.2**
AKTO Aktyubinsk 15.38 320 Pn **Pn 01 27 55.7 -0.9**
0.1nm,0.3s,baz=101,slow=17,SNR=3.7
AKTO Sn **Sn 01 30 44.4 -2.9**
0.1nm,0.3s,baz=147,slow=18,SNR=4.6
1.0nm,0.7s
ZALV Zalesovo Beam 16.39 25 Pn **Pn 01 28 09.7 +0.1**
0.2nm,0.3s,baz=217,slow=8.9,SNR=4.1
1.0nm,0.6s
ZALV Zalesovo Beam 16.39 25 Pn **Pn 01 28 10.9 +1.3**
HYBB Hyderabad (bro 22.47 167 *e*P **P 01 29 21.2 +2.0**
ONI Oni 22.73 287 P **P 01 29 20.3 -1.5**
ONI IAmb IAmb 01 29 26.1
comp=Z,8.3nm,0.8s
GURO Guroymak-BITLI 24.32 278 P **P 01 29 36.9 -0.7**
BRTR Keskin Array B 30.45 283 P **P 01 30 31.6 -1.1**
comp=Z,1.2nm,0.8s,baz=69,slow=6.8,SNR=4.7
comp=Z,1.2nm,0.8s
FINES FINESS Array B 36.12 323 P **P 01 31 21.6 0.0**
comp=Z,3.9nm,1.0s,baz=132,slow=5.4,SNR=3.9
comp=Z,3.9nm,1.0s
ARCES ARCESS Array B 39.13 336 P **P 01 31 47.8 +0.7**
comp=Z,1.2nm,0.8s,baz=107,slow=12,SNR=4.4
comp=Z,1.2nm,0.8s
NB2 NORSAR Subarra 43.17 321 P **P 01 32 20.1 -0.3**
comp=Z,0.4nm,0.6s,baz=91,slow=7.9
NOA NORSAR Array B 43.17 321 P **P 01 32 18.7 -1.7**
comp=Z,0.5nm,0.6s,baz=97,slow=7.6,SNR=4.1
comp=Z,0.5nm,0.6s
ESDC Sonseca Array 57.74 297 P **P 01 34 09.7 -1.2**
comp=Z,0.3nm,0.6s,baz=53,slow=7.4,SNR=5.3
comp=Z,0.3nm,0.6s
TORD Torodi Ar. Bea 67.67 269 P **P 01 35 15.7 -1.8**
comp=Z,0.5nm,0.8s,baz=50,slow=5.2,SNR=5.4
comp=Z,0.5nm,0.8s
TORD Torodi Ar. Bea 67.67 269 P **P 01 35 14.8 -2.7**
TORD IAmb IAmb 01 35 50.9
comp=Z,2.7nm,1.4s
N31M Braeburn, Yuko 76.59 14 P **P 01 36 10.6 +0.4**

*IDC **14** 01:41:53.8±0.7,22.˚79S×172.˚99E,h0km,mb4.3/13, mbtmp4.3/15,ML4.8/2,MS3.9/35,Error ellipse: s-maj=20.9km s-min=16.6km az=102.0*
*NEIC **14** 01:41:55.0±1.5,22.˚89S±0.˚04×173.˚09E±0.˚08,h10km±1km, mb4.7/22,Error ellipse: s-maj=13.4km s-min=5.2km az=69.0*
ISC 14 01:41:55.0±0.4,**22.˚85S**±0.˚07×**173.˚03E**±0.˚06,**h10**km,**n112, σ1s00/85,mb4.6**/27,**MS4.0**/33,**1C,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.83**	**285**		Pn	**Pn**	**01 43 08.3**	**+0.5**
PINNC	**Pines Island,**	**5.16**	**272**			**Pn**	**01 43 11.7**	**-0.6**
OUENC	**Ouen Island, N**	**5.73**	**273**			**Pn**	**01 43 20.6**	**+0.7**
DZM	**Mont Dzumac**	**6.14**	**276**	Pn		**Pn**	**01 43 25.3**	**-0.5**
DZM	2.3nm,0.3s,baz=125,slow=12,SNR=47			Sn		**Sn**	**01 44 35.3**	**-0.9**
DZM	3.5nm,0.3s,baz=346,slow=23,SNR=13 5.8nm,0.3s **Mont Dzumac**	**6.14**	**276**	*e*Pn		**Pn**	**01 43 24.2**	**-1.7**
DZM	113nm,1.4s			*e*Sn		**Sn**	**01 44 35.0**	**-1.2**
DZM	161nm,1.0s			*e*LR		LR	01 44 45.7	
DZM	comp=Z,598nm,22.2s **Mont Dzumac**	**6.14**	**276**	Pn		**Pn**	**01 43 26.6**	**+0.8**
MSVF	**Nonsavu**	**6.93**	**44**	Pn		**Pn**	**01 43 37.3**	**+0.5**
MSVF	1.9nm,0.3s,baz=235,slow=8.9,SNR=12 comp=Z,1µm,19.8s,baz=216,slow=33			LR		LR	01 45 41.5	
MSVF	22nm,0.8s **Nonsavu**	**6.93**	**44**			**Pn**	**01 43 37.1**	**+0.3**
KOUNC	**Koumac, New Ca**	**8.44**	**284**			**Pn**	**01 43 58.7**	**+1.3**
RAO	**Raoul Island**	**10.34**	**130**	LR		LR	01 47 31.7	
	comp=Z,1µm,19.0s,baz=282,slow=32							
RAO	**Raoul Island**	**10.34**	**130**	Pn		**Pn**	**01 44 22.3**	**-1.1**
URZ	**Urewera**	**15.76**	**168**	LR		LR	01 50 33.0	
	comp=Z,746nm,18.6s,baz=28,slow=33							
URZ	**Urewera**	**15.76**	**168**	Pn		**Pn**	**01 45 35.3**	**-1.7**
URZ	comp=Z,38nm,0.8s			IAmb	IAmb	IAmb	01 45 45.8	
AFI	**Afiamalu**	**16.93**	**61**	LR		LR	01 50 57.6	
	comp=Z,289nm,18.7s,baz=166,slow=32							
HNR	**Honiara**	**18.30**	**315**	LR		LR	01 52 23.1	
	comp=Z,376nm,19.1s,baz=178,slow=34							
EIDS	**Eidsvold**	**20.19**	**258**	P		**P**	**01 46 29.7**	**-0.2**
RPZ	**Rata Peaks**	**20.88**	**184**	P		**P**	**01 46 38.8**	**+1.6**
RPZ	comp=Z,13nm,0.7s,baz=360,slow=22,SNR=9.2 comp=Z,718nm,18.3s,baz=337,slow=36			LR		LR	01 54 17.5	
CAN	comp=Z,13nm,0.7s **Canberra**	**24.33**	**234**	P		**P**	**01 47 14.8**	**+1.7**
CAN	comp=Z,27nm,1.3s			IAmb	IAmb	IAmb	01 47 17.7	
CTA	**Charters Tower**	**25.05**	**271**	LR		LR	01 56 32.1	
	comp=Z,218nm,19.1s,baz=90,slow=35							
STKA	**Stephens Creek**	**29.25**	**245**	P		**P**	**01 47 57.8**	**+0.5**
STKA	comp=Z,3.5nm,0.7s,baz=88,slow=11,SNR=7.2			LR		LR	01 58 57.6	
	comp=Z,256nm,18.7s,baz=55,slow=35 comp=Z,3.5nm,0.7s							
STKA	**Stephens Creek**	**29.25**	**245**	P		**P**	**01 47 57.8**	**+0.5**
TBI	**Tubuai**	**34.45**	**98**	*e*LR		LR	01 57 52.8	
	comp=Z,121nm,27.5s							
PPT2	**Papeete2**	**35.41**	**88**	*e*S		**S**	**01 54 27.8**	**+1.2**
PPT2	comp=Z,114nm,37.8s			*e*LR		LR	01 58 19.9	
	comp=Z,130nm,25.8s							
AS31	**Alice Springs**	**35.88**	**261**	P		**P**	**01 48 54.5**	**-1.0**
ASAR	**Alice Springs**	**35.88**	**261**	P		**P**	**01 48 54.9**	**-0.6**
ASAR	comp=Z,4.4nm,0.8s,baz=88,slow=8.0,SNR=20			LR		LR	02 02 43.1	
	comp=Z,163nm,21.1s,baz=114,slow=35 comp=Z,4.4nm,0.8s							
ASAR	**Alice Springs**	**35.88**	**261**	P		**P**	**01 48 54.3**	**-1.1**
WR0	**Warramunga Arr**	**35.88**	**267**	P		**P**	**01 48 55.0**	**-0.4**
WR0	comp=Z,14nm,1.4s			IAmb	IAmb	IAmb	01 48 57.8	
WRA	**Warramunga Arr**	**36.07**	**267**	P		**P**	**01 48 55.7**	**-1.4**
WRA	comp=Z,1.6nm,0.7s,baz=88,slow=6.1,SNR=9.0			LR		LR	02 03 06.4	
	comp=Z,209nm,19.2s,baz=96,slow=35 comp=Z,1.6nm,0.7s							
WRA	**Warramunga Arr**	**36.07**	**267**	P		**P**	**01 48 56.3**	**-0.8**
SMPI	**Sarmi**	**39.22**	**297**	P		**P**	**01 49 22.7**	**-1.0**
	comp=Z,7.9nm,1.1s							
FORT	**Forrest**	**40.69**	**249**	P		**P**	**01 49 36.8**	**+1.0**
H11S2	**WAKE ISLAND Hy**	**41.55**	**351**	T		T	02 33 49.8	
	baz=171,slow=76,SNR=13							
H11S3	**WAKE ISLAND Hy**	**41.55**	**351**	T		T	02 33 50.3	
	baz=171,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**41.56**	**351**	T		T	02 33 52.2	
	baz=171,slow=76,SNR=10							
FITZ	**Fitzroy Crossi**	**44.50**	**267**	LR		LR	02 07 13.8	
	comp=Z,124nm,19.1s,baz=118,slow=34							
FITZ	**Fitzroy Crossi**	**44.50**	**267**	P		**P**	**01 50 06.9**	**0.0**
FITZ	comp=Z,10nm,0.9s			IAmb	IAmb	IAmb	01 50 09.8	
GUMO	**Guam**	**45.52**	**320**	LR		LR	02 06 18.5	
	comp=Z,256nm,21.4s,baz=144,slow=32							
TAOE	**Nuku Hiva Isla**	**46.94**	**81**	*e*LR		LR	02 03 40.8	
	comp=Z,68nm,27.6s							
KAPI	**Kappang**	**54.34**	**281**	LR		LR	02 12 47.5	
	comp=Z,35nm,21.6s,baz=73,slow=34							
VNDA	**Vanda**	**54.99**	**183**	P		**P**	**01 51 26.8**	**+0.8**
VNDA	comp=Z,0.8nm,0.7s,baz=7.7,slow=6.6,SNR=5.4			LR		LR	02 10 56.3	
	comp=Z,213nm,21.9s,baz=20,slow=32 comp=Z,0.8nm,0.7s							
VNDA	**Vanda**	**54.99**	**183**	P		**P**	**01 51 26.9**	**+0.9**
VNDA	comp=Z,9.4nm,1.4s			IAmb	IAmb	IAmb	01 51 42.3	
SBA	**Scott Base**	**55.14**	**182**	P		**P**	**01 51 28.1**	**+1.0**
TOLI2	**Tolitoli**	**56.13**	**288**	P		**P**	**01 51 34.6**	**-0.6**
TOLI2	comp=Z,10nm,0.8s			IAmb	IAmb	IAmb	01 51 36.6	
CASY	**Casey**	**58.30**	**205**	P		**P**	**01 51 49.3**	**-0.4**
CASY	comp=Z,13nm,1.2s			IAmb	IAmb	IAmb	01 51 51.6	
JHJ	**Hachijo jima 2**	**64.05**	**329**	LR		LR	02 17 06.8	
	comp=Z,35nm,20.9s,baz=132,slow=33							
QSPA	**South Pole Qui**	**67.23**	**180**	P		**P**	**01 52 50.3**	**+1.0**
QSPA	comp=Z,23nm,0.9s,baz=10.0,slow=1.1,SNR=43			LR		LR	02 19 48.9	
	comp=Z,120nm,18.2s,baz=44,slow=34 comp=Z,23nm,0.9s							
QSPA	**South Pole Qui**	**67.23**	**180**	P		**P**	**01 52 49.2**	**-0.1**
MJAR	**Matsushiro Arr**	**67.60**	**330**	P		**P**	**01 52 52.3**	**+0.4**
MJAR	comp=Z,2.6nm,0.9s,baz=156,slow=6.7,SNR=8.4			LR		LR	02 18 23.2	
	comp=Z,41nm,21.6s,baz=164,slow=32 comp=Z,2.6nm,0.9s							
JSU	**Suzuyama**	**67.70**	**321**	P		**P**	**01 52 53.7**	**+1.1**
JSU	comp=Z,4.1nm,0.9s			IAmb	IAmb	IAmb	01 52 59.5	
JSD	**Sado**	**68.81**	**331**	P		**P**	**01 52 59.1**	**-0.3**
KSRS	**Korea Array**	**73.48**	**324**	P		**P**	**01 53 28.6**	**+0.9**
KSRS	comp=Z,0.7nm,0.6s,baz=128,slow=6.1,SNR=4.5			LR		LR	02 21 59.3	
	comp=Z,34nm,21.0s,baz=125,slow=33 comp=Z,0.7nm,0.6s							
YSS	**Yuzh-Sakhalins**	**74.66**	**339**	P		**P**	**01 53 34.1**	**-0.3**
YSS	comp=Z,14nm,0.9s			IAmb	IAmb	IAmb	01 53 37.2	
NJ2	**Nanjing**	**75.25**	**315**	*e*P		**P**	**01 53 36.3**	**-1.9**
NJ2	comp=Z,7.0nm,0.5s			pmax	pmax			
SHEM	**Shemya Is, Ala**	**75.26**	**1**	LR		LR	02 19 46.3	
	comp=Z,42nm,19.9s,baz=314,slow=30							
MAW	**Mawson**	**76.42**	**202**	P		**P**	**01 53 45.1**	**+0.7**
	comp=Z,8.6nm,0.9s,baz=112,slow=6.2,SNR=16 comp=Z,8.6nm,0.9s							
MAW	**Mawson**	**76.42**	**202**	P		**P**	**01 53 44.6**	**+0.3**
PETK	**Petropavlovsk-**	**76.80**	**351**	P		**P**	**01 53 46.8**	**+0.3**
PETK	comp=Z,6.1nm,0.9s,baz=171,slow=10,SNR=6.5			LR		LR	02 22 23.6	
	comp=Z,73nm,19.9s,baz=163,slow=32 comp=Z,6.1nm,0.9s							
PETK	**Petropavlovsk-**	**76.80**	**351**	P		**P**	**01 53 46.5**	**0.0**
BELA	**Belgrano 2**	**78.19**	**174**	P		**P**	**01 53 53.8**	**-0.4**
BNX	**BinXian**	**79.85**	**329**	⇑P		**P**	**01 54 01.6**	**-2.0**
BNX	comp=Z,6.0nm,0.9s			pmax	pmax			
	comp=Z,95nm,5.6s			pmax	pmax			
KLR	**Kul'dur**	**80.62**	**334**	LR		LR	02 27 44.1	
	comp=Z,60nm,19.0s,baz=142,slow=34							
LYN	**LuoYang**	**81.01**	**313**	*e*P		**P**	**01 54 10.4**	**+0.3**
LYN	comp=Z,10.0nm,1.3s			pmax	pmax			
MA2	**Magadan**	**84.14**	**349**	LR		LR	02 30 59.0	
	comp=Z,82nm,18.1s,baz=124,slow=35							
XLT	**XiLinHaoTe**	**84.44**	**322**	*e*P		P	01 54 32.6	+4.8
XLT				pP		pwP	01 54 36.8	+1.8
XLT				sP		PcP	01 54 38.5	+7.0
XLT	**XiLinHaoTe**	**84.44**	**322**	S		S	02 05 09.4	+15
PZH	**PanZhiHua**	**84.61**	**302**	P		**P**	**01 54 31.3**	**+2.1**
PZH	comp=Z,10.0nm,0.6s			pmax	pmax			
	comp=Z,120nm,5.4s			pmax	pmax			
TROLL	**Troll, Antarti**	**85.17**	**183**	P		**P**	**01 54 31.1**	**-0.2**
HHC	**Hu-ho-hao-te**	**85.25**	**318**	*e*P		**P**	**01 54 32.6**	**+0.5**
HHC	comp=Z,25nm,0.7s			pmax	pmax			
	comp=Z,100nm,5.7s			pmax	pmax			
SNAA	**Sanae**	**85.69**	**181**	P		**P**	**01 54 33.1**	**-0.7**
SNAA	**Sanae**	**85.69**	**181**	P		**P**	**01 54 32.5**	**-1.3**
VNA3	**Neumayer Olymp**	**86.15**	**179**	P		**P**	**01 54 35.2**	**-0.8**
VNA2	**Neumayer--Watz**	**86.48**	**180**	P		**P**	**01 54 37.1**	**-0.5**
	baz=184,slow=4.0							
VNA1	**Neumayer--Stat**	**86.76**	**180**	P		**P**	**01 54 38.6**	**-0.3**
PFO	**Pinyon Flats O**	**87.47**	**52**	LR		LR	02 26 18.9	
	comp=Z,39nm,20.5s,baz=228,slow=30							
YBH	**Yreka Blue Hor**	**87.49**	**42**	LR		LR	02 25 16.5	
	comp=Z,69nm,21.8s,baz=232,slow=30							
LPIG	**La Paz**	**87.84**	**63**	LR		LR	02 26 26.7	
	comp=Z,56nm,18.8s,baz=211,slow=30							
NVAR	**Mina Array Bea**	**88.59**	**47**	P		**P**	**01 54 47.4**	**-1.1**
	comp=Z,0.6nm,1.0s,baz=258,slow=5.5,SNR=4.5 comp=Z,0.6nm,1.0s							
NVAR	**Mina Array Bea**	**88.59**	**47**	P		**P**	**01 54 47.2**	**-1.3**
BMN	**Battle Mountai**	**90.33**	**46**	P		**P**	**01 54 56.3**	**-0.2**
BMN	comp=Z,2.8nm,0.9s			IAmb	IAmb	IAmb	01 55 03.6	
BBB	**Bella Bella**	**90.60**	**32**	LR		LR	02 27 46.9	
	comp=Z,90nm,19.5s,baz=206,slow=30							
YAK	**Yakutsk**	**91.39**	**341**	LR		LR	02 35 29.6	
	comp=Z,60nm,18.3s,baz=265,slow=35							
CCUT	**Cedar City**	**91.57**	**50**	P		**P**	**01 54 60.0**	**-2.5**
CCUT	comp=Z,2.8nm,1.4s			IAmb	IAmb	IAmb	01 55 14.7	
ELK	**Elko**	**91.80**	**46**	LR		LR	02 28 14.9	
	comp=Z,91nm,20.9s,baz=247,slow=30							
ILAR	**Eielson Array**	**92.66**	**16**	P		**P**	**01 55 04.8**	**-1.7**
	comp=Z,1.8nm,1.2s,baz=211,slow=5.1,SNR=4.2							
ILAR	comp=Z,118nm,20.4s,baz=223,slow=31 comp=Z,1.8nm,1.2s			LR		LR	02 30 13.1	
PLCA	**Paso Flores**	**93.50**	**137**	P		**P**	**01 55 11.2**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=226,slow=3.7,SNR=4.1							
PLCA	comp=Z,49nm,18.8s,baz=201,slow=33 comp=Z,2.0nm,0.8s			LR		LR	02 32 53.8	
DLBC	**Dease Lake**	**93.65**	**26**	LR		LR	02 32 39.0	
	comp=Z,72nm,18.6s,baz=312,slow=32							
NEW	**Newport**	**94.30**	**39**	LR		LR	02 32 42.4	
	comp=Z,69nm,18.2s,baz=246,slow=32							
TXAR	**Lajitas Array**	**95.41**	**61**	LR		LR	02 29 06.0	
	comp=Z,40nm,21.7s,baz=232,slow=30							
PDAR	**Pinedale Array**	**96.50**	**46**	LR		LR	02 32 47.8	
	comp=Z,53nm,18.6s,baz=262,slow=32							
INK	**Inuvik**	**98.87**	**18**	LR		LR	02 33 49.3	
	comp=Z,66nm,20.8s,baz=200,slow=32							
ARCES	**ARCESS Array B**	**129.43**	**346**	PKP		**PKiKP**	**02 01 04.3**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=344,slow=2.3,SNR=8.3							
KOLS	**Kolonicke sedl**	**145.19**	**326**	*e*PKP		**PKPdf**	**02 01 33.8**	**+1.1**
CRVS	**Cervenica-Dubn**	**145.62**	**326**	*e*PKP		**PKPab**	**02 01 34.6**	**+0.6**
LANS	**Liptovska Anna**	**146.46**	**328**	*e*PKP		**PKPbc**	**02 01 36.6**	**+0.3**
OSTC	**Ostas**	**146.95**	**333**	*e*PKP		**PKPab**	**02 01 39.6**	**+0.5**
DPC	**Dobruska-Polom**	**147.06**	**332**	*e*PKP		**PKPdf**	**02 01 34.4**	**-1.5**
DPC				*ex*		x	02 01 38.1	
KRLC	**Kraliky**	**147.06**	**331**	*e*PKP		**PKPbc**	**02 01 37.3**	**-0.7**
UPC	**Upice**	**147.07**	**333**	*e*PKP		**PKPab**	**02 01 39.9**	**+0.4**
VYHS	**Vyhne**	**147.21**	**328**	*e*PKP		**PKPbc**	**02 01 38.5**	**0.0**
BRG	**Berggiesshubel**	**147.63**	**335**	*e*PKP		**PKPab**	**02 01 43.4**	**+1.7**
BRG				Amp			02 01 44.9	
	comp=Z,4.0nm,1.0s							
CLL	**Collm**	**147.64**	**336**	*e*PKPbc		**PKPdf**	**02 01 38.0**	**+1.2**
CLL				*i* PKiKP		**sPKPbc**	**02 01 42.6**	**+0.9**
	comp=Z,5.0nm,1.2s							
KRUC	**Moravsky**	**147.97**	**331**	*e*PKP		**PKPdf**	**02 01 38.0**	**+0.6**
MODS	**Modra-Piesok**	**148.05**	**329**	*e*PKP		**PKPdf**	**02 01 39.2**	**+1.6**
PRU	**Pruhonice**	**148.08**	**333**	*e*PKP		**PKPbc**	**02 01 41.0**	**+0.3**

RONA	**Rosalia, Austr**	**148.99**	**329**	*e*P	**PKPbc**	**02 01 43.1**	**-0.2**
	comp=Z,1.6nm,1.0s						
CONA	**Conrad Observa**	**149.03**	**330**	*e*P	**PKPbc**	**02 01 43.0**	**-0.4**
	comp=Z,2.6nm,1.1s						
CKRC	**Cesky Krumlov**	**149.07**	**332**	*e*PKP	**PKPbc**	**02 01 43.7**	**+0.3**
KHC	**Kasperske Hory**	**149.14**	**333**	*e*PKP	**PKiKP**	**02 01 45.2**	**+0.4**
KHC				*ex*	x	02 01 56.8	
GERES	**GERESS Array B**	**149.31**	**333**	PKPbc	**PKiKP**	**02 01 45.0**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=29,slow=3.0,SNR=8.8						
MOA	**Molln**	**149.82**	**331**	*e*P	**PKPbc**	**02 01 45.6**	**+0.3**
	comp=Z,2.3nm,1.2s						
ABTA	**Abfaltersbach**	**151.44**	**331**	*e*P	**PKiKP**	**02 01 49.9**	**+0.2**
	comp=Z,2.0nm,0.7s						
FETA	**Feichten**	**151.98**	**334**	*e*P	**PKiKP**	**02 01 53.3**	**+2.4**
	comp=Z,2.8nm,0.9s						

WEL ***14*** *01:44:03.9±0.7,33°S±7°×17°9W±1°7,h33km,M4.8/34, mB5.3/25,ML5.2/36,MLv5.1/34,Mw(mB)4.8/25,Error ellipse: s-maj=0.0km s-min=0.0km az=109.5*
IDC ***14*** *01:44:06.1±1.4,32°.48S×179°.69W,h123km±11km, mb4.1/10,mbtmp4.5/14,Error ellipse: s-maj=15.5km s-min=11.5km az=112.0*
NEIC ***14*** *01:44:06.3±1.9,32°.44S±0°.08×179°.6W±0°.1,h123km±6km, mb4.5/18,Error ellipse: s-maj=16.6km s-min=2.6km az=131.0*

ISC 14 01:44:03.3±0.4,**32°.64S**±0°.04×**179°.36W**±0°.08,**h100**km, **n160,**σ**2s05**/163**, mb4.5**/20**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.58**	**21**	P	**Pn**	**01 44 57.7**	**+0.8**
GLKZ				S	**Sn**	**01 45 38.2**	**-0.1**
RAO	**Raoul Island**	**3.59**	**21**	P	**Pn**	**01 44 58.6**	**+1.6**
	270nm,0.3s,baz=94,slow=20,SNR=4.3						
RAO				S	**Sn**	**01 45 41.5**	**+3.0**
	858nm,0.3s,baz=93,slow=24,SNR=5.4						
RAO	**Raoul Island**	**3.59**	**21**	Pn	**Pn**	**01 44 59.1**	**+2.1**
RIZ	**Raoul Island**	**3.60**	**20**	P	**Pn**	**01 44 58.6**	**+1.5**
RIZ				S	**Sn**	**01 45 39.9**	**+1.2**
MXZ	**Matakaoa Point**	**5.27**	**201**	P	**Pn**	**01 45 22.1**	**+2.4**
MXZ				S	**Sn**	**01 46 18.5**	**-0.7**
WMGZ	**Waiomatatini S**	**5.48**	**199**	P	**Pn**	**01 46 24.1**	**+1.6**
WMGZ				S	**Sn**	**01 46 24.1**	**-0.2**
GRZ	**Great Barrier**	**5.60**	**228**	P	Pn	01 45 28.4	+4.3
HAZ	**Te Kaha**	**5.62**	**204**	P	**Pn**	**01 45 25.7**	**+1.4**
HAZ				S	**Sn**	**01 46 29.9**	**+2.3**
WIZ	**White Island**	**5.64**	**209**	P	Pn	01 45 30.2	+5.6
PKGZ	**Pakihiroa**	**5.64**	**201**	P	**Pn**	**01 45 25.0**	**+0.2**
PKGZ				S	**Sn**	**01 46 26.6**	**-1.6**
PUZ	**Puketiti**	**5.76**	**199**	P	**Pn**	**01 45 26.3**	**0.0**
PUZ				S	**Sn**	**01 46 29.4**	**-1.7**
KUZ	**Kuaotunu**	**5.76**	**223**	P	Pn	01 45 31.3	+5.0
RUGZ	**Raukumara Rang**	**5.84**	**204**	P	**Pn**	**01 45 28.4**	**+0.8**
RUGZ				S	**Sn**	**01 46 31.4**	**-1.8**
TWGZ	**Tauwhareparae**	**5.94**	**201**	P	**Pn**	**01 45 29.6**	**+0.8**
TWGZ				S	**Sn**	**01 46 35.8**	**+0.3**
WHRZ	**Whale Island**	**6.01**	**209**	P	Pn	01 45 35.7	+6.0
CNGZ	**Carnagh Statio**	**6.16**	**198**	P	**Pn**	**01 45 34.4**	**+2.6**
OPRZ	**Ohinepanea**	**6.18**	**212**	P	**Pn**	**01 45 35.5**	**+3.5**
TKGZ	**Te Karaka**	**6.22**	**201**	P	**Pn**	**01 45 34.4**	**+1.9**
TKGZ				S	**Sn**	**01 46 39.9**	**-2.3**
MWZ	**Matawai**	**6.23**	**203**	P	**Pn**	**01 45 32.3**	**-0.3**
MWZ				S	**Sn**	**01 46 41.2**	**-1.2**
MARZ	**Manawahe**	**6.24**	**210**	P	**Pn**	**01 45 36.3**	**+3.4**
URZ	**Urewera**	**6.31**	**206**	P	**Pn**	**01 45 35.8**	**+2.1**
	43nm,0.3s,baz=6.8,slow=4.2,SNR=31						
URZ				S	**Sn**	**01 46 45.1**	**+0.8**
	91nm,0.4s,baz=136,slow=23,SNR=14						
URZ	**Urewera**	**6.31**	**206**	P	**Pn**	**01 45 33.7**	**0.0**
URZ				S	**Sn**	**01 46 42.3**	**-1.9**
EDRZ	**Edgecumbe**	**6.32**	**209**	P	Pn	01 45 38.5	+4.5
OUZ	**Omahuta**	**6.40**	**244**		**Pn**	**01 45 36.5**	**+1.6**
RAGZ	**Rawiri**	**6.41**	**203**	P	**Pn**	**01 45 34.7**	**-0.4**
RAGZ				S	**Sn**	**01 46 46.0**	**-0.9**
KARZ	**Kaharoa**	**6.46**	**213**	P	**Pn**	**01 45 40.2**	**+4.4**
KMRZ	**Kaimai**	**6.46**	**215**	P	Pn	01 45 40.8	+4.9
OMRZ	**Omania**	**6.48**	**211**	P	Pn	01 45 40.4	+4.4
RIGZ	**Rimuhau**	**6.49**	**200**	P	**Pn**	**01 45 36.2**	**0.0**
RIGZ				S	**Sn**	**01 46 46.9**	**-2.0**
TARZ	**Mount Tarawera**	**6.53**	**210**	P	**Pn**	**01 45 40.3**	**+3.5**
RRRZ	**Republican Roa**	**6.61**	**209**	P	**Pn**	**01 45 42.2**	**+4.3**
MUGZ	**Murupara**	**6.63**	**207**	P	**Pn**	**01 45 39.0**	**+0.9**
SNGZ	**Shannon Statio**	**6.69**	**203**	P	**Pn**	**01 45 40.1**	**+1.1**
SNGZ				S	**Sn**	**01 46 50.4**	**-3.3**
HSRZ	**Hossack Road**	**6.70**	**211**	P	Pn	01 45 44.9	+5.8
HRRZ	**Handcock Road**	**6.75**	**211**	P	Pn	01 45 44.2	+4.4
PRRZ	**Plateau Road**	**6.80**	**209**	P	**Pn**	**01 45 43.7**	**+3.3**
ALRZ	**Allen Road**	**6.87**	**209**	P	**Pn**	**01 45 44.5**	**+3.1**
MHGZ	**Mahia Peninsul**	**6.87**	**198**	P	**Pn**	**01 45 40.7**	**-0.7**
MTHZ	**Maungataniwha**	**6.91**	**208**	P	**Pn**	**01 45 42.4**	**+0.2**
TLZ	**Tolley Road**	**7.04**	**215**	P	**Pn**	**01 45 48.0**	**+4.3**
MRHZ	**Matea Rd**	**7.07**	**208**	P	**Pn**	**01 45 44.8**	**+0.6**
WHTZ	**Whakaora**	**7.12**	**211**	P	**Pn**	**01 45 48.6**	**+3.7**
NMHZ	**Naumai**	**7.16**	**205**	P	**Pn**	**01 45 44.7**	**-0.7**
ARHZ	**Aropaoanui**	**7.24**	**203**	P	**Pn**	**01 45 45.7**	**-0.7**
HATZ	**Hinemaiaia**	**7.25**	**209**	P	**Pn**	**01 45 48.7**	**+2.1**
WATZ	**Wairara**	**7.25**	**212**	P	**Pn**	**01 45 49.9**	**+3.3**
BKZ	**Black Stump Fm**	**7.33**	**206**	P	**Pn**	**01 45 47.1**	**-0.6**
RITZ	**Rihia Road**	**7.42**	**210**	P	**Pn**	**01 45 51.7**	**+2.8**
HIZ	**Hauiti**	**7.52**	**217**	P	**Pn**	**01 45 53.5**	**+3.3**
CKHZ	**Cape Kidnapper**	**7.58**	**201**	P	**Pn**	**01 45 51.7**	**+0.7**
KWHZ	**Kaweka Forest**	**7.58**	**206**	P	**Pn**	**01 45 52.2**	**+1.1**
NTVZ	**North Tongarir**	**7.60**	**211**	P	**Pn**	**01 45 51.8**	**+0.3**
TMVZ	**Te Maari**	**7.61**	**210**	P	**Pn**	**01 45 52.7**	**+1.2**
KRVZ	**Karewarewa**	**7.61**	**211**	P	**Pn**	**01 45 53.8**	**+2.2**
ETVZ	**East Tongariro**	**7.62**	**210**	P	**Pn**	**01 45 52.2**	**+0.6**
WTVZ	**West Tongariro**	**7.65**	**211**	P	**Pn**	**01 45 54.1**	**+1.9**
NNVZ	**North Ngauruho**	**7.66**	**211**	P	**Pn**	**01 45 54.2**	**+2.0**
OTVZ	**Oturere**	**7.66**	**210**	P	**Pn**	**01 45 53.5**	**+1.2**
TWVZ	**Taurewa**	**7.68**	**212**	P	**Pn**	**01 45 54.3**	**+1.7**
SNVZ	**South Ngauruho**	**7.69**	**210**	P	**Pn**	**01 45 52.3**	**-0.4**
NGZ	**Ngauruhoe**	**7.70**	**211**	P	**Pn**	**01 45 53.7**	**+0.9**
TUVZ	**Tukino**	**7.75**	**210**	P	**Pn**	**01 45 55.6**	**+2.1**
KAHZ	**Kahuranaki**	**7.76**	**202**	P	**Pn**	**01 45 51.8**	**-1.8**
BHHZ	**Black Hill Sta**	**7.78**	**207**	P	**Pn**	**01 45 53.8**	**0.0**
FWVZ	**Far West T-bar**	**7.79**	**211**	P	**Pn**	**01 45 55.5**	**+1.5**
WHVZ	**Whangaehu Hut**	**7.79**	**210**	P	**Pn**	**01 45 55.2**	**+1.1**
KRHZ	**Kereru**	**7.80**	**205**	P	**Pn**	**01 45 51.9**	**-2.1**
WNVZ	**Wahianoa**	**7.83**	**210**	P	**Pn**	**01 45 55.6**	**+1.1**
MOVZ	**Moawhango**	**7.83**	**209**	P	**Pn**	**01 45 54.4**	**-0.1**
PKVZ	**Pokaka**	**7.90**	**211**	P	**Pn**	**01 45 57.4**	**+1.9**
PXZ	**Pawanui**	**7.98**	**201**	P	**Pn**	**01 45 52.5**	**-3.9**
VRZ	**Vera Road**	**8.04**	**215**	P	**Pn**	**01 46 00.6**	**+3.3**
PNHZ	**Pukenui**	**8.10**	**205**	P	**Pn**	**01 45 56.7**	**-1.4**
WPHZ	**Waipukurau**	**8.15**	**203**	P	**Pn**	**01 45 58.9**	**+0.1**
PRHZ	**Porangahau**	**8.27**	**202**	P	**Pn**	**01 45 58.2**	**-2.2**
TSZ	**Takapari Road**	**8.31**	**206**	P	**Pn**	**01 46 00.5**	**-0.5**
WAZ	**Wanganui**	**8.45**	**211**	P	**Pn**	**01 46 03.0**	**+0.3**
DVHZ	**Dannevirke**	**8.45**	**204**	P	**Pn**	**01 46 02.3**	**-0.6**
LREZ	**Lake Rotokare**	**8.48**	**215**	P	**Pn**	**01 46 06.0**	**+2.8**
PKE	**Pukeiti**	**8.48**	**218**	P	**Pn**	**01 46 06.9**	**+3.6**
NEZ	**North Egmont**	**8.48**	**217**	P	**Pn**	**01 46 07.1**	**+3.8**
ANWZ	**Angora Road**	**8.49**	**202**	P	**Pn**	**01 46 03.6**	**+0.1**
KHEZ	**Kahui Hut**	**8.54**	**217**	P	**Pn**	**01 46 07.5**	**+3.4**
POWZ	**Post Office Ro**	**8.68**	**205**	P	**Pn**	**01 46 04.9**	**-1.0**
PRWZ	**Pori Road**	**8.75**	**204**	P	**Pn**	**01 46 06.5**	**-0.4**
BFZ	**Birch Farm**	**8.77**	**202**	P	**Pn**	**01 46 05.2**	**-1.9**
TIWZ	**Tintock**	**8.97**	**204**	P	**Pn**	**01 46 08.8**	**-1.2**
CPWZ	**Castlepoint**	**8.99**	**202**	P	**Pn**	**01 46 09.7**	**-0.5**
HOWZ	**Holdsworth Sta**	**9.21**	**205**	P	**Pn**	**01 46 10.5**	**-2.7**
TMWZ	**Te Maipa**	**9.27**	**203**	P	**Pn**	**01 46 11.9**	**-2.1**
TRWZ	**Traveller**	**9.60**	**203**	P	**Pn**	**01 46 15.9**	**-2.5**
PAWZ	**Paruwai Farm**	**9.67**	**204**	P	**Pn**	**01 46 16.3**	**-3.2**
MSWZ	**Moikau Station**	**9.76**	**205**	P	**Pn**	**01 46 18.2**	**-2.5**
WEL	**Wellington**	**9.82**	**207**	P	**Pn**	**01 46 18.9**	**-2.6**
PLWZ	**Palliser**	**9.90**	**204**	P	**Pn**	**01 46 18.5**	**-4.0**
CTZ	**Chatham Island**	**11.29**	**170**	P	Pn	01 46 49.5	+8.1
RPZ	**Rata Peaks**	**13.37**	**211**	S	Sn	01 49 23.7	-12
	10nm,0.4s,baz=32,slow=15,SNR=7.3						
MSVF	**Nonsavu**	**15.02**	**350**	P	**Pn**	**01 47 30.7**	**+0.2**
	6.4nm,0.8s,baz=107,slow=19,SNR=3.0						
MARNC	**Mare, Loyalty**	**15.78**	**312**	Pn	**Pn**	**01 47 36.4**	**-3.5**
DZM	**Mont Dzumac**	**16.41**	**306**	P	**Pn**	**01 47 46.1**	**-1.7**
	5.6nm,0.7s,baz=121,slow=19,SNR=3.4						
EIDS	**Eidsvold**	**26.79**	**278**	P	**P**	**01 49 31.2**	**-2.8**
STKA	**Stephens Creek**	**32.90**	**261**	P	**P**	**01 50 28.3**	**+0.3**
	1.2nm,0.5s,baz=103,slow=9.4,SNR=3.4						
	1.2nm,0.5s						
CTA	**Charters Tower**	**33.10**	**284**	P	**P**	**01 50 28.4**	**-1.4**
	2.9nm,0.6s,baz=124,slow=9.7,SNR=8.3						
	2.9nm,0.6s						
CTAO	**Charters Tower**	**33.10**	**284**	P	**P**	**01 50 28.3**	**-1.5**
CTAO				IAmb	IAmb	01 50 34.8	
	comp=Z,7.7nm,0.7s						
KRVT	**Keravat (AS076**	**38.86**	**310**	P	**P**	**01 51 16.7**	**-2.3**
	comp=Z,67nm,0.6s,baz=194,slow=4.2,SNR=5.6						
AS31	**Alice Springs**	**41.89**	**270**	P	**P**	**01 51 41.5**	**-2.4**
ASAR	**Alice Springs**	**41.89**	**270**	P	**P**	**01 51 41.8**	**-2.2**
	comp=Z,3.6nm,0.5s,baz=107,slow=7.1,SNR=30						
ASAR				PcP	**PcP**	**01 53 35.8**	**-2.1**
	comp=Z,1.1nm,0.8s,baz=92,slow=2.7,SNR=4.6						
	comp=Z,3.6nm,0.5s						
ASAR	**Alice Springs**	**41.89**	**270**	P	**P**	**01 51 41.5**	**-2.4**
WR0	**Warramunga Arr**	**42.90**	**275**	P	**P**	**01 51 49.6**	**-2.6**
WR0				IAmb	IAmb	01 51 54.6	
	comp=Z,6.6nm,0.8s						
WB2	**Warramunga Arr**	**43.07**	**275**	P	**P**	**01 51 51.3**	**-2.2**
WB2				IAmb	IAmb	01 51 55.9	
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**43.08**	**275**	P	**P**	**01 51 51.3**	**-2.3**
	comp=Z,5.1nm,0.3s,baz=114,slow=7.7,SNR=44						
	comp=Z,5.1nm,0.3s						
WRA	**Warramunga Arr**	**43.08**	**275**	P	**P**	**01 51 51.0**	**-2.6**
FORT	**Forrest**	**44.39**	**258**	P	**P**	**01 52 02.9**	**-1.1**
SBA	**Scott Base**	**45.73**	**184**	P	**P**	**01 52 17.3**	**+3.4**
SBA				IAmb	IAmb	01 52 18.7	
	comp=Z,6.9nm,0.8s						
KNRA	**Kununurra**	**49.77**	**277**	P	**P**	**01 52 44.7**	**-1.2**
KNRA				IAmb	IAmb	01 52 48.6	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.24**	**272**	P	**P**	**01 52 55.4**	**-1.6**
FITZ				IAmb	IAmb	01 52 57.7	
	comp=Z,5.3nm,0.8s						
PSA00	**Pilbara Seismi**	**54.59**	**265**	P	**P**	**01 53 20.2**	**-1.4**
PSA00				IAmb	IAmb	01 53 36.2	
	comp=Z,7.1nm,1.4s						
MBWA	**Marble Bar**	**54.86**	**266**	P	**P**	**01 53 22.4**	**-1.1**
QSPA	**South Pole Qui**	**57.48**	**180**	P	**P**	**01 53 44.6**	**+2.9**
	comp=Z,11nm,0.5s,baz=206,slow=2.3,SNR=28						
	comp=Z,11nm,0.5s						
QSPA	**South Pole Qui**	**57.48**	**180**	P	**P**	**01 53 44.2**	**+2.5**
BELA	**Belgrano 2**	**67.73**	**172**	P	**P**	**01 54 50.7**	**+1.2**
SMAI	**San Martin Ant**	**67.80**	**158**	P	**P**	**01 54 52.1**	**+2.1**
SMAI				IAmb	IAmb	01 54 55.3	
	comp=Z,7.0nm,1.0s						
MAW	**Mawson**	**69.81**	**201**	P	**P**	**01 55 02.1**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=141,slow=6.7,SNR=14						
	comp=Z,1.7nm,0.5s						
MAW	**Mawson**	**69.81**	**201**	P	**P**	**01 55 01.9**	**-0.5**
KSM	**Kuching**	**74.32**	**282**	P	**P**	**01 55 27.1**	**-3.2**
KSM				IAmb	IAmb	01 55 29.7	
	comp=Z,9.8nm,0.9s						
TROLL	**Troll, Antarti**	**75.64**	**181**	P	**P**	**01 55 38.6**	**+1.5**
SNAA	**Sanae**	**75.95**	**179**	P	**P**	**01 55 39.9**	**+1.1**
SNAA	**Sanae**	**75.95**	**179**	P	**P**	**01 55 39.7**	**+0.9**
SNAA				IAmb	IAmb	01 55 40.6	
	comp=Z,5.9nm,0.9s						
VNA3	**Neumayer Olymp**	**76.15**	**177**	P	**P**	**01 55 41.0**	**+1.1**
VNA2	**Neumayer--Watz**	**76.57**	**177**	P	**P**	**01 55 43.8**	**+1.6**
	baz=175,slow=5.0						
VNA1	**Neumayer--Stat**	**76.81**	**177**	P	**P**	**01 55 45.0**	**+1.5**
H03S2	**Juan Fernandez**	**80.20**	**124**	T	T	03 24 51.2	
	baz=237,SNR=11						
H03S1	**Juan Fernandez**	**80.21**	**124**	T	T	03 24 52.4	
	baz=237,SNR=11						
H03S3	**Juan Fernandez**	**80.21**	**124**	T	T	03 24 51.3	
	baz=237,SNR=12						
H03N3	**Juan Fernandez**	**80.40**	**124**	T	T	03 25 03.7	
	baz=240,slow=72,SNR=9.1						
H03N2	**Juan Fernandez**	**80.41**	**123**	T	T	03 25 00.1	
	baz=240,slow=72,SNR=7.2						
H03N1	**Juan Fernandez**	**80.42**	**123**	T	T	03 25 04.0	
	baz=240,slow=72,SNR=14						
PLCA	**Paso Flores**	**81.83**	**133**	P	**P**	**01 56 14.0**	**+2.5**
	comp=Z,2.0nm,0.7s,baz=231,slow=3.5,SNR=4.2						
	comp=Z,2.0nm,0.7s						
KSRS	**Korea Array**	**85.31**	**321**	P	**P**	**01 56 29.2**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=144,slow=5.8,SNR=10						
	comp=Z,1.8nm,0.6s						
PETK	**Petropavlovsk-**	**87.69**	**346**	P	**P**	**01 56 40.1**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=161,slow=5.5,SNR=4.2						
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**90.66**	**43**	P	**P**	**01 56 56.1**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=218,slow=7.8,SNR=6.5						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**90.66**	**43**	P	**P**	**01 56 53.7**	**-1.1**
ENH	**Enshi**	**91.91**	**305**	P	**P**	**01 56 58.6**	**-2.0**
MKAR	**Makanchi Array**	**118.30**	**309**	PKP	**PKPdf**	**02 02 36.9**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=236,slow=1.7,SNR=13						
ZALV	**Zalesovo Beam**	**118.91**	**318**	PKP	**PKPdf**	**02 02 37.8**	**-1.7**
	comp=Z,1.0nm,0.4s,baz=133,slow=3.5,SNR=5.5						
KMBO	**Kilima Mbogo**	**131.81**	**233**	SKPbc	**SKPbc**	**02 06 16.7**	**-5.9**
	comp=Z,1.6nm,0.6s,baz=107,slow=4.2,SNR=6.3						
ARCES	**ARCESS Array B**	**140.50**	**347**	PKhKP	PKPpre	02 03 12.3	
	comp=Z,0.4nm,0.4s,baz=44,slow=2.5,SNR=8.8						
ARCES				PKP	**PKPdf**	**02 03 20.2**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=56,slow=1.9,SNR=7.2						
ARCES				SKPbc	**SKPbc**	**02 06 42.5**	**-4.6**
	comp=Z,2.0nm,1.0s,baz=15,slow=1.4,SNR=5.1						
ONI	**Oni**	**144.98**	**299**	PKPdf	PKPbc	02 03 26.6	-1.7
GEVA	**Gevas**	**145.22**	**292**		**PKPbc**	**02 03 27.5**	**-1.7**
KBZ	**Khabaz**	**145.33**	**301**	PKPbc	**PKPbc**	**02 03 27.6**	**-1.5**
	comp=Z,5.7nm,0.7s,baz=125,slow=2.1,SNR=12						
GURO	**Guroymak-BITLI**	**146.04**	**292**	PKPbc	**PKPdf**	**02 03 30.5**	**-0.2**
FINES	**FINESS Array B**	**146.81**	**338**	PKPbc	**PKPdf**	**02 03 31.6**	**+0.5**
	comp=Z,5.5nm,0.4s,baz=46,slow=4.7,SNR=101						
FINES	**FINESS Array B**	**146.81**	**338**	PKPbc	**PKPbc**	**02 03 32.6**	**-0.4**
MARD	**Mardin**	**146.96**	**290**	PKPbc	**PKPdf**	**02 03 32.9**	**+0.6**
KOPT	**Kop Dagi**	**147.26**	**294**	PKPbc	**PKPbc**	**02 03 35.0**	**-0.4**
NB2	**NORSAR Subarra**	**150.76**	**349**	PKP	**PKPbc**	**02 03 42.2**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.76**	**349**	PKPbc	**PKPbc**	**02 03 41.8**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=17,slow=4.1,SNR=11						
NOA				PKPab	**PKPab**	**02 03 49.7**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=22,slow=3.2,SNR=7.2						
BRTR	**Keskin Array B**	**152.55**	**294**	PKPbc	**PKPbc**	**02 03 46.4**	**-1.7**
	comp=Z,3.3nm,0.5s,baz=151,slow=4.2,SNR=41						
DBIC	**Dimbokro**	**153.66**	**168**	PKPbc	**PKiKP**	**02 03 51.6**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=153,slow=0.6,SNR=6.7						
DBIC				PKPab	**PKPab**	**02 04 05.7**	**+1.8**
	comp=Z,2.6nm,0.6s,baz=178,slow=6.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**160.58**	**183**	PKPab	**PKPab**	**02 04 32.6**	**-1.0**
	comp=Z,2.1nm,0.7s,baz=170,slow=4.1,SNR=10						

IDC ***14*** *01:56:14.8±0.7,28°.79S×178°.25W,h213km±8km,mb3.0/3, mbtmp3.9/5,Error ellipse: s-maj=34.7km s-min=25.0km az=169.0*
ISC 14 01:56:14.1±0.9,**28°.3S**±0°.1×**178°.2W**±0°.2,**h200**km,**n10,** σ**1s88/10,mb3.1/3,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.01**	**164**	P	**Pn**	**01 56 44.3**	**+0.5**
	446nm,0.2s,baz=88,slow=8.4,SNR=12						
RAO				S	**Sn**	**01 57 06.9**	**-0.3**
	721nm,0.3s,baz=259,slow=22,SNR=14						
URZ	**Urewera**	**10.69**	**200**	S	Sn	02 00 27.2	-14
	5.2nm,0.5s,baz=278,slow=23,SNR=11						
MSVF	**Nonsavu**	**11.03**	**341**	P	**P**	**01 58 52.2**	**-0.9**
	36nm,0.7s,baz=153,slow=9.3,SNR=24						
DZM	**Mont Dzumac**	**15.17**	**291**	P	**P**	**01 59 42.0**	**+3.0**
	4.3nm,0.8s,baz=131,slow=23,SNR=5.2						
ASAR	**Alice Springs**	**43.05**	**265**	P	**P**	**02 03 53.4**	**-1.0**
	0.3nm,0.6s,baz=99,slow=7.7,SNR=5.9						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.84**	**270**	P	**P**	**02 03 60.0**	**-0.8**
	0.4nm,0.6s,baz=113,slow=6.6,SNR=4.7						
	0.4nm,0.6s						
NVAR	**Mina Array Bea**	**86.83**	**43**	P	**P**	**02 08 38.2**	**+2.1**
	0.4nm,0.7s,baz=223,slow=8.8,SNR=5.6						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**143.08**	**341**	PKP	**PKPdf**	**02 15 20.5**	**-2.8**
	1.3nm,0.8s,baz=62,slow=3.9,SNR=4.4						
NB2	**NORSAR Subarra**	**146.63**	**352**	PKP	**PKPab**	**02 15 32.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=16,slow=3.5						
NOA	**NORSAR Array B**	**146.63**	**352**	PKPbc	**PKPbc**	**02 15 31.3**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=13,slow=4.6,SNR=3.8						

IDC ***14*** *02:06:28.8±3.0,6°.19S×129°.86E,h91km±40km,mb4.2/1, mbtmp3.9/5,Error ellipse: s-maj=72.8km s-min=21.8km az=89.0*
NEIC ***14*** *02:06:29.8±2.0,6°.13S±0°.07×130°.3E±0°.2,h112km±12km, mb4.2/4,Error ellipse: s-maj=21.7km s-min=10.7km az=90.0*
DJA ***14*** *02:06:43.2±0.7,5°S±3°×13°0E±°,h11km±6km,M4.0/10, mb4.0/3,MLv4.0/10*
ISC 14 02:06:28.7±0.7,**6°.18S**±0°.05×**130°.41E**±0°.09,**h124**km,**n26,** σ**2s87**/30,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.73**	**343**	P	**Pn**	**02 06 56.4**	**-2.6**
SAUI	**Saumlaki**	**1.99**	**154**	Pn	**Pn**	**02 07 03.8**	**+1.6**
SAUI	**Saumlaki**	**1.99**	**154**	P	**Sn**	**02 07 32.6**	**+4.6**
MSAI	**Masohi**	**3.18**	**332**	P	**Pn**	**02 07 19.4**	**+1.9**
FAKI	**Fak Fak**	**3.72**	**30**	Pn	**Pn**	**02 07 25.3**	**+0.7**
FAKI	**Fak Fak**	**3.72**	**30**	P	**Pn**	**02 07 26.0**	**+1.3**
NLAI	**Namlea**	**4.41**	**311**	P	Pn	02 07 41.0	+7.2
SIJI	**Sorong**	**5.35**	**9**	P	**Pn**	**02 07 47.7**	**+1.3**
	9.8nm,0.2s,baz=110,slow=22,SNR=13						
SIJI				S	**Sn**	**02 08 43.1**	**-3.8**
	43nm,0.2s,baz=234,slow=23,SNR=16						
SWI	**Sorong**	**5.35**	**9**	P	**Pn**	**02 07 47.2**	**+0.7**
LBMI	**Labuha**	**6.23**	**332**	P	**Pn**	**02 08 00.7**	**+2.4**
	0.2nm22nm,1.1s						
MTN	**Manton Dam**	**6.66**	**174**	Pn	**Pn**	**02 08 04.6**	**+0.5**
KNRA	**Kununurra**	**9.57**	**190**	Pn	**Pn**	**02 08 45.6**	**+2.3**
KNRA					**Sn**	**02 10 27.2**	**-2.0**
FITZ	**Fitzroy Crossi**	**12.73**	**201**	P	**Pn**	**02 09 25.5**	**+0.2**
	0.8nm,0.3s,baz=28,slow=9.9,SNR=10						
FITZ				S	**Sn**	**02 11 38.7**	**-6.9**
	6.1nm,0.7s,baz=211,slow=9.1,SNR=9.4						
FITZ	**Fitzroy Crossi**	**12.73**	**201**	Pn	**Pn**	**02 09 25.8**	**+0.5**
WB0	**Warramunga Arr**	**14.05**	**164**	Pn	**Pn**	**02 09 43.9**	**+1.6**
WRA	**Warramunga Arr**	**14.20**	**165**	P	**Pn**	**02 09 45.9**	**+1.6**
	0.6nm,0.4s,baz=342,slow=13,SNR=9.1						
WRA				S	**Sn**	**02 12 13.0**	**-8.2**
	1.4nm,0.5s,baz=332,slow=22,SNR=7.8						
COEN	**Coen**	**14.74**	**123**	Pn	**P**	**02 09 53.8**	**-0.1**
ASAR	**Alice

	baz=351								
SSLB					*e*S		**Sn**	02 22 55.7	+2.1
	baz=351								
WDGT	**Dungji**	**2.55**	**321**		P		**Pn**	02 22 23.2	0.0
	baz=328								
WDGT					*e*S		**Sn**	02 22 52.1	-1.6
	baz=328								
VCHM	**Qimei**	**2.66**	**317**		P		**Pn**	02 22 24.5	-0.1
	baz=316								
VCHM					*e*S		**Sn**	02 22 54.5	-1.7
	baz=316								
PHUB	**P'eng-hu**	**2.80**	**323**		*e*P		**Pn**	02 22 26.7	+0.1
	baz=328								
PHUB					*e*S		**Sn**	02 22 58.2	-1.5
	baz=328								
PNG	**Penghu**	**2.85**	**324**		P		**Pn**	02 22 27.1	-0.2
	baz=323								
JYNG	**Yonagunijimaku**	**3.48**	**24**		P		**Pn**	02 22 37.1	+1.4
JYNG					S		**Sn**	02 23 16.0	0.0
YOJ	**Yonaguni jima**	**3.52**	**25**		P		**Pn**	02 22 35.8	-0.3
	baz=31								
YOJ					S		**Sn**	02 23 14.6	-2.3
	baz=31								
YOJ	**Yonaguni jima**	**3.52**	**25**		P		**Pn**	02 22 37.2	+1.0
YOJ					*e*S		**Sn**	02 23 16.6	-0.2
HATJ	**Hateruma jima**	**3.56**	**38**		P		**Pn**	02 22 37.6	+0.8
HATJ					*e*S		**Sn**	02 23 17.5	-0.5
IRIF	**Iriomote-Funau**	**3.74**	**35**		P		**Pn**	02 22 40.1	+0.9
IRIF					*i* S		**Sn**	02 23 21.9	-0.4
JKRS	**Kuro-shima**	**3.82**	**39**		P		**Pn**	02 22 41.1	+0.9
JKRS					S		**Sn**	02 23 23.8	-0.4
JIJ	**Ishigaki jima**	**4.00**	**39**		*e*P		**Pn**	02 22 43.8	+1.1
JIJ					S		**Sn**	02 23 27.7	-0.7
VWUC	**VWUC**	**4.12**	**335**		P		**Pn**	02 22 44.8	+0.5
	baz=334								
VWUC					*e*S		**Sn**	02 23 28.4	-3.0
	baz=334								
KNM	**Kinmen**	**4.16**	**320**		P		**Pn**	02 22 46.5	+1.6
	baz=317								
KNM					S		**Sn**	02 23 31.8	-0.5
	baz=317								
KNMB	**Chin-men Tao**	**4.22**	**320**		P		**Pn**	02 22 46.4	+0.7
	baz=319								
KNMB					*e*S		**Sn**	02 23 31.2	-2.6
	baz=319								
ZPLA	**Ao Xicun**	**4.29**	**309**		P		**Pn**	02 22 47.4	+0.9
	baz=308								
ZPLA					S		**Sn**	02 23 33.0	-2.4
	baz=308								
DSXP	**Dongshan**	**4.40**	**304**		*e*P		**Pn**	02 22 49.3	+1.2
	baz=303								
DSXP					S		**Sn**	02 23 35.7	-2.5
	baz=303								
JTJ	**Tarama**	**4.54**	**42**		*e*P		**Pn**	02 22 50.8	+0.8
JTJ					S		**Sn**	02 23 39.9	-1.7
AXDP	**Jialang**	**4.80**	**320**		*e*P		**Pn**	02 22 54.5	+1.0
	baz=319								
SXFK	**Yanhouchang**	**6.16**	**327**		*e*P		**Pn**	02 23 12.5	+0.5
	baz=326								

IDC 14 02:32:01.7±1.9, 0°74S×124°35E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=185.4km s-min=28.9km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.44**	**153**	P	P	02 36 52.7	+1.0
	0.4nm,0.4s,baz=331,slow=11,SNR=5.9 0.4nm,0.4s						
ASAR	**Alice Springs**	**24.60**	**159**	P	P	02 37 23.1	-0.8
	0.2nm,0.5s,baz=344,slow=7.3,SNR=5.0 0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.95**	**328**	P	P	02 42 09.9	0.0
	0.2nm,0.5s,baz=123,slow=7.1,SNR=2.4 0.2nm,0.5s						

*IDC **14** 02:35:45.6±0.8, 6°.76N×72°.98W, h155km±13km, mb3.0/4, mbtmp3.7/7, Error ellipse: s-maj=38.0km s-min=7.4km az=132.0*

*RSNC **14** 02:35:47.0±1.0, 6°.79N×73°.15W, h148km±4km, ML3.5, Mw3.8*

ISC 14 02:35:45.5±0.8, 6°.83N±0°.03×73°.10W±0°.03, h155km±6km, n44, σ1°.41/73, mb3.3/4, 4C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**199**	⇑*e*P	**Pn**	**02 36 06.8**	**-0.1**
BARC				*e*S	**Sn**	**02 36 21.5**	**-1.6**
BARC				*i*		02 36 22.6	
	comp=Z,846nm,0.3s						
PAMC	**Pamplona, Colo**	**0.64**	**38**	⇑*e*P	**Pn**	**02 36 09.7**	**+0.9**
PAMC				*e*S	**Sn**	**02 36 26.8**	**+0.2**
PAMC				*i*		02 36 28.8	
	comp=Z,2μm,0.5s						
BRRC	**Barranca, Sant**	**0.67**	**294**	⇑*i*P	**Pn**	**02 36 08.7**	**+0.3**
BRRC				*e*S	**Sn**	**02 36 25.6**	**-0.3**
BRRC				*i*		02 36 28.9	
	comp=Z,499nm,0.3s						
RUSC	**La Rusia**	**0.93**	**179**	*e*P	**Pn**	**02 36 10.8**	**0.0**
RUSC				*e*S	**Sn**	**02 36 29.1**	**-1.1**
RUSC				*i*		02 36 31.1	
	comp=Z,583nm,0.4s						
TAMC	**Tame, Arauca**	**1.36**	**107**	⇑*i*P	**Pn**	**02 36 15.2**	**+1.1**
TAMC				*e*S	**Sn**	**02 36 37.0**	**+1.0**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*e*P	**Pn**	**02 36 13.4**	**-0.8**
PTBC				*e*S	**Sn**	**02 36 34.4**	**-1.9**
PTBC				*i*		02 36 37.9	
	comp=Z,404nm,0.4s						
SPBC	**San Pablo de B**	**1.52**	**220**	*e*P	**Pn**	**02 36 15.8**	**0.0**
SPBC				*e*S	**Sn**	**02 36 37.6**	**-1.4**
SPBC				*i*		02 36 41.2	
	comp=Z,536nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	**Pn**	**02 36 19.6**	**+0.2**
ZARC				*e*S	**Sn**	**02 36 45.8**	**+0.2**
ZARC				*i*		02 36 50.9	
	comp=Z,409nm,0.5s						
NORC	**Norcasia**	**2.16**	**235**	*e*P	**Pn**	**02 36 22.9**	**0.0**
NORC				*e*S	**Sn**	**02 36 50.0**	**-1.8**
NORC				*i*		02 36 58.9	
	comp=Z,210nm,0.2s						
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**02 36 25.2**	**+0.5**
CHIC				*e*S	**Sn**	**02 36 52.8**	**-1.9**
CHIC				*i*		02 36 57.6	
	comp=Z,160nm,0.3s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**02 36 26.8**	**+1.6**
	comp=Z,103nm,0.3s,baz=79,slow=9.8,SNR=62						
ROSC				S	**Sn**	**02 36 56.0**	**+0.4**
	comp=Z,431nm,0.5s,baz=351,slow=22,SNR=16						
ROSC	**El Rosal**	**2.32**	**212**	⇓*e*P	**Pn**	**02 36 26.7**	**+1.6**
ROSC				*e*S	**Sn**	**02 36 55.1**	**-0.5**
ROSC				*i*		02 37 03.5	
	comp=Z,376nm,0.6s						
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**02 36 27.4**	**+0.1**
HELC				*e*S	**Sn**	**02 36 59.1**	**-0.3**
HELC				*i*		02 37 06.0	
	comp=Z,128nm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**02 36 27.2**	**-0.7**
UREC				*e*S	**Sn**	**02 36 58.5**	**-2.2**
UREC				*i*		02 37 11.9	
	comp=Z,216nm,0.2s						
SOCV	**Socops**	**2.65**	**57**	*e*P	**Pn**	**02 36 29.8**	**+1.0**
SOCV				*e*S	**Sn**	**02 37 01.4**	**-0.9**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P	**Pn**	**02 36 31.9**	**+1.3**
GUY2C				*e*S	**Sn**	**02 37 06.2**	**+0.8**
GUY2C				*i*		02 37 11.9	
	comp=Z,199nm,0.3s						
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**02 36 30.4**	**0.0**
VILC				*e*S	**Sn**	**02 37 04.8**	**-0.2**
VILC				*i*		02 37 13.4	
	comp=Z,236nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*e*P	**Pn**	**02 36 30.1**	**-0.3**
PTGC				*e*S	**Sn**	**02 37 02.5**	**-2.7**
PTGC				*i*		02 37 05.7	
	comp=Z,340nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*e*P	**Pn**	**02 36 34.3**	**+0.4**
CBOC				*e*S	**Sn**	**02 37 10.9**	**-0.5**
CBOC				*i*		02 37 14.7	
	comp=Z,68nm,0.6s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**02 36 36.7**	**+1.0**
	comp=Z,53nm,0.3s,baz=236,slow=10,SNR=15						
SDV				S	**Sn**	**02 37 13.5**	**-0.9**
	comp=Z,138nm,0.4s,baz=65,slow=23,SNR=25						
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**02 36 37.7**	**+1.8**
ARGC				*e*S	**Sn**	**02 37 13.0**	**-2.0**
ARGC				*i*		02 37 26.7	
	comp=Z,51nm,0.5s						
ANIL	**Santa Ana**	**3.26**	**225**	*e*P	**Pn**	**02 36 38.4**	**+1.7**
ANIL				*e*S	**Sn**	**02 37 18.1**	**+1.7**
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**02 36 40.7**	**+0.2**
PRAC				*e*S	**Sn**	**02 37 22.2**	**-0.9**
PRAC				*i*		02 37 30.2	
	comp=Z,150nm,0.3s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**02 36 41.3**	**-0.5**
SJCC				*e*S	**Sn**	**02 37 22.6**	**-3.0**
SJCC				*i*		02 37 26.6	
	comp=Z,164nm,0.5s						
PLMC	**San Jos del P**	**3.70**	**239**	*e*P	**Pn**	**02 36 43.2**	**+1.0**
PLMC				*e*S	**Sn**	**02 37 25.5**	**-0.6**
PLMC				*i*		02 37 31.8	
	comp=Z,80nm,0.3s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*S	**Sn**	**02 37 28.5**	**-0.1**
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**02 36 47.4**	**-0.8**
CRJC				*e*S	**Sn**	**02 37 34.0**	**-3.1**
CRJC				*i*		02 37 44.1	
	comp=Z,81nm,0.2s						
GUVC	**San Jose del G**	**4.28**	**174**	*e*S	**Sn**	**02 37 37.5**	**-2.2**
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**02 36 49.5**	**-0.5**
SMRC	**Santa Marta, M**	**4.45**	**346**	*e*P	**Pn**	**02 36 52.0**	**+0.2**
CAPC	**Capurgana**	**4.58**	**293**	*e*P	**Pn**	**02 36 52.3**	**-1.3**
CAPC				*i*		02 37 48.2	
	comp=Z,37nm,0.4s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**02 36 54.0**	**-1.3**
MACC				*e*S	**Sn**	**02 37 46.5**	**-3.4**
MACC				*i*		02 37 53.3	
	comp=Z,44nm,0.8s						
DABV	**Dabajuro**	**4.74**	**31**	*e*P	**Pn**	**02 36 56.2**	**+0.6**
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	**Pn**	**02 37 01.4**	**-0.5**
GARC				*e*S	**Sn**	**02 37 56.8**	**-4.7**
GARC				*i*		02 38 01.8	
	comp=Z,46nm,0.3s						
POPC	**Popayan, Colom**	**5.55**	**220**	*e*P	**Pn**	**02 37 07.1**	**+0.4**
FLOC	**Florencia**	**5.80**	**206**	*e*P	**Pn**	**02 37 09.6**	**-0.1**
BBAC	**Balboa, Cauca**	**6.32**	**221**	*e*P	**Pn**	**02 37 18.2**	**+1.4**
BBAC				*e*S	**Sn**	**02 38 26.3**	**-1.9**
BBAC				*i*		02 38 42.2	
	comp=Z,6.3nm,0.5s						
GCUF	**Volcan Galeras**	**6.99**	**217**	*e*P	**Pn**	**02 37 28.0**	**+2.0**
SJG	**San Juan**	**13.10**	**31**	P	**Pn**	**02 38 45.2**	**-0.7**
	comp=Z,4.4nm,0.4s,baz=197,slow=16,SNR=2.2						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**02 42 37.6**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=128,slow=9.2,SNR=7.9 comp=Z,0.3nm,0.4s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**02 44 11.2**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=125,slow=7.6,SNR=3.8 comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**51.49**	**315**	P	**P**	**02 44 35.8**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=133,slow=9.1,SNR=2.8 comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**02 45 57.8**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=133,slow=6.7,SNR=9.3 comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**02 55 16.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=119,slow=4.0,SNR=9.1						

NNC 14 02:41:43.5±1.5, 38°.65N×70°.93E, h0km, mb3.5, mpv3.1, 2C-5D, Error ellipse: s-maj=13.8km s-min=9.5km az=165.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.46**	**356**	Pn	Pn	02 42 53.1	+0.7
	0.7nm,0.3s,baz=175,slow=12,SNR=51						
KK31				⇓Pg	Pb	02 43 04.5	+1.7
	1.6nm,0.4s,baz=179,slow=13,SNR=12						
KK31				⇓Lg	Lg	02 44 04.6	
	2.1nm,0.3s,baz=181,slow=22,SNR=12						
CHMS	**Chumysh**	**5.22**	**32**	⇓Pn	Pn	02 43 02.6	-0.4
	1.7nm,0.3s						
CHMS				⇑Lg	Lg	02 44 28.4	
	4.9nm,0.7s						
TKM2	**Tokmak 2**	**5.55**	**38**	⇑Pn	Pn	02 43 07.1	-0.5
	0.9nm,0.5s						
TKM2				⇓Sn	Sn	02 44 13.7	+1.6
	3.1nm,0.8s						
TKM2				⇓Lg	Lg	02 44 40.8	
	3.7nm,0.9s						

*NIED **14** 02:46:29.2, 27°.15N×128°.28E, h16km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr-2.56; Mθθ1.52; Mφφ 1.04; Mrθ-0.14; Mθφ-1.13; Mφr0.99; Fault plane solution: M0 2.68000×10^15^ NP1: φs297.00000°, δ38.00000°, λ-110.00000°. NP2: φs142.00000°, δ55.00000°, λ-75.00000°.*

*JMA **14** 02:46:29.2±0.1, 27°.2N±0°.2×128°.3E±0°.2, h16km±1km, MD4.4/9, MV4.4/9, NEAR OKINAWAJIMA ISLAND*

JMA Felt II J1 at NEAR OKINAWAJIMA ISLAND .

*NEIC **14** 02:46:30.8±2.5, 26°.93N±0°.09×128°.4E±0°.1, h28km±3km, mb4.5/22, Error ellipse: s-maj=16.0km s-min=10.8km az=125.0*

*IDC **14** 02:46:37.8±3.2, 27°.21N×128°.24E, h84km±29km, mb3.8/20, mbtmp4.0/23, MS3.3/11, Error ellipse: s-maj=21.7km s-min=13.3km az=71.0*

ISC 14 02:46:29.2±1.0, 27°.11N±0°.04×128°.29E±0°.04, h14km±6km, n102, σ1°.20/83, mb4.3/37, MS3.4/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYRO	**Yoronjima**	**0.16**	**120**	*i* P	**Pb**	**02 46 33.9**	**-0.2**
JYRO				S	**Sg**	**02 46 37.0**	**+1.0**
JYRO	**Yoronjima**	**0.16**	**120**	A	A	02 46 33.9	
	comp=E,44nm,0.7s,comp=E,42nm,0.6s						
JOW	**Kunigami**	**0.28**	**183**		**Pb**	**02 46 35.9**	**-0.1**
JOW				Sg	**Sb**	**02 46 40.0**	**-0.4**
JOW	**Kunigami**	**0.28**	**183**	*i* P	**Pb**	**02 46 35.8**	**-0.1**
JOW				S	**Sb**	**02 46 40.1**	**-0.3**
JOW	**Kunigami**	**0.28**	**183**	A	A	02 46 35.8	
	comp=E,191nm,0.3s,comp=E,110nm,0.3s						
JIH	**Iheya**	**0.30**	**256**	*i* P	**Pb**	**02 46 35.6**	**-0.7**
JIH				S	**Sb**	**02 46 39.7**	**-1.4**
JIH	**Iheya**	**0.30**	**256**	A	A	02 46 35.6	
	comp=E,49nm,0.7s,comp=E,115nm,0.6s						
JOKE	**Okinoerabujima**	**0.35**	**45**	*i* P	**Pg**	**02 46 36.0**	**-0.5**
JOKE	**Okinoerabujima**	**0.35**	**45**	A	A	02 46 36.0	
	comp=E,21nm,4.8s,comp=E,25nm,1.6s						
JNTH	**Nagotoyohara**	**0.64**	**202**	*i* P	**Pb**	**02 46 42.0**	**0.0**
JNTH				S	**Sb**	**02 46 50.8**	**0.0**
JNTH	**Nagotoyohara**	**0.64**	**202**	A	A	02 46 42.0	
	comp=E,13nm,0.5s,comp=E,22nm,0.6s						
JTK	**Tokunoshima**	**0.89**	**41**	*i* P	**Pg**	**02 46 45.3**	**-1.3**
JTK				S	**Sg**	**02 46 57.4**	**-0.9**
JTK	**Tokunoshima**	**0.89**	**41**	A	A	02 46 45.3	
	comp=E,27nm,0.6s,comp=E,32nm,0.6s						
JJT3	**Tamagusuku3**	**1.06**	**205**	*i* P	**Pn**	**02 46 50.1**	**+0.5**
JJT3				S	**Sn**	**02 47 04.3**	**+0.1**
JJT3	**Tamagusuku3**	**1.06**	**205**	A	A	02 46 50.1	
	comp=E,38nm,1.1s,comp=E,52nm,4.7s						
JAGN	**Aguni-jima**	**1.07**	**241**	*i* P	**Pb**	**02 46 48.7**	**-0.8**
JAGN				*e*S	**Sg**	**02 47 03.4**	**-0.5**
JAGN	**Aguni-jima**	**1.07**	**241**	A	A	02 46 48.7	
	comp=E,20nm,2.2s,comp=E,20nm,0.7s						
JAMN	**Amaminishikomi**	**1.38**	**35**	A	A	02 46 53.4	
	comp=E,7.0nm,0.6s,comp=E,6.0nm,1.3s						
JKE	**Kume jima 2**	**1.56**	**240**	A	A	02 46 56.8	
	comp=E,5.0nm,5.3s,comp=E,6.0nm,6.5s						
JAM	**Amami Oshima**	**1.74**	**42**	A	A	02 46 59.1	
	comp=E,4.0nm,0.8s,comp=E,6.0nm,0.6s						
JZK	**Kikaishima**	**1.91**	**51**	A	A	02 47 01.6	
	comp=E,20nm,3.3s,comp=E,20nm,3.4s						
JSU	**Suzuyama**	**4.77**	**23**		**Pn**	**02 47 42.7**	**+2.0**
YOJ	**Yonaguni jima**	**5.44**	**242**	Pn	**Pn**	**02 47 50.1**	**+0.2**
TATO	**Taipei**	**6.48**	**252**	Pn	**Pn**	**02 48 05.7**	**+1.6**
YHNB	**Yeheng**	**6.69**	**250**		**Pn**	**02 48 08.5**	**+1.5**
SSLB	**Suanglung**	**7.41**	**245**		**Pn**	**02 48 16.3**	**-0.7**
NAWB	**Namwon**	**8.32**	**355**		**Pn**	**02 48 33.0**	**+3.6**
KSAR	**Wonju Array Be**	**10.31**	**358**	Pn	**Pn**	**02 49 00.1**	**+3.5**
KSRS	**Korea Array**	**10.32**	**358**	P	Pn	02 49 01.1	+4.3
	2.4nm,0.7s,baz=177,slow=14,SNR=18						
KSRS				LR	LR	02 53 24.2	
	comp=Z,56nm,18.4s,baz=175,slow=40						
JHJ	**Hachijo jima 2**	**11.61**	**56**	LR	LR	02 53 39.0	
	comp=Z,122nm,18.2s,baz=254,slow=36						
MAJO	**Matsushiro**	**12.62**	**39**	Pn	**Pn**	**02 49 30.0**	**+1.7**
MJAR	**Matsushiro Arr**	**12.62**	**39**	P	**P**	**02 49 35.6**	**-4.1**
	0.5nm,0.5s,baz=221,slow=8.7,SNR=2.0						
USRK	**Ussuriysk Ar.**	**17.31**	**9**	P	**P**	**02 50 34.8**	**+3.0**
	1.0nm,0.5s,baz=203,slow=6.3,SNR=2.6						
MDJ	**Mudanjiang**	**17.50**	**3**		**P**	**02 50 34.5**	**+0.7**
DAV	**Davao City (W)**	**20.09**	**188**	LR	LR	02 58 32.6	
	comp=Z,55nm,21.7s,baz=354,slow=35						
KLR	**Kul'dur**	**22.25**	**6**	LR	LR	03 00 19.6	
	comp=Z,35nm,18.8s,baz=175,slow=37						
ULN	**Ulaanbaatar**	**26.55**	**327**	P	**P**	**02 52 07.7**	**+1.0**
ULN				IAmb	IAmb	02 52 16.4	
	comp=Z,4.7nm,0.4s						
SONM	**Songino Array**	**26.85**	**326**	P	**P**	**02 52 09.7**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=139,slow=9.1,SNR=9.6 comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**26.85**	**326**	P	**P**	**02 52 10.1**	**+0.8**
KAPI	**Kappang**	**32.98**	**196**	LR	LR	03 06 23.7	
	comp=Z,58nm,19.8s,baz=89,slow=36						
PETK	**Petropavlovsk-**	**33.92**	**32**	P	**P**	**02 53 10.3**	**-1.3**
	comp=Z,5.1nm,0.8s,baz=223,slow=10,SNR=5.1 comp=Z,5.1nm,0.8s						
PETK	**Petropavlovsk-**	**33.92**	**32**	P	**P**	**02 53 10.5**	**-1.2**
MA2	**Magadan**	**35.97**	**19**	LR	LR	03 09 26.6	
	comp=Z,35nm,18.8s,baz=8.5,slow=38						
H11N2	**WAKE ISLAND Hy**	**36.07**	**93**	T	T	03 31 34.3	
	baz=290,slow=74,SNR=66						
H11N1	**WAKE ISLAND Hy**	**36.07**	**93**	T	T	03 31 35.2	
	baz=290,slow=74,SNR=43						
H11N3	**WAKE ISLAND Hy**	**36.09**	**93**	T	T	03 31 35.5	
	baz=290,slow=74,SNR=51						
H11S3	**WAKE ISLAND Hy**	**36.30**	**95**	T	T	03 31 59.6	
	baz=291,slow=74,SNR=41						
H11S1	**WAKE ISLAND Hy**	**36.31**	**95**	T	T	03 31 52.4	
	baz=291,slow=74,SNR=21						
H11S2	**WAKE ISLAND Hy**	**36.32**	**95**	T	T	03 31 55.6	
	baz=291,slow=74,SNR=24						
MKAR	**Makanchi Array**	**41.00**	**311**	P	**P**	**02 54 12.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=97,slow=11,SNR=9.1 comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**41.00**	**311**	P	**P**	**02 54 12.1**	**+0.4**
ZAA0	**Zalesovo Array**	**41.59**	**322**	P	**P**	**02 54 16.3**	**-0.1**
ZALV	**Zalesovo Beam**	**41.59**	**322**	P	**P**	**02 54 14.7**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=103,slow=5.0,SNR=2.2 comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**41.59**	**322**	P	**P**	**02 54 17.4**	**+1.0**
KNRA	**Kununurra**	**42.53**	**179**	P	**P**	**02 54 22.7**	**-1.7**
KNRA				IAmb	IAmb	02 54 30.2	
	comp=Z,22nm,1.4s						
KURK	**Kurchatov**	**44.23**	**316**	P	**P**	**02 54 37.3**	**-0.5**
KURK				IAmb	IAmb	02 54 38.3	
	comp=Z,1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**44.26**	**316**	P	**P**	**02 54 37.9**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=102,slow=8.9,SNR=14 comp=Z,1.6nm,0.6s						
WB0	**Warramunga Arr**	**46.97**	**172**	P	**P**	**02 54 58.4**	**-1.4**
WB0				IAmb	IAmb	02 55 03.0	
	comp=Z,9.2nm,1.2s						
WRA	**Warramunga Arr**	**47.14**	**172**	P	**P**	**02 55 02.0**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=354,slow=8.3,SNR=13 comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**47.14**	**172**	P	**P**	**02 54 59.9**	**-1.2**
WB2	**Warramunga Arr**	**47.14**	**172**	P	**P**	**02 55 00.5**	**-0.6**
WB2				IAmb	IAmb	02 55 15.9	
	comp=Z,6.1nm,1.1s						
KKAR	**Karatay Array**	**48.95**	**305**	P	**P**	**02 55 15.1**	**+0.1**
BRVK	**Borovoye**	**49.73**	**318**	P	**P**	**02 55 21.0**	**+0.2**
BRVK				IAmb	IAmb	02 55 21.8	
	comp=Z,3.5nm,0.8s						
AS31	**Alice Springs**	**50.77**	**173**	P	**P**	**02 55 26.3**	**-2.7**
ASAR	**Alice Springs**	**50.77**	**173**	P	**P**	**02 55 30.4**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=3.8,slow=14,SNR=35 comp=Z,0.9nm,0.5s						
ABKAR	**Akbulak array**	**56.09**	**313**	P	**P**	**02 56 08.0**	**+0.2**
STKA	**Stephens Creek**	**60.01**	**167**	P	**P**	**02 56 36.9**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=349,slow=8.9,SNR=3.5 comp=Z,1.0nm,0.4s						
IMAR	**Indian Mountai**	**60.68**	**27**	P	**P**	**02 56 39.7**	**0.0**
MLY	**Manley**	**61.98**	**28**	P	**P**	**02 56 48.9**	**+0.4**
TOLK	**Toolik Lake Re**	**62.20**	**24**	P	**P**	**02 56 51.1**	**+1.3**
H24K	**Noodor Dome**	**63.10**	**27**	P	**P**	**02 56 57.5**	**+1.5**
H24K				IAmb	IAmb	02 56 58.4	
	comp=Z,6.9nm,1.0s						
ILAR	**Eielson Array**	**63.64**	**28**	P	**P**	**02 56 58.5**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=263,slow=3.1,SNR=8.6 comp=Z,0.9nm,0.8s						
BMAR	**Burnt Mountain**	**64.19**	**25**	P	**P**	**02 57 04.4**	**+1.3**
J26L	**Joseph Creek**	**65.10**	**28**	P	**P**	**02 57 09.3**	**+0.2**
J26L				IAmb	IAmb	02 57 09.9	
	comp=Z,3.1nm,0.8s						
BCAR	**Beaver Creek A**	**66.17**	**30**	P	**P**	**02 57 16.1**	**0.0**
INK	**Inuvik**	**68.06**	**23**	LR	LR	03 31 01.6	
	comp=Z,34nm,18.3s,baz=158,slow=39						
INK	**Inuvik**	**68.06**	**23**	P	**P**	**02 57 28.2**	**+0.4**
INK				IAmb	IAmb	02 57 29.3	
	comp=Z,4.4nm,0.8s						
KBZ	**Khabaz**	**68.65**	**309**	P	**P**	**02 57 31.6**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=54,slow=4.9,SNR=4.4 comp=Z,2.3nm,0.8s						

NEIC ***14*** *03:11:06.5±2.3,51°.6N±0°.1×174°.08W±0°.08, h10km±2km, mb3.9/23, ML3.8/22(AEIC), Error ellipse: s-maj=17.2km s-min=8.4km az=176.0*

AEIC ***14*** *03:11:10.8±5.4,51°.6N±0°.1×174°.32W±0°.07, h18km±6km, Error ellipse: s-maj=15.3km s-min=5.9km az=183.0*

ISC 14 03:11:05.4±0.7, 51°.51N±0°.09×174°.03W±0°.04, h10km, n76, σ1§17/66, mb3.7/18, MS3.3/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**0.77**	**357**		**Pn**	**03 11 24.2**	**+1.7**
KOKL	**Mount Kliuchef**	**0.83**	**353**		**Pn**	**03 11 25.0**	**+1.8**
GSMY	**Great Sitkin M**	**1.37**	**294**		**Pg**	**03 11 31.7**	**0.0**
GSMY					**Sb**	**03 11 46.0**	**-2.6**
GSTR	**Great Sitkin T**	**1.39**	**296**		**Pg**	**03 11 32.4**	**+0.4**
GSCK	**Great Sitkin C**	**1.42**	**292**		**Pb**	**03 11 32.3**	**+0.4**
GSTD	**Great Sitkin T**	**1.42**	**294**		**Pb**	**03 11 32.4**	**+0.3**
GSTD					**Sb**	**03 11 48.6**	**-1.6**
ETKA	**Kagalaska Isla**	**1.52**	**285**		**Pb**	**03 11 33.8**	**+0.1**
ADK	**Adak**	**1.69**	**284**		**Pn**	**03 11 35.9**	**+0.9**
ADK	**Adak**	**1.69**	**284**		**Sn**	**03 11 56.0**	**-0.7**
KIWB	**Kanaga Island**	**1.97**	**281**		**Pn**	**03 11 40.0**	**+1.1**
KIKV	**Kanaga Island**	**1.99**	**282**		**Pn**	**03 11 40.9**	**+1.8**
KICM	**Kanaga Island**	**2.01**	**283**		**Pb**	**03 11 41.5**	**-0.6**
KIMD	**Kanaga Island**	**2.01**	**279**		**Pn**	**03 11 40.8**	**+1.4**
TAPA	**Tanaga Point A**	**2.37**	**279**		**Pn**	**03 11 46.3**	**+1.9**
TAFP	**Tanaga Falls P**	**2.49**	**281**		**Pn**	**03 11 48.3**	**+2.3**
TAFP					**Sn**	**03 12 17.5**	**+1.1**
TASE	**Tanaga Southea**	**2.52**	**279**		**Pn**	**03 11 48.5**	**+2.2**
GAEA	**Gareloi East**	**2.95**	**277**		**Pn**	**03 11 54.7**	**+2.4**
GALAA	**Gareloi Lava P**	**2.96**	**277**		**Pn**	**03 11 55.1**	**+2.7**
NIKH	**Nikolski High**	**3.51**	**63**	Pn	**Pn**	**03 12 01.0**	**+1.1**
CEPE	**Semis' Perret**	**3.95**	**279**		**Pn**	**03 12 08.2**	**+2.1**
AMKA	**Amchitka**	**4.17**	**271**		**Pn**	**03 12 09.9**	**+0.8**
CAST	**Castle Rocks**	**16.67**	**36**	IAmb	IAmb	03 15 07.6	
	comp=Z,16nm,1.5s						
PETK	**Petropavlovsk-**	**17.32**	**286**	Pn	**Pn**	**03 15 08.3**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=97,slow=15,SNR=8.1 comp=Z,1.3nm,0.6s						
BPAW	**Bear Paw Mtn.**	**17.47**	**35**		**P**	**03 15 10.5**	**+0.5**
BPAW				IAmb	IAmb	03 15 13.6	
	comp=Z,4.6nm,0.6s						
I21K	**Tanana**	**17.79**	**31**		**Pn**	**03 15 13.5**	**+0.7**
I21K				IAmb	IAmb	03 15 31.6	
	comp=Z,9.1nm,1.2s						
MLY	**Manley**	**18.11**	**33**	P	**P**	**03 15 19.4**	**+2.3**
MLY				IAmb	IAmb	03 15 22.9	
	comp=Z,12nm,1.4s						
I23K	**Minto, Yukon-K**	**18.65**	**33**	P	**Pn**	**03 15 25.1**	**+1.8**
I23K				IAmb	IAmb	03 15 32.3	
	comp=Z,5.0nm,0.7s						
MDM	**Murphy Dome**	**18.94**	**35**	P	**P**	**03 15 26.8**	**+0.5**
HDA	**Harding Lake**	**19.12**	**37**	IAmb	IAmb	03 15 36.5	
	comp=Z,5.4nm,0.6s						
IL31		**19.33**	**36**	IAmb	IAmb	03 15 38.7	
	comp=Z,4.7nm,0.5s						
ILAR	**Eielson Array**	**19.33**	**36**	P	**P**	**03 15 29.0**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=222,slow=9.3,SNR=43 comp=Z,0.9nm,0.3s						
ILAR	**Eielson Array**	**19.33**	**36**	P	**P**	**03 15 30.4**	**-0.1**
H24K	**Noodor Dome**	**19.55**	**33**	P	**P**	**03 15 32.6**	**-0.4**
H24K				IAmb	IAmb	03 15 52.5	
	comp=Z,7.5nm,1.1s						
RIDG	**Independent Ri**	**19.63**	**40**	P	**P**	**03 15 34.3**	**+0.4**
COLD	**Coldfoot**	**19.68**	**28**	P	**P**	**03 15 34.0**	**-0.2**
M26K	**Nabesna, AK**	**19.91**	**45**	P	**P**	**03 15 38.1**	**+1.1**
M26K				IAmb	IAmb	03 15 39.8	
	comp=Z,13nm,1.5s						
L26K	**Log Cabin Wild**	**19.98**	**43**	P	**P**	**03 15 38.4**	**+0.8**
L26K				IAmb	IAmb	03 16 02.1	
	comp=Z,8.1nm,1.4s						
SCRK	**Sand Creek**	**20.08**	**40**	P	**P**	**03 15 38.6**	**-0.2**
TOLK	**Toolik Lake Re**	**20.81**	**25**	P	**P**	**03 15 46.8**	**+0.2**
K27K	**Chicken**	**20.88**	**41**	P	**P**	**03 15 47.5**	**+0.2**
K27K				IAmb	IAmb	03 16 10.2	
	comp=Z,6.6nm,1.1s						
I26K	**Coal Creek Min**	**20.98**	**37**	P	**P**	**03 15 48.0**	**-0.4**
I26K				IAmb	IAmb	03 16 05.5	
	comp=Z,5.5nm,0.8s						
SEY	**Seymchan**	**21.20**	**316**	P	**P**	**03 15 50.9**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=16,slow=23,SNR=2.4 comp=Z,0.6nm,0.4s						
MA2	**Magadan**	**21.27**	**306**	LR	LR	03 23 49.4	
	comp=Z,40nm,19.1s,baz=104,slow=36						
BMAR	**Burnt Mountain**	**21.53**	**31**	P	**P**	**03 15 55.3**	**+0.9**
DAWY	**Dawson**	**22.00**	**42**	P	**P**	**03 16 00.1**	**+0.7**
DAWY				IAmb	IAmb	03 16 08.7	
	comp=Z,8.7nm,1.5s						
N31M	**Braeburn, Yuko**	**23.02**	**49**	P	**P**	**03 16 10.7**	**+0.4**
INK	**Inuvik**	**25.67**	**34**	P	**P**	**03 16 35.5**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=244,slow=6.8,SNR=13 comp=Z,2.3nm,0.6s						
DLBC	**Dease Lake**	**25.79**	**57**	P	**P**	**03 16 37.0**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=196,slow=17,SNR=2.0 comp=Z,1.1nm,0.6s						
BBB	**Bella Bella**	**28.02**	**70**	LR	LR	03 26 17.0	
	comp=Z,34nm,19.0s,baz=360,slow=33						
YAK	**Yakutsk**	**31.57**	**311**	LR	LR	03 30 21.9	
	comp=Z,58nm,19.6s,baz=88,slow=37						
YKA	**Yellowknife Ar**	**32.97**	**47**	P	**P**	**03 17 38.9**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=72,slow=2.7,SNR=5.8 comp=Z,0.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**35.07**	**212**	T	T	03 55 55.5	
	baz=20,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	**35.08**	**212**	T	T	03 55 56.1	
	baz=20,slow=76,SNR=37						
H11N1	**WAKE ISLAND Hy**	**35.09**	**212**	T	T	03 55 56.0	
	baz=20,slow=76,SNR=33						
USRK	**Ussuriysk Ar.**	**36.23**	**280**	P	**P**	**03 18 08.3**	**+0.1**
	comp=Z,4.8nm,0.5s,baz=54,slow=9.7,SNR=17 comp=Z,4.8nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**36.28**	**212**	T	T	03 57 09.1	
	baz=20,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**36.29**	**212**	T	T	03 57 10.4	
	baz=20,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**36.29**	**212**	T	T	03 57 10.4	
	baz=20,slow=76,SNR=7.4						
NVAR	**Mina Array Bea**	**40.57**	**86**	P	**P**	**03 18 46.7**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=306,slow=7.7,SNR=2.8 comp=Z,0.3nm,0.8s						
KSRS	**Korea Array**	**42.61**	**274**	P	**P**	**03 19 01.8**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=52,slow=7.5,SNR=7.3						
KSRS				LR	LR	03 36 13.4	
	comp=Z,10nm,20.9s,baz=175,slow=35 comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**43.41**	**75**	P	**P**	**03 19 06.9**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=316,slow=4.1,SNR=3.6 comp=Z,0.2nm,0.6s						
SONM	**Songino Array**	**49.23**	**299**	P	**P**	**03 19 52.8**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=50,slow=7.6,SNR=9.2						
SONM				LR	LR	03 41 42.0	
	comp=Z,39nm,19.0s,baz=33,slow=37 comp=Z,1.4nm,0.6s						
FRB	**Frobisher Bay**	**51.32**	**33**	LR	LR	03 41 27.0	
	comp=Z,40nm,18.0s,baz=72,slow=36						
TXAR	**Lajitas Array**	**55.68**	**85**	P	**P**	**03 20 41.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=312,slow=4.9,SNR=4.0 comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**58.43**	**352**	P	**P**	**03 20 60.0**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=28,slow=6.8,SNR=12						
ARCES				PcP	**PcP**	**03 21 51.3**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=21,slow=5.2,SNR=9.5						
ARCES				LR	LR	03 47 22.5	
	comp=Z,20nm,21.1s,baz=89,slow=37 comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**62.25**	**311**	P	**P**	**03 21 26.4**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=41,slow=6.5,SNR=23 comp=Z,0.9nm,0.3s						
FINES	**FINESS Array B**	**66.26**	**350**	P	**P**	**03 21 52.2**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=14,slow=8.1,SNR=11						
FINES				PcP	**PcP**	**03 22 23.1**	**0.0**
	comp=Z,2.2nm,0.8s,baz=65,slow=5.0,SNR=6.7 comp=Z,0.7nm,0.4s						
NOA	**NORSAR Array B**	**67.73**	**357**	P	**P**	**03 22 01.7**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=263,slow=4.1,SNR=5.2 comp=Z,0.2nm,0.5s						
AKTO	**Aktyubinsk**	**69.25**	**327**	LR	LR	03 55 41.3	
	comp=Z,19nm,18.9s,baz=91,slow=39						
AKASG	**Malin Array Be**	**76.27**	**345**	P	**P**	**03 22 53.0**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=17,slow=6.1,SNR=17 comp=Z,1.6nm,0.4s						
GERES	**GERESS Array B**	**79.81**	**355**	P	**P**	**03 23 13.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=15,slow=5.7,SNR=7.7 comp=Z,0.6nm,0.7s						
SJG	**San Juan**	**86.64**	**65**	LR	LR	04 04 40.3	
	comp=Z,14nm,18.6s,baz=49,slow=37						
ASAR	**Alice Springs**	**87.67**	**226**	P	**P**	**03 23 53.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=23,slow=5.0,SNR=2.3 comp=Z,0.3nm,0.7s						
MATP	**Matopo**	**144.32**	**322**	PKP	**PKPab**	**03 30 39.9**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=18,slow=2.4,SNR=7.3						
LBTB	**Lobatse**	**149.58**	**323**	PKPbc	**PKPbc**	**03 30 55.8**	**+0.8**
	comp=Z,1.9nm,0.4s,baz=17,slow=1.6,SNR=5.9						
BOSA	**Boshof**	**152.95**	**320**	PKPbc	**PKPbc**	**03 31 02.7**	**0.0**
	comp=Z,3.5nm,0.8s,baz=96,slow=3.1,SNR=4.1						

IDC 14 03:29:12.1±4.1, 41°.95S×84°.80E, h0km, mb3.8/5, mbtmp3.8/5, MS3.5/5, Error ellipse: s-maj=118.1km s-min=27.3km az=134.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**23.96**	**83**	T	T	03 59 17.1	
	baz=244,slow=74,SNR=163						
H01W3	**Cape Leeuwin H**	**23.97**	**83**	T	T	03 59 17.8	
	baz=244,slow=74,SNR=153						
H01W1	**Cape Leeuwin H**	**23.98**	**83**	T	T	03 59 23.5	
	baz=244,slow=74,SNR=118						
H08S2	**Diego Garcia H**	**35.86**	**339**	T	T	04 13 52.1	
	baz=164,slow=76,SNR=336						
H08S1	**Diego Garcia H**	**35.87**	**339**	T	T	04 13 52.5	
	baz=164,slow=76,SNR=331						
H08S3	**Diego Garcia H**	**35.88**	**339**	T	T	04 13 53.6	
	baz=164,slow=76,SNR=632						
ASAR	**Alice Springs**	**44.47**	**82**	P	P	03 37 25.3	+0.1
	0.7nm,0.8s,baz=229,slow=8.5,SNR=6.5 0.7nm,0.8s						
PSI	**Prapat**	**46.36**	**20**	LR	LR	03 52 44.0	
	comp=Z,110nm,19.5s,baz=154,slow=30						
VNDA	**Vanda**	**46.65**	**163**	P	P	03 37 41.6	-0.1
	0.4nm,0.6s,baz=291,slow=6.7,SNR=5.4						
VNDA				LR	LR	03 54 36.7	
	comp=Z,34nm,18.7s,baz=294,slow=33 0.4nm,0.6s						
WRA	**Warramunga Arr**	**47.07**	**78**	P	P	03 37 45.4	-0.3
	1.4nm,0.8s,baz=231,slow=8.0,SNR=4.2 1.4nm,0.8s						
QSPA	**South Pole Qui**	**48.20**	**180**	P	P	03 37 54.0	-0.1
	1.0nm,0.5s,baz=264,slow=2.6,SNR=8.1 1.0nm,0.5s						
PALK	**Pallekele**	**49.13**	**355**	LR	LR	03 53 18.7	
	comp=Z,62nm,22.0s,baz=264,slow=29						
BOSA	**Boshof**	**49.48**	**266**	LR	LR	03 53 59.6	
	comp=Z,46nm,21.1s,baz=146,slow=30						
SNAA	**Sanae**	**50.09**	**204**	P	P	03 38 08.3	-0.1
	1.0nm,0.6s,baz=156,slow=19,SNR=3.7 1.0nm,0.6s						
TSUM	**Tsumeb**	**60.61**	**270**	LR	LR	04 00 38.6	
	comp=Z,24nm,21.5s,baz=158,slow=31						

NOU ***14*** *03:39:08.2, 40°.59S×177°.11E, h55km, MLv3.9/9, Off E. Coast of N. Island, N.Z.*

WEL ***14*** *03:39:09.9±0.4, 40°.5±2°×177°.7E±°, h33km, M3.2/22, ML3.5/24, MLv3.2/22, Error ellipse: s-maj=0.0km s-min=0.0km az=114.9*

ISC 14 03:39:08.7±1.3, 40°.51S±0°.03×176°.99E±0°.04, h64km±8km, n117, σ0§92/142, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRHZ	**Porangahau**	**0.37**	**312**	P	**Pn**	**03 39 20.2**	**+0.5**
PRHZ				S	**Sn**	**03 39 26.9**	**-0.8**
ANWZ	**Angora Road**	**0.40**	**277**	P	**Pn**	**03 39 20.8**	**+0.8**
ANWZ				S	**Sn**	**03 39 27.7**	**-0.5**
PXZ	**Pawanui**	**0.49**	**348**	P	**Pn**	**03 39 21.5**	**+0.7**
PXZ				S	**Sn**	**03 39 29.2**	**-0.5**
BFZ	**Birch Farm**	**0.59**	**253**	P	**Pn**	**03 39 23.0**	**+1.0**
BFZ				S	**Sn**	**03 39 31.2**	**-0.5**
BFZ	**Birch Farm**	**0.59**	**253**	P	**Pn**	**03 39 22.8**	**+0.8**
WPHZ	**Waipukurau**	**0.61**	**316**	P	**Pn**	**03 39 22.6**	**+0.4**
WPHZ				S	**Sn**	**03 39 31.2**	**-0.9**
DVHZ	**Dannevirke**	**0.67**	**288**	P	**Pn**	**03 39 23.2**	**+0.4**
DVHZ				S	**Sn**	**03 39 31.9**	**-1.3**
KAHZ	**Kahuranaki**	**0.72**	**353**	P	**Pn**	**03 39 24.1**	**+0.7**
KAHZ				S	**Sn**	**03 39 34.1**	**-0.2**
CPWZ	**Castlepoint**	**0.72**	**236**	P	**Pn**	**03 39 25.0**	**+1.6**
CPWZ				S	**Sn**	**03 39 36.3**	**+2.1**
PRWZ	**Pori Road**	**0.78**	**266**	P	**Pn**	**03 39 25.2**	**+1.1**
PRWZ				S	**Sn**	**03 39 35.6**	**+0.1**
PNHZ	**Pukenui**	**0.85**	**314**	P	**Pn**	**03 39 25.3**	**+0.2**
PNHZ				S	**Sn**	**03 39 35.6**	**-1.5**
CKHZ	**Cape Kidnapper**	**0.85**	**4**	P	**Pn**	**03 39 25.9**	**+0.9**
TIWZ	**Tintock**	**0.88**	**252**	P	**Pn**	**03 39 26.4**	**+1.0**
TIWZ				S	**Sn**	**03 39 37.7**	**-0.1**
TSZ	**Takapari Road**	**0.91**	**299**	P	**Pn**	**03 39 26.0**	**+0.2**
TSZ				S	**Sn**	**03 39 36.6**	**-1.8**
POWZ	**Post Office Ro**	**0.94**	**277**	P	**Pn**	**03 39 26.8**	**+0.6**
POWZ				S	**Sn**	**03 39 38.5**	**-0.6**
KRHZ	**Kereru**	**0.99**	**331**	P	**Pn**	**03 39 27.0**	**+0.2**
KRHZ				S	**Sn**	**03 39 38.4**	**-1.8**
TMWZ	**Te Maipa**	**1.03**	**234**	P	**Pn**	**03 39 28.2**	**+1.0**
TMWZ				S	**Sn**	**03 39 41.9**	**+0.8**
MRZ	**Mangatainoka R**	**1.09**	**262**	P	**Pn**	**03 39 28.7**	**+0.7**
MRZ				S	**Sn**	**03 39 41.4**	**-1.0**
KWHZ	**Kaweka Forest**	**1.17**	**338**	P	**Pn**	**03 39 29.7**	**+0.5**
KWHZ				S	**Sn**	**03 39 43.0**	**-1.5**
HOWZ	**Holdsworth Sta**	**1.19**	**251**	P	**Pn**	**03 39 29.9**	**+0.6**
HOWZ				S	**Sn**	**03 39 44.0**	**-0.7**
BHHZ	**Black Hill Sta**	**1.25**	**325**	P	**Pn**	**03 39 30.6**	**+0.5**
BHHZ				S	**Sn**	**03 39 43.9**	**-2.3**
ARHZ	**Aropaoanui**	**1.25**	**0**	P	**Pn**	**03 39 31.0**	**+0.9**
ARHZ				S	**Sn**	**03 39 46.4**	**+0.3**
MTW	**Mount Morrison**	**1.30**	**240**	P	**Pn**	**03 39 31.4**	**+0.6**
MTW				S	**Sn**	**03 39 47.3**	**-0.2**
OHWZ	**Ohakea**	**1.32**	**283**	P	**Pn**	**03 39 32.6**	**+1.6**
OHWZ				S	**Sn**	**03 39 48.4**	**+0.7**
TRWZ	**Traveller**	**1.33**	**228**	P	**Pn**	**03 39 31.8**	**+0.7**
TRWZ				S	**Sn**	**03 39 48.2**	**+0.1**
BKZ	**Black Stump Fm**	**1.40**	**344**	P	**Pn**	**03 39 32.9**	**+0.7**
BKZ				S	**Sn**	**03 39 48.4**	**-1.4**
BKZ	**Black Stump Fm**	**1.40**	**344**	P	**Pn**	**03 39 33.0**	**+0.8**
NMHZ	**Naumai**	**1.42**	**354**	P	**Pn**	**03 39 33.5**	**+1.0**
NMHZ				S	**Sn**	**03 39 50.5**	**+0.2**
OGWZ	**Otaki Gorge**	**1.42**	**257**	P	**Pn**	**03 39 33.0**	**+0.6**
MOVZ	**Moawhango**	**1.46**	**319**	P	**Pn**	**03 39 33.9**	**+0.9**
PAWZ	**Paruwai Farm**	**1.47**	**233**	P	**Pn**	**03 39 33.8**	**+0.7**
MHGZ	**Mahia Peninsul**	**1.53**	**28**	P	**Pn**	**03 39 34.7**	**+0.8**
CAW	**Cannon Point**	**1.58**	**247**	P	**Pn**	**03 39 35.0**	**+0.5**
WNVZ	**Wahianoa**	**1.60**	**317**	P	**Pn**	**03 39 36.2**	**+1.3**
MSWZ	**Moikau Station**	**1.60**	**235**	P	**Pn**	**03 39 35.2**	**+0.3**
TUVZ	**Tukino**	**1.61**	**320**	P	**Pn**	**03 39 36.6**	**+1.4**
KIW	**Kapiti Island**	**1.62**	**257**	P	**Pn**	**03 39 35.9**	**+0.8**
MTVZ	**Mangateitei**	**1.62**	**313**	P	**Pn**	**03 39 36.6**	**+1.4**
WHVZ	**Whangaehu Hut**	**1.64**	**318**	P	**Pn**	**03 39 36.8**	**+1.3**
TRVZ	**Turoa**	**1.64**	**317**	P	**Pn**	**03 39 36.9**	**+1.3**
MTHZ	**Maungataniwha**	**1.66**	**356**	P	**Pn**	**03 39 36.3**	**+0.6**
FWVZ	**Far West T-bar**	**1.67**	**318**	P	**Pn**	**03 39 37.2**	**+1.2**
SNVZ	**South Ngauruho**	**1.68**	**321**	P	**Pn**	**03 39 37.3**	**+1.2**
PLWZ	**Palliser**	**1.69**	**231**	P	**Pn**	**03 39 36.1**	**+0.1**
OTVZ	**Oturere**	**1.69**	**322**	P	**Pn**	**03 39 37.4**	**+1.2**
ETVZ	**East Tongariro**	**1.69**	**324**	P	**Pn**	**03 39 37.3**	**+1.1**
NGZ	**Ngauruhoe**	**1.71**	**321**	P	**Pn**	**03 39 37.6**	**+1.2**
TMVZ	**Te Maari**	**1.71**	**324**	P	**Pn**	**03 39 37.5**	**+1.1**
WAZ	**Wanganui**	**1.71**	**295**	P	**Pn**	**03 39 38.2**	**+1.8**
MRHZ	**Matea Rd**	**1.73**	**345**	P	**Pn**	**03 39 37.7**	**+1.1**
NTVZ	**North Tongarir**	**1.74**	**324**	P	**Pn**	**03 39 37.8**	**+1.1**
NNVZ	**North Ngauruho**	**1.74**	**322**	P	**Pn**	**03 39 38.0**	**+1.1**
SNGZ	**Shannon Statio**	**1.75**	**9**	P	**Pn**	**03 39 37.7**	**+0.9**
KRVZ	**Karewarewa**	**1.76**	**323**	P	**Pn**	**03 39 38.4**	**+1.4**
PKVZ	**Pokaka**	**1.76**	**313**	P	**Pn**	**03 39 38.3**	**+1.3**
WTVZ	**West Tongariro**	**1.76**	**322**	P	**Pn**	**03 39 38.1**	**+1.0**
WEL	**Wellington**	**1.85**	**245**	P	**Pn**	**03 39 38.6**	**+0.4**
TWVZ	**Taurewa**	**1.87**	**320**	P	**Pn**	**03 39 39.4**	**+0.9**
RIGZ	**Rimuhau**	**1.90**	**18**	P	**Pn**	**03 39 39.6**	**+0.8**
SNZO	**South Karori**	**1.91**	**245**	P	**Pn**	**03 39 39.3**	**+0.4**
MUGZ	**Murupara**	**2.04**	**355**	P	**Pn**	**03 39 41.4**	**+0.6**
RAGZ	**Rawiri**	**2.04**	**9**	P	**Pn**	**03 39 41.0**	**+0.2**
TKGZ	**Te Karaka**	**2.17**	**18**	P	**Pn**	**03 39 43.0**	**+0.5**
TCW	**Tory Channel**	**2.18**	**250**	P	**Pn**	**03 39 42.8**	**+0.2**
VRZ	**Vera Road**	**2.21**	**308**	P	**Pn**	**03 39 44.1**	**+1.1**
MWZ	**Matawai**	**2.21**	**11**	P	**Pn**	**03 39 43.4**	**+0.3**
CNGZ	**Carnagh Statio**	**2.23**	**25**	P	**Pn**	**03 39 44.2**	**+0.8**
URZ	**Urewera**	**2.25**	**2**	P	**Pn**	**03 39 43.9**	**+0.3**
URZ	**Urewera**	**2.25**	**2**	P	**Pn**	**03 39 44.0**	**+0.4**
TARZ	**Mount Tarawera**	**2.30**	**350**	P	**Pn**	**03 39 45.3**	**+0.9**
DUWZ	**D'Urville Isla**	**2.35**	**262**	P	**Pn**	**03 39 45.6**	**+0.6**
TWGZ	**Tauwhareparae**	**2.45**	**18**	P	**Pn**	**03 39 47.0**	**+0.6**
TUWZ	**Tuamarina**	**2.48**	**247**	P	**Pn**	**03 39 46.4**	**-0.3**
NEZ	**North Egmont**	**2.55**	**298**	P	**Pn**	**03 39 49.9**	**+2.2**
HIZ	**Hauiti**	**2.59**	**320**	P	**Pn**	**03 39 48.9**	**+0.7**
HIZ	**Hauiti**	**2.59**	**320**	P	**Pn**	**03 39 49.1**	**+0.9**
KHEZ	**Kahui Hut**	**2.59**	**297**	P	**Pn**	**03 39 50.7**	**+2.3**
RUGZ	**Raukumara Rang**	**2.60**	**12**	P	**Pn**	**03 39 48.7**	**+0.3**
PUZ	**Puketiti**	**2.63**	**22**	P	**Pn**	**03 39 48.7**	**0.0**
NMEZ	**Namu Road**	**2.63**	**294**	P	**Pn**	**03 39 51.2**	**+2.4**
BSWZ	**Blackbirch Sta**	**2.65**	**242**	P	**Pn**	**03 39 48.9**	**-0.1**
PKE	**Pukeiti**	**2.66**	**299**	P	**Pn**	**03 39 50.8**	**+1.6**
PKGZ	**Pakihiroa**	**2.75**	**18**	P	**Pn**	**03 39 51.0**	**+0.5**
HAZ	**Te Kaha**	**2.82**	**13**	P	**Pn**	**03 39 51.4**	**+0.1**
NNZ	**Nelson**	**2.83**	**254**	P	**Pn**	**03 39 51.9**	**+0.5**
WMGZ	**Waiomatatini S**	**2.91**	**23**	P	**Pn**	**03 39 52.7**	**+0.2**
TKNZ	**Takaka Hill**	**3.11**	**259**	P	**Pn**	**03 39 56.0**	**+0.7**
MXZ	**Matakaoa Point**	**3.12**	**20**	P	**Pn**	**03 39 55.8**	**+0.4**
KHZ	**Kahutara**	**3.22**	**233**	P	**Pn**	**03 39 56.3**	**-0.4**
KHZ	**Kahutara**	**3.22**	**233**	P	**Pn**	**03 39 56.6**	**-0.1**
MRNZ	**Matariki Terra**	**3.33**	**253**	P	**Pn**	**03 39 58.8**	**+0.5**
THZ	**Tophouse**	**3.33**	**247**	P	**Pn**	**03 39 57.4**	**-1.0**
QRZ	**Quartz Range**	**3.41**	**263**	P	**Pn**	**03 39 59.5**	**+0.2**
QRZ	**Quartz Range**	**3.41**	**263**	P	**Pn**	**03 39 59.9**	**+0.5**
GVZ	**Greta Valley S**	**3.85**	**229**	P	**Pn**	**03 40 05.0**	**-0.4**
DSZ	**Denniston Nort**	**4.11**	**251**	P	**Pn**	**03 40 08.7**	**-0.3**
AMCZ	**Amberley**	**4.20**	**229**	P	**Pn**	**03 40 09.8**	**-0.3**
LTZ	**Lake Taylor**	**4.20**	**236**	P	**Pn**	**03 40 09.7**	**-0.6**
OKCZ	**Okains Bay**	**4.34**	**221**	P	**Pn**	**03 40 11.3**	**-0.8**
AKCZ	**Akaroa Harbour**	**4.53**	**221**	P	**Pn**	**03 40 13.9**	**-0.7**
MQZ	**McQueen's Vall**	**4.54**	**224**	P	**Pn**	**03 40 13.8**	**-1.0**
INZ	**Inchbonnie**	**4.71**	**240**	P	**Pn**	**03 40 16.6**	**-0.6**
RACZ	**Rakaia**	**4.83**	**227**	P	**Pn**	**03 40 18.5**	**-0.3**
WACZ	**Wakanui South**	**5.14**	**226**	P	**Pn**	**03 40 23.4**	**+0.5**
WVZ	**Waitaha Valley**	**5.33**	**239**	P	**Pn**	**03 40 26.3**	**+0.7**
RPZ	**Rata Peaks**	**5.46**	**232**	P	**Pn**	**03 40 26.8**	**-0.5**
RPZ	**Rata Peaks**	**5.46**	**232**	P	**Pn**	**03 40 27.2**	**-0.2**
ARCZ	**Arundel**	**5.52**	**230**	P	**Pn**	**03 40 27.9**	**-0.3**
GCSZ	**Gaunt Creek Bo**	**5.71**	**238**	P	**Pn**	**03 40 31.5**	**+0.7**
CTZ	**Chatham Island**	**5.74**	**126**	P	Pn	03 40 35.1	+3.9
CTZ				S	**Sn**	**03 41 36.0**	**+0.3**
TMZ	**Timaru**	**5.88**	**227**	P	**Pn**	**03 40 32.6**	**-0.6**
FOZ	**Fox Glacier**	**6.14**	**238**	P	**Pn**	**03 40 36.8**	**+0.2**
LBZ	**Lake Benmore**	**6.35**	**230**	P	**Pn**	**03 40 39.7**	**0.0**
ODZ	**Otahua Downs**	**6.51**	**224**	P	**Pn**	**03 40 41.6**	**-0.1**
ODZ	**Otahua Downs**	**6.51**	**224**	P	**Pn**	**03 40 41.2**	**-0.5**
EAZ	**Earnscleugh**	**7.36**	**228**	P	**Pn**	**03 40 52.9**	**-0.5**
SYZ	**Scrubby Hill

AEIC **14** *04:05:32.9±2.7,51.78N±0.09×171.52W±0.08,h63km±4km, Error ellipse: s-maj=14.0km s-min=6.8km az=164.0*
BJI **14** *04:05:33.3±0.0,52.21N×171.93W,h65km,mb5.1/57, mB4.9/30,Ms4.7/14,Ms7 4.3/12*
MOS **14** *04:05:33.0±0.9,52.15N×171.71W,h53km,mb5.0/48, Error ellipse: s-maj=8.3km s-min=5.4km az=104.2*
IDC **14** *04:05:35.5±1.9,52.16N×171.74W,h61km±15km,mb4.4/34, mbtmp4.6/36,MS3.5/10,Error ellipse: s-maj=15.6km s-min=8.2km az=177.0*
NEIC **14** *04:05:35.5±1.4,52.1N±0.1×171.61W±0.08,h61km±5km, mb4.5/249,ML4.5/59(AEIC),Error ellipse: s-maj=15.2km s-min=6.3km az=164.0*
ISC 14 04:05:34.9±0.6, 52.03N±0.06×171.65W±0.03, h61km±4km, n758,σ1$07/687, mb4.6/209, **37C-26D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLES	**Cleveland East**	**1.33**	**53**	Pn	**Pn**	**04 05 57.8**	**+0.5**
CLES	**Cleveland East**	**1.33**	**53**		**Sn**	**04 06 16.1**	**+2.0**
CLCO	**Concord Point,**	**1.40**	**57**		**Pn**	**04 05 58.1**	**-0.1**
CLCO					**Sn**	**04 06 18.1**	**+2.4**
KOFP	**Korovin Flat P**	**1.53**	**280**		**Pn**	**04 06 00.7**	**+0.7**
KOKL	**Mount Kliuchef**	**1.60**	**281**		**Pn**	**04 06 01.7**	**+0.7**
NIKH	**Nikolski High**	**1.95**	**60**	Pn	**Pn**	**04 06 04.9**	**-0.7**
NIKH	**Nikolski High**	**1.95**	**60**		**Sn**	**04 06 29.2**	**+0.2**
NIKH	**Nikolski High** baz=235,SNR=163	**1.95**	**60**	P	**Pn**	**04 06 04.9**	**-0.7**
OKSO	**Okmok South**	**2.50**	**57**		**Pn**	**04 06 12.8**	**-0.4**
OKCE	**Okmok Cone E**	**2.54**	**55**		**Pn**	**04 06 13.7**	**+0.1**
OKNC	**Okmok New Cone**	**2.57**	**55**		**Pn**	**04 06 15.2**	**+1.0**
OKFG	**Magazine Ridge**	**2.66**	**57**		**Pn**	**04 06 15.3**	**0.0**
GSMY	**Great Sitkin M**	**2.72**	**272**		**Pn**	**04 06 16.5**	**+0.3**
GSTR	**Great Sitkin T**	**2.72**	**273**		**Pn**	**04 06 17.1**	**+0.8**
GSTD	**Great Sitkin T**	**2.78**	**272**		**Pn**	**04 06 17.2**	**+0.2**
GSCK	**Great Sitkin C**	**2.79**	**271**		**Pn**	**04 06 17.2**	**+0.1**
ADK	**Adak**	**3.12**	**269**	Pn	**Pn**	**04 06 21.9**	**+0.3**
ADK	**Adak**	**3.12**	**269**	P	**Pn**	**04 06 21.9**	**+0.3**
MAPS	**Pakushin South**	**3.36**	**56**		**Pn**	**04 06 25.4**	**+0.5**
MGOD	**Makushin Gods**	**3.39**	**57**		**Pn**	**04 06 25.5**	**+0.3**
KINB	**Kanaga Island**	**3.41**	**269**		**Pn**	**04 06 26.1**	**+0.5**
KIKV	**Kanaga Island**	**3.42**	**270**		**Pn**	**04 06 26.5**	**+0.8**
KIKV					**Sn**	**04 07 06.3**	**+1.3**
KICM	**Kanaga Island**	**3.43**	**270**		**Pn**	**04 06 26.9**	**+1.0**
KIMD	**Kanaga Island**	**3.47**	**268**		**Pn**	**04 06 26.6**	**+0.2**
MSW	**Makushin Switc**	**3.49**	**55**		**Pn**	**04 06 27.4**	**+0.7**
MNAT	**Makushin Natee**	**3.53**	**56**		**Pn**	**04 06 27.7**	**+0.6**
MTBL	**Makushin Table**	**3.57**	**55**		**Pn**	**04 06 28.7**	**+0.8**
UNV	**Unalaska Valle**	**3.60**	**58**	Pn	**Pn**	**04 06 28.2**	**+0.1**
UNV	**Unalaska Valle** baz=238,SNR=39	**3.60**	**58**	P	**Pn**	**04 06 28.3**	**+0.1**
TAPA	**Tanaga Point A**	**3.82**	**269**		**Pn**	**04 06 31.8**	**+0.5**
TASE	**Tanaga Southea**	**3.96**	**270**		**Pn**	**04 06 33.6**	**+0.5**
AKRB	**Akutan Reef Bi**	**3.96**	**56**		**Pn**	**04 06 34.2**	**+1.0**
AKMO	**Akutan Morgan**	**3.98**	**57**		**Pn**	**04 06 34.2**	**+0.9**
LVA	**Lava Point**	**4.00**	**56**		**Pn**	**04 06 34.6**	**+1.0**
AKBBA	**Akutan Broad B**	**4.02**	**57**		**Pn**	**04 06 34.7**	**+0.8**
AKGG	**Akutan Green G**	**4.04**	**55**		**Pn**	**04 06 34.2**	**+0.1**
AKLV	**Akutan Long Va**	**4.04**	**56**		**Pn**	**04 06 34.9**	**+0.8**
AKUT	**Akutan**	**4.12**	**57**	Pn	**Pn**	**04 06 35.4**	**+0.1**
GAEA	**Gareloi East**	**4.40**	**270**		**Pn**	**04 06 39.5**	**+0.4**
GALAA	**Gareloi Lava P**	**4.42**	**269**		**Pn**	**04 06 39.9**	**+0.5**
GANO	**Gareloi North**	**4.43**	**270**		**Pn**	**04 06 40.0**	**+0.3**
WECS	**Westdahl Cape**	**4.82**	**56**		**Pn**	**04 06 45.9**	**+1.0**
WESN	**West Dahl Nort**	**4.94**	**56**		**Pn**	**04 06 47.4**	**+0.9**
SSLS	**Shishaldin Sou**	**5.31**	**57**		**Pn**	**04 06 52.3**	**+0.8**
CERAA	**Semis' Rag'd T**	**5.36**	**272**		**Pn**	**04 06 52.4**	**+0.1**
CEPE	**Semis' Perret**	**5.38**	**273**		**Pn**	**04 06 52.9**	**+0.4**
BRPK	**Brown Peak**	**5.41**	**58**		**Pn**	**04 06 53.1**	**+0.1**
CESW	**Semis' Southwe**	**5.44**	**272**		**Pn**	**04 06 53.3**	**0.0**
ISLZ	**Isanotski Laza**	**5.46**	**57**		**Pn**	**04 06 54.1**	**+0.4**
AMKA	**Amchitka**	**5.67**	**267**		**Pn**	**04 06 55.9**	**-0.5**
LSSE	**Little Sitkin**	**6.05**	**273**		**Pn**	**04 07 02.2**	**+0.5**
LSNW	**Little Sitkin**	**6.08**	**273**		**Pn**	**04 07 02.5**	**+0.5**
LSSA	**Little Sitkin**	**6.08**	**273**		**Pn**	**04 07 02.9**	**+0.7**
PS4A	**Pavlof South-4**	**6.69**	**56**		**Pn**	**04 07 12.0**	**+1.5**
S12K	**Black Hills** baz=239	**6.75**	**53**	P	**Pn**	**04 07 11.9**	**+0.6**
SDPT	**Sand Point**	**7.42**	**59**	Pn	**Pn**	**04 07 19.7**	**-0.6**
SDPT	**Sand Point** baz=246,SNR=23	**7.42**	**59**	P	**Pn**	**04 07 19.9**	**-0.4**
CNBA	**Chernabura Isl**	**7.72**	**64**	Pn	**Pn**	**04 07 23.4**	**-1.1**
CHNA	**Chernabura Isl** baz=252,SNR=17	**7.73**	**64**	P	**Pn**	**04 07 23.6**	**-1.0**
S14K	**Fog Glacier** baz=242,SNR=10	**8.27**	**54**	P	**Pn**	**04 07 32.3**	**+0.2**
VNFG	**Fog Glacier, M**	**8.27**	**54**		**Pn**	**04 07 32.9**	**+0.8**
CHGN	**Chignik**	**8.86**	**56**	Pn	**Pn**	**04 07 38.7**	**-1.3**
CHGN	**Chignik** baz=245,SNR=19	**8.86**	**56**	P	**Pn**	**04 07 38.9**	**-1.1**
CHIR	**Chirikof Islan**	**10.18**	**62**		**Pn**	**04 07 55.5**	**-2.6**
CHIR	**Chirikof Islan** baz=253	**10.18**	**62**	P	**Pn**	**04 07 55.9**	**-2.2**
R17K	**Ugashik Creek** baz=242,SNR=11	**10.43**	**51**	P	**Pn**	**04 08 00.9**	**-0.6**
O16K	**Kokwok River B**	**10.73**	**40**		**Pn**	**04 08 08.7**	**+3.1**
O16K	**Kokwok River B** baz=230,SNR=31	**10.73**	**40**	P	**Pn**	**04 08 08.8**	**+3.3**
Q16K	**King Salmon** baz=237	**10.80**	**46**	P	**Pn**	**04 08 07.2**	**+0.7**
N16K	**Nishlik Lake**	**11.06**	**35**		**Pn**	**04 08 12.5**	**+2.4**
N16K	**Nishlik Lake** baz=225	**11.06**	**35**	P	**Pn**	**04 08 12.7**	**+2.5**
SII	**Sitkinak Islan**	**11.15**	**59**	Pn	**Pn**	**04 08 08.6**	**-2.8**
SII	**Sitkinak Islan** baz=252	**11.15**	**59**	P	**Pn**	**04 08 08.7**	**-2.7**
P17K	**Kvichak River** baz=235,SNR=6.0	**11.18**	**44**	P	**Pn**	**04 08 12.5**	**+0.9**
O17K	**Koliganek Bris** baz=232	**11.24**	**41**	P	**Pn**	**04 08 14.6**	**+2.1**
KCE	**Katmai Mt Cerb**	**11.27**	**50**		**Pn**	**04 08 14.4**	**+1.4**
OHAK	**Old Harbor**	**11.82**	**57**	Pn	**Pn**	**04 08 16.9**	**-3.6**
OHAK	**Old Harbor** baz=250,SNR=8.4	**11.82**	**57**	P	**Pn**	**04 08 16.7**	**-3.8**
O18K	**Koktuh Hills**	**12.07**	**43**		**Pn**	**04 08 23.8**	**0.0**
O18K	**Koktuh Hills** baz=236	**12.07**	**43**	P	**Pn**	**04 08 24.4**	**+0.6**
N18K	**Kilae Creek**	**12.27**	**39**	Pn	**Pn**	**04 08 27.2**	**+0.5**
N18K	**Kilae Creek** baz=231,SNR=8.7	**12.27**	**39**	P	**Pn**	**04 08 28.6**	**+2.0**
Q19K	**Cape Douglas,**	**12.30**	**49**		**Pn**	**04 08 24.9**	**-2.1**
Q19K	**Cape Douglas,** baz=242,SNR=5.0	**12.30**	**49**	P	**Pn**	**04 08 25.7**	**-1.3**
KDAK	**Kodiak Island**	**12.37**	**55**	Pn	**Pn**	**04 08 25.1**	**-2.8**
KDAK	**Kodiak Island**	**12.37**	**55**	P	**Pn**	**04 08 25.1**	**-2.8**
KDAK	**Kodiak Island** baz=249	**12.37**	**55**	P	**Pn**	**04 08 23.8**	**-4.0**
Q20K	**Shuyak Island** baz=246,SNR=7.0	**12.76**	**51**	P	**Pn**	**04 08 30.1**	**-3.1**
N19K	**Bonanza Creek** baz=234,SNR=16	**12.91**	**40**	P	**Pn**	**04 08 37.1**	**+1.8**
M19K	**Big River Lodg** baz=230,SNR=13	**13.60**	**37**	P	**Pn**	**04 08 45.8**	**+1.1**
L19K	**White Mountain** baz=228,SNR=8.4	**13.61**	**35**	P	**Pn**	**04 08 45.4**	**+0.6**
TTA	**Tatalina** baz=224	**13.73**	**31**	P	**Pn**	**04 08 47.5**	**+1.0**
BRSE	**Bradley Lake S** baz=245	**13.99**	**48**	P	**Pn**	**04 08 47.6**	**-2.4**
M20K	**Styx River** baz=233	**14.06**	**38**	P	**Pn**	**04 08 51.5**	**+0.6**
SPU	**Mount Spurr**	**14.10**	**42**	Pn	**Pn**	**04 08 49.5**	**-1.9**
L20K	**Farewell, AK** baz=230	**14.15**	**35**	P	**Pn**	**04 08 53.7**	**+1.6**
K20K	**Telida** baz=227,SNR=13	**14.66**	**33**	P	**Pn**	**04 08 59.2**	**+0.5**
SEW	**Seward** baz=246	**14.73**	**48**	P	**Pn**	**04 08 56.4**	**-3.2**
SKT	**Skwentna** baz=236	**14.74**	**40**	P	**Pn**	**04 08 59.9**	**+0.3**
O22K	**Cooper Landing** baz=244	**14.77**	**47**	P	**Pn**	**04 08 57.0**	**-3.0**
GCSA	**Galena City Sc** baz=217	**14.85**	**25**	P	**P**	**04 09 03.3**	**-2.1**
PPLA	**Purkeypile** baz=232,SNR=5.2	**15.02**	**36**	P	**Pn**	**04 09 04.1**	**+0.6**
RC01	**Rabbit Creek A**	**15.03**	**44**		**Pn**	**04 09 02.5**	**-0.9**
RC01	**Rabbit Creek A** baz=242	**15.03**	**44**	P	**Pn**	**04 09 01.2**	**-2.2**
M22K	**Willow** comp=Z,50nm,0.9s	**15.19**	**42**	IAmb	IAmb	04 09 15.6	
J20K	**Nowinta River** baz=224	**15.21**	**30**	P	**Pn**	**04 09 06.5**	**+0.9**
CAST	**Castle Rocks** baz=230,SNR=36	**15.38**	**35**	P	**Pn**	**04 09 08.4**	**+0.5**
PWL	**Port Wells** comp=Z,36nm,1.0s	**15.55**	**46**	IAmb	IAmb	04 09 22.3	
PWL	**Port Wells** baz=245	**15.55**	**46**	P	**Pn**	**04 09 06.8**	**-3.2**
CHUM	**Lake Minchumin** baz=246,SNR=7.1	**15.60**	**33**	P	**P**	**04 09 12.1**	**-1.7**
P23K	**Montague Islan** baz=249	**15.65**	**50**	P	**Pn**	**04 09 08.8**	**-2.5**
KNK	**Knik Glacier** comp=Z,23nm,0.5s	**15.73**	**44**	IAmb	IAmb	04 09 14.4	
KNK	**Knik Glacier** baz=243,SNR=5.7	**15.73**	**44**	P	**Pn**	**04 09 10.1**	**-2.2**
KTH	**Kantishna Hill**	**15.88**	**35**	Pn	**Pn**	**04 09 12.7**	**-1.6**
SML	**Sawmill** baz=242	**15.96**	**43**	P	**Pn**	**04 09 13.4**	**-2.0**
TRF	**Thorofare Moun** baz=234	**16.05**	**36**	P	**Pn**	**04 09 16.7**	**+0.1**
GLI	**Glacier Island** baz=247	**16.11**	**47**	P	**Pn**	**04 09 13.5**	**-3.7**
BPAW	**Bear Paw Mtn.** comp=Z,42nm,0.9s	**16.19**	**34**	IAmb	IAmb	04 09 22.7	
BPAW	**Bear Paw Mtn.** baz=231,SNR=43	**16.19**	**34**	P	**Pn**	**04 09 18.5**	**+0.3**
M23K	**Glacier View** baz=243,SNR=10	**16.21**	**44**	P	**Pn**	**04 09 16.5**	**-2.0**
WAT1	**Susitna Watana** baz=238	**16.37**	**40**	P	**Pn**	**04 09 18.5**	**-2.0**
SCM	**Sheep Creek Mo** comp=Z,47nm,0.6s	**16.40**	**44**	IAmb	IAmb	04 09 22.4	
SCM	**Sheep Creek Mo** baz=243,SNR=13	**16.40**	**44**	P	**Pn**	**04 09 18.9**	**-2.0**
I21K	**Tanana** baz=226,SNR=11	**16.58**	**30**	P	**P**	**04 09 24.0**	**-0.7**
EYAK	**Cordova Ski Ar** comp=Z,37nm,1.3s	**16.61**	**49**	IAmb	IAmb	04 09 41.2	
EYAK	**Cordova Ski Ar** baz=250	**16.61**	**49**	P	**Pn**	**04 09 20.2**	**-3.2**
H21K	**Melozitna Rive**	**16.67**	**28**		**P**	**04 09 25.3**	**-0.3**
H21K	**Melozitna Rive** baz=223	**16.67**	**28**	P	**P**	**04 09 25.6**	**0.0**
MCK	**McKinley**	**16.71**	**37**	Pn	**Pn**	**04 09 23.8**	**-0.9**
MCK	**McKinley**	**16.71**	**37**	P	**Pn**	**04 09 23.8**	**-0.9**
MCK	comp=Z,16nm,1.0s			pmax	pmax		
MCK	**McKinley** baz=235	**16.71**	**37**	P	**Pn**	**04 09 23.6**	**-1.0**
BWN	**Browne** comp=Z,27nm,0.9s	**16.77**	**35**	IAmb	IAmb	04 09 55.4	
KLU	**Klutina** comp=Z,17nm,0.7s	**16.87**	**46**	IAmb	IAmb	04 09 27.0	
KLU	**Klutina** baz=247,SNR=7.9	**16.87**	**46**	P	**Pn**	**04 09 23.3**	**-3.5**
MLY	**Manley** baz=229,SNR=20	**16.87**	**31**	P	**P**	**04 09 28.1**	**+0.1**
DHY	**Denali Highway** baz=240,SNR=5.6	**16.96**	**40**	P	**Pn**	**04 09 27.3**	**-0.6**
M24K	**Tolsona, Glenn** baz=244,SNR=7.6	**17.01**	**44**	P	**Pn**	**04 09 27.4**	**-1.1**
G21K	**Allakaket** baz=220	**17.11**	**25**	P	**P**	**04 09 31.3**	**+0.8**
NEA2	**Nenana** baz=233,SNR=6.0	**17.16**	**34**	P	**Pn**	**04 09 28.9**	**-1.3**
H22K	**Ishtalitna Cre** baz=226	**17.25**	**29**	P	**P**	**04 09 31.7**	**-0.4**
BMRM	**Bremner River** comp=Z,17nm,0.6s	**17.28**	**48**	IAmb	IAmb	04 09 39.3	
BMRM	**Bremner River** baz=250	**17.28**	**48**	P	**Pn**	**04 09 28.7**	**-3.1**
I23K	**Minto, Yukon-K**	**17.40**	**32**		**Pn**	**04 09 32.4**	**-0.7**
I23K	comp=Z,46nm,1.2s			IAmb	IAmb	04 09 52.3	
I23K	**Minto, Yukon-K** baz=231,SNR=20	**17.40**	**32**	P	**P**	**04 09 33.6**	**0.0**
N25K	**Chitina, Valde** baz=248,SNR=8.2	**17.50**	**46**	P	**Pn**	**04 09 31.9**	**-2.6**
HARP	**HAARP** baz=245	**17.56**	**44**	P	**Pn**	**04 09 33.8**	**-1.5**
F21K	**Alatna River** baz=219	**17.66**	**24**	P	**P**	**04 09 38.5**	**+1.9**
PAX	**Paxson** baz=243	**17.68**	**42**	P	**Pn**	**04 09 34.6**	**-2.1**
TCOL	**CIO, UAF Yank** baz=234	**17.74**	**34**	P	**Pn**	**04 09 35.3**	**-2.0**
COLA	**College**	**17.75**	**34**	Pn	**Pn**	**04 09 35.1**	**-2.3**
COLA	**College**	**17.75**	**34**	*i* P	**Pn**	**04 09 35.6**	**-1.8**
COLA	**College** baz=234	**17.75**	**34**	P	**Pn**	**04 09 35.4**	**-1.9**
H23K	**Yukon River** baz=229,SNR=13	**17.77**	**31**	P	**P**	**04 09 39.3**	**+1.6**
GLB	**Gilahina Butte** comp=Z,14nm,0.6s	**17.80**	**47**	IAmb	IAmb	04 09 45.6	
HDA	**Harding Lake** baz=237	**17.81**	**36**	P	**Pn**	**04 09 36.6**	**-1.6**
CRQM	**Cirque** comp=Z,42nm,0.7s	**17.90**	**50**	IAmb	IAmb	04 09 42.9	
CRQE	**Cirque** baz=253	**17.92**	**50**	P	**P**	**04 09 37.6**	**-2.0**
K24K	**Donnelly Dome** baz=240	**17.94**	**39**	P	**P**	**04 09 38.6**	**-1.1**
WAX	**Waxell Ridge** comp=Z,44nm,0.6s	**17.95**	**51**	IAmb	IAmb	04 09 45.1	
ILAR	**Eielson Array** comp=Z,2.5nm,0.3s,baz=238,slow=10,SNR=60	**18.03**	**35**	P	**P**	**04 09 38.5**	**-2.1**
POKR	**Poker Plat Res** baz=234	**18.03**	**34**	P	**P**	**04 09 39.7**	**-0.9**
PET	**Petropavlovsk**	**18.04**	**285**	*e*P	**Pn**	**04 09 41.8**	**+0.7**
PET				*e*S	**Sn**	**04 12 57.5**	**-3.9**
PET	comp=Z,29nm,0.6s			pmax	pmax		
PET	comp=Z,100nm,15.0s			MLR	MLR		
TGL	**Tana Glacier** comp=Z,36nm,1.0s	**18.05**	**50**	IAmb	IAmb	04 09 46.9	
MCARA	**McCarthy VSAT** comp=Z,29nm,0.8s	**18.14**	**48**	IAmb	IAmb	04 09 49.3	
MCARA	**McCarthy VSAT** baz=251	**18.14**	**48**	P	**P**	**04 09 40.2**	**-1.7**
F22K	**John River** baz=221	**18.21**	**24**	P	**Pn**	**04 09 44.6**	**+1.6**
G23K	**Bananza Creek** baz=226,SNR=7.9	**18.22**	**28**	P	**Pn**	**04 09 44.1**	**+0.9**
RIDG	**Independent Ri** baz=242	**18.27**	**40**	P	**Pn**	**04 09 43.3**	**-0.6**
H24K	**Noodor Dome** baz=232,SNR=20	**18.31**	**32**	P	**Pn**	**04 09 43.9**	**-0.4**
MESA	**MESA**	**18.32**	**52**	P	**P**	**04 09 42.2**	**-1.9**
MESA	**MESA** baz=256	**18.32**	**52**	P	**P**	**04 09 42.4**	**-1.7**
M26K	**Nabesna, AK** baz=248,SNR=15	**18.49**	**45**	P	**P**	**04 09 45.1**	**-0.7**
J25K	**Salcha River,** comp=Z,24nm,0.7s	**18.50**	**37**	IAmb	IAmb	04 09 46.1	
J25K	**Salcha River,** baz=239,SNR=27	**18.50**	**37**	P	**P**	**04 09 44.3**	**-1.6**
COLD	**Coldfoot** baz=225	**18.53**	**27**	P	**Pn**	**04 09 47.8**	**+1.0**
L26K	**Log Cabin Wild** comp=Z,19nm,0.4s	**18.58**	**43**	IAmb	IAmb	04 09 48.2	
L26K	**Log Cabin Wild** baz=246,SNR=17	**18.58**	**43**	P	**P**	**04 09 46.4**	**-0.3**
PEA0B	**Petropavlovsk-**	**18.60**	**285**	P	**Pn**	**04 09 48.5**	**+0.6**
PEA0B	comp=Z,19nm,0.5s			IAmb	IAmb	04 09 49.0	
PEA0B	**Petropavlovsk-**	**18.60**	**285**	*i* P	**Pn**	**04 09 47.9**	**+0.1**
PETK	**Petropavlovsk-** comp=Z,12nm,0.5s,baz=84,slow=14,SNR=63	**18.60**	**285**	P	**P**	**04 09 46.5**	**-0.4**
PETK	comp=Z,62nm,18.4s,baz=93,slow=40			LR	LR	04 18 01.9	
PETK	**Petropavlovsk-**	**18.60**	**285**	P	**Pn**	**04 09 47.4**	**-0.4**
PETK	**Petropavlovsk-**	**18.60**	**285**	P	**Pn**	**04 09 47.4**	**-0.4**
SCRK	**Sand Creek** baz=243,SNR=16	**18.72**	**40**	P	**P**	**04 09 46.6**	**-1.8**
TABL	**Table Mountain** comp=Z,41nm,0.6s	**18.77**	**51**	IAmb	IAmb	04 09 51.3	
E22K	**Anaktuvuk Pass** baz=220	**18.77**	**23**	P	**Pn**	**04 09 51.1**	**+1.2**
CTG	**Chitna Glacier** baz=254,SNR=12	**18.80**	**50**	P	**P**	**04 09 48.7**	**-0.6**
CTGM	**Chitna Glacie** comp=Z,34nm,0.8s	**18.81**	**50**	IAmb	IAmb	04 09 54.7	
PRP	**Porcupine Dome** comp=Z,15nm,0.6s	**18.92**	**34**	IAmb	IAmb	04 09 51.3	
PRP	**Porcupine Dome** baz=236,SNR=14	**18.92**	**34**	P	**P**	**04 09 49.8**	**-0.7**
LOGN	**Logan Glacier** comp=Z,35nm,0.6s	**18.93**	**50**	IAmb	IAmb	04 09 55.9	
M27K	**Edge Creek, AK** comp=Z,18nm,0.7s	**18.97**	**45**	IAmb	IAmb	04 09 53.6	
M27K	**Edge Creek, AK** baz=250,SNR=16	**18.97**	**45**	P	**P**	**04 09 49.9**	**-1.1**
G24K	**Hadweenzic Riv** baz=230,SNR=20	**18.97**	**30**	P	**Pn**	**04 09 53.0**	**+0.8**
J26L	**Joseph Creek** comp=Z,25nm,0.6s	**19.13**	**38**	IAmb	IAmb	04 09 55.7	
J26L	**Joseph Creek** baz=242,SNR=41	**19.13**	**38**	P	**P**	**04 09 51.9**	**-0.8**
PINM	**Pinnacle** baz=258	**19.14**	**53**	P	**P**	**04 09 52.4**	**-0.5**
L27K	**Beaver Creek,** baz=248	**19.23**	**43**	P	**P**	**04 09 53.5**	**-0.4**
H25K	**Birch Creek** baz=234	**19.24**	**32**	P	**Pn**	**04 09 54.2**	**-1.2**
BILL	**Bilibino**	**19.28**	**335**	P	**Pn**	**04 09 55.2**	**-0.5**
BILL	**Bilibino**	**19.28**	**335**	*i* P	**P**	**04 09 53.0**	**-1.2**
BILL				*e*S	**S**	**04 13 23.4**	**-5.6**
BILL	comp=Z,27nm,0.8s			pmax	pmax		
BILL	comp=Z,58nm,18.0s			MLR	MLR		
O28M	**Mount Upton** baz=256,SNR=16	**19.30**	**51**	P	**Pn**	**04 09 55.7**	**-0.8**
F24K	**Squaw Lake** baz=228	**19.38**	**28**	P	**Pn**	**04 09 57.3**	**+0.2**
BCPM	**Bancas Point** comp=Z,46nm,0.8s	**19.41**	**53**	IAmb	IAmb	04 09 59.7	
YUK3	**Moose Creek** baz=253,SNR=13	**19.43**	**48**	P	**P**	**04 09 55.7**	**-0.5**
G25K	**Bearman Lake** baz=232,SNR=9.3	**19.45**	**31**	P	**Pn**	**04 09 56.6**	**-1.2**
PNL	**Peninsula** baz=260,SNR=15	**19.49**	**54**	P	**P**	**04 09 56.9**	**+0.2**
K27K	**Chicken** baz=245	**19.51**	**41**	P	**P**	**04 09 56.1**	**-0.6**
E24K	**Your Creek** baz=226	**19.59**	**26**	P	**Pn**	**04 09 59.7**	**+0.1**
FYU	**Fort Yukon** comp=Z,14nm,0.7s	**19.61**	**32**	IAmb	IAmb	04 10 03.1	
I26K	**Coal Creek Min** comp=Z,25nm,0.6s	**19.66**	**37**	IAmb	IAmb	04 09 59.5	
I26K	**Coal Creek Min** baz=240	**19.66**	**37**	P	**P**	**04 09 58.0**	**-0.5**
D23K	**Nanushuk River** baz=220,SNR=8.2	**19.68**	**23**	P	**Pn**	**04 10 00.5**	**0.0**
TOLK	**Toolik Lake Re** comp=Z,16nm,0.6s	**19.71**	**24**	IAmb	IAmb	04 10 05.0	
TOLK	**Toolik Lake Re** baz=223,SNR=15	**19.71**	**24**	P	**Pn**	**04 10 00.9**	**-0.1**
O29M	**Mount Kennedy** baz=260,SNR=45	**20.00**	**53**	P	**Pn**	**04 10 03.5**	**-0.9**
F25K	**Christian Rive** baz=231,SNR=17	**20.09**	**29**	P	**Pn**	**04 10 04.5**	**-1.0**
EGAK	**Eagle**	**20.18**	**39**	P	**P**	**04 10 03.8**	**-0.3**
EGAK	**Eagle** baz=245,SNR=40	**20.18**	**39**	P	**P**	**04 10 04.4**	**+0.4**
YUK6	**Outpost Mounta** baz=258,SNR=12	**20.21**	**51**	P	**P**	**04 10 05.7**	**+1.0**
D24K	**Happy Valley** baz=223	**20.27**	**24**	P	Pn	04 10 06.1	-1.4
G26K	**Porcupine Rive** baz=236	**20.30**	**32**	P	**P**	**04 10 04.7**	**-0.6**
P29M	**Windy Craggy** baz=262,SNR=86	**20.32**	**55**	P	Pn	04 10 07.9	-0.3
BMAR	**Burnt Mountain**	**20.32**	**30**	P	Pn	04 10 06.5	-1.6
C23K	**Itkillik River** baz=219,SNR=15	**20.36**	**21**	P	Pn	04 10 07.5	-1.1
I27K	**Kandik River** baz=242	**20.37**	**37**	P	**P**	**04 10 06.3**	**+0.1**
E25K	**Arctic Village** baz=230,SNR=11	**20.45**	**28**	P	Pn	04 10 08.9	-0.7
M29M	**Somme Creek** baz=254	**20.51**	**47**	P	**P**	**04 10 07.9**	**0.0**
HYT	**Haines Junctio** baz=259,SNR=37	**20.61**	**51**	P	**P**	**04 10 09.8**	**+0.9**
DAWY	**Dawson** baz=249,SNR=13	**20.61**	**42**	P	**P**	**04 10 08.3**	**-0.5**
F26K	**Sheenjek River** baz=234,SNR=9.4	**20.61**	**30**	P	**P**	**04 10 09.1**	**+0.3**
H27K	**Steamboat Moun** baz=241	**20.70**	**35**	P	**P**	**04 10 09.4**	**-0.3**
C24K	**Franklin Bluff** baz=222	**20.71**	**23**	P	Pn	04 10 11.1	-1.5
P30M	**Million Dollar** baz=262	**20.77**	**53**	P	Pn	04 10 12.0	-1.5
N30M	**Aishikik Lake** baz=258,SNR=16	**20.92**	**50**	P	**P**	**04 10 12.1**	**0.0**
G27K	**Doyon Strip** baz=239,SNR=5.7	**20.94**	**34**	P	**P**	**04 10 11.0**	**-1.3**
PLBC	**Pleasant Camp** baz=264,SNR=31	**20.99**	**55**	P	**P**	**04 10 12.2**	**-0.7**
D25K	**Kavik River** baz=227	**21.01**	**25**	P	**P**	**04 10 14.0**	**+0.9**
O30N	**Mendenhall** baz=261,SNR=12	**21.28**	**52**	P	**P**	**04 10 16.4**	**+0.4**
SIT	**Sitka**	**21.48**	**62**	P	**P**	**04 10 17.8**	**-0.3**
SIT	**Sitka**	**21.48**	**62**	P	**P**	**04 10 17.8**	**-0.3**
SIT	comp=Z,43nm,0.6s			pmax	pmax		
SIT	**Sitka** baz=271	**21.48**	**62**	P	**P**	**04 10 19.9**	**+1.9**
SKAG	**Skagway** baz=265,SNR=18	**21.52**	**56**	P	**P**	**04 10 19.9**	**+1.4**
I29M	**Ogilvie Camp,** comp=Z,11nm,0.6s	**21.52**	**39**	IAmb	IAmb	04 10 20.9	
I29M	**Ogilvie Camp,** baz=247	**21.52**	**39**	P	**P**	**04 10 17.7**	**-0.8**
N31M	**Braeburn, Yuko** comp=Z,21nm,0.7s	**21.54**	**50**	IAmb	IAmb	04 10 37.0	
N31M	**Braeburn, Yuko** baz=260	**21.54**	**50**	P	**P**	**04 10 19.0**	**+0.2**
E27K	**Coleen River** baz=236,SNR=6.3	**21.68**	**30**	P	**P**	**04 10 20.7**	**+0.5**
BESE	**Bessie Mountai** comp=Z,36nm,0.9s	**21.72**	**58**	IAmb	IAmb	04 10 24.1	
WHY	**Whitehorse** comp=Z,26nm,0.9s	**21.86**	**52**	IAmb	IAmb	04 10 30.2	
WHY	**Whitehorse** baz=263,SNR=11	**21.86**	**52**	P	**P**	**04 10 23.3**	**+1.0**
SEY	**Seymchan** comp=Z,21nm,0.6s,baz=106,slow=8.6,SNR=76	**21.88**	**314**	P	**P**	**04 10 22.4**	**+0.1**
SEY	comp=Z,1.6nm,0.6s,baz=101,slow=3.4,SNR=4.6			PcP	**PcP**	**04 14 19.6**	**+0.4**
SEY	**Seymchan**	**21.88**	**314**	*ce*P	**P**	**04 10 23.1**	**+0.8**
SEY	comp=Z,17nm,0.6s			pmax	pmax		
C27K	**Jago River** baz=230	**21.92**	**26**	P	**P**	**04 10 24.6**	**+1.8**
MA2	**Magadan**	**22.17**

comp=Z,5.2nm,0.7s,baz=338,slow=7.8,SNR=3.9
BBB LR LR 04 19 12.4
comp=Z,58nm,20.9s,baz=290,slow=31
comp=Z,5.2nm,0.7s
YSS Yuzh-Sakhalins 29.66 278 *e*P **P 04 11 34.0 -0.5**
YSS pmax pmax
comp=Z,10.0nm,0.6s
YSS MLR MLR
comp=Z,200nm,14.0s
LLLB Lillooet 30.65 73 IAmb IAmb 04 11 45.8
comp=Z,5.2nm,0.7s
YKA Yellowknife Ar 31.51 48 P **P 04 11 50.9 +0.2**
comp=Z,0.9nm,0.3s,baz=276,slow=7.1,SNR=52
YKA PcP **PcP 04 14 42.9 +0.9**
comp=Z,0.8nm,0.6s,baz=284,slow=3.1,SNR=4.6
YKA LR LR 04 26 14.2
comp=Z,6um,19.9s,baz=315,slow=39
comp=Z,0.9nm,0.3s
TIXI Tiksi 32.30 329 LR LR 04 25 16.6
comp=Z,42nm,21.6s,baz=182,slow=37
YAK Yakutsk 32.34 311 *ce*P **P 04 11 56.6 -1.2**
YAK pmax pmax
comp=Z,8.0nm,0.5s
B08A Colville Reser 33.09 75 IAmb IAmb 04 12 06.7
comp=Z,6.5nm,0.7s
K02D Willamette Mer 33.26 87 P **P 04 12 06.8 +0.5**
baz=303
I04A Tendick Farm, 33.45 84 P **P 04 12 09.0 +1.2**
baz=302
L02F Cave Junction 33.64 88 P **P 04 12 10.4 +0.9**
baz=304
I05D Terrebonne, OR 33.82 83 P **P 04 12 11.5 +0.5**
baz=301
HAWA Hanford 33.89 78 IAmb IAmb 04 12 13.8
comp=Z,5.4nm,0.6s
J04D Umpqua Nationa 33.93 85 P **P 04 12 12.7 +0.5**
baz=302
D08A Wollman Farm, 33.94 77 P **P 04 12 12.0 0.0**
D08A IAmb IAmb 04 12 13.7
comp=Z,3.0nm,0.6s
C09A Chrisman Ranch 33.98 75 IAmb IAmb 04 12 14.5
comp=Z,7.9nm,1.0s
L04D Klamath Falls 34.37 87 P **P 04 12 16.9 +1.0**
baz=304
YBH Yreka Blue Hor 34.39 88 P **P 04 12 17.7 +1.7**
comp=Z,1.9nm,0.4s,baz=7.7,slow=5.5,SNR=7.0
comp=Z,1.9nm,0.4s
J05D Fort Rock, OR 34.44 84 P **P 04 12 16.7 +0.1**
baz=302
NEW Newport 34.45 74 P **P 04 12 17.4 +0.9**
comp=Z,10nm,0.9s,baz=296,slow=7.6,SNR=21
NEW LR LR 04 24 20.8
comp=Z,53nm,20.1s,baz=282,slow=33
comp=Z,10nm,0.9s
NEW Newport 34.45 74 IAmb IAmb 04 12 18.6
comp=Z,8.6nm,0.8s
NEW Newport 34.45 74 P **P 04 12 16.9 +0.4**
baz=297,SNR=14
HUH Hualalai 34.58 153 P **P 04 12 18.5 +0.4**
G08A Pilot Rock 34.78 80 P **P 04 12 19.9 +0.5**
K05A Summer Lake 34.95 85 P **P 04 12 22.1 +1.0**
K05A IAmb IAmb 04 12 23.9
comp=Z,9.5nm,0.8s
I07A Izee 35.08 82 IAmb IAmb 04 12 24.2
comp=Z,4.7nm,0.8s
KLR Kul'dur 35.24 288 *ce*P **P 04 12 21.2 -2.0**
KLR pmax pmax
comp=Z,11nm,1.3s
MOD Modoc Plateau 35.78 86 IAmb IAmb 04 12 30.4
comp=Z,5.6nm,0.8s
ZEA Zeya 35.91 298 *e*P **P 04 12 28.5 -0.4**
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=Z,20nm,0.9s
WALA Waterton Lakes 35.98 71 P **P 04 12 29.2 -0.5**
WALA IAmb IAmb 04 12 31.1
comp=Z,4.2nm,0.6s
J08A Circle Bar Ran 36.09 82 IAmb IAmb 04 12 32.8
comp=Z,5.0nm,0.6s
H11N2 WAKE ISLAND Hy 36.34 216 T T 04 51 06.7
baz=22,slow=76,SNR=530
H11N3 WAKE ISLAND Hy 36.35 216 T T 04 51 10.4
baz=22,slow=76,SNR=482
H11N1 WAKE ISLAND Hy 36.36 216 T T 04 51 08.1
baz=22,slow=76,SNR=384
JTMT Jette 36.38 73 P **P 04 12 33.5 +0.3**
JTMT IAmb IAmb 04 12 36.0
comp=Z,4.8nm,0.9s
WVOR Wild Horse Val 36.50 84 IAmb IAmb 04 12 36.3
comp=Z,6.8nm,0.8s
BEKR Beckworth 36.92 88 IAmb IAmb 04 12 39.3
comp=Z,2.6nm,0.6s
MSO Missoula 37.03 75 P **P 04 12 38.8 +0.1**
MSO IAmb IAmb 04 12 40.6
comp=Z,4.5nm,1.0s
MSO **PcP 04 14 58.8 +0.6**
MSO Missoula 37.03 75 P **P 04 12 38.0 -0.6**
baz=300,SNR=6.2
RES Resolute Bay 37.28 25 P **P 04 12 39.8 -0.5**
comp=Z,7.1nm,0.8s,baz=265,slow=9.6,SNR=15
comp=Z,7.1nm,0.8s
JSD Sado 37.30 268 P **P 04 12 41.9 +1.0**
H11S1 WAKE ISLAND Hy 37.54 215 T T 04 52 39.2
baz=21,slow=76,SNR=392
H11S2 WAKE ISLAND Hy 37.55 215 T T 04 52 40.1
baz=21,slow=76,SNR=318
H11S3 WAKE ISLAND Hy 37.55 215 T T 04 52 38.1
baz=21,slow=76,SNR=266
USRK Ussuriysk Ar. 37.59 281 P **P 04 12 43.2 0.0**
comp=Z,3.3nm,0.8s,baz=62,slow=10,SNR=2.2
comp=Z,3.3nm,0.8s
VCNR Virginia City 37.70 89 IAmb IAmb 04 12 47.5
comp=Z,7.7nm,1.1s
PNTR Pine Nut 37.86 89 P **P 04 12 47.0 +1.1**
CMB Columbia Colle 38.02 91 P **P 04 12 47.9 +0.8**
CMB IAmb IAmb 04 12 49.4
comp=Z,5.9nm,1.4s
CMB Columbia Colle 38.02 91 P **P 04 12 47.9 +0.8**
CMB pmax pmax
comp=Z,6.0nm,1.4s
YERR Yerington 38.15 89 IAmb IAmb 04 12 50.5
comp=Z,7.6nm,0.8s
MAJO Matsushiro 38.28 266 P **P 04 12 50.2 +1.1**
MAJO Matsushiro 38.28 266 *i* P **P 04 12 49.1 -0.1**
MAJO pmax pmax
comp=Z,13nm,0.6s
MJAR Matsushiro Arr 38.28 266 P **P 04 12 49.0 -0.2**
comp=Z,4.0nm,0.4s,baz=32,slow=6.2,SNR=22
MJAR PcP **PcP 04 15 02.5 +0.5**
comp=Z,2.3nm,0.8s,baz=108,slow=3.2,SNR=5.6
comp=Z,4.0nm,0.4s
HLID Hailey 38.46 79 P **P 04 12 50.6 -0.2**
baz=303,SNR=5.2
BMN Battle Mountai 38.52 85 IAmb IAmb 04 12 52.8
comp=Z,3.3nm,0.6s
RYN Ryan 38.81 89 IAmb IAmb 04 12 55.8
comp=Z,5.7nm,1.0s
MDJ Mudanjiang 38.81 283 P **P 04 12 52.8 -0.7**
MDJ pP pP 04 13 08.8 +0.1
MDJ sP sP 04 13 16.3 +0.5
MDJ PP **PP 04 14 21.1 -2.1**
MDJ S **S 04 18 44.5 -2.0**
MDJ ScP **ScP 04 18 46.8 +0.6**
MDJ PcS **PcS 04 18 54.0 +1.0**
MDJ ScS **ScS 04 22 55.6 -1.5**
MDJ pmax pmax
comp=Z,7.0nm,1.1s
MDJ pmax pmax
comp=Z,62nm,3.9s
MDJ LR LR
comp=Z,670nm,15.2s
MDJ LR LR
comp=Z,240nm,12.1s
MDJ LR LR
comp=Z,240nm,12.1s
EGMT Eagleton 38.90 71 P **P 04 12 54.4 0.0**
baz=299,SNR=9.4
MSHR Mys Shultsa 38.98 279 *ce*P **P 04 12 53.2 -1.8**
MSHR pmax pmax
comp=Z,16nm,1.7s
BOZ Bozeman (W) 39.04 75 P **P 04 12 55.7 0.0**
BOZ IAmb IAmb 04 12 57.0
comp=Z,3.4nm,0.6s
BOZ Bozeman (W) 39.04 75 P **P 04 12 55.7 0.0**
BOZ pmax pmax
comp=Z,3.0nm,0.6s
BOZ Bozeman (W) 39.04 75 P **P 04 12 55.6 0.0**
baz=302,SNR=10
NVAR Mina Array Bea 39.07 89 P **P 04 12 57.1 +1.1**
comp=Z,3.6nm,0.8s,baz=296,slow=8.1,SNR=31
NVAR ScP **ScP 04 18 47.3 -0.3**
comp=Z,0.8nm,0.9s,baz=272,slow=3.1,SNR=5.9
comp=Z,3.6nm,0.8s
MDPB Devils Postpil 39.08 90 IAmb IAmb 04 12 58.6
comp=Z,6.4nm,0.8s
OMMB Old Mammoth Mi 39.14 90 IAmb IAmb 04 12 59.8
comp=Z,9.0nm,1.3s
BNX BinXian 39.52 286 ⇑P **P 04 12 57.5 -1.9**
BNX pmax pmax
comp=Z,23nm,0.7s
BNX pmax pmax
comp=Z,69nm,5.5s
ELK Elko 39.56 84 P **P 04 13 00.8 +0.7**
comp=Z,2.9nm,0.7s,baz=325,slow=9.7,SNR=17
ELK LR LR 04 27 49.6
comp=Z,59nm,18.0s,baz=284,slow=34
comp=Z,2.9nm,0.7s
TPH Tonopah 39.95 88 P **P 04 13 04.7 +1.3**
TPH Tonopah 39.95 88 P **P 04 13 04.7 +1.3**
TPH pmax pmax
comp=Z,15nm,0.6s
YNR Norris Junctio 40.08 76 IAmb IAmb 04 13 25.6
comp=Z,5.1nm,0.9s
VES Vestal, Richgr 40.22 93 P **P 04 13 06.5 +1.1**
baz=310
H17A Grant Village 40.32 76 IAmb IAmb 04 13 09.9
comp=Z,5.7nm,1.1s
H17A Grant Village 40.32 76 P **P 04 13 07.2 +0.9**
baz=303
IMW Indian Meadow 40.37 77 P **P 04 13 07.6 +0.8**
FLWY Flagg Ranch 40.41 76 IAmb IAmb 04 13 09.8
comp=Z,8.5nm,1.2s
CWC Cottonwood Cre 40.46 91 P **P 04 13 08.0 +0.5**
baz=310
GRAC Grapevine Rang 40.54 90 P **P 04 13 09.3 +1.2**
baz=309
TPAW Teton Pass 40.59 77 P **P 04 13 08.7 0.0**
RLMT Red Lodge 40.70 74 P **P 04 13 10.0 +0.5**
RLMT IAmb IAmb 04 13 11.9
comp=Z,7.9nm,0.8s
RLMT Red Lodge 40.70 74 P **P 04 13 10.3 +0.8**
baz=303,SNR=11
ISA Isabella, Lake 40.72 92 P **P 04 13 10.3 +0.8**
baz=310
REDW Red Top Meadow 40.73 77 IAmb IAmb 04 13 24.7
comp=Z,8.8nm,1.4s
R11A Troy Canyon, C 40.79 87 P **P 04 13 10.7 +0.5**
baz=308,SNR=7.1
MPMC Manual Prospec 41.07 91 P **P 04 13 13.5 +1.0**
baz=310
BOD Bodaibo 41.11 308 *e*P **P 04 13 11.3 -1.1**
BOD pmax pmax
comp=Z,19nm,0.7s
SPR3 Spring Creek 3 41.17 85 P **P 04 13 14.4 +0.9**
SPR3 IAmb IAmb 04 13 16.2
comp=Z,2.5nm,1.1s
FURC Furnace Creek, 41.19 90 P **P 04 13 14.7 +1.4**
baz=310,SNR=5.5
TPNV Topopah Spring 41.26 89 P **P 04 13 14.2 +0.1**
TPNV IAmb IAmb 04 13 16.0
comp=Z,6.0nm,0.8s
TPNV Topopah Spring 41.26 89 P **P 04 13 14.2 +0.1**
TPNV pmax pmax
comp=Z,6.0nm,0.9s
TPNV Topopah Spring 41.26 89 P **P 04 13 14.4 +0.3**
baz=309,SNR=8.0
LRMC Laurel Mtn Rad 41.32 92 P **P 04 13 15.4 +0.8**
baz=311
DUG Dugway, Tooele 41.37 83 IAmb IAmb 04 13 16.6
comp=Z,8.7nm,1.4s
DUG Dugway, Tooele 41.37 83 P **P 04 13 15.7 +0.8**
baz=307
LAO LASA Array 41.65 70 IAmb IAmb 04 13 18.8
comp=Z,6.9nm,0.6s
LAO LASA Array 41.65 70 P **P 04 13 17.7 +0.7**
baz=302
PRN Pahroc Range 41.71 88 IAmb IAmb 04 13 19.7
comp=Z,9.6nm,1.1s
BW06 Boulder Array 41.84 77 IAmb IAmb 04 13 20.3
comp=Z,7.1nm,1.1s
BW06 Boulder Array 41.84 77 P **P 04 13 19.2 +0.3**
baz=305,SNR=11
PD31 Pinedale Array 41.84 77 IAmb IAmb 04 13 20.3
comp=Z,3.9nm,0.7s
PDAR Pinedale Array 41.84 77 P **P 04 13 19.2 +0.4**
comp=Z,2.1nm,0.4s,baz=306,slow=2.5,SNR=52
PDAR ScP **ScP 04 18 58.5 0.0**
comp=Z,0.5nm,0.9s,baz=267,slow=3.0,SNR=5.7
comp=Z,2.1nm,0.4s
DGMT Dagmar 41.88 67 P **P 04 13 19.5 +0.7**
baz=301
NLU North Lily Min 41.97 82 P **P 04 13 20.4 +0.4**
GSC Goldstone, Bar 41.98 91 IAmb IAmb 04 13 21.7
comp=Z,10nm,1.1s
GSC Goldstone, Bar 41.98 91 P **P 04 13 21.0 +1.1**
baz=311
BFSC Mount Baldy Ra 42.16 93 P **P 04 13 22.3 +0.8**
baz=312
TUQ Turquoise Moun 42.44 90 P **P 04 13 24.4 +0.8**
baz=311
CCUT Cedar City 42.66 86 P **P 04 13 25.7 +0.1**
TMUT Trail Mountain 42.90 83 IAmb IAmb 04 13 55.2
comp=Z,5.5nm,0.9s
GMRC Granite Mounta 43.03 91 P **P 04 13 28.6 +0.1**
baz=311
RDMU Red Mountain 43.13 80 IAmb IAmb 04 13 31.5
comp=Z,6.9nm,1.0s
Q16A Castle Valley 43.16 83 IAmb IAmb 04 13 31.9
comp=Z,4.4nm,0.7s
PFO Pinyon Flats O 43.31 93 P **P 04 13 31.1 +0.4**
baz=312
TPFO Pinon Flats 43.32 93 P **P 04 13 30.6 -0.2**
baz=312
SEHB SEOHWA 43.33 276 P **P 04 13 31.0 +0.2**
BELC Belle Mtn. Jos 43.34 92 P **P 04 13 30.9 -0.1**
baz=312
SRU San Rafael Swe 43.44 82 IAmb IAmb 04 13 33.8
comp=Z,5.0nm,0.7s
K22A Casper 43.73 76 P **P 04 13 34.5 +0.4**
baz=306
IRM Iron Mountain 43.76 91 P **P 04 13 34.6 +0.4**
baz=312
MONP2 Monument Peak 43.82 94 P **P 04 13 35.4 +0.4**
baz=313
BC3 Big Chuckawall 43.91 92 P **P 04 13 35.9 +0.4**
baz=312
U15A North Rim 44.04 87 IAmb IAmb 04 13 38.6
comp=Z,4.5nm,0.7s
KSRS Kona Array 44.05 275 P **P 04 13 37.1 +0.7**
comp=Z,8.6nm,0.8s,baz=56,slow=7.7,SNR=31
KSRS PcP **PcP 04 15 20.9 0.0**
comp=Z,1.1nm,0.6s,baz=50,slow=3.9,SNR=4.2
comp=Z,8.6nm,0.8s
KS19 Wonju Array Si 44.05 275 IAmb IAmb 04 13 37.6
comp=Z,7.1nm,0.7s
KSAR Wonju Array Be 44.08 275 P **P 04 13 36.2 -0.5**
KSAR Wonju Array Be 44.08 275 P **P 04 13 36.2 -0.5**
SWSC Sam W. Stewart 44.17 93 P **P 04 13 38.3 +0.8**
baz=313
IKP In-Ko-Pah, Jac 44.18 94 P **P 04 13 38.5 +0.8**
baz=313
O20A White River Ci 44.20 80 IAmb IAmb 04 13 49.9
comp=Z,7.3nm,0.6s
O20A White River Ci 44.20 80 P **P 04 13 38.4 +0.4**
baz=307,SNR=6.0
PDMCI Parker Dam,Lak 44.28 90 P **P 04 13 39.0 +0.7**
baz=312
RSSD Black Hills 44.35 72 P **P 04 13 39.1 0.0**
RSSD IAmb IAmb 04 13 48.1
comp=Z,4.7nm,0.6s
RSSD Black Hills 44.35 72 P **P 04 13 39.1 0.0**
RSSD pmax pmax
comp=Z,5.0nm,0.6s
RSSD Black Hills 44.35 72 P **P 04 13 38.9 -0.2**
baz=305
KSCHJ Chungju 44.38 275 IAmb IAmb 04 13 40.5
comp=Z,15nm,1.1s
BLYC Blythe 44.42 91 IAmb IAmb 04 13 40.9
comp=Z,4.3nm,0.8s
MDND Maddock 44.81 65 IAmb IAmb 04 13 44.0
comp=Z,17nm,1.1s
MDND Maddock 44.81 65 P **P 04 13 42.1 -0.3**
baz=303
INCN Inchon 44.82 276 P **P 04 13 42.7 0.0**
INCN pmax pmax
comp=Z,32nm,1.3s
PV11 David Mesa, Pa 44.95 82 IAmb IAmb 04 14 13.8
comp=Z,9.7nm,0.7s
TJN Taejon 45.08 275 *ce*P **P 04 13 44.2 -0.5**
N23A Red Feather La 45.13 77 P **P 04 13 46.1 +0.7**
baz=307
WUAZ Wupatki 45.20 87 IAmb IAmb 04 13 47.5
comp=Z,5.3nm,0.8s
WUAZ Wupatki 45.20 87 P **P 04 13 46.2 +0.4**
baz=311,SNR=5.8
MVCO Mesa Verde 45.87 83 P **P 04 13 50.9 -0.3**
MVCO IAmb IAmb 04 14 18.6
comp=Z,11nm,1.5s
MVCO Mesa Verde 45.87 83 P **P 04 13 51.3 0.0**
baz=310
NRIK Noril'sk 46.05 331 *i* P **P 04 13 50.4 -1.5**
NRIK pmax pmax
comp=Z,4.0nm,0.6s
JSU Suzuyama 46.42 267 IAmb IAmb 04 13 58.0
comp=Z,13nm,1.0s
S22A 4UR Ranch, Cre 46.55 81 P **P 04 13 58.0 +1.3**
baz=309
AGMN Agassiz Nation 46.63 63 IAmb IAmb 04 14 14.2
comp=Z,4.2nm,0.8s
AGMN Agassiz Nation 46.63 63 P **P 04 13 57.1 +0.3**
baz=304
214A Organ Pipe Nat 46.69 92 P **P 04 13 57.5 0.0**
baz=313
XLT XiLinHaoTe 47.21 290 *e*P **P 04 14 02.3 +0.9**
XLT pP pP 04 14 17.6 +0.5
XLT sP sP 04 14 24.4 +0.4
XLT PcS **PcS 04 19 26.0 -1.1**
XLT S **S 04 20 48.9 -0.8**
XLT sS sS 04 21 15.5 -0.3
XLT pmax pmax
comp=Z,29nm,0.9s
XLT pmax pmax
comp=Z,72nm,4.8s
XLT LR LR
comp=Z,36nm,14.7s
XLT LR LR
comp=Z,280nm,11.4s
XLT LR LR
comp=Z,290nm,15.2s
SDCO Great Sand Dun 47.36 80 P **P 04 14 02.5 -0.4**
baz=310
TUC Tucson 47.70 90 P **P 04 14 05.3 -0.1**
TUC IAmb IAmb 04 14 07.4
comp=Z,4.0nm,1.1s
TUC Tucson 47.70 90 P **P 04 14 05.3 -0.1**
TUC pmax pmax
comp=Z,4.0nm,1.1s
TUC Tucson 47.70 90 P **P 04 14 05.9 +0.5**
baz=313
F33A 5 Mile Ranch, 47.82 66 IAmb IAmb 04 14 25.3
comp=Z,9.1nm,1.4s
UPNV Upernavik 47.82 21 *i* P **P 04 14 06.2 +0.5**
UPNV IAmb IAmb 04 14 07.0
comp=Z,20nm,0.7s
KSCO Kaye Shedlock' 48.29 77 P **P 04 14 10.0 +0.1**
baz=309
T25A Trinidad 48.41 80 IAmb IAmb 04 14 12.7
comp=Z,6.0nm,1.1s
T25A Trinidad 48.41 80 P **P 04 14 11.4 +0.4**
baz=310
ANMO Albuquerque 48.60 84 *ce*P **P 04 14 13.2 +0.8**
ANMO pmax pmax
comp=Z,5.0nm,2.5s
ANMO Albuquerque 48.60 84 P **P 04 14 12.9 +0.5**
baz=311
ECSD EROS Data Cent 48.90 68 IAmb IAmb 04 14 14.9
comp=Z,10nm,1.4s
ECSD EROS Data Cent 48.90 68 P **P 04 14 13.6 -0.8**
baz=307,SNR=6.8
BGNE Belgrade 49.45 72 P **P 04 14 18.7 +0.1**
baz=308
BJI Beijing 49.53 286 P **P 04 14 19.6 +0.4**
BJI pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuau 49.55 286 P **P 04 14 20.0 +0.6**
BJT Baijiatuau 49.55 286 P **P 04 14 20.0 +0.6**
BJT pmax pmax
comp=Z,9.0nm,0.7s
ULN Ulaanbaatar 49.89 300 *ce*P **P 04 14 21.5 -0.5**
ULN pmax pmax
comp=Z,17nm,0.8s
SPA0 Spitsbergen Ar 49.96 358 *e*P **P 04 14 22.3 +0.3**
E38A The Farm, Brul 49.99 62 IAmb IAmb 04 14 41.8
comp=Z,8.7nm,1.1s
FRB Frobisher Bay 50.05 34 P **P 04 14 23.1 +0.3**
comp=Z,6.5nm,0.5s,baz=309,slow=7.9,SNR=28
FRB LR LR 04 37 50.8
comp=Z,93nm,19.3s,baz=5.5,slow=39
comp=Z,6.5nm,0.5s
SPMN Marine on St. 50.15 65 P **P 04 14 23.7 -0.1**
baz=308
CBKS Cedar Bluff 50.15 75 P **P 04 14 24.3 +0.2**
baz=310
SONM Songino Array 50.26 300 P **P 04 14 25.2 +0.4**
comp=Z,7.6nm,0.6s,baz=53,slow=6.5,SNR=56
SONM PcP **PcP 04 15 42.7 -0.2**
comp=Z,2.4nm,0.7s,baz=78,slow=2.3,SNR=5.1
SONM ScP **ScP 04 19 35.0 +1.7**
comp=Z,0.4nm,0.5s,baz=72,slow=4.8,SNR=3.7
SONM LR LR 04 38 10.8
comp=Z,58nm,18.3s,baz=18,slow=39
comp=Z,7.6nm,0.6s
SONM Songino Array 50.26 300 P **P 04 14 24.8 0.0**
SONM PcP **PcP 04 15 43.1 +0.2**
DAG Danmarks Havn 50.32 8 *i* P **P 04 14 24.0 -0.7**
DAG IAmb IAmb 04 14 24.8
comp=Z,13nm,0.8s
ZAK Zakamensk 50.35 304 *e*P **P 04 14 25.6 +0.1**
ZAK *e* 04 15 42.8
ZAK pmax pmax
comp=Z,14nm,1.3s
ZAK pmax pmax
comp=Z,7.0nm,1.0s
MOY Mondy 50.73 307 *e*P **P 04 14 28.6 +0.3**
MOY pmax pmax
comp=Z,19nm,1.3s
TIA Tai'an 51.44 282 ⇑P **P 04 14 33.8 +0.1**
TIA pmax pmax
comp=Z,17nm,0.9s
MNTX Cornudas Mount 51.45 86 P **P 04 14 34.5 +0.6**
baz=314
SUMG Summit 51.51 16 P **P 04 14 34.0 -0.1**
SUMG Summit 51.51 16 P **P 04 14 34.0 -0.1**
SUMG pmax pmax
comp=Z,28nm,1.1s
SUMG Summit 51.51 16 *i* P **P 04 14 34.0 -0.1**
SUMG IAmb IAmb 04 14 35.2
comp=Z,29nm,1.1s
MSTX Muleshoe 51.51 82 P **P 04 14 34.9 +0.5**
baz=312
HHC Hu-ho-hao-te 51.72 290 *e*P **P 04 14 36.8 +0.9**
HHC pmax pmax
comp=Z,30nm,1.3s
HHC pmax pmax
comp=Z,240nm,5.4s
KSU1 Kansas State U 51.83 73 P **P 04 14 36.4 -0.2**
baz=310
SCIA State Center 51.99 68 P **P 04 14 38.1 +0.4**
baz=310
HNS HongShan 52.11 284 ⇑P **P 04 14 39.5 +0.9**
HNS pmax pmax
comp=Z,61nm,0.9s
DBG Daneborg 52.48 9 *i* P **P 04 14 39.3 -1.6**
DBG IAmb IAmb 04 14 40.9
comp=Z,15nm,0.5s
NJ2 Nanjing 53.20 277 *e*P **P 04 14 46.3 -0.4**
NJ2 pmax pmax
comp=Z,11nm,0.5s
BJO1 Bjornoya 53.55 356 *e*P **P 04 14 48.2 -0.5**
ICESG Greenland Ices 54.16 19 *i* P **P 04 14 53.2 -0.4**
ICESG IAmb IAmb 04 14 57.1
comp=Z,231nm,2.7s
TX32 Lajitas Array 54.16 87 IAmb IAmb 04 15 08.4
comp=Z,4.7nm,1.1s
TXAR Lajitas Array 54.16 87 P **P 04 14 54.0 +0.1**
comp=Z,2.6nm,0.8s,baz=296,slow=5.3,SNR=29
TXAR ScP **ScP 04 19 50.4 0.0**
comp=Z,0.7nm,0.9s,baz=318,slow=1.7,SNR=4.9
comp=Z,2.6nm,0.8s
TXAR Lajitas Array 54.16 87 P **P 04 14 53.8 -0.1**

ABTX Abilene, Hawle 54.34 81 P P 04 14 54.9 -0.2
baz=314
DY2G Dye2 54.79 24 *i* P P 04 14 57.0 -1.1
DY2G IAmb IAmb 04 14 59.1
comp=Z,6.5nm,0.5s
GLMI Grayling 54.88 60 P P 04 14 58.7 -0.2
baz=311
R40A Maddies Statio 54.91 71 IAmb IAmb 04 15 04.5
comp=Z,4.4nm,0.6s
HDIL Hopedale 55.11 67 P P 04 15 00.2 -0.4
baz=312
LYN LuoYang 55.37 283 ⇑P P 04 15 02.3 -0.2
LYN pmax pmax
comp=Z,20nm,0.7s
X37A Clayton 55.58 76 IAmb IAmb 04 15 13.8
comp=Z,5.1nm,0.6s
SCO Scoresbysund 55.85 12 *i* P P 04 15 05.4 0.0
SCO IAmb IAmb 04 15 05.8
comp=Z,13nm,0.5s
FVM French Village 56.19 70 IAmb IAmb 04 15 08.0
comp=Z,4.7nm,0.8s
SFIN Lafayette 56.48 66 P P 04 15 09.5 -0.8
baz=312
FCAR Ozark Folk Cen 56.62 73 IAmb IAmb 04 15 18.6
comp=Z,4.6nm,0.7s
SCHQ Schefferville 56.63 42 P P 04 15 11.0 -0.2
comp=Z,4.2nm,0.5s,baz=323,slow=7.2,SNR=13
SCHQ LR LR 04 38 37.1
comp=Z,62nm,21.9s,baz=136,slow=35
comp=Z,4.2nm,0.5s
MIAR Mount Ida 56.68 75 P P 04 15 12.1 +0.3
baz=314
ZAA0 Zalesovo Array 56.71 317 P P 04 15 11.6 -0.2
ZALV Zalesovo Beam 56.71 317 P P 04 15 11.3 -0.5
comp=Z,8.1nm,0.5s,baz=38,slow=6.6,SNR=25
ZALV PcP PcP 04 16 07.8 +0.7
comp=Z,4.6nm,0.6s,baz=32,slow=4.4,SNR=5.8
ZALV LR LR 04 41 08.6
comp=Z,60nm,19.1s,baz=247,slow=38
comp=Z,8.1nm,0.5s
ZALV Zalesovo Beam 56.71 317 P P 04 15 11.3 -0.5
ZALV PcP PcP 04 16 07.1 -0.1
WHN Wuhan 57.01 279 ⇓P P 04 15 15.0 +0.8
SIUC Southern Illin 57.07 69 IAmb IAmb 04 15 21.4
comp=Z,7.8nm,0.8s
H06N1 SOCORRO T-PHAS 57.36 101 T T 05 17 48.6
SNR=6.7
H06E1 SOCORRO T-PHAS 57.46 101 T T 05 17 50.7
SNR=3.4
O48B Farmland 57.65 65 P P 04 15 18.2 -0.4
baz=313
SADO Sadowa 57.81 57 P P 04 15 20.4 +0.8
comp=Z,4.6nm,0.4s,baz=294,slow=4.6,SNR=7.0
comp=Z,4.6nm,0.4s
XAN Xi'an 57.84 285 ⇑P P 04 15 19.8 -0.3
XAN pmax pmax
comp=Z,19nm,1.1s
XAN pmax pmax
comp=Z,94nm,3.8s
ARA0 ARCESS Array S 58.09 353 *e*P P 04 15 20.4 -0.9
ARA0 IAmb IAmb 04 15 33.3
comp=Z,89nm,2.2s
ARCES ARCESS Array B 58.09 353 P P 04 15 20.4 -0.9
comp=Z,3.1nm,0.4s,baz=24,slow=9.1,SNR=68
ARCES PcP PcP 04 16 12.2 -0.2
comp=Z,4.6nm,0.7s,baz=15,slow=6.3,SNR=7.1
comp=Z,3.1nm,0.4s
P49A Miami Univ. Ec 58.39 65 P P 04 15 23.2 -0.6
baz=313
TRO Tromso 58.40 356 *e*P P 04 15 23.3 -0.1
TRO IAmb IAmb 04 15 28.1
comp=Z,32nm,1.8s
JETT Jettan, Norway 58.40 355 *e*P P 04 15 23.3 -0.2
JETT IAmb IAmb 04 15 24.6
comp=Z,13nm,0.4s
ACSO Alum Creek Sta 58.87 63 P P 04 15 27.1 -0.1
baz=314
WVT Waverly 58.97 70 P P 04 15 28.5 +0.7
baz=314
OXF Oxford 59.18 72 P P 04 15 30.1 +0.8
baz=314
GTA Gaotai 59.37 296 ⇑P P 04 15 30.4 -0.4
GTA pP pP 04 15 45.6 -1.3
GTA sP sP 04 15 53.3 -0.5
GTA pmax pmax
comp=Z,13nm,0.8s
LZH Lanzhou 59.40 290 ⇑P P 04 15 31.8 +0.7
LZH sP sP 04 15 57.6 +3.6
LZH pmax pmax
comp=Z,56nm,1.6s
PLAL Pickwick Lake 59.63 71 IAmb IAmb 04 15 38.6
comp=Z,3.7nm,0.7s
O53A New Philadelph 59.83 62 P P 04 15 33.9 +0.2
baz=314
ENH Enshi 60.16 282 P P 04 15 35.9 -0.3
STEI Steigen 60.25 357 *e*P P 04 15 35.8 -0.4
STEI IAmb IAmb 04 15 48.7
comp=Z,115nm,2.3s
LONY Lake Ozonia 60.25 55 P P 04 15 37.5 +0.9
baz=315
FAUS Fauske 60.79 357 *e*P P 04 15 39.7 -0.2
FAUS IAmb IAmb 04 15 43.9
comp=Z,43nm,1.6s
MCWV Mont Chateau 61.00 62 P P 04 15 42.6 +0.9
baz=315
TZTN Tazewell 61.14 67 P P 04 15 43.7 +1.0
baz=315
BINY Binghamton 61.25 58 P P 04 15 44.4 +1.0
baz=315
SSPA Standing Stone 61.36 60 P P 04 15 45.1 +0.9
baz=315
FPAL Fort Paine 61.37 70 P P 04 15 44.2 -0.2
FPAL IAmb IAmb 04 16 02.8
comp=Z,6.9nm,0.8s
TKL Tuckaleechee C 61.64 68 P P 04 15 48.6 +2.5
comp=Z,2.1nm,0.4s,baz=156,slow=4.4,SNR=7.8
comp=Z,2.1nm,0.4s
KURK Kurchatov 61.68 317 P P 04 15 46.3 +0.2
KURK Kurchatov 61.68 317 *ce*P P 04 15 45.7 -0.4
KURK pmax pmax
comp=Z,31nm,0.6s
L59A Walton 61.75 57 P P 04 15 47.1 +0.3
KURBB Kurchatov Arra 61.79 317 P P 04 15 46.6 -0.2
MOR8 Moi Rana 62.03 357 *e*P P 04 15 46.9 -1.4
MOR8 IAmb IAmb 04 15 58.5
comp=Z,12nm,1.2s
BLA Blacksburg 62.42 64 P P 04 15 51.8 +0.4
baz=316
WMQ Urumqi 62.62 307 *e*P P 04 15 53.6 +0.9
WMQ pmax pmax
comp=Z,38nm,0.7s
MK31 Makanchi Array 63.00 312 P P 04 15 54.6 -0.5
MK31 Makanchi Array 63.00 312 *c i*P P 04 15 54.3 -0.8
MKAR Makanchi Array 63.00 312 P P 04 15 54.6 -0.5
comp=Z,16nm,0.4s,baz=48,slow=6.6,SNR=234
comp=Z,16nm,0.4s
MKAR Makanchi Array 63.00 312 P P 04 15 54.3 -0.8
MKAR Makanchi Array 63.00 312 *i* P P 04 15 54.5 -0.6
MKAR pmax pmax
comp=Z,16nm,0.4s
CD2 Chengdu 63.13 286 P P 04 15 56.3 +0.1
CD2 S S 04 24 21.1 -1.5
CD2 pmax pmax
comp=Z,20nm,0.8s
MAKZ Makanchi 63.14 312 P P 04 15 55.5 -0.5
MAKZ Makanchi 63.14 312 P P 04 15 55.5 -0.5
MAKZ pmax pmax
comp=Z,20nm,0.5s
BVA0 Borovoye Array 63.15 323 *i* P P 04 15 56.3 +0.4
BRVK Borovoye 63.16 323 P P 04 15 56.3 +0.3
BRVK Borovoye 63.16 323 *ce*P P 04 15 56.2 +0.3
BRVK pmax pmax
comp=Z,31nm,1.3s
KMSC Kings Mountain 63.40 66 P P 04 15 58.6 +0.8
KMSC IAmb IAmb 04 16 05.2
comp=Z,5.0nm,0.8s
KMSC Kings Mountain 63.40 66 P P 04 15 58.2 +0.3
baz=316
GOGA Godfrey 63.42 69 P P 04 15 58.5 +0.5
baz=316
LMN Caledonia Moun 64.07 48 P P 04 16 01.7 -0.4
ARU Arti 64.27 332 P P 04 16 02.9 -0.3
ARU Arti 64.27 332 *d i*P P 04 16 02.6 -0.6
ARU 04 16 34.4
ARU S S 04 24 37.9 +2.0
ARU SS SS 04 28 49.8 +4.6
ARU pmax pmax
comp=Z,17nm,0.8s
GOMU GeErMu 64.44 296 P P 04 16 04.5 -0.6
GOMU PcP PcP 04 16 41.4 +2.4
GOMU pmax pmax
comp=Z,15nm,0.9s
GOMU pmax pmax
comp=Z,70nm,5.3s
TBLU Trondheim 65.05 359 *e*P P 04 16 06.5 -1.6
NHSC New Hope 65.53 67 P P 04 16 12.2 +0.4
baz=317
FINES FINESS Array B 65.99 351 P P 04 16 13.2 -1.0
comp=Z,3.2nm,0.3s,baz=14,slow=7.9,SNR=74
FINES PcP PcP 04 16 45.0 +0.5
comp=Z,1.4nm,0.4s,baz=65,slow=5.5,SNR=4.5
FINES LR LR 04 47 41.2
comp=Z,55nm,18.4s,baz=40,slow=38
comp=Z,3.2nm,0.3s
DOMB Dombas 66.27 360 *e*P P 04 16 16.0 -0.1
DOMB IAmb IAmb 04 16 29.5
comp=Z,140nm,2.3s
RAF Rauma 66.78 353 *e*P P 04 16 19.3 0.0
NB2 NORSAR Subarra 67.25 358 P P 04 16 22.6 +0.2
comp=Z,2.8nm,0.5s,baz=2.1,slow=6.5
NB2 NORSAR Subarra 67.25 358 P P 04 16 22.6 +0.2
baz=2.1,slow=6.5
NOA NORSAR Array B 67.25 358 P P 04 16 21.6 -0.8
comp=Z,4.0nm,0.6s,baz=1.9,slow=6.4,SNR=22
comp=Z,4.0nm,0.6s
MEF Metsahovi 67.36 351 *e*P P 04 16 22.4 -0.6
NAO01 NORSAR Array S 67.45 359 *e*P P 04 16 23.4 -0.2
PZH PanZhiHua 67.56 285 P P 04 16 26.6 +1.6
PZH pmax pmax
comp=Z,30nm,0.7s
PZH pmax pmax
comp=Z,80nm,4.9s
SKAR Skarslia 67.64 0 *e*P P 04 16 25.0 +0.1
SKAR IAmb IAmb 04 17 09.4
comp=Z,161nm,2.2s
KMI Kunming 67.98 283 ⇑P P 04 16 28.3 +0.5
KMI pmax pmax
comp=Z,17nm,0.7s
KMI pmax pmax
comp=Z,50nm,5.1s
KONO Kongsberg 68.67 359 *e*P P 04 16 31.6 +0.4
VSU Vasula 68.85 350 *e*P P 04 16 31.9 -0.4
BLS5 Blasjo 68.89 1 *e*P P 04 16 32.4 -0.2
BLS5 IAmb IAmb 04 16 43.0
comp=Z,155nm,2.0s
MTSE Matsula 68.89 351 *e*P P 04 16 32.4 -0.2
TKM2 Tokmak 2 69.02 313 P P 04 16 34.0 0.0
SNR=24
USP Ospenovka 69.23 314 P P 04 16 36.2 +1.1
SNR=24
ULHL Ulahol 69.26 313 P P 04 16 36.5 +0.9
SNR=7.9
CHMS Chumysh 69.34 314 P P 04 16 36.7 +1.0
SNR=11
KBK Karagaybulak 69.52 314 P P 04 16 37.6 +0.6
SNR=18
AKTO Aktyubinsk 69.58 329 P P 04 16 36.3 -0.8
AAK Ala-Archa 69.74 314 P P 04 16 39.4 +1.1
SNR=19
AAK Ala-Archa 69.74 314 P P 04 16 38.2 -0.2
AAK Ala-Archa 69.74 314 P P 04 16 38.2 -0.2
AAK pmax pmax
comp=Z,36nm,0.8s
AB31 Akbulak array 69.97 327 *e*P P 04 16 39.4 0.0
ABKAR Akbulak array 69.97 327 P P 04 16 39.3 -0.1
NRN Naryn 70.02 312 P P 04 16 40.2 -0.1
NRN Naryn 70.02 312 P P 04 16 40.2 -0.1
EKS2 Erkin-Say 70.04 314 P P 04 16 40.8 +0.7
SNR=30
SLIT Slitere, Latvi 70.10 352 *e*P P 04 16 39.7 -0.4
AML Almayashu 70.50 314 P P 04 16 43.8 +0.5
SNR=18
BELG Belogornoye 70.83 336 *i* P P 04 16 44.2 -0.4
BELG pmax pmax
comp=Z,7.0nm,1.5s
KK31 Karatay Array 71.09 317 P P 04 16 45.8 -0.7
KK31 Karatay Array 71.09 317 *i* P P 04 16 46.3 -0.1
KKAR Karatay Array 71.09 317 P P 04 16 46.0 -0.4
KKAR Karatay Array 71.09 317 P P 04 16 46.0 -0.4
LSA Lhasa 71.32 294 P P 04 16 49.5 +0.9
LSA Lhasa 71.32 294 P P 04 16 49.5 +0.9
LSA pmax pmax
comp=Z,23nm,0.6s
KSH Kashi 71.55 311 P P 04 16 52.8 +3.4
KSH pmax pmax
comp=Z,59nm,0.7s
VSVD Vaisvydziai 71.58 351 *e*P P 04 16 48.9 -0.1
PBUR Paburge 71.72 352 *e*P P 04 16 49.9 0.0
PABE Paberze 72.05 351 *e*P P 04 16 51.7 -0.2
TRKS Terek-Say 72.10 315 P P 04 16 53.0 +0.3
MNK Minsk 72.59 348 *i* P P 04 16 54.6 -0.5
MNK *i* *PP **pP** 04 17 11.1 -0.6
MNK *i* 04 19 36.0
MNK *i* PPP PPP 04 21 20.4
MNK *i* S **S** 04 26 12.8 -1.9
MNK *i* *SS **sS** 04 26 42.9 +0.3
MNK *i* 04 26 55.9
MNK *i* SS **SS** 04 30 57.4 +4.0
MNK pmax pmax
comp=E,1.0nm,0.6s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK MLR MLR
comp=E,5.0nm,17.0s
MNK MLR MLR
comp=N,8.0nm,14.0s
MNK MLR MLR
comp=Z,51nm,19.0s
MNK Minsk 72.59 348 *i* P P 04 16 54.6 -0.5
comp=E,1.0nm,0.6s
MNK *i* P P 04 16 54.6 -0.5
comp=N,8.0nm,0.8s
MNK *i* P P 04 16 54.6 -0.5
comp=Z,7.0nm,0.8s,baz=192
MNK *i* pP **pP** 04 17 11.1 -0.6
MNK *i* PP **PP** 04 19 36.1 -0.4
MNK *i* PPP PPP 04 21 20.4
MNK *i* S **S** 04 26 12.8 -1.9
MNK *i* sS **sS** 04 26 42.9 +0.3
MNK *i* SS **SS** 04 30 57.4 +4.0
MNK *i* SSS SSS 04 34 15.3
MNK *i* LR LR 04 48 18.3
MNK *i* LRM MLR 04 51 18.8
comp=E,5.0nm,16.8s
MNK *i* LRM MLR 04 51 27.8
comp=N,8.0nm,14.2s
MNK *i* LRM MLR 04 51 47.1
comp=Z,51nm,18.7s
BSD Bornholm Skovb 73.08 356 *e*P P 04 16 58.1 +0.1
CRAI Chiangrai 73.10 281 P P 04 16 59.1 +0.4
DRK Karamyk 73.49 314 P P 04 17 01.6 +0.5
GAR Garm 74.54 314 P P 04 17 07.7 +0.7
CHTO Chiang Mai 75.04 281 P P 04 17 10.5 +0.4
CHTO IAmb IAmb 04 17 15.5
comp=Z,6.9nm,1.1s
CHTO Chiang Mai 75.04 281 P P 04 17 10.5 +0.4
CHTO pmax pmax
comp=Z,7.0nm,1.1s
TAPN Taplejung 75.06 295 *e*P P 04 17 10.8 +0.4
comp=Z,8.4nm,0.3s
CMAR Chiang Mai Arr 75.32 281 P P 04 17 12.1 +0.4
comp=Z,8.8nm,0.6s,baz=25,slow=6.5,SNR=22
comp=Z,8.8nm,0.6s
CMAR Chiang Mai Arr 75.32 281 P P 04 17 12.2 +0.6
GUN Gumba 75.64 297 *e*P P 04 17 14.4 +0.6
comp=Z,48nm,0.3s
JIRN Jiri 75.66 296 *e*P P 04 17 14.5 +0.5
comp=Z,132nm,0.4s
RAMN Ramite 75.99 296 *e*P P 04 17 15.8 +0.1
comp=Z,49nm,0.4s
KKN Kakani 76.06 297 *e*P P 04 17 15.9 -0.2
comp=Z,13nm,0.3s
AKASG Malin Array Be 76.12 347 P P 04 17 14.6 -1.1
comp=Z,2.3nm,0.3s,baz=16,slow=6.5,SNR=23
comp=Z,2.3nm,0.3s
AKASG Malin Array Be 76.12 347 *i* P P 04 17 14.6 -1.1
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 76.12 347 IAmb IAmb 04 17 15.3
comp=Z,5.0nm,0.8s
PKI Pulchoki 76.16 297 *e*P P 04 17 16.6 -0.2
comp=Z,31nm,0.4s
PKIN Phulchoki 76.16 297 *e*P P 04 17 16.6 -0.1
GKN Gorkha 76.25 298 *e*P P 04 17 17.2 +0.2
comp=Z,62nm,0.4s
DMN Daman 76.30 297 *e*P P 04 17 17.4 0.0
comp=Z,17nm,0.3s
DANN Dangsing 76.45 299 *e*P P 04 17 18.6 +0.2
comp=Z,26nm,0.3s
CLL Collm 76.96 357 IAmb IAmb 04 17 21.2
comp=Z,6.5nm,0.6s
CLL Collm 76.96 357 ⇓ *i*P P 04 17 20.7 +0.3
CLL pmax pmax
comp=Z,7.0nm,0.5s
CLL Collm 76.96 357 ⇓ *i*P P 04 17 20.7 +0.3
comp=Z,7.0nm,0.5s
KSP Ksiaz 77.28 355 *e*P P 04 17 22.7 +0.4
BRG Berggiesshubel 77.36 356 *i* P P 04 17 23.1 +0.4
BRG Amp 04 17 23.7
comp=Z,7.6nm,0.7s
BRG *ex* x 04 17 32.2
BRG Amp 04 17 33.1
comp=Z,2.4nm,0.7s
BRG Berggiesshubel 77.36 356 *i* P P 04 17 23.1 +0.4
BRG *e* 04 17 32.1
BRG pmax pmax
comp=Z,8.0nm,0.7s
BRG pmax pmax
comp=Z,2.0nm,0.7s
OSTC Ostas 77.57 355 *e*P P 04 17 23.8 -0.1
NIL Nilore 77.58 309 P P 04 17 24.3 0.0
NIL Nilore 77.58 309 P P 04 17 24.3 0.0
NIL pmax pmax
comp=Z,57nm,0.7s
UPC Upice 77.63 355 *e*P P 04 17 24.1 -0.1
UPC Upice 77.63 355 *e*P P 04 17 24.1 -0.1
PVCC Panska Ves 77.68 356 *e*P P 04 17 25.1 +0.6
PVCC Panska Ves 77.68 356 *e*P P 04 17 25.1 +0.6
MEM Membach 77.71 2 *d*P P 04 17 24.4 -0.2
comp=Z,4.4nm,1.0s
MEM *d*PcP PcP 04 17 34.5 -0.1
BSTI Sart Tilman 77.73 2 *d*P P 04 17 25.4 +0.6
comp=Z,2.2nm,0.8s
BTNL Ternell 77.74 1 *d*P P 04 17 25.9 +1.0
DPC Dobruska-Polom 77.77 355 *e*P P 04 17 24.8 -0.3
DPC Dobruska-Polom 77.77 355 *e*P P 04 17 24.8 -0.3
BCLA Clavier 77.89 2 *d*P P 04 17 25.9 +0.2
comp=Z,3.9nm,0.8s
BCLA *d*PcP PcP 04 17 35.6 +0.2
BMRD Maredsous 77.99 2 *d*P P 04 17 26.7 +0.5
comp=Z,8.6nm,0.9s
KRLC Kraliky 78.02 354 *e*P P 04 17 25.9 -0.5
KRLC Kraliky 78.02 354 *e*P P 04 17 25.9 -0.5
RCHB Rochefort 78.15 2 *d*P P 04 17 26.6 -0.5
comp=Z,4.2nm,0.8s
OKC Ostrava-Krasne 78.16 354 *e*P P 04 17 26.7 -0.5
OKC Ostrava-Krasne 78.16 354 *e*P P 04 17 26.7 -0.5
DOU Dourbes 78.20 2 *d*P P 04 17 27.5 +0.2
comp=Z,5.2nm,0.9s
DOU *d*PcP PcP 04 17 37.2 +0.6
PRU Pruhonice 78.22 356 *e*P P 04 17 27.1 -0.4
PRU Pruhonice 78.22 356 *e*P P 04 17 27.1 -0.4
MORC Moravsky Berou 78.27 354 ⇑P P 04 17 27.8 0.0
MORC Moravsky Berou 78.27 354 P P 04 17 27.6 -0.2
MORC IAmb IAmb 04 17 28.9
comp=Z,4.5nm,0.8s
MORC Moravsky Berou 78.27 354 ⇑P P 04 17 27.8 0.0
MORC Moravsky Berou 78.27 354 *e*P P 04 17 27.8 0.0
GRFO Grafenberg 78.62 358 P P 04 17 30.1 +0.4
GRFO Grafenberg 78.62 358 P P 04 17 30.1 +0.4
GRFO pmax pmax
comp=Z,14nm,0.7s
WLF Walferdange 78.66 1 *d*P P 04 17 29.9 -0.1
KOLS Kolonicke sedl 78.71 351 *e*P P 04 17 30.8 +0.5
KOLS pmax pmax
comp=Z,4.0nm,0.7s
KOLS Kolonicke sedl 78.71 351 *e*P P 04 17 30.8 +0.5
LANS Liptovska Anna 78.75 353 *e*P P 04 17 31.8 +1.3
LANS pmax pmax
comp=Z,5.0nm,0.7s
LANS Liptovska Anna 78.75 353 *e*P P 04 17 31.8 +1.3
SORM Soroca 78.75 346 ⇑P P 04 17 28.7 -1.8
SORM Soroca 78.75 346 ⇑P P 04 17 28.7 -1.8
GOF Gofitskoye 78.77 336 ⇑ *e*P P 04 17 30.7 +0.1
VRAC Vranov 78.79 355 ⇑P P 04 17 31.0 +0.3
VRAC Vranov 78.79 355 ⇑P P 04 17 31.0 +0.3
VRAC Vranov 78.79 355 *e*P P 04 17 31.3 +0.6
KBL Kabul 78.80 313 P P 04 17 30.9 -0.4
KBL Kabul 78.80 313 P P 04 17 30.9 -0.4
KBL pmax pmax
comp=Z,32nm,1.1s
KRUC Moravsky 79.05 355 *e*P P 04 17 32.1 0.0
KHC Kasperske Hory 79.11 357 IAmb IAmb 04 17 34.1
comp=Z,7.2nm,0.7s
KHC Kasperske Hory 79.11 357 *e*P P 04 17 32.7 +0.2
KHC Kasperske Hory 79.11 357 *e*P P 04 17 32.7 +0.2
JAVC Velka Javorina 79.17 354 *e*P P 04 17 34.0 +1.2
CKRC Cesky Krumlov 79.39 356 *e*P P 04 17 33.6 -0.4
GEC2 GERESS Array S 79.39 356 IAmb IAmb 04 17 35.1
comp=Z,5.6nm,0.7s
GERES GERESS Array B 79.39 356 P P 04 17 33.9 -0.2
comp=Z,3.7nm,0.6s,baz=28,slow=6.0,SNR=53
comp=Z,3.7nm,0.6s
GERES GERESS Array B 79.39 356 P P 04 17 33.5 -0.6
VYHS Vyhne 79.45 353 *e*P P 04 17 34.6 +0.3
VYHS pmax pmax
comp=Z,4.0nm,0.6s
VYHS Vyhne 79.45 353 *e*P P 04 17 34.6 +0.3
SMOL Smolenice 79.53 354 *e*P P 04 17 35.4 +0.7
SMOL pmax pmax
comp=Z,4.0nm,0.8s
BUR08 Bucovina Ar. S 79.66 349 IAmb IAmb 04 17 36.1
comp=Z,3.6nm,0.8s
MODS Modra-Piesok 79.68 354 *e*P P 04 17 36.5 +0.9
MODS pmax pmax
comp=Z,14nm,0.8s
MODS Modra-Piesok 79.68 354 *e*P P 04 17 36.5 +0.9
BURAR Bucovina Array 79.69 348 ⇑P P 04 17 35.9 +0.2
BURAR Bucovina Array 79.69 348 P P 04 17 34.9 -0.8
BURAR IAmb IAmb 04 17 36.5
comp=Z,3.5nm,0.6s
BURAR Bucovina Array 79.69 348 ⇑P P 04 17 35.9 +0.2
ZST Bratislava 79.87 354 *e*P P 04 17 37.7 +1.2
ZST pmax pmax
comp=Z,16nm,0.7s
ZST Bratislava 79.87 354 *e*P P 04 17 37.7 +1.2
KIV Kislovodsk 79.89 336 ⇑P P 04 17 37.1 +0.2
KIV Kislovodsk 79.89 336 P P 04 17 35.8 -1.1
KIV IAmb IAmb 04 17 38.1
comp=Z,9.1nm,0.7s
KIV Kislovodsk 79.89 336 *e*P P 04 17 36.6 -0.3
KIV pmax pmax
comp=Z,13nm,1.1s
BFO Black Forest 80.01 0 P P 04 17 37.1 -0.2
BFO IAmb IAmb 04 17 38.6
comp=Z,3.9nm,0.8s
BFO Black Forest 80.01 0 P P 04 17 37.2 -0.2
BFO pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 80.05 335 P P 04 17 38.0 +0.4
comp=Z,7.0nm,0.8s,baz=80,slow=3.4,SNR=13
comp=Z,7.0nm,0.8s
KBZ Khabaz 80.05 335 *ce*P P 04 17 37.6 0.0
KBZ pmax pmax
comp=Z,7.0nm,0.9s
SHA1 Shidzhatmaz 80.10 336 *i* P P 04 17 38.5 +0.3
ECH Echery 80.12 1 P P 04 17 37.5 -0.5
ECH IAmb IAmb 04 17 38.8
comp=Z,5.1nm,0.9s
ECH Echery 80.12 1 P P 04 17 37.5 -0.5
ECH pmax pmax
comp=Z,5.0nm,0.9s
CLF Chambon-Foret 80.18 4 P P 04 17 38.6 +0.4
CONA Conrad Observa 80.21 355 *i* P P 04 17 39.1 +0.5
comp=Z,4.2nm,0.5s
BIZ Bicaz 80.24 348 ⇑P P 04 17 39.1 +0.5
ARCR ARCALIA 80.31 349 ⇑P P 04 17 40.1 +1.1
MOA Moln 80.37 356 *i* P P 04 17 39.5 +0.3
comp=Z,1.4nm,0.4s
RONA Rosalia, Austr 80.41 355 *i* P P 04 17 40.4 +0.8
comp=Z,2.4nm,0.4s
GEYT Alibeck 80.46 322 P P 04 17 40.1 +0.2
comp=Z,6.7nm,0.8s,baz=277,slow=5.1,SNR=6.7

comp=Z,6.7nm,0.8s
GEYT Alibeck 80.46 322 IAmb IAmb 04 17 41.2
comp=Z,7.5nm,0.8s
GYA0B ALIBECK ARRAY 80.46 322 P **P** **04 17 39.7 -0.2**
GYA0B IAmb IAmb 04 17 41.2
comp=Z,6.7nm,0.8s
BIOA Bad Ischl, Aus 80.55 356 *i* P **P** **04 17 40.6 +0.3**
comp=Z,3.1nm,0.5s
ZEI Tsey 80.66 334 *e*P **P** **04 17 40.6 -0.6**
ZEI pmax pmax
comp=Z,10.0nm,0.6s
DRGR 80.78 350 ⇓P **P** **04 17 41.6 0.0**
DRGR 80.78 350 ⇓P **P** **04 17 41.6 0.0**
RETA Reutte 80.84 358 *e*P **P** **04 17 42.0 +0.2**
comp=Z,4.5nm,0.7s
ARSA Arzberg 80.90 355 *i* P **P** **04 17 43.0 +0.9**
comp=Z,1.8nm,0.4s
WATA Walderalm 80.97 358 *i* P **P** **04 17 42.9 +0.2**
comp=Z,5.0nm,0.6s
MOTA Moosalm 80.97 358 *e*P **P** **04 17 42.9 +0.2**
comp=Z,12nm,1.2s,SNR=6.4
WTTA Wattenberg 81.04 358 *i* P **P** **04 17 43.7 +0.6**
comp=Z,6.7nm,0.6s
SQTA Sankt Quirin 81.09 358 *i* P **P** **04 17 43.8 +0.5**
comp=Z,9.3nm,0.7s,SNR=5.5
KBA Koelnbreinsper 81.17 357 *e*P **P** **04 17 44.6 +0.8**
comp=Z,17nm,0.6s,SNR=8.6
DOPR Dopca 81.28 348 ⇓P **P** **04 17 45.0 +0.8**
COVR Voineasa-Covas 81.30 347 ⇑P **P** **04 17 44.9 +0.6**
FETA Feichten 81.30 358 *i* P **P** **04 17 45.0 +0.5**
comp=Z,7.6nm,0.7s,SNR=9.3
SOKA Soboth 81.50 355 *e*P **P** **04 17 45.7 +0.2**
comp=Z,8.3nm,0.8s,SNR=6.8
ABTA Abfaltersbach 81.53 357 *i* P **P** **04 17 45.7 +0.1**
comp=Z,5.4nm,1.1s
PERS Pernice 81.54 355 *i* P **P** **04 17 45.9 +0.3**
CFR Carcaliu 81.68 346 ⇑P **P** **04 17 46.7 +0.5**
CFR Carcaliu 81.68 346 ⇑P **P** **04 17 46.7 +0.5**
OBKA Obir 81.69 356 *i* P **P** **04 17 46.6 +0.1**
comp=Z,6.4nm,0.9s,SNR=5.7
PRED Cave del Predi 81.80 356 P **P** **04 17 47.0 0.0**
PRED IAmb IAmb 04 17 47.5
comp=Z,5.8nm,0.7s
HRA Herat 81.89 318 P **P** **04 17 48.2 +0.3**
ARR Arges 81.97 348 ⇓P **P** **04 17 50.7 +2.8**
ROBS Robic 82.00 356 *i* P **P** **04 17 47.3 -0.7**
BZS Buzias 82.06 351 ⇓P **P** **04 17 48.1 -0.2**
BZS Buzias 82.06 351 ⇓P **P** **04 17 48.1 -0.2**
GZR Gura Zlata 82.16 350 ⇑P **P** **04 17 48.5 -0.4**
GZR Gura Zlata 82.16 350 ⇑P **P** **04 17 48.5 -0.4**
CTI Castel Tesino 82.26 358 IAmb IAmb 04 17 49.6
comp=Z,2.6nm,0.7s
GBRS Gornja Briga 82.66 355 *i* P **P** **04 17 51.3 -0.1**
HERR Herculane 82.70 350 ⇓P **P** **04 17 51.2 -0.4**
TEOL Teolo 82.94 358 P **P** **04 17 53.1 +0.2**
SSB Saint Sauveur 83.01 3 IAmb IAmb 04 17 54.8
comp=Z,3.8nm,0.9s
BNI Bardonecchia 83.28 1 P **P** **04 17 56.2 +1.4**
BNI IAmb IAmb 04 17 57.4
comp=Z,6.4nm,0.7s
BNI Bardonecchia 83.28 1 P **P** **04 17 56.2 +1.4**
BNI pmax pmax
comp=Z,6.0nm,0.7s
BOVS Bovan 84.01 350 ⇓P **P** **04 17 57.6 -0.8**
OSSC Osservatorio P 84.79 358 P **P** **04 18 01.2 -1.1**
GURO Guroymak-BITLI 85.13 334 P **P** **04 18 04.9 +0.6**
GURO IAmb IAmb 04 18 07.7
comp=Z,2.6nm,0.7s
BR131 Keskin Array S 86.00 341 P **P** **04 18 09.5 +0.9**
BR131 IAmb IAmb 04 18 09.9
comp=Z,6.9nm,0.8s
BR131 Keskin Array S 86.00 341 P **P** **04 18 09.5 +0.9**
BR131 pmax pmax
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 86.00 341 P **P** **04 18 08.9 +0.3**
comp=Z,3.3nm,0.7s,baz=48,slow=2.2,SNR=14
comp=Z,3.3nm,0.7s
BRTR Keskin Array B 86.00 341 *i* P **P** **04 18 08.8 +0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
MARD Mardin 86.62 335 P **P** **04 18 12.1 +0.4**
PSI Prapat 87.46 271 P **P** **04 18 17.6 +1.6**
comp=Z,15nm,0.5s,baz=305,slow=4.6,SNR=7.3
comp=Z,15nm,0.5s
RPSI Rantau Prapat 87.54 271 P **P** **04 18 17.6 +1.3**
ESDC Sonseca Array 88.04 9 P **P** **04 18 18.0 -0.4**
comp=Z,1.5nm,0.7s,baz=347,slow=3.8,SNR=15
comp=Z,1.5nm,0.7s
FITZ Fitzroy Crossi 88.48 238 P **P** **04 18 20.3 -0.1**
comp=Z,5.7nm,0.6s,baz=16,slow=6.1,SNR=24
comp=Z,5.7nm,0.6s
ASAR Alice Springs 89.11 228 P **P** **04 18 23.2 -0.2**
comp=Z,6.6nm,0.8s,baz=21,slow=5.0,SNR=15
comp=Z,6.6nm,0.8s
TORD Torodi Ar. Bea 114.83 7 PKP **PKiKP** **04 24 07.4 -1.4**
comp=Z,0.3nm,0.5s,baz=340,slow=2.9,SNR=14
H03N2 Juan Fernandez 117.11 110 T T 06 32 26.5
baz=318,slow=77,SNR=12
H03N1 Juan Fernandez 117.13 110 T T 06 32 23.4
baz=318,slow=77,SNR=18
H03N3 Juan Fernandez 117.13 110 T T 06 32 36.0
baz=318,slow=77,SNR=25
BDFB Brasilia 122.71 72 PKP **PKPdf** **04 24 23.5 -0.4**
comp=Z,0.9nm,0.4s,baz=178,slow=14,SNR=3.1
CPUP Villa Florida 125.11 89 PKP **PKPdf** **04 24 27.3 -0.7**
comp=Z,0.6nm,0.4s,baz=359,slow=0.6,SNR=3.7
QSPA South Pole Qui 141.79 180 PKPpre 04 24 52.1
comp=Z,1.3nm,0.4s,baz=160,slow=0.4,SNR=14
BLWY Bulawayo 144.46 326 *i* P PKPbc 04 25 03.5 +0.5
BLWY Bulawayo 144.46 326 *i* P PKPbc 04 25 03.5 +0.5
MATP Matopo 144.76 326 *i* P PKPbc 04 25 04.3 +0.3
MATP Matopo 144.76 326 *i* P PKPbc 04 25 04.3 +0.3
MUSN Musina, Limpop 145.98 323 ⇓P **PKPdf** **04 25 07.0 +0.2**
MUSN Musina, Limpop 145.98 323 ⇓P **PKPdf** **04 25 07.0 +0.2**
TSUM Tsumeb 146.44 344 PKPbc **PKPbc** **04 25 09.0 -0.2**
MAW Mawson 149.74 218 PKPbc **PKPbc** **04 25 16.4 +0.2**
comp=Z,5.9nm,0.7s,baz=109,slow=2.8,SNR=9.2
MAW Mawson 149.74 218 PKPbc **PKPbc** **04 25 16.6 +0.3**
POGA Pongola 149.75 316 PKPbc **PKPbc** **04 25 17.4 -0.2**
BELA Belgrano 2 149.78 163 PKPbc **PKPdf** **04 25 14.2 +2.8**
LBTB Lobatse 149.99 327 PKPbc **PKPbc** **04 25 18.6 +0.2**
LBTB Lobatse 149.99 327 PKP2 **PKPbc** **04 25 18.6 +0.2**
BOSA Boshof 153.42 325 PKPbc **PKPbc** **04 25 26.2 +0.1**
comp=Z,2.2nm,0.5s,baz=327,slow=0.8,SNR=12

IDC ***14*** *04:09:45.3±0.4,27.29S×176.33W,h0km,mb4.8/27, mbtmp4.8/30,ML4.4/3,MS4.8/50,Error ellipse: s-maj=15.3km s-min=11.6km az=142.0*
MOS ***14*** *04:09:46.4±1.1,27.32S×176.35W,h13km,mb5.4/36, MS4.9/18,Error ellipse: s-maj=11.7km s-min=10.0km az=87.6*
NEIC ***14*** *04:09:48.0±1.9,27.35S±0.07×176.26W±0.05,h10km±1km, mb5.5/258,Ms_20 5.1/312,Error ellipse: s-maj=13.9km s-min=3.4km az=147.0*
GCMT ***14*** *04:09:50.0±0.1,27.31S±0.01×176.01W±0.01,h14km, MW5.3/140,Moment Tensor Solution. s122,c191; s140,c238; Duration: 1⁄1 Moment tensor: Scale 10^17 Nm; Mrr0.77±.02; Mθθ0.04±.01; Mϕϕ-0.80±.01; Mrθ0.20±.03; Mθϕ-0.12±.01; Mϕr0.75±.04; Best double couple: Mo1.11200×10^17 NP1ϕs13.00000°,δ67.00000°, λ94.00000°. NP2ϕs183.00000°,δ23.00000°,λ81.00000°. Principal axes: T 1.0870, Plg68.0000°, Azm290.0000°; N 0.0500, Plg4.0000°, Azm191.0000°; P -1.1370, Plg22.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***14*** *04:09:51.9±0.0,26.98S×176.30W,h41km,mb5.3/51, mbB5.7/41,Ms5.2/50,Ms7 4.9/50*
ISC 14 04:09:50.5±0.4,27.56S±0.04×176.39W±0.05,h34km±1km, h34km:pP-P,n847,σ1⁄48/634,mb5.4/181,MS5.1/238, 13C-14D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.16**	**218**	Pn	**Pb**	**04 10 27.2**	**-1.7**
	166nm,0.3s,baz=158,slow=3.2,SNR=22						
RAO				LR	LR	04 10 56.8	
	comp=Z,6μm,19.4s,baz=76,slow=30						
RAO				Sn	**Sb**	**04 10 57.5**	**+2.3**
	983nm,0.3s,baz=262,slow=24,SNR=7.5						
	1μm,0.7s						
RAO	**Raoul Island**	**2.16**	**218**	Pn	**Pb**	**04 10 28.3**	**-0.6**
RAO	**Raoul Island**	**2.16**	**218**	P	**Pb**	**04 10 28.3**	**-0.6**
RIZ	**Raoul Island**	**2.16**	**219**	P	**Pn**	**04 10 26.6**	**+2.5**
RIZ				S	**Sb**	**04 10 57.6**	**+2.4**
GLKZ	**Green Lake**	**2.17**	**218**	P	**Pb**	**04 10 27.7**	**-1.3**
GLKZ				S	**Sb**	**04 10 57.0**	**+1.5**
NIUE	**Niue**	**10.32**	**36**	P	Pn	04 12 05.2	-11
	baz=9.7,SNR=5.2						
MXZ	**Matakaoa Point**	**10.93**	**203**	S	**Sn**	**04 14 24.6**	**-0.8**
MSVF	**Nonsavu**	**11.05**	**331**	Pn	**Pn**	**04 12 25.0**	**-1.2**
	0.3nm,0.3s,baz=155,slow=11,SNR=16						
MSVF				LR	LR	04 16 13.7	
	comp=Z,9μm,18.6s,baz=155,slow=36						
WMGZ	**Waiomatatini S**	**11.12**	**202**	P	Pn	04 12 22.1	-5.0
WMGZ				S	**Sn**	**04 14 30.6**	**+0.4**
HAZ	**Te Kaha**	**11.28**	**204**	P	Pn	04 12 23.9	-5.4
HAZ				S	**Sn**	**04 14 32.4**	**-1.8**
KUZ	**Kuaotunu**	**11.33**	**214**	S	**Sn**	**04 14 30.2**	**-5.1**
PUZ	**Puketiti**	**11.40**	**202**	P	Pn	04 12 24.4	-6.6
PUZ				S	**Sn**	**04 14 33.8**	**-3.4**
OUZ	**Omahuta**	**11.46**	**226**	P	Pn	04 12 41.9	+10
WCZ	**Waipu Caves**	**11.48**	**221**	P	Pn	04 12 41.4	+9.4
TWGZ	**Tauwhareparae**	**11.59**	**203**	P	**Pn**	**04 12 29.6**	**-3.9**
TWGZ				S	**Sn**	**04 14 39.4**	**-2.4**
TKGZ	**Te Karaka**	**11.87**	**203**	P	**Pn**	**04 12 36.6**	**-0.7**
TKGZ				S	**Sn**	**04 14 44.7**	**-3.9**
MWZ	**Matawai**	**11.89**	**204**	P	Pn	04 12 30.5	-7.1
MWZ				S	**Sn**	**04 14 45.1**	**-4.0**
URZ	**Urewera**	**11.98**	**205**	Pn	**Pn**	**04 12 38.2**	**-0.6**
	1.5nm,0.3s,baz=309,slow=1.8,SNR=8.9						
URZ				Sn	**Sn**	**04 14 50.4**	**-0.8**
	3.1nm,0.3s,baz=160,slow=23,SNR=10.0						
URZ				LR	LR	04 17 13.2	
	comp=Z,5μm,19.7s,baz=24,slow=37						
URZ	**Urewera**	**11.98**	**205**	Pn	**Pn**	**04 12 41.9**	**+3.1**
URZ	**Urewera**	**11.98**	**205**	P	Pn	04 12 33.1	-5.7
URZ				S	**Sn**	**04 14 47.3**	**-3.9**
BHHZ	**Black Hill Sta**	**13.45**	**206**	P	**Pn**	**04 12 57.7**	**-1.2**
BHHZ				S	**Sn**	**04 15 23.7**	**-3.6**
AFI	**Afiamalu**	**14.25**	**18**	Pn	Pn	04 13 00.1	-10
	6.3nm,0.3s,baz=335,slow=9.1,SNR=6.0						
AFI				Sn	Sn	04 15 25.8	-21
	5.8nm,0.3s,baz=44,slow=24,SNR=3.7						
AFI	**Afiamalu**	**14.25**	**18**	Pn	Pn	04 12 59.2	-11
AFI	**Afiamalu**	**14.25**	**18**	P	Pn	04 12 59.2	-11
BFZ	**Birch Farm**	**14.43**	**203**	P	Pn	04 13 07.5	-4.7
HOWZ	**Holdsworth Sta**	**14.88**	**205**	P	**Pn**	**04 13 15.5**	**-2.9**
OGWZ	**Otaki Gorge**	**14.94**	**206**	P	**Pn**	**04 13 16.1**	**-3.0**
PAWZ	**Paruwai Farm**	**15.34**	**204**	P	**Pn**	**04 13 27.5**	**+3.0**
MARNC	**Mare, Loyalty**	**15.41**	**290**		**P**	**04 13 28.4**	**-1.4**
MSWZ	**Moikau Station**	**15.43**	**204**	P	**Pn**	**04 13 27.1**	**+1.5**
PINNC	**Pines Island,**	**15.45**	**285**		**P**	**04 13 30.5**	**+0.4**
PINNC				IAmb	IAmb	04 13 49.3	
	comp=Z,264nm,1.3s						
PLWZ	**Palliser**	**15.56**	**204**		**Pn**	**04 13 29.4**	**+2.0**
PLWZ	**Palliser**	**15.56**	**204**	P	**P**	**04 13 30.5**	**-0.9**
TUWZ	**Tuamarina**	**15.95**	**207**	P	**Pn**	**04 13 30.9**	**-1.4**
NNZ	**Nelson**	**16.01**	**209**	P	**Pn**	**04 13 31.6**	**-1.4**
OUENC	**Ouen Island, N**	**16.04**	**285**		**P**	**04 13 37.2**	**+0.5**
OUENC				IAmb	IAmb	04 13 42.3	
	comp=Z,727nm,2.0s						
TKNZ	**Takaka Hill**	**16.04**	**210**	P	**Pn**	**04 13 30.9**	**-2.6**
RAR	**Rarotonga**	**16.39**	**71**	Pn	Pn	04 13 27.2	-11
	comp=Z,4.2nm,0.3s,baz=224,slow=9.3,SNR=10						
RAR				Sn	Sn	04 16 18.2	-21
	comp=Z,2.4nm,0.3s,baz=112,slow=10,SNR=5.1						
RAR				LR	LR	04 18 32.7	
	comp=Z,2μm,20.1s,baz=244,slow=32						
MRNZ	**Matariki Terra**	**16.43**	**210**	P	**Pn**	**04 13 36.8**	**-1.6**
MRNZ				S	**Sn**	**04 16 32.5**	**-7.2**
DZM	**Mont Dzumac**	**16.51**	**286**	Pn	**Pn**	**04 13 36.7**	**-3.0**
	comp=Z,0.8nm,0.3s,baz=133,slow=20,SNR=9.0						
DZM				LR	LR	04 19 05.3	
	comp=Z,8μm,18.7s,baz=102,slow=34						
	comp=Z,1.9nm,0.3s						
DZM	**Mont Dzumac**	**16.51**	**286**	*e*P	**P**	**04 13 41.7**	**-0.3**
	comp=Z,629nm,1.6s						
DZM				*e*LR	LR	04 17 30.6	
	comp=Z,11μm,23.6s						
DZM	**Mont Dzumac**	**16.51**	**286**		**P**	**04 13 42.8**	**+0.8**
DZM				IAmb	IAmb	04 13 50.8	
	comp=Z,507nm,1.6s						
THZ	**Tophouse**	**16.66**	**209**	P	Pn	04 13 34.3	-7.1
KHZ	**Kahutara**	**16.94**	**206**	P	**Pn**	**04 13 39.9**	**-4.9**
KOUNC	**Koumac, New Ca**	**18.97**	**287**	P	**Pn**	**04 14 11.2**	**+1.4**
RPZ	**Rata Peaks**	**19.04**	**209**	P	**P**	**04 14 10.3**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=82,slow=2.5,SNR=8.6						
RPZ				S	Sn	04 17 32.8	-10
	comp=Z,15nm,0.7s,baz=183,slow=13,SNR=4.7						
RPZ				LR	LR	04 22 15.0	
	comp=Z,3μm,19.6s,baz=22,slow=39						
	comp=Z,10nm,0.6s						
WKZ	**Wanaka**	**20.81**	**210**	IAMs_20	IAMs_20	04 23 45.5	
	comp=Z,6μm,18.0s						
DCZ	**Deep Cove**	**22.15**	**212**	IAMs_20	IAMs_20	04 24 04.9	
	comp=Z,7μm,19.0s						
PYZ	**Puysegur Point**	**22.90**	**211**	IAMs_20	IAMs_20	04 24 30.5	
	comp=Z,6μm,18.0s						
TBI	**Tubuai**	**24.65**	**86**	*e*P	**P**	**04 15 09.4**	**+1.3**
	comp=Z,88nm,17.2s						
TBI				*e*LR	LR	04 21 16.5	
	comp=Z,65μm,23.2s						
TBI				*e*LR	LR	04 21 16.6	
	comp=Z,3μm,21.8s						
TBI	**Tubuai**	**24.65**	**86**	*e*T	T	04 40 10.7	
	comp=Z,16nm,0.3s						
PAE	**Paea**	**26.58**	**74**	*e*T	T	04 42 30.0	
	comp=Z,4.6nm,0.2s						
PPT2	**Papeete2**	**26.62**	**74**	*e*P	**P**	**04 15 27.8**	**+1.7**
	comp=Z,41nm,18.0s						
PPT2				*e*LR	LR	04 22 10.7	
	comp=Z,2μm,22.2s						
PPT2				*e*LR	LR	04 22 10.7	
	comp=Z,3μm,22.5s						
PPT2	**Papeete2**	**26.62**	**74**	*e*T	T	04 42 38.2	
	comp=Z,4.1nm,0.3s						
PPT	**Papeete**	**26.63**	**74**	P	**P**	**04 15 24.0**	**-2.1**
	comp=Z,87nm,1.0s,baz=76,slow=9.7,SNR=4.1						
PPT				LR	LR	04 24 54.7	
	comp=Z,1μm,18.1s,baz=244,slow=34						
	comp=Z,87nm,1.0s						
PPT	**Papeete**	**26.63**	**74**	P	**P**	**04 15 24.0**	**-2.1**
ARMA	**Armidale**	**28.07**	**256**	P	**P**	**04 15 41.1**	**+2.0**
	baz=28						
ARMA	**Armidale**	**28.07**	**256**	P	**P**	**04 15 41.1**	**+2.0**
MGCD	**Mangrove Creek**	**28.53**	**251**	P	**P**	**04 15 45.0**	**+2.0**
	baz=29						
HNR	**Honiara**	**28.70**	**304**	LR	LR	04 25 57.5	
	comp=Z,4μm,18.5s,baz=144,slow=34						
EIDS	**Eidsvold**	**29.16**	**267**	P	**P**	**04 15 48.9**	**+0.2**
	baz=30						
VAH	**Vaihoa**	**29.37**	**71**	*e*T	T	04 46 06.7	
	comp=Z,10nm,0.2s						
CAN	**Canberra**	**30.41**	**247**	P	**P**	**04 16 01.4**	**+1.6**
CAN				IAMs_20	IAMs_20	04 26 58.0	
	comp=Z,4μm,20.0s						
CAN	**Canberra**	**30.41**	**247**	P	**P**	**04 16 01.4**	**+1.6**
CAN				pmax	pmax		
	comp=Z,27nm,1.2s						
CAN				MLR	MLR		
	comp=Z,4μm,20.0s						
MILA	**Mila**	**30.48**	**243**	P	**P**	**04 16 02.8**	**+2.5**
	baz=31,SNR=4.5						
RMQ	**Roma**	**31.01**	**264**	P	**P**	**04 16 06.0**	**+1.0**
	baz=31						
CMSA	**Cobar Meteorol**	**33.12**	**254**	P	**P**	**04 16 24.6**	**+1.1**
	baz=34,SNR=6.8						
TOO	**Toolangi**	**33.45**	**243**	P	**P**	**04 16 27.0**	**+0.7**
	baz=34,SNR=3.6						
TOO	**Toolangi**	**33.45**	**243**	P	**P**	**04 16 26.8**	**+0.4**
TOO	**Toolangi**	**33.45**	**243**	P	**P**	**04 16 26.8**	**+0.4**
TOO				pmax	pmax		
	comp=Z,35nm,1.3s						
CTA	**Charters Tower**	**34.88**	**274**	P	**P**	**04 16 39.9**	**+0.9**
	comp=Z,10.0nm,0.6s,baz=104,slow=11,SNR=12						
CTA				LR	LR	04 30 01.0	
	comp=Z,5μm,18.4s,baz=103,slow=35						
	comp=Z,10.0nm,0.6s						
CTAO	**Charters Tower**	**34.88**	**274**	P	**P**	**04 16 39.4**	**+0.5**
CTAO	**Charters Tower**	**34.88**	**274**	P	**P**	**04 16 39.4**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,24nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,5μm,19.0s						
STKA	**Stephens Creek**	**36.58**	**253**	P	**P**	**04 16 54.5**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=88,slow=10,SNR=6.9						
STKA				LR	LR	04 31 17.9	
	comp=Z,3μm,18.2s,baz=85,slow=35						
	comp=Z,1.8nm,0.3s						
STKA	**Stephens Creek**	**36.58**	**253**	P	**P**	**04 16 54.5**	**+1.1**
	baz=37,SNR=4.6						
STKA	**Stephens Creek**	**36.58**	**253**	P	**P**	**04 16 54.2**	**+0.8**
STKA	**Stephens Creek**	**36.58**	**253**	*i* P	**P**	**04 16 53.4**	**0.0**
MTSU	**Mount Surprise**	**37.28**	**276**	P	**P**	**04 16 59.6**	**+0.1**
	baz=38,SNR=10						
HTT	**Hallett**	**38.72**	**250**	P	**P**	**04 17 11.7**	**+0.1**
	baz=39,SNR=8.7						
TAOE	**Nuku Hiva Isla**	**38.92**	**68**	*e*P	**P**	**04 17 14.6**	**+1.2**
	comp=Z,41nm,19.0s						
TAOE				*e*S	**S**	**04 23 08.9**	**-1.0**
	comp=Z,338nm,23.8s						
TAOE				*e*LR	LR	04 27 52.4	
	comp=Z,2μm,22.8s						
COEN	**Coen**	**39.98**	**281**	P	**P**	**04 17 23.2**	**+1.0**
	baz=40,SNR=5.7						
COEN	**Coen**	**39.98**	**281**	P	**P**	**04 17 22.8**	**+0.7**
QIS	**Mount Isa**	**40.62**	**270**	P	**P**	**04 17 28.2**	**+0.8**
	baz=41,SNR=3.9						
BBOO	**Buckleboo**	**41.17**	**251**	P	**P**	**04 17 30.9**	**-0.9**
AS31	**Alice Springs**	**44.76**	**263**	P	**P**	**04 18 00.6**	**-0.4**
ASAR	**Alice Springs**	**44.76**	**263**	P	**P**	**04 18 00.1**	**-0.9**
	comp=Z,5.2nm,0.9s,baz=89,slow=6.9,SNR=39						
ASAR				LR	LR	04 36 02.2	
	comp=Z,2μm,18.2s,baz=110,slow=35						
	comp=Z,5.2nm,0.9s						
WR0	**Warramunga Arr**	**45.31**	**269**	P	**P**	**04 18 04.8**	**-0.6**
WB2	**Warramunga Arr**	**45.48**	**269**	P	**P**	**04 18 05.3**	**-1.5**
	baz=46						
WRAB	**Tennant Creek**	**45.49**	**269**	*i* P	**P**	**04 18 05.8**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,32nm,1.7s						
WRA	**Warramunga Arr**	**45.49**	**269**	P	**P**	**04 18 05.7**	**-1.3**
	comp=Z,3.6nm,0.6s,baz=110,slow=6.9,SNR=35						
WRA				LR	LR	04 35 18.4	
	comp=Z,1μm,21.3s,baz=104,slow=34						
	comp=Z,3.6nm,0.6s						
WB0	**Warramunga Arr**	**45.51**	**269**	P	**P**	**04 18 05.8**	**-1.2**
FORT	**Forrest**	**48.20**	**252**	P	**P**	**04 18 27.9**	**0.0**
FORT				IAmb	IAmb	04 18 40.8	
	comp=Z,35nm,0.8s						
WRKA	**Warakurna**	**49.31**	**260**	P	**P**	**04 18 35.4**	**-1.2**
	baz=50,SNR=20						
KDU	**Kakadu**	**49.91**	**277**	P	**P**	**04 18 40.3**	**-0.9**
	baz=50,SNR=5.9						
SBA	**Scott Base**	**50.96**	**185**	P	**P**	**04 18 51.1**	**+2.9**
SBA	**Scott Base**	**50.96**	**185**	P	**P**	**04 18 51.2**	**+2.9**
SBA				pmax	pmax		
	comp=Z,47nm,1.5s						
VNDA	**Vanda**	**51.05**	**186**	P	**P**	**04 18 50.9**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=22,slow=8.3,SNR=6.9						
VNDA				LR	LR	04 36 57.4	
	comp=Z,789nm,20.5s,baz=15,slow=32						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**51.05**	**186**	P	**P**	**04 18 52.1**	**+3.2**
VNDA	**Vanda**	**51.05**	**186**	P	**P**	**04 18 52.1**	**+3.2**
VNDA				pmax	pmax		
	comp=Z,38nm,1.7s						
KNRA	**Kununurra**	**51.98**	**271**	P	**P**	**04 18 56.5**	**-0.3**
	baz=52,SNR=11						
KNRA	**Kununurra**	**51.98**	**271**	P	**P**	**04 18 56.4**	**-0.3**
KNRA				IAmb	IAmb	04 19 10.7	
	comp=Z,67nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.85**	**267**	P	**P**	**04 19 09.8**	**-0.8**
	comp=Z,3.3nm,0.9s,baz=118,slow=12,SNR=3.5						
FITZ				LR	LR	04 41 57.2	
	comp=Z,2μm,18.6s,baz=105,slow=36						
	comp=Z,3.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.85**	**267**	P	**P**	**04 19 10.6**	**+0.1**
	baz=54,SNR=3.3						
FITZ	**Fitzroy Crossi**	**53.85**	**267**	P	**P**	**04 19 10.3**	**-0.3**
GUMO	**Guam**	**55.54**	**312**	LR	LR	04 40 17.3	
	comp=Z,683nm,21.6s,baz=130,slow=33						
SIJI	**Sorong**	**56.69**	**289**	P	**P**	**04 19 30.6**	**-0.4**
	comp=Z,20nm,0.7s,baz=144,slow=2.0,SNR=5.5						
	comp=Z,20nm,0.7s						
CASY	**Casey**	**58.30**	**207**	P	**P**	**04 19 43.1**	**+1.5**
CASY				IAmb	IAmb	04 19 44.8	
	comp=Z,40nm,0.8s						
SOEI	**Soe**	**58.42**	**276**	P	**P**	**04 19 43.9**	**+0.5**
SOEI				IAmb	IAmb	04 19 51.4	
	comp=Z,60nm,1.2s						
BATI	**Baumata**	**58.76**	**275**	LR	LR	04 45 48.2	
	comp=Z,5μm,18.9s,baz=136,slow=37						
RPN	**Rapa Nui**	**58.85**	**106**	LR	LR	04 41 16.9	
	comp=Z,840nm,18.1s,baz=263,slow=32						
QSPA	**South Pole Qui**	**62.54**	**180**	P	**P**	**04 20 13.2**	**+2.4**
	comp=Z,50nm,0.9s,baz=38,slow=2.1,SNR=110						
QSPA				LR	LR	04 44 25.4	
	comp=Z,1μm,19.6s,baz=38,slow=33						
	comp=Z,50nm,0.9s						
QSPA	**South Pole Qui**	**62.54**	**180**	P	**P**	**04 20 12.6**	**+1.9**
QSPA	**South Pole Qui**	**62.54**	**180**	IAMs_20	IAMs_20	04 43 34.4	
	comp=Z,1μm,20.0s						
LUWI	**Luwuk**	**63.85**	**283**	P	**P**	**04 20 20.3**	**+0.2**
DAV	**Davao City (W)**	**65.78**	**293**	LR	LR	04 48 17.7	
	comp=Z,288nm,19.8s,baz=165,slow=35						
TOLI2	**Tolitoli**	**66.65**	**284**	P	**P**	**04 20 37.1**	**-1.1**
TOLI2				IAmb	IAmb	04 20 47.9	
	comp=Z,50nm,1.6s						
JCJ	**Chichijima**	**67.37**	**320**	LR	LR	04 45 52.8	
	comp=Z,346nm,20.6s,baz=134,slow=32						
BKB	**Balikpapan**	**68.85**	**280**	IAMs_20	IAMs_20	04 51 58.1	
	comp=Z,1μm,20.0s						
BELA	**Belgrano 2**	**72.39**	**172**	P	**P**	**04 21 13.0**	**+0.4**
BELA				IAmb	IAmb	04 21 20.0	
	comp=Z,96nm,1.9s						
KKM	**Kota Kinabalu**	**73.07**	**286**	P	**P**	**04 21 17.8**	**0.0**
KKM				IAmb	IAmb	04 21 25.6	
	comp=Z,53nm,1.2s						
JHJ	**Hachijo jima 2**	**73.31**	**323**	LR	LR	04 50 45.7	
	comp=Z,315nm,18.7s,baz=106,slow=34						
PMSA	**Palmer Station**	**74.26**	**156**	LR	LR	04 50 22.9	
	comp=Z,572nm,19.7s,baz=246,slow=33						
LEM	**Lemb

NACB IAMs_20 IAMs_20 04 54 37.0
comp=Z,657nm,19.0s
SSLB Suanglung 79.11 304 IAMs_20 IAMs_20 04 52 32.4
comp=Z,841nm,20.0s
YHNB Yeheng 79.33 305 IAMs_20 IAMs_20 04 56 20.1
comp=Z,688nm,20.0s
TATO Taipei 79.43 305 IAMs_20 IAMs_20 04 55 38.5
comp=Z,1µm,19.0s
SHEM Shemya Is, Ala 80.38 354 LR LR 04 55 08.5
comp=Z,392nm,18.1s,baz=133,slow=34
NIKH Nikolski High 80.46 5 P **P** **04 21 58.3 -0.2**
baz=187
TROLL Troll, Antarti 80.70 180 P **P** **04 22 00.8 +0.9**
H03S2 Juan Fernandez 80.84 123 T T 05 51 14.7
SNR=5.2
H03S1 Juan Fernandez 80.85 123 T T 05 51 16.2
SNR=5.9
H03S3 Juan Fernandez 80.86 123 T T 05 51 14.7
SNR=5.8
SNAA Sanae 80.94 178 P **P** **04 22 01.8 +0.7**
SNAA Sanae 80.94 178 LR LR 04 56 55.2
comp=Z,537nm,18.0s,baz=193,slow=35
SNAA Sanae 80.94 178 P **P** **04 22 01.3 +0.2**
SNAA IAmb IAmb 04 22 08.7
comp=Z,58nm,1.4s
SNAA IAMs_20 IAMs_20 04 57 55.9
comp=Z,901nm,18.0s
SNAA Sanae 80.94 178 P **P** **04 22 01.3 +0.2**
SNAA pmax pmax
comp=Z,58nm,1.4s
SNAA MLR MLR
comp=Z,900nm,18.0s
KSBUS Busan 80.94 318 IAmb IAmb 04 22 13.4
comp=Z,142nm,1.7s
VNA3 Neumayer Olymp 81.02 176 P **P** **04 22 02.0 +0.5**
H03N1 Juan Fernandez 81.03 123 T T 05 51 08.7
SNR=4.0
SNCC San Nicolas Is 81.06 45 P **P** **04 22 01.1 -1.0**
baz=229
LL02 Futaleuf 81.32 134 P **P** **04 22 03.8 +0.2**
LL02 IAmb IAmb 04 22 10.8
comp=Z,59nm,1.6s
VNA2 Neumayer--Watz 81.48 176 P **P** **04 22 04.6 +0.7**
baz=173,slow=4.0
QZH Quanzhou 81.53 304 P **P** **04 22 01.6 -3.2**
QZH S S 04 32 03.3 -11
QZH LR LR
comp=Z,400nm,19.4s
SKR Severo-Kuril's 81.62 343 *e*P P 04 21 58.9 -5.7
SKR *e*S **S** **04 32 16.3 +2.1**
SKR pmax pmax
comp=Z,100nm,7.6s
SKR MLR MLR
comp=Z,400nm,17.0s
VNA1 Neumayer--Stat 81.70 176 P **P** **04 22 05.8 +0.8**
MYKOM Kota Tinggi 81.75 276 IAMs_20 IAMs_20 05 02 12.8
comp=Z,770nm,18.0s
NVL N'lazarevskaya 81.77 183 *e*P **P** **04 22 03.2 -2.2**
NVL *e*S **S** **04 32 12.0 -3.7**
NVL pmax pmax
comp=Z,16nm,1.2s
LPIG La Paz 81.83 58 LR LR 04 53 17.1
comp=Z,762nm,18.2s,baz=206,slow=32
SLBS Sierra La Lagu 81.87 58 IAMs_20 IAMs_20 04 53 24.1
comp=Z,812nm,18.0s
PKM Mcpherson Peak 81.96 44 P **P** **04 22 07.3 +0.1**
baz=228
BCW Bitter Crk WRg 82.24 44 IAmb IAmb 04 22 15.1
comp=Z,88nm,1.7s
PAGB Antelope Grade 82.25 43 IAmb IAmb 04 22 17.1
comp=Z,86nm,1.7s
MCCM Marconi Confer 82.35 40 IAMs_20 IAMs_20 04 59 08.7
comp=Z,807nm,18.0s
109C Camp Elliot, M 82.37 47 IAMs_20 IAMs_20 04 54 01.7
comp=Z,869nm,18.0s
109C Camp Elliot, M 82.37 47 P **P** **04 22 09.4 +0.3**
baz=230
OSI Osito Audit: C 82.45 45 P **P** **04 22 08.6 -1.0**
baz=229
DECC Green Verdugo 82.46 45 P **P** **04 22 07.8 -1.7**
baz=229
SFX San Felipe 82.70 50 P **P** **04 22 12.3 +1.4**
KSCHJ Chungju 82.72 318 IAmb IAmb 04 22 22.8
comp=Z,51nm,1.2s
ARVC Arvin 82.72 44 P **P** **04 22 10.1 -0.8**
baz=229
MURC Murrieta 82.76 46 P **P** **04 22 10.2 -1.0**
baz=230
MONP2 Monument Peak 82.81 47 P **P** **04 22 11.1 -0.6**
baz=231
YSS Yuzh-Sakhalins 82.84 333 P **P** **04 22 10.7 -0.5**
YSS Yuzh-Sakhalins 82.84 333 *e*P **P** **04 22 10.9 -0.3**
YSS *e**PP **pP** **04 22 19.7 -0.9**
YSS *e*S **S** **04 32 27.2 +0.2**
YSS *e*SS **SS** **04 37 51.7 +0.6**
YSS pmax pmax
comp=Z,400nm,9.2s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS smax smax
comp=N,300nm,7.7s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=N,400nm,17.0s
YSS MLR MLR
comp=E,300nm,16.0s
IKP In-Ko-Pah, Jac 82.87 48 P **P** **04 22 11.2 -0.6**
baz=231
BFSC Mount Baldy Ra 82.88 46 P **P** **04 22 11.0 -0.9**
baz=230
VES Vestal, Richgr 83.03 44 P **P** **04 22 11.6 -0.8**
baz=229,SNR=7.7
EDW2 Edwards Air Fo 83.08 45 P **P** **04 22 12.4 -0.4**
baz=230,SNR=6.5
KSRS Korea Array 83.14 319 P **P** **04 22 13.2 +0.3**
comp=E,17nm,1.1s,baz=142,slow=4.2,SNR=11
KSRS LR LR 04 57 35.6
comp=E,244nm,18.7s,baz=140,slow=35
comp=E,17nm,1.1s
PET Petropavlovsk 83.15 345 P **P** **04 22 13.2 +0.6**
PET Petropavlovsk 83.15 345 *e*P **P** **04 22 11.5 -1.1**
PET *e*S **S** **04 32 29.1 -0.7**
PET *e*PS **PnS** **04 33 23.4 -1.1**
PET *e*PPS PPS 04 33 36.0
PET *e*SS **SS** **04 37 59.3 +4.0**
PET pmax pmax
comp=Z,200nm,13.9s
PET pmax pmax
comp=Z,24nm,1.4s
PET MLR MLR
comp=Z,600nm,20.0s
PET MLR MLR
comp=Z,600nm,20.0s
VOG Valley Oaks Go 83.17 43 P **P** **04 22 12.4 -0.7**
baz=229
PFO Pinyon Flats O 83.25 47 P **P** **04 22 13.5 -0.2**
comp=Z,6.8nm,1.1s,baz=239,slow=2.8,SNR=5.9
PFO LR LR 04 54 39.8
comp=Z,933nm,18.2s,baz=241,slow=32
comp=Z,6.8nm,1.1s
PFO Pinyon Flats O 83.25 47 P **P** **04 22 13.2 -0.6**
PFO IAmb IAmb 04 22 19.2
comp=Z,38nm,1.6s
PFO Pinyon Flats O 83.25 47 *i* P **P** **04 22 12.0 -1.8**
PFO pmax pmax
comp=Z,41nm,1.6s
PFO Pinyon Flats O 83.25 47 P **P** **04 22 12.8 -1.0**
baz=231
TPFO Pinon Flats 83.25 47 P **P** **04 22 12.4 -1.4**
baz=231
SWSC Sam W. Stewart 83.25 48 P **P** **04 22 12.7 -1.0**
baz=231
ISA Isabella, Lake 83.29 44 P **P** **04 22 13.4 -0.5**
ISA IAmb IAmb 04 22 26.3
comp=Z,34nm,1.3s
ISA Isabella, Lake 83.29 44 P **P** **04 22 13.4 -0.5**
ISA pmax pmax
comp=Z,34nm,1.3s
ISA Isabella, Lake 83.29 44 P **P** **04 22 13.4 -0.5**
baz=229,SNR=8.9
PMD Palm Desert 83.32 47 IAmb IAmb 04 22 26.2
comp=Z,51nm,1.8s
CHNA Chernabura Isl 83.32 10 P **P** **04 22 13.9 +0.4**
baz=195
GO06 Curarrehue 83.36 131 P **P** **04 22 15.2 +0.7**
PLCA Paso Flores 83.39 133 P **P** **04 22 14.9 +0.3**
comp=Z,14nm,1.1s,baz=217,slow=5.5,SNR=13
PLCA LR LR 04 53 34.1
comp=Z,640nm,18.4s,baz=242,slow=32
comp=Z,14nm,1.1s
PLCA Paso Flores 83.39 133 P **P** **04 22 15.5 +0.9**
PLCA Paso Flores 83.39 133 P **P** **04 22 15.5 +0.9**
PLCA pmax pmax
comp=Z,27nm,1.3s
PEA0B Petropavlovsk- 83.44 345 *i* P **P** **04 22 13.0 -1.2**
PETK Petropavlovsk- 83.44 345 P **P** **04 22 13.8 -0.3**
comp=Z,8.2nm,0.9s,baz=138,slow=9.0,SNR=11
comp=Z,8.2nm,0.9s
BKNI Bangkinang 83.56 274 IAMs_20 IAMs_20 05 00 58.7
comp=Z,1µm,20.0s
JCC Jacoby Creek, 83.58 37 IAMs_20 IAMs_20 05 06 07.3
comp=Z,750nm,18.0s
LRMC Laurel Mtn Rad 83.66 45 P **P** **04 22 15.0 -0.8**
baz=230,SNR=9.0
SDPT Sand Point 83.70 9 P **P** **04 22 15.8 +0.4**
baz=194
CMB Columbia Colle 83.71 41 P **P** **04 22 15.8 -0.2**
CMB Columbia Colle 83.71 41 P **P** **04 22 15.8 -0.2**
CMB pmax pmax
comp=Z,28nm,1.3s
KHMM Horse Mountain 83.78 37 IAmb IAmb 04 22 22.3
comp=Z,41nm,1.3s
BELC Belle Mtn. Jos 83.79 47 P **P** **04 22 15.7 -0.9**
baz=231,SNR=7.7
S12K Black Hills 83.83 8 P **P** **04 22 15.7 -0.4**
baz=193
INCN Inchon 83.92 318 P **P** **04 22 17.9 +0.9**
INCN Inchon 83.92 318 P **P** **04 22 17.9 +0.9**
INCN pmax pmax
comp=Z,52nm,1.2s
INCN MLR MLR
comp=Z,300nm,20.0s
BC3 Big Chuckawall 83.92 47 P **P** **04 22 16.6 -0.7**
GLA Glamis 83.96 48 IAmb IAmb 04 22 30.0
comp=Z,38nm,1.4s
GLA Glamis 83.96 48 P **P** **04 22 17.1 -0.3**
baz=232
TEY Ternei 84.00 329 *e*P **P** **04 22 18.6 +1.5**
TEY *e* 04 32 41.6
CWC Cottonwood Cre 84.04 44 P **P** **04 22 16.4 -1.4**
baz=229
HEC Hector,Ludlow 84.09 46 P **P** **04 22 17.2 -0.8**
baz=231,SNR=9.2
GSC Goldstone, Bar 84.10 45 P **P** **04 22 17.4 -0.7**
baz=230,SNR=11
ORV Oroville 84.10 39 IAMs_20 IAMs_20 04 54 35.1
comp=Z,581nm,18.0s
MPMC Manual Prospec 84.15 44 P **P** **04 22 17.7 -0.8**
baz=230,SNR=20
HSIG 84.20 53 P **P** **04 22 17.3 -1.3**
HSIG IAmb IAmb 04 22 25.6
comp=Z,41nm,1.5s
OMMB Old Mammoth Mi 84.25 42 IAmb IAmb 04 22 25.5
comp=Z,38nm,1.5s
TIN Tinemaha, Big 84.34 43 P **P** **04 22 18.5 -0.8**
baz=229
MLAC Mammoth, Mammo 84.36 42 P **P** **04 22 19.3 -0.2**
baz=229
KSXB Camp Six Broad 84.38 37 IAmb IAmb 04 22 32.7
comp=Z,60nm,1.5s
IRM Iron Mountain 84.44 47 P **P** **04 22 19.3 -0.5**
baz=231,SNR=15
QSM Queen of Sheba 84.48 45 IAmb IAmb 04 22 32.1
comp=Z,54nm,1.4s
GMRC Granite Mounta 84.50 46 P **P** **04 22 19.6 -0.6**
baz=231,SNR=10
SPIA Saint Paul Isl 84.57 3 P **P** **04 22 20.9 +1.1**
baz=186
BLYC Blythe 84.59 48 IAmb IAmb 04 22 32.9
comp=Z,42nm,1.6s
214A Organ Pipe Nat 84.64 50 IAmb IAmb 04 22 27.4
comp=Z,69nm,1.8s
214A Organ Pipe Nat 84.64 50 P **P** **04 22 20.4 -0.4**
baz=233,SNR=6.8
S14K Fog Glacier 84.73 9 P **P** **04 22 21.0 +0.3**
baz=195
TUQ Turquoise Moun 84.74 46 P **P** **04 22 21.0 -0.3**
baz=231,SNR=8.5
L02F Cave Junction 84.75 37 P **P** **04 22 21.2 +0.1**
baz=225
GWY Greenwater Val 84.75 45 IAmb IAmb 04 22 34.3
comp=Z,46nm,1.6s
FURC Furnace Creek, 84.80 44 P **P** **04 22 20.1 -1.3**
baz=230,SNR=7.7
SHOC Shoshone, Teco 84.81 45 P **P** **04 22 20.8 -0.7**
baz=231,SNR=7.2
LCH Last Change Ra 84.82 43 IAmb IAmb 04 22 27.0
comp=Z,36nm,1.5s
GRAC Grapevine Rang 84.83 44 P **P** **04 22 21.2 -0.5**
baz=230,SNR=9.4
PNTR Pine Nut 84.87 41 P **P** **04 22 21.7 -0.3**
CHGN Chignik 84.92 10 P **P** **04 22 21.7 +0.2**
baz=196
CHIR Chirikof Islan 84.92 12 P **P** **04 22 22.1 +0.5**
baz=198
YBH Yreka Blue Hor 84.93 37 P **P** **04 22 20.9 -1.2**
comp=Z,12nm,1.0s,baz=182,slow=2.0,SNR=14
YBH LR LR 04 55 17.1
comp=Z,260nm,18.0s,baz=232,slow=32
comp=Z,12nm,1.0s
YBH Yreka Blue Hor 84.93 37 IAmb IAmb 04 22 37.2
comp=Z,29nm,1.2s
YBH IAMs_20 IAMs_20 05 06 22.0
comp=Z,622nm,18.0s
BEKR Beckworth 84.96 40 IAmb IAmb 04 22 28.5
comp=Z,53nm,1.7s
LHV Little Huntoon 84.96 42 IAmb IAmb 04 22 28.0
comp=Z,53nm,1.3s
YERR Yerington 85.01 41 IAmb IAmb 04 22 28.9
comp=Z,53nm,1.5s
QIZ Qiongzhong 85.09 294 P **P** **04 22 23.0 -0.3**
QIZ S **S** **04 32 52.1 +1.2**
QIZ pmax pmax
comp=Z,430nm,10.8s
QIZ LR LR
comp=Z,350nm,18.3s
QIZ LR LR
comp=Z,220nm,29.5s
QIZ LR LR
comp=Z,330nm,35.0s
K02D Willamette Mer 85.10 36 P **P** **04 22 22.7 -0.2**
baz=225
PDMCI Parker Dam,Lak 85.18 47 P **P** **04 22 22.7 -0.8**
baz=232,SNR=6.8
NVAR Mina Array Bea 85.20 42 P **P** **04 22 22.4 -1.3**
comp=Z,13nm,1.1s,baz=221,slow=7.9,SNR=56
NVAR LR LR 04 56 35.6
comp=Z,988nm,18.0s,baz=238,slow=33
comp=Z,13nm,1.1s
RYN Ryan 85.20 42 IAmb IAmb 04 22 29.0
comp=Z,54nm,1.6s
NV11 Mina Array Sit 85.29 42 IAmb IAmb 04 22 30.3
comp=Z,45nm,1.4s
J01E Myrtle Point 85.29 36 IAMs_20 IAMs_20 04 58 31.5
comp=Z,762nm,19.0s
J01E Myrtle Point 85.29 36 P **P** **04 22 23.1 -0.6**
baz=225
ML02 Panimavida 85.33 128 P **P** **04 22 24.5 +0.1**
ML02 IAmb IAmb 04 22 35.5
comp=Z,42nm,1.1s
PAHR Pah Rah Range 85.41 40 P **P** **04 22 24.1 -0.5**
PAHR IAmb IAmb 04 22 29.9
comp=Z,36nm,1.4s
HUMO Hull Mountain 85.41 37 IAmb IAmb 04 22 31.2
comp=Z,43nm,1.4s
HUMO IAMs_20 IAMs_20 05 06 26.7
comp=Z,578nm,18.0s
L04D Klamath Falls 85.49 37 IAMs_20 IAMs_20 05 04 47.7
comp=Z,699nm,18.0s
L04D Klamath Falls 85.49 37 P **P** **04 22 24.4 -0.5**
baz=226
TPNV Topopah Spring 85.49 44 IAmb IAmb 04 22 30.9
comp=Z,39nm,1.2s
TPNV IAMs_20 IAMs_20 04 57 52.2
comp=Z,897nm,18.0s
TPNV Topopah Spring 85.49 44 P **P** **04 22 24.7 -0.4**
baz=230,SNR=22
IPM Ipoh 85.50 277 P **P** **04 22 26.0 +0.5**
IPM IAmb IAmb 04 22 34.4
comp=Z,46nm,1.4s
IPM IAMs_20 IAMs_20 05 06 52.9
comp=Z,627nm,19.0s
NJ2 Nanjing 85.51 310 *e*P **P** **04 22 25.3 +0.2**
NJ2 pmax pmax
comp=Z,35nm,1.1s
USRK Ussuriysk Ar. 85.61 326 P **P** **04 22 25.3 0.0**
comp=Z,6.8nm,1.0s,baz=147,slow=4.5,SNR=14
USRK LR LR 04 53 55.4
comp=Z,305nm,21.7s,baz=234,slow=31
comp=Z,6.8nm,1.0s
DBO Dodson Butte 85.62 36 IAmb IAmb 04 22 31.4
comp=Z,32nm,1.2s
KVN Kaiserville 85.72 42 IAmb IAmb 04 22 31.4
comp=Z,32nm,1.4s
W13A Hualapai Mount 85.83 47 IAmb IAmb 04 22 32.8
comp=Z,43nm,1.6s
SII Sitkinak Islan 85.89 12 P **P** **04 22 26.5 +0.1**
baz=200
SHPR Sheep Range 85.89 45 IAmb IAmb 04 22 34.0
comp=Z,55nm,1.6s
I03D Drain, OR 85.97 36 P **P** **04 22 26.7 -0.4**
baz=225
I02E Swisshome, OR 86.00 35 P **P** **04 22 25.4 -1.9**
baz=225
TYV Tymovskoe 86.06 335 *e*P P 04 22 38.8 +11
TYV pmax pmax
comp=Z,32nm,1.4s
TYV pmax pmax
comp=Z,300nm,3.2s
K04D Chiloquin, OR 86.06 37 P **P** **04 22 26.1 -1.7**
baz=226
KULM Kulim 86.21 278 IAMs_20 IAMs_20 05 05 10.7
comp=Z,664nm,21.0s
TUC Tucson 86.23 51 P **P** **04 22 28.8 0.0**
TUC IAmb IAmb 04 22 41.7
comp=Z,52nm,1.4s
TUC Tucson 86.23 51 IAMs_20 IAMs_20 04 58 25.2
comp=Z,743nm,18.0s
TUC Tucson 86.23 51 P **P** **04 22 28.8 0.0**
TUC pmax pmax
comp=Z,52nm,1.4s
TUC Tucson 86.23 51 P **P** **04 22 27.8 -1.0**
baz=234
S11A Rachel 86.24 44 IAmb IAmb 04 22 34.3
comp=Z,60nm,1.6s
BO02 Sierra Bellavi 86.28 127 IAmb IAmb 04 22 30.1
comp=Z,29nm,1.2s
J04D Umpqua Nationa 86.30 36 IAmb IAmb 04 22 41.9
comp=Z,59nm,1.3s
J04D Umpqua Nationa 86.30 36 P **P** **04 22 28.2 -0.8**
baz=226
MT01 Popeta 86.42 126 IAmb IAmb 04 22 30.6
comp=Z,45nm,1.1s
I04A Tendick Farm, 86.52 36 P **P** **04 22 28.5 -1.4**
baz=226
R17K Ugashik Creek 86.53 11 P **P** **04 22 27.8 -1.7**
baz=198
RPSI Rantau Prapat 86.53 275 P **P** **04 22 31.1 +0.5**
PSI Prapat 86.58 275 P **P** **04 22 31.1 +0.1**
comp=Z,6.6nm,0.7s,baz=136,slow=22,SNR=3.0
PSI LR LR 05 02 49.1
comp=Z,814nm,19.9s,baz=134,slow=37
comp=Z,6.6nm,0.7s
MOIG Morelia 86.58 66 P **P** **04 22 30.2 -0.8**
MOIG IAmb IAmb 04 22 49.4
comp=Z,21nm,0.8s
K05A Summer Lake 86.59 37 P **P** **04 22 30.5 0.0**
MT09 Talagante 86.65 126 IAmb IAmb 04 22 31.7
comp=Z,29nm,1.2s
OHAK Old Harbor 86.68 12 P **P** **04 22 29.0 -1.2**
baz=200
319A Douglas 86.74 52 IAmb IAmb 04 22 32.7
comp=Z,29nm,1.1s
R11A Troy Canyon, C 86.78 43 P **P** **04 22 29.5 -2.1**
baz=231
J05D Fort Rock, OR 86.79 37 P **P** **04 22 30.3 -1.1**
baz=227
H04D Lebanon 86.86 35 IAMs_20 IAMs_20 04 59 21.1
comp=Z,876nm,19.0s
H04D Lebanon 86.86 35 P **P** **04 22 30.7 -0.8**
baz=226
HPIG 86.89 58 P **P** **04 22 30.9 -1.4**
MT05 Renca 87.03 126 P **P** **04 22 32.9 0.0**
X16A Lo Mia Camp, P 87.03 49 IAmb IAmb 04 22 39.0
comp=Z,34nm,1.4s
G03D McMinnville, O 87.08 34 IAMs_20 IAMs_20 05 05 25.7
comp=Z,770nm,18.0s
G03D McMinnville, O 87.08 34 P **P** **04 22 31.3 -1.2**
baz=225
GSI Gunungsitoli 87.08 273 P **P** **04 22 33.6 +0.2**
MDJ Mudanjiang 87.12 325 P **P** **04 22 32.2 -0.6**
MDJ IAmb IAmb 04 22 45.4
comp=Z,39nm,1.2s
MDJ Mudanjiang 87.12 325 P **P** **04 22 33.4 +0.7**
MDJ pP pwP 04 22 46.9 -0.1
MDJ sP sP 04 22 52.3 +7.2
MDJ pmax pmax
comp=Z,19nm,2.4s
MDJ pmax pmax
comp=Z,410nm,5.2s
MDJ LR LR
comp=Z,280nm,15.7s
MDJ LR LR
comp=Z,150nm,10.5s
MDJ LR LR
comp=Z,420nm,20.8s
BMN Battle Mountai 87.14 41 IAmb IAmb 04 22 38.3
comp=Z,31nm,1.4s
LMEL Las Melosas 87.17 127 IAmb IAmb 04 22 36.9
comp=Z,29nm,1.4s
PEL Peldehue 87.20 126 IAmb IAmb 04 22 34.5
comp=Z,46nm,1.3s
H04A Detroit Lake 87.26 35 IAmb IAmb 04 22 39.4
comp=Z,39nm,1.5s
KDAK Kodiak Island 87.34 12 P **P** **04 22 32.5 -0.9**
baz=201
LCMT Little Creek M 87.41 46 IAmb IAmb 04 22 40.4
comp=Z,33nm,1.4s
I05D Terrebonne, OR 87.46 36 P **P** **04 22 33.2 -1.2**
baz=227
Q16K King Salmon 87.48 10 P **P** **04 22 33.5 -0.6**
baz=197
CNSH ChangSha 87.54 304 ⇑P **P** **04 22 35.5 +0.4**
CNSH S **S** **04 33 07.4 -6.9**
CNSH pmax pmax
comp=Z,18nm,1.5s
CNSH LR LR
comp=Z,330nm,18.9s
CNSH LR LR
comp=Z,410nm,19.4s
CNSH LR LR
comp=Z,370nm,19.4s
P16K Nushagak River 87.61 9 P **P** **04 22 34.6 -0.1**
baz=196
WVOR Wild Horse Val 87.64 39 IAmb IAmb 04 22 40.7
comp=Z,31nm,1.4s
WVOR IAMs_20 IAMs_20 04 56 50.7
comp=Z,842nm,18.0s
CCUT Cedar City 87.67 45 IAmb IAmb 04 22 41.9
comp=Z,34nm,1.6s
U15A North Rim 87.67 47 IAmb IAmb 04 22 42.1
comp=Z,44nm,1.4s
WUAZ Wupatki 87.72 48 IAMs_20 IAMs_20 04 54 37.5
comp=Z,600nm,20.0s
WUAZ Wupatki 87.72 48 P **P** **04 22 34.6 -1.5**
baz=234
WHN Wuhan 87.80 306 ⇓P **P** **04 22 37.6 +1.3**
WHN pmax pmax
comp=Z,170nm,1.4s
DL2 Dalian 87.86 316 P **P** **04 22 36.9 +0.5**
DL2 S **S** **04 33 11.3 -5.6**
DL2 pmax pmax
comp=Z,39nm,1.4s
DL2 pmax pmax
comp=Z,69nm,3.5s
DL2 LR LR
comp=Z,280nm,17.2s
DL2 LR LR
comp=Z,230nm,18.4s
DL2 LR LR
comp=Z,270nm,16.1s
SZCU Shurtz Canyon 87.87 45 IAmb IAmb 04 22 43.7
comp=Z,56nm,1.7s
SPR3 Spring Creek 3 87.95 44 IAmb IAmb 04 22 43.1
comp=Z,23nm,1.4s
HOOD Mount Hood Mea 87.97 35 P **P** **04 22 39.0 +2.0**
HOOD IAmb IAmb 04 22 50.0
comp=Z,34nm,1.5s
P17K Kvichak River 88.00 10 P **P** **04 22 36.1 -0.5**
baz=198

O16K Kokwok River B 88.14 9 P P 04 22 36.3 -0.9
baz=196
Q20K Shuyak Island 88.15 12 P P 04 22 36.3 -1.0
baz=201
Q19K Cape Douglas, 88.22 12 P P 04 22 37.0 -0.7
baz=200
NLWA Neilton Lookou 88.32 33 IAMs_20 IAMs_20 05 01 02.5
comp=Z,898nm,18.0s
J08A Circle Bar Ran 88.33 38 IAmb IAmb 04 22 43.9
comp=Z,32nm,1.5s
GRNR Gornyy 88.42 332 *e*P P 04 22 30.9 -7.9
121A Cookes Peak, D 88.44 52 P P 04 22 39.9 +0.3
baz=236
121A Cookes Peak, D 88.44 52 P P 04 22 38.4 -1.2
baz=236
O17K Koliganek Bris 88.46 10 P P 04 22 38.7 0.0
baz=197
ELK Elko 88.50 42 P P 04 22 38.4 -1.3
comp=Z,3.3nm,1.0s,baz=281,slow=3.3,SNR=9.1
ELK LR LR 04 58 39.4
comp=Z,938nm,18.1s,baz=230,slow=33
comp=Z,3.3nm,1.0s
SNY Shenyang 88.53 320 ⇓P P 04 22 40.0 +0.5
SNY S S 04 33 11.5 -12
SNY pmax pmax
comp=Z,15nm,0.9s
SNY pmax pmax
comp=Z,190nm,3.7s
SNY LR LR
comp=Z,95nm,6.5s
SNY LR LR
comp=Z,130nm,8.2s
SNY LR LR
comp=Z,370nm,16.1s
W18A Petrified Fore 88.58 49 P P 04 22 39.3 -0.9
baz=235
CN2 Changchun 88.76 322 *e*P P 04 22 39.6 -1.0
CN2 PP PP 04 26 11.4 +1.1
CN2 RC01 SKSac 04 33 03.0 -4.3
CN2 sS ScS 04 33 44.1 +14
CN2 SS SS 04 39 16.3 -2.0
CN2 pmax pmax
comp=Z,20nm,1.6s
CN2 pmax pmax
comp=Z,220nm,3.0s
CN2 LR LR
comp=Z,250nm,19.0s
CN2 LR LR
comp=Z,380nm,19.0s
CN2 LR LR
comp=Z,450nm,19.0s
O18K Koktuh Hills 88.83 11 P P 04 22 40.7 +0.1
baz=199
N16K Nishlik Lake 88.90 9 P P 04 22 41.0 +0.1
baz=196
EPT El Paso 88.92 53 IAMs_20 IAMs_20 04 59 02.4
comp=Z,580nm,18.0s
P19K Oil Pt 88.97 12 P P 04 22 40.9 -0.4
baz=200
BNX BinXian 89.01 324 ⇓P P 04 22 41.6 -0.1
BNX pP pwP 04 22 54.6 -1.4
BNX sP sP 04 22 59.3 +5.0
BNX PP PP 04 26 14.9 +2.7
BNX S S 04 33 28.4 +0.9
BNX pmax pmax
comp=Z,11nm,1.2s
BNX pmax pmax
comp=Z,250nm,7.4s
BNX LR LR
comp=Z,210nm,20.1s
BNX LR LR
comp=Z,220nm,22.2s
BNX LR LR
comp=Z,340nm,22.2s
TIA Tai'an 89.10 312 ⇑P P 04 22 43.3 +0.9
TIA S S 04 33 18.8 -10
TIA sS ScS 04 33 51.0 +17
TIA pmax pmax
comp=Z,42nm,1.3s
TIA pmax pmax
comp=Z,390nm,6.9s
HOM Homer 89.27 12 P P 04 22 42.5 -0.1
baz=202
O19K Port Alsworth 89.30 11 IAMs_20 IAMs_20 05 00 22.2
comp=Z,594nm,20.0s
O19K Port Alsworth 89.30 11 P P 04 22 42.3 -0.4
baz=200
ILSW Iliamna Southw 89.30 11 IAmb IAmb 04 22 54.6
comp=Z,87nm,1.2s
KLR Kul'dur 89.33 329 LR LR 04 56 00.3
comp=Z,391nm,21.4s,baz=142,slow=31
KLR Kul'dur 89.33 329 *i*P P 04 22 43.6 +0.5
KLR pmax pmax
comp=Z,21nm,1.3s
G08A Pilot Rock 89.35 37 P P 04 22 43.4 -0.1
PGC Sidney 89.41 32 IAmb IAmb 04 22 55.9
comp=Z,38nm,1.1s
O20K Slope Mountain 89.48 12 P P 04 22 43.6 -0.1
baz=201
N18K Kilae Creek 89.51 10 P P 04 22 43.8 +0.1
baz=198
BRSE Bradley Lake S 89.52 13 P P 04 22 43.6 -0.1
baz=203
CBB Campbell River 89.52 30 IAmb IAmb 04 22 50.8
comp=Z,49nm,1.4s
DUG Dugway, Tooele 89.61 43 P P 04 22 44.1 -0.8
baz=233
TX31 Lajitas Ar. Si 89.66 56 P P 04 22 45.0 -0.3
baz=238
TXAR Lajitas Array 89.66 56 P P 04 22 44.3 -1.0
comp=Z,8.6nm,1.1s,baz=215,slow=5.7,SNR=40
TXAR LR LR 04 58 12.5
comp=Z,488nm,18.1s,baz=234,slow=32
comp=Z,8.6nm,1.1s
MNTX Cornudas Mount 89.68 54 IAmb IAmb 04 22 50.5
comp=Z,42nm,1.8s
MNTX Cornudas Mount 89.68 54 P P 04 22 44.9 -0.3
baz=237
MNTX Cornudas Mount 89.68 54 P P 04 22 44.4 -0.8
baz=237
HAWA Hanford 89.79 35 IAmb IAmb 04 22 51.6
comp=Z,51nm,1.4s
MFID Camas Ranch 89.84 39 IAMs_20 IAMs_20 05 01 18.1
comp=Z,540nm,18.0s
N19K Bonanza Creek 89.86 11 P P 04 22 45.5 0.0
N19K IAmb IAmb 04 22 56.4
comp=Z,29nm,1.2s
N19K Bonanza Creek 89.86 11 P P 04 22 45.1 -0.3
baz=199
Q16A Castle Valley 89.87 45 IAmb IAmb 04 22 53.0
comp=Z,56nm,2.0s
Y22D IRIS PASSCAL I 89.90 51 IAMs_20 IAMs_20 05 00 45.3
comp=Z,813nm,18.0s
Y22D IRIS PASSCAL I 89.90 51 P P 04 22 45.7 -0.7
baz=236
BBB Bella Bella 89.94 27 LR LR 04 56 54.6
comp=Z,445nm,19.4s,baz=220,slow=32
BMO Blue Mountains 89.95 38 IAmb IAmb 04 22 52.1
comp=Z,45nm,1.8s
TMUT Trail Mountain 90.07 45 IAmb IAmb 04 22 53.0
comp=Z,36nm,1.4s
E08A Dider Farm, El 90.09 36 IAmb IAmb 04 22 53.0
comp=Z,43nm,1.5s
SEW Seward 90.11 13 P P 04 22 46.3 -0.2
baz=204
SRU San Rafael Swe 90.39 45 IAmb IAmb 04 22 54.6
comp=Z,67nm,1.9s
O22K Cooper Landing 90.40 13 IAMs_20 IAMs_20 05 00 20.4
comp=Z,640nm,19.0s
P23K Montague Islan 90.44 14 P P 04 22 47.4 -0.6
baz=206
P17A Butcher Ranch, 90.46 45 IAmb IAmb 04 22 55.3
comp=Z,63nm,2.0s
GRNB Grenville Isla 90.47 25 IAmb IAmb 04 22 54.7
comp=Z,44nm,1.4s
CMIG Matias Romero 90.52 71 LR LR 04 56 25.6
comp=Z,375nm,18.4s,baz=240,slow=31
D08A Wollman Farm, 90.54 35 P P 04 22 48.9 +0.1
E09A Wood Farm, Sta 90.58 36 IAmb IAmb 04 22 54.8
comp=Z,43nm,1.3s
CRAG Craig 90.59 23 P P 04 22 47.9 -0.9
baz=218
MVCO Mesa Verde 90.59 48 IAMs_20 IAMs_20 04 59 01.4
comp=Z,631nm,18.0s
MVCO Mesa Verde 90.59 48 P P 04 22 48.3 -1.4
baz=235
SPCR Spurr Chakacha 90.61 11 P P 04 22 48.6 -0.3
baz=201
JLU Jordanelle 90.69 44 IAmb IAmb 04 22 56.1
comp=Z,39nm,1.8s
ANMO Albuquerque 90.70 51 P P 04 22 49.9 -0.2
comp=Z,14nm,1.2s,baz=211,slow=6.1,SNR=20
ANMO LR LR 04 55 45.0
comp=Z,631nm,20.4s,baz=235,slow=30
comp=Z,14nm,1.2s
ANMO Albuquerque 90.70 51 P P 04 22 49.7 -0.4
ANMO IAmb IAmb 04 22 56.4
comp=Z,33nm,1.4s
ANMO Albuquerque 90.70 51 IAMs_20 IAMs_20 05 01 30.4
comp=Z,926nm,18.0s
ANMO Albuquerque 90.70 51 *i*P P 04 22 49.3 -0.8
ANMO pmax pmax
comp=Z,29nm,1.5s
ANMO Albuquerque 90.70 51 P P 04 22 50.3 +0.1
ANMO Albuquerque 90.70 51 P P 04 22 49.2 -1.0
baz=236
F10A Beach Ranch, E 90.72 37 IAmb IAmb 04 22 54.4
comp=Z,35nm,1.2s
HLID Hailey 90.74 40 IAMs_20 IAMs_20 05 02 35.8
comp=Z,537nm,18.0s
HLID Hailey 90.74 40 P P 04 22 49.3 -0.7
baz=232
M19K Big River Lodg 90.90 10 P P 04 22 48.9 -1.3
baz=199
PV10 Paradox Valley 90.91 47 IAmb IAmb 04 23 02.5
comp=Z,30nm,1.4s
PV13 Radium Mtn., P 90.92 47 IAmb IAmb 04 22 57.0
comp=Z,28nm,1.4s
MA2 Magadan 90.95 344 P P 04 22 51.4 +1.0
MA2 IAmb IAmb 04 23 05.3
comp=Z,47nm,1.4s
MA2 Magadan 90.95 344 *i*P P 04 22 50.5 +0.1
MA2 pmax pmax
comp=Z,22nm,1.1s
RC01 Rabbit Creek A 90.96 13 P P 04 22 49.6 -0.8
baz=204
PV23 Carpenter Ridg 90.97 46 IAmb IAmb 04 22 56.6
comp=Z,25nm,1.4s
PV11 David Mesa, Pa 90.97 47 IAmb IAmb 04 22 57.3
comp=Z,34nm,1.4s
HIN Hinchinbrook I 91.00 14 IAMs_20 IAMs_20 04 59 38.0
comp=Z,679nm,19.0s
PWL Port Wells 91.03 13 IAMs_20 IAMs_20 05 00 42.9
comp=Z,679nm,19.0s
PWL Port Wells 91.03 13 P P 04 22 49.8 -1.0
baz=205
KAIM Kayak Island 91.05 15 P P 04 22 50.3 -0.6
baz=208
M20K Styx River 91.09 11 IAMs_20 IAMs_20 05 01 09.5
comp=Z,692nm,20.0s
M20K Styx River 91.09 11 P P 04 22 50.4 -0.7
baz=200
L19K White Mountain 91.09 10 IAmb IAmb 04 23 03.8
comp=Z,45nm,1.4s
L19K White Mountain 91.09 10 P P 04 22 49.9 -1.2
baz=199
GAMB Gambell 91.11 2 P P 04 22 49.9 -1.1
baz=184
SIT Sitka 91.13 21 P P 04 22 50.1 -1.2
baz=216
ENH Enshi 91.19 304 P P 04 22 52.5 +0.1
PV07 Paradox Valley 91.20 47 IAmb IAmb 04 22 58.3
comp=Z,38nm,1.8s
B08A Colville Reser 91.20 34 IAmb IAmb 04 22 56.6
comp=Z,28nm,1.5s
EYAK Cordova Ski Ar 91.30 15 P P 04 22 50.6 -1.4
baz=207
GLI Glacier Island 91.30 14 IAMs_20 IAMs_20 05 08 32.4
comp=Z,592nm,19.0s
GLI Glacier Island 91.30 14 P P 04 22 51.7 -0.4
baz=206
FID Port Fidalgo 91.32 14 IAMs_20 IAMs_20 05 03 36.4
comp=Z,595nm,21.0s
LYN LuoYang 91.32 309 ⇑P P 04 22 52.9 +0.1
LYN pP sP 04 23 03.3 -1.9
LYN pmax pmax
comp=Z,10.0nm,1.0s
LYN pmax pmax
comp=Z,230nm,4.4s
LYN LR LR
comp=Z,310nm,19.7s
LYN LR LR
comp=Z,180nm,17.7s
LYN LR LR
comp=Z,400nm,18.0s
C09A Chrisman Ranch 91.36 35 IAmb IAmb 04 22 58.6
comp=Z,34nm,1.4s
HNS HongShan 91.37 312 ⇑P P 04 22 53.8 +0.9
HNS S S 04 33 52.8 +3.1
HNS pmax pmax
comp=Z,26nm,1.6s
HNS LR LR
comp=Z,240nm,19.2s
HNS LR LR
comp=Z,390nm,17.3s
HNS LR LR
comp=Z,430nm,20.6s
GYA Guiyang 91.39 299 ⇑P P 04 22 54.3 +0.8
GYA pmax pmax
comp=Z,27nm,1.0s
GYA LR LR
comp=Z,260nm,18.1s
HMT Hamilton 91.45 15 IAMs_20 IAMs_20 05 02 22.1
comp=Z,948nm,19.0s
SKT Skwentna 91.45 11 IAMs_20 IAMs_20 05 00 54.1
comp=Z,710nm,20.0s
SKT Skwentna 91.45 11 P P 04 22 51.7 -1.1
baz=202
M22K Willow 91.50 12 IAMs_20 IAMs_20 05 01 02.3
comp=Z,833nm,19.0s
M22K Willow 91.50 12 P P 04 22 52.1 -0.8
baz=203
KNK Knik Glacier 91.51 13 IAMs_20 IAMs_20 05 00 49.6
comp=Z,562nm,19.0s
KNK Knik Glacier 91.51 13 P P 04 22 51.8 -1.2
baz=205
L20K Farewell, AK 91.53 10 P P 04 22 51.8 -1.3
baz=200
PMR Palmer 91.54 13 P P 04 22 52.4 -0.7
baz=204
TTA Tatalina 91.64 9 IAmb IAmb 04 23 05.6
comp=Z,23nm,1.3s
TTA Tatalina 91.64 9 P P 04 22 52.9 -0.8
baz=198
MESA MESA 91.88 16 IAMs_20 IAMs_20 04 59 39.3
comp=Z,928nm,19.0s
WAX Waxell Ridge 91.89 16 IAMs_20 IAMs_20 05 04 36.6
comp=Z,895nm,18.0s
BJT Baijiatuau 91.91 315 P P 04 22 55.3 -0.1
BJT IAmb IAmb 04 23 08.0
comp=Z,34nm,1.3s
BJT Baijiatuau 91.91 315 P P 04 22 55.3 -0.1
BJT pmax pmax
comp=Z,34nm,1.3s
BJI Beijing 91.92 315 P P 04 22 56.1 +0.7
BJI SKS SKSac 04 33 26.8 +1.1
BJI pmax pmax
comp=Z,14nm,1.7s
BJI pmax pmax
comp=Z,210nm,5.8s
BJI LR LR
comp=Z,45nm,18.8s
BJI LR LR
comp=Z,150nm,17.1s
BJI LR LR
comp=Z,400nm,18.0s
BMRM Bremner River 91.93 15 P P 04 22 54.5 -0.5
baz=208
S22A 4UR Ranch, Cre 91.99 48 IAmb IAmb 04 23 02.5
comp=Z,30nm,1.6s
S22A 4UR Ranch, Cre 91.99 48 P P 04 22 54.6 -1.6
baz=236
M23K Glacier View 92.00 13 P P 04 22 54.8 -0.5
baz=205
CUT Chulitna 92.07 12 P P 04 22 55.0 -0.5
baz=203
CRQM Cirque 92.09 16 IAMs_20 IAMs_20 04 59 29.1
comp=Z,759nm,20.0s
CRQE Cirque 92.10 16 P P 04 22 55.1 -0.8
baz=209
PNL Peninsula 92.11 18 P P 04 22 55.4 -0.4
baz=212
KLU Klutina 92.11 14 P P 04 22 55.7 -0.2
baz=207
SCM Sheep Creek Mo 92.12 13 P P 04 22 55.5 -0.4
baz=206
ISLE Juniper Island 92.15 16 IAMs_20 IAMs_20 04 59 40.5
comp=Z,765nm,20.0s
TGL Tana Glacier 92.16 16 IAMs_20 IAMs_20 04 59 39.8
comp=Z,677nm,20.0s
AHID Auburn Hatcher 92.18 42 IAmb IAmb 04 23 08.9
comp=Z,35nm,1.3s
AHID IAMs_20 IAMs_20 05 02 15.2
comp=Z,824nm,18.0s
PPLA Purkeypile 92.19 11 P P 04 22 54.6 -1.7
baz=201
NEW Newport 92.25 35 P P 04 22 56.1 -0.7
comp=Z,2.0nm,0.9s,baz=206,slow=3.2,SNR=6.1
NEW LR LR 05 01 31.2
comp=Z,735nm,18.1s,baz=238,slow=34
comp=Z,2.0nm,0.9s
NEW Newport 92.25 35 P P 04 22 55.6 -1.3
baz=230
BCPM Bancas Point 92.28 18 IAMs_20 IAMs_20 04 58 53.0
comp=Z,694nm,19.0s
TABL Table Mountain 92.31 17 IAMs_20 IAMs_20 04 58 44.6
comp=Z,892nm,20.0s
K20K Telida 92.33 10 P P 04 22 56.7 0.0
baz=200
833A Chaparral WMA, 92.36 59 P P 04 22 56.3 -1.4
baz=240
GRNC Granite Creek 92.40 16 IAMs_20 IAMs_20 04 59 27.2
comp=Z,713nm,20.0s
O20A White River Ci 92.42 45 P P 04 22 56.9 -1.1
baz=236
N25K Chitina, Valde 92.50 15 P P 04 22 57.4 -0.3
baz=208
BESE Bessie Mountai 92.52 20 P P 04 22 57.6 -0.2
BESE IAmb IAmb 04 23 10.3
comp=Z,25nm,1.2s
P29M Windy Craggy 92.53 19 IAMs_20 IAMs_20 05 01 35.6
comp=Z,628nm,19.0s
MCARA McCarthy VSAT 92.67 15 P P 04 22 57.8 -0.6
baz=209
LOGN Logan Glacier 92.67 17 IAMs_20 IAMs_20 04 59 28.3
comp=Z,759nm,20.0s
REDW Red Top Meadow 92.68 42 IAMs_20 IAMs_20 05 02 39.4
comp=Z,887nm,18.0s
SMCO Snowmass 92.69 47 IAmb IAmb 04 23 12.1
comp=Z,30nm,1.6s
TPAW Teton Pass 92.70 42 IAmb IAmb 04 23 16.9
comp=Z,30nm,1.4s
TPAW IAMs_20 IAMs_20 05 02 12.7
comp=Z,928nm,19.0s
CAST Castle Rocks 92.70 11 IAMs_20 IAMs_20 05 03 42.1
comp=Z,644nm,19.0s
CAST Castle Rocks 92.70 11 P P 04 22 56.9 -1.5
baz=201
CTG Chitna Glacier 92.71 16 P P 04 22 57.3 -1.4
baz=211
CTGM Chitina Glacie 92.71 16 IAMs_20 IAMs_20 04 58 38.3
comp=Z,613nm,19.0s
FXWY Fox Creek 92.74 41 IAmb IAmb 04 23 18.7
comp=Z,25nm,1.4s
FXWY IAMs_20 IAMs_20 05 02 15.9
comp=Z,852nm,18.0s
MSTX Muleshoe 92.74 53 P P 04 22 58.2 -1.4
baz=238
T35M Bob Quinn 92.77 23 P P 04 22 58.3 -0.7
baz=220
PLBC Pleasant Camp 92.78 19 P P 04 22 57.5 -1.4
baz=215
WAT1 Susitna Watana 92.78 12 P P 04 22 58.3 -0.6
baz=204
SNOW Snow King Moun 92.80 42 IAMs_20 IAMs_20 05 02 18.4
comp=Z,874nm,18.0s
NNA Nana 92.81 105 LR LR 04 55 21.6
comp=Z,272nm,20.3s,baz=246,slow=30
NNA Nana 92.81 105 IAMs_20 IAMs_20 05 05 09.9
comp=Z,609nm,18.0s
SDCO Great Sand Dun 92.87 49 P P 04 22 59.4 -0.8
baz=237
SDCO Great Sand Dun 92.87 49 P P 04 22 58.7 -1.6
baz=237
IMW Indian Meadow 92.94 41 IAmb IAmb 04 23 06.6
comp=Z,24nm,1.4s
IMW IAMs_20 IAMs_20 05 02 30.2
comp=Z,763nm,18.0s
MOOW Moose Ponds 92.97 41 IAmb IAmb 04 23 06.6
comp=Z,32nm,1.8s
LOHW Long Hollow 92.97 42 IAmb IAmb 04 23 06.6
comp=Z,40nm,1.7s
LOHW IAMs_20 IAMs_20 05 03 07.1
comp=Z,824nm,18.0s
KTH Kantishna Hill 93.02 11 IAMs_20 IAMs_20 05 03 01.6
comp=Z,785nm,20.0s
MSO Missoula 93.02 38 IAMs_20 IAMs_20 05 10 47.1
comp=Z,569nm,18.0s
MSO Missoula 93.02 38 P P 04 22 58.8 -1.6
baz=232
TRF Thorofare Moun 93.03 11 P P 04 22 59.3 -0.9
baz=203
TIY Taiyuan 93.05 311 ⇓P P 04 23 03.8 +3.0
TIY SS SS 04 40 14.5 -6.2
TIY pmax pmax
comp=Z,96nm,5.9s
TIY LR LR
comp=Z,190nm,13.2s
TIY LR LR
comp=Z,200nm,12.3s
TIY LR LR
comp=Z,230nm,19.1s
J20K Nowinta River 93.09 10 P P 04 22 59.5 -0.7
baz=200
CHUM Lake Minchumin 93.10 10 P P 04 23 00.1 -0.2
baz=201
BW06 Boulder Array 93.11 43 IAMs_20 IAMs_20 05 02 39.6
comp=Z,788nm,18.0s
BW06 Boulder Array 93.11 43 P P 04 22 59.6 -1.5
baz=235
PDAR Pinedale Array 93.11 43 P P 04 23 00.1 -1.1
comp=Z,3.1nm,1.0s,baz=222,slow=4.0,SNR=18
PDAR LR LR 05 01 39.6
comp=Z,422nm,18.1s,baz=244,slow=34
comp=Z,3.1nm,1.0s
JCT Junction City 93.12 57 IAmb IAmb 04 23 06.4
comp=Z,26nm,1.6s
JCT IAMs_20 IAMs_20 05 03 25.1
comp=Z,699nm,18.0s
JCT Junction City 93.12 57 P P 04 23 00.4 -0.9
baz=240
JCT Junction City 93.12 57 P P 04 22 58.9 -2.4
baz=240
KVTX Kingsville 93.12 61 IAMs_20 IAMs_20 05 04 44.4
comp=Z,649nm,18.0s
FLWY Flagg Ranch 93.19 41 IAMs_20 IAMs_20 05 02 48.9
comp=Z,820nm,18.0s
YPP Pitchstone Pla 93.24 41 IAmb IAmb 04 23 14.4
comp=Z,29nm,1.6s
RND Reindeer 93.25 12 IAmb IAmb 04 23 14.7
comp=Z,21nm,1.1s
RND IAMs_20 IAMs_20 05 01 46.7
comp=Z,750nm,19.0s
T25A Trinidad 93.28 50 IAmb IAmb 04 23 13.6
comp=Z,30nm,1.8s
T25A Trinidad 93.28 50 P P 04 23 00.4 -1.7
baz=238
YHL Hebgen Lake 93.36 40 IAmb IAmb 04 23 17.8
comp=Z,29nm,1.2s
YMR Madison River 93.38 41 IAmb IAmb 04 23 21.4
comp=Z,38nm,1.5s
CRAI Chiangrai 93.44 291 IAmb IAmb 04 23 14.2
comp=Z,32nm,1.3s
H17A Grant Village 93.45 41 IAmb IAmb 04 23 09.9
comp=Z,21nm,1.4s
H17A Grant Village 93.45 41 P P 04 23 01.8 -0.9
baz=234
YUK6 Outpost Mounta 93.46 18 P P 04 23 01.2 -1.1
baz=213
BPAW Bear Paw Mtn. 93.52 11 IAMs_20 IAMs_20 05 12 51.7
comp=Z,475nm,18.0s
BPAW Bear Paw Mtn. 93.52 11 P P 04 23 01.2 -1.0
baz=202
PAX Paxson 93.53 14 P P 04 23 01.3 -1.1
baz=207
MCK McKinley 93.54 12 IAMs_20 IAMs_20 05 02 17.2
comp=Z,877nm,20.0s
MCK McKinley 93.54 12 P P 04 23 01.3 -1.0
baz=204
XAN Xi'an 93.55 307 ⇓P P 04 23 04.3 +1.2
XAN pP sP 04 23 12.6 -3.0
XAN sP pwP 04 23 17.1 -0.8

XAN pmax pmax
comp=Z,13nm,1.3s
XAN pmax pmax
comp=Z,250nm,6.0s
XAN LR LR
comp=Z,280nm,20.1s
XAN LR LR
comp=Z,300nm,19.8s
XAN LR LR
comp=Z,630nm,19.4s
BOZ Bozeman (W) 93.55 40 IAmb IAmb 04 23 09.2
BOZ comp=Z,29nm,1.5s IAMs_20 IAMs_20 05 03 20.3
BOZ Bozeman (W) 93.55 40 P **P** **04 23 02.4 -0.6**
baz=234
SEY Seymchan 93.56 346 *i* P **P** **04 23 02.0 -0.4**
SEY pmax pmax
comp=Z,14nm,1.2s
M26K Nabesna, AK 93.56 15 P **P** **04 23 02.6 +0.1**
M26K IAmb IAmb 04 23 14.6
comp=Z,24nm,1.4s
M26K Nabesna, AK 93.56 15 P **P** **04 23 02.4 -0.2**
baz=209
HYT Haines Junctio 93.59 18 P **P** **04 23 01.8 -1.0**
baz=214
YUK3 Moose Creek 93.62 16 P **P** **04 23 02.2 -0.9**
baz=212
P32M Atlin 93.68 20 P **P** **04 23 03.0 -0.1**
baz=217
YUK4 Talbot Arm 93.72 17 P **P** **04 23 03.3 -0.2**
baz=213
SNET Serv Nac Est T 93.75 77 IAMs_20 IAMs_20 04 59 33.6
comp=Z,626nm,18.0s
Q24A Divide 93.77 48 P **P** **04 23 02.9 -1.5**
baz=237
M27K Edge Creek, AK 93.78 15 IAmb IAmb 04 23 16.1
M27K comp=Z,33nm,1.4s IAMs_20 IAMs_20 05 00 35.7
comp=Z,556nm,20.0s
M27K Edge Creek, AK 93.78 15 P **P** **04 23 02.6 -1.1**
baz=210
CMAR Chiang Mai Arr 93.82 289 P **P** **04 23 05.7 +1.0**
comp=Z,1.0nm,0.3s,baz=144,slow=3.1,SNR=9.5
CMAR LR LR 05 07 29.2
comp=Z,145nm,18.8s,baz=120,slow=37
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 93.82 289 *i* P **P** **04 23 06.8 +2.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KMI Kunming 93.83 296 ⇓P **P** **04 23 06.8 +1.9**
KMI pP pwP 04 23 23.4 +3.8
KMI SKS **SKSac** **04 33 38.0 +0.5**
KMI pmax pmax
comp=Z,21nm,1.6s
KMI pmax pmax
comp=Z,170nm,3.5s
KMI LR LR
comp=Z,250nm,17.2s
KMI LR LR
comp=Z,260nm,21.2s
KMI LR LR
comp=Z,380nm,21.3s
ISCO Idaho Springs 93.91 47 IAMs_20 IAMs_20 05 01 21.3
comp=Z,536nm,19.0s
ISCO Idaho Springs 93.91 47 P **P** **04 23 03.1 -2.0**
baz=237
RWWY Rawlins 93.94 45 IAMs_20 IAMs_20 05 02 57.7
comp=Z,850nm,20.0s
DLBC Dease Lake 93.97 22 LR LR 05 03 35.2
comp=Z,195nm,18.2s,baz=260,slow=34
DLBC Dease Lake 93.97 22 P **P** **04 23 03.8 -0.7**
baz=220
CHTO Chiang Mai 93.98 289 P **P** **04 23 06.7 +1.3**
CHTO IAmb IAmb 04 23 16.0
comp=Z,39nm,1.6s
CHTO Chiang Mai 93.98 289 P **P** **04 23 06.7 +1.3**
CHTO pmax pmax
comp=Z,39nm,1.6s
AMTX Amarillo 93.99 53 P **P** **04 23 03.7 -1.5**
baz=239
L26K Log Cabin Wild 94.03 14 IAMs_20 IAMs_20 05 04 48.3
comp=Z,498nm,18.0s
LVC Limon Verde 94.04 118 LR LR 04 56 36.4
comp=Z,434nm,20.8s,baz=280,slow=30
XLT XiLinHaoTe 94.18 318 *e*P **P** **04 23 06.5 +0.6**
XLT pP pwP 04 23 19.0 -1.2
XLT sP sP 04 23 27.3 +9.0
XLT SKS **SKSac** **04 33 31.8 -6.5**
XLT sS sS 04 34 36.5 +6.7
XLT pmax pmax
comp=Z,12nm,1.5s
XLT pmax pmax
comp=Z,170nm,5.1s
XLT LR LR
comp=Z,230nm,16.8s
XLT LR LR
comp=Z,280nm,19.4s
WHY Whitehorse 94.20 19 P **P** **04 23 04.8 -0.8**
baz=216
K24K Donnelly Dome 94.21 13 P **P** **04 23 04.0 -1.4**
baz=207
N30M Aishikik Lake 94.23 18 P **P** **04 23 04.4 -1.3**
baz=214
N23A Red Feather La 94.30 46 P **P** **04 23 04.6 -2.1**
baz=237
NEA2 Nenana 94.30 11 P **P** **04 23 05.5 -0.3**
baz=204
ABTX Abilene, Hawle 94.31 55 IAmb IAmb 04 23 18.0
comp=Z,30nm,1.4s
ABTX Abilene, Hawle 94.31 55 P **P** **04 23 05.6 -1.1**
baz=240
ABTX Abilene, Hawle 94.31 55 P **P** **04 23 04.5 -2.2**
baz=240
RIDG Independent Ri 94.34 13 IAMs_20 IAMs_20 05 02 18.5
comp=Z,552nm,19.0s
RIDG Independent Ri 94.34 13 P **P** **04 23 05.9 -0.2**
baz=208
I21K Tanana 94.36 10 P **P** **04 23 05.9 -0.2**
baz=202
WRH Wood River Hil 94.37 12 IAmb IAmb 04 23 18.5
WRH comp=Z,35nm,1.3s IAMs_20 IAMs_20 05 02 43.2
comp=Z,590nm,20.0s
R33M Jennings River 94.40 21 P **P** **04 23 04.8 -1.8**
baz=219
L27K Beaver Creek, 94.41 15 P **P** **04 23 04.6 -1.8**
baz=210
BCAR Beaver Creek A 94.42 15 P **P** **04 23 06.0 -0.4**
MLY Manley 94.42 11 P **P** **04 23 04.4 -2.0**
baz=203
P33M Teslin, Yukon 94.45 20 P **P** **04 23 04.8 -1.9**
baz=218
ZEA Zeya 94.48 330 *e*P **P** **04 23 11.6 +4.7**
ZEA *e* 04 26 56.6
ZEA *e* 04 35 42.1
ZEA pmax pmax
comp=Z,10.0nm,1.5s
HDA Harding Lake 94.52 12 P **P** **04 23 07.1 +0.3**
baz=206
N31M Braeburn, Yuko 94.61 18 IAMs_20 IAMs_20 05 09 50.7
comp=Z,625nm,18.0s
RLMT Red Lodge 94.63 41 IAMs_20 IAMs_20 05 03 53.9
comp=Z,793nm,18.0s
RLMT Red Lodge 94.63 41 P **P** **04 23 07.0 -1.1**
baz=235
H21K Melozitna Rive 94.68 10 P **P** **04 23 07.1 -0.4**
baz=201
M29M Somme Creek 94.69 17 P **P** **04 23 07.0 -0.8**
baz=213
SCRK Sand Creek 94.73 14 P **P** **04 23 06.2 -1.8**
baz=208
I23K Minto, Yukon-K 94.76 11 P **P** **04 23 05.5 -2.3**
baz=204
TCOL CIGO, UAF Yank 94.77 12 IAMs_20 IAMs_20 05 03 05.9
comp=Z,643nm,19.0s
TCOL CIGO, UAF Yank 94.77 12 P **P** **04 23 05.7 -2.2**
baz=205
COLA College 94.78 12 IAMs_20 IAMs_20 05 03 14.9
comp=Z,608nm,19.0s
COLA College 94.78 12 *i* P **P** **04 23 06.7 -1.2**
COLA pmax pmax
comp=Z,13nm,1.2s
MDM Murphy Dome 94.78 12 IAmb IAmb 04 23 19.6
MDM comp=Z,28nm,1.4s IAMs_20 IAMs_20 05 03 35.3
comp=Z,851nm,19.0s

PHWY Pilot Hill 94.83 46 IAMs_20 IAMs_20 05 03 22.3
comp=Z,529nm,18.0s
ILAR Eielson Array 94.86 12 P **P** **04 23 06.5 -1.9**
comp=Z,4.8nm,1.2s,baz=227,slow=4.8,SNR=14
ILAR LR LR 05 01 27.7
comp=Z,196nm,18.8s,baz=190,slow=33
comp=Z,4.8nm,1.2s
K22A Casper 94.89 44 IAmb IAmb 04 23 21.6
comp=Z,50nm,1.9s
K22A Casper 94.89 44 P **P** **04 23 08.7 -0.6**
baz=237
K22A Casper 94.89 44 P **P** **04 23 06.5 -2.7**
baz=237
435B Jarrell 94.94 58 IAMs_20 IAMs_20 05 01 26.1
comp=Z,765nm,19.0s
J25K Salcha River, 95.01 13 P **P** **04 23 07.9 -1.2**
baz=207
POKR Poker Plat Res 95.07 12 IAMs_20 IAMs_20 05 03 24.8
comp=Z,564nm,20.0s
H22K Ishtalitna Cre 95.12 10 P **P** **04 23 08.3 -1.3**
baz=202
K27K Chicken 95.19 14 P **P** **04 23 08.9 -0.9**
baz=210
PZH PanZhiHua 95.27 297 P **P** **04 23 14.1 +2.8**
PZH pP **pwP** **04 23 25.9 -0.2**
PZH S **S** **04 34 22.8 -2.1**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,120nm,4.6s
PZH LR LR
comp=Z,330nm,16.7s
PZH LR LR
comp=Z,240nm,16.5s
PZH LR LR
comp=Z,380nm,18.0s
J26L Joseph Creek 95.28 14 IAmb IAmb 04 23 23.3
comp=Z,27nm,1.2s
J26L Joseph Creek 95.28 14 P **P** **04 23 09.8 -0.6**
baz=209
HHC Hu-ho-hao-te 95.30 314 *e*P **P** **04 23 12.4 +1.3**
HHC S **S** **04 34 24.3 -0.2**
HHC sS sS 04 34 44.6 +4.8
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,300nm,7.4s
HHC LR LR
comp=Z,310nm,13.4s
HHC LR LR
comp=Z,560nm,16.8s
HHC LR LR
comp=Z,820nm,17.7s
H23K Yukon River 95.35 11 IAMs_20 IAMs_20 05 03 57.2
comp=Z,669nm,20.0s
H23K Yukon River 95.35 11 P **P** **04 23 10.1 -0.5**
baz=204
G21K Allakaket 95.39 9 P **P** **04 23 10.5 -0.2**
baz=200
BOSC San Juan Bosco 95.54 96 P **P** **04 23 13.1 +0.1**
M31M Drury Creek, Y 95.58 18 IAMs_20 IAMs_20 05 10 30.3
comp=Z,630nm,18.0s
TGUH Tegucigalpa,Un 95.61 77 IAMs_20 IAMs_20 05 03 44.4
comp=Z,499nm,18.0s
PRP Porcupine Dome 95.79 12 P **P** **04 23 12.6 -0.2**
baz=207
CD2 Chengdu 95.79 302 P **P** **04 23 13.6 +0.1**
CD2 pP pwP 04 23 27.1 -1.2
CD2 sP sP 04 23 32.4 +6.4
CD2 SKS **SKSac** **04 33 45.8 -1.6**
CD2 S **S** **04 34 28.1 -1.0**
CD2 pmax pmax
comp=Z,30nm,1.2s
CD2 pmax pmax
comp=Z,350nm,6.7s
CD2 LR LR
comp=Z,340nm,15.3s
CD2 LR LR
comp=Z,410nm,16.2s
CD2 LR LR
comp=Z,360nm,13.7s
DAWY Dawson 95.83 15 P **P** **04 23 12.4 -0.5**
baz=212
HKT Hockley 95.86 59 IAMs_20 IAMs_20 04 59 44.9
comp=Z,521nm,20.0s
JTS Las Juntas de 95.94 82 IAMs_20 IAMs_20 04 59 45.6
comp=Z,796nm,18.0s
WMOK Wichita Monta 95.98 54 IAMs_20 IAMs_20 05 05 17.5
comp=Z,478nm,18.0s
EGMT Eagleton 96.02 38 IAMs_20 IAMs_20 05 06 10.4
comp=Z,688nm,18.0s
I26K Coal Creek Min 96.07 13 P **P** **04 23 13.3 -0.6**
baz=209
G23K Bananza Creek 96.09 10 P **P** **04 23 13.3 -0.7**
baz=203
BILL Bilibino 96.19 354 ⇑*e*P **P** **04 23 12.4 -1.9**
BILL *e* 04 27 04.9
BILL *i* S **SKSac** **04 33 53.0 +5.3**
BILL pmax pmax
comp=Z,15nm,1.2s
BILL MLR MLR
comp=Z,222nm,19.0s
J29M Klondike Camp 96.44 16 IAMs_20 IAMs_20 05 02 17.9
comp=Z,552nm,19.0s
G24K Hadweenzic Riv 96.50 11 P **P** **04 23 15.5 -0.3**
baz=206
F22K John River 96.51 9 P **P** **04 23 15.8 -0.1**
baz=202
HDC Heredia 96.55 82 IAMs_20 IAMs_20 05 01 49.8
comp=Z,546nm,18.0s
U32A Winter Ranch, 96.62 52 P **P** **04 23 17.1 -0.1**
I27K Kandik River 96.65 14 P **P** **04 23 17.1 +0.5**
baz=211
OGNE Ogallala 96.84 47 IAMs_20 IAMs_20 05 06 32.8
comp=Z,731nm,18.0s
E22K Anaktuvuk Pass 97.14 9 P **P** **04 23 19.1 +0.3**
baz=202
F24K Squaw Lake 97.17 11 P **P** **04 23 18.8 -0.1**
baz=205
I29M Ogilvie Camp, 97.18 15 P Pdif 04 23 19.5 +0.4
baz=214
RSSD Black Hills 97.21 44 P **P** **04 23 18.7 -1.1**
RSSD IAmb IAmb 04 23 20.3
comp=Z,19nm,1.1s
RSSD Black Hills 97.21 44 P **P** **04 23 18.7 -1.1**
RSSD pmax pmax
comp=Z,19nm,1.2s
RSSD MLR MLR
comp=Z,2µm,18.0s
RSSD Black Hills 97.21 44 P **P** **04 23 18.8 -1.1**
baz=238
RSSD Black Hills 97.21 44 P **P** **04 23 18.3 -1.5**
baz=238
H27K Steamboat Moun 97.21 14 P **P** **04 23 18.8 -0.3**
baz=211
LAO LASA Array 97.27 41 IAMs_20 IAMs_20 05 04 43.6
comp=Z,598nm,19.0s
LAO LASA Array 97.27 41 P **P** **04 23 19.9 0.0**
baz=237
G26K Porcupine Rive 97.39 12 P **P** **04 23 19.9 +0.2**
baz=209
E24K Your Creek 97.58 10 P **P** **04 23 20.4 -0.4**
baz=205
NATX Nacogdoches 97.60 58 IAMs_20 IAMs_20 05 03 28.7
comp=Z,688nm,18.0s
F25K Christian River 97.62 11 P **P** **04 23 20.5 -0.4**
baz=207
G27K Doyon Strip 97.69 13 P **P** **04 23 20.6 -0.6**
baz=211
R32A Long Quarter, 97.82 51 P Pdif 04 23 22.9 +0.4
baz=241
TOLK Toolik Lake Re 97.94 10 P **P** **04 23 21.9 -0.4**
baz=204
LPAZ La Paz 97.98 113 LR LR 04 59 11.7
comp=Z,325nm,21.6s,baz=258,slow=30
LPAZ La Paz 97.98 113 P Pdif 04 23 25.6 +1.1
LPAZ La Paz 97.98 113 P Pdif 04 23 25.6 +1.1
LPAZ pmax pmax
comp=Z,3.0nm,1.3s
F26K Sheenjek River 97.98 12 P Pdif 04 23 23.1 +0.6
baz=209
OK034 N. Norfolk Rd. 98.07 54 IAMs_20 IAMs_20 05 06 22.8
comp=Z,770nm,19.0s
D23K Nanushuk River 98.08 9 P **P** **04 23 22.5 -0.3**
baz=203
E25K Arctic Village 98.11 11 P **P** **04 23 23.0 -0.1**
baz=207

LZH Lanzhou 98.18 306 ⇑P Pdif 04 23 25.5 +1.1
LZH sP pwP 04 23 44.8 +5.7
LZH S **S** **04 34 50.3 +0.7**
LZH pmax pmax
comp=Z,20nm,1.5s
LZH pmax pmax
comp=Z,230nm,6.2s
LZH LR LR
comp=Z,330nm,17.9s
LZH LR LR
comp=Z,350nm,18.2s
LZH LR LR
comp=Z,450nm,18.5s
CZSB Cruzeiro do Su 98.43 103 P **P** **04 23 25.9 +0.1**
CZSB IAmb IAmb 04 23 35.6
comp=Z,13nm,1.5s
D24K Happy Valley 98.52 10 P **P** **04 23 24.4 -0.5**
baz=204
TUL1 Leonard 98.69 54 IAMs_20 IAMs_20 05 05 53.1
comp=Z,622nm,18.0s
TUL1 Leonard 98.69 54 P **P** **04 23 25.6 -0.8**
baz=242
E27K Coleen River 98.89 12 P **P** **04 23 26.2 -0.3**
baz=211
YAK Yakutsk 99.18 337 LR LR 05 06 39.1
comp=Z,175nm,19.4s,baz=89,slow=34
YAK Yakutsk 99.18 337 *i* P **Pdif** **04 23 26.0 -1.9**
YAK pmax pmax
comp=Z,6.0nm,0.8s
DGMT Dagmar 99.37 40 IAMs_20 IAMs_20 05 03 10.3
comp=Z,622nm,20.0s
MIAR Mount Ida 99.68 56 IAMs_20 IAMs_20 05 04 55.6
comp=Z,526nm,19.0s
VBMS Vicksburg 100.95 59 IAMs_20 IAMs_20 05 12 47.6
comp=Z,478nm,18.0s
ECSD EROS Data Cent 101.70 47 IAMs_20 IAMs_20 05 05 43.4
comp=Z,718nm,19.0s
GTA Gaotai 102.52 308 *e*P **Pdif** **04 23 43.8 +0.2**
GTA pP sPdif 04 23 56.0 0.0
GTA sP pPdif 04 24 01.1 +8.2
GTA pmax pmax
comp=Z,2.0nm,0.9s
GTA pmax pmax
comp=Z,44nm,4.2s
GTA LR LR
comp=Z,170nm,19.6s
GTA LR LR
comp=Z,230nm,18.5s
GTA LR LR
comp=Z,330nm,18.5s
OXF Oxford 102.77 58 IAMs_20 IAMs_20 05 06 52.4
comp=Z,658nm,18.0s
CCM Cathedral Cave 102.90 54 IAMs_20 IAMs_20 05 09 13.6
comp=Z,581nm,19.0s
SCIA State Center 103.15 50 IAMs_20 IAMs_20 05 09 23.9
comp=Z,667nm,18.0s
C36M Paulatuk 103.76 17 IAMs_20 IAMs_20 05 06 31.4
comp=Z,522nm,19.0s
PLAL Pickwick Lake 103.96 58 IAMs_20 IAMs_20 05 09 46.0
comp=Z,541nm,20.0s
WVT Waverly 104.60 57 IAMs_20 IAMs_20 05 07 50.0
comp=Z,597nm,18.0s
HDIL Hopedale 105.30 52 IAMs_20 IAMs_20 05 09 43.0
comp=Z,703nm,18.0s
MTDJ Mount Denham 105.84 77 IAMs_20 IAMs_20 05 08 52.5
comp=Z,434nm,18.0s
HQIL Hanson Quary C 106.78 51 IAMs_20 IAMs_20 05 10 56.1
comp=Z,2µm,21.0s
GOGA Godfrey 106.86 61 IAMs_20 IAMs_20 05 09 50.2
comp=Z,504nm,19.0s
COWI Conover 107.52 47 IAMs_20 IAMs_20 05 10 50.2
comp=Z,733nm,19.0s
TZTN Tazewell 107.96 58 IAMs_20 IAMs_20 05 12 53.8
comp=Z,656nm,18.0s
NHSC New Hope 109.32 62 IAMs_20 IAMs_20 05 12 01.3
comp=Z,473nm,19.0s
GLMI Grayling 110.05 49 IAMs_20 IAMs_20 05 12 48.6
comp=Z,482nm,20.0s
P52A Corning 110.08 55 IAMs_20 IAMs_20 05 12 36.8
comp=Z,647nm,18.0s
BLA Blacksburg 110.54 58 IAMs_20 IAMs_20 05 14 17.3
comp=Z,560nm,18.0s
M53A WI Miller and 111.71 54 IAMs_20 IAMs_20 05 14 11.8
comp=Z,608nm,18.0s
MCWV Mont Chateau 111.76 56 IAMs_20 IAMs_20 05 13 58.3
comp=Z,439nm,19.0s
CNNC Cliffs of the 111.83 61 IAMs_20 IAMs_20 05 20 43.6
comp=Z,492nm,18.0s
ERPA Erie 112.41 53 IAMs_20 IAMs_20 05 15 09.2
comp=Z,499nm,18.0s
WMQ Urumqi 112.57 309 *e*PKP **PKiKP** **04 28 24.3 +1.0**
WMQ LR LR
comp=Z,310nm,15.3s
WMQ LR LR
comp=Z,260nm,18.5s
CBN Corbin Frederi 113.15 58 IAMs_20 IAMs_20 05 20 34.2
comp=Z,556nm,18.0s
ZALV Zalesovo Beam 116.84 319 PKP **PKPdf** **04 28 29.2 -1.9**
comp=Z,0.4nm,0.4s,baz=107,slow=1.5,SNR=3.6
ZALV Zalesovo Beam 116.84 319 PKPdf **PKPdf** **04 28 30.5 -0.5**
ZALV Zalesovo Beam 116.84 319 PKIKP **PKPdf** **04 28 30.5 -0.5**
MK31 Makanchi Array 117.01 311 *i* PKIKP **PKiKP** **04 28 33.3 +1.6**
MKAR Makanchi Array 117.01 311 PKP **PKPdf** **04 28 30.9 -0.8**
comp=Z,1.2nm,0.9s,baz=64,slow=4.2,SNR=7.1
MAKZ Makanchi 117.23 311 PKPdf **PKPdf** **04 28 32.2 +0.2**
MAKZ Makanchi 117.23 311 PKIKP **PKPdf** **04 28 32.3 +0.2**
VT1 Waterbury 118.08 52 IAMs_20 IAMs_20 05 21 41.3
comp=Z,596nm,19.0s
HNH Hanover 118.28 53 IAMs_20 IAMs_20 05 21 36.6
comp=Z,511nm,18.0s
LBNH Lisbon 118.64 52 IAMs_20 IAMs_20 05 19 23.2
comp=Z,574nm,18.0s
BIM Bigot 118.84 88 IAMs_20 IAMs_20 05 19 43.8
comp=Z,404nm,18.0s
MPOM Morne Pois Mar 119.00 88 IAMs_20 IAMs_20 05 17 36.9
comp=Z,384nm,18.0s
KURK Kurchatov 120.09 315 IAMs_20 IAMs_20 05 19 26.4
comp=Z,341nm,20.0s
NRN Naryn 120.36 304 PKPdf **PKPdf** **04 28 38.7 0.0**
NRN Naryn 120.36 304 PKIKP **PKPdf** **04 28 38.7 0.0**
BOSA Boshof 120.41 202 *i* P Pdif 04 25 20.6 +17
BOSA Boshof 120.41 202 *i* P Pdif 04 25 20.6 +17
TULEG Thule 120.68 15 IAMs_20 IAMs_20 05 16 59.5
comp=Z,419nm,20.0s
AAK Ala-Archa 121.68 305 IAMs_20 IAMs_20 05 24 37.4
comp=Z,356nm,20.0s
EMMW East Machias 121.88 53 IAMs_20 IAMs_20 05 25 01.7
comp=Z,513nm,18.0s
MOPA Mopani 122.57 211 *i* P **Pdif** **04 25 08.4 -4.7**
MOPA Mopani 122.57 211 *i* P **Pdif** **04 25 08.4 -4.7**
LBTB Lobatse 123.59 204 *i* P **Pdif** **04 25 14.3 -3.5**
LBTB Lobatse 123.59 204 *i* P **Pdif** **04 25 14.3 -3.5**
GAR Garm 124.20 300 PKPdf **PKPdf** **04 28 46.6 +0.7**
KBL Kabul 124.37 295 PKPdf **PKiKP** **04 28 48.5 +1.8**
KBL Kabul 124.37 295 PKIKP **PKiKP** **04 28 48.5 +1.8**
KKAR Karatay Array 124.65 305 PKPdf **PKPdf** **04 28 46.1 -0.3**
KKAR Karatay Array 124.65 305 PKIKP **PKPdf** **04 28 46.1 -0.3**
BRVK Borovoye 125.39 317 PKPdf **PKPdf** **04 28 47.4 -0.1**
BRVK Borovoye 125.39 317 *i* PKIKP **PKPdf** **04 28 46.9 -0.6**
ILULI Ilulissat 127.81 22 IAMs_20 IAMs_20 05 25 55.0
comp=Z,441nm,19.0s
RCBR Riachuelo 129.42 125 IAMs_20 IAMs_20 05 21 38.3
comp=Z,470nm,18.0s
SUMG Summit 129.60 15 PKPdf **PKPdf** **04 28 55.9 +0.4**
SUMG Summit 129.60 15 PKIKP **PKPdf** **04 28 55.9 +0.4**
ARU Arti 131.76 322 PKPdf **PKPdf** **04 28 59.5 0.0**
ARU IAMs_20 IAMs_20 05 26 20.0
comp=Z,420nm,20.0s
ARU Arti 131.76 322 *i* PKIKP **PKPdf** **04 28 59.2 -0.3**
ARU 04 31 16.7
ARU MLR MLR
comp=Z,375nm,20.0s
ABKAR Akbulak array 132.08 313 PKPdf **PKiKP** **04 29 02.6 +1.2**
UOSS Minazif 133.05 279 PKPdf **PKPdf** **04 29 03.0 0.0**
GEYT Alibeck 133.58 297 PKPdf **PKPdf** **04 29 04.7 +1.1**
KIBK Kibwezi 135.47 234 IAMs_20 IAMs_20 05 28 55.5
comp=Z,433nm,18.0s
KIRV Kirov 135.75 327 *i* PKIKP **PKPdf** **04 29 04.4 -2.5**
PRGR Permogore 136.01 333 *e*PKIKP **PKPdf** **04 29 06.9 -0.4**
PRGR *e* 04 31 45.6
ARCES ARCESS Array B 136.10 349 PKP **PKPdf** **04 29 07.0 -0.3**
comp=Z,5.8nm,1.0s,baz=12,slow=1.5,SNR=12
ARCES ARCESS Array B 136.10 349 PKPdf **PKPdf** **04 29 06.8 -0.5**
ARCES ARCESS Array B 136.10 349 PKIKP **PKPdf** **04 29 06.8 -0.5**
KLMR Klimovskoe 138.88 334 *e*PKIKP **PKPdf** **04 29 10.9 -1.8**
KLMR *e* 04 32 07.8

KLMR pmax pmax
comp=Z,19nm,1.5s
KLMR Klimovskoe 138.88 334 *e*PKPdf **PKPdf 04 29 10.9 -1.8**
KLMR AMP 04 29 26.3
comp=Z,19nm,1.5s
KLMR *e*PP **PP 04 32 07.9 +3.1**
BELG Belogornoye 139.03 320 *i* PKIKP **PKPdf 04 29 13.7 +0.5**
LODK Lodwar 141.34 237 IAMs_20 IAMs_20 05 29 12.5
comp=Z,332nm,19.0s
RAYN Ar Rayn 142.12 274 PKPdf **PKPdf 04 29 19.7 -0.1**
RAYN Ar Rayn 142.12 274 IAMs_20 IAMs_20 05 35 03.5
comp=Z,429nm,20.0s
RAYN Ar Rayn 142.12 274 PKIKP **PKPdf 04 29 19.7 -0.1**
MOS Moscow 142.73 329 *i* PKIKP **PKiKP 04 29 22.6 -0.3**
MOS *e* 04 32 23.9
VRH Novokhopyorsk 142.87 320 *e*PKIKP **PKPdf 04 29 18.0 -2.1**
VRH pmax pmax
comp=Z,10.0nm,1.3s
FINES FINESS Array B 142.93 342 PKhKP PKPpre 04 29 15.6
comp=Z,1.9nm,0.6s,baz=62,slow=4.0,SNR=12
OBN Obninsk 143.58 328 PKPdf PKPbc 04 29 19.1 +0.4
OBN Obninsk 143.58 328 IAMs_20 IAMs_20 05 36 11.7
comp=Z,302nm,21.0s
OBN Obninsk 143.58 328⇑ *i*PKIKP **PKiKP 04 29 26.0 +1.4**
OBN *e* 04 32 39.7
OBN pmax pmax
comp=Z,50nm,1.4s
LPSR Galich'ya Gora 143.77 323 *e*PKIKP PKPab 04 29 18.9 +0.3
LPSR pmax pmax
comp=Z,9.0nm,0.7s
GNI Garni 143.92 301 PKPdf **PKPdf 04 29 22.2 -0.4**
GNI Garni 143.92 301 PKIKP **PKPdf 04 29 22.2 -0.4**
VORR Voronezh 144.07 322 *e*PKIKP PKPbc 04 29 21.0 +0.7
VORR pmax pmax
comp=Z,45nm,1.6s
ZEI Tsey 144.10 306 *i* PKIKP **PKPab 04 29 20.6 +0.1**
ZEI pmax pmax
comp=Z,22nm,1.4s
VSR Storozhevoye 144.30 321 *e*PKIKP **PKPab 04 29 20.3 -0.4**
VSR pmax pmax
comp=Z,10.0nm,1.5s
ONI Oni 144.47 306 PKPdf PKPbc 04 29 22.6 +0.7
ONI Oni 144.47 306 PKIKP PKPbc 04 29 22.6 +0.7
KBZ Khabaz 144.61 308 PKP **PKPab 04 29 21.4 -0.7**
comp=Z,8.1nm,1.1s,baz=358,slow=6.8,SNR=5.2
KBZ Khabaz 144.61 308 *i* PKIKP **PKPab 04 29 20.6 -1.4**
KIV Kislovodsk 144.70 308 IAMs_20 IAMs_20 05 40 03.8
comp=Z,305nm,20.0s
KIV Kislovodsk 144.70 308 *i* PKIKP **PKPab 04 29 21.4 -1.2**
KIV pmax pmax
comp=Z,11nm,1.1s
GEVA Gevas 145.44 298 PKPbc **PKPdf 04 29 25.2 -0.1**
NC204 NORSAR Array S 145.95 354 **PKPdf 04 29 26.1 +0.8**
NB2 NORSAR Subarra146.14 353 PKP **PKPdf 04 29 25.8 +0.2**
comp=Z,185nm,1.7s,baz=10,slow=3.2
NB2 NORSAR Subarra146.14 353 PKP **PKPdf 04 29 25.8 +0.2**
baz=10,slow=3.2
NOA NORSAR Array B 146.14 353 PKPbc **PKPdf 04 29 25.8 +0.2**
comp=Z,14nm,1.1s,baz=12,slow=4.5,SNR=17
GURO Guroymak-BITLI 146.21 299 PKPbc **PKPbc 04 29 28.6 +0.9**
SOC Sochi 146.87 308 *e*PKIKP **PKPdf 04 29 26.1 -1.2**
SOC *e* 04 32 51.1
SOC *e*PPP PPP 04 36 06.7
SOC *e*SS SS 04 51 57.3 +5.7
MARD Mardin 147.34 297 PKPbc **PKPbc 04 29 32.1 +1.1**
KONO Kongsberg 147.66 354 **PKPbc 04 29 30.8 -0.1**
KONO Kongsberg 147.66 354 PKP2 **PKPbc 04 29 30.8 -0.1**
MNK Minsk 147.77 333 *i* PKP2 **PKPbc 04 29 31.7 +0.4**
MNK *i* 04 33 01.2
MNK *i* PPP PPP 04 36 18.3
MNK *i* 04 36 40.6
MNK *i* SS SS 04 52 02.2 +1.9
MNK *i* SSS SSS 04 57 35.6
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,15nm,0.7s
MNK MLR MLR
comp=E,22nm,21.0s
MNK MLR MLR
comp=N,87nm,21.0s
MNK MLR MLR
comp=Z,130nm,21.0s
MNK Minsk 147.77 333 *i* PKP **PKPbc 04 29 31.8 +0.4**
comp=E,2.0nm,1.1s
MNK *i* PKP **PKPbc 04 29 31.8 +0.4**
comp=N,8.0nm,0.9s
MNK *i* PKP **PKPbc 04 29 31.8 +0.4**
comp=Z,15nm,0.7s,baz=222
MNK *i* pPKP **sPKPab 04 29 45.7 -0.7**
MNK *i* PP **PP 04 33 01.3 +3.0**
MNK *i* PPP PPP 04 36 18.3
MNK *i* SKS **SKSdf 04 36 40.6 +6.4**
MNK *i* SS **SS 04 52 02.2 +2.0**
MNK *i* SSS SSS 04 57 35.6
MNK *i* LR LR 05 29 55.3
MNK *i* LRM MLR 05 35 14.8
comp=E,22nm,21.1s
MNK *i* LRM MLR 05 35 28.0
comp=N,87nm,21.1s
MNK *i* LRM MLR 05 35 28.0
comp=Z,130nm,21.1s
NACGM Naroch 147.90 335 *e*PKP **PKPdf 04 29 29.4 +0.7**
comp=Z,81nm,0.8s,baz=39
ANN Anapa 148.03 312 *e*PKIKP **PKPdf 04 29 28.2 -1.0**
ANN *i* 04 29 32.1
ANN *e* 04 36 31.3
ANN pmax pmax
comp=Z,101nm,1.2s
AKASG Malin Array Be 149.81 327 PKPbc **PKPbc 04 29 36.3 -0.4**
comp=Z,3.4nm,0.6s,baz=44,slow=3.4,SNR=43
SIM Simferopol' 150.14 314 *e*PKP2 PKPab 04 29 55.1 +11
SIM pmax pmax
comp=Z,45nm,1.1s
SIM MLR MLR
comp=Z,371nm,26.0s
BRTR Keskin Array B 152.35 304 PKPbc **PKPbc 04 29 42.9 -0.3**
comp=Z,4.3nm,1.1s,baz=72,slow=4.0,SNR=7.3
BRTR PKPab **PKPab 04 29 54.2 +0.9**
comp=Z,6.5nm,0.9s,baz=104,slow=3.6,SNR=16
LVV L'vov 152.82 330 *e*PKIKP **PKPbc 04 29 43.5 -0.2**
LVV *e* 04 33 34.2
LVV *e* 04 53 38.6
UZH Uzhgorod 154.47 330 *e*PKIKP **PKPdf 04 29 42.2 +3.3**
UZH *e* 04 29 46.2
UZH *i* 04 30 01.2
CRVS Cervenica-Dubn 154.62 332 *e*PKIKP **PKPdf 04 29 39.6 +0.5**
CRVS Cervenica-Dubn 154.62 332 *e*PKP **PKPdf 04 29 39.6 +0.5**
CRVS *e* 04 29 50.6
OSTC Ostas 155.11 341 *e*PKPDF **PKPdf 04 29 40.2 +0.4**
OSTC *e*PKPAB sPKPbc 04 30 00.3 -1.1
OSTC AMS AMS 05 44 40.0
comp=Z,200nm,17.2s
OKC Ostrava-Krasne 155.12 337 AMS AMS 05 47 30.0
comp=Z,200nm,14.8s
UPC Upice 155.22 341 AMS AMS 05 39 10.0
comp=Z,300nm,20.4s
CLL Collm 155.25 346 PKPdf **PKPdf 04 29 39.2 -0.7**
CLL **pPKPdf 04 29 48.7 -0.6**
CLL Collm 155.25 346⇓ *e*PKIKP **PKPdf 04 29 39.0 -0.9**
CLL *i* 04 30 00.3
CLL pmax pmax
comp=Z,8.0nm,1.5s
CLL pmax pmax
comp=Z,19nm,1.1s
CLL MLR MLR
comp=Z,400nm,18.3s
CLL Collm 155.25 346 *e*PKPdf **PKPdf 04 29 39.0 -0.9**
comp=Z,8.0nm,1.5s
CLL *i* PKPdif **pPKPdf 04 29 48.8 -0.6**
comp=Z,11nm,1.2s
CLL ⇓*i*x x 04 30 00.3
comp=Z,19nm,1.1s
CLL *e*pPKPab **pPKPab 04 30 12.0 -2.2**
comp=Z,35nm,1.4s
CLL *e*PP **PP 04 33 41.0 +0.3**
CLL *es*PP 04 33 47.0
comp=Z,18nm,1.4s
CLL *e*PPP PPP 04 37 12.0
CLL *e*PPPP 04 39 24.0
CLL *e*SKKSac SKKSac 04 40 24.0 -4.2
CLL *e*PSKS 04 44 04.0
CLL *e*SKKSdf SKKSdf 04 45 24.0 +2.6
CLL *e*PPS PPS 04 46 42.0
CLL *ex* x 04 48 18.0
CLL *ex* x 04 52 18.0
CLL *e*SS **SS 04 53 24.0 +1.8**
CLL *ex* x 04 56 30.0
CLL *e*SSS SSS 04 59 18.0
CLL *ex* x 05 00 06.0
CLL *e*SSSS 05 03 12.0
CLL LmV 05 47 00.0
comp=Z,400nm,18.3s
DPC Dobruska-Polom 155.26 340 *e*PKIKP **PKPdf 04 29 38.9 -1.1**
DPC MLR MLR
comp=Z,200nm,18.5s
DPC Dobruska-Polom 155.26 340 *e*PKPDF **PKPdf 04 29 38.9 -1.1**
DPC ⇑*e*PKP **sPKPdf 04 29 50.3 -2.5**
DPC *e*PKPAB **PKPab 04 30 05.4 +0.3**
DPC AMS AMS 05 44 10.0
comp=Z,200nm,18.5s
KRLC Kraliky 155.37 339 *e*PKIKP **PKPdf 04 29 40.5 +0.3**
KRLC *e* 04 30 00.9
KRLC MLR MLR
comp=Z,300nm,20.9s
KRLC Kraliky 155.37 339 *e*PKPDF **PKPdf 04 29 40.5 +0.3**
KRLC *ex* x 04 30 00.9
KRLC AMS AMS 05 48 00.0
comp=Z,300nm,20.9s
MORC Moravsky Berou 155.38 338 *e*PKP **PKPdf 04 29 39.9 -0.3**
BRG Berggiesshubel 155.43 344 *e*PKP **PKPdf 04 29 40.2 0.0**
BRG Amp 04 29 44.4
comp=Z,20nm,1.9s
BRG *ex* x 04 29 50.5
BRG Amp 04 29 53.0
comp=Z,25nm,1.7s
BRG *ex* x 04 30 00.9
BRG Amp 04 30 03.0
comp=Z,32nm,1.5s
BRG *ex* x 04 30 16.6
BRG Amp 04 30 18.1
comp=Z,19nm,1.1s
BRG Berggiesshubel 155.43 344 *e*PKIKP **PKPdf 04 29 40.2 0.0**
BRG *e* 04 30 00.9
BRG pmax pmax
comp=Z,20nm,1.9s
BRG pmax pmax
comp=Z,25nm,1.7s
BRG pmax pmax
comp=Z,32nm,1.5s
BRG pmax pmax
comp=Z,19nm,1.1s
PVCC Panska Ves 155.59 343 *e*PKIKP PKPdf 04 29 50.9 +11
PVCC MLR MLR
comp=Z,300nm,17.7s
PVCC Panska Ves 155.59 343⇑ *e*PKP PKPdf 04 29 50.9 +11
PVCC AMS AMS 05 48 30.0
comp=Z,300nm,17.7s
VYHS Vyhne 156.00 335 *e*PKIKP **PKPdf 04 29 41.5 +0.5**
VYHS Vyhne 156.00 335 *e*PKP **PKPdf 04 29 41.5 +0.5**
VYHS *e* 04 30 08.7
PSZ Piszkesteto 156.04 332 PKPdf **PKPdf 04 29 41.9 +0.7**
PSZ PKPab **PKPab 04 30 08.4 -0.2**
PSZ IAMs_20 IAMs_20 05 44 33.8
comp=Z,398nm,20.0s
PSZ Piszkesteto 156.04 332 PKP2 **PKPab 04 30 08.4 -0.2**
PSZ 05 29 41.9
PRU Pruhonice 156.09 342 *e*PKP2 **PKPab 04 30 07.2 -1.4**
PRU MLR MLR
comp=Z,400nm,19.0s
PRU Pruhonice 156.09 342 *e*PKPAB **PKPab 04 30 07.2 -1.4**
PRU *ep*PKP **sPKPab 04 30 19.5 -1.7**
PRU AMS AMS 05 49 50.0
comp=Z,400nm,19.0s
VRAC Vranov 156.09 339 *e*PKP **PKPdf 04 29 40.5 -0.6**
JAVC Velka Javorina 156.12 337 *e*PKP **PKPdf 04 29 42.4 +1.2**
KRUC Moravsky 156.37 339 *e*PKP **PKPdf 04 29 41.2 -0.3**
TREC Trest 156.45 340 AMS AMS 05 55 10.0
comp=Z,300nm,21.3s
MODS Modra-Piesok 156.67 337 *e*PKIKP **PKPdf 04 29 46.1 +4.2**
MODS Modra-Piesok 156.67 337 *e*PKP **PKPdf 04 29 46.1 +4.2**
MODS *e* 04 29 59.0
MODS *e* 04 30 11.0
MEM Membach 156.91 356 *d*PKP **PKPab 04 30 10.8 -1.3**
BTNL Ternell 156.93 356 *d*PKP **PKPab 04 30 11.9 -0.3**
KHC Kasperske Hory 157.13 343 *e*PKIKP **PKPdf 04 29 41.7 -0.8**
KHC MLR MLR
comp=Z,400nm,17.0s
KHC Kasperske Hory 157.13 343 *e*PKPDF **PKPdf 04 29 41.7 -0.8**
KHC ⇑*e*PKP **sPKPdf 04 29 53.3 -2.0**
KHC *e*PKPAB **PKPab 04 30 13.3 +0.1**
KHC *ex* x 04 30 21.0
KHC AMS AMS 05 49 10.0
comp=Z,400nm,17.0s
BCLA Clavier 157.14 357 *d*PKP **PKPab 04 30 12.2 -0.9**
GRA1 Grafenberg Arr 157.14 347 IAMs_20 IAMs_20 05 42 51.6
comp=Z,312nm,20.0s
GRFO Grafenberg 157.15 347 IAMs_20 IAMs_20 05 42 51.6
comp=Z,312nm,20.0s
BHOU Houegnez 157.17 356 *d*PKP **PKPab 04 30 12.5 -0.7**
CKRC Cesky Krumlov 157.22 342 *e*PKPDF **PKPdf 04 29 42.0 -0.6**
CKRC ⇑*e*PKP **sPKPdf 04 29 53.9 -1.5**
CKRC *e*PKPAB **PKPab 04 30 10.5 -3.0**
BMRD Maredsous 157.28 358 *d*PKP **PKPab 04 30 13.6 0.0**
GEC2 GERESS Array S 157.36 343 PKPdf **PKPdf 04 29 43.3 +0.4**
GEC2 PKPab **PKPab 04 30 13.8 -0.4**
GERES GERESS Array B 157.36 343 PKP **PKPdf 04 29 43.2 +0.4**
comp=Z,0.1nm,0.3s,baz=5.7,slow=1.3,SNR=4.4
GERES PKPab **PKPab 04 30 12.7 -1.6**
comp=Z,1.4nm,0.9s,baz=33,slow=5.1,SNR=7.0
CONA Conrad Observa 157.54 338 *e*P **PKPab 04 30 15.6 +0.6**
comp=Z,18nm,1.3s
RONA Rosalia, Austr 157.59 337 *e*P **PKPab 04 30 15.9 +0.7**
comp=Z,16nm,1.3s
WLF Walferdange 157.85 356 *d*PKP **PKPab 04 30 15.7 -0.4**
VTS Vitosha 158.09 318 **PKPab 04 30 16.9 -0.8**
VTS Vitosha 158.09 318 PKP2 **PKPab 04 30 16.9 -0.8**
MOA Molln 158.11 340 *e*P **PKPab 04 30 18.0 +0.6**
comp=Z,10nm,1.3s
ARSA Arzberg 158.24 338 *e*P **PKPab 04 30 18.4 +0.4**
comp=Z,7.8nm,1.5s
BIOA Bad Ischl, Aus 158.43 341 *e*P **PKPab 04 30 19.3 +0.5**
comp=Z,15nm,1.2s
DIVS Divibare 158.89 326 IAMs_20 IAMs_20 05 52 26.9
comp=Z,362nm,19.0s
SOKA Soboth 158.90 338 *e*P **PKPdf 04 29 43.9 -0.9**
comp=Z,6.3nm,1.4s
SOKA *e*P **PKPab 04 30 21.0 0.0**
comp=Z,15nm,1.4s
BFO Black Forest 158.95 351 IAMs_20 IAMs_20 05 48 32.8
comp=Z,312nm,19.0s
ECH Echery 159.20 353 IAMs_20 IAMs_20 05 46 29.3
comp=Z,354nm,19.0s
OBKA Obir 159.21 338 *e*P **PKPab 04 30 21.7 -0.6**
comp=Z,8.6nm,1.2s
WATA Walderalm 159.30 345 *e*P **PKPab 04 30 22.9 +0.2**
comp=Z,25nm,1.5s
RETA Reutte 159.34 346 *e*P **PKPdf 04 29 44.2 -1.1**
comp=Z,4.3nm,1.6s
RETA *e*P **PKPab 04 30 22.3 -0.5**
comp=Z,18nm,1.5s
WTTA Wattenberg 159.35 344 *e*P **PKPdf 04 29 45.7 +0.2**
comp=Z,11nm,2.0s
WTTA *e*P **PKPab 04 30 22.6 -0.4**
comp=Z,21nm,1.3s
MYKA Terra Mystica 159.39 340 *e*P **PKPab 04 30 22.1 -1.0**
comp=Z,9.6nm,1.3s
MOTA Moosalm 159.40 345 *e*P **PKPdf 04 29 47.6 +2.2**
comp=Z,7.4nm,2.2s
MOTA *e*P **PKPab 04 30 22.7 -0.4**
comp=Z,17nm,1.5s
SQTA Sankt Quirin 159.49 345 *e*P **PKPab 04 30 23.6 +0.1**
comp=Z,12nm,1.6s
ABTA Abfaltersbach 159.61 342 *e*P **PKPdf 04 29 45.0 -0.6**
comp=Z,5.5nm,1.5s
ABTA P **PKPab 04 30 22.6 -1.4**
comp=Z,8.4nm,1.2s
FETA Feichten 159.79 346 *e*P **PKPdf 04 29 45.8 -0.1**
comp=Z,2.6nm,1.2s
FETA P **PKPab 04 30 24.7 -0.2**
comp=Z,9.2nm,1.4s
STAL STALIGIAL 160.00 341 PKPdf **PKPdf 04 29 47.0 +0.9**
STAL **PKPab 04 30 24.1 -1.5**
CTI Castel Tesino 160.48 343 PKPdf **PKPdf 04 29 46.2 -0.5**
CTI **PKPab 04 30 26.5 -1.3**
CTI Castel Tesino 160.48 343 PKIKP **PKPdf 04 29 46.2 -0.5**
CTI 04 30 26.5
TOA0 Torodi Ar. Sit 165.54 172 PKPdf **PKPdf 04 29 53.7 +1.4**
TOA0 PKPab **PKPab 04 30 50.0 -0.6**
TORD Torodi Ar. Bea 165.54 172 PKP **PKPdf 04 29 52.4 +0.1**
comp=Z,2.9nm,1.0s,baz=164,slow=1.0,SNR=8.3
TORD PKPab **PKPab 04 30 51.5 +0.9**
comp=Z,9.3nm,0.9s,baz=189,slow=4.4,SNR=18
TORD Torodi Ar. Bea 165.54 172 **PKPdf 04 29 50.8 -1.5**
TORD PKPab **PKPab 04 30 51.0 +0.5**
ESDC Sonseca Array 166.38 26 PKP **PKPdf 04 29 51.9 -0.5**
comp=Z,1.4nm,1.0s,baz=344,slow=3.2,SNR=6.8
ESDC PKPab **PKPab 04 30 52.0 -1.9**
comp=Z,2.5nm,1.1s,baz=317,slow=3.6,SNR=5.3
ESDC Sonseca Array 166.38 26 PKPdf **PKPdf 04 29 52.5 +0.2**
ESDC **PKPab 04 30 52.5 -1.3**
TAM Tamanrasset 174.94 200 **PKPdf 04 29 53.7 -3.9**
TAM Tamanrasset 174.94 200 PKIKP **PKPdf 04 29 53.7 -3.9**

BJI **14** *04:19:08.3±0.0,4.4°39S×127.°26E,h7km,mb4.7/36, mB4.9/19,Ms4.4/7,Ms7 4.1/7*
DJA **14** *04:19:10.0±0.2,4.°S±2.°×12.°7E±.°,h10km,M4.7/20, mb4.9/20,mB5.2/9,MLv4.8/18,Mw(mB)4.5/9,MwMwp4.7/1, Mwp5.0/1*
NEIC **14** *04:19:11.1±1.4,4.°40S±0.°07×127.°29E±0.°07,h10km±1km, mb4.6/28,Error ellipse: s-maj=12.8km s-min=11.1km az=233.0*
IDC **14** *04:19:13.7±3.0,4.°33S×127.°19E,h38km±27km,mb4.1/15, mbtmp4.4/16,ML4.7/3,MS3.9/7,Error ellipse: s-maj=20.4km s-min=13.2km az=76.0*

ISC 14 04:19:10.2±0.4,4.°37S±0.°05×127.°28E±0.°05,h10km,n89, σ1§45/89,mb4.5/26,MS4.0/4,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.14**	**351**	P	**Pb**	**04 19 30.6**	**-1.4**
AAI	**Ambon**	**1.14**	**53**	P	**Pn**	**04 19 30.9**	**-1.1**
MSAI	**Masohi**	**1.94**	**58**	P	**Pn**	**04 19 42.7**	**-0.5**
BNDI	**Bandanaira**	**2.62**	**93**	P	**Pn**	**04 19 51.9**	**-0.7**
SANI	**Sanana**	**2.64**	**331**	P	**Pn**	**04 19 52.0**	**-0.9**
LBMI	**Labuha**	**3.72**	**3**	P	**Pn**	**04 20 09.4**	**+1.7**
TNTI	**Ternate**	**5.11**	**1**	Pn	**Pn**	**04 20 26.7**	**-0.2**
TNTI	**Ternate**	**5.11**	**1**	P	**Pn**	**04 20 27.1**	**+0.3**
	0.4nm101nm,0.9s						
FAKI	**Fak Fak**	**5.17**	**74**	Pn	**Pn**	**04 20 28.5**	**+0.9**
FAKI	**Fak Fak**	**5.17**	**74**	P	**Pn**	**04 20 28.9**	**+1.3**
	0.9nm3µm284nm,0.8s						
SIJI	**Sorong**	**5.29**	**49**	Pn	**Pn**	**04 20 29.4**	**+0.1**
	62nm,0.3s,baz=220,slow=9.0,SNR=84						
SIJI				Sn	**Sn**	**04 21 28.8**	**-1.6**
	33nm,0.3s,baz=72,slow=22,SNR=26						
SIJI				LR	LR	04 22 31.2	
	comp=Z,426nm,20.4s,baz=290,slow=37						
LUWI	**Luwuk**	**5.58**	**306**	Pn	**Pn**	**04 20 34.0**	**+0.7**
LUWI	**Luwuk**	**5.58**	**306**	P	**Pn**	**04 20 31.4**	**-2.0**
	0.9nm6µm192nm,1.3s						
APSI	**Ampana**	**6.59**	**301**	P	**Pn**	**04 20 46.5**	**-0.7**
	0.5nm1µm160nm,0.9s						
BATI	**Baumata**	**6.81**	**212**	Pn	**Pn**	**04 20 50.5**	**+0.1**
	5.4nm,0.3s,baz=280,slow=20,SNR=5.3						
	51nm,0.7s						
BSSI	**Bau Bau, Buton**	**6.98**	**255**	P	**Pn**	**04 20 52.7**	**+0.1**
	0.3nm119nm,1.1s						
EDFI	**Ende, Flores**	**7.05**	**232**	P	**Pn**	**04 20 53.9**	**+0.3**
	0.1nm46nm,0.7s						
MRSI	**Marisa**	**7.19**	**312**	P	**Pn**	**04 20 55.9**	**+0.5**
	0.8nm2µm280nm,1.0s						
BKSI	**Bulukumba**	**7.19**	**262**	P	**Pn**	**04 20 55.9**	**+0.4**
	0.4nm1µm145nm,0.9s						
SPSI	**Sidrap Palu**	**7.50**	**273**	P	**Pn**	**04 21 00.7**	**+1.0**
	0.2nm982nm43nm,0.6s						
KAPI	**Kappang**	**7.53**	**265**	Pn	**Pn**	**04 21 00.0**	**0.0**
	15nm,0.3s,baz=113,slow=4.8,SNR=33						
KAPI				LR	LR	04 23 44.3	
	comp=Z,1µm,21.5s,baz=108,slow=36						
KAPI	**Kappang**	**7.53**	**265**	Pn	**Pn**	**04 21 00.6**	**+0.5**
TOLI2	**Tolitoli**	**8.47**	**310**	Pn	**Pn**	**04 21 15.0**	**+1.9**
MTN	**Manton Dam**	**9.24**	**156**	Pn	**Pn**	**04 21 24.3**	**+0.8**
BAKI	**Biak**	**9.37**	**71**	P	**Pn**	**04 21 26.8**	**+1.5**
	78nm,0.8s						
PLAI	**Plampang**	**10.42**	**244**	P	**Pn**	**04 21 40.5**	**+0.7**
	33nm,1.3s						
KNRA	**Kununurra**	**11.33**	**173**	Pn	**Pn**	**04 21 51.0**	**-1.2**
FITZ	**Fitzroy Crossi**	**13.74**	**187**	Pn	**Pn**	**04 22 22.5**	**-2.6**
	0.4nm,0.3s,baz=10,slow=8.3,SNR=6.7						
FITZ				LR	LR	04 28 22.7	
	comp=Z,418nm,18.5s,baz=26,slow=40						
WB0	**Warramunga Arr**	**16.80**	**156**	Pn	**Pn**	**04 23 05.0**	**-0.7**
WB0				IAmb	IAmb	04 23 09.3	
	comp=Z,49nm,0.9s						
WRAB	**Tennant Creek**	**16.93**	**157**	Pn	**Pn**	**04 23 07.6**	**+0.2**
WRAB				IAmb	IAmb	04 23 10.8	
	comp=Z,46nm,0.8s						
WRA	**Warramunga Arr**	**16.94**	**157**	P	**Pn**	**04 23 03.7**	**-3.8**
	comp=Z,3.3nm,0.6s,baz=327,slow=13,SNR=16						
WRA	**Warramunga Arr**	**16.94**	**157**	Pn	**Pn**	**04 23 07.0**	**-0.4**
WB2	**Warramunga Arr**	**16.94**	**157**	Pn	**Pn**	**04 23 06.3**	**-1.2**
WB2				IAmb	IAmb	04 23 10.9	
	comp=Z,52nm,0.8s						
WR0	**Warramunga Arr**	**17.03**	**156**		**Pn**	**04 23 07.8**	**-0.8**
WR0				IAmb	IAmb	04 23 12.5	
	comp=Z,31nm,0.9s						
KSM	**Kuching**	**17.92**	**289**		**P**	**04 23 20.6**	**+0.2**
KSM				IAmb	IAmb	04 23 23.3	
	comp=Z,70nm,1.2s						
COEN	**Coen**	**18.34**	**122**		**Pn**	**04 23 24.6**	**-0.3**
LEM	**Lembang**	**19.72**	**262**	LR	LR	04 31 47.5	
	comp=Z,619nm,18.6s,baz=91,slow=38						
MANU	**Manus Island**	**20.19**	**84**	P	**P**	**04 23 46.4**	**+1.1**
MANU				IAmb	IAmb	04 23 49.1	
	comp=Z,26nm,0.9s						
AS31	**Alice Springs**	**20.22**	**162**		**P**	**04 23 46.0**	**+0.5**
ASAR	**Alice Springs**	**20.22**	**162**	P	**P**	**04 23 46.5**	**+1.0**
	comp=Z,23nm,0.8s,baz=341,slow=12,SNR=100						
	comp=Z,23nm,0.8s						
ASAR	**Alice Springs**	**20.22**	**162**	P	**P**	**04 23 45.8**	**+0.3**
CTA	**Charters Tower**	**24.20**	**132**	P	**P**	**04 24 28.2**	**+1.0**
	comp=Z,13nm,0.6s,baz=306,slow=11,SNR=22						
	comp=Z,13nm,0.6s						
CTAO	**Charters Tower**	**24.20**	**132**	P	**P**	**04 24 27.4**	**+0.2**
CTAO				IAmb	IAmb	04 24 28.9	
	comp=Z,20nm,0.9s						
STKA	**Stephens Creek**	**30.48**	**155**	P	**P**	**04 25 23.8**	**+0.3**
	comp=Z,6.0nm,0.9s,baz=322,slow=9.2,SNR=8.2						
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**30.48**	**155**	P	**P**	**04 25 22.9**	**-0.5**
HNR	**Honiara**	**32.81**	**101**	LR	LR	04 39 27.4	
	comp=Z,158nm,20.0s,baz=224,slow=37						
CMAR	**Chiang Mai Arr**	**35.98**	**310**	P	**P**	**04 26 11.5**	**0.0**
	comp=Z,2.0nm,0.4s,baz=131,slow=6.8,SNR=10.0						
CMAR				LR	LR	04 44 25.1	
	comp=Z,92nm,18.2s,baz=130,slow=42						
	comp=Z,2.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**35.98**	**310**	P	**P**	**04 26 11.8**	**+0.3**
CHTO	**Chiang Mai**	**36.19**	**310**	P	**P**	**04 26 13.5**	**+0.2**
CHTO				IAmb	IAmb	04 26 14.1	
	comp=Z,7.4nm,0.8s						
JMN	**Monobe**	**38.41**	**9**	P	**P**	**04 26 34.4**	**+2.5**
JMN				IAmb	IAmb	04 26 41.1	
	comp=Z,14nm,0.9s						
PZH	**PanZhiHua**	**39.41**	**323**	P	**P**	**04 26 41.8**	**+1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,120nm,6.1s						
JHS	**Saijyo**	**39.55**	**8**	P	**P**	**04 26 42.9**	**+1.4**
JHS				IAmb	IAmb	04 26 51.6	
	comp=Z,13nm,0.7s						
LYN	**LuoYang**	**41.16**	**341**	⇑P	P	04 26 59.9	+5.1
LYN				pP	pwP	04 27 03.0	+1.7
LYN				sP	sP	04 27 04.8	+7.1
LYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSAR	**Wonju Array Be**	**41.60**	**1**	P	**P**	**04 26 59.3**	**+0.9**
KSRS	**Korea Array**	**41.62**	**1**	P	**P**	**04 26 58.1**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=177,slow=10,SNR=13						
	comp=Z,2.8nm,0.7s						
INCN	**Inchon**	**41.65**	**359**	P	**P**	**04 26 59.1**	**+0.3**
KS19	**Wonju Array Si**	**41.66**	**1**	P	**P**	**04 26 58.8**	**-0.1**
XAN	**Xi'an**	**41.95**	**337**	P	**P**	**04 27 02.6**	**+1.2**
XAN				pP	pwP	04 27 06.8	-0.8
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
MAJO	**Matsushiro**	**41.97**	**13**	P	**P**	**04 27 02.0**	**+0.6**
MJAR	**Matsushiro Arr**	**41.97**	**13**	P	**P**	**04 27 02.0**	**+0.6**

	comp=Z,1.3nm,0.8s,baz=172,slow=9.8,SNR=4.2							
	comp=Z,1.3nm,0.8s							
BJT	**Baijiatuau**	**45.34**	**348**	P	**P**	**04 27 30.0**	**+1.5**
BJT				IAmb	IAmb	04 27 34.9	
	comp=Z,16nm,1.4s							
LZH	**Lanzhou**	**45.84**	**333**	*e*P	**P**	**04 27 30.3**	**-2.5**
LZH				sP	pwP	04 27 39.8	+0.8
LZH				pmax	pmax		
	comp=Z,16nm,1.5s							
HHC	**Hu-ho-hao-te**	**47.25**	**344**	*e*P	**P**	**04 27 45.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s							
HHC				pmax	pmax		
	comp=Z,170nm,5.5s							
LSA	**Lhasa**	**48.44**	**317**	P	**P**	**04 27 53.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**48.54**	**5**	P	**P**	**04 27 53.5**	**+0.1**
	comp=Z,6.9nm,0.8s,baz=203,slow=5.7,SNR=7.7							
	comp=Z,6.9nm,0.8s							
MDJ	**Mudanjiang**	**48.81**	**2**	P	**P**	**04 27 56.6**	**+1.0**
MDJ	**Mudanjiang**	**48.81**	**2**	P	**P**	**04 27 55.6**	**0.0**
MDJ				pP	pwP	04 28 06.4	+4.7
MDJ				PcS	**PcS**	**04 33 12.9**	**-3.4**
MDJ				S	**S**	**04 34 59.6**	**+0.9**
MDJ				ScS	**ScS**	**04 37 42.9**	**-5.3**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.5s							
MDJ				pmax	pmax		
	comp=Z,96nm,3.9s							
MDJ				LR	LR			
	comp=Z,180nm,11.9s							
MDJ				LR	LR			
	comp=Z,170nm,16.3s							
MDJ				LR	LR			
	comp=Z,440nm,15.7s							
GTA	**Gaotai**	**50.39**	**332**	*e*P	**P**	**04 28 10.3**	**+2.4**
GTA				pP	pwP	04 28 14.3	+0.2
GTA				sP	sP	04 28 18.3	+7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s							
SONM	**Songino Array**	**55.13**	**343**	P	**P**	**04 28 41.3**	**-1.5**
	comp=Z,3.1nm,1.1s,baz=141,slow=7.3,SNR=7.8							
	comp=Z,3.1nm,1.1s							
SONM	**Songino Array**	**55.13**	**343**	P	**P**	**04 28 43.7**	**+0.9**
SONM				IAmb	IAmb	04 28 45.7	
	comp=Z,7.7nm,1.3s							
WMQ	**Urumqi**	**59.73**	**328**	*e*P	**P**	**04 29 18.8**	**+3.5**
PETK	**Petropavlovsk-**	**62.74**	**20**	P	**P**	**04 29 35.2**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=195,slow=4.6,SNR=4.1							
	comp=Z,1.7nm,0.6s							
PET	**Petropavlovsk**	**63.01**	**21**	P	**P**	**04 29 37.9**	**+0.8**
NIL	**Nilore**	**63.46**	**311**	P	**P**	**04 29 40.4**	**-0.2**
MK31	**Makanchi Array**	**64.56**	**327**		**P**	**04 29 46.2**	**-1.4**
MK31				IAmb	IAmb	04 30 01.6	
	comp=Z,2.5nm,0.8s							
MKAR	**Makanchi Array**	**64.56**	**327**	P	**P**	**04 29 46.0**	**-1.6**
	comp=Z,2.5nm,0.6s,baz=115,slow=8.3,SNR=15							
	comp=Z,2.5nm,0.6s							
MKAR	**Makanchi Array**	**64.56**	**327**	P	**P**	**04 29 46.1**	**-1.5**
ZAA0	**Zalesovo Array**	**68.05**	**335**	P	**P**	**04 30 09.8**	**+0.1**
ZALV	**Zalesovo Beam**	**68.05**	**335**	P	**P**	**04 30 07.6**	**-2.2**
	comp=Z,2.5nm,0.7s,baz=123,slow=5.7,SNR=5.3							
	comp=Z,2.5nm,0.7s							
SEY	**Seymchan**	**69.77**	**12**	P	**P**	**04 30 19.9**	**-0.4**
	comp=Z,6.8nm,0.8s,baz=207,slow=7.6,SNR=15							
	comp=Z,6.8nm,0.8s							
VNDA	**Vanda**	**75.37**	**173**	P	**P**	**04 30 53.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=176,slow=5.1,SNR=3.9							
	comp=Z,0.6nm,0.6s							
TIXI	**Tiksi**	**75.88**	**1**	LR	LR	05 05 35.4		
	comp=Z,171nm,21.7s,baz=180,slow=37							
TIXI	**Tiksi**	**75.88**	**1**	P	**P**	**04 30 58.3**	**+1.9**
NRIK	**Noril'sk**	**78.38**	**347**	P	**P**	**04 31 08.0**	**-2.5**
	comp=Z,3.6nm,0.6s,baz=107,slow=11,SNR=2.6							
	comp=Z,3.6nm,0.6s							
ABKAR	**Akbulak array**	**78.78**	**322**	P	**P**	**04 31 14.3**	**+1.2**
ILAR	**Eielson Array**	**92.14**	**25**	P	**P**	**04 32 17.6**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=226,slow=6.1,SNR=2.1							
	comp=Z,0.2nm,0.6s							
BMAR	**Burnt Mountain**	**93.29**	**23**	P	**P**	**04 32 27.1**	**+2.2**
BCAR	**Beaver Creek A**	**94.29**	**27**	P	**P**	**04 32 30.7**	**+1.0**
CPUP	**Villa Florida**	**149.16**	**172**	PKPbc	**PKPbc**	**04 38 58.2**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=235,slow=3.7,SNR=5.7							

*IDC **14** 04:23:17.2±7.0,20˚.46S×177˚.91W,h528km±85km, mb3.1/8, mbtmp4.1/9, Error ellipse: s-maj=44.5km s-min=24.7km az=178.0*

ISC 14 04:23:17.6±0.9,20˚.5S±0˚.2×177˚.9W±0˚.2,h534km,n9, σ0s83/10,mb3.6/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.26**	**193**	P		**P**	**P**	**04 26 57.7**	**-0.8**
	3.4nm,0.3s,baz=216,slow=2.6,SNR=5.7								
CTA	**Charters Tower**	**33.59**	**264**	P		**P**	**P**	**04 29 14.0**	**+0.2**
	5.9nm,0.5s,baz=98,slow=9.9,SNR=11								
	5.9nm,0.5s								
STKA	**Stephens Creek**	**37.89**	**244**	P		**P**	**P**	**04 29 49.9**	**+0.6**
	1.2nm,0.4s,baz=83,slow=9.5,SNR=3.7								
	1.2nm,0.4s								
ASAR	**Alice Springs**	**44.62**	**257**	P		**P**	**P**	**04 30 42.8**	**-0.1**
	5.0nm,0.7s,baz=90,slow=7.7,SNR=39								
ASAR				PcP		**PcP**	**PcP**	**04 32 14.1**	**-0.1**
	0.5nm,0.6s,baz=97,slow=4.1,SNR=4.3								
	5.0nm,0.7s								
WRA	**Warramunga Arr**	**44.70**	**262**	P		**P**	**P**	**04 30 42.4**	**-1.0**
	1.8nm,0.5s,baz=96,slow=7.7,SNR=27								
	1.8nm,0.5s								
FITZ	**Fitzroy Crossi**	**53.12**	**262**	P		**P**	**P**	**04 31 45.9**	**+0.1**
	1.0nm,0.4s,baz=64,slow=3.8,SNR=10								
	1.0nm,0.4s								
NVAR	**Mina Array Bea**	**80.93**	**43**	P		**P**	**P**	**04 34 37.3**	**+0.6**
	0.4nm,0.7s,baz=230,slow=7.9,SNR=4.5								
	0.4nm,0.7s								
TXAR	**Lajitas Array**	**86.95**	**57**	P		**P**	**P**	**04 35 07.1**	**+0.6**
	0.3nm,0.8s,baz=210,slow=5.2,SNR=3.5								
	0.3nm,0.8s								
ILAR	**Eielson Array**	**88.25**	**13**	P		**P**	**P**	**04 35 10.2**	**-1.3**
	0.3nm,0.7s,baz=221,slow=5.4,SNR=2.2								
	0.3nm,0.7s								

*DJA **14** 04:47:28.0±0.6,3˚N±5˚×12˚8E±˚, h10km, M4.2/10, mb4.3/2, MLv4.2/10*

*IDC **14** 04:47:31.2±2.9,2˚.49N×128˚.31E, h56km±29km, mb3.7/9, mbtmp4.1/11, ML4.3/2, Error ellipse: s-maj=31.4km s-min=15.1km az=69.0*

*NEIC **14** 04:47:31.2±1.0,2˚.37N±0˚.10×128˚.11E±0˚.08, h57km±10km, mb4.2/12, Error ellipse: s-maj=15.0km s-min=11.1km az=208.0*

ISC 14 04:47:30.6±0.6,2˚.44N±0˚.05×128˚.14E±0˚.09,h51km,n44, σ1s28/39,mb4.2/13,4D,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.82**	**205**				**Pn**	**04 47 59.4**	**-0.2**
TNTI	**Ternate**	**1.82**	**205**	P			**Pn**	**04 48 00.8**	**+1.2**
SGSI	**Sangihe**	**2.89**	**296**	P			**Pn**	**04 48 14.4**	**+0.2**
LBMI	**Labuha**	**3.12**	**192**	P			**Pn**	**04 48 19.6**	**+2.2**
DDMP	**Don Marcelino,**	**4.37**	**326**	‖*e*P			**Pn**	**04 48 34.3**	**-0.3**
SIJI	**Sorong**	**4.53**	**136**	P			**Pn**	**04 48 36.9**	**+0.1**
	17nm,0.3s,baz=95,slow=23,SNR=22								
SIJI				S			**Sn**	**04 49 27.7**	**-0.6**
	19nm,0.4s,baz=253,slow=23,SNR=2.0								
	40nm,0.3s								
KMSI	**Cibinong**	**4.55**	**246**	P			**Pn**	**04 48 37.3**	**+0.3**
SKMP	**Bagumbayan, Su**	**5.41**	**319**	‖*e*P			**Pn**	**04 48 49.8**	**+0.9**
GTOI	**Gorontalo**	**5.43**	**251**	P			**Pn**	**04 48 51.5**	**+2.5**
	0.1nm16nm,0.5s								
KCP	**Kidapawan**	**5.46**	**326**	‖*e*P			**Pn**	**04 48 53.1**	**+3.5**
KCP				*i* S			**Sn**	**04 49 52.4**	**+1.1**
BUKP	**Musuan**	**6.21**	**331**	‖*e*P			**Pn**	**04 49 00.3**	**+0.4**
LUWI	**Luwuk**	**6.38**	**237**	Pn			**Pn**	**04 49 01.2**	**-0.9**
TOLI2	**Tolitoli**	**7.47**	**260**				**Pn**	**04 49 17.0**	**-0.1**
KAPI	**Kappang**	**11.18**	**229**	P			**Pn**	**04 50 09.9**	**+2.1**
	1.7nm,0.3s,baz=242,slow=14,SNR=4.4								
	4.6nm,0.4s								
SBUM	**Sibu**	**15.90**	**270**	Pn			**Pn**	**04 51 08.5**	**-2.8**
SBUM				IAmb			IAmb	04 51 17.5	
	comp=Z,21nm,1.1s								
KSM	**Kuching**	**17.84**	**267**	P			**Pn**	**04 51 34.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**20.55**	**187**	P			Pn	04 52 07.5	-0.2
	comp=Z,1.1nm,0.5s,baz=3.2,slow=12,SNR=2.4								
	comp=Z,1.1nm,0.5s								
WB0	**Warramunga Arr**	**22.90**	**165**	P			**P**	**04 52 28.7**	**-1.6**
WB0				IAmb			IAmb	04 52 31.4	
	comp=Z,9.2nm,0.5s								
WRAB	**Tennant Creek**	**23.05**	**165**	P			**P**	**04 52 30.0**	**-1.8**
WRA	**Warramunga Arr**	**23.06**	**165**	P			**P**	**04 52 31.6**	**-0.3**
	comp=Z,3.9nm,0.4s,baz=345,slow=10,SNR=57								
	comp=Z,3.9nm,0.4s								
WRA	**Warramunga Arr**	**23.06**	**165**	P			**P**	**04 52 30.3**	**-1.6**
WB2	**Warramunga Arr**	**23.06**	**165**	P			**P**	**04 52 30.9**	**-1.0**
WB2				IAmb			IAmb	04 52 33.7	
	comp=Z,5.6nm,0.8s								
ASAR	**Alice Springs**	**26.55**	**168**	P			**P**	**04 53 03.5**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=355,slow=8.5,SNR=25								
	comp=Z,0.9nm,0.5s								
ASAR	**Alice Springs**	**26.55**	**168**	P			**P**	**04 53 03.0**	**-0.9**
ENH	**Enshi**	**32.85**	**329**	P			**P**	**04 53 59.2**	**-0.5**
KSRS	**Korea Array**	**34.85**	**360**	P			**P**	**04 54 16.4**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=177,slow=10,SNR=6.7								
	comp=Z,0.9nm,0.6s								
STKA	**Stephens Creek**	**36.44**	**161**	P			**P**	**04 54 30.4**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=346,slow=7.5,SNR=11								
	comp=Z,2.0nm,0.3s								
H11S3	**WAKE ISLAND Hy**	**40.99**	**64**	T		T	T	05 38 23.5	
	baz=251,slow=75,SNR=13								
H11S2	**WAKE ISLAND Hy**	**41.00**	**64**	T		T	T	05 38 27.8	
	baz=251,slow=75,SNR=13								
H11S1	**WAKE ISLAND Hy**	**41.01**	**64**	T		T	T	05 38 24.0	
	baz=251,slow=75,SNR=7.3								
H11N1	**WAKE ISLAND Hy**	**41.56**	**63**	T		T	T	05 39 03.3	
	baz=250,slow=75,SNR=54								
H11N2	**WAKE ISLAND Hy**	**41.58**	**63**	T		T	T	05 39 04.2	
	baz=250,slow=75,SNR=20								
H11N3	**WAKE ISLAND Hy**	**41.58**	**63**	T		T	T	05 39 04.7	
	baz=250,slow=75,SNR=46								
ULN	**Ulaanbaatar**	**48.78**	**341**	P			**P**	**04 56 10.2**	**-0.5**
ULN				IAmb			IAmb	04 56 16.6	
	comp=Z,2.2nm,0.9s								
SONM	**Songino Array**	**48.97**	**341**	P			**P**	**04 56 12.6**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=158,slow=9.7,SNR=4.9								
	comp=Z,0.9nm,0.6s								
SONM	**Songino Array**	**48.97**	**341**	P			**P**	**04 56 12.4**	**+0.3**
MK31	**Makanchi Array**	**59.41**	**325**	P			**P**	**04 57 27.1**	**-0.9**
MK31				IAmb			IAmb	04 57 29.6	
	comp=Z,1.7nm,0.7s								
MKAR	**Makanchi Array**	**59.41**	**325**	P			**P**	**04 57 28.5**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=119,slow=8.6,SNR=23								
	comp=Z,1.7nm,0.5s								
MKAR	**Makanchi Array**	**59.41**	**325**	P			**P**	**04 57 27.4**	**-0.6**
KK31	**Karatay Array**	**65.13**	**317**	P			**P**	**04 58 06.3**	**0.0**
KK31				IAmb			IAmb	04 58 28.5	
	comp=Z,3.3nm,1.4s								
KKAR	**Karatay Array**	**65.13**	**317**	P			**P**	**04 58 06.9**	**+0.5**
VNDA	**Vanda**	**81.98**	**173**	P			**P**	**04 59 46.0**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=304,slow=9.3,SNR=4.1								
	comp=Z,0.8nm,0.7s								
ARCES	**ARCESS Array B**	**92.14**	**340**	P			**P**	**05 00 33.2**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=42,slow=5.6,SNR=4.0								
	comp=Z,1.2nm,0.8s								
QSPA	**South Pole Qui**	**92.35**	**180**	P			**P**	**05 00 36.6**	**+1.1**

*NEIC **14** 04:49:21.2±1.3,22˚.7S±0˚.1×172˚.9E±0˚.1, h10km±2km, mb4.6/12, Error ellipse: s-maj=25.4km s-min=13.4km az=50.0*

*IDC **14** 04:49:22.2±1.3,23˚.37S×172˚.67E, h0km, mb4.3/4, mbtmp4.2/6, ML4.5/2, MS3.7/8, Error ellipse: s-maj=45.7km s-min=23.2km az=162.0*

ISC 14 04:49:20.5±0.9,22.7S±0˚.2×173.0E±0˚.1,h10km,n40, σ1s07/31,mb4.4/9,MS3.8/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.75**	**284**	Pn			**Pn**	**04 50 32.8**	**+0.7**
PINNC	**Pines Island,**	**5.12**	**270**				**Pn**	**04 50 37.1**	**-0.1**
OUENC	**Ouen Island, N**	**5.69**	**271**	Pn			**Pn**	**04 50 44.2**	**-0.9**
DZM	**Mont Dzumac**	**6.09**	**274**	Pn			**Pn**	**04 50 49.7**	**-1.0**
	1.3nm,0.3s,baz=98,slow=17,SNR=25								
DZM				Sn			**Sn**	**04 52 01.4**	**+0.9**
	2.0nm,0.3s,baz=153,slow=23,SNR=3.1								
	12nm,0.9s								
DZM	**Mont Dzumac**	**6.09**	**274**				**Pn**	**04 50 49.8**	**-0.8**
MSVF	**Nonsavu**	**6.84**	**45**	Pn			Pb	04 51 11.9	-7.5
	0.9nm,0.3s,baz=218,slow=14,SNR=4.9								
	11nm,0.9s								
KOUNC	**Koumac, New Ca**	**8.37**	**283**	Pn			**Pn**	**04 51 21.6**	**-0.2**
RAO	**Raoul Island**	**10.48**	**131**	LR			LR	04 54 54.5	
	comp=Z,294nm,19.9s,baz=4.0,slow=32								
URZ	**Urewera**	**15.93**	**168**	LR			LR	04 57 51.2	
	comp=Z,143nm,19.4s,baz=30,slow=33								
HNR	**Honiara**	**18.16**	**314**	LR			LR	04 59 41.6	
	comp=Z,192nm,18.8s,baz=286,slow=34								
EIDS	**Eidsvold**	**20.19**	**258**	P			**P**	**04 53 54.8**	**-0.6**
RPZ	**Rata Peaks**	**21.05**	**184**	LR			LR	05 01 12.1	
	comp=Z,342nm,18.8s,baz=3.0,slow=35								
CAN	**Canberra**	**24.40**	**234**	P			**P**	**04 54 39.7**	**+0.5**
CAN				IAmb			IAmb	04 54 53.1	
	comp=Z,23nm,1.2s								
CTA	**Charters Tower**	**25.02**	**271**	P			**P**	**04 54 46.4**	**+1.6**
	comp=Z,7.4nm,0.9s,baz=128,slow=8.8,SNR=4.2								
	comp=Z,7.4nm,0.9s								
CTAO	**Charters Tower**	**25.02**	**271**	P			**P**	**04 54 43.3**	**-1.5**
CTAO				IAmb			IAmb	04 54 48.4	
	comp=Z,12nm,1.0s								
STKA	**Stephens Creek**	**29.29**	**245**	LR			LR	05 05 06.2	
	comp=Z,190nm,18.4s,baz=6.2,slow=33								
AS31	**Alice Springs**	**35.87**	**261**	P			**P**	**04 56 21.0**	**+0.1**
ASAR	**Alice Springs**	**35.87**	**261**	P			**P**	**04 56 20.6**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=89,slow=9.1,SNR=31								
	comp=Z,4.4nm,0.8s								
ASAR	**Alice Springs**	**35.87**	**261**	P			**P**	**04 56 20.2**	**-0.7**
WB2	**Warramunga Arr**	**36.03**	**267**	P			**P**	**04 56 21.6**	**-0.6**
WB2				IAmb			IAmb	04 56 32.7	
	comp=Z,15nm,1.5s								
WRA	**Warramunga Arr**	**36.05**	**267**	P			**P**	**04 56 21.5**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=99,slow=8.3,SNR=7.9								
	comp=Z,1.9nm,0.7s								
WRA	**Warramunga Arr**	**36.05**	**267**	P			**P**	**04 56 21.7**	**-0.6**
FORT	**Forrest**	**40.72**	**249**	P			**P**	**04 57 01.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**44.48**	**267**	P			**P**	**04 57 31.9**	**-0.3**
VNDA	**Vanda**	**55.16**	**183**	LR			LR	05 20 39.8	
	comp=Z,73nm,18.4s,baz=354,slow=34								
SBA	**Scott Base**	**55.31**	**182**	P			**P**	**04 58 54.6**	**+0.8**
SBA				IAmb			IAmb	04 59 20.0	
	comp=Z,10nm,1.2s								
JHJ	**Hachijo jima 2**	**63.89**	**329**	LR			LR	05 27 21.3	
	comp=Z,35nm,18.9s,baz=107,slow=35								
PETK	**Petropavlovsk-**	**76.62**	**351**	P			P	05 01 18.5	+7.5
	comp=Z,3.1nm,0.8s,baz=177,slow=10,SNR=5.1								
	comp=Z,3.1nm,0.8s								
BELA	**Belgrano 2**	**78.37**	**174**	P			**P**	**05 01 21.2**	**+0.5**
BELA				IAmb			IAmb	05 01 42.3	
	comp=Z,3.7nm,1.1s								
ENH	**Enshi**	**80.55**	**308**	P			**P**	**05 01 33.6**	**+0.3**
TROLL	**Troll, Antarti**	**85.34**	**183**	P			**P**	**05 01 57.6**	**0.0**
SNAA	**Sanae**	**85.86**	**181**	P			**P**	**05 01 58.3**	**-1.9**
VNA3	**Neumayer Olymp**	**86.32**	**179**	P			**P**	**05 02 02.1**	**-0.3**
VNA2	**Neumayer--Watz**	**86.66**	**180**	P			**P**	**05 02 00.8**	**-3.2**
	baz=184,slow=2.0								
ULN	**Ulaanbaatar**	**91.71**	**322**	P			**P**	**05 02 27.4**	**-0.8**
ULN				IAmb			IAmb	05 02 36.3	
	comp=Z,5.6nm,1.4s								
NEW	**Newport**	**94.18**	**39**	LR			LR	05 40 43.6	
	comp=Z,51nm,18.1s,baz=304,slow=32								
BDFB	**Brasilia**	**124.67**	**130**	PKP			**PKiKP**	**05 08 22.9**	**+1.3**
	comp=Z,0.6nm,0.4s,baz=219,slow=6.5,SNR=3.3								
CLL	**Collm**	**147.47**	**336**	*i* PKPbc			**PKPab**	**05 09 05.5**	**-1.0**
	comp=Z,5.0nm,1.3s								
GERES	**GERESS Array B**	**149.15**	**333**	PKPbc			**PKPab**	**05 09 14.6**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=90,slow=2.9,SNR=4.4								
TORD	**Torodi Ar. Bea**	**167.42**	**223**	PKPab			**PKPab**	**05 10 33.9**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=160,slow=3.0,SNR=2.3								

*IDC **14** 05:12:28.5±1.8, 19˚.36S×169˚.64E, h0km, mb4.0/4, mbtmp4.0/6, ML4.5/2, MS3.5/2, Error ellipse: s-maj=48.9km s-min=26.1km az=168.0*

*NOU **14** 05:12:33.1, 19˚.71S×169˚.69E, h3km, MLv4.2/7, Vanuatu Islands*

*NEIC **14** 05:12:34.8±0.9, 19˚.56S±0˚.07×169˚.74E±0˚.07, h44km±13km, mb4.3/7, Error ellipse: s-maj=12.4km s-min=7.5km az=223.0*

ISC 14 05:12:34.2±0.9,19˚.66S±0˚.08×169˚.79E±0˚.09,h35km,n28, σ1s57/28,mb4.3/8,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.45**	**222**				**Pn**	**05 13 11.9**	**+0.2**
MARNC	**Mare, Loyalty**	**2.45**	**222**	P			**Pn**	**05 13 12.0**	**+0.3**
DVP	**Devils Point**	**2.46**	**321**	P			**Pn**	**05 13 13.8**	**+2.0**
PINNC	**Pines Island,**	**3.66**	**216**				**Pn**	**05 13 29.6**	**+1.3**
OUENC	**Ouen Island, N**	**3.89**	**225**				**Pn**	**05 13 33.4**	**+1.9**
OUENC	**Ouen Island, N**	**3.89**	**225**	P			**Pn**	**05 13 33.4**	**+1.9**
DZM	**Mont Dzumac**	**3.94**	**232**	Pn			**Pn**	**05 13 32.5**	**+0.2**
	3.4nm,0.3s,baz=95,slow=13,SNR=55								
DZM				Sn			**Sn**	**05 14 20.2**	**+2.8**
	11nm,0.3s,baz=134,slow=24,SNR=7.7								
	20nm,0.6s								
DZM	**Mont Dzumac**	**3.94**	**232**				**Pn**	**05 13 32.7**	**+0.4**
DZM	**Mont Dzumac**	**3.94**	**232**	P			**Pn**	**05 13 32.3**	**-0.1**
NOUC	**Port Laguerre**	**4.07**	**233**	P			**Pn**	**05 13 35.3**	**+1.4**
KOUNC	**Koumac, New Ca**	**5.25**	**259**	Pn			**Pn**	**05 13 50.1**	**-0.2**
KOUNC	**Koumac, New Ca**	**5.25**	**259**	P			**Pn**	**05 13 51.1**	**+0.9**
MSVF	**Nonsavu**	**8.06**	**78**	Pn			**Pn**	**05 14 28.4**	**-0.5**
	0.8nm,0.3s,baz=261,slow=15,SNR=14								
	29nm,0.8s								
MSVF	**Nonsavu**	**8.06**	**78**				**Pn**	**05 14 29.4**	**+0.5**
CAN	**Canberra**	**24.08**	**225**	P			**P**	**05 17 43.8**	**-2.7**
CAN				IAmb			IAmb	05 17 49.8	
	comp=Z,7.8nm,0.8s								
STKA	**Stephens Creek**	**28.07**	**239**	P			**P**	**05 18 23.0**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=63,slow=11,SNR=1.6								
STKA				LR			LR	05 30 10.7	
	comp=Z,124nm,18.4s,baz=218,slow=38								
	comp=Z,0.9nm,0.5s								
WB2	**Warramunga Arr**	**33.31**	**263**	P			**P**	**05 19 06.0**	**-2.9**
WB2				IAmb			IAmb	05 19 13.4	
	comp=Z,7.5nm,1.3s								
WRA	**Warramunga Arr**	**33.32**	**263**	P			**P**	**05 19 06.7**	**-2.3**
	comp=Z,0.7nm,0.6s,baz=100,slow=7.9,SNR=8.4								
	comp=Z,0.7nm,0.6s								
WRA	**Warramunga Arr**	**33.32**	**263**	P			**P**	**05 19 06.9**	**-2.1**
AS31	**Alice Springs**	**33.53**	**257**	P			**P**	**05 19 09.7**	**-1.2**
AS31				IAmb			IAmb	05 19 10.4	
	comp=Z,2.6nm,0.6s								
ASAR	**Alice Springs**	**33.53**	**257**	P			**P**	**05 19 09.6**	**-1.3**
	comp=Z,5.2nm,0.6s,baz=84,slow=8.9,SNR=112								
	comp=Z,5.2nm,0.6s								
ASAR	**Alice Springs**	**33.53**	**257**	P			**P**	**05 19 09.5**	**-1.4**
MTN	**Manton Dam**	**37.66**	**274**	P			**P**	**05 19 44.7**	**-1.7**
FITZ	**Fitzroy Crossi**	**41.72**	**265**	LR			LR	05 34 36.2	
	comp=Z,50nm,21.3s,baz=118,slow=32								
FITZ	**Fitzroy Crossi**	**41.72**	**265**	P			**P**	**05 20 19.1**	**-1.1**
VNDA	**Vanda**	**58.03**	**182**	P			**P**	**05 22 24.6**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=4.9,slow=5.6,SNR=4.0								
	comp=Z,0.6nm,0.8s								
VNDA	**Vanda**	**58.03**	**182**	P			**P**	**05 22 23.4**	**+0.2**
VNDA				IAmb			IAmb	05 22 46.0	
	comp=Z,1.8nm,1.1s								
QSPA	**South Pole Qui**	**70.39**	**180**	P			**P**	**05 23 44.9**	**+0.3**
QSPA				IAmb			IAmb	05 23 55.0	
	comp=Z,9.8nm,1.4s								

*UCR **14** 05:13:01.9±1.0, 13˚.94N×89˚.96W, h143km±3km, ML4.5, mb4.8(NEIC)*

*SNET **14** 05:13:01.7±1.0, 13˚.93N×89˚.96W, h144km±3km, ML4.7*

*IDC **14** 05:13:03.1±0.6, 14˚.18N×89˚.56W, h150km±4km, mb3.6/19, mbtmp4.1/21, MS3.4/1, Error ellipse: s-maj=17.8km s-min=8.8km az=59.0*

*NEIC **14** 05:13:03.1±1.7, 13˚.99N±0˚.07×89˚.92W±0˚.07, h139km±6km, mb4.8/266, Error ellipse: s-maj=11.5km s-min=8.0km az=221.0*

*INET **14** 05:13:04.3±1.9, 14˚.73N×89˚.39W, h15km±16km, MW3.8*

*GCG **14** 05:13:07.1±0.6, 14˚.27N×90˚.11W, h119km±21km, MD4.5*

**ISC 14 05:13:02.5±0.5,14˚.02N±0˚.05×89˚.93W±0˚.

LCND **La Caada** 2.11 109 eP Pn 05 13 38.4 -0.4
LCND eS Sn **05 14 07.5 +0.8**
CNCH Conchagua 2.17 110 eP Pn 05 13 39.3 -0.4
CNCH eS Sn **05 14 09.2 +0.9**
CNCH IAML 05 14 19.7
comp=Z,6µm,0.3s
CNCH Conchagua 2.17 110 eP Pn **05 13 39.3 -0.4**
CNCH eS Sn **05 14 09.2 +0.9**
CNCH IAML 05 14 19.7
comp=Z,6µm,0.3s
TGUH Tegucigalpa,Un 2.58 89 Pn Pn **05 13 44.2 -0.5**
PETF Flores 2.88 1 Pn **05 13 49.4 +1.1**
CCIG Comitan 3.09 317 Pn **05 13 52.2 +1.0**
CRIN San Cristobal 3.10 115 Pn **05 13 51.0 -0.1**
CRIN San Cristobal 3.10 115 eP Pn **05 13 50.9 -0.3**
CRIN San Cristobal 3.10 115 eP Pn **05 13 51.0 -0.1**
CRIN eS Sn **05 14 28.8 +0.1**
CNGN Cerro Negro 3.50 115 Pn **05 13 56.3 +0.1**
CNGN Cerro Negro 3.50 115 eP Pn **05 13 55.4 -0.8**
CNGN e 05 13 55.4
CNGN eS Sn **05 14 35.6 -2.3**
CNGN eS 05 14 35.8
BRAN Las Pilas 3.72 110 eP Pn **05 14 03.3 +4.2**
COPN Copaltepe 3.74 119 eP Pn **05 13 59.0 -0.3**
APYN Apoyeque 3.92 117 eP Pn **05 14 01.3 -0.4**
HUEN 4.03 114 eS Sn **05 14 47.5 -2.7**
MATN Matagalpa 4.05 105 Pn **05 14 02.9 -0.6**
BOAB BOACO BROADBAN 4.44 115 Pn Pn **05 14 07.5 -1.0**
ACON Acoyapa 5.07 113 Pn **05 14 16.4 -0.4**
ACON Acoyapa 5.07 113 eP Pn **05 14 16.8 -0.1**
ACON Acoyapa 5.07 113 eP Pn **05 14 16.8 -0.1**
HZTE Horizontes, Gu 5.37 127 Pn **05 14 21.7 +1.0**
CMIG Matias Romero 5.66 303 P Pn **05 14 24.3 -0.4**
comp=Z,18nm,0.3s,baz=164,slow=10,SNR=98
CMIG S Sn **05 15 24.7 -4.3**
comp=Z,55nm,0.5s,baz=291,slow=18,SNR=7.5
ORTG Ortega, Santa 5.69 129 Pn Pn **05 14 25.3 +0.1**
ESPN Las Esperanzas 5.78 108 Pn **05 14 26.1 -0.2**
JTS Las Juntas de 6.12 127 Pn Pn **05 14 30.4 -0.5**
JTS Las Juntas de 6.12 127 eP Pn **05 14 30.6 -0.3**
TEIG Tepich 6.37 14 Pn Pn **05 14 34.6 +0.5**
HDC Heredia 6.96 124 Pn **05 14 42.0 -0.1**
CVTR Volcan Turrial 7.23 123 Pn **05 14 46.3 +0.2**
RIMA Rio Macho 7.29 125 Pn **05 14 46.3 -0.4**
BATAN **Batan** 7.51 121 Pn **05 14 48.5 -0.9**
PEZE Perez Zeledon, 7.67 126 Pn **05 14 51.9 +0.3**
SRBA San Rafael, Bu 8.01 126 Pn Pn **05 14 56.2 0.0**
DRK0 Durika 8.08 125 Pn Pn **05 14 58.0 +0.8**
BRU2 Volcan 8.80 125 Pn **05 15 07.1 +0.4**
BRU2 Volcan 8.80 125 eP Pn **05 15 07.2 +0.4**
TLIG Tlapa 9.02 294 Pn **05 15 10.6 +0.9**
SOR Soroa 10.92 36 Pn Pn **05 15 37.4 +2.7**
BCIP Isla Barro Col 11.01 115 Pn Pn **05 15 35.3 -0.6**
MTDJ Mount Denham 12.62 69 P **05 16 04.8 +2.2**
MTDJ Mount Denham 12.62 69 eP P **05 16 04.8 +2.2**
SJCC San Jacinto, C 15.01 104 eP Pn **05 16 26.2 -1.0**
CBOC Ciudad Bolivar 15.92 119 eP Pn **05 16 38.9 +0.2**
DWPF Disney Wildern 16.10 28 P P **05 16 40.8 -0.2**
DWPF Disney Wildern 16.10 28 P P **05 16 41.3 +0.3**
baz=211
735A Kenedy 16.47 335 P P **05 16 45.6 +0.6**
735A IAmb IAmb 05 16 49.5
comp=Z,31nm,0.9s
YOTC Yotoco, Valle 16.71 125 eP P **05 16 48.3 +0.4**
833A Chaparral WMA, 16.73 330 P Pn **05 16 49.6 +1.4**
833A IAmb IAmb 05 17 18.1
comp=Z,27nm,0.9s
833A Chaparral WMA, 16.73 330 P Pn **05 16 49.0 +0.8**
baz=146,SNR=13
BRAL Brewton 17.27 8 P Pn **05 16 53.9 -0.8**
baz=189
346A Big Creek Wild 17.29 1 IAmb IAmb 05 16 59.4
comp=Z,83nm,1.1s
344A Westbrook Farm 17.36 358 P Pn **05 16 58.4 +2.6**
POPC Popayan, Colom 17.37 130 eP P **05 16 57.2 +1.8**
342A Flagon Creek P 17.41 353 P Pn **05 16 57.5 +1.1**
OTAV Otavalo 17.80 139 P **05 17 01.3 +1.0**
OTAV Otavalo 17.80 139 eP P **05 17 02.4 +2.1**
TULM Tulcn-Chalpat 17.87 137 IAmb IAmb 05 17 09.8
comp=Z,69nm,1.3s
ROSC El Rosal 17.89 119 P Pn **05 17 04.0 +1.4**
IMBA Imbabura, San 17.93 139 P Pn **05 17 05.7 +2.6**
352A Blakely 17.97 14 P Pn **05 17 04.0 +1.0**
352A IAmb IAmb 05 17 05.9
comp=Z,51nm,0.9s
PRAC Prado 18.04 123 eP P **05 17 03.9 +1.4**
435B Jarrell 18.11 338 Pn **05 17 04.0 -0.7**
435B IAmb IAmb 05 17 06.0
comp=Z,66nm,1.2s
435B Jarrell 18.11 338 P Pn **05 17 03.9 -0.7**
baz=156
VBMS Vicksburg 18.12 358 P Pn **05 17 05.5 +0.7**
baz=178,SNR=11
456A Hilliard 18.15 22 IAmb IAmb 05 17 09.2
comp=Z,36nm,0.7s
NATX Nacogdoches 18.18 347 Pn **05 17 05.0 -0.5**
NATX IAmb IAmb 05 17 09.0
comp=Z,79nm,1.2s
NATX Nacogdoches 18.18 347 P Pn **05 17 04.6 -0.9**
baz=165,SNR=8.6
250A Grady 18.19 10 P Pn **05 17 05.4 -0.1**
250A IAmb IAmb 05 17 07.9
comp=Z,62nm,1.2s
TIGA Tifton 18.29 18 P Pn **05 17 06.9 +0.1**
baz=200,SNR=7.9
RUSC La Rusia 18.45 114 eP P **05 17 06.0 -1.4**
CHIC Chingaza 18.50 119 eP P **05 17 07.9 0.0**
237A Washetta, Mont 18.69 344 P Pn **05 17 11.1 -0.4**
237A IAmb IAmb 05 17 12.1
comp=Z,66nm,1.1s
JCT Junction City 18.73 333 Pn **05 17 10.9 -1.2**
JCT IAmb IAmb 05 17 15.2
comp=Z,48nm,1.1s
JCT Junction City 18.73 333 P Pn **05 17 10.6 -1.5**
baz=149,SNR=18
FLOC Florencia 18.77 130 eP P **05 17 12.0 +1.6**
CHSH Refugio Sur-Vo 18.92 144 Pn **05 17 16.7 +1.8**
CHSH IAmb IAmb 05 17 20.9
comp=Z,31nm,0.8s
PORT Chimborazo Vol 18.95 143 P **05 17 16.4 +3.5**
255A Hazlehurst 19.09 20 IAmb IAmb 05 17 19.6
comp=Z,86nm,1.2s
LRAL Lakeview Retre 19.11 8 P Pn **05 17 15.6 -0.8**
LRAL IAmb IAmb 05 17 17.7
comp=Z,34nm,1.1s
LRAL Lakeview Retre 19.11 8 P Pn **05 17 15.7 -0.7**
baz=189,SNR=16
SC01 Santiago de lo 19.16 71 Pn **05 17 17.4 +0.3**
152A Waverly Hall 19.16 14 P Pn **05 17 15.9 -1.1**
152A IAmb IAmb 05 17 17.6
comp=Z,54nm,1.1s
WHTX Lake Whitney, 19.17 340 P Pn **05 17 15.3 -1.7**
WHTX Lake Whitney, 19.17 340 P P **05 17 15.1 +0.5**
baz=157,SNR=18
SOCV Socops 19.56 105 eP P **05 17 17.5 -1.5**
SDV Santo Domingo 19.59 103 P P **05 17 17.2 -2.3**
comp=Z,20nm,0.7s,baz=355,slow=2.3,SNR=4.0
SDV Santo Domingo 19.59 103 P P **05 17 18.4 -1.1**
SDV IAmb IAmb 05 17 23.2
comp=Z,25nm,0.8s
Z51A Franklin 19.69 12 IAmb IAmb 05 17 26.1
comp=Z,34nm,0.8s
Z38A Mt. Pleasant 19.70 347 IAmb IAmb 05 17 27.1
comp=Z,28nm,0.8s
MACC Macarena, Meta 19.80 125 eP P **05 17 21.7 +0.1**
TXAR Lajitas Array 19.84 322 P Pn **05 17 23.5 -1.6**
comp=Z,8.2nm,0.7s,baz=135,slow=10.0,SNR=117
TXAR pP **pP 05 17 50.8 +2.1**
comp=Z,5.5nm,0.9s,baz=144,slow=11,SNR=6.2
TX31 Lajitas Ar. Si 19.84 322 IAmb IAmb 05 17 25.4
comp=Z,36nm,0.8s
TX32 Lajitas Array 19.84 322 P Pn **05 17 24.6 -0.5**
Y49A Blount Mountai 20.00 9 IAmb IAmb 05 17 30.7
comp=Z,37nm,1.0s
GOGA Godfrey 20.18 16 IAmb IAmb 05 17 27.8
comp=Z,26nm,1.1s
GOGA Godfrey 20.18 16 P P **05 17 25.8 +0.4**
baz=196,SNR=11
Z35A Perchaven, San 20.34 342 IAmb IAmb 05 17 28.7
comp=Z,48nm,0.9s
PTLC Puerto Leguiza 20.34 131 eP P **05 17 30.9 +3.5**
OXF Oxford 20.41 1 P Pn 05 17 29.1 -2.4
OXF Oxford 20.41 1 P P **05 17 28.8 +0.9**
baz=181,SNR=19

Y52A Lilburn 20.46 14 IAmb IAmb 05 17 30.9
comp=Z,33nm,0.8s
BOSC San Juan Bosco 20.49 146 IAmb IAmb 05 17 33.4
comp=Z,39nm,1.1s
X48A Hartselle 20.51 7 P Pn 05 17 31.0 -1.8
X48A IAmb IAmb 05 17 31.7
comp=Z,22nm,0.8s
ABTX Abilene, Hawle 20.53 336 IAmb IAmb 05 17 32.6
comp=Z,30nm,0.8s
ABTX Abilene, Hawle 20.53 336 P P **05 17 29.4 +0.2**
baz=152,SNR=19
MIAR Mount Ida 20.70 351 P P **05 17 31.7 +0.7**
MIAR IAmb IAmb 05 17 35.6
comp=Z,25nm,0.9s
MIAR Mount Ida 20.70 351 P P **05 17 31.6 +0.7**
baz=170,SNR=23
UALR University of 20.78 354 P P **05 17 32.6 +0.8**
FPAL Fort Paine 20.80 10 IAmb IAmb 05 17 35.3
comp=Z,58nm,1.2s
PLAL Pickwick Lake 20.94 4 P P **05 17 34.4 +0.9**
PLAL IAmb IAmb 05 17 36.9
comp=Z,24nm,0.7s
LOOK Love County 20.94 343 P **05 17 34.1 +0.5**
LOOK IAmb IAmb 05 17 35.2
comp=Z,73nm,1.1s
X51A Calhoun 20.96 12 IAmb IAmb 05 17 37.7
comp=Z,30nm,0.9s
NHSC New Hope 20.97 23 P P **05 17 35.1 +1.2**
baz=207
X37A Clayton 21.06 347 IAmb IAmb 05 18 04.7
comp=Z,35nm,1.1s
SLBS Sierra La Lagu 21.21 300 P P **05 17 41.7 +5.0**
SLBS IAmb IAmb 05 17 42.2
comp=Z,28nm,1.1s
WHAR Wooly Hollow 21.28 355 IAmb IAmb 05 17 40.5
comp=Z,59nm,1.3s
HODGE Hodges 21.29 18 IAmb IAmb 05 17 39.9
comp=Z,15nm,0.7s
W50A Signal Mountai 21.50 10 IAmb IAmb 05 17 41.9
comp=Z,32nm,1.1s
W52A Murphy 21.67 13 IAmb IAmb 05 18 05.1
comp=Z,24nm,1.1s
V48A Smith Brothers 21.81 7 IAmb IAmb 05 17 46.1
comp=Z,46nm,1.1s
GNAR Gosnell 21.85 360 IAmb IAmb 05 17 47.6
comp=Z,73nm,1.2s
FCAR Ozark Folk Cen 21.86 355 IAmb IAmb 05 17 45.7
comp=Z,43nm,1.3s
CPCT Cooper Cave 21.89 12 IAmb IAmb 05 17 45.6
comp=Z,28nm,0.9s
LCAR Lake Charles 21.98 357 IAmb IAmb 05 17 46.5
comp=Z,56nm,1.3s
WVT Waverly 22.09 5 P P **05 17 45.8 +0.1**
WVT IAmb IAmb 05 17 47.5
comp=Z,60nm,1.3s
WVT Waverly 22.09 5 P P **05 17 46.0 +0.3**
baz=185
WMOK Wichita Mounta 22.12 340 IAmb IAmb 05 17 46.7
comp=Z,71nm,1.2s
WMOK Wichita Mounta 22.12 340 P P **05 17 44.7 -1.3**
baz=157,SNR=44
CLTN Cedars of Leba 22.21 8 IAmb IAmb 05 17 49.1
comp=Z,72nm,1.2s
TKL Tuckaleechee C 22.25 13 P P **05 17 47.3 +0.1**
comp=Z,24nm,0.8s,baz=178,slow=11,SNR=41
comp=Z,24nm,0.8s
BIRD Birdtown, Kers 22.25 21 IAmb IAmb 05 17 49.1
comp=Z,56nm,1.3s
V51A Loudon 22.26 12 IAmb IAmb 05 17 49.3
comp=Z,52nm,1.3s
KMSC Kings Mountain 22.41 19 P P **05 17 48.5 -0.3**
baz=202,SNR=10
TUL1 Leonard 22.42 347 IAmb IAmb 05 18 03.0
comp=Z,21nm,0.9s
TUL1 Leonard 22.42 347 P P **05 17 48.3 -0.6**
baz=165
V52A Sevierville 22.46 14 IAmb IAmb 05 17 52.0
comp=Z,37nm,1.1s
OK025 Westminster Rd 22.48 344 IAmb IAmb 05 17 50.7
comp=Z,34nm,0.6s
V53A Saluda 22.49 15 IAmb IAmb 05 17 52.0
comp=Z,36nm,1.1s
RLO Rose Lookout 22.52 349 IAmb IAmb 05 17 52.2
comp=Z,19nm,1.0s
X58A Rowland 22.58 23 IAmb IAmb 05 17 52.5
comp=Z,31nm,0.9s
MNTX Cornudas Mount 22.58 324 P P **05 17 49.7 -0.8**
MNTX Cornudas Mount 22.58 324 P P **05 17 50.1 -0.4**
baz=138,SNR=15
BCOK Bluff Creek, N 22.62 344 P **05 17 50.1 -0.7**
BCOK IAmb IAmb 05 17 51.4
comp=Z,60nm,1.0s
OK030 Cody Creek RV 22.66 345 IAmb IAmb 05 17 52.3
comp=Z,16nm,0.4s
PBMO Poplar Bluff 22.67 359 IAmb IAmb 05 17 54.5
comp=Z,31nm,0.9s
OK031 S. Brethren Rd 22.70 345 IAmb IAmb 05 17 52.7
comp=Z,18nm,0.4s
OK029 Liberty Lake 22.71 344 IAmb IAmb 05 17 52.1
comp=Z,28nm,0.8s
W57A Gilead 22.87 21 IAmb IAmb 05 17 55.1
comp=Z,20nm,0.8s
QUOK Quay 22.88 346 IAmb IAmb 05 17 53.5
comp=Z,23nm,1.2s
CSTR Hydro, Custer 22.93 341 IAmb IAmb 05 17 57.0
comp=Z,3.3nm,0.6s
MSTX Muleshoe 23.02 332 IAmb IAmb 05 17 55.9
comp=Z,32nm,1.1s
MSTX Muleshoe 23.02 332 P P **05 17 53.8 -0.9**
baz=147,SNR=14
V55A Taylorsville 23.11 18 IAmb IAmb 05 17 57.8
comp=Z,22nm,0.8s
MGMO Montain Grove 23.13 355 IAmb IAmb 05 17 57.6
comp=Z,27nm,1.1s
TZTN Tazewell 23.14 13 IAmb IAmb 05 17 58.2
comp=Z,40nm,1.1s
TZTN Tazewell 23.14 13 P P **05 17 56.0 +0.3**
baz=196,SNR=14
CGM3 Cape Girardeau 23.18 1 IAmb IAmb 05 17 58.4
comp=Z,55nm,1.1s
AMTX Amarillo 23.32 335 IAmb IAmb 05 17 58.7
comp=Z,27nm,0.6s
AMTX Amarillo 23.32 335 P P **05 17 57.4 0.0**
baz=150
ELIS Ellis County 23.54 340 IAmb IAmb 05 18 01.0
comp=Z,54nm,1.1s
U54A Nelsons Funny 23.55 17 IAmb IAmb 05 18 02.4
comp=Z,45nm,0.8s
SIUC Southern Illin 23.61 1 P P **05 18 00.6 +0.8**
U32A Winter Ranch, 23.70 342 IAmb IAmb 05 18 02.1
comp=Z,40nm,1.3s
OK038 West end E0370 23.71 342 IAmb IAmb 05 18 01.0
comp=Z,32nm,1.0s
CNNC Cliffs of the 23.75 25 IAmb IAmb 05 18 04.1
comp=Z,55nm,1.2s
CNNC Cliffs of the 23.75 25 P P **05 18 01.6 +0.4**
baz=210
V58A Windy Hill, Pi 23.76 22 IAmb IAmb 05 18 04.1
comp=Z,26nm,0.8s
S39A Bolivar 23.77 353 IAmb IAmb 05 18 03.3
comp=Z,14nm,0.6s
U56A King 23.82 19 IAmb IAmb 05 18 05.3
comp=Z,42nm,1.1s
OK032 Salt Plains WL 23.86 343 IAmb IAmb 05 18 03.2
comp=Z,43nm,1.1s
KAN13 South Haven SW 23.87 345 IAmb IAmb 05 18 03.3
comp=Z,34nm,1.0s
ATAH Atahualpa 23.94 151 P P **05 18 04.9 +1.4**
comp=Z,27nm,1.0s,baz=338,slow=6.1,SNR=12
ATAH LR LR 05 25 26.2
comp=Z,102nm,21.6s,baz=18,slow=31
comp=Z,27nm,1.0s
KAN14 Manchester OK 23.94 344 IAmb IAmb 05 18 03.8
comp=Z,23nm,1.1s
CCM Cathedral Cave 23.96 357 P P **05 18 03.4 +0.3**
CCM IAmb IAmb 05 18 05.5
comp=Z,25nm,0.8s
CCM Cathedral Cave 23.96 357 P P **05 18 03.6 +0.5**
baz=177
KAN17 Caldwell West 23.97 344 IAmb IAmb 05 18 04.7
comp=Z,41nm,1.0s
KAN05 Bluff City Nor 24.06 344 IAmb IAmb 05 18 05.7
comp=Z,44nm,0.9s
KS20 Mayfield South 24.09 345 IAmb IAmb 05 18 05.9
comp=Z,46nm,1.0s
KAN06 Argonia West S 24.19 344 IAmb IAmb 05 18 06.9
comp=Z,29nm,0.6s
KAN08 Anthony NE Sta 24.20 344 IAmb IAmb 05 18 07.0
comp=Z,37nm,0.9s
KAN16 Harper SW Stat 24.22 344 IAmb IAmb 05 18 07.2
comp=Z,15nm,0.8s
R40A Maddies Statio 24.26 356 IAmb IAmb 05 18 07.8
comp=Z,27nm,1.2s
KAN12 Harper NE Stat 24.27 344 IAmb IAmb 05 18 07.8
comp=Z,36nm,0.8s
R49A Shelbyville 24.54 9 IAmb IAmb 05 18 09.3
comp=Z,11nm,0.6s
121A Cookes Peak, D 24.60 322 P P **05 18 09.8 +0.7**
baz=134,SNR=9.0
BLA Blacksburg 24.60 18 IAmb IAmb 05 18 13.0
comp=Z,16nm,0.9s
BLA Blacksburg 24.60 18 P P **05 18 09.4 +0.4**
baz=202
SRIG Santa Rosalia 24.66 306 P P **05 18 10.5 +1.0**
SRIG IAmb IAmb 05 18 12.8
comp=Z,27nm,0.9s
U59A Littleton 24.76 24 IAmb IAmb 05 18 15.3
comp=Z,34nm,0.9s
BLO Bloomington 25.23 6 IAmb IAmb 05 18 16.1
comp=Z,18nm,1.1s
P43A Skaggs, Pawnee 25.52 1 IAmb IAmb 05 18 21.8
comp=Z,20nm,0.6s
Q51A Peebles 25.58 12 IAmb IAmb 05 18 19.1
comp=Z,21nm,0.6s
ANMO Albuquerque 25.62 327 P P **05 18 19.9 +1.6**
comp=Z,1.3nm,0.9s,baz=154,slow=13,SNR=4.7
comp=Z,1.3nm,0.9s
ANMO Albuquerque 25.62 327 P P **05 18 20.4 +2.0**
ANMO Albuquerque 25.62 327 P P **05 18 19.1 +0.7**
baz=140
P48A Milroy 25.65 8 P P **05 18 18.2 -0.2**
KSU1 Kansas State U 25.67 348 IAmb IAmb 05 18 21.0
comp=Z,11nm,0.6s
KSU1 Kansas State U 25.67 348 P P **05 18 18.1 -0.5**
baz=165,SNR=6.3
P38A Dawn 25.70 354 P P **05 18 19.0 +0.2**
P49A Miami Univ. Ec 25.82 9 P P **05 18 19.8 -0.2**
baz=192
P51A Williamsport 26.07 12 IAmb IAmb 05 18 30.0
comp=Z,18nm,1.2s
Q54A Coxs Mills 26.13 16 IAmb IAmb 05 18 24.1
comp=Z,21nm,1.2s
CBKS Cedar Bluff 26.17 342 P P **05 18 22.6 -0.6**
baz=158
TUC Tucson 26.35 317 P P **05 18 25.0 +0.1**
baz=129
SFIN Lafayette 26.37 5 IAmb IAmb 05 18 25.9
comp=Z,13nm,0.6s
SFIN Lafayette 26.37 5 P P **05 18 24.9 0.0**
baz=186,SNR=7.5
T25A Trinidad 26.40 333 P P **05 18 25.8 +0.4**
baz=147,SNR=8.5
P52A Corning 26.42 14 P P **05 18 25.9 +0.6**
baz=197
HDIL Hopedale 26.44 1 IAmb IAmb 05 18 48.8
comp=Z,12nm,0.7s
HDIL Hopedale 26.44 1 P P **05 18 25.6 +0.2**
baz=181,SNR=5.4
P53A Whipple 26.46 15 IAmb IAmb 05 18 27.2
comp=Z,16nm,1.1s
O48B Farmland 26.47 8 P P **05 18 25.7 0.0**
baz=190
N41A Harden Midland 26.60 358 IAmb IAmb 05 18 28.7
comp=Z,24nm,1.1s
Q56A Snyder Ridge, 26.67 19 IAmb IAmb 05 18 36.3
comp=Z,20nm,1.4s
ACSO Alum Creek Sta 26.81 12 IAmb IAmb 05 18 30.0
comp=Z,14nm,0.9s
ACSO Alum Creek Sta 26.81 12 P P **05 18 29.0 +0.2**
baz=195
N38A Joes South For 26.83 354 IAmb IAmb 05 18 31.0
comp=Z,29nm,1.1s
MCWV Mont Chateau 27.04 17 P P **05 18 30.9 +0.1**
baz=202
O53A New Philadelph 27.22 15 P P **05 18 33.0 +0.5**
baz=199
KSCO Kaye Shedlock' 27.30 338 P P **05 18 33.2 -0.2**
baz=152
SDCO Great Sand Dun 27.38 332 P P **05 18 35.2 +0.9**
baz=146,SNR=6.3
P57A Homestead Farm 27.45 20 IAmb IAmb 05 18 36.4
comp=Z,12nm,0.7s
L42A Oliver, Polo 27.88 0 IAmb IAmb 05 18 41.5
comp=Z,25nm,1.1s
SCIA State Center 27.93 355 IAmb IAmb 05 18 39.8
comp=Z,12nm,0.5s
SCIA State Center 27.93 355 P P **05 18 38.8 +0.1**
baz=173
L40A Anamosa 27.96 358 IAmb IAmb 05 18 42.2
comp=Z,16nm,0.8s
S22A 4UR Ranch, Cre 28.00 331 P P **05 18 40.6 +0.9**
baz=143,SNR=8.2
L46A Eue Claire 28.07 6 IAmb IAmb 05 18 40.1
comp=Z,20nm,0.7s
L44A Lake County Fo 28.11 3 P P **05 18 39.6 -0.7**
baz=184
BGNE Belgrade 28.21 347 P P **05 18 40.8 -0.5**
baz=163
Q24A Divide 28.25 334 P P **05 18 40.6 -1.4**
baz=148
L34A Svendsen Farm, 28.40 350 IAmb IAmb 05 18 43.9
comp=Z,28nm,1.1s
MVCO Mesa Verde 28.41 328 P P **05 18 41.5 -1.8**
baz=140
M53A WI Miller and 28.48 15 P P **05 18 42.7 -1.0**
baz=199
MVL Millersville 28.49 22 IAmb IAmb 05 18 45.4
comp=Z,22nm,1.2s
SSPA Standing Stone 28.53 19 P P **05 18 43.0 -1.1**
baz=205
AAM Ann Arbor 28.70 10 P P **05 18 45.0 -0.6**
baz=193
JFWS Jewell Farm 28.79 360 IAmb IAmb 05 18 47.3
comp=Z,9.1nm,0.7s
JFWS Jewell Farm 28.79 360 P P **05 18 45.8 -0.6**
baz=179,SNR=5.8
WUAZ Wupatki 28.81 322 P P **05 18 46.0 -0.8**
baz=133
ISCO Idaho Springs 29.14 335 P P **05 18 48.9 -1.0**
baz=148,SNR=7.8
I42A Draeger Farm, 29.78 1 IAmb IAmb 05 18 57.4
comp=Z,12nm,0.5s
L56A Greenwood 30.00 19 IAmb IAmb 05 18 57.9
comp=Z,18nm,1.1s
SWSC Sam W. Stewart 30.15 313 P P **05 18 58.1 -0.5**
baz=123
ECSD EROS Data Cent 30.16 350 IAmb IAmb 05 18 59.0
comp=Z,30nm,1.2s
ECSD EROS Data Cent 30.16 350 P P **05 18 58.0 -0.5**
baz=167,SNR=32
N23A Red Feather La 30.20 335 P P **05 18 58.4 -0.8**
baz=148
BC3 Big Chuckawall 30.30 315 P P **05 18 59.5 -0.5**
baz=124
PAL Palisades 30.30 24 P P **05 19 00.0 +0.3**
baz=212
IRM Iron Mountain 30.37 316 P P **05 19 00.5 0.0**
baz=125
BINY Binghamton 30.56 21 P P **05 19 01.7 -0.3**
baz=207
O20A White River Ci 30.57 332 IAmb IAmb 05 19 04.9
comp=Z,14nm,1.2s
O20A White River Ci 30.57 332 P P **05 19 02.2 -0.1**
baz=143,SNR=9.4
MONP2 Monument Peak 30.57 312 P P **05 19 02.0 -0.5**
baz=122
BELC Belle Mtn. Jos 30.87 315 P P **05 19 04.7 -0.3**
baz=124
TPFO Pinon Flats 30.97 314 P P **05 19 04.2 -1.7**
baz=123
PFO Pinyon Flats O 30.98 314 P P **05 19 04.3 -1.7**
baz=123
109C Camp Elliot, M 31.06 312 P P **05 19 05.7 -0.9**
baz=121
GMRC Granite Mounta 31.08 316 P P **05 19 06.9 0.0**
baz=126
SPMN Marine on St. 31.20 356 P P **05 19 06.8 -0.7**
baz=175,SNR=14
SUSD Miller 31.28 348 P P **05 19 08.4 0.0**
baz=163,SNR=11
J58A Remsen 31.83 20 IAmb IAmb 05 19 13.8
comp=Z,9.5nm,0.5s
K22A Casper 31.92 337 IAmb IAmb 05 19 16.0
comp=Z,6.4nm,0.8s
K22A Casper 31.92 337 P P **05 19 14.9 +0.7**
baz=148,SNR=5.9

COWI	Conover	31.98	1	IAmb	IAmb	05 19 14.9		
	comp=Z,13nm,0.6s							
SADO	Sadowa	31.99	15	P	P	05 19 13.7	-0.8	
	comp=Z,5.5nm,0.6s,baz=254,slow=6.7,SNR=8.4							
	comp=Z,5.5nm,0.6s							
F33A	5 Mile Ranch,	32.17	352	IAmb	IAmb	05 19 16.3		
	comp=Z,16nm,0.7s							
RSSD	Black Hills	32.33	341	P	P	05 19 19.1	+1.3	
RSSD	Black Hills	32.33	341	P	P	05 19 18.1	+0.3	
	baz=154							
E43A	Lone Tree Farm	32.35	4	P	P	05 19 17.3	-0.3	
E43A				IAmb	IAmb	05 19 18.2		
	comp=Z,24nm,0.9s							
E38A	The Farm, Brul	32.51	358	IAmb	IAmb	05 19 20.0		
	comp=Z,15nm,0.8s							
HRV	Adam Dziewonsk	32.52	26	P	P	05 19 20.7	+1.5	
	baz=214							
EDW2	Edwards Air Fo	32.73	314	P	P	05 19 21.4	+0.2	
	baz=122							
TPNV	Topopah Spring	32.75	319	P	P	05 19 21.9	+0.4	
	baz=127							
LRMC	Laurel Mtn Rad	32.84	316	P	P	05 19 22.5	+0.3	
	baz=124							
FURC	Furnace Creek,	32.86	318	P	P	05 19 22.9	+0.8	
	baz=126							
DUG	Dugway, Tooele	32.89	327	P	P	05 19 23.2	+0.6	
	baz=136							
MPMC	Manual Prospec	33.03	317	P	P	05 19 24.0	0.0	
	baz=125							
LONY	Lake Ozonia	33.18	20	P	P	05 19 24.8	-0.1	
	baz=208							
R11A	Troy Canyon, C	33.21	322	P	P	05 19 26.5	+1.0	
	baz=130							
BW06	Boulder Array	33.27	333	P	P	05 19 25.8	-0.2	
	baz=144							
PDAR	Pinedale Array	33.27	333	P	P	05 19 26.4	+0.5	
	comp=Z,1.9nm,0.9s,baz=126,slow=11,SNR=12							
PDAR				PcP	PcP	05 22 03.6	-1.2	
	comp=Z,0.2nm,0.4s,baz=119,slow=5.4,SNR=5.3							
	comp=Z,1.9nm,0.9s							
ARVC	Arvin	33.44	314	P	P	05 19 27.6	+0.3	
	baz=122							
GRAC	Grapevine Rang	33.49	318	P	P	05 19 28.3	+0.5	
	baz=126							
CWC	Cottonwood Cre	33.64	317	P	P	05 19 30.3	+1.0	
	baz=124							
EYMN	Ely	33.85	358	IAmb	IAmb	05 19 30.7		
	comp=Z,9.5nm,0.7s							
EYMN	Ely	33.85	358	P	P	05 19 29.4	-1.3	
	baz=177,SNR=6.0							
VES	Vestal, Richgr	33.99	315	P	P	05 19 30.7	-1.4	
	baz=122							
PKM	Mcpherson Peak	34.01	313	P	P	05 19 31.2	-1.3	
	baz=120							
LOHW	Long Hollow	34.40	333	IAmb	IAmb	05 19 37.9		
	comp=Z,10nm,1.1s							
TPAW	Teton Pass	34.46	333	IAmb	IAmb	05 19 38.3		
	comp=Z,15nm,1.2s							
AGMN	Agassiz Nation	34.53	353	P	P	05 19 36.1	-0.4	
	baz=170,SNR=27							
ELK	Elko	34.59	325	P	P	05 19 38.1	+0.6	
	comp=Z,0.4nm,0.5s,baz=56,slow=9.5,SNR=4.6							
	comp=Z,0.4nm,0.5s							
MDND	Maddock	34.67	349	P	P	05 19 38.2	+0.5	
	baz=163,SNR=40							
NV11	Mina Array Sit	34.84	319	P	P	05 19 41.1	+1.6	
NVAR	Mina Array Bea	34.94	319	P	P	05 19 41.8	+1.4	
	comp=Z,2.3nm,0.9s,baz=137,slow=7.9,SNR=16							
NVAR				pP	pP	05 20 14.5	+1.6	
	comp=Z,3.5nm,1.0s,baz=128,slow=7.7,SNR=6.1							
NVAR				ScP	ScP	05 25 41.3	-0.2	
	comp=Z,0.4nm,0.7s,baz=142,slow=4.6,SNR=4.2							
	comp=Z,2.3nm,0.9s							
LHV	Little Huntoon	34.96	319	P	P	05 19 42.9	+2.6	
H17A	Grant Village	35.02	334	P	P	05 19 42.2	+1.1	
	baz=144							
RLMT	Red Lodge	35.07	336	IAmb	IAmb	05 19 43.1		
	comp=Z,14nm,1.1s							
RLMT	Red Lodge	35.07	336	P	P	05 19 41.8	+0.3	
	baz=146,SNR=10							
LAO	LASA Array	35.32	340	IAmb	IAmb	05 19 45.0		
	comp=Z,16nm,1.1s							
LAO	LASA Array	35.32	340	P	P	05 19 44.3	+0.9	
	baz=152,SNR=6.8							
YMR	Madison River	35.40	334	IAmb	IAmb	05 19 47.5		
	comp=Z,13nm,1.0s							
HLID	Hailey	36.15	329	P	P	05 19 51.6	+1.0	
	baz=137							
DGMT	Dagmar	36.32	344	P	P	05 19 52.6	+0.8	
	baz=156,SNR=21							
BOZ	Bozeman (W)	36.43	334	P	P	05 19 53.9	+1.0	
	baz=143,SNR=9.1							
LPAZ	La Paz	37.03	144	P	P	05 19 58.9	+0.1	
	comp=Z,1.1nm,0.5s,baz=340,slow=5.1,SNR=12							
	comp=Z,1.1nm,0.5s							
LPAZ	La Paz	37.03	144	P	P	05 19 59.0	+0.2	
LMQ	La Malbaie	37.20	22	P	P	05 19 58.6	-0.7	
LMQ				IAmb	IAmb	05 20 08.7		
	comp=Z,12nm,1.1s							
EGMT	Eagleton	37.68	338	IAmb	IAmb	05 20 05.5		
	comp=Z,34nm,1.4s							
EGMT	Eagleton	37.68	338	P	P	05 20 04.2	+0.8	
	baz=148,SNR=12							
PB16	IPOC Station P	37.94	147	P	P	05 20 07.0	+0.6	
PLID	Pearl Lake	38.04	330	P	P	05 20 08.1	+1.4	
LMN	Caledonia Moun	38.15	29	P	P	05 20 07.0	-0.4	
LMN				IAmb	IAmb	05 20 29.1		
	comp=Z,22nm,1.4s							
MSO	Missoula	38.39	333	P	P	05 20 11.0	+1.6	
	baz=141,SNR=6.5							
VILB	Vilhena	39.83	131	P	P	05 20 19.8	-1.8	
VILB				IAmb	IAmb	05 20 20.7		
	comp=Z,5.9nm,0.7s							
J04D	Umpqua Nationa	40.12	323	P	P	05 20 24.6	+0.7	
	baz=127							
NEW	Newport	40.89	332	P	P	05 20 30.5	+0.5	
	comp=Z,0.8nm,0.4s,baz=98,slow=7.1,SNR=2.4							
	comp=Z,0.8nm,0.4s							
NEW	Newport	40.89	332	P	P	05 20 29.6	-0.3	
	baz=137							
I02E	Swisshome, OR	41.65	323	P	P	05 20 36.5	+0.3	
	baz=126							
G03D	McMinnville, O	41.97	324	P	P	05 20 38.7	0.0	
	baz=127							
SCHQ	Schefferville	44.53	19	P	P	05 20 58.4	-0.8	
	comp=Z,17nm,0.4s,baz=218,slow=6.2,SNR=104							
SCHQ	Schefferville	44.53	19	P	P	05 20 58.5	-0.7	
FCC	Fort Churchill	44.77	357	P	P	05 21 00.6	-0.3	
AQDB	Aquidauana	48.04	135	P	P	05 21 25.8	-1.2	
BDFB	Brasilia	50.86	124	P	P	05 21 46.3	-2.3	
	comp=Z,1.9nm,0.7s,baz=301,slow=11,SNR=3.2							
	comp=Z,1.9nm,0.7s							
CPUP	Villa Florida	51.13	142	P	P	05 21 49.5	-0.9	
	comp=Z,1.3nm,0.7s,baz=353,slow=7.7,SNR=3.4							
	comp=Z,1.3nm,0.7s							
YKA	Yellowknife Ar	51.48	346	P	P	05 21 51.9	-0.6	
	comp=Z,1.5nm,0.3s,baz=154,slow=5.8,SNR=81							
YKA				pP	pP	05 22 27.5	+0.9	
	comp=Z,5.0nm,0.9s,baz=144,slow=7.7,SNR=10							
	comp=Z,1.5nm,0.3s							
DLBC	Dease Lake	53.46	335	P	P	05 22 07.4	+0.2	
	comp=Z,4.5nm,0.9s,baz=144,slow=8.2,SNR=8.0							
DLBC				pP	pP	05 22 42.6	+0.8	
	comp=Z,4.1nm,0.9s,baz=111,slow=3.0,SNR=4.8							
	comp=Z,4.5nm,0.9s							
DLBC	Dease Lake	53.46	335	P	P	05 22 08.1	+0.9	
	baz=129							
R33M	Jennings River	54.45	336	P	P	05 22 14.6	+0.2	
	baz=128							
SIT	Sitka	54.97	332	P	P	05 22 18.2	+0.2	
	baz=122							
PLCA	Paso Flores	57.37	163	P	P	05 22 35.6	+0.3	
	comp=Z,3.9nm,1.1s,baz=338,slow=8.9,SNR=5.1							
PLCA				pP	pP	05 23 10.4	+0.4	
	comp=Z,1.7nm,0.8s,baz=62,slow=5.1,SNR=2.7							
	comp=Z,3.9nm,1.1s							
L27K	Beaver Creek,	60.85	336	P	P	05 22 58.4	-0.6	
	baz=119							
INK	Inuvik	61.00	343	P	P	05 22 58.7	-1.0	
	baz=130							
EGAK	Eagle	61.45	338	P	P	05 23 02.8	0.0	
	baz=120							
COYC	Coyhaique	61.48	166	P	P	05 23 04.2	+0.9	
I27K	Kandik River	62.03	338	P	P	05 23 06.7	-0.2	
	baz=120							
GLI	Glacier Island	62.13	332	P	P	05 23 06.9	-0.6	
	baz=113							
H27K	Steamboat Moun	62.32	339	P	P	05 23 08.3	-0.4	
	baz=121							
G27K	Doyon Strip	62.66	340	P	P	05 23 10.0	-1.0	
	baz=121							
ILAR	Eielson Array	63.62	336	P	P	05 23 16.6	-0.6	
	comp=Z,0.5nm,0.3s,baz=125,slow=5.3,SNR=11							
ILAR				pP	PcP	05 23 52.6	+0.3	
	comp=Z,3.7nm,1.0s,baz=118,slow=4.6,SNR=12							
	comp=Z,0.5nm,0.3s							
CAPN	Captain Cook N	63.95	331	P	P	05 23 18.3	-1.2	
	baz=109							
POKR	Poker Plat Res	63.97	337	P	P	05 23 18.4	-1.3	
	baz=114							
F25K	Christian Rive	64.40	339	P	P	05 23 21.0	-1.5	
	baz=117							
NEA2	Nenana	64.40	336	P	P	05 23 20.2	-2.3	
	baz=112							
H24K	Noodor Dome	64.44	337	P	P	05 23 22.0	-0.7	
	baz=114							
P19K	Oil Pt	64.60	330	P	P	05 23 22.8	-1.1	
	baz=106							
G24K	Hadweenzic Riv	64.65	338	P	P	05 23 23.4	-0.7	
	baz=115							
I23K	Minto, Yukon-K	64.73	336	P	P	05 23 23.8	-0.8	
	baz=112							
C27K	Jago River	64.76	342	P	P	05 23 23.9	-0.8	
	baz=120							
BPAW	Bear Paw Mtn.	65.00	335	P	P	05 23 24.8	-1.6	
	baz=110							
PPLA	Purkeypile	65.10	333	P	P	05 23 26.4	-0.8	
	baz=109							
F24K	Squaw Lake	65.14	339	P	P	05 23 26.3	-0.9	
	baz=115							
M20K	Styx River	65.20	332	P	P	05 23 25.9	-1.9	
	baz=107							
MLY	Marley	65.23	336	P	P	05 23 26.9	-1.0	
	baz=111							
D25K	Kavik River	65.44	341	P	P	05 23 28.1	-1.0	
	baz=117							
G23K	Bananza Creek	65.58	338	P	P	05 23 28.9	-1.2	
	baz=112							
L20K	Farewell, AK	65.72	333	P	P	05 23 29.1	-1.9	
	baz=107							
K20K	Telida	66.06	334	P	P	05 23 31.3	-1.8	
	baz=107							
TOLK	Toolik Lake Re	66.19	340	P	P	05 23 32.3	-1.6	
	baz=114							
C24K	Franklin Bluff	66.35	341	P	P	05 23 34.0	-0.8	
	baz=115							
E22K	Anaktuvuk Pass	66.76	339	P	P	05 23 36.9	-0.6	
	baz=111							
G21K	Allakaket	66.81	337	P	P	05 23 36.1	-1.8	
	baz=109							
C23K	Itkillik River	67.00	341	P	P	05 23 37.5	-1.5	
	baz=113							
F21K	Alatna River	67.04	338	P	P	05 23 39.0	-0.3	
	baz=109,SNR=5.1							
ESDC	Sonseca Array	78.13	52	P	P	05 24 42.8	-2.7	
	comp=Z,0.6nm,0.5s,baz=291,slow=5.0,SNR=6.9							
ESDC				pP	pP	05 25 21.1	-1.4	
	comp=Z,1.2nm,0.9s,baz=287,slow=6.1,SNR=4.4							
	comp=Z,0.6nm,0.5s							
NOA	NORSAR Array B	83.17	29	P	P	05 25 10.7	-1.1	
	comp=Z,0.7nm,0.8s,baz=279,slow=4.9,SNR=2.1							
	comp=Z,0.7nm,0.8s							
ARCES	ARCESS Array B	85.48	19	P	P	05 25 20.8	-2.4	
	comp=Z,0.2nm,0.4s,baz=296,slow=3.9,SNR=6.7							
	comp=Z,0.2nm,0.4s							
TORD	Torodi Ar. Bea	88.42	77	P	P	05 25 35.1	-3.4	
	comp=Z,0.2nm,0.5s,baz=291,slow=1.3,SNR=1.3							
	comp=Z,0.2nm,0.5s							
STKA	Stephens Creek	129.81	240	PKP	PKPdf	05 31 55.7	+0.9	
	comp=Z,0.7nm,0.4s,baz=0.0,slow=4.0,SNR=3.2							
WRA	Warramunga Arr	137.34	256	PKhKP	PKPpre	05 32 00.8		
	comp=Z,0.4nm,0.5s,baz=88,slow=3.7,SNR=5.8							
WRA				PKP	PKPdf	05 32 10.1	+0.9	
	comp=Z,3.2nm,0.7s,baz=88,slow=2.5,SNR=30							
WRA				SKPbc	SKPbc	05 35 30.5	+1.5	
	comp=Z,0.7nm,0.7s,baz=102,slow=2.2,SNR=5.1							
ASAR	Alice Springs	137.56	250	PKhKP	PKPpre	05 32 01.0		
	comp=Z,0.2nm,0.4s,baz=101,slow=3.3,SNR=5.0							
ASAR				PKP	PKPdf	05 32 10.3	+0.8	
	comp=Z,1.0nm,0.6s,baz=82,slow=1.9,SNR=12							
ASAR				SKPbc	SKPbc	05 35 31.4	+1.8	
	comp=Z,1.0nm,0.7s,baz=87,slow=2.3,SNR=6.5							
PZH	PanZhiHua	138.15	344	PKP	PKPdf	05 32 11.3	+0.5	
FITZ	Fitzroy Crossi	145.61	258	PKPbc	PKPbc	05 32 25.8	+1.3	
	comp=Z,6.9nm,0.4s,baz=5.1,slow=2.4,SNR=71							
CMAR	Chiang Mai Arr	146.56	345	pPKPbc	pPKPbc	05 33 07.2	+0.4	
	comp=Z,1.2nm,0.5s,baz=341,slow=4.6,SNR=2.0							

IDC ***14*** *05:31:03.6±2.3, 6°.54S±128°.75E, h240km±27km, mb3.4/2, mbtmp4.1/6, Error ellipse: s-maj=42.1km s-min=12.5km az=80.0*

ISC 14 05:31:03.4±0.8, 6°.50S±0°.06×128°.7E±0°.1, h250km, n7, σ1§64/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SIJI	Sorong	6.14	24	P		Pn	05 32 33.5	+0.1
	16nm,0.7s,baz=229,slow=19,SNR=1.5							
SIJI				S		S	05 33 42.2	-3.1
	8.1nm,0.3s,baz=232,slow=23,SNR=6.1							
BATI	Baumata	6.23	233	S		S	05 33 45.1	-2.2
	86nm,0.5s,baz=63,slow=22,SNR=9.1							
FITZ	Fitzroy Crossi	11.91	194	P		Pn	05 33 46.4	+0.5
	2.8nm,0.6s,baz=23,slow=9.6,SNR=15							
WRA	Warramunga Arr	14.42	158	P		P	05 34 17.1	+0.3
	2.6nm,0.5s,baz=337,slow=12,SNR=28							
WRA				S		S	05 36 56.4	0.0
	0.7nm,0.6s,baz=337,slow=21,SNR=3.3							
ASAR	Alice Springs	17.77	164	P		Pn	05 34 55.5	-0.9
	3.4nm,0.6s,baz=343,slow=11,SNR=61							
ASAR				S		S	05 38 04.8	-0.2
	0.5nm,0.8s,baz=349,slow=24,SNR=5.7							
KSRS	Korea Array	43.74	359	P		P	05 38 45.6	+1.5
	0.7nm,0.5s,baz=179,slow=9.9,SNR=5.6							
	0.7nm,0.5s							
MKAR	Makanchi Array	67.13	327	P		P	05 41 31.4	+1.1
	1.0nm,0.4s,baz=119,slow=8.6,SNR=13							
	1.0nm,0.4s							

KRSC ***14*** *05:56:03.0±0.6, 54°.53N×161°.72E, h54km±9km, ML4.7*
IDC ***14*** *05:56:04.8±0.6, 54°.73N×161°.25E, h42km±5km, mb3.7/24, mbtmp3.9/27, ML4.4/2, MS3.0/4, Error ellipse: s-maj=16.1km s-min=10.6km az=146.0*
MOS ***14*** *05:56:04.5±0.8, 54°.57N×161°.67E, h63km, mb4.4/6, Error ellipse: s-maj=7.9km s-min=4.0km az=78.9*
NEIC ***14*** *05:56:06.5±1.9, 54°.5N±0°.1×161°.7E±0°.1, h71km±11km, mb4.4/14, Error ellipse: s-maj=18.9km s-min=7.1km az=163.0*

ISC 14 05:56:04.6±0.5, 54°.56N±0°.03×161°.67E±0°.03, h47km±5km, n154, σ1§48/194, mb4.0/33, 3D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MKZ	Mys Kozlova	0.04	94	P	N	Pn	05 56 12.0	+0.1
MKZ	Mys Kozlova	0.04	94	eP		Pn	05 56 12.0	+0.1
TUMR	Tumrok	1.14	310	P	N	Pn	05 56 24.5	+0.3
TUMR	Tumrok	1.14	310	eP		Pn	05 56 24.5	+0.3
KII	Karymskiy	1.40	249	P	N	Pn	05 56 28.4	+0.6
KII	Karymskiy	1.40	249	eP		Pn	05 56 28.4	+0.6
KMNR	Kamenistaya	1.45	326	P	N	Pn	05 56 29.6	+1.1
KMNR				S		Sn	05 56 47.7	+1.3
KMNR	Kamenistaya	1.45	326	eP		Pn	05 56 29.6	+1.1
KMNR				eS		Sn	05 56 47.7	+1.3
BZMR	Bezymyannaya	1.54	334	P	N	Pn	05 56 30.5	+0.8
BZMR	Bezymyannaya	1.54	334	eP		Pn	05 56 30.5	+0.8
ZLN	Zelenaya	1.54	342	P	N	Pn	05 56 30.8	+1.1
ZLN	Zelenaya	1.54	342	eP		Pn	05 56 30.8	+1.1
BZWR	Bezymyannyi-We	1.56	335	P	N	Pn	05 56 31.0	+1.0
BZWR				S		Sn	05 56 50.7	+1.6
BZWR	Bezymyannyi-We	1.56	335	eP		Pn	05 56 31.0	+1.0
BZWR				S		Sn	05 56 50.7	+1.6
KIRR	Kirishev	1.59	332	P	N	Pn	05 56 31.6	+1.2
KIRR	Kirishev	1.59	332	eP		Pn	05 56 31.6	+1.2
KPT	Kopyto	1.63	330	P	N	Pn	05 56 32.2	+1.2
KPT	Kopyto	1.63	330	eP		Pn	05 56 32.2	+1.2
CIRR	Tsirk	1.65	342	P	N	Pn	05 56 32.4	+1.2
CIRR	Tsirk	1.65	342	eP		Pn	05 56 32.4	+1.2
SPN	Mys Shipunski	1.76	214	P	N	Pn	05 56 32.4	-0.2
SPN				S		Sn	05 56 52.4	-1.3
SPN	Mys Shipunski	1.76	214	eP		Pn	05 56 32.4	-0.2
						S	Sn	05 56 52.4 -1.3
KRSR	Krestovskiy	1.78	340	P	N	Pn	05 56 33.8	+0.9
KRSR				S		Sn	05 56 54.9	+0.5
KRSR	Krestovskiy	1.78	340	P		Pn	05 56 33.8	+0.9
KRSR				S		Sn	05 56 54.9	+0.5
KBTR	Krutoberegovo	1.78	21	P	N	Pn	05 56 33.7	+0.8
KBTR				S		Sn	05 56 55.4	+1.1
KBTR	Krutoberegovo	1.78	21	eP		Pn	05 56 33.7	+0.8
KBTR				S		Sn	05 56 55.4	+1.1
KBG	Krutoberegovo	1.80	19	P	N	Pn	05 56 34.5	+1.4
KBG				S		Sn	05 56 56.3	+1.5
KBG	Krutoberegovo	1.80	19	P		Pn	05 56 34.5	+1.4
KBG				S		Sn	05 56 56.3	+1.5
KOZ	Kozyrevsk	1.82	326	P	N	Pn	05 56 34.8	+1.4
KOZ	Kozyrevsk	1.82	326	eP		Pn	05 56 34.8	+1.4
KLY	Klyuchi	1.85	342	P	N	Pn	05 56 34.4	+0.6
KLY				S		Sn	05 56 55.9	-0.1
KLY	Klyuchi	1.85	342	eP		Pn	05 56 34.4	+0.6
KLY				eS		Sn	05 56 55.9	-0.1
NLC	Nalytchevo	1.96	226	P	N	Pn	05 56 36.0	+0.7
NLC				S		Sn	05 56 59.1	+0.6
NLC	Nalytchevo	1.96	226	eP		Pn	05 56 36.0	+0.7
NLC				eS		Sn	05 56 59.1	+0.6
BDR	Baidarnaya	2.03	353	P	N	Pn	05 56 38.1	+1.7
BDR				S		Sn	05 57 01.8	+1.2
BDR	Baidarnaya	2.03	353	P		Pn	05 56 38.1	+1.7
BDR				S		Sn	05 57 01.8	+1.2
SMKR	Semkarok	2.03	357	P	N	Pn	05 56 38.1	+1.7
SMKR	Semkarok	2.03	357	eP		Pn	05 56 38.1	+1.7
SRDR	Sredinnyy	2.08	329	P	N	Pn	05 56 37.8	+0.7
SRDR	Sredinnyy	2.08	329	eP		Pn	05 56 37.8	+0.7
SDLR	Sedlovina	2.09	233	P	N	Pn	05 56 38.7	+1.5
SDLR	Sedlovina	2.09	233	P		Pn	05 56 38.7	+1.5
SRKR	Sorokina	2.12	353	P	N	Pn	05 56 39.1	+1.5
SRKR	Sorokina	2.12	353	eP		Pn	05 56 39.1	+1.5
KRER	Koryakskii	2.13	235	P	N	Pn	05 56 39.4	+1.5
KRER	Koryakskii	2.13	235	eP		Pn	05 56 39.4	+1.5
SMAR	Somma	2.13	234	P	N	Pn	05 56 39.5	+1.6
SMAR				S		Sn	05 57 04.6	+1.3
SMAR	Somma	2.13	234	eP		Pn	05 56 39.5	+1.6
SMAR				eS		Sn	05 57 04.6	+1.3
KRX	Arik	2.15	237	P	N	Pn	05 56 39.2	+1.1
KRX				S		Sn	05 57 04.7	+1.1
KRX	Arik	2.15	237	eP		Pn	05 56 39.2	+1.1
KRX				eS		Sn	05 57 04.7	+1.1
UGLR	Uglovaya	2.16	232	P	N	Pn	05 56 39.9	+1.7
UGLR				S		Sn	05 57 05.5	+1.8
UGLR	Uglovaya	2.16	232	eP		Pn	05 56 39.9	+1.7
UGLR				S		Sn	05 57 05.5	+1.8
AVH	Avacha	2.16	234	P	N	Pn	05 56 39.9	+1.7
AVH	Avacha	2.16	234	P		Pn	05 56 39.9	+1.7
KOK	Koryaka	2.19	236	P	N	Pn	05 56 40.0	+1.3
KOK	Koryaka	2.19	236	eP		Pn	05 56 40.0	+1.3
DALK	Dalny	2.31	230	P	N	Pn	05 56 41.5	+1.4
DALK				S		Sn	05 57 07.7	+0.5
DALK	Dalny	2.31	230	eP		Pn	05 56 41.5	+1.4
DALK				eS		Sn	05 57 07.7	+0.5
GNL	Ganaly	2.36	250	P	N	Pn	05 56 42.4	+1.5
GNL	Ganaly	2.36	250	eP		Pn	05 56 42.4	+1.5
PET	Petropavlovsk	2.36	230			Pn	05 56 42.1	+1.4
PET	Petropavlovsk	2.36	230	P	N	Pn	05 56 42.3	+1.5
PET				S		Sn	05 57 09.1	+0.7
PET	Petropavlovsk	2.36	230	P		Pn	05 56 42.3	+1.5
PET				S		Sn	05 57 09.1	+0.7
BKI	Bering	2.57	74	P	N	Pn	05 56 44.6	+0.9
BKI				S		Sn	05 57 13.6	-0.1
BKI	Bering	2.57	74	eP		Pn	05 56 44.6	+0.9
BKI				S		Sn	05 57 13.6	-0.1
KRMR	Karymshinskiy	2.72	232	P	N	Pn	05 56 48.1	+2.3
KRMR				S		Sn	05 57 20.1	+2.6
KRMR	Karymshinskiy	2.72	232	eP		Pn	05 56 48.1	+2.3
KRMR				eS		Sn	05 57 20.1	+2.6
PEA0B	Petropavlovsk-	2.76	240			Pn	05 56 47.8	+1.4
PEA0B	Petropavlovsk-	2.76	240	*i* P	N	Pn	05 56 47.5	+1.1
PETK	Petropavlovsk-	2.76	240	P		Pn	05 56 46.8	+0.4
	16nm,0.3s,baz=77,slow=16,SNR=104							
PETK				S		Sn	05 57 24.4	+6.0
	64nm,0.5s,baz=67,slow=31,SNR=5.3							
PETK	Petropavlovsk-	2.76	240			Pn	05 56 47.0	+0.6
PETK	Petropavlovsk-	2.76	240	P	N	Pn	05 56 47.0	+0.6
RUS	Russkaya	2.84	223	P	N	Pn	05 56 48.7	+1.3
RUS				S		Sn	05 57 21.1	+0.7
RUS	Russkaya	2.84	223	P		Pn	05 56 48.7	+1.3
RUS				S		Sn	05 57 21.1	+0.7
GRL	Gorelyy	2.94	228	P	N	Pn	05 56 51.2	+2.3
GRL				S		Sn	05 57 25.1	+2.2
GRL	Gorelyy	2.94	228	P		Pn	05 56 51.2	+2.3
GRL				eS		Sn	05 57 25.1	+2.2
MTVR	Mutnovka	2.94	226	P	N	Pn	05 56 50.9	+2.0
MTVR				S		Sn	05 57 24.4	+1.4
MTVR	Mutnovka	2.94	226	eP		Pn	05 56 50.9	+2.0
MTVR				S		Sn	05 57 24.4	+1.4
APC	Apacha	3.14	240	S		Sn	05 57 30.6	+3.0
PAU	Pauzhetka	4.26	225	P	N	Pn	05 57 09.7	+2.8
PAU	Pauzhetka	4.26	225	P		Pn	05 57 09.7	+2.8

comp=Z,0.4nm,0.7s,baz=273,slow=8.2,SNR=5.3
comp=Z,0.4nm,0.7s
KSRS Korea Array 28.64 247 P **P** **06 01 56.5 +0.1**
comp=Z,1.0nm,0.9s,baz=43,slow=8.8,SNR=5.5
KSRS LR LR 06 13 23.4
comp=Z,30nm,18.8s,baz=55,slow=36
comp=Z,1.0nm,0.9s
INK Inuvik 32.14 39 P **P** **06 02 27.9 +0.8**
comp=Z,1.1nm,0.6s,baz=276,slow=2.2,SNR=5.6
comp=Z,1.1nm,0.6s
INK Inuvik 32.14 39 P **P** **06 02 28.4 +1.4**
INK Inuvik 32.14 39 P **P** **06 02 28.4 +1.4**
INK pmax pmax
comp=Z,4.0nm,1.3s
H11N2 WAKE ISLAND Hy 35.00 171 T T 06 40 02.7
baz=355,slow=76,SNR=1469
H11N3 WAKE ISLAND Hy 35.01 171 T T 06 40 05.7
baz=355,slow=76,SNR=1238
H11N1 WAKE ISLAND Hy 35.01 171 T T 06 40 04.6
baz=355,slow=76,SNR=2209
HHC Hu-ho-hao-te 35.60 268 *e*P **P** **06 02 57.8 +0.2**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,5.7s
H11S1 WAKE ISLAND Hy 36.19 172 T T 06 41 54.9
baz=352,slow=76,SNR=59
H11S3 WAKE ISLAND Hy 36.20 172 T T 06 41 31.1
baz=352,slow=76,SNR=47
H11S2 WAKE ISLAND Hy 36.21 172 T T 06 41 33.9
baz=352,slow=76,SNR=47
YKA Yellowknife Ar 41.45 44 P **P** **06 03 47.6 +1.5**
comp=Z,0.9nm,0.6s,baz=301,slow=8.0,SNR=8.6
YKA PcP **PcP** **06 05 44.2 +1.2**
comp=Z,0.7nm,0.8s,baz=304,slow=3.4,SNR=6.0
comp=Z,0.9nm,0.6s
CD2 Chengdu 47.04 264 P **P** **06 04 29.9 -1.4**
WMQ Urumqi 47.37 289 *e*P **P** **06 04 35.4 +1.7**
KURK Kurchatov 47.76 302 P **P** **06 04 34.4 -2.1**
KURK 06 06 04.4
KURBB Kurchatov Arra 47.86 301 P **P** **06 04 34.4 -3.0**
comp=Z,0.8nm,0.4s,baz=57,slow=7.7,SNR=5.8
KURBB PcP **PcP** **06 06 04.4 -0.8**
comp=Z,0.4nm,0.4s,baz=42,slow=3.4,SNR=5.1
comp=Z,0.8nm,0.4s
MKAR Makanchi Array 48.36 295 P **P** **06 04 37.7 -3.7**
comp=Z,0.3nm,0.4s,baz=45,slow=6.8,SNR=5.8
comp=Z,0.3nm,0.4s
PZH PanZhiHua 51.51 262 P **P** **06 05 06.4 +0.8**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,4.7s
ARCES ARCESS Array B 52.18 342 P **P** **06 05 08.4 -1.5**
comp=Z,0.4nm,0.4s,baz=32,slow=7.4,SNR=6.4
comp=Z,0.4nm,0.4s
SUMG Summit 52.39 8 P **P** **06 05 12.5 +0.7**
SUMG IAmb IAmb 06 05 12.6
comp=Z,5.7nm,0.9s
SUMG Summit 52.39 8 P **P** **06 05 12.5 +0.7**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
NVAR Mina Array Bea 54.38 72 P **P** **06 05 28.6 +1.9**
comp=Z,0.4nm,0.6s,baz=301,slow=8.1,SNR=5.8
NVAR pP **pP** **06 05 41.2 +1.4**
comp=Z,1.1nm,0.8s,baz=296,slow=7.9,SNR=8.0
comp=Z,0.4nm,0.6s
PDAR Pinedale Array 56.01 63 P **P** **06 05 39.5 +1.2**
comp=Z,0.3nm,0.6s,baz=319,slow=4.3,SNR=4.7
PDAR pP **pP** **06 05 52.6 +1.2**
comp=Z,0.4nm,0.6s,baz=307,slow=5.2,SNR=3.6
comp=Z,0.3nm,0.6s
ABKAR Akbulak array 57.55 311 P **P** **06 05 48.0 -0.9**
ABKAR IAmb IAmb 06 06 13.3
comp=Z,3.4nm,1.4s
FINES FINESS Array B 59.14 337 P **P** **06 05 59.0 -0.8**
comp=Z,2.9nm,0.5s,baz=34,slow=7.5,SNR=28
comp=Z,2.9nm,0.5s
NB2 NORSAR Subarra 62.39 344 P **P** **06 06 20.9 -1.0**
comp=Z,0.9nm,0.3s,baz=20,slow=6.9
NOA NORSAR Array B 62.39 344 P **P** **06 06 21.1 -0.8**
comp=Z,0.8nm,0.3s,baz=18,slow=7.4,SNR=12
comp=Z,0.8nm,0.3s
HFS Hagfors 62.83 343 P **P** **06 06 23.8 -1.0**
comp=Z,1.7nm,0.4s,baz=28,slow=3.5,SNR=19
comp=Z,1.7nm,0.4s
SCHQ Schefferville 63.91 29 P **P** **06 06 31.4 -0.7**
comp=Z,3.5nm,0.8s,baz=274,slow=7.2,SNR=3.7
comp=Z,3.5nm,0.8s
AKASG Malin Array Be 67.83 330 P **P** **06 06 55.8 -1.5**
comp=Z,0.3nm,0.3s,baz=25,slow=6.5,SNR=3.6
comp=Z,0.3nm,0.3s
TXAR Lajitas Array 69.22 69 P **P** **06 07 08.3 +1.9**
comp=Z,0.6nm,0.6s,baz=298,slow=5.2,SNR=9.9
TXAR pP **pP** **06 07 20.5 +0.6**
comp=Z,0.3nm,0.5s,baz=290,slow=4.2,SNR=4.1
comp=Z,0.6nm,0.6s
EKA Eskdalemuir Ar 69.76 351 P **P** **06 07 08.5 -0.8**
comp=Z,1.0nm,0.5s,baz=19,slow=5.8,SNR=9.5
comp=Z,1.0nm,0.5s
CLL Collm 71.31 340‖ *e*P **P** **06 07 18.0 -0.7**
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 71.31 340‖ *i*P **P** **06 07 18.4 -0.3**
comp=Z,4.0nm,1.0s
GERES GERESS Array B 73.50 339 P **P** **06 07 31.8 -0.1**
comp=Z,0.4nm,0.6s,baz=38,slow=5.0,SNR=7.0
comp=Z,0.4nm,0.6s
BRTR Keskin Array B 76.07 321 P **P** **06 07 47.1 +0.1**
comp=Z,0.7nm,0.7s,baz=27,slow=13,SNR=2.3
comp=Z,0.7nm,0.7s
DAVOX Davos/Dischmat 76.25 340 P **P** **06 07 48.2 +0.2**
comp=Z,0.9nm,0.6s,baz=351,slow=12,SNR=4.3
comp=Z,0.9nm,0.6s
WRA Warramunga Ar 77.81 206 P **P** **06 07 57.4 +0.7**
comp=Z,0.7nm,0.5s,baz=20,slow=5.9,SNR=11
WRA pP **pP** **06 08 09.3 -1.1**
comp=Z,1.2nm,0.7s,baz=18,slow=5.8,SNR=5.1
comp=Z,0.7nm,0.5s
ASAR Alice Springs 81.48 206 P **P** **06 08 17.9 +1.3**
comp=Z,1.9nm,0.8s,baz=18,slow=5.1,SNR=16
comp=Z,1.9nm,0.8s
ESDC Sonseca Array 85.33 349 P **P** **06 08 36.3 -0.1**
comp=Z,0.8nm,0.7s,baz=358,slow=5.2,SNR=6.8
ESDC pP **pP** **06 08 48.8 -1.8**
comp=Z,1.0nm,0.8s,baz=2.9,slow=5.3,SNR=5.4
comp=Z,0.8nm,0.7s
ESDC Sonseca Array 85.33 349 P **P** **06 08 37.4 +1.0**
ESDC IAmb IAmb 06 08 37.7
comp=Z,5.7nm,1.4s

LDG ***14*** *05:58:24.4±0.6,38.°96N×15.°38E,h330km,Ml2.9/2,Error ellipse: s-maj=19.8km s-min=10.5km az=75.0*
ROM ***14*** *05:58:26.1±0.2,38.°93N±0.°01×15.°14E±0.°02,h307km±1km, ML3.3/25,Error ellipse: s-maj=1.9km s-min=0.7km az=126.0*
IDC ***14*** *05:58:29.8±2.8,39.°17N×14.°90E,h323km±27km,mb2.9/9, mbtmp3.6/13,Error ellipse: s-maj=26.4km s-min=18.7km az=125.0*

ISC 14 05:58:26.7±0.7,38.°94N±0.°07×15.°15E±0.°07,h302km±6km, n99,σ1s33/112,mb3.4/8,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IST3	**Stromboli F**	**0.16**	**156**	P	**Pn**	**05 59 06.2**	**+1.2**
IST3				AML	AML		
	comp=E,352μm,0.2s						
IST3				AML	AML		
	comp=N,520μm,0.5s						
IST3				AML	AML		
	comp=E,356μm,0.5s						
IST3				AML	AML		
	comp=N,634μm,0.7s						
ISTR	**Stromboli Gino**	**0.16**	**168**	P	**Pn**	**05 59 06.4**	**+1.3**
LLI	**Lipari**	**0.52**	**198**	P	**Pn**	**05 59 07.3**	**+1.6**
VPL	**Vulcano Piano**	**0.58**	**193**	P	**Pn**	**05 59 07.0**	**+1.2**
VPL				S	**S**	**05 59 36.2**	**-0.8**
VPL				AML	AML		
	comp=E,749μm,0.9s						
VPL				AML	AML		
	comp=E,748μm,0.9s						
VPL				AML	AML		
	comp=N,710μm,1.4s						
IFIL	**Filicudi I Eol**	**0.59**	**231**	P	**Pn**	**05 59 06.8**	**+1.0**
IFIL				AML	AML		
	comp=N,232μm,0.3s						
IFIL				AML	AML		
	comp=E,506μm,0.6s						
MILZ	**Milazzo**	**0.67**	**174**	P	**Pn**	**05 59 06.7**	**+0.6**
MILZ				S	**S**	**05 59 37.2**	**-0.2**
MILZ				AML	AML		
	comp=E,277μm,0.5s						
MILZ				AML	AML		
	comp=N,128μm,0.3s						
MILZ				AML	AML		
	comp=N,216μm,1.6s						
MILZ				AML	AML		
	comp=E,286μm,0.5s						
MSRU	**Castanea**	**0.73**	**157**	P	**Pn**	**05 59 06.7**	**+0.4**
MSRU				S	**S**	**05 59 37.1**	**-0.7**
IACL	**Alicudi**	**0.74**	**237**	P	**Pn**	**05 59 07.5**	**+1.2**
CET2	**Cetraro**	**0.86**	**47**	P	**Pn**	**05 59 07.8**	**+1.1**
CET2				S	**S**	**05 59 38.4**	**-0.1**
CET2				AML	AML		
	comp=E,374μm,1.0s						
CET2				AML	AML		
	comp=N,302μm,1.3s						
MSCL	**Scilla**	**0.87**	**145**	P	**Pn**	**05 59 07.4**	**+0.5**
MSCL				S	**S**	**05 59 37.6**	**-1.2**
MSCL				AML	AML		
	comp=E,499μm,0.1s						
MSCL				AML	AML		
	comp=N,584μm,1.4s						
MSCL				AML	AML		
	comp=E,500μm,0.1s						
CAR1	**CAROLEI**	**0.88**	**69**	P	**Pn**	**05 59 07.6**	**+0.8**
CAR1				S	**S**	**05 59 37.9**	**-0.8**
CAR1				AML	AML		
	comp=E,310μm,1.4s						
CAR1				AML	AML		
	comp=N,350μm,0.6s						
CAR1				AML	AML		
	comp=N,326μm,0.9s						
CAR1				AML	AML		
	comp=E,350μm,0.6s						
CAR1				AML	AML		
	comp=E,310μm,1.4s						
CAR1				AML	AML		
	comp=N,350μm,0.6s						
CEL	**Celeste**	**0.90**	**139**	P	**Pn**	**05 59 07.6**	**+0.6**
CEL				S	**S**	**05 59 38.1**	**-0.9**
CEL				AML	AML		
	comp=E,186μm,0.4s						
CEL				AML	AML		
	comp=N,174μm,1.4s						
CEL				AML	AML		
	comp=E,222μm,0.4s						
CEL				AML	AML		
	comp=N,202μm,0.4s						
AIO	**Antillo**	**0.97**	**176**	P	**Pn**	**05 59 08.8**	**+1.4**
AIO				AML	AML		
	comp=N,271μm,0.5s						
AIO				AML	AML		
	comp=E,194μm,0.6s						
SPS2	**Spezzano della**	**0.99**	**69**	P	**Pn**	**05 59 08.3**	**+1.0**
SPS2				S	**S**	**05 59 39.4**	**-0.2**
SPS2				AML	AML		
	comp=N,112μm,1.3s						
SPS2				AML	AML		
	comp=E,93μm,0.4s						
SPS2				AML	AML		
	comp=N,112μm,1.3s						
GRI	**Girifalco**	**1.00**	**97**	P	**Pn**	**05 59 08.4**	**+1.1**
GRI				AML	AML		
	comp=N,264μm,1.1s						
GRI				AML	AML		
	comp=E,286μm,0.3s						
GRI				AML	AML		
	comp=N,264μm,1.1s						
MSFR	**San Fratello**	**1.01**	**206**	P	**Pn**	**05 59 08.7**	**+1.2**
MSFR				AML	AML		
	comp=E,41μm,1.6s						
MSFR				AML	AML		
	comp=N,39μm,1.6s						
MTTG	**Motta San Giov**	**1.03**	**155**	P	**Pn**	**05 59 08.6**	**+1.0**
MTTG				S	**S**	**05 59 39.9**	**-0.2**
MTTG				AML	AML		
	comp=E,212μm,0.6s						
MTTG				AML	AML		
	comp=N,370μm,0.7s						
PLAC	**Placanica**	**1.12**	**116**	P	**Pn**	**05 59 08.6**	**+0.6**
PLAC				S	**S**	**05 59 40.4**	**-0.5**
PLAC				AML	AML		
	comp=E,396μm,0.3s						
PLAC				AML	AML		
	comp=N,288μm,0.6s						
SOI	**Samo**	**1.12**	**140**	P	**Pn**	**05 59 08.9**	**+0.9**
SOI				S	**S**	**05 59 39.9**	**-0.9**
SOI				AML	AML		
	comp=E,172μm,0.5s						
SOI				AML	AML		
	comp=N,210μm,0.7s						
SOI				AML	AML		
	comp=E,172μm,0.5s						
SOI				AML	AML		
	comp=N,210μm,0.7s						
EPZF	**Pizzo Felice**	**1.14**	**192**	P	**Pn**	**05 59 09.9**	**+1.7**
EPZF				AML	AML		
	comp=N,864μm,1.5s						
EPZF				AML	AML		
	comp=E,492μm,0.9s						
BULG	**Bulgheria - Ca**	**1.15**	**9**	P	**Pn**	**05 59 08.9**	**+0.9**
CELI	**Celico**	**1.15**	**66**	P	**Pn**	**05 59 10.1**	**+1.9**
CELI				AML	AML		
	comp=E,322μm,0.6s						
CELI				AML	AML		
	comp=N,349μm,1.5s						
TDS	**Terranova Siba**	**1.17**	**52**	P	**Pn**	**05 59 09.7**	**+1.7**
TDS				S	**S**	**05 59 41.1**	**+0.1**
TDS				AML	AML		
	comp=N,45μm,1.4s						
TDS				AML	AML		
	comp=N,44μm,1.4s						
TDS				AML	AML		
	comp=E,76μm,1.0s						
CUC	**Castrocucco**	**1.17**	**26**	P	**Pn**	**05 59 09.5**	**+1.4**
CUC				AML	AML		
	comp=E,52μm,0.7s						
CUC				AML	AML		
	comp=E,52μm,0.7s						
CUC				AML	AML		
	comp=N,39μm,1.1s						
SERS	**Sersale**	**1.20**	**85**	P	**Pn**	**05 59 09.9**	**+1.5**
MGR	**Morigerati**	**1.23**	**15**	P	**Pn**	**05 59 09.8**	**+1.4**
TIP	**Timpagrande**	**1.27**	**79**	P	**Pn**	**05 59 10.4**	**+1.7**
TIP				S	**S**	**05 59 42.1**	**-0.1**
TIP				AML	AML		
	comp=N,70μm,1.1s						
TIP				AML	AML		
	comp=E,150μm,0.8s						
TIP				AML	AML		
	comp=E,142μm,0.8s						
TIP				AML	AML		
	comp=N,69μm,1.1s						
TIP				AML	AML		
	comp=N,86μm,1.4s						
GIB	**Gibilmanna**	**1.30**	**223**	P	**Pn**	**05 59 09.6**	**+0.6**
GIB				S	**S**	**05 59 42.1**	**-0.6**
GIB				AML	AML		
	comp=E,144μm,0.7s						
GIB				AML	AML		
	comp=N,164μm,0.9s						
GALF	**Gagliano Caste**	**1.31**	**201**	P	**Pn**	**05 59 09.7**	**+0.6**
GALF				AML	AML		
	comp=E,63μm,0.5s						
GALF				AML	AML		
	comp=N,73μm,0.4s						
CSLB	**Castelbuono**	**1.32**	**221**	P	**Pn**	**05 59 09.7**	**+0.6**
CSLB				AML	AML		
	comp=E,36μm,1.3s						
CSLB				AML	AML		
	comp=N,38μm,0.5s						
SIRI	**Monte Sirino -**	**1.36**	**24**	P	**Pn**	**05 59 10.0**	**+0.8**
PETRA	**Petralia Sopra**	**1.37**	**217**	P	**Pn**	**05 59 10.4**	**+0.8**
PETRA				AML	AML		
	comp=E,104μm,1.6s						
PETRA				AML	AML		
	comp=N,192μm,1.0s						
MTSN	**Montesano sull**	**1.40**	**19**	P	**Pn**	**05 59 10.7**	**+1.2**
MTSN				AML	AML		
	comp=E,37μm,1.0s						
MTSN				AML	AML		
	comp=N,32μm,1.6s						
PIPA	**Pietrapaola**	**1.40**	**67**	P	**Pn**	**05 59 10.8**	**+1.4**
PIPA				AML	AML		
	comp=E,179μm,0.6s						
PIPA				AML	AML		
	comp=N,150μm,0.7s						
LADO	**San Nicola del**	**1.46**	**76**	P	**Pn**	**05 59 11.0**	**+1.2**
LADO				AML	AML		
	comp=E,10μm,0.3s						
LADO				AML	AML		
	comp=N,8μm,1.4s						
LADO				AML	AML		
	comp=E,10μm,0.3s						
LADO				AML	AML		
	comp=N,8μm,1.4s						
MCEL	**Monticello**	**1.47**	**20**	P	**Pn**	**05 59 11.8**	**+1.9**
SOLUN	**Solunto**	**1.53**	**237**	P	**Pn**	**05 59 10.9**	**+0.6**
SOLUN				AML	AML		
	comp=E,80μm,0.7s						
SOLUN				AML	AML		
	comp=E,80μm,0.7s						
SOLUN				AML	AML		
	comp=N,68μm,1.3s						
CDRU	**Civita di Ruta**	**1.55**	**4**	P	**Pn**	**05 59 11.8**	**+1.3**
HLNI	**Lentini**	**1.61**	**188**	P	**Pn**	**05 59 11.7**	**+0.9**
HLNI				AML	AML		
	comp=N,94μm,0.3s						
HLNI				AML	AML		
	comp=N,94μm,0.3s						
HLNI				AML	AML		
	comp=E,65μm,0.5s						
ALJA	**Alia**	**1.62**	**223**	P	**Pn**	**05 59 12.5**	**+1.6**
ALJA				AML	AML		
	comp=E,300μm,0.4s						
ALJA				AML	AML		
	comp=N,173μm,0.2s						
ALJA				AML	AML		
	comp=E,299μm,0.4s						
HAGA	**Augusta**	**1.66**	**180**	P	**Pn**	**05 59 12.1**	**+0.9**
SSY	**Sortino**	**1.79**	**182**	P	**Pn**	**05 59 13.3**	**+1.1**
SSY				AML	AML		
	comp=N,294μm,0.2s						
SSY				AML	AML		
	comp=E,100μm,0.5s						
CORL	**Corleone**	**1.79**	**235**	P	**Pn**	**05 59 13.1**	**+1.0**
CORL				AML	AML		
	comp=E,183μm,0.8s						
CORL				AML	AML		
	comp=N,168μm,0.6s						
RAFF	**Raffo Rosso**	**1.83**	**200**	P	**Pn**	**05 59 13.3**	**+0.9**
LIO3	**Lioni**	**1.95**	**1**	P	**Pn**	**05 59 14.0**	**+0.8**
CLTA	**Licata**	**2.01**	**208**	P	**Pn**	**05 59 15.2**	**+1.4**
FAVR	**Favara**	**2.04**	**215**	P	**Pn**	**05 59 16.0**	**+1.9**
FAVR				AML	AML		
	comp=N,156μm,1.6s						
FAVR				AML	AML		
	comp=E,132μm,1.6s						
MATE	**Matera**	**2.08**	**35**	P	**Pn**	**05 59 15.1**	**+0.9**
AMUR	**Altamura**	**2.26**	**29**	P	**Pn**	**05 59 16.7**	**+1.0**
SGG	**Gregorio Mates**	**2.51**	**347**	AML	AML		
	comp=E,48μm,0.5s						
SGG				AML	AML		
	comp=N,52μm,0.5s						
PGF	**Pioggiola**	**5.90**	**310**	*e*P	**Pn**	**05 59 56.2**	**+1.4**
OBKA	**Obir**	**7.58**	**357**	*e*P	**Pn**	**06 00 19.5**	**+4.5**
	comp=N,4.9nm,0.6s,SNR=7.7						
SBF	**Sospel**	**7.60**	**313**	*e*P	**Pn**	**06 00 16.9**	**+1.6**
SBF				*e*Sn	**S**	**06 01 44.7**	**+1.4**
	comp=N,1.2nm,0.3s						
SOKA	**Soboth**	**7.73**	**359**	*e*P	**Pn**	**06 00 21.3**	**+4.3**
	comp=N,3.9nm,0.5s,SNR=10						
LMR	**La Mourre**	**7.86**	**307**	*e*Pn	Pn	06 00 23.4	+5.0
ABTA	**Abfaltersbach**	**8.04**	**347**	*e*P	**Pn**	**06 00 21.0**	**+0.4**
	comp=N,4.6nm,0.5s						
ARSA	**Arzberg**	**8.31**	**2**	*e*P	**P**	**06 00 27.9**	**-1.0**
	comp=N,3.1nm,0.8s						
MBDF	**Montbardon**	**8.51**	**315**	*e*P	**Pn**	**06 00 27.8**	**+1.2**
FETA	**Feichten**	**8.70**	**340**	*e*P	**Pn**	**06 00 30.5**	**+1.7**
	comp=N,9.5nm,0.9s,SNR=11						
WTTA	**Wattenberg**	**8.70**	**344**	*e*P	**Pn**	**06 00 31.2**	**+2.3**
	comp=N,1.7nm,0.4s,SNR=5.8						
DAVOX	**Davos/Dischmat**	**8.73**	**335**	P	**Pn**	**06 00 30.4**	**+1.1**
	comp=N,2.5nm,0.4s,baz=152,slow=14,SNR=10						
SQTA	**Sankt Quirin**	**8.76**	**342**	*e*P	**Pn**	**06 00 31.2**	**+1.6**
	comp=N,7.2nm,0.8s,SNR=4.7						
SMRF	**Simiane la Rot**	**8.77**	**308**	*e*P	**Pn**	**06 00 31.1**	**+1.5**
SMRF	**Simiane la Rot**	**8.77**	**308**	*e*Pn	**P**	**06 00 35.6**	**+1.1**
SMRF				*e*Sn	**S**	**06 02 09.9**	**+0.3**
	comp=N,0.5nm,0.2s						
WATA	**Walderalm**	**8.79**	**344**	*e*P	**Pn**	**06 00 31.5**	**+1.6**
	comp=N,4.6nm,0.4s,SNR=7.4						
BIOA	**Bad Ischl, Aus**	**8.81**	**353**	*e*P	**P**	**06 00 32.9**	**-2.0**
	comp=N,2.4nm,0.3s						
MOTA	**Moosalm**	**8.90**	**342**	*e*P	**Pn**	**06 00 32.1**	**+0.8**
	comp=N,5.7nm,0.8s						
MOA	**Molln**	**8.93**	**356**	*e*P	**P**	**06 00 34.2**	**-2.0**
	comp=N,2.4nm,0.7s						
LPG	**La Plagne**	**9.04**	**319**	*e*P	**Pn**	**06 00 34.4**	**+1.3**
LPL	**La Plagne**	**9.06**	**319**	*e*P	**Pn**	**06 00 34.8**	**+1.5**
	comp=N,3.5nm,0.2s						
ORIF	**Oris-en-Rattie**	**9.13**	**314**	*e*P	**Pn**	**06 00 35.4**	**+1.4**
VIVF	**Saint-Julien-l**	**9.79**	**310**	*e*P	**Pn**	**06 00 43.4**	**+1.3**
	comp=N,4.6nm,0.6s						
GERES	**GERESS Array B**	**9.95**	**354**	P	**Pn**	**06 00 44.5**	**+0.3**
	comp=N,1.2nm,0.6s,baz=172,slow=13,SNR=20						
CABF	**La Chapelle**	**10.15**	**322**	*e*P	**Pn**	**06 00 45.5**	**-1.0**
HINF	**Hinteralfeld**	**10.72**	**328**	*e*P	**Pn**	**06 00 51.5**	**-2.0**
CDF	**Champ du Feu**	**11.04**	**332**	*e*P	**Pn**	**06 00 56.3**	**-1.1**
HAU	**Haudompre**	**11.08**	**328**	*e*P	**Pn**	**06 00 56.1**	**-1.7**
	comp=N,3.2nm,0.3s						
SMF	**Signal de Mont**	**11.32**	**316**	*e*P	**Pn**	**06 00 58.5**	**-2.2**
LOR	**Lormes**	**11.71**	**319**	*e*P	**P**	**06 01 07.0**	**-0.1**
	comp=N,1.1nm,0.4s,baz=131						
PAGF	**Fort de Pagny**	**11.77**	**328**	*e*P	**Pn**	**06 01 05.8**	**-0.4**
TCF	**Toulx Ste Croi**	**12.02**	**312**	*e*P	P	06 01 17.8	+7.2
ETSF	**Etsaut**	**12.52**	**293**	*e*P	**P**	**06 01 16.9**	**+0.7**
SJPF	**Ste Jean**	**13.04**	**294**	*e*P	**P**	**06 01 23.6**	**+1.6**
LDF	**La Druitiere**	**14.63**	**316**	*e*P	**P**	**06 01 38.7**	**-0.7**
ESDC	**Sonseca Array**	**14.82**	**279**	P	**P**	**06 01 41.9**	**+0.3**
	comp=N,0.3nm,0.5s,baz=76,slow=11,SNR=4.3						
GRR	**Gorron**	**14.92**	**314**	*e*P	**P**	**06 01 42.3**	**-0.2**
FLN	**La Foliniere**	**14.92**	**316**	*e*P	**P**	**06 01 41.2**	**-1.4**
AKASG	**Malin Array Be**	**15.39**	**36**	P	**Pn**	**06 01 49.7**	**+0.3**
	comp=N,0.4nm,0.3s,baz=228,slow=8.8,SNR=4.4						
SGMF	**Saint Gilles**	**15.82**	**312**	*e*P	**P**	**06 01 51.9**	**-0.4**
ROSF	**Rostrenen**	**16.27**	**311**	*e*P	**P**	**06 01 56.3**	**-1.0**
EKA	**Eskdalemuir Ar**	**20.48**	**329**	P	**P**	**06 02 39.7**	**-2.4**
	comp=N,0.3nm,0.3s,baz=143,slow=11,SNR=9.8						
	comp=N,0.3nm,0.3s						
HFS	**Hagfors**	**21.23**	**358**	P	**P**	**06 02 47.8**	**-1.4**
	comp=N,1.1nm,0.4s,baz=178,slow=12,SNR=14						
	comp=N,1.1nm,0.4s						
NOA	**NORSAR Array B**	**22.26**	**355**	P	**P**	**06 02 57.9**	**-0.6**
	comp=N,0.6nm,0.8s,baz=175,slow=10,SNR=2.5						
	comp=N,0.6nm,0.8s						
FINES	**FINESS Array B**	**23.52**	**13**	P	**P**	**06 03 10.1**	**+0.2**
	comp=N,1.8nm,0.3s,baz=188,slow=8.9,SNR=28						
	comp=N,1.8nm,0.3s						
TORD	**Torodi Ar. Bea**	**28.32**	**209**	P	**P**	**06 03 55.3**	**+2.0**
	comp=N,0.1nm,0.4s,baz=3.7,slow=8.8,SNR=1.7						
	comp=N,0.1nm,0.4s						
ARCES	**ARCESS Array B**	**31.15**	**7**	P	**P**	**06 04 16.9**	**-0.7**
	comp=N,0.6nm,0.4s,baz=192,slow=8.7,SNR=12						
	comp=N,0.6nm,0.4s						
MKAR	**Makanchi Array**	**48.47**	**58**	P	**P**	**06 06 40.2**	**+1.0**
	comp=N,0.2nm,0.4s,baz=268,slow=6.8,SNR=2.1						
	comp=N,0.2nm,0.4s						
SCHQ	**Schefferville**	**55.01**	**316**	P	**P**	**06 07 26.0**	**-1.1**
	comp=N,3.2nm,1.0s,baz=63,slow=2.3,SNR=1.9						
	comp=N,3.2nm,1.0s						
YKA	**Yellowknife Ar**	**71.16**	**338**	P	**P**	**06 09 13.1**	**+0.6**
	comp=N,0.3nm,0.5s,baz=54,slow=8.4,SNR=8.3						
	comp=N,0.3nm,0.5s						

KRNET ***14*** *06:02:59.7±0.1,42.°54N×75.°32E,h8km,mb3.1*
KNET ***14*** *06:02:59.8±0.5,42.°56N×75.°31E,h6km±20km,ml2.1,Error ellipse: s-maj=3.5km s-min=1.8km az=9.0*
NNC ***14*** *06:03:00.2±0.3,42.°58N×75.°30E,h0km,mb3.3,mpv3.2, Error ellipse: s-maj=1.9km s-min=0.8km az=0.0*
SOME ***14*** *06:03:00.1,42.°58N×75.°33E,h5km*

ISC 14 06:03:00.4±1.0,42.°57N±0.°03×75.°32E±0.°02,h6km±11km, n54,σ1s06/91,23C-17D,Lake Issyk-Kul region

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

KBK	**Karagaybulak** 26nm,0.1s,SNR=14	**0.29**	**289**	⇑P	**Pg**	**06 03 06.3**	**+0.2**
KBK	274nm,0.2s			⇑S	**Sg**	**06 03 10.4**	**+0.5**
KBK	**Karagaybulak** baz=93	**0.29**	**289**	⇓*i*P	**Pg**	**06 03 05.6**	**-0.5**
KBK	baz=93			⇓*i*S	**Sg**	**06 03 10.0**	**0.0**
TKM2	**Tokmak 2** 7.6nm,0.1s,SNR=252	**0.41**	**30**	⇓P	**Pg**	**06 03 08.5**	**+0.1**
TKM2	164nm,0.1s			⇑S	**Sg**	**06 03 14.4**	**+0.6**
TKM2	**Tokmak 2** 25nm,0.2s	**0.41**	**30**	⇓P	**Pg**	**06 03 08.5**	**+0.1**
TKM2	106nm,0.3s			⇑S	**Sg**	**06 03 14.3**	**+0.6**
TKM2	**Tokmak 2** baz=28	**0.41**	**30**	⇑*i*P	**Pg**	**06 03 08.3**	**-0.1**
TKM2	baz=28			⇑*i*S	**Sg**	**06 03 14.4**	**+0.6**
CHMS	**Chumysh** 6.9nm,0.1s,SNR=16	**0.60**	**316**	⇓P	**Pg**	**06 03 11.8**	**-0.2**
CHMS	128nm,0.1s			⇑S	**Sg**	**06 03 20.1**	**+0.2**
CHMS	**Chumysh** 4.9nm,0.3s	**0.60**	**316**	⇑P	**Pg**	**06 03 11.7**	**-0.2**
CHMS	25nm,0.2s			⇓S	**Sg**	**06 03 19.8**	**0.0**
CHMS	**Chumysh** baz=18	**0.60**	**316**	⇓*i*P	**Pg**	**06 03 11.5**	**-0.5**
CHMS	baz=18			⇓*i*S	**Sg**	**06 03 20.0**	**+0.2**
AAK	**Ala-Archa** 8.8nm,0.2s,SNR=6.0	**0.61**	**277**	⇓P	**Pg**	**06 03 11.9**	**-0.3**
AAK	32nm,0.2s			⇑S	**Sg**	**06 03 20.1**	**-0.2**
AAK	**Ala-Archa** baz=79	**0.61**	**277**	⇑*i*P	**Pg**	**06 03 11.5**	**-0.7**
AAK	baz=79			⇑*i*S	**Sg**	**06 03 19.8**	**-0.4**
KST	**Kastek** 31nm,0.2s	**0.67**	**44**	⇓*e*P	**Pg**	**06 03 13.4**	**+0.1**
KST	52nm,0.3s			*e*S	**Sb**	**06 03 22.9**	**-1.3**
KST	**Kastek** 31nm,0.2s	**0.67**	**44**	P	**Pg**	**06 03 13.4**	**+0.1**
KST	52nm,0.3s			S	**Sb**	**06 03 22.9**	**-1.3**
ULHL	**Ulahol** 7.8nm,0.1s,SNR=9.5	**0.75**	**115**	⇓P	**Pg**	**06 03 14.4**	**-0.4**
ULHL	58nm,0.2s			⇓S	**Sg**	**06 03 24.5**	**-0.2**
ULHL	**Ulahol** baz=13	**0.75**	**115**	⇑*i*P	**Pg**	**06 03 13.9**	**-0.9**
ULHL	baz=13			⇑*i*S	**Sg**	**06 03 24.1**	**-0.5**
USP	**Ospenovka** 7.8nm,0.1s,SNR=8.0	**0.93**	**320**	⇓P	**Pg**	**06 03 17.6**	**-0.5**
USP	22nm,0.1s			⇑S	**Sg**	**06 03 30.1**	**0.0**
USP	**Ospenovka** baz=21	**0.93**	**320**	⇓*i*P	**Pg**	**06 03 17.6**	**-0.5**
USP	baz=21			⇓*i*S	**Sb**	**06 03 30.6**	**-0.8**
MTBS	**Maitube** 11nm,0.2s	**0.99**	**55**	*e*P	**Pg**	**06 03 19.2**	**-0.2**
MTBS	46nm,0.2s			*e*S	**Sb**	**06 03 32.9**	**-0.5**
MTBS	**Maitube** 11nm,0.2s	**0.99**	**55**	P	**Pg**	**06 03 19.2**	**-0.2**
MTBS	46nm,0.2s			S	**Sb**	**06 03 32.9**	**-0.5**
SGDS	**Sogindy** 5.5nm,0.2s	**1.02**	**330**	*e*P	**Pg**	**06 03 19.5**	**-0.4**
SGDS	12nm,0.2s			*e*S	**Sb**	**06 03 33.4**	**-0.8**
SGDS	**Sogindy** 5.5nm,0.2s	**1.02**	**330**	P	**Pg**	**06 03 19.5**	**-0.4**
SGDS	12nm,0.2s			S	**Sb**	**06 03 33.4**	**-0.8**
ARLS	**Aral** baz=27	**1.02**	**227**	⇑*i*P	**Pg**	**06 03 18.8**	**-1.2**
ARLS	baz=27			⇑*i*S	**Sg**	**06 03 32.5**	**-0.7**
EKS2	**Erkin-Say** 4.8nm,0.1s,SNR=7.5	**1.14**	**275**	⇑P	**Pg**	**06 03 21.8**	**-0.5**
EKS2	**Erkin-Say** baz=77	**1.14**	**275**	⇑*i*P	**Pg**	**06 03 21.5**	**-0.8**
EKS2	baz=77			⇑*i*S	**Sb**	**06 03 37.4**	**-0.4**
KRBS	**Karabastau** 9.4nm,0.2s	**1.16**	**13**	*e*P	**Pg**	**06 03 22.1**	**-0.5**
KRBS	12nm,0.1s			*e*S	**Sb**	**06 03 38.0**	**-0.2**
KRBS	**Karabastau** 9.4nm,0.2s	**1.16**	**13**	P	**Pg**	**06 03 22.1**	**-0.5**
KRBS	12nm,0.1s			S	**Sb**	**06 03 38.0**	**-0.2**
AML	**Almayashu** 3.2nm,0.2s,SNR=8.4	**1.28**	**251**	⇑P	**Pg**	**06 03 24.1**	**-0.8**
MDOK	**Medeo** 3.9nm,0.4s	**1.40**	**64**	*e*P	**Pb**	**06 03 26.6**	**-0.4**
MDOK	17nm,0.4s			*e*S	**Sg**	**06 03 45.7**	**+0.2**
MDOK	**Medeo** 2.1nm,0.4s	**1.40**	**64**	P	**Pn**	**06 03 26.5**	**-0.2**
MDOK	3.9nm,0.4s			Pg	**Pb**	**06 03 26.6**	**-0.4**
MDOK	8.3nm,0.5s			S	**Sg**	**06 03 45.3**	**-0.2**
MDOK	17nm,0.4s			Lg	Lg	06 03 45.7	
KTBS	**Karatobe** 17nm,0.2s	**1.52**	**41**	*e*P	**Pb**	**06 03 28.6**	**-0.4**
KTBS	84nm,0.3s			*e*S	**Sg**	**06 03 48.7**	**-0.5**
KTBS	**Karatobe** 17nm,0.2s	**1.52**	**41**	P	**Pb**	**06 03 28.6**	**-0.4**
KTBS	84nm,0.3s			S	**Sg**	**06 03 48.7**	**-0.5**
KUU	**Kurty** 16nm,0.4s	**1.52**	**29**	⇓*e*P	**Pb**	**06 03 28.6**	**-0.4**
KUU	16nm,0.2s			*e*S	**Sg**	**06 03 49.0**	**-0.3**
KUU	**Kurty** 16nm,0.4s	**1.52**	**29**	P	**Pb**	**06 03 28.6**	**-0.4**
KUU	16nm,0.2s			S	**Sg**	**06 03 49.0**	**-0.3**
MRKS	**Merke** 6.4nm,0.3s	**1.56**	**277**	*e*P	**Pg**	**06 03 31.1**	**+0.9**
MRKS	41nm,0.3s			*e*S	**Sg**	**06 03 53.0**	**+2.7**
KURS	**Kuram** 3.3nm,0.5s	**2.28**	**65**	*e*P	**Pb**	**06 03 42.5**	**+0.5**
KURS	17nm,0.7s			*e*S	**Sg**	**06 04 13.0**	**-0.7**
KURS	**Kuram** 3.3nm,0.5s	**2.28**	**65**	Pg	**Pb**	**06 03 42.5**	**+0.5**
KURS	17nm,0.7s			Lg	Lg	06 04 13.0	
SATY	**Saty** 4.8nm,0.2s	**2.32**	**77**	*e*P	**Pg**	**06 03 43.8**	**-1.1**
SATY	10nm,0.3s			*e*S	**Sg**	**06 04 15.1**	**+0.1**
SATY	**Saty** 4.8nm,0.2s	**2.32**	**77**	Pg	**Pg**	**06 03 43.8**	**-1.1**
ZHN	**Zhinishke** 5.7nm,0.3s	**2.37**	**74**	*e*P	**Pg**	**06 03 44.4**	**-1.3**
ZHN	30nm,0.5s			*e*S	**Sg**	**06 04 16.1**	**-0.4**
ZHN	**Zhinishke** 5.7nm,0.3s	**2.37**	**74**	Pg	**Pg**	**06 03 44.4**	**-1.3**
ZHN	30nm,0.5s			Lg	Lg	06 04 16.1	
ARXS	**Arharly** 4.3nm,0.6s	**2.46**	**47**	*e*P	**Pb**	**06 03 45.1**	**0.0**
ARXS	35nm,0.4s			*e*S	**Sg**	**06 04 17.2**	**-2.2**
ARXS	**Arharly** 4.3nm,0.6s	**2.46**	**47**	Pg	**Pb**	**06 03 45.1**	**0.0**
ARXS	35nm,0.4s			Lg	Lg	06 04 17.2	
KPKS	**Kokpek** 9.3nm,0.2s	**2.63**	**69**	*e*P	**Pb**	**06 03 47.9**	**0.0**
KPKS	29nm,0.7s			*e*S	**Sg**	**06 04 22.3**	**-2.4**
KPKS	**Kokpek** 9.3nm,0.2s	**2.63**	**69**	Pg	**Pb**	**06 03 47.9**	**0.0**
KPKS	29nm,0.7s			Lg	Lg	06 04 22.3	
BTLS	**Baital** 5.9nm,0.3s	**2.64**	**340**	*e*P	**Pb**	**06 03 48.1**	**0.0**
BTLS	4.9nm,0.5s			*e*S	**Sg**	**06 04 22.7**	**-2.5**
BTLS	**Baital** 5.9nm,0.3s	**2.64**	**340**	Pg	**Pb**	**06 03 48.1**	**0.0**
BTLS	4.9nm,0.5s			Lg	Lg	06 04 22.7	
UZB	**Uzynbulak** 3.9nm,0.4s	**2.78**	**77**	*e*P	**Pb**	**06 03 51.0**	**+0.5**
UZB	14nm,0.5s			*e*S	**Sg**	**06 04 27.5**	**-2.2**
UZB	**Uzynbulak** 3.9nm,0.4s	**2.78**	**77**	Pg	**Pb**	**06 03 51.0**	**+0.5**
UZB	14nm,0.5s			Lg	Lg	06 04 27.5	
SHLS	**Shalkode** 2.6nm,0.3s	**3.10**	**78**	*e*P	**Pg**	**06 04 03.5**	**+3.7**
SHLS	7.8nm,0.4s			*e*S	Sg	06 04 49.0	+9.0
SHLS	**Shalkode** 2.6nm,0.3s	**3.10**	**78**	Pg	**Pg**	**06 04 03.5**	**+3.7**
KK31	**Karatay Array** 0.4nm,0.4s,baz=96,slow=16,SNR=12	**3.58**	**280**	⇑Pn	**Pn**	**06 03 57.7**	**+1.3**
KK31	1.7nm,0.5s,baz=93,slow=33,SNR=10			⇓Lg	Lg	06 04 53.1	
DJR	**Jarkent** 0.4nm,0.1s	**3.70**	**60**	*e*P	**Pb**	**06 04 07.0**	**+0.8**
DJR	5.6nm,0.4s			*e*S	**Sb**	**06 04 54.9**	**+3.5**
DJR	**Jarkent** 5.6nm,0.4s	**3.70**	**60**	Lg	Lg	06 04 54.8	
KURBB	**Kurchatov Arra** 5.5nm,0.7s	**8.36**	**14**	⇑Lg	Lg	06 07 24.4	
KURK	**Kurchatov** 1.7nm,0.7s	**8.46**	**14**	⇑Lg	Lg	06 07 28.4	

TAP 14 06:16:19.1,24°.44N×122°.48E,h66km±1km,ML2.3,D,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao** baz=291	**0.60**	**286**	*e*P	Pn	06 16 32.8	+0.1
TWC	baz=291			*e*S	Sn	06 16 41.7	-0.8
EGS	baz=313	**0.64**	**309**	*e*P	Pn	06 16 34.0	+1.0
EGS	baz=313			*e*S	Sn	06 16 43.6	+0.3
NDS	**Dongshan** baz=293	**0.72**	**286**	*e*P	Pn	06 16 33.5	-0.5
NDS	baz=293			*e*S	Sn	06 16 45.0	0.0
TIPB	**Shuangxi** baz=311	**0.80**	**312**	*e*S	Sn	06 16 47.4	+0.8
NACB	**Ninganchiao** baz=252	**0.85**	**252**	*e*P	Pn	06 16 35.0	-0.6
ENTT	**Nioudou** baz=289	**0.86**	**284**	P	Pn	06 16 36.1	+0.4
ENTT	baz=289			*e*S	Sn	06 16 48.6	+0.8
FUSB	**Fushanzhiwuyua** baz=299	**0.88**	**292**	*e*P	Pn	06 16 36.7	+0.8
FUSB	baz=299			*e*S	Sn	06 16 49.1	+0.8
LATG	**Datong** baz=269	**0.88**	**276**	P	Pn	06 16 36.6	+0.6
LATG	baz=269			*e*S	Sn	06 16 49.6	+1.1
NDT	**Datong Townshi** baz=285	**0.90**	**281**	*e*P	Pn	06 16 36.6	+0.5
NDT	baz=285			*e*S	Sn	06 16 49.7	+1.0
ETLH	**Xiulin Townshi** baz=248	**0.94**	**256**	*e*P	Pn	06 16 37.0	+0.3
NNSB	**Datong** baz=261	**1.00**	**270**	*e*P	Pn	06 16 37.5	0.0
NNSB	baz=261			*e*S	Sn	06 16 51.3	+0.1
YHNB	**Yeheng** baz=283	**1.03**	**283**	*e*P	Pn	06 16 38.7	+0.8
YHNB	baz=283			*e*S	Sn	06 16 52.1	+0.2
YM01	**YM01** baz=310	**1.09**	**310**	*e*P	Pn	06 16 38.6	0.0
YM01	baz=310			*e*S	Sn	06 16 52.6	-0.5
WHF	**Hehuan Shan** baz=248	**1.15**	**255**	*e*P	Pn	06 16 38.7	-1.0
TWT	**Tachien** baz=261	**1.21**	**261**	*e*P	Pn	06 16 40.2	0.0
TWT	baz=261			*e*S	Sn	06 16 56.5	+0.4
CHGB	**Renai** baz=244	**1.25**	**253**	*e*P	Pn	06 16 40.8	-0.1
CHGB	baz=244			*e*S	Sn	06 16 56.6	-0.6
NFF	**Wufeng Townshi** baz=289	**1.26**	**279**	*e*P	Pn	06 16 41.5	+0.7
OWD	**Renai** baz=240	**1.29**	**248**	*e*P	Pn	06 16 41.1	-0.2
OWD	baz=240			*e*S	Sn	06 16 56.8	-1.1
WUSB	**Renai** baz=244	**1.32**	**251**	*e*P	Pn	06 16 42.1	+0.4
WUSB	baz=244			*e*S	Sn	06 16 58.5	-0.2
HGSD	**Ruisui** baz=221	**1.35**	**226**	*e*P	Pn	06 16 42.1	+0.1
HGSD	baz=221			*e*S	Sn	06 16 59.1	-0.1
YULB	**Yu-li** baz=236	**1.50**	**226**	*e*P	Pn	06 16 42.5	-1.5
SSLB	**Suanglung** baz=245	**1.54**	**245**	*e*P	Pn	06 16 45.5	+1.0
SSLB	baz=245			*e*S	Sn	06 17 04.4	+0.7
SMLT	**Sun Moon Lake** baz=243	**1.55**	**249**	*e*P	Pn	06 16 45.2	+0.5
SMLT	baz=243			*e*S	Sn	06 17 04.4	+0.4
WHYT	**Xinyi Township** baz=244	**1.66**	**244**	*e*S	Sn	06 17 06.5	-0.1

*IDC **14** 06:26:56.4±1.2,22°.63S×173°.09E,h0km,mb3.9/6,*
mbtmp3.9/7,ML3.4/1,MS3.6/20,Error ellipse:
s-maj=34.0km s-min=29.4km az=134.0
ISC 14 06:27:01.6±1.2,22°.65S±0°.2×172°.9E±0°.2,h32km,n28,
σ1$21/8,mb4.0/6,MS3.7/18,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 0.9nm,0.3s,baz=128,slow=13,SNR=24	**6.03**	**274**	Pn	**Pn**	**06 28 27.7**	**-0.9**
DZM	**Mont Dzumac** comp=Z,830nm,25.1s 4.4nm,0.5s	**6.03**	**274**	*e*LR	LR	06 30 06.7	
MSVF	**Nonsavu** comp=Z,760nm,18.1s,baz=208,slow=32	**6.85**	**46**	LR	LR	06 30 33.1	
RAO	**Raoul Island** comp=Z,208nm,19.7s,baz=72,slow=32	**10.55**	**131**	LR	LR	06 32 34.0	
URZ	**Urewera** comp=Z,158nm,21.9s,baz=30,slow=31	**15.98**	**168**	LR	LR	06 35 07.1	
AFI	**Afiamalu** comp=Z,192nm,19.2s,baz=196,slow=32	**16.91**	**62**	LR	LR	06 35 51.6	
RPZ	**Rata Peaks** comp=Z,161nm,19.8s,baz=12,slow=36	**21.08**	**184**	LR	LR	06 39 26.6	
CTA	**Charters Tower** comp=Z,171nm,18.2s,baz=84,slow=35	**24.96**	**271**	LR	LR	06 41 38.2	
RAR	**Rarotonga** comp=Z,35nm,18.2s,baz=250,slow=36	**25.36**	**92**	LR	LR	06 41 59.7	
PPT2	**Papeete2** comp=Z,112nm,27.2s	**35.50**	**89**	*e*LR	LR	06 43 04.1	
ASAR	**Alice Springs** 1.0nm,0.9s,baz=86,slow=9.5,SNR=6.3	**35.82**	**261**	P	**P**	**06 34 00.2**	**+1.8**
ASAR	comp=Z,173nm,18.3s,baz=136,slow=36 1.0nm,0.9s			LR	LR	06 48 21.9	
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=96,slow=8.5,SNR=4.7	**35.99**	**267**	P	**P**	**06 34 00.3**	**+0.5**
WRA	comp=Z,152nm,18.5s,baz=109,slow=36 0.4nm,0.7s			LR	LR	06 48 51.1	
FITZ	**Fitzroy Crossi** comp=Z,96nm,18.6s,baz=108,slow=36	**44.42**	**267**	LR	LR	06 53 52.6	
TAOE	**Nuku Hiva Isla** comp=Z,103nm,27.5s	**47.00**	**81**	*e*LR	LR	06 48 22.8	
BATI	**Baumata** comp=Z,168nm,20.0s,baz=114,slow=35	**48.63**	**276**	LR	LR	06 55 36.9	
KAPI	**Kappang** comp=Z,44nm,19.6s,baz=76,slow=36	**54.20**	**281**	LR	LR	06 59 34.5	
VNDA	**Vanda** comp=Z,48nm,18.5s,baz=264,slow=34	**55.20**	**183**	LR	LR	06 58 00.8	
QSPA	**South Pole Qui** 2.0nm,0.9s,baz=328,slow=1.4,SNR=5.1 2.0nm,0.9s	**67.44**	**180**	P	**P**	**06 37 53.7**	**-0.3**
KSRS	**Korea Array** 0.9nm,0.7s,baz=143,slow=6.3,SNR=6.1 0.9nm,0.7s	**73.25**	**324**	P	**P**	**06 38 29.5**	**-0.1**
PETK	**Petropavlovsk-** 3.2nm,0.8s,baz=188,slow=9.0,SNR=4.7	**76.58**	**351**	P	**P**	**06 38 49.6**	**+1.1**
PETK	comp=Z,38nm,19.8s,baz=187,slow=32 3.2nm,0.8s			LR	LR	07 08 24.9	
MA2	**Magadan** comp=Z,22nm,21.6s,baz=82,slow=31	**83.91**	**349**	LR	LR	07 10 12.7	
YBH	**Yreka Blue Hor** comp=Z,28nm,19.2s,baz=281,slow=31	**87.40**	**42**	LR	LR	07 12 21.2	
PFO	**Pinyon Flats O** comp=Z,34nm,20.9s,baz=246,slow=29	**87.42**	**52**	LR	LR	07 09 07.2	
LPIG	**La Paz** comp=Z,30nm,20.4s,baz=185,slow=30	**87.83**	**63**	LR	LR	07 10 39.3	
ILAR	**Eielson Array** 1.0nm,1.1s,baz=240,slow=6.3,SNR=5.2 1.0nm,1.1s	**92.48**	**16**	P	**P**	**06 40 08.5**	**-0.4**
TXAR	**Lajitas Array** comp=Z,36nm,21.3s,baz=278,slow=30	**95.39**	**61**	LR	LR	07 14 32.9	
ANMO	**Albuquerque** comp=Z,25nm,18.4s,baz=311,slow=32	**95.42**	**55**	LR	LR	07 17 01.6	
GERES	**GERESS Array B** 0.3nm,0.7s,baz=26,slow=5.7,SNR=2.7	**149.08**	**333**	PKPbc	**PKPbc**	**06 46 45.3**	**-1.3**

*IDC **14** 06:42:59.5±2.5,3°.71S×128°.71E,h0km,mb3.5/2,*
mbtmp3.5/3,ML3.2/1,Error ellipse: s-maj=172.9km
s-min=30.2km az=68.0
*DJA **14** 06:43:06.2±2.8,4°.5±4°.×12°.7E±°,h24km±30km,M3.9/9,*
mb4.3/4,mB5.5/1,MLv3.6/9,Mw(mB)4.9/1
ISC 14 06:43:06.0±1.0,4°.34S±0°.08×127°.26E±0°.08,h35km,n11,
σ1$47/12,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.10**	**352**	P	**Pn**	**06 43 24.4**	**-0.5**
NLAI				S	**Sn**	**06 43 37.8**	**-1.1**
AAI	**Ambon**	**1.14**	**55**	P	**Pn**	**06 43 26.3**	**+0.9**
MSAI	**Masohi**	**1.94**	**60**	P	**Pn**	**06 43 35.4**	**-1.0**
SANI	**Sanana**	**2.60**	**331**	P	**Pn**	**06 43 45.5**	**-0.1**
FAKI	**Fak Fak** 0.2nm41nm,0.9s	**5.18**	**74**	P	**Pn**	**06 44 22.7**	**+1.7**
EDFI	**Ende, Flores** 0.0nm4.8nm,1.5s	**7.06**	**231**	P	**Pn**	**06 44 48.2**	**+1.2**
BKSI	**Bulukumba** 0.1nm22nm,0.6s	**7.18**	**262**	P	**Pn**	**06 44 50.0**	**+1.5**
SPSI	**Sidrap Palu**	**7.48**	**273**	P	**Pn**	**06 44 53.6**	**+1.0**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=344,slow=13,SNR=5.2 0.7nm,0.8s	**16.98**	**157**	P	**Pn**	**06 46 58.2**	**-2.7**
ASAR	**Alice Springs** 2.3nm,0.7s,baz=340,slow=12,SNR=23 2.3nm,0.7s	**20.26**	**162**	P	**P**	**06 47 39.5**	**+1.0**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=124,slow=9.2,SNR=2.2 0.2nm,0.5s	**64.52**	**327**	P	**P**	**06 53 40.1**	**+0.7**

IDC 14 07:21:02.5±2.8,9°.26S×113°.78E,h0km,mb3.5/3,
mbtmp3.6/4,ML3.7/1,Error ellipse: s-maj=158.5km
s-min=24.7km az=47.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=301,slow=8.3,SNR=7.2	**14.49**	**129**	Pn	Pn	07 24 30.9	+2.0
FITZ	0.4nm,0.3s,baz=34,slow=20,SNR=8.6 0.7nm,0.3s			Sn	Sn	07 26 57.6	-13
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=295,slow=12,SNR=12 0.7nm,0.5s	**22.53**	**120**	P	P	07 26 02.8	-1.4
ASAR	**Alice Springs** 0.8nm,0.5s,baz=303,slow=9.2,SNR=18 0.8nm,0.5s	**23.99**	**129**	P	P	07 26 19.8	+0.7
H08S2	**Diego Garcia H** baz=95,slow=76	**40.85**	**269**	T	T	08 13 31.0	
H08S3	**Diego Garcia H** baz=95	**40.86**	**269**	T	T	08 13 30.9	
H08S1	**Diego Garcia H** baz=95,slow=76	**40.87**	**269**	T	T	08 13 32.8	
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=136,slow=7.2,SNR=4.7 0.3nm,0.5s	**62.47**	**336**	P	P	07 31 27.7	0.0

*NEIC **14** 07:22:34.3±2.1,24°.14S±0°.06×67°.81W±0°.10,h169km±8km,*
mb4.3/8,ML4.3(GUC),Error ellipse: s-maj=12.9km
s-min=9.3km az=91.0
*GUC **14** 07:22:35.5±0.7,24°.06S×67°.91W,h171km±5km,ML4.3*
*IDC **14** 07:22:36.2±1.3,23°.82S×67°.48W,h152km±11km,mb3.5/7,*
mbtmp3.9/11,Error ellipse: s-maj=18.8km s-min=15.5km
az=13.0
*VAO **14** 07:22:36.7±0.5,23°.90S×67°.88W,h190km,mb4.0*
ISC 14 07:22:35.0±0.6,24°.06S±0°.04×67°.77W±0°.06,h159km±7km,
n112,σ1$55/126,mb4.0/9,12C,Chile-Argentina border
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.17**	**341**		**Pn**	**07 23 03.1**	**+0.6**
AF01	**San Pedro de A**	**1.17**	**341**	⇑*i*P	**Pn**	**07 23 03.1**	**+0.6**
AF01				*i*S	**Sn**	**07 23 24.1**	**+0.5**
PB15	**IPOC Station P**	**1.78**	**298**		**Pn**	**07 23 09.3**	**+0.8**
PB15				Sn	**Sn**	**07 23 34.1**	**-0.1**
PB15	**IPOC Station P**	**1.78**	**298**	⇑*i*P	**Pn**	**07 23 09.2**	**+0.6**
PB15				*i*S	**Sn**	**07 23 34.0**	**-0.3**
LVC	**Limon Verde** 120nm,0.3s,baz=147,slow=12,SNR=456	**1.79**	**324**	P	**Pn**	**07 23 09.4**	**+0.6**
LVC	489nm,0.3s,baz=7.0,slow=19,SNR=134			S	**Sn**	**07 23 34.7**	**0.0**
LVC	**Limon Verde**	**1.79**	**324**	Pn	**Pn**	**07 23 09.4**	**+0.6**
LVC				Sn	**Sn**	**07 23 35.2**	**+0.5**
LVC	**Limon Verde**	**1.79**	**324**	⇑*i*P	**Pn**	**07 23 09.2**	**+0.4**
LVC				*i*S	**Sn**	**07 23 34.6**	**-0.1**
LVC	**Limon Verde**	**1.79**	**324**	*e*P	**Pn**	**07 23 09.7**	**+0.9**
GO02	**Mina Guanaco**	**1.99**	**236**	Pn	**Pn**	**07 23 11.1**	**+0.2**
GO02	**Mina Guanaco**	**1.99**	**236**	⇑*i*P	**Pn**	**07 23 11.1**	**+0.2**
GO02				*i*S	**Sn**	**07 23 38.3**	**-0.2**
GO02	comp=N,2μm,0.3s			IAML		07 23 39.8	
PB06	**IPOC Station P**	**2.14**	**309**		**Pn**	**07 23 13.0**	**+0.5**
PB06	**IPOC Station P**	**2.14**	**309**	⇑*i*P	**Pn**	**07 23 13.0**	**+0.5**
PB06				*i*S	**Sn**	**07 23 40.7**	**-0.7**
PB06	comp=N,1μm,0.1s			IAML		07 23 41.6	
PB14	**IPOC Station P**	**2.47**	**256**	Pn	**Pn**	**07 23 16.1**	**-0.4**
PB14	**IPOC Station P**	**2.47**	**256**	⇑*i*P	**Pn**	**07 23 16.4**	**-0.2**
PB14				*i*S	**Sn**	**07 23 47.4**	**-1.2**
PB09	**IPOC Station P**	**2.63**	**329**		**Pn**	**07 23 19.3**	**+0.9**
PB09	**IPOC Station P**	**2.63**	**329**	⇑*i*P	**Pn**	**07 23 19.4**	**+0.9**
PB09				*i*S	**Sn**	**07 23 50.8**	**-1.2**
PB04	**IPOC Station P**	**2.79**	**308**	Pn	**Pn**	**07 23 20.2**	**-0.1**
PB04	**IPOC Station P**	**2.79**	**308**	⇑*i*P	**Pn**	**07 23 20.3**	**-0.1**
PB04				*i*S	**Sn**	**07 23 53.6**	**-1.7**
PB04	comp=N,900nm,0.4s			IAML		07 23 56.0	
AC02	**Maricunga**	**3.02**	**204**	Pn	**Pn**	**07 23 23.7**	**+0.1**
AC02	**Maricunga**	**3.02**	**204**	⇑*i*P	**Pn**	**07 23 23.7**	**+0.1**
AC02				*i*S	**Sn**	**07 24 01.5**	**+0.3**
PB07	**IPOC Station P**	**3.04**	**320**	Pn	**Pn**	**07 23 23.4**	**-0.1**
PB07	**IPOC Station P**	**3.04**	**320**	*e*P	**Pn**	**07 23 23.5**	**0.0**
PB07				*i*S	**Sn**	**07 23 59.1**	**-1.9**
PB07	comp=E,719nm,0.2s			IAML		07 24 00.5	
AC01	**Pan de Azucar**	**3.30**	**230**	Pn	**Pn**	**07 23 25.2**	**-1.4**
AC01	**Pan de Azucar**	**3.30**	**230**	⇑*i*P	**Pn**	**07 23 25.2**	**-1.4**
AC01				*i*S	**Sn**	**07 24 03.8**	**-2.8**
AC01	comp=E,259nm,0.2s			IAML		07 24 05.6	

PB02	**IPOC Station P**	**3.37**	**324**			**Pn**	**07 23 27.2**	**-0.4**
PB02	**IPOC Station P**	**3.37**	**324**	⇑	*iP*	**Pn**	**07 23 27.1**	**-0.4**
PB02					*i* S	**Sn**	**07 24 05.7**	**-2.5**
PB01	**IPOC Station P**	**3.40**	**332**			**Pn**	**07 23 27.8**	**-0.2**
PB01	**IPOC Station P**	**3.40**	**332**		*eP*	**Pn**	**07 23 27.5**	**-0.5**
PB01					*i* S	**Sn**	**07 24 07.1**	**-2.0**
TA01	**Diego Aracena**	**4.14**	**327**			**Pn**	**07 23 36.7**	**-0.7**
GO03	**Copiap**	**4.16**	**212**			**Pn**	**07 23 35.8**	**-1.9**
GO03	**Copiap**	**4.16**	**212**	⇑	*eP*	**Pn**	**07 23 35.7**	**-1.9**
TA02	**Huaiquique**	**4.36**	**329**	Pn		**Pn**	**07 23 41.1**	**+0.8**
GO01	**Chusmiza**	**4.57**	**343**			**Pn**	**07 23 43.5**	**+0.1**
AC04	**Llanos de Chal**	**5.08**	**215**			**Pn**	**07 23 45.9**	**-3.8**
AC05	**El Transito**	**5.26**	**205**			**Pn**	**07 23 49.8**	**-2.3**
LC01	**Las Campanas**	**5.58**	**207**			**Pn**	**07 23 54.0**	**-2.5**
PB12	**IPOC Station P**	**5.92**	**136**	Pn		**Pn**	**07 23 59.5**	**-1.5**
CO01	**Juntas del Tor**	**6.25**	**199**	Pn		**Pn**	**07 24 03.6**	**-1.7**
CO05	**La Serena**	**6.60**	**207**	Pn		**Pn**	**07 24 06.3**	**-3.5**
GO04	**Tololo Observa**	**6.66**	**203**	Pn		**Pn**	**07 24 07.8**	**-2.9**
CO03	**El Pedregal**	**7.23**	**200**	Pn		**Pn**	**07 24 15.2**	**-3.0**
CO06	**Fray Jorge**	**7.43**	**207**	Pn		**Pn**	**07 24 16.6**	**-4.1**
CO02	**Combarbal**	**7.67**	**201**	Pn		**Pn**	**07 24 20.4**	**-3.7**
LPAZ	**La Paz**	**7.74**	**357**	P		**Pn**	**07 24 25.6**	**0.0**
	comp=E,0.7nm,0.3s,baz=180,slow=10,SNR=16							
LPAZ					S	**Sn**	**07 25 47.9**	**-4.7**
	comp=E,0.7nm,0.4s,baz=150,slow=25,SNR=1.7							
LPAZ	**La Paz**	**7.74**	**357**			**Pn**	**07 24 26.0**	**+0.3**
LPAZ	**La Paz**	**7.74**	**357**		*eP*	**Pn**	**07 24 24.9**	**-0.8**
MT02	**Curacav**	**9.63**	**197**	Pn		**Pn**	**07 24 45.1**	**-4.8**
CPUP	**Villa Florida**	**9.72**	**106**	P		**Pn**	**07 24 48.5**	**-2.6**
	comp=E,1.4nm,0.8s,baz=292,slow=15,SNR=3.2							
CPUP	**Villa Florida**	**9.72**	**106**		*eP*	**Pn**	**07 24 54.8**	**+3.6**
SIV	**San Ignacio**	**10.20**	**39**	P		**Pn**	**07 24 54.4**	**-3.3**
	comp=E,6.4nm,0.3s,baz=214,slow=7.3,SNR=24							
SIV					S	Sn	07 26 38.7	-12
	comp=E,1.0nm,0.2s,baz=180,slow=19,SNR=1.8							
BO01	**Tunca**	**10.69**	**195**	Pn		**Pn**	**07 25 01.6**	**-2.3**
AQDB	**Aquidauana**	**11.73**	**75**			**Pn**	**07 25 16.1**	**-1.5**
PTLB	**Pontes e Lacer**	**11.80**	**45**			**Pn**	**07 25 17.4**	**-1.2**
PTLB	**Pontes e Lacer**	**11.80**	**45**		*eP*	**Pn**	**07 25 17.4**	**-1.2**
RODS	**Rosario do Sul**	**12.81**	**122**		*eP*	**P**	**07 25 35.0**	**-1.3**
CRSM	**Crissiumal (Br**	**12.83**	**108**		*eP*	**P**	**07 25 34.5**	**-2.0**
VILB	**Vilhena**	**13.17**	**34**			**Pn**	**07 25 35.8**	**-0.5**
VILB	**Vilhena**	**13.17**	**34**		*eP*	**Pn**	**07 25 35.8**	**-0.5**
FRBT	**Francisco Belt**	**13.47**	**101**		*eP*	**P**	**07 25 43.1**	**-0.6**
SALV	**Santo Antonio**	**13.95**	**57**		*eP*	**Pn**	**07 25 44.5**	**-1.5**
TRCB	**Terra Rica**	**13.95**	**88**		*eP*	**P**	**07 25 49.3**	**+0.2**
ALGR	**Alto Alegre (B**	**14.02**	**113**		*eP*	**P**	**07 25 49.8**	**0.0**
CPSB	**Cacapava Do Su**	**14.22**	**119**		*eP*	**P**	**07 25 51.1**	**-0.9**
ETMB	**Extrema**	**14.24**	**6**			**Pn**	**07 25 49.8**	**0.0**
ETMB	**Extrema**	**14.24**	**6**		*eP*	**Pn**	**07 25 49.1**	**-0.7**
PTGB	**Pitanga**	**14.32**	**96**		*eP*	**P**	**07 25 53.8**	**+0.5**
ITAB	**Concordia**	**14.45**	**106**	Pn		**Pn**	**07 25 49.4**	**-2.8**
ITAB	**Concordia**	**14.45**	**106**		*eP*	**P**	**07 25 54.6**	**+0.1**
PDRB	**Porto dos Gac**	**16.23**	**42**		*eP*	**Pn**	**07 26 14.2**	**0.0**
ITRB	**Iturama**	**16.73**	**78**		*eP*	**Pn**	**07 26 21.1**	**+0.8**
PLCA	**Paso Flores**	**16.79**	**187**	P		**Pn**	**07 26 25.9**	**+5.1**
	comp=E,1.2nm,0.8s,baz=12,slow=16,SNR=1.7							
CZSB	**Cruzeiro do Su**	**16.92**	**343**		*eP*	**P**	**07 26 20.7**	**-1.2**
CLDB	**Colider**	**17.37**	**43**		*eP*	**P**	**07 26 26.5**	**-0.4**
VAO	**Valinhos**	**19.10**	**91**		*eP*	**P**	**07 26 45.0**	**-0.8**
IPMB	**Ipameri, GO**	**19.22**	**75**		*eP*	**P**	**07 26 46.7**	**-0.5**
SNDB	**Serra Nova Dou**	**19.72**	**55**		*eP*	**P**	**07 26 51.1**	**-1.3**
BDFB	**Brasilia**	**20.36**	**69**	P		**P**	**07 26 58.0**	**-1.5**
	comp=E,6.0nm,0.6s,baz=245,slow=12,SNR=18							
	comp=E,6.0nm,0.6s							
BDFB	**Brasilia**	**20.36**	**69**	P		**P**	**07 26 58.7**	**-0.7**
BDFB				IAmb		IAmb	07 27 00.0	
	comp=Z,6.6nm,0.6s							
BDFB	**Brasilia**	**20.36**	**69**		*eP*	**P**	**07 26 58.6**	**-0.8**
PMNB	**Patos De Minas**	**20.61**	**79**		*eP*	**P**	**07 27 00.8**	**-1.3**
NPGB	**Novo Progresso**	**20.69**	**37**		*eP*	**P**	**07 27 01.0**	**-1.8**
MACA	**Manacapuru-AM**	**21.88**	**19**		*eP*	**P**	**07 27 13.8**	**-1.6**
VAS01	**Vassouras-RJ**	**22.43**	**90**		*eP*	**P**	**07 27 19.9**	**-0.9**
ITTB	**Itaituba**	**22.76**	**33**		*eP*	**P**	**07 27 22.8**	**-1.1**
MC01	**Montes Claros**	**23.48**	**76**		*eP*	**P**	**07 27 29.3**	**-1.3**
JANB	**Januaria**	**23.82**	**72**		*eP*	**P**	**07 27 33.0**	**-0.7**
SMTB	**Santa Maria do**	**24.50**	**55**		*eP*	**P**	**07 27 39.0**	**-0.8**
SDBA	**SAO DESIDERIO**	**24.57**	**66**		*eP*	**P**	**07 27 39.9**	**-0.6**
MALB	**Monte Alegre**	**25.66**	**33**		*eP*	**P**	**07 27 49.5**	**-0.7**
NAN01	**Guarapari, ES**	**26.52**	**82**		*eP*	**P**	**07 27 57.0**	**-1.0**
GUA01	**Guaratinga, BA**	**27.22**	**79**		*eP*	**P**	**07 28 03.9**	**-0.4**
CMC01	**Camacan, BA**	**27.92**	**77**		*eP*	**P**	**07 28 09.8**	**-0.7**
GDU01	**Guandu, BA**	**28.53**	**74**		*eP*	**P**	**07 28 14.9**	**-1.1**
NBAN	**Anadia - AL**	**33.26**	**70**		*eP*	**P**	**07 28 57.0**	**-0.5**
VNA3	**Neumayer Olymp**	**57.32**	**161**	P		**P**	**07 32 07.5**	**+1.6**
VNA2	**Neumayer--Watz**	**57.89**	**160**	P		P	07 32 18.5	+8.6
	baz=283,slow=3.0							
SNAA	**Sanae**	**59.52**	**161**	P		**P**	**07 32 21.9**	**+0.7**
SNAA	**Sanae**	**59.52**	**161**	P		**P**	**07 32 19.7**	**-1.5**
Y49A	**Blount Mountai**	**60.27**	**342**	P		**P**	**07 32 27.5**	**+0.8**
Y49A				IAmb		IAmb	07 32 50.0	
	comp=Z,7.2nm,1.4s							
TROLL	**Troll, Antarti**	**61.24**	**161**	P		**P**	**07 32 34.3**	**+1.3**
WVT	**Waverly**	**62.80**	**342**	P		**P**	**07 32 44.2**	**+0.7**
WVT				IAmb		IAmb	07 32 44.7	
	comp=Z,2.8nm,0.7s							
S54A	**Dingess, Beckl**	**62.84**	**348**	P		**P**	**07 32 44.8**	**+1.0**
TXAR	**Lajitas Array**	**63.32**	**325**	P		**P**	**07 32 49.1**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=134,slow=7.8,SNR=4.1							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**63.32**	**325**	P		**P**	**07 32 46.3**	**-1.0**
CCM	**Cathedral Cave**	**65.61**	**340**	P		**P**	**07 33 02.0**	**+0.2**
CCM				IAmb		IAmb	07 33 03.4	
	comp=Z,4.4nm,0.6s							
VNDA	**Vanda**	**74.52**	**190**	P		P	07 34 00.9	+5.3
	comp=Z,0.3nm,0.6s,baz=118,slow=9.9,SNR=1.5							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**76.85**	**330**	P		**P**	**07 34 11.6**	**+2.0**
	comp=Z,0.6nm,0.9s,baz=133,slow=7.4,SNR=4.2							
	comp=Z,0.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**77.25**	**69**	P		**P**	**07 34 12.6**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=255,slow=5.4,SNR=8.4							
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**93.94**	**340**	P		**P**	**07 35 35.5**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=131,slow=4.5,SNR=14							
	comp=Z,0.9nm,0.8s							
KEST	**Kesra**	**94.01**	**53**	P		**P**	**07 35 34.2**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=234,slow=8.7,SNR=2.3							
	comp=Z,1.7nm,0.5s							
ASAR	**Alice Springs**	**128.10**	**205**	PKP		**PKiKP**	**07 41 23.9**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=151,slow=2.1,SNR=6.2							
WRA	**Warramunga Arr**	**131.24**	**208**	PKP		**PKiKP**	**07 41 30.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=162,slow=1.5,SNR=9.4							

WEL 14 07:37:58.7,42°S±3°×17°2E±°,h5km±3km,M2.2/9,ML2.2/8, MLv2.2/9,Error ellipse: s-maj=0.0km s-min=0.0km az=135.0,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSZ	**Denniston Nort**	**0.33**	**277**	P	Pb	07 38 06.8	-0.3
DSZ				S	Sb	07 38 11.4	-1.2
THZ	**Tophouse**	**0.50**	**88**	P	Pb	07 38 09.8	-0.2
THZ				S	Sb	07 38 17.2	-0.5
MRNZ	**Matariki Terra**	**0.55**	**45**	P	Pb	07 38 10.8	0.0
TKNZ	**Takaka Hill**	**0.93**	**36**	P	Pb	07 38 17.2	-0.1
QRZ	**Quartz Range**	**0.98**	**13**	P	Pn	07 38 18.8	-0.3
LTZ	**Lake Taylor**	**1.00**	**179**	P	Pn	07 38 20.3	+0.9
LTZ				S	Sn	07 38 33.1	-0.7
NNZ	**Nelson**	**1.03**	**57**	P	Pn	07 38 19.5	-0.3
INZ	**Inchbonnie**	**1.11**	**212**	P	Pn	07 38 21.4	+0.5
KHZ	**Kahutara**	**1.16**	**123**	P	Pn	07 38 23.5	+2.0
GVZ	**Greta Valley S**	**1.32**	**154**	P	Pg	07 38 26.0	+2.0

*NIED **14** 07:38:03.9,27.°15N×128.°28E,h13km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-8.59; Mθθ5.74; Mϕϕ2.84; Mrθ0.59; Mθϕ-5.94; Mϕr1.55; Fault plane solution: Mo9.69000×10¹⁴ NP1: ϕs296.00000°,δ45.00000°,λ-108.00000°. NP2: ϕs140.00000°,δ48.00000°,λ-73.00000°.*
*JMA **14** 07:38:03.9±0.1,27.°2N±0.°2×128.°3E±0.°3,h13km±1km, MD3.9/9,MV4.0/9,NEAR OKINAWAJIMA ISLAND*
JMA Felt I J1 at NEAR OKINAWAJIMA ISLAND .
*IDC **14** 07:38:12.2±4.1,27.°20N×128.°22E,h83km±39km,mb3.4/7, mbtmp3.6/9,MS2.8/8,Error ellipse: s-maj=42.2km s-min=21.1km az=72.0*
ISC 14 07:38:02.8±1.6,27.°19N±0.°06×128.°24E±0.°05,h7km±11km, n37,σ0°63/23,mb3.6/7,MS2.8/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**0.26**	**131**	*i* P	**Pg**	**07 38 08.3**	**+0.5**
JYRO				S	**Sg**	**07 38 11.1**	**-0.1**
JYRO	**Yoronjima**	**0.26**	**131**	A	A	07 38 08.3	
	comp=E,10.0nm,5.4s,comp=E,8.0nm,0.8s						
JIH	**Iheya**	**0.29**	**237**	*i* P	**Pb**	**07 38 10.0**	**-0.2**
JIH				S	**Sb**	**07 38 14.5**	**-0.8**
JIH	**Iheya**	**0.29**	**237**	A	A	07 38 10.0	
	comp=E,23nm,0.4s,comp=E,24nm,1.3s						
JOKE	**Okinoerabujima**	**0.34**	**61**	P	**Pb**	**07 38 10.6**	**-0.6**
JOKE				S	**Sb**	**07 38 15.4**	**-1.5**
JOKE	**Okinoerabujima**	**0.34**	**61**	A	A	07 38 10.6	
	comp=E,9.0nm,0.2s,comp=E,10.0nm,0.6s						
JOW	**Kunigami**	**0.36**	**175**	P	**Pg**	**07 38 10.4**	**+0.5**
JOW				S	**Sg**	**07 38 14.5**	**-0.1**
JOW	**Kunigami**	**0.36**	**175**	A	A	07 38 10.4	
	comp=E,22nm,0.3s,comp=E,18nm,0.3s						
JNTH	**Nagotoyohara**	**0.70**	**196**	*i* P	**Pb**	**07 38 16.7**	**-0.6**
JNTH				S	**Sg**	**07 38 24.5**	**-0.8**
JTK	**Tokunoshima**	**0.87**	**47**	S	**Sb**	**07 38 32.4**	**+0.5**
JTK	**Tokunoshima**	**0.87**	**47**	A	A	07 38 32.4	
	comp=E,10.0nm,0.5s,comp=E,11nm,0.5s						
JAGN	**Aguni-jima**	**1.07**	**236**	P	**Pg**	**07 38 23.3**	**0.0**
JAGN				*eS*	**Sb**	**07 38 37.9**	**0.0**
JAGN	**Aguni-jima**	**1.07**	**236**	A	A	07 38 23.3	
	comp=E,7.0nm,1.1s,comp=E,6.0nm,2.8s						
JJT3	**Tamagusuku3**	**1.12**	**201**	*i* P	**Pn**	**07 38 25.1**	**+0.1**
JJT3				S	**Sb**	**07 38 39.1**	**-0.2**
JJT3	**Tamagusuku3**	**1.12**	**201**	A	A	07 38 25.1	
	comp=E,9.0nm,1.6s,comp=E,15nm,2.3s						
KSRS	**Korea Array**	**10.23**	**359**	P	Pn	07 40 35.8	+5.7
	0.9nm,0.8s,baz=177,slow=16,SNR=5.6						
KSRS					LR	LR	07 44 44.0	
	comp=Z,27nm,19.3s,baz=170,slow=38							
JHJ	**Hachijo jima 2**	**11.60**	**57**	LR	LR	07 44 46.0	
	comp=Z,69nm,21.0s,baz=252,slow=34							
MJAR	**Matsushiro Arr**	**12.59**	**40**	P	Pn	07 41 08.6	+6.2
	0.3nm,0.4s,baz=211,slow=11,SNR=3.0							
DAV	**Davao City (W)**	**20.17**	**188**	LR	LR	07 52 28.0	
	comp=Z,21nm,18.5s,baz=164,slow=42							
KLR	**Kul'dur**	**22.17**	**6**	LR	LR	07 50 54.0	
	comp=Z,19nm,19.2s,baz=238,slow=34							
SONM	**Songino Array**	**26.75**	**326**	P	**P**	**07 43 43.3**	**+0.1**
	0.4nm,0.5s,baz=145,slow=11,SNR=3.1							
	0.4nm,0.5s							
CMAR	**Chiang Mai Arr**	**28.31**	**258**	LR	LR	07 57 38.0	
	comp=Z,14nm,18.4s,baz=110,slow=41							
PETK	**Petropavlovsk-**	**33.88**	**32**	LR	LR	07 58 35.3	
	comp=Z,24nm,19.6s,baz=220,slow=36							
MA2	**Magadan**	**35.90**	**19**	LR	LR	07 59 45.1	
	comp=Z,27nm,18.3s,baz=128,slow=36							
H11N2	**WAKE ISLAND Hy**	**36.12**	**93**	T	T	08 23 22.2	
	baz=290,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**36.12**	**93**	T	T	08 23 19.9	
	baz=290,slow=75,SNR=9.3							
H11N3	**WAKE ISLAND Hy**	**36.14**	**93**	T	T	08 23 22.7	
	baz=290,slow=75,SNR=16							
H11S3	**WAKE ISLAND Hy**	**36.36**	**96**	T	T	08 23 38.9	
	baz=291,slow=74,SNR=4.2							
H11S1	**WAKE ISLAND Hy**	**36.37**	**95**	T	T	08 23 23.5	
	baz=291,slow=74,SNR=5.3							
H11S2	**WAKE ISLAND Hy**	**36.38**	**96**	T	T	08 23 41.1	
	baz=291,slow=74,SNR=5.4							
MKAR	**Makanchi Array**	**40.90**	**311**	P	**P**	**07 45 46.9**	**+1.2**
	0.4nm,0.7s,baz=98,slow=8.8,SNR=3.9							
MKAR					LR	LR	08 03 05.3	
	comp=Z,17nm,19.3s,baz=78,slow=36							
	0.4nm,0.7s							
WRA	**Warramunga Arr**	**47.23**	**172**	P	**P**	**07 46 36.6**	**0.0**
	0.5nm,0.9s,baz=354,slow=8.6,SNR=2.2							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**50.86**	**173**	P	**P**	**07 47 04.9**	**+0.5**
	0.6nm,0.8s,baz=4.7,slow=12,SNR=1.9							
	0.6nm,0.8s							
FINES	**FINESS Array B**	**72.03**	**330**	P	**P**	**07 49 26.5**	**-0.6**
	1.6nm,0.8s,baz=60,slow=5.5,SNR=2.3							
	1.6nm,0.8s							
YKA	**Yellowknife Ar**	**77.65**	**25**	P	**P**	**07 49 59.6**	**-0.1**
	0.8nm,0.9s,baz=298,slow=5.5,SNR=4.2							
	0.8nm,0.9s							
NB2	**NORSAR Subarra**	**78.45**	**334**	P	**P**	**07 50 03.9**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=50,slow=5.9							
NOA	**NORSAR Array B**	**78.45**	**334**	P	**P**	**07 50 03.6**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=51,slow=5.6,SNR=6.6							
	comp=Z,1.4nm,0.8s							

IDC 14 07:56:53.1±3.7,4.°65S×148.°45E,h0km,mb3.5/4, mbtmp3.6/4,Error ellipse: s-maj=111.7km s-min=33.2km az=106.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.49**	**221**	P	P	08 01 33.7	+0.8
	1.0nm,0.3s,baz=46,slow=9.5,SNR=24						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**23.54**	**215**	P	P	08 02 04.6	-0.7
	0.2nm,0.3s,baz=42,slow=7.9,SNR=9.5						
	0.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**26.00**	**237**	P	P	08 02 28.0	0.0
	1.3nm,0.4s,baz=54,slow=10,SNR=6.8						
	1.3nm,0.4s						
MKAR	**Makanchi Array**	**77.39**	**320**	P	P	08 08 49.3	-0.9
	0.2nm,0.5s,baz=105,slow=5.5,SNR=2.1						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.12**	**287**	PKPbc	PKPab	08 16 36.9	-0.1
	0.1nm,0.3s,baz=70,slow=3.8,SNR=1.9						

*DDA **14** 08:10:12.9±0.0,35.°53N×31.°33E,h2km±1km,ML1.8*
*NIC **14** 08:10:13.3±0.0,35.°58N×31.°57E,h17km,Ml2.6/3*
ISC 14 08:10:12.1±2.4,35.°44N±0.°06×31.°4E±0.°1,h15km±12km, n10,σ0°82/17,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.87**	**119**	P	**Pg**	**08 10 29.6**	**+0.5**
AKMS				S	**Sn**	**08 10 41.6**	**-0.6**
AKMS				AML	AML	08 10 43.9	
	2.7nm,0.4s						
AKMS				AML	AML	08 10 43.9	
	2.7nm,0.4s						
AKMS				AML	AML	08 10 44.1	
	1.3nm,0.6s						
AKMS				AML	AML	08 10 44.1	
	1.3nm,0.6s						
ALFC	**Alefka**	**1.02**	**106**	P	**Pn**	**08 10 32.1**	**+0.2**
ALFC				S	**Sn**	**08 10 45.2**	**-0.7**
ALFC				AML	AML	08 10 47.6	
	0.7nm,0.3s						
ALFC				AML	AML	08 10 47.6	
	0.6nm,0.2s						
ALFC				AML	AML	08 10 47.6	
	0.7nm,0.3s						
ALFC				AML	AML	08 10 47.6	
	0.6nm,0.2s						
GAZI	**Gazipasa**	**1.09**	**43**	P	**Pn**	**08 10 33.1**	**+0.4**
GAZI				S	**Sn**	**08 10 49.3**	**+1.7**
GAZI				*i* AML	AML	08 10 52.0	
	comp=E,31nm,0.7s						
GAZI				*i* AML	AML	08 10 53.0	
	comp=N,32nm,0.6s						
SZAC	**Souni**	**1.39**	**119**	P	**Pn**	**08 10 37.4**	**+0.4**
SZAC				S	**Sb**	**08 10 56.0**	**+0.5**
SZAC				AML	AML	08 11 01.8	
	0.3nm,0.8s						
SZAC				AML	AML	08 11 01.8	
	0.3nm,0.8s						
SZAC				AML	AML	08 11 01.8	
	0.4nm,0.7s						
SZAC				AML	AML	08 11 01.8	
	0.4nm,0.7s						
KEPZ	**Antalya-Kepez**	**1.47**	**6**	P	**Pg**	**08 10 40.2**	**-0.2**
KEPZ				S	**Sg**	**08 10 59.0**	**-0.5**
KEPZ				*i* AML	AML	08 11 07.0	
	comp=N,12nm,0.7s						
KEPZ				*i* AML	AML	08 11 07.0	
	comp=E,9.7nm,0.7s						
ASGA	**Asgata**	**1.65**	**113**	P	**Pn**	**08 10 40.5**	**+0.1**
ASGA				S	**Sb**	**08 11 01.9**	**-0.8**
CSS	**Mathiatis**	**1.65**	**106**	P	**Pn**	**08 10 40.1**	**-0.4**
MVOU	**Mavrovouni**	**1.87**	**102**	P	**Pn**	**08 10 42.9**	**-0.6**
SEDI	**Konya, Seydise**	**2.03**	**8**	P	Pg	08 10 55.9	+4.8
SEDI				S	**Sg**	**08 11 18.1**	**+0.7**
SEDI				*i* AML	AML	08 11 27.0	
	comp=E,9.0nm,0.5s						
SEDI				*i* AML	AML	08 11 27.0	
	comp=N,11nm,0.4s						
KKBE	**Karaman, Kazim**	**2.17**	**35**	P	**Pg**	**08 10 52.5**	**-1.2**
KKBE				S	**Sg**	**08 11 22.6**	**+0.7**
KKBE				*i* AML	AML	08 11 30.0	
	comp=E,7.3nm,0.8s						

*IDC **14** 08:14:09.6±1.2,22.°87S×172.°90E,h0km,mb4.1/5, mbtmp4.1/7,ML5.1/1,MS3.6/34,Error ellipse: s-maj=41.1km s-min=22.8km az=147.0*
*NOU **14** 08:14:10.1,22.°93S×173.°14E,h0km,ML4.8/9,Southeast of Loyalty Islands*
ISC 14 08:14:14.9±0.7,23.°0S±0.°1×172.°95E±0.°08,h35km,n61, σ1°45/27,mb4.0/5,MS3.7/31,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.79**	**287**	P	**Pn**	**08 15 25.9**	**+1.3**
PINNC	**Pines Island,**	**5.09**	**273**	P	**Pn**	**08 15 29.5**	**+0.8**
OUENC	**Ouen Island, N**	**5.67**	**274**	P	**Pn**	**08 15 38.3**	**+1.6**
YATNC	**Mamie plateau,**	**5.67**	**278**	P	**Pn**	**08 15 38.1**	**+1.3**
DZM	**Mont Dzumac**	**6.08**	**277**	Pn	**Pn**	**08 15 41.3**	**-1.1**
	5.2nm,0.3s,baz=102,slow=7.1,SNR=22						
DZM					Sn	**Sn**	**08 16 49.3**	**-1.5**
	2.6nm,0.3s,baz=132,slow=23,SNR=2.3						
DZM	**Mont Dzumac**	**6.08**	**277**	*e*Pn	**Pn**	**08 15 42.0**	**-0.4**
	40nm,1.4s						
DZM				*e*Sn	**Sn**	**08 16 49.8**	**-1.1**
	112nm,0.8s						
DZM				*e*LR	LR	08 17 06.7	
	comp=Z,314nm,22.8s						
DZM	**Mont Dzumac**	**6.08**	**277**	P	**Pn**	**08 15 43.4**	**+1.0**
NOUC	**Port Laguerre**	**6.20**	**277**	P	**Pn**	**08 15 44.7**	**+0.7**
DVP	**Devils Point**	**6.85**	**318**	P	**Pn**	**08 15 53.8**	**+0.8**
MSVF	**Nonsavu**	**7.06**	**44**	Pn	**Pn**	**08 15 54.8**	**-1.0**
	1.0nm,0.3s,baz=234,slow=7.2,SNR=5.9						
MSVF					LR	LR	08 17 57.2	
	comp=Z,724nm,19.1s,baz=266,slow=32						
	16nm,0.8s						
NFK	**Norfolk Island**	**7.56**	**216**	P	**Pn**	**08 16 03.1**	**+0.5**
RAO	**Raoul Island**	**10.33**	**129**	LR	LR	08 19 58.8	
	comp=Z,272nm,18.5s,baz=338,slow=34						
URZ	**Urewera**	**15.67**	**168**	LR	LR	08 22 38.5	
	comp=Z,358nm,20.5s,baz=32,slow=32						
HNR	**Honiara**	**18.33**	**315**	LR	LR	08 24 24.7	
	comp=Z,170nm,18.9s,baz=139,slow=34						
RPZ	**Rata Peaks**	**20.77**	**184**	LR	LR	08 26 31.9	
	comp=Z,278nm,18.4s,baz=353,slow=36						
CTA	**Charters Tower**	**24.99**	**271**	LR	LR	08 28 42.1	
	comp=Z,130nm,19.5s,baz=92,slow=35						
RAR	**Rarotonga**	**25.32**	**91**	LR	LR	08 28 06.1	
	comp=Z,39nm,20.2s,baz=234,slow=33						
STKA	**Stephens Creek**	**29.14**	**245**	P	**P**	**08 20 13.1**	**+0.3**
	1.4nm,0.6s,baz=76,slow=12,SNR=3.6						
STKA					LR	LR	08 30 42.8	
	comp=Z,169nm,18.6s,baz=50,slow=34						
	1.4nm,0.6s						
PPT2	**Papeete2**	**35.49**	**88**	*e*LR	LR	08 30 30.4	
	comp=Z,43nm,22.5s						
PPT	**Papeete**	**35.49**	**88**	LR	LR	08 31 53.1	
	comp=Z,47nm,20.5s,baz=276,slow=30						
ASAR	**Alice Springs**	**35.79**	**261**	P	**P**	**08 21 09.9**	**-1.2**
	2.0nm,0.9s,baz=88,slow=10.0,SNR=12						
	2.0nm,0.9s						
WRA	**Warramunga Arr**	**36.00**	**267**	LR	LR	08 35 17.6	
	comp=Z,114nm,21.0s,baz=96,slow=35						
H11S2	**WAKE ISLAND Hy**	**41.64**	**351**	T	T	09 06 08.3	
	baz=171,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**41.64**	**351**

	19nm,0.3s,baz=127,slow=21,SNR=38						
SIJI				S	Sn	08 20 01.8	-4.8
	99nm,0.2s,baz=203,slow=22,SNR=11						
SWI	**Sorong**	**5.43**	**8**	P	**Pn**	**08 19 04.9**	**+0.1**
	0.7nm4μm42nm,0.7s						
LBMI	**Labuha**	**6.33**	**332**	P	**Pn**	**08 19 17.0**	**+0.3**
	0.2nm34nm,0.4s						
MTN	**Manton Dam**	**6.56**	**174**	P	**Pn**	**08 19 19.8**	**-0.1**
KDU	**Kakadu**	**6.68**	**163**	P	**Pn**	**08 19 20.8**	**-0.6**
BATI	**Baumata**	**7.78**	**239**	P	**Pn**	**08 19 36.3**	**+0.2**
	0.2nm28nm,1.2s						
EDFI	**Ende, Flores**	**9.04**	**254**	P	**Pn**	**08 19 55.6**	**+2.6**
	3.8nm,1.2s						
KNRA	**Kununurra**	**9.49**	**190**	P	**Pn**	**08 19 57.5**	**-1.4**
FITZ	**Fitzroy Crossi**	**12.66**	**201**	P	**Pn**	**08 20 37.4**	**-3.1**
	1.0nm,0.3s,baz=20,slow=10,SNR=29						
FITZ				S	Sn	08 22 47.8	-13
	5.4nm,0.6s,baz=66,slow=11,SNR=8.5						
FITZ	**Fitzroy Crossi**	**12.66**	**201**	P	**Pn**	**08 20 38.9**	**-1.6**
WRA	**Warramunga Arr**	**14.10**	**165**	P	**Pn**	**08 20 56.4**	**-2.5**
	2.3nm,0.4s,baz=345,slow=13,SNR=39						
WRA				S	Sn	08 23 26.0	-9.3
	1.2nm,0.3s,baz=352,slow=24,SNR=7.4						
COEN	**Coen**	**14.66**	**122**	P	**P**	**08 21 10.0**	**+1.9**
QIS	**Mount Isa**	**16.75**	**149**	P	**Pn**	**08 21 34.2**	**+2.7**
ASAR	**Alice Springs**	**17.61**	**170**	P	**Pn**	**08 21 42.1**	**+0.2**
	1.6nm,0.5s,baz=342,slow=9.3,SNR=32						
ASAR				S	**S**	**08 24 51.5**	**-4.8**
	0.2nm,0.3s,baz=355,slow=25,SNR=4.5						
MKAR	**Makanchi Array**	**67.87**	**326**	P	**P**	**08 28 29.6**	**+1.8**
	1.4nm,0.4s,baz=115,slow=7.9,SNR=25						
	1.4nm,0.4s						

RSNC 14 09:06:23.3±0.9, 4°.05N×76°.45W, h132km±3km, ML3.5, Mw3.9, 5C-10D, Fault plane solution: NP1:
ϕ_s138.00000°, δ51.00000°, λ138.00000°., Colombia

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
YOTC	**Yotoco, Valle**	**0.12**	**124**	⇑	*iP*	Pn	09 06 41.0	-0.4
YOTC					*eS*	Sn	09 06 55.3	+0.2
YOTC					*i*		09 06 57.7	
	comp=Z,758nm,0.3s							
PLMC	**San Jos del P**	**0.86**	**11**	⇑	*eP*	Pn	09 06 44.7	-0.6
PLMC					*eS*	Sn	09 07 01.1	-0.9
PLMC					*i*		09 07 05.9	
	comp=Z,2μm,0.5s							
MALC	**Bahia Malaga**	**0.89**	**267**	⇑	*eP*	Pn	09 06 46.7	+1.4
ANIL	**Santa Ana**	**1.13**	**67**		*eP*	Pn	09 06 46.9	-1.1
ANIL					*eS*	Sn	09 07 05.0	-1.6
ANIL					*i*		09 07 07.1	
	comp=Z,1μm,0.3s							
PIZC	**Pizarro, Choco**	**1.28**	**315**	⇑	*iP*	Pn	09 06 50.3	+1.1
PIZC					*eS*	Sn	09 07 10.8	+1.9
PIZC					*i*		09 07 16.4	
	comp=Z,1μm,0.3s							
POPC	**Popayan, Colom**	**1.52**	**189**	⇓	*iP*	Pn	09 06 51.2	-0.8
POPC					*eS*	Sn	09 07 12.5	-1.4
POPC					*i*		09 07 13.7	
	comp=Z,340nm,0.3s							
GUY2C	**Guyana, Caldas**	**1.59**	**43**	⇓	*iP*	Pn	09 06 52.7	-0.3
GUY2C					*eS*	Sn	09 07 15.0	-0.6
GUY2C					*i*		09 07 17.6	
	comp=Z,576nm,0.6s							
PRAC	**Prado**	**1.59**	**102**	⇑	*eP*	Pn	09 06 52.3	-0.3
PRAC					*eS*	Sn	09 07 14.3	-0.6
PRAC					*i*		09 07 16.4	
	comp=Z,412nm,0.6s							
BETC	**Betania**	**1.69**	**144**		*eP*	Pn	09 06 53.5	-0.3
BETC					*eS*	Sn	09 07 16.4	-0.7
BETC					*i*		09 07 18.3	
	comp=Z,533nm,0.5s							
CBOC	**Ciudad Bolivar**	**1.85**	**13**	⇓	*iP*	Pn	09 06 55.4	-0.4
CBOC					*eS*	Sn	09 07 19.2	-1.4
CBOC					*i*		09 07 26.6	
	comp=Z,327nm,0.3s							
GR1C	**Gorgona, Isla**	**2.01**	**239**		*eP*	Pn	09 06 56.6	-0.9
GR1C					*eS*	Sn	09 07 22.5	-1.2
GARC	**Garzon, Huila**	**2.08**	**153**	⇓	*iP*	Pn	09 06 57.9	-0.8
GARC					*eS*	Sn	09 07 22.8	-3.0
GARC					*i*		09 07 24.8	
	comp=Z,337nm,0.3s							
BBAC	**Balboa, Cauca**	**2.17**	**202**	⇓	*iP*	Pn	09 06 59.2	-0.6
BBAC					*eS*	Sn	09 07 26.7	-0.9
BBAC					*i*		09 07 29.2	
	comp=Z,224nm,0.3s							
NORC	**Norcasia**	**2.17**	**46**	⇓	*iP*	Pn	09 06 59.2	-0.3
NORC					*eS*	Sn	09 07 26.6	-0.8
NORC					*i*		09 07 28.6	
	comp=Z,143nm,0.5s							
ROSC	**El Rosal**	**2.26**	**70**	⇓	*iP*	Pn	09 07 01.9	+1.0
ROSC					*eS*	Sn	09 07 31.7	+1.9
ROSC					*i*		09 07 36.4	
	comp=Z,90nm,0.4s							
HELC	**Santa Helena**	**2.31**	**23**	⇓	*iP*	Pn	09 07 01.1	-0.5
HELC					*eS*	Sn	09 07 31.9	+0.9
HELC					*i*		09 07 34.3	
	comp=Z,137nm,0.7s							
SOLC	**Bahia Solano**	**2.36**	**336**		*eP*	Pn	09 07 02.2	+0.3
SOLC					*i*		09 07 33.5	
	comp=Z,284nm,0.2s							
CRUC	**La Cruz**	**2.52**	**192**		*eP*	Pn	09 07 03.9	-0.4
CRUC					*eS*	Sn	09 07 35.1	-0.5
FLOC	**Florencia**	**2.58**	**162**	⇓	*iP*	Pn	09 07 04.2	-0.5
FLOC					*eS*	Sn	09 07 35.2	-1.3
FLOC					*i*		09 07 37.5	
	comp=Z,66nm,0.6s							
VILC	**Villavicencio,**	**2.75**	**89**		*eP*	Pn	09 07 08.0	+1.1
VILC					*eS*	Sn	09 07 40.3	0.0
VILC					*i*		09 07 44.7	
	comp=Z,148nm,0.5s							
CHIC	**Chingaza**	**2.77**	**78**		*eP*	Pn	09 07 07.6	+0.2
CHIC					*eS*	Sn	09 07 41.0	-0.3
CHIC					*i*		09 07 45.8	
	comp=Z,69nm,0.5s							
SPBC	**San Pablo de B**	**2.85**	**56**	⇓	*iP*	Pn	09 07 08.2	+0.1
SPBC					*eS*	Sn	09 07 41.8	-0.9
GCUF	**Volcan Galeras**	**2.95**	**198**		*eP*	Pn	09 07 09.2	-0.6
GCUF					*eS*	Sn	09 07 43.7	-2.0
GCUF					*i*		09 07 47.5	
	comp=Z,129nm,0.5s							
PTBC	**PUERTO BERRIO,**	**3.17**	**39**		*eP*	Pn	09 07 11.2	-1.0
PTBC					*eS*	Sn	09 07 47.8	-2.2
PTBC					*i*		09 07 51.1	
	comp=Z,69nm,0.4s							
MACC	**Macarena, Meta**	**3.21**	**126**		*eP*	Pn	09 07 11.9	-0.9
PTAC	**Punta Ardita,**	**3.36**	**336**		*eP*	Pn	09 07 14.6	-0.1
ZARC	**Zaragoza, Cauc**	**3.76**	**25**		*eP*	Pn	09 07 19.5	-0.6
UREC	**San Jos de Ur**	**3.79**	**14**		*eP*	Pn	09 07 19.8	-0.5
RUSC	**La Rusia**	**3.82**	**61**		*eP*	Pn	09 07 21.4	+0.3
RUSC					*i*		09 08 09.2	
	comp=Z,82nm,0.9s							
BRRC	**Barranca, Sant**	**4.08**	**42**		*eP*	Pn	09 07 22.6	-1.5
BRRC					*eS*	Sn	09 08 08.4	-2.9
BRRC					*i*		09 08 15.1	
	comp=Z,27nm,0.4s							
BARC	**Barichara**	**4.11**	**52**		*eP*	Pn	09 07 24.2	-0.6
BARC					*eS*	Sn	09 08 11.6	-1.0
BARC					*i*		09 08 15.2	
	comp=Z,123nm,0.7s							
PTLC	**Puerto Leguiza**	**4.19**	**157**		*eP*	Pn	09 07 29.5	+3.8
CUSE	**Cuicocha Este**	**4.20**	**208**		*eP*	Pn	09 07 25.5	-0.8
CAPC	**Capurgana**	**4.64**	**349**		*eP*	Pn	09 07 31.4	-0.3
UPD2	**Meteti**	**4.73**	**341**		*eP*	Pn	09 07 33.8	+0.9
PAMC	**Pamplona, Colo**	**4.96**	**49**		*eP*	Pn	09 07 36.1	-0.2
UPA	**Univ. de Panam**	**5.78**	**328**		*eP*	Pn	09 07 46.7	-0.1
SJCC	**San Jacinto, C**	**5.94**	**12**		*eP*	Pn	09 07 48.3	-0.8
BCIP	**Isla Barro Col**	**6.09**	**327**		*eP*	Pn	09 07 52.6	+1.5
BCIP					*eS*	Sn	09 09 01.2	+1.4
BCIP					*i*		09 09 06.2	
	comp=Z,46nm,0.5s							
SOCV	**Socops**	**6.97**	**53**		*eP*	Pn	09 08 00.5	-2.5

*IDC **14** 09:16:55.4±1.1, 0°.72N×123°.73E, h279km±10km, mb4.1/24, mbtmp4.7/28, Error ellipse: s-maj=11.7km s-min=6.8km az=76.0*
*DJA **14** 09:16:55.3±0.2, 1°.N±2°×123°.4E±°, h269km±2km, M4.4/46, mB5.0/18, mb4.7/46, MLv4.7/22, Mw(mB)4.3/18*
*NEIC **14** 09:16:55.5±2.0, 0°.73N±0°.07×123°.79E±0°.07, h271km±6km, mb4.7/95, Error ellipse: s-maj=11.0km s-min=10.5km az=210.0*

ISC 14 09:16:55.2±0.6, 0°.71N±0°.04×123°.79E±0°.05, h274km±5km, n257, σ1§27/285, mb4.5/83, 2C-8D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
KMSI	**Cibinong**	**0.23**	**125**		P	**Pn**	**09 17 29.9**	**-0.5**
GTOI	**Gorontalo**	**0.78**	**265**		P	**Pn**	**09 17 31.6**	**-0.2**
MRSI	**Marisa**	**1.86**	**263**		P	**Pn**	**09 17 37.6**	**-1.0**
LUWI	**Luwuk**	**2.01**	**210**		Pn	**Pn**	**09 17 38.4**	**-1.6**
LUWI	**Luwuk**	**2.01**	**210**		P	**Pn**	**09 17 38.3**	**-1.6**
LUWI	**Luwuk**	**2.01**	**210**		P	**Pn**	**09 17 38.7**	**-1.2**
APSI	**Ampana**	**2.68**	**233**		P	**Pn**	**09 17 45.5**	**-0.5**
TOLI2	**Tolitoli**	**3.03**	**278**		Pn	**Pn**	**09 17 48.9**	**-0.8**
TOLI2	**Tolitoli**	**3.03**	**278**		P	**Pn**	**09 17 49.4**	**-0.2**
SGSI	**Sangihe**	**3.43**	**30**		P	**Pn**	**09 17 54.1**	**+0.2**
SANI	**Sanana**	**3.51**	**141**		P	**Pn**	**09 17 52.5**	**-2.2**
SANI	**Sanana**	**3.51**	**141**		P	**Pn**	**09 17 52.6**	**-2.2**
TNTI	**Ternate**	**3.58**	**89**			**Pn**	**09 17 54.9**	**-0.6**
TNTI	**Ternate**	**3.58**	**89**		P	**Pn**	**09 17 54.6**	**-0.9**
TNTI	**Ternate**	**3.58**	**89**		P	**Pn**	**09 17 54.9**	**-0.6**
MPSI	**Mapaga**	**3.91**	**265**		P	**Pn**	**09 17 59.3**	**+0.2**
LBMI	**Labuha**	**3.94**	**110**		P	**Pn**	**09 17 58.4**	**-1.2**
NLAI	**Namlea**	**5.13**	**140**		P	**Pn**	**09 18 13.2**	**-0.2**
	1.6nm3μm125nm,0.7s							
TTSI	**Tana Toraja**	**5.45**	**227**		P	**Pn**	**09 18 17.9**	**+0.7**
	1.9nm5μm568nm,0.9s							
GSPH	**General Santos**	**5.47**	**12**	⇓	*iP*	Pn	09 18 10.0	-7.6
DDMP	**Don Marcelino,**	**5.69**	**20**	⇓	*eP*	**Pn**	**09 18 20.7**	**+0.5**
SKMP	**Bagumbayan, Su**	**5.82**	**7**	⇓	*eP*	**Pn**	**09 18 23.1**	**+1.3**
SPSI	**Sidrap Palu**	**6.14**	**221**		P	**Pn**	**09 18 25.5**	**-0.1**
	0.3nm854nm94nm,0.7s							
AAI	**Ambon**	**6.20**	**135**		P	**Pn**	**09 18 27.8**	**+1.4**
	0.5nm115nm,0.7s							
KCP	**Kidapawan**	**6.39**	**12**	⇓	*iP*	**Pn**	**09 18 31.0**	**+2.1**
MSAI	**Masohi**	**6.53**	**128**		P	**Pn**	**09 18 30.5**	**+0.1**
	0.1nm24nm,0.5s							
DAV	**Davao City (W)**	**6.57**	**16**		P	**Pn**	**09 18 30.0**	**-1.0**
	106nm,0.3s,baz=243,slow=18,SNR=1.7							
KAPI	**Kappang**	**6.97**	**215**		P	**Pn**	**09 18 36.4**	**+0.6**
	95nm,0.9s,baz=33,slow=5.2,SNR=32							
KAPI	**Kappang**	**6.97**	**215**		P	**Pn**	**09 18 36.6**	**+0.7**
BKSI	**Bulukumba**	**7.02**	**211**		P	**Pn**	**09 18 36.7**	**+0.2**
	0.4nm1μm107nm,1.0s							
BUKP	**Musuan**	**7.24**	**10**	⇓	*eP*	**Pn**	**09 18 40.8**	**+1.5**
SIJI	**Sorong**	**7.64**	**102**		P	**Pn**	**09 18 44.1**	**-0.1**
	70nm,0.7s,baz=322,slow=9.5,SNR=9.7							
BIPH	**Bislig**	**7.86**	**19**	⇑	*eP*	**Pn**	**09 18 45.9**	**-1.0**
BIPH					*eS*	**S**	**09 20 10.6**	**-6.6**
FAKI	**Fak Fak**	**9.19**	**113**		Pn	**Pn**	**09 19 03.3**	**-0.3**
FAKI	**Fak Fak**	**9.19**	**113**		P	**Pn**	**09 19 03.6**	**0.0**
	46nm,0.9s							
MMRI	**Maumere**	**9.41**	**189**		P	**Pn**	**09 19 07.1**	**+0.8**
	2μm97nm,0.6s							
EDFI	**Ende, Flores**	**9.62**	**193**		P	**Pn**	**09 19 09.7**	**+0.6**
	635nm66nm,0.6s							
SOEI	**Soe**	**10.41**	**177**		Pn	**P**	**09 19 21.2**	**-1.8**
SOEI	**Soe**	**10.41**	**177**		P	**Pn**	**09 19 20.6**	**+1.8**
	2μm219nm,0.8s							
BATI	**Baumata**	**10.84**	**181**		P	**Pn**	**09 19 26.1**	**+2.0**
	471nm,0.5s,baz=339,slow=0.7,SNR=26							
BATI	**Baumata**	**10.84**	**181**		P	**Pn**	**09 19 25.5**	**+1.4**
	3μm368nm,0.6s							
WBSI	**Waikabubak, Su**	**11.18**	**203**		P	**Pn**	**09 19 28.1**	**-0.2**
	2μm190nm,0.8s							
PLAI	**Plampang**	**11.21**	**212**		P	**Pn**	**09 19 29.3**	**+0.7**
	2μm333nm,0.8s							
PLAI	**Plampang**	**11.21**	**212**		P	**Pn**	**09 19 29.9**	**+1.3**
BASI	**Baing, Sumba**	**11.32**	**196**		P	**Pn**	**09 19 28.5**	**-1.4**
	128nm,1.0s							
TWSI	**Taliwang, Sumb**	**11.64**	**216**		P	**Pn**	**09 19 34.3**	**+0.4**
	70nm,0.8s							
SBUM	**Sibu**	**11.69**	**279**			**P**	**09 19 38.9**	**+1.7**
JAGI	**Jajag, Banyuwa**	**13.24**	**226**		P	**P**	**09 19 58.0**	**+3.6**
KSM	**Kuching**	**13.50**	**273**			**P**	**09 19 59.1**	**+1.9**
KSM	**Kuching**	**13.50**	**273**		P	**P**	**09 19 59.5**	**+2.2**
LQP	**Lukban**	**13.50**	**351**	⇓	*eP*	**P**	**09 19 59.3**	**+1.9**
GMJI	**Gumukmas**	**13.64**	**229**		P	**P**	**09 20 00.0**	**+1.3**
	88nm,1.0s							
MTN	**Manton Dam**	**15.31**	**152**		P	**P**	**09 20 17.5**	**+0.3**
MTN	**Manton Dam**	**15.31**	**152**		P	**P**	**09 20 17.7**	**+0.5**
PCJI	**Pacitan**	**15.37**	**235**		P	**Pn**	**09 20 18.7**	**-0.4**
	43nm,1.1s							
KDU	**Kakadu**	**15.85**	**147**		P	**P**	**09 20 23.6**	**+0.4**
KNRA	**Kununurra**	**17.01**	**163**		P	**P**	**09 20 36.3**	**+0.6**
KNRA	**Kununurra**	**17.01**	**163**		P	**P**	**09 20 36.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.78**	**175**		P	**P**	**09 20 53.8**	**-1.1**
	20nm,0.6s,baz=8.4,slow=8.1,SNR=76							
FITZ	**Fitzroy Crossi**	**18.78**	**175**		P	**P**	**09 20 54.0**	**-0.8**
FITZ					IAmb	IAmb	09 20 55.3	
	comp=Z,23nm,0.6s							
FITZ	**Fitzroy Crossi**	**18.78**	**175**		P	**P**	**09 20 54.1**	**-0.7**
MBWA	**Marble Bar**	**22.09**	**190**		P	**P**	**09 21 27.6**	**-0.7**
MBWA					IAmb	IAmb	09 21 28.3	
	comp=Z,20nm,0.8s							
MBWA	**Marble Bar**	**22.09**	**190**		P	**P**	**09 21 27.5**	**-0.7**
PSA00	**Pilbara Seismi**	**22.48**	**190**		P	**P**	**09 21 31.2**	**-0.6**
PSA00	**Pilbara Seismi**	**22.48**	**190**		P	**P**	**09 21 31.1**	**-0.6**
PSA00					IAmb	IAmb	09 21 32.0	
	comp=Z,25nm,0.8s							
PSA00	**Pilbara Seismi**	**22.48**	**190**		P	**P**	**09 21 31.4**	**-0.3**
TPUB	**Ta-pu**	**22.67**	**352**		P	**P**	**09 21 33.0**	**-0.4**
TPUB	**Ta-pu**	**22.67**	**352**		P	**P**	**09 21 36.7**	**+3.3**
YULB	**Yu-li**	**22.68**	**354**		P	**P**	**09 21 34.2**	**+0.7**
YULB					IAmb	IAmb	09 21 35.2	
	comp=Z,22nm,0.5s							
WB0	**Warramunga Arr**	**22.85**	**153**		P	**P**	**09 21 35.0**	**-0.2**
WRAB	**Tennant Creek**	**22.98**	**154**		P	**P**	**09 21 35.9**	**-0.4**
WRAB	**Tennant Creek**	**22.98**	**154**		P	**P**	**09 21 36.2**	**-0.1**
WRA	**Warramunga Arr**	**22.98**	**154**		P	**P**	**09 21 35.8**	**-0.6**
	comp=Z,90nm,0.6s,baz=336,slow=10,SNR=372							
WRA					S	**S**	**09 25 22.5**	**-3.5**
	comp=Z,6.4nm,0.8s,baz=334,slow=17,SNR=7.2							
WRA					ScP	**ScP**	**09 28 28.7**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=339,slow=2.6,SNR=4.0							
WRA	**Warramunga Arr**	**22.98**	**154**		P	**P**	**09 21 35.1**	**-1.3**
WB2	**Warramunga Arr**	**22.99**	**154**		P	**P**	**09 21 36.0**	**-0.4**
IPM	**Ipoh**	**23.04**	**280**		P	**P**	**09 21 37.6**	**+0.6**
IPM	**Ipoh**	**23.04**	**280**		P	**P**	**09 21 37.7**	**+0.6**
WR0	**Warramunga Arr**	**23.09**	**153**		P	**P**	**09 21 36.9**	**-0.4**
SSLB	**Suanglung**	**23.11**	**353**		P	**P**	**09 21 38.4**	**+0.9**
SSLB	**Suanglung**	**23.11**	**353**		P	**P**	**09 21 40.3**	**+2.8**
UBPT	**Khong Chiam**	**23.17**	**310**		P	**P**	**09 21 39.5**	**+1.4**
UBPT					IAmb	IAmb	09 21 41.1	
	comp=Z,19nm,0.6s							
NACB	**Ninganchiao**	**23.42**	**355**		P	**P**	**09 21 41.5**	**+1.2**
NACB					IAmb	IAmb	09 21 47.3	
	comp=Z,20nm,1.2s							
KULM	**Kulim**	**23.55**	**282**		P	**P**	**09 21 42.2**	**+0.6**
KULM					IAmb	IAmb	09 21 44.6	
	comp=Z,21nm,1.0s							
YOJ	**Yonaguni jima**	**23.62**	**358**		P	**P**	**09 21 43.5**	**+1.4**
YOJ	**Yonaguni jima**	**23.62**	**358**		P	**P**	**09 21 44.4**	**+2.3**
YHNB	**Yeheng**	**23.93**	**355**		P	**P**	**09 21 45.6**	**+0.5**
YHNB					IAmb	IAmb	09 22 24.8	
	comp=Z,45nm,1.5s							
COEN	**Coen**	**24.11**	**128**		P	**P**	**09 21 47.2**	**+0.6**
COEN					IAmb	IAmb	09 22 11.2	
	comp=Z,24nm,1.2s							
PSI	**Prapat**	**24.94**	**275**		P	**P**	**09 21 54.3**	**0.0**
	comp=Z,18nm,1.0s,baz=105,slow=3.9,SNR=7.5							
	comp=Z,18nm,1.0s							
PSI	**Prapat**	**24.94**	**275**		P	**P**	**09 21 55.5**	**+1.2**
	comp=Z,29nm,1.5s							
WRKA	**Warakurna**	**25.96**	**171**		P	**P**	**09 22 03.7**	**+0.5**
AS31	**Alice Springs**	**26.15**	**159**		P	**P**	**09 22 05.0**	**+0.1**
ASAR	**Alice Springs**	**26.15**	**159**		P	**P**	**09 22 04.8**	**-0.1**
	comp=Z,4.7nm,0.5s,baz=343,slow=7.3,SNR=125							
ASAR					PcP	**PcP**	**09 25 24.7**	**+0.2**
	comp=Z,2.1nm,0.4s,baz=340,slow=2.9,SNR=5.5							
ASAR					S	**S**	**09 26 14.7**	**-1.4**
	comp=Z,6.3nm,1.0s,baz=355,slow=20,SNR=13							
ASAR					ScP	**ScP**	**09 28 37.6**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=339,slow=2.8,SNR=9.9							
	comp=Z,4.7nm,0.5s							
ASAR	**Alice Springs**	**26.15**	**159**		P	**P**	**09 22 05.5**	**+0.6**
QIS	**Mount Isa**	**26.20**	**145**		P	**P**	**09 22 06.0**	**+0.6**
MEEK	**Meekatharra**	**27.64**	**190**		P	**P**	**09 22 17.8**	**-0.3**
CRAI	**Chiangrai**	**30.02**	**312**		P	**P**	**09 22 39.8**	**+0.6**
CRAI					IAmb	IAmb	09 22 40.5	
	comp=Z,12nm,1.1s							
CMAR	**Chiang Mai Arr**	**30.10**	**307**		P	**P**	**09 22 40.5**	**+0.6**
	comp=Z,9.2nm,0.8s,baz=137,slow=7.4,SNR=37							
CMAR					PcP	**PcP**	**09 25 34.9**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=168,slow=1.9,SNR=5.6							
	comp=Z,9.2nm,0.8s							
CHTO	**Chiang Mai**	**30.30**	**308**		P	**P**	**09 22 42.7**	**+1.0**
CHTO					IAmb	IAmb	09 22 43.3	
	comp=Z,38nm,0.9s							
CHTO	**Chiang Mai**	**30.30**	**308**		P	**P**	**09 22 42.7**	**+1.0**
MORW	**Morawa**	**30.52**	**193**		P	**P**	**09 22 43.1**	**-0.4**
MORW					IAmb	IAmb	09 22 45.6	
	comp=Z,23nm,1.1s							
OOD	**Oodnadatta**	**30.56**	**159**		P	**P**	**09 22 43.8**	**0.0**
FORT	**Forrest**	**31.58**	**173**		P	**P**	**09 22 52.8**	**+0.2**
FORT	**Forrest**	**31.58**	**173**		P	**P**	**09 22 52.9**	**+0.2**
JCJ	**Chichijima**	**31.63**	**32**		P	**P**	**09 22 52.2**	**-1.0**
KMI	**Kunming**	**31.67**	**322**	⇓	P	**P**	**09 22 55.3**	**+1.5**
KMI					pmax	pmax		
	comp=Z,10.0nm,1.1s							
MULG	**Mulgathing**	**32.33**	**163**		P	**P**	**09 22 59.4**	**+0.2**
ENH	**Enshi**	**32.39**	**336**		P	**P**	**09 22 59.9**	**+0.1**
ENH					IAmb	IAmb	09 23 03.2	
	comp=Z,18nm,0.7s							
INKA	**Innaminka**	**32.64**	**151**		P	**P**	**09 23 02.9**	**+1.0**
PZH	**PanZhiHua**	**33.28**	**322**		P	**P**	**09 23 08.1**	**+0.4**
PZH					pmax	pmax		
	comp=Z,20nm,0.7s							
PZH					pmax	pmax		
	comp=Z,130nm,4.4s							
LCRK	**Leigh Creek**	**33.89**	**157**		P	**P**	**09 23 13.0**	**+0.3**
NWAO	**Narrogin (SRO)**	**34.02**	**190**		P	**P**	**09 23 13.6**	**-0.1**
NWAO					IAmb	IAmb	09 23 15.2	
	comp=Z,14nm,0.8s							
JMN	**Monobe**	**34.19**	**15**		P	**P**	**09 23 16.0**	**+0.8**
JMN					IAmb	IAmb	09 23 16.5	
	comp=Z,28nm,0.7s							
JHS	**Saijyo**	**35.21**	**13**		P	**P**	**09 23 24.6**	**+0.7**
JHS					IAmb	IAmb	09 23 28.4	
	comp=Z,14nm,1.0s							
BBOO	**Buckleboo**	**35.29**	**162**		P	**P**	**09 23 24.6**	**-0.1**
BBOO					IAmb	IAmb	09 23 25.7	
	comp=Z,32nm,1.3s							
CD2	**Chengdu**	**35.54**	**330**		P	**P**	**09 23 27.5**	**+0.7**
TIA	**Tai'an**	**35.86**	**351**	⇑	P	**P**	**09 23 30.6**	**+1.2**
TIA					pmax	pmax		
	comp=Z,9.0nm,0.7s							
XAN	**Xi'an**	**35.97**	**339**		P	**P**	**09 23 29.8**	**-0.6**
XAN					pmax	pmax		
	comp=Z,14nm,0.8s							
XAN					pmax	pmax		
	comp=Z,76nm,4.1s							
WHYH	**Whyalla**	**35.99**	**160**		P	**P**	**09 23 30.5**	**0.0**
	comp=Z,34nm,0.7s							
STKA	**Stephens Creek**	**36.53**	**154**		P	**P**	**09 23 35.5**	**+0.4**
	comp=Z,20nm,0.5s,baz=329,slow=8.7,SNR=106							
	comp=Z,20nm,0.5s							
STKA	**Stephens Creek**	**36.53**	**154**		P	**P**	**09 23 35.2**	**+0.1**
STKA	**Stephens Creek**	**36.53**	**154**		P	**P**	**09 23 35.6**	**+0.4**
INU	**Inuyama**	**36.60**	**18**		P	**P**	**09 23 35.5**	**-0.2**
KSRS	**Korea Array**	**36.76**	**6**		P	**P**	**09 23 37.1**	**+0.2**
	comp=Z,6.1nm,0.9s,baz=188,slow=9.5,SNR=19							
KSRS					PcP	**PcP**	**09 25 53.2**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=184,slow=2.4,SNR=7.4							
	comp=Z,6.1nm,0.9s							
HTT	**Hallett**	**36.83**	**159**		P	**P**	**09 23 38.2**	**+0.6**
EIDS	**Eidsvold**	**37.00**	**136**		P	**P**	**09 23 38.9**	**-0.3**
HNS	**HongShan**	**37.46**	**348**	⇓	P	**P**	**09 23 43.8**	**+1.0**
HNS					pmax	pmax		

PEA0B IAmb IAmb 09 26 30.1
comp=Z,11nm,0.7s
PETK Petropavlovsk- 59.33 23 P P 09 26 28.8 +0.2
comp=Z,7.2nm,0.6s,baz=208,slow=4.3,SNR=42
PETK PcP **PcP 09 27 13.6 +0.1**
comp=Z,1.4nm,0.6s,baz=204,slow=3.2,SNR=1.9
comp=Z,7.2nm,0.6s
PETK Petropavlovsk- 59.33 23 P P 09 26 29.3 +0.7
BOOM Boomskoye usch 59.70 321 P P 09 26 30.7 -0.8
BOOM IAmb IAmb 09 26 34.3
comp=Z,19nm,1.4s
AAK Ala-Archa 60.69 320 P P 09 26 38.5 +0.2
AAK IAmb IAmb 09 26 40.5
comp=Z,14nm,1.2s
DRK Karamyk 61.03 316 P P 09 26 40.2 -0.6
DRK IAmb IAmb 09 26 43.3
comp=Z,15nm,0.5s
KBL Kabul 61.09 310 P P 09 26 41.5 +0.4
YAK Yakutsk 61.33 3 P P 09 26 41.8 -0.1
LTZ Lake Taylor 61.34 141 P P 09 26 43.6 +1.2
LTZ IAmb IAmb 09 27 26.7
comp=Z,24nm,1.3s
GAR Garm 61.87 315 P P 09 26 45.3 -0.9
ZAA0 Zalesovo Array 62.00 335 P P 09 26 44.9 -1.6
ZALV Zalesovo Beam 62.00 335 P P 09 26 44.6 -1.9
comp=Z,3.9nm,0.4s,baz=129,slow=4.9,SNR=18
ZALV PcP **PcP 09 27 23.0 -1.2**
comp=Z,1.1nm,0.4s,baz=110,slow=6.3,SNR=1.5
comp=Z,3.9nm,0.4s
ZALV Zalesovo Beam 62.00 335 P P 09 26 44.2 -2.3
MA2 Magadan 62.35 15 P P 09 26 49.7 +1.0
MA2 IAmb IAmb 09 26 50.5
comp=Z,26nm,0.7s
CHGR Chuyangaron 62.56 314 P P 09 26 49.6 -1.1
KURK Kurchatov 62.77 330 P P 09 26 50.6 -1.0
KURK IAmb IAmb 09 26 52.9
comp=Z,19nm,0.7s
KK31 Karatay Array 63.50 319 P P 09 26 56.2 -0.4
KK31 IAmb IAmb 09 26 59.4
comp=Z,14nm,1.4s
KKAR Karatay Array 63.50 319 P P 09 26 56.2 -0.4
KKAR IAmb IAmb 09 26 59.4
comp=Z,14nm,1.4s
KKAR Karatay Array 63.50 319 P P 09 26 56.0 -0.6
WSAR Wadi Sarin 66.97 295 P P 09 27 16.9 -2.3
comp=Z,3.1nm,0.6s,baz=129,slow=6.5,SNR=4.4
comp=Z,3.1nm,0.6s
CASY Casey 67.51 186 P P 09 27 21.8 +0.1
BRVK Borovoye 68.36 329 P P 09 27 26.1 -1.1
BRVK IAmb IAmb 09 27 29.6
comp=Z,20nm,1.4s
AMKA Amchitka 68.63 34 P P 09 27 29.4 +0.5
GEYT Alibeck 70.53 310 P P 09 27 39.9 -1.0
comp=Z,5.3nm,0.7s,baz=130,slow=5.6,SNR=6.9
comp=Z,5.3nm,0.7s
TIXI Tiksi 70.91 2 P P 09 27 41.5 -0.9
ABKAR Akbulak array 72.66 322 P P 09 27 52.0 -1.2
ABKAR Akbulak array 72.66 322 P P 09 27 51.7 -1.5
NRIK Noril'sk 72.68 347 P P 09 27 52.4 -0.5
comp=Z,12nm,0.7s,baz=121,slow=6.8,SNR=17
comp=Z,12nm,0.7s
NRIK Noril'sk 72.68 347 P P 09 27 52.5 -0.5
NRIK IAmb IAmb 09 27 53.2
comp=Z,14nm,0.8s
ARU Arti 75.94 329 P P 09 28 10.0 -1.9
ARU IAmb IAmb 09 28 13.1
comp=Z,14nm,0.9s
OPO Ambohidratompo 77.53 251 P P 09 28 21.5 -0.3
comp=Z,11nm,0.6s,baz=79,slow=3.9,SNR=17
comp=Z,11nm,0.6s
ABPO Ambohimpanom 77.53 250 P P 09 28 20.3 -1.5
ABPO IAmb IAmb 09 28 26.4
comp=Z,10nm,0.8s
AKUT Akutan 78.06 35 P P 09 28 24.3 +0.6
VOI Vohitsoka 78.21 248 P P 09 28 24.9 -0.4
VOI IAmb IAmb 09 28 30.3
comp=Z,13nm,0.6s
RAYN Ar Rayn 78.98 294 P P 09 28 27.5 -2.0
RAYN IAmb IAmb 09 28 28.7
comp=Z,5.7nm,0.8s
MAW Mawson 79.93 200 P P 09 28 33.8 +0.4
comp=Z,2.0nm,1.0s,baz=74,slow=9.0,SNR=3.7
comp=Z,2.0nm,1.0s
VNDA Vanda 80.83 172 P P 09 28 37.8 -0.4
SDPT Sand Point 81.33 34 P P 09 28 41.6 +0.4
GEVA Gevas 82.28 308 P P 09 28 46.8 0.0
GEVA IAmb IAmb 09 28 47.2
comp=Z,16nm,0.7s
KBZ Khabaz 82.92 314 P P 09 28 47.9 -1.8
comp=Z,3.8nm,0.8s,baz=63,slow=5.7,SNR=5.1
comp=Z,3.8nm,0.8s
N18K Kilae Creek 84.64 29 P P 09 28 57.6 -0.4
N18K IAmb IAmb 09 29 00.6
comp=Z,16nm,1.2s
SVW2 Sparrevohn 84.85 29 P P 09 28 59.4 +0.4
L19K White Mountain 85.33 28 P P 09 29 02.4 +0.9
L19K IAmb IAmb 09 29 44.5
comp=Z,11nm,1.5s
OHAK Old Harbor 85.57 33 P P 09 29 02.9 +0.3
OHAK IAmb IAmb 09 29 16.8
comp=Z,34nm,1.4s
K20K Telida 85.84 27 P P 09 29 04.6 +0.7
KDAK Kodiak Island 86.00 32 P P 09 29 04.5 -0.2
IMAR Indian Mountai 86.28 24 P P 09 29 06.5 +0.6
KMBO Kilima Mbogo 86.55 269 P P 09 29 07.6 -1.1
comp=Z,6.1nm,0.8s,baz=58,slow=7.8,SNR=15
comp=Z,6.1nm,0.8s
KMBO Kilima Mbogo 86.55 269 P P 09 29 08.2 -0.5
KMBO IAmb IAmb 09 29 10.1
comp=Z,9.1nm,0.9s
KLMR Klimovskoe 86.58 331 *e*P **P 09 29 04.8 -2.7**
KLMR AMP 09 29 11.0
comp=Z,14nm,0.6s
H21K Melozitna Rive 86.63 24 P P 09 29 08.1 +0.4
MLY Manley 87.44 25 P P 09 29 12.0 +0.4
H23K Yukon River 87.99 24 P P 09 29 15.1 +1.0
H23K IAmb IAmb 09 29 15.6
comp=Z,4.9nm,0.8s
I23K Minto, Yukon-K 88.03 25 P P 09 29 15.0 +0.7
I23K IAmb IAmb 09 29 15.4
comp=Z,6.1nm,0.8s
LODK Lodwar 88.39 273 P P 09 29 17.6 +0.5
H24K Noodor Dome 88.67 24 P P 09 29 17.9 +0.5
CCB Clear Creek Bu 88.68 25 P P 09 29 16.7 -0.7
IL31 89.08 25 P P 09 29 17.9 -1.2
ILAR Eielson Array 89.08 25 P P 09 29 17.9 -1.3
comp=Z,0.9nm,0.5s,baz=242,slow=5.1,SNR=23
comp=Z,0.9nm,0.5s
BRTR Keskin Array B 89.67 310 P P 09 29 21.4 -1.3
comp=Z,2.3nm,0.8s,baz=126,slow=5.9,SNR=7.5
comp=Z,2.3nm,0.8s
BMAR Burnt Mountain 89.98 23 P P 09 29 24.2 +0.8
J26L Joseph Creek 90.51 26 P P 09 29 25.8 -0.2
J26L IAmb IAmb 09 29 27.3
comp=Z,3.2nm,0.7s
ARA0 ARCESS Array S 92.25 340 *e*P **P 09 29 32.1 -1.8**
ARCES ARCESS Array B 92.25 340 P P 09 29 32.1 -1.7
comp=Z,3.6nm,0.7s,baz=83,slow=6.5,SNR=23
comp=Z,3.6nm,0.7s
ARCES ARCESS Array B 92.25 340 P P 09 29 32.2 -1.7
ARCES IAmb IAmb 09 29 47.9
comp=Z,16nm,1.4s
AKASG Malin Array Be 92.36 321 P P 09 29 32.5 -2.2
comp=Z,1.0nm,0.5s,baz=68,slow=5.0,SNR=6.8
comp=Z,1.0nm,0.5s
I29M Ogilvie Camp, 92.67 25 P P 09 29 35.4 -0.5
I29M IAmb IAmb 09 29 37.0
comp=Z,7.3nm,0.9s
HAMF Hammerfest 92.69 341 *e*P **P 09 29 33.8 -2.0**
SPA0 Spitsbergen Ar 92.85 349 *e*P **P 09 29 36.9 +0.4**
MNK Minsk 92.87 324 *i* P **P 09 29 36.3 -0.7**
comp=E,2.0nm,0.9s
MNK *i* P **P 09 29 36.3 -0.7**
comp=N,10.0nm,1.1s
MNK *i* P **P 09 29 36.3 -0.7**
comp=Z,15nm,1.0s,baz=266
MNK *i* pP **pP 09 30 41.3 -0.6**
MNK *i* PP **PP 09 33 22.4 -1.0**
MNK *i* PPP PPP 09 35 24.1
MNK *i* S **SKSac 09 39 43.1 -0.9**
MNK *i* SP **SP 09 41 32.0 +0.3**
MNK *i* sS **pS 09 41 43.9 +3.0**
MNK *i* PS **PS 09 42 07.0 -0.4**
MNK *i* SS **SS 09 46 39.3 +0.7**
MNK *i* SSS SSS 09 50 21.9

MNK *i* LRM MLR 10 12 17.5
comp=E,125nm,18.1s
MNK *i* LRM MLR 10 12 20.1
comp=Z,51nm,18.1s
MNK *i* LRM MLR 10 12 53.6
comp=N,24nm,18.1s
FINES FINESS Array B 93.08 332 P P 09 29 35.4 -2.4
comp=N,1.3nm,0.5s,baz=66,slow=4.8,SNR=14
comp=N,1.3nm,0.5s
JETT Jettan, Norway 94.00 340 *e*P **P 09 29 40.2 -1.7**
TRO Tromso 94.49 340 *e*P **P 09 29 44.5 +0.5**
MATP Matopo 95.20 250 P P 09 29 47.0 -1.6
comp=N,3.1nm,0.7s,baz=114,slow=3.0,SNR=7.8
comp=N,3.1nm,0.7s
FARO Faro, Yukon 95.36 27 P P 09 29 49.4 +1.1
FAUS Fauske 96.40 338 *e*P **P 09 29 52.9 +0.1**
CRVS Cervenica-Dubn 97.56 319 *e*PDIFF Pdif 09 29 59.6 +1.1
NSS Namsos 98.61 336 *e*Pdif **P 09 30 03.5 +0.8**
NOA NORSAR Array B 100.14 333 P Pdif 09 30 08.2 -1.6
comp=N,0.6nm,0.8s,baz=46,slow=4.9,SNR=2.1
ASK Askoy 103.08 333 *e*Pdif **Pdif 09 30 28.0 +5.3**
YKA Yellowknife Ar 103.44 24 Pdiff **Pdif 09 30 25.4 +1.1**
comp=N,0.3nm,0.6s,baz=299,slow=5.0,SNR=2.3
YKA PKiKP **PKiKP 09 34 41.2 -0.4**
comp=N,0.1nm,0.4s,baz=313,slow=1.8,SNR=6.5
NVAR Mina Array Bea 111.10 48 PKiKP **PKiKP 09 34 57.9 +1.0**
comp=N,0.4nm,0.6s,baz=305,slow=2.1,SNR=6.3
PDAR Pinedale Array 115.55 41 PKP **PKPdf 09 35 05.3 0.0**
comp=N,0.3nm,0.5s,baz=120,slow=0.6,SNR=5.7
ESDC Sonseca Array 117.69 316 PKP **PKPdf 09 35 09.0 -0.3**
comp=N,0.2nm,0.4s,baz=322,slow=1.0,SNR=2.6
TORD Torodi Ar. Bea 120.98 286 PKP **PKPdf 09 35 15.3 -0.8**
comp=N,2.6nm,0.7s,baz=74,slow=2.0,SNR=22
SCHQ Schefferville 123.96 7 PKP **PKPdf 09 35 20.9 +0.1**
comp=N,3.5nm,0.5s,baz=268,slow=2.1,SNR=13
TXAR Lajitas Array 125.76 52 PKP **PKPdf 09 35 25.1 0.0**
comp=N,0.4nm,0.6s,baz=90,slow=1.2,SNR=6.8
PLCA Paso Flores 138.09 164 PKP **PKPdf 09 35 47.1 -1.0**
comp=N,1.6nm,0.9s,baz=180,slow=3.0,SNR=2.2
CPUP Villa Florida 154.50 178 PKP **PKPdf 09 36 15.6 0.0**
comp=N,1.1nm,0.8s,baz=284,slow=4.2,SNR=2.2
CPUP PKPbc **PKPbc 09 36 24.1 -0.1**
comp=N,1.8nm,0.9s,baz=88,slow=3.9,SNR=3.8
LPAZ La Paz 160.56 143 PKP **PKPdf 09 36 23.5 -0.6**
comp=N,0.7nm,0.7s,baz=225,slow=1.4,SNR=2.8
LPAZ PKPab **PKPab 09 37 08.7 +1.8**
comp=N,0.8nm,0.5s,baz=190,slow=7.2,SNR=2.7
SIV San Ignacio 164.07 163 PKP **PKPdf 09 36 26.7 -0.1**
comp=N,1.4nm,0.7s,baz=155,slow=2.9,SNR=9.7

IDC ***14*** *10:00:20.8±5.8, 8.°83S×124.°20E, h57km±68km, mb3.5/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=49.3km s-min=35.0km az=11.0*
DJA ***14*** *10:00:23.6±0.5, 9.°S±4.°×12.°4E±.°, h106km±6km, M3.6/7, mb3.9/3, MLv3.5/7*
ISC 14 10:00:22.8±1.1, 9.°12S±0.°09×123.°95E±0.°08, h74km, n17, σ3=19/21, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.12**	**195**	P	**Pn**	**10 00 45.6**	**+2.5**
	174nm,0.3s,baz=72,slow=2.0,SNR=30						
BATI				S	**Sn**	**10 01 03.2**	**+5.0**
	130nm,0.3s,baz=73,slow=5.8,SNR=6.4						
BATI	**Baumata**	**1.12**	**195**	P	**Pn**	**10 00 45.7**	**+2.6**
BATI				S	**Sn**	**10 01 02.2**	**+4.0**
MMRI	**Maumere**	**1.76**	**286**	P	**Pn**	**10 00 52.0**	**+0.6**
EDFI	**Ende, Flores**	**2.26**	**279**	P	**Pn**	**10 00 58.2**	**0.0**
BASI	**Baing, Sumba**	**3.50**	**252**	P	**Pn**	**10 01 15.1**	**+0.2**
PLAI	**Plampang**	**6.11**	**272**	P	**Pn**	**10 01 50.1**	**-0.4**
	0.2nm22nm,1.0s						
TWSI	**Taliwang, Sumb**	**7.00**	**273**	P	**Pn**	**10 02 01.5**	**-1.1**
	0.1nm13nm,1.3s						
MTN	**Manton Dam**	**7.96**	**118**	P	**Pn**	**10 02 18.9**	**+3.0**
KNRA	**Kununurra**	**8.04**	**145**	P	**Pn**	**10 02 17.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**9.08**	**170**	P	**Pn**	**10 02 30.6**	**-0.5**
	0.6nm,0.3s,baz=359,slow=11,SNR=29						
FITZ				S	Sn	10 04 03.8	-7.9
	4.9nm,0.3s,baz=270,slow=1.6,SNR=12						
	1.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.08**	**170**	P	**Pn**	**10 02 30.6**	**-0.5**
KDU	**Kakadu**	**9.09**	**114**	P	**Pn**	**10 02 34.3**	**+3.1**
WRA	**Warramunga Arr**	**14.72**	**138**	P	**Pn**	**10 03 46.0**	**-1.2**
	0.2nm,0.3s,baz=304,slow=11,SNR=19						
WRA				S	**Sn**	**10 06 21.7**	**-7.5**
	0.7nm,0.4s,baz=215,slow=33,SNR=12						
	0.5nm,0.6s						
WRAB	**Tennant Creek**	**14.72**	**138**	P	**Pn**	**10 03 48.2**	**+1.0**
ASAR	**Alice Springs**	**17.32**	**148**	P	**P**	**10 04 21.4**	**+1.1**
	0.2nm,0.3s,baz=321,slow=12,SNR=25						
ASAR				S	**Sn**	**10 07 25.8**	**-6.4**
	0.4nm,0.4s,baz=310,slow=21,SNR=7.4						
	1.0nm,0.6s						
QIS	**Mount Isa**	**18.91**	**129**	P	**Pn**	**10 04 41.3**	**+2.2**
MKAR	**Makanchi Array**	**66.89**	**330**	P	**P**	**10 11 06.2**	**-1.0**
	0.5nm,0.6s,baz=131,slow=7.6,SNR=4.8						
	0.5nm,0.6s						

JMA ***14*** *10:13:35.8±0.1, 24.°N±2.°×122.°7E±0.°5, h94km±1km, MV2.1/14, NW OFF ISHIGAKIJIMA IS*
TAP ***14*** *10:13:36.0, 24.°47N×122.°67E, h91km±1km, ML3.1, B*
ISC 14 10:13:36.7±1.3, 24.°47N±0.°04×122.°71E±0.°02, h87km±8km, n70, σ0=88/137, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.22**	**95**	*i* P	**Pn**	**10 13 49.6**	**+0.3**
JYNG				S	**Sn**	**10 13 59.3**	**+0.6**
YOJ	**Yonaguni jima**	**0.28**	**92**	P	**Pn**	**10 13 49.7**	**+0.2**
	baz=89						
YOJ				S	**Sn**	**10 14 00.2**	**+1.1**
	baz=89						
YOJ	**Yonaguni jima**	**0.28**	**92**	P	**Pn**	**10 13 49.8**	**+0.2**
YOJ				eS	**Sn**	**10 13 59.8**	**+0.7**
TWC	**Suao**	**0.80**	**280**	P	**Pn**	**10 13 53.5**	**-0.4**
	baz=280						
TWC				S	**Sn**	**10 14 06.3**	**-0.3**
	baz=280						
TWB1	**Santiao Chiao**	**0.85**	**309**	P	**Pn**	**10 13 54.2**	**-0.2**
	baz=311						
TWB1				S	**Sn**	**10 14 08.3**	**+0.6**
	baz=311						
EWUT	**Wuta**	**0.85**	**269**	*e*P	**Pn**	**10 13 52.8**	**-1.6**
	baz=268						
EWUT				S	**Sn**	**10 14 07.0**	**-0.7**
	baz=268						
ENA	**Nanau**	**0.88**	**267**	P	**Pn**	**10 13 55.0**	**+0.2**
	baz=267						
ENA				S	**Sn**	**10 14 08.9**	**+0.6**
	baz=267						
NTC	**Toucheng**	**0.89**	**296**	*i* P	**Pn**	**10 13 54.8**	**-0.1**
	baz=296						
NTC				S	**Sn**	**10 14 08.0**	**-0.4**
	baz=296						
NDS	**Dongshan**	**0.92**	**280**	P	**Pn**	**10 13 54.2**	**-1.0**
	baz=280						
NDS				*e*S	**Sn**	**10 14 07.8**	**-1.3**
	baz=280						
IRIF	**Iriomote-Funau**	**0.94**	**98**	P	**Pn**	**10 13 55.5**	**+0.1**
IRIF				S	**Sn**	**10 14 09.7**	**+0.2**
TIPB	**Shuangxi**	**0.94**	**302**	P	**Pn**	**10 13 54.9**	**-0.6**
	baz=303						
TIPB				S	**Sn**	**10 14 08.9**	**-0.8**
	baz=303						
SXI1	**Grass Mountain**	**0.98**	**310**	P	**Pn**	**10 13 55.9**	**-0.1**
	baz=310						
SXI1				S	**Sn**	**10 14 11.1**	**+0.6**
	baz=310						
TWE	**Neicheng**	**0.98**	**285**	P	**Pn**	**10 13 56.0**	**+0.1**
	baz=285						
TWE				*i* S	**Sn**	**10 14 10.0**	**-0.3**
	baz=285						
NWF	**Wu-fen Shan**	**1.03**	**306**	P	**Pn**	**10 13 56.7**	**+0.1**
	baz=306						
NWF				S	**Sn**	**10 14 10.6**	**-0.9**
	baz=306						
WFSB	**Wu-fen Shan**	**1.03**	**306**	P	**Pn**	**10 13 56.7**	**+0.2**
	baz=306						
WFSB				S	**Sn**	**10 14 11.6**	**+0.2**
	baz=306						
ETL	**Fush Village**	**1.04**	**253**	*i* P	**Pn**	**10 13 56.4**	**-0.2**
	baz=252						
ETL				S	**Sn**	**10 14 11.3**	**-0.3**
	baz=252						

ENTT Nioudou 1.05 279 P Pn 10 13 56.2 -0.6
baz=279
ENTT S Sn **10 14 10.9 -0.9**
baz=279
NACB Ninganchiao 1.06 254 P Pn 10 13 56.4 -0.4
baz=253
NACB S Sn **10 14 11.6 -0.4**
baz=253
FUSB Fushanzhiwuyua 1.06 286 P Pn 10 13 56.9 0.0
baz=286
FUSB S Sn **10 14 11.7 -0.4**
baz=286
LATG Datong 1.08 274 P Pn 10 13 57.3 +0.1
baz=273
LATG S Sn **10 14 13.0 +0.4**
baz=273
HATJ Hateruma jima 1.08 112 *e*S **Sn 10 14 13.2 +0.8**
TWD Chiawan 1.09 249 P Pn 10 13 56.9 -0.3
baz=248
TWD S Sn **10 14 12.5 0.0**
baz=248
NDT Datong Townshi 1.10 277 P Pn 10 13 57.7 +0.4
baz=277
NDT S Sn **10 14 12.9 +0.2**
baz=277
HWA Hwalien 1.12 244 P Pn 10 13 57.6 +0.1
baz=243
HWA *e*S Sn **10 14 14.3 +1.1**
baz=243
ETLH Xiulin Townshi 1.15 257 P Pn 10 13 57.6 -0.4
baz=256
ETLH S Sn **10 14 13.5 -0.5**
baz=256
TEYL Yanliau Villag 1.18 240 *i* P **Pn 10 13 57.9 -0.3**
baz=240
TEYL S Sn **10 14 14.9 +0.5**
baz=240
NHDH Xindian Distri 1.18 295 *i* P **Pn 10 13 58.2 -0.1**
baz=295
NHDH S Sn **10 14 14.0 -0.6**
baz=295
JKRS Kuro-shima 1.21 101 P Pn 10 13 59.0 +0.4
JKRS S Sn **10 14 15.8 +0.7**
NNSB Datong 1.21 268 P Pn 10 13 58.7 -0.1
baz=268
NNSB S Sn **10 14 15.1 -0.3**
baz=268
NNSH Datong 1.21 268 *i* P **Pn 10 13 58.6 -0.2**
baz=268
NNSH S Sn **10 14 14.3 -1.1**
baz=268
NNS Nan Shan 1.22 269 P Pn 10 13 57.9 -1.0
baz=268
NNS S Sn **10 14 14.6 -1.0**
baz=268
ETM Tongmen 1.22 246 P Pn 10 13 58.4 -0.4
baz=245
ETM S Sn **10 14 14.8 -0.6**
baz=245
TATO Taipei 1.22 295 P Pn 10 13 58.2 -0.6
baz=295
TATO S Sn **10 14 14.2 -1.2**
baz=295
YHNB Yeheng 1.23 280 P Pn 10 13 59.2 +0.3
baz=279
YHNB S Sn **10 14 15.9 +0.1**
baz=279
JIJ Ishigaki jima 1.31 94 P Pn 10 13 59.8 -0.1
JIJ S Sn **10 14 16.5 -0.9**
ESL Shilin 1.34 241 P Pn 10 13 60.0 -0.3
baz=239
ESL *i* S Sn **10 14 17.6 -0.4**
baz=239
WHF Hehuan Shan 1.36 256 P Pn 10 14 00.8 -0.1
baz=255
WHF S Sn **10 14 18.6 -0.5**
baz=255
EGFH Guangfu 1.42 236 P Pn 10 14 01.0 -0.3
baz=235
EGFH S Sn **10 14 19.4 -0.4**
baz=235
CHGB Renai 1.46 254 P Pn 10 14 02.1 +0.2
baz=253
CHGB S Sn **10 14 21.3 +0.3**
baz=253
JISG Ishigakijimahi 1.46 85 P Pn 10 14 01.6 -0.2
OWD Renai 1.49 250 P Pn 10 14 02.2 -0.1
baz=249
OWD S Sn **10 14 20.8 -0.9**
baz=249
HGSD Ruisui 1.53 231 P Pn 10 14 02.0 -0.6
baz=229
HGSD S Sn **10 14 21.7 -0.5**
baz=229
WUSB Renai 1.53 252 P Pn 10 14 03.0 +0.2
baz=251
WUSB S Sn **10 14 22.6 +0.1**
baz=251
VWDT VWDT 1.60 244 P Pn 10 14 03.9 +0.3
baz=243
VWDT S Sn **10 14 24.1 +0.2**
baz=243
YULB Yu-li 1.68 231 P Pn 10 14 04.0 -0.7
baz=229
YULB S Sn **10 14 25.0 -0.8**
baz=229
EYUL Yuli 1.69 229 P Pn 10 14 05.0 +0.2
baz=227
EYUL *i* S Sn **10 14 25.8 -0.3**
baz=227
TWF1 Yuli 1.71 230 P Pn 10 14 04.7 -0.2
baz=228
TWF1 *i* S Sn **10 14 26.1 -0.3**
baz=228
SSLB Suanglung 1.74 247 P Pn 10 14 05.7 +0.2
baz=246
SSLB S Sn **10 14 27.3 0.0**
baz=246
SMLT Sun Moon Lake 1.75 251 P Pn 10 14 06.3 +0.7
baz=250
SMLT *e*S Sn **10 14 30.3 +2.7**
baz=250
FULB Fuli 1.81 226 P Pn 10 14 06.1 -0.3
baz=224
FULB S Sn **10 14 28.6 -0.2**
baz=224
JTJ Tarama 1.82 84 P Pn 10 14 06.3 -0.2
JTJ S Sn **10 14 27.6 -1.4**
WHYT Xinyi Township 1.86 246 *e*P **Pn 10 14 08.3 +1.3**
baz=245
WHYT *e*S Sn **10 14 30.8 +0.7**
baz=245
YUS Yu-Shan 1.88 239 P Pn 10 14 08.3 +0.6
baz=238
YUS *i* S Sn **10 14 30.0 -1.2**
baz=238
EDH Donghe 1.97 221 P Pn 10 14 07.9 -0.5
baz=220
EDH S Sn **10 14 31.4 -1.1**
baz=220
ALS Alishan 1.99 242 *e*P **Pn 10 14 09.9 +1.0**
baz=240
ALS *e*S Sn **10 14 35.0 +1.7**
baz=240
ELDTW Lidau 2.01 231 P Pn 10 14 08.6 -0.4
baz=229
ELDTW S Sn **10 14 33.2 -0.4**
baz=229
STYH Taoyuan 2.19 234 P Pn 10 14 11.4 +0.1
baz=233
STYH S Sn **10 14 38.1 +0.3**
baz=233
STYT Tauyuan 2.21 234 *e*P **Pn 10 14 12.8 +1.2**
baz=233
STYT *e*S Sn **10 14 39.8 +1.4**
baz=233
TPUB Ta-pu 2.23 239 *e*P **Pn 10 14 13.5 +1.6**
baz=238
TPUB *e*S Sn **10 14 41.1 +2.3**
baz=238
JIRB Irabujima 2.27 80 *e*P **Pn 10 14 11.9 -0.4**
JIRB S Sn **10 14 38.4 -1.3**
WTP Ta-pu 2.27 238 *e*P **Pn 10 14 14.1 +1.6**
baz=236
WTP *e*S Sn **10 14 42.5 +2.7**
baz=236
JMJ Miyako jima 2 2.38 81 P Pn 10 14 14.5 +0.7
baz=81

JMJ				*i* S		Sn	10 14 42.7	+0.5	
	baz=81								
JMJ2	**Miyako jima3**	**2.40**	**83**	P		Pn	10 14 14.2	+0.1	
JMJ2				*e*S		Sn	10 14 42.0	-0.7	
ECL	**Taimali**	**2.46**	**221**	*e*P		Pn	10 14 13.9	-1.0	
	baz=220								
ECL				S		Sn	10 14 42.6	-1.7	
	baz=220								
JOGS	**Gusukube**	**2.47**	**83**	*e*P		Pn	10 14 15.3	+0.3	
JOGS				S		Sn	10 14 44.9	+0.4	
SSD	**Sandimen**	**2.56**	**228**	*e*P		Pn	10 14 18.0	+1.7	
	baz=227								
SSD				*e*S		Sn	10 14 49.1	+2.4	
	baz=227								
TSMG	**Majia**	**2.58**	**228**	*e*P		Pn	10 14 18.0	+1.4	
	baz=226								
TSMG				*e*S		Sn	10 14 49.0	+1.8	
	baz=226								
LAY	**Lan-yu**	**2.64**	**204**	P		Pn	10 14 16.8	-0.6	
	baz=202								
LAY				*e*S		Sn	10 14 45.6	-3.1	
	baz=202								
MASBT	**Mashibuluo**	**2.66**	**226**	P		Pn	10 14 17.3	-0.2	
	baz=225								
MASBT				S		Sn	10 14 46.9	-2.0	
	baz=225								
LYUB	**Lan-yu**	**2.67**	**203**	*e*S		Sn	10 14 48.2	-0.9	
	baz=202								

JMA ***14*** *10:20:58.7±0.2,23°.3N±0°.8×12°.2E±°, h19km±3km, MV3.2/12, TAIWAN REGION*
TAP ***14*** *10:20:59.5,23°.23N×121°.49E, h44km, ML3.8, C*
ISC 14 10:20:59.2±1.4**,23°.18N**±0°.02×**121°.62E**±0°.02**, h36**km±1km**, n112,σ0§99/190,1C-3D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
ECBN	**Changbin**	**0.20**	**312**	P		Pn	10 21 06.6		-0.7
	baz=336								
ECBN				S		Sn	10 21 12.3		-1.8
	baz=336								
FULB	**Fuli**	**0.30**	**273**	⇑	*i*P	Pn	10 21 07.2		-0.1
	baz=260								
FULB				S		Sn	10 21 13.7		+0.1
	baz=260								
EYUL	**Yuli**	**0.32**	**301**	*e*P		Pn	10 21 07.3		-0.1
	baz=293								
EYUL				S		Sn	10 21 15.4		+1.7
	baz=293								
TWF1	**Yuli**	**0.34**	**300**	P		Pn	10 21 07.3		-0.3
	baz=304								
TWF1				S		Sn	10 21 12.9		-1.0
	baz=304								
EDH	**Donghe**	**0.35**	**234**	P		Pn	10 21 08.0		+0.3
	baz=220								
EDH				S		Sn	10 21 14.6		+0.5
	baz=220								
HGSD	**Ruisui**	**0.35**	**330**	P		Pn	10 21 07.5		-0.3
	baz=353								
HGSD				*e*S		Sn	10 21 15.1		+1.0
	baz=353								
YULB	**Yu-li**	**0.36**	**306**	⇓	*i*P	Pn	10 21 07.3		-0.6
	baz=300								
YULB				*e*S		Sn	10 21 12.8		-1.4
	baz=300								
ECS	**Chishang**	**0.37**	**257**	P		Pn	10 21 08.3		+0.3
	baz=252								
ECS				*e*S		Sn	10 21 14.9		+0.5
	baz=252								
EHY	**Hungye**	**0.42**	**320**	P		Pn	10 21 08.0		-0.7
	baz=321								
EHY				*e*S		Sn	10 21 14.0		-1.3
	baz=321								
EGFH	**Guangfu**	**0.51**	**340**	P		Pn	10 21 09.4		-0.7
	baz=342								
EGFH				*e*S		Sn	10 21 17.2		-0.5
	baz=342								
TEGC	**Jichi Village**	**0.53**	**353**	P		Pn	10 21 09.8		-0.5
	baz=12								
TEGC				*e*S		Sn	10 21 18.1		+0.1
	baz=12								
ELDTW	**Lidau**	**0.55**	**271**	⇓	*i*P	Pn	10 21 09.5		-1.2
	baz=264								
ELDTW				*e*S		Sn	10 21 16.5		-2.2
	baz=264								
TTN	**Taitung**	**0.61**	**225**	*e*P		Pn	10 21 12.0		+0.6
	baz=221								
TTN				*e*S		Sn	10 21 21.3		+1.4
	baz=221								
ESL	**Shilin**	**0.65**	**345**	*e*P		Pn	10 21 10.9		-1.1
	baz=348								
ESL				*e*S		Sn	10 21 19.2		-1.9
	baz=348								
YUS	**Yu-Shan**	**0.68**	**297**	*i*P		Pn	10 21 12.2		-0.7
	baz=297								
YUS				*e*S		Sn	10 21 21.2		-1.3
	baz=297								
TEYL	**Yanliau Villag**	**0.68**	**359**	*e*P		Pn	10 21 12.8		+0.4
	baz=20								
TEYL				S		Sn	10 21 22.7		+0.9
	baz=20								
VWDT	**VWDT**	**0.72**	**323**	*e*P		Pn	10 21 12.3		-0.6
	baz=333								
VWDT				*e*S		Sn	10 21 20.9		-1.7
	baz=333								
STYH	**Taoyuan**	**0.77**	**269**	*e*P		Pn	10 21 12.0		-1.6
	baz=262								
STYH				*e*S		Sn	10 21 21.4		-2.6
	baz=262								
ETM	**Tongmen**	**0.79**	**352**	*e*P		Pn	10 21 13.0		-0.9
	baz=355								
ETM				*e*S		Sn	10 21 22.8		-1.6
	baz=355								
STYT	**Tauyuan**	**0.79**	**269**	P		Pn	10 21 13.4		-0.5
	baz=259								
STYT				*e*S		Sn	10 21 23.5		-1.1
	baz=259								
HWA	**Hwalien**	**0.79**	**359**	*e*P		Pn	10 21 13.3		-0.6
	baz=356								
HWA				*e*S		Sn	10 21 24.4		-0.1
	baz=356								
ALS	**Alishan**	**0.81**	**294**	*e*P		Pn	10 21 14.1		-0.4
	baz=295								
ALS				*e*S		Sn	10 21 24.5		-1.0
	baz=295								
ECL	**Taimali**	**0.84**	**226**	*e*P		Pn	10 21 13.0		-1.6
	baz=217								
ECL				*e*S		Sn	10 21 23.4		-2.4
	baz=217								
SSLB	**Suanglung**	**0.85**	**315**	P		Pn	10 21 14.2		-0.6
SSLB	**Suanglung**	**0.85**	**315**	⇓	*i*P	Pn	10 21 14.1		-0.7
	baz=322								
SSLB				S		Sn	10 21 24.2		-1.9
	baz=322								
WHYT	**Xinyi Township**	**0.87**	**306**	*e*P		Pn	10 21 14.7		-0.3
	baz=314								
WHYT				*e*S		Sn	10 21 25.8		-0.7
	baz=314								
OWD	**Renai**	**0.87**	**332**	P		Pn	10 21 14.3		-0.8
	baz=338								
OWD				*e*S		Sn	10 21 24.6		-2.0
	baz=338								
TWD	**Chiawan**	**0.89**	**359**	*e*P		Pn	10 21 14.4		-0.9
	baz=357								
TWD				*e*S		Sn	10 21 26.2		-0.8
	baz=357								
TPUB	**Ta-pu**	**0.91**	**278**	P		Pn	10 21 15.9		+0.3
TPUB	**Ta-pu**	**0.91**	**278**	*i*P		Pn	10 21 15.6		0.0
	baz=274								
TPUB				*e*S		Sn	10 21 28.0		+0.4
	baz=274								
WTP	**Ta-pu**	**0.92**	**274**	*i*P		Pn	10 21 16.0		+0.3
	baz=270								
WTP				*e*S		Sn	10 21 28.0		+0.2
	baz=270								
WUSB	**Renai**	**0.93**	**331**	*e*P		Pn	10 21 15.4		-0.5
	baz=336								
WUSB				*e*S		Sn	10 21 26.1		-1.9
	baz=336								
SGST	**Jiashian**	**0.95**	**264**	P		Pn	10 21 15.7		-0.5
	baz=259								
SGST				*e*S		Sn	10 21 28.9		+0.3
	baz=259								
SMLT	**Sun Moon Lake**	**0.96**	**317**	*i*P		Pn	10 21 16.0		-0.2
	baz=324								
SMLT				*e*S		Sn	10 21 27.7		-1.1
	baz=324								
CHGB	**Renai**	**0.96**	**335**	*i*P		Pn	10 21 16.1		-0.3
	baz=349								
CHGB				*e*S		Sn	10 21 27.8		-1.2
	baz=349								
ETL	**Fush Village**	**0.97**	**0**	*e*P		Pn	10 21 16.0		-0.5
	baz=358								
ETL				*e*S		Sn	10 21 28.4		-0.6
	baz=358								
NACB	**Ninganchiao**	**0.99**	**359**	*e*P		Pn	10 21 16.0		-0.6
	baz=356								
NACB				*e*S		Sn	10 21 27.7		-1.6
	baz=356								
CHN1	**Nanshi**	**1.00**	**270**	*e*P		Pn	10 21 17.2		+0.4
	baz=266								
CHN1				*e*S		Sn	10 21 30.6		+0.9
	baz=266								
SSD	**Sandimen**	**1.00**	**245**	*e*P		Pn	10 21 16.4		-0.4
	baz=237								
SSD				*e*S		Sn	10 21 29.6		-0.1
	baz=237								
WHF	**Hehuan Shan**	**1.01**	**342**	*e*P		Pn	10 21 16.4		-0.8
	baz=357								
WHF				*e*S		Sn	10 21 29.7		-0.8
	baz=357								
TSMG	**Majia**	**1.01**	**242**	*e*P		Pn	10 21 16.8		-0.1
	baz=235								
TSMG				*e*S		Sn	10 21 30.9		+1.0
	baz=235								
WPL	**Puli Township**	**1.02**	**324**	P		Pn	10 21 17.2		+0.1
	baz=333								
WPL				*e*S		Sn	10 21 29.7		-0.5
	baz=333								
ETLH	**Xiulin Townshi**	**1.03**	**353**	*e*P		Pn	10 21 16.6		-0.6
ETLH				*e*S		Sn	10 21 29.1		-1.3
SNST	**Tainan City**	**1.03**	**272**	*e*P		Pn	10 21 17.8		+0.6
	baz=269								
SNST				*e*S		Sn	10 21 31.4		+1.1
	baz=269								
WJS	**Zhushan**	**1.03**	**308**	*e*P		Pn	10 21 17.2		0.0
	baz=309								
WJS				*e*S		Sn	10 21 30.7		+0.3
	baz=309								
TAW	**Tawu**	**1.06**	**219**	*e*P		Pn	10 21 16.4		-1.1
	baz=211								
TAW				*e*S		Sn	10 21 29.4		-1.6
	baz=211								
DPDB	**Guoxing**	**1.06**	**323**	*e*P		Pn	10 21 17.9		+0.3
	baz=332								
DPDB				*e*S		Sn	10 21 30.4		-0.8
	baz=332								
EAST	**Anshuo**	**1.06**	**222**	*e*P		Pn	10 21 16.4		-1.2
	baz=210								
EAST				*e*S		Sn	10 21 29.2		-2.0
	baz=210								
MASBT	**Mashibuluo**	**1.07**	**238**	*e*P		Pn	10 21 17.3		-0.4
	baz=228								
MASBT				*e*S		Sn	10 21 30.6		-0.7
	baz=228								
SCST	**Cishan**	**1.07**	**254**	*e*P		Pn	10 21 18.9		+1.1
	baz=249								
SCST				*e*S		Sn	10 21 32.2		+0.8
	baz=249								
TAWH	**Dawu Township**	**1.07**	**219**	*e*P		Pn	10 21 16.8		-1.0
	baz=207								
TAWH				*e*S		Sn	10 21 28.6		-2.8
	baz=207								
WCS	**Beigang Elemen**	**1.08**	**324**	*e*P		Pn	10 21 17.2		-0.7
	baz=332								
WCS				*e*S		Sn	10 21 31.6		-0.1
	baz=332								
WNT	**Mingjian**	**1.10**	**309**	*e*P		Pn	10 21 18.6		+0.5
	baz=310								
WNT				*e*S		Sn	10 21 32.7		+0.7
	baz=310								
WDLH	**Douliu**	**1.11**	**297**	*e*P		Pn	10 21 18.8		+0.6
	baz=296								
WDLH				*e*S		Sn	10 21 32.9		+0.6
	baz=296								
SGLT	**Jiouru**	**1.13**	**246**	*e*P		Pn	10 21 20.3		+1.8
	baz=241								
CHY	**Chiayi**	**1.14**	**286**	*e*P		Pn	10 21 18.6		0.0
	baz=284								
CHY				*e*S		Sn	10 21 34.2		+1.2
	baz=284								
TWT	**Tachien**	**1.14**	**339**	*e*P		Pn	10 21 19.0		+0.2
	baz=343								
TWT				*e*S		Sn	10 21 31.4		-1.9
	baz=343								
LAY	**Lan-yu**	**1.14**	**183**	*e*P		Pn	10 21 18.2		-0.5
	baz=171								
TDCB	**Techi**	**1.15**	**339**	*e*P		Pn	10 21 18.7		-0.2
	baz=343								
TDCB				*e*S		Sn	10 21 31.9		-1.5
	baz=343								
CHN3	**Shinhua**	**1.16**	**265**	*e*P		Pn	10 21 20.3		+1.4
	baz=271								
CHN3				*e*S		Sn	10 21 36.9		+3.5
	baz=271								
TWM1	**Shoushan**	**1.16**	**252**	*e*P		Pn	10 21 20.9		+2.0
	baz=247								
LYUB	**Lan-yu**	**1.18**	**181**	*e*P		Pn	10 21 17.8		-1.4
	baz=170								
SHHT	**Tainan City**	**1.18**	**262**	*e*P		Pn	10 21 19.6		+0.4
	baz=258								
SHHT				*e*S		Sn	10 21 36.4		+2.4
	baz=258								
SSPT	**Xinbi**	**1.19**	**234**	*e*P		Pn	10 21 19.9		+0.5
	baz=222								
SCZT	**Fangliau**	**1.22**	**229**	P		Pn	10 21 20.5		+0.7
	baz=216								
SLIU	**Shizi**	**1.22**	**218**	*e*P		Pn	10 21 19.4		-0.4
	baz=202								
SSHA	**Shanhua**	**1.22**	**268**	*e*P		Pn	10 21 20.1		+0.4
	baz=265								
WTK	**Tuku**	**1.23**	**294**	*e*P		Pn	10 21 19.5		-0.5
	baz=293								
WTK				*e*S		Sn	10 21 35.1		-0.3
	baz=293								
ICHU	**Yijhu**	**1.24**	**278**	*e*P		Pn	10 21 20.4		+0.3
	baz=275								
ICHU				*e*S		Sn	10 21 36.3		+0.8
	baz=275								
ENA	**Nanau**	**1.25**	**5**	*e*P		Pn	10 21 19.6		-0.6
	baz=1.0								
ENA				*e*S		Sn	10 21 33.8		-1.9
	baz=1.0								
WHP	**Taichung City**	**1.25**	**331**	*e*P		Pn	10 21 21.4		+1.1
	baz=340								
WHP				*e*S		Sn	10 21 36.1		+0.1
	baz=340								
NNSB	**Datong**	**1.26**	**350**	*e*P		Pn	10 21 20.1		-0.3
	baz=4.0								
EWUT	**Wuta**	**1.27**	**7**	*e*P		Pn	10 21 19.4		-1.0
	baz=20								
NNS	**Nan Shan**	**1.27**	**350**	P		Pn	10 21 20.8		+0.1
	baz=4.0								
TCU	**Taichung**	**1.29**	**318**	*e*P		Pn	10 21 21.8		+1.1
	baz=308								
TCU				*e*S		Sn	10 21 37.6		+0.9
	baz=308								
CHN8	**Yiju**	**1.30**	**277**	*e*P		Pn	10 21 20.6		-0.2
	baz=274								
CHN8				*e*S		Sn	10 21 38.0		+0.9
	baz=274								
WCHH	**Zhanghua**	**1.32**	**313**	*e*P		Pn	10 21 21.7		+0.6
	baz=313								
WCHH				*e*S		Sn	10 21 38.3		+0.9
	baz=313								
WSL	**Shuilin Townsh**	**1.32**	**285**	*e*P		Pn	10 21 21.4		+0.3
	baz=283								
WSL				*e*S		Sn	10 21 38.5		+1.0
	baz=283								
LATG	**Datong**	**1.35**	**357**	*e*P		Pn	10 21 21.7		+0.1
	baz=2.0								
WSF	**Szhu**	**1.36**	**290**	*e*P		Pn	10 21 21.2		-0.4
	baz=289								
WSSB	**Gushan**	**1.36**	**247**	*e*P		Pn	10 21 23.2		+1.5
	baz=242								
TWQ1	**Liyutan**	**1.39**	**327**	*e*P		Pn	10 21 23.2		+1.0
	baz=329								
NDT	**Datong Townshi**	**1.42**	**356**	*e*P		Pn	10 21 23.5		+1.0
	baz=9.0								
HEN	**Hengchun**	**1.42**	**215**	*e*P		Pn	10 21 23.6		+1.0
	baz=200								
TWC	**Suao**	**1.44**	**9**	P		Pn	10 21 23.1		+0.4
	baz=21								
TWKBT	**Hengchun**	**1.44**	**211**	*e*P		Pn	10 21 22.4		-0.4
	baz=198								
TWK1	**Hengchun**	**1.44**	**211**	*e*P		Pn	10 21 21.6		-1.2
	baz=198								
NDS	**Dongshan**	**1.45**	**4**	*e*P		Pn	10 21 22.6		-0.3
NDS				*e*S		Sn	10 21 40.7		0.0
ENTT	**Nioudou**	**1.45**	**358**	*e*P		Pn	10 21 22.4		-0.6
	baz=3.0								
NSY	**Sanyi**	**1.46**	**328**	*e*P		Pn	10 21 24.1		+1.1
	baz=331								
WDJ	**Dajia District**	**1.46**	**323**	*e*P		Pn	10 21 23.6		+0.5
	baz=325								
YHNB	**Yeheng**	**1.50**	**352**	P		Pn	10 21 24.6		+0.9
YHNB	**Yeheng**	**1.50**	**352**	*e*P		Pn	10 21 24.1		+0.4
	baz=7.0								
YHNB				*e*S		Sn	10 21 40.7		-1.3
	baz=7.0								
NFF	**Wufeng Townshi**	**1.51**	**343**	*e*P		Pn	10 21 24.2		+0.3
	baz=350								
NMLH	**Miaoli**	**1.54**	**331**	P		Pn	10 21 24.9		+0.7
	baz=333								
NSTT	**Nanjuang**	**1.55**	**339**	*e*P		Pn	10 21 24.8		+0.6
	baz=342								
LIOB	**Emei**	**1.56**	**339**	*e*P		Pn	10 21 24.7		+0.3
	baz=342								
FUSB	**Fushanzhiwuyua**	**1.57**	**359**	*e*P		Pn	10 21 25.0		+0.3
	baz=4.0								
FUSB				*e*S		Sn	10 21 44.0		+0.2
	baz=4.0								
JYNG	**Yonagunijimaku**	**1.75**	**44**	*i*P		Pn	10 21 27.6		+0.5
JYNG				S		Sn	10 21 48.3		0.0
TIPB	**Shuangxi**	**1.79**	**6**	*e*P		Pn	10 21 28.2		+0.5
	baz=3.0								
TIPB				*e*S		Sn	10 21 49.6		+0.3
	baz=3.0								
YOJ	**Yonaguni jima**	**1.80**	**45**	P		Pn	10 21 28.7		+0.9
YOJ	**Yonaguni jima**	**1.80**	**45**	P		Pn	10 21 28.3		+0.5
YOJ				S		Sn	10 21 49.7		+0.3
SXI1	**Grass Mountain**	**1.92**	**7**	*e*P		Pn	10 21 29.9		+0.5
	baz=360								
PNG	**Penghu**	**1.93**	**282**	*e*P		Pn	10 21 28.7		-0.8
	baz=280								
HATJ	**Hateruma jima**	**2.19**	**66**	P		Pn	10 21 33.5		+0.4
HATJ				*e*S		Sn	10 21 58.9		0.0
IRIF	**Iriomote-Funau**	**2.25**	**59**	P		Pn	10 21 34.5		+0.6
IRIF				S		Sn	10 22 01.4		+0.9
JKRS	**Kuro-shima**	**2.43**	**64**	P		Pn	10 21 37.2		+0.8
JKRS				*e*S		Sn	10 22 05.5		+0.5
JIJ	**Ishigaki jima**	**2.60**	**63**	P		Pn	10 21 38.8		+0.1
JIJ				S		Sn	10 22 08.2		-0.9
JTJ	**Tarama**	**3.18**	**62**	P		Pn	10 21 47.0		+0.3
JTJ				S		Sn	10 22 24.0		+0.7
JIRB	**Irabujima**	**3.64**	**63**	*e*P		Pn	10 21 54.1		+1.0
JIRB				*e*S		Sn	10 22 35.2		+0.3
JMJ2	**Miyako jima3**	**3.73**	**65**	P		Pn	10 21 55.2		+0.8
JMJ2				*e*S		Sn	10 22 37.5		+0.4
JMJ	**Miyako jima 2**	**3.74**	**63**	P		Pn	10 21 54.0		-0.4

VAO ***14*** *10:23:56.5±0.4,20°.52S×69°.10W, h109km, mb4.4*
NEIC ***14*** *10:23:57.0±2.9,20°.68S±0°.05×69°.2W±0°.1, h111km±8km, mb4.4/14, ML4.4(GUC), Error ellipse: s-maj=14.9km s-min=7.4km az=97.0*
IDC ***14*** *10:23:57.6±1.4,20°.62S×68°.93W, h116km±13km, mb4.0/6, mbtmp4.4/9, Error ellipse: s-maj=26.5km s-min=13.8km az=102.0*
GUC ***14*** *10:23:57.5±0.8,20°.65S×69°.15W, h113km±4km, ML4.4*
ISC 14 10:23:56.3±0.6**,20°.60S**±0°.03×**69°.12W**±0°.05**, h110**km±6km**, n124,σ1§31/142,mb4.4/6,8C-5D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
PB01	**IPOC Station P**	**0.56**	**218**			Pn	10 24 14.1		+0.4
PB01	**IPOC Station P**	**0.56**	**218**	⇑	*i*P	Pn	10 24 14.1		+0.4
PB01					*i* S	Sn	10 24 26.7		0.0
PB01					IAML		10 24 27.3		
	comp=N,18μm,0.3s								
GO01	**Chusmiza**	**0.93**	**355**		Pn	Pn	10 24 18.8		+1.3
GO01	**Chusmiza**	**0.93**	**355**	⇓	*i*P	Pn	10 24 18.7		+1.3
GO01					*i* S	Sn	10 24 35.4		+2.2
TA01	**Diego Aracena**	**1.00**	**272**			Pn	10 24 17.9		+0.5
TA01	**Diego Aracena**	**1.00**	**272**	⇑	*i*P	Pn	10 24 18.0		+0.5
TA01					*i* S	Sn	10 24 33.5		+0.1
TA01					IAML		10 24 34.2		
	comp=N,8μm,0.4s								
TA02	**Huaiquique**	**1.01**	**289**	⇑	*i*P	Pn	10 24 18.3		+0.7
TA02					*i* S	Sn	10 24 34.4		+0.8
TA02					IAML		10 24 34.9		
	comp=N,20μm,0.1s								
PB02	**IPOC Station P**	**1.02**	**226**	⇑	*i*P	Pn	10 24 18.4		+0.6
PB02					*i* S	Sn	10 24 34.1		0.0
PB02					IAML		10 24 35.3		
	comp=N,20μm,0.3s								
PB09	**IPOC Station P**	**1.19**	**186**	⇑	*i*P	Pn	10 24 20.6		+0.8
PB09					*i* S	Sn	10 24 38.1		+0.6
PB09					IAML		10 24 42.5		
	comp=E,6μm,0.6s								
PB07	**IPOC Station P**	**1.33**	**213**	⇑	*i*P	Pn	10 24 21.7		+0.4
PB07					*i* S	Sn	10 24 39.8		-0.5
PB07					IAML		10 24 40.2		
	comp=N,6μm,0.4s								
PB04	**IPOC Station P**	**1.97**	**209**	⇑	*i*P	Pn	10 24 29.1		-0.1
PB04					*i* S	Sn	10 24 52.1		-2.0
LVC	**Limon Verde**	**2.01**	**175**		P	Pn	10 24 31.2		+1.5
	comp=N,125nm,0.4s,baz=32,slow=7.0,SNR=262								
LVC					S	Sn	10 24 56.8		+1.6
	comp=N,986nm,0.3s,baz=147,slow=19,SNR=73								
LVC					LR	LR	10 25 13.1		
	comp=N,175nm,19.2s,baz=46,slow=38								
LVC	**Limon Verde**	**2.01**	**175**		Pn	Pn	10 24 30.9		+1.2
LVC	**Limon Verde**	**2.01**	**175**	⇓	*i*P	Pn	10 24 30.8		+1.1
LVC					*i* S	Sn	10 24 55.8		+0.6
LVC	**Limon Verde**	**2.01**	**175**	*e*P		Pn	10 24 30.6		+0.8
PB06	**IPOC Station P**	**2.13**	**191**	⇑	*i*P	Pn	10 24 31.3		+0.1
PB06					*i* S	Sn	10 24 56.8		-1.1
PB06					IAML		10 25 01.7		
	comp=E,2μm,0.7s								
PB12	**IPOC Station P**	**2.29**	**330**	*e*P		Pn	10 24 33.4		+0.3
PB12					*i* S	Sn	10 24 59.5		-1.7
PB12					IAML		10 25 07.8		
	comp=N,1μm,0.5s								
PB16	**IPOC Station P**	**2.29**	**351**	⇓	*i*P	Pn	10 24 35.7		+2.1
PB16					*i* S	Sn	10 25 04.8		+2.8
PB16					IAML		10 25 07.3		
	comp=N,760nm,0.8s								
AF01	**San Pedro de A**	**2.49**	**160**			Pn	10 24 37.5		+1.6
AF01	**San Pedro de A**	**2.49**	**160**	⇓	*i*P	Pn	10 24 37.8		+1.8
AF01					*i* S	Sn	10 25 07.5		+1.2
AF01					IAML		10 25 48.4		
	comp=E,1μm,0.5s								
AP01	**Chacalluta**	**2.50**	**332**	*e*P		Pn	10 24 36.3		+0.5
AP01					*i* S	Sn	10 25 07.0		+0.9
AP01					IAML		10 25 26.4		
	comp=N,3μm,0.5s								
PB15	**IPOC Station P**	**2.61**	**187**			Pn	10 24 37.9		+0.4
PB15	**IPOC Station P**	**2.61**	**187**	⇓	*i*P	Pn	10 24 37.8		+0.4
PB15					*i* S	Sn	10 25 08.9		-0.1
PB18	**Visviri**	**3.02**	**353**	*e*P		Pn	10 24 47.1		+4.0
PB14

AQDB	Aquidauana	12.57	92	Pn		Pn	10 26 52.5	+1.2
AQDB	Aquidauana	12.57	92	*e*P		Pn	10 26 52.4	+1.2
MT02	Curacav	12.73	188	Pn		Pn	10 26 52.7	-0.7
LMEL	Las Melosas	13.23	184			Pn	10 26 59.7	-0.3
CZSB	Cruzeiro do Su	13.26	344	*e*P		Pn	10 26 58.9	-1.5
SALV	Santo Antonio	13.58	72	*e*P		Pn	10 27 03.8	-0.7
PP1B	Ponte de Pedra	13.78	80	*e*P		Pn	10 27 06.4	-0.7
BO01	Tunca	13.85	187	Pn		Pn	10 27 07.9	0.0
MCR1	Marechal Candi	14.45	108	*e*P		Pn	10 27 17.0	+1.3
ITQB	Itaqui	14.46	131	*e*P		Pn	10 27 16.2	+0.5
PDRB	Porto dos Gac	14.88	55	*e*P		Pn	10 27 20.6	-0.5
CRSM	Crissiumal (Br	15.37	119	*e*P		Pn	10 27 28.0	+0.7
C2SB	Chapadao do Su	15.44	86	*e*P		Pn	10 27 28.3	+0.1
FRBT	Francisco Belt	15.68	113	*e*P		P	10 27 32.5	-0.5
RODS	Rosario do Sul	15.86	130	*e*P		Pn	10 27 33.9	+0.6
CLDB	Colider	16.05	55	*e*P		Pn	10 27 36.1	+0.3
PTGB	Pitanga	16.26	108	*e*P		P	10 27 39.7	+0.2
PCMB	Pacaembu	16.69	97	*e*P		Pn	10 27 44.1	+0.4
ALGR	Alto Alegre (B	16.73	122	*e*P		P	10 27 44.7	+0.2
ITAB	Concordia	16.86	116	P		P	10 27 46.4	+0.3
ITAB	comp=Z,37nm,1.4s			IAmb		IAmb	10 27 47.4	
ITAB	Concordia	16.86	116	*e*P		P	10 27 46.3	+0.3
CPSB	Cacapava Do Su	17.17	128	*e*P		P	10 27 49.5	+0.1
ITRB	Iturama	17.64	90	*e*P		Pn	10 27 55.4	+0.2
PLTB	Pedras Altas	17.79	132	*e*P		P	10 27 55.5	-0.7
CNLB	Canela	18.67	121	*e*P		P	10 28 05.8	-0.1
NPGB	Novo Progresso	18.95	47	*e*P		P	10 28 08.0	-1.1
GO06	Curarrehue	19.03	186	P		P	10 28 10.3	+0.5
GO06	comp=Z,19nm,0.8s			IAmb		IAmb	10 28 12.5	
TIJ01	Guaruva-PR	19.10	108	*e*P		P	10 28 11.3	+0.6
SNDB	Serra Nova Dou	19.12	66	*e*P		P	10 28 10.5	-0.4
MACA	Manacapuru-AM	19.18	26	P		P	10 28 11.4	-0.2
MACA	comp=Z,41nm,0.7s			IAmb		IAmb	10 28 14.1	
MACA	Manacapuru-AM	19.18	26	*e*P		P	10 28 11.3	-0.2
BB19B	Bebedouro	19.25	95	*e*P		P	10 28 12.3	+0.1
TER01	Tubaro-SC	19.80	117	*e*P		P	10 28 17.6	-0.6
IPMB	Ipameri, GO	19.90	86	*e*P		P	10 28 19.0	-0.4
PLCA	Paso Flores	20.10	183	P		P	10 28 22.1	+0.8
	comp=Z,9.8nm,0.9s,baz=2.6,slow=12,SNR=17 comp=Z,9.8nm,0.9s							
PLCA	Paso Flores	20.10	183	P		P	10 28 21.7	+0.3
PLCA	comp=Z,12nm,0.8s			IAmb		IAmb	10 28 23.5	
PLCA	Paso Flores	20.10	183	*e*P		P	10 28 22.9	+1.5
RCLB	Rio Claro- Sao	20.16	99	*e*P		P	10 28 21.7	-0.5
LL04	Puerto Octay	20.44	187	P		P	10 28 25.0	+0.2
LL04	comp=Z,13nm,0.9s			IAmb		IAmb	10 28 30.1	
PET01	Itanhaem-SP	20.51	104	*e*P		P	10 28 25.5	-0.3
BDFB	Brasilia	20.65	80	P		P	10 28 27.1	-0.4
	comp=Z,6.2nm,0.3s,baz=232,slow=6.2,SNR=15 comp=Z,6.2nm,0.3s							
BDFB	Brasilia	20.65	80	P		P	10 28 27.9	+0.4
BDFB	comp=Z,7.7nm,0.6s			IAmb		IAmb	10 28 30.6	
BDFB	Brasilia	20.65	80	*e*P		P	10 28 28.0	+0.6
VAO	Valinhos	20.70	101	*e*P		P	10 28 27.8	-0.2
ITTB	Itaituba	20.73	41	*e*P		P	10 28 27.3	-1.0
PMNB	Patos De Minas	21.46	88	*e*P		P	10 28 35.7	-0.5
OTAV	Otavalo	22.64	335	*e*P		P	10 28 48.5	-0.3
PRPB	Paraupebas	23.58	55	*e*P		P	10 28 55.8	-1.5
MALB	Monte Alegre	23.61	40	*e*P		P	10 28 56.5	-1.0
SMTB	Santa Maria do	23.83	64	*e*P		P	10 29 00.0	+0.5
DIAM	Diamantina, MG	24.09	89	*e*P		P	10 29 02.2	+0.2
MC01	Montes Claros	24.15	85	*e*P		P	10 29 02.4	-0.1
JANB	Januaria	24.23	81	*e*P		P	10 29 02.4	-0.8
BOAV	Boa Vista	24.36	21	P		P	10 29 04.8	+0.6
BOAV	comp=Z,7.4nm,0.6s			IAmb		IAmb	10 29 06.8	
BOAV	Boa Vista	24.36	21	*e*P		P	10 29 05.1	+0.8
SDBA	SAO DESIDERIO	24.58	74	*e*P		P	10 29 05.9	-0.4
MCPB	Macapa, AP	26.13	42	*e*P		P	10 29 20.5	+0.2
SJMB	Sao Joao De Ma	26.36	91	*e*P		P	10 29 22.7	+0.3
ALF01	Guarapari-ES	26.56	95	*e*P		P	10 29 25.1	+0.9
RIB01	Linhares ES	27.01	92	*e*P		P	10 29 28.4	+0.2
NAN01	Guarapari, ES	27.49	89	*e*P		P	10 29 32.2	-0.4
GUA01	Guaratinga, BA	28.05	87	*e*P		P	10 29 37.9	+0.4
CMC01	Camacan, BA	28.60	84	*e*P		P	10 29 42.5	+0.1
GDU01	Guandu, BA	29.01	81	*e*P		P	10 29 45.5	-0.6
BAUV	El Baul	29.38	2	P		P	10 29 51.1	+1.9
BAUV	comp=Z,11nm,0.9s			IAmb		IAmb	10 30 18.9	
ROSB	Rosrio	30.05	57	*e*P		P	10 29 55.5	+0.2
NBAN	Anadia - AL	33.44	76	*e*P		P	10 30 25.0	-0.1
NBRF	Rio Formoso -	34.87	75	*e*P		P	10 30 37.8	+0.5
RCBR	Riachuelo	35.41	70	P		P	10 30 42.6	+0.6
RCBR	Riachuelo	35.41	70	*e*P		P	10 30 42.0	0.0
OBIP	Obispado Ponce	38.48	4	P		P	10 31 07.2	-0.7
SJG	San Juan	38.59	5	P		P	10 31 07.6	-1.1
	comp=Z,7.3nm,0.7s,baz=212,slow=1.9,SNR=5.2 comp=Z,7.3nm,0.7s							
SJG	San Juan	38.59	5	P		P	10 31 08.2	-0.5
SJG	comp=Z,11nm,1.1s			IAmb		IAmb	10 31 39.5	
SNAA	Sanae	63.19	161	P		P	10 34 12.2	-0.3
DBIC	Dimbokro	68.67	74	P		P	10 34 48.4	0.0
	comp=Z,7.6nm,0.6s,baz=249,slow=6.2,SNR=10 comp=Z,7.6nm,0.6s							
QSPA	South Pole Qui	69.58	180	P		P	10 34 53.4	+0.1
TORD	Torodi Ar. Bea	77.24	71	P		P	10 35 38.6	-0.3
	comp=Z,2.0nm,0.5s,baz=252,slow=5.6,SNR=30 comp=Z,2.0nm,0.5s							
TORD	Torodi Ar. Bea	77.24	71	P		P	10 35 38.9	0.0
YKA	Yellowknife Ar	90.28	341	P		P	10 36 45.4	+1.2
	comp=Z,0.4nm,0.7s,baz=137,slow=4.5,SNR=5.4 comp=Z,0.4nm,0.7s							
MKAR	Makanchi Array	145.02	35	PKP		PKPdf	10 43 21.5	+0.8
	comp=Z,0.9nm,0.5s,baz=320,slow=3.1,SNR=5.6							

*IDC **14** 10:31:43.1±1.0,53°69N×163°55W,h0km,mb4.0/21, mbtmp4.0/23,ML3.5/2,MS3.3/14,Error ellipse: s-maj=27.1km s-min=13.6km az=175.0*
*NEIC **14** 10:31:44.5±1.9,53°48N±0°04×163°48W±0°09,h10km±2km, mb4.0/15,ML3.6/34(AEIC),Error ellipse: s-maj=9.5km s-min=4.7km az=117.0*
*AEIC **14** 10:31:46.6±1.9,53°50N±0°04×163°48W±0°07,h30km±7km, Error ellipse: s-maj=7.3km s-min=4.9km az=222.0*
ISC 14 10:31:47.0±0.6,**53°52N**±0°07×**163°49W**±0°05,**h29**km, **n154,**σ1**§03**/142,**mb4.3**/29,**MS3.2**/14,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRPK	Brown Peak	1.13	352		Pn	10 32 06.7	-0.2
WESE	West Dahl East	1.15	326		Pn	10 32 07.1	-0.1
ISLZ	Isanotski Laza	1.21	354		Pn	10 32 07.5	-0.5
WESP	Westdahl Peak	1.21	324		Pn	10 32 07.8	-0.3
SSLS	Shishaldin Sou	1.23	346		Pn	10 32 08.3	0.0
WESN	West Dahl Nort	1.23	329		Pn	10 32 08.4	+0.2
WECS	Westdahl Cape	1.26	323		Pn	10 32 08.7	0.0
WECS					Sn	10 32 24.0	-0.7
SSLW	Shishaldin Wes	1.30	344		Pn	10 32 09.3	+0.1
SSBA	Shishaldin	1.31	344		Pn	10 32 09.3	0.0
ISNN	Isanotski Nort	1.32	353		Pb	10 32 10.3	-0.8
ISNN					Sb	10 32 28.5	+0.8
SSLN	Shishaldin Nor	1.32	347		Pn	10 32 10.0	+0.5
AKSA	Akutan Strait	1.45	296		Pn	10 32 11.1	-0.1
AKSA	Akutan Strait	1.45	296		Pn	10 32 11.1	-0.1
AKUT	Akutan	1.49	295		Pn	10 32 11.8	+0.1
AKUT					Sb	10 32 31.6	-0.8
AKBBA	Akutan Broad B	1.56	293		Pn	10 32 12.9	+0.1
AKLV	Akutan Long Va	1.60	295		Pn	10 32 13.3	0.0
AKMO	Akutan Morgan	1.60	292		Pn	10 32 13.5	+0.2
AKGG	Akutan Green G	1.63	295		Pn	10 32 13.1	-0.6
AKRB	Akutan Reef Bi	1.65	293		Pn	10 32 14.2	+0.2
UNV	Unalaska Valle	1.82	281		Pn	10 32 16.1	-0.2
MNAT	Makushin Natee	1.94	282		Pn	10 32 17.9	0.0
MREP	Makushin Rep't	1.96	280		Pn	10 32 18.4	+0.1
MGOD	Makushin Gods	2.03	279		Pn	10 32 19.8	+0.5
MAPS	Pakushin South	2.08	279		Pn	10 32 20.3	+0.4
S12K	Black Hills	2.33	20		Pn	10 32 23.7	+0.3
SDPT	Sand Point	2.54	43		Pn	10 32 26.4	+0.3
CNBA	Chernabura Isl	2.63	59	Pn	Pn	10 32 27.2	-0.2
OKCE	Okmok Cone E	2.80	270		Pn	10 32 29.9	+0.1
NIKH	Nikolski High	3.27	262		Pn	10 32 35.8	-0.4
VNHG	Veniaminof 1	3.68	41		Pn	10 32 42.7	+0.8
CHGN	Chignik	4.04	44	Pn	Pn	10 32 47.2	+0.5
ANPB	Aniakchak Plen	4.44	40		Pn	10 32 52.8	+0.5
CHIR	Chirikof Islan	5.11	60	Pn	Pn	10 33 00.9	-0.6
R17K	Ugashik Creek	5.76	41		Pn	10 33 11.0	+0.6
SII	Sitkinak Islan	6.15	57	Pn	Pn	10 33 15.3	-0.5
OHAK	Old Harbor	6.89	53	Pn	Pn	10 33 25.1	-0.8
KDAK	Kodiak Island	7.50	51	Pn	Pn	10 33 33.6	-0.6
O18K	Koktuh Hills	7.81	32		Pn	10 33 40.4	+1.9
ADK	Adak	8.19	264	Pn	Pn	10 33 44.4	+0.7
N18K	Kilae Creek	8.27	27	Pn	Pn	10 33 44.4	-0.5
SVW2	Sparrevohn	8.71	26	Pn	Pn	10 33 51.1	+0.3
N19K	Bonanza Creek	8.78	30	Pn	Pn	10 33 53.8	+1.9
CNPM	China Poot	9.05	43	Pn	Pn	10 33 55.6	+0.1
M19K	Big River Lodg	9.70	26	Pn	Pn	10 34 05.9	+1.6
L19K	White Mountain	9.81	24	Pn	Pn	10 34 06.2	+0.3
M20K	Styx River	10.03	29		Pn	10 34 09.4	+0.4
SEW	Seward	10.12	44	Pn	Pn	10 34 09.0	-1.1
O22K	Cooper Landing	10.23	42	Pn	Pn	10 34 10.9	-0.6
RC01	Rabbit Creek A	10.60	39	Pn	Pn	10 34 17.6	+0.8
AMKA	Amchitka	10.72	265	Pn	Pn	10 34 18.8	+0.4
PWL	Port Wells	11.00	42	Pn	Pn	10 34 21.4	-0.9
K20K	Telida	11.01	23		Pn	10 34 22.8	+0.5
PPLA	Purkeypile	11.11	28	Pn	Pn	10 34 25.6	+1.9
GHO	Glory Hole Cre	11.34	37	Pn	Pn	10 34 25.3	-1.6
CAST	Castle Rocks	11.55	26	Pn	Pn	10 34 30.1	+0.4
J20K	Nowinta River	11.71	20	Pn	Pn	10 34 31.9	+0.1
EYAK	Cordova Ski Ar	11.92	47	Pn	Pn	10 34 33.2	-1.5
SCM	Sheep Creek Mo	11.97	40	Pn	Pn	10 34 33.5	-2.0
KLU	Klutina	12.33	43		Pn	10 34 38.4	-2.0
BPAW	Bear Paw Mtn.	12.39	26	Pn	Pn	10 34 42.2	+1.0
M24K	Tolsona, Glenn	12.57	40	Pn	Pn	10 34 42.4	-1.3
N25K	Chitina, Valde	12.93	44	Pn	Pn	10 34 46.6	-2.0
I21K	Tanana	13.05	22		Pn	10 34 50.2	+0.2
GLB	Gilahina Butte	13.18	45	Pn	Pn	10 34 49.7	-2.2
MLY	Manley	13.21	24		Pn	10 34 52.9	+0.5
H21K	Melozitna Rive	13.29	20	Pn	Pn	10 34 54.0	+0.6
PAX	Paxson	13.35	38	Pn	Pn	10 34 52.9	-1.4
IMAR	Indian Mountai	13.40	17	Pn	Pn	10 34 56.8	+1.9
M26K	Nabesna, AK	13.98	42		Pn	10 35 02.0	-1.0
MENT	Mentasta	13.98	40		Pn	10 35 02.1	-0.8
RIDG	Independent Ri	14.04	36	Pn	Pn	10 35 02.6	-1.1
IL31		14.07	30		Pn	10 35 03.1	-0.9
ILAR	Eielson Array	14.07	30	Pn	Pn	10 35 00.6	-3.4
	0.2nm,0.3s,baz=217,slow=10,SNR=7.4 0.7nm,1.0s						
ILAR	Eielson Array	14.07	30		Pn	10 35 02.0	-2.0
H23K	Yukon River	14.15	24	Pn	Pn	10 35 04.7	-0.5
L26K	Log Cabin Wild	14.17	40		Pn	10 35 04.4	-1.1
DOT	Dot Lake	14.26	37		Pn	10 35 06.7	0.0
M27K	Edge Creek, AK	14.42	44		Pn	10 35 07.3	-1.6
J25K	Salcha River,	14.43	33		Pn	10 35 07.8	-1.3
SCRK	Sand Creek	14.49	36	Pn	Pn	10 35 07.3	-2.6
H24K	Noodor Dome	14.58	26	Pn	Pn	10 35 08.8	-2.2
L27K	Beaver Creek,	14.78	41		Pn	10 35 12.5	-1.3
BCAR	Beaver Creek A	14.80	41	Pn	Pn	10 35 12.5	-1.6
J26L	Joseph Creek	14.96	35		Pn	10 35 15.1	-1.1
PRP	Porcupine Dome	15.00	30		Pn	10 35 16.7	-0.1
PRP	comp=Z,3.9nm,0.8s			IAmb	IAmb	10 35 20.6	
K27K	Chicken	15.20	38		Pn	10 35 18.2	-1.1
I26K	Coal Creek Min	15.60	33		Pn	10 35 22.7	-1.8
I26K	comp=Z,5.1nm,0.8s			IAmb	IAmb	10 35 32.9	
EGAK	Eagle	15.96	36		Pn	10 35 28.4	-0.7
DAWY	Dawson	16.23	40		Pn	10 35 33.1	+0.4
TOLK	Toolik Lake Re	16.52	18	P	Pn	10 35 37.0	+0.7
TOLK	comp=Z,22nm,1.3s			IAmb	IAmb	10 35 41.3	
BMAR	Burnt Mountain	16.65	26	P	Pn	10 35 38.5	+0.5
N31M	Braeburn, Yuko	16.77	51	P	Pn	10 35 40.0	+0.5
N31M	comp=Z,12nm,0.9s			IAmb	IAmb	10 36 02.8	
I29M	Ogilvie Camp,	17.29	37	P	Pn	10 35 46.0	+0.1
MAYO	Mayo, Yukon	17.42	44	P	P	10 35 49.2	+0.6
M31M	Drury Creek, Y	17.60	49	P	P	10 35 52.0	+1.4
M31M	comp=Z,12nm,0.9s			IAmb	IAmb	10 35 54.9	
P33M	Teslin, Yukon	17.92	56		P	10 35 56.8	+2.5
P33M	comp=Z,12nm,0.8s			IAmb	IAmb	10 35 57.9	
FARO	Faro, Yukon	18.08	49	P	P	10 35 57.3	+1.4
FARO	comp=Z,9.6nm,0.8s			IAmb	IAmb	10 36 10.0	
EPYK	Eagle Plains	18.37	35	P	Pn	10 35 59.0	-0.3
EPYK	comp=Z,13nm,0.9s			IAmb	IAmb	10 36 03.8	
DLBC	Dease Lake	19.22	62	P	P	10 36 07.8	-0.6
	comp=Z,0.1nm,0.3s,baz=276,slow=15,SNR=3.2 comp=Z,2.0nm,0.9s						
INK	Inuvik	20.44	32	P	P	10 36 19.9	-1.7
INK	comp=Z,1.5nm,0.4s,baz=248,slow=16,SNR=5.4			LR	LR	10 45 02.7	
	comp=Z,125nm,20.2s,baz=254,slow=39 comp=Z,1.5nm,0.4s						
INK	Inuvik	20.44	32	P	P	10 36 20.1	-1.5
INK	comp=Z,5.6nm,0.7s			IAmb	IAmb	10 36 26.1	
PEA0B	Petropavlovsk-	23.00	285	P	P	10 36 48.9	-0.3
PETK	Petropavlovsk-	23.00	285	P	P	10 36 49.4	+0.2
PETK	comp=Z,2.6nm,0.5s,baz=83,slow=13,SNR=34			LR	LR	10 45 25.9	
	comp=Z,49nm,21.6s,baz=84,slow=36 comp=Z,2.6nm,0.5s						
PETK	Petropavlovsk-	23.00	285	P	P	10 36 49.7	+0.6
SEY	Seymchan	24.58	310	P	P	10 37 03.1	-0.9
	comp=Z,0.9nm,0.6s,baz=113,slow=8.1,SNR=4.5 comp=Z,0.9nm,0.6s						
MA2	Magadan	25.50	302	P	P	10 37 11.5	-0.9
MA2	comp=Z,4.0nm,0.7s,baz=66,slow=21,SNR=2.6			LR	LR	10 47 18.4	
	comp=Z,39nm,18.5s,baz=112,slow=37 comp=Z,4.0nm,0.7s						
YKA	Yellowknife Ar	26.77	51	P	P	10 37 23.9	+0.1
YKA	comp=Z,0.9nm,0.4s,baz=270,slow=9.2,SNR=20			PcP	PcP	10 40 46.1	+0.1
YKA	comp=Z,0.4nm,0.9s,baz=288,slow=2.7,SNR=3.7			LR	LR	10 49 00.3	
	comp=Z,98nm,18.4s,baz=278,slow=39 comp=Z,0.9nm,0.4s						
NEW	Newport	29.29	81	LR	LR	10 47 05.9	
	comp=Z,28nm,21.1s,baz=298,slow=32						
YBH	Yreka Blue Hor	29.49	97	LR	LR	10 46 48.5	
	comp=Z,45nm,19.6s,baz=281,slow=31						
RES	Resolute Bay	33.77	26	LR	LR	10 53 39.2	
	comp=Z,59nm,20.4s,baz=20,slow=39						
NVAR	Mina Array Bea	34.20	98	P	P	10 38 31.3	+1.3
	comp=Z,0.3nm,0.8s,baz=296,slow=10,SNR=3.6 comp=Z,0.3nm,0.8s						
ELK	Elko	34.55	92	LR	LR	10 50 28.8	
	comp=Z,41nm,18.2s,baz=326,slow=32						
YAK	Yakutsk	35.10	311	LR	LR	10 54 47.1	
	comp=Z,82nm,18.2s,baz=93,slow=40						
PFO	Pinyon Flats O	38.59	102	LR	LR	10 53 34.6	
	comp=Z,40nm,18.9s,baz=237,slow=34						
KLR	Kul'dur	39.41	291	LR	LR	10 57 40.0	
	comp=Z,32nm,18.4s,baz=46,slow=40						
H11N2	WAKE ISLAND Hy	40.70	226	T	T	11 23 06.3	
	baz=26,slow=76,SNR=40						
H11N3	WAKE ISLAND Hy	40.70	226	T	T	11 23 06.8	
	baz=26,slow=76,SNR=5						
H11N1	WAKE ISLAND Hy	40.72	226	T	T	11 23 07.7	
	baz=26,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	41.87	225	T	T	11 24 29.0	
	baz=25,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	41.88	225	T	T	11 24 30.2	
	baz=25,slow=76,SNR=71						
H11S3	WAKE ISLAND Hy	41.88	225	T	T	11 24 34.4	
	baz=25,slow=76,SNR=69						
ANMO	Albuquerque	43.58	92	LR	LR	10 55 58.0	
	comp=Z,21nm,18.1s,baz=328,slow=33						
SUMG	Summit	48.57	19	*i* P	P	10 40 28.0	+0.5
KSRS	Korea Array	48.76	280	P	P	10 40 29.1	+0.2
	comp=Z,2.0nm,0.8s,baz=48,slow=6.4,SNR=13 comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	49.23	95	P	P	10 40 33.0	+0.3
	comp=Z,0.2nm,0.5s,baz=295,slow=5.4,SNR=6.5 comp=Z,0.2nm,0.5s						
LPIG	La Paz	49.25	105	LR	LR	10 59 15.5	
	comp=Z,19nm,18.3s,baz=180,slow=34						
DBG	Daneborg	50.08	12	*i* P	P	10 40 36.7	-1.8
SCHQ	Schefferville	52.10	47	P	P	10 40 54.1	+0.2
	comp=Z,4.2nm,0.9s,baz=207,slow=4.5,SNR=3.7 comp=Z,4.2nm,0.9s						
SADO	Sadowa	52.77	63	LR	LR	11 04 18.1	
	comp=Z,32nm,18.6s,baz=349,slow=37						
SONM	Songino Array	53.70	303	P	P	10 41 05.4	-0.6
	comp=Z,2.1nm,0.8s,baz=49,slow=7.4,SNR=9.8 comp=Z,2.1nm,0.8s						
ARCES	ARCESS Array B	57.08	356	P	P	10 41 28.8	-1.0
	comp=Z,0.5nm,0.4s,baz=13,slow=8.4,SNR=19 comp=Z,0.5nm,0.4s						
ZALV	Zalesovo Beam	58.90	320	P	P	10 41 41.7	-1.0
	comp=Z,1.3nm,0.6s,baz=29,slow=10,SNR=5.1 comp=Z,1.3nm,0.6s						
FINES	FINESS Array B	65.13	355	P	P	10 42 23.5	-0.9
	comp=Z,3.6nm,0.9s,baz=12,slow=12,SNR=8.4 comp=Z,3.6nm,0.9s						
MKAR	Makanchi Array	65.51	316	P	P	10 42 26.8	-0.4
	comp=Z,1.1nm,0.7s,baz=51,slow=6.4,SNR=11 comp=Z,1.1nm,0.7s						
NB2	NORSAR Subarra	65.70	3	P	P	10 42 28.2	-0.1
	comp=Z,2.6nm,0.8s,baz=358,slow=6.5						
NOA	NORSAR Array B	65.70	3	P	P	10 42 28.5	+0.2
	comp=Z,2.0nm,0.8s,baz=358,slow=6.6,SNR=8.1 comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	75.60	352	P	P	10 43 28.3	-0.3
	comp=Z,2.3nm,0.5s,baz=8.8,slow=5.4,SNR=7.6 comp=Z,2.3nm,0.5s						
DPC	Dobruska-Polom	76.50	0	*e*P	P	10 43 34.4	+0.6
KHC	Kasperske Hory	77.69	2	*e*P	P	10 43 41.4	+0.9
GERES	GERESS Array B	77.98	2	P	P	10 43 40.7	-1.4
	comp=Z,1.0nm,0.7s,baz=357,slow=5.3,SNR=9.0 comp=Z,1.0nm,0.7s						
CKRC	Cesky Krumlov	78.01	1	*e*P	P	10 43 43.2	+0.9
CONA	Conrad Observa	78.92	0	*e*P	P	10 43 48.5	+1.1
	comp=Z,3.7nm,0.9s						
MOTA	Moosalm	79.40	4	*e*P	P	10 43 51.0	+0.9
	comp=Z,2.8nm,0.8s						
WATA	Walderalm	79.43	3	*i* P	P	10 43 51.2	+1.0
	comp=Z,4.8nm,0.9s						
WTTA	Wattenberg	79.50	3	*e*P	P	10 43 51.7	+1.0
	comp=Z,3.9nm,0.7s						
SQTA	Sankt Quirin	79.53	4	*e*P	P	10 43 51.8	+1.1
	comp=Z,5.9nm,0.8s						
ARSA	Arzberg	79.60	1	*e*P	P	10 43 52.2	+1.1
	comp=Z,1.8nm,0.6s						
FETA	Feichten	79.71	4	*e*P	P	10 43 53.0	+1.2
	comp=Z,4.7nm,0.9s						
CMAR	Chiang Mai Arr	79.76	287	P	P	10 43 53.0	+0.7
	comp=Z,0.7nm,0.3s,baz=26,slow=5.1,SNR=6.3 comp=Z,0.7nm,0.3s						
SOKA	Soboth	80.17	1	*e*P	P	10 43 55.2	+1.1
	comp=Z,4.2nm,1.0s						
OBKA	Obir	80.33	1	*e*P	P	10 43 55.7	+0.6
	comp=Z,6.4nm,0.7s						
KBZ	Khabaz	80.51	341	P	P	10 43 57.4	+1.5
	comp=Z,6.6nm,0.8s,baz=0.0,slow=8.1,SNR=3.6 comp=Z,2.6nm,0.8s						
ESDC	Sonseca Array	85.50	16	P	P	10 44 22.2	+0.2
	comp=Z,0.3nm,0.6s,baz=342,slow=4.2,SNR=2.0 comp=Z,0.3nm,0.6s						
BRTR	Keskin Array B	85.95	347	P	P	10 44 25.4	+1.1
	comp=Z,2.1nm,0.9s,baz=52,slow=3.0,SNR=6.4 comp=Z,2.1nm,0.9s						

*IDC **14** 10:37:59.7±0.8,19°92S×64°39W,h0km,mb3.9/6, mbtmp4.0/11,ML4.2/5,MS3.3/8,Error ellipse: s-maj=19.2km s-min=18.4km az=171.0*
*VAO **14** 10:38:02.1±0.2,19°87S×64°37W,h10km,mb4.1*
*NEIC **14** 10:38:05.4±2.3,19°87S±0°04×64°34W±0°07,h25km±6km, mb4.4/14,Error ellipse: s-maj=10.8km s-min=2.3km az=55.0*
*SCB **14** 10:38:08.4±0.9,19°91S×64°22W,h44km±5km,ML6.6/1, Error ellipse: s-maj=5.0km s-min=2.9km az=2.0*
ISC 14 10:38:02.4±0.4,**19°86S**±0°05×**64°35W**±0°04,**h10**km,**n105,** σ1**§13**/112,**mb4.4**/12,**MS3.3**/4,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	2.55	205	P	Pn	10 38 44.2	0.0
GO01	Chusmiza	4.56	272	Pn	Pn	10 39 12.2	+0.2
BBOE	La Paz, Chanca	4.59	311	P	Pn	10 39 14.3	+1.9
SIV	San Ignacio	4.95	40	Pn	Pn	10 39 17.3	+0.4
SIV	2.1nm,0.3s,baz=231,slow=7.4,SNR=207			Sn	Sn	10 40 15.2	+0.9
SIV	3.0nm,0.3s,baz=132,slow=22,SNR=12 40nm

BDFB	**Brasilia**	**16.11**	**78**	Pn		**Pn**	**10 41 47.9**	**-1.4**
	0.1nm,0.3s,baz=288,slow=23,SNR=1.9							
	1.4nm,0.6s							
BDFB	**Brasilia**	**16.11**	**78**	*e*P		**Pn**	**10 41 48.6**	**-0.7**
TER01	**Tubaro-SC**	**16.34**	**125**	*e*P		**Pn**	**10 41 51.7**	**-0.3**
PET01	**Itanhaem-SP**	**16.43**	**109**	*e*P		**Pn**	**10 41 52.6**	**-0.5**
VAO	**Valinhos**	**16.49**	**104**	*e*P		**Pn**	**10 41 53.6**	**-0.4**
PMNB	**Patos De Minas**	**16.97**	**89**	*e*P		**Pn**	**10 42 00.1**	**0.0**
MACA	**Manacapuru-AM**	**16.98**	**13**	*e*P		**Pn**	**10 41 59.8**	**-0.3**
ITTB	**Itaituba**	**17.54**	**30**	*e*P		**Pn**	**10 42 06.1**	**-1.1**
PRPB	**Parauapebas**	**19.61**	**48**	*e*P		**P**	**10 42 31.4**	**+0.3**
MALB	**Monte Alegre**	**20.43**	**30**	*e*P		Pn	10 42 41.5	-0.6
DUB01	**Friburgo-RJ**	**20.64**	**100**	*e*P		**P**	**10 42 42.2**	**-0.1**
PLCA	**Paso Flores**	**21.47**	**193**	P		**P**	**10 42 49.0**	**-2.2**
	5.5nm,0.7s,baz=18,slow=12,SNR=18							
PLCA				LR		LR	10 51 28.0	
	comp=Z,105nm,20.1s,baz=18,slow=38							
	5.5nm,0.7s							
PLCA	**Paso Flores**	**21.47**	**193**	P		**P**	**10 42 51.8**	**+0.7**
PLCA				IAmb		IAmb	10 42 53.8	
	comp=Z,8.2nm,0.8s							
PLCA	**Paso Flores**	**21.47**	**193**	*e*P		**P**	**10 42 49.0**	**-2.2**
SJMB	**Sao Joao De Ma**	**21.90**	**91**	*e*P		**P**	**10 42 55.4**	**-0.5**
BOAV	**Boa Vista**	**22.43**	**10**	*e*P		**P**	**10 43 01.4**	**-0.1**
RIB01	**Linhares ES**	**22.58**	**93**	*e*P		**P**	**10 43 02.9**	**-0.2**
MCPB	**Macapa, AP**	**22.82**	**33**	*e*P		**P**	**10 43 05.6**	**-0.1**
MCPB				*e*S		**S**	**10 47 16.7**	**+1.6**
NAN01	**Guarapari, ES**	**23.01**	**89**	*e*P		**P**	**10 43 07.6**	**-0.1**
GUA01	**Guaratinga, BA**	**23.54**	**86**	*e*P		**P**	**10 43 13.1**	**+0.1**
ROSC	**El Rosal**	**26.43**	**337**	LR		LR	10 53 18.1	
	comp=Z,114nm,21.4s,baz=240,slow=35							
NBAN	**Anadia - AL**	**28.93**	**74**	*e*P		**P**	**10 44 01.9**	**-0.1**
SDV	**Santo Domingo**	**29.23**	**347**	*e*P		**P**	**10 44 04.2**	**-0.6**
SJG	**San Juan**	**37.77**	**357**	LR		LR	11 01 45.6	
	comp=Z,40nm,18.6s,baz=185,slow=38							
BBTS	**Batate**	**58.21**	**58**	LR		LR	11 11 01.2	
	comp=Z,68nm,20.1s,baz=244,slow=34							
TXAR	**Lajitas Array**	**61.88**	**321**	P		**P**	**10 48 21.6**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=145,slow=9.6,SNR=1.8							
	comp=Z,0.1nm,0.4s							
SNAA	**Sanae**	**62.46**	**162**	P		**P**	**10 48 26.6**	**+1.0**
SNAA				IAmb		IAmb	10 48 41.6	
	comp=Z,4.9nm,1.3s							
SDCO	**Great Sand Dun**	**69.14**	**326**	P		**P**	**10 49 07.5**	**-1.8**
SDCO				IAmb		IAmb	10 49 12.2	
	comp=Z,4.6nm,1.4s							
QSPA	**South Pole Qui**	**70.33**	**180**	P		**P**	**10 49 15.9**	**-0.2**
PV07	**Paradox Valley**	**71.34**	**325**	P		**P**	**10 49 25.0**	**+2.3**
PV07				IAmb		IAmb	10 49 30.8	
	comp=Z,3.7nm,1.2s							
TOA0	**Torodi Ar. Sit**	**72.79**	**69**	P		**P**	**10 49 31.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**72.79**	**69**	P		**P**	**10 49 31.2**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=256,slow=5.8,SNR=14							
	comp=Z,2.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**72.79**	**69**	P		**P**	**10 49 31.5**	**-0.1**
TORD				IAmb		IAmb	10 49 33.8	
	comp=Z,3.0nm,0.8s							
PD31	**Pinedale Array**	**74.94**	**327**	P		**P**	**10 49 43.3**	**-0.6**
PDAR	**Pinedale Array**	**74.94**	**327**	P		**P**	**10 49 42.8**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=127,slow=8.2,SNR=7.8							
	comp=Z,0.4nm,0.5s							
PDAR	**Pinedale Array**	**74.94**	**327**	P		**P**	**10 49 43.1**	**-0.8**
BGU	**Big Grassy Mou**	**75.49**	**324**	P		**P**	**10 49 48.0**	**+0.9**
BGU				IAmb		IAmb	10 49 49.8	
	comp=Z,4.9nm,1.5s							
MOOW	**Moose Ponds**	**76.24**	**327**	P		**P**	**10 49 51.6**	**+0.3**
IMW	**Indian Meadow**	**76.45**	**327**	P		**P**	**10 49 52.5**	**-0.1**
IMW				IAmb		IAmb	10 49 56.5	
	comp=Z,3.3nm,0.7s							
RLMT	**Red Lodge**	**76.50**	**329**	P		**P**	**10 49 53.1**	**+0.3**
RLMT				IAmb		IAmb	10 49 55.9	
	comp=Z,5.0nm,1.1s							
YHL	**Hebgen Lake**	**77.25**	**328**	P		**P**	**10 49 58.4**	**+1.3**
MCMT	**McKenzie Canyo**	**78.08**	**327**	P		**P**	**10 50 02.1**	**+0.5**
ESDC	**Sonseca Array**	**81.71**	**43**	P		**P**	**10 50 21.8**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=235,slow=5.6,SNR=7.7							
	comp=Z,1.4nm,0.9s							
YKA	**Yellowknife Ar**	**91.13**	**339**	P		**P**	**10 51 05.6**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=120,slow=4.2,SNR=7.6							
	comp=Z,0.5nm,0.6s							
YKA	**Yellowknife Ar**	**91.13**	**339**	P		**P**	**10 51 07.2**	**+0.3**
ASAR	**Alice Springs**	**133.22**	**203**	PKP		**PKPdf**	**10 57 15.5**	**-3.9**
	comp=Z,0.4nm,1.0s,baz=148,slow=2.0,SNR=2.0							
WRA	**Warramunga Arr**	**136.41**	**206**	PKP		**PKPdf**	**10 57 23.6**	**-1.7**
	comp=Z,0.7nm,0.9s,baz=163,slow=1.6,SNR=2.0							
SONM	**Songino Array**	**151.10**	**13**	PKPbc		**PKPdf**	**10 57 52.9**	**+2.7**
	comp=Z,0.5nm,0.6s,baz=240,slow=1.2,SNR=2.1							

IDC ***14*** *10:42:12.5±3.1,30.54S×177.96W,h56km±22km,mb3.5/3, mbtmp3.8/4,ML3.5/1,MS3.2/1,Error ellipse: s-maj=52.0km s-min=19.1km az=109.0*

NEIC ***14*** *10:42:15.6±1.9,30.20S±0.09×178.2W±0.2,h57km±10km, mb4.3/10,Error ellipse: s-maj=27.5km s-min=5.2km az=117.0*

ISC 14 10:42:13.8±0.9,30.43S±0.09×178.1W±0.2,h46km,n21, σ1§64/22,mb4.2/8,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**1.19**	**9**	P		**Pn**	**10 42 33.3**	**-0.6**
RAO				S		**Sn**	**10 42 50.5**	**+1.5**
	633nm,0.3s,baz=94,slow=23,SNR=8.2							
RAO	**Raoul Island**	**1.19**	**9**	Pn		**Pn**	**10 42 33.5**	**-0.5**
OUZ	**Omahuta**	**8.45**	**233**	Pn		**Pn**	**10 44 15.8**	**+2.4**
URZ	**Urewera**	**8.74**	**205**	P		**Pn**	**10 44 15.7**	**-1.9**
	0.5nm,0.3s,baz=51,slow=7.3,SNR=2.7							
URZ				S		Sn	10 45 40.6	-14
	10.0nm,0.6s,baz=198,slow=22,SNR=7.8							
	9.4nm,0.9s							
DZM	**Mont Dzumac**	**16.14**	**297**	LR		LR	10 51 16.5	
	comp=Z,78nm,18.2s,baz=200,slow=33							
STKA	**Stephens Creek**	**34.37**	**257**	P		**P**	**10 48 56.0**	**-0.4**
	2.0nm,0.9s,baz=90,slow=10,SNR=3.8							
	2.0nm,0.9s							
STKA	**Stephens Creek**	**34.37**	**257**	P		**P**	**10 48 56.1**	**-0.3**
STKA				IAmb		IAmb	10 49 10.0	
	comp=Z,0.8nm,1.1s							
AS31	**Alice Springs**	**43.00**	**267**	P		**P**	**10 50 07.4**	**-1.5**
ASAR	**Alice Springs**	**43.00**	**267**	P		**P**	**10 50 07.1**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=105,slow=7.7,SNR=14							
ASAR				PcP		**PcP**	**10 51 56.3**	**-2.4**
	comp=Z,0.3nm,0.7s,baz=99,slow=5.7,SNR=2.3							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**43.00**	**267**	P		**P**	**10 50 08.2**	**-0.6**
WR0	**Warramunga Arr**	**43.81**	**272**	P		**P**	**10 50 15.1**	**-0.3**
WR0				IAmb		IAmb	10 50 48.4	
	comp=Z,6.7nm,1.3s							
WB2	**Warramunga Arr**	**43.98**	**272**	P		**P**	**10 50 15.2**	**-1.6**
WB2				IAmb		IAmb	10 50 45.7	
	comp=Z,16nm,1.5s							
WRA	**Warramunga Arr**	**43.99**	**272**	P		**P**	**10 50 15.5**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=112,slow=7.8,SNR=13							
	comp=Z,0.9nm,0.6s							
WRA	**Warramunga Arr**	**43.99**	**272**	P		**P**	**10 50 15.7**	**-1.1**
WB0	**Warramunga Arr**	**44.01**	**273**	P		**P**	**10 50 15.9**	**-1.1**
WB0				IAmb		IAmb	10 50 28.2	
	comp=Z,7.1nm,1.2s							
QSPA	**South Pole Qui**	**59.68**	**180**	P		**P**	**10 52 16.2**	**+3.0**
QSPA				IAmb		IAmb	10 52 32.1	
	comp=Z,8.4nm,1.3s							
SNAA	**Sanae**	**78.13**	**178**	P		**P**	**10 54 08.5**	**+0.9**
SNAA				IAmb		IAmb	10 54 34.0	
	comp=Z,6.0nm,1.5s							
KS19	**Wonju Array Si**	**84.36**	**320**	P		**P**	**10 54 42.0**	**+1.0**
USA0B	**Ussuriysk Arra**	**87.13**	**327**	P		**P**	**10 54 54.6**	**+0.1**
USRK	**Ussuriysk Ar.**	**87.13**	**327**	P		**P**	**10 54 55.9**	**+1.4**
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc		**PKPbc**	**11 01 42.2**	**-2.8**
	comp=Z,1.0nm,0.4s,baz=50,slow=3.8,SNR=17							

IDC 14 10:48:29.1±2.3,17.34S×176.56W,h624km±27km, mb2.7/5,mbtmp3.7/6,Error ellipse: s-maj=29.0km s-min=25.0km az=127.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.15**	**265**	P		P	10 50 04.7	-0.1
	22nm,0.6s,baz=146,slow=3.1,SNR=25							
WRA	**Warramunga Arr**	**46.47**	**259**	P		P	10 56 02.2	-0.1
	0.4nm,0.4s,baz=95,slow=7.0,SNR=18							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**46.64**	**254**	P		P	10 56 03.7	+0.1
	0.5nm,0.4s,baz=89,slow=8.3,SNR=22							
	0.5nm,0.4s							
VNDA	**Vanda**	**61.16**	**185**	P		P	10 57 44.4	+0.1
	0.6nm,0.4s,baz=7.2,slow=6.0,SNR=13							
	0.6nm,0.4s							
ILAR	**Eielson Array**	**84.95**	**12**	P		P	10 59 59.2	-0.3
	0.3nm,0.7s,baz=189,slow=5.4,SNR=5.5							
	0.3nm,0.7s							
PDAR	**Pinedale Array**	**85.74**	**43**	P		P	11 00 04.5	+0.4
	0.2nm,0.7s,baz=230,slow=4.1,SNR=2.6							
	0.2nm,0.7s							

SKHL ***14*** *11:15:11.6±0.3,50.30N×142.50E,h10km±2km,mb6.0/22*
BJI ***14*** *11:15:11.5±0.0,50.60N×142.30E,h10km,mb5.4/80, mB5.9/75,ML6.3/2,Ms6.3/95,Ms7 6.4/87*
IDC ***14*** *11:15:12.6±0.3,50.42N×142.38E,h0km,mb5.4/32, mbtmp5.4/41,ML4.6/8,MS5.2/83,Error ellipse: s-maj=9.5km s-min=8.9km az=134.0*
MOS ***14*** *11:15:12.3±0.9,50.38N×142.36E,h9km,mb5.8/96, MS5.6/69,Error ellipse: s-maj=5.6km s-min=3.4km az=99.3*
MOS Felt (V-VI) at Onor, (V) at Pil'vo, Yasnoye, (IV-V) at Palevo, Beloye, Voskhod, (IV) at Zonal'noye, Kirovskoye, Belorech'ye, Krasnaya Tym', Due, Podgornoye, Aleksandrovsk-Sakhalinskiy, Pobedino, Arkovo, Smirnykh, Pervomayskoye, Boshnyakovo, Buyukly, Lesogorsk, Poronaysk, Uglegorsk, (III-IV) at Tymovskoye, Voskresenovka, Tel'novskiy, Gastello, Ol'khovka, Nikol'skoye, Vostok, Krasnopol'ye, (III) at Ado-Tymovo, Argi-Pagi, Shakhtyorsk, Nysh, Medvezh'ye, Porech'ye, Ol'shanka, Makarov, Mongokhto, (II) at Komrvo, Nogliki, Vostochnyy.
NEIC ***14*** *11:15:14.1,50.43N×142.31E,h5km,Moment Tension Solution. Moment tensor: Scale 10¹⁷Nm; Mrr3.94; Mθθ-0.82; Mϕϕ-3.12; Mrθ1.69; Mθϕ1.66; Mϕr-1.77; Fault plane solution: Mo4.66000×10¹⁷ NP1:φs144.05000°, δ60.86000°,λ81.85000°. NP2:φs340.44000°,δ30.16000°, λ104.27000°. Principal axes: T 4.6796, Plg73.0000°, Azm34.0000°; N -0.0356, Plg7.0000°, Azm148.0000°; P -4.6439, Plg15.0000°, Azm240.0000°;*
NEIC ***14*** *11:15:15.0±1.7,50.47N±0.06×142.3E±0.1,h11km±1km, mb5.8/273,Ms_20 5.4/337,Mwb5.7/52,Mww5.7 Error ellipse: s-maj=12.2km s-min=9.7km az=299.0*
GCMT ***14*** *11:15:17.0±0.1,50.45N±0.01×142.30E±0.01,h12km, MW5.8/168,Moment Tensor Solution. s152,c313; s168,c375; Duration: 1s9 Moment tensor: Scale 10¹⁷ Nm; Mrr4.28±.04; Mθθ-0.50±.03; Mϕϕ-3.78±.04; Mrθ0.63±.08; Mθϕ2.01±.03; Mϕr-3.22±.11; Best double couple: Mo5.58100×10¹⁷ NP1:φs163.00000°,δ63.00000°, λ99.00000°. NP2:φs325.00000°,δ28.00000°,λ73.00000°. Principal axes: T 5.4090, Plg71.0000°, Azm92.0000°; N 0.3430, Plg8.0000°, Azm339.0000°; P -5.7530, Plg18.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***14*** *11:15:20.50.33N×142.41E,h12km,Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10¹⁷Nm; Mrr4.12; Mθθ-0.51; Mϕϕ-3.61; Mrθ1.29; Mθϕ1.96; Mϕr-0.92; Fault plane solution: Mo4.64000×10¹⁷ NP1: φs345.00000°,δ37.00000°,λ107.00000°. NP2: φs144.00000°,δ55.00000°,λ77.00000°. Principal axes: T 4.4794, Plg76.0000°, Azm14.0000°; N 0.3014, Plg10.0000°, Azm151.0000°; P -4.7807, Plg9.0000°, Azm243.0000°;*

ISC 14 11:15:14.5±0.3,50.38N±0.02×142.36E±0.02,h13km±1km, h13km:pP-P,n1988,σ1§50/2293,mb5.7/370,MS5.4/307, 111C-53D,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TYV	**Tymovskoe**	**0.52**	**21**	*e*PN		**Pb**	**11 15 24.4**	**-1.1**
TYV				*e*S		**Sb**	**11 15 31.2**	**-1.7**
TYV				pmax		pmax		
	comp=Z,38μm,1.3s							
TYV				pmax		pmax		
	comp=Z,16μm,0.6s							
TYV				smax		smax		
	comp=N,69μm,0.5s							
TYV				smax		smax		
	comp=E,121μm,0.5s							
TYV				smax		smax		
	comp=N,140μm,1.6s							
TYV				smax		smax		
	comp=E,105μm,1.6s							
TYV	**Tymovskoe**	**0.52**	**21**	*e*Pg		**Pb**	**11 15 23.3**	**-2.2**
TYV				AMB		AMB	11 15 26.3	
	comp=E,38μm,1.0s							
TYV				AMB		AMB	11 15 26.4	
	comp=E,27μm,0.8s							
TYV				*e*Sg		**Sb**	**11 15 31.3**	**-1.7**
TYV				A		A	11 15 31.4	
	comp=E,69μm,0.6s							
TYV				A		A	11 15 31.4	
	comp=E,121μm,0.6s							
TYV				A		A	11 15 31.7	
	comp=E,555μm,3.0s							
TYV				A		A	11 15 31.7	
	comp=E,630μm,3.0s							
UGL	**Uglegorsk**	**1.31**	**189**	*i*PN		**Pg**	**11 15 36.8**	**-3.0**
UGL				*e*S		**Sn**	**11 15 55.7**	**-0.1**
UGL				pmax		pmax		
	comp=Z,47μm,0.7s							
UGL				smax		smax		
	comp=E,242μm,0.6s							
UGL				smax		smax		
	comp=N,200μm,0.6s							
UGL	**Uglegorsk**	**1.31**	**189**	*e*Pg		**Pg**	**11 15 36.8**	**-3.0**
UGL				AMB		AMB	11 15 39.5	
	comp=N,101μm,2.0s							
UGL				AMB		AMB	11 15 39.6	
	comp=N,47μm,0.7s							
UGL				*e*Sg		**Sn**	**11 15 54.7**	**-1.1**
UGL				A		A	11 15 57.7	
	comp=N,581μm,3.0s							
UGL				A		A	11 15 57.7	
	comp=N,671μm,3.0s							
UGL				A		A	11 15 58.7	
	comp=N,200μm,0.6s							
UGL				A		A	11 15 58.7	
	comp=N,216μm,0.6s							
NKL	**Nikolayevsk**	**2.97**	**340**	*e*PN		**Pn**	**11 16 00.0**	**-1.2**
NKL				*e*S		**Sn**	**11 16 36.9**	**+0.3**
NKL				pmax		pmax		
	comp=E,13nm,1.2s							
NKL				pmax		pmax		
	comp=N,15nm,1.0s							
NKL				pmax		pmax		
	comp=Z,20nm,0.9s							
NKL				smax		smax		
	comp=E,10μm,1.3s							
NKL				smax		smax		
	comp=N,12μm,1.1s							
OKH	**Okha**	**3.20**	**6**	*i*PN		**Pn**	**11 16 04.5**	**+0.1**
OKH				pmax		pmax		
	comp=Z,2μm,0.5s							
OKH	**Okha**	**3.20**	**6**	*e*P		**Pn**	**11 16 04.4**	**+0.1**
OKH				AMB		AMB	11 16 05.9	
	comp=Z,2μm,0.5s							
OKH				*i* S		**Sn**	**11 16 42.5**	**+0.2**
OKH				A		A	11 16 47.3	
	comp=Z,11μm,0.8s							
OKH				A		A	11 16 47.3	
	comp=Z,17μm,0.8s							
KHLM	**Kholmsk**	**3.33**	**184**	*e*P		**Pn**	**11 16 03.2**	**-3.0**
KHLM				*e*Pg		**Pg**	**11 16 15.6**	**-2.7**
KHLM				AMB		AMB	11 16 17.7	
	comp=Z,3μm,0.7s							
KHLM				*e*Sg		**Sg**	**11 17 01.5**	**+0.1**
KHLM				A		A	11 17 06.1	
	comp=Z,11μm,0.8s							
KHLM				A		A	11 17 06.1	
	comp=Z,13μm,0.8s							
YSS	**Yuzh-Sakhalins**	**3.44**	**176**	Pn		**Pn**	**11 16 07.1**	**-0.6**
YSS	**Yuzh-Sakhalins**	**3.44**	**176**	*e*PN		**Pn**	**11 16 07.1**	**-0.6**
YSS				*e*			11 16 57.8	
YSS				pmax		pmax		
	comp=Z,5μm,0.8s							
YSS				smax		smax		
	comp=N,14μm,1.1s							
YSS				MLR		MLR		
	comp=Z,160μm,13.0s							
YSS	**Yuzh-Sakhalins**	**3.44**	**176**	P		Pn	11 16 08.9	+1.2
YSS	**Yuzh-Sakhalins**	**3.44**	**176**	*e*P		**Pn**	**11 16 06.4**	**-1.3**
YSS				*e*Pg		**Pg**	**11 16 17.3**	**-3.0**
YSS				AMB		AMB	11 16 18.8	
	comp=Z,23μm,2.0s							
YSS				AMB		AMB	11 16 20.0	
	comp=Z,5μm,0.8s							
YSS				*e*Sg		**Sg**	**11 17 04.6**	**-0.2**
YSS				A		A	11 17 05.4	
	comp=Z,10μm,0.7s							
YSS				A		A	11 17 05.4	
	comp=Z,66μm,0.7s							
YSS				A		A	11 17 06.4	
	comp=Z,94μm,5.0s							
YSS				A		A	11 17 06.4	
	comp=Z,83μm,5.0s							
YSS				AMS		AMS	11 17 40.0	
	comp=Z,160μm,13.0s							
GRNR	**Gornyy**	**3.81**	**278**	*i*PN		**Pn**	**11 16 11.9**	**-0.9**
GRNR				pmax		pmax		
	comp=E,50nm,0.5s							
GRNR				pmax		pmax		
	comp=N,10.0nm,0.2s							
GRNR				pmax		pmax		
	comp=Z,50nm,0.5s							
GRNR				MLR		MLR		
	comp=E,100μm,13.0s							
GRNR				MLR		MLR		
	comp=N,103μm,16.0s							
GRNR				MLR		MLR		
	comp=Z,34μm,10.0s							
GRNR	**Gornyy**	**3.81**	**278**	*e*P		**Pn**	**11 16 11.9**	**-0.9**
GRNR				AMB		AMB	11 16 13.0	
	comp=Z,50nm,0.5s							
GRNR				*e*S		**Sn**	**11 16 56.9**	**-0.5**
GRNR				A		A	11 16 57.9	
	comp=Z,1μm,0.4s							
KUR	**Kuril'sk**	**6.34**	**142**	*e*PN		**Pn**	**11 16 46.2**	**-1.4**
KUR				pmax		pmax		
	comp=Z,4μm,9.9s							
KUR				pmax		pmax		
	comp=Z,820nm,0.7s							
KUR				pmax		pmax		
	comp=E,148nm,0.6s							
KUR				pmax		pmax		
	comp=N,145nm,0.9s							
KUR				MLR		MLR		
	comp=Z,73μm,13.0s							
KUR	**Kuril'sk**	**6.34**	**142**	*e*P		**Pn**	**11 16 46.4**	**-1.2**
KUR				AMB		AMB	11 16 49.3	
	comp=Z,1μm,0.7s							
KUR				A		A	11 17 00.8	
	comp=Z,700nm,0.7s							
KUR				A		A	11 17 00.8	
	comp=Z,310nm,0.7s							
KUR				AMS		AMS	11 17 24.4	
	comp=Z,73μm,1.0s							
KUR				*e*S		**Sn**	**11 17 56.5**	**-3.3**
RUSJ	**Misakicho**	**6.57**	**162**	*e*PN		**Pn**	**11 16 49.6**	**-1.2**
TEY	**Ternei**	**6.61**	**218**	*e*PN		**Pn**	**11 16 51.4**	**+0.2**
TEY				pmax		pmax		
	comp=N,30nm,0.5s							
TEY				pmax		pmax		
	comp=E,30nm,0.5s							
TEY				pmax		pmax		
	comp=Z,40nm,0.5s							
TEY				MLR		MLR		
	comp=E,35μm,7.0s							
TEY				MLR		MLR		
	comp=N,40μm,12.0s							
TEY				MLR		MLR		
	comp=Z,51μm,10.0s							
TEY	**Ternei**	**6.61**	**218**	*e*P		**Pn**	**11 16 51.4**	**+0.2**
TEY				AMB		AMB	11 16 51.9	
	comp=Z,40nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**6.78**	**158**	*c i*PN		**Pn**	**11 16 53.1**	**-0.4**
YUK				pmax		pmax		
	comp=N,472nm,0.5s							
YUK				pmax		pmax		
	comp=E,141nm,0.6s							
YUK				pmax		pmax		
	comp=Z,897nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**6.78**	**158**	*e*P		**Pn**	**11 16 53.4**	**-0.1**
YUK				AMB		AMB	11 16 55.4	
	comp=Z,1μm,0.5s							
YUK				*e*S		**Sn**	**11 18 08.1**	**-2.4**
YUK				AMS		AMS	11 18 23.4	
	comp=Z,5μm,10.0s							
KLR	**Kul'dur**	**6.96**	**265**	Pn		**Pn**	**11 16 56.2**	**+0.1**
	comp=Z,14nm,0.3s,baz=72,slow=13,SNR=132							
KLR				Pg		Pg	11 17 20.6	-7.2
	comp=Z,40nm,0.3s,baz=75,slow=16,SNR=6.3							
KLR				Lg		Lg	11 18 55.3	
	comp=Z,82nm,0.3s,baz=336,slow=20,SNR=5.2							
	comp=Z,55nm,0.3s							
KLR	**Kul'dur**	**6.96**	**265**	*ce*PN		**Pn**	**11 16 56.5**	**+0.3**
KLR				pmax		pmax		
	comp=Z,187nm,1.0s							
KLR				MLR		MLR		
	comp=Z,121μm,10.0s							
KLR	**Kul'dur**	**6.96**	**265**	*e*P		**Pn**	**11 16 56.8**	**+0.6**
SHO	**Shikotan**	**7.18**	**153**	*c i*PN		**Pn**	**11 16 57.7**	**-1.5**
SHO				pmax		pmax		
	comp=N,512nm,0.5s							
SHO				pmax		pmax		
	comp=E,540nm,0.5s							
SHO				pmax		pmax		
	comp=Z,1μm,0.5s							
SHO	**Shikotan**	**7.18**	**153**	*e*P		**Pn**	**11 16 58.3**	**-0.9**
SHO				AMB		AMB	11 17 01.4	
	comp=Z,2μm,0.6s							
SHO				*e*S		**Sn**	**11 18 18.8**	**-1.8**
SHO				AMS		AMS	11 18 21.2	
	comp=Z,4μm,9.0s							
SHO				A		A	11 18 23.5	
	comp=Z,2μm,0.7s							
SHO				A		A	11 18 23.5	
	comp=Z,4μm,0.7s							
NMR	**Nemuro--Hokkai**	**7.38**	**161**	*i*PN		**Pn**	**11 17 01.5**	**-0.3**
NMR	**Nemuro--Hokkai**	**7.38**	**161**	*e*P		**Pn**	**11 17 01.6**	**-0.3**
AKK	**Akkeshi**	**7.56**	**166**	*e*P		**Pn**	**11 17 04.8**	**+0.5**
ERM	**Erimo**	**8.38**	**176**	Pn		Pn	11 17 19.1	+3.6
ERM	**Erimo**	**8.38**	**176**	*ce*PN		Pn	11 17 19.1	+3.5
ERM				pmax		pmax		
	comp=Z,616nm,1.0s							
ERM	**Erimo**	**8.38**	**176**	P		Pn	11 17 19.8	+4.2
SKR	**Severo-Kuril's**	**8.77**	**83**	*e*PN		**Pn**	**11 17 18.6**	**-2.3**
SKR				*e*S		Sn	11 19 07.7	+8.2
SKR				pmax		pmax		
	comp=Z,1μm,12.0s							
SKR				pmax		pmax		
	comp=Z,51nm,1.0s							
SKR				MLR		MLR		
	comp=Z,42μm,12.0s							
SKR	**Severo-Kuril's**	**8.77**	**83**	*e*P		**Pn**	**11 17 20.9**	**0.0**
**PAU

comp=Z,17µm,18.2s,baz=201,slow=40
comp=Z,16nm,0.5s
PETK Petropavlovsk- 9.90 68 Pn **Pn 11 17 37.4 +1.0**
PETK Petropavlovsk- 9.90 68 PN **Pn 11 17 37.4 +1.0**
KROS Kirovskiy 10.24 299 *e*P Pn 11 17 45.2 +4.2
MDJ Mudanjiang 10.38 241 **Pn 11 17 43.7 +0.8**
MDJ Mudanjiang 10.38 241 P **Pn 11 17 41.3 -1.7**
MDJ S **Sn 11 19 40.4 +1.3**
MDJ SS **SnSn 11 19 51.4 +1.0**
MDJ pmax pmax
comp=Z,90nm,1.1s
MDJ pmax pmax
comp=Z,3µm,9.0s
MDJ LR LR
comp=Z,97µm,10.2s
MDJ LR LR
comp=Z,86µm,10.7s
MDJ LR LR
comp=Z,160µm,11.1s
MDJ Mudanjiang 10.38 241 P **Pn 11 17 45.3 +2.3**
MA2 Magadan 10.40 24 Pn **Pn 11 17 42.5 -0.6**
comp=Z,4.3nm,0.3s,baz=199,slow=11,SNR=19
MA2 LR LR 11 22 19.6
comp=Z,16µm,18.5s,baz=230,slow=41
MA2 Magadan 10.40 24*ce*PN **Pn 11 17 42.6 -0.6**
MA2 pmax pmax
comp=Z,347nm,1.7s
MA2 MLR MLR
comp=Z,41µm,13.0s
MA2 Magadan 10.40 24 P Pn 11 17 46.3 +3.2
PET Petropavlovsk 10.45 69 Pn 11 17 46.5 +2.6
PET Petropavlovsk 10.45 69 *e*PN Pn 11 17 46.5 +2.6
PET pmax pmax
comp=Z,3µm,9.5s
PET pmax pmax
comp=Z,119nm,0.6s
PET pmax pmax
comp=Z,2µm,13.6s
PET MLR MLR
comp=Z,67µm,12.0s
PET MLR MLR
comp=Z,78µm,12.0s
PET Petropavlovsk 10.45 69 P Pn 11 17 46.4 +2.5
PET Petropavlovsk 10.45 69 *e*P **Pn 11 17 45.0 +1.1**
MSHR Mys Shultsa 10.97 229*d i*PN **Pn 11 17 51.4 +0.4**
MSHR pmax pmax
comp=Z,37nm,0.8s
MSHR MLR MLR
comp=Z,45µm,11.0s
BNX BinXian 11.03 251 ⇓P **Pn 11 17 53.8 +2.0**
JMM Marumori 12.56 186 Pn **Pn 11 18 12.4 -0.4**
JSD Sado 12.68 195 Pn 11 18 16.0 +1.6
CN2 Changchun 13.25 247 *e*P **Pn 11 18 22.5 +0.3**
CN2 PP **P 11 18 33.1 +1.0**
CN2 S **Sn 11 20 49.8 +0.4**
CN2 sS sSn 11 20 56.8 +2.4
CN2 pmax pmax
comp=Z,210nm,1.1s
CN2 pmax pmax
comp=Z,3µm,10.0s
CN2 LR LR
comp=Z,90µm,11.0s
CN2 LR LR
comp=Z,41µm,11.0s
CN2 LR LR
comp=Z,98µm,11.0s
YAK Yakutsk 13.61 334 Pn **Pn 11 18 26.8 -0.2**
comp=Z,0.2nm,0.3s,baz=334,slow=4.5,SNR=35
YAK Lg Lg 11 22 23.8
comp=Z,0.1nm,0.3s,baz=60,slow=23,SNR=9.3
YAK LR LR 11 24 31.4
comp=Z,3µm,18.7s,baz=142,slow=41
comp=Z,77nm,0.8s
YAK Yakutsk 13.61 334 Pn **Pn 11 18 26.6 -0.4**
YAK Yakutsk 13.61 334*d i*P **Pn 11 18 27.6 +0.6**
YAK *e*S **Sn 11 20 59.9 +2.0**
YAK pmax pmax
comp=Z,207nm,1.1s
YAK pmax pmax
comp=N,74nm,1.2s
YAK pmax pmax
comp=E,39nm,1.3s
YAK pmax pmax
comp=Z,348nm,1.1s
YAK pmax pmax
comp=N,207nm,1.1s
YAK pmax pmax
comp=E,120nm,1.1s
YAK smax smax
comp=N,152nm,1.9s
YAK smax smax
comp=E,121nm,1.5s
YAK MLR MLR
comp=Z,12µm,17.0s
YAK MLR MLR
comp=E,6µm,15.0s
YAK Yakutsk 13.61 334 *e*P **Pn 11 18 27.6 +0.6**
SEY Seymchan 13.71 20 Pn **Pn 11 18 29.8 +1.4**
comp=E,1.0nm,0.3s,baz=197,slow=8.2,SNR=24
SEY LR LR 11 24 28.2
comp=E,20µm,18.3s,baz=198,slow=41
comp=E,28nm,1.0s
SEY Seymchan 13.71 20*ce*P **Pn 11 18 29.5 +1.1**
SEY pmax pmax
comp=Z,186nm,2.5s
SEY MLR MLR
comp=Z,29µm,14.0s
SEY Seymchan 13.71 20 *e*P **Pn 11 18 29.5 +1.1**
MAJO Matsushiro 14.15 194 Pn **Pn 11 18 34.0 -0.5**
MAJO Matsushiro 14.15 194 P **Pn 11 18 34.0 -0.5**
MJAR Matsushiro Arr 14.15 194 Pn **Pn 11 18 34.2 -0.3**
comp=Z,33nm,0.8s,baz=1.0,slow=15,SNR=18
MJAR LR LR 11 23 48.8
comp=Z,11µm,19.6s,baz=18,slow=36
HIA Hailar 14.64 274 Pn **Pn 11 18 42.0 +0.9**
HIA Hailar 14.64 274 P **Pn 11 18 42.0 +0.9**
HHU Hamhung 14.76 231 P **P 11 18 47.3 -1.4**
HHU pP Pn 11 18 50.2 +7.4
HHU S **S 11 21 41.6 -3.1**
HHU AMS AMS
comp=N,64µm,6.5s
HHU AMS AMS
comp=E,68µm,6.8s
HHU AMS AMS
comp=Z,68µm,6.9s
JGF Kuroka 15.21 196 **P 11 18 50.2 -3.7**
INU Inuyama 15.52 197 Pn **Pn 11 18 50.6 -2.3**
INU IAmb IAmb 11 19 02.1
comp=Z,356nm,0.8s
SNY Shenyang 15.55 244 ⇓P **P 11 18 54.8 -2.8**
SNY pmax pmax
comp=Z,95nm,1.1s
SNY pmax pmax
comp=Z,2µm,3.5s
SNY LR LR
comp=Z,55µm,9.2s
SNY LR LR
comp=Z,69µm,10.2s
SNY LR LR
comp=Z,79µm,14.7s
SEHB SEOHWA 15.73 225 **P 11 18 58.0 -1.6**
SUJ Sinuiju 16.20 238 P **P 11 19 05.4 +0.6**
SUJ pP **sP 11 19 08.6 -1.8**
SUJ S **S 11 22 17.3 +3.1**
SUJ AMS AMS
comp=N,48µm,7.2s
SUJ AMS AMS
comp=E,57µm,8.4s
SUJ AMS AMS
comp=Z,45µm,6.6s
PYAG Pyongyang 16.31 232 P **P 11 19 07.0 +1.0**
PYAG pP **sP 11 19 09.3 -2.4**
PYAG S **S 11 22 21.4 +5.0**
PYAG AMS AMS
comp=N,40µm,1.9s
PYAG AMS AMS
comp=E,201µm,9.7s
PYAG AMS AMS
comp=Z,220µm,10.6s
KS19 Wonju Array Si 16.53 224 P **P 11 19 08.9 +0.4**
KSRS Korea Array 16.55 224 Pn **P 11 19 08.8 +0.1**
comp=Z,1.3nm,0.3s,baz=38,slow=11,SNR=93
KSRS PcP **PcP 11 23 56.2 -0.3**
comp=Z,6.5nm,0.9s,baz=284,slow=1.4,SNR=5.5
KSRS LR LR 11 25 09.5
comp=Z,18µm,19.7s,baz=35,slow=36
comp=Z,71nm,0.9s
KSAR Wonju Array Be 16.57 224 P **P 11 19 07.8 -1.1**
KSAR Wonju Array Be 16.57 224 P **P 11 19 07.8 -1.1**
JHS Saijyo 16.78 207 P **P 11 19 10.4 -0.9**
KSCHJ Chungju 17.01 223 P **P 11 19 13.5 -0.2**
HJU Haeju 17.11 230 P **P 11 19 16.9 +2.1**
HJU pP **sP 11 19 20.1 -0.4**
HJU S **S 11 22 37.6 +5.0**
HJU AMS AMS
comp=N,126µm,13.6s
HJU AMS AMS
comp=E,64µm,6.9s
HJU AMS AMS
comp=Z,85µm,9.2s
INCN Inchon 17.11 227 P **P 11 19 16.0 +1.0**
INCN IAmb IAmb 11 19 21.8
comp=Z,1µm,1.8s
INCN Inchon 17.11 227 P **P 11 19 16.0 +1.0**
INCN pmax pmax
comp=Z,1µm,1.8s
INCN Inchon 17.11 227 P **P 11 19 16.1 +1.1**
INCN Inchon 17.11 227 P **P 11 19 17.4 +2.4**
JHJ Hachijo jima 2 17.35 187 P **P 11 19 16.6 -1.0**
comp=Z,31nm,0.3s,baz=156,slow=17,SNR=8.0
JHJ LR LR 11 26 18.2
comp=Z,7µm,18.3s,baz=32,slow=38
comp=Z,367nm,0.8s
JHJ2 Mitsune 17.35 187 **P 11 19 16.3 -1.3**
JHJ2 Mitsune 17.35 187 P **P 11 19 20.4 +2.8**
TJN Taejon 17.69 223 **P 11 19 21.8 +0.5**
TJN IAmb IAmb 11 19 29.0
comp=Z,982nm,1.1s
TJN Taejon 17.69 223*ce*P **P 11 19 21.8 +0.5**
TJN Taejon 17.69 223 P **P 11 19 22.7 +1.4**
JMN Monobe 17.77 204 P **P 11 19 21.6 -0.7**
KSBUS Busan 17.93 218 P **P 11 19 25.7 +1.8**
KSBUS IAmb IAmb 11 19 31.8
comp=Z,402nm,1.3s
BOD Bodaibo 18.12 305 *e*P **P 11 19 25.1 -0.8**
BOD pmax pmax
comp=Z,125nm,1.6s
JTU Tsushima 18.46 216 P **Pn 11 19 30.4 +0.5**
JTU IAmb IAmb 11 19 36.1
comp=Z,812nm,1.4s
NAWB Namwon 18.48 222 P **Pn 11 19 31.1 +1.0**
DL2 Dalian 18.62 240 P **Pn 11 19 33.3 +1.5**
DL2 S **S 11 23 04.9 +1.6**
DL2 pmax pmax
comp=Z,310nm,0.8s
DL2 pmax pmax
comp=Z,5µm,7.7s
DL2 LR LR
comp=Z,51µm,5.9s
DL2 LR LR
comp=Z,40µm,6.9s
DL2 LR LR
comp=Z,50µm,9.6s
XLT XiLinHaoTe 18.96 260⇑ *i*P **Pn 11 19 37.0 +1.0**
XLT pP sP 11 19 42.0 +1.1
XLT sP pP 11 19 43.6 +4.5
XLT PP **PnPn 11 19 51.5 +3.3**
XLT PcP PcP 11 24 06.3 +5.8
XLT pmax pmax
comp=Z,170nm,1.5s
XLT pmax pmax
comp=Z,9µm,7.5s
XLT LR LR
comp=Z,100µm,11.4s
XLT LR LR
comp=Z,102µm,10.1s
SHEM Shemya Is, Ala 19.79 71 P **Pn 11 19 44.3 -1.5**
comp=Z,7.3nm,0.3s,baz=333,slow=4.3,SNR=14
SHEM LR LR 11 27 15.8
comp=Z,7µm,20.3s,baz=288,slow=37
comp=Z,206nm,1.0s
SMY Shemya 19.79 71 P **Pn 11 19 45.6 -0.2**
SMY IAmb IAmb 11 19 53.3
comp=Z,610nm,1.0s
SMY Shemya 19.79 71 P **Pn 11 19 45.6 -0.2**
SMY pmax pmax
comp=Z,610nm,1.0s
JSU Suzuyama 20.84 210 P Pn 11 19 57.6 -0.7
BJI Beijing 21.04 251 P **P 11 19 58.3 +0.4**
BJI pP **sP 11 20 02.6 -1.0**
BJI sP **pP 11 20 04.6 +2.8**
BJI PP **PnPn 11 20 21.5 +4.8**
BJI SS **SnSn 11 24 18.8 +6.1**
BJI pmax pmax
comp=Z,41nm,1.5s
BJI pmax pmax
comp=Z,1µm,4.3s
BJI LR LR
comp=Z,6µm,11.0s
BJI LR LR
comp=Z,38µm,10.4s
BJI LR LR
comp=Z,53µm,10.7s
BILL Bilibino 21.27 25 P **P 11 20 00.6 +0.5**
BILL IAmb IAmb 11 20 12.7
comp=Z,440nm,1.1s
BILL IAMs_20 IAMs_20 11 29 03.0
comp=Z,11µm,18.0s
BILL Bilibino 21.27 25*d i*P **P 11 20 00.6 +0.5**
BILL *e* 11 20 18.7
BILL *i* S Sn 11 24 07.5 +4.4
BILL pmax pmax
comp=Z,204nm,1.0s
BILL MLR MLR
comp=Z,9µm,13.0s
BILL Bilibino 21.27 25 *e*P **P 11 20 00.6 +0.5**
TIXI Tiksi 22.21 349 P **P 11 20 10.6 +0.4**
comp=Z,64nm,0.7s,baz=94,slow=23,SNR=14
TIXI Lg Lg 11 26 57.5
comp=Z,34nm,0.3s,baz=90,slow=20,SNR=1.5
TIXI LR LR 11 29 18.7
comp=Z,3µm,21.2s,baz=181,slow=38
comp=Z,64nm,0.7s
TIXI Tiksi 22.21 349*ce*P **P 11 20 08.8 -1.4**
TIXI pmax pmax
comp=Z,245nm,1.7s
TIXI MLR MLR
comp=Z,4µm,13.0s
TIA Tai'an 23.05 242 ⇑P **P 11 20 18.4 -1.0**
TIA pP sP 11 20 30.8 +5.8
TIA S **S 11 24 27.0 -2.7**
TIA pmax pmax
comp=Z,68nm,1.0s
TIA pmax pmax
comp=Z,3µm,7.8s
TIA LR LR
comp=Z,17µm,13.1s
TIA LR LR
comp=Z,21µm,10.7s
TIA LR LR
comp=Z,30µm,11.2s
ULN Ulaanbaatar 23.11 278 P **P 11 20 19.9 -0.3**
ULN IAmb IAmb 11 20 27.3
comp=Z,310nm,1.3s
ULN Ulaanbaatar 23.11 278*de*P **P 11 20 19.6 -0.5**
ULN pmax pmax
comp=Z,123nm,1.3s
ULN Ulaanbaatar 23.11 278 P **P 11 20 20.7 +0.5**
ULN P **P 11 20 20.7 +0.5**
ULN Ulaanbaatar 23.11 278 *e*P **P 11 20 19.6 -0.5**
AMKA Amchitka 23.18 73 P **P 11 20 20.7 +0.1**
JCJ Chichijima 23.25 180 P **P 11 20 22.0 +0.6**
comp=Z,130nm,0.8s,baz=313,slow=16,SNR=5.4
comp=Z,130nm,0.8s
HHC Hu-ho-hao-te 23.41 258 ⇓P **P 11 20 24.3 +1.2**
HHC S **S 11 24 29.8 -6.1**
HHC sS sS 11 24 42.3 -0.4
HHC pmax pmax
comp=Z,130nm,1.3s
HHC pmax pmax
comp=Z,5µm,5.6s
HHC LR LR
comp=Z,68µm,9.2s
HHC LR LR
comp=Z,63µm,9.3s
HHC LR LR
comp=Z,90µm,10.3s
SONM Songino Array 23.54 278 P **P 11 20 24.5 +0.1**
comp=Z,49nm,1.0s,baz=72,slow=8.0,SNR=51
SONM PcP **PcP 11 24 09.8 +0.4**
comp=Z,9.3nm,1.1s,baz=12,slow=2.4,SNR=2.8
SONM Lg Lg 11 27 40.4
SONM LR LR 11 30 52.6
comp=Z,12µm,19.5s,baz=72,slow=40
comp=Z,49nm,1.0s
SONM Songino Array 23.54 278 P **P 11 20 24.4 0.0**
HNS HongShan 23.62 247 ⇓P **P 11 20 25.0 -0.1**
HNS S **S 11 24 36.8 -2.3**
HNS pmax pmax
comp=Z,98nm,1.0s
HNS pmax pmax
comp=Z,4µm,8.6s
HNS LR LR
comp=Z,53µm,12.2s
HNS LR LR
comp=Z,17µm,14.3s
HNS LR LR
comp=Z,58µm,12.5s
IRK Irkutsk 23.71 289 *e*P **P 11 20 25.9 +0.1**
IRK pmax pmax
comp=Z,455nm,2.2s
BTO Baotou 24.51 259 *e*P **P 11 20 33.8 +0.3**
BTO S **S 11 24 56.9 +3.3**
ZAK Zakamensk 24.73 285 *e*P **P 11 20 36.2 +0.8**
ZAK pmax pmax
comp=Z,341nm,1.5s
TIY Taiyuan 24.77 251 *e*P **P 11 20 37.6 +1.7**
TIY S **S 11 24 56.9 -0.9**
TIY pmax pmax
comp=Z,68nm,0.7s
TIY pmax pmax
comp=Z,3µm,4.8s
TIY LR LR
comp=Z,34µm,10.6s
TIY LR LR
comp=Z,19µm,7.3s
TIY LR LR
comp=Z,22µm,12.4s
SSE Sheshan 24.91 227 P **P 11 20 38.4 +1.3**
SSE S **S 11 24 57.9 -2.0**
SSE pmax pmax
comp=Z,60nm,1.5s
SSE pmax pmax
comp=Z,2µm,7.2s
KIWB Kanaga Island 25.23 71 P **P 11 20 39.4 -0.4**
NJ2 Nanjing 25.28 232⇑ *i*P **P 11 20 40.3 0.0**
NJ2 pP **sP 11 20 44.8 -1.4**
NJ2 sP **pP 11 20 47.3 +2.8**
NJ2 S **S 11 25 03.9 -1.8**
NJ2 sS sS 11 25 19.5 +7.1
NJ2 pmax pmax
comp=Z,190nm,0.6s
NJ2 pmax pmax
comp=Z,1µm,3.7s
NJ2 LR LR
comp=Z,56µm,11.8s
NJ2 LR LR
comp=Z,31µm,19.5s
NJ2 LR LR
comp=Z,54µm,14.7s
ADK Adak 25.51 71 P **P 11 20 43.2 +0.9**
ADK Adak 25.51 71 P **P 11 20 43.2 +0.9**
ADK pmax pmax
comp=Z,118nm,1.0s
ADK Adak 25.51 71 P **P 11 20 43.9 +1.6**
MOY Mondy 25.81 289 *e*P **P 11 20 45.9 +0.7**
MOY pmax pmax
comp=Z,175nm,1.3s
JOW Kunigami 25.87 210 P **P 11 20 46.1 +0.3**
JOW Kunigami 25.87 210 P **P 11 20 47.1 +1.3**
LYN LuoYang 26.90 245⇑ *i*P **P 11 20 55.1 +0.1**
LYN PP **PnPn 11 21 42.8 +5.9**
LYN S **S 11 25 31.0 -0.3**
LYN pmax pmax
comp=Z,40nm,1.0s
LYN pmax pmax
comp=Z,2µm,7.1s
LYN LR LR
comp=Z,17µm,12.4s
LYN LR LR
comp=Z,16µm,10.4s
LYN LR LR
comp=Z,19µm,12.4s
GAMB Gambell 27.62 44 P **P 11 21 01.6 +0.3**
GAMB Gambell 27.62 44 P **P 11 21 00.5 -0.8**
baz=263
GAMB S **S 11 25 46.5 +4.3**
baz=263
KNGR Kungurtug, Tuv 28.20 288 *i* P **P 11 21 07.1 +0.3**
KNGR pmax pmax
comp=Z,72nm,1.0s
KNGR MLR MLR
comp=Z,17µm,10.0s
SPIA Saint Paul Isl 28.32 58 P **P 11 21 09.0 +1.5**
SPIA Saint Paul Isl 28.32 58 P **P 11 21 07.6 +0.1**
baz=277
WHN Wuhan 28.82 237 ⇓P **P 11 21 13.6 +1.3**
WHN S **S 11 26 01.6 -0.1**
WHN pmax pmax
comp=Z,110nm,1.2s
WHN LR LR
comp=Z,47µm,8.7s
WHN LR LR
comp=Z,75µm,10.3s
WHN LR LR
comp=Z,111µm,10.2s
XAN Xi'an 29.35 249 P **P 11 21 16.9 -0.1**
XAN pP sP 11 21 20.8 -2.0
XAN sP pP 11 21 24.6 +3.5
XAN PP **PP 11 22 15.3 -7.8**
XAN S **S 11 26 09.8 -0.2**
XAN sS sS 11 26 19.0 +2.1
XAN SS **SnSn 11 27 42.0 +5.9**
XAN ScS **ScS 11 31 54.3 -4.4**
XAN pmax pmax
comp=Z,17nm,1.3s
XAN pmax pmax
comp=Z,2µm,9.8s
XAN LR LR
comp=Z,32µm,12.4s
XAN LR LR
comp=Z,24µm,10.8s
XAN LR LR
comp=Z,43µm,13.6s
TNA Tin City 29.45 40 P **P 11 21 18.6 +1.1**
TNA Tin City 29.45 40 P **P 11 21 17.6 +0.1**
baz=264,SNR=10
TNA S **S 11 26 16.1 +5.2**
baz=264
NIKH Nikolski High 29.90 66 P **P 11 21 21.5 -0.1**
baz=285
NIKH S S 11 26 28.1 +10
baz=285
TATO Taipei 30.06 220 P **P 11 21 24.4 +1.2**
YHNB Yeheng 30.38 220 P P 11 21 28.6 +2.4
ANM Nome 30.45 42 P P 11 21 29.0 +2.6
ANM IAmb IAmb 11 21 31.0
comp=Z,256nm,1.6s
ANM Nome 30.45 42 P P 11 21 29.0 +2.6
ANM pmax pmax
comp=Z,256nm,1.6s
ANM Nome 30.45 42 P **P 11 21 26.5 +0.1**
baz=268
ANM S **S 11 26 27.9 +1.2**
baz=268
UNV Unalaska Valle 31.04 63 P **P 11 21 31.2 -0.4**
baz=285
UNV S S 11 26 48.0 +12
baz=285
LZH Lanzhou 31.10 258⇑ P **P 11 21 33.3 +0.7**
LZH sP sP 11 21 40.9 +2.4
LZH S **S 11 26 30.0 -7.7**
LZH pmax pmax
comp=Z,45nm,1.5s
LZH pmax pmax
comp=Z,1µm,5.7s
LZH LR LR
comp=Z,34µm,11.3s
LZH LR LR
comp=Z,35µm,10.7s
LZH LR LR
comp=Z,44µm,11.0s
SSLB Suanglung 31.34 220 P **P 11 21 36.1 +1.5**
QZH Quanzhou 31.34 225⇓ *i*P P 11 21 37.0 +2.5
QZH S S 11 26 48.3 +7.1
QZH LR LR
comp=Z,20µm,10.7s

QZH LR LR
comp=Z,6µm,9.5s
QZH LR LR
comp=Z,27µm,10.9s
CNSH ChangSha 31.44 236 ⇑P **P** **11 21 35.3 -0.1**
CNSH S **S** **11 26 43.3 +0.5**
CNSH pmax pmax
comp=Z,43nm,1.1s
CNSH LR LR
comp=Z,22µm,14.7s
CNSH LR LR
comp=Z,22µm,12.5s
CNSH LR LR
comp=Z,32µm,14.2s
GTA Gaotai 31.66 266 ⇑P **P** **11 21 38.8 +1.3**
GTA pP sP 11 21 43.4 0.0
GTA sP pP 11 21 47.4 +5.7
GTA S **S** **11 26 48.0 +1.6**
GTA sS sS 11 26 55.0 +1.8
GTA pmax pmax
comp=Z,23nm,1.2s
GTA pmax pmax
comp=Z,1µm,6.9s
GTA LR LR
comp=Z,15µm,9.8s
GTA LR LR
comp=Z,29µm,10.5s
GTA LR LR
comp=Z,23µm,10.2s
RDOG Red Dog Mine 31.70 36 P **P** **11 21 36.7 -0.7**
baz=264
ENH Enshi 31.73 243 P **P** **11 21 37.7 -0.4**
ENH IAmb IAmb 11 21 44.0
comp=Z,82nm,0.9s
ENH IAMs_20 IAMs_20 11 33 25.6
comp=Z,8µm,18.0s
KNMB Chin-men Tao 31.85 225 IAMs_20 IAMs_20 11 34 16.6
comp=Z,6µm,18.0s
NRIK Noril'sk 31.89 327 P **P** **11 21 38.9 -0.1**
comp=Z,13nm,0.9s,baz=106,slow=6.6,SNR=12
NRIK Lg Lg 11 32 05.0
comp=Z,0.2nm,0.3s,baz=53,slow=20,SNR=3.9
NRIK LR LR 11 36 14.3
comp=Z,3µm,18.5s,baz=97,slow=40
comp=Z,13nm,0.9s
NRIK Noril'sk 31.89 327 *ce*P **P** **11 21 38.5 -0.4**
NRIK pmax pmax
comp=Z,54nm,1.3s
NRIK MLR MLR
comp=Z,4µm,11.0s
TPUB Ta-pu 31.90 220 P P 11 21 43.2 +3.7
S12K Black Hills 33.06 59 P **P** **11 21 48.9 -0.5**
baz=285,SNR=8.8
S12K S S 11 27 15.5 +8.0
baz=285
N16K Nishlik Lake 33.77 50 P **P** **11 21 55.7 +0.2**
baz=280,SNR=39
N16K S **S** **11 27 18.6 +0.1**
baz=280
SDPT Sand Point 34.02 59 P **P** **11 21 57.1 -0.6**
SDPT IAmb IAmb 11 22 22.2
comp=Z,114nm,0.9s
SDPT Sand Point 34.02 59 P **P** **11 21 57.5 -0.2**
baz=286,SNR=6.3
SDPT S **S** **11 27 23.9 +1.5**
baz=286
GCSA Galena City Sc 34.10 42 P **P** **11 21 57.6 -0.7**
baz=275,SNR=20
GCSA S **S** **11 27 26.6 +3.2**
baz=275
A21K Barrow 34.20 30 P **P** **11 21 59.6 +0.5**
A21K Barrow 34.20 30 P **P** **11 21 59.4 +0.3**
baz=265,SNR=5.5
A21K S **S** **11 27 26.7 +2.0**
baz=265
O16K Kokwok River B 34.27 51 P **P** **11 22 00.1 +0.3**
baz=282,SNR=33
O16K S **S** **11 27 28.2 +2.1**
baz=282
S14K Fog Glacier 34.27 57 P **P** **11 22 00.2 +0.1**
baz=285
P16K Nushagak River 34.43 52 P **P** **11 22 01.7 +0.5**
baz=282,SNR=22
CD2 Chengdu 34.65 251 P **P** **11 22 02.6 -0.9**
CD2 pP sP 11 22 06.3 -3.1
CD2 PP **PP** **11 23 20.3 -1.6**
CD2 S **S** **11 27 32.0 -0.6**
CD2 pmax pmax
comp=Z,120nm,0.8s
CD2 pmax pmax
comp=Z,1µm,6.7s
CD2 LR LR
comp=Z,18µm,10.3s
CD2 LR LR
comp=Z,23µm,11.9s
CD2 LR LR
comp=Z,19µm,10.0s
ZAA0 Zalesovo Array 34.65 299 P **P** **11 22 03.2 +0.1**
ZALV Zalesovo Beam 34.65 299 P **P** **11 22 03.0 -0.2**
comp=Z,15nm,0.7s,baz=63,slow=7.2,SNR=48
ZALV PcP **PcP** **11 24 37.2 +0.2**
comp=Z,16nm,0.7s,baz=72,slow=1.3,SNR=7.5
ZALV Lg Lg 11 33 33.4
baz=100,slow=32
ZALV LR LR 11 37 37.6
comp=Z,5µm,20.8s,baz=66,slow=39
comp=Z,15nm,0.7s
ZALV Zalesovo Beam 34.65 299 P **P** **11 22 03.0 -0.2**
CHNA Chernabura Isl 34.66 60 P **P** **11 22 02.6 -0.6**
baz=287,SNR=21
CHNA S **S** **11 27 34.6 +2.4**
baz=287
CNBA Chernabura Isl 34.66 60 P **P** **11 22 03.0 -0.2**
CNBA IAMs_20 IAMs_20 11 36 00.8
comp=Z,7µm,21.0s
TTA Tatalina 34.69 45 P **P** **11 22 04.5 +0.9**
TTA IAmb IAmb 11 22 07.5
comp=Z,294nm,1.8s
TTA Tatalina 34.69 45 P **P** **11 22 04.5 +0.9**
TTA pmax pmax
comp=Z,294nm,1.8s
TTA Tatalina 34.69 45 P **P** **11 22 03.5 -0.1**
baz=278,SNR=32
TTA S **S** **11 27 35.9 +3.1**
baz=278
O17K Koliganek Bris 34.73 51 P **P** **11 22 04.3 +0.5**
baz=282,SNR=103
O17K S **S** **11 27 38.0 +4.8**
baz=282
CHGN Chignik 34.88 57 P **P** **11 22 06.0 +0.8**
CHGN IAmb IAmb 11 22 22.6
comp=Z,69nm,0.7s
CHGN Chignik 34.88 57 P **P** **11 22 05.6 +0.5**
baz=286,SNR=8.8
CHGN S **S** **11 27 34.7 -0.8**
baz=286
R16K Pilot Point 34.99 55 P **P** **11 22 06.8 +0.7**
baz=285,SNR=5.5
GULI GuiLin 35.12 236 ⇓P **P** **11 22 08.4 +0.8**
GULI S **S** **11 27 38.0 -1.9**
GULI pmax pmax
comp=Z,30nm,1.2s
GULI LR LR
comp=Z,11µm,17.4s
GULI LR LR
comp=Z,19µm,14.1s
GULI LR LR
comp=Z,23µm,15.2s
N18K Kilae Creek 35.13 49 P **P** **11 22 08.4 +1.1**
N18K IAmb IAmb 11 22 11.2
comp=Z,141nm,0.8s
N18K Kilae Creek 35.13 49 P **P** **11 22 07.5 +0.2**
baz=282,SNR=76
N18K S **S** **11 27 44.4 +4.9**
baz=282
P17K Kvichak River 35.18 52 P **P** **11 22 07.9 +0.2**
baz=283,SNR=44
P17K S **S** **11 27 43.1 +2.9**
baz=283
Q16K King Salmon 35.19 52 P **P** **11 22 07.6 -0.1**
baz=284,SNR=20
Q16K S **S** **11 27 43.2 +2.9**
baz=284
SVW2 Sparrevohn 35.20 48 P **P** **11 22 09.2 +1.3**
SVW2 IAmb IAmb 11 22 11.8
comp=Z,151nm,0.8s
F21K Alatna River 35.29 37 P **P** **11 22 08.5 -0.1**
baz=274,SNR=132
F21K S **S** **11 27 45.6 +3.7**
baz=274
IMAR Indian Mountai 35.30 40 P **P** **11 22 08.6 -0.1**
L19K White Mountain 35.34 46 IAMs_20 IAMs_20 11 37 25.9
comp=Z,6µm,20.0s
L19K White Mountain 35.34 46 P **P** **11 22 08.8 -0.3**
baz=280,SNR=39
L19K S **S** **11 27 46.7 +4.0**
baz=280
G21K Allakaket 35.34 39 P **P** **11 22 09.3 +0.2**
baz=275
G21K S **S** **11 27 46.0 +3.4**
baz=275
J20K Nowinta River 35.34 43 P **P** **11 22 09.9 +0.9**
J20K IAmb IAmb 11 22 12.6
comp=Z,138nm,0.8s
J20K Nowinta River 35.34 43 P **P** **11 22 08.9 -0.2**
baz=278,SNR=157
J20K S **S** **11 27 47.3 +4.7**
baz=278
GZH Guangzhou 35.40 230 P P 11 22 04.9 -5.1
GZH S S 11 27 35.3 -8.9
GZH LR LR
comp=Z,13µm,12.7s
GZH LR LR
comp=Z,20µm,13.1s
K20K Telida 35.50 44 IAMs_20 IAMs_20 11 38 37.0
comp=Z,8µm,18.0s
K20K Telida 35.50 44 P **P** **11 22 10.1 -0.3**
baz=279,SNR=54
K20K S **S** **11 27 49.2 +4.1**
baz=279
R17K Ugashik Creek 35.59 54 P **P** **11 22 11.0 -0.3**
baz=285,SNR=28
R17K S **S** **11 27 50.7 +4.2**
baz=285
M19K Big River Lodg 35.60 47 P **P** **11 22 12.1 +0.7**
M19K IAmb IAmb 11 22 19.2
comp=Z,166nm,1.6s
M19K IAMs_20 IAMs_20 11 39 20.6
comp=Z,5µm,18.0s
M19K Big River Lodg 35.60 47 P **P** **11 22 11.4 +0.1**
baz=281
M19K S **S** **11 27 53.1 +6.4**
baz=281
O18K Koktuh Hills 35.64 50 P **P** **11 22 12.3 +0.6**
baz=283,SNR=45
O18K S **S** **11 27 51.1 +3.8**
baz=283
H21K Melozitna Rive 35.72 40 P **P** **11 22 12.4 +0.1**
H21K Melozitna Rive 35.72 40 P **P** **11 22 12.0 -0.3**
baz=277,SNR=48
H21K S **S** **11 27 48.7 +0.3**
baz=277
L20K Farewell, AK 35.73 46 P **P** **11 22 12.3 -0.2**
baz=281,SNR=26
L20K S **S** **11 27 52.4 +3.7**
baz=281
F22K John River 35.77 37 P **P** **11 22 12.9 +0.2**
baz=275,SNR=143
F22K S **S** **11 27 49.1 -0.1**
baz=275
N19K Bonanza Creek 35.78 48 P **P** **11 22 13.5 +0.5**
N19K IAmb IAmb 11 22 16.8
comp=Z,103nm,0.8s
N19K Bonanza Creek 35.78 48 P **P** **11 22 13.6 +0.6**
baz=282,SNR=34
N19K S **S** **11 27 52.3 +2.7**
baz=282
E22K Anaktuvuk Pass 35.86 36 P **P** **11 22 13.6 0.0**
baz=274
E22K S **S** **11 27 48.7 -1.9**
baz=274
O19K Port Alsworth 36.00 49 P **P** **11 22 14.7 0.0**
baz=283,SNR=18
O19K S **S** **11 27 58.2 +5.6**
baz=283
G22K Bettles 36.09 38 P **P** **11 22 14.9 -0.5**
baz=276
G22K S **S** **11 27 55.4 +1.3**
baz=276
I21K Tanana 36.12 41 P **P** **11 22 16.0 +0.2**
I21K IAmb IAmb 11 22 19.8
comp=Z,235nm,1.1s
I21K Tanana 36.12 41 P **P** **11 22 15.8 0.0**
baz=278,SNR=107
I21K S **S** **11 27 58.0 +3.5**
baz=278
C23K Itkillik River 36.18 33 P **P** **11 22 15.9 -0.2**
baz=273,SNR=116
C23K S **S** **11 27 57.2 +1.9**
baz=273
CHUM Lake Minchumin 36.18 43 P **P** **11 22 16.3 +0.1**
baz=280,SNR=68
CHUM S **S** **11 27 57.4 +1.9**
baz=280
M20K Styx River 36.19 46 **P** **11 22 17.9 +1.4**
M20K IAmb IAmb 11 22 21.3
comp=Z,329nm,1.6s
M20K IAMs_20 IAMs_20 11 39 47.5
comp=Z,5µm,18.0s
M20K Styx River 36.19 46 P **P** **11 22 17.0 +0.5**
baz=282,SNR=36
M20K S **S** **11 28 01.6 +5.7**
baz=282
D23K Nanushuk River 36.21 34 P **P** **11 22 16.4 -0.2**
baz=274,SNR=57
D23K S **S** **11 27 58.7 +2.8**
baz=274
GYA Guiyang 36.24 242 ⇑*i*P **P** **11 22 17.1 -0.2**
GYA PP **PP** **11 23 42.6 +2.9**
GYA S **S** **11 27 51.6 -5.7**
GYA pmax pmax
comp=Z,75nm,1.0s
GYA pmax pmax
comp=Z,840nm,3.5s
GYA LR LR
comp=Z,18µm,12.3s
GYA LR LR
comp=Z,22µm,13.3s
GYA LR LR
comp=Z,33µm,16.7s
H22K Ishtalitna Cre 36.27 39 P **P** **11 22 17.0 0.0**
baz=278,SNR=88
H22K S **S** **11 27 57.5 +0.6**
baz=278
CAST Castle Rocks 36.37 44 P **P** **11 22 18.3 +0.4**
CAST IAmb IAmb 11 22 22.2
comp=Z,302nm,1.5s
CAST IAMs_20 IAMs_20 11 39 29.6
comp=Z,7µm,18.0s
CAST Castle Rocks 36.37 44 P **P** **11 22 17.8 -0.1**
baz=281,SNR=94
CAST S **S** **11 28 03.1 +4.7**
baz=281
PPLA Purkeypile 36.42 45 P **P** **11 22 19.7 +1.2**
PPLA IAmb IAmb 11 22 26.9
comp=Z,297nm,1.3s
PPLA Purkeypile 36.42 45 P **P** **11 22 18.4 -0.1**
baz=281,SNR=36
PPLA S **S** **11 27 57.1 -2.4**
baz=281
CHIR Chirikof Islan 36.52 57 P **P** **11 22 19.7 +0.5**
CHIR IAMs_20 IAMs_20 11 38 02.5
comp=Z,6µm,20.0s
CHIR Chirikof Islan 36.52 57 P **P** **11 22 18.9 -0.3**
baz=288,SNR=20
CHIR S **S** **11 28 00.5 -0.3**
baz=288
COLD Coldfoot 36.56 37 P **P** **11 22 19.5 0.0**
COLD IAmb IAmb 11 22 22.7
comp=Z,163nm,0.9s
COLD Coldfoot 36.56 37 P **P** **11 22 19.4 -0.2**
baz=277
COLD S **S** **11 28 00.5 -0.7**
baz=277
Q19K Cape Douglas, 36.64 51 P **P** **11 22 21.4 +1.0**
Q19K IAmb IAmb 11 22 27.5
comp=Z,207nm,0.9s
Q19K IAMs_20 IAMs_20 11 35 32.7
comp=Z,6µm,21.0s
Q19K Cape Douglas, 36.64 51 P **P** **11 22 19.5 -0.9**
baz=286,SNR=8.5
TOLK Toolik Lake Re 36.64 35 P **P** **11 22 20.7 +0.5**
TOLK IAMs_20 IAMs_20 11 39 42.7
comp=Z,5µm,19.0s
TOLK Toolik Lake Re 36.64 35 P **P** **11 22 20.0 -0.2**
baz=276,SNR=113
TOLK S **S** **11 28 02.4 -0.2**
baz=276
P19K Oil Pt 36.66 50 P **P** **11 22 21.1 +0.6**
baz=285
P19K S **S** **11 28 04.5 +1.5**
baz=285
MLY Manley 36.66 41 P **P** **11 22 20.0 -0.4**
baz=280,SNR=58
MLY S **S** **11 28 06.7 +3.7**
baz=280
G23K Bananza Creek 36.70 38 P **P** **11 22 20.4 -0.4**
baz=278,SNR=153
G23K S **S** **11 28 04.6 +1.2**
baz=278
BPAW Bear Paw Mtn. 36.72 42 P **P** **11 22 21.7 +0.8**
BPAW IAmb IAmb 11 22 25.0
comp=Z,209nm,1.5s
BPAW IAMs_20 IAMs_20 11 38 32.9
comp=Z,5µm,18.0s
BPAW Bear Paw Mtn. 36.72 42 P **P** **11 22 21.0 0.0**
baz=281,SNR=60
BPAW S **S** **11 28 04.9 +1.1**
baz=281
GUMO Guam 36.74 176 LR LR 11 36 14.1
comp=Z,3µm,21.1s,baz=356,slow=34
GOMU GeErMu 36.75 266 ⇑P **P** **11 22 22.3 +0.4**
GOMU sP sP 11 22 25.0 -2.8
GOMU PP **PP** **11 23 49.9 +4.5**
GOMU PcP **PcP** **11 24 40.4 -3.7**
GOMU S **S** **11 28 05.0 -0.5**
GOMU ScS **ScS** **11 32 34.3 -3.2**
GOMU pmax pmax
comp=Z,61nm,1.0s
GOMU pmax pmax
comp=Z,900nm,4.7s
GOMU LR LR
comp=Z,16µm,10.4s
GOMU LR LR
comp=Z,28µm,9.5s
GOMU LR LR
comp=Z,26µm,12.9s
SPCR Spurr Chakacha 36.77 47 P **P** **11 22 22.0 +0.5**
baz=284,SNR=21
SPCR S **S** **11 28 08.9 +4.2**
baz=284
O20K Slope Mountain 36.85 49 P **P** **11 22 21.8 -0.2**
baz=285,SNR=6.7
O20K S **S** **11 28 11.9 +6.0**
baz=285
SPU Mount Spurr 36.85 47 P **P** **11 22 22.7 +0.6**
C24K Franklin Bluff 36.85 33 P **P** **11 22 21.2 -0.7**
baz=275
C24K S **S** **11 28 08.8 +3.2**
baz=275
KTH Kantishna Hill 36.85 43 P **P** **11 22 22.4 +0.3**
KTH IAmb IAmb 11 22 26.4
comp=Z,167nm,1.2s
KTH IAMs_20 IAMs_20 11 39 19.4
comp=Z,5µm,18.0s
D24K Happy Valley 36.86 34 P **P** **11 22 21.5 -0.5**
baz=276
D24K S **S** **11 28 10.1 +4.3**
baz=276
H23K Yukon River 37.03 39 P **P** **11 22 23.9 +0.4**
H23K IAmb IAmb 11 22 26.5
comp=Z,167nm,0.9s
H23K Yukon River 37.03 39 P **P** **11 22 23.5 0.0**
baz=280,SNR=194
H23K S **S** **11 28 11.5 +3.1**
baz=280
SII Sitkinak Islan 37.05 55 P **P** **11 22 24.2 +0.5**
SII IAmb IAmb 11 22 27.5
comp=Z,132nm,0.8s
SII IAMs_20 IAMs_20 11 38 46.5
comp=Z,6µm,19.0s
SII Sitkinak Islan 37.05 55 P **P** **11 22 23.0 -0.8**
baz=288,SNR=6.4
SII Sitkinak Islan 37.05 55 P **P** **11 22 24.3 +0.5**
WMQ Urumqi 37.06 282 *e*P **P** **11 22 26.8 +2.7**
WMQ sP sP 11 22 36.4 +6.4
WMQ S **S** **11 28 11.6 +2.2**
WMQ pmax pmax
comp=Z,96nm,0.9s
WMQ pmax pmax
comp=Z,320nm,4.1s
WMQ LR LR
comp=Z,14µm,11.9s
WMQ LR LR
comp=Z,27µm,10.3s
WMQ LR LR
comp=Z,8µm,11.9s
ZSN Zaisan 37.09 288 *c i*P **P** **11 22 25.0 +0.8**
ZSN *e*S **S** **11 28 10.4 +0.6**
ZSN pmax pmax
comp=Z,85nm,2.1s
ZSN Zaisan 37.09 288 ⇑*i*P **P** **11 22 25.1 +0.8**
comp=Z,85nm,2.1s,baz=288
ZSN *e*S **S** **11 28 10.4 +0.6**
baz=288
E24K Your Creek 37.11 36 P **P** **11 22 23.7 -0.5**
baz=278,SNR=279
E24K S **S** **11 28 11.6 +1.9**
baz=278
TRF Thorofare Moun 37.15 43 P **P** **11 22 25.2 +0.5**
TRF IAmb IAmb 11 22 28.1
comp=Z,159nm,0.9s
TRF IAMs_20 IAMs_20 11 39 29.3
comp=Z,5µm,19.0s
TRF Thorofare Moun 37.15 43 P **P** **11 22 24.8 0.0**
baz=282,SNR=99
TRF S **S** **11 28 16.2 +5.5**
baz=282
I23K Minto, Yukon-K 37.22 40 P **P** **11 22 25.7 +0.6**
I23K IAmb IAmb 11 22 29.3
comp=Z,336nm,1.6s
I23K Minto, Yukon-K 37.22 40 P **P** **11 22 25.3 +0.2**
baz=281,SNR=77
I23K S **S** **11 28 14.3 +3.1**
baz=281
OHAK Old Harbor 37.31 54 P **P** **11 22 25.8 -0.1**
OHAK Old Harbor 37.31 54 P **P** **11 22 25.4 -0.5**
baz=288,SNR=12
Q20K Shuyak Island 37.36 52 P **P** **11 22 25.8 -0.5**
baz=287,SNR=13
BWN Browne 37.36 42 P **P** **11 22 28.2 +1.8**
CAPN Captain Cook N 37.38 48 P **P** **11 22 26.2 -0.3**
baz=285
CUT Chulitna 37.39 45 P **P** **11 22 26.6 0.0**
CUT IAmb IAmb 11 22 28.6
comp=Z,219nm,1.0s
CUT IAMs_20 IAMs_20 11 38 49.8
comp=Z,7µm,19.0s
CUT Chulitna 37.39 45 P **P** **11 22 25.7 -0.8**
baz=283,SNR=25
F24K Squaw Lake 37.41 36 P **P** **11 22 26.2 -0.6**
baz=279,SNR=234
F24K S **S** **11 28 13.6 -0.7**
baz=279
HOM Homer 37.44 50 P **P** **11 22 25.8 -1.2**
baz=286
NEA2 Nenana 37.45 41 P **P** **11 22 27.8 +0.8**
NEA2 Nenana 37.45 41 P **P** **11 22 26.4 -0.6**
baz=282,SNR=107
NEA2 S **S** **11 28 19.2 +4.4**
baz=282
KDAK Kodiak Island 37.51 53 P **P** **11 22 27.4 -0.2**
KDAK Kodiak Island 37.51 53 IAMs_20 IAMs_20 11 39 44.4
comp=Z,6µm,19.0s
KDAK Kodiak Island 37.51 53 P **P** **11 22 27.4 -0.2**
KDAK pmax pmax
comp=Z,69nm,0.8s
KDAK MLR MLR
comp=Z,6µm,19.0s
KDAK Kodiak Island 37.51 53 P **P** **11 22 26.0 -1.6**
baz=288
KDAK S **S** **11 28 15.8 0.0**
baz=288
M22K Willow 37.62 46 P **P** **11 22 27.7 -0.7**
baz=284,SNR=10
M22K S **S** **11 28 21.3 +4.0**
baz=284
MCK McKinley 37.69 43 P **P** **11 22 29.7 +0.6**
MCK IAmb IAmb 11 22 32.9
comp=Z,163nm,0.9s
MCK McKinley 37.69 43 P **P** **11 22 29.7 +0.6**

MCK pmax pmax
comp=Z,163nm,0.9s
MCK MLR MLR
comp=Z,4µm,20.0s
MCK McKinley 37.69 43 P **P** **11 22 28.3 -0.8**
baz=283,SNR=59
MCK S **S** **11 28 18.9 +0.4**
baz=283
H24K Noodor Dome 37.70 39 P **P** **11 22 30.6 +1.4**
H24K Noodor Dome 37.70 39 P **P** **11 22 29.1 -0.1**
baz=281,SNR=65
H24K S **S** **11 28 21.9 +3.2**
baz=281
G24K Hadweenzic Riv 37.70 38 P **P** **11 22 28.5 -0.7**
baz=280,SNR=123
G24K S **S** **11 28 20.1 +1.5**
baz=280
D25K Kavik River 37.71 33 P **P** **11 22 28.7 -0.6**
baz=278,SNR=235
D25K S **S** **11 28 20.7 +2.0**
baz=278
FIS Fire Island 37.72 47 IAMs_20 IAMs_20 11 39 25.7
comp=Z,5µm,19.0s
MDM Murphy Dome 37.73 41 P **P** **11 22 29.7 +0.2**
RND Reindeer 37.79 43 P **P** **11 22 29.8 -0.2**
RND IAMs_20 IAMs_20 11 40 07.2
comp=Z,6µm,18.0s
RND Reindeer 37.79 43 P **P** **11 22 29.8 -0.2**
RND pmax pmax
comp=Z,100nm,1.0s
RND MLR MLR
comp=Z,6µm,18.0s
BRSE Bradley Lake S 37.85 49 P **P** **11 22 29.8 -0.8**
baz=286,SNR=12
BRSE S **S** **11 28 19.2 -1.8**
baz=286
WRH Wood River Hil 37.89 41 P **P** **11 22 30.7 0.0**
WRH IAmb IAmb 11 22 33.9
comp=Z,207nm,0.8s
TCOL CIGO, UAF Yank 37.90 41 P **P** **11 22 31.4 +0.6**
TCOL IAmb IAmb 11 22 34.1
comp=Z,172nm,0.7s
TCOL CIGO, UAF Yank 37.90 41 P **P** **11 22 30.3 -0.5**
baz=282,SNR=103
TCOL S **S** **11 28 23.0 +1.5**
baz=282
COLA College 37.90 41 P **P** **11 22 31.3 +0.4**
COLA IAmb IAmb 11 22 34.1
comp=Z,172nm,0.7s
COLA College 37.90 41 *c* *i*P **P** **11 22 30.4 -0.4**
COLA pmax pmax
comp=Z,135nm,0.7s
COLA MLR MLR
comp=Z,5µm,16.0s
COLA College 37.90 41 P **P** **11 22 30.7 -0.2**
baz=282
COLA S **S** **11 28 22.4 +0.8**
baz=282
RC01 Rabbit Creek A 37.96 47 P **P** **11 22 31.9 +0.5**
RC01 IAMs_20 IAMs_20 11 41 05.0
comp=Z,4µm,18.0s
RC01 Rabbit Creek A 37.96 47 P **P** **11 22 30.6 -0.8**
baz=286,SNR=9.7
RC01 S **S** **11 28 22.5 -0.2**
baz=286
CCB Clear Creek Bu 37.97 41 P **P** **11 22 31.6 +0.2**
CCB IAmb IAmb 11 22 35.0
comp=Z,470nm,1.8s
POKR Poker Plat Res 38.02 40 P **P** **11 22 31.8 -0.1**
baz=282,SNR=32
POKR S **S** **11 28 23.5 -0.1**
baz=282
WAT1 Susitna Watana 38.06 44 P **P** **11 22 31.4 -0.9**
baz=284
WAT1 S **S** **11 28 25.0 +0.8**
baz=284
PMR Palmer 38.11 46 P **P** **11 22 32.9 +0.3**
PMR Palmer 38.11 46 P **P** **11 22 32.9 +0.3**
PMR pmax pmax
comp=Z,48nm,1.0s
PMR Palmer 38.11 46 P **P** **11 22 31.7 -1.0**
baz=285,SNR=13
PMR S **S** **11 28 24.3 -0.5**
baz=285
O22K Cooper Landing 38.13 48 IAMs_20 IAMs_20 11 40 30.9
comp=Z,4µm,19.0s
O22K Cooper Landing 38.13 48 P **P** **11 22 32.6 -0.3**
baz=286,SNR=11
O22K S **S** **11 28 26.3 +1.1**
baz=286
C26K Camden Bay 38.14 32 P **P** **11 22 32.9 +0.1**
baz=278,SNR=29
C26K S **S** **11 28 26.6 +1.6**
baz=278
GHO Glory Hole Cre 38.16 46 P **P** **11 22 33.5 +0.3**
GHO IAmb IAmb 11 22 35.3
comp=Z,141nm,1.0s
GHO IAMs_20 IAMs_20 11 39 24.6
comp=Z,5µm,19.0s
E25K Arctic Village 38.18 35 P **P** **11 22 33.2 0.0**
baz=280,SNR=119
E25K S **S** **11 28 27.1 +1.1**
baz=280
G25K Bearman Lake 38.23 37 P **P** **11 22 33.6 +0.1**
baz=281,SNR=66
G25K S **S** **11 28 29.2 +2.7**
baz=281
F25K Christian Rive 38.25 36 P **P** **11 22 34.3 +0.5**
baz=280,SNR=121
F25K S **S** **11 28 29.4 +2.4**
baz=280
IL31 38.33 41 P **P** **11 22 35.2 +0.8**
IL31 IAmb IAmb 11 22 38.1
comp=Z,155nm,0.8s
ILAR Eielson Array 38.33 41 P **P** **11 22 34.0 -0.5**
comp=Z,121nm,0.7s,baz=275,slow=7.3,SNR=295
ILAR LR LR 11 38 40.2
comp=Z,2µm,18.2s,baz=284,slow=37
comp=Z,121nm,0.7s
ILAR Eielson Array 38.33 41 P **P** **11 22 35.6 +1.1**
ILAR Eielson Array 38.33 41 P **P** **11 22 34.0 -0.5**
SEW Seward 38.37 49 P **P** **11 22 34.0 -0.9**
baz=287
SEW S **S** **11 28 29.4 +0.7**
baz=287
HDA Harding Lake 38.38 41 P **P** **11 22 34.2 -0.7**
HDA IAmb IAmb 11 22 38.3
comp=Z,123nm,0.9s
HDA Harding Lake 38.38 41 P **P** **11 22 34.2 -0.7**
baz=283,SNR=87
HDA S **S** **11 28 28.8 -0.1**
baz=283
HDA S **S** **11 28 28.8 -0.1**
baz=283
SML Sawmill 38.42 46 P **P** **11 22 35.5 +0.1**
SML IAmb IAmb 11 22 39.0
comp=Z,230nm,1.0s
SML IAMs_20 IAMs_20 11 39 15.1
comp=Z,5µm,19.0s
SML Sawmill 38.42 46 P **P** **11 22 34.6 -0.8**
baz=286,SNR=34
SML S **S** **11 28 31.0 +1.3**
baz=286
H25K Birch Creek 38.44 38 P **P** **11 22 35.6 +0.3**
baz=282
H25K S **S** **11 28 28.7 -1.0**
baz=282
KNK Knik Glacier 38.47 46 P **P** **11 22 35.9 +0.1**
KNK IAmb IAmb 11 22 39.9
comp=Z,189nm,0.8s
KNK Knik Glacier 38.47 46 P **P** **11 22 35.2 -0.5**
baz=286,SNR=32
KNK S **S** **11 28 30.2 -0.2**
baz=286
WAT6 Susitna Watana 38.49 44 P **P** **11 22 34.9 -1.2**
baz=285,SNR=19
WAT6 S **S** **11 28 31.5 +0.6**
baz=285
DHY Denali Highway 38.52 43 P **P** **11 22 35.9 -0.4**
DHY IAmb IAmb 11 22 39.4
comp=Z,529nm,1.9s
DHY Denali Highway 38.52 43 P **P** **11 22 35.5 -0.8**
baz=285,SNR=71
DHY S **S** **11 28 30.0 -1.3**
baz=285
SEM Semipalatinsk 38.56 295 *e*P **P** **11 22 36.5 -0.3**
SEM *e*S **S** **11 28 31.5 -0.8**
SEM pmax pmax
comp=Z,108nm,1.8s
SEM MLR MLR
comp=Z,2µm,10.0s
SEM Semipalatinsk 38.56 295 *e*P **P** **11 22 36.6 -0.3**
comp=Z,108nm,1.8s,baz=295
SEM *e*S **S** **11 28 31.6 -0.8**
baz=295
SEM LR LR 11 38 33.7
comp=Z,2µm,10.0s,baz=295
C27K Jago River 38.59 33 P **P** **11 22 36.8 +0.1**
baz=280,SNR=181
C27K S **S** **11 28 34.6 +2.5**
baz=280
BMAR Burnt Mountain 38.68 36 P **P** **11 22 38.6 +1.1**
PWL Port Wells 38.68 47 IAMs_20 IAMs_20 11 41 30.1
comp=Z,6µm,19.0s
PWL Port Wells 38.68 47 P **P** **11 22 37.0 -0.5**
baz=287
M23K Glacier View 38.70 46 P **P** **11 22 37.3 -0.4**
baz=286,SNR=19
M23K S **S** **11 28 34.5 +0.6**
baz=286
PRP Porcupine Dome 38.72 39 P **P** **11 22 37.8 -0.2**
baz=283,SNR=473
PRP S **S** **11 28 34.0 -0.3**
baz=283
F26K Sheenjek River 38.79 36 P **P** **11 22 38.6 +0.2**
baz=282,SNR=207
F26K S **S** **11 28 40.4 +5.3**
baz=282
SCM Sheep Creek Mo 38.87 45 P **P** **11 22 39.8 +0.6**
SCM IAmb IAmb 11 22 46.5
comp=Z,349nm,1.5s
SCM IAMs_20 IAMs_20 11 39 27.9
comp=Z,6µm,20.0s
SCM Sheep Creek Mo 38.87 45 P **P** **11 22 39.8 +0.6**
SCM pmax pmax
comp=Z,349nm,1.5s
SCM MLR MLR
comp=Z,6µm,20.0s
SCM Sheep Creek Mo 38.87 45 P **P** **11 22 39.1 0.0**
baz=286,SNR=17
SCM S **S** **11 28 38.9 +2.3**
baz=286
MK31 Makanchi Array 38.96 289 P **P** **11 22 40.2 +0.2**
MK31 IAmb IAmb 11 22 46.7
comp=Z,139nm,0.9s
MK31 Makanchi Array 38.96 289 *d* *i*P **P** **11 22 39.8 -0.2**
MKAR Makanchi Array 38.96 289 P **P** **11 22 40.4 +0.4**
comp=Z,58nm,0.7s,baz=69,slow=8.7,SNR=218
MKAR PcP **PcP** **11 24 50.4 +0.1**
comp=Z,4.9nm,0.8s,baz=58,slow=4.3,SNR=1.1
MKAR LR LR 11 38 37.9
comp=Z,3µm,19.4s,baz=64,slow=36
comp=Z,58nm,0.7s
J25K Salcha River, 39.00 41 P **P** **11 22 39.1 -1.0**
baz=284,SNR=56
J25K S **S** **11 28 36.9 -1.5**
baz=284
K24K Donnelly Dome 39.03 42 P **P** **11 22 39.3 -1.2**
baz=285,SNR=69
K24K S **S** **11 28 39.5 +0.7**
baz=285
PZH PanZhiHua 39.06 248 P **P** **11 22 40.9 -0.3**
PZH sP **sP** **11 22 46.6 -0.5**
PZH PP **PnPn** **11 24 18.5 +5.4**
PZH PcP **PcP** **11 24 51.4 +0.4**
PZH S **S** **11 28 40.1 -0.1**
PZH pmax pmax
comp=Z,110nm,0.8s
PZH pmax pmax
comp=Z,1µm,8.5s
PZH LR LR
comp=Z,13µm,12.2s
PZH LR LR
comp=Z,10µm,12.2s
PZH LR LR
comp=Z,20µm,12.2s
G26K Porcupine Rive 39.09 37 P **P** **11 22 41.0 +0.2**
baz=283,SNR=245
G26K S **S** **11 28 41.1 +1.7**
baz=283
MAKZ Makanchi 39.14 289 P **P** **11 22 41.9 +0.4**
MAKZ Makanchi 39.14 289 P **P** **11 22 41.9 +0.4**
MAKZ pmax pmax
comp=Z,119nm,1.0s
GLI Glacier Island 39.26 47 P **P** **11 22 41.7 -0.6**
baz=288,SNR=7.1
GLI S **S** **11 28 38.0 -4.2**
baz=288
M24K Tolsona, Glenn 39.32 45 IAMs_20 IAMs_20 11 40 21.0
comp=Z,5µm,19.0s
M24K Tolsona, Glenn 39.32 45 P **P** **11 22 43.3 +0.4**
baz=287,SNR=18
KURK Kurchatov 39.37 296 P **P** **11 22 42.3 -1.0**
KURK IAmb IAmb 11 22 50.3
comp=Z,205nm,0.9s
KURK Kurchatov 39.37 296 IAMs_20 IAMs_20 11 39 09.1
comp=Z,7µm,20.0s
KURK Kurchatov 39.37 296 *ce*P **P** **11 22 42.1 -1.3**
KURK pmax pmax
comp=Z,150nm,1.0s
KURK MLR MLR
comp=Z,7µm,11.0s
KURK Kurchatov 39.37 296 P **P** **11 22 43.2 -0.1**
KURK P **P** **11 22 43.2 -0.1**
P23K Montague Islan 39.38 48 P **P** **11 22 42.9 -0.5**
baz=288
PAX Paxson 39.39 43 P **P** **11 22 42.9 -0.6**
PAX Paxson 39.39 43 P **P** **11 22 42.9 -0.6**
PAX pmax pmax
comp=Z,65nm,1.0s
PAX Paxson 39.39 43 P **P** **11 22 42.5 -1.0**
baz=286,SNR=35
PAX S **S** **11 28 39.6 -4.7**
baz=286
RIDG Independent Ri 39.45 42 P **P** **11 22 43.1 -0.8**
RIDG IAmb IAmb 11 22 45.2
comp=Z,157nm,1.0s
RIDG Independent Ri 39.45 42 P **P** **11 22 42.5 -1.4**
baz=286,SNR=77
RIDG S **S** **11 28 46.5 +1.4**
baz=286
KURBB Kurchatov Arra 39.47 296 LR LR 11 39 24.7
comp=Z,5µm,18.8s,baz=42,slow=37
KURBB Kurchatov Arra 39.47 296 P **P** **11 22 43.9 -0.2**
KMI Kunming 39.52 245 ⇑P **P** **11 22 45.3 +0.2**
KMI pP sP 11 22 49.8 -1.2
KMI sP pP 11 22 52.3 +2.9
KMI PP **PnPn** **11 24 21.5 +2.8**
KMI S **S** **11 28 43.4 -3.9**
KMI SS **SS** **11 31 37.0 -4.7**
KMI pmax pmax
comp=Z,39nm,1.2s
KMI pmax pmax
comp=Z,890nm,3.6s
KMI LR LR
comp=Z,10µm,10.6s
KMI LR LR
comp=Z,10µm,10.8s
KMI LR LR
comp=Z,10µm,12.9s
FID Port Fidalgo 39.59 47 IAMs_20 IAMs_20 11 41 30.0
comp=Z,5µm,20.0s
KLU Klutina 39.62 46 IAMs_20 IAMs_20 11 40 02.6
comp=Z,6µm,19.0s
KLU Klutina 39.62 46 P **P** **11 22 45.2 -0.2**
baz=288,SNR=26
KLU S **S** **11 28 49.7 +2.0**
baz=288
E27K Coleen River 39.63 35 P **P** **11 22 45.4 0.0**
baz=283,SNR=90
E27K S **S** **11 28 49.1 +1.4**
baz=283
HIN Hinchinbrook I 39.69 47 IAMs_20 IAMs_20 11 40 39.0
comp=Z,5µm,20.0s
HARP HAARP 39.69 44 P **P** **11 22 45.2 -0.7**
baz=287,SNR=17
HARP S **S** **11 28 45.6 -3.1**
baz=287
I26K Coal Creek Min 39.73 39 P **P** **11 22 45.5 -0.7**
I26K Coal Creek Min 39.73 39 P **P** **11 22 45.4 -0.8**
baz=285
I26K S **S** **11 28 54.1 +4.9**
baz=285
SCRK Sand Creek 39.75 41 P **P** **11 22 45.1 -1.4**
baz=286,SNR=106
SCRK S **S** **11 28 47.2 -2.5**
baz=286
J26L Joseph Creek 39.78 41 IAMs_20 IAMs_20 11 41 44.6
comp=Z,4µm,18.0s
J26L Joseph Creek 39.78 41 P **P** **11 22 45.1 -1.6**
baz=286,SNR=76
J26L S **S** **11 28 47.5 -2.6**
baz=286
G27K Doyon Strip 39.94 37 P **P** **11 22 48.3 +0.4**
baz=285,SNR=213
G27K S **S** **11 28 55.8 +3.4**
baz=285
EYAK Cordova Ski Ar 39.99 47 P **P** **11 22 48.6 +0.2**
baz=289,SNR=7.7
EYAK S **S** **11 28 51.7 -1.4**
baz=289
Q23K Middleton Isla 40.07 49 P **P** **11 22 48.8 -0.3**
baz=290
H27K Steamboat Moun 40.14 38 P **P** **11 22 49.9 +0.2**
baz=286
H27K S **S** **11 28 55.7 +0.3**
baz=286
N25K Chitina, Valde 40.18 45 IAMs_20 IAMs_20 11 40 19.6
comp=Z,6µm,20.0s
N25K Chitina, Valde 40.18 45 P **P** **11 22 50.4 +0.3**
baz=288,SNR=18
N25K S **S** **11 28 55.0 -1.2**
baz=288
I27K Kandik River 40.27 39 P **P** **11 22 50.8 0.0**
baz=286
I27K S **S** **11 28 52.1 -5.3**
baz=286
L26K Log Cabin Wild 40.30 43 P **P** **11 22 50.7 -0.3**
baz=288,SNR=33
L26K S **S** **11 28 52.4 -5.4**
baz=288
BMRM Bremner River 40.39 46 P **P** **11 22 51.5 -0.3**
baz=289,SNR=8.7
BMRM S **S** **11 29 02.0 +2.8**
baz=289
K27K Chicken 40.54 41 P **P** **11 22 52.3 -0.5**
K27K IAMs_20 IAMs_20 11 42 52.5
comp=Z,4µm,18.0s
K27K Chicken 40.54 41 P **P** **11 22 52.4 -0.5**
baz=288
K27K S **S** **11 29 02.0 +0.7**
baz=288
QIZ Qiongzhong 40.56 231 P **P** **11 22 55.5 +1.9**
QIZ Qiongzhong 40.56 231 IAMs_20 IAMs_20 11 41 24.0
comp=Z,6µm,19.0s
QIZ Qiongzhong 40.56 231 ⇑*i*P **P** **11 22 54.9 +1.4**
QIZ sP **sP** **11 23 00.0 +0.5**
QIZ PP **PnPn** **11 24 33.1 +2.2**
QIZ S **S** **11 29 02.3 -0.2**
QIZ pmax pmax
comp=Z,62nm,1.3s
QIZ pmax pmax
comp=Z,2µm,6.4s
QIZ LR LR
comp=Z,12µm,9.6s
QIZ LR LR
comp=Z,6µm,11.2s
QIZ LR LR
comp=Z,12µm,12.0s
QIZ Qiongzhong 40.56 231 P **P** **11 22 55.5 +1.9**
GLB Gilahina Butte 40.59 45 IAMs_20 IAMs_20 11 40 43.5
comp=Z,6µm,20.0s
M26K Nabesna, AK 40.65 44 IAMs_20 IAMs_20 11 41 48.7
comp=Z,6µm,19.0s
M26K Nabesna, AK 40.65 44 P **P** **11 22 53.7 -0.2**
baz=289,SNR=69
M26K S **S** **11 29 06.4 +3.4**
baz=289
EGAK Eagle 40.70 40 P **P** **11 22 54.3 +0.2**
EGAK Eagle 40.70 40 P **P** **11 22 53.5 -0.7**
baz=287,SNR=389
EGAK S **S** **11 29 07.3 +3.8**
baz=287
L27K Beaver Creek, 40.95 42 P **P** **11 22 56.5 +0.1**
baz=289,SNR=104
L27K S **S** **11 29 10.6 +3.2**
baz=289
BCAR Beaver Creek A 40.96 42 P **P** **11 22 57.4 +0.9**
MCARA McCarthy VSAT 40.97 45 IAMs_20 IAMs_20 11 40 54.3
comp=Z,6µm,20.0s
MCARA McCarthy VSAT 40.97 45 P **P** **11 22 56.9 +0.4**
baz=290,SNR=50
MCARA S **S** **11 29 10.3 +2.5**
baz=290
CRQM Cirque 41.13 46 IAMs_20 IAMs_20 11 40 52.6
comp=Z,7µm,19.0s
M27K Edge Creek, AK 41.16 43 IAMs_20 IAMs_20 11 42 22.5
comp=Z,6µm,18.0s
M27K Edge Creek, AK 41.16 43 P **P** **11 22 58.7 +0.5**
baz=290,SNR=76
M27K S **S** **11 29 15.9 +5.1**
baz=290
CRQE Cirque 41.16 46 P **P** **11 22 59.1 +0.9**
baz=290,SNR=14
TGL Tana Glacier 41.27 46 IAMs_20 IAMs_20 11 41 05.7
comp=Z,6µm,20.0s
WAX Waxell Ridge 41.37 46 IAMs_20 IAMs_20 11 40 51.4
comp=Z,7µm,20.0s
ISLE Juniper Island 41.56 46 IAMs_20 IAMs_20 11 41 25.4
comp=Z,6µm,20.0s
BVCY Beaver Creek 41.58 43 P **P** **11 23 01.8 +0.3**
baz=290,SNR=23
BVCY S **S** **11 29 21.1 +4.2**
baz=290
DAWY Dawson 41.65 40 P **P** **11 23 01.9 -0.2**
DAWY Dawson 41.65 40 P **P** **11 23 01.3 -0.8**
baz=290,SNR=59
DAWY S **S** **11 29 22.8 +4.9**
baz=290
I29M Ogilvie Camp, 41.66 38 P **P** **11 23 02.0 -0.1**
baz=289,SNR=34
I29M S **S** **11 29 22.9 +4.9**
baz=289
GRNC Granite Creek 41.78 46 IAMs_20 IAMs_20 11 41 42.7
comp=Z,6µm,21.0s
CTG Chitna Glacier 41.88 45 P **P** **11 23 04.4 +0.3**
baz=291,SNR=40
CTGM Chitina Glacie 41.88 45 IAMs_20 IAMs_20 11 42 40.6
comp=Z,4µm,19.0s
MESA MESA 41.89 46 P **P** **11 23 04.3 0.0**
baz=292,SNR=8.1
YAH Yahtse 41.92 46 P **P** **11 23 05.2 +0.6**
YAH IAMs_20 IAMs_20 11 41 20.4
comp=Z,6µm,20.0s
EPYK Eagle Plains 41.95 37 P **P** **11 23 05.4 +0.9**
EPYK IAmb IAmb 11 23 07.8
comp=Z,144nm,0.8s
EPYK Eagle Plains 41.95 37 P **P** **11 23 04.5 0.0**
baz=289,SNR=112
EPYK S **S** **11 29 19.3 -3.0**
baz=289
YUK3 Moose Creek 41.98 44 P **P** **11 23 05.1 0.0**
baz=291,SNR=23
YUK3 S **S** **11 29 23.8 +0.6**
baz=291
J29M Klondike Camp 42.00 40 P **P** **11 23 05.4 +0.4**
baz=290
J29M S **S** **11 29 25.7 +2.5**
baz=290
LKP Lekhapani 42.03 255 *e*P **P** **11 23 06.9 +1.3**
LOGN Logan Glacier 42.09 45 IAMs_20 IAMs_20 11 41 53.2
comp=Z,5µm,20.0s
TABL Table Mountain 42.17 46 IAMs_20 IAMs_20 11 41 26.0
comp=Z,4µm,20.0s
TDK Taldyqorghan 42.20 288 LR LR 11 40 50.3
comp=Z,4µm,10.7s,baz=288
O28M Mount Upton 42.48 45 P **P** **11 23 08.9 -0.3**
baz=292,SNR=32
O28M S **S** **11 29 34.9 +4.2**
baz=292
INK Inuvik 42.48 33 P **P** **11 23 08.7 0.0**
comp=Z,152nm,0.8s,baz=296,slow=7.7,SNR=117
INK LR LR 11 43 13.1
comp=Z,4µm,19.7s,baz=265,slow=40
comp=Z,152nm,0.8s
INK Inuvik 42.48 33 P **P** **11 23 09.5 +0.7**
INK IAmb IAmb 11 23 11.9
comp=Z,164nm,0.8s
INK Inuvik 42.48 33 P **P** **11 23 08.9 +0.1**
baz=290,SNR=165
INK S **S** **11 29 31.2 +1.3**
baz=290

SHLS	**Shalkode**	**42.53**	**285**	*e*P		**P**	**11 23 07.1**	**-2.5**
SHLS				*e*S		**S**	**11 29 27.7**	**-3.8**
SHLS	**Shalkode**	**42.53**	**285**	*e*P		**P**	**11 23 07.2**	**-2.5**
	baz=285							
SHLS				*e*S		**S**	**11 29 27.8**	**-3.8**
	baz=285							
M29M	**Somme Creek**	**42.61**	**42**	P		**P**	**11 23 10.4**	**+0.4**
	baz=292							
M29M				S		**S**	**11 29 33.0**	**+0.7**
	baz=292							
PINM	**Pinnacle**	**42.71**	**46**	P		**P**	**11 23 10.4**	**-0.4**
	baz=293							
UZB	**Uzynbulak**	**42.80**	**286**	*e*P		**P**	**11 23 12.4**	**+0.5**
UZB				*e*S		**S**	**11 29 35.5**	**-0.1**
UZB	**Uzynbulak**	**42.80**	**286**	*e*P		**P**	**11 23 12.4**	**+0.5**
	baz=286							
UZB				*e*S		**S**	**11 29 35.6**	**-0.1**
	baz=286							
KPKS	**Kokpek**	**42.84**	**286**	*e*P		**P**	**11 23 12.8**	**+0.7**
KPKS				*e*S		**S**	**11 29 36.1**	**+0.1**
KPKS				pmax		pmax		
	comp=Z,94nm,1.4s							
KPKS	**Kokpek**	**42.84**	**286**	*e*P		**P**	**11 23 12.9**	**+0.7**
	comp=Z,94nm,1.4s,baz=286							
KPKS				*e*S		**S**	**11 29 36.1**	**+0.1**
	baz=286							
YUK4	**Talbot Arm**	**42.95**	**44**	P		**P**	**11 23 12.8**	**-0.1**
	baz=293,SNR=27							
BVA0	**Borovoye Array**	**42.96**	**303**	*i* P		**P**	**11 23 12.3**	**-0.5**
BRVK	**Borovoye**	**43.00**	**303**	IAMs_20		IAMs_20	11 39 40.8	
	comp=Z,5μm,19.0s							
BRVK	**Borovoye**	**43.00**	**303**	*ce*P		**P**	**11 23 13.2**	**0.0**
BRVK				pmax		pmax		
	comp=Z,67nm,1.7s							
BRVK				MLR		MLR		
	comp=Z,8μm,12.0s							
BRVK	**Borovoye**	**43.00**	**303**	P		**P**	**11 23 13.4**	**+0.2**
BRVK	**Borovoye**	**43.00**	**303**	*e*P		**P**	**11 23 13.2**	**0.0**
BRZS	**Berezniki**	**43.10**	**298**	*e*P		**P**	**11 23 14.0**	**0.0**
BRZS				*i* S		**S**	**11 29 39.6**	**+0.1**
BRZS				pmax		pmax		
	comp=Z,72nm,1.4s							
BRZS	**Berezniki**	**43.10**	**298**	*e*P		**P**	**11 23 14.0**	**0.0**
	comp=Z,72nm,1.4s,baz=298							
BRZS				*i* S		**S**	**11 29 39.6**	**+0.1**
	baz=298							
ZIRO	**ZIRO**	**43.13**	**257**	*e*P		**P**	**11 23 15.5**	**+0.8**
ZHN	**Zhinishke**	**43.15**	**286**	*e*P		**P**	**11 23 14.2**	**-0.5**
ZHN				*e*S		**S**	**11 29 39.9**	**-0.8**
ZHN	**Zhinishke**	**43.15**	**286**	*e*P		**P**	**11 23 14.3**	**-0.5**
	baz=286							
ZHN				*e*S		**S**	**11 29 39.9**	**-0.8**
	baz=286							
SATY	**Saty**	**43.23**	**286**	*e*P		**P**	**11 23 16.1**	**+0.8**
SATY				*e*S		**S**	**11 29 41.9**	**+0.1**
SATY				pmax		pmax		
	comp=Z,120nm,2.2s							
SATY	**Saty**	**43.23**	**286**	*e*P		**P**	**11 23 16.2**	**+0.8**
	comp=Z,120nm,2.2s,baz=286							
SATY				*e*S		**S**	**11 29 42.0**	**+0.1**
	baz=286							
YUK6	**Outpost Mounta**	**43.23**	**44**	P		**P**	**11 23 15.2**	**0.0**
	baz=293,SNR=19							
YUK6				S		**S**	**11 29 43.3**	**+1.7**
	baz=293							
PNL	**Peninsula**	**43.27**	**46**	P		**P**	**11 23 14.6**	**-0.8**
	baz=294							
LSA	**Lhasa**	**43.31**	**261**	P		**P**	**11 23 17.9**	**+1.4**
LSA				IAmb		IAmb	11 23 24.2	
	comp=Z,143nm,0.9s							
LSA				IAMs_20		IAMs_20	11 41 12.1	
	comp=Z,5μm,20.0s							
LSA	**Lhasa**	**43.31**	**261**	P		**P**	**11 23 17.9**	**+1.4**
LSA				S		**S**	**11 29 36.8**	**-7.1**
LSA				LR		LR		
	comp=Z,11μm,12.0s							
LSA				LR		LR		
	comp=Z,7μm,10.8s							
LSA				LR		LR		
	comp=Z,10μm,10.8s							
LSA	**Lhasa**	**43.31**	**261**	P		**P**	**11 23 17.9**	**+1.4**
LSA				pmax		pmax		
	comp=Z,143nm,0.9s							
LSA				MLR		MLR		
	comp=Z,5μm,20.0s							
LSA	**Lhasa**	**43.31**	**261**	P		**P**	**11 23 17.6**	**+1.1**
LSA				P		**P**	**11 23 17.6**	**+1.1**
LSA	**Lhasa**	**43.31**	**261**	P		**P**	**11 23 17.8**	**+1.4**
O29M	**Mount Kennedy**	**43.40**	**45**	P		**P**	**11 23 17.1**	**+0.7**
	baz=294,SNR=17							
O29M				S		**S**	**11 29 49.9**	**+6.1**
	baz=294							
ITAN	**ITANAGAR**	**43.48**	**256**	*e*P		**P**	**11 23 19.1**	**+1.7**
ITAN				IAmb		IAmb	11 23 22.9	
	comp=Z,258nm,1.3s							
MOKO	**MOKOCHONG**	**43.58**	**255**	*e*P		**P**	**11 23 19.7**	**+1.4**
MOKO				IAmb		IAmb	11 23 23.1	
	comp=Z,126nm,0.8s							
N30M	**Aishikik Lake**	**43.59**	**43**	P		**P**	**11 23 17.8**	**-0.2**
	baz=294,SNR=18							
N30M				S		**S**	**11 29 50.9**	**+4.3**
	baz=294							
HYT	**Haines Junctio**	**43.67**	**44**	P		**P**	**11 23 20.3**	**+1.7**
HYT				IAmb		IAmb	11 23 23.4	
	comp=Z,118nm,0.7s							
HYT	**Haines Junctio**	**43.67**	**44**	P		**P**	**11 23 19.4**	**+0.8**
	baz=294,SNR=76							
HYT				S		**S**	**11 29 49.8**	**+2.0**
	baz=294							
MDOK	**Medeo**	**44.01**	**287**	*e*P		**P**	**11 23 22.4**	**+0.8**
MDOK				*e*S		**S**	**11 29 53.5**	**+0.3**
MDOK				pmax		pmax		
	comp=Z,109nm,0.9s							
MDOK				MLR		MLR		
	comp=Z,7μm,12.0s							
MDOK	**Medeo**	**44.01**	**287**	*e*P		**P**	**11 23 22.5**	**+0.8**
	comp=Z,109nm,0.9s,baz=287							
MDOK				*e*S		**S**	**11 29 53.5**	**+0.3**
	baz=287							
MDOK				LR		LR	11 40 59.0	
	comp=Z,7μm,12.1s,baz=287							
KUU	**Kurty**	**44.04**	**288**	*e*P		**P**	**11 23 21.1**	**-0.6**
KUU				*e*S		**S**	**11 29 52.6**	**-0.8**
KUU				pmax		pmax		
	comp=Z,100nm,1.1s							
KUU				MLR		MLR		
	comp=Z,5μm,11.0s							
KUU	**Kurty**	**44.04**	**288**	*e*P		**P**	**11 23 21.1**	**-0.6**
	comp=Z,100nm,1.1s,baz=288							
KUU				*e*S		**S**	**11 29 52.7**	**-0.8**
	baz=288							
KUU				LR		LR	11 41 17.0	
	comp=Z,5μm,11.1s,baz=288							
P29M	**Windy Craggy**	**44.06**	**46**	P		**P**	**11 23 22.4**	**+0.8**
	baz=295,SNR=120							
P29M				S		**S**	**11 29 56.4**	**+3.1**
	baz=295							
AAA	**Alma-Ata**	**44.06**	**287**	*e*P		**P**	**11 23 21.8**	**-0.2**
AAA				*e*S		**S**	**11 29 53.5**	**-0.4**
AAA				MLR		MLR		
	comp=Z,6μm,11.0s							
AAA	**Alma-Ata**	**44.06**	**287**	*e*P		**P**	**11 23 21.8**	**-0.2**
	baz=287							
AAA				*e*S		**S**	**11 29 53.5**	**-0.4**
	baz=287							
AAA				LR		LR	11 41 10.2	
	comp=Z,6μm,11.4s,baz=287							
N31M	**Braeburn, Yuko**	**44.16**	**43**	IAMs_20		IAMs_20	11 43 06.4	
	comp=Z,4μm,19.0s							
N31M	**Braeburn, Yuko**	**44.16**	**43**	P		**P**	**11 23 23.4**	**+1.0**
	baz=295,SNR=55							
N31M				S		**S**	**11 29 57.2**	**+2.4**
	baz=295							
P30M	**Million Dollar**	**44.20**	**45**	P		**P**	**11 23 23.7**	**+0.9**
	baz=295							
P30M				S		**S**	**11 29 55.8**	**+0.3**
	baz=295							
KOHI	**KOHIMA**	**44.27**	**255**	*e*P		**P**	**11 23 24.8**	**+1.0**
O30N	**Mendenhall**	**44.32**	**44**	P		**P**	**11 23 24.3**	**+0.5**
	baz=295,SNR=47							
O30N				S		**S**	**11 29 58.5**	**+1.3**
	baz=295							
TEZP	**TEZPUR**	**44.43**	**257**	*e*P		**P**	**11 23 25.0**	**0.0**
M31M	**Drury Creek, Y**	**44.45**	**42**	P		**P**	**11 23 25.0**	**+0.2**
	baz=295,SNR=20							
M31M				S		**S**	**11 30 00.7**	**+1.7**
	baz=295							
PLBC	**Pleasant Camp**	**44.76**	**46**	P		**P**	**11 23 27.2**	**-0.1**
	baz=296,SNR=23							
PLBC				S		**S**	**11 30 04.4**	**+0.9**
	baz=296							
BTLS	**Baital**	**44.81**	**291**	*e*P		**P**	**11 23 27.8**	**0.0**
BTLS				*e*S		**S**	**11 30 04.5**	**0.0**
BTLS				pmax		pmax		
	comp=Z,51nm,2.1s							
BTLS	**Baital**	**44.81**	**291**	*e*P		**P**	**11 23 27.9**	**+0.1**
	comp=Z,50nm,2.1s,baz=291							
BTLS				*e*S		**S**	**11 30 04.5**	**0.0**
	baz=291							
WHY	**Whitehorse**	**44.91**	**44**	P		**P**	**11 23 28.9**	**+0.4**
	baz=296,SNR=28							
WHY				S		**S**	**11 30 08.4**	**+2.7**
	baz=296							
ULHL	**Ulahol**	**45.01**	**286**	P		**P**	**11 23 32.0**	**+2.3**
	SNR=11							
IMP	**Imphal**	**45.01**	**254**	*e*P		**P**	**11 23 30.2**	**+0.4**
IMP				IAmb		IAmb	11 23 33.9	
	comp=Z,109nm,0.9s							
TKM2	**Tokmak 2**	**45.03**	**287**	P		**P**	**11 23 30.8**	**+0.9**
	SNR=33							
TKM2	**Tokmak 2**	**45.03**	**287**	P		**P**	**11 23 29.8**	**0.0**
SKAG	**Skagway**	**45.24**	**45**	P		**P**	**11 23 31.5**	**+0.5**
	baz=297,SNR=11							
SKAG				S		**S**	**11 30 16.4**	**+6.1**
	baz=297							
C36M	**Paulatuk**	**45.25**	**30**	P		**P**	**11 23 30.3**	**-0.7**
	baz=296,SNR=38							
C36M				S		**S**	**11 30 12.7**	**+2.5**
	baz=296							
SGDS	**Sogindy**	**45.32**	**289**	*e*P		**P**	**11 23 32.7**	**+0.7**
SGDS				pmax		pmax		
	comp=Z,38nm,0.9s							
SGDS	**Sogindy**	**45.32**	**289**	*e*P		**P**	**11 23 32.8**	**+0.7**
	comp=Z,38nm,0.9s,baz=289							
DAV	**Davao City (W)**	**45.39**	**204**	LR		LR	11 40 56.4	
	comp=Z,3μm,21.4s,baz=39,slow=34							
GUWA	**GUWAHATI**	**45.43**	**257**	*e*P		**P**	**11 23 33.9**	**+1.0**
N32M	**Quiet Lake**	**45.48**	**43**	P		**P**	**11 23 32.5**	**-0.4**
	baz=297							
N32M				S		**S**	**11 30 14.7**	**+0.8**
	baz=297							
CHMS	**Chumysh**	**45.50**	**288**	P		**P**	**11 23 33.8**	**+0.4**
	SNR=19							
USP	**Osenovka**	**45.51**	**288**	P		**P**	**11 23 34.4**	**+1.0**
	SNR=76							
KBK	**Karagaybulak**	**45.57**	**287**	P		**P**	**11 23 36.4**	**+2.2**
	SNR=27							
SHL	**Shillong**	**45.76**	**257**	*e*P		**P**	**11 23 36.4**	**+0.6**
SHL				IAmb		IAmb	11 23 41.6	
	comp=Z,115nm,0.7s							
AAK	**Ala-Archa**	**45.86**	**288**	LR		LR	11 44 16.9	
	comp=Z,4μm,20.7s,baz=50,slow=38							
AAK	**Ala-Archa**	**45.86**	**288**	P		**P**	**11 23 38.6**	**+2.2**
	SNR=24							
AAK	**Ala-Archa**	**45.86**	**288**	P		**P**	**11 23 36.8**	**+0.4**
AAK	**Ala-Archa**	**45.86**	**288**	IAMs_20		IAMs_20	11 42 38.9	
	comp=Z,6μm,20.0s							
AAK	**Ala-Archa**	**45.86**	**288**	P		**P**	**11 23 36.8**	**+0.4**
AAK				pmax		pmax		
	comp=Z,49nm,0.9s							
AAK				MLR		MLR		
	comp=Z,6μm,20.0s							
AAK	**Ala-Archa**	**45.86**	**288**	*e*P		**P**	**11 23 36.8**	**+0.4**
P32M	**Atlin**	**45.91**	**45**	P		**P**	**11 23 36.9**	**+0.5**
	baz=298,SNR=8.7							
P32M				S		**S**	**11 30 22.2**	**+2.1**
	baz=298							
P33M	**Teslin, Yukon**	**46.02**	**44**	IAMs_20		IAMs_20	11 42 26.9	
	comp=Z,4μm,22.0s							
P33M	**Teslin, Yukon**	**46.02**	**44**	P		**P**	**11 23 37.3**	**0.0**
	baz=298,SNR=55							
P33M				S		**S**	**11 30 24.3**	**+2.5**
	baz=298							
EKS2	**Erkin-Say**	**46.28**	**288**	P		**P**	**11 23 42.0**	**+2.3**
	SNR=43							
SIT	**Sitka**	**46.36**	**48**	P		**P**	**11 23 40.5**	**+0.6**
	baz=299,SNR=10							
SIT				S		**S**	**11 30 31.1**	**+4.7**
	baz=299							
GTK	**Tadong**	**46.57**	**261**	*e*P		**P**	**11 23 44.8**	**+2.7**
GTK				IAmb		IAmb	11 23 48.7	
	comp=Z,77nm,0.6s							
AZL	**Aizawl**	**46.59**	**254**	*e*P		**P**	**11 23 42.4**	**+0.2**
AZL				IAmb		IAmb	11 23 48.8	
	comp=Z,197nm,0.9s							
CHTO	**Chiang Mai**	**46.63**	**244**	P		**P**	**11 23 43.0**	**+0.6**
CHTO				P		**P**	**11 23 43.0**	**+0.6**
CHTO	**Chiang Mai**	**46.63**	**244**	P		**P**	**11 23 42.8**	**+0.4**
AML	**Almayashu**	**46.64**	**288**	P		**P**	**11 23 43.8**	**+1.0**
	SNR=22							
KSH	**Kashi**	**46.75**	**283**	P		P	11 23 47.4	+4.0
KSH				pP		sP	11 23 51.1	+1.8
KSH				S		**S**	**11 30 39.3**	**+6.4**
KSH				ScS		**ScS**	**11 33 42.3**	**+4.6**
KSH				pmax		pmax		
	comp=Z,21nm,1.2s							
KSH				pmax		pmax		
	comp=Z,1μm,5.0s							
KSH				LR		LR		
	comp=Z,19μm,16.4s							
KSH				LR		LR		
	comp=Z,12μm,14.8s							
KSH				LR		LR		
	comp=Z,11μm,14.9s							
CM31	**Chiang Mai Arr**	**46.91**	**243**	P		**P**	**11 23 45.3**	**+0.6**
	SNR=12							
CMAR	**Chiang Mai Arr**	**46.91**	**243**	P		**P**	**11 23 45.4**	**+0.8**
	comp=Z,33nm,0.9s,baz=25,slow=7.1,SNR=70							
CMAR				PcP		**PcP**	**11 25 17.5**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=27,slow=2.2,SNR=2.5							
CMAR				LR		LR	11 45 39.0	
	comp=Z,5μm,18.9s,baz=35,slow=39							
	comp=Z,33nm,0.9s							
R33M	**Jennings River**	**47.23**	**44**	P		**P**	**11 23 47.6**	**+0.7**
	baz=300,SNR=46							
R33M				S		**S**	**11 30 42.0**	**+2.7**
	baz=300							
HOPEN	**Hopen**	**47.34**	**344**	*e*P		**P**	**11 23 48.1**	**+0.7**
ARU	**Arti**	**47.38**	**311**	LR		LR	11 45 29.6	
	comp=Z,5μm,19.2s,baz=58,slow=38							
ARU	**Arti**	**47.38**	**311**	*c i* P		**P**	**11 23 47.5**	**-0.4**
ARU							11 25 16.6	
ARU							11 25 37.9	
ARU				PPP		PPP	11 26 21.9	
ARU				S		**S**	**11 30 41.2**	**0.0**
ARU							11 33 40.0	
ARU				SSS		SSS	11 35 12.3	
ARU				pmax		pmax		
	comp=Z,67nm,1.0s							
ARU				MLR		MLR		
	comp=Z,7μm,16.0s							
ARU	**Arti**	**47.38**	**311**	*e*P		**P**	**11 23 47.5**	**-0.4**
SPA0	**Spitsbergen Ar**	**47.62**	**347**	*e*P		P	11 23 53.7	+4.2
SPITS	**Spitsbergen Ar**	**47.62**	**347**	LR		LR	11 46 46.9	
	comp=Z,2μm,18.3s,baz=2.0,slow=40							
DZA	**Taraz**	**47.63**	**290**	*e*P		**P**	**11 23 50.5**	**+0.4**
DZA				*e*S		**S**	**11 30 45.6**	**+0.4**
DZA	**Taraz**	**47.63**	**290**	*e*P		**P**	**11 23 50.5**	**+0.4**
	baz=290							
DZA				*e*S		**S**	**11 30 45.6**	**+0.4**
	baz=290							
ODAN	**Odare**	**47.66**	**262**	*e*P		**P**	**11 23 50.4**	**-0.3**
KBS	**Kingsbay**	**47.67**	**349**	*e*P		**P**	**11 23 51.3**	**+1.5**
NOR	**Nord**	**47.79**	**356**	*i* P		**P**	**11 23 51.0**	**+0.3**
NOR				IAmb		IAmb	11 23 56.3	
	comp=Z,36nm,1.0s							
NOR				*e*PP		**PP**	**11 25 41.8**	**-0.4**
JIRN	**Jiri**	**47.87**	**264**	*e*P		**P**	**11 23 52.6**	**+0.1**
	comp=Z,285nm,0.9s							
GUN	**Gumba**	**47.89**	**264**	*e*P		**P**	**11 23 52.6**	**0.0**
	comp=Z,339nm,1.0s							
KK31	**Karatay Array**	**48.00**	**291**	*i* P		**P**	**11 23 52.8**	**-0.1**
KKAR	**Karatay Array**	**48.00**	**291**	P		**P**	**11 23 54.5**	**+1.5**
KKAR	**Karatay Array**	**48.00**	**291**	P		**P**	**11 23 54.5**	**+1.5**
RAMN	**Ramite**	**48.10**	**263**	*e*P		**P**	**11 23 54.2**	**+0.1**
	comp=Z,548nm,0.9s							
WRAK	**Wrangell Islan**	**48.10**	**48**	IAMs_20		IAMs_20	11 43 08.1	
	comp=Z,4μm,20.0s							
WRAK	**Wrangell Islan**	**48.10**	**48**	P		**P**	**11 23 54.4**	**+0.9**
	baz=301,SNR=24							
WRAK				S		**S**	**11 30 54.6**	**+3.3**
	baz=301							
DLBC	**Dease Lake**	**48.14**	**45**	LR		LR	11 46 20.3	
	comp=Z,3μm,18.1s,baz=314,slow=39							
DLBC	**Dease Lake**	**48.14**	**45**	P		**P**	**11 23 55.3**	**+1.5**
DLBC				IAmb		IAmb	11 23 58.2	
	comp=Z,78nm,0.8s							
DLBC	**Dease Lake**	**48.14**	**45**	P		**P**	**11 23 54.5**	**+0.7**
	baz=301,SNR=81							
DLBC				S		**S**	**11 30 53.7**	**+1.7**
	baz=301							
CRAG	**Craig**	**48.22**	**49**	P		**P**	**11 23 54.9**	**+0.5**
	baz=301,SNR=6.7							
CRAG				S		**S**	**11 30 54.4**	**+1.4**
	baz=301							
KKN	**Kakani**	**48.35**	**264**	*e*P		**P**	**11 23 55.7**	**-0.4**
PKI	**Pulchoki**	**48.42**	**264**	*e*P		**P**	**11 23 56.3**	**-0.4**
	comp=Z,106nm,0.8s							
PKIN	**Phulchoki**	**48.43**	**264**	*e*P		**P**	**11 23 56.4**	**-0.3**
	comp=Z,101nm,0.9s							
DMN	**Daman**	**48.59**	**264**	*e*P		**P**	**11 23 58.1**	**+0.2**
	comp=Z,182nm,0.9s							
GKN	**Gorkha**	**48.62**	**265**	*e*P		**P**	**11 23 58.1**	**+0.1**
	comp=Z,451nm,1.0s							
T35M	**Bob Quinn**	**48.79**	**47**	P		**P**	**11 24 00.0**	**+1.2**
	baz=302,SNR=33							
T35M				S		**S**	**11 31 07.6**	**+6.4**
	baz=302							
IUG	**Iuzhnay**	**48.85**	**290**	*e*P		**P**	**11 24 00.3**	**+0.7**
IUG				*e*S		**S**	**11 31 03.0**	**+0.5**
IUG	**Iuzhnay**	**48.85**	**290**	*e*P		**P**	**11 24 00.3**	**+0.7**
	baz=290							
IUG				*e*S		**S**	**11 31 03.0**	**+0.5**
	baz=290							
DANN	**Dangsing**	**48.94**	**266**	*e*P		**P**	**11 24 01.3**	**+0.7**
	comp=Z,607nm,0.8s							
KKM	**Kota Kinabalu**	**49.31**	**215**	P		**P**	**11 24 03.6**	**+0.3**
KKM	**Kota Kinabalu**	**49.31**	**215**	P		**P**	**11 24 05.5**	**+2.2**
RES	**Resolute Bay**	**49.57**	**17**	LR		LR	11 48 37.2	
	comp=Z,3μm,18.4s,baz=316,slow=40							
RES	**Resolute Bay**	**49.57**	**17**	P		**P**	**11 24 04.7**	**+0.2**
RES	**Resolute Bay**	**49.57**	**17**	P		**P**	**11 24 04.7**	**+0.2**
RES				pmax		pmax		
	comp=Z,47nm,0.9s							
DIB	**Dawson Inlet,**	**49.75**	**52**	P		**P**	**11 24 07.4**	**+1.3**
DIB				IAmb		IAmb	11 24 11.1	
	comp=Z,208nm,1.3s							
BJO1	**Bjornoya**	**49.82**	**343**	*e*P		**P**	**11 24 06.6**	**+0.2**
PRGR	**Permogore**	**50.28**	**322**	*e*P		**P**	**11 24 10.6**	**+0.6**
LVZ	**Lovozero**	**50.41**	**332**	*ce*P		**P**	**11 24 11.9**	**+0.9**
LVZ				pmax		pmax		
	comp=Z,38nm,1.3s							
LVZ				MLR		MLR		
	comp=Z,4μm,15.0s							
KIRV	**Kirov**	**50.42**	**317**	LR		LR	11 47 32.6	
	comp=Z,4μm,19.1s,baz=57,slow=38							
KIRV	**Kirov**	**50.42**	**317**	*ce*P		**P**	**11 24 12.2**	**+1.1**
LGTI	**Lohaghat**	**50.44**	**270**	*e*P		**P**	**11 24 13.3**	**+1.6**
AB31	**Akbulak array**	**50.53**	**303**	*i* P		**P**	**11 24 12.0**	**-0.1**
ABKAR	**Akbulak array**	**50.53**	**303**	P		**P**	**11 24 12.5**	**+0.3**
GRNB	**Grenville Isla**	**50.64**	**50**	P		**P**	**11 24 13.9**	**+1.0**
AKTO	**Aktyubinsk**	**50.88**	**305**	LR		LR	11 47 57.2	
	comp=Z,6μm,19.5s,baz=44,slow=39							
AKTO	**Aktyubinsk**	**50.88**	**305**	P		**P**	**11 24 14.0**	**-0.8**
APA	**Apatity**	**50.99**	**332**	*i* P		**P**	**11 24 15.1**	**-0.2**
APA				*i*			11 25 30.5	
APA				*i*			11 26 15.0	
APA				*i* S		**S**	**11 31 28.0**	**-3.5**
APA				*i* SS		**SS**	**11 35 11.0**	**+5.4**
APA				pmax		pmax		
	comp=Z,27nm,0.9s							
APA				MLR		MLR		
	comp=Z,3μm,17.0s							
DDI	**Dehra Dun**	**51.25**	**272**	*e*P		**P**	**11 24 19.6**	**+1.7**
SMLA	**Simla**	**51.28**	**274**	*e*P		**P**	**11 24 18.0**	**0.0**
SMLA				IAmb		IAmb	11 24 23.6	
	comp=Z,199nm,0.7s							
THN	**Thein Dam**	**51.34**	**276**	*e*P		**P**	**11 24 19.6**	**+1.2**
CHGR	**Chuyangaron**	**51.49**	**287**	P		**P**	**11 24 19.8**	**+0.2**
CHGR	**Chuyangaron**	**51.49**	**287**	P		**P**	**11 24 19.8**	**+0.2**
CHGR				pmax		pmax		
	comp=Z,256nm,0.7s							
HAMF	**Hammerfest**	**51.56**	**338**	*e*P		**P**	**11 24 19.5**	**0.0**
BHK	**Bhakra**	**51.57**	**275**	*e*P		**P**	**11 24 22.0**	**+1.8**
BAKI	**Biak**	**51.65**	**188**	P		**P**	**11 24 20.3**	**-0.5**
	comp=Z,3μmcomp=Z,130nm,1.2s							
JMU	**Jammu**	**51.68**	**277**	*e*P		P	11 24 25.2	+4.2
TULEG	**Thule**	**51.80**	**9**	P		**P**	**11 24 21.4**	**+0.2**
TULEG				IAmb		IAmb	11 24 29.1	
	comp=Z,192nm,1.0s							
TULEG				IAMs_20		IAMs_20	11 48 34.9	
	comp=Z,4μm,19.0s							
TULEG	**Thule**	**51.80**	**9**	*i* P		**P**	**11 24 21.6**	**+0.3**
TULEG				IAmb		IAmb	11 24 28.7	
	comp=Z,188nm,1.0s							
ARA0	**ARCESS Array S**	**51.88**	**336**	*e*P		**P**	**11 24 22.7**	**+0.8**
ARCES	**ARCESS Array B**	**51.88**	**336**	P		**P**	**11 24 22.5**	**+0.5**
	comp=Z,23nm,1.0s,baz=47,slow=8.8,SNR=34							
ARCES				PcP		**PcP**	**11 25 35.0**	**+0.5**
	comp=Z,19nm,0.8s,baz=51,slow=4.8,SNR=6.4							
ARCES				LR		LR	11 50 33.8	
	comp=Z,2μm,18.1s,baz=26,slow=41							
	comp=Z,23nm,1.0s							
ARCES	**ARCESS Array B**	**51.88**	**336**	P		**P**	**11 24 22.8**	**+0.8**
SIJI	**Sorong**	**51.93**	**194**	LR		LR	11 44 14.5	
	comp=Z,3μm,20.7s,baz=50,slow=34							
NIL	**Nilore**	**52.11**	**279**	P		**P**	**11 24 25.2**	**+0.9**
NIL	**Nilore**	**52.11**	**279**	IAMs_20		IAMs_20	11 45 25.6	
	comp=Z,4μm,20.0s							
NIL	**Nilore**	**52.11**	**279**	P		**P**	**11 24 25.2**	**+0.9**
NIL				pmax		pmax		
	comp=Z,259nm,0.9s							
NIL	**Nilore**	**52.11**	**279**	P		**P**	**11 24 24.9**	**+0.7**
YKA	**Yellowknife Ar**	**52.17**	**35**	P		**P**	**11 24 24.0**	**-0.2**
	comp=Z,80nm,0.8s,baz=307,slow=7.2,SNR=194							
YKA				LR		LR	11 50 23.0	
	comp=Z,1μm,18.5s,baz=310,slow=40							
YKA				PKPPKP		P'P'df	11 54 48.9	-16
	comp=Z,0.6nm,0.9s,baz=154,slow=2.0,SNR=4.4							
	comp=Z,80nm,0.8s							
YKA	**Yellowknife Ar**	**52.17**	**35**

KLMR eScS **ScS** **11 34 16.2 -3.8**
KLMR eSS **SS** **11 35 39.8 +0.3**
KLMR eSS **SS** **11 35 39.8 +0.3**
KLMR LQ LQ 11 43 09.9
KLMR LQ LQ 11 43 09.9
KLMR LR LR 11 46 08.3
KLMR AMP 11 49 11.4
comp=Z,7µm,15.9s
JETT Jettan, Norway **53.12 338** eP **P** **11 24 31.4 +0.2**
SONA Sohna **53.28 271** eP **P** **11 24 34.3 +1.4**
MPSI Mapaga **53.40 208** P **P** **11 24 33.1 -0.7**
comp=Z,3µmcomp=Z,2µmcomp=Z,65nm,1.4s
TRO Tromso **53.41 339** eP **P** **11 24 33.5 +0.2**
HOLB Holberg **53.43 52** P **P** **11 24 34.3 +0.6**
KUDL Kundal **53.73 272** eP **P** **11 24 36.5 +0.3**
FAKI Fak Fak **53.80 193** P **P** **11 24 36.6 -0.1**
FAKI IAMs_20 IAMs_20 11 46 50.9
comp=Z,3µm,18.0s
FAKI Fak Fak **53.80 193** P **P** **11 24 36.8 +0.1**
comp=Z,4µmcomp=Z,4µmcomp=Z,329nm,0.9s
FAKI Fak Fak **53.80 193** P **P** **11 24 36.8 +0.1**
LUWI Luwuk **53.90 205** P **P** **11 24 36.3 -1.1**
comp=Z,8µmcomp=Z,126nm,0.8s
LUWI Luwuk **53.90 205** P **P** **11 24 38.1 +0.7**
comp=Z,117nm,1.2s
APSI Ampana **54.08 206** P **P** **11 24 37.8 -1.0**
comp=Z,2µmcomp=Z,44nm,0.7s
SANI Sanana **54.08 200** P **P** **11 24 37.8 -1.0**
comp=Z,3µmcomp=Z,3µmcomp=Z,132nm,0.9s
SANI Sanana **54.08 200** P **P** **11 24 38.4 -0.4**
TLCB Telegraph Cove **54.14 52** P **P** **11 24 39.2 +0.3**
TLCB IAmb IAmb 11 24 42.5
comp=Z,98nm,1.2s
KBL Kabul **54.18 283** P **P** **11 24 39.1 -0.6**
SNR=34
JHNI Jhansi **54.28 268** eP **P** **11 24 40.5 +0.2**
BLSP Bilaspur **54.38 262** eP **P** **11 24 41.4 +0.4**
BLSP ix **PP** **11 26 43.8 +0.9**
KIP Kipapa **54.51 99** ceP **P** **11 24 43.1 +1.2**
KIP pmax pmax
comp=Z,76nm,0.8s
KIP Kipapa **54.51 99** P **P** 11 24 43.7 +1.8
KIP Kipapa **54.51 99** P **P** **11 24 43.3 +1.4**
MSAI Masohi **54.75 196** P **P** **11 24 44.7 +1.1**
comp=Z,15nm,0.7s
BELG Belogornoye **54.93 312** LR LR 11 48 12.1
comp=Z,3µm,19.7s,baz=55,slow=36
BELG Belogornoye **54.93 312** iP **P** **11 24 44.9 +0.3**
BELG pmax pmax
comp=Z,17nm,1.0s
BELG MLR MLR
comp=Z,986nm,15.0s
NLAI Namlea **55.00 199** P **P** **11 24 44.5 -0.9**
comp=Z,34nm,1.1s
SMKI Samarinda **55.00 211** P **P** **11 24 47.4 +1.9**
comp=Z,4µmcomp=Z,91nm,0.7s
DBG Daneborg **55.05 354** iP **P** **11 24 44.9 -0.3**
DBG IAmb IAmb 11 24 52.7
comp=Z,5.9nm,0.8s
KRVT Keravat (AS076 **55.10 168** LR LR 11 46 56.6
comp=Z,347nm,19.4s,baz=119,slow=34
CBB Campbell River **55.20 52** P **P** **11 24 47.2 +0.6**
AAI Ambon **55.22 197** P **P** **11 24 48.7 +1.7**
comp=Z,139nm,1.4s
STEI Steigen **55.59 339** eP **P** **11 24 49.6 +0.5**
RAGD RAYAGADA **55.66 258** eP **P** **11 24 51.9 +1.6**
KSM Kuching **55.80 220** P **P** **11 24 52.0 +0.8**
KSM IAmb IAmb 11 24 58.4
comp=Z,70nm,1.0s
KSM Kuching **55.80 220** P **P** **11 24 52.2 +0.9**
LOF Lofoten **55.82 339** eP **P** **11 24 51.3 +0.5**
BKB Balikpapan **55.87 211** P **P** **11 24 52.3 +0.6**
comp=Z,4µmcomp=Z,5µmcomp=Z,213nm,1.5s
BKB Balikpapan **55.87 211** P **P** **11 24 52.8 +1.1**
VALR Valaam **55.93 327** iP **P** **11 24 52.0 +0.3**
VALR pmax pmax
comp=Z,65nm,0.9s
VALR MLR MLR
comp=Z,1µm,14.0s
FAUS Fauske **56.01 338** eP **P** **11 24 52.4 +0.3**
AJM Ajmer **56.07 272** eP **P** **11 24 52.7 -0.5**
MTKI Muara Teweh, K **56.26 214** P **P** **11 24 54.3 -0.2**
comp=Z,2µmcomp=Z,54nm,0.8s
UPNV Upernavik **56.46 7** iP **P** **11 24 55.5 +0.2**
UPNV IAmb IAmb 11 24 57.1
comp=Z,180nm,0.9s
LLLB Lillooet **56.56 49** P **P** **11 24 57.1 +0.7**
BHPL Bhopal **56.57 267** eP **P** **11 24 55.4 -1.5**
BHPL IAmb IAmb 11 24 59.6
comp=Z,177nm,1.0s
CLRS Cowichan Lake **56.59 52** P **P** **11 24 57.2 +0.6**
CLRS IAmb IAmb 11 25 01.7
comp=Z,137nm,1.0s
STKI Sintang **56.61 218** P **P** **11 24 57.8 +0.8**
comp=Z,84nm,1.0s
TTSI Tana Toraja **56.63 207** P **P** **11 24 58.4 +1.2**
comp=Z,36nm,1.3s
KULM Kulim **56.89 232** IAMs_20 IAMs_20 11 50 29.6
comp=Z,3µm,19.0s
NGP Nagpur **57.05 264** eP **P** **11 25 00.7 +0.5**
PGC Sidney **57.05 52** P **P** **11 25 00.6 +0.8**
PGC IAmb IAmb 11 25 02.8
comp=Z,115nm,0.8s
MOR8 Moi Rana **57.18 338** eP **P** **11 24 59.2 -1.3**
MOS Moscow **57.22 319** eP **P** **11 24 58.7 -2.2**
MOS e 11 25 54.3
MOS e 11 27 06.2
MOS eS **S** **11 32 56.5 +0.6**
MOS e 11 34 45.0
MOS pmax pmax
comp=Z,500nm,3.3s
MOS pmax pmax
comp=Z,50nm,0.8s
MOS MLR MLR
comp=N,3µm,14.0s
MOS MLR MLR
comp=E,4µm,14.0s
MOS MLR MLR
comp=Z,6µm,14.0s
KONS Konsvik **57.23 338** eP **P** **11 25 01.8 +0.9**
POHA Pohakuloa **57.30 98** IAMs_20 IAMs_20 11 44 19.5
comp=Z,3µm,21.0s
POHA Pohakuloa **57.30 98** P **P** **11 25 02.8 +0.6**
SUMG Summit **57.35 0** P **P** **11 25 02.2 +0.1**
SUMG Summit **57.35 0** P **P** **11 25 02.2 +0.1**
SUMG pmax pmax
comp=Z,165nm,0.9s
SUMG MLR MLR
comp=Z,4µm,19.0s
SUMG Summit **57.35 0** iP **P** **11 25 02.9 +0.8**
SUMG IAmb IAmb 11 25 09.2
comp=Z,192nm,1.0s
IPM Ipoh **57.39 231** IAMs_20 IAMs_20 11 49 54.0
comp=Z,3µm,20.0s
IPM Ipoh **57.39 231** P **P** **11 25 03.5 +0.9**
FIA1 FINESS Array S **57.49 329** P **P** **11 25 02.6 -0.1**
FIA1 IAmb IAmb 11 25 04.4
comp=Z,73nm,0.8s
FINES FINESS Array B **57.49 329** P **P** **11 25 02.7 0.0**
comp=Z,57nm,0.8s,baz=46,slow=6.3,SNR=106
FINES LR LR 11 53 59.8
comp=Z,3µm,19.2s,baz=50,slow=40
comp=Z,57nm,0.8s
FINES FINESS Array B **57.49 329** iP **P** **11 25 02.5 -0.2**
FINES pmax pmax
comp=Z,57nm,0.8s
SPSI Sidrap Palu **57.52 207** P **P** **11 25 03.3 -0.1**
comp=Z,2µmcomp=Z,48nm,1.0s
NLWA Neilton Lookou **57.66 53** IAMs_20 IAMs_20 11 47 11.0
comp=Z,3µm,22.0s
NUUG Nuugaatsiaq **57.89 6** iP **P** **11 25 06.1 +0.8**
NUUG IAmb IAmb 11 25 08.9
comp=Z,84nm,1.1s
OBN Obninsk **58.09 319** LR LR 11 51 43.1
comp=Z,335nm,20.1s,baz=53,slow=38
OBN Obninsk **58.09 319** deP **P** **11 25 06.7 -0.3**
OBN e 11 27 20.8
OBN iS **S** **11 33 07.2 -0.1**
OBN pmax pmax
comp=Z,65nm,1.3s
OBN MLR MLR
comp=Z,7µm,14.0s
JASL Jaisalmer **58.15 275** eP **P** **11 25 10.1 +2.3**
MYKOM Kota Tinggi **58.36 227** IAMs_20 IAMs_20 11 53 14.8
comp=Z,3µm,18.0s

VRH Novokhopyorsk **58.49 314** eP **P** **11 25 09.2 -0.7**
VRH eS **S** **11 33 09.6 -3.0**
VRH pmax pmax
comp=Z,80nm,0.9s
VRH smax smax
comp=E,700nm,10.0s
VRH MLR MLR
comp=Z,7µm,15.0s
KAPI Kappang **58.52 207** LR LR 11 52 28.0
comp=Z,398nm,18.5s,baz=34,slow=38
KAPI Kappang **58.52 207** iP **P** **11 25 09.8 -0.7**
KAPI pmax pmax
comp=Z,71nm,1.2s
KAPI Kappang **58.52 207** P **P** **11 25 10.3 -0.2**
KAPI P **P** **11 25 10.3 -0.2**
KAPI P **P** **11 25 10.3 -0.2**
KAPI Kappang **58.52 207** P **P** **11 25 11.2 +0.7**
GEYT Alibeck **58.60 293** P **P** **11 25 11.7 +0.8**
comp=Z,37nm,0.7s,baz=40,slow=2.5,SNR=32
GEYT LR LR 11 51 53.5
comp=Z,4µm,18.1s,baz=80,slow=38
comp=Z,37nm,0.7s
GEYT Alibeck **58.60 293** P **P** **11 25 11.9 +0.9**
GEYT IAmb IAmb 11 25 15.2
comp=Z,46nm,0.8s
GYA0 ALIBECK ARRAY **58.60 293** P **P** **11 25 12.0 +1.0**
GYA0B ALIBECK ARRAY **58.60 293** P **P** **11 25 13.0 +2.0**
GYA0B IAmb IAmb 11 25 17.7
comp=Z,57nm,0.9s
AKL Akola **58.67 265** eP **P** **11 25 12.9 +1.4**
LPSR Galich'ya Gora **58.80 316** eP **P** **11 25 11.3 -0.7**
LPSR eS **S** **11 33 15.3 -1.4**
LPSR pmax pmax
comp=Z,40nm,0.9s
LPSR smax smax
comp=E,740nm,11.9s
LPSR MLR MLR
comp=Z,6µm,15.0s
SCO Scoresbysund **58.92 354** iP **P** **11 25 11.3 -1.3**
SCO IAmb IAmb 11 25 17.6
comp=Z,70nm,1.3s
MEF Metsahovi **58.96 329** eP **P** **11 25 13.6 +0.6**
F04D Rainier, OR **58.96 54** P **P** **11 25 13.5 +0.3**
baz=312,SNR=11
NSS Namsos **59.12 337** eP **P** **11 25 14.4 +0.3**
RAF Rauma **59.19 331** eP **P** **11 25 15.4 +0.9**
VORR Voronezh **59.32 315** eP **P** **11 25 16.3 +0.7**
VORR pmax pmax
comp=Z,40nm,0.4s
G03D McMinnville, O **59.41 55** P **P** **11 25 16.8 +0.4**
baz=312
VJD Vijayawada **59.46 259** eP **P** **11 25 17.6 +0.5**
VSU Vasula **59.48 327** iP **P** **11 25 17.4 +0.8**
VSU pmax pmax
comp=Z,168nm,0.9s
VSU MLR MLR
comp=Z,8µm,17.0s
VSU Vasula **59.48 327** eP **P** **11 25 16.7 +0.1**
VSR Storozhevoye **59.65 315** eP **P** **11 25 16.7 -1.2**
VSR eS **S** **11 33 26.8 -0.9**
VSR pmax pmax
comp=Z,40nm,0.9s
VSR smax smax
comp=E,1µm,13.0s
VSR MLR MLR
comp=Z,8µm,14.0s
I02E Swisshome, OR **59.85 56** P **P** **11 25 20.2 +0.8**
baz=312,SNR=7.7
PSI Prapat **59.89 233** LR LR 11 54 59.9
comp=Z,2µm,18.6s,baz=5.0,slow=40
PSI Prapat **59.89 233** P **P** **11 25 21.4 +1.2**
RPSI Rantau Prapat **59.98 232** IAMs_20 IAMs_20 11 54 57.6
comp=Z,3µm,18.0s
DSRI Dabo **60.02 225** P **P** **11 25 22.4 +1.5**
comp=Z,2µmcomp=Z,46nm,1.4s
HYBB Hyderabad (bro **60.11 261** eP **P** **11 25 22.1 +0.5**
HYBB IVmB_BB 11 25 28.6
comp=Z,755nm,3.1s
HYBB ePP **PP** **11 27 33.9 -0.2**
HYBB eScP **ScP** **11 30 08.2 +0.4**
HYBB eS **S** **11 33 36.2 +1.7**
HYBB eScS **ScS** **11 35 10.1 -1.8**
HYBB IVMs_BB IVMs_BB 11 53 53.1
comp=Z,1µm,13.1s
H04D Lebanon **60.16 55** P **P** **11 25 21.6 +0.1**
baz=313,SNR=26
MTSE Matsuda **60.29 328** eP **P** **11 25 23.4 +1.2**
ILULI Ilulissat **60.31 5** IAMs_20 IAMs_20 11 51 46.9
comp=Z,3µm,20.0s
ILULI Ilulissat **60.31 5** iP **P** **11 25 22.9 +0.7**
ILULI IAmb IAmb 11 25 25.8
comp=Z,99nm,1.1s
H04A Detroit Lake **60.34 55** P **P** **11 25 23.6 +0.8**
I03D Drain, OR **60.39 56** P **P** **11 25 23.9 +0.8**
baz=313,SNR=52
G05D Wamic, OR **60.41 54** P **P** **11 25 23.2 -0.1**
baz=313,SNR=22
KEBM Edson Butte **60.42 58** P **P** **11 25 25.2 +1.8**
NEW Newport **60.43 49** LR LR 11 51 48.8
comp=Z,2µm,20.9s,baz=344,slow=36
NEW Newport **60.43 49** IAMs_20 IAMs_20 11 49 27.3
comp=Z,2µm,22.0s
NEW Newport **60.43 49** P **P** **11 25 22.9 -0.6**
baz=314,SNR=65
J01E Myrtle Point **60.44 57** P **P** **11 25 24.6 +1.1**
baz=313,SNR=44
TBLU Trondheim **60.61 337** eP **P** **11 25 22.6 -1.8**
I04A Tendick Farm, **60.82 56** P **P** **11 25 26.9 +0.7**
baz=313,SNR=97
DBO Dodson Butte **60.84 57** P **P** **11 25 28.0 +1.6**
DBO IAmb IAmb 11 25 31.6
comp=Z,101nm,1.1s
ICESG Greenland Ices **60.84 1** iP **P** **11 25 26.7 +0.4**
ICESG IAmb IAmb 11 25 33.2
comp=Z,234nm,0.9s
K02D Willamette Mer **60.90 57** P **P** **11 25 27.6 +0.8**
baz=313,SNR=33
BKNI Bangkinang **60.98 229** IAMs_20 IAMs_20 11 54 13.1
comp=Z,2µm,18.0s
I05D Terrebonne, OR **61.01 55** P **P** **11 25 27.7 +0.2**
baz=314,SNR=50
MAK Makhachkala **61.20 303** ciP **P** **11 25 24.2 -4.4**
MAK eS **S** **11 33 39.1 -8.6**
MAK pmax pmax
comp=Z,307nm,2.1s
MAK MLR MLR
comp=Z,4µm,11.0s
MMRI Maumere **61.32 203** P **P** **11 25 27.7 -2.0**
comp=Z,3µmcomp=Z,4µmcomp=Z,176nm,1.1s
MMRI Maumere **61.32 203** P **P** **11 25 30.0 +0.3**
L02F Cave Junction **61.35 58** P **P** **11 25 30.6 +0.9**
baz=314,SNR=21
J04D Umpqua Nationa **61.36 56** P **P** **11 25 30.9 +0.8**
baz=314,SNR=89
WALA Waterton Lakes **61.40 47** P **P** **11 25 30.1 0.0**
WALA IAmb IAmb 11 25 32.7
comp=Z,101nm,0.8s
HNR Honiara **61.50 160** P **P** **11 25 31.7 +0.8**
comp=Z,38nm,0.5s,baz=162,slow=20,SNR=0.8
HNR LR LR 11 49 29.8
comp=Z,2µm,21.9s,baz=339,slow=33
comp=Z,38nm,0.5s
EDFI Ende, Flores **61.57 203** P **P** **11 25 28.4 -3.1**
comp=Z,2µmcomp=Z,936nmcomp=Z,39nm,0.8s
SOEG Soedalen **61.65 357** iP **P** **11 25 32.4 +1.1**
SOEG IAmb IAmb 11 25 38.4
comp=Z,34nm,0.8s
J05D Fort Rock, OR **61.79 55** P **P** **11 25 33.9 +1.0**
baz=314,SNR=140
MOL Molde **61.85 338** eP **P** **11 25 33.1 +0.4**
GSI Gunungsitoli **61.86 233** P **P** **11 25 34.3 +0.9**
comp=Z,3µmcomp=Z,106nm,1.7s
GSI Gunungsitoli **61.86 233** P **P** **11 25 34.4 +1.0**
ISAL Salakas **61.87 325** eP **P** **11 25 33.6 +0.6**
FCC Fort Churchill **61.89 29** P **P** **11 25 32.7 -0.3**
FCC Fort Churchill **61.89 29** P **P** **11 25 32.7 -0.3**
FCC pmax pmax
comp=Z,151nm,1.1s
DOMB Dombas **61.93 337** eP **P** **11 25 34.0 +0.7**
GROC Groznyy **61.94 305** eP **P** **11 25 34.6 +1.0**
GROC S **S** **11 33 56.6 -0.5**
GROC pmax pmax
comp=Z,63nm,0.6s
L04D Klamath Falls **61.96 57** P **P** **11 25 34.8 +0.8**
L04D Klamath Falls **61.96 57** P **P** **11 25 34.8 +0.8**
baz=314,SNR=107

L04D S **S** **11 33 59.0 +1.2**
baz=314
K04D Chiloquin, OR **61.98 56** P **P** **11 25 34.3 +0.3**
baz=314
K04D S **S** **11 34 03.1 +5.2**
baz=314
IIGN Ignalina **62.00 325** eP **P** **11 25 34.1 +0.2**
MNK Minsk **62.02 323** iP **P** **11 25 35.2 +1.2**
MNK i 11 26 15.5
MNK i 11 27 51.6
MNK iPPP PPP 11 29 17.8
MNK iS **S** **11 33 58.6 +0.9**
MNK i 11 35 25.3
MNK iSS **SS** **11 38 02.4 +3.1**
MNK pmax pmax
comp=Z,85nm,0.7s
MNK pmax pmax
comp=E,8.0nm,1.0s
MNK pmax pmax
comp=N,3.0nm,0.8s
MNK MLR MLR
comp=Z,8µm,17.0s
MNK MLR MLR
comp=E,760nm,15.0s
MNK Minsk **62.02 323** iP **P** **11 25 35.2 +1.2**
comp=E,8.0nm,1.0s
MNK iP **P** **11 25 35.2 +1.2**
comp=N,3.0nm,0.8s
MNK iP **P** **11 25 35.2 +1.2**
comp=Z,85nm,0.7s,baz=220
MNK iPcP **PcP** **11 26 15.5 +1.1**
MNK iPP **PP** **11 27 51.7 +1.8**
MNK iPPP PPP 11 29 17.8
MNK iS **S** **11 33 58.7 +0.9**
MNK iSS **SS** **11 38 02.5 +3.1**
MNK iSSS SSS 11 41 08.6
MNK iLQ LQ 11 48 06.2
MNK iLR LR 11 52 00.5
MNK iLRM MLR 11 54 54.9
comp=Z,8µm,16.8s
MNK iLRM MLR 11 54 56.9
comp=E,760nm,15.5s
MNK iLRM MLR 11 54 56.9
comp=N,26nm,16.1s
GOF Gofitskoye **62.07 308**⇑ eP **P** **11 25 35.7 +1.2**
GOF eS **S** **11 34 03.7 +4.9**
GOF pmax pmax
comp=Z,211nm,0.9s
YBH Yreka Blue Hor **62.08 58** P **P** **11 25 35.6 +0.9**
comp=Z,139nm,1.0s,baz=355,slow=4.3,SNR=128
YBH LR LR 11 52 17.1
comp=Z,942nm,18.1s,baz=327,slow=36
comp=Z,139nm,1.0s
NACGM Naroch **62.13 324**⇓ iP **P** **11 25 34.3 -0.5**
KMPM Mount Pierce **62.22 59** P **P** **11 25 37.6 +1.9**
NB2 NORSAR Subarra **62.23 336** P **P** **11 25 35.0 -0.4**
comp=Z,63nm,1.1s,baz=32,slow=6.9
NB2 NORSAR Subarra **62.23 336** P **P** **11 25 35.0 -0.4**
baz=32,slow=6.9
NOA NORSAR Array B **62.23 336** P **P** **11 25 35.1 -0.2**
comp=Z,38nm,0.9s,baz=34,slow=6.5,SNR=94
NOA LR LR 11 58 23.1
comp=Z,1µm,18.5s,baz=10.0,slow=42
comp=Z,38nm,0.9s
HFS Hagfors **62.30 334** LR LR 11 55 29.0
comp=Z,2µm,18.5s,baz=40,slow=39
AKN Aaknes **62.32 338** eP **P** **11 25 36.6 +0.7**
VSVD Vaisvydziai **62.35 326** eP **P** **11 25 36.4 +0.1**
K05A Summer Lake **62.36 56** P **P** **11 25 38.1 +1.3**
NC602 NORSAR Array S **62.40 335** eP **P** **11 25 36.2 -0.3**
NAO01 NORSAR Array S **62.48 336** eP **P** **11 25 37.1 +0.1**
SFJD Kangerlussuaq **62.54 6** LR LR 11 53 05.2
comp=Z,2µm,21.2s,baz=346,slow=36
SFJD Kangerlussuaq **62.54 6** IAMs_20 IAMs_20 11 52 42.7
comp=Z,2µm,21.0s
SFJD Kangerlussuaq **62.54 6** iP **P** **11 25 37.0 -0.2**
SFJD IAmb IAmb 11 25 41.4
comp=Z,718nm,2.3s
KMRM Mail Ridge **62.58 59** P **P** **11 25 40.0 +1.8**
PABE Paberze **62.71 326** eP **P** **11 25 38.8 +0.2**
PLAI Plampang **62.72 208** P **P** **11 25 36.3 -2.8**
comp=Z,2µmcomp=Z,2µmcomp=Z,116nm,0.8s
PLAI Plampang **62.72 208** P **P** **11 25 38.5 -0.6**
BMO Blue Mountains **62.73 52** IAMs_20 IAMs_20 11 50 08.1
comp=Z,3µm,22.0s
SRBI Singaraja **62.82 211** P **P** **11 25 39.6 -0.1**
comp=Z,4µmcomp=Z,5µmcomp=Z,306nm,1.0s
ABJI Asem Bagus **62.87 212** P **P** **11 25 39.5 -0.6**
comp=Z,5µmcomp=Z,5µmcomp=Z,206nm,0.9s
NCK Nalchik **62.88 306** ciP **P** **11 25 40.7 +0.7**
NCK pmax pmax
comp=Z,124nm,1.1s
NCK MLR MLR
comp=Z,4µm,14.0s
TWSI Taliwang, Sumb **62.91 209** P **P** **11 25 39.1 -1.2**
comp=Z,2µmcomp=Z,731nmcomp=Z,64nm,1.1s
KAD Karad **62.97 265** eP **P** **11 25 41.0 +0.1**
MSO Missoula **62.98 48** IAMs_20 IAMs_20 11 50 56.5
comp=Z,2µm,22.0s
MSO Missoula **62.98 48** P **P** **11 25 40.2 -0.4**
baz=316,SNR=154
MSO S **S** **11 34 11.4 +1.0**
baz=316
KIV Kislovodsk **63.03 307**⇑ iP **P** **11 25 43.2 +2.2**
KIV Kislovodsk **63.03 307** eP **P** **11 25 41.7 +0.7**
KIV e 11 28 01.1
KIV ePPP PPP 11 29 29.1
KIV eS **S** **11 34 11.1 +0.1**
KIV eSS **SS** **11 38 15.3 -0.5**
KIV pmax pmax
comp=Z,184nm,4.0s
KIV pmax pmax
comp=Z,233nm,1.1s
KIV MLR MLR
comp=Z,9µm,17.0s
KIV Kislovodsk **63.03 307** P **P** **11 25 41.7 +0.7**
KIV P **P** **11 25 41.7 +0.7**
KIV Kislovodsk **63.03 307** eP **P** **11 25 41.7 +0.7**
KIV Kislovodsk **63.03 307** iP **P** **11 25 42.4 +1.4**
SNR=28
PBUR Paburge **63.03 327** eP **P** **11 25 40.9 +0.2**
KBZ Khabaz **63.08 307** P **P** **11 25 42.0 +0.8**
comp=Z,32nm,0.9s,baz=48,slow=6.7,SNR=19
KBZ LR LR 11 57 23.6
comp=Z,9µm,18.3s,baz=42,slow=40
comp=Z,32nm,0.9s
KBZ Khabaz **63.08 307** ceP **P** **11 25 41.8 +0.6**
KBZ pmax pmax
comp=Z,74nm,1.1s
KBZ MLR MLR
comp=Z,10µm,17.0s
SHA1 Shidzhatmaz **63.20 307** ciP **P** **11 25 43.1 +0.8**
ZEI Tsey **63.22 305** eP **P** **11 25 43.0 +0.5**
ZEI pmax pmax
comp=Z,36nm,0.8s
FOO Floro **63.28 339** eP **P** **11 25 43.5 +1.2**
SKAR Skarslia **63.29 337** eP **P** **11 25 43.8 +1.3**
OSL Oslo **63.29 335** eP **P** **11 25 42.9 +0.6**
DY2G Dye2 **63.29 4** iP **P** **11 25 42.8 +0.2**
DY2G IAmb IAmb 11 25 47.1
comp=Z,1µm,2.1s
KDU Kakadu **63.39 191** P **P** **11 25 44.0 +0.5**
HYA Hoyanger **63.39 338** eP **P** **11 25 43.4 +0.4**
FRB Frobisher Bay **63.66 15** LR LR 11 56 46.3
comp=Z,4µm,18.5s,baz=348,slow=39
MTN Manton Dam **63.71 192** P **P** **11 25 45.6 0.0**
MTN Manton Dam **63.71 192** P **P** **11 25 46.3 +0.7**
SUE Sulen **63.82 339** eP **P** **11 25 47.2 +1.4**
KONO Kongsberg **63.84 335** IAMs_20 IAMs_20 11 58 10.8
comp=Z,2µm,18.0s
KONO Kongsberg **63.84 335** eP **P** **11 25 47.0 +1.1**
COEN Coen **64.06 179** P **P** **11 25 48.5 +0.6**
COEN IAmb IAmb 11 25 55.2
comp=Z,58nm,0.9s
COEN Coen **64.06 179** P **P** **11 25 49.3 +1.4**
EGMT Eagleton **64.06 45** P **P** **11 25 48.2 +0.4**
EGMT IAMs_20 IAMs_20 11 54 16.1
comp=Z,3µm,20.0s
EGMT Eagleton **64.06 45** P **P** **11 25 47.7 -0.1**
baz=318,SNR=122
HRY Holter Researc **64.06 47** P **P** **11 25 49.1 +1.2**
ASK Askoy **64.22 338** eP **P** **11 25 49.2 +0.7**
BER Bergen **64.28 338** eP **P** **11 25 49.6 +0.8**
ANGG Ammassalik, Gr **64.34 360** IAMs_20 IAMs_20 11 52 59.2
comp=Z,2µm,21.0s

ANGG Ammassalik, Gr 64.34 360 *i* P **P** **11 25 49.7 +0.5**
ANGG IAmb IAmb 11 25 53.2
comp=Z,34nm,0.7s
AKASG Malin Array Be 64.35 320 P **P** **11 25 49.0 -0.5**
comp=Z,27nm,0.7s,baz=38,slow=7.8,SNR=115
AKASG PKPPKP **P'P'df** **11 54 39.6 -5.9**
comp=Z,1.0nm,0.8s,baz=227,slow=2.8,SNR=7.5
AKASG LR LR 11 57 55.8
comp=Z,2μm,18.9s,baz=46,slow=40
comp=Z,27nm,0.7s
AKASG Malin Array Be 64.35 320 P **P** **11 25 48.8 -0.8**
AKASG IAmb IAmb 11 25 51.0
comp=Z,47nm,0.8s
AKASG Malin Array Be 64.35 320 *i* P **P** **11 25 48.7 -0.8**
AKASG pmax pmax
comp=Z,31nm,0.7s
AKBB Malin Array Si 64.35 320 P **P** **11 25 49.7 +0.2**
AKBB IAmb IAmb 11 25 50.5
comp=Z,44nm,0.8s
AKBB Malin Array Si 64.35 320 *ce*P **P** **11 25 48.2 -1.3**
KIEV Kiev 64.36 320 P **P** **11 25 48.0 -1.6**
ODD1 Odda 64.38 337 *e*P **P** **11 25 50.1 +0.5**
LRM Limekiln Ridge 64.42 48 P **P** **11 25 51.0 +0.6**
LEM Lembang 64.42 219 LR LR 11 54 11.7
comp=Z,708nm,20.8s,baz=332,slow=36
BORG Borgarnes 64.52 352 LR LR 11 52 40.7
comp=Z,734nm,20.4s,baz=2.6,slow=35
GNI Garni 64.64 303 *ce*P **P** **11 25 52.0 +0.2**
GNI pmax pmax
comp=Z,192nm,2.5s
GNI MLR MLR
comp=Z,3μm,13.0s
GNI Garni 64.64 303 P **P** **11 25 51.7 -0.2**
GNI Garni 64.64 303 P **P** **11 25 52.8 +0.9**
BEKR Beckworth 64.66 58 P **P** **11 25 52.2 +0.2**
SALM Salem 64.69 257 *e*P **P** **11 25 53.4 +1.2**
SOC Sochi 64.80 308 *e*P **P** **11 25 52.0 -0.6**
SOC *e* 11 28 14.2
SOC *e*PPP PPP 11 29 45.1
SOC *e*S **S** **11 34 32.0 -0.8**
SOC *e*SS **SS** **11 38 42.3 -0.9**
SOC *e*SSS SSS 11 41 37.7
SOC pmax pmax
comp=Z,89nm,1.1s
SOC MLR MLR
comp=Z,3μm,16.0s
BLS5 Blasjo 64.84 337 *e*P **P** **11 25 53.4 +0.7**
MCMT McKenzie Canyo 64.95 49 P **P** **11 25 54.5 +0.6**
BOZ Bozeman (W) 64.97 48 IAMs_20 IAMs_20 11 57 04.4
comp=Z,2μm,19.0s
BOZ Bozeman (W) 64.97 48 P **P** **11 25 54.1 +0.2**
baz=317,SNR=250
BOZ S **S** **11 34 35.1 -0.2**
baz=317
ANN Anapa 65.04 311 *c* *i*P **P** **11 25 53.3 -0.8**
ANN *i* *P **sP** **11 25 59.6 -0.6**
ANN *e*S **S** **11 34 35.3 -0.4**
ANN pmax pmax
comp=Z,87nm,0.8s
ANN MLR MLR
comp=E,877nm,15.0s
ANN MLR MLR
comp=Z,4μm,15.0s
HLID Hailey 65.10 51 IAMs_20 IAMs_20 11 54 39.9
comp=Z,2μm,20.0s
HLID Hailey 65.10 51 P **P** **11 25 55.0 +0.2**
baz=317,SNR=65
HLID S **S** **11 34 38.9 +2.0**
baz=317
NUUK Nuuk 65.25 7 *i* P **P** **11 25 56.1 +1.0**
NUUK IAmb IAmb 11 25 57.5
comp=Z,93nm,0.9s
KMY Karmoy 65.33 337 *e*P **P** **11 25 57.2 +1.5**
NGCH Negor - Chabah 65.45 281 P **P** **11 25 57.7 +0.7**
SNART Snartemo 65.60 336 *e*P **P** **11 25 58.9 +1.4**
QLMT Earthquake Lak 65.64 49 P **P** **11 25 58.9 +0.7**
GCMT Greycliff 65.76 47 P **P** **11 26 00.1 +1.1**
YERR Yerington 65.89 58 P **P** **11 26 00.8 +0.8**
BMN Battle Mountai 65.93 55 P **P** **11 26 00.9 +0.7**
BMN IAmb IAmb 11 26 03.8
comp=Z,84nm,0.8s
BMN Battle Mountai 65.93 55 P **P** **11 26 00.9 +0.7**
BMN pmax pmax
comp=Z,84nm,0.8s
LRW Lerwick 65.96 341 *e*P **P** **11 26 00.7 +0.8**
LRW IAmb IAmb 11 26 01.6
comp=Z,61nm,0.9s
BSD Bornholm Skovb 66.11 330 *e*P **P** **11 26 01.8 +1.0**
BSD Bornholm Skovb 66.11 330 *i* P **P** **11 26 00.8 0.0**
BSD IAmb IAmb 11 26 01.9
comp=Z,76nm,1.1s
DGMT Dagmar 66.18 42 P **P** **11 26 01.6 +0.1**
DGMT Dagmar 66.18 42 IAMs_20 IAMs_20 11 57 56.9
comp=Z,2μm,19.0s
DGMT Dagmar 66.18 42 P **P** **11 26 00.8 -0.7**
baz=320,SNR=65
DGMT Dagmar 66.18 42 P **P** **11 26 00.9 -0.6**
baz=320,SNR=65
DGMT S **S** **11 34 51.0 +1.3**
baz=320
KOD Kodaikanal 66.24 257 *e*P **P** **11 26 03.8 +1.2**
H17A Grant Village 66.37 48 P **P** **11 26 04.9 +1.8**
baz=318,SNR=115
H17A S **S** **11 34 50.6 -2.0**
baz=318
RLMT Red Lodge 66.44 47 IAMs_20 IAMs_20 11 55 48.2
comp=Z,2μm,20.0s
RLMT Red Lodge 66.44 47 P **P** **11 26 03.9 +0.4**
baz=319,SNR=246
RLMT S **S** **11 34 52.2 -1.2**
baz=319
SIM Simferopol' 66.52 313 *e*P **P** **11 26 04.1 +0.5**
SIM *e* 11 28 27.8
SIM pmax pmax
comp=Z,103nm,1.1s
SIM MLR MLR
comp=Z,11μm,22.7s
PALK Pallekele 66.54 252 P **P** **11 26 05.0 +0.8**
HORU Horodok 66.65 320 P **P** **11 26 05.0 +0.5**
LAO LASA Array 66.66 44 P **P** **11 26 04.6 0.0**
baz=320,SNR=31
LAO LASA Array 66.66 44 P **P** **11 26 05.0 +0.4**
baz=320,SNR=31
MUD Monsted U'grnd 66.70 334 *i* P **P** **11 26 04.1 -0.4**
MUD IAmb IAmb 11 26 06.5
comp=Z,36nm,1.0s
ELK Elko 66.74 54 LR LR 11 51 58.7
comp=Z,1μm,21.3s,baz=336,slow=33
MOOW Moose Ponds 66.77 49 P **P** **11 26 06.2 +0.7**
MOOW IAmb IAmb 11 26 10.2
comp=Z,98nm,1.1s
BEL Belsk 66.77 325 *e*P **P** **11 26 05.4 +0.3**
BEL *e*L L 11 58 05.3
comp=Z,4μm,16.8s
NVAR Mina Array Bea 66.80 57 P **P** **11 26 06.5 +0.6**
comp=Z,120nm,0.8s,baz=295,slow=5.1,SNR=398
NVAR LR LR 11 53 31.5
comp=Z,969nm,20.5s,baz=309,slow=34
NVAR PKP2bc 11 54 35.1
comp=Z,1.6nm,1.0s,baz=147,slow=4.6,SNR=5.2
comp=Z,120nm,0.8s
KNRA Kununurra 66.85 194 P **P** **11 26 06.4 +0.5**
KNRA Kununurra 66.85 194 P **P** **11 26 06.3 +0.4**
NV11 Mina Array Sit 66.88 57 P **P** **11 26 06.8 +0.5**
NV11 IAmb IAmb 11 26 14.4
comp=Z,117nm,1.1s
LOHW Long Hollow 66.94 49 P **P** **11 26 07.5 +0.9**
LOHW IAmb IAmb 11 26 11.3
comp=Z,136nm,1.1s
REDW Red Top Meadow 67.00 49 P **P** **11 26 07.8 +0.8**
REDW IAmb IAmb 11 26 20.2
comp=Z,123nm,1.3s
MLAC Mammoth, Mammo 67.09 58 P **P** **11 26 08.4 +0.7**
baz=317,SNR=50
MLAC S **S** **11 35 06.1 +4.6**
baz=317
LVV L'vov 67.14 322 *e*P **P** **11 26 07.3 -0.3**
LVV *e* 11 26 38.4
LVV *e* 11 28 38.0
LVV *e* 11 30 18.3
LVV *e*S **S** **11 34 57.5 -3.7**
LVV *e* 11 35 25.1
LVV *e* 11 36 05.6
LVV *e* 11 39 25.6
LVV *e* 11 42 19.7
LVV pmax pmax
comp=Z,120nm,1.4s
LVV MLR MLR
comp=N,2μm,18.0s
LVV MLR MLR
comp=E,2μm,18.0s
LVV MLR MLR
comp=Z,3μm,18.0s
AHID Auburn Hatcher 67.33 50 IAMs_20 IAMs_20 12 00 19.4
comp=Z,2μm,18.0s
KIS Kishinev 67.36 317 ⇑ *i*P **P** **11 26 08.0 -1.0**
comp=Z,440nm,7.5s
KIS Kishinev 67.36 317 *e*PP PP 11 28 27.0 -10
KIS *e*S **S** **11 35 02.0 -1.9**
KIS *e*L L 11 51 22.0
KIS LQM 11 52 18.0
comp=Z,2μm,21.5s
KIS LRM MLR 11 57 45.0
comp=Z,2μm,14.5s
KIS Kishinev 67.36 317 *c* *i*P **P** **11 26 08.0 -1.0**
KIS *e*S **S** **11 35 02.0 -1.9**
KIS pmax pmax
comp=Z,440nm,7.5s
KIS MLR MLR
comp=Z,2μm,15.0s
KIS MLR MLR
comp=E,2μm,14.5s
MILM Milestii Mici 67.42 317 ⇑ *i*P **P** **11 26 08.5 -0.9**
comp=E,150nm,1.3s
MILM Milestii Mici 67.42 317 ⇑P **P** **11 26 09.7 +0.4**
MILM Milestii Mici 67.42 317 *c* *i*P **P** **11 26 08.5 -0.9**
MILM *i* S **S** **11 35 04.0 -0.6**
MILM pmax pmax
comp=Z,780nm,7.2s
MILM smax smax
comp=E,1μm,11.5s
MILM MLR MLR
comp=Z,6μm,15.6s
MILM MLR MLR
comp=N,6μm,15.7s
TPH Tonopah 67.64 57 P **P** **11 26 11.5 +0.3**
TPH Tonopah 67.64 57 P **P** **11 26 11.5 +0.3**
TPH pmax pmax
comp=Z,311nm,0.9s
VOG Valley Oaks Go 67.74 60 P **P** **11 26 11.8 +0.2**
baz=317
TIN Tinemaha, Big 67.84 58 P **P** **11 26 12.7 +0.4**
baz=317,SNR=28
TIN S **S** **11 35 06.7 -3.5**
baz=317
HWUT Hardware Ranch 67.96 51 IAMs_20 IAMs_20 11 58 26.6
comp=Z,2μm,20.0s
SHME Shamm 68.07 285 P **P** **11 26 13.6 -0.2**
SNR=12
SHME P **P** **11 26 13.6 -0.2**
SNR=12
SHME Shamm 68.07 285 *i* P **P** **11 26 12.9 -0.8**
SNR=7.2
BW06 Boulder Array 68.08 49 P **P** **11 26 13.7 -0.2**
BW06 IAmb IAmb 11 26 16.0
comp=Z,103nm,0.9s
BW06 Boulder Array 68.08 49 P **P** **11 26 14.0 +0.1**
baz=319,SNR=224
BW06 S **S** **11 35 12.0 -1.1**
baz=319
PD31 Pinedale Array 68.08 49 P **P** **11 26 13.8 0.0**
PD31 IAmb IAmb 11 26 16.1
comp=Z,91nm,0.9s
PDAR Pinedale Array 68.08 49 P **P** **11 26 14.1 +0.2**
comp=Z,157nm,1.0s,baz=348,slow=1.7,SNR=322
PDAR PKP2bc 11 54 29.4
comp=Z,0.9nm,0.9s,baz=142,slow=5.6,SNR=7.3
PDAR LR LR 11 59 20.5
comp=Z,1μm,18.4s,baz=342,slow=39
comp=Z,157nm,1.0s
PDAR Pinedale Array 68.08 49 P **P** **11 26 14.5 +0.6**
VASR Vaslui 68.08 318 ⇑P **P** **11 26 15.3 +1.8**
MLA1 Latheron 68.10 341 *e*P **P** **11 26 14.3 +0.8**
SMMC Simmler 68.14 61 P **P** **11 26 14.6 +0.5**
baz=317,SNR=32
SMMC S **S** **11 35 13.3 -0.3**
baz=317
MTSU Mount Surprise 68.23 178 P **P** **11 26 15.7 +1.0**
VES Vestal, Richgr 68.26 60 P **P** **11 26 14.0 -0.8**
baz=317,SNR=58
VES S **S** **11 35 14.7 -0.3**
baz=317
R11A Troy Canyon, C 68.31 56 P **P** **11 26 15.2 -0.1**
R11A Troy Canyon, C 68.31 56 P **P** **11 26 15.3 -0.1**
baz=318
R11A S **S** **11 35 17.2 +1.3**
baz=318
GRAC Grapevine Rang 68.36 58 P **P** **11 26 16.7 +1.2**
GRAC Grapevine Rang 68.36 58 P **P** **11 26 15.8 +0.3**
baz=318,SNR=80
GRAC S **S** **11 35 19.3 +3.1**
baz=318
CWC Cottonwood Cre 68.37 59 P **P** **11 26 16.1 +0.3**
baz=317
CWC S **S** **11 35 18.9 +2.2**
baz=317
DUG Dugway, Tooele 68.39 53 P **P** **11 26 16.2 +0.5**
DUG IAmb IAmb 11 26 23.9
comp=Z,124nm,1.1s
DUG Dugway, Tooele 68.39 53 P **P** **11 26 16.2 +0.5**
DUG pmax pmax
comp=Z,124nm,1.1s
DUG Dugway, Tooele 68.39 53 P **P** **11 26 16.3 +0.5**
baz=318,SNR=129
DUG S **S** **11 35 19.9 +3.2**
baz=318
BUR08 Bucovina Ar. S 68.39 320 P **P** **11 26 15.9 +0.3**
BURAR Bucovina Array 68.41 320 ⇓P **P** **11 26 16.1 +0.4**
BURAR Bucovina Array 68.41 320 P **P** **11 26 16.0 +0.3**
DIKM Dikmen 68.44 310 ⇑P **P** **11 26 18.2 +2.3**
BIR Birlad 68.45 317 ⇑P **P** **11 26 16.8 +1.0**
IVI Ivigtut 68.45 5 *i* P **P** **11 26 15.8 +0.3**
IVI IAmb IAmb 11 26 17.9
comp=Z,144nm,0.9s
OJC Ojcow 68.45 324 *e*P **P** **11 26 14.9 -0.9**
OJC *e*sP **sP** **11 26 22.1 +0.2**
OJC *e*S **S** **11 35 16.4 -0.5**
OJC *e*L L 11 58 39.5
comp=Z,4μm,18.4s
OJC Ojcow 68.45 324 P **P** **11 26 14.8 -1.0**
OJC IAmb IAmb 11 26 17.3
comp=Z,51nm,0.9s
OJC Ojcow 68.45 324 P **P** **11 26 14.8 -1.0**
OJC pmax pmax
comp=Z,51nm,0.9s
KOLS Kolonicke sedl 68.55 322 *e*P **P** **11 26 17.7 +1.3**
KOLS pmax pmax
comp=Z,25nm,1.0s
KOLS Kolonicke sedl 68.55 322 *e*P **P** **11 26 17.7 +1.3**
PKM Mcpherson Peak 68.55 61 P **P** **11 26 17.0 +0.1**
baz=317,SNR=48
PKM S **S** **11 35 21.2 +2.4**
baz=317
WSAR Wadi Sarin 68.55 281 LR LR 11 57 45.1
comp=Z,3μm,20.5s,baz=61,slow=37
VLDR Vladesti 68.58 317 ⇑P **P** **11 26 18.4 +1.8**
MDND Maddock 68.59 40 P **P** **11 26 15.7 -1.1**
baz=323,SNR=51
MDND Maddock 68.59 40 P **P** **11 26 16.4 -0.3**
baz=323,SNR=51
NRS Narsarsuaq 68.64 4 *i* P **P** **11 26 16.7 0.0**
NRS IAmb IAmb 11 26 20.0
comp=Z,52nm,0.9s
BIDO Bidbid 68.66 281 P **P** **11 26 20.2 +2.7**
SNR=5.8
BIDO P **P** **11 26 20.2 +2.7**
SNR=5.8
TESR Tescani 68.67 318 ⇑P **P** **11 26 18.7 +1.4**
RUE Ruedersdorf 68.69 329 *e*P **P** **11 26 18.3 +1.1**
GHRR 68.70 317 ⇑P **P** **11 26 18.9 +1.4**
ISA Isabella, Lake 68.73 60 P **P** **11 26 17.0 -0.9**
baz=318,SNR=47
ISA S **S** **11 35 22.9 +2.2**
baz=318
MCD Coleburn Disti 68.74 341 *e*P **P** **11 26 18.2 +0.7**
SCTR Scanteiesti 68.75 317 ⇓P **P** **11 26 19.2 +1.5**
UZH Uzhgorod 68.78 322 *e*P **P** **11 26 16.8 -1.1**
UZH *i* 11 26 20.6
UZH *e* 11 26 47.4
UZH *e* 11 28 48.8
UZH *e*PPP PPP 11 30 24.0
UZH *i* S **S** **11 35 14.8 -6.0**
UZH *i* 11 35 55.5
UZH MLR MLR
comp=N,730nm,14.0s
UZH MLR MLR
comp=E,480nm,14.0s
UZH MLR MLR
comp=Z,450nm,14.0s
WBK Wadi Bani Khal 68.80 280 P **P** **11 26 18.8 +0.4**
UOSS Minazif 68.83 284 P **P** **11 26 18.9 +0.4**
UOSS Minazif 68.83 284 IAMs_20 IAMs_20 11 57 00.4
comp=Z,3μm,22.0s
UOSS Minazif 68.83 284 P **P** **11 26 18.3 -0.2**
UOSS P **P** **11 26 18.3 -0.2**
UOSS P **P** **11 26 18.3 -0.2**
UOSS Minazif 68.83 284 *i* P **P** **11 26 17.8 -0.7**
SNR=5.7
JLN Jalan Bani Buh 68.85 279 P **P** **11 26 18.2 -0.5**
CRVS Cervenica-Dubn 68.89 323 *e*P **P** **11 26 19.4 +0.8**
CRVS pmax pmax
comp=Z,170nm,1.9s
CRVS Cervenica-Dubn 68.89 323 *e*P **P** **11 26 19.4 +0.8**
NIE Niedzica 68.92 324 *e*P **P** **11 26 19.5 +0.8**
NIE *e*sP **sP** **11 26 26.6 +1.7**
NIE *e*L L 11 58 57.5
comp=Z,3μm,17.1s
ARVC Arvin 68.92 60 P **P** **11 26 18.5 -0.4**
baz=318,SNR=12
SBC Santa Barbara 68.93 61 P **P** **11 26 19.8 +0.7**
baz=317
LEWI Lewis, Hebride 68.93 343 *e*P **P** **11 26 18.1 -0.6**
LEWI IAmb IAmb 11 26 19.1
comp=Z,44nm,1.0s
NLU North Lily Min 68.94 53 P **P** **11 26 20.1 +0.8**
NLU IAmb IAmb 11 26 22.8
comp=Z,71nm,0.9s
PANC Panciu 68.96 317 ⇓P **P** **11 26 20.5 +1.5**
HATD Hatta, Dubai 68.96 284 P **P** **11 26 19.2 -0.2**
SNR=9.9
HATD P **P** **11 26 19.2 -0.2**
SNR=9.9
HATD P **P** **11 26 19.2 -0.2**
SNR=9.9
HATD Hatta, Dubai 68.96 284 *i* P **P** **11 26 19.1 -0.3**
SNR=12
MPMC Manual Prospec 68.98 59 P **P** **11 26 19.5 -0.1**
baz=318,SNR=134
MPMC S **S** **11 35 25.0 +1.1**
baz=318
TPNV Topopah Spring 68.99 57 P **P** **11 26 20.0 +0.4**
TPNV Topopah Spring 68.99 57 P **P** **11 26 20.0 +0.4**
TPNV pmax pmax
comp=Z,177nm,1.0s
TPNV Topopah Spring 68.99 57 P **P** **11 26 19.9 +0.3**
baz=318,SNR=298
TPNV S **S** **11 35 24.5 +0.4**
baz=318
FURC Furnace Creek, 69.02 58 P **P** **11 26 19.7 +0.2**
baz=318,SNR=179
FURC S **S** **11 35 25.8 +1.9**
baz=318
SMDO Samad 69.05 281 P **P** **11 26 19.6 -0.4**
JURR Jurilovca 69.06 316 ⇑P **P** **11 26 20.8 +1.1**
BMR Baia Mare 69.07 321 ⇓P **P** **11 26 21.1 +1.4**
CFR Carcaliu 69.07 316 ⇑P **P** **11 26 20.2 +0.5**
ODBI Odobesti 69.09 317 ⇓P **P** **11 26 21.7 +1.9**
PSUT Pine Spring 69.09 55 P **P** **11 26 20.6 +0.4**
PSUT IAmb IAmb 11 26 28.1
comp=Z,97nm,0.8s
MDO Dochfour 69.10 341 *e*P **P** **11 26 20.4 +0.7**
ASHO Ashiyiah 69.11 284 P **P** **11 26 19.6 -0.8**
SNR=9.2
ASHO P **P** **11 26 19.6 -0.8**
SNR=9.2
ASHO Ashiyiah 69.11 284 *i* P **P** **11 26 19.9 -0.4**
SNR=11
HOQ Hoqain 69.13 282 P **P** **11 26 19.9 -0.5**
SNR=7.8
HOQ P **P** **11 26 19.9 -0.5**
SNR=7.8
E28A Huff 69.15 41 P **P** **11 26 19.4 -0.8**
baz=322,SNR=23
VRI Vrincioaia 69.15 318 ⇑P **P** **11 26 22.1 +1.9**
ARCR ARCALIA 69.19 320 ⇑P **P** **11 26 21.7 +1.2**
PLOR Plostina 69.19 318 ⇓P **P** **11 26 21.4 +0.9**
TPGR Topolog 69.20 316 ⇓P **P** **11 26 22.0 +1.5**
DRUM Mains of Drumt 69.20 340 *e*P **P** **11 26 20.9 +0.6**
DRUM IAmb IAmb 11 26 22.4
comp=Z,132nm,0.9s
KSP Ksiaz 69.20 327 *e*P **P** **11 26 20.4 -0.1**
KSP *e*L L 11 59 26.9
comp=Z,5μm,18.6s
SOHO SOHO 69.22 283 P **P** **11 26 20.5 -0.4**
SOHO P **P** **11 26 20.5 -0.4**
SOHO SOHO 69.22 283 *i* P **P** **11 26 20.0 -1.0**
SNR=10
KAC Achnashellach 69.24 342 *e*P **P** **11 26 21.1 +0.6**
LRMC Laurel Mtn Rad 69.30 59 P **P** **11 26 21.8 +0.3**
baz=318,SNR=103
LRMC S **S** **11 35 34.1 +6.4**
baz=318
SCZ2 Santa Cruz Isl 69.30 62 P **P** **11 26 20.7 -0.7**
baz=318
FAQ Al Faqa, Dubai 69.36 284 P **P** **11 26 22.3 +0.5**
OSI Osito Audit: C 69.36 61 P **P** **11 26 20.9 -0.8**
baz=318,SNR=11
OSI S **S** **11 35 26.3 -1.9**
baz=318
OZUR 69.37 318 ⇓P **P** **11 26 22.6 +1.0**
OKC Ostrava-Krasne 69.37 325 *e*P **P** **11 26 22.2 +0.7**
OKC *e*S **S** **11 35 23.3 -4.5**
OKC MLR MLR
comp=Z,3μm,18.2s
OKC Ostrava-Krasne 69.37 325 *e*P **P** **11 26 22.2 +0.7**
OKC *e*S **S** **11 35 23.3 -4.5**
OKC AMS AMS 11 59 00.0
comp=Z,3μm,18.2s
QSM Queen of Sheba 69.39 58 P **P** **11 26 22.3 +0.5**
COVR Voineasa-Covas 69.39 318 ⇓P **P** **11 26 23.3 +1.5**
LANS Liptovska Anna 69.45 324 *e*P **P** **11 26 23.4 +1.3**
LANS pmax pmax
comp=Z,29nm,0.9s
LANS Liptovska Anna 69.45 324 *e*P **P** **11 26 23.4 +1.3**
KPL Plockton 69.46 342 *e*P **P** **11 26 22.2 +0.4**
KPL IAmb IAmb 11 26 24.1
comp=Z,164nm,0.9s
OSTC Ostas 69.47 327 *e*P **P** **11 26 22.4 +0.2**
OSTC AMS AMS 11 59 10.0
comp=Z,4μm,18.6s
CHVC Chvalec 69.50 327 *e*P **P** **11 26 22.5 +0.1**
CHVC AMS AMS 11 59 20.0
comp=Z,200nm,16.5s
TIRR Tirgusor 69.51 316 ⇑P **P** **11 26 23.8 +1.3**
TIRR Tirgusor 69.51 316 ⇑P **P** **11 26 23.8 +1.3**
HARR Harsova 69.55 316 ⇓P **P** **11 26 23.2 +0.5**
EDW2 Edwards Air Fo 69.57 60 P **P** **11 26 22.6 -0.4**
baz=318,SNR=88
EDW2 S **S** **11 35 32.2 +1.6**
baz=318
UPC Upice 69.58 327 *e*P **P** **11 26 23.6 +0.8**
UPC *e*S **S** **11 35 26.2 -4.0**
UPC MLR MLR
comp=Z,5μm,16.6s
UPC Upice 69.58 327 *e*P **P** **11 26 23.6 +0.8**
UPC *e*S **S** **11 35 26.2 -4.0**
UPC AMS AMS 11 59 10.0
comp=Z,5μm,16.6s
DPC Dobruska-Polom 69.61 326 *e*P **P** **11 26 23.5 +0.5**
DPC *e*S **S** **11 35 26.8 -3.8**
DPC MLR MLR
comp=Z,3μm,16.1s
DPC Dobruska-Polom 69.61 326 *e*P **P** **11 26 23.5 +0.5**
DPC *e*S **S** **11 35 26.8 -3.8**
DPC AMS AMS 11 59 20.0
comp=Z,3μm,16.1s
ASUD Al Ashush, Dub 69.61 284 P **P** **11 26 22.6 -0.7**
ASUD Al Ashush, Dub 69.61 284 P **P** **11 26 24.4 +1.0**
K22A Casper 69.61 47 P **P** **11 26 23.0 -0.4**
baz=321,SNR=52
K22A Casper 69.61 47 P **P** **11 26 22.3 -1.1**
baz=321,SNR=52
K22A S **S** **11 35 30.3 -0.8**
baz=321
RSSD Black Hills 69.62 45 P **P** **11 26 23.3 -0.1**
RSSD Black Hills 69.62 45 P **P** **11 26 23.3 -0.1**

RSSD pmax pmax
comp=Z,125nm,0.9s
RSSD MLR MLR
comp=Z,4µm,20.0s
RSSD Black Hills 69.62 45 P **P** **11 26 23.1 -0.3**
baz=321,SNR=145
RSSD S **S** **11 35 32.3 +1.0**
baz=321
RSSD Black Hills 69.62 45 P **P** **11 26 23.0 -0.3**
baz=321
RSSD S **S** **11 35 30.9 -0.4**
baz=321
DOPR Dopca 69.64 318 ⇑P **P** **11 26 24.8 +1.5**
MORC Moravsky Berou 69.64 325 ⇓P **P** **11 26 23.6 +0.2**
MORC Moravsky Berou 69.64 325 P **P** **11 26 23.5 +0.2**
MORC IAmb IAmb 11 26 25.7
comp=Z,41nm,0.8s
MORC Moravsky Berou 69.64 325 P **P** **11 26 23.5 +0.2**
MORC pmax pmax
comp=Z,41nm,0.8s
MORC Moravsky Berou 69.64 325 ⇑*i*P **P** **11 26 23.4 +0.1**
MORC *e*S **S** **11 35 32.9 +1.8**
KRLC Kraliky 69.67 326 *e*P **P** **11 26 23.1 -0.3**
KRLC *e*S **S** **11 35 28.5 -2.9**
KRLC MLR MLR
comp=Z,3µm,12.4s
KRLC Kraliky 69.67 326 *e*P **P** **11 26 23.1 -0.3**
KRLC *e*S **S** **11 35 28.5 -2.9**
KRLC AMS AMS 11 59 50.0
comp=Z,3µm,12.4s
MESR Meseseni 69.71 321 ⇓P **P** **11 26 25.4 +1.7**
AGMN Agassiz Nation 69.72 37 P **P** **11 26 23.1 -0.6**
AGMN Agassiz Nation 69.72 37 P **P** **11 26 22.8 -0.9**
baz=325,SNR=93
AGMN S **S** **11 35 32.7 +0.8**
baz=325
AGMN Agassiz Nation 69.72 37 P **P** **11 26 22.3 -1.4**
baz=325,SNR=93
AGMN S **S** **11 35 29.5 -2.3**
baz=325
RDMU Red Mountain 69.73 51 P **P** **11 26 25.0 +0.8**
FITZ Fitzroy Crossi 69.75 197 P **P** **11 26 23.9 -0.1**
FITZ IAmb IAmb 11 26 29.4
comp=Z,79nm,0.8s
FITZ Fitzroy Crossi 69.75 197 P **P** **11 26 25.1 +1.0**
SHOC Shoshone, Teco 69.76 58 P **P** **11 26 24.2 0.0**
baz=318,SNR=5.8
SHOC S **S** **11 35 33.3 +0.6**
baz=318
ALNE Al Ain 69.76 283 P **P** **11 26 24.0 -0.3**
SNR=7.0
ALNE P **P** **11 26 24.0 -0.3**
SNR=7.0
MLR Muntele Rosu 69.78 318 ⇑P **P** **11 26 25.9 +1.6**
MLR Muntele Rosu 69.78 318 LR LR 11 59 59.7
comp=Z,3µm,18.3s,baz=49,slow=38
MLR Muntele Rosu 69.78 318 P **P** **11 26 24.9 +0.6**
MLR Muntele Rosu 69.78 318 P **P** **11 26 24.9 +0.6**
MLR pmax pmax
comp=Z,40nm,0.8s
MLR MLR MLR
comp=Z,3µm,20.0s
CJR Cluj-Napoca 69.80 320 ⇑P **P** **11 26 26.3 +2.0**
ARQ Araqi 69.80 282 P **P** **11 26 24.5 -0.1**
BSY Bisya 69.81 281 P **P** **11 26 24.7 +0.1**
SNR=6.1
ISR Istrita 69.82 317 ⇓P **P** **11 26 25.3 +0.9**
DECC Green Verdugo 69.84 61 P **P** **11 26 24.6 -0.1**
baz=318,SNR=44
GSC Goldstone, Bar 69.91 59 P **P** **11 26 25.4 +0.2**
baz=318,SNR=105
SNCC San Nicolas Is 69.91 62 P **P** **11 26 25.2 +0.1**
baz=318,SNR=6.5
CLL Collm 69.94 329 IAMs_20 IAMs_20 12 00 35.3
comp=Z,3µm,21.0s
CLL Collm 69.94 329 *i* P **P** **11 26 24.5 -0.5**
CLL *e**PP **sP** **11 26 30.0 -1.1**
CLL *e* 11 26 48.0
CLL *e*S **S** **11 35 34.0 -0.3**
CLL *e* 11 36 25.0
CLL pmax pmax
comp=Z,60nm,0.8s
CLL MLR MLR
comp=Z,2µm,20.7s
CLL Collm 69.94 329 *i* P **P** **11 26 24.5 -0.5**
comp=Z,60nm,0.8s
CLL *e*pP **sP** **11 26 30.0 -1.1**
CLL *e*PcP **PcP** **11 26 48.0 +0.7**
CLL *e*PP **PP** **11 29 00.0 +1.0**
CLL *e*PPP PPP 11 30 42.0
CLL *e*S **S** **11 35 34.0 -0.3**
CLL *e*SKSac **SKSac** **11 36 25.0 -0.3**
CLL *e*SS **SS** **11 39 54.0 -8.2**
CLL *ex* x 11 41 00.0
CLL *e*SSS SSS 11 43 18.0
CLL Lm MLR 11 57 00.0
comp=N,3µm,18.2s
CLL Lm MLR 11 57 00.0
comp=E,4µm,18.9s
CLL Lm MLR 11 57 00.0
comp=Z,2µm,20.7s
CLL Lmax 12 06 00.0
INVG Invergeldie, C 69.98 341 *e*P **P** **11 26 24.6 -0.5**
P17A Butcher Ranch, 69.98 52 P **P** **11 26 26.0 +0.3**
P17A IAmb IAmb 11 26 29.8
comp=Z,131nm,1.1s
BRG Berggiesshubel 69.99 328 *i* P **P** **11 26 26.5 +1.1**
BRG Amp 11 26 28.3
comp=Z,24nm,1.1s
BRG *ex* x 11 26 33.3
BRG Amp 11 26 35.0
comp=Z,60nm,1.7s
BRG Berggiesshubel 69.99 328 PP PP 11 29 03.0 +3.5
BRG Berggiesshubel 69.99 328 SS SS 11 40 01.0 -2.1
BRG Amp 12 01 54.0
comp=N,1.7nm,16.4s
BRG Amp 12 01 56.0
comp=E,2.4nm,12.5s
BRG Amp 12 01 57.0
comp=Z,3.5nm,13.8s
BRG Berggiesshubel 69.99 328 *i* P **P** **11 26 26.4 +1.1**
BRG *e* 11 26 33.3
BRG 11 29 03.0
BRG S **S** **11 35 38.0 +3.0**
BRG SS **SS** **11 40 01.0 -2.1**
BRG pmax pmax
comp=Z,24nm,1.1s
BRG MLR MLR
comp=E,2µm,12.5s
BRG MLR MLR
comp=Z,3µm,13.8s
RWWY Rawlins 70.03 48 P **P** **11 26 26.2 +0.2**
RWWY IAmb IAmb 11 26 28.7
comp=Z,89nm,0.8s
PVCC Panska Ves 70.07 328 *e*P **P** **11 26 27.4 +1.6**
PVCC MLR MLR
comp=Z,5µm,15.0s
PVCC Panska Ves 70.07 328 *e*P **P** **11 26 27.4 +1.6**
PVCC AMS AMS 12 00 10.0
comp=Z,5µm,15.0s
SECR 70.09 317 ⇓P **P** **11 26 27.1 +1.1**
DRGR 70.09 321 ⇑P **P** **11 26 27.4 +1.3**
RRX Edison Barstow 70.12 59 P **P** **11 26 26.7 +0.3**
baz=318
RRX S **S** **11 35 38.6 +1.5**
baz=318
ESY Stoneypath 70.14 340 *e*P **P** **11 26 26.0 -0.2**
WB0 Warramunga Arr 70.19 188 P **P** **11 26 26.2 -0.6**
WB0 IAmb IAmb 11 26 30.9
comp=Z,70nm,0.8s
VOIR 70.21 318 ⇓P **P** **11 26 27.8 +0.9**
D32B Dogwood Acres, 70.21 39 P **P** **11 26 25.4 -1.3**
baz=324,SNR=47
PSN Preselentsi 70.22 315 P **P** **11 26 27.0 +0.2**
VYHS Vyhne 70.23 324 *e*P **P** **11 26 27.2 +0.4**
VYHS pmax pmax
comp=Z,38nm,1.0s
VYHS Vyhne 70.23 324 *e*P **P** **11 26 27.2 +0.4**
BFSC Mount Baldy Ra 70.23 60 P **P** **11 26 27.2 0.0**
baz=318,SNR=63
BFSC S **S** **11 35 42.2 +3.6**
baz=318
BORR Bors 70.23 321 ⇑P **P** **11 26 27.8 +1.0**
CTA Charters Tower 70.24 176 LR LR 11 54 07.2
comp=Z,1µm,21.7s,baz=340,slow=33

EAB Aberfoyle 70.26 341 *e*P **P** **11 26 27.4 +0.5**
EDI Edinburgh 70.26 340 *e*P **P** **11 26 27.3 +0.5**
FMP Fort Macarthur 70.26 61 P **P** **11 26 27.2 0.0**
baz=318
FMP S **S** **11 35 41.2 +2.6**
baz=318
TUQ Turquoise Moun 70.29 58 P **P** **11 26 27.8 +0.2**
baz=318,SNR=123
TUQ S **S** **11 35 43.1 +3.8**
baz=318
PSZ Piszkesteto 70.30 323 ⇑P **P** **11 26 28.1 +0.8**
PSZ Piszkesteto 70.30 323 P **P** **11 26 28.2 +0.8**
MTPU Mount Pierson 70.33 54 P **P** **11 26 29.0 +0.9**
MTPU IAmb IAmb 11 26 36.7
comp=Z,99nm,1.1s
WRAB Tennant Creek 70.36 188 P **P** **11 26 27.9 +0.1**
WRAB IAmb IAmb 11 26 29.8
comp=Z,71nm,1.1s
WRAB Tennant Creek 70.36 188 P **P** **11 26 27.9 +0.1**
WRAB pmax pmax
comp=Z,71nm,1.1s
WRAB Tennant Creek 70.36 188 P **P** **11 26 27.6 -0.2**
JAVC Velka Javorina 70.36 325 ⇑*i*P **P** **11 26 28.8 +1.1**
JAVC *e*S **S** **11 35 43.5 +4.0**
WB2 Warramunga Arr 70.36 188 P **P** **11 26 27.4 -0.5**
WB2 IAmb IAmb 11 26 29.8
comp=Z,74nm,1.1s
WR0 Warramunga Arr 70.36 188 P **P** **11 26 27.3 -0.5**
WR0 IAmb IAmb 11 26 32.0
comp=Z,70nm,0.8s
WRA Warramunga Arr 70.37 188 P **P** **11 26 27.5 -0.3**
comp=Z,46nm,0.8s,baz=6.2,slow=6.6,SNR=128
WRA PKP2bc 11 54 27.2
comp=Z,2.9nm,1.1s,baz=187,slow=2.2,SNR=6.5
WRA LR LR 11 56 27.3
comp=Z,906nm,21.0s,baz=11,slow=35
comp=Z,46nm,0.8s
WRA Warramunga Arr 70.37 188 P **P** **11 26 27.0 -0.9**
WRA Warramunga Arr 70.37 188 *i* P **P** **11 26 26.8 -1.0**
WRA pmax pmax
comp=Z,44nm,0.8s
EBL Broad Law 70.37 340 *e*P **P** **11 26 28.5 +0.9**
VRAC Vranov 70.38 326 ⇑P **P** **11 26 29.2 +1.5**
VRAC Vranov 70.38 326 LR LR 12 00 01.8
comp=Z,2µm,18.1s,baz=37,slow=38
VRAC Vranov 70.38 326 ⇑*i*P **P** **11 26 28.1 +0.4**
VRAC *e*S **S** **11 35 42.3 +2.7**
LAWE Loch Awe, Argy 70.41 342 *e*P **P** **11 26 27.6 -0.2**
LAWE IAmb IAmb 11 26 32.0
comp=Z,64nm,0.9s
CIS Catalina Islan 70.42 61 P **P** **11 26 28.7 +0.4**
baz=318,SNR=10
CIS S **S** **11 35 44.6 +3.9**
baz=318
B35A Bob, Littlefor 70.48 36 P **P** **11 26 27.3 -1.1**
baz=326,SNR=238
B35A S **S** **11 35 39.7 -1.1**
baz=326
HEC Hector,Ludlow 70.52 59 P **P** **11 26 28.9 0.0**
baz=318,SNR=26
HEC S **S** **11 35 45.1 +3.2**
baz=318
PRU Pruhonice 70.53 327 *e*P **P** **11 26 28.5 -0.1**
PRU *e*S **S** **11 35 35.6 -5.8**
PRU MLR MLR
comp=Z,4µm,15.0s
PRU Pruhonice 70.53 327 *e*P **P** **11 26 28.5 -0.1**
PRU *e*S **S** **11 35 35.6 -5.8**
PRU AMS AMS 12 00 00.0
comp=Z,4µm,15.0s
MHTO MHTO 70.61 280 P **P** **11 26 29.5 -0.1**
SNR=15
MHTO P **P** **11 26 29.5 -0.1**
SNR=15
BBRC Big Bear Solar 70.62 60 P **P** **11 26 29.7 -0.1**
baz=318,SNR=98
PGBU Glenifferbraes 70.64 341 *e*P **P** **11 26 29.7 +0.5**
PGBU IAmb IAmb 11 26 31.6
comp=Z,170nm,1.0s
KRUC Moravsky 70.66 326 ⇑*i*P **P** **11 26 29.7 +0.3**
KRUC *e*S **S** **11 35 43.9 +1.1**
QIS Mount Isa 70.66 183 P **P** **11 26 29.2 -0.4**
SCI2 San Clemente I 70.66 62 P **P** **11 26 29.7 0.0**
baz=318,SNR=5.3
BR131 Keskin Array S 70.70 309 P **P** **11 26 30.6 +0.6**
BR131 IAmb IAmb 11 26 34.0
comp=Z,50nm,0.9s
BR131 Keskin Array S 70.70 309 P **P** **11 26 30.6 +0.6**
BR131 pmax pmax
comp=Z,50nm,1.0s
BR131 Keskin Array S 70.70 309 P **P** **11 26 30.1 0.0**
SNR=12
BR131 P **P** **11 26 30.1 0.0**
SNR=12
BRTR Keskin Array B 70.70 309 P **P** **11 26 30.2 +0.1**
comp=Z,24nm,1.0s,baz=64,slow=3.3,SNR=40
BRTR LR LR 12 02 43.9
comp=Z,3µm,18.2s,baz=59,slow=40
comp=Z,24nm,1.0s
BRTR Keskin Array B 70.70 309 *i* P **P** **11 26 30.2 +0.1**
BRTR pmax pmax
comp=Z,25nm,1.0s
PKCU Pink Cliffs 70.71 54 P **P** **11 26 31.5 +1.1**
O20A White River Ci 70.72 50 P **P** **11 26 29.5 -0.7**
baz=320,SNR=318
O20A S **S** **11 35 45.5 +1.2**
baz=320
SMOL Smolenice 70.73 325 *e*P **P** **11 26 31.6 +1.7**
SMOL pmax pmax
comp=Z,18nm,0.8s
DEV Deva 70.75 320 ⇓P **P** **11 26 31.3 +1.2**
TREC Trest 70.79 326 *e*P **P** **11 26 31.3 +1.1**
TREC MLR MLR
comp=Z,4µm,18.2s
TREC Trest 70.79 326 *e*P **P** **11 26 31.3 +1.1**
TREC AMS AMS 12 00 00.0
comp=Z,4µm,18.2s
ELS Elsinore Mount 70.80 60 P **P** **11 26 30.7 +0.1**
ELS IAmb IAmb 11 26 33.6
comp=Z,70nm,0.8s
EKA Eskdalemuir Ar 70.80 340 LR LR 12 03 09.4
comp=Z,2µm,19.4s,baz=30,slow=41
ESK Eskdalemuir 70.83 340 P **P** **11 26 30.9 +0.5**
ESK IAmb IAmb 11 26 43.5
comp=Z,57nm,1.0s
ESK Eskdalemuir 70.83 340 IAMs_20 IAMs_20 12 02 47.7
comp=Z,3µm,19.0s
ESK Eskdalemuir 70.83 340 P **P** **11 26 30.9 +0.5**
ESK pmax pmax
comp=Z,57nm,1.0s
ESK MLR MLR
comp=Z,3µm,19.0s
MODS Modra-Piesok 70.91 325 *e*P **P** **11 26 32.1 +1.1**
MODS pmax pmax
comp=Z,456nm,2.5s
MODS Modra-Piesok 70.91 325 *e*P **P** **11 26 32.1 +1.1**
GMRC Granite Mounta 70.92 58 P **P** **11 26 31.3 -0.2**
baz=319,SNR=166
GMRC S **S** **11 35 46.4 -0.3**
baz=319
SIRR Siria 70.95 321 ⇓P **P** **11 26 32.1 +0.8**
PRD Provadia 70.95 315 P **P** **11 26 31.0 -0.3**
MURC Murrieta 70.96 60 P **P** **11 26 31.3 -0.2**
baz=318,SNR=47
MURC S **S** **11 35 47.2 +0.3**
baz=318
SRO Srobarova 70.99 324 *e*P **P** **11 26 33.4 +2.0**
SRO pmax pmax
comp=Z,44nm,0.8s
SRO Srobarova 70.99 324 *e*P **P** **11 26 33.4 +2.0**
EDMD Edmundbyers 71.00 339 *e*P **P** **11 26 30.9 -0.5**
ANTO Ankara 71.01 310 ⇓P **P** **11 26 33.5 +1.6**
ANTO Ankara 71.01 310 IAMs_20 IAMs_20 11 58 23.6
comp=Z,2µm,20.0s
RAZG Razgrad 71.06 316 ⇑P **P** **11 26 33.0 +1.0**
ZST Bratislava 71.12 325 *e*P **P** **11 26 34.0 +1.8**
ZST pmax pmax
comp=Z,549nm,2.5s
ZST Bratislava 71.12 325 *e*P **P** **11 26 34.0 +1.8**
GZR Gura Zlata 71.20 320 ⇑P **P** **11 26 33.2 +0.3**
NEWG New Galloway 71.24 340 *e*P **P** **11 26 33.2 +0.4**
NEWG IAmb IAmb 11 26 34.8
comp=Z,39nm,1.0s
N23A Red Feather La 71.25 48 P **P** **11 26 33.9 +0.4**
N23A IAmb IAmb 11 26 37.2
comp=Z,125nm,1.1s

N23A Red Feather La 71.25 48 P **P** **11 26 33.1 -0.4**
baz=321,SNR=109
N23A S **S** **11 35 49.2 -1.3**
baz=321
BELC Belle Mtn. Jos 71.32 59 P **P** **11 26 33.4 -0.5**
baz=319,SNR=67
BELC S **S** **11 35 45.9 -5.4**
baz=319
PFO Pinyon Flats O 71.36 60 P **P** **11 26 34.0 -0.1**
comp=Z,59nm,1.0s,baz=324,slow=6.9,SNR=52
PFO LR LR 11 53 04.4
comp=Z,1µm,21.6s,baz=310,slow=32
comp=Z,59nm,1.0s
PFO Pinyon Flats O 71.36 60 P **P** **11 26 34.0 -0.1**
PFO IAmb IAmb 11 26 38.7
comp=Z,90nm,1.2s
PFO Pinyon Flats O 71.36 60 P **P** **11 26 34.3 +0.2**
baz=319,SNR=48
PFO S **S** **11 35 53.8 +2.0**
baz=319
TPFO Pinon Flats 71.36 60 P **P** **11 26 33.6 -0.6**
baz=319,SNR=63
TPFO S **S** **11 35 50.9 -0.9**
baz=319
PMD Palm Desert 71.38 60 P **P** **11 26 33.9 -0.1**
PMD IAmb IAmb 11 26 36.9
comp=Z,64nm,0.8s
CSKK Cskako 71.38 324 P **P** **11 26 34.9 +1.0**
SHMA Al-Shehemyia 71.39 288 P **P** **11 26 33.1 -1.1**
KESW Keswick, Cumbr 71.48 340 *e*P **P** **11 26 35.8 +1.5**
KESW IAmb IAmb 11 26 38.2
comp=Z,183nm,1.1s
BZS Buzias 71.49 320 ⇓P **P** **11 26 34.9 +0.4**
NEE2 Needles Airpor 71.50 58 P **P** **11 26 34.9 +0.1**
baz=319
NEE2 S **S** **11 35 55.1 +2.1**
baz=319
109C Camp Elliot, M 71.54 61 P **P** **11 26 34.8 -0.3**
baz=319,SNR=13
109C S **S** **11 35 54.9 +1.4**
baz=319
F33A 5 Mile Ranch, 71.55 39 P **P** **11 26 34.1 -0.8**
baz=325,SNR=62
F33A S **S** **11 35 58.1 +4.8**
baz=325
SZH Strazhica 71.55 316 P **P** **11 26 34.0 -1.0**
SUSD Miller 71.59 41 P **P** **11 26 34.2 -1.0**
baz=324,SNR=47
SUSD Miller 71.59 41 P **P** **11 26 34.3 -0.9**
baz=324,SNR=47
SUSD S **S** **11 35 53.4 -0.4**
baz=324
KHC Kasperske Hory 71.59 327 *e*P **P** **11 26 35.0 -0.2**
KHC *e* 11 26 43.0
KHC *e*S **S** **11 35 47.9 -5.9**
KHC MLR MLR
comp=Z,4µm,16.3s
KHC Kasperske Hory 71.59 327 *e*P **P** **11 26 35.0 -0.2**
KHC *ex* x 11 26 43.0
KHC *e*S **S** **11 35 47.9 -5.9**
KHC AMS AMS 12 00 50.0
comp=Z,4µm,16.3s
CKRC Cesky Krumlov 71.60 327 *e*P **P** **11 26 35.4 +0.2**
CKRC *e*S **S** **11 35 51.1 -2.8**
GHWR Ruwais 71.61 285 P **P** **11 26 35.6 +0.1**
W13A Hualapai Mount 71.65 57 P **P** **11 26 36.4 +0.4**
EYMN Ely 71.65 35 IAMs_20 IAMs_20 12 01 54.2
comp=Z,2µm,19.0s
EYMN Ely 71.65 35 P **P** **11 26 34.4 -1.1**
baz=327,SNR=191
EYMN S **S** **11 35 51.9 -2.5**
baz=327
EYMN Ely 71.65 35 P **P** **11 26 34.4 -1.1**
baz=327,SNR=191
EYMN S **S** **11 35 48.4 -6.1**
baz=327
CLGH Cloghs, Cushen 71.66 342 *e*P **P** **11 26 35.6 +0.3**
CLGH IAmb IAmb 11 26 37.5
comp=Z,129nm,0.9s
IRM Iron Mountain 71.67 59 P **P** **11 26 36.1 +0.2**
baz=319,SNR=106
IRM S **S** **11 35 56.2 +1.1**
baz=319
EGYH Egyhazaskeszo 71.69 324 P **P** **11 26 37.9 +2.2**
HPK Haverah Park 71.72 339 *e*P **P** **11 26 37.4 +1.6**
HPK IAmb IAmb 11 26 40.4
comp=Z,102nm,0.9s
SOP Sopron 71.75 325 P **P** **11 26 37.7 +1.7**
HERR Herculane 71.76 320 ⇑P **P** **11 26 36.6 +0.4**
GERES GERESS Array B 71.79 327 P **P** **11 26 36.4 0.0**
comp=Z,5.7nm,0.7s,baz=42,slow=4.2,SNR=48
GERES LR LR 12 01 06.4
comp=Z,3µm,18.2s,baz=25,slow=38
comp=Z,5.7nm,0.7s
CONA Conrad Observa 71.80 325 *i* P **P** **11 26 37.1 +0.7**
comp=Z,41nm,1.0s,SNR=28
MPLH Magyarpolny 71.81 324 P **P** **11 26 38.1 +1.7**
PV11 David Mesa, Pa 71.82 52 P **P** **11 26 37.0 +0.1**
RONA Rosalia, Austr 71.83 325 *i* P **P** **11 26 37.5 +0.9**
comp=Z,52nm,1.4s,SNR=29
BC3 Big Chuckawall 71.88 59 P **P** **11 26 36.8 -0.5**
baz=319,SNR=73
BC3 S **S** **11 35 59.8 +2.1**
baz=319
DJES Djerdap 71.89 319 ⇓P **P** **11 26 37.9 +0.9**
JMB Yambol 71.90 315 P **P** **11 26 34.0 -3.0**
GRFO Grafenberg 71.91 329 P **P** **11 26 37.5 +0.5**
GRFO IAmb IAmb 11 26 41.7
comp=Z,98nm,1.1s
GRFO Grafenberg 71.91 329 P **P** **11 26 37.5 +0.5**
GRFO pmax pmax
comp=Z,98nm,1.1s
MONP2 Monument Peak 71.92 60 P **P** **11 26 37.5 -0.1**
baz=319,SNR=60
MONP2 S **S** **11 36 00.1 +1.7**
baz=319
MZR Muzera 71.94 284 P **P** **11 26 36.8 -0.8**
SNR=5.8
MZR Muzera 71.94 284 *i* P **P** **11 26 37.7 +0.1**
SNR=11
PUNG Punghina 72.03 319 ⇓P **P** **11 26 39.0 +1.2**
BAIL Bailesti 72.07 318 ⇑P **P** **11 26 39.2 +1.2**
IOMK Kirk Michael 72.11 340 *e*P **P** **11 26 38.5 +0.4**
PDMCI Parker Dam,Lak 72.11 58 P **P** **11 26 38.3 -0.1**
baz=319,SNR=65
PDMCI S **S** **11 35 59.4 -0.6**
baz=319
MDVR Moldovita 72.13 320 ⇓P **P** **11 26 39.3 +0.8**
MORH Mrgy, Hungar 72.18 323 ⇓P **P** **11 26 39.6 +0.9**
MORH Mrgy, Hungar 72.18 323 P **P** **11 26 38.8 +0.2**
CBX Cerro Bola 72.22 61 P **P** **11 26 40.2 +0.9**
SWSC Sam W. Stewart 72.22 60 P **P** **11 26 39.0 -0.2**
baz=319,SNR=26
SWSC S **S** **11 36 06.0 +4.6**
baz=319
WIM Isle of Man 72.23 340 *e*P **P** **11 26 39.0 +0.1**
ISCO Idaho Springs 72.26 49 IAMs_20 IAMs_20 12 01 04.1
comp=Z,2µm,20.0s
ISCO Idaho Springs 72.26 49 P **P** **11 26 39.6 0.0**
baz=322,SNR=154
ISCO S **S** **11 36 03.0 +0.7**
baz=322
ISCO Idaho Springs 72.26 49 P **P** **11 26 39.1 -0.5**
baz=322,SNR=154
ISCO S **S** **11 36 02.3 +0.1**
baz=322
LBWR Ladybower, Pea 72.26 338 *e*P **P** **11 26 39.6 +0.6**
LBWR IAmb IAmb 11 26 41.6
comp=Z,146nm,1.0s
IKP In-Ko-Pah, Jac 72.27 60 P **P** **11 26 39.8 +0.2**
baz=319,SNR=81
IKP S **S** **11 36 02.2 0.0**
baz=319
WACR West Acre 72.31 337 *e*P **P** **11 26 40.6 +1.3**
WACR IAmb IAmb 11 26 45.5
comp=Z,116nm,0.9s
SCHQ Schefferville 72.35 17 P **P** **11 26 39.2 -0.4**
comp=Z,83nm,0.9s,baz=347,slow=6.5,SNR=55
SCHQ LR LR 12 01 12.6
comp=Z,2µm,19.0s,baz=352,slow=38
comp=Z,83nm,0.9s
SCHQ Schefferville 72.35 17 P **P** **11 26 39.3 -0.3**
SCHQ IAmb IAmb 11 26 41.3
comp=Z,80nm,0.9s
YUH Yuha Desert 72.38 60 P **P** **11 26 40.4 +0.3**
MOA Molln 72.44 326 *e*P **P** **11 26 40.4 +0.1**

comp=Z,17nm,0.9s,SNR=15
ARSA Arzberg 72.50 325 *e*P **P 11 26 41.0 +0.5**
comp=Z,26nm,1.1s,SNR=26
KOVH Kovagotottos 72.50 323 P **P 11 26 40.5 0.0**
FRGS Fruska Gora 72.60 321 ⇑P **P 11 26 42.3 +1.1**
FRGS Fruska Gora 72.60 321 *i*P **P 11 26 41.1 -0.1**
F36A Milaca 72.63 37 P **P 11 26 40.3 -1.1**
F36A IAmb IAmb 11 26 44.6
comp=Z,76nm,1.0s
F36A Milaca 72.63 37 P **P 11 26 40.2 -1.1**
baz=326,SNR=62
F36A S **S 11 36 06.5 +0.8**
baz=326
BEBN Eben Emael 72.66 333 *d*P **P 11 26 41.0 -0.4**
comp=Z,43nm,0.9s
WUAZ Wupatki 72.66 55 P **P 11 26 42.6 +0.7**
WUAZ Wupatki 72.66 55 P **P 11 26 42.5 +0.6**
baz=320,SNR=127
WUAZ S **S 11 36 09.1 +2.3**
baz=320
BLKB Belogradchik 72.67 319 ⇓P **P 11 26 42.3 +0.6**
GLA Glamis 72.68 59 P **P 11 26 42.1 +0.2**
baz=319,SNR=34
ILTH Belurgan, Co L 72.70 341 *e*P **P 11 26 41.6 0.0**
BTNL Ternell 72.72 332 *d*P **P 11 26 41.8 0.0**
comp=Z,23nm,1.0s
MEM Membach 72.73 333 *d*P **P 11 26 41.6 -0.3**
comp=Z,39nm,0.9s
E38A The Farm, Brul 72.76 36 P **P 11 26 41.2 -0.9**
baz=327,SNR=183
BIOA Bad Ischl, Aus 72.80 327 *e*P **P 11 26 42.6 +0.2**
comp=Z,26nm,1.5s,SNR=7.7
MVCO Mesa Verde 72.84 52 P **P 11 26 42.5 -0.6**
baz=321,SNR=110
WME Myndd Eilian 72.85 340 *e*P **P 11 26 41.4 -1.1**
BSTI Sart Tilman 72.89 333 *d*P **P 11 26 43.4 +0.6**
comp=Z,12nm,0.9s
WPS Cemaes, Angles 72.89 340 *e*P **P 11 26 42.8 0.0**
WPS IAmb IAmb 11 26 45.8
comp=Z,34nm,1.0s
BHOU Houvegnez 72.96 332 *d*P **P 11 26 41.7 -1.5**
comp=Z,22nm,1.0s
WLF1 Llynfaes 72.97 340 *e*P **P 11 26 43.4 +0.2**
WLF1 IAmb IAmb 11 26 46.5
comp=Z,112nm,1.1s
Y14A Wickenburg 73.00 57 P **P 11 26 44.7 +0.9**
OGNE Ogallala 73.03 46 IAMs_20 IAMs_20 11 58 35.4
comp=Z,3µm,22.0s
OGNE Ogallala 73.03 46 P **P 11 26 43.6 -0.4**
baz=323,SNR=65
OGNE Ogallala 73.03 46 P **P 11 26 43.5 -0.4**
baz=323,SNR=65
OGNE S **S 11 36 14.5 +3.9**
baz=323
YRC Rhoscolyn 73.05 340 *e*P **P 11 26 43.1 -0.5**
YLL Llanberis 73.06 340 *e*P **P 11 26 43.3 -0.4**
BOVS Bovan 73.07 319 ⇑P **P 11 26 44.4 +0.4**
KDZ Kurdzhali 73.07 316 P **P 11 26 41.0 -3.1**
FOEL Foel Wylfa 73.08 339 ⇑*e*P **P 11 26 43.5 -0.4**
FOEL IAmb IAmb 11 26 45.0
comp=Z,62nm,0.9s
KALN Kalnik 73.09 324 P **P 11 26 43.5 -0.6**
BCLA Clavier 73.11 333 *b*P **P 11 26 43.6 -0.5**
comp=Z,38nm,1.0s
Q24A Divide 73.13 49 P **P 11 26 44.4 -0.5**
baz=322,SNR=41
A252A Venje 73.14 323 P **P 11 26 43.9 -0.5**
K31A O'Neill 73.14 42 P **P 11 26 43.9 -0.6**
baz=324,SNR=36
ECSD EROS Data Cent 73.14 40 P **P 11 26 43.9 -0.6**
ECSD EROS Data Cent 73.14 40 IAMs_20 IAMs_20 12 01 41.0
comp=Z,2µm,20.0s
ECSD EROS Data Cent 73.14 40 P **P 11 26 43.6 -0.8**
baz=325,SNR=265
ECSD S **S 11 36 12.8 +1.1**
baz=325
ECSD EROS Data Cent 73.14 40 P **P 11 26 43.6 -0.8**
baz=325,SNR=265
ECSD S **S 11 36 10.9 -0.8**
baz=325
SOKA Soboth 73.16 325 *e*P **P 11 26 44.8 +0.2**
comp=Z,28nm,1.1s,SNR=14
GROS Grobnik 73.17 325 *e*P **P 11 26 44.8 +0.1**
GROS *e*S **S 11 36 13.6 +1.6**
LOBO Lobor 73.22 324 P **P 11 26 44.2 -0.7**
LLW Llanuwychllyn 73.22 339 *e*P **P 11 26 44.4 -0.3**
VTS Vitosha 73.25 318 ⇑P **P 11 26 45.6 +0.3**
S22A 4UR Ranch, Cre 73.27 51 P **P 11 26 45.9 +0.2**
baz=322,SNR=151
HLM1 Long Mynd 73.35 339 *e*P **P 11 26 46.0 +0.5**
BMRD Maredsous 73.37 333 *d*P **P 11 26 45.5 -0.1**
comp=Z,57nm,0.9s
DIVS Divibare 73.40 321 ⇑*i*P **P 11 26 45.7 -0.4**
MOSL Moslavina 73.41 323 P **P 11 26 44.6 -1.4**
KBA Koelnbreinsper 73.43 326 *e*P **P 11 26 46.8 +0.5**
comp=Z,72nm,1.0s,SNR=58
SPMN Marine on St. 73.44 37 P **P 11 26 45.3 -1.0**
baz=327,SNR=73
SPMN Marine on St. 73.44 37 P **P 11 26 45.2 -1.0**
baz=327,SNR=73
D41A Chassel 73.46 34 P **P 11 26 45.8 -0.5**
D41A Chassel 73.46 34 P **P 11 26 45.3 -1.0**
baz=329,SNR=44
D41A S **S 11 36 14.1 -1.0**
baz=329
PTJ Puntijarka 73.46 324 P **P 11 26 45.4 -1.0**
X16A Lo Mia Camp, P 73.47 56 P **P 11 26 47.3 +0.5**
X16A IAmb IAmb 11 26 50.4
comp=Z,96nm,0.8s
OBKA Obir 73.48 325 ⇑*i*P **P 11 26 45.8 -0.7**
OBKA Obir 73.48 325 *e*P **P 11 26 46.7 +0.2**
comp=Z,22nm,1.0s,SNR=9.7
WLF Walferdange 73.53 332 *d*P **P 11 26 46.8 +0.2**
comp=Z,19nm,1.0s
A052A Srbac 73.55 323 ⇑*i*P **P 11 26 46.3 -0.5**
DOU Dourbes 73.60 333 *d*P **P 11 26 46.9 -0.2**
comp=Z,25nm,0.9s
MYKA Terra Mystica 73.70 326 *e*P **P 11 26 47.7 -0.1**
comp=Z,29nm,0.9s,SNR=20
ISP Isparta 73.71 310 IAMs_20 IAMs_20 12 02 28.8
comp=Z,2µm,19.0s
CRES Cresnjev 73.72 324 ⇑*i*P **P 11 26 47.6 -0.2**
CRES Cresnjev 73.72 324 *e*P **P 11 26 47.7 -0.2**
RK1H Rockhampton Ha 73.79 172 P **P 11 26 48.9 +0.7**
WATA Walderalm 73.82 328 *e*P **P 11 26 48.8 +0.2**
comp=Z,62nm,1.0s,SNR=26
W18A Petrified Fore 73.83 54 P **P 11 26 48.9 0.0**
baz=321
BBLS Lazići 73.83 321 ⇑*i*P **P 11 26 48.8 +0.2**
MCH1 Michaelchurch 73.86 339 *e*P **P 11 26 48.7 +0.3**
A051A Mrakovica 73.86 323 ⇑*i*P **P 11 26 48.3 -0.4**
STRD Stroud 73.86 338 *e*P **P 11 26 48.8 +0.3**
WTTA Wattenberg 73.86 327 *e*P **P 11 26 49.1 +0.3**
comp=Z,78nm,1.0s,SNR=41
PRED Cave del Predi 73.89 326 P **P 11 26 49.2 +0.4**
OZLJ Ozalj 73.90 324 P **P 11 26 47.7 -1.1**
SDCO Great Sand Dun 73.92 50 IAMs_20 IAMs_20 12 02 48.2
comp=Z,2µm,19.0s
SDCO Great Sand Dun 73.92 50 P **P 11 26 49.4 -0.1**
baz=322,SNR=111
SDCO Great Sand Dun 73.92 50 P **P 11 26 49.2 -0.3**
baz=322,SNR=111
MONM Monmouth 73.96 338 *e*P **P 11 26 49.4 +0.3**
MONM IAmb IAmb 11 26 53.1
comp=Z,736nm,2.6s
RETA Reutte 73.97 328 *e*P **P 11 26 49.3 0.0**
comp=Z,21nm,1.0s,SNR=8.0
VISS Visnje 73.97 325 *i*P **P 11 26 49.0 -0.3**
VISS *e*S **S 11 36 23.7 +2.8**
BLY Banja Luka 73.97 323 ⇑*i*P **P 11 26 48.8 -0.5**
MOTA Moosalm 73.98 328 *e*P **P 11 26 49.6 +0.1**
comp=Z,56nm,1.0s,SNR=28
MBWA Marble Bar 73.98 202 P **P 11 26 49.5 +0.1**
MBWA Marble Bar 73.98 202 P **P 11 26 50.7 +1.3**
MBWA P **P 11 26 50.7 +1.3**
MBWA Marble Bar 73.98 202 P **P 11 26 49.2 -0.2**
ABTA Abfaltersbach 74.00 327 *e*P **P 11 26 49.3 -0.2**
comp=Z,24nm,1.1s,SNR=18
A251A Rujevac 74.01 323 P **P 11 26 49.1 -0.4**
SWN1 Swindon 74.02 338 *e*P **P 11 26 50.1 +0.6**
SWN1 IAmb IAmb 11 26 51.5
comp=Z,114nm,0.8s
BFO Black Forest 74.03 330 P **P 11 26 49.7 +0.1**
BFO IAMs_20 IAMs_20 12 04 15.6
comp=Z,2µm,18.0s
BFO Black Forest 74.03 330 P **P 11 26 49.7 +0.1**
BFO pmax pmax
comp=Z,43nm,1.1s
BFO MLR MLR
comp=Z,2µm,18.0s
SQTA Sankt Quirin 74.05 328 *e*P **P 11 26 50.1 +0.2**
comp=Z,58nm,0.9s,SNR=41
RUDO Rudo 74.05 321 ⇑*i*P **P 11 26 50.0 +0.2**
BOJS Bojanci 74.07 324 ⇑*i*P **P 11 26 49.7 -0.2**
HMNX Herstmonceux 74.07 336 *e*P **P 11 26 49.3 -0.4**
COWI Conover 74.08 34 P **P 11 26 48.8 -1.1**
COWI IAmb IAmb 11 26 53.5
comp=Z,233nm,1.4s
COWI IAMs_20 IAMs_20 12 04 17.3
comp=Z,2µm,19.0s
COWI Conover 74.08 34 S **S 11 36 18.9 -3.2**
baz=329
AS31 Alice Springs 74.09 188 P **P 11 26 50.2 +0.1**
ASAR Alice Springs 74.09 188 P **P 11 26 49.8 -0.3**
comp=Z,34nm,0.8s,baz=2.7,slow=5.0,SNR=111
ASAR PKKPbc **PKKPbc 11 46 21.2 +0.3**
comp=Z,0.3nm,0.7s,baz=174,slow=1.7,SNR=5.5
ASAR PKPPKP P'P'df 11 54 20.9 +5.5
comp=Z,0.9nm,0.9s,baz=162,slow=1.8,SNR=4.2
ASAR LR LR 11 58 44.2
comp=Z,1µm,20.7s,baz=2.5,slow=35
comp=Z,34nm,0.8s
ASAR Alice Springs 74.09 188 P **P 11 26 49.6 -0.5**
ASAR Alice Springs 74.09 188 P **P 11 26 49.6 -0.5**
CLUD Cludinico 74.12 326 P **P 11 26 50.4 +0.1**
CEY Cerknica 74.18 325 ⇑*i*P **P 11 26 49.8 -0.7**
GBRS Gornja Briga 74.21 325 *e*P **P 11 26 50.7 -0.1**
GBRS *e*S **S 11 36 25.2 +1.5**
I37A Lemond, Waseca 74.22 38 P **P 11 26 50.4 -0.4**
I37B Waseca 74.22 38 P **P 11 26 50.3 -0.5**
baz=327,SNR=203
PLE Pljevlja 74.28 321 ⇑*i*P **P 11 26 50.7 -0.6**
SHAO Shalim 74.28 279 P **P 11 26 51.6 +0.1**
MGRS Mrkonjic Grad 74.29 323 ⇑*i*P **P 11 26 53.1 +1.9**
KSCO Kaye Shedlock' 74.30 47 P **P 11 26 50.8 -0.7**
baz=323,SNR=23
KSCO Kaye Shedlock' 74.30 47 P **P 11 26 50.7 -0.7**
baz=323,SNR=23
RSBS Rosebush, Pemb 74.30 340 *e*P **P 11 26 51.1 0.0**
RSBS IAmb IAmb 11 26 54.4
comp=Z,56nm,1.1s
IWEX Carrickbyrne, 74.34 341 *e*P **P 11 26 51.1 -0.2**
PSA00 Pilbara Seismi 74.35 202 P **P 11 26 52.0 +0.4**
PSA00 Pilbara Seismi 74.35 202 P **P 11 26 51.5 0.0**
PSA00 IAmb IAmb 11 26 55.9
comp=Z,36nm,0.9s
PSA00 Pilbara Seismi 74.35 202 P **P 11 26 51.6 0.0**
FETA Feichten 74.38 328 *e*P **P 11 26 52.2 +0.3**
comp=Z,32nm,1.0s,SNR=27
BGNE Belgrade 74.39 43 P **P 11 26 51.0 -0.8**
baz=325,SNR=20
BGNE S **S 11 36 24.9 -1.0**
baz=325
BGNE Belgrade 74.39 43 P **P 11 26 51.3 -0.6**
baz=325,SNR=20
BGNE S **S 11 36 27.1 +1.3**
baz=325
G40A Rib Lake 74.39 36 P **P 11 26 51.0 -0.8**
baz=328,SNR=234
G40A S **S 11 36 27.1 +1.4**
baz=328
DAVA Damuels 74.44 329 *i*P **P 11 26 51.9 -0.2**
comp=Z,34nm,0.9s,SNR=20
IVA Berane 74.45 320 ⇑*i*P **P 11 26 51.8 -0.5**
PLIT Plitvice 74.46 324 P **P 11 26 51.4 -0.8**
SKDS Skadanscina 74.49 325 ⇑*i*P **P 11 26 51.3 -1.1**
ECH Echery 74.50 331 IAMs_20 IAMs_20 12 03 21.1
comp=Z,2µm,21.0s
SRKY Kupres RS 74.55 322 ⇑*i*P **P 11 26 53.0 +0.2**
UPM Unac-Piva 74.58 321 *e*P **P 11 26 52.3 -0.8**
UPM Unac-Piva 74.58 321 ⇑*i*P **P 11 26 52.6 -0.5**
VAY Valandovo 74.59 317 *i*P **P 11 26 53.5 +0.6**
E43A Lone Tree Farm 74.60 33 P **P 11 26 51.9 -1.0**
baz=330,SNR=98
E43A S **S 11 36 26.6 -1.3**
baz=330
214A Organ Pipe Nat 74.61 58 P **P 11 26 53.5 +0.2**
baz=320,SNR=45
214A S **S 11 36 31.8 +3.2**
baz=320
KOME Kolasin 74.63 320 ⇑*i*P **P 11 26 52.4 -0.9**
PVY Plav 74.66 320 ⇑*i*P **P 11 26 53.8 +0.3**
L34A Svendsen Farm, 74.69 41 P **P 11 26 52.8 -0.7**
baz=326,SNR=13
F42A Maple Grove Fa 74.73 34 P **P 11 26 52.8 -0.9**
baz=329,SNR=14
MSVF Nonsavu 74.75 145 P **P 11 26 55.5 +1.5**
comp=Z,20nm,0.9s,baz=271,slow=2.6,SNR=7.1
MSVF LR LR 12 00 06.2
comp=Z,1µm,18.1s,baz=357,slow=36
comp=Z,20nm,0.9s
MSVF Nonsavu 74.75 145 IAMs_20 IAMs_20 12 02 16.1
comp=Z,2µm,18.0s
MSVF Nonsavu 74.75 145 P P 11 26 57.2 +3.1
ASF Jabal al Asfar 74.80 302 LR LR 12 05 49.5
comp=Z,3µm,18.0s,baz=54,slow=41
SMRN Sveta Marina 74.88 325 P **P 11 26 52.9 -1.6**
DAVOX Davos/Dischmat 74.88 328 LR LR 12 03 24.7
comp=Z,2µm,18.6s,baz=32,slow=39
NKME Niksic 74.93 320 ⇑*i*P **P 11 26 54.3 -0.6**
T25A Trinidad 74.93 50 P **P 11 26 54.6 -0.7**
baz=323,SNR=86
MMAI Mount Meron Ar 74.95 304 LR LR 12 02 48.8
comp=Z,2µm,19.2s,baz=206,slow=38
BRY Bratogost 74.98 321 *e*P **P 11 26 54.6 -0.8**
BRY Bratogost 74.98 321 ⇑*i*P **P 11 26 54.3 -1.1**
NVLJ Novalja 75.01 324 P **P 11 26 52.8 -2.6**
PDG Podgorica 75.08 320 ⇓P **P 11 26 56.4 +0.6**
PDG Podgorica 75.08 320 IAMs_20 IAMs_20 12 02 42.8
comp=Z,2µm,18.0s
PDG Podgorica 75.08 320 ⇑*i*P **P 11 26 55.4 -0.4**
TTG Podgorica 75.08 320 ⇑*i*P **P 11 26 55.4 -0.4**
CEME Cevo 75.12 320 ⇑*i*P **P 11 26 55.4 -0.7**
HTL Hartland 75.13 339 *e*P **P 11 26 57.0 +1.2**
NOUC Port Laguerre 75.20 157 P **P 11 26 58.2 +1.7**
DZM Mont Dzumac 75.21 157 *e*P P 11 26 58.6 +1.9
comp=Z,160nm,1.5s
DZM Mont Dzumac 75.21 157 *e*LR LR 11 50 06.3
comp=Z,2µm,25.6s
DZM Mont Dzumac 75.21 157 P P 11 26 58.5 +1.8
TREB Trebinje 75.21 321 *e*P **P 11 26 55.4 -1.1**
N33B J Bar K, Exete 75.24 43 P **P 11 26 55.6 -1.2**
baz=325,SNR=12
DRME Dracevica, Mon 75.31 320 ⇑*i*P **P 11 26 56.9 -0.2**
DRME Dracevica, Mon 75.31 320 ⇑*i*P **P 11 26 57.0 -0.2**
BUM Brajici-Budva 75.34 320 ⇑*i*P **P 11 26 56.5 -0.9**
HCY Herceg Novi 75.38 321 *e*P **P 11 26 56.1 -1.4**
HCY Herceg Novi 75.38 321 ⇑*i*P **P 11 26 57.2 -0.3**
I40A Norwalk 75.41 37 P **P 11 26 56.7 -1.0**
baz=328,SNR=46
I40A S **S 11 36 35.3 -1.7**
baz=328
TUC Tucson 75.44 57 P **P 11 26 58.0 -0.1**
TUC IAmb IAmb 11 27 02.3
comp=Z,124nm,1.6s
TUC Tucson 75.44 57 P **P 11 26 58.0 -0.1**
TUC pmax pmax
comp=Z,124nm,1.7s
TUC MLR MLR
comp=Z,1µm,21.0s
TUC Tucson 75.44 57 P **P 11 26 58.4 +0.2**
baz=321
ULC Ulcinj 75.47 320 ⇑*i*P **P 11 26 57.6 -0.5**
E46A Sault Ste Mari 75.53 31 P **P 11 26 57.6 -0.6**
E46A Sault Ste Mari 75.53 31 P **P 11 26 57.0 -1.2**
baz=331,SNR=56
OHR Ohrid 75.53 318 *i*P **P 11 26 59.5 +1.0**
AFI Afiamalu 75.55 134 LR LR 11 54 27.5
comp=Z,941nm,20.7s,baz=340,slow=31
K38A Parkersburg 75.61 39 P **P 11 26 57.7 -1.1**
baz=327,SNR=14
ANMO Albuquerque 75.64 52 LR LR 12 00 43.4
comp=Z,1µm,19.0s,baz=333,slow=36
ANMO Albuquerque 75.64 52 P **P 11 26 59.8 +0.4**
ANMO Albuquerque 75.64 52 *ce*P **P 11 26 59.3 -0.1**
ANMO pmax pmax
comp=Z,75nm,1.7s
ANMO Albuquerque 75.64 52 P **P 11 26 59.3 -0.1**
baz=322,SNR=73
ANMO Albuquerque 75.64 52 P **P 11 26 59.6 +0.2**
baz=322
ANMO S **S 11 36 40.5 +0.2**
baz=322
OUENC Ouen Island, N 75.64 157 P **P 11 27 00.4 +1.4**
OUENC IAmb IAmb 11 27 05.0
comp=Z,226nm,1.7s
OUENC Ouen Island, N 75.64 157 P P 11 27 00.9 +1.9
TIR Tirane 75.73 319 ⇑P **P 11 27 01.1 +1.6**
CBKS Cedar Bluff 75.79 45 P **P 11 26 59.2 -0.8**
CBKS Cedar Bluff 75.79 45 P **P 11 26 59.2 -0.8**
CBKS pmax pmax
comp=Z,273nm,1.2s
CBKS MLR MLR
comp=Z,3µm,21.0s
CBKS Cedar Bluff 75.79 45 P **P 11 26 58.6 -1.4**
baz=324,SNR=37
CBKS S **S 11 36 44.8 +3.3**
baz=324
CBKS Cedar Bluff 75.79 45 P **P 11 26 59.0 -1.0**
baz=324,SNR=37
CBKS S **S 11 36 44.1 +2.6**
baz=324
EIDS Eidsvold 75.80 172 P **P 11 27 01.2 +1.3**
EIDS IAmb IAmb 11 27 03.2
comp=Z,110nm,1.4s
EIDS Eidsvold 75.80 172 P **P 11 27 01.0 +1.1**
N35A Tabor 75.92 42 P **P 11 26 60.0 -0.7**
baz=326,SNR=46
H43A Windswept, Lux 75.97 35 P **P 11 27 00.0 -0.8**
baz=330,SNR=68
H43A S **S 11 36 42.4 -0.8**
baz=330
PINNC Pines Island, 75.98 156 P P 11 27 03.7 +2.8
I42A Draeger Farm, 76.05 36 P **P 11 27 00.4 -0.9**
I42A Draeger Farm, 76.05 36 P **P 11 27 00.8 -0.5**
baz=329,SNR=126
I42A S **S 11 36 36.6 -7.4**
baz=329
SCIA State Center 76.06 39 IAMs_20 IAMs_20 12 03 44.0
comp=Z,2µm,19.0s
SCIA State Center 76.06 39 P **P 11 27 00.7 -0.7**
baz=327,SNR=12
SCIA State Center 76.06 39 P **P 11 27 00.4 -0.9**
baz=327,SNR=12
VLDQ Val d'Or 76.08 26 P **P 11 27 00.5 -0.9**
Y22D IRIS PASSCAL I 76.09 53 P **P 11 27 03.0 +1.1**
baz=322,SNR=16
Y22D IRIS PASSCAL I 76.09 53 P **P 11 27 02.9 +1.0**
baz=322,SNR=16
SENIN Lac Senin/Sane 76.10 330 IAMs_20 IAMs_20 12 05 00.3
comp=Z,2µm,18.0s
WRKA Warakurna 76.11 193 P **P 11 27 02.5 +0.8**
CLF Chambon-Foret 76.14 334 IAMs_20 IAMs_20 12 07 12.2
comp=Z,2µm,21.0s
JQE Queens East 76.21 337 *e*P **P 11 27 02.3 +0.2**
G45A Suttons Bay 76.23 33 P **P 11 27 01.2 -1.1**
baz=331,SNR=13
G45A P **P 11 27 01.2 -1.1**
baz=331,SNR=13
JVM Valle D.L. Mar 76.24 337 *e*P **P 11 27 02.5 +0.3**
JSA Saint Aubin 76.26 337 *e*P **P 11 27 02.7 +0.4**
JSA IAmb IAmb 11 27 04.1
comp=Z,106nm,0.9s
JFWS Jewell Farm 76.38 37 IAMs_20 IAMs_20 12 04 17.4
comp=Z,2µm,18.0s
JFWS Jewell Farm 76.38 37 P **P 11 27 01.8 -1.4**
baz=329,SNR=34
JFWS S **S 11 36 50.7 +3.0**
baz=329
JFWS Jewell Farm 76.38 37 P **P 11 27 01.6 -1.5**
baz=329,SNR=34
JFWS S **S 11 36 44.3 -3.5**
baz=329
RAYN Ar Rayn 76.43 290 P **P 11 27 03.5 -0.3**
RAYN Ar Rayn 76.43 290 IAMs_20 IAMs_20 11 59 59.2
comp=Z,2µm,22.0s
RAYN Ar Rayn 76.43 290 P **P 11 27 03.5 -0.3**
RAYN pmax pmax
comp=Z,42nm,1.1s
RAYN MLR MLR
comp=Z,2µm,22.0s
RAYN Ar Rayn 76.43 290 *i*P **P 11 27 04.6 +0.8**
SNR=13
R32A Long Quarter, 76.58 45 P **P 11 27 03.5 -0.9**
baz=325,SNR=37
QLP Quilpie 76.63 178 P **P 11 27 04.9 +0.3**
L40A Anamosa 76.72 38 P **P 11 27 04.2 -1.0**
baz=328,SNR=37
RMQ Roma 76.73 174 P **P 11 27 06.6 +1.5**
GLMI Grayling 76.77 32 IAMs_20 IAMs_20 12 03 34.5
comp=Z,2µm,20.0s
GLMI Grayling 76.77 32 P **P 11 27 05.5 +0.1**
baz=331,SNR=6.4
GLMI Grayling 76.77 32 P **P 11 27 04.6 -0.8**
baz=331,SNR=6.4
121A Cookes Peak, D 76.85 55 P **P 11 27 07.0 +0.7**
121A Cookes Peak, D 76.85 55 P **P 11 27 06.6 +0.3**
baz=322,SNR=132
121A Cookes Peak, D 76.85 55 P **P 11 27 06.6 +0.3**
baz=322,SNR=132
I45A Fountain 76.90 34 P **P 11 27 05.4 -0.7**
baz=331,SNR=12
I45A P **P 11 27 05.4 -0.7**
baz=331,SNR=12
KSU1 Kansas State U 76.96 43 P **P 11 27 05.2 -1.4**
baz=326,SNR=34
KSU1 Kansas State U 76.96 43 P **P 11 27 04.9 -1.7**
baz=326,SNR=34
N38A Joes South For 76.98 40 P **P 11 27 05.7 -1.0**
baz=327,SNR=19
NRCA Norcia 77.15 324 P **P 11 27 08.0 +0.4**
NRCA IAmb IAmb 11 27 12.4
comp=Z,95nm,1.0s
K43A Burlington 77.28 36 P **P 11 27 07.5 -0.8**
baz=330,SNR=41
K43A S **S 11 36 55.0 -2.6**
baz=330
SANT Santorini 77.31 312 IAMs_20 IAMs_20 12 03 02.1
comp=Z,2µm,21.0s
L42A Oliver, Polo 77.38 37 P **P 11 27 07.7 -1.1**
baz=329,SNR=18
BNI Bardonecchia 77.46 330 P **P 11 27 09.5 +0.1**
BNI IAMs_20 IAMs_20 12 06 17.4
comp=Z,2µm,19.0s
BNI Bardonecchia 77.46 330 P **P 11 27 09.5 +0.1**
BNI pmax pmax
comp=Z,27nm,1.0s
BNI MLR MLR
comp=Z,2µm,19.0s
MATE Matera 77.62 321 ⇑P **P 11 27 10.5 +0.4**
INKA Innaminka 77.78 181 P **P 11 27 11.6 +0.6**
EIL Elat 77.79 302 LR LR 12 08 00.8
comp=Z,2µm,18.8s,baz=35,slow=41
P38A Dawn 77.84 41 P **P 11 27 10.7 -0.8**
baz=327,SNR=47
L44A Lake County Fo 77.90 36 IAMs_20 IAMs_20 12 06 10.4
comp=Z,2µm,20.0s
L44A Lake County Fo 77.90 36 P **P 11 27 11.4 -0.3**
baz=330,SNR=6.5
L44A Lake County Fo 77.90 36 P **P 11 27 10.8 -1.0**
baz=330,SNR=6.5
SSB Saint Sauveur 77.94 331 IAMs_20 IAMs_20 12 04 34.9
comp=Z,1µm,18.0s
OK035 E0210 Rd and N 77.98 46 IAMs_20 IAMs_20 12 04 03.4
comp=Z,2µm,20.0s
LATQ La Tuque 78.01 24 P **P 11 27 11.8 -0.4**
LATQ IAmb IAmb 11 27 15.3
comp=Z,103nm,1.1s
N41A Harden Midland 78.02 38 P **P 11 27 11.5 -1.0**
baz=329,SNR=50
OOD Oodnadatta 78.05 186 P **P 11 27 13.3 +0.8**
AMTX Amarillo 78.06 49 P **P 11 27 12.9 0.0**
AMTX IAmb IAmb 11 27 15.7
comp=Z,124nm,0.8s
AMTX IAMs_20 IAMs_20 12 06 24.7
comp=Z,2µm,18.0s
AMTX Amarillo 78.06 49 P **P 11 27 13.0 0.0**
baz=324,SNR=67
AMTX Amarillo 78.06 49 P **P 11 27 12.4 -0.5**
baz=324
J47A Sunmer 78.09 33 P **P 11 27 12.9 +0.1**
baz=332,SNR=36
J47A P **P 11 27 12.9 +0.1**
baz=332,SNR=36
U32A Winter Ranch, 78.11 46 P **P 11 27 13.1 0.0**
baz=325,SNR=13
KIDD KIDD Seismic O 78.12 54 P **P 11 27 14.0 +0.7**

baz=323,SNR=15
OK032 Salt Plains WL 78.13 46 IAMs_20 IAMs_20 12 01 55.3
comp=Z,3μm,21.0s
OK038 West end E0370 78.15 46 IAMs_20 IAMs_20 12 03 47.0
comp=Z,2μm,20.0s
I49A Point Hope 78.16 32 P **P** **11 27 12.6 -0.5**
I49A baz=332,SNR=15 P **P** **11 27 12.6 -0.5**
baz=332,SNR=15
HQIL Hanson Quary C 78.25 36 IAMs_20 IAMs_20 11 56 55.7
comp=Z,582nm,21.0s
MSTX Muleshoe 78.26 50 P **P** **11 27 13.8 -0.2**
MSTX IAmb IAmb 11 27 16.6
comp=Z,65nm,0.9s
MSTX Muleshoe 78.26 50 P **P** **11 27 13.9 -0.2**
baz=324,SNR=57
MSTX Muleshoe 78.26 50 P **P** **11 27 13.4 -0.6**
baz=324,SNR=57
LMQ La Malbaie 78.46 22 P **P** **11 27 14.7 -0.1**
LMQ IAmb IAmb 11 27 16.4
comp=Z,138nm,1.0s
M44A Midewin, Midew 78.53 36 P **P** **11 27 15.0 -0.3**
baz=330,SNR=18
M44A S **S** **11 37 13.0 +1.9**
baz=330
P40A Paris 78.53 40 P **P** **11 27 14.4 -0.9**
baz=328,SNR=115
SADO Sadowa 78.61 29 LR LR 12 07 29.0
comp=Z,2μm,18.3s,baz=358,slow=40
SADO Sadowa 78.61 29 P **P** **11 27 14.7 -0.9**
SADO IAmb IAmb 11 27 18.1
comp=Z,98nm,1.1s
TRQ Mont Tremblant 78.61 25 P **P** **11 27 15.4 -0.3**
L46A Eue Claire 78.64 35 P **P** **11 27 15.7 -0.1**
baz=331,SNR=13
L46A P **P** **11 27 15.7 -0.1**
baz=331,SNR=13
MNTX Cornudas Mount 78.76 54 P **P** **11 27 16.9 +0.2**
MNTX IAmb IAmb 11 27 20.9
comp=Z,156nm,1.1s
MNTX IAMs_20 IAMs_20 12 08 28.6
comp=Z,1μm,19.0s
MNTX Cornudas Mount 78.76 54 P **P** **11 27 17.4 +0.7**
baz=323,SNR=252
MNTX Cornudas Mount 78.76 54 P **P** **11 27 17.1 +0.4**
baz=323,SNR=252
HDIL Hopedale 78.76 38 P **P** **11 27 15.9 -0.6**
baz=329,SNR=30
HDIL Hopedale 78.76 38 P **P** **11 27 15.4 -1.2**
baz=329,SNR=30
T35B Sooner Cattle 78.81 44 P **P** **11 27 16.5 -0.4**
baz=326,SNR=90
T35B S **S** **11 37 18.2 +4.0**
baz=326
TIP Timpagrande 78.84 320 ⇑P **P** **11 27 18.1 +1.0**
K50A Casco 79.26 32 P **P** **11 27 19.2 0.0**
baz=333,SNR=6.1
K50A P **P** **11 27 19.2 0.0**
baz=333,SNR=6.1
DRLN Deer Lake 79.30 13 P **P** **11 27 19.6 +0.3**
DRLN IAmb IAmb 11 27 22.7
comp=Z,107nm,1.1s
OK029 Liberty Lake 79.30 46 IAMs_20 IAMs_20 12 03 17.4
comp=Z,2μm,21.0s
AAM Ann Arbor 79.33 33 IAMs_20 IAMs_20 12 02 24.1
comp=Z,2μm,22.0s
AAM Ann Arbor 79.33 33 P **P** **11 27 19.6 0.0**
baz=332,SNR=13
AAM Ann Arbor 79.33 33 P **P** **11 27 18.7 -0.9**
baz=332,SNR=13
L48A N Adams 79.37 34 P **P** **11 27 19.6 -0.2**
L48A N Adams 79.37 34 P **P** **11 27 19.7 -0.2**
baz=332,SNR=27
L48A P **P** **11 27 19.7 -0.2**
baz=332,SNR=27
L48A S **S** **11 37 20.7 +0.6**
baz=332
L48A S **S** **11 37 20.7 +0.6**
baz=332
O44A Mansfield 79.43 37 P **P** **11 27 19.5 -0.7**
baz=330,SNR=20
OK031 S. Brethren Rd 79.45 45 IAMs_20 IAMs_20 12 06 24.4
comp=Z,2μm,18.0s
R40A Maddies Statio 79.49 41 P **P** **11 27 19.9 -0.7**
baz=328,SNR=91
OK030 Cody Creek RV 79.50 45 IAMs_20 IAMs_20 12 03 09.6
comp=Z,2μm,21.0s
MEEK Meekatharra 79.51 202 P **P** **11 27 20.6 0.0**
E62A Clayton Lake 79.53 22 P **P** **11 27 20.2 -0.4**
E62A IAmb IAmb 11 27 23.7
comp=Z,107nm,1.1s
OK025 Westminster Rd 79.53 46 IAMs_20 IAMs_20 12 03 34.5
comp=Z,2μm,20.0s
S39A Bolivar 79.55 42 P **P** **11 27 20.1 -0.9**
baz=328,SNR=29
WMOK Wichita Mounta 79.56 47 IAMs_20 IAMs_20 12 05 37.3
comp=Z,2μm,19.0s
WMOK Wichita Mounta 79.56 47 P **P** **11 27 20.7 -0.3**
baz=325,SNR=92
WMOK Wichita Mounta 79.56 47 P **P** **11 27 20.7 -0.3**
baz=325,SNR=92
BATG Bathurst New B 79.68 19 P **P** **11 27 21.9 +0.5**
BATG IAmb IAmb 11 27 23.8
comp=Z,128nm,0.9s
SOCY Socotra 79.70 277 IAMs_20 IAMs_20 12 03 01.0
comp=Z,2μm,21.0s
SFIN Lafayette 79.76 36 P **P** **11 27 21.2 -0.8**
baz=330,SNR=21
SFIN Lafayette 79.76 36 P **P** **11 27 21.2 -0.8**
baz=330,SNR=21
FNO Franklin 79.77 46 **P** **11 27 22.6 +0.4**
N47A Urbana 79.85 35 P **P** **11 27 21.4 -1.1**
baz=331,SNR=34
N47A P **P** **11 27 21.4 -1.1**
baz=331,SNR=34
BMNY Brushton-Moira 79.90 26 P **P** **11 27 22.2 -0.4**
baz=337,SNR=81
TUL1 Leonard 79.96 44 P **P** **11 27 23.0 -0.2**
baz=327,SNR=57
TUL1 Leonard 79.96 44 P **P** **11 27 22.6 -0.6**
baz=327,SNR=57
E63A Oxbow 79.97 21 P **P** **11 27 22.6 -0.5**
baz=341,SNR=23
E63A P **P** **11 27 22.6 -0.5**
baz=341,SNR=23
CEL Celeste 79.97 320 IAMs_20 IAMs_20 12 08 34.3
comp=Z,2μm,19.0s
SLM Saint Louis 80.03 39 P **P** **11 27 23.4 -0.2**
baz=329,SNR=5.7
LONY Lake Ozonia 80.08 26 P **P** **11 27 22.5 -1.1**
baz=337,SNR=29
J54A Appleton 80.11 29 P **P** **11 27 23.7 -0.2**
baz=335,SNR=13
J54A P **P** **11 27 23.7 -0.2**
baz=335,SNR=13
CCM Cathedral Cave 80.12 40 P **P** **11 27 23.3 -0.7**
CCM IAmb IAmb 11 27 26.7
comp=Z,203nm,1.2s
CCM Cathedral Cave 80.12 40 IAMs_20 IAMs_20 12 08 34.5
comp=Z,2μm,18.0s
CCM Cathedral Cave 80.12 40 P **P** **11 27 23.3 -0.7**
CCM pmax pmax
comp=Z,203nm,1.3s
CCM Cathedral Cave 80.12 40 P **P** **11 27 23.4 -0.5**
baz=329,SNR=56
CCM Cathedral Cave 80.12 40 P **P** **11 27 23.0 -1.0**
baz=329
U38A Gravette 80.14 43 P **P** **11 27 23.2 -1.0**
baz=327,SNR=69
FRNY Flat Rock 80.16 25 P **P** **11 27 23.4 -0.6**
FRNY Flat Rock 80.16 25 P **P** **11 27 23.5 -0.6**
baz=338,SNR=18
Q44A Meyer Farm, Va 80.29 38 P **P** **11 27 24.5 -0.4**
baz=330,SNR=25
M50A Fremont 80.33 33 P **P** **11 27 24.3 -0.8**
baz=333,SNR=12
M50A P **P** **11 27 24.3 -0.8**
baz=333,SNR=12
N49A Columbus Grove 80.36 34 P **P** **11 27 24.4 -0.8**
baz=332,SNR=34
N49A P **P** **11 27 24.4 -0.8**
baz=332,SNR=34
WCNY West Carthage 80.36 27 P **P** **11 27 24.3 -0.9**
baz=337,SNR=13
J55A Hilton 80.37 29 P **P** **11 27 24.4 -0.9**
baz=335,SNR=9.8
J55A P **P** **11 27 24.4 -0.9**
baz=335,SNR=9.8

P46A Rosedale 80.38 37 P **P** **11 27 24.7 -0.7**
baz=330,SNR=35
HHAR Hobbs 80.47 43 P **P** **11 27 25.5 -0.4**
HHAR IAmb IAmb 11 27 29.4
comp=Z,233nm,1.4s
F63A Nahmakanta, Br 80.49 22 P **P** **11 27 25.7 -0.2**
F63A IAmb IAmb 11 27 29.1
comp=Z,153nm,1.1s
F64A Sherman 80.51 21 P **P** **11 27 25.4 -0.5**
baz=341,SNR=54
F64A P **P** **11 27 25.4 -0.5**
baz=341,SNR=54
FVM French Village 80.51 40 P **P** **11 27 25.5 -0.6**
baz=329,SNR=32
LCRK Leigh Creek 80.55 184 P **P** **11 27 27.2 +1.1**
O48B Farmland 80.59 35 P **P** **11 27 25.4 -1.1**
baz=332,SNR=50
O48B Farmland 80.59 35 P **P** **11 27 25.0 -1.4**
baz=332,SNR=50
G62A West of Eustis 80.59 23 P **P** **11 27 26.6 +0.1**
baz=340,SNR=31
G62A P **P** **11 27 26.6 +0.1**
baz=340,SNR=31
MULG Mulgathing 80.64 187 P **P** **11 27 26.6 0.0**
J56A Wolcott 80.65 28 P **P** **11 27 26.1 -0.6**
baz=336,SNR=7.2
J56A P **P** **11 27 26.1 -0.6**
baz=336,SNR=7.2
ERPA Erie 80.72 31 P **P** **11 27 26.6 -0.6**
baz=334,SNR=8.4
ERPA Erie 80.72 31 P **P** **11 27 25.9 -1.3**
baz=334,SNR=8.4
NCB Newcomb 80.78 26 P **P** **11 27 27.2 -0.3**
NCB IAmb IAmb 11 27 29.0
comp=Z,74nm,0.8s
NCB Newcomb 80.78 26 P **P** **11 27 27.1 -0.3**
baz=337,SNR=28
J57A Williamstown 80.79 27 P **P** **11 27 27.4 -0.1**
baz=336,SNR=15
J57A P **P** **11 27 27.4 -0.1**
baz=336,SNR=15
M52A Chesterland 80.79 32 P **P** **11 27 26.8 -0.8**
baz=334,SNR=15
M52A P **P** **11 27 26.8 -0.8**
baz=334,SNR=15
OLIL Olney 80.80 38 P **P** **11 27 27.2 -0.4**
baz=330,SNR=17
VT1 Waterbury 80.85 25 P **P** **11 27 28.3 +0.5**
baz=338,SNR=71
PKME Peaks-Kenny Pk 80.86 22 P **P** **11 27 27.9 +0.2**
baz=340,SNR=32
PKME Peaks-Kenny Pk 80.86 22 P **P** **11 27 26.6 -1.1**
baz=340,SNR=32
ARMA Armidale 80.86 172 P **P** **11 27 28.8 +0.9**
ARMA Armidale 80.86 172 P **P** **11 27 28.8 +0.9**
ABTX Abilene, Hawle 80.88 49 P **P** **11 27 28.1 -0.1**
baz=325,SNR=50
ABTX Abilene, Hawle 80.88 49 P **P** **11 27 28.1 -0.1**
baz=325,SNR=50
WVNY West Valley, N 80.91 29 P **P** **11 27 27.9 -0.3**
baz=335,SNR=27
O49A Covington 80.95 34 P **P** **11 27 27.8 -0.6**
O49A IAmb IAmb 11 27 30.6
comp=Z,72nm,0.9s
O49A Covington 80.95 34 P **P** **11 27 27.9 -0.5**
baz=332,SNR=24
O49A P **P** **11 27 27.9 -0.5**
baz=332,SNR=24
N51A Ashland 81.00 33 P **P** **11 27 28.2 -0.4**
baz=333,SNR=21
N51A P **P** **11 27 28.2 -0.4**
baz=333,SNR=21
H62A Milan 81.04 24 P **P** **11 27 29.1 +0.3**
baz=339,SNR=74
H62A P **P** **11 27 29.1 +0.3**
baz=339,SNR=74
J58A Remsen 81.04 27 P **P** **11 27 28.3 -0.5**
baz=337,SNR=37
J58A P **P** **11 27 28.3 -0.5**
baz=337,SNR=37
ALLY Alegheny Colle 81.09 31 P **P** **11 27 28.5 -0.6**
baz=334,SNR=17
M53A WI Miller and 81.11 31 P **P** **11 27 28.4 -0.8**
baz=334,SNR=17
MCVT Middlebury Col 81.13 25 P **P** **11 27 29.3 0.0**
baz=338,SNR=29
LBNH Lisbon 81.15 24 P **P** **11 27 29.9 +0.4**
baz=339,SNR=20
LBNH Lisbon 81.15 24 P **P** **11 27 29.0 -0.5**
baz=339,SNR=20
J59A Piesco 81.17 26 P **P** **11 27 29.1 -0.4**
baz=337,SNR=35
J59A P **P** **11 27 29.1 -0.4**
baz=337,SNR=35
P48A Milroy 81.19 35 P **P** **11 27 28.8 -0.9**
baz=332,SNR=48
P48A P **P** **11 27 28.8 -0.9**
baz=332,SNR=48
S44A Carbondale 81.24 39 P **P** **11 27 29.8 -0.2**
baz=330,SNR=18
VAE Valguarnera 81.25 321 LR LR 12 08 50.7
comp=Z,1μm,18.9s,baz=47,slow=40
K57A Scipio Center 81.25 28 P **P** **11 27 29.3 -0.7**
baz=336,SNR=8.6
X37A Clayton 81.25 45 P **P** **11 27 29.3 -0.8**
baz=327,SNR=37
LMN Caledonia Moun 81.30 19 P **P** **11 27 30.5 +0.3**
G65A Princeton 81.32 21 P **P** **11 27 30.1 -0.2**
baz=341,SNR=25
G65A P **P** **11 27 30.1 -0.2**
baz=341,SNR=25
P49A Miami Univ. Ec 81.39 35 IAMs_20 IAMs_20 12 08 17.7
comp=Z,2μm,21.0s
P49A Miami Univ. Ec 81.39 35 P **P** **11 27 30.2 -0.6**
baz=332,SNR=28
P49A Miami Univ. Ec 81.39 35 P **P** **11 27 29.1 -1.7**
baz=332,SNR=28
ACSO Alum Creek Sta 81.39 33 IAMs_20 IAMs_20 12 06 09.8
comp=Z,1μm,20.0s
ACSO Alum Creek Sta 81.39 33 P **P** **11 27 30.5 -0.3**
baz=333,SNR=23
ACSO Alum Creek Sta 81.39 33 P **P** **11 27 29.9 -0.9**
baz=333,SNR=23
WVL Waterville 81.42 23 IAMs_20 IAMs_20 12 04 03.7
comp=Z,2μm,21.0s
WVL Waterville 81.42 23 P **P** **11 27 30.3 -0.5**
baz=340,SNR=19
Z35A Perchaven, San 81.43 47 P **P** **11 27 30.9 -0.2**
baz=326,SNR=52
ACCN Adirondack Com 81.47 26 P **P** **11 27 31.0 -0.2**
baz=338,SNR=33
L56A Greenwood 81.48 29 P **P** **11 27 30.6 -0.7**
baz=336,SNR=29
L56A P **P** **11 27 30.6 -0.7**
baz=336,SNR=29
TX31 Lajitas Ar. Si 81.53 54 P **P** **11 27 32.5 +0.7**
TX31 Lajitas Ar. Si 81.53 54 P **P** **11 27 32.6 +0.8**
baz=324,SNR=166
TX32 Lajitas Array 81.53 54 P **P** **11 27 32.5 +0.7**
TX32 IAmb IAmb 11 27 36.1
comp=Z,206nm,1.3s
TXAR Lajitas Array 81.53 54 P **P** **11 27 32.0 +0.2**
comp=Z,64nm,0.9s,baz=299,slow=4.0,SNR=231
TXAR PKKPbc **PKKPbc** **11 46 04.2 +1.8**
comp=Z,1.2nm,0.9s,baz=162,slow=3.8,SNR=5.2
TXAR PKPPKP **P'P'df** **11 54 09.6 -4.7**
comp=Z,0.3nm,0.6s,baz=172,slow=2.5,SNR=5.0
TXAR LR LR 12 04 44.8
comp=Z,576nm,18.1s,baz=338,slow=36
comp=Z,64nm,0.9s
TXAR Lajitas Array 81.53 54 P **P** **11 27 32.6 +0.8**
PBMO Poplar Bluff 81.54 40 P **P** **11 27 31.4 -0.2**
baz=329,SNR=87
HNH Hanover 81.55 25 P **P** **11 27 31.7 +0.2**
baz=338,SNR=30
GGN Saint George 81.56 20 P **P** **11 27 32.0 +0.5**
GGN IAmb IAmb 11 27 33.9
comp=Z,101nm,0.8s
FCAR Ozark Folk Cen 81.59 42 P **P** **11 27 31.5 -0.4**
FCAR IAmb IAmb 11 27 34.5
comp=Z,145nm,1.3s
CMSA Cobar Meteorol 81.61 177 P **P** **11 27 32.3 +0.6**
N53A Lisbon 81.62 32 P **P** **11 27 31.8 -0.2**
baz=334,SNR=31
N53A P **P** **11 27 31.8 -0.2**
baz=334,SNR=31
I62A Tamworth 81.65 24 P **P** **11 27 32.1 +0.1**
baz=339,SNR=26

I62A P **P** **11 27 32.1 +0.1**
baz=339,SNR=26
I63A Otisfield 81.67 23 P **P** **11 27 32.5 +0.4**
I63A Otisfield 81.67 23 P **P** **11 27 33.2 +1.0**
baz=340,SNR=54
I63A P **P** **11 27 33.2 +1.0**
baz=340,SNR=54
M55A Ridgway 81.70 30 P **P** **11 27 31.9 -0.6**
M55A IAmb IAmb 11 27 35.4
comp=Z,181nm,1.1s
M55A Ridgway 81.70 30 P **P** **11 27 32.4 0.0**
baz=335,SNR=30
M55A P **P** **11 27 32.4 0.0**
baz=335,SNR=30
FORT Forrest 81.79 192 P **P** **11 27 32.6 0.0**
FORT Forrest 81.79 192 P **P** **11 27 33.1 +0.5**
J61A Chester 81.81 25 P **P** **11 27 33.3 +0.4**
baz=338,SNR=18
J61A P **P** **11 27 33.3 +0.4**
baz=338,SNR=18
LCAR Lake Charles 81.85 41 P **P** **11 27 33.0 -0.3**
STKA Stephens Creek 81.89 181 P **P** **11 27 33.4 +0.2**
comp=Z,16nm,1.0s,baz=354,slow=7.5,SNR=18
STKA LR LR 12 11 59.6
comp=Z,422nm,18.0s,baz=358,slow=42
comp=Z,16nm,1.0s
STKA Stephens Creek 81.89 181 P **P** **11 27 33.5 +0.3**
STKA Stephens Creek 81.89 181 P **P** **11 27 33.9 +0.7**
O52A Adamsville 81.90 33 P **P** **11 27 33.0 -0.4**
baz=333,SNR=26
O52A P **P** **11 27 33.0 -0.4**
baz=333,SNR=26
BINY Binghamton 81.90 28 P **P** **11 27 33.0 -0.5**
baz=336,SNR=22
BINY Binghamton 81.90 28 P **P** **11 27 32.3 -1.1**
baz=336,SNR=22
HCNY Howe Caverns 81.90 26 P **P** **11 27 33.0 -0.4**
baz=337,SNR=15
O53A New Philadelph 81.99 32 P **P** **11 27 32.8 -1.1**
baz=334,SNR=41
WHAR Wooly Hollow 82.03 42 P **P** **11 27 33.5 -0.7**
P51A Williamsport 82.03 34 P **P** **11 27 33.7 -0.5**
baz=333,SNR=25
P51A P **P** **11 27 33.7 -0.5**
baz=333,SNR=25
T45B Paducah 82.07 39 P **P** **11 27 34.8 +0.4**
baz=330,SNR=21
LPIG La Paz 82.09 62 P **P** **11 27 34.1 -0.6**
comp=Z,61nm,0.9s,baz=230,slow=2.4,SNR=5.0
comp=Z,61nm,0.9s
MIAR Mount Ida 82.09 44 P **P** **11 27 34.5 -0.1**
MIAR IAmb IAmb 11 27 41.9
comp=Z,61nm,0.8s
MIAR Mount Ida 82.09 44 P **P** **11 27 34.5 -0.1**
MIAR pmax pmax
comp=Z,61nm,0.9s
MIAR MLR MLR
comp=Z,2μm,18.0s
MIAR Mount Ida 82.09 44 P **P** **11 27 34.6 +0.1**
baz=328,SNR=46
MIAR Mount Ida 82.09 44 P **P** **11 27 34.0 -0.6**
baz=328,SNR=46
L59A Walton 82.18 27 P **P** **11 27 34.6 -0.3**
baz=337,SNR=64
L59A P **P** **11 27 34.6 -0.3**
baz=337,SNR=64
P52A Corning 82.22 33 IAMs_20 IAMs_20 12 06 00.8
comp=Z,2μm,20.0s
P52A Corning 82.22 33 P **P** **11 27 33.7 -1.5**
baz=333,SNR=23
R49A Shelbyville 82.31 36 P **P** **11 27 35.7 +0.1**
baz=332,SNR=20
R49A P **P** **11 27 35.7 +0.1**
baz=332,SNR=20
Q51A Peebles 82.33 34 P **P** **11 27 35.6 -0.2**
baz=333,SNR=67
Q51A P **P** **11 27 35.6 -0.2**
baz=333,SNR=67
O54A Avella 82.33 32 P **P** **11 27 35.6 -0.1**
baz=334,SNR=27
O54A P **P** **11 27 35.6 -0.1**
baz=334,SNR=27
M57A Sunshine Farm, 82.34 29 P **P** **11 27 35.5 -0.2**
baz=336,SNR=46
M57A P **P** **11 27 35.5 -0.2**
baz=336,SNR=46
GBN Guysborough 82.37 17 P **P** **11 27 36.9 +1.1**
WHTX Lake Whitney, 82.45 48 P **P** **11 27 36.3 -0.1**
baz=326,SNR=47
WHTX Lake Whitney, 82.45 48 P **P** **11 27 36.0 -0.5**
baz=326,SNR=47
MORW Morawa 82.47 203 P **P** **11 27 36.8 +0.6**
MORW Morawa 82.47 203 P **P** **11 27 36.2 -0.1**
UNH University of 82.50 24 P **P** **11 27 37.4 +0.9**
baz=339,SNR=18
K62A Royalston 82.53 25 P **P** **11 27 37.2 +0.5**
baz=339,SNR=14
K62A P **P** **11 27 37.2 +0.5**
baz=339,SNR=14
Z38A Mt. Pleasant 82.54 45 P **P** **11 27 37.0 +0.2**
baz=327,SNR=21
KSPA Keystone Colle 82.55 28 P **P** **11 27 36.2 -0.6**
KSPA IAmb IAmb 11 27 38.1
comp=Z,90nm,0.9s
KSPA Keystone Colle 82.55 28 P **P** **11 27 36.2 -0.6**
baz=337,SNR=34
JCT Junction City 82.55 50 P **P** **11 27 36.8 -0.3**
JCT IAMs_20 IAMs_20 12 09 22.9
comp=Z,1μm,18.0s
JCT Junction City 82.55 50 P **P** **11 27 36.8 -0.3**
JCT pmax pmax
comp=Z,316nm,1.5s
JCT Junction City 82.55 50 P **P** **11 27 36.9 -0.3**
baz=325,SNR=93
JCT Junction City 82.55 50 P **P** **11 27 36.5 -0.6**
baz=325,SNR=93
P53A Whipple 82.61 33 P **P** **11 27 36.8 -0.4**
P53A IAmb IAmb 11 27 40.2
comp=Z,141nm,1.1s
P53A Whipple 82.61 33 P **P** **11 27 36.9 -0.3**
baz=334,SNR=33
P53A P **P** **11 27 36.9 -0.3**
baz=334,SNR=33
L61B Northampton 82.61 25 P **P** **11 27 36.5 -0.6**
L61B IAmb IAmb 11 27 41.0
comp=Z,83nm,1.2s
L61B Northampton 82.61 25 P **P** **11 27 35.9 -1.2**
baz=338
R50A Paris 82.63 35 P **P** **11 27 37.2 -0.1**
baz=332,SNR=18
R50A P **P** **11 27 37.2 -0.1**
baz=332,SNR=18
T47A Sharon Grove 82.70 38 P **P** **11 27 37.5 -0.2**
baz=331,SNR=39
HAL Halifax 82.71 18 P **P** **11 27 38.8 +1.2**
HAL Halifax 82.71 18 P **P** **11 27 38.8 +1.2**
HAL pmax pmax
comp=Z,193nm,1.2s
SSPA Standing Stone 82.74 30 P **P** **11 27 37.3 -0.5**
SSPA IAmb IAmb 11 27 41.5
comp=Z,124nm,1.2s
SSPA Standing Stone 82.74 30 P **P** **11 27 37.4 -0.4**
baz=336,SNR=26
SSPA Standing Stone 82.74 30 P **P** **11 27 36.9 -0.9**
baz=336
Q52A Bidwell 82.77 34 P **P** **11 27 37.3 -0.7**
baz=333,SNR=13
Q52A P **P** **11 27 37.3 -0.7**
baz=333,SNR=13
NPNY Mohonk Preserv 82.85 27 P **P** **11 27 37.7 -0.6**
baz=338,SNR=16
HRV Adam Dziewonsk 82.86 25 P **P** **11 27 38.0 -0.4**
baz=339,SNR=17
HRV Adam Dziewonsk 82.86 25 P **P** **11 27 38.0 -0.4**
baz=339
MAHO Mahon 82.87 329 IAMs_20 IAMs_20 12 07 16.6
comp=Z,2μm,18.0s
N58A Sunbury 82.92 29 P **P** **11 27 38.2 -0.5**
baz=336,SNR=49
N58A P **P** **11 27 38.2 -0.5**
baz=336,SNR=49
MCWV Mont Chateau 82.98 32 P **P** **11 27 39.5 +0.4**
baz=334,SNR=7.6
MCWV Mont Chateau 82.98 32 P **P** **11 27 38.3 -0.8**
baz=334,SNR=7.6
BBOO Buckleboo 83.01 185 P **P** **11 27 39.2 +0.2**
BBOO IAmb IAmb 11 27 44.2

comp=Z,88nm,0.9s
BBOO Buckleboo 83.01 185 P **P** **11 27 39.2 +0.2**
WHYH Whyalla 83.15 184 P **P** **11 27 40.5 +0.8**
WVT Waverly 83.16 39 IAMs_20 IAMs_20 12 07 45.0
comp=Z,2µm,20.0s
WVT Waverly 83.16 39 P **P** **11 27 39.9 -0.2**
baz=330,SNR=79
WVT Waverly 83.16 39 P **P** **11 27 39.3 -0.8**
baz=330
BRNY Black Rk. Fore 83.20 27 P **P** **11 27 39.3 -0.9**
baz=338,SNR=33
237A Washetta, Mont 83.21 47 P **P** **11 27 42.0 +1.6**
baz=327,SNR=12
Q54A Coxs Mills 83.25 32 P **P** **11 27 40.3 -0.2**
Q54A Coxs Mills 83.25 32 P **P** **11 27 40.5 -0.1**
baz=334,SNR=41
Q54A P **P** **11 27 40.5 -0.1**
baz=334,SNR=41
ODNJ Ogdensburg 83.33 27 P **P** **11 27 40.3 -0.6**
baz=337,SNR=22
435B Jarrell 83.38 49 IAMs_20 IAMs_20 12 06 28.7
comp=Z,2µm,20.0s
435B Jarrell 83.38 49 P **P** **11 27 42.8 +1.4**
baz=326,SNR=12
435B Jarrell 83.38 49 P **P** **11 27 40.9 -0.5**
baz=326
TRNY Table Rock, Ra 83.39 27 P **P** **11 27 40.7 -0.5**
BRYW Bryant College 83.42 25 P **P** **11 27 41.3 0.0**
R53A Hurricane 83.45 34 P **P** **11 27 41.5 0.0**
baz=333,SNR=15
R53A P **P** **11 27 41.5 0.0**
baz=333,SNR=15
W45A Hickory Valley 83.45 40 P **P** **11 27 41.4 -0.2**
baz=330,SNR=20
S51A Beattyville 83.47 35 P **P** **11 27 42.1 +0.5**
baz=333,SNR=36
S51A P **P** **11 27 42.1 +0.5**
baz=333,SNR=36
HTT Hallett 83.50 183 P **P** **11 27 41.9 +0.3**
T50A Nancy 83.55 36 P **P** **11 27 41.7 -0.4**
L64A Middleborough 83.59 24 P **P** **11 27 42.5 +0.4**
baz=340,SNR=40
L64A P **P** **11 27 42.5 +0.4**
baz=340,SNR=40
PAL Palisades 83.61 27 P **P** **11 27 42.0 -0.2**
baz=338,SNR=16
PAL Palisades 83.61 27 P **P** **11 27 41.2 -1.1**
baz=338,SNR=16
U49A Red Boiling Sp 83.64 37 P **P** **11 27 42.3 -0.2**
baz=332,SNR=46
BRNJ Basking Ridge 83.71 27 P **P** **11 27 43.5 +0.7**
baz=337,SNR=26
FOR Fordham 83.74 27 P **P** **11 27 43.5 +0.5**
baz=338,SNR=8.7
P57A Homestead Farm 83.74 30 P **P** **11 27 43.4 +0.3**
baz=336,SNR=34
P57A P **P** **11 27 43.4 +0.3**
baz=336,SNR=34
M63A Gales Ferry 83.76 25 P **P** **11 27 43.5 +0.5**
baz=339,SNR=8.4
M63A P **P** **11 27 43.5 +0.5**
baz=339,SNR=8.4
Q56A Snyder Ridge, 83.76 31 P **P** **11 27 43.0 -0.1**
baz=335,SNR=35
Q56A P **P** **11 27 43.0 -0.1**
baz=335,SNR=35
BLDU Ballidu 83.78 202 P **P** **11 27 43.8 +0.8**
N62A Caumsett State 83.80 26 P **P** **11 27 42.9 -0.4**
baz=338,SNR=11
N62A P **P** **11 27 42.9 -0.4**
baz=338,SNR=11
V48A Smith Brothers 83.90 38 P **P** **11 27 43.5 -0.4**
baz=331,SNR=55
OXF Oxford 83.91 41 IAMs_20 IAMs_20 12 06 32.1
comp=Z,2µm,20.0s
OXF Oxford 83.91 41 P **P** **11 27 43.7 -0.2**
baz=330,SNR=20
OXF Oxford 83.91 41 P **P** **11 27 43.0 -0.9**
baz=330,SNR=20
NATX Nacogdoches 83.94 46 P **P** **11 27 45.0 +0.9**
NATX IAMs_20 IAMs_20 12 07 43.3
comp=Z,2µm,20.0s
NATX Nacogdoches 83.94 46 P **P** **11 27 45.1 +1.0**
baz=328,SNR=53
NATX Nacogdoches 83.94 46 P **P** **11 27 44.2 +0.1**
baz=328,SNR=53
PANJ Princeton 83.95 28 P **P** **11 27 43.8 -0.2**
baz=337,SNR=25
TUPA Temple Univers 84.00 28 P **P** **11 27 43.8 -0.5**
baz=337,SNR=34
SYDH Sydney Hard Ro 84.10 173 P P 11 27 47.3 +2.8
R55A Marlinton 84.13 32 P **P** **11 27 45.1 0.0**
baz=334,SNR=25
R55A P **P** **11 27 45.1 0.0**
baz=334,SNR=25
S54A Dingess, Beckl 84.15 33 P **P** **11 27 45.0 -0.2**
baz=334,SNR=29
S54A P **P** **11 27 45.0 -0.2**
baz=334,SNR=29
SDMD Soldier's Deli 84.18 29 P **P** **11 27 44.8 -0.5**
baz=336,SNR=27
GEDE Greenville 84.19 28 P **P** **11 27 44.6 -0.7**
baz=337,SNR=15
PBRG Braganca 84.30 337 *eP* **P** **11 27 45.8 -0.1**
comp=Z,101nm,2.1s
Y45A Yeager Farm, C 84.41 41 P **P** **11 27 46.8 +0.3**
baz=330,SNR=20
TZTN Tazewell 84.45 36 P **P** **11 27 46.5 -0.3**
TZTN IAMs_20 IAMs_20 12 09 50.0
comp=Z,2µm,18.0s
TZTN Tazewell 84.45 36 P **P** **11 27 46.1 -0.6**
baz=333,SNR=36
TZTN Tazewell 84.45 36 P **P** **11 27 45.8 -1.0**
baz=333,SNR=36
KLBR Kellerberrin 84.47 201 P P 11 27 49.0 +2.5
PGAV Gavieira, Arco 84.52 338 *eP* **P** **11 27 47.0 0.0**
comp=Z,168nm,2.4s
PGAV Gavieira, Arco 84.52 338 *ePP* PP 11 31 10.2 +8.7
PGAV *eS* **S** **11 38 13.9 +0.7**
PGAV Gavieira, Arco 84.52 338 *eLR* LR 12 04 43.4
comp=Z,986nm,18.0s
833A Chaparral WMA, 84.52 51 P **P** **11 27 47.6 +0.4**
baz=326,SNR=58
833A Chaparral WMA, 84.52 51 P **P** **11 27 47.2 +0.1**
baz=326,SNR=58
143A Socs Landing, 84.61 43 P **P** **11 27 48.1 +0.6**
baz=329,SNR=9.7
PCAB Cabril 84.70 338 *eP* **P** **11 27 48.1 +0.2**
comp=Z,147nm,2.2s
SWET Sewanee 84.71 38 P **P** **11 27 47.2 -0.8**
KEST Kesra 84.77 323 P **P** **11 27 48.2 -0.2**
comp=Z,33nm,0.9s,baz=322,slow=2.6,SNR=37
KEST LR LR 12 08 41.5
comp=Z,2µm,18.5s,baz=338,slow=38
comp=Z,33nm,0.9s
KEST Kesra 84.77 323 P **P** **11 27 48.7 +0.3**
KEST Kesra 84.77 323 P **P** **11 27 48.2 -0.2**
SNR=12
KEST P **P** **11 27 48.2 -0.2**
SNR=12
V51A Loudon 84.81 36 P **P** **11 27 48.0 -0.4**
V51A IAmb IAmb 11 27 51.4
comp=Z,120nm,1.3s
V51A Loudon 84.81 36 P **P** **11 27 48.1 -0.4**
baz=332,SNR=28
735A Kenedy 84.87 50 P **P** **11 27 49.8 +0.9**
baz=326,SNR=25
HKT Hockley 84.91 48 S **S** **11 38 19.2 +2.0**
baz=327
X48A Hartselle 84.94 39 P **P** **11 27 48.1 -1.1**
baz=331,SNR=30
X48A S **S** **11 38 16.0 -1.4**
baz=331
POLO Lamas de Olo 84.96 338 *eP* **P** **11 27 49.5 +0.2**
comp=Z,103nm,1.2s
W50A Signal Mountai 84.97 37 P **P** **11 27 48.8 -0.6**
baz=332,SNR=28
W50A S **S** **11 38 18.1 +0.2**
baz=332
MVO Moncorvo 84.97 337 *eP* **P** **11 27 49.2 -0.1**
comp=Z,168nm,1.1s
MVO Moncorvo 84.97 337 *ePP* PP 11 31 14.8 +10
MVO *eS* **S** **11 38 19.6 +1.8**
MVO Moncorvo 84.97 337 *eLR* LR 12 04 00.0
comp=Z,1µm,18.0s
BLA Blacksburg 84.99 33 P **P** **11 27 48.6 -0.9**
baz=334,SNR=28
BLA S **S** **11 38 16.9 -1.1**
baz=334
BLA Blacksburg 84.99 33 P **P** **11 27 48.7 -0.7**
baz=334,SNR=28
S57A Dark Hollow, R 84.99 32 P **P** **11 27 49.2 -0.2**
baz=335,SNR=27
S57A P **P** **11 27 49.2 -0.2**
baz=335,SNR=27
PVRL Vila Real 85.04 338 *eP* **P** **11 27 49.8 +0.2**
comp=Z,190nm,2.2s
CPCT Cooper Cave 85.05 37 P **P** **11 27 49.3 -0.5**
CPCT IAmb IAmb 11 27 52.7
comp=Z,131nm,1.3s
V52A Sevierville 85.06 36 P **P** **11 27 49.2 -0.6**
baz=333,SNR=48
V52A S **S** **11 38 16.9 -1.7**
baz=333
TWOA Tennyson Woods 85.11 183 P **P** **11 27 50.7 +1.1**
U54A Nelsons Funny 85.11 34 P **P** **11 27 49.9 -0.2**
baz=334,SNR=30
U54A P **P** **11 27 49.9 -0.2**
baz=334,SNR=30
TKL Tuckaleechee C 85.15 36 LR LR 12 08 51.9
comp=Z,2µm,18.6s,baz=337,slow=38
TKL Tuckaleechee C 85.15 36 P **P** **11 27 49.7 -0.5**
TKL Tuckaleechee C 85.15 36 P **P** **11 27 49.7 -0.5**
TKL pmax pmax
comp=Z,191nm,1.6s
TKL Tuckaleechee C 85.15 36 P **P** **11 27 49.8 -0.4**
baz=333,SNR=42
TKL S **S** **11 38 16.2 -3.4**
baz=333
R58B Mineral 85.17 31 P **P** **11 27 50.1 -0.1**
baz=336,SNR=34
R58B P **P** **11 27 50.1 -0.1**
baz=336,SNR=34
MUN Mundaring 85.20 202 P P 11 27 53.1 +2.9
PTO Porto 85.38 338 *eP* **P** **11 27 52.5 +1.3**
comp=Z,130nm,2.3s
VBMS Vicksburg 85.41 43 P **P** **11 27 51.7 +0.1**
baz=329
441A DeRidder 85.47 45 P **P** **11 27 51.4 -0.4**
baz=328,SNR=8.9
V53A Saluda 85.50 35 P **P** **11 27 51.8 -0.3**
baz=333,SNR=30
V53A P **P** **11 27 51.8 -0.3**
baz=333,SNR=30
V53A S **S** **11 38 24.3 +1.1**
baz=333
V53A S **S** **11 38 24.3 +1.1**
baz=333
CAN Canberra 85.53 175 P **P** **11 27 52.6 +0.9**
CAN Canberra 85.53 175 P **P** **11 27 52.7 +0.9**
CAN pmax pmax
comp=Z,45nm,1.0s
CAN Canberra 85.53 175 P **P** **11 27 53.1 +1.3**
CNB Canberra Magne 85.55 174 P **P** **11 27 53.6 +1.7**
ESBB Sonseca Array 85.57 335 P **P** **11 27 52.9 +0.5**
ESDC Sonseca Array 85.57 335 P **P** **11 27 52.3 0.0**
comp=Z,30nm,0.9s,baz=13,slow=4.1,SNR=132
ESDC PKKPbc **PKKPbc** **11 45 54.3 +1.1**
comp=Z,0.4nm,0.9s,baz=203,slow=1.0,SNR=2.5
ESDC LR LR 12 11 11.1
comp=Z,2µm,18.9s,baz=22,slow=39
comp=Z,30nm,0.9s
ESDC Sonseca Array 85.57 335 P **P** **11 27 52.3 0.0**
ESDC IAmb IAmb 11 27 56.3
comp=Z,60nm,1.2s
T57A Hurt 85.58 32 P **P** **11 27 52.0 -0.3**
baz=335,SNR=17
T57A P **P** **11 27 52.0 -0.3**
baz=335,SNR=17
W52A Murphy 85.59 36 P **P** **11 27 52.4 -0.1**
baz=332,SNR=21
Z47A Carrollton 85.60 40 P **P** **11 27 52.0 -0.5**
baz=330,SNR=16
PVIS Viseu 85.61 338 *eP* **P** **11 27 53.4 +0.9**
comp=Z,126nm,2.0s
146A Union 85.68 41 P **P** **11 27 53.6 +0.7**
baz=330,SNR=36
Y49A Blount Mountai 85.71 39 P **P** **11 27 52.4 -0.7**
baz=331,SNR=23
U56A King 85.78 33 P **P** **11 27 52.9 -0.4**
baz=334,SNR=20
U56A P **P** **11 27 52.9 -0.4**
baz=334,SNR=20
PAB San Pablo 85.80 335 IAMs_20 IAMs_20 12 13 07.9
comp=Z,2µm,18.0s
MTE Manteigas 85.82 337 P **P** **11 27 54.1 +0.5**
MTE IAmb IAmb 11 27 55.9
comp=Z,74nm,0.9s
MTE IAMs_20 IAMs_20 12 09 53.4
comp=Z,2µm,20.0s
MTE Manteigas 85.82 337 *eP* **P** **11 27 53.6 0.0**
comp=Z,142nm,2.5s
MTE Manteigas 85.82 337 *ePP* PP 11 31 20.4 +8.3
MTE *eS* **S** **11 38 25.5 -0.7**
MTE Manteigas 85.82 337 *eLR* LR 12 04 35.0
comp=Z,2µm,18.0s
NWAO Narrogin (SRO) 85.87 201 P **P** **11 27 54.0 +0.5**
NWAO IAmb IAmb 11 27 58.3
comp=Z,55nm,0.9s
NWAO Narrogin (SRO) 85.87 201 P **P** **11 27 54.0 +0.5**
NWAO pmax pmax
comp=Z,55nm,0.9s
NWAO Narrogin (SRO) 85.87 201 P **P** **11 27 54.3 +0.8**
KVTX Kingsville 85.91 51 P **P** **11 27 56.1 +2.0**
baz=326,SNR=13
V55A Taylorsville 85.92 34 P **P** **11 27 53.5 -0.6**
baz=334,SNR=26
V55A P **P** **11 27 53.5 -0.6**
baz=334,SNR=26
344A Westbrook Farm 85.97 43 P **P** **11 27 55.7 +1.3**
baz=329,SNR=11
CASEE Lake Jocassee 86.06 36 P **P** **11 27 54.4 -0.4**
baz=333,SNR=27
T59A Double "B" Far 86.18 31 P **P** **11 27 55.3 0.0**
baz=336,SNR=20
T59A P **P** **11 27 55.3 0.0**
baz=336,SNR=20
LRAL Lakeview Retre 86.19 40 P **P** **11 27 54.5 -0.9**
LRAL Lakeview Retre 86.19 40 P **P** **11 27 54.6 -0.8**
baz=331,SNR=23
LRAL Lakeview Retre 86.19 40 P **P** **11 27 54.3 -1.1**
baz=331,SNR=23
COI Coimbra 86.22 338 IAMs_20 IAMs_20 12 06 12.8
comp=Z,1µm,20.0s
COI Coimbra 86.22 338 *eP* **P** **11 27 56.9 +1.5**
comp=Z,106nm,2.2s
PCBR Castelo Branco 86.34 337 *eP* **P** **11 27 57.0 +1.0**
comp=Z,86nm,1.5s
PCAS Casmilo, Conde 86.38 338 *eP* **P** **11 27 56.6 +0.3**
comp=Z,96nm,1.4s
KMSC Kings Mountain 86.52 35 P **P** **11 27 56.6 -0.4**
baz=334,SNR=31
KMSC Kings Mountain 86.52 35 P **P** **11 27 56.0 -1.0**
baz=334,SNR=31
346A Big Creek Wild 86.58 42 P **P** **11 27 58.2 +0.9**
baz=330,SNR=8.1
Y52A Lilburn 86.63 37 P **P** **11 27 56.8 -0.8**
baz=332,SNR=18
Y52A P **P** **11 27 56.8 -0.8**
baz=332,SNR=18
U59A Littleton 86.66 31 P **P** **11 27 57.5 -0.2**
baz=336,SNR=20
U59A P **P** **11 27 57.5 -0.2**
baz=336,SNR=20
Z51A Franklin 86.68 38 P **P** **11 27 57.1 -0.7**
baz=332,SNR=11
PMRV Marv??o 86.70 337 *eP* **P** **11 27 56.7 -1.2**
comp=Z,55nm,1.8s
PMRV Marv??o 86.70 337 *ePP* PP 11 31 26.7 +7.5
PMRV *eS* **S** **11 38 37.3 +2.6**
PMRV Marv??o 86.70 337 *eLR* LR 12 07 03.0
comp=Z,1µm,18.0s
V58A Windy Hill, Pi 86.72 33 P **P** **11 27 57.6 -0.4**
V58A IAmb IAmb 11 28 01.1
comp=Z,133nm,1.4s
V58A Windy Hill, Pi 86.72 33 P **P** **11 27 57.6 -0.4**
baz=335,SNR=23
V58A P **P** **11 27 57.6 -0.4**
baz=335,SNR=23
RAO Raoul Island 86.73 146 LR LR 12 07 56.8
comp=Z,953nm,18.1s,baz=330,slow=36
RAO Raoul Island 86.73 146 IAMs_20 IAMs_20 12 07 26.1
comp=Z,2µm,19.0s
ARPS Mount Arapiles 86.77 180 P **P** **11 27 59.0 +1.2**
PSBE So Bento 86.97 338 *eP* **P** **11 27 58.4 -0.8**
comp=Z,114nm,1.4s
W57A Gilead 86.99 34 P **P** **11 27 58.6 -0.7**
W57A Gilead 86.99 34 P **P** **11 27 59.2 -0.1**
baz=335,SNR=30
W57A P **P** **11 27 59.2 -0.1**
baz=335,SNR=30
HODGE Hodges 86.99 36 P **P** **11 27 58.9 -0.4**
baz=333,SNR=23
ATD Arta Tunnel 87.20 285 LR LR 12 12 52.3
comp=Z,1µm,18.2s,baz=32,slow=40
ATD Arta Tunnel 87.20 285 IAMs_20 IAMs_20 12 06 16.1
comp=Z,1µm,22.0s
ATD Arta Tunnel 87.20 285 P **P** **11 28 00.6 -0.1**
SNR=5.8
PMTG Montargil 87.25 337 *eP* **P** **11 28 00.7 +0.2**
comp=Z,72nm,1.5s
GOGA Godfrey 87.26 37 P **P** **11 28 00.4 -0.2**
GOGA IAmb IAmb 11 28 03.9
comp=Z,161nm,1.9s
GOGA Godfrey 87.26 37 P **P** **11 28 00.4 -0.2**
GOGA pmax pmax
comp=Z,161nm,1.9s
GOGA Godfrey 87.26 37 P **P** **11 28 00.5 -0.1**
baz=333,SNR=17
GOGA Godfrey 87.26 37 P **P** **11 27 59.9 -0.8**
baz=333,SNR=17
BIRD Birdtown, Kers 87.28 34 P **P** **11 28 00.2 -0.5**
baz=334,SNR=14
PESTR Estremoz 87.28 337 P **P** **11 28 00.5 -0.2**
PESTR Estremoz 87.28 337 *eP* **P** **11 28 00.4 -0.3**
comp=Z,39nm,1.7s
JSC Jenkinsville 87.31 35 P **P** **11 28 00.5 -0.4**
baz=334,SNR=18
250A Grady 87.41 40 P **P** **11 28 01.5 +0.1**
baz=331,SNR=17
152A Waverly Hall 87.43 38 P **P** **11 28 01.2 -0.3**
baz=332,SNR=11
BRAT Ballarat 87.56 179 P P 11 28 03.9 +2.3
TOO Toolangi 87.62 178 P **P** **11 28 03.9 +1.9**
TOO IAmb IAmb 11 28 07.1
comp=Z,137nm,1.9s
TOO Toolangi 87.62 178 P **P** **11 28 03.9 +1.9**
TOO pmax pmax
comp=Z,137nm,1.9s
TOO Toolangi 87.62 178 P **P** **11 28 03.2 +1.3**
RAR Rarotonga 87.62 128 LR LR 12 02 38.4
comp=Z,622nm,20.4s,baz=326,slow=32
CNNC Cliffs of the 87.64 32 P **P** **11 28 01.8 -0.6**
baz=336
X58A Rowland 87.76 33 P **P** **11 28 03.0 0.0**
baz=335,SNR=6.3
X58A P **P** **11 28 03.0 0.0**
baz=335,SNR=6.3
BRAL Brewton 87.79 41 P **P** **11 28 03.3 +0.1**
baz=331
PBAR Barrancos 87.80 336 *eP* **P** **11 28 03.9 +0.7**
comp=Z,46nm,2.2s
LIS Lisbon 87.81 338 *ePP* **PP** **11 31 29.3 +1.3**
LIS IAMs_20 IAMs_20 12 13 40.1
comp=Z,2µm,17.9s
HAW Hawthorne Fire 88.01 36 P **P** **11 28 03.6 -0.7**
baz=334,SNR=17
154A Montrose 88.11 37 P **P** **11 28 05.6 +0.9**
baz=333,SNR=12
PBEJ Beja 88.15 337 *eP* **P** **11 28 05.4 +0.6**
comp=Z,61nm,1.7s
Y58A Scranton 88.23 34 P **P** **11 28 05.9 +0.7**
baz=335,SNR=5.8
Y58A P **P** **11 28 05.9 +0.7**
baz=335,SNR=5.8
PNCL Nicolau / Gran 88.23 337 *eP* **P** **11 28 06.2 +1.0**
352A Blakely 88.39 39 P **P** **11 28 06.5 +0.4**
baz=332,SNR=18
MESJ Messejana 88.41 337 *eP* **P** **11 28 06.5 +0.4**
MESJ *ePP* **PP** **11 31 34.1 +1.3**
MESJ *eSKSac* **SKSac** **11 38 35.1 +0.5**
MESJ IAMs_20 IAMs_20 12 07 10.1
comp=N,2µm,20.2s
MESJ Messejana 88.41 337 *eP* **P** **11 28 06.5 +0.4**
MESJ *e* 11 31 34.1
MESJ *e* 11 38 35.1
MESJ Messejana 88.41 337 *eP* **P** **11 28 06.9 +0.8**
comp=N,63nm,1.1s
Y59A Loris 88.43 33 P **P** **11 28 06.2 0.0**
baz=335,SNR=5.3
Y59A P **P** **11 28 06.2 0.0**
baz=335,SNR=5.3
PCVE Castro Verde 88.56 337 *eP* **P** **11 28 07.7 +0.9**
comp=N,63nm,1.9s
PVAQ Vaqueiros 88.70 337 P **P** **11 28 08.3 +0.9**
PVAQ Vaqueiros 88.70 337 *eP* **P** **11 28 08.1 +0.7**
comp=N,53nm,1.1s
PVAQ Vaqueiros 88.70 337 *ePP* PP 11 31 44.1 +8.9
PVAQ *eS* S 11 38 39.3 -14
PVAQ Vaqueiros 88.70 337 *eLR* LR 12 03 55.4
comp=N,1µm,20.0s
NHSC New Hope 88.76 35 IAMs_20 IAMs_20 12 10 60.0
comp=Z,2µm,21.0s
NHSC New Hope 88.76 35 P **P** **11 28 06.9 -0.9**
baz=334
PTEO Sao Teotonio 88.82 337 *eP* **P** **11 28 08.6 +0.6**
comp=Z,86nm,1.0s
TAOE Nuku Hiva Isla 88.88 105 *eP* P 11 28 10.7 +2.1
comp=Z,132nm,24.7s
TAOE Nuku Hiva Isla 88.88 105 *eLR* LR 11 56 26.5
comp=Z,2µm,22.5s
PBDV Barranco-do-Ve 88.91 337 *eP* **P** **11 28 09.9 +1.4**
comp=Z,98nm,1.6s
TIGA Tifton 88.96 38 P **P** **11 28 09.5 +0.7**
baz=333,SNR=12
TIGA Tifton 88.96 38 P **P** **11 28 08.5 -0.3**
baz=333,SNR=12
255A Hazlehurst 88.96 37 P **P** **11 28 09.7 +1.0**
baz=333,SNR=12
MORF Marmelete 89.03 337 *eP* **P** **11 28 09.3 +0.2**
MORF *ePP* **PP** **11 31 39.0 +1.1**
MORF *eSKSac* **SKSac** **11 38 39.0 +0.5**
MORF IAMs_20 IAMs_20 12 11 10.4
comp=N,2µm,14.7s
MORF Marmelete 89.03 337 *eP* **P** **11 28 09.2 +0.2**
MORF *e* 11 31 38.9
MORF *e* 11 38 38.9
MORF Marmelete 89.03 337 *eP* **P** **11 28 10.2 +1.1**
comp=N,118nm,2.2s
PMOR Pomariorio Ree 89.05 115 *eT* T 13 04 57.9
comp=N,4.7nm,0.2s
PFVI Vila Bisbo 89.23 337 *eP* **P** **11 28 10.2 +0.2**
OUZ Omahuta 89.58 155 IAMs_20 IAMs_20 12 08 01.8
comp=Z,2µm,20.0s
PPT Papeete 90.13 118 LR LR 12 02 00.3
comp=Z,1µm,21.1s,baz=317,slow=31
PPT2 Papeete2 90.15 118 *eP* **P** **11 28 16.0 +1.6**
comp=Z,156nm,27.2s
PPT2 Papeete2 90.15 118 *eS* **S** **11 39 08.0 +0.4**
comp=Z,356nm,37.5s
PPT2 *eSS* **SS** **11 45 09.5 +2.4**
comp=Z,433nm,30.2s
PPT2 Papeete2 90.15 118 *eLR* LR 11 57 02.4
comp=Z,2µm,23.2s
656A Willston 91.21 38 P **P** **11 28 20.1 +0.8**
baz=333,SNR=7.1
MSEY Mahe Island 91.57 265 IAMs_20 IAMs_20 12 12 24.4
comp=Z,1µm,19.0s
MSEY Mahe Island 91.57 265 P **P** **11 28 22.6 +1.4**
CMLA Cha da Macela 91.59 350 IAMs_20 IAMs_20 12 12 46.8
comp=Z,1µm,19.0s
FURI Furi 91.81 286 IAMs_20 IAMs_20 12 13 05.2
comp=Z,1µm,20.0s
UNM Universidad Na 92.03 56 IAMs_20 IAMs_20 12 13 47.3
comp=Z,1µm,20.0s
MDT Midelt 92.16 333 LR LR 12 13 52.7
comp=Z,816nm,20.4s,baz=32,slow=38
AVE Averroes 92.50 335 IAMs_20 IAMs_20 12 13 25.3
comp=Z,1µm,20.0s
DWPF Disney Wildern 92.76 38 P **P** **11 28 26.0 -0.5**
baz=334
BBSR BB Station 94.20 23 P **P** **11 28 34.1 +1.1**
baz=343,SNR=7.9
TBI Tubuai 94.82 121 *eLR* LR 11 59 12.6
comp=Z,1µm,25.5s
PMOZ Porto Moniz, M 95.21 343 *ePP* **PP** **11 32 32.1 +5.5**
PMOZ Porto Moniz, M 95.21 343 *eLR* LR 12 10 18.3
comp=Z,723nm,20.0s
SNZO South Karori 95.60 156 IAMs_20 IAMs_20 12 11 13.1
comp=Z,1µm,19.0s
TEIG Tepich 96.74 47 IAMs_20 IAMs_20 12 20 48.3

comp=Z,1µm,19.0s
RPZ Rata Peaks 96.99 159 LR LR 12 10 21.2
comp=Z,597nm,19.8s,baz=330,slow=34
LODK Lodwar 98.12 285 IAMs_20 IAMs_20 12 15 50.5
comp=Z,2µm,21.0s
KMBO Kilima Mbogo 100.48 281 IAMs_20 IAMs_20 12 17 29.2
comp=Z,2µm,21.0s
KIBK Kibwezi 100.92 280 IAMs_20 IAMs_20 12 13 23.3
comp=Z,1µm,22.0s
GRTK Grand Turk 102.54 32 IAMs_20 IAMs_20 12 20 22.8
comp=Z,2µm,20.0s
MBAR Mbarara 104.12 287 IAMs_20 IAMs_20 12 18 47.3
comp=Z,1µm,20.0s
JTS Las Juntas de 106.91 49 IAMs_20 IAMs_20 12 19 34.0
comp=Z,927nm,21.0s
SJG San Juan 107.32 28 IAMs_20 IAMs_20 12 17 10.6
comp=Z,1µm,22.0s
ABPO Ambohimpanom 107.64 261 IAMs_20 IAMs_20 12 15 53.3
comp=Z,1µm,18.0s
TORD Torodi Ar. Bea 107.99 320 PKiKP **PKiKP 11 33 42.9 +0.9**
comp=Z,1.3nm,0.8s,baz=21,slow=1.4,SNR=6.2
TORD PP **PP 11 34 01.3 -2.0**
comp=Z,2.6nm,0.8s,baz=20,slow=7.7,SNR=7.0
TORD PKKPbc **PKKPbc 11 44 49.7 -2.5**
comp=Z,0.7nm,0.8s,baz=190,slow=1.3,SNR=2.8
ANWB Willy Bob 108.98 24 IAMs_20 IAMs_20 12 18 10.2
comp=Z,1µm,22.0s
KOWA Kowa 108.99 325 IAMs_20 IAMs_20 12 24 49.4
comp=Z,1µm,21.0s
ABD La Joyeuse, An 110.20 24 IAMs_20 IAMs_20 12 22 59.5
comp=Z,876nm,22.0s
GDSD La Dsirade Is 110.47 24 IAMs_20 IAMs_20 12 22 35.5
comp=Z,1µm,21.0s
FDF Fort de France 111.96 25 IAMs_20 IAMs_20 12 19 02.0
comp=Z,1µm,22.0s
ILAM Ilet Lapin Mar 111.99 24 IAMs_20 IAMs_20 12 20 11.9
comp=Z,937nm,21.0s
FOMA Nahampoana Res 112.15 257 IAMs_20 IAMs_20 12 17 34.1
comp=Z,942nm,19.0s
BIM Bigot 112.19 25 IAMs_20 IAMs_20 12 20 18.1
comp=Z,1µm,22.0s
MPOM Morne Pois Mar 112.31 24 IAMs_20 IAMs_20 12 20 08.3
comp=Z,1µm,22.0s
MBO M'Bour 113.00 338 IAMs_20 IAMs_20 12 27 51.2
comp=Z,1µm,19.0s
SDV Santo Domingo 114.38 36 IAMs_20 IAMs_20 12 28 18.8
comp=Z,1µm,20.0s
DBIC Dimbokro 116.49 323 PKP **PKiP 11 33 58.4 +0.1**
comp=Z,7.9nm,1.0s,baz=68,slow=2.8,SNR=3.0
CASY Casey 118.84 194 PKPdf **PKiKP 11 34 02.1 +1.1**
BOSC San Juan Bosco 121.70 50 **PKiKP 11 34 08.4 -0.2**
MDP Montagnes des 123.24 18 PKP **PKiKP 11 34 11.2 -0.3**
comp=Z,6.8nm,0.8s,baz=24,slow=1.5,SNR=2.3
BOAV Boa Vista 123.88 28 *eP* **PKiKP 11 34 13.3 +0.6**
ATAH Atahualpa 125.17 52 PKP **PKiKP 11 34 15.3 -0.5**
comp=Z,19nm,1.1s,baz=96,slow=2.7,SNR=8.0
TSUM Tsumeb 126.60 285 PKP **PKiKP 11 34 17.8 -0.3**
comp=Z,2.8nm,0.8s,baz=84,slow=5.7,SNR=2.9
VNDA Vanda 128.20 175 PKP **PKiKP 11 34 18.7 -0.6**
comp=Z,4.4nm,1.0s,baz=322,slow=4.0,SNR=16
VNDA Vanda 128.20 175 **PKiKP 11 34 20.2 +0.8**
CZSB Cruzeiro do Su 128.46 47 PKPdf **PKiKP 11 34 21.1 -0.7**
CZSB Cruzeiro do Su 128.46 47 *eP* **PKiKP 11 34 20.9 -0.9**
BOSA Boshof 128.50 270 PKP **PKiKP 11 34 21.1 -0.5**
comp=Z,2.8nm,0.8s,baz=20,slow=4.4,SNR=4.8
MCPB Macapa, AP 128.68 19 *eP* **PKiKP 11 34 22.6 +0.3**
SBA Scott Base 128.84 174 **PKiKP 11 34 22.0 +1.4**
SBA Scott Base 128.84 174 PKIKP **PKiKP 11 34 22.0 +1.4**
MACA Manacapuru-AM 129.08 30 **PKiKP 11 34 22.9 -0.2**
MACA Manacapuru-AM 129.08 30 *eP* **PKiKP 11 34 23.4 +0.4**
MALB Monte Alegre 129.63 22 *eP* **PKiKP 11 34 24.9 +0.8**
NNA Nana 130.09 54 PKP **PKiKP 11 34 24.2 -0.9**
comp=Z,19nm,0.9s,baz=331,slow=5.2,SNR=6.4
TMAB Tom-Au,PA,Br 131.35 14 *eP* **PKiKP 11 34 27.6 0.0**
MAW Mawson 131.66 210 PKhKP PKPpre 11 34 15.9
comp=Z,1.5nm,0.8s,baz=85,slow=4.6,SNR=4.1
MAW PKP pPKPdf 11 34 25.5 -4.7
comp=Z,5.5nm,0.8s,baz=358,slow=1.6,SNR=8.9
MAW Mawson 131.66 210 **PKiKP 11 34 27.9 +1.4**
ITTB Itaituba 131.68 25 *eP* **PKiKP 11 34 28.2 -0.1**
ROSB Rosrio 132.37 9 *eP* **PKiKP 11 34 29.4 -0.3**
ETMB Extrema 133.18 40 PKPdf **PKiKP 11 34 30.1 -1.1**
ETMB Extrema 133.18 40 *eP* **PKiKP 11 34 30.9 -0.4**
SAML Samuel 133.59 36 PKPdf **PKiKP 11 34 31.5 -0.6**
SAML Samuel 133.59 36 PKIKP **PKiKP 11 34 31.5 -0.6**
SAML MLR MLR
comp=Z,1µm,22.0s
NPGB Novo Progresso 134.34 25 *eP* **PKiKP 11 34 33.2 -0.4**
PRPB Parauapebas 134.78 17 *eP* **PKiKP 11 34 33.5 -1.0**
RCBR Riachuelo 135.58 358 PKP **PKiKP 11 34 34.9 -1.4**
comp=Z,14nm,0.8s,baz=141,slow=3.2,SNR=5.2
RCBR Riachuelo 135.58 358 IAMs_20 IAMs_20 12 43 36.3
comp=Z,747nm,19.0s
RCBR Riachuelo 135.58 358 *eP* **PKiKP 11 34 35.0 -1.2**
SMTB Santa Maria do 137.80 15 *eP* **PKiKP 11 34 40.1 -0.6**
CLDB Colider 137.87 27 *eP* **PKiKP 11 34 39.8 -1.0**
LPAZ La Paz 138.07 47 PKhKP PKPpre 11 34 28.8
comp=Z,1.7nm,0.8s,baz=12,slow=5.2,SNR=8.4
LPAZ PKP pPKPdf 11 34 40.3 -4.3
comp=Z,6.6nm,1.0s,baz=48,slow=8.6,SNR=8.6
LPAZ La Paz 138.07 47 **PKiKP 11 34 39.4 -2.5**
LPAZ La Paz 138.07 47 PKIKP **PKiKP 11 34 39.4 -2.5**
LPAZ La Paz 138.07 47 *eP* **PKiKP 11 34 40.1 -1.8**
PDRB Porto dos Gac 138.28 29 *eP* **PKiKP 11 34 40.4 -1.3**
VILB Vilhena 138.38 34 PKPdf **PKiKP 11 34 40.9 -0.9**
VILB Vilhena 138.38 34 *eP* **PKiKP 11 34 40.7 -1.1**
NBRF Rio Formoso - 138.38 356 *eP* **PKiKP 11 34 40.1 -1.8**
PB12 IPOC Station P 139.00 51 **PKiKP 11 34 42.4 -0.7**
NBAN Anadia - AL 139.40 358 *eP* **PKiKP 11 34 40.7 -3.3**
SNDB Serra Nova Dou 140.10 21 *eP* **PKiKP 11 34 44.9 -0.5**
QSPA South Pole Qui 140.12 180 IAMs_20 IAMs_20 12 34 27.2
comp=Z,840nm,21.0s
SIV San Ignacio 140.84 37 PKhKP PKPpre 11 34 37.1
comp=Z,4.6nm,0.8s,baz=332,slow=3.1,SNR=13
SIV PP **PP 11 37 42.0 -1.9**
comp=Z,16nm,0.9s,baz=336,slow=6.1,SNR=11
PTLB Pontes e Lacer 141.06 34 *eP* **PKiKP 11 34 46.3 -0.9**
SDBA SAO DESIDERIO 141.67 11 *eP* **PKiKP 11 34 46.9 -1.7**
SALV Santo Antonio 142.65 29 *eP* **PKiKP 11 34 48.1 -2.4**
LVC Limon Verde 143.06 53 PKhKP PKPpre 11 34 45.3
comp=Z,12nm,0.8s,baz=282,slow=4.4,SNR=13
LVC Limon Verde 143.06 53 *eP* **PKiKP 11 34 49.0 -2.6**
GDU01 Guandu, BA 143.41 3 *eP* **PKiKP 11 34 49.3 -2.8**
BDFB Brasilia 144.35 17 PKP **PKPdf 11 34 48.5 -2.0**
comp=Z,32nm,1.0s,baz=353,slow=0.7,SNR=35
BDFB PP **PP 11 38 05.0 0.0**
comp=Z,17nm,1.2s,baz=357,slow=14,SNR=3.7
BDFB Brasilia 144.35 17 PKPdf **PKPdf 11 34 48.7 -1.9**
BDFB Brasilia 144.35 17 *eP* **PKiKP 11 34 50.8 -3.3**
JANB Januaria 144.36 11 *eP* **PKPdf 11 34 49.6 -0.9**
PP1B Ponte de Pedra 144.50 29 *eP* **PKiKP 11 34 50.8 -3.5**
AC01 Pan de Azucar 145.04 59 **PKPdf 11 34 50.8 -0.5**
CMC01 Camacan, BA 145.04 3 *eP* **PKiKP 11 34 51.7 -3.7**
MC01 Montes Claros 146.03 11 *eP* **PKiKP 11 34 55.0 -2.6**
C2SB Chapadao do Su 146.21 27 *eP* **PKPab 11 34 53.8 -1.4**
GUA01 Guaratinga, BA 146.25 4 *eP* **PKiKP 11 34 55.3 -2.6**
GO03 Copiap 146.38 60 **PKiKP 11 34 55.1 -2.9**
AC04 Llanos de Chal 146.38 61 **PKiKP 11 34 55.3 -2.6**
AC02 Maricunga 146.38 57 **PKiKP 11 34 55.4 -3.2**
IPMB Ipameri, GO 146.59 18 *eP* **PKPab 11 34 54.4 -2.4**
AQDB Aquidauana 146.91 32 **PKPbc 11 34 54.7 -1.9**
AQDB Aquidauana 146.91 32 *eP* **PKPab 11 34 55.9 -2.0**
LCO Las Campanas 147.21 62 **PKPbc 11 34 55.6 -1.9**
LCO Las Campanas 147.21 62 PKP2 **PKPbc 11 34 55.6 -1.9**
AC05 El Transito 147.31 61 **PKPab 11 34 57.0 -2.4**
PMNB Patos De Minas 147.46 16 *eP* **PKPbc 11 34 56.5 -1.8**
NAN01 Guarapari, ES 147.48 4 *eP* **PKPab 11 34 57.0 -3.1**
CO05 La Serena 147.59 64 **PKiKP 11 34 58.1 -2.1**
DIAM Diamantina, MG 147.63 11 *eP* **PKPbc 11 34 56.1 -2.6**
ITRB Iturama 147.77 23 *eP* **PKiKP 11 34 58.2 -2.7**
GO04 Tololo Observa 148.03 63 **PKiKP 11 34 58.4 -3.2**
SJMB Sao Joao De Ma 148.27 6 *eP* **PKPbc 11 34 57.3 -3.0**
CO01 Juntas del Tor 148.28 62 **PKiKP 11 34 59.0 -3.0**
CO03 El Pedregal 148.59 64 **PKiKP 11 35 00.7 -1.8**
RIB01 Linhares ES 148.93 5 *eP* **PKPbc 11 34 58.2 -3.7**
PCMB Pacaembu 149.35 25 *eP* **PKPbc 11 34 59.7 -3.3**
VA06 Catapilco 149.48 67 **PKiKP 11 35 02.4 -1.7**
BB19B Bebedouro 149.51 20 *eP* **PKPbc 11 34 59.7 -3.7**
VA01 Torpederas 149.60 68 **PKiKP 11 35 02.7 -1.6**
NVL N'lazarevskaya 149.61 210 *e*PKP2 **PKiKP 11 35 01.0 -2.1**
NVL *e*PPP PPP 11 41 56.7
VA05 Santo Domingo 150.07 69 **PKiKP 11 35 04.1 -1.1**
TRCB Terra Rica 150.07 29 *eP* **PKPbc 11 35 00.3 -4.5**
PEL Peldehue 150.26 67 **PKiKP 11 35 05.1 -0.7**
PEL Peldehue 150.26 67 PKIKP **PKiKP 11 35 05.1 -0.7**
MT05 Renca 150.40 68 **PKiKP 11 35 03.9 -2.2**
RCLB Rio Claro- Sao 151.04 19 *eP* **PKPdf 11 35 01.5 +0.2**
CAM01 Campos-RJ 151.33 8 *eP* **PKPdf 11 35 02.4 +0.7**
BO02 Sierra Bellavi 151.35 70 **PKPdf 11 35 01.2 -0.3**
DUB01 Friburgo-RJ 151.52 9 *eP* **PKPdf 11 35 02.4 +0.3**
VAS01 Vassouras-RJ 151.59 11 *eP* **PKPbc 11 35 03.3 -5.1**
CPUP Villa Florida 151.63 40 PKP **PKPdf 11 35 02.4 +0.4**
comp=Z,34nm,0.8s,baz=298,slow=1.3,SNR=12
CPUP PKPbc **PKPbc 11 35 07.9 -0.3**
comp=Z,41nm,0.9s,baz=330,slow=2.7,SNR=35
CPUP PP **PP 11 38 46.2 -1.5**
comp=Z,8.3nm,1.1s,baz=2.6,slow=4.3,SNR=3.0
CPUP Villa Florida 151.63 40 PKPdf **PKPdf 11 35 02.1 0.0**
CPUP PKPbc **PKPbc 11 35 08.6 +0.3**
CPUP PKPab **PKPab 11 35 17.1 +0.2**
CPUP Villa Florida 151.63 40 *eP* **PKPbc 11 35 03.6 -4.7**
VAO Valinhos 151.72 18 *eP* **PKPbc 11 35 05.5 -3.2**
TROLL Troll, Antarti 151.90 205 PKPdf **PKPbc 11 35 03.5 -4.3**
PTGB Pitanga 152.05 29 *eP* **PKPdf 11 35 01.9 -1.0**
MAN01 Angra dos Reis 152.10 13 *eP* **PKPdf 11 35 03.1 +0.2**
PET01 Itanhaem-SP 152.90 20 *eP* **PKPdf 11 35 04.1 +0.1**
TIJ01 Guaruva-PR 153.49 24 *eP* **PKPdf 11 35 05.3 +0.3**
SNAA Sanae 153.51 204 **PKPdf 11 35 03.7 +0.2**
SNAA PKPbc **PKPbc 11 35 13.4 +2.2**
SNAA Sanae 153.51 204 PKIKP **PKPdf 11 35 03.7 +0.2**
GO06 Curarrehue 153.96 79 **PKPdf 11 35 05.2 0.0**
LL04 Puerto Octay 154.12 82 PKPdf **PKPdf 11 35 05.9 +0.7**
LL04 PKPbc **PKPbc 11 35 13.8 +0.5**
ITAB Concordia 154.37 31 *eP* **PKPdf 11 35 06.2 +0.2**
ITQB Itaqui 154.86 42 *eP* **PKPdf 11 35 06.9 +0.3**
VNA2 Neumayer--Watz 155.13 203 PKPdf **PKPdf 11 35 05.7 0.0**
baz=97,slow=1.0
PLCA Paso Flores 155.20 80 PKP **PKPdf 11 35 06.3 -0.6**
comp=Z,13nm,0.9s,baz=221,slow=1.8,SNR=11
PLCA PKPbc PKPbc 11 35 16.0
comp=Z,23nm,1.0s,baz=298,slow=2.3,SNR=29
PLCA Paso Flores 155.20 80 PKPdf **PKPdf 11 35 06.8 -0.1**
PLCA Paso Flores 155.20 80 *eP* **PKPdf 11 35 08.1 +1.3**
VNA3 Neumayer Olymp 155.47 201 PKPdf **PKPdf 11 35 06.6 +0.4**
VNA3 Neumayer Olymp 155.47 201 PP PP 11 39 09.9 +0.7
VNA1 Neumayer--Stat 155.53 203 PKPdf **PKPdf 11 35 07.0 +0.9**
AY01 Puyuhuapi 155.72 89 **PKPab 11 35 34.0 +0.2**
COYC Coyhaique 156.58 92 PKPdf **PKPdf 11 35 07.7 -0.6**
COYC PKPab **PKPab 11 35 37.4 -0.1**
CNLB Canela 156.71 30 *eP* **PKPdf 11 35 08.9 -0.3**
CPSB Cacapava Do Su 156.79 37 *eP* **PKPdf 11 35 09.6 +0.4**
SMAI San Martin Ant 157.08 152 **PKPdf 11 35 09.7 +1.4**
SMAI **PKPab 11 35 41.8 +2.9**
PLTB Pedras Altas 157.93 39 **PKPdf 11 35 10.6 0.0**
PLTB PKPab **PKPab 11 35 43.6 -0.1**
PLTB Pedras Altas 157.93 39 *eP* **PKPdf 11 35 10.3 -0.2**
GO09 Cerro Castillo 158.18 106 PKPdf **PKPdf 11 35 11.9 +1.7**
GO09 PKPab **PKPab 11 35 46.2 +1.9**
ORCD Orcadas 168.87 162 **PKPdf 11 35 19.8 0.0**
ORCD **PKPab 11 36 31.6 +0.8**

*SKHL **14** 11:21:29.6±0.4,50.°50N×141.°90E,h12km±1km,mb4.8/5*
*MOS **14** 11:21:29.4±1.3,50.°36N×142.°35E,h7km,mb4.7/1,Error ellipse: s-maj=20.0km s-min=9.4km az=79.6*
*IDC **14** 11:21:31.0±0.8,50.°52N×142.°30E,h0km,mb3.9/10, mbtmp4.0/13,ML2.6/3,Error ellipse: s-maj=26.6km s-min=14.3km az=152.0*
*NEIC **14** 11:21:32.7±1.2,50.°38N±0.°09×142.°3E±0.°2,h15km±5km, mb4.6/25,Error ellipse: s-maj=19.0km s-min=13.5km az=84.0*

ISC 14 11:21:32.3±0.5,**50.°45N**±0.°04×**142.°31E**±0.°06,**h10**km,**n56,** σ1**§37**/62,**mb4.5**/22,**Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.47**	**28**	*e*PN		**Pb**		**11 21 42.6**	**0.0**
TYV				*e*S		**Sb**		**11 21 51.8**	**+2.2**
TYV				pmax	pmax				
	comp=Z,566nm,0.4s								
TYV				pmax	pmax				
	comp=Z,17µm,3.6s								
TYV				smax	smax				
	comp=N,2µm,0.4s								
TYV				smax	smax				
	comp=E,2µm,0.4s								
TYV				smax	smax				
	comp=N,36µm,3.6s								
TYV				smax	smax				
	comp=E,19µm,3.6s								
TYV	**Tymovskoe**	**0.47**	**28**	*e*Pg		**Pb**		**11 21 42.6**	**0.0**
TYV				AMB	AMB			11 21 42.7	
	comp=E,522nm,0.3s								
TYV				*e*Sg		**Sb**		**11 21 51.4**	**+1.8**
TYV				A	A			11 21 52.5	
	comp=E,2µm,0.3s								
TYV				A	A			11 21 52.5	
	comp=E,3µm,0.3s								
UGL	**Uglegorsk**	**1.39**	**187**	*e*PN		**Pn**		**11 21 54.4**	**-3.2**
UGL				pmax	pmax				
	comp=Z,501nm,0.5s								
UGL	**Uglegorsk**	**1.39**	**187**	*e*P		**Pn**		**11 21 54.3**	**-3.3**
UGL				AMB	AMB			11 21 56.0	
	comp=Z,500nm,0.5s								
UGL				*e*Sg		**Sg**		**11 22 17.8**	**+1.0**
UGL				A	A			11 22 19.9	
	comp=Z,3µm,0.5s								
UGL				A	A			11 22 19.9	
	comp=Z,3µm,0.5s								
YSS	**Yuzh-Sakhalins**	**3.52**	**175**	Pn		**Pn**		**11 22 25.9**	**-1.0**
YSS	**Yuzh-Sakhalins**	**3.52**	**175**	*e*PN		**Pn**		**11 22 25.7**	**-1.2**
YSS				pmax	pmax				
	comp=Z,90nm,0.9s								
YSS	**Yuzh-Sakhalins**	**3.52**	**175**	*e*P		**Pn**		**11 22 26.0**	**-1.0**
YSS				*e*Pg		**Pg**		**11 22 40.6**	**+1.0**
YSS				AMB	AMB			11 22 43.8	
	comp=Z,90nm,0.5s								
YSS				*e*Sg		**Sg**		**11 23 29.8**	**+4.7**
YSS				A	A			11 23 30.3	
	comp=Z,270nm,0.5s								
YSS				A	A			11 23 30.3	
	comp=Z,200nm,0.5s								
KLR	**Kul'dur**	**6.94**	**264**	Pn		**Pn**		**11 23 14.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=66,slow=20,SNR=1.2								
KLR				Sn		**Sn**		**11 24 34.7**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=345,slow=19,SNR=2.0								
KLR				Lg	Lg			11 25 13.2	
	comp=Z,3.0nm,0.3s,baz=168,slow=20,SNR=2.3								
	comp=Z,96nm,1.0s								
SHO	**Shikotan**	**7.27**	**153**	*e*PN		**Pn**		**11 23 14.5**	**-4.0**
USRK	**Ussuriysk Ar.**	**9.39**	**232**	Pn		**Pn**		**11 23 47.1**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=40,slow=16,SNR=1.2								
USRK				Lg	Lg			11 26 31.4	
	comp=Z,0.9nm,0.3s,baz=44,slow=30,SNR=4.1								
	comp=Z,34nm,1.0s								
PETK	**Petropavlovsk-**	**9.90**	**69**	Pn		**Pn**		**11 23 54.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=271,slow=14,SNR=1.4								
	comp=Z,6.0nm,1.0s								
YAK	**Yakutsk**	**13.53**	**334**	Pn		**Pn**		**11 24 44.1**	**+0.2**
AMKA	**Amchitka**	**23.19**	**73**	P		**P**		**11 26 38.7**	**-0.2**
CNBA	**Chernabura Isl**	**34.65**	**60**	P		**P**		**11 28 24.5**	**+3.0**
CHGN	**Chignik**	**34.87**	**57**	P		**P**		**11 28 25.1**	**+1.8**
N18K	**Kilae Creek**	**35.11**	**49**	P		**P**		**11 28 26.0**	**+0.6**
N18K				IAmb	IAmb			11 28 36.2	
	comp=Z,7.6nm,0.8s								
IMAR	**Indian Mountai**	**35.26**	**40**	P		**P**		**11 28 26.6**	**0.0**
J20K	**Nowinta River**	**35.31**	**43**	P		**P**		**11 28 27.5**	**+0.4**
J20K				IAmb	IAmb			11 28 31.0	
	comp=Z,18nm,1.4s								
CAST	**Castle Rocks**	**36.34**	**44**	P		**P**		**11 28 36.5**	**+0.6**
CHIR	**Chirikof Islan**	**36.50**	**57**	P		**P**		**11 28 36.8**	**-0.6**
TOLK	**Toolik Lake Re**	**36.60**	**35**	P		**P**		**11 28 38.0**	**-0.1**
TOLK				IAmb	IAmb			11 28 48.5	
	comp=Z,6.3nm,0.9s								
H24K	**Noodor Dome**	**37.66**	**39**	P		**P**		**11 28 47.3**	**+0.1**
WRH	**Wood River Hil**	**37.85**	**41**	P		**P**		**11 28 49.1**	**+0.4**
WRH				IAmb	IAmb			11 28 58.9	
	comp=Z,8.0nm,0.7s								
IL31		**38.29**	**41**	P		**P**		**11 28 52.4**	**0.0**
IL31				IAmb	IAmb			11 29 02.7	
	comp=Z,4.8nm,0.6s								
ILAR	**Eielson Array**	**38.29**	**41**	P		**P**		**11 28 52.5**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=276,slow=8.5,SNR=14								
	comp=Z,1.8nm,0.5s								
FYU	**Fort Yukon**	**38.57**	**38**	P		**P**		**11 28 55.1**	**+0.4**
FYU				IAmb	IAmb			11 29 05.5	
	comp=Z,7.5nm,0.6s								
BMAR	**Burnt Mountain**	**38.64**	**36**	P		**P**		**11 28 56.2**	**+0.8**
PRP	**Porcupine Dome**	**38.68**	**39**	P		**P**		**11 28 56.5**	**+0.7**
PRP				IAmb	IAmb			11 29 06.5	
	comp=Z,12nm,0.7s								
MKAR	**Makanchi Array**	**38.90**	**289**	P		**P**		**11 28 58.0**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=60,slow=8.5,SNR=2.8								
	comp=Z,1.2nm,0.7s								
MKAR	**Makanchi Array**	**38.90**	**289**	P		**P**		**11 28 57.5**	**-0.3**
RIDG	**Independent Ri**	**39.41**	**42**	P		**P**		**11 29 01.1**	**-0.8**
K27K	**Chicken**	**40.50**	**41**	P		**P**		**11 29 10.4**	**-0.5**
EGAK	**Eagle**	**40.66**	**40**	P		**P**		**11 29 11.9**	**-0.2**
EGAK				IAmb	IAmb			11 29 21.7	
	comp=Z,8.9nm,0.7s								
L27K	**Beaver Creek,**	**40.91**	**42**	P		**P**		**11 29 14.4**	**+0.1**
BCAR	**Beaver Creek A**	**40.93**	**42**	P		**P**		**11 29 14.6**	**+0.1**
INK	**Inuvik**	**42.44**	**33**	P		**P**		**11 29 26.8**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=297,slow=4.5,SNR=2.2								
	comp=Z,1.8nm,0.5s								
INK	**Inuvik**	**42.44**	**33**	P		**P**		**11 29 26.7**	**0.0**
HYT	**Haines Junctio**	**43.64**	**44**	P		**P**		**11 29 37.3**	**+0.6**
HYT				IAmb	IAmb			11 30 14.0	
	comp=Z,16nm,1.5s								
P29M	**Windy Craggy**	**44.03**	**46**	P		**P**		**11 29 40.4**	**+0.7**
P29M				IAmb	IAmb			11 29 50.9	
	comp=Z,11nm,0.7s								
N31M	**Braeburn, Yuko**	**44.12**	**43**	P		**P**		**11 29 41.6**	**+1.2**
ABKAR	**Akbulak array**	**50.46**	**303**	P		**P**		**11 30 29.9**	**0.0**
YKA	**Yellowknife Ar**	**52.13**	**35**	P		**P**		**11 30 41.8**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=305,slow=7.2,SNR=2.9								
	comp=Z,0.8nm,0.8s								
FINES	**FINESS Array B**	**57.41**	**329**	P		**P**		**11 31 20.1**	**-0.4**
	comp=Z,6.1nm,1.1s,baz=12,slow=7.1,SNR=1.8								
	comp=Z,6.1nm,1.1s								
L04D	**Klamath Falls**	**61.95**	**57**	P		**P**		**11 31 52.0**	**-0.2**
K05A	**Summer Lake**	**62.35**	**56**	P		**P**		**11 31 54.9**	**0.0**
MTN	**Manton Dam**	**63.78**	**192**	P		**P**		**11 32 01.8**	**-2.6**
AKASG	**Malin Array Be**	**64.27**	**320**	P		**P**		**11 32 06.7**	**-0.6**
	comp=Z,0.1nm,0.2s,baz=27,slow=8.0,SNR=1.7								
	comp=Z,0.1nm,0.2s								
KVN	**Kaiserville**	**66.45**	**57**	P		**P**		**11 32 21.1**	**-0.8**
KVN				IAmb	IAmb			11 32 31.7	
	comp=Z,3.9nm,0.9s								
KVN	**Kaiserville**	**66.45**	**57**	P		**P**		**11 32 21.1**	**-0.8**
KVN				pmax	pmax				
	comp=Z,4.0nm,0.9s								
NVAR	**Mina Array Bea**	**66.79**	**57**	P		**P**		**11 32 24.2**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=307,slow=6.6,SNR=3.8								
	comp=Z,1.1nm,0.8s								
PDAR	**Pinedale Array**	**68.05**	**49**	P		**P**		**11 32 31.6**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=355,slow=2.3,SNR=5.1								
	comp=Z,0.5nm,0.6s								
PDAR	**Pinedale Array**	**68.05**	**49**	P		**P**		**11 32 31.5**	**-0.5**
CLL	**Collm**	**69.85**	**329**	*e*P		**P**		**11 32 41.0**	**-1.7**
WRA	**Warramunga Arr**	**70.44**	**188**	P		**P**		**11 32 47.6**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=0.1,slow=6.6,SNR=2.1								
	comp=Z,0.9nm,0.9s								
EYMN	**Ely**	**71.61**	**35**	P		**P**		**11 32 52.6**	**-1.0**
EYMN				IAmb	IAmb			11 33 02.4	
	comp=Z,5.3nm,0.7s								
ASAR	**Alice Springs**	**74.17**	**188**	P		**P**		**11 33 09.4**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=3.6,slow=5.2,SNR=1.7								
	comp=Z,0.4nm,0.7s								

*SKHL **14** 11:28:35.3±0.8,50.°40N×142.°10E,h9km±3km,mb4.9/5*
*MOS **14** 11:28:35.9±0.9,50.°39N×142.°27E,h13km,mb4.6/3,Error ellipse: s-maj=19.5km s-min=8.3km az=83.8*
*IDC **14** 11:28:36.0±0.7,50.°49N×142.°26E,h0km,mb3.8/12, mbtmp3.8/15,ML2.7/3,Error ellipse: s-maj=22.3km s-min=14.3km az=150.0*
*NEIC **14** 11:28:39.1±2.0,50.°5N±0.°1×142.°5E±0.°2,h15km±5km, mb4.4/26,Error ellipse: s-maj=16.8km s-min=15.4km az=167.0*

ISC 14 11:28:37.2±0.5,**50.°44N**±0.°04×**142.°26E**±0.°05,**h10**km,**n68,** σ1**§03**/74,**mb4.3**/27,**Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.50**	**30**	*e*PN		**Pg**		**11 28 47.0**	**+0.1**
TYV				*e*S		**Sb**		**11 28 54.3**	**-1.0**
TYV				pmax	pmax				
	comp=Z,3µm,3.2s								
TYV				pmax	pmax				
	comp=Z,483nm,0.6s								
TYV				smax	smax				
	comp=N,812nm,0.5s								
TYV				smax	smax				
	comp=E,1µm,0.5s								
TYV	**Tymovskoe**	**0.50**	**30**	*e*Pg		**Pg**		**11 28 47.0**	**+0.1**
TYV				AMB	AMB			11 28 47.1	
	comp=E,600nm,0.5s								
TYV				*e*Sg		**Sb**		**11 28 54.7**	**-0.6**
TYV				A	A			11 28 55.8	
	comp=E,2µm,0.2s								
TYV				A	A			11 28 55.8	
	comp=E,1µm,0.2s								
UGL	**Uglegorsk**	**1.37**	**185**	*e*PN		**Pn**		**11 29 00.1**	**-2.2**
UGL				*e*S		**Sn**		**11 29 17.9**	**-2.5**
UGL				pmax	pmax				
	comp=Z,979nm,0.5s								
UGL				smax	smax				
	comp=E,3µm,0.5s								
UGL				smax	smax				
	comp=N,2µm,0.3s								
UGL	**Uglegorsk**	**1.37**	**185**	*e*Pg		**Pn**		**11 29 00.4**	**-1.9**
UGL				AMB	AMB			11 29 01.2	
	comp=N,1µm,0.5s								
UGL				*

MJAR	**Matsushiro Arr**	**14.19**	**193**	Pn		**Pn**	**11 31 58.9**	**+0.7**
	baz=7.9,slow=12,SNR=1.9								
	comp=Z,0.3nm,0.5s								
KSRS	**Korea Array**	**16.54**	**224**	Pn		**P**	**11 32 33.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=38,slow=11,SNR=6.5								
IMAR	**Indian Mountai**	**35.29**	**40**	P		**P**	**11 35 32.3**	**+0.5**
WRH	**Wood River Hil**	**37.88**	**41**	P		**P**	**11 35 54.2**	**+0.3**
ILAR	**Eielson Array**	**38.33**	**41**	P		**P**	**11 35 57.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=279,slow=8.5,SNR=14								
	comp=Z,0.9nm,0.6s								
BMAR	**Burnt Mountain**	**38.67**	**36**	P		**P**	**11 36 00.9**	**+0.4**
PRP	**Porcupine Dome**	**38.72**	**39**	P		**P**	**11 36 01.1**	**0.0**
MK31	**Makanchi Array**	**38.88**	**289**	P		**P**	**11 36 03.3**	**+0.8**
MK31	**Makanchi Array**	**38.88**	**289**	P		**P**	**11 36 03.3**	**+0.8**
MK31				pmax		pmax			
	comp=Z,6.0nm,1.3s								
MKAR	**Makanchi Array**	**38.88**	**289**	P		**P**	**11 36 03.8**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=71,slow=4.7,SNR=8.9								
	comp=Z,1.5nm,0.7s								
MKAR	**Makanchi Array**	**38.88**	**289**	P		**P**	**11 36 04.0**	**+1.5**
MKAR	**Makanchi Array**	**38.88**	**289**	P		**P**	**11 36 04.0**	**+1.5**
HIN	**Hinchinbrook I**	**39.69**	**47**	P		**P**	**11 36 09.6**	**+0.5**
EGAK	**Eagle**	**40.69**	**40**	P		**P**	**11 36 16.7**	**-0.7**
EGAK				IAmb		IAmb	11 36 21.6		
	comp=Z,12nm,1.5s								
LOGN	**Logan Glacier**	**42.09**	**45**	P		**P**	**11 36 28.8**	**-0.3**
ABKAR	**Akbulak array**	**50.44**	**303**	P		**P**	**11 37 35.7**	**+1.1**
YKA	**Yellowknife Ar**	**52.16**	**35**	P		**P**	**11 37 47.1**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=308,slow=7.7,SNR=5.3								
	comp=Z,0.4nm,0.6s								
FINES	**FINESS Array B**	**57.41**	**329**	P		**P**	**11 38 25.8**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=81,slow=12,SNR=3.7								
	comp=Z,1.5nm,0.7s								
FINES	**FINESS Array B**	**57.41**	**329**	P		**P**	**11 38 26.3**	**+1.0**
FINES	**FINESS Array B**	**57.41**	**329**	P		**P**	**11 38 26.3**	**+1.0**
NOA	**NORSAR Array B**	**62.14**	**335**	P		**P**	**11 38 57.5**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=36,slow=6.6,SNR=3.5								
	comp=Z,0.8nm,0.8s								
K05A	**Summer Lake**	**62.38**	**56**	P		**P**	**11 39 00.7**	**+0.5**
K05A				IAmb		IAmb	11 39 02.4		
	comp=Z,5.5nm,1.1s								
PLID	**Pearl Lake**	**63.23**	**51**	P		**P**	**11 39 05.4**	**-0.3**
PLID				IAmb		IAmb	11 39 06.4		
	comp=Z,3.2nm,0.9s								
GDXM	**Geysers**	**64.10**	**60**	P		**P**	**11 39 10.3**	**-1.1**
AKASG	**Malin Array Be**	**64.26**	**319**	P		**P**	**11 39 12.0**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=40,slow=8.1,SNR=6.1								
	comp=Z,0.7nm,0.6s								
AKASG	**Malin Array Be**	**64.26**	**319**	P		**P**	**11 39 12.0**	**-0.2**
BEKR	**Beckworth**	**64.68**	**58**	P		**P**	**11 39 15.4**	**+0.1**
BEKR				IAmb		IAmb	11 39 27.0		
	comp=Z,2.5nm,1.2s								
PAHR	**Pah Rah Range**	**65.32**	**57**	P		**P**	**11 39 19.2**	**-0.3**
PAHR				IAmb		IAmb	11 39 20.5		
	comp=Z,2.6nm,0.8s								
RLMT	**Red Lodge**	**66.45**	**47**	P		**P**	**11 39 26.9**	**+0.2**
RLMT				IAmb		IAmb	11 39 31.4		
	comp=Z,4.3nm,1.4s								
KVN	**Kaiserville**	**66.48**	**57**	P		**P**	**11 39 27.9**	**+0.9**
KVN				IAmb		IAmb	11 39 28.3		
	comp=Z,2.7nm,0.7s								
KVN	**Kaiserville**	**66.48**	**57**	P		**P**	**11 39 27.9**	**+0.9**
KVN				pmax		pmax			
	comp=Z,3.0nm,0.7s								
NVAR	**Mina Array Bea**	**66.83**	**57**	P		**P**	**11 39 29.7**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=306,slow=6.2,SNR=17								
	comp=Z,1.4nm,0.6s								
NVAR	**Mina Array Bea**	**66.83**	**57**	P		**P**	**11 39 29.9**	**+0.7**
NV11	**Mina Array Sit**	**66.90**	**57**	P		**P**	**11 39 29.4**	**-0.3**
NV11				IAmb		IAmb	11 39 30.5		
	comp=Z,1.3nm,0.7s								
BW06	**Boulder Array**	**68.09**	**49**	P		**P**	**11 39 36.9**	**-0.3**
BW06				IAmb		IAmb	11 39 37.8		
	comp=Z,1.7nm,0.8s								
PD31	**Pinedale Array**	**68.09**	**49**	P		**P**	**11 39 37.1**	**-0.1**
PDAR	**Pinedale Array**	**68.09**	**49**	P		**P**	**11 39 37.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=341,slow=1.7,SNR=15								
	comp=Z,0.9nm,0.6s								
PDAR	**Pinedale Array**	**68.09**	**49**	P		**P**	**11 39 36.9**	**-0.3**
TPNV	**Topopah Spring**	**69.02**	**57**	P		**P**	**11 39 43.5**	**+0.5**
TPNV				IAmb		IAmb	11 39 44.0		
	comp=Z,2.5nm,0.7s								
TPNV	**Topopah Spring**	**69.02**	**57**	P		**P**	**11 39 43.5**	**+0.5**
TPNV				pmax		pmax			
	comp=Z,3.0nm,0.7s								
CLL	**Collm**	**69.85**	**329**	*e*P		**P**	**11 39 47.0**	**-0.6**
MTPU	**Mount Pierson**	**70.34**	**54**	P		**P**	**11 39 50.6**	**-0.7**
WRA	**Warramunga Arr**	**70.42**	**188**	P		**P**	**11 39 53.4**	**+2.0**
	comp=Z,0.7nm,1.0s,baz=4.4,slow=6.9,SNR=2.9								
	comp=Z,0.7nm,1.0s								
B35A	**Bob, Littlefor**	**70.47**	**36**	P		**P**	**11 39 51.0**	**-0.5**
EYMN	**Ely**	**71.64**	**35**	P		**P**	**11 39 58.0**	**-0.7**
PV13	**Radium Mtn., P**	**71.97**	**52**	P		**P**	**11 40 01.8**	**+0.7**
PV13				IAmb		IAmb	11 40 03.1		
	comp=Z,4.7nm,1.3s								
ECSD	**EROS Data Cent**	**73.14**	**40**	P		**P**	**11 40 07.4**	**-0.3**
ECSD				IAmb		IAmb	11 40 08.2		
	comp=Z,3.3nm,0.8s								
X16A	**Lo Mia Camp, P**	**73.49**	**56**	P		**P**	**11 40 10.6**	**+0.5**
ASAR	**Alice Springs**	**74.14**	**188**	P		**P**	**11 40 13.3**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=5.1,slow=5.1,SNR=4.7								
	comp=Z,0.5nm,0.7s								
319A	**Douglas**	**76.99**	**56**	P		**P**	**11 40 30.6**	**+0.4**
319A				IAmb		IAmb	11 40 31.6		
	comp=Z,3.6nm,0.6s								
NCB	**Newcomb**	**80.75**	**26**	P		**P**	**11 40 49.4**	**-1.1**
TXAR	**Lajitas Array**	**81.55**	**54**	P		**P**	**11 40 55.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=308,slow=6.2,SNR=5.5								
	comp=Z,0.6nm,0.7s								
WHAR	**Wooly Hollow**	**82.03**	**42**	P		**P**	**11 40 56.5**	**-0.9**
WHAR				IAmb		IAmb	11 40 57.6		
	comp=Z,5.2nm,0.8s								
ESDC	**Sonseca Array**	**85.49**	**335**	P		**P**	**11 41 15.2**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=8.2,slow=3.3,SNR=5.7								
	comp=Z,0.8nm,0.8s								

KRNET ***14*** *11:42:31.0±0.1, 39.47N×73.92E, mb2.6*
ISC 14 11:42:30.1±3.0, 39.4N±0.1×74.1E±0.1, h27km±22km, n7, σ1§70/14, 8C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.52**	**321**	⇓*i*P	**Pn**	**11 42 55.8**	**+0.1**
	baz=21						
OHH				⇓*i*S	**Sn**	**11 43 13.6**	**-1.1**
	baz=21						
DRK	**Karamyk**	**1.75**	**275**	⇓*i*P	**Pn**	**11 42 59.3**	**+0.3**
	baz=71						
DRK				⇓*i*S	**Sn**	**11 43 20.2**	**-0.3**
	baz=71						
ARLS	**Aral**	**2.51**	**5**	⇑*i*P	**Pn**	**11 43 09.9**	**+0.5**
	baz=7.0						
ARLS				⇑*i*S	**Sn**	**11 43 38.8**	**-0.4**
	baz=7.0						
GAR	**Garm**	**2.92**	**264**	⇓*i*P	**Pn**	**11 43 15.7**	**+0.7**
	baz=62						
GAR				⇓*i*S	**Sn**	**11 43 48.6**	**-0.7**
	baz=62						
TRKS	**Terek-Say**	**3.11**	**315**	⇑*i*P	**Pn**	**11 43 17.1**	**-0.5**
	baz=14						
TRKS				⇑*i*S	**Sn**	**11 43 50.7**	**-3.2**
	baz=14						
TKM2	**Tokmak 2**	**3.75**	**18**	⇓Pn	**Pn**	**11 43 26.0**	**-0.4**
	4.9nm,0.9s						
TKM2				⇑Lg	Lg	11 44 14.5	
	6.2nm,0.5s						
KK31	**Karatay Array**	**4.60**	**326**	⇑Pn	**Pn**	**11 43 39.4**	**+1.5**
	0.1nm,0.2s,baz=124,slow=13,SNR=5.3						
KK31				⇑Pg	**Pb**	**11 43 49.9**	**-0.2**
	7.2nm,1.4s,baz=140,slow=16,SNR=3.7						
KK31				⇑Sn	**Sn**	**11 44 34.1**	**+3.6**
	0.9nm,0.5s						
KK31				⇓Lg	Lg	11 44 49.0	
	0.8nm,0.4s						

IDC ***14*** *11:50:01.8±5.3, 21.34S×173.55E, h0km, mb4.0/4, mbtmp4.1/6, ML4.0/2, Error ellipse: s-maj=118.0km s-min=35.8km az=35.0*
NEIC ***14*** *11:50:09.8±1.8, 21.9S±0.2×173.4E±0.1, h40km±12km, mb4.5/14, Error ellipse: s-maj=31.1km s-min=17.9km az=193.0*
NOU ***14*** *11:50:27.8, 22.72S×171.73E, h0km, MLv4.3/7, Southeast of Loyalty Islands*

ISC 14 11:50:12.1±2.0, 22.2S±0.3×173.1E±0.2, h35km, n38, σ1§60/39, mb4.3/11, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.75**	**278**		**Pn**	**11 51 22.6**	**+1.4**
PINNC	**Pines Island,**	**5.23**	**265**		**Pn**	**11 51 28.8**	**+1.0**
PINNC	**Pines Island,**	**5.23**	**265**	P	**Pn**	**11 51 29.3**	**+1.6**
YATNC	**Mamie plateau,**	**5.74**	**270**	P	**Pn**	**11 51 36.9**	**+2.1**
OUENC	**Ouen Island, N**	**5.78**	**267**		**Pn**	**11 51 37.5**	**+2.2**
OUENC	**Ouen Island, N**	**5.78**	**267**	P	**Pn**	**11 51 37.6**	**+2.2**
ONTNC	**Ouen Toro**	**6.14**	**268**		**Pn**	**11 51 42.7**	**+2.5**
ONTNC	**Ouen Toro**	**6.14**	**268**	P	**Pn**	**11 51 43.3**	**+3.0**
DZM	**Mont Dzumac**	**6.15**	**270**	Pn	**Pn**	**11 51 41.0**	**+0.4**
	5.9nm,0.3s,baz=133,slow=17,SNR=40						
DZM				Sn	**Sn**	**11 52 47.2**	**-2.6**
	2.8nm,0.3s,baz=331,slow=20,SNR=7.3						
	11nm,0.3s						
DZM	**Mont Dzumac**	**6.15**	**270**		**Pn**	**11 51 44.1**	**+3.5**
DZM	**Mont Dzumac**	**6.15**	**270**	P	**Pn**	**11 51 43.1**	**+2.5**
NOUC	**Port Laguerre**	**6.28**	**270**	P	**Pn**	**11 51 45.4**	**+3.1**
URZ	**Urewera**	**16.35**	**169**	P	**P**	**11 54 02.4**	**+0.9**
	0.3nm,0.3s,baz=3.2,slow=21,SNR=1.6						
	3.4nm,0.6s						
URZ	**Urewera**	**16.35**	**169**	P	**P**	**11 54 02.5**	**+1.1**
LTZ	**Lake Taylor**	**20.51**	**182**	P	**P**	**11 54 47.1**	**-0.1**
LTZ				IAmb	IAmb	11 54 49.5	
	comp=Z,23nm,0.9s						
OXZ	**Oxford**	**21.06**	**182**	P	**P**	**11 54 53.7**	**+0.6**
OXZ				IAmb	IAmb	11 54 55.4	
	comp=Z,24nm,0.9s						
STKA	**Stephens Creek**	**29.55**	**244**	P	**P**	**11 56 14.3**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=66,slow=11,SNR=3.0						
	comp=Z,1.1nm,0.7s						
WR0	**Warramunga Arr**	**35.97**	**266**	P	**P**	**11 57 07.5**	**-2.2**
WR0				IAmb	IAmb	11 57 27.0	
	comp=Z,3.7nm,1.0s						
AS31	**Alice Springs**	**36.03**	**260**	P	**P**	**11 57 10.1**	**-0.2**
ASAR	**Alice Springs**	**36.03**	**260**	P	**P**	**11 57 10.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=87,slow=9.4,SNR=13						
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**36.03**	**260**	P	**P**	**11 57 10.5**	**+0.2**
WB0	**Warramunga Arr**	**36.14**	**267**	P	**P**	**11 57 10.0**	**-1.2**
WB0				IAmb	IAmb	11 57 53.5	
	comp=Z,12nm,1.5s						
WB2	**Warramunga Arr**	**36.14**	**266**	P	**P**	**11 57 11.2**	**-0.1**
WB2				IAmb	IAmb	11 57 18.8	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**36.16**	**266**	P	**P**	**11 57 10.7**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=96,slow=8.6,SNR=16						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**36.16**	**266**	P	**P**	**11 57 10.2**	**-1.2**
FORT	**Forrest**	**40.96**	**248**	P	**P**	**11 57 51.4**	**-0.2**
KNRA	**Kununurra**	**42.30**	**271**	P	**P**	**11 58 03.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**44.59**	**266**	P	**P**	**11 58 21.4**	**+0.3**
MORW	**Morawa**	**51.46**	**250**	P	**P**	**11 59 12.4**	**-1.8**
VNDA	**Vanda**	**55.61**	**183**	P	**P**	**11 59 42.5**	**-1.4**
VNDA				IAmb	IAmb	11 59 48.1	
	comp=Z,4.4nm,1.4s						
QSPA	**South Pole Qui**	**67.84**	**180**	P	**P**	**12 01 06.7**	**+0.1**
QSPA				IAmb	IAmb	12 01 07.8	
	comp=Z,5.4nm,1.0s						
MAW	**Mawson**	**77.01**	**202**	P	**P**	**12 02 01.9**	**+1.0**
	comp=Z,2.8nm,0.9s,baz=97,slow=6.5,SNR=6.0						
	comp=Z,2.8nm,0.9s						
TROLL	**Troll, Antarti**	**85.79**	**183**	P	**P**	**12 02 47.6**	**0.0**
SNAA	**Sanae**	**86.31**	**181**	P	**P**	**12 02 48.4**	**-1.7**
SNAA	**Sanae**	**86.31**	**181**	P	**P**	**12 02 49.2**	**-0.9**
SNAA				IAmb	IAmb	12 02 53.4	
	comp=Z,5.5nm,1.4s						
VNA3	**Neumayer Olymp**	**86.76**	**179**	P	**P**	**12 02 51.8**	**-0.5**
VNA2	**Neumayer--Watz**	**87.10**	**180**	P	**P**	**12 02 53.4**	**-0.5**
	baz=180,slow=5.0						
VNA1	**Neumayer--Stat**	**87.37**	**180**	P	**P**	**12 02 54.9**	**-0.2**

TUL ***14*** *12:22:21.9±1.1, 36.817N±0.010×97.62W±0.01, h7km±5km, ML3.5, mb_Lg3.1/86(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=102.0*
NEIC ***14*** *12:22:22.0±0.8, 36.80N±0.01×97.61W±0.01, h6km±6km, Error ellipse: s-maj=1.7km s-min=1.5km az=97.0*
ANF ***14*** *12:22:22.3±0.3, 36.80N×97.64W, h7km, ML3.8/14, Error ellipse: s-maj=3.5km s-min=2.9km az=15.0*
ISC 14 12:22:22.0±0.9, 36.80N±0.02×97.62W±0.02, h8km±9km, n105, σ0§61/102, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.20**	**286**	Pg	**Pg**	**12 22 26.1**	**+0.1**
GC02				Sg	**Sg**	**12 22 28.9**	**+0.1**
KAN13	**South Haven SW**	**0.24**	**28**	Pg	**Pg**	**12 22 26.9**	**+0.1**
KAN13				Sg	**Sg**	**12 22 30.0**	**-0.1**
KAN17	**Caldwell West**	**0.27**	**335**	Pg	**Pg**	**12 22 27.4**	**+0.1**
KAN17				Sg	**Sg**	**12 22 30.8**	**-0.2**
KAN14	**Manchester OK**	**0.32**	**300**	Pg	**Pg**	**12 22 28.2**	**-0.1**
KAN14				Sg	**Sg**	**12 22 32.2**	**-0.3**
KAN05	**Bluff City Nor**	**0.37**	**327**		**Pg**	**12 22 29.3**	**+0.1**
KAN01	**Argonia South**	**0.37**	**343**	Pg	**Pg**	**12 22 29.2**	**0.0**
KAN01				Sg	**Sg**	**12 22 34.0**	**-0.2**
CROK	**Carrier**	**0.41**	**225**	Pg	**Pg**	**12 22 30.4**	**+0.4**
CROK				Sg	**Sg**	**12 22 35.8**	**+0.3**
KS20	**Mayfield South**	**0.43**	**7**	Pg	**Pg**	**12 22 30.4**	**-0.1**
KS20				Sg	**Sg**	**12 22 36.5**	**+0.4**
OK032	**Salt Plains WL**	**0.47**	**271**	Pg	**Pg**	**12 22 31.2**	**+0.1**
OK032				Sg	**Sg**	**12 22 37.3**	**-0.1**
KAN06	**Argonia West S**	**0.49**	**337**		**Pg**	**12 22 31.4**	**0.0**
KAN06				Sg	**Sg**	**12 22 37.5**	**-0.4**
KS21	**Milan North St**	**0.49**	**356**	Pg	**Pg**	**12 22 31.4**	**-0.1**
KS21				Sg	**Sg**	**12 22 37.4**	**-0.5**
KAN10	**Anthony SW Sta**	**0.50**	**311**	Pg	**Pg**	**12 22 31.7**	**0.0**
KAN10				Sg	**Sg**	**12 22 38.0**	**-0.2**
KAN08	**Anthony NE Sta**	**0.51**	**327**		**Pg**	**12 22 32.1**	**+0.2**
KAN08				Sg	**Sg**	**12 22 38.9**	**+0.3**
KAN16	**Harper SW Stat**	**0.56**	**320**	Pg	**Pg**	**12 22 32.8**	**+0.1**
KAN16				Sg	**Sg**	**12 22 39.9**	**-0.1**
KAN12	**Harper NE Stat**	**0.58**	**329**	Pg	**Pg**	**12 22 33.3**	**0.0**
KAN12				Sg	**Sg**	**12 22 40.7**	**-0.2**
OK035	**E0210 Rd and N**	**0.88**	**264**	Pg	**Pg**	**12 22 38.7**	**-0.1**
OK035				Sg	**Sb**	**12 22 51.2**	**-0.2**
T35A	**Sooner Cattle**	**0.90**	**82**	Pg	**Pg**	**12 22 38.8**	**-0.4**
T35A				Sg	**Sg**	**12 22 50.4**	**-0.5**
T35B	**Sooner Cattle**	**0.90**	**82**	P	**Pg**	**12 22 38.9**	**-0.3**
	baz=264,SNR=125						
OK038	**West end E0370**	**0.96**	**251**		**Pg**	**12 22 39.2**	**-1.2**
OK038				Sg	**Sg**	**12 22 53.3**	**+0.5**
QUOK	**Quay**	**0.96**	**130**	Pg	**Pg**	**12 22 40.4**	**-0.1**
QUOK				Sg	**Sg**	**12 22 52.7**	**-0.3**
OK029	**Liberty Lake**	**1.01**	**172**	Pg	**Pg**	**12 22 41.3**	**0.0**
OK029					**Sg**	**12 22 54.1**	**-0.2**
OK031	**S. Brethren Rd**	**1.05**	**143**	Pg	**Pg**	**12 22 41.7**	**-0.4**
OK031				Sg	**Sg**	**12 22 55.4**	**-0.4**
NOKA	**Waynoka**	**1.07**	**262**	Pg	**Pg**	**12 22 42.1**	**-0.3**
NOKA				Sg	**Sg**	**12 22 56.1**	**-0.2**
OK030	**Cody Creek RV**	**1.10**	**142**	Pg	**Pg**	**12 22 43.1**	**0.0**
OK030				Sg	**Sg**	**12 22 57.0**	**-0.4**
BCOK	**Bluff Creek, N**	**1.14**	**180**	Pg	**Pg**	**12 22 43.6**	**-0.2**
BCOK				Sg	**Sg**	**12 22 58.6**	**0.0**
U32A	**Winter Ranch,**	**1.19**	**250**	Pg	**Pg**	**12 22 44.2**	**-0.6**
U32A				Sg	**Sg**	**12 23 00.1**	**-0.1**
U32A	**Winter Ranch,**	**1.19**	**250**	P	**Pg**	**12 22 44.1**	**-0.6**
	baz=68,SNR=34						
U32A				S	**Sb**	**12 23 00.4**	**+0.1**
	baz=68						
OK025	**Westminster Rd**	**1.23**	**169**		**Pb**	**12 22 45.3**	**-0.2**
OK025				Sg	**Sg**	**12 23 02.0**	**+0.3**
DEOK	**Depew**	**1.31**	**136**		**Pn**	**12 22 46.4**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**1.40**	**174**		**Pn**	**12 22 47.7**	**-0.1**
CSTR	**Hydro, Custer**	**1.44**	**217**		**Pn**	**12 22 48.9**	**+0.6**
FNO	**Franklin**	**1.55**	**173**		**Pn**	**12 22 50.6**	**+0.8**
ELIS	**Ellis County**	**1.62**	**244**	Pn	**Pb**	**12 22 51.9**	**-0.3**
TUL1	**Leonard**	**1.72**	**120**		**Pn**	**12 22 53.1**	**+0.9**
TUL1				IAmb_Lg		12 23 18.0	
	comp=Z,160nm,0.9s						
TUL1	**Leonard**	**1.72**	**120**	P	**Pn**	**12 22 53.0**	**+0.9**
	baz=302,SNR=74						
TUL1				S	**Sb**	**12 23 16.3**	**+0.7**
	baz=302						
R32A	**Long Quarter,**	**1.84**	**332**		**Pn**	**12 22 54.6**	**+0.7**
R32A	**Long Quarter,**	**1.84**	**332**	P	**Pn**	**12 22 54.7**	**+0.8**
	baz=151,SNR=49						
R32A				S	**Sb**	**12 23 19.5**	**+0.4**
	baz=151						
RLO	**Rose Lookout**	**2.19**	**106**		**Pn**	**12 22 59.9**	**+1.3**

WMOK	**Wichita Mounta**	**2.26**	**205**	Pn		**Pn**	**12 23 00.1**	**+0.4**
WMOK	**Wichita Mounta**	**2.26**	**205**	P		**Pn**	**12 23 00.4**	**+0.8**
	baz=24,SNR=70							
KSU1	**Kansas State U**	**2.43**	**19**	Pn		**Pn**	**12 23 03.0**	**+1.0**
KSU1	**Kansas State U**	**2.43**	**19**	P		**Pn**	**12 23 02.8**	**+0.8**
	baz=200,SNR=26							
CBKS	**Cedar Bluff**	**2.62**	**321**			**Pn**	**12 23 06.3**	**+1.7**
CBKS	**Cedar Bluff**	**2.62**	**321**	P		**Pn**	**12 23 05.0**	**+0.4**
	baz=139							
CBKS				S		**Sb**	**12 23 40.0**	**-1.5**
	baz=139							
U38A	**Gravette**	**2.63**	**97**	Pn		**Pn**	**12 23 05.8**	**+1.2**
U38A	**Gravette**	**2.63**	**97**	P		**Pn**	**12 23 05.9**	**+1.2**
	baz=279,SNR=91							
LOOK	**Love County**	**2.82**	**173**			**Pn**	**12 23 07.7**	**+0.3**
LOOK				IAmb_Lg			12 23 57.8	
	comp=Z,26nm,0.8s							
X37A	**Clayton**	**2.86**	**140**			**Pn**	**12 23 09.2**	**+1.3**
X37A				IAmb_Lg			12 23 56.3	
	comp=Z,74nm,0.9s							
X37A	**Clayton**	**2.86**	**140**	P		**Pn**	**12 23 09.2**	**+1.3**
	baz=321,SNR=24							
HHAR	**Hobbs**	**3.01**	**99**			**Pn**	**12 23 11.4**	**+1.5**
HHAR				IAmb_Lg			12 24 02.3	
	comp=Z,43nm,0.7s							
HHAR	**Hobbs**	**3.01**	**99**	P		**Pn**	**12 23 11.0**	**+1.1**
	baz=281							
S39A	**Bolivar**	**3.54**	**74**	IAmb_Lg			12 24 15.1	
	comp=Z,28nm,0.8s							
AMTX	**Amarillo**	**3.81**	**241**			**Pn**	**12 23 22.2**	**+1.2**
AMTX				IAmb_Lg			12 24 31.5	
	comp=Z,30nm,0.7s							
N33B	**J Bar K, Exete**	**3.94**	**2**	P		**Pn**	**12 23 22.6**	**-0.1**
	baz=182,SNR=9.8							
N33A	**J Bar K, Exete**	**3.94**	**2**			**Pn**	**12 23 23.0**	**+0.3**
MIAR	**Mount Ida**	**3.98**	**123**			**Pn**	**12 23 24.4**	**+1.1**
MIAR				IAmb_Lg			12 24 30.5	
	comp=Z,36nm,0.7s							
Z38A	**Mt. Pleasant**	**4.14**	**148**			**Pn**	**12 23 25.5**	**+0.1**
P38A	**Dawn**	**4.28**	**48**			**Pn**	**12 23 28.2**	**+0.8**
P38A				IAmb_Lg			12 24 37.4	
	comp=Z,36nm,0.8s							
P38A	**Dawn**	**4.28**	**48**	P		**Pn**	**12 23 28.0**	**+0.6**
	baz=230,SNR=12							
MGMO	**Mountain Grove**	**4.30**	**84**	IAmb_Lg			12 24 39.1	
	comp=Z,57nm,0.9s							
N35A	**Tabor**	**4.34**	**20**			**Pn**	**12 23 28.5**	**+0.3**
N35A	**Tabor**	**4.34**	**20**	P		**Pn**	**12 23 28.9**	**+0.7**
	baz=202							
ABTX	**Abilene, Hawle**	**4.49**	**202**			**Pn**	**12 23 30.4**	**+0.2**
R40A	**Maddies Statio**	**4.51**	**69**	Pn		**Pn**	**12 23 31.2**	**+0.7**
R40A				IAmb_Lg			12 24 43.8	
	comp=Z,41nm,0.7s							
R40A	**Maddies Statio**	**4.51**	**69**	P		**Pn**	**12 23 31.1**	**+0.6**
	baz=252,SNR=14							
FCAR	**Ozark Folk Cen**	**4.53**	**100**			**Pn**	**12 23 31.0**	**+0.2**
FCAR				IAmb_Lg			12 24 43.0	
	comp=Z,32nm,1.0s							
KSCO	**Kaye Shedlock'**	**4.54**	**301**			**Pn**	**12 23 30.9**	**-0.1**
KSCO				IAmb_Lg			12 24 55.6	
	comp=Z,36nm,0.8s							
WHAR	**Wooly Hollow**	**4.57**	**108**	Pn		**Pn**	**12 23 32.3**	**+0.9**
WHAR				IAmb_Lg			12 24 44.7	
	comp=Z,36nm,1.0s							
BGNE	**Belgrade**	**4.62**	**355**			**Pn**	**12 23 32.5**	**+0.3**
BGNE				IAmb_Lg			12 24 55.0	
	comp=Z,56nm,0.8s							
BGNE	**Belgrade**	**4.62**	**355**	P		**Pn**	**12 23 32.1**	**0.0**
	baz=175,SNR=6.8							
WLAR	**White Oak Lake**	**4.82**	**129**	IAmb_Lg			12 25 00.4	
	comp=Z,31nm,0.9s							
MSTX	**Muleshoe**	**5.07**	**238**	IAmb_Lg			12 25 13.8	
	comp=Z,20nm,0.8

s-min=17.1km az=159.0
*MOS **14** 12:35:58.2±3.2,50°.31N×142°.52E, h11km, mb3.8/1, Error ellipse: s-maj=20.4km s-min=9.0km az=80.7*

ISC 14 12:35:59.4±0.7,**50°.39N**±0°.03×**142°.50E**±0°.05,**h10**km,**n18,** σ1§**24**/26,**mb3.7**/4,**Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.49**	**12**	*e*PN	**Pg**	**12 36 09.0**	**+0.1**
TYV				*e*S	**Sg**	**12 36 15.8**	**+0.5**
TYV	comp=Z,151nm,0.5s			pmax	pmax		
TYV	comp=Z,300nm,2.1s			pmax	pmax		
TYV	comp=N,318nm,0.5s			smax	smax		
TYV	comp=E,396nm,0.5s			smax	smax		
TYV	**Tymovskoe**	**0.49**	**12**	*e*Pg	**Pg**	**12 36 09.0**	**+0.1**
TYV	comp=E,151nm,0.3s			AMB	AMB	12 36 09.1	
TYV				*e*Sg	**Sg**	**12 36 16.0**	**+0.7**
TYV	comp=E,500nm,0.2s			A	A	12 36 16.1	
TYV	comp=E,640nm,0.2s			A	A	12 36 16.1	
UGL	**Uglegorsk**	**1.34**	**192**	*e*PN	**Pn**	**12 36 22.3**	**-1.8**
UGL				*e*S	**Sb**	**12 36 39.4**	**-2.4**
UGL	comp=Z,326nm,0.5s			pmax	pmax		
UGL	comp=N,737nm,0.3s			smax	smax		
UGL	comp=E,679nm,0.4s			smax	smax		
UGL	**Uglegorsk**	**1.34**	**192**	*e*P	**Pn**	**12 36 22.3**	**-1.8**
UGL	comp=E,300nm,0.5s			AMB	AMB	12 36 23.0	
UGL	comp=N,210nm,0.5s			*e*S	**Sb**	**12 36 40.0**	**-1.8**
UGL	comp=E,700nm,0.6s			A	A	12 36 43.0	
UGL	comp=E,1μm,0.6s			A	A	12 36 43.0	
NGLR	**Nogliki**	**1.45**	**15**	*e*PN	**Pn**	**12 36 26.2**	**+0.5**
NGLR				*e*		12 36 47.7	
NGLR	comp=Z,530nm,0.4s			pmax	pmax		
NGLR	comp=N,210nm,0.5s			smax	smax		
NGLR	comp=E,130nm,0.5s			smax	smax		
NKL	**Nikolayevsk**	**2.99**	**338**	*e*PN	**Pn**	**12 36 45.4**	**-1.4**
NKL				*e*S	**Sb**	**12 37 29.9**	**+0.7**
NKL	comp=N,13nm,0.3s			pmax	pmax		
NKL	comp=E,9.0nm,0.3s			pmax	pmax		
NKL	comp=Z,36nm,0.3s			pmax	pmax		
NKL	comp=E,37nm,0.2s			smax	smax		
NKL	comp=N,7.0nm,0.3s			smax	smax		
OKH	**Okha**	**3.18**	**5**	*e*PN	**Pb**	**12 36 53.7**	**-2.2**
OKH				*e*S	**Sb**	**12 37 34.6**	**-0.1**
OKH	comp=Z,60nm,1.2s			pmax	pmax		
OKH	comp=N,100nm,0.9s			smax	smax		
OKH	comp=E,110nm,0.9s			smax	smax		
YSS	**Yuzh-Sakhalins**	**3.44**	**177**	*e*PN	**Pn**	**12 36 53.8**	**+0.8**
YSS	comp=Z,60nm,0.7s			pmax	pmax		
YSS	**Yuzh-Sakhalins**	**3.44**	**177**	*e*P	**Pn**	**12 36 53.8**	**+0.8**
YSS	comp=Z,20nm,0.5s			AMB	AMB	12 36 55.8	
YSS				*e*Pg	**Pg**	**12 37 05.9**	**+0.6**
YSS	comp=Z,60nm,0.7s			AMB	AMB	12 37 08.0	
YSS				*e*Sg	**Sg**	**12 37 52.0**	**+2.2**
YSS	comp=Z,60nm,0.6s			A	A	12 37 55.0	
YSS	comp=Z,50nm,0.6s			A	A	12 37 55.0	
GRNR	**Gornyy**	**3.89**	**278**	*e*PN	**Pb**	**12 37 07.8**	**-0.3**
GRNR				*e*		12 37 51.1	
GRNR	comp=E,10.0nm,0.3s			pmax	pmax		
GRNR	comp=N,10.0nm,0.2s			pmax	pmax		
GRNR	comp=Z,10.0nm,0.3s			pmax	pmax		
GRNR	comp=E,10.0nm,0.3s			smax	smax		
GRNR	comp=E,370nm,17.0s			MLR	MLR		
GRNR	comp=N,200nm,13.0s			MLR	MLR		
GRNR	comp=Z,410nm,12.0s			MLR	MLR		
GRNR	**Gornyy**	**3.89**	**278**	*e*Pg	**Pg**	**12 37 15.4**	**+1.5**
GRNR	comp=Z,10.0nm,0.3s			AMB	AMB	12 37 16.2	
GRNR	comp=Z,10.0nm,0.3s			AMB	AMB	12 37 16.2	
GRNR	comp=Z,10.0nm,0.3s			AMB	AMB	12 37 16.2	
KLR	**Kul'dur**	**7.05**	**265**	Pn	**Pn**	**12 37 42.0**	**-0.7**
KLR	comp=Z,0.4nm,0.3s,baz=72,slow=13,SNR=5.7			Lg	Lg	12 39 41.2	
KLR	comp=Z,0.9nm,0.3s,baz=348,slow=15,SNR=5.2 **Kul'dur**	**7.05**	**265**	PN	**Pn**	**12 37 42.0**	**-0.7**
USRK	comp=Z,0.9nm,0.3s **Ussuriysk Ar.**	**9.45**	**233**	Pn	**Pn**	**12 38 14.7**	**-0.8**
USRK	comp=Z,0.5nm,0.3s,baz=41,slow=16,SNR=5.0			Lg	Lg	12 40 57.3	
ILAR	comp=Z,0.4nm,0.3s,baz=39,slow=30,SNR=3.7 comp=Z,1.7nm,0.4s **Eielson Array**	**38.26**	**41**	P	**P**	**12 43 20.1**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=274,slow=7.1,SNR=2.5 comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array** comp=Z,0.9nm,0.7s,baz=64,slow=8.5,SNR=7.2 comp=Z,0.9nm,0.7s	**39.04**	**289**	P	**P**	**12 43 26.0**	**0.0**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.5s,baz=291,slow=5.5,SNR=4.3 comp=Z,0.4nm,0.5s	**66.72**	**58**	P	**P**	**12 46 51.5**	**+0.8**
PDAR	**Pinedale Array** comp=Z,0.3nm,0.4s,baz=344,slow=3.8,SNR=3.9 comp=Z,0.3nm,0.4s	**68.00**	**49**	P	**P**	**12 46 59.2**	**+0.4**

*IDC **14** 12:39:24.3±1.4, 18°.71N×146°.54E, h0km, mb3.6/7, mbtmp3.5/8, ML2.5/1, Error ellipse: s-maj=52.9km s-min=22.1km az=84.0*

ISC 14 12:39:32.8±1.3,**18°.7N**±0°.2×**146°.4E**±0°.3,**h64**km,**n8,** σ0§**82**/8,**mb3.5**/7,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr** baz=151,slow=13,SNR=1.5 0.3nm,0.5s	**19.17**	**340**	P	**P**	**12 43 50.0**	**-1.2**
KSRS	**Korea Array** 1.1nm,0.6s,baz=147,slow=8.8,SNR=11 1.1nm,0.6s	**24.70**	**323**	P	**P**	**12 44 48.4**	**+0.4**
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=22,slow=8.6,SNR=4.5 0.2nm,0.5s	**40.20**	**198**	P	**P**	**12 47 03.0**	**-0.2**
SONM	**Songino Array** 0.8nm,0.7s,baz=132,slow=6.6,SNR=4.6 0.8nm,0.7s	**43.55**	**321**	P	**P**	**12 47 30.8**	**+0.4**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=22,slow=8.0,SNR=1.8 0.2nm,0.7s	**43.85**	**197**	P	**P**	**12 47 32.8**	**-0.1**
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=85,slow=7.8,SNR=6.7 0.6nm,0.6s	**58.93**	**314**	P	**P**	**12 49 26.1**	**+0.6**
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=293,slow=6.0,SNR=3.1 0.3nm,0.7s	**77.66**	**28**	P	**P**	**12 51 22.9**	**+0.6**
FINES	**FINESS Array B** 0.8nm,0.5s,baz=79,slow=5.5,SNR=10 0.8nm,0.5s	**87.15**	**335**	P	**P**	**12 52 10.8**	**-0.9**

*IDC **14** 12:44:13.5±0.6, 22°.67S×173°.14E, h0km, mb4.2/14, mbtmp4.3/17, ML5.2/3, MS3.8/16, Error ellipse: s-maj=18.2km s-min=15.4km az=129.0*
*NOU **14** 12:44:15.3, 22°.87S×173°.30E, h0km, mb4.9/22, Southeast of Loyalty Islands*
*NEIC **14** 12:44:16.1±2.1, 22°.67S±0°.08×173°.22E±0°.07, h10km±1km, mb4.7/37, Error ellipse: s-maj=15.6km s-min=8.3km az=148.0*

ISC 14 12:44:18.9±0.4,**22°.73S**±0°.06×**173°.19E**±0°.06,**h32**km,**n129,** σ1§**29**/117,**mb4.6**/30,**MS3.8**/16,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.94**	**284**	Pn	**Pn**	**12 45 30.7**	**-0.1**
MARNC	**Mare, Loyalty**	**4.94**	**284**	P	**Pn**	**12 45 32.7**	**+1.8**
PINNC	**Pines Island,**	**5.30**	**270**		**Pn**	**12 45 36.4**	**+0.5**
PINNC	**Pines Island,**	**5.30**	**270**	P	**Pn**	**12 45 36.2**	**+0.3**
YATNC	**Mamie plateau,**	**5.86**	**275**	P	**Pn**	**12 45 44.4**	**+0.8**
OUENC	**Ouen Island, N**	**5.87**	**272**	Pn	**Pn**	**12 45 43.9**	**+0.2**
OUENC	**Ouen Island, N**	**5.87**	**272**	P	**Pn**	**12 45 43.7**	**0.0**
ONTNC	**Ouen Toro**	**6.24**	**273**	Pn	**Pn**	**12 45 49.1**	**+0.4**
ONTNC	**Ouen Toro**	**6.24**	**273**	P	**Pn**	**12 45 50.4**	**+1.7**
DZM	**Mont Dzumac** 12nm,0.3s,baz=114,slow=10,SNR=96	**6.27**	**275**	Pn	**Pn**	**12 45 46.8**	**-2.5**
DZM	9.9nm,0.3s,baz=128,slow=23,SNR=8.6 48nm,0.5s			Sn	**Sn**	**12 47 00.2**	**+0.2**
DZM	**Mont Dzumac** 92nm,0.7s	**6.27**	**275**	*e*Pn	**Pn**	**12 45 49.5**	**+0.2**
DZM	351nm,0.9s			*e*Sn	**Sn**	**12 46 59.5**	**-0.5**
DZM	comp=Z,1μm,23.7s			*e*LR	LR	12 47 17.5	
DZM	**Mont Dzumac**	**6.27**	**275**	Pn	**Pn**	**12 45 48.6**	**-0.7**
DZM	**Mont Dzumac**	**6.27**	**275**	P	**Pn**	**12 45 49.2**	**-0.1**
NOUC	**Port Laguerre**	**6.40**	**274**	P	**Pn**	**12 45 51.9**	**+1.0**
MSVF	**Nonsavu** 5.5nm,0.3s,baz=224,slow=18,SNR=28 13nm,0.4s	**6.75**	**43**	Pn	**Pn**	**12 45 53.8**	**-2.1**
MSVF	**Nonsavu**	**6.75**	**43**		**Pn**	**12 45 54.8**	**-1.0**
MSVF	**Nonsavu**	**6.75**	**43**	P	**Pn**	**12 45 54.9**	**-1.0**
DVP	**Devils Point**	**6.84**	**316**	P	**Pn**	**12 46 00.1**	**+3.1**
NFK	**Norfolk Island**	**7.86**	**216**	P	**Pn**	**12 46 10.4**	**-0.6**
KOUNC	**Koumac, New Ca**	**8.56**	**283**		**Pn**	**12 46 23.1**	**+2.6**
KOUNC	**Koumac, New Ca**	**8.56**	**283**	P	**Pn**	**12 46 22.4**	**+1.8**
LKBA	**Tubou, Lakemba**	**8.73**	**61**	P	**Pn**	**12 46 22.0**	**-1.0**
TAVE	**Taveuni**	**8.84**	**49**	P	**Pn**	**12 46 25.4**	**+0.9**
RAO	**Raoul Island** comp=Z,690nm,18.5s,baz=290,slow=33	**10.30**	**131**	LR	LR	12 50 00.5	
OUZ	**Omahuta**	**12.45**	**178**	Pn	**Pn**	**12 47 14.7**	**+0.9**
URZ	**Urewera** 0.1nm,0.3s,baz=338,slow=12,SNR=1.8	**15.84**	**169**	Pn	**P**	**12 48 05.4**	**+2.4**
URZ	comp=Z,507nm,18.1s,baz=26,slow=33			LR	LR	12 52 55.5	
URZ	**Urewera**	**15.84**	**169**	P	**P**	**12 48 03.5**	**+0.6**
URZ	comp=Z,46nm,1.3s			IAmb	IAmb	12 48 29.6	
AFI	**Afiamalu** comp=Z,244nm,19.3s,baz=230,slow=32	**16.75**	**61**	LR	LR	12 53 18.7	
BFZ	**Birch Farm**	**18.08**	**172**	P	**P**	**12 48 29.1**	**+1.4**
BFZ	comp=Z,34nm,1.0s			IAmb	IAmb	12 48 58.8	
HNR	**Honiara** comp=Z,3.0nm,0.3s,baz=179,slow=6.9,SNR=4.9	**18.33**	**314**	P	**P**	**12 48 29.2**	**-1.4**
HNR	comp=Z,232nm,19.7s,baz=156,slow=32 comp=Z,131nm,0.9s			LR	LR	12 54 02.9	
KHZ	**Kahutara**	**19.63**	**179**	P	**Pn**	**12 48 45.5**	**-0.7**
KHZ	comp=Z,34nm,1.1s			IAmb	IAmb	12 49 06.6	
LTZ	**Lake Taylor**	**20.01**	**182**	P	Pn	12 48 50.7	-0.1
LTZ	comp=Z,26nm,0.9s			IAmb	IAmb	12 49 04.2	
EIDS	**Eidsvold**	**20.35**	**258**		**P**	**12 48 51.6**	**-1.1**
EIDS	comp=Z,62nm,1.5s			IAmb	IAmb	12 48 58.9	
EIDS	**Eidsvold**	**20.35**	**258**	P	Pn	12 48 55.4	+0.5
ARMA	**Armidale**	**20.72**	**244**	P	**Pn**	**12 48 56.2**	**-0.7**
RPZ	**Rata Peaks** comp=Z,5.4nm,0.7s,baz=40,slow=7.9,SNR=2.6	**21.00**	**184**	P	**P**	**12 49 00.9**	**+1.3**
RPZ	comp=Z,417nm,18.9s,baz=334,slow=36 comp=Z,5.4nm,0.7s			LR	LR	12 57 00.7	
RPZ	**Rata Peaks**	**21.00**	**184**	P	**P**	**12 49 02.4**	**+2.8**
RPZ	comp=Z,43nm,1.2s			IAmb	IAmb	12 49 08.1	
RMQ	**Roma** comp=Z,49nm,0.7s	**22.51**	**255**	P	**P**	**12 49 18.6**	**+2.6**
RAR	**Rarotonga** comp=Z,108nm,18.1s,baz=264,slow=37	**25.11**	**92**	LR	LR	12 59 43.2	
CTA	**Charters Tower** comp=Z,6.3nm,0.5s,baz=101,slow=9.8,SNR=9.6	**25.20**	**271**	P	**P**	**12 49 41.6**	**-0.2**
CTA	comp=Z,231nm,20.3s,baz=120,slow=34 comp=Z,6.3nm,0.5s			LR	LR	12 58 30.4	
CTA	**Charters Tower**	**25.20**	**271**	P	**P**	**12 49 44.6**	**+2.8**
CTAO	**Charters Tower**	**25.20**	**271**	P	**P**	**12 49 41.8**	**0.0**
CTAO	comp=Z,38nm,1.5s			IAmb	IAmb	12 50 18.8	
CTAO	**Charters Tower**	**25.20**	**271**	P	**P**	**12 49 44.1**	**+2.3**
CMSA	**Cobar Meteorol**	**25.94**	**244**	P	**P**	**12 49 50.1**	**+1.7**
MTSU	**Mount Surprise**	**27.41**	**274**	P	**P**	**12 50 02.8**	**+0.9**
STKA	**Stephens Creek** comp=Z,2.9nm,0.7s,baz=86,slow=10,SNR=6.9	**29.43**	**245**	P	**P**	**12 50 19.5**	**-0.2**
STKA	comp=Z,220nm,21.8s,baz=52,slow=32 comp=Z,2.9nm,0.7s			LR	LR	12 59 58.0	
STKA	**Stephens Creek**	**29.43**	**245**	P	**P**	**12 50 19.7**	**0.0**
STKA	**Stephens Creek**	**29.43**	**245**	P	**P**	**12 50 20.0**	**+0.4**
COEN	**Coen**	**29.75**	**282**	P	**P**	**12 50 23.1**	**+0.6**
COEN	**Coen**	**29.75**	**282**	P	**P**	**12 50 25.1**	**+2.5**
BBOO	**Buckleboo**	**34.20**	**245**	P	**P**	**12 51 01.4**	**-0.2**
TBI	**Tubuai** comp=Z,181nm,26.0s	**34.32**	**98**	*e*LR	LR	13 00 02.4	
PPT2	**Papeete2** comp=Z,220nm,29.5s	**35.27**	**89**	*e*LR	LR	13 00 27.7	
WR0	**Warramunga Arr**	**36.03**	**267**	P	**P**	**12 51 16.4**	**-1.1**
AS31	**Alice Springs**	**36.04**	**261**	P	**P**	**12 51 17.4**	**-0.2**
ASAR	**Alice Springs** comp=Z,3.4nm,0.7s,baz=71,slow=8.5,SNR=87	**36.04**	**261**	P	**P**	**12 51 16.3**	**-1.3**
ASAR	comp=Z,167nm,19.0s,baz=112,slow=35 comp=Z,3.4nm,0.7s			LR	LR	13 05 12.0	
ASAR	**Alice Springs**	**36.04**	**261**	P	**P**	**12 51 16.8**	**-0.8**
WB0	**Warramunga Arr**	**36.21**	**267**	P	**P**	**12 51 18.1**	**-0.9**
WB2	**Warramunga Arr**	**36.21**	**267**	P	**P**	**12 51 17.4**	**-1.6**
WRA	**Warramunga Arr** comp=Z,2.1nm,0.4s,baz=97,slow=7.8,SNR=54	**36.22**	**267**	P	**P**	**12 51 16.7**	**-2.5**
WRA	comp=Z,265nm,18.9s,baz=49,slow=35 comp=Z,2.1nm,0.4s			LR	LR	13 05 26.9	
WRA	**Warramunga Arr**	**36.22**	**267**	P	**P**	**12 51 17.9**	**-1.2**
FORT	**Forrest**	**40.87**	**249**	P	**P**	**12 51 58.3**	**+0.3**
MTN	**Manton Dam**	**41.11**	**276**	P	**P**	**12 51 59.5**	**-0.7**
MTN	comp=Z,33nm,1.4s			IAmb	IAmb	12 52 27.6	
H11S2	**WAKE ISLAND Hy** baz=171,slow=76,SNR=7.3	**41.46**	**351**	T	T	13 35 55.7	
H11S3	**WAKE ISLAND Hy** baz=171,slow=76,SNR=4.8	**41.46**	**351**	T	T	13 35 55.7	
H11S1	**WAKE ISLAND Hy** baz=171,slow=76,SNR=3.9	**41.48**	**351**	T	T	13 35 57.9	
KNRA	**Kununurra**	**42.41**	**271**	P	**P**	**12 52 09.8**	**-1.0**
KNRA	comp=Z,15nm,1.2s			IAmb	IAmb	12 52 32.6	
FAKI	**Fak Fak**	**44.28**	**290**	P	**P**	**12 52 24.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**44.65**	**267**	P	**P**	**12 52 27.7**	**-1.1**
FITZ	comp=Z,10nm,0.7s			IAmb	IAmb	12 52 30.1	
GUMO	**Guam** comp=Z,128nm,20.8s,baz=122,slow=33	**45.52**	**320**	LR	LR	13 09 12.4	
SIJI	**Sorong** comp=Z,170nm,19.6s,baz=282,slow=36	**46.16**	**292**	LR	LR	13 11 58.9	
TAOE	**Nuku Hiva Isla** comp=Z,256nm,27.1s	**46.77**	**81**	*e*LR	LR	13 05 47.3	
BATI	**Baumata** comp=Z,254nm,18.2s,baz=126,slow=37	**48.88**	**276**	LR	LR	13 14 38.9	
PSA00	**Pilbara Seismi**	**49.19**	**261**	P	**P**	**12 53 04.8**	**+0.4**
PSA00	comp=Z,6.3nm,1.3s			IAmb	IAmb	12 53 08.7	
MBWA	**Marble Bar**	**49.38**	**261**	P	**P**	**12 53 05.0**	**-0.8**
MBWA	comp=Z,9.8nm,0.9s			IAmb	IAmb	12 53 22.7	
MORW	**Morawa**	**51.38**	**250**	P	**P**	**12 53 20.9**	**+0.1**
KAPI	**Kappang**	**54.46**	**280**	LR	LR	13 16 51.8	
	comp=Z,38nm,21.9s,baz=12,slow=36						
VNDA	**Vanda** comp=Z,0.7nm,0.8s,baz=359,slow=7.5,SNR=5.7 comp=Z,0.7nm,0.8s	**55.11**	**183**	P	**P**	**12 53 47.3**	**-0.2**
VNDA	**Vanda**	**55.11**	**183**	P	**P**	**12 53 49.5**	**+2.0**
DAV	**Davao City (W)** comp=Z,59nm,18.7s,baz=18,slow=36	**55.19**	**297**	LR	LR	13 17 04.1	
SBA	**Scott Base**	**55.26**	**182**	P	**P**	**12 53 50.9**	**+2.4**
TOLI2	**Tolitoli**	**56.24**	**288**	P	**P**	**12 53 54.5**	**-2.0**
TOLI2	comp=Z,9.9nm,1.0s			IAmb	IAmb	12 54 10.4	
CASY	**Casey**	**58.47**	**205**	P	**P**	**12 54 11.3**	**-0.1**
QSPA	**South Pole Qui** comp=Z,6.7nm,1.1s,baz=343,slow=1.5,SNR=14 comp=Z,6.7nm,1.1s	**67.34**	**180**	P	**P**	**12 55 09.7**	**-0.9**
QSPA	**South Pole Qui**	**67.34**	**180**	P	**P**	**12 55 10.5**	**-0.1**
MJAR	**Matsushiro Arr** comp=Z,1.7nm,0.8s,baz=161,slow=6.6,SNR=6.9 comp=Z,1.7nm,0.8s	**67.58**	**330**	P	**P**	**12 55 11.3**	**-1.0**
KSRS	**Korea Array** comp=Z,0.9nm,0.8s,baz=144,slow=5.8,SNR=5.3 comp=Z,0.9nm,0.8s	**73.47**	**324**	P	**P**	**12 55 48.0**	**-0.2**
KSAR	**Wonju Array Be**	**73.48**	**324**	P	**P**	**12 55 46.9**	**-1.3**
MAW	**Mawson** comp=Z,1.7nm,0.8s,baz=79,slow=7.5,SNR=4.7 comp=Z,1.7nm,0.8s	**76.58**	**202**	P	**P**	**12 56 06.6**	**+0.8**
MAW	**Mawson**	**76.58**	**202**	P	**P**	**12 56 06.4**	**+0.7**
PEA0B	**Petropavlovsk-**	**76.71**	**350**	P	**P**	**12 56 06.8**	**+0.2**
PETK	**Petropavlovsk-** comp=Z,6.0nm,0.8s,baz=192,slow=10,SNR=11 comp=Z,6.0nm,0.8s	**76.71**	**350**	P	**P**	**12 56 05.9**	**-0.6**
PETK	**Petropavlovsk-**	**76.71**	**350**	P	**P**	**12 56 07.8**	**+1.3**
MDJ	**Mudanjiang**	**77.96**	**330**	P	**P**	**12 56 16.1**	**+2.4**
MDJ				pP	pwP	12 56 29.0	+0.2
MDJ				sP	sP	12 56 32.1	+6.4
MDJ				S	**S**	**13 06 07.3**	**+2.4**
MDJ	**Mudanjiang**	**77.96**	**330**	ScS	**ScS**	**13 06 30.1**	**-0.6**
MDJ	comp=Z,10.0nm,1.4s			pmax	pmax		
MDJ	comp=Z,100nm,4.0s			pmax	pmax		
MDJ	comp=N,180nm,9.3s			LR	LR		
MDJ	comp=E,220nm,11.4s			LR	LR		
MDJ	comp=Z,280nm,14.1s			LR	LR		
BELA	**Belgrano 2**	**78.29**	**174**	P	**P**	**12 56 14.4**	**-0.8**
BELA	comp=Z,6.1nm,1.0s			IAmb	IAmb	12 56 25.8	
SMAI	**San Martin Ant**	**79.35**	**161**	P	**P**	**12 56 21.7**	**+0.6**
SMAI	comp=Z,13nm,1.3s			IAmb	IAmb	12 56 35.4	
PZH	**PanZhiHua**	**84.68**	**301**	P	**P**	**12 56 50.1**	**+0.1**
PZH	comp=Z,10.0nm,1.1s			pmax	pmax		
PZH	comp=Z,100nm,7.6s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**85.27**	**318**	*e*P	**P**	**12 56 52.9**	**+0.3**
HHC	comp=Z,27nm,0.8s			pmax	pmax		
HHC	comp=Z,180nm,5.6s			pmax	pmax		
TROLL	**Troll, Antarti**	**85.29**	**183**	P	**P**	**12 56 49.8**	**-2.5**
SNAA	**Sanae**	**85.81**	**181**	P	**P**	**12 56 52.5**	**-2.4**
SNAA	**Sanae**	**85.81**	**181**	P	**P**	**12 56 53.9**	**-0.9**
SNAA	comp=Z,9.2nm,1.4s			IAmb	IAmb	12 56 57.7	
VNA3	**Neumayer Olymp**	**86.26**	**179**	P	**P**	**12 56 56.0**	**-1.1**
VNA2	**Neumayer--Watz** baz=165,slow=5.0	**86.60**	**180**	P	**P**	**12 56 57.4**	**-1.3**
VNA1	**Neumayer--Stat**	**86.87**	**180**	P	**P**	**12 56 58.1**	**-1.8**
YBH	**Yreka Blue Hor** baz=0.0,slow=7.1	**87.31**	**42**	P	**P**	**12 57 02.8**	**+0.2**
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.7s,baz=224,slow=7.0,SNR=6.1 comp=Z,0.6nm,0.7s	**88.41**	**47**	P	**P**	**12 57 08.3**	**+0.2**
KVN	**Kaiserville**	**88.86**	**47**	P	**P**	**12 57 09.4**	**-0.8**
KVN	comp=Z,2.2nm,0.8s			IAmb	IAmb	12 57 11.2	
TPNV	**Topopah Spring**	**89.08**	**49**	P	**P**	**12 57 11.7**	**+0.5**
TPNV	comp=Z,2.5nm,0.8s			IAmb	IAmb	12 57 13.2	
YAK	**Yakutsk** comp=Z,43nm,19.4s,baz=92,slow=32	**91.33**	**341**	LR	LR	13 32 35.6	
U15A	**North Rim**	**91.63**	**51**	P	**P**	**12 57 23.8**	**+0.6**
U15A	comp=Z,3.8nm,0.8s			IAmb	IAmb	12 57 25.0	
ILAR	**Eielson Array** comp=Z,1.0nm,0.7s,baz=225,slow=5.4,SNR=8.7 comp=Z,1.0nm,0.7s	**92.50**	**16**	P	**P**	**12 57 24.6**	**-1.7**
BCAR	**Beaver Creek A**	**92.58**	**19**	P	**P**	**12 57 25.9**	**-0.8**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.5s,baz=298,slow=3.9,SNR=2.0 comp=Z,0.2nm,0.5s	**96.31**	**46**	P	**P**	**12 57 44.8**	**+0.3**
WMQ	**Urumqi**	**102.27**	**312**	*e*P	**Pdif**	**12 58 12.3**	**+1.3**
ARCES	**ARCESS Array B** comp=Z,0.5nm,0.7s,baz=77,slow=3.4,SNR=5.6	**129.35**	**346**	PKP	**PKPdf**	**13 03 22.3**	**-1.1**
KOLS	**Kolonicke sedl**	**145.17**	**326**	*e*PKP	**PKPdf**	**13 03 54.5**	**+1.4**
CRVS	**Cervenica-Dubn**	**145.61**	**326**	*e*PKP	**PKPab**	**13 03 55.4**	**+1.0**
MORC	**Moravsky Berou**	**146.91**	**331**	*e*PKP	**PKPdf**	**13 03 56.7**	**+0.7**
DPC	**Dobruska-Polom**	**147.03**	**332**	*e*PKP	**PKPdf**	**13 03 57.1**	**+0.9**
VYHS	**Vyhne**	**147.19**	**328**	*e*PKP	**PKiKP**	**13 04 02.4**	**+1.3**
CLL	**Collm**	**147.60**	**337**	*e*PKPbc	**PKPbc**	**13 03 59.0**	**-0.7**
CLL	comp=Z,4.0nm,1.2s			*i* PKPab	**PKPab**	**13 04 02.0**	**+0.1**
CLL				*i* PKiKP	**PKiKP**	**13 04 02.9**	**+1.1**
CLL	comp=Z,14nm,1.6s			*ex*	x	13 04 09.0	
VRAC	**Vranov**	**147.68**	**331**	*e*PKP	**PKPdf**	**13 03 57.1**	**-0.2**
KRUC	**Moravsky**	**147.94**	**331**	*e*PKP	**PKPdf**	**13 03 57.7**	**0.0**
MODS	**Modra-Piesok**	**148.03**	**329**	*e*PKP	**PKPdf**	**13 03 58.5**	**+0.6**
CKRC	**Cesky Krumlov**	**149.04**	**332**	*e*PKP	**PKPab**	**13 04 07.3**	**-0.6**
KHC	**Kasperske Hory**	**149.11**	**334**	*e*PKP	**PKPab**	**13 04 07.1**	**-1.0**
KHC				*ex*	x	13 04 23.5	
GERES	**GERESS Array B** comp=Z,0.9nm,0.8s,baz=86,slow=1.7,SNR=6.6	**149.28**	**333**	PKPbc	**PKPbc**	**13 04 03.2**	**-1.1**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.8s,baz=145,slow=5.2,SNR=2.4	**167.50**	**222**	PKPab	**PKPab**	**13 05 26.5**	**-1.6**

IDC 14 12:56:29.5±5.0,**21°.72S**×**173°.72E**,**h0**km,**mb3.5**/3, **mbtmp3.5**/4,**ML3.7**/1,**Error ellipse: s-maj=119.1km s-min=33.2km az=28.0,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 1.5nm,0.3s,baz=119,slow=17,SNR=12	**6.76**	**266**	Pn	Pn	12 58 11.6	+1.4
DZM	1.0nm,0.3s,baz=90,slow=17,SNR=2.4 2.6nm,0.3s			Sn	Sn	12 59 26.3	-1.7
ASAR	**Alice Springs** 0.6nm,0.9s,baz=79,slow=7.8,SNR=14 0.6nm,0.9s	**36.70**	**259**	P	P	13 03 38.4	-0.2
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=97,slow=8.5,SNR=12 0.3nm,0.4s	**36.78**	**265**	P	P	13 03 39.1	-0.1
VNDA	**Vanda** 0.3nm,0.6s,baz=360,slow=6.6,SNR=6.0 0.3nm,0.6s	**56.14**	**183**	P	P	13 06 10.2	-0.2

*IDC **14** 13:00:52.1±2.2, 34°.13N×86°.24E, h0km, mb3.4/4, mbtmp3.4/6, ML2.8/2, Error ellipse: s-maj=56.8km s-min=27.9km az=75.0*

ISC 14 13:00:53.5±2.0,**34°.2N**±0°.2×**86°.2E**±0°.3,**h10**km,**n6,** σ0§**28**/6, **mb3.6**/3,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

0.1nm,0.6s,baz=324,slow=8.2,SNR=1.5
0.1nm,0.6s

*IDC **14** 13:10:10.0±0.8,34˚.19N×86˚.16E,h0km,mb3.9/15, mbtmp4.0/18,ML3.5/2,MS3.5/10,Error ellipse: s-maj=21.8km s-min=15.1km az=31.0*
*MOS **14** 13:10:12.0±1.0,34˚.28N×86˚.08E,h26km,mb4.4/13,Error ellipse: s-maj=10.8km s-min=6.7km az=89.8*
*BJI **14** 13:10:13.8±0.0,34˚.29N×86˚.35E,h17km,mb4.3/34, mB4.6/19,Ms4.1/24,Ms7.3/8/24*
*NEIC **14** 13:10:14.8±1.0,34˚.3N±0˚.1×86˚.2E±0˚.1,h25km±6km, mb4.5/18,Error ellipse: s-maj=17.1km s-min=13.0km az=221.0*

ISC 14 13:10:13.1±0.4,34°40N±0˚.05×86°24E±0˚.04,h10km,n113, σ1§63/101,mb4.3/34,MS3.6/10,10C-1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.27**	**137**	Op Pg	**Pb**	ISC LR	**13 12 03.9**	**+1.2**
LSA	comp=N,910nm,7.5s			LR		LR		
LSA	comp=E,440nm,7.6s			LR		LR		
	comp=Z,520nm,7.9s							
DANN	**Dangsing**	**6.40**	**200**	*e*P	**Pn**		**13 11 50.6**	**+2.9**
	31nm,0.4s							
GUN	**Gumba**	**6.48**	**183**	*e*P	**Pn**		**13 11 51.7**	**+2.8**
	39nm,0.4s							
GKN	**Gorkha**	**6.53**	**193**	*e*P	**Pn**		**13 11 51.7**	**+2.3**
	15nm,0.5s							
KKN	**Kakani**	**6.64**	**187**	*e*P	**Pn**		**13 11 55.2**	**+4.2**
JIRN	**Jiri**	**6.72**	**180**	*e*P	**Pn**		**13 11 56.2**	**+4.0**
	40nm,0.5s							
DMN	**Daman**	**6.84**	**188**	*e*P	**Pn**		**13 11 57.8**	**+4.0**
	20nm,0.3s							
PKIN	**Phulchoki**	**6.84**	**186**	*e*P	**Pn**		**13 11 56.2**	**+2.4**
	39nm,0.5s							
PKI	**Pulchoki**	**6.85**	**186**	*e*P	**Pn**		**13 11 56.2**	**+2.3**
	29nm,0.4s							
RAMN	**Ramite**	**7.44**	**178**	*e*P	**Pn**		**13 12 02.5**	**+0.6**
ODAN	**Odare**	**7.58**	**172**	*e*P	**Pn**		**13 12 04.7**	**+0.8**
SMLA	**Simla**	**8.31**	**249**	*i* x	**Sg**		**13 14 43.7**	**+3.9**
THN	**Thein Dam**	**9.01**	**260**	*i* x	Sg		13 15 06.3	
WMQ	**Urumqi**	**9.47**	**6**	*e*P	**Pn**		**13 12 32.1**	**+2.5**
WMQ				pP			13 12 42.3	
WMQ				LR	LR			
	comp=N,500nm,7.5s							
WMQ				LR	LR			
	comp=Z,240nm,7.7s							
KSH	**Kashi**	**9.67**	**305**	P	Pn		13 12 38.0	+5.6
KSH				sP			13 12 48.0	
KSH				S	**Sn**		**13 14 23.3**	**+2.2**
KSH				pmax	pmax			
	comp=Z,4.0nm,0.9s							
KSH				LR	LR			
	comp=N,470nm,14.6s							
KSH				LR	LR			
	comp=E,440nm,12.7s							
KSH				LR	LR			
	comp=Z,560nm,17.0s							
NIL	**Nilore**	**10.81**	**270**	Pn	**Pn**		**13 12 46.6**	**-1.2**
NIL	**Nilore**	**10.81**	**270**	P	**Pn**		**13 12 46.7**	**-1.2**
GTA	**Gaotai**	**11.96**	**61**	*e*P	**Pn**		**13 13 04.6**	**+0.9**
GTA				pP			13 13 11.3	
GTA				sP			13 13 16.1	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.3s							
GTA				pmax	pmax			
	comp=Z,73nm,4.7s							
GTA				LR	LR			
	comp=N,410nm,10.2s							
GTA				LR	LR			
	comp=E,180nm,9.1s							
GTA				LR	LR			
	comp=Z,230nm,9.8s							
AAK	**Ala-Archa**	**12.33**	**315**	Pn	Pn		13 13 05.6	-3.2
	0.6nm,0.3s,baz=47,slow=19,SNR=4.1							
MK31	**Makanchi Array**	**12.73**	**348**	Pn	**Pn**		**13 13 14.1**	**-0.1**
MK31	**Makanchi Array**	**12.73**	**348**	P	**Pn**		**13 13 14.1**	**-0.1**
MKAR	**Makanchi Array**	**12.73**	**348**	Pn	**Pn**		**13 13 14.7**	**+0.5**
	3.7nm,0.8s,baz=159,slow=14,SNR=8.3							
MKAR	**Makanchi Array**	**12.73**	**348**	Pn	**Pn**		**13 13 13.7**	**-0.5**
MKAR	**Makanchi Array**	**12.73**	**348**	*i* P	**Pn**		**13 13 14.8**	**+0.6**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MAKZ	**Makanchi**	**12.80**	**347**		**Pn**		**13 13 15.3**	**+0.1**
MAKZ	**Makanchi**	**12.80**	**347**	P	**Pn**		**13 13 15.3**	**+0.1**
KBL	**Kabul**	**14.19**	**275**	Pn	Pn		13 13 30.7	-3.6
KBL	**Kabul**	**14.19**	**275**	P	Pn		13 13 30.7	-3.7
LZH	**Lanzhou**	**14.49**	**78**	*e*P	**P**		**13 13 45.9**	**+0.8**
LZH				pP	Pn		13 13 50.8	+12
LZH				sP			13 13 54.9	
LZH				S	**Sn**		**13 16 22.6**	**+3.5**
LZH				pmax	pmax			
	comp=Z,10.0nm,1.6s							
LZH				pmax	pmax			
	comp=Z,150nm,5.5s							
LZH				LR	LR			
	comp=N,560nm,11.0s							
LZH				LR	LR			
	comp=E,220nm,11.3s							
LZH				LR	LR			
	comp=Z,180nm,10.7s							
CD2	**Chengdu**	**15.16**	**98**	*e*P	**Pn**		**13 13 45.3**	**-2.1**
KURBB	**Kurchatov Arra**	**17.16**	**343**	P	**Pn**		**13 14 12.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=160,slow=11,SNR=28							
	comp=Z,15nm,0.8s							
KURK	**Kurchatov**	**17.22**	**343**	Pn	**Pn**		**13 14 12.5**	**-1.2**
KURK				IAmb	IAmb		13 14 17.7	
	comp=Z,43nm,1.4s							
KURK	**Kurchatov**	**17.22**	**343**	*ce*P	**Pn**		**13 14 13.8**	**+0.2**
KURK				pmax	pmax			
	comp=Z,27nm,1.0s							
KNGR	**Kungurtug, Tuv**	**18.16**	**24**	*i* P	**Pn**		**13 14 26.5**	**+1.1**
KNGR				pmax	pmax			
	comp=Z,19nm,0.9s							
HYBB	**Hyderabad (bro**	**18.26**	**204**	*e*P	**Pn**		**13 14 25.6**	**-1.2**
HYBB				*e*S	**Sn**		**13 17 45.6**	**-5.1**
XAN	**Xi'an**	**18.76**	**85**	P	**P**		**13 14 33.8**	**+1.5**
XAN				sP	pP		13 14 39.9	+3.3
XAN				pmax	pmax			
	comp=Z,7.0nm,1.0s							
XAN				LR	LR			
	comp=Z,790nm,15.3s							
XAN				LR	LR			
	comp=Z,410nm,15.8s							
XAN				LR	LR			
	comp=Z,320nm,12.9s							
CRAI	**Chiangrai**	**18.86**	**135**	P	**P**		**13 14 31.3**	**-2.2**
GYA	**Guiyang**	**19.29**	**109**	⇑P	**P**		**13 14 35.1**	**-3.1**
GYA				pmax	pmax			
	comp=Z,5.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**19.50**	**141**	P	**P**		**13 14 41.2**	**+0.7**
	comp=Z,2.1nm,0.6s,baz=327,slow=11,SNR=15							
CMAR				LR	LR		13 23 11.4	
	comp=Z,77nm,20.1s,baz=330,slow=40							
ZAA0	**Zalesovo Array**	**19.57**	**357**	P	**P**		**13 14 41.0**	**+0.1**
ZALV	**Zalesovo Beam**	**19.57**	**357**	P	**P**		**13 14 41.7**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=172,slow=11,SNR=23							
ZALV				LR	LR		13 23 20.0	
	comp=Z,140nm,21.3s,baz=272,slow=40							
	comp=Z,4.6nm,0.6s							
ZALV	**Zalesovo Beam**	**19.57**	**357**	P	**P**		**13 14 40.8**	**-0.1**
SONM	**Songino Array**	**20.18**	**42**	P	**P**		**13 14 49.0**	**+1.1**
	comp=Z,7.3nm,0.9s,baz=234,slow=11,SNR=34							
	comp=Z,7.3nm,0.9s							
SONM	**Songino Array**	**20.18**	**42**	P	**P**		**13 14 47.4**	**-0.5**
SONM	**Songino Array**	**20.18**	**42**	P	**P**		**13 14 47.4**	**-0.5**
SONM				pmax	pmax			
	comp=Z,9.0nm,1.1s							
ZAK	**Zakamensk**	**20.25**	**33**	*e*P	**P**		**13 14 49.6**	**+1.0**
ZAK				pmax	pmax			
	comp=Z,12nm,1.4s							
MOY	**Mondy**	**20.28**	**27**	*e*P	**P**		**13 14 50.6**	**+1.7**
MOY				pmax	pmax			
	comp=Z,29nm,1.7s							
ULN	**Ulaanbaatar**	**20.57**	**43**	P	**P**		**13 14 52.2**	**+0.1**
ULN				IAmb	IAmb		13 14 54.9	
	comp=Z,20nm,1.1s							
ULN	**Ulaanbaatar**	**20.57**	**43**	P	**P**		**13 14 52.2**	**+0.1**
ULN				pmax	pmax			
	comp=Z,20nm,1.2s							
HHC	**Hu-ho-hao-te**	**21.02**	**65**	⇑P	**P**		**13 14 58.6**	**+1.6**
HHC				pmax	pmax			
	comp=Z,37nm,1.1s							
HHC				pmax	pmax			
	comp=Z,230nm,4.7s							
LYN	**LuoYang**	**21.61**	**82**	*e*P	**P**		**13 15 04.8**	**+1.6**
LYN				pmax	pmax			
	comp=Z,10.0nm,0.7s							
LYN				pmax	pmax			
	comp=Z,140nm,5.1s							
LYN				LR	LR			
	comp=Z,190nm,10.8s							
LYN				LR	LR			
	comp=Z,120nm,8.2s							
BRVK	**Borovoye**	**21.83**	**334**	P	**P**		**13 15 05.6**	**+0.1**
BRVK	**Borovoye**	**21.83**	**334**	*ce*P	**P**		**13 15 04.8**	**-0.7**
BRVK				pmax	pmax			
	comp=Z,10.0nm,1.0s							
IRK	**Irkutsk**	**22.03**	**30**	*e*P	**P**		**13 15 09.5**	**+1.9**
IRK				pmax	pmax			
	comp=Z,68nm,1.7s							
GEYT	**Alibeck**	**22.94**	**287**	LR	LR		13 25 58.8	
	comp=Z,259nm,21.6s,baz=88,slow=41							
HNS	**HongShan**	**23.22**	**74**	⇑P	**P**		**13 15 21.6**	**+1.4**
HNS				pmax	pmax			
	comp=Z,13nm,1.1s							
ABKAR	**Akbulak array**	**24.41**	**315**	P	**P**		**13 15 31.8**	**+0.1**
XLT	**XiLinHaoTe**	**24.89**	**59**	*e*P	**P**		**13 15 37.8**	**+1.6**
XLT				pP	pP		13 15 45.0	+4.2
XLT				sP	sP		13 15 48.8	+6.1
XLT				PcP	**PcP**		**13 19 15.4**	**+3.6**
XLT				S	S		13 19 51.3	-8.0
XLT				pmax	pmax			
	comp=Z,13nm,0.9s							
XLT				pmax	pmax			
	comp=Z,250nm,5.5s							
XLT				LR	LR			
	comp=Z,330nm,10.5s							
XLT				LR	LR			
	comp=Z,240nm,10.5s							
UBPT	**Khong Chiam**	**25.74**	**133**	P	**P**		**13 15 42.8**	**-1.1**
UBPT				IAmb	IAmb		13 15 46.7	
	comp=Z,15nm,1.1s							
AKTO	**Aktyubinsk**	**26.07**	**317**	P	**P**		**13 15 45.9**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=108,slow=8.3,SNR=7.2							
	comp=Z,2.5nm,0.8s							
NJ2	**Nanjing**	**27.32**	**86**	*e*P	**P**		**13 15 56.8**	**-1.3**
NJ2				pmax	pmax			
	comp=Z,11nm,0.6s							
HIA	**Hailar**	**28.76**	**49**	*i* P	P		13 16 07.7	-3.2
HIA				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BELG	**Belogornoye**	**32.82**	**315**	LR	LR		13 30 37.0	
	comp=Z,49nm,18.2s,baz=246,slow=37							
BELG	**Belogornoye**	**32.82**	**315**	*i* P	**P**		**13 16 46.3**	**-0.2**
BELG				pmax	pmax			
	comp=Z,2.0nm,0.9s							
GNI	**Garni**	**33.29**	**292**	LR	LR		13 31 39.2	
	comp=Z,55nm,19.5s,baz=198,slow=39							
KSRS	**Korea Array**	**33.69**	**73**	P	**P**		**13 16 53.5**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=272,slow=9.5,SNR=12							
	comp=Z,2.0nm,0.7s							
ZEA	**Zeya**	**34.60**	**43**	*e*P	**P**		**13 17 03.7**	**+1.6**
NRIK	**Noril'sk**	**34.99**	**1**	P	**P**		**13 17 05.8**	**+0.5**
	comp=Z,21nm,0.8s,baz=176,slow=7.9,SNR=20							
NRIK	**Noril'sk**	**34.99**	**1**	P	**P**		**13 17 05.5**	**+0.3**
NRIK	**Noril'sk**	**34.99**	**1**	*ce*P	**P**		**13 17 05.7**	**+0.5**
NRIK				pmax	pmax			
	comp=Z,19nm,0.8s							
KLR	**Kul'dur**	**36.43**	**52**	P	**P**		**13 17 17.9**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=291,slow=8.5,SNR=5.3							
	comp=Z,2.0nm,0.7s							
KLR	**Kul'dur**	**36.43**	**52**	*ce*P	**P**		**13 17 17.1**	**-0.7**
KLR				pmax	pmax			
	comp=Z,5.0nm,1.1s							
VORR	**Voronezh**	**37.72**	**312**	*e*P	**P**		**13 17 28.5**	**-0.2**
VORR				pmax	pmax			
	comp=Z,40nm,0.4s							
YAK	**Yakutsk**	**38.83**	**31**	*ce*P	**P**		**13 17 38.7**	**+0.8**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.7s							
OBN	**Obninsk**	**39.84**	**317**	*de*P	P		13 17 42.4	-4.1
OBN				*e*			13 19 14.0	
OBN				*e*S	**S**		**13 23 47.2**	**-3.6**
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,56nm,17.0s							
MJAR	**Matsushiro Arr**	**41.95**	**72**	P	**P**		**13 18 03.5**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=277,slow=7.6,SNR=6.2							
	comp=Z,1.3nm,0.7s							
EIL	**Eilat**	**43.36**	**278**	LR	LR		13 38 34.5	
	comp=Z,143nm,19.3s,baz=268,slow=39							
TIXI	**Tiksi**	**43.43**	**18**	*i* P	**P**		**13 18 14.6**	**-1.1**
TIXI				pmax	pmax			
	comp=Z,8.0nm,1.1s							
AKASG	**Malin Array Be**	**43.92**	**310**	LR	LR		13 40 02.5	
	comp=Z,92nm,18.2s,baz=199,slow=41							
FINES	**FINESS Array B**	**46.30**	**325**	P	**P**		**13 18 37.8**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=110,slow=10,SNR=4.3							
	comp=Z,1.3nm,0.8s							
FINES	**FINESS Array B**	**46.30**	**325**	*i* P	**P**		**13 18 37.0**	**-1.6**
FINES				pmax	pmax			
	comp=Z,2.0nm,1.0s							
KEV	**Kevo**	**47.59**	**336**	P	**P**		**13 18 48.1**	**-0.5**
KEV				IAmb	IAmb		13 19 01.4	
	comp=Z,21nm,1.3s							
KEV	**Kevo**	**47.59**	**336**	P	**P**		**13 18 48.1**	**-0.5**
KEV				pmax	pmax			
	comp=Z,21nm,1.3s							
KARP	**Karpathos**	**47.78**	**289**	P	**P**		**13 18 50.6**	**0.0**
ARCES	**ARCESS Array B**	**48.04**	**336**	P	**P**		**13 18 51.6**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=94,slow=9.1,SNR=3.8							
	comp=Z,2.0nm,0.9s							
ARCES	**ARCESS Array B**	**48.04**	**336**	P	**P**		**13 18 51.6**	**-0.5**
ARCES				IAmb	IAmb		13 18 58.2	
	comp=Z,16nm,1.4s							
ARCES	**ARCESS Array B**	**48.04**	**336**	P	**P**		**13 18 51.6**	**-0.5**
ARCES				pmax	pmax			
	comp=Z,16nm,1.4s							
SEY	**Seymchan**	**49.22**	**34**	*ce*P	**P**		**13 19 02.1**	**+0.8**
SEY				pmax	pmax			
	comp=Z,6.0nm,1.7s							
VRAC	**Vranov**	**52.16**	**309**	LR	LR		13 43 18.5	
	comp=Z,67nm,21.7s,baz=198,slow=38							
PEA0B	**Petropavlovsk-**	**52.61**	**46**	*ce*P	**P**		**13 19 27.9**	**+0.9**
NC405	**NORSAR Array S**	**53.22**	**324**	P	**P**		**13 19 30.9**	**-0.5**
NB201	**NORSAR Array S**	**53.43**	**324**	P	**P**		**13 19 32.0**	**-0.9**
NB2	**NORSAR Subarra**	**53.47**	**324**	P	**P**		**13 19 32.2**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=83,slow=7.4							
NOA	**NORSAR Array B**	**53.47**	**324**	P	**P**		**13 19 32.5**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=84,slow=7.2,SNR=5.6							
NOA				LR	LR		13 43 48.1	
	comp=Z,35nm,18.8s,baz=205,slow=38							
	comp=Z,1.2nm,0.8s							
CLL	**Collm**	**54.02**	**312**	*e*P	pP		13 19 46.0	+3.8
CLL	**Collm**	**54.02**	**312**	*e*pP	pP		13 19 46.0	+3.8
	comp=Z,3.0nm,0.8s							
GERES	**GERESS Array B**	**54.12**	**309**	P	**P**		**13 19 37.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=60,slow=7.9,SNR=5.2							
	comp=Z,0.5nm,0.5s							
ESDC	**Sonseca Array**	**69.18**	**304**	P	**P**		**13 21 18.9**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=66,slow=6.4,SNR=10							
	comp=Z,1.1nm,0.8s							
TOLK	**Toolik Lake Re**	**69.32**	**19**	P	**P**		**13 21 19.5**	**-0.8**
TOLK				IAmb	IAmb		13 21 44.9	
	comp=Z,4.9nm,1.1s							
IMAR	**Indian Mountai**	**69.88**	**22**	P	**P**		**13 21 23.4**	**-0.4**
WRA	**Warramunga Arr**	**70.80**	**132**	P	**P**		**13 21 28.2**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=323,slow=6.7,SNR=8.2							
	comp=Z,0.7nm,0.6s							
WRA	**Warramunga Arr**	**70.80**	**132**	*i* P	P		13 21 27.8	-2.2
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BMAR	**Burnt Mountain**	**71.51**	**18**	P	**P**		**13 21 33.8**	**+0.1**
ILAR	**Eielson Array**	**72.81**	**21**	P	**P**		**13 21 41.0**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=303,slow=5.1,SNR=9.1							
	comp=Z,0.9nm,0.8s							
ILAR	**Eielson Array**	**72.81**	**21**	P	**P**		**13 21 41.0**	**-0.5**
ASAR	**Alice Springs**	**73.38**	**135**	P	P		13 21 43.4	-2.0
	comp=Z,0.5nm,0.9s,baz=61,slow=9.0,SNR=7.2							
	comp=Z,0.5nm,0.9s							
L27K	**Beaver Creek,**	**75.58**	**20**	P	**P**		**13 21 57.9**	**+0.2**
L27K				IAmb	IAmb		13 21 59.0	
	comp=Z,4.0nm,1.1s							
BCAR	**Beaver Creek A**	**75.59**	**20**	P	**P**		**13 21 58.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**78.25**	**278**	P	**P**		**13 22 11.9**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=57,slow=4.8,SNR=6.2							
	comp=Z,0.7nm,0.8s							
N31M	**Braeburn, Yuko**	**78.54**	**19**	P	**P**		**13 22 14.3**	**-0.1**
N31M				IAmb	IAmb		13 22 15.4	
	comp=Z,4.1nm,0.8s							
YKA	**Yellowknife Ar**	**81.99**	**10**	P	**P**		**13 22 32.0**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=340,slow=5.2,SNR=9.9							
	comp=Z,0.9nm,0.7s							
YKA	**Yellowknife Ar**	**81.99**	**10**	P	**P**		**13 22 34.7**	**+1.9**
YKA	**Yellowknife Ar**	**81.99**	**10**	P	**P**		**13 22 32.0**	**-0.9**

IDC 14 13:18:05.1±2.1,26°82N×98˚.26E,h0km,mb3.4/3, mbtmp3.5/4,ML4.3/1,Error ellipse: s-maj=72.1km s-min=30.6km az=83.0,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.35**	**176**	Op Pn		Pn	13 20 07.4	0.0
	0.9nm,0.3s,baz=350,slow=19,SNR=8.8							
CMAR				Sn		Sn	13 21 34.5	-7.9
	0.4nm,0.3s,baz=326,slow=16,SNR=4.3							
	3.4nm,0.6s							
SONM	**Songino Array**	**21.93**	**15**	P		P	13 22 59.8	-0.4
	0.3nm,0.5s,baz=203,slow=5.8,SNR=1.9							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**23.60**	**332**	P		P	13 23 17.5	-0.1
	0.7nm,0.6s,baz=142,slow=9.8,SNR=8.7							
	0.7nm,0.6s							
ZALV	**Zalesovo Beam**	**28.87**	**343**	P		P	13 24 05.7	+0.4
	0.7nm,0.5s,baz=149,slow=9.6,SNR=2.4							
	0.7nm,0.5s							

*IDC **14** 13:18:27.4±6.2,6˚.53N×72˚.93W,h182km±104km,mb3.0/2, mbtmp3.6/3,Error ellipse: s-maj=144.7km s-min=66.9km az=14.0*
*RSNC **14** 13:18:28.1±0.8,6˚.79N×73˚.15W,h140km±3km,ML3.4, Mw3.5*

ISC 14 13:18:26.3±1.0,6°82N±0˚.03×73˚14W±0˚.04,h150km±6km, n32,σ1§73/62,4C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**190**	⇑*i*P		**Pn**	**13 18 47.0**	**0.0**
BARC				*e*S		**Sn**	**13 19 01.7**	**-1.1**
BARC				*i*			13 19 03.4	
	comp=Z,624nm,0.3s							
BRRC	**Barranca, Sant**	**0.64**	**297**	⇑*i*P		**Pn**	**13 18 48.9**	**+0.5**
BRRC				*e*S		**Sn**	**13 19 05.2**	**0.0**
BRRC				*i*			13 19 10.2	
	comp=Z,442nm,0.1s							
PAMC	**Pamplona, Colo**	**0.68**	**40**	*e*P		**Pn**	**13 18 49.9**	**+0.6**
PAMC				*e*S		**Sn**	**13 19 06.6**	**-0.1**
PAMC				*i*			13 19 09.3	
	comp=Z,429nm,0.2s							
RUSC	**La Rusia**	**0.92**	**176**	*e*P		**Pn**	**13 18 51.0**	**-0.1**
RUSC				*e*S		**Sn**	**13 19 09.5**	**-0.4**
RUSC				*i*			13 19 11.4	
	comp=Z,246nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*e*P		**Pn**	**13 18 54.3**	**0.0**
PTBC				*e*S		**Sn**	**13 19 14.3**	**-1.2**
PTBC				*i*			13 19 17.1	
	comp=Z,215nm,0.2s							
TAMC	**Tame, Arauca**	**1.39**	**106**	⇑*i*P		**Pn**	**13 18 55.4**	**+0.6**
TAMC				*e*S		**Sn**	**13 19 16.5**	**-0.1**
TAMC				*i*			13 19 18.0	
	comp=Z,130nm,0.3s							
SPBC	**San Pablo de B**	**1.48**	**219**	*e*P		**Pn**	**13 18 56.0**	**+0.1**
SPBC				*e*S		**Sn**	**13 19 17.9**	**-0.6**
SPBC				*i*			13 19 20.4	
	comp=Z,274nm,0.1s							
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P		**Pn**	**13 19 00.0**	**+0.5**
ZARC				*e*S		**Sn**	**13 19 25.2**	**+0.2**
ZARC				*i*			13 19 32.0	
	comp=Z,275nm,0.3s							
NORC	**Norcasia**	**2.12**	**234**	*e*P		**Pn**	**13 19 03.1**	**+0.1**
NORC				*e*S		**Sn**	**13 19 30.9**	**-0.2**
NORC				*i*			13 19 38.4	
	comp=Z,185nm,0.2s							
CHIC	**Chingaza**	**2.25**	**195**	*e*P		**Pn**	**13 19 05.4**	**+0.5**
CHIC				*e*S		**Sn**	**13 19 34.4**	**-0.2**
CHIC				*i*			13 19 37.8	
	comp=Z,90nm,0.3s							
ROSC	**El Rosal**	**2.29**	**211**	P		**Pn**	**13 19 07.0**	**+1.6**
	comp=Z,51nm,0.4s,baz=135,slow=15,SNR=36							
ROSC				S		**Sn**	**13 19 38.0**	**+2.7**
	comp=Z,226nm,0.4s,baz=39,slow=20,SNR=24							
ROSC	**El Rosal**	**2.29**	**211**	*e*P		**Pn**	**13 19 06.9**	**+1.6**
ROSC				*e*S		**Sn**	**13 19 36.8**	**+1.5**
ROSC				*i*			13 19 41.8	
	comp=Z,214nm,0.3s							
HELC	**Santa Helena**	**2.46**	**255**	*e*P		**Pn**	**13 19 07.7**	**+0.4**
HELC				*e*S		**Sn**	**13 19 38.4**	**-0.3**
HELC				*i*			13 19 45.5	
	comp=Z,104nm,0.2s							
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P		**Pn**	**13 19 07.5**	**-0.5**
UREC				*e*S		**Sn**	**13 19 38.5**	**-1.8**
UREC				*i*			13 19 48.6	
	comp=Z,135nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.72**	**234**	*e*P		**Pn**	**13 19 11.7**	**+1.0**
GUY2C				*e*S		**Sn**	**13 19 44.8**	**0.0**
GUY2C				*i*			13 19 52.4	
	comp=Z,122nm,0.3s							
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e*P		**Pn**	**13 19 13.8**	**+3.4**
LL1C				*e*S		**Sn**	**13 19 47.5**	**+3.1**
LL1C				*i*			13 19 58.0	
	comp=Z,262nm,0.2s							
VILC	**Villavicencio,**	**2.75**	**192**	*e*P		**Pn**	**13 19 10.9**	**+0.2**
VILC				*e*S		**Sn**	**13 19 44.9**	**-0.1**
VILC				*i*			13 19 53.6	
	comp=Z,144nm,0.3s							
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*e*P		**Pn**	**13 19 10.2**	**-1.0**
PTGC				*e*S		**Sn**	**13 19 43.4**	**-2.4**
PTGC				*i*			13 19 45.9	
	comp=Z,109nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.01**	**252**	*e*P		**Pn**	**13 19 15.2**	**+1.2**
CBOC				*e*S		**Sn**	**13 19 51.0**	**+0.2**

YKA	**Yellowknife Ar**	**63.26**	**340**	P		**P**	**13 28 38.4**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=132,slow=6.6,SNR=10							
	comp=Z,0.5nm,0.6s							

IDC ***14*** *13:24:29.6±1.6, 7.29°S×128.56°E,h156km±14km,mb4.0/22, mbtmp4.5/24, Error ellipse: s-maj=14.7km s-min=9.3km az=82.0*

DJA ***14*** *13:24:29.9±0.2,8.3°S±2.2°×12.9°E±.°,h123km±9km,M4.8/13, mB5.2/6,mb4.8/12,MLv4.8/13,Mw(mB)4.6/6*

NEIC ***14*** *13:24:29.6±1.2, 7.30°S±0.07°×128.58°E±0.07°,h156km±7km, mb4.6/60, Error ellipse: s-maj=10.8km s-min=10.5km az=128.0*

ISC 14 13:24:28.4±0.3,7.38°S±0.04°×128.54°E±0.05°,h151km,n141, σ1s28/151,mb4.6/56,4C-1D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.80**	**102**	Pn	**Pn**	**13 25 14.7**	**+1.5**
SAUI	**Saumlaki**	**2.80**	**102**	P	**Pn**	**13 25 15.8**	**+2.6**
SAUI				S	**Sn**	**13 25 46.3**	**-1.6**
BNDI	**Bandanaira**	**3.15**	**26**	P	**Pn**	**13 25 19.4**	**+1.7**
AAI	**Ambon**	**3.69**	**355**	P	**Pn**	**13 25 27.4**	**+2.8**
MSAI	**Masohi**	**4.03**	**6**	P	**Pn**	**13 25 32.1**	**+3.0**
BATI	**Baumata**	**5.58**	**239**	P	**Pn**	**13 25 51.0**	**+1.5**
	906nm,0.4s,baz=110,slow=3.3,SNR=196						
BATI				S	**Sn**	**13 26 52.0**	**-1.0**
	495nm,0.3s,baz=22,slow=22,SNR=12						
BATI	**Baumata**	**5.58**	**239**	P	**Pn**	**13 25 50.8**	**+1.3**
	3.1nm10μm633nm,0.5s						
BATI				S	**Sn**	**13 26 51.9**	**-1.0**
	3.1nm10μm633nm,0.5s						
FAKI	**Fak Fak**	**5.77**	**40**	Pn	**Pn**	**13 25 51.0**	**-1.1**
FAKI	**Fak Fak**	**5.77**	**40**	P	**Pn**	**13 25 51.2**	**-0.9**
	1.0nm103nm,0.6s						
MTN	**Manton Dam**	**6.00**	**155**	Pn	**Pn**	**13 25 54.8**	**-0.3**
MMRI	**Maumere**	**6.37**	**258**	Pn	**Pn**	**13 26 00.6**	**+0.6**
MMRI	**Maumere**	**6.37**	**258**	P	**Pn**	**13 26 01.9**	**+1.9**
	0.7nm2μm158nm,0.5s						
EDFI	**Ende, Flores**	**6.92**	**258**	P	**Pn**	**13 26 08.7**	**+1.2**
	0.2nm590nm69nm,0.8s						
SIJI	**Sorong**	**7.02**	**23**	P	**Pn**	**13 26 09.7**	**+0.9**
	33nm,0.4s,baz=29,slow=22,SNR=32						
SIJI				S	**Sn**	**13 27 25.9**	**-1.6**
	34nm,0.3s,baz=349,slow=23,SNR=9.7						
KNRA	**Kununurra**	**8.24**	**179**	Pn	**Pn**	**13 26 24.2**	**-0.9**
WBSI	**Waikabubak, Su**	**9.32**	**255**	P	**Pn**	**13 26 41.3**	**+1.8**
	2μm113nm,0.7s						
BAKI	**Biak**	**9.73**	**51**	P	**Pn**	**13 26 46.5**	**+1.6**
	84nm,0.6s						
PLAI	**Plampang**	**10.75**	**262**	P	**Pn**	**13 26 58.2**	**-0.2**
	54nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.02**	**195**	P	**Pn**	**13 26 59.5**	**-2.4**
	13nm,0.3s,baz=24,slow=9.2,SNR=109						
FITZ				S	Sn	13 28 54.3	-9.4
	39nm,0.3s,baz=82,slow=15,SNR=11						
FITZ	**Fitzroy Crossi**	**11.02**	**195**	Pn	**Pn**	**13 26 59.1**	**-2.7**
SGSI	**Sangihe**	**11.40**	**345**	P	**P**	**13 27 16.7**	**+2.1**
BKB	**Balikpapan**	**13.10**	**297**	Pn	**Pn**	**13 27 30.4**	**+1.5**
WB0	**Warramunga Arr**	**13.56**	**156**	Pn	**Pn**	**13 27 32.5**	**-2.2**
WRAB	**Tennant Creek**	**13.69**	**156**	P	**Pn**	**13 27 33.8**	**-2.5**
WRA	**Warramunga Arr**	**13.69**	**156**	P	**Pn**	**13 27 34.0**	**-2.4**
	2.5nm,0.3s,baz=332,slow=14,SNR=74						
WRA				S	Sn	13 29 55.9	-12
	21nm,0.6s,baz=330,slow=22,SNR=10						
WRA	**Warramunga Arr**	**13.69**	**156**		**Pn**	**13 27 34.1**	**-2.3**
WB2	**Warramunga Arr**	**13.70**	**156**		**Pn**	**13 27 33.8**	**-2.7**
WR0	**Warramunga Arr**	**13.79**	**156**		**Pn**	**13 27 34.8**	**-2.9**
JAGI	**Jajag, Banyuwa**	**14.29**	**265**	Pn	**Pn**	**13 27 42.4**	**-1.6**
COEN	**Coen**	**15.79**	**116**		**Pn**	**13 28 03.1**	**+0.5**
MBWA	**Marble Bar**	**16.13**	**211**	Pn	**Pn**	**13 28 05.6**	**-1.0**
PSA00	**Pilbara Seismi**	**16.42**	**210**	P	**P**	**13 28 09.3**	**-0.9**
PSA00				IAmb	IAmb	13 28 25.6	
	comp=Z,20nm,0.7s						
AS31	**Alice Springs**	**16.99**	**163**	P	**P**	**13 28 16.8**	**+0.2**
ASAR	**Alice Springs**	**16.99**	**163**	P	**Pn**	**13 28 18.4**	**+1.2**
	comp=Z,6.2nm,0.4s,baz=334,slow=10.0,SNR=232						
ASAR				S	**S**	**13 31 19.4**	**-6.6**
	comp=Z,7.7nm,0.6s,baz=341,slow=26,SNR=9.5						
ASAR				ScP	**ScP**	**13 36 13.6**	**-1.6**
	comp=Z,1.8nm,0.5s,baz=358,slow=2.5,SNR=5.2						
ASAR	**Alice Springs**	**16.99**	**163**	P	**P**	**13 28 16.8**	**+0.2**
UGM	**Wanagama**	**17.86**	**267**	P	**P**	**13 28 26.6**	**+0.4**
KKM	**Kota Kinabalu**	**18.14**	**317**	Pn	**Pn**	**13 28 31.7**	**+0.7**
KKM				IAmb	IAmb	13 28 48.4	
	comp=Z,24nm,1.2s						
SBUM	**Sibu**	**18.99**	**300**	P	**Pn**	**13 28 40.2**	**-0.7**
KSM	**Kuching**	**20.21**	**295**	P	**P**	**13 28 51.9**	**+0.3**
KSM				IAmb	IAmb	13 28 55.6	
	comp=Z,26nm,0.6s						
GIRL	**Giralia**	**20.49**	**221**	P	**P**	**13 28 56.4**	**+1.9**
CTA	**Charters Tower**	**21.31**	**128**	P	**P**	**13 29 05.6**	**+2.1**
	comp=Z,4.1nm,0.9s,baz=308,slow=13,SNR=1.5						
	comp=Z,4.1nm,0.9s						
FORT	**Forrest**	**23.28**	**181**	P	**P**	**13 29 23.5**	**+0.9**
FORT				IAmb	IAmb	13 29 25.1	
	comp=Z,17nm,1.0s						
PMBI	**Palembang**	**24.08**	**279**	P	**P**	**13 29 30.9**	**+0.9**
MORW	**Morawa**	**24.58**	**207**	P	**P**	**13 29 36.1**	**+1.7**
MORW				IAmb	IAmb	13 29 56.5	
	comp=Z,28nm,1.4s						
BBOO	**Buckleboo**	**26.25**	**166**	P	**P**	**13 29 50.3**	**+0.8**
BBOO				IAmb	IAmb	13 30 30.3	
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**27.24**	**155**	P	**P**	**13 29 59.5**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=321,slow=12,SNR=4.0						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**27.24**	**155**	P	**P**	**13 29 58.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**27.50**	**201**	P	**P**	**13 30 01.1**	**+0.5**
NWAO				IAmb	IAmb	13 30 03.4	
	comp=Z,23nm,1.1s						
IPM	**Ipoh**	**29.88**	**292**	P	**P**	**13 30 21.5**	**-0.5**
IPM				IAmb	IAmb	13 30 23.5	
	comp=Z,7.7nm,0.8s						
KULM	**Kulim**	**30.54**	**294**	P	**P**	**13 30 26.8**	**-1.1**
KULM				IAmb	IAmb	13 30 57.1	
	comp=Z,27nm,1.5s						
RPSI	**Rantau Prapat**	**31.20**	**288**	P	**P**	**13 30 34.1**	**+0.5**
PSI	**Prapat**	**31.24**	**288**	P	**P**	**13 30 34.1**	**0.0**
	comp=Z,8.0nm,0.7s,baz=292,slow=2.1,SNR=7.5						
	comp=Z,8.0nm,0.7s						
TPUB	**Ta-pu**	**31.46**	**346**	P	**P**	**13 30 34.1**	**-1.7**
QIZ	**Qiongzhong**	**32.07**	**325**	P	**P**	**13 30 40.2**	**-1.0**
UBPT	**Khong Chiam**	**32.09**	**315**	P	**P**	**13 30 41.3**	**-0.1**
UBPT				IAmb	IAmb	13 30 42.7	
	comp=Z,7.0nm,0.6s						
YOJ	**Yonaguni jima**	**32.11**	**350**	P	**P**	**13 30 40.3**	**-1.1**
YHNB	**Yeheng**	**32.62**	**348**	P	**P**	**13 30 44.1**	**-1.8**
CAN	**Canberra**	**33.55**	**149**	P	**P**	**13 30 56.0**	**+2.1**
CAN				IAmb	IAmb	13 31 07.7	
	comp=Z,21nm,1.4s						
JOW	**Kunigami**	**34.01**	**360**	P	**P**	**13 30 57.4**	**-0.6**
JSU	**Suzuyama**	**38.71**	**3**	P	**P**	**13 31 36.7**	**-1.1**
JSU				IAmb	IAmb	13 32 00.1	
	comp=Z,13nm,1.2s						
CMAR	**Chiang Mai Arr**	**38.88**	**312**	P	**P**	**13 31 40.0**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=143,slow=7.6,SNR=16						
CMAR				PcP	**PcP**	**13 33 48.2**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=174,slow=2.7,SNR=5.6						
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.88**	**312**	P	**P**	**13 31 39.1**	**-0.3**
CRAI	**Chiangrai**	**38.99**	**315**	P	**P**	**13 31 40.0**	**-0.3**
CHTO	**Chiang Mai**	**39.11**	**312**	P	**P**	**13 31 41.2**	**-0.1**
CHTO				IAmb	IAmb	13 31 42.8	
	comp=Z,14nm,1.2s						
JMN	**Monobe**	**41.20**	**7**	P	**P**	**13 31 57.1**	**-1.2**
JMN				IAmb	IAmb	13 31 57.9	
	comp=Z,24nm,1.4s						
ENH	**Enshi**	**41.67**	**335**	P	**P**	**13 32 01.9**	**-0.2**
JHS	**Saijyo**	**42.37**	**6**	P	**P**	**13 32 07.4**	**-0.4**
JHS				IAmb	IAmb	13 32 08.8	
	comp=Z,14nm,1.2s						
PZH	**PanZhiHua**	**42.55**	**323**	P	**P**	**13 32 10.3**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,5.3s						
NAWB	**Namwon**	**42.59**	**359**	P	**P**	**13 32 09.2**	**-0.3**
NAWB				IAmb	IAmb	13 32 10.5	
	comp=Z,10nm,1.0s						
INU	**Inuyama**	**43.25**	**10**	P	**P**	**13 32 13.9**	**-0.9**
INU				IAmb	IAmb	13 32 28.3	
	comp=Z,13nm,1.2s						
LYN	**LuoYang**	**44.39**	**341**	⇑P	**P**	**13 32 23.1**	**-0.8**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSAR	**Wonju Array Be**	**44.59**	**359**	P	**P**	**13 32 23.8**	**-1.7**
KSRS	**Korea Array**	**44.61**	**359**	P	**P**	**13 32 25.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=176,slow=9.6,SNR=14						
	comp=Z,1.5nm,0.7s						
MAJO	**Matsushiro**	**44.63**	**11**	P	**P**	**13 32 24.0**	**-1.8**
MJAR	**Matsushiro Arr**	**44.63**	**11**	P	**P**	**13 32 24.5**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=189,slow=9.5,SNR=16						
	comp=Z,2.5nm,0.6s						
JYT	**Yasato**	**44.74**	**13**	P	**P**	**13 32 25.0**	**-1.7**
JYT				IAmb	IAmb	13 32 51.4	
	comp=Z,46nm,1.5s						
XAN	**Xi'an**	**45.20**	**337**	⇓P	**P**	**13 32 29.8**	**-0.6**
XAN				pmax	pmax		
	comp=Z,23nm,0.9s						
SEHB	**SEOHWA**	**45.42**	**360**	P	**P**	**13 32 32.3**	**+0.3**
JSD	**Sado**	**46.09**	**11**	P	**P**	**13 32 36.4**	**-0.8**
JSD				IAmb	IAmb	13 32 37.8	
	comp=Z,10.0nm,0.5s						
HNS	**HongShan**	**46.39**	**345**	⇑P	**P**	**13 32 39.3**	**-0.3**
HNS				pmax	pmax		
	comp=Z,20nm,0.8s						
JMM	**Marumori**	**46.45**	**13**	P	**P**	**13 32 39.6**	**-0.5**
BJI	**Beijing**	**48.55**	**347**	P	**P**	**13 32 55.9**	**-0.3**
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
LZH	**Lanzhou**	**49.08**	**333**	⇑P	**P**	**13 33 01.3**	**+0.7**
LZH				pP	pP	13 33 34.8	+1.4
LZH				sP	sP	13 33 55.8	+6.2
LZH				pmax	pmax		
	comp=Z,40nm,1.5s						
JTM	**Tenmabayashi**	**49.30**	**13**	P	**P**	**13 33 01.6**	**-0.3**
HHC	**Hu-ho-hao-te**	**50.47**	**343**	*e*P	**P**	**13 33 12.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.1s						
USRK	**Ussuriysk Ar.**	**51.44**	**3**	P	**P**	**13 33 18.0**	**0.0**
	comp=Z,1.6nm,0.4s,baz=190,slow=7.3,SNR=7.4						
	comp=Z,1.6nm,0.4s						
USRK	**Ussuriysk Ar.**	**51.44**	**3**	P	**P**	**13 33 17.6**	**-0.4**
RPZ	**Rata Peaks**	**51.83**	**141**	P	**P**	**13 33 22.8**	**+1.8**
	comp=Z,4.1nm,0.4s,baz=315,slow=2.9,SNR=3.1						
	comp=Z,4.1nm,0.4s						
KHZ	**Kahutara**	**52.76**	**139**	P	**P**	**13 33 29.0**	**+1.2**
GTA	**Gaotai**	**53.62**	**332**	⇑P	**P**	**13 33 34.8**	**+0.5**
GTA				pP	pwP	13 34 11.3	-2.8
GTA				sP	sP	13 34 29.8	+6.1
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
KLR	**Kul'dur**	**56.44**	**3**	P	**P**	**13 33 55.2**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=214,slow=7.3,SNR=2.8						
	comp=Z,1.3nm,0.7s						
ULN	**Ulaanbaatar**	**58.19**	**343**	P	**P**	**13 34 06.5**	**-0.2**
ULN				IAmb	IAmb	13 34 09.0	
	comp=Z,6.9nm,0.7s						
SONM	**Songino Array**	**58.36**	**343**	P	**P**	**13 34 08.8**	**+0.9**
	comp=Z,6.0nm,0.7s,baz=166,slow=8.0,SNR=29						
	comp=Z,6.0nm,0.7s						
SONM	**Songino Array**	**58.36**	**343**	P	**P**	**13 34 08.1**	**+0.2**
SONM				IAmb	IAmb	13 34 10.1	
	comp=Z,8.2nm,1.0s						
WMQ	**Urumqi**	**62.94**	**328**	*e*P	**P**	**13 34 40.3**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
PEA0B	**Petropavlovsk-**	**65.14**	**19**	P	**P**	**13 34 53.0**	**+0.1**
PETK	**Petropavlovsk-**	**65.14**	**19**	P	**P**	**13 34 53.1**	**+0.1**
	comp=Z,8.0nm,0.6s,baz=191,slow=7.2,SNR=22						
PETK				PcP	**PcP**	**13 35 23.9**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=189,slow=1.9,SNR=5.3						
	comp=Z,8.0nm,0.6s						
PETK	**Petropavlovsk-**	**65.14**	**19**	P	**P**	**13 34 52.9**	**0.0**
PET	**Petropavlovsk**	**65.39**	**19**	P	**P**	**13 34 54.3**	**-0.1**
PET				IAmb	IAmb	13 34 55.5	
	comp=Z,18nm,1.4s						
KSH	**Kashi**	**67.33**	**318**	P	**P**	**13 35 07.8**	**+0.4**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	**Makanchi Array**	**67.76**	**328**	P	**P**	**13 35 09.6**	**-0.2**
MK31				IAmb	IAmb	13 35 11.1	
	comp=Z,6.3nm,0.9s						
MKAR	**Makanchi Array**	**67.76**	**328**	P	**P**	**13 35 10.1**	**+0.3**
	comp=Z,4.4nm,0.6s,baz=123,slow=8.3,SNR=57						
MKAR				PcP	**PcP**	**13 35 35.5**	**0.0**
	comp=Z,1.6nm,0.6s,baz=131,slow=4.0,SNR=4.7						
	comp=Z,4.4nm,0.6s						
MKAR	**Makanchi Array**	**67.76**	**328**	P	**P**	**13 35 09.8**	**0.0**
MAKZ	**Makanchi**	**67.94**	**327**	P	**P**	**13 35 10.7**	**-0.1**
MAKZ				IAmb	IAmb	13 35 12.0	
	comp=Z,6.2nm,0.9s						
BOOM	**Boomskoye usch**	**68.92**	**321**	P	**P**	**13 35 18.3**	**+1.0**
MA2	**Magadan**	**69.06**	**12**	P	**P**	**13 35 17.6**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=233,slow=4.9,SNR=6.9						
	comp=Z,6.1nm,0.7s						
MA2	**Magadan**	**69.06**	**12**	P	**P**	**13 35 17.5**	**0.0**
MA2				IAmb	IAmb	13 35 18.7	
	comp=Z,10nm,0.9s						
YAK	**Yakutsk**	**69.21**	**1**	P	**P**	**13 35 18.1**	**-0.3**
	comp=Z,12nm,0.6s,baz=185,slow=1.8,SNR=12						
	comp=Z,12nm,0.6s						
YAK	**Yakutsk**	**69.21**	**1**	P	**P**	**13 35 17.6**	**-0.8**
AAK	**Ala-Archa**	**69.91**	**321**	P	**P**	**13 35 24.2**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=155,slow=4.3,SNR=5.4						
	comp=Z,1.8nm,0.3s						
ZAA0	**Zalesovo Array**	**71.29**	**334**	P	**P**	**13 35 30.2**	**-1.0**
ZAA0				IAmb	IAmb	13 35 31.3	
	comp=Z,7.4nm,0.6s						
ZALV	**Zalesovo Beam**	**71.29**	**334**	P	**P**	**13 35 30.8**	**-0.5**
	comp=Z,7.9nm,0.5s,baz=131,slow=5.4,SNR=28						
	comp=Z,7.9nm,0.5s						
ZALV	**Zalesovo Beam**	**71.29**	**334**	P	**P**	**13 35 30.2**	**-1.0**
KURBB	**Kurchatov Arra**	**72.09**	**329**	P	**P**	**13 35 36.2**	**+0.2**
	comp=Z,9.4nm,0.6s,baz=130,slow=4.9,SNR=98						
	comp=Z,9.4nm,0.6s						
KURK	**Kurchatov**	**72.10**	**329**	P	**P**	**13 35 35.8**	**-0.3**
KURK				IAmb	IAmb	13 35 37.1	
	comp=Z,20nm,1.2s						
VNDA	**Vanda**	**72.25**	**173**	P	**P**	**13 35 37.4**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=316,slow=6.4,SNR=12						
	comp=Z,0.5nm,0.4s						
VNDA	**Vanda**	**72.25**	**173**	P	**P**	**13 35 36.8**	**+0.2**
SEY	**Seymchan**	**72.45**	**11**	P	**P**	**13 35 38.3**	**+0.3**
	comp=Z,12nm,0.6s,baz=205,slow=5.2,SNR=98						
	comp=Z,12nm,0.6s						
KK31	**Karatay Array**	**72.68**	**319**	P	**P**	**13 35 39.8**	**0.0**
KKAR	**Karatay Array**	**72.68**	**319**	P	**P**	**13 35 39.9**	**+0.1**
KKAR	**Karatay Array**	**72.68**	**319**	P	**P**	**13 35 40.0**	**+0.1**
MAW	**Mawson**	**74.07**	**201**	P	**P**	**13 35 48.4**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=315,slow=5.5,SNR=1.5						
	comp=Z,0.7nm,0.5s						
BRVK	**Borovoye**	**77.69**	**328**	P	**P**	**13 36 07.8**	**-0.4**
TIXI	**Tiksi**	**78.87**	**0**	P	**P**	**13 36 13.3**	**-1.0**
TIXI				IAmb	IAmb	13 36 36.7	
	comp=Z,31nm,1.5s						
VOI	**Vohitsoka**	**79.66**	**249**	P	**P**	**13 36 20.1**	**+0.2**
VOI				IAmb	IAmb	13 36 21.2	
	comp=Z,14nm,1.0s						
NRIK	**Noril'sk**	**81.58**	**346**	P	**P**	**13 36 29.1**	**+0.3**
	comp=Z,3.3nm,0.4s,baz=134,slow=6.5,SNR=5.0						
	comp=Z,3.3nm,0.4s						
NRIK	**Noril'sk**	**81.58**	**346**	P	**P**	**13 36 28.6**	**-0.2**
NRIK				IAmb	IAmb	13 36 30.3	
	comp=Z,5.1nm,0.6s						
UNV	**Unalaska Valle**	**81.61**	**33**	P	**P**	**13 36 30.1**	**+0.8**
ABKAR	**Akbulak array**	**81.91**	**322**	P	**P**	**13 36 30.2**	**-0.8**
ABKAR	**Akbulak array**	**81.91**	**322**	P	**P**	**13 36 30.1**	**-0.8**
ABKAR				IAmb	IAmb	13 36 33.7	
	comp=Z,4.4nm,0.9s						
ILAR	**Eielson Array**	**94.31**	**25**	P	**P**	**13 37 28.5**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=283,slow=4.0,SNR=4.7						
	comp=Z,0.7nm,0.7s						
ARCES	**ARCESS Array B**	**101.43**	**340**	P	**Pdif**	**13 38 02.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=79,slow=6.3,SNR=3.7						
FINES	**FINESS Array B**	**102.41**	**331**	PKiKP	**PKiKP**	**13 42 27.9**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=126,slow=2.4,SNR=4.6						
NOA	**NORSAR Array B**	**109.46**	**333**	PKiKP	**PKiKP**	**13 42 41.6**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=242,slow=3.9,SNR=3.3						
GERES	**GERESS Array B**	**111.78**	**320**	PKiKP	**PKiKP**	**13 42 45.1**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=48,slow=2.2,SNR=6.3						
EKA	**Eskdalemuir Ar**	**118.80**	**331**	PKP	**PKPdf**	**13 42 58.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=32,slow=2.0,SNR=7.3						
TXAR	**Lajitas Array**	**126.37**	**59**	PKP	**PKiKP**	**13 43 14.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=188,slow=2.2,SNR=6.0						
SCHQ	**Schefferville**	**131.10**	**12**	PKP	**PKiKP**	**13 43 23.0**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=153,slow=2.3,SNR=1.5						
DBIC	**Dimbokro**	**133.76**	**272**	PKP	**PKiKP**	**13 43 29.2**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=79,slow=5.2,SNR=2.1						
CPUP	**Villa Florida**	**146.01**	**171**	PKPbc	**PKPbc**	**13 43 51.6**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=204,slow=2.7,SNR=5.1						
LPAZ	**La Paz**	**151.27**	**145**	PKPbc	**PKiKP**	**13 44 06.9**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=46,slow=3.5,SNR=19						
LPAZ				PKPab	**PKPab**	**13 44 14.9**	**+0.8**
	comp=Z,3.6nm,0.6s,baz=212,slow=2.4,SNR=4.6						

SJA ***14*** *13:28:41.7±0.8,20.2°S×69.3°E,h108km±3km,ML5.1, MW4.8*

MOS ***14*** *13:28:41.3±1.3,20.0°S×69.0°E,h97km,mb5.2/38,Error ellipse: s-maj=11.7km s-min=5.2km az=110.0*

NEIC ***14*** *13:28:42.5,20.2°S×69.1°W,h103km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=3.16; Mθθ=0.91; Mφφ=4.07; Mrθ=1.22; Mθφ=0.47; Mφr=-1.61; Fault plane solution: M₀=4.24000×10¹⁶ NP1:φs208.42000°, δ38.71000°,λ=-52.48000°. NP2:φs343.88000°,δ60.26000°, λ=-116.02000°. Principal axes: T 4.4150, Plg12.0000°, Azm92.0000°; N -0.3836, Plg22.0000°, Azm357.0000°; P -4.0314, Plg64.0000°, Azm208.0000°;*

NEIC ***14*** *13:28:42.5±1.9,20.2°S±0.04°×69.17°W±0.06°,h100km±1km, mb5.3/518,Mwr5.0/45,Mwr5.0(GUC) Error ellipse: s-maj=9.5km s-min=7.0km az=278.0*

IDC ***14*** *13:28:43.1±0.4,20.19°S×69.08°W,h101km±3km,mb4.7/19, mbtmp5.1/22,MS3.8/14,Error ellipse: s-maj=12.9km s-min=6.9km az=86.0*

GUC ***14*** *13:28:43.0±0.9,20.22°S×69.27°W,h105km±4km,ML5.1*

VAO ***14*** *13:28:44.2±0.3,20.15°S×68.94°W,h105km,mb5.5*

BJI ***14*** *13:28:44.4±0.0,20.20°S×69.10°W,h100km,mB5.1/2*

GCMT ***14*** *13:28:45.5±0.2,20.26°S±0.02°×69.35W±0.02°,h112km±2km, MW5.1/126,Moment Tensor Solution. s61,c74; s126,c178; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.48±.11; Mθθ=0.94±.12; Mφφ4.42±.14; Mrθ1.18±.07; Mθφ0.31±.12; Mφr-2.45±.11; Best double couple: M₀4.85200×10¹⁶ NP1:φs345.00000°,δ63.00000°, λ=-110.00000°. NP2:φs204.00000°,δ33.00000°, λ=-56.00000°. Principal axes: T 5.1180, Plg16.0000°, Azm90.0000°; N -0.5330, Plg18.0000°, Azm354.0000°; P -4.5860, Plg66.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 13:28:42.2±0.2,20.21S±0.02°×69.23W±0.04°,h103km±1km, h103km:pP-P,n1326,σ1s25/1402,mb5.3/298,30C-14D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.54**	**4**		**Pn**	**13 28 59.7**	**+0.6**
GO01				Sn	**Sn**	**13 29 11.2**	**-0.6**
GO01	**Chusmiza**	**0.54**	**4**	⇑*e*P	**Pn**	**13 28 59.7**	**+0.6**
GO01				*e*S	**Sn**	**13 29 12.8**	**+1.1**
GO01				IAML		13 29 14.2	
	comp=E,336μm,0.5s						
GO01	**Chusmiza**	**0.54**	**4**	*e*P	**Pn**	**13 29 00.0**	**+0.9**
GO01				*e*S	**Sn**	**13 29 13.2**	**+1.4**
TA02	**Huaiquique**	**0.85**	**266**		**Pn**	**13 29 01.2**	**0.0**
TA02				Sn	**Sn**	**13 29 15.0**	**-0.5**
TA02	**Huaiquique**	**0.85**	**266**	⇑*e*P	**Pn**	**13 29 01.4**	**+0.2**
TA02				*e*S	**Sn**	**13 29 15.1**	**-0.5**
TA02				IAML		13 29 16.1	
	comp=N,145μm,0.1s						
TA02	**Huaiquique**	**0.85**	**266**	*e*P	**Pn**	**13 29 01.0**	**-0.2**
TA02				*e*S	**Sn**	**13 29 15.5**	**0.0**
TA02				IAML		13 29 16.5	
	comp=Z,114μm,0.2s						
PB01	**IPOC Station P**	**0.86**	**196**		**Pn**	**13 29 01.9**	**+0.5**
PB01	**IPOC Station P**	**0.86**	**196**	⇑*e*P	**Pn**	**13 29 02.1**	**+0.6**
PB01				*e*S	**Sn**	**13 29 16.3**	**+0.3**
PB01				IAML		13 29 17.4	
	comp=N,99μm,0.4s						
PB01	**IPOC Station P**	**0.86**	**196**	*e*P	**Pn**	**13 29 02.0**	**+0.5**
PB01				*e*S	**Sn**	**13 29 17.2**	**+1.2**
PB01				IAML		13 29 18.1	
	comp=Z,30μm,0.5s						
TA01	**Diego Aracena**	**0.96**	**248**		**P

AF01 San Pedro de A 2.99 160 Pn 13 29 28.5 +1.6
PB15 IPOC Station P 2.99 184 Pn 13 29 28.5 +0.4
PB15 IPOC Station P 2.99 184 eP Pn 13 29 29.0 +0.9
PB15 eS Sn 13 30 04.3 +0.9
PB15 IAML 13 30 15.9
comp=Z,8µm,0.2s
PB10 IPOC Station P 3.51 200 Pn 13 29 33.6 -1.2
PB10 IPOC Station P 3.51 200 eP Pn 13 29 34.1 -0.7
PB10 eS Sn 13 30 13.6 -1.9
YJA Yavi 3.98 120 eP Pn 13 29 45.0 +3.4
YJA eP Pn 13 29 45.4 +3.9
LPAZ La Paz 4.04 15 P Pn 13 29 45.6 +3.0
comp=Z,396nm,0.7s,baz=185,slow=8.7,SNR=281
LPAZ S Sn 13 30 25.8 -3.4
comp=Z,502nm,0.7s,baz=84,slow=1.9,SNR=3.6
LPAZ LR LR 13 31 19.2
comp=Z,992nm,20.5s,baz=205,slow=39
LPAZ La Paz 4.04 15 Pn Pn 13 29 45.5 +2.9
LPAZ La Paz 4.04 15 eP Pn 13 29 45.0 +2.4
PB14 IPOC Station P 4.53 194 Pn Pn 13 29 46.8 -2.0
GO02 Mina Guanaco 4.94 184 Pn Pn 13 29 53.5 -0.9
AC01 Pan de Azucar 6.04 192 Pn Pn 13 30 06.3 -2.8
AC02 Maricunga 6.59 179 Pn 13 30 16.4 -0.6
GO03 Copiap 7.41 187 Pn 13 30 24.2 -3.4
AC04 Llanos de Chal 8.13 192 Pn Pn 13 30 32.7 -4.8
AC05 El Transito 8.64 186 Pn Pn 13 30 40.9 -3.6
SIV San Ignacio 8.82 63 P Pn 13 30 45.2 -1.7
comp=Z,282nm,0.8s,baz=251,slow=10,SNR=486
LCO Las Campanas 8.86 188 Pn 13 30 43.1 -4.5
LCO Las Campanas 8.86 188 P Pn 13 30 43.1 -4.5
CO01 Juntas del Tor 9.76 184 Pn Pn 13 30 56.9 -2.9
GO04 Tololo Observa 10.02 188 Pn 13 30 59.1 -4.3
CO03 El Pedregal 10.66 187 Pn 13 31 07.5 -4.4
PTLB Pontes e Lacer 10.71 65 Pn 13 31 09.4 -3.2
PTLB Pontes e Lacer 10.71 65 eP Pn 13 31 10.2 -2.4
ETMB Extrema 10.74 16 Pn 13 31 10.4 -2.5
ETMB Extrema 10.74 16 eP Pn 13 31 12.6 -0.4
NNA Nana 10.97 317 P Pn 13 31 14.7 -1.4
comp=Z,25nm,0.5s,baz=172,slow=7.5,SNR=12
NNA S Sn 13 33 09.8 -7.1
comp=Z,31nm,0.4s,baz=225,slow=18,SNR=2.6
NNA LR LR 13 35 52.2
comp=Z,137nm,21.1s,baz=183,slow=39
NNA Nana 10.97 317 Pn 13 31 13.9 -2.3
NNA Nana 10.97 317 ceP Pn 13 31 15.3 -0.8
NNA pmax pmax
comp=Z,44nm,0.8s
VILB Vilhena 11.27 52 Pn 13 31 16.6 -3.5
VILB Vilhena 11.27 52 eP Pn 13 31 18.0 -2.1
ANTJ Antonio Joao (12.47 101 eP Pn 13 31 35.4 -0.8
CPUP Villa Florida 12.52 121 P Pn 13 31 35.4 -1.2
comp=Z,52nm,0.7s,baz=303,slow=12,SNR=135
CPUP Villa Florida 12.52 121 Pn 13 31 34.4 -2.3
CPUP Villa Florida 12.52 121 eP Pn 13 31 35.6 -1.1
SAML Samuel 12.63 28 Pn Pn 13 31 34.5 -3.7
SAML Samuel 12.63 28 P Pn 13 31 34.5 -3.7
AQDB Aquidauana 12.70 94 Pn Pn 13 31 35.8 -3.3
AQDB Aquidauana 12.70 94 eP Pn 13 31 36.8 -2.3
ROC1 El Roble 12.81 187 Pn 13 31 40.0 -0.8
PEL Peldehue 12.95 185 Pn 13 31 41.7 -0.6
PEL Peldehue 12.95 185 P Pn 13 31 41.7 -0.6
MT02 Curacav 13.11 187 Pn Pn 13 31 43.9 -0.4
MT03 Universidad Ad 13.28 185 Pn 13 31 46.0 -0.7
RVDE Rio Verde (Bra 13.52 87 eP Pn 13 31 46.3 -3.6
VA05 Santo Domingo 13.56 189 Pn 13 31 48.8 -1.4
SALV Santo Antonio 13.57 74 eP Pn 13 31 47.9 -2.6
MT09 Talagante 13.60 186 Pn Pn 13 31 50.5 -0.5
LMEL Las Melosas 13.61 183 Pn 13 31 50.5 -0.6
BO01 Tunca 14.22 186 Pn Pn 13 31 57.3 -1.5
BO02 Sierra Bellavi 14.59 185 Pn Pn 13 32 03.6 0.0
MCR1 Marechal Candi 14.68 110 eP Pn 13 32 04.3 -0.5
ITQB Itaqui 14.80 132 Pn Pn 13 32 06.7 +0.4
ITQB Itaqui 14.80 132 eP Pn 13 32 07.3 +1.0
GO05 Huala 14.93 189 Pn 13 32 07.0 -0.9
C2SB Chapadao do Su 15.53 87 eP Pn 13 32 13.7 -1.8
ML02 Panimavida 15.61 187 Pn Pn 13 32 15.5 -1.0
CRSM Crissiumal (Br 15.66 120 eP Pn 13 32 16.8 -0.4
H03N1 Juan Fernandez 15.74 211 T T 13 48 35.9
baz=33,slow=73,SNR=40
ATAH Atahualpa 15.74 324 P P 13 32 20.6 +0.1
comp=Z,3.8nm,0.7s,baz=304,slow=10,SNR=2.8
H03N2 Juan Fernandez 15.75 211 T T 13 48 56.7
baz=33,slow=73,SNR=35
H03N3 Juan Fernandez 15.76 211 T T 13 48 50.0
baz=33,slow=73,SNR=40
VA04 Juan Fernndez 15.87 211 Pn Pn 13 32 18.9 -0.8
CLDB Colider 15.92 56 eP Pn 13 32 18.1 -2.3
FRBT Francisco Belt 15.94 114 eP Pn 13 32 20.1 -0.6
RODS Rosario do Sul 16.20 131 eP Pn 13 32 23.4 -0.4
PTGB Pitanga 16.49 109 eP Pn 13 32 27.2 -0.3
PCMB Pacaembu 16.85 98 eP Pn 13 32 30.8 -1.1
ALGR Alto Alegre (B 17.03 123 eP Pn 13 32 33.1 -1.1
ITAB Concordia 17.14 117 Pn 13 32 34.2 -1.1
ITAB Concordia 17.14 117 eP Pn 13 32 35.1 -0.3
CPSB Cacapava Do Su 17.50 129 eP P 13 32 38.5 -0.9
ITRB Iturama 17.75 92 eP P 13 32 42.4 +0.1
PLTB Pedras Altas 18.13 132 P P 13 32 43.5 -2.9
NPGB Novo Progresso 18.77 48 eP P 13 32 52.0 -1.4
MACA Manacapuru-AM 18.89 27 P P 13 32 53.6 -1.1
MACA Manacapuru-AM 18.89 27 eP P 13 32 53.9 -0.8
CNLB Canela 18.97 122 eP P 13 32 54.1 -1.6
SNDB Serra Nova Dou 19.07 67 eP P 13 32 56.3 -0.4
BOSC San Juan Bosco 19.21 331 P P 13 32 59.2 +0.7
BB19B Bebedouro 19.40 96 eP P 13 32 59.7 -0.6
GO06 Curarrehue 19.40 185 Pn 13 33 01.4 -1.0
LR03 Panguipulli 19.54 187 P 13 33 02.7 +1.1
ARNL Arenillas 19.64 326 Pn 13 33 06.0 +0.7
LR04 Corral 19.93 190 P 13 33 07.1 +1.2
IPMB Ipameri, GO 19.99 87 eP P 13 33 05.6 -1.2
TER01 Tubaro-SC 20.08 118 eP P 13 33 05.8 -1.8
RCLB Rio Claro- Sao 20.34 100 eP P 13 33 09.6 -0.8
PLCA Paso Flores 20.49 183 P Pn 13 33 13.5 -1.5
comp=Z,109nm,0.7s,baz=5.3,slow=12,SNR=113
PLCA PcP PcP 13 37 20.7 +1.0
comp=Z,5.1nm,1.1s,baz=351,slow=3.6,SNR=3.8
comp=Z,109nm,0.7s
PLCA Paso Flores 20.49 183 P P 13 33 11.8 -0.1
PLCA Paso Flores 20.49 183 eP Pn 13 33 13.5 -1.5
ITTB Itaituba 20.51 42 eP P 13 33 11.4 -0.9
BDFB Brasilia 20.69 81 P P 13 33 13.6 -0.8
comp=Z,198nm,0.6s,baz=258,slow=11,SNR=172
BDFB LR LR 13 42 30.2
comp=Z,572nm,18.2s,baz=273,slow=40
comp=Z,198nm,0.6s
BDFB Brasilia 20.69 81 P P 13 33 13.1 -1.2
BDFB Brasilia 20.69 81 eP P 13 33 13.9 -0.5
PET01 Itanhaem-SP 20.72 105 eP P 13 33 13.2 -1.2
LL04 Puerto Octay 20.81 187 P P 13 33 15.6 +0.3
VAO Valinhos 20.89 102 eP P 13 33 14.7 -1.7
LL03 Petrohue 21.04 187 P P 13 33 17.3 -0.4
PMNB Patos De Minas 21.57 89 eP P 13 33 22.3 -1.4
PARB Paraibuna 22.14 102 eP P 13 33 27.6 -2.1
OTAV Otavalo 22.24 335 P P 13 33 32.0 +0.8
OTAV Otavalo 22.24 335 P P 13 33 32.0 +0.8
OTAV Otavalo 22.24 335 eP P 13 33 34.1 +2.9
OTAV eS sP 13 34 07.8 +3.4
OTAV Otavalo 22.24 335 eP P 13 33 34.1 +2.9
LL01 San Ignacio de 22.26 186 P P 13 33 31.0 +0.3
FLOC Florencia 22.56 343 eP P 13 33 34.0 0.0
FLOC eS sP 13 34 09.9 +2.1
GCUF Volcan Galeras 22.74 339 eP P 13 33 39.5 +3.1
LL02 Futaleuf 23.02 185 P P 13 33 37.9 -0.5
GARC Garzon, Huila 23.09 344 eP P 13 33 39.8 +0.2
GARC eS sP 13 34 14.0 +0.3
GO07 Milladeo Hill, 23.14 188 P P 13 33 39.3 -0.1
MALB Monte Alegre 23.38 41 eP P 13 33 40.5 -1.5
BBAC Balboa, Cauca 23.45 340 eP P 13 33 45.1 +2.3
PRPB Parauapebas 23.45 56 eP P 13 33 41.3 -1.3
MAN01 Angra dos Reis 23.64 101 eP P 13 33 43.4 -1.0
SMTB Santa Maria do 23.76 65 eP P 13 33 44.6 -0.9
POPC Popayan, Colom 23.76 341 eP P 13 33 47.5 +1.9
POPC eS sP 13 34 21.8 +1.1
BOAV Boa Vista 24.04 22 P P 13 33 47.6 -0.2
BOAV Boa Vista 24.04 22 eP P 13 33 48.2 +0.3
VAS01 Vassouras-RJ 24.12 100 eP P 13 33 48.4 -0.2
DIAM Diamantina, MG 24.20 90 eP P 13 33 48.2 -1.3
MC01 Montes Claros 24.23 86 eP P 13 33 49.4 -0.3
JANB Januaria 24.28 82 eP P 13 33 49.0 -1.2
VILC Villavicencio, 24.57 349 eP P 13 33 54.4 +1.6
SDBA SAO DESIDERIO 24.58 75 eP P 13 33 51.4 -1.5
YOTC Yotoco, Valle 25.04 343 eP P 13 33 57.2 +0.1

CHIC Chingaza 25.08 349 eP P 13 33 59.1 +1.3
DUB01 Friburgo-RJ 25.11 99 eP P 13 33 57.7 0.0
ANIL Santa Ana 25.29 345 eP P 13 33 59.1 -0.5
ROSC El Rosal 25.39 348 P P 13 34 01.9 +1.3
comp=Z,10nm,0.5s,baz=143,slow=18,SNR=2.4
comp=Z,10nm,0.5s
ROSC El Rosal 25.39 348 P P 13 34 01.5 +0.9
COYC Coyhaique 25.40 185 P P 13 33 59.9 -0.1
CAM01 Campos-RJ 25.78 98 eP P 13 34 03.5 -0.1
PLMC San Jos del P 25.90 344 eP P 13 34 05.4 +0.6
MCPB Macapa, AP 25.92 42 eP P 13 34 03.9 -1.1
GUY2C Guyana, Caldas 25.98 346 eP P 13 34 07.1 +1.0
GUY2C eS sP 13 34 43.7 +2.2
SPBC San Pablo de B 26.14 349 eP P 13 34 06.5 -0.5
NORC Norcasia 26.21 347 eP P 13 34 05.6 -2.0
RUSC La Rusia 26.21 351 eP P 13 34 08.4 +0.2
SJMB Sao Joao De Ma 26.48 92 eP P 13 34 09.0 -1.0
TAMC Tame, Arauca 26.60 354 eP P 13 34 10.2 -0.9
CBOC Ciudad Bolivar 26.76 345 eP P 13 34 13.0 +0.4
BARC Barichara 26.92 351 eP P 13 34 13.5 -0.7
HELC Santa Helena 26.96 346 eP P 13 34 14.7 +0.1
PTBC PUERTO BERRIO, 27.07 349 eP P 13 34 13.9 -1.4
RIB01 Linhares ES 27.14 93 eP P 13 34 15.9 -0.1
TMAB Tom-Au,PA,Br 27.21 52 eP P 13 34 17.3 +0.8
PAMC Pamplona, Colo 27.59 353 eP P 13 34 19.5 -0.9
NAN01 Guarapari, ES 27.60 90 eP P 13 34 18.6 -1.5
ZARC Zaragoza, Cauc 28.08 348 eP P 13 34 23.2 -1.0
GUA01 Guaratinga, BA 28.14 88 eP P 13 34 25.1 +0.3
PAYG Puerto Ayora 28.31 311 P P 13 34 26.2 -0.1
SOCV Socops 28.36 357 eP P 13 34 26.0 -0.8
CMC01 Camacan, BA 28.68 85 eP P 13 34 29.7 0.0
SDV Santo Domingo 28.95 357 P P 13 34 33.4 +1.2
comp=Z,8.3nm,0.5s,baz=219,slow=6.7,SNR=5.2
SDV LR LR 13 46 47.5
comp=Z,180nm,18.9s,baz=204,slow=38
comp=Z,8.3nm,0.5s
SDV Santo Domingo 28.95 357 eP P 13 34 32.1 -0.1
BAUV El Baul 29.00 2 P P 13 34 32.2 -0.1
GDU01 Guandu, BA 29.06 82 eP P 13 34 32.2 -0.8
ROSB Rosrio 29.93 58 eP P 13 34 41.0 +0.2
MDP Montagnes des 29.98 35 P P 13 34 40.9 -0.2
comp=Z,10nm,0.7s,baz=215,slow=10,SNR=10
MDP LR LR 13 46 57.7
comp=Z,222nm,21.8s,baz=244,slow=37
comp=Z,10nm,0.7s
MPGF Montagnes des 29.98 35 P P 13 34 40.9 -0.3
SJCC San Jacinto, C 30.49 348 eP P 13 34 43.7 -1.9
BIRV Birongo 30.63 6 P P 13 34 47.2 +0.4
BCIP Isla Barro Col 31.00 339 P P 13 34 50.9 +0.8
BCIP IAmb IAmb 13 35 43.8
comp=Z,84nm,1.4s
BCIP Isla Barro Col 31.00 339 P P 13 34 50.9 +0.8
BCIP pmax pmax
comp=Z,84nm,1.4s
GO09 Cerro Castillo 31.09 184 P P 13 34 51.1 +0.5
GO09 IAmb IAmb 13 35 45.9
comp=Z,98nm,1.7s
MG05 Puerto Natales 31.51 184 P P 13 34 55.2 +1.0
MG05 IAmb IAmb 13 34 57.3
comp=Z,55nm,0.9s
TOSP Speyside 32.46 16 P P 13 35 03.5 +0.6
TOSP IAmb IAmb 13 35 04.9
comp=Z,55nm,0.6s
MG02 Cerro Sombrero 32.51 180 P P 13 35 03.8 +0.8
EFI East Falkland 32.60 167 P P 13 35 04.7 +1.0
EFI East Falkland 32.60 167 P P 13 35 04.7 +1.0
EFI pmax pmax
comp=Z,286nm,1.7s
MG04 Isla Riesco 32.63 183 P P 13 35 03.2 -0.8
NBAN Anadia - AL 33.46 77 eP P 13 35 11.6 -0.1
JTS Las Juntas de 34.03 332 dP P 13 35 19.1 +2.5
JTS pmax pmax
comp=Z,12nm,1.0s
JTS Las Juntas de 34.03 332 P P 13 35 19.3 +2.7
JTS pP pP 13 35 43.5 +3.2
COVE Coope Vega, Sa 34.17 333 P P 13 35 17.8 0.0
COVE IAmb IAmb 13 35 21.4
comp=Z,52nm,0.9s
SVB Belmont 34.19 14 P P 13 35 17.8 -0.1
MCLT Moule a Chique 34.68 14 P P 13 35 21.3 -0.8
NBRF Rio Formoso - 34.88 76 eP P 13 35 24.9 +0.9
RCBR Riachuelo 35.38 71 LR LR 13 50 52.4
comp=Z,184nm,18.8s,baz=16,slow=38
RCBR Riachuelo 35.38 71 P P 13 35 26.6 -1.7
RCBR Riachuelo 35.38 71 P P 13 35 26.6 -1.7
RCBR pmax pmax
comp=Z,85nm,0.6s
RCBR Riachuelo 35.38 71 eP P 13 35 28.6 +0.2
BIM Bigot 35.43 14 P P 13 35 27.4 -1.2
FDF Fort de France 35.62 14 P P 13 35 29.1 -1.2
FDF Fort de France 35.62 14 P P 13 35 29.1 -1.2
FDF pmax pmax
comp=Z,58nm,0.8s
ILAM Ilet Lapin Mar 35.73 14 P P 13 35 29.1 -2.0
CBE Ff, Capester 36.83 12 P P 13 35 39.5 -1.0
CRIN San Cristobal 37.11 330 P P 13 35 43.7 +0.7
CRIN IAmb IAmb 13 36 13.7
comp=Z,51nm,1.0s
RPN Rapa Nui 37.25 252 LR LR 13 47 08.6
comp=Z,200nm,20.0s,baz=67,slow=30
ICMP Isla Caja de M 37.95 4 P P 13 35 49.7 -0.3
CDVI St. Croix 37.98 7 P P 13 35 49.3 -0.9
CDVI IAmb IAmb 13 35 56.8
comp=Z,41nm,0.8s
MLPR Magueyes Islan 38.00 3 P P 13 35 48.4 -2.0
MLPR IAmb IAmb 13 36 37.0
comp=Z,50nm,1.0s
CRPR Cabo Rojo, PR 38.04 3 P P 13 35 49.2 -1.5
CRPR IAmb IAmb 13 36 14.5
comp=Z,42nm,0.9s
OBIP Obispado Ponce 38.10 4 P P 13 35 49.7 -1.5
PDPR Patillas Dam, 38.12 5 P P 13 35 49.5 -1.8
SJG San Juan 38.20 5 P P 13 35 50.4 -1.7
SJG IAmb IAmb 13 35 51.4
comp=Z,36nm,0.8s
SJG San Juan 38.20 5 P P 13 35 50.4 -1.7
SJG pmax pmax
comp=Z,36nm,0.8s
SJG San Juan 38.20 5 P P 13 35 50.5 -1.6
SJG pP pP 13 36 14.3 -2.2
SJG sP sP 13 36 27.1 -1.5
PRSN Puerto Rico Se 38.24 3 P P 13 35 50.8 -1.6
PRSN IAmb IAmb 13 36 17.0
comp=Z,60nm,0.9s
HUMP Col San Antoni 38.26 5 P P 13 35 51.0 -1.5
HUMP IAmb IAmb 13 36 26.4
comp=Z,26nm,0.8s
ANWB Willy Bob 38.35 11 P P 13 35 51.3 -2.0
ANWB IAmb IAmb 13 36 37.4
comp=Z,55nm,0.8s
CBYP Canovanas 38.39 5 P P 13 35 51.7 -2.0
CBYP IAmb IAmb 13 35 53.0
comp=Z,45nm,0.8s
AOPR Arecibo Observ 38.40 4 P P 13 35 52.3 -1.4
AOPR IAmb IAmb 13 35 53.1
comp=Z,31nm,0.8s
TGUH Tegucigalpa,Un 38.40 331 P P 13 35 53.9 -0.1
TGUH IAmb IAmb 13 35 56.4
comp=Z,48nm,0.8s
GCPR Guaynabo City 38.41 5 P P 13 35 51.6 -2.2
GCPR IAmb IAmb 13 36 41.8
comp=Z,35nm,0.8s
CUPR Culebra, Puert 38.48 6 P P 13 35 52.6 -1.7
CUPR IAmb IAmb 13 36 18.3
comp=Z,19nm,0.7s
STVI Saint Thomas 38.55 7 P P 13 35 54.0 -0.9
STVI IAmb IAmb 13 36 23.4
comp=Z,34nm,1.1s
DR12 Loma Pena Alta 38.76 360 P P 13 35 55.1 -1.7
MTDJ Mount Denham 39.06 347 P P 13 35 59.2 -0.2
MTDJ IAmb IAmb 13 36 00.5
comp=Z,64nm,1.1s
GRTK Grand Turk 41.51 357 P P 13 36 18.4 -1.0
PETF Flores 42.09 330 P P 13 36 25.6 +1.4
PETF IAmb IAmb 13 36 27.1
comp=Z,68nm,1.2s
HOPE Hope Point 42.15 152 P P 13 36 24.1 -0.2
HOPE Hope Point 42.15 152 P P 13 36 24.1 -0.2
HOPE pmax pmax
comp=Z,610nm,1.8s
CCIG Comitan 42.68 327 P P 13 36 29.0 -0.2
ORCD Orcadas 44.03 163 P P 13 36 38.1 -1.1
TEIG Tepich 44.30 334 P P 13 36 42.4 +0.4

TEIG IAmb IAmb 13 36 43.4
comp=Z,44nm,0.8s
TEIG Tepich 44.30 334 P P 13 36 42.4 +0.4
TEIG pP pP 13 37 07.7 +1.2
TEIG sP sP 13 37 18.1 -0.1
PMSA Palmer Station 44.67 177 P P 13 36 33.6 -11
PMSA x x 13 36 46.6
PMSA sP pP 13 37 08.6 -0.3
SOR Soroa 44.81 342 P P 13 36 46.4 +0.4
SOR IAmb IAmb 13 37 27.8
comp=Z,42nm,1.2s
SOR Soroa 44.81 342 P P 13 36 46.4 +0.4
SOR pmax pmax
comp=Z,42nm,1.2s
061Z Ochoppi 47.19 346 P P 13 37 04.4 -0.2
TLIG Tlapa 47.31 321 P P 13 37 06.6 +0.8
TLIG IAmb IAmb 13 37 09.1
comp=Z,36nm,1.0s
060A Indiantown 48.19 347 P P 13 37 13.1 +0.8
DWPF Disney Wildern 49.47 346 P P 13 37 22.7 +0.6
DWPF Disney Wildern 49.47 346 P P 13 37 23.1 +1.1
baz=165
DWPF Disney Wildern 49.47 346 P P 13 37 22.4 +0.4
baz=165
DWPF Disney Wildern 49.47 346 P P 13 37 22.9 +0.8
DWPF pP pP 13 37 48.5 +1.3
DWPF sP sP 13 37 58.7 -0.2
MOIG Morelia 50.51 320 P P 13 37 30.9 +0.5
656A Willston 50.93 345 P P 13 37 33.5 +0.4
656A Willston 50.93 345 P P 13 37 34.0 +0.8
baz=164,SNR=7.3
456A Hilliard 52.12 346 P P 13 37 42.5 +0.6
456A Hilliard 52.12 346 P P 13 37 43.1 +1.2
baz=165,SNR=12
553A Crawfordville 52.20 343 P P 13 37 42.9 +0.4
553A Crawfordville 52.20 343 P P 13 37 43.9 +1.4
baz=162,SNR=5.4
TIGA Tifton 53.17 345 P P 13 37 49.5 -0.1
TIGA Tifton 53.17 345 P P 13 37 50.2 +0.6
baz=163,SNR=6.7
TIGA Tifton 53.17 345 P P 13 37 49.9 +0.2
baz=163,SNR=6.7
255A Hazlehurst 53.37 346 P P 13 37 51.1 0.0
255A IAmb IAmb 13 38 29.3
comp=Z,53nm,1.2s
255A Hazlehurst 53.37 346 P P 13 37 51.8 +0.7
baz=164
352A Blakely 53.56 343 P P 13 37 52.2 -0.3
352A Blakely 53.56 343 P P 13 37 52.9 +0.4
baz=162,SNR=8.7
ZAIG Zacatecas 53.70 321 P P 13 37 55.3 +1.3
ZAIG IAmb IAmb 13 37 57.2
comp=Z,43nm,0.9s
BRAL Brewton 53.88 341 P P 13 37 55.3 +0.4
BRAL Brewton 53.88 341 P P 13 37 55.2 +0.4
baz=159
CSU Charleston Sou 53.90 349 P P 13 37 55.5 +0.6
NHSC New Hope 54.04 349 P P 13 37 56.9 +0.9
NHSC New Hope 54.04 349 P P 13 37 57.2 +1.3
baz=167,SNR=18
NHSC New Hope 54.04 349 P P 13 37 57.1 +1.1
baz=167,SNR=18
154A Montrose 54.18 346 P P 13 37 57.0 0.0
154A Montrose 54.18 346 P P 13 37 57.5 +0.5
baz=164,SNR=7.2
250A Grady 54.40 342 P P 13 37 58.4 -0.3
250A Grady 54.40 342 P P 13 37 58.8 +0.1
baz=160,SNR=12
HAW Hawthorne Fire 54.57 347 P P 13 38 00.5 +0.7
baz=166,SNR=17
Y60A Bolivia 54.59 351 P P 13 38 00.1 +0.2
152A Waverly Hall 54.63 344 P P 13 37 59.8 -0.5
152A IAmb IAmb 13 38 01.1
comp=Z,29nm,0.9s
152A Waverly Hall 54.63 344 P P 13 38 00.2 -0.1
baz=162,SNR=14
Y58A Scranton 54.73 349 P P 13 38 01.1 +0.2
Y58A Scranton 54.73 349 P P 13 38 01.8 +0.9
baz=168,SNR=10
Y58A P P 13 38 01.8 +0.9
baz=168,SNR=10
346A Big Creek Wild 54.86 339 P P 13 38 01.5 -0.4
Y57A Sumter 54.97 349 P P 13 38 02.6 -0.1
Y57A Sumter 54.97 349 P P 13 38 03.5 +0.8
baz=167,SNR=8.4
Y57A P P 13 38 03.5 +0.8
baz=167,SNR=8.4
GOGA Godfrey 55.03 345 P P 13 38 02.7 -0.4
GOGA Godfrey 55.03 345 P P 13 38 02.7 -0.4
GOGA pmax pmax
comp=Z,18nm,1.1s
GOGA Godfrey 55.03 345 P P 13 38 03.2 +0.1
baz=164,SNR=6.9
GOGA Godfrey 55.03 345 P P 13 38 02.8 -0.4
baz=164,SNR=6.9
X58A Rowland 55.30 350 P P 13 38 05.2 +0.1
X58A Rowland 55.30 350 P P 13 38 05.8 +0.7
baz=168,SNR=13
X58A P P 13 38 05.8 +0.7
baz=168,SNR=13
344A Westbrook Farm 55.36 338 P P 13 38 05.7 +0.2
344A IAmb IAmb 13 38 07.0
comp=Z,35nm,0.7s
344A Westbrook Farm 55.36 338 P P 13 38 06.2 +0.7
baz=155,SNR=6.0
Z51A Franklin 55.36 344 P P 13 38 05.1 -0.5
JSC Jenkinsville 55.39 348 P P 13 38 05.8 +0.1
JSC IAmb IAmb 13 38 07.2
comp=Z,35nm,1.0s
JSC Jenkinsville 55.39 348 P P 13 38 05.8 +0.1
JSC pmax pmax
comp=Z,35nm,1.0s
JSC Jenkinsville 55.39 348 P P 13 38 06.4 +0.7
baz=166,SNR=11
HODGE Hodges 55.54 347 P P 13 38 07.0 +0.2
HODGE Hodges 55.54 347 P P 13 38 08.2 +1.4
baz=165,SNR=5.3
BIRD Birdtown, Kers 55.59 349 P P 13 38 07.6 +0.4
BIRD Birdtown, Kers 55.59 349 P P 13 38 08.0 +0.8
baz=167,SNR=29
Y52A Lilburn 55.60 345 P P 13 38 07.0 -0.3
Y52A IAmb IAmb 13 38 08.1
comp=Z,22nm,1.0s
Y52A Lilburn 55.60 345 P P 13 38 07.2 0.0
baz=163,SNR=8.5
Y52A P P 13 38 07.2 0.0
baz=163,SNR=8.5
LRAL Lakeview Retre 55.60 342 P P 13 38 06.5 -0.8
LRAL IAmb IAmb 13 38 07.9
comp=Z,23nm,1.1s
LRAL Lakeview Retre 55.60 342 P P 13 38 07.0 -0.2
baz=160,SNR=14
LRAL Lakeview Retre 55.60 342 P P 13 38 07.0 -0.2
baz=160,SNR=14
CNNC Cliffs of the 55.76 351 P P 13 38 08.7 +0.4
baz=170
146A Union 55.87 340 P P 13 38 08.9 -0.2
146A IAmb IAmb 13 38 10.9
comp=Z,37nm,0.9s
146A Union 55.87 340 P P 13 38 09.8 +0.7
baz=157
342A Flagon Creek P 55.88 336 P P 13 38 09.8 +0.6
342B Flagon Creek P 55.88 336 P P 13 38 10.7 +1.5
baz=154,SNR=9.1
VBMS Vicksburg 55.98 338 P P 13 38 09.6 -0.4
baz=156
W57A Gilead 56.00 349 P P 13 38 09.8 -0.3
W57A Gilead 56.00 349 P P 13 38 10.7 +0.6
baz=168,SNR=24
W57A P P 13 38 10.7 +0.6
baz=168,SNR=24
HKT Hockley 56.07 332 P P 13 38 10.4 -0.2
HKT IAmb IAmb 13 38 50.0
comp=Z,21nm,1.1s
HKT Hockley 56.07 332 iP P 13 38 11.3 +0.7
HKT pmax pmax
comp=Z,12nm,1.1s
HKT Hockley 56.07 332 P P 13 38 11.5 +1.0
HKT pP pP 13 38 37.8 +1.6
HKT sP sP 13 38 48.1 +0.4
Z47A Carrollton 56.08 341 P P 13 38 09.8 -0.8
Z47A IAmb IAmb 13 38 10.8
comp=Z,25nm,0.7s
Z47A Carrollton 56.08 341 P P 13 38 10.5 -0.2
baz=159,SNR=8.0

Y49A Blount Mountai 56.21 343 P **P** **13 38 10.5 -1.1**
Y49A IAmb IAmb 13 38 12.1
comp=Z,27nm,1.1s
Y49A Blount Mountai 56.21 343 P **P** **13 38 11.2 -0.4**
baz=160,SNR=14
KMSC Kings Mountain 56.23 348 P **P** **13 38 12.5 +0.7**
baz=166,SNR=12
KMSC Kings Mountain 56.23 348 P **P** **13 38 12.5 +0.7**
baz=166,SNR=12
833A Chaparral WMA, 56.37 328 P **P** **13 38 13.3 +0.4**
833A Chaparral WMA, 56.37 328 P **P** **13 38 13.9 +1.1**
baz=146,SNR=29
833A Chaparral WMA, 56.37 328 P **P** **13 38 13.7 +0.8**
baz=146,SNR=29
BG3 Lake Jocassee 56.42 347 P **P** **13 38 13.3 +0.2**
BG3 IAmb IAmb 13 38 14.6
comp=Z,18nm,0.8s
CASEE Lake Jocassee 56.42 347 P **P** **13 38 13.8 +0.7**
baz=164,SNR=7.9
X51A Calhoun 56.47 345 P **P** **13 38 13.1 -0.3**
X51A IAmb IAmb 13 38 14.4
comp=Z,34nm,0.9s
X51A Calhoun 56.47 345 P **P** **13 38 13.6 +0.1**
baz=162,SNR=11
X51A P **P** **13 38 13.6 +0.1**
baz=162,SNR=11
V58A Windy Hill, Pi 56.48 350 P **P** **13 38 13.3 -0.1**
V58A IAmb IAmb 13 38 14.7
comp=Z,48nm,1.2s
V58A Windy Hill, Pi 56.48 350 P **P** **13 38 13.9 +0.5**
baz=169,SNR=12
V58A P **P** **13 38 13.9 +0.5**
baz=169,SNR=12
FPAL Fort Paine 56.63 344 P **P** **13 38 13.9 -0.8**
FPAL IAmb IAmb 13 38 15.3
comp=Z,22nm,1.1s
W52A Murphy 56.74 346 P **P** **13 38 14.8 -0.6**
W52A IAmb IAmb 13 38 16.6
comp=Z,20nm,0.8s
W52A Murphy 56.74 346 P **P** **13 38 15.7 +0.3**
baz=163,SNR=8.2
U59A Littleton 56.84 352 P **P** **13 38 16.6 +0.6**
baz=170,SNR=6.3
U59A P **P** **13 38 16.6 +0.6**
baz=170,SNR=6.3
V55A Taylorsville 56.90 348 P **P** **13 38 16.5 0.0**
V55A Taylorsville 56.90 348 P **P** **13 38 17.4 +0.9**
baz=166,SNR=22
V55A P **P** **13 38 17.4 +0.9**
baz=166,SNR=22
X48A Hartselle 56.94 342 P **P** **13 38 16.2 -0.5**
X48A IAmb IAmb 13 38 17.6
comp=Z,40nm,0.8s
X48A Hartselle 56.94 342 P **P** **13 38 16.7 -0.1**
baz=160,SNR=26
V53A Saluda 57.05 347 P **P** **13 38 17.0 -0.6**
V53A IAmb IAmb 13 38 18.8
comp=Z,17nm,0.8s
V53A Saluda 57.05 347 P **P** **13 38 17.9 +0.3**
baz=165,SNR=14
V53A P **P** **13 38 17.9 +0.3**
baz=165,SNR=14
NATX Nacogdoches 57.14 334 P **P** **13 38 19.0 +0.8**
NATX IAmb IAmb 13 38 20.6
comp=Z,54nm,1.1s
NATX Nacogdoches 57.14 334 P **P** **13 38 19.7 +1.5**
baz=151,SNR=5.9
NATX Nacogdoches 57.14 334 P **P** **13 38 19.3 +1.1**
baz=151,SNR=5.9
Y45A Yeager Farm, C 57.16 340 P **P** **13 38 18.4 +0.1**
W50A Signal Mountai 57.18 344 P **P** **13 38 18.0 -0.5**
W50A IAmb IAmb 13 38 19.5
comp=Z,38nm,0.8s
W50A Signal Mountai 57.18 344 P **P** **13 38 18.6 +0.1**
baz=162,SNR=22
CPCT Cooper Cave 57.23 345 P **P** **13 38 18.4 -0.4**
CPCT IAmb IAmb 13 38 19.8
comp=Z,25nm,0.9s
U56A King 57.23 349 P **P** **13 38 19.3 +0.5**
U56A King 57.23 349 P **P** **13 38 19.9 +1.2**
baz=168,SNR=14
U56A P **P** **13 38 19.9 +1.2**
baz=168,SNR=14
TKL Tuckaleechee C 57.25 346 P **P** **13 38 18.5 -0.5**
TKL IAmb IAmb 13 38 19.8
comp=Z,31nm,0.8s
TKL Tuckaleechee C 57.25 346 P **P** **13 38 18.5 -0.5**
TKL pmax pmax
comp=Z,31nm,0.9s
TKL Tuckaleechee C 57.25 346 P **P** **13 38 19.0 0.0**
baz=164,SNR=15
SWET Sewanee 57.36 344 P **P** **13 38 19.3 -0.5**
V52A Sevierville 57.38 346 P **P** **13 38 19.7 -0.2**
V52A Sevierville 57.38 346 P **P** **13 38 19.9 +0.1**
baz=164,SNR=26
T59A Double "B" Far 57.41 352 P **P** **13 38 19.8 -0.3**
T59A IAmb IAmb 13 38 21.3
comp=Z,38nm,0.9s
T59A Double "B" Far 57.41 352 P **P** **13 38 20.3 +0.3**
baz=171,SNR=16
T59A P **P** **13 38 20.3 +0.3**
baz=171,SNR=16
V51A Loudon 57.52 345 P **P** **13 38 20.3 -0.5**
V51A IAmb IAmb 13 38 21.7
comp=Z,21nm,0.8s
V51A Loudon 57.52 345 P **P** **13 38 20.7 -0.1**
baz=163,SNR=12
435B Jarrell 57.56 331 P **P** **13 38 21.6 +0.4**
435B IAmb IAmb 13 38 22.8
comp=Z,18nm,0.8s
435B Jarrell 57.56 331 P **P** **13 38 21.6 +0.4**
baz=148
U54A Nelsons Funny 57.67 348 P **P** **13 38 21.8 -0.1**
U54A Nelsons Funny 57.67 348 P **P** **13 38 22.3 +0.4**
baz=166,SNR=18
U54A P **P** **13 38 22.3 +0.4**
baz=166,SNR=18
T57A Hurt 57.68 351 P **P** **13 38 21.6 -0.3**
T57A IAmb IAmb 13 38 23.5
comp=Z,48nm,1.2s
T57A Hurt 57.68 351 P **P** **13 38 22.6 +0.7**
baz=169,SNR=15
T57A P **P** **13 38 22.6 +0.7**
baz=169,SNR=15
OXF Oxford 57.71 340 P **P** **13 38 21.1 -1.0**
OXF Oxford 57.71 340 P **P** **13 38 21.1 -1.0**
OXF pmax pmax
comp=Z,58nm,0.7s
OXF Oxford 57.71 340 P **P** **13 38 21.2 -0.9**
baz=158,SNR=8.4
OXF Oxford 57.71 340 P **P** **13 38 21.4 -0.8**
baz=158,SNR=8.4
PLAL Pickwick Lake 57.73 342 P **P** **13 38 21.2 -1.2**
PLAL IAmb IAmb 13 38 22.6
comp=Z,36nm,0.9s
237A Washetta, Mont 57.83 333 P **P** **13 38 24.0 +1.0**
TZTN Tazewell 58.05 346 P **P** **13 38 24.5 0.0**
TZTN IAmb IAmb 13 38 25.5
comp=Z,19nm,1.0s
TZTN Tazewell 58.05 346 P **P** **13 38 24.4 0.0**
baz=164,SNR=6.2
TZTN Tazewell 58.05 346 P **P** **13 38 24.4 -0.2**
baz=164,SNR=6.2
BLA Blacksburg 58.08 349 P **P** **13 38 24.7 -0.1**
BLA IAmb IAmb 13 38 26.2
comp=Z,23nm,0.7s
BLA Blacksburg 58.08 349 P **P** **13 38 24.7 -0.1**
BLA pmax pmax
comp=Z,23nm,0.7s
BLA Blacksburg 58.08 349 P **P** **13 38 25.8 +1.0**
baz=168,SNR=13
BLA Blacksburg 58.08 349 P **P** **13 38 25.7 +1.0**
baz=168,SNR=13
V48A Smith Brothers 58.09 343 P **P** **13 38 24.2 -0.6**
V48A Smith Brothers 58.09 343 P **P** **13 38 24.7 -0.1**
baz=160,SNR=30
W45A Hickory Valley 58.23 341 P **P** **13 38 25.0 -0.8**
W45A Hickory Valley 58.23 341 P **P** **13 38 25.2 -0.6**
baz=158,SNR=12
WLAR White Oak Lake 58.24 337 P **P** **13 38 26.6 +0.7**
CLTN Cedars of Leba 58.29 344 P **P** **13 38 25.4 -0.8**
JCT Junction City 58.35 329 P **P** **13 38 26.7 -0.1**
JCT IAmb IAmb 13 38 28.2
comp=Z,20nm,0.8s
JCT Junction City 58.35 329 P **P** **13 38 26.7 -0.1**
JCT pmax pmax
comp=Z,20nm,0.9s
JCT Junction City 58.35 329 P **P** **13 38 27.2 +0.4**
baz=146,SNR=15
JCT Junction City 58.35 329 P **P** **13 38 27.1 +0.3**
baz=146,SNR=15
S57A Dark Hollow, R 58.38 351 P **P** **13 38 26.7 -0.1**
S57A IAmb IAmb 13 38 28.6
comp=Z,36nm,1.1s
S57A Dark Hollow, R 58.38 351 P **P** **13 38 27.5 +0.7**
baz=169,SNR=12
S57A P **P** **13 38 27.5 +0.7**
baz=169,SNR=12
R58B Mineral 58.43 352 P **P** **13 38 27.1 0.0**
R58B IAmb IAmb 13 38 28.8
comp=Z,14nm,0.8s
R58B Mineral 58.43 352 P **P** **13 38 27.9 +0.7**
baz=170,SNR=9.0
R58B P **P** **13 38 27.9 +0.7**
baz=170,SNR=9.0
WHTX Lake Whitney, 58.53 332 P **P** **13 38 27.8 -0.1**
WHTX IAmb IAmb 13 38 29.1
comp=Z,22nm,0.7s
WHTX Lake Whitney, 58.53 332 P **P** **13 38 28.8 +0.8**
baz=149,SNR=5.8
WHTX Lake Whitney, 58.53 332 P **P** **13 38 28.4 +0.5**
baz=149,SNR=5.8
U49A Red Boiling Sp 58.55 344 P **P** **13 38 27.3 -0.7**
U49A IAmb IAmb 13 38 28.5
comp=Z,28nm,0.7s
U49A Red Boiling Sp 58.55 344 P **P** **13 38 27.8 -0.2**
baz=162,SNR=23
Z38A Mt. Pleasant 58.58 335 P **P** **13 38 28.8 +0.5**
Z38A Mt. Pleasant 58.58 335 P **P** **13 38 29.3 +1.0**
baz=152,SNR=6.8
HPIG 58.68 322 P **P** **13 38 30.0 +0.7**
HPIG IAmb IAmb 13 38 31.6
comp=Z,44nm,1.3s
WVT Waverly 58.73 342 P **P** **13 38 28.2 -1.1**
WVT Waverly 58.73 342 P **P** **13 38 28.2 -1.1**
WVT pmax pmax
comp=Z,61nm,0.7s
WVT Waverly 58.73 342 P **P** **13 38 28.7 -0.6**
baz=160,SNR=59
WVT Waverly 58.73 342 P **P** **13 38 28.8 -0.6**
baz=160
WVT Waverly 58.73 342 P **P** **13 38 28.5 -0.8**
WVT pP **pP** **13 38 54.8 -0.4**
WVT sP **sP** **13 39 04.9 -1.9**
T50A Nancy 58.80 345 P **P** **13 38 28.8 -0.9**
T50A IAmb IAmb 13 38 30.4
comp=Z,21nm,0.8s
S54A Dingess, Beckl 58.81 349 P **P** **13 38 29.7 -0.1**
S54A Dingess, Beckl 58.81 349 P **P** **13 38 30.5 +0.6**
baz=167,SNR=19
S54A P **P** **13 38 30.5 +0.6**
baz=167,SNR=19
UALR University of 58.93 338 P **P** **13 38 30.2 -0.4**
UALR IAmb IAmb 13 38 31.6
comp=Z,19nm,0.8s
SLBS Sierra La Lagu 58.97 316 P **P** **13 38 33.1 +1.8**
SLBS Sierra La Lagu 58.97 316 P **P** **13 38 33.5 +2.2**
SLBS pP **pP** **13 38 58.2 +1.4**
SLBS sP **sP** **13 39 08.5 +0.2**
HALT Halls 58.98 341 P **P** **13 38 30.3 -0.7**
R55A Marlinton 59.08 350 P **P** **13 38 32.6 +0.9**
R55A Marlinton 59.08 350 P **P** **13 38 33.0 +1.3**
baz=168,SNR=20
R55A P **P** **13 38 33.0 +1.3**
baz=168,SNR=20
S51A Beattyville 59.11 347 P **P** **13 38 31.4 -0.4**
S51A IAmb IAmb 13 39 21.7
comp=Z,36nm,1.3s
S51A Beattyville 59.11 347 P **P** **13 38 31.7 -0.2**
baz=164,SNR=8.0
S51A P **P** **13 38 31.7 -0.2**
baz=164,SNR=8.0
MIAR Mount Ida 59.17 337 P **P** **13 38 32.3 0.0**
MIAR Mount Ida 59.17 337 P **P** **13 38 32.3 0.0**
MIAR pmax pmax
comp=Z,69nm,1.4s
MIAR Mount Ida 59.17 337 P **P** **13 38 32.7 +0.4**
baz=153,SNR=29
MIAR Mount Ida 59.17 337 P **P** **13 38 32.7 +0.4**
baz=153,SNR=29
LNXT Lenox 59.20 341 P **P** **13 38 32.2 -0.3**
UTMT University of 59.23 342 P **P** **13 38 32.5 -0.2**
GLAT Glass 59.29 341 P **P** **13 38 32.7 -0.4**
T47A Sharon Grove 59.34 343 P **P** **13 38 32.7 -0.8**
T47A Sharon Grove 59.34 343 P **P** **13 38 33.3 -0.1**
baz=160,SNR=46
WHAR Wooly Hollow 59.38 338 P **P** **13 38 33.2 -0.5**
WHAR IAmb IAmb 13 38 34.6
comp=Z,22nm,0.9s
TX32 Lajitas Array 59.41 325 P **P** **13 38 34.3 +0.1**
TXAR Lajitas Array 59.41 325 P **P** **13 38 34.9 +0.7**
comp=Z,4.4nm,0.6s,baz=153,slow=8.2,SNR=63
TXAR PKPPKP **P'P'df** **14 08 02.2 -0.6**
comp=Z,0.3nm,0.9s,baz=262,slow=1.8,SNR=2.2
comp=Z,4.4nm,0.6s
TXAR Lajitas Array 59.41 325 P **P** **13 38 34.3 +0.1**
TXAR Lajitas Array 59.41 325 P **P** **13 38 34.3 +0.1**
TX31 Lajitas Ar. Si 59.41 325 P **P** **13 38 34.1 0.0**
TX31 IAmb IAmb 13 38 35.4
comp=Z,20nm,0.8s
TX31 Lajitas Ar. Si 59.41 325 P **P** **13 38 34.9 +0.7**
baz=142,SNR=24
R53A Hurricane 59.44 348 P **P** **13 38 33.7 -0.4**
R53A IAmb IAmb 13 38 35.5
comp=Z,28nm,1.1s
R53A Hurricane 59.44 348 P **P** **13 38 34.4 +0.2**
baz=166,SNR=6.5
R53A P **P** **13 38 34.4 +0.2**
baz=166,SNR=6.5
HICK Hickman 59.53 341 P **P** **13 38 33.9 -0.8**
PVMO Portageville 59.55 341 P **P** **13 38 35.0 +0.1**
Z35A Perchaven, San 59.58 333 P **P** **13 38 35.3 +0.1**
Z35A Perchaven, San 59.58 333 P **P** **13 38 36.1 +0.9**
baz=149
Q56A Snyder Ridge, 59.67 351 P **P** **13 38 36.3 +0.6**
Q56A Snyder Ridge, 59.67 351 P **P** **13 38 37.0 +1.3**
baz=169,SNR=22
Q56A P **P** **13 38 37.0 +1.3**
baz=169,SNR=22
LCAR Lake Charles 59.70 339 P **P** **13 38 35.1 -0.8**
LCAR IAmb IAmb 13 38 36.4
comp=Z,27nm,0.7s
LCAR Lake Charles 59.70 339 P **P** **13 38 35.6 -0.3**
baz=156,SNR=8.9
SDMD Soldier's Deli 59.73 353 P **P** **13 38 35.8 -0.3**
T45B Paducah 59.80 342 P **P** **13 38 36.2 -0.4**
baz=159,SNR=13
PARMO Parma 59.80 341 P **P** **13 38 36.2 -0.4**
T45A Paducah 59.80 342 P **P** **13 38 36.1 -0.5**
FCAR Ozark Folk Cen 59.86 339 P **P** **13 38 36.3 -0.8**
FCAR IAmb IAmb 13 38 37.6
comp=Z,28nm,1.0s
Q54A Coxs Mills 59.88 350 P **P** **13 38 37.0 -0.1**
Q54A Coxs Mills 59.88 350 P **P** **13 38 37.7 +0.6**
baz=167,SNR=15
Q54A P **P** **13 38 37.7 +0.6**
baz=167,SNR=15
R50A Paris 59.89 346 P **P** **13 38 36.6 -0.6**
R50A IAmb IAmb 13 38 38.0
comp=Z,40nm,1.2s
R50A Paris 59.89 346 P **P** **13 38 37.1 -0.1**
baz=164,SNR=6.5
R50A P **P** **13 38 37.1 -0.1**
baz=164,SNR=6.5
X37A Clayton 59.90 335 P **P** **13 38 37.5 +0.1**
X37A Clayton 59.90 335 P **P** **13 38 38.3 +1.0**
baz=152,SNR=26
P57A Homestead Farm 59.95 352 P **P** **13 38 38.3 +0.7**
P57A IAmb IAmb 13 38 39.7
comp=Z,23nm,0.9s
P57A Homestead Farm 59.95 352 P **P** **13 38 38.8 +1.2**
baz=170,SNR=13
P57A P **P** **13 38 38.8 +1.2**
baz=170,SNR=13
ABTX Abilene, Hawle 60.05 330 P **P** **13 38 38.3 -0.2**
ABTX IAmb IAmb 13 38 40.0
comp=Z,37nm,0.9s
ABTX Abilene, Hawle 60.05 330 P **P** **13 38 39.0 +0.5**
baz=147,SNR=14
ABTX Abilene, Hawle 60.05 330 P **P** **13 38 38.6 +0.1**
baz=147,SNR=14
BELA Belgrano 2 60.06 172 P **P** **13 38 39.0 +1.0**
BELA IAmb IAmb 13 38 41.0
comp=Z,32nm,1.2s
R49A Shelbyville 60.09 346 P **P** **13 38 37.8 -0.7**
R49A IAmb IAmb 13 38 39.1
comp=Z,19nm,0.8s
R49A Shelbyville 60.09 346 P **P** **13 38 38.0 -0.5**
baz=163,SNR=7.6
R49A P **P** **13 38 38.0 -0.5**
baz=163,SNR=7.6
PBMO Poplar Bluff 60.11 340 P **P** **13 38 38.0 -0.8**
PBMO Poplar Bluff 60.11 340 P **P** **13 38 38.6 -0.1**
baz=157,SNR=39
Q52A Bidwell 60.12 348 P **P** **13 38 38.3 -0.4**
Q52A IAmb IAmb 13 38 39.8
comp=Z,22nm,0.8s
Q52A Bidwell 60.12 348 P **P** **13 38 39.0 +0.2**
baz=166,SNR=7.8
Q52A P **P** **13 38 39.0 +0.2**
baz=166,SNR=7.8
LOOK Love County 60.12 333 P **P** **13 38 39.3 +0.4**
LOOK IAmb IAmb 13 39 18.6
comp=Z,26nm,0.8s
WUPA West Chester U 60.12 354 P **P** **13 38 38.9 +0.1**
MVL Millersville 60.26 354 P **P** **13 38 40.0 +0.3**
MVL IAmb IAmb 13 39 27.4
comp=Z,47nm,1.5s
TUPA Temple Univers 60.32 355 P **P** **13 38 40.6 +0.5**
baz=174
CGM3 Cape Girardeau 60.35 341 P **P** **13 38 39.8 -0.6**
CGM3 IAmb IAmb 13 38 41.1
comp=Z,37nm,0.8s
MCWV Mont Chateau 60.38 351 P **P** **13 38 41.0 +0.5**
MCWV Mont Chateau 60.38 351 P **P** **13 38 41.5 +1.0**
baz=168,SNR=25
MCWV Mont Chateau 60.38 351 P **P** **13 38 41.7 +1.2**
baz=168,SNR=25
Q51A Peebles 60.39 347 P **P** **13 38 40.1 -0.5**
Q51A IAmb IAmb 13 38 41.5
comp=Z,23nm,0.8s
Q51A Peebles 60.39 347 P **P** **13 38 40.5 -0.1**
baz=165,SNR=7.0
Q51A P **P** **13 38 40.5 -0.1**
baz=165,SNR=7.0
USIN University of 60.41 343 P **P** **13 38 40.0 -0.7**
USIN IAmb IAmb 13 38 41.0
comp=Z,35nm,0.8s
P53A Whipple 60.46 349 P **P** **13 38 41.2 +0.1**
P53A Whipple 60.46 349 P **P** **13 38 41.8 +0.7**
baz=167,SNR=23
P53A P **P** **13 38 41.8 +0.7**
baz=167,SNR=23
S44A Carbondale 60.60 342 P **P** **13 38 41.5 -0.5**
S44A Carbondale 60.60 342 P **P** **13 38 42.0 -0.1**
baz=158,SNR=20
SIUC Southern Illin 60.61 342 P **P** **13 38 41.5 -0.6**
P52A Corning 60.74 349 P **P** **13 38 42.4 -0.6**
P52A IAmb IAmb 13 38 43.9
comp=Z,41nm,0.9s
P52A Corning 60.74 349 P **P** **13 38 43.0 +0.1**
baz=166,SNR=13
P51A Williamsport 60.77 348 P **P** **13 38 42.7 -0.5**
P51A IAmb IAmb 13 38 43.4
comp=Z,20nm,0.7s
P51A Williamsport 60.77 348 P **P** **13 38 43.1 -0.1**
baz=165
P51A P **P** **13 38 43.1 -0.1**
baz=165
HHAR Hobbs 60.85 337 P **P** **13 38 43.5 -0.3**
HHAR IAmb IAmb 13 38 44.9
comp=Z,56nm,1.2s
HHAR Hobbs 60.85 337 P **P** **13 38 43.9 +0.1**
baz=153
O54A Avella 60.97 350 P **P** **13 38 44.8 +0.2**
O54A IAmb IAmb 13 38 45.9
comp=Z,33nm,0.8s
O54A Avella 60.97 350 P **P** **13 38 45.2 +0.6**
baz=168,SNR=14
O54A P **P** **13 38 45.2 +0.6**
baz=168,SNR=14
MGMO Mountain Grove 61.05 339 P **P** **13 38 44.6 -0.5**
MGMO IAmb IAmb 13 38 46.1
comp=Z,30nm,0.8s
SSPA Standing Stone 61.07 352 P **P** **13 38 45.2 0.0**
SSPA IAmb IAmb 13 38 46.9
comp=Z,37nm,1.4s
SSPA Standing Stone 61.07 352 P **P** **13 38 46.0 +0.8**
baz=171,SNR=9.6
SSPA Standing Stone 61.07 352 P **P** **13 38 45.9 +0.7**
baz=171
SSPA Standing Stone 61.07 352 P **P** **13 38 45.7 +0.5**
N58A Sunbury 61.13 354 P **P** **13 38 45.9 +0.3**
N58A IAmb IAmb 13 38 47.3
comp=Z,23nm,0.9s
N58A Sunbury 61.13 354 P **P** **13 38 46.2 +0.6**
baz=172,SNR=8.1
N58A P **P** **13 38 46.2 +0.6**
baz=172,SNR=8.1
RLO Rose Lookout 61.15 336 P **P** **13 38 45.8 -0.1**
RLO IAmb IAmb 13 38 47.2
comp=Z,40nm,0.8s
O52A Adamsville 61.16 349 P **P** **13 38 45.8 0.0**
O52A Adamsville 61.16 349 P **P** **13 38 46.1 +0.3**
baz=166,SNR=12
O52A P **P** **13 38 46.1 +0.3**
baz=166,SNR=12
U38A Gravette 61.16 337 **P** **13 38 45.4 -0.5**
U38A Gravette 61.16 337 P **P** **13 38 46.0 +0.1**
baz=153,SNR=9.9
P49A Miami Univ. Ec 61.17 346 P **P** **13 38 45.0 -0.9**
P49A Miami Univ. Ec 61.17 346 P **P** **13 38 45.4 -0.5**
baz=163,SNR=15
P49A Miami Univ. Ec 61.17 346 P **P** **13 38 45.2 -0.7**
baz=163,SNR=15
O53A New Philadelph 61.18 350 P **P** **13 38 46.1 +0.2**
O53A IAmb IAmb 13 38 47.3
comp=Z,45nm,0.9s
O53A New Philadelph 61.18 350 P **P** **13 38 45.9 0.0**
baz=167,SNR=16
UPAO U. Pittsburgh 61.21 351 P **P** **13 38 47.2 +1.1**
baz=168
FVM French Village 61.22 341 P **P** **13 38 45.9 -0.4**
FVM French Village 61.22 341 P **P** **13 38 45.9 -0.4**
FVM pmax pmax
comp=Z,101nm,1.0s
FVM French Village 61.22 341 P **P** **13 38 46.2 -0.1**
baz=157,SNR=35
TUL1 Leonard 61.22 336 **P** **13 38 45.8 -0.5**
TUL1 IAmb IAmb 13 38 47.6
comp=Z,34nm,1.0s
TUL1 Leonard 61.22 336 P **P** **13 38 46.5 +0.1**
baz=151,SNR=8.5
TUL1 Leonard 61.22 336 P **P** **13 38 46.6 +0.3**
baz=151,SNR=8.5
OLIL Olney 61.25 343 P **P** **13 38 45.2 -1.2**
OLIL IAmb IAmb 13 38 46.5
comp=Z,35nm,0.8s
OLIL Olney 61.25 343 P **P** **13 38 45.7 -0.7**
baz=160,SNR=9.2
BLO Bloomington 61.25 345 P **P** **13 38 45.6 -0.8**
BLO Bloomington 61.25 345 P **P** **13 38 45.6 -0.8**
BLO pmax pmax
comp=Z,70nm,0.6s
P48A Milroy 61.26 346 P **P** **13 38 45.2 -1.3**
P48A IAmb IAmb 13 38 46.1
comp=Z,28nm,0.6s
P48A Milroy 61.26 346 P **P** **13 38 45.8 -0.7**
baz=163,SNR=19
P48A P **P** **13 38 45.8 -0.7**
baz=163,SNR=19
FNO Franklin 61.30 334 **P** **13 38 46.6 -0.3**
VNA3 Neumayer Olymp 61.39 161 P **P** **13 38 48.5 +1.5**
DEOK Depew 61.44 335 **P** **13 38 47.5 -0.2**
DEOK IAmb IAmb 13 38 49.0
comp=Z,48nm,0.7s
WMOK Wichita Mounta 61.44 332 **P** **13 38 46.6 -1.3**
WMOK Wichita Mounta 61.44 332 P **P** **13 38 46.6 -1.3**
WMOK pmax pmax
comp=Z,9.0nm,0.8s
WMOK Wichita Mounta 61.44 332 P **P** **13 38 47.2 -0.6**
baz=148
ACSO Alum Creek Sta 61.48 348 P **P** **13 38 47.4 -0.6**
ACSO Alum Creek Sta 61.48 348 P **P** **13 38 48.0 +0.1**
baz=165,SNR=20
ACSO Alum Creek Sta 61.48 348 P **P** **13 38 47.9 -0.1**
baz=165,SNR=20
PSWB Penn State Wil 61.52 354 P **P** **13 38 49.4 +1.1**

baz=173
CCM Cathedral Cave 61.54 340 P P 13 38 47.9 -0.5
CCM IAmb IAmb 13 38 49.3
comp=Z,53nm,1.1s
CCM Cathedral Cave 61.54 340 P P 13 38 47.9 -0.5
CCM pmax pmax
comp=Z,53nm,1.1s
CCM Cathedral Cave 61.54 340 P P 13 38 48.3 -0.1
baz=156,SNR=29
CCM Cathedral Cave 61.54 340 P P 13 38 48.2 -0.2
baz=156
CCM Cathedral Cave 61.54 340 P P 13 38 48.2 -0.2
CCM pP pP 13 39 15.2 +0.8
OK025 Westminster Rd 61.55 334 P 13 38 47.7 -0.9
OK025 IAmb IAmb 13 38 49.3
comp=Z,28nm,0.9s
VNA1 Neumayer--Stat 61.59 161 P P 13 38 50.2 +1.9
OK030 Cody Creek RV 61.63 335 P 13 38 48.6 -0.4
OK030 IAmb IAmb 13 38 49.7
comp=Z,27nm,0.7s
N53A Lisbon 61.66 350 P P 13 38 48.6 -0.5
N53A Lisbon 61.66 350 P P 13 38 49.7 +0.5
baz=168,SNR=7.0
N53A P P 13 38 49.7 +0.5
baz=168,SNR=7.0
Q44A Meyer Farm, Va 61.66 343 P P 13 38 48.2 -0.9
Q44A Meyer Farm, Va 61.66 343 P P 13 38 48.5 -0.7
baz=159,SNR=17
PSDB Penn State Uni 61.66 352 P P 13 38 50.0 +0.8
baz=170
M57A Sunshine Farm, 61.67 353 P P 13 38 49.3 +0.1
M57A IAmb IAmb 13 38 51.2
comp=Z,40nm,1.1s
M57A Sunshine Farm, 61.67 353 P P 13 38 50.0 +0.8
baz=172,SNR=7.6
M57A P P 13 38 50.0 +0.8
baz=172,SNR=7.6
OK031 S. Brethren Rd 61.67 335 P 13 38 49.1 -0.2
OK031 IAmb IAmb 13 38 50.4
comp=Z,37nm,0.7s
O49A Covington 61.72 347 P P 13 38 48.8 -0.7
O49A IAmb IAmb 13 38 50.2
comp=Z,50nm,1.1s
O49A Covington 61.72 347 P P 13 38 49.1 -0.4
baz=164,SNR=14
O49A P P 13 38 49.1 -0.4
baz=164,SNR=14
BCOK Bluff Creek, N 61.73 334 P 13 38 49.2 -0.6
BCOK IAmb IAmb 13 38 50.6
comp=Z,20nm,0.8s
KSPA Keystone Colle 61.75 354 P P 13 38 49.9 +0.2
KSPA IAmb IAmb 13 38 51.5
comp=Z,43nm,1.6s
KSPA Keystone Colle 61.75 354 P P 13 38 50.4 +0.6
baz=173
OK029 Liberty Lake 61.79 334 P 13 38 49.7 -0.4
OK029 IAmb IAmb 13 38 50.9
comp=Z,29nm,0.7s
QUOK Quay 61.81 335 P 13 38 50.1 -0.1
QUOK IAmb IAmb 13 38 51.1
comp=Z,34nm,0.7s
NPNY Mohonk Preserv 61.82 356 P P 13 38 50.9 +0.7
baz=175
P46A Rosedale 61.84 344 P P 13 38 49.2 -1.2
P46A Rosedale 61.84 344 P P 13 38 49.5 -0.8
baz=161,SNR=23
BRYW Bryant College 61.85 358 P P 13 38 50.0 -0.4
BRYW IAmb IAmb 13 39 18.2
comp=Z,31nm,0.7s
S39A Bolivar 61.90 338 P P 13 38 50.2 -0.6
S39A Bolivar 61.90 338 P P 13 38 51.0 +0.2
baz=154,SNR=36
O48B Farmland 61.96 346 P P 13 38 50.7 -0.5
baz=163,SNR=11
O48B Farmland 61.96 346 P P 13 38 50.7 -0.5
baz=163,SNR=11
VNA2 Neumayer--Watz 61.96 161 P P 13 38 52.3 +1.4
baz=288,slow=8.0
M55A Ridgway 62.00 352 P P 13 38 51.7 +0.2
M55A IAmb IAmb 13 38 53.1
comp=Z,41nm,0.8s
M55A Ridgway 62.00 352 P P 13 38 52.0 +0.6
baz=170,SNR=12
M55A P P 13 38 52.0 +0.6
baz=170,SNR=12
N51A Ashland 62.03 349 P P 13 38 51.2 -0.5
N51A IAmb IAmb 13 38 52.0
comp=Z,32nm,0.6s
N51A Ashland 62.03 349 P P 13 38 51.7 +0.1
baz=166,SNR=5.7
N51A P P 13 38 51.7 +0.1
baz=166,SNR=5.7
R40A Maddies Statio 62.09 340 P P 13 38 51.4 -0.7
R40A IAmb IAmb 13 38 52.7
comp=Z,31nm,0.8s
R40A Maddies Statio 62.09 340 P P 13 38 51.9 -0.1
baz=155,SNR=32
MNTX Cornudas Mount 62.17 325 P P 13 38 52.3 -0.5
MNTX Cornudas Mount 62.17 325 P P 13 38 52.9 +0.1
baz=141,SNR=24
MNTX Cornudas Mount 62.17 325 P P 13 38 52.8 -0.1
baz=141,SNR=24
M53A WI Miller and 62.25 350 P P 13 38 53.4 +0.3
M53A WI Miller and 62.25 350 P P 13 38 53.5 +0.4
baz=168,SNR=7.1
L59A Walton 62.32 355 P P 13 38 54.1 +0.6
L59A IAmb IAmb 13 38 55.5
comp=Z,27nm,1.0s
L59A Walton 62.32 355 P P 13 38 54.5 +0.9
baz=174,SNR=7.2
L59A P P 13 38 54.5 +0.9
baz=174,SNR=7.2
BBTS Babate 62.32 60 LR LR 14 05 54.1
comp=Z,82nm,18.2s,baz=246,slow=36
ALLY Alegheny Colle 62.37 351 P P 13 38 54.2 +0.3
ALLY Alegheny Colle 62.37 351 P P 13 38 54.6 +0.7
baz=168,SNR=16
T35A Sooner Cattle 62.38 336 P P 13 38 54.2 +0.1
T35A IAmb IAmb 13 38 55.6
comp=Z,58nm,1.4s
T35B Sooner Cattle 62.38 336 P P 13 38 54.4 +0.3
baz=151,SNR=9.9
N49A Columbus Grove 62.39 347 P P 13 38 53.4 -0.6
N49A Columbus Grove 62.39 347 P P 13 38 54.0 0.0
baz=164,SNR=31
N49A P P 13 38 54.0 0.0
baz=164,SNR=31
BINY Binghamton 62.41 354 P P 13 38 54.1 0.0
BINY IAmb IAmb 13 38 56.0
comp=Z,55nm,1.1s
BINY Binghamton 62.41 354 P P 13 38 55.0 +0.8
baz=173,SNR=12
BINY Binghamton 62.41 354 P P 13 38 55.1 +0.9
baz=173,SNR=12
L61B Northampton 62.43 357 P P 13 38 55.4 +1.2
baz=176
HRV Adam Dziewonsk 62.44 358 P P 13 38 54.5 +0.2
HRV IAmb IAmb 13 38 55.9
comp=Z,22nm,0.9s
HRV Adam Dziewonsk 62.44 358 P P 13 38 54.5 +0.2
HRV pmax pmax
comp=Z,22nm,1.0s
HRV Adam Dziewonsk 62.44 358 P P 13 38 54.9 +0.6
baz=178
HRV Adam Dziewonsk 62.44 358 P P 13 38 55.0 +0.7
HRV pP pP 13 39 20.9 0.0
HRV sP PcP 13 39 33.9 +1.2
M52A Chesterland 62.46 350 P P 13 38 54.5 0.0
M52A IAmb IAmb 13 38 55.7
comp=Z,55nm,0.9s
P43A Skaggs, Pawnee 62.49 342 P P 13 38 53.9 -0.8
P43A Skaggs, Pawnee 62.49 342 P P 13 38 54.3 -0.4
baz=158,SNR=34
L56A Greenwood 62.51 353 P P 13 38 54.9 0.0
L56A IAmb IAmb 13 38 56.4
comp=Z,36nm,0.9s
L56A Greenwood 62.51 353 P P 13 38 55.5 +0.6
baz=171,SNR=11
L56A P P 13 38 55.5 +0.6
baz=171,SNR=11
SFIN Lafayette 62.53 345 P P 13 38 53.8 -1.2
SFIN Lafayette 62.53 345 P P 13 38 54.0 -1.0
baz=161,SNR=41
SFIN Lafayette 62.53 345 P P 13 38 54.1 -0.9
baz=161,SNR=41
CROK Carrier 62.61 334 P 13 38 55.7 0.0
CROK IAmb IAmb 13 38 56.7
comp=Z,31nm,0.9s
M50A Fremont 62.63 348 P P 13 38 55.0 -0.6
M50A IAmb IAmb 13 38 56.0
comp=Z,32nm,0.8s
MSTX Muleshoe 62.64 329 P P 13 38 55.8 -0.2
MSTX IAmb IAmb 13 38 57.7
comp=Z,47nm,0.9s
MSTX Muleshoe 62.64 329 P P 13 38 56.3 +0.3
baz=144,SNR=18
MSTX Muleshoe 62.64 329 P P 13 38 56.0 0.0
baz=144,SNR=18
O44A Mansfield 62.67 343 P P 13 38 54.4 -1.5
O44A Mansfield 62.67 343 P P 13 38 54.7 -1.2
baz=160,SNR=9.2
N47A Urbana 62.68 346 P P 13 38 55.0 -0.9
N47A Urbana 62.68 346 P P 13 38 55.2 -0.8
baz=163,SNR=18
N47A P P 13 38 55.2 -0.8
baz=163,SNR=18
TRY Troy 62.76 356 P P 13 38 57.0 +0.6
TRY IAmb IAmb 13 38 58.4
comp=Z,38nm,0.9s
TRY Troy 62.76 356 P P 13 38 57.3 +0.9
baz=175,SNR=9.2
HCNY Howe Caverns 62.77 356 P P 13 38 57.6 +1.0
baz=174,SNR=5.1
ERPA Erie 62.81 351 P P 13 38 56.9 +0.2
ERPA Erie 62.81 351 P P 13 38 57.5 +0.7
baz=169,SNR=8.3
ERPA Erie 62.81 351 P P 13 38 57.5 +0.7
baz=169,SNR=8.3
KAN13 South Haven SW 62.85 335 P 13 38 57.6 +0.4
KAN13 IAmb IAmb 13 38 58.7
comp=Z,60nm,1.1s
GC02 Grant County # 62.86 334 P P 13 38 57.3 +0.1
AMTX Amarillo 62.87 330 P P 13 38 56.7 -0.8
AMTX Amarillo 62.87 330 P P 13 38 57.3 -0.1
baz=146
WVNY West Valley, N 62.90 352 P P 13 38 57.5 +0.1
WVNY IAmb IAmb 13 38 59.2
comp=Z,47nm,0.8s
WVNY West Valley, N 62.90 352 P P 13 38 58.1 +0.7
baz=170,SNR=9.7
U32A Winter Ranch, 62.93 333 P 13 38 57.3 -0.4
U32A IAmb IAmb 13 38 59.1
comp=Z,32nm,1.1s
U32A Winter Ranch, 62.93 333 P P 13 38 58.0 +0.2
baz=148
OK032 Salt Plains WL 62.96 334 P 13 38 57.8 -0.1
OK032 IAmb IAmb 13 38 58.6
comp=Z,18nm,0.7s
K57A Scipio Center 62.99 354 P P 13 38 57.4 -0.5
K57A IAmb IAmb 13 38 59.3
comp=Z,39nm,0.8s
K57A Scipio Center 62.99 354 P P 13 38 58.3 +0.3
baz=172,SNR=7.4
KAN14 Manchester OK 62.99 334 P 13 38 57.8 -0.3
KS20 Mayfield South 63.06 335 P 13 38 58.4 -0.2
KS20 IAmb IAmb 13 38 60.0
comp=Z,41nm,1.1s
KAN01 Argonia South 63.08 335 P 13 38 58.6 -0.1
KAN01 IAmb IAmb 13 39 00.2
comp=Z,46nm,1.1s
KAN05 Bluff City Nor 63.09 335 P P 13 38 58.6 -0.1
KAN05 IAmb IAmb 13 39 00.2
comp=Z,32nm,1.1s
MMNY Mt. Morris Dam 63.14 353 P P 13 38 59.2 +0.2
P40A Paris 63.14 340 P P 13 38 58.7 -0.3
P40A Paris 63.14 340 P P 13 38 59.0 0.0
baz=156,SNR=18
KAN10 Anthony SW Sta 63.19 334 P P 13 38 59.5 +0.1
KAN08 Anthony NE Sta 63.23 335 P P 13 39 00.2 +0.5
KAN08 IAmb IAmb 13 39 01.1
comp=Z,48nm,1.0s
KAN16 Harper SW Stat 63.27 334 P P 13 39 00.1 +0.2
KAN16 IAmb IAmb 13 39 01.3
comp=Z,32nm,0.6s
HDIL Hopedale 63.27 343 P P 13 38 58.8 -1.1
HDIL Hopedale 63.27 343 P P 13 38 59.4 -0.5
baz=159,SNR=15
HDIL Hopedale 63.27 343 P P 13 38 59.1 -0.8
baz=159,SNR=15
HSIG 63.37 319 P P 13 39 01.9 +1.1
HSIG IAmb IAmb 13 39 03.5
comp=Z,52nm,1.5s
ACCN Adirondack Com 63.41 356 P P 13 39 01.3 +0.6
L48A N Adams 63.42 347 P P 13 39 00.1 -0.8
L48A N Adams 63.42 347 P P 13 39 00.6 -0.3
baz=164,SNR=18
L48A P P 13 39 00.6 -0.3
baz=164,SNR=18
J58A Remsen 63.50 355 P P 13 39 01.4 +0.1
J58A IAmb IAmb 13 39 03.1
comp=Z,48nm,1.5s
J59A Piesco 63.55 356 P P 13 39 01.9 +0.2
J59A IAmb IAmb 13 39 03.6
comp=Z,44nm,0.9s
J59A Piesco 63.55 356 P P 13 39 02.7 +1.0
baz=174,SNR=15
J59A P P 13 39 02.7 +1.0
baz=174,SNR=15
J56A Wolcott 63.56 354 P P 13 39 01.7 0.0
J56A IAmb IAmb 13 39 02.9
comp=Z,52nm,0.8s
J56A Wolcott 63.56 354 P P 13 39 02.3 +0.6
baz=172
J56A P P 13 39 02.3 +0.6
baz=172
SNAA Sanae 63.59 161 P P 13 39 03.0 +1.2
SNAA Sanae 63.59 161 P P 13 39 02.5 +0.8
SNAA IAmb IAmb 13 39 04.1
comp=Z,34nm,0.8s
SNAA Sanae 63.59 161 P P 13 39 02.5 +0.8
SNAA pmax pmax
comp=Z,34nm,0.8s
J57A Williamstown 63.61 355 P P 13 39 01.9 -0.2
J57A IAmb IAmb 13 39 03.5
comp=Z,34nm,1.0s
J57A Williamstown 63.61 355 P P 13 39 02.3 +0.3
baz=173
J57A P P 13 39 02.3 +0.3
baz=173
J55A Hilton 63.65 353 P P 13 39 02.2 -0.1
J55A IAmb IAmb 13 39 03.6
comp=Z,96nm,1.5s
P38A Dawn 63.71 339 P P 13 39 02.3 -0.5
P38A Dawn 63.71 339 P P 13 39 02.8 0.0
baz=154,SNR=49
M44A Midewin, Midew 63.72 344 P P 13 39 01.3 -1.5
M44A IAmb IAmb 13 39 02.7
comp=Z,25nm,0.8s
M44A Midewin, Midew 63.72 344 P P 13 39 01.7 -1.1
baz=160
N41A Harden Midland 63.86 342 P P 13 39 03.0 -0.7
N41A Harden Midland 63.86 342 P P 13 39 03.0 -0.7
baz=157,SNR=8.0
K50A Casco 63.88 349 P P 13 39 03.0 -0.8
K50A Casco 63.88 349 P P 13 39 03.5 -0.3
baz=166,SNR=5.6
K50A P P 13 39 03.5 -0.3
baz=166,SNR=5.6
L46A Eue Claire 63.89 346 P P 13 39 03.1 -0.8
baz=162
L46A P P 13 39 03.1 -0.8
baz=162
NCB Newcomb 64.03 356 P P 13 39 04.9 +0.1
NCB IAmb IAmb 13 39 06.7
comp=Z,43nm,1.5s
NCB Newcomb 64.03 356 P P 13 39 05.5 +0.7
baz=175,SNR=5.5
319A Douglas 64.09 322 P P 13 39 07.0 +1.4
121A Cookes Peak, D 64.11 324 P P 13 39 07.0 +1.2
121A IAmb IAmb 13 39 08.7
comp=Z,46nm,1.3s
121A Cookes Peak, D 64.11 324 P P 13 39 07.8 +1.9
baz=140,SNR=18
121A Cookes Peak, D 64.11 324 P P 13 39 07.6 +1.8
baz=140,SNR=18
WCNY West Carthage 64.15 355 P P 13 39 06.2 +0.7
baz=173,SNR=7.1
LBNH Lisbon 64.18 358 P P 13 39 06.4 +0.6
LBNH Lisbon 64.18 358 P P 13 39 06.4 +0.6
LBNH pmax pmax
comp=Z,14nm,0.9s
LBNH Lisbon 64.18 358 P P 13 39 06.9 +1.1
baz=177
KSU1 Kansas State U 64.33 337 P P 13 39 06.5 -0.4
KSU1 IAmb IAmb 13 39 07.8
comp=Z,31nm,1.1s
KSU1 Kansas State U 64.33 337 P P 13 39 06.7 -0.1
baz=151,SNR=6.8
KSU1 Kansas State U 64.33 337 P P 13 39 06.7 -0.1
baz=151,SNR=6.8
L44A Lake County Fo 64.43 345 P P 13 39 06.8 -0.7
L44A IAmb IAmb 13 39 08.3
comp=Z,41nm,1.0s
L44A Lake County Fo 64.43 345 P P 13 39 06.8 -0.7
baz=160
R32A Long Quarter, 64.56 335 P P 13 39 08.3 -0.1
R32A IAmb IAmb 13 39 09.9
comp=Z,47nm,1.1s
R32A Long Quarter, 64.56 335 P P 13 39 09.0 +0.6
baz=149,SNR=8.6
N38A Joes South For 64.67 340 P P 13 39 08.4 -0.6
N38A IAmb IAmb 13 39 09.8
comp=Z,46nm,0.8s
N38A Joes South For 64.67 340 P P 13 39 09.0 0.0
baz=155,SNR=8.3
LONY Lake Ozonia 64.70 356 P P 13 39 09.5 +0.3
LONY IAmb IAmb 13 39 10.9
comp=Z,24nm,0.9s
LONY Lake Ozonia 64.70 356 P P 13 39 09.8 +0.6
baz=174,SNR=9.4
L42A Oliver, Polo 64.72 343 P P 13 39 08.6 -0.7
L42A IAmb IAmb 13 39 09.3
comp=Z,20nm,0.7s
L42A Oliver, Polo 64.72 343 P P 13 39 08.9 -0.4
baz=159
J47A Sunmer 64.74 347 P P 13 39 08.6 -0.9
J47A Sunmer 64.74 347 P P 13 39 09.3 -0.2
baz=164,SNR=7.9
J47A P P 13 39 09.3 -0.2
baz=164,SNR=7.9
Y22A Socorro 64.74 326 P P 13 39 11.3 +1.4
baz=141
FRNY Flat Rock 64.85 357 P P 13 39 10.2 +0.1
FRNY IAmb IAmb 13 39 11.9
comp=Z,31nm,1.2s
FRNY Flat Rock 64.85 357 P P 13 39 11.0 +0.9
baz=175,SNR=8.5
BMNY Brushton-Moira 64.91 356 P P 13 39 11.5 +1.0
baz=174,SNR=12
K43A Burlington 65.03 345 P P 13 39 10.5 -0.8
K43A Burlington 65.03 345 P P 13 39 11.2 -0.2
baz=160,SNR=13
I49A Point Hope 65.04 349 P P 13 39 10.2 -1.1
G65A Princeton 65.11 1 P P 13 39 12.3 +0.5
G62A West of Eustis 65.12 359 P P 13 39 12.4 +0.5
G62A IAmb IAmb 13 39 56.9
comp=Z,28nm,0.9s
G62A West of Eustis 65.12 359 P P 13 39 13.1 +1.2
baz=179,SNR=9.5
G62A P P 13 39 13.1 +1.2
baz=179,SNR=9.5
PKME Peaks-Kenny Pk 65.16 360 P P 13 39 12.3 +0.2
PKME Peaks-Kenny Pk 65.16 360 P P 13 39 13.2 +1.1
baz=180
L40A Anamosa 65.21 342 P P 13 39 12.0 -0.6
L40A IAmb IAmb 13 39 13.2
comp=Z,38nm,0.9s
L40A Anamosa 65.21 342 P P 13 39 12.1 -0.5
baz=157,SNR=20
ANMO Albuquerque 65.26 327 P P 13 39 13.7 +0.4
ANMO Albuquerque 65.26 327 *de* P P 13 39 14.2 +0.9
ANMO pmax pmax
comp=Z,9.0nm,0.8s
ANMO Albuquerque 65.26 327 P P 13 39 14.5 +1.2
baz=141,SNR=22
ANMO Albuquerque 65.26 327 P P 13 39 14.4 +1.2
baz=141
ANMO Albuquerque 65.26 327 ⇓P P 13 39 14.4 +1.1
ANMO pP pP 13 39 40.7 +1.2
ANMO sP sP 13 39 51.3 +0.3
SADO Sadowa 65.30 352 LR LR 14 08 54.4
comp=Z,32nm,20.3s,baz=186,slow=37
SADO Sadowa 65.30 352 P P 13 39 12.6 -0.4
SADO IAmb IAmb 13 39 14.0
comp=Z,29nm,0.9s
TROLL Troll, Antarti 65.31 161 P P 13 39 14.6 +1.6
CBKS Cedar Bluff 65.31 334 P P 13 39 13.2 -0.1
CBKS IAmb IAmb 13 39 15.1
comp=Z,47nm,0.9s
CBKS Cedar Bluff 65.31 334 P P 13 39 13.2 -0.1
CBKS pmax pmax
comp=Z,47nm,0.9s
CBKS Cedar Bluff 65.31 334 P P 13 39 14.4 +1.2
baz=148,SNR=8.0
CBKS Cedar Bluff 65.31 334 P P 13 39 13.6 +0.3
baz=148,SNR=8.0
MNTQ Montreal, Queb 65.52 357 P P 13 39 14.1 -0.3
MNTQ IAmb IAmb 13 39 16.1
comp=Z,41nm,0.8s
N35A Tabor 65.53 338 P P 13 39 14.3 -0.3
N35A Tabor 65.53 338 P P 13 39 14.8 +0.2
baz=153,SNR=9.6
TUC Tucson 65.64 322 P P 13 39 16.0 +0.4
TUC IAmb IAmb 13 39 18.5
comp=Z,38nm,1.6s
TUC Tucson 65.64 322 P P 13 39 16.0 +0.4
TUC pmax pmax
comp=Z,38nm,1.6s
TUC Tucson 65.64 322 P P 13 39 17.2 +1.5
baz=137
TUC Tucson 65.64 322 P P 13 39 17.1 +1.5
SCIA State Center 65.67 341 P P 13 39 15.3 -0.2
SCIA State Center 65.67 341 P P 13 39 15.7 +0.2
baz=155
SCIA State Center 65.67 341 P P 13 39 15.5 0.0
baz=155
GBN Guysborough 65.68 6 P P 13 39 15.5 +0.1
GBN IAmb IAmb 13 39 43.8
comp=Z,26nm,1.1s
JFWS Jewell Farm 65.73 343 P P 13 39 15.3 -0.5
JFWS IAmb IAmb 13 39 16.3
comp=Z,38nm,0.7s
JFWS Jewell Farm 65.73 343 P P 13 39 15.4 -0.5
JFWS pmax pmax
comp=Z,38nm,0.7s
JFWS Jewell Farm 65.73 343 P P 13 39 15.8 0.0
baz=158,SNR=18
JFWS Jewell Farm 65.73 343 P P 13 39 15.6 -0.3
baz=158,SNR=18
F64A Sherman 65.76 1 P P 13 39 15.9 0.0
F64A Sherman 65.76 1 P P 13 39 16.6 +0.6
baz=181,SNR=5.5
F64A P P 13 39 16.6 +0.6
baz=181,SNR=5.5
LMN Caledonia Moun 65.87 3 P P 13 39 16.1 -0.5
T25A Trinidad 65.99 330 P P 13 39 18.1 +0.2
T25A Trinidad 65.99 330 P P 13 39 19.2 +1.3
baz=144,SNR=13
N33A J Bar K, Exete 66.07 337 P P 13 39 18.2 +0.1
K38A Parkersburg 66.21 341 P P 13 39 18.1 -0.8
K38A Parkersburg 66.21 341 P P 13 39 18.8 -0.1
baz=156,SNR=11
I42A Draeger Farm, 66.29 345 P P 13 39 19.4 -0.1
I42A IAmb IAmb 13 39 20.0
comp=Z,38nm,0.6s
I42A Draeger Farm, 66.29 345 P P 13 39 19.6 +0.2
baz=160,SNR=18
TRQ Mont Tremblant 66.29 356 P P 13 39 19.3 -0.2
TRQ IAmb IAmb 13 39 20.8
comp=Z,28nm,0.9s
E62A Clayton Lake 66.52 360 P P 13 39 21.4 +0.6
E62A Clayton Lake 66.52 360 P P 13 39 21.5 +0.7
baz=180,SNR=6.6
E62A P P 13 39 21.5 +0.7
baz=180,SNR=6.6
H43A Windswept, Lux 66.56 346 P P 13 39 20.5 -0.6
H43A IAmb IAmb 13 39 21.8
comp=Z,40nm,0.8s
H43A Windswept, Lux 66.56 346 P P 13 39 21.1 0.0
baz=161,SNR=8.7
214A Organ Pipe Nat 66.58 320 P P 13 39 22.7 +1.1
214A IAmb IAmb 13 39 24.8
comp=Z,49nm,1.0s
214A Organ Pipe Nat 66.58 320 P P 13 39 23.7 +2.1
baz=135,SNR=27
G45A Suttons Bay 66.64 347 P P 13 39 21.0 -0.7
G45A IAmb IAmb 13 40 13.4
comp=Z,31nm,0.6s

G45A	Suttons Bay	66.64	347	P		P	13 39 21.3	-0.3
	baz=163							
G45A				P		P	13 39 21.3	-0.3
	baz=163							
KSCO	Kaye Shedlock'	66.70	332	P		P	13 39 22.4	0.0
KSCO				IAmb		IAmb	13 39 24.4	
	comp=Z,49nm,1.1s							
KSCO	Kaye Shedlock'	66.70	332	P		P	13 39 23.1	+0.8
	baz=146							
I40A	Norwalk	66.74	343	P		P	13 39 21.7	-0.5
I40A				IAmb		IAmb	13 39 23.0	
	comp=Z,29nm,0.9s							
I40A	Norwalk	66.74	343	P		P	13 39 22.3	0.0
	baz=158,SNR=8.1							
L34A	Svendsen Farm,	66.77	338	P		P	13 39 22.1	-0.4
L34A	Svendsen Farm,	66.77	338	P		P	13 39 22.7	+0.1
	baz=152,SNR=16							
X18A	Snowflake	66.80	324	P		P	13 39 24.1	+1.0
X18A				IAmb		IAmb	13 39 26.1	
	comp=Z,38nm,1.5s							
BGNE	Belgrade	66.92	337	P		P	13 39 23.4	-0.1
BGNE	Belgrade	66.92	337	P		P	13 39 24.1	+0.6
	baz=150,SNR=13							
BGNE	Belgrade	66.92	337	P		P	13 39 23.9	+0.4
	baz=150,SNR=13							
SDCO	Great Sand Dun	66.99	329	P		P	13 39 24.8	+0.4
SDCO				IAmb		IAmb	13 39 26.7	
	comp=Z,51nm,1.4s							
SDCO	Great Sand Dun	66.99	329	P		P	13 39 25.8	+1.4
	baz=143,SNR=41							
SDCO	Great Sand Dun	66.99	329	P		P	13 39 25.8	+1.4
	baz=143,SNR=41							
W18A	Petrified Fore	67.12	325	P		P	13 39 26.1	+0.9
W18A				IAmb		IAmb	13 39 28.0	
	comp=Z,40nm,1.2s							
W18A	Petrified Fore	67.12	325	P		P	13 39 26.6	+1.4
	baz=139,SNR=7.2							
SFX	San Felipe	67.19	318	P		P	13 39 27.0	+1.6
SFX				IAmb		IAmb	13 39 28.4	
	comp=Z,23nm,1.0s							
BATG	Bathurst New B	67.23	2	P		P	13 39 25.3	0.0
X16A	Lo Mia Camp, P	67.55	323	P		P	13 39 29.1	+1.2
S22A	4UR Ranch, Cre	67.63	328	P		P	13 39 28.8	+0.3
S22A	4UR Ranch, Cre	67.63	328	P		P	13 39 29.8	+1.3
	baz=142,SNR=15							
I37A	Lemond, Waseca	67.64	341	P		P	13 39 27.7	-0.3
I37B	Waseca	67.64	341	P		P	13 39 28.2	+0.2
	baz=155,SNR=25							
E46A	Sault Ste Mari	67.66	349	P		P	13 39 27.4	-0.5
E46A				IAmb		IAmb	13 39 28.6	
	comp=Z,21nm,0.8s							
E46A	Sault Ste Mari	67.66	349	P		P	13 39 27.7	-0.3
	baz=165,SNR=9.7							
113A	Mohawk Valley,	67.73	320	P		P	13 39 29.0	+0.3
Q24A	Divide	67.80	330	P		P	13 39 29.9	+0.4
Q24A				IAmb		IAmb	13 39 31.8	
	comp=Z,27nm,0.9s							
Q24A	Divide	67.80	330	P		P	13 39 30.8	+1.3
	baz=144,SNR=27							
G40A	Rib Lake	67.91	344	P		P	13 39 29.2	-0.4
G40A	Rib Lake	67.91	344	P		P	13 39 29.5	-0.1
	baz=159,SNR=20							
OGNE	Ogallala	68.05	334	P		P	13 39 31.5	+0.7
	baz=147							
MVCO	Mesa Verde	68.06	327	P		P	13 39 31.7	+0.7
MVCO	Mesa Verde	68.06	327	P		P	13 39 32.3	+1.3
	baz=140,SNR=15							
Y14A	Wickenburg	68.10	322	P		P	13 39 32.6	+1.4
NVL	N'lazarevskaya	68.14	159	*e*P		P	13 39 30.8	0.0
NVL				pmax		pmax		
	comp=Z,57nm,0.9s							
K31A	O'Neill	68.19	337	P		P	13 39 31.6	+0.1
E43A	Lone Tree Farm	68.20	347	P		P	13 39 31.0	-0.4
E43A	Lone Tree Farm	68.20	347	P		P	13 39 31.3	-0.1
	baz=162,SNR=9.5							
WUAZ	Wupatki	68.32	324	P		P	13 39 34.0	+1.3
WUAZ				IAmb		IAmb	13 39 35.8	
	comp=Z,41nm,0.9s							
WUAZ	Wupatki	68.32	324	P		P	13 39 34.8	+2.2
	baz=137,SNR=33							
LIC	Lamto	68.33	74⇑	*i*P		P	13 39 32.9	0.0
	comp=Z,78nm,0.8s							
VLDQ	Val d'Or	68.41	354	P		P	13 39 32.8	+0.1
VLDQ				IAmb		IAmb	13 39 33.8	
	comp=Z,20nm,0.7s							
ECSD	EROS Data Cent	68.41	339	P		P	13 39 32.5	-0.3
ECSD				IAmb		IAmb	13 39 34.1	
	comp=Z,42nm,1.4s							
ECSD	EROS Data Cent	68.41	339	P		P	13 39 33.0	+0.2
	baz=152,SNR=21							
ECSD	EROS Data Cent	68.41	339	P		P	13 39 33.0	+0.2
	baz=152,SNR=21							
COWI	Conover	68.42	345	P		P	13 39 32.6	-0.2
COWI	Conover	68.42	345	P		P	13 39 33.0	+0.1
	baz=160							
TIC	Toumodi	68.51	74⇑	*i*P		P	13 39 35.0	+0.9
	comp=Z,58nm,0.7s							
GLA	Glamis	68.56	320	P		P	13 39 35.2	+1.1
GLA	Glamis	68.56	320	P		P	13 39 35.2	+1.1
GLA				pmax		pmax		
	comp=Z,12nm,0.7s							
GLA	Glamis	68.56	320	P		P	13 39 35.8	+1.8
	baz=134							
SPMN	Marine on St.	68.57	342	P		P	13 39 33.2	-0.6
SPMN				IAmb		IAmb	13 39 34.5	
	comp=Z,48nm,1.2s							
SPMN	Marine on St.	68.57	342	P		P	13 39 33.7	-0.1
	baz=156,SNR=11							
SPMN	Marine on St.	68.57	342	P		P	13 39 33.7	-0.1
	baz=156,SNR=11							
KIC	Kosan Boka	68.64	74⇑	*e*P		P	13 39 34.5	-0.4
	comp=Z,21nm,0.3s							
DBIC	Dimbokro	68.67	74	P		P	13 39 34.8	-0.3
	comp=Z,15nm,0.4s,baz=256,slow=5.8,SNR=31							
DBIC				pP		pP	13 40 01.5	-0.6
	comp=Z,87nm,0.9s,baz=246,slow=6.4,SNR=16							
DBIC				LR		LR	14 09 42.6	
	comp=Z,66nm,18.1s,baz=258,slow=36							
	comp=Z,15nm,0.4s							
DBIC	Dimbokro	68.67	74	P		P	13 39 34.5	-0.6
DBIC	Dimbokro	68.67	74	P		P	13 39 34.7	-0.3
DBIC				pP		pP	13 40 01.6	-0.6
DBIC				sP		sP	13 40 12.7	-1.1
ISCO	Idaho Springs	68.68	331	P		P	13 39 35.5	+0.5
ISCO	Idaho Springs	68.68	331	P		P	13 39 35.5	+0.5
ISCO				pmax		pmax		
	comp=Z,17nm,1.1s							
ISCO	Idaho Springs	68.68	331	P		P	13 39 36.3	+1.3
	baz=143,SNR=20							
ISCO	Idaho Springs	68.68	331	P		P	13 39 36.3	+1.3
	baz=143,SNR=20							
SMCO	Snowmass	68.83	329	P		P	13 39 36.9	+0.9
BLYC	Blythe	68.86	321	P		P	13 39 36.9	+1.1
PV15	Paradox Valley	68.92	328	P		P	13 39 37.3	+0.9
PV15				IAmb		IAmb	13 39 39.3	
	comp=Z,30nm,1.0s							
PV13	Radium Mtn., P	68.95	327	P		P	13 39 37.4	+0.8
YUH	Yuha Desert	68.96	319	P		P	13 39 37.6	+1.2
YUH				IAmb		IAmb	13 39 39.8	
	comp=Z,49nm,1.4s							
PDMCI	Parker Dam,Lak	69.03	321	P		P	13 39 38.3	+1.5
	baz=135							
IKP	In-Ko-Pah, Jac	69.07	319	P		P	13 39 39.6	+2.3
	baz=133,SNR=8.5							
PV07	Paradox Valley	69.07	328	P		P	13 39 37.6	+0.3
PV11	David Mesa, Pa	69.08	327	P		P	13 39 38.3	+1.0
SWSC	Sam W. Stewart	69.08	319	P		P	13 39 39.2	+2.0
	baz=133							
TAOE	Nuku Hiva Isla	69.15	268	*e*LR		LR	14 00 42.4	
	comp=Z,128nm,41.3s							
D41A	Chassel	69.19	346	P		P	13 39 37.5	0.0
D41A				IAmb		IAmb	13 39 38.9	
	comp=Z,44nm,0.9s							
D41A	Chassel	69.19	346	P		P	13 39 38.0	+0.5
	baz=161,SNR=12							
PV23	Carpenter Ridg	69.27	328	P		P	13 39 38.7	+0.1
BC3	Big Chuckawall	69.36	320	P		P	13 39 41.2	+2.1
	baz=134,SNR=22							
F36A	Milaca	69.36	342	P		P	13 39 38.2	-0.4
F36A				IAmb		IAmb	13 39 39.4	
	comp=Z,34nm,0.9s							
F36A	Milaca	69.36	342	P		P	13 39 38.5	-0.1
	baz=156,SNR=33							
MONP2	Monument Peak	69.43	319	P		P	13 39 41.7	+2.1
	baz=133,SNR=9.5							
W13A	Hualapai Mount	69.44	322	P		P	13 39 41.2	+1.6
BAR	Barrett	69.44	318	P		P	13 39 41.1	+1.6
BAR				IAmb		IAmb	13 39 42.7	
	comp=Z,36nm,0.9s							
U15A	North Rim	69.49	324	P		P	13 39 41.8	+1.8
U15A				IAmb		IAmb	13 39 43.4	
	comp=Z,54nm,1.2s							
E38A	The Farm, Brul	69.50	344	P		P	13 39 39.0	-0.5
E38A	The Farm, Brul	69.50	344	P		P	13 39 39.4	-0.1
	baz=158,SNR=6.9							
IRM	Iron Mountain	69.52	321	P		P	13 39 42.2	+2.3
	baz=134,SNR=35							
NEE2	Needles Airpor	69.63	321	P		P	13 39 42.3	+1.7
	baz=135							
N23A	Red Feather La	69.71	331	P		P	13 39 41.8	+0.5
N23A	Red Feather La	69.71	331	P		P	13 39 42.5	+1.2
	baz=143,SNR=18							
PHWY	Pilot Hill	69.82	332	P		P	13 39 42.5	+0.6
SUSD	Miller	69.84	338	P		P	13 39 41.3	-0.4
SUSD				IAmb		IAmb	13 39 42.8	
	comp=Z,37nm,0.8s							
SUSD	Miller	69.84	338	P		P	13 39 41.7	0.0
	baz=150							
109C	Camp Elliot, M	69.85	318	P		P	13 39 43.8	+1.9
	baz=132							
PMD	Palm Desert	69.91	319	P		P	13 39 43.1	+0.8
PMD				IAmb		IAmb	13 39 45.5	
	comp=Z,24nm,1.1s							
BELC	Belle Mtn. Jos	69.92	320	P		P	13 39 44.7	+2.1
	baz=133,SNR=15							
TPFO	Pinon Flats	69.93	319	P		P	13 39 44.7	+2.1
	baz=133,SNR=14							
DRLN	Deer Lake	69.94	8	P		P	13 39 41.8	-0.3
PFO	Pinyon Flats O	69.94	319	P		P	13 39 44.4	+1.7
PFO	Pinyon Flats O	69.94	319	*d*iP		P	13 39 44.3	+1.7
PFO				pmax		pmax		
	comp=Z,37nm,1.0s							
PFO	Pinyon Flats O	69.94	319	P		P	13 39 44.8	+2.2
	baz=133,SNR=13							
PFO	Pinyon Flats O	69.94	319	P		P	13 39 44.8	+2.2
PFO				x		x	13 39 54.3	
PFO				sP		sP	13 40 20.8	+0.4
QSPA	South Pole Qui	69.97	180	P		P	13 39 44.2	+1.8
	comp=Z,34nm,0.8s,baz=160,slow=1.7,SNR=132							
QSPA				PKP2bc			14 07 42.4	
	comp=Z,3.4nm,1.1s,baz=312,slow=5.2,SNR=5.5							
	comp=Z,34nm,0.8s							
QSPA	South Pole Qui	69.97	180	P		P	13 39 44.0	+1.6
QSPA				IAmb		IAmb	13 39 45.6	
	comp=Z,66nm,1.1s							
QSPA	South Pole Qui	69.97	180	P		P	13 39 44.5	+2.0
F33A	5 Mile Ranch,	70.18	340	P		P	13 39 43.1	-0.5
F33A				IAmb		IAmb	13 39 44.5	
	comp=Z,26nm,0.8s							
F33A	5 Mile Ranch,	70.18	340	P		P	13 39 43.6	-0.1
	baz=153,SNR=12							
O20A	White River Ci	70.19	329	P		P	13 39 44.9	+0.8
O20A	White River Ci	70.19	329	P		P	13 39 45.5	+1.4
	baz=141,SNR=18							
PKCU	Pink Cliffs	70.24	325	P		P	13 39 46.0	+1.3
GMRC	Granite Mounta	70.26	321	P		P	13 39 46.5	+2.0
	baz=134,SNR=40							
MURC	Murrieta	70.39	319	P		P	13 39 47.4	+2.2
	baz=132							
LCMT	Little Creek M	70.44	324	P		P	13 39 47.1	+1.4
SRU	San Rafael Swe	70.54	327	P		P	13 39 47.1	+0.8
SRU				IAmb		IAmb	13 39 48.7	
	comp=Z,34nm,0.8s							
SRU	San Rafael Swe	70.54	327	P		P	13 39 47.1	+0.8
SRU				pmax		pmax		
	comp=Z,34nm,0.8s							
ELS	Elsinore Mount	70.56	319	P		P	13 39 47.8	+1.4
MTPU	Mount Pierson	70.61	325	P		P	13 39 47.9	+1.0
BBRC	Big Bear Solar	70.66	320	P		P	13 39 49.5	+2.3
	baz=133							
HEC	Hector,Ludlow	70.69	320	P		P	13 39 49.4	+2.2
	baz=133,SNR=21							
EYMN	Ely	70.72	344	P		P	13 39 46.4	-0.6
EYMN				IAmb		IAmb	13 39 47.7	
	comp=Z,27nm,0.8s							
EYMN	Ely	70.72	344	P		P	13 39 46.8	-0.2
	baz=158,SNR=16							
EYMN	Ely	70.72	344	P		P	13 39 46.7	-0.3
	baz=158,SNR=16							
Q16A	Castle Valley	70.72	326	P		P	13 39 48.2	+0.8
SZCU	Shurtz Canyon	70.78	324	P		P	13 39 49.2	+1.5
SZCU				IAmb		IAmb	13 39 51.0	
	comp=Z,88nm,1.9s							
P18A	Preston Nutter	70.78	328	P		P	13 39 48.9	+1.0
P18A				IAmb		IAmb	13 39 50.7	
	comp=Z,32nm,0.8s							
SCI2	San Clemente I	70.82	318	P		P	13 39 50.1	+2.3
	baz=131							
TUQ	Turquoise Moun	70.86	321	P		P	13 39 50.2	+2.0
	baz=134,SNR=22							
CCUT	Cedar City	70.89	324	P		P	13 39 50.0	+1.5
CCUT				IAmb		IAmb	13 39 52.3	
	comp=Z,53nm,0.8s							
P17A	Butcher Ranch,	70.92	327	P		P	13 39 49.2	+0.7
P17A				IAmb		IAmb	13 39 51.2	
	comp=Z,41nm,0.9s							
RWWY	Rawlins	70.92	331	P		P	13 39 48.3	-0.3
MSU	Marysvale	70.95	326	P		P	13 39 50.3	+1.4
MSU	Marysvale	70.95	326	P		P	13 39 50.3	+1.4
MVU	Marysvale	70.97	326	P		P	13 39 50.2	+1.3
CIS	Catalina Islan	71.01	318	P		P	13 39 50.5	+1.4
	baz=131							
TMUT	Trail Mountain	71.03	327	P		P	13 39 50.1	+0.7
BFSC	Mount Baldy Ra	71.10	319	P		P	13 39 51.7	+2.0
	baz=132,SNR=9.9							
RRX	Edison Barstow	71.12	320	P		P	13 39 51.9	+2.2
	baz=133							
FMP	Fort Macarthur	71.14	318	P		P	13 39 51.3	+1.5
	baz=132							
SHPR	Sheep Range	71.16	322	P		P	13 39 51.5	+1.4
RDMU	Red Mountain	71.17	329	P		P	13 39 50.9	+0.9
TCRU	Three Creeks R	71.17	325	P		P	13 39 50.6	+0.4
TCRU				IAmb		IAmb	13 39 53.3	
	comp=Z,28nm,0.8s							
GSC	Goldstone, Bar	71.30	320	P		P	13 39 52.3	+1.5
GSC				IAmb		IAmb	13 39 54.2	
	comp=Z,65nm,1.6s							
GSC	Goldstone, Bar	71.30	320	P		P	13 39 52.3	+1.5
GSC				pmax		pmax		
	comp=Z,65nm,1.6s							
GSC	Goldstone, Bar	71.30	320	P		P	13 39 53.0	+2.2
	baz=133,SNR=10							
K22A	Casper	71.37	332	P		P	13 39 51.9	+0.7
K22A	Casper	71.37	332	P		P	13 39 52.5	+1.3
	baz=143,SNR=6.9							
K22A	Casper	71.37	332	P		P	13 39 52.7	+1.4
	baz=143,SNR=6.9							
PASC	Pasadena Art C	71.38	319	P		P	13 39 52.7	+1.4
PASC				IAmb		IAmb	13 39 54.5	
	comp=Z,48nm,1.2s							
SHOC	Shoshone, Teco	71.39	321	P		P	13 39 53.2	+1.9
	baz=134,SNR=6.6							
RSSD	Black Hills	71.51	334	P		P	13 39 52.8	+0.8
RSSD	Black Hills	71.51	334	P		P	13 39 52.8	+0.8
RSSD				pmax		pmax		
	comp=Z,16nm,0.8s							
RSSD	Black Hills	71.51	334	P		P	13 39 53.6	+1.6
	baz=146,SNR=11							
RSSD	Black Hills	71.51	334	P		P	13 39 52.9	+0.8
	baz=146							
RSSD	Black Hills	71.51	334	P		P	13 39 53.0	+0.9
DECC	Green Verdugo	71.53	319	P		P	13 39 54.3	+2.1
	baz=132							
D32A	Dogwood Acres,	71.56	340	P		P	13 39 51.8	-0.2
D32B	Dogwood Acres,	71.56	340	P		P	13 39 52.3	+0.3
	baz=152,SNR=9.8							
SNCC	San Nicolas Is	71.62	317	P		P	13 39 54.6	+1.9
	baz=130							
B35A	Bob, Littlefor	71.69	343	P		P	13 39 52.1	-0.6
B35A				IAmb		IAmb	13 39 53.6	
	comp=Z,41nm,0.8s							
B35A	Bob, Littlefor	71.69	343	P		P	13 39 52.7	0.0
	baz=156,SNR=36							
EDW2	Edwards Air Fo	71.73	319	P		P	13 39 55.2	+1.8
	baz=132,SNR=17							
PRN	Pahroc Range	71.73	323	P		P	13 39 54.9	+1.5
MPU	Maple Canyon	71.78	327	P		P	13 39 54.8	+1.1
QSM	Queen of Sheba	71.78	321	P		P	13 39 54.7	+1.1
GWY	Greenwater Val	71.82	321	P		P	13 39 55.3	+1.3
GWY				IAmb		IAmb	13 39 56.9	
	comp=Z,32nm,0.8s							
PSUT	Pine Spring	71.87	325	P		P	13 39 55.6	+1.3
PSUT				IAmb		IAmb	13 39 57.5	
	comp=Z,34nm,0.7s							
LRMC	Laurel Mtn Rad	71.94	320	P		P	13 39 56.7	+1.9
	baz=132,SNR=14							
NLU	North Lily Min	71.96	327	P		P	13 39 56.2	+1.3
OSI	Osito Audit: C	72.00	319	P		P	13 39 56.9	+1.9
	baz=131							
TPNV	Topopah Spring	72.10	322	P		P	13 39 57.4	+1.7
TPNV				IAmb		IAmb	13 39 59.2	
	comp=Z,40nm,1.1s							
TPNV	Topopah Spring	72.10	322	P		P	13 39 57.4	+1.7
TPNV				pmax		pmax		
	comp=Z,40nm,1.1s							
TPNV	Topopah Spring	72.10	322	P		P	13 39 57.8	+2.1
	baz=134,SNR=48							
FURC	Furnace Creek,	72.12	321	P		P	13 39 58.1	+2.5
	baz=133,SNR=33							
JLU	Jordanelle	72.12	327	P		P	13 39 57.1	+1.2
SCZ2	Santa Cruz Isl	72.17	318	P		P	13 39 57.8	+1.8
	baz=131							
MPMC	Manual Prospec	72.22	321	P		P	13 39 58.3	+1.8
	baz=133,SNR=20							
AGMN	Agassiz Nation	72.25	342	P		P	13 39 55.8	-0.3
AGMN				IAmb		IAmb	13 39 57.1	
	comp=Z,33nm,0.8s							
AGMN	Agassiz Nation	72.25	342	P		P	13 39 56.0	0.0
	baz=154,SNR=25							
AGMN	Agassiz Nation	72.25	342	P		P	13 39 56.2	+0.1
	baz=154,SNR=25							
S11A	Rachel	72.29	323	P		P	13 39 58.6	+1.8
S11A				IAmb		IAmb	13 40 00.1	
	comp=Z,23nm,0.7s							
E28A	Huff	72.30	338	P		P	13 39 57.0	+0.5
E28A				IAmb		IAmb	13 39 58.5	
	comp=Z,48nm,0.8s							
E28A	Huff	72.30	338	P		P	13 39 57.6	+1.1
	baz=149,SNR=7.7							
CTU	Camp Tracy	72.34	327	P		P	13 39 57.8	+0.7
ARVC	Arvin	72.41	319	P		P	13 39 59.3	+1.9
	baz=132							
SPR3	Spring Creek 3	72.46	325	P		P	13 39 59.3	+1.3
SPR3				IAmb		IAmb	13 40 00.7	
	comp=Z,22nm,0.8s							
TCUT	Toone Canyon	72.49	328	P		P	13 39 59.0	+1.0
DUG	Dugway, Tooele	72.52	326	P		P	13 39 59.3	+1.2
DUG	Dugway, Tooele	72.52	326	P		P	13 39 59.3	+1.2
DUG				pmax		pmax		
	comp=Z,29nm,1.1s							
DUG	Dugway, Tooele	72.52	326	P		P	13 40 00.1	+2.1
	baz=137,SNR=35							
ISA	Isabella, Lake	72.55	320	P		P	13 39 59.8	+1.6
ISA				IAmb		IAmb	13 40 01.5	
	comp=Z,30nm,0.8s							
ISA	Isabella, Lake	72.55	320	P		P	13 39 59.8	+1.6
ISA				pmax		pmax		
	comp=Z,30nm,0.8s							
ISA	Isabella, Lake	72.55	320	P		P	13 40 00.5	+2.2
	baz=132,SNR=30							
BCW	Bitter Crk WRg	72.65	319	P		P	13 39 60.0	+1.1
BCW				IAmb		IAmb	13 40 02.2	
	comp=Z,32nm,0.9s							
R11A	Troy Canyon, C	72.69	323	P		P	13 40 00.8	+1.6
R11A	Troy Canyon, C	72.69	323	P		P	13 40 01.3	+2.1
	baz=135,SNR=48							
GRAC	Grapevine Rang	72.78	321	P		P	13 40 01.1	+1.6
GRAC	Grapevine Rang	72.78	321	P		P	13 40 02.0	+2.4
	baz=133,SNR=10.0							
KOWA	Kowa	72.79	67	P		P	13 39 59.2	-0.8
CWC	Cottonwood Cre	72.83	321	P		P	13 40 02.2	+2.2
	baz=132							
PD31	Pinedale Array	72.85	330	P		P	13 40 00.0	-0.1
PDAR	Pinedale Array	72.85	330	P		P	13 40 00.9	+0.8
	comp=Z,2.5nm,0.8s,baz=148,slow=6.8,SNR=21							
PDAR				LR		LR	14 15 28.8	
	comp=Z,49nm,18.1s,baz=143,slow=38							
	comp=Z,2.5nm,0.8s							
PDAR	Pinedale Array	72.85	330	P		P	13 40 00.2	+0.1
BW06	Boulder Array	72.85	330	P		P	13 40 00.1	0.0
BW06	Boulder Array	72.85	330	P		P	13 40 00.9	+0.8
	baz=140,SNR=10							
PKM	Mcpherson Peak	72.86	318	P		P	13 40 02.5	+2.2
	baz=131,SNR=12							
HWUT	Hardware Ranch	72.94	328	P		P	13 40 00.8	+0.3
HWUT				IAmb		IAmb	13 40 04.6	
	comp=Z,26nm,0.8s							
MDND	Maddock	73.03	339	P		P	13 40 00.9	+0.2
MDND	Maddock	73.03	339	P		P	13 40 01.9	+1.2
	baz=150,SNR=14							
MDND	Maddock	73.03	339	P		P	13 40 01.8	+1.0
	baz=150,SNR=14							
VES	Vestal, Richgr	73.03	320	P		P	13 40 03.3	+2.3
	baz=131,SNR=20							
LCH	Last Change Ra	73.11	321	P		P	13 40 03.0	+1.4
BGU	Big Grassy Mou	73.17	327	P		P	13 40 02.6	+0.7
SMMC	Simmler	73.25	319	P		P	13 40 05.1	+2.8
	baz=131,SNR=13							
TIN	Tinemaha, Big	73.33	321	P		P	13 40 05.0	+2.1
	baz=132							
TPH	Tonopah	73.43	322	P		P	13 40 04.8	+1.2
TPH	Tonopah	73.43	322	P		P	13 40 04.8	+1.2
TPH				pmax		pmax		
	comp=Z,84nm,0.8s							
AHID	Auburn Hatcher	73.58	329	P		P	13 40 05.2	+0.8
AHID				IAmb		IAmb	13 40 06.6	
	comp=Z,26nm,0.8s							
TBI	Tubuai	73.63	251	*e*LR		LR	14 02 49.4	
	comp=Z,213nm,31.0s							
HVU	Hansel Valley	73.67	328	P		P	13 40 05.6	+0.8
HVU	Hansel Valley	73.67	328	P		P	13 40 05.6	+0.8
HVU				pmax		pmax		
	comp=Z,28nm,1.1s							
PAGB	Antelope Grade	73.68	319	P		P	13 40 06.7	+1.8
PAGB				IAmb		IAmb	13 40 08.2	
	comp=Z,56nm,1.2s							
REDW	Red Top Meadow	73.91	330	P		P	13 40 07.2	+0.8
ECR	Eagle Creek	73.93	329	P		P	13 40 07.6	+1.2
Q09A	Carvers	73.93	323	P		P	13 40 07.6	+1.2
Q09A				IAmb		IAmb	13 40 09.7	
	comp=Z,45nm,0.9s							
SNOW	Snow King Moun	73.94	330	P		P	13 40 07.4	+0.9
LOHW	Long

KVN Kaiserville 74.60 323 P P 13 40 11.2 +0.8
KVN IAmb IAmb 13 40 13.0
comp=Z,31nm,0.9s
KVN Kaiserville 74.60 323 P P 13 40 11.2 +0.8
KVN pmax pmax
comp=Z,31nm,0.9s
LKWY Lake 74.62 331 P P 13 40 11.8 +1.3
LKWY IAmb IAmb 13 40 52.2
comp=Z,23nm,0.8s
LKWY Lake 74.62 331 P P 13 40 11.8 +1.3
LKWY pmax pmax
comp=Z,23nm,0.8s
SCHQ Schefferville 74.77 1 P P 13 40 11.1 +0.4
comp=Z,19nm,0.7s,baz=185,slow=4.0,SNR=20
comp=Z,19nm,0.7s
SCHQ Schefferville 74.77 1 P P 13 40 10.9 +0.2
YNR Norris Junctio 74.87 331 P P 13 40 13.5 +1.6
BMN Battle Mountai 75.05 324 P P 13 40 13.5 +0.6
BMN Battle Mountai 75.05 324 P P 13 40 13.5 +0.6
BMN pmax pmax
comp=Z,5.0nm,0.9s
SAO San Andreas Ge 75.08 319 P P 13 40 14.1 +1.2
SAO San Andreas Ge 75.08 319 P P 13 40 14.1 +1.2
SAO pmax pmax
comp=Z,10.0nm,0.9s
DGMT Dagmar 75.17 337 P P 13 40 14.1 +0.8
DGMT IAmb IAmb 13 40 15.8
comp=Z,48nm,0.9s
DGMT Dagmar 75.17 337 P P 13 40 14.9 +1.7
baz=146,SNR=6.1
DGMT Dagmar 75.17 337 P P 13 40 14.7 +1.5
baz=146,SNR=6.1
YHL Hebgen Lake 75.20 331 P P 13 40 14.7 +0.9
YHL IAmb IAmb 13 40 17.3
comp=Z,55nm,1.4s
YERR Yerington 75.21 322 P P 13 40 15.0 +1.1
YERR IAmb IAmb 13 40 17.3
comp=Z,52nm,1.4s
GCMT Greycliff 75.24 332 P P 13 40 14.8 +0.9
CMB Columbia Colle 75.26 321 P P 13 40 15.1 +1.1
CMB Columbia Colle 75.26 321 P P 13 40 15.1 +1.1
CMB pmax pmax
comp=Z,6.0nm,0.9s
QLMT Earthquake Lak 75.30 330 P P 13 40 15.0 +0.8
PPT2 Papeete2 75.32 256 *e*LR LR 14 03 35.0
comp=Z,132nm,25.0s
PNTR Pine Nut 75.49 322 P P 13 40 16.3 +0.8
PNTR IAmb IAmb 13 40 18.9
comp=Z,25nm,0.8s
VCNR Virginia City 75.66 322 P P 13 40 17.0 +0.6
EMB Emerald Bay 75.71 321 P P 13 40 17.2 +0.5
PAHR Pah Rah Range 75.78 322 P P 13 40 18.8 +1.8
PAHR IAmb IAmb 13 40 20.3
comp=Z,56nm,0.8s
HLID Hailey 75.80 328 P P 13 40 18.9 +1.8
HLID Hailey 75.80 328 P P 13 40 19.3 +2.2
baz=137,SNR=47
BCYI Bear Canyon 75.85 329 P P 13 40 18.4 +0.9
MPK Martis Peak 75.88 322 P P 13 40 18.8 +1.0
MPK IAmb IAmb 13 40 21.3
comp=Z,44nm,1.3s
MCMT McKenzie Canyo 75.96 330 P P 13 40 19.5 +1.4
BOZ Bozeman (W) 75.97 331 P P 13 40 18.7 +0.7
BOZ Bozeman (W) 75.97 331 P P 13 40 18.7 +0.7
BOZ pmax pmax
comp=Z,19nm,1.2s
BOZ Bozeman (W) 75.97 331 P P 13 40 19.6 +1.5
baz=139,SNR=19
MFID Camas Ranch 76.41 327 P P 13 40 21.9 +1.4
BEKR Beckworth 76.45 322 P P 13 40 21.8 +0.9
LRM Limekiln Ridge 76.52 330 P P 13 40 22.1 +0.8
MCCM Marconi Confer 76.84 319 P P 13 40 23.4 +0.5
MCCM IAmb IAmb 13 41 15.1
comp=Z,98nm,1.4s
HRY Holter Researc 76.91 331 P P 13 40 23.1 -0.1
EGMT Eagleton 77.02 333 P P 13 40 24.5 +0.7
EGMT IAmb IAmb 13 40 25.9
comp=Z,32nm,1.0s
EGMT Eagleton 77.02 333 P P 13 40 24.8 +1.0
baz=141,SNR=20
WVOR Wild Horse Val 77.20 325 P P 13 40 25.0 0.0
WVOR Wild Horse Val 77.20 325 P P 13 40 25.0 0.0
WVOR pmax pmax
comp=Z,10.0nm,1.4s
TOA0 Torodi Ar. Sit 77.21 71 P P 13 40 24.5 -1.0
TOA0 IAmb IAmb 13 40 53.4
comp=Z,60nm,0.8s
TORD Torodi Ar. Bea 77.21 71 P P 13 40 25.2 -0.3
comp=Z,28nm,0.5s,baz=247,slow=5.3,SNR=120
TORD pP **pP 13 40 52.6 -0.6**
comp=Z,50nm,0.8s,baz=252,slow=5.3,SNR=11
comp=Z,28nm,0.5s
TORD Torodi Ar. Bea 77.21 71 P P 13 40 24.4 -1.1
TORD IAmb IAmb 13 40 53.4
comp=Z,57nm,0.8s
PLID Pearl Lake 77.69 328 P P 13 40 28.6 +0.9
PLID IAmb IAmb 13 40 30.3
comp=Z,27nm,0.9s
J08A Circle Bar Ran 77.75 326 P P 13 40 29.1 +1.1
MOD Modoc Plateau 77.76 324 P P 13 40 29.1 +1.0
MOD IAmb IAmb 13 40 31.1
comp=Z,60nm,1.6s
MSO Missoula 77.96 330 P P 13 40 30.1 +1.1
MSO Missoula 77.96 330 P P 13 40 31.0 +1.9
baz=138,SNR=13
VNDA Vanda 78.06 190 P P 13 40 31.6 +2.5
comp=Z,7.0nm,0.8s,baz=129,slow=5.5,SNR=46
comp=Z,7.0nm,0.8s
VNDA Vanda 78.06 190 P P 13 40 31.0 +1.9
BMO Blue Mountains 78.17 327 P P 13 40 31.3 +1.0
BMO Blue Mountains 78.17 327 P P 13 40 31.3 +1.0
BMO pmax pmax
comp=Z,20nm,0.9s
K05A Summer Lake 78.63 324 P P 13 40 34.2 +1.2
K05A IAmb IAmb 13 40 36.3
comp=Z,40nm,1.0s
KMRM Mail Ridge 78.64 321 P P 13 40 34.6 +1.6
KMRM IAmb IAmb 13 40 36.3
comp=Z,50nm,1.2s
I07A Izee 78.78 326 P P 13 40 35.2 +1.5
JTMT Jette 78.79 331 P P 13 40 34.9 +1.2
KMPM Mount Pierce 79.01 320 P P 13 40 36.6 +1.6
KMPM IAmb IAmb 13 40 37.7
comp=Z,30nm,0.6s
YBH Yreka Blue Hor 79.01 322 P P 13 40 35.0 0.0
YBH Yreka Blue Hor 79.01 322 P P 13 40 35.0 0.0
YBH pmax pmax
comp=Z,10.0nm,0.9s
KHMM Horse Mountain 79.06 321 P P 13 40 36.2 +0.8
L04D Klamath Falls 79.09 323 P P 13 40 36.1 +0.6
L04D IAmb IAmb 13 40 37.6
comp=Z,66nm,1.5s
L04D Klamath Falls 79.09 323 P P 13 40 36.5 +1.0
baz=130,SNR=6.0
J05D Fort Rock, OR 79.19 324 P P 13 40 37.9 +1.9
baz=131,SNR=12
JCC Jacoby Creek, 79.21 321 P P 13 40 37.4 +1.5
JCC IAmb IAmb 13 41 19.4
comp=Z,60nm,1.2s
G08A Pilot Rock 79.32 327 P P 13 40 37.6 +1.0
PINE Pine Mountain 79.36 325 P P 13 40 38.6 +1.7
PINE IAmb IAmb 13 40 40.3
comp=Z,33nm,0.9s
AVE Averroes 79.41 49 P P 13 40 36.2 -1.0
AVE IAmb IAmb 13 41 10.2
comp=Z,38nm,0.8s
KRPM Rodgers 79.42 321 P P 13 40 38.8 +1.6
KRPM IAmb IAmb 13 42 07.7
comp=Z,87nm,1.4s
WALA Waterton Lakes 79.60 332 P P 13 40 38.7 +0.7
J04D Umpqua Nationa 79.64 324 P P 13 40 39.9 +1.4
J04D IAmb IAmb 13 40 41.1
comp=Z,43nm,0.7s
J04D Umpqua Nationa 79.64 324 P P 13 40 40.1 +1.6
baz=130,SNR=14
HUMO Hull Mountain 79.71 323 P P 13 40 39.4 +0.7
KSXB Camp Six Broad 79.75 322 P P 13 40 40.6 +1.6
KSXB IAmb IAmb 13 40 41.9
comp=Z,75nm,1.5s
E09A Wood Farm, Sta 79.75 328 P P 13 40 39.5 +0.7
L02F Cave Junction 79.76 322 P P 13 40 40.7 +1.8
baz=129,SNR=8.5
I05D Terrebonne, OR 79.94 325 P P 13 40 42.0 +2.1
baz=131,SNR=22
I04A Tendick Farm, 80.17 324 P P 13 40 42.3 +1.2
baz=130,SNR=6.3
K02D Willamette Mer 80.17 323 P P 13 40 43.1 +1.9
baz=129,SNR=6.1
DBO Dodson Butte 80.20 323 P P 13 40 43.0 +1.6
F07A Phinny Hill Vi 80.23 327 P P 13 40 43.2 +1.9
HAWA Hanford 80.37 327 P P 13 40 43.4 +1.4
NEW Newport 80.49 330 P P 13 40 43.2 +0.5
NEW Newport 80.49 330 P P 13 40 43.2 +0.5
NEW pmax pmax
comp=Z,10.0nm,1.2s
NEW Newport 80.49 330 P P 13 40 43.5 +0.8
baz=135,SNR=8.6
D08A Wollman Farm, 80.52 328 P P 13 40 44.0 +1.1
G05D Wamic, OR 80.52 326 P P 13 40 45.0 +2.0
baz=131,SNR=9.1
J01E Myrtle Point 80.62 323 P P 13 40 45.0 +1.5
J01E IAmb IAmb 13 40 46.1
comp=Z,28nm,0.8s
J01E Myrtle Point 80.62 323 P P 13 40 43.8 +0.4
baz=129
H04A Detroit Lake 80.62 325 P P 13 40 44.3 +0.8
I03D Drain, OR 80.63 323 P P 13 40 44.9 +1.4
baz=130
KEBM Edson Butte 80.67 322 P P 13 40 45.2 +1.3
KEBM IAmb IAmb 13 40 46.9
comp=Z,80nm,1.2s
TSUM Tsumeb 80.70 107 P P 13 40 43.1 -1.6
C09A Chrisman Ranch 80.71 329 P P 13 40 45.5 +1.6
C09A IAmb IAmb 13 40 46.6
comp=Z,30nm,0.7s
BUCK Buck Mountain 80.75 324 P P 13 40 45.3 +1.1
BUCK IAmb IAmb 13 40 46.7
comp=Z,46nm,0.8s
HOOD Mount Hood Mea 80.75 325 P P 13 40 45.7 +1.4
HOOD IAmb IAmb 13 40 47.4
comp=Z,65nm,1.3s
MORF Marmelete 80.76 45 *e*P P 13 40 54.8 +10
H04D Lebanon 80.82 324 P P 13 40 45.4 +0.9
H04D IAmb IAmb 13 40 57.9
comp=Z,68nm,1.6s
H04D Lebanon 80.82 324 P P 13 40 45.3 +0.8
baz=130
PTEO Sao Teotonio 80.85 44 *e*P P 13 40 55.2 +10
I02E Swisshome, OR 81.17 324 P P 13 40 48.5 +2.1
I02E Swisshome, OR 81.17 324 P P 13 40 48.2 +1.8
baz=129
COR Corvallis 81.17 324 P P 13 40 48.2 +1.8
COR IAmb IAmb 13 40 49.5
comp=Z,62nm,0.9s
COR Corvallis 81.17 324 P P 13 40 48.2 +1.8
COR pmax pmax
comp=Z,63nm,1.0s
PMAFR Mafra 81.28 43 *e*P P 13 40 56.7 +10
PNCL Nicolau / Gran 81.29 44 *e*P P 13 40 57.1 +10
FCC Fort Churchill 81.32 347 P P 13 40 47.0 +0.2
FCC IAmb IAmb 13 40 48.5
comp=Z,28nm,0.9s
FCC Fort Churchill 81.32 347 P P 13 40 47.0 +0.2
FCC pmax pmax
comp=Z,28nm,0.9s
MESJ Messejana 81.34 44 *e*P P 13 40 57.0 +10
PCVE Castro Verde 81.35 45 *e*P P 13 40 57.2 +10
PVAQ Vaqueiros 81.43 45 *e*P P 13 40 57.8 +10
LTY Liberty 81.53 327 P P 13 40 49.4 +1.1
LTY IAmb IAmb 13 40 50.8
comp=Z,59nm,1.4s
G03D McMinnville, O 81.55 325 P P 13 40 50.0 +1.7
baz=130
F04A Amboy 81.56 326 P P 13 40 48.9 +0.5
F04A IAmb IAmb 13 40 50.9
comp=Z,56nm,1.0s
B08A Colville Reser 81.61 329 P P 13 40 49.1 +0.5
PBEJ Beja 81.68 44 *e*P P 13 40 59.3 +10
PSBE So Bento 81.91 43 *e*P P 13 41 00.6 +10
F04D Rainier, OR 81.97 325 P P 13 40 52.5 +1.9
baz=130
PMTG Motargil 82.02 43 *e*P P 13 41 00.9 +10
comp=Z,22nm,1.0s
D05A Enumclaw 82.16 327 P P 13 40 52.6 +1.1
D05A IAmb IAmb 13 40 53.8
comp=Z,39nm,0.8s
PBAR Barrancos 82.30 45 *e*P P 13 41 02.1 +10
PESTR Estremoz 82.32 44 *e*P P 13 41 02.8 +10
PCAS Casmilo, Conde 82.40 42 *e*P P 13 41 02.9 +10
RADR Rader Ridge 82.61 325 P P 13 40 55.1 +1.2
RADR IAmb IAmb 13 41 29.8
comp=Z,91nm,1.2s
PMRV Marv??o 82.76 43 *e*P P 13 41 04.4 +10
IVI Ivigtut 82.89 10 P P 13 40 55.2 +0.3
IVI IAmb IAmb 13 41 46.8
comp=Z,58nm,1.2s
PCBR Castelo Branco 82.93 43 *e*P P 13 41 05.3 +10
comp=Z,21nm,1.4s
PVIS Viseu 83.15 42 *e*P P 13 41 06.1 +9.2
MTE Manteigas 83.20 43 *e*P P 13 41 07.2 +10
NLWA Neilton Lookou 83.26 326 P P 13 40 58.8 +1.5
NRS Narsarsuaq 83.33 11 P P 13 40 58.5 +1.3
NRS Narsarsuaq 83.33 11 P P 13 40 58.5 +1.3
NRS pmax pmax
comp=Z,152nm,1.7s
B04A Port Angeles 83.50 327 P P 13 40 59.9 +1.5
B04A IAmb IAmb 13 41 38.5
comp=Z,28nm,1.1s
PVRL Vila Real 83.58 42 *e*P P 13 41 08.9 +10
POLO Lamas de Olo 83.58 42 *e*P P 13 41 08.9 +10
PGAV Gavieira, Arco 83.62 41 *e*P P 13 41 09.1 +10
PCAB Cabril 83.62 41 *e*P P 13 41 09.4 +10
PGC Sidney 83.85 327 P P 13 41 01.3 +1.1
PGC IAmb IAmb 13 41 02.7
comp=Z,28nm,0.8s
MVO Moncorvo 83.95 42 *e*P P 13 41 11.2 +10
comp=Z,23nm,0.7s
CLRS Cowichan Lake 84.31 327 P P 13 41 03.5 +1.0
CLRS IAmb IAmb 13 42 12.6
comp=Z,81nm,1.9s
BOSA Boshof 84.32 118 P P 13 41 03.8 +0.5
comp=Z,9.5nm,0.8s,baz=280,slow=4.0,SNR=10
BOSA pP **pP 13 41 31.0 -0.4**
comp=Z,13nm,0.9s,baz=215,slow=3.2,SNR=5.1
comp=Z,9.5nm,0.8s
BOSA Boshof 84.32 118 P P 13 41 02.1 -1.3
LLLB Lillooet 84.36 329 P P 13 41 03.5 +0.7
LLLB IAmb IAmb 13 41 04.6
comp=Z,27nm,1.0s
PBRG Braganca 84.48 42 A A 13 41 13.8
comp=Z,13nm,0.8s
PBRG Braganca 84.48 42 *e*P P 13 41 13.9 +10
PAB San Pablo 84.81 45 P P 13 41 05.4 0.0
PAB San Pablo 84.81 45 P P 13 41 05.4 0.0
PAB pmax pmax
comp=Z,25nm,1.1s
OZB Mount Ozzard 85.09 327 P P 13 41 07.8 +1.3
OZB IAmb IAmb 13 43 28.7
comp=Z,74nm,1.2s
ESDC Sonseca Array 85.13 45 P P 13 41 06.9 -0.1
comp=Z,2.6nm,1.0s,baz=247,slow=4.4,SNR=11
ESDC pP **pP 13 41 34.9 -0.3**
comp=Z,6.6nm,1.1s,baz=242,slow=5.0,SNR=4.6
ESDC LR LR 14 17 04.8
comp=Z,42nm,19.8s,baz=262,slow=34
comp=Z,2.6nm,1.0s
ESDC Sonseca Array 85.13 45 P P 13 41 07.3 +0.3
MAW Mawson 85.64 163 P P 13 41 10.6 +1.6
comp=Z,8.5nm,0.5s,baz=208,slow=5.8,SNR=41
comp=Z,8.5nm,0.5s
MAW Mawson 85.64 163 P P 13 41 09.9 +0.9
CBB Campbell River 85.70 328 P P 13 41 10.6 +1.1
CBB IAmb IAmb 13 41 11.8
comp=Z,22nm,1.1s
LBTB Lobatse 85.83 115 LR LR 14 15 01.5
comp=Z,50nm,20.0s,baz=226,slow=32
LBTB Lobatse 85.83 115 P P 13 41 09.8 -1.2
LBTB Lobatse 85.83 115 P P 13 41 09.8 -1.2
LBTB pmax pmax
comp=Z,14nm,0.9s
HOLB Holberg 87.47 327 P P 13 41 18.5 +0.4
DY2G Dye2 88.13 9 *i* P P **13 41 21.6 +0.5**
DY2G IAmb IAmb 13 42 10.1
comp=Z,88nm,1.5s
BBB Bella Bella 88.38 328 P P 13 41 22.9 +0.6
BBB IAmb IAmb 13 43 29.1
comp=Z,62nm,1.7s
YKA Yellowknife Ar 89.88 341 P P 13 41 29.8 +0.7
comp=Z,33nm,0.7s,baz=131,slow=4.6,SNR=366
YKA pP **pP 13 41 55.6 -1.1**
comp=Z,12nm,0.7s,baz=130,slow=4.5,SNR=6.2
comp=Z,33nm,0.7s
YKA Yellowknife Ar 89.88 341 P P 13 41 29.6 +0.5
ICESG Greenland Ices 91.57 10 *i* P P **13 41 37.5 +0.2**
ICESG IAmb IAmb 13 42 19.7
comp=Z,24nm,0.8s
T35M Bob Quinn 92.19 331 P P 13 41 41.1 +1.1
baz=125
CRAG Craig 92.69 329 P P 13 41 43.1 +0.8
baz=122
WRAK Wrangell Islan 92.84 330 P P 13 41 43.8 +0.8
baz=123
DLBC Dease Lake 92.93 333 P P 13 41 44.4 +0.9
DLBC IAmb IAmb 13 41 45.8
comp=Z,13nm,1.1s
DLBC Dease Lake 92.93 333 P P 13 41 44.6 +1.2
baz=125,SNR=7.4
EKA Eskdalemuir Ar 93.68 32 P P 13 41 46.0 -0.8
comp=Z,1.1nm,0.8s,baz=226,slow=4.5,SNR=5.3
comp=Z,1.1nm,0.8s
CASY Casey 93.78 180 P P 13 41 48.7 +1.4
R33M Jennings River 93.87 333 P P 13 41 48.8 +1.0
baz=124
SUMG Summit 94.84 9 P P 13 41 52.9 +0.5
SUMG IAmb IAmb 13 42 09.9
comp=Z,13nm,1.1s
SUMG Summit 94.84 9 P P 13 41 52.9 +0.5
SUMG pmax pmax
comp=Z,13nm,1.1s
SUMG Summit 94.84 9 *i* P P **13 41 52.0 -0.4**
SUMG IAmb IAmb 13 42 50.8
comp=Z,337nm,3.6s
P33M Teslin, Yukon 95.10 333 P P 13 41 53.7 +0.3
baz=122
DOU Dourbes 95.41 38 *dx* P 13 42 05.7 +11
BMRD Maredsous 95.60 38 *dx* P 13 42 06.8 +11
RCHB Rochefort 95.80 39 *dx* P 13 42 07.8 +11
BCLA Clavier 95.96 38 *dx* P 13 42 08.6 +11
WLF Walferdange 96.15 39 *dx* P 13 42 10.1 +12
BSTI Sart Tilman 96.18 38 *dx* P 13 42 10.1 +12
MEM Membach 96.44 38 *dx* P 13 42 11.2 +12
BTNL Ternell 96.51 38 *dx* P 13 42 11.2 +11
MOTA Moosalm 98.31 43 *e*P Pdif 13 42 15.2 +6.8
comp=Z,4.1nm,1.3s
SQTA Sankt Quirin 98.34 43 *e*P Pdif 13 42 15.2 +6.8
comp=Z,7.3nm,0.7s
M29M Somme Creek 98.58 334 P Pdif 13 42 09.8 +0.6
baz=117
WATA Walderalm 98.61 43 *e*P Pdif 13 42 14.9 +5.2
comp=Z,2.2nm,0.6s
WTTA Wattenberg 98.62 43 *e*P Pdif 13 42 14.9 +5.1
comp=Z,4.8nm,0.8s
MBAR Mbarara 99.15 94 LR LR 14 23 42.4
comp=Z,144nm,21.7s,baz=16,slow=33
INK Inuvik 99.64 340 P Pdif 13 42 13.6 0.0
comp=Z,2.0nm,0.8s,baz=111,slow=1.4,SNR=5.2
comp=Z,2.0nm,0.8s
INK Inuvik 99.64 340 P Pdif 13 42 14.2 +0.7
baz=121
KBA Koelnbreinsper 99.66 43 *e*P **Pdif 13 42 25.1 +11**
comp=Z,3.0nm,0.5s
MYKA Terra Mystica 99.70 44 *e*P **Pdif 13 42 22.9 +8.5**
comp=Z,4.7nm,0.7s
OBKA Obir 100.26 44 *e*P **Pdif 13 42 26.8 +10**
comp=Z,7.0nm,1.2s
GERES GERESS Array B 100.46 42 PKKPbc PKKPbc 13 58 34.9 +0.1
comp=Z,0.4nm,0.7s,baz=60,slow=5.4,SNR=4.0
I27K Kandik River 101.21 336 P Pdif 13 42 19.9 -0.8
baz=114
KLU Klutina 101.40 332 P Pdif 13 42 21.1 -0.6
baz=111
J26L Joseph Creek 101.53 335 P Pdif 13 42 23.0 +0.8
baz=113
P23K Montague Islan 101.55 330 P Pdif 13 42 23.0 +0.8
baz=110
G27K Doyon Strip 101.72 337 P Pdif 13 42 23.3 +0.4
baz=114
M24K Tolsona, Glenn 101.73 332 P Pdif 13 42 22.8 -0.3
baz=111
PAX Paxson 101.74 333 P Pdif 13 42 23.1 -0.1
baz=111
PRP Porcupine Dome 102.68 335 P Pdif 13 42 28.1 +0.7
baz=111
F26K Sheenjek River 102.95 338 P Pdif 13 42 29.3 +1.0
baz=112
ILAR Eielson Array 102.96 335 PP PP 13 46 41.0 -3.1
comp=Z,0.5nm,0.8s,baz=107,slow=8.7,SNR=4.9
H25K Birch Creek 103.06 336 P Pdif 13 42 30.1 +1.3
baz=110
F25K Christian Rive 103.45 337 P Pdif 13 42 31.0 +0.3
baz=110
E25K Arctic Village 103.61 338 P Pdif 13 42 32.5 +1.2
baz=110
H24K Noodor Dome 103.70 335 P Pdif 13 42 32.5 +0.7
baz=109
NEA2 Nenana 103.79 334 P Pdif 13 42 32.6 +0.4
baz=108
BPAW Bear Paw Mtn. 104.44 333 P Pdif 13 42 35.0 -0.1
baz=106
MLY Manley 104.60 334 P Pdif 13 42 35.5 -0.3
baz=106
CAST Castle Rocks 104.72 333 P Pdif 13 42 36.7 +0.3
baz=106
H21K Melozitna Rive 105.60 335 P PKiKP 13 46 53.3 +0.5
baz=104
F22K John River 105.82 337 P PKiKP 13 46 53.3 +0.2
baz=104
E22K Anaktuvuk Pass 105.84 337 P PKiKP 13 46 53.2 -0.1
baz=104
FINES FINESS Array B 110.06 31 PKKPbc PKKPbc 13 58 05.0 -0.6
comp=Z,1.9nm,0.7s,baz=86,slow=3.0,SNR=9.2
MNK Minsk 110.29 38 *i* P **Pdif 13 42 58.9 -2.3**
MNK *i* 13 46 59.1
MNK *i* 13 47 32.5
MNK *i* 13 53 56.6
MNK *i* SS SS 14 02 54.3 -3.2
MNK *i* SSS SSS 14 07 03.0
MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=Z,7.0nm,0.8s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=E,7.0nm,23.0s
MNK MLR MLR
comp=N,109nm,22.0s
MNK MLR MLR
comp=Z,76nm,25.0s
MNK Minsk 110.29 38 *i* P **Pdif 13 42 58.9 -2.3**
comp=E,1.0nm,0.7s
MNK *i* P **Pdif 13 42 58.9 -2.3**
comp=N,8.0nm,0.9s
MNK *i* P **Pdif 13 42 58.9 -2.3**
comp=Z,7.0nm,0.8s,baz=265
MNK *i* PKP **PKiKP 13 46 59.1 -2.7**
MNK *i* PP **PP 13 47 32.5 -5.7**
MNK *i* PPP PPP 13 49 53.0
MNK *i* SKS **SKSdf 13 53 56.6 -7.7**
MNK *i* SS **SS 14 02 54.3 -3.1**
MNK *i* SSS SSS 14 07 03.0
MNK *i* LRM MLR 14 34 55.9
comp=E,7.0nm,23.2s
MNK *i* LRM MLR 14 35 15.2
comp=N,109nm,21.9s
MNK *i* LRM MLR 14 35 15.2
comp=Z,76nm,24.5s
ARCES ARCESS Array B 110.41 22 PKKPbc PKKPbc 13 58 03.4 -1.4
comp=Z,1.0nm,0.4s,baz=84,slow=3.3,SNR=20
AKASG Malin Array Be 110.66 42 PKKPbc PKKPbc 13 58 02.7 -0.6
comp=Z,2.1nm,0.6s,baz=67,slow=4.1,SNR=7.2
BRTR Keskin Array B 112.33 54 PKiKP PKiKP 13 47 07.0 +0.6
comp=Z,0.3nm,0.4s,baz=177,slow=2.4,SNR=3.6
BRTR PKKPbc **PKKPbc 13 57 58.0 +0.3**
comp=Z,0.3nm,0.5s,baz=113,slow=3.3,SNR=1.4
ANN Anapa 115.65 49 *i* PKIKP **PKiKP 13 47 12.6 +0.2**
ANN *e* 13 53 53.5
ANN pmax pmax
comp=Z,87nm,0.9s
KLMR Klimovskoe 116.57 31 *e*PKIKP **PKPdf 13 47 13.2 -0.4**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 116.57 31 *e*PKPdf **PKPdf 13 47 13.2 -0.4**
KLMR AMP 13 47 16.2
comp=Z,9.0nm,1.2s
KLMR *e*PKKPbc **PKKPbc 13 57 38.2 -5.4**
KIV Kislovodsk 119.39 50 *e*PKIKP **PKPdf 13 47 19.1 -0.7**

KIV pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 119.54 51 PKP **PKiKP 13 47 20.6 +0.6**
comp=Z,6.4nm,0.9s,baz=236,slow=3.6,SNR=5.7
KBZ Khabaz 119.54 51*c i*PKiKP **PKiKP 13 47 22.0 +2.0**
STKA Stephens Creek 120.37 210 PKP **PKiKP 13 47 23.0 +0.9**
comp=Z,4.2nm,0.7s,baz=135,slow=4.3,SNR=11
STKA Stephens Creek 120.37 210 PKiKP **PKiKP 13 47 23.0 +0.9**
BILL Bilibino 121.22 339‖*e*PKiKP **PKiKP 13 47 23.0 +0.4**
BILL *e* 13 47 54.1
BILL *e* 13 48 57.2
BILL pmax pmax
comp=Z,3.0nm,1.0s
KIRV Kirov 121.90 33*c i*PKiKP **PKiKP 13 47 25.1 +1.0**
ARU Arti 127.25 33 PKP **PKiKP 13 47 35.4 +0.6**
comp=Z,8.5nm,0.5s,baz=320,slow=1.6,SNR=14
ARU Arti 127.25 33 PKPdf **PKiKP 13 47 35.1 +0.3**
ARU Arti 127.25 33 *i* PKiKP **PKiKP 13 47 35.6 +0.8**
ARU 13 49 38.1
ARU 13 54 36.2
ARU SS SS 14 06 34.5 -1.3
H11S2 WAKE ISLAND Hy 127.41 278 T T 16 07 20.1
baz=102,slow=74,SNR=379
H11S1 WAKE ISLAND Hy 127.42 278 T T 16 07 24.0
baz=102,slow=74,SNR=318
H11S3 WAKE ISLAND Hy 127.42 278 T T 16 07 21.7
baz=102,slow=74,SNR=318
H11N3 WAKE ISLAND Hy 127.45 280 T T 16 07 25.2
baz=102,slow=75,SNR=457
H11N2 WAKE ISLAND Hy 127.47 280 T T 16 07 32.3
baz=102,slow=75,SNR=284
H11N1 WAKE ISLAND Hy 127.47 280 T T 16 07 30.8
baz=102,slow=75,SNR=150
SEY Seymchan 128.80 337 PKP **PKiKP 13 47 38.2 +0.5**
comp=Z,13nm,0.8s,baz=120,slow=2.5,SNR=56
SEY pPKP **pPKPdf 13 48 05.5 -0.4**
comp=Z,7.6nm,0.9s,baz=81,slow=2.5,SNR=7.5
SEY Seymchan 128.80 337*c i*PKiKP **PKiKP 13 47 38.8 +1.1**
SEY pmax pmax
comp=Z,25nm,1.3s
NRIK Noril'sk 128.86 10 *i* PKiKP **PKiKP 13 47 37.5 -0.2**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
AKTO Aktyubinsk 128.87 41 PKP **PKPdf 13 47 37.7 +0.1**
comp=Z,3.2nm,0.8s,baz=301,slow=1.8,SNR=11
ABKAR Akbulak array 130.40 42 PKPdf **PKPdf 13 47 41.0 +0.4**
ABKAR Akbulak array 130.40 42 PKPdf **PKPdf 13 47 40.7 +0.2**
ASAR Alice Springs 130.90 208 PKhKP PKPpre 13 47 22.8
comp=Z,0.2nm,0.5s,baz=130,slow=2.7,SNR=2.1
ASAR PKP **PKPdf 13 47 42.8 +0.4**
comp=Z,6.2nm,0.5s,baz=128,slow=1.6,SNR=22
ASAR pPKP pPKPdf 13 48 11.1 -0.2
comp=Z,3.1nm,0.9s,baz=149,slow=2.0,SNR=3.6
ASAR PKKP **PKKPdf 13 57 41.4 +0.4**
comp=Z,0.3nm,0.7s,baz=342,slow=1.7,SNR=4.5
ASAR Alice Springs 130.90 208 PKPdf **PKPdf 13 47 41.9 -0.5**
AS31 Alice Springs 130.90 208 PKPdf **PKPdf 13 47 42.0 -0.5**
PEA0B Petropavlovsk- 131.35 324*c i*PKiKP **PKiKP 13 47 42.0 -0.2**
PETK Petropavlovsk- 131.35 324 PKP **PKiKP 13 47 43.3 +0.1**
comp=Z,6.0nm,0.8s,baz=149,slow=2.2,SNR=16
PETK pPKP **pPKPdf 13 48 11.0 -0.1**
comp=Z,5.1nm,0.9s,baz=144,slow=5.3,SNR=4.9
GEYT Alibeck 131.36 57 PKP **PKiKP 13 47 44.0 +0.3**
comp=Z,2.2nm,0.6s,baz=278,slow=4.3,SNR=3.8
WR0 Warramunga Arr 133.78 212 **PKPdf 13 47 48.4 +0.5**
WB2 Warramunga Arr 133.89 211 PKPdf **PKPdf 13 47 48.3 +0.2**
WRA Warramunga Arr 133.90 211 PKhKP PKPpre 13 47 35.6
comp=Z,0.8nm,0.7s,baz=121,slow=2.4,SNR=16
WRA PKP **PKiKP 13 47 48.9 -0.6**
comp=Z,7.9nm,0.7s,baz=157,slow=1.7,SNR=62
WRA pPKP pPKPdf 13 48 17.0 0.0
comp=Z,2.5nm,0.7s,baz=160,slow=1.6,SNR=1.5
WRA Warramunga Arr 133.90 211 PKPdf **PKPdf 13 47 48.4 +0.2**
WRAB Tennant Creek 133.90 211*c i*PKiKP **PKiKP 13 47 49.2 -0.2**
WRAB pmax pmax
comp=Z,34nm,2.5s
WB0 Warramunga Arr 134.02 212 PKPdf **PKPdf 13 47 48.6 +0.3**
BRVK Borovoye 134.83 34 **PKPdf 13 47 49.3 +0.6**
BRVK Borovoye 134.83 34*c i*PKiKP **PKiKP 13 47 50.9 +0.7**
BRVK pmax pmax
comp=Z,6.0nm,1.7s
YAK Yakutsk 136.20 347*c i*PKiKP **PKiKP 13 47 52.4 -0.3**
YAK pmax pmax
comp=Z,9.0nm,1.0s
PSA00 Pilbara Seismi 137.53 193 **PKPdf 13 47 55.0 +0.1**
FITZ Fitzroy Crossi 139.23 202 PKPpre 13 47 48.4
KURK Kurchatov 140.41 32*c i*PKiKP **PKiKP 13 48 01.1 -0.6**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURBB Kurchatov Arra 140.42 32 PKP **PKPdf 13 47 59.4 +0.3**
comp=Z,5.2nm,0.8s,baz=300,slow=2.3,SNR=16
ZALV Zalesovo Beam 140.91 24 PKhKP PKPpre 13 47 52.9
comp=Z,1.7nm,0.5s,baz=298,slow=4.7,SNR=5.5
ZALV PKP **PKPdf 13 48 00.3 +0.3**
comp=Z,15nm,0.8s,baz=311,slow=3.3,SNR=6.9
ZALV SKPbc **SKiKP 13 51 28.7 -0.8**
comp=Z,3.3nm,0.9s,baz=306,slow=3.5,SNR=4.8
BOD Bodaibo 142.37 357 *e*PKHKP PKPpre 13 47 57.3
BOD pmax pmax
comp=Z,16nm,0.8s
YSS Yuzh-Sakhalins 142.74 323 *i* PKiKP **PKPdf 13 48 01.5 -1.9**
YSS pmax pmax
comp=Z,10.0nm,1.1s
ZEA Zeya 144.22 343 *e*PKiKP **PKPdf 13 48 05.2 -0.6**
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA pmax pmax
comp=Z,20nm,1.5s
KSH Kashi 144.51 49 PKP **PKPdf 13 48 06.6 -0.4**
KSH pPKP pPKPdf 13 48 34.5 -1.9
KSH sPKP 13 48 46.6
MAKZ Makanchi 144.58 35 PKPbc 13 48 06.0 +0.3
MAKZ Makanchi 144.58 35 PKiKP PKPbc 13 48 06.0 +0.4
MK31 Makanchi Array 144.76 35 PKPdf PKPbc 13 48 06.5 +0.3
MK31 Makanchi Array 144.76 35 PKiKP PKPbc 13 48 06.5 +0.3
MKAR Makanchi Array 144.76 35 PKP **PKPdf 13 48 07.0 0.0**
comp=Z,16nm,0.7s,baz=322,slow=4.1,SNR=126
MKAR pPKP **pPKPdf 13 48 35.2 -1.3**
comp=Z,15nm,1.1s,baz=299,slow=2.5,SNR=4.0
MKAR SKPbc **SKiKP 13 51 38.2 +0.5**
comp=Z,1.4nm,0.8s,baz=295,slow=2.9,SNR=4.3
MKAR Makanchi Array 144.76 35 PKPdf PKPbc 13 48 06.2 0.0
ERM Erimo 145.09 316*c i*PKiKP **PKPdf 13 48 08.7 +1.1**
ERM pmax pmax
comp=Z,173nm,1.0s
JEW Eniwo 145.77 318 PKPbc **PKPab 13 48 10.2 +0.2**
KLR Kul'dur 146.53 335 PKPbc **PKPbc 13 48 11.3 -0.2**
comp=Z,17nm,0.7s,baz=56,slow=3.4,SNR=29
GUMO Guam 146.76 264 PKPbc **PKPbc 13 48 13.5 +0.4**
comp=Z,278nm,0.9s,baz=174,slow=6.5,SNR=6.5
GUMO Guam 146.76 264 PKPbc **PKPbc 13 48 13.2 +0.1**
GUMO Guam 146.76 264 PKP2 **PKPbc 13 48 13.2 +0.1**
IRK Irkutsk 147.63 7 *e*PKiKP **PKPbc 13 48 13.1 -1.4**
IRK pmax pmax
comp=Z,52nm,1.8s
MOY Mondy 147.69 11 *e*PKP2 **PKiKP 13 48 16.0 -0.8**
MOY pmax pmax
comp=Z,41nm,1.5s
FAKI Fak Fak 148.81 225 PKPab **PKiKP 13 48 20.2 +0.1**
ZAK Zakamensk 149.31 9 *e*PKiKP **PKPdf 13 48 16.2 +1.6**
ZAK *e* 13 48 56.7
ZAK pmax pmax
comp=Z,16nm,1.2s
ZAK pmax pmax
comp=Z,10.0nm,1.3s
HYBB Hyderabad (bro 149.40 90 *e*PKiKP **PKPbc 13 48 20.5 +0.4**
WMQ Urumqi 149.59 34 *e*PKPbc **PKPdf 13 48 15.3 +0.1**
USRK Ussuriysk Ar. 150.26 328 PKPbc **PKiKP 13 48 22.7 +0.5**
comp=Z,39nm,0.7s,baz=7.0,slow=1.2,SNR=34
USRK pPKPbc **pPKPbc 13 48 50.1 -0.2**
comp=Z,29nm,0.9s,baz=13,slow=1.2,SNR=6.0
JSD Sado 150.29 313 PKPbc **PKiKP 13 48 22.2 -0.2**
JSD PKPab **PKPab 13 48 28.6 +0.4**
MJAR Matsushiro Arr 151.03 310 PKP **PKPdf 13 48 19.1 +1.5**
comp=Z,1.4nm,0.6s,baz=93,slow=2.6,SNR=5.5
MJAR PKPbc **PKiKP 13 48 24.4 +0.3**
comp=Z,27nm,0.8s,baz=112,slow=2.0,SNR=67
MJAR pPKPbc **pPKPbc 13 48 51.8 -0.3**
comp=Z,3.8nm,0.7s,baz=111,slow=3.5,SNR=2.7
MAJO Matsushiro 151.03 310 **PKiKP 13 48 23.8 -0.2**
MAJO Matsushiro 151.03 310 PKiKP **PKiKP 13 48 23.8 -0.2**
MDJ Mudanjiang 151.08 332 **PKPbc 13 48 23.5 +0.2**
MDJ Mudanjiang 151.08 332 PKPbc **PKPdf 13 48 18.4 +1.0**
BNX BinXian 151.09 336 ⇑PKPbc **PKPdf 13 48 17.9 +0.5**
SONM Songino Array 152.22 6 PKP **PKPdf 13 48 20.4 +1.2**
comp=Z,4.8nm,0.8s,baz=47,slow=0.2,SNR=21
SONM PKPbc **PKiKP 13 48 27.1 +0.8**
comp=Z,25nm,0.6s,baz=298,slow=1.3,SNR=75
SONM Songino Array 152.22 6 PKPdf **PKPdf 13 48 19.7 +0.5**
SONM **PKiKP 13 48 26.6 +0.3**
INU Inuyama 152.42 309 **PKiKP 13 48 27.1 +0.2**
XLT XiLinHaoTe 155.97 351 *e*PKP **PKPdf 13 48 25.6 +1.1**
XLT PKPab **pPKPdf 13 48 53.8 0.0**
XLT sPKP 13 49 05.3
XLT SKS **SKSdf 13 55 17.4 -4.2**
XLT SS **SS 14 12 09.3 +1.4**
XLT AMB AMB
comp=Z,120nm,5.1s
XLT LR LR
comp=Z,51nm,15.2s
XLT LR LR
comp=Z,460nm,11.4s
XLT LR LR
comp=Z,510nm,12.6s
SEHB SEOHWA 156.48 324 PKPab **PKPab 13 48 55.2 +0.9**
KS19 Wonju Array Si 157.24 323 **PKPab 13 48 58.5 +0.9**
KSRS Korea Array 157.24 323 PKP **PKPdf 13 48 27.3 +1.0**
comp=Z,4.2nm,0.8s,baz=50,slow=0.9,SNR=29
KSRS PKPab **PKPab 13 48 58.8 +1.2**
comp=Z,9.5nm,0.9s,baz=58,slow=4.1,SNR=21
KSAR Wonju Array Be 157.27 323 PKPdf **PKPdf 13 48 26.5 +0.2**
KSAR Wonju Array Be 157.27 323 PKiKP **PKPdf 13 48 26.5 +0.2**
KSCHJ Chungju 157.61 321 **PKPab 13 49 00.0 +0.8**
TJN Taejon 158.31 321 PKPab **PKPab 13 49 02.8 +0.6**
TJN Taejon 158.31 321 PKP2 **PKPab 13 49 02.8 +0.6**
GTA Gaotai 158.67 24 ⇑PKP **PKPdf 13 48 29.9 +1.8**
GTA pPKP pPKPdf 13 48 58.0 +0.7
HHC Hu-ho-hao-te 159.42 358 *e*PKP **PKPdf 13 48 28.1 -0.8**
HNS HongShan 162.53 349 ⇑PKP **PKPdf 13 48 34.3 +2.1**
TIA Tai'an 163.11 342 ⇓PKP **PKPdf 13 48 34.0 +1.1**
NJ2 Nanjing 166.16 330 *e*PKP **PKPdf 13 48 36.4 +0.8**
CD2 Chengdu 167.62 29 *e*PKP **PKPdf 13 48 36.1 -0.7**
CMAR Chiang Mai Arr 168.70 97 PKP **PKPdf 13 48 38.6 +0.7**
comp=Z,1.5nm,0.7s,baz=270,slow=1.4,SNR=9.5
CMAR PKPab **PKPab 13 49 49.9 +1.3**
comp=Z,0.5nm,0.4s,baz=258,slow=6.0,SNR=1.9
PZH PanZhiHua 169.61 51 PKP **PKPdf 13 48 36.8 -1.6**

*DDA **14** 13:40:45.6±0.0, 36.°96N×27.°36E, h0km±1km, ML2.3*
*ISK **14** 13:40:45.8, 37.°02N×27.°40E, h12km, ML2.6/11*
ISC 14 13:40:46.0±0.9,**37.°00N**±0.°03×**27.°38E**±0.°03,**h11**km±6km,
n16,σ**0**°**55/25, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.09**	**35**	P	**Pg**	**13 40 48.5**	**-0.1**
BDRM				S	**Sg**	**13 40 50.3**	**-0.1**
BODT	**Bodrum**	**0.09**	**320**	PG	**Pg**	**13 40 48.6**	**0.0**
DAT	**Datca**	**0.31**	**149**	PG	**Pb**	**13 40 52.7**	**-0.9**
DAT				SG	**Sg**	**13 40 57.1**	**+0.7**
KOSK	**Kos Island**	**0.40**	**233**	PG	**Pb**	**13 40 54.9**	**-0.3**
KOSK				SG	**Sb**	**13 41 01.5**	**+0.1**
DDIM	**Aydin, Didim**	**0.47**	**346**	P	**Pb**	**13 40 55.9**	**-0.6**
DDIM				S	**Sb**	**13 41 04.4**	**+0.9**
DDIM				*i* AML	AML	13 41 05.0	
	comp=E,198nm,0.6s						
DDIM				*i* AML	AML	13 41 07.0	
	comp=N,194nm,0.6s						
GCAM	**G?zelcaml?**	**0.71**	**351**	PG	**Pg**	**13 40 59.9**	**+0.1**
GCAM				SG	**Sb**	**13 41 10.3**	**0.0**
GCAM	**G?zelcaml?**	**0.71**	**351**	P	**Pb**	**13 41 00.3**	**-0.2**
GCAM				S	**Sb**	**13 41 11.8**	**+1.5**
GCAM				*i* AML	AML	13 41 14.0	
	comp=E,134nm,0.5s						
GCAM				*i* AML	AML	13 41 16.0	
	comp=N,133nm,0.4s						
TURN	**Turunc**	**0.72**	**107**	PG	**Pb**	**13 41 00.4**	**-0.3**
TURN				SG	**Sb**	**13 41 10.9**	**+0.3**
TURN	**Turunc**	**0.72**	**107**	P	**Pg**	**13 41 00.0**	**0.0**
TURN				S	**Sb**	**13 41 11.6**	**+1.0**
TURN				*i* AML	AML	13 41 16.0	
	comp=N,79nm,0.4s						
YER	**Yerkesik**	**0.73**	**79**	PG	**Pb**	**13 41 00.8**	**-0.1**
AYDN	**Tasoluk**	**0.77**	**31**	P	**Pb**	**13 41 01.2**	**-0.4**
AYDN				S	**Sb**	**13 41 11.9**	**-0.3**
AYDN				*i* AML	AML	13 41 14.0	
	comp=E,128nm,0.3s						
AYDN				*i* AML	AML	13 41 17.0	
	comp=N,109nm,0.7s						
ARG	**Arkhangelos**	**0.98**	**142**	PG	**Pn**	**13 41 05.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**23**	PG	**Pg**	**13 41 05.4**	**-0.5**
DALY	**Dalyan (Mula)**	**1.03**	**99**	PG	**Pn**	**13 41 06.4**	**-0.1**
URLA	**Izmir**	**1.50**	**336**	PN	**Pn**	**13 41 12.8**	**-0.1**
AKAS	**Kas**	**1.94**	**112**	PN	**Pn**	**13 41 19.1**	**0.0**

*NOU **14** 14:01:15.0, 23.°76S×173.°00E, h0km, MLv4.9/12,*
Southeast of Loyalty Islands
*IDC **14** 14:01:16.7±0.7, 22.°75S×172.°69E, h0km, mb4.1/14,*
mbtmp4.1/17, ML4.3/3, MS3.7/13, Error ellipse:
s-maj=18.6km s-min=16.8km az=125.0
*NEIC **14** 14:01:19.9±2.4, 22.°82S±0.°09×172.°78E±0.°08, h10km±1km,*
mb4.6/24, Error ellipse: s-maj=16.1km s-min=11.7km
az=6.0
ISC 14 14:01:18.9±0.4,**22.°82S**±0.°07×**172.°76E**±0.°06,**h10**km,**n82,**
σ1§**61/72, mb4.4/21, MS3.8/10, Southeast of Loyalty**
Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.58**	**286**		**Pn**	**14 02 27.6**	**-0.7**
MARNC	**Mare, Loyalty**	**4.58**	**286**	P	**Pn**	**14 02 32.6**	**+4.3**
PINNC	**Pines Island,**	**4.91**	**271**		**Pn**	**14 02 30.9**	**-1.9**
PINNC	**Pines Island,**	**4.91**	**271**	P	**Pn**	**14 02 33.9**	**+1.1**
YATNC	**Mamie plateau,**	**5.48**	**277**	P	**Pn**	**14 02 43.5**	**+2.8**
OUENC	**Ouen Island, N**	**5.48**	**273**	Pn	**Pn**	**14 02 41.1**	**+0.5**
OUENC	**Ouen Island, N**	**5.48**	**273**	P	**Pn**	**14 02 41.8**	**+1.1**
ONTNC	**Ouen Toro**	**5.85**	**274**	Pn	**Pn**	**14 02 47.5**	**+1.8**
ONTNC	**Ouen Toro**	**5.85**	**274**	P	**Pn**	**14 02 49.1**	**+3.4**
DZM	**Mont Dzumac**	**5.89**	**276**	Pn	**Pn**	**14 02 43.9**	**-2.5**
	0.9nm,0.3s,baz=123,slow=13,SNR=36						
DZM				Sn	**Sn**	**14 03 51.6**	**-2.5**
	1.3nm,0.3s,baz=317,slow=19,SNR=1.3						
	2.4nm,0.3s						
DZM	**Mont Dzumac**	**5.89**	**276**	Pn	**Pn**	**14 02 46.9**	**+0.5**
DZM	**Mont Dzumac**	**5.89**	**276**	P	**Pn**	**14 02 50.6**	**+4.2**
NOUC	**Port Laguerre**	**6.02**	**276**	P	**Pn**	**14 02 47.9**	**-0.1**
DVP	**Devils Point**	**6.64**	**319**	P	Pb	14 03 05.7	-8.9
MSVF	**Nonsavu**	**7.09**	**45**	Pn	**Pn**	**14 03 02.6**	**-0.3**
	1.0nm,0.3s,baz=225,slow=10,SNR=8.4						
MSVF				Sn	**Sn**	**14 04 25.3**	**+1.7**
	0.6nm,0.3s,baz=291,slow=21,SNR=1.0						
MSVF				LR	LR	14 05 06.7	
	comp=Z,542nm,18.9s,baz=219,slow=32						
	12nm,0.6s						
MSVF	**Nonsavu**	**7.09**	**45**	Pn	**Pn**	**14 03 04.1**	**+1.2**
KOUNC	**Koumac, New Ca**	**8.20**	**284**	Pn	**Pn**	**14 03 20.2**	**+2.2**
KOUNC	**Koumac, New Ca**	**8.20**	**284**	P	Pn	14 03 22.6	+4.6
RAO	**Raoul Island**	**10.54**	**129**	LR	LR	14 06 56.4	
	comp=Z,511nm,19.5s,baz=306,slow=32						
RAO	**Raoul Island**	**10.54**	**129**	Pn	**Pn**	**14 03 50.4**	**+0.3**
URZ	**Urewera**	**15.83**	**167**	Pn	**Pn**	**14 05 04.1**	**+2.2**
	0.3nm,0.3s,baz=335,slow=6.3,SNR=6.2						
URZ				LR	LR	14 09 46.0	
	comp=Z,356nm,20.2s,baz=30,slow=32						
	16nm,1.0s						
URZ	**Urewera**	**15.83**	**167**	Pn	**Pn**	**14 05 04.0**	**+2.1**
URZ				IAmb	IAmb	14 05 05.5	
	comp=Z,33nm,1.2s						
QRZ	**Quartz Range**	**17.95**	**181**	P	**P**	**14 05 30.8**	**+1.6**
QRZ				IAmb	IAmb	14 05 38.2	
	comp=Z,43nm,1.2s						
BFZ	**Birch Farm**	**18.05**	**171**		**P**	**14 05 30.9**	**+0.7**
BFZ				IAmb	IAmb	14 06 13.0	
	comp=Z,52nm,1.3s						
MSWZ	**Moikau Station**	**18.66**	**174**	P	**P**	**14 05 37.6**	**+0.6**
PLWZ	**Palliser**	**18.81**	**174**	P	**P**	**14 05 39.4**	**+0.7**
LTZ	**Lake Taylor**	**19.91**	**181**		**P**	**14 05 51.9**	**+1.2**
LTZ				IAmb	IAmb	14 05 56.0	
	comp=Z,36nm,0.9s						
EIDS	**Eidsvold**	**19.95**	**258**	Pn	**Pn**	**14 05 56.0**	**+3.1**
OXZ	**Oxford**	**20.46**	**182**	P	**P**	**14 05 58.1**	**+1.5**
RPZ	**Rata Peaks**	**20.89**	**183**	P	**P**	**14 06 03.0**	**+1.7**
	comp=Z,13nm,0.9s,baz=306,slow=12,SNR=3.2						
	comp=Z,13nm,0.9s						
LBZ	**Lake Benmore**	**21.61**	**185**	P	**P**	**14 06 10.5**	**+1.5**
LBZ				IAmb	IAmb	14 06 12.7	
	comp=Z,36nm,1.4s						
CTA	**Charters Tower**	**24.81**	**271**	P	**P**	**14 06 41.2**	**-0.2**
	comp=Z,4.7nm,0.9s,baz=94,slow=12,SNR=1.6						
	comp=Z,4.7nm,0.9s						
STKA	**Stephens Creek**	**29.03**	**245**	P	**P**	**14 07 20.0**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=84,slow=12,SNR=2.2						
	comp=Z,1.5nm,0.5s						
STKA	**Stephens Creek**	**29.03**	**245**	P	**P**	**14 07 20.4**	**+1.1**
BBOO	**Buckleboo**	**33.81**	**245**	P	**P**	**14 08 03.3**	**+2.0**
BBOO				IAmb	IAmb	14 08 16.1	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	**35.64**	**267**	P	**P**	**14 08 16.6**	**-0.6**
AS31	**Alice Springs**	**35.64**	**261**	P	**P**	**14 08 16.8**	**-0.5**
ASAR	**Alice Springs**	**35.64**	**261**	P	**P**	**14 08 16.5**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=84,slow=9.3,SNR=29						
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**35.64**	**261**	P	**P**	**14 08 17.2**	**-0.1**
WB0	**Warramunga Arr**	**35.81**	**268**	P	**P**	**14 08 18.4**	**-0.4**
WB0				IAmb	IAmb	14 08 55.0	
	comp=Z,9.3nm,1.2s						
WRA	**Warramunga Arr**	**35.83**	**267**	P	**P**	**14 08 15.9**	**-3.0**
	comp=Z,0.7nm,0.4s,baz=96,slow=8.5,SNR=24						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**35.83**	**267**	P	**P**	**14 08 18.6**	**-0.4**
FORT	**Forrest**	**40.47**	**249**	P	**P**	**14 08 58.0**	**+0.1**
KNRA	**Kununurra**	**42.02**	**272**	P	**P**	**14 09 11.5**	**+0.6**
KNRA				IAmb	IAmb	14 09 21.5	
	comp=Z,9.7nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**42.66**	**352**	T	T	14 54 48.3	
	baz=174						
H11N3	**WAKE ISLAND Hy**	**42.66**	**352**	T	T	14 54 48.8	
	baz=174						
H11N2	**WAKE ISLAND Hy**	**42.68**	**352**	T	T	14 54 55.8	
	baz=174						
FITZ	**Fitzroy Crossi**	**44.26**	**267**	P	**P**	**14 09 28.5**	**-0.4**
	comp=Z,4.7nm,0.8s,baz=145,slow=8.0,SNR=13						
	comp=Z,4.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.26**	**267**	P	**P**	**14 09 28.1**	**-0.8**
FITZ				IAmb	IAmb	14 09 32.1	
	comp=Z,4.8nm,0.8s						
GUMO	**Guam**	**45.34**	**320**	LR	LR	14 25 50.1	
	comp=Z,111nm,20.4s,baz=180,slow=33						
MORW	**Morawa**	**50.98**	**250**	P	**P**	**14 10 20.6**	**-0.4**
VNDA	**Vanda**	**55.01**	**183**	P	**P**	**14 10 49.5**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=22,slow=7.0,SNR=4.2						
VNDA				LR	LR	14 30 07.1	
	comp=Z,112nm,21.9s,baz=356,slow=31						
	comp=Z,0.5nm,0.7s						
SBA	**Scott Base**	**55.16**	**182**	P	**P**	**14 10 52.0**	**+0.8**
SBA				IAmb	IAmb	14 11 06.9	
	comp=Z,9.0nm,1.1s						
TOLI2	**Tolitoli**	**55.89**	**288**	P	**P**	**14 10 58.3**	**+1.0**
TOLI2				IAmb	IAmb	14 11 39.4	
	comp=Z,9.2nm,1.1s						
KSM	**Kuching**	**65.37**	**283**	P	**P**	**14 12 02.5**	**+0.4**
QSPA	**South Pole Qui**	**67.25**	**180**	P	**P**	**14 12 12.5**	**-0.9**
	comp=Z,8.6nm,1.0s,baz=36,slow=2.4,SNR=18						
	comp=Z,8.6nm,1.0s						
QSPA	**South Pole Qui**	**67.25**	**180**	P	**P**	**14 12 12.6**	**-0.9**
MJAR	**Matsushiro Arr**	**67.46**	**330**	P	**P**	**14 12 14.0**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=156,slow=9.1,SNR=1.7						
	comp=Z,0.5nm,0.8s						
KULM	**Kulim**	**75.71**	**282**	P	**P**	**14 13 06.6**	**+1.4**
MAW	**Mawson**	**76.35**	**202**	P	**P**	**14 13 07.6**	**-0.3**
	comp=Z,5.6nm,0.9s,baz=109,slow=7.1,SNR=12						
MAW				LR	LR	14 42 11.8	
	comp=Z,28nm,18.8s,baz=94,slow=32						
	comp=Z,5.6nm,0.9s						
MAW	**Mawson**	**76.35**	**202**	P	**P**	**14 13 08.0**	**+0.1**
PETK	**Petropavlovsk-**	**76.74**	**351**	P	**P**	**14 13 09.7**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=198,slow=14,SNR=4.2						
PETK				LR	LR	14 41 46.1	
	comp=Z,40nm,19.3s,baz=122,slow=32						
	comp=Z,1.8nm,0.8s						
PETK	**Petropavlovsk-**	**76.74**	**351**	P	**P**	**14 13 10.2**	**+0.1**
BELA	**Belgrano 2**	**78.24**	**174**	P	**P**	**14 13 16.2**	**-2.2**
BELA				IAmb	IAmb	14 13 17.2	
	comp=Z,4.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**82.95**	**293**	P	**P**	**14 13 44.1**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=142,slow=4.6,SNR=1.6						
	comp=Z,0.3nm,0.4s						
MA2	**Magadan**	**84.06**	**349**	LR	LR	14 50 21.5	
	comp=Z,66nm,18.2s,baz=98,slow=35						
HHC	**Hu-ho-hao-te**	**85.07**	**318**	*e*P	**P**	**14 13 55.1**	**0.0**
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,88nm,6.3s						
TROLL	**Troll, Antarti**	**85.18**	**183**	P	**P**	**14 13 53.4**	**-1.8**
SNAA	**Sanae**	**85.71**	**181**	P	**P**	**14 13 55.5**	**-2.3**
SNAA	**Sanae**	**85.71**	**181**	LR	LR	14 48 52.3	
	comp=Z,30nm,21.3s,baz=126,slow=33						
VNA3	**Neumayer Olymp**	**86.17**	**179**	P	**P**	**14 13 57.6**	**-2.4**
VNA2	**Neumayer--Watz**	**86.51**	**180**	P	**P**	**14 13 59.6**	**-2.1**
	baz=175,slow=4.0						
VNA1	**Neumayer--Stat**	**86.78**	**180**	P	**P**	**14 14 01.0**	**-2.0**
SEY	**Seymchan**	**86.98**	**351**	P	**P**	**14 14 02.3**	**-1.5**
	comp=Z,1.5nm,1.0s,baz=129,slow=14,SNR=3.1						
	comp=Z,1.5nm,1.0s						
NVAR	**Mina Array Bea**	**88.75**	**47**	P	**P**	**14 14 13.6**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=207,slow=1.0,SNR=2.5						
NVAR				LR	LR	14 48 02.9	
	comp=Z,43nm,19.6s,baz=274,slow=32						
	comp=Z,0.2nm,0.5s						
BBB	**Bella Bella**	**90.71**	**32**	LR	LR	14 49 37.5	
	comp=Z,42nm,18.8s,baz=292,slow=32						
ELK	**Elko**	**91.96**	**46**	LR	LR	14 48 11.0	
	comp=Z,42nm,19.5s,baz=288,slow=31						
PDAR	**Pinedale Array**	**96.66**	**46**	LR	LR	14 51 51.7	
	comp=Z,29nm,20.2s,baz=294,slow=31						
VYHS	**Vyhne**	**147.06**	**327**	*e*PKP	**PKPab**	**14 21 02.5**	**-1.0**
EKA	**Eskdalemuir Ar**	**147.39**	**356**	PKPbc	**PKPdf**	**14 20 59.0**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=11,slow=2.1,SNR=7.7						
CLL	**Collm**	**147.52**	**336**	*e*PKPbc	**PKiKP**	**14 21 05.0**	**-0.3**
GERES	**GERESS Array B**	**149.18**	**333**	PKPbc	**PKPbc**	**14 21 06.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=48,slow=4.4,SNR=2.5						

*IDC **14** 14:07:03.4±0.6

YATNC **Mamie plateau,** 12.50 278 P P 14 09 51.1 +3.4
WCZ **Waipu Caves** 12.63 202 P P 14 09 50.8 +2.1
AFI **Afiamalu** 12.82 37 P P 14 09 49.7 -1.5
30nm,0.5s,baz=246,slow=3.4,SNR=8.9
AFI S S 14 12 05.9 -3.2
40nm,0.5s,baz=60,slow=23,SNR=3.6
ONTNC **Ouen Toro** 12.85 276 P P 14 09 51.8 +0.5
ONTNC **Ouen Toro** 12.85 276 P P 14 09 54.4 +3.1
DZM **Mont Dzumac** 12.90 277 P P 14 09 54.2 +2.1
102nm,0.8s,baz=86,slow=16,SNR=50
DZM **Mont Dzumac** 12.90 277 *e*P P 14 09 52.1 +0.1
262nm,0.9s
DZM *e*S S 14 12 08.7 -1.9
435nm,26.5s
DZM **Mont Dzumac** 12.90 277 P P 14 09 52.5 +0.5
DZM **Mont Dzumac** 12.90 277 P P 14 09 55.2 +3.2
NOUC **Port Laguerre** 13.03 277 P P 14 09 56.3 +3.1
MXZ **Matakaoa Point** 13.27 187 P P 14 09 56.0 +0.4
MXZ **Matakaoa Point** 13.27 187 P P 14 09 59.5 +3.9
MXZ S S 14 12 12.6 -4.5
WMGZ **Waiomatatini S** 13.52 186 P P 14 10 00.6 +2.6
WMGZ S S 14 12 18.1 -3.7
HAZ **Te Kaha** 13.53 188 P P 14 09 55.2 -3.0
HAZ S S 14 12 22.1 +0.1
PKGZ **Pakihiroa** 13.62 187 P P 14 09 57.2 -2.1
PKGZ S S 14 12 19.8 -4.2
RUGZ **Raukumara Rang** 13.75 189 P P 14 09 59.7 -1.0
RUGZ S S 14 12 24.0 -2.5
PUZ **Puketiti** 13.78 187 P P 14 10 02.5 +1.6
PUZ S S 14 12 23.9 -3.1
OPRZ **Ohinepanea** 13.82 192 P P 14 10 05.4 +4.2
TWGZ **Tauwhareparae** 13.92 187 P P 14 10 06.0 +3.6
TWGZ S S 14 12 23.4 -6.2
TOZ **Tahuroa Road** 13.94 196 P P 14 10 06.9 +4.3
URZ **Urewera** 14.12 190 P P 14 10 05.2 +0.8
26nm,0.3s,baz=290,slow=2.3,SNR=66
URZ S S 14 12 31.0 -2.4
20nm,0.5s,baz=230,slow=20,SNR=4.0
URZ **Urewera** 14.12 190 P P 14 10 05.7 +1.2
URZ S S 14 12 30.0 -3.4
URZ **Urewera** 14.12 190 P P 14 10 05.2 +0.8
MWZ **Matawai** 14.13 189 P P 14 10 04.4 -0.2
MWZ S S 14 12 33.1 -0.6
TKGZ **Te Karaka** 14.19 188 P P 14 10 08.2 +3.0
TKGZ S S 14 12 34.2 -0.5
CNGZ **Carnagh Statio** 14.20 187 P P 14 10 07.5 +2.3
CNGZ S S 14 12 35.7 +0.9
TARZ **Mount Tarawera** 14.21 192 P P 14 10 08.6 +3.2
RRRZ **Republican Roa** 14.30 192 P P 14 10 10.1 +3.7
MUGZ **Murupara** 14.39 191 P P 14 10 07.7 +0.4
MUGZ S S 14 12 35.9 -2.7
RIGZ **Rimuhau** 14.47 188 P P 14 10 09.0 +0.9
RIGZ S S 14 12 36.8 -3.3
TLZ **Tolley Road** 14.50 195 P P 14 10 12.6 +4.2
WPRZ **Whakapapatarin** 14.55 193 P P 14 10 11.6 +2.7
SNGZ **Shannon Statio** 14.60 189 P P 14 10 10.5 +1.0
SNGZ S S 14 12 40.4 -2.2
HIZ **Hauiti** 14.85 197 P P 14 10 11.7 -0.3
HIZ **Hauiti** 14.85 197 P P 14 10 15.0 +3.0
NMHZ **Naumai** 14.99 190 P P 14 10 15.0 +1.3
NMHZ S S 14 12 50.1 -0.1
BKZ **Black Stump Fm** 15.11 191 P P 14 10 13.0 -1.8
KOUNC **Koumac, New Ca** 15.24 281 P P 14 10 16.6 +0.2
BFZ **Birch Farm** 16.63 191 P P 14 10 28.1 -2.3
MSWZ **Moikau Station** 17.52 193 P P 14 10 35.9 -3.1
SNZO **South Karori** 17.54 194 P P 14 10 36.9 -2.2
QRZ **Quartz Range** 17.66 200 P P 14 10 40.4 +0.2
PLWZ **Palliser** 17.67 192 P P 14 10 37.7 -2.6
TUWZ **Tuamarina** 17.83 196 P P 14 10 39.3 -2.4
RAR **Rarotonga** 18.67 84 P P 14 10 49.5 -0.2
24nm,0.9s,baz=130,slow=0.7,SNR=3.1
KHZ **Kahutara** 18.86 196 P P 14 10 49.0 -2.1
KHZ **Kahutara** 18.86 196 P P 14 10 50.8 -0.3
RPZ **Rata Peaks** 20.74 199 P P 14 11 07.1 -1.2
14nm,0.5s,baz=46,slow=3.3,SNR=17
14nm,0.5s
RPZ **Rata Peaks** 20.74 199 P P 14 11 08.6 +0.3
WHZ **Wether Hill Ro** 23.68 202 P P 14 11 33.8 -0.9
HNR **Honiara** 24.40 304 P P 14 11 40.0 -1.4
87nm,0.6s,baz=228,slow=2.5,SNR=5.2
87nm,0.6s
ARMA **Armidale** 26.09 250 P P 14 11 57.7 +1.4
baz=26,SNR=18
ARMA **Armidale** 26.09 250 P P 14 11 56.4 +0.1
ARMA **Armidale** 26.09 250 P P 14 11 58.4 +2.1
EIDS **Eidsvold** 26.47 262 P P 14 12 00.2 +0.5
baz=26,SNR=14
EIDS **Eidsvold** 26.47 262 P P 14 11 59.6 -0.1
EIDS **Eidsvold** 26.47 262 P P 14 12 00.8 +1.2
MGCD **Mangrove Creek** 26.96 244 P P 14 12 05.6 +1.7
baz=27,SNR=15
MGCD **Mangrove Creek** 26.96 244 P P 14 12 06.2 +2.4
RK1H **Rockhampton Ha** 27.21 266 P P 14 12 06.9 +0.7
30nm,0.9s
RMQ **Roma** 28.50 259 P P 14 12 18.8 +1.4
baz=28,SNR=28
RMQ **Roma** 28.50 259 P P 14 12 20.1 +2.7
CNB **Canberra Magne** 28.83 241 P P 14 12 21.6 +1.3
baz=29,SNR=10
PAE **Paea** 28.89 83 *e*T T 14 39 57.6
3.3nm,0.3s
PPT2 **Papeete2** 28.92 82 *e*T T 14 39 57.7
2.9nm,0.3s
PPT **Papeete** 28.93 82 P P 14 12 20.2 -1.0
32nm,0.7s,baz=81,slow=20,SNR=2.6
32nm,0.7s
CAN **Canberra** 29.12 241 P P 14 12 23.1 +0.3
CAN **Canberra** 29.12 241 P P 14 12 24.7 +1.9
30nm,1.0s
CAN **Canberra** 29.12 241 P P 14 12 23.7 +0.9
MILA **Mila** 29.45 237 P P 14 12 26.9 +1.3
baz=29,SNR=7.9
CMSA **Cobar Meteorol** 31.27 249 P P 14 12 41.6 +0.3
baz=31,SNR=99
CMSA **Cobar Meteorol** 31.27 249 P P 14 12 42.1 +0.8
CTA **Charters Tower** 31.72 271 P P 14 12 45.4 +0.1
86nm,0.4s,baz=95,slow=10,SNR=328
86nm,0.4s
CTA **Charters Tower** 31.72 271 P P 14 12 46.3 +1.0
CTAO **Charters Tower** 31.72 271 P P 14 12 45.2 -0.1
CTAO **Charters Tower** 31.72 271 P P 14 12 46.1 +0.8
CTAO **Charters Tower** 31.72 271 P P 14 12 45.9 +0.5
TOO **Toolangi** 32.41 238 P P 14 12 51.9 +0.9
baz=32,SNR=17
TOO **Toolangi** 32.41 238 P P 14 12 51.5 +0.6
TOO IAmb IAmb 14 12 52.1
comp=Z,17nm,0.8s
TOO **Toolangi** 32.41 238 P P 14 12 51.8 +0.8
comp=Z,29nm,1.2s
QLP **Quilpie** 32.54 258 P P 14 12 52.3 +0.1
baz=32,SNR=25
QLP **Quilpie** 32.54 258 P P 14 12 52.7 +0.5
TAU **Tasmania Unive** 32.80 228 P P 14 12 54.9 +0.7
GEXS **Deakin Univers** 33.48 237 P P 14 13 01.5 +1.5
comp=Z,78nm,0.7s
BRAT **Ballarat** 33.61 238 P P 14 13 02.5 +1.4
comp=Z,26nm,0.8s
KRVT **Keravat (AS076** 33.70 302 P P 14 13 01.0 -1.3
comp=Z,50nm,0.6s,baz=53,slow=0.6,SNR=16
comp=Z,50nm,0.6s
MTSU **Mount Surprise** 34.00 273 P P 14 13 05.6 +0.9
baz=34,SNR=70
MTSU **Mount Surprise** 34.00 273 P P 14 13 05.3 +0.6
STKA **Stephens Creek** 34.78 249 P P 14 13 11.4 +0.3
comp=Z,21nm,0.6s,baz=94,slow=10,SNR=52
comp=Z,21nm,0.6s
STKA **Stephens Creek** 34.78 249 P P 14 13 11.4 +0.3
baz=35,SNR=35
STKA **Stephens Creek** 34.78 249 P P 14 13 11.3 +0.3
STKA **Stephens Creek** 34.78 249 P P 14 13 11.9 +0.9
ARPS **Mount Arapiles** 35.10 240 P P 14 13 14.1 +0.5
baz=35,SNR=12
ARPS **Mount Arapiles** 35.10 240 P P 14 13 15.5 +1.9
INKA **Innaminka** 35.56 256 P P 14 13 19.7 +2.1
COEN **Coen** 36.42 280 P P 14 13 25.3 +0.4
baz=36,SNR=7.3
COEN **Coen** 36.42 280 P P 14 13 25.0 +0.1
COEN IAmb IAmb 14 13 26.9
comp=Z,73nm,1.4s
COEN **Coen** 36.42 280 P P 14 13 25.8 +0.9
comp=Z,40nm,1.2s
HTT **Hallett** 37.11 246 P P 14 13 30.2 -0.2
baz=37,SNR=34
HTT **Hallett** 37.11 246 P P 14 13 30.7 +0.3

TWOA **Tennyson Woods** 37.50 244 P P 14 13 33.4 -0.2
comp=Z,24nm,0.7s
LCRK **Leigh Creek** 37.66 251 P P 14 13 35.4 +0.5
QIS **Mount Isa** 37.67 267 P P 14 13 34.8 -0.4
baz=38,SNR=13
QIS **Mount Isa** 37.67 267 P P 14 13 35.2 +0.1
PATS **Pohnpei** 37.67 323 P P 14 13 34.7 -0.4
WHYH **Whyalla** 38.22 247 P P 14 13 39.4 0.0
comp=Z,47nm,1.0s
MANU **Manus Island** 38.75 300 P P 14 13 43.5 -0.5
BBOO **Buckleboo** 39.49 247 P P 14 13 49.1 -0.7
baz=39,SNR=53
BBOO **Buckleboo** 39.49 247 P P 14 13 48.9 -0.8
BBOO IAmb IAmb 14 13 49.9
comp=Z,51nm,1.1s
BBOO **Buckleboo** 39.49 247 P P 14 13 49.6 -0.1
OOD **Oodnadatta** 40.02 255 P P 14 13 54.9 +0.8
MULG **Mulgathing** 41.25 251 P P 14 14 03.8 -0.1
AS31 **Alice Springs** 42.20 261 P P 14 14 11.1 -0.4
ASAR **Alice Springs** 42.20 261 P P 14 14 11.2 -0.4
comp=Z,30nm,0.8s,baz=94,slow=6.7,SNR=518
ASAR pP **pP** 14 15 44.3 +1.0
comp=Z,1.9nm,0.8s,baz=91,slow=8.3,SNR=1.8
ASAR ScP **ScP** 14 18 57.3 +1.8
comp=Z,2.6nm,0.9s,baz=110,slow=4.4,SNR=7.8
ASAR S **S** 14 19 52.3 -2.1
comp=Z,1.5nm,0.8s,baz=93,slow=19,SNR=6.9
comp=Z,30nm,0.8s
WR0 **Warramunga Arr** 42.43 267 P P 14 14 12.2 -1.1
WR0 IAmb IAmb 14 14 13.4
comp=Z,38nm,0.8s
WB2 **Warramunga Arr** 42.60 267 P P 14 14 13.6 -1.1
WRAB **Tennant Creek** 42.61 267 P P 14 14 13.3 -1.4
WRAB **Tennant Creek** 42.61 267 P P 14 14 14.6 -0.1
WRAB **Tennant Creek** 42.61 267 P P 14 14 14.0 -0.7
WRAB ScP **ScP** 14 19 00.4 +3.1
WB0 **Warramunga Arr** 42.61 267 P P 14 14 13.5 -1.3
WRA **Warramunga Arr** 42.61 267 P P 14 14 14.0 -0.8
comp=Z,59nm,0.5s,baz=98,slow=8.4,SNR=1428
WRA pP **pP** 14 15 46.5 -0.3
comp=Z,2.5nm,0.6s,baz=101,slow=7.1,SNR=1.4
WRA ScP **ScP** 14 19 00.3 +3.0
comp=Z,12nm,1.0s,baz=102,slow=4.3,SNR=17
WRA S **S** 14 19 56.3 -4.2
comp=Z,1.4nm,0.8s,baz=100,slow=13,SNR=4.4
comp=Z,59nm,0.5s
WRA **Warramunga Arr** 42.61 267 P P 14 14 13.7 -1.1
GENI **Genyem** 44.32 293 P P 14 14 27.5 -0.6
comp=Z,135nm,0.9s
GENI **Genyem** 44.32 293 P P 14 14 29.0 +0.9
FORT **Forrest** 46.38 250 P P 14 14 42.9 -0.8
baz=46,SNR=51
FORT **Forrest** 46.38 250 P P 14 14 42.5 -1.2
FORT **Forrest** 46.38 250 P P 14 14 43.8 +0.1
KDU **Kakadu** 46.57 276 P P 14 14 44.5 -0.8
baz=46,SNR=52
KDU **Kakadu** 46.57 276 P P 14 14 44.8 -0.5
WRKA **Warakurna** 46.97 258 P P 14 14 47.8 -0.6
baz=47,SNR=120
WRKA **Warakurna** 46.97 258 P P 14 14 48.2 -0.1
MTN **Manton Dam** 47.73 275 P P 14 14 53.3 -0.8
baz=48,SNR=5.7
MTN **Manton Dam** 47.73 275 P P 14 14 52.6 -1.5
MTN IAmb IAmb 14 14 53.8
comp=Z,22nm,0.7s
BAKI **Biak** 48.49 292 P P 14 14 59.8 0.0
comp=Z,138nm,0.9s
KNRA **Kununurra** 48.92 270 P P 14 15 02.8 -0.1
baz=49,SNR=196
KNRA **Kununurra** 48.92 270 P P 14 15 02.4 -0.6
KNRA **Kununurra** 48.92 270 P P 14 15 03.2 +0.2
HPAH **Hawaii Prepara** 49.94 30 P P 14 15 10.9 +0.4
FAKI **Fak Fak** 50.94 287 P P 14 15 17.0 -0.8
FAKI IAmb IAmb 14 15 18.0
comp=Z,59nm,1.1s
FITZ **Fitzroy Crossi** 51.03 266 P P 14 15 18.4 -0.1
baz=51,SNR=91
FITZ **Fitzroy Crossi** 51.03 266 P P 14 15 18.4 -0.1
FITZ IAmb IAmb 14 15 20.0
comp=Z,55nm,0.7s
FITZ **Fitzroy Crossi** 51.03 266 P P 14 15 19.1 +0.6
SBA **Scott Base** 53.94 184 P P 14 15 38.4 0.0
SBA **Scott Base** 53.94 184 P P 14 15 41.4 +3.0
SBA ScP **ScP** 14 19 45.8 +1.5
VNDA **Vanda** 53.95 185 P P 14 15 40.0 +1.5
comp=Z,3.2nm,0.7s,baz=352,slow=6.7,SNR=23
comp=Z,3.2nm,0.7s
VNDA **Vanda** 53.95 185 P P 14 15 39.3 +0.8
VNDA **Vanda** 53.95 185 P P 14 15 40.1 +1.7
VNDA ScP **ScP** 14 19 45.3 +1.0
KLBR **Kellerberrin** 55.03 247 P P 14 15 46.5 -0.4
baz=55,SNR=7.0
KLBR **Kellerberrin** 55.03 247 P P 14 15 46.5 -0.4
comp=Z,101nm,0.9s
MEEK **Meekatharra** 55.21 254 P P 14 15 47.2 -1.0
baz=55,SNR=8.0
MEEK **Meekatharra** 55.21 254 P P 14 15 47.9 -0.3
NWAO **Narrogin (SRO)** 55.27 246 P P 14 15 47.2 -1.3
NWAO IAmb IAmb 14 17 30.5
comp=Z,129nm,1.9s
PSA00 **Pilbara Seismi** 55.32 260 P P 14 15 47.3 -1.6
MBWA **Marble Bar** 55.53 260 P P 14 15 49.8 -0.7
MBWA IAmb IAmb 14 15 50.7
comp=Z,33nm,0.8s
MBWA **Marble Bar** 55.53 260 P P 14 15 49.2 -1.2
MBWA **Marble Bar** 55.53 260 P P 14 15 49.8 -0.7
MBWA pP **pP** 14 17 29.5 0.0
BLDU **Ballidu** 56.08 248 P P 14 15 53.6 -0.5
baz=56,SNR=32
MUN **Mundaring** 56.27 247 P P 14 15 55.4 -0.1
baz=56,SNR=5.2
SANI **Sanana** 56.85 284 P P 14 15 59.9 +0.2
comp=Z,702nmcomp=Z,57nm,0.9s
SANI **Sanana** 56.85 284 P P 14 15 59.7 0.0
comp=Z,57nm,1.0s
MORW **Morawa** 56.94 250 P P 14 15 59.8 -0.3
baz=57,SNR=25
MORW **Morawa** 56.94 250 P P 14 15 59.5 -0.6
MORW **Morawa** 56.94 250 P P 14 16 00.5 +0.4
TNTI **Ternate** 56.99 288 P P 14 16 00.0 -0.6
TNTI IAmb IAmb 14 16 01.1
comp=Z,70nm,1.0s
TNTI **Ternate** 56.99 288 P P 14 16 00.9 +0.2
comp=Z,74nm,1.0s
TNTI **Ternate** 56.99 288 P P 14 16 00.9 +0.2
comp=Z,74nm,1.5s
MMRI **Maumere** 57.40 275 P P 14 16 02.8 -0.6
MMRI IAmb IAmb 14 16 03.9
comp=Z,46nm,0.6s
EDFI **Ende, Flores** 57.85 275 P P 14 16 06.1 -0.5
comp=Z,502nmcomp=Z,47nm,1.2s
CCD **Concordia, Ant** 58.35 195 P P 14 16 09.9 +0.5
CCD ScP **ScP** 14 20 04.3 0.0
WBSI **Waikabubak, Su** 59.60 273 P P 14 16 19.2 +0.8
comp=Z,92nm,1.1s
CASY **Casey** 59.81 206 P P 14 16 18.3 -0.5
CASY IAmb IAmb 14 17 45.5
comp=Z,18nm,0.6s
GIRL **Giralia** 60.04 257 P P 14 16 17.7 -3.5
baz=60,SNR=3.7
GIRL **Giralia** 60.04 257 P P 14 16 21.7 +0.6
BKSI **Bulukumba** 60.66 278 P P 14 16 24.8 -0.5
comp=Z,687nmcomp=Z,85nm,0.8s
KAPI **Kappang** 61.12 278 P P 14 16 26.3 -2.1
KAPI **Kappang** 61.12 278 P P 14 16 28.9 +0.5
PLAI **Plampang** 61.38 273 P P 14 16 29.8 -0.3
comp=Z,1µmcomp=Z,135nm,0.9s
PLAI **Plampang** 61.38 273 P P 14 16 29.8 -0.3
SPSI **Sidrap Palu** 61.55 279 P P 14 16 34.4 +3.2
comp=Z,1µmcomp=Z,26nm,0.9s
TWSI **Taliwang, Sumb** 62.23 273 P P 14 16 35.9 +0.3
TOLI2 **Tolitoli** 62.92 285 P P 14 16 38.8 -1.3
TOLI2 IAmb IAmb 14 16 40.1
comp=Z,50nm,0.9s
TOLI2 **Tolitoli** 62.92 285 P P 14 16 40.7 +0.6
JAGI **Jajag, Banyuwa** 64.82 272 P P 14 16 51.3 -0.9
JAGI IAmb IAmb 14 16 51.8
comp=Z,50nm,0.9s
QSPA **South Pole Qui** 65.73 180 P P 14 16 58.5 +1.2
QSPA IAmb IAmb 14 16 59.6
comp=Z,26nm,0.8s
QSPA **South Pole Qui** 65.73 180 P P 14 16 58.8 +1.5
QSPA pP **pwP** 14 18 46.2 +2.1
UGM **Wanagama** 68.35 271 P P 14 17 13.6 -0.5
KKM **Kota Kinabalu** 69.26 287 P P 14 17 19.3 -0.4

KKM IAmb IAmb 14 17 20.5
comp=Z,29nm,0.6s
SBUM **Sibu** 71.13 282 P P 14 17 30.2 -0.5
JYT **Yasato** 71.15 327 P P 14 17 29.6 -0.7
JYT IAmb IAmb 14 18 25.7
comp=Z,85nm,1.6s
JOW **Kunigami** 71.47 312 P P 14 17 32.0 -0.4
JOW IAmb IAmb 14 17 34.0
comp=Z,46nm,0.9s
JOW **Kunigami** 71.47 312 P P 14 17 33.0 +0.6
XMIS **Christmas Isla** 71.81 267 P P 14 17 34.5 -0.2
INU **Inuyama** 72.12 324 P P 14 17 35.8 -0.2
INU **Inuyama** 72.12 324 P P 14 17 36.3 +0.3
MJAR **Matsushiro Arr** 72.40 326 P P 14 17 37.1 -0.5
comp=Z,13nm,0.8s,baz=154,slow=6.9,SNR=56
comp=Z,13nm,0.8s
MAJO **Matsushiro** 72.40 326 P P 14 17 37.0 -0.7
MAJO IAmb IAmb 14 17 38.6
comp=Z,25nm,0.8s
MAJO **Matsushiro** 72.40 326 P P 14 17 38.0 +0.4
KSM **Kuching** 72.42 280 P P 14 17 37.5 -0.7
KSM **Kuching** 72.42 280 P P 14 17 38.5 +0.3
JMN **Monobe** 72.68 321 P P 14 17 39.2 -0.1
JMN IAmb IAmb 14 17 41.2
comp=Z,36nm,1.3s
JSU **Suzuyama** 73.17 317 P P 14 17 42.0 -0.2
JSU IAmb IAmb 14 17 43.0
comp=Z,33nm,0.6s
JSD **Sado** 73.53 327 P P 14 17 44.1 +0.1
JSD IAmb IAmb 14 17 45.6
comp=Z,19nm,0.6s
YOJ **Yonaguni jima** 73.69 307 P P 14 17 45.0 -0.3
YOJ **Yonaguni jima** 73.69 307 P P 14 17 46.5 +1.2
JHS **Saijyo** 74.03 321 P P 14 17 46.7 -0.3
JHS IAmb IAmb 14 17 48.6
comp=Z,34nm,0.8s
YULB **Yu-li** 74.32 305 P P 14 17 48.0 -1.0
YULB IAmb IAmb 14 17 57.0
comp=Z,106nm,2.0s
JTM **Tenmabayashi** 74.34 330 P P 14 17 49.2 +0.7
JTM IAmb IAmb 14 17 50.4
comp=Z,80nm,1.1s
NACB **Ninganchiao** 74.56 306 P P 14 17 49.8 -0.4
NACB IAmb IAmb 14 17 50.4
comp=Z,30nm,0.8s
TPUB **Ta-pu** 74.77 305 P P 14 17 49.4 -2.0
SSLB **Suanglung** 74.81 305 P P 14 17 50.5 -1.2
SSLB IAmb IAmb 14 17 52.0
comp=Z,26nm,0.8s
SSLB **Suanglung** 74.81 305 P P 14 17 50.9 -0.8
AMKA **Amchitka** 75.40 359 P P 14 17 53.7 -0.5
SMAI **San Martin Ant** 75.60 159 P P 14 17 56.7 +1.4
SMAI IAmb IAmb 14 17 58.3
comp=Z,34nm,0.9s
JEW **Eniwo** 75.82 332 P P 14 17 56.6 -0.2
KIWB **Kanaga Island** 75.91 2 P P 14 17 57.0 0.0
ADK **Adak** 75.95 2 P P 14 17 57.0 -0.3
ADK IAmb IAmb 14 17 58.1
comp=Z,93nm,1.4s
BELA **Belgrano 2** 75.96 173 P P 14 17 57.2 0.0
MAW **Mawson** 77.41 200 P P 14 18 06.3 +1.1
comp=Z,1.5nm,0.6s,baz=124,slow=9.1,SNR=6.6
comp=Z,1.5nm,0.6s
MAW **Mawson** 77.41 200 P P 14 18 06.5 +1.3
NIKH **Nikolski High** 77.58 7 P P 14 18 06.0 -0.2
NAWB **Namwon** 77.69 318 P P 14 18 07.2 -0.1
NAWB IAmb IAmb 14 18 09.0
comp=Z,28nm,1.0s
KSCHJ **Chungju** 78.32 320 P P 14 18 10.4 -0.2
TJN **Taejon** 78.35 319 P P 14 18 10.7 0.0
TJN **Taejon** 78.35 319 P P 14 18 12.0 +1.2
comp=Z,120nm,1.4s
MYKOM **Kota Tinggi** 78.38 277 P P 14 18 11.1 -0.3
PMSA **Palmer Station** 78.40 157 P P 14 18 11.5 +0.9
YSS **Yuzh-Sakhalins** 78.64 335 P P 14 18 11.9 -0.1
YSS IAmb IAmb 14 18 14.6
comp=Z,42nm,0.9s
YSS **Yuzh-Sakhalins** 78.64 335 P P 14 18 12.4 +0.3
UNV **Unalaska Valle** 78.71 8 P P 14 18 11.5 -0.8
KSRS **Korea Array** 78.74 320 P P 14 18 13.5 +0.7
comp=Z,10nm,0.7s,baz=133,slow=5.7,SNR=94
comp=Z,10nm,0.7s
KSAR **Wonju Array Be** 78.76 320 P P 14 18 13.0 +0.1
KS19 **Wonju Array Si** 78.81 320 P P 14 18 13.7 +0.5
AKUT **Akutan** 79.09 8 P P 14 18 13.8 -0.5
PET **Petropavlovsk** 79.31 347 P P 14 18 14.5 -1.0
PEA0B **Petropavlovsk-** 79.59 346 P P 14 18 16.6 -0.4
PEA0B IAmb IAmb 14 18 19.1
comp=Z,34nm,1.1s
PETK **Petropavlovsk-** 79.59 346 P P 14 18 16.9 -0.1
comp=Z,21nm,0.9s,baz=112,slow=7.4,SNR=42
comp=Z,21nm,0.9s
PETK **Petropavlovsk-** 79.59 346 P P 14 18 16.5 -0.5
NJ2 **Nanjing** 81.13 311 *e*P P 14 18 25.8 +0.3
NJ2 pmax pmax
comp=Z,15nm,0.6s
MG05 **Puerto Natales** 81.22 143 P P 14 18 26.5 +0.8
MG05 IAmb IAmb 14 18 27.8
comp=Z,30nm,1.1s
USRK **Ussuriysk Ar.** 81.27 327 P P 14 18 26.9 +1.0
comp=Z,12nm,0.7s,baz=130,slow=3.2,SNR=15
comp=Z,12nm,0.7s
USRK **Ussuriysk Ar.** 81.27 327 P P 14 18 26.4 +0.5
IPM **Ipoh** 82.06 279 P P 14 18 30.0 -0.8
IPM IAmb IAmb 14 18 31.7
comp=Z,19nm,0.8s
IPM **Ipoh** 82.06 279 P P 14 18 31.0 +0.2
comp=Z,31nm,1.0s
KULM **Kulim** 82.75 279 P P 14 18 34.0 -0.2
KULM IAmb IAmb 14 18 35.4
comp=Z,53nm,1.5s
MDJ **Mudanjiang** 82.77 326 P P 14 18 34.8 +1.2
MDJ pP pP 14 20 25.9 +1.8
MDJ S **S** 14 28 09.4 +0.6
MDJ pmax pmax
comp=Z,31nm,1.0s
MDJ pmax pmax
comp=Z,95nm,4.1s
MDJ **Mudanjiang** 82.77 326 P P 14 18 34.9 +1.3
comp=Z,32nm,1.0s
SII **Sitkinak Islan** 83.45 14 P P 14 18 36.8 +0.1
WHN **Wuhan** 83.46 308 ⇑P P 14 18 38.6 +1.2
GSI **Gunungsitoli** 83.87 274 P P 14 18 40.2 +0.4
GSI IAmb IAmb 14 18 41.0
comp=Z,20nm,0.8s
TROLL **Troll, Antarti** 83.89 181 P P 14 18 39.2 +0.2
TROLL **Troll, Antarti** 83.89 181 pP pP 14 20 35.2 +4.9
SNAA **Sanae** 84.21 179 P P 14 18 40.1 -0.4
SNAA **Sanae** 84.21 179 pP pP 14 20 35.4 +3.4
SNAA **Sanae** 84.21 179 P P 14 18 39.9 -0.6
OHAK **Old Harbor** 84.25 14 P P 14 18 41.0 +0.4
CN2 **Changchun** 84.39 324 *e*P P 14 18 41.6 0.0
CN2 pmax pmax
comp=Z,30nm,1.2s
COYC **Coyhaique** 84.40 138 P P 14 18 43.1 +1.2
COYC IAmb IAmb 14 18 44.6
comp=Z,28nm,0.8s
VNA3 **Neumayer Olymp** 84.41 177 P P 14 18 41.2 -0.2
VNA3 **Neumayer Olymp** 84.41 177 pP pP 14 20 35.6 +2.6
BNX **BinXian** 84.66 326 ⇑P P 14 18 43.3 +0.4
BNX pmax pmax
comp=Z,23nm,0.9s
BNX pmax pmax
comp=Z,72nm,4.0s
TIA **Tai'an** 84.71 314 ⇓P P 14 18 44.6 +1.2
TIA pmax pmax
comp=Z,40nm,1.1s
VNA2 **Neumayer--Watz** 84.83 177 P P 14 18 43.5 0.0
baz=180,slow=5.0
VNA2 **Neumayer--Watz** 84.83 177 pP pP 14 20 38.7 +3.6
baz=168,slow=4.0
NVAR **Mina Array Bea** 84.91 44 P P 14 18 45.4 +0.7
comp=Z,0.3nm,0.7s,baz=215,slow=7.7,SNR=2.4
NVAR pP **pP** 14 20 36.7 +0.5
comp=Z,0.6nm,0.9s,baz=232,slow=7.3,SNR=2.8
KDAK **Kodiak Island** 84.92 14 P P 14 18 44.5 +0.6
VNA1 **Neumayer--Stat** 85.07 177 P P 14 18 44.7 +0.1
VNA1 **Neumayer--Stat** 85.07 177 pP pP 14 20 36.0 -0.2
LL02 **Futaleuf** 85.72 136 P P 14 18 49.3 +1.0
LL02 IAmb IAmb 14 18 50.8
comp=Z,23nm,0.8s
Q19K **Cape Douglas,** 85.74 13 P P 14 18 48.2 +0.3
Q19K IAmb IAmb 14 20 35.3
comp=Z,46nm,0.9s

O18K **Koktuh Hills** 86.28 12 P P 14 18 50.3 -0.1
O18K IAmb IAmb 14 18 51.4
comp=Z,29nm,0.8s
O19K **Port Alsworth** 86.77 12 P P 14 18 52.1 -0.6
O19K IAmb IAmb 14 18 53.5
comp=Z,33nm,0.9s
CNPM **China Poot** 86.81 14 P P 14 18 52.8 -0.1
ENH **Enshi** 86.89 305 P P 14 18 54.2 +0.2
ENH IAmb IAmb 14 18 56.0
comp=Z,29nm,0.9s
N18K **Kilae Creek** 86.93 11 P P 14 18 53.2 -0.2
N18K IAmb IAmb 14 19 27.0
comp=Z,32nm,1.6s
LYN **LuoYang** 86.96 310 ⇑P P 14 18 54.6 +0.4
LYN pmax pmax
comp=Z,20nm,0.9s
HNS **HongShan** 86.98 313 ⇑P P 14 18 56.0 +1.8
HNS pmax pmax
comp=Z,17nm,1.1s
MA2 **Magadan** 87.07 345 P P 14 18 53.4 -0.7
MA2 IAmb IAmb 14 18 55.3
comp=Z,21nm,1.0s
MA2 **Magadan** 87.07 345 P P 14 18 55.0 +0.9
comp=Z,30nm,1.3s
GYA **Guiyang** 87.18 301 ⇑P P 14 18 56.4 +0.8
GYA pmax pmax
comp=Z,11nm,0.9s
SVW2 **Sparrevohn** 87.37 11 P P 14 18 55.5 0.0
SVW2 IAmb IAmb 14 19 07.7
comp=Z,47nm,1.9s
BJI **Beijing** 87.52 316 P P 14 18 57.8 +1.1
BJI pmax pmax
comp=Z,9.0nm,1.2s
ORCD **Orcadas** 87.69 160 P P 14 18 57.0 -0.2
ORCD IAmb IAmb 14 18 58.0
comp=Z,14nm,0.8s
PLCA **Paso Flores** 87.78 134 P P 14 18 59.9 +1.6
comp=Z,5.0nm,1.1s,baz=269,slow=3.5,SNR=5.9
comp=Z,5.0nm,1.1s
PLCA **Paso Flores** 87.78 134 P P 14 18 58.0 -0.2
PLCA IAmb IAmb 14 19 24.0
comp=Z,40nm,1.9s
M19K **Big River Lodg** 88.34 12 P P 14 18 59.9 -0.2
M19K IAmb IAmb 14 21 37.4
comp=Z,47nm,1.9s
L19K **White Mountain** 88.51 11 P P 14 19 01.2 +0.4
L19K IAmb IAmb 14 19 02.5
comp=Z,16nm,0.9s
RC01 **Rabbit Creek A** 88.54 14 P P 14 19 00.1 -0.9
RC01 IAmb IAmb 14 19 02.2
comp=Z,40nm,1.3s
XAN **Xi'an** 89.20 308 P P 14 19 06.0 +1.2
XAN pmax pmax
comp=Z,36nm,0.8s
XAN pmax pmax
comp=Z,140nm,4.1s
GHO **Glory Hole Cre** 89.33 14 P P 14 19 04.9 +0.2
GHO IAmb IAmb 14 19 43.3
comp=Z,31nm,1.4s
CUT **Chulitna** 89.61 13 P P 14 19 05.6 -0.3
KMI **Kunming** 89.68 298 ⇑P P 14 19 09.1 +1.7
KMI pmax pmax
comp=Z,15nm,1.0s
K20K **Telida** 89.74 11 P P 14 19 06.5 -0.1
SEY **Seymchan** 89.76 348 P P 14 19 07.0 +0.5
comp=Z,12nm,0.9s,baz=145,slow=5.5,SNR=46
comp=Z,12nm,0.9s
XLT **XiLinHaoTe** 89.78 319 *e*P P 14 19 07.5 +0.2
XLT pP pwP 14 21 04.8 -0.1
XLT sP sP 14 21 54.8 +3.4
XLT pmax pmax
comp=Z,28nm,0.9s
XLT pmax pmax
comp=Z,130nm,4.6s
CMAR **Chiang Mai Arr** 89.90 290 P P 14 19 10.3 +2.0
comp=Z,8.8nm,0.9s,baz=136,slow=3.2,SNR=42
CMAR PP PP 14 22 50.2 -0.3
comp=Z,0.5nm,0.5s,baz=114,slow=5.3,SNR=4.4
comp=Z,8.8nm,0.9s
CHTO **Chiang Mai** 90.06 291 P P 14 19 10.7 +1.7
comp=Z,12nm,1.0s
CAST **Castle Rocks** 90.16 12 P P 14 19 07.2 -1.2
CAST IAmb IAmb 14 19 08.3
comp=Z,11nm,1.0s
TXAR **Lajitas Array** 90.47 58 P P 14 19 12.4 +1.6
comp=Z,1.8nm,0.7s,baz=208,slow=7.2,SNR=24
comp=Z,1.8nm,0.7s
TRF **Thorofare Moun** 90.54 13 P P 14 19 09.3 -1.1
TRF IAmb IAmb 14 19 10.8
comp=Z,8.5nm,0.8s
HHC **Hu-ho-hao-te** 90.90 315 *e*P P 14 19 14.4 +1.8
HHC pmax pmax
comp=Z,38nm,0.9s
HHC pmax pmax
comp=Z,97nm,5.3s
PZH **PanZhiHua** 91.11 299 P P 14 19 14.8 +0.9
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
CD2 **Chengdu** 91.53 303 P P 14 19 16.9 +1.3
WRH **Wood River Hil** 91.90 13 P P 14 19 15.7 -0.8
HDA **Harding Lake** 92.08 14 P P 14 19 16.8 -0.6
HDA IAmb IAmb 14 20 18.9
comp=Z,23nm,1.8s
CCB **Clear Creek Bu** 92.11 13 P P 14 19 16.3 -1.1
MDM **Murphy Dome** 92.30 13 P P 14 19 17.4 -1.0
ILAR **Eielson Array** 92.41 13 P P 14 19 18.2 -0.6
comp=Z,1.2nm,0.7s,baz=225,slow=5.4,SNR=12
comp=Z,1.2nm,0.7s
PDAR **Pinedale Array** 92.85 44 P P 14 19 22.5 +0.8
comp=Z,0.2nm,0.3s,baz=261,slow=4.5,SNR=2.1
PDAR pP pP 14 21 14.5 -0.8
comp=Z,0.1nm,0.3s,baz=116,slow=37,SNR=1.6
comp=Z,0.2nm,0.3s
J26L **Joseph Creek** 92.92 15 P P 14 19 21.5 +0.3
EGAK **Eagle** 93.73 16 P P 14 19 25.0 +0.2
SONM **Songino Array** 97.60 319 P Pdif 14 19 42.4 -0.5
comp=Z,0.9nm,0.7s,baz=134,slow=4.3,SNR=4.4
SONM PP PP 14 23 52.1 +2.8
comp=Z,1.8nm,0.9s,baz=123,slow=10,SNR=5.6
comp=Z,0.9nm,0.7s
ZALV **Zalesovo Beam** 112.45 320 PKiKP PKiKP 14 24 39.8 -1.1
comp=Z,0.5nm,0.3s,baz=107,slow=1.5,SNR=4.7
ZALV SKP 14 27 27.6
comp=Z,0.5nm,0.3s,baz=109,slow=2.5,SNR=3.6
MKAR **Makanchi Array** 112.63 313 Pdiff Pdif 14 20 49.9 +0.2
comp=Z,0.2nm,0.5s,baz=103,slow=5.8,SNR=2.9
MKAR PKiKP PKiKP 14 24 40.9 -0.7
comp=Z,0.7nm,0.5s,baz=54,slow=0.3,SNR=10
MKAR PP PP 14 25 35.8 -3.0
comp=Z,0.6nm,0.9s,baz=101,slow=7.5,SNR=3.7
MKAR SKP 14 27 28.7
comp=Z,0.6nm,0.7s,baz=100,slow=1.5,SNR=5.9
MKAR PKKPbc PKKPbc 14 35 33.0 +0.4
comp=Z,0.6nm,0.9s,baz=251,slow=6.3,SNR=4.4
MKAR PKKPab PKKPab 14 35 41.6 +1.2
comp=Z,0.8nm,0.7s,baz=279,slow=4.3,SNR=7.4
KK31 **Karatay Array** 120.32 307 PKPdf PKPdf 14 24 55.8 -0.7
KKAR **Karatay Array** 120.32 307 PKPdf 14 24 55.8 -0.7
KKAR **Karatay Array** 120.32 307 PKPdf PKPdf 14 24 55.6 -0.9
ARU **Arti** 127.39 323 PKP PKPdf 14 25 09.5 0.0
comp=Z,7.1nm,0.5s,baz=94,slow=1.5,SNR=12
ABKAR **Akbulak array** 127.69 314 PKPdf PKPdf 14 25 09.8 -0.5
ABKAR **Akbulak array** 127.69 314 PKPdf PKPdf 14 25 09.8 -0.5
AKTO **Aktyubinsk** 128.79 316 PKP PKPdf 14 25 12.1 -0.3
comp=Z,3.1nm,0.7s,baz=90,slow=4.0,SNR=11
AKTO SKPbc SKPbc 14 27 45.5
comp=Z,1.3nm,0.7s,baz=32,slow=5.6,SNR=4.1
GEYT **Alibeck** 129.40 300 SKPbc SKPbc 14 27 49.0 +1.3
comp=Z,3.8nm,0.7s,baz=166,slow=5.4,SNR=7.6
KIRV **Kirov** 131.43 328 SKPbc SKPbc 14 27 54.4 +0.1
comp=Z,17nm,0.9s,baz=94,slow=1.8,SNR=12
ARA0 **ARCESS Array S** 132.38 348 *e*PKPdf PKPdf 14 25 18.3 -0.3
ARCES **ARCESS Array B** 132.38 348 PKhKP PKPpre 14 25 09.8
comp=Z,1.4nm,0.9s,baz=64,slow=2.8,SNR=8.6
ARCES PKP PKPdf 14 25 18.2 -0.5
comp=Z,2.4nm,0.7s,baz=50,slow=1.9,SNR=13
ARCES SKPbc SKPab 14 27 58.7 -0.5
comp=Z,5.4nm,0.8s,baz=23,slow=4.0,SNR=10
BELG **Belogornoye** 134.64 321 SKPbc SKPbc 14 28 06.6 +1.4
comp=Z,28nm,0.9s,baz=154,slow=5.8,SNR=5.3
KLMR **Klimovskoe** 134.69 334 *e*PKPdf PKPdf 14 25 22.6 -0.6
KLMR AMP 14 25 30.4
comp=Z,8.0nm,1.4s
KLMR *e*PP PP 14 28 02.0 -2.0

FINES **FINESS Array B** 138.95 341 PKhKP PKPpre 14 25 22.3
comp=Z,1.2nm,0.5s,baz=41,slow=4.0,SNR=16
FINES PKP sPdif 14 25 32.3 +0.9
comp=Z,2.9nm,0.5s,baz=116,slow=3.2,SNR=7.7
FINES SKPbc SKPbc 14 28 18.4 +0.8
comp=Z,8.6nm,0.8s,baz=64,slow=4.4,SNR=18
DOMB **Dombas** 141.85 353 *e*PKPdf PKPdf 14 25 31.9 -4.5
NB201 **NORSAR Array S** 142.54 351 *e*PKPdf PKPdf 14 25 33.8 -3.7
NB2 **NORSAR Subarra** 142.56 351 PKP PKPdf 14 25 34.2 -3.4
comp=Z,186nm,5.0s,baz=7.9,slow=3.2
NB2 **NORSAR Subarra** 142.56 351 PKP SKPbc 14 28 27.7 +0.7
comp=Z,1.0nm,0.7s,baz=18,slow=2.6
NB2 **NORSAR Subarra** 142.56 351 PKP PKPdf 14 25 34.2 -3.4
baz=7.9,slow=3.2
NOA **NORSAR Array B** 142.56 351 PKhKP PKPpre 14 25 34.3
comp=Z,6.1nm,0.9s,baz=15,slow=2.3,SNR=19
NOA SKPbc SKiKP 14 28 28.1 -0.1
comp=Z,1.6nm,0.7s,baz=14,slow=4.1,SNR=7.2
NAO01 **NORSAR Array S** 142.79 351 *e*PKPdf PKPdf 14 25 35.2 -2.8
NC602 **NORSAR Array S** 142.81 351 *e*PKPdf PKPdf 14 25 35.1 -2.9
HFS **Hagfors** 143.03 349 PKhKP PKPpre 14 25 35.7
comp=Z,15nm,0.4s,baz=63,slow=3.6,SNR=103
HFS SKPbc SKiKP 14 28 28.9 -0.1
comp=Z,2.0nm,0.7s,baz=69,slow=9.6,SNR=2.9
MARD **Mardin** 143.16 300 PKPab 14 25 37.4 +0.2
SKAR **Skarslia** 143.27 353 *e*PKPdf PKPbc 14 25 37.0 -0.1
MNK **Minsk** 143.55 333 *i* PKP PKPdf 14 25 38.8 -0.7
comp=E,5.0nm,0.8s
MNK *i* PKP PKPdf 14 25 38.8 -0.7
comp=N,7.0nm,0.9s
MNK *i* PKP PKPdf 14 25 38.8 -0.7
comp=Z,105nm,0.9s,baz=47
MNK *i* pPKP pPKPdf 14 27 43.6 +3.5
MNK *i* PP PP 14 28 57.6 -0.3
MNK *i* PPP PPP 14 32 13.7
MNK *i* SKKS 14 41 12.8
MNK *i* SS SS 14 46 35.4 -23
MNK *i* SSS SSS 14 52 30.1
MNK *i* LRM MLR 15 29 48.6
comp=Z,75nm,14.7s
MNK *i* LRM MLR 15 29 55.3
comp=E,8.0nm,13.4s
MNK *i* LRM MLR 15 30 17.0
comp=N,13nm,14.1s
OSL **Oslo** 143.69 351 *e*PKPdf PKPab 14 25 38.0 -0.3
NACGM **Naroch** 143.71 334 ⇑*i*PKP PKPbc 14 25 38.8 +0.2
comp=Z,126nm,0.8s,baz=43
ASK **Askoy** 143.73 356 *e*PKPdf PKPbc 14 25 38.5 +0.1
BER **Bergen** 143.82 356 *e*PKPdf PKPab 14 25 38.8 +0.1
KONO **Kongsberg** 144.12 352 PKPbc PKPbc 14 25 39.4 -0.4
KONO **Kongsberg** 144.12 352 *e*PKPdf PKPbc 14 25 39.6 -0.2
PABE **Paberze** 144.32 337 PKPbc 14 25 40.0 -0.5
BLS5 **Blasjo** 144.68 355 *e*PKPdf **PKPdf** 14 25 41.2 -0.1
KMY **Karmoy** 144.99 356 *e*PKPdf **PKPab** 14 25 42.9 -0.4
AKASG **Malin Array Be** 145.48 327 PKPbc **PKPdf** 14 25 43.5 +0.6
comp=Z,9.5nm,0.5s,baz=44,slow=4.5,SNR=44
AKASG SKPbc **SKiKP** 14 28 35.2 +0.8
comp=Z,4.0nm,0.7s,baz=43,slow=3.2,SNR=9.0
AKBB **Malin Array Si** 145.48 327 PKPbc **PKPdf** 14 25 43.4 +0.5
HOMB **Homborsund** 145.60 352 *e*PKPdf **PKPbc** 14 25 44.3 +0.1
BNN **Bunyan** 146.65 304 **PKPbc** 14 25 47.1 -1.0
SORM **Soroca** 147.50 324 ⇓P **PKPbc** 14 25 48.9 -0.9
MILM **Milestii Mici** 147.96 322 ⇑P **PKPbc** 14 25 49.9 -1.1
BR131 **Keskin Array S** 148.04 307 **PKPbc** 14 25 51.1 -0.6
BRTR **Keskin Array B** 148.04 307 PKPbc **PKPbc** 14 25 51.5 -0.2
comp=Z,6.6nm,0.8s,baz=144,slow=4.7,SNR=26
BRTR **Keskin Array B** 148.04 307 **PKPbc** 14 25 50.9 -0.8
BEL **Belsk** 148.38 335 *e*PKP **PKiKP** 14 25 52.5 -0.5
ANTO **Ankara** 148.61 307 ⇑P **PKPbc** 14 25 53.2 +0.3
ANTO **Ankara** 148.61 307 **PKPbc** 14 25 53.1 +0.1
ANTO **PKPab** 14 25 59.0 +0.4
VASR **Vaslui** 148.70 322 ⇓P **PKPbc** 14 25 53.2 +0.4
TLCR 148.92 319 ⇑P **PKiKP** 14 25 53.9 -0.5
EKA **Eskdalemuir Ar** 148.95 4 PKPbc **PKPbc** 14 25 52.8 -0.4
comp=Z,1.4nm,0.5s,baz=352,slow=2.8,SNR=15
CFR **Carcaliu** 149.33 320 ⇑P **PKPbc** 14 25 54.5 +0.1
TPGR **Topolog** 149.33 319 ⇓P **PKiKP** 14 25 54.9 -0.4
TESR **Tescani** 149.41 323 ⇓P **PKPbc** 14 25 54.2 -0.4
BUR08 **Bucovina Ar. S** 149.46 326 **PKPbc** 14 25 54.6 -0.2
BURAR **Bucovina Array** 149.47 326 ⇓P **PKiKP** 14 25 55.6 -0.1
BURAR **Bucovina Array** 149.47 326 **PKPbc** 14 25 55.2 +0.1
CSS **Mathiatis** 149.50 298 **PKPbc** 14 25 54.4 -0.9
MDUB **Mudurnu** 149.53 309 **PKPbc** 14 25 54.1 -1.1
TIRR **Tirgusor** 149.55 318 ⇓P **PKPbc** 14 25 54.9 0.0
TIRR **Tirgusor** 149.55 318 **PKPbc** 14 25 54.2 -0.8
MFTR **Murfatlar** 149.69 318 ⇑P **PKiKP** 14 25 55.9 -0.1
HARR **Harsova** 149.72 319 ⇓P **PKiKP** 14 25 56.1 0.0
VRI **Vrincioaia** 149.75 322 ⇓P **PKPbc** 14 25 54.1 -1.4
PLOR **Plostina** 149.80 322 ⇑P **PKPbc** 14 25 54.8 -0.9
KOLS **Kolonicke sedl** 149.98 330 *e*PKP **PKiKP** 14 25 56.8 +0.3
OJC **Ojcow** 150.04 335 *e*PKP **PKiKP** 14 25 55.5 -0.5
OJC **Ojcow** 150.04 335 **PKPbc** 14 25 55.0 -1.0
COVR **Voineasa-Covas** 150.06 322 ⇑P **PKPbc** 14 25 56.2 -0.1
NEHR **Nehoiu** 150.25 321 ⇑P **PKPbc** 14 25 54.4 -2.3
ARCR **ARCALIA** 150.26 326 ⇓P **PKiKP** 14 25 57.3 +0.1
CRVS **Cervenica-Dubn** 150.37 331 *e*PKP **PKiKP** 14 25 57.7 +0.4
MLR **Muntele Rosu** 150.41 322 ⇑P **PKPbc** 14 25 56.4 -0.8
MLR **Muntele Rosu** 150.41 322 PKPbc **PKPbc** 14 25 57.1 -0.1
comp=Z,4.7nm,0.5s,baz=292,slow=2.3,SNR=7.1
MLR **Muntele Rosu** 150.41 322 **PKPbc** 14 25 56.4 -0.8
DOPR **Dopca** 150.43 323 ⇓P **PKiKP** 14 25 57.8 +0.2
NIE **Niedzica** 150.47 333 *e*PKP **PKiKP** 14 25 58.2 +0.6
SECR 150.61 321 ⇓P **PKiKP** 14 25 57.9 0.0
KSP **Ksiaz** 150.79 339 *e*PKP **PKiKP** 14 25 58.4 +0.3
CJR **Cluj-Napoca** 150.90 326 ⇓P **PKiKP** 14 25 58.9 +0.3
LANS **Liptovska Anna** 151.02 334 *e*PKP **PKiKP** 14 25 59.7 +1.0
OSTC **Ostas** 151.06 339 ⇑*e*PKP **PKPbc** 14 25 58.0 -0.4
OSTC *e*PKPAB **PKPab** 14 26 06.2 -2.1
CHVC **Chvalec** 151.09 339 ⇑*e*PKP **PKiKP** 14 25 58.7 -0.1
UPC **Upice** 151.17 339 ⇑*e*PKP **PKiKP** 14 25 58.9 0.0
DPC **Dobruska-Polom** 151.20 338 ⇑*e*PKP **PKPbc** 14 25 58.8 +0.1
DPC *e*PKPAB **PKPab** 14 26 09.8 +0.8
MORC **Moravsky Berou** 151.26 336 ⇓P **PKiKP** 14 25 59.3 +0.1
MORC **Moravsky Berou** 151.26 336 **PKPbc** 14 25 58.2 -0.6
MORC **PKPab** 14 25 59.3 +0.1
MORC **Moravsky Berou** 151.26 336 *e*PKP **PKPbc** 14 25 58.8 -0.1
MORC *e* 14 26 09.7
KRLC **Kraliky** 151.28 338 ⇑*e*PKP **PKPbc** 14 25 58.8 -0.1
KRLC *e*PKPAB **PKPab** 14 26 09.7 +0.4
DRGR 151.29 327 ⇓P **PKPbc** 14 25 59.0 -0.1
CLL **Collm** 151.35 343 **PKPbc** 14 25 58.4 -0.5
CLL **Collm** 151.35 343 ⇓*i*PKPbc **PKiKP** 14 25 59.2 0.0
comp=Z,24nm,0.8s
CLL *i* PKPab **PKPab** 14 26 09.2 -0.3
comp=Z,11nm,0.9s
CLL *e*pPKPab **pPKPab** 14 28 05.0 +0.5
CLL *e*SKPdf **SKPdf** 14 28 36.0 -1.0
BRG **Berggiesshubel** 151.49 342 *i* PKP **PKiKP** 14 25 59.7 +0.2
BRG Amp 14 26 00.5
comp=Z,14nm,0.6s
BRG *i* x x 14 26 10.6
BRG Amp 14 26 11.8
comp=Z,11nm,1.1s
VYHS **Vyhne** 151.79 333 *e*PKP **PKPbc** 14 26 00.0 -0.1
VYHS *e* 14 26 12.2
JAVC **Velka Javorina** 151.96 335 *e*PKP **PKiKP** 14 26 01.7 +1.0
JAVC *e* 14 26 13.8
VRAC **Vranov** 151.99 337 ⇑P **PKPab** 14 26 13.4 +1.1
VRAC **Vranov** 151.99 337 PKPab **PKPab** 14 26 13.2 +1.0
comp=Z,17nm,1.0s,baz=32,slow=1.9,SNR=13
VRAC **Vranov** 151.99 337 *e*PKP **PKiKP** 14 26 00.8 +0.1
VRAC *e* 14 26 13.0
PRU **Pruhonice** 152.09 340 ⇑*e*PKP **PKiKP** 14 26 01.0 +0.2
PRU *e*PKPAB **PKPab** 14 26 13.2 +0.6
SIRR **Siria** 152.18 327 ⇓P **PKiKP** 14 26 01.4 +0.2
GZR **Gura Zlata** 152.21 325 ⇓P **PKPbc** 14 26 00.1 -1.0
KRUC **Moravsky** 152.27 337 *e*PKP **PKPbc** 14 26 01.1 0.0
KRUC *e* 14 26 14.2
MODS **Modra-Piesok** 152.51 335 *e*PKP **PKiKP** 14 26 02.7 +0.9
MODS *e* 14 26 15.5
BZS **Buzias** 152.66 326 ⇑P **PKiKP** 14 26 02.2 0.0
HERR **Herculane** 152.74 324 ⇑P **PKPbc** 14 26 02.2 0.0
KHC **Kasperske Hory** 153.15 340 **PKPbc** 14 26 02.6 -0.5
KHC PKPab **PKPab** 14 26 17.6 +0.4
KHC **Kasperske Hory** 153.15 340 ⇑*e*PKP **PKPbc** 14 26 02.9 -0.1
KHC *e*PKPAB **PKPab** 14 26 17.7 +0.5
CKRC **Cesky Krumlov** 153.19 339 ⇑*e*PKP **PKiKP** 14 26 03.2 0.0
CKRC *e*PKPAB **PKPab** 14 26 18.2 +0.8
GEC2 **GERESS Array S** 153.36 340 PKPbc **PKPbc** 14 26 03.3 -0.3
GEC2 PKPab **PKPab** 14 26 17.5 -0.7
GERES **GERESS Array B** 153.36 340 PKPbc **PKiKP** 14 26 03.7 +0.1
comp=Z,1.8nm,0.9s,baz=11,slow=0.7,SNR=12
GERES PKPab **PKPab** 14 26 18.4 +0.2
comp=Z,1.3nm,0.6s,baz=35,slow=4.9,SNR=10
GERES **GERESS Array B** 153.36 340 PKPbc **PKPbc** 14 26 03.2 -0.3
GERES **PKPab** 14 26 18.0 -0.2
BLKB **Belogradchik** 153.41 322 ⇑P **PKiKP** 14 26 03.9 +0.1
CONA **Conrad Observa** 153.41 336 *e*P **PKiKP** 14 26 04.1 +0.4
comp=Z,3.9nm,1.1s
CONA *e*P **PKPab** 14 26 19.1 +0.6
comp=Z,11nm,0.7s,SNR=5.7
BTNL **Ternell** 153.42 352 *d*PKPab PKPab 14 26 17.1 -1.2
RONA **Rosalia, Austr** 153.44 335 *e*P **PKiKP** 14 26 03.9 +0.1
comp=Z,1.9nm,0.6s
RONA *e*P **PKPab** 14 26 19.2 +0.7
comp=Z,7.7nm,0.7s,SNR=5.6
MORH **Mrgy, Hungar** 153.65 330 ⇓P **PKPdf** 14 25 56.0 +0.1
MORH **Mrgy, Hungar** 153.65 330 PKP **PKPdf** 14 25 56.2 +0.4
BHOU **Houvegnez** 153.66 352 *d*PKPab **PKPab** 14 26 19.6 +0.2
BCLA **Clavier** 153.68 353 *d*PKPab **PKPab** 14 26 19.2 -0.2
VTS **Vitosha** 153.70 319 ⇓P **PKPab** 14 26 21.0 +1.1
BMRD **Maredsous** 153.86 353 *d*PKPab **PKPab** 14 26 20.0 -0.1
BOVS **Bovan** 153.94 323 ⇓P **PKPbc** 14 26 04.2 -0.6
RCHB **Rochefort** 153.95 353 *d*PKPab **PKPab** 14 26 19.7 -0.8
KOVH **Kovagotottos** 153.99 331 PKP **PKiKP** 14 26 05.1 +0.3
MOA **Molln** 154.04 338 *e*P **PKPab** 14 26 22.0 +0.9
comp=Z,6.7nm,1.0s
DOU **Dourbes** 154.08 354 *d*PKP **PKiKP** 14 26 05.2 +0.3
DOU *d*PKPab **PKPab** 14 26 21.0 -0.1
ARSA **Arzberg** 154.10 336 *e*P **PKPab** 14 26 21.4 0.0
comp=Z,3.8nm,0.7s
WLF **Walferdange** 154.32 351 *d*PKPab **PKPab** 14 26 22.9 +0.8
BIOA **Bad Ischl, Aus** 154.39 339 *e*P **PKPab** 14 26 23.1 +0.5
comp=Z,8.4nm,1.1s,SNR=6.2
SOKA **Soboth** 154.77 336 *e*P **PKPab** 14 26 24.3 0.0
comp=Z,3.2nm,0.6s
PERS **Pernice** 154.77 336 *i* PKPab **PKPab** 14 26 24.4 +0.1
OBKA **Obir** 155.09 336 *e*P **PKPab** 14 26 25.3 -0.4
comp=Z,3.6nm,0.7s
GCIS **Gornji Cirnik** 155.21 334 *i* PKPab **PKPab** 14 26 26.2 +0.1
BFO **Black Forest** 155.23 347 **PKPab** 14 26 25.3 -0.8
MYKA **Terra Mystica** 155.31 338 *e*P **PKPab** 14 26 26.0 -0.6
comp=Z,6.5nm,0.6s
WATA **Walderalm** 155.35 341 *e*P **PKPab** 14 26 27.4 +0.6
comp=Z,7.2nm,1.0s
WTTA **Wattenberg** 155.40 341 *e*P **PKPab** 14 26 27.3 +0.2
comp=Z,4.7nm,0.6s
RETA **Reutte** 155.44 343 *e*P **PKPab** 14 26 27.5 +0.4
comp=Z,6.3nm,0.7s
MOTA **Moosalm** 155.48 342 *e*P **PKPab** 14 26 27.4 0.0
comp=Z,16nm,1.4s,SNR=5.2
LJU **Ljubljana** 155.49 336 *i* PKPab **PKPab** 14 26 27.2 -0.1
PRED **Cave del Predi** 155.50 337 **PKPab** 14 26 26.3 -1.1
SQTA **Sankt Quirin** 155.56 342 *e*P **PKPab** 14 26 28.3 +0.6
comp=Z,7.8nm,0.9s
VISS **Visnje** 155.57 335 *i* PKPab **PKPab** 14 26 27.6 0.0
ABTA **Abfaltersbach** 155.59 339 *e*P **PKPab** 14 26 27.2 -0.7
comp=Z,6.9nm,0.8s
BOJS **Bojanci** 155.66 334 *i* PKPab **PKPab** 14 26 28.1 +0.1
CLUD **Cludinico** 155.72 338 PKPab **PKPab** 14 26 27.2 -1.1
DAVA **Damuels** 155.86 344 *e*P **PKPab** 14 26 29.1 +0.1
comp=Z,5.9nm,0.7s
FETA **Feichten** 155.88 342 *e*P **PKPab** 14 26 29.6 +0.5
comp=Z,5.7nm,1.1s
STAL **STALIGIAL** 155.95 338 **PKPab** 14 26 28.2 -1.2
CIMO **Cimolais** 156.00 339 **PKPab** 14 26 28.5 -1.0
DAVOX **Davos/Dischmat** 156.33 343 PKPab **PKPab** 14 26 31.9 +0.8
comp=Z,2.2nm,0.6s,baz=330,slow=2.7,SNR=19
CTI **Castel Tesino** 156.49 340 **PKPab** 14 26 30.2 -1.5
TEOL **Teolo** 157.09 339 PKPab **PKPab** 14 26 33.7 -0.5
SENIN **Lac Senin/Sane** 157.32 347 PKPab **PKPab** 14 26 34.4 -1.1
BNI **Bardonecchia** 158.70 347 PKPab **PKPab** 14 26 41.5 +0.1
NRCA **Norcia** 158.73 333 PKPab **PKPab** 14 26 41.6 +0.1
SSB **Saint Sauveur** 158.83 352 **PKPab** 14 26 41.7 -0.1
ESDC **Sonseca Array** 164.31 12 PKPab **PKPab** 14 27 06.3 +0.2
comp=Z,3.5nm,1.1s,baz=347,slow=4.5,SNR=13
ESDC **Sonseca Array** 164.31 12 PKPab **PKPab** 14 27 05.5 -0.5
KEST **Kesra** 166.21 327 PKPab **PKPab** 14 27 15.1 +0.4
comp=Z,4.9nm,1.0s,baz=296,slow=4.5,SNR=4.2
TORD **Torodi Ar. Bea** 168.77 187 PKPab **PKPab** 14 27 26.1 0.0
comp=Z,2.2nm,0.8s,baz=184,slow=3.5,SNR=9.7
TORD **Torodi Ar. Bea** 168.77 187 PKPab **PKPab** 14 27 25.7 -0.5

WEL 14 14:08:17.4±0.3, 41°S±2°×17°5E±°, h23km±3km, M1.9/15, ML2.2/19, MLv1.9/15, Error ellipse: s-maj=0.0km s-min=0.0km az=113.9, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MRZ	**Mangatainoka R**	0.10	62	P	Pb	14 08 23.1	+1.3
MRZ				S	Sb	14 08 27.2	+2.5
HOWZ	**Holdsworth Sta**	0.20	169	P	Pn	14 08 24.5	-0.6
OGWZ	**Otaki Gorge**	0.25	244	P	Pn	14 08 24.7	-1.0
TIWZ	**Tintock**	0.33	103	P	Pn	14 08 26.1	-0.7
POWZ	**Post Office Ro**	0.39	36	P	Pb	14 08 26.3	+0.6
PRWZ	**Pori Road**	0.41	69	P	Pn	14 08 27.3	-0.7
KIW	**Kapiti Island**	0.45	250	P	Pb	14 08 27.6	+0.9
MTW	**Mount Morrison**	0.45	177	P	Pn	14 08 28.1	-0.5
CAW	**Cannon Point**	0.50	217	P	Pn	14 08 28.5	-0.8
OHWZ	**Ohakea**	0.51	347	P	Pb	14 08 28.2	+0.5
OHWZ				S	Sn	14 08 36.7	-0.7
TMWZ	**Te Maipa**	0.51	142	P	Pn	14 08 29.2	-0.2
BFZ	**Birch Farm**	0.59	88	P	Pn	14 08 29.8	-0.6
BFZ				S	Sn	14 08 40.0	+0.6
DVHZ	**Dannevirke**	0.67	53	P	Pb	14 08 30.8	+0.4
DVHZ				S	Sn	14 08 40.5	-0.8
TRWZ	**Traveller**	0.71	167	P	Pn	14 08 32.2	+0.1
TRWZ				S	Sn	14 08 42.4	0.0
MSWZ	**Moikau Station**	0.73	193	P	Pn	14 08 32.2	-0.1
MSWZ				S	Sn	14 08 42.8	-0.1
TSZ	**Takapari Road**	0.75	30	P	Pb	14 08 31.6	-0.1
TSZ				S	Sn	14 08 42.9	-0.4
PLWZ	**Palliser**	0.88	190	P	Pn	14 08 34.3	-0.2
PLWZ				S	Sb	14 08 45.2	-0.1
PNHZ	**Pukenui**	0.97	36	P	Pb	14 08 35.2	-0.4
PNHZ				S	Sn	14 08 48.7	0.0
WAZ	**Wanganui**	1.02	339	P	Pb	14 08 36.8	+0.4
WAZ				S	Sn	14 08 50.8	+0.9
TCW	**Tory Channel**	1.03	240	P	Pn	14 08 36.5	0.0
TCW				S	Sn	14 08 50.1	-0.1
KRHZ	**Kereru**	1.27	33	P	Pn	14 08 39.2	-0.6
KRHZ				S	Sn	14 08 55.8	-0.3
BHHZ	**Black Hill Sta**	1.30	21	P	Pn	14 08 40.3	+0.1
BHHZ				S	Sb	14 08 57.3	-0.1
MOVZ	**Moawhango**	1.31	10	P	Pn	14 08 40.5	0.0
MOVZ				S	Sb	14 08 57.9	0.0
MTVZ	**Mangateitei**	1.32	0	P	Pn	14 08 41.0	+0.5
WNVZ	**Wahianoa**	1.38	4	P	Pn	14 08 41.9	+0.4
WHVZ	**Whangaehu Hut**	1.42	4	P	Pn	14 08 42.6	+0.6
TUVZ	**Tukino**	1.44	6	P	Pb	14 08 43.1	-0.6
FWVZ	**Far West T-bar**	1.45	3	P	Pn	14 08 43.0	+0.5
SNVZ	**South Ngauruho**	1.52	5	P	Pn	14 08 44.1	+0.7
NGZ	**Ngauruhoe**	1.53	4	P	Pb	14 08 44.4	-0.8
OTVZ	**Oturere**	1.55	6	P	Pb	14 08 44.8	-0.7
NNVZ	**North Ngauruho**	1.57	4	P	Pb	14 08 45.1	-0.8
ETVZ	**East Tongariro**	1.58	7	P	Pn	14 08 44.8	+0.7
WTVZ	**West Tongariro**	1.59	3	P	Pb	14 08 45.3	-0.9
TMVZ	**Te Maari**	1.60	7	P	Pn	14 08 45.2	+0.8
NTVZ	**North Tongarir**	1.61	6	P	Pb	14 08 45.7	-0.8
VRZ	**Vera Road**	1.67	341	P	Pn	14 08 46.1	+0.8
KHEZ	**Kahui Hut**	1.80	321	P	Pb	14 08 48.9	-0.8
MRHZ	**Matea Rd**	2.01	22	P	Pb	14 08 52.1	-1.1
WHRZ	**Whale Island**	3.08	23	P	Pn	14 09 07.8	+3.2

*SNET **14** 14:16:44.3±1.0, 13°37N×90°05W, h40km±23km, ML3.4*
*GCG **14** 14:16:46.5±0.3, 13°42N×90°28W, h20km±3km, MD3.7*
**ISC 14 14:16:42.7±1.9, 13°3N±0°1×90°07W±0°8, h21km±7km, n14, σ0.58/24, 2D, Near coast of Guatem

comp=Z,2µm,0.5s
UEES Universidad Ev 0.93 60 eP Pb 14 16 59.9 -0.3
UEES IAML 14 17 16.2
comp=Z,978nm,0.4s
PAVA Las Pavas 1.20 67 eP Pn 14 17 04.2 0.0
COEG Centro de Oper 1.22 72 eP Pn 14 17 04.1 -0.4
COEG eS Sb 14 17 19.6 -0.8
COEG IAML 14 17 24.0
comp=Z,508nm,0.4s
NBG Las Nubes 1.35 349 eP Pn 14 17 06.6 +0.1
NBG eS Sn 14 17 24.7 +0.7
SCLA Alcaldia de Sa 1.38 71 eS Sn 14 17 24.2 -0.2
FUG Fuego 3 1.41 328 eP Pn 14 17 07.5 +0.3
FUG eS Sn 14 17 24.1 -1.1
COEB Comit de Eme 1.52 81 eP Pn 14 17 08.9 +0.2
COEB eS Sn 14 17 27.4 -0.5
COEB IAML 14 17 30.8
comp=Z,278nm,0.2s
STG3 Santiaguito 3, 2.05 315 eP Pn 14 17 16.9 +0.8
STG3 eS Sn 14 17 40.5 -0.8
LCND La Caada 2.13 88 eP Pn 14 17 17.2 +0.3
LCND eS Sn 14 17 43.4 +0.7
LCND IAML 14 17 45.9
comp=Z,250nm,0.3s

BJI ***14*** *14:28:55.4±0.0, 1˚.26N×127˚.10E, h114km, mb4.8/55, mB4.9/29*
NEIC ***14*** *14:28:58.9±1.6, 1˚.58N±0˚.06×126˚.98E±0˚.07, h108km±5km, mb4.9/51, Error ellipse: s-maj=10.1km s-min=8.3km az=66.0*
IDC ***14*** *14:28:59.8±1.2, 1˚.55N×127˚.05E, h118km±11km, mb4.3/22, mbtmp4.7/26, MS3.3/9, Error ellipse: s-maj=15.8km s-min=7.6km az=74.0*
DJA ***14*** *14:28:59.8±0.2, 2˚N±2˚×12˚7E±˚, h117km±2km, M5.1/56, mb5.2/56, mB5.5/30, MLv5.3/19, Mw(mB)5.0/30*
KLM ***14*** *14:29:01, 1˚.67N×127˚.44E, h164km, mb5.1*
ISC 14 14:28:59.0±0.5, 1˚.57N±0˚.03×126˚.99E±0˚.05, h112km±4km, n302, σ1§50/324, mb4.8/61, 3C-15D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**0.88**	**155**	Pn		**Pn**	**14 29 20.1**	**+0.9**
TNTI				Sn		**Sn**	**14 29 33.0**	**-1.5**
TNTI	**Ternate**	**0.88**	**155**	P		**Pn**	**14 29 20.3**	**+1.1**
TNTI	**Ternate**	**0.88**	**155**	P		**Pn**	**14 29 19.9**	**+0.7**
LBMI	**Labuha**	**2.25**	**167**	P		**Pn**	**14 29 36.5**	**+1.1**
SGSI	**Sangihe**	**2.56**	**325**	P		**Pn**	**14 29 38.9**	**-0.4**
SANI	**Sanana**	**3.73**	**196**	P		**Pn**	**14 29 54.0**	**-0.9**
SANI	**Sanana**	**3.73**	**196**	P		**Pn**	**14 29 54.5**	**-0.4**
GTOI	**Gorontalo**	**4.08**	**257**	P		**Pn**	**14 30 01.7**	**+2.1**
DMMP	**Don Marcelino,**	**4.68**	**344**	eP		**Pn**	**14 30 06.3**	**-1.2**
NLAI	**Namlea**	**4.78**	**179**	P		**Pn**	**14 30 09.3**	**+0.3**
SIJI	**Soronq**	**4.92**	**120**	P		**Pn**	**14 30 12.3**	**+1.5**
	225nm,0.7s,baz=320,slow=18,SNR=105							
SIJI				LR		LR	14 32 21.5	
	comp=Z,397nm,18.9s,baz=218,slow=42							
GSPH	**General Santos**	**4.92**	**336**	⇑P	*i*	**Pn**	**14 30 09.9**	**-1.1**
GSPH					*i*	**Sn**	**14 31 03.2**	**-3.8**
LUWI	**Luwuk**	**4.95**	**238**	Pn		**Pn**	**14 30 10.7**	**-0.6**
LUWI	**Luwuk**	**4.95**	**238**	P		**Pn**	**14 30 13.3**	**+2.1**
LUWI	**Luwuk**	**4.95**	**238**	P		**Pn**	**14 30 12.2**	**+1.0**
MRSI	**Marisa**	**5.16**	**258**	P		**Pn**	**14 30 15.1**	**+1.0**
	3.5nm10µm361nm,0.6s							
MSAI	**Masohi**	**5.26**	**158**	P		**Pn**	**14 30 18.7**	**+3.3**
	0.3nm1µm46nm,0.6s							
AAI	**Ambon**	**5.36**	**167**	P		**Pn**	**14 30 17.8**	**+1.0**
	3.0nm9µm221nm,0.5s							
MATI	**Mati**	**5.39**	**352**	⇓eP		**Pn**	**14 30 17.5**	**+0.3**
SKMP	**Bagumbayan, Su**	**5.49**	**334**	⇓eP		**Pn**	**14 30 17.8**	**-0.7**
DAV	**Davao City (W)**	**5.64**	**346**	P		**Pn**	**14 30 22.2**	**+1.6**
	241nm,0.4s,baz=332,slow=2.4,SNR=1.9							
DAV				S		**Sn**	**14 31 26.1**	**+2.0**
	542nm,0.4s,baz=300,slow=23,SNR=7.7							
DAV				LR		LR	14 32 58.3	
	comp=Z,326nm,18.5s,baz=122,slow=42							
DAV	**Davao City (W)**	**5.64**	**346**	Pn		**Pn**	**14 30 21.1**	**+0.5**
KCP	**Kidapawan**	**5.72**	**341**	⇓eP		**Pn**	**14 30 22.4**	**+0.7**
KCP					*i*	**Sn**	**14 31 25.2**	**-1.1**
APSI	**Ampana**	**5.88**	**245**	P		**Pn**	**14 30 24.2**	**+0.4**
	5.1nm6µm215nm,0.4s							
TOLI2	**Tolitoli**	**6.22**	**266**	Pn		**Pn**	**14 30 28.1**	**-0.3**
TOLI2	**Tolitoli**	**6.22**	**266**	P		**Pn**	**14 30 29.2**	**+0.8**
BUKP	**Musuan**	**6.55**	**343**	⇓eP		**Pn**	**14 30 32.8**	**-0.2**
BIPH	**Bislig**	**6.60**	**355**	⇓eP		**Pn**	**14 30 34.8**	**+1.3**
BIPH				eS		**Sn**	**14 31 46.0**	**-1.4**
FAKI	**Fak Fak**	**6.90**	**130**	Pn		**Pn**	**14 30 38.8**	**+1.2**
FAKI	**Fak Fak**	**6.90**	**130**	P		**Pn**	**14 30 39.2**	**+1.6**
	0.7nm2µm230nm,0.9s							
MPSI	**Mapaga**	**7.19**	**260**	P		**Pn**	**14 30 44.0**	**+2.4**
	0.5nm982nm46nm,0.5s							
PAGZ	**Pagadian**	**7.20**	**330**	⇓eP		**Pn**	**14 30 40.6**	**-1.0**
ZCP	**Zamboanga City**	**7.24**	**318**	⇓iP		**Pn**	**14 30 41.6**	**-0.5**
ZCP					*i*	**Sn**	**14 31 58.6**	**-4.2**
GLSP	**General Luna,**	**8.20**	**354**	⇓eP		**Pn**	**14 30 54.6**	**-0.7**
BBSI	**Bau Bau**	**8.29**	**212**	P		**Pn**	**14 30 58.5**	**+2.1**
	494nm31nm,0.6s							
TTSI	**Tana Toraja**	**8.51**	**237**	P		**Pn**	**14 30 59.4**	**-0.1**
	6µm584nm,0.7s							
TBP	**Tagbilaran**	**8.64**	**339**	eP		**Pn**	**14 30 59.0**	**-2.3**
TBP				eS		**Sn**	**14 32 41.1**	**+4.0**
SPSI	**Sidrap Palu**	**9.07**	**233**	P		**Pn**	**14 31 07.5**	**+0.4**
	8µm897nm,0.7s							
MYLDM	**Lahad Datu**	**9.20**	**293**	Pn		**Pn**	**14 31 10.4**	**+1.6**
CNOP	**Candoni, Negro**	**9.27**	**332**	⇓eP		**Pn**	**14 31 09.5**	**-0.3**
BAKI	**Biak**	**9.52**	**107**	P		**Pn**	**14 31 16.2**	**+3.0**
	3µm223nm,1.1s							
BKSI	**Bulukumba**	**9.69**	**225**	P		**Pn**	**14 31 17.2**	**+1.7**
	5µm246nm,0.5s							
KAPI	**Kappang**	**9.75**	**228**	P		**Pn**	**14 31 17.2**	**+0.9**
	186nm,0.4s,baz=76,slow=8.4,SNR=77							
KAPI				S		**Sn**	**14 33 02.8**	**-1.2**
	98nm,0.4s,baz=259,slow=22,SNR=9.8							
KAPI				LR		LR	14 34 59.4	
	comp=Z,73nm,19.2s,baz=74,slow=37							
KAPI	**Kappang**	**9.75**	**228**	Pn		**Pn**	**14 31 15.9**	**-0.4**
KAPI	**Kappang**	**9.75**	**228**	P		**Pn**	**14 31 17.5**	**+1.2**
BSSI	**Bau Bau, Buton**	**10.04**	**220**	P		**Pn**	**14 31 20.3**	**+0.1**
	2µm236nm,0.8s							
MMRI	**Maumere**	**11.19**	**205**	Pn		**Pn**	**14 31 34.7**	**-1.1**
MMRI	**Maumere**	**11.19**	**205**	P		**Pn**	**14 31 39.4**	**+3.6**
	1µm122nm,1.6s							
EDFI	**Ende, Flores**	**11.53**	**207**	P		**Pn**	**14 31 40.6**	**+0.2**
	1µm124nm,0.6s							
KKM	**Kota Kinabalu**	**11.63**	**293**	Pn		**Pn**	**14 31 41.3**	**-0.4**
KKM	**Kota Kinabalu**	**11.63**	**293**	P		**Pn**	**14 31 43.1**	**+1.4**
BATI	**Baumata**	**12.16**	**196**	P		**Pn**	**14 31 49.9**	**+1.2**
	49nm,0.5s,baz=268,slow=20,SNR=2.3							
BATI	**Baumata**	**12.16**	**196**	P		**Pn**	**14 31 50.4**	**+1.8**
	926nm83nm,0.8s							
SMPI	**Sarmi**	**12.24**	**107**	P		**Pn**	**14 31 51.2**	**+1.5**
	32nm,1.1s							
BASI	**Baing, Sumba**	**13.34**	**208**	P		**Pn**	**14 32 07.5**	**+3.5**
	127nm,0.8s							
WBSI	**Waikabubak, Su**	**13.47**	**214**	P		**Pn**	**14 32 06.7**	**+1.0**
	1µm146nm,0.7s							
LQP	**Lukban**	**13.57**	**337**	⇓eP		**Pn**	**14 32 07.6**	**+0.3**
GENI	**Genyem**	**13.81**	**107**	P		**Pn**	**14 32 11.8**	**+1.6**
	184nm,1.3s							
PLAI	**Plampang**	**13.82**	**221**	P		**P**	**14 32 13.9**	**-1.0**
	3µm307nm,1.1s							
TWSI	**Taliwang, Sumb**	**14.37**	**224**	P		**Pn**	**14 32 18.8**	**+1.5**
	3µm368nm,1.0s							
SBUM	**Sibu**	**14.78**	**274**	Pn		**Pn**	**14 32 22.1**	**-0.5**
SBUM	**Sibu**	**14.78**	**274**	P		**P**	**14 32 28.0**	**+2.4**
MTN	**Manton Dam**	**14.90**	**164**	P		**Pn**	**14 32 22.1**	**-2.0**
	baz=15,SNR=79							
MTN	**Manton Dam**	**14.90**	**164**	Pn		**Pn**	**14 32 22.1**	**-2.0**
MTN	**Manton Dam**	**14.90**	**164**	P		**Pn**	**14 32 22.5**	**-1.6**
KDU	**Kakadu**	**15.18**	**159**	P		**Pn**	**14 32 25.4**	**-2.1**
	baz=15,SNR=76							
KDU	**Kakadu**	**15.18**	**159**	P		**Pn**	**14 32 26.1**	**-1.4**
KMMI	**Kalianget**	**15.56**	**236**	P		**Pn**	**14 32 33.3**	**+0.9**
	4µm486nm,0.9s							
IGBI	**Denpasar**	**15.68**	**229**	P		**P**	**14 32 37.1**	**+1.6**
	3µm208nm,1.4s							
JAGI	**Jajag, Banyuwa**	**16.23**	**232**	P		**Pn**	**14 32 40.6**	**0.0**
JAGI	**Jajag, Banyuwa**	**16.23**	**232**	P		**P**	**14 32 42.5**	**+0.9**
	141nm,0.8s							
GMJI	**Gumukmas**	**16.67**	**234**	P		**P**	**14 32 48.4**	**+1.8**
	69nm,1.1s							
KSM	**Kuching**	**16.67**	**270**			**Pn**	**14 32 45.7**	**-0.5**
KSM	**Kuching**	**16.67**	**270**	P		**P**	**14 32 48.0**	**+1.4**
KNRA	**Kununurra**	**17.23**	**174**	P		**P**	**14 32 52.0**	**-0.7**
	baz=17,SNR=121							
KNRA	**Kununurra**	**17.23**	**174**	P		**P**	**14 32 51.5**	**-1.1**
KNRA	**Kununurra**	**17.23**	**174**	P		**P**	**14 32 52.2**	**-0.4**
PCJI	**Pacitan**	**18.51**	**238**	P		**P**	**14 33 08.1**	**+1.3**
	276nm,0.9s							
UGM	**Wanagama**	**18.93**	**240**	Pn		**P**	**14 33 12.6**	**+1.2**
UGM	**Wanagama**	**18.93**	**240**	P		**P**	**14 33 12.6**	**+1.2**
	201nm,1.6s							
UGM	**Wanagama**	**18.93**	**240**	P		**P**	**14 33 12.9**	**+1.5**
FITZ	**Fitzroy Crossi**	**19.59**	**184**	P		**P**	**14 33 18.0**	**-0.5**
	12nm,0.3s,baz=13,slow=9.5,SNR=184							
FITZ				S		**S**	**14 36 48.3**	**-5.3**
	12nm,1.1s,baz=191,slow=17,SNR=2.9							
FITZ				ScP		**ScP**	**14 40 57.2**	**-2.9**
	1.1nm,0.6s,baz=9.5,slow=6.1,SNR=1.3							
FITZ	**Fitzroy Crossi**	**19.59**	**184**	P		**P**	**14 33 17.6**	**-0.9**
	baz=20,SNR=130							
FITZ	**Fitzroy Crossi**	**19.59**	**184**	P		**P**	**14 33 17.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.59**	**184**	P		**P**	**14 33 17.5**	**-0.9**
MANU	**Manus Island**	**20.69**	**100**	P		**P**	**14 33 29.2**	**-1.2**
GUMO	**Guam**	**21.34**	**55**	P		**P**	**14 33 37.2**	**-0.2**
	41nm,0.3s,baz=255,slow=16,SNR=2.6							
	41nm,0.3s							
GUMO	**Guam**	**21.34**	**55**	P		**P**	**14 33 36.1**	**-1.2**
COEN	**Coen**	**22.26**	**134**	P		**P**	**14 33 47.3**	**+0.3**
	baz=22,SNR=8.8							
COEN	**Coen**	**22.26**	**134**	P		**P**	**14 33 46.1**	**-1.0**
COEN	**Coen**	**22.26**	**134**	P		**P**	**14 33 47.3**	**+0.3**
YULB	**Yu-li**	**22.38**	**346**	P		**P**	**14 33 45.6**	**-2.6**
WB0	**Warramunga Arr**	**22.42**	**161**	P		**P**	**14 33 46.9**	**-1.7**
TPUB	**Ta-pu**	**22.46**	**345**	P		**P**	**14 33 47.0**	**-2.1**
TPUB	**Ta-pu**	**22.46**	**345**	P		**P**	**14 33 48.5**	**-0.6**
WRAB	**Tennant Creek**	**22.56**	**162**	P		**P**	**14 33 47.7**	**-2.4**
WRAB	**Tennant Creek**	**22.56**	**162**	P		**P**	**14 33 49.0**	**-1.1**
WRA	**Warramunga Arr**	**22.57**	**162**	P		**P**	**14 33 49.1**	**-1.0**
	26nm,0.5s,baz=340,slow=11,SNR=168							
WRA				PcP		**PcP**	**14 37 40.0**	**+0.2**
	1.4nm,0.5s,baz=340,slow=2.0,SNR=3.2							
WRA				S		**S**	**14 37 46.3**	**-3.2**
	19nm,0.8s,baz=329,slow=21,SNR=16							
WRA				ScP		**ScP**	**14 41 06.0**	**-1.4**
	1.4nm,0.7s,baz=345,slow=3.0,SNR=4.9							
	26nm,0.5s							
WRA	**Warramunga Arr**	**22.57**	**162**	P		**P**	**14 33 47.3**	**-2.8**
WB2	**Warramunga Arr**	**22.57**	**162**	P		**P**	**14 33 48.8**	**-1.4**
WR0	**Warramunga Arr**	**22.64**	**161**	P		**P**	**14 33 49.5**	**-1.4**
SSLB	**Suanglung**	**22.84**	**346**	P		**P**	**14 33 50.9**	**-2.0**
SSLB	**Suanglung**	**22.84**	**346**	P		**P**	**14 33 52.7**	**-0.2**
NACB	**Ninganchiao**	**23.07**	**347**	P		**P**	**14 33 53.4**	**-1.6**
YOJ	**Yonaguni jima**	**23.08**	**351**	P		**P**	**14 33 55.0**	**-0.1**
YOJ	**Yonaguni jima**	**23.08**	**351**	P		**P**	**14 33 56.4**	**+1.4**
MYKOM	**Kota Tinggi**	**23.13**	**271**	P		**P**	**14 33 54.6**	**-1.1**
JMJ	**Miyako jima 2**	**23.16**	**356**	P		**P**	**14 33 57.4**	**+1.6**
KASI	**Kota Agung**	**23.54**	**252**	P		**P**	**14 34 00.7**	**+1.2**
	43nm,0.9s							
YHNB	**Yeheng**	**23.59**	**347**	P		**P**	**14 33 59.4**	**-0.5**
YHNB	**Yeheng**	**23.59**	**347**	P		**P**	**14 34 00.5**	**+0.6**
MBWA	**Marble Bar**	**23.68**	**197**	P		**P**	**14 33 59.6**	**-1.0**
MBWA	**Marble Bar**	**23.68**	**197**	P		**P**	**14 34 00.1**	**-0.5**
PSA00	**Pilbara Seismi**	**24.04**	**197**	P		**P**	**14 34 03.2**	**-0.6**
PSA00	**Pilbara Seismi**	**24.04**	**197**	P		**P**	**14 34 03.8**	**0.0**
QIZ	**Qiongzhong**	**24.15**	**317**	P		**P**	**14 34 04.6**	**-0.3**
QIZ	**Qiongzhong**	**24.15**	**317**	P		**P**	**14 34 05.7**	**+0.8**
XMI	**Christmas Isla**	**24.33**	**240**	P		**P**	**14 34 07.4**	**+0.8**
XMIS	**Christmas Isla**	**24.38**	**240**	P		**P**	**14 34 06.5**	**-0.4**
XMIS	**Christmas Isla**	**24.38**	**240**	P		**P**	**14 34 07.2**	**+0.2**
JOW	**Kunigami**	**25.15**	**3**	P		**P**	**14 34 13.7**	**-0.2**
JOW				IAmb		IAmb	14 34 22.9	
	comp=Z,23nm,0.7s							
JOW	**Kunigami**	**25.15**	**3**	P		**P**	**14 34 15.7**	**+1.9**
UBPT	**Khong Chiam**	**25.23**	**304**	P		**P**	**14 34 14.1**	**-0.6**
UBPT				IAmb		IAmb	14 34 17.1	
	comp=Z,25nm,0.7s							
QIS	**Mount Isa**	**25.23**	**151**	P		**P**	**14 34 14.6**	**-0.1**
	baz=25,SNR=32							
QIS	**Mount Isa**	**25.23**	**151**	P		**P**	**14 34 14.8**	**+0.1**
MTSU	**Mount Surprise**	**25.97**	**140**	P		**P**	**14 34 22.5**	**+1.1**
	baz=26,SNR=6.6							
MTSU	**Mount Surprise**	**25.97**	**140**	P		**P**	**14 34 21.1**	**-0.3**
AS31	**Alice Springs**	**25.97**	**165**	P		**P**	**14 34 19.6**	**-1.8**
AS31				IAmb		IAmb	14 34 30.4	
	comp=Z,12nm,0.3s							
ASAR	**Alice Springs**	**25.97**	**165**	P		**P**	**14 34 20.4**	**-1.0**
	comp=Z,5.2nm,0.3s,baz=349,slow=7.7,SNR=163							
ASAR				PcP		**PcP**	**14 37 47.1**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=342,slow=1.8,SNR=3.3							
ASAR				S		**S**	**14 38 51.4**	**+7.6**
	comp=Z,21nm,1.1s,baz=348,slow=21,SNR=8.0							
ASAR				ScP		**ScP**	**14 41 15.7**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=341,slow=2.8,SNR=5.9							
ASAR				LR		LR	14 44 50.9	
	comp=Z,40nm,20.5s,baz=353,slow=37							
	comp=Z,5.2nm,0.3s							
ASAR	**Alice Springs**	**25.97**	**165**	P		**P**	**14 34 20.1**	**-1.3**
IPM	**Ipoh**	**26.08**	**277**	P		**P**	**14 34 20.8**	**-1.7**
IPM				IAmb		IAmb	14 34 42.2	
	comp=Z,50nm,1.8s							
WRKA	**Warakurna**	**26.48**	**177**	P		**P**	**14 34 25.5**	**-0.4**
	baz=27,SNR=136							
WRKA	**Warakurna**	**26.48**	**177**	P		**P**	**14 34 25.5**	**-0.4**
GIRL	**Giralia**	**27.09**	**207**	P		**P**	**14 34 31.8**	**+0.4**
	baz=27,SNR=4.9							
GIRL	**Giralia**	**27.09**	**207**	P		**P**	**14 34 32.1**	**+0.7**
GIRL	**Giralia**	**27.09**	**207**	P		**P**	**14 34 32.4**	**+1.0**
PSI	**Prapat**	**28.07**	**273**	P		**P**	**14 34 40.1**	**-0.3**
	comp=Z,5.5nm,0.4s,baz=70,slow=3.9,SNR=2.6							
PSI				LR		LR	14 45 52.9	
	comp=Z,65nm,18.8s,baz=102,slow=36							
	comp=Z,5.5nm,0.4s							
CTA	**Charters Tower**	**28.64**	**140**	P		**P**	**14 34 44.6**	**-0.7**
	comp=Z,4.1nm,1.0s,baz=320,slow=9.3,SNR=1.2							
	comp=Z,4.1nm,1.0s							
CTA	**Charters Tower**	**28.64**	**140**	P		**P**	**14 34 45.6**	**+0.3**
CTAO	**Charters Tower**	**28.64**	**140**	P		**P**	**14 34 45.2**	**0.0**
CTAO				IAmb		IAmb	14 35 25.2	
	comp=Z,39nm,1.5s							
CTAO	**Charters Tower**	**28.64**	**140**	P		**P**	**14 34 45.8**	**+0.5**
MEEK	**Meekatharra**	**29.19**	**196**	P		**P**	**14 34 49.8**	**-0.3**
	baz=29,SNR=33							
MEEK	**Meekatharra**	**29.19**	**196**	P		**P**	**14 34 49.9**	**-0.1**
GSI	**Gunungsitoli**	**29.40**	**270**	P		**P**	**14 34 50.9**	**-1.2**
GSI				IAmb		IAmb	14 34 54.5	
	comp=Z,16nm,0.7s							
GSI	**Gunungsitoli**	**29.40**	**270**	P		**P**	**14 34 51.3**	**-0.8**
	comp=Z,33nm,2.1s							
GSI	**Gunungsitoli**	**29.40**	**270**	P		**P**	**14 34 53.8**	**+1.7**
OOD	**Oodnadatta**	**30.37**	**165**	P		**P**	**14 34 59.6**	**-0.9**
NJ2	**Nanjing**	**31.27**	**347**	eP		**P**	**14 35 10.0**	**+1.7**
NJ2				pmax		pmax		
	comp=Z,13nm,0.6s							
INKA	**Innaminka**	**32.01**	**157**	P		**P**	**14 35 14.9**	**+0.1**
FORT	**Forrest**	**32.19**	**178**	P		**P**	**14 35 15.9**	**-0.5**
	baz=32,SNR=20							
FORT	**Forrest**	**32.19**	**178**	P		**P**	**14 35 15.6**	**-0.8**
FORT	**Forrest**	**32.19**	**178**	P		**P**	**14 35 15.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**32.22**	**303**	P		**P**	**14 35 16.9**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=121,slow=6.8,SNR=14							
	comp=Z,2.6nm,0.8s							
MORW	**Morawa**	**32.22**	**198**	P		**P**	**14 35 16.7**	**0.0**
	baz=32,SNR=27							
MORW	**Morawa**	**32.22**	**198**	P		**P**	**14 35 16.4**	**-0.3**
MORW	**Morawa**	**32.22**	**198**	P		**P**	**14 35 16.8**	**+0.1**
MULG	**Mulgathing**	**32.39**	**169**	P		**P**	**14 35 17.8**	**-0.3**
CHTO	**Chiang Mai**	**32.39**	**304**	P		**P**	**14 35 17.1**	**-1.3**
CHTO	**Chiang Mai**	**32.39**	**304**	P		**P**	**14 35 18.7**	**+0.4**
CHTO	**Chiang Mai**	**32.39**	**304**	P		**P**	**14 35 18.2**	**-0.2**
ENH	**Enshi**	**33.02**	**331**	P		**P**	**14 35 23.8**	**+0.1**
ENH				IAmb		IAmb	14 35 25.3	
	comp=Z,19nm,0.7s							
ENH	**Enshi**	**33.02**	**331**	P		**P**	**14 35 24.0**	**+0.2**
ENH				pP		**pP**	**14 35 47.0**	**-1.1**
KMI	**Kunming**	**33.10**	**317**	⇑P		**P**	**14 35 26.3**	**+1.6**
KMI				pmax		pmax		
	comp=Z,10.0nm,0.7s							
BLDU	**Ballidu**	**33.47**	**196**	P		**P**	**14 35 27.4**	**-0.2**
	baz=34,SNR=77							
BLDU	**Ballidu**	**33.47**	**196**	P		**P**	**14 35 27.3**	**-0.3**
LCRK	**Leigh Creek**	**33.59**	**162**	P		**P**	**14 35 28.4**	**-0.2**
JHJ	**Hachijo jima 2**	**33.60**	**20**	LR		LR	14 48 14.4	
	comp=Z,51nm,20.2s,baz=341,slow=34							
RK1H	**Rockhampton Ha**	**33.75**	**139**	P		**P**	**14 35 30.6**	**+0.5**
KLBR	**Kellerberrin**	**34.13**	**194**	P		**P**	**14 35 33.1**	**-0.2**
	baz=34,SNR=96							
KLBR	**Kellerberrin**	**34.13**	**194**	P		**P**	**14 35 33.1**	**-0.2**
PZH	**PanZhiHua**	**34.68**	**318**	P		**P**	**14 35 37.8**	**-0.5**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,90nm,4.0s							
INU	**Inuyama**	**34.88**	**14**	P		**P**	**14 35 40.1**	**+0.4**
MUN	**Mundaring**	**34.90**	**196**	P		**P**	**14 35 40.0**	**+0.1**
	baz=35,SNR=38							
MUN	**Mundaring**	**34.90**	**196**	P		**P**	**14 35 39.9**	**+0.1**
BBOO	**Buckleboo**	**35.26**	**167**	P		**P**	**14 35 42.2**	**-0.7**
	baz=35,SNR=49							
BBOO	**Buckleboo**	**35.26**	**167**	P		**P**	**14 35 42.0**	**-0.9**
BBOO				IAmb		IAmb	14 35 43.1	
	comp=Z,35nm,1.1s							
BBOO	**Buckleboo**	**35.26**	**167**	P		**P**	**14 35 42.4**	**-0.6**
LYN	**LuoYang**	**35.50**	**339**	⇑P		**P**	**14 35 45.8**	**+0.8**
LYN				pmax		pmax		
	comp=Z,10.0nm,0.7s							
EIDS	**Eidsvold**	**35.52**	**141**	P		**P**	**14 35 45.2**	**-0.1**
	baz=36,SNR=5.7							
EIDS	**Eidsvold**	**35.52**	**141**	P		**P**	**14 35 45.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**35.53**	**194**	P		**P**	**14 35 45.0**	**-0.3**
NWAO	**Narrogin (SRO)**	**35.53**	**194**	P		**P**	**14 35 45.2**	**-0.1**
NWAO	**Narrogin (SRO)**	**35.53**	**194**	P		**P**	**14 35 45.2**	**-0.1**
TIA	**Tai'an**	**35.66**	**346**	⇓P		**P**	**14 35 47.0**	**+0.6**
TIA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
KSRS	**Korea Array**	**35.72**	**1**	P		**P**	**14 35 47.5**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=179,slow=9.9,SNR=31							
KSRS				LR		LR	14 52 06.1	
	comp=Z,14nm,20.5s,baz=155,slow=39							
	comp=Z,2.8nm,0.6s							
KS19	**Wonju Array Si**	**35.76**	**1**	P		**P**	**14 35 47.2**	**0.0**
STKA	**Stephens Creek**	**36.04**	**159**	P		**P**	**14 35 49.2**	**-0.4**
	comp=Z,5.1nm,0.3s,baz=338,slow=8.3,SNR=54							
STKA				PcP		**PcP**	**14 38 13.6**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=348,slow=3.2,SNR=3.0							
	comp=Z,5.1nm,0.3s							
STKA	**Stephens Creek**	**36.04**	**159**	P		**P**	**14 35 49.3**	**-0.4**
	baz=36,SNR=34							
STKA	**Stephens Creek**	**36.04**	**159**	P		**P**	**14 35 48.9**	**-0.7**
STKA	**Stephens Creek**	**36.04**	**159**	P		**P**	**14 35 49.2**	**-0.4**
MAJO	**Matsushiro**	**36.31**	**15**	P		**P**	**14 35 50.9**	**-1.1**
MAJO				IAmb		IAmb	14 36 02.9	
	comp=Z,7.2nm,0.7s							
MJAR	**Matsushiro Arr**	**36.31**	**15**	P		**P**	**14 35 50.8**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=176,slow=8.7,SNR=11							
	comp=Z,1.3nm,0.7s							
XAN	**Xi'an**	**36.45**	**334**	P		**P**	**14 35 53.3**	**+0.1**
XAN				pmax		pmax		
	comp=Z,20nm,0.9s							
XAN				pmax		pmax		
	comp=Z,43nm,3.8s							
CD2	**Chengdu**	**36.54**	**325**	P		**P**	**14 35 52.9**	**-1.1**
HTT	**Hallett**	**36.59**	**163**	P		**P**	**14 35 54.3**	**-0.1**
	baz=37,SNR=11							
HTT	**Hallett**	**36.59**	**163**	P		**P**	**14 35 53.8**	**-0.6**
RKGY	**Rocky Gully**	**37.20**	**194**	P		**P**	**14 36 00.7**	**+1.3**
	baz=37,SNR=23							
RKGY	**Rocky Gully

MAKZ Makanchi 59.65 326 P **P** 14 38 52.3 +0.8
KSH Kashi 59.75 316 P **P** 14 38 54.3 +1.8
KSH pmax pmax
comp=Z,16nm,1.2s
RPZ Rata Peaks 59.86 144 P **P** 14 38 52.5 -0.4
comp=Z,7.1nm,0.9s,baz=69,slow=17,SNR=1.8
comp=Z,7.1nm,0.9s
YAK Yakutsk 60.34 1 P **P** 14 38 54.5 -1.4
URZ Urewera 60.81 136 P **P** 14 38 58.9 -0.6
comp=Z,2.7nm,0.6s,baz=21,slow=20,SNR=1.4
comp=Z,2.7nm,0.6s
AAK Ala-Archa 62.13 319 LR LR 15 08 19.1
comp=Z,804nm,20.1s,baz=219,slow=38
ZAA0 Zalesovo Array 62.62 333 P **P** 14 39 10.5 -0.8
ZAA0 IAmb IAmb 14 39 13.4
comp=Z,12nm,1.0s
ZALV Zalesovo Beam 62.62 333 P **P** 14 39 10.8 -0.5
comp=Z,6.3nm,0.4s,baz=125,slow=6.4,SNR=27
comp=Z,6.3nm,0.4s
ZALV Zalesovo Beam 62.62 333 P **P** 14 39 10.5 -0.8
KBL Kabul 63.04 308 P **P** 14 39 15.0 +0.1
KBL IAmb IAmb 14 39 16.3
comp=Z,22nm,0.7s
GAR Garm 63.57 313 P **P** 14 39 18.6 +0.5
KURK Kurchatov 63.69 328 P **P** 14 39 18.6 +0.1
KURK Kurchatov 63.69 328 P **P** 14 39 19.0 +0.6
SEY Seymchan 64.07 13 P **P** 14 39 21.5 +0.8
comp=Z,1.9nm,0.8s,baz=117,slow=17,SNR=1.7
comp=Z,1.9nm,0.8s
CHGR Chuyangaron 64.30 313 P **P** 14 39 22.9 0.0
KK31 Karatay Array 64.98 318 P **P** 14 39 27.6 +0.5
KK31 IAmb IAmb 14 39 29.3
comp=Z,11nm,0.8s
KKAR Karatay Array 64.98 318 P **P** 14 39 27.0 -0.1
DRV Dumont d'Urvil 68.72 174 P **P** 14 39 49.6 -0.6
DRV pP **PcP** 14 40 14.2 0.0
CASY Casey 68.72 187 P **P** 14 39 50.3 0.0
CASY IAmb IAmb 14 41 58.2
comp=Z,16nm,0.5s
CASY Casey 68.72 187 P **P** 14 39 50.7 +0.5
BRVK Borovoye 69.33 327 P **P** 14 39 54.2 -0.1
BRVK Borovoye 69.33 327 P **P** 14 39 54.5 +0.1
BRVK sP **pwP** 14 40 29.8 +5.2
GEYT Alibeck 72.44 309 P **P** 14 40 14.9 +1.3
comp=Z,5.0nm,0.6s,baz=165,slow=9.1,SNR=8.4
comp=Z,5.0nm,0.6s
GEYT Alibeck 72.44 309 P **P** 14 40 14.9 +1.3
GYA0B ALIBECK ARRAY 72.44 309 P **P** 14 40 15.0 +1.4
NRIK Noril'sk 72.57 346 P **P** 14 40 13.8 +0.2
comp=Z,5.2nm,0.6s,baz=134,slow=6.7,SNR=6.5
comp=Z,5.2nm,0.6s
NRIK Noril'sk 72.57 346 P **P** 14 40 13.2 -0.4
NRIK IAmb IAmb 14 40 56.5
comp=Z,24nm,1.5s
ABKAR Akbulak array 73.98 321 P **P** 14 40 21.8 -0.4
AKTO Aktyubinsk 75.50 322 LR LR 15 15 53.3
comp=Z,253nm,20.2s,baz=142,slow=37
ARU Arti 76.89 328 P **P** 14 40 37.7 -1.0
ARU IAmb IAmb 14 40 41.9
comp=Z,10nm,0.7s
VNDA Vanda 81.27 173 P **P** 14 41 02.2 0.0
comp=Z,6.2nm,0.6s,baz=318,slow=6.7,SNR=50
VNDA LR LR 15 18 55.0
comp=Z,25nm,18.2s,baz=330,slow=37
comp=Z,6.2nm,0.6s
VNDA Vanda 81.27 173 P **P** 14 41 01.6 -0.6
VOI Vohitsoka 81.49 248 P **P** 14 41 04.3 -0.4
VOI IAmb IAmb 14 42 35.4
comp=Z,46nm,1.8s
RAYN Ar Rayn 81.57 293 P **P** 14 41 04.5 -0.5
MAW Mawson 81.83 200 P **P** 14 41 06.2 +0.9
comp=Z,10.0nm,0.6s,baz=77,slow=5.4,SNR=27
comp=Z,10.0nm,0.6s
MAW Mawson 81.83 200 P **P** 14 41 06.2 +0.9
baz=82,SNR=45
MAW Mawson 81.83 200 P **P** 14 41 05.9 +0.6
SBA Scott Base 82.18 172 P **P** 14 41 07.5 +0.5
TTA Tatalina 82.70 27 P **P** 14 41 10.1 0.0
TTA IAmb IAmb 14 41 31.5
comp=Z,21nm,1.7s
OHAK Old Harbor 83.12 33 P **P** 14 41 12.4 +0.1
IMAR Indian Mountai 84.20 24 P **P** 14 41 17.6 -0.1
CNPM China Poot 84.47 30 P **P** 14 41 20.1 +1.0
H23K Yukon River 85.89 24 P **P** 14 41 26.8 +0.7
H23K IAmb IAmb 14 44 34.7
comp=Z,18nm,1.8s
I23K Minto, Yukon-K 85.91 25 P **P** 14 41 25.8 -0.3
I23K IAmb IAmb 14 42 34.8
comp=Z,18nm,1.8s
KLMR Klimovskoe 87.40 331 *e*P **P** 14 41 36.9 +3.4
KLMR AMP 14 41 38.9
comp=Z,5.0nm,0.7s
BMAR Burnt Mountain 87.95 23 P **P** 14 41 36.4 +0.3
BCAR Beaver Creek A 89.17 27 P **P** 14 41 42.6 +0.7
QSPA South Pole Qui 91.49 180 P **P** 14 41 52.5 -0.2
QSPA IAmb IAmb 14 42 13.2
comp=Z,27nm,1.9s
BRTR Keskin Array B 91.59 310 LR LR 15 29 53.4
comp=Z,66nm,18.9s,baz=104,slow=40
ARCES ARCESS Array B 92.55 340 P **P** 14 41 56.2 -1.2
comp=Z,1.7nm,0.8s,baz=70,slow=5.2,SNR=5.7
comp=Z,1.7nm,0.8s
FINES FINESS Array B 93.84 332 P **P** 14 42 03.8 +0.3
comp=Z,0.6nm,0.5s,baz=101,slow=1.9,SNR=1.2
comp=Z,0.6nm,0.5s
MNK Minsk 94.02 325 *i* P P 14 41 55.7 -8.8
comp=E,2.0nm,0.8s
MNK *i* P P 14 41 55.7 -8.8
comp=N,13nm,0.9s
MNK *i* P P 14 41 55.7 -8.8
comp=Z,11nm,0.6s,baz=261
MNK *i* pP pP 14 42 24.4 -8.5
MNK *i* PP PP 14 45 43.0 -8.9
MNK *i* PPP PPP 14 47 44.3
MNK *i* S **SKSac** 14 52 19.8 -9.2
MNK *i* sS **ScS** 14 53 12.0 +5.4
MNK *i* SS **SS** 14 59 20.3 -7.1
MNK *i* SSS SSS 15 03 02.3
MNK *i* LRM MLR 15 25 25.3
comp=N,22nm,16.1s
MNK *i* LRM MLR 15 25 56.9
comp=Z,115nm,18.1s
MNK *i* LRM MLR 15 25 58.8
comp=E,32nm,20.0s
PDAR Pinedale Array 112.79 42 PKKPbc PKKPbc 14 58 11.3 -1.4
comp=E,0.5nm,0.6s,baz=106,slow=4.9,SNR=5.3
SCHQ Schefferville 122.64 9 PKP **PKPdf** 14 47 41.4 -0.1
comp=E,1.4nm,0.3s,baz=215,slow=14,SNR=2.3
TXAR Lajitas Array 122.69 53 PKP **PKPdf** 14 47 42.3 -0.2
comp=E,0.4nm,0.7s,baz=329,slow=1.1,SNR=5.5
TXAR PKKPbc **PKKPbc** 14 57 36.9 +0.2
comp=E,0.5nm,0.8s,baz=99,slow=5.7,SNR=4.9
TORD Torodi Ar. Bea 123.81 287 PKP **PKPdf** 14 47 44.7 -0.2
comp=E,1.9nm,0.7s,baz=63,slow=1.9,SNR=11
DBIC Dimbokro 131.24 280 PKP **PKPdf** 14 47 59.5 +0.5
comp=E,4.7nm,0.9s,baz=219,slow=3.6,SNR=2.1
PLCA Paso Flores 137.91 160 PKP **PKPdf** 14 48 11.7 +0.8
comp=E,3.0nm,0.8s,baz=85,slow=1.4,SNR=5.5
CPUP Villa Florida 155.04 171 PKPab **PKPab** 14 49 03.9 -0.3
comp=E,3.1nm,0.7s,baz=196,slow=4.8,SNR=7.5
LPAZ La Paz 159.13 135 PKP **PKPdf** 14 48 45.4 -0.4
comp=E,1.2nm,0.8s,baz=266,slow=3.7,SNR=4.9
SIV San Ignacio 163.62 151 PKPab **PKPab** 14 49 41.9 +0.1
comp=E,1.9nm,0.5s,baz=226,slow=3.4,SNR=7.6
BDFB Brasilia 165.18 199 PKPab **PKPab** 14 49 49.5 +0.8
comp=E,2.0nm,0.6s,baz=181,slow=19,SNR=3.9

*IDC **14** 14:33:24.7±0.8,52.˚07N×170.˚10W,h0km,mb4.0/21, mbtmp4.0/24,ML3.7/3,MS3.5/4, Error ellipse: s-maj=25.3km s-min=12.0km az=0.0*
*AEIC **14** 14:33:26.4±2.2,51.˚74N±0.˚08×169.˚96W±0.˚09,h26km±5km, Error ellipse: s-maj=12.4km s-min=6.9km az=154.0*
*NEIC **14** 14:33:28.7±1.6,51.˚86N±0.˚09×170.˚04W±0.˚08,h34km±4km, mb4.3/108,ML3.8/29(AEIC), Error ellipse: s-maj=14.1km s-min=5.7km az=156.0*

ISC 14 14:33:27.9±0.5,51.˚86N±0.˚07×169.˚99W±0.˚05,h29km, n365,σ1°04/345,mb4.3/55,MS3.4/4,1D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLCO	**Concord Point,**	**0.95**	**10**		**Pb**	**14 33 45.4**	**-0.3**
CLCO					**Sb**	**14 33 57.9**	**-0.1**
CLES	**Cleveland East**	**0.97**	**3**		**Pb**	**14 33 45.6**	**-0.5**
CLES	**Cleveland East**	**0.97**	**3**		**Sb**	**14 34 00.7**	**+2.1**
NIKH	**Nikolski High**	**1.32**	**31**	Pn	**Pn**	**14 33 49.8**	**-0.5**
NIKH	**Nikolski High**	**1.32**	**31**		**Sb**	**14 34 08.7**	**+0.2**
NIKH	**Nikolski High**	**1.32**	**31**	P	**Pb**	**14 33 50.2**	**-1.8**
	baz=209						
OKCE	**Okmok Cone E**	**1.93**	**35**		**Pn**	**14 33 58.6**	**-0.1**
OKNC	**Okmok New Cone**	**1.97**	**35**		**Pb**	**14 34 00.5**	**-2.5**
OKFG	**Magazine Ridge**	**2.01**	**38**		**Pn**	**14 33 59.3**	**-0.5**
KOFP	**Korovin Flat P**	**2.57**	**281**		**Pn**	**14 34 07.5**	**-0.1**
KOKL	**Mount Kliuchef**	**2.64**	**282**		**Pn**	**14 34 09.2**	**+0.7**
MAPS	**Pakushin South**	**2.69**	**42**		**Pn**	**14 34 09.8**	**+0.6**
MSW	**Makushin Switc**	**2.83**	**42**		**Pn**	**14 34 12.3**	**+1.1**
UNV	**Unalaska Valle**	**2.91**	**45**	Pn	**Pn**	**14 34 12.5**	**+0.4**
UNV	**Unalaska Valle**	**2.91**	**45**	P	**Pn**	**14 34 12.2**	**+0.1**
	baz=226						
AKMO	**Akutan Morgan**	**3.29**	**45**		**Pn**	**14 34 18.8**	**+1.4**
AKUT	**Akutan**	**3.42**	**46**	Pn	**Pn**	**14 34 20.4**	**+1.1**
GSMY	**Great Sitkin M**	**3.76**	**275**		**Pn**	**14 34 24.0**	**+0.1**
GSTR	**Great Sitkin T**	**3.76**	**276**		**Pn**	**14 34 23.7**	**-0.2**
GSTD	**Great Sitkin T**	**3.81**	**275**		**Pn**	**14 34 24.5**	**-0.2**
GSCK	**Great Sitkin C**	**3.82**	**275**		**Pn**	**14 34 24.6**	**-0.2**
ADK	**Adak**	**4.15**	**273**	Pn	**Pn**	**14 34 28.6**	**-0.7**
KIWB	**Kanaga Island**	**4.44**	**273**		**Pn**	**14 34 33.0**	**-0.2**
KIKV	**Kanaga Island**	**4.45**	**273**		**Pn**	**14 34 33.4**	**0.0**
KIMD	**Kanaga Island**	**4.50**	**272**		**Pn**	**14 34 33.8**	**-0.2**
TAPA	**Tanaga Point A**	**4.85**	**273**		**Pn**	**14 34 38.8**	**-0.1**
TAFP	**Tanaga Falls P**	**4.95**	**274**		**Pn**	**14 34 40.4**	**+0.1**
TASE	**Tanaga Southea**	**4.99**	**273**		**Pn**	**14 34 40.9**	**+0.1**
SPIA	**Saint Paul Isl**	**5.33**	**358**	P	**Pn**	**14 34 44.6**	**-0.9**
	baz=176						
GAEA	**Gareloi East**	**5.43**	**273**		**Pn**	**14 34 46.9**	**0.0**
GANO	**Gareloi North**	**5.47**	**273**		**Pn**	**14 34 47.1**	**-0.2**
CEPE	**Semis' Perret**	**6.41**	**275**		**Pn**	**14 35 00.4**	**+0.1**
SDPT	**Sand Point**	**6.66**	**55**	Pn	**Pn**	**14 35 03.5**	**-0.1**
SDPT	**Sand Point**	**6.66**	**55**	P	**Pn**	**14 35 04.2**	**+0.6**
	baz=241						
AMKA	**Amchitka**	**6.69**	**270**	Pn	**Pn**	**14 35 02.5**	**-1.5**
CNBA	**Chernabura Isl**	**6.90**	**60**	Pn	**Pn**	**14 35 06.7**	**-0.3**
CHNA	**Chernabura Isl**	**6.90**	**60**	P	**Pn**	**14 35 07.7**	**+0.7**
	baz=248						
LSNW	**Little Sitkin**	**7.11**	**275**		**Pn**	**14 35 10.9**	**+1.0**
CHGN	**Chignik**	**8.13**	**52**	Pn	**Pn**	**14 35 24.7**	**+0.9**
CHGN	**Chignik**	**8.13**	**52**	P	**Pn**	**14 35 23.6**	**-0.2**
	baz=241						
CHIR	**Chirikof Islan**	**9.37**	**59**	Pn	**Pn**	**14 35 40.9**	**0.0**
CHIR	**Chirikof Islan**	**9.37**	**59**	P	**Pn**	**14 35 41.3**	**+0.4**
	baz=250						
R17K	**Ugashik Creek**	**9.76**	**48**	P	**Pn**	**14 35 46.7**	**+0.6**
	baz=239						
SHEM	**Shemya Is, Ala**	**9.79**	**281**	Pn	**Pn**	**14 35 45.7**	**-0.9**
	0.9nm,0.3s,baz=256,slow=21,SNR=1.4						
	37nm,0.9s						
SMY	**Shemya**	**9.79**	**281**	Pn	**Pn**	**14 35 46.8**	**+0.2**
O16K	**Kokwok River B**	**10.24**	**36**	P	**Pn**	**14 35 53.1**	**+0.4**
	baz=226						
SII	**Sitkinak Islan**	**10.38**	**57**	Pn	**Pn**	**14 35 54.2**	**-0.5**
SII	**Sitkinak Islan**	**10.38**	**57**	P	**Pn**	**14 35 55.8**	**+1.1**
	baz=249						
P17K	**Kvichak River**	**10.62**	**41**	P	**Pn**	**14 35 58.1**	**+0.2**
	baz=232						
N16K	**Nishlik Lake**	**10.65**	**31**	P	**Pn**	**14 35 57.7**	**-0.6**
	baz=231						
O17K	**Koliganek Bris**	**10.73**	**37**	P	**Pn**	**14 35 59.0**	**-0.4**
	baz=228						
OHAK	**Old Harbor**	**11.08**	**54**	Pn	**Pn**	**14 36 02.8**	**-1.4**
OHAK	**Old Harbor**	**11.08**	**54**	P	**Pn**	**14 36 03.0**	**-1.2**
	baz=248						
O18K	**Koktuh Hills**	**11.52**	**40**		**Pn**	**14 36 11.1**	**+0.8**
O18K	**Koktuh Hills**	**11.52**	**40**	P	**Pn**	**14 36 10.0**	**-0.3**
	baz=232						
KDAK	**Kodiak Island**	**11.64**	**53**	Pn	**Pn**	**14 36 10.2**	**-1.7**
KDAK	**Kodiak Island**	**11.64**	**53**	P	**Pn**	**14 36 10.7**	**-1.3**
	baz=246						
Q19K	**Cape Douglas,**	**11.66**	**46**	Pn	**Pn**	**14 36 13.1**	**+0.9**
Q19K	**Cape Douglas,**	**11.66**	**46**	P	**Pn**	**14 36 12.1**	**-0.1**
	baz=239						
Q20K	**Shuyak Island**	**12.08**	**49**	P	**Pn**	**14 36 17.1**	**-0.9**
	baz=243						
SVW2	**Sparrevohn**	**12.18**	**35**	Pn	**Pn**	**14 36 19.9**	**+0.6**
P19K	**Oil Pt**	**12.22**	**44**	Pn	**Pn**	**14 36 20.3**	**+0.5**
CNPM	**China Poot**	**13.04**	**47**	Pn	**Pn**	**14 36 30.1**	**-0.8**
L19K	**White Mountain**	**13.19**	**32**		**Pn**	**14 36 33.9**	**+0.8**
BRSE	**Bradley Lake S**	**13.36**	**46**	P	**Pn**	**14 36 34.5**	**-0.9**
	baz=242						
TNA	**Tin City**	**13.79**	**4**	P	**Pn**	**14 36 38.8**	**-2.3**
	baz=185						
SEW	**Seward**	**14.10**	**46**	Pn	**Pn**	**14 36 43.9**	**-1.5**
SEW	**Seward**	**14.10**	**46**	P	**Pn**	**14 36 43.7**	**-1.7**
	baz=243						
O22K	**Cooper Landing**	**14.16**	**45**	Pn	**Pn**	**14 36 44.9**	**-1.4**
O22K	**Cooper Landing**	**14.16**	**45**	P	**Pn**	**14 36 45.3**	**-0.9**
	baz=241						
SUA	**Susitna One**	**14.24**	**40**	P	**Pn**	**14 36 46.8**	**-0.7**
	baz=236						
RC01	**Rabbit Creek A**	**14.46**	**42**	Pn	**Pn**	**14 36 48.4**	**-1.9**
M22K	**Willow**	**14.65**	**40**	P	**Pn**	**14 36 52.8**	**-0.2**
	baz=236						
J20K	**Nowinta River**	**14.87**	**28**	Pn	**Pn**	**14 36 55.9**	**+0.1**
J20K	**Nowinta River**	**14.87**	**28**	P	**Pn**	**14 36 55.9**	**+0.1**
	baz=221						
PWL	**Port Wells**	**14.94**	**44**	Pn	**Pn**	**14 36 54.4**	**-2.4**
PWL	**Port Wells**	**14.94**	**44**	P	**Pn**	**14 36 56.6**	**-0.2**
	baz=242						
PMR	**Palmer**	**14.97**	**41**	Pn	**Pn**	**14 36 57.5**	**+0.4**
PMR	**Palmer**	**14.97**	**41**	P	**Pn**	**14 36 56.5**	**-0.6**
	baz=238						
CAST	**Castle Rocks**	**14.97**	**32**		**Pn**	**14 36 58.7**	**+1.5**
CAST	**Castle Rocks**	**14.97**	**32**	P	**Pn**	**14 36 57.2**	**0.0**
	baz=227						
KTH	**Kantishna Hill**	**15.45**	**33**	Pn	**Pn**	**14 37 04.0**	**+0.4**
KTH				IAmb	IAmb	14 37 41.8	
	comp=Z,16nm,1.3s						
GLI	**Glacier Island**	**15.49**	**45**	P	**Pn**	**14 37 02.5**	**-1.6**
	baz=244						
TRF	**Thorofare Moun**	**15.60**	**34**	Pn	**Pn**	**14 37 05.5**	**-0.1**
M23K	**Glacier View**	**15.64**	**42**	P	**Pn**	**14 37 05.0**	**-1.1**
	baz=240						
FID	**Port Fidalgo**	**15.71**	**46**	Pn	**Pn**	**14 37 03.9**	**-3.1**
FID				IAmb	IAmb	14 37 47.6	
	comp=Z,45nm,1.3s						
BPAW	**Bear Paw Mtn.**	**15.79**	**32**	Pn	**Pn**	**14 37 08.3**	**+0.4**
BPAW				IAmb	IAmb	14 37 19.2	
	comp=Z,9.3nm,0.7s						
BPAW	**Bear Paw Mtn.**	**15.79**	**32**	P	**Pn**	**14 37 07.8**	**-0.1**
	baz=228,SNR=8.4						
SCM	**Sheep Creek Mo**	**15.83**	**42**	Pn	**Pn**	**14 37 06.2**	**-2.4**
SCM				IAmb	IAmb	14 37 11.3	
	comp=Z,22nm,1.1s						
SCM	**Sheep Creek Mo**	**15.83**	**42**	P	**Pn**	**14 37 06.7**	**-1.8**
	baz=241						
I21K	**Tanana**	**16.24**	**28**	Pn	**Pn**	**14 37 13.9**	**+0.3**
I21K	**Tanana**	**16.24**	**28**	P	**Pn**	**14 37 11.6**	**-2.1**
	baz=223						
KLU	**Klutina**	**16.27**	**44**		**Pn**	**14 37 11.9**	**-2.2**
KLU				IAmb	IAmb	14 37 22.6	
	comp=Z,25nm,1.3s						
KLU	**Klutina**	**16.27**	**44**	P	**Pn**	**14 37 11.9**	**-2.2**
	baz=244						
H21K	**Melozitna Rive**	**16.37**	**26**	P	**P**	**14 37 18.1**	**+0.2**
IMAR	**Indian Mountai**	**16.38**	**24**	P	**P**	**14 37 19.1**	**+1.1**
M24K	**Tolsona, Glenn**	**16.44**	**42**	Pn	**Pn**	**14 37 14.2**	**-2.0**
M24K				IAmb	IAmb	14 37 20.1	
	comp=Z,31nm,1.1s						
M24K	**Tolsona, Glenn**	**16.44**	**42**	P	**Pn**	**14 37 15.2**	**-1.1**
	baz=242						
MLY	**Manley**	**16.50**	**30**	Pn	**Pn**	**14 37 15.8**	**-1.3**
MLY	**Manley**	**16.50**	**30**	P	**Pn**	**14 37 17.1**	**+0.1**
	baz=226,SNR=6.9						
BMRM	**Bremner River**	**16.64**	**47**	Pn	**Pn**	**14 37 16.7**	**-2.1**
BMRM				IAmb	IAmb	14 37 26.9	
	comp=Z,36nm,1.2s						
BMRM	**Bremner River**	**16.64**	**47**	P	**Pn**	**14 37 17.4**	**-1.5**
	baz=248						
NEA2	**Nenana**	**16.74**	**32**	P	**Pn**	**14 37 18.4**	**-1.6**
	baz=230						
N25K	**Chitina, Valde**	**16.89**	**45**	Pn	**Pn**	**14 37 19.0**	**-3.1**
N25K				IAmb	IAmb	14 37 39.5	
	comp=Z,23nm,1.4s						
N25K	**Chitina, Valde**	**16.89**	**45**	P	**Pn**	**14 37 20.8**	**-1.2**
	baz=246						
WRH	**Wood River Hil**	**17.00**	**34**	Pn	**P**	**14 37 23.0**	**-1.9**
HARP	**HAARP**	**17.00**	**42**	P	**Pn**	**14 37 22.0**	**-1.2**
	baz=243						
I23K	**Minto, Yukon-K**	**17.01**	**31**		**P**	**14 37 23.2**	**-1.8**
I23K	**Minto, Yukon-K**	**17.01**	**31**	P	**P**	**14 37 23.2**	**-1.8**
	baz=228						
PAX	**Paxson**	**17.14**	**40**	Pn	**Pn**	**14 37 24.4**	**-0.7**
PAX	**Paxson**	**17.14**	**40**	P	**Pn**	**14 37 24.4**	**-0.7**
	baz=240						
GLB	**Gilahina Butte**	**17.18**	**46**	Pn	**Pn**	**14 37 24.1**	**-1.4**
GLB				IAmb	IAmb	14 37 25.2	
	comp=Z,32nm,1.4s						
CCB	**Clear Creek Bu**	**17.20**	**33**	Pn	**Pn**	**14 37 23.8**	**-2.0**
MDM	**Murphy Dome**	**17.25**	**32**	Pn	**Pn**	**14 37 25.0**	**-1.4**
CRQE	**Cirque**	**17.26**	**48**	P	**Pn**	**14 37 25.8**	**-0.9**
	baz=251						
WAX	**Waxell Ridge**	**17.28**	**50**		**P**	**14 37 27.3**	**-0.8**
WAX				IAmb	IAmb	14 37 40.7	
	comp=Z,61nm,1.4s						
HDA	**Harding Lake**	**17.36**	**35**	P	**Pn**	**14 37 27.0**	**-0.7**
	baz=234						
H23K	**Yukon River**	**17.42**	**29**		**P**	**14 37 29.0**	**-0.5**
H23K	**Yukon River**	**17.42**	**29**	P	**P**	**14 37 28.7**	**-0.9**
	baz=226						
MCARA	**McCarthy VSAT**	**17.51**	**47**		**P**	**14 37 29.8**	**-0.8**
MCARA				IAmb	IAmb	14 37 38.9	
	comp=Z,25nm,1.0s						
MCARA	**McCarthy VSAT**	**17.51**	**47**	P	**Pn**	**14 37 28.6**	**-1.0**
	baz=249						
IL31		**17.59**	**34**	Pn	**P**	**14 37 30.0**	**-1.4**
ILAR	**Eielson Array**	**17.59**	**34**	P	**Pn**	**14 37 27.8**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=233,slow=11,SNR=8.3						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**17.59**	**34**	Pn	**P**	**14 37 30.1**	**-1.3**
RIDG	**Independent Ri**	**17.77**	**38**		**P**	**14 37 32.5**	**-0.9**
RIDG	**Independent Ri**	**17.77**	**38**	P	**P**	**14 37 32.7**	**-0.8**
	baz=239						
M26K	**Nabesna, AK**	**17.91**	**43**		**P**	**14 37 33.8**	**-1.3**
M26K	**Nabesna, AK**	**17.91**	**43**	P	**P**	**14 37 34.0**	**-1.0**
	baz=246						
G23K	**Bananza Creek**	**17.91**	**26**	P	**Pn**	**14 37 33.2**	**-1.4**
	baz=223,SNR=5.6						
H24K	**Noodor Dome**	**17.93**	**30**		**P**	**14 37 34.1**	**-1.1**
H24K	**Noodor Dome**	**17.93**	**30**	P	**P**	**14 37 34.2**	**-1.1**
	baz=229						
F22K	**John River**	**17.97**	**22**	P	**P**	**14 37 34.6**	**-1.0**
	baz=218						
L26K	**Log Cabin Wild**	**18.02**	**41**	P	**Pn**	**14 37 34.9**	**-1.1**
L26K	**Log Cabin Wild**	**18.02**	**41**	P	**P**	**14 37 35.6**	**-0.7**
	baz=244						
DOT	**Dot Lake**	**18.03**	**39**	P	**P**	**14 37 35.7**	**-0.6**
J25K	**Salcha River,**	**18.04**	**35**	P	**Pn**	**14 37 34.4**	**-1.7**
J25K	**Salcha River,**	**18.04**	**35**	P	**Pn**	**14 37 33.7**	**-2.5**
	baz=236,SNR=6.0						
CTG	**Chitna Glacier**	**18.14**	**49**	P	**P**	**14 37 36.8**	**-0.9**
	baz=252						
CTGM	**Chitina Glacie**	**18.15**	**49**	P	**P**	**14 37 37.8**	**+0.1**
CTGM				IAmb	IAmb	14 37 48.0	
	comp=Z,15nm,0.8s						
SCRK	**Sand Creek**	**18.22**	**38**	P	**Pn**	**14 37 36.8**	**-1.6**
SCRK	**Sand Creek**	**18.22**	**38**	P	**Pn**	**14 37 36.6**	**-1.8**
	baz=240						
M27K	**Edge Creek, AK**	**18.37**	**44**	P	**Pn**	**14 37 39.4**	**-1.0**
M27K				IAmb	IAmb	14 37 42.4	
	comp=Z,11nm,0.9s						
M27K	**Edge Creek, AK**	**18.37**	**44**	P	**P**	**14 37 38.9**	**-1.3**
	baz=248,SNR=6.0						
PCA	**Pinnacle**	**18.43**	**52**	P	**Pn**	**14 37 41.7**	**+0.7**
PCA				IAmb	IAmb	14 38 16.8	
	comp=Z,40nm,1.2s						
PINM	**Pinnacle**	**18.43**	**52**	P	**Pn**	**14 37 40.1**	**-0.9**
	baz=256						
PRP	**Porcupine Dome**	**18.50**	**33**	P	**P**	**14 37 40.4**	**-1.1**
PRP	**Porcupine Dome**	**18.50**	**33**	P	**P**	**14 37 38.7**	**-2.8**
	baz=234						
E22K	**Anaktuvuk Pass**	**18.55**	**22**	P	**Pn**	**14 37 41.5**	**-0.8**
	baz=217						
G24K	**Hadweenzic Riv**	**18.63**	**28**	P	**P**	**14 37 41.4**	**-1.4**
	baz=228						
O28M	**Mount Upton**	**18.63**	**50**	P	**P**	**14 37 42.2**	**-0.9**
	baz=254						
J26L	**Joseph Creek**	**18.64**	**37**	P	**P**	**14 37 41.6**	**-1.5**
J26L	**Joseph Creek**	**18.64**	**37**	P	**P**	**14 37 41.7**	**-1.3**
	baz=239,SNR=5.6						
L27K	**Beaver Creek,**	**18.67**	**42**	P	**Pn**	**14 37 43.7**	**-0.1**
L27K	**Beaver Creek,**	**18.67**	**42**	P	**P**	**14 37 41.6**	**-1.7**
	baz=246						
BCAR	**Beaver Creek A**	**18.69**	**42**	P	**Pn**	**14 37 43.8**	**-0.3**
BCPM	**Bancas Point**	**18.70**	**52**	P	**Pn**	**14 37 43.9**	**-0.3**
BCPM				IAmb	IAmb	14 38 19.1	
	comp=Z,33nm,1.2s						
PNL	**Peninsula**	**18.76**	**53**	P	**P**	**14 37 42.7**	**-1.7**
	baz=259						
YUK3	**Moose Creek**	**18.80**	**47**	P	**P**	**14 37 44.2**	**-0.8**
	baz=251						
BVCY	**Beaver Creek**	**18.83**	**45**	P	**P**	**14 37 44.4**	**-0.8**
	baz=249						
H25K	**Birch Creek**	**18.86**	**31**	P	**P**	**14 37 44.5**	**-0.8**
	baz=232						
K27K	**Chicken**	**18.98**	**39**	P	**P**	**14 37 45.9**	**-0.8**
	baz=243						
F24K	**Squaw Lake**	**19.07**	**26**	P	**Pn**	**14 37 47.8**	**-0.8**
	baz=225						
PET	**Petropavlovsk**	**19.08**	**286**	P	**Pn**	**14 37 47.5**	**-1.2**
PET				IAmb	IAmb	14 37 53.7	
	comp=Z,20nm,1.3s						
G25K	**Bearman Lake**	**19.08**	**29**	P	**P**	**14 37 46.3**	**-1.5**
	baz=230						
I26K	**Coal Creek Min**	**19.20**	**35**	P	**P**	**14 37 47.5**	**-1.6**
I26K	**Coal Creek Min**	**19.20**	**35**	P	**P**	**14 37 47.7**	**-1.4**
	baz=238						
FYU	**Fort Yukon**	**19.23**	**31**	P	**Pn**	**14 37 49.3**	**-1.2**
FYU				IAmb	IAmb	14 38 30.8	
	comp=Z,14nm,1.3s						
O29M	**Mount Kennedy**	**19.30**	**52**	P	**Pn**	**14 37 50.4**	**-1.1**
	baz=258,SNR=7.8						
E24K	**Your Creek**	**19.31**	**25**	P	**P**	**14 37 49.2**	**-1.2**
	baz=223						
D23K	**Nanushuk River**	**19.46**	**21**	P	**Pn**	**14 37 52.3**	**-1.0**

C24K Franklin Bluff 20.50 21 P Pn 14 38 03.4 -2.1
baz=220
G27K Doyon Strip 20.53 32 P **P** **14 38 03.0 -0.5**
baz=237
O30N Mendenhall 20.59 51 P Pn 14 38 05.8 -0.9
baz=259,SNR=14
SIT Sitka 20.66 62 P Pn 14 38 05.5 -1.9
D25K Kavik River 20.75 24 P Pn 14 38 06.2 -2.2
baz=224,SNR=7.5
SKAG Skagway 20.78 55 P Pn 14 38 08.1 -0.7
SKAG IAmb IAmb 14 38 10.6
comp=Z,26nm,1.1s
SKAG Skagway 20.78 55 P Pn 14 38 06.6 -2.2
baz=264
N31M Braeburn, Yuko 20.88 49 P **P** **14 38 07.2 -0.2**
baz=258
WHY Whitehorse 21.16 52 P **P** **14 38 10.5 0.0**
WHY IAmb IAmb 14 38 36.6
comp=Z,16nm,0.9s
WHY Whitehorse 21.16 52 P **P** **14 38 10.2 -0.3**
baz=261
E27K Coleen River 21.33 29 P **P** **14 38 12.5 +0.3**
baz=234
P32M Atlin 21.61 55 P **P** **14 38 15.8 +0.5**
baz=265
C27K Jago River 21.64 25 P **P** **14 38 15.4 -0.1**
baz=228
M31M Dry Creek, Y 21.67 48 P **P** **14 38 15.3 -0.6**
baz=259
EPYK Eagle Plains 22.04 36 P **P** **14 38 18.4 -1.4**
EPYK IAmb IAmb 14 38 56.1
comp=Z,14nm,1.1s
EPYK Eagle Plains 22.04 36 P **P** **14 38 18.3 -1.6**
baz=245
P33M Teslin, Yukon 22.12 53 P **P** **14 38 21.1 +0.3**
P33M IAmb IAmb 14 38 28.4
comp=Z,20nm,1.0s
P33M Teslin, Yukon 22.12 53 P **P** **14 38 21.0 +0.3**
baz=264,SNR=7.5
FARO Faro, Yukon 22.16 48 P **P** **14 38 21.5 +0.4**
FARO IAmb IAmb 14 38 28.7
comp=Z,9.1nm,1.1s
WRAK Wrangell Islan 22.32 63 P **P** **14 38 22.9 +0.1**
baz=274
SEY Seymchan 22.74 314 P **P** **14 38 26.6 -0.7**
comp=Z,4.2nm,0.7s,baz=108,slow=10,SNR=18
comp=Z,4.2nm,0.7s
R33M Jennings River 23.00 56 P **P** **14 38 29.9 -0.2**
baz=268,SNR=7.3
MA2 Magadan 23.12 305 P **P** **14 38 31.3 +0.1**
comp=Z,4.1nm,0.5s,baz=85,slow=9.8,SNR=7.7
comp=Z,4.1nm,0.5s
MA2 Magadan 23.12 305 P **P** **14 38 31.3 +0.1**
MA2 IAmb IAmb 14 38 44.9
comp=Z,20nm,1.4s
T35M Bob Quinn 23.43 62 P **P** **14 38 33.2 -1.2**
baz=274
DLBC Dease Lake 23.48 58 P **P** **14 38 38.5 +3.6**
comp=Z,6.7nm,0.9s,baz=276,slow=11,SNR=9.1
DLBC Dease Lake 23.48 58 P **P** **14 38 36.1 +1.2**
DLBC IAmb IAmb 14 38 40.1
comp=Z,28nm,1.4s
DLBC Dease Lake 23.48 58 P **P** **14 38 34.7 -0.2**
baz=271,SNR=8.6
INK Inuvik 23.98 33 P **P** **14 38 38.3 -1.1**
comp=Z,3.2nm,0.6s,baz=221,slow=9.9,SNR=12
comp=Z,3.2nm,0.6s
INK Inuvik 23.98 33 P **P** **14 38 38.2 -1.3**
INK IAmb IAmb 14 39 13.9
comp=Z,6.3nm,1.1s
INK Inuvik 23.98 33 P **P** **14 38 38.8 -0.7**
baz=245
YKA Yellowknife Ar 30.87 48 P **P** **14 39 42.5 +1.3**
comp=Z,1.6nm,0.7s,baz=275,slow=9.8,SNR=21
YKA LR LR 14 52 34.1
comp=Z,65nm,18.1s,baz=332,slow=37
comp=Z,1.6nm,0.7s
YKA Yellowknife Ar 30.87 48 P **P** **14 39 41.4 +0.2**
YBH Yreka Blue Hor 33.37 89 LR LR 14 50 19.9
comp=Z,59nm,21.7s,baz=299,slow=30
NEW Newport 33.51 75 P **P** **14 40 06.1 +1.5**
comp=Z,1.5nm,0.7s,baz=310,slow=7.4,SNR=4.1
comp=Z,1.5nm,0.7s
NEW Newport 33.51 75 P **P** **14 40 04.9 +0.3**
baz=296
H11N2 WAKE ISLAND Hy 36.81 218 T T 15 19 50.1
baz=20
H11N3 WAKE ISLAND Hy 36.82 218 T T 15 20 01.8
baz=20
H11N1 WAKE ISLAND Hy 36.83 218 T T 15 19 58.6
baz=20
HRY Holter Researc 37.41 74 P **P** **14 40 38.9 +0.7**
HLID Hailey 37.48 80 P **P** **14 40 39.0 0.0**
baz=303
MCMT McKenzie Canyo 37.76 77 P **P** **14 40 42.2 +0.9**
EGMT Eagleton 37.99 71 P **P** **14 40 43.0 -0.1**
baz=299
H11S1 WAKE ISLAND Hy 38.00 218 T T 15 21 19.3
baz=23
H11S2 WAKE ISLAND Hy 38.02 218 T T 15 21 20.4
baz=23
H11S3 WAKE ISLAND Hy 38.02 218 T T 15 21 23.1
baz=23
NVAR Mina Array Bea 38.04 90 P **P** **14 40 46.0 +2.3**
comp=Z,0.2nm,0.3s,baz=304,slow=5.1,SNR=7.2
comp=Z,0.2nm,0.3s
BOZ Bozeman (W) 38.09 76 P **P** **14 40 44.1 0.0**
baz=301
USA0B Ussuriysk Arra 38.63 282 P **P** **14 40 47.3 -1.0**
USA0B IAmb IAmb 14 40 54.4
comp=Z,7.1nm,0.8s
USRK Ussuriysk Ar. 38.63 282 P **P** **14 40 47.4 -1.0**
SMMC Simmler 38.97 95 P **P** **14 40 51.2 -0.2**
baz=311
MJAR Matsushiro Arr 39.30 268 P **P** **14 40 54.4 +0.4**
comp=Z,1.0nm,1.0s,baz=42,slow=7.4,SNR=4.2
comp=Z,1.0nm,1.0s
IMW Indian Meadow 39.41 78 P **P** **14 40 56.0 +0.7**
IMW IAmb IAmb 14 40 57.9
comp=Z,3.1nm,1.1s
RLMT Red Lodge 39.76 75 P **P** **14 40 58.7 +0.6**
RLMT IAmb IAmb 14 41 20.5
comp=Z,3.5nm,1.1s
RLMT Red Lodge 39.76 75 P **P** **14 40 57.2 -0.9**
baz=302
R11A Troy Canyon, C 39.78 88 P **P** **14 40 58.3 +0.1**
baz=308
SCZ2 Santa Cruz Isl 40.06 96 P **P** **14 41 00.2 -0.3**
baz=312
TPNV Topopah Spring 40.24 90 P **P** **14 41 01.4 -0.7**
baz=309
DUG Dugway, Tooele 40.38 84 P **P** **14 41 03.3 +0.1**
baz=306
PRN Pahroc Range 40.69 89 P **P** **14 41 07.5 +1.7**
PRN IAmb IAmb 14 41 08.6
comp=Z,4.9nm,1.0s
BW06 Boulder Array 40.88 78 P **P** **14 41 07.4 0.0**
BW06 IAmb IAmb 14 41 09.4
comp=Z,6.1nm,1.1s
BW06 Boulder Array 40.88 78 P **P** **14 41 07.3 0.0**
baz=304,SNR=6.1
PD31 Pinedale Array 40.88 78 P **P** **14 41 07.3 0.0**
PD31 IAmb IAmb 14 41 09.5
comp=Z,5.3nm,1.1s
PDAR Pinedale Array 40.88 78 P **P** **14 41 08.7 +1.3**
comp=Z,2.9nm,0.9s,baz=308,slow=5.5,SNR=17
comp=Z,2.9nm,0.9s
PDAR Pinedale Array 40.88 78 P **P** **14 41 07.2 -0.2**
GSC Goldstone, Bar 40.95 92 P **P** **14 41 08.6 +0.7**
baz=311
DGMT Dagmar 41.00 68 P **P** **14 41 07.5 -0.6**
baz=300
BFSC Mount Baldy Ra 41.12 94 P **P** **14 41 09.5 +0.2**
baz=312
HEC Hector,Ludlow 41.55 93 P **P** **14 41 12.6 -0.2**
baz=311
GMRC Granite Mounta 42.00 92 P **P** **14 41 16.1 -0.4**
baz=311
RDMU Red Mountain 42.15 81 P **P** **14 41 18.5 +0.8**
RDMU IAmb IAmb 14 41 20.2
comp=Z,8.5nm,1.1s
Q16A Castle Valley 42.16 84 P **P** **14 41 19.1 +1.2**
Q16A IAmb IAmb 14 41 20.6
comp=Z,4.7nm,1.2s
K22A Casper 42.78 76 P **P** **14 41 23.6 +0.7**
baz=305
U15A North Rim 43.02 88 P **P** **14 41 26.3 +1.3**
U15A IAmb IAmb 14 41 27.7
comp=Z,4.5nm,1.2s
O20A White River Ci 43.22 80 P **P** **14 41 27.5 +1.0**
O20A IAmb IAmb 14 41 28.4
comp=Z,9.2nm,1.1s
O20A White River Ci 43.22 80 P **P** **14 41 27.4 +1.0**
baz=307
RSSD Black Hills 43.43 73 P **P** **14 41 29.3 +1.2**
RSSD IAmb IAmb 14 41 29.7
comp=Z,2.4nm,0.8s
RSSD Black Hills 43.43 73 P **P** **14 41 28.8 +0.7**
baz=304
MDND Maddock 43.94 66 P **P** **14 41 32.3 +0.3**
MDND Maddock 43.94 66 P **P** **14 41 33.1 +1.1**
baz=303
PV11 David Mesa, Pa 43.96 83 P **P** **14 41 32.7 +0.3**
PV11 IAmb IAmb 14 41 34.3
comp=Z,11nm,1.3s
PV13 Radium Mtn., P 44.08 83 P **P** **14 41 33.6 +0.2**
PV13 IAmb IAmb 14 41 35.3
comp=Z,8.9nm,1.1s
WUAZ Wupatki 44.18 88 P **P** **14 41 35.2 +1.0**
WUAZ IAmb IAmb 14 41 36.8
comp=Z,5.9nm,1.1s
WUAZ Wupatki 44.18 88 P **P** **14 41 35.5 +1.3**
baz=310
SEHB SEOHWA 44.37 277 P **P** **14 41 36.4 +0.9**
SEHB IAmb IAmb 14 41 37.3
comp=Z,5.3nm,1.0s
MVCO Mesa Verde 44.87 84 P **P** **14 41 40.0 +0.3**
baz=309
KSRS Korea Array 45.09 277 P **P** **14 41 41.7 +0.6**
comp=Z,1.5nm,0.8s,baz=55,slow=7.7,SNR=12
comp=Z,1.5nm,0.8s
S22A 4UR Ranch, Cre 45.56 82 P **P** **14 41 45.3 0.0**
baz=309
AGMN Agassiz Nation 45.80 64 P **P** **14 41 46.5 -0.2**
AGMN Agassiz Nation 45.80 64 P **P** **14 41 46.5 -0.2**
baz=304
SDCO Great Sand Dun 46.38 81 P **P** **14 41 52.5 +0.8**
SDCO IAmb IAmb 14 41 53.9
comp=Z,6.3nm,1.5s
SDCO Great Sand Dun 46.38 81 P **P** **14 41 52.8 +1.0**
baz=309
TUC Tucson 46.67 91 P **P** **14 41 54.0 +0.1**
baz=313
T25A Trinidad 47.43 81 P **P** **14 42 00.7 +0.8**
T25A Trinidad 47.43 81 P **P** **14 41 59.8 -0.1**
baz=310,SNR=5.3
ANMO Albuquerque 47.59 85 P **P** **14 42 02.3 +1.1**
ANMO IAmb IAmb 14 42 03.4
comp=Z,3.8nm,1.2s
ANMO Albuquerque 47.59 85 P **P** **14 42 02.3 +1.1**
baz=311
ECSD EROS Data Cent 48.01 69 P **P** **14 42 03.2 -0.9**
ECSD IAmb IAmb 14 42 16.0
comp=Z,6.3nm,1.4s
ECSD EROS Data Cent 48.01 69 P **P** **14 42 03.3 -0.8**
baz=307
121A Cooks Peak, D 48.38 88 P **P** **14 42 07.5 +0.2**
baz=313
EYMN Ely 48.41 62 P **P** **14 42 06.4 -0.6**
baz=306
MNTX Cornudas Mount 50.44 87 P **P** **14 42 23.2 +0.4**
baz=313
MSTX Muleshoe 50.52 83 P **P** **14 42 24.3 +0.9**
MSTX Muleshoe 50.52 83 P **P** **14 42 23.0 -0.4**
baz=312
ULN Ulaanbaatar 50.87 301 P **P** **14 42 25.6 -0.4**
ULN IAmb IAmb 14 42 39.2
comp=Z,4.1nm,0.9s
SONM Songino Array 51.23 301 P **P** **14 42 28.2 -0.5**
comp=Z,1.1nm,0.6s,baz=53,slow=7.7,SNR=4.8
comp=Z,1.1nm,0.6s
SONM Songino Array 51.23 301 P **P** **14 42 29.1 +0.4**
SONM IAmb IAmb 14 42 42.4
comp=Z,4.5nm,1.3s
SUMG Summit 51.38 17 P **P** **14 42 30.2 +0.4**
HHC Hu-ho-hao-te 52.75 291 *eP* **P** **14 42 37.6 -2.4**
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,79nm,6.0s
SFJD Kangerlussuaq 53.00 25 LR LR 15 09 08.8
comp=Z,46nm,19.1s,baz=324,slow=41
TX31 Lajitas Ar. Si 53.14 88 P **P** **14 42 43.6 +0.5**
TX32 Lajitas Array 53.14 88 P **P** **14 42 43.5 +0.4**
TX32 IAmb IAmb 14 42 44.5
comp=Z,2.8nm,0.8s
TXAR Lajitas Array 53.14 88 P **P** **14 42 43.9 +0.8**
comp=Z,2.5nm,0.8s,baz=298,slow=5.8,SNR=24
comp=Z,2.5nm,0.8s
TXAR Lajitas Array 53.14 88 P **P** **14 42 43.5 +0.4**
E46A Sault Ste Mari 53.26 60 P **P** **14 42 43.4 -0.1**
JCT Junction City 54.73 84 P **P** **14 42 54.9 +0.3**
baz=314
SFIN Lafayette 55.61 67 P **P** **14 43 00.4 -0.3**
baz=312
I49A Point Hope 55.63 61 P **P** **14 43 01.7 +0.9**
VLDQ Val d'Or 55.68 54 P **P** **14 42 59.7 -1.4**
MIAR Mount Ida 55.73 76 P **P** **14 43 02.1 +0.4**
MIAR IAmb IAmb 14 43 03.0
comp=Z,6.7nm,1.2s
MIAR Mount Ida 55.73 76 P **P** **14 43 02.1 +0.4**
baz=313
P46A Rosedale 56.05 67 P **P** **14 43 02.8 -1.1**
SCHQ Schefferville 56.07 43 LR LR 15 09 08.1
comp=Z,58nn,18.8s,baz=157,slow=38
ZALV Zalesovo Beam 57.54 317 P **P** **14 43 13.6 -0.7**
comp=Z,0.8nm,0.4s,baz=38,slow=7.3,SNR=2.6
ZALV PcP **PcP** **14 44 08.6 +1.1**
comp=Z,2.0nm,0.7s,baz=29,slow=4.1,SNR=6.0
comp=Z,0.8nm,0.4s
ACSO Alum Creek Sta 58.03 64 P **P** **14 43 16.9 -1.0**
baz=313
ARCES ARCESS Array B 58.39 354 P **P** **14 43 19.9 -0.1**
comp=Z,1.2nm,0.8s,baz=36,slow=6.7,SNR=1.3
comp=Z,1.2nm,0.8s
LVZ Lovozero 59.15 349 P **P** **14 43 25.1 -0.2**
BATG Bathurst New B 61.78 49 P **P** **14 43 44.5 +1.0**
LMN Caledonia Moun 63.42 49 P **P** **14 43 55.6 +1.2**
WMQ Urumqi 63.55 308 *eP* **P** **14 43 58.1 +2.6**
WMQ pP sP 14 44 05.4 -1.0
WMQ pmax pmax
comp=Z,18nm,0.7s
MK31 Makanchi Array 63.88 313 P **P** **14 43 56.5 -1.0**
MKAR Makanchi Array 63.88 313 P **P** **14 43 57.2 -0.4**
comp=Z,0.5nm,0.4s,baz=45,slow=6.8,SNR=5.3
MKAR PcP **PcP** **14 44 33.7 +0.6**
comp=Z,0.6nm,0.6s,baz=69,slow=2.8,SNR=2.6
comp=Z,0.5nm,0.4s
MKAR Makanchi Array 63.88 313 P **P** **14 43 56.5 -1.0**
BRVK Borovoye 63.91 324 P **P** **14 43 56.9 -0.7**
ARU Arti 64.90 333 P **P** **14 44 04.0 -0.1**
656A Willston 66.00 73 P **P** **14 44 12.5 +1.0**
FIA1 FINESS Array S 66.32 352 P **P** **14 44 13.2 +0.1**
FINES FINESS Array B 66.32 352 P **P** **14 44 12.6 -0.5**
comp=Z,3.2nm,0.8s,baz=12,slow=7.5,SNR=7.0
comp=Z,3.2nm,0.8s
FINES FINESS Array B 66.32 352 P **P** **14 44 12.8 -0.3**
NC204 NORSAR Array S 67.22 360 P **P** **14 44 18.8 -0.1**
NC303 NORSAR Array S 67.26 359 P **P** **14 44 19.1 0.0**
NC405 NORSAR Array S 67.37 359 P **P** **14 44 19.9 +0.1**
NB2 NORSAR Subarra 67.45 359 P **P** **14 44 20.2 -0.2**
comp=Z,1.0nm,0.7s,baz=358,slow=6.2
NOA NORSAR Array B 67.45 359 P **P** **14 44 20.4 0.0**
comp=Z,1.1nm,0.7s,baz=0.2,slow=6.2,SNR=6.9
comp=Z,1.1nm,0.7s
NAO01 NORSAR Array S 67.65 360 P **P** **14 44 21.1 -0.4**
KMI Kunming 69.02 284 ⇓P P 14 44 41.1 +10
KMI pmax pmax
comp=Z,10.0nm,0.9s
ABKAR Akbulak array 70.67 328 P **P** **14 44 40.5 0.0**
KK31 Karatay Array 71.92 318 P **P** **14 44 47.6 -0.6**
KK31 IAmb IAmb 14 44 49.5
comp=Z,2.4nm,0.8s
KKAR Karatay Array 71.92 318 P **P** **14 44 47.5 -0.7**
CRAI Chiangrai 74.14 283 P **P** **14 45 01.5 -0.1**
CRAI IAmb IAmb 14 45 15.2
comp=Z,4.3nm,0.8s
GAR Garm 75.39 316 P **P** **14 45 08.9 +0.1**
CHGR Chuyangaron 76.17 316 P **P** **14 45 13.4 +0.2**
CMAR Chiang Mai Arr 76.36 282 P **P** **14 45 15.1 +0.7**
comp=Z,2.4nm,0.8s,baz=25,slow=6.7,SNR=14
comp=Z,2.4nm,0.8s
AKASG Malin Array Be 76.53 348 P **P** **14 45 14.0 -0.9**
comp=Z,1.0nm,0.5s,baz=13,slow=5.7,SNR=5.9
comp=Z,1.0nm,0.5s
GERES GERESS Array B 79.63 358 P **P** **14 45 33.2 +1.0**
comp=Z,0.8nm,0.7s,baz=1.8,slow=4.3,SNR=8.3
comp=Z,0.8nm,0.7s
GERES GERESS Array B 79.63 358 P **P** **14 45 32.6 +0.4**
CONA Conrad Observa 80.47 356 *eP* **P** **14 45 37.9 +1.1**
comp=Z,1.1nm,0.5s
SQTA Sankt Quirin 81.30 359 *eP* **P** **14 45 42.8 +1.5**
comp=Z,2.9nm,0.8s
KBA Koelnbreinsper 81.40 358 *eP* **P** **14 45 43.8 +2.0**
comp=Z,7.2nm,0.8s
FETA Feichten 81.50 360 *eP* **P** **14 45 44.0 +1.6**
comp=Z,1.2nm,0.6s
TEOL Teolo 83.15 359 P **P** **14 45 52.0 +1.2**
VLC Villacollemand 84.36 360 P **P** **14 45 58.3 +1.2**
OSSC Osservatorio P 84.99 359 P **P** **14 46 00.5 +0.3**
BRTR Keskin Array B 86.50 342 P **P** **14 46 08.4 +0.4**
comp=Z,0.7nm,0.8s,baz=46,slow=4.2,SNR=1.6
comp=Z,0.7nm,0.8s
ESDC Sonseca Array 88.03 11 P **P** **14 46 15.8 +0.6**
comp=Z,1.7nm,0.9s,baz=342,slow=4.0,SNR=11
comp=Z,1.7nm,0.9s
ESDC Sonseca Array 88.03 11 P **P** **14 46 15.9 +0.6**
ESDC IAmb IAmb 14 46 16.8
comp=Z,2.5nm,1.1s
MAW Mawson 150.23 218 PKPbc **PKiKP** **14 53 15.5 +0.2**
comp=Z,2.8nm,1.0s,baz=56,slow=4.1,SNR=4.4

IDC 14 14:37:34.8±2.5, 4°.58N×123°.34E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=326.9km s-min=28.9km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.66**	**156**	P	P	14 43 15.7	+0.1
	0.6nm,0.3s,baz=335,slow=9.9,SNR=16						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**29.91**	**160**	P	P	14 43 44.5	-0.1
	0.2nm,0.4s,baz=338,slow=7.5,SNR=4.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**54.96**	**327**	P	P	14 47 07.6	-0.1
	0.3nm,0.6s,baz=128,slow=6.6,SNR=2.6						
	0.3nm,0.6s						

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*IDC **14** 14:37:46.0±1.3, 17°.78S×178°.03W, h515km±14km, mb3.7/19, mbtmp4.6/22, Error ellipse: s-maj=11.6km s-min=9.7km az=148.0*
*NEIC **14** 14:37:46.4±1.6, 17°.8S±0°.1×177°.99W±0°.10, h518km±6km, mb4.4/102, Error ellipse: s-maj=15.5km s-min=13.0km az=151.0*

ISC 14 14:37:47.6±0.3, 17°.81S±0°.07×177°.92W±0°.05, h550km, n238, σ1§72/229, mb4.4/80, 21C-13D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.84**	**270**	P	**P**	**14 39 08.5**	**+0.1**
	175nm,0.7s,baz=116,slow=6.6,SNR=122						
MSVF				S	**S**	**14 40 16.3**	**+2.1**
	31nm,1.0s,baz=314,slow=24,SNR=7.1						
MSVF	**Nonsavu**	**3.84**	**270**	P	**P**	**14 39 08.4**	**-0.1**
AFI	**Afiamalu**	**7.07**	**58**	P	**P**	**14 39 34.2**	**-2.2**
	30nm,0.5s,baz=273,slow=5.8,SNR=7.5						
AFI				S	**S**	**14 40 59.0**	**-6.4**
	29nm,0.5s,baz=224,slow=23,SNR=1.7						
AFI	**Afiamalu**	**7.07**	**58**	P	**P**	**14 39 33.8**	**-2.6**
NIUE	**Niue**	**7.69**	**101**	P	**P**	**14 39 37.6**	**-4.8**
MARNC	**Mare, Loyalty**	**13.73**	**252**	P	**P**	**14 40 41.3**	**-2.7**
PINNC	**Pines Island,**	**14.54**	**248**	P	**P**	**14 40 49.5**	**-2.9**
OUENC	**Ouen Island, N**	**15.03**	**250**	P	**P**	**14 40 57.1**	**-0.2**
DZM	**Mont Dzumac**	**15.30**	**251**	P	**P**	**14 40 58.8**	**-1.6**
	5.5nm,0.6s,baz=140,slow=18,SNR=12						
DZM	**Mont Dzumac**	**15.30**	**251**	P	**P**	**14 40 59.0**	**-1.3**
DZM				IAmb	IAmb	14 41 29.6	
	comp=Z,9.6nm,0.9s						
KOUNC	**Koumac, New Ca**	**17.03**	**258**	P	**P**	**14 41 15.2**	**-1.4**
RAR	**Rarotonga**	**17.44**	**104**	P	**P**	**14 41 21.8**	**+1.5**
	comp=Z,31nm,0.8s,baz=304,slow=2.4,SNR=7.2						
RAR	**Rarotonga**	**17.44**	**104**	P	**P**	**14 41 21.9**	**+1.5**
OUZ	**Omahuta**	**18.92**	**202**	P	**P**	**14 41 34.1**	**+0.4**
URZ	**Urewera**	**20.84**	**191**	P	**P**	**14 41 48.2**	**-2.8**
	comp=Z,2.3nm,0.3s,baz=298,slow=2.1,SNR=8.0						
NNZ	**Nelson**	**24.50**	**196**	P	**P**	**14 42 23.5**	**-0.3**
PPT	**Papeete**	**27.00**	**94**	P	**P**	**14 42 47.5**	**+1.4**
	comp=Z,36nm,0.8s,baz=87,slow=7.2,SNR=6.0						
	comp=Z,36nm,0.8s						
PPTF	**Pamatai, Papee**	**27.00**	**94**	P	**P**	**14 42 47.5**	**+1.2**
MQZ	**McQueen's Vall**	**27.02**	**195**	P	**P**	**14 42 45.1**	**-0.8**
RPZ	**Rata Peaks**	**27.46**	**198**	P	**P**	**14 42 50.5**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=334,slow=20,SNR=1.2						
	comp=Z,3.2nm,0.5s						
MLZ	**Mavora Lakes**	**29.85**	**200**	P	**P**	**14 43 10.6**	**0.0**
ARMA	**Armidale**	**30.39**	**240**	P	**P**	**14 43 16.0**	**+0.4**
ARMA				IAmb	IAmb	14 43 52.9	
	comp=Z,21nm,1.2s						
KRVT	**Keravat (AS076**	**32.33**	**291**	P	**P**	**14 43 32.1**	**-0.1**
	comp=Z,13nm,0.3s,baz=204,slow=8.5,SNR=5.0						
	comp=Z,13nm,0.3s						
CTA	**Charters Tower**	**33.92**	**260**	P	**P**	**14 43 45.1**	**-0.5**
	comp=Z,9.1nm,0.6s,baz=97,slow=9.8,SNR=14						
	comp=Z,9.1nm,0.6s						
CTAO	**Charters Tower**	**33.92**	**260**	P	**P**	**14 43 45.1**	**-0.5**
CTAO				IAmb	IAmb	14 43 45.7	
	comp=Z,12nm,0.8s						
CAN	**Canberra**	**34.13**	**233**	P	**P**	**14 43 47.2**	**-0.1**
CAN				IAmb	IAmb	14 43 48.2	
	comp=Z,9.4nm,0.7s						
MANU	**Manus Island**	**37.49**	**291**	P	**P**	**14 44 15.8**	**+0.5**
COEN	**Coen**	**37.57**	**270**	P	**P**	**14 44 16.1**	**+0.2**
COEN				IAmb	IAmb	14 44 17.1	
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**37.59**	**231**	P	**P**	**14 44 16.1**	**+0.4**
TOO				IAmb	IAmb	14 44 17.5	
	comp=Z,36nm,1.1s						
TAOE	**Nuku Hiva Isla**	**37.75**	**81**	P	**P**	**14 44 18.9**	**+1.5**
STKA	**Stephens Creek**	**39.09**	**241**	P	**P**	**14 44 28.4**	**+0.5**
	comp=Z,21nm,0.8s,baz=95,slow=11,SNR=31						
STKA				PcP	**PcP**	**14 46 25.4**	**+1.6**
	comp=Z,3.9nm,0.6s,baz=23,slow=7.5,SNR=4.6						
	comp=Z,21nm,0.8s						
STKA	**Stephens Creek**	**39.09**	**241**	P	**P**	**14 44 27.6**	**-0.3**
STKA				IAmb	IAmb	14 44 29.3	
	comp=Z,5.8nm,1.1s						
HMH	**Humu'ula Sheep**	**43.21**	**32**	P	**P**	**14 45 02.8**	**+1.8**
BBOO	**Buckleboo**	**43.86**	**241**	P	**P**	**14 45 05.4**	**-0.3**
WR0	**Warramunga Arr**	**44.92**	**259**	P	**P**	**14 45 12.4**	**-1.6**
WR0				IAmb	IAmb	14 45 13.6	
	comp=Z,7.4nm,1.0s						
WB0	**Warramunga Arr**	**45.07**	**260**	P	**P**	**14 45 13.8**	**-1.4**
WB0				IAmb	IAmb	14 45 15.2	
	comp=Z,14nm,0.8s						
WB0					**PcP**	**14 46 45.0**	**+0.8**
WB2	**Warramunga Arr**	**45.10**	**259**	P	**P**	**14 45 14.4**	**-0.9**
WB2				IAmb	IAmb	14 45 15.5	
	comp=Z,15nm,0.7s						
WRAB	**Tennant Creek**	**45.10**	**259**	P	**P**	**14 45 13.9**	**-1.4**
WRAB				IAmb	IAmb	14 45 15.4	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**45.11**	**259**	P	**P**	**14 45 14.4**	**-1.0**
	comp=Z,11nm,0.7s,baz=96,slow=6.9,SNR=140						
WRA				PcP	**PcP**	**14 46 45.3**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=89,slow=3.6,SNR=14						
WRA				ScP	**ScP**	**14 49 49.3**	**+4.6**
	comp=Z,1.1nm,0.8s,baz=93,slow=4.4,SNR=4.8						
WRA				S	**S**	**14 51 13.1**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=91,slow=14,SNR=4.7						
	comp=Z,11nm,0.7s						
AS31	**Alice Springs**	**45.27**	**254**	P	**P**	**14 45 16.4**	**-0.3**
ASAR	**Alice Springs**	**45.27**	**254**	P	**P**	**14 45 16.4**	**-0.3**
	comp=Z,91nm,0.6s,baz=88,slow=8.4,SNR=1080						
ASAR				PcP	**PcP**	**14 46 45.6**	**+0.7**
	comp=Z,12nm,0.7s,baz=105,slow=3.8,SNR=17						
ASAR				ScP	**ScP**	**14 49 50.3**	**+4.9**
	comp=Z,1.2nm,0.6s,baz=100,slow=4.8,SNR=6.3						
ASAR				S	**S**	**14 51 15.5**	**-1.8**
	comp=Z,6.1nm,1.0s,baz=87,slow=15,SNR=22						
BAKI	**Biak**	**48.07**	**285**	P	**P**	**14 45 38.5**	**+0.6**
	comp=Z,61nm,0.9s						
MTN	**Manton Dam**	**49.27**	**268**	P	**P**	**14 45 46.1**	**-0.6**
MTN				IAmb	IAmb	14 45 46.9	
	comp=Z,28nm,0.9s						
FORT	**Forrest**	**50.47**	**245**	P	**P**	**14 45 54.4**	**-1.0**
KNRA	**Kununurra**	**50.96**	**264**	P	**P**	**14 45 58.4**	**-0.7**
KNRA				IAmb	IAmb	14 45 59.7	
	comp=Z,25nm,0.8s						

FAKI	**Fak Fak**	**51.01**	**281**	P	**P**	**14 45 59.5**	**-0.1**
	comp=Z,53nm,1.6s						
FITZ	**Fitzroy Crossi**	**53.50**	**260**	P	**P**	**14 46 17.1**	**-0.2**
AAI	**Ambon**	**54.56**	**278**	P	**P**	**14 46 24.8**	**-0.1**
	comp=Z,2µmcomp=Z,64nm,1.2s						
SANI	**Sanana**	**57.18**	**279**	P	**P**	**14 46 42.9**	**-0.1**
	comp=Z,70nm,0.9s						
PSA00	**Pilbara Seismi**	**58.38**	**255**	P	**P**	**14 46 50.1**	**-0.9**
PSA00				IAmb	IAmb	14 46 51.5	
	comp=Z,24nm,0.8s						
PSA00	**Pilbara Seismi**	**58.38**	**255**	P	**P**	**14 46 50.0**	**-1.1**
PSA00				IAmb	IAmb	14 46 51.6	
	comp=Z,12nm,0.9s						
MBWA	**Marble Bar**	**58.55**	**256**	P	**P**	**14 46 51.3**	**-0.8**
MBWA				IAmb	IAmb	14 46 52.2	
	comp=Z,11nm,0.8s						
EDFI	**Ende, Flores**	**59.25**	**270**	P	**P**	**14 46 57.0**	**-0.1**
	comp=Z,232nmcomp=Z,20nm,1.1s						
SBA	**Scott Base**	**60.55**	**184**	P	P	14 47 06.1	+1.6
SBA				IAmb	IAmb	14 47 07.5	
	comp=Z,6.7nm,0.9s						
VNDA	**Vanda**	**60.59**	**185**	P	P	14 47 06.2	+1.5
	comp=Z,1.3nm,0.6s,baz=352,slow=6.8,SNR=14						
	comp=Z,1.3nm,0.6s						
VNDA	**Vanda**	**60.59**	**185**	P	**P**	**14 47 05.6**	**+0.9**
MORW	**Morawa**	**60.95**	**246**	P	**P**	**14 47 07.5**	**-0.5**
MORW				IAmb	IAmb	14 47 14.1	
	comp=Z,28nm,1.4s						
DAV	**Davao City (W)**	**61.01**	**289**	P	**P**	**14 47 08.1**	**-0.4**
APSI	**Ampana**	**61.65**	**279**	P	P	14 47 13.8	+1.0
	comp=Z,497nmcomp=Z,53nm,1.1s						
KAPI	**Kappang**	**62.15**	**274**	P	**P**	**14 47 16.0**	**0.0**
KAPI				IAmb	IAmb	14 47 46.5	
	comp=Z,18nm,1.2s						
PLAI	**Plampang**	**62.96**	**269**	P	**P**	**14 47 20.2**	**-1.1**
	comp=Z,70nm,0.9s						
TOLI2	**Tolitoli**	**63.15**	**281**	P	**P**	**14 47 22.3**	**-0.2**
TOLI2				IAmb	IAmb	14 47 23.7	
	comp=Z,16nm,0.9s						
GIRL	**Giralia**	**63.37**	**253**	P	**P**	**14 47 24.3**	**+0.5**
MPSI	**Mapaga**	**63.72**	**279**	P	**P**	**14 47 26.3**	**+0.2**
	comp=Z,34nm,0.9s						
TWSI	**Taliwang, Sumb**	**63.84**	**269**	P	**P**	**14 47 26.4**	**-0.5**
	comp=Z,45nm,0.9s						
CASY	**Casey**	**66.42**	**205**	P	**P**	**14 47 42.4**	**+0.2**
CASY				IAmb	IAmb	14 47 43.6	
	comp=Z,28nm,1.2s						
JAGI	**Jajag, Banyuwa**	**66.51**	**268**	P	**P**	**14 47 42.6**	**-1.0**
JAGI	**Jajag, Banyuwa**	**66.51**	**268**	P	**P**	**14 47 42.7**	**-1.0**
	comp=Z,60nm,0.8s						
GMJI	**Gumukmas**	**67.23**	**268**	P	**P**	**14 47 47.5**	**-0.6**
MJAR	**Matsushiro Arr**	**68.10**	**323**	P	**P**	**14 47 53.3**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=155,slow=6.0,SNR=16						
	comp=Z,2.9nm,0.8s						
MAJO	**Matsushiro**	**68.11**	**323**	P	**P**	**14 47 53.5**	**+0.6**
MAJO				IAmb	IAmb	14 47 54.5	
	comp=Z,7.5nm,0.9s						
JMN	**Monobe**	**68.82**	**318**	P	**P**	**14 47 57.3**	**-0.1**
JMN				IAmb	IAmb	14 48 14.8	
	comp=Z,19nm,1.2s						
AMKA	**Amchitka**	**68.93**	**358**	P	**P**	**14 47 58.7**	**+1.2**
JSD	**Sado**	**69.13**	**324**	P	**P**	**14 47 59.3**	**+0.3**
JSD				IAmb	IAmb	14 48 01.0	
	comp=Z,8.2nm,0.8s						
KKM	**Kota Kinabalu**	**69.17**	**284**	P	**P**	**14 47 59.2**	**-0.7**
KKM				IAmb	IAmb	14 48 01.6	
	comp=Z,18nm,0.8s						
UGM	**Wanagama**	**70.11**	**268**	P	**P**	**14 48 05.7**	**+0.2**
JHS	**Saijyo**	**70.12**	**319**	P	**P**	**14 48 05.9**	**+0.7**
JHS				IAmb	IAmb	14 48 07.6	
	comp=Z,15nm,0.9s						
QSPA	**South Pole Qui**	**72.25**	**180**	P	**P**	**14 48 18.5**	**+1.3**
	comp=Z,12nm,1.0s,baz=340,slow=0.8,SNR=26						
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**72.25**	**180**	P	**P**	**14 48 18.3**	**+1.1**
QSPA				IAmb	IAmb	14 48 19.4	
	comp=Z,14nm,1.1s						
TPUB	**Ta-pu**	**72.60**	**302**	P	**P**	**14 48 19.3**	**-0.5**
KSM	**Kuching**	**73.13**	**277**	P	**P**	**14 48 24.1**	**+1.0**
PEA0B	**Petropavlovsk-**	**73.70**	**345**	P	**P**	**14 48 26.3**	**+0.9**
PEA0B				IAmb	IAmb	14 49 03.0	
	comp=Z,23nm,1.5s						
PETK	**Petropavlovsk-**	**73.70**	**345**	P	**P**	**14 48 26.5**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=159,slow=9.5,SNR=9.7						
	comp=Z,5.1nm,0.8s						
KSRS	**Korea Array**	**74.94**	**318**	P	P	14 48 34.2	+1.5
	comp=Z,1.4nm,0.8s,baz=136,slow=6.8,SNR=9.1						
	comp=Z,1.4nm,0.8s						
KSAR	**Wonju Array Be**	**74.95**	**318**	P	**P**	**14 48 34.2**	**+1.4**
SEHB	**SEOHWA**	**75.22**	**319**	P	**P**	**14 48 35.0**	**+0.7**
SEHB				IAmb	IAmb	14 48 38.5	
	comp=Z,7.2nm,1.1s						
CMB	**Columbia Colle**	**77.45**	**43**	P	**P**	**14 48 48.4**	**+1.7**
OHAK	**Old Harbor**	**77.52**	**13**	P	**P**	**14 48 47.9**	**+1.5**
OHAK				IAmb	IAmb	14 49 14.0	
	comp=Z,30nm,1.5s						
ORV	**Oroville**	**77.61**	**41**	P	**P**	**14 48 49.5**	**+2.1**
ORV				IAmb	IAmb	14 48 49.9	
	comp=Z,4.8nm,0.6s						
MDPB	**Devils Postpil**	**78.08**	**44**	P	**P**	**14 48 52.1**	**+1.8**
KDAK	**Kodiak Island**	**78.19**	**14**	P	**P**	**14 48 51.6**	**+1.6**
KDAK				IAmb	IAmb	14 49 07.8	
	comp=Z,32nm,1.4s						
MNAI	**Manna**	**78.33**	**269**	P	**P**	**14 48 52.7**	**+0.8**
MPK	**Martis Peak**	**78.39**	**42**	P	**P**	**14 48 53.9**	**+1.9**
MPK				IAmb	IAmb	14 48 55.1	
	comp=Z,10nm,1.3s						
BEKR	**Beckworth**	**78.51**	**42**	P	**P**	**14 48 54.1**	**+1.6**
PNTR	**Pine Nut**	**78.55**	**43**	P	**P**	**14 48 54.9**	**+2.2**
PNTR				IAmb	IAmb	14 48 56.0	
	comp=Z,6.5nm,0.8s						
L04D	**Klamath Falls**	**78.69**	**39**	P	**P**	**14 48 55.5**	**+2.2**
L04D				IAmb	IAmb	14 49 15.5	
	comp=Z,13nm,1.4s						
YERR	**Yerington**	**78.72**	**43**	P	**P**	**14 48 55.5**	**+1.8**
LHV	**Little Huntoon**	**78.80**	**44**	P	P	14 48 56.2	+2.5
LCH	**Last Change Ra**	**78.82**	**45**	P	**P**	**14 48 56.2**	**+2.1**
GRAC	**Grapevine Rang**	**78.88**	**45**	P	**P**	**14 48 56.5**	**+2.1**
RYN	**Ryan**	**78.99**	**43**	P	**P**	**14 48 56.9**	**+1.9**
NVAR	**Mina Array Bea**	**79.03**	**44**	P	**P**	**14 48 57.2**	**+1.9**
	comp=Z,2.1nm,0.7s,baz=223,slow=8.7,SNR=22						
	comp=Z,2.1nm,0.7s						
KVN	**Kaiserville**	**79.50**	**43**	P	**P**	**14 48 59.4**	**+1.6**
O18K	**Koktuh Hills**	**79.56**	**11**	P	**P**	**14 48 58.4**	**+1.0**
O18K				IAmb	IAmb	14 48 59.0	
	comp=Z,8.2nm,0.8s						
MOD	**Modoc Plateau**	**79.71**	**40**	P	**P**	**14 49 00.6**	**+1.8**
K05A	**Summer Lake**	**79.83**	**39**	P	P	14 49 01.9	+2.5
K05A				IAmb	IAmb	14 49 09.6	
	comp=Z,16nm,1.4s						
H04A	**Detroit Lake**	**80.23**	**37**	P	**P**	**14 49 02.5**	**+1.3**
H04A				IAmb	IAmb	14 49 33.7	
	comp=Z,14nm,1.5s						
BNX	**BinXian**	**80.28**	**325**	⇑P	P	14 49 03.0	+1.6
BNX				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNX				pmax	pmax		
	comp=Z,59nm,4.6s						
PINE	**Pine Mountain**	**80.42**	**38**	P	P	14 49 04.9	+2.4
SMAI	**San Martin Ant**	**81.09**	**159**	P	P	14 49 07.4	+2.2
SMAI				IAmb	IAmb	14 49 34.8	
	comp=Z,12nm,1.5s						
I07A	**Izee**	**81.44**	**38**	P	**P**	**14 49 09.0**	**+1.4**
M19K	**Big River Lodg**	**81.61**	**11**	P	**P**	**14 49 08.9**	**+1.0**
M19K				IAmb	IAmb	14 49 25.1	
	comp=Z,8.9nm,1.4s						
X16A	**Lo Mia Camp, P**	**81.76**	**50**	P	**P**	**14 49 11.6**	**+2.0**
U15A	**North Rim**	**82.11**	**48**	P	P	14 49 13.8	+2.4
U15A				IAmb	IAmb	14 49 15.1	
	comp=Z,4.4nm,0.8s						
BELA	**Belgrano 2**	**82.21**	**173**	P	**P**	**14 49 11.1**	**+0.2**
BELA				IAmb	IAmb	14 49 12.4	
	comp=Z,9.9nm,1.0s						
ELK	**Elko**	**82.27**	**43**	P	**P**	**14 49 13.7**	**+1.6**
G08A	**Pilot Rock**	**82.44**	**38**	P	**P**	**14 49 14.7**	**+2.0**
BERG	**Berg Lake**	**82.68**	**16**	P	P	14 49 15.5	+2.1
IPM	**Ipoh**	**82.87**	**277**	P	**P**	**14 49 16.0**	**+0.5**
SCM	**Sheep Creek Mo**	**83.02**	**14**	P	**P**	**14 49 16.1**	**+1.0**
SCM				IAmb	IAmb	14 49 17.0	
	comp=Z,11nm,1.0s						
K20K	**Telida**	**83.02**	**11**	P	**P**	**14 49 16.3**	**+1.3**
CAST	**Castle Rocks**	**83.44**	**11**	P	**P**	**14 49 16.8**	**-0.3**
CAST				IAmb	IAmb	14 49 26.4	
	comp=Z,12nm,1.4s						
KULM	**Kulim**	**83.48**	**278**	P	P	14 49 19.7	+1.3
KULM				IAmb	IAmb	14 49 32.6	
	comp=Z,22nm,1.3s						
GLB	**Gilahina Butte**	**83.54**	**16**	P	**P**	**14 49 18.8**	**+1.1**
GLB				IAmb	IAmb	14 49 52.9	
	comp=Z,12nm,1.4s						
J20K	**Nowinta River**	**83.76**	**10**	P	**P**	**14 49 20.3**	**+1.6**
SEY	**Seymchan**	**83.78**	**347**	P	**P**	**14 49 19.6**	**+0.8**
	comp=Z,6.5nm,0.8s,baz=147,slow=5.4,SNR=34						
	comp=Z,6.5nm,0.8s						
TRF	**Thorofare Moun**	**83.81**	**12**	P	**P**	**14 49 19.5**	**+0.3**
TRF				IAmb	IAmb	14 49 20.5	
	comp=Z,5.7nm,0.8s						
MAW	**Mawson**	**84.11**	**200**	P	**P**	**14 49 21.4**	**+0.9**
	comp=Z,4.8nm,0.7s,baz=177,slow=2.2,SNR=15						
	comp=Z,4.8nm,0.7s						
BPAW	**Bear Paw Mtn.**	**84.26**	**12**	P	**P**	**14 49 22.9**	**+1.7**
ENH	**Enshi**	**84.60**	**304**	P	**P**	**14 49 24.1**	**+0.4**
M27K	**Edge Creek, AK**	**84.81**	**16**	P	**P**	**14 49 25.4**	**+1.4**
M27K				IAmb	IAmb	14 49 26.8	
	comp=Z,7.2nm,1.2s						
GSI	**Gunungsitoli**	**85.16**	**273**	P	**P**	**14 49 27.0**	**+0.3**
WRH	**Wood River Hil**	**85.17**	**12**	P	**P**	**14 49 26.3**	**+0.8**
WRH				IAmb	IAmb	14 49 27.2	
	comp=Z,6.9nm,1.3s						
CCB	**Clear Creek Bu**	**85.38**	**13**	P	**P**	**14 49 27.1**	**+0.6**
IMAR	**Indian Mountai**	**85.50**	**10**	P	**P**	**14 49 28.5**	**+1.4**
TXAR	**Lajitas Array**	**85.55**	**57**	P	P	14 49 30.8	+2.5
	comp=Z,1.7nm,0.8s,baz=213,slow=6.5,SNR=13						
	comp=Z,1.7nm,0.8s						
TXAR	**Lajitas Array**	**85.55**	**57**	P	P	14 49 31.1	+2.8
MDM	**Murphy Dome**	**85.57**	**12**	P	**P**	**14 49 29.1**	**+1.6**
MDM				IAmb	IAmb	14 49 56.0	
	comp=Z,5.6nm,1.4s						
ILAR	**Eielson Array**	**85.68**	**13**	P	**P**	**14 49 28.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=222,slow=5.0,SNR=8.6						
	comp=Z,0.6nm,0.5s						
J25K	**Salcha River,**	**85.87**	**13**	P	**P**	**14 49 30.2**	**+1.2**
J26L	**Joseph Creek**	**86.19**	**14**	P	**P**	**14 49 32.5**	**+2.0**
J26L				IAmb	IAmb	14 49 33.2	
	comp=Z,5.5nm,1.5s						
XAN	**Xi'an**	**86.57**	**307**	P	P	14 49 35.3	+2.3
XAN				pmax	pmax		
	comp=Z,18nm,1.1s						
IMW	**Indian Meadow**	**86.60**	**42**	P	**P**	**14 49 35.1**	**+1.8**
PDAR	**Pinedale Array**	**86.96**	**43**	P	**P**	**14 49 36.5**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=231,slow=3.6,SNR=4.9						
	comp=Z,0.4nm,0.5s						
HHC	**Hu-ho-hao-te**	**87.53**	**314**	*e*P	P	14 49 39.4	+1.9
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,98nm,5.8s						
KMI	**Kunming**	**88.20**	**297**	⇑P	P	14 49 43.8	+2.7
KMI				pmax	pmax		
	comp=Z,12nm,1.5s						
BMAR	**Burnt Mountain**	**88.46**	**12**	P	**P**	**14 49 42.7**	**+1.7**
CMAR	**Chiang Mai Arr**	**89.29**	**290**	P	P	14 49 47.6	+1.7
	comp=Z,4.9nm,0.9s,baz=112,slow=2.9,SNR=21						
	comp=Z,4.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.29**	**290**	P	P	14 49 47.3	+1.3
TROLL	**Troll, Antarti**	**90.41**	**180**	P	**P**	**14 49 50.7**	**+0.3**
SNAA	**Sanae**	**90.69**	**178**	P	**P**	**14 49 51.4**	**-0.2**
SNAA	**Sanae**	**90.69**	**178**	P	**P**	**14 49 51.8**	**+0.3**
	comp=Z,3.4nm,1.0s,baz=206,slow=7.4,SNR=13						
	comp=Z,3.4nm,1.0s						
SNAA	**Sanae**	**90.69**	**178**	P	**P**	**14 49 52.0**	**+0.5**
SNAA				IAmb	IAmb	14 49 52.3	
	comp=Z,3.5nm,0.9s						
VNA3	**Neumayer Olymp**	**90.81**	**176**	P	**P**	**14 49 52.7**	**+0.6**
VNA2	**Neumayer--Watz**	**91.26**	**177**	P	**P**	**14 49 55.1**	**+1.0**
	baz=170,slow=4.0						
VNA1	**Neumayer--Stat**	**91.48**	**177**	P	**P**	**14 49 56.0**	**+0.9**
OK030	**Cody Creek RV**	**93.35**	**53**	P	**P**	**14 50 04.9**	**+0.6**
MKAR	**Makanchi Array**	**109.40**	**314**	PKiKP	**PKiKP**	**14 55 15.2**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=237,slow=1.3,SNR=4.6						
ARCES	**ARCESS Array B**	**126.30**	**350**	PKP	**PKiKP**	**14 55 48.3**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=48,slow=1.8,SNR=8.7						
FINES	**FINESS Array B**	**133.22**	**344**	PKP	**PKiKP**	**14 56 02.0**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=232,slow=6.3,SNR=1.4						
NOA	**NORSAR Array B**	**136.33**	**354**	PKP	**PKiKP**	**14 56 07.6**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=350,slow=0.2,SNR=1.7						
AKASG	**Malin Array Be**	**140.68**	**333**	PKP	**PKiKP**	**14 56 17.3**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=74,slow=0.5,SNR=2.6						
SORM	**Soroca**	**142.93**	**331**	⇓P	**PKPdf**	**14 56 16.3**	**-2.5**
VASR	**Vaslui**	**144.26**	**329**	⇑P	**PKiKP**	**14 56 22.1**	**-3.0**
BUR08	**Bucovina Ar. S**	**144.72**	**333**	PKPdf	**PKiKP**	**14 56 23.3**	**-2.8**
BURAR	**Bucovina Array**	**144.74**	**333**	⇑P	**PKiKP**	**14 56 24.4**	**-1.7**
TLCR		**144.74**	**327**	⇑P	**PKiKP**	**14 56 23.7**	**-2.4**
KOLS	**Kolonicke sedl**	**144.90**	**337**	*e*PKP	**PKiKP**	**14 56 24.5**	**-1.8**
BR131	**Keskin Array S**	**145.04**	**315**	PKPbc	**PKiKP**	**14 56 24.5**	**-2.5**
BRTR	**Keskin Array B**	**145.04**	**315**	PKP	**PKiKP**	**14 56 24.8**	**-2.3**
	comp=Z,3.5nm,0.7s,baz=128,slow=4.6,SNR=14						
BRTR	**Keskin Array B**	**145.04**	**315**	PKPbc	**PKiKP**	**14 56 24.7**	**-2.4**
CFR	**Carcaliu**	**145.10**	**327**	⇑P	**PKiKP**	**14 56 24.8**	**-2.0**
TPGR	**Topolog**	**145.17**	**326**	⇑P	**PKiKP**	**14 56 25.6**	**-1.4**
VRI	**Vrincioaia**	**145.33**	**329**	⇑P	**PKiKP**	**14 56 24.7**	**-2.6**
PLOR	**Plostina**	**145.38**	**329**	⇑P	**PKiKP**	**14 56 25.3**	**-2.1**
OSTC	**Ostas**	**145.42**	**344**	*e*PKP	**PKiKP**	**14 56 25.3**	**-2.0**
BMR	**Baia Mare**	**145.43**	**334**	⇑P	**PKiKP**	**14 56 25.7**	**-1.7**
CLL	**Collm**	**145.46**	**348**		**PKiKP**	**14 56 25.5**	**-1.8**
CLL	**Collm**	**145.46**	**348**	⇓*i*PKPbc	**PKiKP**	**14 56 25.4**	**-1.9**
	comp=Z,12nm,0.9s						
ARCR	**ARCALIA**	**145.52**	**333**	⇑P	**PKiKP**	**14 56 26.5**	**-1.1**
HARR	**Harsova**	**145.54**	**327**	⇑P	**PKiKP**	**14 56 26.5**	**-1.2**
DPC	**Dobruska-Polom**	**145.58**	**344**	*e*PKP	**PKiKP**	**14 56 26.4**	**-1.3**
COVR	**Voineasa-Covas**	**145.60**	**330**	⇑P	**PKiKP**	**14 56 26.0**	**-1.9**
BRG	**Berggiesshubel**	**145.68**	**347**	*i* PKP	**PKiKP**	**14 56 26.6**	**-1.2**
BRG				Amp		14 56 28.1	
	comp=Z,9.8nm,1.1s						
LANS	**Liptovska Anna**	**145.71**	**340**	*e*PKP	**PKiKP**	**14 56 27.6**	**-0.4**
MORC	**Moravsky Berou**	**145.76**	**342**	⇓P	**PKiKP**	**14 56 26.7**	**-1.3**
MORC	**Moravsky Berou**	**145.76**	**342**		**PKiKP**	**14 56 26.8**	**-1.3**
MORC	**Moravsky Berou**	**145.76**	**342**	*e*PKP	**PKiKP**	**14 56 27.0**	**-1.1**
DOPR	**Dopca**	**145.90**	**331**	⇑P	**PKiKP**	**14 56 27.9**	**-0.5**
MLR	**Muntele Rosu**	**145.98**	**329**	⇑P	**PKiKP**	**14 56 28.2**	**-0.6**
MLR	**Muntele Rosu**	**145.98**	**329**	PKPbc	**PKiKP**	**14 56 28.0**	**-0.9**
	comp=Z,2.7nm,0.5s,baz=180,slow=8.2,SNR=4.6						
PRU	**Pruhonice**	**146.37**	**345**	*e*PKP	**PKPab**	**14 56 28.4**	**-1.0**
MBAR	**Mbarara**	**146.38**	**240**		**PKiKP**	**14 56 30.2**	**-0.4**
VRAC	**Vranov**	**146.45**	**343**	PKPbc	**PKPab**	**14 56 28.5**	**-1.3**
	comp=Z,3.2nm,0.8s,baz=48,slow=4.2,SNR=4.2						
VRAC	**Vranov**	**146.45**	**343**	*e*PKP	**PKPab**	**14 56 29.8**	**0.0**
DRGR		**146.45**	**334**	⇓P	**PKPab**	**14 56 28.7**	**-1.3**
VYHS	**Vyhne**	**146.49**	**340**	*e*PKP	**PKPab**	**14 56 29.0**	**-1.0**
JAVC	**Velka Javorina**	**146.54**	**341**	*e*PKP	**PKPab**	**14 56 29.6**	**-0.6**
KRUC	**Moravsky**	**146.73**	**343**	*e*PKP	**PKPab**	**14 56 29.5**	**-1.4**
MODS	**Modra-Piesok**	**147.09**	**341**	*e*PKP	**PKPab**	**14 56 31.1**	**-1.3**
MEM	**Membach**	**147.12**	**355**	*d*PKP	**PKPab**	**14 56 30.3**	**-2.1**
BTNL	**Ternell**	**147.13**	**355**	*d*PKP	**PKPab**	**14 56 30.2**	**-2.3**
BSTI	**Sart Tilman**	**147.18**	**356**	*d*PKP	**PKPab**	**14 56 30.9**	**-1.7**
SIRR	**Siria**	**147.31**	**335**	⇑P	**PKPab**	**14 56 30.9**	**-2.5**
BHOU	**Houvegnez**	**147.38**	**355**	*d*PKP	**PKPab**	**14 56 30.9**	**-2.6**
KHC	**Kasperske Hory**	**147.39**	**346**		**PKPab**	**14 56 30.8**	**-2.9**
KHC	**Kasperske Hory**	**147.39**	**346**	*e*PKP	**PKPab**	**14 56 31.2**	**-2.4**
BMRD	**Maredsous**	**147.51**	**357**	*d*PKP	**PKPab**	**14 56 31.4**	**-2.5**
GZR	**Gura Zlata**	**147.53**	**332**	⇑P	**PKPab**	**14 56 31.1**	**-3.2**
RCHB	**Rochefort**	**147.63**	**356**	*d*PKP	**PKPab**	**14 56 31.7**	**-2.8**
GERES	**GERESS Array B**	**147.63**	**346**	PKPbc	**PKPab**	**14 56 31.7**	**-2.9**
	comp=Z,2.2nm,0.7s,baz=23,slow=2.9,SNR=28						
GERES	**GERESS Array B**	**147.63**	**346**		**PKPab**	**14 56 31.3**	**-3.4**
DOU	**Dourbes**	**147.72**	**357**	*d*PKPdf	**PKPab**	**14 56 30.5**	**-4.4**
DOU				*d*PKPab	PKiKP	14 56 38.1	+6.1
BZS	**Buzias**	**147.85**	**334**	⇑P	**PKPab**	**14 56 31.7**	**-3.8**
CONA	**Conrad Observa**	**147.91**	**342**	*e*P	**PKPab**	**14 56 32.7**	**-3.1**
	comp=Z,5.7nm,0.9s						
RONA	**Rosalia, Austr**	**147.99**	**342**	*e*P	**PKPab**	**14 56 32.8**	**-3.3**
	comp=Z,4.5nm,0.7s						
WLF	**Walferdange**	**148.05**	**355**	*d*PKP	**PKPab**	**14 56 33.5**	**-2.7**
HERR	**Herculane**	**148.08**	**332**	⇑P	**PKPab**	**14 56 32.5**	**-4.0**
MOA	**Moln**	**148.42**	**344**	*e*P	**PKPab**	**14 56 33.5**	**-4.4**
	comp=Z,4.7nm,1.3s						
MORH	**Mrgy. Hungar**	**148.52**	**338**	⇑P	**PKPab**	**14 56 33.8**	**-4.4**
BLKB	**Belogradchik**	**148.93**	**330**	⇑P	**PKPab**	**14 56 34.6**	**-5.6**
SOKA	**Soboth**	**149.28**	**342**	*e*P	**PKiKP**	**14 56 35.1**	**-0.4**
	comp=Z,5.6nm,1.2s						
KBA	**Koelnbreinsper**	**149.37**	**345**	*e*P	**PKiKP**	**14 56 35.8**	**0.0**
	comp=Z,2.8nm,0.5s						
WATA	**Walderalm**	**149.53**	**347**	*e*P	**PKiKP**	**14 56 35.9**	**-0.2**
	comp=Z,3.4nm,0.6s						
RETA	**Reutte**	**149.55**	**348**	*e*P	**PKiKP**	**14 56 36.0**	**-0.1**
	comp=Z,5.9nm,1.1s						
WTTA	**Wattenberg**	**149.59**	**347**	*e*P	**PKiKP**	**14 56 36.3**	**0.0**
	comp=Z,8.9nm,0.6s						
MOTA	**Moosalm**	**149.62**	**348**	*e*P	**PKiKP**	**14 56 36.1**	**-0.2**
	comp=Z,2.0nm,0.6s						
MYKA	**Terra Mystica**	**149.71**	**344**	*i* P	**PKiKP**	**14 56 35.8**	**-0.6**
	comp=Z,3.1nm,0.6s						
SQTA	**Sankt Quirin**	**149.72**	**348**	*e*P	**PKiKP**	**14 56 36.4**	**0.0**
	comp=Z,4.9nm,0.6s						
DIVS	**Divibare**	**149.76**	**334**		**PKiKP**	**14 56 36.8**	**+0.2**
ABTA	**Abfaltersbach**	**149.88**	**346**	*e*P	**PKiKP**	**14 56 36.3**	**-0.4**
	comp=Z,7.9nm,0.7s						
PRED	**Cave del Predi**	**149.90**	**344**		**PKPab**	**14 56 44.1**	**0.0**
DAVA	**Damuels**	**149.91**	**349**	*e*P	**PKiKP**	**14 56 37.2**	**+0.4**
	comp=Z,5.6nm,0.7s						
FETA	**Feichten**	**150.00**	**348**	*e*P	**PKiKP**	**14 56 37.5**	**+0.4**
	comp=Z,5.1nm,0.8s						
CLUD	**Cludinico**	**150.06**	**345**		**PKiKP**	**14 56 36.5**	**-0.6**
STAL	**STALIGIAL**	**150.29**	**345**		**PKiKP**	**14 56 37.2**	**-0.3**
CIMO	**Cimolais**	**150.31**	**345**		**PKiKP**	**14 56 37.2**	**-0.4**
DAVOX	**Davos/Dischmat**	**150.40**	**349**	PKPbc	**PKiKP**	**14 56 38.8**	**+0.8**
	comp=Z,7.8nm,0.6s,baz=291,slow=1.3,SNR=17						

IDC ***14*** *14:44:15.0±1.3, 45.°95N×25.°91E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=51.9km s-min=14.5km az=121.0*

MCSM ***14*** *14:44:30.7±1.0, 46.°1N±8.°×2.°7E±.°, h147km±10km, ML3.8*

SIGU ***14*** *14:44:30.6, 45.°72N×26.°40E, h152km, mb2.9*

BUC ***14*** *14:44:31.5±0.2, 45.°62N×26.°45E, h146km±1km, ml4.1/45, Error ellipse: s-maj=1.6km s-min=1.3km az=167.0*

SOF ***14*** *14:44:34.7, 45.°20N×26.°52E, h2km, MD3.1*

ISC 14 14:44:31.3±0.8, 45.°64N±0.°02×26.°43E±0.°02, h153km±4km, n169, σ0°88/273, mb3.5/4, 144C-87D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.23**	**204**	⇑P	**Pn**	**14 44 52.0**	**-0.1**
NEHR				⇓S	**Sn**	**14 45 07.1**	**-0.8**
NEHR	**Nehoiu**	**0.23**	**204**	⇑P	**Pn**	**14 44 52.0**	**-0.1**
NEHR				⇓S	**Sn**	**14 45 07.1**	**-0.8**
COVR	**Voineasa-Covas**	**0.26**	**322**	⇑P	**Pn**	**14 44 51.5**	**-0.6**
COVR				⇓S	**Sn**	**14 45 06.7**	**-1.4**
COVR	**Voineasa-Covas**	**0.26**	**322**	⇑P	**Pn**	**14 44 51.5**	**-0.6**
COVR				⇓S	**Sn**	**14 45 06.7**	**-1.4**
PLOR	**Plostina**	**0.26**	**36**	⇑P	**Pn**	**14 44 51.7**	**-0.5**
PLOR				⇓S	**Sn**	**14 45 07.1**	**-1.1**
PLOR	**Plostina**	**0.26**	**36**	⇑P	**Pn**	**14 44 51.7**	**-0.5**
PLOR				⇓S	**Sn**	**14 45 07.1**	**-1.1**
PLOR	**Plostina**	**0.26

STFAR	**Stefanesti-Arg**	1.30	234	⇑P		**Pn**	14 44 59.1	0.0
STFAR				⇓S		**Sn**	14 45 19.8	-0.5
STFAR	**Stefanesti-Arg**	1.30	234	⇑P		**Pn**	14 44 59.1	0.0
STFAR				⇓S		**Sn**	14 45 19.8	-0.5
GIRR	**Girov**	1.32	2	⇑P		**Pn**	14 44 59.5	+0.3
GIRR	**Girov**	1.32	2	⇑P		**Pn**	14 44 59.5	+0.3
BUC1	**Bucharest**	1.32	193	⇑P		**Pn**	14 44 59.0	-0.3
BUC1				⇓S		**Sn**	14 45 19.6	-1.1
BUC1	**Bucharest**	1.32	193	⇑P		**Pn**	14 44 59.0	-0.3
BUC1				⇓S		**Sn**	14 45 19.6	-1.1
VASR	**Vaslui**	1.38	43	⇑P		**Pn**	14 44 59.8	0.0
VASR				⇑S		**Sn**	14 45 20.6	-1.1
VASR	**Vaslui**	1.38	43	⇑P		**Pn**	14 44 59.8	0.0
VASR				⇑S		**Sn**	14 45 20.6	-1.1
HARR	**Harsova**	1.42	131	⇓P		**Pn**	14 44 60.0	-0.3
HARR	**Harsova**	1.42	131	⇓P		**Pn**	14 44 60.0	-0.3
SGRR	**Singureni**	1.45	193	⇓P		**Pn**	14 45 00.1	-0.5
SGRR				⇑S		**Sn**	14 45 21.5	-1.5
SGRR	**Singureni**	1.45	193	⇓P		**Pn**	14 45 00.1	-0.5
SGRR				⇑S		**Sn**	14 45 21.5	-1.5
HUMR	**Humele**	1.51	223	⇑P		**Pn**	14 45 00.6	-0.7
HUMR				⇑S		**Sn**	14 45 22.5	-1.6
HUMR	**Humele**	1.51	223	⇑P		**Pn**	14 45 00.6	-0.7
HUMR				⇑S		**Sn**	14 45 22.5	-1.6
HUMR	**Humele**	1.51	223	P		**Pn**	14 44 59.9	-1.4
LEOM	**Leova**	1.51	56	⇑P		**Pn**	14 45 01.4	+0.2
LEOM				⇑S		**Sn**	14 45 23.0	-1.1
LEOM	**Leova**	1.51	56	⇑P		**Pn**	14 45 01.4	+0.2
LEOM				⇑S		**Sn**	14 45 23.0	-1.1
TLBR	**Topalu**	1.58	133	⇓P		**Pn**	14 45 01.7	-0.3
TLBR				⇑S		**Sn**	14 45 23.4	-2.1
TLBR	**Topalu**	1.58	133	⇓P		**Pn**	14 45 01.7	-0.3
TLBR				⇑S		**Sn**	14 45 23.4	-2.1
TPGR	**Topolog**	1.61	118	⇓P		**Pn**	14 45 01.7	-0.6
TPGR				⇑S		**Sn**	14 45 24.3	-1.7
TPGR	**Topolog**	1.61	118	⇓P		**Pn**	14 45 01.7	-0.6
TPGR				⇑S		**Sn**	14 45 24.3	-1.7
RMVG	**GOVORA**	1.63	249	⇓S		**Sn**	14 45 26.6	+0.2
RMVG	**GOVORA**	1.63	249	⇓S		**Sn**	14 45 26.6	+0.2
CVDA	**Cernavoda**	1.73	138	⇑P		**Pn**	14 45 03.4	-0.2
CVDA				⇓S		**Sn**	14 45 26.5	-1.8
CVDA	**Cernavoda**	1.73	138	⇑P		**Pn**	14 45 03.4	-0.2
CVDA				⇓S		**Sn**	14 45 26.5	-1.8
COPA	**Copaceanca**	1.73	210	⇑P		**Pn**	14 45 03.0	-0.7
COPA				⇑S		**Sn**	14 45 27.1	-1.3
COPA	**Copaceanca**	1.73	210	⇑P		**Pn**	14 45 03.0	-0.7
COPA				⇑S		**Sn**	14 45 27.1	-1.3
IAS	**Iasi**	1.74	26	⇑P		**Pn**	14 45 03.6	0.0
IAS	**Iasi**	1.74	26	⇑P		**Pn**	14 45 03.6	0.0
TLCR		1.74	104	⇓P		**Pn**	14 45 03.3	-0.3
TLCR				⇑S		**Sn**	14 45 28.3	-0.1
TLCR		1.74	104	⇓P		**Pn**	14 45 03.3	-0.3
TLCR				⇑S		**Sn**	14 45 28.3	-0.1
ICOR	**Ion Corvin**	1.81	147	⇑P		**Pn**	14 45 04.4	0.0
ICOR				⇑S		**Sn**	14 45 28.3	-1.5
ICOR	**Ion Corvin**	1.81	147	⇑P		**Pn**	14 45 04.4	0.0
ICOR				⇑S		**Sn**	14 45 28.3	-1.5
TIRR	**Tirgusor**	1.83	129	⇓P		**Pn**	14 45 04.4	-0.3
TIRR				⇓S		**Sn**	14 45 28.6	-1.7
TIRR	**Tirgusor**	1.83	129	⇓P		**Pn**	14 45 04.4	-0.3
TIRR				⇓S		**Sn**	14 45 28.6	-1.7
JURR	**Jurilovca**	1.94	116	⇑P		**Pn**	14 45 05.4	-0.5
JURR	**Jurilovca**	1.94	116	⇑P		**Pn**	14 45 05.4	-0.5
MFTR	**Murfatlar**	2.03	135	⇓P		**Pn**	14 45 06.2	-0.8
MFTR				⇑S		**Sn**	14 45 32.4	-2.0
MFTR	**Murfatlar**	2.03	135	⇓P		**Pn**	14 45 06.2	-0.8
MFTR				⇑S		**Sn**	14 45 32.4	-2.0
RAZG	**Razgrad**	2.07	178	⇓P		**Pn**	14 45 07.0	-0.6
RAZG	**Razgrad**	2.07	178	⇓P		**Pn**	14 45 07.0	-0.6
MILM	**Milestii Mici**	2.09	51	⇑*i*P		**Pn**	14 45 07.5	-0.1
	25nm,0.1s							
MILM				*e*S		**Sn**	14 45 33.0	-2.6
	135nm,0.1s							
MILM	**Milestii Mici**	2.09	51	⇑P		**Pn**	14 45 07.5	-0.1
MILM	**Milestii Mici**	2.09	51	⇑P		**Pn**	14 45 07.5	-0.1
MILM	**Milestii Mici**	2.09	51	⇑*i*P		**Pn**	14 45 07.5	-0.1
MILM				Pm			14 45 07.8	
MILM				*i* S		**Sn**	14 45 33.4	-2.2
MILM				Sm			14 45 35.0	
MILM	**Milestii Mici**	2.09	51	P		**Pn**	14 45 07.5	-0.1
KIS	**Kishinev**	2.14	50	*e*P		**Pn**	14 45 08.0	-0.2
	33nm,0.2s							
KIS				*e*S		**Sn**	14 45 34.6	-2.1
	450nm,0.3s							
KIS	**Kishinev**	2.14	50	⇑S		**Sn**	14 45 35.7	-1.0
KIS	**Kishinev**	2.14	50	⇑S		**Sn**	14 45 35.7	-1.0
KIS	**Kishinev**	2.14	50	*e*P		**Pn**	14 45 08.0	-0.2
KIS				*e*S		**Sn**	14 45 34.6	-2.1
KIS				Sm			14 45 35.7	
BURAR	**Bucovina Array**	2.15	337	⇓P		**Pn**	14 45 09.2	+0.8
BURAR	**Bucovina Array**	2.15	337	⇓P		**Pn**	14 45 09.2	+0.8
BURAR	**Bucovina Array**	2.15	337	P		**Pn**	14 45 09.6	+1.2
TSCT	**Constanta Port**	2.17	132	⇑P		**Pn**	14 45 08.3	-0.2
TSCT				⇑S		**Sn**	14 45 36.2	-0.9
TSCT	**Constanta Port**	2.17	132	⇑P		**Pn**	14 45 08.3	-0.2
TSCT				⇑S		**Sn**	14 45 36.2	-0.9
VLAD	**Vladila**	2.19	222	⇑P		**Pn**	14 45 07.9	-0.9
VLAD	**Vladila**	2.19	222	⇑P		**Pn**	14 45 07.9	-0.9
EFOR	**EFORIE**	2.21	134	⇑P		**Pn**	14 45 09.0	-0.1
EFOR				⇓S		**Sn**	14 45 36.7	-1.4
EFOR	**EFORIE**	2.21	134	⇑P		**Pn**	14 45 09.0	-0.1
EFOR				⇓S		**Sn**	14 45 36.7	-1.4
PSN	**Preselentsi**	2.32	147	P		**Pn**	14 45 10.5	+0.1
MANR	**Mangalia**	2.38	139	⇓P		**Pn**	14 45 10.9	-0.3
MANR				⇑S		**Sn**	14 45 40.6	-1.2
MANR	**Mangalia**	2.38	139	⇓P		**Pn**	14 45 10.9	-0.3
MANR				⇑S		**Sn**	14 45 40.6	-1.2
SZH	**Strazhica**	2.40	189	P		**Pn**	14 45 10.5	-0.9
PRD	**Provadia**	2.54	164	P		**Pn**	14 45 13.3	+0.3
PURM	**Purcari**	2.55	68	⇓P		**Pn**	14 45 13.3	+0.1
PURM				⇓S		**Sn**	14 45 44.3	-1.2
PURM	**Purcari**	2.55	68	⇓P		**Pn**	14 45 13.3	+0.1
PURM				⇓S		**Sn**	14 45 44.3	-1.2
GZR	**Gura Zlata**	2.58	266	⇑P		**Pn**	14 45 13.3	-0.3
GZR				⇑S		**Sn**	14 45 46.2	-0.1
GZR	**Gura Zlata**	2.58	266	⇑P		**Pn**	14 45 13.3	-0.3
GZR				⇑S		**Sn**	14 45 46.2	-0.1
ROIA	**ROIAK**	2.63	165	P		**Pn**	14 45 14.1	-0.2
SORM	**Soroca**	2.82	27	⇑P		**Pn**	14 45 15.3	-1.2
SORM	**Soroca**	2.82	27	⇑P		**Pn**	14 45 15.3	-1.2
DRGR		2.83	295	⇑P		**Pn**	14 45 15.9	-0.8
DRGR		2.83	295	⇑P		**Pn**	14 45 15.9	-0.8
KMPD	**K-Podol'skiy**	2.92	0	*i* P		**Pn**	14 45 16.3	-1.5
HERR	**Herculane**	2.94	256	⇑P		**Pn**	14 45 17.2	-0.8
HERR	**Herculane**	2.94	256	⇑P		**Pn**	14 45 17.2	-0.8
NDNU	**Novodnistrovsk**	3.02	12	*e*P		**Pn**	14 45 18.5	-0.5
NDNU				Pm			14 45 19.1	
NDNU				*e*S		**Sn**	14 45 52.9	-3.2
NDNU				Sm			14 45 55.7	
STNU	**Starunia**	3.34	337	*e*P		**Pn**	14 45 21.8	-1.3
MDVR	**Moldovita**	3.44	257	⇑P		**Pn**	14 45 24.3	-0.1
MDVR	**Moldovita**	3.44	257	⇑P		**Pn**	14 45 24.3	-0.1
MDVR	**Moldovita**	3.44	257	P		**Pn**	14 45 24.2	-0.3
HORU	**Horodok**	3.58	360	*e*P		**Pn**	14 45 25.3	-0.8
HORU				*e*S		**Sn**	14 46 06.2	-2.5
LUBAR	**Lubar, Ukraine**	4.38	11	P		**Pn**	14 45 37.5	+1.0
SEV	**Sevastopol'**	5.24	99	⇓*i*P		**Pn**	14 45 47.5	-0.4
AK06	**Malin Array Si**	5.29	20	P		**Pn**	14 45 49.0	+0.6
AK10	**Malin Array Si**	5.31	20	P		**Pn**	14 45 49.4	+0.6
AK12	**Malin Array Si**	5.33	19	P		**Pn**	14 45 50.1	+1.1
AK17	**Malin Array Si**	5.34	18	P		**Pn**	14 45 48.7	-0.5
MI28	**Mi28,Pidlybu**	5.36	8	P		**Pn**	14 45 50.0	+0.6
AK19	**Malin Array Si**	5.37	18	P		**Pn**	14 45 50.0	+0.4
AK18	**Malin Array Si**	5.38	18	P		**Pn**	14 45 49.2	-0.5
AK20	**Malin Array Si**	5.39	18	P		**Pn**	14 45 49.9	+0.1
AKASG	**Malin Array Be**	5.40	19	Pg		**Pn**	14 45 47.8	-2.2
	0.7nm,0.3s,baz=204,slow=13,SNR=4.1							
AKASG				Sn		Sn	14 46 32.4	-19
	0.8nm,0.3s,baz=199,slow=17,SNR=2.3							
AKBB	**Malin Array Si**	5.40	19	P		**Pn**	14 45 50.9	+1.0
AK04	**Malin Array Si**	5.41	19	P		**Pn**	14 45 49.9	-0.1
AK23	**Malin Array Si**	5.43	18	P		**Pn**	14 45 49.9	-0.5
RNPP5	**Staryi Chortor**	5.61	356	P		**Pn**	14 45 53.4	+0.7
RNPP1	**Kostyukhnivka**	5.73	356	P		**Pn**	14 45 54.4	0.0
ZALV	**Zalesovo Beam**	37.61	56	P		**P**	14 51 32.4	+1.6
	0.5nm,0.3s,baz=287,slow=9.0,SNR=1.6 0.5nm,0.3s							
MKAR	**Makanchi Array**	37.97	68	P		**P**	14 51 36.0	+2.0
	0.2nm,0.4s,baz=280,slow=7.6,SNR=2.6 0.2nm,0.4s							

TORD	**Torodi Ar. Bea**	38.58	221	P		**P**	14 51 40.1	+0.7
	0.3nm,0.4s,baz=29,slow=8.2,SNR=5.3 0.3nm,0.4s							
DBIC	**Dimbokro**	47.33	225	P		**P**	14 52 49.1	-0.6
	3.1nm,0.8s,baz=50,slow=7.9,SNR=1.6 3.1nm,0.8s							

MDD **14** *14:53:16.8±0.5, 34°.90N×2°.94W, h7km±3km, mb_Lg2.6/21, Error ellipse: s-maj=4.1km s-min=2.3km az=152.0*
IGIL **14** *14:53:17.6, 34°.90N×2°.94W, h7km*
SFS **14** *14:53:17.0, 34°.94N×2°.90W, ML2.8, HASSI BERKANE (MARRUECOS)*
CNRM **14** *14:53:18.4, 34°.99N×2°.79W, h4km, ml3.0*
INMG **14** *14:53:18.2±1.3, 34°.97N×2°.91W, h15km±4km, ML2.3, Error ellipse: s-maj=4.3km s-min=2.8km az=135.0*

ISC 14 14:53:16.5±1.0, 34°.96N±0°.02×2°.92W±0°.02, h18km±6km, n70, σ1°50/120, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GOG	**Mont Gurugu**	0.27	347	P		**Pg**	14 53 22.1	-0.5
GOG				S		**Sb**	14 53 26.9	-0.3
EMEL	**Melilla**	0.34	355	Pg		**Pb**	14 53 24.6	+0.4
EMEL				Sg		**Sb**	14 53 29.6	+0.3
WMELI	**Melilla**	0.36	356	P		**Pn**	14 53 26.0	-0.9
WMELI				S		**Sb**	14 53 30.4	+0.5
TAF	**Taforalt**	0.44	109	P		**Pg**	14 53 25.0	-0.5
TAF				S		**Sg**	14 53 31.5	-0.1
TAF	**Taforalt**	0.44	109	P		**Pg**	14 53 25.2	-0.3
CHAS	**Isla Isabel II**	0.46	60	P		**Pg**	14 53 25.6	-0.3
CHAS				S		**Sb**	14 53 33.3	+0.7
JBK	**JBK**	0.69	155	P		**Pg**	14 53 28.9	-1.1
JBK				S		**Sg**	14 53 37.7	-1.5
JBK	**JBK**	0.69	155	P		**Pn**	14 53 32.0	+0.4
PALE	**Palemas**	0.88	288	P		**Pn**	14 53 34.2	+0.2
PALE				S		**Sn**	14 53 49.4	+3.1
AKLM	**AKL**	0.90	240	P		**Pb**	14 53 33.8	+0.2
AKLM				S		**Sn**	14 53 47.1	+0.3
PVLZ	**Peæn de**	1.15	281	P		**Pg**	14 53 38.7	-0.1
PVLZ				S		**Sg**	14 53 58.0	+4.0
EBER	**Berja**	1.94	1	Pn		**Pn**	14 53 48.9	+0.2
EBER				Sn		**Sn**	14 54 11.7	-1.0
EBER				*i* Vmb_Lg			14 54 23.2	
CHEFC	**Chefchaouen**	1.99	275	P		**Pb**	14 53 51.8	-0.5
CHEFC	**Chefchaouen**	1.99	275	P		**Pg**	14 53 54.1	-0.7
ELGU	**Los Guajares,**	1.99	343	Pn		**Pn**	14 53 49.0	-0.4
ELGU				Sn		**Sn**	14 54 11.9	-2.1
ELGU				*i* Vmb_Lg			14 54 25.3	
LCRM	**LCR**	2.04	232	P		**Pn**	14 53 50.5	+0.3
LCRM				S		**Sg**	14 54 21.7	-0.7
LCRM	**LCR**	2.04	232	P		**Pg**	14 53 56.0	+0.2
EMAL	**Malaga-Limoner**	2.18	326	P		**Pn**	14 53 52.0	+0.1
EMAL				S		**Sn**	14 54 18.2	-0.2
EMIJ	**Mijas**	2.20	317	Pn		**Pn**	14 53 51.9	-0.4
EMIJ				Sn		**Sn**	14 54 17.6	-1.4
EMIJ				*i* Vmb_Lg			14 54 31.7	
ECEU	**Ceuta**	2.21	296	Pn		**Pn**	14 53 51.4	-1.0
ECEU				Sn		**Sn**	14 54 17.3	-2.0
EQUE	**Quentar**	2.28	350	Pn		**Pn**	14 53 53.9	+0.5
EQUE				Sn		**Sn**	14 54 21.5	+0.4
EQUE				*i* Vmb_Lg			14 54 25.5	
IFR	**Ifrane**	2.33	232	P		**Pb**	14 53 59.1	+1.1
IFR				S		**Sg**	14 54 30.7	-0.7
EGOR	**Sierra Gorda,**	2.35	336	Pn		**Pn**	14 53 54.7	+0.2
EGOR				Sn		**Sn**	14 54 24.2	+1.2
EGOR				*i* Vmb_Lg			14 54 28.5	
EJIF	**Jimena Fronter**	2.56	306	Pn		**Pb**	14 53 59.9	-1.9
EJIF				Sn		**Sn**	14 54 28.6	+0.8
MDT	**Midelt**	2.56	214	P		**Pb**	14 54 02.2	+0.3
MDT	**Midelt**	2.56	214	P		**Pb**	14 54 02.2	+0.3
MD31	**MD31**	2.58	217	P		**Pn**	14 53 58.2	+0.6
CZD	**Col de Zad**	2.61	223	P		**Pn**	14 53 59.6	+1.6
EQES	**Quesada**	2.84	358	Pn		**Pn**	14 54 03.7	+2.6
EQES				Sn		**Sn**	14 54 37.8	+2.8
EQES				*i* Vmb_Lg			14 54 41.7	
CART	**Cartagena**	3.05	30	P		**Pn**	14 54 03.4	-0.4
CART				S		**Sn**	14 54 38.6	-1.3
ESPR	**Espera**	3.05	310	Pn		**Pn**	14 54 05.8	+1.9
ESPR				Sn		**Sn**	14 54 42.5	+2.5
ESPR				*i* Vmb_Lg			14 54 49.3	
EZAR	**Zarzadilla de**	3.08	18	Pn		**Pn**	14 54 04.4	+0.1
EZAR				Sn		**Sn**	14 54 39.5	-1.2
FIGM	**Figuig**	3.14	153	P		**Pn**	14 54 07.3	+2.0
EMUR	**La Murta**	3.18	25	Pn		**Pn**	14 54 06.2	+0.4
EMUR				Sn		**Sn**	14 54 42.5	-0.8
EMUR				*i* Vmb_Lg			14 54 44.6	
EADA	**Adamuz**	3.47	338	Pn		**Pn**	14 54 11.0	+1.3
EADA				Sn		**Sn**	14 54 49.6	-0.8
EADA				*i* Vmb_Lg			14 54 59.8	
ECAB	**El Cabril**	3.71	328	Pn		**Pn**	14 54 14.2	+1.2
ECAB				Sn		**Sn**	14 54 54.6	-1.5
ECAB				*i* Vmb_Lg			14 55 06.3	
ETOB	**Tobarra**	3.84	16	Pn		**Pn**	14 54 17.1	+2.3
ETOB				Sn		**Sn**	14 54 58.6	-1.0
ETOB				*i* Vmb_Lg			14 55 03.4	
EMIN	**Mina Concepcio**	4.13	314	Pn		**Pn**	14 54 18.9	+0.2
EMIN				Sn		**Sn**	14 55 04.1	-2.5
EMIN				*i* Vmb_Lg			14 55 05.4	
AFON	**Font Roja**	4.16	27	Pn		**Pn**	14 54 21.4	+2.1
AFON				Sn		**Sn**	14 55 09.3	+1.7
EGRO	**El Granado**	4.50	306	Pn		**Pn**	14 54 24.0	+0.3
EGRO				Sn		**Sn**	14 55 12.6	-3.0
EGRO				*i* Vmb_Lg			14 55 15.0	
PVAQ	**Vaqueiros**	4.58	304	P		**Pn**	14 54 25.6	+0.7
PVAQ				S		**Sn**	14 55 15.7	-2.1
PVAQ	**Vaqueiros**	4.58	304	*e*Pn		**Pn**	14 54 25.7	+0.7
PVAQ				*e*Sn		**Sn**	14 55 16.3	-1.5
PVAQ				A		A	14 55 19.4	
	3.2nm,0.5s							
PBAR	**Barrancos**	4.62	315	*e*Pn		**Pn**	14 54 26.3	+0.9
PBAR				*e*Sn		**Sn**	14 55 16.8	-1.7
PBAR				A		A	14 55 25.6	
	2.2nm,0.5s							
PBDV	**Barranco-do-Ve**	4.66	301	*e*Pn		**Pn**	14 54 27.2	+1.2
PAB	**San Pablo**	4.72	346	Pn		**Pn**	14 54 29.1	+2.2
PAB				Sn		**Sn**	14 55 21.2	-0.1
PAB				Sg		**Sb**	14 55 35.0	-0.3
PAB				*i* Vmb_Lg			14 55 39.0	
ESDC	**Sonseca Array**	4.78	350	Pn		**Pn**	14 54 29.1	+1.4
ESDC				Sn		**Sn**	14 55 23.5	+0.8
ESDC				Sg		**Sb**	14 55 36.5	-0.5
ESDC				*i* Vmb_Lg			14 55 38.8	
ECHE	**Chera**	4.88	18	Pn		**Pn**	14 54 31.2	+2.1
ECHE				Sn		**Sn**	14 55 24.6	-0.5
PCVE	**Castro Verde**	4.92	304	*e*Pn		**Pn**	14 54 31.6	+2.0
EBAD	**Badajoz**	5.01	320	Pn		**Pn**	14 54 31.5	+0.6
EBAD				Sn		**Sn**	14 55 27.6	-0.8
EBAD				*i* Vmb_Lg			14 55 30.0	
MESJ	**Messejana**	5.15	305	*e*P		**Pn**	14 54 33.3	+0.5
MESJ	**Messejana**	5.15	305	*e*Pn		**Pn**	14 54 34.0	+1.2
MORF	**Marmelete**	5.20	298	*e*Pn		**Pn**	14 54 34.9	+1.5
EIBI	**Ibiza**	5.30	39	Pn		**Pn**	14 54 35.2	+0.3
PESTR	**Estremoz**	5.41	318	P		**Pn**	14 54 38.0	+1.7
PESTR				S		**Sn**	14 55 35.5	-2.6
PESTR	**Estremoz**	5.41	318	*e*Pn		**Pn**	14 54 38.3	+2.0
PESTR				*e*Sn		**Sn**	14 55 37.5	-0.6
PESTR				A		A	14 55 39.7	
	2.1nm,0.7s							
PNCL	**Nicolau / Gran**	5.50	307	*e*Pn		**Pn**	14 54 39.1	+1.5
PMRV	**Marv??o**	5.71	323	*e*Pn		**Pn**	14 54 41.9	+1.4
PMRV				*e*Sn		**Sn**	14 55 43.8	-1.9
PMRV				A		A	14 55 47.5	
	2.1nm,0.9s							
EMOS	**Mosqueruela**	5.74	19	Pn		**Pn**	14 54 44.7	+3.8
GUD	**Guadarrama**	5.76	351	Pn		**Pn**	14 54 42.9	+1.7
GUD				Sn		**Sn**	14 55 45.6	-1.4
GUD				Sg		**Sb**	14 56 05.4	+0.1
GUD				*i* Vmb_Lg			14 56 12.0	
ETOR	**Torete**	5.89	6	Pn		**Pn**	14 54 45.1	+2.0
ETOR				Sn		**Sn**	14 55 48.3	-1.9
ETOR				Sg		**Sb**	14 56 07.7	-1.3
ETOR				*i* Vmb_Lg			14 56 21.7	
PMTG	**Montargil**	5.90	316	*e*Pn		**Pn**	14 54 44.8	+1.7
PMTG				*e*Sn		**Sn**	14 55 48.5	-1.8
PCBR	**Castelo Branco**	6.08	325	*e*Pn		**Pn**	14 54 47.3	+1.9
PSBE	**So Bento**	6.53	316	*e*Pn		**Pn**	14 54 52.9	+1.2
ETOS	**Mallorca**	6.63	42	Pn		**Pn**	14 54 54.8	+1.8
MVO	**Moncorvo**	6.99	334	*e*Pn		**Pn**	14 54 59.7	+1.6
MVO				*e*Sn		**Sn**	14 56 14.4	-2.8
MVO				A		A	14 56 18.5	
	2.9nm,0.6s							
PVRL	**Vila Real**	7.35	331	*e*Pn		**Pn**	14 55 04.8	+1.8
PBRG	**Braganca**	7.47	337	*e*Pn		**Pn**	14 55 06.8	+2.2
POLO	**Lamas de Olo**	7.47	331	*e*Pn		**Pn**	14 55 06.4	+1.7
ECAL	**Calabor**	7.59	338	Pn		**Pn**	14 55 07.9	+1.6
ECAL				Sn		**Sn**	14 56 29.3	-2.6
ECAL				*i* Vmb_Lg			14 56 34.2	
ELOB	**Lobios**	7.99	331	Pn		**Pn**	14 55 12.8	+0.9
ELOB				Sn		**Sn**	14 56 39.0	-2.8
ELOB				*i* Vmb_Lg			14 56 43.6	

IDC **14** *14:56:46.9±1.3, 23°.91S×82°.45E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=55.5km s-min=27.6km az=3.0*
NEIC **14** *14:56:50.0±0.7, 24°.2S±0°.3×82°.4E±0°.2, h10km±2km, mb4.0/5, Error ellipse: s-maj=50.8km s-min=28.8km az=340.0*

ISC 14 14:56:48.4±1.0, 23°.9S±0°.2×82°.5E±0°.2, h10km, n15, σ0°37/9, mb4.1/6, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H08S2	**Diego Garcia H**	18.79	328	T		T	15 20 25.5	
	baz=151,slow=74,SNR=25							
H08S1	**Diego Carcia H**	18.80	328	T		T	15 20 27.0	
	baz=151,slow=74,SNR=18							
H08S3	**Diego Garcia H**	18.81	328	T		T	15 20 27.3	
	baz=151,slow=74,SNR=35							
H01W3	**Cape Leeuwin H**	29.57	119	T		T	15 33 40.9	
	baz=284,slow=74							
H01W2	**Cape Leeuwin H**	29.57	119	T		T	15 33 42.2	
	baz=284,slow=74							
H01W1	**Cape Leeuwin H**	29.59	119	T		T	15 33 43.9	
	baz=284							
ASAR	**Alice Springs**	46.86	101	P		**P**	15 05 18.9	-0.1
	1.4nm,0.5s,baz=261,slow=7.4,SNR=16 1.4nm,0.5s							
WRA	**Warramunga Arr**	48.08	96	P		**P**	15 05 28.6	-0.1
	1.6nm,0.7s,baz=258,slow=8.3,SNR=14 1.6nm,0.7s							
WRA	**Warramunga Arr**	48.08	96	P		**P**	15 05 29.4	+0.8
WRA				IAmb		IAmb	15 05 37.9	
	comp=Z,0.4nm,1.2

CHMS ⇓Lg Lg 15 07 50.4
707nm,1.2s
KK31 Karatay Array 4.62 342 Pn **Pn 15 06 33.6 +2.0**
KK31 Karatay Array 4.62 342 PN **Pn 15 06 34.1 +2.5**
KK31 15 07 28.3
KK31 *e* 15 07 44.0
KK31 Karatay Array 4.62 342 Pn **Pn 15 06 34.1 +2.5**
83nm,0.3s,baz=149,slow=11,SNR=1980
KK31 ⇑Sn **Sn 15 07 28.4 +3.1**
908nm,1.0s,baz=135,slow=22,SNR=6.3
KK31 ⇑Lg Lg 15 07 47.7
602nm,0.8s,baz=168,slow=26,SNR=4.2
KKAR Karatay Array 4.62 342 Pn **Pn 15 06 33.8 +2.2**
KKAR Karatay Array 4.62 342 PN **Pn 15 06 33.8 +2.2**
TKM2 Tokmak 2 4.82 29 P **Pn 15 06 38.9 +4.3**
SNR=8.6
TKM2 Tokmak 2 4.82 29 *i* PN **Pn 15 06 36.8 +2.3**
TKM2 pmax pmax
comp=Z,215nm,1.0s
TKM2 Tokmak 2 4.82 29 ⇑Pn **Pn 15 06 36.9 +2.3**
comp=Z,72nm,0.6s
TKM2 ⇑Pg **Pg 15 06 52.3 -1.7**
comp=Z,274nm,1.0s
TKM2 ⇓Lg Lg 15 07 57.1
comp=Z,1μm,1.5s
CEP Cherat 4.91 185 P **P 15 06 42.5 -0.5**
KBL Kabul 5.00 214 **Pn 15 06 39.0 +2.0**
KBL Kabul 5.00 214 PN **Pn 15 06 39.0 +2.0**
SGDS Sogindy 5.00 18 *e*PN **Pn 15 06 37.8 +0.9**
SGDS *e* 15 06 52.4
SGDS *e* 15 07 37.0
SGDS Sogindy 5.00 18 *e*P **Pb 15 06 52.5 +3.1**
comp=Z,135nm,1.0s
SGDS *e*S **Sb 15 07 55.8 +6.2**
comp=Z,380nm,1.2s
SGDS Sogindy 5.00 18 *e*Pn **Pn 15 06 37.8 +0.9**
baz=18
SGDS *e*Pg **Pb 15 06 52.5 +3.1**
baz=18
SGDS *e*Sn **Sn 15 07 37.0 +2.2**
baz=18
SGDS Sogindy 5.00 18 Pg **Pb 15 06 52.5 +3.1**
comp=Z,135nm,1.0s
SGDS Lg Lg 15 07 55.8
comp=Z,380nm,1.2s
KST Kastek 5.07 30 *e*P **Pb 15 06 52.7 +2.1**
comp=Z,178nm,1.1s
KST *e*S **Sb 15 07 56.5 +5.1**
comp=Z,478nm,1.2s
KST Kastek 5.07 30 Pg **Pb 15 06 52.7 +2.1**
comp=Z,178nm,1.1s
KST Lg Lg 15 07 56.5
comp=Z,478nm,1.2s
CHCP Chirah Chowk 5.10 172 P P 15 06 44.4 +4.1
NIL Nilore 5.10 173 Pn Pn 15 06 42.9 +4.6
NIL Nilore 5.10 173 PN Pn 15 06 42.9 +4.6
MTBS Maitube 5.33 33 *e*P **Pb 15 06 58.3 +3.3**
comp=Z,257nm,1.2s
MTBS *e*S **Sb 15 08 05.7 +6.6**
comp=Z,376nm,1.6s
MTBS Maitube 5.33 33 Pg **Pb 15 06 58.3 +3.3**
comp=Z,257nm,1.2s
MTBS Lg Lg 15 08 05.7
comp=Z,376nm,1.6s
KRBS Karabastau 5.53 25 *e*P **Pb 15 07 00.0 +1.7**
comp=Z,87nm,0.5s
KRBS *e*S **Sb 15 08 09.1 +4.4**
comp=Z,256nm,0.7s
KRBS Karabastau 5.53 25 Pg **Pb 15 06 60.0 +1.7**
comp=Z,87nm,0.5s
KRBS Lg Lg 15 08 09.1
comp=Z,256nm,0.7s
AAA Alma-Ata 5.61 36 *e*PN **Pn 15 06 44.9 -0.3**
AAA *e* 15 07 03.2
AAA Alma-Ata 5.61 36 *e*P **Pb 15 07 03.4 +3.7**
comp=Z,322nm,0.9s
AAA *e*S **Sb 15 08 14.6 +7.6**
comp=Z,998nm,1.5s
AAA Alma-Ata 5.61 36 *e*Pn **Pn 15 06 45.0 -0.3**
baz=35
AAA *e*Pg **Pb 15 07 03.2 +3.6**
baz=35
AAA Alma-Ata 5.61 36 Pg **Pb 15 07 03.4 +3.7**
comp=Z,322nm,0.9s
AAA Lg Lg 15 08 14.6
comp=Z,998nm,1.5s
MDOK Medeo 5.63 37 *e*PN **Pn 15 06 45.9 +0.3**
MDOK *e* 15 07 05.0
MDOK *e* 15 07 51.5
MDOK Medeo 5.63 37 *e*P **Pb 15 07 03.9 +3.7**
comp=Z,169nm,1.1s
MDOK *e*S **Sb 15 08 15.0 +7.2**
comp=Z,555nm,1.1s
MDOK Medeo 5.63 37 *e*Pn **Pn 15 06 46.0 +0.3**
baz=36
MDOK *e*Pg **Pg 15 07 05.0 -4.5**
baz=36
MDOK *e*Sn **Sn 15 07 51.5 +1.1**
baz=36
MDOK Medeo 5.63 37 ⇑Pn **Pn 15 06 48.4 +2.7**
comp=Z,73nm,1.2s
MDOK Pg **Pb 15 07 03.9 +3.7**
comp=Z,169nm,1.1s
MDOK ⇓Pg **Pg 15 07 05.5 -4.0**
comp=Z,219nm,0.8s
MDOK Lg Lg 15 08 15.0
comp=Z,555nm,1.1s
MDOK ⇑Lg Lg 15 08 23.8
comp=Z,1μm,2.0s
KTBS Karatobe 5.91 31 *e*P **Pb 15 07 08.1 +3.3**
comp=Z,134nm,0.9s
KTBS *e*S **Sb 15 08 22.7 +7.0**
comp=Z,109nm,0.9s
KTBS Karatobe 5.91 31 Pg **Pb 15 07 08.1 +3.3**
comp=Z,134nm,0.9s
KTBS Lg Lg 15 08 22.7
comp=Z,109nm,0.9s
KUU Kurty 5.93 28 *e*PN **Pn 15 06 51.0 +1.4**
KUU Kurty 5.93 28 *e*P **Pb 15 07 07.6 +2.4**
comp=Z,103nm,0.9s
KUU *e*S **Sb 15 08 22.1 +5.8**
comp=Z,199nm,1.9s
KUU Kurty 5.93 28 *e*Pn **Pn 15 06 51.0 +1.4**
baz=28
KUU Kurty 5.93 28 Pg **Pb 15 07 07.6 +2.4**
comp=Z,103nm,0.9s
KUU Lg Lg 15 08 22.1
comp=Z,199nm,1.9s
THW Thamme Wali 5.95 186 P Pn 15 06 54.7 +4.9
SATY Saty 6.25 44 *e*PN **Pn 15 06 54.4 +0.4**
SATY Saty 6.25 44 *e*P **Pb 15 07 15.2 +4.5**
comp=Z,192nm,1.1s
SATY *e*S **Sg 15 08 35.1 -7.1**
comp=Z,383nm,2.0s
SATY Saty 6.25 44 *e*Pn **Pn 15 06 54.5 +0.4**
baz=44
SATY Saty 6.25 44 Pg **Pb 15 07 15.2 +4.5**
comp=Z,192nm,1.1s
JMU Jammu 6.31 161 *ex* Pn 15 06 58.7 +3.9
ZHN Zhinishke 6.34 44 *e*PN **Pn 15 06 56.3 +1.0**
ZHN *e* 15 07 13.3
ZHN Zhinishke 6.34 44 *e*P **Pb 15 07 13.8 +1.7**
comp=Z,56nm,1.1s
ZHN *e*S **Sb 15 08 32.7 +4.7**
comp=Z,165nm,1.6s
ZHN Zhinishke 6.34 44 *e*Pn **Pn 15 06 56.4 +1.1**
baz=44
ZHN *e*Pb **Pb 15 07 13.4 +1.2**
baz=44
ZHN Zhinishke 6.34 44 Pg **Pb 15 07 13.8 +1.7**
comp=Z,56nm,1.1s
ZHN Lg Lg 15 08 32.7
comp=Z,165nm,1.6s
KURS Kuram 6.42 40 *e*P **Pg 15 07 20.4 -4.2**
comp=Z,118nm,1.0s
KURS *e*S **Sg 15 08 44.2 -3.6**
comp=Z,275nm,1.9s
KURS Kuram 6.42 40 Pg **Pg 15 07 20.4 -4.2**
comp=Z,118nm,1.0s
BTLS Baital 6.42 10 *e*PN **Pn 15 06 57.8 +1.5**
BTLS pmax pmax
comp=Z,9.0nm,0.7s
BTLS Baital 6.42 10 *e*P Pb 15 07 18.8 +5.3
comp=Z,50nm,0.6s
BTLS Baital 6.42 10 *e*Pn **Pn 15 06 57.8 +1.5**
comp=Z,9.3nm,0.7s,baz=9.9
BTLS Baital 6.42 10 Pg Pb 15 07 18.8 +5.3
comp=Z,50nm,0.6s
BTLS Lg Lg 15 08 40.7
comp=Z,112nm,0.8s
UZB Uzynbulak 6.65 46 *e*PN **Pn 15 06 59.0 -0.5**
UZB *e* 15 07 21.9
UZB Uzynbulak 6.65 46 *e*P **Pb 15 07 21.6 +4.1**
comp=Z,53nm,1.0s
UZB *e*S **Sb 15 08 45.8 +8.8**
comp=Z,181nm,1.4s
UZB Uzynbulak 6.65 46 *e*Pn **Pn 15 06 59.1 -0.5**
baz=46
UZB *e*Pg **Pb 15 07 21.9 +4.4**
baz=46
UZB Uzynbulak 6.65 46 Pg **Pb 15 07 21.6 +4.1**
comp=Z,53nm,1.0s
UZB Lg Lg 15 08 45.8
comp=Z,181nm,1.4s
KPKS Kokpek 6.67 43 *e*PN **Pn 15 07 00.1 +0.3**
KPKS *e* 15 07 22.6
KPKS pmax pmax
comp=Z,12nm,1.0s
KPKS Kokpek 6.67 43 *e*P **Pb 15 07 18.5 +0.6**
comp=Z,129nm,1.0s
KPKS *e*S **Sb 15 08 40.2 +2.5**
comp=Z,5μm,5.4s
KPKS Kokpek 6.67 43 *e*Pn **Pn 15 07 00.2 +0.3**
comp=Z,12nm,1.0s,baz=43
KPKS *e*Pg Pb 15 07 22.6 +4.8
baz=43
KPKS *e*Lg Lg 15 08 53.1
baz=43
KPKS Kokpek 6.67 43 Pg **Pb 15 07 18.5 +0.6**
comp=Z,129nm,1.0s
ARXS Arharly 6.80 35 *e*P **Pb 15 07 23.9 +3.8**
ARXS *e*S **Sb 15 08 49.8 +8.4**
comp=Z,194nm,1.2s
ARXS Arharly 6.80 35 Pg **Pb 15 07 23.9 +3.8**
ARXS Lg Lg 15 08 49.8
comp=Z,194nm,1.2s
THN Thein Dam 6.81 156 *ex* Pn 15 07 05.6 +3.9
THN *ex* **Sn 15 08 24.4 +5.1**
SHLS Shalkode 6.91 48 *e*PN **Pn 15 07 07.2 +4.2**
SHLS *e* 15 07 32.1
SHLS pmax pmax
comp=Z,9.0nm,0.9s
SHLS Shalkode 6.91 48 *e*P **Pg 15 07 33.0 -0.9**
comp=Z,150nm,0.8s
SHLS *e*S **Sg 15 09 05.9 +2.6**
comp=Z,240nm,1.7s
SHLS Shalkode 6.91 48 *e*Pn **Pn 15 07 07.3 +4.2**
comp=Z,8.9nm,0.9s,baz=49
SHLS *e*Pg **Pg 15 07 32.1 -1.8**
baz=49
SHLS Shalkode 6.91 48 Pg **Pg 15 07 33.0 -0.9**
comp=Z,150nm,0.8s
KTMS Ketmen 7.60 49 *e*P Pb 15 07 39.3 +5.6
comp=Z,26nm,0.9s
KTMS *e*S Sg 15 09 16.5 -9.1
comp=Z,43nm,1.3s
KTMS Ketmen 7.60 49 Pg Pb 15 07 39.3 +5.6
comp=Z,26nm,0.9s
TDK Taldyqorghan 7.68 33 *e*P **Pn 15 07 14.7 +1.1**
TDK pmax pmax
comp=Z,7.0nm,0.6s
TDK Taldyqorghan 7.68 33 *e*P **Pb 15 07 38.4 +3.4**
comp=Z,144nm,1.0s
TDK *e*S **Sb 15 09 14.5 +7.9**
comp=Z,414nm,1.9s
TDK Taldyqorghan 7.68 33 *e*Pn **Pn 15 07 14.7 +1.1**
comp=Z,7.0nm,0.6s,baz=33
TDK *e*Pg Pb 15 07 40.8 +5.8
baz=33
TDK Taldyqorghan 7.68 33 Pg **Pb 15 07 38.4 +3.4**
comp=Z,144nm,1.0s
DJR Jarkent 7.85 42 *e*P **Pb 15 07 42.2 +4.4**
comp=Z,40nm,1.1s
DJR *e*S Sb 15 09 20.6 +9.2
comp=Z,122nm,1.3s
DJR Jarkent 7.85 42 Pg **Pb 15 07 42.2 +4.4**
comp=Z,40nm,1.1s
DJR Lg Lg 15 09 20.6
comp=Z,122nm,1.3s
BHK Bhakra 7.98 155 *e*P **Pn 15 07 20.5 +2.8**
BHK *ex* **Sn 15 08 50.8 +2.8**
SMLA Simla 8.50 152 *e*P **Pn 15 07 26.9 +2.0**
DDI Dehra Dun 9.56 150 *e*P **Pn 15 07 40.9 +1.4**
MAKZ Makanchi 10.68 38 ⇓Pn **Pn 15 07 57.2 +2.5**
comp=Z,55nm,0.9s
NDI New Delhi 10.77 157 *e*P **Pn 15 07 58.0 +2.0**
MK31 Makanchi Array 10.82 39 Pn **Pn 15 07 56.5 -0.1**
MK31 Makanchi Array 10.82 39 *i* P **Pn 15 07 57.8 +1.1**
MK31 pmax pmax
comp=Z,34nm,0.8s
MK31 Makanchi Array 10.82 39 ⇓Pn **Pn 15 07 58.2 +1.6**
comp=Z,34nm,0.8s,baz=213,slow=12,SNR=102
MKAR Makanchi Array 10.82 39 Pn **Pn 15 07 57.8 +1.1**
comp=Z,0.7nm,0.3s,baz=215,slow=14,SNR=32
MKAR Lg Lg 15 11 00.8
comp=Z,0.2nm,0.3s,baz=216,slow=32,SNR=3.3
comp=Z,6.5nm,0.7s
MKAR Makanchi Array 10.82 39 Pn **Pn 15 07 56.9 +0.2**
MKAR Makanchi Array 10.82 39 P **Pn 15 07 56.9 +0.2**
AYAN Aya Nagar 10.93 158 *e*P **Pn 15 07 59.8 +1.6**
KUDL Kundal 11.07 161 *e*P **Pn 15 07 59.4 -0.8**
PTH Pithoragarh 11.18 143 *e*P **Pn 15 08 00.9 -0.8**
BRZS Berezniki 11.26 1 *e*P **Pn 15 08 02.2 -0.4**
BRZS *e* 15 10 08.5
BRZS pmax pmax
comp=Z,15nm,1.5s
BRZS Berezniki 11.26 1 *e*Pn **Pn 15 08 02.2 -0.4**
comp=Z,15nm,1.5s,baz=0.6
BRZS *e*Sn **Sn 15 10 08.5 +0.1**
baz=0.6
LGTI Lohaghat 11.27 143 *e*P **Pn 15 08 00.8 -2.1**
GEYT Alibeck 11.30 270 Pn **Pn 15 08 04.3 +1.1**
comp=Z,3.3nm,0.3s,baz=99,slow=9.6,SNR=31
GEYT Sn **Sn 15 10 08.3 -1.3**
comp=Z,5.5nm,0.3s,baz=189,slow=16,SNR=5.3
comp=Z,36nm,0.7s
GEYT Alibeck 11.30 270 **Pn 15 08 02.1 -1.1**
GYA0B ALIBECK ARRAY 11.30 270 **Pn 15 08 03.3 0.0**
GYA0B ALIBECK ARRAY 11.30 270 ⇑Pn **Pn 15 08 04.1 +0.8**
JASL Jaisalmer 11.84 187 *e*P **Pn 15 08 12.0 +1.4**
AJM Ajmer 12.35 171 *e*P **Pn 15 08 19.1 +1.5**
WMQ Urumqi 12.54 61 *e*P **Pn 15 08 22.9 +2.7**
WMQ sP 15 08 28.9
WMQ pmax pmax
comp=Z,45nm,0.7s
WMQ LR LR
comp=Z,3μm,8.1s
WMQ LR LR
comp=Z,2μm,6.9s
WMQ LR LR
comp=Z,490nm,12.7s
ZSN Zaisan 12.57 42 *e*P **Pn 15 08 21.2 +0.7**
ZSN pmax pmax
comp=Z,4.0nm,1.2s
ZSN Zaisan 12.57 42 *e*Pn **Pn 15 08 21.3 +0.7**
comp=Z,4.4nm,1.2s,baz=42
ZSN *e*Lg Lg 15 12 00.1
baz=42
KURBB Kurchatov Arra 12.65 18 Pn **Pn 15 08 19.9 -1.7**
comp=Z,0.2nm,0.3s,baz=208,slow=12,SNR=27
KURBB Sn **Sn 15 10 37.2 -5.3**
comp=Z,0.1nm,0.3s,baz=130,slow=51,SNR=1.5
KURBB Lg Lg 15 11 59.4
comp=Z,0.2nm,0.3s,baz=202,slow=27,SNR=5.2
KURBB LR LR 15 13 20.8
comp=Z,716nm,19.2s,baz=183,slow=38
comp=Z,4.4nm,0.8s
KURBB Kurchatov Arra 12.65 18 ⇑Pn **Pn 15 08 22.4 +0.8**
comp=Z,21nm,1.1s
KURK Kurchatov 12.76 18 **Pn 15 08 20.7 -2.4**
KURK Kurchatov 12.76 18 *ce*P **Pn 15 08 22.9 -0.2**
KURK pmax pmax
comp=Z,24nm,1.3s
KURK Kurchatov 12.76 18 ⇑Pn **Pn 15 08 24.3 +1.2**
comp=Z,16nm,1.0s
SEM Semipalatinsk 12.93 23 *e*P **Pn 15 08 25.5 0.0**
SEM pmax pmax
comp=Z,5.0nm,1.1s
SEM Semipalatinsk 12.93 23 *e*Pn **Pn 15 08 25.6 0.0**
comp=Z,5.2nm,1.1s,baz=23
AB31 Akbulak array 13.84 324 Pn **Pn 15 08 37.9 +0.1**
comp=Z,20nm,0.5s,baz=131,slow=12,SNR=477
ABKAR Akbulak array 13.84 324 **Pn 15 08 35.7 -2.1**
DANN Dangsing 13.98 134 *e*P **Pn 15 08 36.0 -4.2**
comp=Z,191nm,0.6s
JHNI Jhansi 14.18 157 *ex* **Pn 15 08 40.4 -2.2**
JHNI *ex* **Sn 15 11 13.5 -6.5**
BVA0 Borovoye Array 14.38 355 *i* P **Pn 15 08 42.6 -2.6**
BVA0 Borovoye Array 14.38 355 ⇑Pn **Pn 15 08 46.0 +0.8**
comp=Z,31nm,0.8s,baz=169,slow=12,SNR=64
BRVK Borovoye 14.42 355 **Pn 15 08 43.8 -1.9**
BRVK Borovoye 14.42 355 *ce*P **Pn 15 08 44.7 -1.0**
BRVK pmax pmax
comp=Z,29nm,1.3s
BRVK Borovoye 14.42 355 ⇓Pn **Pn 15 08 46.7 +0.9**
comp=Z,53nm,1.1s
GKN Gorkha 14.74 133 *e*P Pn 15 08 45.3 -5.2
comp=Z,45nm,0.3s
KKN Kakani 15.28 132 *e*P **Pn 15 08 52.5 -5.1**
comp=Z,34nm,0.8s
DMN Daman 15.31 133 *e*P **Pn 15 08 53.4 -4.8**
comp=Z,27nm,0.4s
PKIN Phulchoki 15.50 132 *e*P **Pn 15 08 55.1 -5.6**
comp=Z,94nm,0.7s
PKI Pulchoki 15.51 132 *e*P **Pn 15 08 55.0 -5.9**
comp=Z,135nm,0.8s
GUN Gumba 15.54 130 *e*P **Pn 15 08 56.5 -4.7**
comp=Z,26nm,0.4s
AKTO Aktyubinsk 15.55 323 Pn **Pn 15 09 00.7 -0.3**
comp=Z,1.2nm,0.3s,baz=129,slow=14,SNR=53
AKTO Sn **Sn 15 11 48.4 -4.9**
comp=Z,1.6nm,0.3s,baz=204,slow=16,SNR=7.1
comp=Z,12nm,0.7s
AKTO Aktyubinsk 15.55 323 ⇓Pn **Pn 15 09 00.7 -0.3**
comp=Z,187nm,1.1s
JIRN Jiri 15.91 130 *e*P **Pn 15 09 01.0 -5.1**
comp=Z,34nm,0.4s
BHPL Bhopal 16.00 163 *ex* **Pn 15 09 03.9 -3.1**
RAMN Ramite 16.68 131 *e*P **Pn 15 09 09.9 -5.9**
comp=Z,145nm,0.7s
JBP Jabalpur 16.78 155 *e*P **Pn 15 09 10.3 -6.5**
JBP *e*S **Sn 15 12 17.4 -5.9**
ODAN Odare 17.22 129 *e*P **Pn 15 09 16.8 -5.8**
comp=Z,26nm,0.6s
ZAA0 Zalesovo Array 17.41 25 P **Pn 15 09 22.1 -2.5**
ZALV Zalesovo Beam 17.41 25 P **Pn 15 09 22.8 -1.8**
comp=Z,2.7nm,0.3s,baz=214,slow=12,SNR=32
ZALV LR LR 15 16 22.2
comp=Z,364nm,19.7s,baz=218,slow=38
comp=Z,14nm,0.5s
ZALV Zalesovo Beam 17.41 25 P **Pn 15 09 21.9 -2.6**
LSA Lhasa 17.86 115 Pn **Pn 15 09 29.0 -1.8**
LSA Lhasa 17.86 115 P **Pn 15 09 29.0 -1.8**
LSA pmax pmax
comp=Z,35nm,0.9s
GOMU GeErMu 17.92 91 P **P 15 09 32.9 +0.9**
GOMU sP sP 15 09 38.4 +0.4
GOMU S **Sn 15 12 51.8 +0.4**
GOMU pmax pmax
comp=Z,14nm,0.9s
GOMU pmax pmax
comp=Z,140nm,6.8s
GOMU LR LR
comp=Z,360nm,14.7s
GOMU LR LR
comp=Z,440nm,13.1s
GOMU LR LR
comp=Z,480nm,11.0s
AKL Akola 18.39 166 *e*P **P 15 09 35.7 -1.1**
NGP Nagpur 18.41 160 *e*P **Pn 15 09 35.6 -1.5**
BLSP Bilaspur 18.50 151 *e*P **P 15 09 36.5 -1.6**
MSFE Esma-Masafi 19.16 231 *i* Pn **Pn 15 09 47.8 +1.6**
SNR=6.2
MAK Makhachkala 19.32 291 *e*P **P 15 09 44.9 -2.1**
MAK *e*S **Sn 15 13 21.3 -3.3**
MAK pmax pmax
comp=Z,170nm,1.4s
MAK MLR MLR
comp=Z,490nm,10.0s
WSAR Wadi Sarin 19.43 221 P **Pn 15 09 51.2 +1.8**
comp=Z,0.9nm,0.3s,baz=56,slow=12,SNR=9.5
WSAR LR LR 15 18 46.0
comp=Z,131nm,19.9s,baz=54,slow=41
comp=Z,18nm,0.9s
UOSS Minazif 19.44 230 P **P 15 09 48.2 -0.2**
UOSS Minazif 19.44 230 Pn **Pn 15 09 50.6 +1.1**
ASHO Ashiyiah 19.72 230 *i* Pn **Pn 15 09 54.2 +1.3**
SNR=6.6
FAQ Al Faqa, Dubai 19.95 231 Pn **Pn 15 09 56.0 +0.3**
ARU Arti 19.97 337 P **P 15 09 53.8 -0.2**
baz=148,slow=4.9,SNR=12
comp=Z,6.8nm,0.5s
ARU Arti 19.97 337 P **P 15 09 53.2 -0.7**
ARU lAmb lAmb 15 10 02.5
comp=Z,46nm,0.9s
ARU Arti 19.97 337 *c* P **P 15 09 53.2 -0.7**
ARU S **S 15 13 38.7 +0.3**
ARU pmax pmax
comp=Z,7.0nm,0.6s
ARU MLR MLR
comp=Z,374nm,12.0s
POO Poona 20.16 176 *e*P Pn 15 09 58.7 +0.6
POO lAmb lAmb 15 10 03.6
comp=Z,126nm,1.4s
ASUD Al Ashush, Dub 20.20 231 Pn Pn 15 09 59.5 +0.9
ALNE Al Ain 20.38 229 P Pn 15 10 00.5 -0.2
GROC Groznyy 20.59 291 *e*P **P 15 09 58.4 -2.4**
GROC *e*S **S 15 13 50.9 0.0**
GROC pmax pmax
comp=Z,71nm,0.5s
SHL Shillong 20.98 123 *e*P Pn 15 10 07.0 -0.9
SHL lAmb lAmb 15 10 14.6
comp=Z,31nm,0.7s
GTA Gaotai 21.22 80 ⇑P **P 15 10 08.8 +1.0**
GTA pP sP 15 10 14.3 +0.5
GTA sP pP 15 10 17.3 +5.4
GTA S **S 15 14 02.0 -1.8**
GTA pmax pmax
comp=Z,32nm,0.8s
GTA pmax pmax
comp=Z,160nm,4.7s
GTA LR LR
comp=Z,590nm,12.7s
GTA LR LR
comp=Z,370nm,13.1s
GTA LR LR
comp=Z,440nm,13.8s
GNI Garni 21.43 283 P **P 15 10 10.2 +0.1**
comp=Z,9.5nm,0.6s,baz=10.0,slow=14,SNR=2.1
comp=Z,9.5nm,0.6s
GNI Garni 21.43 283 P **P 15 10 10.3 +0.3**
GNI Garni 21.43 283 *i* P **P 15 10 15.4 +5.4**
GNI pmax pmax
comp=Z,148nm,1.0s
GNI Garni 21.43 283 P **P 15 10 15.6 +5.5**
BWNR Bhubaneshwar 21.68 144 *ex* **P 15 10 15.6 +3.0**
HYBB Hyderabad (bro 21.88 164 *eP* **P 15 10 14.9 0.0**
HYBB epP **sP 15 10 19.0 -2.3**
ZEI Tsey 21.96 290 *e*P **P 15 10 19.7 +3.9**
ZEI pmax pmax
comp=Z,44nm,1.3s
BELG Belogornoye 21.98 317 P **P 15 10 15.3 -0.3**
comp=Z,81nm,0.9s,baz=291,slow=1.4,SNR=12
BELG S **S 15 14 17.4 -0.5**
comp=Z,25nm,0.9s,baz=88,slow=15,SNR=3.0
comp=Z,81nm,0.9s
BELG Belogornoye 21.98 317 *i* P **P 15 10 15.6 0.0**
BELG pmax pmax
comp=Z,19nm,0.9s
ONI Oni 22.29 289 P **P 15 10 20.0 +0.8**
ONI Oni 22.29 289 P **P 15 10 20.0 +0.8**
ONI pmax pmax
comp=Z,106nm,1.0s
MZR Muzera 22.54 231 P **P 15 10 22.4 +0.5**
KBZ Khabaz 22.73 292 P **P 15 10 24.0 +0.4**
comp=Z,7.7nm,0.7s,baz=126,slow=9.8,SNR=10
comp=Z,7.7nm,0.7s
KBZ Khabaz 22.73 292 *ce*P **P 15 10 24.5 +0.8**
KBZ pmax pmax
comp=Z,31nm,0.9s
KVAR Kislovodsk Arr 22.88 293 P **P 15 10 27.7 +2.2**
comp=Z,5.2nm,0.5s,baz=260,slow=23,SNR=3.3
KVAR LR LR 15 21 48.2
comp=Z,193nm,18.6s,baz=243,slow=43
comp=Z,5.2nm,0.5s
KIV Kislovodsk 22.89 293 P **P 15 10 23.8 -1.7**
KIV lAmb lAmb 15 10 50.7
comp=Z,32nm,0.8s

KIV **Kislovodsk** 22.89 293 *e*P **P** **15 10 26.3 +0.8**
KIV *e*S **S** **15 14 37.3 +2.0**
KIV pmax pmax
comp=Z,29nm,1.1s
KIV MLR MLR
comp=Z,114nm,14.0s
SHA1 Shidzhatmaz 22.90 292 *i* P **P** **15 10 26.3 +0.5**
VJD Vijayawada 23.26 160 *ex* **P** **15 10 32.1 +2.7**
MOY Mondy 23.73 48 *e*P **P** **15 10 34.9 +0.9**
MOY pmax pmax
comp=Z,57nm,1.8s
ZAK Zakamensk 24.68 52 *e*P **P** **15 10 43.0 +0.2**
ZAK pmax pmax
comp=Z,15nm,1.1s
ZAK pmax pmax
comp=Z,7.0nm,1.0s
KIRV Kirov 24.81 331 P **P** **15 10 44.2 +0.6**
comp=Z,45nm,0.6s,baz=92,slow=3.4,SNR=20
comp=Z,45nm,0.6s
KIRV Kirov 24.81 331 *ce*P **P** **15 10 44.1 +0.5**
VRH Novokhopyorsk 24.87 310 *e*P **P** **15 10 50.3 +6.0**
VRH pmax pmax
comp=Z,20nm,0.7s
LZH Lanzhou 25.01 86 ⇓P **P** **15 10 50.0 +4.1**
LZH pP sP 15 10 55.0 +2.9
LZH S **S** **15 15 04.0 -6.0**
LZH sS sS 15 15 18.4 +1.2
LZH SS **SnSn** **15 16 06.6 +8.3**
LZH pmax pmax
comp=Z,34nm,1.5s
LZH pmax pmax
comp=Z,81nm,5.2s
LZH LR LR
comp=Z,640nm,15.5s
LZH LR LR
comp=Z,780nm,16.5s
LZH LR LR
comp=Z,600nm,15.5s
SOC Sochi 25.03 292 *e*P **P** **15 10 41.6 -4.2**
SOC *e*PPP PPP 15 11 25.9
SOC *e*S **S** **15 15 05.5 -4.4**
SOC MLR MLR
comp=Z,174nm,18.0s
IRK Irkutsk 25.84 48 *e*P P 15 10 37.9 -15
IRK pmax pmax
comp=Z,28nm,1.5s
SONM Songino Array 26.15 59 P **P** **15 10 56.7 +0.5**
comp=Z,5.1nm,1.0s,baz=257,slow=10,SNR=15
SONM LR LR 15 22 20.3
comp=Z,621nm,18.4s,baz=265,slow=39
comp=Z,5.1nm,1.0s
SONM Songino Array 26.15 59 P **P** **15 10 55.1 -1.1**
SONM Songino Array 26.15 59 P **P** **15 10 55.1 -1.1**
SONM pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 26.42 309 *e*P **P** **15 10 58.5 +0.2**
VSR pmax pmax
comp=Z,8.0nm,0.4s
VORR Voronezh 26.52 310 *e*P **P** **15 10 59.0 -0.2**
VORR pmax pmax
comp=Z,45nm,2.1s
ULN Ulaanbaatar 26.59 59 P **P** **15 10 59.3 -0.9**
ULN Ulaanbaatar 26.59 59 *ce*P **P** **15 11 00.5 +0.3**
ULN pmax pmax
comp=Z,15nm,1.7s
ANN Anapa 26.68 294 *e*P **P** **15 11 04.0 +3.2**
ANN *e*S **S** **15 15 41.7 +5.8**
ANN pmax pmax
comp=Z,100nm,1.2s
CD2 Chengdu 26.76 97 P **P** **15 11 00.4 -1.3**
CD2 pP pP 15 11 03.1 -3.0
CD2 S **S** **15 15 36.9 -0.6**
CD2 sS pS 15 15 41.6 -1.0
CD2 LR LR
comp=Z,430nm,14.7s
CD2 LR LR
comp=Z,510nm,9.6s
CD2 LR LR
comp=Z,420nm,11.4s
LPSR Galich'ya Gora 26.95 312 *e*P **P** **15 11 02.5 -0.6**
LPSR pmax pmax
comp=Z,50nm,1.4s
PZH PanZhiHua 27.39 108 P **P** **15 11 07.3 -0.2**
PZH S **S** **15 15 47.5 -0.2**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,140nm,6.7s
PZH LR LR
comp=Z,580nm,18.3s
PZH LR LR
comp=Z,580nm,19.0s
PZH LR LR
comp=Z,550nm,15.5s
RAYN Ar Rayn 27.48 244 P **P** **15 11 08.3 +0.1**
RAYN IAmb IAmb 15 11 11.9
comp=Z,28nm,1.0s
RAYN Ar Rayn 27.48 244 P **P** **15 11 08.3 +0.1**
RAYN pmax pmax
comp=Z,28nm,1.0s
RAYN Ar Rayn 27.48 244 *i* P **P** **15 11 10.5 +2.3**
SNR=22
PRGR Permogore 28.27 333 *e*P **P** **15 11 12.5 -2.4**
MOS Moscow 28.73 318 *e*P **P** **15 11 17.6 -1.4**
MOS pmax pmax
comp=Z,74nm,1.3s
MOS pmax pmax
comp=Z,100nm,1.4s
SIM Simferopol' 29.04 295 *e*P **P** **15 11 25.2 +3.3**
SIM pmax pmax
comp=Z,50nm,1.0s
SIM MLR MLR
comp=Z,40μm,16.0s
OBN Obninsk 29.07 316 P **P** **15 11 22.1 0.0**
comp=Z,4.4nm,0.4s,baz=278,slow=8.0,SNR=7.6
comp=Z,4.4nm,0.4s
OBN Obninsk 29.07 316 *d* *i*P **P** **15 11 22.3 +0.3**
OBN *e* 15 12 17.2
OBN *e*S S 15 16 04.2 -9.2
OBN pmax pmax
comp=Z,57nm,1.3s
OBN MLR MLR
comp=Z,180nm,16.0s
ASF Jabal al Asfar 29.57 268 P **P** **15 11 29.4 +2.5**
comp=Z,0.8nm,0.3s,baz=12,slow=3.8,SNR=3.9
comp=Z,0.8nm,0.3s
XAN Xi'an 29.59 88 P **P** **15 11 30.3 +3.3**
XAN sP sP 15 11 38.3 +5.1
XAN pmax pmax
comp=Z,11nm,0.6s
XAN pmax pmax
comp=Z,190nm,5.2s
XAN LR LR
comp=Z,320nm,11.5s
XAN LR LR
comp=Z,400nm,12.9s
XAN LR LR
comp=Z,430nm,12.0s
BR131 Keskin Array S 29.94 284 P **P** **15 11 29.9 -0.2**
BR131 Keskin Array S 29.94 284 P **P** **15 11 29.9 -0.2**
BR131 pmax pmax
comp=Z,14nm,0.9s
BRTR Keskin Array B 29.94 284 P **P** **15 11 32.5 +2.5**
comp=Z,6.2nm,0.9s,baz=91,slow=8.6,SNR=14
comp=Z,6.2nm,0.9s
BRTR Keskin Array B 29.94 284 P **P** **15 11 29.6 -0.5**
HHC Hu-ho-hao-te 29.96 73 *e*P **P** **15 11 29.4 -0.8**
HHC S **S** **15 16 32.8 +5.0**
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,120nm,4.2s
HHC LR LR
comp=Z,640nm,16.5s
HHC LR LR
comp=Z,610nm,12.3s
HHC LR LR
comp=Z,760nm,12.6s
CRAI Chiangrai 30.32 119 P **P** **15 11 33.3 -0.2**
MMAI Mount Meron Ar 30.42 271 LR LR 15 26 35.0
comp=Z,153nm,18.9s,baz=232,slow=42
CMAR Chiang Mai Arr 30.61 124 P **P** **15 11 36.8 +0.7**
comp=Z,1.8nm,0.8s,baz=308,slow=9.3,SNR=9.7
CMAR PcP **PcP** **15 14 35.8 +1.4**
comp=Z,1.9nm,0.8s,baz=310,slow=4.2,SNR=5.8
comp=Z,1.8nm,0.8s

GYA Guiyang 31.13 103 ⇑P **P** **15 11 42.3 +1.6**
GYA pmax pmax
comp=Z,14nm,1.5s
GYA LR LR
comp=Z,390nm,19.1s
ENH Enshi 31.49 94 P **P** **15 11 41.6 -2.1**
ENH IAmb IAmb 15 11 53.9
comp=Z,13nm,0.8s
NRIK Noril'sk 31.74 10 P **P** **15 11 45.3 -0.1**
comp=Z,11nm,1.0s,baz=169,slow=11,SNR=7.4
NRIK LR LR 15 26 09.9
comp=Z,137nm,19.6s,baz=223,slow=40
comp=Z,11nm,1.0s
NRIK Noril'sk 31.74 10 P **P** **15 11 44.3 -1.1**
NRIK IAmb IAmb 15 11 49.3
comp=Z,25nm,1.1s
NRIK Noril'sk 31.74 10 *ce*P **P** **15 11 46.1 +0.7**
NRIK pmax pmax
comp=Z,31nm,1.3s
NRIK MLR MLR
comp=Z,263nm,15.0s
EIL Elat 32.13 265 LR LR 15 26 47.4
comp=Z,256nm,21.9s,baz=82,slow=40
PALK Pallekele 32.18 165 LR LR 15 25 08.3
comp=Z,246nm,19.1s,baz=102,slow=37
LYN LuoYang 32.19 85 *e*P **P** **15 11 53.4 +3.6**
LYN S **S** **15 17 07.5 +4.8**
LYN pmax pmax
comp=Z,160nm,4.5s
LYN LR LR
comp=Z,470nm,11.6s
LYN LR LR
comp=Z,520nm,15.7s
LYN LR LR
comp=Z,370nm,15.1s
AKASG Malin Array Be 32.52 306 P **P** **15 11 52.9 +0.4**
comp=Z,0.4nm,0.3s,baz=77,slow=7.6,SNR=15
AKASG PcP **PcP** **15 14 38.8 -0.3**
comp=Z,1.2nm,0.7s,baz=81,slow=3.6,SNR=2.3
comp=Z,0.4nm,0.3s
AKASG Malin Array Be 32.52 306 P **P** **15 11 51.3 -1.2**
AKASG Malin Array Be 32.52 306 *i* P **P** **15 11 52.9 +0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 32.52 306 P **P** **15 11 51.8 -0.8**
AKBB IAmb IAmb 15 12 50.1
comp=Z,19nm,0.9s
AKBB Malin Array Si 32.52 306 *ce*P **P** **15 11 53.2 +0.7**
KIEV Kiev 32.53 306 P **P** **15 11 52.0 -0.6**
XLT XiLinHaoTe 32.88 67 *e*P **P** **15 11 54.9 -1.0**
XLT pP pP 15 11 59.6 -0.7
XLT sP sP 15 12 01.8 -0.3
XLT PcP **PcP** **15 14 36.5 -3.8**
XLT S **S** **15 17 13.3 -0.1**
XLT sS sS 15 17 19.0 -1.9
XLT ScP **ScP** **15 18 19.9 -4.5**
XLT PcS **PcS** **15 18 21.9 -3.7**
XLT pmax pmax
comp=Z,9.0nm,0.8s
XLT pmax pmax
comp=Z,100nm,5.6s
XLT LR LR
comp=Z,51nm,16.0s
XLT LR LR
comp=Z,460nm,11.8s
XLT LR LR
comp=Z,510nm,12.2s
BOD Bodaibo 32.90 41 *e*P **P** **15 11 54.4 -1.4**
BOD pmax pmax
comp=Z,37nm,1.1s
HNS HongShan 33.08 79 ⇓P P 15 12 05.3 +7.8
HNS S S 15 17 26.3 +10
HNS SS **SS** **15 19 32.8 -5.9**
HNS pmax pmax
comp=Z,8.0nm,1.1s
HNS LR LR
comp=N,320nm,12.0s
HNS LR LR
comp=E,330nm,12.6s
HNS LR LR
comp=Z,340nm,17.7s
TPGR Topolog 33.09 295 ⇓P **P** **15 11 59.2 +1.6**
CFR Carcaliu 33.26 296 ⇓P **P** **15 12 00.4 +1.4**
MNK Minsk 33.80 313 *i* P P 15 11 58.6 -5.0
MNK *i* PPP PPP 15 13 22.0
MNK *i* 15 14 37.4
MNK *i* S **S** **15 17 23.3 -3.9**
MNK *i* SS **SnSn** **15 19 29.2 -2.4**
MNK *i* 15 22 23.8
MNK pmax pmax
comp=Z,7.0nm,0.7s
MNK pmax pmax
comp=N,6.0nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=E,25nm,15.0s
MNK MLR MLR
comp=Z,72nm,14.0s
MNK MLR MLR
comp=N,22nm,18.0s
MNK Minsk 33.80 313 *i* P P 15 11 58.6 -5.0
comp=E,3.0nm,0.9s
MNK *i* P P 15 11 58.6 -5.0
comp=N,6.0nm,0.8s
MNK *i* P P 15 11 58.6 -5.0
comp=Z,7.0nm,0.7s,baz=280
MNK *i* PP **PnPn** **15 13 11.0 -4.8**
MNK *i* PPP PPP 15 13 22.1
MNK *i* S **S** **15 17 23.3 -3.9**
MNK *i* SS **SnSn** **15 19 29.3 -2.4**
MNK *i* LQ LQ 15 23 37.4
MNK *i* LR LR 15 25 44.5
MNK *i* LRM MLR 15 27 02.1
comp=E,25nm,15.4s
MNK *i* LRM MLR 15 27 10.1
comp=Z,72nm,14.2s
MNK *i* LRM MLR 15 27 12.0
comp=N,22nm,18.1s
VRI Vrincioaia 34.19 297 ⇑P **P** **15 12 10.0 +2.8**
PLOR Plostina 34.24 297 ⇓P **P** **15 12 10.4 +2.7**
HORU Horodok 34.27 303 P **P** **15 12 09.0 +1.2**
NACGM Naroch 34.49 313 *i* P **P** **15 12 10.4 +0.8**
COVR Voineasa-Covas 34.56 297 ⇑P **P** **15 12 13.1 +2.7**
MLR Muntele Rosu 34.77 296 ⇓P **P** **15 12 13.7 +1.4**
MLR Muntele Rosu 34.77 296 P **P** **15 12 15.2 +2.8**
comp=N,12nm,1.0s,baz=285,slow=22,SNR=8.0
comp=N,12nm,1.0s
MLR Muntele Rosu 34.77 296 P **P** **15 12 12.8 +0.5**
MLR IAmb IAmb 15 12 23.6
comp=Z,23nm,0.9s
MLR Muntele Rosu 34.77 296 P **P** **15 12 12.8 +0.5**
MLR pmax pmax
comp=Z,23nm,0.9s
IIGN Ignalina 34.88 314 *e*P **P** **15 12 14.0 +1.0**
ISAL Salakas 34.97 314 *e*P **P** **15 12 14.5 +0.8**
BURAR Bucovina Array 35.11 300 ⇑P **P** **15 12 16.7 +1.5**
BURAR Bucovina Array 35.11 300 P **P** **15 12 15.3 +0.1**
DOPR Dopca 35.11 297 ⇑P **P** **15 12 17.7 +2.5**
BUR08 Bucovina Ar. S 35.12 300 P **P** **15 12 15.9 +0.6**
WHN Wuhan 35.17 90 ⇓P **P** **15 12 19.3 +3.5**
WHN pP **sP** **15 12 22.8 +0.7**
WHN sP **pP** **15 12 25.5 +5.2**
VSU Vasula 35.21 319 *e*P **P** **15 12 16.4 +0.6**
TIA Tai'an 35.28 80 ⇑P **P** **15 12 17.8 +1.1**
TIA pmax pmax
comp=Z,9.0nm,1.1s
VOIR 35.40 297 ⇑P **P** **15 12 19.8 +2.1**
LVV L'vov 35.82 304 *e*P **P** **15 12 22.1 +0.9**
LVZ Lovozero 35.85 337 P **P** **15 12 19.8 -1.5**
LVZ Lovozero 35.85 337 *ce*P **P** **15 12 22.5 +1.2**
LVZ pmax pmax
comp=Z,34nm,1.3s
APA Apatity 36.06 336 ⇓ *i*P **P** **15 12 21.5 -1.5**
APA pmax pmax
comp=Z,6.0nm,0.8s
APA MLR MLR
comp=Z,800nm,11.0s
PABE Paberze 36.17 314 *e*P **P** **15 12 25.0 +0.9**
VSVD Vaisvydziai 36.25 315 *e*P **P** **15 12 25.2 +0.5**
FIA1 FINESS Array S 36.33 324 P **P** **15 12 24.5 -0.9**
FIA1 IAmb IAmb 15 12 28.9
comp=Z,18nm,0.9s
FINES FINESS Array B 36.33 324 P **P** **15 12 25.4 +0.1**
comp=Z,7.2nm,0.4s,baz=111,slow=9.4,SNR=46

FINES LR LR 15 28 15.2
comp=Z,262nm,19.4s,baz=104,slow=38
comp=Z,7.2nm,0.4s
FINES FINESS Array B 36.33 324 P **P** **15 12 25.1 -0.3**
FINES FINESS Array B 36.33 324 *i* P **P** **15 12 25.3 0.0**
FINES pmax pmax
comp=Z,7.0nm,0.4s
MTSE Matsula 36.76 319 *e*P **P** **15 12 29.9 +0.9**
MEF Metsahovi 36.80 322 *e*P **P** **15 12 30.1 +0.8**
DRGR 36.88 299 ⇑P **P** **15 12 32.4 +2.1**
GZR Gura Zlata 37.00 297 ⇑P **P** **15 12 32.6 +1.3**
KOLS Kolonicke sedl 37.00 303 *e*P **P** **15 12 33.5 +2.2**
KOLS pmax pmax
comp=Z,12nm,1.1s
KOLS Kolonicke sedl 37.00 303 *e*P **P** **15 12 33.5 +2.2**
UZH Uzhgorod 37.01 302 *e*P **P** **15 12 34.5 +3.2**
UZH *e* 15 12 45.0
VTS Vitosha 37.12 292 ⇓P **P** **15 12 34.2 +1.6**
VTS Vitosha 37.12 292 P **P** **15 12 32.3 -0.2**
VTS Vitosha 37.12 292 P **P** **15 12 32.3 -0.2**
VTS pmax pmax
comp=Z,6.0nm,1.0s
UBPT Khong Chiam 37.23 120 P **P** **15 12 32.6 -0.9**
UBPT IAmb IAmb 15 13 11.1
comp=Z,71nm,1.8s
BLKB Belogradchik 37.34 294 ⇑P **P** **15 12 36.3 +2.1**
PBUR Paburge 37.37 314 *e*P **P** **15 12 35.3 +1.0**
CRVS Cervenica-Dubn 37.54 303 *e*P P 15 12 41.8 +6.0
CRVS Cervenica-Dubn 37.54 303 *e* P 15 12 41.8 +6.0
SIRR Siria 37.66 298 ⇓P **P** **15 12 38.6 +1.7**
BZS Buzias 37.77 297 ⇓P **P** **15 12 39.4 +1.5**
ATD Arta Tunnel 37.79 232 LR LR 15 31 23.6
comp=Z,87nm,19.3s,baz=48,slow=41
IDI Anoyia 37.81 280 LR LR 15 31 57.3
comp=Z,35nm,19.3s,baz=85,slow=42
QIZ Qiongzhong 37.82 111 P **P** **15 12 39.4 +0.9**
QIZ S **S** **15 18 30.3 +0.7**
QIZ LR LR
comp=Z,310nm,14.3s
QIZ LR LR
comp=Z,270nm,15.9s
QIZ LR LR
comp=Z,420nm,19.1s
KAAM Kaadhehdhoo 38.05 179 P **P** **15 12 40.2 -0.2**
NJ2 Nanjing 38.08 86 *e*P **P** **15 12 41.3 +0.7**
NJ2 pmax pmax
comp=Z,14nm,0.5s
NIE Niedzica 38.26 304 *e*P **P** **15 12 44.1 +2.2**
OJC Ojcow 38.54 305 *e*P **P** **15 12 44.4 +0.2**
OJC Ojcow 38.54 305 P **P** **15 12 43.6 -0.6**
OJC IAmb IAmb 15 12 49.1
comp=Z,46nm,1.4s
OJC Ojcow 38.54 305 P **P** **15 12 43.7 -0.6**
OJC pmax pmax
comp=Z,46nm,1.4s
PSZ Piszkesteto 38.66 301 ⇓P **P** **15 12 47.3 +1.9**
PSZ Piszkesteto 38.66 301 P **P** **15 12 44.5 -0.9**
PSZ Piszkesteto 38.66 301 P **P** **15 12 44.5 -0.9**
PSZ pmax pmax
comp=Z,8.0nm,1.0s
PSZ Piszkesteto 38.66 301 P **P** **15 12 46.1 +0.7**
FRGS Fruska Gora 39.10 297 ⇓P **P** **15 12 51.1 +2.0**
DIVS Divibare 39.16 295 P **P** **15 12 50.0 +0.4**
DIVS IAmb IAmb 15 12 56.3
comp=Z,40nm,1.5s
KEV Kevo 39.19 337 P **P** **15 12 49.4 0.0**
KEV IAmb IAmb 15 14 03.2
comp=Z,80nm,2.0s
KEV Kevo 39.19 337 P **P** **15 12 49.4 0.0**
KEV pmax pmax
comp=Z,80nm,2.0s
VYHS Vyhne 39.31 302 *e*P **P** **15 12 52.5 +1.8**
VYHS pmax pmax
comp=Z,22nm,1.4s
VYHS Vyhne 39.31 302 *e*P **P** **15 12 52.5 +1.8**
ARA0 ARCESS Array S 39.56 336 *e*P **P** **15 12 52.7 +0.2**
ARCES ARCESS Array B 39.56 336 P **P** **15 12 52.7 +0.2**
comp=Z,11nm,0.6s,baz=111,slow=8.0,SNR=50
comp=Z,11nm,0.6s
ARCES ARCESS Array B 39.56 336 P **P** **15 12 52.3 -0.2**
ARCES IAmb IAmb 15 12 56.7
comp=Z,78nm,1.5s
OKC Ostrava-Krasne 39.63 304 AMS AMS 15 30 00.0
comp=Z,200nm,14.4s
ZEA Zeya 39.73 49 *e*P **P** **15 12 55.1 +1.0**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
SRO Srobarova 39.73 301 *e*P P 15 12 59.1 +4.9
SRO Srobarova 39.73 301 *e*P P 15 12 59.1 +4.9
MORH Mrgy, Hungar 39.74 299 ⇓P **P** **15 12 56.1 +1.8**
MORH Mrgy, Hungar 39.74 299 P **P** **15 12 55.2 +0.9**
CSKK Cskako 39.83 301 P **P** **15 12 57.1 +2.0**
MORC Moravsky Berou 40.02 304 ⇓P **P** **15 12 58.0 +1.3**
MORC Moravsky Berou 40.02 304 P **P** **15 12 56.2 -0.5**
MORC Moravsky Berou 40.02 304 P **P** **15 12 56.2 -0.5**
MORC pmax pmax
comp=Z,15nm,1.3s
MORC Moravsky Berou 40.02 304 *e*P **P** **15 12 58.2 +1.5**
JAVC Velka Javorina 40.03 303 *e*P **P** **15 12 59.6 +2.8**
KOVH Kovagotottos 40.13 299 P **P** **15 12 58.4 +0.8**
SMOL Smolenice 40.23 302 *e*P **P** **15 13 00.4 +2.0**
MPLH Magyarpolny 40.34 300 P **P** **15 13 00.8 +1.5**
MODS Modra-Piesok 40.35 302 *e*P **P** **15 13 01.3 +1.9**
MODS pmax pmax
comp=Z,24nm,1.2s
MODS Modra-Piesok 40.35 302 *e*P **P** **15 13 01.3 +1.9**
KRLC Kraliky 40.48 305 *e*P **P** **15 13 01.9 +1.4**
KRLC MLR MLR
comp=Z,200nm,16.1s
KRLC Kraliky 40.48 305 *e*P **P** **15 13 01.9 +1.4**
KRLC AMS AMS 15 29 50.0
comp=Z,200nm,16.1s
HAMF Hammerfest 40.60 337 *e*P **P** **15 13 01.6 +0.4**
VRAC Vranov 40.69 304 ⇓P **P** **15 13 03.8 +1.7**
VRAC Vranov 40.69 304 P **P** **15 13 03.2 +1.1**
comp=Z,7.2nm,0.8s,baz=76,slow=7.6,SNR=9.8
VRAC LR LR 15 33 21.7
comp=Z,109nm,18.1s,baz=88,slow=41
comp=Z,7.2nm,0.8s
VRAC Vranov 40.69 304 *e*P **P** **15 13 04.0 +1.8**
DPC Dobruska-Polom 40.75 305 *e*P **P** **15 13 03.5 +0.8**
DPC MLR MLR
comp=Z,200nm,14.3s
DPC Dobruska-Polom 40.75 305 *e*P **P** **15 13 03.5 +0.8**
DPC AMS AMS 15 29 50.0
comp=Z,200nm,14.3s
OSTC Ostas 40.80 306 *e*P **P** **15 13 04.1 +1.0**
OSTC AMS AMS 15 31 10.0
comp=Z,200nm,11.5s
BLEU Blekinge 40.80 315 *i* P **P** **15 13 04.6 +1.7**
KRUC Moravsky 40.84 303 *e*P **P** **15 13 05.4 +1.9**
CHVC Chvalec 40.90 306 AMS AMS 15 31 00.0
SOP Sopron 40.92 301 P **P** **15 13 05.8 +1.7**
UPC Upice 40.93 306 *e*P **P** **15 13 05.7 +1.5**
UPC MLR MLR
comp=Z,200nm,16.2s
UPC Upice 40.93 306 *e*P **P** **15 13 05.7 +1.5**
UPC AMS AMS 15 31 00.0
comp=Z,200nm,16.2s
RONA Rosalia, Austr 41.10 301 *e*P **P** **15 13 06.9 +1.3**
comp=Z,15nm,1.2s
JETT Jettan, Norway 41.21 335 *e*P **P** **15 13 06.6 +0.4**
BSD Bornholm Skovb 41.32 313 *i* P **P** **15 13 06.9 -0.3**
BSD IAmb IAmb 15 13 25.2
comp=Z,57nm,1.2s
CONA Conrad Observa 41.35 302 *e*P **P** **15 13 09.1 +1.4**
comp=Z,30nm,1.2s,SNR=29
TREC Trest 41.41 304 AMS AMS 15 30 20.0
comp=Z,200nm,13.4s
YAK Yakutsk 41.49 37 P **P** **15 13 07.0 -1.5**
comp=Z,5.0nm,0.5s,baz=157,slow=0.3,SNR=3.0
YAK LR LR 15 30 38.6
comp=Z,223nm,18.5s,baz=271,slow=37
comp=Z,5.0nm,0.5s
YAK Yakutsk 41.49 37 P **P** **15 13 06.8 -1.7**
YAK IAmb IAmb 15 13 11.1
comp=Z,65nm,1.5s
YAK Yakutsk 41.49 37 *e*P **P** **15 13 07.0 -1.5**
YAK *e* 15 14 41.9
YAK *e* 15 15 04.9
YAK *e*PPP PPP 15 15 24.5
YAK *e*S **S** **15 19 17.1 -6.6**
YAK *e*SS **SS** **15 22 24.5 -3.2**
YAK *e* 15 23 02.1

YAK pmax pmax
comp=Z,34nm,1.2s
YAK pmax pmax
comp=E,23nm,1.4s
YAK pmax pmax
comp=Z,22nm,2.0s
YAK pmax pmax
comp=N,14nm,2.0s
YAK pmax pmax
comp=E,29nm,1.9s
YAK smax smax
comp=N,25nm,2.5s
YAK smax smax
comp=E,26nm,2.3s
ARSA Arzberg 41.69 301 *e*P **P 15 13 11.2 +0.7**
comp=E,12nm,1.2s,SNR=5.1
TRO Tromso 41.73 335 *e*P **P 15 13 10.2 -0.1**
PVCC Panska Ves 41.84 306 AMS AMS 15 30 50.0
comp=E,200nm,13.4s
DEL Delary 41.88 315 *i* P **P 15 13 13.8 +1.9**
PRU Pruhonice 41.93 305 *e*P **P 15 13 13.2 +0.9**
PRU MLR MLR
comp=Z,100nm,12.5s
PRU Pruhonice 41.93 305 *e*P **P 15 13 13.2 +0.9**
PRU AMS AMS 15 31 50.0
comp=Z,100nm,12.5s
HFS Hagfors 42.07 320 P **P 15 13 13.2 -0.2**
comp=Z,12nm,0.5s,baz=97,slow=11,SNR=32
HFS LR LR 15 30 51.5
comp=Z,153nm,20.7s,baz=88,slow=36
comp=Z,12nm,0.5s
SOKA Soboth 42.12 300 *e*P **P 15 13 15.1 +1.0**
comp=Z,26nm,1.3s,SNR=20
LUNU Lund 42.14 314 *i* P **P 15 13 16.2 +2.3**
BRG Berggiesshubel 42.20 306 *i* P **P 15 13 16.2 +1.6**
BRG Amp 15 13 17.0
comp=Z,9.5nm,0.9s
BRG *i* x x 15 13 19.1
BRG Amp 15 13 21.3
comp=Z,19nm,1.0s
BRG *e*x x 15 13 35.3
BRG Amp 15 13 36.1
comp=Z,7.1nm,0.8s
BRG Berggiesshubel 42.20 306 *i* P **P 15 13 16.1 +1.6**
BRG *i* 15 13 19.1
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG pmax pmax
comp=Z,19nm,1.0s
BRG pmax pmax
comp=Z,7.0nm,0.9s
CKRC Cesky Krumlov 42.24 303 *e*P **P 15 13 16.5 +1.6**
MDJ Mudanjiang 42.33 63 P **P 15 13 15.3 -0.4**
MDJ pP pP 15 13 18.8 -1.4
MDJ S **S 15 19 36.8 +0.2**
MDJ pmax pmax
comp=Z,9.0nm,1.8s
MDJ pmax pmax
comp=Z,87nm,3.8s
MDJ LR LR
comp=Z,280nm,6.6s
MDJ LR LR
comp=Z,270nm,11.3s
MDJ LR LR
comp=Z,440nm,10.8s
BJUU Bjuv 42.37 314 *i* P **P 15 13 19.8 +4.0**
FAUS Fauske 42.39 331 *e*P **P 15 13 16.4 +0.5**
MOA Molln 42.43 302 *e*P **P 15 13 17.4 +1.0**
comp=Z,15nm,1.6s
MOR8 Moi Rana 42.47 329 *e*P **P 15 13 15.1 -1.5**
BORU Boraas 42.48 317 *i* P **P 15 13 18.4 +1.7**
OBKA Obir 42.48 300 *e*P **P 15 13 18.4 +1.4**
comp=Z,17nm,1.1s,SNR=10
FABU Falkenberg 42.51 316 *i* P **P 15 13 19.4 +2.5**
STEI Steigen 42.54 332 *e*P **P 15 13 19.2 +2.2**
GEC2 GERESS Array S 42.63 303 P **P 15 13 18.4 +0.1**
GEC2 IAmb IAmb 15 13 23.8
comp=Z,30nm,1.4s
GERES GERESS Array B 42.63 303 P **P 15 13 19.5 +1.3**
comp=Z,2.7nm,0.6s,baz=69,slow=7.3,SNR=31
GERES LR LR 15 32 28.9
comp=Z,213nm,21.5s,baz=88,slow=38
comp=Z,2.7nm,0.6s
GERES GERESS Array B 42.63 303 P **P 15 13 18.1 -0.1**
GERES GERESS Array B 42.63 303 P **P 15 13 18.1 -0.1**
KHC Kasperske Hory 42.67 304 P **P 15 13 18.8 +0.4**
KHC IAmb IAmb 15 13 24.2
comp=Z,44nm,1.6s
KHC Kasperske Hory 42.67 304 *e*P **P 15 13 20.0 +1.6**
KHC MLR MLR
comp=Z,100nm,22.0s
KHC Kasperske Hory 42.67 304 *e*P **P 15 13 20.0 +1.6**
KHC AMS AMS 15 31 30.0
comp=Z,100nm,22.0s
TIP Timpagrande 42.73 289 P **P 15 13 18.9 -0.2**
SGRT San Giovanni R 42.73 293 P **P 15 13 19.4 +0.2**
SGRT IAmb IAmb 15 13 29.7
comp=Z,22nm,1.1s
CLL Collm 42.74 307 P **P 15 13 19.6 +0.7**
CLL IAmb IAmb 15 13 24.4
comp=Z,34nm,1.5s
CLL Collm 42.74 307 *i* P **P 15 13 19.3 +0.4**
CLL *i* 15 13 22.4
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 42.74 307 *i* P **P 15 13 19.3 +0.4**
comp=Z,8.0nm,0.8s
CLL *i* (pP) **pP 15 13 22.4 -1.0**
comp=Z,16nm,1.1s
CLL *i* x x 15 13 26.7
CLL *e*PP **PP 15 14 59.0 +1.2**
CLL *e*(PcP) **PcP 15 15 08.0 -2.3**
CLL *e*x x 15 15 21.0
CLL *e*S **S 15 19 48.0 +5.6**
CLL *e*x x 15 20 18.0
CLL *e*SS **SS 15 22 54.0 +1.3**
BIOA Bad Ischl, Aus 42.87 302 *e*P **P 15 13 21.1 +1.0**
comp=Z,5.8nm,0.9s
KLR Kul'dur 42.92 56 P **P 15 13 19.4 -1.0**
comp=Z,2.5nm,0.7s,baz=273,slow=6.5,SNR=5.8
KLR LR LR 15 32 09.3
comp=Z,162nm,20.3s,baz=278,slow=38
comp=Z,2.5nm,0.7s
KLR Kul'dur 42.92 56 *ce*P **P 15 13 20.7 +0.3**
KLR pmax pmax
comp=Z,14nm,2.5s
ONAU Onsala 42.94 316 *i* P **P 15 13 22.7 +2.3**
KONS Konsvik 43.06 330 *e*P **P 15 13 22.4 +1.1**
MYKA Terra Mystica 43.07 300 *e*P **P 15 13 21.8 0.0**
comp=Z,5.2nm,1.0s
SEHB SEOHWA 43.08 72 P **P 15 13 21.2 -0.6**
NC405 NORSAR Array S 43.09 322 P **P 15 13 21.6 -0.1**
NC405 IAmb IAmb 15 13 25.2
comp=Z,68nm,1.4s
KSRS Korea Array 43.10 74 P **P 15 13 21.8 -0.2**
comp=Z,2.6nm,1.0s,baz=280,slow=7.2,SNR=14
KSRS LR LR 15 33 30.8
comp=Z,155nm,19.3s,baz=270,slow=39
comp=Z,2.6nm,1.0s
PSI Prapat 43.14 139 LR LR 15 34 10.3
comp=Z,87nm,18.3s,baz=312,slow=40
NC602 NORSAR Array S 43.16 321 P **P 15 13 21.3 -0.9**
NC602 NORSAR Array S 43.16 321 *e*P **P 15 13 22.7 +0.5**
CUC Castrocucco 43.18 290 P **P 15 13 22.4 -0.3**
KBA Koelnbreinsper 43.18 301 *e*P **P 15 13 25.3 +2.5**
comp=Z,7.5nm,0.8s
SABO M.te Sabotino 43.23 299 P **P 15 13 23.1 0.0**
SABO IAmb IAmb 15 13 29.0
comp=Z,109nm,1.5s
NC303 NORSAR Array S 43.27 322 P **P 15 13 22.8 -0.3**
TIXI Tiksi 43.28 23 P **P 15 13 22.0 -1.0**
comp=Z,22nm,0.8s
comp=Z,22nm,0.8s
TIXI Tiksi 43.28 23 P **P 15 13 22.0 -1.0**
TIXI IAmb IAmb 15 13 25.5
comp=Z,24nm,0.8s
TIXI Tiksi 43.28 23 *ce*P **P 15 13 23.2 +0.2**
TIXI pmax pmax
comp=Z,35nm,1.0s
NB201 NORSAR Array S 43.30 322 P **P 15 13 23.0 -0.3**
NB201 IAmb IAmb 15 13 27.2
comp=Z,50nm,1.1s
NB2 NORSAR Subarra 43.33 322 P **P 15 13 23.3 -0.4**
comp=Z,6.7nm,0.7s,baz=93,slow=8.6
NB2 NORSAR Subarra 43.33 322 P **P 15 13 23.3 -0.4**
baz=93,slow=8.6

NOA NORSAR Array B 43.33 322 P **P 15 13 23.6 -0.1**
comp=Z,5.6nm,0.6s,baz=92,slow=8.0,SNR=23
NOA LR LR 15 31 31.2
comp=Z,140nm,19.3s,baz=105,slow=36
comp=Z,5.6nm,0.6s
NAO01 NORSAR Array S 43.49 321 P **P 15 13 24.3 -0.5**
BJO1 Bjornoya 43.51 342 *e*P **P 15 13 25.1 +0.3**
NBO00 NORSAR Array S 43.55 322 P **P 15 13 24.5 -0.9**
NC204 NORSAR Array S 43.56 322 P **P 15 13 25.0 -0.5**
NC204 IAmb IAmb 15 13 29.4
comp=Z,29nm,0.9s
ABTA Abfaltersbach 43.81 301 *e*P **P 15 13 27.4 -0.3**
comp=Z,6.2nm,1.4s
CIMO Cimolais 43.95 300 P **P 15 13 29.1 +0.3**
CIMO IAmb IAmb 15 13 34.0
comp=Z,18nm,1.3s
GRA1 Grafenberg Arr 44.10 305 P **P 15 13 30.0 +0.1**
GRA1 IAmb IAmb 15 13 36.1
comp=Z,26nm,1.1s
GRF Grafenberg Arr 44.10 305 P **P 15 13 30.0 +0.1**
GRF pmax pmax
comp=Z,27nm,1.1s
GRFO Grafenberg 44.10 305 P **P 15 13 30.0 +0.1**
GRFO IAmb IAmb 15 13 36.0
comp=Z,27nm,1.1s
GRFO Grafenberg 44.10 305 P **P 15 13 30.0 +0.1**
GRFO pmax pmax
comp=Z,27nm,1.1s
KONO Kongsberg 44.12 320 *e*P **P 15 13 32.2 +2.2**
WTTA Wattenberg 44.28 302 *e*P **P 15 13 32.3 +0.6**
comp=Z,9nm,0.8s,SNR=7.4
WATA Walderalm 44.31 302 *e*P **P 15 13 32.2 +0.4**
comp=Z,8.4nm,1.1s
NRCA Norcia 44.33 295 P **P 15 13 32.8 +0.9**
NRCA IAmb IAmb 15 13 39.0
comp=Z,18nm,0.6s
DOMB Dombas 44.39 323 *e*P **P 15 13 32.3 +0.2**
CTI Castel Tesino 44.54 300 P **P 15 13 34.2 +0.5**
CTI Castel Tesino 44.54 300 P **P 15 13 34.2 +0.5**
CTI pmax pmax
comp=Z,9.0nm,1.0s
SQTA Sankt Quirin 44.58 302 *e*P **P 15 13 33.9 -0.1**
comp=Z,6.4nm,1.0s
MOTA Moosalm 44.62 302 *e*P **P 15 13 34.9 +0.6**
comp=Z,7.9nm,1.0s
SKAR Skarslia 44.75 321 *e*P **P 15 13 36.3 +1.2**
RETA Reutte 44.82 302 *e*P **P 15 13 36.1 +0.3**
comp=Z,11nm,1.6s
FETA Feichten 44.94 301 *e*P **P 15 13 36.9 0.0**
comp=Z,4.7nm,0.9s
DAVA Damuels 45.45 302 *e*P **P 15 13 41.5 +0.6**
comp=Z,12nm,0.7s,SNR=9.7
DAVOX Davos/Dischmat 45.56 301 P **P 15 13 42.3 +0.4**
comp=Z,9.5nm,0.6s,baz=106,slow=5.1,SNR=20
DAVOX LR LR 15 34 54.1
comp=Z,90nm,19.1s,baz=83,slow=39
comp=Z,9.5nm,0.6s
SPB2 Spitsbergen Ar 45.60 346 P **P 15 13 42.2 +0.7**
SPA0 Spitsbergen Ar 45.61 346 *e*P **P 15 13 42.3 +0.7**
SPITS Spitsbergen Ar 45.61 346 P **P 15 13 41.8 +0.3**
comp=Z,12nm,0.7s,baz=102,slow=15,SNR=4.2
SPITS LR LR 15 36 25.4
comp=Z,177nm,18.5s,baz=86,slow=41
comp=Z,12nm,0.7s
VLC Villacollemand 45.88 298 P **P 15 13 44.9 +0.7**
VLC IAmb IAmb 15 13 55.1
comp=Z,17nm,0.9s
BFO Black Forest 46.23 304 P **P 15 13 47.2 +0.3**
BFO IAmb IAmb 15 13 52.5
comp=Z,15nm,1.4s
BFO Black Forest 46.23 304 P **P 15 13 47.2 +0.3**
BFO pmax pmax
comp=Z,15nm,1.4s
MSSA Maissana 46.44 298 P **P 15 13 48.7 0.0**
MSSA IAmb IAmb 15 14 08.8
comp=Z,16nm,1.1s
KBS Kingsbay 46.71 347 *e*P **P 15 13 51.3 +1.0**
BTNL Ternell 47.14 307 *d*P **P 15 13 55.1 +1.0**
MEM Membach 47.21 307 *d*P **P 15 13 54.4 -0.1**
comp=Z,6.8nm,0.8s
WLF Walferdange 47.33 306 *d*P **P 15 13 57.3 +1.8**
SENIN Lac Senin/Sane 47.39 301 P **P 15 13 55.1 -1.1**
SENIN IAmb IAmb 15 14 02.8
comp=Z,8.8nm,0.7s
JOW Kunigami 47.74 87 P **P 15 13 57.7 -1.3**
RCHB Rochefort 47.80 307 *d*P **P 15 13 59.6 +0.5**
BMRD Maredsous 48.05 307 *d*P **P 15 14 00.5 -0.5**
BNI Bardonecchia 48.17 300 P **P 15 14 02.0 -0.2**
BNI Bardonecchia 48.17 300 P **P 15 14 02.0 -0.2**
BNI pmax pmax
comp=Z,38nm,1.4s
DOU Dourbes 48.21 307 *d*P **P 15 14 02.5 +0.2**
comp=Z,5.2nm,1.3s
KEST Kesra 49.46 287 P **P 15 14 13.2 +1.1**
comp=Z,2.4nm,0.6s,baz=70,slow=7.8,SNR=5.8
comp=Z,2.4nm,0.6s
KEST Kesra 49.46 287 P **P 15 14 11.8 -0.3**
KEST IAmb IAmb 15 14 19.1
comp=Z,16nm,1.2s
SSB Saint Sauveur 49.55 301 P **P 15 14 12.2 -0.5**
SSB IAmb IAmb 15 14 17.8
comp=Z,21nm,1.5s
SSB Saint Sauveur 49.55 301 P **P 15 14 12.2 -0.5**
SSB pmax pmax
comp=Z,21nm,1.5s
CLF Chambon-Foret 50.24 305 P **P 15 14 17.7 -0.1**
CLF IAmb IAmb 15 14 21.3
comp=Z,34nm,1.4s
INU Inuyama 50.69 73 P **P 15 14 20.8 -0.6**
INU IAmb IAmb 15 14 26.5
comp=Z,13nm,0.9s
JMIC Jan Mayen 51.03 335 LR LR 15 35 03.2
comp=Z,61nm,19.3s,baz=83,slow=35
MAJO Matsushiro 51.09 71 P **P 15 14 23.2 -1.2**
MAJO IAmb IAmb 15 14 29.5
comp=Z,13nm,0.9s
MAJO Matsushiro 51.09 71 P **P 15 14 23.2 -1.2**
MAJO pmax pmax
comp=Z,13nm,0.9s
MJAR Matsushiro Arr 51.09 71 P **P 15 14 24.0 -0.4**
comp=Z,5.4nm,0.8s,baz=293,slow=7.4,SNR=26
MJAR LR LR 15 37 30.1
comp=Z,94nm,18.7s,baz=306,slow=38
comp=Z,5.4nm,0.8s
KMBO Kilima Mbogo 51.18 228 P **P 15 14 28.1 +2.5**
comp=Z,3.2nm,0.8s,baz=37,slow=12,SNR=8.8
KMBO LR LR 15 37 24.2
comp=Z,67nm,18.1s,baz=93,slow=38
comp=Z,3.2nm,0.8s
KMBO Kilima Mbogo 51.18 228 P **P 15 14 24.7 -0.9**
KMBO Kilima Mbogo 51.18 228 *i* P **P 15 14 27.1 +1.5**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 51.18 228 P **P 15 14 28.0 +2.4**
EKA Eskdalmuir Ar 51.52 315 P **P 15 14 27.6 +0.2**
comp=Z,7.6nm,0.9s,baz=82,slow=7.8,SNR=15
EKA LR LR 15 36 36.0
comp=Z,108nm,18.5s,baz=97,slow=36
comp=Z,7.6nm,0.9s
SEY Seymchan 51.93 35 *i* P **P 15 14 30.5 +0.2**
SEY pmax pmax
comp=Z,2.0nm,0.9s
JYT Yasato 52.68 70 P **P 15 14 34.7 -1.5**
JYT IAmb IAmb 15 14 38.7
comp=Z,26nm,0.8s
JHJ Hachijo jima 2 53.71 74 LR LR 15 39 46.5
comp=Z,115nm,19.2s,baz=309,slow=38
MBAR Mbarara 54.74 235 LR LR 15 40 01.6
comp=Z,116nm,20.4s,baz=26,slow=38
MBAR Mbarara 54.74 235 *ce*P **P 15 14 53.8 +2.0**
MBAR pmax pmax
comp=Z,10.0nm,1.0s
LEM Lembang 55.84 136 LR LR 15 41 25.8
comp=Z,89nm,19.4s,baz=340,slow=39
BILL Bilibino 56.10 27 *i* P **P 15 15 01.5 +0.8**
BILL *e* 15 17 03.4
BILL *e*PPP PPP 15 18 19.2
BILL pmax pmax
comp=Z,6.0nm,1.1s
BILL MLR MLR
comp=Z,180nm,16.0s
DAV Davao City (W) 57.17 109 LR LR 15 41 44.0
comp=Z,52nm,19.8s,baz=348,slow=38
ESDC Sonseca Array 57.46 297 P **P 15 15 11.7 +0.8**
comp=Z,3.4nm,0.8s,baz=58,slow=7.0,SNR=30
ESDC LR LR 15 43 22.6
comp=Z,51nm,18.5s,baz=50,slow=40
comp=Z,3.4nm,0.8s
ESDC Sonseca Array 57.46 297 P **P 15 15 11.2 +0.3**
PETK Petropavlovsk- 57.57 45 P **P 15 15 10.3 -1.1**
comp=Z,2.2nm,0.9s,baz=290,slow=6.0,SNR=2.2
PETK LR LR 15 40 23.3
comp=Z,128nm,19.1s,baz=290,slow=37
comp=Z,2.2nm,0.9s
PETK Petropavlovsk- 57.57 45 P **P 15 15 09.9 -1.5**
SUMG Summit 59.34 341 P **P 15 15 24.0 +0.1**
SUMG Summit 59.34 341 P **P 15 15 24.0 +0.1**
SUMG pmax pmax
comp=Z,28nm,0.9s
SUMG Summit 59.34 341 *i* P **P 15 15 24.0 +0.1**
MDT Midelt 61.09 290 P **P 15 15 37.8 +1.7**
comp=Z,2.5nm,0.8s,baz=113,slow=6.1,SNR=4.6
comp=Z,2.5nm,0.8s
PVAQ Vaqueiros 61.11 296 P **P 15 15 37.1 +1.0**
KAPI Kappang 61.67 124 LR LR 15 44 52.3
comp=Z,34nm,19.9s,baz=308,slow=38
RES Resolute Bay 66.56 356 LR LR 15 49 18.9
comp=Z,46nm,18.8s,baz=348,slow=40
SIJI Sorong 66.69 111 LR LR 15 48 34.6
comp=Z,47nm,19.1s,baz=85,slow=39
TOA0 Torodi Ar. Sit 66.93 269 P **P 15 16 14.1 -0.5**
TOA0 IAmb IAmb 15 16 15.7
comp=Z,12nm,0.8s
TORD Torodi Ar. Bea 66.93 269 P **P 15 16 14.9 +0.3**
comp=Z,10.0nm,0.7s,baz=45,slow=5.9,SNR=58
comp=Z,10.0nm,0.7s
TORD Torodi Ar. Bea 66.93 269 P **P 15 16 14.0 -0.6**
TORD IAmb IAmb 15 16 15.8
comp=Z,8.8nm,0.8s
C23K Itkillik River 67.28 15 P **P 15 16 16.1 +0.1**
baz=325
C24K Franklin Bluff 67.75 14 P **P 15 16 18.6 -0.4**
baz=326
LSZ Lusaka 67.83 227 LR LR 15 50 01.3
comp=Z,87nm,18.4s,baz=20,slow=40
D23K Nanushuk River 67.98 15 P **P 15 16 18.0 -2.4**
baz=325
BATI Baumata 68.11 124 P **P 15 16 21.7 -0.4**
comp=Z,42nm,1.0s,baz=301,slow=22,SNR=2.4
comp=Z,42nm,1.0s
D24K Happy Valley 68.20 15 P **P 15 16 21.1 -0.7**
baz=326
E22K Anaktuvuk Pass 68.42 16 P **P 15 16 22.7 -0.6**
baz=324
TOLK Toolik Lake Re 68.48 15 P **P 15 16 22.7 -1.0**
TOLK Toolik Lake Re 68.48 15 P **P 15 16 23.8 +0.1**
baz=326
D25K Kavik River 68.53 14 P **P 15 16 23.1 -0.8**
baz=328
C27K Jago River 68.75 13 P **P 15 16 23.9 -1.4**
baz=330
F21K Alatna River 68.77 17 P **P 15 16 23.9 -1.6**
baz=323
F22K John River 68.84 17 P **P 15 16 24.3 -1.6**
baz=324
E24K Your Creek 69.17 15 P **P 15 16 27.2 -0.8**
baz=327
G21K Allakaket 69.33 18 P **P 15 16 27.4 -1.6**
baz=323
COLD Coldfoot 69.52 16 P **P 15 16 29.4 -0.7**
COLD Coldfoot 69.52 16 P **P 15 16 29.3 -0.7**
baz=326
IMAR Indian Mountai 69.70 18 P **P 15 16 30.0 -1.2**
E25K Arctic Village 69.72 14 P **P 15 16 29.9 -1.4**
baz=329
F24K Squaw Lake 69.77 15 P **P 15 16 30.8 -0.8**
baz=327
G23K Bananza Creek 69.98 17 P **P 15 16 32.5 -0.5**
baz=326
F25K Christian River 70.16 15 P **P 15 16 34.0 -0.1**
baz=329
H21K Melozitna Rive 70.20 18 P **P 15 16 32.8 -1.5**
H21K IAmb IAmb 15 16 37.9
comp=Z,34nm,1.6s
H21K Melozitna Rive 70.20 18 P **P 15 16 33.6 -0.7**
baz=324
H22K Ishtalitna Cre 70.35 18 P **P 15 16 33.2 -2.1**
baz=325
F26K Sheenjek River 70.36 14 P **P 15 16 34.8 -0.5**
baz=330
E27K Coleen River 70.39 13 P **P 15 16 34.2 -1.3**
baz=332
BMAR Burnt Mountain 70.51 14 P **P 15 16 36.3 +0.1**
G24K Hadweenzic Riv 70.55 16 P **P 15 16 35.8 -0.6**
baz=328
KOWA Kowa 70.60 273 P **P 15 16 38.7 +1.2**
KOWA Kowa 70.60 273 P **P 15 16 37.6 +0.1**
G25K Bearman Lake 70.78 15 P **P 15 16 37.0 -0.7**
baz=329
I21K Tanana 70.79 18 P **P 15 16 38.5 +0.6**
I21K IAmb IAmb 15 16 41.8
comp=Z,24nm,1.7s
I21K Tanana 70.79 18 P **P 15 16 36.9 -0.9**
baz=324
H23K Yukon River 70.83 17 P **P 15 16 38.3 +0.1**
H23K IAmb IAmb 15 16 42.5
comp=Z,27nm,1.8s
H23K Yukon River 70.83 17 P **P 15 16 37.7 -0.5**
baz=326
J20K Nowinta River 71.05 20 P **P 15 16 39.4 -0.1**
J20K IAmb IAmb 15 16 43.3
comp=Z,35nm,1.7s
J20K Nowinta River 71.05 20 P **P 15 16 38.9 -0.6**
baz=323
G26K Porcupine Rive 71.08 14 P **P 15 16 39.2 -0.4**
baz=331
H24K Noodor Dome 71.19 16 P **P 15 16 40.1 -0.3**
H24K Noodor Dome 71.19 16 P **P 15 16 40.0 -0.4**
baz=328
MLY Manley 71.21 18 P **P 15 16 39.9 -0.6**
MLY IAmb IAmb 15 16 45.2
comp=Z,32nm,1.8s
MLY Manley 71.21 18 P **P 15 16 39.5 -1.0**
baz=326
H25K Birch Creek 71.27 15 P **P 15 16 41.4 +0.7**
baz=329
I23K Minto, Yukon-K 71.44 17 P **P 15 16 41.5 -0.3**
I23K IAmb IAmb 15 16 45.2
comp=Z,12nm,1.0s
I23K Minto, Yukon-K 71.44 17 P **P 15 16 41.7 -0.1**
baz=327
INK Inuvik 71.52 10 P **P 15 16 42.3 +0.1**
INK IAmb IAmb 15 16 45.6
comp=Z,19nm,1.1s
INK Inuvik 71.52 10 P **P 15 16 42.3 +0.1**
INK pmax pmax
comp=Z,19nm,1.2s
INK Inuvik 71.52 10 P **P 15 16 42.2 -0.1**
baz=339
TTA Tatalina 71.53 21 P **P 15 16 42.3 -0.3**
baz=322
C36M Paulatuk 71.55 6 P **P 15 16 41.9 -0.5**
C36M Paulatuk 71.55 6 P **P 15 16 40.9 -1.4**
baz=346
G27K Doyon Strip 71.60 14 P **P 15 16 43.0 +0.1**
baz=332
K20K Telida 71.73 20 P **P 15 16 42.7 -1.0**
K20K Telida 71.73 20 P **P 15 16 42.3 -1.3**
baz=323
CHUM Lake Minchumin 71.77 19 P **P 15 16 43.5 -0.3**
baz=324
MDM Murphy Dome 71.86 17 P **P 15 16 43.7 -0.7**
MDM IAmb IAmb 15 16 48.2
comp=Z,8.7nm,1.1s
POKR Poker Plat Res 71.91 17 P **P 15 16 44.6 -0.1**
POKR Poker Plat Res 71.91 17 P **P 15 16 44.6 -0.1**
baz=328
BPAW Bear Paw Mtn. 71.92 19 P **P 15 16 43.9 -0.9**
BPAW IAmb IAmb 15 16 48.0
comp=Z,29nm,1.7s
BPAW Bear Paw Mtn. 71.92 19 P **P 15 16 43.6 -1.2**
baz=326
NEA2 Nenana 71.97 18 P **P 15 16 44.4 -0.6**
NEA2 IAmb IAmb 15 16 47.8
comp=Z,11nm,1.0s
NEA2 Nenana 71.97 18 P **P 15 16 44.4 -0.6**
baz=327
PRP Porcupine Dome 71.98 16 P **P 15 16 45.1 -0.2**
PRP Porcupine Dome 71.98 16 P **P 15 16 44.6 -0.7**
baz=330
TCOL CIGO, UAF Yank 72.02 17 P **P 15 16 45.1 -0.1**
baz=328
H27K Steamboat Moun 72.14 14 P **P 15 16 45.6 -0.5**

baz=333
CAST Castle Rocks 72.20 19 P P 15 16 45.8 -0.7
CAST IAmb IAmb 15 16 49.6
comp=Z,23nm,1.3s
CAST Castle Rocks 72.20 19 P P 15 16 46.0 -0.5
baz=325
CCB Clear Creek Bu 72.22 17 P P 15 16 45.7 -0.8
IL31 72.32 17 P P 15 16 45.6 -1.4
ILAR Eielson Array 72.32 17 P P 15 16 45.9 -1.2
comp=Z,2.4nm,0.8s,baz=330,slow=4.1,SNR=26
ILAR LR LR 15 52 32.6
comp=Z,43nm,21.9s,baz=320,slow=39
comp=Z,2.4nm,0.8s
ILAR Eielson Array 72.32 17 P P 15 16 45.4 -1.7
KTH Kantishna Hill 72.39 19 P P 15 16 46.0 -1.7
L20K Farewell, AK 72.49 21 P P 15 16 48.3 +0.1
baz=324
PPLA Purkeypile 72.61 20 P P 15 16 47.2 -1.9
PPLA Purkeypile 72.61 20 P P 15 16 49.5 +0.4
baz=325
N16K Nishlik Lake 72.63 24 P P 15 16 50.2 +1.2
baz=320
TRF Thorofare Moun 72.64 19 P P 15 16 49.2 -0.1
baz=326
I26K Coal Creek Min 72.65 15 P P 15 16 48.5 -0.6
I26K IAmb IAmb 15 16 57.4
comp=Z,28nm,1.9s
I26K Coal Creek Min 72.65 15 P P 15 16 48.8 -0.3
baz=332
I27K Kandik River 72.69 14 P P 15 16 49.0 -0.4
baz=333
J25K Salcha River, 72.79 16 P P 15 16 48.4 -1.7
J25K Salcha River, 72.79 16 P P 15 16 49.0 -1.0
baz=330
J26L Joseph Creek 73.28 15 P P 15 16 51.7 -1.2
J26L Joseph Creek 73.28 15 P P 15 16 52.0 -0.9
baz=331
K24K Donnelly Dome 73.41 17 P P 15 16 52.5 -1.2
baz=330
I29M Ogilvie Camp, 73.51 13 P P 15 16 53.5 -0.7
I29M Ogilvie Camp, 73.51 13 P P 15 16 53.7 -0.5
baz=335
O16K Kokwok River B 73.53 24 P P 15 16 54.5 +0.1
baz=321
SKT Skwentna 73.54 20 P P 15 16 52.3 -2.1
baz=326
SCRK Sand Creek 73.65 16 P P 15 16 54.2 -1.0
SCRK Sand Creek 73.65 16 P P 15 16 54.2 -1.0
baz=331
DHY Denali Highway 73.66 18 P P 15 16 54.1 -1.3
DHY IAmb IAmb 15 17 00.4
comp=Z,7.6nm,0.8s
DHY Denali Highway 73.66 18 P P 15 16 54.0 -1.3
baz=328
RIDG Independent Ri 73.67 16 P P 15 16 53.9 -1.3
RIDG IAmb IAmb 15 16 57.6
comp=Z,17nm,1.2s
RIDG Independent Ri 73.67 16 P P 15 16 53.7 -1.5
baz=330
K27K Chicken 74.00 15 P P 15 16 56.7 -0.3
baz=332
SUA Susitna One 74.17 20 P P 15 16 56.7 -1.6
baz=326
PAX Paxson 74.20 17 P P 15 16 56.5 -1.9
baz=330
O18K Koktuh Hills 74.22 23 P P 15 16 58.5 +0.1
O18K IAmb IAmb 15 17 02.1
comp=Z,18nm,0.9s
O18K Koktuh Hills 74.22 23 P P 15 16 57.4 -1.0
baz=323
MBWA Marble Bar 74.22 135 P P 15 16 58.4 -0.5
MBWA IAmb IAmb 15 17 01.1
comp=Z,16nm,1.0s
P17K Kvichak River 74.36 24 P P 15 16 59.5 +0.3
baz=322
DAWY Dawson 74.49 14 P P 15 16 59.2 -0.8
DAWY IAmb IAmb 15 17 03.8
comp=Z,30nm,1.8s
DAWY Dawson 74.49 14 P P 15 16 59.4 -0.6
baz=335
SML Sawmill 74.51 19 P P 15 16 58.8 -1.3
SML IAmb IAmb 15 17 12.6
comp=Z,17nm,0.8s
SML Sawmill 74.51 19 P P 15 16 59.1 -1.0
baz=328
PSA00 Pilbara Seismi 74.62 135 P P 15 17 01.0 -0.1
PSA00 Pilbara Seismi 74.62 135 P P 15 17 01.2 +0.1
PSA00 IAmb IAmb 15 17 02.2
comp=Z,26nm,1.2s
M23K Glacier View 74.68 19 P P 15 17 00.2 -0.8
baz=328
SCM Sheep Creek Mo 74.74 18 P P 15 17 01.0 -0.5
SCM Sheep Creek Mo 74.74 18 P P 15 17 01.0 -0.5
SCM pmax pmax
comp=Z,42nm,1.3s
SCM Sheep Creek Mo 74.74 18 P P 15 16 59.8 -1.7
baz=329
RC01 Rabbit Creek A 74.76 20 P P 15 17 01.8 +0.3
baz=327
HARP HAARP 74.77 17 P P 15 17 01.2 -0.4
baz=330
M24K Tolsona, Glenn 74.78 18 P P 15 17 01.7 0.0
M24K Tolsona, Glenn 74.78 18 P P 15 17 01.5 -0.3
baz=330
L27K Beaver Creek, 74.91 15 P P 15 17 02.0 -0.4
L27K Beaver Creek, 74.91 15 P P 15 17 01.4 -1.0
baz=333
BCAR Beaver Creek A 74.92 15 P P 15 17 02.2 -0.3
M26K Nabesna, AK 75.25 16 P P 15 17 04.5 0.0
baz=332
FITZ Fitzroy Crossi 75.31 128 P P 15 17 05.0 -0.1
comp=Z,4.4nm,0.9s,baz=300,slow=6.2,SNR=8.0
FITZ LR LR 15 55 41.8
comp=Z,30nm,18.1s,baz=308,slow=40
comp=Z,4.4nm,0.9s
FITZ Fitzroy Crossi 75.31 128 P P 15 17 05.1 -0.1
FITZ IAmb IAmb 15 17 08.6
comp=Z,13nm,1.2s
KNRA Kununurra 75.48 124 P P 15 17 05.8 -0.4
KNRA IAmb IAmb 15 17 07.3
comp=Z,17nm,0.8s
L29M L29M 75.60 14 P P 15 17 06.3 -0.1
baz=336
DBIC Dimbokro 75.97 267 P P 15 17 09.3 +0.1
comp=Z,12nm,1.1s,baz=74,slow=8.1,SNR=3.4
DBIC LR LR 15 54 19.0
comp=Z,81nm,20.3s,baz=58,slow=39
comp=Z,12nm,1.1s
M29M Somme Creek 76.15 14 P P 15 17 11.5 +1.8
baz=336
OHAK Old Harbor 76.95 24 P P 15 17 13.8 -0.2
LBTB Lobatse 77.10 223 LR LR 15 52 01.6
comp=Z,54nm,18.5s,baz=22,slow=36
LBTB Lobatse 77.10 223 P P 15 17 16.1 +0.7
LBTB Lobatse 77.10 223 P P 15 17 16.1 +0.7
LBTB pmax pmax
comp=Z,70nm,1.9s
M31M Drury Creek, Y 77.11 13 P P 15 17 14.6 -0.4
M31M IAmb IAmb 15 17 19.1
comp=Z,8.7nm,1.1s
M31M Drury Creek, Y 77.11 13 P P 15 17 13.9 -1.0
baz=339
TSUM Tsumeb 77.20 232 LR LR 15 53 44.1
comp=Z,55nm,19.3s,baz=352,slow=38
TSUM Tsumeb 77.20 232 P P 15 17 16.2 +0.1
TSUM IAmb IAmb 15 17 18.7
comp=Z,24nm,1.1s
FARO Faro, Yukon 77.25 12 P P 15 17 15.4 -0.4
HYT Haines Junctio 77.82 14 P P 15 17 19.2 +0.1
HYT IAmb IAmb 15 17 30.3
comp=Z,8.0nm,0.9s
MORW Morawa 78.76 142 P P 15 17 24.4 0.0
MORW IAmb IAmb 15 17 25.3
comp=Z,14nm,0.8s
YKA Yellowknife Ar 78.97 3 P P 15 17 25.1 -0.1
comp=Z,5.0nm,0.6s,baz=350,slow=5.8,SNR=42
YKA LR LR 15 56 46.1
comp=Z,81nm,18.2s,baz=326,slow=39
comp=Z,5.0nm,0.6s
YKA Yellowknife Ar 78.97 3 P P 15 17 24.6 -0.6
P33M Teslin, Yukon 79.25 13 P P 15 17 26.2 -0.7
P33M IAmb IAmb 15 17 31.5
comp=Z,43nm,1.9s
BOSA Boshof 80.19 221 P P 15 17 32.0 -0.4
comp=Z,6.4nm,0.9s,baz=29,slow=8.6,SNR=5.4
BOSA LR LR 15 52 59.3
comp=Z,37nm,20.7s,baz=20,slow=36
comp=Z,6.4nm,0.9s
BOSA Boshof 80.19 221 P P 15 17 32.0 -0.4
BOSA Boshof 80.19 221 P P 15 17 32.0 -0.4
BOSA pmax pmax
comp=Z,97nm,2.0s
BBTS Babate 80.21 281 LR LR 15 57 59.4
comp=Z,22nm,18.3s,baz=54,slow=39
SCHQ Schefferville 80.50 338 P P 15 17 32.8 -0.9
comp=Z,3.3nm,0.7s,baz=9.5,slow=5.8,SNR=3.8
comp=Z,3.3nm,0.7s
WB0 Warramunga Arr 82.11 123 P P 15 17 41.8 -0.9
WB0 IAmb IAmb 15 17 43.0
comp=Z,11nm,0.8s
WRA Warramunga Arr 82.20 123 P P 15 17 42.9 -0.3
comp=Z,12nm,0.8s,baz=324,slow=5.0,SNR=112
WRA LR LR 16 00 18.5
comp=Z,53nm,19.7s,baz=140,slow=40
comp=Z,12nm,0.8s
WRA Warramunga Ar 82.20 123 P P 15 17 42.4 -0.8
WRAB Tennant Creek 82.20 123 P P 15 17 42.1 -1.1
WRAB Tennant Creek 82.20 123 *ce* P P 15 17 43.3 +0.1
WRAB pmax pmax
comp=Z,11nm,0.7s
WB2 Warramunga Arr 82.21 123 P P 15 17 42.3 -0.9
WR0 Warramunga Arr 82.35 123 P P 15 17 43.6 -0.3
WR0 IAmb IAmb 15 17 44.2
comp=Z,11nm,0.8s
COEN Coen 84.17 113 P P 15 17 53.8 +0.3
AS31 Alice Springs 84.60 126 P P 15 17 54.9 -0.5
ASAR Alice Springs 84.60 126 P P 15 17 55.0 -0.4
comp=Z,4.5nm,0.7s,baz=312,slow=4.9,SNR=61
ASAR LR LR 16 03 51.9
comp=Z,84nm,20.1s,baz=9.0,slow=42
comp=Z,4.5nm,0.7s
ASAR Alice Springs 84.60 126 P P 15 17 54.8 -0.6
SUR Sutherland 85.49 222 LR LR 15 58 24.7
comp=Z,26nm,18.3s,baz=17,slow=37
FORT Forrest 86.38 135 P P 15 18 04.3 +0.2
VLDQ Val d'Or 89.50 340 P P 15 18 18.7 -0.2
VLDQ IAmb IAmb 15 18 29.7
comp=Z,9.0nm,0.9s
CTA Charters Tower 90.43 116 P P 15 18 23.6 -0.1
comp=Z,7.2nm,1.0s,baz=287,slow=8.9,SNR=3.0
comp=Z,7.2nm,1.0s
WALA Waterton Lakes 92.41 4 P P 15 18 32.1 -0.6
WALA IAmb IAmb 15 18 33.4
comp=Z,5.2nm,1.0s
NEW Newport 92.97 6 LR LR 16 05 25.4
comp=Z,71nm,18.6s,baz=4.5,slow=39
NEW Newport 92.97 6 P P 15 18 33.9 -1.3
NEW IAmb IAmb 15 18 38.8
comp=Z,4.5nm,1.0s
NEW Newport 92.97 6 P P 15 18 33.9 -1.3
NEW pmax pmax
comp=Z,5.0nm,1.0s
SADO Sadowa 93.03 340 LR LR 16 04 47.7
comp=Z,34nm,18.4s,baz=358,slow=38
STKA Stephens Creek 95.19 127 P P 15 18 44.3 -1.0
comp=Z,1.9nm,0.7s,baz=328,slow=4.9,SNR=4.8
STKA LR LR 16 10 46.2
comp=Z,151nm,19.4s,baz=207,slow=41
comp=Z,1.9nm,0.7s
BOZ Bozeman (W) 95.98 3 P P 15 18 48.8 -0.3
BOZ Bozeman (W) 95.98 3 P P 15 18 48.8 -0.3
BOZ pmax pmax
comp=Z,2.0nm,1.1s
ECSD EROS Data Cent 97.33 352 P P 15 18 54.4 -0.7
ECSD IAmb IAmb 15 18 58.5
comp=Z,5.2nm,1.1s
PDAR Pinedale Array 98.87 2 P Pdif 15 19 02.8 +0.5
comp=Z,0.2nm,0.5s,baz=358,slow=2.1,SNR=2.3
PDAR LR LR 16 09 09.9
comp=Z,24nm,18.7s,baz=18,slow=39
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 112.20 356 PKKPbc PKKPbc 15 34 48.5 +0.5
comp=Z,0.3nm,0.7s,baz=191,slow=8.8,SNR=4.1
TROLL Troll, Antarti 120.58 200 PKPdf PKiKP 15 24 14.0 +1.3
SNAA Sanae 121.88 201 PKPdf PKiKP 15 24 15.7 +0.5
SNAA Sanae 121.88 201 PKPdf PKiKP 15 24 15.3 +0.1
SNAA Sanae 121.88 201 PKIKP PKiKP 15 24 15.3 +0.1
VNA2 Neumayer--Watz 122.89 203 PKPdf PKiKP 15 24 18.0 +0.9
baz=26,slow=3.0
VNA1 Neumayer--Stat 123.05 203 PKPdf PKiKP 15 24 18.4 +1.1
VNA3 Neumayer Olymp 123.70 203 PKPdf PKiKP 15 24 19.3 +0.6
VNDA Vanda 127.32 164 PKP PKPdf 15 24 24.7 -0.5
comp=Z,1.9nm,0.9s,baz=258,slow=5.3,SNR=9.1
VNDA Vanda 127.32 164 PKPdf PKiKP 15 24 25.4 -0.4
QSPA South Pole Qui 128.51 180 PKPdf PKiKP 15 24 27.9 -0.6
CPUP Villa Florida 136.39 271 PKP PKPdf 15 24 43.4 -0.5
comp=Z,2.9nm,0.8s,baz=43,slow=2.7,SNR=8.0
LPAZ La Paz 139.94 292 PKP PKPdf 15 24 49.4 -0.2
comp=Z,0.7nm,0.8s,baz=72,slow=5.9,SNR=4.4
PLCA Paso Flores 151.61 254 PKPbc PKiKP 15 25 17.5 +1.0
comp=Z,6.9nm,0.7s,baz=30,slow=2.0,SNR=16

*IDC **14** 15:11:37.0±0.5,38.°70N×72.°60E,h0km,mb4.4/35, mbtmp4.4/42,ML3.9/7,MS3.4/1,Error ellipse: s-maj=11.8km s-min=9.6km az=170.0*
*BJI **14** 15:11:37.9±0.0,38.°89N×72.°27E,h8km,mb4.5/31, mB4.8/14,ML4.2/4,Ms4.3/10,Ms7 4.2/9*
*NEIC **14** 15:11:39.7±2.3,38.°93N±0.°04×72.°42E±0.°06,h5km±4km, mb4.7/82,Error ellipse: s-maj=7.4km s-min=5.0km az=47.0*
*MOS **14** 15:11:40.2±1.5,38.°78N×72.°55E,h22km,mb4.9/31,Error ellipse: s-maj=5.0km s-min=3.3km az=84.8*
*SOME **14** 15:11:42.7,39.°27N×72.°07E,h0km,MS3.6*
*NNC **14** 15:11:46.1±1.6,39.°11N×72.°58E,h0km,mb5.0,mpv4.6, Error ellipse: s-maj=11.9km s-min=8.8km az=14.0*

ISC 14 15:11:39.5±0.3,38.73N±0.03×72.35E±0.02,h10km,n389, σ2S18/422,mb4.6/112,MS3.4/4,30C-14D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.86**	**331**	Pg	Pg	15 11 52.6	-3.5
DRK				Sg	**Sg**	**15 12 03.3**	**-4.1**
GAR	**Garm**	**1.61**	**280**	Pn	**Pn**	**15 12 09.1**	**+1.1**
GAR	**Garm**	**1.61**	**280**	*i* PN	**Pb**	**15 12 10.4**	**+1.1**
GAR				*i* S	**Sg**	**15 12 33.9**	**+2.7**
OHH	**Osh**	**1.82**	**11**	*i* PN	**Pn**	**15 12 10.7**	**-0.3**
OHH				*i* S	**Sn**	**15 12 32.3**	**-1.8**
CHGR	**Chuyangaron**	**2.50**	**269**	Pn	**Pb**	**15 12 24.2**	**-0.2**
CHGR	**Chuyangaron**	**2.50**	**269**	PN	**Pb**	**15 12 24.2**	**-0.2**
KSH	**Kashi**	**2.93**	**73**	Pn	Pn	15 12 20.0	-6.2
KSH				Sn	Sn	15 12 51.3	-10
KSH				smax	smax		
	comp=N,1μm,0.9s						
KSH				smax	smax		
	comp=E,2μm,0.9s						
ARLS	**Aral**	**3.47**	**25**	*i* PN	**Pn**	**15 12 34.1**	**+0.4**
ARLS				*i* S	**Sn**	**15 13 13.5**	**-1.5**
TAS	**Tashkent**	**3.49**	**319**	Pn	**Pn**	**15 12 32.9**	**-0.9**
TAS	**Tashkent**	**3.49**	**319**	PN	**Pn**	**15 12 32.9**	**-0.9**
AML	**Almayashu**	**3.55**	**16**	P	**Pn**	**15 12 36.2**	**+1.2**
	SNR=219						
AML	**Almayashu**	**3.55**	**16**	*i* PN	**Pn**	**15 12 35.3**	**+0.3**
AML				*i* S	**Sn**	**15 13 15.9**	**-1.3**
IUG	**luzhnay**	**3.84**	**333**	*e*PN	**Pn**	**15 12 41.3**	**+2.6**
IUG				*e*		15 13 27.9	
IUG	**luzhnay**	**3.84**	**333**	*e*P	**Pb**	**15 12 44.9**	**-2.5**
	16μm,0.5s						
IUG				*e*S	**Sn**	**15 13 29.7**	**+5.7**
	3μm,0.5s						
IUG	**luzhnay**	**3.84**	**333**	*e*Pn	**Pn**	**15 12 41.4**	**+2.6**
	baz=331						
IUG				*e*Sn	**Sn**	**15 13 27.9**	**+3.9**
	baz=331						
NRN	**Naryn**	**3.89**	**45**	Pn	**Pn**	**15 12 38.7**	**-0.9**
NRN	**Naryn**	**3.89**	**45**	PN	**Pn**	**15 12 38.7**	**-0.9**
MRKS	**Merke**	**4.06**	**9**	*e*P	**Pb**	**15 12 50.9**	**-0.3**
	122nm,0.6s						
MRKS				*e*S	**Sb**	**15 13 39.5**	**-0.9**
	196nm,0.7s						
MRKS	**Merke**	**4.06**	**9**	Pg	**Pb**	**15 12 50.9**	**-0.3**
	122nm,0.6s						
MRKS				Lg	Lg	15 13 39.5	
	196nm,0.7s						
EKS2	**Erkin-Say**	**4.07**	**15**	P	**Pn**	**15 12 44.6**	**+2.7**
	SNR=22						
EKS2	**Erkin-Say**	**4.07**	**15**	*i* PN	**Pn**	**15 12 42.2**	**+0.3**
EKS2				*i* S	**Sn**	**15 13 28.5**	**-1.2**
CHM	**Chimkent**	**4.15**	**331**	*i* PN	**Pg**	**15 13 03.0**	**+4.1**
CHM	**Chimkent**	**4.15**	**331**	*e*P	**Pb**	**15 12 50.8**	**-1.7**
	15nm,0.6s						
CHM				*e*S	**Sb**	**15 13 40.3**	**-2.4**
	1μm,0.5s						
DZA	**Taraz**	**4.23**	**350**	*e*PN	**Pn**	**15 12 45.7**	**+1.7**
DZA				*e*		15 13 36.4	
DZA	**Taraz**	**4.23**	**350**	*e*Pn	**Pn**	**15 12 45.7**	**+1.7**
	baz=348						
DZA				*e*Sn	**Sn**	**15 13 36.4**	**+3.0**
	baz=348						
AAK	**Ala-Archa**	**4.23**	**22**	Pn	**Pn**	**15 12 46.4**	**+2.3**
	13nm,0.3s,baz=171,slow=5.9,SNR=25						
AAK				Sn	**Sn**	**15 13 37.8**	**+4.1**
	12nm,0.3s,baz=137,slow=15,SNR=9.1						
	150nm,0.8s						
AAK	**Ala-Archa**	**4.23**	**22**	P	**Pn**	**15 12 46.5**	**+2.4**
	SNR=24						
KBK	**Karagaybulak**	**4.39**	**26**	*i* PN	**Pn**	**15 12 47.6**	**+1.3**
KBK				*i* S	**Sn**	**15 13 35.6**	**-2.0**
FRU1	**Bishkek**	**4.43**	**22**	*i* PN	**Pn**	**15 12 47.6**	**+0.8**
FRU1				*i* S	**Sn**	**15 13 37.7**	**-0.7**
KK31	**Karatay Array**	**4.58**	**343**	Pn	**Pn**	**15 12 50.3**	**+1.5**
KK31	**Karatay Array**	**4.58**	**343**	PN	**Pn**	**15 12 51.0**	**+2.2**
KK31						15 13 45.4	
KK31				*e*		15 14 04.5	
KK31	**Karatay Array**	**4.58**	**343**	⇓Pn	**Pn**	**15 12 51.1**	**+2.2**
	111nm,0.4s,baz=149,slow=12,SNR=938						
KK31				⇑Sn	**Sn**	**15 13 45.5**	**+3.3**
	192nm,0.6s,baz=156,slow=24,SNR=5.2						
KK31				⇑Lg	Lg	15 14 04.5	
	530nm,1.1s,baz=170,slow=27,SNR=4.9						
KKAR	**Karatay Array**	**4.58**	**343**	Pn	**Pn**	**15 12 50.0**	**+1.2**
KKAR	**Karatay Array**	**4.58**	**343**	PN	**Pn**	**15 12 50.0**	**+1.2**
ULHL	**Ulahol**	**4.60**	**39**	P	**Pn**	**15 12 50.1**	**+0.8**
	SNR=12						
ULHL	**Ulahol**	**4.60**	**39**	*i* PN	**Pn**	**15 12 49.7**	**+0.5**
ULHL				*i* S	**Sn**	**15 13 40.7**	**-2.1**
CHMS	**Chumysh**	**4.64**	**22**	P	**Pn**	**15 12 52.4**	**+2.8**
	SNR=32						
CHMS	**Chumysh**	**4.64**	**22**	*i* PN	**Pn**	**15 12 51.9**	**+2.4**
CHMS				pmax	pmax		
	comp=Z,174nm,0.7s						
CHMS	**Chumysh**	**4.64**	**22**	⇓Pn	**Pn**	**15 12 52.0**	**+2.4**
	comp=Z,174nm,0.8s						
CHMS				⇓Pg	**Pb**	**15 13 03.3**	**+2.4**
	comp=Z,299nm,1.2s						
CHMS				⇓Lg	Lg	15 14 02.5	
	comp=Z,152nm,0.7s						
USP	**Ospenovka**	**4.81**	**19**	P	**Pn**	**15 12 54.6**	**+2.6**
	SNR=8.5						
USP	**Ospenovka**	**4.81**	**19**	*i* PN	**Pn**	**15 12 53.3**	**+1.3**
USP				*i* S	**Sn**	**15 13 45.5**	**-2.4**
TKM2	**Tokmak 2**	**4.86**	**29**	P	**Pn**	**15 12 55.9**	**+3.2**
	SNR=6.9						
TKM2	**Tokmak 2**	**4.86**	**29**	PN	**Pn**	**15 12 56.1**	**+3.3**
TKM2						15 13 08.8	
TKM2						15 14 07.7	
TKM2	**Tokmak 2**	**4.86**	**29**	⇑Pn	**Pn**	**15 12 56.1**	**+3.3**
	comp=Z,46nm,0.9s						
TKM2				⇓Pg	**Pb**	**15 13 08.9**	**+4.2**
	comp=Z,106nm,0.7s						
TKM2				⇓Lg	Lg	15 14 07.7	
	comp=Z,396nm,1.3s						
CEP	**Cherat**	**4.91**	**184**	P	Pb	15 13 00.3	-5.3
KBL	**Kabul**	**4.96**	**213**		Pn	15 13 00.0	+5.9
KBL	**Kabul**	**4.96**	**213**	PN	Pn	15 13 00.0	+5.9
SGDS	**Sogindy**	**5.02**	**19**	*e*PN	**Pn**	**15 12 55.3**	**+0.4**
SGDS				*e*		15 13 10.5	
SGDS	**Sogindy**	**5.02**	**19**	*e*P	**Pb**	**15 13 09.8**	**+2.3**
	comp=Z,71nm,0.9s						
SGDS				*e*S	**Sb**	**15 14 12.2**	**+4.3**
	comp=Z,136nm,1.7s						
SGDS	**Sogindy**	**5.02**	**19**	*e*Pn	**Pn**	**15 12 55.3**	**+0.4**
	baz=18						
SGDS				*e*Pg	**Pb**	**15 13 10.5**	**+3.1**
	baz=18						
SGDS				*e*Lg	Lg	15 14 18.0	
	baz=18						
SGDS	**Sogindy**	**5.02**	**19**	Pg	**Pb**	**15 13 09.8**	**+2.3**
	comp=Z,71nm,0.9s						
SGDS				Lg	Lg	15 14 12.2	
	comp=Z,136nm,1.7s						
KST	**Kastek**	**5.10**	**31**	*e*P	**Pb**	**15 13 11.4**	**+2.5**
	comp=Z,107nm,1.2s						
KST				*e*S	**Sb**	**15 14 14.8**	**+4.4**
	comp=Z,164nm,0.6s						
KST	**Kastek**	**5.10**	**31**	Pg	**Pb**	**15 13 11.4**	**+2.5**
	comp=Z,107nm,1.2s						
KST				Lg	Lg	15 14 14.8	
	comp=Z,164nm,0.6s						
CHCP	**Chirah Chowk**	**5.12**	**171**	P	Pn	15 13 01.2	+5.0
NIL	**Nilore**	**5.12**	**172**		Pn	15 13 00.5	+4.2
NIL	**Nilore**	**5.12**	**172**	PN	Pn	15 13 00.5	+4.2
MTBS	**Maitube**	**5.37**	**34**	*e*P	**Pb**	**15 13 16.2**	**+2.8**
	comp=Z,126nm,1.0s						
MTBS				*e*S	**Sb**	**15 14 23.0**	**+5.0**
	comp=Z,163nm,0.7s						
MTBS	**Maitube**	**5.37**	**34**	Pg	**Pb**	**15 13 16.2**	**+2.8**
	comp=Z,126nm,1.0s						
MTBS				Lg	Lg	15 14 23.0	
	comp=Z,163nm,0.7s						
KRBS	**Karabastau**	**5.56**	**26**	*e*P	**Pb**	**15 13 20.0**	**+3.4**
	comp=Z,44nm,0.6s						
KRBS				*e*S	**Sb**	**15 14 29.8**	**+6.5**
	comp=Z,114nm,0.6s						
KRBS	**Karabastau**	**5.56**	**26**	Pg	**Pb**	**15 13 20.0**	**+3.4**
	comp=Z,44nm,0.6s						
KRBS				Lg	Lg	15 14 29.8	
	comp=Z,114nm,0.6s						
AAA	**Alma-Ata**	**5.65**	**36**	*e*PN	**Pn**	**15 13 03.4**	**-0.1**
AAA				*e*		15 13 21.2	
AAA	**Alma-Ata**	**5.65**	**36**	*e*P	**Pb**	**15 13 20.7**	**+2.5**
	comp=Z,113nm,0.6s						
AAA				*e*S	**Sb**	**15 14 31.0**	**+5.0**
	comp=Z,390nm,1.1s						
AAA	**Alma-Ata**	**5.65**	**36**	*e*Pn	**Pn**	**15 13 03.5**	**-0.1**
	baz=35						
AAA				*e*Pg	**Pb**	**15 13 21.2**	**+3.0**
	baz=35						
MDOK	**Medeo**	**5.68**	**37**	*e*PN	**Pn**	**15 13 04.0**	**0.0**
MDOK				*e*		15 13 22.2	
MDOK				*e*		15 14 08.6	
MDOK	**Medeo**	**5.68**	**37**	*e*P	**Pb**	**15 13 22.0**	**+3.3**
	comp=Z,78nm,0.6s						
MDOK				*e*S	**Sb**	**15 14 33.0**	**+6.1**
	comp=Z,126nm,0.9s						
MDOK	**Medeo**	**5.68**	**37**	*e*Pn	**Pn**	**15 13 04.0**	**0.0**
	baz=36						
MDOK				*e*Pg	**Pb**	**15 13 22.2**	**+3.5**
	baz=36						
MDOK				*e*Sn	**Sn**	**15 14 08.6**	**-0.8**
	baz=36						
MDOK	**Medeo**	**5.68**	**37**	⇑Pn	**Pn**	**15 13 06.5**	**+2.5**
	comp=Z,34nm,0.8s						
MDOK				⇓Pg	**Pb**	**15 13 21.0**	**+2.2**
	comp=Z,82nm,0.7s						
MDOK				Pg	Pg	15 13 22.0	-6.2
	comp=Z,78nm,0.6s						
MDOK				⇓Lg	Lg	15 14 32.7	
	comp=Z,308nm,1.2s						
MDOK				Lg	Lg	15 14 33.0	
	comp=Z,126nm,0.9s						
PRZ	**Przheval'sk**	**5.94**	**49**	Pn	**Pn**	**15 13 07.3**	**-0.3**
PRZ	**Przheval'sk**	**5.94**	**49**	PN	**Pn**	**15 13 07.3**	**-0.3**
THW	**Thamme Wali**	**5.95**	**185**	P	Pn	15 13 11.5	+3.9
KTBS	**Karatobe**	**5.95**	**32**	*e*P	**Pb**	**15 13 27.6**	**+4.3**
	comp=Z,41nm,0.9s						
KTBS				*e*S	**Sg**	**15 14 43.7**	**-6.8**
	comp=Z,82nm,0.6s						
KTBS	**Karatobe**	**5.95**	**32**	Pg	**Pb**	**15 13 27.6**	**+4.3**
	comp=Z,41nm,0.9s						
KTBS				Lg	Lg	15 14 43.7	
	comp=Z,82nm,0.6s						
KUU	**Kurty**	**5.97**	**29**	*e*PN	**Pn**	**15 13 08.4**	**+0.6**
KUU	**Kurty**	**5.97**	**29**	*e*P	**Pb**	**15 13 26.3**	**+2.7**
	comp=Z,44nm,0.8s						
KUU				*e*S	**Sb**	**15 14 41.0**	**+5.9**
	comp=Z,100nm,1.4s						
KUU	**Kurty**	**5.97**	**29**	*e*Pn	**Pn**	**15 13 08.5**	**+0.6**
	baz=28						
KUU	**Kurty**	**5.97**	**29**	Pg	**Pb**	**15 13 26.3**	**+2.7**
	comp=Z,44nm,0.8s						
KUU				Lg	Lg	15 14 41.0	
	comp=Z,100nm,1.4s						
SATY	**Saty**	**6.30**	**45**	*e*PN	**Pn**	**15 13 12.7**	**+0.1**
SATY				*e*		15 13 33.9	
SATY				pmax	pmax		
	comp=Z,8.0nm,0.9s						

SATY Saty 6.30 45 *e*Pn **Pn** **15 13 12.8 +0.1**
comp=Z,8.1nm,0.9s,baz=44
SATY *e*Pg Pb 15 13 34.0 +4.6
baz=44
JMU Jammu 6.35 160 *e*P **Pn** **15 13 15.1 +2.0**
ZHN Zhinishke 6.39 44 *e*PN **Pn** **15 13 13.3 -0.5**
ZHN *e* 15 13 34.9
ZHN Zhinishke 6.39 44 *e*Pn **Pn** **15 13 13.4 -0.5**
baz=44
ZHN *e*Pg **Pb** **15 13 35.0 +4.1**
baz=44
BTLS Baital 6.43 11 *e*PN **Pn** **15 13 15.2 +1.1**
BTLS Baital 6.43 11 *e*Pn **Pn** **15 13 15.3 +1.1**
baz=9.5
UZB Uzynbulak 6.71 47 *e*PN **Pn** **15 13 17.6 -0.5**
UZB Uzynbulak 6.71 47 *e*Pn **Pn** **15 13 17.6 -0.5**
baz=46
KPKS Kokpek 6.73 43 *e*PN **Pn** **15 13 18.3 0.0**
KPKS *e* 15 13 41.3
KPKS pmax pmax
comp=Z,7.0nm,0.7s
KPKS Kokpek 6.73 43 *e*Pn **Pn** **15 13 18.4 0.0**
comp=Z,7.1nm,0.7s,baz=43
KPKS *e*Pg Pb 15 13 41.3 +4.8
baz=43
THN Thein Dam 6.86 155 *e*P **Pn** **15 13 22.4 +2.4**
THN *e*S **Sn** **15 14 40.2 +2.1**
SHLS Shalkode 6.97 48 *e*PN **Pn** **15 13 24.0 +2.4**
SHLS pmax pmax
comp=Z,8.0nm,1.1s
SHLS Shalkode 6.97 48 *e*Pn **Pn** **15 13 24.1 +2.4**
comp=Z,7.8nm,1.1s,baz=49
TDK Taldyqorghan 7.72 34 *e*Pg Pb 15 13 59.4 +6.0
baz=33
BHK Bhakra 8.02 154 *e*P **Pn** **15 13 35.3 -0.8**
BHK *e*S **Sn** **15 15 09.0 +2.1**
SMLA Simla 8.55 151 *e*P **Pn** **15 13 43.8 +0.5**
SMLA *e*S **Sn** **15 15 18.1 -1.8**
SMLA IAML 15 15 25.7
comp=N,50nm,0.8s
SMLA IAML 15 15 26.8
comp=E,80nm,0.7s
MAKZ Makanchi 10.73 38 Pn **Pn** **15 14 11.5 -1.6**
MAKZ Makanchi 10.73 38 P **Pn** **15 14 11.5 -1.6**
MAKZ Makanchi 10.73 38 ⇓Pn **Pn** **15 14 16.0 +2.9**
comp=E,59nm,1.0s
MK31 Makanchi Array 10.87 39 Pn **Pn** **15 14 15.2 +0.1**
MK31 Makanchi Array 10.87 39 *i*P **Pn** **15 14 15.1 +0.1**
MK31 Makanchi Array 10.87 39 ⇑Pn **Pn** **15 14 18.1 +3.0**
comp=E,16nm,0.8s,baz=238,slow=9.9,SNR=7.9
MKAR Makanchi Array 10.87 39 Pn **Pn** **15 14 15.2 +0.2**
comp=E,0.2nm,0.3s,baz=224,slow=13,SNR=3.4
MKAR Lg Lg 15 17 13.3
comp=E,0.2nm,0.3s,baz=227,slow=27,SNR=1.5
MKAR LR LR 15 18 30.5
comp=E,215nm,20.5s,baz=239,slow=38
comp=E,5.4nm,0.9s
MKAR Makanchi Array 10.87 39 Pn **Pn** **15 14 15.6 +0.5**
GEYT Alibeck 11.21 270 Pn **Pn** **15 14 19.7 -0.1**
comp=E,2.5nm,0.3s,baz=97,slow=12,SNR=12
GEYT Sn **Sn** **15 16 25.6 +0.5**
comp=E,1.5nm,0.3s,baz=118,slow=25,SNR=3.4
comp=E,7.3nm,0.4s
GEYT Alibeck 11.21 270 Pn **Pn** **15 14 21.5 +1.7**
GYA0 ALIBECK ARRAY 11.21 270 P **Pn** **15 14 21.5 +1.8**
GYA0B ALIBECK ARRAY 11.21 270 Pn **Pn** **15 14 21.5 +1.7**
WMQ Urumqi 12.61 61 *e*P **Pn** **15 14 41.4 +2.5**
KURBB Kurchatov Arra 12.67 18 Pn **Pn** **15 14 38.4 -1.2**
comp=E,0.2nm,0.3s,baz=214,slow=12,SNR=1.7
KURBB Lg Lg 15 18 16.9
baz=203,slow=30,SNR=6.5
comp=E,2.4nm,0.7s
KURK Kurchatov 12.78 18 P **Pn** **15 14 38.4 -2.7**
ABKAR Akbulak array 13.78 324 Pn **Pn** **15 14 53.5 -1.2**
DANN Dangsing 14.05 134 *e*P **Pn** **15 14 55.0 -3.9**
comp=E,72nm,0.6s
BRVK Borovoye 14.40 355 *i*P **Pn** **15 15 04.2 +1.0**
BRVK pmax pmax
comp=Z,4.0nm,0.6s
GKN Gorkha 14.81 133 *e*P **Pn** **15 15 05.8 -3.4**
comp=Z,63nm,0.7s
DMN Daman 15.38 132 *e*P **Pn** **15 15 12.9 -3.9**
AKTO Aktyubinsk 15.49 324 Pn **Pn** **15 15 17.4 -0.5**
comp=Z,2.0nm,0.3s,baz=112,slow=12,SNR=11
AKTO Sn **Sn** **15 18 04.5 -5.0**
comp=Z,0.8nm,0.3s,baz=191,slow=13,SNR=6.8
comp=Z,8.6nm,0.5s
PKIN Phulchoki 15.57 132 *e*P **Pn** **15 15 16.5 -2.9**
PKI Pulchoki 15.59 132 *e*P **Pn** **15 15 16.0 -3.6**
JIRN Jiri 15.98 130 *e*P **Pn** **15 15 22.3 -2.5**
comp=Z,32nm,0.5s
RAMN Ramite 16.75 130 *e*P **Pn** **15 15 31.9 -2.6**
ZAA0 Zalesovo Array 17.44 25 Pn **Pn** **15 15 40.2 -2.5**
ZALV Zalesovo Beam 17.44 25 P **Pn** **15 15 40.5 -2.2**
comp=Z,1.1nm,0.3s,baz=210,slow=11,SNR=13
comp=Z,9.8nm,0.8s
ZALV Zalesovo Beam 17.44 25 Pn **Pn** **15 15 40.2 -2.5**
GOMU GeErMu 18.01 91 P **P** **15 15 51.8 +1.1**
GOMU sP sP 15 15 55.0 -1.8
GOMU pmax pmax
comp=Z,13nm,0.7s
MAK Makhachkala 19.24 291*c* *i*P **P** **15 15 59.7 -4.1**
MAK *e*S **Sn** **15 19 34.9 -5.4**
MAK pmax pmax
comp=Z,135nm,1.3s
WSAR Wadi Sarin 19.37 221 P **Pn** **15 16 06.8 +0.3**
comp=Z,0.4nm,0.3s,baz=320,slow=6.6,SNR=4.4
comp=Z,7.7nm,0.8s
UOSS Minazif 19.38 230 P **Pn** **15 16 07.9 +1.4**
ARU Arti 19.93 337 P **P** **15 16 12.4 +1.2**
comp=Z,5.5nm,0.5s,baz=298,slow=21,SNR=5.5
comp=Z,5.5nm,0.5s
ARU Arti 19.93 337 P **P** **15 16 11.1 -0.1**
ARU IAmb IAmb 15 16 43.2
comp=Z,78nm,1.3s
ARU Arti 19.93 337*d* *i*P P 15 16 01.3 -10
ARU SS **S** **15 19 54.6 -0.7**
ARU pmax pmax
comp=Z,51nm,1.5s
ARU MLR MLR
comp=Z,107nm,11.0s
GTA Gaotai 21.31 79 *e*P **P** **15 16 26.0 -0.5**
GTA pP pP 15 16 29.4 -1.3
GTA sP sP 15 16 32.0 -0.6
GTA pmax pmax
comp=Z,17nm,0.9s
GTA pmax pmax
comp=Z,110nm,5.2s
GTA LR LR
comp=Z,230nm,11.6s
GTA LR LR
comp=Z,220nm,8.7s
GTA LR LR
comp=Z,150nm,9.5s
GNI Garni 21.34 283 P **P** **15 16 28.7 +1.9**
comp=Z,21nm,0.8s,baz=2.5,slow=6.7,SNR=4.7
comp=Z,21nm,0.8s
GNI Garni 21.34 283 P **P** **15 16 28.4 +1.6**
GNI Garni 21.34 283 *i*P **P** **15 16 32.0 +5.2**
GNI pmax pmax
comp=Z,103nm,1.0s
ZEI Tsey 21.88 290 *e*P **P** **15 16 39.2 +6.6**
ZEI pmax pmax
comp=Z,16nm,0.8s
BELG Belogornoye 21.91 317 P **P** **15 16 33.2 +0.6**
comp=Z,65nm,0.7s,baz=161,slow=2.9,SNR=7.0
comp=Z,65nm,0.7s
BELG Belogornoye 21.91 317 *i*P **P** **15 16 34.3 +1.7**
BELG pmax pmax
comp=Z,14nm,0.9s
HYBB Hyderabad (bro 21.92 164 *e*P **P** **15 16 35.4 +2.4**
ONI Oni 22.20 289 P **P** **15 16 37.3 +1.3**
ONI Oni 22.20 289 P **P** **15 16 37.3 +1.3**
ONI pmax pmax
comp=Z,64nm,1.0s
KBZ Khabaz 22.64 292 P **P** **15 16 42.9 +2.3**
comp=Z,12nm,0.9s,baz=130,slow=9.1,SNR=5.9
comp=Z,12nm,0.9s
KVAR Kislovodsk Arr 22.80 293 P **P** **15 16 44.1 +1.8**
comp=Z,8.7nm,1.0s,baz=244,slow=24,SNR=1.4
comp=Z,8.7nm,1.0s
KIV Kislovodsk 22.80 293 *e*P **P** **15 16 45.5 +3.1**
KIV pmax pmax
comp=Z,28nm,1.0s
SHA1 Shidzhatmaz 22.81 292 *i*P **P** **15 16 46.5 +3.9**
MOY Mondy 23.79 48 *e*P **P** **15 16 53.2 +0.9**
MOY pmax pmax
comp=Z,16nm,1.4s
KIRV Kirov 24.76 331 P **P** **15 17 00.1 -0.8**
comp=Z,40nm,0.8s,baz=127,slow=2.6,SNR=7.5
comp=Z,40nm,0.8s
KIRV Kirov 24.76 331 *i*P **P** **15 17 00.9 0.0**
LZH Lanzhou 25.10 86 *e*P **P** **15 17 04.3 -0.2**
LZH pP sP 15 17 15.6 +4.7
LZH pmax pmax
comp=Z,19nm,1.4s
SONM Songino Array 26.22 59 P **P** **15 17 12.6 -2.0**
comp=Z,2.5nm,0.8s,baz=272,slow=6.1,SNR=8.1
comp=Z,2.5nm,0.8s
SONM Songino Array 26.22 59 P **P** **15 17 14.5 0.0**
VORR Voronezh 26.44 310 *e*P **P** **15 17 18.3 +2.0**
VORR pmax pmax
comp=Z,40nm,0.4s
ULN Ulaanbaatar 26.67 59 P **P** **15 17 16.7 -1.9**
ULN Ulaanbaatar 26.67 59 P **P** **15 17 16.7 -1.9**
ULN pmax pmax
comp=Z,4.0nm,0.8s
CD2 Chengdu 26.85 97 P **P** **15 17 19.6 -0.6**
RAYN Ar Rayn 27.40 244 P **P** **15 17 26.2 +1.0**
RAYN IAmb IAmb 15 17 35.6
comp=Z,11nm,1.0s
RAYN Ar Rayn 27.40 244 P **P** **15 17 26.2 +1.0**
RAYN pmax pmax
comp=Z,11nm,1.0s
PZH PanZhiHua 27.48 108 P **P** **15 17 26.8 +0.8**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,120nm,4.9s
PRGR Permogore 28.23 333 *e*P **P** **15 17 33.1 +0.9**
SIM Simferopol' 28.95 295 *e*P **P** **15 17 42.4 +3.5**
SIM pmax pmax
comp=Z,38nm,1.1s
SIM MLR MLR
comp=Z,74nm,19.9s
KMI Kunming 29.00 109 ⇓P **P** **15 17 42.1 +2.4**
KMI pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 29.01 316 P **P** **15 17 38.9 -0.3**
comp=Z,5.1nm,0.4s,baz=171,slow=18,SNR=3.7
comp=Z,5.1nm,0.4s
OBN Obninsk 29.01 316 P **P** **15 17 38.7 -0.5**
OBN Obninsk 29.01 316⇑*e*P **P** **15 17 40.5 +1.3**
OBN *e* 15 18 34.8
OBN *e*S **S** **15 22 24.7 -5.4**
OBN pmax pmax
comp=Z,16nm,1.0s
OBN MLR MLR
comp=Z,111nm,16.0s
BRTR Keskin Array B 29.85 284 P **P** **15 17 49.3 +2.3**
comp=Z,2.4nm,0.9s,baz=79,slow=6.4,SNR=6.8
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 29.85 284 P **P** **15 17 47.6 +0.6**
BRTR Keskin Array B 29.85 284 P **P** **15 17 47.6 +0.6**
HHC Hu-ho-hao-te 30.04 73 *e*P **P** **15 17 47.3 -1.4**
HHC pmax pmax
comp=Z,26nm,0.8s
HHC pmax pmax
comp=Z,95nm,5.8s
KLMR Klimovskoe 30.11 328 *e*P **P** **15 17 49.4 +0.5**
KLMR pmax pmax
comp=Z,15nm,1.0s
KLMR Klimovskoe 30.11 328 *e*P **P** **15 17 49.4 +0.5**
KLMR AMP 15 17 51.6
comp=Z,15nm,1.0s
KLMR Klimovskoe 30.11 328 *e*P **P** **15 17 49.5 +0.5**
KLMR AMP 15 17 51.6
comp=Z,15nm,1.0s
NRIK Noril'sk 31.74 10 P **P** **15 18 02.5 -0.7**
comp=Z,7.2nm,1.0s,baz=288,slow=0.7,SNR=4.2
comp=Z,7.2nm,1.0s
NRIK Noril'sk 31.74 10 P **P** **15 18 03.1 -0.1**
NRIK IAmb IAmb 15 18 06.1
comp=Z,20nm,1.2s
NRIK Noril'sk 31.74 10 P **P** **15 18 03.1 -0.1**
NRIK pmax pmax
comp=Z,19nm,1.3s
AKASG Malin Array Be 32.44 306 P **P** **15 18 09.7 +0.2**
comp=Z,1.7nm,0.5s,baz=79,slow=7.8,SNR=11
comp=Z,1.7nm,0.5s
SORM Soroca 32.91 301 ⇑P **P** **15 18 15.0 +1.4**
SORM Soroca 32.91 301 ⇑P **P** **15 18 15.0 +1.4**
BOD Bodaibo 32.95 41 *e*P **P** **15 18 11.4 -2.6**
BOD pmax pmax
comp=Z,17nm,0.9s
CFR Carcaliu 33.17 296 ⇓P **P** **15 18 19.6 +3.6**
CFR Carcaliu 33.17 296 ⇓P **P** **15 18 19.6 +3.6**
MNK Minsk 33.72 313 *i*P **P** **15 18 21.4 +0.7**
MNK *i* 15 19 33.8
MNK *i* 15 21 00.2
MNK *i*S **S** **15 23 46.2 +2.4**
MNK *i*SS **SnSn** **15 25 52.3 +4.7**
MNK *i* 15 28 46.6
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=Z,23nm,1.0s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=N,17nm,17.0s
MNK MLR MLR
comp=E,13nm,15.0s
MNK MLR MLR
comp=Z,65nm,15.0s
MNK Minsk 33.72 313 *i*P **P** **15 18 21.5 +0.7**
comp=E,1.0nm,0.8s
MNK *i*P **P** **15 18 21.5 +0.7**
comp=N,8.0nm,0.9s
MNK *i*P **P** **15 18 21.5 +0.7**
comp=Z,23nm,1.0s,baz=279
MNK *i*PP **PnPn** **15 19 33.9 +1.3**
MNK *i*PPP PPP 15 19 45.0
MNK *i*S **S** **15 23 46.3 +2.4**
MNK *i*SS **SnSn** **15 25 52.4 +4.7**
MNK *i*SSS SSS 15 26 08.1
MNK *i*LQ LQ 15 29 33.4
MNK *i*LR LR 15 32 07.8
MNK *i*LRM MLR 15 33 21.3
comp=N,17nm,16.6s
MNK *i*LRM MLR 15 33 25.4
comp=E,13nm,14.7s
MNK *i*LRM MLR 15 33 32.1
comp=Z,65nm,15.3s
VRI Vrincioaia 34.11 297 ⇑P P 15 18 29.2 +5.0
VRI Vrincioaia 34.11 297 ⇑P P 15 18 29.2 +5.0
PLOR Plostina 34.16 297 ⇑P P 15 18 29.8 +5.1
PLOR Plostina 34.16 297 ⇑P P 15 18 29.8 +5.1
NACGM Naroch 34.42 313⇑*e*P **P** **15 18 27.1 +0.4**
baz=97
COVR Voineasa-Covas 34.47 297 ⇑P **P** **15 18 31.1 +3.7**
MLR Muntele Rosu 34.69 296 ⇑P P 15 18 34.9 +5.6
MLR Muntele Rosu 34.69 296 P **P** **15 18 31.7 +2.3**
comp=Z,1.9nm,0.4s,baz=83,slow=11,SNR=5.5
comp=Z,1.9nm,0.4s
MLR Muntele Rosu 34.69 296 P **P** **15 18 31.1 +1.7**
MLR IAmb IAmb 15 18 39.8
comp=Z,11nm,1.0s
MLR Muntele Rosu 34.69 296 P **P** **15 18 31.1 +1.7**
MLR pmax pmax
comp=Z,11nm,1.0s
IIGN Ignalina 34.80 314 *e*P **P** **15 18 31.9 +1.8**
ISAL Salakas 34.90 314 *e*P **P** **15 18 32.6 +1.7**
BURAR Bucovina Array 35.03 300 ⇑P **P** **15 18 36.1 +3.9**
BURAR Bucovina Array 35.03 300 P **P** **15 18 33.8 +1.6**
BURAR Bucovina Array 35.03 300 ⇑P **P** **15 18 36.1 +3.9**
BUR08 Bucovina Ar. S 35.04 300 P **P** **15 18 34.1 +1.8**
VSU Vasula 35.15 319 *e*P **P** **15 18 34.4 +1.4**
HIA Hailar 35.15 57 *i*P **P** **15 18 33.9 +0.7**
HIA pmax pmax
comp=Z,3.0nm,0.9s
VOIR 35.32 296 ⇑P P 15 18 39.7 +5.0
VOIR 35.32 296 ⇑P P 15 18 39.7 +5.0
LVZ Lovozero 35.81 337 P **P** **15 18 39.9 +1.3**
LVZ Lovozero 35.81 337 P **P** **15 18 39.9 +1.3**
LVZ pmax pmax
comp=Z,69nm,1.5s
PABE Paberze 36.10 314 P **P** **15 18 42.8 +1.6**
PABE Paberze 36.10 314 *e*P **P** **15 18 42.8 +1.6**
VSVD Vaisvydziai 36.18 315 *e*P **P** **15 18 43.5 +1.6**
FIA1 FINESS Array S 36.27 324 P **P** **15 18 42.0 -0.5**
FIA1 IAmb IAmb 15 18 46.1
comp=Z,9.5nm,0.5s
FINES FINESS Array B 36.27 324 P **P** **15 18 41.9 -0.7**
comp=Z,10nm,0.5s,baz=106,slow=9.8,SNR=62
comp=Z,10nm,0.5s
MTSE Matsula 36.70 319 *e*P **P** **15 18 47.7 +1.5**
MEF Metsahovi 36.73 322 *e*P **P** **15 18 47.7 +1.2**
DRGR 36.80 299 ⇑P **P** **15 18 51.1 +3.7**
DRGR 36.80 299 ⇑P **P** **15 18 51.1 +3.7**
KOLS Kolonicke sedl 36.92 303 *e*P **P** **15 18 52.7 +4.3**
KOLS pmax pmax
comp=Z,7.0nm,1.1s
KOLS Kolonicke sedl 36.92 303 *e*P **P** **15 18 52.7 +4.3**
VTS Vitosha 37.03 292 ⇑P P 15 18 57.0 +7.4
VTS Vitosha 37.03 292 ⇑P P 15 18 57.0 +7.4
PBUR Paburge 37.30 314 *e*P **P** **15 18 52.8 +1.4**
SLIT Slitere, Latvi 37.31 317 *e*P **P** **15 18 52.8 +1.4**
SIRR Siria 37.58 298 ⇑P **P** **15 18 58.7 +4.7**
BZS Buzias 37.69 297 ⇑P **P** **15 18 57.8 +2.9**
BZS Buzias 37.69 297 ⇑P **P** **15 18 57.8 +2.9**
NJ2 Nanjing 38.17 85 *e*P **P** **15 18 56.3 -2.8**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
OJC Ojcow 38.46 305 P **P** **15 19 00.9 -0.4**
OJC IAmb IAmb 15 19 04.6
comp=Z,22nm,1.3s
OJC Ojcow 38.46 305 P **P** **15 19 00.9 -0.4**
OJC pmax pmax
comp=Z,22nm,1.3s
LANS Liptovska Anna 38.75 303 *e*P **P** **15 19 08.1 +4.3**
LANS Liptovska Anna 38.75 303 *e*P **P** **15 19 08.1 +4.3**
KEV Kevo 39.15 337 P **P** **15 19 06.2 -0.6**
KEV IAmb IAmb 15 19 10.0
comp=Z,23nm,1.2s
KEV Kevo 39.15 337 P **P** **15 19 06.2 -0.6**
KEV pmax pmax
comp=Z,23nm,1.2s
VYHS Vyhne 39.23 302 *e*P **P** **15 19 11.9 +4.1**
VYHS pmax pmax
comp=Z,17nm,1.7s
VYHS Vyhne 39.23 302 *e*P **P** **15 19 11.9 +4.1**
ARA0 ARCESS Array S 39.51 336 *e*P **P** **15 19 09.5 -0.4**
ARCES ARCESS Array B 39.51 336 P **P** **15 19 09.1 -0.9**
comp=Z,5.8nm,0.5s,baz=111,slow=8.6,SNR=44
comp=Z,5.8nm,0.5s
ARCES ARCESS Array B 39.51 336 P **P** **15 19 09.0 -0.9**
ARCES IAmb IAmb 15 19 13.4
comp=Z,17nm,1.1s
MORH Mrgy, Hungar 39.66 299 ⇑P **P** **15 19 12.5 +1.2**
MORH Mrgy, Hungar 39.66 299 P **P** **15 19 15.1 +3.7**
ZEA Zeya 39.79 49 *e*P **P** **15 19 13.2 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
MORC Moravsky Berou 39.94 304 P **P** **15 19 14.4 +0.6**
MORC Moravsky Berou 39.94 304 P **P** **15 19 14.4 +0.6**
MORC pmax pmax
comp=Z,4.0nm,0.7s
MORC Moravsky Berou 39.94 304 *e*P **P** **15 19 16.4 +2.6**
JAVC Velka Javorina 39.95 303 *e*P **P** **15 19 17.9 +4.0**
KOVH Kovagotottos 40.05 299 P **P** **15 19 17.8 +3.1**
MPLH Magyarpolny 40.26 300 P **P** **15 19 20.2 +3.8**
HAMF Hammerfest 40.56 337 *e*P **P** **15 19 18.3 -0.3**
VRAC Vranov 40.61 304 ⇑P **P** **15 19 21.0 +1.7**
VRAC Vranov 40.61 304 P **P** **15 19 20.3 +1.1**
comp=Z,5.8nm,0.8s,baz=73,slow=6.5,SNR=7.4
comp=Z,5.8nm,0.8s
VRAC Vranov 40.61 304 ⇑P **P** **15 19 21.0 +1.7**
VRAC Vranov 40.61 304 *e*P **P** **15 19 22.5 +3.2**
DPC Dobruska-Polom 40.67 305 *e*P **P** **15 19 22.6 +2.8**
DPC Dobruska-Polom 40.67 305 *e*P **P** **15 19 22.6 +2.8**
OSTC Ostas 40.72 306 *e*P **P** **15 19 22.3 +2.1**
KRUC Morasky 40.77 303 *e*P **P** **15 19 23.7 +3.2**
UPC Upice 40.85 306 *e*P **P** **15 19 24.3 +3.0**
UPC Upice 40.85 306 *e*P **P** **15 19 24.3 +3.0**
RONA Rosalia, Austr 41.02 301 *e*P **P** **15 19 23.0 +0.3**
comp=Z,9.8nm,1.2s
JETT Jettan, Norway 41.16 335 *e*P **P** **15 19 23.2 -0.4**
CONA Conrad Observa 41.27 302 *e*P **P** **15 19 24.4 -0.4**
comp=Z,9.2nm,1.1s
YAK Yakutsk 41.54 37 P **P** **15 19 25.4 -1.2**
YAK Yakutsk 41.54 37 *i*P **P** **15 19 27.2 +0.5**
YAK pmax pmax
comp=Z,21nm,0.8s
ARSA Arzberg 41.61 301 *e*P **P** **15 19 28.5 +1.0**
comp=Z,4.5nm,1.1s
PRU Pruhonice 41.85 305 *e*P **P** **15 19 32.9 +3.5**
PRU Pruhonice 41.85 305 *e*P **P** **15 19 32.9 +3.5**
HFS Hagfors 42.00 320 P **P** **15 19 29.6 -0.9**
comp=Z,11nm,0.6s,baz=96,slow=12,SNR=39
HFS PP **PP** **15 21 08.2 +0.7**
comp=Z,5.4nm,0.8s,baz=112,slow=14,SNR=2.9
comp=Z,11nm,0.6s
SOKA Soboth 42.04 300 *e*P **P** **15 19 32.2 +1.1**
comp=Z,8.2nm,0.9s
BRG Berggiesshubel 42.12 306 *e*P **P** **15 19 34.9 +3.3**
BRG Amp 15 19 37.0
comp=Z,6.9nm,1.0s
BRG Amp 15 34 38.0
comp=E,0.1nm,12.0s
BRG Amp 15 34 41.0
comp=Z,0.2nm,14.4s
BRG Amp 15 34 44.0
comp=N,0.2nm,13.0s
BRG Berggiesshubel 42.12 306 *e*P **P** **15 19 34.9 +3.3**
BRG pmax pmax
comp=Z,7.0nm,1.0s
CKRC Cesky Krumlov 42.16 303 *e*P **P** **15 19 35.6 +3.6**
FAUS Fauske 42.34 331 *e*P **P** **15 19 33.0 -0.2**
MOA Molln 42.34 302 *e*P **P** **15 19 34.2 +0.6**
comp=Z,7.4nm,1.1s
OBKA Obir 42.40 300 *e*P **P** **15 19 32.9 -1.2**
comp=Z,11nm,1.6s
MOR8 Moi Rana 42.42 329 *e*P **P** **15 19 34.6 +0.7**
GERES GERESS Array B 42.55 303 P **P** **15 19 37.0 +1.7**
comp=Z,2.0nm,0.6s,baz=70,slow=7.8,SNR=15
comp=Z,2.0nm,0.6s
GERES GERESS Array B 42.55 303 P **P** **15 19 36.0 +0.7**
GERES GERESS Array B 42.55 303 P **P** **15 19 36.0 +0.7**
KHC Kasperske Hory 42.59 304 P **P** **15 19 35.9 +0.4**
KHC Kasperske Hory 42.59 304 *e*P **P** **15 19 36.2 +0.7**
KHC *e* 15 19 38.5
KHC Kasperske Hory 42.59 304 *e*P **P** **15 19 36.2 +0.7**
KHC *e*pP **pP** **15 19 38.5 -1.6**
SGRT San Giovanni R 42.65 293 P **P** **15 19 36.4 +0.2**
SGRT IAmb IAmb 15 20 16.1
comp=Z,23nm,1.2s
CLL Collm 42.66 307 P **P** **15 19 36.2 +0.2**
CLL Collm 42.66 307 P **P** **15 19 36.2 +0.2**
CLL pmax pmax
comp=Z,12nm,1.3s
CLL Collm 42.66 307 *i*P **P** **15 19 38.5 +2.5**
comp=Z,7.0nm,0.8s
CLL *e*PP **PP** **15 21 16.0 +1.3**
CLL *e*(PcP) **PcP** **15 21 26.0 -1.8**
BIOA Bad Ischl, Aus 42.79 302 *e*P **P** **15 19 39.2 +2.0**
comp=Z,2.8nm,0.7s
KLR Kul'dur 42.99 56 P **P** **15 19 35.8 -2.9**
comp=Z,1.0nm,0.6s,baz=290,slow=9.4,SNR=2.7
comp=Z,1.0nm,0.6s
KLR Kul'dur 42.99 56 *i*P **P** **15 19 38.1 -0.6**
KLR pmax pmax
comp=Z,2.0nm,1.0s
NC405 NORSAR Array S 43.03 322 P **P** **15 19 39.6 +0.7**
PRED Cave del Predi 43.08 300 P **P** **15 19 39.9 +0.3**
KBA Koelnbreinsper 43.10 301 *e*P **P** **15 19 40.8 +0.9**
comp=Z,5.9nm,1.3s
NC602 NORSAR Array S 43.10 321 P **P** **15 19 40.2 +0.7**
NC602 IAmb IAmb 15 19 51.2
comp=Z,35nm,1.4s
NC602 NORSAR Array S 43.10 321 *e*P **P** **15 19 40.0 +0.6**
SABO M.te Sabotino 43.15 299 P **P** **15 19 40.4 +0.2**
SABO IAmb IAmb 15 19 46.4
comp=Z,15nm,0.7s
KSRS Korea Array 43.18 74 P **P** **15 19 39.6 -0.8**
comp=Z,1.1nm,0.9s,baz=281,slow=6.4,SNR=7.1
comp=Z,1.1nm,0.9s
NC303 NORSAR Array S 43.20 322 P **P** **15 19 39.7 -0.6**
NC303 IAmb IAmb 15 19 43.8
comp=Z,13nm,0.6s
NB201 NORSAR Array S 43.23 322 P **P** **15 19 41.0 +0.4**
NB201 IAmb IAmb 15 19 47.9
comp=Z,11nm,0.9s
NB2 NORSAR Subarra 43.27 322 P **P** **15 19 40.2 -0.7**
comp=Z,6.2nm,0.8s,baz=90,slow=7.9
NB2 NORSAR Subarra 43.27 322 P **P** **15 19 40.2 -0.7**

baz=90,slow=7.9
NOA NORSAR Array B 43.27 322 P P 15 19 40.4 -0.5
comp=Z,4.1nm,0.6s,baz=92,slow=7.8,SNR=26
comp=Z,4.1nm,0.6s
TIXI Tiksi 43.31 23 P P 15 19 38.5 -2.5
comp=Z,11nm,0.9s,baz=89,slow=22,SNR=4.2
comp=Z,11nm,0.9s
TIXI Tiksi 43.31 23 *i* **P P 15 19 41.1 +0.1**
TIXI pmax pmax
comp=Z,14nm,1.0s
NAO01 NORSAR Array S 43.42 321 P P 15 19 41.4 -0.7
BJO1 Bjornoya 43.47 342 *eP* **P 15 19 43.6 +1.4**
NBO00 NORSAR Array S 43.48 322 P P 15 19 41.8 -0.7
NBO00 IAmb IAmb 15 19 58.8
comp=Z,14nm,1.1s
NC204 NORSAR Array S 43.50 322 P P 15 19 41.7 -1.0
NC204 IAmb IAmb 15 19 53.9
comp=Z,22nm,1.4s
KONO Kongsberg 44.06 320 P P 15 19 46.0 -1.1
KONO IAmb IAmb 15 20 18.6
comp=Z,27nm,1.5s
KONO Kongsberg 44.06 320 P P 15 19 46.0 -1.1
KONO pmax pmax
comp=Z,27nm,1.5s
WTTA Wattenberg 44.20 302 *eP* **P 15 19 50.7 +2.0**
comp=Z,5.3nm,0.8s
WATA Walderalm 44.23 302 *eP* **P 15 19 49.5 +0.6**
comp=Z,3.4nm,1.0s
DOMB Dombas 44.33 323 *eP* **P 15 19 50.9 +1.5**
SQTA Sankt Quirin 44.50 302 *eP* **P 15 19 51.0 -0.1**
comp=Z,7.2nm,1.2s
MOTA Moosalm 44.54 302 *eP* **P 15 19 51.1 -0.3**
comp=Z,6.7nm,1.0s
FETA Feichten 44.86 301 P P 15 19 52.9 -1.1
comp=Z,2.7nm,0.7s
DAVA Damuels 45.37 302 *eP* **P 15 19 58.5 +0.5**
comp=Z,7.3nm,0.6s
DAVOX Davos/Dischmat 45.48 301 P P 15 19 58.7 -0.3
comp=Z,6.0nm,0.6s,baz=122,slow=7.0,SNR=14
comp=Z,6.0nm,0.6s
SPITS Spitsbergen Ar 45.58 346 P P 15 19 59.1 0.0
comp=Z,16nm,0.9s,baz=107,slow=13,SNR=4.1
comp=Z,16nm,0.9s
SENIN Lac Senin/Sane 47.31 301 P P 15 20 13.2 -0.2
SENIN IAmb IAmb 15 20 20.1
comp=Z,5.0nm,0.7s
SSB Saint Sauveur 49.47 301 P P 15 20 31.4 +1.6
SSB Saint Sauveur 49.47 301 P P 15 20 31.4 +1.6
SSB pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 51.12 228 P P 15 20 43.8 +0.9
comp=Z,0.6nm,0.4s,baz=43,slow=13,SNR=3.8
comp=Z,0.6nm,0.4s
MAJO Matsushiro 51.17 71 P P 15 20 41.8 -1.0
MAJO IAmb IAmb 15 20 43.6
comp=Z,11nm,1.5s
MAJO Matsushiro 51.17 71 P P 15 20 41.8 -1.0
MAJO pmax pmax
comp=Z,11nm,1.5s
MJAR Matsushiro Arr 51.17 71 P P 15 20 40.5 -2.3
comp=Z,3.2nm,0.9s,baz=292,slow=7.9,SNR=13
comp=Z,3.2nm,0.9s
EKA Eskdalemuir Ar 51.45 315 P P 15 20 45.7 +1.2
comp=Z,1.5nm,0.5s,baz=93,slow=8.7,SNR=14
comp=Z,1.5nm,0.5s
KIBK Kibwezi 51.66 226 P P 15 20 48.0 +1.3
JYT Yasato 52.76 70 P P 15 20 55.2 +0.6
BILL Bilibino 56.14 27 *de* **P P 15 21 20.2 +1.5**
BILL *e* 15 22 17.4
BILL *eS* **S 15 29 14.2 +6.8**
BILL pmax pmax
comp=Z,4.0nm,0.9s
ESDC Sonseca Array 57.38 297 P P 15 21 27.7 -0.3
comp=Z,2.1nm,0.9s,baz=55,slow=7.3,SNR=12
comp=Z,2.1nm,0.9s
PETK Petropavlovsk- 57.63 45 P P 15 21 29.2 -0.3
comp=Z,1.8nm,0.9s,baz=221,slow=3.4,SNR=4.1
comp=Z,1.8nm,0.9s
SUMG Summit 59.30 341 P P 15 21 40.8 -0.6
SUMG Summit 59.30 341 P P 15 21 40.8 -0.6
SUMG pmax pmax
comp=Z,16nm,0.8s
SUMG Summit 59.30 341 *i* **P P 15 21 42.0 +0.6**
TOA0 Torodi Ar. Sit 66.84 268 P P 15 22 31.0 -0.9
TOA0 IAmb IAmb 15 22 34.6
comp=Z,5.7nm,0.7s
TORD Torodi Ar. Bea 66.84 268 P P 15 22 31.2 -0.6
comp=Z,5.6nm,0.7s,baz=52,slow=5.8,SNR=20
comp=Z,5.6nm,0.7s
TORD Torodi Ar. Bea 66.84 268 P P 15 22 31.1 -0.8
TORD IAmb IAmb 15 22 34.6
comp=Z,4.0nm,0.7s
TOLK Toolik Lake Re 68.49 15 P P 15 22 41.9 +0.4
IMAR Indian Mountai 69.72 18 P P 15 22 47.3 -1.8
H21K Melozitna Rive 70.22 18 P P 15 22 52.1 0.0
H21K IAmb IAmb 15 22 54.2
comp=Z,10nm,1.4s
KOWA Kowa 70.51 273 P P 15 22 54.8 +0.1
BMAR Burnt Mountain 70.52 14 P P 15 22 53.2 -0.8
H23K Yukon River 70.85 17 P P 15 22 57.0 +0.9
H23K IAmb IAmb 15 22 58.2
comp=Z,4.0nm,0.9s
J20K Nowinta River 71.07 20 P P 15 22 56.8 -0.5
J20K IAmb IAmb 15 22 59.1
comp=Z,5.9nm,0.9s
H24K Noodor Dome 71.21 16 P P 15 22 57.1 -1.1
H24K IAmb IAmb 15 23 04.5
comp=Z,7.6nm,1.3s
MLY Manley 71.23 18 P P 15 22 59.2 +0.8
I23K Minto, Yukon-K 71.46 17 P P 15 22 60.0 +0.3
I23K IAmb IAmb 15 23 03.9
comp=Z,15nm,1.5s
INK Inuvik 71.53 10 P P 15 22 59.5 -0.5
comp=Z,3.1nm,0.5s,baz=1.6,slow=7.3,SNR=6.5
comp=Z,3.1nm,0.5s
K20K Telida 71.75 20 P P 15 23 00.5 -1.0
K20K IAmb IAmb 15 23 04.8
comp=Z,4.2nm,0.8s
MDM Murphy Dome 71.88 17 P P 15 23 03.0 +0.7
MDM IAmb IAmb 15 23 04.8
comp=Z,4.0nm,0.7s
POKR Poker Plat Res 71.92 17 P P 15 23 03.6 +1.1
NEA2 Nenana 71.99 17 P P 15 23 02.8 -0.1
NEA2 IAmb IAmb 15 23 04.1
comp=Z,6.1nm,1.0s
CAST Castle Rocks 72.23 19 P P 15 23 04.5 +0.1
CAST IAmb IAmb 15 23 09.4
comp=Z,4.7nm,0.8s
IL31 72.34 17 P P 15 23 02.5 -2.4
IL31 IAmb IAmb 15 23 06.9
comp=Z,11nm,1.4s
ILAR Eielson Array 72.34 17 P P 15 23 03.0 -2.0
comp=Z,2.9nm,0.9s,baz=317,slow=5.4,SNR=16
comp=Z,2.9nm,0.9s
ILAR Eielson Array 72.34 17 P P 15 23 02.6 -2.4
L19K White Mountain 72.48 21 P P 15 23 06.4 +0.5
L19K IAmb IAmb 15 23 39.4
comp=Z,11nm,1.4s
PPLA Purkeypile 72.63 20 P P 15 23 06.1 -0.8
PPLA IAmb IAmb 15 23 43.7
comp=Z,14nm,1.4s
I26K Coal Creek Min 72.66 15 P P 15 23 07.5 +0.6
I26K IAmb IAmb 15 23 08.7
comp=Z,7.5nm,1.4s
MCK McKinley 72.75 18 P P 15 23 07.5 +0.1
MCK IAmb IAmb 15 23 09.6
comp=Z,5.1nm,1.0s
MCK McKinley 72.75 18 P P 15 23 07.6 +0.1
MCK pmax pmax
comp=Z,5.0nm,1.0s
J25K Salcha River, 72.81 16 P P 15 23 07.5 -0.4
RND Reindeer 73.05 18 P P 15 23 10.2 +0.9
RND IAmb IAmb 15 23 15.8
comp=Z,7.5nm,1.1s
RND Reindeer 73.05 18 P P 15 23 10.2 +0.9
RND pmax pmax
comp=Z,8.0nm,1.1s
J26L Joseph Creek 73.29 15 P P 15 23 09.8 -0.9
SCRK Sand Creek 73.66 16 P P 15 23 12.4 -0.6
O18K Koktuh Hills 74.25 23 P P 15 23 17.3 +0.9
GHO Glory Hole Cre 74.41 19 P P 15 23 18.3 +1.0
GHO IAmb IAmb 15 23 25.6
comp=Z,12nm,1.2s
PMR Palmer 74.51 19 P P 15 23 17.9 +0.1
PMR IAmb IAmb 15 23 57.2
comp=Z,11nm,1.3s
PMR Palmer 74.51 19 P P 15 23 17.9 +0.1
PMR pmax pmax
comp=Z,11nm,1.3s
SML Sawmill 74.53 19 P P 15 23 18.1 +0.1
SCM Sheep Creek Mo 74.76 18 P P 15 23 19.7 +0.3
SCM Sheep Creek Mo 74.76 18 P P 15 23 19.7 +0.3
SCM pmax pmax
comp=Z,29nm,1.3s
M24K Tolsona, Glenn 74.80 18 P P 15 23 20.8 +1.2
L27K Beaver Creek, 74.93 15 P P 15 23 19.1 -1.2
BCAR Beaver Creek A 74.93 15 P P 15 23 19.5 -0.8
KDAK Kodiak Island 76.73 23 P P 15 23 30.4 -0.2
KDAK Kodiak Island 76.73 23 P P 15 23 30.4 -0.2
KDAK pmax pmax
comp=Z,17nm,1.3s
PCA Pinnacle 77.93 16 P P 15 23 35.1 -2.3
YKA Yellowknife Ar 78.97 3 P P 15 23 41.4 -1.5
comp=Z,4.6nm,0.9s,baz=348,slow=5.7,SNR=18
comp=Z,4.6nm,0.9s
YKA Yellowknife Ar 78.97 3 P P 15 23 41.3 -1.6
BOSA Boshof 80.14 221 P P 15 23 49.0 -0.8
comp=Z,5.9nm,1.1s,baz=159,slow=4.7,SNR=3.1
comp=Z,5.9nm,1.1s
WB0 Warramunga Arr 82.19 123 P P 15 23 59.0 -1.9
WB0 IAmb IAmb 15 24 09.5
comp=Z,5.2nm,1.0s
WRA Warramunga Arr 82.28 123 P P 15 23 59.1 -2.3
comp=Z,3.3nm,0.8s,baz=326,slow=4.9,SNR=21
comp=Z,3.3nm,0.8s
WRA Warramunga Arr 82.28 123 P P 15 23 59.8 -1.5
WRA Warramunga Arr 82.28 123 P P 15 23 59.8 -1.5
WRA pmax pmax
comp=Z,1.0nm,1.3s
WB2 Warramunga Arr 82.29 123 P P 15 23 59.3 -2.0
WB2 IAmb IAmb 15 24 00.7
comp=Z,7.0nm,0.8s
WR0 Warramunga Arr 82.43 123 P P 15 24 00.0 -2.0
WR0 IAmb IAmb 15 24 03.7
comp=Z,5.3nm,0.9s
ASAR Alice Springs 84.67 126 P P 15 24 11.6 -2.0
comp=Z,1.5nm,0.8s,baz=317,slow=5.2,SNR=11
comp=Z,1.5nm,0.8s
NEW Newport 92.97 6 P P 15 24 51.3 -1.6
NEW IAmb IAmb 15 24 52.3
comp=Z,4.6nm,1.3s
NEW Newport 92.97 6 P P 15 24 51.3 -1.6
NEW pmax pmax
comp=Z,5.0nm,1.3s
TROLL Troll, Antarti 120.56 200 PKPdf PKPdf 15 30 28.1 -2.2
SNAA Sanae 121.86 201 PKPdf PKPdf 15 30 32.0 -0.7
VNA2 Neumayer--Watz 122.87 203 PKPdf PKPdf 15 30 34.2 -0.4
baz=34,slow=3.0
VNA1 Neumayer--Stat 123.02 203 PKPdf PKiKP 15 30 37.1 +2.0
VNA3 Neumayer Olymp 123.67 203 PKPdf PKPdf 15 30 35.6 -0.6
PLCA Paso Flores 151.53 254 PKPbc PKPbc 15 31 33.2 -0.4
comp=Z,3.4nm,1.0s,baz=274,slow=2.9,SNR=4.6

SKHL 14 15:13:54.4±0.5, 45.00N×151.10E, h42km±5km, mb4.1/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.30**	**277**	*eP*	Pn	15 14 29.6	-0.2
KUR				AMB	AMB	15 14 30.2	
	40nm,0.3s						
KUR				*eS*	Sn	15 14 56.1	-0.7
KUR				A	A	15 14 58.1	
	50nm,0.4s						
KUR				A	A	15 14 58.1	
	40nm,0.4s						
SHO	**Shikotan**	**3.26**	**251**	*eP*	Pn	15 14 43.9	+0.9
SHO	**Shikotan**	**3.26**	**251**	*eP*	Pn	15 14 43.4	+0.4
SHO				AMB	AMB	15 14 46.6	
	30nm,0.8s						
SHO				*eS*	Sn	15 15 20.5	0.0
SHO				A	A	15 15 25.7	
	30nm,0.4s						
SHO				A	A	15 15 25.7	
	30nm,0.4s						
NMR	**Nemuro--Hokkai**	**4.19**	**249**	*eP*	Pn	15 14 56.6	+0.8
NMR				*eS*	Sn	15 15 42.9	-0.6

KRSC 14 15:41:34.9±1.8, 48.32N×158.05E, h18km±48km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.68**	**333**	*eP*	Pn	15 42 17.6	+0.5
SKR				*eS*	Sn	15 42 48.9	-0.1
PAU	**Pauzhetka**	**3.25**	**346**	*eS*	Sb	15 43 07.7	-3.5
KDTR	**Khodutka, Kamc**	**3.49**	**0**	*eP*	Pn	15 42 31.8	+3.6
KDTR				*eS*	Sb	15 43 13.7	-4.4
RUS	**Russkaya**	**4.13**	**4**	*eP*	Pn	15 42 40.6	+3.7
RUS				*eS*	Sn	15 43 29.2	+4.5
MTVR	**Mutnovka**	**4.17**	**1**	*eP*	Pn	15 42 41.8	+4.1
MTVR				*eS*	Sn	15 43 31.3	+5.4
GRL	**Gorelyy**	**4.23**	**0**	*eP*	Pn	15 42 42.8	+4.2
GRL				*eS*	Sn	15 43 32.8	+5.2
KRMR	**Karymshinskiy**	**4.51**	**1**	*eS*	Sn	15 43 40.2	+5.9
PET	**Petropavlovsk**	**4.72**	**4**	*eP*	Pn	15 42 49.8	+4.7
PET				*eS*	Sn	15 43 45.1	+5.7
DALK	**Dalny**	**4.74**	**5**	*eP*	Pn	15 42 49.5	+4.2
DALK				*eS*	Sn	15 43 44.7	+5.0
KOK	**Koryaka**	**4.99**	**4**	*eP*	Pn	15 42 54.4	+5.5
KRX	**Arik**	**5.06**	**4**	*eP*	Pn	15 42 55.3	+5.4
GNL	**Ganaly**	**5.38**	**359**	*eP*	Pn	15 42 59.3	+5.0
MKZ	**Mys Kozlova**	**6.65**	**19**	*eP*	Pn	15 43 16.8	+5.2

IDC 14 15:44:21.7±1.8, 6.17S×122.73E, h0km, mb3.0/2, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=72.4km s-min=23.6km az=41.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.18**	**291**	Pn	Pn	15 45 12.8	-0.1
	6.3nm,0.3s,baz=136,slow=4.5,SNR=26						
KAPI				Sn	Sn	15 45 50.8	-0.8
	2.8nm,0.3s,baz=35,slow=23,SNR=7.7						
	19nm,0.4s						
WRA	**Warramunga Arr**	**17.74**	**142**	P	Pn	15 48 29.9	-0.5
	baz=321,slow=13,SNR=2.2						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**20.45**	**149**	P	P	15 49 01.3	+0.2
	0.5nm,1.0s,baz=327,slow=12,SNR=2.3						
	0.5nm,1.0s						
MKAR	**Makanchi Array**	**63.74**	**330**	P	P	15 54 55.6	+0.3
	0.1nm,0.5s,baz=135,slow=7.5,SNR=1.8						
	0.1nm,0.5s						

IDC ***14*** *15:53:43.5±3.0, 6.28S×130.39E, h155km±32km, mb3.5/3, mbtmp3.9/6, Error ellipse: s-maj=66.7km s-min=17.9km az=85.0*

ISC 14 15:53:42.3±1.1, 6.42S±0.07×130.6E±0.4, h150km, n6, σ2s16/9, mb3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.55**	**7**	P	Pn	15 55 04.4	+1.4
	8.5nm,0.3s,baz=10,slow=7.8,SNR=42						
SIJI				S	Sn	15 56 04.7	-1.5
	33nm,0.2s,baz=249,slow=22,SNR=12						
WRA	**Warramunga Arr**	**13.92**	**165**	P	Pn	15 56 54.8	+1.5
	0.7nm,0.4s,baz=348,slow=13,SNR=12						
WRA				S	Sn	15 59 24.2	-3.3
	2.6nm,0.5s,baz=332,slow=22,SNR=14						
ASAR	**Alice Springs**	**17.44**	**170**	P	Pn	15 57 39.2	+2.7
	1.4nm,0.4s,baz=351,slow=12,SNR=25						
ASAR				S	S	16 00 50.1	+0.6
	0.9nm,0.5s,baz=346,slow=26,SNR=8.9						
MJAR	**Matsushiro Arr**	**43.32**	**9**	P	P	16 01 29.5	+0.1
	0.8nm,0.7s,baz=184,slow=9.4,SNR=5.6						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**68.09**	**326**	P	P	16 04 25.1	-0.8
	1.2nm,0.5s,baz=115,slow=7.8,SNR=16						
	1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**71.34**	**333**	P	P	16 04 44.3	-1.3
	0.7nm,0.3s,baz=122,slow=7.0,SNR=3.1						
	0.7nm,0.3s						

BJI ***14*** *16:28:53.8±0.0, 51.45N×179.65E, h76km, mb5.1/78, mB5.2/61, Ms5.1/79, Ms7 4.8/77*

NEIC ***14*** *16:28:55.6±1.9, 51.54N±0.07×179.50E±0.08, h65km±1km, mb5.7/836, Mwb5.6/70, Mww5.6, ML5.7/34(AEIC), Error ellipse: s-maj=12.7km s-min=8.7km az=170.0*

NEIC ***14*** *16:28:55.5, 51.53N×179.54E, h59km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.66; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$2.07; $M_{r\theta}$1.74; $M_{\theta\phi}$-1.43; $M_{\phi r}$-0.06; Fault plane solution: $M_0$2.94000×10^{17} NP1:ϕ_s187.40000°, δ46.57000°, λ-34.47000°. NP2:ϕ_s302.67000°, δ65.73000°, λ-131.05000°. Principal axes: T 2.8739, Plg11.0000°, Azm61.0000°; N 0.1353, Plg37.0000°, Azm322.0000°; P -3.0091, Plg51.0000°, Azm165.0000°;*

MOS ***14*** *16:28:55.3±0.9, 51.57N×179.61E, h75km, mb5.4/61, MS4.7/20 Error ellipse: s-maj=5.5km s-min=4.1km az=100.3*

IDC ***14*** *16:28:56.7±0.4, 51.52N×179.55E, h73km±2km, mb5.0/40, mbtmp5.3/44, MS4.5/89, Error ellipse: s-maj=8.3km s-min=6.2km az=2.0*

AEIC ***14*** *16:28:56±2.5, 51.31N±0.08×179.54E±0.08, h75km±3km, Error ellipse: s-maj=11.9km s-min=7.6km az=179.0*

GCMT ***14*** *16:28:57.6±0.1, 51.44N±0.01×179.56E±0.01, h67km, MW5.6/165, Moment Tensor Solution. s159,c301; s165,c358; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.90±.03; $M_{\theta\theta}$-0.72±.04; $M_{\phi\phi}$2.62±.03; $M_{r\theta}$2.06±.03; $M_{\theta\phi}$-1.72±.03; $M_{\phi r}$0.00±.03: Best double couple: $M_0$3.56100×10^{17} NP1:ϕ_s303.00000°, δ66.00000°, λ-134.00000°. NP2:ϕ_s190.00000°, δ49.00000°, λ-33.00000°. Principal axes: T 3.4850, Plg10.0000°, Azm63.0000°; N 0.1540, Plg39.0000°, Azm325.0000°; P -3.6360, Plg49.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *16:28:59, 51.34N×179.39E, h70km, Moment Tensor Solution. Duration: 7s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.06; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$2.18; $M_{r\theta}$1.96; $M_{\theta\phi}$-0.90; $M_{\phi r}$-0.12; Fault plane solution: $M_0$3.03000×10^{17} NP1: ϕ_s186.00000°, δ43.00000°, λ-42.00000°. NP2: ϕ_s310.00000°, δ63.00000°, λ-124.00000°. Principal axes: T 2.6497, Plg12.0000°, Azm64.0000°; N 0.6596, Plg30.0000°, Azm327.0000°; P -3.3094, Plg57.0000°, Azm173.0000°;*

ISC 14 16:28:56.5±0.2, 51.46N±0.03×179.51E±0.02, h75km±1km, h75km:pP-P, n2403, σ1s25/2970, mb5.6/612, 119C-45D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.15**	**237**	Pn	**Pn**	**16 29 07.1**	**-0.5**
AMKA	**Amchitka**	**0.15**	**237**		**Sn**	**16 29 15.0**	**-0.6**
CESW	**Semis' Southwe**	**0.44**	**5**		**Pn**	**16 29 10.6**	**+1.3**
CERAA	**Semis' Rag'd T**	**0.46**	**14**		**Pn**	**16 29 10.7**	**+1.2**
CERAA					**Sn**	**16 29 21.1**	**+2.1**
CEPE	**Semis' Perret**	**0.51**	**10**		**Pn**	**16 29 11.4**	**+1.4**
LSSE	**Little Sitkin**	**0.75**	**309**		**Pn**	**16 29 13.8**	**+1.5**
LSSA	**Little Sitkin**	**0.79**	**309**		**Pn**	**16 29 14.1**	**+1.3**
LSNW	**Little Sitkin**	**0.80**	**310**		**Pn**	**16 29 14.2**	**+1.3**
GANO	**Gareloi North**	**1.11**	**70**		**Pn**	**16 29 17.2**	**+0.5**
GALAA	**Gareloi Lava P**	**1.11**	**74**		**Pn**	**16 29 17.5**	**+0.8**
GAEA	**Gareloi East**	**1.14**	**73**		**Pn**	**16 29 17.7**	**+0.7**
TASE	**Tanaga Southea**	**1.57**	**75**		**Pn**	**16 29 23.4**	**+0.7**
TAPA	**Tanaga Point A**	**1.71**	**77**		**Pn**	**16 29 24.9**	**+0.5**
KIMD	**Kanaga Island**	**2.05**	**80**		**Pn**	**16 29 29.3**	**+0.3**
KICM	**Kanaga Island**	**2.10**	**76**		**Pn**	**16 29 30.4**	**+0.8**
KIKV	**Kanaga Island**	**2.11**	**77**		**Pn**	**16 29 30.3**	**+0.6**
KIWB	**Kanaga Island**	**2.12**	**78**		**Pn**	**16 29 30.1**	**+0.3**
ADK	**Adak**	**2.41**	**78**	Pn	**Pn**	**16 29 34.0**	**+0.3**
ADK	**Adak**	**2.41**	**78**		**Sn**	**16 30 02.4**	**+0.1**
ADK	**Adak**	**2.41**	**78**	P	**Pn**	**16 29 34.4**	**+0.7**
GSCK	**Great Sitkin C**	**2.75**	**77**		**Pn**	**16 29 39.0**	**+0.6**
GSTD	**Great Sitkin T**	**2.77**	**76**		**Pn**	**16 29 38.8**	**+0.1**
GSMY	**Great Sitkin M**	**2.82**	**76**		**Pn**	**16 29 39.6**	**+0.3**
GSTR	**Great Sitkin T**	**2.83**	**75**		**Pn**	**16 29 39.6**	**+0.1**
SHEM	**Shemya Is, Ala**	**3.57**	**293**	P	**Pn**	**16 29 50.0**	**+0.5**
	1μm,0.6s,baz=118,slow=3.9,SNR=58						
SHEM				S	**Sn**	**16 30 29.9**	**-0.5**
	2μm,0.4s,baz=284,slow=20,SNR=23						
SHEM				LR	LR	16 30 34.6	
	comp=Z,5μm,18.5s,baz=112,slow=27						
SMY	**Shemya**	**3.57**	**293**	Pn	**Pn**	**16 29 49.7**	**+0.3**
SMY	**Shemya**	**3.57**	**293**	P	**Pn**	**16 29 49.7**	**+0.3**
KOKL	**Mount Kliuchef**	**3.99**	**75**		**Pn**	**16 29 55.8**	**+0.4**
KOFP	**Korovin Flat P**	**4.05**	**76**		**Pn**	**16 29 56.9**	**+0.9**
CLES	**Cleveland East**	**6.67**	**74**	Pn	**Pn**	**16 30 31.9**	**+0.2**
CLCO	**Concord Point,**	**6.76**	**74**		**Pn**	**16 30 34.4**	**+1.4**
NIKH	**Nikolski High**	**7.31**	**74**	Pn	**Pn**	**16 30 40.6**	**+0.1**
NIKH	**Nikolski High**	**7.31**	**74**	P	**Pn**	**16 30 41.0**	**+0.5**
	baz=262,SNR=69						
OKCE	**Okmok Cone E**	**7.79**	**71**		**Pn**	**16 30 48.0**	**+1.0**
OKNC	**Okmok New Cone**	**7.82**	**70**		**Pn**	**16 30 49.8**	**+2.4**
SPIA	**Saint Paul Isl**	**8.28**	**42**	Pn	**Pn**	**16 30 56.0**	**+2.3**
SPIA	**Saint Paul Isl**	**8.28**	**42**	P	**Pn**	**16 30 56.5**	**+2.8**
	baz=230,SNR=80						
MAPS	**Pakushin South**	**8.57**	**69**		**Pn**	**16 30 59.0**	**+1.3**
MGOD	**Makushin Gods**	**8.61**	**69**		**Pn**	**16 30 59.7**	**+1.4**
UNV	**Unalaska Valle**	**8.83**	**69**	Pn	**Pn**	**16 31 01.8**	**+0.5**
UNV	**Unalaska Valle**	**8.83**	**69**	P	**Pn**	**16 31 02.1**	**+0.8**
	baz=259,SNR=92						
UNV	**Unalaska Valle**	**8.83**	**69**	P	**Pn**	**16 31 02.9**	**+1.6**
AKUT	**Akutan**	**9.31**	**68**	Pn	**Pn**	**16 31 08.8**	**+1.0**
S12K	**Black Hills**	**11.74**	**62**	P	**Pn**	**16 31 41.6**	**+0.8**
	baz=256,SNR=39						
SDPT	**Sand Point**	**12.55**	**64**	Pn	**Pn**	**16 31 50.2**	**-1.6**
SDPT	**Sand Point**	**12.55**	**64**	P	**Pn**	**16 31 49.9**	**-2.0**
	baz=260,SNR=46						
PET	**Petropavlovsk**	**12.87**	**285**		**Pn**	**16 31 56.5**	**+0.3**
PET	**Petropavlovsk**	**12.87**	**285**	*eP*	**Pn**	**16 31 55.9**	**-0.3**
PET				*eS*	**Sn**	**16 34 18.2**	**+0.8**
PET				pmax	pmax		
	comp=Z,2μm,5.3s						
PET				pmax	pmax		
	comp=Z,202nm,1.3s						
PET				pmax	pmax		
	comp=Z,1μm,11.6s						
PET				MLR	MLR		
	comp=Z,2μm,19.0s						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
PET	**Petropavlovsk**	**12.87**	**285**	P	**Pn**	**16 31 58.5**	**+2.3**
CNBA	**Chernabura Isl**	**12.98**	**67**	Pn	**Pn**	**16 31 54.9**	**-2.7**
CHNA	**Chernabura Isl**	**12.98**	**67**	P	**Pn**	**16 31 55.2**	**-2.4**
	baz=263,SNR=34						
GAMB	**Gambell**	**13.20**	**17**	P	**Pn**	**16 32 03.2**	**+2.7**
	baz=204,SNR=20						
S14K	**Fog Glacier**	**13.24**	**60**	P	**Pn**	**16 32 01.1**	**-0.1**
	baz=257,SNR=31						
PEA0B	**Petropavlovsk-**	**13.45**	**286**		**Pn**	**16 32 04.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**13.45**	**286**	*ceP*	**Pn**	**16 32 04.8**	**+0.9**
PETK	**Petropavlovsk-**	**13.45**	**286**	P	**Pn**	**16 32 05.0**	**+1.1**
	comp=Z,107nm,0.8s,baz=93,slow=9.2,SNR=102						
PETK				S	**Sn**	**16 34 27.2**	**-4.2**
	comp=Z,19nm,0.5s,baz=124,slow=18,SNR=1.5						
PETK				LR	LR	16 37 06.7	
	comp=Z,3μm,21.6s,baz=95,slow=36						
PETK				PcP	**PcP**	**16 37 26.1**	**+0.6**
	comp=Z,10nm,0.9s,baz=97,slow=4.8,SNR=5.0						
PETK				ScP	**ScP**	**16 40 51.3**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=55,slow=2.6,SNR=2.6						
PETK	**Petropavlovsk-**	**13.45**	**286**	Pn	**Pn**	**16 32 04.5**	**+0.6**
PETK	**Petropavlovsk-**	**13.45**	**286**	P	**Pn**	**16 32 05.0**	**+1.1**
CHGN	**Chignik**	**13.87**	**61**	Pn	**Pn**	**16 32 07.6**	**-1.7**
CHGN	**Chignik**	**13.87**	**61**	P	**Pn**	**16 32 07.8**	**-1.6**
	baz=258,SNR=54						
R16K	**Pilot Point**	**14.61**	**56**	P	**Pn**	**16 32 19.9**	**+1.0**
	baz=254,SNR=10						
SKR	**Severo-Kuril's**	**14.71**	**276**	*ceP*	**Pn**	**16 32 21.0**	**+0.6**
P16K	**Nushagak River**	**14.85**	**51**	P	**Pn**	**16 32 23.3**	**+1.3**
	baz=249,SNR=85						
O16K	**Kokwok River B**	**15.01**	**48**	P	**Pn**	**16 32 25.0**	**+0.9**
	baz=246,SNR=335						
N16K	**Nishlik Lake**	**15.08**	**45**	P	**Pn**	**16 32 26.3**	**+1.3**
	baz=242,SNR=329						
R17K	**Ugashik Creek**	**15.24**	**57**	P	**Pn**	**16 32 26.1**	**-1.1**
	baz=256,SNR=38						
ANM	**Nome**	**15.32**	**25**	P	**P**	**16 32 31.7**	**+0.4**
ANM	**Nome**	**15.32**	**25**	P	**P**	**16 32 31.7**	**+0.4**
ANM	**Nome**	**15.32**	**25**	P	**P**	**16 32 30.4**	**-0.9**
	baz=218,SNR=9.5				

TNA	**Tin City**	**15.54**	**20**	P		**P**	**16 32 33.9**	**+0.3**
	baz=210,SNR=12							
O17K	**Koliganek Bris**	**15.55**	**49**	P		**Pn**	**16 32 32.0**	**+1.0**
	baz=248,SNR=449							
P17K	**Kvichak River**	**15.65**	**51**	P		**P**	**16 32 34.1**	**-0.9**
	baz=250							
SII	**Sitkinak Islan**	**16.23**	**61**	Pn		**Pn**	**16 32 36.6**	**-3.1**
SII				P		**P**	**16 32 40.7**	**-0.7**
SII	**Sitkinak Islan**	**16.23**	**61**	P		**Pn**	**16 32 36.0**	**-3.6**
	baz=262,SNR=84							
SII	**Sitkinak Islan**	**16.23**	**61**	P		**Pn**	**16 32 37.6**	**-2.0**
N18K	**Kilae Creek**	**16.45**	**46**	P		**P**	**16 32 43.5**	**-0.4**
N18K	**Kilae Creek**	**16.45**	**46**	P		**P**	**16 32 43.9**	**+0.1**
	baz=246,SNR=125							
O18K	**Koktuh Hills**	**16.47**	**50**			**P**	**16 32 43.7**	**-0.3**
O18K	**Koktuh Hills**	**16.47**	**50**	P		**P**	**16 32 44.2**	**+0.2**
	baz=250,SNR=750							
SVW2	**Sparrevohn**	**16.76**	**45**			**P**	**16 32 47.4**	**+0.2**
OHAK	**Old Harbor**	**16.81**	**59**	Pn		**Pn**	**16 32 43.2**	**-3.6**
OHAK	**Old Harbor**	**16.81**	**59**	P		**Pn**	**16 32 43.2**	**-3.6**
	baz=261,SNR=196							
Q19K	**Cape Douglas,**	**16.96**	**53**			**Pn**	**16 32 48.0**	**-0.7**
Q19K	**Cape Douglas,**	**16.96**	**53**	P		**Pn**	**16 32 47.9**	**-0.8**
	baz=255,SNR=32							
O19K	**Port Alsworth**	**17.00**	**49**	P		**P**	**16 32 50.4**	**+0.5**
O19K	**Port Alsworth**	**17.00**	**49**	P		**P**	**16 32 51.1**	**+1.2**
	baz=250,SNR=197							
N19K	**Bonanza Creek**	**17.14**	**47**	P		**P**	**16 32 52.6**	**+1.0**
N19K	**Bonanza Creek**	**17.14**	**47**	P		**P**	**16 32 53.0**	**+1.4**
	baz=248,SNR=230							
KDAK	**Kodiak Island**	**17.27**	**58**	Pn		**Pn**	**16 32 49.6**	**-2.9**
KDAK	**Kodiak Island**	**17.27**	**58**	P		**Pn**	**16 32 49.6**	**-2.9**
KDAK				pmax		pmax		
	comp=Z,601nm,0.7s							
KDAK	**Kodiak Island**	**17.27**	**58**	P		**Pn**	**16 32 49.7**	**-2.7**
	baz=260							
P19K	**Oil Pt**	**17.36**	**51**	P		**P**	**16 32 54.4**	**+0.5**
P19K	**Oil Pt**	**17.36**	**51**	P		**P**	**16 32 54.9**	**+1.1**
	baz=253,SNR=54							
TTA	**Tatalina**	**17.41**	**39**	P		**P**	**16 32 55.5**	**+1.0**
TTA				IAmb		IAmb	16 32 59.2	
	comp=Z,656nm,1.0s							
TTA	**Tatalina**	**17.41**	**39**	P		**P**	**16 32 55.5**	**+1.0**
TTA				pmax		pmax		
	comp=Z,656nm,1.0s							
TTA	**Tatalina**	**17.41**	**39**	P		**P**	**16 32 56.2**	**+1.8**
	baz=240,SNR=351							
ILSW	**Iliamna Southw**	**17.50**	**50**	P		**P**	**16 32 55.9**	**+0.4**
ILSW				IAmb		IAmb	16 32 59.3	
	comp=Z,1μm,1.2s							
Q20K	**Shuyak Island**	**17.52**	**55**	P		**Pn**	**16 32 54.1**	**-1.5**
	baz=258,SNR=14							
L19K	**White Mountain**	**17.53**	**42**			**P**	**16 32 57.2**	**+1.4**
L19K				IAmb		IAmb	16 33 02.0	
	comp=Z,602nm,0.8s							
L19K	**White Mountain**	**17.53**	**42**	P		**P**	**16 32 57.6**	**+1.9**
	baz=244,SNR=444							
M19K	**Big River Lodg**	**17.61**	**44**			**P**	**16 32 57.8**	**+1.2**
M19K				IAmb		IAmb	16 33 01.1	
	comp=Z,412nm,0.8s							
M19K	**Big River Lodg**	**17.61**	**44**	P		**P**	**16 32 58.7**	**+2.1**
	baz=245,SNR=262							
O20K	**Slope Mountain**	**17.77**	**50**	P		**Pn**	**16 33 00.3**	**+1.6**
	baz=253,SNR=172							
RSO	**Redoubt South**	**17.82**	**49**	P		**Pn**	**16 32 59.4**	**0.0**
BILL	**Bilibino**	**17.84**	**344**	P		**Pn**	**16 32 59.4**	**+0.1**
BILL	**Bilibino**	**17.84**	**344***d i*	P		**Pn**	**16 33 01.2**	**+1.9**
BILL				pmax		pmax		
	comp=Z,206nm,1.3s							
BILL				MLR		MLR		
	comp=Z,1μm,16.0s							
MA2	**Magadan**	**18.06**	**308**	P		**Pn**	**16 33 03.4**	**+1.4**
	comp=Z,17nm,0.7s,baz=100,slow=14,SNR=15							
MA2				LR		LR	16 39 01.6	
	comp=Z,2μm,21.4s,baz=111,slow=34							
MA2	**Magadan**	**18.06**	**308**	P		**Pn**	**16 33 02.2**	**+0.1**
MA2	**Magadan**	**18.06**	**308***ce*	P		**Pn**	**16 33 03.1**	**+1.0**
MA2				pmax		pmax		
	comp=Z,20nm,0.7s							
MA2	**Magadan**	**18.06**	**308**	P		**Pn**	**16 33 02.9**	**+0.8**
L20K	**Farewell, AK**	**18.07**	**42**	P		**Pn**	**16 33 03.5**	**+1.2**
	baz=244,SNR=239							
L20K				S		**S**	**16 36 24.9**	**+1.3**
	baz=244							
GCSA	**Galena City Sc**	**18.08**	**34**	P		**Pn**	**16 33 03.6**	**+1.4**
	baz=234,SNR=144							
HOM	**Homer**	**18.14**	**52**	P		**Pn**	**16 33 04.1**	**+1.1**
	baz=255,SNR=19							
M20K	**Styx River**	**18.15**	**44**	P		**Pn**	**16 33 03.6**	**+0.4**
M20K				IAmb		IAmb	16 33 09.9	
	comp=Z,342nm,0.8s							
M20K	**Styx River**	**18.15**	**44**	P		**Pn**	**16 33 04.7**	**+1.5**
	baz=247,SNR=282							
CNPM	**China Poot**	**18.31**	**52**	P		**P**	**16 33 02.8**	**-1.5**
CNPM				IAmb		IAmb	16 33 09.2	
	comp=Z,314nm,0.8s							
N20K	**Mount Spurr**	**18.31**	**47**	P		**Pn**	**16 33 06.0**	**+0.8**
	baz=250							
SPCR	**Spurr Chakacha**	**18.31**	**47**	P		**Pn**	**16 33 06.0**	**+0.8**
	baz=250,SNR=215							
SPU	**Mount Spurr**	**18.38**	**47**	P		**Pn**	**16 33 06.0**	**0.0**
K20K	**Telida**	**18.39**	**39**			**Pn**	**16 33 06.4**	**+0.3**
K20K				IAmb		IAmb	16 33 09.0	
	comp=Z,475nm,1.1s							
K20K	**Telida**	**18.39**	**39**	P		**Pn**	**16 33 06.8**	**+0.7**
	baz=242,SNR=249							
K20K				S		**S**	**16 36 30.4**	**+0.1**
	baz=242							
SEY	**Seymchan**	**18.48**	**319**	P		**Pn**	**16 33 07.6**	**+0.5**
	comp=Z,9.5nm,0.8s,baz=122,slow=14,SNR=34							
SEY				ScP		**ScP**	**16 41 00.5**	**-0.9**
	comp=Z,7.7nm,0.5s,baz=149,slow=3.6,SNR=28							
SEY	**Seymchan**	**18.48**	**319***ce*	P		**P**	**16 33 06.2**	**+0.1**
SEY				pmax		pmax		
	comp=Z,24nm,1.5s							
BRSE	**Bradley Lake S**	**18.60**	**52**	P		**P**	**16 33 06.6**	**-0.9**
	baz=256,SNR=25							
CAPN	**Captain Cook N**	**18.67**	**49**	P		**P**	**16 33 07.9**	**-0.3**
	baz=253							
J20K	**Nowinta River**	**18.76**	**37**	Pn		**Pn**	**16 33 10.5**	**+0.1**
J20K				IAmb		IAmb	16 33 14.2	
	comp=Z,532nm,0.9s							
J20K	**Nowinta River**	**18.76**	**37**	P		**Pn**	**16 33 11.0**	**+0.6**
	baz=239,SNR=340							
PPLA	**Purkeypile**	**18.95**	**42**			**Pn**	**16 33 13.0**	**+0.1**
PPLA	**Purkeypile**	**18.95**	**42**	P		**Pn**	**16 33 13.3**	**+0.4**
	baz=246,SNR=115							
SUA	**Susitna One**	**19.07**	**47**	P		**P**	**16 33 11.9**	**-0.8**
	baz=251							
FIS	**Fire Island**	**19.21**	**48**	Pn		**Pn**	**16 33 16.0**	**+0.2**
CAST	**Castle Rocks**	**19.21**	**41**	Pn		**Pn**	**16 33 15.8**	**-0.1**
CAST	**Castle Rocks**	**19.21**	**41**	P		**Pn**	**16 33 15.9**	**0.0**
	baz=244,SNR=413							
O22K	**Cooper Landing**	**19.27**	**50**	P		**P**	**16 33 14.3**	**-0.5**
O22K	**Cooper Landing**	**19.27**	**50**	P		**P**	**16 33 14.2**	**-0.5**
	baz=255,SNR=134							
SEW	**Seward**	**19.32**	**51**	P		**P**	**16 33 14.4**	**-0.8**
SEW				IAmb		IAmb	16 33 24.6	
	comp=Z,373nm,0.8s							
SEW	**Seward**	**19.32**	**51**	P		**P**	**16 33 14.6**	**-0.7**
	baz=257,SNR=49							
CHUM	**Lake Minchumin**	**19.33**	**39**	P		**Pn**	**16 33 17.5**	**+0.4**
	baz=243,SNR=474							
RC01	**Rabbit Creek A**	**19.42**	**48**	P		**P**	**16 33 15.1**	**-1.4**
RC01				IAmb		IAmb	16 33 31.1	
	comp=Z,204nm,0.7s							
RC01	**Rabbit Creek A**	**19.42**	**48**	P		**P**	**16 33 15.5**	**-0.9**
	baz=254,SNR=42							
M22K	**Willow**	**19.44**	**46**	P		**P**	**16 33 15.7**	**-0.9**
M22K	**Willow**	**19.44**	**46**	P		**P**	**16 33 16.1**	**-0.5**
	baz=252,SNR=158							
CUT	**Chulitna**	**19.59**	**44**	P		**P**	**16 33 17.9**	**-0.3**
CUT	**Chulitna**	**19.59**	**44**	P		**P**	**16 33 18.2**	**0.0**
	baz=250,SNR=107							
KTH	**Kantishna Hill**	**19.75**	**41**	P		**Pn**	**16 33 21.2**	**-0.9**
PMR	**Palmer**	**19.84**	**47**	P		**P**	**16 33 19.4**	**-1.6**
PMR	**Palmer**	**19.84**	**47**	P		**P**	**16 33 19.4**	**-1.6**
PMR				pmax		pmax		
	comp=Z,139nm,0.6s							
PMR	**Palmer**	**19.84**	**47**	P		**P**	**16 33 20.4**	**-0.6**
	baz=253,SNR=53							
IMAR	**Indian Mountai**	**19.87**	**33**	P		**Pn**	**16 33 22.4**	**-1.1**
BPAW	**Bear Paw Mtn.**	**19.95**	**39**	P		**Pn**	**16 33 23.3**	**-1.2**
BPAW				IAmb		IAmb	16 33 25.0	
	comp=Z,542nm,1.0s							
BPAW	**Bear Paw Mtn.**	**19.95**	**39**	P		**Pn**	**16 33 23.8**	**-0.7**
	baz=244,SNR=473							
TRF	**Thorofare Moun**	**19.96**	**41**	P		**P**	**16 33 23.0**	**+0.5**
TRF	**Thorofare Moun**	**19.96**	**41**	P		**P**	**16 33 23.2**	**+0.7**
	baz=247,SNR=389							
GHO	**Glory Hole Cre**	**19.99**	**47**	P		**P**	**16 33 22.1**	**-0.6**
GHO				IAmb		IAmb	16 33 28.6	
	comp=Z,308nm,0.6s							
H21K	**Melozitna Rive**	**20.02**	**34**	Pn		Pn	16 33 24.7	-0.6
H21K	**Melozitna Rive**	**20.02**	**34**	P		Pn	16 33 24.5	-0.8
	baz=238,SNR=810							
PWL	**Port Wells**	**20.03**	**50**	P		**P**	**16 33 22.2**	**-0.8**
PWL	**Port Wells**	**20.03**	**50**	P		**P**	**16 33 22.4**	**-0.7**
	baz=256,SNR=49							
PWL				S		**S**	**16 37 01.1**	**-2.7**
	baz=256							
I21K	**Tanana**	**20.07**	**36**	P		Pn	16 33 24.9	-0.9
I21K	**Tanana**	**20.07**	**36**	P		Pn	16 33 25.4	-0.5
	baz=240,SNR=477							
KNK	**Knik Glacier**	**20.11**	**48**	P		**P**	**16 33 22.2**	**-1.7**
KNK	**Knik Glacier**	**20.11**	**48**	P		**P**	**16 33 22.8**	**-1.0**
	baz=254,SNR=107							
KNK				S		**S**	**16 37 05.9**	**+0.6**
	baz=254							
G21K	**Allakaket**	**20.25**	**32**	P		Pn	16 33 27.3	-0.7
	baz=235,SNR=804							
SML	**Sawmill**	**20.27**	**47**	P		**P**	**16 33 24.1**	**-1.6**
SML				IAmb		IAmb	16 33 28.2	
	comp=Z,358nm,0.7s							
SML	**Sawmill**	**20.27**	**47**	P		**P**	**16 33 24.7**	**-1.0**
	baz=254,SNR=107							
SML				S		**S**	**16 37 07.7**	**-0.9**
	baz=254							
P23K	**Montague Islan**	**20.30**	**52**	P		Pn	16 33 27.5	-1.1
	baz=260,SNR=17							
MLY	**Manley**	**20.46**	**37**	Pn		**P**	**16 33 29.0**	**+1.3**
MLY	**Manley**	**20.46**	**37**	P		**P**	**16 33 28.9**	**+1.1**
	baz=242,SNR=573							
MLY				S		**S**	**16 37 11.4**	**-0.9**
	baz=242							
WAT1	**Susitna Watana**	**20.48**	**44**	P		**P**	**16 33 27.1**	**-0.8**
	baz=251							
WAT1				S		**S**	**16 37 10.3**	**-2.4**
	baz=251							
M23K	**Glacier View**	**20.54**	**47**	P		**P**	**16 33 27.9**	**-0.7**
	baz=254,SNR=146							
M23K				S		**S**	**16 37 13.0**	**-0.9**
	baz=254							
RND	**Reindeer**	**20.55**	**42**	P		**P**	**16 33 27.9**	**-0.8**
RND				IAmb		IAmb	16 33 32.2	
	comp=Z,408nm,0.8s							
RND	**Reindeer**	**20.55**	**42**	P		**P**	**16 33 27.9**	**-0.8**
RND				pmax		pmax		
	comp=Z,408nm,0.8s							
BWN	**Browne**	**20.59**	**40**	P		**P**	**16 33 29.8**	**+0.7**
GLI	**Glacier Island**	**20.62**	**50**	P		**P**	**16 33 27.9**	**-1.5**
GLI	**Glacier Island**	**20.62**	**50**	P		**P**	**16 33 27.7**	**-1.7**
	baz=258,SNR=41							
GLI				S		**S**	**16 37 15.5**	**0.0**
	baz=258							
MCK	**McKinley**	**20.63**	**41**	P		**P**	**16 33 28.6**	**-1.0**
MCK				IAmb		IAmb	16 33 45.5	
	comp=Z,516nm,1.0s							
MCK	**McKinley**	**20.63**	**41**	P		**P**	**16 33 28.6**	**-1.0**
MCK				pmax		pmax		
	comp=Z,516nm,1.0s							
MCK	**McKinley**	**20.63**	**41**	P		**P**	**16 33 29.2**	**-0.4**
	baz=248,SNR=182							
MCK				S		**S**	**16 37 14.9**	**-0.7**
	baz=248							
H22K	**Ishtalitna Cre**	**20.64**	**35**	P		Pn	16 33 31.4	-1.3
	baz=239,SNR=302							
H22K				S		**S**	**16 37 16.0**	**+0.2**
	baz=239							
F21K	**Alatna River**	**20.68**	**30**	P		Pn	16 33 31.8	-1.2
	baz=233,SNR=471							
SCM	**Sheep Creek Mo**	**20.74**	**47**	P		**P**	**16 33 29.9**	**-0.9**
SCM	**Sheep Creek Mo**	**20.74**	**47**	P		**P**	**16 33 29.9**	**-0.9**
SCM				pmax		pmax		
	comp=Z,1μm,1.1s							
SCM	**Sheep Creek Mo**	**20.74**	**47**	P		**P**	**16 33 30.1**	**-0.6**
	baz=255,SNR=217							
SCM				S		**S**	**16 37 16.0**	**-1.8**
	baz=255							
Q23K	**Middleton Isla**	**20.74**	**54**	P		**P**	**16 33 31.2**	**+0.5**
Q23K	**Middleton Isla**	**20.74**	**54**	P		**P**	**16 33 31.6**	**+1.0**
	baz=262,SNR=10							
MID	**Middleton Isla**	**20.75**	**54**	P		**P**	**16 33 30.7**	**0.0**
MID	**Middleton Isla**	**20.75**	**54**	P		**P**	**16 33 30.7**	**0.0**
MID				pmax		pmax		
	comp=Z,957nm,0.8s							
WAT6	**Susitna Watana**	**20.76**	**45**	P		**P**	**16 33 30.6**	**-0.4**
	baz=252,SNR=93							
WAT6				S		**S**	**16 37 14.9**	**-3.5**
	baz=252							
HIN	**Hinchinbrook I**	**20.82**	**51**	P		**P**	**16 33 30.4**	**-1.2**
HIN				IAmb		IAmb	16 33 38.6	
	comp=Z,398nm,0.8s							
FID	**Port Fidalgo**	**20.89**	**50**	P		**P**	**16 33 30.2**	**-2.1**
NEA2	**Nenana**	**20.91**	**39**	P		**P**	**16 33 32.7**	**+0.1**
NEA2	**Nenana**	**20.91**	**39**	P		**P**	**16 33 33.1**	**+0.5**
	baz=246,SNR=755							
NEA2				S		**S**	**16 37 19.6**	**-1.6**
	baz=246							
I23K	**Minto, Yukon-K**	**21.04**	**37**	P		**P**	**16 33 34.2**	**+0.4**
I23K	**Minto, Yukon-K**	**21.04**	**37**	P		**P**	**16 33 34.8**	**+1.0**
	baz=244,SNR=173							
I23K				S		**S**	**16 37 20.6**	**-2.9**
	baz=244							
DHY	**Denali Highway**	**21.07**	**44**	P		**P**	**16 33 33.9**	**-0.5**
DHY	**Denali Highway**	**21.07**	**44**	P		**P**	**16 33 34.0**	**-0.4**
	baz=252,SNR=483							
DHY				S		**S**	**16 37 22.6**	**-2.0**
	baz=252							
G22K	**Bettles**	**21.14**	**32**	P		**P**	**16 33 35.7**	**+0.8**
	baz=237							
EYAK	**Cordova Ski Ar**	**21.21**	**51**	P		**P**	**16 33 35.2**	**-0.5**
EYAK				IAmb		IAmb	16 33 41.9	
	comp=Z,192nm,0.7s							
EYAK	**Cordova Ski Ar**	**21.21**	**51**	P		**P**	**16 33 33.9**	**-1.8**
	baz=260,SNR=22							
EYAK				S		**S**	**16 37 25.4**	**-1.6**
	baz=260							
F22K	**John River**	**21.25**	**30**	P		**P**	**16 33 37.7**	**+1.6**
	baz=235,SNR=159							
F22K				S		**S**	**16 37 26.5**	**-1.3**
	baz=235							
WRH	**Wood River Hil**	**21.25**	**40**	P		**P**	**16 33 35.0**	**-1.1**
WRH				IAmb		IAmb	16 33 38.8	
	comp=Z,175nm,0.8s							
H23K	**Yukon River**	**21.27**	**36**	P		**P**	**16 33 37.3**	**+0.9**
H23K				IAmb		IAmb	16 33 39.9	
	comp=Z,432nm,1.1s							
H23K	**Yukon River**	**21.27**	**36**	P		**P**	**16 33 37.7**	**+1.3**
	baz=242,SNR=258							
H23K				S		**S**	**16 37 28.4**	**+0.1**
	baz=242							
DIV	**Divide**	**21.30**	**50**	P		**P**	**16 33 35.5**	**-1.3**
KLU	**Klutina**	**21.31**	**49**	P		**P**	**16 33 35.5**	**-1.3**
KLU				IAmb		IAmb	16 33 45.4	
	comp=Z,202nm,0.7s							
KLU	**Klutina**	**21.31**	**49**	P		**P**	**16 33 35.4**	**-1.5**
	baz=257,SNR=71							
KLU				S		**S**	**16 37 26.8**	**-2.4**
	baz=257							
M24K	**Tolsona, Glenn**	**21.33**	**47**	P		**P**	**16 33 36.8**	**-0.3**
M24K	**Tolsona, Glenn**	**21.33**	**47**	P		**P**	**16 33 37.3**	**+0.2**
	baz=256,SNR=194							
MDM	**Murphy Dome**	**21.39**	**39**	P		**P**	**16 33 37.6**	**-0.1**
CCB	**Clear Creek Bu**	**21.44**	**40**	P		**P**	**16 33 36.7**	**-1.3**
CCB				IAmb		IAmb	16 33 51.4	
	comp=Z,220nm,1.0s							
TCOL	**CIGO, UAF Yank**	**21.50**	**39**	P		**P**	**16 33 37.8**	**-1.0**
TCOL				IAmb		IAmb	16 33 42.6	
	comp=Z,327nm,0.8s							
TCOL	**CIGO, UAF Yank**	**21.50**	**39**	P		**P**	**16 33 38.5**	**-0.3**
	baz=247,SNR=64							
TCOL				S		**S**	**16 37 30.5**	**-2.3**
	baz=247							
COLA	**College**	**21.51**	**39**	P		**P**	**16 33 37.8**	**-1.0**
COLA				IAmb		IAmb	16 33 42.6	
	comp=Z,328nm,0.8s							
COLA	**College**	**21.51**	**39***c i*	P		**P**	**16 33 37.0**	**-1.8**
COLA				pmax		pmax		
	comp=Z,454nm,1.2s							
COLA	**College**	**21.51**	**39**	P		**P**	**16 33 38.4**	**-0.4**
	baz=247							
COLA				S		**S**	**16 37 31.2**	**-1.7**
	baz=247							
G23K	**Bananza Creek**	**21.53**	**33**	P		**P**	**16 33 40.6**	**+1.5**
	baz=240,SNR=1000							
G23K				S		**S**	**16 37 34.1**	**+0.7**
	baz=240							
HDA	**Harding Lake**	**21.69**	**40**	P		**P**	**16 33 38.5**	**-2.4**
HDA				IAmb		IAmb	16 33 55.7	
	comp=Z,121nm,0.8s							
HDA	**Harding Lake**	**21.69**	**40**	P		**P**	**16 33 38.8**	**-2.0**
	baz=249,SNR=126							
HDA				S		**S**	**16 37 33.2**	**-3.4**
	baz=249							
HDA				S		**S**	**16 37 33.2**	**-3.4**
	baz=249							
RAGM	**Ragged Mountai**	**21.71**	**52**	P		**P**	**16 33 39.9**	**-1.2**
RAGM				IAmb		IAmb	16 33 44.7	
	comp=Z,480nm,0.9s							
E22K	**Anaktuvuk Pass**	**21.73**	**29**	P		**P**	**16 33 42.2**	**+0.9**
	baz=234,SNR=268							
E22K				S		**S**	**16 37 37.6**	**+0.3**
	baz=234							
COLD	**Coldfoot**	**21.74**	**32**	P		**P**	**16 33 41.5**	**+0.3**
COLD				IAmb		IAmb	16 33 45.5	
	comp=Z,295nm,0.8s							
COLD	**Coldfoot**	**21.74**	**32**	P		**P**	**16 33 42.2**	**+0.9**
	baz=238							
COLD				S		**S**	**16 37 37.0**	**-0.4**
	baz=238							
POKR	**Poker Plat Res**	**21.77**	**38**	P		**P**	**16 33 40.6**	**-1.0**
POKR				IAmb		IAmb	16 33 43.8	
	comp=Z,322nm,1.0s							
POKR	**Poker Plat Res**	**21.77**	**38**	P		**P**	**16 33 40.9**	**-0.7**
	baz=247,SNR=37							
POKR				S		**S**	**16 37 35.3**	**-2.6**
	baz=247							
KAIM	**Kayak Island**	**21.78**	**53**	P		**P**	**16 33 40.8**	**-1.0**
KAIM				IAmb		IAmb	16 33 45.5	
	comp=Z,311nm,0.8s							
KAIM	**Kayak Island**	**21.78**	**53**	P		**P**	**16 33 41.4**	**-0.3**
	baz=263,SNR=5.7							
KUR	**Kuril'sk**	**21.82**	**266***c i*	P		**P**	**16 33 43.4**	**+1.1**
KUR				S		**S**	**16 37 42.5**	**+3.4**
KUR				pmax		pmax		
	comp=Z,2μm,3.8s							
KUR				pmax		pmax		
	comp=Z,978nm,1.3s							
BMRM	**Bremner River**	**21.83**	**50**	P		**P**	**16 33 40.9**	**-1.6**
BMRM				IAmb		IAmb	16 34 03.4	
	comp=Z,431nm,1.0s							
BMRM	**Bremner River**	**21.83**	**50**	P		**P**	**16 33 41.2**	**-1.2**
	baz=260,SNR=65							
BMRM				S		**S**	**16 37 36.7**	**-2.7**
	baz=260							
IL31		**21.85**	**40**	P		**P**	**16 33 40.2**	**-2.2**
IL31				IAmb		IAmb	16 33 57.2	
	comp=Z,230nm,0.9s							
ILAR	**Eielson Array**	**21.85**	**40**	P		**P**	**16 33 40.9**	**-1.6**
	comp=Z,52nm,0.7s,baz=240,slow=8.2,SNR=78							
ILAR				pP		**pP**	**16 33 55.4**	**-2.0**
	comp=Z,110nm,0.9s,baz=261,slow=14,SNR=17							
ILAR				PcP		**PcP**	**16 37 38.8**	**-0.3**
	comp=Z,14nm,0.6s,baz=273,slow=3.2,SNR=14							
ILAR				ScP		**ScP**	**16 41 07.4**	**-1.9**
	comp=Z,6.4nm,0.7s,baz=288,slow=3.5,SNR=32							
ILAR				LR		LR	16 42 15.4	
	comp=Z,2μm,21.0s,baz=236,slow=37							
ILAR				ScS		**ScS**	**16 44 50.7**	**-2.8**
	comp=Z,2.0nm,0.8s,baz=235,slow=5.0,SNR=10							
ILAR				P3KPbc			17 07 29.4	
	comp=Z,3.2nm,1.0s,baz=60,slow=3.7,SNR=17							
	comp=Z,52nm,0.7s							
ILAR	**Eielson Array**	**21.85**	**40**	P		**P**	**16 33 40.5**	**-2.0**
HARP	**HAARP**	**21.87**	**46**	P		**P**	**16 33 42.4**	**-0.3**
	baz=256,SNR=70							
PAX	**Paxson**	**21.87**	**45**	P		**P**	**16 33 41.8**	**-1.0**
PAX	**Paxson**	**21.87**	**45**	P		**P**	**16 33 41.8**	**-1.0**
PAX				pmax		pmax		
	comp=Z,1μm,1.6s							
PAX	**Paxson**	**21.87**	**45**	P		**P**	**16 33 42.4**	**-0.4**
	baz=254,SNR=254							
PAX				S		**S**	**16 37 39.0**	**-1.0**
	baz=254							
H24K	**Noodor Dome**	**21.89**	**37**	P		**P**	**16 33 43.1**	**+0.1**
H24K	**Noodor Dome**	**21.89**	**37**	P		**P**	**16 33 43.3**	**+0.3**
	baz=244,SNR=759							
H24K				S		**S**	**16 37 38.6**	**-1.7**
	baz=244							
HMT	**Hamilton**	**21.91**	**52**	P		**P**	**16 33 43.1**	**0.0**
N25K	**Chitina, Valde**	**21.95**	**49**	P		**P**	**16 33 43.0**	**-0.7**
N25K				IAmb		IAmb	16 33 45.9	
	comp=Z,358nm,0.8s							
N25K	**Chitina, Valde**	**21.95**	**49**	P		**P**	**16 33 42.9**	**-0.8**
	baz=258,SNR=180							
N25K				S		**S**	**16 37 40.2**	**-1.4**
	baz=258							
K24K	**Donnelly Dome**	**21.98**	**42**	P		**P**	**16 33 43.2**	**-0.8**
	baz=252,SNR=106							
K24K				S		**S**	**16 37 39.5**	**-2.4**
	baz=252							
SUCK	**Suckling Hills**	**22.11**	**53**	P		**P**	**16 33 44.4**	**-1.0**
BERG	**Berg Lake**	**22.19**	**52**	P		**P**	**16 33 45.2**	**-1.0**
BERG				IAmb		IAmb	16 34 05.5	
	comp=Z,247nm,0.8s							
GLB	**Gilahina Butte**	**22.29**	**49**	P		**P**	**16 33 46.2**	**-1.2**
RIDG	**Independent Ri**	**22.35**	**43**	P		**P**	**16 33 46.5**	**-1.5**
RIDG				IAmb		IAmb	16 33 51.2	
	comp=Z,188nm,0.8s							
RIDG	**Independent Ri**	**22.35**	**43**	P		**P**	**16 33 46.8**	**-1.2**

DOT IAmb IAmb 16 34 13.2
comp=Z,224nm,1.0s
TOLK Toolik Lake Re 22.70 29 P P 16 33 51.9 +0.2
TOLK IAmb IAmb 16 33 54.2
comp=Z,435nm,1.1s
TOLK Toolik Lake Re 22.70 29 P P 16 33 52.5 +0.8
baz=236,SNR=345
TOLK S S **16 37 54.5 +0.3**
baz=236
E24K Your Creek 22.74 31 P P 16 33 52.7 +0.6
baz=239,SNR=409
E24K S S **16 37 55.2 +0.4**
baz=239
SCRK Sand Creek 22.79 43 P P 16 33 51.0 -1.7
SCRK IAmb IAmb 16 33 54.6
comp=Z,187nm,0.7s
SCRK Sand Creek 22.79 43 P P 16 33 51.3 -1.4
baz=254,SNR=278
SCRK S S **16 37 52.0 -3.8**
baz=254
L26K Log Cabin Wild 22.82 45 P P 16 33 52.5 -0.5
L26K IAmb IAmb 16 33 59.0
comp=Z,216nm,0.8s
L26K Log Cabin Wild 22.82 45 P P 16 33 52.9 0.0
baz=257,SNR=128
L26K S S **16 37 54.4 -1.8**
baz=257
H25K Birch Creek 22.84 36 P P 16 33 53.7 +0.7
baz=246
H25K S S **16 37 57.1 +1.0**
baz=246
M26K Nabesna, AK 22.85 47 P P 16 33 52.2 -1.0
M26K IAmb IAmb 16 33 55.2
comp=Z,434nm,1.2s
M26K Nabesna, AK 22.85 47 P P 16 33 52.5 -0.8
baz=258,SNR=150
M26K S S **16 37 56.0 -0.7**
baz=258
ISLE Juniper Island 22.88 52 P P 16 33 52.5 -1.2
ISLE IAmb IAmb 16 34 17.6
comp=Z,647nm,1.5s
G25K Bearman Lake 22.94 35 P P 16 33 54.8 +0.8
baz=245,SNR=305
G25K S S **16 38 00.5 +2.7**
baz=245
TYV Tymovskoe 22.97 283 *e*P **P 16 33 56.4 +2.0**
TYV *e*S **S 16 38 03.3 +4.7**
TYV pmax pmax
comp=Z,64nm,0.7s
TYV pmax pmax
comp=Z,700nm,3.1s
TYV smax smax
comp=N,2μm,9.6s
TYV smax smax
comp=E,4μm,9.6s
TYV MLR MLR
comp=E,2μm,19.0s
TYV MLR MLR
comp=Z,3μm,19.0s
MESA MESA 23.03 53 P P 16 33 54.1 -1.2
MESA IAmb IAmb 16 33 59.6
comp=Z,173nm,0.7s
MESA MESA 23.03 53 P P 16 33 54.8 -0.4
baz=265,SNR=8.9
C23K Itkillik River 23.10 26 P P 16 33 56.3 +0.8
baz=232,SNR=346
J26L Joseph Creek 23.11 41 P P 16 33 54.2 -1.7
J26L IAmb IAmb 16 33 57.0
comp=Z,335nm,0.7s
J26L Joseph Creek 23.11 41 P P 16 33 54.4 -1.5
baz=253,SNR=575
J26L S S **16 37 58.7 -2.2**
baz=253
SHO Shikotan 23.13 264 *e*P **P 16 33 55.1 -1.0**
SHO S **PnPn 16 34 24.4 -0.3**
FYU Fort Yukon 23.17 36 P P 16 33 55.9 -0.3
GRNC Granite Creek 23.18 51 P **P 16 33 55.5 -1.2**
GRNC IAmb IAmb 16 33 57.5
comp=Z,441nm,1.2s
D24K Happy Valley 23.21 28 P P 16 33 57.5 +0.8
baz=236
D24K S S **16 38 01.4 -0.9**
baz=236
MIDW Midway 23.34 173 P P 16 33 59.9 +1.8
M27K Edge Creek, AK 23.35 47 P P 16 33 57.9 -0.3
M27K Edge Creek, AK 23.35 47 P P 16 33 58.3 +0.1
baz=260,SNR=294
CTG Chitna Glacier 23.41 51 P P 16 33 58.1 -0.6
baz=264,SNR=44
CTGM Chitina Glacie 23.41 51 P P 16 33 58.2 -0.5
CTGM IAmb IAmb 16 34 25.1
comp=Z,338nm,1.3s
F25K Christian Rive 23.46 33 P P 16 33 59.8 +0.8
baz=244,SNR=1000
F25K S S **16 38 06.6 +0.2**
baz=244
TABL Table Mountain 23.46 52 P P 16 33 58.4 -0.8
TABL IAmb IAmb 16 33 59.9
comp=Z,639nm,1.4s
L27K Beaver Creek, 23.51 46 P P 16 33 58.9 -0.6
L27K IAmb IAmb 16 34 01.2
comp=Z,353nm,0.8s
L27K Beaver Creek, 23.51 46 P P 16 33 59.5 0.0
baz=258,SNR=317
I26K Coal Creek Min 23.52 40 P P 16 33 57.6 -1.9
I26K Coal Creek Min 23.52 40 P P 16 33 57.7 -1.8
baz=252
I26K S S **16 38 07.8 +0.5**
baz=252
BCAR Beaver Creek A 23.53 46 P P 16 33 59.4 -0.3
LOGN Logan Glacier 23.56 51 P P 16 33 59.5 -0.6
LOGN IAmb IAmb 16 34 00.7
comp=Z,262nm,1.1s
C24K Franklin Bluff 23.57 27 P P 16 34 00.5 +0.7
baz=235
C24K S S **16 38 08.9 +0.9**
baz=235
K27K Chicken 23.61 43 P P 16 34 00.3 0.0
baz=256
K27K S S **16 38 10.3 +1.4**
baz=256
YUK Yuzh-Kuril'sk 23.65 265 *i*P **P 16 34 02.2 +1.4**
E25K Arctic Village 23.72 32 P P 16 34 02.3 +1.0
baz=243,SNR=1000
BMAR Burnt Mountain 23.76 34 P P 16 34 02.4 +0.8
BVCY Beaver Creek 23.83 47 P P 16 34 02.2 -0.1
baz=261,SNR=104
BVCY S S **16 38 16.9 +4.4**
baz=261
G26K Porcupine Rive 23.85 36 P P 16 34 02.3 -0.1
baz=247,SNR=1000
G26K S S **16 38 13.4 +0.9**
baz=247
PCA Pinnacle 23.87 53 P P 16 34 01.9 -0.9
PCA IAmb IAmb 16 34 04.8
comp=Z,275nm,0.7s
PINM Pinnacle 23.88 53 P P 16 34 02.4 -0.4
baz=266,SNR=25
UGL Uglegorsk 23.88 279 *e*P **P 16 34 04.8 +2.0**
UGL *e*S **PnPn 16 34 29.8 -5.1**
UGL pmax pmax
comp=Z,200nm,0.6s
YUK3 Moose Creek 23.93 49 P P 16 34 03.1 -0.3
baz=262,SNR=664
O28M Mount Upton 23.95 51 P P 16 34 03.3 -0.4
baz=265,SNR=93
F26K Sheenjek River 24.02 34 P P 16 34 05.1 +1.1
baz=245,SNR=550
D25K Kavik River 24.04 29 P P 16 34 05.0 +0.8
baz=239,SNR=499
D25K S S **16 38 16.2 +0.4**
baz=239
BCPM Bancas Point 24.18 53 P P 16 34 04.4 -1.1
BCPM IAmb IAmb 16 34 30.4
comp=Z,134nm,0.8s
EGAK Eagle 24.18 42 P P 16 34 05.0 -0.4
EGAK Eagle 24.18 42 P P 16 34 05.2 -0.3
baz=255,SNR=614
EGAK S S **16 38 15.1 -2.9**
baz=255
I27K Kandik River 24.22 39 P P 16 34 04.4 -1.5
baz=253
YSS Yuzh-Sakhalins 24.26 274 P P 16 34 07.8 +1.5
YSS IAmb IAmb 16 34 10.0
comp=Z,158nm,0.8s
YSS **PcP 16 37 44.7 +0.4**
YSS Yuzh-Sakhalins 24.26 274*o**e*P **P 16 34 08.2 +2.0**
YSS *e**SP **sP 16 34 34.1 +1.7**
YSS *e* 16 35 00.2
YSS *e* 16 37 45.3
YSS *e*S **S 16 38 19.7 +0.3**
YSS *e*SS SnSn 16 38 51.3 -18
YSS pmax pmax
comp=Z,240nm,0.7s
YSS pmax pmax
comp=Z,800nm,3.1s
YSS smax smax
comp=N,1μm,7.4s
YSS MLR MLR
comp=Z,1μm,17.0s
YSS Yuzh-Sakhalins 24.26 274 P P 16 34 08.8 +2.6
PNL Peninsula 24.29 54 P P 16 34 05.5 -1.0
baz=268,SNR=9.9
H27K Steamboat Moun 24.45 38 P P 16 34 06.3 -1.6
baz=252
G27K Doyon Strip 24.59 37 P P 16 34 08.1 -1.0
baz=250,SNR=270
O29M Mount Kennedy 24.72 53 P P 16 34 09.7 -0.8
baz=268,SNR=18
YUK4 Talbot Arm 24.75 50 P P 16 34 11.0 +0.2
baz=265,SNR=24
DAWY Dawson 24.77 44 P P 16 34 10.7 -0.2
DAWY Dawson 24.77 44 P P 16 34 11.1 +0.1
baz=259,SNR=242
DAWY S S **16 38 26.8 -0.8**
baz=259
C26K Camden Bay 24.79 29 P P 16 34 12.6 +1.8
baz=240,SNR=208
C26K S S **16 38 27.6 0.0**
baz=240
YUK6 Outpost Mounta 24.86 51 P P 16 34 11.3 -0.6
baz=266,SNR=26
M29M Somme Creek 24.94 48 P P 16 34 12.4 -0.1
baz=263
C27K Jago River 25.01 30 P P 16 34 13.9 +0.9
baz=242,SNR=429
C27K S S **16 38 31.3 +0.1**
baz=242
E27K Coleen River 25.10 34 P P 16 34 14.9 +1.1
baz=248,SNR=560
E27K S S **16 38 32.0 -0.6**
baz=248
P29M Windy Craggy 25.13 54 P P 16 34 13.2 -1.0
P29M Windy Craggy 25.13 54 P P 16 34 13.4 -0.8
baz=270,SNR=19
HYT Haines Junctio 25.27 52 P P 16 34 14.8 -0.7
HYT IAmb IAmb 16 34 20.8
comp=Z,148nm,0.8s
HYT Haines Junctio 25.27 52 P P 16 34 15.1 -0.5
baz=267,SNR=84
J29M Klondike Camp 25.35 43 P P 16 34 16.1 0.0
baz=259
J29M S S **16 38 36.0 -0.8**
baz=259
I29M Ogilvie Camp, 25.50 41 P P 16 34 16.5 -0.9
I29M IAmb IAmb 16 34 21.2
comp=Z,248nm,0.9s
I29M Ogilvie Camp, 25.50 41 P P 16 34 16.9 -0.5
baz=257,SNR=144
N30M Aishikik Lake 25.50 50 P P 16 34 17.2 -0.4
baz=266,SNR=92
P30M Million Dollar 25.52 53 P P 16 34 17.1 -0.6
baz=269
PLBC Pleasant Camp 25.83 55 P P 16 34 19.9 -0.5
baz=271,SNR=6.5
O30N Mendenhall 25.96 52 P P 16 34 21.2 -0.5
baz=269,SNR=16
N31M Braeburn, Yuko 26.13 50 P P 16 34 22.4 -0.8
N31M IAmb IAmb 16 34 27.3
comp=Z,138nm,0.9s
N31M Braeburn, Yuko 26.13 50 P P 16 34 23.2 0.0
baz=268,SNR=31
MAYO Mayo, Yukon 26.24 45 P P 16 34 23.2 -0.9
EPYK Eagle Plains 26.36 39 P P 16 34 24.1 -1.0
EPYK IAmb IAmb 16 34 25.7
comp=Z,150nm,0.8s
EPYK Eagle Plains 26.36 39 P P 16 34 24.6 -0.6
baz=257,SNR=90
SKAG Skagway 26.36 55 P P 16 34 24.8 -0.4
SKAG Skagway 26.36 55 P P 16 34 24.8 -0.4
baz=272,SNR=6.2
WHY Whitehorse 26.56 52 P P 16 34 26.7 -0.5
WHY IAmb IAmb 16 35 02.9
comp=Z,346nm,1.9s
WHY Whitehorse 26.56 52 P P 16 34 26.8 -0.3
baz=270,SNR=12
WHY S S **16 38 56.1 +0.2**
baz=270
SIT Sitka 26.57 60 P P 16 34 27.2 +0.1
SIT Sitka 26.57 60 P P 16 34 27.2 +0.1
SIT pmax pmax
comp=Z,35nm,0.8s
SIT Sitka 26.57 60 P P 16 34 27.1 0.0
baz=277
BESE Bessie Mountai 26.66 57 P P 16 34 27.5 -0.5
GRNR Gornyy 26.77 286*i*P **P 16 34 30.2 +1.2**
GRNR *e* 16 34 46.0
GRNR *e*S **S 16 39 03.7 +4.4**
GRNR pmax pmax
comp=E,10.0nm,0.6s
GRNR pmax pmax
comp=N,5.0nm,0.5s
GRNR pmax pmax
comp=Z,30nm,0.8s
GRNR smax smax
comp=N,4.0nm,0.8s
GRNR MLR MLR
comp=E,680nm,19.0s
GRNR MLR MLR
comp=N,800nm,20.0s
GRNR MLR MLR
comp=Z,900nm,17.0s
M31M Drury Creek, Y 26.82 48 P P 16 34 28.9 -0.4
M31M Drury Creek, Y 26.82 48 P P 16 34 29.4 +0.1
baz=268,SNR=78
M31M S S **16 38 59.1 -0.8**
baz=268
JIS Juneau Island 26.94 57 P P 16 34 30.1 -0.3
P32M Atlin 27.18 54 P P 16 34 32.9 +0.2
baz=273,SNR=16
P32M S S **16 39 06.3 +0.7**
baz=273
FARO Faro, Yukon 27.31 48 P P 16 34 33.3 -0.4
N32M Quiet Lake 27.43 51 P P 16 34 34.8 0.0
baz=271
P33M Teslin, Yukon 27.59 53 P P 16 34 36.3 -0.1
P33M Teslin, Yukon 27.59 53 P P 16 34 36.7 +0.3
baz=273,SNR=50
INK Inuvik 28.00 35 P P 16 34 40.3 +0.5
comp=Z,79nm,1.0s,baz=253,slow=8.3,SNR=47
INK PcP **PcP 16 37 53.1 +0.5**
comp=Z,15nm,0.6s,baz=289,slow=3.0,SNR=4.7
INK S S **16 39 15.6 -2.6**
comp=Z,2.9nm,0.5s,baz=189,slow=17,SNR=0.8
INK ScP **ScP 16 41 25.2 -1.3**
comp=Z,11nm,0.7s,baz=292,slow=4.6,SNR=8.9
INK ScS **ScS 16 45 16.2 -2.4**
comp=Z,4.7nm,1.0s,baz=11,slow=32,SNR=22
INK LR LR 16 46 31.2
comp=Z,1μm,21.8s,baz=243,slow=38
comp=Z,79nm,1.0s
INK Inuvik 28.00 35 P P 16 34 39.9 +0.1
INK IAmb IAmb 16 34 46.8
comp=Z,216nm,0.8s
INK Inuvik 28.00 35 P P 16 34 40.4 +0.5
baz=257,SNR=52
INK S S **16 39 15.9 -2.3**
baz=257
CRAG Craig 28.05 63 P P 16 34 40.7 +0.4
baz=282
WRAK Wrangell Islan 28.29 61 P P 16 34 42.5 0.0
WRAK Wrangell Islan 28.29 61 P P 16 34 42.9 +0.4
baz=280
YAK Yakutsk 28.57 311 P P 16 34 44.8 -0.1
comp=Z,7.0nm,0.3s,baz=83,slow=3.3,SNR=31
YAK pP **pP 16 35 03.3 +1.0**
comp=Z,40nm,0.8s,baz=172,slow=1.1,SNR=8.7
YAK S S **16 39 25.8 -1.4**
comp=Z,4.7nm,0.6s,baz=147,slow=23,SNR=6.5
YAK ScP **ScP 16 41 27.4 -1.0**
comp=Z,11nm,0.6s,baz=118,slow=1.3,SNR=9.6
YAK ScS **ScS 16 45 20.4 -1.0**
comp=Z,1.0nm,0.4s,baz=150,slow=22,SNR=18
YAK LR LR 16 45 57.1
comp=Z,1μm,21.7s,baz=114,slow=36
comp=Z,7.0nm,0.3s
YAK Yakutsk 28.57 311 P **P 16 34 44.5 -0.4**
YAK Yakutsk 28.57 311*c**i*P **P 16 34 44.6 -0.3**
YAK *e**PP **pP 16 35 01.2 -1.1**
YAK *e* 16 35 39.8
YAK *e* 16 37 51.0
YAK *e*S **S 16 39 27.2 0.0**
YAK *e**SS **sS 16 39 59.4 +2.3**
YAK *e*SS **SnSn 16 40 57.0 +3.3**
YAK *e* 16 45 21.3
YAK pmax pmax
comp=Z,31nm,1.0s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,12nm,1.1s
YAK pmax pmax
comp=Z,107nm,1.3s
YAK pmax pmax
comp=N,15nm,1.4s
YAK pmax pmax
comp=E,48nm,1.4s
YAK smax smax
comp=N,167nm,1.4s
YAK smax smax
comp=E,106nm,1.3s
YAK Yakutsk 28.57 311 P **P 16 34 44.7 -0.1**
YAK pP **pP 16 35 02.3 +0.1**
YAK sP **sP 16 35 13.3 +2.3**
YAK ScP **ScP 16 41 27.8 -0.7**
R33M Jennings River 28.59 54 P **P 16 34 46.1 +0.8**
baz=276,SNR=30
TEY Ternei 28.95 274*i**e*P **P 16 34 49.5 +1.1**
TEY *e* 16 35 09.2
TEY *e* 16 39 31.6
TEY *e* 16 41 33.2
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=E,20nm,1.0s
TEY pmax pmax
comp=Z,20nm,1.0s
DIB Dawson Inlet, 28.96 67 P **P 16 34 48.5 0.0**
H02S1 DAWSON INLET T 28.96 67 P **P 16 34 49.6 +1.1**
SNR=43
DLBC Dease Lake 29.20 56 P **P 16 34 51.2 +0.6**
comp=Z,8.0nm,0.5s,baz=286,slow=7.4,SNR=25
DLBC ScP **ScP 16 41 29.6 -1.0**
comp=Z,3.9nm,0.6s,baz=126,slow=2.6,SNR=3.6
DLBC ScS **ScS 16 45 25.4 +0.7**
comp=Z,0.5nm,0.4s,baz=198,slow=26,SNR=1.2
DLBC LR LR 16 45 41.6
comp=Z,2μm,21.7s,baz=278,slow=34
comp=Z,8.0nm,0.5s
DLBC Dease Lake 29.20 56 P **P 16 34 51.4 +0.7**
DLBC IAmb IAmb 16 35 55.6
comp=Z,275nm,2.0s
DLBC Dease Lake 29.20 56 P **P 16 34 51.5 +0.9**
baz=278,SNR=14
T35M Bob Quinn 29.32 59 P **P 16 34 52.8 +1.1**
baz=281,SNR=8.9
HG4B Hotspring 29.98 69 P **P 16 34 57.8 +0.3**
TIXI Tiksi 30.04 331 P **P 16 34 59.3 +1.5**
comp=Z,3.4nm,0.5s,baz=90,slow=23,SNR=1.7
TIXI pP **pP 16 35 14.8 -0.4**
comp=Z,17nm,0.9s,baz=90,slow=24,SNR=4.0
TIXI ScP **ScP 16 41 31.7 -1.3**
comp=Z,20nm,1.0s,baz=90,slow=22,SNR=7.0
TIXI LR LR 16 48 02.0
comp=Z,2μm,18.4s,baz=177,slow=38
comp=Z,3.4nm,0.5s
KLR Kul'dur 30.14 285 P **P 16 34 59.6 +0.6**
comp=Z,64nm,0.7s,baz=65,slow=8.1,SNR=169
KLR PcP **PcP 16 37 58.9 +0.4**
comp=Z,3.7nm,0.6s,baz=22,slow=2.9,SNR=1.9
KLR LR LR 16 46 54.4
comp=Z,2μm,21.4s,baz=70,slow=36
comp=Z,64nm,0.7s
KLR Kul'dur 30.14 285*c**e*P **P 16 34 59.8 +0.9**
KLR pmax pmax
comp=Z,88nm,1.0s
GRNB Grenville Isla 30.23 65 P **P 16 35 00.0 +0.3**
JMM Marumori 30.32 259 P **P 16 35 01.2 +0.5**
ZEA Zeya 31.23 295 *e*P **P 16 35 09.1 +0.5**
ZEA *e**SP **sP 16 35 35.8 +0.7**
ZEA *e* 16 36 16.2
ZEA *e*S **S 16 40 04.6 -4.6**
ZEA *e*SS **SS 16 42 17.8 -7.4**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA pmax pmax
comp=Z,200nm,3.5s
ZEA pmax pmax
comp=Z,100nm,3.5s
ZEA smax smax
comp=E,400nm,8.3s
ZEA MLR MLR
comp=N,600nm,16.0s
ZEA MLR MLR
comp=Z,800nm,21.0s
ZEA MLR MLR
comp=E,400nm,20.0s
C36M Paulatuk 31.55 34 P **P 16 35 11.4 +0.3**
C36M IAmb IAmb 16 35 12.8
comp=Z,141nm,0.8s
C36M Paulatuk 31.55 34 P **P 16 35 11.8 +0.7**
baz=265,SNR=25
C36M S S **16 40 13.6 -0.2**
baz=265
JYT Yasato 31.74 257 P **P 16 35 13.2 0.0**
JYT IAmb IAmb 16 35 15.5
comp=Z,69nm,0.9s
JSD Sado 31.78 261 P **P 16 35 14.2 +0.7**
JSD PcP **PcP 16 38 03.5 +0.6**
BBB Bella Bella 31.80 68 LR LR 16 46 00.6
comp=Z,1μm,21.3s,baz=276,slow=32
BBB Bella Bella 31.80 68 P **P 16 35 13.6 +0.1**
USRK Ussuriysk Ar. 32.23 276 P **P 16 35 18.1 +0.7**
comp=Z,14nm,0.7s,baz=59,slow=7.8,SNR=47
USRK PcP **PcP 16 38 05.0 +0.9**
comp=Z,12nm,0.7s,baz=68,slow=1.6,SNR=10
USRK pPcP 16 38 24.8
comp=Z,6.2nm,0.7s,baz=59,slow=4.2,SNR=4.2
USRK ScP **ScP 16 41 41.8 +1.0**
comp=Z,11nm,0.9s,baz=27,slow=2.6,SNR=9.9
comp=Z,14nm,0.7s
USRK Ussuriysk Ar. 32.23 276 P **P 16 35 17.7 +0.3**
USRK **PcP 16 38 04.7 +0.6**
HOLB Holberg 32.35 70 P **P 16 35 18.4 0.0**
MJAR Matsushiro Arr 32.75 259 P **P 16 35 21.6 -0.5**
comp=Z,18nm,0.9s,baz=41,slow=6.5,SNR=68
MJAR pP **pP 16 35 41.0 +1.3**
comp=Z,11nm,0.8s,baz=34,slow=7.0,SNR=8.2
MJAR PcP **PcP 16 38 06.3 +0.6**
comp=Z,5.1nm,0.5s,baz=77,slow=1.7,SNR=12
MJAR pPcP 16 38 26.1
comp=Z,2.0nm,0.6s,baz=92,slow=1.1,SNR=4.4
MJAR ScP **ScP 16 41 42.1 -0.7**
comp=Z,4.2nm,0.8s,baz=81,slow=5.3,SNR=14
MJAR LR LR 16 46 57.6
comp=Z,1μm,21.9s,baz=49,slow=33
comp=Z,18nm,0.9s
MAJO Matsushiro 32.76 259 P **P 16 35 21.8 -0.3**
MAJO IAmb IAmb 16 35 50.5
comp=Z,366nm,1.9s
MAJO Matsushiro 32.76 259 *i*P **P 16 35 23.3 +1.2**
MAJO pmax pmax
comp=Z,50nm,0.9s
MAJO Matsushiro 32.76 259 P **P 16 35 23.9 +1.8**
MAJO Matsushiro 32.76 259 P **P 16 35 23.6 +1.5**
MAJO pP **pP 16 35 39.6 -0.1**
MAJO sP **sP 16 35 48.0 -0.4**
MAJO ScP **ScP 16 41 44.1 +1.3**
TLCB Telegraph Cove 33.15 70 P **P 16 35 25.4 0.0**
H11N2 WAKE ISLAND Hy 33.18 202 P **P 16 35 26.8 +1.2**
baz=314,slow=4.8,SNR=6.3
H11N2 T T 17 10 40.1
baz=11,slow=76,SNR=27
H11N3 WAKE ISLAND Hy 33.19 202 P **P 16 35 26.1 +0.4**
baz=314,slow=4.8,SNR=13
H11N3 T T 17 10 37.8
baz=11,slow=76,SNR=221
H11N1 WAKE ISLAND Hy 33.20 202 P **P 16 35 26.6 +0.8**

baz=314,slow=4.8,SNR=4.5
H11N1 T T 17 10 37.6
baz=11,slow=76,SNR=15
MDJ Mudanjiang 33.51 278 P **P** **16 35 27.3 -1.3**
MDJ pP pP 16 35 43.8 -2.6
MDJ S **S** **16 40 45.4 +0.6**
MDJ sS sS 16 41 13.9 -1.0
MDJ ScP **ScP** **16 41 45.3 +0.1**
MDJ PcS **PcS** **16 41 52.6 -0.8**
MDJ ScS **ScS** **16 45 45.9 -0.5**
MDJ pmax pmax
comp=Z,22nm,1.1s
MDJ pmax pmax
comp=Z,140nm,3.8s
MDJ LR LR
comp=Z,1μm,13.9s
MDJ LR LR
comp=Z,2μm,15.6s
MDJ LR LR
comp=Z,2μm,17.1s
MDJ Mudanjiang 33.51 278 P **P** **16 35 29.2 +0.6**
comp=Z,18nm,0.9s
MSHR Mys Shultsa 33.59 274 *ce*P **P** **16 35 30.7 +1.4**
MSHR pmax pmax
comp=Z,43nm,1.0s
WAKE Wake Island 33.67 202 P **P** **16 35 30.0 -0.1**
WAKE Wake Island 33.67 202 P **P** **16 35 31.1 +1.0**
WAKE Wake Island 33.67 202 P **P** **16 35 29.7 -0.4**
WAKE sP **sP** **16 35 55.3 -0.2**
JHJ Hachijo jima 2 34.10 253 LR LR 16 47 23.0
comp=Z,680nm,21.4s,baz=74,slow=32
CBB Campbell River 34.22 70 P **P** **16 35 35.0 +0.3**
INU Inuyama 34.26 259 P **P** **16 35 35.1 -0.1**
INU Inuyama 34.26 259 P **P** **16 35 36.7 +1.5**
INU Inuyama 34.26 259 P **P** **16 35 36.1 +0.9**
INU sP **sP** **16 36 03.0 +1.5**
INU ScP **ScP** **16 41 49.2 +1.1**
BNX BinXian 34.31 281 ⇑P **P** **16 35 35.4 -0.1**
BNX pP **pP** **16 35 52.0 -1.3**
BNX sP **sP** **16 36 00.0 -2.0**
BNX PP **PP** **16 36 57.6 +3.3**
BNX S **S** **16 40 53.3 -3.8**
BNX pmax pmax
comp=Z,48nm,0.8s
BNX pmax pmax
comp=Z,100nm,4.9s
BNX LR LR
comp=Z,690nm,11.4s
BNX LR LR
comp=Z,1μm,14.6s
BNX LR LR
comp=Z,1μm,27.6s
H11S1 WAKE ISLAND Hy 34.41 202 P **P** **16 35 36.2 -0.1**
baz=23,slow=4.9,SNR=4.4
H11S1 T T 17 12 58.0
baz=18,slow=74
H11S2 WAKE ISLAND Hy 34.42 202 P **P** **16 35 36.7 +0.3**
baz=23,slow=4.9,SNR=4.1
H11S2 T T 17 12 59.3
baz=18,slow=74
H11S3 WAKE ISLAND Hy 34.42 202 P **P** **16 35 37.3 +0.8**
baz=23,slow=4.9,SNR=4.3
H11S3 T T 17 12 59.6
baz=18
OZB Mount Ozzard 34.59 72 P **P** **16 35 38.4 +0.4**
OZB lAmb lAmb 16 35 40.3
comp=Z,80nm,0.6s
KIP Kipapa 34.72 141 P **P** **16 35 40.0 +0.7**
KIP Kipapa 34.72 141 *de*P **P** **16 35 41.0 +1.8**
KIP pmax pmax
comp=Z,693nm,1.7s
KIP Kipapa 34.72 141 P **P** **16 35 41.0 +1.8**
KIP Kipapa 34.72 141 P **P** **16 35 41.0 +1.8**
HON Honolulu 34.82 141 P **P** **16 35 40.8 +0.7**
HON Honolulu 34.82 141 P **P** **16 35 40.8 +0.7**
HON pmax pmax
comp=Z,627nm,1.4s
CLRS Cowichan Lake 35.46 72 P **P** **16 35 46.1 +0.8**
CLRS lAmb lAmb 16 35 47.6
comp=Z,73nm,0.7s
C03A Quillayute Air 35.59 73 P **P** **16 35 46.9 +0.4**
PGC Sidney 35.94 71 P **P** **16 35 49.8 +0.4**
YKA Yellowknife Ar 35.94 46 P **P** **16 35 49.3 +0.1**
comp=Z,160nm,0.6s,baz=283,slow=8.3,SNR=940
YKA PP **PP** **16 37 13.6 +1.6**
comp=Z,17nm,0.8s,baz=279,slow=11,SNR=3.8
YKA PcP **PcP** **16 38 15.0 +0.6**
comp=Z,3.0nm,0.4s,baz=314,slow=1.3,SNR=6.2
YKA S **S** **16 41 20.1 -1.7**
comp=Z,0.7nm,0.6s,baz=85,slow=20,SNR=3.5
YKA ScP **ScP** **16 41 53.3 -0.3**
comp=Z,21nm,0.7s,baz=288,slow=3.5,SNR=37
YKA LR LR 16 52 01.4
comp=Z,4μm,18.5s,baz=282,slow=38
YKA P3KPbc 17 06 25.1
comp=Z,0.4nm,0.7s,baz=68,slow=5.5,SNR=4.1
YKA Yellowknife Ar 35.94 46 *i* P **P** **16 35 49.2 -0.1**
YKA pmax pmax
comp=Z,160nm,0.6s
LLLB Lillooet 36.01 68 P **P** **16 35 50.2 +0.1**
LLLB lAmb lAmb 16 35 53.3
comp=Z,32nm,0.5s
B04A Port Angeles 36.18 72 P **P** **16 35 52.5 +1.0**
B04A lAmb lAmb 16 35 53.5
comp=Z,48nm,0.7s
NLWA Neilton Lookou 36.27 74 P **P** **16 35 53.7 +1.4**
NLWA lAmb lAmb 16 35 55.3
comp=Z,152nm,1.1s
WISH Wishkah 36.46 74 P **P** **16 35 55.2 +1.3**
WISH lAmb lAmb 16 35 57.2
comp=Z,146nm,1.1s
CN2 Changchun 36.49 280 *e*P **P** **16 35 53.8 -0.4**
CN2 *e*PP **PnPn** **16 37 19.4 +0.6**
CN2 *e*S **S** **16 41 29.1 -1.5**
CN2 *es*S sS 16 42 00.3 -0.5
CN2 *e*SS **SnSn** **16 43 57.9 -8.1**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,160nm,5.0s
CN2 LR LR
comp=Z,990nm,16.0s
CN2 LR LR
comp=Z,910nm,16.0s
CN2 LR LR
comp=Z,2μm,18.0s
MHA Mahukona 36.68 139 P **P** **16 35 56.8 +0.8**
MHA Mahukona 36.68 139 P **P** **16 35 56.8 +0.8**
RADR Rader Ridge 36.77 75 P **P** **16 35 57.9 +1.2**
RADR lAmb lAmb 16 35 59.3
comp=Z,124nm,0.8s
E03A Lebam 36.86 75 P **P** **16 35 58.9 +1.6**
JHS Saijyo 36.90 262 P **P** **16 35 59.0 +1.2**
HPAH Hawaii Prepara 36.91 139 P **P** **16 35 58.7 +0.7**
BOD Bodaibo 37.08 306 *e*P **P** **16 35 58.9 -0.1**
BOD pmax pmax
comp=Z,111nm,2.4s
HUH Hualalai 37.16 139 P **P** **16 36 01.0 +0.7**
JCJ Chichijima 37.16 243 P **P** **16 36 00.6 +0.5**
comp=Z,66nm,0.6s,baz=18,slow=20,SNR=5.2
JCJ LR LR 16 48 47.7
comp=Z,878nm,21.8s,baz=103,slow=32
comp=Z,66nm,0.6s
JCJ Chichijima 37.16 243 P **P** **16 36 00.9 +0.9**
POHA Pohakuloa 37.22 139 P **P** **16 36 01.4 +0.5**
POHA Pohakuloa 37.22 139 P **P** **16 36 02.4 +1.6**
POHA Pohakuloa 37.22 139 P **P** **16 36 02.1 +1.3**
POHA x x 16 36 10.5
POHA sP **sP** **16 36 28.6 +2.5**
KHLU Kahalu`u 37.22 140 P **P** **16 36 00.9 +0.2**
HIA Hailar 37.27 291 P **P** **16 35 60.0 -0.8**
HIA PcP **16 38 19.0 +0.3**
HIA Hailar 37.27 291 P **P** **16 36 00.0 -0.8**
HIA 16 38 19.0
HIA pmax pmax
comp=Z,28nm,0.6s
HHU Hamhung 37.34 273 P **P** **16 36 03.0 +1.6**
MLOA Mauna Loa Obse 37.40 139 P **P** **16 36 02.0 -0.6**
F04D Rainier, OR 37.42 75 P **P** **16 36 03.7 +1.7**
baz=300,SNR=28
F04D S **S** **16 41 45.4 +0.8**
baz=300
MWH Moku'aweowe 37.44 139 P **P** **16 36 02.7 -0.3**
D05A Enumclaw 37.49 73 P **P** **16 36 03.9 +1.3**
MLH Mauna Loa 37.51 139 P **P** **16 36 04.0 +0.6**

AIN Ainahou 37.59 139 P **P** **16 36 03.9 -0.1**
SDHHI Sand Hill 37.65 139 P **P** **16 36 04.1 -0.2**
PUH Pauahi 37.69 139 P **P** **16 36 05.2 +0.5**
G03D McMinnville, O 37.70 76 P **P** **16 36 05.9 +1.5**
G03D McMinnville, O 37.70 76 P **P** **16 36 06.4 +2.0**
baz=300,SNR=16
G03D S **S** **16 41 51.8 +2.9**
baz=300
F04A Amboy 37.85 75 P **P** **16 36 06.3 +0.6**
SEHB SEOHWA 37.87 270 P **P** **16 36 06.5 +0.5**
SEHB lAmb lAmb 16 36 38.6
comp=Z,88nm,1.2s
I02E Swisshome, OR 37.92 78 P **P** **16 36 07.7 +1.5**
I02E Swisshome, OR 37.92 78 P **P** **16 36 08.4 +2.1**
baz=302,SNR=5.6
I02E S **S** **16 41 56.0 +3.8**
baz=302
COR Corvallis 38.00 77 P **P** **16 36 08.9 +2.0**
COR Corvallis 38.00 77 P **P** **16 36 08.9 +2.0**
COR pmax pmax
comp=Z,166nm,0.7s
COR Corvallis 38.00 77 P **P** **16 36 09.3 +2.4**
COR pP **pP** **16 36 26.8 +2.0**
LTY Liberty 38.24 72 P **P** **16 36 09.4 +0.3**
LTY lAmb lAmb 16 36 10.3
comp=Z,56nm,0.6s
KEBM Edson Butte 38.28 80 P **P** **16 36 11.2 +1.7**
KEBM lAmb lAmb 16 36 12.5
comp=Z,127nm,1.0s
J01E Myrtle Point 38.37 80 P **P** **16 36 11.7 +1.7**
J01E lAmb lAmb 16 36 36.4
comp=Z,122nm,1.1s
J01E Myrtle Point 38.37 80 P **P** **16 36 12.0 +1.9**
baz=303
J01E S **S** **16 42 03.5 +4.4**
baz=303
H04D Lebanon 38.38 77 P **P** **16 36 11.9 +1.8**
H04D Lebanon 38.38 77 P **P** **16 36 12.2 +2.0**
baz=301,SNR=26
H04D S **S** **16 42 01.5 +2.3**
baz=301
BUCK Buck Mountain 38.40 78 P **P** **16 36 12.5 +2.1**
I03D Drain, OR 38.44 79 P **P** **16 36 12.5 +1.9**
baz=302,SNR=7.3
I03D S **S** **16 42 04.1 +3.9**
baz=302
B08A Colville Reser 38.51 70 P **P** **16 36 11.4 +0.2**
B08A lAmb lAmb 16 36 12.7
comp=Z,90nm,0.7s
KSRS Korea Array 38.58 269 P **P** **16 36 13.8 +2.0**
comp=Z,22nm,0.9s,baz=59,slow=8.2,SNR=113
KSRS PcP **PcP** **16 38 24.2 +1.4**
comp=Z,4.7nm,0.8s,baz=67,slow=3.8,SNR=9.5
KSRS ScP **ScP** **16 42 05.2 +1.3**
comp=Z,1.2nm,0.9s,baz=64,slow=2.5,SNR=4.4
KSRS LR LR 16 51 34.1
comp=Z,262nm,22.0s,baz=55,slow=35
comp=Z,22nm,0.9s
KS19 Wonju Array Si 38.58 269 P **P** **16 36 12.9 +1.0**
KSAR Wonju Array Be 38.61 269 P **P** **16 36 13.1 +1.0**
KSAR Wonju Array Be 38.61 269 P **P** **16 36 13.1 +1.0**
HOOD Mount Hood Mea 38.62 75 P **P** **16 36 13.4 +1.0**
H04A Detroit Lake 38.63 76 P **P** **16 36 13.4 +1.1**
KBO Bosley Butte 38.71 81 P **P** **16 36 14.7 +1.6**
SNY Shenyang 38.72 278 ⇓P **P** **16 36 14.5 +1.6**
SNY S **S** **16 42 09.8 +5.5**
SNY pmax pmax
comp=Z,45nm,1.2s
SNY pmax pmax
comp=Z,140nm,3.5s
SNY LR LR
comp=Z,780nm,15.5s
SNY LR LR
comp=Z,700nm,16.5s
SNY LR LR
comp=Z,2μm,24.5s
K02D Willamette Mer 38.79 80 P **P** **16 36 15.6 +1.9**
baz=303,SNR=13
K02D S **S** **16 42 08.3 +2.7**
baz=303
DBO Dodson Butte 38.82 79 P **P** **16 36 15.7 +1.7**
DBO lAmb lAmb 16 36 23.5
comp=Z,118nm,1.1s
G05D Wamic, OR 38.87 75 P **P** **16 36 16.0 +1.7**
baz=301,SNR=54
G05D S **S** **16 42 08.5 +1.9**
baz=301
KSCHJ Chungju 38.91 269 P **P** **16 36 15.6 +1.0**
KSCHJ lAmb lAmb 16 36 46.9
comp=Z,177nm,1.7s
I04A Tendick Farm, 38.96 78 P **P** **16 36 16.9 +1.8**
baz=302
I04A S **S** **16 42 10.1 +1.9**
baz=302
SUJ Sinuiju 39.13 275 P **P** **16 36 17.9 +1.5**
SUJ pP **pP** **16 36 34.6 +0.1**
SUJ S **S** **16 42 12.0 +1.5**
SUJ AmB
comp=Z,658nm,3.0s
SUJ AMS AMS
comp=N,623nm,2.8s
SUJ AMS AMS
comp=E,1μm,5.9s
SUJ AMS AMS
comp=Z,1μm,5.2s
KSXB Camp Six Broad 39.14 81 P **P** **16 36 18.3 +1.7**
KSXB lAmb lAmb 16 36 19.3
comp=Z,53nm,0.6s
L02F Cave Junction 39.17 81 P **P** **16 36 18.7 +2.0**
baz=304,SNR=17
L02F S **S** **16 42 14.1 +3.0**
baz=304
KSBUS Busan 39.23 266 P **P** **16 36 18.4 +1.1**
KSBUS lAmb lAmb 16 36 48.5
comp=Z,172nm,1.7s
HUMO Hull Mountain 39.27 80 P **P** **16 36 18.2 +0.5**
HUMO lAmb lAmb 16 36 40.8
comp=Z,215nm,1.9s
I05D Terrebonne, OR 39.33 76 P **P** **16 36 19.8 +1.6**
baz=302,SNR=40
I05D S **S** **16 42 15.4 +1.8**
baz=302
HAWA Hanford 39.35 73 P **P** **16 36 18.9 +0.6**
INCN Inchon 39.37 270 P **P** **16 36 19.5 +1.0**
INCN lAmb lAmb 16 36 41.6
comp=Z,85nm,0.8s
INCN Inchon 39.37 270 P **P** **16 36 19.5 +1.0**
INCN pmax pmax
comp=Z,85nm,0.9s
INCN Inchon 39.37 270 P **P** **16 36 18.1 -0.4**
INCN Inchon 39.37 270 P **P** **16 36 20.3 +1.8**
comp=Z,128nm,1.0s
INCN Inchon 39.37 270 P **P** **16 36 20.2 +1.8**
INCN pP **pP** **16 36 36.9 +0.3**
F07A Phinny Hill Vi 39.37 74 P **P** **16 36 19.2 +0.8**
D08A Wollman Farm, 39.38 71 P **P** **16 36 18.6 +0.1**
D08A lAmb lAmb 16 36 19.4
comp=Z,66nm,0.6s
C09A Chrisman Ranch 39.40 70 P **P** **16 36 18.5 -0.1**
C09A lAmb lAmb 16 36 19.8
comp=Z,86nm,0.7s
J04D Umpqua Nationa 39.45 78 P **P** **16 36 20.7 +1.4**
J04D Umpqua Nationa 39.45 78 P **P** **16 36 21.3 +1.9**
baz=303,SNR=46
J04D S **S** **16 42 19.1 +3.4**
baz=303
CIT Chita 39.57 298 *e*P **P** **16 36 21.1 +1.1**
CIT *e* 16 36 37.3
CIT *e* 16 36 50.6
CIT *e* 16 38 22.2
CIT *e* 16 42 08.5
CIT pmax pmax
comp=Z,216nm,3.1s
E08A Dider Farm, El 39.58 72 P **P** **16 36 20.3 +0.1**
E08A lAmb lAmb 16 36 21.4
comp=Z,69nm,0.8s
HJU Haeju 39.59 272 P **P** **16 36 22.0 +1.7**
HJU pP **pP** **16 36 38.6 +0.2**
HJU S **S** **16 42 19.0 +1.5**
HJU AmB
comp=Z,200nm,0.7s
HJU AMS AMS
comp=N,1μm,7.4s
HJU AMS AMS
comp=E,1μm,7.4s

HJU AMS AMS
comp=Z,1μm,7.4s
TJN Taejon 39.60 268 P **P** **16 36 21.8 +1.4**
TJN Taejon 39.60 268 P **P** **16 36 21.8 +1.4**
TJN pmax pmax
comp=Z,314nm,1.0s
TJN Taejon 39.60 268 P **P** **16 36 22.3 +1.9**
JCC Jacoby Creek, 39.62 83 P **P** **16 36 22.1 +1.7**
JCC lAmb lAmb 16 36 26.1
comp=Z,84nm,1.0s
KHMM Horse Mountain 39.77 82 P **P** **16 36 23.8 +1.8**
KHMM lAmb lAmb 16 36 31.0
comp=Z,96nm,0.8s
KMPM Mount Pierce 39.80 83 P **P** **16 36 23.8 +1.7**
NEW Newport 39.84 69 P **P** **16 36 22.3 -0.1**
comp=Z,109nm,0.7s,baz=288,slow=14,SNR=236
NEW ScP **ScP** **16 42 08.8 +0.1**
comp=Z,6.3nm,0.7s,baz=277,slow=3.6,SNR=6.3
NEW LR LR 16 50 14.7
comp=Z,1μm,22.0s,baz=302,slow=32
comp=Z,109nm,0.7s
NEW Newport 39.84 69 P **P** **16 36 22.3 -0.1**
NEW lAmb lAmb 16 36 23.4
comp=Z,115nm,0.8s
NEW Newport 39.84 69 P **P** **16 36 22.3 -0.1**
NEW pmax pmax
comp=Z,115nm,0.8s
NEW Newport 39.84 69 P **P** **16 36 22.5 +0.1**
baz=299,SNR=144
NEW S **S** **16 42 18.2 -3.0**
baz=299
PINE Pine Mountain 39.86 77 P **P** **16 36 24.1 +1.4**
PINE lAmb lAmb 16 36 45.8
comp=Z,122nm,1.1s
L04D Klamath Falls 39.89 80 P **P** **16 36 24.1 +1.1**
L04D Klamath Falls 39.89 80 P **P** **16 36 24.8 +1.9**
baz=304,SNR=30
L04D S **S** **16 42 24.4 +2.2**
baz=304
YBH Yreka Blue Hor 39.91 81 LR LR 16 49 43.9
comp=Z,900nm,21.3s,baz=308,slow=31
YBH Yreka Blue Hor 39.91 81 P **P** **16 36 24.9 +1.8**
YBH lAmb lAmb 16 36 26.4
comp=Z,61nm,0.9s
YBH Yreka Blue Hor 39.91 81 P **P** **16 36 24.9 +1.8**
YBH pmax pmax
comp=Z,61nm,0.9s
J05D Fort Rock, OR 39.96 78 P **P** **16 36 25.7 +2.2**
baz=303,SNR=53
J05D S **S** **16 42 24.0 +0.7**
baz=303
K04D Chiloquin, OR 40.01 79 P **P** **16 36 25.7 +1.8**
baz=304
K04D S **S** **16 42 25.7 +1.8**
baz=304
RES Resolute Bay 40.10 24 LR LR 16 54 16.0
comp=Z,827nm,21.9s,baz=284,slow=38
RES Resolute Bay 40.10 24 P **P** **16 36 24.5 +0.4**
RES lAmb lAmb 16 36 26.0
comp=Z,49nm,0.8s
RES Resolute Bay 40.10 24 P **P** **16 36 24.5 +0.4**
RES pmax pmax
comp=Z,49nm,0.8s
E09A Wood Farm, Sta 40.12 72 P **P** **16 36 24.4 -0.2**
E09A lAmb lAmb 16 36 26.2
comp=Z,203nm,1.5s
KMRM Mail Ridge 40.16 83 P **P** **16 36 27.4 +2.3**
KMRM lAmb lAmb 16 36 31.4
comp=Z,96nm,0.8s
NAWB Namwon 40.19 267 P **P** **16 36 26.3 +1.0**
G08A Pilot Rock 40.26 74 P **P** **16 36 26.4 +0.4**
K05A Summer Lake 40.48 78 P **P** **16 36 29.6 +1.8**
EUNU Eureka 40.49 15 P **P** **16 36 27.6 +0.3**
EUNU lAmb lAmb 16 36 49.6
comp=Z,160nm,1.8s
KCPM Cahto Peak 40.56 84 P **P** **16 36 30.1 +1.6**
I07A Izee 40.58 76 P **P** **16 36 29.7 +1.1**
I07A lAmb lAmb 16 36 31.0
comp=Z,121nm,0.8s
JSU Suzuyama 40.90 260 P **P** **16 36 32.3 +1.1**
JSU lAmb lAmb 16 36 34.0
comp=Z,112nm,1.0s
HOPS Hopland Field 41.29 84 P **P** **16 36 35.7 +1.4**
HOPS lAmb lAmb 16 36 40.5
comp=Z,109nm,1.2s
MOD Modoc Plateau 41.30 79 P **P** **16 36 35.6 +1.0**
MOD lAmb lAmb 16 36 43.5
comp=Z,163nm,1.2s
WALA Waterton Lakes 41.31 66 P **P** **16 36 34.1 -0.4**
WALA lAmb lAmb 16 36 35.6
comp=Z,113nm,0.9s
BMO Blue Mountains 41.49 73 P **P** **16 36 36.6 +0.6**
BMO lAmb lAmb 16 36 37.9
comp=Z,98nm,0.8s
BMO Blue Mountains 41.49 73 P **P** **16 36 36.6 +0.6**
BMO pmax pmax
comp=Z,98nm,0.9s
J08A Circle Bar Ran 41.60 76 P **P** **16 36 37.8 +0.8**
J08A lAmb lAmb 16 36 39.3
comp=Z,98nm,1.0s
DL2 Dalian 41.62 276 P **P** **16 36 37.9 +0.9**
DL2 pP **pP** **16 36 54.8 -0.5**
DL2 S **S** **16 42 47.3 -0.4**
DL2 pmax pmax
comp=Z,31nm,1.0s
DL2 LR LR
comp=Z,460nm,13.0s
DL2 LR LR
comp=Z,600nm,11.9s
DL2 LR LR
comp=Z,1μm,34.9s
ORV Oroville 41.93 83 P **P** **16 36 40.1 +0.5**
ORV Oroville 41.93 83 P **P** **16 36 40.1 +0.5**
ORV pmax pmax
comp=Z,40nm,0.8s
WVOR Wild Horse Val 42.02 77 P **P** **16 36 41.5 +1.1**
WVOR lAmb lAmb 16 36 42.8
comp=Z,116nm,0.8s
WVOR Wild Horse Val 42.02 77 P **P** **16 36 41.5 +1.1**
WVOR pmax pmax
comp=Z,116nm,0.9s
PLID Pearl Lake 42.14 72 P **P** **16 36 41.0 -0.5**
XLT XiLinHaoTe 42.15 286 ⇓*i*P **P** **16 36 43.3 +1.9**
XLT pP pP 16 36 58.3 -1.4
XLT sP sP 16 37 05.8 -2.5
XLT PcP **PcP** **16 38 35.4 +1.0**
XLT ScP **ScP** **16 42 16.3 -1.7**
XLT PcS **PcS** **16 42 23.8 -2.5**
XLT S **S** **16 42 56.6 +1.0**
XLT sS sS 16 43 24.8 -1.5
XLT pmax pmax
comp=Z,57nm,0.9s
XLT pmax pmax
comp=Z,480nm,3.7s
XLT LR LR
comp=Z,1μm,17.3s
XLT LR LR
comp=Z,2μm,19.4s
MSO Missoula 42.43 69 P **P** **16 36 43.1 -0.5**
MSO lAmb lAmb 16 36 44.6
comp=Z,70nm,0.8s
MSO Missoula 42.43 69 P **P** **16 36 43.6 -0.1**
baz=302,SNR=67
MSO S **S** **16 42 57.6 -2.1**
baz=302
BEKR Beckworth 42.45 81 P **P** **16 36 44.7 +0.7**
PLTX Planet X, Gerl 42.51 80 P **P** **16 36 45.6 +1.3**
PLTX lAmb lAmb 16 36 53.5
comp=Z,459nm,1.5s
ALE Alert 42.72 10 P **P** **16 36 46.4 +0.9**
ALE pP **pP** **16 37 03.0 -0.7**
ALE ScP **ScP** **16 42 19.4 -0.2**
MPK Martis Peak 42.99 82 P **P** **16 36 49.6 +1.1**
MPK lAmb lAmb 16 36 51.5
comp=Z,121nm,0.9s
EMB Emerald Bay 43.14 82 P **P** **16 36 50.6 +0.9**
EMB lAmb lAmb 16 36 54.2
comp=Z,96nm,0.8s
PAHR Pah Rah Range 43.15 81 P **P** **16 36 50.5 +0.9**
PAHR lAmb lAmb 16 36 51.9
comp=Z,97nm,0.7s
MFID Camas Ranch 43.17 74 P **P** **16 36 50.0 +0.3**
MFID lAmb lAmb 16 36 51.5
comp=Z,78nm,0.9s
VCNR Virginia City 43.23 82 P **P** **16 36 51.4 +1.0**

VCNR IAmb IAmb 16 36 53.0
comp=Z,89nm,0.8s
PNTR Pine Nut 43.39 82 P **P** **16 36 52.9 +1.2**
CMB Columbia Colle 43.54 84 P **P** **16 36 53.5 +0.8**
CMB Columbia Colle 43.54 84 P **P** **16 36 53.5 +0.8**
CMB pmax pmax
comp=Z,38nm,0.9s
SAO San Andreas Ge 43.67 86 P **P** **16 36 53.9 +0.2**
SAO San Andreas Ge 43.67 86 P **P** **16 36 53.9 +0.2**
SAO pmax pmax
comp=Z,32nm,0.9s
YERR Yerington 43.67 82 P **P** **16 36 54.4 +0.5**
YERR IAmb IAmb 16 36 56.3
comp=Z,80nm,0.8s
NRIK Noril'sk 43.80 329 P **P** **16 36 54.6 +0.4**
comp=Z,7.8nm,0.7s,baz=59,slow=5.9,SNR=12
NRIK PcP **PcP** **16 38 40.3 +0.9**
comp=Z,10nm,0.6s,baz=67,slow=4.1,SNR=6.6
NRIK ScP **ScP** **16 42 24.4 +0.4**
comp=Z,11nm,0.9s,baz=70,slow=4.6,SNR=6.2
NRIK LR LR 16 56 15.3
comp=Z,517nm,18.3s,baz=78,slow=37
comp=Z,7.8nm,0.7s
NRIK Noril'sk 43.80 329 *ce*P **P** **16 36 55.5 +1.3**
NRIK pmax pmax
comp=Z,10.0nm,0.9s
HLID Hailey 43.94 73 P **P** **16 36 56.3 +0.4**
HLID IAmb IAmb 16 36 57.9
comp=Z,133nm,0.8s
HLID Hailey 43.94 73 P **P** **16 36 56.7 +0.8**
baz=304,SNR=274
HLID S **S** **16 43 20.7 -1.2**
baz=304
BBGB Big Mountain B 44.04 86 P **P** **16 36 57.7 +0.9**
BBGB IAmb IAmb 16 37 08.1
comp=Z,118nm,0.9s
BMN Battle Mountai 44.05 79 P **P** **16 36 57.6 +0.8**
BMN IAmb IAmb 16 36 59.1
comp=Z,104nm,0.6s
BMN Battle Mountai 44.05 79 P **P** **16 36 57.7 +0.8**
BMN pmax pmax
comp=Z,104nm,0.6s
BCYI Bear Canyon 44.12 72 P **P** **16 36 57.6 +0.2**
EGMT Eagleton 44.21 65 P **P** **16 36 57.0 -0.9**
EGMT IAmb IAmb 16 36 59.6
comp=Z,92nm,0.8s
EGMT Eagleton 44.21 65 P **P** **16 36 57.3 -0.7**
baz=302,SNR=79
EGMT S **S** **16 43 23.4 -2.2**
baz=302
BJI Beijing 44.32 281 P **P** **16 36 59.5 +0.7**
BJI sP **sP** **16 37 22.3 -3.5**
BJI PcP **PcP** **16 38 42.3 +0.7**
BJI PP **PP** **16 38 45.3 +2.2**
BJI S **S** **16 43 26.8 -0.3**
BJI sS **sS** **16 43 55.4 -2.6**
BJI SS **SS** **16 46 38.0 -10**
BJI pmax pmax
comp=Z,24nm,1.1s
BJI pmax pmax
comp=Z,160nm,4.9s
BJI LR LR
comp=Z,180nm,20.2s
BJI LR LR
comp=Z,660nm,21.6s
BJI LR LR
comp=Z,2µm,20.0s
RYN Ryan 44.33 82 P **P** **16 36 59.9 +0.7**
RYN IAmb IAmb 16 37 01.8
comp=Z,96nm,0.8s
BJT Baijiatuau 44.34 281 P **P** **16 36 59.1 +0.3**
BJT Baijiatuau 44.34 281 P **P** **16 36 59.2 +0.3**
BJT pmax pmax
comp=Z,50nm,1.2s
KVN Kaiserville 44.34 81 P **P** **16 36 60.0 +0.8**
KVN IAmb IAmb 16 37 01.4
comp=Z,58nm,0.7s
KVN Kaiserville 44.34 81 P **P** **16 37 00.0 +0.8**
KVN pmax pmax
comp=Z,58nm,0.7s
PMPB Monarch Peak 44.42 86 P **P** **16 37 00.3 +0.6**
PMPB IAmb IAmb 16 37 07.2
comp=Z,73nm,0.7s
BOZ Bozeman (W) 44.45 69 P **P** **16 36 59.7 -0.2**
BOZ IAmb IAmb 16 37 00.9
comp=Z,79nm,0.8s
BOZ Bozeman (W) 44.45 69 P **P** **16 36 59.7 -0.2**
BOZ pmax pmax
comp=Z,79nm,0.8s
BOZ Bozeman (W) 44.45 69 P **P** **16 36 60.0 0.0**
baz=303,SNR=175
BOZ S **S** **16 43 26.4 -2.9**
baz=303
IRK Irkutsk 44.50 302 *e*P **pP** **16 37 17.3 -1.0**
IRK pmax pmax
comp=Z,100nm,3.0s
LHV Little Huntoon 44.58 82 P **P** **16 37 01.8 +1.0**
LHV IAmb IAmb 16 37 03.9
comp=Z,84nm,1.0s
NVAR Mina Array Bea 44.59 82 P **P** **16 37 02.4 +1.1**
comp=Z,80nm,0.7s,baz=293,slow=7.2,SNR=562
NVAR pP **pP** **16 37 21.0 +1.5**
comp=Z,18nm,0.8s,baz=278,slow=5.5,SNR=2.3
NVAR ScP **ScP** **16 42 28.6 +0.4**
comp=Z,3.0nm,0.7s,baz=270,slow=5.0,SNR=7.9
NVAR S **S** **16 43 35.2 +3.6**
comp=Z,0.2nm,0.6s,baz=137,slow=33,SNR=1.7
NVAR LR LR 16 52 20.1
comp=Z,395nm,19.9s,baz=308,slow=31
comp=Z,80nm,0.7s
NVAR Mina Array Bea 44.59 82 P **P** **16 37 01.9 +0.7**
MDPB Devils Postpil 44.60 83 P **P** **16 37 02.3 +0.9**
MDPB IAmb IAmb 16 37 06.9
comp=Z,97nm,0.9s
OMMB Old Mammoth Mi 44.66 83 P **P** **16 37 02.8 +0.8**
NV11 Mina Array Sit 44.68 82 P **P** **16 37 02.6 +0.7**
NV11 IAmb IAmb 16 37 04.2
comp=Z,61nm,0.8s
MLAC Mammoth, Mammo 44.76 83 P **P** **16 37 04.5 +1.9**
baz=308,SNR=19
MLAC S **S** **16 43 35.5 +1.4**
baz=308
Q09A Carvers 45.04 80 P **P** **16 37 06.1 +1.3**
ELK Elko 45.07 77 LR LR 16 53 49.6
comp=Z,858nm,20.7s,baz=324,slow=33
ELK Elko 45.07 77 P **P** **16 37 05.9 +0.8**
ELK IAmb IAmb 16 37 07.4
comp=Z,98nm,0.8s
ELK Elko 45.07 77 P **P** **16 37 05.9 +0.8**
ELK pmax pmax
comp=Z,98nm,0.8s
PAGB Antelope Grade 45.07 86 P **P** **16 37 05.8 +1.0**
PAGB IAmb IAmb 16 37 11.1
comp=Z,108nm,0.7s
YHL Hebgen Lake 45.12 70 P **P** **16 37 05.3 -0.2**
YHL IAmb IAmb 16 37 06.9
comp=Z,143nm,1.1s
TULEG Thule 45.23 18 P **P** **16 37 05.6 +0.1**
TULEG IAmb IAmb 16 37 06.7
comp=Z,52nm,0.7s
TULEG Thule 45.23 18 *i* P **P** **16 37 02.0 -3.5**
TULEG IAmb IAmb 16 37 06.3
comp=Z,234nm,1.7s
VOG Valley Oaks Go 45.24 85 P **P** **16 37 07.0 +0.9**
baz=309,SNR=7.9
VOG S **S** **16 43 42.7 +2.2**
baz=309
ULN Ulaanbaatar 45.27 295 P **P** **16 37 07.4 +1.0**
ULN Ulaanbaatar 45.27 295 *ce*P **P** **16 37 08.3 +1.8**
ULN pmax pmax
comp=Z,19nm,1.3s
ULN Ulaanbaatar 45.27 295 P **P** **16 37 08.2 +1.8**
ULN P **P** **16 37 08.2 +1.8**
ULN Ulaanbaatar 45.27 295 P **P** **16 37 08.2 +1.7**
ULN pP **pP** **16 37 24.9 0.0**
ULN sP **sP** **16 37 32.8 -0.7**
ULN ScP **ScP** **16 42 31.4 +0.6**
YMR Madison River 45.36 70 P **P** **16 37 07.2 -0.1**
YMR IAmb IAmb 16 37 08.7
comp=Z,114nm,1.0s
TPH Tonopah 45.48 81 P **P** **16 37 08.9 +0.6**
TPH Tonopah 45.48 81 P **P** **16 37 08.9 +0.6**
TPH pmax pmax
comp=Z,519nm,0.8s
TIN Tinemaha, Big 45.49 83 P **P** **16 37 09.9 +1.6**
baz=309,SNR=18
TIN S **S** **16 43 47.6 +3.2**
baz=309
YNR Norris Junctio 45.50 70 P **P** **16 37 08.5 +0.1**
YNR IAmb IAmb 16 37 10.3
comp=Z,97nm,1.1s
SMMC Simmler 45.50 86 P **P** **16 37 09.8 +1.5**
baz=310
SMMC S **S** **16 43 47.8 +3.3**
baz=310
JOW Kunigami 45.55 257 P **P** **16 37 08.9 +0.2**
JOW IAmb IAmb 16 37 10.9
comp=Z,131nm,1.1s
JOW Kunigami 45.55 257 P **P** **16 37 10.2 +1.5**
YUF Upper Falls 45.60 70 P **P** **16 37 09.1 -0.1**
YUF IAmb IAmb 16 37 15.9
comp=Z,78nm,1.1s
SONM Songino Array 45.66 296 P **P** **16 37 11.4 +1.9**
comp=Z,14nm,0.9s,baz=58,slow=7.7,SNR=47
SONM pP **pP** **16 37 27.9 -0.1**
comp=Z,30nm,0.8s,baz=61,slow=7.3,SNR=15
SONM PcP **PcP** **16 38 47.2 +0.8**
comp=Z,13nm,0.6s,baz=51,slow=3.0,SNR=5.7
SONM pPcP 16 39 04.9
comp=Z,8.4nm,0.6s,baz=79,slow=1.8,SNR=3.2
SONM ScP **ScP** **16 42 32.5 +0.2**
comp=Z,6.1nm,0.8s,baz=52,slow=3.3,SNR=8.9
SONM S **S** **16 43 48.0 +1.4**
comp=Z,0.5nm,0.4s,baz=82,slow=40,SNR=1.8
SONM ScS **ScS** **16 46 56.1 -1.9**
comp=Z,0.2nm,0.4s,baz=31,slow=46,SNR=1.9
SONM LR LR 16 57 18.1
comp=Z,1µm,19.3s,baz=58,slow=37
comp=Z,14nm,0.9s
SONM Songino Array 45.66 296 P **P** **16 37 10.3 +0.8**
YPP Pitchstone Pla 45.68 70 P **P** **16 37 10.2 +0.3**
VES Vestal, Richgr 45.73 85 P **P** **16 37 10.7 +0.7**
baz=310,SNR=56
VES S **S** **16 43 49.2 +1.6**
baz=310
H17A Grant Village 45.74 70 P **P** **16 37 11.3 +0.9**
H17A IAmb IAmb 16 37 13.2
comp=Z,170nm,1.2s
H17A Grant Village 45.74 70 P **P** **16 37 11.7 +1.4**
baz=305
LCH Last Change Ra 45.74 83 P **P** **16 37 10.7 +0.4**
LCH IAmb IAmb 16 37 12.6
comp=Z,58nm,0.7s
LKWY Lake 45.75 70 P **P** **16 37 10.9 +0.5**
LKWY IAmb IAmb 16 37 13.0
comp=Z,100nm,1.3s
LKWY Lake 45.75 70 P **P** **16 37 10.9 +0.5**
LKWY pmax pmax
comp=Z,100nm,1.3s
IMW Indian Meadow 45.81 71 P **P** **16 37 11.2 +0.2**
FLWY Flagg Ranch 45.85 70 P **P** **16 37 11.5 +0.4**
FLWY IAmb IAmb 16 37 13.1
comp=Z,143nm,1.2s
PKM Mcpherson Peak 45.89 87 P **P** **16 37 12.8 +1.3**
baz=310,SNR=18
PKM S **S** **16 43 52.8 +2.5**
baz=310
FXWY Fox Creek 45.91 71 P **P** **16 37 11.8 +0.1**
HVU Hansel Valley 45.95 74 P **P** **16 37 12.5 +0.6**
HVU Hansel Valley 45.95 74 P **P** **16 37 12.5 +0.6**
HVU pmax pmax
comp=Z,180nm,0.7s
CWC Cottonwood Cre 45.97 84 P **P** **16 37 13.0 +0.9**
baz=309
CWC S **S** **16 43 53.7 +2.3**
baz=309
ZAK Zakamensk 46.00 300 *e*P **P** **16 37 13.5 +1.4**
ZAK pmax pmax
comp=Z,49nm,1.8s
MOOW Moose Ponds 46.01 71 P **P** **16 37 12.5 +0.1**
TPAW Teton Pass 46.04 71 P **P** **16 37 12.0 -0.7**
ECR Eagle Creek 46.04 72 P **P** **16 37 12.8 +0.1**
GRAC Grapevine Rang 46.06 83 P **P** **16 37 13.4 +0.7**
GRAC IAmb IAmb 16 37 17.6
comp=Z,66nm,0.8s
GRAC Grapevine Rang 46.06 83 P **P** **16 37 14.4 +1.7**
baz=309,SNR=31
GRAC S **S** **16 43 54.1 +1.6**
baz=309
RLMT Red Lodge 46.09 68 P **P** **16 37 13.1 0.0**
RLMT IAmb IAmb 16 37 14.6
comp=Z,64nm,0.8s
RLMT Red Lodge 46.09 68 P **P** **16 37 13.4 +0.4**
baz=305,SNR=100
RLMT S **S** **16 43 51.6 -1.5**
baz=305
TIA Tai'an 46.10 276 ⇓P **P** **16 37 13.9 +1.0**
TIA pP **pP** **16 37 31.1 -0.4**
TIA sP **sP** **16 37 40.1 0.0**
TIA S **S** **16 43 51.3 -1.7**
TIA sS **sS** **16 44 26.3 +2.3**
TIA pmax pmax
comp=Z,38nm,0.8s
TIA pmax pmax
comp=Z,130nm,3.8s
TIA LR LR
comp=Z,360nm,19.4s
TIA LR LR
comp=Z,660nm,15.7s
TIA LR LR
comp=Z,500nm,16.3s
BCW Bitter Crk WRg 46.11 86 P **P** **16 37 13.9 +0.8**
BCW IAmb IAmb 16 37 20.1
comp=Z,78nm,0.7s
SNOW Snow King Moun 46.17 71 P **P** **16 37 13.8 +0.1**
REDW Red Top Meadow 46.17 71 P **P** **16 37 13.9 +0.2**
LOHW Long Hollow 46.17 71 P **P** **16 37 13.8 +0.1**
ISA Isabella, Lake 46.23 85 P **P** **16 37 13.8 -0.2**
ISA Isabella, Lake 46.23 85 P **P** **16 37 13.8 -0.2**
ISA pmax pmax
comp=Z,32nm,0.9s
ISA Isabella, Lake 46.23 85 P **P** **16 37 14.4 +0.4**
baz=310,SNR=33
ISA S **S** **16 43 52.8 -2.1**
baz=310
BGU Big Grassy Mou 46.31 75 P **P** **16 37 15.4 +0.7**
BGU IAmb IAmb 16 37 16.8
comp=Z,62nm,0.8s
R11A Troy Canyon, C 46.32 80 P **P** **16 37 15.3 +0.4**
R11A IAmb IAmb 16 37 16.7
comp=Z,75nm,0.7s
R11A Troy Canyon, C 46.32 80 P **P** **16 37 15.7 +0.8**
baz=308,SNR=239
R11A S **S** **16 43 56.0 -0.4**
baz=308
ARVC Arvin 46.35 86 P **P** **16 37 15.1 +0.2**
baz=310,SNR=9.4
ARVC S **S** **16 43 57.1 +0.6**
baz=310
AHID Auburn Hatcher 46.38 72 P **P** **16 37 15.5 +0.2**
AHID IAmb IAmb 16 37 17.1
comp=Z,71nm,0.9s
MOY Mondy 46.53 303 *e*P **P** **16 37 17.4 +1.1**
MOY pmax pmax
comp=Z,87nm,3.0s
SCZ2 Santa Cruz Isl 46.58 87 P **P** **16 37 18.0 +1.2**
baz=311
SCZ2 S **S** **16 44 01.0 +1.0**
baz=311
MPMC Manual Prospec 46.59 84 P **P** **16 37 17.8 +0.8**
baz=310,SNR=73
MPMC S **S** **16 44 01.5 +1.2**
baz=310
HHC Hu-ho-hao-te 46.64 285 *e*P **P** **16 37 19.6 +2.3**
HHC pP pP 16 37 35.3 -0.5
HHC S **S** **16 44 04.0 +3.1**
HHC sS sS 16 44 32.5 +0.5
HHC pmax pmax
comp=Z,63nm,1.0s
HHC pmax pmax
comp=Z,680nm,5.0s
HHC LR LR
comp=Z,800nm,15.7s
HHC LR LR
comp=Z,1µm,18.6s
HHC LR LR
comp=Z,2µm,20.6s
S11A Rachel 46.66 81 P **P** **16 37 18.1 +0.6**
S11A IAmb IAmb 16 37 39.1
comp=Z,115nm,0.8s
FCC Fort Churchill 46.66 46 P **P** **16 37 16.5 -0.5**
FCC IAmb IAmb 16 37 17.7
comp=Z,78nm,0.8s
FCC Fort Churchill 46.66 46 P **P** **16 37 16.5 -0.5**
FCC pmax pmax
comp=Z,78nm,0.9s
SPR3 Spring Creek 3 46.69 78 P **P** **16 37 18.9 +1.0**
SPR3 IAmb IAmb 16 37 20.4
comp=Z,63nm,0.6s
FURC Furnace Creek, 46.71 83 P **P** **16 37 18.8 +1.2**
baz=310,SNR=124
FURC S **S** **16 44 01.2 -0.5**
baz=310
OSI Osito Audit: C 46.75 86 P **P** **16 37 19.1 +1.0**
baz=311,SNR=11
OSI S **S** **16 44 03.9 +1.5**
baz=311
HWUT Hardware Ranch 46.78 74 P **P** **16 37 19.0 +0.5**
HWUT IAmb IAmb 16 37 20.4
comp=Z,66nm,0.8s
TPNV Topopah Spring 46.79 82 P **P** **16 37 19.1 +0.6**
TPNV Topopah Spring 46.79 82 P **P** **16 37 19.1 +0.6**
TPNV pmax pmax
comp=Z,223nm,0.8s
TPNV Topopah Spring 46.79 82 P **P** **16 37 19.5 +1.0**
baz=309,SNR=412
TPNV S **S** **16 44 04.7 +1.6**
baz=309
LRMC Laurel Mtn Rad 46.84 84 P **P** **16 37 19.3 +0.4**
baz=310,SNR=48
LRMC S **S** **16 44 03.5 -0.3**
baz=310
CCAC Calif City Air 46.84 85 P **P** **16 37 18.6 -0.2**
HNS HongShan 46.85 279 ⇓P **P** **16 37 20.4 +1.7**
HNS pP **pP** **16 37 38.9 +1.6**
HNS S **S** **16 44 03.9 +0.4**
HNS sS **sS** **16 44 38.1 +3.4**
HNS pmax pmax
comp=Z,53nm,1.0s
HNS LR LR
comp=Z,590nm,13.8s
HNS LR LR
comp=Z,310nm,13.1s
HNS LR LR
comp=Z,480nm,16.7s
DUG Dugway, Tooele 46.88 76 P **P** **16 37 20.1 +1.0**
DUG Dugway, Tooele 46.88 76 P **P** **16 37 20.2 +1.0**
DUG pmax pmax
comp=Z,189nm,0.8s
DUG Dugway, Tooele 46.88 76 P **P** **16 37 20.4 +1.2**
baz=307,SNR=329
DUG S **S** **16 44 03.9 -0.4**
baz=307
NOR Nord 46.90 3 *i* P **P** **16 37 18.5 -0.1**
NOR IAmb IAmb 16 37 41.4
comp=Z,515nm,2.6s
SSE Sheshan 46.94 268 P **P** **16 37 21.1 +1.6**
SSE S **S** **16 44 06.1 +1.1**
SSE pmax pmax
comp=Z,38nm,1.3s
SSE pmax pmax
comp=Z,200nm,3.5s
SSE LR LR
comp=Z,260nm,18.5s
SSE LR LR
comp=Z,130nm,24.0s
GUMO Guam 46.95 229 LR LR 16 56 09.3
comp=Z,470nm,19.7s,baz=58,slow=35
LAO LASA Array 46.95 65 P **P** **16 37 19.2 -0.3**
LAO IAmb IAmb 16 37 20.2
comp=Z,60nm,0.7s
LAO LASA Array 46.95 65 P **P** **16 37 19.7 +0.2**
baz=305,SNR=41
LAO LASA Array 46.95 65 P **P** **16 37 19.7 +0.2**
baz=304,SNR=41
LAO S **S** **16 44 01.6 -3.4**
baz=304
GWY Greenwater Val 47.01 83 P **P** **16 37 20.4 +0.1**
GWY IAmb IAmb 16 37 25.0
comp=Z,74nm,0.8s
EDW2 Edwards Air Fo 47.03 85 P **P** **16 37 20.9 +0.6**
baz=311,SNR=48
EDW2 S **S** **16 44 05.7 -0.7**
baz=311
QSM Queen of Sheba 47.03 83 P **P** **16 37 20.5 +0.3**
QSM IAmb IAmb 16 37 23.8
comp=Z,57nm,0.8s
DGMT Dagmar 47.09 62 P **P** **16 37 19.5 -1.0**
DGMT IAmb IAmb 16 38 53.0
comp=Z,77nm,0.8s
DGMT Dagmar 47.09 62 P **P** **16 37 19.9 -0.6**
baz=304,SNR=6.1
DGMT Dagmar 47.09 62 P **P** **16 37 19.9 -0.6**
baz=304,SNR=6.1
DGMT S **S** **16 44 04.2 -2.6**
baz=304
SNCC San Nicolas Is 47.15 88 P **P** **16 37 21.8 +0.6**
baz=312
TCUT Toone Canyon 47.17 74 P **P** **16 37 22.1 +0.5**
CTU Camp Tracy 47.22 75 P **P** **16 37 22.3 +0.4**
CTU IAmb IAmb 16 37 23.6
comp=Z,87nm,0.7s
DECC Green Verdugo 47.23 86 P **P** **16 37 22.4 +0.6**
baz=311
DECC S **S** **16 44 09.3 +0.1**
baz=311
PRN Pahroc Range 47.24 81 P **P** **16 37 22.8 +0.8**
PSUT Pine Spring 47.27 79 P **P** **16 37 22.7 +0.4**
PSUT IAmb IAmb 16 37 27.9
comp=Z,89nm,0.6s
BW06 Boulder Array 47.29 71 P **P** **16 37 22.4 -0.1**
BW06 IAmb IAmb 16 37 23.9
comp=Z,179nm,1.2s
BW06 Boulder Array 47.29 71 P **P** **16 37 22.8 +0.3**
baz=306,SNR=192
BW06 S **S** **16 44 08.7 -1.6**
baz=306
PD31 Pinedale Array 47.29 71 P **P** **16 37 22.4 0.0**
PD31 IAmb IAmb 16 37 23.9
comp=Z,159nm,1.2s
PDAR Pinedale Array 47.29 71 P **P** **16 37 22.6 +0.1**
comp=Z,100nm,0.8s,baz=314,slow=3.4,SNR=420
PDAR ScP **ScP** **16 42 39.5 +0.2**
comp=Z,2.4nm,0.5s,baz=22,slow=1.2,SNR=11
PDAR LR LR 16 55 32.8
comp=Z,801nm,21.5s,baz=314,slow=34
comp=Z,100nm,0.8s
PDAR Pinedale Array 47.29 71 P **P** **16 37 22.4 0.0**
PASC Pasadena Art C 47.37 86 P **P** **16 37 23.3 +0.3**
SHOC Shoshone, Teco 47.44 83 P **P** **16 37 24.5 +1.1**
baz=310,SNR=86
SHOC S **S** **16 44 12.5 +0.4**
baz=310
JLU Jordanelle 47.46 75 P **P** **16 37 24.3 +0.5**
JLU IAmb IAmb 16 37 25.8
comp=Z,111nm,0.8s
NLU North Lily Min 47.48 76 P **P** **16 37 24.5 +0.6**
NLU IAmb IAmb 16 37 25.9
comp=Z,100nm,0.7s
GSC Goldstone, Bar 47.50 84 P **P** **16 37 24.4 +0.4**
GSC IAmb IAmb 16 37 29.4
comp=Z,95nm,0.8s
GSC Goldstone, Bar 47.50 84 P **P** **16 37 24.4 +0.4**
GSC pmax pmax
comp=Z,95nm,0.8s
GSC Goldstone, Bar 47.50 84 P **P** **16 37 24.8 +0.9**
baz=310,SNR=98
GSC S **S** **16 44 12.9 -0.1**
baz=310
FMP Fort Macarthur 47.61 87 P **P** **16 37 25.1 +0.4**
baz=311
RRX Edison Barstow 47.65 85 P **P** **16 37 25.5 +0.4**
baz=311
RRX S **S** **16 44 15.5 +0.3**
baz=311
BFSC Mount Baldy Ra 47.66 86 P **P** **16 37 26.3 +1.0**
baz=311,SNR=19
BFSC S **S** **16 44 15.9 +0.4**
baz=311
MPU Maple Canyon 47.71 76 P **P** **16 37 26.3 +0.6**
MPU IAmb IAmb 16 37 27.6
comp=Z,89nm,0.7s
BTO Baotou 47.72 285 *e*P **P** **16 37 27.6 +1.9**
CIS Catalina Islan 47.74 87 P **P** **16 37 26.2 +0.5**
baz=312
CIS S **S** **16 44 17.2 +0.8**
baz=312
SHPR Sheep Range 47.74 82 P **P** **16 37 26.3 +0.4**
NJ2 Nanjing 47.75 270 *e*P **P** **16 37 26.6 +0.8**

NJ2 pP **pP** 16 37 43.4 -1.0
NJ2 sP **sP** 16 37 51.5 -1.4
NJ2 S **S** 16 44 16.8 +0.3
NJ2 SS **SS** 16 47 45.5 +0.2
NJ2 pmax pmax
comp=Z,1µm,3.7s
NJ2 LR LR
comp=Z,580nm,16.7s
NJ2 LR LR
comp=Z,940nm,16.7s
NJ2 LR LR
comp=Z,1µm,19.4s
PATS Pohnpei 47.82 209 P **P** 16 37 27.4 +1.0
baz=48,SNR=4.9
PATS Pohnpei 47.82 209 P **P** 16 37 26.4 -0.1
PATS Pohnpei 47.82 209 P **P** 16 37 28.6 +2.1
comp=Z,195nm,1.6s
TUQ Turquoise Moun 47.96 83 P **P** 16 37 28.2 +0.6
baz=310,SNR=59
TUQ S **S** 16 44 20.8 +1.1
baz=310
TIY Taiyuan 48.05 281 *e*P **P** 16 37 30.8 +2.6
TIY pP **pP** 16 37 47.6 +0.8
TIY sP **sP** 16 37 52.3 -3.1
TIY S **S** 16 44 25.3 +4.5
TIY sS **sS** 16 44 58.3 +6.3
TIY SS **SS** 16 47 43.8 -6.4
TIY pmax pmax
comp=Z,25nm,0.6s
TIY pmax pmax
comp=Z,330nm,4.5s
TIY LR LR
comp=Z,530nm,20.1s
TIY LR LR
comp=Z,580nm,13.7s
TIY LR LR
comp=Z,850nm,23.0s
TCRU Three Creeks R 48.08 78 P **P** 16 37 29.1 +0.4
TCRU lAmb lAmb 16 37 51.7
comp=Z,85nm,0.9s
HEC Hector,Ludlow 48.10 84 P **P** 16 37 29.2 +0.6
baz=311,SNR=41
HEC S **S** 16 44 22.9 +1.3
baz=311
BBRC Big Bear Solar 48.10 85 P **P** 16 37 28.7 -0.1
baz=311
CCUT Cedar City 48.19 79 P **P** 16 37 29.8 +0.3
CCUT lAmb lAmb 16 37 31.5
comp=Z,44nm,0.6s
ELS Elsinore Mount 48.19 86 P **P** 16 37 29.4 0.0
MVU Marysvale 48.29 78 P **P** 16 37 30.8 +0.6
MSU Marysvale 48.31 77 P **P** 16 37 31.0 +0.6
MSU Marysvale 48.31 77 P **P** 16 37 31.0 +0.6
SZCU Shurtz Canyon 48.33 79 P **P** 16 37 30.8 +0.3
MURC Murrieta 48.37 86 P **P** 16 37 31.0 +0.3
baz=312,SNR=14
MURC S **S** 16 44 27.0 +1.7
baz=312
TMUT Trail Mountain 48.41 76 P **P** 16 37 31.9 +0.7
GMRC Granite Mounta 48.55 84 P **P** 16 37 32.5 +0.4
baz=311,SNR=58
GMRC S **S** 16 44 28.3 +0.3
baz=311
P17A Butcher Ranch, 48.58 76 P **P** 16 37 33.1 +0.7
MTPU Mount Pierson 48.60 78 P **P** 16 37 33.4 +0.7
MTPU lAmb lAmb 16 37 41.6
comp=Z,154nm,1.4s
LCMT Little Creek M 48.60 80 P **P** 16 37 33.5 +0.9
LCMT lAmb lAmb 16 37 34.9
comp=Z,85nm,0.7s
RDMU Red Mountain 48.61 74 P **P** 16 37 33.2 +0.6
Q16A Castle Valley 48.67 76 P **P** 16 37 33.5 +0.4
P18A Preston Nutter 48.79 75 P **P** 16 37 34.9 +0.8
PFO Pinyon Flats O 48.82 85 LR LR 16 55 41.2
comp=Z,302nm,20.3s,baz=296,slow=33
PFO Pinyon Flats O 48.82 85 P **P** 16 37 34.4 +0.2
PFO Pinyon Flats O 48.82 85 *i* P **P** 16 37 34.8 +0.6
PFO pmax pmax
comp=Z,37nm,0.9s
PFO Pinyon Flats O 48.82 85 P **P** 16 37 34.2 -0.1
baz=312,SNR=18
PFO S **S** 16 44 33.5 +1.6
baz=312
PFO Pinyon Flats O 48.82 85 P **P** 16 37 34.5 +0.3
PFO pP **pP** 16 37 53.4 +0.8
PFO sP **sP** 16 38 00.5 -0.4
TPFO Pinon Flats 48.83 85 P **P** 16 37 34.3 0.0
baz=312,SNR=22
TPFO S **S** 16 44 33.9 +1.9
baz=312
PMD Palm Desert 48.85 85 P **P** 16 37 34.5 +0.2
PMD lAmb lAmb 16 37 39.4
comp=Z,31nm,0.9s
BELC Belle Mtn. Jos 48.85 85 P **P** 16 37 34.4 -0.1
baz=311,SNR=56
BELC S **S** 16 44 32.7 +0.4
baz=311
109C Camp Elliot, M 48.90 87 P **P** 16 37 35.0 +0.3
109C lAmb lAmb 16 37 41.1
comp=Z,54nm,0.9s
109C Camp Elliot, M 48.90 87 P **P** 16 37 34.9 +0.3
baz=312,SNR=9.2
109C S **S** 16 44 35.1 +2.4
baz=312
PKCU Pink Cliffs 48.90 79 P **P** 16 37 35.9 +0.9
PKCU lAmb lAmb 16 37 37.1
comp=Z,57nm,0.6s
SRU San Rafael Swe 48.94 76 P **P** 16 37 35.6 +0.4
SRU San Rafael Swe 48.94 76 P **P** 16 37 35.6 +0.4
SRU pmax pmax
comp=Z,196nm,0.7s
K22A Casper 49.15 70 P **P** 16 37 35.8 -0.9
K22A Casper 49.15 70 P **P** 16 37 36.3 -0.3
baz=308,SNR=17
K22A Casper 49.15 70 P **P** 16 37 36.3 -0.3
baz=307,SNR=17
NEE2 Needles Airpor 49.20 83 P **P** 16 37 37.6 +0.6
baz=311,SNR=12
NEE2 S **S** 16 44 37.7 +0.7
baz=311
IRM Iron Mountain 49.28 84 P **P** 16 37 37.8 +0.2
baz=311,SNR=45
IRM S **S** 16 44 39.6 +1.5
baz=311
MONP2 Monument Peak 49.32 86 P **P** 16 37 38.6 +0.5
baz=312,SNR=15
MONP2 S **S** 16 44 42.3 +3.2
baz=312
RWWY Rawlins 49.33 71 P **P** 16 37 37.4 -0.7
RWWY lAmb lAmb 16 37 39.2
comp=Z,68nm,1.1s
BC3 Big Chuckawall 49.42 85 P **P** 16 37 38.6 -0.2
baz=312,SNR=19
W13A Hualapai Mount 49.44 82 P **P** 16 37 39.2 +0.1
W13A lAmb lAmb 16 37 40.7
comp=Z,53nm,0.7s
CBX Cerro Bola 49.56 87 P **P** 16 37 40.4 +0.5
CBX lAmb lAmb 16 37 46.1
comp=Z,40nm,0.7s
U15A North Rim 49.56 80 P **P** 16 37 41.0 +0.9
KBS Kingsbay 49.66 357 P **P** 16 37 40.6 +0.8
KBS Kingsbay 49.66 357 *ce*P **P** 16 37 40.5 +0.6
KBS pmax pmax
comp=Z,84nm,0.7s
KBS Kingsbay 49.66 357 *i* P **P** 16 37 40.7 +0.8
KBS Kingsbay 49.66 357 ⇓*i* P **P** 16 37 40.9 +1.1
KBS Kingsbay 49.66 357 P **P** 16 37 40.6 +0.8
KBS ScP **ScP** 16 42 47.9 -0.7
SWSC Sam W. Stewart 49.67 86 P **P** 16 37 40.3 -0.2
baz=312
SWSC S **S** 16 44 45.0 +1.4
baz=312
O20A White River Ci 49.68 73 P **P** 16 37 41.0 +0.2
O20A White River Ci 49.68 73 P **P** 16 37 41.0 +0.2
baz=308,SNR=165
O20A S **S** 16 44 43.3 -0.6
baz=308
IKP In-Ko-Pah, Jac 49.68 86 P **P** 16 37 41.1 +0.3
baz=312,SNR=18
IKP S **S** 16 44 45.4 +1.6
baz=312
RSSD Black Hills 49.70 67 P **P** 16 37 39.9 -1.1
RSSD lAmb lAmb 16 39 02.1
comp=Z,47nm,0.6s
RSSD Black Hills 49.70 67 P **P** 16 37 39.9 -1.1
RSSD pmax pmax
comp=Z,47nm,0.6s
RSSD Black Hills 49.70 67 P **P** 16 37 40.6 -0.3
baz=307,SNR=22
RSSD Black Hills 49.70 67 P **P** 16 37 40.0 -0.9
baz=307
RSSD Black Hills 49.70 67 P **P** 16 37 40.0 -0.9
RSSD ScP **ScP** 16 42 48.2 -1.4
YUH Yuha Desert 49.80 86 P **P** 16 37 41.6 +0.1
PDMCI Parker Dam,Lak 49.80 83 P **P** 16 37 41.9 +0.4
baz=311,SNR=31
PDMCI S **S** 16 44 46.5 +1.2
baz=311
BLYC Blythe 49.93 84 P **P** 16 37 42.8 +0.2
BLYC lAmb lAmb 16 37 44.7
comp=Z,63nm,0.8s
MDND Maddock 49.96 60 P **P** 16 37 41.8 -0.8
MDND Maddock 49.96 60 P **P** 16 37 42.2 -0.3
baz=306,SNR=29
MDND Maddock 49.96 60 P **P** 16 37 42.0 -0.5
baz=306,SNR=29
LYN LuoYang 50.07 278 ⇓*i* P **P** 16 37 43.9 +0.4
LYN pP pP 16 38 01.8 -0.5
LYN S **S** 16 44 50.3 +1.3
LYN sS sS 16 45 20.8 +0.4
LYN pmax pmax
comp=Z,20nm,0.8s
LYN pmax pmax
comp=Z,290nm,5.7s
LYN LR LR
comp=Z,710nm,15.5s
LYN LR LR
comp=Z,420nm,19.2s
LYN LR LR
comp=Z,1µm,29.2s
E28A Huff 50.12 62 P **P** 16 37 42.8 -1.0
E28A lAmb lAmb 16 39 04.5
comp=Z,55nm,0.7s
GLA Glamis 50.21 85 P **P** 16 37 44.4 -0.3
GLA lAmb lAmb 16 37 50.0
comp=Z,64nm,0.8s
GLA Glamis 50.21 85 P **P** 16 37 44.4 -0.3
GLA pmax pmax
comp=Z,64nm,0.8s
GLA Glamis 50.21 85 P **P** 16 37 45.2 +0.5
baz=312,SNR=15
GLA S **S** 16 44 53.0 +1.9
baz=312
SPA0 Spitsbergen Ar 50.21 356 *e*P **P** 16 37 44.2 +0.1
SPITS Spitsbergen Ar 50.21 356 LR LR 16 59 13.3
comp=Z,671nm,21.0s,baz=340,slow=36
SPITS Spitsbergen Ar 50.21 356 P **P** 16 37 44.1 +0.1
SPITS pmax pmax
comp=Z,211nm,0.7s
SPB2 Spitsbergen Ar 50.22 356 P **P** 16 37 44.0 0.0
UPNV Upernavik 50.24 19 *i* P **P** 16 37 43.5 -0.8
UPNV lAmb lAmb 16 37 45.0
comp=Z,97nm,0.8s
PV23 Carpenter Ridg 50.27 75 P **P** 16 37 45.4 0.0
PV10 Paradox Valley 50.30 76 P **P** 16 37 46.1 +0.5
PV11 David Mesa, Pa 50.45 76 P **P** 16 37 46.9 +0.3
PV07 Paradox Valley 50.50 75 P **P** 16 37 47.1 0.0
YOJ Yonaguni jima 50.51 260 P **P** 16 37 46.3 -0.7
YOJ lAmb lAmb 16 37 48.0
comp=Z,124nm,1.2s
YOJ Yonaguni jima 50.51 260 P **P** 16 37 46.3 -0.7
YOJ pmax pmax
comp=Z,124nm,1.2s
YOJ Yonaguni jima 50.51 260 P **P** 16 37 47.4 +0.4
N23A Red Feather La 50.57 71 P **P** 16 37 47.5 -0.1
N23A lAmb lAmb 16 37 49.4
comp=Z,162nm,1.6s
N23A Red Feather La 50.57 71 P **P** 16 37 48.1 +0.5
baz=309,SNR=30
N23A S **S** 16 44 56.6 +0.2
baz=309
PV13 Radium Mtn., P 50.57 76 P **P** 16 37 47.9 +0.3
PHWY Pilot Hill 50.60 70 P **P** 16 37 47.2 -0.7
PHWY lAmb lAmb 16 37 49.0
comp=Z,94nm,1.9s
PV15 Paradox Valley 50.66 75 P **P** 16 37 48.3 0.0
WUAZ Wupatki 50.72 80 P **P** 16 37 49.1 +0.4
WUAZ Wupatki 50.72 80 P **P** 16 37 49.7 +1.1
baz=311,SNR=107
WUAZ S **S** 16 45 00.7 +2.3
baz=311
Y14A Wickenburg 50.75 83 P **P** 16 37 49.0 +0.2
SMCO Snowmass 51.04 73 P **P** 16 37 51.2 -0.1
SMCO lAmb lAmb 16 37 53.1
comp=Z,46nm,0.6s
113A Mohawk Valley, 51.06 84 P **P** 16 37 51.0 0.0
TATO Taipei 51.08 262 P **P** 16 37 48.9 -2.3
HOPEN Hopen 51.26 353 *e*P **P** 16 37 52.1 +0.1
YHNB Yeheng 51.37 262 P **P** 16 37 53.3 -0.2
YHNB Yeheng 51.37 262 P **P** 16 37 55.9 +2.4
MVCO Mesa Verde 51.38 76 P **P** 16 37 53.8 +0.1
MVCO lAmb lAmb 16 38 14.4
comp=Z,83nm,1.1s
MVCO Mesa Verde 51.38 76 P **P** 16 37 54.2 +0.5
baz=310,SNR=43
MVCO S **S** 16 45 08.6 +1.0
baz=310
X16A Lo Mia Camp, P 51.40 81 P **P** 16 37 54.1 +0.3
X16A lAmb lAmb 16 37 56.5
comp=Z,63nm,0.7s
HSPB Hornsund (broa 51.41 355 *e*P **P** 16 37 53.0 0.0
HSPB Hornsund (broa 51.41 355 ⇑*i* P **P** 16 37 53.2 +0.2
ISCO Idaho Springs 51.46 72 P **P** 16 37 54.4 +0.1
ISCO lAmb lAmb 16 37 56.3
comp=Z,41nm,0.9s
ISCO Idaho Springs 51.46 72 P **P** 16 37 54.4 +0.1
ISCO pmax pmax
comp=Z,41nm,0.9s
ISCO Idaho Springs 51.46 72 P **P** 16 37 55.0 +0.7
baz=310,SNR=72
ISCO Idaho Springs 51.46 72 P **P** 16 37 55.0 +0.7
baz=309,SNR=72
ISCO S **S** 16 45 08.6 -0.1
baz=309
DAG Danmarks Havn 51.52 5 *i* P **P** 16 37 52.0 -1.8
DAG lAmb lAmb 16 37 54.0
comp=Z,35nm,0.8s
WHN Wuhan 51.59 272 ⇓P **P** 16 37 55.4 +0.4
WHN pP **pP** 16 38 13.3 -0.5
WHN S **S** 16 45 11.8 +1.7
WHN pmax pmax
comp=Z,210nm,1.5s
WHN LR LR
comp=Z,2µm,24.1s
NACB Ninganchiao 51.59 261 P **P** 16 37 54.6 -0.5
NACB lAmb lAmb 16 38 22.9
comp=Z,53nm,1.0s
AGMN Agassiz Nation 51.70 58 P **P** 16 37 54.0 -1.5
AGMN Agassiz Nation 51.70 58 P **P** 16 37 54.5 -1.1
baz=308,SNR=22
AGMN Agassiz Nation 51.70 58 P **P** 16 37 54.5 -1.1
baz=307,SNR=22
W18A Petrified Fore 51.99 79 P **P** 16 37 58.7 +0.5
W18A lAmb lAmb 16 38 00.3
comp=Z,66nm,0.7s
W18A Petrified Fore 51.99 79 P **P** 16 37 59.2 +1.0
baz=311,SNR=29
W18A S **S** 16 45 17.8 +1.8
baz=311
S22A 4UR Ranch, Cre 52.04 75 P **P** 16 37 59.5 +0.9
S22A lAmb lAmb 16 38 01.1
comp=Z,88nm,0.8s
S22A 4UR Ranch, Cre 52.04 75 P **P** 16 37 60.0 +1.3
baz=310,SNR=157
S22A S **S** 16 45 19.0 +2.2
baz=310
214A Organ Pipe Nat 52.20 84 P **P** 16 37 59.7 +0.1
214A lAmb lAmb 16 38 04.9
comp=Z,78nm,1.4s
214A Organ Pipe Nat 52.20 84 P **P** 16 37 59.9 +0.3
baz=313,SNR=19
214A S **S** 16 45 18.9 +0.3
baz=313
X18A Snowflake 52.25 80 P **P** 16 38 00.7 +0.6
Q24A Divide 52.27 72 P **P** 16 38 00.4 +0.1
Q24A Divide 52.27 72 P **P** 16 38 00.6 +0.2
baz=310,SNR=21
Q24A S **S** 16 45 20.6 +0.7
baz=310
SSLB Suanglung 52.27 261 P **P** 16 38 00.6 +0.4
SSLB Suanglung 52.27 261 P **P** 16 38 01.8 +1.6
YULB Yu-li 52.35 261 P **P** 16 38 00.8 0.0
SUSD Miller 52.39 63 P **P** 16 37 59.5 -1.3
SUSD Miller 52.39 63 P **P** 16 37 59.8 -1.0
baz=309,SNR=8.2
SUSD Miller 52.39 63 P **P** 16 37 59.8 -1.0
baz=308,SNR=8.2
XAN Xi'an 52.60 280 ⇓P **P** 16 38 02.6 +0.1
XAN pP pP 16 38 20.8 -0.6
XAN sP sP 16 38 28.6 -1.3
XAN S **S** 16 45 24.1 +0.1
XAN sS sS 16 45 55.4 +0.2
XAN SS **SS** 16 49 04.8 +2.1
XAN pmax pmax
comp=Z,25nm,1.3s
XAN LR LR
comp=Z,740nm,17.2s
XAN LR LR
comp=Z,830nm,18.0s
XAN LR LR
comp=Z,1µm,20.4s
B35A Bob, Littlefor 52.78 57 P **P** 16 38 02.2 -1.4
TPUB Ta-pu 52.83 261 P **P** 16 38 04.6 +0.2
TPUB lAmb lAmb 16 38 29.4
comp=Z,83nm,0.9s
TPUB Ta-pu 52.83 261 P **P** 16 38 05.3 +1.0
OGNE Ogallala 52.84 69 P **P** 16 38 04.1 -0.1
OGNE Ogallala 52.84 69 P **P** 16 38 04.1 -0.1
baz=310,SNR=13
OGNE Ogallala 52.84 69 P **P** 16 38 04.5 +0.3
baz=310,SNR=13
SDCO Great Sand Dun 52.84 74 P **P** 16 38 05.2 +0.6
SDCO lAmb lAmb 16 38 06.7
comp=Z,74nm,0.8s
SDCO Great Sand Dun 52.84 74 P **P** 16 38 05.5 +1.0
baz=311,SNR=174
SDCO S **S** 16 45 29.2 +1.5
baz=311
SDCO Great Sand Dun 52.84 74 P **P** 16 38 05.5 +1.0
baz=311,SNR=174
SDCO S **S** 16 45 28.9 +1.2
baz=311
QZH Quanzhou 52.90 264 P **P** 16 38 05.8 +1.1
QZH S **S** 16 45 31.0 +3.0
QZH LR LR
comp=Z,690nm,23.2s
XMAS Kiritimati 52.92 151 P **P** 16 38 04.5 -0.4
XMAS Kiritimati 52.92 151 P **P** 16 38 05.7 +0.8
XMAS Kiritimati 52.92 151 P **P** 16 38 05.3 +0.4
XMAS sP **sP** 16 38 31.1 +0.2
F33A 5 Mile Ranch, 52.98 61 P **P** 16 38 03.8 -1.4
F33A 5 Mile Ranch, 52.98 61 P **P** 16 38 03.8 -1.4
baz=309,SNR=16
ZAA0 Zalesovo Array 53.20 313 P **P** 16 38 06.3 -0.2
ZALV Zalesovo Beam 53.20 313 P **P** 16 38 06.8 +0.2
comp=Z,7.0nm,0.5s,baz=44,slow=7.8,SNR=30
ZALV pP **pP** 16 38 23.7 -1.6
comp=Z,4.1nm,0.5s,baz=35,slow=5.4,SNR=3.2
ZALV PcP **PcP** 16 39 14.6 +1.0
comp=Z,16nm,0.7s,baz=45,slow=5.2,SNR=7.5
ZALV ScP **ScP** 16 43 03.5 -0.6
comp=Z,6.1nm,0.8s,baz=46,slow=4.3,SNR=6.7
ZALV LR LR 17 02 18.8
comp=Z,272nm,18.6s,baz=55,slow=38
comp=Z,7.0nm,0.5s
ZALV Zalesovo Beam 53.20 313 P **P** 16 38 06.1 -0.4
TUC Tucson 53.22 83 P **P** 16 38 07.1 -0.1
TUC Tucson 53.22 83 P **P** 16 38 07.1 -0.1
TUC pmax pmax
comp=Z,34nm,0.8s
TUC Tucson 53.22 83 P **P** 16 38 07.9 +0.7
baz=313
TUC S **S** 16 45 33.6 +1.1
baz=313
TUC Tucson 53.22 83 P **P** 16 38 07.7 +0.5
TUC pP **pP** 16 38 25.1 -0.6
SUMG Summit 53.47 13 P **P** 16 38 08.4 -0.4
SUMG Summit 53.47 13 P **P** 16 38 08.4 -0.4
SUMG pmax pmax
comp=Z,112nm,0.9s
SUMG Summit 53.47 13 *i* P **P** 16 38 08.7 -0.1
SUMG lAmb lAmb 16 38 10.1
comp=Z,111nm,0.9s
FRB Frobisher Bay 53.50 31 LR LR 17 02 10.1
comp=Z,2µm,21.7s,baz=314,slow=37
BJO1 Bjornoya 53.64 354 *e*P **P** 16 38 10.1 +0.5
K31A O'Neill 53.65 65 P **P** 16 38 09.4 -0.7
K31A O'Neill 53.65 65 P **P** 16 38 10.0 -0.2
baz=310
KSCO Kaye Shedlock' 53.73 71 P **P** 16 38 11.2 +0.3
KSCO lAmb lAmb 16 38 12.9
comp=Z,122nm,1.1s
KSCO Kaye Shedlock' 53.73 71 P **P** 16 38 11.7 +0.8
baz=311,SNR=17
KSCO S **S** 16 45 40.6 +1.2
baz=311
KSCO Kaye Shedlock' 53.73 71 P **P** 16 38 11.8 +0.9
baz=311,SNR=17
KSCO S **S** 16 45 40.3 +0.9
baz=311
DBG Daneborg 53.81 7 *i* P **P** 16 38 09.9 -0.9
DBG lAmb lAmb 16 38 11.0
comp=Z,61nm,0.9s
T25A Trinidad 53.90 74 P **P** 16 38 12.9 +0.7
T25A Trinidad 53.90 74 P **P** 16 38 13.3 +1.1
baz=311,SNR=189
T25A S **S** 16 45 42.9 +1.1
baz=311
ILULI Ilulissat 54.05 20 P **P** 16 38 12.2 -0.4
ILULI lAmb lAmb 16 38 13.2
comp=Z,58nm,0.8s
ILULI Ilulissat 54.05 20 P **P** 16 38 12.2 -0.4
ILULI pmax pmax
comp=Z,58nm,0.8s
ILULI Ilulissat 54.05 20 *i* P **P** 16 38 10.3 -2.2
ILULI lAmb lAmb 16 38 12.9
comp=Z,58nm,0.8s
ANMO Albuquerque 54.11 77 LR LR 16 58 52.9
comp=Z,893nm,21.8s,baz=310,slow=33
ANMO Albuquerque 54.11 77 P **P** 16 38 13.8 0.0
ANMO lAmb lAmb 16 38 34.1
comp=Z,161nm,1.9s
ANMO Albuquerque 54.11 77 *ce*P **P** 16 38 13.4 -0.4
ANMO pmax pmax
comp=Z,27nm,0.8s
ANMO Albuquerque 54.11 77 P **P** 16 38 14.6 +0.8
baz=312,SNR=47
ANMO S **S** 16 45 46.3 +1.6
baz=312
ANMO Albuquerque 54.11 77 P **P** 16 38 14.6 +0.8
baz=312
ANMO S **S** 16 45 47.6 +2.8
baz=312
ANMO Albuquerque 54.11 77 P **P** 16 38 14.5 +0.7
ANMO pP **pP** 16 38 32.2 -0.3
CNSH ChangSha 54.12 271 ⇓P **P** 16 38 14.3 +0.6
CNSH S **S** 16 45 44.1 -0.5
CNSH LR LR
comp=Z,650nm,18.5s
CNSH LR LR
comp=Z,580nm,15.8s
CNSH LR LR
comp=Z,970nm,18.5s
ECSD EROS Data Cent 54.14 63 P **P** 16 38 12.0 -1.6
ECSD EROS Data Cent 54.14 63 P **P** 16 38 12.3 -1.3
baz=310,SNR=30
ECSD EROS Data Cent 54.14 63 P **P** 16 38 12.3 -1.3
baz=310,SNR=30
EYMN Ely 54.21 56 P **P** 16 38 12.8 -1.2
EYMN lAmb lAmb 16 38 14.2
comp=Z,39nm,0.8s
EYMN Ely 54.21 56 P **P** 16 38 13.3 -0.7
baz=310,SNR=21
EYMN Ely 54.21 56 P **P** 16 38 13.3 -0.7
baz=310,SNR=21
LZH Lanzhou 54.34 285 *e*P **P** 16 38 12.4 -3.0
LZH pP pP 16 38 35.0 +0.6
LZH sP sP 16 38 43.1 +0.3
LZH S **S** 16 45 42.9 -4.8
LZH sS sS 16 46 19.3 -0.5
LZH pmax pmax
comp=Z,36nm,1.5s
LZH pmax pmax
comp=Z,170nm,5.2s
LZH LR LR
comp=Z,990nm,16.1s
LZH LR LR

LZH comp=Z,1µm,16.5s LR LR

Y22D **IRIS PASSCAL I** **54.41** **78** P **P** **16 38 17.0 +1.1**
comp=Z,1µm,15.8s baz=312

Y22D S **S** **16 45 53.8 +5.0**
baz=312

F36A **Milaca** **54.47** **59** P **P** **16 38 14.5 -1.5**
F36A **Milaca** **54.47** **59** P **P** **16 38 14.7 -1.2**
baz=310,SNR=25

Y22A **Socorro** **54.48** **78** P **P** **16 38 17.9 +1.5**
baz=313

GTA **Gaotai** **54.55** **291** ⇓P **P** **16 38 17.8 +1.0**
GTA pP pP 16 38 35.8 +0.1
GTA sP sP 16 38 45.6 +1.5
GTA ScP **ScP** **16 43 11.0 +0.5**
GTA S **S** **16 45 47.8 -2.6**
GTA sS sS 16 46 21.6 -0.8
GTA ScS **ScS** **16 47 56.8 -2.1**
GTA pmax pmax
comp=Z,21nm,1.3s
GTA pmax pmax
comp=Z,120nm,5.7s
GTA LR LR
comp=Z,450nm,17.8s
GTA LR LR
comp=Z,800nm,19.6s
GTA LR LR
comp=Z,920nm,20.0s

BGNE **Belgrade** **54.78** **66** P **P** **16 38 17.5 -0.8**
BGNE **Belgrade** **54.78** **66** P **P** **16 38 17.9 -0.5**
baz=311,SNR=9.9

BGNE **Belgrade** **54.78** **66** P **P** **16 38 17.8 -0.5**
baz=311,SNR=9.9

319A **Douglas** **54.79** **82** P **P** **16 38 18.6 -0.1**
319A IAmb IAmb 16 38 21.5
comp=Z,50nm,0.9s

ENH **Enshi** **54.81** **276** P **P** **16 38 18.2 -0.6**
ENH IAmb IAmb 16 38 42.5
comp=Z,74nm,1.1s

ENH **Enshi** **54.81** **276** P **P** **16 38 18.7 0.0**
ENH pP **pP** **16 38 36.0 -1.7**
ENH pwP **sP** **16 38 40.1 -6.0**
121A **Cookes Peak, D** **54.93** **80** P **P** **16 38 19.8 +0.1**
121A IAmb IAmb 16 38 22.0
comp=Z,53nm,0.7s

121A **Cookes Peak, D** **54.93** **80** P **P** **16 38 20.7 +1.0**
baz=313,SNR=62

121A **Cookes Peak, D** **54.93** **80** P **P** **16 38 20.7 +1.0**
baz=313,SNR=62

121A S **S** **16 45 56.9 +1.2**
baz=313

E38A **The Farm, Brul** **55.03** **57** P **P** **16 38 18.8 -1.3**
E38A **The Farm, Brul** **55.03** **57** P **P** **16 38 18.9 -1.1**
baz=310,SNR=32

SPMN **Marine on St.** **55.27** **59** P **P** **16 38 20.6 -1.2**
SPMN IAmb IAmb 16 38 22.5
comp=Z,29nm,0.6s

SPMN **Marine on St.** **55.27** **59** P **P** **16 38 21.1 -0.7**
baz=311,SNR=13

SPMN **Marine on St.** **55.27** **59** P **P** **16 38 21.1 -0.7**
baz=310,SNR=13

HSIG **55.39** **86** P **P** **16 38 22.0 -0.8**
L34A **Svendsen Farm,** **55.42** **64** P **P** **16 38 21.8 -1.1**
L34A **Svendsen Farm,** **55.42** **64** P **P** **16 38 22.0 -0.9**
baz=311,SNR=17

CBKS **Cedar Bluff** **55.56** **69** P **P** **16 38 24.1 0.0**
baz=312

CBKS S **S** **16 46 03.1 -0.7**
baz=312

I37A **Lemond, Waseca** **55.73** **61** P **P** **16 38 24.4 -0.7**
I37A IAmb IAmb 16 38 25.6
comp=Z,45nm,0.8s

I37B **Waseca** **55.73** **61** P **P** **16 38 24.8 -0.3**
baz=311,SNR=17

SFJD **Kangerlussuaq** **55.96** **21** LR LR 17 05 21.7
comp=Z,187nm,19.4s,baz=320,slow=39

SFJD **Kangerlussuaq** **55.96** **21** P **P** **16 38 25.4 -0.9**
SFJD IAmb IAmb 16 38 27.1
comp=Z,48nm,1.0s

SFJD **Kangerlussuaq** **55.96** **21** P **P** **16 38 25.4 -0.9**
SFJD pmax pmax
comp=Z,48nm,1.0s

SFJD **Kangerlussuaq** **55.96** **21** *i* P **P** **16 38 25.6 -0.7**
SFJD IAmb IAmb 16 38 26.8
comp=Z,48nm,1.0s

SFJD **Kangerlussuaq** **55.96** **21** P **P** **16 38 25.5 -0.9**
KIDD **KIDD Seismic O** **56.24** **80** P **P** **16 38 29.9 +0.9**
baz=314,SNR=18

D41A **Chassel** **56.29** **55** P **P** **16 38 28.4 -0.7**
D41A **Chassel** **56.29** **55** P **P** **16 38 28.7 -0.4**
baz=311,SNR=8.4

ICESG **Greenland Ices** **56.36** **16** *i* P **P** **16 38 27.7 -1.9**
ICESG IAmb IAmb 16 38 29.9
comp=Z,103nm,0.8s

R32A **Long Quarter,** **56.42** **69** P **P** **16 38 29.4 -0.7**
R32A IAmb IAmb 16 39 27.6
comp=Z,48nm,0.8s

R32A **Long Quarter,** **56.42** **69** P **P** **16 38 29.8 -0.3**
baz=312,SNR=12

R32A S **S** **16 46 14.0 -1.2**
baz=312

N35A **Tabor** **56.56** **65** P **P** **16 38 30.6 -0.5**
N35A **Tabor** **56.56** **65** P **P** **16 38 30.9 -0.1**
baz=312,SNR=62

G40A **Rib Lake** **56.62** **58** P **P** **16 38 30.3 -1.2**
G40A **Rib Lake** **56.62** **58** P **P** **16 38 30.8 -0.7**
baz=312,SNR=22

COWI **Conover** **56.63** **56** P **P** **16 38 30.3 -1.2**
COWI IAmb IAmb 16 38 31.1
comp=Z,33nm,0.6s

COWI **Conover** **56.63** **56** P **P** **16 38 30.8 -0.7**
baz=312

HAMF **Hammerfest** **56.96** **351** *eP* **P** **16 38 32.6 -0.8**
K38A **Parkersburg** **56.98** **62** P **P** **16 38 32.7 -1.3**
K38A **Parkersburg** **56.98** **62** P **P** **16 38 33.1 -0.9**
baz=312

MNTX **Cornudas Mount** **56.98** **79** P **P** **16 38 34.3 +0.2**
MNTX IAmb IAmb 16 38 36.2
comp=Z,39nm,0.8s

MNTX **Cornudas Mount** **56.98** **79** P **P** **16 38 34.6 +0.5**
baz=314,SNR=68

MNTX S **S** **16 46 24.9 +2.2**
baz=314

MNTX **Cornudas Mount** **56.98** **79** P **P** **16 38 35.0 +0.9**
baz=314,SNR=68

MNTX S **S** **16 46 24.5 +1.8**
baz=314

MSTX **Muleshoe** **57.01** **75** P **P** **16 38 34.3 -0.2**
MSTX **Muleshoe** **57.01** **75** P **P** **16 38 34.7 +0.2**
baz=313,SNR=93

MSTX S **S** **16 46 23.1 -0.1**
baz=313

MSTX **Muleshoe** **57.01** **75** P **P** **16 38 34.9 +0.4**
baz=313,SNR=93

MSTX S **S** **16 46 22.6 -0.6**
baz=313

AMTX **Amarillo** **57.05** **74** P **P** **16 38 35.0 +0.3**
AMTX **Amarillo** **57.05** **74** P **P** **16 38 35.4 +0.7**
baz=313,SNR=83

AMTX S **S** **16 46 23.9 +0.3**
baz=313

AMTX **Amarillo** **57.05** **74** P **P** **16 38 35.4 +0.7**
baz=313

AMTX S **S** **16 46 23.8 +0.2**
baz=313

KSU1 **Kansas State U** **57.19** **67** P **P** **16 38 34.5 -1.0**
KSU1 **Kansas State U** **57.19** **67** P **P** **16 38 34.8 -0.7**
baz=312,SNR=14

KSU1 **Kansas State U** **57.19** **67** P **P** **16 38 34.8 -0.7**
baz=312,SNR=14

KSU1 S **S** **16 46 25.4 +0.3**
baz=312

SCIA **State Center** **57.23** **62** P **P** **16 38 35.0 -0.7**
SCIA IAmb IAmb 16 38 37.3
comp=Z,48nm,0.7s

SCIA **State Center** **57.23** **62** P **P** **16 38 35.5 -0.2**
baz=312,SNR=9.8

SCIA **State Center** **57.23** **62** P **P** **16 38 35.2 -0.5**
baz=312,SNR=9.8

I40A **Norwalk** **57.32** **59** P **P** **16 38 35.4 -1.0**
I40A IAmb IAmb 16 38 38.8
comp=Z,44nm,0.6s

I40A **Norwalk** **57.32** **59** P **P** **16 38 35.6 -0.8**
baz=312

DY2G **Dye2** **57.36** **20** *i* P **P** **16 38 35.6 -1.0**

DY2G IAmb IAmb 16 38 37.9
comp=Z,35nm,0.7s

SCO **Scoresbysund** **57.38** **8** P **P** **16 38 36.2 -0.1**
SCO IAmb IAmb 16 38 38.0
comp=Z,46nm,0.9s

SCO **Scoresbysund** **57.38** **8** P **P** **16 38 36.2 -0.1**
SCO pmax pmax
comp=Z,47nm,0.9s

SCO **Scoresbysund** **57.38** **8** *i* P **P** **16 38 37.3 +1.0**
SCO IAmb IAmb 16 38 37.6
comp=Z,43nm,0.9s

F42A **Maple Grove Fa** **57.38** **56** P **P** **16 38 35.7 -1.1**
F42A IAmb IAmb 16 38 37.4
comp=Z,64nm,0.7s

F42A **Maple Grove Fa** **57.38** **56** P **P** **16 38 36.6 -0.2**
baz=312,SNR=15

ZSN **Zaisan** **57.41** **307** *eP* **P** **16 38 37.6 +0.7**
ZSN *eS* **S** **16 46 28.9 +1.0**
ZSN pmax pmax
comp=Z,9.0nm,0.8s

ZSN **Zaisan** **57.41** **307** *eP* **P** **16 38 37.7 +0.7**
comp=Z,9.3nm,0.8s,baz=307

ZSN *eS* **S** **16 46 28.9 +1.0**
baz=307

KEV **Kevo** **57.44** **349** P **P** **16 38 35.8 -1.0**
KEV IAmb IAmb 16 38 59.5
comp=Z,131nm,1.9s

KEV **Kevo** **57.44** **349** P **P** **16 38 35.8 -1.0**
KEV pmax pmax
comp=Z,131nm,1.9s

KEV **Kevo** **57.44** **349** P **P** **16 38 35.7 -1.0**
E43A **Lone Tree Farm** **57.55** **55** P **P** **16 38 37.1 -0.8**
E43A IAmb IAmb 16 38 38.1
comp=Z,55nm,0.6s

E43A **Lone Tree Farm** **57.55** **55** P **P** **16 38 37.7 -0.2**
baz=312,SNR=36

OK035 **E0210 Rd and N** **57.58** **70** **P** **16 38 37.2 -1.1**
OK035 IAmb IAmb 16 38 38.7
comp=Z,56nm,0.7s

ELIS **Ellis County** **57.59** **71** P **P** **16 38 38.2 -0.3**
ELIS IAmb IAmb 16 38 58.1
comp=Z,62nm,1.0s

U32A **Winter Ranch,** **57.63** **71** **P** **16 38 38.1 -0.5**
U32A IAmb IAmb 16 38 39.7
comp=Z,66nm,0.8s

U32A **Winter Ranch,** **57.63** **71** P **P** **16 38 39.0 +0.3**
baz=313,SNR=6.4

SEM **Semipalatinsk** **57.65** **312** *eP* **P** **16 38 38.7 -0.1**
SEM *eS* **S** **16 46 30.0 -1.3**
SEM pmax pmax
comp=Z,11nm,0.5s

SEM **Semipalatinsk** **57.65** **312** *eP* **P** **16 38 38.7 -0.1**
comp=Z,11nm,0.5s,baz=312

SEM *eS* **S** **16 46 30.1 -1.3**
baz=312

KAN10 **Anthony SW Sta** **57.66** **70** **P** **16 38 37.9 -1.0**
KAN10 IAmb IAmb 16 39 32.7
comp=Z,26nm,0.7s

OK038 **West end E0370** **57.72** **71** P **P** **16 38 37.9 -1.4**
OK038 IAmb IAmb 16 38 39.2
comp=Z,51nm,0.8s

JMIC **Jan Mayen** **57.72** **3** LR LR 17 03 59.0
comp=Z,191nm,20.6s,baz=354,slow=36

OK032 **Salt Plains WL** **57.81** **70** P **P** **16 38 39.4 -0.5**
OK032 IAmb IAmb 16 39 52.4
comp=Z,52nm,1.2s

ARA0 **ARCESS Array S** **57.82** **350** ⇑*eP* **P** **16 38 39.1 -0.4**
ARCES **ARCESS Array B** **57.82** **350** P **P** **16 38 39.1 -0.4**
comp=Z,32nm,0.7s,baz=20,slow=7.8,SNR=181

ARCES ScP **ScP** **16 43 23.2 -1.0**
comp=Z,9.7nm,1.1s,baz=11,slow=5.9,SNR=4.8

ARCES LR LR 17 03 57.3
comp=Z,451nm,21.8s,baz=7.5,slow=36

ARCES PKPPKP **P'P'df** **17 08 23.0 -3.8**
comp=Z,5.5nm,1.0s,baz=180,slow=0.3,SNR=5.7
comp=Z,32nm,0.7s

ARCES **ARCESS Array B** **57.82** **350** P **P** **16 38 39.0 -0.6**
ARCES IAmb IAmb 16 38 40.1
comp=Z,42nm,0.8s

KAN01 **Argonia South** **57.83** **69** P **P** **16 38 39.3 -0.8**
KAN01 IAmb IAmb 16 38 59.0
comp=Z,112nm,1.4s

KAN14 **Manchester OK** **57.85** **70** P **P** **16 38 39.2 -1.0**
KS20 **Mayfield South** **57.90** **69** **P** **16 38 39.6 -0.9**
KS20 IAmb IAmb 16 38 59.5
comp=Z,184nm,1.6s

KAN17 **Caldwell West** **57.91** **70** P **P** **16 38 39.7 -0.9**
KAN17 IAmb IAmb 16 38 41.1
comp=Z,57nm,0.9s

CD2 **Chengdu** **57.92** **281** P **P** **16 38 39.8 -1.0**
CD2 sP sP 16 39 05.6 -2.8
CD2 S **S** **16 46 34.1 -0.9**
CD2 sS sS 16 47 03.6 -3.6
CD2 SS **SS** **16 50 26.9 +0.4**
CD2 pmax pmax
comp=Z,30nm,1.2s
CD2 pmax pmax
comp=Z,320nm,4.3s
CD2 LR LR
comp=Z,640nm,20.1s
CD2 LR LR
comp=Z,760nm,13.7s
CD2 LR LR
comp=Z,710nm,18.6s

N38A **Joes South For** **57.96** **63** P **P** **16 38 39.7 -1.2**
N38A **Joes South For** **57.96** **63** P **P** **16 38 40.1 -0.8**
baz=313,SNR=16

NUUK **Nuuk** **58.01** **24** *i* P **P** **16 38 39.6 -1.2**
NUUK IAmb IAmb 16 38 43.0
comp=Z,36nm,1.0s

LVZ **Lovozero** **58.09** **345** P **P** **16 38 40.5 -1.0**
LVZ IAmb IAmb 16 38 42.7
comp=Z,68nm,0.9s

LVZ **Lovozero** **58.09** **345** *ceP* **P** **16 38 40.1 -1.4**
LVZ pmax pmax
comp=Z,78nm,1.0s

LVZ **Lovozero** **58.09** **345** P **P** **16 38 40.2 -1.3**
LVZ pP **pP** **16 38 57.8 -2.6**
KAN13 **South Haven SW** **58.09** **69** **P** **16 38 41.0 -0.9**
KAN13 IAmb IAmb 16 38 42.4
comp=Z,89nm,0.9s

CROK **Carrier** **58.14** **70** **P** **16 38 40.8 -1.5**
CROK IAmb IAmb 16 39 35.0
comp=Z,49nm,0.8s

JFWS **Jewell Farm** **58.17** **60** P **P** **16 38 40.9 -1.5**
JFWS IAmb IAmb 16 38 42.1
comp=Z,58nm,0.7s

JFWS **Jewell Farm** **58.17** **60** P **P** **16 38 40.9 -1.5**
JFWS pmax pmax
comp=Z,58nm,0.7s

JFWS **Jewell Farm** **58.17** **60** P **P** **16 38 41.2 -1.2**
baz=313,SNR=28

JFWS **Jewell Farm** **58.17** **60** P **P** **16 38 41.1 -1.2**
baz=312,SNR=28

JFWS S **S** **16 46 34.2 -3.8**
baz=312

KURK **Kurchatov** **58.19** **313** P **P** **16 38 42.8 +0.5**
KURK **Kurchatov** **58.19** **313** *ceP* **P** **16 38 43.1 +0.8**
KURK pmax pmax
comp=Z,98nm,1.3s

KURK **Kurchatov** **58.19** **313** P **P** **16 38 43.3 +1.0**
KURK P **P** **16 38 43.3 +1.0**
KURK **Kurchatov** **58.19** **313** P **P** **16 38 43.1 +0.8**
KURK pP **pP** **16 39 00.9 -0.4**
KURK ScP **ScP** **16 43 26.4 +0.2**
L40A **Anamosa** **58.22** **61** P **P** **16 38 41.1 -1.6**
L40A IAmb IAmb 16 38 42.6
comp=Z,66nm,0.7s

L40A **Anamosa** **58.22** **61** P **P** **16 38 41.8 -0.9**
baz=313,SNR=33

I42A **Draeger Farm,** **58.23** **58** P **P** **16 38 41.8 -0.9**
I42A IAmb IAmb 16 38 43.1
comp=Z,64nm,0.8s

I42A **Draeger Farm,** **58.23** **58** P **P** **16 38 42.2 -0.5**
baz=313,SNR=27

KURBB **Kurchatov Arra** **58.30** **313** P **P** **16 38 43.8 +0.7**
comp=Z,56nm,0.5s,baz=42,slow=6.7,SNR=609

KURBB pP **pP** **16 39 01.8 -0.3**
comp=Z,49nm,0.6s,baz=47,slow=6.5,SNR=15

KURBB LR LR 17 04 35.6
comp=Z,712nm,21.6s,baz=31,slow=37
comp=Z,56nm,0.5s

KURBB **Kurchatov Arra** **58.30** **313** P **P** **16 38 43.4 +0.3**
JETT **Jettan, Norway** **58.33** **352** ⇑*iP* **P** **16 38 43.0 -0.1**
TRO **Tromso** **58.38** **352** *eP* **P** **16 38 43.4 0.0**
WMQ **Urumqi** **58.40** **302** *eP* **P** **16 38 45.6 +1.6**

WMQ pP pP 16 39 02.8 -0.4
WMQ S **S** **16 46 45.4 +4.4**
WMQ sS sS 16 47 14.9 +1.7
WMQ ScS **ScS** **16 48 27.1 +0.6**
WMQ pmax pmax
comp=Z,55nm,1.1s
WMQ pmax pmax
comp=Z,470nm,4.3s
WMQ LR LR
comp=Z,2µm,17.9s
WMQ LR LR
comp=Z,1µm,17.3s
WMQ LR LR
comp=Z,1µm,21.1s

H43A **Windswept, Lux** **58.44** **57** P **P** **16 38 43.4 -0.8**
H43A **Windswept, Lux** **58.44** **57** P **P** **16 38 43.6 -0.6**
baz=313,SNR=24

SOEG **Soedalen** **58.45** **13** *i* P **P** **16 38 42.5 -1.3**
SOEG IAmb IAmb 16 38 44.4
comp=Z,41nm,0.7s

P38A **Dawn** **58.59** **65** P **P** **16 38 44.0 -1.3**
P38A **Dawn** **58.59** **65** P **P** **16 38 44.3 -1.0**
baz=313,SNR=34

APA **Apatity** **58.59** **345** ⇑*iP* P 16 38 54.0 +9.1
APA *i* S S 16 46 57.0 +14
APA *i* PS **PnS** **16 47 07.0 +2.3**
APA *i* SSS SSS 16 53 02.0
APA pmax pmax
comp=Z,11nm,0.9s
APA MLR MLR
comp=Z,700nm,14.0s

T35A **Sooner Cattle** **58.73** **69** P **P** **16 38 45.1 -1.2**
T35A IAmb IAmb 16 39 37.4
comp=Z,32nm,0.9s

T35B **Sooner Cattle** **58.73** **69** P **P** **16 38 45.5 -0.8**
baz=314,SNR=11

T35B S **S** **16 46 45.2 -0.1**
baz=314

WMOK **Wichita Mounta** **58.88** **72** **P** **16 38 47.3 -0.1**
WMOK IAmb IAmb 16 38 49.0
comp=Z,55nm,0.8s

WMOK **Wichita Mounta** **58.88** **72** P **P** **16 38 47.3 -0.1**
WMOK pmax pmax
comp=Z,55nm,0.9s

WMOK **Wichita Mounta** **58.88** **72** P **P** **16 38 47.9 +0.4**
baz=314,SNR=30

WMOK S **S** **16 46 48.4 +1.0**
baz=314

WMOK **Wichita Mounta** **58.88** **72** P **P** **16 38 47.8 +0.4**
baz=314,SNR=30

WMOK S **S** **16 46 47.5 +0.1**
baz=314

E46A **Sault Ste Mari** **58.93** **53** P **P** **16 38 47.0 -0.5**
E46A **Sault Ste Mari** **58.93** **53** P **P** **16 38 47.4 -0.2**
baz=314,SNR=52

OK029 **Liberty Lake** **58.94** **70** **P** **16 38 47.3 -0.5**
OK029 IAmb IAmb 16 38 48.9
comp=Z,71nm,0.9s

BCOK **Bluff Creek, N** **58.95** **71** **P** **16 38 47.0 -0.8**
BCOK IAmb IAmb 16 38 49.0
comp=Z,79nm,1.1s

L42A **Oliver, Polo** **59.11** **60** P **P** **16 38 47.5 -1.3**
L42A IAmb IAmb 16 38 48.5
comp=Z,48nm,0.8s

L42A **Oliver, Polo** **59.11** **60** P **P** **16 38 47.6 -1.2**
baz=313,SNR=13

QUOK **Quay** **59.12** **70** **P** **16 38 48.4 -0.7**
QUOK IAmb IAmb 16 39 38.3
comp=Z,52nm,0.7s

MK31 **Makanchi Array** **59.15** **307** P **P** **16 38 48.8 -0.3**
MK31 **Makanchi Array** **59.15** **307** *i* P **P** **16 38 48.7 -0.4**
MK31 pmax pmax
comp=Z,27nm,0.6s

MKAR **Makanchi Array** **59.15** **307** P **P** **16 38 49.1 +0.1**
comp=Z,10.0nm,0.3s,baz=47,slow=6.7,SNR=265

MKAR pP **pP** **16 39 07.1 -1.0**
comp=Z,29nm,0.7s,baz=47,slow=7.0,SNR=12

MKAR ScP **ScP** **16 43 30.0 -0.5**
comp=Z,1.6nm,0.8s,baz=39,slow=9.3,SNR=2.3

MKAR S **S** **16 46 50.5 0.0**
comp=Z,2.6nm,1.1s,baz=51,slow=11,SNR=4.5

MKAR ScS **ScS** **16 48 31.0 -0.8**
comp=Z,0.3nm,0.8s,baz=159,slow=18,SNR=2.2

MKAR LR LR 17 06 30.1
comp=Z,516nm,18.3s,baz=48,slow=38

MKAR PKPPKP **P'P'df** **17 08 20.7 -3.6**
comp=Z,0.8nm,0.9s,baz=288,slow=1.2,SNR=4.6

MKAR PKP2bc 17 08 32.3
comp=Z,0.7nm,0.8s,baz=242,slow=1.2,SNR=4.9
comp=Z,10.0nm,0.3s

MKAR **Makanchi Array** **59.15** **307** P **P** **16 38 48.8 -0.3**
G45A **Suttons Bay** **59.15** **55** P **P** **16 38 48.3 -0.8**
G45A **Suttons Bay** **59.15** **55** P **P** **16 38 48.6 -0.5**
baz=314,SNR=11

G45A P **P** **16 38 48.6 -0.5**
baz=314,SNR=11

OK025 **Westminster Rd** **59.16** **70** **P** **16 38 48.6 -0.7**
OK025 IAmb IAmb 16 38 50.5
comp=Z,62nm,1.0s

OK031 **S. Brethren Rd** **59.19** **70** **P** **16 38 48.9 -0.6**
OK034 **N. Norfolk Rd.** **59.23** **70** **P** **16 38 49.1 -0.7**
OK034 IAmb IAmb 16 39 38.7
comp=Z,57nm,0.7s

GYA **Guiyang** **59.26** **275** ⇑P **P** **16 38 50.8 +0.5**
GYA pP pP 16 39 08.3 -1.2
GYA PcP **PcP** **16 39 38.8 +1.0**
GYA PP **PP** **16 41 01.8 +0.2**
GYA S **S** **16 46 52.3 -0.4**
GYA SS **SS** **16 50 44.1 -3.7**
GYA pmax pmax
comp=Z,24nm,1.9s
GYA LR LR
comp=Z,420nm,19.0s
GYA LR LR
comp=Z,590nm,22.0s
GYA LR LR
comp=Z,570nm,14.1s

MAKZ **Makanchi** **59.29** **308** P **P** **16 38 49.8 -0.3**
MAKZ pP **pP** **16 39 07.4 -1.7**
MAKZ IAmb IAmb 16 39 12.6
comp=Z,34nm,0.7s

MAKZ **Makanchi** **59.29** **308** P **P** **16 38 50.1 +0.1**
MAKZ pP **pP** **16 39 07.9 -1.2**
FNO **Franklin** **59.34** **71** **P** **16 38 50.0 -0.6**
FNO IAmb IAmb 16 38 52.1
comp=Z,98nm,1.1s

N41A **Harden Midland** **59.35** **62** P **P** **16 38 49.4 -1.2**
N41A **Harden Midland** **59.35** **62** P **P** **16 38 49.7 -0.8**
baz=314,SNR=18

K43A **Burlington** **59.35** **59** P **P** **16 38 49.2 -1.3**
K43A **Burlington** **59.35** **59** P **P** **16 38 49.7 -0.8**
baz=314,SNR=14

DEOK **Depew** **59.47** **70** **P** **16 38 50.5 -1.0**
DEOK IAmb IAmb 16 39 10.8
comp=Z,96nm,1.3s

P40A **Paris** **59.49** **64** P **P** **16 38 50.5 -1.0**
P40A **Paris** **59.49** **64** P **P** **16 38 50.8 -0.7**
baz=314,SNR=124

P40A S **S** **16 46 51.2 -3.8**
baz=314

I45A **Fountain** **59.54** **57** P **P** **16 38 50.8 -1.0**
I45A **Fountain** **59.54** **57** P **P** **16 38 51.4 -0.4**
baz=314,SNR=7.4

I45A P **P** **16 38 51.4 -0.4**
baz=314,SNR=7.4

GOMU **GeErMu** **59.63** **291** ⇑*eP* **P** **16 38 51.8 -1.2**
GOMU pP pP 16 39 08.4 -3.8
GOMU PcP **PcP** **16 39 39.5 0.0**
GOMU S **S** **16 46 53.0 -4.8**
GOMU ScS **ScS** **16 48 35.3 -1.2**
GOMU pmax pmax
comp=Z,21nm,0.9s
GOMU pmax pmax
comp=Z,95nm,4.8s
GOMU LR LR
comp=Z,510nm,20.4s
GOMU LR LR
comp=Z,350nm,20.9s
GOMU LR LR
comp=Z,420nm,23.9s

TX31 **Lajitas Ar. Si** **59.69** **80** P **P** **16 38 52.8 -0.3**
TX31 **Lajitas Ar. Si** **59.69** **80** P **P** **16 38 53.3 +0.2**
baz=315,SNR=86

TX31 S **S** **16 46 57.4 -0.7**
baz=315

TX32 **Lajitas Array** **59.69** **80** P **P** **16 38 53.0 -0.2**

TX32 IAmb IAmb 16 39 01.2
comp=Z,175nm,2.0s
TXAR Lajitas Array 59.69 80 P **P** **16 38 53.4 +0.3**
comp=Z,19nm,0.6s,baz=299,slow=4.9,SNR=229
TXAR pP **pP** **16 39 11.6 -0.3**
comp=Z,13nm,0.7s,baz=297,slow=5.5,SNR=4.3
TXAR ScP **ScP** **16 43 34.5 +1.2**
comp=Z,1.2nm,0.7s,baz=306,slow=3.2,SNR=3.0
TXAR S **S** **16 46 56.1 -1.9**
comp=Z,0.1nm,0.5s,baz=23,slow=36,SNR=1.2
TXAR LR LR 17 04 22.8
comp=Z,311nm,18.3s,baz=310,slow=36
TXAR PKPPKP **P'P'df** **17 08 20.4 -2.1**
comp=Z,0.4nm,0.9s,baz=126,slow=2.2,SNR=3.5
comp=Z,19nm,0.6s
TXAR Lajitas Array 59.69 80 P **P** **16 38 53.0 -0.1**
ANGG Ammassalik, Gr 59.82 17 P **P** **16 38 52.1 -1.2**
ANGG Ammassalik, Gr 59.82 17 *i* P **P** **16 38 52.5 -0.9**
ANGG IAmb IAmb 16 38 52.9
comp=Z,74nm,0.7s
SLBS Sierra La Lagu 59.83 89 P **P** **16 38 54.3 +0.1**
SLBS Sierra La Lagu 59.83 89 P **P** **16 38 55.1 +1.0**
SLBS pP **pP** **16 39 13.8 +0.8**
SLBS sP **sP** **16 39 22.1 +0.8**
ABTX Abilene, Hawle 59.83 75 P **P** **16 38 54.2 +0.2**
ABTX Abilene, Hawle 59.83 75 P **P** **16 38 54.5 +0.5**
baz=315,SNR=67
ABTX S **S** **16 47 00.2 +0.5**
baz=315
ABTX Abilene, Hawle 59.83 75 P **P** **16 38 54.5 +0.5**
baz=314,SNR=67
ABTX S **S** **16 47 00.5 +0.8**
baz=314
GLMI Grayling 59.83 55 P **P** **16 38 53.6 -0.2**
baz=314
TUL1 Leonard 59.84 69 P **P** **16 38 53.4 -0.6**
TUL1 IAmb IAmb 16 39 41.1
comp=Z,47nm,0.8s
TUL1 Leonard 59.84 69 P **P** **16 38 53.7 -0.3**
baz=314,SNR=15
TUL1 Leonard 59.84 69 P **P** **16 38 53.7 -0.3**
baz=314,SNR=15
TUL1 S **S** **16 46 58.1 -1.5**
baz=314
MANU Manus Island 59.88 218 P **P** **16 38 53.7 -0.7**
L44A Lake County Fo 59.94 59 P **P** **16 38 53.4 -1.1**
L44A Lake County Fo 59.94 59 P **P** **16 38 53.9 -0.6**
baz=314,SNR=14
L44A Lake County Fo 59.94 59 P **P** **16 38 53.9 -0.6**
baz=314,SNR=14
S39A Bolivar 60.03 66 P **P** **16 38 53.3 -2.0**
S39A Bolivar 60.03 66 P **P** **16 38 53.8 -1.5**
baz=314,SNR=7.8
RLO Rose Lookout 60.11 69 **P** **16 38 54.5 -1.3**
RLO IAmb IAmb 16 39 42.9
comp=Z,26nm,0.7s
BVA0 Borovoye Array 60.13 319 *i* P **P** **16 38 56.0 +0.3**
BRVK Borovoye 60.15 319 P **P** **16 38 56.1 +0.3**
BRVK Borovoye 60.15 319 *ce* P **P** **16 38 56.8 +0.9**
BRVK pmax pmax
comp=Z,18nm,1.3s
BRVK Borovoye 60.15 319 P **P** **16 38 56.5 +0.7**
BRVK P **P** **16 38 56.5 +0.7**
BRVK Borovoye 60.15 319 P **P** **16 38 56.4 +0.6**
BRVK pP **pP** **16 39 14.2 -0.8**
BRVK sP **sP** **16 39 23.4 +0.2**
HPIG 60.15 83 P **P** **16 38 55.7 -0.8**
R40A Maddies Statio 60.22 65 P **P** **16 38 54.7 -1.8**
R40A IAmb IAmb 16 38 57.2
comp=Z,48nm,0.6s
R40A Maddies Statio 60.22 65 P **P** **16 38 54.9 -1.7**
baz=314,SNR=66
HQIL Hanson Quary C 60.23 59 P **P** **16 38 55.7 -0.9**
HQIL IAmb IAmb 16 38 56.9
comp=Z,73nm,0.8s
LOF Lofoten 60.27 354 *eP* **P** **16 38 56.0 -0.4**
HDIL Hopedale 60.31 61 P **P** **16 38 56.0 -1.2**
HDIL Hopedale 60.31 61 P **P** **16 38 56.4 -0.7**
baz=314,SNR=38
HDIL Hopedale 60.31 61 P **P** **16 38 56.4 -0.7**
baz=314,SNR=38
KRVT Keravat (AS076 60.31 212 P **P** **16 38 57.4 0.0**
comp=Z,41nm,1.0s,baz=47,slow=19,SNR=5.7
KRVT LR LR 17 00 11.0
comp=Z,548nm,21.7s,baz=158,slow=31
comp=Z,41nm,1.0s
STEI Steigen 60.35 353 *eP* **P** **16 38 56.7 -0.2**
LOOK Love County 60.35 72 **P** **16 38 57.1 -0.4**
LOOK IAmb IAmb 16 39 17.9
comp=Z,442nm,1.7s
M44A Midewin, Midew 60.41 60 P **P** **16 38 57.0 -0.8**
M44A Midewin, Midew 60.41 60 P **P** **16 38 57.2 -0.6**
baz=314,SNR=29
SCHQ Schefferville 60.59 37 P **P** **16 38 58.4 -0.5**
comp=Z,73nm,0.8s,baz=326,slow=7.2,SNR=73
SCHQ LR LR 17 05 56.8
comp=Z,737nm,21.3s,baz=322,slow=37
comp=Z,73nm,0.8s
SCHQ Schefferville 60.59 37 P **P** **16 38 58.1 -0.7**
SCHQ IAmb IAmb 16 38 59.4
comp=Z,66nm,0.8s
HHAR Hobbs 60.66 68 P **P** **16 38 58.3 -1.3**
HHAR IAmb IAmb 16 38 59.9
comp=Z,31nm,0.5s
HHAR Hobbs 60.66 68 P **P** **16 38 58.6 -1.0**
baz=314
Z35A Perchaven, San 60.77 72 P **P** **16 39 00.0 -0.4**
Z35A Perchaven, San 60.77 72 P **P** **16 39 00.4 +0.1**
baz=315,SNR=9.7
Z35A S **S** **16 47 11.7 +0.1**
baz=315
P43A Skaggs, Pawnee 60.82 62 P **P** **16 38 59.3 -1.3**
P43A Skaggs, Pawnee 60.82 62 P **P** **16 38 59.8 -0.8**
baz=314,SNR=16
J47A Sunmer 60.84 56 P **P** **16 38 60.0 -0.7**
J47A Sunmer 60.84 56 P **P** **16 39 00.3 -0.3**
baz=315,SNR=16
J47A P **P** **16 39 00.3 -0.3**
baz=315,SNR=16
FAUS Fauske 60.88 353 *eP* **P** **16 39 00.6 +0.1**
L46A Eue Claire 60.92 58 P **P** **16 39 00.1 -1.2**
L46A Eue Claire 60.92 58 P **P** **16 39 00.4 -0.8**
baz=315,SNR=14
L46A P **P** **16 39 00.4 -0.8**
baz=315,SNR=14
CCM Cathedral Cave 60.96 65 P **P** **16 38 59.9 -1.7**
CCM Cathedral Cave 60.96 65 P **P** **16 38 59.9 -1.7**
CCM pmax pmax
comp=Z,19nm,0.7s
CCM Cathedral Cave 60.96 65 P **P** **16 39 00.1 -1.4**
baz=314,SNR=22
CCM S **S** **16 47 12.7 -1.2**
baz=314
CCM Cathedral Cave 60.96 65 P **P** **16 39 00.2 -1.4**
baz=314
CCM S **S** **16 47 08.9 -5.0**
baz=314
CCM Cathedral Cave 60.96 65 P **P** **16 39 00.2 -1.4**
X37A Clayton 61.00 70 **P** **16 39 01.6 -0.3**
X37A IAmb IAmb 16 39 21.1
comp=Z,57nm,1.0s
X37A Clayton 61.00 70 P **P** **16 39 02.1 +0.2**
baz=315,SNR=22
MGMO Mountain Grove 61.01 66 P **P** **16 39 00.1 -1.8**
MGMO IAmb IAmb 16 39 02.8
comp=Z,51nm,0.8s
VLDQ Val d'Or 61.02 48 P **P** **16 38 58.9 -2.9**
VLDQ IAmb IAmb 16 39 00.3
comp=Z,43nm,0.8s
O44A Mansfield 61.05 61 P **P** **16 39 00.8 -1.3**
O44A IAmb IAmb 16 39 02.2
comp=Z,48nm,0.7s
O44A Mansfield 61.05 61 P **P** **16 39 01.3 -0.8**
baz=315,SNR=13
SLM Saint Louis 61.12 63 P **P** **16 39 01.4 -1.2**
SLM IAmb IAmb 16 39 02.9
comp=Z,42nm,0.7s
SLM Saint Louis 61.12 63 P **P** **16 39 01.5 -1.2**
SLM pmax pmax
comp=Z,42nm,0.7s
SLM Saint Louis 61.12 63 P **P** **16 39 01.8 -0.8**
baz=315
JCT Junction City 61.24 76 P **P** **16 39 02.9 -0.7**
JCT IAmb IAmb 16 39 05.9
comp=Z,53nm,0.7s
JCT Junction City 61.24 76 P **P** **16 39 02.9 -0.7**
JCT pmax pmax
comp=Z,53nm,0.7s
JCT Junction City 61.24 76 P **P** **16 39 03.6 -0.1**
baz=316,SNR=37
JCT S **S** **16 47 16.8 -1.1**
baz=316
JCT Junction City 61.24 76 P **P** **16 39 03.6 -0.1**
baz=315,SNR=37
JCT S **S** **16 47 16.7 -1.1**
baz=315
I49A Point Hope 61.37 55 P **P** **16 39 04.0 -0.3**
I49A Point Hope 61.37 55 P **P** **16 39 04.0 -0.3**
baz=315,SNR=9.4
I49A P **P** **16 39 04.0 -0.3**
baz=315,SNR=9.4
BRZS Berezniki 61.39 315 *eP* **P** **16 39 05.1 +0.8**
BRZS *eS* **S** **16 47 20.2 +1.2**
BRZS pmax pmax
comp=Z,16nm,1.0s
BRZS Berezniki 61.39 315 *eP* **P** **16 39 05.1 +0.8**
comp=Z,16nm,1.0s,baz=315
BRZS *eS* **S** **16 47 20.3 +1.2**
baz=315
IVI Ivigtut 61.40 24 P **P** **16 39 03.5 -0.6**
IVI Ivigtut 61.40 24 *i* P **P** **16 39 04.2 0.0**
IVI IAmb IAmb 16 39 04.5
comp=Z,93nm,0.7s
IVI Ivigtut 61.40 24 P **P** **16 39 03.8 -0.3**
IVI pP **pP** **16 39 22.3 -1.0**
PRGR Permogore 61.42 337 *eP* **P** **16 39 04.0 -0.3**
PRGR *e**PP **pP** **16 39 24.1 +0.7**
PRGR *e**SP **sP** **16 39 31.2 -0.4**
PRGR *eS* **S** **16 47 14.8 -4.2**
PRGR *e* 16 48 45.0
FVM French Village 61.48 64 P **P** **16 39 03.7 -1.4**
FVM IAmb IAmb 16 39 06.5
comp=Z,26nm,0.7s
FVM French Village 61.48 64 P **P** **16 39 03.7 -1.4**
FVM pmax pmax
comp=Z,26nm,0.7s
FVM French Village 61.48 64 P **P** **16 39 04.1 -1.0**
baz=315,SNR=18
WHTX Lake Whitney, 61.59 74 P **P** **16 39 05.5 -0.4**
WHTX Lake Whitney, 61.59 74 P **P** **16 39 06.5 +0.6**
baz=315,SNR=24
WHTX S **S** **16 47 22.3 +0.2**
baz=315
WHTX Lake Whitney, 61.59 74 P **P** **16 39 06.9 +1.0**
baz=315,SNR=24
WHTX S **S** **16 47 23.2 +1.1**
baz=315
Q44A Meyer Farm, Va 61.62 62 P **P** **16 39 04.9 -1.1**
Q44A IAmb IAmb 16 39 07.8
comp=Z,74nm,1.0s
Q44A Meyer Farm, Va 61.62 62 P **P** **16 39 05.1 -0.8**
baz=315,SNR=18
SFIN Lafayette 61.63 60 P **P** **16 39 05.3 -0.7**
SFIN Lafayette 61.63 60 P **P** **16 39 05.6 -0.4**
baz=315,SNR=68
SFIN Lafayette 61.63 60 P **P** **16 39 05.4 -0.6**
baz=315,SNR=68
SFIN S **S** **16 47 19.2 -3.2**
baz=315
KONS Konsvik 61.91 354 *eP* **P** **16 39 07.3 -0.2**
L48A N Adams 61.95 57 P **P** **16 39 07.4 -0.8**
L48A IAmb IAmb 16 39 09.5
comp=Z,54nm,0.6s
L48A N Adams 61.95 57 P **P** **16 39 07.6 -0.6**
baz=315,SNR=14
L48A P **P** **16 39 07.6 -0.6**
baz=315,SNR=14
ARU Arti 61.97 327 LR LR 17 08 18.6
comp=Z,521nm,21.3s,baz=38,slow=38
ARU Arti 61.97 327 P **P** **16 39 07.4 -0.7**
ARU IAmb IAmb 16 39 31.7
comp=Z,74nm,1.0s
ARU Arti 61.97 327 *c i* P **P** **16 39 08.3 +0.2**
ARU ***PP **pP** **16 39 27.4 +0.2**
ARU 16 39 46.2
ARU PPP PPP 16 42 52.0
ARU S **S** **16 47 27.4 +1.3**
ARU ***SS **sS** **16 48 00.6 +2.6**
ARU 16 48 48.6
ARU SS **SS** **16 51 28.1 -0.5**
ARU pmax pmax
comp=Z,14nm,0.7s
ARU MLR MLR
comp=Z,543nm,21.0s
ARU Arti 61.97 327 P **P** **16 39 08.3 +0.2**
ARU pP **pP** **16 39 27.9 +0.6**
FCAR Ozark Folk Cen 61.98 67 P **P** **16 39 07.2 -1.2**
N47A Urbana 62.03 59 P **P** **16 39 07.3 -1.5**
N47A IAmb IAmb 16 39 09.9
comp=Z,46nm,0.8s
N47A Urbana 62.03 59 P **P** **16 39 07.7 -1.1**
baz=315,SNR=23
N47A P **P** **16 39 07.7 -1.1**
baz=315,SNR=23
MIAR Mount Ida 62.09 69 P **P** **16 39 08.7 -0.5**
MIAR Mount Ida 62.09 69 P **P** **16 39 08.7 -0.5**
MIAR pmax pmax
comp=Z,81nm,0.8s
MIAR Mount Ida 62.09 69 P **P** **16 39 09.5 +0.3**
baz=315,SNR=66
MIAR S **S** **16 47 27.8 -0.5**
baz=315
MIAR Mount Ida 62.09 69 P **P** **16 39 09.5 +0.3**
baz=315,SNR=66
MIAR S **S** **16 47 27.9 -0.3**
baz=315
AAM Ann Arbor 62.10 56 P **P** **16 39 08.2 -1.0**
AAM IAmb IAmb 16 39 09.8
comp=Z,46nm,0.6s
AAM Ann Arbor 62.10 56 P **P** **16 39 08.2 -1.0**
AAM pmax pmax
comp=Z,46nm,0.6s
AAM Ann Arbor 62.10 56 P **P** **16 39 09.1 -0.1**
baz=316,SNR=6.6
AAM Ann Arbor 62.10 56 P **P** **16 39 08.5 -0.7**
baz=315,SNR=6.6
P46A Rosedale 62.11 61 P **P** **16 39 08.3 -1.0**
P46A IAmb IAmb 16 39 09.8
comp=Z,67nm,0.8s
P46A Rosedale 62.11 61 P **P** **16 39 08.9 -0.3**
baz=315,SNR=18
NRS Narsarsuaq 62.12 23 P **P** **16 39 07.5 -1.5**
NRS IAmb IAmb 16 39 08.9
comp=Z,48nm,0.7s
NRS Narsarsuaq 62.12 23 P **P** **16 39 07.5 -1.5**
NRS pmax pmax
comp=Z,49nm,0.7s
NRS Narsarsuaq 62.12 23 *i* P **P** **16 39 06.1 -2.9**
NRS IAmb IAmb 16 39 08.6
comp=Z,51nm,0.7s
MOR8 Moi Rana 62.14 353 *eP* **P** **16 39 07.8 -1.3**
Z38A Mt. Pleasant 62.17 71 P **P** **16 39 09.2 -0.6**
Z38A Mt. Pleasant 62.17 71 P **P** **16 39 10.0 +0.3**
baz=315,SNR=22
OLIL Olney 62.24 62 P **P** **16 39 09.3 -0.9**
OLIL IAmb IAmb 16 39 10.6
comp=Z,57nm,0.8s
OLIL Olney 62.24 62 P **P** **16 39 09.7 -0.5**
baz=315,SNR=22
PZH PanZhiHua 62.28 278 P **P** **16 39 11.0 +0.2**
PZH pP **pP** **16 39 29.0 -1.2**
PZH sP **sP** **16 39 38.3 -0.3**
PZH S **S** **16 47 30.4 -0.8**
PZH ScS **ScS** **16 48 54.8 -1.4**
PZH pmax pmax
comp=Z,30nm,1.1s
PZH pmax pmax
comp=Z,260nm,5.7s
PZH LR LR
comp=Z,610nm,22.5s
PZH LR LR
comp=Z,330nm,20.5s
PZH LR LR
comp=Z,860nm,28.9s
K50A Casco 62.30 55 P **P** **16 39 09.7 -0.8**
K50A IAmb IAmb 16 39 11.0
comp=Z,43nm,0.7s
WHAR Wooly Hollow 62.31 67 P **P** **16 39 09.5 -1.1**
WHAR IAmb IAmb 16 39 17.0
comp=Z,59nm,0.9s
PBMO Poplar Bluff 62.32 65 P **P** **16 39 09.4 -1.3**
PBMO Poplar Bluff 62.32 65 P **P** **16 39 09.9 -0.8**
baz=315,SNR=66
TDK Taldyqorghan 62.33 308 *eP* **P** **16 39 11.7 +1.0**
TDK *eS* **S** **16 47 32.5 +1.4**
TDK pmax pmax
comp=Z,18nm,0.6s
TDK Taldyqorghan 62.33 308 *eP* **P** **16 39 11.8 +1.0**
comp=Z,18nm,0.6s,baz=308
TDK *eS* **S** **16 47 32.6 +1.4**
baz=308
S44A Carbondale 62.34 64 P **P** **16 39 09.4 -1.4**
S44A IAmb IAmb 16 39 12.8
comp=Z,53nm,0.7s
S44A Carbondale 62.34 64 P **P** **16 39 09.8 -1.1**
baz=315,SNR=33
SIUC Southern Illin 62.34 64 P **P** **16 39 09.6 -1.2**
SIUC IAmb IAmb 16 39 12.4
comp=Z,60nm,0.8s
435B Jarrell 62.37 75 P **P** **16 39 10.9 -0.3**
435B Jarrell 62.37 75 P **P** **16 39 11.8 +0.6**
baz=316,SNR=22
435B S **S** **16 47 32.9 +0.9**
baz=316
435B Jarrell 62.37 75 P **P** **16 39 11.5 +0.4**
baz=316
435B S **S** **16 47 34.3 +2.4**
baz=316
CGM3 Cape Girardeau 62.39 64 P **P** **16 39 09.8 -1.4**
CGM3 IAmb IAmb 16 39 11.9
comp=Z,15nm,0.8s
LCAR Lake Charles 62.41 66 P **P** **16 39 09.8 -1.5**
LCAR IAmb IAmb 16 39 12.3
comp=Z,49nm,0.8s
LCAR Lake Charles 62.41 66 P **P** **16 39 10.0 -1.4**
baz=315,SNR=67
DAV Davao City (W) 62.55 245 LR LR 17 02 37.8
comp=Z,766nm,21.6s,baz=43,slow=32
237A Washetta, Mont 62.57 72 P **P** **16 39 12.5 0.0**
237A Washetta, Mont 62.57 72 P **P** **16 39 12.9 +0.4**
baz=316,SNR=11
237A S **S** **16 47 33.7 -0.7**
baz=316
SADO Sadowa 62.62 52 LR LR 17 06 30.8
comp=Z,1μm,22.0s,baz=354,slow=36
SADO Sadowa 62.62 52 P **P** **16 39 11.4 -1.2**
UALR University of 62.64 68 P **P** **16 39 11.9 -0.9**
KMI Kunming 62.66 277 ⇓P **P** **16 39 12.8 -0.7**
KMI pP pP 16 39 31.9 -0.9
KMI sP sP 16 39 40.8 -0.4
KMI S **S** **16 47 35.8 -0.4**
KMI sS sS 16 48 09.9 +1.8
KMI pmax pmax
comp=Z,21nm,1.3s
KMI pmax pmax
comp=Z,220nm,4.1s
KMI LR LR
comp=Z,280nm,19.0s
KMI LR LR
comp=Z,370nm,17.1s
KMI LR LR
comp=Z,460nm,21.1s
QIZ Qiongzhong 62.71 267 P **P** **16 39 14.4 +0.9**
QIZ sP **sP** **16 39 41.1 -0.2**
QIZ S **S** **16 47 38.1 +1.7**
QIZ sS **sS** **16 48 06.0 -1.6**
QIZ LR LR
comp=Z,570nm,21.7s
QIZ LR LR
comp=Z,560nm,18.4s
QIZ LR LR
comp=Z,440nm,19.1s
O48B Farmland 62.77 59 P **P** **16 39 12.5 -1.2**
baz=316,SNR=49
O48B Farmland 62.77 59 P **P** **16 39 12.3 -1.4**
baz=316,SNR=49
PARMO Parma 62.79 65 P **P** **16 39 13.1 -0.8**
BLO Bloomington 62.80 61 P **P** **16 39 12.9 -1.0**
BLO Bloomington 62.80 61 P **P** **16 39 12.9 -1.0**
BLO pmax pmax
comp=Z,59nm,0.6s
N49A Columbus Grove 62.81 58 P **P** **16 39 12.9 -1.0**
N49A IAmb IAmb 16 39 15.1
comp=Z,68nm,0.7s
N49A Columbus Grove 62.81 58 P **P** **16 39 13.1 -0.8**
baz=316,SNR=27
N49A P **P** **16 39 13.1 -0.8**
baz=316,SNR=27
HNR Honiara 62.96 202 LR LR 17 01 25.9
comp=Z,611nm,21.8s,baz=26,slow=31
WLAR White Oak Lake 62.97 69 P **P** **16 39 15.1 0.0**
BORG Borgarnes 63.01 10 LR LR 17 07 06.4
comp=Z,320nm,21.3s,baz=352,slow=36
BORG Borgarnes 63.01 10 P **P** **16 39 16.1 +1.3**
BORG IAmb IAmb 16 39 17.2
comp=Z,67nm,0.8s
BORG Borgarnes 63.01 10 P **P** **16 39 16.1 +1.3**
BORG pmax pmax
comp=Z,67nm,0.9s
BORG Borgarnes 63.01 10 P **P** **16 39 16.3 +1.5**
BORG pP **pP** **16 39 33.2 -0.7**
833A Chaparral WMA, 63.03 78 P **P** **16 39 15.6 0.0**
833A Chaparral WMA, 63.03 78 P **P** **16 39 15.8 +0.2**
baz=316,SNR=14
833A S **S** **16 47 40.7 +0.5**
baz=316
833A Chaparral WMA, 63.03 78 P **P** **16 39 16.0 +0.4**
baz=316,SNR=14
833A S **S** **16 47 41.4 +1.2**
baz=316
KIRV Kirov 63.03 333 LR LR 17 11 53.0
comp=Z,294nm,18.0s,baz=32,slow=41
KIRV Kirov 63.03 333 *ce* P **P** **16 39 15.2 +0.1**
USIN University of 63.03 62 P **P** **16 39 14.6 -0.8**
HBAR Harrisburg 63.06 66 P **P** **16 39 14.2 -1.4**
HBAR IAmb IAmb 16 39 17.1
comp=Z,87nm,0.8s
M50A Fremont 63.06 57 P **P** **16 39 14.6 -1.1**
M50A IAmb IAmb 16 39 16.2
comp=Z,50nm,0.7s
M50A Fremont 63.06 57 P **P** **16 39 15.3 -0.4**
baz=316,SNR=7.3
M50A P **P** **16 39 15.3 -0.4**
baz=316,SNR=7.3
GNAR Gosnell 63.13 65 P **P** **16 39 15.3 -0.9**
GNAR IAmb IAmb 16 39 17.6
comp=Z,46nm,0.7s
SHLS Shalkode 63.14 306 *eP* **P** **16 39 15.6 -0.6**
SHLS pmax pmax
comp=Z,9.0nm,0.6s
SHLS Shalkode 63.14 306 *eP* **P** **16 39 15.7 -0.6**
comp=Z,8.8nm,0.6s,baz=306
T45A Paducah 63.16 64 P **P** **16 39 15.6 -0.7**
HICK Hickman 63.17 64 P **P** **16 39 15.4 -1.0**
HICK IAmb IAmb 16 39 19.5
comp=Z,72nm,0.8s
ARXS Arharly 63.19 308 *i* P **P** **16 39 17.4 +0.9**
P48A Milroy 63.19 60 P **P** **16 39 15.2 -1.3**
P48A Milroy 63.19 60 P **P** **16 39 15.5 -1.0**
baz=316,SNR=74
P48A P **P** **16 39 15.5 -1.0**
baz=316,SNR=74
O49A Covington 63.25 59 P **P** **16 39 15.6 -1.3**
O49A IAmb IAmb 16 39 18.7
comp=Z,36nm,0.6s
O49A Covington 63.25 59 P **P** **16 39 16.0 -0.9**
baz=316,SNR=13
O49A P **P** **16 39 16.0 -0.9**
baz=316,SNR=13
KPKS Kokpek 63.30 307 *eP* **P** **16 39 18.1 +0.8**
KPKS *eS* **S** **16 47 44.5 +1.0**
KPKS Kokpek 63.30 307 *eP* **P** **16 39 18.1 +0.8**
baz=307
KPKS *eS* **S** **16 47 44.5 +1.0**
baz=307
GLAT Glass 63.33 65 P **P** **16 39 16.7 -0.8**
GLAT IAmb IAmb 16 39 20.1
comp=Z,70nm,0.7s
LNXT Lenox 63.33 65 P **P** **16 39 16.8 -0.7**
LNXT Lenox 63.33 65 P **P** **16 39 17.5 0.0**
baz=316,SNR=9.9
GENI Genyem 63.37 225 P **P** **16 39 18.9 +1.1**
comp=Z,174nm,1.2s
UZB Uzynbulak 63.37 306 *eP* **P** **16 39 18.1 +0.3**
UZB Uzynbulak 63.37 306 *eP* **P** **16 39 18.2 +0.3**
baz=306
NATX Nacogdoches 63.42 72 P **P** **16 39 17.8 -0.3**

NATX Nacogdoches 63.42 72 P **P** **16 39 19.0 +0.8**
baz=316,SNR=10
NATX Nacogdoches 63.42 72 P **P** **16 39 18.6 +0.5**
baz=316,SNR=10
NATX S **S** **16 47 46.5 +1.5**
baz=316
P49A Miami Univ. Ec 63.52 59 P **P** **16 39 16.6 -2.0**
P49A IAmb IAmb 16 39 19.5
comp=Z,52nm,0.7s
P49A Miami Univ. Ec 63.52 59 P **P** **16 39 17.7 -1.0**
baz=316,SNR=25
P49A Miami Univ. Ec 63.52 59 P **P** **16 39 17.5 -1.2**
baz=316,SNR=25
KLMR Klimovskoe 63.53 339 *e*P **P** **16 39 16.9 -1.4**
KLMR *e*S **S** **16 47 45.4 -0.1**
KLMR pmax pmax
comp=Z,20nm,1.0s
KLMR Klimovskoe 63.53 339 *e*P **P** **16 39 17.0 -1.4**
KLMR AMP 16 39 20.5
comp=Z,20nm,1.0s
KLMR *e*S **S** **16 47 45.5 -0.1**
KLMR *e*S **S** **16 47 45.5 -0.1**
KLMR *e*SSS SSS 16 54 58.1
KLMR *e*SSS SSS 16 54 58.1
KLMR LQ LQ 17 01 11.9
KLMR LQ LQ 17 01 11.9
KLMR LR LR 17 03 47.3
HALT Halls 63.56 65 P **P** **16 39 18.2 -0.7**
CCAR Cane Creek 63.58 68 P **P** **16 39 19.1 -0.1**
735A Kenedy 63.61 76 P **P** **16 39 18.7 -0.7**
735A IAmb IAmb 16 39 22.2
comp=Z,123nm,1.0s
735A Kenedy 63.61 76 P **P** **16 39 20.9 +1.5**
baz=316,SNR=9.2
735A S **S** **16 47 49.8 +2.3**
baz=316
ZHN Zhinishke 63.65 307 *e*P **P** **16 39 18.5 -1.1**
ZHN Zhinishke 63.65 307 *e*P **P** **16 39 18.5 -1.1**
baz=307
SATY Saty 63.74 307 *e*P **P** **16 39 21.2 +1.0**
SATY Saty 63.74 307 *e*P **P** **16 39 21.3 +1.0**
baz=307
TRQ Mont Tremblant 63.76 48 P **P** **16 39 18.1 -2.0**
N51A Ashland 63.76 57 P **P** **16 39 19.2 -1.0**
N51A Ashland 63.76 57 P **P** **16 39 19.5 -0.7**
baz=316,SNR=24
N51A P **P** **16 39 19.5 -0.7**
baz=316,SNR=24
MET Memphis--Engin 63.78 66 P **P** **16 39 20.1 -0.3**
M52A Chesterland 63.84 56 P **P** **16 39 20.0 -0.7**
M52A IAmb IAmb 16 39 22.4
comp=Z,63nm,0.6s
M52A Chesterland 63.84 56 P **P** **16 39 20.3 -0.4**
baz=317,SNR=7.7
M52A P **P** **16 39 20.3 -0.4**
baz=317,SNR=7.7
NSS Namsos 63.94 354 *e*P **P** **16 39 20.7 -0.3**
ACSO Alum Creek Sta 63.94 58 P **P** **16 39 20.5 -0.9**
ACSO IAmb IAmb 16 39 23.1
comp=Z,62nm,0.6s
ACSO Alum Creek Sta 63.94 58 P **P** **16 39 20.9 -0.5**
baz=316,SNR=21
ACSO Alum Creek Sta 63.94 58 P **P** **16 39 20.9 -0.5**
baz=316,SNR=21
J54A Appleton 63.96 53 P **P** **16 39 21.0 -0.5**
J54A IAmb IAmb 16 39 22.2
comp=Z,85nm,0.7s
J54A Appleton 63.96 53 P **P** **16 39 21.2 -0.3**
baz=317,SNR=13
J54A P **P** **16 39 21.2 -0.3**
baz=317,SNR=13
HKT Hockley 64.02 74 P **P** **16 39 21.9 -0.1**
HKT Hockley 64.02 74*d i*P **P** **16 39 22.2 +0.2**
HKT pmax pmax
comp=Z,49nm,0.9s
HKT Hockley 64.02 74 P **P** **16 39 22.9 +1.0**
baz=316
HKT S **S** **16 47 51.1 -1.3**
baz=316
HKT Hockley 64.02 74 P **P** **16 39 23.1 +1.1**
HKT pP **pP** **16 39 40.7 -0.5**
T47A Sharon Grove 64.04 63 P **P** **16 39 21.6 -0.6**
T47A Sharon Grove 64.04 63 P **P** **16 39 22.1 0.0**
baz=316,SNR=77
T47A S **S** **16 47 51.3 -1.2**
baz=316
ERPA Erie 64.12 54 P **P** **16 39 21.8 -0.8**
ERPA IAmb IAmb 16 39 24.2
comp=Z,85nm,0.9s
ERPA Erie 64.12 54 P **P** **16 39 22.8 +0.2**
baz=317,SNR=6.8
ERPA Erie 64.12 54 P **P** **16 39 22.1 -0.5**
baz=317,SNR=6.8
ERPA S **S** **16 47 53.4 -0.1**
baz=317
KUU Kurty 64.15 309 *e*P **P** **16 39 22.8 0.0**
KUU pmax pmax
comp=Z,22nm,0.9s
KUU Kurty 64.15 309 *e*P **P** **16 39 22.9 0.0**
comp=Z,22nm,0.9s,baz=309
R49A Shelbyville 64.17 61 P **P** **16 39 22.0 -0.9**
R49A Shelbyville 64.17 61 P **P** **16 39 22.6 -0.3**
baz=316,SNR=8.9
R49A P **P** **16 39 22.6 -0.3**
baz=316,SNR=8.9
R49A S **S** **16 47 52.6 -1.5**
baz=316
R49A S **S** **16 47 52.6 -1.5**
baz=316
W45A Hickory Valley 64.18 66 P **P** **16 39 22.0 -1.0**
W45A Hickory Valley 64.18 66 P **P** **16 39 22.9 -0.1**
baz=316,SNR=20
WVT Waverly 64.25 64 P **P** **16 39 22.5 -1.0**
WVT IAmb IAmb 16 39 25.6
comp=Z,52nm,0.8s
WVT Waverly 64.25 64 P **P** **16 39 22.5 -1.0**
WVT pmax pmax
comp=Z,52nm,0.8s
WVT Waverly 64.25 64 P **P** **16 39 23.3 -0.2**
baz=316,SNR=56
WVT Waverly 64.25 64 P **P** **16 39 22.8 -0.7**
baz=316
WVT S **S** **16 47 53.3 -1.9**
baz=316
WVT Waverly 64.25 64 P **P** **16 39 23.0 -0.5**
M53A WI Miller and 64.27 55 P **P** **16 39 22.8 -0.8**
M53A IAmb IAmb 16 39 25.1
comp=Z,92nm,0.7s
M53A WI Miller and 64.27 55 P **P** **16 39 23.0 -0.5**
baz=317,SNR=19
M53A S **S** **16 47 54.0 -1.3**
baz=317
MDOK Medeo 64.34 308 *e*P **P** **16 39 25.0 +0.8**
MDOK Medeo 64.34 308 *e*P **P** **16 39 25.1 +0.8**
baz=308
AAA Alma-Ata 64.37 308 *e*P **P** **16 39 25.3 +1.0**
AAA pmax pmax
comp=Z,29nm,0.7s
AAA Alma-Ata 64.37 308 *e*P **P** **16 39 25.4 +1.1**
comp=Z,29nm,0.7s,baz=308
J55A Hilton 64.37 52 P **P** **16 39 23.1 -1.1**
J55A IAmb IAmb 16 39 24.7
comp=Z,65nm,0.8s
J55A Hilton 64.37 52 P **P** **16 39 23.9 -0.2**
baz=318,SNR=6.4
J55A P **P** **16 39 23.9 -0.2**
baz=318,SNR=6.4
ALLY Alegheny Colle 64.39 55 P **P** **16 39 23.5 -0.8**
ALLY IAmb IAmb 16 39 26.0
comp=Z,100nm,0.8s
ALLY Alegheny Colle 64.39 55 P **P** **16 39 24.0 -0.3**
baz=317,SNR=20
BTLS Baital 64.41 311*d i*P **P** **16 39 25.1 +0.7**
BTLS pmax pmax
comp=Z,12nm,0.6s
BTLS Baital 64.41 311 ⇓ *i*P **P** **16 39 25.2 +0.7**
comp=Z,12nm,0.6s,baz=311
P51A Williamsport 64.44 58 P **P** **16 39 23.3 -1.4**
P51A IAmb IAmb 16 39 26.0
comp=Z,78nm,0.6s
P51A Williamsport 64.44 58 P **P** **16 39 24.0 -0.7**
baz=317,SNR=21
P51A P **P** **16 39 24.0 -0.7**
baz=317,SNR=21
KVTX Kingsville 64.51 77 P **P** **16 39 25.0 -0.3**
KVTX IAmb IAmb 16 39 28.4
comp=Z,102nm,1.1s
OXF Oxford 64.52 66 P **P** **16 39 24.7 -0.6**
OXF Oxford 64.52 66 P **P** **16 39 24.7 -0.6**
OXF pmax pmax
comp=Z,251nm,1.0s
OXF Oxford 64.52 66 P **P** **16 39 25.2 0.0**
baz=316,SNR=27
OXF Oxford 64.52 66 P **P** **16 39 25.0 -0.3**
baz=316,SNR=27
OXF S **S** **16 47 57.3 -1.2**
baz=316
WVNY West Valley, N 64.61 53 P **P** **16 39 25.1 -0.7**
WVNY IAmb IAmb 16 39 26.4
comp=Z,94nm,0.7s
WVNY West Valley, N 64.61 53 P **P** **16 39 25.6 -0.2**
baz=318,SNR=31
WVNY S **S** **16 47 57.1 -2.4**
baz=318
Q51A Peebles 64.62 59 P **P** **16 39 25.2 -0.7**
Q51A Peebles 64.62 59 P **P** **16 39 25.8 -0.1**
baz=317,SNR=87
Q51A P **P** **16 39 25.8 -0.1**
baz=317,SNR=87
Q51A S **S** **16 47 58.9 -0.8**
baz=317
Q51A S **S** **16 47 58.9 -0.8**
baz=317
O52A Adamsville 64.63 57 P **P** **16 39 25.1 -0.9**
O52A Adamsville 64.63 57 P **P** **16 39 25.5 -0.4**
baz=317,SNR=57
O52A P **P** **16 39 25.5 -0.4**
baz=317,SNR=57
R50A Paris 64.63 60 P **P** **16 39 25.3 -0.6**
R50A Paris 64.63 60 P **P** **16 39 25.9 -0.1**
baz=317,SNR=15
R50A P **P** **16 39 25.9 -0.1**
baz=317,SNR=15
N53A Lisbon 64.65 56 P **P** **16 39 25.1 -0.9**
N53A Lisbon 64.65 56 P **P** **16 39 25.6 -0.5**
baz=317,SNR=9.5
N53A P **P** **16 39 25.6 -0.5**
baz=317,SNR=9.5
143A Socs Landing, 64.67 69 P **P** **16 39 26.7 +0.5**
baz=316
LMQ La Malbaie 64.67 45 P **P** **16 39 24.8 -1.3**
LMQ IAmb IAmb 16 39 26.0
comp=Z,60nm,0.8s
MMNY Mt. Morris Dam 64.72 53 P **P** **16 39 25.7 -0.8**
MMNY IAmb IAmb 16 39 26.9
comp=Z,92nm,0.7s
VALR Valaam 64.77 344 *i* P **P** **16 39 26.7 +0.3**
VALR pmax pmax
comp=Z,63nm,1.0s
BMNY Brushton-Moira 64.81 49 P **P** **16 39 25.4 -1.6**
baz=318,SNR=11
P52A Corning 64.82 58 P **P** **16 39 25.9 -1.3**
P52A IAmb IAmb 16 39 29.1
comp=Z,68nm,0.7s
P52A Corning 64.82 58 P **P** **16 39 26.4 -0.8**
baz=317,SNR=42
P52A S **S** **16 48 00.2 -1.9**
baz=317
J56A Wolcott 64.84 52 P **P** **16 39 25.9 -1.3**
J56A IAmb IAmb 16 39 27.4
comp=Z,90nm,0.8s
J56A Wolcott 64.84 52 P **P** **16 39 26.6 -0.6**
baz=318,SNR=8.7
J56A P **P** **16 39 26.6 -0.6**
baz=318,SNR=8.7
O53A New Philadelph 64.86 57 P **P** **16 39 26.0 -1.4**
O53A IAmb IAmb 16 39 28.9
comp=Z,57nm,0.7s
O53A New Philadelph 64.86 57 P **P** **16 39 26.6 -0.8**
baz=317,SNR=32
O53A S **S** **16 48 00.6 -2.0**
baz=317
WCNY West Carthage 64.90 50 P **P** **16 39 26.9 -0.7**
baz=318,SNR=5.2
Y45A Yeager Farm, C 64.91 67 P **P** **16 39 26.1 -1.7**
Y45A IAmb IAmb 16 39 28.8
comp=Z,115nm,0.8s
Y45A Yeager Farm, C 64.91 67 P **P** **16 39 28.2 +0.5**
baz=316,SNR=8.8
LONY Lake Ozonia 64.94 49 P **P** **16 39 25.7 -2.2**
LONY Lake Ozonia 64.94 49 P **P** **16 39 26.0 -1.9**
baz=318,SNR=7.8
PLAL Pickwick Lake 64.94 65 P **P** **16 39 26.7 -1.3**
PLAL IAmb IAmb 16 39 29.8
comp=Z,94nm,0.8s
342A Flagon Creek P 65.08 70 P **P** **16 39 28.9 -0.1**
342A IAmb IAmb 16 39 31.0
comp=Z,80nm,1.1s
342B Flagon Creek P 65.08 70 P **P** **16 39 29.6 +0.6**
baz=317
V48A Smith Brothers 65.10 64 P **P** **16 39 28.1 -0.9**
V48A IAmb IAmb 16 39 30.6
comp=Z,48nm,0.7s
V48A Smith Brothers 65.10 64 P **P** **16 39 28.6 -0.5**
baz=317,SNR=45
ZAIG Zacatecas 65.10 84 P **P** **16 39 29.3 -0.3**
CLTN Cedars of Leba 65.12 63 P **P** **16 39 28.5 -0.6**
CLTN IAmb IAmb 16 39 31.6
comp=Z,103nm,0.8s
U49A Red Boiling Sp 65.12 62 P **P** **16 39 28.4 -0.7**
U49A IAmb IAmb 16 39 30.9
comp=Z,53nm,0.6s
U49A Red Boiling Sp 65.12 62 P **P** **16 39 28.9 -0.2**
baz=317,SNR=48
J57A Williamstown 65.16 51 P **P** **16 39 28.1 -1.2**
J57A Williamstown 65.16 51 P **P** **16 39 28.9 -0.4**
baz=318,SNR=6.4
J57A P **P** **16 39 28.9 -0.4**
baz=318,SNR=6.4
M55A Ridgway 65.22 54 P **P** **16 39 28.8 -0.9**
M55A IAmb IAmb 16 39 30.4
comp=Z,48nm,0.8s
M55A Ridgway 65.22 54 P **P** **16 39 29.5 -0.3**
baz=318,SNR=31
M55A P **P** **16 39 29.5 -0.3**
baz=318,SNR=31
TKM2 Tokmak 2 65.24 308 P **P** **16 39 31.3 +1.2**
SNR=49
TKM2 Tokmak 2 65.24 308 *i* P **P** **16 39 31.1 +1.0**
TKM2 pmax pmax
comp=Z,62nm,1.1s
Q52A Bidwell 65.24 58 P **P** **16 39 28.8 -1.1**
Q52A IAmb IAmb 16 39 30.2
comp=Z,57nm,0.7s
Q52A Bidwell 65.24 58 P **P** **16 39 29.3 -0.6**
baz=317,SNR=24
Q52A P **P** **16 39 29.3 -0.6**
baz=317,SNR=24
FRNY Flat Rock 65.24 49 P **P** **16 39 27.4 -2.5**
FRNY Flat Rock 65.24 49 P **P** **16 39 27.3 -2.5**
baz=319
T50A Nancy 65.27 61 P **P** **16 39 29.2 -0.9**
T50A IAmb IAmb 16 39 30.8
comp=Z,46nm,0.7s
T50A Nancy 65.27 61 P **P** **16 39 30.0 -0.1**
baz=317
T50A P **P** **16 39 30.0 -0.1**
baz=317
T50A S **S** **16 48 06.6 -1.1**
baz=317
T50A S **S** **16 48 06.6 -1.1**
baz=317
LKP Lekhapani 65.31 283 *e*P **P** **16 39 32.0 +1.6**
LKP IAmb IAmb 16 39 34.3
comp=Z,29nm,0.7s
LKP *i* pP **pP** **16 39 50.0 +0.1**
UPAO U. Pittsburgh 65.31 56 P **P** **16 39 29.6 -0.7**
baz=318
SGDS Sogindy 65.31 309*d i*P **P** **16 39 31.6 +1.2**
SGDS Sogindy 65.31 309 ⇓ *i*P **P** **16 39 31.7 +1.2**
baz=309
TBLU Trondheim 65.32 355 *e*P **P** **16 39 28.2 -1.8**
P53A Whipple 65.32 57 P **P** **16 39 29.3 -1.1**
P53A IAmb IAmb 16 39 32.3
comp=Z,44nm,0.6s
P53A Whipple 65.32 57 P **P** **16 39 29.9 -0.5**
baz=317,SNR=24
P53A P **P** **16 39 29.9 -0.5**
baz=317,SNR=24
P53A S **S** **16 48 06.7 -1.6**
baz=317
P53A S **S** **16 48 06.7 -1.6**
baz=317
L56A Greenwood 65.33 53 P **P** **16 39 29.8 -0.7**
L56A Greenwood 65.33 53 P **P** **16 39 30.4 -0.1**
baz=318,SNR=112
L56A P **P** **16 39 30.4 -0.1**
baz=318,SNR=112
L56A S **S** **16 48 06.3 -2.1**
baz=318
L56A S **S** **16 48 06.3 -2.1**
baz=318
O54A Avella 65.34 56 P **P** **16 39 29.5 -1.1**
O54A Avella 65.34 56 P **P** **16 39 30.0 -0.6**
baz=318,SNR=10
O54A P **P** **16 39 30.0 -0.6**
baz=318,SNR=10
O54A S **S** **16 48 06.9 -1.6**
baz=318
O54A S **S** **16 48 06.9 -1.6**
baz=318
BOOM Boomskoye usch 65.39 308 P **P** **16 39 32.0 +1.0**
BOOM Boomskoye usch 65.39 308 P **P** **16 39 32.0 +1.0**
BOOM pmax pmax
comp=Z,314nm,2.0s
K57A Scipio Center 65.41 52 P **P** **16 39 30.0 -1.0**
K57A IAmb IAmb 16 39 31.3
comp=Z,76nm,0.7s
K57A Scipio Center 65.41 52 P **P** **16 39 30.5 -0.5**
baz=318,SNR=21
K57A S **S** **16 48 06.6 -2.6**
baz=318
ULHL Ulahol 65.42 307 P **P** **16 39 32.7 +1.4**
SNR=5.9
FIA1 FINESS Array S 65.46 346 P **P** **16 39 29.8 -1.1**
FINES FINESS Array B 65.46 346 P **P** **16 39 30.2 -0.7**
comp=Z,26nm,0.8s,baz=32,slow=7.6,SNR=67
FINES PKPPKP P'P'df 17 08 03.0 -11
comp=Z,1.4nm,0.6s,baz=150,slow=4.2,SNR=6.2
FINES LR LR 17 13 31.1
comp=Z,567nm,18.1s,baz=23,slow=41
comp=Z,26nm,0.8s
FINES FINESS Array B 65.46 346 P **P** **16 39 29.9 -1.0**
PSDB Penn State Uni 65.48 54 P **P** **16 39 30.7 -0.7**
baz=318
S51A Beattyville 65.50 60 P **P** **16 39 30.6 -0.9**
S51A IAmb IAmb 16 39 33.3
comp=Z,42nm,0.6s
S51A Beattyville 65.50 60 P **P** **16 39 31.2 -0.4**
baz=317,SNR=30
S51A P **P** **16 39 31.2 -0.4**
baz=317,SNR=30
S51A S **S** **16 48 09.6 -0.8**
baz=317
S51A S **S** **16 48 09.6 -0.8**
baz=317
USP Ospenovka 65.51 309 P **P** **16 39 33.0 +1.3**
SNR=62
VBMS Vicksburg 65.53 69 P **P** **16 39 32.4 +0.5**
baz=317
VBMS Vicksburg 65.53 69 P **P** **16 39 31.6 -0.3**
baz=317
J58A Remsen 65.54 51 P **P** **16 39 30.5 -1.3**
J58A Remsen 65.54 51 P **P** **16 39 30.8 -1.0**
baz=319,SNR=13
J58A P **P** **16 39 30.8 -1.0**
baz=319,SNR=13
CHMS Chumysh 65.59 309 P **P** **16 39 33.6 +1.4**
SNR=14
NCB Newcomb 65.59 50 P **P** **16 39 30.5 -1.6**
NCB Newcomb 65.59 50 P **P** **16 39 31.2 -0.9**
baz=319,SNR=8.5
E62A Clayton Lake 65.74 45 P **P** **16 39 31.7 -1.3**
E62A Clayton Lake 65.74 45 P **P** **16 39 32.1 -0.9**
baz=320,SNR=9.7
E62A P **P** **16 39 32.1 -0.9**
baz=320,SNR=9.7
KBK Karagaybulak 65.75 308 P **P** **16 39 35.2 +1.8**
SNR=9.1
J59A Piesco 65.84 50 P **P** **16 39 32.0 -1.7**
J59A Piesco 65.84 50 P **P** **16 39 32.5 -1.2**
baz=319,SNR=12
J59A P **P** **16 39 32.5 -1.2**
baz=319,SNR=12
R53A Hurricane 65.87 58 P **P** **16 39 32.9 -1.1**
R53A IAmb IAmb 16 39 34.8
comp=Z,90nm,0.7s
R53A Hurricane 65.87 58 P **P** **16 39 33.9 -0.1**
baz=318,SNR=53
R53A P **P** **16 39 33.9 -0.1**
baz=318,SNR=53
R53A S **S** **16 48 15.3 +0.3**
baz=318
R53A S **S** **16 48 15.3 +0.3**
baz=318
X48A Hartselle 65.91 65 P **P** **16 39 32.9 -1.3**
X48A IAmb IAmb 16 39 35.3
comp=Z,28nm,0.5s
X48A Hartselle 65.91 65 P **P** **16 39 33.5 -0.7**
baz=317,SNR=22
344A Westbrook Farm 65.96 69 P **P** **16 39 34.5 -0.2**
344A IAmb IAmb 16 39 36.5
comp=Z,81nm,0.7s
344A Westbrook Farm 65.96 69 P **P** **16 39 35.8 +1.1**
baz=317,SNR=13
SWET Sewanee 65.97 63 P **P** **16 39 33.5 -1.3**
SWET IAmb IAmb 16 39 36.3
comp=Z,69nm,0.7s
Q54A Coxs Mills 65.98 57 P **P** **16 39 33.7 -1.0**
Q54A Coxs Mills 65.98 57 P **P** **16 39 34.2 -0.5**
baz=318,SNR=16
Q54A P **P** **16 39 34.2 -0.5**
baz=318,SNR=16
Q54A S **S** **16 48 15.0 -1.3**
baz=318
Q54A S **S** **16 48 15.0 -1.3**
baz=318
AAK Ala-Archa 65.99 309 LR LR 17 08 44.0
comp=Z,666nm,21.4s,baz=32,slow=36
AAK Ala-Archa 65.99 309 P **P** **16 39 36.7 +1.8**
SNR=26
AAK Ala-Archa 65.99 309 P **P** **16 39 35.7 +0.8**
AAK Ala-Archa 65.99 309 P **P** **16 39 36.1 +1.2**
AAK x x 16 39 40.3
AAK pP **pP** **16 39 53.6 -0.7**
MCWV Mont Chateau 66.00 56 P **P** **16 39 33.7 -1.1**
MCWV Mont Chateau 66.00 56 P **P** **16 39 34.5 -0.3**
baz=318,SNR=11
MCWV Mont Chateau 66.00 56 P **P** **16 39 34.3 -0.5**
baz=318,SNR=11
MCWV S **S** **16 48 15.5 -1.0**
baz=318
VT1 Waterbury 66.02 48 P **P** **16 39 33.8 -1.1**
baz=320,SNR=6.1
BINY Binghamton 66.07 52 P **P** **16 39 34.3 -0.9**
BINY IAmb IAmb 16 39 36.7
comp=Z,122nm,1.3s
BINY Binghamton 66.07 52 P **P** **16 39 34.9 -0.3**
baz=319,SNR=22
BINY Binghamton 66.07 52 P **P** **16 39 34.5 -0.7**
baz=318,SNR=22
BINY S **S** **16 48 16.3 -1.0**
baz=318
146A Union 66.08 67 P **P** **16 39 35.1 -0.2**
146A Union 66.08 67 P **P** **16 39 35.9 +0.5**
baz=317,SNR=62
MOL Molde 66.14 356 *e*P **P** **16 39 34.6 -0.6**
M57A Sunshine Farm, 66.14 53 P **P** **16 39 35.1 -0.6**
M57A IAmb IAmb 16 39 36.3
comp=Z,59nm,0.7s
M57A Sunshine Farm, 66.14 53 P **P** **16 39 35.5 -0.1**
baz=318,SNR=27
M57A P **P** **16 39 35.5 -0.1**
baz=318,SNR=27
M57A S **S** **16 48 17.3 -0.9**
baz=318
M57A S **S** **16 48 17.3 -0.9**
baz=318
MCVT Middlebury Col 66.19 49 P **P** **16 39 34.6 -1.3**
baz=320,SNR=7.9
Z47A Carrollton 66.24 66 P **P** **16 39 35.6 -0.8**
Z47A Carrollton 66.24 66 P **P** **16 39 35.9 -0.4**
baz=317,SNR=78
Z47A S **S** **16 48 17.7 -1.8**
baz=317
SSPA Standing Stone 66.28 54 P **P** **16 39 35.7 -1.0**
SSPA IAmb IAmb 16 39 37.0
comp=Z,49nm,0.7s
SSPA Standing Stone 66.28 54 P **P** **16 39 36.1 -0.5**
baz=318,SNR=23

SSPA	**Standing Stone**	**66.28**	**54**	P	**P**	**16 39 35.6**	**-1.0**
	baz=318						
SSPA				S	**S**	**16 48 18.8**	**-1.1**
	baz=318						
SSPA	**Standing Stone**	**66.28**	**54**	P	**P**	**16 39 35.8**	**-0.8**
SSPA				pP	**pP**	**16 39 53.3**	**-2.4**
ACCN	**Adirondack Com**	**66.30**	**50**	P	**P**	**16 39 35.2**	**-1.4**
ACCN	**Adirondack Com**	**66.30**	**50**	P	**P**	**16 39 35.6**	**-1.0**
	baz=319,SNR=13						
EKS2	**Erkin-Say**	**66.32**	**309**	P	**P**	**16 39 39.0**	**+2.1**
	SNR=9.4						
TZTN	**Tazewell**	**66.32**	**61**	P	**P**	**16 39 36.3**	**-0.6**
TZTN	**Tazewell**	**66.32**	**61**	P	**P**	**16 39 36.9**	**0.0**
	baz=318,SNR=16						
TZTN				S	**S**	**16 48 18.9**	**-1.7**
	baz=318						
TZTN	**Tazewell**	**66.32**	**61**	P	**P**	**16 39 36.6**	**-0.3**
	baz=317,SNR=16						
TZTN				S	**S**	**16 48 20.1**	**-0.5**
	baz=317						
W50A	**Signal Mountai**	**66.33**	**63**	P	**P**	**16 39 36.1**	**-1.0**
W50A				IAmb	IAmb	16 39 38.6	
	comp=Z,48nm,0.7s						
W50A	**Signal Mountai**	**66.33**	**63**	P	**P**	**16 39 36.6**	**-0.4**
	baz=317,SNR=37						
W50A				S	**S**	**16 48 19.6**	**-1.1**
	baz=317						
PQI	**Presque Isle**	**66.36**	**44**	P	**P**	**16 39 35.2**	**-1.7**
G62A	**West of Eustis**	**66.36**	**46**	P	**P**	**16 39 35.8**	**-1.3**
G62A				IAmb	IAmb	16 39 37.1	
	comp=Z,50nm,0.8s						
G62A	**West of Eustis**	**66.36**	**46**	P	**P**	**16 39 36.3**	**-0.7**
	baz=320,SNR=16						
G62A				P	**P**	**16 39 36.3**	**-0.7**
	baz=320,SNR=16						
E63A	**Oxbow**	**66.38**	**44**	P	**P**	**16 39 35.8**	**-1.3**
	baz=321,SNR=19						
E63A				P	**P**	**16 39 35.8**	**-1.3**
	baz=321,SNR=19						
ZIRO	**ZIRO**	**66.38**	**285**	*e*P	**P**	**16 39 39.0**	**+1.4**
LSA	**Lhasa**	**66.41**	**288**	P	**P**	**16 39 39.9**	**+1.7**
LSA				P	**P**	**16 39 39.9**	**+1.7**
LSA	**Lhasa**	**66.41**	**288**	P	**P**	**16 39 39.7**	**+1.6**
LSA	**Lhasa**	**66.41**	**288**	P	**P**	**16 39 40.1**	**+1.9**
LSA				pP	**pP**	**16 39 57.9**	**+0.2**
V51A	**Loudon**	**66.42**	**62**	P	**P**	**16 39 36.6**	**-1.0**
V51A				IAmb	IAmb	16 39 39.1	
	comp=Z,57nm,0.6s						
V51A	**Loudon**	**66.42**	**62**	P	**P**	**16 39 37.2**	**-0.4**
	baz=318,SNR=38						
V51A				S	**S**	**16 48 20.8**	**-1.0**
	baz=318						
RAF	**Rauma**	**66.46**	**348**	*e*P	**P**	**16 39 37.1**	**-0.2**
HCNY	**Howe Caverns**	**66.47**	**51**	P	**P**	**16 39 37.3**	**-0.4**
	baz=319,SNR=8.6						
LBNH	**Lisbon**	**66.47**	**48**	P	**P**	**16 39 36.2**	**-1.5**
LBNH	**Lisbon**	**66.47**	**48**	P	**P**	**16 39 36.2**	**-1.5**
LBNH				pmax	pmax		
	comp=Z,34nm,0.9s						
LBNH	**Lisbon**	**66.47**	**48**	P	**P**	**16 39 36.8**	**-1.0**
	baz=320,SNR=10.0						
LBNH	**Lisbon**	**66.47**	**48**	P	**P**	**16 39 36.6**	**-1.2**
	baz=320,SNR=10.0						
L59A	**Walton**	**66.54**	**51**	P	**P**	**16 39 37.1**	**-1.1**
L59A				IAmb	IAmb	16 39 38.6	
	comp=Z,60nm,0.8s						
L59A	**Walton**	**66.54**	**51**	P	**P**	**16 39 37.6**	**-0.7**
	baz=319,SNR=20						
L59A				P	**P**	**16 39 37.6**	**-0.7**
	baz=319,SNR=20						
AKN	**Aaknes**	**66.55**	**356**	*e*P	**P**	**16 39 38.5**	**+0.6**
H62A	**Milan**	**66.57**	**47**	P	**P**	**16 39 37.2**	**-1.2**
H62A				IAmb	IAmb	16 39 38.8	
	comp=Z,87nm,0.8s						
H62A	**Milan**	**66.57**	**47**	P	**P**	**16 39 37.6**	**-0.8**
	baz=320,SNR=29						
H62A				P	**P**	**16 39 37.6**	**-0.8**
	baz=320,SNR=29						
DOMB	**Dombas**	**66.59**	**355**	*e*P	**P**	**16 39 38.2**	**0.0**
CPCT	**Cooper Cave**	**66.59**	**62**	P	**P**	**16 39 37.5**	**-1.1**
CPCT				IAmb	IAmb	16 39 40.0	
	comp=Z,48nm,0.5s						
S54A	**Dingess, Beckl**	**66.61**	**58**	P	**P**	**16 39 38.0**	**-0.7**
S54A				IAmb	IAmb	16 39 40.4	
	comp=Z,41nm,0.6s						
S54A	**Dingess, Beckl**	**66.61**	**58**	P	**P**	**16 39 38.5**	**-0.2**
	baz=318,SNR=28						
S54A				P	**P**	**16 39 38.5**	**-0.2**
	baz=318,SNR=28						
F63A	**Nahmakanta, Br**	**66.63**	**45**	P	**P**	**16 39 37.4**	**-1.3**
F63A	**Nahmakanta, Br**	**66.63**	**45**	P	**P**	**16 39 37.9**	**-0.9**
	baz=321,SNR=12						
F63A				P	**P**	**16 39 37.9**	**-0.9**
	baz=321,SNR=12						
FPAL	**Fort Paine**	**66.65**	**64**	P	**P**	**16 39 37.8**	**-1.3**
FPAL				IAmb	IAmb	16 39 40.5	
	comp=Z,78nm,0.7s						
KSPA	**Keystone Colle**	**66.66**	**52**	P	**P**	**16 39 38.1**	**-0.9**
KSPA				IAmb	IAmb	16 39 39.4	
	comp=Z,47nm,0.7s						
KSPA	**Keystone Colle**	**66.66**	**52**	P	**P**	**16 39 38.5**	**-0.4**
	baz=319,SNR=16						
Y49A	**Blount Mountai**	**66.70**	**65**	P	**P**	**16 39 38.0**	**-1.4**
Y49A	**Blount Mountai**	**66.70**	**65**	P	**P**	**16 39 38.5**	**-0.8**
	baz=317,SNR=20						
HNH	**Hanover**	**66.71**	**49**	P	**P**	**16 39 38.2**	**-1.0**
HNH	**Hanover**	**66.71**	**49**	P	**P**	**16 39 38.7**	**-0.5**
	baz=320,SNR=6.6						
N58A	**Sunbury**	**66.72**	**53**	P	**P**	**16 39 38.3**	**-1.1**
N58A				IAmb	IAmb	16 39 39.9	
	comp=Z,51nm,0.8s						
N58A	**Sunbury**	**66.72**	**53**	P	**P**	**16 39 39.0**	**-0.4**
	baz=319,SNR=20						
N58A				P	**P**	**16 39 39.0**	**-0.4**
	baz=319,SNR=20						
N58A				S	**S**	**16 48 24.6**	**-0.6**
	baz=319						
N58A				S	**S**	**16 48 24.6**	**-0.6**
	baz=319						
PSWB	**Penn State Wil**	**66.72**	**53**	P	**P**	**16 39 38.9**	**-0.5**
	baz=319						
BATG	**Bathurst New B**	**66.72**	**42**	P	**P**	**16 39 38.2**	**-1.1**
ITAN	**ITANAGAR**	**66.73**	**285**	*e*P	**P**	**16 39 41.2**	**+1.6**
ITAN				IAmb	IAmb	16 39 48.8	
	comp=Z,86nm,0.8s						
AML	**Almayashu**	**66.76**	**309**	P	**P**	**16 39 41.9**	**+1.8**
	SNR=51						
TNTI	**Ternate**	**66.77**	**239**	P	**P**	**16 39 39.1**	**-0.9**
TNTI				IAmb	IAmb	16 39 41.2	
	comp=Z,72nm,1.1s						
TNTI	**Ternate**	**66.77**	**239**	P	**P**	**16 39 41.0**	**+1.0**
	comp=Z,68nm,1.4s						
Q56A	**Snyder Ridge,**	**66.80**	**56**	P	**P**	**16 39 38.9**	**-1.0**
Q56A	**Snyder Ridge,**	**66.80**	**56**	P	**P**	**16 39 39.3**	**-0.7**
	baz=318						
Q56A				P	**P**	**16 39 39.3**	**-0.7**
	baz=318						
V52A	**Sevierville**	**66.81**	**61**	P	**P**	**16 39 39.3**	**-0.8**
V52A	**Sevierville**	**66.81**	**61**	P	**P**	**16 39 39.8**	**-0.2**
	baz=318,SNR=20						
V52A				S	**S**	**16 48 25.6**	**-0.9**
	baz=318						
F64A	**Sherman**	**66.84**	**45**	P	**P**	**16 39 38.8**	**-1.3**
F64A				IAmb	IAmb	16 39 40.0	
	comp=Z,62nm,0.8s						
F64A	**Sherman**	**66.84**	**45**	P	**P**	**16 39 39.1**	**-0.9**
	baz=321,SNR=21						
F64A				P	**P**	**16 39 39.1**	**-0.9**
	baz=321,SNR=21						
TKL	**Tuckaleechee C**	**66.85**	**62**	LR	LR	17 08 03.8	
	comp=Z,1µm,21.8s,baz=330,slow=35						
TKL	**Tuckaleechee C**	**66.85**	**62**	P	**P**	**16 39 39.1**	**-1.2**
TKL	**Tuckaleechee C**	**66.85**	**62**	P	**P**	**16 39 39.1**	**-1.2**
TKL				pmax	pmax		
	comp=Z,42nm,0.9s						
TKL	**Tuckaleechee C**	**66.85**	**62**	P	**P**	**16 39 39.9**	**-0.3**
	baz=318,SNR=24						
TKL				S	**S**	**16 48 26.2**	**-0.8**
	baz=318						
MOKO	**MOKOCHONG**	**66.85**	**284**	*e*P	**P**	**16 39 42.2**	**+1.6**
J61A	**Chester**	**66.86**	**49**	P	**P**	**16 39 39.0**	**-1.2**
J61A	**Chester**	**66.86**	**49**	P	**P**	**16 39 39.5**	**-0.7**
	baz=320,SNR=11						
J61A				P	**P**	**16 39 39.5**	**-0.7**
	baz=320,SNR=11						
R55A	**Marlinton**	**66.88**	**57**	P	**P**	**16 39 39.3**	**-1.2**
	baz=318,SNR=15						
R55A				P	**P**	**16 39 40.3**	**-0.2**
	baz=318,SNR=15						
R55A				S	**S**	**16 48 25.0**	**-2.4**
	baz=318						
R55A				S	**S**	**16 48 25.0**	**-2.4**
	baz=318						
MEF	**Metsahovi**	**66.88**	**347**	*e*P	**P**	**16 39 39.8**	**-0.2**
PKME	**Peaks-Kenny Pk**	**66.89**	**46**	P	**P**	**16 39 39.1**	**-1.2**
PKME	**Peaks-Kenny Pk**	**66.89**	**46**	P	**P**	**16 39 39.4**	**-1.0**
	baz=321,SNR=8.7						
PKME	**Peaks-Kenny Pk**	**66.89**	**46**	P	**P**	**16 39 39.2**	**-1.2**
	baz=321,SNR=8.7						
LRAL	**Lakeview Retre**	**66.97**	**66**	P	**P**	**16 39 40.0**	**-1.0**
LRAL	**Lakeview Retre**	**66.97**	**66**	P	**P**	**16 39 40.2**	**-0.8**
	baz=318,SNR=28						
LRAL				S	**S**	**16 48 24.4**	**-4.0**
	baz=318						
LRAL	**Lakeview Retre**	**66.97**	**66**	P	**P**	**16 39 40.0**	**-1.0**
	baz=317,SNR=28						
LRAL				S	**S**	**16 48 24.9**	**-3.5**
	baz=317						
AKTO	**Aktyubinsk**	**67.00**	**324**	LR	LR	17 11 36.9	
	comp=Z,1µm,19.9s,baz=35,slow=38						
AKTO	**Aktyubinsk**	**67.00**	**324**	P	**P**	**16 39 40.7**	**-0.3**
I62A	**Tamworth**	**67.02**	**48**	P	**P**	**16 39 40.0**	**-1.2**
I62A	**Tamworth**	**67.02**	**48**	P	**P**	**16 39 40.6**	**-0.7**
	baz=320,SNR=5.5						
I62A				P	**P**	**16 39 40.6**	**-0.7**
	baz=320,SNR=5.5						
X51A	**Calhoun**	**67.05**	**63**	P	**P**	**16 39 40.4**	**-1.2**
X51A	**Calhoun**	**67.05**	**63**	P	**P**	**16 39 41.1**	**-0.5**
	baz=318,SNR=18						
X51A				P	**P**	**16 39 41.1**	**-0.5**
	baz=318,SNR=18						
P57A	**Homestead Farm**	**67.08**	**55**	P	**P**	**16 39 40.6**	**-1.0**
P57A	**Homestead Farm**	**67.08**	**55**	P	**P**	**16 39 41.1**	**-0.6**
	baz=319,SNR=7.5						
P57A				P	**P**	**16 39 41.1**	**-0.6**
	baz=319,SNR=7.5						
PAGS	**Pennsylvania G**	**67.18**	**54**	P	**P**	**16 39 41.1**	**-1.1**
PAGS				IAmb	IAmb	16 39 48.6	
	comp=Z,183nm,1.7s						
W52A	**Murphy**	**67.18**	**62**	P	**P**	**16 39 41.5**	**-0.9**
W52A				IAmb	IAmb	16 39 44.1	
	comp=Z,45nm,0.8s						
W52A	**Murphy**	**67.18**	**62**	P	**P**	**16 39 42.1**	**-0.3**
	baz=316,SNR=17						
FOO	**Floro**	**67.20**	**357**	*e*P	**P**	**16 39 42.1**	**+0.1**
AB31	**Akbulak array**	**67.22**	**322**	*e*P	**P**	**16 39 42.5**	**+0.1**
ABKAR	**Akbulak array**	**67.22**	**322**	P	**P**	**16 39 42.1**	**-0.3**
ABKAR	**Akbulak array**	**67.22**	**322**	P	**P**	**16 39 42.0**	**-0.3**
ABKAR				IAmb	IAmb	16 40 06.2	
	comp=Z,50nm,1.1s						
I63A	**Otisfield**	**67.24**	**47**	P	**P**	**16 39 41.6**	**-1.0**
I63A				IAmb	IAmb	16 39 42.9	
	comp=Z,54nm,0.8s						
I63A	**Otisfield**	**67.24**	**47**	P	**P**	**16 39 42.1**	**-0.4**
	baz=320,SNR=8.8						
I63A				P	**P**	**16 39 42.1**	**-0.4**
	baz=320,SNR=8.8						
NC204	**NORSAR Array S**	**67.25**	**354**	P	**P**	**16 39 42.1**	**-0.4**
NC303	**NORSAR Array S**	**67.26**	**354**	P	**P**	**16 39 42.2**	**-0.3**
NC303				IAmb	IAmb	16 39 43.7	
	comp=Z,103nm,0.8s						
WVL	**Waterville**	**67.26**	**46**	P	**P**	**16 39 41.3**	**-1.4**
WVL	**Waterville**	**67.26**	**46**	P	**P**	**16 39 42.0**	**-0.8**
	baz=321,SNR=8.2						
U54A	**Nelsons Funny**	**67.28**	**60**	P	**P**	**16 39 42.6**	**-0.5**
U54A	**Nelsons Funny**	**67.28**	**60**	P	**P**	**16 39 43.1**	**+0.1**
	baz=318,SNR=17						
U54A				P	**P**	**16 39 43.1**	**+0.1**
	baz=318,SNR=17						
U54A				S	**S**	**16 48 32.3**	**+0.1**
	baz=318						
U54A				S	**S**	**16 48 32.3**	**+0.1**
	baz=318						
DZA	**Taraz**	**67.32**	**311**	*e*P	**P**	**16 39 44.0**	**+0.9**
DZA				pmax	pmax		
	comp=Z,12nm,0.7s						
DZA	**Taraz**	**67.32**	**311**	*e*P	**P**	**16 39 44.1**	**+0.9**
	comp=Z,12nm,0.7s,baz=311						
NC405	**NORSAR Array S**	**67.35**	**354**	P	**P**	**16 39 42.7**	**-0.3**
V53A	**Saluda**	**67.37**	**61**	P	**P**	**16 39 42.9**	**-0.7**
V53A	**Saluda**	**67.37**	**61**	P	**P**	**16 39 43.6**	**0.0**
	baz=318,SNR=21						
V53A				P	**P**	**16 39 43.6**	**0.0**
	baz=318,SNR=21						
V53A				S	**S**	**16 48 32.7**	**-0.5**
	baz=318						
V53A				S	**S**	**16 48 32.7**	**-0.5**
	baz=318						
FAKI	**Fak Fak**	**67.38**	**233**	P	**P**	**16 39 43.1**	**-0.7**
FAKI				IAmb	IAmb	16 39 45.2	
	comp=Z,104nm,1.0s						
FAKI	**Fak Fak**	**67.38**	**233**	P	**P**	**16 39 44.1**	**+0.3**
NB201	**NORSAR Array S**	**67.44**	**354**	P	**P**	**16 39 43.5**	**-0.2**
NB2	**NORSAR Subarra**	**67.46**	**354**	P	**P**	**16 39 43.5**	**-0.2**
	comp=Z,72nm,0.8s,baz=7.6,slow=6.5						
NB2	**NORSAR Subarra**	**67.46**	**354**	P	**P**	**16 39 43.5**	**-0.2**
	baz=7.6,slow=6.5						
NOA	**NORSAR Array B**	**67.46**	**354**	P	**P**	**16 39 43.8**	**+0.1**
	comp=Z,61nm,0.7s,baz=7.8,slow=6.3,SNR=370						
NOA				pP	**pP**	**16 40 02.5**	**-0.7**
	comp=Z,14nm,0.9s,baz=8.0,slow=6.3,SNR=3.4						
NOA				PKPPKP	P'P'df	17 08 00.1	-11
	comp=Z,5.3nm,1.0s,baz=168,slow=3.2,SNR=5.5						
NOA				LR	LR	17 11 43.6	
	comp=Z,204nm,18.9s,baz=10.0,slow=38						
	comp=Z,61nm,0.7s						
DGTI	**Dogotuki**	**67.47**	**180**	P	**P**	**16 39 45.5**	**+1.3**
L61B	**Northampton**	**67.48**	**50**	P	**P**	**16 39 42.7**	**-1.4**
	baz=320						
L61B	**Northampton**	**67.48**	**50**	P	**P**	**16 39 42.5**	**-1.6**
	baz=320						
NBO00	**NORSAR Array S**	**67.50**	**354**	P	**P**	**16 39 43.4**	**-0.6**
NBO00				IAmb	IAmb	16 39 45.5	
	comp=Z,63nm,0.8s						
BLA	**Blacksburg**	**67.52**	**58**	P	**P**	**16 39 43.4**	**-1.1**
BLA	**Blacksburg**	**67.52**	**58**	P	**P**	**16 39 43.4**	**-1.1**
BLA				pmax	pmax		
	comp=Z,33nm,0.7s						
BLA	**Blacksburg**	**67.52**	**58**	P	**P**	**16 39 44.3**	**-0.2**
	baz=318,SNR=14						
BLA				S	**S**	**16 48 34.7**	**-0.3**
	baz=318						
BLA	**Blacksburg**	**67.52**	**58**	P	**P**	**16 39 43.5**	**-1.0**
	baz=318,SNR=14						
BLA				S	**S**	**16 48 35.1**	**+0.2**
	baz=318						
K62A	**Royalston**	**67.53**	**49**	P	**P**	**16 39 43.4**	**-1.1**
K62A	**Royalston**	**67.53**	**49**	P	**P**	**16 39 43.6**	**-0.9**
	baz=320						
K62A				P	**P**	**16 39 43.6**	**-0.9**
	baz=320						
MVL	**Millersville**	**67.54**	**54**	P	**P**	**16 39 43.4**	**-1.1**
MVL				IAmb	IAmb	16 39 44.9	
	comp=Z,38nm,0.7s						
KK31	**Karatay Array**	**67.54**	**311**	P	**P**	**16 39 45.0**	**+0.4**
KK31	**Karatay Array**	**67.54**	**311**	*i* P	**P**	**16 39 45.6**	**+1.0**
KKAR	**Karatay Array**	**67.54**	**311**	P	**P**	**16 39 45.0**	**+0.5**
KKAR	**Karatay Array**	**67.54**	**311**	P	**P**	**16 39 45.2**	**+0.6**
KKAR	**Karatay Array**	**67.54**	**311**	P	**P**	**16 39 45.2**	**+0.6**
KKAR				pmax	pmax		
	comp=Z,287nm,1.8s						
KOHI	**KOHIMA**	**67.54**	**283**	*e*P	**P**	**16 39 45.9**	**+1.0**
KOHI				IAmb	IAmb	16 39 51.1	
	comp=Z,22nm,0.8s						
KOHI				*i* x	**pP**	**16 40 06.9**	**+2.3**
LUPA	**Lehigh Univers**	**67.58**	**53**	P	**P**	**16 39 44.0**	**-0.8**
LUPA				IAmb	IAmb	16 39 45.3	
	comp=Z,87nm,0.8s						
ODNJ	**Ogdensburg**	**67.59**	**52**	P	**P**	**16 39 43.6**	**-1.2**
ODNJ	**Ogdensburg**	**67.59**	**52**	P	**P**	**16 39 44.2**	**-0.6**
	baz=320,SNR=9.4						
KSH	**Kashi**	**67.59**	**306**	P	**P**	**16 39 49.3**	**+4.2**
KSH				pP	pP	16 40 07.5	+2.9
KSH				S	**S**	**16 48 43.3**	**+7.3**
KSH				sS	sS	16 49 14.4	+5.1
KSH				ScS	**ScS**	**16 49 37.5**	**+0.8**
KSH				pmax	pmax		
	comp=Z,51nm,0.8s						
KSH				pmax	pmax		
	comp=Z,140nm,3.5s						
KSH				LR	LR		
	comp=Z,800nm,19.4s						
KSH				LR	LR		
	comp=Z,770nm,22.9s						
KSH				LR	LR		
	comp=Z,1µm,21.3s						
HYA	**Hoyanger**	**67.60**	**357**	*i* P	**P**	**16 39 44.7**	**+0.2**
BRNY	**Black Rk. Fore**	**67.63**	**51**	P	**P**	**16 39 44.6**	**-0.5**
	baz=320,SNR=6.5						
KSCT	**Kent School, K**	**67.65**	**51**	P	**P**	**16 39 44.1**	**-1.1**
NAO01	**NORSAR Array S**	**67.67**	**354**	P	**P**	**16 39 44.3**	**-0.7**
NAO01				IAmb	IAmb	16 39 45.9	
	comp=Z,56nm,0.8s						
NAO01	**NORSAR Array S**	**67.67**	**354**	*e*P	**P**	**16 39 44.5**	**-0.6**
TEZP	**TEZPUR**	**67.68**	**285**	*e*P	**P**	**16 39 46.1**	**+0.5**
G65A	**Princeton**	**67.70**	**45**	P	**P**	**16 39 44.3**	**-1.2**
G65A				IAmb	IAmb	16 39 45.6	
	comp=Z,54nm,0.9s						
G65A	**Princeton**	**67.70**	**45**	P	**P**	**16 39 44.8**	**-0.7**
	baz=322,SNR=10						
G65A				P	**P**	**16 39 44.8**	**-0.7**
	baz=322,SNR=10						
TRNY	**Table Rock, Ra**	**67.73**	**52**	P	**P**	**16 39 44.5**	**-1.3**
CRAI	**Chiangrai**	**67.73**	**275**	P	**P**	**16 39 46.1**	**+0.1**
CRAI				IAmb	IAmb	16 39 48.1	
	comp=Z,161nm,1.6s						
SDMD	**Soldier's Deli**	**67.73**	**54**	P	**P**	**16 39 44.3**	**-1.5**
SDMD	**Soldier's Deli**	**67.73**	**54**	P	**P**	**16 39 45.2**	**-0.6**
	baz=319,SNR=8.5						
NC602	**NORSAR Array S**	**67.74**	**354**	P	**P**	**16 39 44.9**	**-0.6**
NC602				IAmb	IAmb	16 39 46.4	
	comp=Z,107nm,0.9s						
QUA2	**Belchertown**	**67.77**	**50**	P	**P**	**16 39 44.7**	**-1.2**
Z51A	**Franklin**	**67.79**	**64**	P	**P**	**16 39 44.9**	**-1.3**
Z51A				IAmb	IAmb	16 39 47.2	
	comp=Z,36nm,0.6s						
Z51A	**Franklin**	**67.79**	**64**	P	**P**	**16 39 45.6**	**-0.7**
	baz=318,SNR=9.8						
BG3	**Lake Jocassee**	**67.80**	**62**	P	**P**	**16 39 45.6**	**-0.8**
CASEE	**Lake Jocassee**	**67.80**	**62**	P	**P**	**16 39 46.3**	**0.0**
	baz=318,SNR=20						
UNH	**University of**	**67.84**	**48**	P	**P**	**16 39 45.5**	**-0.9**
	baz=321,SNR=8.7						
TAVE	**Taveuni**	**67.88**	**179**	P	**P**	**16 39 49.2**	**+2.5**
	comp=Z,134nm,1.5s						
S57A	**Dark Hollow, R**	**67.88**	**57**	P	**P**	**16 39 46.0**	**-0.8**
S57A	**Dark Hollow, R**	**67.88**	**57**	P	**P**	**16 39 46.6**	**-0.1**
	baz=319,SNR=14						
S57A				P	**P**	**16 39 46.6**	**-0.1**
	baz=319,SNR=14						
BRNJ	**Basking Ridge**	**67.91**	**52**	P	**P**	**16 39 45.9**	**-1.0**
BRNJ	**Basking Ridge**	**67.91**	**52**	P	**P**	**16 39 46.3**	**-0.6**
	baz=320						
WUPA	**West Chester U**	**67.96**	**53**	P	**P**	**16 39 47.0**	**-0.2**
HRV	**Adam Dziewonsk**	**67.97**	**49**	P	**P**	**16 39 45.7**	**-1.5**
HRV	**Adam Dziewonsk**	**67.97**	**49**	P	**P**	**16 39 45.7**	**-1.5**
HRV				pmax	pmax		
	comp=Z,22nm,1.0s						
HRV	**Adam Dziewonsk**	**67.97**	**49**	P	**P**	**16 39 46.5**	**-0.7**
	baz=320						
HRV	**Adam Dziewonsk**	**67.97**	**49**	P	**P**	**16 39 46.2**	**-1.0**
	baz=320						
HRV				S	**S**	**16 48 37.9**	**-2.2**
	baz=320						
HRV	**Adam Dziewonsk**	**67.97**	**49**	P	**P**	**16 39 46.3**	**-1.0**
SKAR	**Skarslia**	**67.99**	**355**	*e*P	**P**	**16 39 47.5**	**+0.4**
PAL	**Palisades**	**67.99**	**51**	P	**P**	**16 39 46.1**	**-1.2**
PAL				IAmb	IAmb	16 39 47.6	
	comp=Z,48nm,0.8s						
PAL	**Palisades**	**67.99**	**51**	P	**P**	**16 39 46.1**	**-1.2**
PAL				pmax	pmax		
	comp=Z,48nm,0.8s						
PAL	**Palisades**	**67.99**	**51**	P	**P**	**16 39 46.6**	**-0.7**
	baz=320,SNR=7.4						
PAL	**Palisades**	**67.99**	**51**	P	**P**	**16 39 46.0**	**-1.3**
	baz=320,SNR=7.4						
TUPA	**Temple Univers**	**68.00**	**53**	P	**P**	**16 39 47.0**	**-0.4**
	baz=320,SNR=25						
Y52A	**Lilburn**	**68.01**	**63**	P	**P**	**16 39 46.7**	**-0.9**
Y52A				IAmb	IAmb	16 39 49.6	
	comp=Z,57nm,0.7s						
Y52A	**Lilburn**	**68.01**	**63**	P	**P**	**16 39 47.2**	**-0.5**
	baz=318,SNR=31						
Y52A				P	**P**	**16 39 47.2**	**-0.5**
	baz=318,SNR=31						
Y52A				S	**S**	**16 48 38.3**	**-2.6**
	baz=318						
Y52A				S	**S**	**16 48 38.3**	**-2.6**
	baz=318						
PSUB	**Penn St. - Bra**	**68.05**	**53**	P	**P**	**16 39 46.7**	**-1.1**
	baz=320						
PANJ	**Princeton**	**68.08**	**52**	P	**P**	**16 39 47.4**	**-0.5**
	baz=320,SNR=8.3						
PANJ				S	**S**	**16 48 38.8**	**-2.6**
	baz=320						
GGN	**Saint George**	**68.08**	**44**	P	**P**	**16 39 46.7**	**-1.1**
GGN				IAmb	IAmb	16 39 48.3	
	comp=Z,67nm,0.8s						
V55A	**Taylorsville**	**68.10**	**60**	P	**P**	**16 39 47.6**	**-0.6**
V55A	**Taylorsville**	**68.10**	**60**	P	**P**	**16 39 48.0**	**-0.1**
	baz=318,SNR=16						
V55A				P	**P**	**16 39 48.0**	**-0.1**
	baz=318,SNR=16						
V55A				S	**S**	**16 48 41.7**	**-0.2**
	baz=318						
V55A				S	**S**	**16 48 41.7**	**-0.2**
	baz=318						
FOR	**Fordham**	**68.11**	**52**	P	**P**	**16 39 47.7**	**-0.4**
	baz=320,SNR=9.5						
CPNY	**Central Park**	**68.13**	**52**	P	**P**	**16 39 47.2**	**-1.0**
CPNY				IAmb	IAmb	16 39 48.6	
	comp=Z,57nm,0.8s						
EMMW	**East Machias**	**68.14**	**45**	P	**P**	**16 39 47.1**	**-1.0**
EMMW				IAmb	IAmb	16 39 48.6	
	comp=Z,85nm,0.9s						
EMMW	**East Machias**	**68.14**	**45**	P	**P**	**16 39 47.2**	**-1.0**
	baz=322,SNR=16						
250A	**Grady**	**68.16**	**66**	P	**P**	**16 39 47.9**	**-0.7**
250A				IAmb	IAmb	16 39 49.7	
	comp=Z,82nm,0.8s						
250A	**Grady**	**68.16**	**66**	P	**P**	**16 39 48.4**	**-0.2**
	baz=318,SNR=20						
HFS	**Hagfors**	**68.17**	**352**	LR	LR	17 11 03.7	
	comp=Z,266nm,19.1s,baz=5.0,slow=37						
WES	**Weston

IUG Iuzhnay 68.50 311 *e*P P 16 39 52.4 +1.6
baz=311
DRLN Deer Lake 68.52 36 P P 16 39 49.6 -0.9
DRLN IAmb IAmb 16 39 51.0
comp=Z,86nm,0.9s
152A Waverly Hall 68.53 64 P P 16 39 49.2 -1.7
152A Waverly Hall 68.53 64 P P 16 39 49.8 -1.1
baz=318,SNR=7.7
KMSC Kings Mountain 68.57 60 P P 16 39 50.4 -0.7
KMSC IAmb IAmb 16 39 51.7
comp=Z,63nm,0.8s
KMSC Kings Mountain 68.57 60 P P 16 39 50.9 -0.2
baz=319,SNR=20
KMSC Kings Mountain 68.57 60 P P 16 39 50.4 -0.7
baz=318,SNR=20
KMSC S S 16 48 45.4 -2.0
baz=318
OSL Oslo 68.59 354 *e*P P 16 39 51.2 +0.5
M63A Gales Ferry 68.59 50 P P 16 39 49.9 -1.1
M63A IAmb IAmb 16 40 09.8
comp=Z,120nm,1.1s
M63A Gales Ferry 68.59 50 P P 16 39 50.2 -0.8
baz=321,SNR=6.2
M63A P P 16 39 50.2 -0.8
baz=321,SNR=6.2
MOS Moscow 68.59 338 *e*P P 16 39 49.5 -1.3
GUWA GUWAHATI 68.66 285 *e*P P 16 39 51.4 -0.3
GUWA *i* x pP 16 40 09.8 -1.6
GOGA Godfrey 68.68 63 P P 16 39 50.8 -1.0
GOGA Godfrey 68.68 63 P P 16 39 50.8 -1.0
GOGA pmax pmax
comp=Z,48nm,1.2s
GOGA Godfrey 68.68 63 P P 16 39 51.1 -0.7
baz=318,SNR=21
GOGA S S 16 48 46.2 -2.6
baz=318
GOGA Godfrey 68.68 63 P P 16 39 50.8 -1.0
baz=318,SNR=21
GOGA S S 16 48 45.9 -3.0
baz=318
HODGE Hodges 68.74 62 P P 16 39 51.6 -0.5
HODGE IAmb IAmb 16 39 54.0
comp=Z,76nm,0.6s
HODGE Hodges 68.74 62 P P 16 39 52.0 -0.1
baz=319,SNR=56
L64A Middleborough 68.75 49 P P 16 39 51.1 -1.0
LRW Lerwick 68.75 0⇑*e*P P 16 39 51.9 +0.1
KKM Kota Kinabalu 68.82 252 P P 16 39 53.0 0.0
ODD1 Odda 68.83 356 *e*P P 16 39 52.6 +0.3
BELG Belogornoye 68.87 331 LR LR 17 13 05.6
comp=Z,471nm,20.0s,baz=2,9,slow=38
MSVF Nonsavu 68.91 181 P P 16 39 54.1 +0.8
comp=Z,69nm,1.1s,baz=16,slow=3.8,SNR=14
MSVF LR LR 17 03 33.7
comp=Z,413nm,21.6s,baz=9.9,slow=30
comp=Z,69nm,1.1s
MSVF Nonsavu 68.91 181 P P 16 39 54.3 +1.0
MSVF IAmb IAmb 16 39 56.3
comp=Z,189nm,1.3s
MSVF Nonsavu 68.91 181 *d i*P P 16 39 54.7 +1.4
MSVF pmax pmax
comp=Z,104nm,1.2s
MSVF Nonsavu 68.91 181 P P 16 39 54.5 +1.2
MSVF Nonsavu 68.91 181 P P 16 39 54.6 +1.4
KONO Kongsberg 68.94 355 P P 16 39 53.2 +0.3
KONO IAmb IAmb 16 39 54.8
comp=Z,104nm,0.8s
KONO Kongsberg 68.94 355 *ce*P P 16 39 52.8 -0.2
KONO pmax pmax
comp=Z,100nm,0.7s
KONO Kongsberg 68.94 355⇑ *i*P P 16 39 53.4 +0.4
KONO Kongsberg 68.94 355 P P 16 39 53.3 +0.3
SHL Shillong 69.01 285 *e*P P 16 39 54.3 +0.1
SHL *i* x pP 16 40 15.2 +1.4
SHL IAmb IAmb 16 40 16.1
comp=Z,97nm,0.3s
T59A Double "B" Far 69.21 57 P P 16 39 54.5 -0.5
T59A Double "B" Far 69.21 57 P P 16 39 54.8 -0.2
baz=320,SNR=23
T59A P P 16 39 54.8 -0.2
baz=320,SNR=23
JSC Jenkinsville 69.25 61 P P 16 39 54.7 -0.6
JSC IAmb IAmb 16 39 57.2
comp=Z,54nm,0.5s
JSC Jenkinsville 69.25 61 P P 16 39 54.7 -0.6
JSC pmax pmax
comp=Z,53nm,0.5s
JSC Jenkinsville 69.25 61 P P 16 39 55.0 -0.3
baz=319,SNR=37
V58A Windy Hill, Pi 69.27 58 P P 16 39 55.5 +0.1
baz=319,SNR=16
V58A P P 16 39 55.5 +0.1
baz=319,SNR=16
W57A Gilead 69.28 59 P P 16 39 54.6 -0.9
W57A Gilead 69.28 59 P P 16 39 55.0 -0.4
baz=319,SNR=14
W57A P P 16 39 55.0 -0.4
baz=319,SNR=14
352A Blakely 69.30 65 P P 16 39 54.8 -0.9
BLS5 Blasjo 69.33 356 *e*P P 16 39 55.8 +0.4
TAOE Nuku Hiva Isla 69.40 137 *e*P P 16 39 55.6 -0.8
comp=Z,285nm,1.3s
TAOE *e*S S 16 48 59.0 +1.3
comp=Z,97nm,24.8s
TAOE Nuku Hiva Isla 69.40 137 *e*LR LR 17 01 04.9
comp=Z,2µm,28.0s
TAOE Nuku Hiva Isla 69.40 137 *e*T T 17 55 34.8
comp=Z,60nm,0.2s
LKBA Tubou, Lakemba 69.41 178 P P 16 39 57.8 +1.6
comp=Z,2.0nm,1.6s
OBN Obninsk 69.41 338 LR LR 17 14 52.2
comp=Z,208nm,18.1s,baz=10,slow=40
OBN Obninsk 69.41 338 P P 16 39 55.3 -0.6
OBN IAmb IAmb 16 39 57.0
comp=Z,44nm,0.5s
OBN Obninsk 69.41 338⇑ *e*P P 16 39 55.1 -0.8
OBN *e* 16 40 19.5
OBN *e* 16 42 26.5
OBN *i* S S 16 48 53.9 -2.8
OBN pmax pmax
comp=Z,31nm,0.6s
OBN MLR MLR
comp=Z,840nm,18.0s
OBN Obninsk 69.41 338 P P 16 39 55.8 -0.1
BIRD Birdtown, Kers 69.41 60 P P 16 39 55.5 -0.7
BIRD Birdtown, Kers 69.41 60 P P 16 39 56.1 -0.2
baz=319,SNR=16
154A Montrose 69.48 63 P P 16 39 55.7 -1.0
154A IAmb IAmb 16 39 58.4
comp=Z,81nm,0.6s
154A Montrose 69.48 63 P P 16 39 56.2 -0.5
baz=319,SNR=12
U59A Littleton 69.55 57 P P 16 39 56.3 -0.9
U59A Littleton 69.55 57 P P 16 39 56.9 -0.2
baz=320,SNR=9.7
U59A P P 16 39 56.9 -0.2
baz=320,SNR=9.7
KMY Karmoy 69.58 357 *e*P P 16 39 57.1 +0.2
GTK Tadong 69.67 288 *e*P P 16 39 59.9 +1.7
GTK *i* x pP 16 40 20.1 +2.1
SLIT Slitere, Latvi 69.67 347 *e*P P 16 39 58.1 +0.6
CHTO Chiang Mai 69.68 275 P P 16 39 57.2 -1.0
CHTO Chiang Mai 69.68 275 P P 16 39 57.2 -1.0
CHTO pmax pmax
comp=Z,32nm,1.1s
CHTO Chiang Mai 69.68 275 P P 16 39 58.8 +0.6
CHTO Chiang Mai 69.68 275 P P 16 39 58.3 +0.1
CHTO x x 16 40 05.5
CHTO pP pP 16 40 17.1 -0.8
HAW Hawthorne Fire 69.75 62 P P 16 39 58.3 -0.1
baz=319,SNR=39
HAW S S 16 48 60.0 -1.4
baz=319
AZL Aizawl 69.87 283 *e*P P 16 40 00.3 +0.9
AZL *i* x pP 16 40 20.7 +1.6
Y57A Sumter 69.92 61 P P 16 39 58.6 -0.8
Y57A IAmb IAmb 16 40 01.2
comp=Z,54nm,0.5s
CM31 Chiang Mai Arr 69.95 275 P P 16 40 00.0 +0.2
CM31 Chiang Mai Arr 69.95 275 P P 16 40 00.4 +0.6
CMAR Chiang Mai Arr 69.95 275 P P 16 40 00.4 +0.6
comp=Z,15nm,0.9s,baz=26,slow=6.7,SNR=77
CMAR pP pP 16 40 19.2 -0.3
comp=Z,15nm,0.8s,baz=27,slow=6.1,SNR=8.8
CMAR LR LR 17 11 27.3
comp=Z,119nm,21.9s,baz=45,slow=36
comp=Z,15nm,0.9s
CMAR Chiang Mai Arr 69.95 275 P P 16 39 59.8 0.0
CMAR Chiang Mai Arr 69.95 275 *i* P P 16 40 00.4 +0.6
CMAR pmax pmax
comp=Z,16nm,0.9s
TIGA Tifton 70.08 64 P P 16 39 59.7 -0.7
baz=319
TIGA S S 16 49 03.5 -1.9
baz=319
X58A Rowland 70.09 59 P P 16 39 59.5 -1.0
X58A Rowland 70.09 59 P P 16 39 59.8 -0.7
baz=319,SNR=11
X58A P P 16 39 59.8 -0.7
baz=319,SNR=11
GBN Guysborough 70.11 41 P P 16 39 59.5 -0.9
GBN IAmb IAmb 16 40 19.9
comp=Z,94nm,1.4s
TOLI2 Tolitoli 70.14 245 P P 16 40 00.3 -0.7
TOLI2 IAmb IAmb 16 40 01.8
comp=Z,107nm,1.0s
TOLI2 Tolitoli 70.14 245 P P 16 40 00.4 -0.6
CNNC Cliffs of the 70.34 58 P P 16 40 01.6 -0.4
baz=320
255A Hazlehurst 70.34 63 P P 16 40 00.7 -1.3
255A IAmb IAmb 16 40 02.8
comp=Z,71nm,1.0s
255A Hazlehurst 70.34 63 P P 16 40 02.0 0.0
baz=319,SNR=16
BIGH Upper Bighouse 70.37 2⇑ *e*P P 16 40 02.2 +0.5
BIGH IAmb IAmb 16 40 03.6
comp=Z,70nm,1.0s
SNART Snartemo 70.38 356 *e*P P 16 40 02.2 +0.4
HOMB Hombersund 70.38 355 *e*P P 16 40 02.0 +0.2
Y58A Scranton 70.40 60 P P 16 40 00.7 -1.7
Y58A IAmb IAmb 16 40 03.2
comp=Z,80nm,0.8s
Y58A Scranton 70.40 60 P P 16 40 02.7 +0.4
baz=320,SNR=6.6
Y58A P P 16 40 02.7 +0.4
baz=320,SNR=6.6
553A Crawfordville 70.54 66 P P 16 40 03.3 0.0
553A IAmb IAmb 16 40 04.5
comp=Z,101nm,1.0s
MLA1 Latheron 70.57 2⇑ *e*P P 16 40 03.1 +0.1
V61A Roper 70.61 57 P P 16 40 03.3 -0.3
V61A IAmb IAmb 16 40 04.5
comp=Z,74nm,0.8s
V61A Roper 70.61 57 P P 16 40 03.7 +0.1
baz=320
V61A P P 16 40 03.7 +0.1
baz=320
LEWI Lewis, Hebride 70.63 4 *e*P P 16 40 03.0 -0.3
LINV Loch Inver, As 70.68 3 *e*P P 16 40 04.1 +0.4
NHSC New Hope 70.73 61 P P 16 40 04.3 0.0
NHSC IAmb IAmb 16 40 05.7
comp=Z,99nm,0.9s
NHSC New Hope 70.73 61 P P 16 40 05.2 +0.9
baz=320,SNR=14
NHSC New Hope 70.73 61 P P 16 40 04.4 0.0
baz=319,SNR=14
NHSC S S 16 49 11.1 -1.7
baz=319
ODAN Odare 70.73 289 *e*P P 16 40 06.1 +1.3
Y59A Loris 70.77 60 P P 16 40 04.1 -0.4
Y59A IAmb IAmb 16 40 05.6
comp=Z,49nm,0.7s
Y59A Loris 70.77 60 P P 16 40 04.7 +0.1
baz=320,SNR=5.3
Y59A P P 16 40 04.7 +0.1
baz=320,SNR=5.3
LUWI Luwuk 70.79 242 P P 16 40 03.9 -1.0
LUWI Luwuk 70.79 242 P P 16 40 04.1 -0.8
GAR Garm 70.81 309 P P 16 40 05.7 +0.8
GUN Gumba 70.84 291 *e*P P 16 40 07.1 +1.5
comp=Z,305nm,0.7s
JIRN Jiri 70.84 290 *e*P P 16 40 07.0 +1.4
comp=Z,219nm,0.8s
Y60A Bolivia 71.11 59 P P 16 40 05.9 -0.7
Y60A IAmb IAmb 16 40 08.1
comp=Z,63nm,0.7s
LPSR Galich'ya Gora 71.13 336 *e*P P 16 40 05.5 -0.9
LPSR pmax pmax
comp=Z,10.0nm,0.7s
RAMN Ramite 71.13 290 *e*P P 16 40 08.3 +1.1
comp=Z,168nm,0.7s
IIGN Ignalina 71.26 344 *e*P P 16 40 07.2 0.0
KKN Kakani 71.28 291 *e*P P 16 40 09.5 +1.4
MCD Coleburn Disti 71.29 2⇑ *e*P P 16 40 07.9 +0.5
KAC Achnashellach 71.33 3⇑ *e*P P 16 40 07.9 +0.3
PKI Pulchoki 71.37 291 *e*P P 16 40 09.7 +1.0
comp=Z,98nm,0.8s
PKIN Phulchoki 71.37 291 *e*P P 16 40 09.7 +1.0
comp=Z,55nm,0.5s
MDO Dochfour 71.41 2 *e*P P 16 40 08.8 +0.6
KPL Plockton 71.48 3 *e*P P 16 40 08.9 +0.4
KPL IAmb IAmb 16 40 09.9
comp=Z,47nm,0.8s
PABE Paberze 71.48 346 P P 16 40 07.8 -0.7
PABE IAmb IAmb 16 40 09.8
comp=Z,54nm,0.9s
PABE Paberze 71.48 346 *e*P P 16 40 08.5 0.0
GKN Gorkha 71.49 292 *e*P P 16 40 10.3 +1.0
comp=Z,55nm,0.4s
456A Hilliard 71.50 64 P P 16 40 08.7 -0.4
456A IAmb IAmb 16 40 10.4
comp=Z,72nm,0.7s
DMN Daman 71.52 291 *e*P P 16 40 10.8 +1.2
comp=Z,86nm,0.7s
NACGM Naroch 71.59 344⇓ *e*P P 16 40 09.1 -0.1
baz=17
CHGR Chuyangaron 71.64 309 P P 16 40 10.1 +0.2
CHGR Chuyangaron 71.64 309 P P 16 40 10.1 +0.2
CHGR pmax pmax
comp=Z,841nm,1.5s
VRH Novokhopyorsk 71.64 334 *e*P P 16 40 08.5 -1.1
VRH pmax pmax
comp=Z,30nm,0.6s
DANN Dangsing 71.74 293 *e*P P 16 40 12.1 +1.2
MNK Minsk 71.78 343 *i* P P 16 40 10.2 -0.1
MNK *i* *PP pP 16 40 31.1 +1.3
MNK *i* 16 42 50.2
MNK *i* PPP PPP 16 44 34.2
MNK *i* S S 16 49 24.6 +0.3
MNK *i* *SS sS 16 50 00.9 +3.6
MNK *i* SS SS 16 54 02.9 +2.7
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,30nm,0.9s
MNK MLR MLR
comp=Z,379nm,20.0s
MNK MLR MLR
comp=N,16nm,16.0s
MNK MLR MLR
comp=E,46nm,20.0s
MNK Minsk 71.78 343 *i* P P 16 40 10.2 -0.1
comp=E,2.0nm,0.8s
MNK *i* P P 16 40 10.2 -0.1
comp=N,7.0nm,0.9s
MNK *i* P P 16 40 10.2 -0.1
comp=Z,30nm,0.9s,baz=18
MNK *i* pP pP 16 40 31.2 +1.3
MNK *i* PP PP 16 42 50.2 +0.5
MNK *i* PPP PPP 16 44 34.2
MNK *i* S S 16 49 24.7 +0.3
MNK *i* sS sS 16 50 01.0 +3.6
MNK *i* SS SS 16 54 03.0 +2.7
MNK *i* SSS SSS 16 57 23.0
MNK *i* LQ LQ 17 06 56.7
MNK *i* LR LR 17 12 24.6
MNK *i* LRM MLR 17 14 16.1
comp=Z,379nm,19.7s
MNK *i* LRM MLR 17 14 22.1
comp=N,16nm,16.3s
MNK *i* LRM MLR 17 14 44.6
comp=E,46nm,20.4s
VORR Voronezh 71.90 335 *e*P P 16 40 11.4 +0.3
VORR pmax pmax
comp=Z,30nm,0.4s
DRUM Mains of Drumt 71.98 1⇑ *e*P P 16 40 11.4 -0.1
PMOR Pomariorio Ree 72.02 147 *e*T T 17 58 54.2
comp=Z,26nm,0.2s
MUD Monsted U'grnd 72.15 354 *i* P P 16 40 12.2 -0.3
MUD IAmb IAmb 16 40 13.8
comp=Z,43nm,0.9s
656A Willston 72.24 65 P P 16 40 13.7 +0.2
656A IAmb IAmb 16 40 15.0
comp=Z,71nm,1.0s
VSR Storozhevoye 72.33 335 *e*P P 16 40 12.4 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.6s
VAH Vaihoa 72.33 147 *e*P P 16 40 14.6 +0.6
comp=Z,125nm,0.9s
COEN Coen 72.40 217 P P 16 40 14.7 +0.2
baz=72,SNR=7.0
COEN Coen 72.40 217 P P 16 40 14.4 -0.1
COEN IAmb IAmb 16 40 16.0
comp=Z,104nm,1.1s
COEN Coen 72.40 217 P P 16 40 14.7 +0.2
INVG Invergeldie, C 72.44 2⇑ *e*P P 16 40 14.4 +0.1
LAWE Loch Awe, Argy 72.57 3⇑ *e*P P 16 40 15.6 +0.6
LAWE IAmb IAmb 16 40 16.4
comp=Z,108nm,0.8s
EAB Aberfoyle 72.67 2⇑ *e*P P 16 40 16.1 +0.4
LGTI Lohaghat 72.91 296 *e*P P 16 40 18.7 +1.2
KOUNC Koumac, New Ca 72.94 195 P P 16 40 18.6 +1.1
KOUNC IAmb IAmb 16 40 20.5
comp=Z,208nm,1.4s
KOUNC Koumac, New Ca 72.94 195 P P 16 40 19.0 +1.5
EDI Edinburgh 72.96 2 *e*P P 16 40 17.2 -0.1
ESY Stoneypath 72.97 1⇑ *e*P P 16 40 17.7 +0.2
PGBU Glenifferbraes 73.04 2⇑ *e*P P 16 40 18.3 +0.4
PGBU IAmb IAmb 16 40 19.1
comp=Z,102nm,1.1s
EBL Broad Law 73.11 2⇑ *e*P P 16 40 18.6 +0.3
MARNC Mare, Loyalty 73.32 191 P P 16 40 19.8 0.0
MARNC Mare, Loyalty 73.32 191 P P 16 40 21.2 +1.5
JMU Jammu 73.34 302 *e*P P 16 40 22.4 +2.4
JMU *i* x pP 16 40 39.0 -0.7
SMLA Simla 73.34 299 *e*P P 16 40 20.7 +0.7
SMLA IAmb IAmb 16 40 27.6
comp=Z,158nm,0.2s
SMLA *i* pP pP 16 40 39.1 -0.6
NIL Nilore 73.49 303 P P 16 40 21.7 +0.8
NIL IAmb IAmb 16 40 46.8
comp=Z,173nm,1.2s
NIL Nilore 73.49 303 P P 16 40 21.7 +0.8
NIL pmax pmax
comp=Z,173nm,1.3s
NIL Nilore 73.49 303 P P 16 40 22.6 +1.7
NIL P P 16 40 22.6 +1.7
BHK Bhakra 73.53 300 *e*P P 16 40 22.5 +1.3
BHK *i* x pP 16 40 40.2 -0.7
EKA Eskdalemuir Ar 73.55 2 LR LR 17 12 32.6
comp=Z,117nm,19.9s,baz=343,slow=36
CLGH Cloghs, Cushen 73.72 3⇑ *e*P P 16 40 22.4 +0.5
NEWG New Galloway 73.74 2⇑ *e*P P 16 40 22.3 +0.3
NEWG IAmb IAmb 16 40 23.0
comp=Z,40nm,0.8s
DWPF Disney Wildern 73.82 65 P P 16 40 22.9 +0.1
DWPF IAmb IAmb 16 40 24.8
comp=Z,90nm,0.8s
DWPF Disney Wildern 73.82 65 P P 16 40 23.8 +1.0
baz=320,SNR=5.8
DWPF Disney Wildern 73.82 65 P P 16 40 23.0 +0.1
baz=320
PPT Papeete 73.86 149 LR LR 17 05 09.8
comp=Z,317nm,20.5s,baz=332,slow=29
PPT2 Papeete2 73.88 149 *e*P P 16 40 25.2 +2.0
comp=Z,197nm,33.5s
PPT2 *e*S S 16 49 50.4 +1.4
comp=Z,202nm,28.0s
PPT2 *e*SS SS 16 54 37.2 +2.1
comp=Z,140nm,32.2s
PPT2 *e*LR LR 17 03 10.0
comp=Z,1µm,27.0s
PPT2 *e*LR LR 17 03 10.4
comp=Z,3µm,29.0s
PPT2 Papeete2 73.88 149 *e*T T 18 01 15.5
comp=Z,29nm,0.2s
PPTF Pamatai, Papee 73.89 149 P P 16 40 22.9 -0.4
TIAR Tiarei 73.93 149 *e*T T 18 01 17.5
comp=Z,4.0nm,0.2s
PAE Paea 73.95 149 *e*T T 18 01 16.6
comp=Z,6.2nm,0.3s
YATNC Mamie plateau, 74.04 192 P P 16 40 25.1 +1.2
EDMD Edmundbyers 74.07 1⇑ *e*P P 16 40 24.1 +0.2
SBUM Sibu 74.07 253 P P 16 40 24.7 +0.3
SBUM IAmb IAmb 16 40 26.9
comp=Z,179nm,1.8s
DZM Mont Dzumac 74.11 193 P P 16 40 25.8 +1.3
comp=Z,91nm,1.1s,baz=12,slow=8.7,SNR=24
DZM LR LR 17 06 58.2
comp=Z,543nm,21.9s,baz=24,slow=31
comp=Z,91nm,1.1s
DZM Mont Dzumac 74.11 193 *e*P P 16 40 24.4 0.0
comp=Z,229nm,28.6s
DZM *e*S S 16 49 53.5 +2.1
comp=Z,427nm,26.4s
DZM Mont Dzumac 74.11 193 *e*LR LR 17 03 17.5
comp=Z,3µm,29.2s
DZM Mont Dzumac 74.11 193 P P 16 40 24.5 0.0
DZM IAmb IAmb 16 40 27.7
comp=Z,183nm,1.2s
DZM Mont Dzumac 74.11 193 P P 16 40 26.0 +1.5
NOUC Port Laguerre 74.16 193 P P 16 40 26.3 +1.7
BKB Balikpapan 74.30 247 P P 16 40 25.9 +0.2
KESW Keswick, Cumbr 74.30 2⇑ *e*P P 16 40 25.6 +0.4
KESW IAmb IAmb 16 40 26.5
comp=Z,64nm,0.9s
ONTNC Ouen Toro 74.34 193 P P 16 40 26.2 +0.6
ONTNC Ouen Toro 74.34 193 P P 16 40 27.3 +1.6
OUENC Ouen Island, N 74.40 192 P P 16 40 26.5 +0.5
OUENC IAmb IAmb 16 40 29.2
comp=Z,202nm,1.6s
OUENC Ouen Island, N 74.40 192 P P 16 40 28.1 +2.1
comp=Z,87nm,1.8s
PINNC Pines Island, 74.51 192 P P 16 40 27.3 +0.6
PINNC IAmb IAmb 16 40 29.4
comp=Z,145nm,1.2s
PINNC Pines Island, 74.51 192 P P 16 40 28.2 +1.5
IOMK Kirk Michael 74.59 2 *e*P P 16 40 27.2 +0.3
RAR Rarotonga 74.61 160 P P 16 40 27.5 +0.2
comp=Z,31nm,1.0s,baz=313,slow=5.9,SNR=3.0
RAR LR LR 17 05 44.7
comp=Z,813nm,20.5s,baz=338,slow=30
comp=Z,31nm,1.0s
WIM Isle of Man 74.70 3⇑ *i*P P 16 40 28.0 +0.4
ILTH Belurgan, Co L 74.77 4 *e*P P 16 40 28.1 +0.2
KBL Kabul 74.94 307 P P 16 40 28.7 -0.9
KBL IAmb IAmb 16 40 49.0
comp=Z,166nm,1.3s
KBL Kabul 74.94 307 P P 16 40 28.7 -0.9
KBL pmax pmax
comp=Z,166nm,1.3s
KBL Kabul 74.94 307 P P 16 40 29.9 +0.3
SNR=21
KBL P P 16 40 29.9 +0.3
SNR=21
HPK Haverah Park 74.95 1⇑ *e*P P 16 40 29.8 +0.8
AKASG Malin Array Be 75.13 341 P P 16 40 29.6 -0.6
comp=Z,9.5nm,0.4s,baz=21,slow=6.4,SNR=55
AKASG pP pP 16 40 47.9 -1.8
comp=Z,7.7nm,0.6s,baz=24,slow=6.1,SNR=4.3
AKASG LR LR 17 17 02.1
comp=Z,560nm,21.4s,baz=20,slow=38
comp=Z,9.5nm,0.4s
AKASG Malin Array Be 75.13 341 P P 16 40 29.5 -0.6
AKBB Malin Array Si 75.13 341 P P 16 40 29.2 -0.9
AKBB Malin Array Si 75.13 341 *ce*P P 16 40 29.6 -0.5
WPS Cemaes, Angles 75.46 2⇑ *e*P P 16 40 31.9 +0.1
WPS IAmb IAmb 16 40 32.6
comp=Z,26nm,0.8s
WME Myndd Eilian 75.47 2⇑ *i*P P 16 40 32.0 0.0
LBWR Ladybower, Pea 75.50 1⇑ *e*P P 16 40 32.5 +0.3
LBWR IAmb IAmb 16 40 33.7
comp=Z,69nm,0.9s
DSB Dublin 75.55 4 P P 16 40 32.6 +0.1
DSB IAmb IAmb 16 40 34.1
comp=Z,101nm,0.8s
WLF1 Llynfaes 75.57 2⇑ *e*P P 16 40 32.5 -0.1
WLF1 IAmb IAmb 16 40 32.9
comp=Z,27nm,0.7s
YRC Rhoscolyn 75.60 3⇑ *i*P P 16 40 32.6 -0.1
KAPI Kappang 75.75 243 LR LR 17 09 44.8
comp=Z,301nm,21.9s,baz=41,slow=32
KAPI Kappang 75.75 243 P P 16 40 33.8 -0.3

KAPI Kappang 75.75 243 P **P** **16 40 33.8 -0.3**
KAPI pmax pmax
comp=Z,49nm,0.9s
KAPI Kappang 75.75 243 P **P** **16 40 33.7 -0.3**
KAPI Kappang 75.75 243 P **P** **16 40 34.7 +0.6**
KDU Kakadu 75.77 227 P **P** **16 40 34.1 0.0**
baz=76,SNR=56
KDU Kakadu 75.77 227 P **P** **16 40 34.2 +0.1**
TEIG Tepich 75.79 75 P **P** **16 40 34.0 -0.4**
MTSU Mount Surprise 75.83 214 P **P** **16 40 34.7 +0.3**
baz=76,SNR=33
MTSU Mount Surprise 75.83 214 P **P** **16 40 34.9 +0.5**
KSM Kuching 75.99 254 P **P** **16 40 35.3 -0.3**
KSM lAmb lAmb 16 40 37.5
comp=Z,136nm,1.5s
KSM Kuching 75.99 254 P **P** **16 40 36.3 +0.8**
FOEL Foel Wylfa 76.00 2⇑*e*P **P** **16 40 34.5 -0.5**
KUDL Kundal 76.02 298 *e*P **P** **16 40 36.2 +0.7**
KUDL *i* x pP 16 40 42.1 -13
KUDL *ex* **pP** **16 40 54.2 -1.2**
LLW Llanuwychllyn 76.03 2 *e*P **P** **16 40 35.5 +0.4**
WACR West Acre 76.18 359⇑*e*P **P** **16 40 36.2 +0.1**
WACR lAmb lAmb 16 40 37.0
comp=Z,225nm,0.9s
HLM1 Long Mynd 76.37 2⇑*e*P **P** **16 40 37.5 +0.3**
IWEX Carrickbyrne, 76.40 4 *e*P **P** **16 40 37.4 +0.1**
CCIG Comitan 76.43 81 P **P** **16 40 38.8 +0.6**
CCIG lAmb lAmb 16 41 00.5
comp=Z,154nm,1.7s
MTN Manton Dam 76.53 229 P **P** **16 40 38.5 +0.1**
baz=76,SNR=56
MTN Manton Dam 76.53 229 P **P** **16 40 37.9 -0.5**
MTN Manton Dam 76.53 229 P **P** **16 40 38.6 +0.2**
GOF Gofitskoye 76.77 330⇑*e*P **P** **16 40 40.0 +0.5**
MCH1 Michaelchurch 76.89 2 *e*P **P** **16 40 40.4 +0.3**
MCH1 lAmb lAmb 16 40 41.1
comp=Z,79nm,0.7s
RSBS Rosebush, Pemb 76.90 3⇑*e*P **P** **16 40 40.3 +0.2**
RSBS lAmb lAmb 16 40 41.1
comp=Z,68nm,0.9s
JHNI Jhansi 76.94 294 *e*P **P** **16 40 40.4 -0.4**
JHNI *i* x **pP** **16 40 58.8 -2.0**
LVV L'vov 76.96 344 *e*P **P** **16 40 41.0 +0.5**
LVV MLR MLR
comp=E,300nm,19.0s
LVV MLR MLR
comp=N,300nm,20.0s
LVV MLR MLR
comp=Z,600nm,22.0s
CLL Collm 76.97 351 P **P** **16 40 40.0 -0.5**
CLL Collm 76.97 351⇑*i*P **P** **16 40 40.3 -0.2**
CLL *i* 16 40 50.9
CLL *i* *PP **pP** **16 40 58.3 -1.9**
CLL *e*S **S** **16 50 24.0 +1.6**
CLL pmax pmax
comp=Z,14nm,0.9s
CLL Collm 76.97 351⇑*i*P **P** **16 40 40.3 -0.2**
comp=Z,14nm,0.9s
CLL *i* x x 16 40 44.4
CLL *i* PcP **PcP** **16 40 50.9 -0.4**
CLL *i* pP **pP** **16 40 58.3 -1.9**
CLL *i* sP **sP** **16 41 06.3 -2.0**
CLL *e*PP **PP** **16 43 33.0 -0.7**
CLL *ep*PP 16 43 50.0
CLL *es*PPP 16 45 50.0
CLL *es*PPPP 16 46 54.0
CLL *e*S **S** **16 50 24.0 +1.6**
CLL *e*SKSac **SKKSac** **16 50 47.0 +0.5**
CLL *e*PS **PnS** **16 51 18.0 +8.2**
CLL *e*SS **SS** **16 55 24.0 +5.0**
CLL *e*SSS SSS 16 58 48.0
CLL *e*SSSS 17 01 06.0
CTA Charters Tower 76.98 212 LR LR 17 10 50.9
comp=Z,219nm,21.4s,baz=15,slow=33
CTA Charters Tower 76.98 212 P **P** **16 41 41.3 +0.4**
CTAO Charters Tower 76.98 212 P **P** **16 40 40.4 -0.5**
CTAO lAmb lAmb 16 40 42.5
comp=Z,122nm,1.1s
CTAO Charters Tower 76.98 212 P **P** **16 40 40.4 -0.5**
CTAO pmax pmax
comp=Z,122nm,1.1s
CTAO Charters Tower 76.98 212 P **P** **16 40 41.2 +0.4**
SOR Soroa 76.98 70 P **P** **16 40 41.3 +0.2**
SOR Soroa 76.98 70 P **P** **16 40 41.3 +0.2**
SOR pmax pmax
comp=Z,63nm,1.2s
MONM Monmouth 77.06 1⇑*e*P **P** **16 40 41.4 +0.4**
MONM lAmb lAmb 16 40 42.2
comp=Z,98nm,0.8s
KSP Ksiaz 77.08 349 *e*P **P** **16 40 41.0 -0.1**
STRD Stroud 77.13 1⇑*e*P **P** **16 40 41.9 +0.5**
STRD lAmb lAmb 16 40 42.6
comp=Z,121nm,0.7s
MAK Makhachkala 77.15 326*d i*P **P** **16 40 39.7 -1.9**
MAK *e**PP **pP** **16 41 00.9 -0.5**
MAK *e**SP **sP** **16 41 09.9 +0.4**
MAK *e* 16 43 36.5
MAK *e*PPP PPP 16 45 20.3
MAK *e*S **S** **16 50 21.6 -3.0**
MAK *e**SS **sS** **16 50 59.8 +1.3**
MAK *e*SS **SS** **16 55 25.9 +3.7**
MAK pmax pmax
comp=Z,294nm,1.2s
MAK MLR MLR
comp=Z,799nm,18.0s
OJC Ojcow 77.23 347 *e*P **P** **16 40 41.5 -0.6**
OJC Ojcow 77.23 347 P **P** **16 40 41.1 -1.0**
OJC Ojcow 77.23 347 P **P** **16 40 41.1 -1.0**
OJC pmax pmax
comp=Z,21nm,0.9s
GEYT Alibeck 77.30 316 P **P** **16 40 44.0 +1.3**
comp=Z,9.3nm,0.8s,baz=56,slow=11,SNR=13
GEYT pP **pP** **16 41 02.7 +0.2**
comp=Z,10nm,0.7s,baz=48,slow=11,SNR=6.1
GEYT PP **PP** **16 43 37.6 +0.6**
comp=Z,8.0nm,0.8s,baz=252,slow=13,SNR=4.0
GEYT LR LR 17 17 19.5
comp=Z,934nm,21.6s,baz=47,slow=38
comp=Z,9.3nm,0.8s
GEYT Alibeck 77.30 316 P **P** **16 40 42.5 -0.2**
GEYT lAmb lAmb 16 41 03.6
comp=Z,164nm,1.8s
GYA0B ALIBECK ARRAY 77.30 316 P **P** **16 40 42.6 -0.1**
GYA0B lAmb lAmb 16 41 03.5
comp=Z,143nm,1.8s
BRG Berggiesshubel 77.31 351 *i*P **P** **16 40 42.3 -0.2**
BRG Amp 16 40 44.7
comp=Z,12nm,1.0s
BRG *ex* x 16 40 46.9
BRG Amp 16 40 48.4
comp=Z,6.4nm,0.7s
BRG *ex* x 16 41 01.7
BRG Amp 16 41 03.3
comp=Z,17nm,1.4s
BRG *ex* x 16 41 09.9
BRG Amp 16 41 10.8
comp=Z,14nm,1.3s
BRG Berggiesshubel 77.31 351 *i*P **P** **16 40 42.2 -0.2**
BRG *e* 16 40 46.8
BRG *e* 16 41 01.6
BRG *e* 16 41 09.8
BRG S **S** **16 50 28.0 +1.9**
BRG pmax pmax
comp=Z,12nm,1.0s
BRG pmax pmax
comp=Z,6.0nm,0.7s
BRG pmax pmax
comp=Z,17nm,1.4s
BRG pmax pmax
comp=Z,14nm,1.3s
BRG pmax pmax
comp=E,260nm,24.3s
BRG MLR MLR
comp=Z,608nm,20.5s
BRG MLR MLR
comp=N,504nm,23.3s
CHVC Chvalec 77.36 349 *e*P **P** **16 40 42.5 -0.3**
CHVC AMS AMS 17 11 40.0
OSTC Ostas 77.37 349 *e*P **P** **16 40 43.1 +0.3**
OSTC AMS AMS 17 12 00.0
comp=N,600nm,27.2s
SWN1 Swindon 77.39 1 *e*P **P** **16 40 43.5 +0.6**
MMRI Maumere 77.40 238 P **P** **16 40 42.7 -0.7**
MMRI lAmb lAmb 16 40 43.7
comp=Z,71nm,0.9s
BLSP Bilaspur 77.42 290 *e*P **P** **16 40 43.9 +0.3**
BLSP *i* x **pP** **16 41 02.2 -1.3**
UPC Upice 77.44 349 *e*P **P** **16 40 43.3 +0.1**
UPC *e*S **S** **16 50 21.1 -6.5**
UPC MLR MLR
comp=Z,600nm,25.0s
UPC Upice 77.44 349 *e*P **P** **16 40 43.3 +0.1**
UPC *e*S **S** **16 50 21.1 -6.5**
UPC AMS AMS 17 11 50.0
comp=Z,600nm,25.0s
DPC Dobruska-Polom 77.56 349 *e*P **P** **16 40 43.9 0.0**
DPC *e*S S 16 50 17.0 -12
DPC MLR MLR
comp=Z,500nm,23.2s
DPC Dobruska-Polom 77.56 349 *e*P **P** **16 40 43.9 0.0**
DPC *e*S S 16 50 17.0 -12
DPC AMS AMS 17 12 30.0
comp=Z,500nm,23.2s
PVCC Panska Ves 77.58 350 AMS AMS 17 11 40.0
comp=Z,600nm,25.1s
DGPR DIGLIPUR 77.69 276 *e*P **P** **16 40 45.4 +0.3**
SORM Soroca 77.75 341 ⇓P **P** **16 40 43.8 -1.1**
SORM Soroca 77.75 341 ⇓P **P** **16 40 43.8 -1.1**
KRLC Kraliky 77.78 349 *e*P **P** **16 40 44.7 -0.4**
KRLC *e*S **SKSac** **16 50 56.4 +4.5**
KRLC MLR MLR
comp=Z,500nm,24.7s
KRLC Kraliky 77.78 349 *e*P **P** **16 40 44.7 -0.4**
KRLC *ex* x 16 50 56.4
KRLC AMS AMS 17 12 50.0
comp=Z,500nm,24.7s
OKC Ostrava-Krasne 77.84 348 *e*P **P** **16 40 45.4 0.0**
OKC MLR MLR
comp=Z,400nm,27.4s
OKC Ostrava-Krasne 77.84 348 *e*P **P** **16 40 45.4 0.0**
OKC AMS AMS 17 13 20.0
comp=Z,400nm,27.4s
HTL Hartland 77.86 3⇑*e*P **P** **16 40 46.0 +0.5**
KVAR Kislovodsk Arr 77.87 330 LR LR 17 20 12.4
comp=Z,257nm,18.5s,baz=272,slow=40
KIV Kislovodsk 77.87 330 ⇑P **P** **16 40 47.0 +1.2**
KIV Kislovodsk 77.87 330 P **P** **16 40 45.6 -0.2**
KIV Kislovodsk 77.87 330 *e*P **P** **16 40 46.1 +0.3**
KIV *e*S **S** **16 50 32.9 +0.3**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,355nm,19.0s
KIV Kislovodsk 77.87 330 P **P** **16 40 46.6 +0.8**
KIV P **P** **16 40 46.6 +0.8**
KIV Kislovodsk 77.87 330 P **P** **16 40 46.4 +0.6**
NIE Niedzica 77.94 346 *e*P **P** **16 40 46.7 +0.7**
BATI Baumata 77.97 236 LR LR 17 10 49.5
comp=Z,256nm,21.7s,baz=82,slow=32
MORC Moravsky Berou 77.97 348 ⇓P **P** **16 40 46.2 -0.1**
MORC Moravsky Berou 77.97 348 P **P** **16 40 45.8 -0.4**
MORC Moravsky Berou 77.97 348 ⇓P **P** **16 40 46.2 -0.1**
MORC Moravsky Berou 77.97 348 *e*P **P** **16 40 45.8 -0.4**
BEBN Eben Emael 77.98 356 *d*P **P** **16 40 46.0 -0.1**
KBZ Khabaz 78.01 329 P **P** **16 40 47.3 +0.9**
comp=Z,7.8nm,0.8s,baz=40,slow=4.6,SNR=11
KBZ LR LR 17 20 01.4
comp=Z,494nm,20.6s,baz=18,slow=39
comp=Z,7.8nm,0.8s
KBZ Khabaz 78.01 329*ce*P **P** **16 40 47.0 +0.6**
KBZ pmax pmax
comp=Z,11nm,0.9s
SHA1 Shidzhatmaz 78.07 330 *i* P **P** **16 40 47.8 +0.7**
KOLS Kolonicke sedl 78.11 345 *e*P **P** **16 40 47.5 +0.6**
KOLS pmax pmax
comp=Z,23nm,0.9s
KOLS Kolonicke sedl 78.11 345 *e*P **P** **16 40 47.5 +0.6**
PRU Pruhonice 78.12 350 *e*P **P** **16 40 46.6 -0.4**
PRU *e*S **S** **16 50 30.0 -4.9**
PRU MLR MLR
comp=Z,600nm,23.0s
PRU Pruhonice 78.12 350 *e*P **P** **16 40 46.6 -0.4**
PRU *e*S **S** **16 50 30.0 -4.9**
PRU AMS AMS 17 11 50.0
comp=Z,600nm,23.0s
MEM Membach 78.16 356 *d*P **P** **16 40 47.3 +0.2**
comp=Z,46nm,0.9s
BTNL Ternell 78.17 356 *d*P **P** **16 40 47.9 +0.6**
comp=Z,38nm,0.8s
BSTI Sart Tilman 78.20 356 *d*P **P** **16 40 47.7 +0.3**
comp=Z,11nm,0.7s
CRVS Cervenica-Dubn 78.27 345 *e*P **P** **16 40 48.4 +0.6**
CRVS pmax pmax
comp=Z,22nm,1.0s
CRVS Cervenica-Dubn 78.27 345 *e*P **P** **16 40 48.4 +0.6**
LANS Liptovska Anna 78.33 347 *e*P **P** **16 40 49.2 +1.0**
LANS pmax pmax
comp=Z,21nm,1.0s
LANS Liptovska Anna 78.33 347 *e*P **P** **16 40 49.2 +1.0**
AJM Ajmer 78.34 298 *e*P **P** **16 40 49.1 +0.5**
AJM *i* x **pP** **16 41 07.3 -1.3**
BCLA Clavier 78.38 356 *d*P **P** **16 40 48.3 -0.1**
comp=Z,28nm,0.9s
UZH Uzhgorod 78.40 345 *e*P **P** **16 40 45.5 -3.0**
UZH *i* 16 40 53.1
UZH *i* 16 41 11.3
BHOU Houvegnez 78.41 356 *d*P **P** **16 40 49.0 +0.4**
DYA Yadsworthy 78.44 2 *e*P **P** **16 40 48.7 0.0**
BMRD Maredsous 78.51 357 *d*P **P** **16 40 49.5 +0.4**
comp=Z,40nm,0.8s
ZEI Tsey 78.52 328 *e*P **P** **16 40 49.2 -0.4**
ZEI pmax pmax
comp=Z,23nm,0.9s
VRAC Vranov 78.55 349 ⇑P **P** **16 40 49.8 +0.4**
VRAC Vranov 78.55 349 LR LR 17 18 29.1
comp=Z,166nm,18.9s,baz=16,slow=38
VRAC Vranov 78.55 349 ⇑P **P** **16 40 49.8 +0.4**
VRAC Vranov 78.55 349 *e*P **P** **16 40 49.6 +0.2**
RCHB Rochefort 78.64 356 *d*P **P** **16 40 49.9 +0.1**
comp=Z,24nm,0.8s
CCA1 Carmenellis 78.65 3⇑*e*P **P** **16 40 50.2 +0.3**
ANN Anapa 78.67 333 *e*P **P** **16 40 48.0 -2.0**
ANN *e**PP **pP** **16 41 09.6 -0.2**
ANN pmax pmax
comp=Z,45nm,0.8s
ANN MLR MLR
comp=Z,582nm,23.0s
TREC Trest 78.70 349 AMS AMS 17 12 30.0
comp=Z,500nm,23.4s
DOU Dourbes 78.73 357 *d*P **P** **16 40 50.3 0.0**
comp=Z,21nm,0.9s
GRA1 Grafenberg Arr 78.73 352 P **P** **16 40 50.3 -0.1**
GRF Grafenberg Arr 78.73 352 P **P** **16 40 50.3 -0.1**
GRF pmax pmax
comp=Z,43nm,1.1s
GRFO Grafenberg 78.73 352 P **P** **16 40 50.4 +0.1**
GRFO Grafenberg 78.73 352 P **P** **16 40 50.4 +0.1**
GRFO pmax pmax
comp=Z,37nm,1.1s
RK1H Rockhampton Ha 78.77 207 P **P** **16 40 51.5 +0.8**
MILM Milestii Mici 78.81 340 *e*P **P** **16 40 47.0 -3.8**
MILM *ep*P **pP** **16 41 07.0 -3.6**
MILM Milestii Mici 78.81 340 *e*P **P** **16 40 47.0 -3.8**
MILM *e**PP **pP** **16 41 07.0 -3.6**
MILM *i* S **S** **16 50 41.0 -1.3**
MILM smax smax
comp=E,100nm,2.4s
MILM MLR MLR
comp=Z,450nm,16.5s
KRUC Moravsky 78.82 349 *e*P **P** **16 40 50.9 +0.1**
BUR08 Bucovina Ar. S 78.84 343 P **P** **16 40 51.1 0.0**
ONI Oni 78.85 329 P **P** **16 40 51.4 +0.2**
ONI Oni 78.85 329 P **P** **16 40 51.4 +0.2**
ONI pmax pmax
comp=Z,25nm,1.2s
JAVC Velka Javorina 78.86 348 *e*P **P** **16 40 52.5 +1.4**
BURAR Bucovina Array 78.87 343 ⇓P **P** **16 40 51.5 +0.3**
BURAR Bucovina Array 78.87 343 P **P** **16 40 51.3 +0.1**
BURAR Bucovina Array 78.87 343 ⇓P **P** **16 40 51.5 +0.3**
KULM Kulim 78.94 265 P **P** **16 40 51.0 -0.9**
VYHS Vyhne 79.06 347 *e*P **P** **16 40 52.7 +0.5**
VYHS pmax pmax
comp=Z,17nm,1.0s
VYHS Vyhne 79.06 347 *e*P **P** **16 40 52.7 +0.5**
KHC Kasperske Hory 79.07 351 P **P** **16 40 52.1 -0.1**
KHC Kasperske Hory 79.07 351 *e*P **P** **16 40 51.9 -0.3**
KHC *e* 16 40 56.0
KHC *e* 16 41 10.0
KHC *e* 16 41 24.0
KHC *e*S **S** **16 50 51.0 +5.9**
KHC MLR MLR
comp=Z,700nm,29.1s
KHC Kasperske Hory 79.07 351 *e*P **P** **16 40 51.9 -0.3**
KHC *ex* x 16 40 56.0
KHC *ep*P **pP** **16 41 10.0 -2.0**
KHC *ex* x 16 41 24.0
KHC *e*S **S** **16 50 51.0 +5.9**
KHC AMS AMS 17 11 50.0
comp=Z,700nm,29.1s
WLF Walferdange 79.09 356 P **P** **16 40 52.5 +0.2**
WLF Walferdange 79.09 356 P **P** **16 40 52.5 +0.2**
WLF pmax pmax
comp=Z,23nm,0.9s
SOC Sochi 79.12 331 *e*P **P** **16 40 51.4 -1.2**
SOC *e* 16 43 53.1
SOC *e*PPP PPP 16 45 40.7
SOC *e*S **S** **16 50 45.3 -0.5**
SOC *e*SS **SS** **16 55 55.3 +3.6**
SOC *e*SSS SSS 16 59 17.8
SMOL Smolenice 79.23 348 *e*P **P** **16 40 54.1 +1.0**
SMOL pmax pmax
comp=Z,11nm,1.1s
CKRC Cesky Krumlov 79.30 350 *e*P **P** **16 40 52.7 -0.8**
CKRC *e*S SKiKP 16 50 03.5 +11
BHPL Bhopal 79.30 294 *e*P **P** **16 40 52.9 -1.0**
BHPL lAmb lAmb 16 40 55.0
comp=Z,27nm,0.5s
BHPL *i* x **pP** **16 41 11.6 -2.5**
BBSR BB Station 79.32 51 P **P** **16 40 53.3 -0.6**
BBSR lAmb lAmb 16 41 54.7
comp=Z,34nm,0.6s
BBSR BB Station 79.32 51 P **P** **16 40 53.6 -0.2**
baz=325,SNR=7.8
TBI Tubuai 79.33 151 *e*LR LR 17 05 41.6
comp=Z,23µm,24.5s
TBI *e*LR LR 17 05 41.7
comp=Z,2µm,26.0s
TBI Tubuai 79.33 151 *e*T T 18 08 09.8
comp=Z,10nm,0.3s
IPM Ipoh 79.33 264 P **P** **16 40 53.1 -1.0**
IPM Ipoh 79.33 264 P **P** **16 40 53.9 -0.3**
GEC2 GERESS Array S 79.34 351 P **P** **16 40 53.4 -0.4**
GERES GERESS Array B 79.34 351 P **P** **16 40 53.7 -0.1**
comp=Z,5.9nm,0.7s,baz=24,slow=4.8,SNR=50
GERES PKKPbc **PKKPbc** **16 59 39.9 -1.0**
comp=Z,0.5nm,0.7s,baz=177,slow=2.3,SNR=5.4
GERES PKPPKP P'P'df 17 07 39.6 -11
comp=Z,0.6nm,0.7s,baz=174,slow=1.3,SNR=4.7
GERES LR LR 17 20 49.6
comp=Z,193nm,18.7s,baz=14,slow=39
comp=Z,5.9nm,0.7s
GERES GERESS Array B 79.34 351 P **P** **16 40 53.2 -0.6**
MODS Modra-Piesok 79.39 348 *e*P **P** **16 40 54.8 +0.8**
MODS pmax pmax
comp=Z,44nm,1.1s
MODS Modra-Piesok 79.39 348 *e*P **P** **16 40 54.8 +0.8**
PSZ Piszkesteto 79.47 346 ⇑P **P** **16 40 55.2 +0.7**
PSZ Piszkesteto 79.47 346 P **P** **16 40 54.1 -0.4**
PSZ Piszkesteto 79.47 346 ⇑P **P** **16 40 55.2 +0.7**
PSZ Piszkesteto 79.47 346 P **P** **16 40 55.4 +0.9**
ARCR ARCALIA 79.53 343 ⇑P **P** **16 40 56.4 +1.6**
ZST Bratislava 79.58 348 *e*P **P** **16 40 56.2 +1.2**
ZST pmax pmax
comp=Z,65nm,1.1s
ZST Bratislava 79.58 348 *e*P **P** **16 40 56.2 +1.2**
JVM Valle D.L. Mar 79.69 1⇑*e*P **P** **16 40 55.8 +0.3**
JSA Saint Aubin 79.72 1⇑*e*P **P** **16 40 56.0 +0.3**
JSA lAmb lAmb 16 40 56.8
comp=Z,125nm,0.8s
QIS Mount Isa 79.78 218 P **P** **16 40 55.7 -0.6**
baz=80,SNR=23
QIS Mount Isa 79.78 218 P **P** **16 40 55.9 -0.4**
SRO Srobarova 79.80 347 *e*P **P** **16 40 57.4 +1.3**
SRO pmax pmax
comp=Z,17nm,1.2s
SRO Srobarova 79.80 347 *e*P **P** **16 40 57.4 +1.3**
PLAI Plampang 79.98 242 P **P** **16 40 56.1 -1.5**
NGP Nagpur 79.99 291 *e*P **P** **16 40 57.6 0.0**
NGP *i* x **pP** **16 41 16.2 -1.5**
CONA Conrad Observa 80.00 349 *e*P **P** **16 40 58.0 +0.6**
comp=Z,18nm,0.9s,SNR=14
KNRA Kununurra 80.11 229 P **P** **16 40 58.1 0.0**
baz=80,SNR=17
KNRA Kununurra 80.11 229 P **P** **16 40 57.8 -0.3**
KNRA lAmb lAmb 16 40 59.4
comp=Z,170nm,1.3s
KNRA Kununurra 80.11 229 P **P** **16 40 58.2 +0.1**
DRGR 80.11 344 ⇓P **P** **16 40 58.2 +0.2**
DRGR 80.11 344 ⇓P **P** **16 40 58.2 +0.2**
SOP Sopron 80.16 348 P **P** **16 40 58.8 +0.7**
RONA Rosalia, Austr 80.17 349 *e*P **P** **16 40 59.1 +0.8**
comp=Z,15nm,1.2s,SNR=8.9
CSKK Cskako 80.25 347 P **P** **16 40 59.6 +1.1**
VRI Vrincioaia 80.25 341 ⇑P **P** **16 40 59.2 +0.5**
VRI Vrincioaia 80.25 341 ⇑P **P** **16 40 59.2 +0.5**
MOA Molln 80.26 350 *e*P **P** **16 40 58.8 +0.1**
comp=Z,6.9nm,1.0s
BFO Black Forest 80.30 354 P **P** **16 40 58.5 -0.4**
BFO Black Forest 80.30 354 P **P** **16 40 58.5 -0.4**
BFO pmax pmax
comp=Z,73nm,1.9s
EGYH Egyhazaskeszo 80.32 348 P **P** **16 40 59.8 +0.8**
COVR Voineasa-Covas 80.37 341 ⇑P **P** **16 41 00.7 +1.3**
RAO Raoul Island 80.39 178 LR LR 17 13 14.2
comp=Z,189nm,18.7s,baz=2.5,slow=33
DOPR Dopca 80.42 342 ⇑P **P** **16 41 00.7 +1.1**
TLCR 80.46 339 ⇑P **P** **16 41 00.0 +0.3**
TLCR 80.46 339 ⇑P **P** **16 41 00.0 +0.3**
BIOA Bad Ischl, Aus 80.48 350 *e*P **P** **16 41 00.1 +0.2**
comp=Z,9.2nm,0.7s,SNR=8.3
ECH Echery 80.48 355 P **P** **16 40 59.6 -0.3**
ECH Echery 80.48 355 P **P** **16 40 59.6 -0.3**
ECH pmax pmax
comp=Z,16nm,1.1s
EIDS Eidsvold 80.48 206 P **P** **16 41 00.9 +0.9**
baz=80,SNR=9.2
EIDS Eidsvold 80.48 206 P **P** **16 40 59.9 0.0**
EIDS lAmb lAmb 16 41 02.2
comp=Z,132nm,1.5s
EIDS Eidsvold 80.48 206 P **P** **16 41 00.9 +0.9**
comp=Z,67nm,1.7s
MPLH Magyarpolny 80.53 348 P **P** **16 41 00.6 +0.5**
GNI Garni 80.60 327 LR LR 17 21 11.6
comp=Z,839nm,20.9s,baz=28,slow=39
CFR Carcaliu 80.61 340 ⇑P **P** **16 41 00.8 +0.2**
CFR Carcaliu 80.61 340 ⇑P **P** **16 41 00.8 +0.2**
ARSA Arzberg 80.71 349 *e*P **P** **16 41 01.8 +0.7**
comp=Z,16nm,1.0s,SNR=13
TIH Tihany 80.75 347 P **P** **16 41 02.4 +1.1**
MLR Muntele Rosu 80.77 342 ⇓P **P** **16 41 03.0 +1.4**
MLR Muntele Rosu 80.77 342 LR LR 17 22 30.3
comp=Z,508nm,18.2s,baz=20,slow=40
MLR Muntele Rosu 80.77 342 ⇓P **P** **16 41 03.0 +1.4**
SIRR Siria 80.80 345 ⇑P **P** **16 41 02.3 +0.7**
TPGR Topolog 80.86 340 ⇑P **P** **16 41 02.4 +0.5**
CLF Chambon-Foret 80.86 358 P **P** **16 41 02.0 +0.2**
CLF lAmb lAmb 16 41 03.8
comp=Z,93nm,0.7s
RETA Reutte 80.96 352 *e*P **P** **16 41 02.6 +0.1**
comp=Z,5.9nm,0.7s,SNR=6.9
VOIR 80.99 342 ⇑P **P** **16 41 03.8 +1.0**
VOIR 80.99 342 ⇑P **P** **16 41 03.8 +1.0**
WATA Walderalm 81.04 352 *i* P **P** **16 41 03.3 +0.3**
comp=Z,17nm,0.6s,SNR=15
MOTA Moosalm 81.07 352 *i* P **P** **16 41 02.8 -0.4**
comp=Z,16nm,0.7s,SNR=20
WTTA Wattenberg 81.10 352 *e*P **P** **16 41 03.9 +0.5**
comp=Z,28nm,0.6s,SNR=30
KBA Koelnbreinsper 81.12 350 *i* P **P** **16 41 04.5 +0.9**
comp=Z,42nm,0.6s,SNR=69
TGUH Tegucigalpa,Un 81.13 79 P **P** **16 41 04.3 +0.4**
TGUH Tegucigalpa,Un 81.13 79 *e*P **P** **16 41 05.1 +1.2**
WB0 Warramunga Arr 81.17 222 P **P** **16 41 03.0 -0.7**
SQTA Sankt Quirin 81.18 352 *i* P **P** **16 41 04.2 +0.4**
comp=Z,14nm,0.6s,SNR=16
DAVA Damuels 81.23 353 *e*P **P** **16 41 04.1 0.0**
comp=Z,11nm,1.2s
TIRR Tirgusor 81.24 339 ⇑P **P** **16 41 04.3 +0.4**
TIRR Tirgusor 81.24 339 P **P** **16 41 03.7 -0.2**
TIRR Tirgusor 81.24 339 ⇑P **P** **16 41 04.3 +0.4**
WR0 Warramunga Arr 81.28 222 P **P** **16 41 03.7 -0.6**
WR0 lAmb lAmb 16 41 04.6

comp=Z,75nm,0.8s
MORH Mrgy, Hungar 81.31 347 ⇑P **P 16 41 04.3 0.0**
MORH Mrgy, Hungar 81.31 347 P **P 16 41 03.6 -0.7**
SOKA Soboth 81.33 349 *i* P **P 16 41 05.0 +0.5**
comp=Z,43nm,1.1s,SNR=37
WRAB Tennant Creek 81.33 222 P **P 16 41 03.9 -0.7**
WRAB IAmb IAmb 16 41 05.5
comp=Z,118nm,1.0s
WRAB Tennant Creek 81.33 222 *ce*P **P 16 41 03.6 -1.0**
WRAB pmax pmax
comp=Z,158nm,1.3s
WRAB Tennant Creek 81.33 222 P **P 16 41 04.2 -0.4**
comp=Z,152nm,1.1s
WB2 Warramunga Arr 81.34 222 P **P 16 41 04.0 -0.6**
WB2 IAmb IAmb 16 41 05.6
comp=Z,124nm,0.9s
WRA Warramunga Arr 81.35 222 P **P 16 41 04.3 -0.4**
comp=Z,68nm,0.9s,baz=33,slow=6.1,SNR=248
WRA PKiKP **PKiKP 16 46 28.4 -0.9**
comp=Z,0.6nm,0.8s,baz=332,slow=1.6,SNR=6.3
WRA PKKPbc **PKKPbc 16 59 38.4 +0.7**
comp=Z,1.6nm,0.7s,baz=225,slow=2.0,SNR=5.8
WRA PKPPKP **P'P'df 17 07 42.2 +1.0**
comp=Z,0.5nm,0.7s,baz=220,slow=2.5,SNR=4.6
WRA LR LR 17 15 34.8
comp=Z,256nm,19.6s,baz=14,slow=34
comp=Z,68nm,0.9s
WRA Warramunga Arr 81.35 222 *i* P **P 16 41 03.0 -1.7**
WRA pmax pmax
comp=Z,79nm,0.9s
FETA Feichten 81.42 352 *i* P **P 16 41 05.5 +0.4**
comp=Z,25nm,1.0s,SNR=20
BZS Buzias 81.44 345 ⇓P **P 16 41 05.1 +0.1**
BZS Buzias 81.44 345 ⇓P **P 16 41 05.1 +0.1**
GZR Gura Zlata 81.45 344 ⇓P **P 16 41 05.5 +0.4**
GZR Gura Zlata 81.45 344 ⇓P **P 16 41 05.6 +0.4**
KOVH Kovagotottos 81.52 347 P **P 16 41 05.5 +0.1**
AKL Akola 81.52 292 *e*P **P 16 41 06.5 +0.7**
AKL *i* x **pP 16 41 25.4 -0.6**
ABTA Abfaltersbach 81.53 351 *i* P **P 16 41 05.7 +0.1**
comp=Z,68nm,1.0s,SNR=18
MYKA Terra Mystica 81.53 350 *i* P **P 16 41 05.4 -0.1**
comp=Z,12nm,1.0s,SNR=6.3
OBKA Obir 81.55 350 ⇑*i*P **P 16 41 05.8 +0.1**
OBKA Obir 81.55 350 *i* P **P 16 41 06.0 +0.3**
comp=Z,24nm,0.6s,SNR=16
PRED Cave del Predi 81.73 350 P **P 16 41 06.1 -0.5**
DAVOX Davos/Dischmat 81.73 353 LR LR 17 21 12.4
comp=Z,179nm,18.6s,baz=266,slow=38
CLUD Cludinico 81.78 351 P **P 16 41 05.6 -1.2**
FUORN Ofenpass-Fuorn 81.86 353 P **P 16 41 07.8 +0.3**
CADS Cadrg 81.92 350 *i* P **P 16 41 07.0 -0.6**
PSI Prapat 81.95 264 PKKPbc PKKPbc 16 59 34.5 -0.7
comp=Z,2.7nm,0.5s,baz=167,slow=6.6,SNR=1.9
PSI LR LR 17 19 48.7
comp=Z,31nm,18.8s,baz=30,slow=37
CIMO Cimolais 81.97 351 P **P 16 41 07.5 -0.3**
CIMO IAmb IAmb 16 41 42.0
comp=Z,10nm,1.0s
CRNS Crni Vrh 82.01 350 *i* P **P 16 41 07.4 -0.6**
HERR Herculane 82.01 344 ⇑P **P 16 41 08.0 0.0**
CRES Cresnjev 82.12 349 ⇑*i*P **P 16 41 08.5 -0.1**
FRGS Fruska Gora 82.17 346 ⇑P **P 16 41 09.5 +0.6**
FRGS Fruska Gora 82.17 346 ⇑*i*P **P 16 41 09.1 +0.2**
SABO M.te Sabotino 82.18 350 P **P 16 41 08.2 -0.7**
SABO IAmb IAmb 16 43 18.8
comp=Z,25nm,1.3s
RMQ Roma 82.19 208 P **P 16 41 10.1 +1.2**
baz=82,SNR=32
RMQ Roma 82.19 208 P **P 16 41 10.0 +1.0**
comp=Z,93nm,0.9s
CTI Castel Tesino 82.31 351 P **P 16 41 08.9 -0.8**
CTI Castel Tesino 82.31 351 P **P 16 41 08.9 -0.8**
CTI pmax pmax
comp=Z,19nm,1.0s
CRIN San Cristobal 82.31 79 P **P 16 41 09.3 -0.8**
CRIN IAmb IAmb 16 41 33.9
comp=Z,54nm,0.8s
SENIN Lac Senin/Sane 82.32 355 P **P 16 41 09.6 -0.3**
CEY Cerknica 82.33 350 ⇑*i*P **P 16 41 09.3 -0.4**
BOJS Bojanci 82.46 349 ⇑*i*P **P 16 41 10.5 +0.2**
GBRS Gornja Briga 82.49 349 *i* P **P 16 41 10.7 +0.1**
SKDS Skadanscina 82.56 350 ⇑*i*P **P 16 41 10.4 -0.5**
A051A Mrakovica 82.73 348 ⇑*i*P **P 16 41 12.0 +0.1**
MATN Matagalpa 82.83 78 P **P 16 41 12.9 +0.1**
MATN IAmb IAmb 16 41 14.9
comp=Z,39nm,0.7s
SALO Salr 82.83 352 P **P 16 41 12.0 -0.3**
SALO IAmb IAmb 16 41 13.6
comp=Z,55nm,0.9s
BLY Banja Luka 82.96 347 ⇑*i*P **P 16 41 12.9 0.0**
TEOL Teolo 82.99 351 P **P 16 41 12.9 -0.2**
DIVS Divibare 83.18 345 P **P 16 41 13.8 -0.4**
DIVS Divibare 83.18 345 ⇑*i*P **P 16 41 14.3 +0.1**
BLKB Belogradchik 83.19 343 ⇑P **P 16 41 13.9 -0.3**
HYBB Hyderabad (bro 83.19 289 *e*P **P 16 41 14.5 -0.1**
HYBB *e*PcP **PcP 16 41 19.1 +0.1**
HYBB *e*pP **pP 16 41 33.2 -1.6**
HYBB *e*PP **PP 16 44 26.6 +0.2**
HYBB *e*SKSac **SKSac 16 51 29.7 -0.4**
MGRS Mrkonjic Grad 83.30 347 *e*P **P 16 41 16.0 +1.3**
BOVS Bovan 83.34 344 ⇑P **P 16 41 14.6 -0.4**
BBLS Lazići 83.50 346 ⇑*i*P **P 16 41 16.5 +0.7**
SSB Saint Sauveur 83.54 356 P **P 16 41 15.8 -0.2**
SSB Saint Sauveur 83.54 356 P **P 16 41 15.8 -0.2**
SSB pmax pmax
comp=Z,13nm,0.8s
SRKY Kupres RS 83.63 347 ⇑*i*P **P 16 41 16.8 +0.3**
BNI Bardonecchia 83.67 355 P **P 16 41 17.6 +0.9**
BNI Bardonecchia 83.67 355 P **P 16 41 17.6 +0.9**
BNI pmax pmax
comp=Z,29nm,0.7s
QLP Quilpie 83.68 211 P **P 16 41 17.4 +0.8**
baz=84,SNR=45
QLP Quilpie 83.68 211 P **P 16 41 17.4 +0.8**
FITZ Fitzroy Crossi 83.69 231 LR LR 17 16 42.3
comp=Z,106nm,19.0s,baz=33,slow=34
FITZ Fitzroy Crossi 83.69 231 P **P 16 41 17.4 +0.6**
baz=84,SNR=26
FITZ Fitzroy Crossi 83.69 231 P **P 16 41 17.0 +0.2**
FITZ Fitzroy Crossi 83.69 231 P **P 16 41 17.3 +0.5**
comp=Z,108nm,1.2s
MTDJ Mount Denham 83.73 69 P **P 16 41 16.7 -0.7**
MTDJ IAmb IAmb 16 41 20.4
comp=Z,164nm,1.4s
RUDO Rudo 83.75 346 ⇑*i*P **P 16 41 17.0 0.0**
GSI Gunungsitoli 83.95 264 P **P 16 41 18.1 -0.3**
GSI IAmb IAmb 16 41 19.9
comp=Z,178nm,1.7s
GSI Gunungsitoli 83.95 264 P **P 16 41 18.9 +0.5**
ACON Acoyapa 84.03 78 P **P 16 41 18.1 -0.8**
ACON IAmb IAmb 16 41 20.9
comp=Z,46nm,0.9s
ACON Acoyapa 84.03 78 *e*P **P 16 41 20.0 +1.1**
VTS Vitosha 84.06 343 ⇑P **P 16 41 18.8 0.0**
VTS Vitosha 84.06 343 P **P 16 41 17.6 -1.2**
VTS Vitosha 84.06 343 ⇑P **P 16 41 18.8 0.0**
LEM Lembang 84.20 252 LR LR 17 16 58.2
comp=Z,85nm,21.4s,baz=40,slow=34
MSSA Maissana 84.21 353 P **P 16 41 18.7 -0.8**
UPM Unac-Piva 84.22 346 *e*P **P 16 41 19.5 -0.2**
VLC Villacollemand 84.29 352 P **P 16 41 19.5 -0.3**
BR131 Keskin Array S 84.42 334 P **P 16 41 20.5 -0.2**
BR131 Keskin Array S 84.42 334 P **P 16 41 20.5 -0.2**
BR131 pmax pmax
comp=Z,14nm,0.8s
BRTR Keskin Array B 84.42 334 P **P 16 41 21.1 +0.4**
comp=Z,8.1nm,0.7s,baz=31,slow=2.4,SNR=40
BRTR PKKPbc **PKKPbc 16 59 29.8 +0.3**
comp=Z,1.2nm,0.7s,baz=191,slow=3.8,SNR=5.1
BRTR PKPPKP P'P'df 17 07 31.2 -10
comp=Z,1.1nm,0.8s,baz=132,slow=2.8,SNR=4.7
BRTR LR LR 17 23 41.0
comp=Z,268nm,19.0s,baz=31,slow=39
comp=Z,8.1nm,0.7s
BRTR Keskin Array B 84.42 334 P **P 16 41 20.4 -0.2**
MARD Mardin 84.49 328 P **P 16 41 20.5 -0.6**
BRY Bratogost 84.57 346 *e*P **P 16 41 21.0 -0.4**
BNN Bunyan 84.61 332 P **P 16 41 20.6 -1.1**
BNN IAmb IAmb 16 41 22.1
comp=Z,48nm,0.8s
HZTE Horizontes, Gu 84.75 80 P **P 16 41 21.2 -1.3**
HZTE IAmb IAmb 16 41 23.5
comp=Z,55nm,0.8s

TREB Trebinje 84.78 346 *e*P **P 16 41 21.2 -1.1**
AS31 Alice Springs 84.84 221 P **P 16 41 22.2 -0.5**
ASAR Alice Springs 84.84 221 P **P 16 41 23.0 +0.3**
comp=Z,47nm,0.7s,baz=23,slow=5.5,SNR=538
ASAR PKiKP **PKiKP 16 46 34.0 -0.8**
comp=Z,0.5nm,0.6s,baz=26,slow=1.7,SNR=4.5
ASAR PKPPKP **P'P'df 17 07 30.8 -3.9**
comp=Z,0.5nm,0.9s,baz=190,slow=3.7,SNR=2.1
ASAR LR LR 17 15 13.1
comp=Z,230nm,20.6s,baz=20,slow=33
comp=Z,47nm,0.7s
ASAR Alice Springs 84.84 221 P **P 16 41 22.6 -0.1**
OSSC Osservatorio P 84.85 351 P **P 16 41 22.2 -0.4**
OSSC IAmb IAmb 16 41 23.5
comp=Z,55nm,0.8s
PDG Podgorica 84.92 345 ⇓P **P 16 41 23.0 +0.1**
PDG Podgorica 84.92 345 P **P 16 41 22.3 -0.6**
PDG Podgorica 84.92 345 ⇑*i*P **P 16 41 22.8 -0.1**
MURB Monte Urbino 84.98 350 P **P 16 41 23.3 0.0**
MURB IAmb IAmb 16 41 26.1
comp=Z,70nm,0.7s
RDO Rodhopi 85.02 341 P **P 16 41 23.8 +0.3**
HCY Herceg Novi 85.02 346 *e*P **P 16 41 22.2 -1.3**
ORTG Ortega, Santa 85.10 80 P **P 16 41 24.0 -0.3**
ORTG IAmb IAmb 16 41 26.8
comp=Z,57nm,0.8s
ARMA Armidale 85.14 204 P **P 16 41 25.6 +1.6**
baz=85,SNR=16
ARMA Armidale 85.14 204 P **P 16 41 24.5 +0.4**
ARMA Armidale 85.14 204 P **P 16 41 25.7 +1.6**
DRME Dracevica, Mon 85.17 345 ⇑*i*P **P 16 41 23.5 -0.7**
NRCA Norcia 85.34 350 P **P 16 41 25.2 0.0**
NRCA IAmb IAmb 16 41 28.7
comp=Z,54nm,0.8s
JTS Las Juntas de 85.47 79 P **P 16 41 25.1 -1.0**
JTS Las Juntas de 85.47 79 P **P 16 41 25.1 -1.0**
JTS pmax pmax
comp=Z,13nm,0.8s
JTS Las Juntas de 85.47 79 *e*P **P 16 41 23.7 -2.4**
CASP Castiglione de 85.61 352 P **P 16 41 25.9 -0.5**
CASP IAmb IAmb 16 41 27.1
comp=Z,33nm,0.7s
LATE Laterza 85.70 351 P **P 16 41 26.3 -0.6**
LATE IAmb IAmb 16 42 01.9
comp=Z,42nm,1.0s
INKA Innaminka 85.92 214 P **P 16 41 28.4 +0.6**
SGRT San Giovanni R 86.09 348 P **P 16 41 28.9 0.0**
OUZ Omahuta 86.47 185 P **P 16 41 31.3 +0.9**
RIMA Rio Macho 86.54 79 P **P 16 41 31.2 -0.5**
SDDR Presa de Saban 86.70 64 P **P 16 41 31.8 -0.4**
SDDR Presa de Saban 86.70 64 *e*P **P 16 41 33.0 +0.8**
PGAV Gavieira, Arco 86.71 6 *e*SKSac **SKSac 16 51 53.9 +1.9**
PGAV Gavieira, Arco 86.71 6 *e*LR LR 17 07 53.5
comp=Z,243nm,22.0s
PBRG Braganca 86.95 5 *e*P **P 16 41 32.5 -0.6**
SRBA San Rafael, Bu 87.27 79 P **P 16 41 35.3 +0.3**
POLO Lamas de Olo 87.32 5 *e*P **P 16 41 34.5 -0.4**
comp=Z,6.9nm,1.4s
PVRL Vila Real 87.43 5 *e*P **P 16 41 34.8 -0.6**
comp=Z,28nm,1.7s
MVO Moncorvo 87.58 5 *e*P **P 16 41 35.4 -0.7**
comp=Z,33nm,1.4s
MVO Moncorvo 87.58 5 *e*PP **PP 16 45 01.9 +0.9**
MVO *e*SKSac **SKSac 16 51 58.1 +0.9**
MVO Moncorvo 87.58 5 *e*LR LR 17 08 11.3
comp=Z,172nm,22.0s
OOD Oodnadatta 87.82 218 P **P 16 41 37.4 +0.3**
CMSA Cobar Meteorol 87.84 208 P **P 16 41 38.3 +1.3**
baz=88,SNR=34
CMSA Cobar Meteorol 87.84 208 P **P 16 41 38.2 +1.1**
DR12 Loma Pena Alta 87.92 62 P **P 16 41 38.3 +0.2**
MGCD Mangrove Creek 87.93 204 P **P 16 41 39.3 +1.8**
baz=88,SNR=7.9
MGCD Mangrove Creek 87.93 204 P **P 16 41 39.4 +1.9**
PVIS Viseu 87.97 6 *e*P **P 16 41 37.4 -0.6**
comp=Z,28nm,1.4s
SHME Shamm 88.21 311 *i* P **P 16 41 39.2 -0.1**
SNR=6.1
MTE Manteigas 88.31 5 P **P 16 41 38.8 -0.8**
MTE Manteigas 88.31 5 *e*P **P 16 41 38.9 -0.7**
comp=Z,23nm,1.1s
MTE Manteigas 88.31 5 *e*PP **PP 16 45 07.2 +0.3**
MTE *e*SKSac **SKSac 16 52 02.7 +1.0**
MTE Manteigas 88.31 5 *e*LR LR 17 09 09.8
comp=Z,227nm,24.0s
WRKA Warakurna 88.44 225 P **P 16 41 40.7 +0.5**
baz=88,SNR=50
WRKA Warakurna 88.44 225 P **P 16 41 40.8 +0.6**
TIP Timpagrande 88.48 347 ⇑P **P 16 41 40.0 -0.5**
TIP Timpagrande 88.48 347 P **P 16 41 39.8 -0.7**
PCAS Casmilo, Conde 88.59 6 *e*P **P 16 41 40.1 -0.8**
comp=Z,29nm,1.7s
MASF Masafi 88.78 311 P **P 16 41 41.5 -0.5**
PCBR Castelo Branco 88.87 5 *e*P **P 16 41 41.3 -0.9**
comp=Z,23nm,1.3s
CSS Mathiatis 88.96 333 P **P 16 41 42.4 -0.3**
PSBE So Bento 89.11 6 *e*P **P 16 41 42.7 -0.6**
comp=Z,57nm,1.9s
UOSS Minazif 89.12 311 P **P 16 41 42.2 -1.4**
UOSS IAmb IAmb 16 42 02.7
comp=Z,38nm,1.3s
UOSS Minazif 89.12 311 P **P 16 41 42.4 -1.2**
UOSS P **P 16 41 42.4 -1.2**
UOSS Minazif 89.12 311 *i* P **P 16 41 42.8 -0.8**
SNR=5.2
ESBB Sonseca Array 89.19 3 P **P 16 41 42.5 -1.2**
ESDC Sonseca Array 89.19 3 P **P 16 41 43.4 -0.4**
comp=Z,3.7nm,0.7s,baz=350,slow=4.4,SNR=49
ESDC PKKPbc **PKKPbc 16 59 18.1 0.0**
comp=Z,0.8nm,0.6s,baz=212,slow=1.3,SNR=7.9
ESDC PKPPKP **P'P'df 17 07 25.0 -7.0**
comp=Z,1.2nm,1.2s,baz=235,slow=1.7,SNR=5.8
ESDC LR LR 17 23 15.1
comp=Z,158nm,19.8s,baz=350,slow=37
comp=Z,3.7nm,0.7s
ESDC Sonseca Array 89.19 3 P **P 16 41 42.7 -1.0**
MBWA Marble Bar 89.20 234 P **P 16 41 42.8 -1.0**
MBWA Marble Bar 89.20 234 P **P 16 41 43.3 -0.5**
LCRK Leigh Creek 89.28 215 P **P 16 41 44.8 +0.9**
PMRV Marv??o 89.29 5 *e*PP **PP 16 45 13.9 -0.7**
PMRV *e*SKSac **SKSac 16 52 14.3 +6.9**
PMRV Marv??o 89.29 5 *e*LR LR 17 09 27.0
comp=Z,275nm,24.0s
PAB San Pablo 89.31 3 P **P 16 41 43.2 -1.1**
PAB San Pablo 89.31 3 P **P 16 41 43.2 -1.1**
PAB pmax pmax
comp=Z,17nm,1.5s
URZ Urewera 89.37 182 P **P 16 41 43.0 -1.1**
comp=Z,18nm,1.0s,baz=11,slow=13,SNR=5.8
URZ LR LR 17 16 05.3
comp=Z,494nm,21.8s,baz=32,slow=32
comp=Z,18nm,1.0s
URZ Urewera 89.37 182 P **P 16 41 42.4 -1.7**
URZ IAmb IAmb 16 41 50.6
comp=Z,30nm,1.1s
WSAR Wadi Sarin 89.38 308 LR LR 17 26 27.9
comp=Z,190nm,21.8s,baz=83,slow=39
WSAR Wadi Sarin 89.38 308 P **P 16 41 45.3 +0.4**
ASHO Ashiyiah 89.41 311 P **P 16 41 44.3 -0.7**
ASHO P **P 16 41 44.3 -0.7**
ASHO Ashiyiah 89.41 311 P **P 16 41 44.5 -0.5**
STKA Stephens Creek 89.43 212 P **P 16 41 45.6 +1.1**
comp=Z,133nm,1.1s,baz=30,slow=4.3,SNR=64
STKA pP **pP 16 42 07.1 +2.1**
comp=Z,33nm,1.0s,baz=356,slow=7.8,SNR=3.7
STKA LR LR 17 17 23.2
comp=Z,597nm,21.7s,baz=18,slow=32
comp=Z,133nm,1.1s
STKA Stephens Creek 89.43 212 P **P 16 41 45.7 +1.1**
baz=90,SNR=31
STKA Stephens Creek 89.43 212 P **P 16 41 44.5 -0.1**
STKA IAmb IAmb 16 41 46.9
comp=Z,62nm,1.4s
STKA Stephens Creek 89.43 212 P **P 16 41 45.3 +0.7**
PSA00 Pilbara Seismi 89.49 233 P **P 16 41 44.1 -1.0**
PSA00 IAmb IAmb 16 41 45.3
comp=Z,46nm,0.8s
PSA00 Pilbara Seismi 89.49 233 P **P 16 41 44.1 -1.0**
PSA00 IAmb IAmb 16 41 45.2
comp=Z,28nm,0.8s
PSA00 Pilbara Seismi 89.49 233 P **P 16 41 44.6 -0.5**
comp=Z,81nm,1.0s
CEL Celeste 89.51 347 P **P 16 41 43.0 -2.3**
FAQ Al Faqa, Dubai 89.58 311 P **P 16 41 44.9 -0.8**
PMTG Montargil 89.59 6 *e*P **P 16 41 44.5 -1.1**

comp=Z,25nm,1.6s
HIZ Hauiti 89.69 184 P **P 16 41 45.9 +0.3**
AOPR Arecibo Observ 89.72 60 P **P 16 41 46.2 -0.3**
AOPR IAmb IAmb 16 41 49.3
comp=Z,24nm,0.8s
ASUD Al Ashush, Dub 89.80 311 P **P 16 41 47.3 +0.5**
CRPR Cabo Rojo, PR 89.80 61 P **P 16 41 47.0 +0.2**
CRPR IAmb IAmb 16 42 16.8
comp=Z,62nm,1.1s
PALK Pallekele 89.82 281 LR LR 17 23 19.5
comp=Z,117nm,21.9s,baz=138,slow=36
PESTR Estremoz 89.83 6 P **P 16 41 45.8 -0.9**
PESTR Estremoz 89.83 6 *e*P **P 16 41 46.0 -0.7**
comp=Z,44nm,1.7s
MLPR Magueyes Islan 89.87 61 P **P 16 41 46.2 -1.0**
MLPR IAmb IAmb 16 42 34.7
comp=Z,41nm,1.2s
OBIP Obispado Ponce 90.05 60 P **P 16 41 47.0 -1.0**
OBIP IAmb IAmb 16 42 07.0
comp=Z,76nm,1.4s
ALNE Al Ain 90.09 311 P **P 16 41 46.9 -1.2**
SNR=8.3
ALNE P **P 16 41 46.9 -1.2**
SNR=8.3
ALNE Al Ain 90.09 311 *i* P **P 16 41 47.9 -0.2**
SNR=8.3
GCPR Guaynabo City 90.11 60 P **P 16 41 48.1 -0.2**
GCPR IAmb IAmb 16 41 49.9
comp=Z,62nm,1.0s
EVO Evora 90.14 6 *e*P **P 16 41 48.3 +0.2**
comp=Z,28nm,1.8s
MMAI Mount Meron Ar 90.16 330 LR LR 17 29 31.7
comp=Z,183nm,18.0s,baz=191,slow=40
SJG San Juan 90.24 60 LR LR 17 22 20.4
comp=Z,514nm,21.6s,baz=0.0,slow=36
SJG San Juan 90.24 60 P **P 16 41 48.5 -0.4**
SJG IAmb IAmb 16 41 50.3
comp=Z,24nm,0.7s
SJG San Juan 90.24 60 P **P 16 41 48.5 -0.4**
SJG pmax pmax
comp=Z,24nm,0.7s
CBYP Canovanas 90.27 60 P **P 16 41 48.3 -0.8**
CBYP IAmb IAmb 16 42 09.3
comp=Z,55nm,1.2s
CACAO El Cacao, Vera 90.27 78 *e*P P 16 41 56.1 +7.1
AZU Azuero 90.28 77 *e*P **P 16 41 48.8 -0.3**
BKZ Black Stump Fm 90.29 182 P **P 16 41 47.4 -1.1**
ARQ Araqi 90.33 310 P **P 16 41 49.2 0.0**
SNR=8.0
ARQ P **P 16 41 49.2 0.0**
SNR=8.0
CNB Canberra Magne 90.37 204 P **P 16 41 50.4 +1.4**
baz=90,SNR=8.4
CNB Canberra Magne 90.37 204 P **P 16 41 50.3 +1.3**
CAN Canberra 90.47 205 P **P 16 41 49.3 -0.1**
CAN IAmb IAmb 16 41 51.3
comp=Z,40nm,0.9s
CAN Canberra 90.47 205 P **P 16 41 49.3 -0.1**
CAN pmax pmax
comp=Z,40nm,0.9s
CAN Canberra 90.47 205 P **P 16 41 50.7 +1.3**
VAE Valguarnera 90.47 348 LR LR 17 28 18.5
comp=Z,177nm,18.1s,baz=10.0,slow=39
CUPR Culebra, Puert 90.55 59 P **P 16 41 49.9 -0.4**
CUPR IAmb IAmb 16 41 51.1
comp=Z,21nm,0.6s
PBAR Barrancos 90.55 5 *e*P **P 16 41 49.5 -0.6**
comp=Z,51nm,1.6s
MULG Mulgathing 90.67 218 P **P 16 41 50.7 +0.3**
STVI Saint Thomas 90.69 59 P **P 16 41 50.7 -0.3**
SHMA Al-Shehemyia 90.74 315 P **P 16 41 50.5 -0.5**
PVAQ Vaqueiros 91.28 6 *e*LR LR 17 12 26.5
comp=Z,345nm,22.0s
CDVI St. Croix 91.28 59 P **P 16 41 52.8 -0.9**
CAPC Capurgana 91.39 74 *e*P **P 16 41 53.5 -0.8**
MHTO MHTO 91.61 307 P **P 16 41 55.1 -0.1**
SNR=5.9
MHTO P **P 16 41 55.1 -0.1**
SNR=5.9
SJCC San Jacinto, C 91.69 72 *e*P **P 16 41 55.3 -0.4**
HTT Hallett 91.75 213 P **P 16 41 56.0 +0.6**
baz=92,SNR=17
HTT Hallett 91.75 213 P **P 16 41 56.3 +0.9**
WHYH Whyalla 91.85 214 P **P 16 41 57.2 +1.4**
MZR Muzera 92.06 312 *i* P **P 16 41 57.2 -0.1**
SNR=6.0
MILA Mila 92.08 204 P **P 16 41 58.2 +1.4**
baz=92,SNR=5.3
CRJC Cerrejon, Guaj 92.16 69 *e*P **P 16 41 60.0 +2.0**
BBOO Buckleboo 92.19 215 P **P 16 41 57.9 +0.5**
baz=92,SNR=7.4
BBOO Buckleboo 92.19 215 P **P 16 41 57.7 +0.3**
BBOO Buckleboo 92.19 215 P **P 16 41 58.0 +0.5**
TUWZ Tuamarina 92.64 184 P **P 16 41 57.6 -1.6**
KEST Kesra 92.75 352 P **P 16 41 59.6 -0.8**
comp=Z,6.6nm,0.8s,baz=342,slow=1.1,SNR=11
KEST LR LR 17 26 20.5
comp=Z,96nm,20.6s,baz=325,slow=37
comp=Z,6.6nm,0.8s
KEST Kesra 92.75 352 P **P 16 41 59.4 -0.9**
UREC San Jos de Ur 93.18 74 *e*P **P 16 42 00.9 -1.7**
GIRL Giralia 93.26 237 P **P 16 42 03.4 +0.8**
baz=93,SNR=7.6
GIRL Giralia 93.26 237 P **P 16 42 03.2 +0.6**
TWOA Tennyson Woods 93.32 213 P **P 16 42 04.3 +1.8**
EIL Elat 93.40 330 LR LR 17 30 29.5
comp=Z,314nm,18.3s,baz=37,slow=40
TOO Toolangi 93.53 206 P **P 16 42 04.5 +1.0**
baz=94,SNR=5.2
TOO Toolangi 93.53 206 P **P 16 42 04.7 +1.2**
FORT Forrest 93.54 222 P **P 16 42 04.5 +0.8**
baz=94,SNR=6.4
FORT Forrest 93.54 222 P **P 16 42 03.1 -0.6**
FORT Forrest 93.54 222 P **P 16 42 04.5 +0.8**
ZARC Zaragoza, Cauc 93.79 73 *e*P **P 16 42 05.6 +0.2**
BRAT Ballarat 93.96 208 P **P 16 42 07.2 +1.8**
MEEK Meekatharra 94.33 232 P **P 16 42 07.2 -0.2**
comp=Z,94,SNR=31
MEEK Meekatharra 94.33 232 P **P 16 42 07.1 -0.4**
CBOC Ciudad Bolivar 94.39 75 *e*P **P 16 42 08.4 +0.1**
PTBC PUERTO BERRIO, 94.79 73 *e*P **P 16 42 10.2 +0.3**
PMOZ Porto Moniz, M 94.80 14 *e*SKSac **SKSac 16 52 41.9 +3.2**
PMOZ Porto Moniz, M 94.80 14 *e*LR LR 17 14 25.0
comp=Z,261nm,20.0s
RPZ Rata Peaks 95.08 186 P **P 16 42 09.2 -1.2**
comp=Z,12nm,0.7s,baz=96,slow=2.8,SNR=6.1
RPZ LR LR 17 18 48.7
comp=Z,398nm,21.9s,baz=38,slow=31
comp=Z,12nm,0.7s
RAYN Ar Rayn 95.12 318 P **P 16 42 10.7 -0.7**
RAYN Ar Rayn 95.12 318 P **P 16 42 10.7 -0.7**
RAYN pmax pmax
comp=Z,6.0nm,0.9s
RAYN Ar Rayn 95.12 318 P **P 16 42 11.2 -0.2**
SDV Santo Domingo 95.18 69 LR LR 17 28 26.7
comp=Z,161nm,18.2s,baz=1.0,slow=38
SDV Santo Domingo 95.18 69 P **P 16 42 11.6 -0.4**
SDV IAmb IAmb 16 42 13.6
comp=Z,22nm,0.8s
SDV Santo Domingo 95.18 69 *e*P **P 16 42 12.5 +0.5**
GUY2C Guyana, Caldas 95.28 75 *e*P **P 16 42 13.0 +0.2**
NORC Norcasia 95.31 74 ⇑*e*P **P 16 42 13.0 +0.6**
BARC Barichara 95.51 72 *e*P **P 16 42 13.9 +0.4**
SOCV Socops 95.53 69 *e*P **P 16 42 13.0 -0.4**
YOTC Yotoco, Valle 95.67 76 *e*P **P 16 42 13.9 -0.1**
SPBC San Pablo de B 95.72 74 *e*P **P 16 42 13.9 -0.4**
MDT Midelt 96.01 3 LR LR 17 26 51.6
comp=Z,53nm,19.7s,baz=2.0,slow=36
BAUV El Baul 96.64 67 P **P 16 42 17.8 -0.6**
BAUV IAmb IAmb 16 42 38.6
comp=Z,39nm,1.3s
CHIC Chingaza 96.74 74 *e*P **P 16 42 17.7 -1.6**
MORW Morawa 97.61 232 P **P 16 42 22.1 -0.1**
baz=98,SNR=4.1
MORW Morawa 97.61 232 P Pdif 16 42 23.7 +1.4
comp=Z,24nm,1.6s
ETMB Extrema 112.69 77 *e*P **PKiKP 16 47 28.8 +4.3**
TOA0 Torodi Ar. Sit 115.64 358 **PKiKP 16 47 29.3 -0.9**
TORD Torodi Ar. Bea 115.64 358 PKP **PKiKP 16 47 29.4 -0.8**
comp=Z,8.4nm,0.5s,baz=352,slow=2.2,SNR=69
TORD PP **PP 16 48 31.6 -0.7**
comp=Z,2.2nm,0.8s,baz=9.7,slow=7.5,SNR=5.1
TORD SKP 16 50 57.2
comp=Z,1.5nm,0.7s,baz=340,slow=2.5,SNR=5.8
TORD PKKPbc **PKKPbc 16 57 59.8 -0.9**

	comp=Z,6.0nm,0.9s,baz=189,slow=2.2,SNR=15							
TORD				SKKP			17 01 59.2	
	comp=Z,3.4nm,1.1s,baz=197,slow=3.1,SNR=5.6							
TORD	**Torodi Ar. Bea**	**115.64**	**358**		**PKiKP**		**16 47 29.2**	**-0.9**
LPAZ	**La Paz**	**116.49**	**83**	PKP	**PKiKP**		**16 47 33.2**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=0.0,slow=9.1,SNR=2.1							
LPAZ				PKKPbc	**PKKPbc**		**16 57 59.3**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=180,slow=2.0,SNR=2.4							
SIV	**San Ignacio**	**120.61**	**77**	PKP	**PKPdf**		**16 47 39.2**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=273,slow=5.2,SNR=13							
SIV				PP	**PP**		**16 49 08.2**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=15,slow=6.4,SNR=5.0							
KMBO	**Kilima Mbogo**	**120.65**	**315**	PKP	**PKiKP**		**16 47 40.9**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=24,slow=9.0,SNR=8.1							
KMBO				pPKP	**pPKPdf**		**16 48 00.6**	**-0.7**
	comp=Z,7.2nm,1.0s,baz=9.9,slow=7.1,SNR=5.7							
KMBO	**Kilima Mbogo**	**120.65**	**315**	PKPdf	**PKPdf**		**16 47 40.0**	**-0.1**
LVC	**Limon Verde**	**120.72**	**88**	PKP	**PKiKP**		**16 47 40.6**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=311,slow=19,SNR=2.1							
PTLB	**Pontes e Lacer**	**121.36**	**75**	*eP*	**PKiKP**		**16 47 42.8**	**+1.7**
PTLB	**Pontes e Lacer**	**121.36**	**75**	*eP*	**PKiKP**		**16 47 41.7**	**+0.5**
DBIC	**Dimbokro**	**121.98**	**5**	PKP	**PKPdf**		**16 47 41.9**	**-0.5**
	comp=Z,12nm,0.4s,baz=0.6,slow=2.1,SNR=36							
TIC	**Toumodi**	**122.00**	**5⇑**	*i*PKIKP	**PKPdf**		**16 47 42.1**	**-0.4**
	comp=Z,9.3nm,0.3s							
H03N2	**Juan Fernandez**	**122.19**	**105**	T	T		19 02 13.8	
	baz=317,slow=77,SNR=12							
H03N1	**Juan Fernandez**	**122.20**	**105**	T	T		19 02 12.3	
	baz=317,slow=77,SNR=137							
H03N3	**Juan Fernandez**	**122.21**	**105**	T	T		19 02 12.8	
	baz=317,slow=77,SNR=81							
KIC	**Kosan Boka**	**122.29**	**5⇑**	*i*PKIKP	**PKPdf**		**16 47 42.7**	**-0.3**
	comp=Z,14nm,0.4s							
LIC	**Lamto**	**122.41**	**5⇑**	*i*PKIKP	**PKPdf**		**16 47 42.9**	**-0.3**
	comp=Z,27nm,0.4s							
SALV	**Santo Antonio**	**123.78**	**72**	*eP*	**PKiKP**		**16 47 46.6**	**+0.7**
AC05	**El Transito**	**124.33**	**94**		**PKPdf**		**16 47 46.5**	**-0.1**
CO01	**Juntas del Tor**	**125.24**	**95**		**PKPdf**		**16 47 48.4**	**0.0**
PP1B	**Ponte de Pedra**	**125.58**	**72**	*eP*	**PKiKP**		**16 47 49.4**	**-0.1**
RVDE	**Rio Verde (Bra**	**126.65**	**74**	*eP*	**PKiKP**		**16 47 51.6**	**0.0**
ROC1	**El Roble**	**126.72**	**99**		**PKPdf**		**16 47 50.8**	**-0.4**
MT02	**Curacav**	**126.84**	**99**	PKPdf	**PKPdf**		**16 47 50.9**	**-0.2**
MT01	**Popeta**	**127.18**	**100**		**PKPdf**		**16 47 51.2**	**-0.4**
MT05	**Renca**	**127.18**	**99**	PKPdf	**PKPdf**		**16 47 51.6**	**-0.1**
ZON	**Zonda**	**127.20**	**96**	PKPdf	**PKPdf**		**16 47 51.5**	**-0.4**
ZON	**Zonda**	**127.20**	**96**	PKIKP	**PKPdf**		**16 47 51.5**	**-0.4**
MT09	**Talagante**	**127.28**	**99**		**PKPdf**		**16 47 51.3**	**-0.8**
AQDB	**Aquidauana**	**127.30**	**75**	PKPdf	**PKPdf**		**16 47 51.9**	**-0.4**
AQDB	**Aquidauana**	**127.30**	**75**	*eP*	**PKPdf**		**16 47 52.2**	**-0.1**
MT03	**Universidad Ad**	**127.39**	**99**		**PKPdf**		**16 47 51.7**	**-0.5**
BO01	**Tunca**	**127.63**	**100**	PKPdf	**PKPdf**		**16 47 52.2**	**-0.4**
BDFB	**Brasilia**	**128.03**	**64**	PKP	**PKPdf**		**16 47 54.2**	**+0.2**
	comp=Z,3.9nm,0.7s,baz=228,slow=6.4,SNR=9.1							
BDFB	**Brasilia**	**128.03**	**64**	PKPdf	**PKPdf**		**16 47 53.4**	**-0.6**
BDFB	**Brasilia**	**128.03**	**64**	*eP*	**PKPdf**		**16 47 54.1**	**+0.2**
BO02	**Sierra Bellavi**	**128.08**	**100**		**PKPdf**		**16 47 53.4**	**-0.1**
ANTJ	**Antonio Joao (**	**128.27**	**77**	*eP*	**PKPdf**		**16 47 54.3**	**+0.1**
CASY	**Casey**	**128.51**	**209**	PKPdf	**PKPdf**		**16 47 53.1**	**0.0**
NBRF	**Rio Formoso -**	**128.75**	**46**	*eP*	**PKiKP**		**16 47 56.7**	**+0.8**
VNDA	**Vanda**	**129.18**	**185**	PKP	**PKiKP**		**16 47 55.0**	**+0.1**
	comp=Z,3.9nm,1.0s,baz=32,slow=3.6,SNR=12							
VNDA				SKPbc	SKPbc		16 51 09.6	+0.9
	comp=Z,9.6nm,1.0s,baz=326,slow=3.8,SNR=13							
VNDA	**Vanda**	**129.18**	**185**	PKPdf	**PKiKP**		**16 47 54.7**	**-0.2**
SBA	**Scott Base**	**129.29**	**183**	PKPdf	**PKPdf**		**16 47 54.6**	**+0.2**
SBA	**Scott Base**	**129.29**	**183**	PKIKP	**PKPdf**		**16 47 54.6**	**+0.2**
JANB	**Januaria**	**129.61**	**60**	*eP*	**PKiKP**		**16 47 58.5**	**+0.8**
CPUP	**Villa Florida**	**130.64**	**82**	PKP	**PKPdf**		**16 47 58.5**	**0.0**
	comp=Z,3.1nm,0.8s,baz=338,slow=2.6,SNR=7.1							
CPUP				SKPbc	**SKPbc**		**16 51 14.1**	**-1.4**
	comp=Z,8.3nm,0.8s,baz=287,slow=4.7,SNR=12							
CPUP	**Villa Florida**	**130.64**	**82**	PKPdf	**PKPdf**		**16 47 58.0**	**-0.5**
CPUP	**Villa Florida**	**130.64**	**82**	*eP*	**PKiKP**		**16 47 59.8**	**+0.4**
GO06	**Curarrehue**	**130.75**	**105**		**PKPdf**		**16 47 58.1**	**-0.3**
TRCB	**Terra Rica**	**130.91**	**75**	*eP*	**PKiKP**		**16 48 00.4**	**+0.3**
MCR1	**Marechal Candi**	**131.30**	**77**	*eP*	**PKPdf**		**16 48 00.2**	**+0.4**
PLCA	**Paso Flores**	**132.01**	**106**	PKP	**PKPdf**		**16 48 01.1**	**+0.3**
	comp=Z,12nm,0.6s,baz=31,slow=5.9,SNR=35							
PLCA				SKPbc	**SKPbc**		**16 51 20.2**	**+0.2**
	comp=Z,19nm,0.8s,baz=313,slow=4.8,SNR=23							
PLCA	**Paso Flores**	**132.01**	**106**	PKPdf	**PKPdf**		**16 48 00.7**	**-0.1**
PLCA	**Paso Flores**	**132.01**	**106**	*eP*	**PKiKP**		**16 48 02.1**	**+0.3**
PLCA	**Paso Flores**	**132.01**	**106**	*eP*	**PKPdf**		**16 48 01.3**	**+0.5**
CMC01	**Camacan, BA**	**132.39**	**55**	*eP*	**PKiKP**		**16 48 02.7**	**-0.5**
DIAM	**Diamantina, MG**	**132.60**	**62**	*eP*	**PKiKP**		**16 48 03.3**	**-0.4**
PTGB	**Pitanga**	**132.69**	**76**	*eP*	PKiKP		16 48 22.6	+19
LL02	**Futaleuf**	**132.71**	**109**		**PKPdf**		**16 48 01.9**	**+0.1**
FRBT	**Francisco Belt**	**133.01**	**78**	*eP*	**PKPdf**		**16 48 00.7**	**-2.3**
ITQB	**Itaqui**	**133.44**	**84**	*eP*	**PKiKP**		**16 48 05.1**	**+0.1**
CRSM	**Crissiumal (Br**	**133.51**	**80**	*eP*	**PKiKP**		**16 48 04.8**	**-0.4**
SJMB	**Sao Joao De Ma**	**134.29**	**60**	*eP*	**PKiKP**		**16 48 06.5**	**-0.4**
RODS	**Rosario do Sul**	**134.80**	**84**	*eP*	PKPdf		16 47 53.1	-13
ALGR	**Alto Alegre (B**	**135.06**	**80**	*eP*	**PKiKP**		**16 48 08.5**	**+0.2**
CPSB	**Cacapava Do Su**	**135.94**	**82**	*eP*	**PKPdf**		**16 48 08.5**	**+0.2**
CPSB	**Cacapava Do Su**	**135.94**	**82**	*eP*	**PKiKP**		**16 48 10.3**	**+0.3**
PLTB	**Pedras Altas**	**136.77**	**84**	PKPdf	**PKiKP**		**16 48 10.8**	**-0.8**
PLTB	**Pedras Altas**	**136.77**	**84**	*eP*	PKPdf		16 48 01.3	-8.6
MG05	**Puerto Natales**	**136.95**	**120**	PKPdf	**PKPdf**		**16 48 10.3**	**+0.8**
USHA	**Ushuaia**	**140.56**	**122**	PKhKP	PKPpre		16 48 08.6	
	comp=Z,7.9nm,0.7s,baz=210,slow=1.8,SNR=4.3							
QSPA	**South Pole Qui**	**141.21**	**180**	PKhKP	PKPpre		16 48 11.7	
	comp=Z,21nm,0.7s,baz=356,slow=0.6,SNR=94							
QSPA				SKKPbc	SKKPbc		17 00 11.2	-2.2
	comp=Z,5.7nm,0.9s,baz=258,slow=3.6,SNR=8.9							
SMAI	**San Martin Ant**	**144.72**	**143**		**PKPdf**		**16 48 22.5**	**-0.4**
TSUM	**Tsumeb**	**144.79**	**329**	PKPdf	PKPbc		16 48 24.1	+0.1
EFI	**East Falkland**	**145.02**	**114**		**PKPbc**		**16 48 23.3**	**-0.3**
EFI	**East Falkland**	**145.02**	**114**	PKIKP	**PKPbc**		**16 48 23.3**	**-0.3**
PMSA	**Palmer Station**	**145.51**	**137**	PKPbc	**PKPbc**		**16 48 24.8**	**+0.1**
	comp=Z,38nm,0.7s,baz=293,slow=3.6,SNR=15							
PMSA				PKKP	**PKKPdf**		**16 57 27.3**	**-1.8**
	comp=Z,19nm,0.9s,baz=53,slow=5.1,SNR=13							
POGA	**Pongola**	**145.83**	**302**	PKPdf	**PKPdf**		**16 48 26.4**	**+0.2**
MAW	**Mawson**	**145.90**	**218**	PKPbc	**PKPbc**		**16 48 26.1**	**+0.3**
	comp=Z,40nm,0.6s,baz=98,slow=3.4,SNR=73							
MAW	**Mawson**	**145.90**	**218**	PKPdf	**PKPbc**		**16 48 25.5**	**-0.3**
LBTB	**Lobatse**	**146.91**	**313**		**PKPbc**		**16 48 30.8**	**+0.5**
LBTB	**Lobatse**	**146.91**	**313**	PKP2	**PKPbc**		**16 48 30.8**	**+0.5**
BOSA	**Boshof**	**150.12**	**311**	PKPbc	**PKiKP**		**16 48 39.0**	**-0.3**
	comp=Z,12nm,0.5s,baz=266,slow=2.7,SNR=73							
BOSA	**Boshof**	**150.12**	**310**	PKIKP	**PKiKP**		**16 48 39.0**	**-0.3**
TROLL	**Troll, Antarti**	**159.34**	**183**	PKPab	**PKPab**		**16 49 22.0**	**-0.7**
TROLL	**Troll, Antarti**	**159.34**	**183**	PKPdf	**PKPdf**		**16 48 44.2**	**-0.5**
SNAA	**Sanae**	**159.69**	**178**	PKPab	**PKPab**		**16 49 23.3**	**-0.9**
SNAA	**Sanae**	**159.69**	**178**	PKPdf	**PKPdf**		**16 48 43.7**	**-1.3**
SNAA	**Sanae**	**159.69**	**178**	PKP	**PKPdf**		**16 48 43.3**	**-1.7**
	comp=Z,5.2nm,0.9s,baz=162,slow=2.6,SNR=20							
SNAA				PKPab	**PKPab**		**16 49 22.4**	**-1.8**
	comp=Z,21nm,1.1s,baz=199,slow=5.1,SNR=16							
SNAA	**Sanae**	**159.69**	**178**	PKPdf	**PKPdf**		**16 48 43.5**	**-1.5**
SNAA	**Sanae**	**159.69**	**178**	PKIKP	**PKPdf**		**16 48 43.5**	**-1.5**
VNA3	**Neumayer Olymp**	**159.72**	**171**	PKPab	**PKPab**		**16 49 23.9**	**-0.3**
VNA3	**Neumayer Olymp**	**159.72**	**171**	PKPdf	**PKPdf**		**16 48 43.5**	**-1.5**
NVL	**N'lazarevskaya**	**159.82**	**192**	*e*PKP2	**PKPab**		**16 49 22.0**	**-2.7**
NVL				pmax	pmax			
	comp=Z,35nm,0.9s							
VNA2	**Neumayer--Watz**	**160.21**	**173**	PKPab	**PKPab**		**16 49 26.3**	**-0.1**
VNA2	**Neumayer--Watz**	**160.21**	**173**	PKPdf	**PKPdf**		**16 48 44.4**	**-1.1**
	baz=259,slow=2.0							
VNA2	**Neumayer--Watz**	**160.21**	**173**	PP	PP		16 53 06.1	-3.1
VNA1	**Neumayer--Stat**	**160.41**	**172**	PKPab	**PKPab**		**16 49 27.0**	**-0.3**
VNA1	**Neumayer--Stat**	**160.41**	**172**	PKPdf	**PKPdf**		**16 48 44.4**	**-1.3**
VNA1	**Neumayer--Stat**	**160.41**	**172**	PP	PP		16 53 06.9	-3.4

IDC 14 16:33:31.6±11.0, 19°30S×178°38W, h569km±58km, mb2.1/2, mbtmp3.2/3, Error ellipse: s-maj=312.0km s-min=105.7km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.73**	**294**	P	P	16 34 52.9	0.0
	4.8nm,0.3s,baz=278,slow=24,SNR=16						
WRA	**Warramunga Arr**	**44.42**	**261**	P	P	16 40 53.0	+0.2
	0.2nm,0.5s,baz=97,slow=7.7,SNR=5.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**44.45**	**256**	P	P	16 40 52.7	-0.4
	0.2nm,0.6s,baz=90,slow=8.0,SNR=7.3						
	0.2nm,0.6s						
AKASG	**Malin Array Be**	**141.80**	**332**	PKP	PKPdf	16 51 57.7	-1.1
	0.4nm,0.5s,baz=57,slow=1.5,SNR=1.5						

JMA 14 16:34:56.7±0.0, 32°74N±0°07×130°7E±0°1, h13km,

MV0.1/12, NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.21**	**152**	P	Pg	16 35 01.4	0.0
JIU3				S	Sg	16 35 04.8	+0.2
JTA	**Tamana**	**0.26**	**329**	P	Pg	16 35 02.4	0.0
JTA				S	Sg	16 35 06.1	0.0

IDC 14 16:52:50.0±7.1, 6°11S×128°39E, h306km±78km, mb2.9/1, mbtmp3.5/4, Error ellipse: s-maj=81.9km s-min=23.5km az=48.0

ISC 14 16:52:50.1±1.0, 6°2S±0°1×128°51E±0°09, h322km, n13, σ1s97/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.92**	**49**	P	**Pn**	**16 54 05.9**	**-1.8**
BATI	**Baumata**	**6.26**	**230**	P	**Pn**	**16 54 23.4**	**+0.2**
	21nm,0.3s,baz=81,slow=19,SNR=12						
BATI				S	**S**	**16 55 34.6**	**-3.7**
	10nm,0.3s,baz=27,slow=18,SNR=2.1						
MTN	**Manton Dam**	**7.13**	**159**	P	**Pn**	**16 54 32.3**	**-1.1**
KDU	**Kakadu**	**7.57**	**149**	P	**Pn**	**16 54 37.5**	**-1.3**
KNRA	**Kununurra**	**9.46**	**179**	P	**Pn**	**16 54 59.9**	**-1.7**
FITZ	**Fitzroy Crossi**	**12.19**	**193**	P	**P**	**16 55 36.2**	**+1.1**
	1.2nm,0.6s,baz=18,slow=10,SNR=12						
FITZ	**Fitzroy Crossi**	**12.19**	**193**	P	**Pn**	**16 55 35.0**	**+0.4**
WRAB	**Tennant Creek**	**14.82**	**158**	P	**P**	**16 56 05.4**	**+1.2**
WRA	**Warramunga Arr**	**14.83**	**158**	P	**P**	**16 56 04.7**	**+0.5**
	0.3nm,0.4s,baz=337,slow=12,SNR=9.0						
COEN	**Coen**	**16.38**	**119**	P	**P**	**16 56 23.6**	**+2.4**
QIS	**Mount Isa**	**17.91**	**144**	P	**P**	**16 56 40.5**	**+2.8**
ASAR	**Alice Springs**	**18.16**	**164**	P	**P**	**16 56 42.0**	**+1.6**
	0.3nm,0.4s,baz=346,slow=12,SNR=15						
MKAR	**Makanchi Array**	**66.72**	**327**	P	**P**	**17 03 08.0**	**+0.7**
	0.2nm,0.3s,baz=123,slow=5.3,SNR=7.2						
	0.2nm,0.3s						

IDC 14 16:54:53.2±5.7, 8°56S×129°72E, h109km±61km, mb3.2/1, mbtmp3.7/5, Error ellipse: s-maj=50.9km s-min=20.0km az=36.0

ISC 14 16:54:51.6±1.2, 8°43S±0°09×129°79E±0°08, h100km, n13, σ1s76/16, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.56**	**73**	P	**Pn**	**16 55 15.4**	**-3.1**
KDU	**Kakadu**	**4.98**	**148**	P	**Pn**	**16 56 04.3**	**+0.3**
FAKI	**Fak Fak**	**6.00**	**24**	P	Pn	16 56 09.7	-8.2
BATI	**Baumata**	**6.30**	**253**	P	**Pn**	**16 56 21.4**	**-0.7**
	21nm,1.0s,baz=90,slow=3.0,SNR=1.8						
BATI				S	**Sn**	**16 57 33.1**	**+0.4**
	14nm,0.7s,baz=72,slow=20,SNR=1.2						
KNRA	**Kununurra**	**7.27**	**188**	P	**Pn**	**16 56 36.5**	**+1.3**
FITZ	**Fitzroy Crossi**	**10.42**	**202**	P	**Pn**	**16 57 18.4**	**+0.3**
	2.1nm,0.3s,baz=25,slow=10,SNR=18						
FITZ				S	**Sn**	**16 59 09.9**	**-3.0**
	14nm,0.6s,baz=357,slow=19,SNR=14						
FITZ	**Fitzroy Crossi**	**10.42**	**202**	P	**Pn**	**16 57 18.6**	**+0.5**
PLAI	**Plampang**	**11.89**	**267**	P	**Pn**	**16 57 35.7**	**-2.2**
WRAB	**Tennant Creek**	**12.25**	**159**	P	**Pn**	**16 57 45.3**	**+2.6**
WRA	**Warramunga Arr**	**12.26**	**159**	P	**Pn**	**16 57 42.0**	**-0.7**
	0.9nm,0.5s,baz=342,slow=13,SNR=12						
WRA				S	**Sn**	**16 59 58.3**	**+0.7**
	3.6nm,0.7s,baz=335,slow=21,SNR=8.8						
ASAR	**Alice Springs**	**15.65**	**166**	P	**Pn**	**16 58 27.8**	**+1.2**
	0.5nm,0.6s,baz=347,slow=12,SNR=8.4						
ASAR				S	**Sn**	**17 01 18.7**	**-1.0**
	1.0nm,0.8s,baz=353,slow=26,SNR=5.3						
WRKA	**Warakurna**	**16.57**	**185**	P	**P**	**16 58 40.5**	**+1.7**
MKAR	**Makanchi Array**	**69.31**	**327**	P	**P**	**17 05 49.2**	**+1.0**
	0.2nm,0.4s,baz=120,slow=7.6,SNR=6.5						
	0.2nm,0.4s						

ISK 14 16:57:29.9, 39°23N×26°21E, h11km, ML2.7/13
DDA 14 16:57:30.7±0.0, 39°26N×26°25E, h7km±2km, ML2.3
ATH 14 16:57:31.2, 39°30N×26°22E, h12km±1km, ML2.5/4, Error ellipse: s-maj=1.7km s-min=0.7km az=138.0
THE 14 16:57:31.6, 39°27N×26°19E, h8km, ML2.5/4, Error ellipse: s-maj=1.1km s-min=0.7km az=71.0

ISC 14 16:57:31.1±0.8, 39°27N±0°02×26°24E±0°02, h15km±4km, n44, σ0s68/75, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.03**	**127**	P	**Pg**	**16 57 33.7**	**0.0**
PRK				S	**Sg**	**16 57 34.9**	**-0.6**
	10μm,0.2s						
PRK	**Paraskevi**	**0.03**	**127**	P	**Pg**	**16 57 33.7**	**0.0**
PRK				S	**Sg**	**16 57 35.2**	**-0.3**
PRK				AML	AML	16 57 35.4	
	comp=N,14466μm,0.2s						
PRK				AML	AML	16 57 35.7	
	comp=E,12103μm,0.2s						
GPNR	**Gulpinar-Canak**	**0.21**	**337**	PG	**Pg**	**16 57 35.5**	**-0.4**
GPNR				SG	**Sg**	**16 57 38.9**	**-0.1**
KOCA	**Canakkale, Ayv**	**0.25**	**342**	P	**Pg**	**16 57 36.3**	**-0.3**
KOCA				*i* AML	AML	16 57 40.0	
	comp=E,460nm,0.4s						
KOCA				S	**Sg**	**16 57 40.5**	**+0.3**
KOCA				*i* AML	AML	16 57 41.0	
	comp=E,578nm,0.2s						
SIGR	**SIGRI**	**0.30**	**260**	P	**Pg**	**16 57 37.0**	**-0.4**
SIGR				S	**Sg**	**16 57 41.5**	**-0.2**
	comp=E,595nm,0.3s						
SIGR	**SIGRI**	**0.30**	**260**	P	**Pg**	**16 57 37.0**	**-0.4**
SIGR				S	**Sg**	**16 57 41.5**	**-0.2**
SIGR				AML	AML	16 57 42.2	
	comp=N,1598μm,0.4s						
SIGR				AML	AML	16 57 43.0	
	comp=E,770μm,0.3s						
AYVA	**Ayvalik**	**0.35**	**83**	P	**Pg**	**16 57 37.8**	**-0.6**
AYVA				*i* AML	AML	16 57 43.0	
	comp=E,337nm,0.6s						
AYVA				*i* AML	AML	16 57 43.0	
	comp=E,210nm,0.3s						
AYVA				S	**Sg**	**16 57 43.2**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.53**	**27**	P	**Pg**	**16 57 40.8**	**-0.9**
BAYC				S	**Sg**	**16 57 48.8**	**0.0**
BAYC				*i* AML	AML	16 57 49.0	
	comp=E,108nm,0.1s						
BAYC				*i* AML	AML	16 57 52.0	
	comp=E,152nm,0.2s						
DKL	**Dikili**	**0.55**	**110**	PG	**Pg**	**16 57 41.7**	**-0.3**
DKL				SG	**Sg**	**16 57 49.8**	**+0.4**
EZN	**Ezine**	**0.56**	**7**	PG	**Pg**	**16 57 41.8**	**-0.4**
EZN				SG	**Sg**	**16 57 49.9**	**+0.1**
BOZC	**Bozcaada**	**0.59**	**346**	PG	**Pg**	**16 57 42.2**	**-0.6**
BOZC				SG	**Sb**	**16 57 51.8**	**+0.3**
BOZC	**Bozcaada**	**0.59**	**346**	P	**Pg**	**16 57 42.2**	**-0.6**
BOZC				S	**Sg**	**16 57 50.2**	**-0.4**
BOZC				*i* AML	AML	16 57 53.0	
	comp=E,78nm,0.3s						
BOZC				*i* AML	AML	16 57 54.0	
	comp=E,82nm,0.3s						
FOCM	**Foa**	**0.67**	**145**	PG	**Pg**	**16 57 43.0**	**-1.3**
FOCM				SG	**Sg**	**16 57 52.5**	**-0.6**
BUHA	**Balikesir, Bur**	**0.69**	**70**	P	**Pg**	**16 57 43.7**	**-0.9**
BUHA				S	**Sg**	**16 57 53.2**	**-0.6**
BUHA				*i* AML	AML	16 57 57.0	
	comp=E,126nm,0.3s						
BUHA				*i* AML	AML	16 57 58.0	
	comp=E,114nm,0.3s						
ZEDA	**zmir-Bergama**	**0.72**	**114**	P	**Pg**	**16 57 44.7**	**-0.4**
ZEDA				S	**Sg**	**16 57 54.9**	**+0.3**
ZEDA				*i* AML	AML	16 57 57.0	
	comp=E,190nm,0.2s						
ZEDA				*i* AML	AML	16 57 57.0	
	comp=E,158nm,0.3s						
ECEA	**Canakkale, Ece**	**0.78**	**356**	P	**Pg**	**16 57 45.8**	**-0.5**
ECEA				*i* AML	AML	16 58 00.0	
	comp=E,144nm,0.7s						
ECEA				*i* AML	AML	16 58 02.0	
	comp=E,144nm,0.4s						
CHOS	**Chios island**	**0.89**	**189**	P	**Pg**	**16 57 47.9**	**-0.5**
CHOS				S	**Sb**	**16 58 00.7**	**+0.7**
	comp=E,365nm,0.2s						
CHOS	**Chios island**	**0.89**	**189**	P	**Pg**	**16 57 48.4**	**0.0**
CHOS				S	**Sb**	**16 58 00.9**	**+0.8**
CHOS				AML	AML	16 58 03.2	
	comp=N,533μm,0.2s						
CHOS				AML	AML	16 58 03.7	
	comp=E,933μm,0.2s						
PSRA	**Psara**	**0.89**	**216**	P	**Pg**	**16 57 48.4**	**0.0**
PSRA				S	**Sb**	**16 58 01.2**	**+1.2**
URLA	**Izmir**	**0.95**	**163**	PG	**Pg**	**16 57 47.7**	**-1.7**
URLA				SG	**Sg**	**16 58 01.2**	**-0.6**
URLA	**Izmir**	**0.95**	**163**	P	**Pg**	**16 57 47.9**	**-1.6**
URLA				S	**Sg**	**16 58 01.0**	**-0.9**
URLA				*i* AML	AML	16 58 03.0	
	comp=E,153nm,0.3s						
URLA				*i* AML	AML	16 58 04.0	
	comp=E,91nm,0.2s						
GOKA	**anakkale-Gk**	**0.96**	**345**	P	**Pg**	**16 57 49.3**	**-0.4**
GOKA				S	**Sb**	**16 58 02.8**	**+0.8**
GADA	**Gvkgeada**	**0.96**	**344**	PG	**Pg**	**16 57 49.0**	**-0.7**
LIA	**Limnos Island**	**1.03**	**308**	P	**Pg**	**16 57 50.2**	**-0.9**
LIA				S	**Sb**	**16 58 04.9**	**+0.8**
	comp=E,258nm,0.4s						
LIA	**Limnos Island**	**1.03**	**308**	P	**Pg**	**16 57 50.1**	**-0.9**
LIA				S	**Sg**	**16 58 03.5**	**-1.0**
LIA				AML	AML	16 58 05.0	
	comp=E,718μm,0.4s						
LIA				AML	AML	16 58 06.0	
	comp=N,308μm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**1.05**	**168**	P	**Pg**	**16 57 50.3**	**-1.0**
ZEYE				S	**Sb**	**16 58 05.5**	**+1.0**
ZEYE				*i* AML	AML	16 58 07.0	
	comp=N,108nm,0.6s						
ZEYE				*i* AML	AML	16 58 10.0	
	comp=N,124nm,0.3s						
BLCB	**Balcova**	**1.08**	**144**	PG	**Pb**	**16 57 51.1**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.15**	**9**	PN	**Pb**	**16 57 52.6**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.15**	**84**	P	**Pb**	**16 57 52.9**	**+0.1**
STEP				*i* AML	AML	16 58 10.0	
	comp=N,113nm,1.0s						
STEP				*i* AML	AML	16 58 12.0	
	comp=N,85nm,0.6s						
BALY	**Balya**	**1.17**	**66**	P	**Pb**	**16 57 51.6**	**-1.5**
BALY				*i* AML	AML	16 58 09.0	
	comp=N,47nm,0.5s						
BALY				*i* AML	AML	16 58 09.0	
	comp=N,93nm,0.6s						
AKHS	**Akhisar**	**1.29**	**107**	P	**Pn**	**16 57 55.0**	**+0.4**
AKHS				S	**Sg**	**16 58 13.6**	**+0.9**
AKHS				*i* AML	AML	16 58 14.0	
	comp=N,42nm,0.5s						
SMTH	**Samothraki Isl**	**1.32**	**336**	P	**Pn**	**16 57 54.9**	**-0.2**
SMTH				S	**Sn**	**16 58 13.1**	**+0.6**
SMTH	**Samothraki Isl**	**1.32**	**336**	P	**Pn**	**16 57 54.9**	**-0.2**
SMTH				S	**Sb**	**16 58 12.2**	**-0.3**
GONE	**Gonen-Balikesi**	**1.36**	**55**	PN	**Pn**	**16 57 55.7**	**0.0**
ERIK	**Erikli-Kesan**	**1.42**	**8**	PN	**Pn**	**16 57 56.6**	**+0.2**
ERIK				SN	**Sb**	**16 58 16.0**	**+0.8**
ENEZ	**Enez**	**1.47**

JYW	Yuwa	2.06	290	A		A		17 16 50.1
	comp=E,6.0nm,2.9s,comp=E,6.0nm,2.9s							
JTM	Tenmabayashi	2.30	327	Pn		Pn	17 16 53.0	-0.4
ERM	Erimo	3.17	6	Pn		Pn	17 17 04.9	-0.4
ERM	Erimo	3.17	6	P		Pn	17 17 04.9	-0.4
JYT	Yasato	3.30	218			Pn	17 17 07.2	+0.2
JSD	Sado	3.59	258			Pn	17 17 11.4	+0.4
JEW	Eniwo	4.09	347	Pn		Pn	17 17 18.7	+0.7
MJAR	Matsushiro Arr	4.25	238	P		Pn	17 17 21.1	+1.0
	2.7nm,0.4s,baz=25,slow=12,SNR=36							
MJAR				S		Sn	17 18 07.9	-0.7
	3.4nm,0.5s,baz=58,slow=21,SNR=4.3							
MAJO	Matsushiro	4.25	238			Pn	17 17 22.6	+2.4
MAJO	Matsushiro	4.25	238	P		Pn	17 17 23.1	+2.9
INU	Inuyama	5.74	234			Pn	17 17 42.2	+1.6
INU	Inuyama	5.74	234	P		Pn	17 17 43.6	+3.0
JHJ2	Mitsune	6.20	203	Pn		Pn	17 17 45.8	-1.1
JHJ2	Mitsune	6.20	203	P		Pn	17 17 46.3	-0.5
JHJ	Hachijo jima 2	6.20	203	P		Pn	17 17 46.5	-0.3
	55nm,0.3s,baz=345,slow=20,SNR=9.0							
JHJ				S		Sn	17 18 53.0	-3.4
	59nm,0.3s,baz=53,slow=20,SNR=1.6							
YSS	Yuzh-Sakhalins	8.09	0			Pn	17 18 11.3	-1.5
YSS	Yuzh-Sakhalins	8.09	0	P		Pn	17 18 14.0	+1.2
USRK	Ussuriysk Ar.	9.64	307	P		Pn	17 18 35.1	+1.1
	2.5nm,0.6s,baz=116,slow=15,SNR=2.1							
KSRS	Korea Array	11.73	268	P		Pn	17 19 06.9	+4.4
	0.9nm,0.8s,baz=80,slow=14,SNR=3.7							
JCJ	Chichijima	11.74	182	P		Pn	17 19 00.8	-2.0
KLR	Kul'dur	13.01	326	P		Pn	17 19 19.0	-1.0
	1.2nm,0.6s,baz=130,slow=18,SNR=2.6							
MA2	Magadan	21.36	11	P		P	17 21 01.2	-0.1
	5.6nm,0.8s,baz=219,slow=6.5,SNR=2.6							
	5.6nm,0.8s							
TPUB	Ta-pu	24.36	237	P		P	17 21 30.2	-1.7
YAK	Yakutsk	24.54	345	P		P	17 21 33.2	0.0
	5.8nm,0.4s,baz=143,slow=4.9,SNR=12							
	5.8nm,0.4s							
YAK	Yakutsk	24.54	345	P		P	17 21 32.8	-0.4
YAK				IAmb		IAmb	17 21 33.8	
	comp=Z,13nm,0.5s							
SEY	Seymchan	24.81	11	P		P	17 21 36.9	+1.3
	comp=Z,2.0nm,0.7s,baz=189,slow=11,SNR=7.9							
	comp=Z,2.0nm,0.7s							
SONM	Songino Array	27.67	301	P		P	17 22 02.2	+0.4
	comp=Z,0.6nm,0.5s,baz=106,slow=8.4,SNR=4.7							
	comp=Z,0.6nm,0.5s							
SONM	Songino Array	27.67	301	P		P	17 22 01.6	-0.2
H11N2	WAKE ISLAND Hy	28.29	125	T		T	17 52 41.7	
	baz=318,slow=75,SNR=154							
H11N1	WAKE ISLAND Hy	28.30	125	T		T	17 52 42.4	
	baz=318,slow=75,SNR=161							
H11N3	WAKE ISLAND Hy	28.30	125	T		T	17 52 43.0	
	baz=318,slow=75,SNR=81							
H11S1	WAKE ISLAND Hy	29.07	127	T		T	17 53 45.5	
	baz=318,slow=76,SNR=2.6							
H11S3	WAKE ISLAND Hy	29.07	127	T		T	17 53 38.5	
	baz=318,slow=76,SNR=4.5							
H11S2	WAKE ISLAND Hy	29.09	127	T		T	17 53 39.9	
	baz=318,slow=76,SNR=3.5							
ZALV	Zalesovo Beam	41.47	311	P		P	17 24 00.5	+0.2
	comp=Z,0.6nm,0.3s,baz=85,slow=6.0,SNR=4.1							
ZALV				PcP		PcP	17 25 56.3	-1.1
	comp=Z,0.4nm,0.3s,baz=73,slow=5.0,SNR=2.3							
	comp=Z,0.6nm,0.3s							
MK31	Makanchi Array	44.04	301	P		P	17 24 21.5	+0.1
MKAR	Makanchi Array	44.04	301	P		P	17 24 21.7	+0.3
	comp=Z,0.9nm,0.4s,baz=82,slow=9.9,SNR=14							
	comp=Z,0.9nm,0.4s							
KURK	Kurchatov	45.63	307	P		P	17 24 33.9	0.0
KURK				IAmb		IAmb	17 24 49.1	
	comp=Z,2.9nm,0.6s							
SUA	Susitna One	45.79	38	P		P	17 24 35.5	+0.4
ILAR	Eielson Array	47.41	33	P		P	17 24 48.5	+0.9
	comp=Z,1.5nm,0.7s,baz=272,slow=6.4,SNR=14							
ILAR				pP		sP	17 25 03.7	-0.4
	comp=Z,0.9nm,0.8s,baz=272,slow=6.3,SNR=3.8							
	comp=Z,1.5nm,0.7s							
ABKAR	Akbulak array	57.56	310	P		P	17 26 02.1	-0.8
ABKAR				IAmb		IAmb	17 26 18.4	
	comp=Z,1.7nm,0.7s							
ABKAR	Akbulak array	57.56	310	P		P	17 26 01.9	-1.1
WB0	Warramunga Arr	58.84	189	P		P	17 26 11.9	-0.2
WB0				IAmb		IAmb	17 26 31.9	
	comp=Z,3.6nm,1.0s							
WR0	Warramunga Arr	59.01	189	P		P	17 26 13.1	-0.2
WR0				IAmb		IAmb	17 26 49.4	
	comp=Z,10.0nm,1.4s							
WB2	Warramunga Arr	59.01	189	P		P	17 26 13.7	+0.3
WB2				IAmb		IAmb	17 26 42.4	
	comp=Z,7.6nm,1.4s							
WRA	Warramunga Arr	59.02	189	P		P	17 26 13.6	+0.2
	comp=Z,1.4nm,0.5s,baz=5.9,slow=7.0,SNR=39							
WRA				pP		pP	17 26 27.2	+2.0
	comp=Z,1.2nm,0.6s,baz=5.1,slow=6.9,SNR=6.0							
	comp=Z,1.4nm,0.5s							
WRA	Warramunga Arr	59.02	189	P		P	17 26 13.3	-0.1
TLCB	Telegraph Cove	61.50	47	P		P	17 26 28.7	-1.3
YKA	Yellowknife Ar	61.72	31	P		P	17 26 31.9	+0.5
	comp=Z,0.5nm,0.6s,baz=306,slow=6.3,SNR=5.4							
	comp=Z,0.5nm,0.6s							
ARCES	ARCESS Array B	62.65	339	P		P	17 26 38.0	+0.5
	comp=Z,0.9nm,0.9s,baz=59,slow=11,SNR=1.2							
	comp=Z,0.9nm,0.9s							
AS31	Alice Springs	62.74	189	P		P	17 26 36.6	-2.0
AS31				IAmb		IAmb	17 27 02.7	
	comp=Z,1.9nm,1.5s							
ASAR	Alice Springs	62.74	189	P		P	17 26 39.5	+0.9
	comp=Z,0.5nm,0.7s,baz=16,slow=10,SNR=12							
ASAR				pP		sP	17 26 54.2	-1.2
	comp=Z,0.5nm,0.7s,baz=0.2,slow=5.2,SNR=4.2							
	comp=Z,0.5nm,0.7s							
ASAR	Alice Springs	62.74	189	P		P	17 26 37.2	-1.4
FINES	FINESS Array B	67.68	332	P		P	17 27 10.0	-0.2
	comp=Z,2.2nm,1.0s,baz=28,slow=6.3,SNR=4.7							
FINES				pP		pP	17 27 24.2	+1.8
	comp=Z,1.2nm,0.6s,baz=56,slow=7.4,SNR=2.6							
	comp=Z,2.2nm,1.0s							
NOA	NORSAR Array B	72.90	338	P		P	17 27 42.1	-0.1
	comp=Z,0.5nm,0.7s,baz=39,slow=5.8,SNR=3.5							
NOA				pP		pP	17 27 56.8	+2.3
	comp=Z,0.2nm,0.7s,baz=38,slow=6.1,SNR=1.6							
	comp=Z,0.5nm,0.7s							
NVAR	Mina Array Bea	73.08	54	P		P	17 27 45.3	+1.4
	comp=Z,0.2nm,0.3s,baz=312,slow=4.7,SNR=3.2							
	comp=Z,0.2nm,0.3s							
AKASG	Malin Array Be	73.48	323	P		P	17 27 45.6	-0.1
	comp=Z,1.2nm,0.4s,baz=45,slow=6.7,SNR=9.2							
AKASG				pP		pP	17 27 58.6	+0.6
	comp=Z,0.6nm,0.5s,baz=44,slow=6.5,SNR=2.7							
	comp=Z,1.2nm,0.4s							
PDAR	Pinedale Array	75.66	46	P		P	17 27 59.7	+0.9
	comp=Z,0.3nm,0.5s,baz=294,slow=1.2,SNR=5.6							
	comp=Z,0.3nm,0.5s							
GERES	GERESS Array B	81.69	329	P		P	17 28 31.8	+0.1
	comp=Z,0.4nm,0.6s,baz=24,slow=7.3,SNR=4.1							
	comp=Z,0.4nm,0.6s							
TXAR	Lajitas Array	88.20	53	P		P	17 29 06.2	+1.4
	comp=Z,0.3nm,0.6s,baz=300,slow=2.0,SNR=2.5							
	comp=Z,0.3nm,0.6s							
ESDC	Sonseca Array	96.09	335	P		P	17 29 41.3	+0.3
	comp=Z,0.2nm,0.6s,baz=28,slow=7.4,SNR=1.2							
	comp=Z,0.2nm,0.6s							
LPAZ	La Paz	144.88	59	PKP		PKPdf	17 35 51.8	+0.3
	comp=Z,0.7nm,0.5s,baz=278,slow=7.1,SNR=5.0							

*IDC **14** 17:22:43.8±0.6, 10.78N×174.86W, h0km, mb4.2/17, mbtmp4.2/17, Error ellipse: s-maj=22.7km s-min=14.9km az=138.0*

*NEIC **14** 17:22:46.4±1.9, 10.93N±0.08×174.94W±0.07, h16km±4km, mb4.7/41, Error ellipse: s-maj=11.5km s-min=10.1km az=201.0*

ISC 14 17:22:44.7±0.5, 10.76N±0.1×174.83W±0.09, h10km, n151, σ1.15/145, mb4.6/35, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOHN	Johnston Islan	7.86	40	Pn	Pn	17 24 36.2	-2.9
JOHN				Sn	Sn	17 25 55.7	-12
KNTN	Kanton	13.79	167	Pn	Pn	17 25 57.5	-2.9
KNTN				P	P	17 26 06.2	-2.8
KWAJ	Kwajalein Atol	17.41	265	Pn	Pn	17 26 44.2	-3.7
H11S2	WAKE ISLAND Hy	19.44	295	T	T	17 47 14.3	
	baz=111,slow=75,SNR=42						
OPA	Opana	19.44	54	P	P	17 27 10.9	-0.6
OPA				IAmb	IAmb	17 27 24.7	
	comp=Z,64nm,0.9s						
H11S1	WAKE ISLAND Hy	19.45	295	T	T	17 47 18.2	
	baz=111,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	19.46	295	T	T	17 47 11.1	
	baz=111,slow=75,SNR=56						
H11N3	WAKE ISLAND Hy	19.73	299	T	T	17 47 54.0	
	baz=116,slow=74,SNR=6.5						
H11N1	WAKE ISLAND Hy	19.74	299	T	T	17 47 53.4	
	baz=116,slow=74,SNR=4.1						
H11N2	WAKE ISLAND Hy	19.74	299	T	T	17 47 54.1	
	baz=116,slow=74,SNR=12						
KHLU	Kahalu`u	20.26	62	P	P	17 27 20.1	-0.4
HUH	Hualalai	20.34	62	P	P	17 27 21.5	-0.1
KHLH	Kahului Airpor	20.35	58	P	P	17 27 21.9	+0.4
KHU	Kahuku	20.37	63	P	P	17 27 22.8	+0.8
KHU				IAmb	IAmb	17 27 47.8	
	comp=Z,76nm,1.0s						
MLOA	Mauna Loa Obse	20.51	63	P	P	17 27 25.3	+1.6
PETK	Petropavlovsk-	47.66	338	P	P	17 31 21.7	+0.6
	comp=Z,1.9nm,0.8s,baz=130,slow=11,SNR=8.9						
	comp=Z,1.9nm,0.8s						
MJAR	Matsushiro Arr	49.46	309	P	P	17 31 35.3	0.0
	comp=Z,1.2nm,0.9s,baz=118,slow=5.7,SNR=6.2						
	comp=Z,1.2nm,0.9s						
P17K	Kvichak River	50.29	12	P	P	17 31 40.9	-0.2
	baz=204						
O16K	Kokwok River B	50.33	11	P	P	17 31 41.6	+0.1
	baz=202						
Q19K	Cape Douglas,	50.67	14	P	P	17 31 40.6	-3.5
	baz=208						
O17K	Koliganek Bris	50.69	11	P	P	17 31 44.5	+0.3
	baz=203						
Q20K	Shuyak Island	50.70	15	P	P	17 31 41.0	-3.3
	baz=209						
O18K	Koktuh Hills	51.15	13	P	P	17 31 47.9	+0.3
O18K	Koktuh Hills	51.15	13	P	P	17 31 48.0	+0.3
	baz=205						
O19K	Port Alsworth	51.65	13	P	P	17 31 51.4	0.0
	baz=206						
N18K	Kilae Creek	51.77	12	P	P	17 31 52.0	-0.3
	baz=204						
M20K	Styx River	53.43	13	P	P	17 32 03.5	-1.1
	baz=207						
RC01	Rabbit Creek A	53.52	15	P	P	17 32 04.6	-0.7
	baz=212						
TTA	Tatalina	53.81	11	P	P	17 32 07.5	0.0
TTA				IAmb	IAmb	17 32 08.7	
	comp=Z,7.3nm,0.8s						
TTA	Tatalina	53.81	11	P	P	17 32 07.9	+0.4
	baz=203						
PMR	Palmer	54.10	15	P	P	17 32 09.9	+0.4
	baz=212						
KNK	Knik Glacier	54.12	15	P	P	17 32 09.8	+0.1
	baz=213						
SML	Sawmill	54.49	15	P	P	17 32 12.3	-0.1
	baz=213						
K20K	Telida	54.56	11	P	P	17 32 13.4	+0.5
K20K				IAmb	IAmb	17 32 14.3	
	comp=Z,13nm,0.9s						
K20K	Telida	54.56	11	P	P	17 32 12.4	-0.4
	baz=206,SNR=9.4						
CRQE	Cirque	55.11	18	P	P	17 32 15.7	-1.3
	baz=219						
J20K	Nowinta River	55.30	11	P	P	17 32 17.4	-0.8
J20K				IAmb	IAmb	17 32 20.3	
	comp=Z,6.8nm,1.0s						
J20K	Nowinta River	55.30	11	P	P	17 32 18.7	+0.6
	baz=205,SNR=5.9						
N25K	Chitina, Valde	55.34	17	P	P	17 32 17.9	-0.7
	baz=217						
CHUM	Lake Minchumin	55.38	12	P	P	17 32 17.8	-0.9
	baz=208						
RND	Reindeer	55.72	14	P	P	17 32 20.6	-0.7
RND				IAmb	IAmb	17 32 26.2	
	comp=Z,15nm,1.3s						
CTG	Chitna Glacier	55.83	19	P	P	17 32 23.5	+1.3
	baz=221						
BPAW	Bear Paw Mtn.	55.85	12	P	P	17 32 20.7	-1.5
	baz=209						
MCK	McKinley	55.98	14	P	P	17 32 21.3	-1.9
	baz=212						
O28M	Mount Upton	56.06	20	P	P	17 32 24.9	+0.9
	baz=223						
PAX	Paxson	56.20	16	P	P	17 32 23.6	-1.2
	baz=216						
BWN	Browne	56.24	13	P	P	17 32 22.8	-2.2
M26K	Nabesna, AK	56.43	17	P	P	17 32 26.9	+0.5
	baz=219,SNR=5.6						
USRK	Ussuriysk Ar.	56.47	316	P	P	17 32 27.2	+0.3
	comp=Z,2.7nm,0.8s,baz=108,slow=9.3,SNR=2.6						
	comp=Z,2.7nm,0.8s						
I21K	Tanana	56.61	11	P	P	17 32 27.7	+0.2
	baz=208						
NEA2	Nenana	56.70	13	P	P	17 32 27.2	-0.9
	baz=211						
P30M	Million Dollar	56.71	22	P	P	17 32 30.6	+2.2
	baz=226						
YUK3	Moose Creek	56.72	19	P	P	17 32 29.1	+0.5
	baz=222						
MLY	Manley	56.72	12	P	P	17 32 27.3	-1.1
	baz=209						
M27K	Edge Creek, AK	56.73	18	P	P	17 32 29.9	+1.3
	baz=220						
K24K	Donnelly Dome	56.81	15	P	P	17 32 29.5	+0.5
	baz=215						
L26K	Log Cabin Wild	56.83	17	P	P	17 32 29.8	+0.6
	baz=218,SNR=5.6						
H21K	Melozitna Rive	56.88	11	P	P	17 32 30.7	+1.2
	baz=206						
RIDG	Independent Ri	56.99	15	P	P	17 32 29.4	-1.0
	baz=216						
HYT	Haines Junctio	57.01	21	P	P	17 32 32.1	+1.5
	baz=226						
IMAR	Indian Mountai	57.01	10	P	P	17 32 30.9	+0.5
HDA	Harding Lake	57.02	14	P	P	17 32 29.3	-1.2
HDA	Harding Lake	57.02	14	P	P	17 32 30.2	-0.3
	baz=214,SNR=11						
CCB	Clear Creek Bu	57.03	13	P	P	17 32 29.5	-0.9
CCB				IAmb	IAmb	17 32 47.5	
	comp=Z,4.1nm,0.6s						
BVCY	Beaver Creek	57.08	18	P	P	17 32 31.8	+0.9
	baz=221,SNR=5.8						
I23K	Minto, Yukon-K	57.11	12	P	P	17 32 30.5	-0.5
	baz=210						
MDM	Murphy Dome	57.20	13	P	P	17 32 31.1	-0.7
NVAR	Mina Array Bea	57.28	51	P	P	17 32 34.8	+1.8
	comp=Z,2.4nm,0.6s,baz=243,slow=10,SNR=26						
	comp=Z,2.4nm,0.6s						
L27K	Beaver Creek,	57.29	17	P	P	17 32 33.0	+0.6
	baz=220,SNR=8.4						
ILAR	Eielson Array	57.34	14	P	P	17 32 32.8	0.0
	comp=Z,4.5nm,0.8s,baz=222,slow=6.6,SNR=34						
	comp=Z,4.5nm,0.8s						
ILAR	Eielson Array	57.34	14	P	P	17 32 32.2	-0.6
H22K	Ishtalitna Cre	57.36	11	P	P	17 32 33.3	+0.4
	baz=208,SNR=6.2						
SCRK	Sand Creek	57.41	16	P	P	17 32 33.4	0.0
SCRK	Sand Creek	57.41	16	P	P	17 32 33.6	+0.3
	baz=217,SNR=6.3						
G21K	Allakaket	57.54	10	P	P	17 32 35.4	+1.3
	baz=205,SNR=5.1						
J25K	Salcha River,	57.58	15	P	P	17 32 34.1	-0.3
J25K	Salcha River,	57.58	15	P	P	17 32 34.4	-0.1
	baz=215						
KSRS	Korea Array	57.63	308	P	P	17 32 37.1	+1.9
	comp=Z,2.1nm,0.8s,baz=114,slow=7.3,SNR=13						
	comp=Z,2.1nm,0.8s						
H23K	Yukon River	57.66	12	P	P	17 32 34.5	-0.5
	baz=210						
M29M	Somme Creek	57.85	19	P	P	17 32 37.7	+1.2
	baz=224						
J26L	Joseph Creek	57.95	15	P	P	17 32 36.4	-0.6
J26L				IAmb	IAmb	17 32 38.6	
	comp=Z,5.3nm,0.8s						
J26L	Joseph Creek	57.95	15	P	P	17 32 37.3	+0.2
	baz=217,SNR=6.4						
K27K	Chicken	57.97	16	P	P	17 32 38.4	+1.2
	baz=219						
H24K	Noodor Dome	58.02	13	P	P	17 32 36.4	-1.2
H24K				IAmb	IAmb	17 32 38.6	
	comp=Z,6.3nm,0.8s						
H24K	Noodor Dome	58.02	13	P	P	17 32 36.9	-0.7
	baz=212,SNR=9.1						
F21K	Alatna River	58.19	10	P	P	17 32 39.6	+1.0
	baz=205,SNR=5.7						
PRP	Porcupine Dome	58.29	14	P	P	17 32 40.0	+0.4
PRP				IAmb	IAmb	17 32 40.7	
	comp=Z,10nm,0.8s						
PRP	Porcupine Dome	58.29	14	P	P	17 32 39.6	+0.1
	baz=215,SNR=8.1						
G23K	Bananza Creek	58.34	11	P	P	17 32 40.3	+0.5
	baz=209,SNR=7.5						
WR0	Warramunga Arr	58.44	239	P	P	17 32 39.5	-1.7
WR0				IAmb	IAmb	17 32 41.1	
	comp=Z,6.3nm,1.0s						
WB0	Warramunga Arr	58.48	239	P	P	17 32 40.3	-1.1
WB0				IAmb	IAmb	17 32 41.6	
	comp=Z,7.0nm,1.1s						
TPNV	Topopah Spring	58.58	53	P	P	17 32 42.7	+0.6
TPNV				IAmb	IAmb	17 32 44.5	
	comp=Z,4.1nm,0.7s						
WB2	Warramunga Arr	58.59	239	P	P	17 32 41.1	-1.1
WB2				IAmb	IAmb	17 32 44.4	
	comp=Z,6.6nm,1.1s						
WRA	Warramunga Arr	58.60	239	P	P	17 32 41.5	-0.8
	comp=Z,2.4nm,0.7s,baz=59,slow=6.8,SNR=22						
WRA				PcP	PcP	17 33 33.0	+0.4
	comp=Z,0.8nm,0.7s,baz=54,slow=4.9,SNR=5.6						
	comp=Z,2.4nm,0.7s						
WRA	Warramunga Arr	58.60	239	P	P	17 32 41.1	-1.2
F22K	John River	58.66	10	P	P	17 32 42.9	+0.9
	baz=207						
I26K	Coal Creek Min	58.70	15	P	P	17 32 42.3	+0.1
	baz=217						
DAWY	Dawson	58.76	17	P	P	17 32 43.9	+1.1
	baz=222,SNR=6.0						
EGAK	Eagle	58.80	16	P	P	17 32 44.1	+1.1
	baz=220,SNR=11						
M31M	Drury Creek, Y	59.04	21	P	P	17 32 44.7	0.0
M31M				IAmb	IAmb	17 32 46.0	
	comp=Z,6.2nm,0.7s						
E22K	Anaktuvuk Pass	59.29	10	P	P	17 32 47.1	+0.8
	baz=207,SNR=6.8						
I27K	Kandik River	59.33	15	P	P	17 32 47.2	+0.6
	baz=219						
STKA	Stephens Creek	59.46	223	P	P	17 32 49.0	+1.0
	comp=Z,1.7nm,0.7s,baz=76,slow=15,SNR=3.4						
	comp=Z,1.7nm,0.7s						
F24K	Squaw Lake	59.47	12	P	P	17 32 48.7	+1.1
	baz=211,SNR=7.4						
E24K	Your Creek	59.83	11	P	P	17 32 51.7	+1.6
	baz=211,SNR=15						
H27K	Steamboat Moun	59.84	15	P	P	17 32 51.1	+0.9
	baz=219						
G26K	Porcupine Rive	59.87	14	P	P	17 32 51.2	+0.9
	baz=216						
F25K	Christian Rive	59.99	12	P	P	17 32 52.3	+1.2
	baz=214						
I29M	Ogilvie Camp,	60.04	17	P	P	17 32 51.8	+0.3
	baz=223,SNR=5.3						
D23K	Nanushuk River	60.22	10	P	P	17 32 54.1	+1.4
	baz=208,SNR=6.5						
G27K	Doyon Strip	60.26	14	P	P	17 32 53.8	+0.8
	baz=218						
F26K	Sheenjek River	60.40	13	P	P	17 32 54.8	+0.9
	baz=216						
AS31	Alice Springs	60.68	235	P	P	17 32 56.0	-0.6
ASAR	Alice Springs	60.68	235	P	P	17 32 57.1	+0.5
	comp=Z,2.0nm,0.9s,baz=60,slow=8.1,SNR=26						
ASAR				PcP	PcP	17 33 42.0	+1.2
	comp=Z,0.6nm,0.7s,baz=68,slow=3.4,SNR=1.6						
	comp=Z,2.0nm,0.9s						
PSUT	Pine Spring	60.73	52	P	P	17 32 57.5	+0.5
PSUT				IAmb	IAmb	17 33 04.0	
	comp=Z,4.1nm,0.8s						
CCUT	Cedar City	60.95	53	P	P	17 32 59.0	+0.5
C23K	Itkillik River	61.01	9	P	P	17 32 59.3	+1.3
	baz=208,SNR=5.3						
C24K	Franklin Bluff	61.22	10	P	P	17 33 00.7	+1.3
	baz=210						
EPYK	Eagle Plains	61.23	16	P	P	17 33 00.1	+0.5
	baz=224,SNR=6.8						
D25K	Kavik River	61.30	11	P	P	17 33 00.6	+0.5
	baz=212						
E27K	Coleen River	61.37	13	P	P	17 33 01.9	+1.4
	baz=218,SNR=8.4						
U15A	North Rim	61.63	54	P	P	17 33 03.5	+0.2
MTPU	Mount Pierson	61.94	53	P	P	17 33 06.3	+0.9
MTPU				IAmb	IAmb	17 33 08.0	
	comp=Z,3.6nm,0.7s						
C27K	Jago River	62.08	12	P	P	17 33 07.2	+1.9
	baz=215						
X16A	Lo Mia Camp, P	62.08	57	P	P	17 33 06.5	+0.4
C26K	Camden Bay	62.08	11	P	P	17 33 07.1	+1.9
	baz=214						
INK	Inuvik	63.47	16	P	P	17 33 15.3	+0.8
	baz=227						
FXWY	Fox Creek	63.74	47	P	P	17 33 17.7	+0.6
BBOO	Buckleboo	63.79	225	P	P	17 33 16.0	-1.2
PDAR	Pinedale Array	64.65	48	P	P	17 33 23.8	+0.7
	comp=Z,1.9nm,0.8s,baz=248,slow=4.0,SNR=19						
	comp=Z,1.9nm,0.8s						
PDAR	Pinedale Array	64.65	48	P	P	17 33 23.5	+0.4
FITZ	Fitzroy Crossi	65.38	244	P	P	17 33 27.0	-0.8
FITZ				IAmb	IAmb	17 33 34.9	
	comp=Z,7.8nm,1.4s						
C36M	Paulatuk	66.80	17	P	P	17 33 35.5	-0.6
YKA	Yellowknife Ar	66.99	26	P	P	17 33 37.4	-0.1
	comp=Z,2.7nm,0.7s,baz=253,slow=6.2,SNR=18						
	comp=Z,2.7nm,0.7s						
YKA	Yellowknife Ar	66.99	26	P	P	17 33 36.4	-1.1
TXAR	Lajitas Array	68.44	63	P	P	17 33 48.6	+1.1
	comp=Z,0.9nm,0.8s,baz=266,slow=5.0,SNR=5.3						
	comp=Z,0.9nm,0.8s						
ECSD	EROS Data Cent	74.14	48	P	P	17 34 21.4	-0.2
SONM	Songino Array	74.58	317	P	P	17 34 25.0	+0.9
	comp=Z,2.4nm,0.7s,baz=108,slow=4.4,SNR=14						
	comp=Z,2.4nm,0.7s						
B35A	Bob, Littlefor	76.14	43	P	P	17 34 32.6	-0.4

CTA Charters Tower 25.03 270 LR LR 17 48 49.5
comp=Z,115nm,18.1s,baz=94,slow=36
ASAR Alice Springs 35.92 260 P **P** **17 41 07.1 +0.8**
0.3nm,0.5s,baz=80,slow=8.3,SNR=10
0.3nm,0.5s
WRA Warramunga Arr 36.07 267 P **P** **17 41 06.7 -1.0**
0.3nm,0.7s,baz=100,slow=8.3,SNR=7.3
0.3nm,0.7s
H11S2 WAKE ISLAND Hy 41.20 351 T T 18 25 43.0
baz=173,slow=76
H11S3 WAKE ISLAND Hy 41.21 351 T T 18 25 57.5
baz=173
H11S1 WAKE ISLAND Hy 41.22 351 T T 18 25 42.4
baz=173,slow=76
FITZ Fitzroy Crossi 44.50 267 P **P** **17 42 17.2 -0.3**
1.5nm,0.8s,baz=111,slow=8.6,SNR=2.1
1.5nm,0.8s
BATI Baumata 48.70 276 LR LR 18 04 48.4
comp=Z,87nm,18.1s,baz=118,slow=38
JHJ Hachijo jima 2 63.75 329 LR LR 18 08 20.7
comp=Z,12nm,22.0s,baz=42,slow=32
PETK Petropavlovsk- 76.46 351 P **P** **17 45 55.4 +0.5**
0.9nm,0.6s,baz=145,slow=5.3,SNR=4.9
0.9nm,0.6s
YBH Yreka Blue Hor 87.25 42 LR LR 18 19 22.5
comp=Z,23nm,18.4s,baz=9.5,slow=31

IDC 14 17:39:54.5±7.3, 4°68'S×144°76'E, h0km, mb3.2/2, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=244.9km s-min=35.6km az=99.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.25**	**213**	P	Pn	17 44 08.7	-0.7
	0.1nm,0.3s,baz=37,slow=11,SNR=6.2						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**21.58**	**208**	P	P	17 44 46.0	-0.1
	0.6nm,1.1s,baz=32,slow=12,SNR=6.4						
	0.6nm,1.1s						
MKAR	**Makanchi Array**	**75.07**	**321**	P	P	17 51 38.7	+0.3
	0.2nm,0.4s,baz=104,slow=6.4,SNR=1.9						
	0.2nm,0.4s						

*IDC **14** 18:22:23.1±1.0, 37°19'N×71°72'E, h0km, mb3.7/12, mbtmp3.7/18, ML3.3/5, MS3.3/2, Error ellipse: s-maj=19.5km s-min=16.8km az=159.0*
*NNC **14** 18:22:36.0±2.2, 37°93'N×72°07'E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=19.5km s-min=13.1km az=38.0*
ISC 14 18:22:25.1±0.6, 37°22'N±0'04×71°57'E±0'07, h10km, n26, σ2s06/32, mb3.6/12, 1C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.40**	**175**	P	**Pb**	**18 23 25.9**	**+0.4**
CEP				S	**Sg**	**18 24 12.0**	**-2.2**
CHCP	**Chirah Chowk**	**3.81**	**158**	P	**Pb**	**18 23 30.2**	**-2.3**
THW	**Thamme Wali**	**4.41**	**178**	P	**Pn**	**18 23 35.7**	**+3.5**
AAK	**Ala-Archa**	**5.87**	**22**	Pn	**Pn**	**18 23 53.8**	**+1.6**
	1.2nm,0.3s,baz=201,slow=6.2,SNR=4.5						
AAK				Sn	**Sn**	**18 24 59.6**	**0.0**
	0.5nm,0.3s,baz=167,slow=19,SNR=2.0						
	3.3nm,0.4s						
KK31	**Karatay Array**	**5.94**	**353**	Pn	**Pn**	**18 23 55.3**	**+2.2**
	2.1nm,0.3s,baz=183,slow=14,SNR=88						
KK31				⇓Pg	**Pb**	**18 24 13.2**	**+4.5**
	5.2nm,0.5s,baz=165,slow=12,SNR=3.5						
KK31				⇑Sn	**Sn**	**18 24 59.8**	**-1.4**
	5.7nm,0.5s,baz=176,slow=20,SNR=3.5						
KK31				⇓Lg	Lg	18 25 24.6	
	10nm,0.7s,baz=166,slow=29,SNR=4.1						
CHMS	**Chumysh**	**6.27**	**22**	⇓Pn	**Pn**	**18 23 59.9**	**+2.2**
	7.6nm,0.8s						
CHMS				⇓Lg	Lg	18 25 28.8	
	8.7nm,0.8s						
TKM2	**Tokmak 2**	**6.48**	**27**	⇓Pn	**Pn**	**18 24 01.2**	**+0.4**
	7.8nm,0.6s						
TKM2				⇓Lg	Lg	18 25 35.8	
	7.7nm,0.9s						
MDOK	**Medeo**	**7.27**	**34**	Pn	**Pn**	**18 24 13.3**	**+1.8**
	3.6nm,0.8s						
MDOK				Pg	**Pb**	**18 24 31.9**	**+0.4**
	8.8nm,1.0s						
MDOK				Lg	Lg	18 26 00.9	
	12nm,1.0s						
GEYT	**Alibeck**	**10.70**	**278**	Pn	**Pn**	**18 24 57.5**	**-0.9**
	0.6nm,0.3s,baz=79,slow=19,SNR=3.6						
GEYT				Sn	**Sn**	**18 26 57.1**	**-1.2**
	0.8nm,0.3s,baz=188,slow=20,SNR=3.6						
GEYT				LR	LR	18 29 58.7	
	comp=Z,57nm,19.4s,baz=36,slow=42						
	1.5nm,0.4s						
MKAR	**Makanchi Array**	**12.45**	**36**	Pn	**Pn**	**18 25 23.2**	**+0.9**
	0.1nm,0.3s,baz=224,slow=14,SNR=7.7						
	0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**14.30**	**18**	Pn	**Pn**	**18 25 43.4**	**-4.1**
	0.3nm,0.3s,baz=207,slow=9.9,SNR=1.7						
KURBB				Lg	Lg	18 29 57.4	
	baz=169,slow=31,SNR=1.6						
AKTO	**Aktyubinsk**	**16.40**	**328**	Pn	**Pn**	**18 26 14.4**	**-0.8**
	baz=83,slow=23,SNR=1.5						
AKTO				Sn	**Sn**	**18 29 11.3**	**-5.9**
	0.2nm,0.3s,baz=211,slow=23,SNR=2.6						
	1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**19.08**	**24**	P	**P**	**18 26 45.8**	**-1.8**
	0.6nm,0.3s,baz=215,slow=9.9,SNR=14						
	2.7nm,0.5s						
GNI	**Garni**	**21.12**	**286**	P	**P**	**18 27 10.6**	**+0.5**
	3.9nm,0.6s,baz=63,slow=18,SNR=1.9						
	3.9nm,0.6s						
KBZ	**Khabaz**	**22.69**	**296**	P	**P**	**18 27 28.0**	**+1.3**
	4.0nm,0.9s,baz=168,slow=7.2,SNR=3.3						
	4.0nm,0.9s						
BRTR	**Keskin Array B**	**29.66**	**287**	P	**P**	**18 28 30.9**	**-0.1**
	1.1nm,1.1s,baz=74,slow=7.8,SNR=2.2						
	1.1nm,1.1s						
FINES	**FINESS Array B**	**37.15**	**325**	P	**P**	**18 29 35.7**	**0.0**
	1.4nm,0.9s,baz=98,slow=10.0,SNR=1.5						
	1.4nm,0.9s						
IDI	**Anoyia**	**37.40**	**282**	LR	LR	18 49 10.7	
	comp=Z,105nm,18.1s,baz=238,slow=43						
ARCES	**ARCESS Array B**	**40.66**	**337**	P	**P**	**18 30 04.9**	**-0.2**
	0.9nm,0.7s,baz=108,slow=7.8,SNR=6.0						
	0.9nm,0.7s						
NOA	**NORSAR Array B**	**44.09**	**323**	P	**P**	**18 30 33.8**	**+0.7**
	0.5nm,0.8s,baz=95,slow=8.2,SNR=2.2						
	0.5nm,0.8s						
ESDC	**Sonseca Array**	**57.53**	**298**	P	**P**	**18 32 14.9**	**+0.2**
	0.3nm,0.7s,baz=59,slow=6.6,SNR=4.2						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**66.19**	**269**	P	**P**	**18 33 13.6**	**+0.3**
	0.5nm,0.7s,baz=49,slow=6.2,SNR=2.4						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**73.97**	**16**	P	**P**	**18 34 00.4**	**+0.1**
	0.5nm,0.8s,baz=312,slow=5.4,SNR=5.0						
	0.5nm,0.8s						
YKA	**Yellowknife Ar**	**80.51**	**3**	P	**P**	**18 34 37.0**	**0.0**
	0.5nm,0.7s,baz=350,slow=5.3,SNR=4.3						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**81.99**	**122**	P	**P**	**18 34 45.3**	**-0.1**
	0.7nm,1.1s,baz=319,slow=5.5,SNR=2.0						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**	**18 34 56.1**	**-1.3**
	0.5nm,1.0s,baz=311,slow=5.7,SNR=2.5						
	0.5nm,1.0s						

*NCEDC **14** 18:23:28.4±1.2, 37°48'N±0'02×118°78'W±0'03, h5km±4km, ML3.1/10, ML2.8/8(REN), ML2.6/58(NEIC), Error ellipse: s-maj=3.6km s-min=2.5km az=54.0*
*NEIC **14** 18:23:28.6±1.4, 37°48'N±0'02×118°75'W±0'03, h5km±4km, Error ellipse: s-maj=3.2km s-min=2.3km az=70.0*
*ANF **14** 18:23:28.2±0.2, 37°45'N×118°79'W, h4km±3km, ML2.7/13, Error ellipse: s-maj=3.0km s-min=1.7km az=68.0*
*REN **14** 18:23:28.4±0.9, 37°48'N±0'02×118°78'W±0'03, h6km±4km, Error ellipse: s-maj=3.7km s-min=2.9km az=213.0*
ISC 14 18:23:28.6±0.8, 37°48'N±0'02×118°77'W±0'02, h8km±7km, n171, σ0s94/178, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCCR	**Rock Creek Can**	**0.04**	**79**		**Pg**	**18 23 30.1**	**-0.5**
WMD		**0.11**	**110**		**Pg**	**18 23 31.1**	**0.0**
MCVM	**Convict Lake**	**0.12**	**338**		**Pg**	**18 23 31.1**	**-0.4**
SCHCA	**Scheelite**	**0.14**	**150**		**Pg**	**18 23 31.5**	**-0.1**
MLAC	**Mammoth, Mammo**	**0.16**	**342**		**Pg**	**18 23 32.1**	**0.0**
MLAC	**Mammoth, Mammo**	**0.16**	**342**	P	**Pg**	**18 23 32.0**	**0.0**
	baz=164,SNR=254						
MLAC				S	**Sg**	**18 23 34.6**	**+0.2**
	baz=164						
MDRNC	**Doe Ridge**	**0.17**	**343**		**Pg**	**18 23 32.1**	**0.0**
MLCM	**Laurel Creek C**	**0.17**	**320**		**Pg**	**18 23 32.1**	**-0.2**
MGPM	**Gravel Pit**	**0.18**	**325**		**Pg**	**18 23 32.2**	**-0.1**
ORC	**Owens River**	**0.18**	**31**		**Pg**	**18 23 32.4**	**0.0**
MCBM	**Casa Benchmark**	**0.19**	**329**		**Pg**	**18 23 32.5**	**-0.1**
MCBM					**Sg**	**18 23 35.5**	**+0.2**
MCSM	**Casa Diablo Ho**	**0.20**	**329**		**Pg**	**18 23 32.8**	**0.0**
MTUM	**Tungsten Hills**	**0.21**	**127**		**Pg**	**18 23 32.9**	**+0.1**
OMMB	**Old Mammoth Mi**	**0.23**	**307**		**Pg**	**18 23 32.8**	**-0.3**
OMMB					**Sg**	**18 23 35.8**	**-0.5**
OMMB	**Old Mammoth Mi**	**0.23**	**307**	IAML		18 23 36.0	
	comp=E,861nm,0.4s						
OMMB				IAML		18 23 36.1	
	comp=N,1μm,0.3s						
MEMM	**East Mammoth H**	**0.23**	**325**		**Pg**	**18 23 33.2**	**0.0**
MMPM	**Mammoth Pass**	**0.24**	**303**		**Pg**	**18 23 33.2**	**-0.3**
MMLB	**Mammoth Lakes**	**0.24**	**318**		**Pg**	**18 23 33.5**	**0.0**
MMLB					**Sg**	**18 23 37.0**	**+0.2**
MLIM	**Lincoln Peak**	**0.25**	**309**		**Pg**	**18 23 33.6**	**0.0**
MMSM	**Mammoth Summit**	**0.26**	**307**		**Pg**	**18 23 33.6**	**-0.2**
MRDM	**Red Cones**	**0.26**	**298**		**Pg**	**18 23 33.6**	**-0.2**
MDYM	**Dry Creek**	**0.26**	**313**		**Pg**	**18 23 33.9**	**0.0**
MDYM					**Sg**	**18 23 37.8**	**+0.4**
MCDM	**Chidago Canyon**	**0.27**	**75**		**Pg**	**18 23 34.3**	**+0.2**
MFBM	**Five Bridges**	**0.28**	**100**		**Pg**	**18 23 34.6**	**+0.5**
BENR	**Benton**	**0.28**	**34**		**Pg**	**18 23 34.1**	**-0.2**
MDPB	**Devils Postpil**	**0.29**	**302**		**Pg**	**18 23 34.1**	**-0.3**
MDPB					**Sg**	**18 23 38.0**	**-0.3**
MDPB	**Devils Postpil**	**0.29**	**302**	IAML		18 23 38.6	
	comp=N,1μm,0.4s						
MINS	**Minaret Summit**	**0.29**	**308**		**Pg**	**18 23 34.1**	**-0.3**
MINS					**Sg**	**18 23 38.3**	**0.0**
MRCM	**Red Rock Canyo**	**0.29**	**47**		**Pg**	**18 23 34.3**	**-0.1**
MDCM	**Deadman Creek**	**0.31**	**317**		**Pg**	**18 23 34.6**	**-0.3**
MGNR	**McGee Canyon**	**0.34**	**10**		**Pg**	**18 23 35.4**	**0.0**
MLNR	**Milner Canyon**	**0.36**	**71**		**Pg**	**18 23 35.8**	**+0.1**
BCKR	**Birch Creek**	**0.39**	**56**		**Pg**	**18 23 36.4**	**+0.2**
POCCA	**Poleta Canyon**	**0.41**	**106**		**Pg**	**18 23 36.7**	**+0.1**
KCC	**Kaiser Creek**	**0.46**	**251**		**Pg**	**18 23 37.2**	**-0.3**
ANTCA	**Antelope Range**	**0.47**	**21**		**Pg**	**18 23 37.5**	**-0.2**
BONR	**Boundary Peak**	**0.60**	**38**		**Pg**	**18 23 40.2**	**-0.1**
TIN	**Tinemaha, Big**	**0.61**	**134**		**Pg**	**18 23 40.4**	**+0.1**
TIN	**Tinemaha, Big**	**0.61**	**134**	P	**Pg**	**18 23 40.3**	**0.0**
	baz=314,SNR=7.8						
TIN				S	**Sg**	**18 23 48.7**	**+0.5**
	baz=314						
HCK	**Huntoon Valley**	**0.61**	**14**		**Pg**	**18 23 40.5**	**0.0**
DSP	**Deep Springs**	**0.65**	**99**		**Pg**	**18 23 40.9**	**-0.2**
DSP					**Sg**	**18 23 49.9**	**+0.3**
LUL	**Lundy Lake**	**0.66**	**331**		**Pg**	**18 23 41.2**	**-0.1**
LHV	**Little Huntoon**	**0.80**	**15**		**Pg**	**18 23 43.8**	**-0.2**
LHV				IAML		18 24 04.2	
	comp=E,332nm,0.7s						
LHV	**Little Huntoon**	**0.80**	**15**		**Sg**	**18 23 55.1**	**+0.7**
LCH	**Last Change Ra**	**0.93**	**105**		**Pg**	**18 23 46.0**	**-0.5**
LCH					**Sg**	**18 23 58.8**	**+0.1**
LCH	**Last Change Ra**	**0.93**	**105**	IAML		18 23 59.2	
	comp=E,308nm,0.2s						
NV08	**Mina Array Sit**	**0.99**	**21**		**Pg**	**18 23 47.1**	**-0.5**
NV09	**Mina Array Sit**	**1.02**	**20**		**Pg**	**18 23 47.6**	**-0.5**
NVAR	**Mina Array Bea**	**1.02**	**21**		**Pg**	**18 23 47.4**	**-0.8**
NV11	**Mina Array Sit**	**1.07**	**27**		**Pg**	**18 23 48.5**	**-0.6**
RYN	**Ryan**	**1.17**	**10**		**Pg**	**18 23 50.5**	**-0.5**
RYN	**Ryan**	**1.17**	**10**	IAML		18 24 06.5	
	comp=E,141nm,0.3s						
RYN				IAML		18 24 06.9	
	comp=N,98nm,0.2s						
CWC	**Cottonwood Cre**	**1.18**	**152**		**Pg**	**18 23 50.4**	**-0.7**
CWC	**Cottonwood Cre**	**1.18**	**152**	P	**Pg**	**18 23 50.4**	**-0.7**
	baz=332						
CWC				S	**Sg**	**18 24 05.7**	**-0.7**
	baz=332						
MRHM	**Rocky Hill**	**1.22**	**192**		**Pg**	**18 23 50.7**	**-1.2**
GMN	**Gold Mountain**	**1.22**	**98**		**Pg**	**18 23 51.6**	**-0.4**
GRAC	**Grapevine Rang**	**1.22**	**113**		**Pg**	**18 23 52.0**	**-0.1**
GRAC	**Grapevine Rang**	**1.22**	**113**	Pg	**Pg**	**18 23 51.7**	**-0.4**
GRAC	**Grapevine Rang**	**1.22**	**113**	IAML		18 24 14.7	
	comp=N,224nm,0.6s						
GRAC	**Grapevine Rang**	**1.22**	**113**	P	**Pb**	**18 23 51.8**	**-0.2**
	baz=294,SNR=57						
VOG	**Valley Oaks Go**	**1.25**	**203**		**Pg**	**18 23 51.2**	**-1.4**
VOG	**Valley Oaks Go**	**1.25**	**203**	P	**Pg**	**18 23 51.9**	**-0.7**
	baz=22						
VOG				S	**Sg**	**18 24 08.5**	**-0.4**
	baz=22						
SPG2	**Springville 2**	**1.28**	**180**		**Pg**	**18 23 52.4**	**-0.6**
MYLM	**Yosemite Lake**	**1.31**	**266**		**Pn**	**18 23 52.8**	**-0.5**
TPH	**Tonopah**	**1.37**	**64**		**Pn**	**18 23 54.1**	**-0.1**
WLHM	**Little Horse**	**1.37**	**164**		**Pn**	**18 23 53.9**	**-0.5**
CMB	**Columbia Colle**	**1.39**	**294**		**Pn**	**18 23 53.6**	**-0.8**
CMB	**Columbia Colle**	**1.39**	**294**		**Pn**	**18 23 53.3**	**-1.2**
CMB	**Columbia Colle**	**1.39**	**294**	IAML		18 24 13.6	
	comp=E,200nm,0.2s						
MCA	**Marble Canyon**	**1.46**	**124**		**Pn**	**18 23 55.3**	**+0.1**
SGV	**South Grapevin**	**1.48**	**109**		**Pb**	**18 23 56.1**	**-0.3**
MCUB	**Copperopolis B**	**1.55**	**289**		**Pn**	**18 23 56.1**	**-0.4**
YERR	**Yerington**	**1.55**	**346**		**Pn**	**18 23 57.0**	**+0.3**
PWMM	**Westland Maint**	**1.55**	**228**		**Pb**	**18 23 57.5**	**-0.1**
VES	**Vestal, Richgr**	**1.65**	**189**		**Pn**	**18 23 58.8**	**+0.8**
VES	**Vestal, Richgr**	**1.65**	**189**	Pb	**Pn**	**18 23 58.8**	**+0.8**
	baz=8.3,SNR=20						
VES				S	**Sb**	**18 24 20.3**	**0.0**
	baz=8.3						
KVN	**Kaiserville**	**1.66**	**18**		**Pn**	**18 23 58.4**	**+0.2**
KVN	**Kaiserville**	**1.66**	**18**	IAML		18 24 22.5	
	comp=E,46nm,0.6s						
KVN				IAML		18 24 24.3	
	comp=N,64nm,0.6s						
PDRM	**Domengine Ranc**	**1.71**	**229**		**Pb**	**18 23 60.0**	**-0.4**
PNTP	**Pine Nut**	**1.73**	**338**		**Pn**	**18 23 59.9**	**+0.6**
WASM	**Alta Sierra Ca**	**1.75**	**174**		**Pb**	**18 24 00.6**	**-0.4**
MPMC	**Manual Prospec**	**1.75**	**144**	P	**Pn**	**18 23 59.8**	**+0.3**
	baz=324,SNR=26						
MPMC				S	**Sb**	**18 24 22.9**	**-0.5**
	baz=324						
PARM	**Anticline Ridg**	**1.76**	**226**		**Pb**	**18 24 00.7**	**-0.4**
BRMM	**Rolling Bench**	**1.76**	**249**		**Pb**	**18 24 00.8**	**-0.3**
PKEM	**Kettleman Hill**	**1.77**	**218**		**Pb**	**18 24 01.2**	**-0.2**
WNMM	**Nine Mile Cany**	**1.78**	**157**		**Pb**	**18 24 01.2**	**-0.1**
BMSM	**Mercy Hot Spri**	**1.81**	**244**		**Pn**	**18 24 01.5**	**+1.3**
ISA	**Isabella, Lake**	**1.83**	**172**		**Pb**	**18 24 01.9**	**-0.4**
ISA	**Isabella, Lake**	**1.83**	**172**	Pn	**Pb**	**18 24 01.7**	**-0.7**
ISA	**Isabella, Lake**	**1.83**	**172**	IAML		18 24 27.2	
	comp=N,120nm,0.2s						
ISA				IAML		18 24 30.4	
	comp=E,93nm,0.2s						
ISA	**Isabella, Lake**	**1.83**	**172**	Pb	**Pb**	**18 24 02.1**	**-0.2**
	baz=352						
ISA				Sb	**Sg**	**18 24 26.4**	**-0.9**
	baz=352						
FURC	**Furnace Creek,**	**1.83**	**123**	Pg	**Pg**	**18 24 03.2**	**-0.5**
	baz=304						
Q09A	**Carvers**	**1.85**	**42**	Pn	**Pn**	**18 24 01.6**	**+0.8**
WCT	**Wildcat Mounta**	**1.85**	**111**		**Pn**	**18 24 01.2**	**+0.5**
SCKWR	**San Luis Creek**	**1.85**	**262**		**Pb**	**18 24 02.5**	**-0.2**
PJUM	**Juniper Ridge**	**1.92**	**230**		**Pn**	**18 24 02.9**	**+1.2**
BAVM	**Antelope Valle**	**1.99**	**246**		**Pn**	**18 24 04.1**	**+1.5**
CTM	**Castle Mountai**	**1.99**	**220**		**Pb**	**18 24 04.3**	**-0.8**
SLD	**San Luis Dam**	**1.99**	**259**		**Pn**	**18 24 04.1**	**+1.4**
PSRM	**Scobie Ranch**	**2.02**	**217**		**Pn**	**18 24 04.2**	**+1.1**
BBGB	**Big Mountain B**	**2.02**	**244**		**Pn**	**18 24 04.7**	**+1.5**
CMPM	**Mikes Peak**	**2.03**	**267**		**Pn**	**18 24 04.4**	**+1.3**
PSMM	**Smith Mountain**	**2.03**	**227**		**Pn**	**18 24 04.3**	**+1.1**
HPCM	**Pacheco Lake**	**2.04**	**259**		**Pn**	**18 24 04.4**	**+1.1**
PMPB	**Monarch Peak**	**2.06**	**233**		**Pn**	**18 24 04.8**	**+1.3**
COSM	**Mount Oso**	**2.07**	**272**		**Pn**	**18 24 05.0**	**+1.2**
PPTM	**Peach Tree Val**	**2.08**	**229**		**Pn**	**18 24 04.8**	**+1.0**
BBNM	**San Benito**	**2.08**	**243**		**Pb**	**18 24 05.7**	**-0.9**
LRV	**Little Rabbit**	**2.08**	**240**		**Pb**	**18 24 06.1**	**-0.6**
TPNV	**Topopah Spring**	**2.08**	**104**		**Pn**	**18 24 04.2**	**+0.2**
TPNV	**Topopah Spring**	**2.08**	**104**	IAML		18 24 41.4	
	comp=E,37nm,0.6s						
TPNV				IAML		18 24 43.4	
	comp=E,39nm,1.5s						
TPNV	**Topopah Spring**	**2.08**	**104**	P	**Pn**	**18 24 04.2**	**+0.2**
	baz=286,SNR=37						
TPNV				Sg	**Sg**	**18 24 36.8**	**+1.3**
	baz=286						
PKD	**Bear Valley Ra**	**2.09**	**223**		**Pn**	**18 24 04.8**	**+0.9**
PHPM	**Hope Ranch**	**2.10**	**225**		**Pn**	**18 24 05.2**	**+1.1**
PAGB	**Antelope Grade**	**2.11**	**215**		**Pn**	**18 24 05.0**	**+0.8**
PKLM	**Kerr Lake**	**2.12**	**217**		**Pn**	**18 24 05.4**	**+1.1**
HJSM	**John Smith Roa**	**2.12**	**253**		**Pn**	**18 24 06.1**	**+1.7**
GWY	**Greenwater Val**	**2.12**	**127**	Pn	**Pn**	**18 24 04.1**	**-0.5**
QSM	**Queen of Sheba**	**2.15**	**134**		**Pg**	**18 24 08.8**	**-1.0**
HFEM	**San Felipe**	**2.15**	**258**		**Pn**	**18 24 06.8**	**+1.9**
PTRM	**Twissleman Ran**	**2.16**	**213**		**Pn**	**18 24 06.2**	**+1.3**
TRAM	**Private Proper**	**2.17**	**214**		**Pn**	**18 24 06.2**	**+1.1**
GHS	**Gilroy Hot Spr**	**2.17**	**261**		**Pn**	**18 24 06.7**	**+1.6**
PWKM	**Work Ranch**	**2.17**	**221**		**Pn**	**18 24 06.2**	**+1.1**
BSLM	**Silva Ranch**	**2.17**	**252**		**Pb**	**18 24 07.1**	**-1.1**
PPO	**Portuguese Can**	**2.19**	**223**		**Pn**	**18 24 06.5**	**+1.2**
ARN	**Arnold Ranch**	**2.20**	**267**		**Pn**	**18 24 07.2**	**+1.7**
BJOM	**Mount Johnson**	**2.20**	**248**		**Pn**	**18 24 07.3**	**+1.8**
TCHL	**Shandon**	**2.21**	**217**		**Pn**	**18 24 07.1**	**+1.4**
PSAM	**San Ardo**	**2.23**	**230**		**Pn**	**18 24 07.4**	**+1.5**
AMDNV	**Amargosa**	**2.24**	**116**		**Pn**	**18 24 06.7**	**+0.6**
TEJ	**El Tejon**	**2.25**	**178**		**Pb**	**18 24 08.7**	**-0.7**
BSGM	**Shirttail Gulc**	**2.25**	**243**		**Pn**	**18 24 07.5**	**+1.3**
SAO	**San Andreas Ge**	**2.25**	**252**		**Pn**	**18 24 07.7**	**+1.5**
SCZ	**Santa Cruz**	**2.28**	**248**		**Pn**	**18 24 07.9**	**+1.3**
FRP	**Fremont Peak**	**2.29**	**252**		**Pn**	**18 24 07.8**	**+1.1**
MHC	**Mount Hamilton**	**2.29**	**267**		**Pn**	**18 24 08.4**	**+1.6**
CMLM	**Mount Lewis**	**2.29**	**271**		**Pn**	**18 24 08.7**	**+2.0**
BJCM	**Johnson Can.**	**2.29**	**247**		**Pn**	**18 24 08.2**	**+1.4**
TSCN	**Private Proper**	**2.31**	**214**		**Pn**	**18 24 08.6**	**+1.6**
CCOB	**Coe Ranch Numb**	**2.32**	**265**		**Pb**	**18 24 09.5**	**-1.2**
ANZ	**Anzar Road**	**2.33**	**256**		**Pn**	**18 24 08.8**	**+1.6**
CARC	**Carrizo Plain**	**2.33**	**202**		**Pn**	**18 24 08.7**	**+1.4**
BSRM	**Salinas Radio**	**2.34**	**251**		**Pn**	**18 24 09.0**	**+1.6**
ARVC	**Arvin**	**2.35**	**181**		**Pb**	**18 24 10.7**	**-0.4**
ARVC	**Arvin**	**2.35**	**181**	Pb	**Pb**	**18 24 10.8**	**-0.4**
	baz=0.9						
ARVC				Sb	**Sb**	**18 24 41.3**	**+1.0**
	baz=0.9						
CRGC	**Crocker Grade**	**2.36**	**199**		**Pn**	**18 24 09.7**	**+1.9**
PCCM	**Crazy Canyon**	**2.37**	**235**		**Pn**	**18 24 09.4**	**+1.6**
JLAB	**Laurel Hill**	**2.38**	**263**		**Pn**	**18 24 10.1**	**+2.1**
BSMM	**Soledad Missio**	**2.39**	**244**		**Pn**	**18 24 09.5**	**+1.3**
CALM	**Calaveras Res.**	**2.41**	**270**		**Pn**	**18 24 10.1**	**+1.8**
CVLM	**Vallecito**	**2.44**	**274**		**Pb**	**18 24 11.2**	**-1.5**
BPCNC	**Pine Canyon**	**2.46**	**249**		**Pn**	**18 24 10.8**	**+1.9**
HAST	**Hastings Reser**	**2.48**	**245**		**Pn**	**18 24 10.5**	**+1.2**
BCH	**Branch Mountai**	**2.52**	**205**		**Pn**	**18 24 11.3**	**+1.3**
BCWM	**Chews Ridge**	**2.53**	**243**		**Pn**	**18 24 11.3**	**+1.2**
BCW	**Bitter Crk WRg**	**2.59**	**192**		**Pb**	**18 24 13.5**	**-1.7**
BLDC	**Black Mountain**	**2.59**	**222**		**Pn**	**18 24 12.5**	**+1.6**
PTAM	**Tassajara Cree**	**2.60**	**217**		**Pn**	**18 24 12.4**	**+1.4**
PHCM	**Hearst Castle**	**2.62**	**228**		**Pn**	**18 24 12.8**	**+1.5**
R11A	**Troy Canyon, C**	**2.67**	**70**	Pb	**Pb**	**18 24 16.7**	**0.0**
	baz=252						
R11A				Sb	**Sg**	**18 24 52.3**	**-1.9**
	baz=252						
EDW2	**Edwards Air Fo**	**2.67**	**166**	Sb	**Sb**	**18 24 51.8**	**+2.2**
	baz=346						
PCBM	**Cambria**	**2.69**	**224**		**Pn**	**18 24 13.6**	**+1.4**
BEKR	**Beckworth**	**2.69**	**333**		**Pn**	**18 24 13.1**	**+0.8**
BEKR	**Beckworth**	**2.69**	**333**	IAML		18 25 04.8	
	comp=N,16nm,0.4s						
BEKR				IAML		18 25 07.8	
	comp=E,28nm,0.4s						
JFP	**Foothills Park**	**2.72**	**269**		**Pn**	**18 24 13.9**	**+1.3**
PRN	**Pahroc Range**	**2.96**	**90**		**Pn**	**18 24 17.0**	**+0.9**
PRN	**Pahroc Range**	**2.96**	**90**	IAML		18 25 07.7	
	comp=E,18nm,0.5s						
PRN				IAML		18 25 08.0	
	comp=N,25nm,0.7s						
SHPR	**Sheep Range**	**3.05**	**107**		**Pn**	**18 24 17.3**	**0.0**
BMN	**Battle Mountai**	**3.19**	**22**

BOSA LR LR 19 02 45.5
comp=Z,27nm,18.3s,baz=169,slow=35 7.3nm,1.2s
KMBO Kilima Mbogo 35.94 317 LR LR 19 04 14.4
comp=Z,81nm,18.4s,baz=92,slow=33
MAW Mawson 38.50 179 P **P** **18 52 00.7 -0.3**
1.8nm,0.9s,baz=294,slow=10,SNR=4.5
MAW LR LR 19 03 21.0
comp=Z,63nm,21.4s,baz=5.5,slow=29 1.8nm,0.9s
MBAR Mbarara 40.53 309 LR LR 19 06 49.5
comp=Z,54nm,21.4s,baz=134,slow=33
TSUM Tsumeb 40.68 274 LR LR 19 08 41.8
comp=Z,41nm,18.4s,baz=146,slow=36
H01W2 Cape Leeuwin H 44.93 112 T T 19 40 46.6
baz=261,slow=74,SNR=14
H01W3 Cape Leeuwin H 44.94 111 T T 19 40 39.4
baz=261,slow=74,SNR=9.2
H01W1 Cape Leeuwin H 44.95 112 T T 19 40 44.2
baz=261,slow=74,SNR=9.1
SNAA Sanae 54.44 200 P **P** **18 54 05.9 -0.2**
1.0nm,0.9s,baz=73,slow=11,SNR=2.9 1.0nm,0.9s
CMAR Chiang Mai Arr 59.82 42 P **P** **18 54 46.0 +1.2**
1.2nm,0.8s,baz=230,slow=6.9,SNR=8.1 1.2nm,0.8s
RAMN Ramite 60.92 26 *e*P **P** **18 54 53.4 +1.0**
DMN Daman 60.96 24 *e*P **P** **18 54 52.7 0.0**
QSPA South Pole Qui 61.01 180 P **P** **18 54 52.4 -0.1**
1.7nm,1.0s,baz=226,slow=3.1,SNR=5.2
QSPA LR LR 19 18 57.0
comp=Z,44nm,18.2s,baz=310,slow=34 1.7nm,1.0s
GKN Gorkha 61.15 24 *e*P **P** **18 54 54.3 +0.5**
32nm,0.9s
DANN Dangsing 61.16 23 *e*P **P** **18 54 54.6 +0.5**
JIRN Jiri 61.40 25 *e*P **P** **18 54 56.6 +0.8**
GUN Gumba 61.51 25 *e*P **P** **18 54 57.2 +0.7**
VNDA Vanda 64.06 166 P **P** **18 55 13.7 +1.1**
1.5nm,1.0s,baz=264,slow=8.2,SNR=7.7
VNDA LR LR 19 21 28.0
comp=Z,69nm,18.3s,baz=336,slow=34 1.5nm,1.0s
ASAR Alice Springs 64.53 104 P **P** **18 55 15.9 -0.7**
1.4nm,0.8s,baz=244,slow=6.0,SNR=15 1.4nm,0.8s
WRA Warramunga Arr 66.36 100 P **P** **18 55 27.3 -1.1**
1.8nm,0.9s,baz=247,slow=5.8,SNR=10 1.8nm,0.9s
TORD Torodi Ar. Bea 71.05 298 P **P** **18 55 58.1 +0.5**
3.1nm,0.8s,baz=114,slow=5.4,SNR=16 3.1nm,0.8s
DBIC Dimbokro 72.62 288 P **P** **18 56 07.6 +0.5**
7.1nm,1.1s,baz=136,slow=3.8,SNR=3.5 7.1nm,1.1s
BRTR Keskin Array B 73.12 338 P **P** **18 56 09.7 +0.1**
1.4nm,0.8s,baz=166,slow=9.8,SNR=7.3 1.4nm,0.8s
MKAR Makanchi Array 77.99 15 P **P** **18 56 36.9 -0.4**
2.0nm,0.9s,baz=179,slow=4.9,SNR=13 2.0nm,0.9s
AKTO Aktyubinsk 79.28 358 P **P** **18 56 43.9 -0.4**
1.8nm,0.8s,baz=270,slow=5.1,SNR=4.5 1.8nm,0.8s
KURBB Kurchatov Arra 80.92 11 P **P** **18 56 52.8 -0.3**
1.5nm,0.9s,baz=204,slow=6.4,SNR=7.7 1.5nm,0.9s
AKASG Malin Array Be 84.34 340 P **P** **18 57 10.5 -0.4**
1.0nm,0.6s,baz=140,slow=4.2,SNR=5.5 1.0nm,0.6s
ARU Arti 85.27 359 P **P** **18 57 14.7 -0.7**
2.0nm,0.6s,baz=238,slow=0.8,SNR=5.5 2.0nm,0.6s
ESDC Sonseca Array 91.32 316 P **P** **18 57 46.1 +1.2**
1.3nm,0.9s,baz=116,slow=3.7,SNR=7.9 1.3nm,0.9s
YKA Yellowknife Ar 146.53 356 PKPbc **PKPbc** **19 04 18.8 -1.1**
1.8nm,0.6s,baz=350,slow=3.6,SNR=13
TKL Tuckaleechee C 149.72 292 PKPbc **PKPbc** **19 04 27.9 -1.3**
1.5nm,0.7s,baz=163,slow=5.8,SNR=2.1
PDAR Pinedale Array 164.45 333 PKP **PKPdf** **19 04 43.0 -0.2**
0.3nm,0.3s,baz=122,slow=1.9,SNR=4.6
TXAR Lajitas Array 166.66 275 PKP **PKPdf** **19 04 45.3 +0.1**
0.5nm,0.8s,baz=128,slow=2.1,SNR=4.6
NVAR Mina Array Bea 170.73 357 PKP **PKPdf** **19 04 46.6 -1.2**
0.3nm,0.6s,baz=56,slow=1.6,SNR=2.6

*IDC **14** 18:45:53.6±1.3,36˚.30N×69˚.10E,h0km,mb3.6/8, mbtmp3.7/13,ML3.3/5,MS2.4/1,Error ellipse: s-maj=23.1km s-min=15.8km az=146.0*
*NNC **14** 18:46:00.8±1.0,36˚.74N×69˚.24E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=9.5km s-min=7.5km az=111.0*
ISC 14 18:45:56.9±1.2,36˚.5N±0˚.1×68˚.89E±0˚.08,h10km,n23, σ1§46/27,mb3.7/7,6C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.67**	**10**	Pn		**Pn**	**18 47 36.4**	**+1.3**
	1.3nm,0.5s,baz=203,slow=15,SNR=24							
KK31				⇑Sn		**Sn**	**18 48 52.1**	**+1.0**
	3.0nm,0.4s							
KK31				⇑Lg		Lg	18 49 26.4	
	14nm,0.6s,baz=189,slow=28,SNR=9.4							
AML	**Almayashu**	**6.71**	**32**	P		**Pn**	**18 47 37.3**	**+1.4**
	SNR=24							
UCH	**Uchtor**	**7.16**	**36**	P		Pg	18 48 24.0	+10
	SNR=6.8							
AAK	**Ala-Archa**	**7.47**	**34**	Pn		**Pn**	**18 47 47.3**	**+1.3**
	2.5nm,0.3s,baz=218,slow=8.4,SNR=22							
AAK				Sn		**Sn**	**18 49 11.7**	**+0.8**
	1.1nm,0.3s,baz=146,slow=23,SNR=8.3							
AAK				Lg		Lg	18 49 54.3	
	0.2nm,0.3s,baz=162,slow=20,SNR=4.6							
AAK				LR		LR	18 50 41.4	
	comp=Z,25nm,20.3s,baz=252,slow=38 12nm,0.5s							
AAK	**Ala-Archa**	**7.47**	**34**	P		**Pn**	**18 47 48.0**	**+1.9**
	SNR=10							
KBK	**Karagaybulak**	**7.69**	**36**	P		**Pn**	**18 47 52.3**	**+3.1**
	SNR=9.0							
CHMS	**Chumysh**	**7.87**	**33**	P		**Pn**	**18 47 52.9**	**+1.4**
	SNR=12							
CHMS	**Chumysh**	**7.87**	**33**	⇓Pn		**Pn**	**18 47 52.4**	**+1.0**
	20nm,0.8s							
CHMS				⇑Sn		**Sn**	**18 49 19.6**	**-1.0**
	15nm,1.1s							
CHMS				⇑Lg		Lg	18 49 59.5	
	7.8nm,1.1s							
TKM2	**Tokmak 2**	**8.20**	**37**	P		**Pn**	**18 47 56.8**	**+0.6**
	SNR=5.5							
TKM2	**Tokmak 2**	**8.20**	**37**	⇑Pn		**Pn**	**18 47 57.1**	**+0.9**
	2.6nm,0.6s							
TKM2				⇓Sn		**Sn**	**18 49 27.9**	**-1.2**
	11nm,0.8s							
TKM2				⇑Lg		Lg	18 50 11.7	
	3.9nm,0.7s							
GEYT	**Alibeck**	**8.70**	**282**	Pn		**Pn**	**18 48 03.2**	**+0.4**
	0.4nm,0.3s,baz=126,slow=12,SNR=1.7							
GEYT				Sn		**Sn**	**18 49 40.4**	**-0.7**
	0.7nm,0.3s,baz=36,slow=32,SNR=2.3							
GEYT				Lg		Lg	18 50 42.7	
	baz=105,slow=22 1.2nm,0.5s							
MKAR	**Makanchi Array**	**14.31**	**40**	Pn		**Pn**	**18 49 19.1**	**-0.5**
	0.1nm,0.3s,baz=239,slow=14,SNR=7.4 1.5nm,0.8s							
KURBB	**Kurchatov Arra**	**15.69**	**23**	Pn		**Pn**	**18 49 34.7**	**-3.3**
	baz=213,slow=9.1,SNR=2.8							
KURBB				Lg		Lg	18 54 13.6	
	baz=154,slow=36,SNR=2.2 0.3nm,0.6s							
AKTO	**Aktyubinsk**	**15.95**	**334**	Pn		**Pn**	**18 49 41.2**	**0.0**
	0.2nm,0.3s,baz=139,slow=15,SNR=2.2							
AKTO				Sn		**Sn**	**18 52 35.8**	**-2.2**
	0.1nm,0.3s,baz=210,slow=21,SNR=1.5							
AKTO				Lg		Lg	18 54 21.1	
	0.1nm,0.3s,baz=246,slow=20,SNR=1.2 0.6nm,0.3s							
ZALV	**Zalesovo Beam**	**20.62**	**27**	P		**P**	**18 50 34.6**	**-1.6**
	0.7nm,0.4s,baz=224,slow=7.8,SNR=3.5 0.7nm,0.4s							
ARU	**Arti**	**21.08**	**344**	P		**P**	**18 50 42.9**	**+1.8**
	1.9nm,0.5s,baz=140,slow=4.4,SNR=3.7 1.9nm,0.5s							
KVAR	**Kislovodsk Arr**	**21.26**	**298**	P		**P**	**18 50 42.7**	**-0.6**
	1.6nm,0.3s,baz=117,slow=2.3,SNR=2.1 1.6nm,0.3s							
SONM	**Songino Array**	**29.72**	**56**	P		**P**	**18 52 02.4**	**-0.8**
	0.3nm,0.5s,baz=290,slow=5.1,SNR=3.2 0.3nm,0.5s							
NB2	**NORSAR Subarra**	**43.32**	**323**	P		**P**	**18 53 59.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=97,slow=8.6							
NOA	**NORSAR Array B**	**43.32**	**323**	P		**P**	**18 53 59.6**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=97,slow=8.1,SNR=4.3 comp=Z,0.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**64.02**	**267**	P		**P**	**18 56 30.9**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=64,slow=4.9,SNR=1.9 comp=Z,0.8nm,1.0s							
YKA	**Yellowknife Ar**	**81.27**	**2**	P		**P**	**18 58 12.8**	**0.0**
	comp=Z,0.5nm,0.8s,baz=348,slow=5.8,SNR=2.9 comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**85.69**	**124**	P		P	18 58 32.5	-3.7
	comp=Z,0.5nm,0.9s,baz=303,slow=4.3,SNR=2.1 comp=Z,0.5nm,0.9s							

*BJI **14** 18:49:14.9±0.0,37˚.44N×141˚.49E,h62km,mb4.6/59, mB4.7/30,Ms3.8/21,Ms7.3/7.23*
*MOS **14** 18:49:14.1±0.9,37˚.53N×141˚.49E,h43km,mb4.9/21,Error ellipse: s-maj=7.4km s-min=4.8km az=98.5*
*NIED **14** 18:49:16.8,37˚.52N×141˚.44E,h49km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.26; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-2.63; $M_{r\theta}$2.41; $M_{\theta\phi}$-1.17; $M_{\phi r}$4.35; Fault plane solution: $M_0$5.92000×10^{15} NP1: ϕ_s201.00000°,δ17.00000°,λ83.00000°. NP2:ϕ_s28.00000°, δ74.00000°,λ92.00000°.*
*JMA **14** 18:49:16.8±0.1,37˚.5N±0˚.3×141˚.4E±0˚.6,h49km±1km, MD4.4/40,MV4.6/40,E OFF FUKUSHIMA PREF*
JMA Felt III J1 at E OFF FUKUSHIMA PREF .
*NEIC **14** 18:49:16±2.3,37˚.49N±0˚.05×141˚.52E±0˚.09,h42km±7km, mb4.7/55,Error ellipse: s-maj=10.5km s-min=7.8km az=103.0*
*IDC **14** 18:49:17.4±0.4,37˚.50N×141˚.32E,h55km±3km,mb4.3/40, mbtmp4.5/47,MS3.5/30,Error ellipse: s-maj=10.3km s-min=8.9km az=106.0*
ISC 14 18:49:16.4±0.3,37˚.47N±0˚.03×141˚.54E±0˚.04,h52km±2km, h52km:pP-P,n462,σ1§59/459,mb4.7/102,MS3.7/36, 12C-25D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.54**	**259**	⇓P		**Pn**	**18 49 27.7**	**-0.6**
JFK				⇓S		**Sn**	**18 49 35.1**	**-1.7**
JFK	**Kawauchi**	**0.54**	**259**	A		A	18 49 27.7	
	comp=E,67nm,0.9s,comp=E,39nm,1.6s							
JMST	**Minamisoumatoc**	**0.58**	**296**	⇓P		**Pn**	**18 49 27.8**	**-0.9**
JMST				⇓S		**Sn**	**18 49 35.4**	**-2.2**
JMST	**Minamisoumatoc**	**0.58**	**296**	A		A	18 49 27.8	
	comp=E,41nm,0.6s,comp=E,26nm,0.2s							
ONAJ	**Iwakimizuishiy**	**0.70**	**238**	⇓P		**Pn**	**18 49 29.9**	**-0.4**
ONAJ				⇓S		**Sn**	**18 49 38.9**	**-1.4**
ONAJ	**Iwakimizuishiy**	**0.70**	**238**	A		A	18 49 29.9	
	comp=E,59nm,0.2s,comp=E,49nm,0.3s							
JMM	**Marumori**	**0.71**	**304**			**Pn**	**18 49 29.4**	**-1.0**
JMM	**Marumori**	**0.71**	**304**	⇓P		**Pn**	**18 49 29.6**	**-0.8**
JMM				⇓S		**Sn**	**18 49 38.5**	**-2.0**
JMM	**Marumori**	**0.71**	**304**	A		A	18 49 29.6	
	comp=E,61nm,0.4s,comp=E,48nm,0.3s							
JIKH	**Ishinomakikobu**	**0.84**	**356**	⇓P		**Pn**	**18 49 31.8**	**-0.3**
JIKH				⇓S		**Sn**	**18 49 42.2**	**-1.4**
JIKH	**Ishinomakikobu**	**0.84**	**356**	A		A	18 49 31.8	
	comp=E,74nm,0.5s,comp=E,20nm,0.4s							
JFFD	**Fukushimafurud**	**0.87**	**244**	A		A	18 49 32.2	
	comp=E,28nm,0.9s,comp=E,13nm,7.1s							
JFT	**Otama**	**0.96**	**273**	⇓*i*P		**Pn**	**18 49 33.5**	**-0.1**
JFT				⇓S		**Sn**	**18 49 45.6**	**-0.7**
JFT	**Otama**	**0.96**	**273**	A		A	18 49 33.5	
	comp=E,43nm,0.7s,comp=E,69nm,1.0s							
JIO	**Ouri**	**0.99**	**351**	⇓*i*P		**Pn**	**18 49 33.8**	**-0.3**
JIO				⇓S		**Sn**	**18 49 45.6**	**-1.5**
JIO	**Ouri**	**0.99**	**351**	A		A	18 49 33.8	
	comp=E,33nm,0.6s,comp=E,9.0nm,0.6s							
JOU	**Okura**	**1.13**	**322**	*i* P		**Pn**	**18 49 35.2**	**-0.8**
JOU	**Okura**	**1.13**	**322**	A		A	18 49 35.2	
	comp=E,26nm,1.7s,comp=E,28nm,1.0s							
JYAR	**Yonezawaarcadi**	**1.19**	**292**	A		A	18 49 36.1	
	comp=E,21nm,1.3s,comp=E,24nm,1.0s							
JOFO	**Osakifurukawao**	**1.23**	**336**	A		A	18 49 37.0	
	comp=E,43nm,1.6s,comp=E,44nm,2.3s							
JKMT	**Kesennumamotoy**	**1.34**	**358**	A		A	18 49 38.9	
	comp=E,7.0nm,2.6s,comp=E,6.0nm,2.0s							
JSB	**Shiboa**	**1.39**	**249**	A		A	18 49 39.4	
	comp=E,17nm,4.1s,comp=E,18nm,2.4s							
JYS	**Shirataka**	**1.39**	**303**	⇓*i*P		**Pn**	**18 49 38.9**	**-0.5**
JYS	**Shirataka**	**1.39**	**303**	A		A	18 49 38.9	
	comp=E,12nm,1.0s,comp=E,13nm,1.8s							
JFY	**Yanaizu**	**1.46**	**268**	⇓*i*P		**Pn**	**18 49 40.1**	**-0.3**
JFY	**Yanaizu**	**1.46**	**268**	A		A	18 49 40.1	
	comp=E,6.0nm,2.1s,comp=E,7.0nm,2.2s							
JMK	**Ichinoseki**	**1.50**	**350**	⇓*i*P		**Pn**	**18 49 40.8**	**-0.2**
JMK				⇓S		**Sn**	**18 49 58.7**	**-0.7**
JMK	**Ichinoseki**	**1.50**	**350**	A		A	18 49 40.8	
	comp=E,11nm,0.5s,comp=E,6.0nm,0.4s							
JYT	**Yasato**	**1.64**	**221**	Pn		**Pn**	**18 49 42.0**	**-0.9**
JYT	**Yasato**	**1.64**	**221**	A		A	18 49 43.7	
	comp=E,7.0nm,0.2s,comp=E,6.0nm,1.2s							
JIHU	**Itakohorinouch**	**1.71**	**209**	A		A	18 49 44.9	
	comp=E,18nm,5.8s,comp=E,21nm,1.7s							
JYK	**Kaneyama**	**1.72**	**328**	⇓*i*P		**Pn**	**18 49 43.8**	**-0.2**
JYK	**Kaneyama**	**1.72**	**328**	A		A	18 49 43.8	
	comp=E,6.0nm,2.1s,comp=E,5.0nm,1.2s							
JNS	**Sasagawa**	**1.80**	**282**	A		A	18 49 44.9	
	comp=E,4.0nm,4.3s,comp=E,3.0nm,1.0s							
JYA	**Atsumi**	**1.83**	**308**	A		A	18 49 45.3	
	comp=E,8.0nm,1.0s,comp=E,9.0nm,1.6s							
CHOJ	**Chosi**	**1.85**	**197**	A		A	18 49 47.1	
	comp=E,4.0nm,1.5s,comp=E,4.0nm,4.5s							
JYYZ	**Yamagatayuza**	**2.00**	**321**	A		A	18 49 47.7	
	comp=E,10.0nm,8.8s,comp=E,14nm,3.5s							
JOM	**Ohasama**	**2.01**	**355**	A		A	18 49 48.4	
	comp=E,10.0nm,0.4s,comp=E,7.0nm,0.4s							
JRG	**Rokugo**	**2.05**	**340**	A		A	18 49 48.8	
	comp=E,7.0nm,2.1s,comp=E,6.0nm,2.5s							
JIZZ	**Izumozaki**	**2.25**	**272**	A		A	18 49 51.4	
	comp=E,9.0nm,3.1s,comp=E,7.0nm,4.7s							
JSZI	**Iwateshizukuis**	**2.31**	**349**	A		A	18 49 52.6	
	comp=E,11nm,2.3s,comp=E,9.0nm,2.4s							
JYW	**Yuwa**	**2.32**	**334**	A		A	18 49 52.5	
	comp=E,15nm,1.7s,comp=E,13nm,2.1s							
JTH	**Tanohata**	**2.48**	**6**	A		A	18 49 55.3	
	comp=E,6.0nm,0.6s,comp=E,5.0nm,1.3s							
JKZ	**Kuzumaki**	**2.52**	**356**	A		A	18 49 55.7	
	comp=E,6.0nm,3.1s,comp=E,7.0nm,1.3s							
JSD	**Sado**	**2.66**	**283**	Pn		**Pn**	**18 49 55.8**	**-1.0**
JJN	**Nakama**	**2.72**	**263**	A		A	18 49 58.2	
	comp=E,3.0nm,4.1s,comp=E,3.0nm,3.0s							
JKEN	**Kujiedanarisaw**	**2.73**	**3**	A		A	18 49 58.9	
	comp=E,16nm,1.0s,comp=E,21nm,0.9s							
MJAR	**Matsushiro Arr**	**2.82**	**252**	P		**Pn**	**18 49 57.9**	**-1.1**
	33nm,0.7s,baz=40,slow=8.3,SNR=109							
MJAR				S		**Sn**	**18 50 35.6**	**+3.8**
	24nm,0.3s,baz=64,slow=17,SNR=4.7							
MJAR				LR		LR	18 51 21.1	
	comp=Z,1μm,19.6s,baz=36,slow=46							
MAJO	**Matsushiro**	**2.82**	**252**	Pn		**Pn**	**18 49 60.0**	**+0.9**
MAJO	**Matsushiro**	**2.82**	**252**	*d* P		**Pn**	**18 49 59.9**	**+0.9**
JANG	**Nango**	**2.90**	**360**	A		A	18 50 01.2	
	comp=E,4.0nm,0.8s,comp=E,5.0nm,1.3s							
JOD2	**Odawara 2**	**2.96**	**223**	A		A	18 50 02.3	
	comp=E,3.0nm,1.3s,comp=E,4.0nm,1.6s							
JNTW	**Noshirotokiwa**	**3.00**	**339**	A		A	18 50 02.2	
	comp=E,12nm,4.4s,comp=E,12nm,4.2s							
JHTM	**Izuhatsuma**	**3.24**	**220**	A		A	18 50 06.3	
	comp=E,7.0nm,1.2s,comp=E,6.0nm,1.2s							
JHHS	**Hirosakihyakuz**	**3.31**	**344**	A		A	18 50 06.6	
	comp=E,6.0nm,2.0s,comp=E,6.0nm,2.1s							
JTM	**Tenmabayashi**	**3.33**	**354**			**Pn**	**18 50 07.0**	**+1.0**
JTM	**Tenmabayashi**	**3.33**	**354**	A		A	18 50 07.2	
	comp=E,4.0nm,3.1s,comp=E,4.0nm,5.8s							
SHZ3	**Shizuoka 3**	**3.60**	**229**	A		A	18 50 11.3	
	comp=E,2.0nm,4.9s,comp=E,2.0nm,2.9s							
JNY	**Yasuok**	**3.64**	**236**	A		A	18 50 11.6	
	comp=E,3.0nm,4.0s,comp=E,4.0nm,1.2s							
JSI2	**Shiura 2**	**3.69**	**347**	A		A	18 50 12.1	
	comp=E,3.0nm,1.1s,comp=E,2.0nm,3.3s							
JAHD	**Aomorihigashid**	**3.79**	**358**	A		A	18 50 13.7	
	comp=E,11nm,1.5s,comp=E,12nm,1.4s							
JGF	**Kuroka**	**3.85**	**242**	Pn		**Pn**	**18 50 15.9**	**+2.7**
INU	**Inuyama**	**4.22**	**241**	Pn		**Pn**	**18 50 20.1**	**+1.9**
JHJ	**Hachijo jima 2**	**4.57**	**199**	P		**Pn**	**18 50 24.2**	**+1.2**
	53nm,0.3s,baz=332,slow=17,SNR=12							
JHJ				S		**Sn**	**18 51 13.7**	**-1.1**
	124nm,0.3s,baz=83,slow=22,SNR=2.5							
ERM	**Erimo**	**4.71**	**15**			**Pn**	**18 50 25.2**	**+0.4**
ERM	**Erimo**	**4.71**	**15**	*i* P		**Pn**	**18 50 24.9**	**+0.1**
JEW	**Eniwo**	**5.37**	**359**	Pn		**Pn**	**18 50 35.4**	**+1.5**
NMR	**Nemuro--Hokkai**	**6.70**	**27**	*e*P		**Pn**	**18 50 51.2**	**-1.0**
NMR				*e*S		**Sn**	**18 52 00.2**	**-6.9**
RUSJ	**Misakicho**	**7.20**	**22**	*e*P		**Pn**	**18 50 58.5**	**-0.5**
RUSJ				S		**Sn**	**18 52 13.3**	**-6.0**
JHS	**Saijyo**	**7.24**	**253**	Pn		**Pn**	**18 51 02.0**	**+2.4**
JMN	**Monobe**	**7.27**	**241**	Pn		**Pn**	**18 51 02.5**	**+2.4**
YUK	**Yuzh-Kuril'sk**	**7.33**	**25**	*e*P		**Pn**	**18 51 00.2**	**-0.6**
YUK				*e*S		**Sn**	**18 52 16.6**	**-5.9**
YUK				pmax	pmax			
	comp=E,111nm,0.3s							
YUK				pmax	pmax			
	comp=Z,179nm,0.3s							
SHO	**Shikotan**	**7.55**	**30**	*e*P		**Pn**	**18 51 02.7**	**-1.1**
SHO				*e*S		**Sn**	**18 52 21.1**	**-6.8**
TEY	**Ternei**	**8.42**	**335**	⇑*e*P		Pn	18 51 20.6	+4.9
TEY				pmax	pmax			
	comp=E,20nm,0.9s							
TEY				pmax	pmax			
	comp=N,40nm,0.8s							
TEY				pmax	pmax			
	comp=Z,40nm,0.8s							
KUR	**Kuril'sk**	**9.10**	**30**	P		**Pn**	**18 51 26.3**	**+1.4**
KUR				S		**Sn**	**18 53 00.4**	**-5.4**
KUR				pmax	pmax			
	comp=Z,62nm,1.1s							
KUR				smax	smax			
	comp=N,185μm,0.4s							
MSHR	**Mys Shultsa**	**9.46**	**306**	*de*P		**Pn**	**18 51 33.3**	**+3.4**
MSHR				pmax	pmax			
	comp=Z,37nm,1.3s							
YSS	**Yuzh-Sakhalins**	**9.52**	**5**	Pn		**Pn**	**18 51 30.9**	**+0.2**
YSS	**Yuzh-Sakhalins**	**9.52**	**5**	*e*P		**Pn**	**18 51 31.4**	**+0.7**
YSS				*e*S		**Sn**	**18 53 12.4**	**-3.8**
YSS				pmax	pmax			
	comp=Z,30nm,0.7s							
USA0B	**Ussuriysk Arra**	**9.87**	**316**	Pn		**Pn**	**18 51 34.0**	**-1.6**
USA0B	**Ussuriysk Arra**	**9.87**	**316**	P		**Pn**	**18 51 34.0**	**-1.6**
USRK	**Ussuriysk Ar.**	**9.87**	**316**	P		**Pn**	**18 51 33.9**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=119,slow=9.0,SNR=3.4							
USRK				LR		LR	18 55 04.7	
	comp=Z,277nm,20.0s,baz=198,slow=36							
JCJ	**Chichijima**	**10.36**	**177**	P		**Pn**	**18 51 42.9**	**+0.6**
	comp=Z,22nm,0.3s,baz=294,slow=20,SNR=1.5							
JCJ				S		**Sn**	**18 53 29.8**	**-7.2**
	comp=Z,108nm,0.9s,baz=64,slow=23,SNR=2.2							
SEHB	**SEOHWA**	**10.54**	**278**	Pn		**Pn**	**18 51 47.1**	**+2.3**
KSRS	**Korea Array**	**10.83**	**274**	P		**Pn**	**18 51 49.4**	**+0.8**
	comp=Z,13nm,0.8s,baz=92,slow=13,SNR=68							
KSRS				LR		LR	18 55 39.7	
	comp=Z,246nm,19.9s,baz=80,slow=36							
KSAR	**Wonju Array Be**	**10.86**	**274**	Pn		**Pn**	**18 51 50.8**	**+1.7**
KSAR	**Wonju Array Be**	**10.86**	**274**	P		**Pn**	**18 51 50.8**	**+1.7**
KS19	**Wonju Array Si**	**10.87**	**274**			**Pn**	**18 51 50.9**	**+1.7**
JSU	**Suzuyama**	**10.91**	**240**	Pn		**Pn**	**18 51 51.4**	**+1.5**
TJN	**Taejon**	**11.40**	**269**	*ce*P		**Pn**	**18 51 56.7**	**+0.2**
MDJ	**Mudanjiang**	**11.50**	**312**	P		**Pn**	**18 52 00.5**	**+2.7**
MDJ				sP			18 52 13.9	
MDJ				S		**Sn**	**18 54 01.5**	**-3.1**
MDJ				pmax	pmax			
	comp=Z,22nm,1.1s							
MDJ				pmax	pmax			
	comp=Z,90nm,3.8s							
MDJ				LR	LR			
	comp=Z,260nm,10.1s							
MDJ				LR	LR			
	comp=Z,270nm,11.7s							
MDJ				LR	LR			
	comp=Z,460nm,19.7s							
NAWB	**Namwon**	**11.57**	**264**	Pn		**Pn**	**18 51 57.7**	**-1.2**
KLR	**Kul'dur**	**13.73**	**332**	P		**Pn**	**18 52 27.6**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=143,slow=12,SNR=3.7							
KLR				LR	LR		18 57 43.1	
	comp=Z,198nm,18.3s,baz=145,slow=37							
KLR	**Kul'dur**	**13.73**	**332**	*i* P		**Pn**	**18 52 29.0**	**+0.8**
KLR				pmax	pmax			
	comp=Z,8.0nm,0.9s							
DL2	**Dalian**	**15.72**	**281**	P		**P**	**18 52 56.6**	**-1.0**
DL2				pmax	pmax			
	comp=Z,19nm,0.9s							
DL2				LR	LR			
	comp=Z,180nm,16.1s							
DL2				LR	LR			
	comp=Z,190nm,23.2s							
ZEA	**Zeya**	**19.03**	**333**	*e*P		**P**	**18 53 33.0**	**-1.0**
ZEA				pmax	pmax			
	comp=N,10.0nm,0.8s							
ZEA				pmax	pmax			
	comp=E,10.0nm,0.8s							
ZEA				pmax	pmax			
	comp=Z,20nm,0.7s							
PEA0B	**Petropavlovsk-**	**19.26**	**31**	P		**P**	**18 53 36.3**	**-0.1**
PEA0B	**Petropavlovsk-**	**19.26**	**31**	P		**P**	**18 53 36.3**	**-0.1**
PEA0B				pmax	pmax			
	comp=Z,16nm,1.2s							
PETK	**Petropavlovsk-**	**19.26**	**31**	P		**Pn**	**18 53 38.2**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=209,slow=12,SNR=7.7							
PETK				LR	LR		19 00 46.0	
	comp=Z,36nm,19.1s,baz=216,slow=36							
NJ2	**Nanjing**	**19.39**	**261**	*e*P		**Pn**	**18 53 39.3**	**-0.2**
NJ2				pmax	pmax			
	comp=Z,10.0nm

YAK *e* 18 55 19.6
YAK *e* 18 58 10.0
YAK *eS* **S** **18 59 05.5 -0.1**
YAK *e**SS **sS** **18 59 27.7 -0.1**
YAK *eSS* **SnSn** **19 00 04.6 +0.6**
YAK *e* 19 05 33.0
YAK pmax pmax
comp=Z,63nm,0.8s
YAK pmax pmax
comp=N,11nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.8s
YAK pmax pmax
comp=Z,17nm,1.6s
YAK pmax pmax
comp=N,15nm,1.6s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK smax smax
comp=N,14nm,1.4s
YAK smax smax
comp=E,14nm,1.4s
SEY Seymchan 26.34 11 P **P** **18 54 48.6 +1.4**
comp=E,8.8nm,0.8s,baz=203,slow=8.0,SNR=23
comp=E,8.8nm,0.8s
SEY Seymchan 26.34 11 *i* P **P** **18 54 46.8 -0.4**
SEY pmax pmax
comp=Z,14nm,1.0s
XAN Xi'an 26.62 273 P **P** **18 54 50.8 +0.7**
XAN pmax pmax
comp=Z,12nm,0.7s
XAN pmax pmax
comp=Z,130nm,4.6s
ULN Ulaanbaatar 27.20 303 P **P** **18 54 54.1 -1.2**
ULN Ulaanbaatar 27.20 303 *ce*P **P** **18 54 55.1 -0.1**
ULN pmax pmax
comp=Z,5.0nm,0.6s
BOD Bodaibo 27.22 327 *e*P **P** **18 54 53.7 -1.4**
BOD pmax pmax
comp=Z,13nm,0.8s
ENH Enshi 27.47 264 P **P** **18 54 56.5 -1.2**
SONM Songino Array 27.63 303 P **P** **18 54 58.5 -0.6**
comp=Z,8.3nm,0.7s,baz=100,slow=8.5,SNR=39
SONM PcP **PcP** **18 58 15.0 -0.3**
comp=Z,0.6nm,0.5s,baz=123,slow=3.5,SNR=2.7
comp=Z,8.3nm,0.7s
SONM Songino Array 27.63 303 P **P** **18 54 58.6 -0.5**
SONM IAmb IAmb 18 55 00.6
comp=Z,13nm,1.0s
SONM Songino Array 27.63 303 P **P** **18 54 58.6 -0.5**
SONM pmax pmax
comp=Z,13nm,1.0s
H11N2 WAKE ISLAND Hy 28.29 122 T T 19 25 20.8
baz=315,slow=75,SNR=941
H11N1 WAKE ISLAND Hy 28.30 122 T T 19 25 20.4
baz=315,slow=75,SNR=1273
H11N3 WAKE ISLAND Hy 28.30 122 T T 19 25 22.2
baz=315,slow=75,SNR=135
H11S1 WAKE ISLAND Hy 29.01 124 T T 19 26 14.2
baz=317,slow=76,SNR=699
H11S3 WAKE ISLAND Hy 29.02 124 T T 19 26 17.5
baz=317,slow=76,SNR=1027
H11S2 WAKE ISLAND Hy 29.03 124 T T 19 26 21.5
baz=317,slow=76,SNR=590
ZAK Zakamensk 30.08 308 *e*P **P** **18 55 20.3 -0.5**
ZAK pmax pmax
comp=Z,3.0nm,0.9s
LZH Lanzhou 30.10 279 *e*P **P** **18 55 17.3 -3.9**
LZH pmax pmax
comp=Z,20nm,1.5s
LZH pmax pmax
comp=Z,100nm,4.8s
LZH LR LR
comp=Z,150nm,9.3s
LZH LR LR
comp=Z,170nm,10.7s
LZH LR LR
comp=Z,160nm,11.0s
GYA Guiyang 31.40 260 ⇓P **P** **18 55 32.0 -0.6**
GYA pmax pmax
comp=Z,40nm,0.9s
GTA Gaotai 32.53 287 ⇑P **P** **18 55 41.8 -0.7**
GTA pP pP 18 55 53.8 -2.0
GTA sP sP 18 55 59.6 -2.3
GTA PcP **PcP** **18 58 28.3 +0.1**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,74nm,4.7s
GTA LR LR
comp=Z,48nm,14.2s
GTA LR LR
comp=Z,95nm,15.3s
GTA LR LR
comp=Z,95nm,16.4s
DAV Davao City (W) 33.56 210 LR LR 19 07 49.7
comp=Z,55nm,21.0s,baz=115,slow=33
BILL Bilibino 33.58 17 *de*P **P** **18 55 51.4 +0.2**
BILL *e* 18 57 03.9
BILL pmax pmax
comp=Z,3.0nm,0.3s
BILL MLR MLR
comp=Z,104nm,18.0s
KMI Kunming 35.13 261 ⇓P **P** **18 56 05.1 -0.2**
KMI pmax pmax
comp=Z,24nm,1.1s
PZH PanZhiHua 35.25 264 P **P** **18 56 05.8 -0.4**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,80nm,5.9s
CRAI Chiangrai 39.59 256 P **P** **18 56 42.6 -0.2**
WMQ Urumqi 40.73 296 *e*P **P** **18 56 53.6 +1.4**
WMQ pP pP 18 57 05.0 -0.8
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ LR LR
comp=Z,110nm,20.3s
ZAA0 Zalesovo Array 41.70 312 P **P** **18 56 56.8 -3.0**
ZAA0 IAmb IAmb 18 57 00.5
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 41.70 312 P **P** **18 56 59.8 0.0**
comp=Z,12nm,0.9s,baz=91,slow=7.6,SNR=37
ZALV pP **pP** **18 57 15.3 +1.9**
comp=Z,6.9nm,0.9s,baz=100,slow=6.2,SNR=5.2
ZALV PcP **PcP** **18 58 55.0 -0.5**
comp=Z,2.1nm,0.6s,baz=79,slow=2.4,SNR=3.8
ZALV LR LR 19 14 50.6
comp=Z,77nm,20.5s,baz=106,slow=37
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 41.70 312 P **P** **18 56 58.6 -1.2**
CMAR Chiang Mai Arr 41.71 255 P **P** **18 56 59.9 -0.4**
comp=Z,0.9nm,0.6s,baz=45,slow=7.8,SNR=7.1
CMAR PcP **PcP** **18 58 55.2 -0.9**
comp=Z,0.2nm,0.3s,baz=44,slow=6.6,SNR=1.8
CMAR LR LR 19 15 39.4
comp=Z,34nm,18.9s,baz=180,slow=38
comp=Z,0.9nm,0.6s
CMAR Chiang Mai Arr 41.71 255 *i* P **P** **18 57 03.4 +3.1**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
N16K Nishlik Lake 43.52 38 P **P** **18 57 13.9 -0.7**
baz=266
MK31 Makanchi Array 43.97 302 P **P** **18 57 17.9 -0.5**
MK31 IAmb IAmb 18 57 19.8
comp=Z,12nm,0.8s
MK31 Makanchi Array 43.97 302 P **P** **18 57 17.9 -0.5**
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 43.97 302 P **P** **18 57 18.1 -0.3**
comp=Z,14nm,0.8s,baz=88,slow=9.3,SNR=57
MKAR LR LR 19 16 53.0
comp=Z,36nm,18.4s,baz=81,slow=38
comp=Z,14nm,0.8s
MAKZ Makanchi 44.18 302 P **P** **18 57 19.8 -0.3**
MAKZ IAmb IAmb 18 57 21.6
comp=Z,14nm,0.9s
MAKZ Makanchi 44.18 302 P **P** **18 57 19.8 -0.3**
MAKZ pmax pmax
comp=Z,14nm,1.0s
R17K Ugashik Creek 44.67 43 P **P** **18 57 23.7 0.0**
baz=271
SVW2 Sparrevohn 45.12 38 P **P** **18 57 27.3 0.0**
O18K Koktuh Hills 45.28 39 P **P** **18 57 28.9 +0.3**
baz=270
KURK Kurchatov 45.74 308 P **P** **18 57 32.0 -0.3**
KURK Kurchatov 45.74 308 *ce*P **P** **18 57 32.1 -0.3**
KURK pmax pmax
comp=Z,23nm,0.8s
KURBB Kurchatov Arra 45.81 308 P **P** **18 57 32.0 -0.9**
comp=Z,14nm,0.7s,baz=83,slow=8.2,SNR=72
KURBB pP **pP** **18 57 48.0 +1.3**
comp=Z,17nm,0.7s,baz=82,slow=7.8,SNR=12
KURBB LR LR 19 17 21.7
comp=Z,83nm,19.1s,baz=60,slow=37
comp=Z,14nm,0.7s
K20K Telida 45.91 34 P **P** **18 57 34.6 +1.0**
K20K Telida 45.91 34 P **P** **18 57 34.6 +1.0**
baz=267
J20K Nowinta River 45.92 33 P **P** **18 57 33.5 -0.1**
J20K Nowinta River 45.92 33 P **P** **18 57 34.4 +0.8**
baz=266
A21K Barrow 46.02 23 P **P** **18 57 35.4 +1.2**
baz=257
IMAR Indian Mountai 46.23 31 P **P** **18 57 37.8 +1.9**
G21K Allakaket 46.37 30 P **P** **18 57 37.7 +0.6**
baz=265
F21K Alatna River 46.45 29 P **P** **18 57 38.4 +0.7**
baz=264
ODAN Odare 46.49 273 *e*P **P** **18 57 37.8 -1.0**
H21K Melozitna Rive 46.59 31 P **P** **18 57 40.2 +1.3**
baz=266
KDAK Kodiak Island 46.71 42 P **P** **18 57 40.0 +0.2**
KDAK Kodiak Island 46.71 42 P **P** **18 57 40.0 +0.2**
KDAK pmax pmax
comp=Z,30nm,1.5s
KDAK Kodiak Island 46.71 42 P **P** **18 57 40.0 +0.2**
baz=274
CHUM Lake Minchumin 46.72 34 P **P** **18 57 40.9 +1.1**
baz=268
CAST Castle Rocks 46.81 34 P **P** **18 57 41.1 +0.5**
baz=269
F22K John River 46.98 29 P **P** **18 57 42.9 +1.0**
baz=265,SNR=6.5
RAMN Ramite 47.08 274 *e*P **P** **18 57 42.5 -0.9**
comp=Z,39nm,1.0s
JIRN Jiri 47.08 275 *e*P **P** **18 57 43.6 0.0**
comp=Z,4.0nm,0.3s
HOM Homer 47.09 40 P **P** **18 57 43.5 +0.8**
baz=273
E22K Anaktuvuk Pass 47.17 28 P **P** **18 57 44.2 +0.8**
baz=265,SNR=13
H22K Ishtalitna Cre 47.19 31 P **P** **18 57 44.3 +0.8**
baz=267
GUN Gumba 47.21 275 *e*P **P** **18 57 44.7 +0.1**
BPAW Bear Paw Mtn. 47.30 34 P **P** **18 57 44.9 +0.4**
baz=269
MLY Manley 47.43 32 P **P** **18 57 47.2 +1.8**
MLY IAmb IAmb 18 58 05.1
comp=Z,13nm,1.5s
MLY Manley 47.43 32 P **P** **18 57 45.9 +0.5**
baz=269
SUA Susitna One 47.45 37 P **P** **18 57 45.8 +0.1**
baz=272
D23K Nanushuk River 47.66 27 P **P** **18 57 47.6 +0.5**
baz=265
M22K Willow 47.74 37 P **P** **18 57 48.3 +0.6**
baz=272
PKI Pulchoki 47.74 275 *e*P **P** **18 57 47.8 -0.9**
comp=Z,13nm,1.0s
KKN Kakani 47.74 275 *e*P **P** **18 57 48.6 0.0**
comp=Z,6.5nm,0.9s
PKIN Phulchoki 47.75 275 *e*P **P** **18 57 48.2 -0.5**
C23K Itkillik River 47.76 26 P **P** **18 57 48.8 +1.0**
baz=264,SNR=10
G23K Bananza Creek 47.77 30 P **P** **18 57 48.7 +0.6**
baz=268,SNR=6.2
H23K Yukon River 47.94 31 P **P** **18 57 50.7 +1.3**
H23K IAmb IAmb 18 57 53.2
comp=Z,8.6nm,1.0s
H23K Yukon River 47.94 31 P **P** **18 57 50.6 +1.3**
baz=269,SNR=5.6
DMN Daman 47.96 275 *e*P **P** **18 57 49.9 -0.4**
comp=Z,1.6nm,0.2s
TOLK Toolik Lake Re 48.04 27 P **P** **18 57 51.2 +1.1**
baz=267,SNR=5.1
NEA2 Nenana 48.14 33 P **P** **18 57 51.8 +0.9**
baz=271
GKN Gorkha 48.16 276 *e*P **P** **18 57 51.7 0.0**
comp=Z,64nm,1.0s
PMR Palmer 48.22 37 P **P** **18 57 51.7 +0.2**
baz=273
RND Reindeer 48.26 34 P **P** **18 57 52.6 +0.7**
RND IAmb IAmb 18 57 54.1
comp=Z,6.7nm,1.0s
RND Reindeer 48.26 34 P **P** **18 57 52.6 +0.7**
RND pmax pmax
comp=Z,7.0nm,1.0s
GHO Glory Hole Cre 48.30 37 P **P** **18 57 53.0 +0.7**
GHO IAmb IAmb 18 58 01.5
comp=Z,13nm,1.2s
D24K Happy Valley 48.34 27 P **P** **18 57 53.2 +0.8**
baz=267
E24K Your Creek 48.41 28 P **P** **18 57 53.4 +0.4**
baz=268,SNR=13
C24K Franklin Bluff 48.41 26 P **P** **18 57 53.6 +0.8**
baz=266
WAT1 Susitna Watana 48.42 35 P **P** **18 57 53.8 +0.7**
baz=273
MDM Murphy Dome 48.49 32 P **P** **18 57 55.1 +1.5**
MDM IAmb IAmb 18 57 57.4
comp=Z,10nm,1.1s
SML Sawmill 48.58 37 P **P** **18 57 55.1 +0.7**
baz=274
F24K Squaw Lake 48.63 29 P **P** **18 57 55.2 +0.5**
baz=269
H24K Noodor Dome 48.63 31 P **P** **18 57 56.3 +1.6**
H24K IAmb IAmb 18 57 58.3
comp=Z,5.8nm,1.1s
H24K Noodor Dome 48.63 31 P **P** **18 57 55.5 +0.8**
baz=271
DANN Dangsing 48.70 277 *e*P **P** **18 57 56.1 +0.1**
comp=Z,26nm,0.8s
G24K Hadweenzic Riv 48.78 30 P **P** **18 57 57.3 +1.5**
baz=270
POKR Poker Plat Res 48.83 32 P **P** **18 57 56.8 +0.6**
baz=272
M23K Glacier View 48.87 37 P **P** **18 57 56.9 +0.4**
baz=274
HDA Harding Lake 49.06 33 P **P** **18 57 59.2 +1.2**
baz=273
IL31 49.07 33 P **P** **18 57 59.0 +1.0**
IL31 IAmb IAmb 18 58 00.3
comp=Z,6.6nm,0.8s
ILAR Eielson Array 49.07 33 P **P** **18 57 59.2 +1.2**
comp=Z,4.3nm,0.8s,baz=271,slow=6.2,SNR=41
ILAR pP **pP** **18 58 14.2 +2.3**
comp=Z,3.9nm,0.8s,baz=272,slow=6.6,SNR=8.8
comp=Z,4.3nm,0.8s
D25K Kavik River 49.22 27 P **P** **18 57 60.0 +0.9**
baz=269,SNR=18
G25K Bearman Lake 49.33 30 P **P** **18 58 01.0 +1.0**
baz=272
BOOM Boomskoye usch 49.40 297 P **P** **18 58 01.7 +0.6**
BOOM IAmb IAmb 18 58 02.4
comp=Z,8.2nm,0.7s
BOOM Boomskoye usch 49.40 297 P **P** **18 58 01.7 +0.6**
BOOM pmax pmax
comp=Z,8.0nm,0.7s
H25K Birch Creek 49.46 31 P **P** **18 58 01.9 +1.0**
baz=272
F25K Christian Rive 49.49 29 P **P** **18 58 02.6 +1.4**
baz=271,SNR=8.3
E25K Arctic Village 49.51 28 P **P** **18 58 02.4 +1.1**
baz=271,SNR=5.6
TKM2 Tokmak 2 49.51 298 P **P** **18 58 02.6 +0.6**
SNR=33
PRP Porcupine Dome 49.61 32 P **P** **18 58 03.5 +1.2**
baz=273
J25K Salcha River, 49.73 33 P **P** **18 58 05.1 +1.9**
baz=274
C26K Camden Bay 49.73 26 P **P** **18 58 05.0 +2.0**
baz=270
KLU Klutina 49.76 37 P **P** **18 58 04.4 +1.0**
baz=276
PAX Paxson 49.82 35 P **P** **18 58 05.5 +1.6**
baz=275
BMAR Burnt Mountain 49.90 29 P **P** **18 58 07.5 +3.1**
HARP HAARP 50.02 36 P **P** **18 58 07.3 +2.0**
baz=276
RIDG Independent Ri 50.03 34 P **P** **18 58 07.2 +1.8**
baz=275
KBK Karagaybulak 50.05 298 P **P** **18 58 06.8 +0.8**
SNR=19
F26K Sheenjek River 50.06 29 P **P** **18 58 08.1 +2.5**
baz=272,SNR=17
C27K Jago River 50.16 26 P **P** **18 58 08.1 +1.9**
baz=271,SNR=7.7
USP Ospenovka 50.18 299 P **P** **18 58 06.9 +0.1**
SNR=8.9
G26K Porcupine Rive 50.24 30 P **P** **18 58 08.7 +1.9**
baz=273
KSH Kashi 50.32 294 P **P** **18 58 12.0 +3.9**
KSH pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 50.37 298 LR LR 19 21 02.0
comp=Z,114nm,18.6s,baz=59,slow=38
SCRK Sand Creek 50.39 33 P **P** **18 58 09.0 +0.8**
SCRK IAmb IAmb 18 58 10.6
comp=Z,6.6nm,1.0s
SCRK Sand Creek 50.39 33 P **P** **18 58 09.6 +1.4**
baz=276,SNR=5.5
BRVK Borovoye 50.41 312 P **P** **18 58 08.5 +0.1**
BRVK IAmb IAmb 18 58 09.7
comp=Z,6.7nm,0.8s
BRVK Borovoye 50.41 312 P **P** **18 58 08.5 +0.1**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BMRM Bremner River 50.45 37 P **P** **18 58 11.2 +2.6**
baz=278
J26L Joseph Creek 50.52 33 P **P** **18 58 09.0 -0.1**
J26L Joseph Creek 50.52 33 P **P** **18 58 10.2 +1.1**
baz=276
KAIM Kayak Island 50.69 39 P **P** **18 58 12.4 +2.1**
baz=279
L26K Log Cabin Wild 50.78 35 P **P** **18 58 13.1 +2.1**
baz=277
EKS2 Erkin-Say 50.87 298 P **P** **18 58 12.2 +0.1**
SNR=11
E27K Coleen River 50.99 28 P **P** **18 58 14.4 +1.9**
baz=274,SNR=7.8
M26K Nabesna, AK 51.02 35 P **P** **18 58 14.8 +1.9**
baz=278
G27K Doyon Strip 51.09 30 P **P** **18 58 15.4 +2.1**
baz=275
AML Almayashu 51.09 298 P **P** **18 58 14.7 +0.6**
SNR=18
H27K Steamboat Moun 51.19 30 P **P** **18 58 16.7 +2.6**
baz=276
K27K Chicken 51.22 33 P **P** **18 58 16.4 +2.1**
baz=277
I27K Kandik River 51.23 31 P **P** **18 58 16.4 +2.0**
baz=276
L27K Beaver Creek, 51.46 35 P **P** **18 58 17.9 +1.8**
baz=278,SNR=5.8
BCAR Beaver Creek A 51.48 34 P **P** **18 58 17.3 +1.0**
EGAK Eagle 51.52 32 P **P** **18 58 17.8 +1.3**
baz=278
M27K Edge Creek, AK 51.54 35 P **P** **18 58 18.4 +1.5**
M27K IAmb IAmb 18 58 41.0
comp=Z,16nm,1.3s
M27K Edge Creek, AK 51.54 35 P **P** **18 58 18.7 +1.8**
baz=279
MESA MESA 51.87 38 P **P** **18 58 22.1 +2.6**
baz=280
BVCY Beaver Creek 52.00 35 P **P** **18 58 21.7 +1.6**
baz=280
CTG Chitna Glacier 52.02 37 P **P** **18 58 21.8 +1.3**
baz=280
PSI Prapat 52.10 239 P **P** **18 58 21.6 0.0**
comp=Z,5.8nm,0.6s,baz=43,slow=5.7,SNR=5.0
PSI LR LR 19 23 26.0
comp=Z,61nm,18.2s,baz=55,slow=39
comp=Z,5.8nm,0.6s
YUK3 Moose Creek 52.30 36 P **P** **18 58 24.3 +1.7**
baz=280
KK31 Karatay Array 52.99 300 P **P** **18 58 27.6 -0.2**
KK31 IAmb IAmb 18 58 30.6
comp=Z,13nm,1.1s
KK31 Karatay Array 52.99 300 P **P** **18 58 27.6 -0.2**
KK31 pmax pmax
comp=Z,13nm,1.1s
KKAR Karatay Array 52.99 300 P **P** **18 58 27.7 -0.1**
KKAR Karatay Array 52.99 300 P **P** **18 58 27.7 -0.1**
M29M Somme Creek 53.09 35 P **P** **18 58 30.5 +2.2**
baz=282
EPYK Eagle Plains 53.10 30 P **P** **18 58 30.8 +2.5**
EPYK Eagle Plains 53.10 30 P **P** **18 58 29.9 +1.7**
baz=280,SNR=12
HYT Haines Junctio 53.89 37 P **P** **18 58 36.0 +1.8**
baz=284
INK Inuvik 53.95 27 P **P** **18 58 35.4 +1.0**
comp=Z,4.7nm,0.6s,baz=291,slow=7.6,SNR=8.5
INK pP **sP** **18 58 51.6 -2.7**
comp=Z,2.9nm,0.6s,baz=260,slow=7.1,SNR=2.8
comp=Z,4.7nm,0.6s
INK Inuvik 53.95 27 P **P** **18 58 36.2 +1.9**
baz=281
KNRA Kununurra 54.21 195 P **P** **18 58 37.7 +0.9**
M31M Drury Creek, Y 55.00 35 P **P** **18 58 44.4 +2.3**
baz=285
CHGR Chuyangaron 55.57 295 P **P** **18 58 46.9 +0.2**
CHGR Chuyangaron 55.57 295 P **P** **18 58 46.9 +0.2**
CHGR pmax pmax
comp=Z,103nm,1.0s
ARU Arti 56.10 318 P **P** **18 58 49.6 -0.5**
comp=Z,8.2nm,0.5s,baz=86,slow=3.1,SNR=22
ARU LR LR 19 25 08.0
comp=Z,94nm,18.1s,baz=32,slow=38
comp=Z,8.2nm,0.5s
ARU Arti 56.10 318 P **P** **18 58 50.0 -0.1**
ARU Arti 56.10 318 *c* *i*P **P** **18 58 49.8 -0.3**
ARU *PP **sP** **18 59 07.5 -2.6**
ARU 18 59 45.1
ARU 19 00 53.5
ARU S **S** **19 06 37.2 +2.3**
ARU SS **SS** **19 10 24.0 +2.8**
ARU pmax pmax
comp=Z,28nm,1.1s
P33M Teslin, Yukon 56.29 37 P **P** **18 58 52.8 +1.3**
P33M IAmb IAmb 18 58 55.7
comp=Z,5.3nm,0.9s
P33M Teslin, Yukon 56.29 37 P **P** **18 58 54.2 +2.7**
baz=288
C36M Paulatuk 56.99 25 P **P** **18 58 58.0 +1.8**
baz=289
WB0 Warramunga Arr 57.33 188 P **P** **18 58 58.9 -0.2**
WB0 IAmb IAmb 18 59 28.8
comp=Z,4.7nm,0.8s
R33M Jennings River 57.43 37 P **P** **18 59 01.2 +1.5**
baz=290
WRAB Tennant Creek 57.49 188 *ce*P **P** **18 58 59.5 -0.8**
WRAB pmax pmax
comp=Z,9.0nm,1.7s
WR0 Warramunga Arr 57.50 188 P **P** **18 59 00.7 +0.4**
WR0 IAmb IAmb 18 59 37.3
comp=Z,13nm,1.4s
WB2 Warramunga Arr 57.50 188 P **P** **18 59 00.2 -0.2**
WB2 IAmb IAmb 18 59 04.3
comp=Z,12nm,1.3s
WRA Warramunga Arr 57.51 188 P **P** **18 59 00.7 +0.4**
comp=Z,2.3nm,0.7s,baz=4.1,slow=7.3,SNR=39
WRA pP **pP** **18 59 15.8 +1.3**
comp=Z,2.7nm,0.7s,baz=5.2,slow=7.4,SNR=7.3
comp=Z,2.3nm,0.7s
WRA Warramunga Arr 57.51 188 P **P** **18 59 01.1 +0.7**
WRA Warramunga Arr 57.51 188 *i* P **P** **18 59 01.2 +0.8**
WRA pmax pmax
comp=Z,2.0nm,0.6s
ABKAR Akbulak array 57.74 310 P **P** **18 59 01.1 -0.7**
DLBC Dease Lake 58.22 38 P **P** **18 59 07.3 +2.2**
baz=291
AKTO Aktyubinsk 58.46 312 P **P** **18 59 06.3 -0.6**
comp=Z,8.9nm,0.8s,baz=76,slow=12,SNR=21
comp=Z,8.9nm,0.8s
T35M Bob Quinn 58.63 40 P **P** **18 59 10.2 +2.2**
baz=291
KIRV Kirov 59.96 323 P **P** **18 59 16.9 -0.1**
comp=Z,25nm,0.5s,baz=77,slow=3.8,SNR=12
KIRV pP **pP** **18 59 31.5 +0.3**
comp=Z,8.1nm,0.5s,baz=78,slow=12,SNR=2.4
comp=Z,25nm,0.5s
PRGR Permogore 60.46 327 *e*P **P** **18 59 19.9 -0.4**
PRGR *e**PP **pP** **18 59 31.5 -3.1**
ASAR Alice Springs 61.23 188 P **P** **18 59 27.2 +1.1**
comp=Z,1.5nm,0.7s,baz=12,slow=6.0,SNR=17
ASAR pP **pP** **18 59 42.1 +1.8**
comp=Z,1.9nm,0.8s,baz=360,slow=4.8,SNR=7.3
ASAR LR LR 19 23 40.9
comp=Z,33nm,21.6s,baz=16,slow=34
comp=Z,1.5nm,0.7s

RES	**Resolute Bay**	**62.15**	**15**	P		**P**		**18 59 32.4**	**+0.8**
	comp=Z,7.7nm,0.9s,baz=314,slow=6.8,SNR=3.4								
	comp=Z,7.7nm,0.9s								
PALK	**Pallekele**	**62.56**	**257**	LR		LR		19 26 41.7	
	comp=Z,25nm,21.4s,baz=195,slow=36								
KEV	**Kevo**	**63.07**	**339**	*eP*		**P**		**18 59 37.4**	**-0.4**
YKA	**Yellowknife Ar**	**63.38**	**30**	P		**P**		**18 59 41.2**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=304,slow=7.0,SNR=16								
	comp=Z,2.3nm,0.7s								
KLMR	**Klimovskoe**	**63.44**	**328**	*eP*		**P**		**18 59 39.0**	**-1.4**
KLMR				pmax		pmax			
	comp=Z,11nm,0.8s								
KLMR	**Klimovskoe**	**63.44**	**328**	*eP*		**P**		**18 59 39.1**	**-1.4**
KLMR				AMP				18 59 40.9	
	comp=Z,11nm,0.8s								
BELG	**Belogornoye**	**63.55**	**317**	P		**P**		**18 59 41.1**	**-0.1**
	comp=Z,20nm,0.9s,baz=106,slow=3.5,SNR=8.1								
	comp=Z,20nm,0.9s								
ARA0	**ARCESS Array S**	**63.62**	**339**	*eP*		**P**		**18 59 42.1**	**+0.6**
ARCES	**ARCESS Array B**	**63.62**	**339**	P		**P**		**18 59 41.6**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=60,slow=6.5,SNR=14								
ARCES				LR		LR		19 30 37.3	
	comp=Z,12nm,19.5s,baz=11,slow=39								
	comp=Z,4.5nm,0.8s								
DZM	**Mont Dzumac**	**63.70**	**154**	LR		LR		19 24 59.2	
	comp=Z,58nm,20.7s,baz=19,slow=34								
GEYT	**Alibeck**	**63.71**	**299**	P		**P**		**18 59 42.3**	**-0.3**
	comp=Z,9.3nm,0.8s,baz=76,slow=1.8,SNR=10								
	comp=Z,9.3nm,0.8s								
GEYT	**Alibeck**	**63.71**	**299**	P		**P**		**18 59 41.9**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**63.71**	**299**	P		**P**		**18 59 40.8**	**-1.9**
HEF	**Hetta**	**64.85**	**339**	*eP*		**P**		**18 59 50.2**	**+0.7**
KIF	**Kilpisjarvi**	**65.26**	**340**	*eP*		**P**		**18 59 52.3**	**+0.2**
SALU	**Saltoluokta**	**66.99**	**339**	*eP*		**P**		**19 00 03.2**	**-0.2**
AFI	**Afiamalu**	**67.33**	**130**	LR		LR		19 25 56.6	
	comp=Z,32nm,20.6s,baz=57,slow=33								
STEI	**Steigen**	**67.49**	**341**	*eP*		**P**		**19 00 06.6**	**+0.2**
OBN	**Obninsk**	**67.81**	**323**	P		**P**		**19 00 07.8**	**-0.8**
	comp=Z,3.1nm,0.4s,baz=127,slow=6.7,SNR=3.5								
	comp=Z,3.1nm,0.4s								
OBN	**Obninsk**	**67.81**	**323**	*eP*		**P**		**19 00 07.2**	**-1.4**
OBN				*e*				19 00 37.8	
OBN				*e*				19 02 38.4	
OBN				pmax		pmax			
	comp=Z,12nm,1.0s								
OBN				MLR		MLR			
	comp=Z,43nm,17.0s								
FAUS	**Fauske**	**67.88**	**340**	*eP*		**P**		**19 00 09.2**	**+0.4**
VORR	**Voronezh**	**68.40**	**319**	*eP*		**P**		**19 00 12.6**	**+0.2**
VORR				pmax		pmax			
	comp=Z,20nm,0.4s								
FINES	**FINESS Array B**	**68.48**	**332**	P		**P**		**19 00 12.7**	**-0.1**
	comp=Z,9.1nm,0.7s,baz=31,slow=11,SNR=35								
FINES				pP		**pP**		**19 00 26.9**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=20,slow=6.1,SNR=3.1								
	comp=Z,9.1nm,0.7s								
FINES	**FINESS Array B**	**68.48**	**332**	*iP*		**P**		**19 00 13.0**	**+0.3**
FINES				pmax		pmax			
	comp=Z,9.0nm,0.6s								
K02D	**Willamette Mer**	**68.88**	**52**	P		**P**		**19 00 17.6**	**+1.9**
	baz=302								
STKA	**Stephens Creek**	**68.99**	**180**	P		**P**		**19 00 17.1**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=5.2,slow=14,SNR=2.9								
STKA				pP		**pP**		**19 00 31.5**	**+0.8**
	comp=Z,3.9nm,0.9s,baz=319,slow=10.0,SNR=4.8								
	comp=Z,1.4nm,0.7s								
MOR8	**Moi Rana**	**68.99**	**340**	*eP*		**P**		**19 00 14.8**	**-1.1**
I05D	**Terrebonne, OR**	**69.44**	**50**	P		**P**		**19 00 21.0**	**+1.9**
	baz=303								
NEW	**Newport**	**69.75**	**44**	P		**P**		**19 00 22.7**	**+1.8**
	baz=304								
PINE	**Pine Mountain**	**69.98**	**50**	P		**P**		**19 00 23.9**	**+1.3**
PINE				IAmb		IAmb		19 00 26.9	
	comp=Z,8.3nm,0.8s								
L04D	**Klamath Falls**	**69.99**	**52**	P		**P**		**19 00 24.7**	**+2.1**
	baz=303								
J05D	**Fort Rock, OR**	**70.08**	**50**	P		**P**		**19 00 24.8**	**+1.7**
	baz=303								
KVAR	**Kislovodsk Arr**	**70.69**	**311**	P		**P**		**19 00 28.2**	**+1.3**
	comp=Z,8.7nm,1.0s,baz=342,slow=9.6,SNR=3.2								
	comp=Z,8.7nm,1.0s								
KBZ	**Khabaz**	**70.70**	**311**	P		**P**		**19 00 26.8**	**+0.1**
	comp=Z,5.9nm,0.8s,baz=46,slow=4.8,SNR=7.6								
	comp=Z,5.9nm,0.8s								
KBZ	**Khabaz**	**70.70**	**311**	*iP*		**P**		**19 00 26.8**	**+0.1**
KBZ				pmax		pmax			
	comp=Z,9.0nm,0.9s								
KIV	**Kislovodsk**	**70.70**	**311**	*eP*		**P**		**19 00 26.8**	**-0.1**
KIV				pmax		pmax			
	comp=Z,23nm,1.1s								
WSAR	**Wadi Sarin**	**70.85**	**285**	P		**P**		**19 00 27.6**	**-0.5**
	comp=Z,9.1nm,0.8s,baz=27,slow=5.9,SNR=4.6								
	comp=Z,9.1nm,0.8s								
UOSS	**Minazif**	**71.77**	**288**	P		**P**		**19 00 33.6**	**0.0**
UOSS				IAmb		IAmb		19 00 34.7	
	comp=Z,11nm,0.8s								
MNK	**Minsk**	**72.19**	**326**	*iP*		**P**		**19 00 36.4**	**+0.9**
MNK				*i*PP*		**PcP**		**19 00 52.9**	**-0.6**
MNK				*i*				19 03 17.3	
MNK				*i* PPP		PPP		19 05 01.5	
MNK				*i* S		**S**		**19 09 55.1**	**+1.2**
MNK				*i *SS*		**sS**		**19 10 23.5**	**+5.0**
MNK				*i*				19 10 37.3	
MNK				*i* SS		**SS**		**19 14 34.7**	**+3.5**
MNK				pmax		pmax			
	comp=Z,17nm,0.9s								
MNK				pmax		pmax			
	comp=E,2.0nm,0.9s								
MNK				pmax		pmax			
	comp=N,7.0nm,0.9s								
MNK				MLR		MLR			
	comp=N,84nm,17.0s								
MNK				MLR		MLR			
	comp=Z,30nm,16.0s								
MNK				MLR		MLR			
	comp=E,1.0nm,13.0s								
MNK	**Minsk**	**72.19**	**326**	*iP*		**P**		**19 00 36.4**	**+0.9**
	comp=E,2.0nm,0.9s								
MNK				*iP*		**P**		**19 00 36.4**	**+0.9**
	comp=N,7.0nm,0.9s								
MNK				*iP*		**P**		**19 00 36.4**	**+0.9**
	comp=Z,17nm,0.9s,baz=50								
MNK				*i* pP		**PcP**		**19 00 52.9**	**-0.6**
MNK				*i* PP		**PP**		**19 03 17.3**	**+1.5**
MNK				*i* PPP		PPP		19 05 01.5	
MNK				*i* S		**S**		**19 09 55.1**	**+1.2**
MNK				*i* sS		**sS**		**19 10 23.6**	**+5.0**
MNK				*i* SS		**SS**		**19 14 34.7**	**+3.5**
MNK				*i* SSS		SSS		19 17 55.0	
MNK				*i* LQ		LQ		19 27 32.6	
MNK				*i* LR		LR		19 33 02.6	
MNK				*i* LRM		MLR		19 35 17.5	
	comp=N,84nm,16.6s								
MNK				*i* LRM		MLR		19 35 34.1	
	comp=Z,30nm,16.0s								
MNK				*i* LRM		MLR		19 35 38.6	
	comp=E,1.0nm,13.4s								
MSO	**Missoula**	**72.33**	**44**	P		**P**		**19 00 37.9**	**+1.2**
	baz=306								
DOMB	**Dombas**	**73.68**	**339**	*eP*		**P**		**19 00 44.6**	**+0.4**
HFS	**Hagfors**	**73.73**	**336**	P		**P**		**19 00 44.2**	**-0.4**
	comp=E,3.7nm,0.6s,baz=57,slow=5.5,SNR=23								
HFS				pP		**PcP**		**19 01 00.1**	**0.0**
	comp=E,2.6nm,0.7s,baz=93,slow=5.9,SNR=2.6								
HFS				LR		LR		19 35 48.6	
	comp=E,76nm,19.0s,baz=58,slow=38								
	comp=E,3.7nm,0.6s								
NC204	**NORSAR Array S**	**73.78**	**338**	P		**P**		**19 00 44.8**	**-0.1**
NB2	**NORSAR Subarra**	**73.82**	**337**	P		**P**		**19 00 45.2**	**0.0**
	comp=Z,8.1nm,0.9s,baz=39,slow=6.2								
NB2	**NORSAR Subarra**	**73.82**	**337**	*eP*		**P**		**19 00 45.4**	**+0.2**
NOA	**NORSAR Array B**	**73.82**	**337**	P		**P**		**19 00 45.1**	**-0.1**
	comp=Z,4.9nm,0.8s,baz=39,slow=5.9,SNR=25								
NOA				pP		**PcP**		**19 01 01.0**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=38,slow=5.8,SNR=4.5								
NOA				LR		LR		19 36 33.6	
	comp=Z,40nm,19.6s,baz=40,slow=38								
	comp=Z,4.9nm,0.8s								
EGMT	**Eagleton**	**73.88**	**41**	P		**P**		**19 00 47.0**	**+1.2**
	baz=308								
HLID	**Hailey**	**74.00**	**47**	P		**P**		**19 00 48.0**	**+1.3**
	baz=307								
AKASG	**Malin Array Be**	**74.02**	**322**	P		**P**		**19 00 45.8**	**-0.6**
	comp=Z,4.9nm,0.5s,baz=46,slow=6.2,SNR=36								
AKASG				pP		**pP**		**19 01 00.3**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=47,slow=6.6,SNR=3.9								
	comp=Z,4.9nm,0.5s								
AKASG	**Malin Array Be**	**74.02**	**322**	*i* P		**P**		**19 00 46.2**	**-0.2**
AKASG				pmax		pmax			
	comp=Z,5.0nm,0.5s								
AKBB	**Malin Array Si**	**74.02**	**322**	P		**P**		**19 00 45.5**	**-0.9**
AKBB				IAmb		IAmb		19 00 47.0	
	comp=Z,12nm,0.9s								
AKBB	**Malin Array Si**	**74.02**	**322**	P		**P**		**19 00 45.5**	**-0.9**
AKBB				pmax		pmax			
	comp=Z,13nm,0.9s								
BOZ	**Bozeman (W)**	**74.36**	**44**	P		**P**		**19 00 50.3**	**+1.6**
	baz=308								
NVAR	**Mina Array Bea**	**74.65**	**53**	P		**P**		**19 00 53.0**	**+2.4**
	comp=Z,2.3nm,0.8s,baz=287,slow=5.9,SNR=14								
NVAR				pP		**pP**		**19 01 07.2**	**+2.0**
	comp=Z,1.8nm,0.8s,baz=285,slow=5.6,SNR=4.6								
	comp=Z,2.3nm,0.8s								
SFJD	**Kangerlussuaq**	**75.44**	**5**	LR		LR		19 36 39.4	
	comp=Z,28nm,18.5s,baz=279,slow=38								
VES	**Vestal, Richgr**	**75.65**	**56**	P		**P**		**19 00 57.1**	**+1.0**
	baz=306								
PKM	**Mcpherson Peak**	**75.72**	**57**	P		**P**		**19 00 58.9**	**+2.1**
	baz=306								
RLMT	**Red Lodge**	**75.96**	**44**	P		**P**		**19 00 59.9**	**+1.9**
	baz=309								
R11A	**Troy Canyon, C**	**76.41**	**52**	P		**P**		**19 01 02.7**	**+2.0**
	baz=307								
DGMT	**Dagmar**	**76.44**	**39**	P		**P**		**19 01 01.1**	**+0.7**
	baz=312								
MPMC	**Manual Prospec**	**76.57**	**55**	P		**P**		**19 01 03.4**	**+1.8**
	baz=307								
LAO	**LASA Array**	**76.58**	**41**	P		**P**		**19 01 02.8**	**+1.5**
	baz=311								
FURC	**Furnace Creek,**	**76.73**	**54**	P		**P**		**19 01 04.3**	**+2.1**
	baz=307								
TPNV	**Topopah Spring**	**76.83**	**54**	P		**P**		**19 01 04.8**	**+1.8**
	baz=307								
DUG	**Dugway, Tooele**	**76.99**	**49**	P		**P**		**19 01 05.4**	**+1.5**
	baz=306								
BORG	**Borgarnes**	**77.23**	**353**	LR		LR		19 36 10.4	
	comp=Z,21nm,19.4s,baz=206,slow=36								
BW06	**Boulder Array**	**77.29**	**46**	P		**P**		**19 01 06.4**	**+0.8**
	baz=310								
PDAR	**Pinedale Array**	**77.29**	**46**	P		**P**		**19 01 07.1**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=278,slow=3.6,SNR=12								
PDAR				pP		**pP**		**19 01 21.7**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=276,slow=4.0,SNR=3.8								
	comp=Z,1.5nm,0.7s								
BUR08	**Bucovina Ar. S**	**78.02**	**322**	P		**P**		**19 01 09.7**	**+0.3**
BURAR	**Bucovina Array**	**78.03**	**322**	P		**P**		**19 01 08.7**	**-0.8**
BURAR				IAmb		IAmb		19 01 11.3	
	comp=Z,4.8nm,0.9s								
KOLS	**Kolonicke sedl**	**78.53**	**324**	*eP*		**P**		**19 01 13.3**	**+1.2**
KOLS	**Kolonicke sedl**	**78.53**	**324**	*eP*		**P**		**19 01 13.3**	**+1.2**
BRTR	**Keskin Array B**	**78.64**	**312**	P		**P**		**19 01 13.6**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=103,slow=3.9,SNR=7.6								
BRTR				pP		**pP**		**19 01 27.6**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=79,slow=5.1,SNR=2.4								
	comp=Z,2.2nm,0.9s								
PFO	**Pinyon Flats O**	**78.71**	**56**	LR		LR		19 29 04.6	
	comp=Z,30nm,20.4s,baz=42,slow=30								
PFO	**Pinyon Flats O**	**78.71**	**56**	P		**P**		**19 01 13.7**	**+0.2**
	baz=308								
TPFO	**Pinon Flats**	**78.72**	**56**	P		**P**		**19 01 15.2**	**+1.6**
	baz=308								
OJC	**Ojcow**	**78.73**	**326**	*eP*		**P**		**19 01 13.1**	**-0.1**
NIE	**Niedzica**	**79.09**	**325**	*eP*		**P**		**19 01 16.2**	**+1.1**
MLR	**Muntele Rosu**	**79.12**	**320**	LR		LR		19 39 37.4	
	comp=Z,83nm,18.1s,baz=52,slow=38								
LANS	**Liptovska Anna**	**79.66**	**326**	*eP*		**P**		**19 01 19.7**	**+1.4**
LANS	**Liptovska Anna**	**79.66**	**326**	*eP*		**P**		**19 01 19.7**	**+1.4**
O20A	**White River Ci**	**79.74**	**47**	P		**P**		**19 01 20.5**	**+1.4**
	baz=311								
KSP	**Ksiaz**	**79.78**	**328**	*eP*		**P**		**19 01 19.6**	**+0.8**
PDMCI	**Parker Dam,Lak**	**79.81**	**55**	P		**P**		**19 01 20.9**	**+1.6**
	baz=309								
MORC	**Moravsky Berou**	**80.05**	**327**	*eP*		**P**		**19 01 20.9**	**+0.5**
DPC	**Dobruska-Polom**	**80.14**	**328**	*eP*		**P**		**19 01 21.6**	**+0.7**
DPC	**Dobruska-Polom**	**80.14**	**328**	*eP*		**P**		**19 01 21.6**	**+0.7**
KRLC	**Kraliky**	**80.15**	**328**	*eP*		**P**		**19 01 21.2**	**+0.3**
KRLC	**Kraliky**	**80.15**	**328**	*eP*		**P**		**19 01 21.2**	**+0.3**
VYHS	**Vyhne**	**80.42**	**325**	*eP*		**P**		**19 01 23.3**	**+0.9**
VYHS				pmax		pmax			
	comp=Z,4.0nm,1.0s								
VYHS	**Vyhne**	**80.42**	**325**	*eP*		**P**		**19 01 23.3**	**+0.9**
AGMN	**Agassiz Nation**	**80.52**	**35**	P		**P**		**19 01 23.4**	**+0.5**
	baz=317								
N23A	**Red Feather La**	**80.56**	**45**	P		**P**		**19 01 25.0**	**+1.5**
	baz=312								
JAVC	**Velka Javorina**	**80.67**	**326**	*eP*		**P**		**19 01 25.3**	**+1.5**
BRG	**Berggiesshubel**	**80.73**	**329**	*eP*		**P**		**19 01 24.5**	**+0.6**
BRG				Amp				19 01 27.0	
	comp=Z,3.9nm,1.0s								
BRG				Amp				19 14 39.0	
	comp=N,0.1nm,13.2s								
BRG				Amp				19 14 47.0	
	comp=Z,0.1nm,18.9s								
BRG				Amp				19 14 51.0	
	comp=E,0.1nm,16.7s								
BRG	**Berggiesshubel**	**80.73**	**329**	*eP*		**P**		**19 01 24.5**	**+0.6**
BRG				pmax		pmax			
	comp=Z,4.0nm,1.0s								
BRG				MLR		MLR			
	comp=N,72nm,13.2s								
BRG				MLR		MLR			
	comp=Z,123nm,18.9s								
BRG				MLR		MLR			
	comp=E,97nm,16.7s								
CLL	**Collm**	**80.77**	**330**	*iP*		**P**		**19 01 24.2**	**+0.1**
CLL				*e*PP*		**pP**		**19 01 40.0**	**+1.1**
CLL				pmax		pmax			
	comp=Z,8.0nm,1.0s								
CLL	**Collm**	**80.77**	**330**	*iP*		**P**		**19 01 24.2**	**+0.1**
	comp=Z,8.0nm,1.0s								
CLL				*e*pP		**pP**		**19 01 35.0**	**-3.9**
CLL				*e*sP		**pP**		**19 01 40.0**	**+1.1**
CLL				*e*PP		**PP**		**19 04 29.0**	**+1.0**
VRAC	**Vranov**	**80.81**	**327**	*eP*		**P**		**19 01 24.8**	**+0.4**
WUAZ	**Wupatki**	**80.81**	**52**	P		**P**		**19 01 27.0**	**+2.1**
	baz=310								
KRUC	**Moravsky**	**81.08**	**327**	*eP*		**P**		**19 01 25.7**	**-0.1**
PRU	**Pruhonice**	**81.16**	**329**	*eP*		**P**		**19 01 27.3**	**+1.0**
PRU	**Pruhonice**	**81.16**	**329**	*eP*		**P**		**19 01 27.3**	**+1.0**
MODS	**Modra-Piesok**	**81.21**	**326**	*eP*		**P**		**19 01 27.5**	**+0.9**
MODS	**Modra-Piesok**	**81.21**	**326**	*eP*		**P**		**19 01 27.5**	**+0.9**
ASF	**Jabal al Asfar**	**81.35**	**304**	P		**P**		**19 01 28.0**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=145,slow=1.5,SNR=3.9								
	comp=Z,2.4nm,0.7s								
ISCO	**Idaho Springs**	**81.48**	**46**	P		**P**		**19 01 30.1**	**+1.5**
	baz=312								
MMAI	**Mount Meron Ar**	**81.80**	**305**	P		**P**		**19 01 30.3**	**+0.3**
	comp=Z,4.8nm,0.8s,baz=25,slow=4.6,SNR=7.3								
	comp=Z,4.8nm,0.8s								
S22A	**4UR Ranch, Cre**	**82.14**	**48**	P		**P**		**19 01 33.4**	**+1.3**
	baz=312								
RONA	**Rosalia, Austr**	**82.15**	**326**	*eP*		**P**		**19 01 32.8**	**+1.3**
	comp=Z,3.8nm,0.6s								
CKRC	**Cesky Krumlov**	**82.16**	**328**	*eP*		**P**		**19 01 31.6**	**0.0**
CONA	**Conrad Observa**	**82.17**	**327**	*iP*		**P**		**19 01 32.7**	**+0.9**
	comp=Z,2.2nm,0.7s								
KHC	**Kasperske Hory**	**82.22**	**328**	*eP*		**P**		**19 01 32.1**	**+0.2**
KHC				*e*				19 01 52.5	
KHC	**Kasperske Hory**	**82.22**	**328**	*eP*		**P**		**19 01 32.1**	**+0.2**
KHC				*es*P		**sP**		**19 01 52.5**	**0.0**
GERES	**GERESS Array B**	**82.39**	**328**	P		**P**		**19 01 32.5**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=38,slow=6.8,SNR=19								
	comp=Z,1.7nm,0.7s								
VTS	**Vitosha**	**82.52**	**319**	P		**P**		**19 01 33.2**	**-0.5**
VTS	**Vitosha**	**82.52**	**319**	P		**P**		**19 01 33.2**	**-0.5**
VTS				pmax		pmax			
	comp=Z,5.0nm,1.0s								
EKA	**Eskdalemuir Ar**	**82.75**	**341**	P		**P**		**19 01 34.7**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=34,slow=4.9,SNR=9.4								
EKA				LR		LR		19 42 07.9	
	comp=Z,39nm,18.3s,baz=38,slow=38								
	comp=Z,0.6nm,0.5s								
ARSA	**Arzberg**	**82.83**	**326**	*eP*		**P**		**19 01 35.7**	**+0.6**
	comp=Z,1.3nm,0.6s								
SDCO	**Great Sand Dun**	**82.92**	**47**	P		**P**		**19 01 37.3**	**+1.2**
	baz=313								
BIOA	**Bad Ischl, Aus**	**83.31**	**328**	*eP*		**P**		**19 01 38.3**	**+0.7**
	comp=Z,3.0nm,0.7s								
SOKA	**Soboth**	**83.49**	**326**	*eP*		**P**		**19 01 39.0**	**+0.4**
	comp=Z,5.5nm,0.8s								
ECSD	**EROS Data Cent**	**83.51**	**38**	P		**P**		**19 01 39.4**	**+0.7**
	baz=317								
KBA	**Koelnbreinsper**	**83.92**	**327**	*eP*		**P**		**19 01 41.8**	**+0.9**
	comp=Z,3.7nm,0.8s								
T25A	**Trinidad**	**83.97**	**47**	P		**P**		**19 01 43.3**	**+1.9**
	baz=313								
EIL	**Elat**	**84.22**	**303**	P		**P**		**19 01 42.8**	**+0.2**
	comp=Z,10nm,0.8s,baz=72,slow=8.0,SNR=5.1								
EIL				LR		LR		19 44 44.8	
	comp=Z,38nm,19.0s,baz=28,slow=40								
	comp=Z,10nm,0.8s								
ANMO	**Albuquerque**	**84.23**	**50**	P		**P**		**19 01 45.3**	**+2.5**
	baz=312								
PMOR	**Pomariorio Ree**	**84.26**	**114**	*eT*		T		20 34 24.4	
	comp=Z,17nm,0.2s								
MOTA	**Moosalm**	**84.65**	**329**	*eP*		**P**		**19 01 44.7**	**+0.2**
	comp=Z,5.4nm,1.0s								
BMRD	**Maredsous**	**84.66**	**334**	*dP*		**P**		**19 01 43.5**	**-0.9**
RETA	**Reutte**	**84.68**	**329**	*eP*		**P**		**19 01 45.0**	**+0.4**
	comp=Z,4.2nm,0.6s								
PPT2	**Papeete2**	**84.75**	**117**	*e*LR		LR		19 28 32.4	
	comp=Z,78nm,27.8s								
PPT2	**Papeete2**	**84.75**	**117**	*eT*		T		20 35 03.3	
	comp=Z,3.1nm,0.3s								
BFO	**Black Forest**	**84.97**	**331**	P		**P**		**19 01 45.5**	**-0.5**
BFO				IAmb		IAmb		19 01 47.3	
	comp=Z,6.6nm,0.9s								
BFO	**Black Forest**	**84.97**	**331**	P		**P**		**19 01 45.5**	**-0.5**
BFO				pmax		pmax			
	comp=Z,7.0nm,0.9s								
121A	**Cookes Peak, D**	**85.01**	**52**	P		**P**		**19 01 48.7**	**+2.0**
	baz=312								
FETA	**Feichten**	**85.06**	**329**	*eP*		**P**		**19 01 46.9**	**+0.2**
	comp=Z,1.9nm,0.7s								
DAVA	**Damuels**	**85.20**	**329**	*eP*		**P**		**19 01 47.6**	**+0.3**
	comp=Z,5.1nm,0.8s								
ECH	**Echery**	**85.52**	**331**	P		**P**		**19 01 48.7**	**0.0**
ECH				IAmb		IAmb		19 01 49.7	
	comp=Z,3.8nm,0.8s								
ECH	**Echery**	**85.52**	**331**	P		**P**		**19 01 48.7**	**0.0**
ECH				pmax		pmax			
	comp=Z,4.0nm,0.8s								
DAVOX	**Davos/Dischmat**	**85.61**	**329**	P		**P**		**19 01 49.3**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=64,slow=4.5,SNR=5.7								
DAVOX				LR		LR		19 43 22.1	
	comp=Z,50nm,20.7s,baz=68,slow=38								
	comp=Z,1.2nm,0.4s								
KSU1	**Kansas State U**	**86.92**	**41**	P		**P**		**19 01 56.5**	**+0.7**
	baz=318								
MNTX	**Cornudas Mount**	**87.08**	**52**	P		**P**		**19 01 58.2**	**+1.5**
	baz=313								
TBI	**Tubuai**	**88.66**	**121**	*e*LR		LR		19 30 21.4	
	comp=Z,68nm,31.8s								
TBI	**Tubuai**	**88.66**	**121**	*eT*		T		20 39 55.1	
	comp=Z,29nm,0.3s								
TUL1	**Leonard**	**89.71**	**43**	P		**P**		**19 02 10.1**	**+1.0**
	baz=318								
TXAR	**Lajitas Array**	**89.78**	**52**	P		**P**		**19 02 11.0**	**+1.4**
	comp=Z,2.4nm,0.7s,baz=304,slow=3.3,SNR=24								
TXAR				pP		**pP**		**19 02 25.9**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=293,slow=2.8,SNR=5.4								
	comp=Z,2.4nm,0.7s								
ABTX	**Abilene, Hawle**	**89.92**	**48**	P		**P**		**19 02 11.7**	**+1.5**
	baz=316								
JCT	**Junction City**	**91.36**	**49**	P		**P**		**19 02 18.3**	**+1.4**
	baz=316								
H06N1	**SOCORRO T-PHAS**	**91.81**	**65**	T		T		20 44 27.5	
	SNR=9.8								
H06E1	**SOCORRO T-PHAS**	**91.91**	**65**	T		T		20 44 30.4	
MIAR	**Mount Ida**	**91.93**	**43**	P		**P**		**19 02 20.7**	**+1.3**
	baz=319								
ESDC	**Sonseca Array**	**96.94**	**334**	LR		LR		19 51 01.3	
	comp=Z,54nm,19.1s,baz=327,slow=38								
TORD	**Torodi Ar. Bea**	**117.09**	**315**	PKP		**PKPdf**		**19 07 54.9**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=76,slow=5.0,SNR=5.2								
TORD				PP		PP		19 08 55.8	-10
	comp=Z,0.4nm,0.9s,baz=32,slow=8.5,SNR=2.5								
LPAZ	**La Paz**	**146.38**	**59**	PKPbc

BFO	**Black Forest**	**26.12**	**83**	P	**P**	**19 03 17.3**	**-1.2**
BFO				IAmb	IAmb	19 03 20.8	
	comp=Z,11nm,1.3s						
HFS	**Hagfors**	**26.18**	**55**	P	**P**	**19 03 20.2**	**+1.3**
	comp=Z,1.5nm,0.4s,baz=260,slow=7.4,SNR=9.5						
	comp=Z,1.5nm,0.4s						
SENIN	**Lac Senin/Sane**	**26.39**	**88**	P	**P**	**19 03 19.2**	**-1.9**
CLL	**Collm**	**27.75**	**74**	*e*P	**P**	**19 03 34.0**	**+0.9**
	comp=Z,3.0nm,0.8s						
CLL				*e*PPP	PPP	19 04 28.0	
DAVOX	**Davos/Dischmat**	**27.76**	**85**	P	**P**	**19 03 34.4**	**+1.0**
	comp=Z,3.4nm,0.9s,baz=319,slow=11,SNR=6.4						
DAVOX				LR	LR	19 13 12.9	
	comp=Z,50nm,19.7s,baz=284,slow=34						
	comp=Z,3.4nm,0.9s						
RETA	**Reutte**	**27.96**	**83**	*e*P	**P**	**19 03 35.8**	**+0.7**
	comp=Z,4.0nm,0.9s						
MDT	**Midelt**	**28.29**	**124**	LR	LR	19 13 43.3	
	comp=Z,44nm,18.4s,baz=328,slow=34						
SQTA	**Sankt Quirin**	**28.36**	**83**	*e*P	**P**	**19 03 39.7**	**+1.0**
	comp=Z,6.3nm,0.9s						
WATA	**Walderalm**	**28.52**	**83**	*e*P	**P**	**19 03 40.7**	**+0.5**
	comp=Z,3.4nm,0.9s						
WTTA	**Wattenberg**	**28.59**	**83**	*e*P	**P**	**19 03 41.9**	**+1.0**
	comp=Z,5.1nm,0.9s						
GEC2	**GERESS Array S**	**29.13**	**79**	P	**P**	**19 03 45.4**	**-0.1**
GEC2				IAmb	IAmb	19 03 55.4	
	comp=Z,6.9nm,1.2s						
GERES	**GERESS Array B**	**29.13**	**79**	P	**P**	**19 03 46.1**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=302,slow=7.7,SNR=14						
	comp=Z,1.7nm,0.8s						
CTI	**Castel Tesino**	**29.18**	**85**	P	**P**	**19 03 42.4**	**-3.7**
BIOA	**Bad Ischl, Aus**	**29.60**	**81**	*e*P	**P**	**19 03 50.5**	**+0.8**
	comp=Z,1.8nm,0.5s						
KBA	**Koelnbreinsper**	**29.71**	**82**	*e*P	**P**	**19 03 51.4**	**+0.6**
	comp=Z,2.7nm,0.8s						
CLUD	**Cludinico**	**29.73**	**84**	P	**P**	**19 03 50.8**	**0.0**
CLUD				IAmb	IAmb	19 03 52.7	
	comp=Z,8.4nm,0.7s						
MOA	**Molln**	**29.91**	**80**	P	**P**	**19 03 52.3**	**0.0**
	comp=Z,4.6nm,1.4s						
MYKA	**Terra Mystica**	**30.11**	**83**	*e*P	**P**	**19 03 55.1**	**+0.9**
	comp=Z,10nm,0.8s						
VRAC	**Vranov**	**30.65**	**76**	LR	LR	19 15 41.2	
	comp=Z,75nm,18.5s,baz=294,slow=35						
OBKA	**Obir**	**30.71**	**82**	*e*P	**P**	**19 03 59.7**	**+0.2**
	comp=Z,6.6nm,0.7s						
SOKA	**Soboth**	**30.92**	**82**	*e*P	**P**	**19 04 01.2**	**-0.2**
	comp=Z,2.0nm,0.6s						
ARSA	**Arzberg**	**30.94**	**81**	*e*P	**P**	**19 04 02.1**	**+0.7**
	comp=Z,1.3nm,0.6s						
ARCES	**ARCESS Array B**	**31.14**	**35**	P	**P**	**19 04 03.6**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=239,slow=5.1,SNR=6.6						
	comp=Z,3.2nm,0.9s						
SADO	**Sadowa**	**31.24**	**274**	LR	LR	19 16 04.7	
	comp=Z,54nm,19.5s,baz=182,slow=35						
MODS	**Modra-Piesok**	**31.47**	**78**	*e*P	**P**	**19 04 06.4**	**+0.3**
L56A	**Greenwood**	**31.72**	**269**	P	**P**	**19 04 09.1**	**+0.7**
L56A				IAmb	IAmb	19 04 15.4	
	comp=Z,12nm,1.1s						
FINES	**FINESS Array B**	**32.01**	**51**	P	**P**	**19 04 11.1**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=287,slow=8.1,SNR=11						
FINES				LR	LR	19 16 08.0	
	comp=Z,98nm,19.0s,baz=302,slow=34						
	comp=Z,2.6nm,0.6s						
MPLH	**Magyarpolny**	**32.19**	**79**	P	**P**	**19 04 12.5**	**+0.1**
VYHS	**Vyhne**	**32.34**	**76**	*e*P	**P**	**19 04 15.3**	**+1.6**
PABE	**Paberze**	**32.50**	**62**	P	**P**	**19 04 15.7**	**+0.6**
RES	**Resolute Bay**	**32.85**	**334**	P	**P**	**19 04 18.9**	**+1.0**
	comp=Z,6.1nm,0.9s,baz=116,slow=5.3,SNR=3.9						
RES				LR	LR	19 16 57.9	
	comp=Z,66nm,18.1s,baz=112,slow=35						
	comp=Z,6.1nm,0.9s						
MORH	**Mrgy, Hungar**	**33.32**	**80**	P	**P**	**19 04 22.1**	**-0.2**
KEST	**Kesra**	**33.93**	**103**	P	**P**	**19 04 28.4**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=7.4,slow=1.6,SNR=5.6						
	comp=Z,4.7nm,0.8s						
MNK	**Minsk**	**34.97**	**62**	*i* P	**P**	**19 04 37.1**	**+0.6**
	comp=E,4.0nm,1.2s						
MNK				*i* P	**P**	**19 04 37.1**	**+0.6**
	comp=N,4.0nm,0.9s						
MNK				*i* P	**P**	**19 04 37.1**	**+0.6**
	comp=Z,15nm,0.9s,baz=114						
MNK				*i* PP	**PnPn**	**19 05 54.1**	**+1.0**
MNK				*i* PPP	PPP	19 06 06.8	
MNK				*i* S	**S**	**19 10 10.0**	**+2.1**
MNK				*i* SS	**SnSn**	**19 12 26.7**	**+4.2**
MNK				*i* SSS	SSS	19 12 42.9	
MNK				*i* LQ	LQ	19 16 02.6	
MNK				*i* LR	LR	19 18 56.8	
MNK				*i* LRM	MLR	19 20 15.0	
	comp=E,4.0nm,13.4s						
MNK				*i* LRM	MLR	19 20 15.0	
	comp=N,12nm,19.2s						
MNK				*i* LRM	MLR	19 20 15.0	
	comp=Z,46nm,16.6s						
AKASG	**Malin Array Be**	**37.33**	**68**	P	**P**	**19 04 55.5**	**-1.2**
	comp=Z,3.4nm,0.7s,baz=306,slow=8.0,SNR=13						
AKASG				LR	LR	19 21 22.3	
	comp=Z,67nm,18.1s,baz=243,slow=38						
	comp=Z,3.4nm,0.7s						
AKBB	**Malin Array Si**	**37.33**	**68**	P	**P**	**19 04 56.1**	**-0.6**
AKBB				IAmb	IAmb	19 04 57.6	
	comp=Z,7.6nm,0.8s						
KLMR	**Klimovskoe**	**38.42**	**49**	*e*P	**P**	**19 05 05.4**	**-0.5**
KLMR				AMP		19 05 07.7	
	comp=Z,15nm,1.4s						
OBN	**Obninsk**	**39.30**	**58**	P	**P**	**19 05 13.3**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=270,slow=14,SNR=6.2						
OBN				LR	LR	19 20 34.9	
	comp=Z,22nm,19.5s,baz=336,slow=35						
	comp=Z,3.7nm,0.6s						
TKL	**Tuckaleechee C**	**39.54**	**265**	LR	LR	19 21 12.2	
	comp=Z,104nm,18.5s,baz=58,slow=36						
BBTS	**Babate**	**40.03**	**155**	LR	LR	19 18 56.2	
	comp=Z,62nm,19.1s,baz=22,slow=32						
YKA	**Yellowknife Ar**	**42.10**	**317**	P	**P**	**19 05 36.4**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=62,slow=8.6,SNR=2.9						
	comp=Z,1.1nm,0.9s						
SJG	**San Juan**	**43.32**	**230**	LR	LR	19 19 33.8	
	comp=Z,38nm,21.7s,baz=93,slow=30						
KIRV	**Kirov**	**43.92**	**48**	LR	LR	19 23 27.6	
	comp=Z,62nm,21.4s,baz=6.4,slow=35						
BR131	**Keskin Array S**	**46.03**	**79**	P	**P**	**19 06 07.3**	**-1.0**
BRTR	**Keskin Array B**	**46.03**	**79**	P	**P**	**19 06 09.6**	**+1.3**
	comp=Z,4.2nm,0.8s,baz=303,slow=6.7,SNR=18						
BRTR				LR	LR	19 25 15.5	
	comp=Z,26nm,19.8s,baz=317,slow=36						
	comp=Z,4.2nm,0.8s						
BRTR	**Keskin Array B**	**46.03**	**79**	P	**P**	**19 06 08.5**	**+0.3**
INK	**Inuvik**	**46.08**	**330**	P	**P**	**19 06 09.8**	**+1.7**
	comp=Z,1.5nm,0.7s,baz=57,slow=6.4,SNR=1.7						
INK				LR	LR	19 24 09.9	
	comp=Z,97nm,20.4s,baz=70,slow=34						
	comp=Z,1.5nm,0.7s						
BELG	**Belogornoye**	**46.34**	**57**	LR	LR	19 25 19.8	
	comp=Z,42nm,18.7s,baz=312,slow=36						
TORD	**Torodi Ar. Bea**	**47.99**	**132**	P	**P**	**19 06 22.4**	**-1.3**
	comp=Z,2.5nm,1.0s,baz=342,slow=6.9,SNR=9.0						
	comp=Z,2.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**47.99**	**132**	P	**P**	**19 06 23.0**	**-0.6**
TORD				IAmb	IAmb	19 06 28.8	
	comp=Z,5.0nm,1.2s						
ARU	**Arti**	**49.23**	**47**	P	**P**	**19 06 32.8**	**+0.1**
MDP	**Montagnes des**	**50.24**	**206**	LR	LR	19 22 27.5	
	comp=Z,48nm,22.0s,baz=50,slow=30						
PDAR	**Pinedale Array**	**50.37**	**291**	P	**P**	**19 06 40.8**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=65,slow=7.7,SNR=3.8						
PDAR				LR	LR	19 26 28.9	
	comp=Z,39nm,19.4s,baz=52,slow=34						
	comp=Z,0.6nm,0.5s						
DBIC	**Dimbokro**	**51.19**	**144**	P	**P**	**19 06 47.0**	**-1.0**
	comp=Z,5.4nm,0.9s,baz=296,slow=5.7,SNR=2.0						
	comp=Z,5.4nm,0.9s						
SCRK	**Sand Creek**	**52.11**	**329**	P	**P**	**19 06 55.9**	**+1.4**
SCRK				IAmb	IAmb	19 07 06.0	
	comp=Z,4.9nm,0.8s						
HWUT	**Hardware Ranch**	**52.26**	**291**	P	**P**	**19 06 55.6**	**-0.3**
HWUT				IAmb	IAmb	19 07 04.2	
	comp=Z,6.0nm,0.8s						
ILAR	**Eielson Array**	**52.44**	**330**	P	**P**	**19 06 57.5**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=44,slow=5.2,SNR=5.4						
ILAR				PcP	**PcP**	**19 08 07.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=5.5,slow=2.7,SNR=4.4						
ILAR				LR	LR	19 29 01.2	
	comp=Z,60nm,19.5s,baz=59,slow=36						
	comp=Z,0.6nm,0.8s						
SDV	**Santo Domingo**	**53.46**	**229**	LR	LR	19 26 55.4	
	comp=Z,27nm,21.8s,baz=62,slow=33						
ABKAR	**Akbulak array**	**54.42**	**54**	P	**P**	**19 07 11.8**	**+0.2**
ABKAR	**Akbulak array**	**54.42**	**54**	P	**P**	**19 07 12.0**	**+0.5**
ABKAR				IAmb	IAmb	19 07 22.5	
	comp=Z,5.6nm,0.8s						
TXAR	**Lajitas Array**	**56.01**	**275**	P	**P**	**19 07 24.2**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=46,slow=7.2,SNR=2.1						
	comp=Z,0.2nm,0.6s						
BRVK	**Borovoye**	**56.58**	**45**	P	**P**	**19 07 26.0**	**-1.0**
BRVK				IAmb	IAmb	19 07 38.0	
	comp=Z,7.1nm,0.8s						
NVAR	**Mina Array Bea**	**58.21**	**293**	P	**P**	**19 07 40.8**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=316,slow=11,SNR=1.3						
	comp=Z,0.1nm,0.3s						
ROSC	**El Rosal**	**58.73**	**231**	P	**P**	**19 07 43.9**	**+0.9**
	comp=Z,7.2nm,0.4s,baz=18,slow=19,SNR=1.7						
ROSC				LR	LR	19 28 23.5	
	comp=Z,37nm,21.7s,baz=62,slow=31						
	comp=Z,7.2nm,0.4s						
ZALV	**Zalesovo Beam**	**61.68**	**37**	P	**P**	**19 08 03.4**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=309,slow=9.4,SNR=3.7						
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**61.80**	**42**	P	**P**	**19 08 03.3**	**+0.1**
SEY	**Seymchan**	**64.65**	**357**	LR	LR	19 36 46.3	
	comp=Z,388nm,21.9s,baz=150,slow=36						
AAK	**Ala-Archa**	**66.20**	**50**	LR	LR	19 36 43.4	
	comp=Z,59nm,19.6s,baz=317,slow=35						
MK31	**Makanchi Array**	**66.39**	**43**	P	**P**	**19 08 33.4**	**0.0**
MK31				IAmb	IAmb	19 08 43.9	
	comp=Z,4.5nm,0.7s						
MKAR	**Makanchi Array**	**66.39**	**43**	P	**P**	**19 08 34.4**	**+1.0**
	comp=Z,1.4nm,0.4s,baz=332,slow=5.0,SNR=29						
MKAR				LR	LR	19 36 09.5	
	comp=Z,54nm,21.7s,baz=286,slow=35						
	comp=Z,1.4nm,0.4s						
MKAR	**Makanchi Array**	**66.39**	**43**	P	**P**	**19 08 33.3**	**-0.1**
KSH	**Kashi**	**69.33**	**52**	P	**P**	**19 08 55.4**	**+3.2**
KSH				sP	pwP	19 09 03.3	+4.5
KSH				PcS		19 13 26.1	
KSH				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WMQ	**Urumqi**	**71.02**	**41**	*e*P	**P**	**19 09 03.9**	**+1.5**
ATAH	**Atahualpa**	**71.15**	**229**	LR	LR	19 38 00.8	
	comp=Z,21nm,21.7s,baz=15,slow=34						
SIV	**San Ignacio**	**72.70**	**209**	LR	LR	19 36 55.9	
	comp=Z,55nm,18.6s,baz=112,slow=32						
SONM	**Songino Array**	**73.92**	**27**	P	**P**	**19 09 21.0**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=346,slow=8.0,SNR=4.6						
	comp=Z,1.1nm,1.0s						
NNA	**Nana**	**74.76**	**225**	LR	LR	19 41 09.1	
	comp=Z,10nm,21.4s,baz=10.0,slow=35						
KMBO	**Kilima Mbogo**	**78.80**	**107**	LR	LR	19 47 51.0	
	comp=Z,16nm,18.3s,baz=91,slow=38						
GTA	**Gaotai**	**79.41**	**36**	*e*P	**P**	**19 09 48.8**	**-2.1**
GTA				pP	sP	19 09 54.9	+1.1
GTA				sP	pwP	19 09 58.0	+0.4
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LVC	**Limon Verde**	**81.38**	**214**	LR	LR	19 43 42.2	
	comp=Z,23nm,18.3s,baz=264,slow=34						
HHC	**Hu-ho-hao-te**	**81.79**	**27**	*e*P	**P**	**19 10 00.9**	**-2.7**
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
LSZ	**Lusaka**	**85.47**	**122**	LR	LR	19 48 10.6	
	comp=Z,28nm,18.9s,baz=143,slow=35						
KSRS	**Korea Array**	**88.63**	**15**	LR	LR	19 52 03.7	
	comp=Z,13nm,19.1s,baz=330,slow=37						
NJ2	**Nanjing**	**92.00**	**24**	*e*P	**P**	**19 10 53.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SUR	**Sutherland**	**96.65**	**137**	LR	LR	19 49 13.8	
	comp=Z,16nm,22.0s,baz=312,slow=32						
CMAR	**Chiang Mai Arr**	**97.66**	**46**	LR	LR	19 57 51.9	
	comp=Z,15nm,20.0s,baz=255,slow=37						
PALK	**Pallekele**	**97.99**	**67**	LR	LR	20 00 54.2	
	comp=Z,18nm,18.2s,baz=336,slow=39						
WRA	**Warramunga Arr**	**145.77**	**22**	PKPbc	**PKPab**	**19 17 24.2**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=346,slow=2.8,SNR=2.5						
ASAR	**Alice Springs**	**149.24**	**25**	PKPbc	**PKPbc**	**19 17 32.7**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=358,slow=2.2,SNR=6.2						

*IDC **14** 19:20:56.2±2.6, 4.°97S×129.°92E, h201km±38km, mb2.7/1, mbtmp3.4/5, MS2.7/1, Error ellipse: s-maj=70.5km s-min=19.9km az=85.0*
ISC 14 19:20:55.4±1.0, 5.°04S±0.°07×130.°2E±0.°2, h200km, n6, σ2°82/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.28**	**14**	P	**Pn**	**19 22 01.8**	**+1.1**
	8.4nm,0.2s,baz=197,slow=19,SNR=8.2						
SIJI				S	**Sn**	**19 22 49.5**	**-2.6**
	33nm,0.2s,baz=233,slow=20,SNR=13						
KAPI	**Kappang**	**10.42**	**270**	LR	LR	19 28 23.9	
	comp=Z,37nm,18.1s,baz=30,slow=44						
FITZ	**Fitzroy Crossi**	**13.73**	**199**	P	**Pn**	**19 24 01.7**	**-0.3**
	0.9nm,0.5s,baz=33,slow=11,SNR=12						
FITZ				S	S	19 26 21.1	-14
	0.6nm,0.5s,baz=58,slow=21,SNR=1.0						
WRA	**Warramunga Arr**	**15.35**	**165**	P	**Pn**	**19 24 24.2**	**+2.2**
	0.3nm,0.9s,baz=345,slow=11,SNR=1.5						
WRA				S	**S**	**19 27 08.8**	**-3.6**
	0.2nm,0.3s,baz=354,slow=19,SNR=6.8						
ASAR	**Alice Springs**	**18.86**	**169**	P	**P**	**19 25 03.3**	**+2.6**
	0.5nm,0.5s,baz=345,slow=11,SNR=4.3						
ASAR				S	**S**	**19 28 21.9**	**-2.6**
	0.4nm,1.0s,baz=302,slow=17,SNR=2.1						
MKAR	**Makanchi Array**	**66.72**	**326**	P	**P**	**19 31 24.9**	**-0.2**
	0.1nm,0.4s,baz=116,slow=8.1,SNR=3.1						
	0.1nm,0.4s						

*IDC **14** 19:22:18.8±7.0, 35.°16N×142.°29E, h0km, mb3.4/2, mbtmp3.1/3, ML2.0/1, Error ellipse: s-maj=177.2km s-min=39.7km az=49.0*
*JMA **14** 19:22:35.0±0.5, 35.°6N±0.°9×14.°1E±.°, h18km±1km, NEAR CHOSHI CITY*
ISC 14 19:22:15.4±2.5, 35.°9N±0.°2×142.°4E±0.°2, h10km, n17, σ1°27/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.23**	**263**	P	**Pg**	**19 22 38.6**	**-0.5**
JIHU	**Itakohorinouch**	**1.49**	**274**	P	**Pg**	**19 22 45.1**	**+1.1**
JSMT	**Sammumatsuo**	**1.57**	**262**	P	**Pb**	**19 22 43.6**	**-0.9**
JYT	**Yasato**	**1.79**	**282**	P	**Pg**	**19 22 50.1**	**+0.3**
JCN	**Nagara**	**1.81**	**256**	P	**Pb**	**19 22 48.4**	**-0.3**
MJAR	**Matsushiro Arr**	**3.42**	**283**	Pn	**Pb**	**19 23 14.6**	**-1.5**
	0.1nm,0.3s,baz=116,slow=14,SNR=4.4						
MJAR				Sn	**Sn**	**19 23 50.6**	**+1.1**
	0.2nm,0.3s,baz=150,slow=16,SNR=4.4						
	0.6nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**26.90**	**120**	T	T	19 57 22.5	
	baz=311,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**26.91**	**120**	T	T	19 57 19.6	
	baz=311,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**26.92**	**120**	T	T	19 57 24.0	
	baz=311,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**27.59**	**122**	T	T	19 58 09.4	
	baz=312,slow=75,SNR=30						
H11S3	**WAKE ISLAND Hy**	**27.59**	**122**	T	T	19 58 11.4	
	baz=312,slow=75,SNR=29						
H11S2	**WAKE ISLAND Hy**	**27.61**	**122**	T	T	19 58 10.2	
	baz=312,slow=75,SNR=22						
WRA	**Warramunga Arr**	**56.02**	**189**	P	**P**	**19 31 53.3**	**-1.1**
	0.3nm,0.5s,baz=14,slow=8.2,SNR=7.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**59.74**	**189**	P	**P**	**19 32 22.1**	**+1.6**
	0.4nm,0.9s,baz=16,slow=6.4,SNR=2.1						
	0.4nm,0.9s						
H03N2	**Juan Fernandez**	**146.12**	**98**	T	T	22 26 36.9	
	baz=289,slow=76,SNR=9.7						
H03N3	**Juan Fernandez**	**146.14**	**98**	T	T	22 26 37.6	
	baz=289,slow=76,SNR=9.1						
H03N1	**Juan Fernandez**	**146.14**	**98**	T	T	22 26 40.4	
	baz=289,slow=76,SNR=9.0						

JMA 14 19:22:38.3±0.2, 35.°6N±0.°5×14.°1E±.°, h16km±1km, MV2.9/29, NEAR CHOSHI CITY, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.09**	**320**	P	Pg	19 22 41.6	0.0
CHOJ				*e*S	Sg	19 22 44.0	+0.3
CHOJ	**Chosi**	**0.09**	**320**	S	Pg	19 22 41.1	-0.5
JSMT	**Sammumatsuo**	**0.40**	**272**	P	Pg	19 22 46.5	+0.2
JIHU	**Itakohorinouch**	**0.47**	**315**	P	Pb	19 22 48.1	-0.1
JIHU				S	Sb	19 22 55.5	+0.5
JCN	**Nagara**	**0.63**	**251**	P	Pb	19 22 51.3	+0.3
JCN				S	Sn	19 23 01.7	-0.7
KTR	**Katsuura**	**0.70**	**226**	*e*P	Pg	19 22 51.7	-0.2
KTR				S	Sb	19 23 02.1	+0.6
JYT	**Yasato**	**0.84**	**315**	P	Pb	19 22 54.2	-0.4
JYT				S	Sb	19 23 04.6	-1.1
BSO3	**Boso 3**	**0.90**	**203**	P	Pb	19 22 54.7	-0.6
JAG	**Ashikaga**	**1.44**	**304**	P	Pn	19 23 03.8	0.0

*IDC **14** 19:51:02.2±6.6, 42.°46N×143.°14E, h32km±55km, mb3.5/10, mbtmp3.8/13, ML2.7/2, MS3.4/2, Error ellipse: s-maj=33.9km s-min=28.2km az=126.0*
*MOS **14** 19:51:04.3±1.7, 42.°28N×142.°91E, h73km, mb4.0/1, Error ellipse: s-maj=16.5km s-min=9.4km az=62.3*
*SKHL **14** 19:51:05.6±0.6, 42.°20N×143.°10E, h85km±4km, mb4.6/4, msha5.3/3*
*NIED **14** 19:51:06.1, 42.°31N×143.°02E, h51km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.77; $M_{\theta\theta}$-0.95; $M_{\phi\phi}$-2.81; $M_{r\theta}$1.35; $M_{\theta\phi}$-1.51; $M_{\phi r}$3.03; Fault plane solution: $M_0$4.98000×10^{14} NP1: ϕ_s212.00000°, δ24.00000°, λ96.00000°. NP2:ϕ_s26.00000°, δ66.00000°, λ87.00000°.*
*JMA **14** 19:51:06.1±0.1, 42.°3N±0.°5×143.°0E±0.°5, h51km±1km, MV3.5/39, HIDAKA MOUNTAINS REGION*
JMA Felt I J1 at HIDAKA MOUNTAINS REGION .
ISC 14 19:51:04.8±0.7, 42.°24N±0.°05×143.°05E±0.°04, h61km±6km, n50, σ1°51/57, mb3.6/10, 5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTHR	**Tokachihiroo**	**0.20**	**73**	*i* P	**Pn**	**19 51 14.5**	**+0.2**
JTHR				*e*S	**Sn**	**19 51 20.9**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.22**	**282**	*i* P	**Pn**	**19 51 14.3**	**-0.2**
JNBK				*e*S	**Sn**	**19 51 20.3**	**-1.2**
JEM	**Erimo**	**0.23**	**160**	P	**Pn**	**19 51 15.4**	**+0.8**
JEM				*e*S	**Sn**	**19 51 22.8**	**+1.2**
JCH	**Churui**	**0.45**	**31**	*i* P	**Pn**	**19 51 16.3**	**0.0**
JCH				*e*S	**Sn**	**19 51 24.1**	**-0.5**
JSHD	**Hidakashinhida**	**0.47**	**292**	⇓P	**Pn**	**19 51 16.7**	**+0.2**
JSHD				⇓*e*S	**Sn**	**19 51 25.6**	**+0.7**
JBT2	**Biratori 2**	**0.74**	**317**	*e*S	**Sn**	**19 51 31.4**	**+0.9**
JOB	**Onbets**	**0.89**	**41**	*e*P	**Pn**	**19 51 22.5**	**+1.1**
JOB				*e*S	**Sn**	**19 51 34.2**	**+0.5**
JIAM	**Iburiatsuma**	**0.92**	**295**	⇓P	**Pn**	**19 51 23.2**	**+1.4**
JFR	**Furan**	**0.99**	**340**	⇓*e*P	**Pn**	**19 51 22.3**	**-0.5**
JAR	**Ashorobuto**	**1.19**	**26**	*e*P	**Pn**	**19 51 25.6**	**+0.2**
JAR				*e*S	**Sn**	**19 51 40.2**	**-0.5**
JEW	**Eniwo**	**1.33**	**298**	⇓*e*P	**Pn**	**19 51 28.0**	**+0.9**
JAB	**Ashibetsu**	**1.41**	**335**	*e*P	**Pn**	**19 51 29.1**	**+0.9**
JAK	**Akkeshi**	**1.44**	**57**	*e*P	**Pn**	**19 51 29.3**	**+0.7**
JAK				*e*S	**Sn**	**19 51 46.6**	**+0.1**
AKK	**Akkeshi**	**1.54**	**59**	*e*P	**Pn**	**19 51 30.4**	**+0.4**
AKK				*e*S	**Sn**	**19 51 49.4**	**+0.4**
NMR	**Nemuro--Hokkai**	**2.27**	**59**	*e*PN	**Pn**	**19 51 40.4**	**+0.4**
NMR				*e*S	**Sn**	**19 52 06.4**	**-0.5**
NMR	**Nemuro--Hokkai**	**2.27**	**59**	*e*P	**Pn**	**19 51 40.4**	**+0.4**
NMR				*e*S	**Sn**	**19 52 06.4**	**-0.5**
RUSJ	**Misakicho**	**2.47**	**40**	*e*PN	**Pn**	**19 51 45.1**	**+2.5**
YUK	**Yuzh-Kuril'sk**	**2.73**	**48**	*e*PN	**Pn**	**19 51 48.7**	**+2.5**
YUK				*e*S	**Sn**	**19 52 19.9**	**+1.8**
YUK				pmax	pmax		
	comp=Z,105nm,0.1s						
YUK				smax	smax		
	comp=E,408nm,0.3s						
YUK				smax	smax		
	comp=N,283nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.73**	**48**	*e*P	**Pn**	**19 51 48.5**	**+2.3**
YUK				AMB	AMB	19 51 50.7	
	comp=N,220nm,0.5s						
YUK				*e*S	**Sn**	**19 52 19.3**	**+1.2**
YUK				A	A	19 52 22.9	
	comp=N,390nm,0.6s						
YUK				A	A	19 52 22.9	
	comp=N,490nm,0.6s						
SHO	**Shikotan**	**3.22**	**58**	*e*PN	**Pn**	**19 51 53.5**	**+0.7**
SHO				*e*S	**Sn**	**19 52 28.8**	**-1.1**
SHO				pmax	pmax		
	comp=Z,30nm,0.3s						
SHO				pmax	pmax		
	comp=E,20nm,0.2s						
SHO				smax	smax		
	comp=E,107nm,0.2s						
SHO		

NOA	**NORSAR Array B**	**69.88**	**337**	P		**P**	**20 02 08.7**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=32,slow=5.4,SNR=1.9							
	comp=Z,0.4nm,0.7s							
WSAR	**Wadi Sarin**	**70.78**	**284**	LR		LR	20 35 59.7	
	comp=Z,36nm,18.4s,baz=134,slow=38							
AKASG	**Malin Array Be**	**70.97**	**322**	P		**P**	**20 02 14.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=43,slow=6.9,SNR=1.4							
	comp=Z,0.2nm,0.3s							
TXAR	**Lajitas Array**	**85.98**	**54**	P		**P**	**20 03 38.6**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=258,slow=3.4,SNR=2.5							
	comp=Z,0.1nm,0.4s							
H03N2	**Juan Fernandez**	**145.99**	**89**	T		T	22 53 54.4	
	baz=302							
H03N3	**Juan Fernandez**	**146.00**	**89**	T		T	22 53 50.5	
	baz=302							
H03N1	**Juan Fernandez**	**146.00**	**89**	T		T	22 53 57.2	
	baz=302							

IDC ***14*** *20:06:36.2±0.9, 39.25°N×73.49°E, h0km, mb3.7/16, mbtmp3.7/22, ML2.9/6, MS2.9/4, Error ellipse: s-maj=16.5km s-min=13.0km az=147.0*
ISU ***14*** *20:06:37, 39.55°N×73.74°E, h27km*
KRNET ***14*** *20:06:39.2±0.1, 39.53°N×73.45°E, mb4.0*
SOME ***14*** *20:06:40.0, 39.48°N×73.50°E, h15km*
NNC ***14*** *20:06:42.9±1.9, 39.60°N×73.43°E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=16.1km s-min=9.6km az=178.0*

ISC 14 20:06:37.4±1.4, 39.48N±0.04×73.54E±0.02, h6km±8km, n82, σ2s06/118, mb3.8/16, 25C-11D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.20**	**331**	⇑*i*	P	**Pb**	**20 07 00.5**	**0.0**
	baz=33							
OHH				⇑*i*	S	**Sb**	**20 07 16.3**	**0.0**
	baz=33							
OHH	**Osh**	**1.20**	**331**	P		**Pg**	**20 07 00.3**	**0.0**
OHH				S		**Sn**	**20 07 18.7**	**+1.3**
DRK	**Karamyk**	**1.34**	**271**	⇑*i*	P	**Pb**	**20 07 03.6**	**+0.4**
	baz=69							
DRK				⇑*i*	S	**Sn**	**20 07 21.4**	**0.0**
	baz=69							
TSTA	**Tashata**	**1.37**	**324**	P		**Pn**	**20 07 03.1**	**0.0**
TSTA				S		**Sn**	**20 07 23.1**	**+1.4**
FRG	**Fergana**	**1.62**	**304**	P		**Pb**	**20 07 07.3**	**-0.4**
FRG				S		**Sg**	**20 07 30.9**	**+1.5**
NAM	**Namangan**	**2.09**	**317**	P		**Pg**	**20 07 18.5**	**+1.1**
NAM				S		**Sg**	**20 07 48.1**	**+3.6**
ARLS	**Aral**	**2.46**	**14**	⇑*i*	P	**Pb**	**20 07 22.4**	**+0.3**
	baz=16							
ARLS				⇑*i*	S	**Sb**	**20 07 53.6**	**+0.9**
	baz=16							
GAR	**Garm**	**2.54**	**260**	⇑*i*	P	**Pb**	**20 07 23.1**	**-0.5**
	baz=59							
GAR				⇑*i*	S	**Sb**	**20 07 55.2**	**0.0**
	baz=59							
CHDK	**Chadak**	**2.60**	**306**	P		**Pb**	**20 07 24.2**	**-0.3**
CHDK				S		**Sg**	**20 08 00.0**	**-1.0**
ARK	**Arkit**	**2.61**	**333**	P		**Pb**	**20 07 24.1**	**-0.6**
ARK				S		**Sb**	**20 07 58.3**	**+1.2**
AML	**Almayashu**	**2.66**	**3**	P		**Pb**	**20 07 25.2**	**-0.4**
	SNR=68							
EKS2	**Erkin-Say**	**3.19**	**3**	P		**Pb**	**20 07 33.3**	**-1.2**
	SNR=25							
AAK	**Ala-Archa**	**3.24**	**13**	Pn		**Pb**	**20 07 34.4**	**-1.0**
	7.7nm,0.3s,baz=178,slow=12,SNR=44							
AAK					Sn	**Sb**	**20 08 17.1**	**+1.9**
	4.7nm,0.3s,baz=123,slow=18,SNR=10							
	41nm,0.7s							
AAK	**Ala-Archa**	**3.24**	**13**	P		**Pb**	**20 07 34.5**	**-1.0**
	SNR=27							
AAK	**Ala-Archa**	**3.24**	**13**	⇑*i*	P	**Pb**	**20 07 33.3**	**-2.1**
	baz=14							
AAK				⇑*i*	S	**Sb**	**20 08 12.7**	**-2.6**
	baz=14							
KBK	**Karagaybulak**	**3.35**	**18**	P		**Pb**	**20 07 37.2**	**-0.1**
	SNR=11							
KBK	**Karagaybulak**	**3.35**	**18**	⇑*i*	P	**Pb**	**20 07 34.6**	**-2.8**
	baz=19							
KBK				⇑*i*	S	**Sb**	**20 08 15.2**	**-3.3**
	baz=19							
ULHL	**Ulahol**	**3.44**	**36**	P		**Pg**	**20 07 42.2**	**-1.1**
	SNR=30							
BOOM	**Boomskoye usch**	**3.52**	**30**	⇓*i*	P	**Pb**	**20 07 36.9**	**-3.3**
	baz=32							
BOOM				⇓*i*	S	**Sb**	**20 08 19.8**	**-3.4**
	baz=32							
CHMS	**Chumysh**	**3.64**	**14**	P		**Pb**	**20 07 40.2**	**-2.0**
	SNR=12							
CHMS	**Chumysh**	**3.64**	**14**	⇓Pn		**Pb**	**20 07 40.4**	**-1.7**
	15nm,0.6s							
CHMS				⇑Lg		Lg	20 08 37.2	
	44nm,0.8s							
CHMS	**Chumysh**	**3.64**	**14**	⇑*eP*		**Pb**	**20 07 38.3**	**-3.8**
	baz=15							
CHMS				⇑*i*	S	**Sn**	**20 08 21.6**	**+4.0**
	baz=15							
TAS	**Tashkent**	**3.73**	**301**	⇓*i*	P	**Pn**	**20 07 38.9**	**+3.4**
	baz=1.0							
TAS				⇓*i*	S	**Sn**	**20 08 22.4**	**+2.6**
	baz=1.0							
IUG	**Iuzhnay**	**3.77**	**316**	*eP*		**Pg**	**20 07 47.7**	**-1.8**
	1μm,0.7s							
IUG				*eS*		**Sg**	**20 08 36.4**	**-2.0**
	481nm,0.7s							
IUG	**Iuzhnay**	**3.77**	**316**	*eP*		**Pb**	**20 07 44.4**	**0.0**
	642nm,0.2s							
IUG				*eS*		**Sb**	**20 08 26.9**	**-3.4**
	313nm,0.3s							
IUG	**Iuzhnay**	**3.77**	**316**	Pg		**Pn**	**20 07 40.1**	**+3.9**
	391nm,0.6s							
IUG				Lg		Lg	20 08 27.1	
	313nm,0.6s							
TKM2	**Tokmak 2**	**3.78**	**24**	P		**Pb**	**20 07 43.9**	**-0.7**
	SNR=8.6							
TKM2	**Tokmak 2**	**3.78**	**24**	⇑Pn		**Pb**	**20 07 42.2**	**-2.4**
	5.8nm,0.5s							
TKM2				⇓Pg		**Pg**	**20 07 51.5**	**+1.8**
	7.7nm,0.4s							
TKM2				⇑Lg		Lg	20 08 42.6	
	38nm,0.7s							
USP	**Ospenovka**	**3.86**	**11**	P		**Pb**	**20 07 42.6**	**-3.2**
	SNR=12							
KST	**Kastek**	**4.01**	**26**	*eP*		**Pg**	**20 07 53.7**	**-0.4**
	8.0nm,0.8s							
KST				*eS*		**Sg**	**20 08 46.7**	**+0.7**
	59nm,0.8s							
KST	**Kastek**	**4.01**	**26**	*eP*		**Pg**	**20 07 55.4**	**+1.3**
	8.1nm,0.2s							
KST				*eS*		**Sg**	**20 08 46.5**	**+0.4**
	14nm,0.3s							
KST	**Kastek**	**4.01**	**26**	Pg		**Pg**	**20 07 51.7**	**-2.4**
	8.2nm,0.7s							
KST				Lg		Lg	20 08 46.7	
	59nm,0.8s							
SGDS	**Sogindy**	**4.06**	**11**	*eP*		**Pg**	**20 07 53.8**	**-1.3**
	9.2nm,0.4s							
SGDS				*eS*		**Sg**	**20 08 47.5**	**-0.2**
	35nm,0.9s							
SGDS	**Sogindy**	**4.06**	**11**	*eP*		**Pg**	**20 07 52.6**	**-2.6**
	6.4nm,0.4s							
SGDS				*eS*		**Sb**	**20 08 41.0**	**+2.3**
	36nm,0.5s							
SGDS	**Sogindy**	**4.06**	**11**	Pg		**Pg**	**20 07 52.5**	**-2.6**
	9.2nm,0.4s							
SGDS				Lg		Lg	20 08 47.5	
	35nm,0.9s							
CHM	**Chimkent**	**4.12**	**315**	*eP*		**Pg**	**20 07 54.4**	**-1.9**
	4.3nm,0.5s							
CHM				*eS*		**Sg**	**20 08 48.2**	**-1.4**
	221nm,0.2s							
KK31	**Karatay Array**	**4.28**	**329**	⇑Pn		**Pn**	**20 07 47.3**	**+4.2**
	2.1nm,0.3s,baz=150,slow=11,SNR=96							
KK31				⇑Pg		**Pg**	**20 07 57.1**	**-2.3**
	7.9nm,0.4s,baz=152,slow=16,SNR=20							
KK31				⇓Sn		**Sn**	**20 08 38.3**	**+4.9**
	12nm,0.5s,baz=144,slow=23,SNR=4.8							
KK31				⇑Lg		Lg	20 08 54.6	
	33nm,0.5s							
KRBS	**Karabastau**	**4.51**	**20**	*eP*		**Pg**	**20 08 02.7**	**-1.1**
	9.8nm,0.8s							
KRBS				*eS*		**Sg**	**20 09 03.6**	**+1.3**
	23nm,0.7s							
KRBS	**Karabastau**	**4.51**	**20**	Pg		**Pg**	**20 08 01.6**	**-2.2**
	9.8nm,0.8s							
KRBS				Lg		Lg	20 09 03.6	
	23nm,0.7s							
MDOK	**Medeo**	**4.54**	**35**	*eP*		**Pg**	**20 08 02.8**	**-1.4**
	6.6nm,0.6s							
MDOK				*eS*		**Sg**	**20 09 03.0**	**0.0**
	44nm,0.5s							
MDOK	**Medeo**	**4.54**	**35**	*eP*		**Pg**	**20 08 05.3**	**+1.1**
	6.8nm,0.4s							
MDOK				*eS*		**Sg**	**20 09 03.5**	**+0.5**
	44nm,0.5s							
MDOK	**Medeo**	**4.54**	**35**	⇓Pn		**Pb**	**20 07 53.5**	**-3.9**
	5.6nm,0.6s							
MDOK				⇑Pg		**Pg**	**20 08 06.5**	**+2.2**
	16nm,0.6s							
MDOK				⇑Lg		Lg	20 09 06.9	
	53nm,0.8s							
KTBS	**Karatobe**	**4.84**	**28**	*eP*		**Pg**	**20 08 09.3**	**-0.9**
	7.2nm,0.7s							
KTBS				*eS*		**Sg**	**20 09 14.4**	**+1.5**
	29nm,0.4s							
KTBS	**Karatobe**	**4.84**	**28**	Pg		**Pg**	**20 08 08.1**	**-2.1**
	7.2nm,0.7s							
KUU	**Kurty**	**4.89**	**25**	*eP*		**Pg**	**20 08 09.2**	**-1.8**
	8.4nm,0.5s							
KUU				*eS*		**Sg**	**20 09 14.1**	**-0.2**
	26nm,0.6s							
KUU	**Kurty**	**4.89**	**25**	Pg		**Pg**	**20 08 08.4**	**-2.6**
	8.4nm,0.5s							
SATY	**Saty**	**5.13**	**44**	*eP*		**Pg**	**20 08 16.4**	**+0.9**
	11nm,0.7s							
SATY				*eS*		**Sg**	**20 09 26.4**	**+4.4**
	35nm,0.4s							
SATY	**Saty**	**5.13**	**44**	*eP*		**Pg**	**20 08 18.1**	**+2.5**
	13nm,0.4s							
SATY				*eS*		**Sg**	**20 09 25.4**	**+3.4**
	35nm,0.4s							
ZHN	**Zhinishke**	**5.22**	**43**	*eP*		**Pg**	**20 08 17.9**	**+0.6**
	6.9nm,0.1s							
ZHN				*eS*		**Sg**	**20 09 24.2**	**-0.6**
	26nm,0.3s							
KURS	**Kuram**	**5.31**	**39**	*eP*		**Pg**	**20 08 20.0**	**+0.9**
	9.9nm,0.3s							
KURS				*eS*		**Sg**	**20 09 27.8**	**0.0**
	16nm,0.6s							
UZB	**Uzynbulak**	**5.52**	**47**	*eP*		**Pg**	**20 08 20.7**	**-2.4**
	3.4nm,0.3s							
UZB				*eS*		**Sg**	**20 09 33.7**	**-1.0**
	12nm,0.4s							
UZB	**Uzynbulak**	**5.52**	**47**	*eP*		**Pg**	**20 08 23.2**	**0.0**
	4.1nm,0.4s							
UZB				*eS*		**Sg**	**20 09 33.7**	**-1.0**
	12nm,0.5s							
MKAR	**Makanchi Array**	**9.71**	**38**	Pn		Pn	20 09 02.7	+5.0
	baz=209,slow=15,SNR=2.4							
MKAR				Lg		Lg	20 11 45.8	
	0.1nm,0.3s,baz=220,slow=26,SNR=3.8							
KURBB	**Kurchatov Arra**	**11.69**	**16**	Pn		**Pn**	**20 09 26.8**	**+2.2**
	baz=206,slow=12,SNR=5.1							
KURBB				Lg		Lg	20 12 48.3	
	baz=203,slow=29,SNR=6.0							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**11.69**	**16**	⇓Lg		Lg	20 12 53.1	
	11nm,0.8s							
KURK	**Kurchatov**	**11.80**	**16**	⇑Lg		Lg	20 12 56.6	
	12nm,1.0s							
GEYT	**Alibeck**	**12.15**	**268**	Pn		**Pn**	**20 09 28.6**	**-2.4**
	1.0nm,0.4s,baz=70,slow=9.3,SNR=1.6							
GEYT					Sn	**Sn**	**20 11 43.4**	**-3.5**
	0.3nm,0.3s,baz=83,slow=24,SNR=1.5							
BVA0	**Borovoye Array**	**13.72**	**352**	⇓Pn		**P**	**20 09 57.3**	**-4.0**
	3.4nm,0.7s,baz=156,slow=9.1,SNR=8.7							
AB31	**Aktubulak array**	**13.77**	**320**	⇓Pn		**Pn**	**20 09 55.8**	**+2.7**
	2.1nm,0.8s							
BRVK	**Borovoye**	**13.77**	**352**	⇑Pn		**P**	**20 09 57.5**	**-4.3**
	3.3nm,0.8s							
AKTO	**Aktyubinsk**	**15.48**	**320**	Pn		**Pn**	**20 10 16.9**	**+0.7**
	0.4nm,0.3s,baz=105,slow=10,SNR=9.0							
AKTO					Sn	**Sn**	**20 13 02.7**	**-5.3**
	0.1nm,0.3s,baz=162,slow=20,SNR=1.8							
AKTO					LR	LR	20 17 14.1	
	comp=Z,15nm,20.7s,baz=65,slow=41							
	0.9nm,0.5s							
AKTO	**Aktyubinsk**	**15.48**	**320**	⇑Pn		**P**	**20 10 19.1**	**-1.7**
	4.3nm,0.8s							
ZALV	**Zalesovo Beam**	**16.38**	**24**	Pn		**P**	**20 10 31.0**	**+0.3**
	0.2nm,0.3s,baz=206,slow=9.7,SNR=6.9							
	1.6nm,0.6s							
ARU	**Arti**	**19.63**	**335**	P		**Pn**	**20 11 08.7**	**+0.8**
	baz=128,slow=19,SNR=2.6							
ARU					LR	LR	20 19 12.5	
	comp=Z,29nm,21.9s,baz=99,slow=38							
	2.1nm,0.7s							
SONM	**Songino Array**	**25.05**	**60**	P		**P**	**20 12 04.1**	**+1.7**
	0.5nm,0.7s,baz=263,slow=12,SNR=3.1							
	0.5nm,0.7s							
BRTR	**Keskin Array B**	**30.57**	**283**	P		**P**	**20 12 53.3**	**+1.3**
	1.4nm,0.8s,baz=84,slow=8.0,SNR=8.0							
	1.4nm,0.8s							
AKASG	**Malin Array Be**	**32.77**	**305**	P		**P**	**20 13 11.7**	**+0.7**
	0.3nm,0.4s,baz=79,slow=7.3,SNR=7.0							
	0.3nm,0.4s							
EIL	**Elat**	**33.03**	**265**	LR		LR	20 28 45.3	
	comp=Z,12nm,21.4s,baz=275,slow=40							
MLR	**Muntele Rosu**	**35.19**	**296**	P		**P**	**20 13 32.8**	**+0.5**
	2.2nm,0.5s,baz=96,slow=11,SNR=6.8							
	2.2nm,0.5s							
FINES	**FINESS Array B**	**36.22**	**323**	P		**P**	**20 13 41.8**	**+1.1**
	0.7nm,0.4s,baz=113,slow=9.7,SNR=13							
	0.7nm,0.4s							
ARCES	**ARCESS Array B**	**39.22**	**336**	P		**P**	**20 14 06.9**	**+0.9**
	0.9nm,0.6s,baz=106,slow=8.9,SNR=5.3							
	0.9nm,0.6s							
HFS	**Hagfors**	**42.03**	**320**	P		**P**	**20 14 30.1**	**+0.7**
	1.8nm,0.5s,baz=102,slow=11,SNR=13							
	1.8nm,0.5s							
GERES	**GERESS Array B**	**42.92**	**303**	P		**P**	**20 14 38.1**	**+1.2**
	0.4nm,0.7s,baz=54,slow=9.0,SNR=6.0							
GERES					LR	LR	20 34 16.9	
	comp=Z,97nm,21.6s,baz=156,slow=39							
	0.4nm,0.7s							
NB2	**NORSAR Subarra**	**43.27**	**321**	P		**P**	**20 14 39.8**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=90,slow=8.6							
NOA	**NORSAR Array B**	**43.27**	**321**	P		**P**	**20 14 39.8**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=91,slow=7.8,SNR=7.3							
	comp=Z,1.1nm,0.6s							
DAVOX	**Davos/Dischmat**	**45.89**	**301**	P		**P**	**20 15 00.1**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=117,slow=9.0,SNR=4.1							
	comp=Z,0.9nm,0.5s							
EKA	**Eskdalemuir Ar**	**51.58**	**315**	P		**P**	**20 15 44.2**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=86,slow=8.5,SNR=8.4							
	comp=Z,0.5nm,0.5s							
ESDC	**Sonseca Array**	**57.86**	**297**	P		**P**	**20 16 30.3**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=54,slow=7.1,SNR=8.2							
	comp=Z,0.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P		**P**	**20 17 35.1**	**-1.3**
	comp=Z,0.8nm,1.0s,baz=59,slow=5.4,SNR=4.1							
	comp=Z,0.8nm,1.0s							
ILAR	**Eielson Array**	**71.36**	**17**	P		**P**	**20 17 57.8**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=329,slow=4.6,SNR=4.4							
	comp=Z,0.6nm,0.8s							
WRA	**Warramunga Arr**	**81.92**	**124**	P		**P**	**20 18 57.5**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=326,slow=4.9,SNR=3.2							
	comp=Z,0.8nm,0.9s							
ASAR	**Alice Springs**	**84.37**	**127**	P		**P**	**20 19 09.5**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=312,slow=5.6,SNR=1.4							
	comp=Z,0.2nm,0.6s							

IDC 14 20:22:13.7±2.1, 8.11S×123.23E, h0km, mb3.3/1, mbtmp3.5/3, ML3.8/2, MS3.2/1, Error ellipse: s-maj=265.8km s-min=31.5km az=57.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.94**	**139**	Pn		Pn	20 25 59.5	0.0
	0.5nm,0.3s,baz=313,slow=14,SNR=16							
WRA					Sn	Sn	20 28 42.5	-15
	0.2nm,0.3s,baz=300,slow=22,SNR=2.7							
	0.8nm,0.4s							
ASAR	**Alice Springs**	**18.55**	**148**	P		P	20 26 32.1	0.0
	0.2nm,0.3s,baz=330,slow=13,SNR=25							
ASAR					S	Sn	20 29 47.2	-13
	0.7nm,0.7s,baz=318,slow=20,SNR=5.0							
	1.0nm,0.5s							
HNR	**Honiara**	**36.30**	**95**	LR		LR	20 44 47.3	
	comp=Z,31nm,18.1s,baz=248,slow=37							
MKAR	**Makanchi Array**	**65.66**	**330**	P		P	20 32 59.9	0.0
	0.2nm,0.8s,baz=125,slow=7.7,SNR=1.4							
	0.2nm,0.8s							

KRSC ***14*** *21:11:20.6±1.9, 49.24°N×157.23°E, h40km±31km, ML4.9*
MOS ***14*** *21:11:23.9±1.0, 49.43°N×156.35°E, h64km, mb4.5/5, Error ellipse: s-maj=14.2km s-min=4.4km az=80.5*
IDC ***14*** *21:11:24.0±0.7, 49.36°N×156.19°E, h46km±6km, mb3.5/15, mbtmp3.7/17, ML5.1/1, MS3.3/24, Error ellipse: s-maj=17.2km s-min=10.8km az=125.0*
NEIC ***14*** *21:11:26.9±0.9, 49.56°N±0.05°×156.1°E±0.2, h67km±10km, mb4.2/10, Error ellipse: s-maj=22.7km s-min=2.6km az=108.0*

ISC 14 21:11:24.4±0.7, 49.32N±0.06×156.49E±0.06, h56km±5km, h55km:pP-P, n114, σ1s44/116, mb4.2/28, MS3.4/20, 6C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.38**	**350**	⇓*i*	PN	**Pn**	**21 11 46.4**	**-0.9**
SKR				*i*	S	**Sn**	**21 12 02.9**	**-1.7**
SKR					pmax	pmax		
	comp=Z,320nm,0.4s							
SKR					smax	smax		
	comp=N,4μm,0.4s							
SKR					smax	smax		
	comp=E,2μm,0.3s							
SKR	**Severo-Kuril's**	**1.38**	**350**	*eP*		**Pn**	**21 11 45.6**	**-1.7**
SKR				*eS*		**Sn**	**21 12 04.9**	**+0.3**
PAU	**Pauzhetka**	**2.16**	**5**	PN		**Pn**	**21 11 57.4**	**-0.5**
PAU				S		**Sn**	**21 12 24.1**	**+0.7**
PAU	**Pauzhetka**	**2.16**	**5**	*eP*		**Pn**	**21 11 57.4**	**-0.5**
PAU				*eS*		**Sn**	**21 12 24.1**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.69**	**22**	PN		**Pn**	**21 12 04.0**	**-1.1**
KDTR				S		**Sn**	**21 12 35.0**	**-1.4**
KDTR	**Khodutka, Kamc**	**2.69**	**22**	*eP*		**Pn**	**21 12 04.0**	**-1.1**
KDTR				*eS*		**Sn**	**21 12 35.0**	**-1.4**
MTVR	**Mutnovka**	**3.34**	**18**	PN		**Pn**	**21 12 13.9**	**-0.3**
MTVR				S		**Sn**	**21 12 52.9**	**+0.2**
MTVR	**Mutnovka**	**3.34**	**18**	*eP*		**Pn**	**21 12 13.9**	**-0.3**
MTVR				*eS*		**Sn**	**21 12 52.9**	**+0.2**
RUS	**Russkaya**	**3.37**	**22**	PN		**Pn**	**21 12 13.3**	**-1.1**
RUS				S		**Sn**	**21 12 52.4**	**-0.7**
RUS	**Russkaya**	**3.37**	**22**	*eP*		**Pn**	**21 12 13.3**	**-1.1**
RUS				*eS*		**Sn**	**21 12 52.4**	**-0.7**
GRL	**Gorelyy**	**3.39**	**17**	PN		**Pn**	**21 12 15.1**	**+0.3**
GRL				S		**Sn**	**21 12 54.9**	**+1.2**
GRL	**Gorelyy**	**3.39**	**17**	*eP*		**Pn**	**21 12 15.1**	**+0.3**
GRL				*eS*		**Sn**	**21 12 54.9**	**+1.2**
APC	**Apacha**	**3.63**	**6**	PN		**Pn**	**21 12 19.1**	**+1.1**
APC	**Apacha**	**3.63**	**6**	*eP*		**Pn**	**21 12 19.1**	**+1.1**
KRMR	**Karymshinskiy**	**3.66**	**16**	PN		**Pn**	**21 12 19.0**	**+0.6**
KRMR				S		**Sn**	**21 13 02.1**	**+1.8**
KRMR	**Karymshinskiy**	**3.66**	**16**	*eP*		**Pn**	**21 12 19.0**	**+0.6**
KRMR				*eS*		**Sn**	**21 13 02.1**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.87**	**11**			**Pn**	**21 12 21.6**	**+0.3**
PEA0B	**Petropavlovsk-**	**3.87**	**11**	*ce*	PN	**Pn**	**21 12 21.5**	**+0.3**
PETK	**Petropavlovsk-**	**3.87**	**11**	P		**Pn**	**21 12 21.2**	**0.0**
	comp=E,10nm,0.5s,baz=186,slow=6.7,SNR=40							
PETK					S	**Sn**	**21 13 06.2**	**+0.8**
	comp=E,15nm,0.5s,baz=210,slow=20,SNR=5.6							
PETK					LR	LR	21 14 05.2	
	comp=E,545nm,19.1s,baz=187,slow=42							
PET	**Petropavlovsk**	**3.95**	**19**			**Pn**	**21 12 22.1**	**-0.2**
PET					Sn	**Sn**	**21 13 08.0**	**+0.6**
PET	**Petropavlovsk**	**3.95**	**19**	*ePN*		**Pn**	**21 12 22.3**	**-0.1**
PET				*eS*		**Sn**	**21 13 07.9**	**+0.6**
PET					smax	smax		
	comp=E,541nm,0.6s							
PET					smax	smax		
	comp=N,633nm,0.6s							
PET					MLR	MLR		
	comp=Z,200nm,14.0s							
PET					MLR	MLR		
	comp=Z,300nm,14.0s							
PET	**Petropavlovsk**	**3.95**	**19**	*eS*		**Sn**	**21 13 08.7**	**+1.4**
DALK	**Dalny**	**3.98**	**20**	PN		**Pn**	**21 12 22.5**	**-0.3**
DALK				S		**Sn**	**21 13 08.2**	**+0.1**
DALK	**Dalny**	**3.98**	**20**	*eP*		**Pn**	**21 12 22.5**	**-0.3**
DALK				*eS*		**Sn**	**21 13 08.2**	**+0.1**
UGLR	**Uglovaya**	**4.16**	**20**	PN		**Pn**	**21 12 26.5**	**+1.1**
UGLR	**Uglovaya**	**4.16**	**20**	*eP*		**Pn**	**21 12 26.5**	**+1.1**
KOK	**Koryaka**	**4.20**	**18**	PN		**Pn**	**21 12 27.3**	**+1.4**
KOK	**Koryaka**	**4.20**	**18**	*eP*		**Pn**	**21 12 27.3**	**+1.4**
KRER	**Koryakskii**	**4.23**	**19**	PN		**Pn**	**21 12 27.3**	**+0.9**
KRER	**Koryakskii**	**4.23**	**19**	*eP*		**Pn**	**21 12 27.3**	**+0.9**
SDLR	**Sedlovina**	**4.24**	**20**	PN		**Pn**	**21 12 26.8**	**+0.4**
SDLR	**Sedlovina**	**4.24**	**20**	*eP*		**Pn**	**21 12 26.8**	**+0.4**
SPN	**Mys Shipunski**	**4.38**	**29**	PN		**Pn**	**21 12 27.4**	**-0.9**
SPN				S		**Sn**	**21 13 15.9**	**-2.2**
SPN	**Mys Shipunski**	**4.38**	**29**	*eP*		**Pn**	**21 12 27.4**	**-0.9**
SPN				*eS*		**Sn**	**21 13 15.9**	**-2.2**
GNL	**Ganaly**	**4.47**	**11**	PN		**Pn**	**21 12 30.7**	**+1.0**
GNL	**Ganaly**	**4.47**	**11**	*eP*		**Pn**	**21 12 30.7**	**+1.0**
MKZ	**Mys Kozlova**	**6.16**	**30**	PN		**Pn**	**21 12 50.7**	**-1.9**
MKZ	**Mys Kozlova**	**6.16**	**30**	*eP*		**Pn**	**21 12 50.7**	**-1.9**
MKZ				*eS*		**Sn**	**21 13 58.3**	**-3.3**
TUMR	**Tumrok**

I23K					IAmb	IAmb	21 18 27.1	
	comp=Z,5.5nm,1.4s							
SONM	**Songino Array**	**32.69**	**287**	LR	LR		21 33 44.0	
	comp=Z,36nm,18.0s,baz=90,slow=41							
ILAR	**Eielson Array**	**33.12**	**41**	P	**P**		**21 17 56.0**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=259,slow=4.7,SNR=5.5							
	comp=Z,0.5nm,0.7s							
NRIK	**Noril'sk**	**37.77**	**327**	LR	LR		21 36 04.4	
	comp=Z,76nm,18.9s,baz=345,slow=39							
NRIK	**Noril'sk**	**37.77**	**327**	*i* P	**P**		**21 18 36.5**	**+2.0**
NRIK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
INK	**Inuvik**	**38.26**	**34**	LR	LR		21 35 36.7	
	comp=Z,24nm,18.4s,baz=133,slow=38							
ZALV	**Zalesovo Beam**	**42.98**	**305**	P	**P**		**21 19 16.4**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=97,slow=7.4,SNR=2.6							
ZALV				LR	LR		21 38 33.1	
	comp=Z,26nm,18.4s,baz=30,slow=38							
	comp=Z,0.9nm,0.7s							
YKA	**Yellowknife Ar**	**47.50**	**39**	P	**P**		**21 19 54.9**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=308,slow=6.0,SNR=2.5							
YKA				pP	**pP**		**21 20 06.6**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=297,slow=8.1,SNR=5.1							
	comp=Z,0.5nm,0.8s							
PZH	**PanZhiHua**	**47.62**	**262**	P	**P**		**21 19 56.4**	**+1.5**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
PZH				pmax	pmax			
	comp=Z,80nm,4.0s							
MKAR	**Makanchi Array**	**47.79**	**297**	P	**P**		**21 19 54.2**	**-1.6**
	comp=Z,1.2nm,0.9s,baz=60,slow=7.4,SNR=8.2							
MKAR				LR	LR		21 41 35.7	
	comp=Z,96nm,18.1s,baz=73,slow=38							
	comp=Z,1.2nm,0.9s							
MKAR	**Makanchi Array**	**47.79**	**297**	*eP*	**P**		**21 19 54.8**	**-1.1**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KURK	**Kurchatov**	**47.84**	**303**	*ce*P	**P**		**21 19 55.7**	**-0.5**
KURK				pmax	pmax			
	comp=Z,4.0nm,1.3s							
KURBB	**Kurchatov Arra**	**47.94**	**303**	P	**P**		**21 19 55.4**	**-1.5**
	comp=Z,2.3nm,0.9s,baz=62,slow=7.5,SNR=12							
KURBB				LR	LR		21 40 28.7	
	comp=Z,39nm,18.5s,baz=66,slow=36							
	comp=Z,2.3nm,0.9s							
BRVK	**Borovoye**	**51.02**	**309**	*ce*P	**P**		**21 20 19.6**	**-0.7**
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
YBH	**Yreka Blue Hor**	**54.56**	**65**	LR	LR		21 43 01.0	
	comp=Z,11nm,18.9s,baz=288,slow=35							
ARU	**Arti**	**54.64**	**318**	LR	LR		21 45 55.9	
	comp=Z,28nm,18.1s,baz=16,slow=38							
ARU	**Arti**	**54.64**	**318**	*d* iP	**P**		**21 20 46.5**	**-0.5**
ARU							21 22 45.1	
ARU				S	**S**		**21 28 23.1**	**+0.7**
ARU				SS	**SS**		**21 31 58.9**	**-6.2**
ARU				pmax	pmax			
	comp=Z,4.0nm,1.5s							
AAK	**Ala-Archa**	**54.72**	**296**	LR	LR		21 45 47.0	
	comp=Z,76nm,18.8s,baz=54,slow=38							
CMAR	**Chiang Mai Arr**	**55.16**	**257**	P	**P**		**21 20 52.2**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=38,slow=7.5,SNR=2.7							
CMAR				pP	**pP**		**21 21 03.6**	**-2.1**
	comp=Z,2.1nm,0.8s,baz=32,slow=6.6,SNR=8.0							
	comp=Z,0.4nm,0.5s							
ARCES	**ARCESS Array B**	**56.15**	**341**	LR	LR		21 49 54.7	
	comp=Z,36nm,18.2s,baz=38,slow=41							
KIRV	**Kirov**	**57.07**	**323**	LR	LR		21 47 53.7	
	comp=Z,32nm,18.5s,baz=59,slow=38							
ABKAR	**Akbulak array**	**58.51**	**310**	P	**P**		**21 21 14.5**	**0.0**
ABKAR	**Akbulak array**	**58.51**	**310**	P	**P**		**21 21 13.5**	**-1.0**
NVAR	**Mina Array Bea**	**59.27**	**66**	P	**P**		**21 21 22.2**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=306,slow=7.7,SNR=2.5							
	comp=Z,0.2nm,0.5s							
PDAR	**Pinedale Array**	**61.42**	**57**	P	**P**		**21 21 37.0**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=302,slow=3.3,SNR=4.6							
PDAR				pP	**pP**		**21 21 49.0**	**-0.1**
	comp=Z,1.2nm,1.1s,baz=335,slow=4.0,SNR=3.0							
	comp=Z,0.4nm,0.6s							
BELG	**Belogornoye**	**62.10**	**319**	LR	LR		21 49 47.7	
	comp=Z,27nm,19.1s,baz=199,slow=37							
SFJD	**Kangerlussuaq**	**62.20**	**12**	LR	LR		21 49 50.8	
	comp=Z,32nm,20.1s,baz=335,slow=37							
FINES	**FINESS Array B**	**62.65**	**336**	P	**P**		**21 21 42.5**	**0.0**
	comp=Z,1.6nm,0.9s,baz=36,slow=10,SNR=1.8							
FINES				LR	LR		21 51 23.5	
	comp=Z,29nm,19.4s,baz=24,slow=38							
	comp=Z,1.6nm,0.9s							
OBN	**Obninsk**	**64.44**	**326**	⇑*eP*	**P**		**21 21 54.7**	**+0.3**
OBN				*e*			21 24 18.7	
OBN				*eS*	**sS**		**21 30 56.8**	**+2.7**
OBN				pmax	pmax			
	comp=Z,6.0nm,0.4s							
OBN				MLR	MLR			
	comp=Z,20nm,15.0s							
NOA	**NORSAR Array B**	**66.49**	**342**	LR	LR		21 55 46.3	
	comp=Z,28nm,19.2s,baz=35,slow=40							
HFS	**Hagfors**	**66.81**	**341**	LR	LR		21 53 42.5	
	comp=Z,24nm,19.9s,baz=42,slow=38							
KIV	**Kislovodsk**	**70.59**	**316**	*eP*	**P**		**21 22 32.2**	**-1.4**
KIV				pmax	pmax			
	comp=Z,9.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,17nm,17.0s							
AKASG	**Malin Array Be**	**70.63**	**328**	LR	LR		21 55 58.7	
	comp=Z,26nm,21.1s,baz=42,slow=38							
WRA	**Warramunga Arr**	**71.72**	**202**	P	**P**		**21 22 40.4**	**0.0**
	comp=Z,0.8nm,0.7s,baz=19,slow=6.3,SNR=5.5							
WRA				pP	**pP**		**21 22 54.2**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=14,slow=6.5,SNR=2.0							
	comp=Z,0.8nm,0.7s							
GNI	**Garni**	**72.55**	**312**	LR	LR		21 57 01.4	
	comp=Z,18nm,19.5s,baz=27,slow=38							
TX31	**Lajitas Ar. Si**	**74.28**	**63**	P	**P**		**21 22 57.1**	**+1.4**
TX31				IAmb	IAmb		21 22 58.0	
	comp=Z,2.2nm,0.6s							
TX32	**Lajitas Array**	**74.28**	**63**	P	**P**		**21 22 57.3**	**+1.5**
TXAR	**Lajitas Array**	**74.28**	**63**	P	**P**		**21 22 57.5**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=307,slow=4.6,SNR=10							
	comp=Z,0.8nm,0.7s							
ASAR	**Alice Springs**	**75.40**	**201**	P	**P**		**21 23 03.1**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=16,slow=5.5,SNR=5.2							
	comp=Z,0.3nm,0.6s							
GERES	**GERESS Array B**	**77.09**	**336**	P	**P**		**21 23 11.2**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=15,slow=4.3,SNR=2.6							
	comp=Z,0.3nm,0.7s							
BRTR	**Keskin Array B**	**78.02**	**319**	P	**P**		**21 23 15.5**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=35,slow=7.4,SNR=3.3							
	comp=Z,1.0nm,0.9s							
BRTR	**Keskin Array B**	**78.02**	**319**	*eP*	**P**		**21 23 19.6**	**+2.7**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
H03N2	**Juan Fernandez**	**136.49**	**90**	T	T		00 02 48.8	
	baz=313,slow=77,SNR=3.8							
H03N1	**Juan Fernandez**	**136.51**	**90**	T	T		00 02 52.5	
	baz=313,slow=77,SNR=4.2							
H03N3	**Juan Fernandez**	**136.51**	**90**	T	T		00 03 05.7	
	baz=313,slow=77,SNR=6.3							

IDC 14 21:30:21.7±3.1, 7°.14S×147°.59E, h0km, mb3.5/2, mbtmp3.5/3, ML3.4/1, MS3.2/3, Error ellipse: s-maj=98.2km s-min=41.3km az=121.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**17.43**	**290**	LR	LR	21 41 31.0	
	comp=Z,79nm,18.5s,baz=156,slow=38						
WRA	**Warramunga Arr**	**18.09**	**224**	P	Pn	21 34 34.4	-0.3
	0.1nm,0.3s,baz=50,slow=12,SNR=7.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**21.04**	**217**	P	P	21 35 07.6	+0.2
	0.7nm,0.4s,baz=51,slow=8.7,SNR=11						
	0.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.00**	**241**	P	P	21 35 38.0	-0.3
	0.6nm,0.3s,baz=61,slow=9.9,SNR=6.0						
	0.6nm,0.3s						
AFI	**Afiamalu**	**40.47**	**103**	LR	LR	21 53 05.5	
	comp=Z,38nm,20.4s,baz=50,slow=34						
KSRS	**Korea Array**	**48.02**	**339**	LR	LR	21 58 30.7	
	comp=Z,16nm,18.7s,baz=175,slow=35						
TORD	**Torodi Ar. Bea**	**145.93**	**283**	PKPbc	PKPdf	21 50 03.7	0.0
	0.6nm,0.6s,baz=76,slow=3.3,SNR=7.9						

IDC 14 21:38:17.4±2.8, 36°.23N×71°.00E, h128km±25km, mb3.5/13, mbtmp4.0/17, Error ellipse: s-maj=20.6km s-min=13.2km az=19.0
NNC 14 21:38:18.4±1.4, 36°.74N×70°.59E, h0km, mb4.9, mpv4.5, Error ellipse: s-maj=11.6km s-min=10.8km az=127.0
NEIC 14 21:38:20.8±1.4, 36°.47N±0°.05×70°.96E±0°.09, h158km±8km, mb4.2/13, Error ellipse: s-maj=10.8km s-min=7.6km az=76.0
SOME 14 21:38:24.5, 38°.25N×72°.15E, h15km

ISC 14 21:38:19.7±0.5, 36°.46N±0°.05×70°.97E±0°.05, h150km, n89, σ1§86/105, mb3.9/15, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.48**	**220**	Pn	**Pn**	**21 39 02.6**	**+1.8**
GAR	**Garm**	**2.59**	**349**	Pn	**Pn**	**21 39 03.3**	**+1.2**
CHGR	**Chuyangaron**	**2.62**	**327**	Pn	**Pn**	**21 39 03.4**	**+1.0**
CEP	**Cherat**	**2.74**	**163**	⇓P	**Pn**	**21 39 06.5**	**+2.5**
CEP				S	**Sn**	**21 39 40.0**	**+1.8**
DRK	**Karamyk**	**3.08**	**12**	P	**Pn**	**21 39 09.7**	**+1.3**
CHCP	**Chirah Chowk**	**3.37**	**145**	P	**Pn**	**21 39 13.2**	**+1.3**
NIL	**Nilore**	**3.37**	**146**	Pn	**Pn**	**21 39 13.6**	**+1.7**
THW	**Thamme Wali**	**3.71**	**170**	P	**Pn**	**21 39 17.3**	**+1.0**
TAS	**Tashkent**	**5.03**	**345**	Pn	**Pn**	**21 39 34.2**	**+0.8**
THN	**Thein Dam**	**5.61**	**134**	*eP*	**Pn**	**21 39 41.6**	**+0.3**
THN				*eS*	**Sn**	**21 40 43.2**	**-1.8**
IUG	**Iuzhnay**	**5.72**	**353**	*eP*	**Pn**	**21 39 43.8**	**+1.0**
	475nm,0.4s						
IUG				*eS*	**Sn**	**21 40 45.8**	**-2.0**
	231nm,0.5s						
AML	**Almayashu**	**6.04**	**20**	P	**Pn**	**21 39 47.6**	**+0.3**
	SNR=74						
NRN	**Naryn**	**6.32**	**37**	Pn	**Pn**	**21 39 50.3**	**-0.7**
DZA	**Taraz**	**6.43**	**2**	*eP*	**Pn**	**21 39 53.0**	**+0.9**
	150nm,0.3s						
DZA				*eS*	**Sn**	**21 41 02.3**	**-2.2**
	269nm,0.2s						
EKS2	**Erkin-Say**	**6.56**	**18**	P	**Pn**	**21 39 54.5**	**+0.6**
	SNR=24						
KK31	**Karatay Array**	**6.64**	**357**	Pn	**Pn**	**21 39 55.6**	**+0.7**
KK31	**Karatay Array**	**6.64**	**357**	P	**Pn**	**21 39 53.6**	**-1.4**
	26nm,0.4s,baz=186,slow=14,SNR=446						
KK31				⇑S	**Sn**	**21 41 08.1**	**-1.5**
	9.5nm,0.3s,baz=185,slow=16,SNR=16						
KKAR	**Karatay Array**	**6.64**	**357**	Pn	**Pn**	**21 39 55.6**	**+0.7**
KKAR	**Karatay Array**	**6.64**	**357**		**Pn**	**21 39 55.7**	**+0.7**
AAK	**Ala-Archa**	**6.74**	**23**	P	**Pn**	**21 39 56.9**	**+0.5**
	21nm,0.4s,baz=194,slow=6.3,SNR=30						
AAK				S	**Sn**	**21 41 09.2**	**-3.0**
	22nm,0.5s,baz=151,slow=19,SNR=2.5						
AAK	**Ala-Archa**	**6.74**	**23**	P	**Pn**	**21 39 58.5**	**+2.1**
	SNR=22						
AAK	**Ala-Archa**	**6.74**	**23**		**Pn**	**21 39 57.4**	**+1.0**
BHK	**Bhakra**	**6.77**	**136**	*eP*	**Pn**	**21 39 55.3**	**-1.4**
BHK				*eS*	**Sn**	**21 41 08.6**	**-4.1**
KBK	**Karagaybulak**	**6.91**	**25**	P	**Pn**	**21 40 01.2**	**+2.6**
	SNR=14						
ULHL	**Ulahol**	**7.07**	**34**	P	**Pn**	**21 40 02.5**	**+1.7**
	SNR=6.8						
BOOM	**Boomskoye usch**	**7.14**	**31**	Pn	**Pn**	**21 40 02.4**	**+0.6**
CHMS	**Chumysh**	**7.15**	**23**	P	**Pn**	**21 40 04.1**	**+2.4**
	SNR=8.3						
CHMS	**Chumysh**	**7.15**	**23**	⇓P	**Pn**	**21 40 02.2**	**+0.5**
	21nm,0.5s						
CHMS				⇑S	**Sn**	**21 41 24.0**	**+2.3**
	22nm,0.8s						
USP	**Ospenovka**	**7.32**	**21**	P	**Pn**	**21 40 04.9**	**+0.9**
	SNR=10.0						
TKM2	**Tokmak 2**	**7.37**	**28**	P	**Pn**	**21 40 06.5**	**+1.6**
	SNR=38						
TKM2	**Tokmak 2**	**7.37**	**28**	⇑P	**Pn**	**21 40 06.0**	**+1.2**
	14nm,0.6s						
TKM2				⇑S	**Sn**	**21 41 30.6**	**+3.3**
	20nm,1.0s						
SMLA	**Simla**	**7.41**	**134**	*eP*	**Pn**	**21 40 04.7**	**-0.5**
SMLA				*eS*	**Sn**	**21 41 23.3**	**-4.6**
SMLA				IAML		21 41 28.1	
	comp=E,208nm,0.5s						
SMLA				IAML		21 41 28.2	
	comp=N,129nm,0.2s						
HRA	**Herat**	**7.42**	**256**	Pn	**Pn**	**21 40 06.1**	**+0.5**
SGDS	**Sogindy**	**7.53**	**21**	*eP*	**Pn**	**21 40 06.4**	**-0.4**
	comp=N,11nm,0.5s						
SGDS				*eS*	**Sn**	**21 41 26.3**	**-4.5**
	comp=N,9.8nm,0.8s						
KST	**Kastek**	**7.61**	**29**	*eP*	**Pn**	**21 40 09.2**	**+1.2**
	comp=N,9.6nm,0.5s						
KST				*eS*	**Sn**	**21 41 31.1**	**-1.9**
	comp=N,28nm,0.8s						
MDOK	**Medeo**	**8.16**	**33**	P	**Pn**	**21 40 18.0**	**+2.6**
	comp=N,14nm,0.6s						
MDOK				S	**Sn**	**21 41 52.1**	**+5.8**
	comp=N,11nm,0.9s						
PRZ	**Przheval'sk**	**8.31**	**41**	Pn	**Pn**	**21 40 18.1**	**+0.7**
KUDL	**Kundal**	**9.51**	**149**	*eP*	**Pn**	**21 40 31.9**	**-1.4**
KUDL				*eS*	Sn	21 42 09.6	-9.2
GEYT	**Alibeck**	**10.36**	**282**	P	**Pn**	**21 40 44.5**	**+0.1**
	comp=N,7.2nm,0.5s,baz=112,slow=12,SNR=16						
GEYT				S	**Sn**	**21 42 37.7**	**-1.4**
	comp=N,9.5nm,0.5s,baz=90,slow=23,SNR=6.8						
GEYT	**Alibeck**	**10.36**	**282**	Pn	**Pn**	**21 40 44.1**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**10.36**	**282**		**Pn**	**21 40 44.3**	**-0.2**
PTH	**Pithoragarh**	**10.38**	**129**	*eP*	**Pn**	**21 40 42.7**	**-2.1**
PTH				*eS*	Sn	21 42 29.6	-10
AJM	**Ajmer**	**10.43**	**162**	*eP*	**Pn**	**21 40 46.0**	**+0.4**
MAKZ	**Makanchi**	**13.20**	**35**		**Pn**	**21 41 20.8**	**-0.5**
MK31	**Makanchi Array**	**13.34**	**36**		**Pn**	**21 41 23.4**	**+0.3**
MKAR	**Makanchi Array**	**13.34**	**36**	P	**Pn**	**21 41 22.8**	**-0.3**
	comp=N,0.8nm,0.6s,baz=218,slow=12,SNR=8.4						
MKAR	**Makanchi Array**	**13.34**	**36**	Pn	**Pn**	**21 41 23.7**	**+0.6**
DANN	**Dangsing**	**13.49**	**123**	*eP*	**Pn**	**21 41 24.3**	**-1.1**
	comp=N,16nm,0.4s						
GKN	**Gorkha**	**14.30**	**122**	*eP*	**Pn**	**21 41 34.3**	**-1.3**
	comp=N,18nm,0.4s						
DMN	**Daman**	**14.87**	**122**	*eP*	**Pn**	**21 41 42.6**	**-0.2**
	comp=N,11nm,0.4s						
KKN	**Kakani**	**14.88**	**121**	*eP*	**Pn**	**21 41 41.9**	**-0.9**
PKIN	**Phulchoki**	**15.09**	**122**	*eP*	**Pn**	**21 41 45.0**	**-0.6**
	comp=N,12nm,0.5s						
PKI	**Pulchoki**	**15.10**	**122**	*eP*	**Pn**	**21 41 45.6**	**-0.2**
	comp=N,11nm,0.5s						
ABKAR	**Akbulak array**	**15.11**	**331**	Pn	**Pn**	**21 41 43.9**	**-1.4**
ABKAR				IAmb	IAmb	21 41 47.8	
	comp=Z,6.1nm,0.5s						
ABKAR	**Akbulak array**	**15.11**	**331**	Pn	**Pn**	**21 41 45.0**	**-0.3**
KURBB	**Kurchatov Arra**	**15.17**	**19**	P	**Pn**	**21 41 44.6**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=208,slow=11,SNR=12						
GUN	**Gumba**	**15.22**	**120**	*eP*	**Pn**	**21 41 46.2**	**-1.0**
	comp=Z,12nm,0.3s						
JIRN	**Jiri**	**15.59**	**120**	*eP*	**Pn**	**21 41 50.8**	**-1.0**
	comp=Z,20nm,0.3s						
RAMN	**Ramite**	**16.32**	**121**	*eP*	**P**	**21 42 01.0**	**+0.2**
	comp=Z,6.4nm,0.4s						
BRVK	**Borovoye**	**16.60**	**359**	P	**P**	**21 42 03.8**	**+0.4**
AKTO	**Aktyubinsk**	**16.80**	**330**	P	**Pn**	**21 42 07.2**	**+1.2**
	comp=Z,16nm,0.8s,baz=127,slow=9.9,SNR=39						
AKTO				S	**S**	**21 45 04.2**	**-8.5**
	comp=Z,2.1nm,0.7s,baz=180,slow=20,SNR=3.5						
ODAN	**Odare**	**16.92**	**120**	*eP*	**Pn**	**21 42 08.8**	**+0.9**
LSA	**Lhasa**	**18.19**	**106**	P	**P**	**21 42 20.6**	**-1.0**
LSA				IAmb	IAmb	21 42 29.1	
	comp=Z,5.6nm,0.6s						
ZAA0	**Zalesovo Array**	**19.96**	**24**	P	**P**	**21 42 40.2**	**+0.3**
ZALV	**Zalesovo Beam**	**19.96**	**24**	P	**P**	**21 42 41.1**	**+1.1**
	comp=Z,2.1nm,0.3s,baz=217,slow=9.4,SNR=12						
	comp=Z,2.1nm,0.3s						
ZALV	**Zalesovo Beam**	**19.96**	**24**	P	**P**	**21 42 39.5**	**-0.4**
HYBB	**Hyderabad (bro**	**20.12**	**159**	*eP*	**P**	**21 42 42.9**	**+0.8**
HYBB				*eS*	**S**	**21 46 21.0**	**+1.1**
ARU	**Arti**	**21.66**	**341**	P	**P**	**21 42 59.2**	**+1.1**
	comp=Z,2.1nm,0.3s,baz=168,slow=10,SNR=5.4						
	comp=Z,2.1nm,0.3s						
ARU	**Arti**	**21.66**	**341**	P	**P**	**21 42 59.1**	**+1.0**
BELG	**Belogornoye**	**22.91**	**321**	P	**P**	**21 43 12.6**	**+2.3**
	comp=Z,5.2nm,0.4s,baz=122,slow=1.7,SNR=9.3						
	comp=Z,5.2nm,0.4s						
SONM	**Songino Array**	**28.38**	**55**	P	**P**	**21 43 58.7**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=265,slow=10.0,SNR=2.2						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.46**	**119**	P	**P**	**21 44 18.3**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=314,slow=8.9,SNR=5.3						
	comp=Z,0.8nm,0.8s						
MDUB	**Mudurnu**	**31.21**	**290**	P	**P**	**21 44 24.1**	**-0.8**
AK05	**Malin Array Si**	**32.95**	**309**	P	**P**	**21 44 42.1**	**+2.2**
AK05				IAmb	IAmb	21 44 42.5	
	comp=Z,3.3nm,0.8s						
AKASG	**Malin Array Be**	**32.95**	**309**	P	**P**	**21 44 42.0**	**+2.2**
	comp=Z,1.1nm,0.5s,baz=80,slow=7.2,SNR=9.6						
	comp=Z,1.1nm,0.5s						
FIA1	**FINESS Array S**	**37.50**	**326**	P	**P**	**21 45 19.8**	**+1.2**
FINES	**FINESS Array B**	**37.50**	**326**	P	**P**	**21 45 20.8**	**+2.2**
	comp=Z,1.1nm,0.4s,baz=123,slow=8.9,SNR=14						
	comp=Z,1.1nm,0.4s						
FINES	**FINESS Array B**	**37.50**	**326**	P	**P**	**21 45 20.5**	**+1.9**
ARCES	**ARCESS Array B**	**41.17**	**338**	P	**P**	**21 45 50.9**	**+2.0**
	comp=Z,1.7nm,0.6s,baz=111,slow=8.7,SNR=18						
	comp=Z,1.7nm,0.6s						
ARCES	**ARCESS Array B**	**41.17**	**338**	P	**P**	**21 45 51.0**	**+2.0**
ARCES				IAmb	IAmb	21 46 01.8	
	comp=Z,14nm,1.4s						
NC405	**NORSAR Array S**	**44.16**	**323**	P	**P**	**21 46 14.7**	**+1.6**
NC303	**NORSAR Array S**	**44.34**	**323**	P	**P**	**21 46 16.1**	**+1.6**
NC303				IAmb	IAmb	21 46 17.2	
	comp=Z,9.9nm,0.9s						
NB201	**NORSAR Array S**	**44.36**	**323**	P	**P**	**21 46 16.4**	**+1.6**
NB201				IAmb	IAmb	21 46 39.0	
	comp=Z,18nm,1.4s						
NB2	**NORSAR Subarra**	**44.40**	**323**	P	**P**	**21 46 16.4**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**21 46 16.3**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=96,slow=7.8,SNR=14						
	comp=Z,2.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.69**	**269**	P	**P**	**21 48 47.4**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=62,slow=6.8,SNR=14						
	comp=Z,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**81.28**	**3**	P	**P**	**21 50 20.8**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=341,slow=6.0,SNR=1.6						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**81.99**	**122**	P	**P**	**21 50 22.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=324,slow=4.9,SNR=7.9						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**84.25**	**125**	P	**P**	**21 50 34.2**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=316,slow=6.5,SNR=4.2						
	comp=Z,0.6nm,0.8s						

IDC 14 21:51:26.0±3.1, 37°.17N×71°.60E, h0km, mb3.7/6, mbtmp3.6/11, ML3.1/5, MS2.8/3, Error ellipse: s-maj=62.4km s-min=20.0km az=144.0
NNC 14 21:51:30.1±1.4, 37°.34N×71°.57E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=11.1km s-min=8.8km az=163.0

ISC 14 21:51:29.1±1.3, 37°.2N±0°.1×71°.36E±0°.08, h10km, n18, σ2§00/24, mb3.6/6, 9C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.92**	**354**	⇑Pn	**Pn**	**21 52 57.4**	**+0.5**
	1.8nm,0.3s,baz=179,slow=13,SNR=82						
KK31				⇑Sn	**Sn**	**21 54 06.6**	**+1.8**
	6.4nm,0.5s,baz=173,slow=20,SNR=4.0						
KK31				⇑Lg	Lg	21 54 33.1	
	10.0nm,0.6s,baz=176,slow=29,SNR=4.5						
AAK	**Ala-Archa**	**5.93**	**23**	Pn	**Pn**	**21 52 57.4**	**+0.3**
	0.5nm,0.3s,baz=202,slow=13,SNR=1.7						
AAK				Sn	**Sn**	**21 54 05.0**	**-0.2**
	0.7nm,0.3s,baz=198,slow=20,SNR=1.2						
	4.0nm,0.4s						
CHMS	**Chumysh**	**6.34**	**23**	⇑Pn	**Pn**	**21 53 02.9**	**+0.2**
	18nm,1.4s						
CHMS				⇑Lg	Lg	21 54 44.2	
	9.2nm,0.8s						
TKM2	**Tokmak 2**	**6.57**	**28**	⇑Pn	**Pn**	**21 53 06.0**	**+0.1**
	6.8nm,0.6s						
TKM2				⇑Sn	**Sn**	**21 54 19.6**	**-1.3**
	3.7nm,0.7s						
TKM2				⇑Lg	Lg	21 54 51.5	
	6.9nm,1.1s						
MDOK	**Medeo**	**7.37**	**34**	Pn	**Pn**	**21 53 15.2**	**-1.7**
	1.4nm,0.7s						
MDOK				Pg	**Pb**	**21 53 40.5**	**+3.4**
	2.9nm,0.6s						
MDOK				Sn	**Sn**	**21 54 40.4**	**-0.3**
	5.2nm,1.0s						
MDOK				Lg	Lg	21 55 16.8	
	9.5nm,1.1s						
GEYT	**Alibeck**	**10.54**	**278**	Pn	**Pn**	**21 53 59.9**	**-0.4**
	0.4nm,0.3s,baz=90,slow=16,SNR=5.8						
GEYT				Sn	**Sn**	**21 56 00.5**	**+2.1**
	0.9nm,0.3s,baz=103,slow=24,SNR=3.0

comp=Z,11nm,0.8s
MBWA Marble Bar 16.89 211 P **P** **22 00 01.2 +1.2**
MBWA IAmb IAmb 22 00 13.1
comp=Z,13nm,1.1s
PSA00 Pilbara Seismi 17.18 210 P **P** **22 00 04.5 +1.4**
PSA00 IAmb IAmb 22 00 23.5
comp=Z,10nm,1.1s
PSA00 Pilbara Seismi 17.18 210 P **P** **22 00 03.9 +0.8**
PSA00 IAmb IAmb 22 00 10.4
comp=Z,1.8nm,1.1s
AS31 Alice Springs 17.54 165 P **Pn** **22 00 09.1 +0.2**
ASAR Alice Springs 17.55 165 P **Pn** **22 00 10.2 +1.3**
comp=Z,28nm,0.6s,baz=347,slow=11,SNR=227
ASAR S **S** **22 03 16.6 -2.5**
comp=Z,0.7nm,0.6s,baz=343,slow=18,SNR=2.9
ASAR ScP **ScP** **22 07 48.1 -5.1**
comp=Z,0.4nm,0.5s,baz=356,slow=2.0,SNR=2.5
ASAR Alice Springs 17.55 165 P **Pn** **22 00 09.1 +0.2**
CTA Charters Tower 21.47 130 P **P** **22 00 51.6 +2.4**
comp=Z,9.2nm,1.0s,baz=20,slow=5.9,SNR=2.5
comp=Z,9.2nm,1.0s
BBOO Buckleboo 26.82 167 P **P** **22 01 38.7 +0.7**
BBOO IAmb IAmb 22 01 39.6
comp=Z,6.9nm,0.7s
STKA Stephens Creek 27.72 156 P **P** **22 01 47.5 +1.6**
comp=Z,1.4nm,0.5s,baz=334,slow=12,SNR=12
comp=Z,1.4nm,0.5s
STKA Stephens Creek 27.72 156 P **P** **22 01 47.1 +1.1**
NWAO Narrogin (SRO) 28.26 201 P **P** **22 01 51.6 +0.8**
KSRS Korea Array 43.93 359 P **P** **22 04 03.5 +0.3**
comp=Z,1.1nm,0.5s,baz=177,slow=9.5,SNR=8.6
comp=Z,1.1nm,0.5s
USRK Ussuriysk Ar. 50.74 3 P **P** **22 04 55.6 0.0**
comp=Z,2.4nm,0.7s,baz=189,slow=10,SNR=2.0
comp=Z,2.4nm,0.7s
SONM Songino Array 57.82 342 P **P** **22 05 46.1 -0.7**
comp=Z,0.5nm,0.6s,baz=161,slow=8.6,SNR=3.6
comp=Z,0.5nm,0.6s
MKAR Makanchi Array 67.38 327 P **P** **22 06 49.9 0.0**
comp=Z,1.8nm,0.5s,baz=116,slow=8.5,SNR=32
comp=Z,1.8nm,0.5s
ZALV Zalesovo Beam 70.83 334 P **P** **22 07 09.8 -1.1**
comp=Z,1.1nm,0.6s,baz=126,slow=4.0,SNR=5.4
comp=Z,1.1nm,0.6s
SEY Seymchan 71.72 11 P **P** **22 07 15.3 -0.7**
comp=Z,0.6nm,0.3s,baz=177,slow=17,SNR=4.8
comp=Z,0.6nm,0.3s
VNDA Vanda 72.88 173 P **P** **22 07 23.5 +0.7**
comp=Z,0.5nm,0.6s,baz=324,slow=6.8,SNR=5.3
comp=Z,0.5nm,0.6s
CPUP Villa Florida 146.62 170 PKPbc **PKPbc** **22 15 35.0 +0.1**
comp=Z,0.8nm,0.5s,baz=252,slow=9.6,SNR=3.6
LPAZ La Paz 151.62 144 PKPbc **PKPbc** **22 15 47.3 -1.2**
comp=Z,0.6nm,0.4s,baz=297,slow=2.3,SNR=16

*IPEC **14** 22:08:32.9±0.2, 51.°63N×16.°23E, h0km, ML2.6/6, Error ellipse: s-maj=1.6km s-min=1.1km az=34.0*
*DNK **14** 22:08:33.0±1.7, 51.°68N×16.°08E, h0km, ML1.5, Suspected explosion*
*VIE **14** 22:08:33.2±0.9, 51.°60N×16.°25E, h0km, mb2.5/14, ml2.7/12, ms3.2/1, Error ellipse: s-maj=11.4km s-min=6.5km az=140.0 78 km NW of Wroclaw Suspected Mining induced.*
*IDC **14** 22:08:34.7±1.0, 51.°51N×16.°05E, h0km, mbtmp3.1/6, ML2.7/5, Error ellipse: s-maj=15.5km s-min=9.0km az=110.0*
*PRU **14** 22:08:34.1±0.0, 51.°56N×16.°12E, h0km*
*UPP **14** 22:08:36.5±3.2, 51.°78N×15.°80E, h0km, ML1.7, Suspected explosion*

ISC 14 22:08:32.0±0.7, 51.°68N±0.°03×16.°14E±0.°02, h0km, n59, σ1§14/114, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.84**	**173**	*e*Pg	**Pg**	**22 08 48.2**	**+0.1**
KSP				*e*Sg	**Sg**	**22 08 57.6**	**-1.3**
CHVC	**Chvalec**	**1.09**	**183**	*e*SG	**Sg**	**22 09 05.4**	**-1.6**
OSTC	**Ostas**	**1.12**	**177**	*e*PG	**Pg**	**22 08 53.3**	**-0.2**
OSTC				*e*SG	**Sg**	**22 09 06.9**	**-1.1**
comp=Z,54nm,0.7s							
UPC	**Upice**	**1.17**	**184**	*e*PG	**Pg**	**22 08 54.1**	**-0.4**
UPC				*e*SG	**Sg**	**22 09 08.6**	**-1.1**
comp=Z,74nm,0.4s							
DPC	**Dobruska-Polom**	**1.33**	**175**	*e*PG	**Pg**	**22 08 56.9**	**-0.6**
DPC				*e*SG	**Sg**	**22 09 13.4**	**-1.4**
comp=Z,55nm,0.8s							
PVCC	**Panska Ves**	**1.52**	**221**	*e*PG	**Pn**	**22 09 00.4**	**0.0**
PVCC				*e*SG	**Sn**	**22 09 20.8**	**0.0**
comp=Z,161nm,0.2s							
BRG	**Berggiesshubel**	**1.59**	**241**	Pg	**Pg**	**22 09 02.8**	**+0.3**
BRG				Sg	**Sg**	**22 09 23.5**	**+0.3**
BRG				Amp		22 09 24.1	
comp=Z,82nm,0.3s							
KRLC	**Kraliky**	**1.65**	**165**	*e*PG	**Pn**	**22 09 02.1**	**-0.3**
KRLC				*e*SG	**Sn**	**22 09 23.1**	**-1.2**
comp=Z,38nm,0.3s							
PRU	**Pruhonice**	**1.97**	**212**	*e*PG	**Pn**	**22 09 07.2**	**+0.6**
PRU				*e*SG	**Sb**	**22 09 33.3**	**-0.5**
comp=Z,38nm,0.5s							
CLL	**Collm**	**1.99**	**261**	*e*Pn	**Pn**	**22 09 07.0**	**0.0**
CLL				*e*Pg	**Pg**	**22 09 10.0**	**-0.2**
CLL				*i* x	x	22 09 14.2	
CLL				*e*Sg	**Sg**	**22 09 37.0**	**+1.0**
comp=Z,38nm,0.3s							
RAC	**Raciborz**	**2.06**	**140**	*e*PG	**Pg**	**22 09 11.7**	**+0.2**
RAC				*e*SG	**Sb**	**22 09 37.1**	**+0.7**
MORC	**Moravsky Berou**	**2.10**	**154**	*e*Pn	**Pn**	**22 09 08.2**	**-0.2**
baz=336							
MORC				*e*Sg	**Sb**	**22 09 36.6**	**-1.1**
comp=Z,27nm,0.6s,baz=336							
MORC	**Moravsky Berou**	**2.10**	**154**	*e*PN	**Pn**	**22 09 08.3**	**-0.2**
MORC				*e*SG	**Sb**	**22 09 36.7**	**-1.0**
OKC	**Ostrava-Krasne**	**2.24**	**144**	*e*PG	**Pb**	**22 09 12.8**	**-0.6**
OKC				*e*SG	**Sb**	**22 09 41.6**	**0.0**
comp=Z,33nm,0.4s							
VRAC	**Vranov**	**2.39**	**173**	Pn	**Pn**	**22 09 12.6**	**+0.2**
comp=Z,1.5nm,0.3s,baz=342,slow=16,SNR=17							
VRAC				Lg	Lg	22 09 45.2	
comp=Z,3.7nm,0.3s,baz=256,slow=20,SNR=8.2							
comp=Z,6.0nm,0.3s							
VRAC	**Vranov**	**2.39**	**173**	*e*Pn	**Pn**	**22 09 12.6**	**+0.2**
baz=354							
VRAC				*e*Sg	**Sb**	**22 09 45.8**	**-0.1**
comp=Z,22nm,0.5s,baz=354							
VRAC	**Vranov**	**2.39**	**173**	*e*PN	**Pn**	**22 09 12.7**	**+0.2**
VRAC				*e*SG	**Sb**	**22 09 45.8**	**-0.1**
TREC	**Trest**	**2.42**	**190**	*e*PN	**Pn**	**22 09 13.0**	**+0.1**
TREC				*e*SG	**Sb**	**22 09 46.6**	**-0.2**
comp=Z,17nm,0.4s							
KRUC	**Moravsky**	**2.62**	**176**	*e*Pn	**Pn**	**22 09 15.8**	**+0.2**
baz=358							
KRUC	**Moravsky**	**2.62**	**176**	*e*Pg	**Pb**	**22 09 19.8**	**-0.1**
baz=358							
KRUC				*e*Sg	**Sb**	**22 09 53.5**	**+0.9**
comp=Z,23nm,0.7s,baz=358							
KRUC	**Moravsky**	**2.62**	**176**	*e*PN	**Pn**	**22 09 15.9**	**+0.3**
KRUC				*e*PG	**Pb**	**22 09 19.9**	**0.0**
KRUC				*e*SG	**Sb**	**22 09 53.6**	**+0.9**
OJC	**Ojcow**	**2.74**	**121**	*e*Pn	**Pn**	**22 09 15.9**	**-1.3**
OJC				*e*Pg	**Pg**	**22 09 25.1**	**+0.6**
OJC				*e*Sg	**Sg**	**22 09 59.5**	**-0.4**
KHC	**Kasperske Hory**	**3.03**	**214**	*e*PN	**Pn**	**22 09 21.3**	**+0.1**
KHC				*e*PG	**Pb**	**22 09 27.4**	**+0.6**
KHC				*e*SN	**Sn**	**22 09 57.5**	**-0.7**
KHC				*e*SG	**Sg**	**22 10 07.0**	**-2.3**
comp=Z,16nm,0.4s							
CKRC	**Cesky Krumlov**	**3.09**	**203**	*e*PN	**Pn**	**22 09 23.0**	**+0.9**
CKRC				*e*PG	**Pb**	**22 09 28.7**	**+0.8**
CKRC				*e*SG	**Sb**	**22 10 08.5**	**+2.4**
GERES	**GERESS Array B**	**3.24**	**210**	Pn	**Pn**	**22 09 24.1**	**0.0**
comp=Z,1.2nm,0.3s,baz=29,slow=13,SNR=56							
GERES				Sn	**Sn**	**22 10 02.5**	**-0.9**
comp=Z,1.5nm,0.3s,baz=29,slow=24,SNR=6.1							
GERES				Lg	Lg	22 10 12.6	
comp=Z,3.3nm,0.3s,baz=31,slow=27,SNR=5.9							
comp=Z,2.1nm,0.3s							
LANS	**Liptovska Anna**	**3.31**	**139**	*e*PN	**Pn**	**22 09 26.6**	**+1.5**
LANS				*e*PG	**Pg**	**22 09 34.9**	**-0.5**
LANS				*e*SG	**Sg**	**22 10 15.7**	**-2.5**
MODS	**Modra-Piesok**	**3.39**	**167**	*e*PN	**Pn**	**22 09 27.4**	**+1.3**
MODS				*e*PG	**Pg**	**22 09 35.7**	**-1.2**
MODS				*e*SG	**Sg**	**22 10 22.3**	**+1.5**
NIE	**Niedzica**	**3.49**	**129**	*e*P	**Pg**	**22 09 39.1**	**+0.3**
NIE				*e*S	**Sg**	**22 10 23.9**	**-0.1**
BSD	**Bornholm Skovb**	**3.52**	**349**	*i* P	**Pn**	**22 09 29.8**	**+1.8**
BSD				*i* S	**Sn**	**22 10 09.4**	**-0.9**
BSD				IAML		22 10 16.1	
comp=Z,0.9nm,0.1s							
VYHS	**Vyhne**	**3.63**	**150**	*e*PN	**Pn**	**22 09 29.5**	**0.0**
VYHS				*e*PG	**Pg**	**22 09 42.7**	**+1.2**
VYHS				*e*SG	**Sg**	**22 10 29.7**	**+1.1**
CONA	**Conrad Observa**	**3.76**	**183**	*e*Pn	**Pn**	**22 09 31.9**	**+0.7**
comp=Z,1.6nm,0.4s							
CONA				Sg	**Sg**	**22 10 31.9**	**-0.7**
comp=Z,11nm,0.5s							
MOA	**Molln**	**4.02**	**198**	*i* Pn	**Pn**	**22 09 35.2**	**+0.4**
comp=Z,5.8nm,0.3s,SNR=29							
MOA				Sg	**Sg**	**22 10 40.8**	**-0.2**
comp=Z,14nm,0.7s							
LUNU	**Lund**	**4.27**	**339**	*i* P	**Pn**	**22 09 39.2**	**+0.9**
LUNU				*i* S	**Sn**	**22 10 27.5**	**-1.3**
BIOA	**Bad Ischl, Aus**	**4.30**	**203**	*e*Pn	**Pn**	**22 09 38.7**	**0.0**
comp=Z,2.5nm,0.2s,SNR=5.1							
ARSA	**Arzberg**	**4.45**	**185**	*e*Pn	**Pn**	**22 09 42.1**	**+1.4**
comp=Z,1.6nm,0.3s							
ARSA				Sg	**Sg**	**22 10 55.6**	**+0.7**
comp=Z,12nm,0.8s							
COP	**Copenhagen**	**4.58**	**333**	*i* S	**Sn**	**22 10 35.6**	**-0.7**
BLEU	**Blekinge**	**4.64**	**358**	*i* P	**Pn**	**22 09 45.1**	**+1.8**
BLEU				*i* S	**Sn**	**22 10 37.0**	**-0.9**
BLEU				IAML		22 10 40.6	
comp=Z,0.2nm,0.2s							
BJUU	**Bjuv**	**4.78**	**339**	*i* P	**Pn**	**22 09 44.7**	**-0.5**
BJUU				P	**Pn**	**22 09 46.4**	**+1.2**
BJUU				*i* S	**Sn**	**22 10 40.3**	**-0.9**
BJUU				S	**Sn**	**22 10 40.4**	**-0.7**
BJUU	**Bjuv**	**4.78**	**339**	P	**Pn**	**22 09 46.4**	**+1.2**
BJUU				S	**Sn**	**22 10 40.4**	**-0.7**
KOLS	**Kolonicke sedl**	**4.80**	**123**	*e*PN	**Pn**	**22 09 46.3**	**+0.8**
KOLS				*e*PG	**Pg**	**22 10 06.4**	**+2.5**
KOLS				*e*SG	**Sg**	**22 11 06.7**	**+0.7**
KBA	**Koelnbreinsper**	**4.95**	**203**	*e*Pn	**Pn**	**22 09 48.2**	**+0.5**
comp=Z,3.4nm,0.4s,SNR=9.5							
KBA				Sg	**Sg**	**22 11 12.6**	**+1.6**
comp=Z,4.9nm,0.4s							
DEL	**Delary**	**4.99**	**345**	*i* P	**Pn**	**22 09 49.3**	**+1.2**
DEL				P	**Pn**	**22 09 49.6**	**+1.5**
DEL				S	**Sn**	**22 10 44.6**	**-1.7**
DEL				*i* S	**Sn**	**22 10 45.1**	**-1.2**
DEL	**Delary**	**4.99**	**345**	P	**Pn**	**22 09 49.6**	**+1.5**
DEL				S	**Sn**	**22 10 44.6**	**-1.7**
SOKA	**Soboth**	**5.05**	**189**	*e*Pn	**Pn**	**22 09 50.5**	**+1.4**
comp=Z,0.3nm,0.2s							
WATA	**Walderalm**	**5.26**	**216**	*i* Pn	**Pn**	**22 09 52.6**	**+0.5**
comp=Z,0.8nm,0.2s,SNR=4.1							
OBKA	**Obir**	**5.28**	**192**	*e*Pn	**Pn**	**22 09 53.1**	**+1.0**
comp=Z,0.2nm,0.3s							
WTTA	**Wattenberg**	**5.30**	**215**	*e*Pn	**Pn**	**22 09 53.9**	**+1.4**
comp=Z,0.6nm,0.2s							
MOTA	**Moosalm**	**5.43**	**219**	*e*Pn	**Pn**	**22 09 54.4**	**0.0**
comp=Z,0.6nm,0.3s							
ABTA	**Abfaltersbach**	**5.47**	**207**	*e*Pn	**Pn**	**22 09 55.8**	**+0.9**
comp=Z,0.3nm,0.2s							
SQTA	**Sankt Quirin**	**5.50**	**218**	*e*Pn	**Pn**	**22 09 56.8**	**+1.5**
comp=Z,1.3nm,0.2s,SNR=5.0							
FABU	**Falkenberg**	**5.70**	**341**	*i* P	**Pn**	**22 09 57.9**	**+0.1**
FABU				P	**Pn**	**22 09 59.1**	**+1.3**
FABU				*i* S	**Sn**	**22 11 00.8**	**-3.1**
FABU	**Falkenberg**	**5.70**	**341**	P	**Pn**	**22 09 59.1**	**+1.3**
ONAU	**Onsala**	**6.24**	**338**	*i* P	**Pn**	**22 10 06.5**	**+1.4**
ONAU				*i* S	**Sn**	**22 11 13.1**	**-3.9**
BORU	**Boraas**	**6.28**	**343**	*i* S	**Sn**	**22 11 18.5**	**+0.3**
DAVOX	**Davos/Dischmat**	**6.38**	**222**	Pn	**Pn**	**22 10 08.3**	**+0.8**
comp=Z,0.2nm,0.3s,baz=22,slow=19,SNR=1.8							
DAVOX				Lg	Lg	22 11 53.5	
comp=Z,0.3nm,0.3s,baz=210,slow=20,SNR=4.3							
comp=Z,0.7nm,0.4s							
AKASG	**Malin Array Be**	**8.28**	**92**	Pn	**Pn**	**22 10 33.6**	**+0.3**
comp=Z,0.4nm,0.3s,baz=278,slow=13,SNR=2.2							
comp=Z,0.3nm,0.4s							
HFS	**Hagfors**	**8.59**	**352**	Pn	**Pn**	**22 10 39.3**	**+1.9**
comp=Z,2.5nm,1.0s,baz=188,slow=20,SNR=1.8							
FINES	**FINESS Array B**	**11.21**	**25**	Pn	**Pn**	**22 11 13.8**	**+0.6**
comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=0.8							
comp=Z,1.0nm,0.9s							
EKA	**Eskdalemuir Ar**	**12.05**	**295**	Pn	**Pn**	**22 11 22.3**	**-2.5**
baz=104,slow=14							

*IDC **14** 22:43:09.6±0.8, 22.°60S×172.°96E, h0km, mb4.2/11, mbtmp4.3/14, ML4.8/3, MS3.9/38, Error ellipse: s-maj=20.8km s-min=16.9km az=120.0*
*NEIC **14** 22:43:11.4±1.8, 22.°65S±0.°10×173.°09E±0.°09, h10km±1km, mb4.9/25, Error ellipse: s-maj=16.4km s-min=13.9km az=354.0*
*GCMT **14** 22:43:16.4±0.4, 22.°74S±0.°02×173.°00E±0.°03, h24km, MW4.8/72, Moment Tensor Solution. s14,c15; s72,c87; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.81±.17; Mθθ=0.54±.12; Mφφ=1.36±.10; Mrθ=1.16±.16; Mφθ=1.33±.07; Mrφ=0.30±.14; Best double couple: Mo=2.14300×10^16^ NP1:φ=245.00000°, δ=68.00000°, λ=-35.00000°. NP2: φ=350.00000°, δ=58.00000°, λ=-153.00000°. Principal axes: T 2.0730, Plg6.0000°, Azm299.0000°; N 0.1440, Plg49.0000°, Azm37.0000°; P -2.2130, Plg40.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **14** 22:43:23.0, 22.°88S×172.°15E, h0km, mb5.1/8, Southeast of Loyalty Islands*

ISC 14 22:43:14.1±0.5, 22.°71S±0.°07×173.°04E±0.°07, h32km, n101, σ1§14/69, mb4.6/20, MS4.0/36, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.80**	**284**	Pn	**Pn**	**22 44 24.2**	**0.0**
MARNC	**Mare, Loyalty**	**4.80**	**284**	P	**Pn**	**22 44 25.5**	**+1.3**
PINNC	**Pines Island,**	**5.17**	**270**		**Pn**	**22 44 29.7**	**+0.5**
YATNC	**Mamie plateau,**	**5.72**	**275**	P	**Pn**	**22 44 38.5**	**+1.5**
OUENC	**Ouen Island, N**	**5.73**	**272**	Pn	**Pn**	**22 44 37.5**	**+0.4**
OUENC	**Ouen Island, N**	**5.73**	**272**	P	**Pn**	**22 44 37.9**	**+0.8**
DZM	**Mont Dzumac**	**6.13**	**275**	Pn	**Pn**	**22 44 42.4**	**-0.3**
3.9nm,0.3s,baz=123,slow=13,SNR=66							
DZM				Sn	**Sn**	**22 45 51.3**	**-0.5**
4.1nm,0.3s,baz=115,slow=23,SNR=7.8							
DZM				LR	LR	22 46 32.5	
comp=Z,311nm,19.6s,baz=68,slow=34							
20nm,0.5s							
DZM	**Mont Dzumac**	**6.13**	**275**	*e*Pn	**Pn**	**22 44 44.3**	**+1.6**
92nm,0.9s							
DZM				*e*Sn	Sn	22 45 44.2	-7.6
141nm,0.8s							
DZM				*e*LR	LR	22 45 59.2	
comp=Z,881nm,21.9s							
DZM	**Mont Dzumac**	**6.13**	**275**		**Pn**	**22 44 43.6**	**+1.0**
DZM	**Mont Dzumac**	**6.13**	**275**	P	**Pn**	**22 44 44.0**	**+1.3**
NOUC	**Port Laguerre**	**6.26**	**274**	P	**Pn**	**22 44 45.3**	**+1.0**
DVP	**Devils Point**	**6.73**	**317**	P	Pn	22 44 58.0	+7.2
MSVF	**Nonsavu**	**6.83**	**44**	Pn	**Pn**	**22 44 50.8**	**-1.4**
5.3nm,0.3s,baz=220,slow=18,SNR=18							
MSVF				Sn	**Sn**	**22 46 11.6**	**+2.6**
baz=127,slow=21							
MSVF				LR	LR	22 46 55.1	
comp=Z,2μm,18.6s,baz=221,slow=33							
16nm,0.6s							
MSVF	**Nonsavu**	**6.83**	**44**	Pn	Pn	**22 44 51.0**	**-1.2**
KOUNC	**Koumac, New Ca**	**8.42**	**283**		**Pn**	**22 45 13.1**	**-0.9**
KOUNC	**Koumac, New Ca**	**8.42**	**283**	P	**Pn**	**22 45 16.7**	**+2.8**
RAO	**Raoul Island**	**10.42**	**131**	LR	LR	22 48 46.9	
comp=Z,777nm,18.4s,baz=296,slow=32							
URZ	**Urewera**	**15.89**	**168**	Pn	**P**	**22 46 57.8**	**-0.9**
0.5nm,0.3s,baz=336,slow=5.5,SNR=6.0							
URZ				LR	LR	22 51 40.5	
comp=Z,755nm,20.2s,baz=31,slow=32							
8.0nm,0.9s							
URZ	**Urewera**	**15.89**	**168**		**Pn**	**22 46 55.6**	**+0.2**
BKZ	**Black Stump Fm**	**16.67**	**171**	Pn	**Pn**	**22 47 04.8**	**-0.6**
AFI	**Afiamalu**	**16.85**	**61**	LR	LR	22 52 21.2	
comp=Z,472nm,19.3s,baz=236,slow=33							
TUWZ	**Tuamarina**	**18.68**	**178**	P	**P**	**22 47 29.6**	**0.0**
MSWZ	**Moikau Station**	**18.75**	**175**	P	**Pn**	**22 47 31.1**	**+0.2**
LTZ	**Lake Taylor**	**20.03**	**182**	P	**P**	**22 47 45.0**	**+0.7**
LTZ				IAmb	IAmb	22 47 47.7	
comp=Z,43nm,0.9s							
EIDS	**Eidsvold**	**20.23**	**258**	P	**P**	**22 47 46.8**	**+0.2**
EIDS				IAmb	IAmb	22 47 53.7	
comp=Z,35nm,0.9s							
OXZ	**Oxford**	**20.58**	**182**	P	**P**	**22 47 50.7**	**+0.4**
OXZ				IAmb	IAmb	22 47 55.6	
comp=Z,40nm,0.8s							
RPZ	**Rata Peaks**	**21.02**	**184**	P	**P**	**22 47 56.9**	**+1.8**
comp=Z,18nm,0.8s,baz=37,slow=5.1,SNR=4.9							
RPZ				LR	LR	22 55 44.5	
comp=Z,791nm,18.2s,baz=354,slow=36							
comp=Z,18nm,0.8s							
CAN	**Canberra**	**24.42**	**234**	P	**P**	**22 48 31.2**	**+1.3**
CAN				IAmb	IAmb	22 48 48.7	
comp=Z,32nm,1.2s							
CTA	**Charters Tower**	**25.06**	**271**	P	**P**	**22 48 36.7**	**+0.9**
comp=Z,7.5nm,0.8s,baz=117,slow=8.6,SNR=6.0							
CTA				LR	LR	22 57 33.4	
comp=Z,314nm,19.3s,baz=90,slow=35							
comp=Z,7.5nm,0.8s							
CTAO	**Charters Tower**	**25.06**	**271**	P	**P**	**22 48 35.0**	**-0.9**
CTAO				IAmb	IAmb	22 48 42.3	
comp=Z,35nm,1.4s							
RAR	**Rarotonga**	**25.25**	**92**	LR	LR	22 58 27.2	
comp=Z,91nm,18.2s,baz=240,slow=36							
TOO	**Toolangi**	**27.92**	**232**	P	**P**	**22 49 02.9**	**+1.4**
TOO				IAmb	IAmb	22 49 03.9	
comp=Z,25nm,1.2s							
STKA	**Stephens Creek**	**29.31**	**245**	P	**P**	**22 49 14.1**	**+0.2**
comp=Z,3.7nm,0.9s,baz=107,slow=11,SNR=4.6							
STKA				LR	LR	23 00 06.4	
comp=Z,358nm,18.8s,baz=65,slow=35							
comp=Z,3.7nm,0.9s							
STKA	**Stephens Creek**	**29.31**	**245**	P	**P**	**22 49 15.3**	**+1.4**
BBOO	**Buckleboo**	**34.09**	**245**	P	**P**	**22 49 55.4**	**-0.5**
TBI	**Tubuai**	**34.46**	**99**	*e*LR	LR	22 59 33.4	
comp=Z,105nm,24.5s							
PPT2	**Papeete2**	**35.40**	**89**	*e*LR	LR	23 00 00.0	
comp=Z,176nm,23.8s							
PPT	**Papeete**	**35.41**	**89**	LR	LR	23 01 10.2	
comp=Z,152nm,19.4s,baz=201,slow=30							
WR0	**Warramunga Arr**	**35.90**	**267**	P	**P**	**22 50 10.2**	**-1.4**
AS31	**Alice Springs**	**35.91**	**261**	P	**P**	**22 50 11.0**	**-0.7**
ASAR	**Alice Springs**	**35.91**	**261**	P	**P**	**22 50 10.7**	**-1.0**
comp=Z,5.3nm,0.8s,baz=88,slow=9.1,SNR=29							
ASAR				LR	LR	23 04 36.4	
comp=Z,291nm,18.6s,baz=104,slow=36							
comp=Z,5.3nm,0.8s							
ASAR	**Alice Springs**	**35.91**	**261**	P	**P**	**22 50 12.4**	**+0.7**
WB0	**Warramunga Arr**	**36.07**	**267**	P	**P**	**22 50 12.9**	**-0.2**
WB0				IAmb	IAmb	22 50 48.6	
comp=Z,22nm,1.5s							
WB2	**Warramunga Arr**	**36.08**	**267**	P	**P**	**22 50 11.8**	**-1.4**
WB2				IAmb	IAmb	22 51 08.7	
comp=Z,41nm,2.0s							
WRAB	**Tennant Creek**	**36.08**	**267**	P	**P**	**22 50 11.4**	**-1.8**
WRAB				IAmb	IAmb	22 50 26.7	
comp=Z,19nm,0.8s							
WRA	**Warramunga Arr**	**36.09**	**267**	P	**P**	**22 50 11.4**	**-1.9**
comp=Z,2.6nm,0.7s,baz=101,slow=7.8,SNR=13							
WRA				LR	LR	23 05 15.4	
comp=Z,268nm,18.2s,baz=106,slow=37							
comp=Z,2.6nm,0.7s							
WRA	**Warramunga Arr**	**36.09**	**267**	P	**P**	**22 50 13.2**	**-0.1**
FORT	**Forrest**	**40.75**	**249**	P	**P**	**22 50 51.6**	**-0.7**
FORT				IAmb	IAmb	22 50 53.2	
comp=Z,25nm,0.7s							
H11S2	**WAKE ISLAND Hy**	**41.41**	**351**	T	T	23 35 07.0	
baz=171,slow=76,SNR=27							
H11S3	**WAKE ISLAND Hy**	**41.42**	**351**	T	T	23 35 08.3	
baz=171,slow=76,SNR=20							
H11S1	**WAKE ISLAND Hy**	**41.43**	**351**	T	T	23 35 09.0	
baz=171,slow=76,SNR=28							
H11N1	**WAKE ISLAND Hy**	**42.59**	**351**	T	T	23 36 46.2	
baz=173,slow=74							
H11N3	**WAKE ISLAND Hy**	**42.59**	**351**	T	T	23 36 46.0	
baz=173							
H11N2	**WAKE ISLAND Hy**	**42.60**	**351**	T	T	23 36 47.8	
baz=173,slow=74							
FITZ	**Fitzroy Crossi**	**44.52**	**267**	LR	LR	23 08 34.1	
comp=Z,89nm,19.5s,baz=110,slow=34							
FITZ	**Fitzroy Crossi**	**44.52**	**267**	P	**P**	**22 51 22.4**	**-0.6**
FITZ				IAmb	IAmb	22 51 26.4	
comp=Z,10nm,0.8s							
GUMO	**Guam**	**45.42**	**320**	LR	LR	23 08 09.8	
comp=Z,120nm,20.2s,baz=125,slow=33							
TAOE	**Nuku Hiva Isla**	**46.91**	**81**	*e*LR	LR	23 05 20.2	
comp=Z,104nm,25.1s							
BATI	**Baunata**	**48.74**	**276**	LR	LR	23 12 50.8	
comp=Z,255nm,18.7s,baz=142,slow=37							
DAV	**Davao City (W)**	**55.06**	**297**	LR	LR	23 16 04.7	
comp=Z,29nm,18.1s,baz=164,slow=36							
VNDA	**Vanda**	**55.13**	**183**	P	**P**	**22 52 44.0**	**+1.1**
comp=Z,0.8nm,0.8s,baz=0.1,slow=6.7,SNR=5.9							
VNDA				LR	LR	23 12 24.7	
comp=Z,247nm,21.4s,baz=12,slow=32							
comp=Z,0.8nm,0.8s							
VNDA	**Vanda**	**55.13**	**183**	P	**P**	**22 52 43.1**	**+0.2**
SBA	**Scott Base**	**55.28**	**182**	P	**P**	**22 52 43.3**	**-0.6**
TOLI2	**Tolitoli**	**56.10**	**288**	P	**P**	**22 52 50.7**	**-0.1**
TOLI2				IAmb	IAmb	22 52 52.6	
comp=Z,10.0nm,0.7s							
CASY	**Casey**	**58.43**	**205**	P	**P**	**22 53 06.2**	**-0.3**
**JHJ

INK	**Inuvik**	**98.73**	**18**	LR	LR	23 35 14.5			
	comp=Z,74nm,20.9s,baz=212,slow=32								
ARCES	**ARCESS Array B**	**129.29**	**346**	PKP	**PKPdf**	**23 02 17.1**	**-1.5**		
	comp=Z,0.7nm,0.7s,baz=45,slow=2.7,SNR=5.5								
VYHS	**Vyhne**	**147.10**	**328**	*e*	**PKiKP**	**23 02 56.8**	**+0.6**		
CLL	**Collm**	**147.52**	**336**	*e*(PKPbc)	**PKPdf**	**23 02 53.0**	**+0.8**		
CLL				*i* PKiKP	**pPKPdf**	**23 02 58.7**	**-2.7**		
	comp=Z,5.0nm,1.0s								
CLL				*ex*	x	23 03 06.0			
GERES	**GERESS Array B**	**149.19**	**333**	PKPbc	**PKPbc**	**23 02 57.7**	**-1.7**		
	comp=Z,0.8nm,0.8s,baz=40,slow=1.7,SNR=6.7								
TORD	**Torodi Ar. Bea**	**167.43**	**222**	PKPab	**PKPab**	**23 04 22.5**	**-0.6**		
	comp=Z,0.9nm,0.9s,baz=132,slow=2.1,SNR=4.1								

AAE ***14*** *22:44:00.8±1.5, 12.23N×44.00E, h0km±13km, ML5.7*
EAF ***14*** *22:44:08.7±32.0, 12.34N×44.21E, h0km±434km*
IDC ***14*** *22:44:09.3±1.6, 12.26N×43.48E, h0km, mb3.7/9, mbtmp3.6/10, ML2.8/1, MS3.2/12, Error ellipse: s-maj=36.0km s-min=25.5km az=169.0*

ISC 14 22:44:08.9±0.8, 12.0N±0.1×43.5E±0.1, h10km, n26, σ1s78/24, mb3.7/9, MS3.2/8, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**0.81**	**235**	*e*P	**Pn**	**22 44 25.6**	**-1.0**
ATD				*e*S	**Sn**	**22 44 40.6**	**+2.0**
ATD	**Arta Tunnel**	**0.81**	**235**	*e*P	**Pb**	**22 44 24.6**	**-0.6**
ATD				*e*S	**Sn**	**22 44 41.4**	**+2.7**
ATD				IAML		22 44 45.9	
	comp=N,124μm,2.1s						
ATD	**Arta Tunnel**	**0.81**	**235**	*e*P	**Pn**	**22 44 25.5**	**-1.0**
ATD				*e*S	**Sn**	**22 44 40.5**	**+1.8**
AAE	**Adis Abeba**	**5.54**	**238**	*e*P	**Pn**	**22 45 28.7**	**-3.0**
AAE				*e*S	**Sg**	**22 47 07.7**	**+0.9**
AAE	**Adis Abeba**	**5.54**	**238**	*e*P	**Pn**	**22 45 29.4**	**-2.3**
AAE				*e*S	**Sn**	**22 46 35.8**	**+0.2**
FURI	**Furi**	**5.68**	**238**	*e*P	**Pg**	**22 45 56.4**	**-1.3**
FURI				*e*S	**Sg**	**22 47 15.0**	**+3.6**
FURI	**Furi**	**5.68**	**238**	*e*P	**Pn**	**22 45 31.1**	**-2.6**
FURI				*e*S	**Sn**	**22 46 39.3**	**+0.2**
KMBO	**Kilima Mbogo**	**14.46**	**206**	Pn	**P**	**22 47 39.7**	**-1.1**
	baz=41,slow=19,SNR=1.5						
KMBO				LR	LR	22 52 28.4	
	comp=N,75nm,18.6s,baz=46,slow=34						
	comp=N,0.4nm,0.3s						
MBAR	**Mbarara**	**17.83**	**226**	LR	LR	22 54 45.0	
	comp=N,79nm,20.3s,baz=36,slow=35						
WSAR	**Wadi Sarin**	**18.21**	**50**	LR	LR	22 56 08.1	
	comp=N,110nm,19.9s,baz=243,slow=40						
EIL	**Elat**	**19.31**	**337**	LR	LR	22 54 44.5	
	comp=N,41nm,20.1s,baz=155,slow=33						
GNI	**Garni**	**28.06**	**2**	LR	LR	23 01 41.2	
	comp=N,20nm,21.2s,baz=196,slow=38						
BRTR	**Keskin Array B**	**28.97**	**344**	P	**P**	**22 50 10.1**	**+1.2**
	comp=N,1.2nm,0.8s,baz=148,slow=8.5,SNR=7.4						
	comp=N,1.2nm,0.8s						
LSZ	**Lusaka**	**31.07**	**210**	LR	LR	23 04 01.8	
	comp=N,43nm,18.3s,baz=151,slow=38						
AKTO	**Aktyubinsk**	**40.13**	**14**	LR	LR	23 09 27.1	
	comp=N,31nm,18.6s,baz=212,slow=38						
AKASG	**Malin Array Be**	**40.33**	**346**	P	**P**	**22 51 44.5**	**-2.0**
	comp=N,0.1nm,0.3s,baz=169,slow=7.5,SNR=1.7						
	comp=N,0.1nm,0.3s						
AAK	**Ala-Archa**	**40.67**	**36**	LR	LR	23 10 58.1	
	comp=N,25nm,18.3s,baz=193,slow=40						
LBTB	**Lobatse**	**40.74**	**205**	LR	LR	23 10 03.0	
	comp=N,52nm,19.5s,baz=45,slow=38						
TORD	**Torodi Ar. Bea**	**40.81**	**276**	P	**P**	**22 51 52.3**	**+1.3**
	comp=N,0.4nm,0.8s,baz=86,slow=5.4,SNR=2.5						
	comp=N,0.4nm,0.8s						
GERES	**GERESS Array B**	**44.29**	**332**	P	**P**	**22 52 18.0**	**-0.9**
	comp=N,0.4nm,0.7s,baz=126,slow=6.8,SNR=5.8						
	comp=N,0.4nm,0.7s						
ARU	**Arti**	**45.84**	**12**	LR	LR	23 14 51.6	
	comp=N,26nm,18.9s,baz=197,slow=40						
MKAR	**Makanchi Array**	**47.60**	**36**	P	**P**	**22 52 46.1**	**+1.1**
	comp=N,1.8nm,0.8s,baz=210,slow=7.0,SNR=12						
MKAR				LR	LR	23 16 30.0	
	comp=N,34nm,18.2s,baz=258,slow=41						
	comp=N,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**47.95**	**29**	P	**P**	**22 52 48.2**	**+0.6**
	comp=N,1.1nm,0.9s,baz=226,slow=8.0,SNR=5.4						
	comp=N,1.1nm,0.9s						
ZALV	**Zalesovo Beam**	**53.05**	**29**	P	**P**	**22 53 26.6**	**+0.5**
	comp=N,0.5nm,0.6s,baz=224,slow=10,SNR=2.6						
ZALV				LR	LR	23 19 18.7	
	comp=N,51nm,19.7s,baz=212,slow=40						
	comp=N,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**53.69**	**76**	P	**P**	**22 53 32.3**	**+0.9**
	comp=N,0.7nm,0.3s,baz=264,slow=8.1,SNR=1.8						
	comp=N,0.7nm,0.3s						
SONM	**Songino Array**	**63.05**	**42**	P	**P**	**22 54 37.6**	**+1.1**
	comp=N,0.8nm,0.7s,baz=235,slow=6.8,SNR=6.2						
	comp=N,0.8nm,0.7s						

KRSC 14 23:23:04.0±2.2, 49.25N×157.00E, h46km±34km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.54**	**339**	P	Pn	23 23 29.8	+0.8
SKR				S	Sn	23 23 47.9	+0.1
PAU	**Pauzhetka**	**2.22**	**357**	S	Sn	23 24 07.7	+3.2
KDTR	**Khodutka, Kamc**	**2.65**	**15**	P	Pn	23 23 48.4	+4.2
KDTR				S	Sn	23 24 19.7	+4.7
MTVR	**Mutnovka**	**3.32**	**13**	S	Sn	23 24 37.3	+5.6
RUS	**Russkaya**	**3.33**	**16**	P	Pn	23 23 56.9	+3.5
RUS				S	Sn	23 24 35.1	+3.5
GRL	**Gorelyy**	**3.37**	**11**	S	Sn	23 24 36.6	+3.6
GNL	**Ganaly**	**4.49**	**7**	P	Pn	23 24 14.8	+5.3
MKZ	**Mys Kozlova**	**6.06**	**27**	P	Pn	23 24 34.9	+4.0

NEIC ***14*** *23:48:37.1±1.4, 4.91N±0.08×94.99E±0.03, h57km±8km, mb4.5/57, Error ellipse: s-maj=12.2km s-min=2.2km az=194.0*
IDC ***14*** *23:48:38.7±3.3, 5.01N×95.10E, h75km±31km, mb3.9/16, mbtmp4.2/17, MS3.0/5, Error ellipse: s-maj=33.0km s-min=15.1km az=51.0*

ISC 14 23:48:35.9±0.5, 4.94N±0.07×94.94E±0.07, h50km, n113, σ0s88/110, mb4.4/51, 1C, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.02**	**82**		**Pn**	**23 49 07.9**	**+0.4**
GSI	**Gunungsitoli**	**4.47**	**144**	P	**Pn**	**23 49 40.9**	**-0.3**
PSI	**Prapat**	**4.50**	**118**	P	**Pn**	**23 49 44.2**	**+2.4**
	12nm,0.3s,baz=337,slow=8.7,SNR=12						
PSI				S	**Sn**	**23 50 35.4**	**+2.4**
	34nm,0.6s,baz=345,slow=9.0,SNR=4.7						
PSI				LR	LR	23 51 55.0	
	comp=Z,98nm,18.6s,baz=260,slow=44						
RPSI	**Rantau Prapat**	**4.55**	**119**		**Pn**	**23 49 44.2**	**+1.9**
RPSI					**Sn**	**23 50 35.4**	**+1.3**
RPSI	**Rantau Prapat**	**4.55**	**119**	Pn	**Pn**	**23 49 43.3**	**+1.0**
KULM	**Kulim**	**5.70**	**86**		**Pn**	**23 49 58.3**	**+0.3**
SRIT	**Nakonsritamara**	**5.88**	**52**		**Pn**	**23 50 02.1**	**+1.5**
IPM	**Ipoh**	**6.08**	**94**		**Pn**	**23 50 03.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**13.99**	**16**	P	**P**	**23 51 56.9**	**-1.3**
	5.3nm,0.6s,baz=211,slow=11,SNR=16						
CMAR				LR	LR	23 56 54.0	
	comp=Z,40nm,21.1s,baz=205,slow=36						
CHTO	**Chiang Mai**	**14.33**	**15**	P	**P**	**23 52 02.5**	**+0.5**
PALK	**Pallekele**	**14.35**	**280**	LR	LR	23 56 31.3	
	comp=Z,75nm,18.9s,baz=234,slow=33						
KSM	**Kuching**	**15.72**	**102**	Pn	**Pn**	**23 52 13.0**	**-1.2**
CRAI	**Chiangrai**	**16.09**	**19**	P	**P**	**23 52 22.0**	**+0.5**
XMIS	**Christmas Isla**	**18.67**	**145**	P	**P**	**23 52 49.2**	**-0.7**
H08S2	**Diego Garcia H**	**25.65**	**241**	T	T	00 21 04.2	
	baz=61,slow=75,SNR=667						
H08S3	**Diego Garcia H**	**25.65**	**241**	T	T	00 21 05.7	
	baz=61,slow=75,SNR=386						
H08S1	**Diego Carcia H**	**25.67**	**241**	T	T	00 21 13.0	
	baz=61,slow=75,SNR=480						
XAN	**Xi'an**	**31.73**	**22**	P	**P**	**23 54 54.1**	**-1.2**
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**34.97**	**327**	P	**P**	**23 55 23.3**	**-0.2**
NIL				IAmb	IAmb	23 55 24.2	
	comp=Z,12nm,1.4s						
HNS	**HongShan**	**37.02**	**27**	⇑P	**P**	**23 55 41.5**	**+0.7**
HNS				pmax	pmax		
	comp=Z,18nm,0.8s						
WMQ	**Urumqi**	**39.25**	**352**	*e*P	**P**	**23 56 02.1**	**+2.5**
NRN	**Naryn**	**40.09**	**338**	P	**P**	**23 56 06.8**	**-0.3**
NRN				IAmb	IAmb	23 56 08.8	
	comp=Z,4.8nm,0.8s						
GAR	**Garm**	**40.59**	**330**	P	**P**	**23 56 11.0**	**+0.1**
GAR				IAmb	IAmb	23 56 16.3	
	comp=Z,6.0nm,0.4s						
BOOM	**Boomskoye usch**	**41.03**	**338**	P	**P**	**23 56 13.9**	**-0.7**
BOOM				IAmb	IAmb	23 56 16.3	
	comp=Z,6.1nm,0.7s						
AAK	**Ala-Archa**	**41.70**	**337**	P	**P**	**23 56 20.8**	**+0.7**
AAK				IAmb	IAmb	23 56 23.3	
	comp=Z,3.8nm,0.8s						
MK31	**Makanchi Array**	**43.11**	**347**	P	**P**	**23 56 30.9**	**-0.3**
MK31				IAmb	IAmb	23 56 32.3	
	comp=Z,3.2nm,0.6s						
MKAR	**Makanchi Array**	**43.11**	**347**	P	**P**	**23 56 31.3**	**0.0**
	comp=Z,3.3nm,0.5s,baz=161,slow=7.8,SNR=17						
	comp=Z,3.3nm,0.5s						
MKAR	**Makanchi Array**	**43.11**	**347**	P	**P**	**23 56 30.6**	**-0.6**
MAKZ	**Makanchi**	**43.19**	**347**	P	**P**	**23 56 31.9**	**-0.1**
MAKZ				IAmb	IAmb	23 56 33.1	
	comp=Z,5.0nm,0.6s						
KK31	**Karatay Array**	**43.73**	**334**	P	**P**	**23 56 36.8**	**+0.5**
KKAR	**Karatay Array**	**43.73**	**334**	P	**P**	**23 56 36.8**	**+0.5**
KKAR	**Karatay Array**	**43.73**	**334**	P	**P**	**23 56 36.5**	**+0.2**
KKAR				IAmb	IAmb	23 56 38.4	
	comp=Z,2.9nm,1.0s						
SONM	**Songino Array**	**43.85**	**11**	P	**P**	**23 56 37.1**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=166,slow=6.7,SNR=4.8						
	comp=Z,0.6nm,0.4s						
KSRS	**Korea Array**	**44.20**	**38**	P	**P**	**23 56 38.9**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=193,slow=11,SNR=2.5						
KSRS				LR	LR	00 17 35.5	
	comp=Z,24nm,18.2s,baz=200,slow=40						
	comp=Z,0.9nm,0.5s						
WB0	**Warramunga Arr**	**45.91**	**124**	P	**P**	**23 56 52.8**	**-1.2**
WB0				IAmb	IAmb	23 56 53.8	
	comp=Z,4.6nm,0.7s						
WRA	**Warramunga Arr**	**45.95**	**124**	P	**P**	**23 56 53.5**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=302,slow=9.2,SNR=29						
	comp=Z,3.4nm,0.7s						
WRA	**Warramunga Arr**	**45.95**	**124**	P	**P**	**23 56 53.0**	**-1.3**
WB2	**Warramunga Arr**	**45.96**	**124**	P	**P**	**23 56 53.4**	**-1.0**
WB2				IAmb	IAmb	23 57 32.2	
	comp=Z,11nm,1.2s						
JMN	**Monobe**	**46.12**	**47**	P	**P**	**23 56 55.8**	**+0.3**
WR0	**Warramunga Arr**	**46.12**	**124**	P	**P**	**23 56 54.9**	**-0.8**
WR0				IAmb	IAmb	23 56 55.7	
	comp=Z,4.5nm,0.6s						
JHS	**Saijyo**	**46.22**	**45**	P	**P**	**23 56 56.8**	**+0.5**
GEYT	**Alibeck**	**46.92**	**320**	P	**P**	**23 57 02.5**	**+0.8**
	comp=Z,3.3nm,0.6s,baz=121,slow=11,SNR=4.5						
	comp=Z,3.3nm,0.6s						
GEYT	**Alibeck**	**46.92**	**320**	P	**P**	**23 57 02.8**	**+1.1**
GEYT				IAmb	IAmb	23 57 03.7	
	comp=Z,3.4nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**46.92**	**320**	P	**P**	**23 57 02.7**	**+1.0**
GYA0B				IAmb	IAmb	23 57 03.6	
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**47.45**	**129**	P	**P**	**23 57 05.5**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=300,slow=7.8,SNR=11						
	comp=Z,1.1nm,0.5s						
KURK	**Kurchatov**	**47.63**	**346**	P	**P**	**23 57 07.6**	**+0.6**
KURK				IAmb	IAmb	23 57 28.1	
	comp=Z,3.0nm,1.1s						
ZAA0	**Zalesovo Array**	**49.55**	**352**	P	**P**	**23 57 21.6**	**-0.1**
ZAA0				IAmb	IAmb	23 57 21.7	
	comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**49.55**	**352**	P	**P**	**23 57 21.3**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=166,slow=8.0,SNR=17						
	comp=Z,2.3nm,0.4s						
RAYN	**Ar Rayn**	**51.05**	**296**	P	**P**	**23 57 34.9**	**+1.3**
BRVK	**Borovoye**	**52.07**	**341**	P	**P**	**23 57 41.0**	**+0.4**
JMM	**Marumori**	**53.02**	**45**	P	**P**	**23 57 47.0**	**-0.9**
ABKAR	**Akbulak array**	**53.18**	**332**	P	**P**	**23 57 50.1**	**+1.2**
AKTO	**Aktyubinsk**	**54.89**	**332**	P	**P**	**23 58 02.4**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=140,slow=7.9,SNR=5.3						
	comp=Z,1.2nm,0.6s						
ARU	**Arti**	**58.89**	**337**	P	**P**	**23 58 29.3**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=78,slow=9.3,SNR=3.6						
	comp=Z,1.1nm,0.4s						
YAK	**Yakutsk**	**62.52**	**18**	LR	LR	00 27 33.9	
	comp=Z,22nm,19.9s,baz=88,slow=37						
NRIK	**Noril'sk**	**64.49**	**357**	P	**P**	**23 59 06.0**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=153,slow=11,SNR=2.2						
	comp=Z,0.8nm,0.3s						
BR131	**Keskin Array S**	**64.95**	**312**	P	**P**	**23 59 10.7**	**-0.2**
BR131				IAmb	IAmb	23 59 29.3	
	comp=Z,4.8nm,1.3s						
BRTR	**Keskin Array B**	**64.95**	**312**	P	**P**	**23 59 10.7**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=116,slow=6.6,SNR=14						
	comp=Z,1.3nm,0.5s						
BRTR	**Keskin Array B**	**64.95**	**312**	P	**P**	**23 59 10.9**	**0.0**
ELL	**Elmali**	**67.12**	**308**	P	**P**	**23 59 26.1**	**+1.3**
TIRR	**Tirgusor**	**69.89**	**316**	P	**P**	**23 59 41.3**	**-0.4**
MLR	**Muntele Rosu**	**71.82**	**316**	P	**P**	**23 59 54.5**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=148,slow=9.5,SNR=4.6						
	comp=Z,1.8nm,0.6s						
MLR	**Muntele Rosu**	**71.82**	**316**	P	**P**	**23 59 54.7**	**+1.0**
BURAR	**Bucovina Array**	**72.75**	**318**	P	**P**	**23 59 60.0**	**+0.9**
BUR08	**Bucovina Ar. S**	**72.77**	**318**	P	**P**	**23 59 59.8**	**+0.6**
VTS	**Vitosha**	**73.23**	**313**	P	**P**	**00 00 01.4**	**-0.7**
ITM	**Ithomi**	**73.51**	**307**	P	**P**	**00 00 03.0**	**-0.7**
LVZ	**Lovozero**	**74.57**	**340**	P	**P**	**00 00 08.9**	**-0.4**
PABE	**Paberze**	**75.22**	**326**	P	**P**	**00 00 13.0**	**-0.2**
FIA1	**FINESS Array S**	**75.66**	**332**	P	**P**	**00 00 15.4**	**-0.2**
FINES	**FINESS Array B**	**75.66**	**332**	P	**P**	**00 00 15.4**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=111,slow=6.0,SNR=28						
	comp=Z,2.4nm,0.5s						
PDG	**Podgorica**	**76.12**	**312**	P	**P**	**00 00 18.6**	**0.0**
PDG				IAmb	IAmb	00 00 19.7	
	comp=Z,14nm,1.5s						
PSZ	**Piszkesteto**	**76.34**	**318**	P	**P**	**00 00 20.2**	**+0.3**
PSZ				IAmb	IAmb	00 00 21.1	
	comp=Z,3.2nm,0.8s						
OJC	**Ojcow**	**76.72**	**320**	P	**P**	**00 00 21.8**	**-0.2**
OJC				IAmb	IAmb	00 00 22.4	
	comp=Z,3.5nm,0.6s						
TIP	**Timpagrande**	**77.74**	**309**	P	**P**	**00 00 27.5**	**-0.4**
TIP				IAmb	IAmb	00 00 48.5	
	comp=Z,3.9nm,1.0s						
KEV	**Kevo**	**77.85**	**341**	P	**P**	**00 00 27.8**	**0.0**
MORC	**Moravsky Berou**	**78.11**	**320**	P	**P**	**00 00 30.4**	**+0.6**
ARA0	**ARCESS Array S**	**78.28**	**340**	*e*P	**P**	**00 00 30.3**	**0.0**
ARCES	**ARCESS Array B**	**78.28**	**340**	P	**P**	**00 00 30.3**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=92,slow=5.7,SNR=36						
	comp=Z,1.7nm,0.5s						
ARCES	**ARCESS Array B**	**78.28**	**340**	P	**P**	**00 00 30.3**	**+0.1**
ARCES				IAmb	IAmb	00 00 57.3	
	comp=Z,16nm,1.5s						
SGRT	**San Giovanni R**	**78.67**	**311**	P	**P**	**00 00 31.6**	**-1.5**
ARSA	**Arzberg**	**79.21**	**317**	*e*P	**P**	**00 00 37.4**	**+1.6**
	comp=Z,1.6nm,1.3s						
BOJS	**Bojanci**	**79.27**	**315**	*i* P	**P**	**00 00 36.6**	**+0.4**
BOJS				*i*		00 00 37.2	
	comp=Z,2.3nm,0.6s						
SOKA	**Soboth**	**79.50**	**316**	*e*P	**P**	**00 00 38.6**	**+1.0**
	comp=Z,3.3nm,1.1s						
KIF	**Kilpisjarvi**	**79.75**	**339**	*e*P	**P**	**00 00 38.1**	**-0.2**
JETT	**Jettan, Norway**	**80.01**	**340**	*e*P	**P**	**00 00 39.9**	**+0.2**
VOJS	**Vojsko**	**80.26**	**316**	*i* P	**P**	**00 00 41.7**	**+0.1**
VOJS				*i*		00 00 42.3	
	comp=Z,1.7nm,0.6s						
PRED	**Cave del Predi**	**80.50**	**316**	P	**P**	**00 00 43.5**	**+0.6**
PRED				IAmb	IAmb	00 00 44.1	
	comp=Z,3.0nm,0.9s						
GEC2	**GERESS Array S**	**80.53**	**319**	P	**P**	**00 00 43.9**	**+0.9**
GERES	**GERESS Array B**	**80.53**	**319**	P	**P**	**00 00 43.6**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=102,slow=5.6,SNR=21						
	comp=Z,1.5nm,0.8s						
GERES	**GERESS Array B**	**80.53**	**319**	P	**P**	**00 00 44.0**	**+1.0**
TRO	**Tromso**	**80.54**	**340**	*e*P	**P**	**00 00 42.2**	**-0.3**
NRCA	**Norcia**	**80.67**	**312**	P	**P**	**00 00 44.4**	**+0.5**
CLUD	**Cludinico**	**80.97**	**316**	P	**P**	**00 00 45.4**	**0.0**
CLUD				IAmb	IAmb	00 00 46.8	
	comp=Z,4.6nm,0.8s						
STAL	**STALIGIAL**	**81.08**	**316**	P	**P**	**00 00 46.4**	**+0.4**
STAL				IAmb	IAmb	00 00 46.6	
	comp=Z,2.4nm,0.6s						
CIMO	**Cimolais**	**81.27**	**316**	P	**P**	**00 00 47.9**	**+1.0**
CIMO				IAmb	IAmb	00 00 48.2	
	comp=Z,3.4nm,0.7s						
FAUS	**Fauske**	**81.48**	**337**	*e*P	**P**	**00 00 47.6**	**0.0**
STEI	**Steigen**	**81.58**	**338**	*e*P	**P**	**00 00 48.0**	**-0.1**
MOR8	**Moi Rana**	**81.67**	**336**	*e*P	**P**	**00 00 47.9**	**-0.7**
CTI	**Castel Tesino**	**81.81**	**316**	P	**P**	**00 00 50.2**	**+0.3**
CTI				IAmb	IAmb	00 00 51.4	
	comp=Z,2.5nm,0.7s						
WTTA	**Wattenberg**	**81.85**	**317**	*e*P	**P**	**00 00 49.9**	**-0.3**
	comp=Z,0.1nm,0.3s						
WATA	**Walderalm**	**81.89**	**317**	*e*P	**P**	**00 00 50.1**	**-0.3**
	comp=Z,1.1nm,0.5s						
SQTA	**Sankt Quirin**	**82.14**	**317**	*e*P	**P**	**00 00 51.5**	**-0.2**
	comp=Z,2.7nm,0.5s						
MOTA	**Moosalm**	**82.22**	**317**	*e*P	**P**	**00 00 51.7**	**-0.4**
	comp=Z,1.1nm,0.7s						
NC405	**NORSAR Array S**	**82.42**	**331**	P	**P**	**00 00 53.6**	**+1.0**
NC405				IAmb	IAmb	00 01 12.7	
	comp=Z,13nm,1.4s						
RETA	**Reutte**	**82.45**	**317**	*e*P	**P**	**00 00 53.2**	**0.0**
	comp=Z,1.7nm,0.5s						
NSS	**Namsos**	**82.54**	**334**	*e*P	**P**	**00 00 52.9**	**-0.3**
VLC	**Villacollemand**	**82.68**	**314**	P	**P**	**00 00 54.3**	**-0.1**
VLC				IAmb	IAmb	00 00 54.6	
	comp=Z,5.1nm,1.1s						
DAVA	**Damuels**	**83.05**	**317**	*e*P	**P**	**00 00 56.8**	**+0.4**
	comp=Z,4.7nm,1.4s						
MSSA	**Maissana**	**83.30**	**314**	P	**P**	**00 00 57.1**	**-0.6**
MSSA				IAmb	IAmb	00 01 40.0	
	comp=Z,7.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**92.04**	**283**	P	**P**	**00 01 41.1**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=112,slow=6.4,SNR=1.9						
	comp=Z,0.3nm,0.7s						
NVAR	**Mina Array Bea**	**126.98**	**33**	PKP	**PKiKP**	**00 07 35.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=259,slow=2.4,SNR=2.7						
TXAR	**Lajitas Array**	**141.52**	**27**	PKP	**PKPdf**	**00 07 59.2**	**-3.2**
	comp=Z,0.3nm,0.5s,baz=273,slow=0.9,SNR=2.1						

NOU ***15*** *00:25:06.2, 37.83S×173.58E, h201km, MLv4.0/6, Off W. Coast of N. Island, N.Z.*
WEL ***15*** *00:25:23.2±0.3, 39.0S±3.1×17.4E±0.1, h18km±3km, M3.2/30, ML3.6/30, MLv3.2/30, Error ellipse: s-maj=0.0km s-min=0.0km az=167.6*

ISC 15 00:25:23.9±1.0, 39.19S±0.03×174.41E±0.03, h30km±6km, n91, σ1s09/98, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MHEZ	**Mangahewa**	**0.13**	**330**	P	**Pb**	**00 25 29.3**	**-0.1**
MHEZ				S	**Sb**	**00 25 33.5**	**+0.3**
DREZ	**Durham Road**	**0.16**	**271**	P	**Pb**	**00 25 29.1**	**-0.6**
DREZ				S	**Sb**	**00 25 33.7**	**0.0**
NEZ	**North Egmont**	**0.25**	**252**	P	**Pb**	**00 25 30.1**	**-0.7**
NEZ				S	**Sb**	**00 25 35.5**	**0.0**
LREZ	**Lake Rotokare**	**0.27**	**181**	P	**Pb**	**00 25 30.0**	**-1.0**
LREZ				S	**Sb**	**00 25 35.3**	**-0.4**
VRZ	**Vera Road**	**0.28**	**77**	P	**Pb**	**00 25 30.4**	**-0.7**
VRZ				S	**Sb**	**00 25 35.8**	**-0.1**
KHEZ	**Kahui Hut**	**0.32**	**251**	P	**Pb**	**00 25 31.3**	**-0.4**
KHEZ				S	**Sb**	**00 25 37.2**	**+0.2**
PKE	**Pukeiti**	**0.33**	**269**	P	**Pb**	**00 25 31.5**	**-0.2**
PKE				S	**Sb**	**00 25 37.4**	**+0.4**
NBEZ	**Newall Road No**	**0.42**	**259**	P	**Pb**	**00 25 32.9**	**-0.2**
NMEZ	**Namu Road**	**0.47**	**241**	P	**Pb**	**00 25 33.1**	**-0.6**
WAZ	**Wanganui**	**0.72**	**142**	P	**Pb**	**00 25 37.3**	**-0.7**
PKVZ	**Pokaka**	**0.74**	**98**	P	**Pb**	**00 25 37.3**	**-1.0**
HIZ	**Hauiti**	**0.76**	**28**	P	**Pb**	**00 25 38.0**	**-0.6**
HIZ	**Hauiti**	**0.76**	**28**	P	**Pb**	**00 25 38.0**	**-0.6**
TWVZ	**Taurewa**	**0.81**	**82**	P	**Pb**	**00 25 38.4**	**-1.1**
MTVZ	**Mangateitei**	**0.85**	**104**	P	**Pb**	**00 25 38.9**	**-1.2**
FWVZ	**Far West T-bar**	**0.89**	**94**	P	**Pb**	**00 25 39.8**	**-1.1**
TRVZ	**Turoa**	**0.89**	**97**	P	**Pb**	**00 25 40.0**	**-1.0**
DRZ	**Dome Shelter**	**0.90**	**96**	P	**Pb**	**00 25 40.7**	**-0.5**
WHVZ	**Whangaehu Hut**	**0.92**	**96**	P	**Pb**	**00 25 40.3**	**-1.2**
WTVZ	**West Tongariro**	**0.92**	**86**	P	**Pb**	**

TDK	**Taldyqorghan**	**1.29 268**	*eP*		**Pg**	**00 28 53.1**	**0.0**
	97nm,0.1s							
TDK			*eS*		**Sg**	**00 29 12.5**	**+2.7**
	134nm,0.2s							
TDK	**Taldyqorghan**	**1.29 268**	P		**Pn**	**00 28 52.1**	**-0.4**
	75nm,0.1s							
TDK			S		**Sg**	**00 29 10.7**	**+0.9**
	201nm,0.2s							
KTMS	**Ketmen**	**1.62 177**	*eP*		**Pn**	**00 28 57.0**	**-0.1**
	4.5nm,0.4s							
KTMS			*eS*		**Sn**	**00 29 18.8**	**+0.7**
	170nm,0.3s							
KTMS	**Ketmen**	**1.62 177**	P		**Pn**	**00 28 57.0**	**-0.1**
	6.8nm,0.1s							
KTMS			S		**Sn**	**00 29 18.8**	**+0.7**
	170nm,0.3s							
ARXS	**Arharly**	**1.91 244**	*eP*		**Pb**	**00 29 03.0**	**-0.3**
	37nm,0.3s							
ARXS			*eS*		**Sg**	**00 29 29.8**	**+0.1**
	56nm,0.4s							
ARXS	**Arharly**	**1.91 244**	Pg		**Pb**	**00 29 03.0**	**-0.3**
	37nm,0.3s							
ARXS			Lg		Lg	00 29 29.8		
	56nm,0.4s							
KPKS	**Kokpek**	**1.94 215**	*eP*		**Pb**	**00 29 04.0**	**+0.2**
	37nm,0.2s							
KPKS			*eS*		**Sg**	**00 29 31.0**	**+0.3**
	358nm,0.3s							
KPKS	**Kokpek**	**1.94 215**	Pg		**Pb**	**00 29 04.0**	**+0.2**
	37nm,0.2s							
KPKS			Lg		Lg	00 29 31.0		
	358nm,0.3s							
SHLS	**Shalkode**	**1.98 196**	*eP*		**Pn**	**00 29 02.5**	**+0.4**
	12nm,0.2s							
SHLS			*eS*		**Sn**	**00 29 28.1**	**+1.2**
	83nm,0.5s							
SHLS	**Shalkode**	**1.98 196**	Pg		**Pn**	**00 29 02.5**	**+0.4**
	23nm,0.5s							
SHLS			Lg		Lg	00 29 28.1		
	83nm,0.5s							
UZB	**Uzynbulak**	**2.10 205**	*eP*		**Pb**	**00 29 06.1**	**-0.5**
	7.8nm,0.3s							
UZB			*eS*		**Sb**	**00 29 34.6**	**+1.8**
	108nm,0.4s							
UZB	**Uzynbulak**	**2.10 205**	Pg		**Pb**	**00 29 06.1**	**-0.5**
	7.8nm,0.3s							
UZB			Lg		Lg	00 29 34.6		
	108nm,0.4s							
MAKZ	**Makanchi**	**2.13 34**	⇓Pn		**Pn**	**00 29 02.0**	**-2.1**
	3.2nm,0.4s							
MAKZ			⇑Lg		Lg	00 29 28.4		
	36nm,0.3s							
KURS	**Kuram**	**2.15 224**	*eP*		**Pb**	**00 29 07.7**	**+0.2**
	8.5nm,0.3s							
KURS			*eS*		**Sg**	**00 29 37.1**	**-0.5**
	47nm,0.6s							
KURS	**Kuram**	**2.15 224**	Pg		**Pb**	**00 29 07.7**	**+0.2**
	8.5nm,0.3s							
KURS			Lg		Lg	00 29 37.1		
	47nm,0.6s							
MK31	**Makanchi Array**	**2.26 39**	⇑Pn		**Pn**	**00 29 03.9**	**-1.9**
	3.9nm,0.3s,baz=214,slow=15,SNR=5.7							
MK31			⇓Lg		Lg	00 29 32.6		
	14nm,0.2s,baz=217,slow=28,SNR=29							
ZHN	**Zhinishke**	**2.29 215**	*eP*		**Pb**	**00 29 10.0**	**+0.2**
	32nm,0.2s							
ZHN			*eS*		**Sg**	**00 29 41.4**	**-0.5**
	274nm,0.2s							
ZHN	**Zhinishke**	**2.29 215**	Pg		**Pb**	**00 29 10.0**	**+0.2**
	32nm,0.2s							
ZHN			Lg		Lg	00 29 41.4		
	274nm,0.2s							
SATY	**Saty**	**2.39 214**	*eP*		**Pb**	**00 29 11.4**	**-0.2**
	7.1nm,0.1s							
SATY			*eS*		**Sg**	**00 29 43.4**	**-1.8**
	132nm,0.3s							
SATY	**Saty**	**2.39 214**	Pg		**Pb**	**00 29 11.4**	**-0.2**
	7.1nm,0.1s							
SATY			Lg		Lg	00 29 43.4		
	132nm,0.3s							
KTBS	**Karatobe**	**2.87 243**	*eP*		**Pb**	**00 29 20.5**	**+0.7**
	7.1nm,0.4s							
KTBS			*eS*		**Sg**	**00 29 59.0**	**-1.6**
	70nm,0.3s							
KTBS	**Karatobe**	**2.87 243**	Pg		**Pb**	**00 29 20.5**	**+0.7**
	7.1nm,0.4s							
KTBS			Lg		Lg	00 29 59.0		
	70nm,0.3s							
MDOK	**Medeo**	**2.97 231**	*eP*		**Pb**	**00 29 21.1**	**-0.4**
	7.3nm,0.3s							
MDOK			*eS*		**Sb**	**00 30 00.5**	**+2.7**
	47nm,0.6s							
MDOK	**Medeo**	**2.97 231**	⇑Pg		**Pb**	**00 29 20.7**	**-0.7**
	3.9nm,0.4s							
MDOK			Pg		**Pb**	**00 29 21.1**	**-0.4**
	7.3nm,0.3s							
MDOK			Lg		Lg	00 30 00.5		
	47nm,0.6s							
MDOK			⇓Lg		Lg	00 30 02.0		
	40nm,0.8s							
KUU	**Kurty**	**3.01 249**	*eP*		**Pb**	**00 29 22.0**	**-0.1**
	6.7nm,0.3s							
KUU			*eS*		**Sg**	**00 30 02.2**	**-2.9**
	24nm,0.4s							
KUU	**Kurty**	**3.01 249**	Pg		**Pb**	**00 29 22.0**	**-0.1**
	6.7nm,0.3s							
KUU			Lg		Lg	00 30 02.2		
	24nm,0.4s							
KRBS	**Karabastau**	**3.53 249**	*eP*		**Pb**	**00 29 33.0**	**+2.0**
	7.6nm,0.4s							
KRBS			*eS*		**Sg**	**00 30 20.7**	**-1.1**
	8.0nm,0.4s							
KST	**Kastek**	**3.67 238**	*eP*		**Pb**	**00 29 34.3**	**+0.8**
	10nm,0.5s							
KST			*eS*		**Sg**	**00 30 22.8**	**-3.5**
	10nm,0.4s							
TKM2	**Tokmak 2**	**3.96 239**	⇓Pn		**Pn**	**00 29 30.7**	**+1.3**
	2.7nm,0.6s							
TKM2			⇓Pg		**Pb**	**00 29 40.1**	**+1.7**
	3.5nm,0.6s							
TKM2			⇓Lg		Lg	00 30 33.0		
	4.4nm,0.5s							
ZSN	**Zaisan**	**4.01 52**	*eP*		**Pn**	**00 29 31.6**	**+1.7**
	2.1nm,0.2s							
ZSN			*eS*		**Sn**	**00 30 19.0**	**+2.0**
	7.7nm,0.4s							
SGDS	**Sogindy**	**4.33 250**	*eP*		**Pb**	**00 29 46.5**	**+2.0**
	5.4nm,0.4s							
SGDS			*eS*		**Sg**	**00 30 43.5**	**-3.7**
	7.4nm,0.7s							
BTLS	**Baital**	**4.38 272**	*eP*		**Pg**	**00 29 48.7**	**-3.5**
	3.8nm,0.2s							
BTLS			*eS*		**Sg**	**00 30 48.1**	**-0.7**
	2.6nm,0.3s							
KURBB	**Kurchatov Arra**	**5.68 349**	⇑Pg		**Pb**	**00 30 07.8**	**+0.3**
	1.5nm,0.5s							
KURBB			⇓Lg		Lg	00 31 25.9		
	16nm,0.6s							
KURK	**Kurchatov**	**5.76 350**	⇑Pg		**Pb**	**00 30 09.9**	**+1.0**
	4.1nm,1.3s							
KURK			⇑Lg		Lg	00 31 27.5		
	8.0nm,0.8s							

*IDC **15** 00:29:42.0±1.9,3.°87N×126.°58E,h0km,mb3.8/5, mbtmp3.8/5,Error ellipse: s-maj=111.4km s-min=27.1km az=67.0*
*NEIC **15** 00:29:43.9±0.8,4.°4N±0.°1×126.°48E±0.°09,h47km±15km, mb4.4/10,Error ellipse: s-maj=18.1km s-min=10.9km az=202.0*
ISC 15 00:29:47.5±0.8,3.°74N±0.°07×126.°2E±0.°1,h35km,n20, σ2ş23/19,mb4.2/10,2D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.41**	**348**	⇓*eP*	**Pn**	**00 30 27.4**	**+3.0**
DDMP				*eS*	Sn	00 31 00.9	+8.1
TNTI	**Ternate**	**3.15**	**159**	Pn	**Pn**	**00 30 38.2**	**+3.5**
SKMP	**Bagumbayan, Su**	**3.24**	**329**	⇓*eP*	**Pn**	**00 30 38.3**	**+2.5**
TOLI2	**Tolitoli**	**6.04**	**245**	Pn	**Pn**	**00 31 17.1**	**+2.8**
KNRA	**Kununurra**	**19.45**	**173**	P	**Pn**	**00 34 13.1**	**+0.5**
KNRA				IAmb	IAmb	00 34 32.6	
	comp=Z,36nm,1.5s						
FITZ	**Fitzroy Crossi**	**21.70**	**182**	P	**P**	**00 34 36.1**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=9.5,slow=12,SNR=1.8						
	comp=Z,1.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**21.70**	**182**	P	**P**	**00 34 37.1**	**+1.5**
JOW	**Kunigami**	**23.05**	**5**	P	P	00 34 38.5	-11
JOW				IAmb	IAmb	00 35 00.2	
	comp=Z,27nm,1.5s						
COEN	**Coen**	**24.32**	**137**	P	**P**	**00 34 59.0**	**-3.1**
COEN				IAmb	IAmb	00 35 36.1	
	comp=Z,26nm,1.2s						
WB0	**Warramunga Arr**	**24.70**	**161**	P	**P**	**00 35 04.3**	**-1.1**
WB0				IAmb	IAmb	00 35 05.7	
	comp=Z,5.9nm,0.8s						
WRA	**Warramunga Arr**	**24.84**	**162**	P	**P**	**00 35 05.0**	**-1.8**
	comp=Z,2.5nm,0.8s,baz=342,slow=10,SNR=18						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**24.84**	**162**	P	**P**	**00 35 05.3**	**-1.5**
WB2	**Warramunga Arr**	**24.85**	**162**	P	**P**	**00 35 06.0**	**-0.8**
WB2				IAmb	IAmb	00 35 06.7	
	comp=Z,6.5nm,0.8s						
WR0	**Warramunga Arr**	**24.92**	**161**	P	**P**	**00 35 05.7**	**-1.8**
WR0				IAmb	IAmb	00 35 33.5	
	comp=Z,13nm,1.5s						
KULM	**Kulim**	**25.55**	**274**	P	**P**	**00 35 09.2**	**-4.0**
PSA00	**Pilbara Seismi**	**25.92**	**194**	P	**P**	**00 35 16.1**	**-0.4**
ASAR	**Alice Springs**	**28.24**	**165**	P	**P**	**00 35 39.5**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=344,slow=11,SNR=2.8						
	comp=Z,0.3nm,0.3s						
STKA	**Stephens Creek**	**38.31**	**159**	P	**P**	**00 37 04.9**	**0.0**
	comp=Z,1.9nm,0.6s,baz=327,slow=11,SNR=7.8						
	comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**38.31**	**159**	P	**P**	**00 37 04.8**	**-0.1**
MKAR	**Makanchi Array**	**57.27**	**325**	P	**P**	**00 39 32.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=126,slow=7.1,SNR=2.9						
	comp=Z,0.3nm,0.4s						

*SOME **15** 00:33:20.8,45.°10N×80.°33E,h15km*
*NNC **15** 00:33:20.7±0.5,45.°12N×80.°33E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=6.6km s-min=3.2km az=119.0*
ISC 15 00:33:18.4±1.2,45.°19N±0.°03×80.°33E±0.°04,h15km±13km, n34,σ1ş41/55,8C-4D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.94**	**204**	*eP*	**Pn**	**00 33 37.7**	**+0.5**
	8.3nm,0.1s						
DJR				*eS*	**Sb**	**00 33 49.7**	**+0.9**
	106nm,0.3s						
DJR	**Jarkent**	**0.94**	**204**	P	**Pn**	**00 33 37.7**	**+0.5**
	7.4nm,0.1s						
DJR				S	**Sb**	**00 33 49.7**	**+0.9**
	106nm,0.3s						
TDK	**Taldyqorghan**	**1.38**	**263**	*eP*	**Pg**	**00 33 47.3**	**+2.4**
	46nm,0.2s						
TDK				*eS*	**Sg**	**00 34 06.8**	**+4.0**
	151nm,0.2s						
KTMS	**Ketmen**	**1.74**	**179**	*eP*	**Pg**	**00 33 51.6**	**-0.3**
	6.5nm,0.1s						
KTMS				*eS*	**Sb**	**00 34 13.5**	**+1.5**
	94nm,0.4s						
KTMS	**Ketmen**	**1.74**	**179**	P	**Pg**	**00 33 51.5**	**-0.3**
	6.5nm,0.1s						
KTMS				S	**Sb**	**00 34 13.5**	**+1.5**
	94nm,0.4s						
MAKZ	**Makanchi**	**1.98**	**35**	⇓Pn	**Pg**	**00 33 56.7**	**+0.3**
	2.2nm,0.5s						
MAKZ				⇑Lg	Lg	00 34 23.6	
	20nm,0.3s						
ARXS	**Arharly**	**2.04**	**242**	*eP*	**Pg**	**00 33 57.8**	**+0.4**
	23nm,0.1s						
ARXS				*eS*	**Sg**	**00 34 25.1**	**+1.3**
	39nm,0.4s						
ARXS	**Arharly**	**2.04**	**242**	Pg	**Pg**	**00 33 57.8**	**+0.4**
	23nm,0.1s						
ARXS				Lg	Lg	00 34 25.1	
	39nm,0.4s						
KPKS	**Kokpek**	**2.09**	**215**	*eP*	**Pg**	**00 33 58.7**	**+0.2**
	26nm,0.1s						
KPKS				*eS*	**Sg**	**00 34 25.7**	**+0.1**
	208nm,0.4s						
KPKS	**Kokpek**	**2.09**	**215**	Pg	**Pg**	**00 33 58.7**	**+0.2**
	26nm,0.1s						
KPKS				Lg	Lg	00 34 25.7	
	208nm,0.4s						
MK31	**Makanchi Array**	**2.11**	**40**	⇑Pn	**Pg**	**00 33 58.6**	**-0.2**
	1.5nm,0.3s,baz=212,slow=16,SNR=2.7						
MK31				⇑Lg	Lg	00 34 27.1	
	8.1nm,0.2s,baz=214,slow=28,SNR=9.9						
SHLS	**Shalkode**	**2.13**	**197**	*eP*	**Pb**	**00 33 57.1**	**+0.4**
	14nm,0.3s						
SHLS				*eS*	**Sb**	**00 34 23.0**	**0.0**
	49nm,0.4s						
SHLS	**Shalkode**	**2.13**	**197**	P	**Pb**	**00 33 57.1**	**+0.4**
	14nm,0.3s						
SHLS				S	**Sb**	**00 34 23.0**	**0.0**
	49nm,0.4s						
UZB	**Uzynbulak**	**2.25**	**205**	*eP*	**Pg**	**00 34 00.8**	**-0.7**
	4.0nm,0.2s						
UZB				*eS*	**Sg**	**00 34 29.4**	**-1.3**
	63nm,0.4s						
UZB	**Uzynbulak**	**2.25**	**205**	Pg	**Pg**	**00 34 00.9**	**-0.7**
	4.0nm,0.2s						
UZB				Lg	Lg	00 34 29.4	
	63nm,0.4s						
KURS	**Kuram**	**2.30**	**223**	*eP*	**Pg**	**00 34 02.4**	**-0.1**
	5.0nm,0.3s						
KURS				*eS*	**Sg**	**00 34 32.5**	**+0.2**
	15nm,0.2s						
KURS	**Kuram**	**2.30**	**223**	Pg	**Pg**	**00 34 02.4**	**-0.1**
	5.0nm,0.3s						
KURS				Lg	Lg	00 34 32.6	
	15nm,0.2s						
ZHN	**Zhinishke**	**2.44**	**215**	*eP*	**Pg**	**00 34 04.5**	**-0.6**
	14nm,0.3s						
ZHN				*eS*	**Sg**	**00 34 35.7**	**-1.1**
	196nm,0.2s						
ZHN	**Zhinishke**	**2.44**	**215**	Pg	**Pg**	**00 34 04.5**	**-0.6**
	14nm,0.3s						
ZHN				Lg	Lg	00 34 35.7	
	196nm,0.2s						
SATY	**Saty**	**2.54**	**214**	*eP*	**Pg**	**00 34 06.6**	**-0.5**
	4.1nm,0.1s						
SATY				*eS*	**Sg**	**00 34 39.3**	**-0.7**
	117nm,0.2s						
SATY	**Saty**	**2.54**	**214**	Pg	**Pg**	**00 34 06.6**	**-0.5**
	4.1nm,0.1s						
SATY				Lg	Lg	00 34 39.3	
	117nm,0.2s						
KTBS	**Karatobe**	**3.00**	**242**	*eP*	**Pg**	**00 34 14.5**	**-1.4**
	4.4nm,0.2s						
KTBS				*eS*	**Sg**	**00 34 53.6**	**-1.2**
	17nm,0.3s						
KTBS	**Karatobe**	**3.00**	**242**	Pg	**Pg**	**00 34 14.5**	**-1.4**
	4.4nm,0.2s						
KTBS				Lg	Lg	00 34 53.6	
	17nm,0.3s						
MDOK	**Medeo**	**3.11**	**231**	*eP*	**Pg**	**00 34 15.8**	**-2.2**
	4.3nm,0.3s						
MDOK				*eS*	**Sg**	**00 34 55.7**	**-2.6**
	28nm,0.6s						
MDOK	**Medeo**	**3.11**	**231**	⇑Pg	**Pb**	**00 34 14.9**	**+1.4**
	2.6nm,0.4s						
MDOK				Pg	**Pg**	**00 34 15.8**	**-2.2**
	4.3nm,0.3s						
MDOK				Lg	Lg	00 34 55.7	
	28nm,0.6s						
MDOK				⇑Lg	Lg	00 34 57.3	
	23nm,0.6s						
KUU	**Kurty**	**3.13**	**247**	*eP*	**Pg**	**00 34 16.8**	**-1.7**
	2.5nm,0.2s						
KUU				*eS*	**Sg**	**00 34 56.7**	**-2.3**
	18nm,0.4s						
KUU	**Kurty**	**3.13**	**247**	Pg	**Pg**	**00 34 16.8**	**-1.7**
	2.5nm,0.2s						
KUU				Lg	Lg	00 34 56.7	
	18nm,0.4s						
KST	**Kastek**	**3.81**	**237**	*eP*	**Pg**	**00 34 28.8**	**-2.5**
	6.1nm,0.4s						
KST				*eS*	**Sg**	**00 35 17.6**	**-3.1**
	5.2nm,0.3s						
ZSN	**Zaisan**	**3.87**	**53**	*eP*	**Pb**	**00 34 26.3**	**0.0**
	3.8nm,0.5s						
ZSN				*eS*	**Sb**	**00 35 13.3**	**+0.3**
	4.8nm,0.4s						
TKM2	**Tokmak 2**	**4.10**	**238**	⇓Pg	**Pg**	**00 34 35.1**	**-1.8**
	4.3nm,1.1s						
TKM2				⇑Lg	Lg	00 35 27.5	
	2.6nm,0.5s						
SGDS	**Sogindy**	**4.44**	**249**	*eP*	**Pg**	**00 34 42.1**	**-1.4**
	3.5nm,0.3s						
SGDS				*eS*	**Sg**	**00 35 40.7**	**-0.3**
	4.2nm,0.4s						
BTLS	**Baital**	**4.45**	**270**	*eP*	**Pg**	**00 34 42.1**	**-1.5**
	1.1nm,0.3s						
BTLS				*eS*	**Sg**	**00 35 40.5**	**-0.8**
	2.4nm,0.4s						
KURBB	**Kurchatov Arra**	**5.57**	**348**	⇓Pg	**Pg**	**00 35 04.1**	**-0.9**
	2.2nm,0.8s						
KURBB				⇓Lg	Lg	00 36 20.7	
	7.1nm,0.5s						
KURK	**Kurchatov**	**5.65**	**349**	⇑Pg	**Pg**	**00 35 04.2**	**-2.2**
	2.9nm,1.2s						
KURK				⇑Lg	Lg	00 36 23.9	
	3.6nm,0.7s						

*IDC **15** 00:36:43.8±1.9,4.°76S×131.°19E,h0km,mb3.8/1, mbtmp3.7/5,ML3.6/4,Error ellipse: s-maj=91.1km s-min=24.0km az=84.0*
ISC 15 00:36:47.8±0.9,4.°69S±0.°06×131.°1E±0.°2,h35km,n11, σ2ş79/13,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.10**	**33**	P	**Pn**	**00 37 19.2**	**-1.3**
SIJI	**Sorong**	**3.80**	**2**	Pn	**Pn**	**00 37 43.2**	**-0.7**
	3.0nm,0.3s,baz=207,slow=22,SNR=11						
SIJI				Sn	**Sn**	**00 38 25.4**	**-2.0**
	4.5nm,0.3s,baz=282,slow=24,SNR=2.2						
	12nm,0.2s						
KDU	**Kakadu**	**8.06**	**170**	P	**Pn**	**00 38 44.4**	**+2.0**
MTN	**Manton Dam**	**8.10**	**180**	P	**Pn**	**00 38 44.8**	**+1.9**
KNRA	**Kununurra**	**11.15**	**192**	P	**Pn**	**00 39 25.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**14.36**	**201**	Pn	**Pn**	**00 40 06.0**	**-2.6**
	0.2nm,0.3s,baz=32,slow=10,SNR=12						
	0.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**14.36**	**201**	P	**Pn**	**00 40 07.7**	**-0.9**
WRA	**Warramunga Arr**	**15.48**	**169**	Pn	**Pn**	**00 40 21.6**	**-2.1**
	0.2nm,0.3s,baz=350,slow=11,SNR=8.7						
WRA				Sn	**Sn**	**00 43 07.9**	**-6.2**
	0.1nm,0.3s,baz=360,slow=23,SNR=2.9						
	0.4nm,0.4s						
QIS	**Mount Isa**	**17.80**	**153**	P	**P**	**00 40 56.1**	**+2.7**
ASAR	**Alice Springs**	**19.05**	**172**	P	**Pn**	**00 41 07.8**	**-0.4**
	0.5nm,0.3s,baz=345,slow=9.5,SNR=20						
	2.7nm,0.6s						
MKAR	**Makanchi Array**	**66.93**	**326**	P	**P**	**00 47 39.2**	**+2.5**
	0.4nm,0.4s,baz=117,slow=8.5,SNR=5.1						
	0.4nm,0.4s						

IDC 15 00:43:27.9±4.1,2.°59S×139.°10E,h0km,mb3.4/3, mbtmp3.6/4,ML4.1/1,Error ellipse: s-maj=139.4km s-min=29.4km az=90.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.86**	**195**	P	Pn	00 47 38.3	+0.3
	0.7nm,0.3s,baz=15,slow=13,SNR=29						
	1.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.29**	**220**	P	P	00 48 05.4	0.0
	0.7nm,0.4s,baz=36,slow=14,SNR=1.4						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**21.54**	**193**	P	P	00 48 18.9	-0.1
	0.8nm,0.5s,baz=19,slow=9.6,SNR=9.3						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**69.94**	**322**	P	P	00 54 41.1	0.0
	0.3nm,0.4s,baz=104,slow=6.1,SNR=4.6						
	0.3nm,0.4s						

*NEIC **15** 00:52:07.0±0.8,49.°05N±0.°02×120.°55W±0.°02,h5km±6km, Error ellipse: s-maj=3.0km s-min=2.1km az=189.0*
*PGC **15** 00:52:07.1±0.0,49.°07N×120.°56W,h10km,ML3.5, ML3.0/36,44km south of Princeton, Bc British Columbia, Canada*
*SEA **15** 00:52:08.2±0.9,49.°08N±0.°02×120.°54W±0.°01,h9km±6km, Error ellipse: s-maj=3.5km s-min=1.1km az=176.0*
ISC 15 00:52:06.2±1.1,49.°08N±0.°02×120.°54W±0.°01,h2km±10km, n113,σ1ş21/164,British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNT	**Penticton**	**0.65**	**69**		**Pg**	**00 52 19.9**	**+1.3**
PNT					**Sg**	**00 52 28.7**	**+1.6**
PNT	**Penticton**	**0.65**	**69**	P	**Pg**	**00 52 19.9**	**+1.3**
PNT				S	**Sg**	**00 52 28.1**	**+1.0**
HOPB	**Hope**	**0.65**	**298**	P	**Pg**	**00 52 19.7**	**+1.0**
HOPB				S	**Sg**	**00 52 28.2**	**+1.0**
SHUK	**Shuksan-Mt. Ba**	**0.78**	**253**		**Pg**	**00 52 21.9**	**+0.7**
SHUK					**Sg**	**00 52 31.9**	**+0.6**
RPW	**Rockport**	**0.90**	**226**		**Pg**	**00 52 24.1**	**+0.6**
RPW	**Rockport**	**0.90**	**226**	P	**Pg**	**00 52 24.2**	**+0.6**
MBW	**Mount Baker**	**0.94**	**252**		**Pg**	**00 52 24.9**	**+0.6**
MBW	**Mount Baker**	**0.94**	**252**	P	**Pg**	**00 52 24.9**	**+0.6**
NLW	**Nelson Butte**	**1.01**	**172**		**Pg**	**00 52 25.8**	**+0.2**
A05A	**Maple Falls**	**1.02**	**266**	P	**Pg**	**00 52 26.4**	**+0.7**
A05A				S	**Sg**	**00 52 39.5**	**+0.5**
A05A				Sg	**Sn**	**00 52 42.4**	**0.0**
VDB	**Vedder Mountai**	**1.03**	**267**		**Pg**	**00 52 26.5**	**+0.6**
VDB					**Sg**	**00 52 39.8**	**+0.6**
VDB	**Vedder Mountai**	**1.03**	**267**	P	**Pg**	**00 52 26.6**	**+0.6**
VDB				S	**Sg**	**00 52 39.3**	**+0.1**
GPW	**Glacier Peak**	**1.04**	**203**		**Pg**	**00 52 26.6**	**+0.4**
GPW	**Glacier Peak**	**1.04**	**203**	P	**Pg**	**00 52 26.7**	**+0.4**
B08A	**Colville Reser**	**1.08**	**132**	Pn	**Pg**	**00 52 27.3**	**+0.4**
B08A				Sg	**Sg**	**00 52 41.3**	**+0.4**
B08A				IAML		00 52 44.2	
	comp=N,961nm,0.2s						
B08A				IAML		00 52 44.3	
	comp=E,1μm,0.3s						
B08A	**Colville Reser**	**1.08**	**132**	P	**Pg**	**00 52 27.2**	**+0.4**
B08A				S	**Sg**	**00 52 40.7**	**-0.2**
DHW2	**Dyer Hill 2**	**1.21**	**155**		**Pb**	**00 52 29.1**	**-0.8**
CMW	**Cultus Mountai**	**1.23**	**238**		**Pb**	**00 52 29.9**	**-0.3**
CMW	**Cultus Mountai**	**1.23**	**238**	P	**Pb**	**00 52 30.0**	**-0.3**
WRW	**Wenatchee Ridg**	**1.25**	**191**		**Pn**	**00 52 30.1**	**-0.7**
CBSW	**Chelan Butte S**	**1.32**	**165**		**Pn**	**00 52 31.1**	**-0.6**
SLFW	**Sugar Loaf**	**1.32**	**180**		**Pn**	**00 52 31.4**	**-0.5**
HNBB	**Haney**	**1.35**	**279**	P	**Pn**	**00 52 31.8**	**-0.3**
HNBB				S	**Sb**	**00 52 48.7**	**-1.1**
WTV	**Waterville**	**1.44**	**164**		**Pn**	**00 52 33.2**	**-0.1**
HTW	**Haystack Looko**	**1.52**	**213**		**Pb**	**00 52 35.1**	**-0.1**
MCW	**Mount Constitu**	**1.56**	**256**		**Pn**	**00 52 35.3**	**+0.2**
MCW	**Mount Constitu**	**1.56**	**256**	Pn	**Pn**	**00 52 35.3**	**+0.2**
MCW				Sg	**Sg**	**00 52 56.8**	**+0.4**
SAW	**Saint Andrews**	**1.58**	**151**		**Pn**	**00 52 34.8**	**-0.4**
C05A	**Tolt Reservoir**	**1.59**	**209**		**Pb**	**00 52 36.1**	**-0.2**
C05A					**Sn**	**00 52 55.8**	**-0.7**
C05A	**Tolt Reservoir**	**1.59**	**209**	Pn	**Pb**	**00 52 36.0**	**-0.2**
C05A				Sg	**Sn**	**00 52 55.7**	**-0.7**
TTW

B009			Sg	**Sb**	**00 53 07.0**	**-0.7**
B010	**North Saanich**	**1.97 258**	Pn	**Pn**	**00 52 40.5**	**-0.1**
B010			Sg	**Sb**	**00 53 07.4**	**-0.3**
C09A	**Chrisman Ranch**	**1.98 130**		**Pn**	**00 52 40.6**	**-0.2**
C09A	**Chrisman Ranch**	**1.98 130**	Pn	**Pb**	**00 52 42.6**	**-0.4**
C09A			Sg	**Sb**	**00 53 08.7**	**+0.6**
D05A	**Enumclaw**	**2.13 208**		**Pn**	**00 52 43.1**	**+0.4**
D05A			IAML		00 53 15.7	
	comp=E,230nm,1.3s					
D05A	**Enumclaw**	**2.13 208**	Pn	**Pb**	**00 52 45.0**	**-0.5**
D05A			Sg	**Sb**	**00 53 13.1**	**+0.8**
GNW	**Green Mountain**	**2.15 226**	Pn	**Pn**	**00 52 42.8**	**-0.3**
GNW			Sg	**Sb**	**00 53 12.4**	**-0.6**
HDW	**Hoodsport**	**2.21 230**	Pn	**Pn**	**00 52 43.7**	**-0.2**
HDW			Sg	**Sb**	**00 53 14.6**	**0.0**
B04A	**Port Angeles**	**2.22 244**		**Pn**	**00 52 44.2**	**+0.2**
SHB	**Sechelt**	**2.24 285**	Pn	**Pn**	**00 52 44.6**	**+0.2**
SHB			Sg	**Sb**	**00 53 15.3**	**-0.3**
NLLB	**Nanaimo Lost L**	**2.27 275**	Pn	**Pn**	**00 52 44.9**	**+0.3**
NLLB			Sg	**Sb**	**00 53 15.8**	**-0.5**
STW	**Striped Peak**	**2.28 247**	Pn	**Pn**	**00 52 45.0**	**+0.3**
FMW	**Mount Fremont**	**2.28 200**	Pn	**Pb**	**00 52 47.9**	**-0.3**
FMW			Sg	**Sb**	**00 53 17.6**	**+0.6**
D08A	**Wollman Farm,**	**2.30 151**		**Pn**	**00 52 44.2**	**-0.9**
D08A			IAML		00 53 26.6	
	comp=N,193nm,0.3s					
B926	**Mesachie Lake**	**2.38 265**	Pn	**Pn**	**00 52 47.4**	**+1.2**
B926			Sg	**Sb**	**00 53 18.1**	**-1.4**
CLRS	**Cowichan Lake**	**2.38 265**	Pn	**Pn**	**00 52 46.3**	**+0.1**
CLRS	**Cowichan Lake**	**2.38 265**	Pn	**Pn**	**00 52 47.8**	**+1.6**
CLRS			Sg	**Sb**	**00 53 18.7**	**-0.8**
NEW	**Newport**	**2.41 109**		**Pn**	**00 52 46.4**	**-0.2**
NEW			IAML		00 53 23.5	
	comp=N,150nm,0.5s					
NEW			IAML		00 53 24.6	
	comp=N,120nm,0.6s					
GHNB	**Nanoose**	**2.43 277**	Pn	**Pn**	**00 52 47.1**	**+0.2**
GHNB			Sg	**Sb**	**00 53 20.4**	**-0.6**
OSD	**Olympics--Snow**	**2.45 240**	Pn	**Pn**	**00 52 47.8**	**+0.4**
OBC	**Olympics--Boni**	**2.57 247**	Pn	**Pn**	**00 52 50.4**	**+1.5**
SLEB	**Sale Mountain**	**2.60 36**	Pn	**Pn**	**00 52 50.3**	**+0.9**
SLEB			Sg	**Sg**	**00 53 29.1**	**-0.5**
TXB	**Texada**	**2.62 285**	Pn	**Pn**	**00 52 49.8**	**+0.3**
TXB			Sg	**Sb**	**00 53 26.5**	**+0.1**
PFB	**Port Renfrew**	**2.63 260**	Pn	**Pn**	**00 52 50.5**	**+0.8**
PFB			Sg	**Sb**	**00 53 25.9**	**-0.8**
MGB	**Mount Grey**	**2.73 270**	Pn	**Pn**	**00 52 51.6**	**+0.4**
MGB			Sg	**Sb**	**00 53 28.0**	**-1.8**
CPW	**Capitol Peak**	**2.74 220**	Sg	**Sb**	**00 53 29.7**	**-0.1**
HAWA	**Hanford**	**2.78 165**		**Pg**	**00 52 59.8**	**+0.4**
HAWA			IAML		00 53 39.1	
	comp=N,115nm,0.6s					
E08A	**Dider Farm, El**	**2.78 158**		**Pn**	**00 52 51.3**	**-0.4**
E08A			IAML		00 53 40.6	
	comp=E,140nm,0.6s					
E08A			IAML		00 53 41.7	
	comp=N,72nm,0.4s					
NLWA	**Neilton Lookou**	**2.79 234**		**Pn**	**00 52 52.5**	**+0.5**
B927	**Port Alberni**	**2.81 274**	Pn	**Pn**	**00 52 52.4**	**+0.4**
OCP	**Olym-Cheeka Pk**	**2.82 255**	Pn	**Pn**	**00 52 53.1**	**+0.8**
C03A	**Quillayute Air**	**2.91 249**	Pn	**Pn**	**00 52 53.7**	**+0.3**
C03A			IAML		00 53 57.4	
	comp=E,64nm,2.1s					
WISH	**Wishkah**	**2.92 229**		**Pn**	**00 52 53.6**	**0.0**
B928	**Bamfield**	**3.04 267**	Pn	**Pn**	**00 52 55.9**	**+0.7**
BFSB	**Bamfield**	**3.04 267**	Pn	**Pn**	**00 52 54.6**	**-0.6**
BLBC	**Blue River**	**3.08 15**	Pn	**Pn**	**00 52 57.1**	**+1.0**
BLBC			Sg	**Sg**	**00 53 44.3**	**-0.8**
F07A	**Phinny Hill Vi**	**3.22 172**		**Pn**	**00 52 58.4**	**+0.7**
E03A	**Lebam**	**3.25 220**		**Pn**	**00 52 58.7**	**+0.6**
E03A			IAML		00 53 54.9	
	comp=N,49nm,0.8s					
E03A			IAML		00 53 55.9	
	comp=E,50nm,0.7s					
E03A	**Lebam**	**3.25 220**	Sg	**Sb**	**00 53 44.6**	**-0.1**
OZB	**Mount Ozzard**	**3.26 270**	Pn	**Pn**	**00 52 56.9**	**-1.4**
CBB	**Campbell River**	**3.28 289**	Pn	**Pn**	**00 52 58.9**	**+0.3**
CBB	**Campbell River**	**3.28 289**	Pn	**Pn**	**00 52 58.2**	**-0.3**
CBB			Sg	**Sb**	**00 53 44.7**	**-0.7**
BTB	**Buttle Lake**	**3.28 279**	Pn	**Pn**	**00 53 00.2**	**+1.4**
BTB			Sg	**Sb**	**00 53 46.4**	**+0.7**
B012	**Ucluelet**	**3.30 269**	Pn	**Pn**	**00 53 00.7**	**+1.9**
F04A	**Amboy**	**3.40 203**	Pn	**Pn**	**00 53 01.2**	**+1.0**
F04A			IAML		00 53 51.6	
	comp=E,52nm,0.7s					
MNB	**Mounoet Dainar**	**3.41 23**	Pn	**Pn**	**00 53 01.7**	**+1.1**
MNB			Sg	**Sg**	**00 53 54.4**	**-1.3**
RADR	**Rader Ridge**	**3.45 221**	Pn	**Pn**	**00 53 03.4**	**+2.5**
RADR			IAML		00 53 57.7	
	comp=E,52nm,0.9s					
RADR			IAML		00 54 05.9	
	comp=N,47nm,1.6s					
GDR	**Gold River**	**3.65 283**	Pn	**Pn**	**00 53 04.6**	**+1.0**
GDR			Sg	**Sb**	**00 53 57.1**	**+1.0**
NCRB	**Newcastle Ridg**	**3.81 292**	Pn	**Pn**	**00 53 07.1**	**+1.1**
NCRB			Sg	**Sb**	**00 54 02.4**	**+1.5**
G08A	**Pilot Rock**	**3.94 164**	Pn	**Pn**	**00 53 08.4**	**+0.6**
G08A			IAML		00 54 19.6	
	comp=N,42nm,0.5s					
G08A			IAML		00 54 21.8	
	comp=E,43nm,1.1s					
BSMT	**Bassoo Peak**	**4.02 106**	Pn	**Pn**	**00 53 09.9**	**+0.9**
BSMT			Sg	**Sb**	**00 54 10.6**	**+3.6**
WOSB	**Woss**	**4.07 288**	Pn	**Pn**	**00 53 10.8**	**+1.4**
WOSB			Sg	**Sb**	**00 54 09.3**	**+1.2**
WALA	**Waterton Lakes**	**4.36 88**	IAML		00 54 27.0	
	comp=N,38nm,0.9s					
WALA			IAML		00 54 34.1	
	comp=E,29nm,1.1s					
WALA	**Waterton Lakes**	**4.36 88**	Sg	**Sb**	**00 54 20.7**	**+4.1**
JTMT	**Jette**	**4.38 105**	Pn	**Pn**	**00 53 13.7**	**-0.1**
JTMT			Sg	**Sg**	**00 54 23.3**	**-3.5**
PRDA	**Priddis**	**4.41 64**	Pg	**Pg**	**00 53 28.9**	**-1.8**
PRDA			Sg	**Sg**	**00 54 25.5**	**-2.3**
UBRB	**Upper Baezaeko**	**4.42 331**	Pn	**Pn**	**00 53 15.1**	**+0.8**
UBRB			Sn	**Sn**	**00 54 05.5**	**-0.9**
UBRB			Sg	**Sg**	**00 54 25.1**	**-3.1**
MAYB	**Maynard**	**4.50 290**	Pn	**Pn**	**00 53 16.6**	**+1.2**
MAYB			Sg	**Sb**	**00 54 21.7**	**+1.1**
YBMT	**Yellow Bay**	**4.51 103**	Sg	**Sb**	**00 54 26.1**	**+5.1**
PHC	**Port Hardy**	**4.74 293**	Sg	**Sb**	**00 54 29.4**	**+2.0**
BMO	**Blue Mountains**	**4.78 151**	IAML		00 54 43.8	
	comp=E,15nm,0.8s					
BMO			IAML		00 54 45.0	
	comp=E,21nm,0.7s					
BPBC	**Brooks Peninsu**	**4.82 286**	Pn	**Pn**	**00 53 21.0**	**+1.2**
I07A	**Izee**	**5.05 171**	IAML		00 55 02.6	
	comp=N,17nm,1.6s					
I07A			IAML		00 55 11.1	
	comp=E,16nm,1.7s					
PLID	**Pearl Lake**	**5.06 140**	IAML		00 54 48.8	
	comp=E,31nm,0.7s					
HOLB	**Holberg**	**5.15 290**	Pn	**Pn**	**00 53 25.8**	**+1.5**
BRLDA	**Berland Lookou**	**5.38 20**	Sg	**Sg**	**00 54 55.6**	**-3.4**
OVMT	**Ovando**	**5.45 109**	Pn	**Pn**	**00 53 28.6**	**+0.2**
OVMT			Sg	**Sg**	**00 54 55.5**	**-5.5**
BDMTA	**Bald Mountain**	**5.83 9**	Sg	**Sg**	**00 55 09.4**	**-3.8**
NBC5	**NorthernBC 5**	**8.55 352**	Pn	**Pn**	**00 54 12.7**	**+1.7**

*NEIC **15** 01:01:53.2±1.0,57.°5S±0.°1×147.°1W±0.°2, h10km±1km, mb4.3/10, Error ellipse: s-maj=22.9km s-min=10.6km az=316.0*

*IDC **15** 01:01:57.0±1.3,56.°78S×147.°05W, h0km, mb4.4/4, mbtmp4.4/4, MS4.3/34, Error ellipse: s-maj=226.2km s-min=27.2km az=4.0*

*GCMT **15** 01:01:58.2±0.2,57.°67S±0.°01×147.°89W±0.°02, h23km±1km, MW5.2/118, Moment Tensor Solution. s80,c108; s118,c185; Duration: 1!0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.19±.02; $M_{\theta\theta}$0.83±.02; $M_{\phi\phi}$-0.64±.02; $M_{r\theta}$-0.09±.03; $M_{r\phi}$0.38±.01; $M_{\theta\phi}$-0.06±.02; Best double couple: M0.83500×10^{17} NP1:ϕ_{S1}211.00000°, δ89.00000°, λ174.00000°. NP2:ϕ_{S2}301.00000°, δ84.00000°, λ1.00000°. Principal axes: T 0.9340, Plg5.0000°, Azm166.0000°; N -0.1970, Plg83.0000°, Azm24.0000°; P -0.7360, Plg4.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 01:01:52.6±0.8,57.°4S±0.°2×147.°1W±0.°1, h10km, n75,
σ1!15/19, mb4.2/9, MS4.4/37, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**25.70**	**201**	P	**P**	**01 07 21.9**	**-0.4**
SBA				IAmb	IAmb	01 07 49.2	
	comp=Z,4.7nm,1.3s						
VNDA	**Vanda**	**26.54**	**202**	LR	LR	01 15 39.2	
	comp=Z,524nm,18.9s,baz=74,slow=30						
VNDA	**Vanda**	**26.54**	**202**	P	**P**	**01 07 30.1**	**+0.2**
MSWZ	**Moikau Station**	**28.80**	**287**	P	**P**	**01 07 51.0**	**+0.5**
RPZ	**Rata Peaks**	**29.39**	**280**	LR	LR	01 17 01.4	
	comp=Z,811nm,19.3s,baz=130,slow=31						
TUWZ	**Tuamarina**	**29.46**	**286**	P	**P**	**01 07 57.7**	**+1.4**
URZ	**Urewera**	**30.23**	**294**	LR	LR	01 16 01.4	
	comp=Z,458nm,21.7s,baz=38,slow=28						
QSPA	**South Pole Qui**	**32.75**	**180**	LR	LR	01 19 08.3	
	comp=Z,1μm,21.8s,baz=62,slow=31						
QSPA	**South Pole Qui**	**32.75**	**180**	P	**P**	**01 08 25.4**	**+0.1**
QSPA				IAmb	IAmb	01 08 36.7	
	comp=Z,3.2nm,1.1s						
TBI	**Tubuai**	**34.05**	**356**	*e*S	S	01 13 46.4	-16
	comp=Z,168nm,29.2s						
TBI				*e*LR	LR	01 17 10.3	
	comp=Z,2μm,28.5s						
TBI				*e*LR	LR	01 17 10.6	
	comp=Z,27μm,25.2s						
TBI	**Tubuai**	**34.05**	**356**	*e*T	T	01 44 34.6	
	comp=Z,19nm,0.3s						
RAO	**Raoul Island**	**35.42**	**309**	LR	LR	01 19 59.3	
	comp=Z,395nm,20.2s,baz=148,slow=31						
RAR	**Rarotonga**	**37.32**	**340**	LR	LR	01 21 02.6	
	comp=Z,715nm,18.3s,baz=178,slow=31						
PMSA	**Palmer Station**	**38.02**	**136**	LR	LR	01 20 51.6	
	comp=Z,415nm,20.4s,baz=237,slow=30						
BELA	**Belgrano 2**	**38.92**	**162**	P	**P**	**01 09 16.1**	**-1.7**
BELA				IAmb	IAmb	01 09 28.5	
	comp=Z,3.8nm,1.0s						
MEH	**Mehetia**	**39.46**	**359**	*e*T	T	01 51 24.7	
	comp=Z,30nm,0.3s						
TVO	**Taravao**	**39.58**	**357**	*e*T	T	01 51 29.6	
	comp=Z,18nm,0.3s						
PPT2	**Papeete2**	**39.78**	**356**	*e*S	S	01 15 14.4	-15
	comp=Z,234nm,26.2s						
PPT2				*e*LR	LR	01 19 49.7	
	comp=Z,1μm,28.0s						
PPT2				*e*LR	LR	01 19 50.2	
	comp=Z,2μm,25.5s						
RPN	**Rapa Nui**	**40.28**	**58**	LR	LR	01 22 30.3	
	comp=Z,195nm,19.0s,baz=207,slow=31						
VAH	**Vaihoa**	**42.08**	**359**	*e*T	T	01 54 41.9	
	comp=Z,26nm,0.3s						
AFI	**Afiamalu**	**47.28**	**326**	LR	LR	01 26 07.2	
	comp=Z,334nm,19.2s,baz=161,slow=31						
VNA3	**Neumayer Olymp**	**48.19**	**163**	P	**P**	**01 10 34.0**	**+1.5**
DZM	**Mont Dzumac**	**48.71**	**296**	LR	LR	01 29 22.8	
	comp=Z,195nm,18.0s,baz=160,slow=34						
DZM	**Mont Dzumac**	**48.71**	**296**	*e*LR	LR	01 24 32.7	
	comp=Z,606nm,26.4s						
TAOE	**Nuku Hiva Isla**	**48.72**	**9**	*e*S	S	01 17 22.3	-18
	comp=Z,149nm,26.5s						
TAOE				*e*LR	LR	01 23 53.4	
	comp=Z,1μm,27.0s						
SNAA	**Sanae**	**48.81**	**166**	LR	LR	01 28 52.5	
	comp=Z,202nm,21.9s,baz=205,slow=33						
VNA2	**Neumayer--Watz**	**48.83**	**164**	P	**P**	**01 10 39.0**	**+1.5**
	baz=197,slow=6.8						
VNA1	**Neumayer--Stat**	**48.94**	**163**	P	**P**	**01 10 40.0**	**+1.8**
PLCA	**Paso Flores**	**50.03**	**105**	LR	LR	01 27 14.3	
	comp=Z,307nm,18.3s,baz=222,slow=30						
H03S2	**Juan Fernandez**	**50.67**	**93**	T	T	02 06 04.2	
	baz=220,SNR=166						
H03S1	**Juan Fernandez**	**50.68**	**93**	T	T	02 06 17.4	
	baz=220,SNR=114						
H03S3	**Juan Fernandez**	**50.69**	**93**	T	T	02 06 11.5	
	baz=220,SNR=110						
H03N3	**Juan Fernandez**	**50.96**	**93**	T	T	02 06 30.3	
	baz=221,slow=72,SNR=535						
H03N2	**Juan Fernandez**	**50.97**	**93**	T	T	02 06 25.3	
	baz=221,slow=72,SNR=652						
H03N1	**Juan Fernandez**	**50.98**	**93**	T	T	02 06 21.1	
	baz=221,slow=72,SNR=484						
MAW	**Mawson**	**53.36**	**194**	LR	LR	01 31 51.4	
	comp=Z,349nm,18.8s,baz=156,slow=33						
STKA	**Stephens Creek**	**53.90**	**266**	P	P	01 11 22.4	+6.5
	comp=Z,1.4nm,0.4s,baz=126,slow=11,SNR=4.7						
STKA				LR	LR	01 29 51.9	
	comp=Z,393nm,20.0s,baz=137,slow=31						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**53.90**	**266**	P	**P**	**01 11 15.3**	**-0.6**
TRQA	**Tornquist**	**56.45**	**109**	P	**P**	**01 11 34.1**	**-0.1**
CTA	**Charters Tower**	**60.76**	**278**	LR	LR	01 34 38.7	
	comp=Z,254nm,19.3s,baz=110,slow=32						
HNR	**Honiara**	**62.71**	**298**	LR	LR	01 33 13.8	
	comp=Z,123nm,20.9s,baz=146,slow=30						
ASAR	**Alice Springs**	**64.53**	**266**	P	P	01 12 36.2	+6.6
	comp=Z,11nm,0.3s,baz=138,slow=6.5,SNR=6.5						
	comp=Z,11nm,0.3s						
H01W1	**Cape Leeuwin H**	**65.74**	**243**	T	T	02 24 18.0	
	baz=143,slow=76,SNR=47						
H01W2	**Cape Leeuwin H**	**65.75**	**243**	T	T	02 24 18.0	
	baz=143,slow=76,SNR=50						
H01W3	**Cape Leeuwin H**	**65.76**	**243**	T	T	02 24 18.9	
	baz=143,slow=76,SNR=36						
WR0	**Warramunga Arr**	**67.18**	**268**	P	**P**	**01 12 47.8**	**+1.1**
WB2	**Warramunga Arr**	**67.30**	**268**	P	**P**	**01 12 47.7**	**+0.2**
WRA	**Warramunga Arr**	**67.31**	**268**	P	P	01 12 53.4	+5.9
	comp=Z,1.3nm,0.9s,baz=150,slow=5.6,SNR=6.6						
WRA				LR	LR	01 38 49.5	
	comp=Z,330nm,19.9s,baz=150,slow=33						
	comp=Z,1.3nm,0.9s						
CPUP	**Villa Florida**	**68.09**	**105**	P	P	01 12 59.1	+6.7
	comp=Z,1.6nm,0.9s,baz=189,slow=7.0,SNR=3.5						
CPUP				LR	LR	01 38 35.7	
	comp=Z,139nm,18.4s,baz=236,slow=32						
	comp=Z,1.6nm,0.9s						
LPAZ	**La Paz**	**70.48**	**90**	LR	LR	01 39 04.1	
	comp=Z,59nm,18.5s,baz=265,slow=32						
FITZ	**Fitzroy Crossi**	**73.50**	**262**	LR	LR	01 41 18.7	
	comp=Z,380nm,21.4s,baz=142,slow=32						
FITZ	**Fitzroy Crossi**	**73.50**	**262**	P	**P**	**01 13 23.9**	**-1.5**
FITZ				IAmb	IAmb	01 13 44.3	
	comp=Z,6.9nm,1.4s						
CZSB	**Cruzeiro do Su**	**75.11**	**81**	P	**P**	**01 13 34.7**	**-0.1**
CZSB				IAmb	IAmb	01 13 37.3	
	comp=Z,4.5nm,0.8s						
BATI	**Baumata**	**81.09**	**265**	LR	LR	01 48 45.7	
	comp=Z,385nm,18.1s,baz=144,slow=35						
SIJI	**Sorong**	**84.77**	**277**	LR	LR	01 49 48.6	
	comp=Z,160nm,20.9s,baz=83,slow=34						
ROSC	**El Rosal**	**84.86**	**73**	LR	LR	01 45 19.6	
	comp=Z,228nm,20.5s,baz=232,slow=31						
LPIG	**La Paz**	**86.85**	**33**	LR	LR	01 44 38.6	
	comp=Z,123nm,19.2s,baz=207,slow=30						
KAPI	**Kappang**	**87.53**	**265**	LR	LR	01 50 59.1	
	comp=Z,313nm,20.4s,baz=118,slow=34						
SUR	**Sutherland**	**89.99**	**170**	LR	LR	01 51 16.9	
	comp=Z,297nm,20.2s,baz=180,slow=33						
LEM	**Lembang**	**92.45**	**253**	LR	LR	01 51 33.1	
	comp=Z,77nm,18.2s,baz=171,slow=32						
TXAR	**Lajitas Array**	**93.80**	**37**	LR	LR	01 49 19.7	
	comp=Z,56nm,18.0s,baz=194,slow=30						
BOSA	**Boshof**	**94.08**	**173**	LR	LR	01 53 07.9	
	comp=Z,400nm,20.5s,baz=183,slow=32						
PFO	**Pinyon Flats O**	**94.27**	**25**	LR	LR	01 49 12.9	
	comp=Z,181nm,18.8s,baz=205,slow=30						
DAV	**Davao City (W)**	**94.47**	**276**	LR	LR	01 55 42.6	
	comp=Z,65nm,20.5s,baz=168,slow=34						
LBTB	**Lobatse**	**97.68**	**173**	LR	LR	01 55 26.5	
	comp=Z,400nm,20.8s,baz=177,slow=33						
ANMO	**Albuquerque**	**98.15**	**33**	LR	LR	01 50 06.4	
	comp=Z,92nm,21.9s,baz=202,slow=30						
NVAR	**Mina Array Bea**	**98.49**	**22**	LR	LR	01 49 55.4	
	comp=Z,13nm,21.4s,baz=264,slow=29						
H10S3	**ASCENSION HYDR**	**103.34**	**131**	T	T	03 12 14.4	
	baz=204,slow=74,SNR=38						
H10S2	**ASCENSION HYDR**	**103.34**	**131**	T	T	03 12 20.5	
	baz=16,slow=74,SNR=15						
H10N3	**ASCENSION HYDR**	**104.41**	**131**	T	T	03 13 49.1	
	baz=204,slow=75,SNR=61						
H10N1	**ASCENSION HYDR**	**104.42**	**131**	T	T	03 13 46.6	
	baz=204,slow=75,SNR=76						
H10N2	**ASCENSION HYDR**	**104.43**	**131**	T	T	03 13 50.3	
	baz=204,slow=75,SNR=63						
MKAR	**Makanchi Array**	**148.56**	**272**	PKP	**PKPbc**	**01 21 39.3**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=113,slow=1.5,SNR=11						
MKAR				PKPbc	**pPKPab**	**01 21 44.2**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=107,slow=4.6,SNR=16						
ESDC	**Sonseca Array**	**150.32**	**111**	PKPbc	**PKPab**	**01 21 50.1**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=253,slow=2.1,SNR=8.7						
ZALV	**Zalesovo Beam**	**151.13**	**286**	PKPbc	**PKPab**	**01 21 50.6**	**-2.0**
	comp=Z,0.5nm,0.4s,baz=85,slow=3.2,SNR=2.3						

DJA 15 01:31:07.1±0.7,9.°5±6.°×11.°9E±.°, h62km±9km, M2.7/5, MLv2.7/5, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.43**	**132**	P	Pn	01 31 18.9	+0.3
WBSI				S	Sn	01 31 30.9	+4.0
PLAI	**Plampang**	**1.38**	**292**	P	Pn	01 31 30.1	-0.1
PLAI				S	Sn	01 31 47.5	-0.1
TWSI	**Taliwang, Sumb**	**2.25**	**286**	P	Pn	01 31 42.5	+0.6
TWSI				S	Sn	01 32 09.3	+0.7
EDFI	**Ende, Flores**	**2.66**	**77**	P	Pn	01 31 48.6	+1.0
EDFI				S	Sn	01 32 18.5	-0.3

*IDC **15** 01:31:56.4±2.1,0.°47S×127.°27E, h0km, mb3.3/3, mbtmp3.4/4, ML3.4/1, MS3.9/1, Error ellipse: s-maj=115.4km s-min=27.5km az=69.0*

ISC 15 01:32:02.7±1.5,0.°8S±0.°2×126.°5E±0.°3, h35km, n7, σ1!43/5, Southern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**2.53**	**167**	P	Pn	01 32 32.2	-9.2
MSAI	**Masohi**	**3.52**	**137**	P	**Pn**	**01 32 55.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**17.25**	**183**	P	**P**	**01 36 02.5**	**+0.3**
	0.1nm,0.3s,baz=20,slow=15,SNR=1.6						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**20.55**	**159**	P	**P**	**01 36 36.6**	**-1.8**
	0.8nm,0.7s,baz=340,slow=11,SNR=8.1						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**23.87**	**163**	P	**P**	**01 37 12.8**	**-0.5**
	1.1nm,0.8s,baz=348,slow=12,SNR=7.9						
	1.1nm,0.8s						
PALK	**Palikekele**	**46.39**	**281**	LR	LR	02 01 48.8	
	comp=Z,127nm,19.1s,baz=258,slow=38						
MKAR	**Makanchi Array**	**61.13**	**327**	P	**P**	**01 42 13.7**	**0.0**
	0.2nm,0.6s,baz=110,slow=7.8,SNR=1.4						
	0.2nm,0.6s						

*IDC **15** 01:45:37.3±2.5,7.°24S×81.°14W, h0km, mb4.1/5, mbtmp4.0/8, ML3.5/3, MS3.8/15, Error ellipse: s-maj=51.1km s-min=28.6km az=56.0*

*ARE **15** 01:45:42±1.6,7.°13S±0.°04×80.°53W±0.°10, h35km±7km, Error ellipse: s-maj=14.0km s-min=5.8km az=81.0*

*VAO **15** 01:45:47.7±0.7,7.°12S×80.°50W, h41km, mb4.4*

*NEIC **15** 01:45:47.9±1.3,7.°06S±0.°06×80.°53W±0.°09, h41km±8km, mb4.3/26, ML4.5(ARE), Error ellipse: s-maj=13.7km s-min=7.2km az=68.0*

ISC 15 01:45:45.4±0.6,7.°10S±0.°07×80.°61W±0.°07, h29km, n102, σ1!07/85, mb4.2/17, MS3.9/11, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.20**	**91**	Pn	**Pb**	**01 46 23.0**	**-1.7**
	16nm,0.3s,baz=298,slow=15,SNR=120						
ATAH				Sn	**Sb**	**01 46 57.1**	**+5.4**
	108nm,0.3s,baz=31,slow=21,SNR=7.0						
ATAH				LR	LR	01 47 36.0	
	comp=Z,2μm,20.4s,baz=261,slow=44						
	72nm,0.3s						
ARNL	**Arenillas**	**3.57**	**9**	Pn	**Pn**	**01 46 41.1**	**+2.3**
BOSC	**San Juan Bosco**	**4.45**	**28**	Pn	**Pn**	**01 46 52.0**	**+0.8**
CHSH	**Refugio Sur-Vo**	**5.83**	**17**	Pn	**Pn**	**01 47 11.3**	**+0.8**
PORT	**Chimborazo Vol**	**5.89**	**18**	Pn	**Pn**	**01 47 12.8**	**+1.5**
NNA	**Nana**	**6.12**	**143**	Pn	**Pn**	**01 47 12.9**	**-1.0**
	0.7nm,0.3s,baz=321,slow=13,SNR=2.1						
NNA				LR	LR	01 49 39.7	
	comp=Z,536nm,19.1s,baz=296,slow=38						
	6.1nm,0.5s						
NNA	**Nana**	**6.12**	**143**	Pn	**Pn**	**01 47 16.9**	**+2.9**
SLOR	**San Lorenzo -**	**6.67**	**19**	Pn	**Pn**	**01 47 23.0**	**+1.1**
PULU	**Pululahua**	**7.38**	**17**	Pn	**Pn**	**01 47 32.1**	**+0.6**
OTAV	**Otavalo**	**7.60**	**17**	Pn	**Pn**	**01 47 35.2**	**+0.5**
OTAV	**Otavalo**	**7.60**	**17**	*e*P	**Pn**	**01 47 36.1**	**+1.4**
CZSB	**Cruzeiro do Su**	**7.86**	**95**	Pn	**Pn**	**01 47 37.5**	**-0.4**
CZSB	**Cruzeiro do Su**	**7.86**	**95**	*e*P	**Pn**	**01 47 37.8**	**-0.1**
PAYG	**Puerto Ayora**	**11.57**	**303**	Pn	**Pn**	**01 48 30.2**	**+1.4**
ROSC	**El Rosal**	**13.42**	**28**	LR	LR	01 54 02.0	
	comp=Z,276nm,18.0s,baz=224,slow=37						
ETMB	**Extrema**	**14.49**	**102**	Pn	**Pn**	**01 49 06.3**	**-2.4**
ETMB	**Extrema**	**14.49**	**102**	*e*P	**Pn**	**01 49 07.8**	**-0.9**
LPAZ	**La Paz**	**15.24**	**128**	Pn	**Pn**	**01 49 20.6**	**+1.2**
	0.1nm,0.3s,baz=322,slow=7.0,SNR

JANB	**Januaria**	**36.44**	**106**	*e*P		**P**	**01 52 48.3**	**+0.2**	
DIAM	**Diamantina, MG**	**37.63**	**111**	*e*P		**P**	**01 52 58.5**	**+0.2**	
LRAL	**Lakeview Retre**	**40.37**	**352**	P		**P**	**01 53 20.7**	**0.0**	
LRAL				IAmb		IAmb	01 53 21.4		
	comp=Z,5.4nm,1.2s								
GDU01	**Guandu, BA**	**40.85**	**103**	*e*P		**P**	**01 53 25.1**	**+0.1**	
NAN01	**Guarapari, ES**	**40.85**	**109**	*e*P		**P**	**01 53 24.9**	**-0.1**	
RIB01	**Linhares ES**	**40.88**	**111**	*e*P		**P**	**01 53 25.1**	**-0.2**	
CMC01	**Camacan, BA**	**41.07**	**105**	*e*P		**P**	**01 53 27.5**	**+0.7**	
Y49A	**Blount Mountai**	**41.10**	**353**	P		**P**	**01 53 25.4**	**-1.4**	
Y49A				IAmb		IAmb	01 53 50.3		
	comp=Z,11nm,1.4s								
TX31	**Lajitas Ar. Si**	**42.48**	**330**	P		**P**	**01 53 38.0**	**-0.2**	
TX31				IAmb		IAmb	01 54 06.4		
	comp=Z,4.4nm,1.2s								
TX32	**Lajitas Array**	**42.48**	**330**	P		**P**	**01 53 38.0**	**-0.2**	
V53A	**Saluda**	**42.59**	**357**	P		**P**	**01 53 38.6**	**-0.4**	
V53A				IAmb		IAmb	01 54 13.9		
	comp=Z,8.6nm,1.5s								
WVT	**Waverly**	**43.53**	**352**	P		**P**	**01 53 45.4**	**-1.2**	
WVT				IAmb		IAmb	01 54 00.0		
	comp=Z,6.7nm,1.4s								
WHAR	**Wooly Hollow**	**43.58**	**346**	P		**P**	**01 53 47.7**	**+0.8**	
WHAR				IAmb		IAmb	01 54 04.2		
	comp=Z,3.1nm,0.9s								
NBAN	**Anadia - AL**	**43.91**	**97**	*e*P		**P**	**01 53 49.6**	**-0.5**	
LCAR	**Lake Charles**	**44.07**	**348**	P		**P**	**01 53 50.8**	**-0.1**	
LCAR				IAmb		IAmb	01 53 51.9		
	comp=Z,5.3nm,0.9s								
FCAR	**Ozark Folk Cen**	**44.11**	**347**	P		**P**	**01 53 50.9**	**-0.3**	
FCAR				IAmb		IAmb	01 53 52.3		
	comp=Z,4.3nm,0.9s								
RCBR	**Riachuelo**	**44.43**	**91**	LR		LR	02 13 52.9		
	comp=Z,375nm,18.6s,baz=40,slow=38								
WMOK	**Wichita Mounta**	**45.02**	**339**	P		**P**	**01 53 58.8**	**+0.3**	
WMOK				IAmb		IAmb	01 53 59.5		
	comp=Z,4.0nm,1.2s								
HTMS	**Hat Mesa**	**45.05**	**332**	P		**P**	**01 53 59.1**	**+0.2**	
MGMO	**Mountain Grove**	**45.35**	**347**	P		**P**	**01 54 01.2**	**0.0**	
CCM	**Cathedral Cave**	**46.00**	**348**	P		**P**	**01 54 06.7**	**+0.5**	
CCM				IAmb		IAmb	01 54 07.5		
	comp=Z,4.6nm,1.0s								
P17A	**Butcher Ranch,**	**54.08**	**331**	P		**P**	**01 55 08.3**	**+0.5**	
P17A				IAmb		IAmb	01 55 11.8		
	comp=Z,5.6nm,1.4s								
TAOE	**Nuku Hiva Isla**	**58.94**	**264**	*e*LR		LR	02 13 07.9		
	comp=Z,70nm,23.9s								
TBI	**Tubuai**	**67.83**	**248**	*e*T		T	03 10 18.1		
	comp=Z,11nm,0.3s								
PPT2	**Papeete2**	**67.88**	**254**	*e*LR		LR	02 17 16.4		
	comp=Z,92nm,23.5s								
DBIC	**Dimbokro**	**76.79**	**81**	LR		LR	02 30 06.0		
	comp=Z,178nm,19.7s,baz=249,slow=34								
VNA3	**Neumayer Olymp**	**77.23**	**162**	P		**P**	**01 57 36.8**	**+0.3**	
VNA1	**Neumayer--Stat**	**77.52**	**161**	P		**P**	**01 57 38.6**	**+0.6**	
VNA2	**Neumayer--Watz**	**77.87**	**161**	P		**P**	**01 57 40.9**	**+0.8**	
	baz=323,slow=11								
SNAA	**Sanae**	**79.46**	**162**	P		**P**	**01 57 49.0**	**+0.2**	
SNAA	**Sanae**	**79.46**	**162**	P		**P**	**01 57 48.9**	**+0.1**	
SNAA				IAmb		IAmb	01 57 57.0		
	comp=Z,5.8nm,1.3s								
TROLL	**Troll, Antarti**	**81.17**	**162**	P		**P**	**01 57 58.6**	**+0.5**	
TOA0	**Torodi Ar. Sit**	**84.16**	**76**	P		**P**	**01 58 13.6**	**-1.0**	
TORD	**Torodi Ar. Bea**	**84.16**	**76**	P		**P**	**01 58 14.0**	**-0.6**	
	comp=Z,1.2nm,0.7s,baz=246,slow=2.8,SNR=11								
	comp=Z,1.2nm,0.7s								
TORD	**Torodi Ar. Bea**	**84.16**	**76**	P		**P**	**01 58 14.3**	**-0.3**	
ESDC	**Sonseca Array**	**84.33**	**49**	P		**P**	**01 58 13.4**	**-1.6**	
	comp=Z,0.6nm,0.8s,baz=260,slow=7.9,SNR=4.4								
	comp=Z,0.6nm,0.8s								
TSUM	**Tsumeb**	**95.37**	**110**	LR		LR	02 40 03.5		
	comp=Z,52nm,19.7s,baz=315,slow=34								
H11N3	**WAKE ISLAND Hyl**	**13.50**	**288**	T		T	04 07 30.6		
	baz=91,slow=75,SNR=113								
H11N2	**WAKE ISLAND Hyl**	**13.51**	**288**	T		T	04 07 28.4		
	baz=91,slow=75,SNR=133								
H11N1	**WAKE ISLAND Hyl**	**13.51**	**288**	T		T	04 07 28.7		
	baz=91,slow=75,SNR=145								
PZH	**PanZhiHua**	**160.57**	**354**	PKP		**PKPdf**	**02 05 41.4**	**-2.0**	

NEIC ***15*** *01:51:25.2±2.4, 16°.76N±0°.06×95°.89W±0°.04, h57km±10km, mb4.4/85, Md4.5/72(MEX), Error ellipse: s-maj=8.9km s-min=5.8km az=164.0*
MEX ***15*** *01:51:26.5±1.7, 16°.63N×95°.78W, h76km±29km, MD4.5*
IDC ***15*** *01:51:30.9±1.4, 17°.27N×95°.48W, h69km±9km, mb3.6/13, mbtmp3.9/14, Error ellipse: s-maj=34.3km s-min=15.5km az=51.0*

ISC 15 01:51:25.5±0.7, 16°.64N±0°.03×95°.83W±0°.02, h67km±7km, n227, σ1.9 90/274, mb4.3/36, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
HUIG	**Huatulco**	**0.91**	**197**		**Pn**	**01 51 43.0**	**+0.3**
HUIG					Sn	01 51 55.8	+0.4
HUIG	**Huatulco**	**0.91**	**197**	*e*P	**Pn**	**01 51 43.0**	**+0.3**
HUIG				*e*S	Sn	01 51 55.8	+0.4
VHO	**Vista Hermosa**	**0.97**	**297**	*i* P	**Pn**	**01 51 45.4**	**+1.7**
VHO				*e*S	Sn	01 51 58.7	+1.5
CMIG	**Matias Romero**	**1.01**	**63**	P	**Pn**	**01 51 43.9**	**0.0**
	490nm,0.2s,baz=256,slow=14,SNR=1518						
CMIG				S	Sn	01 51 56.7	-1.0
	1μm,0.2s,baz=85,slow=20,SNR=35						
CMIG	**Matias Romero**	**1.01**	**63**		**Pn**	**01 51 44.0**	**0.0**
CMIG					Sn	01 51 57.0	-0.7
CMIG	**Matias Romero**	**1.01**	**63**	*e*P	**Pn**	**01 51 44.0**	**0.0**
CMIG				*i* S	Sn	01 51 57.0	-0.7
NEUV	**Arroyo Zacate**	**1.07**	**1**	*e*P	**Pn**	**01 51 44.8**	**0.0**
NEUV				*e*S	Sn	01 51 58.8	-0.2
PEIG	**Puerto Escondi**	**1.42**	**243**	*i* P	**Pn**	**01 51 49.1**	**-0.2**
PEIG				*e*S	Sn	01 52 07.3	+0.1
YOIG	**Yosondua**	**1.66**	**278**	*e*P	**Pn**	**01 51 54.5**	**+1.7**
YOIG				*e*S	Sn	01 52 14.2	+0.8
UXUV	**UXUV**	**1.74**	**67**	*e*P	**Pn**	**01 51 54.3**	**+0.7**
UXUV				*e*S	Sn	01 52 13.6	-1.4
TOIG	**Toxpalan**	**1.87**	**321**	*e*P	**Pn**	**01 51 58.2**	**+2.7**
TOIG				*e*S	Sn	01 52 18.5	+0.3
TUIG	**Tuzandepetl**	**1.93**	**44**	*e*P	**Pn**	**01 51 56.8**	**+0.7**
TUIG				*e*S	Sn	01 52 18.0	-1.4
TXIG	**Tlaxiaco**	**1.96**	**288**	*i* P	**Pn**	**01 51 58.9**	**+2.2**
TXIG				*e*S	Sn	01 52 20.2	-0.3
PNIG	**Pinotepa**	**2.22**	**264**		**Pn**	**01 52 00.3**	**+0.2**
PNIG					Sn	01 52 24.7	-1.8
PNIG	**Pinotepa**	**2.22**	**264**	*e*P	**Pn**	**01 52 00.3**	**+0.2**
PNIG				*e*S	Sn	01 52 24.7	-1.8
HLIG	**Huajuapan de L**	**2.23**	**302**	*e*P	**Pn**	**01 52 02.6**	**+2.2**
HLIG				*i* S	Sn	01 52 28.8	+1.8
TPIG	**Tehuac#an**	**2.30**	**321**		**Pn**	**01 52 04.6**	**+3.3**
TPIG					Sn	01 52 22.8	-5.9
TPIG	**Tehuac#an**	**2.30**	**321**	*e*P	**Pn**	**01 52 04.6**	**+3.3**
TPIG				*e*S	Sn	01 52 26.1	-2.5
FTIG	**Fresnillo de T**	**2.54**	**300**	*e*P	**Pn**	**01 52 07.0**	**+2.5**
FTIG				*e*S	Sn	01 52 35.0	+0.6
TGIG		**2.59**	**87**		**Pn**	**01 52 06.5**	**+1.2**
TGIG					Sn	01 52 35.1	-0.6
TGIG		**2.59**	**87**	*e*P	**Pn**	**01 52 06.5**	**+1.2**
TGIG				*i* S	Sn	01 52 35.1	-0.6
PCIG		**2.67**	**110**		**Pn**	**01 52 07.2**	**+1.0**
PCIG					Sn	01 52 38.6	+1.1
PCIG		**2.67**	**110**	*e*P	**Pn**	**01 52 07.2**	**+1.0**
PCIG				*e*S	Sn	01 52 38.6	+1.1
MGIG	**Malinaltepec**	**2.75**	**283**	*e*P	**Pn**	**01 52 08.8**	**+1.4**
MGIG				*e*S	Sn	01 52 37.9	-1.8
TLIG	**Tlapa**	**2.78**	**290**	Pn	**Pn**	**01 52 08.5**	**+0.7**
TLIG	**Tlapa**	**2.78**	**290**	*e*P	**Pn**	**01 52 10.0**	**+2.2**
TLIG				*e*S	Sn	01 52 38.9	-1.4
JAUV	**Jalcomulco**	**2.87**	**341**	*e*P	**Pn**	**01 52 08.2**	**-0.7**
JAUV				*i* S	Sn	01 52 39.8	-2.6
LVIG	**Laguna Verde**	**3.12**	**350**	*e*P	**Pn**	**01 52 11.1**	**-1.2**
LVIG				*e*S	Sn	01 52 44.8	-3.5
CRIG	**Cruz Grande**	**3.17**	**272**		**Pn**	**01 52 13.2**	**+0.2**
CRIG					Sn	01 52 43.8	-5.8
CRIG	**Cruz Grande**	**3.17**	**272**	*e*P	**Pn**	**01 52 13.2**	**+0.2**
CRIG				*e*S	Sn	01 52 46.2	-3.4
CCIG	**Comitan**	**3.56**	**95**	Pn	**Pn**	**01 52 20.5**	**+2.0**
CCIG	**Comitan**	**3.56**	**95**	*e*P	**Pn**	**01 52 20.1**	**+1.6**
CCIG				*e*S	Sn	01 52 56.2	-3.2
PPM	**Popocatepetl**	**3.60**	**313**	*e*P	**Pn**	**01 52 23.2**	**+3.9**
PPM				*i* S	Sn	01 53 05.7	+4.8
DAIG	**Los Arroyos**	**3.68**	**276**	*e*P	**Pn**	**01 52 20.6**	**+0.6**
DAIG				*e*S	Sn	01 52 58.1	-4.1
PATR	**El Naranjo**	**3.77**	**113**	*e*P	**Pn**	**01 52 23.6**	**+2.1**
PATR				*e*S	Sn	01 53 03.2	-1.6
PAVE	**Pavencul**	**3.79**	**112**	*e*P	**Pn**	**01 52 24.2**	**+2.5**
PAVE				*i* S	Sn	01 53 02.8	-2.5
YAIG	**Yautepec**	**3.80**	**306**		**Pn**	**01 52 24.9**	**+3.2**
YAIG					Sn	01 53 00.8	-4.5
YAIG	**Yautepec**	**3.80**	**306**	*i* P	**Pn**	**01 52 24.9**	**+3.2**
YAIG				*e*S	Sn	01 53 04.3	-1.0
MEIG	**Mezcala**	**3.84**	**290**		**Pn**	**01 52 24.8**	**+2.5**
MEIG					Sn	01 53 01.7	-4.6
MEIG	**Mezcala**	**3.84**	**290**	*e*P	**Pn**	**01 52 24.8**	**+2.5**
MEIG				*e*S	Sn	01 53 04.9	-1.3
CXUV	**Coxquihui**	**3.89**	**335**	*e*P	**Pn**	**01 52 23.7**	**+0.8**
CXUV				*e*S	Sn	01 53 08.4	+1.0
CHUJ	**Union Juarez**	**3.89**	**113**	*e*P	**Pn**	**01 52 25.6**	**+2.5**
CHUJ				*i* S	Sn	01 53 03.8	-4.0
PLIG	**Platanillo**	**3.92**	**297**		**Pn**	**01 52 26.3**	**+3.1**
PLIG					Sn	01 53 01.7	-6.4
PLIG	**Platanillo**	**3.92**	**297**	*e*P	**Pn**	**01 52 26.3**	**+3.1**
PLIG				*e*S	Sn	01 53 06.7	-1.4
MAVM	**Malinalco, Edo**	**4.19**	**304**		**Pn**	**01 52 31.6**	**+4.5**
MAVM					Sn	01 53 16.8	+1.9
MAVM	**Malinalco, Edo**	**4.19**	**304**	*e*P	**Pn**	**01 52 31.6**	**+4.5**
MAVM				*i* S	Sn	01 53 16.8	+1.9
AOVM	**Tlapan**	**4.23**	**309**	*e*P	**Pn**	**01 52 26.0**	**-1.9**
AOVM				*i* S	Sn	01 53 12.7	-3.6
CAIG	**El Cayaco**	**4.27**	**276**		**Pn**	**01 52 28.8**	**+0.8**
CAIG					Sn	01 53 08.8	-7.8
CAIG	**El Cayaco**	**4.27**	**276**	*e*P	**Pn**	**01 52 28.8**	**+0.8**
CAIG				*e*		01 53 11.2	
HUEH	**Huehuetenango**	**4.36**	**107**	Pn	**Pn**	**01 52 30.7**	**+1.2**
ARIG	**Puente Sto Nin**	**4.61**	**291**	*e*P	**Pn**	**01 52 35.6**	**+2.9**
ARIG				*e*S	Sn	01 53 22.7	-2.3
DEIG	**Demacu**	**4.75**	**321**	*e*P	**Pn**	01 52 40.4	+5.7
DEIG				*i* S	Sn	**01 53 30.9**	**+2.2**
SCIG	**Sabancuy**	**4.99**	**62**	*e*P	**Pn**	**01 52 36.8**	**-1.0**
SCIG				*e*S	Sn	01 53 28.8	-5.5
ZIIG	**Zihuatanejo**	**5.48**	**281**		**Pn**	**01 52 41.7**	**-2.8**
ZIIG					Sn	01 53 39.6	-6.6
ZIIG	**Zihuatanejo**	**5.48**	**281**	*e*P	**Pn**	**01 52 41.7**	**-2.8**
ZIIG				*e*S	Sn	01 53 44.5	-1.7
PETF	**Flores**	**5.72**	**86**	Pn	**Pn**	**01 52 48.7**	**+0.9**
TEIG	**Tepich**	**8.01**	**62**	Pn	**Pn**	**01 53 16.9**	**-2.3**
HZTE	**Horizontes, Gu**	**11.55**	**119**	Pn	**Pn**	**01 54 10.3**	**+2.7**
ORTG	**Ortega, Santa**	**11.85**	**120**	Pn	**Pn**	**01 54 14.5**	**+2.7**
JTS	**Las Juntas de**	**12.31**	**119**	Pn	**Pn**	**01 54 21.4**	**+3.4**
RIMA	**Rio Macho**	**13.50**	**119**	P	**P**	**01 54 41.8**	**+0.5**
SOR	**Soroa**	**13.53**	**61**	Pn	**Pn**	**01 54 32.0**	**-2.5**
TXAR	**Lajitas Array**	**14.54**	**332**	P	**Pn**	**01 54 49.8**	**+2.0**
	0.7nm,0.8s,baz=145,slow=12,SNR=6.4						
WHTX	**Lake Whitney,**	**15.36**	**355**	P	**Pn**	**01 54 59.0**	**+0.8**
WHTX	**Lake Whitney,**	**15.36**	**355**	P	**Pn**	**01 54 58.3**	**+0.1**
	baz=174,SNR=7.9						
ABTX	**Abilene, Hawle**	**16.29**	**348**	P	**Pn**	**01 55 10.4**	**+0.4**
	baz=167,SNR=6.4						
Z38A	**Mt. Pleasant**	**16.57**	**2**		**Pn**	**01 55 14.0**	**+0.6**
Z38A				IAmb	IAmb	01 55 17.4	
	comp=Z,27nm,0.8s						
HTMS	**Hat Mesa**	**17.28**	**337**		**Pn**	**01 55 20.6**	**-1.8**
MNTX	**Cornudas Mount**	**17.33**	**332**	P	**P**	**01 55 23.9**	**+0.5**
	baz=148						
DWPF	**Disney Wildern**	**17.52**	**47**	P	**Pn**	**01 55 23.9**	**-1.3**
	baz=233						
MIAR	**Mount Ida**	**17.95**	**6**	P	**Pn**	**01 55 30.5**	**+0.1**
MIAR	**Mount Ida**	**17.95**	**6**	P	**P**	**01 55 30.1**	**-0.1**
	baz=187,SNR=8.0						
LRAL	**Lakeview Retre**	**18.17**	**24**	P	**P**	**01 55 30.7**	**-2.0**
LRAL	**Lakeview Retre**	**18.17**	**24**	P	**P**	**01 55 31.4**	**-1.2**
	baz=208						
WMOK	**Wichita Mounta**	**18.22**	**352**	P	**P**	**01 55 33.2**	**0.0**
WMOK	**Wichita Mounta**	**18.22**	**352**	P	**P**	**01 55 32.7**	**-0.4**
	baz=171						
UALR	**University of**	**18.33**	**9**	P	**P**	**01 55 34.4**	**+0.1**
UALR				IAmb	IAmb	01 55 36.9	
	comp=Z,21nm,0.8s						
MSTX	**Muleshoe**	**18.35**	**341**	P	**P**	**01 55 33.8**	**-1.0**
MSTX	**Muleshoe**	**18.35**	**341**	P	**P**	**01 55 34.7**	**0.0**
	baz=159,SNR=7.0						
OXF	**Oxford**	**18.71**	**17**	P	**P**	**01 55 37.5**	**-1.0**
OXF				IAmb	IAmb	01 55 40.1	
	comp=Z,16nm,0.8s						
OXF	**Oxford**	**18.71**	**17**	P	**P**	**01 55 37.9**	**-0.6**
	baz=200						
WHAR	**Wooly Hollow**	**18.84**	**9**	P	**P**	**01 55 39.1**	**-0.9**
AMTX	**Amarillo**	**18.91**	**345**	P	**P**	**01 55 41.0**	**+0.1**
AMTX	**Amarillo**	**18.91**	**345**	P	**P**	**01 55 41.1**	**+0.3**
	baz=163						
OK025	**Westminster Rd**	**18.91**	**356**	P	**P**	**01 55 38.2**	**-2.6**
OK025				IAmb	IAmb	01 55 44.7	
	comp=Z,11nm,0.6s						
Y49A	**Blount Mountai**	**19.12**	**25**	P	**P**	**01 55 41.4**	**-1.8**
TUL1	**Leonard**	**19.19**	**0**	P	**P**	**01 55 43.0**	**-0.8**
TUL1				IAmb	IAmb	01 55 48.0	
	comp=Z,11nm,0.8s						
TUL1	**Leonard**	**19.19**	**0**	P	**P**	**01 55 43.4**	**-0.5**
	baz=180						
OK030	**Cody Creek RV**	**19.23**	**358**	P	**P**	**01 55 43.9**	**-0.4**
OK030				IAmb	IAmb	01 55 46.3	
	comp=Z,19nm,0.7s						
OK031	**S. Brethren Rd**	**19.26**	**358**	P	**P**	**01 55 43.7**	**-0.8**
OK031				IAmb	IAmb	01 55 46.7	
	comp=Z,18nm,0.7s						
OK034	**N. Norfolk Rd.**	**19.31**	**358**	P	**P**	**01 55 42.0**	**-3.1**
FCAR	**Ozark Folk Cen**	**19.45**	**9**	P	**P**	**01 55 46.8**	**+0.1**
RLO	**Rose Lookout**	**19.46**	**2**	P	**P**	**01 55 45.4**	**-1.4**
RLO				IAmb	IAmb	01 55 51.0	
	comp=Z,20nm,1.4s						
QUOK	**Quay**	**19.47**	**358**	P	**P**	**01 55 46.6**	**-0.3**
QUOK				IAmb	IAmb	01 55 50.9	
	comp=Z,33nm,0.5s						
PLAL	**Pickwick Lake**	**19.54**	**19**	P	**P**	**01 55 45.7**	**-1.9**
HHAR	**Hobbs**	**19.64**	**5**	P	**P**	**01 55 47.5**	**-1.1**
U38A	**Gravette**	**19.76**	**3**	P	**P**	**01 55 49.7**	**-0.3**
U38A				IAmb	IAmb	01 55 51.4	
	comp=Z,12nm,0.6s						
CROK	**Carrier**	**19.88**	**355**	P	**P**	**01 55 49.3**	**-2.0**
CROK				IAmb	IAmb	01 55 55.6	
	comp=Z,36nm,0.8s						
GOGA	**Godfrey**	**20.08**	**31**	P	**P**	**01 55 51.3**	**-2.1**
GOGA				IAmb	IAmb	01 56 04.8	
	comp=Z,12nm,0.8s						
GOGA	**Godfrey**	**20.08**	**31**	P	**P**	**01 55 52.3**	**-1.2**
	baz=217,SNR=5.1						
OK032	**Salt Plains WL**	**20.20**	**354**	P	**P**	**01 55 52.6**	**-2.1**
OK032				IAmb	IAmb	01 55 59.5	
	comp=Z,18nm,0.8s						
T35A	**Sooner Cattle**	**20.21**	**358**	P	**P**	**01 55 53.6**	**-1.3**
T35A				IAmb	IAmb	01 56 00.1	
	comp=Z,18nm,1.0s						
KAN13	**South Haven SW**	**20.35**	**356**	P	**P**	**01 55 55.6**	**-0.8**
KAN17	**Caldwell West**	**20.40**	**356**	P	**P**	**01 55 55.9**	**-1.0**
KAN17				IAmb	IAmb	01 56 00.8	
	comp=Z,9.9nm,0.6s						
SWET	**Sewanee**	**20.50**	**24**	P	**P**	**01 55 56.7**	**-1.5**
ANMO	**Albuquerque**	**20.56**	**334**	P	Pn	01 56 01.3	-0.5
	comp=Z,1.8nm,0.5s,baz=140,slow=12,SNR=7.5						
	comp=Z,1.8nm,0.5s						
ANMO	**Albuquerque**	**20.56**	**334**	P	**P**	**01 55 58.9**	**-0.1**
ANMO	**Albuquerque**	**20.56**	**334**	P	**P**	**01 55 59.0**	**+0.1**
	baz=150						
PBMO	**Poplar Bluff**	**20.62**	**12**	P	**P**	**01 55 58.2**	**-1.1**
PBMO				IAmb	IAmb	01 56 00.9	
	comp=Z,12nm,0.6s						
V48A	**Smith Brothers**	**20.65**	**21**	P	**P**	**01 55 57.3**	**-2.3**
PARMO	**Parma**	**20.66**	**14**	P	**P**	**01 55 60.0**	**+0.3**
WVT	**Waverly**	**20.67**	**19**	P	**P**	**01 55 59.4**	**-0.5**
WVT	**Waverly**	**20.67**	**19**	P	**P**	**01 55 59.7**	**-0.2**
	baz=202						
MGMO	**Mountain Grove**	**20.68**	**8**	P	**P**	**01 55 59.5**	**-0.5**
CLTN	**Cedars of Leba**	**21.14**	**22**	P	**P**	**01 56 02.4**	**-2.4**
T45A	**Paducah**	**21.27**	**16**	P	**P**	**01 56 05.7**	**-0.6**
CGM3	**Cape Girardeau**	**21.29**	**14**	P	**P**	**01 56 04.7**	**-1.8**
CGM3				IAmb	IAmb	01 56 09.3	
	comp=Z,6.5nm,0.9s						
HODGE	**Hodges**	**21.34**	**32**	P	**P**	**01 56 04.5**	**-2.5**
HODGE				IAmb	IAmb	01 56 06.2	
	comp=Z,11nm,0.9s						
BG3	**Lake Jocassee**	**21.61**	**30**	P	**P**	**01 56 08.1**	**-1.9**
BG3				IAmb	IAmb	01 56 25.4	
	comp=Z,10nm,0.7s						
U49A	**Red Boiling Sp**	**21.71**	**22**	P	**P**	**01 56 08.8**	**-2.2**
CCM	**Cathedral Cave**	**21.71**	**10**	P	**P**	**01 56 10.0**	**-1.0**
CCM				IAmb	IAmb	01 56 13.3	
	comp=Z,8.5nm,0.8s						
CCM	**Cathedral Cave**	**21.71**	**10**	P	**P**	**01 56 10.6**	**-0.4**
	baz=192						
S44A	**Carbondale**	**21.76**	**14**	P	**P**	**01 56 11.5**	**0.0**
S44A				IAmb	IAmb	01 56 13.3	
	comp=Z,12nm,0.7s						
TKL	**Tuckaleechee C**	**21.78**	**27**	P	**P**	**01 56 08.6**	**-3.1**
	comp=Z,1.4nm,0.5s,baz=238,slow=13,SNR=4.9						
	comp=Z,1.4nm,0.5s						
SIUC	**Southern Illin**	**21.79**	**14**	P	**P**	**01 56 09.9**	**-1.9**
SIUC				IAmb	IAmb	01 56 14.4	
	comp=Z,14nm,0.7s						
R40A	**Maddies Statio**	**21.80**	**8**	P	**P**	**01 56 10.5**	**-1.4**
R40A				IAmb	IAmb	01 56 15.0	
	comp=Z,11nm,0.8s						
JSC	**Jenkinsville**	**21.90**	**34**	P	**P**	**01 56 11.8**	**-1.3**
JSC				IAmb	IAmb	01 56 12.3	
	comp=Z,9.4nm,0.5s						
KSU1	**Kansas State U**	**22.39**	**358**	P	**P**	**01 56 17.5**	**-0.8**
	baz=178						
USIN	**University of**	**22.43**	**17**	P	**P**	**01 56 17.2**	**-1.4**
USIN				IAmb	IAmb	01 56 20.1	
	comp=Z,15nm,0.7s						
T50A	**Nancy**	**22.51**	**23**	P	**P**	**01 56 18.1**	**-1.5**
KMSC	**Kings Mountain**	**22.52**	**32**	P	**P**	**01 56 17.8**	**-1.9**
KMSC				IAmb	IAmb	01 56 19.5	
	comp=Z,11nm,0.8s						
KMSC	**Kings Mountain**	**22.52**	**32**	P	**P**	**01 56 18.6**	**-1.2**
	baz=219						
TZTN	**Tazewell**	**22.62**	**26**	P	**P**	**01 56 19.4**	**-1.4**
	baz=212						
SDCO	**Great Sand Dun**	**22.69**	**340**	P	**P**	**01 56 21.2**	**-0.6**
	baz=155						
Q44A	**Meyer Farm, Va**	**22.97**	**14**	P	**P**	**01 56 22.8**	**-1.5**
P38A	**Dawn**	**22.99**	**5**	P	**P**	**01 56 21.9**	**-2.6**
P38A				IAmb	IAmb	01 56 24.1	
	comp=Z,6.6nm,0.4s						
OLIL	**Olney**	**23.03**	**16**	P	**P**	**01 56 23.4**	**-1.6**
P40A	**Paris**	**23.04**	**7**	P	**P**	**01 56 23.3**	**-1.8**
P40A				IAmb	IAmb	01 56 25.7	
	comp=Z,17nm,1.1s						
V55A	**Taylorsville**	**23.14**	**31**	P	**P**	**01 56 23.9**	**-2.2**
V55A				IAmb	IAmb	01 56 25.5	
	comp=Z,11nm,0.6s						
W57A	**Gilead**	**23.24**	**35**	P	**P**	**01 56 24.7**	**-2.3**
W57A				IAmb	IAmb	01 56 26.0	
	comp=Z,15nm,1.0s						
MVCO	**Mesa Verde**	**23.35**	**334**	P	**P**	**01 56 29.0**	**+0.6**
	baz=148						
U54A	**Nelsons Funny**	**23.38**	**29**	P	**P**	**01 56 25.9**	**-2.4**
R49A	**Shelbyville**	**23.52**	**21**	P	**P**	**01 56 28.7**	**-0.8**
R49A				IAmb	IAmb	01 56 30.5	
	comp=Z,7.6nm,0.8s						
BLO	**Bloomington**	**23.88**	**18**	P	**P**	**01 56 31.2**	**-1.6**
P46A	**Rosedale**	**24.10**	**16**	P	**P**	**01 56 34.6**	**-0.2**
P48A	**Milroy**	**24.48**	**20**	P	**P**	**01 56 37.4**	**-0.9**
P48A				IAmb	IAmb	01 56 38.3	
	comp=Z,19nm,1.1s						
HDIL	**Hopedale**	**24.50**	**12**	P	**P**	**01 56 38.1**	**-0.3**
	baz=195						
ISCO	**Idaho Springs**	**24.60**	**342**	P	**P**	**01 56 40.3**	**+0.6**
ISCO	**Idaho Springs**	**24.60**	**342**	P	**P**	**01 56 39.7**	**0.0**
	baz=157						
BLA	**Blacksburg**	**24.60**	**31**	P	**P**	**01 56 39.2**	**-0.2**
	baz=218						
P49A	**Miami Univ. Ec**	**24.78**	**21**	P	**P**	**01 56 40.5**	**-0.5**
	baz=206						
OGNE	**Ogallala**	**24.81**	**349**	P	**P**	**01 56 40.0**	**-1.3**
OGNE				IAmb	IA

K24K	Donnelly Dome	58.08 336	P	P	02 01 11.2	-0.4	
	baz=120						
PRP	Porcupine Dome	58.86 338	P	P	02 01 16.5	-0.6	
	baz=121						
CAPN	Captain Cook N	58.96 332	P	P	02 01 16.6	-1.0	
	baz=113						
ILAR	Eielson Array	58.98 337	P	P	02 01 18.8	+1.0	
	comp=Z,0.7nm,0.9s,baz=147,slow=3.9,SNR=4.5						
	comp=Z,0.7nm,0.9s						
TRF	Thorofare Moun	59.69 335	P	P	02 01 23.6	+0.7	
	baz=115						
H24K	Noodor Dome	59.87 338	P	P	02 01 24.4	+0.5	
H24K			IAmb	IAmb	02 01 44.8		
	comp=Z,4.4nm,1.2s						
H24K	Noodor Dome	59.87 338	P	P	02 01 24.7	+0.7	
	baz=119						
I23K	Minto, Yukon-K	60.09 337	P	P	02 01 26.5	+1.2	
I23K			IAmb	IAmb	02 01 27.7		
	comp=Z,2.3nm,0.7s						
I23K	Minto, Yukon-K	60.09 337	P	P	02 01 25.6	+0.3	
	baz=117						
C27K	Jago River	60.55 343	P	P	02 01 28.6	+0.1	
	baz=125,SNR=6.2						
MLY	Manley	60.55 336	P	P	02 01 29.1	+0.4	
MLY			IAmb	IAmb	02 01 31.2		
	comp=Z,3.5nm,0.8s						
MLY	Manley	60.55 336	P	P	02 01 28.6	0.0	
	baz=116						
N18K	Kilae Creek	61.11 331	P	P	02 01 32.8	+0.3	
	baz=108						
D25K	Kavik River	61.16 342	P	P	02 01 32.0	-0.6	
	baz=122						
E24K	Your Creek	61.18 340	P	P	02 01 32.5	-0.3	
	baz=120						
J20K	Nowinta River	61.55 335	P	P	02 01 35.5	+0.1	
	baz=112						
O16K	Kokwok River B	61.84 329	P	P	02 01 37.2	-0.1	
	baz=106						
C24K	Franklin Bluff	62.06 342	P	P	02 01 38.4	-0.2	
	baz=120						
E22K	Anaktuvuk Pass	62.31 339	P	P	02 01 39.9	-0.5	
	baz=116						
F21K	Alatna River	62.49 338	P	P	02 01 41.4	-0.3	
	baz=114						
C23K	Itkillik River	62.70 341	P	P	02 01 42.9	0.0	
	baz=118						
ESDC	Sonseca Array	80.97 51	P	P	02 03 33.9	+0.8	
	comp=Z,0.5nm,0.6s,baz=318,slow=2.0,SNR=4.9						
	comp=Z,0.5nm,0.6s						
NB2	NORSAR Subarra	83.58 28	P	P	02 03 47.9	+1.7	
	comp=Z,1.0nm,0.8s,baz=292,slow=5.1						
NOA	NORSAR Array B	83.58 28	P	P	02 03 48.2	+2.0	
	comp=Z,1.5nm,0.8s,baz=293,slow=5.0,SNR=6.5						
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	84.77 18	P	P	02 03 54.1	+2.0	
	comp=Z,2.0nm,1.0s,baz=302,slow=2.0,SNR=4.3						
	comp=Z,2.0nm,1.0s						
ARCES	ARCESS Array B	84.77 18	P	P	02 03 53.2	+1.1	
ARCES			IAmb	IAmb	02 04 22.2		
	comp=Z,6.6nm,1.4s						
PZH	PanZhiHua	133.84 338	PKP	PKPdf	02 10 36.0	+0.3	
PZH	PanZhiHua	133.84 338	PKP	PKPdf	02 10 36.0	+0.3	

DJA ***15*** *01:54:22.9±0.3,5˚S±3˚×12˚6E±˚, h441km±5km, M4.2/22, mB4.7/13, mb4.6/20, MLv4.7/22, Mw(mB)3.9/13*

IDC ***15*** *01:54:23.0±1.5, 4.46S×125.54E, h443km±18km, mb3.8/14, mbtmp4.6/18, Error ellipse: s-maj=30.6km s-min=10.4km az=61.0*

NEIC ***15*** *01:54:23.2±1.8, 4.50S±0.10×125.47E±0.05, h444km±11km, mb4.4/29, Error ellipse: s-maj=15.0km s-min=6.2km az=164.0*

ISC 15 01:54:22.6±0.4, 4.53S±0.05×125.49E±0.07, h441km, n112, σ1§02/118, mb4.3/29, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	2.06	51	P	P	01 55 22.8	+0.1
NLAI				S	S	01 56 09.7	-1.6
SANI	Sanana	2.52	11	P	P	01 55 26.1	+0.5
SANI				S	S	01 56 31.4	+15
SANI	Sanana	2.52	11	P	P	01 55 26.9	+1.3
AAI	Ambon	2.83	73	P	P	01 55 27.2	-0.5
BBSI	Bau Bau	3.06	252	P	P	01 55 31.4	+2.0
MSAI	Masohi	3.63	71	P	P	01 55 33.5	-0.5
LUWI	Luwuk	4.41	322	P	P	01 55 41.3	+0.4
LUWI	Luwuk	4.41	322	P	P	01 55 41.9	+1.0
LUWI	Luwuk	4.41	322	P	P	01 55 42.3	+1.4
MMRI	Maumere	5.20	218	P	P	01 55 49.9	+1.3
BSSI	Bau Bau, Buton	5.23	252	P	P	01 55 49.9	+1.1
	0.9nm3µm252nm,0.7s						
APSI	Ampana	5.26	313	P	P	01 55 50.4	+1.3
	0.3nm1µm99nm,0.9s						
KMSI	Cibinong	5.29	343	P	P	01 55 50.6	+1.1
	1.4nm367nm,0.6s						
SOEI	Soe	5.33	193		P	01 55 49.5	-0.4
BKSI	Bulukumba	5.40	261	P	P	01 55 51.4	+0.8
	1.1nm3µm300nm,0.7s						
TNTI	Ternate	5.59	20	P	P	01 55 53.0	+0.5
EDFI	Ende, Flores	5.64	222	P	P	01 55 54.3	+1.3
	0.1nm461nm48nm,0.9s						
GTOI	Gorontalo	5.70	334	P	P	01 55 56.4	+2.8
	0.3nm950nm104nm,0.7s						
SPSI	Sidrap Palu	5.73	275	P	P	01 55 54.6	+0.7
	0.4nm2µm130nm,0.9s						
KAPI	Kappang	5.74	265	P	P	01 55 54.9	+1.0
	47nm,0.5s,baz=106,slow=4.6,SNR=29						
KAPI	Kappang	5.74	265	P	P	01 55 54.1	+0.2
KAPI	Kappang	5.74	265	P	P	01 55 55.5	+1.6
TTSI	Tana Toraja	5.85	284	P	P	01 55 56.6	+1.5
	0.3nm68nm,0.6s						
BATI	Baumata	5.92	198	P	P	01 55 57.1	+1.3
	130nm,0.4s,baz=40,slow=3.1,SNR=14						
BATI				S	S	01 57 11.0	-1.0
	151nm,0.4s,baz=144,slow=13,SNR=11						
BATI	Baumata	5.92	198	P	P	01 55 56.8	+1.0
	0.5nm2µm88nm,0.5s						
MRSI	Marisa	6.11	324	P	P	01 55 58.5	+0.7
	0.8nm2µm239nm,0.6s						
FAKI	Fak Fak	6.93	77	P	P	01 56 05.9	-0.7
FAKI	Fak Fak	6.93	77	P	P	01 56 07.1	+0.5
	1.2nm4µm293nm,0.6s						
FAKI	Fak Fak	6.93	77	P	P	01 56 07.7	+1.1
TOLI2	Tolitoli	7.32	320	P	P	01 56 10.6	-0.1
TOLI2	Tolitoli	7.32	320	P	P	01 56 14.1	+3.4
BASI	Baing, Sumba	7.46	220	P	P	01 56 11.6	-0.5
	0.4nm88nm,0.8s						
WBSI	Waikabubak, Su	7.90	230	P	P	01 56 15.1	-1.8
	0.3nm40nm,0.5s						
PLAI	Plampang	8.77	240	P	P	01 56 25.8	-0.5
	785nm46nm,0.8s						
TWSI	Taliwang, Sumb	9.51	244	P	P	01 56 33.8	-0.7
	579nm14nm,0.8s						
MTN	Manton Dam	9.96	146	P	P	01 56 39.7	+0.4
MTN	Manton Dam	9.96	146	P	P	01 56 40.5	+1.1
KDU	Kakadu	10.64	140	P	P	01 56 48.1	+1.3
KNRA	Kununurra	11.53	164	P	P	01 56 56.9	+0.4
KNRA	Kununurra	11.53	164	P	P	01 56 57.6	+1.1
JAGI	Jajag, Banyuwa	11.92	250	P	P	01 57 00.2	-0.6
	42nm,0.8s						
FITZ	Fitzroy Crossi	13.48	179	P	P	01 57 18.1	+0.5
	12nm,0.3s,baz=358,slow=9.0,SNR=336						
FITZ				S	S	01 59 39.8	-2.6
	2.4nm,0.6s,baz=168,slow=18,SNR=6.1						
FITZ	Fitzroy Crossi	13.48	179	P	P	01 57 17.1	-0.6
FITZ	Fitzroy Crossi	13.48	179	P	P	01 57 18.2	+0.5
PCJI	Pacitan	14.68	255	P	P	01 57 30.8	+0.1
SBUM	Sibu	14.96	297	P	P	01 57 34.0	+0.3
WB0	Warramunga Arr	17.45	151	P	P	01 57 59.9	-0.1
WRAB	Tennant Creek	17.57	151	P	P	01 58 01.4	+0.1
WRAB	Tennant Creek	17.57	151	P	P	01 58 01.0	-0.3
WRA	Warramunga Arr	17.57	151	P	P	01 58 01.1	-0.3
	18nm,0.5s,baz=334,slow=10.0,SNR=120						
WRA				S	S	02 00 59.8	-1.9
	1.4nm,0.8s,baz=312,slow=19,SNR=4.7						
WRA	Warramunga Arr	17.57	151	P	P	01 58 00.3	-1.0
WB2	Warramunga Arr	17.58	151	P	P	01 58 01.0	-0.4
WR0	Warramunga Arr	17.69	151	P	P	01 58 02.2	-0.4
PSA00	Pilbara Seismi	17.80	197	P	P	01 58 04.2	+0.5
PSA00				IAmb	IAmb	01 58 06.0	
	comp=Z,23nm,1.4s						
PSA00	Pilbara Seismi	17.80	197	P	P	01 58 03.9	+0.2
PSA00				IAmb	IAmb	01 58 05.5	
	comp=Z,2.7nm,1.1s						
COEN	Coen	19.79	119	P	P	01 58 23.6	+0.8
WRKA	Warakurna	20.56	173	P	P	01 58 30.5	+0.7
AS31	Alice Springs	20.68	158	P	P	01 58 32.1	+1.3
AS31				IAmb	IAmb	01 58 37.0	
	comp=Z,6.4nm,0.9s						
ASAR	Alice Springs	20.68	158	P	P	01 58 31.9	+1.0
	comp=Z,11nm,0.5s,baz=336,slow=8.0,SNR=111						
ASAR				S	S	02 01 54.4	+1.4
	comp=Z,1.2nm,0.8s,baz=349,slow=24,SNR=4.4						
ASAR				ScP	ScP	02 05 16.2	+0.1
	comp=Z,1.6nm,0.5s,baz=342,slow=2.1,SNR=6.2						
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	20.68	158	P	P	01 58 32.8	+1.9
QIS	Mount Isa	21.03	140	P	P	01 58 35.0	+1.0
FORT	Forrest	26.22	175	P	P	01 59 20.7	+0.3
FORT				IAmb	IAmb	01 59 52.2	
	comp=Z,28nm,1.1s						
BBOO	Buckleboo	29.82	162	P	P	01 59 52.9	+0.9
BBOO				IAmb	IAmb	01 59 59.7	
	comp=Z,23nm,1.2s						
STKA	Stephens Creek	31.12	153	P	P	02 00 04.5	+1.2
	comp=Z,7.5nm,0.5s,baz=327,slow=8.4,SNR=23						
	comp=Z,7.5nm,0.5s						
STKA	Stephens Creek	31.12	153	P	P	02 00 04.5	+1.2
CM31	Chiang Mai Arr	34.74	312	P	P	02 00 35.0	+0.6
CM31				IAmb	IAmb	02 00 36.0	
	comp=Z,9.3nm,0.7s						
CMAR	Chiang Mai Arr	34.74	312	P	P	02 00 35.3	+0.9
	comp=Z,7.1nm,0.6s,baz=136,slow=7.0,SNR=39						
	comp=Z,7.1nm,0.6s						
CMAR	Chiang Mai Arr	34.74	312	P	P	02 00 33.6	-0.8
CRAI	Chiangrai	34.85	316	P	P	02 00 36.2	+0.9
CRAI				IAmb	IAmb	02 00 37.3	
	comp=Z,7.7nm,0.8s						
CHTO	Chiang Mai	34.96	312	P	P	02 00 36.4	+0.2
CHTO				IAmb	IAmb	02 00 37.7	
	comp=Z,16nm,0.7s						
CAN	Canberra	37.56	148	P	P	02 00 59.6	+1.9
CAN				IAmb	IAmb	02 01 00.7	
	comp=Z,15nm,0.6s						
PZH	PanZhiHua	38.48	325	P	P	02 01 07.5	+2.0
PZH				pmax	pmax		
	comp=Z,20nm,0.5s						
PZH				pmax	pmax		
	comp=Z,130nm,4.5s						
HHC	Hu-ho-hao-te	46.93	346	eP	P	02 02 12.1	+0.1
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.8s						
LSA	Lhasa	47.35	318	P	P	02 02 15.8	0.0
LSA				IAmb	IAmb	02 02 17.5	
	comp=Z,13nm,0.6s						
USRK	Ussuriysk Ar.	48.86	6	P	P	02 02 26.8	+0.4
	comp=Z,3.3nm,0.6s,baz=202,slow=11,SNR=6.9						
	comp=Z,3.3nm,0.6s						
RAMN	Ramite	48.91	312	eP	P	02 02 27.4	0.0
	comp=Z,57nm,0.6s						
JIRN	Jiri	49.61	312	eP	P	02 02 32.5	-0.2
	comp=Z,11nm,0.3s						
GTA	Gaotai	49.73	334	eP	P	02 02 33.6	+0.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GUN	Gumba	49.98	313	eP	P	02 02 34.8	-0.6
PKI	Pulchoki	50.14	312	eP	P	02 02 35.8	-0.7
	comp=Z,15nm,0.5s						
PKIN	Phulchoki	50.15	312	eP	P	02 02 36.0	-0.6
	comp=Z,15nm,0.5s						
DMN	Daman	50.38	312	eP	P	02 02 37.8	-0.5
	comp=Z,15nm,0.3s						
GKN	Gorkha	50.94	312	eP	P	02 02 42.0	-0.3
	comp=Z,46nm,0.3s						
DANN	Dangsing	51.78	312	eP	P	02 02 48.2	-0.4
	comp=Z,18nm,0.4s						
ULN	Ulaanbaatar	54.64	345	P	P	02 03 07.4	-1.1
SONM	Songino Array	54.78	344	P	P	02 03 09.5	+0.1
	comp=Z,1.2nm,0.5s,baz=157,slow=8.2,SNR=9.2						
	comp=Z,1.2nm,0.5s						
SONM	Songino Array	54.78	344	P	P	02 03 08.4	-1.0
WMQ	Urumqi	58.93	329	eP	P	02 03 39.8	+1.6
NIL	Nilore	62.23	312	P	P	02 03 59.6	-0.6
KSH	Kashi	63.20	319	P	P	02 04 06.5	-0.1
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
MK31	Makanchi Array	63.75	328	P	P	02 04 09.2	-0.7
MKAR	Makanchi Array	63.75	328	P	P	02 04 09.8	-0.1
	comp=Z,6.5nm,0.7s,baz=126,slow=8.1,SNR=50						
	comp=Z,6.5nm,0.7s						
MKAR	Makanchi Array	63.75	328	P	P	02 04 09.0	-0.8
KBL	Kabul	65.76	311	P	P	02 04 22.5	-0.6
KBL				IAmb	IAmb	02 04 24.1	
	comp=Z,8.2nm,0.7s						
DRK	Karamyk	65.97	317	P	P	02 04 24.2	-0.2
DRK				IAmb	IAmb	02 04 25.5	
	comp=Z,9.3nm,0.6s						
GAR	Garm	66.77	316	P	P	02 04 28.8	-0.4
CHGR	Chuyangaron	67.43	315	P	P	02 04 32.4	-0.8
CHGR				IAmb	IAmb	02 04 33.6	
	comp=Z,20nm,1.1s						
ZAA0	Zalesovo Array	67.44	335	P	P	02 04 31.7	-1.2
ZAA0				IAmb	IAmb	02 04 32.6	
	comp=Z,5.7nm,1.1s						
ZALV	Zalesovo Beam	67.44	335	P	P	02 04 31.8	-1.0
	comp=Z,3.1nm,0.4s,baz=115,slow=4.8,SNR=14						
	comp=Z,3.1nm,0.4s						
ZALV	Zalesovo Beam	67.44	335	P	P	02 04 31.3	-1.6
KURBB	Kurchatov Arra	68.11	330	P	P	02 04 36.8	-0.2
	comp=Z,1.8nm,0.2s,baz=134,slow=5.3,SNR=19						
	comp=Z,1.8nm,0.2s						
KURK	Kurchatov	68.12	330	P	P	02 04 36.2	-0.9
KURK				IAmb	IAmb	02 04 37.6	
	comp=Z,6.3nm,0.8s						
KKAR	Karatay Array	68.56	320	P	P	02 04 39.4	-0.6
ABKAR	Akbulak array	77.81	322	P	P	02 05 32.0	-1.1
NRIK	Noril'sk	78.13	347	P	P	02 05 34.8	+0.4
	comp=Z,3.6nm,0.8s,baz=154,slow=4.5,SNR=4.8						
	comp=Z,3.6nm,0.8s						
NRIK	Noril'sk	78.13	347	P	P	02 05 34.9	+0.4
NRIK				IAmb	IAmb	02 05 36.0	
	comp=Z,5.4nm,1.1s						
AKTO	Aktyubinsk	79.41	323	P	P	02 05 41.4	-0.3
	comp=Z,2.3nm,0.5s,baz=108,slow=8.8,SNR=6.7						
	comp=Z,2.3nm,0.5s						
ARU	Arti	81.27	329	P	P	02 05 50.9	-0.5
	comp=Z,1.3nm,0.3s,baz=221,slow=8.0,SNR=3.1						
	comp=Z,1.3nm,0.3s						
BELG	Belogornoye	86.19	323	P	P	02 06 15.8	-0.1
	comp=Z,7.0nm,0.8s,baz=152,slow=12,SNR=3.6						
	comp=Z,7.0nm,0.8s						
ILAR	Eielson Array	93.05	25	P	P	02 06 46.5	-1.2
	comp=Z,0.3nm,0.6s,baz=281,slow=5.7,SNR=4.2						
	comp=Z,0.3nm,0.6s						
ARCES	ARCESS Array B	97.72	340	P	P	02 07 07.6	-1.1
	comp=Z,0.9nm,0.8s,baz=60,slow=4.8,SNR=3.5						
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	123.91	283	PKP	PKiKP	02 12 30.9	-0.1
	comp=Z,1.5nm,0.6s,baz=73,slow=2.0,SNR=18						

IDC ***15*** *02:05:48.2±0.8, 22.57S×172.96E, h0km, mb4.1/10, mbtmp4.1/12, ML3.5/2, MS3.5/12, Error ellipse: s-maj=25.1km s-min=19.7km az=111.0*

NEIC ***15*** *02:05:49.2±1.5, 22.68S±0.09×173.0E±0.1, h10km±1km, mb4.7/14, Error ellipse: s-maj=24.0km s-min=8.1km az=56.0*

ISC 15 02:05:52.6±0.5, 22.67S±0.09×172.98E±0.08, h32km, n70, σ1§60/60, mb4.3/16, MS3.5/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	4.74	283	Pn	Pn	02 07 01.6	-0.3
PINNC	Pines Island,	5.11	270	Pn	Pn	02 07 06.7	-0.3
OUENC	Ouen Island, N	5.68	271	Pn	Pn	02 07 14.4	-0.4
DZM	Mont Dzumac	6.08	274	Pn	Pn	02 07 20.2	-0.2
	1.2nm,0.3s,baz=179,slow=19,SNR=20						
DZM				Sn	Sn	02 08 29.7	+0.8
	2.6nm,0.3s,baz=145,slow=1.8,SNR=4.4						
	8.1nm,0.4s						
RAO	Raoul Island	10.49	131	LR	LR	02 11 36.0	
	comp=Z,403nm,18.4s,baz=342,slow=33						
OUZ	Omahuta	12.52	178	Pn	Pn	02 08 50.9	+2.4
URZ	Urewera	15.94	168	Pn	P	02 09 36.4	-1.3
	0.2nm,0.3s,baz=2.0,slow=8.8,SNR=4.5						
URZ				LR	LR	02 14 16.7	
	comp=Z,384nm,19.4s,baz=32,slow=32						
	7.0nm,0.8s						
URZ	Urewera	15.94	168		P	02 09 36.1	-1.7
BKZ	Black Stump Fm	16.72	170		P	02 09 45.8	-0.6
AFI	Afiamalu	16.88	62	LR	LR	02 15 33.2	
	comp=Z,62nm,18.9s,baz=13,slow=35						
HNR	Honiara	18.15	314	LR	LR	02 16 05.6	
	comp=Z,191nm,20.3s,baz=153,slow=34						
LTZ	Lake Taylor	20.07	182	P	Pn	02 10 23.9	-1.2
LTZ				IAmb	IAmb	02 10 32.7	
	comp=Z,64nm,1.3s						
EIDS	Eidsvold	20.18	258		P	02 10 22.1	-2.5
EIDS				IAmb	IAmb	02 10 44.0	
	comp=Z,18nm,1.1s						
RPZ	Rata Peaks	21.05	184	P	P	02 10 36.1	+2.3
	comp=Z,14nm,0.9s,baz=14,slow=8.3,SNR=4.0						
RPZ				LR	LR	02 17 18.4	
	comp=Z,368nm,20.9s,baz=14,slow=33						
	comp=Z,14nm,0.9s						
CTA	Charters Tower	25.01	271	LR	LR	02 20 03.4	
	comp=Z,70nm,18.6s,baz=81,slow=34						
RAR	Rarotonga	25.30	92	LR	LR	02 19 50.6	
	comp=Z,33nm,19.4s,baz=202,slow=33						
STKA	Stephens Creek	29.28	245	P	P	02 11 54.5	+2.5
	comp=Z,0.6nm,0.3s,baz=100,slow=11,SNR=1.7						
STKA				LR	LR	02 22 56.8	
	comp=Z,64nm,19.9s,baz=53,slow=35						
	comp=Z,0.6nm,0.3s						
COEN	Coen	29.55	282	P	P	02 11 55.5	+0.9
WR0	Warramunga Arr	35.85	267	P	P	02 12 49.2	-0.5
WR0				IAmb	IAmb	02 12 55.8	
	comp=Z,13nm,1.4s						
AS31	Alice Springs	35.87	261	P	P	02 12 47.9	-1.9
ASAR	Alice Springs	35.87	261	P	P	02 12 48.9	-1.0
	comp=Z,3.4nm,0.9s,baz=89,slow=9.0,SNR=18						
	comp=Z,3.4nm,0.9s						
ASAR	Alice Springs	35.87	261	P	P	02 12 48.7	-1.1
WB2	Warramunga Arr	36.03	267	P	P	02 12 50.1	-1.0
WB2				IAmb	IAmb	02 13 22.2	
	comp=Z,15nm,1.5s						
WRA	Warramunga Arr	36.04	267	P	P	02 12 50.8	-0.5
	comp=Z,1.2nm,0.8s,baz=91,slow=5.7,SNR=9.1						
	comp=Z,1.2nm,0.8s						
FORT	Forrest	40.71	249	P	P	02 13 29.3	-1.2
H11S2	WAKE ISLAND Hy	41.37	351	T	T	02 57 49.9	
	baz=171,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	41.37	351	T	T	02 57 47.3	
	baz=171,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	41.38	351	T	T	02 57 51.9	
	baz=171,slow=76,SNR=12						
FITZ	Fitzroy Crossi	44.47	267	P	P	02 14 00.4	-0.7
FITZ				IAmb	IAmb	02 14 06.6	
	comp=Z,17nm,1.4s						
GUMO	Guam	45.35	320	LR	LR	02 30 34.6	
	comp=Z,99nm,21.7s,baz=224,slow=33						
MORW	Morawa	51.22	250	P	P	02 14 53.3	0.0
MORW				IAmb	IAmb	02 14 53.5	
	comp=Z,19nm,1.1s						
KAPI	Kappang	54.26	281	LR	LR	02 40 45.5	
	comp=Z,12nm,19.1s,baz=66,slow=39						
VNDA	Vanda	55.17	183	P	P	02 15 22.5	+0.9
	comp=Z,0.6nm,0.8s,baz=16,slow=5.8,SNR=3.2						
VNDA				LR	LR	02 35 11.2	
	comp=Z,88nm,21.8s,baz=3.0,slow=32						
	comp=Z,0.6nm,0.8s						
VNDA	Vanda	55.17	183	P	P	02 15 21.2	-0.4
SBA	Scott Base	55.32	182	P	P	02 15 21.7	-0.9
SBA				IAmb	IAmb	02 15 30.5	
	comp=Z,8.5nm,1.1s						
QSPA	South Pole Qui	67.40	180	LR	LR	02 43 52.3	
	comp=Z,47nm,18.6s,baz=130,slow=34						
QSPA	South Pole Qui	67.40	180	P	P	02 16 44.1	-0.6
USRK	Ussuriysk Ar.	76.40	331	P	P	02 17 39.6	+1.0
	comp=Z,1.1nm,0.5s,baz=169,slow=11,SNR=4.4						
	comp=Z,1.1nm,0.5s						
MAW	Mawson	76.57	202	P	P	02 17 39.7	+0.3
	comp=Z,2.8nm,0.8s,baz=139,slow=8.0,SNR=7.1						
	comp=Z,2.8nm,0.8s						
MAW	Mawson	76.57	202	P	P	02 17 40.1	+0.7
PETK	Petropavlovsk-	76.62	351	P	P	02 17 40.5	+0.8
	comp=Z,2.6nm,0.8s,baz=172,slow=11,SNR=5.9						
	comp=Z,2.6nm,0.8s						
BELA	Belgrano 2	78.38	174	P	P	02 17 47.8	-1.7
BELA				IAmb	IAmb	02 18 01.1	
	comp=Z,10nm,1.5s						
TROLL	Troll, Antarti	85.34	183	P	P	02 18 25.0	-1.4
SNAA	Sanae	85.87	181	P	P	02 18 27.5	-1.4
VNA3	Neumayer Olymp	86.32	179	P	P	02 18 29.7	-1.4
VNA2	Neumayer--Watz	86.66	180	P	P	02 18 31.6	-1.1
	baz=183,slow=4.0						
VNA1	Neumayer--Stat	86.93	180	P	P	02 18 33.8	-0.2
NVAR	Mina Array Bea	88.50	47	P	P	02 18 42.8	+0.5
	comp=Z,0.2nm,0.4s,baz=218,slow=9.3,SNR=3.5						
	comp=Z,0.2nm,0.4s						
ILAR	Eielson Array	92.50	16	P	P	02 19 00.1	+0.2
	comp=Z,0.5nm,0.8s,baz=221,slow=5.3,SNR=5.1						
	comp=Z,0.5nm,0.8s						
ARCES	ARCESS Array B	129.24	346	PKP	PKPdf	02 24 56.9	-0.1
	comp=Z,2.0nm,1.0s,baz=59,slow=4.7,SNR=4.9						
OSTC	Ostas	146.77	333	ePKP	PKPdf	02 25 29.8	+0.3
DPC	Dobruska-Polom	146.88	332	ePKP	PKPdf	02 25 30.4	+0.7
EKA	Eskdalemuir Ar	147.25	356	PKPbc	PKPdf	02 25 30.4	+0.3
	comp=Z,1.5nm,0.5s,baz=352,slow=2.3,SNR=19						
CLL	Collm	147.46	336	ePKPbc	PKPbc	02 25 34.0	+0.9
CLL				ePKiKP	PKiKP	02 25 36.0	+0.7
RONA	Rosalia, Austr	148.82	329	eP	PKiKP	02 25 38.3	0.0
	comp=Z,4.9nm,1.5s						
CKRC	Cesky Krumlov	148.90	332	ePKP	PKiKP	02 25 38.2	-0.2
KHC	Kasperske Hory	148.97	333	ePKP	PKPab	02 25 40.4	-0.9
GERES	GERESS Array B	149.14	333	PKPbc	PKiKP	02 25 39.5	+0.5
	comp=Z,0.8nm,0.6s,baz=46,slow=5.8,SNR=5.2						
ARSA	Arzberg	149.51	329

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**18**	*e*PN	**Pn**	**02 21 23.9**	**+1.5**
SKR				*e*S	**Sn**	**02 21 45.5**	**-1.0**
SKR				pmax	pmax		
	comp=Z,34nm,0.6s						
SKR				smax	smax		
	comp=E,286nm,0.2s						
SKR				smax	smax		
	comp=N,112nm,0.3s						
SKR	**Severo-Kuril's**	**2.02**	**18**	P	**Pn**	**02 21 22.9**	**+0.5**
SKR				S	**Sn**	**02 21 47.1**	**+0.6**
SKR	**Severo-Kuril's**	**2.02**	**18**	*e*P	**Pn**	**02 21 22.8**	**+0.4**
SKR				AMB	AMB	02 21 25.5	
	comp=N,100nm,0.5s						
SKR				*e*S	**Sn**	**02 21 45.5**	**-1.0**
SKR				A	A	02 21 48.6	
	comp=N,340nm,0.3s						
SKR				A	A	02 21 48.6	
	comp=N,540nm,0.3s						
PAU	**Pauzhetka**	**2.91**	**21**	S	**Sn**	**02 22 10.4**	**+2.1**
PAU	**Pauzhetka**	**2.91**	**21**	*e*P	**Pn**	**02 21 36.2**	**+1.6**
PAU				AMB	AMB	02 21 43.2	
	comp=N,40nm,0.4s						
PAU				*e*S	**Sn**	**02 22 08.2**	**-0.1**
PAU				A	A	02 22 15.9	
	comp=N,210nm,0.5s						
PAU				A	A	02 22 15.9	
	comp=N,360nm,0.5s						
KDTR	**Khodutka, Kamc**	**3.58**	**31**	PN	**Pn**	**02 21 44.3**	**+0.6**
KDTR				S	**Sn**	**02 22 23.4**	**-1.3**
KDTR	**Khodutka, Kamc**	**3.58**	**31**	P	**Pn**	**02 21 44.3**	**+0.6**
KDTR				S	**Sn**	**02 22 23.4**	**-1.3**
MTVR	**Mutnovka**	**4.19**	**26**	PN	**Pn**	**02 21 54.0**	**+1.7**
MTVR				S	**Sn**	**02 22 41.1**	**+1.1**
MTVR	**Mutnovka**	**4.19**	**26**	P	**Pn**	**02 21 54.0**	**+1.7**
MTVR				S	**Sn**	**02 22 41.1**	**+1.1**
GRL	**Gorelyy**	**4.22**	**25**	PN	**Pn**	**02 21 54.9**	**+2.2**
GRL				S	**Sn**	**02 22 42.2**	**+1.5**
GRL	**Gorelyy**	**4.22**	**25**	P	**Pn**	**02 21 54.9**	**+2.2**
GRL				S	**Sn**	**02 22 42.2**	**+1.5**
RUS	**Russkaya**	**4.25**	**29**	PN	**Pn**	**02 21 53.5**	**+0.6**
RUS				S	**Sn**	**02 22 39.7**	**-1.5**
RUS	**Russkaya**	**4.25**	**29**	P	**Pn**	**02 21 53.5**	**+0.6**
RUS				S	**Sn**	**02 22 39.7**	**-1.5**
RUS	**Russkaya**	**4.25**	**29**	*e*P	**Pn**	**02 21 53.5**	**+0.6**
PETK	**Petropavlovsk-**	**4.64**	**19**	P	**Pn**	**02 22 00.3**	**+2.1**
	comp=N,3,4nm,0.6s,baz=178,slow=11,SNR=19						
PET	**Petropavlovsk**	**4.81**	**26**	*e*S	**Sn**	**02 22 54.1**	**-0.7**
PET				A	A	02 23 06.8	
	comp=N,60nm,0.7s						
PET				A	A	02 23 06.8	
	comp=N,60nm,0.7s						
KOK	**Koryaka**	**5.04**	**25**	PN	Pn	02 22 07.0	+3.2
KOK	**Koryaka**	**5.04**	**25**	P	Pn	02 22 07.0	+3.2
KOK	**Koryaka**	**5.04**	**25**	*e*P	Pn	02 22 07.0	+3.2
KRER	**Koryakskii**	**5.08**	**25**	PN	**Pn**	**02 22 07.2**	**+2.7**
KRER	**Koryakskii**	**5.08**	**25**	P	**Pn**	**02 22 07.2**	**+2.7**
SDLR	**Sedlovina**	**5.10**	**26**	PN	**Pn**	**02 22 05.9**	**+1.3**
SDLR	**Sedlovina**	**5.10**	**26**	P	**Pn**	**02 22 05.9**	**+1.3**
KRX	**Arik**	**5.10**	**24**	PN	**Pn**	**02 22 07.1**	**+2.4**
KRX	**Arik**	**5.10**	**24**	P	**Pn**	**02 22 07.1**	**+2.4**
GNL	**Ganaly**	**5.24**	**19**	PN	**Pn**	**02 22 08.9**	**+2.3**
GNL	**Ganaly**	**5.24**	**19**	P	**Pn**	**02 22 08.9**	**+2.3**
SPN	**Mys Shipunski**	**5.32**	**34**	PN	**Pn**	**02 22 08.2**	**+0.6**
SPN	**Mys Shipunski**	**5.32**	**34**	P	**Pn**	**02 22 08.2**	**+0.6**
SPN				S	**Sn**	**02 23 05.6**	**-1.9**
SPN	**Mys Shipunski**	**5.32**	**34**	*e*P	**Pn**	**02 22 08.2**	**+0.6**
MKZ	**Mys Kozlova**	**7.10**	**33**	PN	**Pn**	**02 22 31.0**	**-0.9**
MKZ	**Mys Kozlova**	**7.10**	**33**	P	**Pn**	**02 22 31.0**	**-0.9**
MKZ				S	**Sn**	**02 23 46.0**	**-5.0**
SHO	**Shikotan**	**7.55**	**233**	*e*PN	**Pn**	**02 22 37.2**	**-1.0**
KBG	**Krutoberegovo**	**8.80**	**29**	*e*P	**Pn**	**02 22 57.9**	**+2.7**
KBG				*e*S	**Sn**	**02 24 31.4**	**-1.3**
MA2	**Magadan**	**11.13**	**348**	LR	LR	02 27 01.7	
	comp=N,54nm,19.2s,baz=142,slow=34						
USRK	**Ussuriysk Ar.**	**16.57**	**263**	P	**P**	**02 24 40.0**	**-1.0**
	comp=N,0.8nm,0.6s,baz=62,slow=19,SNR=3.1						
USRK	**Ussuriysk Ar.**	**16.57**	**263**	P	**P**	**02 24 40.0**	**-1.0**
KSRS	**Korea Array**	**22.74**	**250**	P	**P**	**02 25 49.6**	**+1.5**
	comp=N,0.8nm,0.7s,baz=48,slow=11,SNR=4.4						
	comp=N,0.8nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**30.48**	**158**	T	T	02 59 00.6	
	baz=342,slow=74,SNR=37						
H11N1	**WAKE ISLAND Hy**	**30.49**	**158**	T	T	02 58 58.2	
	baz=342,SNR=69						
H11N3	**WAKE ISLAND Hy**	**30.49**	**158**	T	T	02 58 57.9	
	baz=342,slow=74,SNR=40						
H11S1	**WAKE ISLAND Hy**	**31.60**	**159**	T	T	03 00 48.6	
	baz=345,slow=76,SNR=269						
H11S3	**WAKE ISLAND Hy**	**31.61**	**159**	T	T	03 00 18.7	
	baz=345,slow=76,SNR=307						
H11S2	**WAKE ISLAND Hy**	**31.62**	**159**	T	T	03 00 19.4	
	baz=345,slow=76,SNR=187						
CMAR	**Chiang Mai Arr**	**54.17**	**257**	P	**P**	**02 30 11.4**	**+0.9**
	comp=N,1.0nm,0.3s,baz=35,slow=7.8,SNR=6.6						
	comp=N,1.0nm,0.3s						
YBH	**Yreka Blue Hor**	**55.60**	**64**	LR	LR	02 53 11.6	
	comp=N,31nm,18.6s,baz=316,slow=35						
ARCES	**ARCESS Array B**	**56.39**	**341**	P	**P**	**02 30 25.3**	**-0.6**
	comp=N,3.4nm,1.1s,baz=32,slow=8.6,SNR=2.3						
	comp=N,3.4nm,1.1s						
FINES	**FINESS Array B**	**62.79**	**335**	P	**P**	**02 31 07.9**	**-2.1**
	comp=N,0.7nm,0.5s,baz=52,slow=9.9,SNR=5.1						
	comp=N,0.7nm,0.5s						
NOA	**NORSAR Array B**	**66.75**	**342**	P	**P**	**02 31 33.8**	**-2.0**
	comp=N,0.7nm,1.0s,baz=34,slow=8.6,SNR=1.7						
	comp=N,0.7nm,1.0s						
HFS	**Hagfors**	**67.03**	**340**	P	**P**	**02 31 36.8**	**-0.7**
	comp=N,1.4nm,0.8s,baz=44,slow=3.9,SNR=5.6						
	comp=N,1.4nm,0.8s						
AKASG	**Malin Array Be**	**70.62**	**327**	P	**P**	**02 31 58.0**	**-2.0**
	comp=N,0.2nm,0.4s,baz=26,slow=9.2,SNR=2.5						
	comp=N,0.2nm,0.4s						
AKASG	**Malin Array Be**	**70.62**	**327**	P	**P**	**02 31 58.0**	**-2.0**
WRA	**Warramunga Arr**	**70.88**	**201**	P	**P**	**02 32 02.0**	**+0.2**
	comp=N,0.5nm,0.7s,baz=14,slow=5.7,SNR=4.8						
	comp=N,0.5nm,0.7s						
SCHQ	**Schefferville**	**70.91**	**24**	P	**P**	**02 32 02.3**	**+0.5**
	comp=N,1.5nm,0.7s,baz=336,slow=10.0,SNR=2.0						
	comp=N,1.5nm,0.7s						
ASAR	**Alice Springs**	**74.56**	**200**	P	**P**	**02 32 24.9**	**+1.2**
	comp=N,0.3nm,0.6s,baz=11,slow=4.9,SNR=4.6						
	comp=N,0.3nm,0.6s						
EKA	**Eskdalemuir Ar**	**74.69**	**347**	P	**P**	**02 32 23.5**	**-0.6**
	comp=N,0.2nm,0.3s,baz=20,slow=5.4,SNR=11						
	comp=N,0.2nm,0.3s						
TXAR	**Lajitas Array**	**75.32**	**62**	P	**P**	**02 32 30.2**	**+1.9**
	comp=N,0.2nm,0.5s,baz=294,slow=4.1,SNR=4.2						
TXAR				pP	**pP**	**02 32 46.8**	**+3.2**
	comp=N,0.5nm,0.6s,baz=304,slow=4.8,SNR=6.2						
	comp=N,0.2nm,0.5s						
GERES	**GERESS Array B**	**77.22**	**335**	P	**P**	**02 32 38.1**	**-0.7**
	comp=N,0.1nm,0.3s,baz=36,slow=5.2,SNR=2.3						
	comp=N,0.1nm,0.3s						

BER ***15*** *02:24:18.3±2.2, 71°.42N×4°.19W, h0km±999km, Confirmed Earthquake*
IDC ***15*** *02:24:18.6±1.2, 71°.34N×3°.18W, h0km, mb3.6/6, mbtmp3.7/12, ML3.2/6, MS3.4/6, Error ellipse: s-maj=24.5km s-min=19.4km az=64.0*
DNK ***15*** *02:24:24.3±3.9, 71°.92N×5°.14W, h18km±102km, ML2.2*
ISC 15 02:24:17.9±0.6, 71°.45N±0°.08×3°.88W±0°.05, h10km, n67, σ2s62/59, mb3.9/23, MS3.4/4, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.57**	**255**	Pn	**Pb**	**02 24 45.8**	**-1.2**
	8.1nm,0.3s,baz=121,slow=8.8,SNR=2.5						
JMIC				Sn	**Sn**	**02 25 02.9**	**-3.2**
	14nm,0.3s,baz=1.8,slow=23,SNR=7.3						
JMIC				LR	LR	02 25 29.0	
	comp=Z,306nm,20.8s,baz=12,slow=40						
JMIC	**Jan Mayen**	**1.57**	**255**	*e*P	**Pn**	**02 24 44.4**	**-1.4**
JMIC				IAML		02 25 06.2	
	comp=Z,45nm,0.7s						
DBG	**Daneborg**	**5.60**	**308**	*e*	Pn	02 25 34.9	-6.2
	baz=127,slow=12						
DBG				*i* P	**Pn**	**02 25 37.4**	**-3.7**
DBG				*i* S	Sn	02 26 33.5	-12
DBG				IAML		02 26 46.0	
	comp=Z,12nm,1.0s						
DBG	**Daneborg**	**5.60**	**308**	*e*P	**Pn**	**02 25 38.6**	**-2.5**
SCO	**Scoresbysund**	**5.98**	**269**	*i* P	**Pn**	**02 25 45.7**	**-0.7**
DAG	**Danmarks Havn**	**6.68**	**330**	*i* P	**Pn**	**02 25 52.6**	**-3.3**
DAG				*i* S	Sn	02 26 55.5	-16
DAG				IAML		02 27 05.7	
	comp=Z,8.3nm,0.6s						
LOF	**Lofoten**	**6.88**	**111**	*e*P	**Pn**	**02 25 57.5**	**-1.1**
STEI	**Steigen**	**7.51**	**109**	*e*P	**Pn**	**02 26 06.3**	**-1.0**
HSPB	**Hornsund (broa**	**7.63**	**35**	*e*P	**Pn**	**02 26 08.2**	**-0.8**
TRO	**Tromso**	**7.81**	**93**	*e*P	**Pn**	**02 26 09.9**	**-1.5**
KONS	**Konsvik**	**7.85**	**121**	*e*P	**Pn**	**02 26 10.6**	**-1.4**
FAUS	**Fauske**	**7.87**	**112**	*e*P	**Pn**	**02 26 10.8**	**-1.3**
JETT	**Jettan, Norway**	**8.31**	**92**	*e*P	**Pn**	**02 26 16.9**	**-1.5**
KBS	**Kingsbay**	**8.48**	**21**	*i* P	**Pn**	**02 26 20.2**	**-0.3**
KBS	**Kingsbay**	**8.48**	**21**	*e*P	**Pn**	**02 26 20.5**	**0.0**
SPITS	**Spitsbergen Ar**	**8.52**	**29**	Pn	**Pn**	**02 26 20.8**	**-0.3**
	baz=213,slow=15						
	comp=Z,2.7nm,0.5s						
KIF	**Kilpisjarvi**	**8.68**	**94**	*e*P	**Pn**	**02 26 21.9**	**-1.4**
HAMF	**Hammerfest**	**8.96**	**82**	*e*P	**Pn**	**02 26 25.5**	**-1.7**
NSS	**Namsos**	**9.11**	**132**	*e*P	**Pn**	**02 26 29.1**	**-0.2**
HEF	**Hetta**	**9.89**	**95**	*e*P	**Pn**	**02 26 38.9**	**-0.9**
ARA0	**ARCESS Array S**	**9.95**	**87**	*e*P	**Pn**	**02 26 39.9**	**-0.9**
ARCES	**ARCESS Array B**	**9.95**	**87**	Pn	**Pn**	**02 26 39.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=289,slow=12,SNR=12						
ARCES				LR	LR	02 29 53.7	
	comp=Z,222nm,21.9s,baz=354,slow=34						
	comp=Z,1.2nm,0.6s						
NOA	**NORSAR Array B**	**12.04**	**143**	Pn	**Pn**	**02 27 07.0**	**-2.4**
	baz=328,slow=13,SNR=1.8						
NOA				LR	LR	02 31 36.5	
	comp=Z,156nm,21.0s,baz=340,slow=37						
	comp=Z,0.5nm,0.8s						
HFS	**Hagfors**	**13.37**	**139**	Pn	**Pn**	**02 27 26.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=12						
HFS				Sn	**Sn**	**02 29 50.1**	**-5.8**
	comp=Z,0.3nm,0.3s,baz=353,slow=24,SNR=5.5						
	comp=Z,2.2nm,0.7s						
FINES	**FINESS Array B**	**15.40**	**115**	Pn	**Pn**	**02 27 54.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=342,slow=12,SNR=11						
	comp=Z,5.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**16.19**	**179**	Pn	**Pn**	**02 28 05.1**	**-0.1**
	baz=352,slow=13						
	comp=Z,0.6nm,0.4s						
KLMR	**Klimovskoe**	**19.96**	**100**	*e*	Pn	02 28 53.5	+2.1
KLMR				AMP		02 28 55.3	
	comp=Z,25nm,0.9s						
BRG	**Berggiesshubel**	**22.18**	**149**	*e*P	**P**	**02 29 16.7**	**+2.9**
BRG				Amp		02 29 22.6	
	comp=Z,7.1nm,1.1s						
OSTC	**Ostas**	**22.88**	**146**	*e*P	**P**	**02 29 22.4**	**+1.2**
OSTC				*ex*	x	02 29 26.5	
DPC	**Dobruska-Polom**	**23.09**	**146**	*e*P	**P**	**02 29 24.2**	**+0.7**
DPC				*ex*	x	02 29 28.7	
PRU	**Pruhonice**	**23.13**	**149**	*e*P	**P**	**02 29 26.0**	**+2.1**
KRLC	**Kraliky**	**23.44**	**145**	*e*P	**P**	**02 29 32.4**	**+5.4**
KHC	**Kasperske Hory**	**23.81**	**151**	*e*P	**P**	**02 29 32.4**	**+1.8**
KHC				*ex*	x	02 29 37.1	
MORC	**Moravsky Berou**	**23.87**	**144**	*e*P	**P**	**02 29 31.8**	**+0.6**
TREC	**Trest**	**23.96**	**148**	*e*P	**P**	**02 29 38.2**	**+6.1**
GERES	**GERESS Array B**	**24.11**	**151**	P	**P**	**02 29 34.5**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=349,slow=11,SNR=8.1						
	comp=Z,0.6nm,0.6s						
VRAC	**Vranov**	**24.14**	**146**	*e*P	**P**	**02 29 35.7**	**+2.0**
RES	**Resolute Bay**	**24.24**	**320**	LR	LR	02 38 37.9	
	comp=Z,94nm,19.7s,baz=156,slow=35						
KRUC	**Moravsky**	**24.35**	**146**	*e*P	**P**	**02 29 37.5**	**+1.9**
FRB	**Frobisher Bay**	**24.57**	**285**	LR	LR	02 37 56.3	
	comp=Z,52nm,20.2s,baz=23,slow=33						
RETA	**Reutte**	**25.02**	**156**	*e*P	**P**	**02 29 44.0**	**+2.3**
	comp=Z,3.6nm,1.1s						
DAVA	**Damuels**	**25.10**	**158**	*e*P	**P**	**02 29 45.9**	**+3.3**
	comp=Z,7.6nm,1.2s						
MOA	**Molln**	**25.16**	**150**	*e*P	P	02 29 51.4	+8.4
	comp=Z,3.9nm,1.5s						
MOTA	**Moosalm**	**25.20**	**156**	*e*P	**P**	**02 29 46.8**	**+3.3**
	comp=Z,2.5nm,1.4s						
BIOA	**Bad Ischl, Aus**	**25.22**	**151**	*e*P	P	02 29 50.8	+7.3
	comp=Z,0.9nm,0.4s						
WATA	**Walderalm**	**25.27**	**155**	*e*P	**P**	**02 29 46.9**	**+2.8**
	comp=Z,4.2nm,1.1s						
SQTA	**Sankt Quirin**	**25.34**	**156**	*e*P	**P**	**02 29 47.6**	**+3.0**
	comp=Z,5.4nm,1.1s						
VYHS	**Vyhne**	**25.34**	**143**	*e*P	**P**	**02 29 47.2**	**+2.6**
CONA	**Conrad Observa**	**25.35**	**148**	*e*P	**P**	**02 29 48.3**	**+3.6**
	comp=Z,4.5nm,0.8s						
WTTA	**Wattenberg**	**25.35**	**155**	*e*P	**P**	**02 29 47.6**	**+2.8**
	comp=Z,8.5nm,1.3s						
FETA	**Feichten**	**25.47**	**156**	*e*P	**P**	**02 29 48.5**	**+2.5**
	comp=Z,2.8nm,1.3s						
AKASG	**Malin Array Be**	**25.62**	**127**	P	**P**	**02 29 47.0**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=337,slow=9.7,SNR=4.6						
	comp=Z,3.8nm,0.7s						
KOLS	**Kolonicke sedl**	**25.62**	**138**	*e*P	**P**	**02 29 45.7**	**-1.4**
RONA	**Rosalia, Austr**	**25.64**	**147**	*e*P	**P**	**02 29 51.0**	**+3.6**
	comp=Z,5.5nm,1.1s						
KBA	**Koelnbreinsper**	**25.77**	**152**	*e*P	**P**	**02 29 53.2**	**+4.5**
	comp=Z,2.1nm,0.7s						
ARSA	**Arzberg**	**25.95**	**149**	*e*P	**P**	**02 29 54.8**	**+4.6**
	comp=Z,2.6nm,0.9s						
ABTA	**Abfaltersbach**	**25.98**	**154**	*e*P	P	02 29 57.6	+7.2
	comp=Z,1.5nm,1.0s						
MYKA	**Terra Mystica**	**26.26**	**152**	*e*P	**P**	**02 29 58.4**	**+5.4**
	comp=Z,3.4nm,1.0s						
SOKA	**Soboth**	**26.43**	**150**	*e*P	P	02 30 01.6	+7.1
	comp=Z,1.8nm,1.1s						
OBKA	**Obir**	**26.51**	**151**	*e*P	P	02 30 02.9	+7.6
	comp=Z,3.3nm,1.3s						
ESDC	**Sonseca Array**	**31.85**	**180**	P	**P**	**02 30 43.5**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=1.9,slow=8.6,SNR=5.2						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**36.98**	**129**	P	**P**	**02 31 28.3**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=359,slow=7.2,SNR=2.3						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**38.14**	**315**	P	**P**	**02 31 40.8**	**+4.2**
	comp=Z,0.6nm,0.9s,baz=19,slow=9.8,SNR=3.2						
	comp=Z,0.6nm,0.9s						
NEW	**Newport**	**51.65**	**308**	LR	LR	02 55 31.6	
	comp=Z,62nm,19.0s,baz=12,slow=36						
PDAR	**Pinedale Array**	**54.74**	**300**	LR	LR	02 55 27.9	
	comp=Z,43nm,19.8s,baz=12,slow=34						
TORD	**Torodi Ar. Bea**	**58.37**	**174**	P	**P**	**02 34 13.8**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=356,slow=7.1,SNR=6.8						
	comp=Z,1.1nm,0.7s						
MAW	**Mawson**	**145.76**	**141**	PKPbc	**PKPab**	**02 43 56.7**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=347,slow=4.8,SNR=2.1						

SOME ***15*** *02:27:54.8, 50°.63N×87°.43E, h10km*
ASRS ***15*** *02:28:09.2±0.3, 50°.N±2°×8°.8E±°, h10km, MLh3.1/10, Error ellipse: s-maj=3.9km s-min=3.3km az=133.6, confirmed*
NNC ***15*** *02:28:14.3±2.0, 50°.10N×87°.52E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=22.0km s-min=5.6km az=103.0*
ISC 15 02:28:12.2±0.8, 50°.05N±0°.03×87°.81E±0°.03, h10km, n18, σ2s13/34, 4C-12D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.29**	**336**	⇓Pg	**Pg**	**02 28 16.3**	**-1.9**
AKAR				Sg	**Sg**	**02 28 20.7**	**-1.5**
CHBI	**Chibit, Altay**	**0.33**	**323**	⇓Pg	**Pg**	**02 28 17.6**	**-1.1**
CHBI				Sg	**Sg**	**02 28 22.2**	**-1.0**
CUR	**Chagan-Uzun**	**0.35**	**82**	⇑Pg	**Pg**	**02 28 17.8**	**-1.4**
CUR				Sg	**Sg**	**02 28 23.7**	**-0.2**
DGZ	**Jazzator, Alta**	**0.43**	**215**	⇓Pg	Pg	02 28 17.0	-3.5
DGZ				Sg	**Sg**	**02 28 21.1**	**-5.1**
ULGR	**Ulagan, Altay**	**0.58**	**10**	⇓Pg	**Pg**	**02 28 22.8**	**-0.7**
ULGR				Sg	**Sb**	**02 28 31.3**	**-1.6**
ARTR	**Artybash**	**1.78**	**349**	Pg	**Pg**	**02 28 45.2**	**-1.0**
ARTR				Sg	**Sg**	**02 29 07.7**	**-1.7**
UKR	**Ust'-Kan**	**2.13**	**296**	Pg	**Pb**	**02 28 49.5**	**+1.6**
UKR				Sg	**Sb**	**02 29 17.5**	**+0.1**
TASR	**Tashtagol**	**2.71**	**1**	Pg	**Pb**	**02 28 59.7**	**-1.1**
TASR				Sg	**Sg**	**02 29 37.3**	**-2.0**
ZSN	**Zaisan**	**3.25**	**218**	*e*P	**Pn**	**02 29 06.3**	**+3.1**
	5.0nm,0.4s						
ZSN				*e*S	**Sb**	**02 29 50.1**	**+0.6**
	30nm,0.7s						
ELT	**Eltsovka**	**3.36**	**344**	Pg	**Pb**	**02 29 08.3**	**-3.4**
ELT				Sg	**Sb**	**02 29 55.1**	**+2.4**
DJO	**Djoy, Khakassi**	**3.47**	**37**	Pg	**Pb**	**02 29 15.3**	**+1.6**
DJO				Sg	**Sg**	**02 30 03.3**	**-0.2**
CERR	**Cheremushki**	**3.60**	**37**	Pg	**Pg**	**02 29 20.2**	**-0.9**
CERR				Sg	**Sg**	**02 30 07.1**	**-0.6**
LUZB	**Luzhba, Kemero**	**3.68**	**10**	Pg	**Pb**	**02 29 17.8**	**+0.6**
LUZB				Sg	**Sg**	**02 30 07.5**	**-2.7**
ZAA0	**Zalesovo Array**	**4.32**	**336**	⇓Pn	**Pn**	**02 29 19.6**	**+1.8**
	0.3nm,0.6s						
ZAA0				⇓Sn	**Sn**	**02 30 10.3**	**+2.1**
	0.9nm,0.5s						
ZAA0				⇓Lg	Lg	02 30 28.5	
	1.2nm,0.5s						
ERNS	**Erzin**	**4.73**	**85**	Pg	**Pg**	**02 29 40.5**	**-2.2**
ERNS				Sg	**Sg**	**02 30 40.0**	**-3.9**
MK31	**Makanchi Array**	**4.91**	**231**	⇑Pn	**Pn**	**02 29 28.0**	**+2.0**
	1.0nm,0.3s,baz=50,slow=13,SNR=57						
MK31				⇓Sn	**Sn**	**02 30 26.3**	**+3.4**
	0.6nm,0.2s,baz=58,slow=27,SNR=4.2						
MK31				⇑Lg	Lg	02 30 44.1	
	8.9nm,0.7s,baz=48,slow=29,SNR=6.2						
MAKZ	**Makanchi**	**5.06**	**232**	⇓Pn	**Pn**	**02 29 29.7**	**+1.7**
	3.6nm,0.8s						
MAKZ				⇓Sn	**Sn**	**02 30 28.7**	**+2.2**
	2.5nm,0.5s						
MAKZ				⇓Lg	Lg	02 30 50.0	
	5.8nm,0.6s						
KURK	**Kurchatov**	**5.92**	**280**	⇑Pn	**Pn**	**02 29 40.3**	**+0.5**
	4.3nm,1.0s						
KURK				⇓Lg	Lg	02 31 13.3	
	11nm,0.7s						

MAN ***15*** *02:50:38, 14°.99N×122°.05E, h6km, Ms4.2*
IDC ***15*** *02:50:43.5±2.2, 14°.83N×122°.20E, h50km±20km, mb4.0/29, mbtmp4.3/30, ML4.2/1, MS3.7/15, Error ellipse: s-maj=14.9km s-min=10.0km az=79.0*
NEIC ***15*** *02:50:44.3±2.7, 14°.94N±0°.05×121°.97E±0°.07, h44km±8km, mb4.6/29, Error ellipse: s-maj=10.4km s-min=6.2km az=55.0*
ISC 15 02:50:40.8±1.3, 14°.85N±0°.04×122°.11E±0°.04, h24km±10km, n111, σ1s22/112, mb4.4/49, MS3.8/19, 7C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCNP	**Jose Panganiba**	**0.80**	**134**	*i* P	**Pb**	**02 50 55.6**	**-0.4**
JCNP				*i* S	**Sn**	**02 51 08.9**	**+1.1**
LQP	**Lukban**	**0.92**	**217**	⇑*e*P	**Pb**	**02 50 56.4**	**-1.8**
LQP				*e*S	**Sb**	**02 51 08.2**	**-1.8**
GQP	**Guinayangan**	**1.00**	**161**	⇓*i* P	**Pb**	**02 50 59.1**	**-0.3**
GQP				*i* S	**Sn**	**02 51 14.4**	**+1.8**
TGY	**Tagaytay City**	**1.36**	**237**	P	**Pb**	**02 51 05.2**	**-0.4**
TGY				S	**Sb**	**02 51 25.1**	**+2.5**
TGY	**Tagaytay City**	**1.36**	**237**	⇑*e*P	**Pn**	**02 51 04.4**	**0.0**
TGY				*e*S	**Sb**	**02 51 24.0**	**+1.5**
PGP	**Puerto Galera**	**1.75**	**220**	⇑*i* P	**Pn**	**02 51 09.8**	**+0.1**
PGP				*i* S	**Sb**	**02 51 34.3**	**+0.5**
LUBP	**Lubang**	**2.12**	**239**	⇓*i* P	**Pn**	**02 51 16.2**	**+1.4**
LUBP				*i* S	**Sb**	**02 51 43.3**	**-1.1**
APYP	**Conner**	**3.11**	**345**	⇑*i* P	**Pn**	**02 51 27.2**	**-1.2**
APYP				*i* S	**Sn**	**02 52 04.8**	**0.0**
RCP	**Roxas**	**3.33**	**169**	⇑*e*P	**Pb**	**02 51 38.9**	**-0.3**
SGCP	**Gonzaga**	**3.37**	**359**	⇓*i* P	**Pn**	**02 51 31.4**	**-0.7**
SGCP				*i* S	**Sn**	**02 52 11.3**	**-0.1**
SIPP	**Brgy, Tapao**	**3.44**	**333**	⇓*i* P	**Pn**	**02 51 29.9**	**-3.1**
SIPP				*i* S	Sb	02 52 32.6	+10
DAV	**Davao City (W)**	**8.45**	**156**	LR	LR	02 56 16.4	
	comp=Z,624nm,18.5s,baz=326,slow=40						
TPUB	**Ta-pu**	**8.52**	**351**	Pn	**Pn**	**02 52 41.5**	**-1.4**
YULB	**Yu-li**	**8.53**	**355**	Pn	**Pn**	**02 52 42.4**	**-0.5**
SSLB	**Suanglung**	**8.96**	**353**	Pn	**Pn**	**02 52 49.3**	**+0.5**
YOJ	**Yonaguni jima**	**9.60**	**5**	Pn	**Pn**	**02 52 57.2**	**-0.4**
YHNB	**Yeheng**	**9.79**	**356**	Pn	**Pn**	**02 53 00.3**	**0.0**
QIZ	**Qiongzhong**	**12.45**	**291**	P	**Pn**	**02 53 37.4**	**+0.8**
QIZ				S	**Sn**	**02 55 55.

HHC					LR	LR			
	comp=N,540nm,13.3s								
HHC					LR	LR			
	comp=E,570nm,15.2s								
HHC					LR	LR			
	comp=Z,800nm,16.5s								
GTA	**Gaotai**	**31.33**	**326**	*eP*	**P**		**02 57 03.8**	**+4.2**	
GTA				pmax	pmax				
	comp=Z,3.0nm,1.1s								
GTA				pmax	pmax				
	comp=Z,75nm,4.9s								
GTA				LR	LR				
	comp=N,350nm,18.5s								
GTA				LR	LR				
	comp=E,240nm,16.7s								
GTA				LR	LR				
	comp=Z,190nm,14.9s								
KLR	**Kul'dur**	**35.18**	**11**	P	**P**		**02 57 33.3**	**+0.4**	
	comp=Z,1.9nm,0.6s,baz=235,slow=8.8,SNR=4.2								
KLR				LR	LR		03 12 21.7		
	comp=Z,113nm,21.1s,baz=214,slow=37								
	comp=Z,1.9nm,0.6s								
ULN	**Ulaanbaatar**	**35.20**	**342**	P	**P**		**02 57 33.8**	**+0.4**	
KRVT	**Keravat (AS076**	**35.23**	**120**	LR	LR		03 10 30.9		
	comp=Z,180nm,19.5s,baz=227,slow=34								
SONM	**Songino Array**	**35.37**	**342**	P	**P**		**02 57 34.6**	**-0.2**	
	comp=Z,1.0nm,0.6s,baz=161,slow=9.9,SNR=8.8								
SONM				LR	LR		03 13 02.6		
	comp=Z,283nm,20.8s,baz=156,slow=38								
	comp=Z,1.0nm,0.6s								
SONM	**Songino Array**	**35.37**	**342**	P	**P**		**02 57 35.2**	**+0.5**	
WB0	**Warramunga Arr**	**36.46**	**160**	P	**P**		**02 57 42.7**	**-1.5**	
WB0				IAmb	IAmb		02 57 49.6		
	comp=Z,8.0nm,1.0s								
WRA	**Warramunga Arr**	**36.61**	**160**	P	**P**		**02 57 42.8**	**-2.6**	
	comp=Z,2.2nm,0.6s,baz=347,slow=9.0,SNR=28								
	comp=Z,2.2nm,0.6s								
WRA	**Warramunga Arr**	**36.61**	**160**	P	**P**		**02 57 44.1**	**-1.3**	
WB2	**Warramunga Arr**	**36.61**	**160**	P	**P**		**02 57 44.0**	**-1.5**	
WB2				IAmb	IAmb		02 57 53.3		
	comp=Z,7.0nm,0.8s								
WR0	**Warramunga Arr**	**36.69**	**160**	P	**P**		**02 57 44.8**	**-1.3**	
WR0				IAmb	IAmb		02 57 50.7		
	comp=Z,9.0nm,1.1s								
AS31	**Alice Springs**	**39.98**	**163**	P	**P**		**02 58 13.0**	**-0.8**	
ASAR	**Alice Springs**	**39.98**	**163**	P	**P**		**02 58 12.2**	**-1.7**	
	comp=Z,1.0nm,0.3s,baz=339,slow=7.3,SNR=29								
ASAR				PcP	**PcP**		**03 00 18.3**	**-0.6**	
	comp=Z,1.0nm,0.6s,baz=349,slow=3.1,SNR=6.3								
	comp=Z,1.0nm,0.3s								
ASAR	**Alice Springs**	**39.98**	**163**	P	**P**		**02 58 13.4**	**-0.4**	
WMQ	**Urumqi**	**41.13**	**322**	*eP*	**P**		**02 58 24.4**	**+1.2**	
WMQ				LR	LR				
	comp=N,490nm,18.7s								
WMQ				LR	LR				
	comp=E,200nm,17.9s								
WMQ				LR	LR				
	comp=Z,220nm,20.5s								
PALK	**Pallekele**	**41.27**	**264**	LR	LR		03 13 35.9		
	comp=Z,63nm,20.8s,baz=204,slow=33								
CTA	**Charters Tower**	**42.06**	**145**	P	**P**		**02 58 31.8**	**+0.8**	
	comp=Z,9.9nm,1.0s,baz=325,slow=9.7,SNR=2.6								
	comp=Z,9.9nm,1.0s								
CTAO	**Charters Tower**	**42.06**	**145**	P	**P**		**02 58 31.8**	**+0.8**	
H11S3	**WAKE ISLAND Hy**	**42.78**	**79**	T	T		03 44 17.7		
	baz=272								
H11S1	**WAKE ISLAND Hy**	**42.79**	**79**	T	T		03 44 18.0		
	baz=272								
H11S2	**WAKE ISLAND Hy**	**42.80**	**79**	T	T		03 44 20.4		
	baz=272,SNR=867								
H11N1	**WAKE ISLAND Hy**	**42.94**	**77**	T	T		03 44 31.4		
	baz=272,slow=75,SNR=176								
H11N2	**WAKE ISLAND Hy**	**42.95**	**77**	T	T		03 44 29.1		
	baz=272,slow=75,SNR=277								
H11N3	**WAKE ISLAND Hy**	**42.96**	**77**	T	T		03 44 31.1		
	baz=272,slow=75,SNR=197								
MORW	**Morawa**	**44.05**	**188**	P	**P**		**02 58 47.1**	**+0.2**	
MORW				IAmb	IAmb		02 59 26.3		
	comp=Z,23nm,1.4s								
MK31	**Makanchi Array**	**45.94**	**322**	P	**P**		**02 59 02.2**	**+0.3**	
MK31				IAmb	IAmb		02 59 07.6		
	comp=Z,4.7nm,1.1s								
MKAR	**Makanchi Array**	**45.94**	**322**	P	**P**		**02 59 02.6**	**+0.7**	
	comp=Z,3.2nm,0.7s,baz=124,slow=8.8,SNR=24								
	comp=Z,3.2nm,0.7s								
MKAR	**Makanchi Array**	**45.94**	**322**	P	**P**		**02 59 02.4**	**+0.5**	
MAKZ	**Makanchi**	**46.13**	**322**	P	**P**		**02 59 03.5**	**+0.1**	
MAKZ				IAmb	IAmb		02 59 04.7		
	comp=Z,6.8nm,1.2s								
KSH	**Kashi**	**47.17**	**311**	P	**P**		**02 59 14.0**	**+2.2**	
KSH				pmax	pmax				
	comp=Z,7.0nm,0.8s								
PEA0B	**Petropavlovsk-**	**47.37**	**28**	P	**P**		**02 59 13.6**	**+0.7**	
PETK	**Petropavlovsk-**	**47.37**	**28**	P	**P**		**02 59 12.4**	**-0.5**	
	comp=Z,7.1nm,0.8s,baz=210,slow=11,SNR=17								
	comp=Z,7.1nm,0.8s								
PETK	**Petropavlovsk-**	**47.37**	**28**	P	**P**		**02 59 14.0**	**+1.0**	
YAK	**Yakutsk**	**47.43**	**5**	LR	LR		03 20 20.5		
	comp=Z,70nm,20.0s,baz=264,slow=38								
NWAO	**Narrogin (SRO)**	**47.74**	**186**	P	**P**		**02 59 17.2**	**+1.3**	
ZALV	**Zalesovo Beam**	**48.68**	**332**	P	**P**		**02 59 22.1**	**-1.0**	
	comp=Z,1.8nm,0.6s,baz=114,slow=6.6,SNR=6.8								
ZALV				LR	LR		03 20 39.3		
	comp=Z,91nm,19.7s,baz=108,slow=37								
	comp=Z,1.8nm,0.6s								
ZALV	**Zalesovo Beam**	**48.68**	**332**	P	**P**		**02 59 22.6**	**-0.5**	
BBOO	**Buckleboo**	**49.23**	**164**	P	**P**		**02 59 27.1**	**-0.4**	
KURK	**Kurchatov**	**50.01**	**325**	P	**P**		**02 59 32.8**	**-0.4**	
KURBB	**Kurchatov Arra**	**50.02**	**325**	P	**P**		**02 59 33.6**	**+0.3**	
	comp=Z,5.6nm,0.8s,baz=121,slow=8.2,SNR=36								
KURBB				LR	LR		03 20 35.3		
	comp=Z,64nm,18.6s,baz=92,slow=36								
	comp=Z,5.6nm,0.8s								
STKA	**Stephens Creek**	**50.08**	**158**	P	**P**		**02 59 33.0**	**-0.9**	
	comp=Z,1.8nm,0.6s,baz=320,slow=7.1,SNR=5.1								
	comp=Z,1.8nm,0.6s								
STKA	**Stephens Creek**	**50.08**	**158**	P	**P**		**02 59 34.5**	**+0.5**	
GAR	**Garm**	**51.27**	**308**	P	**P**		**02 59 43.5**	**+0.4**	
GAR				IAmb	IAmb		02 59 45.7		
	comp=Z,8.4nm,0.8s								
CHGR	**Chuyangaron**	**52.08**	**308**	P	**P**		**02 59 48.4**	**-0.7**	
CHGR				IAmb	IAmb		02 59 50.8		
	comp=Z,7.5nm,0.7s								
KK31	**Karatay Array**	**52.16**	**313**	P	**P**		**02 59 49.6**	**-0.1**	
KK31				IAmb	IAmb		03 00 18.4		
	comp=Z,4.6nm,1.2s								
KKAR	**Karatay Array**	**52.16**	**313**	P	**P**		**02 59 49.3**	**-0.4**	
KKAR	**Karatay Array**	**52.16**	**313**	P	**P**		**02 59 50.0**	**+0.3**	
KKAR				IAmb	IAmb		03 00 18.4		
	comp=Z,4.6nm,1.2s								
SEY	**Seymchan**	**52.52**	**17**	P	**P**		**02 59 52.1**	**+0.2**	
	comp=Z,3.8nm,0.8s,baz=227,slow=5.9,SNR=12								
	comp=Z,3.8nm,0.8s								
BRVK	**Borovoye**	**55.68**	**325**	P	**P**		**03 00 12.8**	**-2.3**	
BRVK				IAmb	IAmb		03 00 22.2		
	comp=Z,4.2nm,0.8s								
TIXI	**Tiksi**	**56.92**	**3**	P	**P**		**03 00 22.8**	**-0.9**	
	comp=Z,8.6nm,0.7s,baz=90,slow=23,SNR=4.1								
	comp=Z,8.6nm,0.7s								
NRIK	**Noril'sk**	**58.62**	**346**	P	**P**		**03 00 35.6**	**0.0**	
	comp=Z,3.7nm,0.6s,baz=140,slow=8.3,SNR=5.3								
NRIK				LR	LR		03 31 10.0		
	comp=Z,63nm,18.1s,baz=168,slow=41								
	comp=Z,3.7nm,0.6s								
NRIK	**Noril'sk**	**58.62**	**346**	P	**P**		**03 00 35.0**	**-0.6**	
GEYT	**Alibeck**	**60.58**	**305**	P	**P**		**03 00 50.3**	**+0.5**	
GEYT				IAmb	IAmb		03 00 51.4		
	comp=Z,4.4nm,0.7s								
ABKAR	**Akbulak array**	**60.77**	**318**	P	**P**		**03 00 49.5**	**-1.3**	
AKTO	**Aktyubinsk**	**62.22**	**319**	P	**P**		**03 01 00.1**	**-0.5**	
	comp=Z,1.4nm,0.7s,baz=47,slow=4.6,SNR=5.7								
	comp=Z,1.4nm,0.7s								
ARU	**Arti**	**63.19**	**326**	P	**P**		**03 01 06.2**	**-0.7**	
	comp=Z,2.8nm,0.5s,baz=169,slow=7.3,SNR=4.7								
	comp=Z,2.8nm,0.5s								
BELG	**Belogornoye**	**68.91**	**321**	P	**P**		**03 01 43.4**	**-0.4**	
	comp=Z,8.3nm,0.8s,baz=28,slow=6.8,SNR=3.9								
	comp=Z,8.3nm,0.8s								
RPZ	**Rata Peaks**	**73.43**	**145**	P	**P**		**03 02 10.6**	**-0.6**	
	comp=Z,9.8nm,0.9s,baz=310,slow=7.0,SNR=5.1								
	comp=Z,9.8nm,0.9s								
KLMR	**Klimovskoe**	**73.55**	**330**	*eP*	**P**		**03 02 08.0**	**-3.7**	
KLMR				AMP			03 02 16.7		
	comp=Z,10.0nm,1.2s								
ILAR	**Eielson Array**	**77.12**	**26**	P	**P**		**03 02 32.1**	**-0.1**	
	comp=Z,0.4nm,0.7s,baz=275,slow=5.5,SNR=5.2								
	comp=Z,0.4nm,0.7s								
BMAR	**Burnt Mountain**	**77.68**	**23**	P	**P**		**03 02 35.6**	**+0.3**	
ARCES	**ARCESS Array B**	**78.50**	**339**	P	**P**		**03 02 39.2**	**-0.5**	
	comp=Z,0.5nm,0.4s,baz=74,slow=6.6,SNR=7.3								
	comp=Z,0.5nm,0.4s								
SPITS	**Spitsbergen Ar**	**78.75**	**348**	P	**P**		**03 02 40.9**	**-0.1**	
	comp=Z,4.6nm,0.7s,baz=79,slow=10,SNR=2.2								
	comp=Z,4.6nm,0.7s								
FINES	**FINESS Array B**	**79.95**	**331**	P	**P**		**03 02 46.7**	**-1.0**	
	comp=Z,2.1nm,0.8s,baz=60,slow=7.5,SNR=5.4								
	comp=Z,2.1nm,0.8s								
FARO	**Faro, Yukon**	**83.61**	**27**	P	**P**		**03 03 07.7**	**+0.5**	
FARO				IAmb	IAmb		03 03 10.3		
	comp=Z,4.5nm,0.8s								
KMBO	**Kilima Mbogo**	**85.31**	**268**	P	**P**		**03 03 16.6**	**-0.3**	
	comp=Z,1.5nm,0.7s,baz=34,slow=4.6,SNR=4.2								
	comp=Z,1.5nm,0.7s								
HFS	**Hagfors**	**86.12**	**332**	P	**P**		**03 03 18.6**	**-1.2**	
	comp=Z,3.6nm,0.9s,baz=90,slow=8.9,SNR=5.1								
	comp=Z,3.6nm,0.9s								
NB2	**NORSAR Subarra**	**86.87**	**333**	P	**P**		**03 03 22.5**	**-0.9**	
	comp=Z,1.2nm,0.8s,baz=66,slow=4.8								
NOA	**NORSAR Array B**	**86.87**	**333**	P	**P**		**03 03 22.6**	**-0.9**	
	comp=Z,0.9nm,0.7s,baz=67,slow=4.8,SNR=5.6								
	comp=Z,0.9nm,0.7s								
YKA	**Yellowknife Ar**	**91.19**	**23**	P	**P**		**03 03 44.0**	**+0.2**	
	comp=Z,1.6nm,0.9s,baz=311,slow=5.3,SNR=8.5								
	comp=Z,1.6nm,0.9s								
PLCA	**Paso Flores**	**151.95**	**159**	PKPbc	**PKPbc**		**03 10 34.6**	**+0.3**	
	comp=Z,1.2nm,0.6s,baz=252,slow=2.3,SNR=4.3								

NEIC ***15*** *02:53:36.3±1.6, 22.2°20S±0.09°×173.4°4E±0.1, h10km±2km, mb4.7/16, Error ellipse: s-maj=24.2km s-min=3.2km az=51.0*

IDC ***15*** *02:53:39.1±1.0, 22.2°54S×172.7°6E, h0km, mb4.1/7, mbtmp4.1/9, ML3.8/2, MS3.9/5, Error ellipse: s-maj=25.0km s-min=22.7km az=69.0*

NOU ***15*** *02:53:57.7, 22.2°55S×171.8°1E, h0km, mb5.0/7, Southeast of Loyalty Islands*

ISC 15 02:53:41.9±0.9, 22°55S±0.1×173°1E±0.1, h32km, n49, σ1875/47, mb4.4/12, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.78**	**281**	Pn	**Pn**	**02 54 52.6**	**+1.0**
MARNC	**Mare, Loyalty**	**4.78**	**281**	P	**Pn**	**02 54 55.7**	**+4.1**
PINNC	**Pines Island,**	**5.19**	**268**	Pn	**Pn**	**02 54 57.1**	**-0.1**
YATNC	**Mamie plateau,**	**5.73**	**273**	P	**Pn**	**02 55 08.1**	**+3.4**
OUENC	**Ouen Island, N**	**5.75**	**270**	Pn	**Pn**	**02 55 05.7**	**+0.7**
OUENC	**Ouen Island, N**	**5.75**	**270**	P	**Pn**	**02 55 08.6**	**+3.6**
ONTNC	**Ouen Toro**	**6.11**	**271**	Pn	**Pn**	**02 55 10.6**	**+0.5**
ONTNC	**Ouen Toro**	**6.11**	**271**	P	**Pn**	**02 55 13.5**	**+3.5**
DZM	**Mont Dzumac**	**6.14**	**273**	Pn	**Pn**	**02 55 09.5**	**-1.0**
	2.2nm,0.3s,baz=240,slow=21,SNR=15						
DZM				Sn	**Sn**	**02 56 18.2**	**-1.5**
	6.5nm,0.3s,baz=309,slow=23,SNR=7.7						
	5.6nm,0.3s						
DZM	**Mont Dzumac**	**6.14**	**273**	Pn	**Pn**	**02 55 11.1**	**+0.6**
DZM	**Mont Dzumac**	**6.14**	**273**	P	**Pn**	**02 55 13.7**	**+3.2**
NOUC	**Port Laguerre**	**6.27**	**272**	P	**Pn**	**02 55 15.2**	**+3.1**
KOUNC	**Koumac, New Ca**	**8.39**	**282**	Pn	**Pn**	**02 55 42.3**	**+1.0**
OUZ	**Omahuta**	**12.68**	**178**	Pn	**Pn**	**02 56 40.6**	**+0.7**
URZ	**Urewera**	**16.09**	**168**	Pn	**Pn**	**02 57 26.9**	**+1.3**
	0.5nm,0.3s,baz=316,slow=7.5,SNR=8.1						
URZ				LR	LR	03 02 07.2	
	comp=Z,593nm,21.9s,baz=30,slow=32						
	11nm,0.7s						
URZ	**Urewera**	**16.09**	**168**		**P**	**02 57 28.4**	**-0.3**
AFI	**Afiamalu**	**16.74**	**62**	LR	LR	03 03 06.2	
	comp=Z,179nm,18.1s,baz=238,slow=33						
BKZ	**Black Stump Fm**	**16.87**	**171**		**P**	**02 57 38.6**	**+1.1**
HNR	**Honiara**	**18.08**	**314**	LR	LR	03 03 55.4	
	comp=Z,306nm,18.9s,baz=150,slow=34						
BFZ	**Birch Farm**	**18.33**	**172**	P	**P**	**02 57 51.7**	**-1.7**
BFZ				IAmb	IAmb	02 58 15.3	
	comp=Z,50nm,1.2s						
LTZ	**Lake Taylor**	**20.23**	**182**	P	**P**	**02 58 13.9**	**-0.5**
LTZ				IAmb	IAmb	02 58 17.9	
	comp=Z,35nm,0.9s						
OXZ	**Oxford**	**20.79**	**182**	P	**P**	**02 58 20.6**	**+0.4**
OXZ				IAmb	IAmb	02 58 23.3	
	comp=Z,35nm,0.7s						
RPZ	**Rata Peaks**	**21.22**	**184**	P	**P**	**02 58 26.3**	**+1.3**
	comp=Z,8.6nm,0.8s,baz=270,slow=20,SNR=3.6						
RPZ				LR	LR	03 06 00.6	
	comp=Z,393nm,18.2s,baz=355,slow=35						
	comp=Z,8.6nm,0.8s						
BBOO	**Buckleboo**	**34.19**	**244**	P	**P**	**03 00 24.6**	**+0.1**
ASAR	**Alice Springs**	**35.96**	**260**	P	**P**	**03 00 38.9**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=87,slow=9.2,SNR=13						
	comp=Z,2.2nm,0.8s						
WB0	**Warramunga Arr**	**36.10**	**267**	P	**P**	**03 00 40.0**	**-1.1**
WB0				IAmb	IAmb	03 01 11.0	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**36.11**	**267**	P	**P**	**03 00 39.9**	**-1.2**
WB2				IAmb	IAmb	03 01 12.0	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**36.12**	**267**	P	**P**	**03 00 39.7**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=96,slow=8.4,SNR=7.6						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**36.12**	**267**	P	**P**	**03 00 38.9**	**-2.3**
FORT	**Forrest**	**40.84**	**249**	P	**P**	**03 01 20.1**	**-0.7**
FORT				IAmb	IAmb	03 01 21.2	
	comp=Z,19nm,0.8s						
FITZ	**Fitzroy Crossi**	**44.55**	**267**	P	**P**	**03 01 50.6**	**-0.5**
FITZ				IAmb	IAmb	03 02 15.9	
	comp=Z,10nm,1.0s						
GUMO	**Guam**	**45.27**	**320**	LR	LR	03 18 13.6	
	comp=Z,146nm,21.4s,baz=272,slow=33						
MORW	**Morawa**	**51.34**	**250**	P	**P**	**03 02 42.9**	**-0.6**
VNDA	**Vanda**	**55.34**	**183**	P	**P**	**03 03 14.7**	**+2.6**
	comp=Z,0.7nm,0.8s,baz=16,slow=8.2,SNR=7.3						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**55.34**	**183**	P	**P**	**03 03 13.9**	**+1.8**
SBA	**Scott Base**	**55.49**	**182**	P	**P**	**03 03 14.3**	**+1.1**
QSPA	**South Pole Qui**	**67.57**	**180**	P	**P**	**03 04 34.7**	**-0.4**
PETK	**Petropavlovsk-**	**76.47**	**351**	P	**P**	**03 05 30.1**	**+1.9**
	comp=Z,2.6nm,0.8s,baz=181,slow=15,SNR=5.9						
	comp=Z,2.6nm,0.8s						
MAW	**Mawson**	**76.75**	**202**	P	**P**	**03 05 30.0**	**+0.3**
	comp=Z,4.3nm,1.0s,baz=107,slow=7.2,SNR=7.2						
	comp=Z,4.3nm,1.0s						
MAW	**Mawson**	**76.75**	**202**	P	**P**	**03 05 30.5**	**+0.8**
BELA	**Belgrano 2**	**78.53**	**174**	P	**P**	**03 05 37.8**	**-1.7**
BELA				IAmb	IAmb	03 05 43.9	
	comp=Z,4.9nm,0.9s						
TROLL	**Troll, Antarti**	**85.52**	**183**	P	**P**	**03 06 16.1**	**-0.4**
SNAA	**Sanae**	**86.04**	**181**	P	**P**	**03 06 18.1**	**-0.8**
VNA3	**Neumayer Olymp**	**86.49**	**179**	P	**P**	**03 06 20.3**	**-0.9**
VNA2	**Neumayer--Watz**	**86.83**	**180**	P	**P**	**03 06 20.4**	**-2.4**
VNA1	**Neumayer--Stat**	**87.10**	**180**	P	**P**	**03 06 23.5**	**-0.5**
NVAR	**Mina Array Bea**	**88.34**	**47**	P	P	03 06 33.5	+2.7
	comp=Z,0.7nm,0.9s,baz=227,slow=5.5,SNR=4.0						
	comp=Z,0.7nm,0.9s						
CLL	**Collm**	**147.34**	**337**	*e*PKPbc	**PKPab**	**03 13 21.0**	**-2.9**
CLL				*e*PKiKP	**PKiKP**	**03 13 24.0**	**-0.3**
GERES	**GERESS Array B**	**149.02**	**333**	PKPbc	**PKPab**	**03 13 30.4**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=49,slow=4.1,SNR=5.6						

IDC ***15*** *02:58:58.0±0.4, 15.5°51S×71.3°38W, h0km, mb4.8/21, mbtmp4.8/26, ML4.2/5, MS4.9/46, Error ellipse: s-maj=16.3km s-min=11.9km az=66.0*

ARE ***15*** *02:58:58±2.2, 15.6°64S±0.06°×71.6°8W±0.0°8, h8km±3km, Error ellipse: s-maj=11.2km s-min=8.0km az=81.0*

NEIC ***15*** *02:58:59.4, 15.6°66S×71.9°6W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr0.23; Mθθ2.14; Mθφ-2.37; Mrθ-0.04; Mθθ0.80; Mθr0.12; Fault plane solution: M0 2.40000×10^17 NP1:ϑs215.21000°, δ87.89000°, λ-178.52000°. NP2:ϑs125.15000°, δ88.52000°, λ-2.11000°. Principal axes: T 2.2780, Plg0.0000°, Azm170.0000°; N 0.2317, Plg87.0000°, Azm270.0000°; P -2.5097, Plg3.0000°, Azm80.0000°;*

NEIC ***15*** *02:59:00.8±1.7, 15.6°65S±0.06°6Z, 72.0°1W±0.0°9, h20km±1km, mb5.4/516, Ms_20 5.1/286, Mwb5.5/29, ML5.3(ARE) Error ellipse: s-maj=14.2km s-min=9.7km az=258.0*

VAO ***15*** *02:59:00.2±0.2, 15.6°63S×71.5°1W, h10km, mb5.1*

GCMT ***15*** *02:59:02.8±0.1, 15.6°68S±0.01°×71.6°7W±0.0°1, h22km, MW5.5/149, Moment Tensor Solution. s122,c181; s149,c273; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr-0.60±.04; Mθθ2.66±.03; Mφφ-2.06±.04; Mrθ-0.18±.06; Mθφ0.42±.03; Mφr0.51±.07; Best double couple: M0 2.48300×10^17 NP1:ϑs128.00000°, δ79.00000°, λ-14.00000°. NP2:ϑs221.00000°, δ76.00000°, λ-169.00000°. Principal axes: T 2.7030, Plg2.0000°, Azm175.0000°; N -0.4400, Plg72.0000°, Azm273.0000°; P -2.2620, Plg17.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***15*** *02:59:02.3±1.6, 15.6°56S×71.8°7W, h39km, mb5.3/28, MS5.0/10 Error ellipse: s-maj=15.4km s-min=7.0km az=117.2*

ISC 15 02:58:59.0±0.2, 15.6°59S±0.0°3×71.6°6W±0.0°4, h10km, n1234, σ1938/922, mb5.4/297, MS5.1/212, 29C-4D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**2.88**	**134**		**Pb**	**02 59 51.3**	**+0.4**
AP01	**Chacalluta**	**3.04**	**156**	Pn	**Pn**	**02 59 49.6**	**+2.4**
AP01	**Chacalluta**	**3.04**	**156**	↑*i*P	**Pn**	**02 59 49.5**	**+2.3**
AP01				*i* S	**Sb**	**03 00 30.1**	**-0.3**
AP01	**Chacalluta**	**3.04**	**156**	↑*i*P	**Pn**	**02 59 49.5**	**+2.3**
AP01				*i* S	**Sb**	**03 00 29.9**	**-0.5**
I08BO	**LAS PENAS INFR**	**3.14**	**102**	Pn	**Pb**	**02 59 52.7**	**-2.6**
	baz=274,slow=23						
I08BO				*i*		03 15 30.0	
	0.1nm,1.1s,baz=280,slow=327,SNR=1.8						
PB12	**IPOC Station P**	**3.26**	**157**	Pn	**Pn**	**02 59 52.4**	**+2.0**
PB12	**IPOC Station P**	**3.26**	**157**	↑*i*P	**Pn**	**02 59 52.2**	**+1.8**
PB12				*i* S	**Sb**	**03 00 35.2**	**-1.8**
PB12	**IPOC Station P**	**3.26**	**157**	↑*i*P	**Pn**	**02 59 52.2**	**+1.8**
PB12				*i* S	**Sb**	**03 00 35.3**	**-1.8**
PB16	**IPOC Station P**	**3.42**	**143**	Pn	**Pn**	**02 59 55.8**	**+2.9**
PB16	**IPOC Station P**	**3.42**	**143**	↑*i*P	**Pn**	**02 59 56.6**	**-3.5**
PB16				*i* S	**Sg**	**03 00 44.3**	**-4.7**
PB16	**IPOC Station P**	**3.42**	**143**	↑*i*P	**Pn**	**02 59 56.6**	**-3.5**
PB16				*i* S	**Sb**	**03 00 43.0**	**+1.1**
LPAZ	**La Paz**	**3.46**	**102**	Pn	**Pb**	**02 59 58.7**	**-2.1**
	5.2nm,0.3s,baz=275,slow=12,SNR=162						
LPAZ	**La Paz**	**3.46**	**102**	Pn	**Pb**	**02 59 58.5**	**-2.3**
LPAZ	**La Paz**	**3.46**	**102**	P	**Pb**	**02 59 58.5**	**-2.3**
LPAZ	**La Paz**	**3.46**	**102**	↓*i*P	**Pb**	**02 59 58.5**	**-2.3**
LPAZ				*i* S	**Sg**	**03 00 51.1**	**+0.7**
GO01	**Chusmiza**	**4.69**	**150**		**Pn**	**03 00 13.4**	**+3.1**
GO01	**Chusmiza**	**4.69**	**150**	↑*i*P	**Pn**	**03 00 13.3**	**+3.1**
TA02	**Huaiquique**	**4.88**	**163**		**Pn**	**03 00 13.4**	**+1.0**
TA02	**Huaiquique**	**4.88**	**163**	↑*i*P	**Pn**	**03 00 13.6**	**+1.1**
TA01	**Diego Aracena**	**5.14**	**164**	Pn	**Pn**	**03 00 16.2**	**+0.1**
TA01	**Diego Aracena**	**5.14**	**164**	↑*i*P	**Pn**	**03 00 16.7**	**+0.5**
TA01				*i* S	**Sn**	**03 01 19.7**	**+4.1**
PB01	**IPOC Station P**	**5.80**	**160**	Pn	**Pn**	**03 00 25.7**	**+0.3**
PB01	**IPOC Station P**	**5.80**	**160**	↑*i*P	**Pn**	**03 00 25.6**	**+0.3**
PB01				*i* S	**Sn**	**03 01 37.1**	**+5.1**
PB02	**IPOC Station P**	**5.94**	**164**	Pn	**Pn**	**03 00 27.3**	**+0.1**
PB02	**IPOC Station P**	**5.94**	**164**	↑*i*P	**Pn**	**03 00 27.5**	**+0.3**
PB02				*i* S	**Sn**	**03 01 39.3**	**+3.9**
NNA	**Nana**	**6.18**	**305**	Pn	**Pn**	**03 00 33.3**	**+2.8**
	8.7nm,0.3s,baz=140,slow=11,SNR=21						
NNA				LR	LR	03 02 58.4	
	comp=Z,30μm,19.2s,baz=130,slow=38						
	95nm,0.7s						
NNA	**Nana**	**6.18**	**305**	*i* P	**Pn**	**03 00 32.7**	**+2.2**
PB07	**IPOC Station P**	**6.33**	**165**	Pn	**Pn**	**03 00 33.0**	**+0.3**
PB07	**IPOC Station P**	**6.33**	**165**	↑*i*P	**Pn**	**03 00 32.7**	**+0.2**
PB09	**IPOC Station P**	**6.58**	**160**		**Pn**	**03 00 37.1**	**+1.0**
PB09	**IPOC Station P**	**6.58**	**160**	↑*i*P	**Pn**	**03 00 36.9**	**+0.8**

POPC Popayan, Colom 18.69 344 *eP* **Pn 03 03 19.7 +1.6**
MCR1 Marechal Candi 18.74 121 *eP* **Pn 03 03 18.4 -0.2**
VA04 Juan Fernndez 19.11 199 P **P 03 03 19.6 -2.5**
BO02 Sierra Bellavi 19.14 178 IAmb IAmb 03 03 29.5
comp=Z,397nm,1.4s
ITTB Itaituba 19.22 56 *eP* **Pn 03 03 23.9 -0.6**
PRAC Prado 19.45 350 *eP* **Pn 03 03 27.8 +0.7**
GR1C Gorgona, Isla 19.57 340 *eP* **Pn 03 03 30.4 +1.9**
PTGC Puerto Gaitan, 19.67 359 *eP* **P 03 03 27.7 -0.6**
ITQB Itaqui 19.69 138 P **P 03 03 28.7 +0.2**
ITQB Itaqui 19.69 138 *eP* **Pn 03 03 29.0 -0.9**
YOTC Yotoco, Valle 19.99 346 *eP* **P 03 03 32.1 +0.5**
ML02 Panimavida 20.09 179 P **P 03 03 33.0 +0.2**
SNDB Serra Nova Dou 20.10 82 *eP* Pn 03 03 33.4 -1.6
CRSM Crissiumal (Br 20.19 129 *eP* **P 03 03 34.0 0.0**
FRBT Francisco Belt 20.20 124 *eP* **P 03 03 34.0 -0.2**
PCMB Pacaembu 20.23 110 *eP* **P 03 03 33.7 -0.8**
ANIL Santa Ana 20.29 349 *eP* Pn 03 03 38.1 +0.7
ROSC El Rosal 20.47 352 P **P 03 03 38.6 +1.1**
comp=Z,17nm,0.8s,baz=169,slow=11,SNR=14
ROSC LR LR 03 12 09.7
comp=Z,10µm,19.4s,baz=213,slow=39
comp=Z,17nm,0.8s
ROSC El Rosal 20.47 352 P 03 03 38.5 +1.0
ROSC El Rosal 20.47 352 P **P 03 03 38.5 +1.0**
ROSC pmax pmax
comp=Z,74nm,1.0s
ROSC El Rosal 20.47 352 *eP* **P 03 03 37.3 -0.2**
PTGB Pitanga 20.49 119 *eP* **P 03 03 36.9 -0.5**
ITRB Iturama 20.70 105 *eP* **P 03 03 39.3 -0.3**
PLMC San Jos del P 20.87 347 *eP* **P 03 03 42.6 +1.1**
BOAV Boa Vista 20.99 33 P 03 03 43.7 +0.9
BOAV IAmb IAmb 03 03 50.0
comp=Z,120nm,1.1s
BOAV Boa Vista 20.99 33 *eP* **P 03 03 43.4 +0.6**
GUY2C Guyana, Caldas 21.00 350 *eP* **P 03 03 45.2 +1.8**
RODS Rosario do Sul 21.06 137 *eP* **P 03 03 43.8 +0.3**
SPBC San Pablo de B 21.24 353 *eP* **P 03 03 45.0 -0.5**
NORC Norcasia 21.26 351 *eP* **P 03 03 44.8 -0.8**
RUSC La Rusia 21.39 356 *eP* **P 03 03 46.5 -1.0**
ITAB Concordia 21.52 126 P **P 03 03 48.0 -0.4**
ITAB IAmb IAmb 03 03 54.2
comp=Z,150nm,1.1s
ITAB Concordia 21.52 126 *eP* **P 03 03 48.2 -0.2**
ALGR Alto Alegre (B 21.64 131 *eP* **P 03 03 49.0 -0.8**
CBOC Ciudad Bolivar 21.75 348 *eP* **P 03 03 51.2 +0.1**
MAPC Malpelo 21.82 332 *eP* **P 03 03 57.8 +6.1**
TAMC Tame, Arauca 21.88 360 *eP* **P 03 03 52.7 +0.4**
MALB Monte Alegre 21.92 53 *eP* **P 03 03 54.3 +1.6**
HELC Santa Helena 21.98 350 *eP* **P 03 03 53.2 -0.5**
BARC Barichara 22.09 356 *eP* **P 03 03 53.3 -1.5**
PTBC PUERTO BERRIO, 22.16 353 *eP* **P 03 03 53.4 -2.0**
CPSB Cacapava Do Su 22.28 135 *eP* **P 03 03 56.3 -0.2**
IPMB Ipameri, GO 22.57 99 *eP* **P 03 03 56.7 -3.1**
BB19B Bebedouro 22.61 107 *eP* **P 03 03 60.0 -0.2**
BDFB Brasilia 22.77 93 P **P 03 04 00.6 -1.4**
comp=Z,42nm,1.0s,baz=264,slow=12,SNR=31
BDFB LR LR 03 13 31.5
comp=Z,6µm,18.1s,baz=277,slow=39
comp=Z,42nm,1.0s
BDFB Brasilia 22.77 93 *eP* **P 03 04 00.6 -1.4**
PAMC Pamplona, Colo 22.80 357 *eP* **P 03 04 02.0 -0.7**
LPA La Plata 22.85 150 *i P* P 03 03 55.1 -7.4
LPA pP sP 03 04 09.0 +0.6
LPA sP pP 03 04 17.8 +11
LPA PP **PnPn 03 04 28.1 +1.3**
LPA PPP PPP 03 05 35.6
LPA PCP **PcP 03 07 52.2 -1.4**
LPA S **S 03 08 14.2 +2.2**
LPA PS 03 08 21.0
LPA sS Sn 03 08 28.0 +1.1
LPA SS **SnSn 03 08 47.4 +4.4**
LPA SSS SSS 03 10 39.1
LPA SCS **ScS 03 15 15.5 -1.7**
LPA PKIKP PKiKP 03 15 29.7 -8.7
LPA SKIKP 03 19 05.8
LPA PKIKS 03 19 11.5
LPA SKIKS 03 22 28.6
DBBC Dabeiba 22.91 348 *eP* **P 03 04 04.4 +1.0**
PLTB Pedras Altas 23.02 138 P **P 03 04 03.2 -1.2**
PLTB IAmb IAmb 03 04 20.4
comp=Z,100nm,1.1s
PLTB Pedras Altas 23.02 138 *eP* **P 03 04 03.4 -1.0**
ZARC Zaragoza, Cauc 23.15 352 *eP* **P 03 04 05.2 -0.6**
PRPB Parauapebas 23.38 69 *eP* **P 03 04 07.6 -0.5**
PTAC Punta Ardita, 23.40 344 *eP* **P 03 04 10.1 +1.8**
UREC San Jos de Ur 23.51 350 *eP* **P 03 04 10.0 +0.7**
CNLB Canela 23.53 129 *eP* **P 03 04 09.0 -0.6**
OCAC Ocana 23.73 356 *eP* **P 03 04 10.1 -1.7**
SOCV Socops 23.73 2 *eP* **P 03 04 10.8 -0.8**
RCLB Rio Claro- Sao 23.78 110 *eP* **P 03 04 10.3 -1.8**
GO06 Curarrehue 23.90 180 P **P 03 04 12.8 -0.4**
GO06 IAmb IAmb 03 04 24.3
comp=Z,164nm,1.3s
TRQA Tornquist 23.95 161 IAMs_20 IAMs_20 03 13 42.7
comp=Z,6µm,21.0s
LR03 Panguipulli 23.96 181 IAmb IAmb 03 04 38.4
comp=Z,211nm,1.5s
LR04 Corral 24.25 183 IAmb IAmb 03 04 32.3
comp=Z,220nm,1.2s
PMNB Patos De Minas 24.28 101 *eP* **P 03 04 15.1 -1.8**
SDV Santo Domingo 24.34 2 P **P 03 04 18.0 +0.6**
comp=Z,84nm,1.1s,baz=196,slow=9.3,SNR=45
comp=Z,84nm,1.1s
SDV Santo Domingo 24.34 2 P **P 03 04 17.9 +0.4**
SDV Santo Domingo 24.34 2 *eP* **P 03 04 16.9 -0.5**
SDV Santo Domingo 24.34 2 *eP* **P 03 04 17.7 +0.3**
VAO Valinhos 24.42 111 *eP* **P 03 04 18.4 +0.3**
SMTB Santa Maria do 24.44 77 *eP* **P 03 04 19.4 +1.1**
PET01 Itanhaem-SP 24.47 115 *eP* **P 03 04 19.1 +0.7**
TER01 Tubaro-SC 24.48 126 *eP* **P 03 04 18.1 -0.3**
CACAO El Cacao, Vera 24.54 338 *eP* **P 03 04 24.7 +5.6**
MCPB Macapa, AP 24.57 54 *eP* **P 03 04 20.0 +0.6**
LCBC Los crdobas, 24.73 349 *eP* **P 03 04 23.8 +3.0**
AZU Azuero 24.75 339 *eP* **P 03 04 21.9 +1.0**
LL1C La Loma 1 Cana 25.04 356 *eP* **P 03 04 20.2 -3.3**
PLCA Paso Flores 25.07 178 P **P 03 04 24.7 +0.9**
comp=Z,74nm,1.0s,baz=3.3,slow=11,SNR=41
PLCA LR LR 03 14 17.5
comp=Z,1µm,20.3s,baz=6.0,slow=37
comp=Z,74nm,1.0s
PLCA Paso Flores 25.07 178 IAmb IAmb 03 04 28.7
comp=Z,151nm,1.1s
PLCA Paso Flores 25.07 178 *eP* **P 03 04 24.2 +0.4**
LL6C La Loma 6 Bece 25.21 356 *eP* P 03 04 13.8 -11
LL04 Puerto Octay 25.24 181 P **P 03 04 24.9 -0.3**
ARGC Ariguani, Magd 25.41 354 *eP* **P 03 04 25.3 -1.7**
SJCC San Jacinto, C 25.56 352 *eP* **P 03 04 28.4 0.0**
UPA Univ. de Panam 25.63 342 *eP* **P 03 04 36.1 +7.1**
PARB Paraibuna 25.70 112 *eP* **P 03 04 28.5 -1.2**
BCIP Isla Barro Col 25.90 341 *eP* **P 03 04 33.3 +1.9**
SDBA SAO DESIDERIO 26.14 86 *eP* **P 03 04 32.5 -1.3**
JANB Januaria 26.37 93 *eP* **P 03 04 33.9 -1.9**
BIRV Birongo 26.44 12 IAmb IAmb 03 04 41.2
comp=Z,83nm,0.9s
CRJC Cerrejon, Guaj 26.47 357 *eP* **P 03 04 36.0 -0.7**
MC01 Montes Claros 26.64 96 *eP* **P 03 04 37.8 -0.5**
TMAB Tom-Au,PA,Br 26.68 63 *eP* **P 03 04 40.2 +1.7**
DIAM Diamantina, MG 26.89 100 *eP* **P 03 04 39.8 -0.8**
MAN01 Angra dos Reis 27.10 110 *eP* **P 03 04 42.8 +0.5**
SRBA San Rafael, Bu 27.25 334 P **P 03 04 43.3 -0.4**
SRBA IAmb IAmb 03 05 02.9
comp=Z,195nm,1.4s
VAS01 Vassouras-RJ 27.47 108 *eP* **P 03 04 45.6 0.0**
MDP Montagnes des 27.88 44 P **P 03 04 49.4 +0.1**
comp=Z,12nm,1.0s,baz=210,slow=13,SNR=5.0
MDP LR LR 03 15 30.0
comp=Z,4µm,19.8s,baz=220,slow=36
comp=Z,12nm,1.0s
DUB01 Friburgo-RJ 28.42 108 *eP* **P 03 04 54.2 0.0**
JTS Las Juntas de 28.89 332 P 03 04 56.7 -1.6
JTS Las Juntas de 28.89 332 *i P* **P 03 05 00.1 +1.8**
JTS pmax pmax
comp=Z,16nm,1.2s
CAM01 Campos-RJ 29.05 107 *eP* **P 03 04 58.6 -1.1**
SJMB Sao Joao De Ma 29.26 100 *eP* **P 03 05 01.8 +0.2**
GRGR Grenville 29.27 20 IAMs_20 IAMs_20 03 17 45.0
comp=Z,5µm,18.0s
COYC Coyhaique 29.89 181 IAmb IAmb 03 05 11.2
comp=Z,51nm,0.9s
ROSB Rosrio 29.90 68 *eP* **P 03 05 07.8 +0.5**
RIB01 Linhares ES 30.03 102 *eP* **P 03 05 09.1 +0.7**

NAN01 Guarapari, ES 30.26 99 *eP* **P 03 05 10.7 +0.2**
ACON Acoyapa 30.48 333 P **P 03 05 12.4 +0.1**
ACON IAmb IAmb 03 05 53.8
comp=Z,81nm,1.5s
GUA01 Guaratinga, BA 30.60 96 *eP* **P 03 05 14.4 +0.8**
CMC01 Camacan, BA 30.96 94 *eP* **P 03 05 17.2 +0.5**
GDU01 Guandu, BA 31.08 91 *eP* **P 03 05 15.7 -2.1**
BIM Bigot 31.69 20 IAMs_20 IAMs_20 03 18 09.5
comp=Z,4µm,21.0s
MPOM Morne Pois Mar 31.69 20 IAMs_20 IAMs_20 03 18 56.6
comp=Z,4µm,18.0s
FDF Fort de France 31.87 20 IAMs_20 IAMs_20 03 18 51.2
comp=Z,5µm,22.0s
SVN Savane Anatole 31.96 19 IAMs_20 IAMs_20 03 18 52.6
comp=Z,4µm,22.0s
MAGL Barre de l'ile 32.97 19 IAMs_20 IAMs_20 03 19 09.2
comp=Z,3µm,20.0s
TGUH Tegucigalpa,Un 33.26 332 P **P 03 05 34.1 -2.8**
TGUH IAmb IAmb 03 05 53.9
comp=Z,41nm,1.0s
GDSD La Dsirade Is 33.38 19 IAMs_20 IAMs_20 03 19 59.0
comp=Z,3µm,21.0s
MLPR Magueyes Islan 33.66 8 P **P 03 05 40.2 0.0**
OBIP Obispado Ponce 33.79 9 IAmb IAmb 03 05 46.2
comp=Z,38nm,0.9s
PDPR Patillas Dam, 33.85 10 IAmb IAmb 03 06 51.6
comp=Z,30nm,0.7s
MTDJ Mount Denham 34.10 350 IAMs_20 IAMs_20 03 21 15.7
comp=Z,3µm,20.0s
CBYP Canovanas 34.13 10 IAmb IAmb 03 05 48.5
comp=Z,38nm,0.8s
GCPR Guaynabo City 34.13 9 IAmb IAmb 03 05 55.3
comp=Z,29nm,0.8s
SDDR Presa de Saban 34.36 1 IAmb IAmb 03 05 52.5
comp=Z,53nm,1.1s
ANWB Willy Bob 34.45 17 IAMs_20 IAMs_20 03 20 56.1
comp=Z,3µm,18.0s
SMRT St. Maarten 34.48 15 IAmb IAmb 03 05 50.3
comp=Z,84nm,1.1s
NBAN Anadia AL. 34.99 85 *eP* **P 03 05 50.1 -1.8**
NBRF Rio Formoso - 36.33 83 *eP* **P 03 06 04.3 +0.9**
RCBR Riachuelo 36.39 78 LR LR 03 21 27.4
comp=Z,4µm,21.6s,baz=36,slow=37
RCBR Riachuelo 36.39 78 P **P 03 06 06.0 +2.0**
RCBR Riachuelo 36.39 78 P **P 03 06 06.0 +2.0**
RCBR pmax pmax
comp=Z,29nm,1.3s
RCBR MLR MLR
comp=Z,5µm,20.0s
RCBR Riachuelo 36.39 78 *eP* **P 03 06 04.3 +0.3**
RPN Rapa Nui 36.78 245 LR LR 03 17 28.2
comp=Z,2µm,19.0s,baz=85,slow=30
GRTK Grand Turk 36.88 1 IAMs_20 IAMs_20 03 22 12.0
comp=Z,3µm,22.0s
EFI East Falkland 37.60 166 IAMs_20 IAMs_20 03 22 06.9
comp=Z,3µm,19.0s
EFI East Falkland 37.60 166 *ceP* **P 03 06 17.2 +3.4**
EFI pmax pmax
comp=Z,204nm,2.5s
TEIG Tepich 39.16 335 IAMs_20 IAMs_20 03 24 07.5
comp=Z,3µm,18.0s
USHA Ushuaia 39.24 177 P **P 03 06 28.7 +1.2**
comp=Z,32nm,1.0s,baz=1.1,slow=7.4,SNR=5.0
USHA LR LR 03 22 01.2
comp=Z,2µm,18.3s,baz=11,slow=35
comp=Z,32nm,1.0s
SOR Soroa 39.73 343 IAmb IAmb 03 06 48.0
comp=Z,95nm,1.1s
CMIG Matias Romero 39.74 324 LR LR 03 21 56.8
comp=Z,2µm,20.9s,baz=154,slow=35
060A Indiantown 43.21 349 P **P 03 07 00.1 -0.3**
UNM Universidad Na 44.02 321 IAMs_20 IAMs_20 03 23 35.1
comp=Z,3µm,22.0s
DWPF Disney Wildern 44.46 348 P **P 03 07 10.4 -0.1**
DWPF Disney Wildern 44.46 348 P **P 03 07 12.0 +1.5**
baz=167
DWPF Disney Wildern 44.46 348 P **P 03 07 11.4 +0.9**
baz=167
456A Hilliard 47.12 348 P **P 03 07 33.1 +1.7**
baz=7,SNR=11
TIGA Tifton 48.14 346 P **P 03 07 39.0 -0.4**
TIGA Tifton 48.14 346 P **P 03 07 40.0 +0.6**
baz=165
BBSR BB Station 48.15 8 P **P 03 07 38.6 -0.8**
BBSR IAmb IAmb 03 07 41.5
comp=Z,46nm,1.2s
BBSR BB Station 48.15 8 P **P 03 07 40.7 +1.3**
baz=189,SNR=6.8
255A Hazlehurst 48.37 348 P **P 03 07 43.7 +2.6**
baz=166,SNR=9.2
255A S **S 03 14 44.5 +2.9**
baz=166
352A Blakely 48.50 345 P **P 03 07 43.0 +0.8**
baz=163
ZAIG Zacatecas 48.67 321 P **P 03 07 41.5 -2.5**
ORCD Orcadas 49.10 163 P **P 03 07 45.6 -0.8**
ORCD IAmb IAmb 03 08 05.4
comp=Z,55nm,1.5s
NHSC New Hope 49.10 351 P **P 03 07 47.1 +0.3**
NHSC IAMs_20 IAMs_20 03 29 24.2
comp=Z,2µm,22.0s
NHSC New Hope 49.10 351 P **P 03 07 47.8 +1.1**
baz=170,SNR=44
NHSC New Hope 49.10 351 P **P 03 07 47.8 +1.1**
baz=170,SNR=44
154A Montrose 49.17 347 P **P 03 07 48.1 +0.8**
baz=166,SNR=25
250A Grady 49.33 344 P **P 03 07 49.5 +1.0**
baz=162,SNR=13
PMSA Palmer Station 49.41 176 P **P 03 07 48.5 -0.2**
PMSA IAmb IAmb 03 08 00.6
comp=Z,80nm,1.5s
PMSA Palmer Station 49.41 176 *eP* **P 03 07 50.7 +2.0**
152A Waverly Hall 49.59 346 P **P 03 07 50.5 0.0**
baz=164,SNR=43
HAW Hawthorne Fire 49.59 349 P **P 03 07 50.9 +0.4**
baz=168,SNR=44
HAW S **S 03 15 00.8 +2.1**
baz=168
Y59A Loris 49.78 352 IAmb IAmb 03 07 55.9
comp=Z,34nm,0.8s
Y58A Scranton 49.81 351 P **P 03 07 53.0 +0.9**
baz=170,SNR=19
Y58A P **P 03 07 53.0 +0.9**
baz=170,SNR=19
GOGA Godfrey 50.01 347 IAmb IAmb 03 07 58.8
comp=Z,48nm,1.2s
GOGA Godfrey 50.01 347 IAMs_20 IAMs_20 03 29 48.8
comp=Z,2µm,21.0s
GOGA Godfrey 50.01 347 P **P 03 07 54.0 +0.3**
baz=166,SNR=17
GOGA S **S 03 15 05.7 +1.0**
baz=166
GOGA Godfrey 50.01 347 P **P 03 07 54.0 +0.3**
baz=166,SNR=17
Y57A Sumter 50.03 351 P **P 03 07 54.8 +1.0**
baz=170,SNR=16
Y57A P **P 03 07 54.8 +1.0**
baz=170,SNR=16
344A Westbrook Farm 50.23 339 P **P 03 07 56.4 +1.0**
baz=156,SNR=5.3
Z51A Franklin 50.32 345 P **P 03 07 56.2 +0.2**
baz=164
X58A Rowland 50.40 352 P **P 03 07 57.4 +0.8**
baz=171,SNR=9.4
X58A P **P 03 07 57.4 +0.8**
baz=171,SNR=9.4
JSC Jenkinsville 50.43 350 P **P 03 07 57.0 +0.2**
JSC Jenkinsville 50.43 350 P **P 03 07 57.0 +0.2**
JSC pmax pmax
comp=Z,131nm,1.5s
JSC Jenkinsville 50.43 350 P **P 03 07 57.2 +0.4**
baz=168,SNR=21
LRAL Lakeview Retre 50.53 343 IAmb IAmb 03 08 01.3
comp=Z,48nm,1.2s
LRAL Lakeview Retre 50.53 343 P **P 03 07 57.7 +0.1**
baz=161,SNR=19
LRAL Lakeview Retre 50.53 343 P **P 03 07 58.1 +0.5**
baz=161,SNR=19
HODGE Hodges 50.56 349 IAmb IAmb 03 08 02.4
comp=Z,57nm,1.1s
HODGE Hodges 50.56 349 P **P 03 07 58.6 +0.7**
baz=167,SNR=27
Y52A Lilburn 50.58 347 IAmb IAmb 03 08 03.0
comp=Z,45nm,1.2s
Y52A Lilburn 50.58 347 P **P 03 07 58.6 +0.6**
baz=165,SNR=6.4
Y52A P **P 03 07 58.6 +0.6**
baz=165,SNR=6.4
Y52A S **S 03 15 13.5 +0.9**
baz=165
Y52A S **S 03 15 13.5 +0.9**
baz=165
BIRD Birdtown, Kers 50.65 351 P **P 03 07 59.3 +0.8**
baz=170,SNR=53
342B Flagon Creek P 50.74 337 P **P 03 08 01.3 +2.0**
baz=154,SNR=5.4
146A Union 50.76 341 IAmb IAmb 03 08 03.4
comp=Z,68nm,1.1s
146A Union 50.76 341 P **P 03 08 00.5 +1.1**
baz=159,SNR=5.8
VBMS Vicksburg 50.86 339 IAmb IAmb 03 08 11.4
comp=Z,58nm,1.2s
VBMS Vicksburg 50.86 339 P **P 03 08 00.7 +0.6**
baz=157
CNNC Cliffs of the 50.90 353 P **P 03 08 00.7 +0.4**
CNNC IAmb IAmb 03 08 05.1
comp=Z,37nm,0.9s
CNNC Cliffs of the 50.90 353 P **P 03 08 00.7 +0.4**
baz=173
HKT Hockley 50.92 333 P **P 03 07 59.2 -1.3**
HKT Hockley 50.92 333 *i P* **P 03 08 03.4 +2.8**
HKT pmax pmax
comp=Z,10.0nm,1.1s
Z47A Carrollton 50.99 342 P **P 03 08 01.1 0.0**
baz=160,SNR=14
W57A Gilead 51.08 351 P **P 03 08 02.0 +0.3**
baz=170,SNR=42
W57A P **P 03 08 02.0 +0.3**
baz=170,SNR=42
Y49A Blount Mountai 51.15 344 P **P 03 08 02.1 -0.2**
baz=162,SNR=9.2
Y49A S **S 03 15 20.9 +0.5**
baz=162
833A Chaparral WMA, 51.25 328 IAmb IAmb 03 08 05.1
comp=Z,36nm,0.9s
833A Chaparral WMA, 51.25 328 P **P 03 08 04.5 +1.3**
baz=146,SNR=9.0
833A Chaparral WMA, 51.25 328 P **P 03 08 03.8 +0.6**
baz=146,SNR=9.0
KMSC Kings Mountain 51.28 350 P **P 03 08 04.2 +1.0**
baz=168
KMSC Kings Mountain 51.28 350 P **P 03 08 04.3 +1.0**
baz=168
BG3 Lake Jocassee 51.43 348 IAmb IAmb 03 08 09.1
comp=Z,37nm,1.0s
CASEE Lake Jocassee 51.43 348 P **P 03 08 06.2 +1.8**
baz=167,SNR=19
X51A Calhoun 51.43 346 IAmb IAmb 03 08 19.3
comp=Z,50nm,1.1s
X51A Calhoun 51.43 346 P **P 03 08 04.9 +0.4**
baz=164,SNR=11
X51A P **P 03 08 04.9 +0.4**
baz=164,SNR=11
V58A Windy Hill, Pi 51.59 352 IAmb IAmb 03 08 09.6
comp=Z,79nm,1.1s
V58A Windy Hill, Pi 51.59 352 P **P 03 08 05.7 +0.2**
baz=171,SNR=32
V58A P **P 03 08 05.7 +0.2**
baz=171,SNR=32
FPAL Fort Paine 51.59 345 P **P 03 08 04.8 -0.8**
143A Socs Landing, 51.60 339 IAmb IAmb 03 08 19.9
comp=Z,81nm,1.3s
W52A Murphy 51.73 347 IAmb IAmb 03 08 11.8
comp=Z,56nm,1.2s
W52A Murphy 51.73 347 P **P 03 08 07.0 +0.3**
baz=165,SNR=12
X48A Hartselle 51.87 344 IAmb IAmb 03 08 11.9
comp=Z,80nm,1.4s
X48A Hartselle 51.87 344 P **P 03 08 07.7 0.0**
baz=162,SNR=20
X48A S **S 03 15 29.3 -1.1**
baz=162
V55A Taylorsville 51.96 350 P **P 03 08 09.4 +1.1**
baz=169,SNR=42
V55A P **P 03 08 09.4 +1.1**
baz=169,SNR=42
U59A Littleton 51.98 354 P **P 03 08 08.9 +0.4**
baz=173
U59A P **P 03 08 08.9 +0.4**
baz=173
NATX Nacogdoches 52.00 335 P **P 03 08 08.4 -0.3**
NATX IAmb IAmb 03 08 31.4
comp=Z,36nm,0.7s
NATX Nacogdoches 52.00 335 P **P 03 08 10.0 +1.3**
baz=152
Y45A Yeager Farm, C 52.05 341 IAmb IAmb 03 08 28.7
comp=Z,70nm,1.2s
V53A Saluda 52.06 348 IAmb IAmb 03 08 14.1
comp=Z,49nm,1.3s
V53A Saluda 52.06 348 P **P 03 08 09.7 +0.5**
baz=167,SNR=22
V53A P **P 03 08 09.7 +0.5**
baz=167,SNR=22
W50A Signal Mountai 52.15 346 P **P 03 08 09.8 0.0**
baz=164,SNR=15
W50A S **S 03 15 32.5 -1.8**
baz=164
CPCT Cooper Cave 52.21 347 IAmb IAmb 03 08 15.2
comp=Z,57nm,1.4s
TKL Tuckaleechee C 52.24 348 LR LR 03 31 19.3
comp=Z,2µm,21.0s,baz=174,slow=37
TKL Tuckaleechee C 52.24 348 P **P 03 08 10.1 -0.4**
TKL IAmb IAmb 03 08 15.1
comp=Z,72nm,1.2s
TKL Tuckaleechee C 52.24 348 P **P 03 08 10.1 -0.4**
TKL pmax pmax
comp=Z,72nm,1.3s
TKL Tuckaleechee C 52.24 348 P **P 03 08 10.6 +0.2**
baz=166,SNR=21
U56A King 52.31 351 P **P 03 08 11.9 +0.9**
baz=170,SNR=36
U56A P **P 03 08 11.9 +0.9**
baz=170,SNR=36
V52A Sevierville 52.39 348 P **P 03 08 11.3 -0.2**
baz=166,SNR=43
435B Jarrell 52.42 332 P **P 03 08 12.2 +0.3**
baz=148
V51A Loudon 52.51 347 IAmb IAmb 03 08 17.2
comp=Z,49nm,1.2s
V51A Loudon 52.51 347 P **P 03 08 12.2 -0.2**
baz=165,SNR=14
T59A Double "B" Far 52.57 354 IAmb IAmb 03 08 18.9
comp=Z,41nm,0.8s
T59A Double "B" Far 52.57 354 P **P 03 08 12.7 -0.2**
baz=173,SNR=23
T59A P **P 03 08 12.7 -0.2**
baz=173,SNR=23
SMAI San Martin Ant 52.59 178 P **P 03 08 12.6 +0.1**
SMAI IAmb IAmb 03 08 17.8
comp=Z,61nm,1.2s
OXF Oxford 52.61 342 IAmb IAmb 03 08 16.6
comp=Z,62nm,1.2s
OXF Oxford 52.61 342 P **P 03 08 12.3 -0.9**
baz=159
OXF Oxford 52.61 342 P **P 03 08 12.5 -0.6**
baz=159
PLAL Pickwick Lake 52.66 343 IAmb IAmb 03 08 31.4
comp=Z,44nm,1.2s
237A Washetta, Mont 52.68 334 IAmb IAmb 03 08 52.6
comp=Z,86nm,1.4s
U54A Nelsons Funny 52.71 350 P **P 03 08 14.7 +0.7**
baz=168,SNR=25
U54A P **P 03 08 14.7 +0.7**
baz=168,SNR=25
T57A Hurt 52.79 352 P **P 03 08 15.2 +0.8**
baz=171,SNR=68
T57A P **P 03 08 15.2 +0.8**
baz=171,SNR=68
CCAR Cane Creek 52.83 339 IAmb IAmb 03 08 26.4
comp=Z,75nm,1.2s
V48A Smith Brothers 53.03 345 IAmb IAmb 03 08 45.2
comp=Z,70nm,1.4s
V48A Smith Brothers 53.03 345 P **P 03 08 16.1 -0.2**
baz=162,SNR=26
TZTN Tazewell 53.05 348 P **P 03 08 16.5 0.0**
TZTN IAmb IAmb 03 08 21.2
comp=Z,63nm,1.2s
TZTN IAMs_20 IAMs_20 03 34 46.5
comp=Z,2µm,19.0s
TZTN Tazewell 53.05 348 P **P 03 08 16.8 +0.3**
baz=166,SNR=18
TZTN S **S 03 15 46.2 -0.4**
baz=166
TZTN Tazewell 53.05 348 P **P 03 08 16.7 +0.3**

baz=166,SNR=18
BLA Blacksburg 53.16 351 IAMs_20 IAMs_20 03 32 20.8
comp=Z,2µm,22.0s
BLA Blacksburg 53.16 351 P P 03 08 18.0 +0.7
baz=170,SNR=37
BLA S S 03 15 48.3 +0.3
baz=170
BLA Blacksburg 53.16 351 P P 03 08 18.0 +0.7
baz=170,SNR=37
JCT Junction City 53.22 329 P P 03 08 18.6 +0.7
baz=146,SNR=8.8
JCT Junction City 53.22 329 P P 03 08 18.0 +0.2
baz=146,SNR=8.8
CLTN Cedars of Leba 53.24 345 IAmb IAmb 03 08 22.7
comp=Z,40nm,1.2s
JSRW J. Sargeant Re 53.32 354 P P 03 08 18.4 +0.1
WHTX Lake Whitney, 53.39 333 IAmb IAmb 03 08 31.4
comp=Z,76nm,1.2s
WHTX Lake Whitney, 53.39 333 P P 03 08 19.7 +0.7
baz=149,SNR=12
WHTX Lake Whitney, 53.39 333 P P 03 08 19.3 +0.3
baz=149,SNR=12
Z38A Mt. Pleasant 53.44 336 IAmb IAmb 03 08 31.5
comp=Z,52nm,1.0s
Z38A Mt. Pleasant 53.44 336 P P 03 08 20.8 +1.5
baz=152,SNR=5.5
S57A Dark Hollow, R 53.51 353 P P 03 08 20.1 +0.4
baz=172,SNR=58
S57A P P 03 08 20.1 +0.4
baz=172,SNR=58
U49A Red Boiling Sp 53.51 346 P P 03 08 19.5 -0.3
baz=164,SNR=18
R58B Mineral 53.59 354 IAmb IAmb 03 08 26.7
comp=Z,40nm,1.1s
R58B Mineral 53.59 354 P P 03 08 20.9 +0.6
baz=173,SNR=5.5
R58B P P 03 08 20.9 +0.6
baz=173,SNR=5.5
WVT Waverly 53.67 344 P P 03 08 19.5 -1.4
WVT Waverly 53.67 344 P P 03 08 19.5 -1.4
WVT pmax pmax
comp=Z,19nm,1.0s
WVT MLR MLR
comp=Z,1µm,22.0s
WVT Waverly 53.67 344 P P 03 08 19.6 -1.3
baz=161,SNR=22
WVT Waverly 53.67 344 P P 03 08 20.4 -0.6
baz=161
T50A Nancy 53.78 347 IAmb IAmb 03 08 27.9
comp=Z,27nm,0.8s
UALR University of 53.81 339 IAmb IAmb 03 08 33.0
comp=Z,33nm,1.0s
S54A Dingess, Beckl 53.88 351 P P 03 08 23.2 +0.7
baz=169,SNR=58
S54A P P 03 08 23.2 +0.7
baz=169,SNR=58
MIAR Mount Ida 54.04 338 IAmb IAmb 03 08 25.6
comp=Z,44nm,1.2s
MIAR Mount Ida 54.04 338 P P 03 08 23.8 +0.1
baz=154,SNR=31
MIAR Mount Ida 54.04 338 P P 03 08 23.3 -0.4
baz=154,SNR=31
SLBS Sierra La Lagu 54.08 315 P P 03 08 21.2 -3.1
SLBS IAmb IAmb 03 08 30.3
comp=Z,38nm,1.4s
S51A Beattyville 54.12 348 IAmb IAmb 03 08 28.1
comp=Z,26nm,0.9s
S51A Beattyville 54.12 348 P P 03 08 24.3 +0.1
baz=166,SNR=9.8
S51A P P 03 08 24.3 +0.1
baz=166,SNR=9.8
R55A Marlinton 54.17 352 P P 03 08 26.0 +1.3
baz=170,SNR=36
R55A P P 03 08 26.0 +1.3
baz=170,SNR=36
T47A Sharon Grove 54.29 345 IAmb IAmb 03 08 45.2
comp=Z,52nm,1.1s
T47A Sharon Grove 54.29 345 P P 03 08 25.6 +0.2
baz=162,SNR=15
TX31 Lajitas Ar. Si 54.31 325 IAmb IAmb 03 08 27.5
comp=Z,36nm,1.1s
TX31 Lajitas Ar. Si 54.31 325 P P 03 08 26.8 +0.8
baz=142,SNR=18
TXAR Lajitas Array 54.31 325 P P 03 08 26.6 +0.7
comp=Z,6.7nm,0.9s,baz=144,slow=9.3,SNR=52
TXAR LR LR 03 31 52.0
comp=Z,681nm,19.2s,baz=138,slow=36
comp=Z,6.7nm,0.9s
TXAR Lajitas Array 54.31 325 P P 03 08 25.6 -0.3
TXAR Lajitas Array 54.31 325 P P 03 08 25.6 -0.3
Z35A Perchaven, San 54.44 334 P P 03 08 28.0 +1.3
baz=150,SNR=14
R53A Hurricane 54.50 350 IAmb IAmb 03 08 31.1
comp=Z,60nm,1.0s
R53A Hurricane 54.50 350 P P 03 08 28.1 +1.1
baz=168,SNR=17
R53A P P 03 08 28.1 +1.1
baz=168,SNR=17
LPIG La Paz 54.60 316 LR LR 03 27 37.2
comp=Z,403nm,21.9s,baz=128,slow=31
T45A Paducah 54.72 343 IAmb IAmb 03 08 36.4
comp=Z,44nm,0.8s
X37A Clayton 54.76 336 IAmb IAmb 03 08 41.6
comp=Z,80nm,1.4s
X37A Clayton 54.76 336 P P 03 08 30.1 +1.2
baz=152,SNR=22
R50A Paris 54.89 348 IAmb IAmb 03 08 34.4
comp=Z,58nm,1.1s
R50A Paris 54.89 348 P P 03 08 29.9 +0.1
baz=166,SNR=9.9
R50A P P 03 08 29.9 +0.1
baz=166,SNR=9.9
ABTX Abilene, Hawle 54.91 331 P P 03 08 29.4 -0.8
ABTX IAmb IAmb 03 08 32.4
comp=Z,56nm,1.1s
ABTX Abilene, Hawle 54.91 331 P P 03 08 31.1 +1.0
baz=147,SNR=16
ABTX Abilene, Hawle 54.91 331 P P 03 08 30.1 -0.1
baz=147,SNR=16
Q54A Coxs Mills 54.96 351 P P 03 08 30.9 +0.6
baz=170
Q54A P P 03 08 30.9 +0.6
baz=170
LOOK Love County 54.98 334 IAmb IAmb 03 08 35.1
comp=Z,35nm,1.0s
PBMO Poplar Bluff 55.02 342 IAmb IAmb 03 08 46.0
comp=Z,32nm,0.9s
PBMO Poplar Bluff 55.02 342 P P 03 08 30.5 -0.3
baz=158,SNR=19
R49A Shelbyville 55.08 347 IAmb IAmb 03 08 35.6
comp=Z,80nm,1.4s
R49A Shelbyville 55.08 347 P P 03 08 31.2 0.0
baz=165,SNR=9.1
R49A P P 03 08 31.2 0.0
baz=165,SNR=9.1
P57A Homestead Farm 55.11 354 IAmb IAmb 03 08 36.0
comp=Z,92nm,1.6s
P57A Homestead Farm 55.11 354 P P 03 08 32.9 +1.5
baz=173,SNR=8.1
P57A P P 03 08 32.9 +1.5
baz=173,SNR=8.1
Q52A Bidwell 55.17 350 P P 03 08 32.7 +0.9
baz=168,SNR=20
Q52A P P 03 08 32.7 +0.9
baz=168,SNR=20
CGM3 Cape Girardeau 55.27 343 IAmb IAmb 03 08 51.6
comp=Z,42nm,1.1s
WUPA West Chester U 55.36 356 P P 03 08 31.8 -1.3
Q51A Peebles 55.42 349 IAmb IAmb 03 08 37.3
comp=Z,34nm,1.1s
Q51A Peebles 55.42 349 P P 03 08 33.6 -0.1
baz=167,SNR=5.5
Q51A P P 03 08 33.6 -0.1
baz=167,SNR=5.5
MCWV Mont Chateau 55.49 352 P P 03 08 35.2 +1.0
baz=171,SNR=24
MCWV Mont Chateau 55.49 352 P P 03 08 34.6 +0.5
baz=171,SNR=24
S44A Carbondale 55.52 343 P P 03 08 34.3 -0.1
baz=160,SNR=26
P53A Whipple 55.54 351 P P 03 08 35.2 +0.7
baz=169,SNR=55
P53A P P 03 08 35.2 +0.7
baz=169,SNR=55
TUPA Temple Univers 55.56 357 P P 03 08 34.3 -0.3
baz=176
HHAR Hobbs 55.73 338 IAmb IAmb 03 08 46.9
comp=Z,49nm,1.2s
HHAR Hobbs 55.73 338 P P 03 08 35.8 -0.1
baz=154
PAGS Pennsylvania G 55.73 355 IAmb IAmb 03 08 58.1
comp=Z,38nm,1.3s
P52A Corning 55.80 350 IAMs_20 IAMs_20 03 35 05.4
comp=Z,2µm,21.0s
P52A Corning 55.80 350 P P 03 08 36.2 -0.1
baz=168,SNR=29
P51A Williamsport 55.81 349 IAmb IAmb 03 08 39.9
comp=Z,41nm,1.1s
P51A Williamsport 55.81 349 P P 03 08 36.2 -0.2
baz=167,SNR=5.3
P51A P P 03 08 36.2 -0.2
baz=167,SNR=5.3
MGMO Mountain Grove 55.94 340 P P 03 08 36.1 -1.4
MGMO IAmb IAmb 03 08 48.2
comp=Z,81nm,1.4s
RLO Rose Lookout 56.02 337 IAmb IAmb 03 08 50.7
comp=Z,58nm,1.0s
U38A Gravette 56.03 338 P P 03 08 38.1 0.0
baz=154,SNR=9.0
O54A Avella 56.08 352 IAmb IAmb 03 08 55.7
comp=Z,34nm,0.9s
O54A Avella 56.08 352 P P 03 08 38.8 +0.4
baz=170,SNR=18
O54A P P 03 08 38.8 +0.4
baz=170,SNR=18
TUL1 Leonard 56.09 336 P P 03 08 38.0 -0.5
TUL1 IAmb IAmb 03 08 40.4
comp=Z,43nm,1.1s
TUL1 Leonard 56.09 336 P P 03 08 39.1 +0.6
baz=152,SNR=9.5
TUL1 Leonard 56.09 336 P P 03 08 38.5 0.0
baz=152,SNR=9.5
FNO Franklin 56.16 335 IAmb IAmb 03 08 51.9
comp=Z,61nm,1.0s
P49A Miami Univ. Ec 56.18 348 IAmb IAmb 03 08 42.9
comp=Z,67nm,1.4s
P49A Miami Univ. Ec 56.18 348 P P 03 08 39.6 +0.5
baz=165,SNR=12
P49A Miami Univ. Ec 56.18 348 P P 03 08 38.6 -0.5
baz=165,SNR=12
OLIL Olney 56.19 345 IAmb IAmb 03 08 58.7
comp=Z,34nm,1.2s
BLO Bloomington 56.22 346 IAmb IAmb 03 08 58.9
comp=Z,64nm,1.4s
O52A Adamsville 56.22 351 P P 03 08 39.6 +0.2
baz=169,SNR=24
O52A P P 03 08 39.6 +0.2
baz=169,SNR=24
SSPA Standing Stone 56.24 354 P P 03 08 38.7 -0.8
SSPA IAmb IAmb 03 08 43.6
comp=Z,75nm,1.6s
SSPA Standing Stone 56.24 354 IAMs_20 IAMs_20 03 34 28.6
comp=Z,1µm,20.0s
SSPA Standing Stone 56.24 354 P P 03 08 40.6 +1.2
baz=173,SNR=6.8
SSPA Standing Stone 56.24 354 P P 03 08 39.8 +0.3
baz=173
P48A Milroy 56.25 347 IAmb IAmb 03 08 43.3
comp=Z,65nm,1.4s
P48A Milroy 56.25 347 P P 03 08 38.5 -1.2
baz=164,SNR=6.2
P48A P P 03 08 38.5 -1.2
baz=164,SNR=6.2
O53A New Philadelph 56.26 351 IAMs_20 IAMs_20 03 33 43.8
comp=Z,2µm,22.0s
O53A New Philadelph 56.26 351 P P 03 08 39.7 0.0
baz=169,SNR=31
WMOK Wichita Mounta 56.30 333 P P 03 08 40.0 -0.1
baz=149,SNR=7.4
WMOK Wichita Mounta 56.30 333 P P 03 08 39.5 -0.6
baz=149,SNR=7.4
DEOK Depew 56.30 336 IAmb IAmb 03 08 51.9
comp=Z,90nm,1.1s
UPAO U. Pittsburgh 56.32 352 P P 03 08 40.7 +0.6
baz=171
N58A Sunbury 56.34 355 IAmb IAmb 03 08 43.9
comp=Z,35nm,1.2s
N58A Sunbury 56.34 355 P P 03 08 40.7 +0.5
baz=175,SNR=5.7
N58A P P 03 08 40.7 +0.5
baz=175,SNR=5.7
PAL Palisades 56.34 358 IAmb IAmb 03 08 43.1
comp=Z,33nm,1.2s
PAL IAMs_20 IAMs_20 03 34 37.1
comp=Z,2µm,20.0s
PAL Palisades 56.34 358 P P 03 08 39.8 -0.4
baz=178
PAL Palisades 56.34 358 P P 03 08 40.1 -0.1
baz=178
OK025 Westminster Rd 56.41 335 IAmb IAmb 03 08 44.7
comp=Z,33nm,0.8s
CCM Cathedral Cave 56.44 341 P P 03 08 39.8 -1.2
CCM IAmb IAmb 03 09 41.9
comp=Z,46nm,1.4s
CCM Cathedral Cave 56.44 341 P P 03 08 39.8 -1.2
CCM pmax pmax
comp=Z,46nm,1.4s
CCM MLR MLR
comp=Z,800nm,20.0s
CCM Cathedral Cave 56.44 341 P P 03 08 40.6 -0.4
baz=158,SNR=18
CCM Cathedral Cave 56.44 341 P P 03 08 40.6 -0.4
baz=158
ODNJ Ogdensburg 56.45 357 IAmb IAmb 03 08 44.0
comp=Z,43nm,1.5s
OK030 Cody Creek RV 56.49 336 IAmb IAmb 03 08 53.8
comp=Z,75nm,1.2s
OK030 IAMs_20 IAMs_20 03 33 26.5
comp=Z,1µm,22.0s
TRNY Table Rock, Ra 56.50 358 IAmb IAmb 03 08 44.4
comp=Z,51nm,1.6s
ACSO Alum Creek Sta 56.53 350 IAMs_20 IAMs_20 03 33 30.6
comp=Z,2µm,21.0s
ACSO Alum Creek Sta 56.53 350 P P 03 08 41.6 +0.1
baz=167,SNR=18
ACSO Alum Creek Sta 56.53 350 P P 03 08 41.1 -0.4
baz=167,SNR=18
OK034 N. Norfolk Rd. 56.53 336 IAmb IAmb 03 08 54.1
comp=Z,67nm,1.1s
BCOK Bluff Creek, N 56.59 335 IAmb IAmb 03 08 58.6
comp=Z,63nm,1.2s
Q44A Meyer Farm, Va 56.59 344 P P 03 08 41.5 -0.5
baz=160,SNR=11
YLE Yale 56.63 359 IAMs_20 IAMs_20 03 32 12.9
comp=Z,2µm,22.0s
OK029 Liberty Lake 56.65 335 IAmb IAmb 03 08 46.5
comp=Z,45nm,0.7s
QUOK Quay 56.67 336 IAmb IAmb 03 08 47.0
comp=Z,42nm,0.8s
SLM Saint Louis 56.68 343 P P 03 08 41.7 -1.0
SLM IAmb IAmb 03 09 13.0
comp=Z,91nm,1.4s
SLM Saint Louis 56.68 343 P P 03 08 41.7 -1.0
SLM pmax pmax
comp=Z,91nm,1.5s
O49A Covington 56.73 348 IAmb IAmb 03 08 47.0
comp=Z,65nm,1.1s
O49A Covington 56.73 348 P P 03 08 42.5 -0.5
baz=166,SNR=16
O49A P P 03 08 42.5 -0.5
baz=166,SNR=16
N53A Lisbon 56.75 352 P P 03 08 43.7 +0.6
baz=170,SNR=31
N53A P P 03 08 43.7 +0.6
baz=170,SNR=31
S39A Bolivar 56.78 340 P P 03 08 43.4 0.0
baz=155,SNR=7.5
PSDB Penn State Uni 56.81 354 P P 03 08 44.5 +0.9
baz=172
M57A Sunshine Farm, 56.86 355 IAmb IAmb 03 08 50.5
comp=Z,26nm,0.9s
M57A Sunshine Farm, 56.86 355 P P 03 08 44.5 +0.6
baz=174
M57A P P 03 08 44.5 +0.6
baz=174
GDL2 Guadalupe Moun 56.92 327 P P 03 08 43.5 -1.2
O48B Farmland 56.96 348 P P 03 08 43.7 -1.0
baz=165,SNR=20
O48B Farmland 56.96 348 P P 03 08 43.7 -1.0
baz=165,SNR=20
R40A Maddies Statio 56.98 341 P P 03 08 44.0 -0.7
baz=157,SNR=19
CSTR Hydro, Custer 57.03 334 IAmb IAmb 03 08 46.7
comp=Z,5.9nm,1.0s
MNTX Cornudas Mount 57.08 326 P P 03 08 45.9 +0.2
baz=141,SNR=27
MNTX Cornudas Mount 57.08 326 P P 03 08 45.3 -0.4
baz=141,SNR=27
N51A Ashland 57.09 350 IAmb IAmb 03 08 48.9
comp=Z,38nm,0.8s
N51A Ashland 57.09 350 P P 03 08 45.7 +0.1
baz=168
N51A P P 03 08 45.7 +0.1
baz=168
NPNY Mohonk Preserv 57.10 358 P P 03 08 45.9 +0.3
baz=178
M55A Ridgway 57.15 354 P P 03 08 46.5 +0.5
baz=172,SNR=29
M55A P P 03 08 46.5 +0.5
baz=172,SNR=29
BRYW Bryant College 57.22 0 P P 03 08 45.8 -0.6
BRYW IAmb IAmb 03 08 49.4
comp=Z,75nm,1.2s
T35A Sooner Cattle 57.24 336 IAmb IAmb 03 09 00.1
comp=Z,50nm,1.1s
T35B Sooner Cattle 57.24 336 P P 03 08 47.4 +0.7
baz=152,SNR=16
M53A WI Miller and 57.35 352 IAMs_20 IAMs_20 03 35 13.8
comp=Z,1µm,22.0s
M53A WI Miller and 57.35 352 P P 03 08 47.9 +0.5
baz=170,SNR=24
N49A Columbus Grove 57.41 349 P P 03 08 47.6 -0.2
baz=166,SNR=28
N49A P P 03 08 47.6 -0.2
baz=166,SNR=28
P43A Skaggs, Pawnee 57.42 344 IAmb IAmb 03 08 51.4
comp=Z,56nm,0.9s
P43A Skaggs, Pawnee 57.42 344 P P 03 08 47.3 -0.5
baz=160,SNR=15
CROK Carrier 57.47 335 IAmb IAmb 03 09 25.8
comp=Z,80nm,1.4s
ALLY Alegheny Colle 57.49 352 P P 03 08 48.6 +0.3
baz=171,SNR=21
SFIN Lafayette 57.50 346 P P 03 08 47.5 -0.9
baz=163
SFIN Lafayette 57.50 346 P P 03 08 46.8 -1.6
baz=163
MSTX Muleshoe 57.51 329 P P 03 08 48.2 -0.6
MSTX IAmb IAmb 03 08 50.5
comp=Z,51nm,1.1s
MSTX Muleshoe 57.51 329 P P 03 08 49.2 +0.4
baz=144,SNR=19
MSTX Muleshoe 57.51 329 P P 03 08 48.6 -0.2
baz=144,SNR=19
M52A Chesterland 57.55 351 P P 03 08 49.0 +0.3
baz=169,SNR=14
M52A P P 03 08 49.0 +0.3
baz=169,SNR=14
L59A Walton 57.58 357 IAmb IAmb 03 08 52.5
comp=Z,48nm,1.2s
L59A Walton 57.58 357 P P 03 08 49.4 +0.4
baz=177,SNR=5.3
L59A P P 03 08 49.4 +0.4
baz=177,SNR=5.3
QUA2 Belchertown 57.58 359 IAMs_20 IAMs_20 03 32 15.0
comp=Z,2µm,22.0s
O44A Mansfield 57.62 345 IAmb IAmb 03 09 18.6
comp=Z,73nm,1.6s
BINY Binghamton 57.64 356 IAmb IAmb 03 08 53.2
comp=Z,66nm,1.2s
BINY IAMs_20 IAMs_20 03 33 06.0
comp=Z,1µm,21.0s
BINY Binghamton 57.64 356 P P 03 08 49.5 +0.1
baz=176,SNR=7.0
BINY Binghamton 57.64 356 P P 03 08 49.7 +0.3
baz=176,SNR=7.0
N47A Urbana 57.67 347 IAmb IAmb 03 08 55.1
comp=Z,32nm,0.8s
N47A Urbana 57.67 347 P P 03 08 49.0 -0.7
baz=164
N47A P P 03 08 49.0 -0.7
baz=164
M50A Fremont 57.68 350 P P 03 08 50.1 +0.4
baz=167,SNR=5.4
M50A P P 03 08 50.1 +0.4
baz=167,SNR=5.4
L56A Greenwood 57.69 355 P P 03 08 52.4 +2.6
baz=174,SNR=7.5
L56A P P 03 08 52.4 +2.6
baz=174,SNR=7.5
ELIS Ellis County 57.70 333 IAmb IAmb 03 08 55.1
comp=Z,86nm,1.4s
AMTX Amarillo 57.73 331 P P 03 08 49.8 -0.5
AMTX Amarillo 57.73 331 P P 03 08 50.5 +0.2
baz=146,SNR=5.2
AMTX Amarillo 57.73 331 P P 03 08 49.8 -0.5
baz=146
OK038 West end E0370 57.76 334 IAmb IAmb 03 08 53.2
comp=Z,34nm,1.0s
U32A Winter Ranch, 57.79 334 P P 03 08 49.3 -1.3
U32A IAmb IAmb 03 08 52.5
comp=Z,47nm,1.0s
U32A Winter Ranch, 57.79 334 P P 03 08 51.4 +0.8
baz=149,SNR=5.5
HRV Adam Dziewonsk 57.81 0 P P 03 08 49.8 -0.8
HRV IAmb IAmb 03 08 53.8
comp=Z,58nm,1.2s
HRV Adam Dziewonsk 57.81 0 P P 03 08 49.8 -0.8
HRV pmax pmax
comp=Z,58nm,1.3s
HRV MLR MLR
comp=Z,900nm,20.0s
HRV Adam Dziewonsk 57.81 0 P P 03 08 50.0 -0.5
baz=180
OK032 Salt Plains WL 57.82 335 IAmb IAmb 03 08 54.6
comp=Z,35nm,1.0s
KAN17 Caldwell West 57.85 335 IAmb IAmb 03 09 03.0
comp=Z,65nm,1.2s
KAN14 Manchester OK 57.85 335 IAmb IAmb 03 09 03.6
comp=Z,34nm,1.1s
KS20 Mayfield South 57.92 336 IAmb IAmb 03 09 04.3
comp=Z,138nm,1.4s
ERPA Erie 57.93 353 IAMs_20 IAMs_20 03 35 33.2
comp=Z,1µm,21.0s
ERPA Erie 57.93 353 P P 03 08 51.7 +0.3
baz=171,SNR=17
ERPA Erie 57.93 353 P P 03 08 51.7 +0.3
baz=171,SNR=17
OK035 E0210 Rd and N 57.95 334 IAmb IAmb 03 08 56.2
comp=Z,40nm,0.8s
NOKA Waynoka 57.98 334 IAmb IAmb 03 09 05.3
comp=Z,58nm,1.2s
P40A Paris 58.04 341 P P 03 08 50.7 -1.6
P40A IAmb IAmb 03 09 25.5
comp=Z,39nm,1.1s
P40A Paris 58.04 341 P P 03 08 52.2 -0.1
baz=157
TRY Troy 58.06 358 IAmb IAmb 03 08 55.9
comp=Z,47nm,1.2s
TRY IAMs_20 IAMs_20 03 33 30.5
comp=Z,2µm,22.0s
WVNY West Valley, N 58.06 354 P P 03 08 53.0 +0.6
baz=173,SNR=15
K57A Scipio Center 58.20 356 IAmb IAmb 03 08 56.7
comp=Z,57nm,1.3s
K57A Scipio Center 58.20 356 P P 03 08 52.7 -0.6
baz=175,SNR=6.0
HDIL Hopedale 58.21 344 IAMs_20 IAMs_20 03 35 15.4
comp=Z,1µm,21.0s
HDIL Hopedale 58.21 344 P P 03 08 52.5 -0.9
baz=160,SNR=6.5
HDIL Hopedale 58.21 344 P P 03 08 52.5 -0.9
baz=160,SNR=6.5
HSIG 58.38 319 P P 03 08 52.4 -2.4
L48A N Adams 58.45 349 P P 03 08 55.5 +0.4
baz=166,SNR=16
L48A P P 03 08 55.5 +0.4
baz=166,SNR=16
J61A Chester 58.65 359 IAmb IAmb 03 09 00.3
comp=Z,72nm,1.6s
J61A Chester 58.65 359 P P 03 08 59.2 +2.7
baz=179,SNR=5.6
J61A P P 03 08 59.2 +2.7
baz=179,SNR=5.6
AAM Ann Arbor 58.66 350 IAmb IAmb 03 08 59.7
comp=Z,27nm,0.9s
AAM Ann Arbor 58.66 350 P P 03 08 56.2 -0.3
baz=167
J58A Remsen 58.75 357 IAmb IAmb 03 09 00.8
comp=Z,46nm,1.4s
J58A Remsen 58.75 357 P P 03 09 00.5 +3.3
baz=176,SNR=5.9
J58A P P 03 09 00.5 +3.3
baz=176,SNR=5.9

N41A Harden Midland 58.78 343 IAmb IAmb 03 09 12.0
comp=Z,51nm,1.1s
J59A Piesco 58.82 358 IAmb IAmb 03 09 01.3
comp=Z,50nm,1.2s
J59A Piesco 58.82 358 P **P** **03 08 57.8 +0.1**
baz=177,SNR=6.6
J59A P **P** **03 08 57.8 +0.1**
baz=177,SNR=6.6
J57A Williamstown 58.84 356 IAmb IAmb 03 09 01.1
comp=Z,49nm,1.4s
L46A Eue Claire 58.89 347 IAmb IAmb 03 09 01.7
comp=Z,43nm,0.9s
K50A Casco 58.95 351 P **P** **03 08 58.2 -0.3**
baz=168,SNR=9.7
K50A P **P** **03 08 58.2 -0.3**
baz=168,SNR=9.7
121A Cookes Peak, D 59.03 324 IAmb IAmb 03 09 16.7
comp=Z,27nm,1.1s
121A Cookes Peak, D 59.03 324 P **P** **03 09 01.3 +1.7**
baz=139,SNR=14
121A Cookes Peak, D 59.03 324 P **P** **03 08 59.6 +0.1**
baz=139,SNR=14
319A Douglas 59.04 322 IAmb IAmb 03 09 02.2
comp=Z,26nm,0.9s
KSU1 Kansas State U 59.20 338 P **P** **03 08 59.6 -0.7**
KSU1 IAmb IAmb 03 09 36.6
comp=Z,38nm,1.2s
KSU1 Kansas State U 59.20 338 P **P** **03 09 00.5 +0.1**
baz=152,SNR=5.3
KSU1 Kansas State U 59.20 338 P **P** **03 09 00.5 +0.1**
baz=152,SNR=5.3
MCVT Middlebury Col 59.27 359 P **P** **03 09 01.1 +0.3**
baz=179
NCB Newcomb 59.32 358 IAmb IAmb 03 09 32.7
comp=Z,55nm,1.8s
I63A Otisfield 59.36 1 IAmb IAmb 03 09 05.0
comp=Z,34nm,1.2s
L44A Lake County Fo 59.40 346 IAMs_20 IAMs_20 03 36 18.2
comp=Z,1μm,22.0s
L44A Lake County Fo 59.40 346 P **P** **03 09 01.0 -0.7**
baz=162
R32A Long Quarter, 59.41 335 P **P** **03 09 02.7 +0.8**
baz=150,SNR=12
LBNH Lisbon 59.54 360 IAmb IAmb 03 09 06.2
comp=Z,38nm,1.3s
LBNH Lisbon 59.54 360 P **P** **03 09 02.5 -0.1**
baz=180
N38A Joes South For 59.57 341 IAmb IAmb 03 09 15.9
comp=Z,26nm,1.1s
VT1 Waterbury 59.64 359 IAmb IAmb 03 09 06.8
comp=Z,42nm,1.5s
VT1 IAMs_20 IAMs_20 03 35 50.1
comp=Z,1μm,20.0s
Y22A Socorro 59.64 326 P **P** **03 09 05.0 +1.3**
baz=140,SNR=7.9
L42A Oliver, Polo 59.67 345 IAmb IAmb 03 09 56.3
comp=Z,24nm,1.1s
L42A Oliver, Polo 59.67 345 P **P** **03 09 03.0 -0.5**
baz=160
J47A Sunmer 59.77 349 P **P** **03 09 03.8 -0.5**
baz=166,SNR=18
J47A P **P** **03 09 03.8 -0.5**
baz=166,SNR=18
WVL Waterville 59.89 2 IAmb IAmb 03 09 08.6
comp=Z,47nm,1.3s
WVL IAMs_20 IAMs_20 03 33 35.5
comp=Z,1μm,21.0s
WVL Waterville 59.89 2 P **P** **03 09 05.5 +0.5**
baz=183
LONY Lake Ozonia 59.98 358 P **P** **03 09 04.9 -0.8**
LONY IAmb IAmb 03 09 09.2
comp=Z,56nm,1.6s
LONY IAMs_20 IAMs_20 03 35 22.2
comp=Z,1μm,21.0s
LONY Lake Ozonia 59.98 358 P **P** **03 09 06.1 +0.5**
baz=177
K43A Burlington 60.00 346 IAmb IAmb 03 09 05.8
comp=Z,51nm,1.1s
K43A Burlington 60.00 346 P **P** **03 09 05.5 -0.2**
baz=162,SNR=5.2
I49A Point Hope 60.11 351 P **P** **03 09 06.2 -0.3**
baz=168
I49A P **P** **03 09 06.2 -0.3**
baz=168
EMMW East Machias 60.13 3 IAmb IAmb 03 09 09.9
comp=Z,58nm,1.2s
EMMW IAMs_20 IAMs_20 03 36 35.1
comp=Z,1μm,20.0s
L40A Anamosa 60.14 343 IAmb IAmb 03 09 21.6
comp=Z,26nm,1.0s
L40A Anamosa 60.14 343 P **P** **03 09 06.0 -0.8**
baz=159,SNR=9.2
ANMO Albuquerque 60.15 327 LR LR 03 35 02.7
comp=Z,545nm,19.9s,baz=132,slow=36
ANMO Albuquerque 60.15 327 P **P** **03 09 06.8 -0.4**
ANMO Albuquerque 60.15 327 *i* P **P** **03 09 07.7 +0.5**
ANMO pmax pmax
comp=Z,16nm,1.2s
ANMO Albuquerque 60.15 327 P **P** **03 09 07.7 +0.5**
baz=141,SNR=13
ANMO Albuquerque 60.15 327 P **P** **03 09 06.8 -0.4**
baz=141
FRNY Flat Rock 60.16 358 IAmb IAmb 03 09 10.5
comp=Z,52nm,1.3s
FRNY Flat Rock 60.16 358 P **P** **03 09 07.2 +0.3**
baz=178,SNR=7.4
CBKS Cedar Bluff 60.16 335 P **P** **03 09 08.1 +1.0**
baz=149,SNR=6.6
CBKS Cedar Bluff 60.16 335 P **P** **03 09 07.3 +0.2**
baz=149,SNR=6.6
BMNY Brushton-Moira 60.20 358 P **P** **03 09 07.1 0.0**
baz=177,SNR=12
N35A Tabor 60.41 339 IAmb IAmb 03 09 19.3
comp=Z,59nm,1.2s
N35A Tabor 60.41 339 P **P** **03 09 08.5 -0.2**
baz=154,SNR=9.3
SADO Sadowa 60.45 354 LR LR 03 36 29.9
comp=Z,1μm,20.5s,baz=182,slow=37
G62A West of Eustis 60.53 1 P **P** **03 09 09.3 -0.1**
baz=182,SNR=23
G62A P **P** **03 09 09.3 -0.1**
baz=182,SNR=23
GGN Saint George 60.58 4 IAmb IAmb 03 09 13.1
comp=Z,58nm,1.3s
TUC Tucson 60.60 322 P **P** **03 09 08.1 -2.2**
TUC Tucson 60.60 322 IAMs_20 IAMs_20 03 34 31.4
comp=Z,944nm,18.0s
TUC Tucson 60.60 322 P **P** **03 09 08.1 -2.2**
TUC pmax pmax
comp=Z,12nm,1.2s
TUC Tucson 60.60 322 P **P** **03 09 10.1 -0.1**
baz=136
PKME Peaks-Kenny Pk 60.60 2 IAmb IAmb 03 09 13.3
comp=Z,52nm,1.1s
PKME IAMs_20 IAMs_20 03 33 56.3
comp=Z,1μm,21.0s
PKME Peaks-Kenny Pk 60.60 2 P **P** **03 09 09.3 -0.5**
baz=183
PKME Peaks-Kenny Pk 60.60 2 P **P** **03 09 09.7 -0.2**
baz=183
G65A Princeton 60.61 3 P **P** **03 09 12.6 +2.7**
baz=185,SNR=5.8
G65A P **P** **03 09 12.6 +2.7**
baz=185,SNR=5.8
JFWS Jewell Farm 60.67 344 IAmb IAmb 03 09 16.6
comp=Z,18nm,0.7s
JFWS Jewell Farm 60.67 344 P **P** **03 09 10.0 -0.4**
baz=160,SNR=9.1
JFWS Jewell Farm 60.67 344 P **P** **03 09 10.0 -0.4**
baz=160,SNR=9.1
T25A Trinidad 60.85 330 P **P** **03 09 12.6 +0.6**
baz=144,SNR=11
N33A J Bar K, Exete 60.94 338 P **P** **03 09 11.6 -0.7**
K38A Parkersburg 61.12 342 IAmb IAmb 03 09 47.2
comp=Z,30nm,1.2s
F64A Sherman 61.23 3 P **P** **03 09 13.5 -0.7**
F64A Sherman 61.23 3 P **P** **03 09 14.0 -0.1**
baz=184,SNR=16
F64A P **P** **03 09 14.0 -0.1**
baz=184,SNR=16
I42A Draeger Farm, 61.26 346 IAmb IAmb 03 09 31.9
comp=Z,26nm,1.0s
I42A Draeger Farm, 61.26 346 P **P** **03 09 14.2 -0.2**
baz=161,SNR=6.2
LMN Caledonia Moun 61.47 5 P **P** **03 09 14.7 -1.0**
H43A Windswept, Lux 61.55 347 IAmb IAmb 03 09 20.4
comp=Z,70nm,1.4s
KSCO Kaye Shedlock' 61.56 333 P **P** **03 09 17.9 +1.2**
baz=146,SNR=7.2
KSCO Kaye Shedlock' 61.56 333 P **P** **03 09 17.9 +1.2**
baz=146,SNR=7.2
214A Organ Pipe Nat 61.57 320 IAmb IAmb 03 09 31.7
comp=Z,24nm,1.1s
214A Organ Pipe Nat 61.57 320 P **P** **03 09 17.5 +0.8**
baz=134,SNR=5.7
TRQ Mont Tremblant 61.58 358 IAmb IAmb 03 09 19.7
comp=Z,50nm,1.2s
L34A Svendsen Farm, 61.65 339 P **P** **03 09 16.6 -0.5**
baz=153,SNR=8.2
G45A Suttons Bay 61.67 349 P **P** **03 09 19.5 +2.4**
baz=165,SNR=6.3
G45A P **P** **03 09 19.5 +2.4**
baz=165,SNR=6.3
I40A Norwalk 61.68 345 P **P** **03 09 17.1 -0.1**
baz=160
X18A Snowflake 61.72 324 IAmb IAmb 03 09 20.9
comp=Z,33nm,1.3s
MBO M'Bour 61.73 64 P **P** **03 09 18.2 +0.1**
MBO IAMs_20 IAMs_20 03 34 22.6
comp=Z,1μm,19.0s
BGNE Belgrade 61.79 338 P **P** **03 09 18.6 +0.5**
baz=151,SNR=7.9
BGNE Belgrade 61.79 338 P **P** **03 09 18.6 +0.5**
baz=151,SNR=7.9
E63A Oxbow 61.79 3 P **P** **03 09 18.1 +0.2**
baz=184,SNR=5.2
E63A P **P** **03 09 18.1 +0.2**
baz=184,SNR=5.2
SDCO Great Sand Dun 61.86 330 IAmb IAmb 03 09 32.2
comp=Z,35nm,1.1s
SDCO Great Sand Dun 61.86 330 P **P** **03 09 19.8 +0.9**
baz=143,SNR=52
SDCO Great Sand Dun 61.86 330 P **P** **03 09 18.6 -0.3**
baz=143,SNR=52
E62A Clayton Lake 61.95 2 P **P** **03 09 18.7 -0.2**
E62A IAmb IAmb 03 09 22.7
comp=Z,58nm,1.2s
E62A Clayton Lake 61.95 2 P **P** **03 09 18.4 -0.6**
baz=183,SNR=5.1
E62A P **P** **03 09 18.4 -0.6**
baz=183,SNR=5.1
W18A Petrified Fore 62.04 325 IAmb IAmb 03 09 23.1
comp=Z,59nm,1.5s
W18A Petrified Fore 62.04 325 P **P** **03 09 20.5 +0.4**
baz=138,SNR=6.4
PQI Presque Isle 62.06 3 IAmb IAmb 03 09 23.1
comp=Z,50nm,1.2s
X16A Lo Mia Camp, P 62.49 323 P **P** **03 09 21.4 -1.7**
S22A 4UR Ranch, Cre 62.51 329 P **P** **03 09 23.9 +0.6**
baz=142,SNR=15
I37A Lemond, Waseca 62.56 342 IAmb IAmb 03 09 41.4
comp=Z,42nm,1.2s
Q24A Divide 62.66 331 IAmb IAmb 03 09 36.9
comp=Z,24nm,1.1s
Q24A Divide 62.66 331 P **P** **03 09 25.0 +0.7**
baz=144,SNR=13
LATQ La Tuque 62.69 359 IAmb IAmb 03 09 27.4
comp=Z,52nm,1.4s
E46A Sault Ste Mari 62.72 350 P **P** **03 09 23.6 -0.5**
baz=167,SNR=14
F42A Maple Grove Fa 62.86 347 IAmb IAmb 03 09 29.3
comp=Z,64nm,1.5s
OGNE Ogallala 62.91 335 P **P** **03 09 26.4 +0.8**
baz=147
MVCO Mesa Verde 62.94 327 P **P** **03 09 25.0 -1.1**
MVCO IAmb IAmb 03 09 28.8
comp=Z,42nm,1.4s
MVCO Mesa Verde 62.94 327 P **P** **03 09 26.5 +0.4**
baz=140,SNR=15
K31A O'Neill 63.06 338 P **P** **03 09 27.3 +0.8**
baz=151,SNR=6.3
E43A Lone Tree Farm 63.21 348 IAmb IAmb 03 09 31.4
comp=Z,58nm,1.5s
E43A Lone Tree Farm 63.21 348 P **P** **03 09 27.1 -0.3**
baz=164,SNR=11
WUAZ Wupatki 63.24 324 IAmb IAmb 03 09 31.2
comp=Z,33nm,1.1s
WUAZ IAMs_20 IAMs_20 03 34 13.7
comp=Z,1μm,22.0s
WUAZ Wupatki 63.24 324 P **P** **03 09 29.2 +1.1**
baz=137,SNR=17
ECSD EROS Data Cent 63.30 340 P **P** **03 09 28.3 +0.2**
baz=153,SNR=25
ECSD EROS Data Cent 63.30 340 P **P** **03 09 27.7 -0.4**
baz=153,SNR=25
COWI Conover 63.40 346 IAmb IAmb 03 10 11.2
comp=Z,48nm,1.5s
SPMN Marine on St. 63.50 343 IAmb IAmb 03 09 32.6
comp=Z,29nm,1.1s
SPMN Marine on St. 63.50 343 P **P** **03 09 30.4 +1.1**
baz=156
ISCO Idaho Springs 63.54 331 P **P** **03 09 31.2 +1.1**
baz=144,SNR=17
ISCO Idaho Springs 63.54 331 P **P** **03 09 31.2 +1.1**
baz=144,SNR=17
GLA Glamis 63.56 320 P **P** **03 09 28.5 -1.6**
GLA Glamis 63.56 320 P **P** **03 09 28.5 -1.6**
GLA pmax pmax
comp=Z,10.0nm,0.9s
GLA Glamis 63.56 320 P **P** **03 09 30.6 +0.5**
baz=133
PV15 Paradox Valley 63.80 328 IAmb IAmb 03 09 49.2
comp=Z,37nm,0.9s
PV13 Radium Mtn., P 63.83 328 IAmb IAmb 03 09 44.6
comp=Z,22nm,1.0s
BLYC Blythe 63.85 321 P **P** **03 09 30.3 -1.6**
BLYC IAmb IAmb 03 09 53.0
comp=Z,30nm,1.4s
PV11 David Mesa, Pa 63.96 328 IAmb IAmb 03 09 59.6
comp=Z,38nm,1.4s
YUH Yuha Desert 63.97 319 P **P** **03 09 30.0 -2.7**
YUH IAmb IAmb 03 09 35.3
comp=Z,32nm,1.5s
PDMCI Parker Dam,Lak 63.99 322 P **P** **03 09 33.9 +1.1**
baz=134
IKP In-Ko-Pah, Jac 64.09 319 P **P** **03 09 34.6 +1.0**
baz=132
SWSC Sam W. Stewart 64.09 319 P **P** **03 09 34.6 +1.1**
baz=132
D41A Chassel 64.19 347 IAmb IAmb 03 09 38.5
comp=Z,62nm,1.3s
D41A Chassel 64.19 347 P **P** **03 09 33.5 -0.3**
baz=162
F36A Milaca 64.28 343 IAmb IAmb 03 09 37.9
comp=Z,49nm,1.3s
F36A Milaca 64.28 343 P **P** **03 09 34.5 -0.1**
baz=157,SNR=22
BC3 Big Chuckawall 64.35 320 P **P** **03 09 36.5 +1.1**
baz=133,SNR=5.9
W13A Hualapai Mount 64.39 322 P **P** **03 09 33.3 -2.4**
MONP2 Monument Peak 64.45 319 P **P** **03 09 36.7 +0.6**
baz=132
E38A The Farm, Brul 64.45 345 P **P** **03 09 35.5 -0.1**
baz=159,SNR=13
IRM Iron Mountain 64.50 321 P **P** **03 09 37.5 +1.2**
baz=133,SNR=9.0
N23A Red Feather La 64.57 332 P **P** **03 09 38.0 +1.1**
baz=144,SNR=8.8
PHWY Pilot Hill 64.68 332 IAmb IAmb 03 09 40.2
comp=Z,52nm,1.9s
SUSD Miller 64.72 339 P **P** **03 09 37.2 -0.2**
baz=151
109C Camp Elliot, M 64.88 319 P **P** **03 09 39.1 +0.4**
baz=131
BELC Belle Mtn. Jos 64.92 320 P **P** **03 09 39.7 +0.6**
baz=132
PMD Palm Desert 64.92 320 P **P** **03 09 36.1 -2.9**
PMD IAmb IAmb 03 09 53.4
comp=Z,20nm,1.3s
BELA Belgrano 2 64.93 172 P **P** **03 09 38.5 +0.1**
TPFO Pinon Flats 64.94 320 P **P** **03 09 39.5 +0.3**
baz=132
PFO Pinyon Flats O 64.95 320 LR LR 03 35 32.5
comp=Z,441nm,21.4s,baz=128,slow=34
PFO Pinyon Flats O 64.95 320 *i* P **P** **03 09 41.8 +2.5**
PFO pmax pmax
comp=Z,15nm,1.3s
PFO Pinyon Flats O 64.95 320 P **P** **03 09 39.4 +0.2**
baz=132
O20A White River Ci 65.06 330 IAmb IAmb 03 10 00.6
comp=Z,58nm,1.6s
O20A White River Ci 65.06 330 P **P** **03 09 40.5 +0.6**
baz=141,SNR=16
F33A 5 Mile Ranch, 65.08 341 P **P** **03 09 39.8 +0.1**
baz=154,SNR=22
GMRC Granite Mounta 65.24 321 P **P** **03 09 41.7 +0.5**
baz=133,SNR=9.1
MURC Murrieta 65.40 319 P **P** **03 09 42.7 +0.6**
baz=131
SRU San Rafael Swe 65.42 328 IAmb IAmb 03 09 44.9
comp=Z,41nm,1.6s
MTPU Mount Pierson 65.52 326 P **P** **03 09 41.6 -1.6**
MTPU IAmb IAmb 03 09 54.9
comp=Z,44nm,1.8s
HEC Hector,Ludlow 65.68 321 P **P** **03 09 45.0 +1.1**
baz=132
EYMN Ely 65.69 346 IAmb IAmb 03 09 46.9
comp=Z,27nm,1.1s
EYMN Ely 65.69 346 P **P** **03 09 43.4 -0.2**
baz=159,SNR=12
EYMN Ely 65.69 346 P **P** **03 09 43.4 -0.2**
baz=159,SNR=12
RWWY Rawlins 65.78 331 IAmb IAmb 03 09 47.5
comp=Z,78nm,1.6s
P17A Butcher Ranch, 65.80 328 IAmb IAmb 03 09 47.4
comp=Z,43nm,1.4s
CCUT Cedar City 65.81 325 P **P** **03 09 43.5 -1.4**
CCUT IAmb IAmb 03 09 48.7
comp=Z,27nm,1.3s
TUQ Turquoise Moun 65.84 321 P **P** **03 09 45.5 +0.4**
baz=133,SNR=6.0
TMUT Trail Mountain 65.92 327 P **P** **03 09 45.7 0.0**
CIS Catalina Islan 66.05 318 P **P** **03 09 44.9 -1.4**
baz=130
TCRU Three Creeks R 66.07 326 P **P** **03 09 45.3 -1.3**
TCRU IAmb IAmb 03 09 59.8
comp=Z,22nm,1.0s
SHPR Sheep Range 66.11 323 P **P** **03 09 45.0 -1.8**
K22A Casper 66.23 333 IAmb IAmb 03 10 18.9
comp=Z,25nm,1.2s
K22A Casper 66.23 333 P **P** **03 09 48.4 +0.9**
baz=144,SNR=7.4
K22A Casper 66.23 333 P **P** **03 09 47.6 +0.2**
baz=144,SNR=7.4
GSC Goldstone, Bar 66.28 321 P **P** **03 09 48.5 +0.7**
baz=132,SNR=8.0
SHOC Shoshone, Teco 66.36 322 P **P** **03 09 48.7 +0.5**
baz=133
RSSD Black Hills 66.37 335 P **P** **03 09 47.1 -1.2**
RSSD Black Hills 66.37 335 P **P** **03 09 47.1 -1.2**
RSSD pmax pmax
comp=Z,14nm,0.9s
RSSD Black Hills 66.37 335 P **P** **03 09 49.4 +1.1**
baz=146,SNR=5.9
RSSD Black Hills 66.37 335 P **P** **03 09 48.4 +0.1**
baz=146
VNA3 Neumayer Olymp 66.47 162 P **P** **03 09 49.3 +0.9**
DECC Green Verdugo 66.55 319 P **P** **03 09 49.7 +0.2**
baz=131
B35A Bob, Littlefor 66.63 344 IAmb IAmb 03 09 55.8
comp=Z,20nm,0.8s
B35A Bob, Littlefor 66.63 344 P **P** **03 09 49.2 -0.5**
baz=157,SNR=19
SNCC San Nicolas Is 66.67 317 P **P** **03 09 50.0 -0.2**
baz=129
VNA1 Neumayer--Stat 66.69 161 P **P** **03 09 51.8 +2.0**
EDW2 Edwards Air Fo 66.74 320 P **P** **03 09 50.6 -0.1**
baz=131
GWY Greenwater Val 66.79 321 P **P** **03 09 50.2 -0.9**
LRMC Laurel Mtn Rad 66.94 320 P **P** **03 09 52.8 +0.7**
baz=132
TAOE Nuku Hiva Isla 67.05 267 *e* S **S** **03 18 41.4 -6.1**
comp=Z,274nm,29.8s
TAOE Nuku Hiva Isla 67.05 267 *e* LR LR 03 29 55.0
comp=Z,1μm,28.3s
TPNV Topopah Spring 67.05 322 P **P** **03 09 51.2 -1.6**
TPNV Topopah Spring 67.05 322 P **P** **03 09 51.2 -1.6**
TPNV pmax pmax
comp=Z,19nm,1.0s
TPNV Topopah Spring 67.05 322 P **P** **03 09 53.3 +0.4**
baz=133,SNR=16
VNA2 Neumayer--Watz 67.06 161 P **P** **03 09 52.5 +0.3**
baz=284,slow=8.5
FURC Furnace Creek, 67.09 322 P **P** **03 09 52.9 +0.1**
baz=132,SNR=10.0
AGMN Agassiz Nation 67.16 343 IAmb IAmb 03 10 06.0
comp=Z,31nm,0.9s
AGMN Agassiz Nation 67.16 343 P **P** **03 09 52.8 -0.2**
baz=155,SNR=19
AGMN Agassiz Nation 67.16 343 P **P** **03 09 52.8 -0.2**
baz=155,SNR=19
E28A Huff 67.18 339 P **P** **03 09 55.6 +2.4**
baz=150,SNR=7.4
MPMC Manual Prospec 67.20 321 P **P** **03 09 53.2 -0.6**
baz=132,SNR=6.1
CTU Camp Tracy 67.23 328 IAmb IAmb 03 10 39.3
comp=Z,50nm,1.9s
TCUT Toone Canyon 67.37 328 IAmb IAmb 03 10 28.6
comp=Z,36nm,1.2s
SPR3 Spring Creek 3 67.38 325 IAmb IAmb 03 09 57.9
comp=Z,38nm,1.6s
DUG Dugway, Tooele 67.41 327 IAmb IAmb 03 10 08.7
comp=Z,29nm,1.1s
DUG IAMs_20 IAMs_20 03 39 42.5
comp=Z,879nm,18.0s
DUG Dugway, Tooele 67.41 327 P **P** **03 09 55.6 +0.5**
baz=137,SNR=26
ARVC Arvin 67.42 319 P **P** **03 09 55.5 +0.5**
baz=130
ISA Isabella, Lake 67.54 320 P **P** **03 09 53.7 -2.1**
ISA Isabella, Lake 67.54 320 P **P** **03 09 53.7 -2.1**
ISA pmax pmax
comp=Z,17nm,1.2s
ISA Isabella, Lake 67.54 320 P **P** **03 09 56.2 +0.3**
baz=131,SNR=7.0
R11A Troy Canyon, C 67.62 324 P **P** **03 09 56.9 +0.5**
baz=134,SNR=21
BW06 Boulder Array 67.71 331 IAMs_20 IAMs_20 03 41 05.9
comp=Z,898nm,21.0s
BW06 Boulder Array 67.71 331 P **P** **03 09 57.6 +0.7**
baz=141,SNR=19
PDAR Pinedale Array 67.71 331 P **P** **03 09 57.5 +0.5**
comp=Z,2.9nm,0.8s,baz=151,slow=6.4,SNR=17
PDAR LR LR 03 42 29.5
comp=Z,399nm,21.6s,baz=136,slow=38
comp=Z,2.9nm,0.8s
GRAC Grapevine Rang 67.75 322 P **P** **03 09 58.2 +1.1**
baz=132
CWC Cottonwood Cre 67.81 321 P **P** **03 09 58.7 +1.1**
baz=132
HWUT Hardware Ranch 67.81 329 P **P** **03 09 56.6 -0.9**
HWUT IAMs_20 IAMs_20 03 42 21.2
comp=Z,1μm,22.0s
PKM Mcpherson Peak 67.89 319 P **P** **03 09 57.6 -0.5**
baz=130
MDND Maddock 67.91 340 P **P** **03 09 58.8 +1.0**
baz=151,SNR=17
MDND Maddock 67.91 340 P **P** **03 09 58.8 +1.0**
baz=151,SNR=17
VES Vestal, Richgr 68.04 320 P **P** **03 09 59.7 +0.9**
baz=130,SNR=7.4
SMMC Simmler 68.27 319 P **P** **03 10 01.0 +0.6**
baz=130
AHID Auburn Hatcher 68.45 330 IAMs_20 IAMs_20 03 38 51.3
comp=Z,952nm,22.0s
CMLA Cha da Macela 68.51 38 IAMs_20 IAMs_20 03 42 30.8
comp=Z,1μm,21.0s
SNAA Sanae 68.68 162 P **P** **03 10 02.7 +0.2**
SNAA Sanae 68.68 162 LR LR 03 38 42.1
comp=Z,647nm,20.2s,baz=286,slow=35
SNAA Sanae 68.68 162 P **P** **03 10 02.4 0.0**
SNAA Sanae 68.68 162 P **P** **03 10 02.4 0.0**
SNAA pmax pmax
comp=Z,84nm,1.4s
SNAA Sanae 68.68 162 ⇑ *i* P **P** **03 10 02.9 +0.4**
REDW Red Top Meadow 68.78 330 IAmb IAmb 03 10 28.1
comp=Z,23nm,1.1s
Q09A Carvers 68.87 323 IAmb IAmb 03 10 19.5
comp=Z,46nm,1.1s
TPAW Teton Pass 68.92 330 IAmb IAmb 03 10 43.0
comp=Z,25nm,1.2s
MLAC Mammoth, Mammo 69.04 321 P **P** **03 10 05.7 +0.3**
baz=131
FXWY Fox Creek 69.07 330 IAmb IAmb 03 10 30.9
comp=Z,25nm,1.2s
ELK Elko 69.10 326 IAMs_20 IAMs_20 03 38 22.0
comp=Z,1μm,22.0s
IMW Indian Meadow 69.23 331 IAmb IAmb 03 10 19.7
comp=Z,34nm,1.2s
NVAR Mina Array Bea 69.25 322 P **P** **03 10 08.3 +1.7**
comp=Z,3.1nm,0.9s,baz=143,slow=6.7,SNR=22
NVAR LR LR 03 39 43.6
comp=Z,297nm,18.9s,baz=124,slow=35
comp=Z,3.1nm,0.9s

NVAR **Mina Array Bea** 69.25 322 P P 03 10 05.8 -0.8
FLWY **Flagg Ranch** 69.25 331 IAmb IAmb 03 10 30.6
comp=Z,55nm,1.1s
LAO **LASA Array** 69.36 335 IAmb IAmb 03 10 18.9
comp=Z,34nm,1.1s
LAO **LASA Array** 69.36 335 P P 03 10 07.9 +1.0
baz=145,SNR=11
LAO **LASA Array** 69.36 335 P P 03 10 07.9 +1.0
baz=145,SNR=11
RLMT **Red Lodge** 69.40 333 IAmb IAmb 03 10 22.9
comp=Z,32nm,1.2s
RLMT **Red Lodge** 69.40 333 P P 03 10 08.6 +1.1
baz=142,SNR=15
LIC **Lamto** 69.43 77⇑ *i*PKP2 P 03 10 07.0 -1.0
comp=Z,72nm,0.7s
LKWY **Lake** 69.48 331 P P 03 10 07.0 -1.0
LKWY IAmb IAmb 03 10 29.7
comp=Z,28nm,0.9s
LKWY **Lake** 69.48 331 P P 03 10 07.0 -1.0
LKWY pmax pmax
comp=Z,28nm,0.9s
TIC **Toumodi** 69.58 77⇑ *i*PKP2 P 03 10 08.7 -0.2
comp=Z,1.4nm,0.2s
DBIC **Dimbokro** 69.74 77 P P 03 10 07.6 -2.3
comp=Z,41nm,1.0s,baz=251,slow=5.8,SNR=16
DBIC LR LR 03 39 22.4
comp=Z,2µm,18.4s,baz=256,slow=35
comp=Z,41nm,1.0s
DBIC **Dimbokro** 69.74 77 P P 03 10 07.6 -2.3
DBIC **Dimbokro** 69.74 77 P P 03 10 07.6 -2.3
DBIC pmax pmax
comp=Z,58nm,1.1s
KIC **Kosan Boka** 69.75 77⇑ *i*PKP2 P 03 10 07.7 -2.3
comp=Z,31nm,0.5s
YMR **Madison River** 69.82 331 IAmb IAmb 03 10 32.2
comp=Z,41nm,1.2s
DGMT **Dagmar** 70.04 338 P P 03 10 12.0 +0.9
baz=147
YHL **Hebgen Lake** 70.06 331 IAmb IAmb 03 10 25.8
comp=Z,41nm,1.1s
SCHQ **Schefferville** 70.26 3 P P 03 10 11.4 -0.9
comp=Z,13nm,1.0s,baz=190,slow=6.5,SNR=8.2
SCHQ LR LR 03 44 11.2
comp=Z,540nm,18.1s,baz=204,slow=39
comp=Z,13nm,1.0s
SCHQ **Schefferville** 70.26 3 IAmb IAmb 03 10 15.2
comp=Z,29nm,1.2s
TROLL **Troll, Antarti** 70.40 161 P P 03 10 14.1 +0.9
HLID **Hailey** 70.67 328 IAMs_20 IAMs_20 03 41 32.0
comp=Z,988nm,22.0s
HLID **Hailey** 70.67 328 P P 03 10 15.3 +0.1
baz=137,SNR=12
BOZ **Bozeman (W)** 70.83 331 P P 03 10 17.3 +1.2
baz=140,SNR=15
PMOZ **Porto Moniz, M** 70.88 46 *e*LQ LQ 03 28 03.6
PMOZ *e*LR LR 03 32 29.6
comp=Z,442nm,18.0s
MFID **Camas Ranch** 71.29 328 IAmb IAmb 03 10 40.0
comp=Z,35nm,1.2s
MFID IAMs_20 IAMs_20 03 43 29.2
comp=Z,845nm,21.0s
LRM **Limekiln Ridge** 71.38 331 P P 03 10 19.2 -0.4
EGMT **Eagleton** 71.87 334 IAmb IAmb 03 10 43.6
comp=Z,28nm,1.1s
EGMT **Eagleton** 71.87 334 P P 03 10 22.7 +0.4
baz=142,SNR=10
ORV **Oroville** 71.88 322 P P 03 10 21.2 -1.2
ORV IAmb IAmb 03 10 37.8
comp=Z,35nm,1.1s
ORV **Oroville** 71.88 322 P P 03 10 21.2 -1.2
ORV pmax pmax
comp=Z,35nm,1.2s
WVOR **Wild Horse Val** 72.11 325 IAMs_20 IAMs_20 03 41 26.6
comp=Z,913nm,20.0s
PLID **Pearl Lake** 72.56 329 IAMs_20 IAMs_20 03 37 52.9
comp=Z,913nm,21.0s
MOD **Modoc Plateau** 72.69 324 IAMs_20 IAMs_20 03 43 21.7
comp=Z,808nm,19.0s
MSO **Missoula** 72.82 331 P P 03 10 28.9 +0.9
baz=138,SNR=9.3
TBI **Tubuai** 73.00 250 *e*S S 03 19 51.2 -5.7
comp=Z,326nm,30.0s
TBI **Tubuai** 73.00 250 *e*LR LR 03 32 40.5
comp=Z,662nm,26.8s
KOWA **Kowa** 73.22 69 P P 03 10 30.8 -0.1
KOWA IAmb IAmb 03 10 32.3
comp=Z,50nm,1.2s
NVL **N'lazarevskaya** 73.25 160 *e*P P 03 10 30.4 +0.3
NVL *e*S SKiKP 03 20 01.5 -0.5
NVL pmax pmax
comp=Z,40nm,1.1s
K04D **Chiloquin, OR** 73.97 324 P P 03 10 34.9 -0.1
baz=130
L04D **Klamath Falls** 74.03 323 IAMs_20 IAMs_20 03 40 47.2
comp=Z,902nm,21.0s
L04D **Klamath Falls** 74.03 323 P P 03 10 35.8 +0.5
baz=130
J05D **Fort Rock, OR** 74.11 325 P P 03 10 36.2 +0.5
baz=131
PPT2 **Papeete2** 74.18 256 *e*LR LR 03 33 13.2
comp=Z,590nm,23.5s
PINE **Pine Mountain** 74.27 325 P P 03 10 35.9 -0.9
QSPA **South Pole Qui** 74.57 180 IAMs_20 IAMs_20 03 48 29.4
comp=Z,832nm,20.0s
J04D **Umpqua Nationa** 74.57 324 IAmb IAmb 03 11 01.6
comp=Z,34nm,1.1s
J04D IAMs_20 IAMs_20 03 44 06.5
comp=Z,762nm,18.0s
J04D **Umpqua Nationa** 74.57 324 P P 03 10 38.8 +0.3
baz=130
L02F **Cave Junction** 74.71 323 P P 03 10 39.5 +0.5
baz=129
I05D **Terrebonne, OR** 74.85 325 P P 03 10 40.1 +0.2
baz=131
I04A **Tendick Farm,** 75.09 325 P P 03 10 42.5 +1.2
baz=130
K02D **Willamette Mer** 75.12 323 P P 03 10 42.3 +0.8
baz=129
DBO **Dodson Butte** 75.14 324 IAmb IAmb 03 10 44.9
comp=Z,80nm,1.8s
HAWA **Hanford** 75.25 328 P P 03 10 42.1 0.0
HAWA IAMs_20 IAMs_20 03 44 43.0
comp=Z,1µm,21.0s
NEW **Newport** 75.35 331 P P 03 10 42.8 +0.1
NEW **Newport** 75.35 331 P P 03 10 42.8 +0.1
NEW pmax pmax
comp=Z,24nm,1.8s
NEW MLR MLR
comp=Z,600nm,20.0s
NEW **Newport** 75.35 331 P P 03 10 43.6 +1.0
baz=135
D08A **Wollman Farm,** 75.39 329 P P 03 10 42.2 -0.7
G05D **Wamic, OR** 75.42 326 P P 03 10 43.7 +0.6
baz=131
I03D **Drain, OR** 75.56 324 P P 03 10 44.6 +0.7
baz=129
J01E **Myrtle Point** 75.56 323 IAMs_20 IAMs_20 03 39 51.6
comp=Z,850nm,20.0s
J01E **Myrtle Point** 75.56 323 P P 03 10 44.8 +0.9
baz=128
C09A **Chrisman Ranch** 75.58 330 IAmb IAmb 03 10 50.2
comp=Z,72nm,1.9s
I02E **Swisshome, OR** 76.09 324 IAMs_20 IAMs_20 03 45 41.9
comp=Z,900nm,20.0s
FCC **Fort Churchill** 76.33 348 P P 03 10 47.3 -0.6
FCC **Fort Churchill** 76.33 348 P P 03 10 47.3 -0.6
FCC pmax pmax
comp=Z,28nm,1.2s
LTY **Liberty** 76.41 328 IAmb IAmb 03 10 54.9
comp=Z,73nm,1.9s
G03D **McMinnville, O** 76.46 325 P P 03 10 49.4 +0.4
baz=129
F04D **Rainier, OR** 76.87 326 P P 03 10 52.1 +0.7
baz=130
TORD **Torodi Ar. Bea** 77.96 73 P P 03 10 55.8 -2.3
comp=Z,46nm,0.9s,baz=272,slow=4.9,SNR=100
TORD LR LR 03 43 20.0
comp=Z,1µm,19.7s,baz=206,slow=34
comp=Z,46nm,0.9s
TORD **Torodi Ar. Bea** 77.96 73 P P 03 10 55.0 -3.1
TORD IAmb IAmb 03 10 59.3
comp=Z,58nm,1.0s
NLWA **Neilton Lookou** 78.16 327 P P 03 10 56.5 -2.0
AVE **Averroes** 78.18 50 IAMs_20 IAMs_20 03 50 21.4
comp=Z,763nm,19.0s
IVI **Ivigtut** 78.80 11 *i* P P 03 11 00.4 -1.3
IVI IAmb IAmb 03 11 04.8
comp=Z,185nm,1.6s
FRB **Frobisher Bay** 79.12 1 LR LR 03 45 25.6
comp=Z,665nm,21.9s,baz=190,slow=35
LLLB **Lillooet** 79.22 330 IAmb IAmb 03 11 10.0
comp=Z,53nm,1.5s
NRS **Narsarsuaq** 79.31 13 *i* P P 03 11 02.0 -2.4
NRS IAmb IAmb 03 11 10.2
comp=Z,216nm,1.8s
PNCL **Nicolau / Gran** 79.66 46 *e*P P 03 11 09.5 +2.5
PVAQ **Vaqueiros** 79.89 47 *e*LR LR 03 37 24.9
comp=Z,666nm,20.0s
MDT **Midelt** 80.07 52 LR LR 03 42 30.2
comp=Z,540nm,21.8s,baz=267,slow=33
PMTG **Montargil** 80.33 45 *e*P P 03 11 12.9 +2.3
PCAS **Casmilo, Conde** 80.63 44 *e*P P 03 11 13.3 +1.1
PESTR **Estremoz** 80.67 45 *e*P P 03 11 13.9 +1.5
COI **Coimbra** 80.76 44 IAMs_20 IAMs_20 03 46 46.0
comp=Z,956nm,21.0s
NUUK **Nuuk** 80.99 9 *i* P P 03 11 12.7 -0.8
NUUK IAmb IAmb 03 11 17.2
comp=Z,33nm,0.9s
PMRV **Marv??o** 81.08 45 *e*LQ LQ 03 32 55.9
PMRV *e*LR LR 03 36 51.5
comp=Z,744nm,18.0s
SBA **Scott Base** 81.14 191 P P 03 11 14.3 0.0
SBA **Scott Base** 81.14 191 IAMs_20 IAMs_20 03 43 34.5
comp=Z,943nm,19.0s
SBA **Scott Base** 81.14 191 P P 03 11 14.3 0.0
SBA pmax pmax
comp=Z,31nm,1.3s
MTE **Manteigas** 81.44 44 *e*LQ LQ 03 32 53.0
MTE *e*LR LR 03 37 11.4
comp=Z,853nm,18.0s
PGAV **Gavieira, Arco** 81.72 42 *e*LQ LQ 03 32 58.0
PGAV *e*LR LR 03 37 18.3
comp=Z,649nm,20.0s
MVO **Moncorvo** 82.15 44 *e*LQ LQ 03 33 12.2
MVO *e*LR LR 03 37 13.5
comp=Z,622nm,20.0s
VNDA **Vanda** 82.18 190 P P 03 11 20.9 +1.0
comp=Z,6.5nm,0.9s,baz=129,slow=3.9,SNR=31
VNDA LR LR 03 42 41.2
comp=Z,644nm,18.2s,baz=95,slow=32
comp=Z,6.5nm,0.9s
VNDA **Vanda** 82.18 190 P P 03 11 20.0 +0.2
VNDA **Vanda** 82.18 190 P P 03 11 20.0 +0.2
VNDA pmax pmax
comp=Z,14nm,1.1s
CER **Ceres** 82.37 122 *e*P P 03 11 16.7 -5.0
CER IAmb IAmb 03 11 19.6
comp=Z,14nm,0.8s
RAR **Rarotonga** 82.78 250 LR LR 03 39 18.2
comp=Z,360nm,19.5s,baz=130,slow=29
PAB **San Pablo** 83.22 46 P P 03 11 26.2 +0.3
PAB **San Pablo** 83.22 46 IAMs_20 IAMs_20 03 42 17.2
comp=Z,921nm,21.0s
PAB **San Pablo** 83.22 46 P P 03 11 26.2 +0.3
PAB pmax pmax
comp=Z,13nm,1.2s
BBB **Bella Bella** 83.26 329 LR LR 03 50 41.4
comp=Z,397nm,19.4s,baz=130,slow=37
ESDC **Sonseca Array** 83.54 46 P P 03 11 27.0 -0.6
comp=Z,5.0nm,1.1s,baz=246,slow=5.0,SNR=15
ESDC LR LR 03 43 11.9
comp=Z,948nm,21.8s,baz=242,slow=32
comp=Z,5.0nm,1.1s
ESBB **Sonseca Array** 83.54 46 IAmb IAmb 03 11 31.8
comp=Z,33nm,1.5s
SUR **Sutherland** 83.84 122 LR LR 03 44 52.5
comp=Z,564nm,18.2s,baz=252,slow=33
DY2G **Dye2** 83.98 10 *i* P P 03 11 28.4 -1.0
DY2G IAmb IAmb 03 11 32.7
comp=Z,579nm,2.1s
TSUM **Tsumeb** 84.30 108 LR LR 03 45 58.1
comp=Z,942nm,20.4s,baz=256,slow=34
TSUM **Tsumeb** 84.30 108 P P 03 11 30.5 -1.5
TSUM IAmb IAmb 03 11 35.3
comp=Z,32nm,0.9s
TSUM **Tsumeb** 84.30 108 *e*P P 03 11 31.2 -0.8
TSUM IAmb IAmb 03 11 34.6
comp=Z,32nm,0.9s
YKA **Yellowknife Ar** 84.78 341 P P 03 11 33.1 -0.1
comp=Z,8.8nm,0.9s,baz=133,slow=5.0,SNR=31
comp=Z,8.8nm,0.9s
KEIM **Keimoes** 84.90 118 *e*P P 03 11 34.6 -0.2
KEIM IAmb IAmb 03 11 38.5
comp=Z,242nm,1.8s
GRNB **Grenville Isla** 85.13 330 IAmb IAmb 03 11 41.4
comp=Z,60nm,1.6s
UPI **Upington** 85.23 118 *e*P P 03 11 36.3 -0.2
UPI IAmb IAmb 03 11 40.6
comp=Z,58nm,1.1s
T35M **Bob Quinn** 87.05 332 P P 03 11 45.6 +1.0
baz=125
ICESG **Greenland Ices** 87.47 11 *i* P P 03 11 46.0 -0.8
ICESG IAmb IAmb 03 11 49.8
comp=Z,84nm,1.0s
CRAG **Craig** 87.56 330 P P 03 11 47.5 +0.5
baz=122
WRAK **Wrangell Islan** 87.70 331 IAmb IAmb 03 11 55.0
comp=Z,32nm,1.1s
WRAK **Wrangell Islan** 87.70 331 IAMs_20 IAMs_20 03 57 57.9
comp=Z,635nm,18.0s
DLBC **Dease Lake** 87.78 333 LR LR 03 57 55.3
comp=Z,571nm,18.1s,baz=108,slow=40
DLBC **Dease Lake** 87.78 333 P P 03 11 48.2 0.0
baz=125
BOSA **Boshof** 88.55 119 P P 03 11 51.2 -1.6
comp=Z,7.6nm,1.0s,baz=351,slow=3.4,SNR=4.7
BOSA LR LR 03 47 44.0
comp=Z,1µm,21.3s,baz=252,slow=33
comp=Z,7.6nm,1.0s
BOSA **Boshof** 88.55 119 *e*P P 03 11 48.2 -4.6
BOSA IAmb IAmb 03 11 48.9
comp=Z,81nm,1.4s
R33M **Jennings River** 88.73 334 P P 03 11 53.2 +0.5
baz=124
SIT **Sitka** 89.44 331 P P 03 11 57.1 +1.3
baz=121
JIS **Juneau Island** 89.62 332 IAMs_20 IAMs_20 03 51 38.6
comp=Z,742nm,22.0s
LBTB **Lobatse** 89.89 116 LR LR 03 49 19.4
comp=Z,2µm,19.7s,baz=246,slow=34
LBTB **Lobatse** 89.89 116 P P 03 11 59.0 0.0
LBTB **Lobatse** 89.89 116 P P 03 11 59.1 0.0
LBTB pmax pmax
comp=Z,68nm,1.6s
LBTB **Lobatse** 89.89 116 *e*P P 03 11 56.1 -3.0
LBTB IAmb IAmb 03 12 01.9
comp=Z,96nm,1.7s
P33M **Teslin, Yukon** 89.96 334 IAmb IAmb 03 12 06.1
comp=Z,31nm,1.0s
P33M IAMs_20 IAMs_20 03 54 47.8
comp=Z,849nm,21.0s
P33M **Teslin, Yukon** 89.96 334 P P 03 11 58.8 +0.4
baz=123
P32M **Atlin** 90.01 333 P P 03 11 59.7 +1.1
baz=122
N32M **Quiet Lake** 90.58 335 P P 03 12 01.8 +0.5
baz=123
SKAG **Skagway** 90.65 333 IAmb IAmb 03 12 17.2
comp=Z,33nm,1.3s
SKAG **Skagway** 90.65 333 P P 03 12 02.5 +0.9
baz=121
SUMG **Summit** 90.67 9 *i* P P 03 12 01.4 -0.5
SUMG IAmb IAmb 03 12 05.8
comp=Z,130nm,1.1s
MAW **Mawson** 90.70 164 P P 03 12 01.4 -0.3
comp=Z,15nm,1.0s,baz=235,slow=6.7,SNR=19
MAW LR LR 03 54 32.5
comp=Z,516nm,18.3s,baz=221,slow=37
comp=Z,15nm,1.0s
KSR **Koster** 90.76 117 *e*P P 03 11 57.5 -5.7
KSR IAmb IAmb 03 11 58.7
comp=Z,236nm,2.1s
ESK **Eskdalemuir** 90.96 32 IAMs_20 IAMs_20 03 48 19.1
comp=Z,636nm,20.0s
EKA **Eskdalemuir Ar** 91.00 32 P P 03 12 01.9 -1.4
comp=Z,2.2nm,1.1s,baz=242,slow=1.8,SNR=4.9
comp=Z,2.2nm,1.1s
WHY **Whitehorse** 91.07 334 P P 03 12 03.5 -0.1
baz=121
CLF **Chambon-Foret** 91.07 40 IAmb IAmb 03 12 07.6
comp=Z,26nm,1.4s
CLF IAMs_20 IAMs_20 03 49 40.3
comp=Z,719nm,20.0s
PLBC **Pleasant Camp** 91.11 332 P P 03 12 04.4 +0.8
baz=120
FARO **Faro, Yukon** 91.26 336 IAmb IAmb 03 12 11.9
comp=Z,15nm,1.0s
RES **Resolute Bay** 91.27 354 LR LR 03 54 17.6
comp=Z,1µm,21.5s,baz=162,slow=36
SSB **Saint Sauveur** 91.54 43 IAMs_20 IAMs_20 03 51 37.0
comp=Z,744nm,21.0s
O30N **Mendenhall** 91.64 334 P P 03 12 07.1 +0.9
baz=120
M31M **Drury Creek, Y** 91.66 335 P P 03 12 07.6 +1.3
baz=121
P30M **Million Dollar** 91.70 333 P P 03 12 07.4 +0.9
baz=119
P29M **Windy Craggy** 91.81 332 IAmb IAmb 03 12 16.3
comp=Z,23nm,1.1s
P29M IAMs_20 IAMs_20 03 57 59.4
comp=Z,830nm,20.0s
P29M **Windy Craggy** 91.81 332 P P 03 12 07.9 +0.9
baz=119
N31M **Braeburn, Yuko** 91.86 334 IAmb IAmb 03 12 14.5
comp=Z,19nm,0.9s
N31M **Braeburn, Yuko** 91.86 334 P P 03 12 07.7 +0.5
baz=120
KEST **Kesra** 91.87 54 LR LR 03 54 09.1
comp=Z,575nm,19.8s,baz=195,slow=36
TULEG **Thule** 91.96 1 IAMs_20 IAMs_20 03 51 19.1
comp=Z,845nm,22.0s
TULEG **Thule** 91.96 1 *i* P P 03 12 05.8 -1.5
TULEG IAmb IAmb 03 12 12.0
comp=Z,63nm,1.0s
SLR **Silverton** 91.99 117 *e*P P 03 12 07.8 -1.1
SLR IAmb IAmb 03 12 14.4
comp=Z,25nm,1.2s
HYT **Haines Junctio** 92.27 333 P P 03 12 09.9 +0.7
baz=119
N30M **Aishikik Lake** 92.40 334 P P 03 12 10.6 +0.9
baz=119
O29M **Mount Kennedy** 92.49 333 P P 03 12 11.0 +0.8
baz=118
NWCL **Newcastle** 92.71 120 *e*P P 03 12 12.0 -0.1
NWCL IAmb IAmb 03 12 15.3
comp=Z,104nm,1.9s
BCPM **Bancas Point** 92.81 332 IAMs_20 IAMs_20 04 00 44.8
comp=Z,788nm,20.0s
O28M **Mount Upton** 93.42 333 P P 03 12 15.8 +1.1
baz=118
M29M **Somme Creek** 93.44 335 P P 03 12 15.4 +0.8
baz=118
TABL **Table Mountain** 93.70 332 IAMs_20 IAMs_20 04 01 30.4
comp=Z,767nm,19.0s
LOGN **Logan Glacier** 93.80 333 IAMs_20 IAMs_20 03 58 10.1
comp=Z,797nm,21.0s
MATP **Matopo** 93.82 112⇑ *i*P P 03 12 18.5 +1.1
MATP IAmb IAmb 03 12 20.7
comp=Z,87nm,1.1s
MESA **MESA** 93.95 332 P P 03 12 17.6 +0.5
baz=115
YUK3 **Moose Creek** 93.98 334 P P 03 12 17.7 +0.5
baz=116
CTGM **Chitina Glacie** 94.01 333 IAMs_20 IAMs_20 03 58 14.7
comp=Z,749nm,20.0s
BLWY **Bulawayo** 94.01 112 *e*P P 03 12 17.6 -0.7
BLWY IAmb IAmb 03 12 21.1
comp=Z,339nm,1.8s
GRNC **Granite Creek** 94.09 332 IAMs_20 IAMs_20 03 56 54.9
comp=Z,831nm,21.0s
MUSN **Musina, Limpop** 94.44 114 *e*P P 03 12 21.4 +1.3
MUSN IAmb IAmb 03 12 24.4
comp=Z,71nm,1.8s
INK **Inuvik** 94.53 341 P P 03 12 19.0 -0.3
comp=Z,4.6nm,1.0s,baz=84,slow=4.2,SNR=6.7
INK LR LR 03 58 18.5
comp=Z,1µm,21.5s,baz=118,slow=38
comp=Z,4.6nm,1.0s
INK **Inuvik** 94.53 341 IAmb IAmb 03 12 26.6
comp=Z,15nm,1.2s
INK **Inuvik** 94.53 341 P P 03 12 20.0 +0.8
baz=122
DAWY **Dawson** 94.55 336 P P 03 12 20.2 +0.7
baz=117
EPYK **Eagle Plains** 94.63 338 P P 03 12 20.3 +0.5
baz=119
CRQE **Cirque** 94.70 332 P P 03 12 20.4 0.0
baz=114
I29M **Ogilvie Camp,** 94.72 337 IAmb IAmb 03 14 20.9
comp=Z,8.3nm,0.6s
I29M IAMs_20 IAMs_20 03 58 23.1
comp=Z,573nm,20.0s
I29M **Ogilvie Camp,** 94.72 337 P P 03 12 20.6 +0.3
baz=118
CRQM **Cirque** 94.73 332 IAMs_20 IAMs_20 03 56 27.9
comp=Z,824nm,21.0s
M27K **Edge Creek, AK** 94.83 334 IAMs_20 IAMs_20 03 59 51.4
comp=Z,658nm,20.0s
MCARA **McCarthy VSAT** 94.93 333 IAMs_20 IAMs_20 03 57 39.9
comp=Z,664nm,20.0s
MCARA **McCarthy VSAT** 94.93 333 P P 03 12 21.7 +0.4
baz=114
BCAR **Beaver Creek A** 95.08 335 P P 03 12 21.1 -0.9
L27K **Beaver Creek,** 95.10 335 IAmb IAmb 03 12 36.7
comp=Z,22nm,1.7s
L27K IAMs_20 IAMs_20 04 01 20.7
comp=Z,561nm,18.0s
L27K **Beaver Creek,** 95.10 335 P P 03 12 22.8 +0.7
baz=115
LSZ **Lusaka** 95.11 107 LR LR 03 52 15.0
comp=Z,876nm,20.7s,baz=256,slow=34
VLC **Villacollemand** 95.13 46 IAMs_20 IAMs_20 03 53 24.4
comp=Z,550nm,22.0s
GLB **Gilahina Butte** 95.30 333 IAMs_20 IAMs_20 03 57 41.7
comp=Z,622nm,20.0s
M26K **Nabesna, AK** 95.32 334 P P 03 12 23.3 +0.2
baz=114
MOPA **Mopani** 95.38 116 *e*P P 03 12 25.4 +1.1
MOPA IAmb IAmb 03 12 27.7
comp=Z,24nm,1.2s
BMRM **Bremner River** 95.47 332 P P 03 12 24.1 +0.3
baz=113
EGAK **Eagle** 95.55 336 P P 03 12 24.8 +0.8
baz=115
K27K **Chicken** 95.60 335 IAMs_20 IAMs_20 03 56 41.0
comp=Z,714nm,22.0s
K27K **Chicken** 95.60 335 P P 03 12 24.6 +0.3
baz=114
DAVA **Damuels** 95.69 43 *e*P P 03 12 24.2 -1.1
comp=Z,4.2nm,1.4s
DAVA *e*P PP 03 16 18.4 +1.4
comp=Z,3.5nm,1.1s
N25K **Chitina, Valde** 95.71 333 IAMs_20 IAMs_20 04 04 29.6
comp=Z,592nm,18.0s
N25K **Chitina, Valde** 95.71 333 P P 03 12 25.4 +0.5
baz=113
Q23K **Middleton Isla** 95.71 330 P P 03 12 25.7 +0.9
baz=111
L26K **Log Cabin Wild** 95.72 334 P P 03 12 26.3 +1.4
baz=114
AFI **Afiamalu** 95.78 254 LR LR 03 46 09.3
comp=Z,309nm,19.1s,baz=116,slow=30
EYAK **Cordova Ski Ar** 95.84 331 P P 03 12 26.8 +1.4
baz=112
I27K **Kandik River** 96.07 337 P P 03 12 27.6 +1.2
baz=115
RAO **Raoul Island** 96.08 238 LR LR 03 52 13.7
comp=Z,101nm,18.2s,baz=124,slow=33
FETA **Feichten** 96.17 43 *e*P P 03 12 29.4 +1.9
comp=Z,1.6nm,0.9s
FETA *e*P PP 03 16 19.3 -1.4
comp=Z,6.0nm,1.3s
FID **Port Fidalgo** 96.24 332 IAMs_20 IAMs_20 03 58 34.8
comp=Z,690nm,20.0s
HARP **HAARP** 96.25 333 P P 03 12 28.5 +1.2
baz=112
KLU **Klutina** 96.26 332 IAmb IAmb 03 12 36.1
comp=Z,27nm,1.2s
KLU **Klutina** 96.26 332 P P 03 12 28.6 +1.1
baz=111
DOT **Dot Lake** 96.26 335 IAmb IAmb 03 14 11.8
comp=Z,38nm,1.9s
JMIC **Jan Mayen** 96.30 17 LR LR 03 53 19.9
comp=Z,227nm,20.1s,baz=250,slow=34
H27K **Steamboat Moun** 96.30 337 P P 03 12 28.9 +1.4
baz=115
RETA **Reutte** 96.32 43 *e*P P 03 12 29.3 +1.3
comp=Z,2.9nm,1.0s
RETA *e*P PP 03 16 19.2 -2.6
comp=Z,2.1nm,1.3s
URZ **Urewera** 96.32 228 LR LR 03 50 04.0
comp=Z,215nm,18.2s,baz=208,slow=32

SCRK Sand Creek 96.35 335 IAMs_20 IAMs_20 04 02 02.9
comp=Z,708nm,21.0s
SCRK Sand Creek 96.35 335 P **P** **03 12 28.7 +0.8**
baz=113
J26L Joseph Creek 96.39 336 IAMs_20 IAMs_20 03 59 57.8
comp=Z,571nm,21.0s
J26L Joseph Creek 96.39 336 P **P** **03 12 28.8 +0.8**
baz=113
MOTA Moosalm 96.50 43 *e*P **P** **03 12 30.1 +1.1**
MOTA *e*P **PP** **03 16 20.3 -3.0**
comp=Z,6.7nm,1.4s
SQTA Sankt Quirin 96.54 43 *e*P **P** **03 12 30.9 +1.8**
comp=Z,4.8nm,1.1s
SQTA *e*P **PP** **03 16 21.6 -1.9**
comp=Z,8.6nm,1.6s
I26K Coal Creek Min 96.54 336 P **P** **03 12 30.3 +1.8**
baz=114
GLI Glacier Island 96.57 332 P **P** **03 12 30.3 +1.5**
baz=110
G27K Doyon Strip 96.59 338 P **P** **03 12 29.0 +0.3**
baz=115
M24K Tolsona, Glenn 96.59 333 P **P** **03 12 30.2 +1.3**
baz=111
PAX Paxson 96.59 334 IAmb IAmb 03 12 33.8
comp=Z,12nm,1.2s
PAX Paxson 96.59 334 P **P** **03 12 29.9 +0.9**
baz=112
RIDG Independent Ri 96.62 335 IAMs_20 IAMs_20 04 02 14.8
comp=Z,688nm,21.0s
RIDG Independent Ri 96.62 335 P **P** **03 12 30.2 +1.2**
baz=112
WATA Walderalm 96.81 43 *e*P **P** **03 12 30.5 +0.2**
comp=Z,5.1nm,1.5s
WATA *e*P **PP** **03 16 24.8 -0.9**
comp=Z,7.3nm,1.4s
WTTA Wattenberg 96.83 43 *e*P **P** **03 12 29.8 -0.7**
comp=Z,7.8nm,1.4s
WTTA *e*P **PP** **03 16 23.0 -2.8**
comp=Z,7.8nm,1.9s
SCM Sheep Creek Mo 97.00 332 P **P** **03 12 31.8 +1.0**
baz=110
K24K Donnelly Dome 97.03 335 P Pdif 03 12 31.8 +0.9
baz=111
CIMO Cimolais 97.11 44 IAmb IAmb 03 16 27.5
comp=Z,17nm,1.6s
E27K Coleen River 97.13 339 P Pdif 03 12 32.4 +1.1
baz=114
PWL Port Wells 97.14 331 P Pdif 03 12 32.5 +1.0
baz=110
J25K Salcha River, 97.15 335 IAMs_20 IAMs_20 03 57 37.0
comp=Z,665nm,22.0s
J25K Salcha River, 97.15 335 P Pdif 03 12 32.2 +0.7
baz=112
M23K Glacier View 97.17 332 P Pdif 03 12 32.1 +0.5
baz=110
GRFO Grafenberg 97.21 41 IAMs_20 IAMs_20 03 54 14.6
comp=Z,681nm,20.0s
GRA1 Grafenberg Arr 97.21 41 IAMs_20 IAMs_20 03 54 15.7
comp=Z,670nm,20.0s
ABTA Abfaltersbach 97.27 44 *e*P Pdif 03 12 33.5 +1.0
comp=Z,4.2nm,1.2s
ABTA *e*P **PP** **03 16 26.6 -2.6**
comp=Z,6.5nm,1.4s
KNK Knik Glacier 97.37 332 IAMs_20 IAMs_20 04 01 47.5
comp=Z,721nm,21.0s
G26K Porcupine Rive 97.42 338 P Pdif 03 12 33.4 +0.9
baz=113
SEW Seward 97.42 330 P Pdif 03 12 33.1 +0.4
baz=109
WAT6 Susitna Watana 97.44 333 P Pdif 03 12 34.2 +1.2
baz=110
CLUD Cludinico 97.44 44 IAmb IAmb 03 16 29.1
comp=Z,10nm,1.3s
SML Sawmill 97.44 332 IAMs_20 IAMs_20 04 01 29.4
comp=Z,570nm,19.0s
SML Sawmill 97.44 332 P Pdif 03 12 34.2 +1.4
baz=109
DHY Denali Highway 97.45 334 IAMs_20 IAMs_20 04 02 50.6
comp=Z,639nm,20.0s
DHY Denali Highway 97.45 334 P **P** **03 12 33.1 +0.2**
baz=110
PRP Porcupine Dome 97.54 336 IAMs_20 IAMs_20 03 59 23.3
comp=Z,563nm,20.0s
PRP Porcupine Dome 97.54 336 P Pdif 03 12 33.7 +0.4
baz=111
CEL Celeste 97.60 53 IAMs_20 IAMs_20 03 57 19.7
comp=Z,518nm,22.0s
HDA Harding Lake 97.72 335 IAMs_20 IAMs_20 04 00 30.9
comp=Z,566nm,20.0s
HDA Harding Lake 97.72 335 P Pdif 03 12 34.8 +0.8
baz=110
PMR Palmer 97.74 332 P Pdif 03 12 35.3 +1.2
baz=109
FYU Fort Yukon 97.81 337 IAMs_20 IAMs_20 04 00 06.5
comp=Z,544nm,21.0s
ILAR Eielson Array 97.82 335 P **P** **03 12 33.9 -0.5**
comp=Z,0.8nm,1.0s,baz=100,slow=3.8,SNR=7.0
ILAR PP **PP** **03 16 37.9 +5.1**
comp=Z,1.7nm,0.9s,baz=111,slow=6.0,SNR=8.3
ILAR LR LR 04 01 32.8
comp=Z,541nm,18.3s,baz=106,slow=38
comp=Z,0.8nm,1.0s
RPZ Rata Peaks 97.84 221 LR LR 03 48 47.6
comp=Z,436nm,18.0s,baz=112,slow=30
RC01 Rabbit Creek A 97.86 331 IAMs_20 IAMs_20 04 01 56.3
comp=Z,787nm,22.0s
RC01 Rabbit Creek A 97.86 331 P Pdif 03 12 35.7 +1.1
baz=108
WAT1 Susitna Watana 97.87 333 P Pdif 03 12 35.4 +0.7
baz=109
PRED Cave del Predi 97.90 44 P **P** **03 12 34.6 -0.6**
KBA Koelnbreinsper 97.91 43 *e*P **PP** **03 16 33.5 -0.7**
comp=Z,4.6nm,1.1s
H25K Birch Creek 97.92 337 P Pdif 03 12 35.4 +0.7
baz=111
MYKA Terra Mystica 98.00 44 *e*P **PP** **03 16 34.4 -0.3**
comp=Z,6.1nm,1.1s
CCB Clear Creek Bu 98.15 335 IAMs_20 IAMs_20 04 01 02.3
comp=Z,656nm,22.0s
POKR Poker Plat Res 98.15 336 IAmb IAmb 03 12 39.5
comp=Z,12nm,1.4s
POKR IAMs_20 IAMs_20 03 58 38.5
comp=Z,759nm,21.0s
POKR Poker Plat Res 98.15 336 P Pdif 03 12 36.3 +0.5
baz=110
RND Reindeer 98.19 334 IAmb IAmb 03 12 43.7
comp=Z,4.0nm,1.0s
G25K Bearman Lake 98.20 337 P Pdif 03 12 37.5 +1.5
baz=111
WRH Wood River Hil 98.21 335 IAmb IAmb 03 12 42.2
comp=Z,10nm,1.2s
WRH IAMs_20 IAMs_20 03 58 59.9
comp=Z,516nm,21.0s
M22K Willow 98.24 332 IAMs_20 IAMs_20 04 04 46.3
comp=Z,489nm,20.0s
M22K Willow 98.24 332 P **P** **03 12 36.5 +0.2**
baz=108
COLA College 98.24 335 IAMs_20 IAMs_20 04 02 43.9
comp=Z,736nm,21.0s
COLA College 98.24 335 P Pdif 03 12 36.6 +0.4
baz=109
TCOL CIGO, UAF Yank 98.25 335 IAMs_20 IAMs_20 04 02 53.9
comp=Z,735nm,20.0s
BIOA Bad Ischl, Aus 98.25 43 *e*P Pdif 03 12 37.6 +0.8
comp=Z,3.0nm,1.1s
BIOA *e*P **PP** **03 16 35.5 -1.1**
comp=Z,4.2nm,1.3s
MCK McKinley 98.32 334 P **P** **03 12 37.0 +0.3**
baz=109
C27K Jago River 98.41 340 P Pdif 03 12 38.0 +1.1
baz=112
MDM Murphy Dome 98.42 335 IAmb IAmb 03 12 43.7
comp=Z,11nm,1.0s
MDM IAMs_20 IAMs_20 04 01 19.6
comp=Z,677nm,20.0s
TIP Timpagrande 98.47 52 IAMs_20 IAMs_20 04 03 02.7
comp=Z,534nm,20.0s
E25K Arctic Village 98.48 339 P Pdif 03 12 38.1 +0.8
baz=111
CUT Chulitna 98.50 333 IAMs_20 IAMs_20 04 03 36.2
comp=Z,578nm,20.0s
KHC Kasperske Hory 98.56 41 IAMs_20 IAMs_20 04 01 11.5
comp=Z,477nm,20.0s
KHC Kasperske Hory 98.56 41 *ex* x 03 13 29.6
KHC AMS AMS 03 55 10.0
comp=Z,400nm,23.5s
H24K Noodor Dome 98.57 336 IAMs_20 IAMs_20 03 59 42.4
comp=Z,570nm,21.0s
H24K Noodor Dome 98.57 336 P **P** **03 12 37.9 +0.2**
baz=109
GERES GERESS Array B 98.57 42 P **P** **03 12 37.1 -1.0**
comp=Z,0.5nm,0.9s,baz=174,slow=1.2,SNR=7.0
comp=Z,0.5nm,0.9s
OBKA Obir 98.58 44 *e*P **P** **03 12 38.1 -0.2**
comp=Z,3.5nm,1.7s
OBKA *e*P **PP** **03 16 37.1 -2.0**
comp=Z,0.4nm,0.7s
NEA2 Nenana 98.65 335 IAmb IAmb 03 12 44.6
comp=Z,8.4nm,1.0s
NEA2 IAMs_20 IAMs_20 03 56 21.5
comp=Z,539nm,22.0s
NEA2 Nenana 98.65 335 P Pdif 03 12 39.2 +1.1
baz=108
BWN Browne 98.68 334 IAMs_20 IAMs_20 03 56 03.5
comp=Z,665nm,22.0s
G24K Hadweenzic Riv 98.69 337 P Pdif 03 12 39.6 +1.4
baz=109
MOA Molln 98.70 43 *e*P Pdif 03 12 40.3 +1.6
comp=Z,3.2nm,1.2s
CLL Collm 98.72 39 IAMs_20 IAMs_20 03 54 24.4
comp=Z,702nm,19.0s
CLL Collm 98.72 39 *e*PP **PP** **03 16 42.0 +2.0**
CLL *e*SKKSac **SKKSac** **03 23 42.0 -5.1**
CLL *e*S **ScS** **03 24 09.0 +0.7**
CLL *e*PS **PS** **03 25 30.0 -4.9**
CLL *ex* x 03 26 48.0
CLL *e*SS **SS** **03 30 54.0 -0.5**
CLL *e*SSS SSS 03 34 48.0
CLL LmH 03 54 00.0
comp=N,200nm,18.8s
CLL LmH 03 54 00.0
comp=E,400nm,18.6s
CLL LmV 03 54 00.0
comp=Z,700nm,18.9s
SII Sitkinak Islan 98.80 326 P Pdif 03 12 39.5 +0.5
baz=105
TRF Thorofare Moun 98.81 334 IAMs_20 IAMs_20 04 03 51.8
comp=Z,752nm,20.0s
TRF Thorofare Moun 98.81 334 P Pdif 03 12 39.9 +0.9
baz=107
C26K Camden Bay 98.90 340 P Pdif 03 12 39.9 +0.8
baz=111
I23K Minto, Yukon-K 98.94 335 IAmb IAmb 03 12 58.1
comp=Z,25nm,1.8s
I23K IAMs_20 IAMs_20 03 56 57.2
comp=Z,793nm,21.0s
I23K Minto, Yukon-K 98.94 335 P Pdif 03 12 40.2 +0.9
baz=108
SOKA Soboth 98.94 44 *e*P **P** **03 12 39.6 -0.2**
comp=Z,2.6nm,1.3s
SOKA *e*P **PP** **03 16 43.4 +1.4**
comp=Z,2.8nm,1.3s
SKT Skwentna 98.94 332 P Pdif 03 12 40.5 +1.0
baz=107
CKRC Cesky Krumlov 98.95 42 *ex* x 03 13 29.2
KONO Kongsberg 98.96 31 IAMs_20 IAMs_20 03 53 51.2
comp=Z,721nm,20.0s
F24K Squaw Lake 99.11 338 P **Pdif** **03 12 41.6 +1.5**
baz=109
P19K Oil Pt 99.11 329 P **Pdif** **03 12 41.6 +1.3**
baz=106
Q19K Cape Douglas, 99.13 329 P **Pdif** **03 12 41.6 +1.3**
baz=105
D25K Kavik River 99.18 340 P **Pdif** **03 12 41.9 +1.5**
baz=110
H23K Yukon River 99.21 336 IAMs_20 IAMs_20 03 59 28.5
comp=Z,698nm,21.0s
H23K Yukon River 99.21 336 P **Pdif** **03 12 41.9 +1.3**
baz=108
BPAW Bear Paw Mtn. 99.30 334 IAMs_20 IAMs_20 04 02 35.6
comp=Z,655nm,20.0s
BPAW Bear Paw Mtn. 99.30 334 P **Pdif** **03 12 42.3 +1.3**
baz=107
PRU Pruhonice 99.37 41 AMS AMS 03 56 40.0
comp=Z,600nm,18.8s
ARSA Arzberg 99.39 44 *e*P **Pdif** **03 12 43.4 +1.6**
comp=Z,2.4nm,1.3s
CHIR Chirikof Islan 99.40 325 P **Pdif** **03 12 42.4 +0.8**
baz=104
MLY Manley 99.46 335 IAMs_20 IAMs_20 04 03 39.0
comp=Z,504nm,20.0s
MLY Manley 99.46 335 P **Pdif** **03 12 42.7 +0.9**
baz=107
PPLA Purkeypile 99.49 333 P **Pdif** **03 12 42.9 +0.9**
baz=106
E24K Your Creek 99.50 338 P **Pdif** **03 12 43.1 +1.2**
baz=108
PVCC Panska Ves 99.50 40 AMS AMS 03 55 10.0
comp=Z,800nm,18.8s
CAST Castle Rocks 99.58 333 IAmb IAmb 03 12 48.0
comp=Z,9.8nm,1.0s
CAST Castle Rocks 99.58 333 P **Pdif** **03 12 43.1 +0.8**
baz=106
M20K Styx River 99.64 332 IAMs_20 IAMs_20 04 01 29.5
comp=Z,459nm,20.0s
G23K Bananza Creek 99.66 337 P **Pdif** **03 12 43.1 +0.5**
baz=107
CONA Conrad Observa 99.76 43 *e*P **Pdif** **03 12 46.3 +2.8**
comp=Z,2.3nm,1.3s
CONA *e*P **PP** **03 16 46.2 -1.9**
comp=Z,3.6nm,1.4s
O19K Port Alsworth 99.78 330 IAMs_20 IAMs_20 04 05 18.0
comp=Z,648nm,20.0s
TREC Trest 99.81 42 AMS AMS 03 53 10.0
comp=Z,400nm,21.5s
I21K Tanana 100.01 335 IAMs_20 IAMs_20 04 00 22.4
comp=Z,700nm,20.0s
I21K Tanana 100.01 335 P **Pdif** **03 12 44.7 +0.7**
baz=106
N19K Bonanza Creek 100.01 330 IAMs_20 IAMs_20 04 03 30.1
comp=Z,748nm,21.0s
N19K Bonanza Creek 100.01 330 P **Pdif** **03 12 44.5 +0.2**
baz=104
C24K Franklin Bluff 100.08 340 P **Pdif** **03 12 45.1 +0.8**
baz=108
L20K Farewell, AK 100.13 332 P **Pdif** **03 12 45.6 +0.9**
baz=104
O18K Kokhlub Hills 100.13 329 P **Pdif** **03 12 45.6 +0.8**
baz=104
M19K Big River Lodg 100.23 331 IAMs_20 IAMs_20 04 07 34.9
comp=Z,506nm,18.0s
M19K Big River Lodg 100.23 331 P **Pdif** **03 12 46.6 +1.4**
baz=104
UPC Upice 100.40 40 AMS AMS 03 55 50.0
comp=Z,700nm,17.0s
K20K Telida 100.43 333 P **Pdif** **03 12 47.3 +1.2**
baz=104
CHVC Chvalec 100.44 40 AMS AMS 03 55 40.0
H21K Melozitna Rive 100.46 335 IAMs_20 IAMs_20 03 57 39.5
comp=Z,803nm,22.0s
L19K White Mountain 100.51 332 IAMs_20 IAMs_20 04 03 25.3
comp=Z,422nm,19.0s
D23K Nanushuk River 100.53 339 P **Pdif** **03 12 47.8 +1.4**
baz=106
OSTC Ostas 100.54 40 AMS AMS 03 55 50.0
comp=Z,800nm,21.1s
DPC Dobruska-Polom 100.56 41 *ex* x 03 13 21.2
DPC AMS AMS 03 56 10.0
comp=Z,500nm,17.2s
J20K Nowinta River 100.66 334 IAMs_20 IAMs_20 04 04 40.5
comp=Z,569nm,20.0s
J20K Nowinta River 100.66 334 P **Pdif** **03 12 48.1 +1.1**
baz=104
E22K Anaktuvuk Pass 100.72 338 P **Pdif** **03 12 48.3 +1.1**
baz=105
C23K Itkillik River 100.75 340 P **Pdif** **03 12 48.8 +1.6**
baz=106
KRLC Kraliky 100.80 41 AMS AMS 03 55 30.0
comp=Z,400nm,20.1s
TIR Tirane 101.25 50 IAMs_20 IAMs_20 04 06 54.9
comp=Z,442nm,20.0s
OKC Ostrava-Krasne 101.62 41 AMS AMS 03 57 40.0
comp=Z,300nm,22.4s
PSZ Piszkesteto 102.43 44 IAMs_20 IAMs_20 04 01 17.1
comp=Z,478nm,18.0s
KBS Kingsbay 103.96 11 IAMs_20 IAMs_20 03 59 55.0
comp=Z,743nm,22.0s
IDI Anoyia 104.09 57 IAMs_20 IAMs_20 04 07 42.1
comp=Z,486nm,18.0s
UZH Uzhgorod 104.12 43 *e*P **Pdif** **03 13 04.0 +1.3**
KOLS Kolonicke sedl 104.14 43 *e*P **Pdif** **03 13 04.7 +1.8**
KOLS Kolonicke sedl 104.14 43 *e*PDIFF **Pdif** **03 13 04.7 +1.8**
RDOG Red Dog Mine 104.80 337 IAMs_20 IAMs_20 04 10 20.3
comp=Z,584nm,22.0s
PABE Paberze 105.87 36 IAMs_20 IAMs_20 04 01 41.8
comp=Z,435nm,18.0s
MLR Muntele Rosu 106.23 47 IAMs_20 IAMs_20 04 02 34.3
comp=Z,423nm,20.0s
ISP Isparta 108.91 55 IAMs_20 IAMs_20 04 08 06.2
comp=Z,365nm,19.0s
BRTR Keskin Array B 111.47 53 *c i*PKIKP **PKiKP** **03 17 37.7 +3.6**
BRTR pmax pmax
comp=Z,1.0nm,1.0s
OBN Obninsk 113.06 36 IAMs_20 IAMs_20 04 08 23.2
comp=Z,533nm,20.0s
OBN Obninsk 113.06 36 *c i*PKIKP **PKiKP** **03 17 40.1 +3.7**
OBN pmax pmax
comp=Z,4.0nm,0.4s
ANN Anapa 114.33 48 *e*PKIKP PKPdf 03 17 39.1 0.0
ANN MLR MLR
comp=Z,480nm,21.0s
VORR Voronezh 115.01 40 *e*PKIKP PKPdf 03 17 42.0 +1.8
VORR pmax pmax
comp=Z,30nm,0.4s
BILL Bilibino 116.10 339 IAMs_20 IAMs_20 04 11 42.2
comp=Z,469nm,20.0s
BILL Bilibino 116.10 339 *i* PKIKP **PKPdf** **03 17 44.0 +2.1**
BILL pmax pmax
comp=Z,6.0nm,1.2s
ATD Arta Tunnel 116.41 85 IAMs_20 IAMs_20 04 10 10.0
comp=Z,498nm,19.0s
PRGR Permogore 116.46 28 *e*PKIKP **PKiKP** **03 17 43.2 +0.5**
KIV Kislovodsk 118.14 48 *i* PKIKP **PKiKP** **03 17 48.8 +2.1**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,164nm,22.0s
KBZ Khabaz 118.31 49 PKP **PKiKP** **03 17 47.4 +0.5**
comp=Z,6.5nm,1.0s,baz=114,slow=5.0,SNR=4.3
KBZ Khabaz 118.31 49 *c i*PKIKP **PKiKP** **03 17 47.9 +1.0**
RAYN Ar Rayn 120.65 72 **PKPdf** **03 17 52.0 0.0**
RAYN Ar Rayn 120.65 72 PKIKP **PKPdf** **03 17 52.0 0.0**
RAYN MLR MLR
comp=Z,700nm,20.0s
STKA Stephens Creek 123.04 214 PKP **PKiKP** **03 17 57.6 +0.9**
comp=Z,2.7nm,0.8s,baz=91,slow=4.2,SNR=4.8
HNR Honiara 123.17 247 IAMs_20 IAMs_20 04 06 25.7
comp=Z,443nm,22.0s
SEY Seymchan 123.67 338 PKP **PKiKP** **03 17 57.4 +0.6**
comp=Z,3.1nm,0.7s,baz=97,slow=5.4,SNR=7.2
SEY Seymchan 123.67 338 *i* PKIKP **PKiKP** **03 17 59.6 +2.8**
SEY pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 124.59 31 **PKPdf** **03 17 58.3 -0.2**
ARU Arti 124.59 31 *i* PKIKP **PKiKP** **03 18 01.6 +2.8**
ARU 03 19 48.7
ARU SP SP 03 29 48.3 +5.9
ARU SS SS 03 36 44.3 +5.9
PETK Petropavlovsk- 126.27 325 PKP **PKPdf** **03 18 01.9 +0.1**
comp=Z,2.6nm,0.9s,baz=101,slow=7.5,SNR=4.6
PETK Petropavlovsk- 126.27 325 PKPdf **PKPdf** **03 18 01.1 -0.8**
PETK Petropavlovsk- 126.27 325 PKIKP **PKPdf** **03 18 01.1 -0.8**
ABKAR Akbulak array 128.39 39 PKPdf **PKiKP** **03 18 06.7 0.0**
CTA Charters Tower 128.57 228 PKP **PKiKP** **03 18 09.6 +1.6**
comp=Z,8.6nm,0.9s,baz=118,slow=7.3,SNR=4.0
YAK Yakutsk 131.20 347 IAMs_20 IAMs_20 04 20 55.1
comp=Z,446nm,21.0s
BRVK Borovoye 132.14 30 PKPdf **PKPdf** **03 18 12.3 -0.7**
BRVK Borovoye 132.14 30 IAMs_20 IAMs_20 04 19 51.4
comp=Z,438nm,20.0s
BRVK Borovoye 132.14 30 PKIKP **PKPdf** **03 18 12.3 -0.7**
ASAR Alice Springs 133.67 213 PKP **PKPdf** **03 18 17.4 +0.4**
comp=Z,2.7nm,0.8s,baz=125,slow=2.0,SNR=15
ASAR Alice Springs 133.67 213 PKPdf **PKPdf** **03 18 14.5 -2.4**
ASAR Alice Springs 133.67 213 PKIKP **PKPdf** **03 18 14.5 -2.4**
WB2 Warramunga Arr 136.40 217 PKPdf **PKPdf** **03 18 19.5 -2.6**
WRA Warramunga Arr 136.41 217 PKhKP PKPpre 03 18 15.9
comp=Z,0.8nm,0.9s,baz=143,slow=3.9,SNR=5.7
WRA PKP **PKiKP** **03 18 23.3 -0.5**
comp=Z,6.5nm,0.8s,baz=144,slow=1.9,SNR=22
WRAB Tennant Creek 136.41 217 *c i*PKIKP **PKPdf** **03 18 23.2 +1.1**
WRAB pmax pmax
comp=Z,19nm,1.3s
WB0 Warramunga Arr 136.52 217 PKPdf **PKPdf** **03 18 19.3 -3.0**
ZALV Zalesovo Beam 137.54 20 PKhKP PKPpre 03 18 16.0
comp=Z,4.6nm,0.8s,baz=316,slow=4.1,SNR=8.2
ZALV PKP **PKPdf** **03 18 23.6 +0.5**
comp=Z,19nm,0.9s,baz=318,slow=2.0,SNR=26
KURK Kurchatov 137.58 28 PKPpre PKPpre 03 18 16.0
KURK **PKPdf** **03 18 23.5 +0.3**
KURK Kurchatov 137.58 28 PKHKP PKPpre 03 18 16.0
KURK 03 18 23.5
KURK MLR MLR
comp=Z,500nm,20.0s
AAK Ala-Archa 140.43 40 IAMs_20 IAMs_20 04 30 47.9
comp=Z,408nm,21.0s
KLR Kul'dur 141.39 335 *i* PKIKP **PKPdf** **03 18 31.0 +0.7**
KLR pmax pmax
comp=Z,14nm,1.4s
MAKZ Makanchi 141.92 30 PKPpre 03 18 25.8
MAKZ Makanchi 141.92 30 PKHKP PKPpre 03 18 25.8
MAKZ MLR MLR
comp=Z,600nm,21.0s
MK31 Makanchi Array 142.08 29 PKPpre PKPpre 03 18 25.2
MK31 Makanchi Array 142.08 29 PKHKP PKPpre 03 18 25.2
MKAR Makanchi Array 142.08 29 PKhKP PKPpre 03 18 27.1
comp=Z,6.0nm,0.9s,baz=325,slow=1.9,SNR=20
MKAR Makanchi Array 142.08 29 PKPpre PKPpre 03 18 25.4
MKAR Makanchi Array 142.08 29 PKHKP PKPpre 03 18 25.4
FITZ Fitzroy Crossi 142.44 208 PKhKP PKPpre 03 18 29.2
comp=Z,9.8nm,1.0s,baz=178,slow=5.4,SNR=10.0
KSH Kashi 143.02 44 PKP **PKPdf** **03 18 33.3 -0.4**
KSH PKS **PKSdf** **03 22 10.4 +0.9**
KSH LR LR
comp=Z,290nm,20.7s
KSH LR LR
comp=Z,410nm,21.7s
KSH LR LR
comp=Z,670nm,22.0s
MOY Mondy 143.53 8 *e*PKIKP PKPbc 03 18 32.8 +1.4
MOY pmax pmax
comp=Z,68nm,2.7s
ZAK Zakamensk 145.06 6 *e*PKIKP **PKPab** **03 18 36.5 +0.3**
ZAK pmax pmax
comp=Z,85nm,1.6s
USRK Ussuriysk Ar. 145.13 330 PKPbc **PKPdf** **03 18 37.1 +0.1**
comp=Z,12nm,0.8s,baz=35,slow=3.5,SNR=27
HIA Hailar 145.15 347 *i* PKIKP **PKPbc** **03 18 36.6 +0.2**
JSD Sado 145.43 316 **PKPdf** **03 18 34.8 -2.9**
MDJ Mudanjiang 145.94 332 PKPbc **PKPbc** **03 18 39.5 +0.5**
BNX BinXian 145.95 336 ⇓PKPbc **PKPbc** **03 18 39.1 +0.1**
MAJO Matsushiro 146.24 314 PKPbc **PKPdf** **03 18 40.0 +0.8**
MAJO Matsushiro 146.24 314 PKP2 **PKPdf** **03 18 40.0 +0.8**
MJAR Matsushiro Arr 146.24 314 PKPbc **PKPdf** **03 18 38.9 -0.2**
comp=Z,24nm,0.8s,baz=31,slow=1.1,SNR=45
WMQ Urumqi 146.82 28 *e*PKPbc **PKPab** **03 18 43.3 +0.3**
WMQ PKPab **pPKPdf** **03 18 45.1 +0.2**
WMQ LR LR
comp=Z,290nm,22.9s
WMQ LR LR
comp=Z,210nm,20.1s
WMQ LR LR
comp=Z,380nm,23.7s
SONM Songino Array 147.81 2 PKPbc **PKPbc** **03 18 45.3 +0.9**
comp=Z,24nm,0.9s,baz=335,slow=1.7,SNR=52
CN2 Changchun 148.33 336 PKPbc **PKPab** **03 18 48.8 -0.1**
CN2 PP PP 03 22 24.6 +11
CN2 LR LR
comp=N,400nm,20.0s
CN2 LR LR
comp=E,300nm,20.0s
CN2 LR LR
comp=Z,500nm,20.0s
PCHI Peechi 148.45 95 *e*P **PKPbc** **03 18 47.5 +0.5**
BATI Baumata 150.22 212 PKPbc **PKiKP** **03 18 53.4 +1.2**
comp=Z,36nm,0.6s,baz=119,slow=2.7,SNR=5.4
JMN Monobe 150.72 313 PKPbc **PKPbc** **03 18 50.3 -1.9**
XLT XiLinHaoTe 151.02 348 *i* PKPbc **PKPbc** **03 18 53.0 +0.4**
XLT PKPab **sPKPab** **03 19 08.0 +1.4**
HYBB Hyderabad (bro 151.39 82 *e*PKiKP **PKPbc** **03 18 54.3 +0.1**
HYBB *e*P **sPKPbc** **03 19 00.2 -0.4**
SEHB SEOHWA 151.40 326 PKPdf **PKPdf** **03 18 45.2 -2.3**
KSRS Korea Array 152.16 325 PKP **PKPdf** **03 18 50.0 +1.4**
comp=Z,2.6nm,0.9s,baz=71,slow=0.6,SNR=12
KSRS PKPbc **PKiKP** **03 18 56.2 +0.6**
comp=Z,16nm,1.0s,baz=34,slow=1.5,SNR=22
HHC Hu-ho-hao-te 154.68 354 *e*PKPbc **PKPdf** **03 18 47.8 -4.5**
HHC LR LR
comp=Z,830nm,22.2s
HHC LR LR

comp=Z,380nm,22.2s
HHC LR LR
comp=Z,2μm,22.8s
BJT Baijiatuau 154.72 346 IAMs_20 IAMs_20 04 34 53.1
comp=Z,291nm,20.0s
GTA Gaotai 155.12 16 ⇑PKP **PKPdf** **03 18 56.3 +3.3**
GTA LR LR
comp=Z,550nm,24.0s
GTA LR LR
comp=Z,180nm,24.4s
GTA LR LR
comp=Z,800nm,23.6s
GOMU GeErMu 156.19 28 *e*PKP **PKPdf** **03 18 56.8 +2.0**
GOMU SS SS 03 42 48.0 -0.5
GOMU LR LR
comp=Z,350nm,22.6s
GOMU LR LR
comp=Z,240nm,22.6s
GOMU LR LR
comp=Z,310nm,24.7s
KAPI Kappang 156.62 210 PKPab **PKPab** **03 19 25.5 +1.3**
comp=Z,11nm,0.5s,baz=158,slow=5.7,SNR=6.5
KAPI Kappang 156.62 210 PKPdf **PKPdf** **03 18 52.6 -2.9**
KAPI Kappang 156.62 210 PKIKP **PKPdf** **03 18 52.6 -2.9**
HNS HongShan 157.56 347 ⇓PKP **PKPdf** **03 19 00.3 +4.3**
HNS PKPab **PKPab** **03 19 28.4 +0.7**
HNS PP **PP** **03 23 08.0 +2.3**
HNS *e*SS SS 03 43 03.8 +2.2
HNS LR LR
comp=Z,380nm,22.6s
HNS LR LR
comp=Z,350nm,21.2s
HNS LR LR
comp=Z,670nm,24.7s
LSA Lhasa 158.85 45 IAMs_20 IAMs_20 04 35 47.2
comp=Z,343nm,22.0s
LZH Lanzhou 159.20 10 *e*PKP PKPdf 03 18 46.0 -12
LZH sPKP 03 19 03.6
LZH PKP **PKPab** **03 19 33.4 -1.7**
LZH LR LR
comp=N,450nm,18.2s
LZH LR LR
comp=E,300nm,19.6s
LZH LR LR
comp=Z,1μm,19.9s
NJ2 Nanjing 161.02 332 *e*PKP **PKPdf** **03 18 59.8 -0.4**
XAN Xi'an 161.62 358 PKP **PKPdf** **03 19 02.3 +1.4**
XAN AMB AMB
comp=Z,410nm,6.7s
XAN LR LR
comp=Z,440nm,18.7s
XAN LR LR
comp=Z,270nm,19.7s
XAN LR LR
comp=Z,910nm,20.6s
CD2 Chengdu 164.18 15 PKP **PKPdf** **03 19 02.0 -1.4**
PZH PanZhiHua 167.52 28 PKP **PKPdf** **03 19 06.8 +0.4**
PZH PP **PP** **03 23 58.0 -1.2**
PZH AMB AMB
comp=Z,80nm,7.7s
PZH LR LR
comp=Z,290nm,24.0s
PZH LR LR
comp=Z,280nm,24.5s
PZH LR LR
comp=Z,600nm,25.0s
KMI Kunming 169.16 28 ⇑PKP **PKPdf** **03 19 08.5 +0.9**
KMI LR LR
comp=Z,400nm,20.5s
KMI LR LR
comp=Z,340nm,18.6s
KMI LR LR
comp=Z,530nm,30.0s
CMAR Chiang Mai Arr 170.57 71 PKP **PKPdf** **03 19 08.4 +0.1**
comp=Z,2.4nm,0.3s,baz=293,slow=2.2,SNR=6.5
CMAR PKPab **PKPab** **03 20 25.8 +0.2**
comp=Z,3.5nm,0.8s,baz=284,slow=5.8,SNR=11
QIZ Qiongzhong 176.29 337 PKP **PKPdf** **03 19 09.0 -1.5**
QIZ PP **PP** **03 24 42.1 -0.1**
QIZ SS SS 03 46 13.4 +2.0
QIZ LR LR
comp=Z,790nm,27.7s

*NEIC **15** 03:16:16.4±2.3,22°.20S±0°.10×173°.5E±0°.1,h10km±2km, mb4.7/25,Error ellipse: s-maj=24.0km s-min=3.4km az=47.0*
*IDC **15** 03:16:22.7±1.1,22°.98S×172°.45E,h0km,mb4.1/10, mbtmp4.1/12,ML3.7/2,MS4.2/16,Error ellipse: s-maj=27.8km s-min=23.8km az=20.0*
*NOU **15** 03:16:44.4,22°.37S×171°.18E,h0km,MLv4.3/6,Southeast of Loyalty Islands*
ISC 15 03:16:24.6±0.7,22°.8S±0°.1×172°.90E±0°.09,h35km,n86, σ1§57/66,mb4.3/16,MS4.3/12,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.70**	**285**		**Pn**	**03 17 32.6**	**-0.4**
MARNC	**Mare, Loyalty**	**4.70**	**285**	P	**Pn**	**03 17 33.8**	**+0.8**
PINNC	**Pines Island,**	**5.04**	**271**	Pn	**Pn**	**03 17 38.2**	**+0.6**
YATNC	**Mamie plateau,**	**5.60**	**276**	P	**Pn**	**03 17 46.4**	**+0.9**
OUENC	**Ouen Island, N**	**5.61**	**273**	Pn	**Pn**	**03 17 46.9**	**+1.4**
OUENC	**Ouen Island, N**	**5.61**	**273**	P	**Pn**	**03 17 46.6**	**+1.1**
ONTNC	**Ouen Toro**	**5.97**	**273**	Pn	**Pn**	**03 17 52.5**	**+1.9**
ONTNC	**Ouen Toro**	**5.97**	**273**	P	**Pn**	**03 17 52.6**	**+2.0**
DZM	**Mont Dzumac**	**6.01**	**276**	Pn	**Pn**	**03 17 49.8**	**-1.3**
	2.5nm,0.3s,baz=126,slow=17,SNR=22						
DZM				Sn	**Sn**	**03 18 59.3**	**+0.4**
	11nm,0.3s,baz=300,slow=23,SNR=8.1						
	6.0nm,0.3s						
DZM	**Mont Dzumac**	**6.01**	**276**	Pn	**Pn**	**03 17 51.7**	**+0.5**
DZM	**Mont Dzumac**	**6.01**	**276**	P	**Pn**	**03 17 52.0**	**+0.8**
NOUC	**Port Laguerre**	**6.14**	**275**	P	**Pn**	**03 17 54.5**	**+1.7**
KOUNC	**Koumac, New Ca**	**8.31**	**284**	Pn	**Pn**	**03 18 25.2**	**+2.6**
RAO	**Raoul Island**	**10.47**	**130**	LR	LR	03 22 08.0	
	comp=Z,1μm,19.4s,baz=326,slow=32						
URZ	**Urewera**	**15.84**	**168**	Pn	**P**	**03 20 08.1**	**-0.2**
	0.3nm,0.3s,baz=5.1,slow=11,SNR=5.5						
URZ				LR	LR	03 24 57.7	
	comp=Z,1μm,19.2s,baz=27,slow=33						
	4.9nm,0.6s						
URZ	**Urewera**	**15.84**	**168**	Pn	**Pn**	**03 20 05.0**	**+0.2**
URZ				IAmb	IAmb	03 20 33.0	
	comp=Z,74nm,1.5s						
BKZ	**Black Stump Fm**	**16.61**	**170**		**P**	**03 20 18.3**	**+1.4**
AFI	**Afiamalu**	**17.01**	**61**	LR	LR	03 25 29.4	
	comp=Z,328nm,21.1s,baz=242,slow=31						
BFZ	**Birch Farm**	**18.06**	**172**	P	**Pn**	**03 20 32.4**	**-0.3**
BFZ				IAmb	IAmb	03 20 40.2	
	comp=Z,30nm,1.0s						
HNR	**Honiara**	**18.18**	**315**	LR	LR	03 26 36.8	
	comp=Z,870nm,18.9s,baz=144,slow=34						
NNZ	**Nelson**	**18.38**	**179**	P	**Pn**	**03 20 39.3**	**+2.8**
NNZ				IAmb	IAmb	03 20 59.7	
	comp=Z,76nm,1.4s						
TUWZ	**Tuamarina**	**18.61**	**178**	P	**Pn**	**03 20 39.6**	**+0.3**
BSWZ	**Blackbirch Sta**	**18.89**	**178**	P	**Pn**	**03 20 44.9**	**+2.2**
LTZ	**Lake Taylor**	**19.95**	**181**	P	**Pn**	**03 20 56.6**	**+1.2**
LTZ				IAmb	IAmb	03 21 05.4	
	comp=Z,93nm,1.5s						
EIDS	**Eidsvold**	**20.08**	**258**	P	**P**	**03 20 55.7**	**+0.6**
ARMA	**Armidale**	**20.46**	**244**	P	Pn	03 21 03.4	+1.8
ARMA				IAmb	IAmb	03 21 11.5	
	comp=Z,26nm,1.2s						
OXZ	**Oxford**	**20.49**	**182**	P	Pn	03 21 03.0	+1.3
OXZ				IAmb	IAmb	03 21 10.8	
	comp=Z,37nm,0.9s						
RPZ	**Rata Peaks**	**20.93**	**184**	LR	LR	03 28 32.3	
	comp=Z,1μm,19.8s,baz=4.0,slow=35						
CTA	**Charters Tower**	**24.93**	**271**	P	**P**	**03 21 46.1**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=81,slow=8.7,SNR=3.1						
CTA				LR	LR	03 30 43.8	
	comp=Z,494nm,19.9s,baz=86,slow=35						
	comp=Z,2.2nm,0.5s						
CTAO	**Charters Tower**	**24.93**	**271**	P	**P**	**03 21 44.1**	**-0.7**
CTAO				IAmb	IAmb	03 21 57.4	
	comp=Z,34nm,1.5s						
STKA	**Stephens Creek**	**29.16**	**245**	P	**P**	**03 22 22.3**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=49,slow=9.3,SNR=2.2						
	comp=Z,1.5nm,0.7s						
STKA	**Stephens Creek**	**29.16**	**245**	P	**P**	**03 22 24.5**	**+1.9**
BBOO	**Buckleboo**	**33.93**	**245**	P	**P**	**03 23 02.8**	**-1.8**
AS31	**Alice Springs**	**35.77**	**261**	P	**P**	**03 23 19.4**	**-1.1**
ASAR	**Alice Springs**	**35.77**	**261**	P	**P**	**03 23 20.5**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=86,slow=8.9,SNR=11						
ASAR				LR	LR	03 37 26.3	
	comp=Z,204nm,18.6s,baz=94,slow=36						
	comp=Z,2.1nm,0.9s						
ASAR	**Alice Springs**	**35.77**	**261**	P	**P**	**03 23 18.8**	**-1.8**
WB0	**Warramunga Arr**	**35.94**	**267**	P	**P**	**03 23 20.9**	**-1.1**
WB0				IAmb	IAmb	03 23 48.0	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**35.94**	**267**	P	**P**	**03 23 20.4**	**-1.7**
WB2				IAmb	IAmb	03 23 41.6	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**35.95**	**267**	P	**P**	**03 23 22.1**	**0.0**
WRAB				IAmb	IAmb	03 23 26.0	
	comp=Z,19nm,1.1s						
WRA	**Warramunga Arr**	**35.95**	**267**	P	**P**	**03 23 20.2**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=96,slow=8.5,SNR=9.4						
WRA				LR	LR	03 38 00.2	
	comp=Z,511nm,19.0s,baz=90,slow=36						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**35.95**	**267**	P	**P**	**03 23 20.5**	**-1.7**
FORT	**Forrest**	**40.60**	**249**	P	**P**	**03 23 59.9**	**-1.2**
MTN	**Manton Dam**	**40.85**	**277**	P	**P**	**03 24 01.6**	**-1.7**
MTN				IAmb	IAmb	03 24 19.4	
	comp=Z,30nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**41.47**	**351**	T	T	04 07 41.5	
	baz=173,slow=74,SNR=69						
H11S3	**WAKE ISLAND Hy**	**41.48**	**351**	T	T	04 07 42.8	
	baz=173,slow=74,SNR=55						
H11S1	**WAKE ISLAND Hy**	**41.49**	**351**	T	T	04 07 43.2	
	baz=173,SNR=60						
FITZ	**Fitzroy Crossi**	**44.38**	**267**	P	**P**	**03 24 31.1**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=104,slow=17,SNR=2.0						
	comp=Z,1.8nm,0.5s						
GUMO	**Guam**	**45.40**	**320**	LR	LR	03 41 06.9	
	comp=Z,268nm,21.9s,baz=138,slow=33						
BATI	**Baumata**	**48.62**	**277**	LR	LR	03 47 33.8	
	comp=Z,667nm,18.0s,baz=128,slow=39						
MBWA	**Marble Bar**	**49.11**	**261**	P	**P**	**03 25 08.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**49.75**	**245**	P	**P**	**03 25 14.2**	**+0.5**
MORW	**Morawa**	**51.11**	**250**	P	**P**	**03 25 23.3**	**-0.8**
KAPI	**Kappang**	**54.21**	**281**	LR	LR	03 49 17.4	
	comp=Z,76nm,19.7s,baz=116,slow=37						
DAV	**Davao City (W)**	**54.98**	**297**	LR	LR	03 49 36.5	
	comp=Z,91nm,18.4s,baz=144,slow=36						
VNDA	**Vanda**	**55.04**	**183**	P	**P**	**03 25 54.3**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=6.9,slow=6.7,SNR=2.2						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**55.04**	**183**	P	**P**	**03 25 51.5**	**-0.8**
TOLI2	**Tolitoli**	**56.00**	**288**	P	**P**	**03 25 57.0**	**-3.1**
TOLI2				IAmb	IAmb	03 26 08.3	
	comp=Z,6.1nm,0.8s						
QSPA	**South Pole Qui**	**67.28**	**180**	P	**P**	**03 27 15.6**	**0.0**
RPN	**Rapa Nui**	**69.58**	**112**	LR	LR	03 50 19.0	
	comp=Z,182nm,20.9s,baz=323,slow=29						
MAW	**Mawson**	**76.43**	**202**	P	**P**	**03 28 10.2**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=144,slow=8.3,SNR=5.3						
	comp=Z,2.2nm,0.8s						
MAW	**Mawson**	**76.43**	**202**	P	**P**	**03 28 09.4**	**-0.8**
PETK	**Petropavlovsk-**	**76.72**	**351**	P	**P**	**03 28 15.6**	**+3.7**
	comp=Z,1.2nm,0.7s,baz=143,slow=5.2,SNR=2.8						
	comp=Z,1.2nm,0.7s						
BELA	**Belgrano 2**	**78.26**	**174**	P	**P**	**03 28 18.4**	**-1.9**
BELA				IAmb	IAmb	03 28 28.1	
	comp=Z,3.8nm,0.8s						
TROLL	**Troll, Antarti**	**85.22**	**183**	P	**P**	**03 28 56.9**	**-0.4**
SNAA	**Sanae**	**85.75**	**181**	P	**P**	**03 28 59.0**	**-0.8**
SNAA	**Sanae**	**85.75**	**181**	LR	LR	04 06 51.6	
	comp=Z,117nm,18.1s,baz=248,slow=35						
VNA3	**Neumayer Olymp**	**86.20**	**179**	P	**P**	**03 29 01.0**	**-1.0**
VNA2	**Neumayer--Watz**	**86.54**	**180**	P	**P**	**03 29 01.7**	**-1.9**
	baz=178,slow=4.8						
USHA	**Ushuaia**	**86.68**	**149**	LR	LR	03 59 48.6	
	comp=Z,248nm,20.7s,baz=220,slow=30						
VNA1	**Neumayer--Stat**	**86.81**	**180**	P	**P**	**03 29 06.7**	**+1.8**
YBH	**Yreka Blue Hor**	**87.53**	**42**	LR	LR	04 01 42.7	
	comp=Z,128nm,19.3s,baz=122,slow=31						
ILAR	**Eielson Array**	**92.63**	**16**	P	P	03 29 39.0	+6.8
	comp=Z,0.5nm,0.8s,baz=322,slow=32,SNR=2.6						
	comp=Z,0.5nm,0.8s						
PLCA	**Paso Flores**	**93.62**	**137**	P	P	03 29 43.5	+6.0
	comp=Z,3.5nm,1.0s,baz=112,slow=5.0,SNR=3.1						
	comp=Z,3.5nm,1.0s						
CLL	**Collm**	**147.54**	**336**	*i* (PKP)	**PKPbc**	**03 36 04.8**	**0.0**
CONA	**Conrad Observa**	**148.93**	**329**	*e*P	PKPab	03 36 22.2	+9.4
	comp=Z,2.2nm,0.9s						
GERES	**GERESS Array B**	**149.21**	**333**	PKPbc	**PKiKP**	**03 36 10.8**	**+0.2**
	comp=Z,1.4nm,1.1s,baz=54,slow=5.1,SNR=4.1						
SOKA	**Soboth**	**150.21**	**329**	*e*P	**PKPab**	**03 36 17.8**	**-0.2**
	comp=Z,2.6nm,1.4s						
OBKA	**Obir**	**150.57**	**329**	*e*P	**PKPab**	**03 36 16.6**	**-3.0**
	comp=Z,1.2nm,0.7s						
WTTA	**Wattenberg**	**151.31**	**333**	*e*P	**PKPab**	**03 36 21.5**	**-1.2**
	comp=Z,2.3nm,0.9s						
ABTA	**Abfaltersbach**	**151.33**	**331**	*e*P	**PKPab**	**03 36 25.9**	**+3.2**
	comp=Z,1.6nm,0.8s						
MOTA	**Moosalm**	**151.47**	**334**	*e*P	PKPab	03 36 31.3	+8.0
	comp=Z,3.6nm,0.9s						
RETA	**Reutte**	**151.49**	**334**	*e*P	**PKiKP**	**03 36 14.7**	**-0.6**
	comp=Z,1.1nm,0.9s						
SQTA	**Sankt Quirin**	**151.52**	**333**	*e*P	**PKPab**	**03 36 25.0**	**+1.5**
	comp=Z,3.2nm,1.1s						
FETA	**Feichten**	**151.88**	**334**	*e*P	**PKPab**	**03 36 27.5**	**+2.4**
	comp=Z,3.9nm,1.5s						
DAVA	**Damuels**	**152.00**	**335**	*e*P	**PKPbc**	**03 36 13.0**	**-3.2**
	comp=Z,3.4nm,1.3s						
TORD	**Tondi Ar. Bea**	**167.28**	**223**	PKPab	**PKPab**	**03 37 33.8**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=107,slow=5.1,SNR=3.9						

*IDC **15** 03:42:25.9±1.2,27°.26S×176°.48W,h0km,mb3.8/6, mbtmp3.8/7,ML4.5/1,MS4.1/3,Error ellipse: s-maj=46.3km s-min=21.1km az=139.0*
ISC 15 03:42:30.6±1.0,27°.4S±0°.2×176°.5W±0°.2,h34km,n13, σ1§09/11,mb3.8/6,MS4.1/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.27**	**214**	Pn	**Pn**	**03 43 06.8**	**+1.2**
	112nm,0.3s,baz=78,slow=19,SNR=4.8						
RAO				Sn	**Sb**	**03 43 38.0**	**-0.5**
	177nm,0.3s,baz=278,slow=24,SNR=5.5						
	188nm,0.3s						
CTA	**Charters Tower**	**34.79**	**274**	LR	LR	04 02 58.7	
	comp=Z,241nm,18.4s,baz=108,slow=36						
STKA	**Stephens Creek**	**36.57**	**253**	P	**P**	**03 49 32.6**	**-0.8**
	0.5nm,0.0s,baz=104,slow=17,SNR=2.9						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**44.71**	**263**	P	**P**	**03 50 40.2**	**-0.5**
	0.3nm,0.5s,baz=97,slow=7.1,SNR=5.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**45.43**	**268**	P	**P**	**03 50 45.3**	**-1.1**
	0.6nm,0.5s,baz=108,slow=7.0,SNR=1.9						
	0.6nm,0.5s						
LEM	**Lembang**	**74.40**	**270**	LR	LR	04 28 03.8	
	comp=Z,237nm,18.2s,baz=172,slow=37						
KSRS	**Korea Array**	**82.95**	**319**	P	**P**	**03 54 54.1**	**+2.1**
	0.6nm,0.7s,baz=161,slow=5.2,SNR=2.8						
	0.6nm,0.7s						
NVAR	**Mina Array Bea**	**85.11**	**42**	P	**P**	**03 55 03.2**	**-0.1**
	1.1nm,0.8s,baz=223,slow=8.6,SNR=6.8						
	1.1nm,0.8s						
TXAR	**Lajitas Array**	**89.62**	**57**	P	**P**	**03 55 24.3**	**-0.9**
	0.9nm,1.0s,baz=210,slow=5.0,SNR=5.9						
	0.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**93.69**	**289**	LR	LR	04 36 50.5	
	comp=Z,67nm,21.4s,baz=320,slow=35						
NOA	**NORSAR Array B**	**145.94**	**353**	PKPbc	**PKPab**	**04 02 06.5**	**-0.1**
	1.7nm,1.1s,baz=8.5,slow=2.5,SNR=4.3						
AKASG	**Malin Array Be**	**149.61**	**327**	PKPbc	**PKiKP**	**04 02 17.9**	**+0.6**
	0.3nm,0.4s,baz=43,slow=1.9,SNR=4.7						
BRTR	**Kebkin Array B**	**152.18**	**304**	PKPab	**PKPab**	**04 02 32.2**	**-0.5**
	0.3nm,0.6s,baz=69,slow=4.2,SNR=4.4						

IDC 15 03:49:37.0±48.0,16°.76S×177°.27W,h0km,mb4.2/3, mbtmp4.2/3,Error ellipse: s-maj=891.5km s-min=159.1km az=78.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.13**	**240**	P	P	03 57 15.4	+0.6
	1.4nm,0.4s,baz=94,slow=9.5,SNR=5.3						
	1.4nm,0.4s						
WRA	**Warramunga Arr**	**45.91**	**258**	P	P	03 58 01.6	-0.3
	0.6nm,0.5s,baz=96,slow=7.6,SNR=18						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**46.15**	**253**	P	P	03 58 03.1	-0.6
	5.6nm,0.6s,baz=88,slow=8.3,SNR=78						
	5.6nm,0.6s						

IDC 15 03:51:15.8±4.9,31°.69N×140°.93E,h0km,mb3.4/3, mbtmp3.3/4,ML2.0/1,MS4.4/1,Error ellipse: s-maj=180.6km s-min=31.1km az=72.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**5.34**	**336**	Pn	Pn	03 52 35.6	-1.1
	0.1nm,0.3s,baz=151,slow=11,SNR=4.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**46.79**	**306**	P	P	03 59 47.4	+0.3
	0.4nm,0.6s,baz=99,slow=7.5,SNR=4.1						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**49.11**	**312**	P	P	04 00 04.8	-0.1
	0.3nm,0.6s,baz=83,slow=7.0,SNR=4.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**51.73**	**188**	P	P	04 00 24.6	-0.3
	0.5nm,0.8s,baz=2.6,slow=7.6,SNR=1.6						
	0.5nm,0.8s						
AAK	**Ala-Archa**	**52.82**	**302**	LR	LR	04 22 04.6	
	comp=Z,370nm,21.9s,baz=323,slow=35						

*IDC **15** 04:23:53.4±0.8,6°.78N×72°.97W,h159km±15km,mb3.3/3, mbtmp3.8/5,Error ellipse: s-maj=49.9km s-min=8.3km az=132.0*
*RSNC **15** 04:23:54.0±1.4,6°.81N×73°.15W,h152km±5km,ML3.4, Mw3.8*
ISC 15 04:23:53.0±0.8,6°.81N±0°.03×73°.12W±0°.03,h159km±6km, n42,σ1§96/78,mb3.7/3,4C-5D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.22**	**196**	⇓*i*P	**Pn**	**04 24 14.6**	**-0.2**
BARC				*e*S	**Sn**	**04 24 29.8**	**-1.6**
BARC				*i*		04 24 31.3	
	comp=Z,849nm,0.4s						
BRRC	**Barranca, Sant**	**0.66**	**297**	⇑*i*P	**Pn**	**04 24 16.4**	**+0.2**
BRRC				*e*S	**Sn**	**04 24 33.6**	**-0.3**
BRRC				*i*		04 24 36.2	
	comp=Z,350nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**38**	⇑*e*P	**Pn**	**04 24 17.4**	**+0.5**
PAMC				*e*S	**Sn**	**04 24 34.6**	**-0.5**
PAMC				*i*		04 24 37.4	
	comp=Z,340nm,0.5s						
RUSC	**La Rusia**	**0.91**	**178**	⇓*e*P	**Pn**	**04 24 18.5**	**0.0**
RUSC				*e*S	**Sn**	**04 24 37.1**	**-0.9**
RUSC				*i*		04 24 38.7	
	comp=Z,304nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.35**	**259**	*e*P	**Pn**	**04 24 21.0**	**-0.9**
PTBC				*e*S	**Sn**	**04 24 42.5**	**-1.5**
PTBC				*i*		04 24 47.7	
	comp=Z,327nm,0.4s						
TAMC	**Tame, Arauca**	**1.37**	**106**	*i*P	**Pn**	**04 24 22.9**	**+0.9**
TAMC				*i*		04 24 43.9	
	comp=Z,211nm,0.4s						
TAMC				*e*S	**Sn**	**04 24 44.5**	**+0.3**
OCAC	**Ocana**	**1.44**	**352**	*e*P	**Pn**	**04 24 22.6**	**-0.2**
OCAC				*e*S	**Sn**	**04 24 45.0**	**-0.7**
OCAC				*i*		04 24 53.1	
	comp=Z,575nm,0.5s						
SPBC	**San Pablo de B**	**1.49**	**220**	*e*P	**Pn**	**04 24 23.6**	**+0.3**
SPBC				*e*S	**Sn**	**04 24 45.9**	**-0.7**
SPBC				*i*		04 24 53.6	
	comp=Z,485nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**292**	*e*P	**Pn**	**04 24 26.9**	**-0.2**
ZARC				*e*S	**Sn**	**04 24 52.3**	**-0.9**
ZARC				*i*		04 24 59.1	
	comp=Z,425nm,0.4s						
NORC	**Norcasia**	**2.13**	**235**	*e*P	**Pn**	**04 24 30.6**	**+0.3**
NORC				*e*S	**Sn**	**04 24 58.0**	**-1.0**
NORC				*i*		04 25 09.9	
	comp=Z,146nm,0.4s						
CHIC	**Chingaza**	**2.25**	**196**	*e*P	**Pn**	**04 24 32.7**	**+0.7**
CHIC				*e*S	**Sn**	**04 25 01.9**	**-0.2**
CHIC				*i*		04 25 07.2	
	comp=Z,143nm,0.3s						
ROSC	**El Rosal**	**2.29**	**211**	P	**Pn**	**04 24 34.4**	**+1.8**
	comp=Z,117nm,0.4s,baz=310,slow=9.0,SNR=106						
ROSC				S	**Sn**	**04 25 04.8**	**+1.9**
	comp=Z,213nm,0.3s,baz=72,slow=20,SNR=6.5						
ROSC	**El Rosal**	**2.29**	**211**	*e*P	**Pn**	**04 24 34.3**	**+1.8**
ROSC				*e*S	**Sn**	**04 25 04.7**	**+1.7**
HELC	**Santa Helena**	**2.47**	**256**	*e*P	**Pn**	**04 24 35.4**	**+0.8**
HELC				*e*S	**Sn**	**04 25 06.3**	**-0.3**
HELC				*i*		04 25 12.8	
	comp=Z,164nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**292**	*e*P	**Pn**	**04 24 34.4**	**-1.1**
UREC				*e*S	**Sn**	**04 25 05.0**	**-3.3**
UREC				*i*		04 25 15.2	
	comp=Z,151nm,0.4s						
SOCV	**Socops**	**2.68**	**57**	*e*P	**Pn**	**04 24 37.2**	**+0.4**
SOCV				*e*S	**Sn**	**04 25 09.4**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*e*P	**Pn**	**04 24 38.8**	**+0.9**
GUY2C				*e*S	**Sn**	**04 25 15.9**	**+3.4**
GUY2C				*i*		04 25 20.9	
	comp=Z,240nm,0.4s						
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**04 24 39.4**	**+1.8**
LL1C				*e*S	**Sn**	**04 25 13.4**	**+1.1**
PTGC	**Puerto Gaitan,**	**2.77**	**159**	⇓*e*P	**Pn**	**04 24 37.7**	**-0.3**
PTGC				*e*S	**Sn**	**04 25 10.7**	**-2.0**
PTGC				*i*		04 25 16.0	
	comp=Z,87nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.91**	**357**	*e*P	**Pn**	**04 24 39.1**	**-0.6**
LL6C				*e*S	**Sn**	**04 25 11.6**	**-4.3**
LL6C				*i*		04 25 20.7	
	comp=Z,48nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*e*P	**Pn**	**04 24 42.0**	**+0.8**
CBOC				*e*S	**Sn**	**04 25 17.5**	**-1.0**
CBOC				*i*		04 25 29.6	
	comp=Z,56nm,0.4s						
DBBC	**Dabeiba**	**3.08**	**274**	⇑*e*P	**Pn**	**04 24 42.0**	**+0.2**
DBBC				*e*S	**Sn**	**04 25 17.7**	**-1.9**
DBBC				*i*		04 25 20.2	
	comp=Z,76nm,0.4s						
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**04 24 44.1**	**+0.4**
	comp=Z,73nm,0.4s,baz=237,slow=7.6,SNR=33						
SDV				S	**Sn**	**04 25 21.0**	**-1.9**
	comp=Z,39nm,0.5s,baz=47,slow=10.0,SNR=10						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**04 24 44.7**	**+1.0**
ARGC				*e*S	**Sn**	**04 25 23.9**	**+0.9**
ARGC				*i*		04 25 32.8	
	comp=Z,46nm,0.4s						
ANIL	**Santa Ana**	**3.23**	**225**	*e*P	**Pn**	**04 24 44.9**	**+0.8**
ANIL				*e*S	**Sn**	**04 25 23.7**	**+0.2**
**PR

GARC				*e*S	**Sn**	**04 26 01.7**	**-6.8**
GARC				*i*		04 26 11.2	
	comp=Z,44nm,0.5s						
POPC	**Popayan, Colom**	**5.53**	**220**	*e*P	**Pn**	**04 25 13.9**	**0.0**
POPC				*e*S	Sn	04 26 08.8	-8.2
FLOC	**Florencia**	**5.77**	**206**	*e*P	**Pn**	**04 25 17.0**	**+0.1**
FLOC				*e*S	**Sn**	**04 26 20.3**	**-2.3**
FLOC				*i*		04 26 56.5	
	comp=Z,8.2nm,0.4s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	*e*P	**Pn**	**04 25 24.8**	**+0.9**
BBAC				*e*S	**Sn**	**04 26 30.2**	**-4.9**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**04 30 44.4**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=134,slow=11,SNR=3.5						
	comp=Z,0.3nm,0.6s						
SCHQ	**Schefferville**	**48.15**	**5**	P	**P**	**04 32 18.0**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=197,slow=14,SNR=2.0						
	comp=Z,1.2nm,0.6s						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**04 34 05.1**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=132,slow=6.8,SNR=6.9						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**04 43 26.5**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=97,slow=2.3,SNR=4.7						

IDC 15 04:35:29.6±1.7, 24°82N×99°65E, h0km, mb3.6/3, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=51.6km s-min=18.7km az=90.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.36**	**186**	Pn	Pn	04 37 03.9	-0.8
	0.7nm,0.3s,baz=4.7,slow=13,SNR=5.9						
CMAR				Pg	Pg	04 37 26.6	-5.0
	1.8nm,0.3s,baz=358,slow=15,SNR=5.2						
CMAR				Lg	Lg	04 38 52.0	
	1.8nm,0.3s,baz=1.9,slow=30,SNR=12						
	1.7nm,0.3s						
SONM	**Songino Array**	**23.59**	**11**	P	P	04 40 42.1	+0.1
	0.6nm,0.4s,baz=204,slow=14,SNR=3.7						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**25.95**	**332**	P	P	04 41 03.7	0.0
	0.6nm,0.6s,baz=134,slow=10,SNR=5.7						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**30.49**	**333**	P	P	04 41 44.1	0.0
	0.2nm,0.2s,baz=139,slow=9.4,SNR=2.4						
	0.2nm,0.2s						

*BJI **15** 04:36:43.3±0.0, 33°17N×132°28E, h80km, mb4.5/45, mB4.8/17, Ms3.9/10, Ms7.3/6/11*
*IDC **15** 04:36:47.3±0.6, 33°42N×131°79E, h74km±4km, mb3.7/16, mbtmp4.2/21, MS3.7/10, Error ellipse: s-maj=16.0km s-min=10.6km az=48.0*
*NEIC **15** 04:36:48.0±2.1, 33°48N±0°06×131°90E±0°07, h72km±7km, mb4.9/41, Error ellipse: s-maj=9.2km s-min=7.7km az=152.0*
*NIED **15** 04:36:47.6, 33°49N×131°91E, h71km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr=0.46; Mθθ=4.60; Mφφ=5.06; Mrθ=1.58; Mθφ=0.75; Mφr=5.89; Fault plane solution: M0=7.48000×10^15^ NP1: φs=304.00000°, δ=39.00000°, λ=178.00000°. NP2: φs=213.00000°, δ=89.00000°, λ=51.00000°.*
*JMA **15** 04:36:47.6±0.1, 33°5N±0°2×131°9E±0°2, h71km, MD4.3/40, MW4.6/40, IYONADA SETONAIKAI*
JMA Felt III J1 at IYONADA SETONAIKAI .
ISC 15 04:36:47.6±0.4, 33°45N±0°03×131°92E±0°03, h74km±4km, n163, σ1°16/146, mb4.7/41, 3C-16D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKI	**Kunimi**	**0.35**	**301**	⇓*i*P	**Pn**	**04 36 59.1**	**-0.5**
JKI				⇓S	**Sn**	**04 37 07.5**	**-0.8**
JKI	**Kunimi**	**0.35**	**301**	A	A	04 36 59.1	
	comp=E,37nm,0.4s,comp=E,72nm,1.4s						
JUS	**Usuki**	**0.41**	**201**	⇓*i*P	**Pn**	**04 37 00.0**	**-0.1**
JUS				⇓S	**Sn**	**04 37 08.9**	**-0.3**
JUS	**Usuki**	**0.41**	**201**	A	A	04 37 00.0	
	comp=E,38nm,1.4s,comp=E,39nm,0.8s						
OIT2	**Oita 2**	**0.43**	**246**	P	**Pn**	**04 36 59.7**	**-0.5**
OIT2				S	**Sn**	**04 37 09.2**	**-0.3**
JBEP	**Beppuamama**	**0.45**	**255**	⇓P	**Pn**	**04 37 00.0**	**-0.4**
JBEP				⇓S	**Sn**	**04 37 09.4**	**-0.4**
JBEP	**Beppuamama**	**0.45**	**255**	A	A	04 37 00.0	
	comp=E,39nm,0.8s,comp=E,38nm,0.6s						
JNA	**Nagahama**	**0.47**	**77**	*i* P	**Pn**	**04 37 00.3**	**-0.3**
JNA				S	**Sn**	**04 37 09.6**	**-0.5**
JNA	**Nagahama**	**0.47**	**77**	A	A	04 37 00.3	
	comp=E,55nm,0.4s,comp=E,35nm,0.4s						
JKD	**Kudamatsu**	**0.60**	**356**	A	A	04 37 01.2	
	comp=E,57nm,1.2s,comp=E,20nm,0.5s						
UWA2	**Uwa jima 2**	**0.63**	**112**	*i* P	**Pn**	**04 37 01.7**	**-0.4**
UWA2				S	**Sn**	**04 37 12.1**	**-0.8**
UWA2	**Uwa jima 2**	**0.63**	**112**	A	A	04 37 01.7	
	comp=E,10.0nm,1.0s,comp=E,15nm,2.6s						
JSKE	**Saikikamae**	**0.65**	**182**	A	A	04 37 02.5	
	comp=E,65nm,1.0s,comp=E,33nm,0.9s						
JHM	**Kurahashi**	**0.85**	**36**	*i* P	**Pn**	**04 37 04.2**	**-0.4**
JHM				S	**Sn**	**04 37 16.3**	**-0.7**
JHM	**Kurahashi**	**0.85**	**36**	A	A	04 37 04.2	
	comp=E,39nm,0.5s,comp=E,74nm,0.9s						
JKIT	**Kitakata**	**0.92**	**206**	A	A	04 37 05.5	
	comp=E,6.0nm,2.1s,comp=E,10.0nm,2.5s						
JNU	**Nakatsue**	**0.94**	**250**	Pn	**Pn**	**04 37 04.6**	**-1.0**
JNU	**Nakatsue**	**0.94**	**250**	A	A	04 37 05.5	
	comp=E,18nm,2.9s,comp=E,12nm,1.0s						
JTO	**Tosashimizu**	**0.94**	**129**	*i* P	**Pn**	**04 37 05.4**	**-0.3**
JTO				S	**Sn**	**04 37 18.2**	**-0.9**
JTO	**Tosashimizu**	**0.94**	**129**	A	A	04 37 05.4	
	comp=E,23nm,2.1s,comp=E,15nm,2.7s						
JKU	**Kubokawa**	**0.96**	**98**	*i* P	**Pn**	**04 37 05.4**	**-0.5**
JKU				S	**Sn**	**04 37 19.2**	**-0.3**
JKU	**Kubokawa**	**0.96**	**98**	A	A	04 37 05.4	
	comp=E,22nm,1.3s,comp=E,9.0nm,2.6s						
JET	**Tanbara**	**0.99**	**71**	*i* P	**Pn**	**04 37 05.9**	**-0.4**
JET				S	**Sn**	**04 37 19.6**	**-0.5**
JET	**Tanbara**	**0.99**	**71**	A	A	04 37 05.9	
	comp=E,31nm,0.2s,comp=E,39nm,0.3s						
JHHC	**Hyugahichiya**	**1.04**	**194**	A	A	04 37 07.2	
	comp=E,10.0nm,0.9s,comp=E,7.0nm,1.4s						
JHIK	**Hikimi**	**1.08**	**0**	A	A	04 37 06.8	
	comp=E,19nm,1.2s,comp=E,17nm,1.4s						
JTY	**Toyota**	**1.08**	**319**	A	A	04 37 07.0	
	comp=E,36nm,1.7s,comp=E,14nm,0.3s						
JTSN	**Tsuno**	**1.25**	**196**	A	A	04 37 09.9	
	comp=E,9.0nm,0.9s,comp=E,5.0nm,1.1s						
JHT	**Toyohira**	**1.27**	**19**	⇓*i*P	**Pn**	**04 37 09.8**	**-0.1**
JHT				⇓S	**Sn**	**04 37 25.8**	**-0.8**
JHT	**Toyohira**	**1.27**	**19**	A	A	04 37 09.8	
	comp=E,23nm,1.4s,comp=E,22nm,0.3s						
JFI	**Itaya**	**1.28**	**269**	A	A	04 37 09.8	
	comp=E,15nm,0.8s,comp=E,7.0nm,0.6s						
JIU3	**Izumi3**	**1.30**	**226**	⇓*i*P	**Pn**	**04 37 10.1**	**0.0**
JIU3				⇓S	**Sn**	**04 37 26.8**	**-0.2**
JIU3	**Izumi3**	**1.30**	**226**	A	A	04 37 10.1	
	comp=E,7.0nm,1.0s,comp=E,10.0nm,1.3s						
JKHR	**Kochiharuno**	**1.32**	**87**	A	A	04 37 10.6	
	comp=E,17nm,1.2s,comp=E,11nm,0.9s						
JHGM	**Hagimishima**	**1.48**	**334**	⇓*i*P	**Pn**	**04 37 12.2**	**-0.2**
JHGM				⇓S	**Sn**	**04 37 30.8**	**-0.3**
JHGM	**Hagimishima**	**1.48**	**334**	A	A	04 37 12.2	
	comp=E,24nm,1.1s,comp=E,12nm,0.9s						
JJG	**Jouge**	**1.56**	**40**	A	A	04 37 13.6	
	comp=E,14nm,0.6s,comp=E,11nm,1.4s						
JMN	**Monobe**	**1.65**	**80**	Pn	**Pn**	**04 37 14.2**	**-0.6**
JMN	**Monobe**	**1.65**	**80**	A	A	04 37 15.1	
	comp=E,7.0nm,2.4s,comp=E,9.0nm,1.1s						
JGT2	**ShimaneMisato**	**1.68**	**17**	A	A	04 37 14.9	
	comp=E,8.0nm,4.8s,comp=E,6.0nm,1.6s						
JUR	**Ureshino**	**1.69**	**258**	A	A	04 37 15.6	
	comp=E,6.0nm,2.6s,comp=E,6.0nm,1.4s						
JHD	**Hondo**	**1.80**	**237**	A	A	04 37 17.2	
	comp=E,7.0nm,2.0s,comp=E,7.0nm,2.3s						
JHS	**Saijyo**	**1.83**	**32**	Pn	**Pn**	**04 37 17.4**	**+0.2**
JHS	**Saijyo**	**1.83**	**32**	A	A	04 37 17.2	
	comp=E,8.0nm,2.3s,comp=E,7.0nm,0.4s						
JNKG	**Nichinankitago**	**1.84**	**195**	A	A	04 37 18.1	
	comp=E,7.0nm,8.1s,comp=E,6.0nm,6.3s						
JII	**Iki**	**1.86**	**281**	A	A	04 37 17.7	
	comp=E,8.0nm,2.3s,comp=E,11nm,2.1s						
JJS	**Sakaide**	**1.90**	**61**	A	A	04 37 18.4	
	comp=E,6.0nm,1.1s,comp=E,11nm,1.3s						
JNAR	**Kushima--Naru**	**2.00**	**196**	A	A	04 37 20.1	
	comp=E,7.0nm,3.7s,comp=E,6.0nm,1.8s						
JISK	**Izumosakaura**	**2.18**	**20**	A	A	04 37 22.0	
	comp=E,7.0nm,3.4s,comp=E,7.0nm,0.8s						
JNM	**Ikuma**	**2.23**	**24**	A	A	04 37 22.6	
	comp=E,8.0nm,2.3s,comp=E,9.0nm,2.5s						
JSU	**Suzuyama**	**2.31**	**213**	Pn	**Pn**	**04 37 23.8**	**+0.2**
JTU	**Tsushima**	**2.35**	**298**	Pn	**Pn**	**04 37 23.6**	**-0.5**
JKR	**Kurayoshi**	**2.48**	**39**	A	A	04 37 26.1	
	comp=E,9.0nm,1.8s,comp=E,9.0nm,2.1s						
JKY	**Yasaka**	**3.41**	**50**	A	A	04 37 39.3	
	comp=E,3.0nm,0.7s,comp=E,4.0nm,0.7s						
NAWB	**Namwon**	**4.23**	**299**	Pn	**Pn**	**04 37 49.5**	**-0.1**
INU	**Inuyama**	**4.62**	**64**	Pn	**Pn**	**04 37 55.6**	**+0.7**
KSCHJ	**Chungju**	**4.70**	**318**	Pn	**Pn**	**04 37 56.0**	**-0.1**
TJN	**Taejon**	**4.75**	**309**	Pn	**Pn**	**04 37 56.3**	**-0.4**
JGF	**Kuroka**	**4.97**	**63**	Pn	**Pn**	**04 38 00.0**	**+0.3**
KSRS	**Korea Array**	**5.16**	**322**	P	**Pn**	**04 38 02.7**	**+0.4**
	9.2nm,0.4s,baz=142,slow=14,SNR=41						
KSRS				S	**Sn**	**04 38 58.9**	**-1.6**
	101nm,0.7s,baz=140,slow=24,SNR=20						
KSRS				LR	LR	04 40 25.8	
	comp=E,161nm,18.8s,baz=145,slow=43						
KSAR	**Wonju Array Be**	**5.17**	**322**	Pn	**Pn**	**04 38 02.6**	**+0.2**
KS19	**Wonju Array Si**	**5.22**	**322**	Pn	**Pn**	**04 38 02.9**	**-0.2**
SEHB	**SEOHWA**	**5.65**	**329**	Pn	**Pn**	**04 38 09.6**	**+0.5**
INCN	**Inchon**	**5.90**	**314**	Pn	**Pn**	**04 38 13.8**	**+1.4**
MAJO	**Matsushiro**	**6.01**	**57**	Pn	**Pn**	**04 38 14.7**	**+0.8**
MJAR	**Matsushiro Arr**	**6.01**	**57**	P	**Pn**	**04 38 13.7**	**-0.3**
	91nm,0.6s,baz=243,slow=12,SNR=180						
JHJ	**Hachijo jima 2**	**6.59**	**91**	P	**Pn**	**04 38 22.1**	**+0.2**
	355nm,0.5s,baz=20,slow=23,SNR=14						
JHJ2	**Mitsune**	**6.62**	**91**	Pn	**Pn**	**04 38 22.0**	**-0.2**
JSD	**Sado**	**6.89**	**47**	Pn	**Pn**	**04 38 26.9**	**+1.0**
JYT	**Yasato**	**7.34**	**66**	Pn	**Pn**	**04 38 32.5**	**+0.4**
JMM	**Marumori**	**8.45**	**56**	Pn	**Pn**	**04 38 49.0**	**+1.7**
USRK	**Ussuriysk Ar.**	**10.73**	**0**	P	**Pn**	**04 39 20.2**	**+1.9**
	6.7nm,0.8s,baz=188,slow=14,SNR=17						
USRK	**Ussuriysk Ar.**	**10.73**	**0**	Pn	**Pn**	**04 39 16.7**	**-1.6**
NJ2	**Nanjing**	**11.10**	**266**	*e*P	**Pn**	**04 39 26.3**	**+2.9**
NJ2				pmax	pmax		
	comp=E,36nm,1.0s						
CN2	**Changchun**	**11.50**	**336**	*e*P	**Pn**	**04 39 32.3**	**+3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ERM	**Erimo**	**12.32**	**43**	Pn	**Pn**	**04 39 40.2**	**+0.2**
TIA	**Tai'an**	**12.47**	**287**	⇑P	**Pn**	**04 39 44.6**	**+2.5**
TIA				pmax	pmax		
	comp=Z,16nm,1.0s						
YULB	**Yu-li**	**13.70**	**226**	Pn	**Pn**	**04 39 59.7**	**+1.1**
HNS	**HongShan**	**14.58**	**291**	⇑P	**Pn**	**04 40 11.4**	**+1.4**
HNS				pmax	pmax		
	comp=Z,57nm,1.2s						
WHN	**Wuhan**	**15.19**	**264**	⇓P	**P**	**04 40 23.3**	**+2.0**
KLR	**Kul'dur**	**15.76**	**360**	P	**P**	**04 40 26.4**	**-1.1**
	7.9nm,0.9s,baz=164,slow=11,SNR=13						
LYN	**LuoYang**	**16.18**	**279**	⇓P	**P**	**04 40 31.4**	**-0.9**
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC	**Hu-ho-hao-te**	**17.81**	**300**	*e*P	**Pn**	**04 40 52.6**	**+2.0**
HHC				pmax	pmax		
	comp=Z,55nm,1.1s						
HHC				pmax	pmax		
	comp=Z,490nm,6.6s						
BTO	**Baotou**	**18.86**	**299**	*e*P	**Pn**	**04 41 05.5**	**+2.3**
XAN	**Xi'an**	**19.14**	**278**	⇓P	**Pn**	**04 41 07.9**	**+1.4**
XAN				pP	pP	04 41 25.6	+5.6
XAN				sP	sP	04 41 35.8	+6.4
XAN				S	**Sn**	**04 44 44.0**	**+3.5**
XAN				sS	sS	04 45 07.3	+4.9
XAN				pmax	pmax		
	comp=Z,23nm,1.4s						
XAN				pmax	pmax		
	comp=Z,230nm,5.7s						
XAN				LR	LR		
	comp=N,260nm,13.6s						
XAN				LR	LR		
	comp=E,260nm,13.7s						
XAN				LR	LR		
	comp=Z,430nm,17.0s						
GYA	**Guiyang**	**22.94**	**259**	⇑P	**P**	**04 41 45.3**	**-0.5**
GYA				pmax	pmax		
	comp=Z,18nm,0.9s						
LZH	**Lanzhou**	**23.19**	**284**	⇓P	**P**	**04 41 46.8**	**-1.5**
LZH				pP	pP	04 42 04.3	+0.3
LZH				sP	sP	04 42 16.1	+3.0
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
ULN	**Ulaanbaatar**	**23.60**	**315**	P	**P**	**04 41 51.6**	**-0.3**
ULN				IAmb	IAmb	04 42 11.0	
	comp=Z,42nm,1.1s						
SONM	**Songino Array**	**23.97**	**314**	P	**P**	**04 41 55.4**	**+0.1**
	comp=Z,12nm,0.7s,baz=130,slow=9.7,SNR=48						
SONM				pP	**pP**	**04 42 12.5**	**+0.4**
	comp=Z,9.0nm,0.7s,baz=130,slow=10.0,SNR=9.1						
SONM				LR	LR	04 50 28.5	
	comp=Z,172nm,21.9s,baz=164,slow=34						
	comp=Z,12nm,0.7s						
SONM	**Songino Array**	**23.97**	**314**	P	**P**	**04 41 55.3**	**+0.1**
GTA	**Gaotai**	**26.42**	**292**	*e*P	**P**	**04 42 19.0**	**+1.5**
GTA				pP	pP	04 42 35.1	+0.3
GTA				sP	sP	04 42 44.3	+0.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
PETK	**Petropavlovsk-**	**26.92**	**35**	P	**P**	**04 42 22.3**	**+0.6**
PZH	**PanZhiHua**	**26.98**	**263**	P	**P**	**04 42 23.5**	**+0.8**
PZH				pmax	pmax		
	comp=Z,30nm,1.0s						
GOMU	**GeErMu**	**30.47**	**286**	P	**P**	**04 42 51.9**	**-2.0**
GOMU				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ	**Urumqi**	**35.69**	**300**	*e*P	**P**	**04 43 40.4**	**+1.5**
WMQ				LR	LR		
	comp=Z,77nm,22.3s						
FAKI	**Fak Fak**	**36.18**	**179**	P	**P**	**04 43 43.4**	**+0.2**
ZAA0	**Zalesovo Array**	**38.84**	**316**	P	**P**	**04 44 04.2**	**-1.1**
ZALV	**Zalesovo Beam**	**38.84**	**316**	P	**P**	**04 44 04.5**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=97,slow=6.4,SNR=7.7						
ZALV				pP	**pP**	**04 44 22.9**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=97,slow=6.4,SNR=3.1						
	comp=Z,1.9nm,0.7s						
ZALV	**Zalesovo Beam**	**38.84**	**316**	P	**P**	**04 44 03.0**	**-2.3**
MK31	**Makanchi Array**	**39.58**	**305**	P	**P**	**04 44 10.4**	**-1.2**
MKAR	**Makanchi Array**	**39.58**	**305**	P	**P**	**04 44 10.8**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=94,slow=10,SNR=12						
MKAR				pP	**pP**	**04 44 29.7**	**+0.2**
	comp=Z,3.8nm,0.9s,baz=94,slow=10,SNR=11						
	comp=Z,2.1nm,0.8s						
MKAR	**Makanchi Array**	**39.58**	**305**	P	**P**	**04 44 10.0**	**-1.7**
MAKZ	**Makanchi**	**39.80**	**305**	P	**P**	**04 44 11.4**	**-2.1**
KURK	**Kurchatov**	**42.17**	**311**	P	**P**	**04 44 31.4**	**-1.4**
AAK	**Ala-Archa**	**45.38**	**299**	LR	LR	05 03 54.1	
	comp=Z,109nm,21.7s,baz=104,slow=36						
BRVK	**Borovoye**	**47.38**	**314**	P	**P**	**04 45 12.8**	**-1.4**
BRVK				IAmb	IAmb	04 45 33.3	
	comp=Z,11nm,0.9s						
KK31	**Karatay Array**	**48.20**	**300**	P	**P**	**04 45 19.1**	**-1.5**
KK31				IAmb	IAmb	04 45 40.2	
	comp=Z,10nm,0.9s						
KKAR	**Karatay Array**	**48.20**	**300**	P	**P**	**04 45 19.1**	**-1.5**
GAR	**Garm**	**49.18**	**295**	P	**P**	**04 45 27.3**	**-1.2**
CHGR	**Chuyangaron**	**50.14**	**295**	P	**P**	**04 45 34.1**	**-1.5**
HYBB	**Hyderabad (bro**	**50.25**	**265**	*e*P	**P**	**04 45 38.2**	**+1.6**
KBL	**Kabul**	**51.37**	**290**	P	**P**	**04 45 43.3**	**-1.9**
KBL				IAmb	IAmb	04 46 10.8	
	comp=Z,4.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.61**	**188**	P	**P**	**04 45 47.1**	**+0.5**
FITZ				IAmb	IAmb	04 45 48.3	
	comp=Z,7.3nm,0.8s						
WRA	**Warramunga Arr**	**53.15**	**177**	P	**P**	**04 45 56.5**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=354,slow=8.2,SNR=20						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**53.15**	**177**	P	**P**	**04 45 58.7**	**+0.7**
WB2	**Warramunga Arr**	**53.15**	**177**	P	**P**	**04 45 57.8**	**-0.2**
WB2				IAmb	IAmb	04 47 56.8	
	comp=Z,28nm,1.8s						
WR0	**Warramunga Arr**	**53.17**	**177**	P	**P**	**04 45 58.2**	**+0.1**
K20K	**Telida**	**53.59**	**33**	P	**P**	**04 46 02.7**	**+1.9**
K20K				IAmb	IAmb	04 46 22.0	
	comp=Z,7.4nm,0.8s						
IMAR	**Indian Mountai**	**53.63**	**29**	P	**P**	**04 46 02.5**	**+1.5**
ARU	**Arti**	**53.90**	**319**	P	**P**	**04 46 01.7**	**-1.5**
ARU				IAmb	IAmb	04 46 03.6	
	comp=Z,14nm,1.2s						
ABKAR	**Akbulak array**	**54.27**	**310**	P	**P**	**04 46 04.7**	**-1.3**
AKTO	**Aktyubinsk**	**55.25**	**312**	LR	LR	05 10 55.9	
	comp=Z,50nm,21.9s,baz=99,slow=37						
NEA2	**Nenana**	**55.68**	**31**	P	**P**	**04 46 16.7**	**+0.8**
NEA2				IAmb	IAmb	04 46 36.9	
	comp=Z,7.0nm,0.7s						
PSA00	**Pilbara Seismi**	**55.92**	**194**	P	**P**	**04 46 17.3**	**-0.8**
PSA00				IAmb	IAmb	04 46 18.4	
	comp=Z,14nm,0.9s						
PSA00	**Pilbara Seismi**	**55.92**	**194**	P	**P**	**04 46 16.9**	**-1.1**
PSA00				IAmb	IAmb	04 46 18.4	
	comp=Z,5.4nm,1.0s						
RND	**Reindeer**	**55.92**	**32**	P	**P**	**04 46 18.7**	**+0.9**
RND				IAmb	IAmb	04 46 37.9	
	comp=Z,10nm,0.7s						
MDM	**Murphy Dome**	**56.00**	**30**	P	**P**	**04 46 18.8**	**+0.6**
H24K	**Noodor Dome**	**56.04**	**29**	P	**P**	**04 46 19.4**	**+0.9**
WRH	**Wood River Hil**	**56.12**	**31**	P	**P**	**04 46 20.1**	**+1.1**
WRH				IAmb	IAmb	04 46 41.1	
	comp=Z,26nm,1.7s						
IL31		**56.59**	**30**	P	**P**	**04 46 22.8**	**+0.4**
IL31				IAmb	IAmb	04 47 07.4	
	comp=Z,19nm,1.9s						
ILAR	**Eielson Array**	**56.59**	**30**	P	**P**	**04 46 23.2**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=295,slow=9.1,SNR=6.7						
ILAR				pP	**pP**	**04 46 41.0**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=265,slow=5.9,SNR=14						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**56.83**	**178**	P	**P**	**04 46 24.9**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=9.7,slow=13,SNR=14						
	comp=Z,1.8nm,0.8s						
PRP	**Porcupine Dome**	**57.05**	**30**	P	**P**	**04 46 27.2**	**+1.4**
PRP				IAmb	IAmb	04 46 46.6	
	comp=Z,4.0nm,0.7s						
SCRK	**Sand Creek**	**57.97**	**31**	P	**P**	**04 46 32.6**	**+0.3**
SCRK				IAmb	IAmb	04 46 52.4	
	comp=Z,7.0nm,0.8s						
J26L	**Joseph Creek**	**58.05**	**31**	P	**P**	**04 46 33.4**	**+0.7**
M26K	**Nabesna, AK**	**58.74**	**33**	P	**P**	**04 46 39.5**	**+1.9**
M26K				IAmb	IAmb	04 46 59.2	
	comp=Z,14nm,1.2s						
L27K	**Beaver Creek,**	**59.11**	**32**	P	**P**	**04 46 40.8**	**+0.7**
L27K				IAmb	IAmb	04 47 01.5	
	comp=Z,8.2nm,0.9s						
BCAR	**Beaver Creek A**	**59.13**	**32**	P	**P**	**04 46 41.5**	**+1.3**
LOGN	**Logan Glacier**	**60.05**	**34**	P	**P**	**04 46 45.3**	**-1.4**
EPYK	**Eagle Plains**	**60.39**	**28**	P	**P**	**04 46 50.1**	**+1.3**
EPYK				IAmb	IAmb	04 47 18.9	
	comp=Z,9.3nm,0.9s						
DZM	**Mont Dzumac**	**64.28**	**144**	LR	LR	05 13 53.5	
	comp=Z,91nm,18.5s,baz=350,slow=35						
ARCES	**ARCESS Array B**	**64.50**	**338**	P	**P**	**04 47 15.9**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=59,slow=8.8,SNR=17						
ARCES				LR	LR	05 18 28.8	
	comp=Z,48nm,21.7s,baz=106,slow=39						
	comp=Z,2.2nm,0.6s						
ARCES	**ARCESS Array B**	**64.50**	**338**	P	**P**	**04 47 15.7**	**-0.4**
STKA	**Stephens Creek**	**65.62**	**171**	P	**P**	**04 47 22.6**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=332,slow=10,SNR=3.2						
	comp=Z,1.4nm,0.5s						
STKA	**Stephens Creek**	**65.62**	**171**	P	**P**	**04 47 24.1**	**+0.4**
KBZ	**Khabaz**	**67.16**	**308**	P	**P**	**04 47 32.9**	**-0.7**
	comp=Z,4.9nm,1.0s,baz=80,slow=1.4,SNR=4.3						
KBZ				LR	LR	05 20 09.5	
	comp=Z,58nm,18.8s,baz=50,slow=39						
	comp=Z,4.9nm,1.0s						
KVAR	**Kislovodsk Arr**	**67.19**	**308**	LR	LR	05 19 09.3	
	comp=Z,69nm,19.6s,baz=301,slow=38						
FIA1	**FINESS Array S**	**68.19**	**330**	P	**P**	**04 47 40.0**	**+0.2**
FIA1				IAmb	IAmb	04 49 32.5	
	comp=Z,21nm,1.2s						
FINES	**FINESS Array B**	**68.19**	**330**	P	**P**	**04 47 38.7**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=76,slow=7.0,SNR=7.1						
FINES				pP	**pP**	**04 47 58.0**	**-1.2**
	comp=Z,2.5nm,0.5s,baz=76,slow=6.4,SNR=4.5						
FINES				LR	LR	05 19 23.9	
	comp=Z,56nm,19.1s,baz=99,slow=38						
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**68.19**	**330**	P	**P**	**04 47 39.0**	**-0.8**
YKA	**Yellowknife Ar**	**70.65**	**27**	P	**P**	**04 47 53.9**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=307,slow=5.5,SNR=4.9						
YKA				pP	**pP**	**04 48 14.2**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=306,slow=6.0,SNR=4.2						
	comp=Z,0.7nm,0.8s						
AKASG	**

PTBC	**PUERTO BERRIO,**	**4.84**	**215**	*eP*	**Pn**	**04 51 23.0**	**-1.4**
BIRV	**Birongo**	**5.33**	**90**	*eP*	**Pn**	**04 51 31.0**	**-0.1**
BIRV				*eS*	**Sn**	**04 52 28.8**	**-3.4**
SPBC	**San Pablo de B**	**5.41**	**206**	*eP*	**Pn**	**04 51 31.9**	**-0.4**
HELC	**Santa Helena**	**5.76**	**222**	*eP*	**Pn**	**04 51 38.2**	**+0.7**
NORC	**Norcasia**	**5.88**	**213**	*eP*	**Pn**	**04 51 38.9**	**+0.2**
CACV	**CAICARA DEL OR**	**5.89**	**120**	*eP*	Pn	04 51 44.4	+5.6
CACV				*eS*	**Sn**	**04 52 52.7**	**+6.7**
CHIC	**Chingaza**	**6.23**	**199**	*eP*	**Pn**	**04 51 43.0**	**-0.8**
ROSC	**El Rosal**	**6.25**	**205**	*eP*	**Pn**	**04 51 45.0**	**+1.0**
CBOC	**Ciudad Bolivar**	**6.33**	**223**	*eP*	**Pn**	**04 51 46.0**	**+1.1**
GUY2C	**Guyana, Caldas**	**6.43**	**215**	*eP*	**Pn**	**04 51 45.5**	**-1.1**
PLMC	**San Jos del P**	**7.23**	**219**	*eP*	**Pn**	**04 51 57.4**	**+0.2**

NEIC ***15*** *05:00:19.9±1.2, 17°.1N±0°.1×67°.62W±0°.08, h28km±23km, Error ellipse: s-maj=19.9km s-min=8.0km az=201.0*
OSPL ***15*** *05:00:20.5±1.5, 17°.07N×67°.77W, h35km±80km, ML2.6*
RSPR ***15*** *05:00:21.0, 17°.04N×67°.63W, h27km±25km, MD3.3/13*

ISC 15 05:00:18.5±1.7, 17°.00N±0°.09×67°.69W±0°.04, h35km, n57, σ0.98/60, 12C-4D, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**1.14**	**29**	⇓	*iP*		**Pn**	**05 00 38.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.14**	**29**		*eS*		**Sn**	**05 00 51.1**	**-1.3**
CRPR	**Cabo Rojo, PR**	**1.14**	**29**				**Pn**	**05 00 38.0**	**-0.1**
CRPR							**Sn**	**05 00 51.1**	**-1.3**
CRPR	**Cabo Rojo, PR**	**1.14**	**29**	*i*	P		**Pn**	**05 00 37.9**	**-0.1**
CRPR					IAML			05 01 00.2	
	comp=Z,41nm,0.9s								
MLPR	**Magueyes Islan**	**1.15**	**32**	⇓	*iP*		**Pn**	**05 00 37.0**	**-1.0**
MLPR	**Magueyes Islan**	**1.15**	**32**		*eS*		**Sn**	**05 00 50.8**	**-1.7**
MLPR	**Magueyes Islan**	**1.15**	**32**				**Pn**	**05 00 37.0**	**-1.0**
MLPR	**Magueyes Islan**	**1.15**	**32**				**Sn**	**05 00 50.8**	**-1.7**
GBPR	**Guanica, Bosqu**	**1.24**	**38**	⇑	*eP*		**Pn**	**05 00 39.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.24**	**38**		*eS*		**Sn**	**05 00 54.6**	**-0.2**
LSP	**Las Mesas**	**1.30**	**26**	⇑	*eP*		**Pn**	**05 00 40.6**	**+0.4**
LSP	**Las Mesas**	**1.30**	**26**		*eS*		**Sn**	**05 00 55.9**	**-0.6**
IDE	**Isla Desecheo**	**1.40**	**8**	⇑	*eP*		**Pn**	**05 00 42.3**	**+0.8**
IDE	**Isla Desecheo**	**1.40**	**8**		*eS*		**Sn**	**05 00 58.6**	**-0.1**
OBIP	**Obispado Ponce**	**1.46**	**45**	⇓	*eP*		**Pn**	**05 00 42.1**	**-0.3**
OBIP	**Obispado Ponce**	**1.46**	**45**		*eS*		**Sn**	**05 00 59.8**	**-0.6**
OBIP	**Obispado Ponce**	**1.46**	**45**				**Pn**	**05 00 41.8**	**-0.6**
OBIP	**Obispado Ponce**	**1.46**	**45**				**Sn**	**05 00 59.8**	**-0.6**
AGPR	**Aguadilla, PR**	**1.56**	**21**	⇑	*eP*		**Pn**	**05 00 44.7**	**+0.9**
AGPR	**Aguadilla, PR**	**1.56**	**21**				**Pn**	**05 00 44.6**	**+0.9**
AGPR	**Aguadilla, PR**	**1.56**	**21**				**Sn**	**05 01 02.7**	**-0.1**
AGPR	**Aguadilla, PR**	**1.56**	**21**		IAML			05 01 17.3	
	comp=N,74nm,2.8s								
AGPR					IAML			05 01 27.1	
	comp=E,68nm,2.5s								
AGPR	**Aguadilla, PR**	**1.56**	**21**	*i*	P		**Pn**	**05 00 44.5**	**+0.8**
AGPR					*eS*		**Sn**	**05 01 02.4**	**-0.4**
AGPR					IAML			05 01 07.8	
	comp=Z,57nm,2.7s								
AOPR	**Arecibo Observ**	**1.61**	**33**	⇑	*eP*		**Pn**	**05 00 45.0**	**+0.5**
AOPR	**Arecibo Observ**	**1.61**	**33**		*eS*		**Sn**	**05 01 03.9**	**-0.1**
AOPR	**Arecibo Observ**	**1.61**	**33**				**Pn**	**05 00 45.0**	**+0.5**
AOPR							**Sn**	**05 01 03.9**	**-0.1**
AOPR	**Arecibo Observ**	**1.61**	**33**		IAML			05 01 05.0	
	comp=N,66nm,0.3s								
AOPR					IAML			05 01 13.6	
	comp=E,84nm,0.4s								
PCDR	**Punta Cana, DR**	**1.65**	**336**	*i*	P		**Pn**	**05 00 44.6**	**-0.3**
PCDR					IAML			05 01 12.4	
	comp=Z,92nm,1.4s								
IGPR	**InterUniversit**	**1.79**	**57**	⇑	*eP*		**Pn**	**05 00 47.4**	**+0.6**
IGPR	**InterUniversit**	**1.79**	**57**		*eS*		**Sn**	**05 01 07.6**	**-0.8**
IGPR	**InterUniversit**	**1.79**	**57**				**Sn**	**05 01 07.6**	**-0.8**
SJG	**San Juan**	**1.84**	**53**		Pn		**Pn**	**05 00 47.9**	**+0.3**
SJG					IAML			05 01 10.5	
	comp=Z,44nm,0.4s								
SJG					IAML			05 01 11.2	
	comp=Z,40nm,0.5s								
EMPR	**Esperanza - Ma**	**1.84**	**37**	⇑	*eP*		**Pn**	**05 00 48.7**	**+1.1**
EMPR	**Esperanza - Ma**	**1.84**	**37**		*eS*		**Sn**	**05 01 09.3**	**-0.3**
EMPR	**Esperanza - Ma**	**1.84**	**37**				**Pn**	**05 00 47.7**	**+0.2**
EMPR					IAML			05 01 17.4	
	comp=N,90nm,2.2s								
EMPR	**Esperanza - Ma**	**1.84**	**37**				**Sn**	**05 01 09.3**	**-0.3**
PDPR	**Patillas Dam,**	**1.89**	**57**		Pn		**Pn**	**05 00 48.7**	**+0.5**
GCPR	**Guaynabo City**	**2.01**	**49**		Pn		**Pn**	**05 00 49.1**	**-0.8**
GCPR					IAML			05 01 15.9	
	comp=N,18nm,0.5s								
HUMP	**Col San Antoni**	**2.09**	**57**	⇓	*eP*		**Pn**	**05 00 51.7**	**+0.7**
HUMP	**Col San Antoni**	**2.09**	**57**		*eS*		**Sn**	**05 01 14.9**	**-1.0**
HUMP	**Col San Antoni**	**2.09**	**57**				**Pn**	**05 00 51.7**	**+0.7**
HUMP	**Col San Antoni**	**2.09**	**57**				**Sn**	**05 01 15.9**	**+0.1**
HUMP					IAML			05 01 17.1	
	comp=N,50nm,0.2s								
CBYP	**Canovanas**	**2.16**	**54**	⇑	*eP*		**Pn**	**05 00 52.8**	**+0.8**
CBYP	**Canovanas**	**2.16**	**54**		*eS*		**Sn**	**05 01 17.4**	**-0.2**
CBYP	**Canovanas**	**2.16**	**54**				**Pn**	**05 00 52.6**	**+0.6**
CBYP					IAML			05 01 21.0	
	comp=E,73nm,0.2s								
CBYP	**Canovanas**	**2.16**	**54**				**Sn**	**05 01 17.4**	**-0.2**
DR12	**Loma Pena Alta**	**2.40**	**318**	⇑	*eP*		**Pn**	**05 00 57.1**	**+1.7**
DR12					*eS*		**Sn**	**05 01 24.9**	**+1.3**
DR12	**Loma Pena Alta**	**2.40**	**318**		Pn		**Pn**	**05 00 57.1**	**+1.7**
CUPR	**Culebra, Puert**	**2.64**	**60**	⇑	*eP*		**Pn**	**05 00 59.5**	**+0.9**
CUPR	**Culebra, Puert**	**2.64**	**60**				**Pn**	**05 00 59.5**	**+0.9**
CUPR	**Culebra, Puert**	**2.64**	**60**		IAML			05 01 29.5	
	comp=E,16nm,0.8s								
CUPR					IAML			05 01 30.1	
	comp=N,12nm,0.5s								
CDVI	**St. Croix**	**2.89**	**75**	⇑	*eP*		**Pn**	**05 01 02.5**	**+0.5**
CDVI	**St. Croix**	**2.89**	**75**				**Sn**	**05 01 02.5**	**+0.5**
SJVI	**Gifft Hill Sch**	**3.08**	**64**	⇑	*eP*		**Pn**	**05 01 05.9**	**+1.2**
SJVI	**Gifft Hill Sch**	**3.08**	**64**		*eS*		**Sn**	**05 01 40.0**	**-0.3**
SJVI	**Gifft Hill Sch**	**3.08**	**64**				**Pn**	**05 01 05.9**	**+1.2**
SJVI							**Sn**	**05 01 40.0**	**-0.3**
LOBA2	**Hotel Casa Bon**	**3.42**	**289**	*i*	P		**Pn**	**05 01 10.1**	**+0.7**
LOBA2					*eS*		**Sn**	**05 01 44.6**	**-4.1**
LOBA2					IAML			05 01 48.3	
	comp=Z,21nm,0.9s								

KRNET ***15*** *05:06:37.7±0.1, 40°.87N×71°.17E, h14km, mb3.0*
NNC ***15*** *05:06:38.2±3.4, 40°.83N×71°.21E, h0km, mb3.9, mpv3.4, Error ellipse: s-maj=27.1km s-min=11.4km az=18.0*
SOME ***15*** *05:06:40.1, 41°.03N×71°.18E, h10km*

ISC 15 05:06:36.5±1.1, 40°.89N±0°.03×71°.21E±0°.03, h15km±12km, n23, σ1.963/42, 13C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**0.64**	**355**	⇑	*iP*		**Pb**	**05 06 49.1**	**-0.5**
TRKS	baz=0.0				*iS*		**Sb**	**05 06 57.3**	**-1.1**
	baz=0.0								
ARK	**Arkit**	**1.07**	**32**	⇑	*iP*		**Pg**	**05 06 58.6**	**+1.4**
ARK	baz=33				*iS*		**Sn**	**05 07 13.6**	**+1.8**
	baz=33								
OHH	**Osh**	**1.25**	**107**	⇑	*iP*		**Pg**	**05 07 01.5**	**+0.9**
OHH	baz=5.0				*iS*		**Sg**	**05 07 18.7**	**+1.8**
	baz=5.0								
IUG	**Iuzhnay**	**1.54**	**325**		*eP*		**Pg**	**05 07 07.7**	**+1.6**
IUG	2µm,0.5s				*eS*		**Sg**	**05 07 27.0**	**+1.0**
	228nm,0.0s								
IUG	**Iuzhnay**	**1.54**	**325**		P		**Pg**	**05 07 07.6**	**+1.6**
IUG	2µm,0.4s				S		**Sg**	**05 07 26.6**	**+0.6**
	223nm,0.4s								
CHM	**Chimkent**	**1.87**	**320**		*eP*		**Pg**	**05 07 14.4**	**+2.1**
CHM	122nm,0.1s				*eS*		**Sg**	**05 07 38.3**	**+1.7**
	391nm,0.3s								
DZA	**Taraz**	**2.00**	**3**		*eP*		**Pg**	**05 07 13.4**	**-1.5**
DZA	155nm,0.1s				*eS*		**Sb**	**05 07 36.2**	**-1.2**
	151nm,0.1s								
GAR	**Garm**	**2.01**	**200**	⇑	*iP*		**Pg**	**05 07 13.7**	**-1.4**
GAR	baz=0.0				*iS*		**Sg**	**05 07 39.8**	**-1.4**
	baz=0.0								
KK31	**Karatay Array**	**2.27**	**347**	⇓	Pn		**Pg**	**05 07 18.0**	**-2.1**
KK31	3.2nm,0.3s,baz=165,slow=15,SNR=14					Sn	**Sg**	**05 07 49.4**	**-0.1**
	14nm,0.3s,baz=170,slow=23,SNR=24								
KKAR	**Karatay Array**	**2.27**	**347**	⇑	*iP*		**Pg**	**05 07 17.8**	**-2.3**
KKAR	baz=48				*iS*		**Sg**	**05 07 47.1**	**-2.4**
	baz=48								
ARLS	**Aral**	**2.53**	**67**	⇑	*iP*		**Pb**	**05 07 21.8**	**0.0**
ARLS	baz=66				*iS*		**Sb**	**05 07 53.7**	**+0.8**
	baz=66								
EKS2	**Erkin-Say**	**2.61**	**46**	⇓	*iP*		**Pb**	**05 07 22.9**	**-0.2**
EKS2	baz=47				*iS*		**Sb**	**05 07 55.7**	**+0.7**
	baz=47								
UCH	**Uchtor**	**2.81**	**61**	⇓	*iP*		**Pb**	**05 07 25.9**	**-0.9**
UCH	baz=61				*iS*		**Sb**	**05 08 01.2**	**0.0**
	baz=61								
SGDS	**Sogindy**	**3.60**	**44**		*eP*		**Pg**	**05 07 43.2**	**-2.4**
SGDS	2.6nm,0.2s				*eS*		**Sb**	**05 08 27.4**	**+3.8**
	11nm,0.2s								
TKM2	**Tokmak 2**	**3.85**	**57**	⇓	Pg		**Pg**	**05 07 49.1**	**-1.1**
TKM2	2.0nm,0.6s			⇑	Lg		Lg	05 08 42.4	
	4.1nm,0.6s								
KST	**Kastek**	**4.14**	**57**		*eP*		**Pg**	**05 07 56.3**	**+0.4**
KST	1.3nm,0.8s				*eS*		**Sg**	**05 08 50.2**	**+0.7**
	6.4nm,0.3s								
KST	**Kastek**	**4.14**	**57**		Pg		**Pg**	**05 07 54.3**	**-1.5**
KST	1.0nm,0.2s				Lg		Lg	05 08 47.9	
	6.5nm,0.4s								
KRBS	**Karabastau**	**4.34**	**48**		*eP*		**Pg**	**05 07 58.9**	**-0.7**
KRBS	0.4nm,0.3s				*eS*		**Sg**	**05 08 54.6**	**-1.2**
	5.8nm,0.7s								
KRBS	**Karabastau**	**4.34**	**48**		Pg		**Pg**	**05 07 57.8**	**-1.7**
KRBS	1.0nm,0.3s				Lg		Lg	05 08 53.2	
	5.2nm,0.7s								
BTLS	**Baital**	**4.64**	**26**		*eP*		**Pg**	**05 08 04.8**	**-0.5**
BTLS	0.8nm,0.2s				*eS*		**Sg**	**05 09 05.5**	**+0.1**
	6.8nm,1.7s								
KUU	**Kurty**	**4.84**	**50**		*eP*		**Pg**	**05 08 07.2**	**-2.0**
KUU	0.4nm,0.5s				*eS*		**Sg**	**05 09 08.7**	**-3.1**
	6.1nm,0.4s								
KUU	**Kurty**	**4.84**	**50**		Pg		**Pg**	**05 08 06.7**	**-2.4**
KUU	1.0nm,0.4s				Lg		Lg	05 09 08.7	
	6.1nm,0.4s								
MDOK	**Medeo**	**4.90**	**61**		*eP*		**Pg**	**05 08 11.1**	**+0.7**
MDOK	2.2nm,0.3s				*eS*		**Sg**	**05 09 15.6**	**+1.7**
	3.7nm,0.5s								

TAP ***15*** *05:22:57.0, 24°.77N×122°.11E, h6km, ML2.7, C*
JMA ***15*** *05:22:57.8±0.1, 24°.8N±0°.3×122°.1E±0°.3, h41km±3km, MV2.3/9, TAIWAN REGION*

ISC 15 05:22:56.3±1.1, 24°.75N±0°.02×122°.17E±0°.02, h5km±9km, n60, σ0.71/106, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EGS		**0.24**	**294**	⇓	*iP*		**Pg**	**05 23 01.2**	**+0.3**
EGS	baz=295				S		**Sg**	**05 23 04.0**	**0.0**
	baz=295								
TWB1	**Santiao Chiao**	**0.31**	**328**		*i* P		**Pg**	**05 23 02.8**	**+0.5**
TWB1	baz=338				*i* S		**Sg**	**05 23 06.2**	**-0.1**
	baz=338								
TWC	**Suao**	**0.32**	**245**		*i* P		**Pg**	**05 23 02.9**	**+0.4**
TWC	baz=235				*i* S		**Sg**	**05 23 06.3**	**-0.5**
	baz=235								
NTC	**Toucheng**	**0.33**	**289**		*i* P		**Pg**	**05 23 03.1**	**+0.5**
NTC	baz=287				*eS*		**Sb**	**05 23 08.2**	**-1.9**
	baz=287								
TIPB	**Shuangxi**	**0.38**	**306**	⇓	*iP*		**Pg**	**05 23 04.2**	**+0.5**
TIPB	baz=299				S		**Sg**	**05 23 08.7**	**-0.1**
	baz=299								
NDS	**Dongshan**	**0.43**	**255**		P		**Pg**	**05 23 03.7**	**-0.8**
NDS	baz=241				S		**Sg**	**05 23 09.0**	**-1.1**
	baz=241								
SXI1	**Grass Mountain**	**0.44**	**322**		P		**Pb**	**05 23 05.6**	**-1.0**
SXI1	baz=334				S		**Sg**	**05 23 10.6**	**+0.2**
	baz=334								
TWE	**Neicheng**	**0.46**	**267**		*i* P		**Pg**	**05 23 05.1**	**0.0**
TWE	baz=255				*i* S		**Sg**	**05 23 12.2**	**+1.2**
	baz=255								
EWUT	**Wuta**	**0.47**	**230**		P		**Pg**	**05 23 04.9**	**-0.3**
EWUT	baz=224				S		**Sg**	**05 23 10.5**	**-0.9**
	baz=224								
NWF	**Wu-fen Shan**	**0.48**	**312**		*i* P		**Pb**	**05 23 06.4**	**-0.8**
NWF	baz=308				*i* S		**Sg**	**05 23 12.4**	**+0.6**
	baz=308								
WFSB	**Wu-fen Shan**	**0.48**	**312**		P		**Pb**	**05 23 06.3**	**-0.8**
WFSB	baz=308				S		**Sg**	**05 23 12.4**	**+0.7**
	baz=308								
ENA	**Nanau**	**0.50**	**231**		*i* P		**Pg**	**05 23 06.7**	**+0.7**
ENA	baz=216				*i* S		**Sg**	**05 23 12.7**	**+0.2**
	baz=216								
FUSB	**Fushanzhiwuyua**	**0.53**	**271**		P		**Pg**	**05 23 06.6**	**+0.1**
FUSB	baz=268				*eS*		**Sg**	**05 23 13.4**	**0.0**
	baz=268								
TNOU	**National Taiwa**	**0.54**	**318**		*eP*		**Pb**	**05 23 08.3**	**+0.1**
	baz=315								
ENTT	**Nioudou**	**0.56**	**259**		*i* P		**Pg**	**05 23 06.7**	**-0.4**
ENTT	baz=254				*i* S		**Sg**	**05 23 14.6**	**+0.2**
	baz=254								
NWLT	**Wulai**	**0.61**	**273**		*i* P		**Pb**	**05 23 08.7**	**-0.7**
NWLT	baz=270				S		**Sg**	**05 23 15.3**	**-0.5**
	baz=270								
NDT	**Datong Townshi**	**0.61**	**257**		P		**Pg**	**05 23 06.9**	**-1.2**
NDT	baz=259				S		**Sg**	**05 23 14.9**	**-1.2**
	baz=259								
LATG	**Datong**	**0.62**	**250**		P		**Pg**	**05 23 08.8**	**+0.5**
LATG	baz=254				S		**Sg**	**05 23 16.6**	**+0.2**
	baz=254								
YM01	**YM01**	**0.67**	**306**		*eP*		**Pb**	**05 23 10.8**	**+0.3**
YM01	baz=300				*eS*		**Sb**	**05 23 19.8**	**-0.4**
	baz=300								
YHNB	**Yeheng**	**0.73**	**264**		P		**Pg**	**05 23 10.2**	**0.0**
YHNB	baz=254				*eS*		**Sg**	**05 23 18.5**	**-1.1**
	baz=254								
JYNG	**Yonagunijimaku**	**0.77**	**112**		P		**Pn**	**05 23 13.3**	**-0.4**
JYNG					S		**Sn**	**05 23 25.2**	**-0.4**
ETL	**Fush Village**	**0.77**	**221**		*eP*		**Pg**	**05 23 10.2**	**-0.9**
ETL	baz=217				S		**Sb**	**05 23 22.5**	**-0.4**
	baz=217								
NACB	**Ninganchiao**	**0.78**	**223**		P		**Pg**	**05 23 11.6**	**+0.5**
NACB	baz=219				S		**Sg**	**05 23 21.2**	**-0.1**
	baz=219								
NNSB	**Datong**	**0.78**	**246**		P		**Pg**	**05 23 11.8**	**+0.5**
NNSB	baz=249				S		**Sg**	**05 23 20.9**	**-0.6**
	baz=249								
NNS	**Nan Shan**	**0.79**	**247**		*i* P		**Pg**	**05 23 10.9**	**-0.4**
NNS	baz=249				*i* S		**Sg**	**05 23 20.2**	**-1.4**
	baz=249								
YOJ	**Yonaguni jima**	**0.82**	**110**		P		**Pn**	**05 23 13.8**	**-0.6**
YOJ	baz=110				S		**Sn**	**05 23 27.1**	**+0.2**
	baz=110								
YOJ	**Yonaguni jima**	**0.82**	**110**		P		**Pn**	**05 23 14.1**	**-0.3**
YOJ					S		**Sn**	**05 23 26.2**	**-0.6**

ETLH	**Xiulin Townshi**	**0.83**	**230**		*eP*		**Pg**	**05 23 12.5**	**+0.4**
ETLH	baz=226				S		**Sg**	**05 23 23.3**	**+0.5**
	baz=226								
TWD	**Chiawan**	**0.84**	**218**		P		**Pg**	**05 23 12.6**	**+0.1**
TWD	baz=215				S		**Sg**	**05 23 23.7**	**+0.2**
	baz=215								
PCYT	**Pengchaiyu**	**0.88**	**354**	*i*	P		**Pn**	**05 23 15.4**	**+0.1**
PCYT	baz=4.0				S		**Sn**	**05 23 28.9**	**+0.3**
	baz=4.0								
NFF	**Wufeng Townshi**	**0.96**	**263**		P		**Pn**	**05 23 15.9**	**-0.6**
NFF	baz=260				*eS*		**Sg**	**05 23 27.0**	**-0.3**
	baz=260								
FUSS	**Fushou**	**0.98**	**240**	*i*	P		**Pb**	**05 23 16.1**	**+0.2**
FUSS	baz=229				*i* S		**Sg**	**05 23 28.2**	**+0.4**
	baz=229								
WHF	**Hehuan Shan**	**1.02**	**234**		P		**Pg**	**05 23 16.1**	**+0.3**
WHF	baz=230				S		**Sb**	**05 23 30.0**	**-0.5**
	baz=230								
TWT	**Tachien**	**1.03**	**242**		*eS*		**Sg**	**05 23 29.7**	**+0.2**
	baz=231								
LIOB	**Emei**	**1.05**	**265**		P		**Pn**	**05 23 18.1**	**+0.4**
	baz=262								
NSTT	**Nanjuang**	**1.07**	**264**	*i*	P		**Pn**	**05 23 18.1**	**+0.2**
	baz=261								
NSTT					S		**Sb**	**05 23 31.3**	**-0.2**
	baz=261								
CHGB	**Renai**	**1.14**	**233**		P		**Pb**	**05 23 18.6**	**0.0**
	baz=230								
CHGB					S		**Sb**	**05 23 33.5**	**-0.1**
	baz=230								
OWD	**Renai**	**1.20**	**229**		P		**Pg**	**05 23 19.7**	**+0.3**
	baz=219								
OWD					S		**Sb**	**05 23 34.2**	**-1.3**
	baz=219								
WHP	**Taichung City**	**1.21**	**248**		P		**Pg**	**05 23 21.8**	**+2.3**
	baz=244								
WHP					*eS*		**Sn**	**05 23 36.1**	**-0.6**
	baz=244								
WUSB	**Renai**	**1.22**	**232**		P		**Pg**	**05 23 20.1**	**+0.4**
	baz=229								
WUSB					*eS*		**Sb**	**05 23 35.2**	**-0.7**
	baz=229								
NMLH	**Miaoli**	**1.27**	**261**		*eS*		**Sn**	**05 23 40.4**	**+2.3**
	baz=247								
NSY	**Sanyi**	**1.32**	**256**		*eP*		**Pg**	**05 23 23.3**	**+1.7**
	baz=244								
NSY					*eS*		**Sg**	**05 23 39.1**	**+0.2**
	baz=244								
HGSD	**Ruisui**	**1.42**	**209**		*eP*		**Pb**	**05 23 23.4**	**+0.2**
	baz=185								
SMLT	**Sun Moon Lake**	**1.44**	**234**		*eP*		**Pb**	**05 23 23.8**	**+0.1**
	baz=229								
EHY	**Hungye**	**1.46**	**212**		P		**Pb**	**05 23 23.8**	**-0.1**
	baz=214								
SSLB	**Suanglung**	**1.46**	**230**		P		**Pg**	**05 23 24.4**	**+0.1**
	baz=227								
SSLB					*eS*		**Sn**	**05 23 42.5**	**-0.4**
	baz=227								
IRIF	**Iriomote-Funau**	**1.48**	**106**		S		**Sb**	**05 23 43.3**	**0.0**
YULB	**Yu-li**	**1.57**	**211**		P		**Pb**	**05 23 25.4**	**-0.3**
	baz=204								
EYUL	**Yuli**	**1.60**	**209**		*eP*		**Pg**	**05 23 27.8**	**+0.9**
	baz=220								
HATJ	**Hateruma jima**	**1.64**	**114**		P		**Pn**	**05 23 26.2**	**+0.5**
HATJ					S		**Sn**	**05 23 47.5**	**+0.3**
FULB	**Fuli**	**1.74**	**208**		*eP*		**Pg**	**05 23 29.4**	**-0.1**
	baz=184								
JKRS	**Kuro-shima**	**1.75**	**106**		P		**Pn**	**05 23 27.6**	**+0.3**
JKRS					S		**Sn**	**05 23 50.2**	**+0.2**
ALS	**Alishan**	**1.75**	**226**		P		**Pg**	**05 23 30.7**	**+0.8**
	baz=222								
CHN5	**Tsauling**	**1.78**	**230**		*eP*		**Pg**	**05 23 31.6**	**+1.1**
	baz=227								
CHN5					*eS*		**Sg**	**05 23 54.7**	**+1.2**
	baz=227								
JIJ	**Ishigaki jima**	**1.84**	**102**		P		**Pn**	**05 23 29.0**	**+0.6**
JIJ					S		**Sn**	**05 23 52.2**	**+0.1**
EDH	**Donghe**	**1.94**	**204**		*eP*		**Pb**	**05 23 31.1**	**-0.9**
	baz=186								
EDH					*eS*		**Sn**	**05 23 55.3**	**+0.8**
	baz=186								
STYH	**Taoyuan**	**2.02**	**219**		*eP*		**Pb**	**05 23 32.8**	**-0.7**
	baz=218								
STYH					*eS*		**Sg**	**05 24 01.6**	**+0.3**
	baz=218								
WTP	**Ta-pu**	**2.06**	**224**		*eP*		**Pg**	**05 23 35.5**	**-0.3**
	baz=199								
TWK	**Hsinying**	**2.13**	**227**		*eP*		**Pb**	**05 23 36.0**	**+0.6**
	baz=208								
TWK					*eS*		**Sg**	**05 24 06.0**	**+1.3**
	baz=208								
CHN1	**Nanshi**	**2.16**	**224**		*eP*		**Pb**	**05 23 36.7**	**+0.8**
	baz=218								

MAN ***15*** *05:28:12, 5°.72N×126°.21E, h97km, Ms4.7*
GCMT ***15*** *05:28:13.6±0.2, 5°.78N±0°.02×126°.07E±0°.02, h94km±3km, MW5.0/97, Moment Tensor Solution. s46,c49; s97,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.81±.11; $M_{\theta\theta}$0.22±.10; $M_{\phi\phi}$1.59±.12; $M_{r\theta}$0.42±.07; $M_{\theta\phi}$-1.58±.11; $M_{\phi r}$-2.54±.08; Best double couple: M_o3.44800×10^{16} NP1:ϕ_s347.00000°,δ71.00000°,λ-71.00000°. NP2: ϕ_s120.00000°,δ26.00000°,λ-134.00000°. Principal axes: T 3.6830, Plg24.0000°, Azm63.0000°; N -0.4730, Plg18.0000°, Azm161.0000°; P -3.2120, Plg59.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***15*** *05:28:14.6±1.5, 5°.75N±0°.06×125°.85E±0°.09, h101km±6km, mb4.8/112 Error ellipse: s-maj=13.2km s-min=8.5km az=78.0*
DJA ***15*** *05:28:14.3±0.3, 6°.N±3°×12°.6E±°, h101km±3km, M5.0/44, mb4.8/44, m

SNPH Sibulan 4.47 324 *i* P Pn 05 29 24.5 +4.4
MSLP Maasin 4.51 347 ⇓*i* P Pn 05 29 23.2 +2.8
MSLP *i* S Sn 05 30 07.3 -4.4
LLP Lapu-Lapu 4.96 337 *e*P Pn 05 29 26.0 -0.6
LLP *e*S Sn 05 30 23.6 +0.9
TNTI Ternate 5.13 164 Pn Pn 05 29 29.3 +0.4
TNTI Ternate 5.13 164 P Pn 05 29 29.5 +0.6
1.0nm3µm205nm,0.7s
TNTI Ternate 5.13 164 P Pn 05 29 29.2 +0.4
CNOP Candoni, Negro 5.22 322 ⇓*e*P Pn 05 29 31.3 +1.2
KMSI Cibinong 5.47 201 P Pn 05 29 34.9 +1.3
1.8nm507nm,0.9s
GTOI Gorontalo 5.83 210 P Pn 05 29 38.4 -0.1
2.0nm6µm501nm,0.5s
BESP Borongan 5.86 355 ⇓*e*P Pn 05 29 41.1 +2.4
BESP *e*S Sn 05 30 56.1 +11
LBMI Labuha 6.51 166 P Pn 05 29 48.1 +0.4
0.8nm2µm111nm,0.8s
MRSI Marisa 6.56 217 P Pn 05 29 49.4 +1.1
2.1nm6µm528nm,0.8s
RCP Roxas 6.59 332 ⇑*e*P Pn 05 29 50.6 +1.8
TOLI2 Tolitoli 6.88 228 Pn Pn 05 29 52.2 -0.6
MYLDM Lahad Datu 7.41 266 Pn Pn 05 29 58.6 -1.3
LUWI Luwuk 7.42 205 Pn Pn 05 30 01.3 +1.2
LUWI Luwuk 7.42 205 P Pn 05 30 02.3 +2.2
2.1nm7µm585nm,1.0s
SANI Sanana 7.72 180 P Pn 05 30 02.4 -1.8
APSI Ampana 7.86 213 P Pn 05 30 08.1 +2.2
0.9nm2µm226nm,0.7s
MPSI Mapaga 8.05 229 P Pn 05 30 08.4 -0.2
36nm,0.9s
SIJI Sorong 8.45 141 P Pn 05 30 13.6 -0.4
19nm,0.5s,baz=240,slow=23,SNR=2.8
SIJI LR LR 05 33 36.4
comp=Z,486nm,19.9s,baz=288,slow=37
NLAI Namlea 8.98 172 P Pn 05 30 20.2 -1.1
12µm143nm,0.8s
LQP Lukban 9.39 333 ⇓*e*P Pn 05 30 29.8 +2.9
AAI Ambon 9.62 166 P Pn 05 30 30.2 +0.2
25µm92nm,0.9s
TTSI Tana Toraja 10.63 215 P Pn 05 30 44.7 +0.9
1µm67nm,0.8s
FAKI Fak Fak 10.66 144 Pn Pn 05 30 44.5 +0.3
FAKI Fak Fak 10.66 144 P Pn 05 30 44.1 0.0
69nm,1.4s
FAKI Fak Fak 10.66 144 P Pn 05 30 44.1 0.0
SPSI Sidrap Palu 11.42 213 P Pn 05 30 55.3 +0.9
3µm51nm,0.7s
KAPI Kappang 12.32 210 P Pn 05 31 07.4 +1.0
12nm,0.4s,baz=20,slow=5.9,SNR=11
KAPI LR LR 05 36 14.4
comp=Z,328nm,19.4s,baz=61,slow=39
KAPI Kappang 12.32 210 Pn Pn 05 31 07.8 +1.4
KAPI Kappang 12.32 210 P Pn 05 31 10.2 +3.8
BKSI Bulukumba 12.41 208 P Pn 05 31 08.4 +0.8
28nm,0.8s
SBUM Sibu 14.05 257 Pn Pn 05 31 29.0 0.0
BBKI Banjar Baru 14.35 231 P P 05 31 41.4 +4.4
SAUI Saumlaki 14.63 158 P Pn 05 31 36.7 +0.2
307nm,0.9s
EDFI Ende, Flores 14.99 196 P Pn 05 31 41.7 +0.6
306nm22nm,0.8s
SOEI Soe 15.47 186 Pn Pn 05 31 45.2 -2.0
SOEI Soe 15.47 186 P Pn 05 31 47.7 +0.5
97nm,0.9s
BATI Baumata 15.99 188 P P 05 31 55.5 +0.3
225nm,0.8s,baz=106,slow=1.4,SNR=15
BATI Baumata 15.99 188 P Pn 05 31 54.2 +0.6
153nm,0.8s
KSM Kuching 16.15 255 Pn Pn 05 31 53.7 -1.9
PLAI Plampang 16.58 209 P P 05 32 01.8 +0.1
116nm,0.9s
PLAI Plampang 16.58 209 P P 05 32 05.3 +3.6
TWSI Taliwang, Sumb 16.96 212 P P 05 32 06.5 +0.6
37nm,0.8s
MTN Manton Dam 19.16 164 P P 05 32 30.5 +0.5
MTN Manton Dam 19.16 164 P Pn 05 32 31.5 -0.5
KDU Kakadu 19.41 160 P P 05 32 33.5 +0.7
NGJI Ngawi 19.43 228 P P 05 32 33.9 +0.9
76nm,1.2s
TPI Tanjungpandan 20.10 246 P Pn 05 32 47.6 +4.6
GUMO Guam 20.23 66 LR LR 05 39 13.7
comp=Z,240nm,20.9s,baz=288,slow=32
GUMO Guam 20.23 66 P P 05 32 42.0 +0.4
QIZ Qiongzhong 20.50 312 P P 05 32 44.8 +0.2
QIZ S S 05 36 29.4 +0.7
QIZ LR LR
comp=N,740nm,8.6s
QIZ LR LR
comp=E,340nm,9.6s
QIZ LR LR
comp=Z,470nm,12.0s
JOW Kunigami 21.11 6 P P 05 32 51.1 +0.1
KNRA Kununurra 21.45 173 P P 05 32 54.4 -0.3
KNRA Kununurra 21.45 173 P P 05 32 55.2 +0.5
LEM Lembang 22.12 236 P P 05 33 02.3 +0.3
21nm,0.5s,baz=118,slow=22,SNR=1.9
LEM LR LR 05 42 52.0
comp=Z,138nm,18.5s,baz=32,slow=40
21nm,0.5s
UBPT Khong Chiam 22.22 297 P P 05 33 01.0 -1.9
KLI Kotabumi 23.52 244 P P 05 33 16.3 +0.6
10µm259nm,0.9s
FITZ Fitzroy Crossi 23.67 181 P P 05 33 17.1 +0.1
41nm,0.8s,baz=8.6,slow=7.8,SNR=107
FITZ LR LR 05 44 19.1
comp=Z,101nm,19.4s,baz=21,slow=41
41nm,0.8s
FITZ Fitzroy Crossi 23.67 181 P P 05 33 16.4 -0.6
FITZ Fitzroy Crossi 23.67 181 P P 05 33 17.4 +0.4
KASI Kota Agung 24.14 243 P P 05 33 22.1 +0.9
163nm,0.9s
LWLI Liwa 24.30 244 P P 05 33 23.6 +0.7
13µm130nm,0.9s
IPM Ipoh 24.83 268 P P 05 33 27.1 -0.5
KULM Kulim 25.16 270 P P 05 33 29.2 -1.3
COEN Coen 25.99 139 P P 05 33 37.7 -0.3
COEN IAmb IAmb 05 33 41.5
comp=Z,37nm,1.2s
COEN Coen 25.99 139 P P 05 33 37.8 -0.3
JSU Suzuyama 26.00 9 P P 05 33 37.8 -0.2
MNSI Mandailing Nat 26.75 260 P P 05 33 45.7 +0.8
comp=Z,7µmcomp=Z,18nm,0.4s
WRA Warramunga Arr 26.82 162 P P 05 33 45.3 -0.1
comp=Z,2.7nm,0.7s,baz=350,slow=8.7,SNR=7.9
WRA LR LR 05 45 17.1
comp=Z,95nm,19.2s,baz=331,slow=38
comp=Z,2.7nm,0.7s
WB2 Warramunga Arr 26.82 162 P P 05 33 45.0 -0.4
WB2 IAmb IAmb 05 34 29.8
comp=Z,18nm,0.8s
WR0 Warramunga Arr 26.89 162 P P 05 33 45.8 -0.3
NJ2 Nanjing 27.01 347 *e*P P 05 33 50.3 +3.3
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
PSI Prapat 27.08 265 P P 05 33 47.9 -0.2
comp=Z,14nm,0.7s,baz=62,slow=4.2,SNR=7.9
PSI LR LR 05 47 38.1
comp=Z,148nm,18.2s,baz=67,slow=43
comp=Z,14nm,0.7s
MBWA Marble Bar 27.40 193 P P 05 33 49.7 -0.9
MBWA IAmb IAmb 05 33 52.7
comp=Z,17nm,0.8s
SISI Saibi 27.70 256 P P 05 33 53.6 +0.2
comp=Z,74nm,0.7s
PSA00 Pilbara Seismi 27.78 192 P P 05 33 53.9 0.0
PSA00 Pilbara Seismi 27.78 192 P P 05 33 52.3 -1.7
PSA00 IAmb IAmb 05 33 58.2
comp=Z,24nm,0.8s
PSA00 Pilbara Seismi 27.78 192 P P 05 33 54.0 0.0
KRVT Keravat (AS076 27.91 110 LR LR 05 45 18.7
comp=Z,78nm,18.1s,baz=75,slow=36
KCSI Kotacane, Aceh 28.15 267 P P 05 33 56.6 -0.8
comp=Z,4µmcomp=Z,29nm,0.8s
GSI Gunungsitoli 28.63 262 P P 05 33 59.5 -2.2
GSI Gunungsitoli 28.63 262 P P 05 34 00.9 -0.8
comp=Z,18µmcomp=Z,53nm,0.6s
CRAI Chiangrai 28.70 303 P P 05 34 00.1 -2.2
JMN Monobe 28.83 14 P P 05 34 02.2 -1.0
CMAR Chiang Mai Arr 29.20 298 P P 05 34 06.8 +0.1
comp=Z,3.2nm,0.8s,baz=105,slow=6.9,SNR=12
CMAR LR LR 05 46 10.2
comp=Z,122nm,18.4s,baz=105,slow=37
comp=Z,3.2nm,0.8s
CMAR Chiang Mai Arr 29.20 298 P P 05 34 05.0 -1.8
CHTO Chiang Mai 29.34 299 P P 05 34 06.6 -1.3
CHTO Chiang Mai 29.34 299 P P 05 34 09.4 +1.5
QIS Mount Isa 29.38 153 P P 05 34 08.9 +0.7
JHJ Hachijo jima 2 30.16 24 LR LR 05 44 44.5
comp=Z,57nm,20.9s,baz=270,slow=33
AS31 Alice Springs 30.23 165 P P 05 34 15.3 -0.5
ASAR Alice Springs 30.23 165 P P 05 34 15.7 -0.1
comp=Z,1.9nm,0.6s,baz=345,slow=7.3,SNR=21
ASAR S S 05 39 06.4 -1.8
comp=Z,2.0nm,0.9s,baz=355,slow=2.1,SNR=4.9
ASAR ScP ScP 05 40 48.0 +0.1
comp=Z,1.3nm,0.9s,baz=326,slow=3.1,SNR=6.3
ASAR LR LR 05 47 58.4
comp=Z,82nm,20.4s,baz=340,slow=39
comp=Z,1.9nm,0.6s
ASAR Alice Springs 30.23 165 P P 05 34 15.2 -0.6
GIRL Giralia 30.43 202 P P 05 34 18.5 +1.1
WRKA Warakurna 30.66 176 P P 05 34 20.2 +0.6
PZH PanZhiHua 30.97 314 P P 05 34 23.5 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,4.2s
KSCHJ Chungju 31.06 3 P P 05 34 24.2 +1.4
INU Inuyama 31.20 18 P P 05 34 23.3 -0.9
INU Inuyama 31.20 18 P P 05 34 23.3 -0.9
KSAR Wonju Array Be 31.62 3 P P 05 34 26.3 -1.5
KSRS Korea Array 31.63 3 P P 05 34 28.3 +0.4
comp=Z,3.6nm,0.6s,baz=188,slow=9.5,SNR=14
KSRS PcP PcP 05 37 18.9 +1.1
comp=Z,0.8nm,0.5s,baz=164,slow=2.1,SNR=4.5
KSRS LR LR 05 46 15.1
comp=Z,44nm,20.7s,baz=190,slow=34
comp=Z,3.6nm,0.6s
XAN Xi'an 32.29 333 P P 05 34 34.0 +0.2
XAN pP pP 05 34 59.9 +3.4
XAN sP sP 05 35 09.1 +1.0
XAN pmax pmax
comp=Z,15nm,0.8s
XAN pmax pmax
comp=Z,120nm,6.0s
XAN Xi'an 32.29 333 P P 05 34 33.9 +0.2
XAN sP sP 05 35 10.3 +2.2
CTA Charters Tower 32.52 143 LR LR 05 49 02.4
comp=Z,198nm,19.8s,baz=293,slow=38
MJAR Matsushiro Arr 32.67 19 P P 05 34 37.9 +0.8
comp=Z,2.0nm,0.9s,baz=182,slow=9.7,SNR=9.0
MJAR LR LR 05 49 37.2
comp=Z,55nm,18.4s,baz=210,slow=39
comp=Z,2.0nm,0.9s
MAJO Matsushiro 32.67 19 P P 05 34 35.7 -1.3
MAJO IAmb IAmb 05 34 44.7
comp=Z,23nm,1.6s
MEEK Meekatharra 32.94 192 P P 05 34 39.4 -0.1
HNS HongShan 33.15 344 ⇑P P 05 34 44.8 +3.7
HNS pmax pmax
comp=Z,12nm,0.8s
JSD Sado 34.06 18 P P 05 34 48.1 -1.0
JSD IAmb IAmb 05 34 52.6
comp=Z,12nm,0.9s
OOD Oodnadatta 34.63 165 P P 05 34 55.0 +0.9
JMM Marumori 34.74 21 P P 05 34 54.1 -0.8
BJT Baijiatuau 35.25 347 P P 05 34 57.7 -1.6
BJT IAmb IAmb 05 35 08.2
comp=Z,14nm,1.0s
BJT Baijiatuau 35.25 347 P P 05 34 58.2 -1.2
BJT sP sP 05 35 32.8 -0.2
MORW Morawa 35.88 195 P P 05 35 04.3 -0.5
FORT Forrest 36.35 177 P P 05 35 09.3 +0.5
FORT Forrest 36.35 177 P P 05 35 09.0 +0.2
LZH Lanzhou 36.39 329 ⇑P P 05 35 10.8 +1.5
LZH pP pP 05 35 34.9 +2.7
LZH sP sP 05 35 48.8 +5.0
LZH pmax pmax
comp=Z,17nm,1.4s
LZH pmax pmax
comp=Z,120nm,5.8s
LZH LR LR
comp=Z,290nm,14.4s
LZH LR LR
comp=Z,300nm,15.8s
LZH LR LR
comp=Z,180nm,15.8s
MULG Mulgathing 36.64 168 P P 05 35 13.2 +1.9
HNR Honiara 37.10 114 LR LR 05 50 02.6
comp=Z,58nm,20.4s,baz=310,slow=35
HHC Hu-ho-hao-te 37.27 342 *e*P P 05 35 18.6 +2.0
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,190nm,6.2s
KLBR Kellerberrin 37.92 191 P P 05 35 22.1 0.0
CN2 Changchun 37.92 359 *e*P P 05 35 22.0 +0.1
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Ar. 38.69 7 P P 05 35 29.2 +0.9
comp=Z,5.3nm,0.7s,baz=192,slow=7.6,SNR=8.3
comp=Z,5.3nm,0.7s
MDJ Mudanjiang 38.87 4 P P 05 35 30.8 +1.0
MDJ IAmb IAmb 05 35 36.7
comp=Z,30nm,1.2s
MDJ Mudanjiang 38.87 4 P P 05 35 31.8 +1.9
MDJ pmax pmax
comp=Z,22nm,1.7s
MDJ pmax pmax
comp=Z,130nm,3.9s
NWAO Narrogin (SRO) 39.32 192 P P 05 35 34.5 +0.7
EIDS Eidsvold 39.41 143 P P 05 35 34.1 -0.5
BBOO Buckleboo 39.52 167 P P 05 35 36.2 +0.8
BBOO IAmb IAmb 05 36 01.5
comp=Z,16nm,0.7s
BNX BinXian 39.88 2 ⇑P P 05 35 39.9 +1.7
BNX pmax pmax
comp=Z,15nm,0.8s
BNX pmax pmax
comp=Z,70nm,4.8s
STKA Stephens Creek 40.27 159 P P 05 35 42.1 +0.5
comp=Z,22nm,1.0s,baz=338,slow=7.0,SNR=21
STKA LR LR 05 54 19.0
comp=Z,62nm,18.2s,baz=357,slow=39
comp=Z,22nm,1.0s
STKA Stephens Creek 40.27 159 P P 05 35 42.5 +0.9
GTA Gaotai 40.98 329 *e*P P 05 35 49.1 +1.5
GTA pP pP 05 36 08.6 -2.3
GTA sP sP 05 36 23.6 +1.2
GTA PcP PcP 05 37 46.4 +0.4
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA LR LR
comp=Z,120nm,19.6s
GTA LR LR
comp=Z,120nm,19.3s
GTA LR LR
comp=Z,130nm,17.8s
GOMU GeErMu 41.64 321 P P 05 35 55.1 +1.8
GOMU pmax pmax
comp=Z,4.0nm,0.6s
H11S3 WAKE ISLAND Hy 41.71 69 T T 06 19 54.3
baz=258,slow=75,SNR=15
H11S1 WAKE ISLAND Hy 41.73 69 T T 06 19 59.1
baz=258,slow=75,SNR=9.7
H11S2 WAKE ISLAND Hy 41.73 69 T T 06 19 56.1
baz=258,slow=75,SNR=18
H11N1 WAKE ISLAND Hy 42.17 67 T T 06 20 35.1
baz=255,slow=75,SNR=7.1
H11N2 WAKE ISLAND Hy 42.18 67 T T 06 20 35.7
baz=255,slow=75,SNR=6.2
H11N3 WAKE ISLAND Hy 42.19 67 T T 06 20 52.2
baz=255,slow=75,SNR=8.0
TWOA Tennyson Woods 42.26 164 P P 05 35 58.4 +0.6
RAMN Ramite 42.97 304 *e*P P 05 36 04.7 +0.6
comp=Z,29nm,0.8s
JIRN Jiri 43.57 305 *e*P P 05 36 10.3 +1.2
KLR Kul'dur 43.63 6 P P 05 36 08.7 -0.1
comp=Z,3.7nm,0.5s,baz=187,slow=8.0,SNR=10
KLR LR LR 05 54 56.0
comp=Z,46nm,20.3s,baz=194,slow=37
comp=Z,3.7nm,0.5s
GUN Gumba 43.92 305 *e*P P 05 36 13.5 +1.6
comp=Z,58nm,0.8s
PKI Pulchoki 44.18 304 *e*P P 05 36 13.8 -0.1
DMN Daman 44.44 304 *e*P P 05 36 15.3 -0.6
SONM Songino Array 45.16 341 P P 05 36 21.0 -0.2
comp=Z,1.6nm,0.6s,baz=158,slow=8.7,SNR=7.0
SONM PcP PcP 05 37 60.0 +0.1
comp=Z,3.7nm,0.7s,baz=172,slow=2.7,SNR=8.2
SONM LR LR 05 56 37.7
comp=Z,63nm,18.4s,baz=170,slow=38
comp=Z,1.6nm,0.6s
DANN Dangsing 45.82 304 *e*P P 05 36 27.2 +0.3
comp=Z,15nm,0.5s
CAN Canberra 46.24 154 P P 05 36 31.6 +1.8
CAN pP pwP 05 36 56.4 -0.6
CAN sP sP 05 37 08.9 +5.6
HYBB Hyderabad (bro 47.71 288 *e*P P 05 36 41.0 -0.5
HYBB epP pP 05 37 04.3 -1.1
HYBB esP sP 05 37 15.9 -0.9
HYBB *e*S S 05 43 29.0 -1.5
DZM Mont Dzumac 48.34 126 LR LR 05 56 26.1
comp=Z,39nm,18.3s,baz=225,slow=35
DZM Mont Dzumac 48.34 126 eLR LR 05 50 40.2
comp=Z,325nm,29.5s
WMQ Urumqi 50.64 325 *e*P P 05 37 04.3 +0.9
WMQ PcP PcP 05 38 21.6 +2.0
WMQ PP PP 05 39 07.0 +6.7
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ pmax pmax
comp=Z,110nm,5.1s
WMQ LR LR
comp=Z,220nm,23.5s
WMQ LR LR
comp=Z,170nm,21.7s
WMQ LR LR
comp=Z,190nm,23.5s
PETK Petropavlovsk- 53.91 23 P P 05 37 27.8 +0.4
comp=Z,8.4nm,1.0s,baz=199,slow=3.1,SNR=7.8
PETK LR LR 06 00 16.3
comp=Z,24nm,20.6s,baz=213,slow=36
comp=Z,8.4nm,1.0s
PETK Petropavlovsk- 53.91 23 P P 05 37 27.5 +0.1
MK31 Makanchi Array 55.47 325 P P 05 37 37.5 -1.3
MKAR Makanchi Array 55.47 325 P P 05 37 38.2 -0.6
comp=Z,3.5nm,0.3s,baz=116,slow=7.6,SNR=57
MKAR PcP PcP 05 38 36.1 -1.7
comp=Z,2.8nm,0.6s,baz=116,slow=2.8,SNR=4.4
MKAR ScP ScP 05 42 26.6 -1.0
comp=Z,0.7nm,0.7s,baz=131,slow=5.0,SNR=3.6
MKAR LR LR 06 02 04.5
comp=Z,101nm,21.4s,baz=100,slow=37
comp=Z,3.5nm,0.3s
MKAR Makanchi Array 55.47 325 P P 05 37 37.9 -0.9
MAKZ Makanchi 55.66 325 P P 05 37 39.7 -0.5
MAKZ IAmb IAmb 05 37 41.7
comp=Z,7.4nm,0.8s
MAKZ Makanchi 55.66 325 P P 05 37 39.6 -0.5
NIL Nilore 56.09 307 P P 05 37 43.2 -0.2
NIL Nilore 56.09 307 P P 05 37 43.4 -0.1
YAK Yakutsk 56.25 2 P P 05 37 44.5 +0.5
comp=Z,20nm,0.5s,baz=282,slow=0.8,SNR=4.8
YAK LR LR 06 05 19.4
comp=Z,22nm,18.5s,baz=91,slow=40
comp=Z,20nm,0.5s
YAK Yakutsk 56.25 2 P P 05 37 44.7 +0.7
NRN Naryn 56.84 317 P P 05 37 47.3 -1.7
MA2 Magadan 56.98 15 P P 05 37 50.1 +0.8
comp=Z,8.4nm,0.5s,baz=221,slow=5.0,SNR=5.3
comp=Z,8.4nm,0.5s
MA2 Magadan 56.98 15 P P 05 37 49.3 +0.1
BOOM Boomskoye usch 57.32 318 P P 05 37 50.6 -1.6
BOOM IAmb IAmb 05 38 10.8
comp=Z,15nm,1.7s
AAK Ala-Archa 58.35 317 LR LR 06 04 57.3
comp=Z,77nm,21.9s,baz=100,slow=38
ZAA0 Zalesovo Array 58.46 333 P P 05 37 58.7 -0.9
ZALV Zalesovo Beam 58.46 333 P P 05 37 58.9 -0.8
comp=Z,2.0nm,0.5s,baz=133,slow=5.9,SNR=7.3
ZALV LR LR 06 04 04.9
comp=Z,48nm,21.4s,baz=116,slow=37
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 58.46 333 P P 05 37 58.0 -1.6
KURBB Kurchatov Arra 59.64 327 P P 05 38 07.1 -0.8
comp=Z,5.7nm,0.6s,baz=125,slow=5.8,SNR=29
comp=Z,5.7nm,0.6s
KURK Kurchatov 59.64 327 P P 05 38 07.0 -0.9
KURK IAmb IAmb 05 38 09.2
comp=Z,10nm,0.7s
KURK Kurchatov 59.64 327 P P 05 38 06.7 -1.2
KURK sP sP 05 38 44.4 +0.1
KBL Kabul 59.69 307 P P 05 38 06.3 -2.5
KBL IAmb IAmb 05 38 10.5
comp=Z,10nm,0.7s
GAR Garm 59.99 312 P P 05 38 09.2 -1.5
CHGR Chuyangaron 60.75 311 P P 05 38 15.2 -0.6
CHGR IAmb IAmb 05 38 18.1
comp=Z,11nm,0.8s
KK31 Karatay Array 61.24 317 P P 05 38 18.1 -0.9
KKAR Karatay Array 61.24 317 P P 05 38 18.2 -0.8
AFI Afiamalu 64.82 108 LR LR 06 05 32.1
comp=Z,30nm,18.2s,baz=274,slow=34
BRVK Borovoye 65.29 327 P P 05 38 44.5 -1.0
BRVK IAmb IAmb 05 38 46.8
comp=Z,10nm,0.8s
BRVK Borovoye 65.29 327 P P 05 38 44.3 -1.2
BRVK pP pP 05 39 11.2 +0.8
TIXI Tiksi 65.87 1 P P 05 38 49.4 +0.5
comp=Z,7.1nm,0.4s,baz=94,slow=23,SNR=6.9
comp=Z,7.1nm,0.4s
TIXI Tiksi 65.87 1 P P 05 38 49.2 +0.3
WSAR Wadi Sarin 66.91 293 LR LR 06 13 25.4
comp=Z,22nm,18.0s,baz=112,slow=41
NRIK Noril'sk 68.31 346 P P 05 39 03.8 -0.6
comp=Z,10nm,0.6s,baz=134,slow=7.4,SNR=13
comp=Z,10nm,0.6s
NRIK Noril'sk 68.31 346 P P 05 39 03.8 -0.6
NRIK IAmb IAmb 05 39 06.3
comp=Z,12nm,0.8s
GEYT Alibeck 69.03 308 P P 05 39 07.9 -1.6
GYA0B ALIBECK ARRAY 69.03 308 P P 05 39 08.1 -1.4
GYA0B IAmb IAmb 05 39 15.4
comp=Z,6.5nm,0.5s
ABKAR Akbulak array 70.11 320 P P 05 39 14.4 -1.5
AKTO Aktyubinsk 71.61 321 P P 05 39 23.6 -1.3
comp=Z,4.4nm,0.5s,baz=105,slow=6.5,SNR=16
comp=Z,4.4nm,0.5s
UNV Unalaska Valle 72.25 35 P P 05 39 28.9 +0.2
baz=255
CASY Casey 72.69 186 P P 05 39 31.9 +1.0
ARU Arti 72.83 328 P P 05 39 30.5 -1.5
comp=Z,5.9nm,0.4s,baz=106,slow=5.3,SNR=9.3
comp=Z,5.9nm,0.4s
ARU Arti 72.83 328 P P 05 39 30.6 -1.5
GAMB Gambell 72.91 24 P P 05 39 32.8 +0.5
baz=247
S12K Black Hills 75.19 34 P P 05 39 46.5 +0.7
baz=258
SDPT Sand Point 76.00 34 P P 05 39 50.9 +0.5
baz=260
S14K Fog Glacier 76.68 34 P P 05 39 54.8 +0.4
baz=260
CHGN Chignik 77.31 34 P P 05 39 58.6 +0.8
baz=261
N16K Nishlik Lake 77.81 29 P P 05 40 01.0 +0.4
baz=260
R16K Pilot Point 77.96 32 P P 05 40 01.4 +0.1
baz=262
P16K Nushagak River 77.96 31 P P 05 40 02.5 +1.2
baz=261
O16K Kokwok River B 78.00 30 P P 05 40 02.0 +0.5
baz=261
KIRV Kirov 78.11 329 P P 05 40 00.5 -1.7
comp=Z,32nm,0.6s,baz=245,slow=1.3,SNR=8.5
comp=Z,32nm,0.6s
BELG Belogornoye 78.35 322 P P 05 40 01.4 -2.2
comp=Z,17nm,0.9s,baz=42,slow=2.7,SNR=6.2
comp=Z,17nm,0.9s
O17K Koliganek Bris 78.53 30 P P 05 40 05.0 +0.6
baz=262
R17K Ugashik Creek 78.60 32 P P 05 40 05.5 +0.6
baz=263
P17K Kvichak River 78.78 31 P P 05 40 06.8 +1.0
baz=262
CHIR Chirikof Islan 78.80 34 P P 05 40 06.8 +0.7
baz=264
N18K Kilae Creek 79.25 29 P P 05 40 09.2 +0.7
baz=263
GCSA Galena City Sc 79.39 25 P P 05 40 09.7 +0.6
baz=261
SVW2 Sparrevohn 79.45 29 P P 05 40 11.1 +1.5
SVW2 IAmb IAmb 05 40 13.2
comp=Z,46nm,2.0s
O18K Koktuh Hills 79.48 30 P P 05 40 09.8 +0.1
O18K IAmb IAmb 05 40 12.1
comp=Z,45nm,1.8s

O18K	**Koktuh Hills**	79.48	30	P		P	05 40 11.1	+1.4
	baz=263							
TTA	**Tatalina**	79.50	27	P		P	05 40 10.4	+0.6
	baz=262							
L19K	**White Mountain**	79.93	28	P		P	05 40 12.9	+0.8
L19K				IAmb		IAmb	05 40 15.0	
	comp=Z,22nm,1.6s							
L19K	**White Mountain**	79.93	28	P		P	05 40 13.4	+1.3
	baz=263							
N19K	**Bonanza Creek**	79.95	29	P		P	05 40 13.7	+1.4
N19K				IAmb		IAmb	05 40 18.2	
	comp=Z,8.9nm,0.7s							
N19K	**Bonanza Creek**	79.95	29	P		P	05 40 12.7	+0.4
	baz=264,SNR=5.3							
O19K	**Port Alsworth**	79.96	30	P		P	05 40 12.1	-0.1
	baz=264							
M19K	**Big River Lodg**	80.11	28	P		P	05 40 13.5	+0.4
	baz=264							
Q19K	**Cape Douglas,**	80.18	31	P		P	05 40 11.7	-1.8
OHAK	**Old Harbor**	80.22	33	P		P	05 40 14.9	+1.2
	baz=265							
L20K	**Farewell, AK**	80.42	28	P		P	05 40 15.4	+0.7
	baz=264							
K20K	**Telida**	80.43	27	P		P	05 40 14.1	-0.7
K20K	**Telida**	80.43	27	P		P	05 40 15.5	+0.7
	baz=264							
J20K	**Nowinta River**	80.48	26	P		P	05 40 16.2	+1.1
J20K	**Nowinta River**	80.48	26	P		P	05 40 16.1	+1.1
	baz=264,SNR=8.1							
A21K	**Barrow**	80.59	19	P		P	05 40 15.6	+0.2
	baz=260							
KDAK	**Kodiak Island**	80.64	32	P		P	05 40 17.0	+1.0
KDAK	**Kodiak Island**	80.64	32	P		P	05 40 16.8	+0.8
	baz=266							
M20K	**Styx River**	80.71	28	P		P	05 40 17.5	+1.1
M20K				IAmb		IAmb	05 40 22.8	
	comp=Z,14nm,0.8s							
M20K	**Styx River**	80.71	28	P		P	05 40 17.3	+0.9
	baz=265							
IMAR	**Indian Mountai**	80.86	24	P		P	05 40 18.0	+1.0
G21K	**Allakaket**	81.02	24	P		P	05 40 19.1	+1.3
	baz=264,SNR=8.4							
F21K	**Alatna River**	81.11	23	P		P	05 40 19.3	+1.0
	baz=264							
H21K	**Melozitna Rive**	81.21	24	P		P	05 40 20.4	+1.6
H21K	**Melozitna Rive**	81.21	24	P		P	05 40 19.8	+0.9
	baz=264,SNR=9.9							
PPLA	**Purkeypile**	81.23	27	P		P	05 40 19.8	+0.6
PPLA				IAmb		IAmb	05 40 23.3	
	comp=Z,11nm,0.7s							
PPLA	**Purkeypile**	81.23	27	P		P	05 40 20.0	+0.7
	baz=266							
CHUM	**Lake Minchumin**	81.26	26	P		P	05 40 20.0	+0.9
	baz=265							
CAST	**Castle Rocks**	81.32	27	P		P	05 40 20.4	+0.8
CAST				IAmb		IAmb	05 40 26.8	
	comp=Z,12nm,0.8s							
CAST	**Castle Rocks**	81.32	27	P		P	05 40 20.8	+1.3
	baz=266,SNR=11							
I21K	**Tanana**	81.51	25	P		P	05 40 20.8	+0.4
I21K				IAmb		IAmb	05 40 26.8	
	comp=Z,14nm,0.9s							
I21K	**Tanana**	81.51	25	P		P	05 40 21.3	+0.9
	baz=265,SNR=12							
F22K	**John River**	81.64	23	P		P	05 40 22.2	+1.1
	baz=265							
H22K	**Ishtalitna Cre**	81.82	24	P		P	05 40 22.9	+0.8
	baz=266,SNR=11							
E22K	**Anaktuvuk Pass**	81.83	22	P		P	05 40 23.4	+1.2
	baz=265							
KTH	**Kantishna Hill**	81.85	27	P		P	05 40 24.0	+1.6
KTH				IAmb		IAmb	05 40 28.6	
	comp=Z,26nm,1.4s							
BPAW	**Bear Paw Mtn.**	81.86	26	P		P	05 40 22.9	+0.6
BPAW				IAmb		IAmb	05 40 25.3	
	comp=Z,13nm,0.7s							
BPAW	**Bear Paw Mtn.**	81.86	26	P		P	05 40 23.2	+0.9
	baz=266,SNR=9.9							
MLY	**Manley**	82.02	25	P		P	05 40 24.2	+1.0
MLY				IAmb		IAmb	05 40 27.8	
	comp=Z,12nm,0.7s							
MLY	**Manley**	82.02	25	P		P	05 40 23.8	+0.6
	baz=266,SNR=20							
CUT	**Chulitna**	82.08	28	P		P	05 40 24.5	+1.1
	baz=267							
M22K	**Willow**	82.12	29	P		P	05 40 22.2	-1.5
M22K	**Willow**	82.12	29	P		P	05 40 24.5	+0.8
	baz=268							
TRF	**Thorofare Moun**	82.13	27	P		P	05 40 24.6	+0.7
TRF				IAmb		IAmb	05 40 54.0	
	comp=Z,15nm,1.1s							
TRF	**Thorofare Moun**	82.13	27	P		P	05 40 24.6	+0.7
	baz=267,SNR=6.0							
O22K	**Cooper Landing**	82.26	30	P		P	05 40 25.2	+0.8
	baz=268							
RC01	**Rabbit Creek A**	82.28	29	P		P	05 40 25.1	+0.5
	baz=268							
D23K	**Nanushuk River**	82.31	21	P		P	05 40 25.8	+1.2
	baz=266							
COLD	**Coldfoot**	82.38	23	P		P	05 40 26.5	+1.5
	baz=267							
SEW	**Seward**	82.39	30	P		P	05 40 25.8	+0.7
	baz=268							
C23K	**Itkillik River**	82.40	20	P		P	05 40 25.9	+0.9
	baz=266,SNR=14							
G23K	**Bananza Creek**	82.42	24	P		P	05 40 26.3	+1.1
	baz=267,SNR=9.0							
H23K	**Yukon River**	82.57	24	P		P	05 40 25.8	-0.2
H23K				IAmb		IAmb	05 40 29.6	
	comp=Z,7.2nm,0.7s							
H23K	**Yukon River**	82.57	24	P		P	05 40 26.8	+0.8
	baz=267,SNR=12							
PMR	**Palmer**	82.59	29	P		P	05 40 25.9	-0.3
PMR				IAmb		IAmb	05 41 01.4	
	comp=Z,14nm,1.1s							
PMR	**Palmer**	82.59	29	P		P	05 40 27.1	+1.0
	baz=268							
I23K	**Minto, Yukon-K**	82.61	25	P		P	05 40 27.1	+0.9
I23K	**Minto, Yukon-K**	82.61	25	P		P	05 40 26.9	+0.7
	baz=268,SNR=12							
TOLK	**Toolik Lake Re**	82.70	22	P		P	05 40 27.8	+1.2
TOLK				IAmb		IAmb	05 40 31.6	
	comp=Z,10nm,0.7s							
TOLK	**Toolik Lake Re**	82.70	22	P		P	05 40 27.1	+0.4
	baz=267,SNR=9.6							
NEA2	**Nenana**	82.72	26	P		P	05 40 27.6	+0.8
NEA2				IAmb		IAmb	05 40 33.3	
	comp=Z,10nm,0.8s							
NEA2	**Nenana**	82.72	26	P		P	05 40 27.6	+0.8
	baz=268,SNR=12							
MCK	**McKinley**	82.75	27	P		P	05 40 27.2	+0.2
MCK				IAmb		IAmb	05 40 29.3	
	comp=Z,17nm,0.7s							
MCK	**McKinley**	82.75	27	P		P	05 40 27.7	+0.7
	baz=268,SNR=9.0							
RND	**Reindeer**	82.77	27	P		P	05 40 27.5	+0.3
WAT1	**Susitna Watana**	82.89	27	P		P	05 40 28.2	+0.5
	baz=269							
KNK	**Knik Glacier**	82.91	29	P		P	05 40 27.6	-0.3
KNK	**Knik Glacier**	82.91	29	P		P	05 40 28.5	+0.7
	baz=269							
PWL	**Port Wells**	82.96	29	P		P	05 40 28.2	+0.1
	baz=269							
SML	**Sawmill**	82.97	29	P		P	05 40 28.3	+0.1
SML	**Sawmill**	82.97	29	P		P	05 40 28.6	+0.3
	baz=269							
D24K	**Happy Valley**	82.99	21	P		P	05 40 28.8	+0.7
	baz=268							
C24K	**Franklin Bluff**	83.06	20	P		P	05 40 29.1	+0.8
	baz=268							
E24K	**Your Creek**	83.07	22	P		P	05 40 29.2	+0.6
	baz=268							
MDM	**Murphy Dome**	83.09	25	P		P	05 40 29.4	+0.7
MDM				IAmb		IAmb	05 40 32.7	
	comp=Z,20nm,1.4s							
WRH	**Wood River Hil**	83.14	26	P		P	05 40 28.8	-0.1
WRH				IAmb		IAmb	05 40 34.1	
	comp=Z,12nm,1.1s							
TCOL	**CIGO, UAF Yank**	83.24	25	P		P	05 40 29.9	+0.5
TCOL	**CIGO, UAF Yank**	83.24	25	P		P	05 40 30.2	+0.8
	baz=269							
COLA	**College**	83.25	25	P		P	05 40 30.0	+0.5
COLA	**College**	83.25	25	P		P	05 40 30.5	+1.0
	baz=269							
H24K	**Noodor Dome**	83.25	24	P		P	05 40 29.7	+0.1
H24K				IAmb		IAmb	05 40 33.6	
	comp=Z,11nm,0.7s							
H24K	**Noodor Dome**	83.25	24	P		P	05 40 30.4	+0.8
	baz=269,SNR=15							
CCB	**Clear Creek Bu**	83.26	26	P		P	05 40 29.5	-0.1
CCB				IAmb		IAmb	05 40 34.0	
	comp=Z,13nm,1.1s							
M23K	**Glacier View**	83.26	29	P		P	05 40 29.6	-0.1
	baz=270							
WAT6	**Susitna Watana**	83.26	28	P		P	05 40 30.1	+0.3
	baz=270							
KLMR	**Klimovskoe**	83.28	331	*e*P		P	05 40 27.8	-1.9
KLMR				AMP			05 40 31.3	
	comp=Z,17nm,0.9s							
F24K	**Squaw Lake**	83.28	23	P		P	05 40 30.3	+0.6
	baz=269,SNR=5.9							
G24K	**Hadweenzic Riv**	83.43	24	P		P	05 40 31.3	+0.9
	baz=269,SNR=14							
DHY	**Denali Highway**	83.44	27	P		P	05 40 31.6	+0.9
DHY	**Denali Highway**	83.44	27	P		P	05 40 31.6	+0.9
	baz=270							
SCM	**Sheep Creek Mo**	83.45	28	P		P	05 40 31.1	+0.4
	baz=270							
GLI	**Glacier Island**	83.56	29	P		P	05 40 31.1	-0.1
GLI	**Glacier Island**	83.56	29	P		P	05 40 31.2	0.0
	baz=270							
HDA	**Harding Lake**	83.63	26	P		P	05 40 31.1	-0.4
HDA				IAmb		IAmb	05 40 34.8	
	comp=Z,11nm,0.8s							
HDA	**Harding Lake**	83.63	26	P		P	05 40 31.5	0.0
	baz=270,SNR=11							
IL31		83.66	26	P		P	05 40 30.8	-0.7
ILAR	**Eielson Array**	83.66	26	P		P	05 40 30.9	-0.7
	comp=Z,3.7nm,0.6s,baz=245,slow=5.1,SNR=32							
ILAR				LR		LR	06 16 34.6	
	comp=Z,22nm,21.9s,baz=206,slow=35							
	comp=Z,3.7nm,0.6s							
ILAR	**Eielson Array**	83.66	26	P		P	05 40 30.6	-1.0
D25K	**Kavik River**	83.87	21	P		P	05 40 33.0	+0.4
	baz=270,SNR=10							
FID	**Fidalgo**	83.87	30	P		P	05 40 33.5	+0.8
M24K	**Tolsona, Glenn**	84.00	28	P		P	05 40 33.9	+0.5
M24K	**Tolsona, Glenn**	84.00	28	P		P	05 40 34.3	+0.8
	baz=271							
H25K	**Birch Creek**	84.09	24	P		P	05 40 34.7	+0.9
	baz=271							
KLU	**Klutina**	84.12	29	P		P	05 40 35.0	+0.9
KLU				IAmb		IAmb	05 40 37.0	
	comp=Z,11nm,0.6s							
KLU	**Klutina**	84.12	29	P		P	05 40 35.2	+1.0
	baz=271							
F25K	**Christian Rive**	84.15	23	P		P	05 40 35.3	+1.1
	baz=271,SNR=8.5							
K24K	**Donnelly Dome**	84.15	26	P		P	05 40 35.2	+1.0
	baz=271,SNR=6.9							
E25K	**Arctic Village**	84.17	22	P		P	05 40 35.7	+1.5
	baz=271,SNR=8.1							
DIV	**Divide**	84.21	29	P		P	05 40 34.2	-0.4
PRP	**Porcupine Dome**	84.23	25	P		P	05 40 34.3	-0.4
PRP	**Porcupine Dome**	84.23	25	P		P	05 40 34.8	+0.2
	baz=271,SNR=6.4							
EYAK	**Cordova Ski Ar**	84.23	30	P		P	05 40 35.3	+0.7
	baz=271							
PAX	**Paxson**	84.31	27	P		P	05 40 35.9	+0.8
	baz=271							
J25K	**Salcha River,**	84.31	26	P		P	05 40 34.7	-0.3
J25K				IAmb		IAmb	05 40 37.9	
	comp=Z,8.1nm,0.7s							
J25K	**Salcha River,**	84.31	26	P		P	05 40 35.6	+0.6
	baz=271,SNR=10.0							
HARP	**HAARP**	84.47	28	P		P	05 40 36.7	+0.9
	baz=272							
BMAR	**Burnt Mountain**	84.56	23	P		P	05 40 36.2	0.0
RIDG	**Independent Ri**	84.56	27	P		P	05 40 36.4	+0.1
RIDG				IAmb		IAmb	05 40 42.2	
	comp=Z,16nm,0.8s							
RIDG	**Independent Ri**	84.56	27	P		P	05 40 37.1	+0.8
	baz=272,SNR=15							
F26K	**Sheenjek River**	84.72	23	P		P	05 40 38.3	+1.4
	baz=272,SNR=10							
N25K	**Chitina, Valde**	84.76	29	P		P	05 40 38.1	+0.7
N25K				IAmb		IAmb	05 40 43.4	
	comp=Z,9.0nm,0.8s							
N25K	**Chitina, Valde**	84.76	29	P		P	05 40 38.6	+1.2
	baz=272							
BMRM	**Bremner River**	84.78	29	P		P	05 40 36.1	-1.3
BMRM				IAmb		IAmb	05 40 43.3	
	comp=Z,18nm,0.8s							
BMRM	**Bremner River**	84.78	29	P		P	05 40 38.6	+1.2
	baz=272							
C27K	**Jago River**	84.80	21	P		P	05 40 38.6	+1.3
	baz=272,SNR=11							
G26K	**Porcupine Rive**	84.89	23	P		P	05 40 39.6	+1.9
	baz=273,SNR=6.5							
DOT	**Dot Lake**	84.92	27	P		P	05 40 37.7	-0.3
SCRK	**Sand Creek**	84.94	26	P		P	05 40 38.0	-0.3
SCRK				IAmb		IAmb	05 41 07.8	
	comp=Z,26nm,1.9s							
SCRK	**Sand Creek**	84.94	26	P		P	05 40 39.8	+1.5
	baz=273							
OBN	**Obninsk**	84.98	325	P		P	05 40 37.5	-0.9
	comp=Z,8nm,0.4s,baz=278,slow=17,SNR=3.8							
	comp=Z,4.8nm,0.4s							
J26L	**Joseph Creek**	85.09	26	P		P	05 40 39.0	+0.1
J26L				IAmb		IAmb	05 40 43.3	
	comp=Z,7.5nm,0.7s							
J26L	**Joseph Creek**	85.09	26	P		P	05 40 40.1	+1.1
	baz=273,SNR=12							
MENT	**Mentasta**	85.11	27	P		P	05 40 38.7	-0.3
MENT				IAmb		IAmb	05 41 28.6	
	comp=Z,25nm,1.7s							
GLB	**Gilahina Butte**	85.14	29	P		P	05 40 40.2	+1.0
GLB				IAmb		IAmb	05 40 46.2	
	comp=Z,13nm,0.9s							
I26K	**Coal Creek Min**	85.23	25	P		P	05 40 39.6	+0.1
I26K				IAmb		IAmb	05 40 44.0	
	comp=Z,9.0nm,0.8s							
I26K	**Coal Creek Min**	85.23	25	P		P	05 40 40.9	+1.4
	baz=273							
L26K	**Log Cabin Wild**	85.27	27	P		P	05 40 40.1	+0.3
L26K				IAmb		IAmb	05 42 22.9	
	comp=Z,16nm,1.7s							
L26K	**Log Cabin Wild**	85.27	27	P		P	05 40 40.9	+1.1
	baz=273							
MAW	**Mawson**	85.34	200	P		P	05 40 39.8	0.0
	comp=Z,3.7nm,0.7s,baz=81,slow=6.5,SNR=16							
MAW				LR		LR	06 12 59.6	
	comp=Z,34nm,21.6s,baz=158,slow=32							
	comp=Z,3.7nm,0.7s							
MAW	**Mawson**	85.34	200	P		P	05 40 40.0	+0.1
VNDA	**Vanda**	85.49	173	P		P	05 40 40.9	+0.3
	comp=Z,1.8nm,0.9s,baz=318,slow=5.0,SNR=10							
	comp=Z,1.8nm,0.9s							
VNDA	**Vanda**	85.49	173	P		P	05 40 40.6	+0.1
E27K	**Coleen River**	85.65	22	P		P	05 40 43.2	+1.6
	baz=274,SNR=8.7							
G27K	**Doyon Strip**	85.73	23	P		P	05 40 43.6	+1.6
	baz=275							
K27K	**Chicken**	85.77	26	P		P	05 40 44.5	+2.2
K27K				IAmb		IAmb	05 41 13.9	
	comp=Z,16nm,1.4s							
K27K	**Chicken**	85.77	26	P		P	05 40 43.7	+1.5
	baz=274							
H27K	**Steamboat Moun**	85.83	24	P		P	05 40 43.5	+1.0
	baz=275							
I27K	**Kandik River**	85.85	25	P		P	05 40 43.9	+1.3
	baz=275							
L27K	**Beaver Creek,**	85.96	27	P		P	05 40 44.2	+0.9
L27K				IAmb		IAmb	05 40 49.6	
	comp=Z,19nm,1.7s							
L27K	**Beaver Creek,**	85.96	27	P		P	05 40 44.2	+0.9
	baz=275							
BCAR	**Beaver Creek A**	85.98	27	P		P	05 40 44.4	+1.0
M27K	**Edge Creek, AK**	85.99	28	P		P	05 40 44.5	+0.9
	baz=275							
EGAK	**Eagle**	86.11	25	P		P	05 40 44.6	+0.8
EGAK				IAmb		IAmb	05 40 54.4	
	comp=Z,27nm,1.9s							
EGAK	**Eagle**	86.11	25	P		P	05 40 44.9	+1.0
	baz=275							
CTG	**Chitna Glacier**	86.37	29	P		P	05 40 46.6	+1.2
	baz=275							
CTGM	**Chitina Glacie**	86.37	29	P		P	05 40 45.5	+0.1
CTGM				IAmb		IAmb	05 40 49.1	
	comp=Z,12nm,0.6s							
PPT2	**Papeete2**	86.49	108	*e*LR		LR	06 08 21.2	
	comp=Z,179nm,30.5s							
DAWY	**Dawson**	86.95	26	P		P	05 40 46.9	-1.1
DAWY	**Dawson**	86.95	26	P		P	05 40 49.1	+1.0
	baz=277							
I29M	**Ogilvie Camp,**	87.25	25	P		P	05 40 50.0	+0.6
I29M	**Ogilvie Camp,**	87.25	25	P		P	05 40 50.3	+0.8
	baz=278							
TBI	**Tubuai**	87.32	114	*e*LR		LR	06 08 43.8	
	comp=Z,119nm,35.2s							
MMAI	**Mount Meron Ar**	87.36	303	LR		LR	06 26 19.5	
	comp=Z,31nm,19.0s,baz=218,slow=40							
M29M	**Somme Creek**	87.56	28	P			05 40 52.1	+1.0
	baz=278							
EPYK	**Eagle Plains**	87.75	24	P		P	05 40 52.3	+0.4
EPYK				IAmb		IAmb	05 40 57.3	
	comp=Z,8.1nm,0.9s							
EPYK	**Eagle Plains**	87.75	24	P		P	05 40 52.5	+0.7
	baz=279							
BRTR	**Keskin Array B**	88.14	310	P		P	05 40 52.4	-2.0
	comp=Z,0.8nm,0.6s,baz=67,slow=3.2,SNR=3.8							
	comp=Z,0.8nm,0.6s							
HYT	**Haines Junctio**	88.25	29	P		P	05 40 55.1	+0.7
	baz=279							
ARCES	**ARCESS Array B**	88.31	340	P		P	05 40 52.6	-1.8
	comp=Z,1.0nm,0.4s,baz=46,slow=3.5,SNR=20							
ARCES				LR		LR	06 26 46.2	
	comp=Z,18nm,18.1s,baz=68,slow=40							
	comp=Z,1.0nm,0.4s							
INK	**Inuvik**	88.61	21	LR		LR	06 27 25.3	
	comp=Z,22nm,18.0s,baz=260,slow=40							
INK	**Inuvik**	88.61	21	P		P	05 40 56.5	+0.8
	baz=282							
P30M	**Million Dollar**	88.62	30	P		P	05 40 56.5	+0.4
	baz=279							
KMBO	**Kilima Mbogo**	88.79	269	LR		LR	06 15 54.6	
	comp=Z,29nm,20.4s,baz=98,slow=32							
FINES	**FINESS Array B**	89.71	332	P		P	05 40 58.8	-2.3
	comp=Z,3.1nm,0.7s,baz=70,slow=6.3,SNR=9.7							
FINES				LR		LR	06 23 36.4	
	comp=Z,45nm,22.0s,baz=48,slow=37							
	comp=Z,3.1nm,0.7s							
AKASG	**Malin Array Be**	89.85	321	P		P	05 40 59.9	-2.1
	comp=Z,0.3nm,0.4s,baz=60,slow=4.3,SNR=3.5							
	comp=Z,0.3nm,0.4s							
FARO	**Faro, Yukon**	89.95	27	P		P	05 41 02.8	+0.5
FARO				IAmb		IAmb	05 41 06.7	
	comp=Z,5.8nm,0.9s							
MNK	**Minsk**	90.04	325	*i* P		P	05 41 01.2	-1.6
	comp=E,3.0nm,0.8s							
MNK				*i* P		P	05 41 01.2	-1.6
MNK				*i* P		P	05 41 01.2	-1.6
	comp=Z,11nm,0.8s,baz=80							
MNK				*i* pP		pP	05 41 26.9	-1.4
MNK				*i* sP		sP	05 41 36.4	-2.2
MNK				*i* PPP		PPP	05 46 29.7	
MNK				*i* S		SKSac	05 51 19.8	-4.7
MNK				*i* sS		pS	05 52 15.0	-6.4
MNK				*i* SS		SS	05 57 23.0	-25
MNK				*i* SSS		SSS	06 00 16.8	
MNK				*i* LQ		LQ	06 16 00.4	
MNK				*i* LR		LR	06 19 27.4	
MNK				*i* LRM		MLR	06 20 47.9	
	comp=E,63nm,19.5s							
MNK				*i* LRM		MLR	06 22 10.9	
MNK				*i* LRM		MLR	06 22 58.2	
	comp=Z,65nm,19.2s							
R33M	**Jennings River**	91.74	30	P		P	05 41 11.2	+0.5
	baz=284							
MLR	**Muntele Rosu**	92.92	316	P		P	05 41 14.8	-1.7
	comp=Z,2.5nm,1.0s,baz=339,slow=8.6,SNR=2.2							
MLR				LR		LR	06 26 23.2	
	comp=Z,37nm,21.7s,baz=66,slow=38							
	comp=Z,2.5nm,1.0s							
BURAR	**Bucovina Array**	92.99	318	P		P	05 41 15.0	-1.8
TAOE	**Nuku Hiva Isla**	94.73	98	*e*LR		LR	06 12 09.5	
	comp=Z,138nm,27.0s							
MBAR	**Mbarara**	95.22	270	LR		LR	06 20 11.2	
	comp=Z,37nm,21.7s,baz=68,slow=33							
HFS	**Hagfors**	95.89	332	LR		LR	06 27 30.0	
	comp=Z,45nm,20.3s,baz=60,slow=37							
NB2	**NORSAR Subarra**	96.66	334	P		P	05 41 31.0	-2.1
	comp=Z,1.8nm,0.7s,baz=64,slow=4.4							
NB2	**NORSAR Subarra**	96.66	334	P		P	05 41 31.0	-2.1
	baz=64,slow=4.4							
NOA	**NORSAR Array B**	96.66	334	P		P	05 41 31.0	-2.1
	comp=Z,1.2nm,0.7s,baz=65,slow=4.6,SNR=7.9							
NOA				LR		LR	06 27 55.2	
	comp=Z,44nm,21.3s,baz=60,slow=37							
	comp=Z,1.2nm,0.7s							
JMIC	**Jan Mayen**	97.74	346	LR		LR	06 33 11.5	
	comp=Z,16nm,18.0s,baz=318,slow=40							
YKA	**Yellowknife Ar**	98.02	24	P		P	05 41 38.2	-1.0
	comp=Z,0.9nm,0.7s,baz=296,slow=4.3,SNR=5.8							
	comp=Z,0.9nm,0.7s							
TUC	**Tucson**	114.19	51	P		PKPdf	05 46 42.1	-0.8
	baz=294							
EYMN	**Ely**	117.25	27	P		PKPdf	05 46 48.1	-0.1
	baz=317							
SCHQ	**Schefferville**	118.73	8	PKP		PKPdf	05 46 50.9	+0.1
	comp=Z,0.8nm,0.3s,baz=12,slow=3.3,SNR=6.3							
TXAR	**Lajitas Array**	120.99	51	PKP		PKPdf	05 46 56.0	0.0
	comp=Z,0.3nm,0.6s,baz=195,slow=2.1,SNR=3.6							
JFWS	**Jewell Farm**	121.53	31	P		PKPdf	05 46 55.9	-0.6
	baz=317							
TORD	**Torodi Ar. Bea**	121.53	289	PKP		PKPdf	05 46 56.6	-0.7
	comp=Z,2.2nm,0.4s,baz=63,slow=1.4,SNR=51							
JCT	**Junction City**	123.34	48	P		PKPdf	05 46 60.0	-0.5
	baz=302							
HDIL	**Hopedale**	123.72	32	P		PKPdf	05 47 00.1	-0.7
	baz=317							
AAM	**Ann Arbor**	125.14	27	P		PKPdf	05 47 02.9	-0.6
	baz=323							
LONY	**Lake Ozonia**	126.60	18	P		PKPdf	05 47 05.7	-0.5
	baz=334							
P52A	**Corning**	127.96	27	P		PKPdf	05 47 08.2	-0.7
	baz=324							
BINY	**Binghamton**	128.29	21	P		PKPdf	05 47 09.4	-0.2
	baz=332							
DBIC	**Dimbokro**	129.36	283	PKP		PKPdf	05 47 12.1	-0.1
	comp=Z,2.9nm,0.7s,baz=53,slow=2.7,SNR=3.2							
HRV	**Adam Dziewonsk**	129.43	17	P		PKPdf	05 47 11.6	0.0
	baz=337							
TKL	**Tuckaleechee C**	130.27	32

SXI1	**Grass Mountain** baz=335	**0.41**	**316**	⇓P	**Pb**	**05 38 33.0**	**+0.2**
SXI1	baz=335			S	**Sb**	**05 38 38.2**	**-1.1**
NDS	**Dongshan** baz=239	**0.46**	**249**	P	**Pg**	**05 38 31.4**	**-0.8**
NDS	baz=239			S	**Sg**	**05 38 36.6**	**-1.6**
NWF	**Wu-fen Shan** baz=304	**0.46**	**307**	⇓*i*P	**Pb**	**05 38 33.7**	**+0.1**
NWF	baz=304			*i* S	**Sb**	**05 38 39.6**	**-1.1**
WFSB	**Wu-fen Shan** baz=304	**0.46**	**307**	P	**Pb**	**05 38 33.4**	**-0.3**
EWUT	**Wuta** baz=224	**0.51**	**227**	P	**Pg**	**05 38 32.5**	**-0.7**
TNOU	**National Taiwa** baz=311	**0.52**	**313**	P	**Pb**	**05 38 34.9**	**+0.3**
FUSB	**Fushanzhiwuyua** baz=268	**0.55**	**266**	⇓P	**Pg**	**05 38 34.1**	**+0.3**
FUSB	baz=268			S	**Sg**	**05 38 41.2**	**+0.2**
ENA	**Nanau** baz=226	**0.55**	**228**	*i* P	**Pg**	**05 38 34.1**	**+0.3**
ENA	baz=226			*i* S	**Sg**	**05 38 39.8**	**-1.3**
TWA	**Mucha** baz=282	**0.58**	**289**	*i* P	**Pb**	**05 38 35.7**	**0.0**
TWA	baz=282			S	**Sb**	**05 38 43.0**	**-1.1**
ENTT	**Nioudou** baz=254	**0.59**	**255**	*i* P	**Pg**	**05 38 34.0**	**-0.6**
ENTT	baz=254			*i* S	**Sg**	**05 38 42.1**	**-0.2**
NWLT	**Wulai** baz=270	**0.62**	**268**	*i* P	**Pb**	**05 38 36.2**	**-0.3**
NWLT	baz=270			S	**Sg**	**05 38 42.9**	**-0.5**
NHDH	**Xindian Distri** baz=279	**0.62**	**286**	*e*P	**Pn**	**05 38 37.2**	**-1.2**
NDT	**Datong Townshi** baz=253	**0.64**	**253**	P	**Pg**	**05 38 34.5**	**-1.2**
NDT	baz=253			S	**Sg**	**05 38 44.3**	**+0.2**
LATG	**Datong** baz=247	**0.66**	**247**	P	**Pg**	**05 38 35.9**	**0.0**
LATG	baz=247			S	**Sg**	**05 38 44.1**	**-0.3**
YM01	**YM01** baz=306	**0.66**	**302**	P	**Pn**	**05 38 37.8**	**-1.2**
TWY	**Chenhua** baz=316	**0.71**	**312**	*i* P	**Pn**	**05 38 40.4**	**+0.6**
TWY	baz=316			*i* S	**Sn**	**05 38 51.0**	**+0.1**
YHNB	**Yeheng** baz=255	**0.75**	**260**	P	**Pg**	**05 38 37.7**	**0.0**
YHNB	baz=255			*e*S	**Sg**	**05 38 48.0**	**+0.6**
TWS1	**Kuangyinshan** baz=286	**0.76**	**294**	*i* P	**Pn**	**05 38 39.5**	**-0.8**
TWS1	baz=286			*e*S	**Sn**	**05 38 50.2**	**-1.8**
JYNG	**Yonagunijimaku**	**0.77**	**116**	P	**Pn**	**05 38 40.7**	**+0.2**
JYNG				*e*S	**Sn**	**05 38 52.5**	**+0.3**
ETL	**Fush Village** baz=218	**0.82**	**219**	P	**Pg**	**05 38 39.0**	**0.0**
ETL	baz=218			S	**Sg**	**05 38 50.1**	**+0.5**
NNSB	**Datong** baz=251	**0.82**	**244**	P	**Pg**	**05 38 39.3**	**+0.3**
NNSB	baz=251			S	**Sb**	**05 38 51.0**	**-0.1**
YOJ	**Yonaguni jima** baz=111	**0.82**	**114**	P	**Pn**	**05 38 41.2**	**0.0**
YOJ	baz=111			S	**Sn**	**05 38 54.0**	**+0.5**
YOJ	**Yonaguni jima**	**0.82**	**114**	P	**Pn**	**05 38 41.5**	**+0.4**
YOJ				S	**Sn**	**05 38 53.1**	**-0.4**
NACB	**Ninganchiao** baz=221	**0.82**	**221**	P	**Pg**	**05 38 39.3**	**+0.2**
NACB	baz=221			S	**Sg**	**05 38 48.6**	**-1.2**
NNS	**Nan Shan** baz=252	**0.82**	**245**	P	**Pg**	**05 38 37.9**	**-1.2**
NNS	baz=252			*i* S	**Sb**	**05 38 50.8**	**-0.4**
PCYT	**Pengchaiyu** baz=354	**0.84**	**353**	P	**Pn**	**05 38 41.7**	**+0.3**
PCYT	baz=354			S	**Sn**	**05 38 55.1**	**+1.2**
ETLH	**Xiulin Townshi** baz=228	**0.87**	**228**	P	**Pb**	**05 38 40.8**	**+0.1**
ETLH	baz=228			*e*S	**Sg**	**05 38 50.7**	**-0.7**
TWD	**Chiawan** baz=216	**0.89**	**217**	*i* P	**Pg**	**05 38 40.2**	**-0.2**
TWD	baz=216			*i* S	**Sg**	**05 38 52.8**	**+0.7**
NCU	**National Centr** baz=273	**0.93**	**281**	P	**Pn**	**05 38 42.4**	**-0.2**
NCU	baz=273			S	**Sn**	**05 38 56.5**	**+0.4**
NCUH	**Zhongli** baz=282	**0.93**	**281**	P	**Pn**	**05 38 43.4**	**+0.7**
NCUH	baz=282			*e*S	**Sn**	**05 38 56.9**	**+0.8**
NFF	**Wufeng Townshi** baz=256	**0.99**	**261**	P	**Pn**	**05 38 43.2**	**-0.3**
NFF	baz=256			S	**Sg**	**05 38 54.3**	**-0.8**
FUSS	**Fushou** baz=229	**1.02**	**238**	*i* P	**Pn**	**05 38 43.6**	**-0.5**
FUSS	baz=229			S	**Sg**	**05 38 56.1**	**0.0**
WHF	**Hehuan Shan** baz=232	**1.06**	**233**	*i* P	**Pb**	**05 38 43.8**	**-0.4**
WHF	baz=232			*i* S	**Sg**	**05 38 57.7**	**+0.2**
TWT	**Tachien** baz=231	**1.07**	**240**	P	**Pn**	**05 38 45.3**	**+0.5**
TWT	baz=231			*i* S	**Sg**	**05 38 58.5**	**+0.8**
LIOB	**Emei** baz=262	**1.08**	**262**	P	**Pn**	**05 38 45.8**	**+1.1**
TDCB	**Techi** baz=233	**1.08**	**240**	P	**Pn**	**05 38 44.7**	**-0.2**
TDCB	baz=233			*e*S	**Sg**	**05 38 58.5**	**+0.4**
NSTT	**Nanjuang** baz=261	**1.09**	**262**	P	**Pn**	**05 38 46.0**	**+1.1**
NSTT	baz=261			S	**Sn**	**05 38 59.0**	**-1.3**
SBCB	**Hsinchu** baz=289	**1.09**	**270**	*e*P	**Pn**	**05 38 46.5**	**+1.6**
CHGB	**Renai** baz=232	**1.18**	**232**	P	**Pg**	**05 38 46.2**	**+0.3**
CHGB	baz=232			S	**Sg**	**05 39 01.7**	**+0.4**
ESL	**Shilin** baz=223	**1.20**	**215**	*i* P	**Pg**	**05 38 46.9**	**+0.7**
WHP	**Taichung City** baz=245	**1.24**	**246**	P	**Pg**	**05 38 47.6**	**+0.5**
WHP	baz=245			S	**Sg**	**05 39 03.7**	**+0.5**
OWD	**Renai** baz=220	**1.25**	**228**	*i* P	**Pn**	**05 38 46.8**	**-0.4**
OWD	baz=220			S	**Sb**	**05 39 02.0**	**-1.5**
WUSB	**Renai** baz=223	**1.26**	**231**	P	**Pg**	**05 38 47.9**	**+0.4**
WUSB	baz=223			*e*S	**Sb**	**05 39 03.3**	**-0.6**
NMLH	**Miaoli** baz=250	**1.30**	**259**	*e*P	**Pg**	**05 38 49.5**	**+1.4**
NMLH	baz=250			*e*S	**Sg**	**05 39 07.7**	**+2.7**
EGFH	**Guangfu** baz=229	**1.32**	**212**	*e*P	**Pg**	**05 38 49.1**	**+0.5**
EGFH	baz=229			*e*S	**Sg**	**05 39 07.2**	**+1.4**
TWQ1	**Liyutan** baz=242	**1.36**	**251**	P	**Pg**	**05 38 50.6**	**+1.2**
TWQ1	baz=242			*e*S	**Sg**	**05 39 07.4**	**+0.3**
WCS	**Beigang Elemen** baz=237	**1.38**	**238**	*e*S	**Sg**	**05 39 07.6**	**0.0**
VWDT	**VWDT** baz=224	**1.41**	**223**	P	**Pg**	**05 38 50.3**	**0.0**
VWDT	baz=224			*e*S	**Sn**	**05 39 07.2**	**-0.9**
HGSD	**Ruisui** baz=189	**1.47**	**208**	P	**Pb**	**05 38 50.9**	**-0.1**
IRIF	**Iriomote-Funau**	**1.48**	**108**	P	**Pb**	**05 38 50.8**	**-0.2**
IRIF				S	**Sb**	**05 39 10.0**	**0.0**
WDJ	**Dajia District** baz=252	**1.48**	**253**	*e*S	**Sg**	**05 39 12.8**	**+2.0**
SMLT	**Sun Moon Lake** baz=225	**1.48**	**233**	P	**Pb**	**05 38 51.4**	**+0.2**
SMLT	baz=225			*e*S	**Sb**	**05 39 10.3**	**0.0**
EHY	**Hungye** baz=225	**1.51**	**212**	P	**Pn**	**05 38 51.0**	**+0.4**
EHY	baz=225			S	**Sg**	**05 39 12.9**	**+1.1**
SSLB	**Suanglung** baz=229	**1.51**	**228**	P	**Pb**	**05 38 51.7**	**+0.1**
SSLB	baz=229			*e*S	**Sg**	**05 39 11.5**	**-0.3**
TCU	**Taichung** baz=234	**1.52**	**245**	*e*P	**Pg**	**05 38 52.9**	**+0.5**
YULB	**Yu-li** baz=223	**1.62**	**210**	P	**Pn**	**05 38 52.2**	**+0.1**
YULB	baz=223			*e*S	**Sb**	**05 39 14.5**	**+0.5**
WHYT	**Xinyi Township** baz=223	**1.64**	**228**	*e*P	**Pg**	**05 38 55.5**	**+0.8**
WHYT	baz=223			*e*S	**Sg**	**05 39 16.0**	**+0.1**
HATJ	**Hateruma jima**	**1.65**	**116**	P	**Pb**	**05 38 53.6**	**-0.3**
HATJ				S	**Sb**	**05 39 14.7**	**-0.1**
WNT	**Mingjian** baz=237	**1.65**	**237**	P	**Pg**	**05 38 56.2**	**+1.3**
WNT	baz=237			S	**Sg**	**05 39 17.8**	**+1.6**
JKRS	**Kuro-shima**	**1.75**	**108**	P	**Pb**	**05 38 55.1**	**-0.5**
JKRS				S	**Sb**	**05 39 17.4**	**-0.4**
FULB	**Fuli** baz=224	**1.79**	**207**	*e*P	**Pb**	**05 38 55.4**	**-0.9**
FULB	baz=224			S	**Sb**	**05 39 19.2**	**+0.2**
ALS	**Alishan** baz=213	**1.80**	**225**	*i* P	**Pb**	**05 38 57.2**	**+0.5**
ALS	baz=213			S	**Sg**	**05 39 20.6**	**-0.6**
JIJ	**Ishigaki jima** baz=235	**1.83**	**103**	P	**Pb**	**05 38 56.4**	**-0.7**
JIJ				S	**Sb**	**05 39 19.4**	**-0.8**
WDLH	**Douliu** baz=216	**1.87**	**234**	*e*S	**Sg**	**05 39 23.3**	**0.0**
ELDTW	**Lidau** baz=216	**1.93**	**214**	P	**Pb**	**05 38 58.0**	**-0.7**
ELDTW	baz=216			*e*S	**Sb**	**05 39 22.1**	**-0.9**
EDH	**Donghe** baz=186	**1.99**	**204**	*e*P	**Pn**	**05 38 57.5**	**+0.2**
TPUB	**Ta-pu** baz=214	**2.06**	**224**	*e*P	**Pg**	**05 39 02.1**	**-0.7**
TPUB	baz=214			*e*S	**Sg**	**05 39 29.3**	**-0.2**
STYH	**Taoyuan** baz=209	**2.07**	**219**	*e*P	**Pb**	**05 39 00.2**	**-0.9**
STYH	baz=209			*e*S	**Sb**	**05 39 28.6**	**+1.6**
WTP	**Ta-pu** baz=213	**2.11**	**223**	P	**Pb**	**05 39 01.1**	**-0.7**
WTP	baz=213			*e*S	**Sg**	**05 39 30.1**	**-1.0**
LONT	**Longtian** baz=188	**2.12**	**207**	*e*P	**Pn**	**05 38 58.5**	**-0.5**
TWK	**Hsinying** baz=226	**2.18**	**226**	P	**Pb**	**05 39 03.5**	**+0.5**
TWK	baz=226			S	**Sb**	**05 39 31.6**	**+1.5**
SNST	**Tainan City** baz=214	**2.20**	**225**	*e*S	**Sg**	**05 39 33.5**	**-0.5**
CHN1	**Nanshi** baz=225	**2.21**	**224**	P	**Pb**	**05 39 04.0**	**+0.5**
CHN1	baz=225			*e*S	**Sb**	**05 39 32.2**	**+1.1**
SGST	**Jiashian** baz=208	**2.25**	**221**	*e*P	**Pn**	**05 39 02.4**	**+1.5**
SGST	baz=208			*e*S	**Sb**	**05 39 34.1**	**+1.8**
ICHU	**Yijhu** baz=231	**2.25**	**231**	*e*S	**Sg**	**05 39 34.2**	**-1.5**
SSD	**Sandimen** baz=217	**2.49**	**215**	*e*P	**Pb**	**05 39 07.6**	**-0.7**
SSD	baz=217			*e*S	**Sb**	**05 39 40.7**	**+1.5**
TSMG	**Majia** baz=199	**2.52**	**214**	*e*P	**Pb**	**05 39 08.4**	**-0.3**
TSMG	baz=199			*e*S	**Sb**	**05 39 40.4**	**+0.5**
MASBT	**Mashibuluo** baz=200	**2.60**	**214**	*e*P	**Pb**	**05 39 08.8**	**-1.4**
MASBT	baz=200			*e*S	**Sb**	**05 39 41.5**	**-0.8**

*IDC **15** 05:45:30.1±0.9,52.°91N×35.°18W,h0km,mb3.8/12, mbtmp3.9/14,ML3.0/2,MS3.3/16,Error ellipse: s-maj=27.5km s-min=15.8km az=18.0*
*NEIC **15** 05:45:31.4±2.1,52.°9N±0.°2×35.°2W±0.°2,h10km±2km, mb4.4/29,Error ellipse: s-maj=31.7km s-min=18.6km az=175.0*

ISC 15 05:45:31.8±0.6,52.°8N±0.°1×35.°24W±0.°06,h13km,n59, σ1§16/50,mb4.3/25,MS3.3/12,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**13.90**	**25**	LR	LR	05 52 05.7	
	comp=Z,32nm,19.9s,baz=263,slow=29						
SFJD	**Kangerlussuaq**	**16.08**	**338**	LR	LR	05 54 00.9	
	comp=Z,80nm,18.3s,baz=128,slow=32						
SCHQ	**Schefferville**	**18.67**	**289**	P	**Pn**	**05 49 50.0**	**+0.3**
SCHQ	0.1nm,0.3s,baz=57,slow=9.1,SNR=3.9			LR	LR	05 56 18.2	
	comp=Z,42nm,20.4s,baz=132,slow=35 3.8nm,0.9s						
SCHQ	**Schefferville**	**18.67**	**289**	P	**P**	**05 49 48.3**	**-1.0**
SCHQ				IAmb	IAmb	05 49 49.2	
	comp=Z,27nm,1.4s						
ESK	**Eskdalemuir**	**18.87**	**70**	P	**P**	**05 49 49.7**	**-1.7**
EKA	**Eskdalemuir Ar** baz=275,slow=9.1	**18.90**	**70**	P	**Pn**	**05 49 51.8**	**-0.5**
EKA				LR	LR	05 55 49.7	
	comp=Z,126nm,18.3s,baz=272,slow=33 comp=Z,5.3nm,0.8s						
FRB	**Frobisher Bay**	**20.37**	**315**	LR	LR	05 56 12.0	
	comp=Z,106nm,20.1s,baz=33,slow=32						
LMN	**Caledonia Moun**	**20.39**	**262**	P	**P**	**05 50 07.5**	**-0.6**
LMN				IAmb	IAmb	05 50 35.9	
	comp=Z,14nm,1.2s						
BATG	**Bathurst New B**	**20.45**	**267**	P	**P**	**05 50 07.9**	**-0.9**
PQI	**Presque Isle**	**21.92**	**267**	P	**P**	**05 50 24.6**	**0.0**
PQI				IAmb	IAmb	05 50 29.9	
	comp=Z,16nm,1.2s						
GGN	**Saint George**	**21.99**	**262**	P	**P**	**05 50 25.3**	**0.0**
GGN				IAmb	IAmb	05 50 26.5	
	comp=Z,10nm,1.1s						
G65A	**Princeton**	**22.38**	**263**	P	**P**	**05 50 29.7**	**+0.1**
G65A				IAmb	IAmb	05 51 06.4	
	comp=Z,22nm,1.3s						
F64A	**Sherman**	**22.52**	**265**	P	**P**	**05 50 29.3**	**-1.7**
F64A				IAmb	IAmb	05 50 41.7	
	comp=Z,23nm,1.5s						
EMMW	**East Machias**	**22.58**	**262**	P	**P**	**05 50 31.1**	**-0.5**
E62A	**Clayton Lake**	**22.86**	**268**	P	**P**	**05 50 34.4**	**-0.2**
E62A				IAmb	IAmb	05 50 42.8	
	comp=Z,13nm,1.1s						
F63A	**Nahmakanta, Br**	**23.05**	**266**	P	**P**	**05 50 36.8**	**+0.1**
F63A				IAmb	IAmb	05 51 16.3	
	comp=Z,18nm,1.5s						
PKME	**Peaks-Kenny Pk**	**23.39**	**265**	P	**P**	**05 50 41.0**	**+0.9**
PKME				IAmb	IAmb	05 51 20.5	
	comp=Z,18nm,1.4s						
G62A	**West of Eustis**	**24.17**	**266**	P	**P**	**05 50 49.2**	**+1.7**
ESBB	**Sonseca Array**	**25.09**	**109**	P	**P**	**05 50 56.3**	**+0.4**
ESBB				IAmb	IAmb	05 51 00.1	
	comp=Z,8.0nm,1.2s						
ESDC	**Sonseca Array**	**25.09**	**109**	P	**P**	**05 50 56.3**	**+0.4**
ESDC	comp=Z,4.3nm,1.0s,baz=310,slow=8.5,SNR=17			LR	LR	05 58 58.0	
	comp=Z,90nm,18.1s,baz=312,slow=32 comp=Z,4.3nm,1.0s						
ESDC	**Sonseca Array**	**25.09**	**109**	P	**P**	**05 50 54.0**	**-1.9**
LBNH	**Lisbon**	**25.53**	**265**	P	**P**	**05 50 60.0**	**+0.1**
LBNH				IAmb	IAmb	05 51 06.2	
	comp=Z,13nm,1.4s						
NBO00	**NORSAR Array S**	**25.91**	**53**	P	**P**	**05 51 03.1**	**-0.1**
NOA	**NORSAR Array B**	**26.12**	**53**	P	**P**	**05 51 04.1**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=276,slow=9.2,SNR=5.3						
NOA				LR	LR	06 00 14.9	
	comp=Z,34nm,18.8s,baz=275,slow=34 comp=Z,1.5nm,0.9s						
HFS	**Hagfors**	**27.42**	**55**	LR	LR	06 00 46.5	
	comp=Z,50nm,18.5s,baz=273,slow=34						
CLL	**Collm**	**29.26**	**73**	*e*P	**P**	**05 51 33.0**	**-0.2**
	comp=Z,6.0nm,1.1s						
CLL				*e*S	**S**	**05 56 30.0**	**+4.5**
DAVOX	**Davos/Dischmat**	**29.35**	**84**	LR	LR	06 02 14.6	
	comp=Z,28nm,18.9s,baz=297,slow=34						
SADO	**Sadowa**	**29.62**	**272**	LR	LR	06 02 29.0	
	comp=Z,97nm,21.2s,baz=20,slow=34						
GERES	**GERESS Array B**	**30.68**	**77**	P	**P**	**05 51 46.0**	**0.0**
	comp=Z,0.7nm,0.8s,baz=316,slow=9.3,SNR=5.0 comp=Z,0.7nm,0.8s						
GERES	**GERESS Array B**	**30.68**	**77**	P	**P**	**05 51 46.0**	**0.0**
ARCES	**ARCESS Array B**	**31.96**	**35**	P	**P**	**05 51 55.8**	**-1.1**
VRAC	**Vranov**	**32.18**	**75**	LR	LR	06 04 15.9	
	comp=Z,65nm,19.5s,baz=306,slow=35						
FINES	**FINESS Array B**	**33.17**	**50**	P	**P**	**05 52 06.4**	**-1.1**
	comp=Z,5.3nm,0.9s,baz=286,slow=7.7,SNR=6.9						
FINES				LR	LR	06 03 47.4	
	comp=Z,54nm,19.9s,baz=278,slow=33 comp=Z,5.3nm,0.9s						
FINES	**FINESS Array B**	**33.17**	**50**	P	**P**	**05 52 07.2**	**-0.3**
FIA1	**FINESS Array S**	**33.17**	**50**	P	**P**	**05 52 07.2**	**-0.4**
EYMN	**Ely**	**35.41**	**285**	P	**P**	**05 52 27.3**	**+0.2**
EYMN				IAmb	IAmb	05 52 50.4	
	comp=Z,10.0nm,1.4s						
TKL	**Tuckaleechee C**	**37.95**	**263**	LR	LR	06 08 00.1	
	comp=Z,78nm,19.4s,baz=64,slow=36						
BUR08	**Bucovina Ar. S**	**38.00**	**73**	P	**P**	**05 52 49.2**	**-0.1**
BURAR	**Bucovina Array**	**38.02**	**73**	P	**P**	**05 52 46.3**	**-3.2**
AKASG	**Malin Array Be**	**38.76**	**66**	P	**P**	**05 52 54.5**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=297,slow=9.0,SNR=3.3						
AKASG				LR	LR	06 08 41.5	
	comp=Z,44nm,18.4s,baz=50,slow=36 comp=Z,0.4nm,0.4s						
N41A	**Harden Midland**	**39.02**	**275**	P	**P**	**05 52 58.9**	**+1.1**
N41A				IAmb	IAmb	05 53 15.7	
	comp=Z,5.3nm,0.5s						
KLMR	**Klimovskoe**	**39.53**	**48**	*e*	**P**	**05 53 00.1**	**-1.7**
KLMR				AMP		05 53 04.1	
	comp=Z,11nm,1.2s						
ECSD	**EROS Data Cent**	**40.69**	**283**	P	**P**	**05 53 11.9**	**+0.3**
YKA	**Yellowknife Ar**	**40.88**	**316**	P	**P**	**05 53 12.8**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=66,slow=9.2,SNR=2.7 comp=Z,0.3nm,0.7s						
SJG	**San Juan**	**42.21**	**227**	LR	LR	06 08 22.4	
	comp=Z,26nm,21.4s,baz=208,slow=32						
KSU1	**Kansas State U**	**43.49**	**277**	P	**P**	**05 53 33.6**	**-0.9**
BRTR	**Keskin Array B**	**47.58**	**77**	P	**P**	**05 54 08.5**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=308,slow=4.5,SNR=7.6 comp=Z,1.7nm,0.8s						
N23A	**Red Feather La**	**47.90**	**285**	P	**P**	**05 54 11.4**	**+1.6**
PDAR	**Pinedale Array**	**48.81**	**290**	P	**P**	**05 54 17.1**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=43,slow=8.9,SNR=5.7 comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**49.30**	**129**	P	**P**	**05 54 20.7**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=347,slow=11,SNR=4.9 comp=Z,1.4nm,1.0s						
SCRK	**Sand Creek**	**51.14**	**328**	P	**P**	**05 54 34.7**	**+0.7**
SCRK				IAmb	IAmb	05 54 42.1	
	comp=Z,4.5nm,1.0s						
ILAR	**Eielson Array**	**51.52**	**329**	P	**P**	**05 54 36.8**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=45,slow=5.8,SNR=5.9 comp=Z,0.9nm,0.9s						
DBIC	**Dimbokro**	**52.30**	**141**	P	**P**	**05 54 42.7**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=288,slow=6.4,SNR=3.5 comp=Z,2.9nm,0.7s						
YBH	**Yreka Blue Hor**	**56.82**	**297**	LR	LR	06 18 49.3	
	comp=Z,86nm,18.7s,baz=328,slow=35						
MK31	**Makanchi Array**	**67.36**	**41**	P	**P**	**05 56 26.0**	**-0.3**
MKAR	**Makanchi Array**	**67.36**	**41**	P	**P**	**05 56 26.2**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=339,slow=5.9,SNR=8.9 comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**67.36**	**41**	P	**P**	**05 56 26.8**	**+0.5**
WRA	**Warramunga Arr**	**146.19**	**18**	PKPbc	**PKPbc**	**06 05 11.4**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=347,slow=3.1,SNR=15						
ASAR	**Alice Springs**	**149.72**	**20**	PKPbc	**PKPbc**	**06 05 20.9**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=353,slow=2.3,SNR=13						

IDC 15 05:49:01.2±2.5,52.°78N×35.°49W,h0km,mb3.5/1, mbtmp3.5/2,ML2.7/1,MS3.6/4,1C-1D,Error ellipse: s-maj=89.8km s-min=44.8km az=24.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar** baz=266,slow=12	**19.06**	**69**	P	P	05 53 24.9	+0.2
	1.1nm,0.7s						
ESDC	**Sonseca Array**	**25.21**	**109**	P	P	05 54 28.5	0.0
	1.1nm,0.9s,baz=314,slow=9.9,SNR=5.9 1.1nm,0.9s						
DLBC	**Dease Lake**	**49.43**	**316**	LR	LR	06 17 10.4	
	comp=Z,55nm,18.8s,baz=289,slow=34						
NVAR	**Mina Array Bea**	**56.54**	**291**	LR	LR	06 20 59.2	
	comp=Z,52nm,19.7s,baz=267,slow=34						
PFO	**Pinyon Flats O**	**58.85**	**286**	LR	LR	06 22 42.3	
	comp=Z,48nm,19.0s,baz=277,slow=34						
LPIG	**La Paz**	**62.10**	**274**	LR	LR	06 25 19.6	
	comp=Z,58nm,20.9s,baz=202,slow=35						
MK31	**Makanchi Array**	**67.50**	**41**	⇑Pg	P	05 59 57.3	-1.4
MK31	0.3nm,0.5s,baz=80,slow=18,SNR=4.8			⇓Lg	Lg	06 00 33.6	
	0.4nm,0.5s,baz=80,slow=28,SNR=5.1						
WRA	**Warramunga Arr**	**146.28**	**17**	PKPbc	PKPdf	06 08 42.8	+0.3
	0.5nm,0.6s,baz=334,slow=3.2,SNR=6.3						
ASAR	**Alice Springs**	**149.82**	**20**	PKPbc	PKPbc	06 08 52.5	-0.6
	0.4nm,0.6s,baz=7.4,slow=2.9,SNR=3.7						

IDC 15 05:50:49.8±2.6,52.°95N×35.°39W,h0km,mb3.5/2, mbtmp3.5/3,MS3.5/1,Error ellipse: s-maj=75.8km s-min=45.0km az=30.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**18.94**	**70**	P	Pn	05 55 12.6	-0.1
	1.6nm,0.9s,baz=274,slow=11,SNR=4.2						
ESDC	**Sonseca Array**	**25.21**	**109**	P	P	05 56 17.1	+0.1
	1.2nm,1.0s,baz=307,slow=8.2,SNR=5.3 1.2nm,1.0s						
ELK	**Elko**	**53.23**	**291**	LR	LR	06 21 57.4	
	comp=Z,44nm,20.0s,baz=304,slow=35						
MKAR	**Makanchi Array**	**67.33**	**41**	P	P	06 01 45.8	-0.5
	0.2nm,0.5s,baz=339,slow=5.9,SNR=2.9 0.2nm,0.5s						
WRA	**Warramunga Arr**	**146.10**	**18**	PKPbc	PKPbc	06 10 31.9	+0.2
	0.9nm,1.0s,baz=0.6,slow=2.5,SNR=2.7						
ASAR	**Alice Springs**	**149.64**	**20**	PKPbc	PKPbc	06 10 40.1	-1.1
	0.6nm,0.8s,baz=356,slow=3.3,SNR=4.2						

*NEIC **15** 06:08:04.9±2.0,14.°86N±0.°04×94.°01W±0.°04,h35km±11km, mb4.0/21,Md4.3/37(MEX),Error ellipse: s-maj=6.6km s-min=4.4km az=55.0*
*IDC **15** 06:08:04.4±6.1,15.°61N×93.°24W,h0km,mb3.7/5, mbtmp3.7/7,ML3.9/2,MS2.6/2,Error ellipse: s-maj=171.8km s-min=31.7km az=26.0*
*MEX **15** 06:08:06.0±0.7,15.°12N×93.°74W,h102km±34km,MD4.3*
*GCG **15** 06:08:18.9±3.9,14.°72N×92.°76W,h6km±452km,MD4.3*

ISC 15 06:08:04.3±3.5,14.°84N±0.°06×93.°99W±0.°03,h31km±28km, n74,σ1§81/94,mb3.8/7,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.13**	**41**		**Pn**	**06 08 22.9**	**-1.1**
PCIG					**Sn**	**06 08 36.3**	**-2.2**
PCIG		**1.13**	**41**	*i* P	**Pn**	**06 08 22.9**	**-1.1**
PCIG				*e*S	**Sn**	**06 08 36.3**	**-2.2**
CARR	**Arriaga**	**1.40**	**3**	*e*P	**Pn**	**06 08 27.0**	**-0.7**
CARR				*i* S	**Sn**	**06 08 42.9**	**-2.2**
THIG		**1.67**	**88**		**Pn**	**06 08 30.3**	**-1.0**
THIG		**1.67**	**88**	*e*P	**Pn**	**06 08 30.3**	**-1.0**
PATR	**El Naranjo**	**1.71**	**81**	*e*P	**Pn**	**06 08 30.4**	**-1.8**
PAVE	**Pavencul**	**1.78**	**79**	*e*P	**Pn**	**06 08 31.6**	**-1.5**
PAVE				*i* S	**Sn**	**06 08 51.3**	**-3.6**

CHUJ	**Union Juarez**	**1.83**	**82**	*eP*		**Pn**	**06 08 32.5**	**-1.4**
CHUJ				*i* S		**Sn**	**06 08 52.8**	**-3.3**
TGIG		**2.10**	**23**			**Pn**	**06 08 38.2**	**+0.8**
TGIG		**2.10**	**23**	*i* P		**Pn**	**06 08 38.2**	**+0.8**
TGBT	**Tuxtla Gutierr**	**2.11**	**24**			**Pn**	**06 08 38.3**	**+0.9**
TGBT						**Sn**	**06 09 02.7**	**+0.2**
TGBT	**Tuxtla Gutierr**	**2.11**	**24**	*i* P		**Pn**	**06 08 38.3**	**+0.9**
TGBT				*i* S		**Sn**	**06 09 02.7**	**+0.2**
RTAL	**Retalhuleu**	**2.24**	**98**			**Pn**	**06 08 38.5**	**-0.8**
HUIG	**Huatulco**	**2.25**	**294**			**Pn**	**06 08 38.9**	**-0.4**
HUIG						**Sn**	**06 09 03.6**	**-2.4**
HUIG	**Huatulco**	**2.25**	**294**	*eP*		**Pn**	**06 08 38.9**	**-0.4**
HUIG				*i* S		**Sn**	**06 09 03.6**	**-2.4**
CCIG	**Comitan**	**2.29**	**51**			**Pn**	**06 08 41.2**	**+1.2**
CCIG	**Comitan**	**2.29**	**51**	*eP*		**Pn**	**06 08 41.6**	**+1.6**
CCIG				*i* S		**Sn**	**06 09 06.5**	**-0.7**
STG3	**Santiaguito 3,**	**2.34**	**93**	*eP*		**Pn**	**06 08 40.7**	**-0.1**
CMIG	**Matias Romero**	**2.40**	**339**		Pn	**Pn**	**06 08 41.8**	**+0.4**
	76nm,0.3s,baz=183,slow=10,SNR=1639							
CMIG					LR	LR	06 08 59.7	
	comp=Z,31nm,21.9s,baz=119,slow=26							
CMIG					Sn	**Sn**	**06 09 09.2**	**-0.5**
	89nm,0.3s,baz=95,slow=10.0,SNR=18							
	175nm,0.3s							
CMIG	**Matias Romero**	**2.40**	**339**			**Pn**	**06 08 41.9**	**+0.4**
CMIG						**Sn**	**06 09 08.0**	**-1.8**
CMIG	**Matias Romero**	**2.40**	**339**	*i* P		**Pn**	**06 08 41.9**	**+0.4**
CMIG				*i* S		**Sn**	**06 09 08.0**	**-1.8**
HUEH	**Huehuetenango**	**2.44**	**79**			**Pn**	**06 08 43.1**	**+0.9**
FUG	**Fuego 3**	**3.07**	**97**	*eP*		**Pn**	**06 08 51.1**	**+0.3**
FUG				*eS*		**Sn**	**06 09 24.3**	**-2.2**
PEIG	**Puerto Escondi**	**3.26**	**291**	*eP*		**Pn**	**06 08 53.4**	**+0.1**
PEIG				*eS*		**Sn**	**06 09 27.2**	**-3.8**
NEUV	**Arroyo Zacate**	**3.34**	**329**	*i* P		**Pn**	**06 08 54.7**	**+0.3**
NEUV				*i* S		**Sn**	**06 09 28.7**	**-4.4**
VHO	**Vista Hermosa**	**3.45**	**310**	*eP*		**Pn**	**06 08 58.3**	**+2.2**
VHO				*i* S		**Sn**	**06 09 36.5**	**+0.5**
NBG	**Las Nubes**	**3.53**	**94**	*eP*		Pn	06 09 02.3	+5.1
YOIG	**Yosondua**	**3.97**	**301**	*eP*		**Pn**	**06 09 06.1**	**+2.8**
YOIG				*i* S		**Sn**	**06 09 45.1**	**-3.8**
MRL	**Marmol**	**4.16**	**86**	*eP*		**Pn**	**06 09 07.7**	**+1.8**
TOIG	**Toxpalan**	**4.38**	**318**	*eP*		**Pn**	**06 09 11.5**	**+2.7**
TOIG				*eS*		**Sn**	**06 09 59.8**	**+1.0**
PETF	**Flores**	**4.47**	**62**			**Pn**	**06 09 09.2**	**-0.7**
SCIG	**Sabancuy**	**4.90**	**33**	*eP*		**Pn**	**06 09 16.0**	**+0.2**
SCIG				*i* S		Sn	06 09 59.0	-12
TLIG	**Tlapa**	**5.17**	**302**			**Pn**	**06 09 20.9**	**+1.3**
JAUV	**Jalcomulco**	**5.24**	**329**	*eP*		**Pn**	**06 09 19.6**	**-1.0**
JAUV				*i* S		**Sn**	**06 10 13.6**	**-6.4**
CXUV	**Coxquihui**	**6.32**	**328**	*eP*		**Pn**	**06 09 34.9**	**-0.5**
CXUV				*i* S		**Sn**	**06 10 40.3**	**-6.2**
TGUH	**Tegucigalpa,Un**	**6.55**	**96**		Pn	**Pn**	**06 09 38.3**	**-0.4**
CRIN	**San Cristobal**	**7.07**	**107**		Pn	**Pn**	**06 09 45.8**	**+0.1**
CNGN	**Cerro Negro**	**7.46**	**107**		Pn	**Pn**	**06 09 51.8**	**+0.7**
TEIG	**Tepich**	**7.63**	**45**			**Pn**	**06 09 54.0**	**+0.6**
MATN	**Matagalpa**	**8.05**	**103**		Pn	**Pn**	**06 10 00.3**	**+1.0**
BOAB	**BOACO BROADBAN**	**8.43**	**105**		Pn	**Pn**	**06 10 04.8**	**+0.4**
ORTG	**Ortega, Santa**	**9.44**	**117**		Pn	**Pn**	**06 10 18.1**	**-0.2**
JTS	**Las Juntas de**	**9.91**	**116**		Pn	**Pn**	**06 10 25.7**	**+1.0**
RIMA	**Rio Macho**	**11.10**	**116**		Pn	**Pn**	**06 10 42.6**	**+1.4**
SRBA	**San Rafael, Bu**	**11.79**	**117**		Pn	**Pn**	**06 10 51.0**	**+0.4**
SOR	**Soroa**	**13.05**	**51**		Pn	**Pn**	**06 11 07.1**	**-0.5**
833A	**Chaparral WMA,**	**14.32**	**340**		Pn	**Pn**	**06 11 26.4**	**+1.4**
344A	**Westbrook Farm**	**16.80**	**10**		Pn	**Pn**	**06 11 55.2**	**-2.0**
344A					IAmb	IAmb	06 12 14.9	
	comp=Z,15nm,1.2s							
TXAR	**Lajitas Array**	**16.97**	**330**		Pn	**P**	**06 12 02.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=8.4							
	comp=Z,1.1nm,0.8s							
TXAR	**Lajitas Array**	**16.97**	**330**		Pn	**Pn**	**06 11 58.1**	**-1.4**
TX31	**Lajitas Ar. Si**	**16.97**	**330**			**Pn**	**06 11 59.2**	**-0.3**
TX31					IAmb	IAmb	06 12 24.0	
	comp=Z,14nm,1.5s							
TX32	**Lajitas Array**	**16.97**	**330**		Pn	**Pn**	**06 11 56.2**	**-3.3**
237A	**Washetta, Mont**	**17.16**	**355**		Pn	**Pn**	**06 12 01.1**	**-0.7**
237A					IAmb	IAmb	06 12 25.3	
	comp=Z,17nm,0.9s							
WHTX	**Lake Whitney,**	**17.36**	**350**		Pn	**Pn**	**06 12 03.0**	**-1.3**
WHTX					IAmb	IAmb	06 12 11.5	
	comp=Z,7.2nm,0.6s							
MIAR	**Mount Ida**	**19.62**	**1**		P	**P**	**06 12 29.4**	**-0.8**
MIAR					IAmb	IAmb	06 12 39.5	
	comp=Z,6.8nm,1.2s							
HTMS	**Hat Mesa**	**19.63**	**335**		P	**P**	**06 12 29.2**	**-1.3**
WMOK	**Wichita Mounta**	**20.27**	**349**		P	**P**	**06 12 37.6**	**+0.2**
X48A	**Hartselle**	**20.50**	**17**		P	**P**	**06 12 38.6**	**-1.2**
X48A					IAmb	IAmb	06 12 48.0	
	comp=Z,4.5nm,0.9s							
FNO	**Franklin**	**20.56**	**352**		P	**P**	**06 12 39.4**	**-1.1**
MSTX	**Muleshoe**	**20.64**	**339**		P	**P**	**06 12 40.1**	**-1.3**
MSTX					IAmb	IAmb	06 12 47.7	
	comp=Z,17nm,1.1s							
GOGA	**Godfrey**	**20.80**	**25**		P	**P**	**06 12 42.5**	**-0.6**
GOGA					IAmb	IAmb	06 13 15.1	
	comp=Z,4.1nm,1.0s							
FCAR	**Ozark Folk Cen**	**21.02**	**4**		P	**P**	**06 12 45.7**	**+0.2**
AMTX	**Amarillo**	**21.12**	**342**		P	**P**	**06 12 46.8**	**+0.2**
AMTX					IAmb	IAmb	06 12 53.1	
	comp=Z,10nm,0.8s							
OTAV	**Otavalo**	**21.13**	**132**		P	**P**	**06 12 47.3**	**+0.1**
LCAR	**Lake Charles**	**21.29**	**6**		P	**P**	**06 12 48.4**	**+0.2**
LCAR					IAmb	IAmb	06 13 28.1	
	comp=Z,5.7nm,1.3s							
OK035	**E0210 Rd and N**	**22.18**	**350**		P	**P**	**06 12 57.6**	**-0.3**
CPCT	**Cooper Cave**	**22.21**	**21**		P	**P**	**06 12 57.1**	**-1.1**
R40A	**Maddies Statio**	**23.40**	**3**		P	**P**	**06 13 10.3**	**-0.2**
N38A	**Joes South For**	**25.86**	**1**		P	**P**	**06 13 32.7**	**-0.5**
NVAR	**Mina Array Bea**	**31.82**	**322**		P	**P**	**06 14 30.2**	**+3.7**
	comp=Z,0.5nm,0.7s,baz=142,slow=8.1,SNR=4.8							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**49.78**	**348**		P	**P**	**06 16 54.1**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=152,slow=7.1,SNR=7.0							
	comp=Z,0.4nm,0.5s							
ILAR	**Eielson Array**	**61.31**	**337**		P	**P**	**06 18 18.1**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=156,slow=3.7,SNR=4.7							
ILAR					LR	LR	06 45 24.9	
	comp=Z,21nm,18.5s,baz=306,slow=37							
	comp=Z,0.5nm,0.8s							
NOA	**NORSAR Array B**	**84.32**	**28**		P	**P**	**06 20 32.8**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=294,slow=5.0,SNR=1.7							
	comp=Z,0.4nm,0.7s							
ARCES	**ARCESS Array B**	**85.94**	**18**		P	**P**	**06 20 41.7**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=284,slow=7.3,SNR=1.3							
	comp=Z,1.0nm,0.9s							

IDC ***15*** *06:11:44.5±0.9, 27.°14S×176.°51W, h0km, mb3.9/7, mbtmp4.0/10, ML4.3/3, MS3.6/10, Error ellipse: s-maj=31.6km s-min=18.7km az=110.0*

NEIC ***15*** *06:11:51.1±2.7, 27.°35S±0.°08×177.°0W±0.°1, h35km±2km, mb4.5/8, Error ellipse: s-maj=22.2km s-min=13.0km az=108.0*

ISC 15 06:11:52.1±0.6,**27.°26S**±0.°07×**176.°9W**±0.°1,**h55**km,**n34, σ2s03/28, mb4.0**/11,**MS3.7**/6,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.16**	**203**	Pn	**Pn**	**06 12 26.8**	**+1.1**
	183nm,0.3s,baz=53,slow=19,SNR=6.4						
RAO				LR	LR	06 12 55.1	
	comp=Z,221nm,19.5s,baz=124,slow=29						
RAO				Sn	**Sn**	**06 12 56.8**	**+5.5**
	152nm,0.3s,baz=117,slow=23,SNR=5.6						
	337nm,0.3s						
RAO	**Raoul Island**	**2.16**	**203**		**Pn**	**06 12 23.1**	**-2.6**
NIUE	**Niue**	**10.39**	**40**	Pn	**Pn**	**06 14 17.7**	**-0.7**
MSVF	**Nonsavu**	**10.55**	**333**	LR	LR	06 18 10.0	
	comp=Z,251nm,18.3s,baz=128,slow=36						
MSVF	**Nonsavu**	**10.55**	**333**	Pn	**Pn**	**06 14 21.2**	**+0.4**
URZ	**Urewera**	**12.05**	**203**	Pn	**Pn**	**06 14 39.4**	**-1.6**
	0.6nm,0.3s,baz=171,slow=18,SNR=1.8						
URZ					Sn	**Sn**	**06 16 49.1**	**-4.7**
	1.5nm,0.3s,baz=176,slow=22,SNR=4.1						
	1.6nm,0.3s						
AFI	**Afiamalu**	**14.13**	**21**	Pn	Pn	06 15 01.0	-8.5
	1.4nm,0.3s,baz=278,slow=13,SNR=2.0						
	17nm,0.6s						
DZM	**Mont Dzumac**	**15.96**	**285**	LR	LR	06 21 02.8	
	comp=Z,306nm,18.3s,baz=174,slow=34						
RAR	**Rarotonga**	**16.77**	**73**	LR	LR	06 20 31.2	
	comp=Z,78nm,20.9s,baz=250,slow=32						
PPT	**Papeete**	**27.02**	**75**	LR	LR	06 27 37.3	
	comp=Z,79nm,18.3s,baz=260,slow=36						

HNR	**Honiara**	**28.12**	**305**		LR	LR	06 27 35.1		
	comp=Z,112nm,19.6s,baz=189,slow=34								
EIDS	**Eidsvold**	**28.69**	**266**		P	**P**	**06 17 42.2**	**-1.8**	
CTA	**Charters Tower**	**34.37**	**274**		LR	LR	06 31 49.8		
	comp=Z,226nm,18.1s,baz=88,slow=35								
CTAO	**Charters Tower**	**34.37**	**274**		P	**P**	**06 18 33.0**	**-1.0**	
STKA	**Stephens Creek**	**36.20**	**253**		LR	LR	06 31 39.1		
	comp=Z,159nm,18.6s,baz=40,slow=33								
AS31	**Alice Springs**	**44.30**	**263**		P	**P**	**06 19 54.9**	**-2.0**	
ASAR	**Alice Springs**	**44.30**	**263**		P	**P**	**06 19 58.8**	**+1.9**	
	0.8nm,0.5s,baz=96,slow=6.9,SNR=12								
ASAR					LR	LR	06 36 47.9		
	comp=Z,98nm,19.2s,baz=157,slow=34								
	0.8nm,0.5s								
ASAR	**Alice Springs**	**44.30**	**263**		P	**P**	**06 19 55.1**	**-1.8**	
WR0	**Warramunga Arr**	**44.83**	**269**		P	**P**	**06 19 59.9**	**-1.1**	
WR0					IAmb	IAmb	06 20 15.4		
	comp=Z,6.3nm,1.2s								
WB2	**Warramunga Arr**	**45.00**	**268**		P	**P**	**06 20 02.5**	**+0.2**	
WB2					IAmb	IAmb	06 20 18.7		
	comp=Z,18nm,1.5s								
WRA	**Warramunga Arr**	**45.01**	**268**		P	**P**	**06 20 04.7**	**+2.2**	
	comp=Z,1.1nm,0.6s,baz=108,slow=7.2,SNR=11								
WRA					LR	LR	06 37 03.4		
	comp=Z,91nm,18.5s,baz=122,slow=34								
	comp=Z,1.1nm,0.6s								
WRA	**Warramunga Arr**	**45.01**	**268**		P	**P**	**06 20 02.3**	**-0.2**	
WB0	**Warramunga Arr**	**45.02**	**269**		P	**P**	**06 20 03.2**	**+0.7**	
WB0					IAmb	IAmb	06 20 09.8		
	comp=Z,6.8nm,1.1s								
VNDA	**Vanda**	**51.30**	**186**		P	**P**	**06 20 51.6**	**+1.5**	
	comp=Z,0.5nm,0.8s,baz=327,slow=12,SNR=1.9								
	comp=Z,0.5nm,0.8s								
QSPA	**South Pole Qui**	**62.84**	**180**		P	**P**	**06 22 12.7**	**+0.7**	
QSPA					IAmb	IAmb	06 22 18.1		
	comp=Z,5.1nm,0.9s								
MAW	**Mawson**	**75.56**	**200**		P	**P**	**06 23 32.6**	**+2.2**	
	comp=Z,1.1nm,0.6s,baz=137,slow=13,SNR=4.1								
	comp=Z,1.1nm,0.6s								
MJAR	**Matsushiro Arr**	**76.23**	**324**		P	**P**	**06 23 36.1**	**+1.5**	
	comp=Z,1.6nm,0.8s,baz=147,slow=8.1,SNR=5.6								
	comp=Z,1.6nm,0.8s								
KSRS	**Korea Array**	**82.59**	**319**		P	**P**	**06 24 11.4**	**+2.3**	
	comp=Z,1.5nm,0.9s,baz=138,slow=6.6,SNR=6.1								
	comp=Z,1.5nm,0.9s								
NVAR	**Mina Array Bea**	**85.31**	**42**		P	**P**	**06 24 21.8**	**-1.5**	
	comp=Z,0.6nm,0.9s,baz=213,slow=7.9,SNR=4.7								
	comp=Z,0.6nm,0.9s								
ARCES	**ARCESS Array B**	**135.72**	**349**	PKP		**PKPdf**	**06 31 04.8**	**-0.8**	
	comp=Z,1.7nm,0.9s,baz=35,slow=3.3,SNR=2.1								
NB2	**NORSAR Subarra**	**145.78**	**353**	PKP		**PKPab**	**06 31 25.4**	**+0.5**	
	comp=Z,5.0nm,1.2s,baz=16,slow=3.2								
NOA	**NORSAR Array B**	**145.78**	**353**	PKPbc		**PKPdf**	**06 31 23.9**	**0.0**	
	comp=Z,5.0nm,0.6s,baz=2.6,slow=5.8,SNR=2.6								
AKASG	**Malin Array Be**	**149.29**	**327**	PKPbc		**PKPbc**	**06 31 33.8**	**-0.5**	
	comp=Z,0.7nm,0.5s,baz=50,slow=3.3,SNR=6.2								
TORD	**Torodi Ar. Bea**	**165.90**	**175**	PKPab		**PKPab**	**06 32 50.5**	**-0.7**	
	comp=Z,0.2nm,0.4s,baz=116,slow=38,SNR=2.3								

NEIC ***15*** *06:30:28.2±1.7, 18.°8N±0.°1×66.°80W±0.°04, h45km±6km, Error ellipse: s-maj=15.1km s-min=4.9km az=165.0*

RSPR 15 06:30:28.9,18.°87N×66.°86W,h44km±3km,**MD2.7/9,9C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.46**	**212**	*e*P	Pn	06 30 38.2	-1.1
AGPR	**Aguadilla, PR**	**0.46**	**212**	*e*S	Sn	06 30 45.7	-1.1
AGPR	**Aguadilla, PR**	**0.46**	**212**		Pn	06 30 38.2	-1.1
AGPR	**Aguadilla, PR**	**0.46**	**212**		Sn	06 30 45.7	-1.1
AGPR	**Aguadilla, PR**	**0.46**	**212**	IAML		06 30 43.2	
	comp=E,48nm,2.2s						
AGPR	**Aguadilla, PR**	**0.46**	**212**	IAML		06 30 47.3	
	comp=N,101nm,2.4s						
EMPR	**Esperanza - Ma**	**0.49**	**141**	*e*P	Pn	06 30 39.4	-0.4
EMPR	**Esperanza - Ma**	**0.49**	**141**	*e*S	Sn	06 30 47.2	-0.2
EMPR	**Esperanza - Ma**	**0.49**	**141**		Pn	06 30 39.0	-0.7
EMPR				IAML		06 30 40.7	
	comp=N,64nm,1.1s						
EMPR				IAML		06 30 53.8	
	comp=E,84nm,2.1s						
EMPR	**Esperanza - Ma**	**0.49**	**141**		Sn	06 30 47.2	-0.2
AOPR	**Arecibo Observ**	**0.53**	**169**	*e*P	Pn	06 30 39.0	-1.1
AOPR	**Arecibo Observ**	**0.53**	**169**	*e*S	Sn	06 30 47.0	-1.1
AOPR	**Arecibo Observ**	**0.53**	**169**		Pn	06 30 39.0	-1.1
AOPR					Sn	06 30 47.0	-1.1
AOPR	**Arecibo Observ**	**0.53**	**169**	IAML		06 30 48.6	
	comp=N,56nm,0.2s						
AOPR				IAML		06 30 49.0	
	comp=E,73nm,0.3s						
PRSN	**Puerto Rico Se**	**0.70**	**203**	Pn	Pn	06 30 41.4	-1.0
LSP	**Las Mesas**	**0.72**	**198**	*e*P	Pn	06 30 41.9	-0.8
LSP	**Las Mesas**	**0.72**	**198**	*e*S	Sn	06 30 52.0	-0.7
OBIP	**Obispado Ponce**	**0.85**	**164**	*e*P	Pn	06 30 42.7	-1.8
OBIP	**Obispado Ponce**	**0.85**	**164**	*e*S	Sn	06 30 54.3	-1.5
OBIP	**Obispado Ponce**	**0.85**	**164**		Pn	06 30 42.7	-1.8
OBIP					Sn	06 30 54.3	-1.5
CRPR	**Cabo Rojo, PR**	**0.89**	**196**	*e*P	Pn	06 30 44.4	-0.6
CRPR	**Cabo Rojo, PR**	**0.89**	**196**	*e*S	Sn	06 30 56.4	-0.3
CRPR	**Cabo Rojo, PR**	**0.89**	**196**		Pn	06 30 44.0	-1.0
CRPR				IAML		06 30 51.8	
	comp=E,20nm,1.5s						
CRPR				IAML		06 30 55.0	
	comp=N,26nm,2.6s						
CRPR	**Cabo Rojo, PR**	**0.89**	**196**		Sn	06 30 56.4	-0.4
MLPR	**Magueyes Islan**	**0.91**	**191**	*e*P	Pn	06 30 43.7	-1.6
MLPR	**Magueyes Islan**	**0.91**	**191**	*e*S	Sn	06 30 56.3	-0.9
MLPR	**Magueyes Islan**	**0.91**	**191**		Pn	06 30 43.7	-1.6
MLPR					Sn	06 30 56.3	-0.9
MLPR	**Magueyes Islan**	**0.91**	**191**	IAML		06 30 57.2	
	comp=N,29nm,2.5s						
GCPR	**Guaynabo City**	**0.92**	**127**	*e*P	Pn	06 30 44.0	-1.4
GCPR	**Guaynabo City**	**0.92**	**127**	*e*S	Sn	06 30 56.1	-1.3
GCPR	**Guaynabo City**	**0.92**	**127**		Pn	06 30 43.9	-1.5
GCPR					Sn	06 30 55.1	-2.3
CBYP	**Canovanas**	**1.12**	**122**	*e*P	Pn	06 30 47.3	-0.9
CBYP	**Canovanas**	**1.12**	**122**	*e*S	Sn	06 31 00.9	-1.5
CBYP	**Canovanas**	**1.12**	**122**		Pn	06 30 46.6	-1.6
CBYP					Sn	06 31 01.2	-1.2
IGPR	**InterUniversit**	**1.14**	**141**	*e*P	Pn	06 30 47.3	-1.1
IGPR	**InterUniversit**	**1.14**	**141**	*e*S	Sn	06 31 01.8	-1.2
HUMP	**Col San Antoni**	**1.20**	**127**	*e*P	Pn	06 30 48.7	-0.5
HUMP	**Col San Antoni**	**1.20**	**127**	*e*S	Sn	06 31 03.2	-1.0
HUMP	**Col San Antoni**	**1.20**	**127**		Pn	06 30 46.5	-2.7
HUMP					Sn	06 31 02.6	-1.6
HUMP				IAML		06 31 13.0	
	comp=N,20nm,1.9s						
CUPR	**Culebra, Puert**	**1.59**	**110**	*e*S	Sn	06 31 13.2	-0.8
CUPR	**Culebra, Puert**	**1.59**	**110**		Sn	06 31 13.2	-0.8

NEIC ***15*** *06:31:08.9±2.2, 18.°8N±0.°1×67.°57W±0.°05, h111km±6km, Error ellipse: s-maj=15.7km s-min=5.8km az=190.0*

RSPR ***15*** *06:31:12.8, 18.°72N×67.°59W, h80km±2km, MD2.8/9*

OSPL ***15*** *06:31:13.4±0.7, 18.°77N×67.°61W, h75km±9km, ML2.1*

ISC 15 06:31:09.3±1.9,**19.°0N**±0.°1×**67.°58W**±0.°04,**h17**km±10km, **n33,σ1s42/38,6C-3D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.62**	**171**	*e*P	**Pn**	**06 31 25.0**	**+1.6**
IDE	**Isla Desecheo**	**0.62**	**171**	*e*S	**Sn**	**06 31 34.3**	**+1.3**
AGPR	**Aguadilla, PR**	**0.69**	**140**	*e*P	**Pn**	**06 31 26.4**	**+2.0**
AGPR	**Aguadilla, PR**	**0.69**	**140**		**Pn**	**06 31 26.4**	**+2.0**
AGPR	**Aguadilla, PR**	**0.69**	**140**	IAML		06 31 32.5	
	comp=N,66nm,2.8s						
AGPR				IAML		06 31 37.1	
	comp=E,61nm,0.4s						
AGPR	**Aguadilla, PR**	**0.69**	**140**		**Sn**	**06 31 36.6**	**+1.9**
AGPR	**Aguadilla, PR**	**0.69**	**140**	*i* P	**Pn**	**06 31 26.2**	**+1.8**
AGPR				*e*S	**Sn**	**06 31 36.5**	**+1.8**
AGPR				IAML		06 31 37.1	
	comp=Z,57nm,1.7s						
PRSN	**Puerto Rico Se**	**0.88**	**152**	Pn	**Pn**	**06 31 27.6**	**+0.6**
PCDR	**Punta Cana, DR**	**0.91**	**238**	*e*P	**Pn**	**06 31 28.9**	**+1.5**
PCDR	**Punta Cana, DR**	**0.91**	**238**	*e*S	**Sn**	**06 31 41.1**	**+1.1**
PCDR	**Punta Cana, DR**	**0.91**	**238**		**Pn**	**06 31 28.9**	**+1.5**
PCDR				IAML		06 31 37.8	
	comp=E,91nm,2.5s						
PCDR					**Sn**	**06 31 40.9**	**+0.8**
PCDR	**Punta Cana, DR**	**0.91**	**238**	*i* P	**Pn**	**06 31 28.8**	**+1.5**
PCDR				*e*S	**Sn**	**06 31 40.0**	**0.0**
PCDR				IAML		06 31 42.9	

	comp=Z,99nm,1.6s								
LSP	**Las Mesas**	**0.95**	**151**	*e*P		**Pn**	**06 31 29.0**	**+1.1**	
LSP	**Las Mesas**	**0.95**	**151**	*e*S		**Sn**	**06 31 40.6**	**-0.4**	
AOPR	**Arecibo Observ**	**1.02**	**130**	*e*P		**Pn**	**06 31 30.0**	**+1.1**	
AOPR	**Arecibo Observ**	**1.02**	**130**	*e*S		**Sg**	**06 31 42.4**	**0.0**	
AOPR	**Arecibo Observ**	**1.02**	**130**			**Pn**	**06 31 30.0**	**+1.1**	
AOPR				IAML			06 31 42.9		
	comp=N,81nm,0.3s								
AOPR	**Arecibo Observ**	**1.02**	**130**			**Sg**	**06 31 42.4**	**0.0**	
CRPR	**Cabo Rojo, PR**	**1.09**	**156**	*e*P		**Pn**	**06 31 29.4**	**-0.3**	
CRPR	**Cabo Rojo, PR**	**1.09**	**156**			**Pb**	**06 31 29.4**	**-0.3**	
CRPR	**Cabo Rojo, PR**	**1.09**	**156**			**Sb**	**06 31 42.7**	**-0.9**	
CRPR	**Cabo Rojo, PR**	**1.09**	**156**	*i* P		**Pg**	**06 31 30.4**	**+0.1**	
CRPR				*e*S		**Sb**	**06 31 42.3**	**-1.3**	
CRPR				IAML			06 31 43.3		
	comp=Z,35nm,4.2s								
EMPR	**Esperanza - Ma**	**1.12**	**118**	*e*P		**Pn**	**06 31 31.8**	**+1.5**	
EMPR	**Esperanza - Ma**	**1.12**	**118**	*e*S		**Sg**	**06 31 46.8**	**+1.1**	
EMPR	**Esperanza - Ma**	**1.12**	**118**			**Pn**	**06 31 31.7**	**+1.5**	
EMPR						**Sg**	**06 31 46.7**	**+1.1**	
EMPR				IAML			06 32 00.3		
	comp=E,70nm,1.6s								
MLPR	**Magueyes Islan**	**1.15**	**154**	*e*P		**Pb**	**06 31 29.4**	**-1.3**	
MLPR	**Magueyes Islan**	**1.15**	**154**	*e*S		**Sb**	**06 31 42.5**	**-2.8**	
MLPR	**Magueyes Islan**	**1.15**	**154**			**Pb**	**06 31 29.7**	**-1.0**	
MLPR						**Sb**	**06 31 42.6**	**-2.8**	
MLPR				IAML			06 31 43.8		
	comp=N,32nm,2.7s								
OBIP	**Obispado Ponce**	**1.33**	**136**	*e*P		**Pn**	**06 31 32.8**	**-0.3**	
OBIP	**Obispado Ponce**	**1.33**	**136**			**Pn**	**06 31 32.0**	**-1.1**	
OBIP				IAML			06 31 49.8		
	comp=N,21nm,1.6s								
GCPR	**Guaynabo City**	**1.57**	**116**	Pn		**Pn**	**06 31 37.2**	**+0.6**	
GCPR				IAML			06 32 08.5		
	comp=E,15nm,2.9s								
SJG	**San Juan**	**1.62**	**123**	Pn		**Pn**	**06 31 35.1**	**-2.0**	
SJG				IAML			06 31 58.3		
	comp=E,18nm,0.2s								
SJG				IAML			06 31 58.4		
	comp=E,17nm,0.5s								
DR12	**Loma Pena Alta**	**1.72**	**263**	Pn		**Pn**	**06 31 37.9**	**-0.8**	

DRS ***15*** *06:44:29.0±0.0, 41.°19N×48.°10E, h22km*

MOS ***15*** *06:44:30.1±0.0, 41.°67N×48.°00E, h5km, MPVA3.9*

ISC 15 06:44:26.0±2.2,**41.°48N**±0.°08×**48.°27E**±0.°06,**h6**km±11km, **n15,σ2s12/29,3C,Eastern Caucasus**

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

JMM Marumori 0.82 301 A A 07 04 56.6
comp=E,253nm,0.4s,comp=E,483nm,0.5s
JIKH Ishinomakikobu 0.89 349⇓*iP* **Pn 07 04 57.5 -0.1**
JIKH Ishinomakikobu 0.89 349 A A 07 04 57.5
comp=E,631nm,0.7s,comp=E,186nm,0.5s
JFFD Fukushimafurud 0.96 249⇓*iP* **Pn 07 04 57.9 -0.7**
JFFD ⇓S **Sn 07 05 10.6 -0.5**
JFFD Fukushimafurud 0.96 249 A A 07 04 57.9
comp=E,334nm,0.6s,comp=E,289nm,0.9s
JIO Ouri 1.05 346⇓*iP* **Pn 07 04 59.9 +0.1**
JIO ⇓*e*S **Sn 07 05 13.9 +0.7**
JIO Ouri 1.05 346 A A 07 04 59.9
comp=E,293nm,0.6s,comp=E,105nm,0.5s
JFT Otama 1.07 275⇓*iP* **Pn 07 05 00.6 +0.5**
JFT ⇓S **Sn 07 05 15.4 +1.5**
JFT Otama 1.07 275 A A 07 05 00.6
comp=E,660nm,1.0s,comp=E,300nm,0.7s
JHO Hitachi 1.22 227⇓*iP* **Pn 07 05 00.7 -1.3**
JHO ⇓*e*S **Sn 07 05 16.0 -1.3**
JHO Hitachi 1.22 227 A A 07 05 00.7
comp=E,108nm,1.7s,comp=E,96nm,0.7s
JOU Okura 1.23 319⇓*iP* **Pn 07 05 02.7 +0.4**
JOU ⇓S **Sn 07 05 19.8 +2.1**
JOU Okura 1.23 319 A A 07 05 02.7
comp=E,223nm,1.9s,comp=E,319nm,0.9s
JYAR Yonezawaarcadi 1.31 292 A A 07 05 03.6
comp=E,454nm,1.2s,comp=E,394nm,0.4s
JOFO Osakifurukawao 1.31 333 A A 07 05 03.7
comp=E,723nm,2.9s,comp=E,580nm,3.4s
JKMT Kesennumamotoy 1.38 353 A A 07 05 04.5
comp=E,89nm,1.0s,comp=E,56nm,2.9s
JHYU Hitachinakayam 1.41 219 A A 07 05 03.8
comp=E,128nm,2.4s,comp=E,70nm,2.0s
JSB Shiboa 1.48 252 A A 07 05 05.6
comp=E,674nm,1.1s,comp=E,579nm,2.3s
JYS Shirataka 1.50 302⇓P **Pn 07 05 06.7 +0.7**
JYS Shirataka 1.50 302 A A 07 05 06.7
comp=E,192nm,0.5s,comp=E,205nm,2.0s
JMK Ichinoseki 1.55 347⇓*iP* **Pn 07 05 07.4 +0.7**
JMK ⇓*e*S **Sn 07 05 27.0 +1.3**
JMK Ichinoseki 1.55 347 A A 07 05 07.4
comp=E,161nm,0.8s,comp=E,82nm,0.9s
JFY Yanaizu 1.57 269⇓*iP* **Pn 07 05 07.4 +0.4**
JFY ⇓S **Sn 07 05 28.1 +1.9**
JFY Yanaizu 1.57 269 A A 07 05 07.4
comp=E,123nm,3.7s,comp=E,96nm,1.5s
OFUJ Ofunato 1.64 360 A A 07 05 08.2
comp=E,55nm,1.0s,comp=E,54nm,0.9s
JYT Yasato 1.70 225 Pn **Pn 07 05 07.6 -1.1**
JYT Yasato 1.70 225 A A 07 05 08.1
comp=E,116nm,0.4s,comp=E,98nm,0.3s
JIHU Itakohorinouch 1.74 213 A A 07 05 08.4
comp=E,435nm,1.4s,comp=E,404nm,1.4s
JYK Kaneyama 1.81 325 A A 07 05 10.9
comp=E,666nm,1.5s,comp=E,62nm,4.0s
CHOJ Chosi 1.86 201 A A 07 05 09.8
comp=E,88nm,1.4s,comp=E,104nm,1.8s
JNS Sasagawa 1.92 282 A A 07 05 12.2
comp=E,48nm,2.9s,comp=E,59nm,5.7s
JYA Atsumi 1.94 307 A A 07 05 12.7
comp=E,103nm,0.7s,comp=E,89nm,0.9s
JSMT Sammumatsuo 2.05 209 A A 07 05 12.8
comp=E,192nm,4.7s,comp=E,203nm,3.1s
JAG Ashikaga 2.05 241 A A 07 05 13.5
comp=E,49nm,2.8s,comp=E,54nm,2.9s
JOM Ohasama 2.05 352 A A 07 05 14.2
comp=E,112nm,0.7s,comp=E,51nm,2.0s
JKT Katashina 2.06 252 A A 07 05 13.8
comp=E,57nm,1.3s,comp=E,67nm,4.0s
JYYZ Yamagatayuza 2.09 319 A A 07 05 14.9
comp=E,129nm,4.9s,comp=E,166nm,3.2s
JUON Uonuma 2.12 265 A A 07 05 14.6
comp=E,42nm,3.1s,comp=E,35nm,3.1s
JRG Rokugo 2.12 337 A A 07 05 15.3
comp=E,119nm,0.9s,comp=E,89nm,0.7s
MIYJ Miyakonagasawa 2.14 3 A A 07 05 15.2
comp=E,52nm,1.0s,comp=E,51nm,0.5s
JAW Awa shima 2.18 299 A A 07 05 16.1
comp=E,62nm,5.9s,comp=E,47nm,4.8s
TOK Tokyo 2.34 222 A A 07 05 17.1
comp=E,148nm,1.1s,comp=E,171nm,1.8s
JCN Nagara 2.34 211 A A 07 05 17.0
comp=E,262nm,3.9s,comp=E,206nm,5.4s
JIZZ Izumozaki 2.37 273 A A 07 05 18.5
comp=E,227nm,2.2s,comp=E,153nm,4.8s
JSZI Iwateshizukuis 2.37 346 A A 07 05 18.7
comp=E,124nm,0.8s,comp=E,127nm,2.8s
JYW Yuwa 2.40 332 A A 07 05 19.2
comp=E,149nm,5.6s,comp=E,148nm,1.1s
I30JP ISUMI INFRASON 2.40 208 P **Pn 07 05 19.7 +1.5**
baz=41,slow=22,SNR=5.7
JTB Tobi-shima 2.42 317 A A 07 05 19.7
comp=E,41nm,0.9s,comp=E,90nm,2.4s
JHU Hanno 2.50 231 A A 07 05 19.6
comp=E,55nm,3.9s,comp=E,40nm,2.3s
JTH Tanohata 2.50 3 A A 07 05 20.4
comp=E,65nm,0.9s,comp=E,46nm,1.5s
JKZ Kuzumaki 2.56 354 A A 07 05 21.3
comp=E,79nm,2.7s,comp=E,54nm,0.9s
JKUC kamogawauchiur 2.57 208 A A 07 05 20.2
comp=E,85nm,3.5s,comp=E,161nm,3.3s
JGK Kuni 2.59 251 A A 07 05 21.3
comp=E,101nm,4.0s,comp=E,103nm,2.6s
JRY Ryogami san 2.65 238 A A 07 05 21.9
comp=E,39nm,1.9s,comp=E,43nm,3.7s
JSGW Sagamiharawaka 2.71 228 A A 07 05 22.5
comp=E,80nm,3.0s,comp=E,90nm,2.3s
JYO Yokosk 2.75 217 A A 07 05 22.8
comp=E,128nm,6.2s,comp=E,104nm,2.6s
JKEN Kujiedanarisaw 2.76 0 A A 07 05 24.1
comp=E,166nm,0.7s,comp=E,174nm,0.9s
JSD Sado 2.78 283 Pn **Pn 07 05 23.9 +0.5**
JSD Sado 2.78 283 A A 07 05 24.5
comp=E,43nm,2.5s,comp=E,24nm,2.5s
JJN Nakama 2.83 264 A A 07 05 24.9
comp=E,64nm,1.9s,comp=E,86nm,4.0s
JAH Hinai 2.87 344 A A 07 05 25.8
comp=E,105nm,2.5s,comp=E,49nm,2.2s
MJAR Matsushiro Arr 2.92 253 P **Pn 07 05 24.8 -0.7**
14nm,0.3s,baz=85,slow=16,SNR=277
MJAR S **Sn 07 06 03.6 +4.3**
1µm,0.8s,baz=91,slow=27,SNR=7.6
MJAR LR LR 07 06 53.8
comp=Z,49µm,20.6s,baz=97,slow=46
298nm,0.6s
MAJO Matsushiro 2.92 253 Pn **Pn 07 05 26.8 +1.3**
MAJO Matsushiro 2.92 253*d iP* **Pn 07 05 26.6 +1.1**
MAJO Matsushiro 2.92 253 P **Pn 07 05 27.0 +1.5**
JANG Nango 2.93 357 A A 07 05 26.6
comp=E,43nm,2.4s,comp=E,29nm,2.8s
JOD2 Odawara 2 3.02 225 A A 07 05 26.8
comp=E,62nm,3.7s,comp=E,90nm,1.7s
JNG Nsakai 3.05 251 A A 07 05 27.8
comp=E,27nm,3.8s,comp=E,52nm,2.5s
JNTW Noshirotokiwa 3.07 338 A A 07 05 28.7
comp=E,246nm,3.3s,comp=E,140nm,3.3s
JYN Shimok 3.19 233 A A 07 05 29.4
comp=E,138nm,1.8s,comp=E,118nm,2.4s
JOG3 Oga3 3.21 321 A A 07 05 26.0
comp=E,55nm,3.1s,comp=E,70nm,4.3s
JNT Takato 3.25 242 A A 07 05 30.5
comp=E,24nm,2.8s,comp=E,35nm,2.2s
JIM2 Oshima 3 3.27 215 A A 07 05 30.2
comp=E,81nm,1.5s,comp=E,90nm,1.7s
JHTM Izuhatsuma 3.29 222 A A 07 05 30.6
comp=E,103nm,1.9s,comp=E,126nm,2.8s
JFNN Fujinakano 3.30 228 A A 07 05 30.9
comp=E,102nm,3.5s,comp=E,98nm,4.1s
JHHS Hirosakihyakuz 3.37 343 A A 07 05 32.9
comp=E,111nm,2.9s,comp=E,93nm,3.9s
JTM Tenmabayashi 3.38 352 Pn **Pn 07 05 33.2 +1.5**
JTM Tenmabayashi 3.38 352 A A 07 05 33.0
comp=E,38nm,1.6s,comp=E,26nm,1.0s
JIW Iwasaki 3.41 338 A A 07 05 33.5
comp=E,52nm,4.8s,comp=E,25nm,3.4s
JSZ Suzu 3.44 271 A A 07 05 33.7
comp=E,22nm,7.2s,comp=E,27nm,2.7s
JTHY Toshimahigashi 3.50 214 A A 07 05 33.4
comp=E,57nm,6.4s,comp=E,72nm,2.9s
JIZS Izushimoda 3.54 221 A A 07 05 34.1
comp=E,30nm,1.7s,comp=E,34nm,2.0s
JARK Aomorirokkasho 3.57 356 A A 07 05 35.6
comp=E,37nm,1.0s,comp=E,31nm,0.8s
JTT Ttatey 3.58 258 A A 07 05 35.4
comp=E,107nm,2.3s,comp=E,58nm,7.2s
JNIO Niijimaoohara 3.65 213 A A 07 05 35.5
comp=E,79nm,2.7s,comp=E,57nm,1.6s

SHZ3 Shizuoka 3 3.67 231 A A 07 05 36.2
comp=E,54nm,1.8s,comp=E,61nm,1.7s
JSKK Shikinejimakit 3.69 214 A A 07 05 36.1
comp=E,35nm,2.1s,comp=E,33nm,2.4s
JGN Niukaw 3.71 252 A A 07 05 37.1
comp=E,19nm,6.0s,comp=E,14nm,5.1s
JNY Yasuok 3.72 237 A A 07 05 36.9
comp=E,88nm,1.9s,comp=E,98nm,1.7s
JSI2 Shiura 2 3.75 345 A A 07 05 38.2
comp=E,39nm,6.0s,comp=E,36nm,1.0s
JHG Hegura jima 3.80 278 A A 07 05 38.9
comp=E,16nm,2.8s,comp=E,16nm,4.5s
JAHD Aomorihigashid 3.83 356 A A 07 05 39.3
comp=E,104nm,1.1s,comp=E,82nm,1.2s
JKO Kozu shima 3.85 213 A A 07 05 38.3
comp=E,52nm,4.5s,comp=E,45nm,3.5s
JMKN Mikurajimanish 3.93 206 A A 07 05 39.3
comp=E,20nm,7.4s,comp=E,17nm,5.8s
JGF Kuroka 3.94 244 Pn **Pn 07 05 39.2 -0.3**
JGF Kuroka 3.94 244 A A 07 05 40.2
comp=E,24nm,5.4s,comp=E,24nm,2.8s
JJH Hakui 3.95 264 A A 07 05 40.7
comp=E,16nm,7.5s,comp=E,28nm,4.3s
JSG Sagara 3.95 227 A A 07 05 40.1
comp=E,96nm,3.6s,comp=E,45nm,6.8s
JOT Ohata 3.97 353 A A 07 05 41.3
comp=E,27nm,4.3s,comp=E,26nm,3.3s
JKKS Kanegawashinom 4.02 229 A A 07 05 41.1
comp=E,61nm,4.5s,comp=E,43nm,3.9s
HMMJ Hamamatsu 2 4.11 232 A A 07 05 42.4
comp=E,17nm,3.9s,comp=E,17nm,5.0s
JAO Obara 4.18 240 A A 07 05 43.5
comp=E,34nm,3.2s,comp=E,30nm,2.8s
JSR Shiriuchi 4.20 347 A A 07 05 44.6
comp=E,23nm,3.5s,comp=E,30nm,5.5s
JSSY Shinshiroyabe 4.21 235 A A 07 05 43.9
comp=E,15nm,3.4s,comp=E,20nm,3.8s
JOMM Oshimamatsumae 4.28 343 A A 07 05 45.7
comp=E,15nm,5.7s,comp=E,17nm,3.3s
INU Inuyama 4.30 242 Pn **Pn 07 05 44.8 +0.3**
INU Inuyama 4.30 242 P **Pn 07 05 46.0 +1.6**
JYTA Yamagatataniai 4.39 247 A A 07 05 46.6
comp=E,23nm,4.2s,comp=E,19nm,5.1s
JKG Kaga 4.45 256 A A 07 05 47.6
comp=E,15nm,6.1s,comp=E,14nm,7.7s
JICN Ichinomiyachia 4.45 249 A A 07 05 47.4
comp=E,37nm,1.6s,comp=E,57nm,2.3s
JKB Kayabe 4.47 354 A A 07 05 48.3
comp=E,19nm,2.2s,comp=E,17nm,0.9s
JHJ2 Mitsune 4.58 200 Pn **Pn 07 05 47.1 -1.1**
JHJ2 Mitsune 4.58 200 P **Pn 07 05 47.7 -0.5**
JHJ2 Mitsune 4.58 200 A A 07 05 48.3
comp=E,27nm,2.9s,comp=E,24nm,2.6s
JHJ Hachijo jima 2 4.58 200 P **Pn 07 05 47.3 -1.0**
1µm,0.3s,baz=335,slow=20,SNR=86
JHJ S **Sn 07 06 36.9 -3.3**
2µm,0.3s,baz=76,slow=23,SNR=9.3
JHCJ Hachijojimakas 4.62 200 A A 07 05 49.0
comp=E,16nm,4.3s,comp=E,13nm,4.1s
JAA Atsumi 4.62 234 A A 07 05 49.6
comp=E,16nm,4.9s,comp=E,23nm,2.4s
ERM Erimo 4.71 14 Pn **Pn 07 05 50.1 +0.1**
ERM Erimo 4.71 14 P **Pn 07 05 50.1 +0.1**
ERM Erimo 4.71 14 P **Pn 07 05 50.8 +0.8**
JEM Erimo 4.71 14 A A 07 05 51.4
comp=E,11nm,5.1s,comp=E,13nm,4.8s
JYM2 Yakumo 2 4.78 348 A A 07 05 52.7
comp=E,21nm,3.3s,comp=E,20nm,1.9s
JEG Eigenji 4.85 243 A A 07 05 53.0
comp=E,10.0nm,5.2s,comp=E,13nm,7.4s
JNBK Urakawa-nobuka 4.91 9 A A 07 05 54.2
comp=E,23nm,2.3s,comp=E,24nm,4.2s
JFM Mihama 4.97 249 A A 07 05 54.8
comp=E,22nm,2.0s,comp=E,13nm,4.9s
JSHD Hidakashinhida 5.00 7 A A 07 05 55.5
comp=E,35nm,4.2s,comp=E,34nm,1.1s
JTHR Tokachihiroo 5.00 14 A A 07 05 55.5
comp=E,11nm,3.1s,comp=E,10.0nm,2.9s
JIE Ise 5.05 234 A A 07 05 55.7
comp=E,16nm,5.0s,comp=E,20nm,4.1s
TSUJ Tsu 2 5.06 239 A A 07 05 55.8
comp=E,17nm,2.3s,comp=E,20nm,2.9s
JHST Hiyamasetana 5.17 345 A A 07 05 58.1
comp=E,26nm,3.0s,comp=E,20nm,4.2s
JIAM Iburiatsuma 5.18 2 A A 07 05 58.1
comp=E,31nm,1.0s,comp=E,42nm,1.3s
JAOM Aogashimamukai 5.21 198 A A 07 05 57.1
comp=E,22nm,3.3s,comp=E,21nm,2.1s
JCH Churui 5.33 13 A A 07 06 00.0
comp=E,12nm,3.7s,comp=E,15nm,4.5s
JSH Shimam 5.35 347 A A 07 06 00.7
comp=E,9.0nm,3.1s,comp=E,7.0nm,4.5s
JBT2 Biratori 2 5.36 5 A A 07 06 00.6
comp=E,17nm,3.8s,comp=E,12nm,3.2s
JEW Eniwo 5.40 358 Pn **Pn 07 06 00.9 +1.5**
JEW Eniwo 5.40 358 A A 07 06 01.2
comp=E,14nm,4.0s,comp=E,15nm,1.1s
JKN2 Miekihoku 5.43 236 A A 07 06 01.0
comp=E,8.0nm,1.9s,comp=E,17nm,5.3s
JWT Wachi 5.51 249 A A 07 06 02.3
comp=E,7.0nm,3.2s,comp=E,10.0nm,3.7s
JKY Yasaka 5.60 253 A A 07 06 03.6
comp=E,16nm,2.6s,comp=E,20nm,2.4s
JHE Heguri 5.60 242 A A 07 06 03.4
comp=E,11nm,3.8s,comp=E,11nm,2.4s
JNTK Naratenkawa 5.67 238 A A 07 06 04.4
comp=E,12nm,3.7s,comp=E,13nm,8.3s
JOB Onbets 5.70 16 A A 07 06 05.2
comp=E,15nm,1.4s,comp=E,16nm,1.6s
JFR Furan 5.76 7 A A 07 06 06.2
comp=E,11nm,1.0s,comp=E,9.0nm,0.9s
JISS Ishikarishitsu 5.83 358 A A 07 06 07.3
comp=E,21nm,4.7s,comp=E,21nm,5.9s
JMMH Miemihama 5.85 234 A A 07 06 06.8
comp=E,8.0nm,4.8s,comp=E,8.0nm,4.4s
JWY Kouya 5.90 239 A A 07 06 07.6
comp=E,8.0nm,2.8s,comp=E,16nm,3.2s
JKSM Kasumi 5.95 254 A A 07 06 08.5
comp=E,7.0nm,4.1s,comp=E,7.0nm,5.1s
JMIK Miki 5.97 246 A A 07 06 08.7
comp=E,11nm,2.4s,comp=E,17nm,4.4s
JSK Shakotan 5.98 352 A A 07 06 09.4
comp=E,10.0nm,6.2s,comp=E,5.0nm,5.1s
JAK Akkeshi 6.01 22 A A 07 06 09.4
comp=E,12nm,3.8s,comp=E,12nm,3.7s
JAR Ashorobuto 6.06 15 A A 07 06 10.3
comp=E,9.0nm,0.7s,comp=E,11nm,0.5s
JAB Ashibetsu 6.07 4 A A 07 06 10.6
comp=E,15nm,4.0s,comp=E,17nm,1.0s
JTNC Tanabenakahech 6.12 236 A A 07 06 10.6
comp=E,15nm,3.7s,comp=E,14nm,2.8s
JKHN Kushirohamanak 6.23 24 A A 07 06 12.5
comp=E,16nm,2.8s,comp=E,17nm,1.0s
JAWN Awajishima-nag 6.24 244 A A 07 06 12.4
comp=E,10.0nm,5.5s,comp=E,11nm,5.2s
JWKM Wakayamakushim 6.26 232 A A 07 06 12.5
comp=E,14nm,2.7s,comp=E,10.0nm,3.3s
JWM Minabe 6.27 237 A A 07 06 12.8
comp=E,8.0nm,2.8s,comp=E,11nm,4.4s
NMR Nemuro--Hokkai 6.68 26⇓*iP* **Pn 07 06 14.5 -2.5**
NMR *e*S **Sn 07 07 24.5 -7.2**
RUSJ Misakicho 7.19 21⇑*iP* **Pn 07 06 23.0 -0.9**
RUSJ *e*S **Sn 07 07 41.0 -3.2**
YUK Yuzh-Kuril'sk 7.31 24*c iP* **Pn 07 06 24.2 -1.5**
YUK *e*S **Sn 07 07 41.7 -5.6**
YUK pmax pmax
comp=Z,953nm,0.4s
YUK pmax pmax
comp=E,364nm,0.2s
YUK pmax pmax
comp=N,639nm,0.4s
YUK MLR MLR
comp=Z,6µm,18.0s
YUK MLR MLR
comp=N,5µm,13.0s
JHS Saijyo 7.34 253 **Pn 07 06 27.9 +1.8**
JMN Monobe 7.36 242 **Pn 07 06 26.9 +0.5**
SHO Shikotan 7.52 30*d iP* **Pn 07 06 25.8 -2.7**
SHO *e*S **Sn 07 07 43.9 -8.5**
SHO pmax pmax
comp=Z,237nm,0.4s
SHO pmax pmax
comp=N,171nm,0.3s
SHO pmax pmax
comp=E,86nm,0.3s
SHO MLR MLR
comp=Z,6µm,14.0s

SHO MLR MLR
comp=E,2µm,9.0s
TEY Ternei 8.50 335⇑*eP* **Pn 07 06 43.9 +2.0**
TEY *e* 07 08 16.5
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=N,10.0nm,1.1s
TEY pmax pmax
comp=Z,10.0nm,1.1s
TEY MLR MLR
comp=Z,2µm,17.0s
KUR Kuril'sk 9.07 29 *eP* **Pn 07 06 50.1 +0.4**
KUR *e*S **Sn 07 08 23.5 -6.9**
KUR pmax pmax
comp=Z,352nm,0.8s
KUR pmax pmax
comp=N,195nm,0.7s
KUR pmax pmax
comp=E,126nm,0.8s
KUR smax smax
comp=N,721nm,0.7s
KUR smax smax
comp=E,986nm,0.7s
KUR MLR MLR
comp=Z,6µm,20.0s
VLA Vladivostok 9.39 310*c iP* **Pn 07 06 55.2 +1.0**
VLA pmax pmax
comp=Z,183nm,1.2s
YSS Yuzh-Sakhalins 9.54 4 **Pn 07 06 56.0 -0.3**
YSS Yuzh-Sakhalins 9.54 4 *eP* **Pn 07 06 55.9 -0.3**
YSS *e*S **Sn 07 08 40.6 -1.4**
YSS pmax pmax
comp=Z,400nm,3.2s
YSS pmax pmax
comp=Z,180nm,1.1s
YSS MLR MLR
comp=Z,6µm,19.0s
YSS MLR MLR
comp=N,5µm,15.0s
YSS Yuzh-Sakhalins 9.54 4 P **Pn 07 06 57.4 +1.2**
MSHR Mys Shultsa 9.57 306*ceP* **Pn 07 06 58.6 +2.0**
USA0B Ussuriysk Arra 9.97 316 **Pn 07 07 02.6 +0.4**
USA0B Ussuriysk Arra 9.97 316 P **Pn 07 07 02.6 +0.4**
USRK Ussuriysk Ar. 9.97 316 P **Pn 07 07 03.6 +1.4**
comp=N,9.1nm,0.3s,baz=113,slow=16,SNR=68
USRK S **Sn 07 09 00.3 +7.6**
comp=N,12nm,0.6s,baz=127,slow=34,SNR=1.4
USRK LR LR 07 10 38.1
comp=N,5µm,20.7s,baz=241,slow=36
comp=N,44nm,0.7s
JCJ Chichijima 10.32 178 P **Pn 07 07 02.8 -4.2**
comp=N,135nm,0.3s,baz=266,slow=14,SNR=14
JCJ S Sn 07 08 51.3 -10
comp=N,342nm,0.3s,baz=292,slow=22,SNR=9.6
JCJ LR LR 07 12 38.9
comp=N,1µm,18.5s,baz=9.5,slow=47
JCJ Chichijima 10.32 178 **Pn 07 07 03.6 -3.4**
JCJ Chichijima 10.32 178 P **Pn 07 07 04.7 -2.3**
JTU Tsushima 10.37 257 **Pn 07 07 05.4 -2.2**
KSBUS Busan 10.37 262 **Pn 07 07 06.8 -0.8**
SEHB SEOHWA 10.65 279 **Pn 07 07 11.5 0.0**
KSRS Korea Array 10.94 274 P **Pn 07 07 18.9 +3.5**
comp=N,128nm,0.8s,baz=90,slow=13,SNR=242
KSRS LR LR 07 11 13.9
comp=N,10µm,19.6s,baz=85,slow=36
KSRS PcP **PcP 07 13 12.6 +0.7**
comp=N,4.6nm,0.9s,baz=81,slow=1.1,SNR=4.7
KSCHJ Chungju 10.96 271 **Pn 07 07 16.5 +0.9**
KSAR Wonju Array Be 10.97 274 **Pn 07 07 16.9 +1.1**
KSAR Wonju Array Be 10.97 274 P **Pn 07 07 16.9 +1.1**
KS19 Wonju Array Si 10.98 275 **Pn 07 07 16.5 +0.5**
JSU Suzuyama 10.99 241 **Pn 07 07 17.4 +1.2**
HHU Hamhung 11.34 287 P **Pn 07 07 23.2 +2.4**
HHU sP 07 07 35.8
HHU S **Sn 07 09 33.3 +7.2**
HHU AMS AMS
comp=N,105nm,1.7s
HHU AMS AMS
comp=E,326nm,5.4s
HHU AMS AMS
comp=Z,299nm,4.9s
TJN Taejon 11.52 269 **Pn 07 07 22.8 -0.5**
TJN Taejon 11.52 269*c iP* **Pn 07 07 26.2 +3.0**
TJN Taejon 11.52 269 P **Pn 07 07 23.3 +0.1**
MDJ Mudanjiang 11.60 312 Pn **Pn 07 07 26.1 +1.7**
MDJ Mudanjiang 11.60 312 P **Pn 07 07 28.4 +4.0**
MDJ S **Sn 07 09 38.9 +6.4**
MDJ pmax pmax
comp=Z,32nm,1.3s
MDJ pmax pmax
comp=Z,380nm,5.8s
MDJ LR LR
comp=Z,4µm,19.2s
MDJ LR LR
comp=Z,4µm,20.8s
MDJ LR LR
comp=Z,6µm,20.2s
UGL Uglegorsk 11.64 1 P Pn 07 07 33.4 +8.6
UGL S **Sn 07 09 32.3 -1.0**
UGL pmax pmax
comp=Z,86nm,1.2s
UGL MLR MLR
comp=Z,2µm,15.0s
UGL MLR MLR
comp=N,4µm,16.0s
UGL MLR MLR
comp=E,2µm,14.0s
NAWB Namwon 11.68 264 **Pn 07 07 26.0 +0.4**
INCN Inchon 11.96 275 **Pn 07 07 27.1 -2.3**
INCN Inchon 11.96 275 P **Pn 07 07 27.1 -2.3**
INCN Inchon 11.96 275 P **Pn 07 07 33.5 +4.1**
INCN P **Pn 07 07 33.5 +4.1**
INCN P **Pn 07 07 33.5 +4.1**
PYAG Pyongyang 12.62 282 P **Pn 07 07 41.0 +2.6**
HJU Haeju 12.65 278 P **Pn 07 07 41.4 +2.7**
HJU pP **P 07 07 49.4 +0.3**
HJU S **Sn 07 10 00.2 +2.1**
HJU AMS AMS
comp=N,14µm,15.2s
HJU AMS AMS
comp=E,16µm,17.0s
HJU AMS AMS
comp=Z,13µm,14.3s
TYV Tymovskoe 13.44 3 *eP* **Pn 07 07 47.9 -1.5**
TYV *e*S **Sn 07 10 18.2 +1.0**
TYV pmax pmax
comp=Z,100nm,3.0s
TYV pmax pmax
comp=Z,16nm,0.8s
TYV smax smax
comp=N,8.0nm,0.9s
TYV smax smax
comp=E,13nm,0.9s
TYV smax smax
comp=N,300nm,4.4s
TYV smax smax
comp=E,300nm,4.4s
TYV MLR MLR
comp=N,3µm,14.0s
TYV MLR MLR
comp=Z,3µm,14.0s
BNX BinXian 13.51 312 ⇑P **Pn 07 07 49.6 -0.9**
BNX pP **P 07 07 56.9 -1.7**
BNX PP **PnPn 07 08 04.0 +5.6**
BNX sP 07 08 08.9
BNX S **Sn 07 10 20.1 +1.0**
BNX sS **S 07 10 33.8 -7.0**
BNX pmax pmax
comp=Z,12nm,1.0s
BNX pmax pmax
comp=Z,200nm,4.8s
BNX LR LR
comp=Z,3µm,15.7s
BNX LR LR
comp=Z,4µm,21.1s
BNX LR LR
comp=Z,5µm,21.3s
SUJ Sinuiju 13.68 286 P **Pn 07 07 53.7 +0.9**
SUJ pP **P 07 08 01.7 +1.3**
SUJ S **Sn 07 10 24.6 +1.5**
SUJ AMS AMS
comp=N,3µm,10.5s
SUJ AMS AMS
comp=E,4µm,11.4s

SUJ AMS AMS
comp=Z,5μm,16.0s
KLR Kul'dur 13.81 332 P **Pn 07 07 54.7 +0.2**
comp=Z,1.4nm,0.3s,baz=133,slow=12,SNR=24
KLR S **Sn 07 10 26.0 -0.3**
comp=Z,15nm,1.1s,baz=260,slow=4.1,SNR=1.2
KLR LR LR 07 13 05.8
comp=Z,3μm,19.0s,baz=146,slow=36
comp=Z,5.0nm,0.4s
KLR Kul'dur 13.81 332 *de*P **Pn 07 07 54.0 -0.5**
KLR pmax pmax
comp=Z,8.0nm,0.7s
GRNR Gornyy 13.85 346 ⇑*i*P Pn 07 07 48.9 -6.1
GRNR *e*S **Sn 07 10 19.7 -7.5**
GRNR pmax pmax
comp=E,6.0nm,0.9s
GRNR pmax pmax
comp=N,9.0nm,0.5s
GRNR pmax pmax
comp=Z,4.0nm,0.7s
GRNR smax smax
comp=E,7.0nm,0.6s
GRNR MLR MLR
comp=E,1μm,15.0s
GRNR MLR MLR
comp=N,2μm,16.0s
GRNR MLR MLR
comp=Z,1μm,15.0s
CN2 Changchun 13.86 302 *e*P **Pn 07 07 55.9 +0.6**
CN2 pP P 07 08 06.1 +3.6
CN2 S **Sn 07 10 26.6 -1.1**
CN2 pmax pmax
comp=Z,60nm,1.0s
CN2 pmax pmax
comp=Z,1μm,8.0s
CN2 LR LR
comp=Z,2μm,16.0s
CN2 LR LR
comp=Z,4μm,16.0s
CN2 LR LR
comp=Z,4μm,19.0s
SNY Shenyang 14.62 293 ⇓P **Pn 07 08 06.1 +0.7**
SNY S **Sn 07 10 52.0 +5.9**
SNY pmax pmax
comp=Z,84nm,1.3s
SNY pmax pmax
comp=Z,560nm,4.5s
SNY LR LR
comp=Z,7μm,15.7s
SNY LR LR
comp=Z,9μm,18.8s
SNY LR LR
comp=Z,12μm,19.0s
JOW Kunigami 15.50 231 **Pn 07 08 14.3 -2.7**
DL2 Dalian 15.84 281 P **Pn 07 08 21.9 +0.5**
DL2 pP **pP 07 08 32.6 -2.4**
DL2 S **Sn 07 11 19.4 +3.6**
DL2 sS **S 07 11 31.4 +2.9**
DL2 pmax pmax
comp=Z,320nm,0.8s
DL2 pmax pmax
comp=Z,730nm,5.8s
DL2 LR LR
comp=Z,2μm,15.4s
DL2 LR LR
comp=Z,5μm,18.9s
DL2 LR LR
comp=Z,6μm,19.7s
OKH Okha 16.14 3 *de*P **Pn 07 08 18.0 -7.0**
OKH *e*S **Sn 07 11 17.6 -5.1**
OKH smax smax
comp=N,200nm,13.2s
OKH smax smax
comp=E,400nm,13.9s
OKH MLR MLR
comp=N,3μm,25.0s
OKH MLR MLR
comp=Z,2μm,22.0s
OKH MLR MLR
comp=E,6μm,21.0s
SKR Severo-Kuril's 16.78 33 *e*P **Pn 07 08 30.7 -2.4**
SKR *e*S **Sn 07 11 30.1 -8.2**
SKR pmax pmax
comp=Z,22nm,0.8s
SKR pmax pmax
comp=Z,400nm,2.8s
SKR MLR MLR
comp=Z,2μm,19.0s
SSE Sheshan 18.07 256 P **Pn 07 08 50.4 +1.2**
SSE sP **pP 07 08 58.5 -1.2**
SSE S **Sn 07 12 11.1 +1.2**
SSE pmax pmax
comp=Z,110nm,1.1s
SSE pmax pmax
comp=Z,500nm,7.3s
SSE LR LR
comp=Z,2μm,20.3s
JMJ Miyako jima 2 18.81 233 P **P 07 08 57.1 -0.3**
ZEA Zeya 19.11 333 *e*P **P 07 09 00.2 -0.3**
ZEA *e*S Sn 07 12 19.7 -15
ZEA pmax pmax
comp=Z,200nm,5.0s
ZEA pmax pmax
comp=E,70nm,0.9s
ZEA pmax pmax
comp=N,110nm,0.8s
ZEA pmax pmax
comp=Z,200nm,0.8s
ZEA smax smax
comp=N,600nm,7.7s
ZEA MLR MLR
comp=E,900nm,19.0s
ZEA MLR MLR
comp=N,1μm,17.0s
ZEA MLR MLR
comp=Z,2μm,18.0s
PEA0B Petropavlovsk- 19.23 30 P **P 07 09 01.3 -0.5**
PEA0B Petropavlovsk- 19.23 30 *d*i P **P 07 09 02.4 +0.6**
PETK Petropavlovsk- 19.23 30 P **Pn 07 09 02.9 -0.1**
comp=Z,0.7nm,0.3s,baz=207,slow=9.6,SNR=53
PETK PcP **PcP 07 13 24.3 +0.9**
comp=Z,6.5nm,0.9s,baz=168,slow=2.7,SNR=4.0
PETK LR LR 07 16 16.1
comp=Z,3μm,21.8s,baz=219,slow=36
comp=Z,40nm,0.9s
PETK Petropavlovsk- 19.23 30 P **P 07 09 01.0 -0.7**
NJ2 Nanjing 19.50 261 ⇑P **P 07 09 02.6 -2.2**
NJ2 S **S 07 12 42.8 +0.1**
NJ2 sS **sS 07 12 56.5 -3.1**
NJ2 pmax pmax
comp=Z,74nm,0.9s
NJ2 pmax pmax
comp=Z,510nm,4.3s
NJ2 LR LR
comp=Z,3μm,14.7s
NJ2 LR LR
comp=Z,2μm,13.7s
NJ2 LR LR
comp=Z,4μm,18.5s
PET Petropavlovsk 19.56 32 P **P 07 09 05.3 0.0**
PET Petropavlovsk 19.56 32 *d*i P **P 07 09 05.6 +0.3**
PET *e*S **S 07 12 39.0 -4.6**
PET pmax pmax
comp=Z,800nm,5.3s
PET pmax pmax
comp=Z,94nm,1.3s
PET pmax pmax
comp=Z,600nm,13.3s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,1μm,15.0s
TIA Tai'an 19.69 274 ⇑P **P 07 09 04.9 -2.0**
TIA S **S 07 12 42.5 -4.1**
TIA pmax pmax
comp=Z,110nm,1.1s
TIA LR LR
comp=Z,2μm,16.6s
TIA LR LR
comp=Z,3μm,17.6s
TIA LR LR
comp=Z,5μm,18.6s
HIA Hailar 19.78 314 P **P 07 09 06.7 -1.1**
HIA Hailar 19.78 314 *de*P **P 07 09 08.1 +0.3**
HIA pmax pmax
comp=Z,17nm,0.9s

BJI Beijing 20.05 285 P **P 07 09 09.3 -1.5**
BJI pP **pP 07 09 17.6 -3.8**
BJI S **S 07 12 48.4 -5.2**
BJI pmax pmax
comp=Z,58nm,1.3s
BJI pmax pmax
comp=Z,470nm,5.4s
BJI LR LR
comp=Z,230nm,23.2s
BJI LR LR
comp=Z,1μm,23.9s
BJI LR LR
comp=Z,2μm,24.5s
BJT Baijiatuan 20.05 285 P **P 07 09 09.2 -1.7**
BJT Baijiatuan 20.05 285 P **P 07 09 09.2 -1.7**
BJT pmax pmax
comp=Z,80nm,0.8s
BJT MLR MLR
comp=Z,2μm,21.0s
XLT XiLinHaoTe 20.42 296 ⇑*i*P **P 07 09 12.9 -2.0**
XLT pP Pn 07 09 21.0 +3.7
XLT sP pP 07 09 26.9 +1.4
XLT S **S 07 12 55.5 -5.6**
XLT sS Sn 07 13 10.6 +4.1
XLT SS **SnSn 07 13 22.8 +1.5**
XLT PcP **PcP 07 13 28.3 +2.5**
XLT pmax pmax
comp=Z,320nm,0.8s
XLT pmax pmax
comp=Z,460nm,5.9s
XLT LR LR
comp=Z,4μm,19.4s
XLT LR LR
comp=Z,5μm,19.8s
YOJ Yonaguni jima 20.54 236 P **P 07 09 12.8 -3.4**
YOJ Yonaguni jima 20.54 236 P **P 07 09 12.8 -3.4**
YOJ pmax pmax
comp=Z,167nm,1.4s
YOJ Yonaguni jima 20.54 236 P **P 07 09 15.7 -0.5**
TATO Taipei 21.23 240 P **P 07 09 22.6 -1.0**
TATO IAmb IAmb 07 09 24.8
comp=Z,134nm,0.7s
TATO Taipei 21.23 240 P **P 07 09 23.5 -0.1**
TATO P **P 07 09 23.5 -0.1**
HNS HongShan 21.40 278 ⇑P **P 07 09 22.3 -3.1**
HNS S **S 07 13 10.3 -10**
HNS SS **SnSn 07 13 49.5 +4.1**
HNS pmax pmax
comp=Z,470nm,0.8s
HNS LR LR
comp=Z,3μm,15.6s
HNS LR LR
comp=Z,5μm,16.9s
HNS LR LR
comp=Z,5μm,18.2s
YHNB Yeheng 21.50 239 P **P 07 09 25.1 -1.5**
NACB Ninganchiao 21.68 238 P **P 07 09 26.0 -2.5**
SSLB Suanglung 22.37 238 P **P 07 09 32.6 -3.4**
YULB Yu-li 22.41 237 P **P 07 09 32.7 -3.6**
MA2 Magadan 22.91 12 LR LR 07 18 46.3
comp=Z,1μm,20.5s,baz=194,slow=37
MA2 Magadan 22.91 12 P **P 07 09 41.1 -0.3**
MA2 IAmb IAmb 07 09 44.0
comp=Z,181nm,0.9s
MA2 Magadan 22.91 12 *de*P **P 07 09 41.5 +0.2**
MA2 pmax pmax
comp=Z,189nm,0.9s
MA2 MLR MLR
comp=Z,2μm,24.0s
TPUB Ta-pu 22.92 238 P **P 07 09 37.9 -3.8**
TPUB IAmb IAmb 07 09 44.2
comp=Z,222nm,1.0s
TIY Taiyuan 23.15 280 *e*P **P 07 09 41.4 -2.6**
TIY S **S 07 13 52.3 +0.1**
TIY SS **SnSn 07 14 31.3 +3.1**
TIY pmax pmax
comp=Z,28nm,0.5s
TIY LR LR
comp=Z,2μm,14.5s
TIY LR LR
comp=Z,4μm,18.4s
TIY LR LR
comp=Z,5μm,17.6s
QZH Quanzhou 23.28 244 ⇑*i*P **P 07 09 42.3 -3.0**
QZH S **S 07 13 49.3 -5.2**
QZH pmax pmax
comp=Z,88nm,0.9s
QZH LR LR
comp=Z,2μm,21.8s
QZH LR LR
comp=Z,2μm,19.4s
QZH LR LR
comp=Z,3μm,21.3s
HHC Hu-ho-hao-te 23.55 288 *e*P **P 07 09 44.4 -3.5**
HHC S **S 07 13 53.3 -5.6**
HHC SS **SnSn 07 14 42.0 +3.9**
HHC pmax pmax
comp=Z,47nm,1.0s
HHC pmax pmax
comp=Z,530nm,5.3s
HHC LR LR
comp=Z,2μm,13.3s
HHC LR LR
comp=Z,3μm,14.6s
HHC LR LR
comp=Z,5μm,15.9s
WHN Wuhan 23.63 261 ⇑P **P 07 09 47.8 -0.8**
WHN pP **pP 07 10 00.4 +0.4**
WHN S **S 07 14 00.3 +0.2**
WHN pmax pmax
comp=Z,580nm,1.0s
WHN LR LR
comp=Z,4μm,13.9s
WHN LR LR
comp=Z,5μm,12.7s
WHN LR LR
comp=Z,9μm,14.1s
KNMB Chin-men Tao 23.72 244 P **P 07 09 46.9 -2.6**
KNMB IAmb_20 IAmb_20 07 18 56.8
comp=Z,4μm,22.0s
LYN LuoYang 23.77 272 ⇓*i*P **P 07 09 45.9 -4.0**
LYN S **S 07 13 57.8 -4.5**
LYN pmax pmax
comp=Z,100nm,0.7s
LYN pmax pmax
comp=Z,380nm,8.4s
LYN LR LR
comp=Z,3μm,19.1s
LYN LR LR
comp=Z,4μm,17.8s
GUMO Guam 23.92 172 LR LR 07 23 14.8
comp=Z,470nm,19.2s,baz=19,slow=47
GUMO Guam 23.92 172 P **P 07 09 49.2 -2.2**
GUMO Guam 23.92 172 P **P 07 09 49.2 -2.2**
GUMO pmax pmax
comp=Z,1μm,1.7s
CIT Chita 24.54 315 *e*P **P 07 09 56.5 -0.3**
CIT *e* 07 10 03.8
CIT *e*S **S 07 14 14.7 +0.3**
CIT pmax pmax
comp=Z,668nm,1.4s
BTO Baotou 24.73 287 *e*P **P 07 09 57.8 -1.0**
YAK Yakutsk 25.72 347 P **P 07 10 07.7 +0.4**
comp=Z,96nm,0.5s,baz=340,slow=2.4,SNR=42
YAK pP **pP 07 10 19.7 +0.7**
comp=Z,157nm,0.8s,baz=291,slow=0.3,SNR=7.8
YAK LR LR 07 21 15.3
comp=Z,1μm,18.8s,baz=146,slow=38
comp=Z,96nm,0.5s
YAK Yakutsk 25.72 347 P **P 07 10 07.5 +0.2**
YAK Yakutsk 25.72 347 *c*i P **P 07 10 07.2 -0.2**
YAK *e*S **S 07 14 30.5 -2.4**
YAK *e* 07 20 54.7
YAK pmax pmax
comp=Z,303nm,0.9s
YAK pmax pmax
comp=N,71nm,0.9s
YAK pmax pmax
comp=E,35nm,0.9s
YAK smax smax
comp=N,363nm,2.0s
YAK smax smax
comp=E,400nm,1.7s
CNSH ChangSha 25.79 257 ⇑P **P 07 10 07.4 -0.9**
CNSH S **S 07 14 35.0 +0.5**

CNSH pmax pmax
comp=E,250nm,1.1s
CNSH LR LR
comp=E,3μm,20.9s
CNSH LR LR
comp=E,2μm,19.4s
CNSH LR LR
comp=E,3μm,21.5s
SEY Seymchan 26.35 11 P **P 07 10 14.7 +1.6**
comp=E,60nm,0.8s,baz=198,slow=6.9,SNR=109
comp=E,60nm,0.8s
SEY Seymchan 26.35 11 *d*i P **P 07 10 14.7 +1.6**
SEY pmax pmax
comp=Z,142nm,1.3s
SEY MLR MLR
comp=Z,2μm,23.0s
XAN Xi'an 26.73 273 ⇑P **P 07 10 16.3 -0.6**
XAN PP **PnPn 07 11 04.3 +4.8**
XAN S **S 07 14 47.6 -1.9**
XAN pmax pmax
comp=Z,140nm,0.8s
XAN pmax pmax
comp=Z,960nm,4.0s
XAN LR LR
comp=Z,3μm,16.8s
XAN LR LR
comp=Z,3μm,16.7s
XAN LR LR
comp=Z,4μm,17.2s
SHEM Shemya Is, Ala 27.23 45 P **P 07 10 23.4 +2.4**
comp=Z,71nm,0.9s,baz=298,slow=7.9,SNR=4.6
SHEM LR LR 07 19 12.1
comp=Z,2μm,21.5s,baz=252,slow=32
comp=Z,71nm,0.9s
ULN Ulaanbaatar 27.31 303 P **P 07 10 21.8 -0.2**
ULN IAmb IAmb 07 10 25.1
comp=Z,203nm,1.4s
ULN Ulaanbaatar 27.31 303 IAMs_20 IAMs_20 07 21 28.0
comp=Z,2μm,18.0s
ULN Ulaanbaatar 27.31 303 *c*i P **P 07 10 21.4 -0.7**
ULN pmax pmax
comp=Z,127nm,1.3s
ULN MLR MLR
comp=Z,2μm,18.0s
ULN Ulaanbaatar 27.31 303 P **P 07 10 23.0 +0.9**
ULN P **P 07 10 23.0 +0.9**
ULN P **P 07 10 23.0 +0.9**
ENH Enshi 27.58 265 P **P 07 10 23.8 -0.7**
ENH IAMs_20 IAMs_20 07 21 09.0
comp=Z,3μm,21.0s
SONM Songino Array 27.74 303 P **P 07 10 26.5 +0.6**
comp=Z,69nm,0.6s,baz=103,slow=9.2,SNR=283
SONM PcP **PcP 07 13 42.2 +0.6**
comp=Z,9.2nm,1.1s,baz=85,slow=1.3,SNR=2.6
SONM LR LR 07 21 53.6
comp=Z,2μm,18.3s,baz=100,slow=37
comp=Z,69nm,0.6s
SONM Songino Array 27.74 303 P **P 07 10 25.4 -0.5**
SONM IAmb IAmb 07 10 27.7
comp=Z,231nm,1.4s
H11N2 WAKE ISLAND Hy 28.17 122 T T 07 40 51.6
baz=315,slow=75,SNR=2419
H11N1 WAKE ISLAND Hy 28.18 122 T T 07 40 50.9
baz=315,slow=75,SNR=3502
H11N3 WAKE ISLAND Hy 28.19 122 T T 07 40 48.6
baz=315,slow=75,SNR=2560
IRK Irkutsk 29.99 312 *e*P **P 07 10 45.5 -0.2**
IRK pmax pmax
comp=Z,83nm,1.0s
ZAK Zakamensk 30.19 308 *e*P **P 07 10 47.5 -0.1**
ZAK pmax pmax
comp=Z,105nm,1.2s
LZH Lanzhou 30.21 279 *e*P **P 07 10 47.5 -0.5**
LZH pP pP 07 10 55.8 -4.0
LZH PP **PnPn 07 11 43.9 -2.9**
LZH SS **SnSn 07 17 19.1 -1.8**
LZH pmax pmax
comp=Z,86nm,1.5s
LZH pmax pmax
comp=Z,260nm,4.1s
LZH LR LR
comp=Z,2μm,15.8s
LZH LR LR
comp=Z,4μm,14.8s
LZH LR LR
comp=Z,6μm,16.8s
GYA Guiyang 31.50 260 ⇑*i*P **P 07 10 58.8 -0.6**
GYA pP pP 07 11 12.0 +0.8
GYA PP **PnPn 07 12 04.1 +0.5**
GYA PcP **PcP 07 13 52.4 +0.8**
GYA S **S 07 16 02.0 -2.7**
GYA sS sS 07 16 21.5 -2.9
GYA pmax pmax
comp=Z,420nm,1.1s
GYA LR LR
comp=Z,2μm,21.7s
GYA LR LR
comp=Z,3μm,20.0s
GYA LR LR
comp=Z,5μm,21.5s
MOY Mondy 31.84 310 *e*P **P 07 11 02.6 +0.5**
MOY pmax pmax
comp=Z,88nm,2.1s
CD2 Chengdu 31.89 270 P **P 07 11 01.8 -0.9**
CD2 pP pP 07 11 15.0 +0.5
CD2 S **S 07 16 06.3 -4.3**
CD2 sS sS 07 16 28.6 -1.7
CD2 pmax pmax
comp=Z,170nm,0.9s
CD2 LR LR
comp=Z,2μm,19.9s
CD2 LR LR
comp=Z,3μm,18.0s
CD2 LR LR
comp=Z,4μm,15.2s
ADK Adak 32.46 50 IAMs_20 IAMs_20 07 22 06.9
comp=Z,2μm,20.0s
ADK Adak 32.46 50 P **P 07 11 08.9 +1.6**
comp=Z,65nm,1.9s
GTA Gaotai 32.65 287 ⇑P **P 07 11 08.8 -0.6**
GTA PP **PnPn 07 12 19.9 +1.7**
GTA PcP **PcP 07 13 55.3 +0.8**
GTA S **S 07 16 23.6 +1.1**
GTA ScP **ScP 07 17 35.3 +0.5**
GTA ScS **ScS 07 21 33.8 -0.8**
GTA pmax pmax
comp=Z,51nm,1.2s
GTA pmax pmax
comp=Z,290nm,6.5s
GTA LR LR
comp=Z,1μm,21.8s
GTA LR LR
comp=Z,2μm,21.8s
GTA LR LR
comp=Z,3μm,22.9s
QIZ Qiongzhong 33.29 245 P **P 07 11 14.0 -0.9**
QIZ IAmb IAmb 07 11 17.5
comp=Z,95nm,1.1s
QIZ Qiongzhong 33.29 245 IAMs_20 IAMs_20 07 25 58.3
comp=Z,2μm,19.0s
QIZ Qiongzhong 33.29 245 P **P 07 11 16.3 +1.3**
QIZ S **S 07 16 35.8 +3.4**
QIZ pmax pmax
comp=Z,87nm,1.2s
QIZ LR LR
comp=Z,2μm,17.3s
QIZ LR LR
comp=Z,1μm,22.7s
QIZ LR LR
comp=Z,2μm,17.1s
QIZ Qiongzhong 33.29 245 P **P 07 11 15.9 +1.0**
BILL Bilibino 33.58 16 P **P 07 11 17.7 +0.7**
BILL IAmb IAmb 07 11 18.8
comp=Z,67nm,1.1s
BILL Bilibino 33.58 16 *c*i P **P 07 11 17.3 +0.3**
BILL *i* 07 11 25.6
BILL *i* 07 13 58.4
BILL pmax pmax
comp=Z,79nm,1.3s
BILL MLR MLR
comp=Z,962nm,17.0s
DAV Davao City (W) 33.59 210 LR LR 07 25 48.6
comp=Z,863nm,18.4s,baz=360,slow=38
DAV Davao City (W) 33.59 210 IAMs_20 IAMs_20 07 22 36.8
comp=Z,2μm,22.0s
KNGR Kungurtug, Tuv 33.86 307 *d*i P **P 07 11 20.8 +1.0**

KNGR pmax pmax
comp=Z,176nm,1.2s
TIXI Tiksi 34.91 353 P **P** **07 11 28.7 +0.2**
comp=Z,15nm,0.7s,baz=88,slow=23,SNR=2.8
TIXI LR LR 07 27 24.6
comp=Z,1µm,19.9s,baz=180,slow=39
comp=Z,15nm,0.7s
TIXI Tiksi 34.91 353 P **P** **07 11 27.9 -0.6**
TIXI Tiksi 34.91 353 *d* iP **P** **07 11 28.5 +0.1**
TIXI pmax pmax
comp=Z,19nm,0.7s
TIXI MLR MLR
comp=Z,1µm,20.0s
TIXI Tiksi 34.91 353 P **P** **07 11 28.9 +0.4**
TIXI pP **pP** **07 11 40.9 +0.6**
TIXI sP **sP** **07 11 45.9 +0.3**
KMI Kunming 35.24 261 ⇑P **P** **07 11 31.8 -0.2**
KMI pP pP 07 11 43.8 -0.2
KMI sP sP 07 11 49.4 +0.2
KMI PP **PnPn** **07 12 47.1 -3.8**
KMI S **S** **07 16 59.3 -3.5**
KMI pmax pmax
comp=Z,280nm,1.2s
KMI pmax pmax
comp=Z,660nm,3.5s
KMI LR LR
comp=Z,1µm,22.5s
KMI LR LR
comp=Z,3µm,20.7s
KMI LR LR
comp=Z,4µm,20.6s
KMI Kunming 35.24 261 P **P** **07 11 31.8 -0.2**
PZH PanZhiHua 35.36 264 P **P** **07 11 32.5 -0.5**
PZH pP **pP** **07 11 42.6 -2.3**
PZH PP **PnPn** **07 12 50.0 -2.3**
PZH PcP **PcP** **07 14 04.8 +2.4**
PZH S **S** **07 17 03.4 -1.1**
PZH pmax pmax
comp=Z,130nm,1.0s
PZH pmax pmax
comp=Z,540nm,3.5s
PZH LR LR
comp=Z,1µm,14.3s
PZH LR LR
comp=Z,2µm,15.1s
PZH LR LR
comp=Z,2µm,15.1s
SPIA Saint Paul Isl 37.12 42 P **P** **07 11 46.5 -1.0**
baz=259
GOMU GeErMu 37.24 283 *eP* **P** **07 11 49.8 +0.6**
GOMU pP pP 07 11 56.6 -4.6
GOMU PP **PP** **07 13 14.8 +0.2**
GOMU PcP **PcP** **07 14 09.3 +1.1**
GOMU S **S** **07 17 37.3 +3.8**
GOMU pmax pmax
comp=Z,97nm,1.2s
GOMU pmax pmax
comp=Z,240nm,5.0s
GOMU LR LR
comp=Z,850nm,17.5s
GOMU LR LR
comp=Z,1µm,19.8s
GOMU LR LR
comp=Z,2µm,21.6s
NIKH Nikolski High 37.35 49 P **P** **07 11 48.4 -1.1**
NIKH IAmb IAmb 07 11 52.1
comp=Z,75nm,0.7s
NIKH Nikolski High 37.35 49 P **P** **07 11 48.4 -1.1**
baz=266
GAMB Gambell 38.26 31 P **P** **07 11 56.6 -0.4**
baz=249
MYLDM Lahad Datu 38.46 219 P **P** **07 11 57.8 -1.5**
TNTI Ternate 38.80 203 P **P** **07 12 00.1 -2.0**
TNTI IAmb IAmb 07 12 35.1
comp=Z,59nm,0.8s
UNV Unalaska Valle 38.81 48 P **P** **07 12 01.2 -0.6**
baz=266
UBPT Khong Chiam 38.89 245 P **P** **07 12 02.9 0.0**
UBPT IAmb IAmb 07 12 17.6
comp=Z,88nm,1.0s
KKM Kota Kinabalu 38.92 223 P **P** **07 12 01.4 -1.9**
KKM IAmb IAmb 07 12 18.3
comp=Z,168nm,1.3s
SIJI Sorong 39.32 197 LR LR 07 26 14.1
comp=Z,2µm,19.5s,baz=200,slow=33
MANU Manus Island 39.64 171 P **P** **07 12 08.5 -0.5**
LKP Lekhapani 39.66 269 *eP* **P** **07 12 10.2 +0.9**
LKP IAmb IAmb 07 12 11.0
comp=Z,434nm,0.7s
CRAI Chiangrai 39.69 256 P **P** **07 12 09.9 +0.4**
CRAI IAmb IAmb 07 12 11.4
comp=Z,165nm,1.3s
KMSI Cibinong 40.16 208 P **P** **07 12 13.4 0.0**
comp=Z,311nm,0.7s
TNA Tin City 40.40 30 P **P** **07 12 14.6 -0.2**
baz=251
GTOI Gorontalo 40.47 210 P **P** **07 12 15.1 -0.9**
comp=Z,1µmcomp=Z,107nm,1.1s
WMQ Urumqi 40.85 296 ⇓P **P** **07 12 20.8 +1.8**
WMQ pP pP 07 12 30.3 -0.8
WMQ S **S** **07 18 27.3 +0.2**
WMQ pmax pmax
comp=Z,95nm,1.3s
WMQ pmax pmax
comp=Z,700nm,3.8s
WMQ LR LR
comp=Z,2µm,23.1s
WMQ LR LR
comp=Z,2µm,20.7s
WMQ LR LR
comp=Z,2µm,23.1s
WMQ Urumqi 40.85 296 P **P** **07 12 20.0 +1.1**
WMQ pP **pP** **07 12 30.6 -0.5**
WMQ sP **sP** **07 12 35.7 -0.6**
TOLI2 Tolitoli 40.97 213 P **P** **07 12 18.9 -1.1**
TOLI2 Tolitoli 40.97 213 P **P** **07 12 19.7 -0.3**
MRSI Marisa 41.05 211 P **P** **07 12 20.7 0.0**
comp=Z,3µmcomp=Z,211nm,1.1s
MRSI pP **pP** **07 12 34.1 +1.3**
comp=Z,3µmcomp=Z,211nm,1.1s
FAKI Fak Fak 41.10 194 P **P** **07 12 20.6 -0.5**
FAKI IAmb IAmb 07 12 43.0
comp=Z,58nm,0.7s
FAKI Fak Fak 41.10 194 P **P** **07 12 20.7 -0.4**
comp=Z,87nm,0.7s
ANM Nome 41.14 32 P **P** **07 12 20.6 -0.4**
baz=255
MOKO MOKOCHONG 41.18 268 *eP* **P** **07 12 22.5 +0.6**
MOKO IAmb IAmb 07 12 24.6
comp=Z,513nm,0.8s
JORH JORHAT 41.20 269 *eP* **P** **07 12 23.4 +1.5**
JORH IAmb IAmb 07 12 25.4
comp=Z,410nm,0.7s
ITAN ITANAGAR 41.44 270 *eP* **P** **07 12 25.2 +1.3**
ITAN IAmb IAmb 07 12 27.8
comp=Z,327nm,0.8s
S12K Black Hills 41.47 45 P **P** **07 12 23.1 -0.7**
baz=268
CHTO Chiang Mai 41.60 256 P **P** **07 12 24.9 -0.4**
CHTO Chiang Mai 41.60 256 IAMs_20 IAMs_20 07 30 23.5
comp=Z,2µm,20.0s
CHTO Chiang Mai 41.60 256 P **P** **07 12 24.9 -0.4**
CHTO pmax pmax
comp=Z,35nm,0.8s
CHTO MLR MLR
comp=Z,2µm,20.0s
CHTO Chiang Mai 41.60 256 P **P** **07 12 25.6 +0.3**
CHTO P **P** **07 12 25.6 +0.3**
CHTO Chiang Mai 41.60 256 P **P** **07 12 26.8 +1.5**
CHTO Chiang Mai 41.60 256 P **P** **07 12 25.3 0.0**
CHTO sP **pP** **07 12 39.2 +1.8**
KOHI KOHIMA 41.78 268 *eP* **P** **07 12 26.3 -0.6**
KOHI IAmb IAmb 07 12 29.6
comp=Z,369nm,1.3s
ZAA0 Zalesovo Array 41.80 312 P **P** **07 12 26.5 0.0**
ZAA0 IAmb IAmb 07 12 28.1
comp=Z,164nm,1.1s
ZALV Zalesovo Beam 41.80 312 P **P** **07 12 27.2 +0.7**
comp=Z,34nm,0.4s,baz=87,slow=6.2,SNR=166
ZALV pP **pP** **07 12 38.2 -0.4**
comp=Z,95nm,0.7s,baz=106,slow=5.8,SNR=15
ZALV PcP **PcP** **07 14 21.5 -0.3**
comp=Z,14nm,0.6s,baz=84,slow=1.6,SNR=3.5
ZALV LR LR 07 30 41.7
comp=Z,2µm,18.2s,baz=86,slow=37
comp=Z,34nm,0.4s
ZALV Zalesovo Beam 41.80 312 P **P** **07 12 26.6 0.0**
CM31 Chiang Mai Arr 41.81 255 P **P** **07 12 27.2 +0.2**
CM31 Chiang Mai Arr 41.81 255 P **P** **07 12 28.1 +1.1**
SNR=10
CM31 P **P** **07 12 28.1 +1.1**
SNR=10
CMAR Chiang Mai Arr 41.81 255 P **P** **07 12 27.2 +0.2**
comp=Z,13nm,0.9s,baz=49,slow=5.6,SNR=47
CMAR PcP **PcP** **07 14 23.4 +0.9**
comp=Z,12nm,1.0s,baz=356,slow=2.7,SNR=7.5
CMAR ScP **ScP** **07 18 09.8 +0.7**
comp=Z,3.9nm,0.8s,baz=26,slow=3.6,SNR=10
CMAR LR LR 07 30 40.7
comp=Z,2µm,20.6s,baz=55,slow=37
comp=Z,13nm,0.9s
CMAR Chiang Mai Arr 41.81 255 P **P** **07 12 26.6 -0.4**
CMAR Chiang Mai Arr 41.81 255 *i* P **P** **07 12 27.2 +0.2**
CMAR pmax pmax
comp=Z,14nm,0.9s
SANI Sanana 41.90 204 P **P** **07 12 26.4 -1.3**
comp=Z,2µmcomp=Z,149nm,1.0s
SANI Sanana 41.90 204 P **P** **07 12 27.7 0.0**
MPSI Mapaga 42.04 214 P **P** **07 12 28.1 -0.8**
comp=Z,7µmcomp=Z,66nm,2.2s
ZSN Zaisan 42.25 302 *ce* P **P** **07 12 31.5 +1.2**
ZSN *eS* **S** **07 18 48.2 +0.6**
ZSN pmax pmax
comp=Z,124nm,1.3s
ZSN Zaisan 42.25 302 ⇑ *eP* **P** **07 12 31.6 +1.2**
comp=Z,124nm,1.3s,baz=302
ZSN *eS* **S** **07 18 48.2 +0.6**
baz=302
IMP Imphal 42.34 267 *eP* **P** **07 12 30.0 -1.3**
IMP IAmb IAmb 07 12 34.7
comp=Z,44nm,0.5s
SDPT Sand Point 42.36 46 P **P** **07 12 30.8 -0.3**
baz=270
LSA Lhasa 42.39 275 IAMs_20 IAMs_20 07 30 38.7
comp=Z,1µm,22.0s
LSA Lhasa 42.39 275 *i* P **P** **07 12 33.3 +1.1**
SNR=21
LSA Lhasa 42.39 275 P **P** **07 12 33.5 +1.3**
LSA sP **sP** **07 12 48.2 -1.3**
TEZP TEZPUR 42.41 270 *eP* **P** **07 12 32.0 +0.2**
TEZP IAmb IAmb 07 12 33.9
comp=Z,77nm,0.9s
APSI Ampana 42.43 211 P **P** **07 12 31.1 -0.9**
comp=Z,2µmcomp=Z,130nm,0.9s
RABL Rabaul 42.55 164 P **P** **07 12 33.3 +0.3**
KRVT Keravat (AS076 42.63 165 LR LR 07 29 33.4
comp=Z,272nm,20.3s,baz=131,slow=35
NLAI Namlea 42.68 202 P **P** **07 12 34.0 0.0**
comp=Z,52nm,0.6s
AAI Ambon 42.80 200 P **P** **07 12 34.9 -0.1**
comp=Z,2µmcomp=Z,135nm,0.5s
CHNA Chernabura Isl 42.88 47 P **P** **07 12 34.9 -0.3**
baz=271
CNBA Chernabura Isl 42.88 47 P **P** **07 12 35.9 +0.6**
CNBA IAmb IAmb 07 12 36.7
comp=Z,88nm,1.0s
CNBA IAMs_20 IAMs_20 07 28 35.6
comp=Z,2µm,22.0s
S14K Fog Glacier 42.89 44 P **P** **07 12 35.0 -0.5**
baz=270
NRIK Noril'sk 42.99 335 P **P** **07 12 36.0 0.0**
comp=Z,21nm,0.5s,baz=109,slow=8.8,SNR=28
NRIK PcP **PcP** **07 14 26.1 +0.6**
comp=Z,17nm,0.5s,baz=124,slow=3.6,SNR=2.4
NRIK LR LR 07 31 40.8
comp=Z,2µm,18.8s,baz=108,slow=38
comp=Z,21nm,0.5s
NRIK Noril'sk 42.99 335 P **P** **07 12 36.0 0.0**
NRIK Noril'sk 42.99 335 *c* iP **P** **07 12 35.9 -0.1**
RDOG Red Dog Mine 43.05 27 P **P** **07 12 36.7 +0.2**
baz=254
N16K Nishlik Lake 43.47 38 P **P** **07 12 41.4 +1.3**
baz=266,SNR=36
GUWA GUWAHATI 43.49 270 *eP* **P** **07 12 40.5 -0.1**
GUWA IAmb IAmb 07 12 44.4
comp=Z,110nm,0.9s
CHGN Chignik 43.53 44 P **P** **07 12 40.6 +0.2**
baz=270
SHL Shillong 43.63 269 *eP* **P** **07 12 41.5 -0.4**
SHL IAmb IAmb 07 12 45.9
comp=Z,55nm,0.6s
O16K Kokwok River B 43.76 40 P **P** **07 12 43.6 +1.3**
baz=267,SNR=22
P16K Nushagak River 43.79 40 P **P** **07 12 44.7 +2.1**
baz=268,SNR=26
AZL Aizawl 43.87 266 *eP* **P** **07 12 43.4 -0.4**
R16K Pilot Point 43.98 43 P **P** **07 12 46.0 +1.9**
baz=270
MK31 Makanchi Array 44.09 302 P **P** **07 12 45.5 +0.4**
MK31 IAmb IAmb 07 12 48.6
comp=Z,94nm,0.8s
MK31 Makanchi Array 44.09 302 *c* iP **P** **07 12 45.4 +0.2**
MK31 pmax pmax
comp=Z,86nm,0.6s
MKAR Makanchi Array 44.09 302 P **P** **07 12 45.6 +0.5**
comp=Z,85nm,0.6s,baz=86,slow=9.7,SNR=692
MKAR pP **pP** **07 12 57.2 -0.2**
comp=Z,66nm,0.7s,baz=83,slow=8.7,SNR=12
MKAR LR LR 07 32 25.9
comp=Z,994nm,19.1s,baz=90,slow=38
comp=Z,85nm,0.6s
MKAR Makanchi Array 44.09 302 *i* P **P** **07 12 45.5 +0.3**
MKAR pmax pmax
comp=Z,87nm,0.6s
SBUM Sibu 44.10 225 P **P** **07 12 45.2 -0.3**
SBUM IAmb IAmb 07 13 00.2
comp=Z,120nm,1.3s
O17K Koliganek Bris 44.27 39 P **P** **07 12 47.6 +1.2**
baz=268,SNR=23
MAKZ Makanchi 44.30 302 P **P** **07 12 47.4 +0.6**
MAKZ IAmb IAmb 07 12 49.9
comp=Z,104nm,0.8s
MAKZ IAMs_20 IAMs_20 07 32 11.4
comp=Z,1µm,18.0s
MAKZ Makanchi 44.30 302 P **P** **07 12 47.4 +0.6**
MAKZ pmax pmax
comp=Z,104nm,0.8s
MAKZ MLR MLR
comp=Z,1µm,18.0s
MAKZ Makanchi 44.30 302 P **P** **07 12 47.4 +0.6**
MAKZ pP **pP** **07 12 58.6 -0.4**
Q16K King Salmon 44.48 41 P **P** **07 12 49.2 +1.2**
baz=269,SNR=24
P17K Kvichak River 44.59 40 P **P** **07 12 50.4 +1.4**
baz=269
R17K Ugashik Creek 44.62 43 P **P** **07 12 48.2 -1.0**
baz=271
GCSA Galena City Sc 44.76 32 P **P** **07 12 50.9 +0.7**
baz=263
BKB Balikpapan 44.83 216 P **P** **07 12 50.2 -1.1**
comp=Z,5µmcomp=Z,325nm,1.3s
SEM Semipalatinsk 44.87 307 *ce* P **P** **07 12 51.1 -0.5**
SEM Semipalatinsk 44.87 307 ⇑ *eP* **P** **07 12 51.1 -0.5**
baz=307
N18K Kilae Creek 44.91 38 P **P** **07 12 54.0 +2.5**
N18K IAmb IAmb 07 12 55.3
comp=Z,75nm,0.9s
N18K Kilae Creek 44.91 38 P **P** **07 12 53.2 +1.7**
baz=268,SNR=31
TTA Tatalina 44.97 35 P **P** **07 12 53.9 +1.9**
TTA Tatalina 44.97 35 P **P** **07 12 53.9 +1.9**
TTA pmax pmax
comp=Z,21nm,1.0s
TTA Tatalina 44.97 35 P **P** **07 12 53.4 +1.4**
baz=266,SNR=9.5
SVW2 Sparrevohn 45.07 38 P **P** **07 12 52.5 -0.3**
SVW2 IAmb IAmb 07 12 56.5
comp=Z,78nm,0.9s
CHIR Chirikof Islan 45.11 45 P **P** **07 12 54.4 +1.3**
baz=273
TTSI Tana Toraja 45.11 212 P **P** **07 12 52.2 -1.3**
comp=Z,831nmcomp=Z,32nm,0.6s
O18K Koktuh Hills 45.23 39 P **P** **07 12 55.9 +1.8**
baz=270
GTK Tadong 45.43 273 *eP* **P** **07 12 56.8 +0.5**
GTK IAmb IAmb 07 12 59.4
comp=Z,35nm,0.9s
L19K White Mountain 45.46 36 P **P** **07 12 57.3 +1.4**
L19K White Mountain 45.46 36 P **P** **07 12 57.8 +2.0**
baz=268,SNR=18
MTKI Muara Teweh, K 45.53 219 P **P** **07 12 56.9 0.0**
N19K Bonanza Creek 45.60 38 P **P** **07 12 59.0 +2.0**
baz=269,SNR=15
M19K Big River Lodg 45.67 36 P **P** **07 12 59.7 +2.2**
baz=268,SNR=13
O19K Port Alsworth 45.67 39 IAmb IAmb 07 13 01.0
comp=Z,90nm,1.2s
O19K IAMs_20 IAMs_20 07 31 49.5
comp=Z,1µm,22.0s
O19K Port Alsworth 45.67 39 P **P** **07 12 59.4 +1.9**
baz=270,SNR=11
KURK Kurchatov 45.85 308 P **P** **07 12 59.2 +0.1**
KURK Kurchatov 45.85 308 P **P** **07 13 00.0 +0.9**
KURK Kurchatov 45.85 308 P **P** **07 12 59.7 +0.7**
KURK Kurchatov 45.85 308 P **P** **07 12 59.5 +0.4**
KURK pP **pP** **07 13 10.9 -0.4**
KURK sP **sP** **07 13 16.1 -0.4**
SII Sitkinak Islan 45.86 44 P **P** **07 12 59.7 +0.6**
baz=274
K20K Telida 45.87 34 IAmb IAmb 07 13 02.6
comp=Z,51nm,0.8s
K20K Telida 45.87 34 P **P** **07 13 01.0 +1.9**
baz=267,SNR=39
J20K Nowinta River 45.89 33 P **P** **07 13 01.5 +2.3**
J20K IAmb IAmb 07 13 02.7
comp=Z,60nm,1.0s
J20K Nowinta River 45.89 33 P **P** **07 13 01.0 +1.8**
baz=266,SNR=29
KURBB Kurchatov Arra 45.92 308 P **P** **07 13 00.0 +0.4**
comp=Z,147nm,0.6s,baz=82,slow=7.9,SNR=651
KURBB LR LR 07 32 55.0
comp=Z,2µm,20.2s,baz=58,slow=37
comp=Z,147nm,0.6s
KURBB Kurchatov Arra 45.92 308 P **P** **07 12 59.8 +0.2**
L20K Farewell, AK 45.92 36 P **P** **07 13 01.5 +2.0**
baz=268,SNR=25
SPSI Sidrap Palu 45.96 211 P **P** **07 12 59.4 -0.9**
comp=Z,7µmcomp=Z,71nm,1.2s
KSM Kuching 45.99 226 P **P** **07 13 00.2 -0.4**
KSM IAmb IAmb 07 13 15.7
comp=Z,72nm,0.8s
A21K Barrow 46.00 23 P **P** **07 13 01.2 +1.3**
A21K Barrow 46.00 23 P **P** **07 13 01.3 +1.3**
baz=257,SNR=7.3
Q19K Cape Douglas, 46.04 41 P **P** **07 13 01.2 +0.7**
Q19K Cape Douglas, 46.04 41 P **P** **07 13 01.1 +0.7**
baz=272,SNR=13
TAPN Taplejung 46.13 274 *eP* **P** **07 13 02.3 +0.4**
comp=Z,41nm,0.4s
P19K Oil Pt 46.23 40 IAmb IAmb 07 13 05.0
comp=Z,93nm,0.9s
P19K Oil Pt 46.23 40 P **P** **07 13 03.8 +1.8**
baz=271,SNR=11
M20K Styx River 46.26 37 P **P** **07 13 04.2 +1.9**
M20K Styx River 46.26 37 P **P** **07 13 04.4 +2.1**
baz=269,SNR=17
ILSW Iliamna Southw 46.27 39 P **P** **07 13 03.3 +0.9**
ILSW IAmb IAmb 07 13 06.4
comp=Z,19nm,0.8s
OHAK Old Harbor 46.31 43 P **P** **07 13 03.4 +0.8**
OHAK Old Harbor 46.31 43 P **P** **07 13 02.9 +0.3**
baz=274,SNR=15
G21K Allakaket 46.34 30 P **P** **07 13 03.6 +0.8**
baz=265,SNR=31
F21K Alatna River 46.42 29 P **P** **07 13 04.7 +1.3**
baz=264,SNR=15
RSO Redoubt South 46.45 38 P **P** **07 13 05.5 +1.6**
O20K Slope Mountain 46.53 39 P **P** **07 13 05.0 +0.6**
baz=272
H21K Melozitna Rive 46.56 31 P **P** **07 13 06.5 +2.0**
H21K Melozitna Rive 46.56 31 P **P** **07 13 05.8 +1.4**
baz=266,SNR=34
ODAN Odare 46.60 273 *eP* **P** **07 13 06.1 +0.5**
comp=Z,146nm,1.2s
KDAK Kodiak Island 46.65 42 P **P** **07 13 06.3 +1.0**
KDAK Kodiak Island 46.65 42 P **P** **07 13 06.3 +1.0**
KDAK pmax pmax
comp=Z,145nm,0.8s
KDAK Kodiak Island 46.65 42 P **P** **07 13 06.1 +0.8**
baz=274
KDAK Kodiak Island 46.65 42 P **P** **07 13 06.3 +1.0**
KDAK pP **pP** **07 13 17.2 -0.2**
CHUM Lake Minchumin 46.68 34 P **P** **07 13 07.1 +1.7**
baz=268,SNR=24
Q20K Shuyak Island 46.70 41 P **P** **07 13 06.7 +1.0**
baz=273,SNR=8.7
SPCR Spurr Chakacha 46.71 37 P **P** **07 13 07.2 +1.4**
baz=271,SNR=17
PPLA Purkeypile 46.71 35 P **P** **07 13 08.5 +2.6**
PPLA IAmb IAmb 07 13 09.1
comp=Z,60nm,1.0s
PPLA Purkeypile 46.71 35 P **P** **07 13 07.7 +1.8**
baz=269,SNR=14
CAST Castle Rocks 46.77 34 P **P** **07 13 08.4 +2.2**
CAST IAmb IAmb 07 13 09.2
comp=Z,40nm,0.8s
CAST Castle Rocks 46.77 34 P **P** **07 13 08.4 +2.2**
baz=269,SNR=31
SPU Mount Spurr 46.78 37 P **P** **07 13 08.4 +2.1**
SHLS Shalkode 46.84 297 *ce* P **P** **07 13 05.0 -2.1**
SHLS *eS* **S** **07 19 50.8 -3.7**
SHLS pmax pmax
comp=Z,18nm,0.7s
SHLS Shalkode 46.84 297 ⇑ *eP* **P** **07 13 05.0 -2.1**
comp=Z,18nm,0.7s,baz=297
SHLS *eS* **S** **07 19 50.9 -3.7**
baz=297
I21K Tanana 46.87 32 P **P** **07 13 09.2 +2.3**
baz=267,SNR=18
KAPI Kappang 46.92 211 LR LR 07 33 24.1
comp=Z,293nm,19.9s,baz=36,slow=37
KAPI Kappang 46.92 211 P **P** **07 13 08.3 +0.5**
KAPI Kappang 46.92 211 *c* iP **P** **07 13 08.0 +0.2**
KAPI pmax pmax
comp=Z,144nm,1.2s
KAPI Kappang 46.92 211 P **P** **07 13 08.6 +0.8**
KAPI Kappang 46.92 211 P **P** **07 13 08.2 +0.5**
F22K John River 46.95 29 P **P** **07 13 09.4 +1.9**
baz=265
SKT Skwentna 47.02 36 P **P** **07 13 09.0 +0.9**
baz=271
HOM Homer 47.04 40 P **P** **07 13 09.0 +0.8**
HOM IAMs_20 IAMs_20 07 30 37.4
comp=Z,1µm,21.0s
HOM Homer 47.04 40 P **P** **07 13 09.8 +1.6**
baz=273
BKSI Bulukumba 47.05 210 P **P** **07 13 07.8 -1.0**
comp=Z,1µmcomp=Z,53nm,1.3s
TDK Taldyqorghan 47.11 300 *eP* **P** **07 13 09.9 +0.8**
TDK *eS* **S** **07 19 58.0 -0.2**
TDK Taldyqorghan 47.11 300 *eP* **P** **07 13 09.9 +0.8**
baz=300
TDK *eS* **S** **07 19 58.0 -0.2**
baz=300
TDK LR LR 07 32 43.1
baz=300
E22K Anaktuvuk Pass 47.15 28 P **P** **07 13 11.0 +1.9**
baz=265
UZB Uzynbulak 47.15 298 *eP* **P** **07 13 09.9 +0.3**
UZB *eS* **S** **07 19 58.9 -0.1**
UZB Uzynbulak 47.15 298 *eP* **P** **07 13 09.9 +0.3**
baz=298
UZB *eS* **S** **07 19 59.0 -0.1**
baz=298
H22K Ishtalitna Cre 47.16 31 P **P** **07 13 10.8 +1.7**
baz=267,SNR=37
G22K Bettles 47.16 30 P **P** **07 13 10.8 +1.7**
baz=266
RAMN Ramite 47.19 274 *eP* **P** **07 13 10.5 +0.3**
comp=Z,330nm,0.9s
JIRN Jiri 47.20 275 *eP* **P** **07 13 11.0 +0.6**
CAPN Captain Cook N 47.23 38 P **P** **07 13 11.6 +1.9**
baz=272
CNPM China Poot 47.25 40 P **P** **07 13 10.0 +0.1**
CNPM IAmb IAmb 07 13 12.2
comp=Z,50nm,0.9s
CNPM IAMs_20 IAMs_20 07 33 38.1
comp=Z,1µm,22.0s
BPAW Bear Paw Mtn. 47.27 33 P **P** **07 13 11.2 +1.2**
BPAW Bear Paw Mtn. 47.27 33 P **P** **07 13 11.6 +1.5**
baz=269,SNR=16
KTH Kantishna Hill 47.29 34 P **P** **07 13 12.4 +2.1**
KTH IAmb IAmb 07 13 13.6
comp=Z,86nm,0.9s
KPKS Kokpek 47.31 298 *c* iP **P** **07 13 11.0 +0.3**
KPKS *eS* **S** **07 20 02.3 +1.2**
KPKS pmax pmax
comp=Z,21nm,0.5s
KPKS Kokpek 47.31 298 ⇑ *iP* **P** **07 13 11.1 +0.3**

KPKS comp=Z,21nm,0.5s,baz=298 *e*S **S** **07 20 02.4 +1.2**

GUN **Gumba** **47.33 275** *e*P **P** **07 13 12.0 +0.6**
comp=Z,459nm,0.9s baz=298

MLY **Manley** **47.39 32** IAmb IAmb 07 13 14.0
comp=Z,46nm,0.9s

MLY **Manley** **47.39 32** P **P** **07 13 13.1 +2.1**
baz=269,SNR=50

BRLK **Bradley Lake** **47.41 39** IAmb IAmb 07 13 14.3
comp=Z,49nm,0.9s

BRLK IAMs_20 IAMs_20 07 34 18.2
comp=Z,1µm,22.0s

BRSE **Bradley Lake S** **47.49 39** P **P** **07 13 13.9 +2.1**
baz=273,SNR=7.5

ZHN **Zhinishke** **47.56 298** *e*P **P** **07 13 12.8 +0.1**
ZHN *e*S **S** **07 20 05.9 +1.1**

ZHN **Zhinishke** **47.56 298** *e*P **P** **07 13 12.8 +0.1**
baz=298

ZHN *e*S **S** **07 20 05.9 +1.1**
baz=298

TRF **Thorofare Moun** **47.58 34** IAmb IAmb 07 13 16.6
comp=Z,50nm,0.8s

TRF **Thorofare Moun** **47.58 34** P **P** **07 13 13.7 +1.1**
baz=270,SNR=28

CUT **Chulitna** **47.60 36** IAmb IAmb 07 13 14.9
comp=Z,65nm,0.9s

CUT **Chulitna** **47.60 36** P **P** **07 13 13.9 +1.4**
baz=271,SNR=7.1

SATY **Saty** **47.61 298** *e*P **P** **07 13 13.5 +0.4**
SATY *e*S **S** **07 20 05.7 +0.2**
SATY pmax pmax
comp=Z,14nm,0.7s

SATY **Saty** **47.61 298** *e*P **P** **07 13 13.5 +0.4**
comp=Z,14nm,0.7s,baz=298

SATY *e*S **S** **07 20 05.8 +0.2**
baz=298

D23K **Nanushuk River** **47.63 27** P **P** **07 13 14.7 +1.9**
baz=265,SNR=34

M22K **Willow** **47.69 37** P **P** **07 13 12.9 -0.4**
M22K IAmb IAmb 07 13 16.2
comp=Z,68nm,0.8s

M22K **Willow** **47.69 37** P **P** **07 13 13.9 +0.7**
baz=272,SNR=6.2

COLD **Coldfoot** **47.69 29** P **P** **07 13 13.2 -0.1**
COLD **Coldfoot** **47.69 29** P **P** **07 13 15.1 +1.9**
baz=267

BBKI **Banjar Baru** **47.73 218** P **P** **07 13 13.8 -0.3**
comp=Z,6µmcomp=Z,125nm,1.3s

C23K **Itkillik River** **47.74 26** P **P** **07 13 15.4 +1.8**
baz=264,SNR=96

G23K **Bananza Creek** **47.74 30** P **P** **07 13 15.6 +1.9**
baz=268,SNR=23

PKI **Pulchoki** **47.85 275** *e*P **P** **07 13 15.3 -0.1**
KKN **Kakani** **47.86 276** *e*P **P** **07 13 15.8 +0.5**
comp=Z,226nm,1.3s

PKIN **Phulchoki** **47.86 275** *e*P **P** **07 13 15.4 0.0**
comp=Z,89nm,0.6s

RC01 **Rabbit Creek A** **47.91 38** IAMs_20 IAMs_20 07 33 10.5
comp=Z,986nm,22.0s

RC01 **Rabbit Creek A** **47.91 38** P **P** **07 13 15.6 +0.6**
baz=273,SNR=16

H23K **Yukon River** **47.91 31** IAmb IAmb 07 13 18.3
comp=Z,54nm,0.9s

H23K **Yukon River** **47.91 31** P **P** **07 13 16.9 +1.9**
baz=269,SNR=49

BWN **Browne** **47.94 33** P **P** **07 13 16.9 +1.7**
O22K **Cooper Landing** **47.95 38** IAMs_20 IAMs_20 07 33 54.6
comp=Z,1µm,20.0s

O22K **Cooper Landing** **47.95 38** P **P** **07 13 16.1 +0.8**
baz=274,SNR=6.8

I23K **Minto, Yukon-K** **47.98 32** P **P** **07 13 17.3 +1.8**
baz=270,SNR=18

TOLK **Toolik Lake Re** **48.01 27** P **P** **07 13 16.6 +0.8**
TOLK IAmb IAmb 07 13 19.3
comp=Z,62nm,1.1s

TOLK IAMs_20 IAMs_20 07 32 58.2
comp=Z,1µm,22.0s

TOLK **Toolik Lake Re** **48.01 27** P **P** **07 13 17.5 +1.7**
baz=266,SNR=30

DMN **Daman** **48.08 275** *e*P **P** **07 13 17.2 +0.1**
NEA2 **Nenana** **48.10 33** IAmb IAmb 07 13 19.8
comp=Z,80nm,1.2s

NEA2 **Nenana** **48.10 33** P **P** **07 13 18.0 +1.6**
baz=270,SNR=45

SEW **Seward** **48.11 39** IAmb IAmb 07 13 18.7
comp=Z,105nm,1.2s

SEW **Seward** **48.11 39** P **P** **07 13 17.1 +0.6**
baz=274,SNR=11

PMR **Palmer** **48.17 37** IAmb IAmb 07 13 19.1
comp=Z,74nm,1.0s

PMR **Palmer** **48.17 37** P **P** **07 13 17.9 +0.9**
baz=273,SNR=28

MCK **McKinley** **48.18 34** IAmb IAmb 07 13 19.6
comp=Z,50nm,0.8s

MCK **McKinley** **48.18 34** P **P** **07 13 18.1 +1.0**
baz=271,SNR=23

RND **Reindeer** **48.22 34** IAmb IAmb 07 13 19.8
comp=Z,74nm,0.9s

RND IAMs_20 IAMs_20 07 32 13.7
comp=Z,976nm,21.0s

GHO **Glory Hole Cre** **48.26 37** P **P** **07 13 18.7 +0.8**
GHO IAMs_20 IAMs_20 07 32 23.8
comp=Z,1µm,21.0s

GKN **Gorkha** **48.27 276** *e*P **P** **07 13 18.8 +0.3**
comp=Z,579nm,1.0s

D24K **Happy Valley** **48.31 27** P **P** **07 13 19.9 +1.9**
baz=267

WAT1 **Susitna Watana** **48.38 35** P **P** **07 13 19.6 +0.9**
baz=272

E24K **Your Creek** **48.39 28** P **P** **07 13 20.4 +1.7**
baz=268,SNR=50

C24K **Franklin Bluff** **48.39 26** P **P** **07 13 20.3 +1.7**
baz=266

MDM **Murphy Dome** **48.46 32** P **P** **07 13 20.8 +1.5**
KNK **Knik Glacier** **48.51 37** IAmb IAmb 07 13 22.2
comp=Z,60nm,0.8s

KNK IAMs_20 IAMs_20 07 36 39.3
comp=Z,925nm,20.0s

KNK **Knik Glacier** **48.51 37** P **P** **07 13 20.5 +0.9**
baz=274,SNR=11

WRH **Wood River Hil** **48.53 33** P **P** **07 13 20.3 +0.6**
WRH IAmb IAmb 07 14 46.3
comp=Z,32nm,0.8s

MDOK **Medeo** **48.54 298** *i* P **P** **07 13 21.1 +0.8**
MDOK *e*S **S** **07 20 19.2 +0.5**
MDOK MLR MLR
comp=Z,2µm,19.0s

MDOK **Medeo** **48.54 298** *i* P **P** **07 13 21.1 +0.8**
baz=298

MDOK *e*S **S** **07 20 19.3 +0.5**
baz=298

MDOK LR LR 07 33 53.3
comp=Z,2µm,18.7s,baz=298

SML **Sawmill** **48.54 37** IAMs_20 IAMs_20 07 36 21.2
comp=Z,957nm,20.0s

SML **Sawmill** **48.54 37** P **P** **07 13 21.1 +1.2**
baz=274,SNR=28

H24K **Noodor Dome** **48.59 31** IAmb IAmb 07 13 23.5
comp=Z,36nm,0.9s

H24K **Noodor Dome** **48.59 31** P **P** **07 13 22.4 +2.1**
baz=270,SNR=33

F24K **Squaw Lake** **48.60 29** P **P** **07 13 22.0 +1.7**
baz=269,SNR=15

PWL **Port Wells** **48.61 38** IAmb IAmb 07 13 22.6
comp=Z,74nm,0.9s

PWL IAMs_20 IAMs_20 07 34 28.0
comp=Z,1µm,21.0s

PWL **Port Wells** **48.61 38** P **P** **07 13 20.8 +0.4**
baz=274,SNR=13

TCOL **CIGO, UAF Yank** **48.62 32** IAmb IAmb 07 13 24.0
comp=Z,42nm,0.8s

TCOL **CIGO, UAF Yank** **48.62 32** P **P** **07 13 21.9 +1.5**
baz=271,SNR=9.2

AAA **Alma-Ata** **48.62 298** *e*P **P** **07 13 21.7 +0.9**
AAA **Alma-Ata** **48.62 298** *e*P **P** **07 13 21.8 +0.9**
baz=298

COLA **College** **48.62 32** P **P** **07 13 22.4 +2.0**
COLA IAmb IAmb 07 13 24.0
comp=Z,41nm,0.8s

COLA **College** **48.62 32** *de*P **P** **07 13 22.2 +1.8**
COLA pmax pmax
comp=Z,25nm,0.8s

COLA **College** **48.62 32** P **P** **07 13 22.3 +1.9**
baz=271

COLA **College** **48.62 32** P **P** **07 13 22.0 +1.6**
COLA sP **sP** **07 13 37.5 -0.4**

G24K **Hadweenzic Riv** **48.75 30** P **P** **07 13 23.9 +2.4**
baz=270,SNR=34

WAT6 **Susitna Watana** **48.77 35** P **P** **07 13 22.7 +0.8**
baz=273,SNR=18

POKR **Poker Plat Res** **48.79 32** P **P** **07 13 23.6 +1.8**
POKR **Poker Plat Res** **48.79 32** P **P** **07 13 23.8 +2.0**
baz=271,SNR=27

DANN **Dangsing** **48.81 277** *e*P **P** **07 13 23.5 +0.7**
comp=Z,773nm,0.8s

M23K **Glacier View** **48.83 37** P **P** **07 13 22.8 +0.7**
baz=274,SNR=20

KUU **Kurty** **48.83 299** *c i*P **P** **07 13 22.4 0.0**
KUU *e*S **S** **07 20 22.9 +0.4**
KUU pmax pmax
comp=Z,68nm,0.5s

KUU **Kurty** **48.83 299** ⇑ *i*P **P** **07 13 22.4 0.0**
comp=Z,68nm,0.5s,baz=299

KUU *e*S **S** **07 20 22.9 +0.4**
baz=299

KUU LR LR 07 34 37.5
baz=299

DHY **Denali Highway** **48.91 35** IAMs_20 IAMs_20 07 37 11.9
comp=Z,849nm,20.0s

DHY **Denali Highway** **48.91 35** P **P** **07 13 23.6 +0.8**
baz=273,SNR=12

SCM **Sheep Creek Mo** **49.01 36** P **P** **07 13 24.9 +1.3**
SCM IAMs_20 IAMs_20 07 33 40.7
comp=Z,1µm,22.0s

SCM **Sheep Creek Mo** **49.01 36** P **P** **07 13 24.9 +1.3**
SCM pmax pmax
comp=Z,85nm,0.8s

SCM MLR MLR
comp=Z,1µm,22.0s

SCM **Sheep Creek Mo** **49.01 36** P **P** **07 13 24.6 +1.0**
baz=274,SNR=18

HDA **Harding Lake** **49.03 33** IAmb IAmb 07 13 25.7
comp=Z,69nm,0.9s

HDA **Harding Lake** **49.03 33** P **P** **07 13 24.3 +0.7**
baz=272,SNR=43

IL31 **49.04 33** IAmb IAmb 07 13 25.9
comp=Z,68nm,0.8s

ILAR **Eielson Array** **49.04 33** P **P** **07 13 24.4 +0.8**
comp=Z,52nm,0.8s,baz=268,slow=6.3,SNR=428

ILAR PcP **PcP** **07 14 46.8 -0.1**
comp=Z,9.5nm,0.9s,baz=278,slow=3.8,SNR=1.2

ILAR LR LR 07 35 19.2
comp=Z,696nm,21.3s,baz=253,slow=37
comp=Z,52nm,0.8s

P23K **Montague Islan** **49.15 39** P **P** **07 13 25.5 +1.0**
baz=276

VLK **Valmikinagar** **49.19 276** *e*P **P** **07 13 25.5 +0.2**
D25K **Kavik River** **49.19 26** P **P** **07 13 26.1 +1.2**
baz=269,SNR=78

KULM **Kulim** **49.21 240** P **P** **07 13 25.2 -0.3**
KULM IAmb IAmb 07 13 27.4
comp=Z,68nm,1.2s

KULM IAMs_20 IAMs_20 07 33 50.0
comp=Z,1µm,22.0s

GLI **Glacier Island** **49.21 38** P **P** **07 13 25.2 +0.2**
GLI IAmb IAmb 07 13 26.8
comp=Z,52nm,0.9s

GLI IAMs_20 IAMs_20 07 36 04.9
comp=Z,1µm,20.0s

GLI **Glacier Island** **49.21 38** P **P** **07 13 25.9 +0.9**
baz=275,SNR=5.5

BOK **Bokaro** **49.25 271** *e*P **P** **07 13 26.2 +0.3**
BOK IAmb IAmb 07 13 28.1
comp=Z,33nm,0.9s

ULHL **Ulahol** **49.37 297** P **P** **07 13 27.6 +0.8**
SNR=7.7

H25K **Birch Creek** **49.43 31** P **P** **07 13 27.6 +1.0**
baz=272

F25K **Christian Rive** **49.46 29** P **P** **07 13 28.6 +1.6**
baz=271,SNR=39

E25K **Arctic Village** **49.48 28** P **P** **07 13 28.7 +1.7**
baz=270,SNR=34

FID **Port Fidalgo** **49.52 38** P **P** **07 13 27.7 +0.3**
FID IAmb IAmb 07 13 30.0
comp=Z,119nm,1.3s

FID IAMs_20 IAMs_20 07 36 17.7
comp=Z,1µm,21.0s

M24K **Tolsona, Glenn** **49.53 36** IAmb IAmb 07 13 30.9
comp=Z,66nm,0.8s

M24K IAMs_20 IAMs_20 07 32 45.4
comp=Z,1µm,22.0s

M24K **Tolsona, Glenn** **49.53 36** P **P** **07 13 28.5 +0.9**
baz=275,SNR=11

IPM **Ipoh** **49.53 239** IAMs_20 IAMs_20 07 35 21.7
comp=Z,967nm,20.0s

IPM **Ipoh** **49.53 239** P **P** **07 13 28.3 +0.2**
HIN **Hinchinbrook I** **49.55 38** IAMs_20 IAMs_20 07 34 02.9
comp=Z,1µm,21.0s

K24K **Donnelly Dome** **49.58 34** P **P** **07 13 28.9 +1.1**
baz=274,SNR=12

PRP **Porcupine Dome** **49.58 32** P **P** **07 13 29.0 +1.1**
PRP IAmb IAmb 07 13 31.0
comp=Z,49nm,0.8s

PRP **Porcupine Dome** **49.58 32** P **P** **07 13 29.0 +1.1**
baz=273,SNR=58

DGPR **DIGLIPUR** **49.59 254** *e*P **P** **07 13 29.2 +0.8**
EDFI **Ende, Flores** **49.62 206** P **P** **07 13 26.4 -2.3**
comp=Z,646nmcomp=Z,34nm,1.1s

TKM2 **Tokmak 2** **49.63 298** P **P** **07 13 29.9 +1.2**
SNR=153

TKM2 **Tokmak 2** **49.63 298** *i* P **P** **07 13 29.7 +1.0**
TKM2 pmax pmax
comp=Z,96nm,0.6s

HNR **Honiara** **49.67 156** LR LR 07 33 12.2
comp=Z,692nm,20.8s,baz=329,slow=34

HNR **Honiara** **49.67 156** IAMs_20 IAMs_20 07 33 51.3
comp=Z,859nm,20.0s

J25K **Salcha River,** **49.70 33** P **P** **07 13 28.7 0.0**
J25K **Salcha River,** **49.70 33** P **P** **07 13 28.7 0.0**
baz=274,SNR=14

SOEI **Soe** **49.70 203** P **P** **07 13 28.5 -0.9**
comp=Z,2µmcomp=Z,261nm,1.0s

SOEI **Soe** **49.70 203** P **P** **07 13 31.1 +1.7**
KLU **Klutina** **49.71 37** IAmb IAmb 07 13 31.9
comp=Z,64nm,0.9s

KLU IAMs_20 IAMs_20 07 36 52.2
comp=Z,1µm,20.0s

KLU **Klutina** **49.71 37** P **P** **07 13 30.2 +1.3**
baz=276,SNR=22

C26K **Camden Bay** **49.71 26** P **P** **07 13 30.9 +2.3**
baz=270,SNR=13

BRZS **Berezniki** **49.73 308** ⇑ *i*P **P** **07 13 29.3 +0.2**
comp=Z,42nm,0.7s,baz=308

BRZS *e*S **S** **07 20 33.8 -1.1**
baz=308

Q23K **Middleton Isla** **49.74 40** P **P** **07 13 29.3 +0.3**
baz=277

PAX **Paxson** **49.78 35** P **P** **07 13 30.5 +1.0**
baz=275,SNR=17

BMAR **Burnt Mountain** **49.87 29** P **P** **07 13 32.3 +2.2**
EYAK **Cordova Ski Ar** **49.90 38** P **P** **07 13 29.6 -0.6**
EYAK IAmb IAmb 07 13 33.4
comp=Z,59nm,0.8s

EYAK **Cordova Ski Ar** **49.90 38** P **P** **07 13 31.3 +1.0**
baz=277,SNR=8.2

HARP **HAARP** **49.98 36** P **P** **07 13 32.3 +1.5**
baz=276,SNR=11

RIDG **Independent Ri** **49.99 34** P **P** **07 13 31.2 +0.2**
RIDG IAMs_20 IAMs_20 07 38 40.6
comp=Z,981nm,21.0s

RIDG **Independent Ri** **49.99 34** P **P** **07 13 31.4 +0.4**
baz=275,SNR=21

F26K **Sheenjek River** **50.03 29** P **P** **07 13 34.1 +2.9**
baz=272,SNR=63

BTLS **Baital** **50.09 301** *c i*P **P** **07 13 32.0 +0.1**
BTLS *e*S **S** **07 20 38.7 -1.3**
BTLS pmax pmax
comp=Z,32nm,0.7s

BTLS **Baital** **50.09 301** ⇑ *i*P **P** **07 13 32.0 +0.1**
comp=Z,32nm,0.7s,baz=301

BTLS *e*S **S** **07 20 38.8 -1.3**
baz=301

C27K **Jago River** **50.13 26** P **P** **07 13 33.8 +1.9**
baz=271,SNR=52

SGDS **Sogindy** **50.15 299** *c i*P **P** **07 13 32.8 +0.3**
SGDS pmax pmax
comp=Z,32nm,1.1s

SGDS **Sogindy** **50.15 299** ⇑ *i*P **P** **07 13 32.9 +0.3**
comp=Z,32nm,1.1s,baz=299

KBK **Karagaybulak** **50.16 298** P **P** **07 13 33.8 +1.0**
SNR=70

CHMS **Chumysh** **50.20 299** P **P** **07 13 33.4 +0.6**
SNR=23

CHMS **Chumysh** **50.20 299** *i* P **P** **07 13 33.0 +0.2**
CHMS pmax pmax
comp=Z,34nm,0.6s

G26K **Porcupine Rive** **50.21 30** P **P** **07 13 34.5 +2.1**
baz=273,SNR=40

USP **Ospenovka** **50.29 299** P **P** **07 13 34.2 +0.7**
SNR=60

N25K **Chitina, Valde** **50.33 37** IAMs_20 IAMs_20 07 36 20.5
comp=Z,810nm,20.0s

N25K **Chitina, Valde** **50.33 37** P **P** **07 13 34.9 +1.2**
baz=277,SNR=7.7

DOT **Dot Lake** **50.35 34** P **P** **07 13 34.8 +1.1**
SCRK **Sand Creek** **50.35 33** IAmb IAmb 07 13 36.2
comp=Z,78nm,1.0s

SCRK IAMs_20 IAMs_20 07 39 02.0
comp=Z,1µm,20.0s

SCRK **Sand Creek** **50.35 33** P **P** **07 13 34.8 +1.0**
baz=276,SNR=70

BMRM **Bremner River** **50.41 37** IAmb IAmb 07 13 37.3
comp=Z,65nm,0.9s

BMRM **Bremner River** **50.41 37** P **P** **07 13 35.5 +1.4**
baz=277,SNR=14

KSH **Kashi** **50.44 294** P **P** **07 13 38.6 +3.8**
KSH PcS **PcS** **07 18 52.0 +2.0**
KSH S **S** **07 20 53.3 +8.0**
KSH sS sS 07 21 07.4 +1.5
KSH pmax pmax
comp=Z,50nm,1.2s

KSH pmax pmax
comp=Z,380nm,5.9s

KSH LR LR
comp=Z,2µm,18.1s

KSH LR LR
comp=Z,2µm,17.1s

KSH LR LR
comp=Z,3µm,18.1s

J26L **Joseph Creek** **50.48 33** IAMs_20 IAMs_20 07 38 07.6
comp=Z,895nm,21.0s

J26L **Joseph Creek** **50.48 33** P **P** **07 13 35.3 +0.6**
baz=275,SNR=18

AAK **Ala-Archa** **50.49 298** P **P** **07 13 35.8 +0.6**
comp=Z,29nm,0.5s,baz=117,slow=5.3,SNR=39

AAK LR LR 07 36 17.0
comp=Z,3µm,19.7s,baz=75,slow=38
comp=Z,29nm,0.5s

AAK **Ala-Archa** **50.49 298** P **P** **07 13 35.9 +0.6**
SNR=23

AAK **Ala-Archa** **50.49 298** P **P** **07 13 35.6 +0.4**
AAK **Ala-Archa** **50.49 298** P **P** **07 13 35.8 +0.6**
AAK sP **pP** **07 13 49.8 +2.2**
BRVK **Borovoye** **50.52 312** P **P** **07 13 35.6 +0.6**
BRVK IAmb IAmb 07 13 36.7
comp=Z,71nm,0.9s

BRVK **Borovoye** **50.52 312** *c i*P **P** **07 13 35.2 +0.2**
BRVK pmax pmax
comp=Z,62nm,0.9s

BRVK **Borovoye** **50.52 312** P **P** **07 13 35.9 +0.9**
BRVK P **P** **07 13 35.9 +0.9**
BRVK **Borovoye** **50.52 312** P **P** **07 13 35.5 +0.4**
BRVK pP **pP** **07 13 46.6 -0.8**
I26K **Coal Creek Min** **50.58 32** IAMs_20 IAMs_20 07 36 15.2
comp=Z,1µm,22.0s

I26K **Coal Creek Min** **50.58 32** P **P** **07 13 35.7 +0.3**
baz=275

UCH **Uchtor** **50.60 298** P **P** **07 13 37.3 +0.9**
SNR=50

KDU **Kakadu** **50.60 192** P **P** **07 13 35.9 -0.1**
KAIM **Kayak Island** **50.64 39** P **P** **07 13 36.4 +0.5**
baz=278

HMT **Hamilton** **50.66 38** IAMs_20 IAMs_20 07 33 52.3
comp=Z,1µm,21.0s

GLB **Gilahina Butte** **50.73 37** P **P** **07 13 37.0 +0.4**
GLB IAmb IAmb 07 13 40.0
comp=Z,77nm,1.4s

GLB IAMs_20 IAMs_20 07 34 43.0
comp=Z,1µm,22.0s

L26K **Log Cabin Wild** **50.74 35** IAmb IAmb 07 13 40.1
comp=Z,82nm,0.8s

L26K IAMs_20 IAMs_20 07 38 06.3
comp=Z,941nm,20.0s

L26K **Log Cabin Wild** **50.74 35** P **P** **07 13 38.2 +1.6**
baz=277,SNR=86

BERG **Berg Lake** **50.93 38** IAMs_20 IAMs_20 07 34 00.4
comp=Z,1µm,22.0s

TPI **Tanjungpandan** **50.95 226** P **P** **07 13 38.5 -0.2**
comp=Z,54nm,1.0s

E27K **Coleen River** **50.97 28** P **P** **07 13 39.9 +1.7**
baz=274,SNR=41

M26K **Nabesna, AK** **50.98 35** IAmb IAmb 07 13 42.1
comp=Z,81nm,1.3s

M26K IAMs_20 IAMs_20 07 37 26.6
comp=Z,1µm,20.0s

M26K **Nabesna, AK** **50.98 35** P **P** **07 13 40.2 +1.7**
baz=278,SNR=20

EKS2 **Erkin-Say** **50.98 298** P **P** **07 13 39.4 +0.5**
SNR=45

MTN **Manton Dam** **50.99 193** P **P** **07 13 38.4 -0.5**
MTN IAmb IAmb 07 13 57.5
comp=Z,50nm,0.8s

G27K **Doyon Strip** **51.06 30** P **P** **07 13 40.8 +1.9**
baz=275,SNR=24

PTH **Pithoragarh** **51.07 280** *e*P **P** **07 13 39.9 +0.1**
LGTI **Lohaghat** **51.09 280** *e*P **P** **07 13 41.3 +1.6**
MCARA **McCarthy VSAT** **51.11 37** P **P** **07 13 40.7 +1.4**
MCARA IAmb IAmb 07 13 42.8
comp=Z,96nm,1.0s

MCARA IAMs_20 IAMs_20 07 35 14.1
comp=Z,1µm,22.0s

MCARA **McCarthy VSAT** **51.11 37** P **P** **07 13 41.0 +1.7**
baz=278,SNR=14

COEN **Coen** **51.14 178** P **P** **07 13 40.1 +0.1**
COEN **Coen** **51.14 178** P **P** **07 13 40.3 +0.3**
H27K **Steamboat Moun** **51.16 30** P **P** **07 13 41.9 +2.2**
baz=276

CRQE **Cirque** **51.17 38** P **P** **07 13 41.7 +1.7**
baz=279,SNR=13

BGLC **Bering Glacier** **51.18 38** P **P** **07 13 41.7 +1.8**
baz=279

PLAI **Plampang** **51.18 211** P **P** **07 13 39.1 -1.3**
K27K **Chicken** **51.18 33** IAMs_20 IAMs_20 07 38 33.0
comp=Z,195nm,20.0s

K27K **Chicken** **51.18 33** P **P** **07 13 41.5 +1.6**
baz=277

I27K **Kandik River** **51.19 31** P **P** **07 13 41.4 +1.3**
baz=276

AML **Almayashu** **51.21 298** P **P** **07 13 42.1 +1.2**
SNR=144

TGL **Tana Glacier** **51.30 38** IAmb IAmb 07 13 44.1
comp=Z,74nm,1.1s

TGL IAMs_20 IAMs_20 07 34 54.1
comp=Z,899nm,21.0s

WAX **Waxell Ridge** **51.34 38** IAMs_20 IAMs_20 07 37 10.1
comp=Z,1µm,19.0s

L27K **Beaver Creek,** **51.42 35** IAmb IAmb 07 13 45.3
comp=Z,63nm,0.9s

L27K IAMs_20 IAMs_20 07 36 05.3
comp=Z,1µm,22.0s

L27K **Beaver Creek,** **51.42 35** P **P** **07 13 43.5 +1.8**
baz=278,SNR=47

BCAR **Beaver Creek A** **51.44 34** P **P** **07 13 42.9 +1.0**
EGAK **Eagle** **51.48 32** P **P** **07 13 43.2 +1.1**
EGAK **Eagle** **51.48 32** P **P** **07 13 43.1 +1.0**
baz=277,SNR=16

M27K **Edge Creek, AK** **51.50 35** IAMs_20 IAMs_20 07 36 01.4
comp=Z,1µm,21.0s

M27K **Edge Creek, AK** **51.50 35** P **P** **07 13 44.1 +1.6**
baz=279

ISLE **Juniper Island** **51.56 38** IAMs_20 IAMs_20 07 37 19.0
comp=Z,990nm,20.0s

GRNC **Granite Creek** **51.82 37** IAmb IAmb 07 13 47.9
comp=Z,54nm,0.8s

GRNC IAMs_20 IAMs_20 07 37 39.0
comp=Z,814nm,20.0s

MESA **MESA** **51.82 38** IAMs_20 IAMs_20 07 36 34.0
comp=Z,1µm,19.0s

MESA **MESA** **51.82 38** P **P** **07 13 46.0 +1.1**
baz=280

YAH **Yahtse** **51.89 38** IAmb IAmb 07 13 48.7
comp=Z,67nm,0.9s

YAH IAMs_20 IAMs_20 07 34 19.8
comp=Z,1µm,20.0s

BVCY **Beaver Creek** **51.96 35** P **P** **07 13 47.1 +1.3**
baz=279,SNR=21

CTG **Chitna Glacier** **51.98 37** P **P** **07 13 46.9 +0.8**
baz=280,SNR=5.3

CTGM **Chitina Glacie** **51.98 37** IAmb IAmb 07 14 18.1
comp=Z,64nm,0.8s

CTGM IAMs_20 IAMs_20 07 36 09.2
comp=Z,749nm,21.0s
LOGN Logan Glacier 52.17 37 IAMs_20 IAMs_20 07 37 39.1
comp=Z,814nm,21.0s
TABL Table Mountain 52.17 38 IAMs_20 IAMs_20 07 34 29.2
comp=Z,1μm,20.0s
PSI Prapat 52.19 239 LR LR 07 36 10.5
comp=Z,794nm,21.9s,baz=46,slow=36
YUK3 Moose Creek 52.25 36 P **P** **07 13 49.6 +1.4**
baz=280,SNR=20
RPSI Rantau Prapat 52.26 239 IAMs_20 IAMs_20 07 35 37.0
comp=Z,1μm,22.0s
DAWY Dawson 52.34 33 P **P** **07 13 49.7 +1.1**
DAWY Dawson 52.34 33 P **P** **07 13 49.7 +1.1**
baz=279,SNR=15
O28M Mount Upton 52.57 37 P **P** **07 13 52.1 +1.5**
baz=281,SNR=7.1
I29M Ogilvie Camp, 52.59 31 P **P** **07 13 52.3 +1.9**
I29M IAMs_20 IAMs_20 07 38 54.3
comp=Z,832nm,20.0s
I29M Ogilvie Camp, 52.59 31 P **P** **07 13 51.9 +1.5**
baz=279,SNR=96
DZA Taraz 52.61 299 *e*P **P** **07 13 51.0 +0.1**
DZA *e*S **S** **07 21 15.5 +0.5**
DZA pmax pmax
comp=Z,34nm,0.9s
DZA Taraz 52.61 299 *e*P **P** **07 13 51.0 +0.1**
comp=Z,34nm,0.9s,baz=299
DZA *e*S **S** **07 21 15.5 +0.5**
baz=299
PINM Pinnacle 52.67 38 P **P** **07 13 52.7 +1.5**
baz=282
J29M Klondike Camp 52.78 32 IAMs_20 IAMs_20 07 39 09.4
comp=Z,839nm,20.0s
J29M Klondike Camp 52.78 32 P **P** **07 13 53.3 +1.4**
baz=280
BCPM Bancas Point 53.01 38 IAMs_20 IAMs_20 07 34 16.3
comp=Z,1μm,22.0s
M29M Somme Creek 53.05 35 P **P** **07 13 55.7 +1.8**
baz=281
EPYK Eagle Plains 53.07 30 P **P** **07 13 55.5 +1.6**
baz=280,SNR=178
BLSP Bilaspur 53.08 271 *e*P **P** **07 13 54.0 -0.6**
KK31 Karatay Array 53.11 300 IAmb IAmb 07 14 10.5
comp=Z,48nm,0.8s
KK31 Karatay Array 53.11 300 P **P** **07 13 54.5 0.0**
KKAR Karatay Array 53.11 300 P **P** **07 13 54.8 +0.2**
KKAR IAmb IAmb 07 14 10.5
comp=Z,48nm,0.8s
KKAR Karatay Array 53.11 300 P **P** **07 13 54.8 +0.2**
KKAR pmax pmax
comp=Z,48nm,0.8s
PNL Peninsula 53.19 38 P **P** **07 13 56.0 +1.1**
baz=283
THN Thein Dam 53.33 286 *e*P **P** **07 13 56.0 -0.2**
YUK6 Outpost Mounta 53.41 37 P **P** **07 13 58.2 +1.5**
baz=282
O29M Mount Kennedy 53.45 38 P **P** **07 13 59.3 +2.4**
baz=283,SNR=16
UGM Wanagama 53.70 219 P **P** **07 13 58.6 -0.5**
UGM Wanagama 53.70 219 P **P** **07 13 59.3 +0.2**
IUG luzhnay 53.77 299 *ce*P **P** **07 14 00.2 +0.7**
IUG *e*S **S** **07 21 32.1 +1.3**
IUG luzhnay 53.77 299⇑ *e*P **P** **07 14 00.2 +0.7**
baz=299
IUG *e*S **S** **07 21 32.1 +1.3**
baz=299
HYT Haines Junctio 53.85 37 P **P** **07 14 02.0 +2.2**
baz=283,SNR=35
N30M Aishikik Lake 53.90 36 P **P** **07 14 01.8 +1.7**
baz=283
INK Inuvik 53.93 27 LR LR 07 39 08.2
comp=Z,770nm,20.2s,baz=264,slow=38
INK Inuvik 53.93 27 IAmb IAmb 07 14 03.1
comp=Z,66nm,0.9s
INK Inuvik 53.93 27 P **P** **07 14 01.8 +1.7**
baz=281,SNR=49
P29M Windy Craggy 54.02 38 IAMs_20 IAMs_20 07 35 44.0
comp=Z,1μm,22.0s
P29M Windy Craggy 54.02 38 P **P** **07 14 03.1 +2.1**
baz=284,SNR=23
GSI Gunungsitoli 54.19 239 P **P** **07 14 03.5 +0.8**
KNRA Kununurra 54.21 195 IAmb IAmb 07 14 20.8
comp=Z,56nm,0.8s
KNRA Kununurra 54.21 195 P **P** **07 14 03.0 +0.3**
JHNI Jhansi 54.27 277 *e*P **P** **07 14 01.6 -1.6**
P30M Million Dollar 54.27 38 P **P** **07 14 05.2 +2.3**
baz=284
LEM Lembang 54.32 223 LR LR 07 37 32.9
comp=Z,406nm,20.7s,baz=5.5,slow=36
N31M Braeburn, Yuko 54.50 36 IAmb IAmb 07 14 08.4
comp=Z,69nm,0.9s
N31M IAMs_20 IAMs_20 07 37 31.8
comp=Z,796nm,20.0s
N31M Braeburn, Yuko 54.50 36 P **P** **07 14 06.6 +2.2**
baz=284,SNR=20
O30N Mendenhall 54.53 37 P **P** **07 14 05.9 +1.2**
baz=284,SNR=6.9
NIL Nilore 54.69 288 P **P** **07 14 07.1 +0.8**
NIL Nilore 54.69 288 IAMs_20 IAMs_20 07 40 13.6
comp=Z,682nm,19.0s
NIL Nilore 54.69 288 P **P** **07 14 07.1 +0.8**
NIL pmax pmax
comp=Z,92nm,0.6s
NIL MLR MLR
comp=Z,700nm,19.0s
NIL Nilore 54.69 288 P **P** **07 14 07.5 +1.3**
NIL Nilore 54.69 288 P **P** **07 14 07.1 +0.8**
NIL pP **pP** **07 14 16.8 -2.0**
GAR Garm 54.72 295 P **P** **07 14 06.9 +0.4**
PLBC Pleasant Camp 54.73 38 P **P** **07 14 08.1 +2.0**
baz=285,SNR=19
M31M Drury Creek, Y 54.96 35 P **P** **07 14 09.0 +1.2**
M31M IAmb IAmb 07 14 11.2
comp=Z,46nm,0.9s
M31M IAMs_20 IAMs_20 07 38 29.9
comp=Z,786nm,20.0s
M31M Drury Creek, Y 54.96 35 P **P** **07 14 09.6 +1.8**
baz=285,SNR=26
WHY Whitehorse 55.13 37 IAmb IAmb 07 14 12.9
comp=Z,47nm,0.9s
WHY Whitehorse 55.13 37 P **P** **07 14 11.0 +1.8**
baz=285,SNR=15
SKAG Skagway 55.24 38 IAmb IAmb 07 14 13.7
comp=Z,44nm,1.0s
SKAG Skagway 55.24 38 P **P** **07 14 11.6 +1.9**
baz=286
CHGR Chuyangaron 55.69 295 P **P** **07 14 14.0 +0.6**
CHGR Chuyangaron 55.69 295 P **P** **07 14 14.0 +0.6**
CHGR pmax pmax
comp=Z,500nm,0.7s
BESE Bessie Mountai 55.73 39 IAmb IAmb 07 14 17.1
comp=Z,109nm,1.2s
N32M Quiet Lake 55.84 36 P **P** **07 14 16.1 +1.9**
baz=286
SIT Sitka 55.94 41 P **P** **07 14 17.0 +2.2**
baz=288
P32M Atlin 56.00 38 P **P** **07 14 17.4 +2.1**
baz=287,SNR=15
NGP Nagpur 56.03 272 *e*P **P** **07 14 15.8 -0.2**
JIS Juneau Island 56.06 39 P **P** **07 14 18.0 +2.4**
JIS IAmb IAmb 07 14 19.6
comp=Z,88nm,1.0s
ARU Arti 56.20 318 P **P** **07 14 17.2 +0.5**
comp=Z,161nm,0.6s,baz=72,slow=3.7,SNR=199
ARU pP **pP** **07 14 29.0 -0.2**
comp=Z,44nm,0.5s,baz=24,slow=1.1,SNR=7.5
ARU LR LR 07 40 40.1
comp=Z,2μm,18.1s,baz=72,slow=38
comp=Z,161nm,0.6s
ARU Arti 56.20 318 P **P** **07 14 17.1 +0.5**
ARU Arti 56.20 318*c iP* **P** **07 14 17.1 +0.5**
ARU 07 15 14.7
ARU 07 16 18.2
ARU S **S** **07 22 06.2 +3.5**
ARU 07 23 59.5
ARU SS **SS** **07 25 53.4 +4.3**
ARU pmax pmax
comp=Z,139nm,0.6s
ARU Arti 56.20 318⇑ P **P** **07 14 17.2 +0.5**
ARU pP **pP** **07 14 29.1 -0.1**
ARU sP **sP** **07 14 33.7 -0.6**
P33M Teslin, Yukon 56.24 37 P **P** **07 14 19.2 +2.2**
P33M IAmb IAmb 07 14 20.9
comp=Z,84nm,1.0s
P33M IAMs_20 IAMs_20 07 36 48.9
comp=Z,1μm,21.0s
P33M Teslin, Yukon 56.24 37 P **P** **07 14 19.5 +2.4**
baz=287,SNR=37
BHPL Bhopal 56.26 275 *e*P **P** **07 14 15.8 -1.9**
AJM Ajmer 56.85 280 *e*P **P** **07 14 21.9 0.0**
C36M Paulatuk 56.97 25 IAmb IAmb 07 14 24.2
comp=Z,67nm,0.8s
C36M Paulatuk 56.97 25 P **P** **07 14 23.1 +1.2**
baz=289,SNR=9.9
VJD Vijayawada 57.26 266 *e*P **P** **07 14 25.6 +0.8**
FITZ Fitzroy Crossi 57.27 198 LR LR 07 40 26.1
comp=Z,184nm,19.4s,baz=22,slow=38
FITZ Fitzroy Crossi 57.27 198 P **P** **07 14 24.9 +0.2**
FITZ IAmb IAmb 07 14 44.0
comp=Z,169nm,1.9s
FITZ Fitzroy Crossi 57.27 198 P **P** **07 14 25.1 +0.5**
WB0 Warramunga Arr 57.31 188 P **P** **07 14 24.1 -0.8**
R33M Jennings River 57.39 37 P **P** **07 14 27.7 +2.4**
baz=289,SNR=16
KBL Kabul 57.47 291 P **P** **07 14 26.1 -0.2**
KBL Kabul 57.47 291 P **P** **07 14 26.1 -0.2**
KBL pmax pmax
comp=Z,133nm,1.1s
KBL Kabul 57.47 291 P **P** **07 14 26.3 0.0**
SNR=56
WRAB Tennant Creek 57.48 188 P **P** **07 14 24.9 -1.2**
WRAB Tennant Creek 57.48 188*c iP* **P** **07 14 25.2 -0.9**
WRAB pmax pmax
comp=Z,82nm,1.3s
WRAB Tennant Creek 57.48 188 P **P** **07 14 25.6 -0.5**
WRAB Tennant Creek 57.48 188 P **P** **07 14 25.5 -0.6**
WRAB pP **pP** **07 14 36.0 -2.7**
WR0 Warramunga Arr 57.49 188 P **P** **07 14 25.2 -0.9**
WR0 IAmb IAmb 07 14 26.0
comp=Z,51nm,0.6s
WB2 Warramunga Arr 57.49 188 P **P** **07 14 25.4 -0.8**
WB2 IAmb IAmb 07 14 26.4
comp=Z,50nm,0.7s
WRA Warramunga Arr 57.49 188 P **P** **07 14 25.4 -0.7**
comp=Z,42nm,0.5s,baz=5.2,slow=7.4,SNR=232
WRA pP **pP** **07 14 36.4 -2.3**
comp=Z,20nm,0.6s,baz=2.0,slow=7.4,SNR=8.5
WRA LR LR 07 38 23.7
comp=Z,300nm,19.9s,baz=356,slow=35
comp=Z,42nm,0.5s
WRA Warramunga Arr 57.49 188 P **P** **07 14 24.5 -1.7**
WRA Warramunga Arr 57.49 188 *i* P **P** **07 14 25.5 -0.7**
WRA pmax pmax
comp=Z,43nm,0.5s
CRAG Craig 57.62 42 P **P** **07 14 28.3 +1.6**
baz=290
WRAK Wrangell Islan 57.70 41 P **P** **07 14 27.1 -0.2**
WRAK IAmb IAmb 07 14 31.0
comp=Z,32nm,0.8s
WRAK Wrangell Islan 57.70 41 IAMs_20 IAMs_20 07 37 02.4
comp=Z,703nm,20.0s
QIS Mount Isa 57.72 182 P **P** **07 14 27.6 -0.2**
AB31 Akbulak array 57.84 310 *i* P **P** **07 14 28.3 -0.1**
ABKAR Akbulak array 57.84 310 P **P** **07 14 28.1 -0.3**
AKL Akola 57.89 273 *e*P **P** **07 14 29.3 +0.1**
DLBC Dease Lake 58.17 38 LR LR 07 38 39.2
comp=Z,355nm,21.6s,baz=304,slow=35
DLBC Dease Lake 58.17 38 P **P** **07 14 31.1 +0.3**
DLBC IAmb IAmb 07 14 35.0
comp=Z,70nm,1.1s
DLBC Dease Lake 58.17 38 P **P** **07 14 33.5 +2.7**
baz=290,SNR=27
HYBB Hyderabad (bro 58.43 268 *e*P **P** **07 14 33.4 +0.3**
HYBB *ep*P **pP** **07 14 43.8 -1.8**
HYBB *ePcP* **PcP** **07 15 23.8 +0.4**
HYBB *ePP* **PP** **07 16 42.6 0.0**
HYBB *e*ScS **ScS** **07 24 21.4 +2.1**
AKTO Aktyubinsk 58.56 312 P **P** **07 14 33.4 -0.1**
comp=Z,29nm,0.8s,baz=78,slow=7.2,SNR=66
AKTO LR LR 07 40 59.9
comp=Z,1μm,19.0s,baz=66,slow=37
comp=Z,29nm,0.8s
T35M Bob Quinn 58.58 40 P **P** **07 14 36.3 +2.8**
baz=291,SNR=24
ALE Alert 59.69 4 P **P** **07 14 41.9 +1.0**
ALE pP **pP** **07 14 55.1 +1.7**
EUNU Eureka 59.76 9 P **P** **07 14 41.9 +0.5**
GRNB Grenville Isla 59.92 43 P **P** **07 14 44.4 +1.6**
GRNB IAmb IAmb 07 14 46.0
comp=Z,99nm,1.6s
KIRV Kirov 60.05 323 LR LR 07 42 57.5
comp=Z,667nm,19.0s,baz=66,slow=38
KIRV Kirov 60.05 323*c iP* **P** **07 14 44.1 +0.6**
SPA0 Spitsbergen Ar 60.17 349 *e*P **P** **07 14 45.1 +0.9**
SPA0 IAmb IAmb 07 14 59.0
comp=Z,25nm,0.9s
SPB2 Spitsbergen Ar 60.17 349 IAmb IAmb 07 15 31.3
comp=Z,56nm,1.1s
SPITS Spitsbergen Ar 60.17 349 LR LR 07 43 45.2
comp=Z,715nm,19.6s,baz=3.5,slow=39
KBS Kingsbay 60.30 350 P **P** **07 14 46.2 +1.2**
KBS Kingsbay 60.30 350 IAMs_20 IAMs_20 07 44 28.3
comp=Z,644nm,20.0s
KBS Kingsbay 60.30 350*c iP* **P** **07 14 46.1 +1.2**
KBS pmax pmax
comp=Z,91nm,1.0s
KBS Kingsbay 60.30 350 *i* P **P** **07 14 45.1 +0.1**
KBS Kingsbay 60.30 350 *e*P **P** **07 14 46.3 +1.4**
KBS IAmb IAmb 07 14 47.0
comp=Z,72nm,0.8s
KBS Kingsbay 60.30 350 P **P** **07 14 46.1 +1.2**
KBS pP **pP** **07 14 59.5 +1.9**
KBS sP **sP** **07 15 05.8 +3.1**
PRGR Permogore 60.54 327⇑ *i*P **P** **07 14 47.5 +0.6**
PRGR *e**SP **pP** **07 14 59.5 0.0**
PRGR *e*S **S** **07 23 00.7 +1.6**
NOR Nord 60.66 356 *i* P **P** **07 14 48.2 +0.8**
NOR IAmb IAmb 07 15 01.9
comp=Z,47nm,0.9s
HSPB Hornsund (broa 61.10 348 *e*P **P** **07 14 51.5 +1.1**
HSPB *ep*P **pP** **07 15 04.7 +1.6**
HSPB *e*L L 07 44 58.6
comp=Z,763nm,20.4s
HSPB Hornsund (broa 61.10 348 *e*P **P** **07 14 51.7 +1.3**
AS31 Alice Springs 61.22 188 P **P** **07 14 51.6 -0.3**
ASAR Alice Springs 61.22 188 P **P** **07 14 51.5 -0.3**
comp=Z,21nm,0.8s,baz=18,slow=6.2,SNR=153
ASAR LR LR 07 40 57.3
comp=Z,372nm,20.0s,baz=6.0,slow=36
ASAR PKP2bc **P'P'ab** **07 44 16.4 -3.1**
comp=Z,1.9nm,0.8s,baz=171,slow=1.8,SNR=13
comp=Z,21nm,0.8s
ASAR Alice Springs 61.22 188 P **P** **07 14 51.3 -0.5**
BBB Bella Bella 61.62 44 LR LR 07 39 01.7
comp=Z,563nm,20.9s,baz=291,slow=33
BBB Bella Bella 61.62 44 P **P** **07 14 54.2 -0.1**
BBB IAmb IAmb 07 14 57.1
comp=Z,69nm,1.4s
LVZ Lovozero 61.83 336 P **P** **07 14 55.5 -0.1**
LVZ Lovozero 61.83 336*de*P **P** **07 14 56.0 +0.4**
LVZ pmax pmax
comp=Z,127nm,2.5s
LVZ Lovozero 61.83 336 P **P** **07 14 55.5 -0.1**
MBWA Marble Bar 61.84 203 P **P** **07 14 56.0 -0.1**
MBWA Marble Bar 61.84 203 P **P** **07 14 56.3 +0.2**
MBWA Marble Bar 61.84 203 P **P** **07 14 56.0 -0.1**
MBWA Marble Bar 61.84 203 P **P** **07 14 56.0 -0.1**
MBWA sP **pP** **07 15 10.7 +2.0**
BJO1 Bjornoya 62.13 345 *eP* **P** **07 14 58.3 +0.9**
RES Resolute Bay 62.16 15 LR LR 07 43 31.3
comp=Z,401nm,21.9s,baz=329,slow=37
RES Resolute Bay 62.16 15 P **P** **07 14 58.3 +0.7**
RES IAmb IAmb 07 14 59.1
comp=Z,55nm,0.9s
RES Resolute Bay 62.16 15 P **P** **07 14 58.3 +0.7**
RES pmax pmax
comp=Z,55nm,1.0s
PSA00 Pilbara Seismi 62.20 203 P **P** **07 14 58.2 -0.2**
PSA00 IAmb IAmb 07 14 59.3
comp=Z,49nm,1.2s
HOLB Holberg 62.28 46 P **P** **07 14 58.9 0.0**
APA Apatity 62.41 336⇓ *i*P **P** **07 14 58.1 -1.3**
APA *i* 07 15 15.0
APA *i* S **S** **07 23 17.0 -5.6**
APA *i* SS **SS** **07 27 25.0 -1.0**
APA pmax pmax
comp=Z,59nm,0.8s
APA MLR MLR
comp=Z,2μm,18.0s
PALK Pallekele 62.66 258 P **P** **07 15 01.8 -0.1**
comp=Z,30nm,1.0s,baz=150,slow=5.6,SNR=6.9
PALK LR LR 07 43 36.2
comp=Z,806nm,21.2s,baz=150,slow=37
comp=Z,30nm,1.0s
PALK Pallekele 62.66 258 P **P** **07 15 02.1 +0.1**
PALK IAmb IAmb 07 15 03.4
comp=Z,81nm,1.3s
PALK Pallekele 62.66 258 IAMs_20 IAMs_20 07 43 02.7
comp=Z,897nm,20.0s
PALK Pallekele 62.66 258⇓ *e*P **P** **07 15 02.0 +0.1**
PALK pmax pmax
comp=Z,85nm,1.4s
PALK Pallekele 62.66 258 P **P** **07 15 02.3 +0.4**
PALK Pallekele 62.66 258 P **P** **07 15 01.8 -0.1**
PALK sP **sP** **07 15 18.3 -1.4**
TLCB Telegraph Cove 63.06 46 P **P** **07 14 04.9 +1.0**
KEV Kevo 63.14 339 P **P** **07 15 04.9 +0.7**
KEV IAmb IAmb 07 15 05.9
comp=Z,42nm,0.9s
KEV Kevo 63.14 339 P **P** **07 15 04.9 +0.7**
KEV pmax pmax
comp=Z,42nm,0.9s
KEV MLR MLR
comp=Z,1μm,19.0s
KEV Kevo 63.14 339 P **P** **07 15 04.8 +0.6**
KEV pP **pP** **07 15 17.9 +1.0**
GOA Goa 63.26 269 *e*P **P** **07 15 06.2 +0.4**
GOA IAmb IAmb 07 15 07.9
comp=Z,65nm,0.7s
GOA *i* x **pP** **07 15 20.5 +2.0**
YKA Yellowknife Ar 63.35 30 P **P** **07 15 06.7 +1.0**
comp=Z,22nm,0.8s,baz=304,slow=7.4,SNR=118
YKA LR LR 07 42 25.5
comp=Z,441nm,21.9s,baz=284,slow=36
comp=Z,22nm,0.8s
YKA Yellowknife Ar 63.35 30 P **P** **07 15 06.5 +0.8**
WRKA Warakurna 63.41 194 P **P** **07 15 06.8 +0.3**
HAMF Hammerfest 63.51 341 *e*P **P** **07 15 06.6 0.0**
HAMF IAmb IAmb 07 15 07.2
comp=Z,36nm,0.7s
KLMR Klimovskoe 63.53 328 *e*P **P** **07 15 04.7 -2.1**
KLMR *e* 07 17 24.9
KLMR *e*S **S** **07 23 38.1 +1.3**
KLMR pmax pmax
comp=Z,58nm,0.9s
KLMR MLR MLR
comp=Z,1μm,20.0s
KLMR Klimovskoe 63.53 328 *e*P **P** **07 15 04.8 -2.1**
KLMR AMP 07 15 21.8
comp=Z,58nm,0.9s
KLMR *e*PP **PP** **07 17 25.0 -1.5**
KLMR *e*S **S** **07 23 38.2 +1.4**
KLMR *e*S **S** **07 23 38.2 +1.4**
KLMR LQ LQ 07 37 50.5
KLMR LQ LQ 07 37 50.5
KLMR LR LR 07 43 18.6
KLMR AMP 07 44 56.1
comp=Z,1μm,20.1s
NOUC Port Laguerre 63.60 154 P **P** **07 15 09.1 +1.3**
NOUC pP **pP** **07 15 19.9 -0.5**
NOUC sP **sP** **07 15 26.0 +0.6**
DZM Mont Dzumac 63.62 154 LR LR 07 40 05.6
comp=Z,932nm,21.0s,baz=10.0,slow=33
DZM Mont Dzumac 63.62 154 *e*LR LR 07 34 08.0
comp=Z,2μm,21.9s
DZM Mont Dzumac 63.62 154 P **P** **07 15 09.4 +1.4**
DZM Mont Dzumac 63.62 154 P **P** **07 15 10.0 +2.0**
DZM sP **sP** **07 15 26.0 +0.3**
BELG Belogornoye 63.65 317 LR LR 07 44 50.0
comp=Z,1μm,18.2s,baz=65,slow=38
BELG Belogornoye 63.65 317*c iP* **P** **07 15 08.0 +0.2**
BELG pmax pmax
comp=Z,19nm,1.1s
ARA0 ARCESS Array S 63.69 339 *e*P **P** **07 15 08.7 +0.8**
ARA0 IAmb IAmb 07 15 09.8
comp=Z,63nm,1.2s
ARCES ARCESS Array B 63.69 339 P **P** **07 15 08.5 +0.6**
comp=Z,28nm,0.8s,baz=54,slow=7.5,SNR=157
ARCES pP **pP** **07 15 20.8 +0.2**
comp=Z,21nm,0.9s,baz=40,slow=9.6,SNR=7.7
ARCES LR LR 07 47 54.0
comp=Z,808nm,18.1s,baz=52,slow=41
comp=Z,28nm,0.8s
ARCES ARCESS Array B 63.69 339 P **P** **07 15 08.4 +0.6**
ARCES IAmb IAmb 07 15 09.6
comp=Z,43nm,1.1s
YATNC Mamie plateau, 63.77 154 P **P** **07 15 10.5 +1.6**
GEYT Alibeck 63.83 299 P **P** **07 15 09.9 +0.6**
comp=Z,28nm,0.6s,baz=90,slow=0.3,SNR=25
GEYT pP **pP** **07 15 23.1 +1.0**
comp=Z,62nm,0.8s,baz=48,slow=2.2,SNR=14
GEYT LR LR 07 45 39.7
comp=Z,599nm,18.2s,baz=67,slow=38
comp=Z,28nm,0.6s
GEYT Alibeck 63.83 299 P **P** **07 15 09.3 -0.1**
GYA0 ALIBECK ARRAY 63.83 299 P **P** **07 15 09.9 +0.6**
GYA0B ALIBECK ARRAY 63.83 299 P **P** **07 15 09.9 +0.6**
GYA0B IAmb IAmb 07 15 23.8
comp=Z,53nm,0.8s
RMQ Roma 63.93 173 P **P** **07 15 10.3 +0.4**
PCHI Peechi 64.12 263⇑ *e*P **P** **07 15 11.5 0.0**
CBB Campbell River 64.14 46 P **P** **07 15 12.7 +1.6**
TULEG Thule 64.67 8 P **P** **07 15 14.7 +0.5**
TULEG IAmb IAmb 07 15 15.3
comp=Z,66nm,0.9s
TULEG Thule 64.67 8 *i* P **P** **07 15 14.0 -0.2**
MSVF Nonsavu 64.69 141 LR LR 07 40 01.6
comp=Z,729nm,19.7s,baz=349,slow=33
MSVF Nonsavu 64.69 141 P **P** **07 15 16.5 +1.4**
MSVF IAmb IAmb 07 15 18.4
comp=Z,54nm,1.1s
MSVF Nonsavu 64.69 141*de*P **P** **07 15 17.1 +2.0**
MSVF pmax pmax
comp=Z,46nm,1.1s
MSVF Nonsavu 64.69 141 P **P** **07 15 17.3 +2.2**
MSVF pP **pP** **07 15 27.6 -0.1**
MSVF sP **sP** **07 15 33.0 +0.2**
JETT Jettan, Norway 65.07 341 *e*P **P** **07 15 17.4 +0.5**
JETT IAmb IAmb 07 15 18.1
comp=Z,49nm,1.0s
GIRL Giralia 65.11 208 P **P** **07 15 17.8 +0.2**
OOD Oodnadatta 65.13 186 P **P** **07 15 18.3 +0.6**
DAG Danmarks Havn 65.39 355 *i* P **P** **07 15 19.0 +0.2**
DAG IAmb IAmb 07 15 19.9
comp=Z,65nm,0.8s
TRO Tromso 65.40 341 *e*P **P** **07 15 19.5 +0.5**
TRO IAmb IAmb 07 15 33.0
comp=Z,46nm,0.9s
CLRS Cowichan Lake 65.42 46 P **P** **07 15 20.2 +0.7**
LLLB Lillooet 65.81 44 P **P** **07 15 23.0 +1.0**
LLLB IAmb IAmb 07 15 24.9
comp=Z,43nm,0.9s
PGC Sidney 65.90 46 P **P** **07 15 23.1 +0.6**
NLWA Neilton Lookou 66.28 48 P **P** **07 15 26.5 +1.3**
NLWA IAmb IAmb 07 15 28.9
comp=Z,86nm,1.1s
NLWA IAMs_20 IAMs_20 07 38 03.6
comp=Z,743nm,22.0s
VALR Valaam 66.78 331*c iP* **P** **07 15 28.1 +0.2**
VALR pmax pmax
comp=Z,76nm,0.7s
E03A Lebam 66.89 48 P **P** **07 15 31.1 +2.1**
E03A IAmb IAmb 07 15 32.5
comp=Z,70nm,1.1s
MOS Moscow 67.05 323 *eP* **P** **07 15 26.8 -3.0**
MOS *e* 07 15 41.4
MOS *e*S **S** **07 24 18.3 -1.8**
MOS *e* 07 24 40.0
MOS *e* 07 25 19.9
MOS pmax pmax
comp=Z,300nm,1.8s
MOS pmax pmax
comp=Z,112nm,1.4s
MOS MLR MLR
comp=Z,1μm,19.0s
MEEK Meekatharra 67.32 202 P **P** **07 15 31.7 -0.1**
VRH Novokhopyorsk 67.42 318 *eP* **P** **07 15 31.9 -0.3**
VRH *e**SP **pP** **07 15 44.6 -0.4**
VRH pmax pmax
comp=Z,90nm,0.6s
VRH MLR MLR
comp=Z,1μm,16.0s
D05A Enumclaw 67.49 47 IAmb IAmb 07 15 53.6
comp=Z,81nm,1.2s
STEI Steigen 67.56 341 *eP* **P** **07 15 33.3 +0.6**

STEI IAmb IAmb 07 15 33.7
comp=Z,40nm,0.7s
LCRK Leigh Creek 67.61 183 P **P** **07 15 34.0 +0.5**
MULG Mulgathing 67.75 187 P **P** **07 15 34.8 +0.5**
G03D McMinnville, O 67.75 50 IAmb IAmb 07 16 00.0
comp=Z,54nm,1.1s
G03D McMinnville, O 67.75 50 P **P** **07 15 36.1 +1.7**
baz=301
LOF Lofoten 67.85 341 *e*P **P** **07 15 35.6 +1.0**
DBG Daneborg 67.88 355 *i* P **P** **07 15 32.8 -1.9**
DBG IAmb IAmb 07 15 47.9
comp=Z,64nm,1.5s
F04A Amboy 67.89 49 P **P** **07 15 37.1 +1.8**
F04A IAmb IAmb 07 15 38.3
comp=Z,71nm,0.9s
OBN Obninsk 67.90 323 LR LR 07 48 48.5
comp=Z,180nm,18.6s,baz=52,slow=39
OBN Obninsk 67.90 323*c i* P **P** **07 15 35.3 +0.2**
OBN pmax pmax
comp=Z,43nm,0.9s
OBN MLR MLR
comp=Z,1µm,17.0s
NGCH Negor - Chabah 67.91 286 P **P** **07 15 37.4 +1.7**
FAUS Fauske 67.94 340 *e*P **P** **07 15 35.8 +0.6**
FAUS IAmb IAmb 07 15 36.4
comp=Z,77nm,0.7s
PUL Pulkovo 67.95 329⇑ *e*P **P** **07 15 35.6 +0.2**
PUL pmax pmax
comp=Z,73nm,0.7s
I02E Swisshome, OR 67.97 51 P **P** **07 15 38.5 +2.7**
I02E IAmb IAmb 07 16 06.0
comp=Z,84nm,1.2s
I02E Swisshome, OR 67.97 51 P **P** **07 15 38.4 +2.7**
baz=301
COR Corvallis 68.05 50 P **P** **07 15 38.2 +1.9**
COR Corvallis 68.05 50 P **P** **07 15 38.2 +1.9**
COR pmax pmax
comp=Z,104nm,0.9s
COR Corvallis 68.05 50 P **P** **07 15 38.8 +2.5**
COR pP **pP** **07 15 50.5 +1.4**
COR sP **sP** **07 15 56.5 +2.5**
LPSR Galich'ya Gora 68.13 320 *e*P **P** **07 15 36.8 +0.2**
LPSR *e**SP **pP** **07 15 49.7 +0.2**
LPSR pmax pmax
comp=Z,70nm,0.7s
LPSR MLR MLR
comp=Z,2µm,19.0s
ARMA Armidale 68.14 171 P **P** **07 15 36.8 -0.2**
LTY Liberty 68.22 47 P **P** **07 15 39.0 +1.5**
MAK Makhachkala 68.38 308 *e*P **P** **07 15 37.4 -1.0**
MAK *e*S **S** **07 24 33.5 -2.8**
MAK pmax pmax
comp=Z,242nm,1.1s
MAK MLR MLR
comp=Z,808nm,16.0s
B08A Colville Reser 68.40 45 IAmb IAmb 07 15 41.3
comp=Z,51nm,1.3s
J01E Myrtle Point 68.40 52 P **P** **07 15 40.5 +2.0**
baz=301
H04D Lebanon 68.43 50 IAmb IAmb 07 15 46.2
comp=Z,62nm,1.2s
H04D IAMs_20 IAMs_20 07 43 49.4
comp=Z,482nm,18.0s
H04D Lebanon 68.43 50 P **P** **07 15 40.7 +2.0**
baz=302,SNR=8.2
I03D Drain, OR 68.49 51 P **P** **07 15 41.3 +2.3**
baz=302,SNR=11
VORR Voronezh 68.50 319 *e*P **P** **07 15 40.4 +1.5**
VORR pmax pmax
comp=Z,90nm,0.4s
FIA1 FINESS Array S 68.56 332 P **P** **07 15 39.0 -0.2**
FINES FINESS Array B 68.56 332 P **P** **07 15 39.5 +0.4**
comp=Z,68nm,0.7s,baz=56,slow=7.8,SNR=170
FINES pP **pP** **07 15 51.0 -1.0**
comp=Z,69nm,0.8s,baz=38,slow=10,SNR=16
FINES LR LR 07 48 01.3
comp=Z,920nm,18.7s,baz=42,slow=38
comp=Z,68nm,0.7s
FINES FINESS Array B 68.56 332 P **P** **07 15 39.3 +0.2**
CMSA Cobar Meteorol 68.72 176 P **P** **07 15 41.7 +1.3**
VSR Storozhevoye 68.77 319 *e*P **P** **07 15 40.7 0.0**
VSR *e**SP **pP** **07 15 53.6 +0.1**
VSR pmax pmax
comp=Z,70nm,0.6s
VSR MLR MLR
comp=Z,1µm,15.0s
K02D Willamette Mer 68.81 52 P **P** **07 15 42.9 +1.7**
baz=302,SNR=7.0
HMDM Hanimaadhoo 68.86 262 P **P** **07 15 42.8 +1.0**
G05D Wamic, OR 68.91 49 P **P** **07 15 43.5 +1.8**
baz=302,SNR=13
STKA Stephens Creek 68.96 180 P **P** **07 15 42.2 +0.4**
comp=Z,42nm,0.8s,baz=347,slow=7.0,SNR=73
STKA PKP2ab **P'P'ab** **07 43 53.2 +4.2**
comp=Z,1.8nm,0.7s,baz=152,slow=10,SNR=3.3
STKA LR LR 07 45 53.8
comp=Z,258nm,21.9s,baz=9.2,slow=36
comp=Z,42nm,0.8s
STKA Stephens Creek 68.96 180 P **P** **07 15 41.7 -0.2**
STKA Stephens Creek 68.96 180*c i* P **P** **07 15 41.9 0.0**
STKA Stephens Creek 68.96 180 P **P** **07 15 42.3 +0.4**
I04A Tendick Farm, 69.01 50 P **P** **07 15 44.5 +2.1**
baz=302,SNR=19
FORT Forrest 69.05 193 P **P** **07 15 42.9 +0.4**
MOR8 Moi Rana 69.06 340 *e*P **P** **07 15 41.4 -0.8**
MOR8 IAmb IAmb 07 15 42.1
comp=Z,84nm,0.7s
KSXB Camp Six Broad 69.14 53 IAmb IAmb 07 15 46.3
comp=Z,66nm,1.1s
KONS Konsvik 69.17 340 *e*P **P** **07 15 43.2 +0.3**
L02F Cave Junction 69.18 52 P **P** **07 15 45.5 +2.1**
baz=302,SNR=5.2
C09A Chrisman Ranch 69.30 45 P **P** **07 15 45.2 +1.2**
C09A IAmb IAmb 07 15 46.2
comp=Z,39nm,1.0s
HUMO Hull Mountain 69.30 52 P **P** **07 15 45.7 +1.5**
HUMO IAMs_20 IAMs_20 07 38 44.7
comp=Z,650nm,22.0s
GROC Groznyy 69.31 309 *e*P **P** **07 15 44.4 +0.2**
GROC *e* 07 16 08.1
GROC pmax pmax
comp=Z,89nm,0.8s
HAWA Hanford 69.34 47 IAMs_20 IAMs_20 07 39 54.5
comp=Z,487nm,22.0s
I05D Terrebonne, OR 69.38 50 P **P** **07 15 46.1 +1.4**
baz=302,SNR=17
F07A Phinny Hill Vi 69.38 48 IAmb IAmb 07 15 47.7
comp=Z,52nm,0.8s
J04D Umpqua Nationa 69.49 51 IAMs_20 IAMs_20 07 44 13.6
comp=Z,539nm,19.0s
J04D Umpqua Nationa 69.49 51 P **P** **07 15 47.6 +2.0**
baz=302,SNR=18
NEW Newport 69.69 44 LR LR 07 42 56.6
comp=Z,414nm,20.9s,baz=301,slow=33
NEW Newport 69.69 44 P **P** **07 15 46.9 +0.4**
NEW Newport 69.69 44 IAMs_20 IAMs_20 07 40 58.6
comp=Z,551nm,22.0s
NEW Newport 69.69 44 P **P** **07 15 46.9 +0.4**
NEW pmax pmax
comp=Z,28nm,0.9s
NEW Newport 69.69 44 P **P** **07 15 47.5 +1.0**
baz=304,SNR=32
KMPM Mount Pierce 69.73 54 IAmb IAmb 07 15 50.7
comp=Z,49nm,1.1s
KHMM Horse Mountain 69.73 54 IAmb IAmb 07 15 50.2
comp=Z,35nm,0.9s
JMIC Jan Mayen 69.78 350 LR LR 07 46 26.5
comp=Z,147nm,21.3s,baz=57,slow=36
PINE Pine Mountain 69.91 50 P **P** **07 15 49.9 +1.8**
L04D Klamath Falls 69.92 52 IAMs_20 IAMs_20 07 40 43.0
comp=Z,642nm,22.0s
L04D Klamath Falls 69.92 52 P **P** **07 15 50.1 +2.0**
baz=303,SNR=23
YBH Yreka Blue Hor 69.93 52 LR LR 07 41 00.2
comp=Z,398nm,21.7s,baz=304,slow=31
YBH Yreka Blue Hor 69.93 52 P **P** **07 15 50.0 +1.9**
YBH IAmb IAmb 07 15 51.6
comp=Z,40nm,1.1s
YBH Yreka Blue Hor 69.93 52 P **P** **07 15 50.0 +1.9**
YBH pmax pmax
comp=Z,40nm,1.1s
MEF Metsahovi 69.98 332 *e*P **P** **07 15 48.6 +0.6**
GOF Gofitskoye 69.98 312⇑ *e*P **P** **07 15 48.9 +0.6**
GOF pmax pmax
comp=Z,181nm,0.9s
J05D Fort Rock, OR 70.01 50 P **P** **07 15 50.6 +2.0**
baz=303,SNR=42
K04D Chiloquin, OR 70.05 51 P **P** **07 15 50.5 +1.7**
baz=303,SNR=8.6
E09A Wood Farm, Sta 70.08 46 P **P** **07 15 49.5 +0.6**
E09A IAmb IAmb 07 15 51.8
comp=Z,48nm,1.0s
BBOO Buckleboo 70.08 185 P **P** **07 15 48.9 +0.1**
BBOO IAmb IAmb 07 15 50.0
comp=Z,62nm,0.9s
BBOO Buckleboo 70.08 185 P **P** **07 15 49.4 +0.6**
VSU Vasula 70.21 330*c i* P **P** **07 15 49.8 +0.4**
VSU pmax pmax
comp=Z,125nm,1.0s
VSU Vasula 70.21 330 *e*P **P** **07 15 50.3 +0.9**
SUMG Summit 70.28 0 P **P** **07 15 51.1 +1.0**
SUMG IAmb IAmb 07 15 53.0
comp=Z,50nm,0.9s
SUMG Summit 70.28 0 P **P** **07 15 51.1 +1.0**
SUMG pmax pmax
comp=Z,50nm,0.9s
SUMG Summit 70.28 0 *i* P **P** **07 15 51.5 +1.3**
SUMG IAmb IAmb 07 15 52.2
comp=Z,68nm,1.1s
G08A Pilot Rock 70.28 48 P **P** **07 15 51.0 +0.7**
MORW Morawa 70.39 204 IAmb IAmb 07 15 51.9
comp=Z,94nm,1.3s
RAF Rauma 70.40 333 *e*P **P** **07 15 51.0 +0.5**
KCPM Cahto Peak 70.47 55 IAmb IAmb 07 15 54.4
comp=Z,40nm,0.9s
NCK Nalchik 70.51 310⇓ *e*P **P** **07 15 52.1 +0.5**
NCK pmax pmax
comp=Z,31nm,0.9s
HTT Hallett 70.55 182 P **P** **07 15 52.0 +0.2**
ZEI Tsey 70.71 309 *e*P **P** **07 15 52.1 -0.9**
ZEI pmax pmax
comp=Z,38nm,0.6s
KVAR Kislovodsk Arr 70.80 311 LR LR 07 49 06.8
comp=Z,782nm,19.5s,baz=279,slow=38
KBZ Khabaz 70.80 311 P **P** **07 15 54.0 +0.7**
comp=Z,51nm,0.9s,baz=38,slow=3.6,SNR=50
KBZ pP **pP** **07 16 06.8 +0.7**
comp=Z,100nm,0.9s,baz=24,slow=5.1,SNR=24
KBZ LR LR 07 51 49.2
comp=Z,1µm,18.3s,baz=50,slow=40
comp=Z,51nm,0.9s
KBZ Khabaz 70.80 311*c i* P **P** **07 15 53.5 +0.2**
KBZ pmax pmax
comp=Z,64nm,1.0s
KIV Kislovodsk 70.80 311⇑ P **P** **07 15 54.2 +0.7**
KIV Kislovodsk 70.80 311 *i* P **P** **07 15 54.5 +1.0**
KIV Kislovodsk 70.80 311 P **P** **07 15 52.8 -0.7**
KIV IAMs_20 IAMs_20 07 50 48.4
comp=Z,559nm,20.0s
KIV Kislovodsk 70.80 311 *e*P **P** **07 15 54.1 +0.7**
KIV *e*S **S** **07 25 06.0 +0.9**
KIV *e*SS **SS** **07 29 39.8 +2.6**
KIV pmax pmax
comp=Z,132nm,1.1s
KIV pmax pmax
comp=Z,60nm,4.2s
KIV MLR MLR
comp=Z,491nm,18.0s
KIV Kislovodsk 70.80 311 P **P** **07 15 55.2 +1.7**
KIV Kislovodsk 70.80 311 *i* P **P** **07 15 54.1 +0.7**
SNR=27
KIV Kislovodsk 70.80 311 P **P** **07 15 54.2 +0.7**
KIV pP **pP** **07 16 07.6 +1.2**
WSAR Wadi Sarin 70.97 285 LR LR 07 52 38.3
comp=Z,676nm,18.3s,baz=87,slow=41
WSAR Wadi Sarin 70.97 285 P **P** **07 15 55.4 +0.7**
NSS Namsos 70.98 339 *e*P **P** **07 15 54.2 +0.2**
NSS IAmb IAmb 07 16 07.9
comp=Z,58nm,1.1s
WALA Waterton Lakes 70.99 42 P **P** **07 15 56.0 +1.4**
WALA IAmb IAmb 07 15 57.3
comp=Z,41nm,0.8s
ONI Oni 71.09 309 *e*P **P** **07 15 56.5 +1.3**
MTSE Matsula 71.20 331 *e*P **P** **07 15 55.8 +0.4**
SHME Shamm 71.33 289 P **P** **07 15 57.5 +0.7**
SNR=20
SHME Shamm 71.33 289 *i* P **P** **07 15 57.0 +0.2**
SNR=12
BMO Blue Mountains 71.50 47 IAmb IAmb 07 16 00.5
comp=Z,42nm,0.8s
BMO IAMs_20 IAMs_20 07 40 57.5
comp=Z,565nm,22.0s
JTMT Jette 71.55 44 P **P** **07 15 58.9 +0.9**
JTMT IAmb IAmb 07 16 00.9
comp=Z,44nm,0.8s
BLDU Ballidu 71.62 203 P **P** **07 15 58.5 +0.3**
GNI Garni 71.64 307 LR LR 07 49 58.2
comp=Z,818nm,20.3s,baz=66,slow=38
GNI Garni 71.64 307 *e*P **P** **07 15 59.2 +0.6**
GNI Garni 71.64 307 P **P** **07 15 60.0 +1.3**
GNI IAmb IAmb 07 16 21.9
comp=Z,69nm,0.9s
GNI Garni 71.64 307*ce*P **P** **07 15 59.6 +1.0**
GNI pmax pmax
comp=Z,36nm,1.7s
GNI Garni 71.64 307 P **P** **07 16 00.0 +1.3**
GNI Garni 71.64 307 P **P** **07 15 59.7 +1.0**
J08A Circle Bar Ran 71.65 49 IAmb IAmb 07 16 01.9
comp=Z,62nm,1.0s
MASF Masafi 71.69 288 P **P** **07 15 59.9 +0.9**
SNR=16
MSFE Esma-Masafi 71.70 288 *i* P **P** **07 15 59.7 +0.7**
SNR=16
AKH Akhalkalaki 71.72 308 *e*P **P** **07 16 00.1 +0.9**
SCO Scoresbysund 71.73 354 *i* P **P** **07 15 57.8 -0.6**
SCO IAmb IAmb 07 15 59.9
comp=Z,39nm,1.1s
MCCM Marconi Confer 71.77 56 IAMs_20 IAMs_20 07 40 14.0
comp=Z,677nm,20.0s
UOSS Minazif 71.89 288 P **P** **07 16 00.3 +0.1**
UOSS IAmb IAmb 07 16 14.8
comp=Z,81nm,1.1s
UOSS Minazif 71.89 288 P **P** **07 16 00.6 +0.4**
UOSS Minazif 71.89 288 *i* P **P** **07 16 00.1 -0.1**
SNR=35
UOSS Minazif 71.89 288 P **P** **07 16 00.2 -0.1**
UMQ Umm Al-Quwin 71.98 289 P **P** **07 16 01.4 +0.7**
WVOR Wild Horse Val 72.07 50 P **P** **07 16 02.1 +0.9**
WVOR IAMs_20 IAMs_20 07 41 19.8
comp=Z,537nm,22.0s
WVOR Wild Horse Val 72.07 50 P **P** **07 16 02.1 +0.9**
WVOR pmax pmax
comp=Z,45nm,1.2s
SOHO SOHO 72.08 287 P **P** **07 16 01.8 +0.5**
SOHO SOHO 72.08 287 *i* P **P** **07 16 01.3 0.0**
SNR=16
PLID Pearl Lake 72.12 47 IAmb IAmb 07 16 04.0
comp=Z,102nm,1.8s
PLID IAMs_20 IAMs_20 07 37 11.1
comp=Z,777nm,22.0s
ASHO Ashiyiah 72.14 288 P **P** **07 16 02.3 +0.5**
SNR=21
ASHO Ashiyiah 72.14 288 *i* P **P** **07 16 01.9 +0.1**
SNR=30
KLBR Kellerberrin 72.22 201 P **P** **07 16 02.2 +0.4**
NAZ Nazwa, Dubai 72.28 288 P **P** **07 16 03.2 +0.7**
SNR=8.7
NAZ Nazwa, Dubai 72.28 288 P **P** **07 16 02.5 0.0**
MSO Missoula 72.28 44 P **P** **07 16 03.2 +0.9**
baz=306,SNR=32
MNK Minsk 72.28 326 *i* P **P** **07 16 02.3 +0.3**
MNK *i* 07 16 15.8
MNK *i* 07 18 40.8
MNK *i* PPP PPP 07 20 25.2
MNK *i* S **S** **07 25 23.8 +2.3**
MNK pmax pmax
comp=E,8.0nm,0.9s
MNK pmax pmax
comp=Z,72nm,0.9s
MNK MLR MLR
comp=Z,862nm,18.0s
MNK Minsk 72.28 326 *i* P **P** **07 16 02.3 +0.3**
comp=E,8.0nm,0.9s
MNK *i* P **P** **07 16 02.3 +0.3**
MNK *i* P **P** **07 16 02.3 +0.3**
comp=Z,72nm,0.9s,baz=50
MNK *i* PcP **pP** **07 16 15.9 +1.0**
MNK *i* PP **PP** **07 18 40.9 -1.6**
MNK *i* PPP PPP 07 20 25.2
MNK *i* S **S** **07 25 23.9 +2.3**
MNK *i* SS SS 07 29 03.6 -55
MNK *i* SSS SSS 07 32 46.5
MNK *i* LQ LQ 07 41 39.1
MNK *i* LR LR 07 48 25.1
MNK *i* LRM MLR 07 52 24.1
comp=Z,862nm,18.4s
MNK *i* LRM MLR 07 53 30.0
comp=E,122nm,18.4s
MNK *i* LRM MLR 07 55 09.7
BSY Bisya 72.34 285 P **P** **07 16 03.6 +0.7**
ISAL Salakas 72.35 327 *e*P **P** **07 16 03.2 +0.8**
BEKR Beckworth 72.44 53 IAmb IAmb 07 16 06.1
comp=Z,49nm,0.9s
TBLU Trondheim 72.45 339 *e*P **P** **07 16 01.6 -1.3**
FAQ Al Faqa, Dubai 72.46 288 P **P** **07 16 03.7 0.0**
SNR=5.7
FAQ Al Faqa, Dubai 72.46 288 *i* P **P** **07 16 03.6 0.0**
SNR=6.0
NACGM Naroch 72.50 327 *e*P **P** **07 16 04.0 +0.6**
PLTX Planet X, Gerl 72.53 52 IAmb IAmb 07 16 07.1
comp=Z,68nm,1.0s
ARQ Araqi 72.53 286 P **P** **07 16 04.9 +0.8**
SNR=14
SLIT Slitere, Latvi 72.53 331 *e*P **P** **07 16 03.7 +0.3**
CAN Canberra 72.71 174 P **P** **07 16 05.3 +0.7**
CAN Canberra 72.71 174 P **P** **07 16 05.3 +0.7**
CAN pmax pmax
comp=Z,47nm,1.4s
CAN Canberra 72.71 174 P **P** **07 16 05.4 +0.7**
ALNE Al Ain 72.72 287 P **P** **07 16 05.7 +0.5**
SNR=16
ALNE Al Ain 72.72 287 P **P** **07 16 05.4 +0.2**
MHTO MHTO 72.72 283 P **P** **07 16 05.6 +0.4**
SNR=9.5
ASUD Al Ashush, Dub 72.73 288 P **P** **07 16 05.9 +0.7**
SNR=7.0
ASUD Al Ashush, Dub 72.73 288 *i* P **P** **07 16 05.6 +0.5**
SNR=11
SOC Sochi 72.79 312 *e*P **P** **07 16 04.1 -1.1**
SOC *e**PP **pP** **07 16 14.3 -3.9**
SOC *e**SP **PcP** **07 16 18.4 -3.9**
SOC *e* 07 18 46.4
SOC *e*PPP PPP 07 20 30.8
SOC *e*S **S** **07 25 28.2 +0.5**
SOC *e*SS **SS** **07 30 12.0 +4.7**
SOC pmax pmax
comp=Z,44nm,0.8s
SOC MLR MLR
comp=Z,819nm,21.0s
KAAM Kaadhehdhoo 72.88 257 P **P** **07 16 07.6 +1.5**
MPK Martis Peak 72.97 53 IAmb IAmb 07 16 09.9
comp=Z,109nm,1.3s
VSVD Vaisvydziai 73.00 329 *e*P **P** **07 16 07.0 +0.8**
AGRB Hanur-Agry 73.07 307 *e*P **P** **07 16 08.7 +1.4**
EMB Emerald Bay 73.11 54 IAmb IAmb 07 16 10.4
comp=Z,58nm,1.2s
PAHR Pah Rah Range 73.15 53 IAmb IAmb 07 16 10.5
comp=Z,47nm,1.0s
MFID Camas Ranch 73.19 48 P **P** **07 16 09.2 +1.4**
MFID IAmb IAmb 07 16 10.8
comp=Z,44nm,0.8s
MFID IAMs_20 IAMs_20 07 42 21.5
comp=Z,448nm,22.0s
ILULI Ilulissat 73.24 5 *i* P **P** **07 16 07.2 -0.3**
ILULI IAmb IAmb 07 16 11.5
comp=Z,63nm,1.0s
PABE Paberze 73.31 328 *e*P **P** **07 16 09.1 +1.1**
ANN Anapa 73.40 314 *e*P **P** **07 16 08.4 -0.4**
ANN *e* 07 16 21.9
ANN *e*S **S** **07 25 33.7 -0.9**
ANN pmax pmax
comp=Z,67nm,0.9s
ANN MLR MLR
comp=Z,688nm,20.0s
ANN MLR MLR
comp=N,529nm,14.0s
CMB Columbia Colle 73.46 55 P **P** **07 16 10.1 +0.7**
CMB IAmb IAmb 07 16 12.2
comp=Z,53nm,1.1s
CMB IAMs_20 IAMs_20 07 41 57.8
comp=Z,747nm,21.0s
CMB Columbia Colle 73.46 55 P **P** **07 16 10.1 +0.7**
CMB pmax pmax
comp=Z,53nm,1.1s
SAO San Andreas Ge 73.48 56 P **P** **07 16 09.3 -0.1**
SAO IAMs_20 IAMs_20 07 45 30.5
comp=Z,469nm,20.0s
SAO San Andreas Ge 73.48 56 P **P** **07 16 09.4 -0.1**
SAO pmax pmax
comp=Z,27nm,1.2s
FCC Fort Churchill 73.54 27 P **P** **07 16 09.5 +0.1**
FCC IAmb IAmb 07 16 11.5
comp=Z,108nm,1.1s
FCC Fort Churchill 73.54 27 P **P** **07 16 09.5 +0.1**
FCC pmax pmax
comp=Z,108nm,1.2s
NWAO Narrogin (SRO) 73.63 201 P **P** **07 16 10.3 +0.2**
NWAO Narrogin (SRO) 73.63 201 P **P** **07 16 10.7 +0.6**
DQM DQM 73.65 283 P **P** **07 16 10.5 -0.2**
YERR Yerington 73.66 53 IAmb IAmb 07 16 13.7
comp=Z,63nm,1.0s
NC303 NORSAR Array S 73.70 337 P **P** **07 16 10.1 -0.2**
NC303 IAmb IAmb 07 16 25.2
comp=Z,95nm,1.1s
DOMB Dombas 73.75 339 *e*P **P** **07 16 11.3 +0.7**
DOMB IAmb IAmb 07 16 25.0
comp=Z,69nm,0.9s
GEVA Gevas 73.75 306 P **P** **07 16 11.1 -0.2**
MOL Molde 73.75 340 *e*P **P** **07 16 10.4 -0.1**
ICESG Greenland Ices 73.78 0 *i* P **P** **07 16 11.3 +0.2**
ICESG IAmb IAmb 07 16 13.4
comp=Z,53nm,1.1s
PBUR Paburge 73.79 329 *e*P **P** **07 16 10.9 0.0**
AKDM Akdamar-Van 73.79 306 *e*P **P** **07 16 12.1 +0.6**
HFS Hagfors 73.81 336 LR LR 07 51 21.1
comp=Z,2µm,19.6s,baz=33,slow=38
EGMT Eagleton 73.83 41 IAmb IAmb 07 16 14.0
comp=Z,67nm,0.9s
EGMT IAMs_20 IAMs_20 07 46 44.9
comp=Z,460nm,20.0s
EGMT Eagleton 73.83 41 P **P** **07 16 12.8 +1.4**
baz=308,SNR=44
ARPS Mount Arapiles 73.84 180 P **P** **07 16 12.3 +1.1**
BBGB Big Mountain B 73.86 56 P **P** **07 16 12.0 +0.1**
BBGB IAmb IAmb 07 16 14.9
comp=Z,59nm,0.9s
NB2 NORSAR Subarra 73.90 337 P **P** **07 16 11.7 +0.2**
comp=Z,50nm,0.8s,baz=40,slow=6.2
NB2 NORSAR Subarra 73.90 337 P **P** **07 16 11.7 +0.2**
baz=40,slow=6.2
NOA NORSAR Array B 73.90 337 P **P** **07 16 12.0 +0.5**
comp=Z,36nm,0.8s,baz=39,slow=5.9,SNR=127
NOA pP **pP** **07 16 23.4 -1.1**
comp=Z,11nm,0.8s,baz=53,slow=7.0,SNR=25
NOA LR LR 07 51 04.8
comp=Z,887nm,21.6s,baz=35,slow=38
comp=Z,36nm,0.8s
UMZA Um Al Zommool 73.92 286 P **P** **07 16 12.1 -0.1**
HLID Hailey 73.94 47 IAMs_20 IAMs_20 07 43 01.2
comp=Z,444nm,21.0s
HLID Hailey 73.94 47 P **P** **07 16 14.0 +1.7**
baz=306,SNR=66
NC602 NORSAR Array S 74.03 337 P **P** **07 16 12.2 -0.1**
NC602 IAmb IAmb 07 16 27.4
comp=Z,105nm,1.3s
NBO00 NORSAR Array S 74.04 337 P **P** **07 16 12.9 +0.6**
BMN Battle Mountai 74.09 51 IAmb IAmb 07 16 16.4
comp=Z,68nm,1.2s
AKASG Malin Array Be 74.11 322 P **P** **07 16 13.0 +0.1**
comp=Z,37nm,0.6s,baz=46,slow=6.3,SNR=212
AKASG LR LR 07 51 44.2
comp=Z,867nm,18.4s,baz=54,slow=38
comp=Z,37nm,0.6s
AKASG Malin Array Be 74.11 322 *i* P **P** **07 16 13.0 +0.1**
AKASG pmax pmax
comp=Z,39nm,0.5s
AKBB Malin Array Si 74.11 322*c i* P **P** **07 16 12.8 -0.1**
NAO01 NORSAR Array S 74.15 337 P **P** **07 16 13.6 +0.6**
NAO01 NORSAR Array S 74.15 337 *e*P **P** **07 16 13.5 +0.6**
AK05 Malin Array Si 74.17 322 P **P** **07 16 13.3 0.0**
AKN Aaknes 74.22 340 *e*P **P** **07 16 14.7 +1.3**
AKN IAmb IAmb 07 16 28.2
comp=Z,68nm,1.1s
GURO Guroymak-BITLI 74.27 307 IAmb IAmb 07 16 29.5
comp=Z,51nm,0.7s
BOZ Bozeman (W) 74.30 44 IAmb IAmb 07 16 17.1

comp=Z,63nm,0.8s
BOZ Bozeman (W) 74.30 44 P P 07 16 15.8 +1.4
baz=308,SNR=144
RYN Ryan 74.32 53 P P 07 16 15.2 +0.7
KVN Kaiserville 74.34 53 IAmb IAmb 07 16 17.8
comp=Z,64nm,1.0s
KOPT Kop Dagi 74.39 309 IAmb IAmb 07 16 31.3
comp=Z,68nm,1.2s
JRN Qarnain Island 74.42 290 P P 07 16 14.6 -0.5
NVAR Mina Array Bea 74.57 53 P P 07 16 17.9 +1.8
comp=Z,30nm,0.8s,baz=283,slow=6.1,SNR=237
comp=Z,30nm,0.8s
NVAR Mina Array Bea 74.57 53 P P 07 16 17.6 +1.5
NV11 Mina Array Sit 74.67 53 P P 07 16 17.5 +0.9
NV11 IAmb IAmb 07 16 19.7
comp=Z,59nm,1.4s
MLAC Mammoth, Mammo 74.70 54 P P 07 16 18.7 +1.9
baz=306,SNR=16
TOO Toolangi 74.72 177 P P 07 16 17.0 +0.6
TOO Toolangi 74.72 177 P P 07 16 17.0 +0.6
TOO pmax pmax
comp=Z,17nm,1.0s
TOO Toolangi 74.72 177 P P 07 16 17.2 +0.8
PAGB Antelope Grade 74.87 57 IAmb IAmb 07 16 20.8
comp=Z,71nm,0.9s
BNGB Bingl 74.87 308 *i* P P 07 16 18.7 +1.0
OSL Oslo 74.91 337 *eP* P 07 16 18.8 +1.4
GHWR Ruwais 74.95 289 P P 07 16 18.0 -0.2
YHL Hebgen Lake 75.01 45 IAmb IAmb 07 16 21.7
comp=Z,54nm,0.8s
MZR Muzera 75.04 288 P P 07 16 18.5 -0.3
SNR=11
MZR Muzera 75.04 288 *i* P P 07 16 18.4 -0.3
SNR=15
SVAN Silvan-Diyarba 75.04 307 *i* P P 07 16 19.6 +1.0
Q09A Carvers 75.05 52 IAmb IAmb 07 16 21.8
comp=Z,54nm,0.9s
SKAR Skarslia 75.06 338 *eP* P 07 16 19.6 +1.3
VOG Valley Oaks Go 75.10 56 P P 07 16 20.0 +1.1
baz=306
ELK Elko 75.12 50 LR LR 07 47 28.4
comp=Z,340nm,19.7s,baz=316,slow=34
ELK Elko 75.12 50 P P 07 16 20.6 +1.3
ELK Elko 75.12 50 P P 07 16 20.6 +1.3
ELK pmax pmax
comp=Z,18nm,0.9s
SIM Simferopol' 75.19 316 *eP* P 07 16 18.8 -0.5
SIM *e* 07 16 32.1
SIM pmax pmax
comp=Z,90nm,1.1s
FOO Floro 75.23 340 *eP* P 07 16 18.8 -0.3
YMR Madison River 75.24 45 IAmb IAmb 07 16 23.1
comp=Z,45nm,0.8s
GCMT Greycliff 75.26 43 P P 07 16 21.2 +1.4
HYA Hoyanger 75.27 339 *eP* P 07 16 20.5 +1.1
HYA IAmb IAmb 07 16 34.1
comp=Z,62nm,0.9s
SMMC Simmler 75.28 57 P P 07 16 22.1 +2.2
baz=306,SNR=6.0
SHMA Al-Shehemyia 75.31 291 P P 07 16 20.1 -0.1
TIN Tinemaha, Big 75.42 54 P P 07 16 22.8 +1.9
baz=306,SNR=7.0
SFJD Kangerlussuaq 75.46 5 LR LR 07 52 18.4
comp=Z,321nm,19.3s,baz=358,slow=38
SFJD Kangerlussuaq 75.46 5 P P 07 16 21.4 +1.0
SFJD IAmb IAmb 07 16 22.0
comp=Z,46nm,0.9s
SFJD Kangerlussuaq 75.46 5 P P 07 16 21.4 +1.0
SFJD pmax pmax
comp=Z,46nm,1.0s
SFJD Kangerlussuaq 75.46 5 *i* P P 07 16 20.5 +0.1
SFJD IAmb IAmb 07 16 22.3
comp=Z,84nm,1.3s
TPH Tonopah 75.47 53 P P 07 16 22.5 +1.3
TPH Tonopah 75.47 53 P P 07 16 22.5 +1.3
TPH pmax pmax
comp=Z,296nm,1.0s
KONO Kongsberg 75.49 337 *ce* P P 07 16 21.1 +0.4
KONO pmax pmax
comp=Z,27nm,1.7s
KONO Kongsberg 75.49 337 *eP* P 07 16 18.9 -1.8
SAKB Bahrain 75.56 292 P P 07 16 21.4 -0.3
VES Vestal, Richgr 75.57 56 P P 07 16 22.7 +1.1
baz=306,SNR=26
LKWY Lake 75.62 45 IAmb IAmb 07 16 28.1
comp=Z,48nm,0.9s
LKWY IAMs_20 IAMs_20 07 49 34.6
comp=Z,526nm,21.0s
H17A Grant Village 75.63 45 P P 07 16 25.6 +3.4
baz=308,SNR=118
PKM Mcpherson Peak 75.64 57 P P 07 16 24.4 +2.1
baz=306,SNR=12
LCH Last Change Ra 75.70 54 P P 07 16 21.9 -0.6
IMW Indian Meadow 75.74 45 IAmb IAmb 07 16 26.4
comp=Z,62nm,0.8s
PTK Pertek 75.74 308 P P 07 16 24.1 +1.3
SUE Sulen 75.75 340 *eP* P 07 16 23.0 +0.9
SUE IAmb IAmb 07 16 37.0
comp=Z,54nm,1.0s
FLWY Flagg Ranch 75.76 45 P P 07 16 23.1 +0.3
FLWY IAmb IAmb 07 16 26.9
comp=Z,58nm,1.1s
SLWR Sila 75.78 289 P P 07 16 23.0 0.0
MARD Mardin 75.80 306 P P 07 16 23.9 +0.8
DYBB Diyarbakir 75.83 307 *eP* P 07 16 24.1 +1.0
FXWY Fox Creek 75.85 46 IAmb IAmb 07 16 26.9
comp=Z,44nm,0.9s
FXWY IAMs_20 IAMs_20 07 44 42.6
comp=Z,514nm,22.0s
CWC Cottonwood Cre 75.88 55 P P 07 16 25.0 +1.4
baz=306
BCW Bitter Crk WRg 75.88 57 IAmb IAmb 07 16 26.9
comp=Z,72nm,1.0s
RLMT Red Lodge 75.90 44 P P 07 16 25.1 +1.5
RLMT IAmb IAmb 07 16 26.9
comp=Z,95nm,1.6s
RLMT IAMs_20 IAMs_20 07 50 19.0
comp=Z,486nm,21.0s
RLMT Red Lodge 75.90 44 P P 07 16 25.4 +1.7
baz=309,SNR=56
MAZI Mazidag 75.92 306 P P 07 16 24.8 +1.0
SBC Santa Barbara 75.97 57 P P 07 16 26.0 +2.1
baz=306
TPAW Teton Pass 75.98 46 IAmb IAmb 07 16 26.7
comp=Z,40nm,0.8s
TPAW IAMs_20 IAMs_20 07 44 33.2
comp=Z,610nm,22.0s
GRAC Grapevine Rang 76.02 54 IAmb IAmb 07 16 27.3
comp=Z,57nm,0.8s
GRAC Grapevine Rang 76.02 54 P P 07 16 26.2 +2.0
baz=306,SNR=20
SMRA Abu-Samra 76.05 290 P P 07 16 24.2 -0.3
ISA Isabella, Lake 76.08 56 P P 07 16 25.0 +0.4
baz=306,SNR=16
ASK Askoy 76.11 339 *eP* P 07 16 25.4 +1.2
SNOW Snow King Moun 76.11 46 P P 07 16 26.7 +1.8
SNOW IAmb IAmb 07 16 28.4
comp=Z,42nm,0.8s
SNOW IAMs_20 IAMs_20 07 45 31.6
comp=Z,519nm,22.0s
REDW Red Top Meadow 76.12 46 IAmb IAmb 07 16 28.3
comp=Z,48nm,1.1s
REDW IAMs_20 IAMs_20 07 45 43.8
comp=Z,608nm,22.0s
BER Bergen 76.15 339 *eP* P 07 16 25.5 +1.1
ARVC Arvin 76.16 56 P P 07 16 26.1 +1.1
baz=306,SNR=7.3
ODD1 Odda 76.17 338 *eP* P 07 16 25.9 +1.3
DY2G Dye2 76.23 3 *i* P P 07 16 23.7 -1.4
DY2G IAmb IAmb 07 16 26.7
comp=Z,52nm,0.9s
ARPR Arapgir-MALATY 76.28 309 P P 07 16 27.5 +1.7
SCZ2 Santa Cruz Isl 76.29 58 P P 07 16 26.8 +1.0
baz=306
R11A Troy Canyon, C 76.34 52 IAmb IAmb 07 16 29.2
comp=Z,47nm,1.1s
R11A Troy Canyon, C 76.34 52 P P 07 16 27.8 +1.5
baz=307,SNR=104
AHID Auburn Hatcher 76.35 46 IAMs_20 IAMs_20 07 44 31.9
comp=Z,660nm,22.0s
RAO Raoul Island 76.38 144 LR LR 07 43 47.2
comp=Z,442nm,21.2s,baz=343,slow=31
DGMT Dagmar 76.39 39 P P 07 16 26.9 +0.8
DGMT IAmb IAmb 07 16 28.5
comp=Z,76nm,0.9s
DGMT Dagmar 76.39 39 IAMs_20 IAMs_20 07 47 05.6
comp=Z,612nm,20.0s
DGMT Dagmar 76.39 39 P P 07 16 27.4 +1.4
baz=312,SNR=12
DGMT Dagmar 76.39 39 P P 07 16 27.2 +1.1
baz=312,SNR=12
KVT Kavak 76.46 312 *eP* P 07 16 28.0 +1.3
MPMC Manual Prospec 76.49 55 P P 07 16 28.3 +1.1
baz=307,SNR=24
LAO LASA Array 76.53 41 P P 07 16 28.1 +1.1
LAO IAmb IAmb 07 16 30.0
comp=Z,86nm,0.9s
LAO IAMs_20 IAMs_20 07 48 34.4
comp=Z,524nm,20.0s
LAO LASA Array 76.53 41 P P 07 16 28.8 +1.9
baz=311,SNR=40
LAO LASA Array 76.53 41 P P 07 16 28.5 +1.5
baz=311,SNR=40
OSI Osito Audit: C 76.53 57 P P 07 16 28.8 +1.6
baz=306
DIKM Dikmen 76.58 312 ⇑P P 07 16 28.1 +0.8
DIKM Dikmen 76.58 312 P P 07 16 28.2 +1.0
SVSK Karacayir 76.60 310 *i* P P 07 16 28.9 +1.5
BLS5 Blasjo 76.62 338 *eP* P 07 16 28.4 +1.2
TOKT Tokat 76.63 311 P P 07 16 28.8 +1.2
FURC Furnace Creek, 76.66 54 P P 07 16 29.4 +1.7
baz=307,SNR=70
S11A Rachel 76.66 53 IAmb IAmb 07 16 31.1
comp=Z,65nm,0.9s
CCAC Calif City Air 76.68 56 IAmb IAmb 07 16 30.7
comp=Z,68nm,0.9s
LRMC Laurel Mtn Rad 76.71 56 P P 07 16 29.5 +1.2
baz=307,SNR=11
KIS Kishinev 76.72 320 *eP* P 07 16 28.0 +0.1
KIS *eL* L 07 45 48.0
KIS LRM MLR 07 53 11.0
comp=Z,500nm,15.5s
KIS Kishinev 76.72 320 *eP* P 07 16 28.0 +0.1
KIS *e* 07 16 40.0
KIS MLR MLR
comp=Z,500nm,15.5s
SPR3 Spring Creek 3 76.73 51 IAmb IAmb 07 16 32.2
comp=Z,139nm,1.9s
TPNV Topopah Spring 76.76 54 IAmb IAmb 07 16 31.4
comp=Z,54nm,0.9s
TPNV IAMs_20 IAMs_20 07 44 11.1
comp=Z,712nm,21.0s
TPNV Topopah Spring 76.76 54 P P 07 16 30.3 +1.7
baz=307,SNR=62
MILM Milestii Mici 76.78 320 ⇑ *iP* P 07 16 27.9 -0.3
comp=Z,90nm,0.9s
MILM *i* S S 07 26 10.0 -2.1
MILM *eL* L 07 44 10.0
MILM LQM 07 46 10.0
comp=Z,800nm,23.5s
MILM LRM MLR 07 53 14.0
comp=Z,1μm,15.5s
MILM Milestii Mici 76.78 320 ⇓P P 07 16 28.3 +0.1
MILM Milestii Mici 76.78 320 *c* *iP* P 07 16 27.9 -0.3
MILM *e* 07 16 41.0
MILM *i* S S 07 26 10.0 -2.1
MILM pmax pmax
comp=Z,200nm,3.2s
MILM MLR MLR
comp=Z,1μm,15.5s
MILM MLR MLR
comp=N,800nm,16.4s
HWUT Hardware Ranch 76.80 48 P P 07 16 30.5 +1.8
HWUT IAmb IAmb 07 16 32.0
comp=Z,69nm,1.1s
SNCC San Nicolas Is 76.80 58 P P 07 16 29.9 +1.3
baz=306
EDW2 Edwards Air Fo 76.86 56 P P 07 16 30.7 +1.7
baz=307,SNR=21
DMTO DMTO 76.92 282 P P 07 16 29.4 -0.1
DUG Dugway, Tooele 76.93 49 IAmb IAmb 07 16 49.9
comp=Z,54nm,1.1s
DUG Dugway, Tooele 76.93 49 P P 07 16 31.2 +1.8
baz=308,SNR=69
GWY Greenwater Val 76.95 54 P P 07 16 30.2 +0.6
GWY IAmb IAmb 07 16 32.3
comp=Z,43nm,0.9s
QSM Queen of Sheba 76.95 55 IAmb IAmb 07 16 32.2
comp=Z,75nm,0.9s
URFA Urfa 76.97 307 P P 07 16 26.7 -2.9
DECC Green Verdugo 77.00 57 P P 07 16 30.9 +1.0
baz=306,SNR=5.5
BZK Bozkurt 77.12 313 ⇓P P 07 16 30.1 -0.1
LVV L'vov 77.18 324 *eP* P 07 16 30.9 +0.4
LVV *e* 07 19 24.2
LVV *eS* S 07 26 13.8 -2.5
LVV *e* 07 31 09.6
LVV *e* 07 34 31.0
LVV pmax pmax
comp=Z,80nm,1.2s
LVV MLR MLR
comp=N,900nm,16.0s
LVV MLR MLR
comp=E,1μm,16.0s
LVV MLR MLR
comp=Z,1μm,16.0s
BSD Bornholm Skovb 77.19 332 *eP* P 07 16 31.4 +1.1
BSD Bornholm Skovb 77.19 332 *i* P P 07 16 29.4 -1.0
BSD IAmb IAmb 07 16 44.5
comp=Z,70nm,0.9s
TCUT Toone Canyon 77.19 48 IAmb IAmb 07 16 33.6
comp=Z,46nm,0.9s
BEL Belsk 77.22 327 *eP* P 07 16 31.8 +1.1
BEL *epP* pP 07 16 45.0 +1.4
BEL *eL* L 07 54 40.5
comp=Z,958nm,18.8s
BW06 Boulder Array 77.23 46 P P 07 16 32.0 +0.8
BW06 IAMs_20 IAMs_20 07 46 41.2
comp=Z,607nm,22.0s
BW06 Boulder Array 77.23 46 P P 07 16 32.3 +1.1
baz=303,SNR=54
PD31 Pinedale Array 77.23 46 P P 07 16 31.9 +0.7
PDAR Pinedale Array 77.23 46 P P 07 16 32.4 +1.1
comp=Z,20nm,0.7s,baz=272,slow=2.5,SNR=191
PDAR LR LR 07 46 40.6
comp=Z,454nm,21.7s,baz=330,slow=33
comp=Z,20nm,0.7s
PDAR Pinedale Array 77.23 46 P P 07 16 31.9 +0.7
IAS Iasi 77.24 320 ⇑P P 07 16 31.4 +0.5
PRN Pahroc Range 77.25 53 IAmb IAmb 07 16 34.5
comp=Z,44nm,1.0s
SNART Smartmo 77.28 337 *eP* P 07 16 31.4 +0.6
PSUT Pine Spring 77.31 51 IAmb IAmb 07 16 34.7
comp=Z,43nm,1.0s
FMP Fort Macarthur 77.35 57 P P 07 16 32.8 +1.1
baz=307
SHOC Shoshone, Teco 77.38 54 P P 07 16 33.2 +1.4
baz=307
GSC Goldstone, Bar 77.39 55 P P 07 16 33.6 +1.5
baz=307,SNR=19
CIS Catalina Islan 77.46 58 P P 07 16 33.3 +0.9
baz=307
VASR Vaslui 77.49 320 ⇓P P 07 16 33.0 +0.7
RRX Edison Barstow 77.52 56 P P 07 16 34.1 +1.4
baz=307
RBK Rabkut 77.62 283 P P 07 16 33.0 -0.5
COP Copenhagen 77.66 333 *i* P P 07 16 32.8 -0.2
COP IAmb IAmb 07 16 47.7
comp=Z,221nm,0.9s
GKP Gorka Klasztor 77.67 330 *eP* P 07 16 34.4 +1.3
GOET G??ttrup 77.69 336 *i* P P 07 16 33.6 +0.5
GOET IAmb IAmb 07 16 48.2
comp=Z,175nm,0.9s
WHFO Wadi Hawf 77.72 283 P P 07 16 33.4 -0.6
SHPR Sheep Range 77.73 53 IAmb IAmb 07 16 37.2
comp=Z,44nm,1.0s
MPU Maple Canyon 77.75 49 P P 07 16 35.3 +1.2
MPU IAmb IAmb 07 16 37.1
comp=Z,41nm,0.9s
CORM Corum 77.87 311 *eP* P 07 16 34.9 +0.2
VLDR Vladesti 77.87 319 ⇑P P 07 16 35.3 +0.9
TUQ Turquoise Moun 77.88 55 P P 07 16 36.4 +1.6
baz=307,SNR=30
SARI SarD1z-Kayseri 77.89 309 *eP* P 07 16 35.1 +0.2
TLCR 77.92 318 ⇓P P 07 16 35.4 +0.7
BBRC Big Bear Solar 77.94 56 P P 07 16 36.5 +1.2
baz=307
VARL Varlezi 77.95 319 ⇑P P 07 16 35.9 +1.0
BNN Bunyan 77.96 310 *i* P P 07 16 36.1 +0.9
ELS Elsinore Mount 77.97 57 P P 07 16 36.2 +0.9
ELS IAmb IAmb 07 16 38.0
comp=Z,100nm,1.8s
HEC Hector,Ludlow 77.98 55 P P 07 16 36.8 +1.4
baz=307,SNR=10
SCTR Scanteiesti 78.03 319 ⇑P P 07 16 36.4 +1.1
TATR Tatarca 78.05 319 ⇓P P 07 16 36.0 +0.7
GHRR 78.08 320 ⇑P P 07 16 37.2 +1.7
BUR08 Bucovina Ar. S 78.11 322 P P 07 16 36.6 +0.7
BUR08 IAmb IAmb 07 16 51.5
comp=Z,76nm,0.9s
BURAR Bucovina Array 78.13 322 ⇑P P 07 16 36.7 +0.8
BURAR Bucovina Array 78.13 322 P P 07 16 36.5 +0.6
KMRS Kahramanmaras 78.14 308 *eP* P 07 16 37.4 +1.3
BIZ Bicaz 78.15 321 ⇑P P 07 16 37.0 +1.1
MURC Murrieta 78.15 57 P P 07 16 37.3 +1.0
baz=307,SNR=9.0
TESR Tescani 78.16 320 ⇑P P 07 16 36.6 +0.6
NUUK Nuuk 78.16 6 *i* P P 07 16 36.0 +0.4
NUUK IAmb IAmb 07 16 37.4
comp=Z,81nm,0.9s
JURR Jurilovca 78.17 318 ⇓P P 07 16 36.4 +0.4
MUD Monsted U'grnd 78.18 335 *i* P P 07 16 36.0 +0.1
MUD IAmb IAmb 07 16 50.6
comp=Z,63nm,0.9s
SLCR Slobozia Conac 78.20 319 ⇑P P 07 16 37.2 +1.0
CFR Carcaliu 78.29 319 ⇑P P 07 16 37.1 +0.4
PANC Panciu 78.34 320 ⇑P P 07 16 38.6 +1.6
TPGR Topolog 78.35 318 ⇑P P 07 16 37.8 +0.7
SZCU Shurtz Canyon 78.37 51 P P 07 16 37.6 0.0
ABTO Aybut 78.41 283 P P 07 16 37.6 -0.3
GMRC Granite Mounta 78.45 55 P P 07 16 39.6 +1.6
baz=308,SNR=25
TMUT Trail Mountain 78.45 49 P P 07 16 39.5 +1.3
ODBI Odobesti 78.46 319 ⇑P P 07 16 38.9 +1.2
VRI Vrincioaia 78.56 320 ⇑P P 07 16 38.9 +0.7
VRI ⇑P PcP 07 16 40.4 -6.8
VRI Vrincioaia 78.56 320 *eP* P 07 16 39.4 +1.2
PLOR Plostina 78.61 320 ⇑P P 07 16 39.2 +0.7
TIRR Tirgusor 78.62 318 ⇓P P 07 16 39.0 +0.4
TIRR Tirgusor 78.62 318 ⇓P P 07 16 39.0 +0.4
TIRR Tirgusor 78.62 318 P P 07 16 38.2 -0.3
TIRR Tirgusor 78.62 318 P P 07 16 38.2 -0.3
TIRR pmax pmax
comp=Z,142nm,0.9s
TIRR MLR MLR
comp=Z,3μm,19.0s
KOLS Kolonicke sedl 78.62 324 *eP* P 07 16 39.9 +1.4
KOLS pmax pmax
comp=Z,34nm,1.0s
KOLS Kolonicke sedl 78.62 324 *eP* P 07 16 39.9 +1.4
KOLS *epP* pP 07 16 53.0 +1.4
RDMU Red Mountain 78.62 47 IAmb IAmb 07 16 42.0
comp=Z,96nm,1.0s
P17A Butcher Ranch, 78.62 49 IAmb IAmb 07 16 41.5
comp=Z,56nm,0.9s
LCMT Little Creek M 78.63 52 IAmb IAmb 07 16 42.3
comp=Z,57nm,1.0s
PFO Pinyon Flats O 78.64 56 LR LR 07 44 36.0
comp=Z,1μm,21.9s,baz=294,slow=30
PFO Pinyon Flats O 78.64 56 P P 07 16 38.6 -0.5
PFO Pinyon Flats O 78.64 56 *d* *iP* P 07 16 39.9 +0.9
PFO pmax pmax
comp=Z,44nm,1.1s
PFO Pinyon Flats O 78.64 56 P P 07 16 40.1 +1.0
baz=308,SNR=13
109C Camp Elliot, M 78.64 57 P P 07 16 39.9 +1.0
baz=307,SNR=8.1
TPFO Pinon Flats 78.64 56 P P 07 16 40.1 +1.0
baz=308,SNR=15
MTPU Mount Pierson 78.65 51 IAmb IAmb 07 16 42.9
comp=Z,40nm,0.9s
PMD Palm Desert 78.67 56 IAmb IAmb 07 16 41.5
comp=Z,35nm,1.1s
BELC Belle Mtn. Jos 78.70 56 P P 07 16 40.4 +1.0
baz=308,SNR=9.2
Q16A Castle Valley 78.72 49 P P 07 16 40.8 +1.3
Q16A IAmb IAmb 07 16 42.9
comp=Z,112nm,1.6s
HARR Harsova 78.72 318 ⇑P P 07 16 39.7 +0.6
BR131 Keskin Array S 78.74 312 P P 07 16 39.5 0.0
BR131 IAmb IAmb 07 16 55.0
comp=Z,63nm,0.9s
BR131 Keskin Array S 78.74 312 *c* *iP* P 07 16 39.7 +0.2
BR131 Keskin Array S 78.74 312 P P 07 16 40.5 +0.9
SNR=16
BRTR Keskin Array B 78.74 312 P P 07 16 40.0 +0.5
comp=Z,39nm,1.1s,baz=90,slow=3.8,SNR=43
BRTR pP pP 07 16 52.3 -0.3
comp=Z,31nm,0.9s,baz=94,slow=4.3,SNR=14
BRTR LR LR 07 56 10.2
comp=Z,435nm,18.5s,baz=48,slow=39
comp=Z,39nm,1.1s
BRTR Keskin Array B 78.74 312 P P 07 16 40.1 +0.5
BRTR Keskin Array B 78.74 312 P P 07 16 39.5 0.0
BRTR Keskin Array B 78.74 312 *i* P P 07 16 40.0 +0.5
BRTR pmax pmax
comp=Z,21nm,0.9s
TLBR Topalu 78.76 318 ⇓P P 07 16 40.4 +1.1
MFTR Murfatlar 78.80 318 ⇓P P 07 16 40.2 +0.7
OJC Ojcow 78.82 326 *eP* P 07 16 39.8 +0.2
OJC *epP* pP 07 16 53.0 +0.4
OJC *eS* S 07 26 33.1 -1.0
OJC *eL* L 07 54 40.2
comp=Z,1μm,19.0s
UZH Uzhgorod 78.82 324 ⇑ *iP* P 07 16 40.4 +0.8
UZH *i* 07 16 47.5
UZH *i* *PP pP 07 16 53.5 +0.8
UZH *i* S S 07 26 31.4 -2.7
UZH *i* PS PnS 07 27 09.5 -11
UZH MLR MLR
comp=N,230nm,16.0s
UZH MLR MLR
comp=E,250nm,16.0s
UZH MLR MLR
comp=Z,160nm,16.0s
KOZT Kozan 78.83 309 *eP* P 07 16 40.8 +0.9
COVR Voineasa-Covas 78.84 320 ⇑P P 07 16 41.0 +1.2
OZUR 78.88 320 ⇓P P 07 16 41.8 +1.8
ARCR ARCALIA 78.92 322 ⇓P P 07 16 41.9 +1.8
BMR Baia Mare 78.92 323 ⇑P P 07 16 41.8 +1.7
KAMT Kaman 78.93 311 *eP* P 07 16 40.9 +0.4
MANR Mangalia 78.95 317 ⇓P P 07 16 41.6 +1.2
SRU San Rafael Swe 78.98 49 IAmb IAmb 07 16 43.7
comp=Z,52nm,0.9s
K22A Casper 79.01 44 P P 07 16 42.2 +1.3
baz=311,SNR=25
K22A Casper 79.01 44 P P 07 16 42.2 +1.3
baz=311,SNR=25
CRVS Cervenica-Dubn 79.02 324 *eP* P 07 16 41.5 +0.8
CRVS pmax pmax
comp=Z,48nm,1.1s
CRVS Cervenica-Dubn 79.02 324 *eP* P 07 16 41.5 +0.8
CRVS *epP* pP 07 16 54.9 +1.1
MDND Maddock 79.06 37 P P 07 16 41.8 +0.8
MDND Maddock 79.06 37 P P 07 16 42.4 +1.5
baz=315,SNR=16
MDND Maddock 79.06 37 P P 07 16 42.0 +1.0
baz=315,SNR=16
BAR Barrett 79.06 57 P P 07 16 42.2 +0.9
PGOR Pogoanele 79.07 319 ⇓P P 07 16 41.4 +0.4
NEHR Nehoiu 79.08 320 ⇑P P 07 16 41.8 +0.6
MONP2 Monument Peak 79.10 57 P P 07 16 42.8 +1.2
baz=308,SNR=10
NEE2 Needles Airpor 79.14 55 P P 07 16 42.4 +0.8
baz=308,SNR=5.2
YAYX Yaylak 79.14 311 *eP* P 07 16 41.9 +0.2
ANTO Ankara 79.15 312 ⇓P P 07 16 42.4 +0.8
ANTO Ankara 79.15 312 *eP* P 07 16 42.5 +0.8
ANTO Ankara 79.15 312 P P 07 16 41.7 0.0
ANTO Ankara 79.15 312 P P 07 16 41.7 0.0
ANTO pmax pmax
comp=Z,93nm,0.8s
ANTO Ankara 79.15 312 P P 07 16 42.8 +1.1
LOD Lodumlu 79.16 312 P P 07 16 41.4 -0.3
ISR Istrita 79.16 319 ⇓P P 07 16 43.4 +1.8
CEYT Ceyhan 79.17 308 P P 07 16 43.1 +1.4
IRM Iron Mountain 79.17 55 P P 07 16 42.9 +1.0
baz=308,SNR=11
TKX Tecate 79.17 57 P P 07 16 41.7 -0.1
DOPR Dopca 79.17 320 ⇑P P 07 16 43.1 +1.5
ICOR Ion Corvin 79.17 318 ⇓P P 07 16 42.9 +1.3
NIE Niedzica 79.18 325 *eP* P 07 16 43.0 +1.4
NIE *epP* pP 07 16 56.2 +1.6
NIE *eL* L 07 56 25.0
comp=Z,494nm,19.6s
MLR Muntele Rosu 79.22 320 ⇑P P 07 16 42.6 +0.6

MLR Muntele Rosu 79.22 320 LR LR 07 54 51.9
comp=Z,983nm,18.4s,baz=43,slow=38
CMRD Camardi-Nigde 79.23 309 P **P** **07 16 43.3 +1.1**
RWWY Rawlins 79.26 45 IAmb IAmb 07 16 44.9
comp=Z,45nm,0.9s
AFSR Afar-Bala (An 79.26 312 *e*P **P** **07 16 42.1 -0.2**
PSN Preselentsi 79.26 317 P **P** **07 16 43.1 +1.0**
BC3 Big Chuckawall 79.27 56 P **P** **07 16 43.3 +0.8**
baz=308,SNR=16
SERE Sereflikochisa 79.28 311 *e*P **P** **07 16 42.1 -0.4**
TAHT Tahtakopru-Hat 79.29 308 *e*P **P** **07 16 43.5 +1.1**
RSSD Black Hills 79.38 42 P **P** **07 16 43.6 +0.5**
RSSD Black Hills 79.38 42 IAMs_20 IAMs_20 07 47 49.0
comp=Z,579nm,22.0s
RSSD Black Hills 79.38 42 P **P** **07 16 43.6 +0.5**
RSSD pmax pmax
comp=Z,27nm,0.8s
RSSD Black Hills 79.38 42 P **P** **07 16 43.9 +0.9**
baz=312,SNR=33
RSSD Black Hills 79.38 42 P **P** **07 16 43.1 +0.1**
baz=312
E28A Huff 79.42 38 IAmb IAmb 07 16 44.8
comp=Z,47nm,0.8s
E28A Huff 79.42 38 P **P** **07 16 44.0 +1.1**
baz=314,SNR=13
KARA Karaisali 79.44 309 *e*P **P** **07 16 44.2 +1.0**
IKP In-Ko-Pah, Jac 79.45 57 P **P** **07 16 44.8 +1.3**
baz=308,SNR=15
SECR 79.46 319 ⇓P **P** **07 16 44.6 +1.4**
YUVA Yuva-Kibriscik 79.46 313 *e*P **P** **07 16 44.1 +0.7**
SWSC Sam W. Stewart 79.48 57 P **P** **07 16 44.5 +1.0**
baz=308,SNR=9.8
CJR Cluj-Napoca 79.55 322 ⇓P **P** **07 16 45.0 +1.3**
YAYL Yayladag 79.55 307 *e*P **P** **07 16 44.9 +0.9**
CCX Cicese 79.56 58 IAmb IAmb 07 16 46.3
comp=Z,43nm,0.9s
MESR Meseseni 79.56 323 ⇑P **P** **07 16 45.2 +1.6**
KULU Kulu 79.56 311 *e*P **P** **07 16 44.9 +0.9**
U15A North Rim 79.59 52 IAmb IAmb 07 16 47.8
comp=Z,57nm,1.1s
O20A White River Ci 79.68 47 P **P** **07 16 45.7 +1.0**
baz=311,SNR=36
MDUB Mudurnu 79.70 313 *e*P **P** **07 16 45.2 +0.5**
VOIR 79.71 320 ⇑P **P** **07 16 45.2 +0.6**
PDMCI Parker Dam,Lak 79.73 55 P **P** **07 16 45.9 +1.1**
baz=308,SNR=36
LANS Liptovska Anna 79.75 326 *e*P **P** **07 16 46.4 +1.7**
LANS pmax pmax
comp=Z,20nm,0.8s
LANS Liptovska Anna 79.75 326 *e*P **P** **07 16 46.4 +1.7**
LANS *e*pP **pP** **07 16 59.8 +2.0**
SULT Sultanhani-AKS 79.79 310 *e*P **P** **07 16 46.0 +0.8**
OKC Ostrava-Krasne 79.83 327 *e*P **P** **07 16 45.7 +0.6**
OKC *e* 07 16 59.6
OKC MLR MLR
comp=Z,1μm,15.6s
OKC Ostrava-Krasne 79.83 327 *e*P **P** **07 16 45.7 +0.6**
OKC *e*pP **pP** **07 16 59.6 +1.5**
OKC comp=Z,1μm,15.6s AMS AMS 07 54 50.0
KSP Ksiaz 79.87 328 *e*P **P** **07 16 46.3 +1.0**
KSP *e*pP **pP** **07 16 59.4 +1.1**
KSP *e*S **S** **07 26 45.0 -0.1**
KSP *e*L L 07 59 31.5
comp=Z,978nm,20.0s
YESY Yesilyurt 79.92 310 *e*P **P** **07 16 46.9 +1.0**
CHBY Cihanbeyli 79.92 311 P **P** **07 16 45.9 0.0**
DRGR 79.93 322 ⇓P **P** **07 16 46.6 +0.8**
PRD Provadia 80.01 317 P **P** **07 16 47.5 +1.4**
MERS Mersin 80.02 309 *e*P **P** **07 16 45.8 -0.6**
GLA Glamis 80.06 56 P **P** **07 16 47.0 +0.3**
GLA IAmb IAmb 07 16 49.5
comp=Z,58nm,1.1s
GLA Glamis 80.06 56 P **P** **07 16 47.0 +0.3**
GLA pmax pmax
comp=Z,58nm,1.2s
GLA Glamis 80.06 56 P **P** **07 16 47.9 +1.3**
baz=308,SNR=8.1
GULT Gulveren 80.11 314 *e*P **P** **07 16 47.2 +0.3**
OSTC Ostas 80.12 328 *e*P **P** **07 16 47.5 +0.8**
OSTC *ex* x 07 16 54.2
OSTC *e*S **S** **07 26 45.1 -2.7**
OSTC AMS AMS 07 59 00.0
comp=Z,900nm,16.9s
MORC Moravsky Berou 80.14 327 ⇑P **P** **07 16 47.7 +0.9**
MORC Moravsky Berou 80.14 327 P **P** **07 16 47.6 +0.9**
MORC IAmb IAmb 07 17 02.1
comp=Z,71nm,1.0s
MORC Moravsky Berou 80.14 327 P **P** **07 16 47.6 +0.9**
MORC pmax pmax
comp=Z,71nm,1.0s
MORC Moravsky Berou 80.14 327 *e*P **P** **07 16 47.7 +0.9**
MORC *e* 07 17 01.2
STFAR Stefanesti-Arg 80.15 320 ⇓P **P** **07 16 48.3 +1.3**
CHVC Chvalec 80.16 328 *e*P **P** **07 16 48.0 +1.1**
CHVC AMS AMS 07 59 20.0
comp=Z,100nm,22.0s
AUSIV SIVRIHISAR 80.17 312 *i* P **P** **07 16 47.3 +0.1**
SVRH Sivrihisar-ESK 80.17 312 *e*P **P** **07 16 47.3 +0.1**
RAR Rarotonga 80.22 126 LR LR 07 44 10.7
comp=Z,867nm,21.4s,baz=306,slow=30
DPC Dobruska-Polom 80.23 328 *e*P **P** **07 16 48.5 +1.2**
DPC *e* 07 17 00.7
DPC *e*S **S** **07 26 44.3 -4.7**
DPC MLR MLR
comp=Z,900nm,19.9s
DPC Dobruska-Polom 80.23 328 *e*P **P** **07 16 48.5 +1.2**
DPC *e*pP **pP** **07 17 00.7 +0.4**
DPC *e*S **S** **07 26 44.3 -4.7**
DPC AMS AMS 07 55 50.0
comp=Z,900nm,19.9s
KRLC Kraliky 80.24 328 *e*P **P** **07 16 47.9 +0.5**
KRLC *e* 07 17 00.9
KRLC *e*S **S** **07 26 49.2 0.0**
KRLC MLR MLR
comp=Z,900nm,15.8s
KRLC Kraliky 80.24 328 *e*P **P** **07 16 47.9 +0.5**
KRLC *e*pP **pP** **07 17 00.9 +0.5**
KRLC *e*S **S** **07 26 49.2 0.0**
KRLC AMS AMS 07 58 40.0
comp=Z,900nm,15.8s
UPC Upice 80.24 328 *e*P **P** **07 16 48.3 +1.0**
UPC *e* 07 17 01.9
UPC *e*S **S** **07 26 46.7 -2.3**
UPC MLR MLR
comp=Z,1μm,18.4s
UPC Upice 80.24 328 *e*P **P** **07 16 48.3 +1.0**
UPC *e*pP **pP** **07 17 01.9 +1.6**
UPC *e*S **S** **07 26 46.7 -2.3**
UPC AMS AMS 07 59 10.0
comp=Z,1μm,18.4s
SRCK Saricakaya, Es 80.31 313 *e*P **P** **07 16 47.9 +0.1**
PV23 Carpenter Ridg 80.31 49 IAmb IAmb 07 16 51.3
comp=Z,123nm,1.2s
KIZT Kizilcal 80.33 312 *e*P **P** **07 16 48.2 +0.1**
HRT Hereke 80.34 314 *e*P **P** **07 16 48.4 +0.3**
PSZ Piszkesteto 80.45 325 P **P** **07 16 49.1 +0.5**
PSZ IAmb IAmb 07 17 04.2
comp=Z,96nm,1.0s
PSZ Piszkesteto 80.45 325 P **P** **07 16 49.1 +0.5**
PSZ pmax pmax
comp=Z,96nm,1.0s
DEV Deva 80.47 322 ⇑P **P** **07 16 50.0 +1.3**
AGMN Agassiz Nation 80.48 35 P **P** **07 16 48.7 +0.1**
AGMN IAmb IAmb 07 16 50.2
comp=Z,47nm,1.0s
AGMN Agassiz Nation 80.48 35 P **P** **07 16 48.9 +0.3**
baz=317,SNR=32
AGMN Agassiz Nation 80.48 35 P **P** **07 16 48.6 +0.1**
baz=317,SNR=32
LADK Ladik-KONYA 80.48 311 *e*P **P** **07 16 48.3 -0.7**
N23A Red Feather La 80.50 45 P **P** **07 16 50.1 +0.9**
N23A IAmb IAmb 07 16 52.4
comp=Z,67nm,1.1s
N23A Red Feather La 80.50 45 P **P** **07 16 50.2 +1.0**
baz=312,SNR=46
CIFT Cifteler, Eski 80.50 313 *e*P pP 07 17 02.7 +0.6
PHWY Pilot Hill 80.50 45 P **P** **07 16 49.5 +0.3**
PHWY IAmb IAmb 07 16 52.0
comp=Z,81nm,1.8s
KIZK Mersin 80.50 309 *e*P **P** **07 16 49.2 +0.3**
BORA Eskisehir 80.51 313 *e*P **P** **07 16 48.3 -0.8**
BORA Eskisehir 80.51 313 IAmb IAmb 07 17 03.8
comp=Z,58nm,1.1s

VYHS Vyhne 80.51 325 *e*P **P** **07 16 49.8 +1.0**
VYHS pmax pmax
comp=Z,46nm,1.1s
VYHS Vyhne 80.51 325 *e*P **P** **07 16 49.8 +1.0**
VYHS *e*pP **pP** **07 17 03.3 +1.4**
ISK Istanbul-Kandi 80.53 315 *e*P **P** **07 16 48.6 -0.4**
ADVT Abdulvahap 80.56 314 P **P** **07 16 49.6 +0.4**
PV13 Radium Mtn., P 80.62 49 IAmb IAmb 07 16 52.8
comp=Z,103nm,1.1s
KONT Konya--Tatoy 80.65 311 *e*P **P** **07 16 50.2 +0.4**
CAVI Cavuskoy 80.65 314 *e*P **P** **07 16 50.4 +0.7**
YLV Yalova 80.68 314 *e*P **P** **07 16 50.3 +0.4**
Y14A Wickenburg 80.70 54 P **P** **07 16 49.9 -0.2**
PV15 Paradox Valley 80.70 49 IAmb IAmb 07 16 53.2
comp=Z,118nm,1.8s
RAYN Ar Rayn 80.70 292 P **P** **07 16 50.5 +0.2**
RAYN IAmb IAmb 07 17 04.7
comp=Z,52nm,0.8s
RAYN Ar Rayn 80.70 292 P **P** **07 16 50.5 +0.2**
RAYN pmax pmax
comp=Z,52nm,0.8s
RAYN MLR MLR
comp=Z,1μm,20.0s
RAYN Ar Rayn 80.70 292 P **P** **07 16 50.6 +0.2**
RAYN Ar Rayn 80.70 292 *i* P **P** **07 16 50.3 0.0**
SNR=25
AUBOZ BOZOYUK 80.74 314 *e*P **P** **07 16 49.3 -0.9**
WUAZ Wupatki 80.74 52 IAmb IAmb 07 16 53.7
comp=Z,66nm,1.1s
WUAZ IAMs_20 IAMs_20 07 46 56.5
comp=Z,574nm,20.0s
WUAZ Wupatki 80.74 52 P **P** **07 16 51.7 +1.2**
baz=310,SNR=57
SZH Strazhica 80.75 318 P **P** **07 16 50.7 +0.6**
JAVC Velka Javorina 80.76 326 *e*P **P** **07 16 52.0 +1.8**
JAVC *e* 07 17 05.7
KEBE Keben-Mersin 80.79 309 *e*P **P** **07 16 50.1 -0.5**
D32A Dogwood Acres, 80.79 36 P **P** **07 16 50.9 +0.6**
D32A IAmb IAmb 07 16 51.4
comp=Z,84nm,1.0s
SIRR Siria 80.81 323 ⇓P **P** **07 16 51.2 +0.8**
BRG Berggiesshubel 80.81 329 *i* P **P** **07 16 51.0 +0.6**
BRG Amp 07 16 54.5
comp=Z,46nm,1.1s
BRG pP **pP** **07 17 04.4 +1.0**
BRG Amp 07 17 05.5
comp=Z,51nm,1.1s
BRG *ex* x 07 17 16.1
BRG Amp 07 17 17.2
comp=Z,16nm,1.0s
BRG Berggiesshubel 80.81 329 S **S** **07 26 55.0 0.0**
BRG Amp 07 55 32.0
comp=Z,1.2nm,18.8s
BRG Amp 07 55 37.0
comp=E,0.7nm,19.7s
BRG Amp 07 55 48.0
comp=N,0.5nm,18.6s
BRG Berggiesshubel 80.81 329 *i* P **P** **07 16 50.9 +0.6**
BRG 07 17 04.3
BRG S **S** **07 26 55.0 0.0**
BRG pmax pmax
comp=Z,46nm,1.1s
BRG pmax pmax
comp=Z,51nm,1.1s
BRG pmax pmax
comp=Z,16nm,1.0s
BRG smax smax
comp=Z,1μm,18.8s
BRG MLR MLR
comp=E,709nm,19.7s
BRG MLR MLR
comp=N,541nm,18.6s
PVCC Panska Ves 80.82 329 *e*P **P** **07 16 51.6 +1.2**
PVCC *e* 07 17 05.4
PVCC MLR MLR
comp=Z,1μm,17.2s
PVCC Panska Ves 80.82 329 *e*P **P** **07 16 51.6 +1.2**
PVCC *e*pP **pP** **07 17 05.4 +1.9**
PVCC AMS AMS 07 55 10.0
comp=Z,1μm,17.2s
CLL Collm 80.85 330 P **P** **07 16 50.5 0.0**
CLL IAmb IAmb 07 17 05.3
comp=Z,68nm,0.9s
CLL Collm 80.85 330 *i* P **P** **07 16 50.9 +0.4**
CLL *i* *PP **pP** **07 17 04.7 +1.1**
CLL *e*S **S** **07 26 54.0 -1.4**
CLL pmax pmax
comp=Z,85nm,1.1s
CLL MLR MLR
comp=Z,900nm,19.1s
CLL Collm 80.85 330 *i* P **P** **07 16 50.9 +0.4**
comp=Z,85nm,1.1s
CLL *i* pP **pP** **07 17 04.7 +1.1**
comp=Z,91nm,1.0s
CLL *e*S **S** **07 26 54.0 -1.4**
CLL *e*SS **SS** **07 32 00.0 -8.4**
CLL *ex* x 07 33 12.0
CLL *e*SSS SSS 07 35 36.0
CLL *e*SSSS 07 38 00.0
CLL LmH 07 54 00.0
comp=N,600nm,21.6s
CLL LmH 07 54 00.0
comp=E,700nm,21.8s
CLL LmV 07 57 00.0
comp=Z,900nm,19.1s
GZR Gura Zlata 80.88 321 ⇑P **P** **07 16 51.5 +0.5**
VRAC Vranov 80.90 327 ⇑P **P** **07 16 51.8 +0.9**
VRAC Vranov 80.90 327 LR LR 07 56 56.9
comp=Z,610nm,19.1s,baz=36,slow=39
VRAC Vranov 80.90 327 *e*P **P** **07 16 51.8 +0.9**
VRAC *e* 07 17 05.5
113A Mohawk Valley, 80.93 56 P **P** **07 16 52.7 +1.4**
IKL Isikli 80.94 309 P **P** **07 16 51.6 +0.3**
JMB Yambol 80.94 317 P **P** **07 16 50.0 -1.2**
TEVE Tevekalti-Mers 80.96 309 *e*P **P** **07 16 52.2 +0.7**
VLAD Vladila 81.04 320 ⇑P **P** **07 16 52.1 +0.5**
SMCO Snowmass 81.04 47 P **P** **07 16 53.7 +1.4**
AKKU Akkuyu-Mersin 81.08 309 P **P** **07 16 50.6 -1.4**
EREN Erenkoy 81.09 308 *e*P **P** **07 16 51.7 -0.4**
SMOL Smolenice 81.13 326 *e*P **P** **07 16 53.7 +1.6**
SMOL pmax pmax
comp=Z,34nm,1.1s
BERE Bereket-Mersin 81.16 309 *e*P **P** **07 16 52.8 +0.2**
KRUC Moravsky 81.17 327 *e*P **P** **07 16 53.0 +0.7**
KRUC *e* 07 17 06.6
SRE Strehaia 81.19 321 ⇑P **P** **07 16 53.4 +1.0**
PRU Pruhonice 81.25 329 *e*P **P** **07 16 53.5 +0.8**
PRU *e* 07 17 06.5
PRU *e*S **S** **07 26 58.9 -0.7**
PRU MLR MLR
comp=Z,1μm,17.0s
PRU Pruhonice 81.25 329 *e*P **P** **07 16 53.5 +0.8**
PRU *e*pP **pP** **07 17 06.5 +0.8**
PRU *e*S **S** **07 26 58.9 -0.7**
PRU AMS AMS 07 57 50.0
comp=Z,1μm,17.0s
SRO Srobarova 81.25 325 *e*P **P** **07 16 54.3 +1.6**
SRO pmax pmax
comp=Z,82nm,1.2s
SRO Srobarova 81.25 325 *e*P **P** **07 16 54.3 +1.6**
EDRB Edirne 81.28 317 *e*P **P** **07 16 53.9 +0.9**
SFX San Felipe 81.29 58 P **P** **07 16 54.6 +1.4**
SFX IAmb IAmb 07 16 55.8
comp=Z,42nm,1.0s
BZS Buzias 81.30 322 ⇑P **P** **07 16 53.3 +0.3**
MODS Modra-Piesok 81.30 326 *e*P **P** **07 16 54.3 +1.3**
MODS pmax pmax
comp=Z,101nm,1.1s
MODS Modra-Piesok 81.30 326 *e*P **P** **07 16 54.3 +1.3**
MODS *e*pP **pP** **07 17 07.9 +1.8**
SEYD Seydisehir-KON 81.32 311 P **P** **07 16 53.2 -0.2**
SHUT Suhut-Afyon 81.33 312 *e*P **P** **07 16 54.4 +0.9**
TEKE Tekeli-Mersin 81.36 309 *e*P **P** **07 16 53.7 +0.2**
TVSB Tavsanli 81.37 314 *e*P **P** **07 16 48.9 -4.8**
IVI Ivigtut 81.37 5 *i* P **P** **07 16 53.4 +0.3**
TREC Trest 81.38 328 *e*P **P** **07 16 54.2 +0.8**
TREC *e* 07 17 08.1
TREC MLR MLR
comp=Z,600nm,17.5s
TREC Trest 81.38 328 *e*P **P** **07 16 54.2 +0.8**
TREC *e*pP **pP** **07 17 08.1 +1.6**
TREC AMS AMS 07 56 30.0
comp=Z,600nm,17.5s
B35A Bob, Littlefor 81.39 34 P **P** **07 16 53.9 +0.4**

B35A IAmb IAmb 07 16 54.7
comp=Z,56nm,1.0s
B35A Bob, Littlefor 81.39 34 P **P** **07 16 54.0 +0.5**
baz=318,SNR=37
X16A Lo Mia Camp, P 81.40 53 P **P** **07 16 55.5 +1.5**
X16A IAmb IAmb 07 16 57.3
comp=Z,41nm,1.0s
ISCO Idaho Springs 81.42 46 P **P** **07 16 55.7 +1.6**
ISCO IAMs_20 IAMs_20 07 47 50.0
comp=Z,507nm,19.0s
ISCO Idaho Springs 81.42 46 P **P** **07 16 55.7 +1.6**
ISCO pmax pmax
comp=Z,17nm,0.9s
ISCO Idaho Springs 81.42 46 P **P** **07 16 55.8 +1.6**
baz=312,SNR=32
ISCO Idaho Springs 81.42 46 P **P** **07 16 55.3 +1.1**
baz=312,SNR=32
HERR Herculane 81.43 321 ⇓P **P** **07 16 54.2 +0.4**
MVCO Mesa Verde 81.43 49 P **P** **07 16 55.7 +1.5**
MVCO IAMs_20 IAMs_20 07 47 21.7
comp=Z,495nm,22.0s
MVCO Mesa Verde 81.43 49 P **P** **07 16 55.2 +1.0**
baz=311,SNR=39
ASF Jabal al Asfar 81.46 304 LR LR 07 56 38.2
comp=Z,602nm,20.2s,baz=99,slow=38
ZST Bratislava 81.51 326 *e*P **P** **07 16 55.3 +1.2**
ZST pmax pmax
comp=Z,59nm,0.9s
ZST Bratislava 81.51 326 *e*P **P** **07 16 55.3 +1.2**
ZST *e*pP **pP** **07 17 08.8 +1.6**
DJES Djerdap 81.53 321 ⇓P **P** **07 16 54.6 +0.4**
BAIL Bailesti 81.57 320 ⇓P **P** **07 16 56.0 +1.5**
LFK Lefkose 81.65 308 *e*P **P** **07 16 55.7 +0.5**
GEDZ Gediz 81.67 313 *e*P **P** **07 16 55.7 +0.5**
SUTC Sutluce-Ispart 81.77 311 *e*P **P** **07 16 55.9 0.0**
SUSD Miller 81.79 39 P **P** **07 16 56.5 +0.8**
SUSD Miller 81.79 39 P **P** **07 16 56.2 +0.6**
baz=316,SNR=9.0
SUSD Miller 81.79 39 P **P** **07 16 56.4 +0.8**
baz=316,SNR=9.0
GAZI Gazipasa 81.79 310 *e*P **P** **07 16 55.0 -0.8**
ISP Isparta 81.83 312 *e*P **P** **07 16 55.7 -0.4**
ISP Isparta 81.83 312 IAMs_20 IAMs_20 07 59 54.1
comp=Z,367nm,19.0s
ISP Isparta 81.83 312 *de*P **P** **07 16 56.4 +0.3**
ISP pmax pmax
comp=Z,38nm,0.9s
MPEP Malo Peshtene 81.83 319 P **P** **07 16 56.6 +0.7**
MDVR Moldovita 81.85 321 ⇑P **P** **07 16 56.3 +0.3**
MMAI Mount Meron Ar 81.91 305 LR LR 07 56 32.4
comp=Z,571nm,21.1s,baz=202,slow=38
CSS Mathiatis 81.98 308 P **P** **07 16 57.4 +0.5**
CSS Mathiatis 81.98 308 P **P** **07 16 57.2 +0.4**
CSS IAmb IAmb 07 17 11.5
comp=Z,58nm,0.9s
W18A Petrified Fore 82.03 52 P **P** **07 16 58.7 +1.4**
baz=310
BCK Bucak 82.03 311 *e*P **P** **07 16 55.1 -2.0**
214A Organ Pipe Nat 82.07 56 P **P** **07 16 58.3 +0.9**
214A Organ Pipe Nat 82.07 56 P **P** **07 16 58.5 +1.1**
baz=309,SNR=8.9
S22A 4UR Ranch, Cre 82.08 48 P **P** **07 16 59.6 +1.9**
baz=312,SNR=70
F33A 5 Mile Ranch, 82.08 37 P **P** **07 16 57.8 +0.7**
F33A IAmb IAmb 07 16 59.3
comp=Z,66nm,0.9s
F33A 5 Mile Ranch, 82.08 37 P **P** **07 16 57.9 +0.8**
baz=317,SNR=45
URZ Urewera 82.11 153 LR LR 07 49 21.0
comp=Z,455nm,20.5s,baz=24,slow=33
KDZ Kurdzhali 82.14 317 *e*P **P** **07 16 58.8 +1.3**
KDZ Kurdzhali 82.14 317 P **P** **07 16 58.5 +1.0**
LEF Lefka 82.16 308 *e*P **P** 07 16 46.5 -11
PGB Panagyurishte 82.18 319 P **P** **07 16 59.9 +2.1**
BLKB Belogradchik 82.19 320 ⇓P **P** **07 16 58.4 +0.6**
RONA Rosalia, Austr 82.24 326 *i* P **P** **07 16 59.1 +1.1**
comp=Z,74nm,1.5s,SNR=38
RONA *e*P **pP** **07 17 13.2 +2.0**
comp=Z,65nm,0.9s
RONA *e*P **PP** **07 20 09.6 +3.5**
comp=Z,4.0nm,1.0s
Q24A Divide 82.24 46 P **P** **07 16 59.5 +1.0**
baz=312,SNR=13
CKRC Cesky Krumlov 82.25 328 *e*P **P** **07 16 58.6 +0.6**
CKRC *ex* x 07 17 12.1
CKRC *e*S **S** **07 27 04.9 -5.0**
CONA Conrad Observa 82.26 327 *i* P **P** **07 16 59.1 +0.9**
comp=Z,44nm,1.1s,SNR=34
CONA *e*P **pP** **07 17 13.1 +1.9**
comp=Z,80nm,1.3s
CONA *e*P **PP** **07 20 07.0 +0.7**
comp=Z,6.3nm,1.2s
MMLI Mount Malkishu 82.26 305 *e*P **P** **07 16 56.4 -2.0**
KHC Kasperske Hory 82.31 329 IAmb IAmb 07 17 13.6
comp=Z,63nm,0.9s
KHC Kasperske Hory 82.31 329 *e*P **P** **07 16 58.9 +0.6**
KHC *e* 07 17 12.4
KHC *e*S **S** **07 27 07.0 -3.6**
KHC MLR MLR
comp=Z,1μm,18.0s
KHC Kasperske Hory 82.31 329 *e*P **P** **07 16 58.9 +0.6**
KHC *e*pP **pP** **07 17 12.4 +1.0**
KHC *ex* x 07 17 24.0
KHC *ex* x 07 17 33.5
KHC *e*S **S** **07 27 07.0 -3.6**
KHC AMS AMS 07 58 40.0
comp=Z,1μm,18.0s
ENEZ Enez 82.37 316 *e*P P 07 16 47.6 -11
RDO Rodhopi 82.42 317 P **P** **07 17 00.0 +1.0**
RDO Rodhopi 82.42 317 P **P** **07 16 58.8 -0.2**
RDO IAmb IAmb 07 17 14.3
comp=Z,69nm,1.2s
KULA Kula-Manisa 82.46 313 *e*P **P** **07 16 59.7 +0.3**
KORT Korkueli 82.48 311 *e*P **P** **07 16 59.3 -0.3**
GEC2 GERESS Array S 82.48 328 P **P** **07 16 59.0 -0.3**
GERES GERESS Array B 82.48 328 P **P** **07 16 59.5 +0.2**
comp=Z,18nm,0.9s,baz=35,slow=4.9,SNR=128
GERES pP **pP** **07 17 12.2 -0.2**
comp=Z,20nm,0.8s,baz=46,slow=5.8,SNR=16
GERES LR LR 07 58 00.5
comp=Z,816nm,18.7s,baz=28,slow=39
comp=Z,18nm,0.9s
GERES GERESS Array B 82.48 328 P **P** **07 16 59.1 -0.3**
RZN Rozhen 82.49 318 P **P** **07 17 00.6 +1.0**
FRGS Fruska Gora 82.51 323 ⇑P **P** **07 17 00.1 +0.7**
FRGS Fruska Gora 82.51 323 ⇑*i*P **P** **07 16 59.7 +0.3**
VTS Vitosha 82.62 319 ⇑P **P** **07 17 01.3 +1.1**
VTS Vitosha 82.62 319 IAmb IAmb 07 17 15.7
comp=Z,76nm,0.9s
VTS Vitosha 82.62 319 P **P** **07 17 01.3 +1.1**
OGNE Ogallala 82.64 43 P **P** **07 16 59.7 -0.5**
OGNE IAmb IAmb 07 17 01.9
comp=Z,37nm,0.8s
OGNE Ogallala 82.64 43 P **P** **07 17 01.4 +1.2**
baz=314,SNR=6.9
OGNE Ogallala 82.64 43 P **P** **07 17 01.1 +0.8**
baz=314,SNR=6.9
BOVS Bovan 82.67 321 ⇑P **P** **07 17 00.2 0.0**
EYMN Ely 82.68 33 IAmb IAmb 07 17 02.1
comp=Z,67nm,1.0s
EYMN Ely 82.68 33 IAMs_20 IAMs_20 07 55 02.9
comp=Z,481nm,21.0s
EYMN Ely 82.68 33 P **P** **07 17 00.8 +0.5**
baz=320,SNR=40
EYMN Ely 82.68 33 P **P** **07 17 00.5 +0.2**
baz=320,SNR=40
EKA Eskdalemuir Ar 82.82 341 LR LR 07 57 50.0
comp=Z,514nm,18.5s,baz=33,slow=38
GRA1 Grafenberg Arr 82.83 330 P **P** **07 17 01.3 +0.3**
GRA1 IAmb IAmb 07 17 16.5
comp=Z,81nm,1.0s
GRA1 IAMs_20 IAMs_20 08 00 04.4
comp=Z,587nm,20.0s
GRF Grafenberg Arr 82.83 330 P **P** **07 17 01.3 +0.3**
GRF pmax pmax
comp=Z,81nm,1.0s
GRFO Grafenberg 82.83 330 P **P** **07 17 01.8 +0.8**
GRFO IAmb IAmb 07 17 03.2
comp=Z,79nm,1.0s
GRFO Grafenberg 82.83 330 P **P** **07 17 01.8 +0.8**
GRFO pmax pmax
comp=Z,79nm,1.0s
ESK Eskdalemuir 82.85 341 P **P** **07 17 01.7 +0.8**
ESK Eskdalemuir 82.85 341 P **P** **07 17 01.7 +0.8**
ESK pmax pmax

comp=Z,38nm,1.3s
ESK MLR MLR
comp=Z,600nm,19.0s
SDCO Great Sand Dun 82.86 47 P **P** **07 17 03.4 +1.6**
baz=312,SNR=43
SDCO Great Sand Dun 82.86 47 P **P** **07 17 02.8 +1.1**
baz=312,SNR=43
GADA Gvkgeada 82.88 316 *eP* **P** **07 16 58.3 -3.1**
ELL Elmali 82.91 311 *eP* **P** **07 17 02.4 +0.6**
ELL Elmali 82.91 311 P **P** **07 17 02.0 +0.3**
ELL Elmali 82.91 311 P **P** **07 17 02.1 +0.3**
ELL pmax pmax
comp=Z,235nm,0.9s
ARSA Arzberg 82.92 326 *i* P **P** **07 17 02.3 +0.8**
comp=Z,29nm,1.3s,SNR=21
ARSA *eP* **pP** **07 17 15.9 +1.3**
comp=Z,33nm,1.2s
ARSA *eP* **PP** **07 20 12.2 +0.5**
comp=Z,5.6nm,1.1s
MOA Molln 83.01 327 *i* P **P** **07 17 02.7 +0.7**
comp=Z,34nm,1.1s,SNR=28
MOA *eP* **pP** **07 17 17.1 +2.0**
comp=Z,46nm,1.1s
MOA *eP* **PP** **07 20 13.9 +1.5**
comp=Z,7.6nm,0.9s
MMB Musomiste 83.08 318 P **P** **07 17 03.2 +0.7**
TUC Tucson 83.17 54 P **P** **07 17 03.5 +0.4**
TUC IAmb IAmb 07 17 06.1
comp=Z,64nm,1.7s
TUC Tucson 83.17 54 P **P** **07 17 03.6 +0.4**
TUC pmax pmax
comp=Z,64nm,1.7s
TUC Tucson 83.17 54 P **P** **07 17 04.5 +1.3**
baz=310
NVR Nevrokopi 83.18 318 P **P** **07 17 03.5 +0.5**
K31A O'Neill 83.19 40 P **P** **07 17 04.2 +1.1**
baz=316,SNR=15
DIVS Divibare 83.19 322 P **P** **07 17 03.4 +0.3**
DIVS IAmb IAmb 07 17 17.9
comp=Z,56nm,1.1s
DIVS Divibare 83.19 322⇑ *i*P **P** **07 17 03.2 +0.1**
A252A Venje 83.23 324 *i* P **P** **07 17 03.5 +0.3**
AYDB Zeytinkoy-Aydi 83.29 313 *eP* **P** **07 17 04.4 +0.7**
KALN Kalnik 83.36 325 *i* P **P** **07 17 03.5 -0.3**
F36A Milaca 83.36 35 P **P** **07 17 03.7 -0.1**
F36A Milaca 83.36 35 P **P** **07 17 04.1 +0.3**
baz=319,SNR=8.8
BIOA Bad Ischl, Aus 83.40 328 *i* P **P** **07 17 04.7 +0.7**
comp=Z,41nm,0.8s,SNR=33
BIOA *eP* **pP** **07 17 18.7 +1.5**
comp=Z,83nm,1.4s
AKAS Kas 83.43 311 *eP* **P** **07 17 01.5 -3.0**
ECSD EROS Data Cent 83.47 38 IAmb IAmb 07 17 06.3
comp=Z,47nm,0.9s
ECSD EROS Data Cent 83.47 38 IAMs_20 IAMs_20 07 53 38.9
comp=Z,507nm,21.0s
ECSD EROS Data Cent 83.47 38 P **P** **07 17 05.0 +0.6**
baz=317,SNR=62
ECSD EROS Data Cent 83.47 38 P **P** **07 17 04.7 +0.3**
baz=317,SNR=62
BLCB Balcova 83.48 314 *eP* **P** **07 17 04.2 -0.3**
SRS Serrai 83.49 318 P **P** **07 17 04.5 -0.1**
SOKA Soboth 83.58 326 *i* P **P** **07 17 05.5 +0.5**
comp=Z,94nm,1.3s,SNR=85
SOKA *eP* **pP** **07 17 19.7 +1.6**
comp=Z,123nm,1.1s
MOSL Moslavina 83.61 325 *i* P **P** **07 17 04.6 -0.5**
YER Yerkesik 83.61 312 *i* P **P** **07 17 06.6 +1.3**
KSCO Kaye Shedlock' 83.65 45 P **P** **07 17 06.8 +1.2**
baz=314
KSCO Kaye Shedlock' 83.65 45 P **P** **07 17 06.8 +1.2**
baz=314
BBLS Lazići 83.65 322⇑ *i*P **P** **07 17 06.2 +0.8**
E38A The Farm, Brul 83.68 34 P **P** **07 17 05.8 +0.3**
baz=320,SNR=64
PTJ Puntijarka 83.75 325 P **P** **07 17 05.4 -0.5**
KNT Kendrikon 83.83 318 P **P** **07 17 06.8 +0.5**
GCAM G?zelcaml? 83.84 313 *eP* **P** **07 17 06.3 -0.1**
RUDO Rudo 83.85 322⇑ *i*P **P** **07 17 06.4 0.0**
TURN Turunc 83.88 312 *eP* **P** **07 17 06.9 +0.3**
T25A Trinidad 83.91 47 P **P** **07 17 07.7 +0.7**
T25A Trinidad 83.91 47 P **P** **07 17 08.3 +1.2**
baz=313,SNR=44
OBKA Obir 83.92 326⇑ *i*P **P** **07 17 06.7 -0.1**
OBKA Obir 83.92 326 *i* P **P** **07 17 06.8 -0.1**
comp=Z,15nm,0.9s,SNR=13
OBKA *eP* **pP** **07 17 20.5 +0.6**
comp=Z,30nm,0.9s
OBKA *eP* **PP** **07 20 18.8 -1.2**
comp=Z,13nm,1.4s
KBA Koelnbreinsper 84.00 327 *i* P **P** **07 17 07.6 +0.3**
comp=Z,11nm,0.7s,SNR=30
KBA *eP* **pP** **07 17 22.5 +2.0**
comp=Z,46nm,0.9s
KBA *eP* **PP** **07 20 22.9 +2.2**
comp=Z,12nm,1.1s
BEBN Eben Emael 84.01 334 *dP* **P** **07 17 07.2 +0.2**
BEBN *dx* **pP** **07 17 20.6 +0.5**
BTNL Ternell 84.02 333 *dP* **P** **07 17 07.3 +0.2**
comp=Z,19nm,1.1s
BTNL *dx* **pP** **07 17 21.2 +1.0**
CRES Cresnjev 84.04 325⇑ *i*P **P** **07 17 07.0 -0.3**
MEM Membach 84.05 333 *dP* **P** **07 17 07.4 +0.2**
MEM *dx* **pP** **07 17 20.8 +0.4**
PLE Pljevlja 84.05 322⇑ *i*P **P** **07 17 08.4 +0.9**
IVA Berane 84.14 321⇑ *i*P **P** **07 17 08.5 +0.5**
PMOR Pomariorio Ree 84.14 114 *eT* T 08 49 19.7
comp=Z,54nm,0.2s
ANMO Albuquerque 84.16 50 LR LR 07 50 52.5
comp=Z,322nm,20.1s,baz=326,slow=33
ANMO Albuquerque 84.16 50 P **P** **07 17 08.7 +0.3**
ANMO IAmb IAmb 07 17 11.6
comp=Z,46nm,1.1s
ANMO Albuquerque 84.16 50 IAMs_20 IAMs_20 07 50 19.9
comp=Z,397nm,21.0s
ANMO Albuquerque 84.16 50*d i*P **P** **07 17 10.1 +1.7**
ANMO pmax pmax
comp=Z,55nm,1.3s
ANMO Albuquerque 84.16 50 P **P** **07 17 10.0 +1.7**
baz=312,SNR=79
ANMO Albuquerque 84.16 50 P **P** **07 17 09.7 +1.4**
baz=312
SPMN Marine on St. 84.17 35 IAmb IAmb 07 17 09.3
comp=Z,29nm,0.9s
SPMN Marine on St. 84.17 35 P **P** **07 17 08.5 +0.5**
baz=319,SNR=12
SPMN Marine on St. 84.17 35 P **P** **07 17 08.1 +0.1**
baz=319,SNR=12
OZLJ Ozalj 84.20 325 *i* P **P** **07 17 07.5 -0.5**
A251A Rujevac 84.20 325 *i* P **P** **07 17 08.5 +0.4**
BSTI Sart Tilman 84.22 334 *dP* **P** **07 17 08.4 +0.3**
BSTI *dx* **pP** **07 17 22.3 +1.1**
MYKA Terra Mystica 84.22 327 *i* P **P** **07 17 08.1 -0.2**
comp=Z,18nm,0.7s,SNR=21
MYKA *eP* **pP** **07 17 21.7 +0.3**
comp=Z,25nm,0.8s
BODT Bodrum 84.23 313 *eP* **P** **07 17 07.0 -1.4**
BHOU Houvegnez 84.26 333 *dP* **P** **07 17 08.7 +0.4**
BHOU *dx* **pP** **07 17 22.1 +0.7**
LJU Ljubljana 84.29 326 *i* P **P** **07 17 08.4 -0.1**
LJU *i* pP **pP** **07 17 21.6 -0.1**
PVY Plav 84.31 321⇑ *i*P **P** **07 17 08.8 -0.1**
ARG Arkhangelos 84.33 312 *eP* **P** **07 17 09.7 +0.8**
EIL Elat 84.34 303 LR LR 08 00 09.9
comp=Z,488nm,18.7s,baz=76,slow=40
EIL Elat 84.34 303 *eP* **P** **07 17 09.9 +0.8**
KOME Kolasin 84.34 321⇑ *i*P **P** **07 17 09.4 +0.4**
MGRS Mrkonjic Grad 84.36 324⇑ *i*P **P** **07 17 10.2 +1.2**
BGNE Belgrade 84.38 41 P **P** **07 17 09.9 +0.8**
baz=316,SNR=7.8
BGNE Belgrade 84.38 41 P **P** **07 17 09.2 +0.1**
baz=316,SNR=7.8
BOJS Bojanci 84.38 325 *i* P **P** **07 17 09.0 0.0**
BOJS *i* pP **pP** **07 17 22.7 +0.5**
UPM Unac-Piva 84.39 322⇑ *i*P **P** **07 17 09.1 -0.2**
UPM Unac-Piva 84.39 322⇑ *i*P **P** **07 17 09.3 0.0**
PRED Cave del Predi 84.40 327 P **P** **07 17 08.6 -0.6**
PRED IAmb IAmb 07 17 23.1
comp=Z,35nm,0.8s
BCLA Clavier 84.45 334 *dP* **P** **07 17 09.1 -0.2**
BCLA *dx* **pP** **07 17 22.6 +0.2**
WATA Walderalm 84.55 328 *i* P **P** **07 17 10.1 +0.1**
comp=Z,6.2nm,0.8s,SNR=8.5
WATA *eP* **pP** **07 17 24.0 +0.8**
comp=Z,22nm,0.9s
WATA *eP* **PP** **07 20 21.4 -3.7**
comp=Z,6.5nm,1.1s
CEY Cerknica 84.57 326⇑ *i*P **P** **07 17 09.6 -0.4**
CEY Cerknica 84.57 326 *i* P **P** **07 17 09.7 -0.3**
WTTA Wattenberg 84.58 328 *i* P **P** **07 17 10.6 +0.4**
comp=Z,20nm,1.0s,SNR=10
WTTA *eP* **pP** **07 17 24.7 +1.3**
comp=Z,34nm,1.2s
WTTA *eP* **PP** **07 20 25.2 -0.2**
comp=Z,6.7nm,1.1s
D41A Chassel 84.62 32 P **P** **07 17 11.3 +1.1**
baz=322,SNR=19
ABTA Abfaltersbach 84.62 328 *i* P **P** **07 17 09.8 -0.5**
comp=Z,16nm,0.9s,SNR=22
ABTA *eP* **pP** **07 17 23.6 +0.1**
comp=Z,31nm,1.0s
ABTA *eP* **PP** **07 20 25.9 +0.4**
comp=Z,5.4nm,1.2s
PPT Papeete 84.62 117 LR LR 07 49 50.2
comp=Z,668nm,19.7s,baz=298,slow=32
NKY Niksic 84.63 322⇑ *i*P **P** **07 17 10.5 0.0**
PPT2 Papeete2 84.64 117 *eP* **P** **07 17 12.4 +1.7**
comp=Z,122nm,27.5s
PPT2 Papeete2 84.64 117 *e*LR LR 07 43 51.9
comp=Z,2µm,27.8s
PPT2 *e*LR LR 07 43 52.5
comp=Z,1µm,28.5s
PPT2 Papeete2 84.64 117 *eT* T 08 50 06.3
comp=Z,6.9nm,0.2s
PAE Paea 84.68 117 *eT* T 08 50 19.5
comp=Z,1.5nm,0.2s
NKME Niksic 84.69 322⇑ *i*P **P** **07 17 10.6 -0.1**
PLIT Plitvice 84.69 325 *i* P **P** **07 17 10.4 -0.2**
RCHB Rochefort 84.70 334 *dP* **P** **07 17 10.7 +0.2**
comp=Z,29nm,1.1s
RCHB *dx* **pP** **07 17 24.5 +0.8**
PHP Peshkopia 84.73 320 P **P** **07 17 11.3 +0.4**
MOTA Moosalm 84.74 329 *i* P **P** **07 17 11.1 +0.1**
comp=Z,58nm,1.3s,SNR=25
MOTA *eP* **pP** **07 17 25.5 +1.3**
comp=Z,77nm,1.2s
MOTA *eP* **PP** **07 20 27.6 +1.0**
comp=Z,8.9nm,1.1s
BMRD Maredsous 84.74 334 *dP* **P** **07 17 11.0 +0.3**
comp=Z,45nm,1.0s
BMRD *dx* **pP** **07 17 25.1 +1.2**
319A Douglas 84.75 54 IAmb IAmb 07 17 14.1
comp=Z,56nm,1.0s
SABO M.te Sabotino 84.75 327 IAmb IAmb 07 17 24.6
comp=Z,37nm,1.0s
RETA Reutte 84.77 329 *i* P **P** **07 17 11.7 +0.7**
comp=Z,49nm,0.8s,SNR=37
RETA *eP* **pP** **07 17 25.5 +1.3**
comp=Z,90nm,1.1s
WLF Walferdange 84.78 333 IAmb IAmb 07 17 27.2
comp=Z,55nm,1.1s
WLF Walferdange 84.78 333 *dP* **P** **07 17 11.5 +0.6**
WLF *dx* **pP** **07 17 25.6 +1.6**
PDG Podgorica 84.78 321⇑ *i*P **P** **07 17 11.4 +0.3**
PDG Podgorica 84.78 321⇑ *i*P **P** **07 17 11.3 +0.2**
TTG Podgorica 84.78 321⇑ *i*P **P** **07 17 11.4 +0.3**
BRY Bratogost 84.79 322⇑ *i*P **P** **07 17 10.9 -0.4**
BRY Bratogost 84.79 322⇑ *i*P **P** **07 17 11.1 -0.2**
SQTA Sankt Quirin 84.79 329 *i* P **P** **07 17 11.6 +0.4**
comp=Z,17nm,0.8s,SNR=12
SQTA *eP* **pP** **07 17 25.1 +0.7**
comp=Z,52nm,1.5s
SQTA *eP* **PP** **07 20 26.4 -0.6**
comp=Z,12nm,1.2s
LIT Litokhoron 84.80 318 P **P** **07 17 10.9 -0.4**
I37A Leond, Waseca 84.81 36 P **P** **07 17 12.2 +1.0**
I37B Waseca 84.81 36 P **P** **07 17 12.3 +1.1**
baz=319,SNR=44
CEME Cevo 84.86 321⇑ *i*P **P** **07 17 11.6 0.0**
L34A Svendsen Farm, 84.88 39 P **P** **07 17 12.1 +0.4**
L34A Svendsen Farm, 84.88 39 P **P** **07 17 12.4 +0.8**
baz=317,SNR=11
SCHQ Schefferville 84.89 16 P **P** **07 17 12.2 +0.8**
comp=Z,34nm,0.7s,baz=353,slow=5.1,SNR=57
SCHQ LR LR 07 56 42.8
comp=Z,649nm,21.8s,baz=325,slow=37
comp=Z,34nm,0.7s
SCHQ Schefferville 84.89 16 IAmb IAmb 07 17 13.1
comp=Z,38nm,0.8s
UDBI Udbina 84.89 324 *i* P **P** **07 17 11.7 0.0**
SKDS Skadanscina 84.90 326⇑ *i*P **P** **07 17 10.6 -1.1**
STAL STALIGIAL 84.92 327 IAmb IAmb 07 17 25.2
comp=Z,51nm,0.8s
121A Cookes Peak, D 84.94 53 IAmb IAmb 07 17 15.4
comp=Z,44nm,1.0s
121A Cookes Peak, D 84.94 53 P **P** **07 17 13.5 +1.2**
baz=312,SNR=31
121A Cookes Peak, D 84.94 53 P **P** **07 17 13.1 +0.8**
baz=312,SNR=31
DOU Dourbes 84.97 334 *dP* **P** **07 17 12.0 +0.1**
DOU *dx* **pP** **07 17 25.6 +0.6**
DOU *dx* pP 07 17 37.6 +13
KIJV Kijevo 84.99 324 *i* P **P** **07 17 12.1 0.0**
CIMO Cimolais 84.99 327 IAmb IAmb 07 17 25.5
comp=Z,25nm,0.9s
DRME Dracevica, Mon 85.00 321⇑ *i*P **P** **07 17 12.7 +0.5**
DRME Dracevica, Mon 85.00 321⇑ *i*P **P** **07 17 12.7 +0.5**
RICI Ricice 85.03 323 *i* P **P** **07 17 10.1 -2.2**
BFO Black Forest 85.06 331 P **P** **07 17 12.7 +0.3**
BFO Black Forest 85.06 331 P **P** **07 17 12.7 +0.3**
BFO pmax pmax
comp=Z,87nm,1.0s
BUM Brajici-Budva 85.06 321⇑ *i*P **P** **07 17 12.6 0.0**
RPZ Rata Peaks 85.06 159 LR LR 07 49 02.6
comp=Z,434nm,21.4s,baz=332,slow=31
COWI Conover 85.13 33 P **P** **07 17 13.1 +0.3**
COWI IAmb IAmb 07 17 14.1
comp=Z,36nm,0.8s
COWI IAMs_20 IAMs_20 07 53 28.7
comp=Z,507nm,22.0s
COWI Conover 85.13 33 P **P** **07 17 13.1 +0.3**
baz=322
ULC Ulcinj 85.13 321⇑ *i*P **P** **07 17 13.1 +0.2**
HCY Herceg Novi 85.15 322⇑ *i*P **P** **07 17 12.5 -0.4**
HCY Herceg Novi 85.15 322⇑ *i*P **P** **07 17 12.6 -0.4**
FETA Feichten 85.15 329 *i* P **P** **07 17 13.3 +0.2**
comp=Z,26nm,0.9s,SNR=25
FETA *eP* **pP** **07 17 27.5 +1.3**
comp=Z,47nm,1.1s
FETA *eP* **PP** **07 20 30.2 +0.2**
comp=Z,6.9nm,1.1s
DBRK Dubrovnik 85.16 322 *i* P **P** **07 17 10.5 -2.4**
RABC Rab 85.17 325 *i* P P 07 17 06.8 -6.1
HSIG 85.18 57 IAmb IAmb 07 17 15.8
comp=Z,36nm,1.2s
N33A J Bar K, Exete 85.23 41 IAmb IAmb 07 17 14.7
comp=Z,41nm,0.8s
N33B J Bar K, Exete 85.23 41 P **P** **07 17 13.9 +0.5**
baz=317
SMRN Sveta Marina 85.23 326 *i* P **P** **07 17 11.4 -1.9**
MAKA Makarska 85.24 323 *i* P **P** **07 17 12.1 -1.2**
TIR Tirane 85.27 320⇑ P **P** **07 17 13.9 +0.4**
NVLJ Novalja 85.27 325 *i* P **P** **07 17 11.9 -1.5**
DAVA Damuels 85.28 329 *i* P **P** **07 17 14.0 +0.3**
comp=Z,77nm,1.0s,SNR=45
DAVA *eP* **pP** **07 17 28.2 +1.3**
comp=Z,79nm,0.9s
DAVA *eP* **PP** **07 20 30.7 -0.3**
comp=Z,6.7nm,1.5s
G40A Rib Lake 85.32 34 IAmb IAmb 07 17 15.7
comp=Z,51nm,0.8s
G40A Rib Lake 85.32 34 P **P** **07 17 14.3 +0.6**
baz=321,SNR=58
KBN Korca 85.32 319 P **P** **07 17 13.8 -0.2**
KBN Korca 85.32 319 P **P** **07 17 13.8 -0.2**
KBN pmax pmax
comp=Z,244nm,1.1s
NEST Nestorio 85.34 319 P **P** **07 17 14.8 +0.7**
CBKS Cedar Bluff 85.39 43 IAmb IAmb 07 17 15.8
comp=Z,47nm,0.9s
CBKS IAMs_20 IAMs_20 07 58 56.0
comp=Z,401nm,19.0s
CBKS Cedar Bluff 85.39 43 P **P** **07 17 14.8 +0.5**
baz=316,SNR=10
CBKS Cedar Bluff 85.39 43 P **P** **07 17 14.4 +0.2**
baz=316,SNR=10
SRIG Santa Rosalia 85.40 59 P **P** **07 17 14.4 0.0**
SRIG IAmb IAmb 07 17 16.9
comp=Z,35nm,1.2s
LBZ Lake Benmore 85.44 160 IAmb IAmb 07 17 15.3
comp=Z,42nm,0.9s
ATAL Atalanti 85.52 316 P **P** **07 17 14.3 -0.6**
DSB Dublin 85.53 341 IAmb IAmb 07 17 30.0
comp=Z,50nm,1.2s
CTI Castel Tesino 85.54 328 P **P** **07 17 14.4 -0.5**
CTI IAmb IAmb 07 17 28.6
comp=Z,31nm,0.9s
CTI Castel Tesino 85.54 328 P **P** **07 17 14.5 -0.5**
CTI pmax pmax
comp=Z,31nm,0.9s
ECH Echery 85.60 331 P **P** **07 17 15.0 -0.1**
ECH IAmb IAmb 07 17 16.4
comp=Z,47nm,0.9s
ECH IAMs_20 IAMs_20 07 57 21.7
comp=Z,575nm,21.0s
ECH Echery 85.60 331 P **P** **07 17 15.0 -0.1**
ECH pmax pmax
comp=Z,47nm,0.9s
ECH MLR MLR
comp=Z,600nm,21.0s
DUGI Dugi Otok 85.63 324 *i* P **P** **07 17 12.8 -2.5**
FUORN Ofenpass-Fuorn 85.66 329 P **P** **07 17 16.2 +0.4**
LSTV Lastovo 85.69 323 *i* P **P** **07 17 11.3 -4.3**
DAVOX Davos/Dischmat 85.69 329 LR LR 07 59 04.6
comp=Z,999nm,19.0s,baz=20,slow=38
E43A Lone Tree Farm 85.82 31 P **P** **07 17 16.7 +0.5**
baz=323,SNR=32
F42A Maple Grove Fa 85.83 32 IAmb IAmb 07 17 18.4
comp=Z,36nm,0.8s
F42A Maple Grove Fa 85.83 32 P **P** **07 17 17.3 +1.1**
baz=322,SNR=5.0
MEH Mehetia 85.90 116 *e*T T 08 51 57.4
comp=Z,103nm,0.3s
TAOE Nuku Hiva Isla 86.06 104 *eP* **P** **07 17 19.5 +1.6**
comp=Z,101nm,28.0s
TAOE Nuku Hiva Isla 86.06 104 *e*S **S** **07 27 49.2 0.0**
comp=Z,189nm,27.5s
TAOE Nuku Hiva Isla 86.06 104 *e*LR LR 07 44 31.6
comp=Z,2µm,24.0s
N35A Tabor 86.07 40 P **P** **07 17 18.7 +1.2**
baz=318,SNR=34
TEOL Teolo 86.07 327 P **P** **07 17 17.2 -0.3**
TEOL IAmb IAmb 07 17 32.0
comp=Z,37nm,0.8s
K38A Parkersburg 86.15 37 P **P** **07 17 17.7 -0.2**
K38A IAmb IAmb 07 17 19.2
comp=Z,37nm,1.1s
K38A Parkersburg 86.15 37 P **P** **07 17 18.2 +0.3**
baz=320,SNR=8.6
ANX Ano Chora 86.19 317 P **P** **07 17 18.5 +0.2**
I40A Norwalk 86.20 35 IAmb IAmb 07 17 19.5
comp=Z,47nm,1.0s
I40A Norwalk 86.20 35 P **P** **07 17 18.5 +0.3**
baz=321,SNR=14
R32A Long Quarter, 86.23 43 P **P** **07 17 18.4 -0.1**
R32A Long Quarter, 86.23 43 P **P** **07 17 18.6 +0.2**
baz=316,SNR=7.3
SALO Salr 86.36 328 P **P** **07 17 19.3 +0.4**
SALO IAmb IAmb 07 17 35.5
comp=Z,48nm,0.8s
LAKA Lakka 86.41 317 P **P** **07 17 19.2 -0.1**
SCIA State Center 86.49 38 P **P** **07 17 20.4 +0.8**
baz=319
KEK Kerkira 86.51 319 P **P** **07 17 19.8 +0.1**
KSU1 Kansas State U 86.86 42 P **P** **07 17 21.8 +0.4**
KSU1 Kansas State U 86.86 42 IAMs_20 IAMs_20 07 59 42.0
comp=Z,392nm,20.0s
KSU1 Kansas State U 86.86 42 P **P** **07 17 21.7 +0.1**
baz=317,SNR=30
KSU1 Kansas State U 86.86 42 P **P** **07 17 21.6 +0.1**
baz=317,SNR=30
IDI Anoyia 86.87 313⇓ P **P** **07 17 21.3 -0.3**
E46A Sault Ste Mari 86.92 30 P **P** **07 17 22.1 +0.6**
baz=325,SNR=21
SCTE Santa Cesarea 86.93 320 P **P** **07 17 21.8 +0.1**
I42A Draeger Farm, 86.97 34 P **P** **07 17 22.4 +0.5**
baz=322,SNR=32
H43A Windswept, Lux 87.01 33 P **P** **07 17 23.0 +1.0**
H43A Windswept, Lux 87.01 33 P **P** **07 17 23.1 +1.0**
baz=323,SNR=15
MNTX Cornudas Mount 87.01 52 P **P** **07 17 22.7 +0.3**
MNTX IAMs_20 IAMs_20 07 50 24.4
comp=Z,451nm,22.0s
MNTX Cornudas Mount 87.01 52 P **P** **07 17 22.9 +0.5**
baz=313,SNR=21
MNTX Cornudas Mount 87.01 52 P **P** **07 17 23.0 +0.7**
baz=313,SNR=21
SGRT San Giovanni R 87.02 323 P **P** **07 17 22.3 0.0**
MSTX Muleshoe 87.05 49 P **P** **07 17 21.8 -0.8**
MSTX Muleshoe 87.05 49 P **P** **07 17 23.2 +0.5**
baz=314,SNR=12
MSTX Muleshoe 87.05 49 P **P** **07 17 23.2 +0.5**
baz=314,SNR=12
AMTX Amarillo 87.06 47 P **P** **07 17 22.8 +0.2**
AMTX IAMs_20 IAMs_20 07 52 03.5
comp=Z,473nm,21.0s
AMTX Amarillo 87.06 47 P **P** **07 17 24.0 +1.4**
baz=315,SNR=34
AMTX Amarillo 87.06 47 P **P** **07 17 23.5 +0.9**
baz=315
SENIN Lac Senin/Sane 87.07 330 P **P** **07 17 22.9 +0.3**
SENIN IAmb IAmb 07 17 37.2
comp=Z,33nm,1.2s
SENIN IAMs_20 IAMs_20 07 59 24.6
comp=Z,554nm,21.0s
JFWS Jewell Farm 87.13 35 P **P** **07 17 22.9 +0.2**
JFWS IAmb IAmb 07 17 23.7
comp=Z,40nm,0.9s
JFWS Jewell Farm 87.13 35 P **P** **07 17 22.9 +0.2**
JFWS pmax pmax
comp=Z,40nm,1.0s
JFWS MLR MLR
comp=Z,1µm,21.0s
JFWS Jewell Farm 87.13 35 P **P** **07 17 23.0 +0.3**
baz=321,SNR=18
JFWS Jewell Farm 87.13 35 P **P** **07 17 22.8 +0.2**
baz=321,SNR=18
PRMA PARMA 87.13 328 P **P** **07 17 22.3 -0.4**
ITM Ithomi 87.21 316 P **P** **07 17 22.4 -0.8**
ITM Ithomi 87.21 316 P **P** **07 17 22.7 -0.5**
N38A Joes South For 87.33 38 P **P** **07 17 23.3 -0.4**
N38A Joes South For 87.33 38 P **P** **07 17 24.9 +1.2**
baz=319,SNR=16
L40A Anamosa 87.33 36 P **P** **07 17 24.3 +0.6**
L40A Anamosa 87.33 36 P **P** **07 17 24.2 +0.5**
baz=321,SNR=25
MURB Monte Urbino 87.35 325 P **P** **07 17 24.1 +0.3**
KAN16 Harper SW Stat 87.45 44 IAmb IAmb 07 17 26.4
comp=Z,43nm,0.8s
G45A Suttons Bay 87.45 31 P **P** **07 17 24.5 +0.3**
G45A Suttons Bay 87.45 31 P **P** **07 17 25.5 +1.3**
baz=324,SNR=16
G45A P **P** **07 17 25.5 +1.3**
baz=324,SNR=16
KAN08 Anthony NE Sta 87.50 44 IAmb IAmb 07 17 26.1
comp=Z,44nm,0.9s
ELIS Ellis County 87.53 45 IAmb IAmb 07 17 27.5
comp=Z,81nm,0.9s
U32A Winter Ranch, 87.54 45 IAmb IAmb 07 17 27.2
comp=Z,38nm,0.9s
U32A Winter Ranch, 87.54 45 P **P** **07 17 26.4 +1.6**
baz=316,SNR=6.2
CLF Chambon-Foret 87.54 334 P **P** **07 17 24.1 -0.4**
CLF IAmb IAmb 07 17 39.9
comp=Z,55nm,1.0s
OK038 West end E0370 87.61 45 P **P** **07 17 24.9 -0.2**
KAN05 Bluff City Nor 87.64 44 IAmb IAmb 07 17 27.6
comp=Z,55nm,1.1s
AQU L'Aquila 87.66 324 IAmb IAmb 07 17 26.9
comp=Z,46nm,0.9s
OK032 Salt Plains WL 87.67 44 **P** **07 17 26.1 +0.7**
OK032 IAMs_20 IAMs_20 07 55 26.5
comp=Z,440nm,21.0s
KAN14 Manchester OK 87.70 44 **P** **07 17 25.8 +0.2**
KAN14 IAmb IAmb 07 17 27.1
comp=Z,28nm,0.9s
OSSC Osservatorio P 87.72 326 P **P** **07 17 25.4 -0.1**
KS20 Mayfield South 87.72 43 IAmb IAmb 07 17 27.3
comp=Z,37nm,0.9s
KAN17 Caldwell West 87.74 44 IAmb IAmb 07 17 28.2
comp=Z,63nm,1.2s
MSSA Maissana 87.83 328 P **P** **07 17 25.5 -0.6**
MSSA IAmb IAmb 07 17 39.8
comp=Z,48nm,1.6s
KAN13 South Haven SW 87.92 43 IAmb IAmb 07 17 28.3
comp=Z,32nm,1.0s
VLDQ Val d'Or 87.96 25 P **P** **07 17 25.9 -0.7**

CROK Carrier 88.01 44 P 07 17 27.7 +0.6
CROK IAmb IAmb 07 17 28.8
comp=Z,44nm,1.0s
I45A Fountain 88.02 32 P P 07 17 28.5 +1.6
baz=324,SNR=7.1
I45A P P 07 17 28.5 +1.6
baz=324,SNR=7.1
GLMI Grayling 88.06 31 P P 07 17 28.5 +1.4
baz=325,SNR=22
GLMI Grayling 88.06 31 P P 07 17 28.1 +1.0
baz=325,SNR=22
P38A Dawn 88.06 39 P P 07 17 28.1 +0.8
baz=319,SNR=38
L42A Oliver, Polo 88.11 36 P P 07 17 27.6 +0.2
L42A Oliver, Polo 88.11 36 P P 07 17 27.7 +0.3
baz=322,SNR=19
K43A Burlington 88.16 34 IAmb IAmb 07 17 28.8
comp=Z,31nm,0.8s
K43A Burlington 88.16 34 P P 07 17 28.3 +0.7
baz=322,SNR=6.4
LATE Laterza 88.19 325 P P 07 17 27.5 -0.3
LATE IAmb IAmb 07 17 41.9
comp=Z,67nm,1.4s
CSTR Hydro, Custer 88.24 45 P 07 17 27.8 -0.4
CSTR IAmb IAmb 07 17 30.7
comp=Z,4.7nm,0.9s
CUC Castrocucco 88.33 321 P P 07 17 27.2 -1.4
CUC IAmb IAmb 07 17 42.5
comp=Z,18nm,0.8s
BNI Bardonecchia 88.39 330 P P 07 17 28.8 -0.1
BNI Bardonecchia 88.39 330 P P 07 17 28.8 -0.1
BNI pmax pmax
comp=Z,10.0nm,0.8s
TIP Timpagrande 88.47 320 ⇑P P 07 17 29.5 +0.3
TIP Timpagrande 88.47 320 IAmb IAmb 07 17 44.1
comp=Z,49nm,1.2s
T35A Sooner Cattle 88.52 43 IAmb IAmb 07 17 31.2
comp=Z,30nm,0.9s
T35B Sooner Cattle 88.52 43 P P 07 17 30.6 +1.2
baz=318,SNR=16
TBI Tubuai 88.55 121 *e*P P 07 17 31.3 +1.7
comp=Z,70nm,26.0s
TBI Tubuai 88.55 121 *e*LR LR 07 45 40.1
comp=Z,27µm,23.0s
TBI *e*LR LR 07 45 41.6
comp=Z,1µm,23.5s
TBI Tubuai 88.55 121 *e*T T 08 55 04.1
comp=Z,115nm,0.3s
L44A Lake County Fo 88.77 34 P P 07 17 31.4 +1.0
L44A Lake County Fo 88.77 34 P P 07 17 31.5 +1.0
baz=323,SNR=7.0
L44A Lake County Fo 88.77 34 P P 07 17 31.2 +0.7
baz=323,SNR=7.0
LPIG La Paz 88.80 60 LR LR 07 52 37.4
comp=Z,245nm,19.1s,baz=307,slow=32
WMOK Wichita Mounta 88.84 46 P 07 17 31.2 +0.2
WMOK IAmb IAmb 07 17 33.3
comp=Z,38nm,1.2s
WMOK Wichita Mounta 88.84 46 IAMs_20 IAMs_20 08 02 19.6
comp=Z,422nm,20.0s
WMOK Wichita Mounta 88.84 46 P P 07 17 31.2 +0.2
WMOK pmax pmax
comp=Z,38nm,1.2s
WMOK Wichita Mounta 88.84 46 P P 07 17 32.1 +1.1
baz=316,SNR=16
WMOK Wichita Mounta 88.84 46 P P 07 17 31.7 +0.6
baz=316,SNR=16
P40A Paris 88.88 39 P P 07 17 31.8 +0.7
P40A Paris 88.88 39 P P 07 17 32.0 +1.0
baz=320,SNR=40
SSB Saint Sauveur 89.04 331 P P 07 17 31.4 -0.4
SSB IAMs_20 IAMs_20 08 01 20.8
comp=Z,560nm,21.0s
SSB Saint Sauveur 89.04 331 P P 07 17 31.4 -0.4
SSB pmax pmax
comp=Z,10.0nm,0.9s
SSB MLR MLR
comp=Z,600nm,21.0s
OK031 S. Brethren Rd 89.05 44 P 07 17 32.7 +0.7
OK031 IAmb IAmb 07 17 33.7
comp=Z,31nm,0.9s
OK031 IAMs_20 IAMs_20 07 53 44.9
comp=Z,442nm,22.0s
OK034 N. Norfolk Rd. 89.08 44 IAMs_20 IAMs_20 07 53 49.6
comp=Z,459nm,19.0s
OK030 Cody Creek RV 89.10 44 IAMs_20 IAMs_20 07 53 49.2
comp=Z,446nm,22.0s
HQIL Hanson Quary C 89.10 35 P P 07 17 32.0 0.0
HQIL IAmb IAmb 07 17 34.1
comp=Z,57nm,1.0s
FNO Franklin 89.25 45 P 07 17 33.9 +1.0
J47A Sunmer 89.27 32 P P 07 17 34.1 +1.3
baz=325,SNR=30
J47A P P 07 17 34.1 +1.3
baz=325,SNR=30
DEOK Depew 89.32 44 P 07 17 33.8 +0.6
DEOK IAmb IAmb 07 17 35.4
comp=Z,54nm,0.9s
M44A Midewin, Midew 89.34 35 P P 07 17 33.9 +0.7
baz=323,SNR=14
HDIL Hopedale 89.42 36 P P 07 17 34.2 +0.6
HDIL IAMs_20 IAMs_20 07 54 44.2
comp=Z,541nm,20.0s
HDIL Hopedale 89.42 36 P P 07 17 34.6 +1.1
baz=322,SNR=6.4
HDIL Hopedale 89.42 36 P P 07 17 34.1 +0.6
baz=322,SNR=6.4
I49A Point Hope 89.51 30 P P 07 17 35.0 +1.1
I49A Point Hope 89.51 30 P P 07 17 35.7 +1.8
baz=326,SNR=7.6
I49A P P 07 17 35.7 +1.8
baz=326,SNR=7.6
CEL Celeste 89.61 320 P P 07 17 33.9 -0.7
L46A Eue Claire 89.62 34 P P 07 17 35.1 +0.6
L46A Eue Claire 89.62 34 P P 07 17 35.6 +1.1
baz=324,SNR=8.2
L46A P P 07 17 35.6 +1.1
baz=324,SNR=8.2
S39A Bolivar 89.63 41 P P 07 17 34.6 0.0
S39A Bolivar 89.63 41 P P 07 17 35.5 +0.9
baz=319,SNR=8.6
TUL1 Leonard 89.65 43 P 07 17 34.7 -0.1
TUL1 IAmb IAmb 07 17 36.5
comp=Z,39nm,0.8s
TUL1 IAMs_20 IAMs_20 07 56 06.9
comp=Z,393nm,21.0s
TUL1 Leonard 89.65 43 P P 07 17 35.8 +1.0
baz=318,SNR=27
TUL1 Leonard 89.65 43 P P 07 17 35.3 +0.6
baz=318,SNR=27
TX31 Lajitas Ar. Si 89.70 53 P P 07 17 36.1 +0.9
TX31 Lajitas Ar. Si 89.70 53 P P 07 17 36.3 +1.1
baz=314,SNR=80
TX32 Lajitas Array 89.70 53 P P 07 17 35.3 +0.1
TX32 IAmb IAmb 07 17 37.6
comp=Z,21nm,0.9s
TXAR Lajitas Array 89.70 53 P P 07 17 36.2 +0.9
comp=Z,17nm,0.8s,baz=298,slow=3.3,SNR=215
TXAR PP PP 07 21 01.9 -5.2
comp=Z,0.9nm,1.0s,baz=324,slow=4.5,SNR=1.5
TXAR LR LR 07 51 32.2
comp=Z,565nm,21.8s,baz=311,slow=31
comp=Z,17nm,0.8s
TXAR Lajitas Array 89.70 53 P P 07 17 35.5 +0.2
R40A Maddies Statio 89.72 40 P P 07 17 34.6 -0.4
R40A IAmb IAmb 07 17 37.0
comp=Z,64nm,1.4s
R40A Maddies Statio 89.72 40 P P 07 17 35.6 +0.6
baz=320,SNR=30
ABTX Abilene, Hawle 89.86 48 P P 07 17 36.0 +0.2
ABTX IAmb IAmb 07 17 38.2
comp=Z,48nm,1.0s
ABTX Abilene, Hawle 89.86 48 P P 07 17 36.9 +1.1
baz=316,SNR=32
ABTX Abilene, Hawle 89.86 48 P P 07 17 36.4 +0.5
baz=316,SNR=32
RLO Rose Lookout 89.88 43 IAmb IAmb 07 17 37.3
comp=Z,30nm,0.8s
ATD Arta Tunnel 89.98 284 LR LR 08 02 34.0
comp=Z,248nm,19.6s,baz=36,slow=39
ATD Arta Tunnel 89.98 284 IAMs_20 IAMs_20 08 02 31.8
comp=Z,465nm,20.0s
U38A Gravette 90.02 42 P 07 17 36.8 +0.3
U38A IAmb IAmb 07 17 38.2
comp=Z,38nm,0.8s
U38A Gravette 90.02 42 P P 07 17 37.0 +0.5
baz=319,SNR=36

P43A Skaggs, Pawnee 90.03 37 IAmb IAmb 07 17 38.0
comp=Z,32nm,0.9s
P43A Skaggs, Pawnee 90.03 37 P P 07 17 37.2 +0.8
baz=322,SNR=12
HPIG 90.05 55 P P 07 17 37.6 +0.6
LATQ La Tugue 90.11 23 IAmb IAmb 07 17 38.2
comp=Z,22nm,0.8s
O44A Mansfield 90.12 36 IAmb IAmb 07 17 38.3
comp=Z,28nm,0.8s
O44A Mansfield 90.12 36 P P 07 17 37.5 +0.6
baz=322,SNR=5.3
SADO Sadowa 90.24 28 LR LR 08 00 34.2
comp=Z,459nm,21.4s,baz=355,slow=37
SADO Sadowa 90.24 28 IAmb IAmb 07 17 38.6
comp=Z,25nm,1.0s
LOOK Love County 90.29 45 IAmb IAmb 07 17 39.9
comp=Z,35nm,0.9s
HHAR Hobbs 90.37 42 P P 07 17 38.5 +0.4
HHAR IAmb IAmb 07 17 39.7
comp=Z,32nm,0.8s
CCM Cathedral Cave 90.41 39 P P 07 17 38.1 -0.2
CCM IAmb IAmb 07 17 40.3
comp=Z,45nm,1.1s
CCM Cathedral Cave 90.41 39 IAMs_20 IAMs_20 07 57 03.8
comp=Z,389nm,21.0s
CCM Cathedral Cave 90.41 39 P P 07 17 38.1 -0.2
CCM pmax pmax
comp=Z,45nm,1.1s
CCM MLR MLR
comp=Z,400nm,21.0s
CCM Cathedral Cave 90.41 39 P P 07 17 39.1 +0.9
baz=321,SNR=34
CCM Cathedral Cave 90.41 39 P P 07 17 38.5 +0.2
baz=321
SLM Saint Louis 90.46 38 IAmb IAmb 07 17 40.5
comp=Z,42nm,1.0s
SLM Saint Louis 90.46 38 P P 07 17 39.2 +0.7
baz=321
L48A N Adams 90.49 33 P P 07 17 39.0 +0.5
L48A N Adams 90.49 33 P P 07 17 39.6 +1.0
baz=325,SNR=23
L48A P P 07 17 39.6 +1.0
baz=325,SNR=23
AAM Ann Arbor 90.52 32 IAmb IAmb 07 17 41.1
comp=Z,29nm,0.8s
AAM IAMs_20 IAMs_20 08 03 51.4
comp=Z,438nm,20.0s
AAM Ann Arbor 90.52 32 P P 07 17 39.1 +0.4
baz=326
SFIN Lafayette 90.58 35 IAmb IAmb 07 17 40.6
comp=Z,31nm,0.9s
SFIN Lafayette 90.58 35 P P 07 17 40.1 +1.1
baz=323,SNR=9.2
SFIN Lafayette 90.58 35 P P 07 17 39.4 +0.4
baz=323,SNR=9.2
TRQ Mont Tremblant 90.58 24 IAmb IAmb 07 17 40.4
comp=Z,36nm,1.0s
MGMO Mountain Grove 90.58 40 P P 07 17 38.9 -0.2
MGMO IAmb IAmb 07 17 40.7
comp=Z,40nm,0.8s
LMQ La Malbaie 90.69 21 P P 07 17 39.7 +0.4
Z35A Perchaven, San 90.73 46 P P 07 17 40.1 +0.3
Z35A Perchaven, San 90.73 46 P P 07 17 40.7 +0.8
baz=317,SNR=40
N47A Urbana 90.80 34 P P 07 17 40.2 +0.2
N47A Urbana 90.80 34 P P 07 17 40.7 +0.7
baz=324,SNR=20
N47A P P 07 17 40.7 +0.7
baz=324,SNR=20
Q44A Meyer Farm, Va 90.85 37 IAmb IAmb 07 17 42.5
comp=Z,42nm,1.1s
Q44A Meyer Farm, Va 90.85 37 P P 07 17 41.3 +1.0
baz=322,SNR=10
X37A Clayton 90.86 44 IAmb IAmb 07 17 42.5
comp=Z,26nm,0.8s
X37A Clayton 90.86 44 P P 07 17 41.3 +0.9
baz=318,SNR=24
VAE Valguarnera 90.96 321 LR LR 08 02 52.2
comp=Z,572nm,18.2s,baz=39,slow=38
P46A Rosedale 91.13 36 IAmb IAmb 07 17 43.3
comp=Z,36nm,1.1s
P46A Rosedale 91.13 36 P P 07 17 42.5 +0.9
baz=323,SNR=5.6
RAFF Raffo Rosso 91.18 321 P P 07 17 41.5 -0.4
RAFF IAmb IAmb 07 18 06.3
comp=Z,36nm,1.0s
JCT Junction City 91.29 49 IAmb IAmb 07 17 44.4
comp=Z,24nm,0.8s
JCT IAMs_20 IAMs_20 07 53 04.6
comp=Z,523nm,22.0s
JCT Junction City 91.29 49 P P 07 17 43.4 +0.8
baz=316,SNR=18
JCT Junction City 91.29 49 P P 07 17 43.1 +0.5
baz=316,SNR=18
OLIL Olney 91.42 37 IAmb IAmb 07 17 45.3
comp=Z,43nm,1.1s
OLIL Olney 91.42 37 P P 07 17 44.2 +1.3
baz=323,SNR=8.0
N49A Columbus Grove 91.43 33 P P 07 17 43.5 +0.6
N49A IAmb IAmb 07 17 45.2
comp=Z,38nm,0.9s
N49A Columbus Grove 91.43 33 P P 07 17 44.0 +1.0
baz=325,SNR=9.9
N49A P P 07 17 44.0 +1.0
baz=325,SNR=9.9
MNTQ Montreal, Queb 91.52 24 P P 07 17 43.5 +0.2
MNTQ IAmb IAmb 07 17 45.3
comp=Z,26nm,0.9s
O48B Farmland 91.55 34 P P 07 17 44.1 +0.5
baz=325,SNR=15
O48B Farmland 91.55 34 P P 07 17 44.0 +0.5
baz=325,SNR=15
WHTX Lake Whitney, 91.59 47 P P 07 17 44.4 +0.5
WHTX Lake Whitney, 91.59 47 P P 07 17 45.4 +1.6
baz=317,SNR=8.5
WHTX Lake Whitney, 91.59 47 P P 07 17 45.0 +1.1
baz=317,SNR=8.5
FCAR Ozark Folk Cen 91.62 41 P P 07 17 43.8 -0.2
S44A Carbondale 91.68 38 P P 07 17 44.3 +0.1
S44A IAmb IAmb 07 17 46.2
comp=Z,34nm,1.1s
S44A Carbondale 91.68 38 P P 07 17 44.9 +0.7
baz=322,SNR=14
SIUC Southern Illin 91.68 38 P P 07 17 44.5 +0.4
SIUC IAmb IAmb 07 17 46.2
comp=Z,34nm,0.9s
E62A Clayton Lake 91.76 21 IAmb IAmb 07 17 46.5
comp=Z,20nm,0.9s
E62A Clayton Lake 91.76 21 P P 07 17 45.0 +0.6
baz=336,SNR=6.7
E62A P P 07 17 45.0 +0.6
baz=336,SNR=6.7
PBMO Poplar Bluff 91.81 39 IAmb IAmb 07 17 46.8
comp=Z,36nm,0.9s
PBMO Poplar Bluff 91.81 39 P P 07 17 45.7 +0.9
baz=321,SNR=12
BMNY Brushton-Moira 91.81 25 P P 07 17 45.4 +0.8
baz=332,SNR=9.4
MIAR Mount Ida 91.88 43 P P 07 17 46.0 +0.9
MIAR IAMs_20 IAMs_20 07 55 55.7
comp=Z,478nm,21.0s
MIAR Mount Ida 91.88 43 P P 07 17 46.0 +0.9
MIAR pmax pmax
comp=Z,63nm,0.9s
MIAR Mount Ida 91.88 43 P P 07 17 46.1 +1.0
baz=319,SNR=52
MIAR Mount Ida 91.88 43 P P 07 17 45.8 +0.6
baz=319,SNR=52
O49A Covington 91.97 33 P P 07 17 44.3 -1.2
O49A IAmb IAmb 07 17 47.0
comp=Z,18nm,0.8s
O49A Covington 91.97 33 P P 07 17 46.5 +1.0
baz=325,SNR=8.3
O49A P P 07 17 46.5 +1.0
baz=325,SNR=8.3
LONY Lake Ozonia 91.98 25 P P 07 17 45.2 -0.3
LONY IAMs_20 IAMs_20 07 57 13.7
comp=Z,498nm,22.0s
LONY Lake Ozonia 91.98 25 P P 07 17 45.5 0.0
baz=332,SNR=5.9
LCAR Lake Charles 91.99 40 P P 07 17 44.4 -1.3
J55A Hilton 92.02 28 P P 07 17 46.2 +0.6
baz=330
J55A P P 07 17 46.2 +0.6
baz=330
Z38A Mt. Pleasant 92.06 44 P P 07 17 47.1 +1.1
baz=318,SNR=8.5

M52A Chesterland 92.11 31 IAmb IAmb 07 17 47.9
comp=Z,18nm,0.9s
FRNY Flat Rock 92.12 24 P P 07 17 45.7 -0.4
FRNY IAmb IAmb 07 18 02.9
comp=Z,30nm,1.8s
PQI Presque Isle 92.13 20 P P 07 17 46.1 +0.1
PQI IAmb IAmb 07 17 47.6
comp=Z,29nm,0.9s
ERPA Erie 92.17 30 IAMs_20 IAMs_20 08 01 09.9
comp=Z,498nm,20.0s
ERPA Erie 92.17 30 P P 07 17 46.4 0.0
baz=328
N51A Ashland 92.21 32 IAmb IAmb 07 17 48.0
comp=Z,25nm,1.1s
E63A Oxbow 92.25 20 P P 07 17 47.6 +1.0
baz=336,SNR=7.1
E63A P P 07 17 47.6 +1.0
baz=336,SNR=7.1
P49A Miami Univ. Ec 92.33 34 IAmb IAmb 07 17 48.6
comp=Z,22nm,1.1s
P49A Miami Univ. Ec 92.33 34 P P 07 17 48.0 +0.8
baz=325,SNR=6.8
P49A Miami Univ. Ec 92.33 34 P P 07 17 47.6 +0.5
baz=325,SNR=6.8
UALR University of 92.36 42 P P 07 17 47.1 -0.2
UALR IAmb IAmb 07 17 48.9
comp=Z,16nm,0.8s
435B Jarrell 92.39 48 IAmb IAmb 07 17 49.7
comp=Z,27nm,1.0s
435B IAMs_20 IAMs_20 08 02 47.8
comp=Z,350nm,21.0s
435B Jarrell 92.39 48 P P 07 17 48.6 +1.0
baz=317
435B Jarrell 92.39 48 P P 07 17 47.9 +0.3
baz=317
MMNY Mt. Morris Dam 92.45 28 IAmb IAmb 07 17 49.9
comp=Z,21nm,1.0s
WVNY West Valley, N 92.46 29 IAmb IAmb 07 17 54.6
comp=Z,24nm,1.1s
M53A WI Miller and 92.47 30 IAmb IAmb 07 17 49.5
comp=Z,23nm,1.1s
M53A IAMs_20 IAMs_20 08 01 26.9
comp=Z,529nm,21.0s
M53A WI Miller and 92.47 30 P P 07 17 47.7 -0.1
baz=328,SNR=5.9
ALLY Alegheny Colle 92.51 30 IAmb IAmb 07 17 49.6
comp=Z,23nm,0.8s
ACSO Alum Creek Sta 92.52 33 P P 07 17 48.5 +0.5
ACSO IAMs_20 IAMs_20 07 57 52.2
comp=Z,509nm,22.0s
ACSO Alum Creek Sta 92.52 33 P P 07 17 49.1 +1.1
baz=326,SNR=11
ACSO Alum Creek Sta 92.52 33 P P 07 17 48.5 +0.5
baz=326,SNR=11
237A Washetta, Mont 92.53 46 P P 07 17 49.4 +1.2
237A IAmb IAmb 07 17 50.6
comp=Z,20nm,0.9s
J57A Williamstown 92.55 26 P P 07 17 48.8 +0.7
J57A IAmb IAmb 07 17 50.3
comp=Z,28nm,0.9s
J57A Williamstown 92.55 26 P P 07 17 49.1 +1.1
baz=331,SNR=8.3
J57A P P 07 17 49.1 +1.1
baz=331,SNR=8.3
HBAR Harrisburg 92.64 40 P P 07 17 50.1 +1.5
GNAR Gosnell 92.65 40 P P 07 17 48.1 -0.6
GNAR IAmb IAmb 07 17 49.1
comp=Z,31nm,0.8s
NCB Newcomb 92.67 25 P P 07 17 49.3 +0.7
NCB IAmb IAmb 07 17 50.3
comp=Z,14nm,0.8s
NCB Newcomb 92.67 25 P P 07 17 49.8 +1.1
baz=332,SNR=8.7
G62A West of Eustis 92.74 22 P P 07 17 50.3 +1.4
G62A IAmb IAmb 07 17 51.2
comp=Z,27nm,0.9s
G62A West of Eustis 92.74 22 P P 07 17 50.4 +1.5
baz=335,SNR=10
G62A P P 07 17 50.4 +1.5
baz=335,SNR=10
WLAR White Oak Lake 92.78 43 P P 07 17 50.4 +1.2
F64A Sherman 92.78 20 IAmb IAmb 07 17 50.8
comp=Z,29nm,1.1s
F64A Sherman 92.78 20 P P 07 17 50.3 +1.2
baz=336,SNR=7.0
F64A P P 07 17 50.3 +1.2
baz=336,SNR=7.0
GLAT Glass 92.78 39 P P 07 17 50.3 +1.1
VT1 Waterbury 92.84 24 IAmb IAmb 07 17 51.4
comp=Z,18nm,0.9s
VT1 IAMs_20 IAMs_20 08 01 10.7
comp=Z,412nm,21.0s
VT1 Waterbury 92.84 24 P P 07 17 51.3 +1.8
baz=333,SNR=6.3
J58A Remsen 92.85 26 IAmb IAmb 07 17 51.1
comp=Z,17nm,0.9s
J58A Remsen 92.85 26 P P 07 17 50.5 +1.1
baz=331,SNR=5.5
J58A P P 07 17 50.5 +1.1
baz=331,SNR=5.5
N53A Lisbon 92.94 31 IAmb IAmb 07 17 51.5
comp=Z,22nm,0.9s
N53A Lisbon 92.94 31 P P 07 17 51.0 +1.1
baz=327,SNR=7.5
N53A P P 07 17 51.0 +1.1
baz=327,SNR=7.5
K57A Scipio Center 92.96 27 P P 07 17 51.0 +1.0
baz=330
J59A Piesco 93.03 25 P P 07 17 50.8 +0.5
J59A IAmb IAmb 07 17 51.9
comp=Z,18nm,0.8s
J59A Piesco 93.03 25 P P 07 17 51.3 +1.0
baz=332,SNR=9.4
J59A P P 07 17 51.3 +1.0
baz=332,SNR=9.4
PKME Peaks-Kenny Pk 93.06 21 P P 07 17 50.5 +0.1
PKME IAmb IAmb 07 17 52.6
comp=Z,31nm,0.9s
PKME Peaks-Kenny Pk 93.06 21 P P 07 17 51.8 +1.4
baz=336,SNR=6.8
PKME Peaks-Kenny Pk 93.06 21 P P 07 17 51.1 +0.7
baz=336,SNR=6.8
833A Chaparral WMA, 93.08 51 P P 07 17 50.6 -0.2
833A Chaparral WMA, 93.08 51 P P 07 17 52.2 +1.4
baz=316,SNR=6.4
833A Chaparral WMA, 93.08 51 P P 07 17 51.7 +0.9
baz=316,SNR=6.4
L56A Greenwood 93.09 28 P P 07 17 51.4 +0.8
baz=330,SNR=6.0
L56A P P 07 17 51.4 +0.8
baz=330,SNR=6.0
O52A Adamsville 93.10 32 P P 07 17 50.9 +0.2
O52A IAmb IAmb 07 17 52.1
comp=Z,21nm,0.8s
O52A Adamsville 93.10 32 P P 07 17 51.6 +1.0
baz=327,SNR=8.4
O52A P P 07 17 51.6 +1.0
baz=327,SNR=8.4
P51A Williamsport 93.11 33 IAmb IAmb 07 17 52.3
comp=Z,31nm,0.9s
P51A Williamsport 93.11 33 P P 07 17 51.4 +0.7
baz=326,SNR=8.5
P51A P P 07 17 51.4 +0.7
baz=326,SNR=8.5
H62A Milan 93.13 23 P P 07 17 52.2 +1.5
baz=334,SNR=14
H62A P P 07 17 52.2 +1.5
baz=334,SNR=14
R49A Shelbyville 93.14 35 IAmb IAmb 07 17 53.7
comp=Z,40nm,1.9s
LBNH Lisbon 93.19 23 P P 07 17 51.7 +0.7
baz=334
M55A Ridgway 93.20 29 IAmb IAmb 07 17 52.9
comp=Z,18nm,0.9s
M55A Ridgway 93.20 29 P P 07 17 52.4 +1.2
baz=329,SNR=7.1
M55A P P 07 17 52.4 +1.2
baz=329,SNR=7.1
O53A New Philadelph 93.25 31 IAmb IAmb 07 17 53.4
comp=Z,29nm,0.9s
O53A IAMs_20 IAMs_20 08 01 11.6
comp=Z,477nm,20.0s
O53A New Philadelph 93.25 31 P P 07 17 51.9 +0.6
baz=327,SNR=14
T47A Sharon Grove 93.28 37 IAmb IAmb 07 17 53.1
comp=Z,22nm,0.8s
T47A Sharon Grove 93.28 37 P P 07 17 52.5 +0.9
baz=323,SNR=11

CCAR Cane Creek 93.32 42 P **P** **07 17 51.1 -0.7**
Q51A Peebles 93.36 34 P **P** **07 17 52.2 +0.3**
Q51A Peebles 93.36 34 P **P** **07 17 52.8 +0.9**
baz=326,SNR=17
Q51A P **P** **07 17 52.8 +0.9**
baz=326,SNR=17
P52A Corning 93.38 32 P **P** **07 17 51.6 -0.4**
P52A IAmb IAmb 07 17 53.6
comp=Z,21nm,0.8s
P52A IAMs_20 IAMs_20 07 58 18.0
comp=Z,422nm,22.0s
P52A Corning 93.38 32 P **P** **07 17 51.9 -0.1**
baz=327,SNR=10
PSDB Penn State Uni 93.50 29 P **P** **07 17 53.8 +1.3**
baz=329
R50A Paris 93.53 35 IAmb IAmb 07 17 54.8
comp=Z,19nm,1.0s
R50A Paris 93.53 35 P **P** **07 17 53.4 +0.7**
baz=325,SNR=6.8
R50A P **P** **07 17 53.4 +0.7**
baz=325,SNR=6.8
UPAO U. Pittsburgh 93.54 31 P **P** **07 17 53.7 +1.0**
baz=328
HNH Hanover 93.55 24 IAMs_20 IAMs_20 08 01 31.2
comp=Z,405nm,20.0s
WVL Waterville 93.59 22 P **P** **07 17 53.1 +0.3**
WVL IAmb IAmb 07 17 54.8
comp=Z,22nm,0.9s
WVL Waterville 93.59 22 P **P** **07 17 54.2 +1.4**
baz=336
G65A Princeton 93.61 20 IAmb IAmb 07 17 54.9
comp=Z,34nm,0.9s
G65A Princeton 93.61 20 P **P** **07 17 54.3 +1.4**
baz=337,SNR=7.8
G65A P **P** **07 17 54.3 +1.4**
baz=337,SNR=7.8
WVT Waverly 93.61 38 P **P** **07 17 52.9 -0.2**
WVT Waverly 93.61 38 IAMs_20 IAMs_20 07 55 45.5
comp=Z,437nm,22.0s
WVT Waverly 93.61 38 P **P** **07 17 52.9 -0.2**
WVT pmax pmax
comp=Z,12nm,1.0s
WVT Waverly 93.61 38 P **P** **07 17 53.9 +0.8**
baz=323,SNR=10.0
WVT Waverly 93.61 38 P **P** **07 17 52.5 -0.7**
baz=323
BINY Binghamton 93.61 27 IAMs_20 IAMs_20 08 04 49.0
comp=Z,526nm,21.0s
BINY Binghamton 93.61 27 P **P** **07 17 52.5 -0.5**
baz=331
O54A Avella 93.65 31 P **P** **07 17 54.0 +0.7**
O54A IAmb IAmb 07 17 55.3
comp=Z,28nm,0.8s
O54A Avella 93.65 31 P **P** **07 17 54.5 +1.2**
baz=328,SNR=9.9
O54A P **P** **07 17 54.5 +1.2**
baz=328,SNR=9.9
W45A Hickory Valley 93.70 40 P **P** **07 17 54.4 +0.9**
baz=322,SNR=6.7
I63A Otisfield 93.78 23 P **P** **07 17 55.4 +1.7**
baz=335,SNR=8.5
I63A P **P** **07 17 55.4 +1.7**
baz=335,SNR=8.5
J61A Chester 93.79 24 P **P** **07 17 55.2 +1.4**
baz=333
J61A P **P** **07 17 55.2 +1.4**
baz=333
P53A Whipple 93.82 32 IAmb IAmb 07 17 56.0
comp=Z,20nm,0.9s
P53A Whipple 93.82 32 P **P** **07 17 55.0 +1.0**
baz=327,SNR=8.9
P53A P **P** **07 17 55.0 +1.0**
baz=327,SNR=8.9
Q52A Bidwell 93.88 33 IAmb IAmb 07 17 55.5
comp=Z,12nm,0.7s
M57A Sunshine Farm, 93.94 28 IAmb IAmb 07 17 56.8
comp=Z,20nm,0.8s
M57A Sunshine Farm, 93.94 28 P **P** **07 17 55.9 +1.3**
baz=330,SNR=12
M57A P **P** **07 17 55.9 +1.3**
baz=330,SNR=12
L59A Walton 93.96 26 P **P** **07 17 54.1 -0.6**
TRY Troy 93.96 25 IAMs_20 IAMs_20 08 02 35.1
comp=Z,434nm,21.0s
HKT Hockley 94.03 47 P **P** **07 17 54.2 -0.8**
HKT IAmb IAmb 07 17 57.8
comp=Z,40nm,1.9s
HKT Hockley 94.03 47 IAMs_20 IAMs_20 08 05 04.8
comp=Z,278nm,20.0s
HKT Hockley 94.03 47ǁ *e*P **P** **07 17 54.3 -0.8**
HKT pmax pmax
comp=Z,20nm,1.8s
EMMW East Machias 94.09 20 IAmb IAmb 07 17 57.5
comp=Z,23nm,0.9s
EMMW IAMs_20 IAMs_20 08 00 23.4
comp=Z,462nm,22.0s
OXF Oxford 94.09 40 P **P** **07 17 55.4 +0.1**
OXF IAMs_20 IAMs_20 08 04 16.3
comp=Z,353nm,21.0s
OXF Oxford 94.09 40 P **P** **07 17 55.4 +0.1**
OXF pmax pmax
comp=Z,45nm,1.0s
OXF Oxford 94.09 40 P **P** **07 17 56.0 +0.7**
baz=322,SNR=5.4
OXF Oxford 94.09 40 P **P** **07 17 54.7 -0.6**
baz=322,SNR=5.4
SSPA Standing Stone 94.26 29 P **P** **07 17 56.1 +0.1**
SSPA Standing Stone 94.26 29 IAMs_20 IAMs_20 07 59 06.1
comp=Z,315nm,20.0s
SSPA Standing Stone 94.26 29 P **P** **07 17 55.3 -0.7**
baz=330
U49A Red Boiling Sp 94.30 37 P **P** **07 17 56.6 +0.4**
U49A IAmb IAmb 07 17 57.6
comp=Z,15nm,0.7s
U49A Red Boiling Sp 94.30 37 P **P** **07 17 56.9 +0.7**
baz=324,SNR=12
MCWV Mont Chateau 94.31 31 IAmb IAmb 07 17 58.1
comp=Z,22nm,0.8s
MCWV Mont Chateau 94.31 31 P **P** **07 17 57.6 +1.4**
baz=328,SNR=7.9
MCWV Mont Chateau 94.31 31 P **P** **07 17 55.9 -0.4**
baz=328,SNR=7.9
T50A Nancy 94.33 36 P **P** **07 17 55.3 -1.1**
T50A IAmb IAmb 07 17 57.7
comp=Z,18nm,0.8s
T50A Nancy 94.33 36 P **P** **07 17 57.0 +0.6**
baz=325
T50A P **P** **07 17 57.0 +0.6**
baz=325
PSWB Penn State Wil 94.38 28 P **P** **07 17 57.0 +0.4**
baz=331
S51A Beattyville 94.39 34 P **P** **07 17 57.1 +0.4**
baz=326,SNR=6.3
S51A P **P** **07 17 57.1 +0.4**
baz=326,SNR=6.3
PLAL Pickwick Lake 94.40 39 P **P** **07 17 54.7 -2.0**
PLAL IAMs_20 IAMs_20 07 58 38.4
comp=Z,329nm,20.0s
V48A Smith Brothers 94.42 38 P **P** **07 17 57.4 +0.6**
baz=323,SNR=7.3
Q54A Coxs Mills 94.47 32 P **P** **07 17 56.8 -0.2**
Q54A IAmb IAmb 07 17 58.7
comp=Z,26nm,0.9s
Q54A Coxs Mills 94.47 32 P **P** **07 17 58.2 +1.2**
baz=327,SNR=12
Q54A P **P** **07 17 58.2 +1.2**
baz=327,SNR=12
K62A Royalston 94.50 24 IAmb IAmb 07 18 00.2
comp=Z,15nm,1.0s
N58A Sunbury 94.53 28 P **P** **07 17 57.1 -0.2**
baz=330
N58A P **P** **07 17 57.1 -0.2**
baz=330
Y45A Yeager Farm, C 94.53 41 P **P** **07 17 58.2 +0.9**
baz=322
R53A Hurricane 94.54 33 IAmb IAmb 07 17 59.3
comp=Z,17nm,1.1s
R53A Hurricane 94.54 33 P **P** **07 17 58.6 +1.3**
baz=327,SNR=5.4
R53A P **P** **07 17 58.6 +1.3**
baz=327,SNR=5.4
QUA2 Belchertown 94.81 25 IAMs_20 IAMs_20 08 06 54.4
comp=Z,436nm,20.0s
FURI Furi 94.82 285 IAMs_20 IAMs_20 08 05 32.0
comp=Z,441nm,21.0s
KEST Kesra 94.83 323 P **P** **07 17 58.7 -0.1**
comp=Z,16nm,1.1s,baz=339,slow=4.0,SNR=8.0

KEST PP **PP** **07 21 46.9 -0.2**
comp=Z,3.6nm,0.8s,baz=328,slow=3.4,SNR=3.6
KEST LR LR 08 05 43.6
comp=Z,554nm,19.1s,baz=340,slow=39
comp=Z,16nm,1.1s
KEST Kesra 94.83 323 P **P** **07 17 57.5 -1.4**
KEST IAmb IAmb 07 18 00.0
comp=Z,21nm,1.2s
KEST Kesra 94.83 323 P **P** **07 17 59.0 +0.2**
HRV Adam Dziewonsk 94.86 24 IAMs_20 IAMs_20 08 07 17.9
comp=Z,375nm,20.0s
HRV Adam Dziewonsk 94.86 24 P **P** **07 17 57.3 -1.4**
baz=334
WES Weston 95.05 24 IAMs_20 IAMs_20 08 02 00.8
comp=Z,465nm,21.0s
BCX Boston College 95.14 24 IAMs_20 IAMs_20 07 58 47.3
comp=Z,392nm,20.0s
P57A Homestead Farm 95.20 30 P **P** **07 18 00.6 +0.3**
baz=329
P57A P **P** **07 18 00.6 +0.3**
baz=329
S54A Dingess, Beckl 95.26 33 IAmb IAmb 07 18 02.6
comp=Z,20nm,1.1s
S54A Dingess, Beckl 95.26 33 P **P** **07 18 01.1 +0.4**
baz=327,SNR=6.1
S54A P **P** **07 18 01.1 +0.4**
baz=327,SNR=6.1
SWET Sewanee 95.27 37 IAmb IAmb 07 18 02.0
comp=Z,16nm,1.0s
VBMS Vicksburg 95.30 42 P **P** **07 18 01.1 +0.2**
VBMS IAmb IAmb 07 18 03.3
comp=Z,22nm,0.9s
VBMS Vicksburg 95.30 42 P **P** **07 18 02.3 +1.4**
baz=321
VBMS Vicksburg 95.30 42 P **P** **07 18 01.4 +0.5**
baz=321
TZTN Tazewell 95.31 35 P **P** **07 18 01.8 +0.9**
baz=326,SNR=6.0
TZTN Tazewell 95.31 35 P **P** **07 18 00.7 -0.2**
baz=326,SNR=6.0
X48A Hartselle 95.34 39 P **P** **07 17 59.9 -1.2**
X48A Hartselle 95.34 39 P **P** **07 18 01.0 -0.1**
baz=323
R55A Marlinton 95.36 32 P **P** **07 18 01.1 -0.1**
R55A IAmb IAmb 07 18 03.2
comp=Z,24nm,0.9s
R55A Marlinton 95.36 32 P **P** **07 18 02.2 +1.0**
baz=328,SNR=9.6
R55A P **P** **07 18 02.2 +1.0**
baz=328,SNR=9.6
MVL Millersville 95.40 28 P **P** **07 18 01.3 +0.1**
BRYW Bryant College 95.40 24 IAMs_20 IAMs_20 08 07 46.1
comp=Z,358nm,19.0s
PAL Palisades 95.41 26 IAMs_20 IAMs_20 08 00 35.4
comp=Z,425nm,21.0s
PAL Palisades 95.41 26 P **P** **07 18 01.6 +0.4**
baz=332
YLE Yale 95.47 25 IAMs_20 IAMs_20 08 01 27.0
comp=Z,447nm,19.0s
V51A Loudon 95.55 36 P **P** **07 18 01.8 -0.2**
V51A Loudon 95.55 36 P **P** **07 18 02.6 +0.7**
baz=325,SNR=5.2
W50A Signal Mountai 95.58 37 P **P** **07 18 02.0 -0.2**
W50A Signal Mountai 95.58 37 P **P** **07 18 02.1 -0.1**
baz=324
TUPA Temple Univers 95.68 28 P **P** **07 18 02.9 +0.4**
baz=331
SDMD Soldier's Deli 95.72 29 P **P** **07 18 02.1 -0.6**
baz=330
CPCT Cooper Cave 95.75 36 P **P** **07 18 02.7 -0.2**
V52A Sevierville 95.86 35 P **P** **07 18 03.7 +0.2**
V52A Sevierville 95.86 35 P **P** **07 18 04.0 +0.6**
baz=325,SNR=6.1
TKL Tuckaleechee C 95.93 36 LR LR 08 03 40.8
comp=Z,345nm,20.9s,baz=330,slow=37
TKL Tuckaleechee C 95.93 36 P **P** **07 18 04.0 +0.2**
TKL IAmb IAmb 07 18 04.9
comp=Z,12nm,0.8s
TKL Tuckaleechee C 95.93 36 P **P** **07 18 04.0 +0.2**
TKL pmax pmax
comp=Z,13nm,0.8s
TKL Tuckaleechee C 95.93 36 P **P** **07 18 04.1 +0.3**
baz=325,SNR=10
PBRG Braganca 96.03 337 *e*P **P** **07 18 04.1 0.0**
comp=Z,12nm,0.9s
U54A Nelsons Funny 96.11 34 P **P** **07 18 04.5 -0.1**
U54A Nelsons Funny 96.11 34 P **P** **07 18 05.6 +1.0**
baz=327,SNR=5.7
U54A P **P** **07 18 05.6 +1.0**
baz=327,SNR=5.7
BLA Blacksburg 96.14 33 P **P** **07 18 04.5 -0.2**
BLA IAmb IAmb 07 18 06.5
comp=Z,17nm,0.9s
BLA Blacksburg 96.14 33 P **P** **07 18 04.5 -0.2**
BLA pmax pmax
comp=Z,17nm,0.9s
BLA MLR MLR
comp=Z,600nm,22.0s
BLA Blacksburg 96.14 33 P **P** **07 18 06.2 +1.5**
baz=328,SNR=7.0
BLA Blacksburg 96.14 33 P **P** **07 18 04.6 -0.2**
baz=328,SNR=7.0
S57A Dark Hollow, R 96.29 31 P **P** **07 18 04.8 -0.5**
S57A Dark Hollow, R 96.29 31 P **P** **07 18 06.1 +0.8**
baz=329,SNR=5.1
S57A P **P** **07 18 06.1 +0.8**
baz=329,SNR=5.1
W52A Murphy 96.32 36 P **P** **07 18 05.6 0.0**
PGAV Gavieira, Arco 96.35 338 *e*PP **PP** **07 21 56.0 -2.5**
PGAV Gavieira, Arco 96.35 338 *e*LR LR 07 50 58.8
comp=Z,448nm,20.0s
V53A Saluda 96.37 35 P **P** **07 18 05.3 -0.5**
LRAL Lakeview Retre 96.49 39 P **P** **07 18 06.5 +0.2**
baz=323
CBN Corbin Frederi 96.55 30 IAMs_20 IAMs_20 08 04 14.9
comp=Z,400nm,20.0s
MVO Moncorvo 96.70 337 *e*P **P** **07 18 06.3 -0.9**
comp=Z,16nm,1.4s
MVO Moncorvo 96.70 337 *e*PP PP 07 22 11.0 +10
MVO *e*S **S** **07 29 23.4 -1.9**
MVO Moncorvo 96.70 337 *e*LQ LQ 07 47 44.5
MVO *e*LR LR 07 53 32.9
comp=Z,569nm,20.0s
POLO Lamas de Olo 96.74 337 *e*P **P** **07 18 07.9 +0.5**
comp=Z,9.0nm,1.6s
T57A Hurt 96.81 32 P **P** **07 18 08.3 +0.6**
baz=328,SNR=7.5
T57A P **P** **07 18 08.3 +0.6**
baz=328,SNR=7.5
BG3 Lake Jocassee 96.87 36 IAmb IAmb 07 18 09.5
comp=Z,14nm,0.8s
CASEE Lake Jocassee 96.87 36 P **P** **07 18 09.0 +1.0**
baz=326,SNR=6.7
U56A King 96.88 33 P **P** **07 18 08.9 +0.8**
baz=328
U56A P **P** **07 18 08.9 +0.8**
baz=328
ESDC Sonseca Array 97.02 334 P Pdif 07 18 08.8 0.0
comp=Z,4.5nm,0.9s,baz=15,slow=4.4,SNR=32
ESDC PP **PP** **07 21 56.8 -7.0**
comp=Z,1.7nm,1.0s,baz=26,slow=6.9,SNR=4.7
ESDC LR LR 08 06 32.6
comp=Z,793nm,20.4s,baz=19,slow=38
comp=Z,4.5nm,0.9s
PAB San Pablo 97.27 334 P **P** **07 18 09.6 -0.2**
PAB San Pablo 97.27 334 P **P** **07 18 09.6 -0.2**
PAB pmax pmax
comp=Z,10.0nm,1.1s
PAB MLR MLR
comp=Z,600nm,21.0s
KMSC Kings Mountain 97.47 34 P **P** **07 18 10.4 -0.3**
KMSC Kings Mountain 97.47 34 P Pdif 07 18 11.2 +0.4
baz=327,SNR=5.2
KMSC Kings Mountain 97.47 34 P **P** **07 18 10.7 0.0**
baz=327,SNR=5.2
T59A Double "B" Far 97.54 31 P **P** **07 18 10.4 -0.5**
T59A Double "B" Far 97.54 31 P Pdif 07 18 11.3 +0.3
baz=330
T59A P Pdif 07 18 11.3 +0.3
baz=330
MTE Manteigas 97.56 337 *e*P Pdif 07 18 11.3 +0.2
MTE Manteigas 97.56 337 *e*PP PP 07 22 17.4 +10
MTE *e*S **S** **07 29 35.0 +2.3**
MTE *e*SS **SS** **07 36 19.1 +8.3**
MTE Manteigas 97.56 337 *e*LQ LQ 07 47 27.8
MTE *e*LR LR 07 53 27.3
comp=Z,549nm,18.0s

GOGA Godfrey 97.92 37 P Pdif 07 18 13.2 +0.4
baz=325
W57A Gilead 98.06 33 P Pdif 07 18 13.6 +0.3
W57A Gilead 98.06 33 P Pdif 07 18 13.9 +0.5
baz=328,SNR=5.4
W57A P Pdif 07 18 13.9 +0.5
baz=328,SNR=5.4
BIRD Birdtown, Kers 98.28 34 P **P** **07 18 13.9 -0.4**
PMRV Marv??o 98.39 336 *e*P **P** **07 18 14.8 0.0**
comp=Z,25nm,1.8s
PMRV Marv??o 98.39 336 *e*PP PP 07 22 24.8 +11
PMRV *e*S **S** **07 29 41.6 +1.9**
PMRV *e*SS SS 07 36 46.1 +24
PMRV Marv??o 98.39 336 *e*LQ LQ 07 50 47.7
PMRV *e*LR LR 07 58 03.2
comp=Z,480nm,22.0s
PSBE So Bento 98.75 337 *e*P **P** **07 18 16.4 0.0**
CNNC Cliffs of the 98.89 32 P **P** **07 18 17.0 0.0**
baz=329
PBAR Barrancos 99.41 335 *e*P **Pdif** **07 18 20.4 +1.1**
TIGA Tifton 99.47 38 P **Pdif** **07 18 19.6 -0.2**
baz=325
PVAQ Vaqueiros 100.34 336 *e*LR LR 07 55 44.3
comp=Z,742nm,20.0s
LODK Lodwar 100.80 283 IAMs_20 IAMs_20 08 10 06.7
comp=Z,416nm,21.0s
KIBK Kibwezi 102.24 276 IAMs_20 IAMs_20 08 05 45.6
comp=Z,284nm,20.0s
DWPF Disney Wildern 103.27 38 P **Pdif** **07 18 35.9 -0.8**
baz=326
BBSR BB Station 106.31 23 IAMs_20 IAMs_20 08 11 51.0
comp=Z,263nm,21.0s
TAM Tamanrasset 107.26 318 IAMs_20 IAMs_20 08 16 56.0
comp=Z,232nm,20.0s
PMOZ Porto Moniz, M 107.37 341 *e*LR LR 08 01 53.1
comp=Z,214nm,20.0s
TGUH Tegucigalpa,Un 111.17 52 IAMs_20 IAMs_20 08 07 22.3
comp=Z,362nm,21.0s
BOAB BOAB BROADBAN 118.40 52 IAMs_20 IAMs_20 08 04 07.4
comp=Z,339nm,19.0s
VNDA Vanda 115.36 175 PKP **PKPdf** **07 23 16.8 -0.1**
comp=Z,1.9nm,0.8s,baz=311,slow=4.9,SNR=14
VNDA PKKPbc **PKKPbc** **07 33 53.0 0.0**
comp=Z,0.5nm,0.6s,baz=191,slow=1.7,SNR=5.5
JTS Las Juntas de 115.50 52 IAMs_20 IAMs_20 08 05 09.0
comp=Z,357nm,22.0s
SC01 Santiago de lo 115.72 34 PKPdf **PKiKP** **07 23 18.3 -1.2**
TOA0 Torodi Ar. Sit 117.20 315 PKPdf **PKPdf** **07 23 20.7 -1.7**
TORD Torodi Ar. Bea 117.20 315 PKP **PKPdf** **07 23 21.7 -0.6**
comp=Z,2.4nm,0.6s,baz=21,slow=1.5,SNR=19
TORD PKKPbc **PKKPbc** **07 33 46.8 +1.5**
comp=Z,1.0nm,0.9s,baz=230,slow=2.7,SNR=4.1
SJG San Juan 118.84 30 IAMs_20 IAMs_20 08 15 28.3
comp=Z,290nm,20.0s
MAW Mawson 120.00 206 PKP **PKiKP** **07 23 26.3 +0.2**
comp=Z,5.3nm,0.8s,baz=309,slow=2.5,SNR=14
MAW PKKPbc **PKKPbc** **07 33 36.0 -0.1**
comp=Z,2.0nm,0.8s,baz=242,slow=7.6,SNR=5.7
ZARC Zaragoza, Cauc 123.76 45 *e*P **PKiKP** **07 23 35.2 -0.1**
OCAC Ocana 124.00 43 *e*P **PKiKP** **07 23 35.9 -0.1**
CBOC Ciudad Bolivar 124.41 48 *e*P **PKPdf** **07 23 36.6 +0.1**
BRRC Barranca, Sant 124.72 44 *e*P **PKiKP** **07 23 37.4 +0.2**
PTBC PUERTO BERRIO 124.76 46 *e*P **PKPdf** **07 23 36.6 -0.4**
SDV Santo Domingo 124.88 40 PKPdf **PKPdf** **07 23 35.9 -1.5**
SDV Santo Domingo 124.88 40 *e*P **PKPdf** **07 23 36.9 -0.6**
LBTB Lobatse 124.90 263 PKPdf **PKPdf** **07 23 37.0 0.0**
LBTB Lobatse 124.90 263 PKIKP **PKPdf** **07 23 37.0 0.0**
PLMC San Jos del P 125.02 48 *e*P **PKiKP** **07 23 38.2 +0.3**
PAMC Pamplona, Colo 125.08 43 *e*P **PKPdf** **07 23 37.8 -0.4**
SOCV Socops 125.27 41 *e*P **PKPdf** **07 23 38.1 +0.1**
GUY2C Guyana, Caldas 125.31 47 *e*P **PKPdf** **07 23 38.5 0.0**
NORC Norcasia 125.32 47 *e*P **PKPdf** **07 23 37.8 -0.3**
BARC Barichara 125.44 44 *e*P **PKPdf** **07 23 38.6 +0.1**
YOTC Yotoco, Valle 125.71 49 *e*P **PKiKP** **07 23 39.3 -0.1**
RUSC La Rusia 126.07 45 *e*P **PKPdf** **07 23 39.7 -0.3**
BAUV El Baul 126.12 37 PKPdf **PKPdf** **07 23 39.4 -0.2**
DBIC Dimbokro 126.14 317 PKP **PKPdf** **07 23 39.5 -0.1**
comp=Z,12nm,0.8s,baz=31,slow=2.8,SNR=12
ROSC El Rosal 126.22 47 PKP **PKPdf** **07 23 40.2 -0.1**
comp=Z,8.0nm,0.5s,baz=85,slow=18,SNR=7.5
TIC Toumodi 126.25 317ǁ *i*PKIKP **PKPdf** **07 23 39.4 -0.4**
comp=Z,4.9nm,0.3s
KIC Kosan Boka 126.33 317ǁ *e*PKIKP **PKPdf** **07 23 39.4 -0.6**
comp=Z,10.0nm,0.5s
LIC Lamto 126.60 317ǁ *e*PKIKP **PKPdf** **07 23 39.8 -0.7**
comp=Z,31nm,0.5s
POPC Popayan, Colom 126.65 51 *e*P **PKPdf** **07 23 40.4 -0.5**
CHIC Chingaza 126.73 46 *e*P **PKPdf** **07 23 41.1 -0.2**
BOSA Boshof 126.86 260 PKP **PKPdf** **07 23 40.3 -0.4**
comp=Z,11nm,0.9s,baz=108,slow=1.6,SNR=12
BETC Betania 127.29 49 *e*P **PKiKP** **07 23 43.0 +0.6**
OTAV Otavalo 127.31 54 **PKPdf** **07 23 42.5 +0.1**
OTAV Otavalo 127.31 54 PKIKP **PKPdf** **07 23 42.5 +0.1**
GARC Garzon, Huila 127.65 50 *e*P **PKiKP** **07 23 43.6 +0.3**
PTGC Puerto Gaitan, 127.99 45 *e*P **PKPdf** **07 23 43.1 0.0**
ARNL Arenillas 129.04 59 **PKiKP** **07 23 45.6 -0.2**
BOSC San Juan Bosco 129.81 57 **PKiKP** **07 23 47.4 -0.1**
BOAV Boa Vista 135.33 32 *e*P **PKiKP** **07 23 58.3 -0.2**
CZSB Cruzeiro do Su 137.04 55 PKPdf **PKPdf** **07 24 00.5 +0.3**
CZSB Cruzeiro do Su 137.04 55 *e*P **PKPdf** **07 23 59.2 -0.9**
TROLL Troll, Antarti 139.68 198 PKPdf **PKPdf** **07 23 56.7 -6.7**
TROLL Troll, Antarti 139.68 198 PP PP 07 27 00.3 +0.7
MACA Manacapuru-AM 140.19 36 *e*P **PKPdf** **07 24 06.1 +0.2**
MCPB Macapa, AP 140.98 22 *e*P **PKPdf** **07 24 08.5 +1.1**
SNAA Sanae 141.20 197 PKPdf **PKPdf** **07 23 58.7 -7.3**
SNAA Sanae 141.20 197 PP PP 07 27 07.5 -1.2
MALB Monte Alegre 141.66 26 *e*P **PKPdf** **07 24 09.7 +1.1**
VNA2 Neumayer--Watz 142.77 196 PKPdf **PKPdf** **07 24 04.8 -4.0**
baz=112,slow=2.8
VNA2 Neumayer--Watz 142.77 196 PP PP 07 27 16.9 -1.2
VNA3 Neumayer Olymp 143.01 195 PKPdf PKPbc 07 24 05.5 -0.7
VNA3 Neumayer Olymp 143.01 195 PP PP 07 27 21.4 +1.8
VNA1 Neumayer--Stat 143.16 196 PKPdf PKPbc 07 24 05.9 -0.6
ITTB Itaituba 143.43 30 *e*P PKPbc 07 24 10.3 +1.4
TMAB Tom-Au,PA,Br 143.96 17 *e*P **PKPdf** **07 24 12.1 -0.6**
BOSB Bosrio 145.21 10 *e*P **PKPdf** **07 24 13.7 +0.8**
SMAI San Martin Ant 145.35 161 PKPbc **PKPab** **07 24 14.5 +1.0**
NPGB Novo Progresso 146.01 31 *e*P **PKPbc** **07 24 17.1 +0.2**
PB18 Visviri 146.25 63 PKPbc **PKPab** **07 24 19.9 +0.9**
LPAZ La Paz 146.30 59 PKPbc **PKPbc** **07 24 18.7 +0.2**
comp=Z,32nm,0.8s,baz=344,slow=3.0,SNR=126
LPAZ La Paz 146.30 59 **PKPab** **07 24 19.0 -0.3**
PB12 IPOC Station P 146.32 65 **PKPdf** **07 24 17.0 +0.4**
PB16 IPOC Station P 146.72 64 PKPbc **PKPbc** **07 24 19.9 +0.2**
H03N2 Juan Fernandez 146.85 95 T T 10 08 30.7
baz=287,slow=74,SNR=176
H03N3 Juan Fernandez 146.86 96 T T 10 08 30.0
baz=287,SNR=212
H03N1 Juan Fernandez 146.87 95 T T 10 08 33.7
baz=287,slow=74,SNR=174
H03S2 Juan Fernandez 146.98 96 T T 10 08 46.0
baz=293
H03S3 Juan Fernandez 146.99 96 T T 10 08 42.4
baz=293
H03S1 Juan Fernandez 147.00 96 T T 10 08 46.3
baz=293
PRPB Parauapebas 147.16 21 *e*P **PKPdf** **07 24 18.9 +0.8**
GO01 Chusmiza 147.81 65 PKPbc **PKPbc** **07 24 23.5 +0.9**
PB02 IPOC Station P 148.33 68 PKPbc **PKPbc** **07 24 24.6 -0.4**
RCBR Riachuelo 148.46 355 PKPbc **PKPbc** **07 24 24.5 +0.6**
RCBR Riachuelo 148.46 355 PKP2 **PKPbc** **07 24 24.5 +0.6**
RCBR Riachuelo 148.46 355 *e*P **PKPdf** **07 24 21.3 +1.0**
PB01 IPOC Station P 148.46 68 PKPbc **PKiKP** **07 24 24.8 -0.5**
PB07 IPOC Station P 148.58 69 PKPbc **PKPbc** **07 24 24.9 +0.8**
PMSA Palmer Station 148.67 159 *e*P **PKPdf** **07 24 18.9 0.0**
VILB Vilhena 148.75 44 PKPbc **PKiKP** **07 24 25.7 -0.2**
VILB Vilhena 148.75 44 *e*P **PKPdf** **07 24 21.9 +1.2**
PB09 IPOC Station P 149.10 68 PKPbc **PKiKP** **07 24 27.1 +0.4**
CLDB Colider 149.23 35 *e*P **PKPdf** **07 24 22.5 +1.0**
PDRB Porto dos Gac 149.43 37 *e*P **PKPdf** **07 24 23.1 +1.3**
LVC Limon Verde 149.83 69 PKPbc **PKiKP** **07 24 28.5 +0.1**
LVC Limon Verde 149.83 69 PKP2 **PKiKP** **07 24 28.5 +0.1**
LVC Limon Verde 149.83 69 *e*P **PKPdf** **07 24 23.1 +0.5**
PB14 IPOC Station P 149.84 74 PKPbc **PKiKP** **07 24 28.1 -0.2**
SMTB Santa Maria do 150.34 19 *e*P **PKPdf** **07 24 24.0 +0.7**
NBRF Rio Formoso - 151.22 353 *e*P **PKPdf** **07 24 25.2 +0.6**
PTLB Pontes e Lacer 151.37 46 PKPdf **PKPdf** **07 24 24.7 0.0**
PTLB PKPbc **PKiKP** **07 24 31.1 -0.2**
PTLB PKPab **PKPab** **07 24 39.2 +0.2**
PTLB Pontes e Lacer 151.37 46 *e*P **PKPdf** **07 24 25.8 +1.1**
GO03 Copiap 151.47 79 **PKiKP** **07 24 32.0 +0.7**
CO06 Fray Jorge 151.69 86 **PKiKP** **07 24 31.5 0.0**
CO06 PKPab **PKPab** **07 24 41.5 +1.4**

LCO	**Las Campanas**	**151.74**	**82**			**PKiKP**	07 24 32.1	**0.0**	
LCO						**PKPbc**	07 24 32.8	**+1.2**	
LCO	**Las Campanas**	**151.74**	**82**		PKiKP	**PKiKP**	07 24 32.1	**0.0**	
AC02	**Maricunga**	**151.96**	**77**			**PKiKP**	07 24 33.3	**+0.4**	
AC05	**El Transito**	**152.00**	**82**			**PKiKP**	07 24 33.2	**+0.8**	
MG05	**Puerto Natales**	**152.09**	**132**			**PKiKP**	07 24 32.1	**+0.5**	
SNDB	**Serra Nova Dou**	**152.10**	**28**	*eP*		**PKPdf**	07 24 27.3	**+1.4**	
GO04	**Tololo Observa**	**152.15**	**85**			**PKiKP**	07 24 33.2	**+0.3**	
NBAN	**Anadia - AL**	**152.29**	**356**	*eP*		**PKPdf**	07 24 26.7	**+0.5**	
GO09	**Cerro Castillo**	**152.30**	**131**		PKPdf	**PKPdf**	07 24 23.6	**-1.5**	
GO09						**PKiKP**	07 24 33.1	**+0.9**	
CO02	**Combarbal**	**152.39**	**87**		PKPdf	**PKPdf**	07 24 24.5	**-1.5**	
CO02						**PKPbc**	07 24 32.9	**0.0**	
CO03	**El Pedregal**	**152.50**	**86**			**PKPbc**	07 24 33.1	**0.0**	
VA01	**Torpederas**	**152.50**	**91**		PKPdf	**PKPdf**	07 24 25.4	**-0.6**	
VA01						**PKPbc**	07 24 33.0	**+0.1**	
CO01	**Juntas del Tor**	**152.63**	**84**		PKPdf	**PKPdf**	07 24 24.4	**-2.1**	
CO01						**PKiKP**	07 24 34.6	**+0.7**	
VA06	**Catapilco**	**152.63**	**90**			**PKPbc**	07 24 33.2	**0.0**	
VA05	**Santo Domingo**	**152.73**	**92**			**PKiKP**	07 24 33.5	**-0.1**	
GO05	**Huala**	**152.86**	**95**			**PKiKP**	07 24 34.2	**+0.3**	
ROC1	**El Roble**	**152.99**	**90**			**PKiKP**	07 24 34.6	**0.0**	
MT01	**Popeta**	**153.08**	**92**			**PKPdf**	07 24 26.3	**-0.5**	
MT09	**Talagante**	**153.26**	**92**			**PKPbc**	07 24 34.5	**-0.2**	
VA03	**San Esteban**	**153.29**	**90**			**PKiKP**	07 24 35.5	**+0.6**	
PEL	**Peldehue**	**153.31**	**91**			**PKPdf**	07 24 25.6	**-1.6**	
PEL					PKPbc	**PKiKP**	07 24 35.6	**+0.7**	
PEL					PKPab	**PKPab**	07 24 48.6	**+1.7**	
PEL	**Peldehue**	**153.31**	**91**		PKP2	**PKPab**	07 24 48.6	**+1.7**	
PEL							08 24 25.6		
PEL							08 24 35.6		
MT05	**Renca**	**153.34**	**91**		PKPdf	**PKPdf**	07 24 27.0	**-0.3**	
MT05					PKPbc	**PKiKP**	07 24 35.8	**+0.8**	
MT05					PKPab	**pPKPbc**	07 24 48.8	**+0.2**	
BO01	**Tunca**	**153.36**	**93**			**PKPdf**	07 24 26.3	**-0.8**	
BO01					PKPbc	**PKiKP**	07 24 35.2	**+0.3**	
BO01					PKPab	**pPKPbc**	07 24 48.5	**+0.1**	
LR03	**Panguipulli**	**153.38**	**105**			**PKiKP**	07 24 35.7	**+0.9**	
LR03					PKPab	**PKPab**	07 24 47.3	**+0.3**	
ML02	**Panimavida**	**153.45**	**97**		PKPdf	**PKPdf**	07 24 26.2	**-1.1**	
ML02						**PKiKP**	07 24 35.5	**+0.5**	
COYC	**Coyhaique**	**153.59**	**119**		PKPdf	**PKPdf**	07 24 26.8	**-0.3**	
COYC						**PKiKP**	07 24 35.7	**+0.7**	
COYC					PKPab	**pPKPbc**	07 24 49.8	**+1.2**	
SALV	**Santo Antonio**	**153.61**	**40**	*eP*		**PKPdf**	07 24 27.6	**-0.5**	
BO02	**Sierra Bellavi**	**153.71**	**94**			**PKPdf**	07 24 27.9	**+0.2**	
BO02					PKPbc	**PKiKP**	07 24 36.7	**+1.0**	
BO02					PKPab	**pPKPbc**	07 24 49.4	**+0.1**	
LMEL	**Las Melosas**	**153.91**	**92**		PKPdf	**PKPdf**	07 24 26.2	**-2.0**	
LMEL					PKPbc	**PKiKP**	07 24 35.2	**+0.7**	
LMEL					PKPab	**pPKPbc**	07 24 51.3	**+1.5**	
LL02	**Futaleuf**	**153.91**	**113**		PKPdf	**PKPdf**	07 24 27.7	**0.0**	
LL02						**PKiKP**	07 24 36.4	**+0.7**	
LL02						**pPKPbc**	07 24 49.5	**+0.2**	
ZON	**Zonda**	**154.36**	**86**			**PKiKP**	07 24 38.1	**+1.0**	
ZON					PKPab	**PKPab**	07 24 53.3	**+1.9**	
ZON	**Zonda**	**154.36**	**86**		PKP2	**PKPab**	07 24 53.3	**+1.9**	
SDBA	**SAO DESIDERIO**	**154.39**	**15**	*eP*		**PKPdf**	07 24 30.3	**+1.0**	
PLCA	**Paso Flores**	**154.84**	**108**		PKPbc	**PKiKP**	07 24 38.8	**+0.9**	
	comp=Z,7.4nm,1.0s,baz=247,slow=4.5,SNR=8.0								
PLCA					PKPab	**PKPab**	07 24 53.4	**+0.2**	
	comp=Z,15nm,1.1s,baz=290,slow=4.4,SNR=6.7								
PLCA	**Paso Flores**	**154.84**	**108**	*eP*		**PKPdf**	07 24 27.0	**-2.2**	
ORCD	**Orcadas**	**156.33**	**172**		PKPdf	**PKPdf**	07 24 30.6	**+0.3**	
ORCD					PKPab	**PKPab**	07 24 58.4	**+0.3**	
GDU01	**Guandu, BA**	**156.35**	**3**	*eP*		**PKPdf**	07 24 31.4	**-0.4**	
BDFB	**Brasilia**	**156.65**	**24**	PKP		**PKPdf**	07 24 32.6	**+0.3**	
	comp=Z,3.0nm,1.0s,baz=18,slow=6.6,SNR=4.3								
BDFB					PKPab	**PKPab**	07 25 02.7	**+1.2**	
	comp=Z,9.5nm,0.7s,baz=329,slow=4.0,SNR=14								
BDFB	**Brasilia**	**156.65**	**24**	*eP*		**PKPdf**	07 24 33.2	**+0.9**	
JANB	**Januaria**	**157.08**	**15**	*eP*		**PKPdf**	07 24 33.5	**+0.7**	
AQDB	**Aquidauana**	**157.33**	**47**	PKPdf		**PKPdf**	07 24 33.0	**0.0**	
AQDB						**PKPab**	07 25 03.6	**-0.6**	
AQDB	**Aquidauana**	**157.33**	**47**	*eP*		**PKPdf**	07 24 33.2	**+0.3**	
C2SB	**Chapadao do Su**	**157.47**	**38**	*eP*		**PKPdf**	07 24 32.9	**-0.2**	
CMC01	**Camacan, BA**	**157.98**	**3**	*eP*		**PKPdf**	07 24 34.1	**+0.3**	
IPMB	**Ipameri, GO**	**158.76**	**27**	*eP*		**PKPdf**	07 24 34.7	**-0.1**	
PMNB	**Patos De Minas**	**159.87**	**23**	*eP*		**PKPdf**	07 24 35.9	**-0.2**	
DIAM	**Diamantina, MG**	**160.36**	**15**	*eP*		**PKPdf**	07 24 37.7	**+1.0**	
NAN01	**Guarapari, ES**	**160.41**	**5**	*eP*		**PKPdf**	07 24 36.1	**-0.6**	
CPUP	**Villa Florida**	**160.46**	**61**	PKP		**PKPdf**	07 24 36.4	**0.0**	
	comp=Z,1.3nm,0.8s,baz=357,slow=3.7,SNR=4.9								
CPUP					PKPab	**PKPab**	07 25 18.2	**+0.4**	
	comp=Z,3.4nm,0.8s,baz=315,slow=7.2,SNR=8.5								
CPUP	**Villa Florida**	**160.46**	**61**	*eP*		**PKPdf**	07 24 38.6	**+2.2**	
SJMB	**Sao Joao De Ma**	**161.16**	**8**	*eP*		**PKPdf**	07 24 37.7	**+0.3**	
BB19B	**Bebedouro**	**161.43**	**31**	*eP*		**PKPdf**	07 24 38.4	**+0.6**	
RIB01	**Linhares ES**	**161.85**	**6**	*eP*		**PKPdf**	07 24 39.0	**+0.8**	
BSCB	**Bom Sucesso**	**162.68**	**21**	*eP*		**PKPdf**	07 24 39.0	**-0.1**	
PTGB	**Pitanga**	**162.72**	**47**	*eP*		**PKPdf**	07 24 39.3	**+0.5**	
TGB	**Itaqui**	**162.90**	**68**	*eP*		**PKPdf**	07 24 39.5	**+1.7**	
RCLB	**Rio Claro- Sao**	**163.05**	**31**	*eP*		**PKPdf**	07 24 40.1	**+0.8**	
ALF01	**Guarapari-ES**	**163.11**	**8**	*eP*		**PKPdf**	07 24 40.1	**+0.8**	
VAO	**Valinhos**	**163.80**	**30**	*eP*		**PKPdf**	07 24 41.6	**+1.6**	
CAM01	**Campos-RJ**	**164.17**	**11**	*eP*		**PKPdf**	07 24 42.2	**+1.9**	
ITAB	**Concordia**	**164.53**	**53**	*eP*		**PKPdf**	07 24 41.9	**+1.5**	
PARB	**Paraibuna**	**164.61**	**26**	*eP*		**PKPdf**	07 24 41.3	**+0.6**	
PET01	**Itanhaem-SP**	**164.82**	**33**	*eP*		**PKPdf**	07 24 41.9	**+1.1**	
CPSB	**Cacapava Do Su**	**165.63**	**65**	*eP*		**PKPdf**	07 24 42.8	**+1.5**	
PLTB	**Pedras Altas**	**166.20**	**70**			**PKPdf**	07 24 39.6	**-2.1**	
PLTB						**PKPab**	07 25 43.7	**+0.8**	
PLTB	**Pedras Altas**	**166.20**	**70**	*eP*		**PKPdf**	07 24 43.1	**+1.4**	
CNLB	**Canela**	**166.77**	**56**	*eP*		**PKPdf**	07 24 43.4	**+1.1**	
TER01	**Tubaro-SC**	**167.31**	**49**	*eP*		**PKPdf**	07 24 44.3	**+1.6**	

*VAO **15** 07:06:27.2±0.4, 19°.29S×67°.92W, h274km±6km, mb3.5*
*GUC **15** 07:06:28.5±0.5, 19°.37S×67°.68W, h260km±8km, ML4.0*
*SCB **15** 07:06:28.8±1.3, 19°.39S×67°.21W, h226km±5km, ML3.5/5, MW3.4, Error ellipse: s-maj=5.1km s-min=4.2km az=2.0*
*IDC **15** 07:06:30.9±2.6, 18°.855S×66°.70W, h224km±17km, mb3.9/1, mbtmp3.8/3, Error ellipse: s-maj=80.2km s-min=24.3km az=52.0*

ISC 15 07:06:27.2±0.6, **19°32S**±0°.05×**67°81W**±0°.09, **h266**km±10km, **n40**, σ1°**32**/48, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB16	**IPOC Station P**	**1.89**	**301**	*eP*		**Pn**	**07 07 12.5**	**+1.8**
PB16				*i*	S	**S**	**07 07 47.0**	**+2.0**
PB01	**IPOC Station P**	**2.33**	**222**	*eP*		**Pn**	**07 07 14.6**	**+0.5**
PB01				*i*	S	**S**	**07 07 50.1**	**-1.2**
PB01					IAML		07 07 51.3	
	comp=N,412nm,0.4s							
PB12	**IPOC Station P**	**2.49**	**286**	*eP*		**Pn**	**07 07 17.2**	**+1.6**
PB12				*i*	S	**S**	**07 07 54.4**	**+0.4**
PB12					IAML		07 07 56.0	
	comp=E,311nm,0.4s							
BBOE	**La Paz, Chanca**	**2.50**	**356**		P	**Pn**	**07 07 16.0**	**-0.2**
BBOE					IAML		07 07 57.1	
	comp=E,16nm,0.6s							
TA01	**Diego Aracena**	**2.56**	**241**	*eP*		**Pn**	**07 07 17.2**	**+1.1**
TA01				*i*	S	**S**	**07 07 54.0**	**-1.0**
TA01					IAML		07 08 01.8	
	comp=N,184nm,0.3s							
BBOD	**La Paz, Gloria**	**2.77**	**344**		P	**Pn**	**07 07 19.7**	**+0.8**
BBOD					IAML		07 08 07.5	
	comp=N,8.8nm,0.5s							
PB02	**IPOC Station P**	**2.80**	**224**	*eP*		**Pn**	**07 07 19.7**	**+1.0**
PB02				*i*	S	**S**	**07 07 58.8**	**-0.7**
PB02	**IPOC Station P**	**2.80**	**224**		P	**Pn**	**07 07 20.3**	**+1.7**
PB02					S	**S**	**07 07 58.8**	**-0.7**
PB02					IAML		07 08 00.1	
	comp=N,514nm,0.3s							
MOCB	**Mochara**	**2.80**	**134**		P	Pn	07 07 13.1	-5.9
MOCB					S	S	07 07 43.4	-17
PB09	**IPOC Station P**	**2.81**	**208**	*eP*		**Pn**	**07 07 19.9**	**+1.0**
PB09				*i*	S	**S**	**07 07 59.2**	**-0.7**
PB09					IAML		07 08 03.8	
	comp=E,80nm,0.3s							
LPAZ	**La Paz**	**3.03**	**354**		P	**Pn**	**07 07 21.7**	**+0.1**
	comp=E,5.5nm,0.4s,baz=117,slow=6.8,SNR=59							
LPAZ					S	**S**	**07 08 01.4**	**-3.6**
	comp=E,10nm,0.7s,baz=326,slow=20,SNR=18							
LPAZ	**La Paz**	**3.03**	**354**		P	**Pn**	**07 07 21.8**	**+0.1**
LPAZ	**La Paz**	**3.03**	**354**	*eP*		**Pn**	**07 07 22.1**	**+0.4**
PB07	**IPOC Station P**	**3.09**	**219**	*eP*		**Pn**	**07 07 22.8**	**+1.0**
PB07				*i*	S	**S**	**07 08 03.9**	**-1.3**
LVC	**Limon Verde**	**3.44**	**197**	*eP*		**Pn**	**07 07 26.1**	**+0.4**
YJA	**Yavi**	**3.56**	**143**		P	Pn	07 07 22.3	-4.9
PB04	**IPOC Station P**	**3.72**	**216**		P	**Pn**	**07 07 30.3**	**+1.7**
PB04					S	**S**	**07 08 16.3**	**-1.3**
PB04					IAML		07 08 18.7	
	comp=E,101nm,0.7s							
PB06	**IPOC Station P**	**3.75**	**206**		P	**Pn**	**07 07 30.0**	**+1.0**
PB06					S	**S**	**07 08 15.2**	**-3.1**
PB06					IAML		07 08 20.6	
	comp=E,155nm,0.4s							
PB15	**IPOC Station P**	**4.17**	**202**		P	**Pn**	**07 07 35.1**	**+1.2**
SIV	**San Ignacio**	**7.22**	**64**		P	Pn	07 08 05.1	-5.8
ETMB	**Extrema**	**9.57**	**9**	*eP*		**Pn**	**07 08 39.6**	**-0.7**
VILB	**Vilhena**	**9.66**	**50**	*eP*		**Pn**	**07 08 41.3**	**-0.2**
CPUP	**Villa Florida**	**11.91**	**128**		P	**Pn**	**07 09 07.5**	**-1.8**
	comp=E,0.5nm,0.3s,baz=325,slow=12,SNR=5.3							
CPUP	**Villa Florida**	**11.91**	**128**	*eP*		**Pn**	**07 09 10.0**	**+0.7**
CZSB	**Cruzeiro do Su**	**12.46**	**337**	*eP*		**Pn**	**07 09 14.2**	**-2.0**
PDRB	**Porto dos Gac**	**13.13**	**56**	*eP*		**P**	**07 09 26.0**	**+0.4**
CLDB	**Colider**	**14.31**	**56**	*eP*		**Pn**	**07 09 39.6**	**+1.0**
PTGB	**Pitanga**	**15.55**	**113**	*eP*		**P**	**07 09 53.1**	**+0.8**
ITAB	**Concordia**	**16.41**	**122**	*eP*		**P**	**07 10 02.6**	**+1.0**
CPSB	**Cacapava Do Su**	**17.06**	**133**	*eP*		**P**	**07 10 09.7**	**+1.0**
NPGB	**Novo Progresso**	**17.18**	**46**	*eP*		**P**	**07 10 10.0**	**-0.1**
SNDB	**Serra Nova Dou**	**17.49**	**68**	*eP*		**P**	**07 10 13.7**	**+0.2**
ITTB	**Itaituba**	**18.96**	**40**	*eP*		**P**	**07 10 29.3**	**0.0**
BDFB	**Brasilia**	**19.23**	**82**	*eP*		**P**	**07 10 33.5**	**+1.2**
TER01	**Tubaro-SC**	**19.36**	**122**	*eP*		**P**	**07 10 33.3**	**-0.1**
MALB	**Monte Alegre**	**21.84**	**39**	*eP*		**P**	**07 10 58.9**	**+0.4**
OTAV	**Otavalo**	**22.06**	**331**	*eP*		**P**	**07 10 59.9**	**-1.3**
JANB	**Januaria**	**22.83**	**83**	*eP*		**P**	**07 11 08.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**75.65**	**70**	P		**P**	**07 17 45.5**	**+1.8**
	comp=E,1.3nm,0.3s,baz=258,slow=5.1,SNR=22							
	comp=E,1.3nm,0.3s							
SONM	**Songino Array**	**151.16**	**8**	PKPbc		**PKPab**	**07 25 55.8**	**-2.0**
	comp=E,0.8nm,0.5s,baz=360,slow=1.4,SNR=5.5							

*CNRM **15** 07:11:60.0, 35°.51N×5°.23W, h84km, ml3.0*
*INMG **15** 07:12:02.3±1.6, 35°.62N×5°.17W, h64km±15km, ML1.8, Error ellipse: s-maj=5.7km s-min=5.1km az=84.0*
*MDD **15** 07:12:04.4±0.8, 35°.67N×5°.22W, h64km±6km, Mb2.6/7, Error ellipse: s-maj=7.3km s-min=4.1km az=176.0*

ISC 15 07:12:00.0±1.3, **35°56N**±0°.04×**5°13W**±0°.05, **h81**km±10km, **n27**, σ1°**64**/50, **6C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ECEU	**Ceuta**	**0.40**	**329**		P	**Pn**	**07 12 14.1**	**+1.0**
ECEU					S	**Sn**	**07 12 23.1**	**+0.4**
CHEFC	**Chefchaouen**	**0.48**	**201**		P	**Pn**	**07 12 14.7**	**+0.9**
EMIJ	**Mijas**	**1.04**	**16**		P	**Pn**	**07 12 20.0**	**+0.2**
EMIJ					⇑*i*Vmb_V		07 12 20.4	
	29nm,SNR=0.4							
EMIJ					S	**Sn**	**07 12 33.3**	**-1.2**
JBK	**JBK**	**2.43**	**119**		S	**Sn**	**07 13 06.4**	**-0.5**
ECAB	**El Cabril**	**2.52**	**355**		P	**Pn**	**07 12 41.9**	**+2.9**
ECAB					⇑*i*Vmb_V		07 12 42.3	
	30nm,SNR=0.6							
ECAB					S	**Sn**	**07 13 06.7**	**-2.2**
EMIN	**Mina Concepcio**	**2.53**	**331**		P	**Pn**	**07 12 39.8**	**+0.7**
EMIN					⇑*i*Vmb_V		07 12 43.2	
	105nm,SNR=1.4							
EMIN					S	**Sn**	**07 13 07.3**	**-1.7**
EADA	**Adamuz**	**2.64**	**9**		P	**Pn**	**07 12 42.7**	**+2.1**
EADA					⇑*i*Vmb_V		07 12 43.3	
	49nm,SNR=1.1							
EADA					S	**Sn**	**07 13 10.6**	**-1.1**
MD31	**MD31**	**2.70**	**173**		P	**Pn**	**07 12 42.7**	**+1.2**
MD31					S	**Sn**	**07 13 11.0**	**-2.2**
EGRO	**El Granado**	**2.74**	**317**		P	**Pn**	**07 12 42.8**	**+1.0**
EGRO					⇑*i*Vmb_V		07 12 43.1	
	211nm,SNR=1.4							
EGRO					S	**Sn**	**07 13 12.6**	**-1.3**
MDT	**Midelt**	**2.77**	**171**		P	**Pn**	**07 12 43.8**	**+1.4**
MDT					S	**Sn**	**07 13 12.9**	**-2.1**
PVAQ	**Vaqueiros**	**2.78**	**312**		P	**Pn**	**07 12 43.5**	**+1.0**
PVAQ					S	**Sn**	**07 13 14.0**	**-1.1**
PVAQ	**Vaqueiros**	**2.78**	**312**	*eP*		**Pn**	**07 12 43.6**	**+1.1**
PVAQ					S	**Sn**	**07 13 14.0**	**-1.1**
PVAQ					A	A	07 13 14.6	
	2.8nm,0.3s							
PBDV	**Barranco-do-Ve**	**2.82**	**307**	*eP*		**Pn**	**07 12 44.1**	**+1.1**
PBDV					S	**Sn**	**07 13 14.9**	**-1.1**
PBAR	**Barrancos**	**3.03**	**330**	*eP*		**Pn**	**07 12 47.0**	**+1.2**
PBAR					S	**Sn**	**07 13 19.6**	**-1.4**
PBAR					A	A	07 13 21.9	
	2.4nm,0.2s							
PCVE	**Castro Verde**	**3.13**	**312**	*eP*		**Pn**	**07 12 49.3**	**+2.2**
PCVE					S	**Sn**	**07 13 21.8**	**-1.6**
PCVE					A	A	07 13 23.2	
	2.3nm,0.6s							
MORF	**Marmelete**	**3.33**	**303**	*eP*		**Pn**	**07 12 52.2**	**+2.2**
MORF					S	**Sn**	**07 13 27.6**	**-0.9**
MORF					A	A	07 13 33.4	
	2.1nm,0.2s							
MESJ	**Messejana**	**3.37**	**313**	*eP*		**Pn**	**07 12 51.6**	**+1.2**
MESJ					S	**Sn**	**07 13 27.7**	**-1.6**
MESJ					A	A	07 13 29.4	
	2.6nm,0.4s							
PFVI	**Vila Bisbo**	**3.37**	**299**		P	**Pn**	**07 12 52.3**	**+1.9**
PFVI					S	**Sn**	**07 13 27.6**	**-1.8**
PFVI	**Vila Bisbo**	**3.37**	**299**	*eP*		**Pn**	**07 12 52.5**	**+2.0**
PFVI					S	**Sn**	**07 13 27.9**	**-1.5**
EBAD	**Badajoz**	**3.53**	**335**		P	**Pn**	**07 12 54.3**	**+1.8**
EBAD					⇑*i*Vmb_V		07 12 54.6	
	39nm,SNR=0.5							
EBAD					S	**Sn**	**07 13 31.7**	**-1.5**
PNCL	**Nicolau / Gran**	**3.73**	**314**	*eP*		**Pn**	**07 12 56.6**	**+1.3**
PNCL					S	**Sn**	**07 13 36.7**	**-1.4**
PNCL					A	A	07 13 38.1	
	1.2nm,0.2s							
EVO	**Evora**	**3.76**	**323**		S	**Sn**	**07 13 37.4**	**-1.4**
EVO					A	A	07 13 38.4	
	3.1nm,0.3s							
PESTR	**Estremoz**	**3.84**	**330**		P	**Pn**	**07 12 57.5**	**+0.6**
PESTR					S	**Sn**	**07 13 39.0**	**-1.9**
PESTR	**Estremoz**	**3.84**	**330**	*eP*		**Pn**	**07 12 59.0**	**+2.2**
PESTR					S	**Sn**	**07 13 38.8**	**-2.1**
PESTR					A	A	07 13 41.2	
	0.4nm,0.1s							
PAB	**San Pablo**	**4.03**	**9**		S	**Sn**	**07 13 42.9**	**-2.5**
PMTG	**Montargil**	**4.29**	**326**	*eP*		**Pn**	**07 13 04.2**	**+1.4**
PMTG					S	**Sn**	**07 13 49.8**	**-1.8**
PMTG					A	A	07 13 52.0	
	0.7nm,0.1s							
PSBE	**So Bento**	**4.91**	**325**	*eP*		**Pn**	**07 13 12.7**	**+1.4**
PSBE					S	**Sn**	**07 14 04.9**	**-1.9**

*TEH **15** 07:11:58.8, 38°.78N×48°.55E, h27km, ML3.5*
*AZER **15** 07:11:58.5±0.1, 38°.83N×48°.53E, h12km±1km, Error ellipse: s-maj=1.7km s-min=1.1km az=37.0*

ISC 15 07:12:00.1±0.9, **38°79N**±0°.02×**48°53E**±0°.02, **h27**km±6km, **n85**, σ1°**23**/119, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LRK	**Lerik**	**0.21**	**224**	*eP*		**Pb**	**07 12 05.8**	**-0.4**
LRK	**Lerik**	**0.21**	**224**	P		**Pb**	**07 12 05.9**	**-0.4**
	SNR=491							
LRK					S	**Sb**	**07 12 11.0**	**+0.6**
LKRN	**Lenkeran, Azer**	**0.21**	**113**	*eP*		**Pb**	**07 12 05.4**	**-0.7**
LKRN	**Lenkeran, Azer**	**0.21**	**113**	P		**Pb**	**07 12 05.4**	**-0.7**
	SNR=155							
LKRN					S	**Sb**	**07 12 10.4**	**+0.2**
YRD	**Yardimli**	**0.26**	**299**	*ePg*		**Pb**	**07 12 05.7**	**-1.2**
YRD	**Yardimli**	**0.26**	**299**	P		**Pb**	**07 12 05.8**	**-1.2**
	SNR=163							
YRD					S	**Sb**	**07 12 10.8**	**-0.7**
ASTR	**Astara**	**0.31**	**138**	*ePg*		**Pb**	**07 12 06.8**	**-0.6**
ASTR	**Astara**	**0.31**	**138**	P		**Pb**	**07 12 06.9**	**-0.6**
	SNR=182							
ASTR					S	**Sb**	**07 12 12.8**	**+0.4**
GLBA	**Clilabad**	**0.46**	**347**	*ePg*		**Pb**	**07 12 08.4**	**-1.4**
GLBA	**Clilabad**	**0.46**	**347**	P		**Pb**	**07 12 08.4**	**-1.4**
	SNR=62							
GLBA					S	**Sb**	**07 12 15.9**	**-0.5**
GRMI	**Germi**	**0.49**	**272**	*eSg*		**Sb**	**07 12 16.9**	**-0.5**
GRMI					*ePg*	**Pb**	**07 12 08.1**	**-2.3**
QRD	**Qoradiz**	**1.15**	**306**	*ePg*		**Pn**	**07 12 19.3**	**-1.2**
QRD	**Qoradiz**	**1.15**	**306**	Pg		**Pn**	**07 12 19.4**	**-1.2**
	SNR=15							
QRD					Sg	**Sn**	**07 12 34.5**	**-0.9**
ISRB	**Sarab**	**1.18**	**215**	*ePg*		**Pn**	**07 12 20.7**	**-0.4**
ISRB					*e*		07 12 22.0	
	comp=Z,9μm,0.2s							
ISRB					*eSg*	**Sb**	**07 12 38.3**	**+1.4**
BLQ	**Beylaqan**	**1.19**	**321**	*ePg*		**Pn**	**07 12 19.8**	**-1.2**
BLQ	**Beylaqan**	**1.19**	**321**	Pg		**Pn**	**07 12 19.9**	**-1.2**
	SNR=16							
BLQ					Sg	**Sn**	**07 12 36.4**	**0.0**
ALIB	**Äli-Bayra**	**1.22**	**18**	*ePg*		**Pb**	**07 12 21.9**	**-0.7**
ALIB	**Äli-Bayra**	**1.22**	**18**	P		**Pb**	**07 12 21.9**	**-0.7**
	SNR=13							
ALIB					S	**Sb**	**07 12 40.2**	**+2.2**
IHRS	**Heris**	**1.26**	**248**	*ePg*		**Pn**	**07 12 21.9**	**-0.3**
IHRS					*eSg*	**Sb**	**07 12 39.4**	**+0.2**
CSN1	**Caspian**	**1.31**	**160**	*ePg*		**Pn**	**07 12 21.9**	**-0.7**
CSN1					*e*		07 12 47.6	
	comp=Z,17μm,0.3s							
TVRZ	**Varzaqan**	**1.48**	**259**	*ePg*		**Pb**	**07 12 25.9**	**-1.2**
KDMR	**Kurdemir**	**1.60**	**351**	*ePn*		**Pn**	**07 12 27.1**	**+0.4**
KDMR	**Kurdemir**	**1.60**	**351**	Pn		**Pn**	**07 12 26.6**	**-0.1**
	SNR=4.0							
KDMR					Sn	**Sb**	**07 12 48.5**	**-0.4**
ZRD	**Zardab**	**1.62**	**337**	*ePn*		**Pn**	**07 12 27.1**	**+0.2**
ZRD	**Zardab**	**1.62**	**337**	Pn		**Pn**	**07 12 27.1**	**+0.2**
ZRD					Sn	**Sb**	**07 12 49.8**	**+0.4**
IBST	**Bostanabad**	**1.69**	**230**	*ePg*		**Pn**	**07 12 28.7**	**+0.6**
IBST					*e*		07 12 30.7	
	comp=Z,4μm,0.3s							
AGDM	**Agdam**	**1.71**	**321**	Pn		**Pn**	**07 12 27.9**	**-0.3**
	SNR=22							
AGDM					Sn	**Sb**	**07 12 51.2**	**-0.8**
GBS	**Qobustan**	**1.77**	**10**	*ePn*		**Pn**	**07 12 29.7**	**+0.7**
GBS	**Qobustan**	**1.77**	**10**	Pn		**Pn**	**07 12 29.8**	**+0.7**
GBS					Sn	**Sb**	**07 12 54.2**	**+0.5**
IHSH	**Hashtrud**	**1.79**	**214**	*ePn*		**Pn**	**07 12 30.0**	**+0.4**
IHSH					*e*		07 12 59.9	
	comp=Z,6μm,0.3s							
BRDA	**Brd**	**1.80**	**325**	*ePn*		**Pn**	**07 12 30.0**	**+0.6**
BRDA	**Brd**	**1.80**	**325**	Pn		**Pn**	**07 12 30.0**	**+0.6**
	SNR=10							
BRDA					Sn	**Sb**	**07 12 55.2**	**+0.7**
ITBZ	**Tabriz**	**1.95**	**254**	*ePn*		**Pn**	**07 12 31.9**	**+0.3**
ITBZ					*e*		07 13 00.7	
	comp=Z,5μm,0.4s							
ORD	**Ordubad**	**1.98

1.0nm,0.8s,baz=103,slow=8.1,SNR=8.9
1.0nm,0.8s
YKA Yellowknife Ar 77.11 28 P **P 07 57 26.2 +0.1**
0.3nm,0.7s,baz=280,slow=5.0,SNR=1.5
0.3nm,0.7s
FINES FINESS Array B 87.35 336 P **P 07 58 19.4 -0.1**
0.6nm,0.4s,baz=60,slow=4.6,SNR=6.5
0.6nm,0.4s

IDC 15 07:49:27.5±50.0, 15°74S×176°03W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=938.6km s-min=168.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.68**	**240**	P	P	07 57 17.7	-0.4
	1.0nm,0.3s,baz=92,slow=8.1,SNR=4.5						
	1.0nm,0.3s						
WRA	**Warramunga Arr**	**47.30**	**257**	P	P	07 58 03.3	0.0
	0.3nm,0.5s,baz=90,slow=7.5,SNR=16						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**47.59**	**252**	P	P	07 58 05.5	-0.1
	5.4nm,0.5s,baz=90,slow=8.1,SNR=96						
	5.4nm,0.5s						

IDC 15 08:06:51.0±2.9, 22°.76S×68°.67W, h0km, mb3.9/2, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=86.4km s-min=51.9km az=58.0
VAO 15 08:07:10.8±0.5, 21°.55S×68°.23W, h142km, mb3.7
NEIC 15 08:07:11.2±1.8, 21°.46S±0°.05×68°.47W±0°.09, h127km±7km, mb4.1/5, ML3.2(GUC), Error ellipse: s-maj=11.7km s-min=7.8km az=83.0
GUC 15 08:07:12.1±0.8, 21°.45S×68°.41W, h127km±7km, ML3.2
ISC 15 08:07:10.3±0.7, 21°42S±0°.04×68°34W±0°.07, h124km±8km, n61, σ1§22/71, mb3.9/4, 8C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.92**	**246**		**Pn**	**08 07 32.7**	**+0.6**
PB09	**IPOC Station P**	**0.92**	**246**	⇑*i*P	**Pn**	**08 07 33.4**	**+1.2**
PB09				*e*S	**Sn**	**08 07 49.9**	**+1.2**
PB09				IAML		08 07 52.2	
	comp=E,462nm,0.3s						
PB01	**IPOC Station P**	**1.13**	**289**		**Pn**	**08 07 34.5**	**+0.4**
PB01	**IPOC Station P**	**1.13**	**289**	⇑*i*P	**Pn**	**08 07 34.9**	**+0.7**
PB01				*e*S	**Sn**	**08 07 52.4**	**+0.2**
PB01				IAML		08 07 54.9	
	comp=E,598nm,0.3s						
LVC	**Limon Verde**	**1.30**	**204**	Pn	**Pn**	**08 07 36.4**	**+0.2**
LVC	**Limon Verde**	**1.30**	**204**	⇑*i*P	**Pn**	**08 07 37.1**	**+0.8**
LVC				*e*S	**Sn**	**08 07 56.8**	**+0.9**
LVC	**Limon Verde**	**1.30**	**204**	*e*P	**Pn**	**08 07 37.0**	**+0.8**
PB02	**IPOC Station P**	**1.45**	**274**		**Pn**	**08 07 38.0**	**+0.4**
PB02	**IPOC Station P**	**1.45**	**274**	⇑*i*P	**Pn**	**08 07 38.2**	**+0.6**
PB02				*e*S	**Sn**	**08 07 58.5**	**+0.2**
PB07	**IPOC Station P**	**1.47**	**258**		**Pn**	**08 07 38.1**	**+0.2**
PB07	**IPOC Station P**	**1.47**	**258**	⇑*i*P	**Pn**	**08 07 38.4**	**+0.5**
PB07				*e*S	**Sn**	**08 07 58.9**	**+0.1**
PB07				IAML		08 08 00.4	
	comp=N,618nm,0.2s						
AF01	**San Pedro de A**	**1.54**	**174**		**Pn**	**08 07 39.5**	**+0.7**
AF01	**San Pedro de A**	**1.54**	**174**	*i* P	**Pn**	**08 07 40.5**	**+1.8**
PB06	**IPOC Station P**	**1.71**	**221**		**Pn**	**08 07 41.4**	**+0.7**
PB06	**IPOC Station P**	**1.71**	**221**	⇑*e*P	**Pn**	**08 07 41.2**	**+0.5**
PB06				*e*S	**Sn**	**08 08 04.5**	**+0.5**
PB06				IAML		08 08 06.2	
	comp=E,244nm,0.1s						
PB04	**IPOC Station P**	**1.91**	**241**		**Pn**	**08 07 42.6**	**-0.4**
PB04	**IPOC Station P**	**1.91**	**241**	*e*P	**Pn**	**08 07 43.2**	**+0.1**
PB04				IAML		08 08 16.1	
	comp=N,224nm,0.1s						
GO01	**Chusmiza**	**1.91**	**335**		**Pn**	**08 07 44.2**	**+0.7**
GO01	**Chusmiza**	**1.91**	**335**	*e*P	**Pn**	**08 07 45.4**	**+1.9**
GO01				*e*S	**Sn**	**08 08 10.7**	**+1.9**
GO01				IAML		08 08 17.1	
	comp=N,290nm,0.2s						
TA01	**Diego Aracena**	**1.91**	**296**	Pn	**Pn**	**08 07 42.5**	**-0.5**
TA01	**Diego Aracena**	**1.91**	**296**	⇑*i*P	**Pn**	**08 07 43.5**	**+0.6**
TA01				*e*S	**Sn**	**08 08 07.7**	**-0.2**
TA02	**Huaiquique**	**2.02**	**304**		**Pn**	**08 07 44.8**	**+0.5**
TA02	**Huaiquique**	**2.02**	**304**	*e*P	**Pn**	**08 07 44.7**	**+0.5**
TA02				*e*S	**Sn**	**08 08 09.9**	**-0.4**
PB15	**IPOC Station P**	**2.07**	**210**		**Pn**	**08 07 45.7**	**+0.7**
PB15	**IPOC Station P**	**2.07**	**210**	⇑*i*P	**Pn**	**08 07 45.7**	**+0.7**
PB15				*e*S	**Sn**	**08 08 13.0**	**+1.4**
PB16	**IPOC Station P**	**3.26**	**340**	Pn	**Pn**	**08 08 02.5**	**+1.7**
PB12	**IPOC Station P**	**3.35**	**326**	Pn	**Pn**	**08 08 01.2**	**-0.4**
PB12	**IPOC Station P**	**3.35**	**326**	*e*P	**Pn**	**08 08 01.1**	**-0.4**
PB14	**IPOC Station P**	**3.71**	**210**	Pn	**Pn**	**08 08 05.7**	**-0.7**
GO02	**Mina Guanaco**	**3.90**	**197**	Pn	**Pn**	**08 08 08.3**	**-0.6**
LPAZ	**La Paz**	**5.11**	**2**	Pn	**Pn**	**08 08 28.0**	**+2.6**
	comp=N,1.9nm,0.3s,baz=153,slow=5.7,SNR=58						
	comp=N,3.9nm,0.3s						
LPAZ	**La Paz**	**5.11**	**2**	Pn	**Pn**	**08 08 27.6**	**+2.2**
LPAZ	**La Paz**	**5.11**	**2**	*e*P	**Pn**	**08 08 27.5**	**+2.1**
AC01	**Pan de Azucar**	**5.14**	**203**	Pn	**Pn**	**08 08 23.5**	**-1.7**
AC02	**Maricunga**	**5.44**	**187**	Pn	**Pn**	**08 08 33.1**	**-0.4**
AC04	**Llanos de Chal**	**7.20**	**200**	Pn	**Pn**	**08 08 50.6**	**-2.4**
AC05	**El Transito**	**7.59**	**193**	Pn	**Pn**	**08 08 56.5**	**-1.9**
PTLB	**Pontes e Lacer**	**10.56**	**57**	*e*P	**Pn**	**08 09 38.0**	**-0.4**
CPUP	**Villa Florida**	**11.20**	**118**	*e*P	**Pn**	**08 09 45.4**	**-1.5**
VILB	**Vilhena**	**11.46**	**44**	Pn	**Pn**	**08 09 50.3**	**-0.1**
ANTJ	**Antonio Joao (**	**11.49**	**95**	*e*P	**Pn**	**08 09 48.5**	**-2.2**
ETMB	**Extrema**	**11.71**	**10**	Pn	**Pn**	**08 09 51.8**	**-1.9**
AQDB	**Aquidauana**	**11.85**	**88**	*e*P	**Pn**	**08 09 54.0**	**-1.5**
MT02	**Curacav**	**12.05**	**191**	Pn	**Pn**	**08 09 57.2**	**-0.8**
RVDE	**Rio Verde (Bra**	**12.81**	**82**	*e*P	**Pn**	**08 10 06.5**	**-1.5**
SALV	**Santo Antonio**	**13.18**	**68**	*e*P	**Pn**	**08 10 11.8**	**-1.1**
PDRB	**Porto dos Gac**	**14.79**	**51**	*e*P	**P**	**08 10 33.9**	**-2.2**
PCMB	**Pacaembu**	**15.90**	**94**	*e*P	**Pn**	**08 10 45.3**	**-1.9**
CLDB	**Colider**	**15.96**	**51**	*e*P	**P**	**08 10 47.6**	**-1.5**
TRQA	**Tornquist**	**17.47**	**163**	P	**Pn**	**08 11 06.3**	**+0.1**
SNDB	**Serra Nova Dou**	**18.82**	**63**	*e*P	**P**	**08 11 20.1**	**-0.5**
NPGB	**Novo Progresso**	**19.02**	**43**	*e*P	**P**	**08 11 21.8**	**-0.9**
PLCA	**Paso Flores**	**19.35**	**185**	P	**P**	**08 11 25.9**	**-0.2**
PLCA				IAmb	IAmb	08 11 51.0	
	comp=Z,16nm,1.4s						
MACA	**Manacapuru-AM**	**19.62**	**23**	P	**P**	**08 11 28.0**	**-1.1**
MACA				IAmb	IAmb	08 11 31.6	
	comp=Z,9.3nm,0.6s						
ITTB	**Itaituba**	**20.91**	**38**	*e*P	**P**	**08 11 42.2**	**-0.9**
MALB	**Monte Alegre**	**23.80**	**37**	*e*P	**P**	**08 12 10.8**	**-1.0**
BOAV	**Boa Vista**	**24.87**	**19**	P	**P**	**08 12 22.5**	**+0.9**
BOAV				IAmb	IAmb	08 12 43.6	
	comp=Z,7.8nm,1.3s						
QSPA	**South Pole Qui**	**68.77**	**180**	P	**P**	**08 18 03.3**	**+2.5**
QSPA				IAmb	IAmb	08 18 13.2	
	comp=Z,5.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**76.83**	**70**	P	**P**	**08 18 49.5**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=247,slow=5.8,SNR=12						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**91.29**	**340**	P	**P**	**08 20 03.1**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=129,slow=4.8,SNR=2.9						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**145.26**	**36**	PKPbc	**PKPab**	**08 26 33.4**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=318,slow=1.9,SNR=4.6						

IDC 15 08:18:44.3±1.1, 56°.81S×141°.20W, h0km, mb4.0/6, mbtmp4.0/6, MS3.7/5, Error ellipse: s-maj=39.5km s-min=26.2km az=180.0
ISC 15 08:18:45.8±1.2, 56°9S±0°.2×141°2W±0°.2, h10km, n27, σ0§53/11, mb4.0/6, MS3.6/5, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**32.53**	**273**	LR	LR	08 35 31.7	
	comp=Z,144nm,20.7s,baz=133,slow=31						
URZ	**Urewera**	**33.07**	**286**	LR	LR	08 35 46.5	
	comp=Z,136nm,19.8s,baz=42,slow=31						
QSPA	**South Pole Qui**	**33.30**	**180**	P	**P**	**08 25 24.1**	**+0.8**
	5.0nm,1.0s,baz=58,slow=6.1,SNR=9.5						
QSPA				LR	LR	08 36 25.8	
	comp=Z,223nm,20.1s,baz=67,slow=32						
	5.0nm,1.0s						
RPN	**Rapa Nui**	**37.35**	**51**	LR	LR	08 37 05.4	
	comp=Z,90nm,20.6s,baz=190,slow=30						
RAR	**Rarotonga**	**38.16**	**331**	LR	LR	08 39 28.1	
	comp=Z,60nm,19.3s,baz=179,slow=33						
PLCA	**Paso Flores**	**47.02**	**102**	P	**P**	**08 27 16.8**	**-0.3**
	5.0nm,1.1s,baz=238,slow=13,SNR=3.2						
	5.0nm,1.1s						
H03S2	**Juan Fernandez**	**47.46**	**88**	T	T	09 18 13.6	
	baz=220,SNR=30						
H03S1	**Juan Fernandez**	**47.46**	**89**	T	T	09 18 14.1	
	baz=220,SNR=34						
H03S3	**Juan Fernandez**	**47.47**	**88**	T	T	09 18 13.4	
	baz=220,SNR=29						
VNA3	**Neumayer Olymp**	**47.71**	**161**	P	**P**	**08 27 21.3**	**-0.7**
H03N3	**Juan Fernandez**	**47.74**	**88**	T	T	09 18 30.2	
	baz=222,slow=72,SNR=51						
H03N2	**Juan Fernandez**	**47.75**	**88**	T	T	09 18 30.6	
	baz=222,slow=72,SNR=64						
H03N1	**Juan Fernandez**	**47.76**	**88**	T	T	09 18 32.1	
	baz=222,slow=72,SNR=58						
VNA2	**Neumayer--Watz**	**48.38**	**161**	P	**P**	**08 27 26.7**	**-0.4**
	baz=210,slow=6.3						
VNA1	**Neumayer--Stat**	**48.46**	**161**	P	**P**	**08 27 27.5**	**-0.2**
SNAA	**Sanae**	**48.48**	**164**	P	**P**	**08 27 27.5**	**-0.5**
MAW	**Mawson**	**54.58**	**191**	P	**P**	**08 28 13.4**	**-0.1**
	2.1nm,1.1s,baz=146,slow=7.6,SNR=3.1						
	2.1nm,1.1s						
LPAZ	**La Paz**	**67.24**	**85**	P	**P**	**08 29 41.6**	**+0.5**
	0.8nm,0.8s,baz=219,slow=6.7,SNR=3.5						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**67.79**	**261**	P	**P**	**08 29 43.5**	**-0.3**
	0.8nm,0.8s,baz=145,slow=6.3,SNR=6.1						
	0.8nm,0.8s						
H01W1	**Cape Leeuwin H**	**68.82**	**239**	T	T	09 45 45.6	
	baz=145,slow=75,SNR=20						
H01W2	**Cape Leeuwin H**	**68.82**	**238**	T	T	09 45 48.2	
	baz=145,slow=75,SNR=18						
H01W3	**Cape Leeuwin H**	**68.83**	**239**	T	T	09 45 46.9	
	baz=145,slow=75,SNR=13						
WRA	**Warramunga Arr**	**70.56**	**263**	P	**P**	**08 30 01.2**	**+0.3**
	0.7nm,0.8s,baz=151,slow=5.4,SNR=4.7						
	0.7nm,0.8s						
H10N3	**ASCENSION HYDR**	**102.22**	**126**	T	T	10 27 19.5	
	baz=206,slow=75,SNR=3.4						
H10N1	**ASCENSION HYDR**	**102.23**	**126**	T	T	10 27 14.7	
	baz=206,slow=75,SNR=5.7						
H10N2	**ASCENSION HYDR**	**102.24**	**126**	T	T	10 27 28.6	
	baz=206,slow=75,SNR=5.7						
MKAR	**Makanchi Array**	**151.78**	**268**	PKPbc	**PKiKP**	**08 38 39.8**	**-0.3**
	0.7nm,0.9s,baz=128,slow=2.4,SNR=4.8						

BJI 15 08:23:04.6±0.0, 50°.64N×142°.83E, h10km, mb4.5/42, mB4.9/31, Ms5.1/42, Ms7 4.8/43
MOS 15 08:23:06.2±1.2, 50°.42N×142°.45E, h5km, mb4.8/40, MS4.0/11, Error ellipse: s-maj=7.6km s-min=4.4km az=92.5
MOS Felt (III-IV) at Aleksandrovsk-Sakhalinskiy, Onor, (III) at Tymovskoye, Poronaysk.
SKHL 15 08:23:06.4±0.7, 50°.40N×142°.40E, h11km±3km, mb5.1/10, ms4.9/1, msh5.4/1
IDC 15 08:23:07.4±0.5, 50°.48N×142°.47E, h0km, mb4.3/28, mbtmp4.3/34, ML3.4/6, MS4.0/65, Error ellipse: s-maj=13.3km s-min=10.9km az=129.0
NEIC 15 08:23:08.1±1.5, 50°.35N±0°.07×142°.4E±0°.1, h15km±4km, mb4.7/249, Error ellipse: s-maj=10.6km s-min=9.3km az=131.0
GCMT 15 08:23:11.1±0.2, 50°.55N±0°.02×142°.28E±0°.02, h15km, MW4.9/110, Moment Tensor Solution. s40,c49; s110,c157; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.73±.12; Mθθ=0.58±.07; Mφφ=2.15±.08; Mrθ=0.41±.20; Mθφ=0.63±.05; Mφr=1.33±.17; Best double couple: M=2.88500×10^16 NP1:φs=175.00000°, δ=58.00000°, λ=104.00000°. NP2:φs=330.00000°, δ=34.00000°, λ=69.00000°. Principal axes: T 3.1520, Plg73.0000°, Azm120.0000°; N -0.5290, Plg12.0000°, Azm348.0000°; P -2.6190, Plg12.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 15 08:23:09.3±0.7, 50°41N±0°.03×142°56E±0°.04, h17km±4km, n733, σ1§45/679, mb4.7/195, MS4.0/72, 26C-25D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.46**	**8**	*e*PN	**Pg**	**08 23 17.7**	**-0.8**
TYV				*e*S	**Sg**	**08 23 24.3**	**-0.4**
TYV				pmax	pmax		
	comp=Z,1μm,0.3s						
TYV				pmax	pmax		
	comp=Z,4μm,1.3s						
TYV				smax	smax		
	comp=N,21μm,0.4s						
TYV				smax	smax		
	comp=E,33μm,0.4s						
TYV	**Tymovskoe**	**0.46**	**8**	*e*Pg	**Pg**	**08 23 17.5**	**-1.0**
TYV				AMB	AMB	08 23 19.3	
	comp=E,1μm,0.4s						
TYV				*e*Sg	**Sg**	**08 23 24.8**	**+0.1**
TYV				A	A	08 23 25.6	
	comp=E,21μm,0.4s						
TYV				A	A	08 23 25.6	
	comp=E,33μm,0.4s						
UGL	**Uglegorsk**	**1.37**	**194**	⇓*i*PN	**Pn**	**08 23 32.3**	**-1.3**
UGL				*e*S	**Sn**	**08 23 50.5**	**-0.9**
UGL				pmax	pmax		
	comp=Z,3μm,0.4s						
UGL				smax	smax		
	comp=N,4μm,0.4s						
UGL				smax	smax		
	comp=E,14μm,0.5s						
UGL	**Uglegorsk**	**1.37**	**194**	*e*Pg	**Pn**	**08 23 32.3**	**-1.3**
UGL				AMB	AMB	08 23 34.5	
	comp=E,3μm,0.5s						
UGL				*e*Sg	**Sn**	**08 23 50.9**	**-0.5**
UGL				A	A	08 23 54.4	
	comp=E,8μm,0.5s						
UGL				A	A	08 23 54.4	
	comp=E,14μm,0.5s						
UGL				AMS	AMS	08 25 00.0	
	comp=E,30μm,5.0s						
UGL				AMS	AMS	08 25 00.0	
	comp=E,14μm,5.0s						
UGL				AMS	AMS	08 25 00.0	
	comp=E,16μm,5.0s						
NKL	**Nikolayevsk**	**2.98**	**338**	*e*PN	**Pn**	**08 23 54.8**	**-0.9**
NKL				*e*S	**Sn**	**08 24 29.7**	**-1.4**
NKL				pmax	pmax		
	comp=E,93nm,0.2s						
NKL				pmax	pmax		
	comp=N,150nm,0.3s						
NKL				pmax	pmax		
	comp=Z,380nm,0.3s						
NKL				smax	smax		
	comp=E,288nm,0.5s						
NKL				smax	smax		
	comp=N,321nm,0.7s						
NKL	**Nikolayevsk**	**2.98**	**338**	*e*P	**Pn**	**08 23 54.8**	**-0.9**
NKL				AMB	AMB	08 23 54.9	
	comp=N,380nm,0.3s						
NKL				*e*S	**Sn**	**08 24 29.7**	**-1.4**
NKL				A	A	08 24 30.6	
	comp=N,321nm,0.7s						
NKL				A	A	08 24 30.6	
	comp=N,288nm,0.7s						
OKH	**Okha**	**3.15**	**4**	⇑*i*PN	**Pn**	**08 23 59.7**	**+1.6**
OKH				*e*S	**Sn**	**08 24 37.1**	**+1.8**
OKH				pmax	pmax		
	comp=Z,739nm,0.8s						
OKH				smax	smax		
	comp=N,3μm,1.1s						
OKH	**Okha**	**3.15**	**4**	*e*P	**Pn**	**08 23 59.6**	**+1.5**
OKH				AMB	AMB	08 24 02.2	
	comp=N,700nm,0.8s						
OKH				*e*S	**Sn**	**08 24 37.1**	**+1.8**
OKH				A	A	08 24 44.2	
	comp=N,2μm,1.0s						
OKH				A	A	08 24 44.2	
	comp=N,1μm,1.0s						
YSS	**Yuzh-Sakhalins**	**3.46**	**178**	Pn	**Pn**	**08 23 59.9**	**-2.5**
YSS	**Yuzh-Sakhalins**	**3.46**	**178**	*e*Pn	**Pn**	**08 24 02.4**	**0.0**
YSS				*e*		08 24 44.2	
YSS				pmax	pmax		
	comp=Z,230nm,0.4s						
YSS				pmax	pmax		
	comp=Z,2μm,3.5s						
YSS				pmax	pmax		
	comp=Z,720nm,0.6s						
YSS				smax	smax		
	comp=N,410nm,0.5s						
YSS				smax	smax		
	comp=E,310nm,0.7s						
YSS				smax	smax		
	comp=E,560μm,0.6s						
YSS				smax	smax		
	comp=E,6μm,4.3s						
YSS				MLR	MLR		
	comp=Z,7μm,19.0s						
YSS	**Yuzh-Sakhalins**	**3.46**	**178**	*e*P	**Pn**	**08 24 01.5**	**-0.9**
YSS				AMB	AMB	08 24 06.3	
	comp=Z,200nm,0.5s						
YSS				*e*Sg	**Sg**	**08 25 01.3**	**+0.9**
YSS				A	A	08 25 04.5	
	comp=Z,540nm,0.5s						
YSS				A	A	08 25 04.5	
	comp=Z,600nm,0.5s						
YSS				A	A	08 25 09.2	
	comp=Z,5μm,4.0s						
YSS				A	A	08 25 09.2	
	comp=Z,6μm,4.0s						
GRNR	**Gornyy**	**3.92**	**278**	*e*PN	**Pn**	**08 24 07.1**	**-1.7**
GRNR				pmax	pmax		
	comp=N,40nm,0.3s						
GRNR				pmax	pmax		
	comp=E,30nm,0.3s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.3s						
GRNR				MLR	MLR		
	comp=E,2μm,11.0s						
GRNR				MLR	MLR		
	comp=N,5μm,14.0s						
GRNR				MLR	MLR		
	comp=Z,4μm,12.0s						
GRNR	**Gornyy**	**3.92**	**278**	*e*P	**Pn**	**08 24 07.1**	**-1.7**
GRNR				*e*Pg	**Pb**	**08 24 20.2**	**+2.2**
GRNR				AMB	AMB	08 24 21.0	
	comp=Z,40nm,0.3s						
GRNR				AMB	AMB	08 24 21.0	
	comp=Z,30nm,0.3s						
GRNR				AMB	AMB	08 24 21.0	
	comp=Z,40nm,0.3s						
GRNR				*e*S	**Sn**	**08 24 50.4**	**-4.0**
KUR	**Kuril'sk**	**6.29**	**143**	⇓*e*PN	**Pn**	**08 24 46.0**	**+4.7**
TEY	**Ternei**	**6.71**	**219**	⇑*e*PN	**Pn**	**08 24 46.6**	**-0.4**
TEY				pmax	pmax		
	comp=N,10.0nm,0.5s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.5s						
TEY				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TEY				MLR	MLR		
	comp=E,300nm,7.0s						
TEY				MLR	MLR		
	comp=N,500nm,5.0s						
TEY				MLR	MLR		
	comp=Z,400nm,5.0s						
TEY	**Ternei**	**6.71**	**219**	*e*P	**Pn**	**08 24 46.6**	**-0.4**
TEY				AMB	AMB	08 24 47.1	
	comp=Z,10.0nm,0.5s						
TEY				AMB	AMB	08 24 47.1	
	comp=Z,10.0nm,0.5s						
TEY				AMB	AMB	08 24 47.1	
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	**7.09**	**265**	Pn	**Pn**	**08 24 52.0**	**-0.2**
	comp=Z,3.5nm,0.3s,baz=73,slow=18,SNR=54						
KLR				Lg	Lg	08 26 49.3	
	comp=Z,8.9nm,0.3s,baz=350,slow=23,SNR=14						
	comp=Z,6.5nm,0.3s						
KLR	**Kul'dur**	**7.09**	**265**	*d*PN	**Pn**	**08 24 51.7**	**-0.5**
KLR				pmax	pmax		
	comp=Z,14nm,1.7s						
SHO	**Shikotan**	**7.16**	**154**	*e*PN	**Pn**	**08 24 53.1**	**-0.1**
SHO	**Shikotan**	**7.16**	**154**	*e*P	**Pn**	**08 24 53.1**	**-0.1**
ERM	**Erimo**	**8.41**	**177**	Pn	**Pn**	**08 25 11.2**	**+1.0**
ERM	**Erimo**	**8.41**	**177**	PN	**Pn**	**08 25 11.3**	**+1.0**
SKR	**Severo-Kuril's**	**8.64**	**83**	*d*PN	**Pn**	08 25 18.6	+5.1
SKR				pmax	pmax		
	comp=Z,200nm,8.6s						
SKR				MLR	MLR		
	comp=Z,1μm,13.0s						
USA0B	**Ussuriysk Arra**	**9.49**	**233**	Pn	**Pn**	**08 25 21.2**	**-3.9**
USA0B	**Ussuriysk Arra**	**9.49**	**233**	PN	**Pn**	**08 25 21.2**	**-3.9**
USRK	**Ussuriysk Ar.**	**9.49**	**233**	Pn	**Pn**	**08 25 25.2**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=41,slow=15,SNR=13						
USRK				Lg	Lg	08 28 05.4	
	comp=Z,2.2nm,0.3s,baz=57,slow=30,SNR=7.9						
USRK				LR	LR	08 28 38.4	
	comp=Z,2μm,18.1s,baz=245,slow=35						
	comp=Z,5.6nm,0.4s						
USRK	**Ussuriysk Ar.**	**9.49**	**233**	Pn	**Pn**	**08 25 22.5**	**-2.6**
PEA0B	**Petropavlovsk-**	**9.77**	**68**	Pn	**Pn**	**08 25 30.0**	**+1.1**
PEA0B	**Petropavlovsk-**	**9.77**	**68**	⇓*e*PN	**Pn**	**08 25 32.2**	**+3.3**
PETK	**Petropavlovsk-**	**9.77**	**68**	Pn	**Pn**	**08 25 29.5**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=275,slow=8.4,SNR=14						
PETK				LR	LR	08 29 36.3	
	comp=Z,1μm,19.2s,baz=274,slow=40						
ZEA	**Zeya**	**9.99**	**295**	*e*PN	**Pn**	**08 25 33.6**	**+1.6**
ZEA				*e*		08 27 33.7	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZEA				MLR	MLR		
	comp=E,1μm,8.0s						
ZEA				MLR	MLR		
	comp=N,1μm,5.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,7.0s						
MA2	**Magadan**	**10.31**	**24**	Pn	**Pn**	**08 25 38.0**	**+1.7**
	comp=Z,4.4nm,0.5s,baz=206,slow=14,SNR=2.2						
MA2				LR	LR	08 29 45.3	
	comp=Z,582nm,21.4s,baz=215,slow=39						
MA2	**Magadan**	**10.31**	**24**	PN	**Pn**	**08 25 38.0**	**+1.7**
PET	**Petropavlovsk**	**10.32**	**69**	*e*PN	Pn	08 25 42.5	+6.0
PET				*e*S	Sn	08 27 42.9	+11
PET				MLR	MLR		
	comp=Z,3μm,14.0s						
PET				MLR	MLR		
	comp=Z,2μm,14.0s						
MDJ	**Mudanjiang**	**10.51**	**241**	Pn	**Pn**	**08 25 35.5**	**-3.5**
BNX	**BinXian**	**11.16**	**251**	⇑P	**Pn**	**08 25 49.6**	**+1.7**
BNX				S	**Sn**	**08 27 55.5**	**+3.3**
JSD	**Sado**	**12.75**	**196**	Pn	**Pn**	**08 26 06.7**	**-3.0**
CN2	**Changchun**	**13.38**	**247**	*e*P	**Pn**	**08 26 20.0**	**+1.7**
CN2				S	**Sn**	**08 28 47.4**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=Z,2μm,10.0s						
CN2				LR	LR		
	comp=Z,2μm,10.0s						
CN2				LR	LR		
	comp=Z,3μm,10.0s						
YAK	**Yakutsk**	**13.63**	**334**	LR	LR	08 31 59.8	
	comp=Z,328nm,20.9s,baz=255,slow=39						
YAK	**Yakutsk**	**13.63**	**334**	*e*P	**Pn**	**08 26 22.1**	**+0.5**
YAK				*e*S	**Sn**	**08 28 52.2**	**-0.

INU Inuyama 15.59 197 Pn **Pn** **08 26 44.7 -3.4**
KS19 Wonju Array Si 16.64 225 Pn **Pn** **08 26 57.6 -4.1**
KSRS Korea Array 16.66 225 Pn **P** **08 27 04.5 +0.4**
comp=Z,0.4nm,0.3s,baz=36,slow=11,SNR=14
KSRS PcP **PcP** **08 31 51.8 +0.9**
comp=Z,1.1nm,0.8s,baz=14,slow=2.4,SNR=4.7
KSRS LR LR 08 33 12.2
comp=Z,1μm,19.2s,baz=35,slow=36
comp=Z,3.4nm,0.7s
KSAR Wonju Array Be 16.68 225 Pn **Pn** **08 26 59.2 -3.0**
KSAR Wonju Array Be 16.68 225 P **Pn** **08 26 59.2 -3.0**
JHJ Hachijo jima 2 17.40 188 LR LR 08 34 45.8
comp=Z,438nm,18.9s,baz=15,slow=40
BOD Bodaibo 18.20 305 *e*P **P** **08 27 22.8 +1.8**
BOD pmax pmax
comp=Z,15nm,1.8s
DL2 Dalian 18.74 240 P **Pn** **08 27 28.8 +1.2**
DL2 S **S** **08 31 01.6 +1.8**
DL2 pmax pmax
comp=Z,24nm,1.3s
DL2 pmax pmax
comp=Z,320nm,6.7s
DL2 LR LR
comp=Z,4μm,5.5s
DL2 LR LR
comp=Z,4μm,5.9s
DL2 LR LR
comp=Z,2μm,12.1s
XLT XiLinHaoTe 19.09 260 *e*P **Pn** **08 27 35.5 +3.7**
XLT pP sP 08 27 39.0 +1.0
XLT sP pP 08 27 41.5 +5.7
XLT S **S** **08 31 11.8 +4.9**
XLT sS sS 08 31 15.3 +0.8
XLT SS **SnSn** **08 31 27.8 +8.9**
XLT pmax pmax
comp=Z,15nm,0.8s
XLT pmax pmax
comp=Z,720nm,6.5s
XLT LR LR
comp=Z,3μm,10.0s
XLT LR LR
comp=Z,3μm,10.5s
SHEM Shemya Is, Ala 19.66 71 LR LR 08 34 50.6
comp=Z,527nm,21.6s,baz=287,slow=36
BILL Bilibino 21.18 25 *i*P **P** **08 27 55.5 +2.0**
BILL *i* 08 28 01.8
BILL *i* 08 28 15.2
BILL *i* 08 32 00.9
BILL pmax pmax
comp=Z,16nm,0.9s
BILL MLR MLR
comp=Z,413nm,17.0s
BILL Bilibino 21.18 25 *e*P **P** **08 27 55.5 +2.0**
TIXI Tiksi 22.20 349 P **P** **08 28 02.0 -2.3**
comp=Z,5.9nm,0.7s,baz=92,slow=22,SNR=2.3
TIXI LR LR 08 36 52.3
comp=Z,242nm,19.8s,baz=181,slow=37
comp=Z,5.9nm,0.7s
TIXI Tiksi 22.20 349 P **P** **08 28 02.1 -2.3**
TIXI Tiksi 22.20 349⇑ *e*P **P** **08 28 05.5 +1.1**
TIXI pmax pmax
comp=Z,65nm,1.7s
TIXI Tiksi 22.20 349 *e*P **P** **08 28 05.5 +1.1**
ULN Ulaanbaatar 23.23 278 P **P** **08 28 12.1 -3.5**
ULN Ulaanbaatar 23.23 278⇑ *e*P **P** **08 28 16.0 +0.4**
ULN pmax pmax
comp=Z,28nm,1.7s
HHC Hu-ho-hao-te 23.54 258 *e*P **P** **08 28 17.8 -0.8**
HHC S **S** **08 32 21.8 -10**
HHC pmax pmax
comp=Z,22nm,1.1s
HHC pmax pmax
comp=Z,440nm,6.4s
HHC LR LR
comp=Z,4μm,8.6s
HHC LR LR
comp=Z,3μm,8.3s
HHC LR LR
comp=Z,3μm,9.2s
SONM Songino Array 23.66 278 P **P** **08 28 19.9 +0.1**
comp=Z,6.2nm,1.2s,baz=64,slow=8.7,SNR=11
SONM LR LR 08 38 31.9
comp=Z,1μm,18.7s,baz=74,slow=39
comp=Z,6.2nm,1.2s
SONM Songino Array 23.66 278 P **P** **08 28 18.0 -1.8**
SONM Songino Array 23.66 278 P **P** **08 28 18.0 -1.8**
SONM pmax pmax
comp=Z,9.0nm,1.3s
HNS HongShan 23.75 247 ⇑P **P** **08 28 24.1 +3.6**
HNS S **S** **08 32 37.6 +2.6**
HNS pmax pmax
comp=Z,7.0nm,0.8s
HNS LR LR
comp=Z,1μm,15.5s
HNS LR LR
comp=Z,450nm,13.7s
HNS LR LR
comp=Z,1μm,12.2s
IRK Irkutsk 23.81 289 *e*P **P** **08 28 24.5 +3.4**
IRK pmax pmax
comp=Z,32nm,2.1s
BTO Baotou 24.64 259 *e*P **P** **08 28 30.6 +1.7**
ZAK Zakamensk 24.84 285 *e*P **P** **08 28 30.8 +0.1**
ZAK pmax pmax
comp=Z,30nm,1.6s
SSE Sheshan 25.03 228 P **P** **08 28 33.1 +0.8**
SSE S **S** **08 33 00.5 +4.8**
SSE pmax pmax
comp=Z,18nm,0.6s
SSE pmax pmax
comp=Z,100nm,4.9s
KIWB Kanaga Island 25.11 71 P **P** **08 28 33.2 +0.4**
NJ2 Nanjing 25.40 233 *e*P **P** **08 28 36.9 +1.2**
NJ2 S **S** **08 33 03.3 +1.8**
NJ2 sS **sS** **08 33 10.3 +0.2**
NJ2 pmax pmax
comp=Z,350nm,3.8s
NJ2 LR LR
comp=Z,1μm,15.6s
NJ2 LR LR
comp=Z,2μm,11.4s
NJ2 LR LR
comp=Z,1μm,14.7s
MOY Mondy 25.92 289 *e*P **P** **08 28 41.3 +0.9**
MOY pmax pmax
comp=Z,20nm,1.4s
LYN LuoYang 27.02 246 ⇓P **P** **08 28 54.3 +3.9**
LYN S **S** **08 33 33.6 +6.4**
LYN LR LR
comp=Z,990nm,15.2s
LYN LR LR
comp=Z,700nm,19.6s
LYN LR LR
comp=Z,560nm,20.6s
TNA Tin City 29.35 40 P **P** **08 29 10.4 -0.4**
baz=264
LZH Lanzhou 31.23 258 *e*P **P** **08 29 26.8 -1.2**
LZH sP pP 08 29 33.6 +0.4
LZH pmax pmax
comp=Z,23nm,1.4s
LZH LR LR
comp=Z,1μm,14.1s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,2μm,15.1s
AKUT Akutan 31.25 63 P **P** **08 29 26.3 -1.4**
YULB Yu-li 31.65 219 P **P** **08 29 28.0 -3.5**
YULB lAmb lAmb 08 30 11.0
comp=Z,12nm,1.1s
GTA Gaotai 31.79 266 *e*P **P** **08 29 37.3 +4.5**
GTA pP sP 08 29 40.4 +0.2
GTA sP pP 08 29 43.1 +5.1
GTA S S 08 34 52.8 +11
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,120nm,5.9s
GTA LR LR
comp=Z,640nm,8.7s
GTA LR LR
comp=Z,1μm,9.8s
GTA LR LR
comp=Z,880nm,12.7s
NRIK Noril'sk 31.93 327 P **P** **08 29 33.6 +0.1**
comp=Z,1.7nm,0.5s,baz=103,slow=4.7,SNR=5.4
comp=Z,1.7nm,0.5s
NRIK Noril'sk 31.93 327 P **P** **08 29 31.4 -2.1**
NRIK Noril'sk 31.93 327⇑ *e*P **P** **08 29 34.1 +0.6**
KNMB Chin-men Tao 31.96 225 P **P** **08 29 31.8 -2.5**
S12K Black Hills 32.93 59 P **P** **08 29 41.3 -1.2**
baz=285
N16K Nishlik Lake 33.66 50 P **P** **08 29 48.1 -0.7**
baz=280
GCSA Galena City Sc 33.99 42 P **P** **08 29 50.2 -1.4**
baz=275
O16K Kokwok River B 34.15 51 P **P** **08 29 52.5 -0.6**
baz=282
P16K Nushagak River 34.31 52 P **P** **08 29 53.7 -0.8**
baz=282
CHNA Chernabura Isl 34.53 60 P **P** **08 29 55.6 -0.8**
baz=287
TTA Tatalina 34.58 45 P **P** **08 29 57.9 +1.1**
TTA lAmb lAmb 08 30 22.1
comp=Z,16nm,1.4s
TTA Tatalina 34.58 45 P **P** **08 29 57.9 +1.1**
TTA pmax pmax
comp=Z,16nm,1.4s
O17K Koliganek Bris 34.61 51 P **P** **08 29 56.0 -1.0**
baz=282
ZALV Zalesovo Beam 34.74 299 PcP **PcP** **08 32 32.0 +0.5**
comp=Z,2.4nm,0.6s,baz=79,slow=3.1,SNR=6.6
ZALV LR LR 08 45 13.9
comp=Z,504nm,18.9s,baz=66,slow=38
CHGN Chignik 34.76 57 P **P** **08 29 57.7 -0.6**
CHGN Chignik 34.76 57 P **P** **08 29 57.6 -0.6**
baz=286
R16K Pilot Point 34.87 55 P **P** **08 29 58.4 -0.9**
baz=285
N18K Kilae Creek 35.02 49 P **P** **08 29 59.5 -1.0**
baz=282
P17K Kvichak River 35.06 52 P **P** **08 29 59.8 -1.0**
baz=283
Q16K King Salmon 35.07 53 P **P** **08 30 00.1 -0.9**
baz=284
SVW2 Sparrevohn 35.08 48 P **P** **08 30 00.7 -0.4**
SVW2 lAmb lAmb 08 30 05.4
comp=Z,9.3nm,1.1s
IMAR Indian Mountai 35.19 40 P **P** **08 30 01.0 -0.9**
F21K Alatna River 35.19 37 P **P** **08 30 00.9 -1.1**
baz=274,SNR=10
L19K White Mountain 35.23 46 P **P** **08 30 00.7 -1.7**
baz=280
J20K Nowinta River 35.23 43 P **P** **08 30 01.9 -0.4**
J20K lAmb lAmb 08 30 06.2
comp=Z,12nm,1.0s
J20K Nowinta River 35.23 43 P **P** **08 30 01.9 -0.4**
baz=278,SNR=6.9
G21K Allakaket 35.24 39 P **P** **08 30 01.9 -0.5**
baz=275,SNR=7.0
K20K Telida 35.39 44 P **P** **08 30 02.3 -1.4**
K20K lAmb lAmb 08 30 15.1
comp=Z,11nm,1.2s
K20K Telida 35.39 44 P **P** **08 30 01.8 -1.9**
baz=279
R17K Ugashik Creek 35.47 54 P **P** **08 30 03.4 -1.0**
baz=286
M19K Big River Lodg 35.49 47 P **P** **08 30 03.0 -1.7**
baz=281
O18K Koktuh Hills 35.52 50 P **P** **08 30 03.9 -1.0**
baz=283
H21K Melozitna Rive 35.61 40 P **P** **08 30 06.0 +0.3**
H21K lAmb lAmb 08 30 09.1
comp=Z,19nm,1.5s
H21K Melozitna Rive 35.61 40 P **P** **08 30 03.5 -2.1**
baz=277
L20K Farewell, AK 35.62 46 P **P** **08 30 04.0 -1.7**
baz=281
N19K Bonanza Creek 35.66 48 P **P** **08 30 04.8 -1.4**
baz=282
F22K John River 35.67 37 P **P** **08 30 04.9 -1.3**
baz=275
E22K Anaktuvuk Pass 35.76 36 P **P** **08 30 05.1 -1.8**
baz=274
O19K Port Alsworth 35.88 49 P **P** **08 30 05.8 -2.1**
baz=283
I21K Tanana 36.01 41 P **P** **08 30 09.5 +0.5**
I21K lAmb lAmb 08 30 15.4
comp=Z,17nm,1.4s
I21K Tanana 36.01 41 P **P** **08 30 08.5 -0.5**
baz=278
CHUM Lake Minchumin 36.07 43 P **P** **08 30 09.6 0.0**
baz=280
M20K Styx River 36.08 46 P **P** **08 30 09.7 -0.1**
baz=282
C23K Itkillik River 36.09 33 P **P** **08 30 09.7 +0.1**
baz=273,SNR=7.0
D23K Nanushuk River 36.12 34 P **P** **08 30 09.3 -0.6**
baz=274
H22K Ishtalitna Cre 36.16 40 P **P** **08 30 10.6 +0.2**
baz=278,SNR=6.8
CAST Castle Rocks 36.26 44 P **P** **08 30 12.9 +1.7**
CAST Castle Rocks 36.26 44 P **P** **08 30 11.0 -0.2**
baz=281
PPLA Purkeypile 36.31 45 P **P** **08 30 11.6 -0.2**
PPLA lAmb lAmb 08 30 19.0
comp=Z,27nm,1.5s
PPLA Purkeypile 36.31 45 P **P** **08 30 11.4 -0.4**
baz=281
GYA Guiyang 36.37 242 ⇓P **P** **08 30 12.0 -0.6**
GYA pmax pmax
comp=Z,360nm,4.6s
GYA LR LR
comp=Z,1μm,17.3s
Q19K Cape Douglas, 36.52 51 P **P** **08 30 13.2 -0.3**
Q19K Cape Douglas, 36.52 51 P **P** **08 30 13.6 +0.1**
baz=286
P19K Oil Pt 36.54 50 P **P** **08 30 13.3 -0.4**
baz=285
TOLK Toolik Lake Re 36.54 35 P **P** **08 30 13.5 -0.1**
TOLK lAmb lAmb 08 30 54.2
comp=Z,15nm,1.4s
TOLK Toolik Lake Re 36.54 35 P **P** **08 30 13.1 -0.5**
baz=276
MLY Manley 36.56 41 P **P** **08 30 14.5 +0.7**
MLY lAmb lAmb 08 30 16.9
comp=Z,16nm,1.5s
MLY Manley 36.56 41 P **P** **08 30 13.4 -0.4**
baz=280,SNR=6.3
G23K Bananza Creek 36.60 38 P **P** **08 30 13.7 -0.4**
baz=278,SNR=5.4
BPAW Bear Paw Mtn. 36.61 42 P **P** **08 30 13.7 -0.5**
baz=281
KTH Kantishna Hill 36.74 43 P **P** **08 30 14.9 -0.5**
KTH lAmb lAmb 08 30 19.4
comp=Z,20nm,1.3s
C24K Franklin Bluff 36.76 33 P **P** **08 30 15.2 -0.1**
baz=275
D24K Happy Valley 36.77 34 P **P** **08 30 15.8 +0.4**
baz=276
GUMO Guam 36.77 176 LR LR 08 44 37.1
comp=Z,112nm,20.5s,baz=277,slow=35
SKT Skwentna 36.80 46 P **P** **08 30 16.2 +0.4**
baz=283
H23K Yukon River 36.92 39 P **P** **08 30 15.6 -1.2**
H23K lAmb lAmb 08 30 20.8
comp=Z,16nm,1.2s
H23K Yukon River 36.92 39 P **P** **08 30 17.8 +1.0**
baz=280,SNR=11
E24K Your Creek 37.01 36 P **P** **08 30 17.7 +0.1**
baz=278,SNR=10.0
I23K Minto, Yukon-K 37.11 41 P **P** **08 30 18.1 -0.3**
I23K Minto, Yukon-K 37.11 41 P **P** **08 30 18.0 -0.4**
baz=281
WMQ Urumqi 37.17 282 *e*P **P** **08 30 19.5 +0.2**
WMQ LR LR
comp=Z,2μm,18.3s
WMQ LR LR
comp=Z,520nm,13.5s
WMQ LR LR
comp=Z,520nm,21.7s
OHAK Old Harbor 37.19 54 P **P** **08 30 16.6 -2.5**
OHAK lAmb lAmb 08 30 31.6
comp=Z,27nm,1.3s
OHAK Old Harbor 37.19 54 P **P** **08 30 18.4 -0.7**
baz=288
Q20K Shuyak Island 37.24 52 P **P** **08 30 19.1 -0.5**
baz=287
CUT Chulitna 37.28 45 P **P** **08 30 19.8 0.0**
baz=283
F24K Squaw Lake 37.31 36 P **P** **08 30 20.1 0.0**
baz=279
NEA2 Nenana 37.34 41 P **P** **08 30 20.4 +0.1**
NEA2 Nenana 37.34 41 P **P** **08 30 20.8 +0.5**
baz=282
KDAK Kodiak Island 37.39 53 P **P** **08 30 21.4 +0.6**
baz=288
M22K Willow 37.50 46 P **P** **08 30 21.7 0.0**
baz=284
MCK McKinley 37.58 43 P **P** **08 30 22.0 -0.4**
MCK lAmb lAmb 08 30 34.1
comp=Z,14nm,1.1s
MCK McKinley 37.58 43 P **P** **08 30 22.0 -0.4**
MCK pmax pmax
comp=Z,14nm,1.1s
MCK McKinley 37.58 43 P **P** **08 30 22.4 0.0**
baz=283
H24K Noodor Dome 37.59 39 P **P** **08 30 21.6 -0.9**
H24K Noodor Dome 37.59 39 P **P** **08 30 22.3 -0.2**
baz=281
G24K Hadweenzic Riv 37.60 38 P **P** **08 30 22.2 -0.3**
baz=280,SNR=6.2
D25K Kavik River 37.61 33 P **P** **08 30 22.8 +0.1**
baz=278,SNR=12
MDM Murphy Dome 37.62 41 P **P** **08 30 24.3 +1.6**
BRSE Bradley Lake S 37.73 49 P **P** **08 30 23.7 -0.1**
baz=286
WRH Wood River Hil 37.78 41 P **P** **08 30 25.1 +1.1**
WRH lAmb lAmb 08 30 32.6
comp=Z,18nm,1.2s
TCOL CIGO, UAF Yank 37.79 41 P **P** **08 30 23.7 -0.4**
TCOL CIGO, UAF Yank 37.79 41 P **P** **08 30 23.9 -0.2**
baz=282
COLA College 37.79 41 P **P** **08 30 23.7 -0.4**
COLA lAmb lAmb 08 30 37.3
comp=Z,5.6nm,0.5s
COLA College 37.79 41⇓ *e*P **P** **08 30 25.8 +1.7**
COLA pmax pmax
comp=Z,15nm,1.5s
COLA College 37.79 41 P **P** **08 30 24.0 -0.1**
baz=282
RC01 Rabbit Creek A 37.85 47 P **P** **08 30 24.3 -0.4**
baz=286
CCB Clear Creek Bu 37.86 41 P **P** **08 30 25.7 +0.9**
POKR Poker Plat Res 37.92 40 P **P** **08 30 24.7 -0.5**
baz=282
WAT1 Susitna Watana 37.95 44 P **P** **08 30 25.3 -0.2**
baz=284
PMR Palmer 38.00 46 P **P** **08 30 25.8 -0.1**
baz=285
O22K Cooper Landing 38.02 48 P **P** **08 30 26.4 +0.3**
baz=286
C26K Camden Bay 38.04 32 P **P** **08 30 26.0 -0.1**
baz=278
E25K Arctic Village 38.08 35 P **P** **08 30 27.2 +0.5**
baz=280,SNR=8.9
F25K Christian Rive 38.15 36 P **P** **08 30 26.9 -0.3**
baz=280
IL31 38.22 41 P **P** **08 30 27.3 -0.4**
ILAR Eielson Array 38.22 41 P **P** **08 30 28.9 +1.1**
comp=Z,2.8nm,0.7s,baz=280,slow=8.0,SNR=31
ILAR LR LR 08 46 23.8
comp=Z,146nm,19.3s,baz=264,slow=36
comp=Z,2.8nm,0.7s
ILAR Eielson Array 38.22 41 P **P** **08 30 27.3 -0.5**
SEW Seward 38.26 49 P **P** **08 30 27.8 -0.3**
baz=287
HDA Harding Lake 38.27 41 P **P** **08 30 27.1 -1.1**
HDA lAmb lAmb 08 30 30.4
comp=Z,20nm,1.5s
HDA Harding Lake 38.27 41 P **P** **08 30 28.6 +0.3**
baz=283
SML Sawmill 38.31 46 P **P** **08 30 28.1 -0.6**
baz=286
H25K Birch Creek 38.33 38 P **P** **08 30 27.5 -1.2**
baz=282
KNK Knik Glacier 38.36 46 P **P** **08 30 27.4 -1.6**
baz=286
WAT6 Susitna Watana 38.38 44 P **P** **08 30 27.5 -1.8**
baz=285
DHY Denali Highway 38.41 44 P **P** **08 30 28.6 -1.0**
baz=285
C27K Jago River 38.50 33 P **P** **08 30 29.8 -0.3**
baz=280,SNR=11
FYU Fort Yukon 38.50 38 P **P** **08 30 31.7 +1.6**
PWL Port Wells 38.57 47 P **P** **08 30 29.7 -1.1**
baz=287
BMAR Burnt Mountain 38.58 36 P **P** **08 30 30.3 -0.5**
PRP Porcupine Dome 38.61 39 P **P** **08 30 30.4 -0.9**
PRP lAmb lAmb 08 30 35.1
comp=Z,35nm,1.4s
PRP Porcupine Dome 38.61 39 P **P** **08 30 30.6 -0.7**
baz=283,SNR=16
F26K Sheenjek River 38.69 36 P **P** **08 30 30.7 -1.1**
baz=282,SNR=5.3
SCM Sheep Creek Mo 38.76 45 P **P** **08 30 31.6 -0.9**
baz=286
J25K Salcha River, 38.89 41 P **P** **08 30 33.9 +0.4**
baz=284
K24K Donnelly Dome 38.92 42 P **P** **08 30 33.4 -0.3**
baz=285
G26K Porcupine Rive 38.98 37 P **P** **08 30 33.8 -0.3**
baz=283,SNR=11
MK31 Makanchi Array 39.06 289 P **P** **08 30 33.4 -1.8**
MK31 Makanchi Array 39.06 289 *c i*P **P** **08 30 34.9 -0.2**
MKAR Makanchi Array 39.06 289 P **P** **08 30 35.5 +0.4**
comp=Z,5.2nm,0.7s,baz=66,slow=9.4,SNR=22
MKAR PcP **PcP** **08 32 45.0 +0.2**
comp=Z,0.7nm,0.8s,baz=48,slow=9.9,SNR=2.3
MKAR LR LR 08 47 06.2
comp=Z,366nm,22.0s,baz=65,slow=37
comp=Z,5.2nm,0.7s
MKAR Makanchi Array 39.06 289 P **P** **08 30 33.9 -1.2**
GLI Glacier Island 39.14 47 P **P** **08 30 34.1 -1.4**
baz=288
PZH PanZhiHua 39.19 248 P **P** **08 30 37.0 +0.5**
PZH S **S** **08 36 36.1 +0.1**
PZH pmax pmax
comp=Z,20nm,0.5s
PZH pmax pmax
comp=Z,140nm,6.7s
PZH LR LR
comp=Z,640nm,12.0s
PZH LR LR
comp=Z,520nm,12.8s
PZH LR LR
comp=Z,460nm,16.2s
M24K Tolsona, Glenn 39.21 45 P **P** **08 30 33.7 -2.5**
baz=287
MAKZ Makanchi 39.25 289 P **P** **08 30 34.8 -1.9**
MAKZ Makanchi 39.25 289 P **P** **08 30 34.8 -1.9**
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
RIDG Independent Ri 39.34 42 P **P** **08 30 37.6 +0.3**
RIDG lAmb lAmb 08 30 44.0
comp=Z,20nm,1.4s
RIDG Independent Ri 39.34 42 P **P** **08 30 36.4 -0.8**
baz=286
KURK Kurchatov 39.47 296 P **P** **08 30 38.3 -0.1**
KURK lAmb lAmb 08 30 42.9
comp=Z,16nm,1.2s
KURK Kurchatov 39.47 296 P **P** **08 30 38.3 -0.1**
KURK pmax pmax
comp=Z,16nm,1.2s
KURK Kurchatov 39.47 296 *e*P **P** **08 30 38.3 -0.1**
KLU Klutina 39.50 46 P **P** **08 30 37.8 -0.9**
baz=288
E27K Coleen River 39.53 35 P **P** **08 30 38.1 -0.7**
baz=283
KURBB Kurchatov Arra 39.56 296 P **P** **08 30 39.5 +0.3**
comp=Z,5.8nm,0.8s,baz=67,slow=8.8,SNR=13
KURBB PcP **PcP** **08 32 48.1 +1.9**
comp=Z,1.1nm,0.7s,baz=61,slow=3.1,SNR=1.8
KURBB LR LR 08 47 16.2
comp=Z,309nm,18.2s,baz=31,slow=37
comp=Z,5.8nm,0.8s
HARP HAARP 39.58 44 P **P** **08 30 38.5 -0.7**
baz=287
I26K Coal Creek Min 39.63 39 P **P** **08 30 39.3 -0.2**
baz=285
SCRK Sand Creek 39.64 42 P **P** **08 30 40.0 +0.2**
SCRK Sand Creek 39.64 42 P **P** **08 30 39.1 -0.7**
baz=286
KMI Kunming 39.65 245 ⇑P **P** **08 30 43.8 +3.4**
KMI S **S** **08 36 45.8 +2.7**
KMI pmax pmax
comp=Z,11nm,0.9s
KMI LR LR
comp=Z,750nm,19.1s
KMI LR LR

comp=Z,620nm,18.7s
KMI LR LR
comp=Z,700nm,16.1s
J26L Joseph Creek 39.67 41 P P 08 30 40.0 -0.1
baz=286
G27K Doyon Strip 39.83 37 P P 08 30 41.4 +0.1
baz=285,SNR=10
EYAK Cordova Ski Ar 39.88 47 P P 08 30 41.5 -0.2
baz=289
H27K Steamboat Moun 40.03 38 P P 08 30 41.3 -1.7
baz=286
I27K Kandik River 40.17 39 P P 08 30 42.3 -1.8
baz=286
L26K Log Cabin Wild 40.19 43 P P 08 30 43.1 -1.1
baz=288
BMRM Bremner River 40.27 46 P P 08 30 43.8 -1.2
baz=289
K27K Chicken 40.43 41 P P 08 30 47.3 +1.1
K27K Chicken 40.43 41 P P 08 30 44.3 -1.9
baz=288
M26K Nabesna, AK 40.54 44 P P 08 30 47.4 +0.2
M26K IAmb IAmb 08 30 52.6
comp=Z,21nm,1.4s
M26K Nabesna, AK 40.54 44 P P 08 30 45.7 -1.5
baz=289
EGAK Eagle 40.59 40 P P 08 30 47.6 +0.1
EGAK IAmb IAmb 08 30 50.3
comp=Z,19nm,1.4s
EGAK Eagle 40.59 40 P P 08 30 46.9 -0.6
baz=287,SNR=6.6
L27K Beaver Creek, 40.84 42 P P 08 30 51.2 +1.5
L27K Beaver Creek, 40.84 42 P P 08 30 49.3 -0.4
baz=289
BCAR Beaver Creek A 40.85 42 P P 08 30 49.4 -0.4
MCARA McCarthy VSAT 40.86 45 P P 08 30 50.0 +0.2
MCARA IAmb IAmb 08 31 01.5
comp=Z,25nm,1.2s
MCARA McCarthy VSAT 40.86 45 P P 08 30 49.2 -0.6
baz=290
CRQE Cirque 41.04 46 P P 08 30 49.7 -1.8
baz=290
M27K Edge Creek, AK 41.04 43 P P 08 30 50.7 -0.8
baz=290
DAWY Dawson 41.54 40 P P 08 30 53.6 -1.8
baz=290
I29M Ogilvie Camp, 41.56 38 P P 08 30 54.8 -0.7
baz=289
CTG Chitna Glacier 41.77 45 P P 08 30 56.6 -0.8
baz=291
EPYK Eagle Plains 41.85 37 P P 08 30 57.0 -0.9
EPYK Eagle Plains 41.85 37 P P 08 30 57.5 -0.4
baz=289
YUK3 Moose Creek 41.87 44 P P 08 30 56.8 -1.6
baz=291
O28M Mount Upton 42.36 45 P P 08 31 01.5 -1.0
baz=292
INK Inuvik 42.38 33 LR LR 08 51 07.1
comp=Z,407nm,19.3s,baz=274,slow=40
INK Inuvik 42.38 33 P P 08 31 02.0 -0.2
INK Inuvik 42.38 33 P P 08 31 02.0 -0.2
INK pmax pmax
comp=Z,10.0nm,1.2s
INK Inuvik 42.38 33 P P 08 31 01.9 -0.2
baz=290,SNR=5.4
M29M Somme Creek 42.50 43 P P 08 31 02.8 -0.6
baz=292
BRVK Borovoye 43.09 303 P P 08 31 06.1 -2.0
BRVK Borovoye 43.09 303 ⇓ *e*P P 08 31 08.1 0.0
BRVK pmax pmax
comp=Z,6.0nm,1.7s
BRVK Borovoye 43.09 303 *e*P P 08 31 08.1 0.0
PNL Peninsula 43.16 47 P P 08 31 07.8 -0.8
baz=294
LSA Lhasa 43.44 261 P P 08 31 08.2 -3.6
LSA IAmb IAmb 08 31 17.5
comp=Z,28nm,1.5s
LSA Lhasa 43.44 261 P P 08 31 08.2 -3.6
LSA pmax pmax
comp=Z,28nm,1.5s
N30M Aishikik Lake 43.48 43 P P 08 31 10.6 -0.7
baz=294
HYT Haines Junctio 43.55 44 P P 08 31 11.3 -0.6
baz=294
P29M Windy Craggy 43.94 46 P P 08 31 14.3 -0.6
baz=295
N31M Braeburn, Yuko 44.05 43 P P 08 31 14.8 -0.9
baz=295
P30M Million Dollar 44.09 45 P P 08 31 15.7 -0.5
baz=295
O30N Mendenhall 44.21 44 P P 08 31 15.3 -1.8
baz=295
PLBC Pleasant Camp 44.65 46 P P 08 31 19.2 -1.4
baz=296
FARO Faro, Yukon 44.78 41 P P 08 31 23.2 +1.6
WHY Whitehorse 44.79 44 P P 08 31 20.6 -1.2
baz=296
SKAG Skagway 45.12 46 P P 08 31 23.4 -0.9
baz=297
C36M Paulatuk 45.16 30 P P 08 31 23.7 -0.7
baz=296
BOOM Boomskoye usch 45.17 287 P P 08 31 24.3 -0.8
BOOM IAmb IAmb 08 31 30.6
comp=Z,16nm,1.4s
BOOM Boomskoye usch 45.17 287 P P 08 31 24.3 -0.8
BOOM pmax pmax
comp=Z,16nm,1.5s
N32M Quiet Lake 45.37 43 P P 08 31 25.2 -1.1
baz=297
P32M Atlin 45.80 45 P P 08 31 28.2 -1.5
baz=298
P33M Teslin, Yukon 45.91 44 P P 08 31 28.3 -2.4
baz=298
AAK Ala-Archa 45.97 288 LR LR 08 51 26.9
comp=Z,407nm,18.3s,baz=48,slow=37
KWAJ Kwajalein Atol 46.39 145 P P 08 31 33.9 -0.9
KWAJ Kwajalein Atol 46.39 145 P P 08 31 33.9 -0.9
KWAJ pmax pmax
comp=Z,79nm,1.0s
CMAR Chiang Mai Arr 47.04 243 P P 08 31 40.7 +0.9
comp=Z,1.1nm,0.3s,baz=36,slow=7.9,SNR=4.9
CMAR LR LR 08 53 46.5
comp=Z,410nm,18.9s,baz=40,slow=39
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 47.04 243 P P 08 31 37.6 -2.3
ARU Arti 47.45 311 P P 08 31 41.9 -0.7
comp=Z,1.4nm,0.3s,baz=62,slow=8.6,SNR=3.7
ARU LR LR 08 54 01.5
comp=Z,255nm,19.4s,baz=81,slow=39
comp=Z,1.4nm,0.3s
ARU Arti 47.45 311 P P 08 31 40.4 -2.3
ARU Arti 47.45 311 *c i*P P 08 31 41.8 -0.8
ARU 08 33 10.6
ARU 08 33 32.7
ARU S S **08 38 35.3 -0.7**
ARU SS SS **08 41 54.6 -8.6**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU MLR MLR
comp=Z,283nm,14.0s
ARU Arti 47.45 311 *e*P P 08 31 41.8 -0.8
SPITS Spitsbergen Ar 47.61 347 LR LR 08 54 46.4
comp=Z,80nm,18.2s,baz=350,slow=40
ARK Arkit 47.99 288 P P 08 31 48.1 +0.9
DLBC Dease Lake 48.02 45 LR LR 08 51 32.1
comp=Z,165nm,21.9s,baz=310,slow=36
DLBC Dease Lake 48.02 45 P P 08 31 45.0 -2.2
baz=301
T35M Bob Quinn 48.68 47 P P 08 31 49.9 -2.3
baz=302
RES Resolute Bay 49.50 17 LR LR 08 56 21.9
comp=Z,109nm,18.6s,baz=11,slow=40
ABKAR Akbulak array 50.62 303 P P 08 32 06.2 -0.8
ABKAR IAmb IAmb 08 32 08.3
comp=Z,8.9nm,1.2s
GAR Garm 50.67 286 P P 08 32 07.2 -0.5
GAR IAmb IAmb 08 32 41.9
comp=Z,14nm,1.1s
AKTO Aktyubinsk 50.97 305 P P 08 32 09.5 -0.1
comp=Z,1.0nm,0.6s,baz=62,slow=12,SNR=3.7
AKTO LR LR 08 53 28.8
comp=Z,196nm,19.6s,baz=45,slow=36
comp=Z,1.0nm,0.6s
CHGR Chuyangaron 51.59 287 P P 08 32 11.5 -3.1
CHGR Chuyangaron 51.59 287 P P 08 32 11.5 -3.1
CHGR pmax pmax
comp=Z,10.0nm,0.5s
ARCES ARCESS Array B 51.90 337 P P 08 32 16.2 -0.1
comp=Z,6.0nm,1.2s,baz=82,slow=8.7,SNR=5.0
ARCES LR LR 08 58 32.7
comp=Z,96nm,18.3s,baz=354,slow=41
comp=Z,6.0nm,1.2s
SIJI Sorong 51.99 194 LR LR 08 51 47.9
comp=Z,113nm,21.4s,baz=178,slow=33
YKA Yellowknife Ar 52.07 35 P P 08 32 18.6 +0.9
comp=Z,1.9nm,0.8s,baz=307,slow=7.5,SNR=10
YKA LR LR 08 57 36.5
comp=Z,92nm,18.3s,baz=320,slow=40
comp=Z,1.9nm,0.8s
NIL Nilore 52.23 279 P P 08 32 17.1 -2.2
NIL IAmb IAmb 08 32 24.5
comp=Z,12nm,1.1s
NIL Nilore 52.23 279 P P 08 32 17.1 -2.2
NIL pmax pmax
comp=Z,12nm,1.1s
BBB Bella Bella 52.40 51 LR LR 08 54 50.5
comp=Z,168nm,19.8s,baz=302,slow=36
TOLI2 Tolitoli 52.49 208 P P 08 32 18.9 -2.5
KLMR Klimovskoe 53.17 323 *e*P P 08 32 24.6 -1.2
KLMR pmax pmax
comp=Z,20nm,1.3s
KLMR Klimovskoe 53.17 323 *e*P P 08 32 24.6 -1.2
KLMR AMP 08 32 29.8
comp=Z,20nm,1.3s
KBL Kabul 54.29 283 P P 08 32 32.8 -1.9
KBL IAmb IAmb 08 32 35.6
comp=Z,4.7nm,0.5s
KBL Kabul 54.29 283 P P 08 32 32.8 -1.9
KBL pmax pmax
comp=Z,5.0nm,0.5s
LLLB Lillooet 56.44 50 P P 08 32 49.8 0.0
LLLB IAmb IAmb 08 32 53.4
comp=Z,17nm,1.5s
JMIC Jan Mayen 57.14 349 LR LR 08 56 32.4
comp=Z,35nm,21.0s,baz=70,slow=35
SUMG Summit 57.31 0 *i* P P 08 33 00.0 +4.0
SUMG IAmb IAmb 08 33 01.1
comp=Z,5.3nm,0.8s
FIA1 FINESS Array S 57.52 329 P P 08 32 56.5 -0.6
FIA1 IAmb IAmb 08 33 26.4
comp=Z,12nm,1.1s
FINES FINESS Array B 57.53 329 P P 08 32 57.0 -0.1
comp=Z,4.3nm,0.6s,baz=60,slow=9.1,SNR=10.0
FINES PcP **PcP 08 33 52.5 +2.1**
comp=Z,1.0nm,0.5s,baz=102,slow=3.4,SNR=3.8
FINES LR LR 09 00 49.2
comp=Z,101nm,19.2s,baz=60,slow=39
comp=Z,4.3nm,0.6s
FINES FINESS Array B 57.53 329 P P 08 32 56.4 -0.8
FINES FINESS Array B 57.53 329 *i* P P 08 32 59.4 +2.2
FINES pmax pmax
comp=Z,4.0nm,0.6s
NUUG Nuugaatsiaq 57.84 6 *i* P P 08 33 10.3 +11
KAPI Kappang 58.61 207 LR LR 08 59 25.1
comp=Z,40nm,19.4s,baz=96,slow=37
GEYT Ailbeck 58.70 293 LR LR 08 59 46.8
comp=Z,216nm,19.2s,baz=78,slow=38
F04D Rainier, OR 58.84 54 P P 08 33 05.0 -1.6
baz=312
B08A Colville Reser 59.17 50 P P 08 33 07.9 -1.1
B08A IAmb IAmb 08 33 12.7
comp=Z,7.7nm,1.1s
LTY Liberty 59.25 52 P P 08 33 08.5 -1.1
LTY IAmb IAmb 08 33 12.8
comp=Z,12nm,1.4s
I02E Swishome, OR 59.73 56 P P 08 33 11.1 -1.7
baz=313
PSI Prapat 60.01 233 LR LR 09 01 36.5
comp=Z,214nm,18.1s,baz=26,slow=38
HOOD Mount Hood Mea 60.06 54 P P 08 33 15.0 -0.3
C09A Chrisman Ranch 60.08 50 P P 08 33 14.6 -0.5
C09A IAmb IAmb 08 33 18.9
comp=Z,11nm,1.3s
G05D Wamic, OR 60.29 54 P P 08 33 15.9 -0.8
baz=313
NEW Newport 60.32 49 LR LR 08 58 18.8
comp=Z,116nm,21.9s,baz=308,slow=35
NEW Newport 60.32 49 P P 08 33 16.7 -0.2
NEW IAmb IAmb 08 33 20.6
comp=Z,7.2nm,1.3s
NEW Newport 60.32 49 P P 08 33 16.7 -0.2
NEW pmax pmax
comp=Z,7.0nm,1.3s
NEW Newport 60.32 49 P P 08 33 15.9 -0.9
baz=314
J01E Myrtle Point 60.32 57 P P 08 33 15.3 -1.5
baz=313
HAWA Hanford 60.41 52 P P 08 33 16.7 -0.8
E08A Dider Farm, El 60.58 52 P P 08 33 18.5 -0.1
E08A IAmb IAmb 08 33 22.5
comp=Z,12nm,1.3s
I04A Tendick Farm, 60.70 56 P P 08 33 18.6 -1.0
baz=313
K02D Willamette Mer 60.78 57 P P 08 33 18.9 -1.2
baz=313
ICESG Greenland Ices 60.80 1 *i* P P 08 33 24.5 +4.3
ICESG IAmb IAmb 08 33 24.8
comp=Z,8.1nm,0.8s
I05D Terrebonne, OR 60.89 55 P P 08 33 19.9 -0.9
baz=314
E09A Wood Farm, Sta 61.02 51 P P 08 33 21.1 -0.5
L02F Cave Junction 61.22 58 P P 08 33 22.0 -1.1
baz=314
J04D Umpqua Nationa 61.24 56 P P 08 33 21.7 -1.7
baz=314
WALA Waterton Lakes 61.29 47 P P 08 33 24.1 +0.5
WALA IAmb IAmb 08 33 27.9
comp=Z,11nm,1.2s
PINE Pine Mountain 61.48 55 P P 08 33 24.8 -0.2
HNR Honiara 61.49 160 LR LR 08 57 28.3
comp=Z,64nm,21.8s,baz=200,slow=34
J05D Fort Rock, OR 61.67 56 P P 08 33 24.7 -1.6
baz=314,SNR=7.0
L04D Klamath Falls 61.84 57 P P 08 33 25.6 -1.7
baz=314
K04D Chiloquin, OR 61.85 56 P P 08 33 26.6 -0.8
baz=314
YBH Yreka Blue Hor 61.96 58 LR LR 08 57 48.4
comp=Z,56nm,20.4s,baz=319,slow=34
I07A Izee 62.02 54 P P 08 33 28.3 -0.3
I07A IAmb IAmb 08 33 32.7
comp=Z,5.9nm,1.1s
JTMT Jette 62.04 48 P P 08 33 28.0 -0.7
JTMT IAmb IAmb 08 33 32.9
comp=Z,13nm,1.5s
NC405 NORSAR Array S 62.05 335 P P 08 33 28.3 0.0
NB2 NORSAR Subarra 62.25 336 P P 08 33 29.7 0.0
comp=Z,4.6nm,0.8s,baz=33,slow=6.9
NOA NORSAR Array B 62.25 336 P P 08 33 29.6 -0.1
comp=Z,3.0nm,0.7s,baz=33,slow=6.4,SNR=9.1
NOA LR LR 09 04 06.2
comp=Z,79nm,18.0s,baz=45,slow=40
comp=Z,3.0nm,0.7s
HFS Hagfors 62.33 334 P P 08 33 30.2 +0.1
comp=Z,6.3nm,0.7s,baz=93,slow=6.1,SNR=8.7
HFS LR LR 09 03 29.4
comp=Z,57nm,19.3s,baz=46,slow=39
comp=Z,6.3nm,0.7s
SFJD Kangerlussuaq 62.49 6 LR LR 09 01 36.1
comp=Z,83nm,19.5s,baz=341,slow=37
SFJD Kangerlussuaq 62.49 6 P P 08 33 31.9 +0.7
SFJD Kangerlussuaq 62.49 6 P P 08 33 31.9 +0.7
SFJD pmax pmax
comp=Z,25nm,1.1s
BMO Blue Mountains 62.61 52 P P 08 33 31.8 -0.7
BMO IAmb IAmb 08 33 36.4
comp=Z,5.9nm,1.2s
BMO Blue Mountains 62.61 52 P P 08 33 31.8 -0.7
BMO pmax pmax
comp=Z,6.0nm,1.3s
MSO Missoula 62.86 49 P P 08 33 33.1 -1.0
MSO Missoula 62.86 49 P P 08 33 33.0 -1.1
baz=316,SNR=8.2
J08A Circle Bar Ran 63.06 54 P P 08 33 35.8 +0.2
J08A IAmb IAmb 08 33 39.9
comp=Z,5.4nm,1.1s
PLID Pearl Lake 63.09 51 P P 08 33 35.1 -0.7
PLID IAmb IAmb 08 33 39.6
comp=Z,5.7nm,0.9s
KIV Kislovodsk 63.10 307 *e*P P 08 33 37.1 +1.3
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,219nm,17.0s
MOD Modoc Plateau 63.13 56 P P 08 33 35.0 -1.0
MOD IAmb IAmb 08 33 40.6
comp=Z,10nm,1.3s
KBZ Khabaz 63.16 307 LR LR 09 04 15.3
comp=Z,291nm,18.1s,baz=42,slow=39
KBZ Khabaz 63.16 307 ⇓ *e*P P 08 33 37.1 +1.2
KBZ pmax pmax
comp=Z,5.0nm,1.3s
KBZ Khabaz 63.16 307 *e*P P 08 33 37.1 +1.2
DY2G Dye2 63.25 4 *i* P P 08 33 40.1 +3.5
DY2G IAmb IAmb 08 33 40.7
comp=Z,7.4nm,0.7s
FRB Frobisher Bay 63.59 15 LR LR 09 02 23.2
comp=Z,107nm,21.2s,baz=2.5,slow=37
HRY Holter Researc 63.95 48 P P 08 33 41.2 -0.2
EGMT Eagleton 63.95 45 P P 08 33 39.8 -1.5
EGMT Eagleton 63.95 45 P P 08 33 39.9 -1.4
baz=318
MFID Camas Ranch 64.38 52 IAmb IAmb 08 33 47.9
comp=Z,5.3nm,1.1s
AKASG Malin Array Be 64.41 320 P P 08 33 43.8 -0.3
comp=Z,1.0nm,0.4s,baz=37,slow=7.3,SNR=11
AKASG LR LR 09 02 24.1
comp=Z,167nm,18.4s,baz=63,slow=37
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 64.41 320 *c e*P P 08 33 43.3 -0.8
LEM Lembang 64.53 219 LR LR 09 02 41.1
comp=Z,49nm,19.1s,baz=18,slow=37
BEKR Beckworth 64.53 58 P P 08 33 45.2 -0.1
BEKR IAmb IAmb 08 33 49.0
comp=Z,6.0nm,1.0s
GNI Garni 64.73 303 LR LR 09 04 03.9
comp=Z,153nm,20.3s,baz=66,slow=38
MCMT McKenzie Canyo 64.83 50 P P 08 33 47.2 -0.1
BOZ Bozeman (W) 64.86 48 P P 08 33 46.4 -0.9
BOZ IAmb IAmb 08 33 51.1
comp=Z,8.7nm,1.2s
BOZ Bozeman (W) 64.86 48 P P 08 33 46.4 -0.9
BOZ pmax pmax
comp=Z,9.0nm,1.2s
BOZ Bozeman (W) 64.86 48 P P 08 33 46.5 -0.9
baz=317,SNR=9.9
SOC Sochi 64.87 309 *e*P P 08 33 47.1 -0.1
SOC *e* 08 36 10.8
SOC *e*PPP PPP 08 37 43.0
SOC *e*S **S 08 42 29.5 +1.9**
SOC *e*SS **SS 08 46 36.3 -2.0**
SOC MLR MLR
comp=Z,153nm,15.0s
HLID Hailey 64.98 51 P P 08 33 47.8 -0.5
baz=317
MPK Martis Peak 65.12 58 P P 08 33 47.7 -1.6
PAHR Pah Rah Range 65.18 57 P P 08 33 49.0 -0.5
PAHR IAmb IAmb 08 33 53.7
comp=Z,10nm,1.2s
VCNR Virginia City 65.33 58 IAmb IAmb 08 33 54.5
comp=Z,4.8nm,0.8s
PNTR Pine Nut 65.50 58 P P 08 33 51.0 -0.8
PNTR IAmb IAmb 08 34 00.0
comp=Z,6.3nm,0.9s
YHL Hebgen Lake 65.62 49 IAmb IAmb 08 33 56.8
comp=Z,6.2nm,1.2s
GCMT Greycliff 65.64 47 P P 08 33 51.9 -0.5
YERR Yerington 65.77 58 P P 08 33 52.3 -1.1
BMN Battle Mountai 65.81 55 IAmb IAmb 08 33 56.0
comp=Z,5.0nm,1.1s
CMB Columbia Colle 65.83 59 IAmb IAmb 08 33 58.2
comp=Z,7.4nm,1.1s
YMR Madison River 65.86 49 IAmb IAmb 08 33 58.6
comp=Z,8.4nm,1.4s
RLMT Red Lodge 66.33 47 P P 08 33 56.7 -0.2
RLMT Red Lodge 66.33 47 P P 08 33 56.3 -0.6
baz=319,SNR=12
RYN Ryan 66.42 58 IAmb IAmb 08 34 01.5
comp=Z,5.7nm,1.0s
IMW Indian Meadow 66.45 49 P P 08 33 57.8 0.0
LAO LASA Array 66.55 44 P P 08 33 57.6 -0.5
baz=320
ELK Elko 66.61 54 LR LR 09 01 01.7
comp=Z,77nm,21.7s,baz=344,slow=34
MOOW Moose Ponds 66.65 49 IAmb IAmb 08 34 01.6
comp=Z,8.0nm,1.4s
PALK Pallekele 66.67 252 LR LR 09 06 14.0
comp=Z,134nm,19.9s,baz=140,slow=39
NVAR Mina Array Bea 66.68 58 P P 08 34 01.4 +2.1
comp=Z,3.3nm,0.8s,baz=299,slow=5.7,SNR=27
NVAR LR LR 09 01 26.0
comp=Z,93nm,20.0s,baz=270,slow=34
comp=Z,3.3nm,0.8s
NVAR Mina Array Bea 66.68 58 P P 08 33 59.0 -0.2
LHV Little Huntoon 66.70 58 P P 08 33 59.1 0.0
TPAW Teton Pass 66.74 49 IAmb IAmb 08 34 01.5
comp=Z,13nm,1.5s
NV11 Mina Array Sit 66.76 58 P P 08 34 00.1 +0.4
LOHW Long Hollow 66.82 49 IAmb IAmb 08 34 04.4
comp=Z,6.9nm,1.2s
SNOW Snow King Moun 66.86 49 IAmb IAmb 08 34 06.0
comp=Z,7.7nm,1.4s
REDW Red Top Meadow 66.89 49 P P 08 34 00.1 -0.4
BGU Big Grassy Mou 67.61 53 IAmb IAmb 08 34 11.4
comp=Z,6.4nm,1.4s
HWUT Hardware Ranch 67.84 51 IAmb IAmb 08 34 10.4
comp=Z,7.3nm,1.1s
LCH Last Change Ra 67.91 58 P P 08 34 07.5 +0.6
LCH IAmb IAmb 08 34 14.4
comp=Z,5.7nm,1.3s
BW06 Boulder Array 67.96 49 IAmb IAmb 08 34 10.5
comp=Z,10nm,1.3s
BW06 Boulder Array 67.96 49 P P 08 34 07.3 0.0
baz=319,SNR=10
PD31 Pinedale Array 67.96 49 P P 08 34 06.5 -0.8
PD31 IAmb IAmb 08 34 10.5
comp=Z,8.8nm,1.3s
PDAR Pinedale Array 67.96 49 P P 08 34 08.3 +0.9
comp=Z,1.5nm,0.6s,baz=356,slow=1.6,SNR=22
PDAR LR LR 09 06 07.3
comp=Z,64nm,19.0s,baz=342,slow=38
comp=Z,1.5nm,0.6s
PDAR Pinedale Array 67.96 49 P P 08 34 07.0 -0.3
SMMC Simmler 68.01 61 P P 08 34 08.4 +0.9
baz=317
VES Vestal, Richgr 68.13 60 P P 08 34 08.6 +0.4
baz=317
R11A Troy Canyon, C 68.19 56 P P 08 34 09.3 +0.5
baz=318,SNR=5.4
GRAC Grapevine Rang 68.23 58 IAmb IAmb 08 34 14.4
comp=Z,4.3nm,0.8s
GRAC Grapevine Rang 68.23 58 P P 08 34 10.3 +1.4
baz=318
CWC Cottonwood Cre 68.25 59 P P 08 34 09.9 +0.7
baz=317
DUG Dugway, Tooele 68.27 53 P P 08 34 08.7 -0.5
DUG IAmb IAmb 08 34 13.1
comp=Z,6.2nm,1.0s
DUG Dugway, Tooele 68.27 53 P P 08 34 08.7 -0.5
DUG pmax pmax
comp=Z,6.0nm,1.0s
DUG Dugway, Tooele 68.27 53 P P 08 34 09.9 +0.7
baz=318,SNR=11
TCUT Toone Canyon 68.29 51 P P 08 34 09.7 +0.3
TCUT IAmb IAmb 08 34 13.9
comp=Z,6.9nm,1.3s
SPR3 Spring Creek 3 68.37 55 P P 08 34 09.7 -0.4
SPR3 IAmb IAmb 08 34 16.0
comp=Z,9.1nm,1.0s
BUR08 Bucovina Ar. S 68.45 320 P P 08 34 08.3 -1.8
BURAR Bucovina Array 68.46 320 ⇑P P 08 34 10.3 +0.1
BURAR Bucovina Array 68.46 320 P P 08 34 09.4 -0.9
BURAR Bucovina Array 68.46 320 ⇑P P 08 34 10.3 +0.1
MDND Maddock 68.48 40 P P 08 34 10.1 -0.2
baz=323
OJC Ojcow 68.49 325 P P 08 34 09.0 -1.3
OJC IAmb IAmb 08 34 10.2
comp=Z,4.9nm,1.0s
OJC Ojcow 68.49 325 P P 08 34 09.0 -1.3
OJC pmax pmax
comp=Z,5.0nm,1.0s
ISA Isabella, Lake 68.60 60 P P 08 34 12.0 +0.7
baz=318
BIZ Bicaz 68.63 319 ⇓P P 08 34 11.8 +0.7
WSAR Wadi Sarin 68.67 281 LR LR 09 05 36.8
comp=Z,181nm,21.3s,baz=64,slow=37
ARVC Arvin 68.80 60 P P 08 34 12.5 +0.1
baz=318
SBC Santa Barbara 68.81 61 P P 08 34 12.8 +0.3
baz=317
MPMC Manual Prospec 68.85 59 P P 08 34 13.5 +0.5

baz=318
TPNV **Topopah Spring** 68.87 57 P P 08 34 13.5 +0.4
baz=318,SNR=7.6
FURC **Furnace Creek,** 68.89 58 P P 08 34 14.2 +1.3
baz=318,SNR=5.6
PSUT **Pine Spring** 68.97 55 P P 08 34 12.6 -1.1
MPU **Maple Canyon** 69.00 52 P P 08 34 12.1 -1.7
MPU IAmb IAmb 08 34 17.4
comp=Z,4.8nm,1.0s
CFR **Carcaliu** 69.13 316 ⇑P P 08 34 15.2 +0.9
CFR **Carcaliu** 69.13 316 ⇑P P 08 34 15.2 +0.9
SCZ2 **Santa Cruz Isl** 69.18 62 P P 08 34 15.4 +0.6
baz=318
VRI **Vrincioaia** 69.21 318 ⇑P P 08 34 15.6 +0.8
VRI **Vrincioaia** 69.21 318 ⇑P P 08 34 15.6 +0.8
GWY **Greenwater Val** 69.21 58 IAmb IAmb 08 34 20.1
comp=Z,4.2nm,0.8s
OSI **Osito Audit: C** 69.23 61 P P 08 34 15.4 +0.2
baz=318
PLOR **Plostina** 69.25 318 ⇑P P 08 34 16.2 +1.1
PLOR **Plostina** 69.25 318 ⇑P P 08 34 16.2 +1.1
TPGR **Topolog** 69.26 316 ⇓P P 08 34 15.7 +0.5
EDW2 **Edwards Air Fo** 69.44 60 P P 08 34 17.3 +0.9
baz=318
K22A **Casper** 69.50 47 IAmb IAmb 08 34 19.1
comp=Z,6.7nm,1.1s
K22A **Casper** 69.50 47 P P 08 34 17.3 +0.5
baz=321
RSSD **Black Hills** 69.50 45 P P 08 34 16.7 -0.3
RSSD **Black Hills** 69.50 45 P P 08 34 16.7 -0.3
RSSD pmax pmax
comp=Z,16nm,1.3s
RSSD **Black Hills** 69.50 45 P P 08 34 16.8 -0.1
baz=321
TIRR **Tirgusor** 69.57 316 P P 08 34 18.2 +1.2
TIRR **Tirgusor** 69.57 316 P P 08 34 18.2 +1.2
HARR **Harsova** 69.61 316 P P 08 34 18.5 +1.3
HARR **Harsova** 69.61 316 P P 08 34 18.5 +1.3
AGMN **Agassiz Nation** 69.61 37 P P 08 34 16.8 -0.4
AGMN IAmb IAmb 08 34 19.4
comp=Z,6.8nm,1.1s
AGMN **Agassiz Nation** 69.61 37 P P 08 34 17.4 +0.2
baz=325,SNR=5.1
RDMU **Red Mountain** 69.62 51 IAmb IAmb 08 34 22.6
comp=Z,6.9nm,1.0s
MORC **Moravsky Berou** 69.69 326 P P 08 34 17.9 +0.2
MORC **Moravsky Berou** 69.69 326 P P 08 34 16.1 -1.7
MORC IAmb IAmb 08 34 22.7
comp=Z,4.1nm,0.7s
MORC **Moravsky Berou** 69.69 326 P P 08 34 17.9 +0.2
MORC **Moravsky Berou** 69.69 326 eP P 08 34 18.0 +0.3
KRLC **Kraliky** 69.71 326 eP P 08 34 18.1 +0.2
KRLC **Kraliky** 69.71 326 eP P 08 34 18.1 +0.2
TMUT **Trail Mountain** 69.76 53 P P 08 34 18.2 -0.5
SHPR **Sheep Range** 69.78 57 P P 08 34 16.9 -1.8
GSC **Goldstone, Bar** 69.79 59 P P 08 34 17.4 -1.3
GSC IAmb IAmb 08 34 22.3
comp=Z,6.8nm,1.1s
GSC **Goldstone, Bar** 69.79 59 P P 08 34 17.4 -1.3
GSC pmax pmax
comp=Z,7.0nm,1.1s
GSC **Goldstone, Bar** 69.79 59 P P 08 34 18.9 +0.2
baz=318
FITZ **Fitzroy Crossi** 69.82 197 P P 08 34 18.6 -0.1
comp=Z,2.3nm,0.8s,baz=273,slow=3.7,SNR=3.0
comp=Z,2.3nm,0.8s
MLR **Muntele Rosu** 69.84 318 ⇓P P 08 34 19.9 +1.1
MLR **Muntele Rosu** 69.84 318 P P 08 34 19.9 +1.1
comp=Z,3.1nm,0.5s,baz=47,slow=0.6,SNR=3.9
comp=Z,3.1nm,0.5s
MLR **Muntele Rosu** 69.84 318 P P 08 34 16.8 -2.0
ISR **Istrita** 69.88 317 P P 08 34 20.1 +1.1
ISR **Istrita** 69.88 317 P P 08 34 20.1 +1.1
CCUT **Cedar City** 69.96 55 P P 08 34 19.2 -0.7
CLL **Collm** 69.97 329 eP P 08 34 20.0 +0.6
CLL **Collm** 69.97 329 eP P 08 34 20.0 +0.6
CLL LmV 09 05 00.0
comp=Z,100nm,20.2s
P18A **Preston Nutter** 69.99 52 P P 08 34 21.4 +1.3
P18A IAmb IAmb 08 34 23.8
comp=Z,8.6nm,1.1s
DRGR 70.15 321 ⇓P P 08 34 21.4 +0.8
DRGR 70.15 321 ⇓P P 08 34 21.4 +0.8
TUQ **Turquoise Moun** 70.17 58 P P 08 34 21.1 0.0
baz=318
MTPU **Mount Pierson** 70.20 54 IAmb IAmb 08 34 25.9
comp=Z,9.6nm,1.3s
CIS **Catalina Islan** 70.30 61 P P 08 34 22.0 +0.3
baz=318
HEC **Hector,Ludlow** 70.39 59 P P 08 34 22.8 +0.5
baz=318
JAVC **Velka Javorina** 70.40 325 eP P 08 34 23.3 +1.1
WRAB **Tennant Creek** 70.41 188⇓eP P 08 34 24.1 +1.8
WRAB pmax pmax
comp=Z,11nm,1.7s
WRA **Warramunga Arr** 70.42 188 P P 08 34 22.3 -0.1
comp=Z,3.3nm,1.0s,baz=6.7,slow=6.6,SNR=13
comp=Z,3.3nm,1.0s
WRA **Warramunga Ar** 70.42 188 P P 08 34 22.0 -0.3
VRAC **Vranov** 70.42 326 eP P 08 34 22.5 +0.3
LCMT **Little Creek M** 70.43 55 P P 08 34 22.4 -0.2
BBRC **Big Bear Solar** 70.49 60 P P 08 34 23.9 +0.8
baz=318
PKCU **Pink Cliffs** 70.59 55 P P 08 34 24.2 +0.4
PKCU IAmb IAmb 08 34 30.0
comp=Z,5.4nm,0.9s
O20A **White River Ci** 70.60 50 IAmb IAmb 08 34 26.9
comp=Z,5.6nm,0.8s
O20A **White River Ci** 70.60 50 P P 08 34 24.3 +0.6
baz=320,SNR=8.0
KRUC **Moravsky** 70.70 326 eP P 08 34 23.0 -0.9
BR131 **Keskin Array S** 70.78 309⇑eP P 08 34 26.0 +1.3
BRTR **Keskin Array B** 70.78 309 P P 08 34 25.5 +0.8
comp=Z,2.3nm,0.9s,baz=66,slow=3.1,SNR=6.0
BRTR LR LR 09 10 43.6
comp=Z,87nm,18.6s,baz=72,slow=40
comp=Z,2.3nm,0.9s
BRTR **Keskin Array B** 70.78 309 P P 08 34 23.0 -1.7
BRTR **Keskin Array B** 70.78 309 i P P 08 34 25.5 +0.8
BRTR pmax pmax
comp=Z,3.0nm,0.9s
GMRC **Granite Mounta** 70.80 59 P P 08 34 25.2 +0.3
baz=319
EKA **Eskdalemuir Ar** 70.81 340 P P 08 34 25.2 +0.7
comp=Z,2.8nm,0.6s,baz=23,slow=6.0,SNR=9.8
comp=Z,2.8nm,0.6s
MURC **Murrieta** 70.83 60 P P 08 34 24.3 -0.7
baz=318
SIRR **Siria** 71.00 321 P P 08 34 25.5 -0.3
N23A **Red Feather La** 71.13 48 P P 08 34 25.9 -1.1
baz=321
BELC **Belle Mtn. Jos** 71.20 59 P P 08 34 26.4 -1.0
baz=319
PFO **Pinyon Flats O** 71.23 60 LR LR 09 01 22.3
comp=Z,88nm,21.9s,baz=300,slow=32
PFO **Pinyon Flats O** 71.23 60 P P 08 34 26.5 -1.0
baz=319
TPFO **Pinon Flats** 71.24 60 P P 08 34 27.1 -0.5
baz=319
U15A **North Rim** 71.37 55 IAmb IAmb 08 34 35.8
comp=Z,11nm,1.3s
109C **Camp Elliot, M** 71.41 61 P P 08 34 28.1 -0.4
baz=319
SUSD **Miller** 71.48 42 P P 08 34 27.8 -0.9
baz=324
PV23 **Carpenter Ridg** 71.51 52 P P 08 34 28.6 -0.8
PV23 IAmb IAmb 08 34 33.2
comp=Z,8.0nm,0.9s
BZS **Buzias** 71.54 321 ⇓P P 08 34 29.1 +0.1
BZS **Buzias** 71.54 321 ⇓P P 08 34 29.1 +0.1
IRM **Iron Mountain** 71.55 59 P P 08 34 29.0 -0.3
baz=319
EYMN **Ely** 71.55 35 P P 08 34 29.0 -0.1
EYMN **Ely** 71.55 35 P P 08 34 28.5 -0.6
baz=327,SNR=6.9
KHC **Kasperske Hory** 71.63 327 eP P 08 34 29.7 +0.1
KHC **Kasperske Hory** 71.63 327 eP P 08 34 29.7 +0.1
PV11 **David Mesa, Pa** 71.70 52 IAmb IAmb 08 34 34.4
comp=Z,12nm,1.3s
BC3 **Big Chuckawall** 71.76 59 P P 08 34 30.2 -0.5
baz=319
HERR **Herculane** 71.82 320 ⇓P P 08 34 31.0 +0.3
GERES **GERESS Array B** 71.83 327 P P 08 34 31.0 +0.1
comp=Z,0.6nm,0.7s,baz=295,slow=6.9,SNR=4.3
comp=Z,0.6nm,0.7s
GERES **GERESS Array B** 71.83 327 P P 08 34 31.0 +0.1
PV13 **Radium Mtn., P** 71.83 52 IAmb IAmb 08 34 34.6
comp=Z,5.5nm,0.9s
CONA **Conrad Observa** 71.84 325 eP P 08 34 29.4 -1.5
comp=Z,4.7nm,1.3s
PV15 **Paradox Valley** 71.86 51 IAmb IAmb 08 34 40.0
comp=Z,4.6nm,0.8s
RONA **Rosalia, Austr** 71.88 325 eP P 08 34 33.4 +2.3
comp=Z,0.4nm,0.4s
SMCO **Snowmass** 71.96 50 P P 08 34 31.7 -0.5
SMCO IAmb IAmb 08 34 35.6
comp=Z,5.8nm,1.0s
PDMCI **Parker Dam,Lak** 71.98 58 P P 08 34 32.0 +0.1
baz=319
SWSC **Sam W. Stewart** 72.10 60 P P 08 34 32.6 +0.1
baz=319
ISCO **Idaho Springs** 72.14 49 IAmb IAmb 08 34 36.9
comp=Z,9.5nm,1.5s
ISCO **Idaho Springs** 72.14 49 P P 08 34 33.0 -0.1
baz=322,SNR=5.8
IKP **In-Ko-Pah, Jac** 72.15 60 P P 08 34 33.1 +0.1
baz=319
BLYC **Blythe** 72.19 59 P P 08 34 33.1 -0.1
BLYC IAmb IAmb 08 34 38.4
comp=Z,16nm,1.4s
SCHQ **Schefferville** 72.28 17 LR LR 09 07 31.4
comp=Z,149nm,21.2s,baz=101,slow=37
MOA **Molln** 72.48 326 eP P 08 34 35.8 +1.2
comp=Z,3.1nm,1.4s
ARSA **Arzberg** 72.54 325 eP P 08 34 36.2 +1.1
comp=Z,1.0nm,0.7s
WUAZ **Wupatki** 72.54 55 P P 08 34 35.6 +0.1
baz=320,SNR=6.5
GLA **Glamis** 72.55 59 P P 08 34 35.7 +0.3
baz=319
E38A **The Farm, Brul** 72.66 36 P P 08 34 34.4 -1.4
MVCO **Mesa Verde** 72.73 52 P P 08 34 34.9 -1.6
MVCO **Mesa Verde** 72.73 52 P P 08 34 36.3 -0.3
baz=321
BTNL **Ternell** 72.74 333 dx P 08 34 39.4 +3.2
MEM **Membach** 72.76 333 dx P 08 34 40.2 +4.0
BIOA **Bad Ischl, Aus** 72.84 327 eP P 08 34 38.7 +1.8
comp=Z,0.3nm,0.3s
Y14A **Wickenburg** 72.88 57 P P 08 34 36.6 -0.7
BSTI **Sart Tilman** 72.91 333 dx P 08 34 41.6 +4.5
OGNE **Ogallala** 72.92 46 P P 08 34 37.1 -0.4
baz=323
Q24A **Divide** 73.02 49 P P 08 34 37.9 -0.4
baz=322
ECSD **EROS Data Cent** 73.04 41 IAmb IAmb 08 34 40.5
comp=Z,9.0nm,0.9s
ECSD **EROS Data Cent** 73.04 41 P P 08 34 37.9 -0.2
baz=325,SNR=10
S22A **4UR Ranch, Cre** 73.15 51 P P 08 34 39.7 +0.5
baz=322,SNR=9.6
SOKA **Soboth** 73.20 325 eP P 08 34 39.4 +0.4
comp=Z,3.3nm,1.3s
VTS **Vitosha** 73.31 318 ⇓P P 08 34 40.5 +0.6
VTS **Vitosha** 73.31 318 P P 08 34 37.5 -2.3
VTS IAmb IAmb 08 34 45.0
comp=Z,6.6nm,0.9s
VTS **Vitosha** 73.31 318 ⇓P P 08 34 40.5 +0.6
SPMN **Marine on St.** 73.34 37 IAmb IAmb 08 34 42.0
comp=Z,9.0nm,1.0s
SPMN **Marine on St.** 73.34 37 P P 08 34 39.4 -0.3
baz=327
BMRD **Maredsous** 73.39 333 dx P 08 34 43.6 +3.6
DIVS **Divibare** 73.45 321 P P 08 34 39.1 -1.4
KBA **Koelnbreinsper** 73.47 326 eP P 08 34 41.9 +1.2
comp=Z,7.8nm,1.1s
OBKA **Obir** 73.52 325 eP P 08 34 41.7 +0.7
comp=Z,4.2nm,1.3s
W18A **Petrified Fore** 73.70 54 P P 08 34 42.8 +0.4
baz=321
MYKA **Terra Mystica** 73.74 326 eP P 08 34 42.9 +0.7
comp=Z,4.3nm,1.1s
SDCO **Great Sand Dun** 73.80 50 P P 08 34 43.2 +0.2
baz=322
WATA **Walderalm** 73.86 328 eP P 08 34 43.7 +0.7
comp=Z,7.8nm,1.4s
WTTA **Wattenberg** 73.90 328 eP P 08 34 44.4 +1.1
comp=Z,8.8nm,1.2s
PRED **Cave del Predi** 73.93 326 P P 08 34 41.8 -1.5
COWI **Conover** 73.98 35 P P 08 34 43.1 -0.4
COWI IAmb IAmb 08 34 48.4
comp=Z,7.4nm,1.0s
RETA **Reutte** 74.00 328 eP P 08 34 43.4 -0.4
comp=Z,3.9nm,1.4s
MOTA **Moosalm** 74.01 328 eP P 08 34 44.8 +0.9
comp=Z,6.1nm,1.3s
ABTA **Abfaltersbach** 74.04 327 eP P 08 34 44.4 +0.4
comp=Z,2.9nm,1.2s
X18A **Snowflake** 74.05 55 IAmb IAmb 08 34 48.4
comp=Z,9.1nm,1.1s
SQTA **Sankt Quirin** 74.08 328 eP P 08 34 45.4 +1.1
comp=Z,6.0nm,1.1s
ASAR **Alice Springs** 74.15 188 P P 08 34 45.2 +0.6
comp=Z,1.1nm,0.6s,baz=4.1,slow=5.1,SNR=13
ASAR LR LR 09 07 23.3
comp=Z,70nm,19.7s,baz=347,slow=36
comp=Z,1.1nm,0.6s
KSCO **Kaye Shedlock'** 74.18 47 P P 08 34 45.2 +0.2
baz=323
BGNE **Belgrade** 74.28 43 P P 08 34 45.3 -0.1
baz=325
G40A **Rib Lake** 74.29 36 IAmb IAmb 08 34 46.4
comp=Z,10nm,0.9s
FETA **Feichten** 74.42 328 eP P 08 34 46.8 +0.5
comp=Z,5.9nm,1.5s
DAVA **Damuels** 74.47 329 eP P 08 34 46.7 +0.1
comp=Z,4.7nm,1.1s
214A **Organ Pipe Nat** 74.49 59 P P 08 34 46.5 -0.3
baz=320
E43A **Lone Tree Farm** 74.50 33 P P 08 34 46.1 -0.5
MSVF **Nonsavu** 74.70 145 LR LR 09 04 45.2
comp=Z,59nm,18.6s,baz=142,slow=33
T25A **Trinidad** 74.81 50 P P 08 34 49.3 +0.5
T25A IAmb IAmb 08 34 51.9
comp=Z,8.5nm,1.4s
T25A **Trinidad** 74.81 50 P P 08 34 48.9 +0.1
baz=323
DAVOX **Davos/Dischmat** 74.92 328 P P 08 34 49.8 +0.6
comp=Z,1.5nm,0.6s,baz=255,slow=16,SNR=4.0
comp=Z,1.5nm,0.6s
MMAI **Mount Meron Ar** 75.03 304 LR LR 09 12 21.7
comp=Z,151nm,19.6s,baz=204,slow=39
PDG **Pogorica** 75.13 320 ⇑P P 08 34 49.9 -0.3
TUC **Tucson** 75.32 57 P P 08 34 51.4 -0.2
TUC **Tucson** 75.32 57 P P 08 34 51.4 -0.2
TUC pmax pmax
comp=Z,4.0nm,1.2s
TUC **Tucson** 75.32 57 P P 08 34 51.6 0.0
baz=321
AFI **Afiamalu** 75.49 134 LR LR 09 00 38.4
comp=Z,60nm,21.1s,baz=343,slow=30
ANMO **Albuquerque** 75.52 52 LR LR 09 08 27.2
comp=Z,52nm,18.4s,baz=342,slow=36
ANMO **Albuquerque** 75.52 52 P P 08 34 53.1 +0.2
ANMO **Albuquerque** 75.52 52⇑eP P 08 34 54.3 +1.4
ANMO pmax pmax
comp=Z,5.0nm,1.7s
ANMO **Albuquerque** 75.52 52 P P 08 34 52.2 -0.7
baz=322
CBKS **Cedar Bluff** 75.68 46 P P 08 34 52.2 -1.3
baz=324
SCIA **State Center** 75.95 40 P P 08 34 53.9 -1.0
baz=327
JFWS **Jewell Farm** 76.28 37 P P 08 34 56.0 -0.8
baz=329
L40A **Anamosa** 76.62 38 P P 08 34 57.7 -1.0
L40A IAmb IAmb 08 35 00.5
comp=Z,6.4nm,0.9s
GLMI **Grayling** 76.68 32 P P 08 34 57.6 -1.4
baz=331
121A **Cookes Peak, D** 76.73 55 P P 08 34 58.6 -1.2
121A IAmb IAmb 08 35 04.1
comp=Z,9.8nm,1.1s
121A **Cookes Peak, D** 76.73 55 P P 08 34 58.5 -1.3
baz=322,SNR=6.5
319A **Douglas** 76.84 57 IAmb IAmb 08 35 03.8
comp=Z,6.5nm,0.7s
KSU1 **Kansas State U** 76.85 43 P P 08 34 58.8 -1.3
baz=326
NRCA **Norcia** 77.20 324 IAmb IAmb 08 35 07.2
comp=Z,8.8nm,1.1s
P38A **Dawn** 77.73 41 IAmb IAmb 08 35 07.5
comp=Z,13nm,1.2s
EIL **Elat** 77.87 302 LR LR 09 14 03.0
comp=Z,138nm,18.3s,baz=286,slow=39
AMTX **Amarillo** 77.94 49 P P 08 35 06.1 -0.3
baz=324
SSB **Saint Sauveur** 77.97 331 P P 08 35 05.1 -1.2
SSB **Saint Sauveur** 77.97 331 P P 08 35 05.1 -1.2
SSB pmax pmax
comp=Z,5.0nm,0.9s
ELIS **Ellis County** 78.06 47 IAmb IAmb 08 35 10.1
comp=Z,20nm,1.1s
MSTX **Muleshoe** 78.14 51 P P 08 35 07.5 -0.1
baz=324
LMQ **La Malbaie** 78.39 22 P P 08 35 07.2 -1.3
P40A **Paris** 78.43 40 P P 08 35 08.8 -0.1
P40A IAmb IAmb 08 35 11.4
comp=Z,9.7nm,1.0s
SADO **Sadowa** 78.51 29 LR LR 09 13 05.5
comp=Z,55nm,18.5s,baz=355,slow=38
MNTX **Cornudas Mount** 78.64 54 P P 08 35 10.3 +0.1
MNTX IAmb IAmb 08 35 14.2
comp=Z,8.6nm,1.1s
MNTX **Cornudas Mount** 78.64 54 P P 08 35 11.7 +1.5
baz=323,SNR=13
HDIL **Hopedale** 78.66 38 P P 08 35 09.9 -0.3
baz=329
T35A **Sooner Cattle** 78.69 45 P P 08 35 09.7 -0.7
T35A IAmb IAmb 08 35 16.5
comp=Z,8.1nm,0.9s
OK029 **Liberty Lake** 79.19 46 IAmb IAmb 08 35 16.3
comp=Z,11nm,0.9s
OK031 **S. Brethren Rd** 79.34 45 P 08 35 14.8 +0.8
OK034 **N. Norfolk Rd.** 79.35 45 P 08 35 14.2 +0.1
R40A **Maddies Statio** 79.38 41 P P 08 35 14.2 0.0
R40A IAmb IAmb 08 35 16.4
comp=Z,7.7nm,1.1s
OK030 **Cody Creek RV** 79.39 45 P 08 35 14.4 +0.1
WMOK **Wichita Mounta** 79.44 47 P P 08 35 14.6 0.0
baz=325
FNO **Franklin** 79.66 46 P 08 35 15.8 +0.1
SFIN **Lafayette** 79.66 36 P P 08 35 15.4 -0.2
baz=330
TUL1 **Leonard** 79.85 45 P P 08 35 16.8 0.0
TUL1 IAmb IAmb 08 35 19.6
comp=Z,10nm,0.8s
TUL1 **Leonard** 79.85 45 P P 08 35 17.2 +0.5
baz=327
LONY **Lake Ozonia** 80.00 26 IAmb IAmb 08 35 19.6
comp=Z,13nm,1.4s
LONY **Lake Ozonia** 80.00 26 P P 08 35 17.0 -0.4
baz=337
CCM **Cathedral Cave** 80.01 40 P P 08 35 16.5 -1.1
CCM **Cathedral Cave** 80.01 40 P P 08 35 16.5 -1.1
CCM pmax pmax
comp=Z,5.0nm,1.0s
CCM **Cathedral Cave** 80.01 40 P P 08 35 16.9 -0.7
baz=329
U38A **Gravette** 80.03 43 P P 08 35 16.8 -1.0
U38A IAmb IAmb 08 35 20.1
comp=Z,12nm,1.5s
P46A **Rosedale** 80.28 37 IAmb IAmb 08 35 20.8
comp=Z,7.6nm,0.8s
HHAR **Hobbs** 80.36 43 P P 08 35 18.9 -0.6
O48B **Farmland** 80.49 35 P P 08 35 19.4 -0.7
baz=332
ABTX **Abilene, Hawle** 80.76 49 P P 08 35 20.4 -1.3
ABTX IAmb IAmb 08 35 23.1
comp=Z,6.7nm,1.1s
ABTX **Abilene, Hawle** 80.76 49 P P 08 35 21.6 -0.1
baz=325
PKME **Peaks-Kenny Pk** 80.78 22 P P 08 35 20.4 -1.2
baz=340
M53A **WI Miller and** 81.01 31 P P 08 35 22.6 -0.3
baz=334
LBNH **Lisbon** 81.07 24 P P 08 35 22.8 -0.4
baz=339
SIUC **Southern Illin** 81.13 39 P P 08 35 23.5 -0.1
SIUC IAmb IAmb 08 35 29.3
comp=Z,17nm,1.4s
S44A **Carbondale** 81.13 39 P P 08 35 23.6 -0.1
S44A IAmb IAmb 08 35 26.0
comp=Z,10nm,1.1s
P49A **Miami Univ. Ec** 81.28 35 P P 08 35 24.4 0.0
baz=332
ACSO **Alum Creek Sta** 81.30 34 P P 08 35 24.4 0.0
baz=333
TX31 **Lajitas Ar. Si** 81.41 54 P P 08 35 25.7 +0.4
TX32 **Lajitas Array** 81.41 54 P P 08 35 25.9 +0.5
TX32 IAmb IAmb 08 35 27.6
comp=Z,7.1nm,1.2s
TXAR **Lajitas Array** 81.41 54 P P 08 35 26.8 +1.4
comp=Z,1.6nm,0.7s,baz=293,slow=4.0,SNR=20
TXAR LR LR 09 11 48.8
comp=Z,30nm,18.7s,baz=344,slow=36
comp=Z,1.6nm,0.7s
TXAR **Lajitas Array** 81.41 54 P P 08 35 25.7 +0.4
PBMO **Poplar Bluff** 81.44 40 IAmb IAmb 08 35 27.7
comp=Z,8.5nm,1.1s
FCAR **Ozark Folk Cen** 81.48 42 P P 08 35 25.1 -0.3
N53A **Lisbon** 81.52 32 P P 08 35 25.3 -0.4
N53A IAmb IAmb 08 35 28.1
comp=Z,9.3nm,0.9s
LCAR **Lake Charles** 81.74 41 P P 08 35 27.2 +0.4
BINY **Binghamton** 81.81 28 P P 08 35 27.0 -0.2
baz=336
O53A **New Philadelph** 81.89 32 IAmb IAmb 08 35 30.0
comp=Z,10nm,1.1s
O53A **New Philadelph** 81.89 32 P P 08 35 27.1 -0.5
baz=334
WHAR **Wooly Hollow** 81.92 42 P P 08 35 27.7 -0.1
LPIG **La Paz** 81.96 62 LR LR 09 05 53.3
comp=Z,26nm,20.9s,baz=298,slow=31
MIAR **Mount Ida** 81.98 44 P P 08 35 27.6 -0.6
baz=328
P52A **Corning** 82.12 33 P P 08 35 28.2 -0.6
baz=333
Q51A **Peebles** 82.23 34 P P 08 35 29.0 -0.4
Q51A IAmb IAmb 08 35 41.8
comp=Z,6.5nm,0.8s
HPIG 82.28 57 IAmb IAmb 08 35 32.1
comp=Z,6.8nm,1.1s
WHTX **Lake Whitney,** 82.33 48 P P 08 35 30.1 +0.1
baz=326
JCT **Junction City** 82.44 50 P P 08 35 31.4 +0.7
JCT IAmb IAmb 08 35 33.5
comp=Z,8.6nm,0.9s
JCT **Junction City** 82.44 50 P P 08 35 31.4 +0.7
JCT **Junction City** 82.44 50 P P 08 35 30.9 +0.2
baz=325,SNR=5.4
SSPA **Standing Stone** 82.64 30 P P 08 35 31.8 +0.3
SSPA **Standing Stone** 82.64 30 P P 08 35 31.5 0.0
baz=336
HRV **Adam Dziewonsk** 82.78 25 P P 08 35 31.2 -1.0
baz=339
MCWV **Mont Chateau** 82.89 32 P P 08 35 32.3 -0.5
baz=334
WVT **Waverly** 83.06 39 P P 08 35 33.2 -0.6
baz=330
435B **Jarrell** 83.27 49 P P 08 35 34.9 0.0
baz=326
R53A **Hurricane** 83.35 34 P P 08 35 35.6 +0.4
T50A **Nancy** 83.45 36 IAmb IAmb 08 35 38.2
comp=Z,4.3nm,0.9s
PAL **Palisades** 83.52 27 P P 08 35 35.5 -0.5
baz=338
OXF **Oxford** 83.81 41 P P 08 35 37.4 -0.2
baz=330
PLAL **Pickwick Lake** 83.95 40 P P 08 35 38.8 +0.4
PLAL IAmb IAmb 08 35 39.0
comp=Z,3.8nm,0.8s
TZTN **Tazewell** 84.35 36 P P 08 35 40.2 -0.2
TZTN **Tazewell** 84.35 36 P P 08 35 39.7 -0.7
baz=333
833A **Chaparral WMA,** 84.41 51 P P 08 35 41.1 +0.3
baz=326
SWET **Sewanee** 84.61 38 P P 08 35 40.7 -1.0
SWET IAmb IAmb 08 35 42.1
comp=Z,9.1nm,1.2s
HKT **Hockley** 84.80 48⇑eP P 08 35 43.7 +1.1
HKT pmax pmax
comp=Z,11nm,1.7s
KEST **Kesra** 84.81 323 P P 08 35 43.0 +0.2
comp=Z,3.1nm,0.7s,baz=12,slow=3.0,SNR=5.1
KEST LR LR 09 18 12.1
comp=Z,209nm,18.2s,baz=243,slow=39
comp=Z,3.1nm,0.7s
X48A **Hartselle** 84.83 39 P P 08 35 42.0 -0.8
X48A IAmb IAmb 08 36 01.7
comp=Z,6.4nm,1.2s

BLA Blacksburg 84.89 33 P **P** 08 35 42.5 -0.7
baz=334
R58B Mineral 85.07 31 P **P** 08 35 42.5 -1.5
ESDC Sonseca Array 85.59 335 P **P** 08 35 47.6 +1.0
comp=Z,2.1nm,0.8s,baz=11,slow=4.1,SNR=13
ESDC LR LR 09 19 09.7
comp=Z,57nm,18.5s,baz=84,slow=39
comp=Z,2.1nm,0.8s
ESDC Sonseca Array 85.59 335 P **P** 08 35 46.2 -0.4
LRAL Lakeview Retre 86.08 40 P **P** 08 35 48.5 -0.6
baz=331
KMSC Kings Mountain 86.42 35 P **P** 08 35 50.4 -0.3
baz=334
GOGA Godfrey 87.16 37 P **P** 08 35 53.6 -0.7
baz=333
RAR Rarotonga 87.55 128 LR LR 09 16 21.7
comp=Z,48nm,18.2s,baz=292,slow=36
TAOE Nuku Hiva Isla 88.77 105 *e*LR LR 09 04 20.0
comp=Z,154nm,31.0s
PPT Papeete 90.03 118 LR LR 09 08 44.2
comp=Z,61nm,20.9s,baz=320,slow=30
PPT2 Papeete2 90.05 118 *e*LR LR 09 04 54.9
comp=Z,114nm,22.2s
DWPF Disney Wildern 92.66 38 P **P** 08 36 19.5 -0.7
baz=334
TBI Tubuai 94.73 121 *e*LR LR 09 07 04.0
comp=Z,124nm,31.0s
CMIG Matias Romero 96.02 54 LR LR 09 21 51.9
comp=Z,35nm,18.7s,baz=331,slow=37
VNDA Vanda 128.23 175 PKP **PKiKP** 08 42 13.4 -0.1
comp=Z,0.8nm,1.0s,baz=342,slow=3.2,SNR=3.8
NNA Nana 129.97 54 *c i*PKIKP **PKiKP** 08 42 19.1 +0.1
NNA pmax pmax
comp=Z,55nm,1.7s
SIV San Ignacio 140.73 38 PKP **PKPdf** 08 42 38.7 +0.5
comp=Z,0.8nm,0.8s,baz=205,slow=1.6,SNR=3.4
BDFB Brasilia 144.28 18 PKP **PKPdf** 08 42 43.9 -0.7
comp=Z,1.2nm,0.4s,baz=12,slow=1.9,SNR=3.5
CPUP Villa Florida 151.52 40 PKPbc **PKiKP** 08 43 02.8 +0.1
comp=Z,2.0nm,0.7s,baz=284,slow=2.5,SNR=6.0
TROLL Troll, Antarti 151.99 205 PKPdf **PKiKP** 08 43 02.9 +0.5
SNAA Sanae 153.59 204 PKPdf **PKPbc** 08 43 05.4 -0.1
SNAA Sanae 153.59 204 PKPbc **PKPbc** 08 43 04.9 -0.7
comp=Z,1.7nm,0.9s,baz=55,slow=21,SNR=2.5
PLCA Paso Flores 155.07 80 PKPbc PKPdf 08 43 10.7 +10
comp=Z,2.9nm,0.9s,baz=185,slow=1.8,SNR=4.4
VNA2 Neumayer–Watz 155.22 203 PKPdf PKPdf 08 43 09.3 +9.3
VNA3 Neumayer Olymp 155.55 201 PKPdf PKPdf 08 43 09.7 +9.3
PMSA Palmer Station 159.97 146 PKPab **PKPab** 08 43 48.7 +3.0
comp=Z,13nm,0.9s,baz=32,slow=7.7,SNR=3.0

NEIC ***15*** *08:44:38.3±2.4,26.7S±0.1×176.4W±0.2,h10km±2km, mb4.6/9,Error ellipse: s-maj=29.2km s-min=13.1km az=124.0*
IDC ***15*** *08:44:39.4±2.5,26.84S×176.65W,h0km,mb3.9/4, mbtmp4.1/6,ML4.6/2,MS3.5/2,Error ellipse: s-maj=59.1km s-min=31.0km az=122.0*
ISC 15 08:44:40.9±0.9,26.9S±0.1×176.3W±0.2,h35km,n21, σ1§20/20,mb4.4/9,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.77**	**212**	Pn	**Pn**	**08 45 22.4**	**-0.3**
RAO	174nm,0.3s,baz=105,slow=19,SNR=7.0			Sn	**Sn**	**08 45 53.5**	**-1.4**
	141nm,0.3s,baz=84,slow=22,SNR=7.5						
	377nm,0.3s						
RAO	**Raoul Island**	**2.77**	**212**		**Pn**	**08 45 22.0**	**-0.8**
NIUE	**Niue**	**9.72**	**38**	Pn	**Pn**	**08 46 57.4**	**-0.9**
AFI	**Afiamalu**	**13.59**	**19**	Pn	**Pn**	**08 47 52.7**	**+1.5**
AFI	1.9nm,0.3s,baz=192,slow=19,SNR=2.4			Sn	Sn	08 50 08.8	-12
	0.3nm,0.3s,baz=278,slow=24,SNR=1.5						
	24nm,0.9s						
AFI	**Afiamalu**	**13.59**	**19**	Pn	**Pn**	**08 47 49.0**	**-2.3**
DZM	**Mont Dzumac**	**16.46**	**283**	LR	LR	08 53 27.9	
	comp=Z,98nm,18.6s,baz=51,slow=33						
CTA	**Charters Tower**	**34.95**	**273**	P	**P**	**08 51 30.7**	**+0.9**
	4.7nm,0.9s,baz=113,slow=7.4,SNR=1.5						
	4.7nm,0.9s						
STKA	**Stephens Creek**	**36.89**	**252**	P	**P**	**08 51 46.4**	**+0.1**
	1.8nm,0.9s,baz=97,slow=8.1,SNR=2.0						
	1.8nm,0.9s						
STKA	**Stephens Creek**	**36.89**	**252**	P	**P**	**08 51 46.7**	**+0.4**
COEN	**Coen**	**39.96**	**281**	P	**P**	**08 52 12.5**	**+0.2**
ASAR	**Alice Springs**	**44.95**	**263**	P	**P**	**08 52 53.6**	**+0.8**
	0.5nm,0.8s,baz=95,slow=6.9,SNR=10						
	0.5nm,0.8s						
WR0	**Warramunga Arr**	**45.45**	**268**	P	**P**	**08 52 56.0**	**-0.7**
WR0				IAmb	IAmb	08 53 19.0	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**45.62**	**268**	P	**P**	**08 52 57.9**	**-0.2**
WB2				IAmb	IAmb	08 53 28.5	
	comp=Z,5.5nm,1.1s						
WRA	**Warramunga Arr**	**45.63**	**268**	P	**P**	**08 52 59.4**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=103,slow=8.6,SNR=18						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**45.63**	**268**	P	**P**	**08 52 58.0**	**-0.2**
WB0	**Warramunga Arr**	**45.64**	**268**	P	**P**	**08 52 55.9**	**-2.4**
WB0				IAmb	IAmb	08 53 19.5	
	comp=Z,12nm,1.4s						
FORT	**Forrest**	**48.51**	**252**	P	**P**	**08 53 19.2**	**-1.4**
CASY	**Casey**	**58.94**	**207**	P	**P**	**08 54 37.5**	**+1.2**
CASY				IAmb	IAmb	08 54 37.5	
	comp=Z,2.3nm,0.8s						
QSPA	**South Pole Qui**	**63.20**	**180**	P	**P**	**08 55 06.4**	**+1.0**
QSPA				IAmb	IAmb	08 55 19.6	
	comp=Z,7.1nm,1.3s						
JCJ	**Chichijima**	**66.93**	**320**	LR	LR	09 17 24.4	
	comp=Z,69nm,22.0s,baz=82,slow=30						
NOA	**NORSAR Array B**	**145.49**	**354**	PKPbc	**PKiKP**	**09 04 18.5**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=14,slow=4.9,SNR=3.3						

IDC ***15*** *08:55:04.3±0.9,40.34N×78.64E,h0km,mb3.8/10, mbtmp3.9/16,ML3.8/5,Error ellipse: s-maj=18.0km s-min=17.3km az=110.0*
BJI ***15*** *08:55:07.9±0.0,40.79N×78.26E,h5km,mb3.9/8,mB4.0/2, ML3.9/7,Ms3.6/1,Ms7 3.4/1*
KRNET ***15*** *08:55:09.6±0.1,40.79N×78.19E,mb4.5*
SOME ***15*** *08:55:10.3,40.88N×78.10E,h10km,MS3.7*
NNC ***15*** *08:55:12.4±0.9,40.94N×78.21E,h0km,mb4.8,mpv4.5, Error ellipse: s-maj=6.4km s-min=4.3km az=163.0*
ISC 15 08:55:10.2±1.4,40.80N±0.04×78.20E±0.03,h7km±9km, n109,σ1§79/146,mb4.1/23,33C-17D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.69**	**5**	⇓*e*P	**Pn**	**08 55 41.3**	**+0.9**
PRZ	baz=5.0			⇓*e*S	**Sb**	**08 56 04.5**	**+1.1**
	baz=5.0						
ULHL	**Ulahol**	**2.06**	**315**	P	**Pn**	**08 55 47.4**	**+1.9**
	SNR=150						
ULHL	**Ulahol**	**2.06**	**315**	⇑*e*P	**Pn**	**08 55 46.9**	**+1.4**
	baz=16						
ULHL				⇑*e*S	**Sb**	**08 56 14.1**	**0.0**
	baz=16						
KSH	**Kashi**	**2.13**	**234**	Pn	**Pg**	**08 55 52.8**	**+1.7**
KSH				Sn	Sg	08 56 28.3	+10
KSH				smax	smax		
	comp=N,3μm,0.8s						
KSH				smax	smax		
	comp=E,3μm,0.7s						
SATY	**Saty**	**2.26**	**4**	*e*P	**Pb**	**08 55 52.2**	**+0.7**
SATY	441nm,0.5s			*e*S	**Sb**	**08 56 22.5**	**+2.7**
	1μm,0.7s						
SATY	**Saty**	**2.26**	**4**	Pg	**Pb**	**08 55 51.7**	**+0.1**
SATY	441nm,0.5s			Lg	Lg	08 56 21.0	
	1μm,0.7s						
ZHN	**Zhinishke**	**2.37**	**4**	*e*P	**Pb**	**08 55 54.1**	**+0.7**
ZHN	231nm,0.2s			*e*S	**Sb**	**08 56 25.6**	**+2.6**
	1μm,0.5s						
ZHN	**Zhinishke**	**2.37**	**4**	Pg	**Pb**	**08 55 53.2**	**-0.2**
ZHN	176nm,0.1s			Lg	Lg	08 56 23.7	
	1μm,0.5s						
BOOM	**Boomskoye usch**	**2.39**	**316**	⇑*e*P	**Pn**	**08 55 51.4**	**+1.4**
BOOM	baz=16			⇑*e*S	**Sn**	**08 56 22.0**	**+2.3**
	baz=16						
UZB	**Uzynbulak**	**2.43**	**14**	*e*P	**Pb**	**08 55 54.2**	**-0.1**
UZB	47nm,0.4s			*e*S	**Sb**	**08 56 25.7**	**+1.3**
	1μm,0.5s						
UZB	**Uzynbulak**	**2.43**	**14**	Pg	**Pb**	**08 55 53.9**	**-0.4**
UZB	47nm,0.4s			Lg	Lg	08 56 25.6	
	1μm,0.5s						
MDOK	**Medeo**	**2.51**	**340**	*e*P	**Pb**	**08 55 56.1**	**+0.3**
MDOK	355nm,0.3s			*e*S	**Sb**	**08 56 29.4**	**+2.4**
	2μm,0.6s						
MDOK	**Medeo**	**2.51**	**340**	⇓Pn	**Pn**	**08 55 54.5**	**+2.8**
MDOK	330nm,0.6s			Pg	**Pb**	**08 55 56.1**	**+0.3**
MDOK	355nm,0.3s			Lg	Lg	08 56 29.7	
MDOK	1μm,0.8s			⇑Lg	Lg	08 56 30.4	
	2μm,0.6s						
SHLS	**Shalkode**	**2.54**	**21**	*e*P	**Pb**	**08 55 58.7**	**+2.5**
SHLS	108nm,0.2s			*e*S	**Sg**	**08 56 33.0**	**+1.2**
	1μm,0.7s						
SHLS	**Shalkode**	**2.54**	**21**	Pg	**Pb**	**08 55 58.7**	**+2.5**
SHLS	108nm,0.2s			Lg	Lg	08 56 33.0	
	1μm,0.7s						
AAA	**Alma-Ata**	**2.59**	**339**	*e*P	**Pb**	**08 55 58.2**	**+1.1**
AAA	762nm,0.6s			*e*S	**Sg**	**08 56 33.0**	**-0.5**
	2μm,0.7s						
AAA	**Alma-Ata**	**2.59**	**339**	Pg	**Pb**	**08 55 58.2**	**+1.1**
AAA	762nm,0.6s			Lg	Lg	08 56 33.0	
	2μm,0.7s						
MTBS	**Maitube**	**2.68**	**331**	*e*P	**Pb**	**08 55 58.5**	**0.0**
MTBS	150nm,0.7s			*e*S	**Sb**	**08 56 32.5**	**+0.8**
	834nm,0.4s						
MTBS	**Maitube**	**2.68**	**331**	Pg	**Pb**	**08 55 58.5**	**0.0**
MTBS	150nm,0.7s			Lg	Lg	08 56 32.5	
	834nm,0.4s						
KURS	**Kuram**	**2.69**	**360**	*e*P	**Pb**	**08 55 59.2**	**+0.4**
KURS	431nm,0.4s			*e*S	**Sb**	**08 56 34.1**	**+2.2**
	968nm,0.7s						
KURS	**Kuram**	**2.69**	**360**	Pg	**Pb**	**08 55 59.2**	**+0.4**
KURS	431nm,0.4s			Lg	Lg	08 56 34.1	
	968nm,0.7s						
KPKS	**Kokpek**	**2.69**	**8**	*e*P	**Pb**	**08 55 59.2**	**+0.4**
KPKS	470nm,0.6s			*e*S	**Sb**	**08 56 34.1**	**+2.1**
	2μm,0.4s						
KPKS	**Kokpek**	**2.69**	**8**	Pg	**Pb**	**08 55 59.2**	**+0.4**
KPKS	470nm,0.6s			Lg	Lg	08 56 34.1	
	2μm,0.4s						
KST	**Kastek**	**2.79**	**324**	*e*P	**Pb**	**08 56 00.8**	**+0.2**
KST	295nm,0.4s			*e*S	**Sb**	**08 56 36.7**	**+1.6**
	899nm,0.6s						
KST	**Kastek**	**2.79**	**324**	Pg	**Pb**	**08 56 00.8**	**+0.2**
KST	295nm,0.4s			Lg	Lg	08 56 36.7	
	899nm,0.6s						
TKM2	**Tokmak 2**	**2.88**	**318**	P	**Pn**	**08 55 59.5**	**+2.8**
	SNR=166						
TKM2	**Tokmak 2**	**2.88**	**318**	⇓Pn	**Pn**	**08 55 59.4**	**+2.7**
TKM2	86nm,0.5s			⇑Lg	Lg	08 56 40.8	
	371nm,0.6s						
TKM2	**Tokmak 2**	**2.88**	**318**	⇑*e*P	**Pn**	**08 55 58.4**	**+1.7**
TKM2	baz=19			⇑*e*S	**Sn**	**08 56 33.9**	**+2.2**
	baz=19						
KBK	**Karagaybulak**	**3.06**	**308**	P	**Pn**	**08 56 02.0**	**+2.8**
	SNR=49						
KBK	**Karagaybulak**	**3.06**	**308**	⇑*e*P	**Pn**	**08 56 00.7**	**+1.5**
KBK	baz=9.0			⇑*i*S	**Sn**	**08 56 38.0**	**+1.8**
	baz=9.0						
KTMS	**Ketmen**	**3.09**	**30**	*e*P	**Pb**	**08 56 05.8**	**+0.1**
KTMS	38nm,0.3s			*e*S	**Sb**	**08 56 45.1**	**+1.5**
	284nm,0.7s						
KTMS	**Ketmen**	**3.09**	**30**	Pg	**Pb**	**08 56 05.8**	**+0.1**
KTMS	38nm,0.3s			Lg	Lg	08 56 45.1	
	284nm,0.7s						
ARLS	**Aral**	**3.10**	**291**	⇓*e*P	**Pn**	**08 56 01.0**	**+1.2**
ARLS	baz=91			⇓*i*S	**Sn**	**08 56 38.7**	**+1.4**
	baz=91						
UCH	**Uchtor**	**3.11**	**298**	P	**Pn**	**08 56 01.8**	**+1.5**
	SNR=59						
UCH	**Uchtor**	**3.11**	**298**	⇑*e*P	**Pn**	**08 56 01.7**	**+1.5**
UCH	baz=99			⇑*e*S	**Sn**	**08 56 39.6**	**+1.7**
	baz=99						
KTBS	**Karatobe**	**3.12**	**339**	*e*P	**Pb**	**08 56 06.5**	**+0.4**
KTBS	136nm,0.7s			*e*S	**Sb**	**08 56 46.4**	**+2.0**
	714nm,0.4s						
KTBS	**Karatobe**	**3.12**	**339**	Pg	**Pb**	**08 56 06.5**	**+0.4**
KTBS	136nm,0.7s			Lg	Lg	08 56 46.4	
	714nm,0.4s						
AAK	**Ala-Archa**	**3.33**	**305**	Pn	**Pn**	**08 56 06.4**	**+3.5**
	31nm,0.3s,baz=131,slow=11,SNR=55						
AAK				Sn	**Sg**	**08 56 55.3**	**-1.8**
	51nm,0.3s,baz=306,slow=22,SNR=24						
	65nm,0.3s						
AAK	**Ala-Archa**	**3.33**	**305**	P	**Pb**	**08 56 10.3**	**+0.6**
	SNR=26						
AAK	**Ala-Archa**	**3.33**	**305**	⇑*i*P	**Pn**	**08 56 04.5**	**+1.6**
AAK	baz=5.0			⇑*i*S	**Sn**	**08 56 44.5**	**+1.8**
	baz=5.0						
FRU1	**Bishkek**	**3.34**	**308**	⇑*e*P	**Pn**	**08 56 04.6**	**+1.6**
FRU1	baz=8.0			⇑*e*S	**Sn**	**08 56 45.0**	**+2.1**
	baz=8.0						
CHMS	**Chumysh**	**3.38**	**312**	P	**Pb**	**08 56 11.2**	**+0.6**
	SNR=36						
CHMS	**Chumysh**	**3.38**	**312**	⇓Pg	**Pb**	**08 56 10.8**	**+0.2**
CHMS	195nm,0.9s			⇑Lg	Lg	08 56 57.2	
	525nm,1.1s						
CHMS	**Chumysh**	**3.38**	**312**	⇑*e*P	**Pn**	**08 56 05.0**	**+1.5**
CHMS	baz=12			⇑*i*S	**Sn**	**08 56 45.9**	**+1.9**
	baz=12						
KUU	**Kurty**	**3.38**	**337**	*e*P	**Pb**	**08 56 11.0**	**+0.4**
KUU	84nm,0.5s			*e*S	**Sb**	**08 56 54.4**	**+2.4**
	303nm,0.8s						
KUU	**Kurty**	**3.38**	**337**	Pg	**Pb**	**08 56 11.0**	**+0.4**
KUU	84nm,0.5s			Lg	Lg	08 56 54.4	
	303nm,0.8s						
ARXS	**Arharly**	**3.42**	**356**	*e*P	**Pb**	**08 56 12.1**	**+0.8**
ARXS	108nm,0.7s			*e*S	**Sb**	**08 56 57.0**	**+3.9**
	500nm,0.5s						
ARXS	**Arharly**	**3.42**	**356**	Pg	**Pb**	**08 56 12.1**	**+0.8**
ARXS	108nm,0.7s			Lg	Lg	08 56 57.0	
	500nm,0.5s						
KRBS	**Karabastau**	**3.45**	**328**	*e*P	**Pb**	**08 56 11.6**	**-0.1**
KRBS	79nm,0.4s			*e*S	**Sb**	**08 56 55.9**	**+2.1**
	500nm,0.5s						
KRBS	**Karabastau**	**3.45**	**328**	Pg	**Pb**	**08 56 11.6**	**-0.1**
KRBS	79nm,0.4s			Lg	Lg	08 56 55.9	
	500nm,0.5s						
AML	**Almayashu**	**3.64**	**293**	P	**Pn**	**08 56 10.1**	**+2.7**
	SNR=7.3						
USP	**Ospenovka**	**3.70**	**313**	P	**Pb**	**08 56 15.9**	**0.0**
	SNR=48						
USP	**Ospenovka**	**3.70**	**313**	⇓*e*P	**Pn**	**08 56 09.4**	**+1.5**
USP	baz=13			⇓*e*S	**Sn**	**08 56 53.4**	**+1.7**
	baz=13						
DJR	**Jarkent**	**3.72**	**18**	*e*P	**Pb**	**08 56 17.6**	**+1.2**
	82nm,0.4s						
DJR	262nm,0.4s			*e*S	**Sb**	**08 57 05.0**	**+3.3**
DJR	**Jarkent**	**3.72**	**18**	Pg	**Pb**	**08 56 17.6**	**+1.2**
	82nm,0.4s						
DJR	262nm,0.4s			Lg	Lg	08 57 05.0	
SGDS	**Sogindy**	**3.75**	**316**	*e*P	**Pb**	**08 56 18.3**	**+1.5**
	22nm,0.5s						
SGDS	308nm,0.5s			*e*S	**Sb**	**08 57 06.7**	**+4.2**
SGDS	**Sogindy**	**3.75**	**316**	Pg	**Pb**	**08 56 18.3**	**+1.5**
	22nm,0.5s						
SGDS	308nm,0.5s			Lg	Lg	08 57 06.7	
EKS2	**Erkin-Say**	**3.80**	**301**	P	**Pn**	**08 56 12.4**	**+3.1**
	SNR=21						
EKS2	**Erkin-Say**	**3.80**	**301**	⇓*i*P	**Pn**	**08 56 10.8**	**+1.5**
EKS2	baz=1.0			⇓*e*S	**Sn**	**08 56 55.8**	**+1.5**
	baz=1.0						
OHH	**Osh**	**4.13**	**268**	⇑*e*P	**Pn**	**08 56 15.3**	**+1.5**
	baz=68						
OHH	baz=68			⇑*e*S	**Sn**	**08 57 03.6**	**+1.2**
MRKS	**Merke**	**4.20**	**299**	*e*P	**Pb**	**08 56 27.4**	**+3.0**
	56nm,0.4s						
MRKS	182nm,0.9s			*e*S	**Sg**	**08 57 22.3**	**-2.6**
MRKS	**Merke**	**4.20**	**299**	Pg	**Pb**	**08 56 27.4**	**+3.0**
	56nm,0.4s						
MRKS	182nm,0.9s			Lg	Lg	08 57 22.3	
TDK	**Taldyqorghan**	**4.20**	**2**	*e*P	**Pb**	**08 56 26.5**	**+2.0**
	352nm,0.4s						
TDK	869nm,0.7s			*e*S	**Sb**	**08 57 20.9**	**+5.4**
TDK	**Taldyqorghan**	**4.20**	**2**	Pg	**Pb**	**08 56 26.5**	**+2.0**
	352nm,0.4s						
TDK	869nm,0.7s			Lg	Lg	08 57 20.9	
BTLS	**Baital**	**5.22**	**326**	*e*P	**Pb**	**08 56 46.2**	**+4.3**
	22nm,0.6s						
BTLS	145nm,0.6s			*e*S	**Sg**	**08 57 54.1**	**-3.7**
BTLS	**Baital**	**5.22**	**326**	Pg	**Pb**	**08 56 46.2**	**+4.3**
	22nm,0.6s						
BTLS	145nm,0.6s			Lg	Lg	08 57 54.1	
TRKS	**Terek-Say**	**5.38**	**280**	⇑*e*P	**Pn**	**08 56 32.2**	**+1.1**
	baz=80						
TRKS	baz=80			⇑*e*S	**Sn**	**08 57 32.5**	**-0.8**
KK31	**Karatay Array**	**6.18**	**294**	⇑Pg	**Pg**	**08 57 05.5**	**-3.0**
	6.5nm,0.5s,baz=111,slow=15,SNR=32						
KK31				⇑Lg	Lg	08 58 28.4	
	22nm,0.6s,baz=105,slow=28,SNR=9.8						
IUG	**Iuzhnay**	**6.28**	**285**	*e*P	**Pg**	**08 57 07.2**	**-3.3**
	634nm,0.8s						
IUG	129nm,0.7s			*e*S	**Sg**	**08 58 31.0**	**-0.9**
MAKZ	**Makanchi**	**6.60**	**23**	⇑Pn	**Pn**	**08 56 48.3**	**+0.6**
	5.2nm,0.9s						
MAKZ	32nm,0.8s			⇑Lg	Lg	08 58 36.8	
MK31	**Makanchi Array**	**6.68**	**25**	⇓Pn	**Pn**	**08 56 49.1**	**+0.3**
	3.1nm,0.5s,baz=204,slow=12,SNR=44						
MK31				⇑Sn	**Sn**	**08 58 05.3**	**0.0**
	12nm,0.6s,baz=200,slow=20,SNR=4.9						
MK31				⇓Lg	Lg	08 58 37.1	
	29nm,0.7s,baz=208,slow=27,SNR=4.5						
MKAR	**Makanchi Array**	**6.68**	**25**	Pn	**Pn**	**08 56 49.4**	**+0.6**
	0.6nm,0.3s,baz=204,slow=13,SNR=23						
MKAR				Sn	**Sn**	**08 58 04.7**	**-0.6**
	2.0nm,0.3s,baz=199,slow=18,SNR=8.3						
MKAR				Lg	Lg	08 58 43.9	
	2.5nm,0.3s,baz=192,slow=28,SNR=5.1						
	1.2nm,0.3s						
WMQ	**Urumqi**	**7.66**	**64**	*e*Pn	**Pn**	**08 57 03.8**	**+1.5**
WMQ				Sn	**Sn**	**08 58 30.9**	**+1.6**
WMQ				smax	smax		
	comp=N,44nm,1.3s						
WMQ				smax	smax		
	comp=E,41nm,1.3s						
CHCP	**Chirah Chowk**	**8.14**	**210**	P	**Pn**	**08 57 08.6**	**-0.3**
ZSN	**Zaisan**	**8.20**	**34**	*e*P	Pb	08 57 38.1	+5.6
	5.2nm,0.3s						
ZSN	24nm,0.8s			*e*S	Sg	08 59 24.4	-8.7
CEP	**Cherat**	**8.57**	**218**	P	**Pn**	**08 57 16.1**	**+1.2**
THW	**Thamme Wali**	**9.52**	**215**	P	**Pn**	**08 57 29.2**	**+1.5**
KURBB	**Kurchatov Arra**	**9.83**	**1**	Pn	**Pn**	**08 57 32.6**	**+0.7**
	0.4nm,0.3s,baz=189,slow=12,SNR=42						
KURBB				Lg	Lg	09 00 19.1	
	0.2nm,0.3s,baz=186,slow=25,SNR=5.8						
	1.3nm,0.4s						
KURBB	**Kurchatov Arra**	**9.83**	**1**	⇑Pn	**Pn**	**08 57 32.3**	**+0.4**
	4.1nm,0.6s						
KURBB	166nm,1.1s			⇓Lg	Lg	09 00 21.1	
KURK	**Kurchatov**	**9.92**	**2**	⇑Pn	**Pn**	**08 57 32.6**	**-0.6**
	8.6nm,0.5s						
KURK	65nm,0.9s			⇓Lg	Lg	09 00 22.0	
BVA0	**Borovoye Array**	**13.33**	**339**	⇓Pn	**Pn**	**08 58 22.1**	**+2.3**
	5.0nm,0.8s,baz=151,slow=14,SNR=12						
BVA0				⇓Lg	Lg	09 02 13.7	
	29nm,1.1s,baz=156,slow=25,SNR=12						
BRVK	**Borovoye**	**13.39**	**339**	⇑Pn	**Pn**	**08 58 21.8**	**+1.2**
	5.3nm,0.8s						
BRVK	44nm,1.0s			⇑Lg	Lg	09 02 13.4	
ZALV	**Zalesovo Beam**	**13.89**	**16**	Pn	**Pn**	**08 58 26.9**	**-0.5**
	2.2nm,0.7s,baz=213,slow=11,SNR=5.9						
GEYT	**Alibeck**	**15.79**	**266**	Pn	**Pn**	**08 58 53.4**	**+0.3**
	0.7nm,0.3s,baz=63,slow=17,SNR=4.5						
	3.3nm,0.4s						
GTA	**Gaotai**	**16.59**	**88**	⇑P	**P**	**08 59 06.3**	**+0.3**
GTA				pP	pP	08 59 09.6	+0.9
GTA				sP	sP	08 59 12.9	+3.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKTO	**Aktyubinsk**	**17.04**	**311**	P	**Pn**	**08 59 09.4**	**+0.5**
	0.2nm,0.3s,baz=130,slow=12,SNR=2.4						
	1.4nm,0.7s						
SONM	**Songino Array**	**21.29**	**61**	P	**P**	**08 59 57.6**	**+0.2**
	3.7nm,0.9s,baz=261,slow=11,SNR=17						
FINES	**FINESS Array B**	**37.36**	**321**	P	**P**	**09 02 22.6**	**-0.5**
	1.8nm,0.8s,baz=107,slow=9.5,SNR=1.8						
	1.8nm,0.8s						
ARCES	**ARCESS Array B**	**39.54**	**334**	P	**P**	**09 02 40.9**	**-0.6**
	1.4nm,0.8s,baz=98,slow=5.1,SNR=4.4						
	1.4nm,0.8s						
CONA	**Conrad Observa**	**44.05**	**301**	*e*P	**P**	**09 03 19.4**	**+0.7**
	5.7nm,1.6s						
NOA	**NORSAR Array B**	**44.52**	**320**	P	**P**	**09 03 20.5**	**-1.6**
	0.4nm,0.6s,baz=90,slow=8.4,SNR=1.8						
	0.4nm,0.6s						
SOKA	**Soboth**	**44.93**	**300**	*e*P	**P**	**09 03 25.2**	**-0.5**
	4.3nm,1.3s						
MOA	**Molln**	**45.11**	**301**	*e*P	**P**	**09 03 26.6**	**-0.4**
	2.6nm,1.2s						
GERES	**GERESS Array B**	**45.20**	**303**	P	**P**	**09 03 27.8**	**-0.1**
	1.6nm,0.7s,baz=79,slow=6.9,SNR=14						
	1.6nm,0.7s						
OBKA	**Obir**	**45.30**	**299**	*e*P	**P**	**09 03 30.2**	**+1.5**
	1.7nm,0.8s						
KBA	**Koelnbreinsper**	**45.92**	**301**	*e*P	**P**	**09 03 36.1**	**+2.4**
	0.9nm,0.5s						
ABTA	**Abfaltersbach**	**46.57**	**300**	*e*P	**P**	**09 03 38.2**	**-0.4**
	2.2nm,1.0s						
WTTA	**Wattenberg**	**46.98**	**301**	*e*P	**P**	**09 03 40.9**	**-1.1**
	0.4nm,0.5s						
WATA	**Walderalm**	**47.00**	**301**	*e*P	**P**	**09 03 43.6**	**+1.5**
	3.0nm,1.0s						
MOTA	**Moosalm**	**47.30**	**302**	*e*P	**P**	**09 03 43.1**	**-1.3**
	1.2nm,0.6s						
RETA	**Reutte**	**47.48**	**302**	*e*P	**P**	**09 03 45.5**	**-0.2**
	5.5nm,1.0s						
FETA	**Feichten**	**47.65**	**301**	*e*P	**P**	**09 03 47.2**	**+0.1**
	1.1nm,0.7s						
DAVA	**Damuels**	**48.11**	**302**	*e*P	**P**	**09 03 50.9**	**+0.1**
	3.7nm,0.7s						
ESDC	**Sonseca Array**	**60

1.5nm,0.6s,baz=52,slow=5.5,SNR=13
1.5nm,0.6s

YKA	**Yellowknife Ar**	**76.54**	**6**	P		**P**	**09 06 59.1**	**-1.6**
	0.9nm,0.6s,baz=344,slow=5.9,SNR=7.0							
	0.9nm,0.6s							
WRA	**Warramunga Arr**	**79.79**	**127**	P		P	09 07 11.5	-7.8
	0.4nm,0.8s,baz=321,slow=4.0,SNR=2.0							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**82.39**	**130**	P		P	09 07 25.2	-7.9
	0.5nm,1.0s,baz=327,slow=5.7,SNR=1.8							
	0.5nm,1.0s							

IDC ***15*** *09:56:41.3±3.5,23°.86N×93°.65E, h0km, mb4.1/2, mbtmp3.9/3, ML3.7/1, MS3.7/2, Error ellipse: s-maj=125.9km s-min=61.4km az=47.0*
NEIC ***15*** *08:57:07.0±0.8, 22°.52N±0°.09×94°.73E±0°.04, h115km±9km, mb4.5/8, Error ellipse: s-maj=13.1km s-min=4.2km az=199.0*
NDI ***15*** *08:57:09.6±3.4, 22°.61N×94°.49E, h118km±51km, mb4.6, ML3.8, mb4.5(NEIC)*
ISC 15 08:57:05.6±0.8, 22°.45N±0°.06×94°.56E±0°.06, h106km, n28, σ2s31/33, mb4.4/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MND	**Mandalay**	**1.50**	**106**	Pn		**Pn**	**08 57 32.8**	**+0.5**
MND						**Sn**	**08 57 51.5**	**-0.9**
AZL	**Aizawl**	**2.15**	**307**	*e*P		**Pn**	**08 57 43.5**	**+3.1**
AZL				*e*S		**Sn**	**08 58 08.4**	**+1.4**
AZL				IAML			08 58 10.0	
	comp=E,2μm,0.3s							
AZL				IAML			08 58 11.3	
	comp=N,1μm,0.5s							
IMP	**Imphal**	**2.44**	**347**	*e*P		**Pn**	**08 57 48.5**	**+4.3**
IMP				*e*S		**Sn**	**08 58 14.4**	**+0.6**
IMP				IAML			08 58 15.4	
	comp=N,146nm,0.1s							
KOHI	**KOHIMA**	**3.29**	**353**	*e*P		**Pn**	**08 57 58.7**	**+3.2**
KOHI				*e*S		**Sn**	**08 58 32.7**	**-1.2**
SHL	**Shillong**	**3.95**	**322**	*e*P		**Pn**	**08 58 06.0**	**+1.5**
SHL				*e*S		**Sn**	**08 58 45.2**	**-4.8**
SHL				IAML			08 58 51.6	
	comp=N,431nm,0.0s							
SHL				IAML			08 58 51.9	
	comp=E,314nm,0.1s							
TEZP	**TEZPUR**	**4.45**	**339**	*e*P		**Pn**	**08 58 11.5**	**+0.6**
TEZP				*e*S		**Sn**	**08 58 57.7**	**-4.0**
ITAN	**ITANAGAR**	**4.74**	**351**	*e*P		**Pn**	**08 58 16.5**	**+1.7**
ITAN				*e*S		**Sn**	**08 59 06.2**	**-2.5**
ZIRO	**ZIRO**	**5.10**	**353**	*e*P		**Pn**	**08 58 21.2**	**+1.3**
ZIRO				*e*S		**Sn**	**08 59 13.6**	**-4.0**
CMAR	**Chiang Mai Arr**	**5.71**	**133**	Pn		**Pn**	**08 58 29.5**	**+1.4**
	comp=E,0.3nm,0.3s,baz=306,slow=13,SNR=1.4							
CMAR				Sn		Sn	08 59 54.2	+22
	comp=E,0.6nm,0.3s,baz=319,slow=15,SNR=2.1							
	comp=E,0.7nm,0.4s							
SLGI	**Shiliguri**	**7.01**	**308**	*e*S		**Sn**	**09 00 01.2**	**-2.6**
LSA	**Lhasa**	**7.84**	**338**	Pn		**Pn**	**08 58 58.5**	**+1.0**
BWNR	**Bhubaneshwar**	**8.43**	**257**	*e*S		**Sn**	**09 00 33.4**	**-5.1**
BLSP	**Bilaspur**	**11.51**	**271**	*e*S		Sn	09 02 06.9	+13
HYBB	**Hyderabad (bro**	**15.86**	**254**	*e*P		**P**	**09 00 46.9**	**+2.4**
KBL	**Kabul**	**25.38**	**304**	P		**P**	**09 02 23.2**	**0.0**
KBL				IAmb		IAmb	09 02 31.1	
	comp=Z,6.7nm,0.5s							
KNRA	**Kununurra**	**50.58**	**135**	P		**P**	**09 05 52.4**	**-1.3**
ASF	**Jabal al Asfar**	**51.62**	**294**	LR		LR	09 31 52.4	
	comp=Z,152nm,21.4s,baz=288,slow=42							
WB0	**Warramunga Arr**	**57.22**	**134**	P		**P**	**09 06 41.5**	**-0.6**
WRA	**Warramunga Arr**	**57.31**	**134**	P		**P**	**09 06 42.2**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=323,slow=7.4,SNR=50							
	comp=Z,1.4nm,0.6s							
WRA	**Warramunga Arr**	**57.31**	**134**	P		**P**	**09 06 41.5**	**-1.2**
WRAB	**Tennant Creek**	**57.31**	**134**	P		**P**	**09 06 42.0**	**-0.7**
WRAB				IAmb		IAmb	09 07 01.2	
	comp=Z,4.5nm,1.1s							
WB2	**Warramunga Arr**	**57.31**	**134**	P		**P**	**09 06 41.9**	**-0.8**
WB2				IAmb		IAmb	09 06 49.7	
	comp=Z,11nm,1.4s							
WR0	**Warramunga Arr**	**57.45**	**134**	P		**P**	**09 06 42.9**	**-0.8**
WR0				IAmb		IAmb	09 06 43.5	
	comp=Z,6.2nm,1.2s							
AS31	**Alice Springs**	**59.71**	**138**	P		**P**	**09 06 59.1**	**-0.2**
ASAR	**Alice Springs**	**59.71**	**138**	P		**P**	**09 06 59.0**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=320,slow=6.8,SNR=32							
	comp=Z,1.2nm,0.5s							
ASAR	**Alice Springs**	**59.71**	**138**	P		**P**	**09 06 58.6**	**-0.8**
JMIC	**Jan Mayen**	**73.13**	**341**	LR		LR	09 43 20.9	
	comp=Z,30nm,18.1s,baz=164,slow=39							
BMAR	**Burnt Mountain**	**80.39**	**20**	P		**P**	**09 09 04.7**	**-0.3**

IDC ***15*** *09:03:26.6±0.8, 0°.80N×28°.81W, h0km, mb3.8/12, mbtmp3.9/13, ML4.4/1, MS3.5/9, Error ellipse: s-maj=33.6km s-min=15.0km az=143.0*
ISC 15 09:03:28.0±0.7, 0°.7N±0°.2×28°.8W±0°.2, h10km, n23, σ0s99/14, mb3.8/12, MS3.7/9, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RCBR	**Riachuelo**	**9.64**	**227**	Pn		**Pn**	**09 05 46.1**	**-0.9**
	3.2nm,0.3s,baz=176,slow=15,SNR=27							
RCBR				Sn		Sn	09 07 26.1	-9.5
	0.6nm,0.3s,baz=106,slow=18,SNR=1.6							
	22nm,0.6s							
H10N3	**ASCENSION HYDR16.60**	**121**		T		T	09 24 28.3	
	baz=300,slow=74,SNR=178							
H10N2	**ASCENSION HYDR16.60**	**121**		T		T	09 24 24.0	
	baz=300,slow=74,SNR=157							
H10N1	**ASCENSION HYDR16.62**	**121**		T		T	09 24 28.2	
	baz=300,slow=74,SNR=233							
DBIC	**Dimbokro**	**24.58**	**76**	P		**P**	**09 08 48.5**	**-0.1**
	4.2nm,0.6s,baz=261,slow=11,SNR=9.6							
	4.2nm,0.6s							
BDFB	**Brasilia**	**25.02**	**229**	P		**P**	**09 08 52.5**	**0.0**
	3.2nm,0.6s,baz=45,slow=8.2,SNR=6.4							
	3.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**32.61**	**66**	P		**P**	**09 09 59.4**	**-0.8**
	1.5nm,0.6s,baz=258,slow=9.3,SNR=16							
	1.5nm,0.6s							
CPUP	**Villa Florida**	**38.50**	**224**	P		**P**	**09 10 50.8**	**+0.2**
	2.1nm,1.0s,baz=43,slow=11,SNR=3.7							
CPUP				LR		LR	09 25 48.2	
	comp=Z,110nm,19.9s,baz=286,slow=35							
	2.1nm,1.0s							
LPAZ	**La Paz**	**42.35**	**245**	P		**P**	**09 11 25.2**	**+1.7**
	1.0nm,0.8s,baz=81,slow=5.7,SNR=4.6							
	1.0nm,0.8s							
ESDC	**Sonseca Array**	**44.88**	**27**	P		**P**	**09 11 42.5**	**-0.4**
	1.6nm,1.1s,baz=229,slow=8.9,SNR=5.5							
	1.6nm,1.1s							
GERES	**GERESS Array B**	**60.22**	**31**	P		**P**	**09 13 36.1**	**-0.3**
	1.0nm,0.8s,baz=239,slow=7.7,SNR=8.0							
	1.0nm,0.8s							
TKL	**Tuckaleechee C**	**61.67**	**311**	LR		LR	09 37 52.4	
	comp=Z,25nm,18.1s,baz=130,slow=34							
NOA	**NORSAR Array B**	**67.42**	**20**	P		**P**	**09 14 25.3**	**+1.7**
	0.5nm,0.8s,baz=222,slow=6.2,SNR=3.5							
NOA				LR		LR	09 40 07.8	
	comp=Z,42nm,19.7s,baz=215,slow=33							
	0.5nm,0.8s							
AKASG	**Malin Array Be**	**69.71**	**35**	P		**P**	**09 14 38.4**	**+0.4**
	1.8nm,0.7s,baz=244,slow=6.2,SNR=4.5							
	1.8nm,0.7s							
TXAR	**Lajitas Array**	**76.47**	**300**	P		**P**	**09 15 17.1**	**-1.6**
	0.5nm,0.9s,baz=98,slow=6.5,SNR=4.6							
	0.5nm,0.9s							
ARCES	**ARCESS Array B**	**77.45**	**17**	LR		LR	09 44 39.7	
	comp=Z,35nm,20.2s,baz=184,slow=32							
ANMO	**Albuquerque**	**79.48**	**305**	LR		LR	09 45 21.6	
	comp=Z,31nm,21.1s,baz=94,slow=32							
PDAR	**Pinedale Array**	**82.72**	**313**	P		**P**	**09 15 52.6**	**0.0**
	0.1nm,0.4s,baz=107,slow=4.8,SNR=2.1							
PDAR				LR		LR	09 49 38.4	
	comp=Z,23nm,19.8s,baz=109,slow=34							
	0.1nm,0.4s							
ELK	**Elko**	**86.83**	**311**	LR		LR	09 49 50.6	
	comp=Z,26nm,21.9s,baz=111,slow=32							
NVAR	**Mina Array Bea**	**89.17**	**308**	P		**P**	**09 16 24.2**	**-0.4**
	0.3nm,0.5s,baz=103,slow=3.1,SNR=3.9							
	0.3nm,0.5s							
YBH	**Yreka Blue Hor**	**92.45**	**312**	LR		LR	09 53 43.9	
	comp=Z,28nm,20.1s,baz=88,slow=33							
DLBC	**Dease Lake**	**95.26**	**329**	LR		LR	09 56 43.1	
	comp=Z,25nm,20.3s,baz=287,slow=34							
ASAR	**Alice Springs**	**151.69**	**145**	PKPbc		**PKiKP**	**09 23 24.9**	**+0.7**
	0.3nm,0.9s,baz=215,slow=1.1,SNR=4.1							

SOME ***15*** *09:17:07.0, 44°.63N×82°.22E, h25km*
NNC ***15*** *09:17:09.1±2.0, 44°.68N×82°.01E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=22.1km s-min=7.0km az=124.0*
ISC 15 09:17:05.0±1.9, 44°.68N±0°.06×82°.29E±0°.07, h6km±14km, n14, σ0s94/26, 2C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DJR	**Jarkent**	**1.82**	**260**	*e*P		**Pg**	**09 17 39.2**	**-0.7**
	2.5nm,0.1s							
DJR				*e*S		**Sg**	**09 18 02.8**	**-0.8**
	8.1nm,0.4s							
DJR	**Jarkent**	**1.82**	**260**	P		**Pg**	**09 17 39.1**	**-0.8**
	4.0nm,0.2s							
DJR				S		**Sg**	**09 18 02.8**	**-0.8**
	8.1nm,0.4s							
KTMS	**Ketmen**	**1.86**	**229**	*e*P		**Pb**	**09 17 39.5**	**-0.1**
	0.3nm,0.4s							
KTMS				*e*S		**Sb**	**09 18 03.0**	**-0.3**
	5.4nm,0.6s							
MK31	**Makanchi Array**	**2.11**	**0**	⇑Pn		**Pg**	**09 17 46.3**	**+0.8**
	1.4nm,0.4s,baz=191,slow=15,SNR=44							
MK31				⇑Sn		**Sg**	**09 18 14.1**	**+1.3**
	2.4nm,0.3s,baz=188,slow=26,SNR=21							
MAKZ	**Makanchi**	**2.14**	**354**	⇓Pn		**Pg**	**09 17 46.0**	**0.0**
	0.8nm,0.3s							
MAKZ				⇓Sn		**Sg**	**09 18 13.7**	**0.0**
	3.5nm,0.3s							
SHLS	**Shalkode**	**2.55**	**234**	*e*P		**Pn**	**09 17 47.8**	**+0.7**
	2.4nm,0.2s							
SHLS				*e*S		**Sn**	**09 18 17.0**	**-1.5**
	12nm,0.4s							
SHLS	**Shalkode**	**2.55**	**234**	Pg		**Pn**	**09 17 47.7**	**+0.7**
	3.7nm,0.2s							
SHLS				Lg		Lg	09 18 17.2	
	12nm,0.4s							
TDK	**Taldyqorghan**	**2.78**	**278**	*e*P		**Pb**	**09 17 54.9**	**-0.3**
	51nm,0.1s							
TDK				*e*S		**Sb**	**09 18 29.1**	**-0.4**
	58nm,0.7s							
UZB	**Uzynbulak**	**2.82**	**238**	*e*P		**Pb**	**09 17 56.8**	**+1.0**
	0.9nm,0.1s							
UZB				*e*S		**Sb**	**09 18 32.6**	**+2.0**
	2.0nm,0.2s							
UZB	**Uzynbulak**	**2.82**	**238**	Pg		**Pb**	**09 17 55.0**	**-0.9**
	1.3nm,0.3s							
UZB				Lg		Lg	09 18 29.8	
	1.5nm,0.2s							
KPKS	**Kokpek**	**2.87**	**246**	*e*P		**Pb**	**09 17 56.7**	**0.0**
	4.5nm,0.2s							
KPKS				*e*S		**Sb**	**09 18 32.3**	**+0.2**
	9.4nm,0.4s							
ARXS	**Arharly**	**3.23**	**263**	*e*P		**Pb**	**09 18 02.7**	**-0.1**
	2.4nm,0.5s							
ARXS				*e*S		**Sb**	**09 18 43.1**	**+0.7**
	3.2nm,0.5s							
SATY	**Saty**	**3.24**	**241**	*e*P		**Pb**	**09 18 03.7**	**+0.7**
	2.9nm,0.4s							
SATY				*e*S		**Sb**	**09 18 44.6**	**+1.8**
	7.6nm,0.3s							
ZSN	**Zaisan**	**3.30**	**32**	*e*P		**Pb**	**09 18 03.1**	**-0.9**
	2.8nm,0.3s							
ZSN				*e*S		**Sb**	**09 18 43.4**	**-1.0**
	2.8nm,0.6s							

IDC ***15*** *09:17:43.4±2.2, 41°.48S×85°.15E, h0km, mb3.9/5, mbtmp3.9/5, MS3.8/20, Error ellipse: s-maj=97.1km s-min=35.0km az=9.0*
ISC 15 09:17:45.0±0.9, 41°.4S±0°.2×85°.2E±0°.2, h10km, n29, σ0s35/7, mb4.0/5, MS3.8/20, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**23.61**	**83**	T		T	09 47 18.3	
	baz=245,slow=74,SNR=8.4							
H01W3	**Cape Leeuwin H**	**23.62**	**83**	T		T	09 47 18.9	
	baz=245,slow=74,SNR=6.7							
H01W1	**Cape Leeuwin H**	**23.63**	**83**	T		T	09 47 18.6	
	baz=245,slow=74,SNR=11							
MAW	**Mawson**	**28.89**	**198**	LR		LR	09 32 42.7	
	comp=Z,139nm,21.5s,baz=38,slow=31							
H08S2	**Diego Garcia H**	**35.49**	**338**	T		T	10 02 08.2	
	baz=164,slow=75,SNR=102							
H08S1	**Diego Garcia H**	**35.50**	**338**	T		T	10 02 08.2	
	baz=164,slow=75,SNR=87							
H08S3	**Diego Garcia H**	**35.51**	**338**	T		T	10 02 09.3	
	baz=164,slow=75,SNR=144							
LEM	**Lembang**	**39.83**	**36**	LR		LR	09 40 50.5	
	comp=Z,96nm,18.4s,baz=185,slow=35							
FITZ	**Fitzroy Crossi**	**41.61**	**68**	LR		LR	09 40 54.9	
	comp=Z,86nm,20.1s,baz=226,slow=33							
ASAR	**Alice Springs**	**44.12**	**82**	P		**P**	**09 25 53.9**	**+0.2**
	0.9nm,0.9s,baz=216,slow=7.8,SNR=5.0							
ASAR				PcP		**PcP**	**09 27 38.4**	**-0.4**
	0.5nm,0.9s,baz=241,slow=1.7,SNR=3.2							
ASAR				LR		LR	09 42 36.3	
	comp=Z,178nm,19.6s,baz=227,slow=34							
	0.9nm,0.9s							
PSI	**Prapat**	**45.77**	**19**	LR		LR	09 40 52.8	
	comp=Z,215nm,21.7s,baz=244,slow=30							
WRA	**Warramunga Arr**	**46.68**	**78**	P		**P**	**09 26 14.1**	**+0.1**
	1.1nm,0.8s,baz=234,slow=8.3,SNR=5.6							
	1.1nm,0.8s							
VNDA	**Vanda**	**47.06**	**163**	LR		LR	09 44 00.3	
	comp=Z,97nm,19.8s,baz=262,slow=34							
KAPI	**Kappang**	**47.62**	**50**	LR		LR	09 45 09.0	
	comp=Z,47nm,18.6s,baz=266,slow=34							
PALK	**Pallekele**	**48.65**	**354**	LR		LR	09 42 03.3	
	comp=Z,161nm,22.0s,baz=296,slow=30							
QSPA	**South Pole Qui**	**48.72**	**180**	LR		LR	09 44 55.2	
	comp=Z,69nm,20.0s,baz=324,slow=34							
SNAA	**Sanae**	**50.68**	**204**	LR		LR	09 46 34.1	
	comp=Z,78nm,18.2s,baz=84,slow=34							
SUR	**Sutherland**	**51.20**	**258**	LR		LR	09 43 09.5	
	comp=Z,122nm,20.4s,baz=48,slow=30							
VNA3	**Neumayer Olymp**	**52.89**	**204**	P		**P**	**09 27 00.7**	**0.0**
KMBO	**Kilima Mbogo**	**58.90**	**300**	LR		LR	09 49 43.9	
	comp=Z,42nm,18.1s,baz=164,slow=33							
DAV	**Davao City (W)**	**60.81**	**47**	LR		LR	09 51 02.5	
	comp=Z,38nm,21.2s,baz=324,slow=33							
CMAR	**Chiang Mai Arr**	**60.94**	**15**	LR		LR	09 52 43.8	
	comp=Z,27nm,18.2s,baz=150,slow=34							
WSAR	**Wadi Sarin**	**68.90**	**334**	LR		LR	09 53 19.3	
	comp=Z,97nm,18.9s,baz=154,slow=31							
PMSA	**Palmer Station**	**71.41**	**193**	LR		LR	10 00 03.4	
	comp=Z,119nm,19.4s,baz=114,slow=36							
MKAR	**Makanchi Array**	**87.89**	**358**	P		**P**	**09 30 34.6**	**+0.3**
	0.5nm,0.7s,baz=166,slow=3.0,SNR=6.2							
MKAR				LR		LR	10 07 32.3	
	comp=Z,58nm,20.1s,baz=246,slow=34							
	0.5nm,0.7s							
SONM	**Songino Array**	**90.86**	**14**	P		**P**	**09 30 48.0**	**-0.4**
	0.5nm,0.5s,baz=188,slow=5.5,SNR=3.1							
SONM				LR		LR	10 09 44.0	
	comp=Z,51nm,20.6s,baz=258,slow=34							
	0.5nm,0.5s							
TORD	**Torodi Ar. Bea**	**93.78**	**284**	P		**P**	**09 31 02.6**	**+0.1**
	1.1nm,1.0s,baz=133,slow=4.2,SNR=3.6							
	1.1nm,1.0s							
ZALV	**Zalesovo Beam**	**95.01**	**360**	LR		LR	10 11 17.2	
	comp=Z,57nm,21.6s,baz=246,slow=34							
KLR	**Kul'dur**	**99.15**	**29**	LR		LR	10 17 20.5	
	comp=Z,22nm,18.2s,baz=274,slow=36							

IDC 15 09:18:36.8±12.0, 0°.78N×28°.67W, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=255.6km s-min=56.1km az=34.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H10N3	**ASCENSION HYDR16.52**	**121**		T		T	09 39 33.1	
	baz=300,slow=74,SNR=80							
H10N2	**ASCENSION HYDR16.52**	**121**		T		T	09 39 32.6	
	baz=300,slow=74,SNR=78							
H10N1	**ASCENSION HYDR16.54**	**121**		T		T	09 39 33.7	
	baz=300,slow=74,SNR=115							
H10S3	**ASCENSION HYDR16.98**	**125**		T		T	09 40 11.0	
	baz=277,slow=74,SNR=44							
H10S2	**ASCENSION HYDR16.99**	**125**		T		T	09 40 10.6	
	baz=303,slow=74,SNR=15							
DBIC	**Dimbokro**	**24.46**	**76**	P		P	09 23 58.3	+0.5
	2.3nm,0.6s,baz=254,slow=9.9,SNR=5.6							
	2.3nm,0.6s							

TORD	**Torodi Ar. Bea**	**32.49**	**66**	P		P	09 25 09.0	-0.5
	0.7nm,0.5s,baz=254,slow=8.4,SNR=8.9							
	0.7nm,0.5s							
ESDC	**Sonseca Array**	**44.79**	**27**	P		P	09 26 52.7	+0.2
	1.4nm,1.1s,baz=219,slow=9.4,SNR=5.5							
	1.4nm,1.1s							
GERES	**GERESS Array B**	**60.12**	**31**	P		P	09 28 46.0	-0.2
	0.7nm,0.6s,baz=219,slow=6.2,SNR=7.7							
	0.7nm,0.6s							
AKASG	**Malin Array Be**	**69.61**	**35**	P		P	09 29 47.9	0.0
	1.0nm,0.5s,baz=245,slow=4.2,SNR=4.9							
	1.0nm,0.5s							

IDC ***15*** *09:36:55.5±2.1, 20°.53S×178°.08W, h563km±21km, mb3.2/9, mbtmp4.1/11, Error ellipse: s-maj=25.4km s-min=15.0km az=117.0*
NEIC ***15*** *09:36:56.1±1.1, 20°.2S±0°.2×178°.10W±0°.08, h564km±13km, mb4.1/14, Error ellipse: s-maj=26.0km s-min=9.4km az=165.0*
ISC 15 09:36:54.8±0.6, 20°.4S±0°.1×178°.14W±0°.10, h550km, n34, σ1s14/37, mb3.9/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.49**	**306**	P		**P**	**09 38 22.8**	**+2.2**
	16nm,0.3s,baz=249,slow=23,SNR=48							
MSVF	**Nonsavu**	**4.49**	**306**	P		**P**	**09 38 23.0**	**+2.4**
NIUE	**Niue**	**7.84**	**82**	P		**P**	**09 38 51.8**	**+0.7**
OUENC	**Ouen Island, N**	**14.13**	**259**	P		**P**	**09 39 56.0**	**+0.6**
URZ	**Urewera**	**18.25**	**192**	P		**P**	**09 40 34.6**	**-0.1**
	4.8nm,0.9s,baz=21,slow=14,SNR=3.0							
URZ				S		**S**	**09 43 30.8**	**-3.0**
	2.1nm,0.7s,baz=9.0,slow=19,SNR=1.6							
URZ	**Urewera**	**18.25**	**192**	P		**P**	**09 40 35.2**	**+0.4**
URZ				IAmb		IAmb	09 41 01.1	
	comp=Z,4.4nm,0.9s							
CTAO	**Charters Tower**	**33.37**	**264**	P		**P**	**09 42 48.3**	**+0.1**
COEN	**Coen**	**37.45**	**274**	P		**P**	**09 43 20.4**	**-1.7**
STKA	**Stephens Creek**	**37.71**	**244**	P		**P**	**09 43 23.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=85,slow=11,SNR=3.5							
	comp=Z,1.6nm,0.7s							
STKA	**Stephens Creek**	**37.71**	**244**	P		**P**	**09 43 24.5**	**+0.5**
BBOO	**Buckleboo**	**42.47**	**243**	P		**P**	**09 44 01.6**	**-0.5**
WR0	**Warramunga Arr**	**44.30**	**262**	P		**P**	**09 44 16.0**	**-0.4**
WR0				IAmb		IAmb	09 44 18.4	
	comp=Z,7.1nm,1.3s							
AS31	**Alice Springs**	**44.41**	**257**	P		**P**	**09 44 17.8**	**+0.5**
ASAR	**Alice Springs**	**44.41**	**257**	P		**P**	**09 44 17.7**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=97,slow=7.7,SNR=60							
ASAR				PcP		**PcP**	**09 45 49.2**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=103,slow=3.8,SNR=11							
	comp=Z,5.2nm,0.8s							
ASAR	**Alice Springs**	**44.41**	**257**	P		**P**	**09 44 17.1**	**-0.3**
WB0	**Warramunga Arr**	**44.46**	**262**	P		**P**	**09 44 17.6**	**-0.2**
WB0				IAmb		IAmb	09 44 19.8	
	comp=Z,12nm,1.4s							
WB2	**Warramunga Arr**	**44.48**	**262**	P		**P**	**09 44 17.9**	**+0.1**
WB2				IAmb		IAmb	09 44 18.3	
	comp=Z,7.8nm,1.1s							
WRAB	**Tennant Creek**	**44.48**	**262**	P		**P**	**09 44 17.9**	**0.0**
WRAB				IAmb		IAmb	09 44 35.5	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**44.49**	**262**	P		**P**	**09 44 17.5**	**-0.4**
	comp=Z,2.7nm,0.5s,baz=96,slow=7.6,SNR=111							
WRA				PcP		**PcP**	**09 45 49.5**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=96,slow=3.0,SNR=2.0							
	comp=Z,2.7nm,0.5s							
WRA	**Warramunga Arr**	**44.49**	**262**	P		**P**	**09 44 18.0**	**+0.1**
KNRA	**Kununurra**	**50.54**	**266**	P		**P**	**09 45 03.5**	**+0.3**
KNRA				IAmb		IAmb	09 45 16.2	
	comp=Z,21nm,1.4s							
MBWA	**Marble Bar**	**57.75**	**257**	P		**P**	**09 45 54.2**	**+0.3**
MBWA				IAmb		IAmb	09 46 12.5	
	comp=Z,3.7nm,1.1s							
QSPA	**South Pole Qui**	**69.65**	**180**	P		**P**	**09 47 11.2**	**+2.1**
QSPA				IAmb		IAmb	09 47 18.0	
	comp=Z,2.8nm,1.3s							
MJAR	**Matsushiro Arr**	**70.07**	**324**	P		**P**	**09 47 11.1**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=147,slow=7.5,SNR=2.9							
	comp=Z,0.6nm,0.5s							
SEY	**Seymchan**	**86.27**	**347**	P		**P**	**09 48 36.9**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=151,slow=13,SNR=2.1							
	comp=Z,0.9nm,0.5s							
TXAR	**Lajitas Array**	**87.12**	**57**	P		**P**	**09 48 44.1**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=227,slow=6.1,SNR=4.7							
	comp=Z,0.5nm,0.9s							
ILAR	**Eielson Array**	**88.26**	**13**	P		**P**	**09 48 46.1**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=213,slow=5.0,SNR=5.0							
	comp=Z,0.8nm,0.9s							
PDAR	**Pinedale Array**	**88.99**	**43**	P		**P**	**09 48 51.4**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=223,slow=3.7,SNR=4.0							
	comp=Z,0.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**

YKA	**Yellowknife Ar**	**40.85 316**	LR	LR	10 31 22.3		
	comp=Z,39nm,19.9s,baz=332,slow=33						
SJG	**San Juan**	**42.27 227**	LR	LR	10 32 13.4		
	comp=Z,25nm,21.3s,baz=84,slow=33						
IDI	**Anoyia**	**45.20 88**	LR	LR	10 37 06.9		
	comp=Z,24nm,19.9s,baz=76,slow=37						
BRTR	**Keskin Array B**	**47.54 77**	P	**P**	**10 17 36.0**	**+0.2**	
	1.0nm,0.8s,baz=312,slow=9.5,SNR=2.2						
BRTR			LR	LR	10 39 13.9		
	comp=Z,27nm,18.4s,baz=296,slow=38						
	1.0nm,0.8s						
PDAR	**Pinedale Array**	**48.80 290**	P	**P**	**10 17 45.2**	**-0.3**	
	0.1nm,0.3s,baz=58,slow=6.7,SNR=2.1						
PDAR			LR	LR	10 37 16.3		
	comp=Z,38nm,19.4s,baz=95,slow=35						
	0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**49.33 130**	P	**P**	**10 17 49.7**	**+0.2**	
	0.6nm,1.0s,baz=325,slow=7.4,SNR=2.6						
	0.6nm,1.0s						
NEW	**Newport**	**49.54 300**	LR	LR	10 37 11.1		
	comp=Z,60nm,18.6s,baz=62,slow=34						
KBZ	**Khabaz**	**50.32 67**	LR	LR	10 40 49.8		
	comp=Z,27nm,18.1s,baz=284,slow=38						
ILAR	**Eielson Array**	**51.47 329**	P	**P**	**10 18 05.6**	**+0.4**	
	0.5nm,1.0s,baz=50,slow=7.2,SNR=3.2						
ILAR			LR	LR	10 38 45.2		
	comp=Z,42nm,18.8s,baz=282,slow=35						
	0.5nm,1.0s						
ANMO	**Albuquerque**	**52.15 280**	LR	LR	10 39 37.6		
	comp=Z,76nm,19.8s,baz=46,slow=35						
DBIC	**Dimbokro**	**52.33 141**	LR	LR	10 37 43.5		
	comp=Z,38nm,21.1s,baz=331,slow=33						
BBB	**Bella Bella**	**52.55 309**	LR	LR	10 39 35.2		
	comp=Z,43nm,19.2s,baz=298,slow=35						
ELK	**Elko**	**53.35 291**	LR	LR	10 39 17.2		
	comp=Z,42nm,19.6s,baz=38,slow=34						
GNI	**Garni**	**53.70 69**	LR	LR	10 43 04.0		
	comp=Z,20nm,18.5s,baz=301,slow=38						
AKTO	**Aktyubinsk**	**53.85 52**	LR	LR	10 41 44.5		
	comp=Z,12nm,20.8s,baz=318,slow=36						
TXAR	**Lajitas Array**	**54.41 273**	LR	LR	10 42 20.8		
	comp=Z,36nm,19.0s,baz=102,slow=37						
NVAR	**Mina Array Bea**	**56.66 291**	LR	LR	10 41 56.1		
	comp=Z,41nm,18.1s,baz=226,slow=35						
YBH	**Yreka Blue Hor**	**56.81 297**	LR	LR	10 42 17.9		
	comp=Z,53nm,18.8s,baz=82,slow=35						
PFO	**Pinyon Flats O**	**58.98 286**	LR	LR	10 41 36.5		
	comp=Z,30nm,20.1s,baz=158,slow=33						
LPIG	**La Paz**	**62.26 274**	LR	LR	10 46 59.3		
	comp=Z,46nm,18.1s,baz=4.5,slow=37						
AAK	**Ala-Archa**	**67.28 49**	LR	LR	10 49 02.5		
	comp=Z,37nm,18.1s,baz=246,slow=36						
MKAR	**Makanchi Array**	**67.30 41**	P	**P**	**10 19 55.1**	**+0.3**	
	0.3nm,0.6s,baz=0.0,slow=7.3,SNR=3.5						
MKAR			LR	LR	10 48 47.4		
	comp=Z,26nm,18.2s,baz=291,slow=36						
	0.3nm,0.6s						
KMBO	**Kilima Mbogo**	**80.39 105**	LR	LR	11 00 01.6		
	comp=Z,33nm,18.0s,baz=90,slow=38						
TSUM	**Tsumeb**	**85.06 131**	LR	LR	10 58 06.0		
	comp=Z,19nm,18.6s,baz=149,slow=35						
WRA	**Warramunga Arr**	**146.12 18**	PKPbc	**PKPab**	**10 28 40.6**	**-0.4**	
	1.2nm,1.0s,baz=339,slow=3.2,SNR=5.4						
ASAR	**Alice Springs**	**149.66 20**	PKPbc	**PKPbc**	**10 28 50.0**	**0.0**	
	0.6nm,1.0s,baz=352,slow=2.5,SNR=5.5						

*IDC **15** 10:27:10.4±2.1,7.2°20S×129.9°90E,h112km±18km,mb3.4/1, mbtmp3.8/6,Error ellipse: s-maj=27.5km s-min=19.3km az=110.0*

ISC 15 10:27:08.5±0.9,7.2°22S±0.0°06×130.1°1E±0.0°1,h104km,n6, σ3.928/12,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.43**	**11**	P	**Pn**	**10 28 42.0**	**+1.3**
	8.5nm,0.2s,baz=197,slow=19,SNR=20						
SIJI				S	**Sn**	**10 29 47.3**	**-5.3**
	8.1nm,0.5s,baz=268,slow=23,SNR=1.9						
BATI	**Baumata**	**6.98**	**244**	P	**Pn**	**10 28 49.8**	**+1.6**
	32nm,0.5s,baz=241,slow=21,SNR=1.6						
BATI				S	**Sn**	**10 30 05.2**	**-1.0**
	41nm,0.6s,baz=298,slow=22,SNR=2.2						
FITZ	**Fitzroy Crossi**	**11.63**	**201**	P	**Pn**	**10 29 51.7**	**+0.4**
	1.1nm,0.3s,baz=30,slow=12,SNR=25						
FITZ				S	**Sn**	**10 31 53.1**	**-6.2**
	2.5nm,0.5s,baz=34,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**13.31**	**162**	P	**Pn**	**10 30 15.9**	**+2.5**
	0.3nm,0.4s,baz=339,slow=14,SNR=18						
WRA				S	**Sn**	**10 32 36.8**	**-3.2**
	2.2nm,0.6s,baz=337,slow=22,SNR=15						
ASAR	**Alice Springs**	**16.76**	**168**	P	**P**	**10 31 00.1**	**+2.5**
	0.4nm,0.6s,baz=349,slow=14,SNR=10						
ASAR				S	**Sn**	**10 34 01.9**	**-1.5**
	0.4nm,0.5s,baz=350,slow=26,SNR=8.1						
ASAR				ScP	**ScP**	**10 39 04.7**	**-0.5**
	0.1nm,0.5s,baz=358,slow=2.6,SNR=4.2						
MKAR	**Makanchi Array**	**68.44**	**327**	P	**P**	**10 37 59.7**	**+0.4**
	0.3nm,0.3s,baz=125,slow=7.7,SNR=6.3						
	0.3nm,0.3s						

WEL 15 10:44:24.9±1.1,35°S±15°×178°0E±1°7,h221km±21km, M3.5/12,ML3.8/13,MLv3.5/12,Error ellipse: s-maj=0.0km s-min=0.0km az=125.8,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.71**	**202**	P	Pn	10 45 11.9	-0.5
MXZ				S	S	10 45 48.3	-1.2
WMGZ	**Waiomatatini S**	**2.92**	**199**	P	Pn	10 45 15.1	+0.4
WMGZ				S	S	10 45 55.3	+1.7
HAZ	**Te Kaha**	**3.07**	**208**	P	Pn	10 45 16.2	-0.1
HAZ				S	S	10 45 57.8	+1.1
PKGZ	**Pakihiroa**	**3.08**	**203**	P	Pn	10 45 16.4	-0.2
PKGZ				S	S	10 45 57.5	+0.3
PUZ	**Puketiti**	**3.20**	**199**	P	Pn	10 45 17.8	-0.1
PUZ				S	S	10 45 59.8	+0.3
RUGZ	**Raukumara Rang**	**3.29**	**208**	P	Pn	10 45 19.1	0.0
TWGZ	**Tauwhareparae**	**3.38**	**202**	P	Pn	10 45 20.5	+0.5
TWGZ				S	S	10 46 04.7	+1.4
KUZ	**Kuaotunu**	**3.58**	**241**	P	Pn	10 45 22.9	+0.7
CNGZ	**Carnagh Statio**	**3.60**	**198**	P	Pn	10 45 23.2	+0.6
TKGZ	**Te Karaka**	**3.66**	**202**	P	Pn	10 45 23.2	0.0
TKGZ				S	S	10 46 10.1	+1.0
MWZ	**Matawai**	**3.67**	**206**	P	Pn	10 45 23.6	+0.1
MWZ				S	S	10 46 10.3	+0.8
MARZ	**Manawahe**	**3.76**	**218**	P	Pn	10 45 25.2	+0.7
URZ	**Urewera**	**3.77**	**211**	P	Pn	10 45 24.3	-0.3
URZ				S	S	10 46 10.9	-0.7
RIGZ	**Rimuhau**	**3.93**	**202**	P	Pn	10 45 26.5	-0.1
RIGZ				S	S	10 46 16.1	+1.0
MUGZ	**Murupara**	**4.10**	**213**	P	Pn	10 45 28.7	0.0
MUGZ				S	S	10 46 19.9	+1.1
SNGZ	**Shannon Statio**	**4.14**	**205**	P	Pn	10 45 29.3	+0.2
SNGZ				S	S	10 46 20.1	+0.4
MTHZ	**Maungataniwha**	**4.39**	**209**	P	Pn	10 45 31.9	-0.3
ARHZ	**Aropaoanui**	**4.69**	**206**	P	Pn	10 45 35.4	-0.4
KWHZ	**Kaweka Forest**	**5.05**	**209**	P	Pn	10 45 39.4	-0.9
SNVZ	**South Ngauruho**	**5.20**	**216**	P	Pn	10 45 42.2	-0.3

IDC 15 10:45:16.8±1.7,0.2°42S×124.7°6E,h0km,mb3.8/4, mbtmp3.9/4,MS2.9/1,Error ellipse: s-maj=160.6km s-min=26.0km az=63.0,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**7.49**	**6**	LR	LR	10 50 10.7	
	comp=Z,78nm,18.3s,baz=177,slow=39						
WRA	**Warramunga Arr**	**21.55**	**155**	P	P	10 50 06.8	-1.2
	1.9nm,0.5s,baz=332,slow=11,SNR=28						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**24.75**	**160**	P	P	10 50 41.0	+0.7
	1.5nm,0.7s,baz=343,slow=7.5,SNR=21						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**35.10**	**155**	P	P	10 52 12.2	+0.1
	3.2nm,0.7s,baz=315,slow=6.9,SNR=6.0						
	3.2nm,0.7s						
MKAR	**Makanchi Array**	**59.90**	**328**	P	P	10 55 24.5	-0.2
	0.3nm,0.4s,baz=121,slow=7.4,SNR=3.6						
	0.3nm,0.4s						

*NEIC **15** 10:51:23.1±1.6,23.9°S±0.1°×179.5°W±0.1°,h517km±13km, mb4.5/27,Error ellipse: s-maj=21.3km s-min=8.8km az=221.0*

*IDC **15** 10:51:24.9±2.0,23.8°4S×179.7°6W,h526km±23km, mb3.4/12,mbtmp4.2/14,Error ellipse: s-maj=18.1km s-min=16.0km az=133.0*

*NOU **15** 10:51:24.5,23.8°1S×179.5°3W,h539km,mb4.3/18,South of Fiji Islands*

ISC 15 10:51:22.7±0.5,23.8°6S±0.0°7×179.5°8W±0.0°8,h512km, n71,σ1.983/74,mb4.3/25,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.49**	**340**	P	**P**	**10 53 05.9**	**+1.5**
	6.0nm,0.3s,baz=236,slow=23,SNR=14						
MSVF	**Nonsavu**	**6.49**	**340**	P	**P**	**10 53 06.3**	**+1.9**
NIUE	**Niue**	**10.17**	**64**	P	**P**	**10 53 43.2**	**+1.1**
MARNC	**Mare, Loyalty**	**11.68**	**279**	P	**P**	**10 53 58.3**	**+0.3**
MARNC	**Mare, Loyalty**	**11.68**	**279**	P	**P**	**10 53 59.3**	**+1.4**
PINNC	**Pines Island,**	**11.99**	**273**	P	**P**	**10 54 03.0**	**+1.8**
AFI	**Afiamalu**	**12.35**	**38**	P	**P**	**10 54 03.2**	**-1.9**
	21nm,0.4s,baz=162,slow=0.7,SNR=8.2						
AFI				S	**S**	**10 56 11.8**	**-7.1**
	15nm,0.7s,baz=72,slow=11,SNR=1.3						
AFI	**Afiamalu**	**12.35**	**38**	P	**P**	**10 54 03.4**	**-1.7**
OUZ	**Omahuta**	**12.78**	**206**	P	**P**	**10 54 12.3**	**+3.1**
DZM	**Mont Dzumac**	**13.00**	**275**	P	**P**	**10 54 12.8**	**+0.9**
	5.2nm,0.7s,baz=85,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**13.00**	**275**	P	**P**	**10 54 14.4**	**+2.5**
URZ	**Urewera**	**14.63**	**190**	P	**P**	**10 54 25.3**	**-3.3**
	5.7nm,0.4s,baz=354,slow=19,SNR=3.9						
URZ				S	**S**	**10 56 56.2**	**-5.7**
	3.3nm,0.6s,baz=66,slow=0.6,SNR=2.5						
URZ	**Urewera**	**14.63**	**190**	P	**P**	**10 54 26.1**	**-2.5**
URZ	**Urewera**	**14.63**	**190**	P	**P**	**10 54 30.6**	**+2.0**
BKZ	**Black Stump Fm**	**15.62**	**191**	P	**P**	**10 54 41.8**	**+2.8**
BFZ	**Birch Farm**	**17.13**	**191**	P	**P**	**10 54 52.5**	**-1.8**
BFZ	**Birch Farm**	**17.13**	**191**	P	**P**	**10 54 54.7**	**+0.4**
MSWZ	**Moikau Station**	**18.03**	**193**	P	**P**	**10 55 00.9**	**-1.7**
QRZ	**Quartz Range**	**18.16**	**200**	P	**P**	**10 55 04.5**	**+0.7**
QRZ	**Quartz Range**	**18.16**	**200**	P	**P**	**10 55 04.7**	**+0.9**
NNZ	**Nelson**	**18.28**	**197**	P	**P**	**10 55 04.1**	**-0.7**
NNZ				IAmb	IAmb	10 55 12.7	
	comp=Z,25nm,1.0s						
TUWZ	**Tuamarina**	**18.34**	**196**	P	**P**	**10 55 05.7**	**+0.4**
THZ	**Tophouse**	**18.92**	**198**	P	**P**	**10 55 11.3**	**+0.5**
KHZ	**Kahutara**	**19.36**	**196**	P	**P**	**10 55 14.3**	**-0.4**
OXZ	**Oxford**	**20.61**	**198**	P	**P**	**10 55 26.3**	**+0.3**
OXZ				IAmb	IAmb	10 55 26.8	
	comp=Z,16nm,0.7s						
RPZ	**Rata Peaks**	**21.25**	**199**	P	**P**	**10 55 32.8**	**+1.0**
	comp=Z,8.2nm,0.4s,baz=43,slow=4.2,SNR=17						
	comp=Z,8.2nm,0.4s						
RPZ	**Rata Peaks**	**21.25**	**199**	P	**P**	**10 55 33.0**	**+1.2**
ODZ	**Otahua Downs**	**22.58**	**198**	P	**P**	**10 55 44.9**	**+1.1**
HNR	**Honiara**	**24.25**	**303**	P	**P**	**10 55 59.8**	**+0.7**
EIDS	**Eidsvold**	**26.69**	**261**	P	**P**	**10 56 20.9**	**+0.4**
EIDS				IAmb	IAmb	10 56 37.1	
	comp=Z,23nm,1.2s						
CAN	**Canberra**	**29.49**	**240**	P	**P**	**10 56 44.9**	**-0.1**
CAN				IAmb	IAmb	10 57 18.2	
	comp=Z,13nm,1.3s						
CMSA	**Cobar Meteorol**	**31.59**	**248**	P	**P**	**10 57 03.5**	**+0.5**
CTA	**Charters Tower**	**31.86**	**270**	P	**P**	**10 57 06.0**	**+0.5**
	comp=Z,17nm,0.4s,baz=93,slow=11,SNR=32						
	comp=Z,17nm,0.4s						
CTA	**Charters Tower**	**31.86**	**270**	P	**P**	**10 57 06.2**	**+0.7**
CTAO	**Charters Tower**	**31.86**	**270**	P	**P**	**10 57 06.2**	**+0.7**
CTAO	**Charters Tower**	**31.86**	**270**	P	**P**	**10 57 06.2**	**+0.7**
TOO	**Toolangi**	**32.79**	**237**	P	**P**	**10 57 13.6**	**+0.3**
TOO				IAmb	IAmb	10 57 30.3	
	comp=Z,20nm,1.4s						
MTSU	**Mount Surprise**	**34.12**	**273**	P	**P**	**10 57 25.3**	**+0.6**
STKA	**Stephens Creek**	**35.09**	**248**	P	**P**	**10 57 32.7**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=105,slow=12,SNR=5.4						
	comp=Z,1.7nm,0.5s						
INKA	**Innaminka**	**35.82**	**255**	P	**P**	**10 57 39.8**	**+1.0**
COEN	**Coen**	**36.49**	**279**	P	**P**	**10 57 44.8**	**+0.3**
COEN				IAmb	IAmb	10 58 26.1	
	comp=Z,21nm,1.3s						
COEN	**Coen**	**36.49**	**279**	P	**P**	**10 57 44.9**	**+0.5**
QIS	**Mount Isa**	**37.84**	**267**	P	**P**	**10 57 55.2**	**-0.3**
BBOO	**Buckleboo**	**39.81**	**247**	P	**P**	**10 58 10.5**	**-0.8**
BBOO				IAmb	IAmb	10 58 37.9	
	comp=Z,27nm,1.5s						
AS31	**Alice Springs**	**42.42**	**260**	P	**P**	**10 58 32.0**	**-0.2**
ASAR	**Alice Springs**	**42.42**	**260**	P	**P**	**10 58 32.0**	**-0.2**
	comp=Z,6.4nm,0.7s,baz=92,slow=6.7,SNR=114						
ASAR				S	**S**	**11 04 09.8**	**-6.9**
	comp=Z,0.8nm,0.9s,baz=101,slow=14,SNR=3.8						
	comp=Z,6.4nm,0.7s						
ASAR	**Alice Springs**	**42.42**	**260**	P	**P**	**10 58 31.5**	**-0.8**
WR0	**Warramunga Arr**	**42.60**	**266**	P	**P**	**10 58 32.9**	**-0.8**
WR0				IAmb	IAmb	10 58 33.4	
	comp=Z,6.2nm,0.8s						
WB2	**Warramunga Arr**	**42.78**	**266**	P	**P**	**10 58 34.4**	**-0.7**
WRAB	**Tennant Creek**	**42.78**	**266**	P	**P**	**10 58 34.4**	**-0.7**
WRAB				IAmb	IAmb	10 58 35.0	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	**42.78**	**266**	P	**P**	**10 58 34.4**	**-0.7**
WB0				IAmb	IAmb	10 58 35.0	
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**42.79**	**266**	P	**P**	**10 58 34.4**	**-0.8**
	comp=Z,11nm,0.5s,baz=96,slow=8.3,SNR=713						
WRA				S	S	11 04 11.6	-10
	comp=Z,0.8nm,1.1s,baz=98,slow=15,SNR=1.3						
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**42.79**	**266**	P	**P**	**10 58 33.3**	**-1.9**
FORT	**Forrest**	**46.68**	**250**	P	**P**	**10 59 04.3**	**-0.7**
KNRA	**Kununurra**	**49.07**	**270**	P	**P**	**10 59 22.9**	**-0.1**
KNRA				IAmb	IAmb	10 59 23.1	
	comp=Z,16nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.21**	**265**	P	**P**	**10 59 38.7**	**-0.1**
	comp=Z,5.4nm,0.6s,baz=121,slow=4.3,SNR=22						
	comp=Z,5.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.21**	**265**	P	**P**	**10 59 38.7**	**-0.1**
VNDA	**Vanda**	**54.45**	**185**	P	**P**	**11 00 02.6**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=4.7,slow=4.6,SNR=5.2						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**54.45**	**185**	P	**P**	**11 00 03.0**	**+2.1**
PSA00	**Pilbara Seismi**	**55.55**	**259**	P	**P**	**11 00 08.1**	**-1.5**
MBWA	**Marble Bar**	**55.76**	**260**	P	**P**	**11 00 10.1**	**-1.0**
MBWA				IAmb	IAmb	11 00 11.1	
	comp=Z,14nm,0.9s						
MORW	**Morawa**	**57.25**	**250**	P	**P**	**11 00 20.7**	**-0.5**
MORW				IAmb	IAmb	11 00 50.6	
	comp=Z,46nm,1.5s						
TOLI2	**Tolitoli**	**62.94**	**284**	P	**P**	**11 00 58.5**	**-0.7**
TOLI2				IAmb	IAmb	11 01 00.1	
	comp=Z,7.5nm,0.8s						
QSPA	**South Pole Qui**	**66.22**	**180**	P	**P**	**11 01 20.9**	**+1.6**
QSPA				IAmb	IAmb	11 01 22.1	
	comp=Z,9.6nm,1.5s						
BELA	**Belgrano 2**	**76.42**	**173**	P	**P**	**11 02 19.4**	**+0.6**
MAW	**Mawson**	**77.92**	**200**	P	**P**	**11 02 26.7**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=308,slow=16,SNR=2.2						
	comp=Z,1.2nm,0.6s						
KSRS	**Korea Array**	**78.47**	**320**	P	**P**	**11 02 31.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=116,slow=5.7,SNR=2.2						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**84.46**	**44**	P	**P**	**11 03 02.6**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=226,slow=8.3,SNR=3.8						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**90.09**	**58**	P	**P**	**11 03 29.6**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=208,slow=6.7,SNR=8.1						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**92.40**	**44**	P	**P**	**11 03 39.7**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=216,slow=4.8,SNR=3.5						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**169.27**	**187**	PKPab	**PKPab**	**11 11 47.8**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=190,slow=3.6,SNR=3.0						

*TUL **15** 11:12:14.9±1.1,36.7°42N±0.0°01×97.7°36W±0.0°02,h8km±6km, ML3.1,mb_Lg3.1/89(NEIC),Error ellipse: s-maj=2.0km s-min=1.5km az=45.0*

*NEIC **15** 11:12:15.0±1.1,36.7°41N±0.0°01×97.7°37W±0.0°02,h4km±5km, Error ellipse: s-maj=2.0km s-min=1.6km az=46.0*

*ANF **15** 11:12:15.2±0.2,36.7°44N×97.7°35W,h8km,ML3.7/12,Error ellipse: s-maj=2.6km s-min=2.4km az=17.0*

ISC 15 11:12:14.5±1.1,36.7°41N±0.0°02×97.7°37W±0.0°02,h2km±10km, n106,σ0.972/98,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.50**	**281**	Pg	**Pg**	**11 12 24.9**	**+0.8**
CROK					**Sg**	**11 12 32.0**	**+1.3**
QUOK	**Quay**			Pg	**Pg**	**11 12 26.3**	**+0.6**
QUOK				Sg	**Sg**	**11 12 34.3**	**+0.9**
GC02	**Grant County #**	**0.59**	**318**	Pg	**Pg**	**11 12 26.3**	**+0.5**
GC02				Sg	**Sg**	**11 12 34.0**	**+0.6**
KAN13	**South Haven SW**	**0.61**	**352**	Pg	**Pg**	**11 12 26.6**	**+0.5**
KAN13				Sg	**Sg**	**11 12 35.1**	**+1.1**
OK029	**Liberty Lake**	**0.62**	**186**	Pg	**Pg**	**11 12 27.0**	**+0.7**
OK029				Sg	**Sg**	**11 12 34.5**	**+0.2**
OK031	**S. Brethren Rd**	**0.63**	**137**	Pg	**Pg**	**11 12 27.1**	**+0.6**
OK031				Sg	**Sg**	**11 12 35.1**	**+0.4**
OK030	**Cody Creek RV**	**0.68**	**135**	Pg	**Pg**	**11 12 28.0**	**+0.6**
OK030				Sg	**Sg**	**11 12 36.7**	**+0.5**
KAN17	**Caldwell West**	**0.71**	**334**	Pg	**Pg**	**11 12 28.4**	**+0.4**
KAN17				Sg	**Sg**	**11 12 37.9**	**+0.7**
KAN14	**Manchester OK**	**0.72**	**319**	Pg	**Pg**	**11 12 28.8**	**+0.4**
KAN14				Sg	**Sg**	**11 12 38.7**	**+1.0**
BCOK	**Bluff Creek, N**	**0.78**	**194**	Pg	**Pg**	**11 12 29.9**	**+0.5**
BCOK				Sg	**Sg**	**11 12 40.2**	**+0.8**
KAN01	**Argonia South**	**0.80**	**337**	Pg	**Pg**	**11 12 30.1**	**+0.2**
KAN01				Sg	**Sg**	**11 12 41.1**	**+0.7**
KAN05	**Bluff City Nor**	**0.80**	**330**		**Pg**	**11 12 30.3**	**+0.4**
KAN05				Sg	**Sg**	**11 12 41.6**	**+1.3**
KS20	**Mayfield South**	**0.83**	**350**	Pg	**Pg**	**11 12 30.5**	**+0.1**
OK025	**Westminster Rd**	**0.83**	**178**	Pg	**Pg**	**11 12 30.8**	**+0.4**
OK025				Sg	**Sg**	**11 12 41.8**	**+0.7**
T35A	**Sooner Cattle**	**0.85**	**54**		**Pg**	**11 12 30.9**	**0.0**
T35B	**Sooner Cattle**	**0.85**	**54**	P	**Pg**	**11 12 31.0**	**+0.1**
	baz=234,SNR=106						
T35B				S	**Sg**	**11 12 42.2**	**+0.2**
	baz=234						
KS21	**Milan North St**	**0.90**	**345**	Pg	**Pg**	**11 12 31.8**	**0.0**
KS21				Sg	**Sg**	**11 12 44.1**	**+0.6**
DEOK	**Depew**	**0.91**	**129**	Pg	**Pg**	**11 12 32.0**	**+0.1**
DEOK				Sg	**Sg**	**11 12 44.2**	**+0.5**
KAN10	**Anthony SW Sta**	**0.92**	**321**	Pg	**Pg**	**11 12 32.4**	**+0.3**
KAN10				Sg	**Sg**	**11 12 44.6**	**+0.6**
KAN06	**Argonia West S**	**0.92**	**335**		**Pg**	**11 12 32.4**	**+0.3**
KAN06				Sg	**Sg**	**11 12 44.2**	**0.0**
KAN08	**Anthony NE Sta**	**0.94**	**330**		**Pg**	**11 12 32.8**	**+0.2**
KAN08				Sg	**Sg**	**11 12 45.4**	**+0.6**
KAN16	**Harper SW Stat**	**0.98**	**326**		**Pg**	**11 12 33.5**	**+0.1**
KAN16				Sg	**Sg**	**11 12 46.6**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**1.01**	**183**	Pg	**Pg**	**11 12 33.9**	**+0.2**
OKCSW					**Sg**	**11 12 47.7**	**+0.9**
KAN12	**Harper NE Stat**	**1.02**	**331**		**Pg**	**11 12 34.1**	**+0.1**
KAN12				Sg	**Sg**	**11 12 47.0**	**-0.1**
OK038	**West end E0370**	**1.11**	**274**	Pg	**Pg**	**11 12 34.7**	**-1.0**
OK038				Sg	**Sg**	**11 12 49.4**	**-0.6**
OK035	**E0210 Rd and N**	**1.12**	**286**		**Pg**	**11 12 35.8**	**-0.1**
OK035				Sg	**Sg**	**11 12 50.8**	**+0.3**
FNO	**Franklin**	**1.15**	**181**		**Pg**	**11 12 36.5**	**-0.1**
NOKA	**Waynoka**	**1.28**	**280**	Pn	**Pn**	**11 12 38.5**	**-0.8**
NOKA				Sg	**Sb**	**11 12 55.3**	**-0.8**
CSTR	**Hydro, Custer**	**1.31**	**235**		**Pn**	**11 12 39.4**	**-0.4**
U32A	**Winter Ranch,**	**1.32**	**269**	Pn	**Pn**	**11 12 39.2**	**-0.6**
U32A	**Winter Ranch,**	**1.32**	**269**	P	**Pn**	**11 12 39.3**	**-0.6**
	baz=88,SNR=28						
U32A				S	**Sb**	**11 12 57.4**	**+0.2**
	baz=88						
TUL1	**Leonard**	**1.37**	**111**		**Pn**	**11 12 39.8**	**-0.8**
TUL1	**Leonard**	**1.37**	**111**	P	**Pn**	**11 12 39.9**	**-0.8**
	baz=292,SNR=66						
TUL1				S	**Sb**	**11 12 58.2**	**-0.7**
	baz=292						
ELIS	**Ellis County**	**1.69**	**259**		**Pn**	**11 12 45.6**	**+0.5**
RLO	**Rose Lookout**	**1.91**	**97**		**Pn**	**11 12 48.7**	**+0.7**
WMOK	**Wichita Mounta**	**2.03**	**215**		**Pn**	**11 12 50.4**	**+0.8**
WMOK				IAmb_Lg		11 13 21.2	
	comp=Z,72nm,0.9s						
WMOK	**Wichita Mounta**	**2.03**	**215**	P	**Pn**	**11 12 50.5**	**+0.8**
	baz=34,SNR=45						
WMOK				S	**Sb**	**11 13 17.1**	**-0.6**
	baz=34						
R32A	**Long Quarter,**	**2.27**	**332**		**Pn**	**11 12 54.5**	**+1.4**
R32A	**Long Quarter,**	**2.27**	**332**	S	**Sn**	**11 13 22.6**	**+0.9**
	baz=151						
U38A	**

K31A	**O'Neill** comp=Z,36nm,0.9s	**6.29**	**351**	IAmb_Lg		11 15 40.8	
S44A	**Carbondale** comp=Z,20nm,0.7s	**6.62**	**76**	IAmb_Lg		11 15 42.8	
Q24A	**Divide** comp=Z,19nm,0.8s	**6.67**	**295**	IAmb_Lg		11 15 50.7	
OXF	**Oxford** comp=Z,22nm,0.8s	**6.77**	**104**	IAmb_Lg		11 15 47.2	
W45A	**Hickory Valley** comp=Z,40nm,0.8s	**6.77**	**98**	IAmb_Lg		11 16 01.3	
Y45A	**Yeager Farm, C** comp=Z,35nm,1.0s	**6.90**	**109**	IAmb_Lg		11 16 01.6	
T45A	**Paducah** comp=Z,36nm,0.7s	**7.04**	**82**	IAmb_Lg		11 15 59.3	
ISCO	**Idaho Springs** comp=Z,16nm,0.8s	**7.33**	**300**	IAmb_Lg		11 16 15.5	
ECSD	**EROS Data Cent**	**7.34**	**4**	Pn	**Pn**	**11 14 01.8**	**-0.7**
L40A	**Anamosa** comp=Z,19nm,0.8s	**7.39**	**38**	IAmb_Lg		11 16 16.7	
HDIL	**Hopedale** comp=Z,31nm,0.7s	**7.56**	**54**	IAmb_Lg		11 16 13.2	
N23A	**Red Feather La** comp=Z,22nm,0.8s	**8.06**	**306**	IAmb_Lg		11 16 35.8	
Y22D	**IRIS PASSCAL I** comp=Z,16nm,0.7s	**8.15**	**256**	IAmb_Lg		11 16 56.9	
I37A	**Lemond, Waseca** comp=Z,21nm,0.7s	**8.18**	**21**	IAmb_Lg		11 16 50.4	
833A	**Chaparral WMA,** comp=Z,17nm,1.1s	**8.24**	**193**	IAmb_Lg		11 16 39.9	
JFWS	**Jewell Farm** comp=Z,22nm,0.8s	**8.50**	**38**	IAmb_Lg		11 16 54.8	
M44A	**Midewin, Midew** comp=Z,21nm,0.8s	**8.80**	**53**	IAmb_Lg		11 17 07.8	
I40A	**Norwalk** comp=Z,15nm,0.7s	**9.08**	**33**	IAmb_Lg		11 17 05.5	
K43A	**Burlington** comp=Z,22nm,0.8s	**9.39**	**45**	IAmb_Lg		11 17 18.3	
K22A	**Casper** comp=Z,16nm,0.9s	**9.42**	**314**	IAmb_Lg		11 17 27.4	
SPMN	**Marine on St.** comp=Z,11nm,0.8s	**9.46**	**20**	IAmb_Lg		11 17 24.1	
I42A	**Draeger Farm,** comp=Z,14nm,0.7s	**9.88**	**38**	IAmb_Lg		11 17 30.7	

TAP ***15*** *11:14:28.2,24.˚47N×121.˚88E,h18km,ML2.9,C*
JMA ***15*** *11:14:29.0±0.1,25.˚N±3.˚×12.˚2E±.˚,h55km,MV2.0/7, TAIWAN REGION*
ISC 15 11:14:27.2±0.9,24.˚52N±0.˚02×121.˚94E±0.˚02,h14km±6km, n77,σ0s76/141,7C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWC	**Suao** baz=352	**0.13**	**318**	⇑*i*	*P*		**Pb**	**11 14 32.5**	**+1.0**
TWC	baz=352			*i*	S		**Sb**	**11 14 35.0**	**+0.7**
EWUT	**Wuta** baz=256	**0.17**	**245**	*i*	P		**Pg**	**11 14 31.0**	**-0.2**
EWUT	baz=256				S		**Sg**	**11 14 33.3**	**-0.5**
ENA	**Nanau** baz=250	**0.20**	**245**	⇑*i*	*P*		**Pg**	**11 14 32.3**	**+0.5**
ENA	baz=250			*i*	S		**Sg**	**11 14 35.0**	**+0.1**
NDS	**Dongshan** baz=318	**0.24**	**300**		P		**Pb**	**11 14 32.9**	**-0.5**
NDS	baz=318				S		**Sg**	**11 14 36.4**	**+0.5**
EHP	**Heping Village** baz=216	**0.28**	**222**	*e*	*P*		**Pg**	**11 14 33.3**	**+0.2**
EHP	baz=216			*e*	S		**Sg**	**11 14 37.0**	**+0.1**
ILA	**Ilan** baz=335	**0.31**	**325**	⇑*i*	*P*		**Pn**	**11 14 35.7**	**-1.6**
ILA	baz=335				S		**Sb**	**11 14 40.5**	**+1.1**
TWE	**Neicheng** baz=324	**0.33**	**309**	⇑*i*	*P*		**Pb**	**11 14 35.4**	**+0.6**
TWE	baz=324				S		**Sb**	**11 14 39.8**	**-0.1**
EGS	baz=13	**0.33**	**358**	*e*	*P*		**Pn**	**11 14 36.7**	**-0.9**
EGS	baz=13				S		**Sn**	**11 14 41.6**	**-2.6**
NTC	**Toucheng** baz=354	**0.35**	**343**		P		**Pn**	**11 14 36.5**	**-1.5**
NTC	baz=354			*e*	S		**Sb**	**11 14 42.2**	**+1.4**
ENTT	**Nioudou** baz=301	**0.36**	**290**	⇑*i*	*P*		**Pg**	**11 14 34.8**	**+0.1**
ENTT	baz=301			*e*	S		**Sg**	**11 14 39.3**	**-0.4**
LATG	**Datong** baz=281	**0.38**	**273**	⇓*i*	*P*		**Pb**	**11 14 35.7**	**-0.2**
LATG	baz=281				S		**Sg**	**11 14 40.3**	**+0.2**
NDT	**Datong Townshi** baz=291	**0.40**	**283**	*e*	*P*		**Pb**	**11 14 36.4**	**+0.2**
NDT	baz=291			*e*	S		**Sb**	**11 14 41.5**	**-0.7**
FUSB	**Fushanzhiwuyua** baz=317	**0.41**	**307**	⇑*i*	*P*		**Pb**	**11 14 36.9**	**+0.7**
FUSB	baz=317			*e*	S		**Sb**	**11 14 42.2**	**-0.2**
ETL	**Fush Village** baz=216	**0.46**	**220**		P		**Pg**	**11 14 36.0**	**-0.4**
ETL	baz=216			*e*	S		**Sg**	**11 14 42.0**	**-0.5**
NACB	**Ninganchiao** baz=220	**0.47**	**223**	⇓	*P*		**Pg**	**11 14 35.9**	**-0.5**
NACB	baz=220				S		**Sg**	**11 14 41.5**	**-1.2**
TIPB	**Shuangxi** baz=3.0	**0.47**	**347**	*e*	*P*		**Pn**	**11 14 38.7**	**-0.9**
TIPB	baz=3.0			*e*	S		**Sb**	**11 14 45.2**	**+1.1**
NWLT	**Wulai** baz=306	**0.48**	**303**	*e*	*P*		**Pn**	**11 14 38.9**	**-0.8**
NWLT	baz=306			*e*	S		**Sb**	**11 14 44.2**	**-0.2**
TWB1	**Santiao Chiao** baz=5.0	**0.49**	**5**	*e*	*P*		**Pn**	**11 14 39.5**	**-0.4**
TWB1	baz=5.0			*e*	S		**Sn**	**11 14 46.1**	**-2.2**
NNSB	**Datong** baz=264	**0.52**	**261**	⇓*i*	*P*		**Pg**	**11 14 37.8**	**+0.3**
NNSB	baz=264				S		**Sg**	**11 14 44.0**	**-0.4**
NNSH	**Datong** baz=264	**0.52**	**261**	*e*	*P*		**Pg**	**11 14 37.8**	**+0.3**
NNSH	baz=264			*e*	S		**Sg**	**11 14 44.1**	**-0.3**
ETLH	**Xiulin Townshi** baz=233	**0.52**	**234**	*e*	*P*		**Pg**	**11 14 37.1**	**-0.4**
ETLH	baz=233			*e*	S		**Sg**	**11 14 43.0**	**-1.5**
NNS	**Nan Shan** baz=265	**0.53**	**262**	⇓*i*	*P*		**Pg**	**11 14 36.9**	**-0.7**
NNS	baz=265			*e*	S		**Sg**	**11 14 43.3**	**-1.4**
TWD	**Chiawan** baz=212	**0.54**	**216**	⇑	*P*		**Pg**	**11 14 37.4**	**-0.4**
TWD	baz=212			*e*	S		**Sg**	**11 14 44.1**	**-0.9**
YHNB	**Yeheng** baz=293	**0.54**	**287**		P		**Pb**	**11 14 38.9**	**+0.4**
YHNB	baz=293			*e*	S		**Sg**	**11 14 45.5**	**+0.4**
TWA	**Mucha** baz=321	**0.57**	**325**	*e*	*P*		**Pn**	**11 14 40.6**	**-0.3**
TWA	baz=321			*e*	S		**Sn**	**11 14 48.5**	**-1.7**
NWF	**Wu-fen Shan** baz=342	**0.57**	**345**	*e*	*P*		**Pn**	**11 14 41.1**	**0.0**
NWF	baz=342			*e*	S		**Sn**	**11 14 48.9**	**-1.5**
SXI1	**Grass Mountain** baz=5.0	**0.58**	**354**	*e*	*P*		**Pn**	**11 14 41.1**	**-0.1**
SXI1	baz=5.0			*e*	S		**Sn**	**11 14 49.2**	**-1.4**
NHDH	**Xindian Distri** baz=317	**0.59**	**320**	*e*	*P*		**Pn**	**11 14 40.4**	**-0.8**
NHDH	baz=317			*e*	S		**Sb**	**11 14 48.6**	**+1.1**
HWA	**Hwalien** baz=210	**0.62**	**210**	*e*	*P*		**Pb**	**11 14 39.9**	**+0.1**
TNOU	**National Taiwa** baz=345	**0.65**	**346**	*e*	*P*		**Pn**	**11 14 42.5**	**+0.5**
TNOU	baz=345				*e*S		**Sn**	**11 14 52.1**	**-0.1**
ETM	**Tongmen** baz=222	**0.68**	**217**	*e*	*P*		**Pg**	**11 14 40.1**	**-0.5**
ETM	baz=222			*e*	S		**Sg**	**11 14 49.3**	**-0.3**
FUSS	**Fushou** baz=249	**0.69**	**248**	*e*	*P*		**Pg**	**11 14 40.8**	**+0.1**
FUSS	baz=249			*e*	S		**Sg**	**11 14 49.3**	**-0.6**
YM01	**YM01** baz=337	**0.71**	**332**	*e*	*P*		**Pn**	**11 14 43.7**	**+0.7**
YM01	baz=337			*e*	S		**Sn**	**11 14 54.4**	**+0.6**
WHF	**Hehuan Shan** baz=239	**0.72**	**239**	*e*	*P*		**Pg**	**11 14 40.9**	**-0.4**
WHF	baz=239			*e*	S		**Sg**	**11 14 49.7**	**-1.2**
TWT	**Tachien** baz=244	**0.75**	**250**	*e*	*P*		**Pb**	**11 14 42.1**	**0.0**
TWT	baz=244			*e*	S		**Sg**	**11 14 51.4**	**-0.3**
TWS1	**Kuangyinshan** baz=321	**0.75**	**321**	*e*	*P*		**Pn**	**11 14 44.8**	**+1.3**
TWS1	baz=321			*e*	S		**Sn**	**11 14 56.0**	**+1.3**
NFF	**Wufeng Townshi** baz=283	**0.76**	**279**	*e*	*P*		**Pb**	**11 14 42.3**	**-0.1**
NFF	baz=283			*e*	S		**Sg**	**11 14 51.1**	**-1.0**
TDCB	**Techi** baz=247	**0.76**	**250**		P		**Pg**	**11 14 42.2**	**+0.2**
TDCB	baz=247			*e*	S		**Sg**	**11 14 51.2**	**-0.9**
TWY	**Chenhua** baz=343	**0.82**	**338**	*e*	*P*		**Pn**	**11 14 45.8**	**+1.4**
TWY	baz=343			*e*	S		**Sn**	**11 14 56.6**	**+0.3**
NCUH	**Zhongli** baz=316	**0.82**	**303**	*e*	*P*		**Pn**	**11 14 45.0**	**+0.6**
NCUH	baz=316			*e*	S		**Sn**	**11 14 57.3**	**+0.9**
CHGB	**Renai** baz=237	**0.83**	**237**	*e*	*P*		**Pg**	**11 14 43.2**	**-0.3**
CHGB	baz=237			*e*	S		**Sg**	**11 14 53.6**	**-0.9**
ESL	**Shilin** baz=217	**0.84**	**214**	*e*	*P*		**Pg**	**11 14 42.9**	**-0.6**
ESL	baz=217			*e*	S		**Sg**	**11 14 53.5**	**-1.0**
LIOB	**Emei** baz=282	**0.85**	**279**	*e*	*P*		**Pn**	**11 14 45.0**	**+0.1**
LIOB	baz=282			*e*	S		**Sb**	**11 14 55.6**	**+0.4**
NSTT	**Nanjuang** baz=273	**0.87**	**278**	*e*	*P*		**Pn**	**11 14 44.6**	**-0.5**
NSTT	baz=273			*e*	S		**Sb**	**11 14 55.7**	**+0.1**
OWD	**Renai** baz=238	**0.90**	**232**	*e*	*P*		**Pg**	**11 14 44.1**	**-0.5**
OWD	baz=238			*e*	S		**Sg**	**11 14 55.1**	**-1.2**
JYNG	**Yonagunijimaku**	**0.92**	**94**		P		**Pn**	**11 14 46.1**	**+0.4**
JYNG					S		**Sn**	**11 14 59.3**	**+0.6**
WUSB	**Renai** baz=235	**0.92**	**236**	*e*	*P*		**Pg**	**11 14 44.6**	**-0.4**
WUSB	baz=235			*e*	S		**Sg**	**11 14 55.8**	**-1.2**
WHP	**Taichung City** baz=257	**0.94**	**256**	*e*	*P*		**Pn**	**11 14 45.9**	**-0.2**
WHP	baz=257			*e*	S		**Sg**	**11 14 57.3**	**-0.4**
EGFH	**Guangfu** baz=221	**0.96**	**209**	*e*	*P*		**Pb**	**11 14 45.8**	**0.0**
EGFH	baz=221			*e*	S		**Sg**	**11 14 59.1**	**+0.6**
YOJ	**Yonaguni jima** baz=89	**0.97**	**93**		P		**Pn**	**11 14 46.5**	**-0.1**
YOJ	baz=89				S		**Sn**	**11 15 00.6**	**+0.5**
YOJ	**Yonaguni jima**	**0.97**	**93**		P		**Pn**	**11 14 46.9**	**+0.4**
YOJ					*e*S		**Sn**	**11 14 60.0**	**-0.2**
WCS	**Beigang Elemen** baz=244	**1.05**	**244**	*e*	*P*		**Pb**	**11 14 46.7**	**-0.5**
WCS	baz=244			*e*	S		**Sb**	**11 14 59.9**	**-0.8**
NMLH	**Miaoli** baz=273	**1.05**	**271**	*e*	*P*		**Pn**	**11 14 49.0**	**+1.4**
VWDT	**VWDT** baz=223	**1.05**	**224**	*e*	*P*		**Pb**	**11 14 47.3**	**0.0**
TWQ1	**Liyutan** baz=262	**1.08**	**261**	*e*	*P*		**Pn**	**11 14 49.0**	**+1.0**
TWQ1	baz=262			*e*	S		**Sn**	**11 15 03.3**	**+0.5**
HGSD	**Ruisui** baz=191	**1.12**	**205**	*e*	*P*		**Pg**	**11 14 49.4**	**+0.5**
SMLT	**Sun Moon Lake** baz=236	**1.14**	**237**	*e*	*P*		**Pb**	**11 14 49.0**	**+0.2**
EHY	**Hungye** baz=207	**1.15**	**210**	*e*	*P*		**Pn**	**11 14 49.0**	**0.0**
SSLB	**Suanglung** baz=236	**1.16**	**232**	*e*	*P*		**Pn**	**11 14 48.7**	**-0.4**
SSLB	baz=236			*e*	S		**Sn**	**11 15 05.2**	**+0.5**
YULB	**Yu-li** baz=215	**1.26**	**208**	*e*	*P*		**Pn**	**11 14 50.4**	**-0.2**
YULB	baz=215			*e*	S		**Sn**	**11 15 07.9**	**+0.5**
WHYT	**Xinyi Township** baz=230	**1.29**	**231**	*e*	*P*		**Pn**	**11 14 50.6**	**-0.3**
EYUL	**Yuli** baz=218	**1.29**	**206**	*e*	*P*		**Pn**	**11 14 50.6**	**-0.4**
FULB	**Fuli** baz=216	**1.44**	**205**	*e*	*P*		**Pb**	**11 14 54.1**	**+0.3**
ALS	**Alishan** baz=211	**1.44**	**226**	*e*	*P*		**Pg**	**11 14 55.0**	**-0.1**
WDLH	**Douliu** baz=237	**1.52**	**238**	*e*	*P*		**Pg**	**11 14 56.9**	**+0.4**
IRIF	**Iriomote-Funau**	**1.64**	**96**		P		**Pn**	**11 14 56.1**	**+0.4**
IRIF					S		**Sn**	**11 15 16.8**	**+0.2**
EDH	**Donghe** baz=185	**1.64**	**201**	*e*	*P*		**Pb**	**11 14 57.6**	**+0.3**
CHN4	**Tsaushan** baz=215	**1.69**	**227**	*e*	*P*		**Pb**	**11 14 57.8**	**-0.4**
CHN4	baz=215			*e*	S		**Sg**	**11 15 22.2**	**+0.5**
TPUB	**Ta-pu** baz=213	**1.71**	**225**	*e*	*P*		**Pb**	**11 14 59.2**	**+0.8**
TPUB	baz=213			*e*	S		**Sg**	**11 15 22.6**	**+0.4**
STYH	**Taoyuan** baz=218	**1.71**	**219**	*e*	*P*		**Pn**	**11 14 57.8**	**+1.2**
WTP	**Ta-pu** baz=225	**1.75**	**224**	*e*	*P*		**Pb**	**11 14 59.2**	**-0.1**
WTP	baz=225			*e*	S		**Sg**	**11 15 23.8**	**+0.1**
TWK	**Hsinying** baz=228	**1.82**	**227**	*e*	*P*		**Pb**	**11 15 00.5**	**+0.1**
TWK	baz=228			*e*	S		**Sg**	**11 15 25.8**	**0.0**
CHN1	**Nanshi** baz=226	**1.85**	**225**	*e*	*P*		**Pb**	**11 15 01.1**	**+0.2**
CHN1	baz=226			*e*	S		**Sg**	**11 15 26.8**	**-0.1**
WSL	**Shuilin Townsh** baz=251	**1.85**	**238**	*e*	*P*		**Pb**	**11 15 01.2**	**+0.3**
WSL	baz=251			*e*	S		**Sg**	**11 15 27.7**	**+0.8**
JKRS	**Kuro-shima**	**1.90**	**98**		P		**Pb**	**11 15 00.5**	**-1.3**
JKRS					S		**Sn**	**11 15 24.1**	**+1.0**
JIJ	**Ishigaki jima**	**2.01**	**94**		P		**Pn**	**11 15 01.6**	**+0.9**
JIJ					*e*S		**Sn**	**11 15 25.7**	**-0.1**
MASBT	**Mashibuluo** baz=214	**2.24**	**213**	*e*	*P*		**Pb**	**11 15 06.4**	**-1.2**
MASBT	baz=214			*e*	S		**Sb**	**11 15 35.6**	**+0.4**

KRNET ***15*** *11:16:25.8±0.1,39.˚31N×73.˚46E,mb3.3*
NNC ***15*** *11:16:38.3±4.3,39.˚79N×73.˚67E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=31.6km s-min=15.4km az=169.0*
SOME ***15*** *11:16:42.2,39.˚93N×73.˚68E,h10km*
ISC 15 11:16:27.9±1.6,39.˚37N±0.˚07×73.˚40E±0.˚05,h10km,n27, σ2s78/37,9C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh** baz=37	**1.25**	**338**	⇑*i*	*P*		**Pb**	**11 16 50.8**	**-0.8**
OHH	baz=37			⇑*i*	S		**Sg**	**11 17 09.2**	**+1.1**
GAR	**Garm** baz=64	**2.43**	**262**	⇓*e*	*P*		**Pb**	**11 17 09.3**	**-2.5**
GAR	baz=64			⇓*i*	S		**Sb**	**11 17 41.1**	**-0.7**
ARLS	**Aral** baz=14	**2.58**	**15**	⇑*i*	*P*		**Pb**	**11 17 11.5**	**-3.0**
ARLS	baz=14			⇑*i*	S		**Sb**	**11 17 44.8**	**-1.6**
UCH	**Uchtor** baz=15	**2.98**	**16**	⇓*i*	*P*		**Pb**	**11 17 17.3**	**-4.0**
UCH	baz=15			⇓*i*	S		**Sb**	**11 17 54.7**	**-3.2**
MRKS	**Merke** 5.3nm,0.4s	**3.37**	**358**	*e*	*P*		Pg	11 17 36.5	+3.9
MRKS	14nm,0.4s			*e*	S		**Sg**	**11 18 15.8**	**-0.5**
MRKS	**Merke** 5.3nm,0.4s	**3.37**	**358**		Pg		Pg	11 17 36.5	+3.9
MRKS	14nm,0.4s				Lg		Lg	11 18 15.8	
IUG	**Iuzhnay** 189nm,0.3s	**3.78**	**318**	*e*	*P*		Pg	11 17 46.9	+6.6
IUG	15nm,0.5s			*e*	S		**Sg**	**11 18 33.5**	**+4.3**
IUG	**Iuzhnay** 189nm,0.3s	**3.78**	**318**		Pg		Pg	11 17 46.9	+6.6
IUG	15nm,0.5s				Lg		Lg	11 18 33.5	
DZA	**Taraz** 65nm,0.3s	**3.85**	**337**	*e*	*P*		Pg	11 17 45.9	+4.2
DZA	449nm,0.1s			*e*	S		**Sg**	**11 18 31.8**	**+0.2**
DZA	**Taraz** 65nm,0.3s	**3.85**	**337**		Pg		Pg	11 17 45.9	+4.2
DZA	449nm,0.1s				Lg		Lg	11 18 31.8	
TKM2	**Tokmak 2** 2.0nm,0.7s	**3.91**	**24**	⇑	Pg		**Pb**	**11 17 37.4**	**+0.3**
TKM2	4.1nm,0.8s			⇓	Lg		Lg	11 18 25.3	
CHM	**Chimkent** 112nm,0.2s	**4.12**	**317**	*e*	*P*		Pg	11 17 53.4	+6.5
CHM	160nm,0.1s			*e*	S		**Sg**	**11 18 44.6**	**+4.4**
KST	**Kastek** 2.3nm,0.0s	**4.15**	**27**	*e*	*P*		**Pg**	**11 17 47.3**	**-0.1**
KST	7.3nm,0.8s			*e*	S		**Sb**	**11 18 34.3**	**+3.1**
KST	**Kastek** 2.3nm,0.0s	**4.15**	**27**		Pg		**Pg**	**11 17 47.3**	**-0.1**
KST	7.3nm,0.8s				Lg		Lg	11 18 34.3	
SGDS	**Sogindy** 1.8nm,0.1s	**4.18**	**12**	*e*	*P*		**Pg**	**11 17 47.0**	**-1.0**
SGDS	12nm,0.1s			*e*	S		**Sb**	**11 18 33.6**	**+1.4**
SGDS	**Sogindy** 1.8nm,0.1s	**4.18**	**12**		Pg		**Pg**	**11 17 47.0**	**-1.0**
SGDS	12nm,0.1s				Lg		Lg	11 18 33.6	
KK31	**Karatay Array** 0.5nm,0.4s,baz=141,slow=12,SNR=8.0	**4.32**	**331**	⇑	Pn		**Pn**	**11 17 37.3**	**+3.6**
KK31	1.9nm,0.6s,baz=145,slow=15,SNR=4.8			⇑	Pg		**Pg**	**11 17 48.2**	**-2.5**
KK31	1.0nm,0.3s,baz=159,slow=25			⇑	Sn		**Sb**	**11 18 30.8**	**-5.4**
KK31	6.8nm,0.8s,baz=140,slow=27			⇑	Lg		Lg	11 18 48.1	
KRBS	**Karabastau** 1.9nm,0.2s	**4.65**	**21**	*e*	*P*		**Pg**	**11 17 56.2**	**-0.7**
KRBS	4.5nm,0.7s			*e*	S		**Sb**	**11 18 49.5**	**+3.9**
KRBS	**Karabastau** 1.9nm,0.2s	**4.65**	**21**		Pg		**Pg**	**11 17 56.2**	**-0.7**
KRBS	4.5nm,0.7s				Lg		Lg	11 18 49.5	
MDOK	**Medeo** 1.2nm,0.5s	**4.68**	**35**	*e*	*P*		**Pg**	**11 17 57.0**	**-0.5**
MDOK	3.7nm,0.6s			*e*	S		**Sb**	**11 18 50.9**	**+4.3**
MDOK	**Medeo** 1.2nm,0.5s	**4.68**	**35**		Pg		**Pg**	**11 17 57.0**	**-0.5**
MDOK	3.7nm,0.6s				Lg		Lg	11 18 50.9	
KTBS	**Karatobe** 1.8nm,0.5s	**4.99**	**28**	*e*	*P*		**Pg**	**11 18 03.6**	**+0.2**
KTBS	5.3nm,0.5s			*e*	S		**Sg**	**11 19 02.3**	**-5.7**
KTBS	**Karatobe** 1.8nm,0.5s	**4.99**	**28**		Pg		**Pg**	**11 18 03.6**	**+0.2**
KTBS	5.3nm,0.5s				Lg		Lg	11 19 02.3	
KUU	**Kurty** 1.4nm,0.5s	**5.03**	**25**	*e*	*P*		**Pg**	**11 18 03.3**	**-0.9**
KUU	5.7nm,0.7s			*e*	S		**Sb**	**11 19 01.7**	**+5.3**
KUU	**Kurty** 1.4nm,0.5s	**5.03**	**25**		Pg		**Pg**	**11 18 03.3**	**-0.9**
KUU	5.7nm,0.7s				Lg		Lg	11 19 01.7	
BTLS	**Baital** 1.4nm,0.3s	**5.69**	**5**	*e*	*P*		**Pg**	**11 18 17.5**	**+0.7**
BTLS	2.8nm,0.1s			*e*	S		**Sg**	**11 19 26.1**	**-4.4**
BTLS	**Baital** 1.4nm,0.3s	**5.69**	**5**		Pg		**Pg**	**11 18 17.5**	**+0.7**
BTLS	2.8nm,0.1s				Lg		Lg	11 19 26.1	

IDC ***15*** *11:16:25.6±0.8,4.˚97S×78.˚95W,h0km,mb3.6/8, mbtmp3.8/12,ML3.7/4,MS3.4/6,Error ellipse: s-maj=25.8km s-min=13.3km az=61.0*
NEIC ***15*** *11:16:32.0±2.3,5.˚23S±0.˚08×79.˚14W±0.˚07,h79km±6km, mb4.2/10,Error ellipse: s-maj=11.9km s-min=10.3km az=210.0*
VAO ***15*** *11:16:35.7±0.8,4.˚87S×78.˚22W,h10km,mb4.3*
ISC 15 11:16:30.1±0.6,5.˚18S±0.˚04×79.˚15W±0.˚08,h35km,n68, σ2s34/68,mb3.9/10,Northern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARNL	**Arenillas**	**1.87**	**330**		Pn		**Pn**	**11 16 59.1**	**-0.5**
ARNL					Sn		**Sn**	**11 17 25.1**	**+3.2**
ATAH	**Atahualpa** 154nm,0.3s,baz=19,slow=8.7,SNR=284	**2.08**	**159**		Pn		**Pn**	**11 17 03.9**	**+1.1**
ATAH	207nm,0.3s,baz=231,slow=22,SNR=10				Sn		**Sn**	**11 17 32.0**	**+4.3**
ATAH	comp=Z,334nm,18.0s,baz=332,slow=44				LR		LR	11 18 03.5	
BOSC	**San Juan Bosco** 506nm,0.4s	**2.12**	**18**		Pn		**Pn**	**11 17 03.1**	**-0.1**
BOSC					Sn		**Sn**	**11 17 32.1**	**+3.7**
CHSH	**Refugio Sur-Vo**	**3.68**	**4**				**Pn**	**11 17 28.1**	**+3.1**
PORT	**Chimborazo Vol**	**3.71**	**6**				**Pn**	**11 17 29.0**	**+3.4**
SLOR	**San Lorenzo -**	**4.47**	**8**				**Pn**	**11 17 39.4**	**+3.5**
PULU	**Pululahua**	**5.21**	**7**				**Pn**	**11 17 49.2**	**+3.2**
OTAV	**Otavalo**	**5.43**	**7**				**Pn**	**11 17 51.7**	**+2.6**
OTAV	**Otavalo**	**5.43**	**7**	*e*	*P*		**Pn**	**11 17 49.8**	**+0.8**
OTAV	**Otavalo**	**5.43**	**7**	*e*	*P*		**Pn**	**11 17 51.6**	**+2.6**
TULM	**Tulcn-Chalpat**	**6.02**	**13**				**Pn**	**11 17 59.9**	**+2.8**
GCUF	**Volcan Galeras**	**6.62**	**16**	*e*	*P*		**Pn**	**11 18 06.9**	**+1.6**
PTLC	**Puerto Leguiza**	**6.87**	**39**	*e*	*P*		Pn	11 18 01.9	-6.5
CZSB	**Cruzeiro do Su**	**6.88**	**112**		Pn		**Pn**	**11 18 06.8**	**-1.8**
CZSB	**Cruzeiro do Su**	**6.88**	**112**	*e*	*P*		**Pn**	**11 18 06.3**	**-2.2**
NNA	**Nana** 5.1nm,0.3s,baz=319,slow=17,SNR=11	**7.13**	**162**		Pn		**Pn**	**11 18 12.5**	**+0.4**
NNA	4.6nm,0.3s,baz=217,slow=19,SNR=1.7				Sn		**Sn**	**11 19 32.7**	**+0.7**
NNA	comp=Z,282nm,18.0s,baz=343,slow=36				LR		LR	11 20 46.7	
NNA	**Nana** 18nm,0.4s	**7.13**	**162**		Pn		**Pn**	**11 18 13.9**	**+1.8**
BBAC	**Balboa, Cauca**	**7.40**	**15**	*e*	*P*		**Pn**	**11 18 16.8**	**+0.8**
FLOC	**Florencia**	**7.57**	**28**	*e*	*P*		**Pn**	**11 18 17.3**	**-0.8**
POPC	**Popayan, Colom**	**8.06**	**18**	*e*	*P*		**Pn**	**11 18 26.8**	**+1.8**
GARC	**Garzon, Huila**	**8.18**	**27**	*e*	*P*		**Pn**	**11 18 26.0**	**-0.6**
BETC	**Betania**	**8.64**	**25**	*e*	*P*		Pn	11 18 40.8	+7.9
MALC	**Bahia Malaga**	**9.31**	**11**	*e*	*P*		**Pn**	**11 18 36.3**	**-5.6**
VILC	**Villavicencio,**	**10.72**	**31**	*e*	*P*		**Pn**	**11 19 05.1**	**+3.8**

RUSC	**La Rusia**	**12.56**	**29**	*eP*	**Pn**	**11 19 25.6**	**-1.2**
ETMB	**Extrema**	**13.62**	**111**	Pn	Pn	11 19 36.0	-4.9
LPAZ	**La Paz**	**15.44**	**136**	Pn	**Pn**	**11 20 05.3**	**-0.7**
	baz=329,slow=12,SNR=2.5						
LPAZ				Sn	**S**	**11 23 12.7**	**+1.1**
	0.1nm,0.3s,baz=183,slow=15,SNR=1.6						
LPAZ				LR	LR	11 27 03.3	
	comp=Z,318nm,18.4s,baz=298,slow=41						
	1.1nm,0.7s						
LPAZ	**La Paz**	**15.44**	**136**	P	**P**	**11 20 10.2**	**-0.1**
LPAZ	**La Paz**	**15.44**	**136**	*eP*	**P**	**11 20 09.2**	**-1.0**
PB16	**IPOC Station P**	**16.11**	**145**	P	**Pn**	**11 20 13.7**	**-0.9**
SDV	**Santo Domingo**	**16.35**	**31**	Pn	**Pn**	**11 20 13.2**	**-4.1**
	1.2nm,0.3s,baz=190,slow=22,SNR=1.6						
SDV				LR	LR	11 28 05.9	
	comp=Z,106nm,18.5s,baz=257,slow=44						
	3.1nm,0.3s						
SDV	**Santo Domingo**	**16.35**	**31**	*eP*	**Pn**	**11 20 16.1**	**-1.2**
BAUV	**El Baul**	**17.87**	**38**		**Pn**	**11 20 34.8**	**-1.3**
BAUV				IAmb	IAmb	11 20 39.3	
	comp=Z,21nm,0.8s						
MACA	**Manacapuru-AM**	**18.52**	**84**	P	**P**	**11 20 40.3**	**-3.4**
MACA				IAmb	IAmb	11 20 42.0	
	comp=Z,25nm,0.5s						
MACA	**Manacapuru-AM**	**18.52**	**84**	*eP*	**P**	**11 20 41.6**	**-2.1**
LVC	**Limon Verde**	**19.95**	**151**	P	**P**	**11 21 00.9**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=356,slow=19,SNR=1.8						
LVC				LR	LR	11 28 06.4	
	comp=Z,118nm,18.1s,baz=240,slow=35						
	comp=Z,2.2nm,0.8s						
LVC	**Limon Verde**	**19.95**	**151**	*eP*	**Pn**	**11 21 06.4**	**+4.9**
BOAV	**Boa Vista**	**20.07**	**68**	P	**P**	**11 20 57.9**	**-2.8**
BOAV				IAmb	IAmb	11 21 36.1	
	comp=Z,11nm,1.4s						
BOAV	**Boa Vista**	**20.07**	**68**	*eP*	**P**	**11 20 59.0**	**-1.6**
BIRV	**Birongo**	**20.16**	**39**	P	**P**	**11 21 00.2**	**-1.4**
BIRV				IAmb	IAmb	11 21 06.3	
	comp=Z,22nm,1.0s						
SIV	**San Ignacio**	**20.73**	**123**	P	**P**	**11 21 06.0**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=291,slow=13,SNR=6.0						
SIV				S	Sn	11 25 01.6	-2.0
	comp=Z,1.0nm,0.7s,baz=228,slow=20,SNR=2.1						
SIV				Lg	Lg	11 27 20.8	
	baz=32,slow=18,SNR=1.3						
	comp=Z,1.5nm,0.7s						
PTLB	**Pontes e Lacer**	**22.15**	**119**	P	**P**	**11 21 20.7**	**-2.3**
PTLB				IAmb	IAmb	11 21 35.4	
	comp=Z,5.4nm,1.1s						
ITTB	**Itaituba**	**23.34**	**89**	*eP*	**P**	**11 21 33.5**	**-2.0**
MALB	**Monte Alegre**	**25.05**	**83**	*eP*	**P**	**11 21 52.1**	**+0.7**
SALV	**Santo Antonio**	**25.36**	**117**	*eP*	**P**	**11 21 57.6**	**+3.5**
SJG	**San Juan**	**26.46**	**29**	P	**P**	**11 22 02.5**	**-1.6**
	comp=Z,4.4nm,0.3s,baz=190,slow=7.0,SNR=1.3						
RVDE	**Rio Verde (Bra**	**27.32**	**122**	*eP*	**P**	**11 22 15.5**	**+3.6**
MCPB	**Macapa, AP**	**27.47**	**81**	*eP*	**P**	**11 22 14.0**	**+0.7**
ANTJ	**Antonio Joao (**	**27.95**	**129**	*eP*	**P**	**11 22 22.1**	**+4.6**
SNDB	**Serra Nova Dou**	**28.33**	**106**	*eP*	**P**	**11 22 23.2**	**+2.2**
MDP	**Montagnes des**	**28.37**	**69**	LR	LR	11 32 56.6	
	comp=Z,31nm,18.4s,baz=297,slow=35						
PRPB	**Parauapebas**	**29.20**	**93**	*eP*	**P**	**11 22 30.4**	**+1.7**
IPMB	**Ipameri, GO**	**32.79**	**115**	*eP*	**P**	**11 23 02.8**	**+2.4**
SDBA	**SAO DESIDERIO**	**34.56**	**104**	*eP*	**P**	**11 23 17.6**	**+1.8**
PLCA	**Paso Flores**	**36.23**	**169**	P	**P**	**11 23 32.5**	**+2.7**
	comp=Z,4.2nm,0.9s,baz=14,slow=4.2,SNR=4.8						
	comp=Z,4.2nm,0.9s						
NBAN	**Anadia - AL**	**42.72**	**99**	*eP*	**P**	**11 24 26.5**	**+2.2**
RCBR	**Riachuelo**	**43.04**	**93**	*eP*	**P**	**11 24 28.5**	**+1.6**
PDAR	**Pinedale Array**	**55.13**	**333**	P	**P**	**11 25 58.8**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=134,slow=6.4,SNR=2.3						
	comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	**56.57**	**324**	P	**P**	**11 26 10.2**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=130,slow=8.1,SNR=3.7						
	comp=Z,0.3nm,0.7s						
SNAA	**Sanae**	**80.81**	**162**	P	**P**	**11 28 35.9**	**-4.0**
SNAA				IAmb	IAmb	11 28 57.1	
	comp=Z,6.9nm,1.4s						
ESDC	**Sonseca Array**	**81.98**	**49**	P	**P**	**11 28 46.1**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=249,slow=7.2,SNR=1.2						
	comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**82.29**	**76**	P	**P**	**11 28 48.1**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=289,slow=6.0,SNR=1.9						
	comp=Z,0.3nm,0.4s						
QSPA	**South Pole Qui**	**84.90**	**180**	P	**P**	**11 28 58.4**	**-3.0**
ILAR	**Eielson Array**	**85.38**	**337**	P	**P**	**11 29 03.6**	**+0.1**
	comp=Z,0.8nm,1.1s,baz=101,slow=4.7,SNR=4.6						
	comp=Z,0.8nm,1.1s						
VNDA	**Vanda**	**91.00**	**191**	P	**P**	**11 29 26.8**	**-3.4**
VNDA				IAmb	IAmb	11 29 43.9	
	comp=Z,1.8nm,1.2s						
ASAR	**Alice Springs**	**136.85**	**227**	PKhKP	PKPpre	11 35 47.6	
	comp=Z,0.3nm,0.9s,baz=139,slow=1.6,SNR=1.9						
ASAR				PKP	**PKiKP**	**11 35 52.5**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=152,slow=1.9,SNR=3.2						
WRA	**Warramunga Arr**	**138.68**	**232**	PKhKP	PKPpre	11 35 50.0	
	comp=Z,0.4nm,0.9s,baz=119,slow=2.0,SNR=2.3						
WRA				PKP	**PKiKP**	**11 35 55.0**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=120,slow=1.9,SNR=1.8						
FITZ	**Fitzroy Crossi**	**146.34**	**226**	PKPbc	**PKPab**	**11 36 09.5**	**+0.5**
	comp=Z,4.3nm,1.1s,baz=127,slow=5.1,SNR=2.8						

*IDC **15** 11:31:59.7±2.5, 10˚.82N×122˚.23E, h21km±15km, mb5.0/37, mbtmp5.1/41,ML4.4/3,MS4.7/46, Error ellipse: s-maj=13.1km s-min=8.4km az=80.0*

*BJI **15** 11:32:00.2±0.0, 10˚.66N×122˚.30E, h46km, mb5.2/85, mB5.2/64, Ms5.1/87, Ms7 5.0/83*

*MOS **15** 11:32:00.0±0.9, 10˚.85N×122˚.18E, h32km, mb5.6/100, MS4.8/22, Error ellipse: s-maj=7.9km s-min=3.8km az=114.0*

*NEIC **15** 11:32:00.7, 10˚.87N×122˚.16E, h26km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=5.67; Mθθ 1.91; Mθθ 3.76; Mrθ-3.99; Mθθ 3.67; Mθr-5.89; Fault plane solution: M0 9.43000×10¹⁶ NP1:φs 34.81000°, δ 69.61000°, λ-92.53000°. NP2:φs 222.02000°, δ 20.54000°, λ-83.24000°. Principal axes: T 9.8640, Plg 25.0000°, Azm 127.0000°; N -0.9310, Plg 2.0000°, Azm 36.0000°; P -8.9330, Plg 65.0000°, Azm 301.0000°;*

*MAN **15** 11:32:01, 10˚.93N×122˚.12E, h29km, Ms5.3*

*GCMT **15** 11:32:01.6±0.1, 10˚.88N±0.01˚×122˚.14E±0.01˚, h28km, MW5.4/140, Moment Tensor Solution. s121,c190; s140,c250; Duration: 1±2 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.75±.02; Mθθ 0.47±.01; Mφφ 0.28±.01; Mrθ-0.82±.03; Mθφ 0.41±.01; Mφr-0.81±.03; Best double couple: M0 1.39000×10¹⁷ NP1:φs 46.00000°, δ 73.00000°, λ-93.00000°. NP2:φs 237.00000°, δ 17.00000°, λ-80.00000°. Principal axes: T 1.4120, Plg 28.0000°, Azm 139.0000°; N -0.0430, Plg 3.0000°, Azm 47.0000°; P -1.3690, Plg 62.0000°, Azm 312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 11:32:02.6±2.1, 10˚.90N±0.06˚×122˚.20E±0.08, h29km±1km, mb5.4/196, Mwb5.3/42, Mww5.4 Error ellipse: s-maj=12.8km s-min=10.6km az=258.0*

*DJA **15** 11:32:04.3±0.4, 11˚N±3˚×12˚2E±˚, h52km±3km, M5.2/97, mb5.4/97, mB5.7/62, MLv5.6/4, Mw(mB)5.2/62, MwMwp5.1/24, Mwp5.3/24*

*KLM **15** 11:32:07, 10˚.69N×122˚.18E, h54km, mb5.5*

*NEIC **15** 11:32:10, 10˚.98N×122˚.18E, h20km, Moment Tensor Solution. Duration: 12±6 Moment tensor: Scale 10¹⁷Nm; Mrr-0.92; Mθθ 0.54; Mφφ 0.38; Mrθ-0.94; Mθφ 0.28; Mφr-1.18; Fault plane solution: M0 1.73000×10¹⁷ NP1: φs 238.00000°, δ 15.00000°, λ-72.00000°. NP2:φs 40.00000°, δ 76.00000°, λ-94.00000°. Principal axes: T 1.6272, Plg 31.0000°, Azm 134.0000°; N 0.1924, Plg 4.0000°, Azm 42.0000°; P -1.8196, Plg 59.0000°, Azm 304.0000°;*

ISC 15 11:32:02.6±0.2, 10˚.86N±0˚.02×122˚.17E±0˚.03, h36km, h36km:pP-P, n1222, σ1934/1350, mb5.4/259, MS4.8/103, 55C-71D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.24**	**244**	⇑*iP*		**Pn**	**11 32 09.3**	**-1.6**
JAP				*i*	S	**Sn**	**11 32 13.2**	**-5.4**
RCP	**Roxas**	**0.90**	**39**	⇑*eP*		**Pn**	**11 32 17.8**	**-0.9**
RCP				*e*	S	**Sn**	**11 32 33.5**	**+2.9**
CNOP	**Candoni, Negro**	**1.12**	**156**	⇑*iP*		**Pn**	**11 32 22.0**	**+0.2**
CNOP				*i*	S	**Sn**	**11 32 39.1**	**+3.1**
SNPH	**Sibulan**	**1.83**	**145**	⇑*iP*		**Pn**	**11 32 33.2**	**+1.6**
SNPH				*i*	S	**Sn**	**11 32 59.8**	**+6.1**
LLP	**Lapu-Lapu**	**1.85**	**107**	⇑*eP*		**Pn**	**11 32 32.9**	**+1.1**
LLP				*e*	S	**Sn**	**11 32 55.5**	**+1.7**
TBP	**Tagbilaran**	**2.03**	**125**	⇑*iP*		**Pn**	**11 32 35.7**	**+1.5**
TBP				*i*	S	Sn	11 33 13.7	+15
MMPH	**Masbate**	**2.06**	**44**	⇓*eP*		**Pn**	**11 32 36.1**	**+1.4**
MMPH				*i*	S	**Sn**	**11 33 02.6**	**+3.4**
DCPH	**Dipolog City**	**2.54**	**153**	⇑*eP*		**Pn**	**11 32 43.1**	**+1.8**
MSLP	**Maasin**	**2.74**	**105**	⇑*iP*		**Pn**	**11 32 45.6**	**+1.6**
MSLP				*i*	S	**Sn**	**11 33 24.2**	**+8.3**
PGP	**Puerto Galera**	**2.88**	**336**	⇑*eP*		**Pn**	**11 32 45.8**	**-0.3**
PGP				*i*	S	**Sn**	**11 33 20.2**	**+0.7**
GQP	**Guinayangan**	**3.04**	**5**	⇑*eP*		**Pn**	**11 32 47.9**	**-0.3**
GQP				*e*	S	**Sn**	**11 33 23.6**	**+0.2**
PAGZ	**Pagadian**	**3.22**	**158**	⇑*iP*		**Pn**	**11 32 52.8**	**+2.1**
PAGZ				*i*	S	**Sn**	**11 33 32.7**	**+5.0**
LQP	**Lukban**	**3.29**	**349**	⇓*eP*		**Pn**	**11 32 51.0**	**-0.8**
LQP				*e*	S	**Sn**	**11 33 29.1**	**-0.7**
LUBP	**Lubang**	**3.42**	**327**	⇓*eP*		**Pn**	**11 32 54.1**	**+0.7**
LUBP				*i*	S	**Sn**	**11 33 31.6**	**-1.1**
SCPH	**Surigao**	**3.44**	**108**	⇓*eP*		**Pn**	**11 32 54.6**	**+1.1**
TGY	**Tagaytay City**	**3.44**	**340**	Pn		**Pn**	**11 32 53.9**	**+0.2**
	431nm,0.4s,baz=90,slow=1.9							
JCNP	**Jose Panganiba**	**3.45**	**9**	⇓*eP*		**Pn**	**11 32 53.4**	**-0.4**
JCNP				*i*	S	Sn	11 33 44.7	+11
PPR	**Puerto Princes**	**3.55**	**253**	⇓*iP*		**Pn**	**11 32 53.3**	**-1.9**
ZCP	**Zamboanga City**	**3.90**	**181**	⇑*iP*		**Pn**	**11 33 00.8**	**+0.9**
ZCP				*i*	S	**Sn**	**11 33 43.5**	**-1.1**
BUKP	**Musuan**	**4.11**	**136**	⇑*iP*		**Pn**	**11 33 05.2**	**+2.2**
BUKP				*i*	S	**Sn**	**11 33 55.5**	**+5.7**
KCP	**Kidapawan**	**4.79**	**143**	⇑*iP*		**Pn**	**11 33 15.8**	**+3.5**
PCPH	**Palayan**	**4.79**	**348**	⇑*eP*		**Pn**	**11 33 12.5**	**+0.3**
BIPH	**Bislig**	**4.91**	**122**	⇑*eP*		**Pn**	**11 33 15.4**	**+1.5**
DAV	**Davao City (W)**	**5.05**	**138**	Pn		**Pn**	**11 33 14.2**	**-1.6**
	48nm,0.3s,baz=59,slow=13,SNR=1.9							
DAV				Lg		Lg	11 34 41.1	
	baz=124,slow=20							
DAV				LR		LR	11 35 41.2	
	comp=Z,27μm,19.6s,baz=348,slow=44							
	147nm,0.3s							
DAV	**Davao City (W)**	**5.05**	**138**			**Pn**	**11 33 16.5**	**+0.7**
DAV	**Davao City (W)**	**5.05**	**138**	P		**Pn**	**11 33 11.5**	**-4.3**
DAV	**Davao City (W)**	**5.05**	**138**	P		**Pn**	**11 33 11.7**	**-4.1**
MYLDM	**Lahad Datu**	**6.71**	**213**	Pn		**Pn**	**11 33 41.1**	**+2.5**
KKM	**Kota Kinabalu**	**7.58**	**231**	Pn		**Pn**	**11 33 51.8**	**+1.1**
KKM	**Kota Kinabalu**	**7.58**	**231**	P		**Pn**	**11 33 53.4**	**+2.7**
SGSI	**Sangihe**	**7.86**	**155**	P		**Pn**	**11 33 56.8**	**+2.3**
	0.9nm4μm266nm,0.9s							
TOLI2	**Tolitoli**	**9.78**	**188**	Pn		**Pn**	**11 34 21.3**	**+0.5**
TOLI2	**Tolitoli**	**9.78**	**188**	P		**Pn**	**11 34 21.0**	**+0.3**
GTOI	**Gorontalo**	**10.19**	**175**	P		**Pn**	**11 34 25.4**	**-0.9**
	2μm897nm96nm,0.7s							
MRSI	**Marisa**	**10.31**	**181**	P		**Pn**	**11 34 29.4**	**+1.3**
	5μm2μm146nm,1.0s							
KMSI	**Cibinong**	**10.37**	**170**	P		**Pn**	**11 34 31.9**	**+3.0**
	4μm494nm,1.2s							
MPSI	**Mapaga**	**10.69**	**192**	P		**Pn**	**11 34 34.6**	**+1.4**
	4μm51nm,0.8s							
TNTI	**Ternate**	**11.27**	**152**	Pn		**Pn**	**11 34 43.3**	**+2.1**
TNTI	**Ternate**	**11.27**	**152**	P		**Pn**	**11 34 43.2**	**+2.0**
	2μm2μm139nm,1.7s							
TNTI	**Ternate**	**11.27**	**152**	P		**Pn**	**11 34 40.0**	**-1.2**
APSI	**Ampana**	**11.70**	**183**	P		**Pn**	**11 34 50.1**	**+3.0**
	3μm222nm,1.0s							
LUWI	**Luwuk**	**11.84**	**177**	Pn		**Pn**	**11 34 53.4**	**+4.5**
LUWI	**Luwuk**	**11.84**	**177**	P		**Pn**	**11 34 51.8**	**+2.9**
	4μm8μm1μm,1.0s							
LUWI	**Luwuk**	**11.84**	**177**	P		**Pn**	**11 34 48.7**	**-0.2**
TPUB	**Ta-pu**	**12.46**	**353**			**Pn**	**11 34 60.0**	**+2.5**
TPUB	**Ta-pu**	**12.46**	**353**	P		**Pn**	**11 35 00.7**	**+3.2**
YULB	**Yu-li**	**12.49**	**356**			**Pn**	**11 35 00.7**	**+2.8**
LBMI	**Labuha**	**12.59**	**155**	P		**P**	**11 35 12.9**	**+2.7**
SSLB	**Suanglung**	**12.91**	**355**			**Pn**	**11 35 05.6**	**+2.0**
SSLB	**Suanglung**	**12.91**	**355**	P		**Pn**	**11 35 06.3**	**+2.7**
SBUM	**Sibu**	**12.93**	**230**	Pn		**Pn**	**11 35 05.8**	**+1.9**
NACB	**Ninganchiao**	**13.26**	**358**			**Pn**	**11 35 09.6**	**+1.3**
SANI	**Sanana**	**13.37**	**163**	P		**Pn**	**11 35 09.2**	**-0.7**
	3μm2μm110nm,1.0s							
SANI	**Sanana**	**13.37**	**163**	P		**Pn**	**11 35 07.7**	**-2.2**
YOJ	**Yonaguni jima**	**13.55**	**3**	Pn		**Pn**	**11 35 13.6**	**+1.3**
YOJ	**Yonaguni jima**	**13.55**	**3**	P		**Pn**	**11 35 13.6**	**+1.3**
YOJ	**Yonaguni jima**	**13.55**	**3**	P		**Pn**	**11 35 16.5**	**+4.2**
YHNB	**Yeheng**	**13.76**	**357**			**Pn**	**11 35 16.4**	**+1.1**
YHNB	**Yeheng**	**13.76**	**357**	P		**Pn**	**11 35 17.8**	**+2.6**
MTKI	**Muara Teweh, K**	**13.77**	**212**	P		**Pn**	**11 35 18.9**	**+3.5**
	4μm45nm,1.0s							
KNMB	**Chin-men Tao**	**14.00**	**346**			**Pn**	**11 35 19.7**	**+1.3**
TTSI	**Tana Toraja**	**14.01**	**190**	P		**Pn**	**11 35 21.7**	**+3.1**
	2μm202nm,1.0s							
QIZ	**Qiongzhong**	**14.41**	**306**	Pn		**Pn**	**11 35 24.2**	**+0.2**
QIZ	**Qiongzhong**	**14.41**	**306**	P		**Pn**	**11 35 25.0**	**+0.9**
QIZ				S		**Sn**	**11 38 04.8**	**+2.1**
QIZ				pmax		pmax		
	comp=Z,40nm,0.9s							
QIZ				LR		LR		
	comp=N,5μm,17.8s							
QIZ				LR		LR		
	comp=E,6μm,17.1s							
QIZ				LR		LR		
	comp=Z,9μm,18.4s							
QIZ	**Qiongzhong**	**14.41**	**306**	P		**Pn**	**11 35 25.4**	**+1.3**
QZH	**Quanzhou**	**14.42**	**347**	⇑*iP*		**P**	**11 35 28.1**	**-2.3**
QZH				S		**Sn**	**11 38 09.9**	**+7.2**
QZH				pmax		pmax		
	comp=Z,160nm,1.2s							
QZH				pmax		pmax		
	comp=Z,810nm,6.7s							
QZH				LR		LR		
	comp=N,5μm,17.5s							
QZH				LR		LR		
	comp=E,2μm,19.9s							
QZH				LR		LR		
	comp=Z,6μm,19.2s							
SIJI	**Sorong**	**14.75**	**142**	Pn		**Pn**	**11 35 25.4**	**-3.3**
	0.9nm,0.3s,baz=302,slow=23,SNR=3.0							
SIJI				LR		LR	11 41 54.5	
	comp=Z,5μm,21.3s,baz=348,slow=40							
	34nm,1.0s							
NLAI	**Namlea**	**14.84**	**160**	P		**Pn**	**11 35 32.0**	**+2.1**
	66nm,1.1s							
SPSI	**Sidrap Palu**	**14.92**	**189**	P		**P**	**11 35 33.7**	**-2.4**
	1μm139nm,0.9s							
KSM	**Kuching**	**15.02**	**232**	P		**Pn**	**11 35 34.5**	**+2.2**
KSM	**Kuching**	**15.02**	**232**	P		**P**	**11 35 35.9**	**-1.4**
STKI	**Sintang**	**15.10**	**225**	P		**P**	**11 35 36.5**	**-1.6**
	9μm39nm,1.1s							
MSAI	**Masohi**	**15.63**	**154**	P		**Pn**	**11 35 42.0**	**+1.7**
	20nm,1.2s							
KAPI	**Kappang**	**15.95**	**189**	Pn		**Pn**	**11 35 42.8**	**-1.6**
	0.9nm,0.3s,baz=217,slow=22,SNR=2.2							
KAPI				LR		LR	11 41 56.5	
	comp=Z,3μm,22.0s,baz=3.0,slow=38							
	27nm,1.0s							
KAPI	**Kappang**	**15.95**	**189**			**P**	**11 35 46.8**	**-0.8**
KAPI	**Kappang**	**15.95**	**189**	⇑*eP*		**P**	**11 35 47.1**	**-0.5**
KAPI				pmax		pmax		
	comp=Z,38nm,1.1s							
KAPI	**Kappang**	**15.95**	**189**	P		**Pn**	**11 35 45.1**	**+0.7**
KAPI				P		**Pn**	**11 35 45.1**	**+0.7**
KAPI	**Kappang**	**15.95**	**189**	P		**Pn**	**11 35 44.7**	**+0.3**
BBKI	**Banjar Baru**	**15.99**	**208**	P		**P**	**11 35 47.7**	**-0.3**
	comp=Z,74nm,1.0s							
BKSI	**Bulukumba**	**16.20**	**187**	P		**P**	**11 35 50.1**	**-0.2**
	comp=Z,2μmcomp=Z,2μmcomp=Z,140nm,1.0s							
BBSI	**Bau Bau**	**16.24**	**179**	P		**P**	**11 35 50.4**	**-0.4**
	comp=Z,247nmcomp=Z,28nm,1.1s							
UBPT	**Khong Chiam**	**16.85**	**287**	P		**P**	**11 35 57.6**	**+0.1**
JOW	**Kunigami**	**16.90**	**19**			**P**	**11 35 58.0**	**0.0**
JOW	**Kunigami**	**16.90**	**19**	P		**P**	**11 35 58.1**	**0.0**
FAKI	**Fak Fak**	**16.97**	**143**			**P**	**11 35 59.6**	**+0.7**
FAKI	**Fak Fak**	**16.97**	**143**	P		**P**	**11 35 58.7**	**-0.2**
	comp=Z,4μmcomp=Z,2μmcomp=Z,101nm,1.1s							
FAKI	**Fak Fak**	**16.97**	**143**	P		**Pn**	**11 35 57.1**	**-0.2**
PBKI	**Pangkalan Bun**	**17.05**	**218**	P		**P**	**11 36 01.2**	**+1.4**
BAKI	**Biak**	**18.32**	**130**	P		**Pn**	**11 36 14.4**	**+0.5**
	comp=Z,5μmcomp=Z,326nm,1.1s							
SRPI	**Serui, Papua**	**18.86**	**131**	P		**Pn**	**11 36 20.5**	**-0.1**
	comp=Z,2μmcomp=Z,188nm,1.0s							
CNSH	**ChangSha**	**19.29**	**335**	⇑P		**P**	**11 36 24.6**	**+0.2**
CNSH				S		**S**	**11 39 58.6**	**-2.3**
CNSH				pmax		pmax		
	comp=Z,72nm,1.0s							
CNSH				LR		LR		
	comp=Z,5μm,19.3s							
CNSH				LR		LR		
	comp=Z,2μm,20.5s							
CNSH				LR		LR		
	comp=Z,5μm,19.6s							
MMRI	**Maumere**	**19.36**	**180**	P		**Pn**	**11 36 27.1**	**+0.6**
MMRI	**Maumere**	**19.36**	**180**	P		**Pn**	**11 36 27.1**	**+0.6**
	comp=Z,3μmcomp=Z,5μmcomp=Z,580nm,1.3s							
MMRI	**Maumere**	**19.36**	**180**	P		**Pn**	**11 36 27.2**	**+0.6**
EDFI	**Ende, Flores**	**19.48**	**181**	P		**Pn**	**11 36 28.2**	**+0.1**
	comp=Z,942nmcomp=Z,69nm,0.7s							
KMMI	**Kalianget**	**19.57**	**205**	P		**Pn**	**11 36 29.9**	**+0.9**
	comp=Z,254nm,1.3s							
TPI	**Tanjungpandan**	**19.79**	**228**	P		**Pn**	**11 36 32.3**	**+0.7**
	comp=Z,999nmcomp=Z,109nm,1.1s							
PLAI	**Plampang**	**20.04**	**193**	P		Pn	11 36 34.6	+0.1
	comp=Z,3μmcomp=Z,381nm,0.9s							
PLAI	**Plampang**	**20.04**	**193**	P		Pn	11 36 34.7	+0.2
SRBI	**Singaraja**	**20.05**	**200**	P		Pn	11 36 34.9	+0.2
	comp=Z,3μmcomp=Z,222nm,0.9s							
TPRI	**Tanjung Pinang**	**20.12**	**242**	P		Pn	11 36 35.9	+0.4
	comp=Z,108nm,1.2s							
ABJI	**Asem Bagus**	**20.14**	**203**	P		Pn	11 36 35.9	+0.1
	comp=Z,3μmcomp=Z,232nm,1.0s							
SSE	**Sheshan**	**20.16**	**358**	P		Pn	11 36 36.0	+0.1
SSE				pmax		pmax		
	comp=Z,83nm,1.3s							
SSE				LR		LR		
	comp=Z,930nm,20.8s							
SSE				LR		LR		
	comp=Z,380nm,21.3s							
TWSI	**Taliwang, Sumb**	**20.16**	**195**	P		Pn	11 36 36.1	+0.1
	comp=Z,1μmcomp=Z,119nm,1.0s							
MYKOM	**Kota Tinggi**	**20.30**	**245**	P		**P**	**11 36 35.7**	**+0.3**
MYKOM				IAmb		IAmb	11 36 43.1	
	comp=Z,145nm,0.9s							
PPBI	**Pangkal Pinang**	**20.54**	**232**	P		Pn	11 36 40.4	0.0
	comp=Z,23μmcomp=Z,47nm,0.6s							
WBSI	**Waikabubak, Su**	**20.55**	**188**	P		Pn	11 36 40.1	-0.5
	comp=Z,2μmcomp=Z,164nm,0.8s							
JRMM	**Jerantut**	**20.71**	**252**	P		Pn	11 36 43.0	+0.5
JAGI	**Jajag, Banyuwa**	**20.79**	**203**	P		**P**	**11 36 41.0**	**+0.2**
JAGI				IAmb		IAmb	11 36 50.6	
	comp=Z,112nm,0.9s							
JAGI	**Jajag, Banyuwa**	**20.79**	**203**	P		Pn	11 36 43.0	-0.4
	comp=Z,130nm,1.0s							
JAGI	**Jajag, Banyuwa**	**20.79**	**203**	P		**P**	**11 36 41.8**	**+1.0**
DSRI	**Dabo**	**20.80**	**238**	P		Pn	11 36 43.3	-0.2
	comp=Z,1μmcomp=Z,80nm,1.0s							
SMPI	**Sarmi**	**20.83**	**127**	P		**P**	**11 36 41.7**	**+0.5**
	comp=Z,3μmcomp=Z,118nm,1.3s							
WHN	**Wuhan**	**20.89**	**341**	⇓P		Pn	11 36 43.5	-0.9
WHN				S		Sn	11 40 39.3	-0.2
WHN				pmax		pmax		
	comp=Z,170nm,0.9s							
WHN				LR		LR		
	comp=Z,16μm,20.1s							
WHN				LR		LR		
	comp=Z,6μm,16.5s							
WHN				LR		LR		
	comp=Z,16μm,17.3s							
BATI	**Baumata**	**20.98**	**176**	P		**P**	**11 36 42.3**	**-0.5**
	baz=40,slow=0.7							
BATI				LR		LR	11 45 17.2	
	comp=Z,2μm,20.5s,baz=326,slow=38							
BATI	**Baumata**	**20.98**	**176**	P		**P**	**11 36 44.0**	**+1.2**
	comp=Z,2μmcomp=Z,6μmcomp=Z,729nm,1.0s							
NGJI	**Ngawi**	**21.01**	**211**	P		**P**	**11 36 45.4**	**+2.3**
	comp=Z,274nm,1.0s							
SMRI	**Semarang**	**21.28**	**214**	P		**P**	**11 36 48.3**	**+2.3**
	comp=Z,147nm,0.9s							
NJ2	**Nanjing**	**21.31**	**352**	⇓P

comp=Z,1.5nm,0.9s,baz=57,slow=1.9,SNR=4.8
CMAR LR LR 11 46 29.6
comp=Z,2μm,18.2s,baz=110,slow=37
comp=Z,143nm,1.0s
CMAR Chiang Mai Arr 23.69 291 P **P** **11 37 11.0 -0.2**
CMAR Chiang Mai Arr 23.69 291 *ce*P **P** **11 37 11.6 +0.4**
CMAR pmax pmax
comp=Z,147nm,1.0s
CHTO Chiang Mai 23.78 292 P **P** **11 37 11.9 -0.2**
CHTO IAmb IAmb 11 37 14.3
comp=Z,136nm,1.1s
CHTO Chiang Mai 23.78 292 P **P** **11 37 11.9 -0.2**
CHTO pmax pmax
comp=Z,136nm,1.1s
CHTO Chiang Mai 23.78 292 P **P** **11 37 12.1 0.0**
CHTO P **P** **11 37 12.1 0.0**
CHTO Chiang Mai 23.78 292 P **P** **11 37 12.2 +0.1**
LWLI Liwa 23.95 230 P **P** **11 37 15.6 +1.8**
comp=Z,9μmcomp=Z,122nm,0.4s
MASI Maura Aman, Be 24.22 236 P **P** **11 37 18.1 +1.9**
comp=Z,8μmcomp=Z,655nm,1.0s
KRJI Kerinci 24.29 239 P **P** **11 37 18.7 +1.8**
comp=Z,451nm,0.8s
PSI Prapat 24.41 253 P **P** **11 37 18.2 +0.1**
comp=Z,89nm,0.8s,baz=59,slow=4.4,SNR=39
PSI LR LR 11 46 59.5
comp=Z,2μm,21.7s,baz=78,slow=37
comp=Z,89nm,0.8s
PSI Prapat 24.41 253 P **P** **11 37 18.6 +0.6**
PSI pmax pmax
comp=Z,99nm,0.9s
RPSI Rantau Prapat 24.45 252 P **P** **11 37 18.6 +0.3**
RPSI IAmb IAmb 11 37 20.9
comp=Z,99nm,0.9s
TSI Tuntungan 24.52 254 P **P** **11 37 20.7 +1.8**
comp=Z,433nm,0.8s
MNSI Mandailing Nat 24.57 247 P **P** **11 37 20.5 +1.2**
comp=Z,2μmcomp=Z,104nm,0.9s
PZH PanZhiHua 24.77 312 P **P** **11 37 21.0 -0.2**
PZH pP **pP** **11 37 32.3 +0.9**
PZH S **S** **11 41 43.4 +2.0**
PZH pmax pmax
comp=Z,40nm,1.0s
PZH pmax pmax
comp=Z,440nm,8.6s
PZH LR LR
comp=Z,1μm,17.5s
PZH LR LR
comp=Z,3μm,17.5s
PZH LR LR
comp=Z,3μm,16.1s
JCJ Chichijima 24.82 47 LR LR 11 45 42.1
comp=Z,1μm,21.9s,baz=236,slow=33
NAWB Namwon 24.91 10 P **P** **11 37 22.0 -0.2**
KSBUS Busan 25.09 13 P **P** **11 37 24.5 +0.7**
KSBUS IAmb IAmb 11 37 27.1
comp=Z,211nm,1.1s
JMN Monobe 25.17 23 P **P** **11 37 25.8 +1.2**
MTN Manton Dam 25.17 159 P **P** **11 37 23.4 -1.4**
MTN IAmb IAmb 11 37 27.9
comp=Z,98nm,1.2s
MTN Manton Dam 25.17 159 P **P** **11 37 23.5 -1.2**
LYN LuoYang 25.20 341 ⇓*i*P **P** **11 37 24.0 -0.8**
LYN S **S** **11 41 43.9 -3.8**
LYN pmax pmax
comp=Z,140nm,1.0s
LYN pmax pmax
comp=Z,330nm,7.4s
LYN LR LR
comp=Z,4μm,16.5s
LYN LR LR
comp=Z,2μm,17.2s
LYN LR LR
comp=Z,5μm,17.6s
KCSI Kotacane, Aceh 25.26 255 P **P** **11 37 25.8 +0.2**
comp=Z,1μmcomp=Z,166nm,1.0s
KDU Kakadu 25.53 156 P **P** **11 37 25.5 -2.5**
TIA Tai'an 25.65 351 ⇓P **P** **11 37 28.6 -0.3**
TIA S **S** **11 41 58.5 +3.5**
TIA pmax pmax
comp=Z,38nm,1.1s
TIA pmax pmax
comp=Z,410nm,5.9s
TIA LR LR
comp=Z,2μm,19.6s
TIA LR LR
comp=Z,570nm,17.7s
TIA LR LR
comp=Z,3μm,21.6s
TJN Taejon 25.84 10 P **P** **11 37 30.2 -0.5**
TJN IAmb IAmb 11 37 33.3
comp=Z,122nm,0.9s
TJN Taejon 25.84 10 *de*P **P** **11 37 30.1 -0.5**
TJN Taejon 25.84 10 P **P** **11 37 30.5 -0.1**
SISI Saibi 25.95 244 P **P** **11 37 32.5 +0.6**
comp=Z,81nm,1.3s
JHS Saijyo 26.02 21 P **P** **11 37 33.0 +0.7**
XAN Xi'an 26.07 334 ⇓P **P** **11 37 31.3 -1.5**
XAN pP pP 11 37 43.4 +0.3
XAN sP sP 11 37 48.8 +1.6
XAN PP **PnPn** **11 38 14.0 +2.2**
XAN S **S** **11 41 58.4 -3.2**
XAN sS sS 11 42 21.6 +2.7
XAN pmax pmax
comp=Z,78nm,1.0s
XAN pmax pmax
comp=Z,460nm,7.1s
XAN LR LR
comp=Z,4μm,17.2s
XAN LR LR
comp=Z,3μm,18.0s
XAN LR LR
comp=Z,6μm,18.0s
GSI Gunungsitoli 26.20 250 P **P** **11 37 33.9 -0.3**
GSI IAmb IAmb 11 37 38.1
comp=Z,127nm,0.9s
GSI Gunungsitoli 26.20 250 P **P** **11 37 35.4 +1.2**
comp=Z,8μmcomp=Z,178nm,1.1s
GSI Gunungsitoli 26.20 250 P **P** **11 37 35.4 +1.2**
comp=Z,179nm,1.1s
CD2 Chengdu 26.27 322 P **P** **11 37 34.1 -0.5**
CD2 sP sP 11 37 53.8 +4.7
CD2 pmax pmax
comp=Z,110nm,0.8s
CD2 pmax pmax
comp=Z,530nm,8.8s
CD2 LR LR
comp=Z,3μm,18.0s
CD2 LR LR
comp=Z,2μm,15.2s
CD2 LR LR
comp=Z,4μm,16.1s
KSCHJ Chungju 26.43 11 P **P** **11 37 35.6 -0.3**
KSAR Wonju Array Be 26.97 10 P **P** **11 37 40.8 0.0**
KSAR Wonju Array Be 26.97 10 P **P** **11 37 40.8 0.0**
KSRS Korea Array 26.98 10 P **P** **11 37 40.2 -0.7**
comp=Z,25nm,1.0s,baz=186,slow=9.8,SNR=70
KSRS ScP **ScP** **11 44 40.4 +0.7**
comp=Z,1.4nm,1.1s,baz=199,slow=3.3,SNR=2.6
KSRS LR LR 11 49 17.6
comp=Z,558nm,20.5s,baz=190,slow=38
comp=Z,25nm,1.0s
KS19 Wonju Array Si 27.02 10 P **P** **11 37 41.0 -0.3**
KNRA Kununurra 27.16 166 P **P** **11 37 43.3 +0.7**
KNRA IAmb IAmb 11 37 47.2
comp=Z,89nm,0.8s
KNRA Kununurra 27.16 166 P **P** **11 37 43.6 +0.9**
HJU Haeju 27.26 6 P **P** **11 37 44.4 +1.0**
HJU pP **pP** **11 37 53.3 -0.6**
HJU S **S** **11 42 25.0 +4.8**
HJU AmB
comp=Z,234nm,1.8s
HJU AMS AMS
comp=N,147nm,5.9s
HJU AMS AMS
comp=E,304nm,12.1s
HJU AMS AMS
comp=Z,34nm,1.3s
HNS HongShan 27.27 347 ⇓P **P** **11 37 43.3 -0.2**
HNS pP **sP** **11 37 58.4 +0.3**
HNS *e*S **S** **11 42 19.9 -0.5**
HNS SS **SnSn** **11 43 38.5 +7.9**
HNS pmax pmax
comp=Z,67nm,1.1s
HNS LR LR
comp=Z,5μm,18.0s
HNS LR LR
comp=Z,2μm,19.0s
HNS LR LR
comp=Z,6μm,18.4s
JHJ Hachijo jima 2 27.44 33 LR LR 11 48 53.6
comp=Z,2μm,19.0s,baz=250,slow=37
SEHB SEOHWA 27.84 10 P **P** **11 37 49.6 +1.0**
INU Inuyama 27.87 27 P **P** **11 37 48.9 0.0**
INU Inuyama 27.87 27 P **P** **11 37 48.6 -0.3**
DL2 Dalian 27.94 359 P **P** **11 37 49.3 -0.1**
DL2 sP **sP** **11 38 10.3 +6.1**
DL2 S **S** **11 42 34.6 +3.7**
DL2 sS **sS** **11 42 51.9 +5.4**
DL2 ScP **SS** **11 44 34.3 +4.5**
DL2 pmax pmax
comp=Z,44nm,1.1s
DL2 pmax pmax
comp=Z,190nm,5.9s
DL2 LR LR
comp=Z,2μm,19.7s
DL2 LR LR
comp=Z,480nm,22.9s
DL2 LR LR
comp=Z,2μm,20.0s
TIY Taiyuan 28.14 343 ⇑P **P** **11 37 52.8 +1.4**
TIY S **S** **11 42 35.4 +1.1**
TIY LR LR
comp=Z,4μm,19.1s
TIY LR LR
comp=Z,2μm,19.6s
TIY LR LR
comp=Z,5μm,20.1s
PYAG Pyongyang 28.26 6 P **P** **11 37 53.7 +1.4**
FITZ Fitzroy Crossi 28.97 173 P **P** **11 37 57.2 -1.6**
comp=Z,55nm,1.0s,baz=359,slow=8.0,SNR=40
comp=Z,55nm,1.0s
FITZ Fitzroy Crossi 28.97 173 P **P** **11 37 57.4 -1.5**
FITZ IAmb IAmb 11 37 59.8
comp=Z,71nm,1.1s
FITZ Fitzroy Crossi 28.97 173 P **P** **11 37 58.1 -0.7**
HHU Hamhung 29.34 8 P **P** **11 38 04.3 +2.4**
HHU sP **sP** **11 38 18.5 +1.8**
HHU S **S** **11 42 56.8 +3.9**
HHU AmB
comp=Z,336nm,3.3s
HHU AMS AMS
comp=N,120nm,5.5s
HHU AMS AMS
comp=E,680nm,31.1s
HHU AMS AMS
comp=Z,91nm,4.2s
MAJO Matsushiro 29.40 27 P **P** **11 38 01.3 -1.2**
MAJO Matsushiro 29.40 27 *ce*P **P** **11 38 01.1 -1.4**
MAJO pmax pmax
comp=Z,23nm,1.5s
MAJO Matsushiro 29.40 27 P **P** **11 38 01.9 -0.6**
comp=Z,17nm,1.2s
MJAR Matsushiro Arr 29.40 27 P **P** **11 38 00.6 -1.9**
comp=Z,6.6nm,1.0s,baz=200,slow=8.1,SNR=19
MJAR LR LR 11 49 25.5
comp=Z,2μm,18.9s,baz=216,slow=36
comp=Z,6.6nm,1.0s
BJT Baijiatuan 29.53 351 P **P** **11 38 03.7 +0.1**
BJT Baijiatuan 29.53 351 P **P** **11 38 03.7 +0.1**
BJT pmax pmax
comp=Z,177nm,1.4s
BJT Baijiatuan 29.53 351 P **P** **11 38 03.6 +0.1**
BJT pP **pP** **11 38 12.8 -1.2**
BJI Beijing 29.55 351 P **P** **11 38 03.8 +0.1**
BJI sP **sP** **11 38 21.3 +2.8**
BJI PP **PnPn** **11 39 00.6 +1.4**
BJI S **S** **11 42 55.0 -1.2**
BJI pmax pmax
comp=Z,91nm,1.2s
BJI pmax pmax
comp=Z,340nm,8.3s
BJI LR LR
comp=Z,330nm,21.9s
BJI LR LR
comp=Z,1μm,20.7s
BJI LR LR
comp=Z,3μm,22.4s
LZH Lanzhou 30.11 329 *e*P **P** **11 38 08.9 -0.1**
LZH pP pP 11 38 19.1 -0.3
LZH sP sP 11 38 26.9 +3.3
LZH PP **PnPn** **11 39 04.1 -2.9**
LZH S **S** **11 43 03.6 -1.9**
LZH pmax pmax
comp=Z,28nm,1.4s
LZH pmax pmax
comp=Z,270nm,5.8s
LZH LR LR
comp=Z,1μm,14.4s
LZH LR LR
comp=Z,2μm,15.5s
LZH LR LR
comp=Z,3μm,15.1s
SNY Shenyang 30.88 2 ⇑P **P** **11 38 15.8 +0.3**
SNY S **S** **11 43 17.5 +0.5**
SNY pmax pmax
comp=Z,50nm,1.1s
SNY pmax pmax
comp=Z,200nm,7.1s
SNY LR LR
comp=Z,1μm,21.6s
SNY LR LR
comp=Z,2μm,18.8s
SNY LR LR
comp=Z,2μm,20.8s
HHC Hu-ho-hao-te 31.31 344 *e*P **P** **11 38 19.9 +0.5**
HHC S **S** **11 43 23.3 -0.7**
HHC SS **SnSn** **11 45 11.8 +2.7**
HHC pmax pmax
comp=Z,69nm,1.1s
HHC pmax pmax
comp=Z,640nm,6.9s
HHC LR LR
comp=Z,8μm,19.0s
HHC LR LR
comp=Z,4μm,19.7s
HHC LR LR
comp=Z,11μm,20.3s
BTO Baotou 31.52 342 *e*P **P** **11 38 22.0 +0.7**
JMM Marumori 31.66 29 P **P** **11 38 22.4 -0.1**
JMM IAmb IAmb 11 38 22.7
comp=Z,38nm,1.0s
MBWA Marble Bar 31.91 184 P **P** **11 38 24.2 -0.6**
MBWA Marble Bar 31.91 184 P **P** **11 38 24.2 -0.6**
MBWA P **P** **11 38 24.2 -0.6**
MBWA Marble Bar 31.91 184 P **P** **11 38 24.1 -0.6**
MBWA Marble Bar 31.91 184 P **P** **11 38 24.0 -0.7**
MBWA pP **pP** **11 38 34.6 -0.6**
MBWA sP **sP** **11 38 39.4 +0.8**
PSA00 Pilbara Seismi 32.31 184 P **P** **11 38 27.7 -0.6**
PSA00 Pilbara Seismi 32.31 184 P **P** **11 38 27.3 -1.0**
PSA00 IAmb IAmb 11 38 29.7
comp=Z,61nm,0.9s
PSA00 Pilbara Seismi 32.31 184 P **P** **11 38 27.9 -0.4**
MSHR Mys Shultsa 32.56 12 *ce*P **P** **11 38 29.7 -0.6**
MSHR pmax pmax
comp=Z,37nm,1.1s
WB0 Warramunga Arr 32.73 158 P **P** **11 38 30.0 -2.0**
WRAB Tennant Creek 32.86 159 P **P** **11 38 31.2 -2.0**
WRAB IAmb IAmb 11 38 34.2
comp=Z,46nm,1.1s
WRAB Tennant Creek 32.86 159 P **P** **11 38 31.2 -2.0**
WRAB pmax pmax
comp=Z,46nm,1.1s
WRAB Tennant Creek 32.86 159 P **P** **11 38 30.6 -2.6**
WRAB Tennant Creek 32.86 159 P **P** **11 38 30.2 -3.0**
WRAB pP **pP** **11 38 39.3 -4.2**
WRAB sP **sP** **11 38 45.5 -2.4**
WRA Warramunga Arr 32.87 159 P **P** **11 38 30.3 -3.0**
comp=Z,34nm,1.0s,baz=331,slow=11,SNR=155
comp=Z,34nm,1.0s
WRA Warramunga Arr 32.87 159 P **P** **11 38 31.7 -1.5**
WRA Warramunga Arr 32.87 159 P **P** **11 38 31.7 -1.5**
WRA pmax pmax
comp=Z,2.0nm,1.2s
WB2 Warramunga Arr 32.87 159 P **P** **11 38 31.9 -1.3**
WB2 IAmb IAmb 11 38 33.2
comp=Z,44nm,0.9s
CN2 Changchun 32.95 4 *e*P **P** **11 38 33.1 -0.6**
CN2 S S 11 43 38.8 -10
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,2μm,19.0s
CN2 LR LR
comp=Z,1μm,19.0s
CN2 LR LR
comp=Z,2μm,19.0s
WR0 Warramunga Arr 32.96 158 P **P** **11 38 32.5 -1.5**
WR0 IAmb IAmb 11 38 34.1
comp=Z,50nm,1.2s
VLA Vladivostok 33.24 13 ⇑*e*P **P** **11 38 34.5 -1.7**
VLA pmax pmax
comp=Z,60nm,1.0s
VLA MLR MLR
comp=Z,1μm,20.0s
XLT XiLinHaoTe 33.34 352 ⇑*i*P **P** **11 38 37.4 +0.2**
XLT pP sP 11 38 50.6 -1.4
XLT sP pP 11 38 54.8 +7.1
XLT S **S** **11 43 54.8 -0.8**
XLT sS sS 11 44 16.3 +4.5
XLT pmax pmax
comp=Z,82nm,1.3s
XLT pmax pmax
comp=Z,380nm,4.1s
XLT LR LR
comp=Z,120nm,19.0s
XLT LR LR
comp=Z,850nm,18.7s
XLT LR LR
comp=Z,2μm,21.8s
MDJ Mudanjiang 34.24 9 P **P** **11 38 44.6 -0.3**
MDJ Mudanjiang 34.24 9 P **P** **11 38 45.3 +0.4**
MDJ S **S** **11 44 03.4 -5.9**
MDJ pmax pmax
comp=Z,81nm,1.5s
MDJ pmax pmax
comp=Z,220nm,5.2s
MDJ LR LR
comp=Z,1μm,17.3s
MDJ LR LR
comp=Z,1μm,18.4s
MDJ LR LR
comp=Z,2μm,17.5s
MDJ Mudanjiang 34.24 9 P **P** **11 38 45.9 +1.0**
MDJ Mudanjiang 34.24 9 P **P** **11 38 45.7 +0.8**
MDJ sP **sP** **11 39 01.5 +1.8**
USA0B Ussuriysk Arra 34.29 13 P **P** **11 38 46.2 +0.9**
USA0B Ussuriysk Arra 34.29 13 P **P** **11 38 46.2 +0.9**
USA0B pmax pmax
comp=Z,19nm,0.9s
USRK Ussuriysk Ar. 34.29 13 P **P** **11 38 44.2 -1.1**
comp=Z,48nm,0.9s,baz=199,slow=9.6,SNR=47
USRK LR LR 11 51 23.0
comp=Z,784nm,22.0s,baz=241,slow=34
comp=Z,48nm,0.9s
USRK Ussuriysk Ar. 34.29 13 P **P** **11 38 45.6 +0.3**
USRK Ussuriysk Ar. 34.29 13 P **P** **11 38 45.6 +0.3**
LSA Lhasa 34.44 308 P **P** **11 38 47.8 +0.4**
LSA IAmb IAmb 11 38 50.5
comp=Z,85nm,1.1s
LSA Lhasa 34.44 308 P **P** **11 38 47.8 +0.4**
LSA pmax pmax
comp=Z,85nm,1.1s
LSA Lhasa 34.44 308 P **P** **11 38 48.3 +0.8**
LSA P **P** **11 38 48.3 +0.8**
LSA Lhasa 34.44 308 P **P** **11 38 48.2 +0.8**
LSA Lhasa 34.44 308 P **P** **11 38 48.3 +0.8**
LSA pP **pP** **11 38 57.6 -0.1**
LSA sP **sP** **11 39 02.0 -0.1**
GTA Gaotai 34.70 329 ⇓P **P** **11 38 48.8 -0.3**
GTA pP pP 11 39 03.1 +3.5
GTA sP sP 11 39 10.8 +7.1
GTA PP **PnPn** **11 40 03.6 -2.1**
GTA PcP **PcP** **11 41 23.8 +1.2**
GTA S **S** **11 44 18.4 +1.6**
GTA sS sS 11 44 40.9 +6.6
GTA pmax pmax
comp=Z,17nm,1.2s
GTA pmax pmax
comp=Z,280nm,4.3s
GTA LR LR
comp=Z,1μm,19.3s
GTA LR LR
comp=Z,3μm,20.0s
GTA LR LR
comp=Z,3μm,20.7s
BNX BinXian 35.05 6 ⇑P **P** **11 38 51.9 0.0**
BNX pP **sP** **11 39 07.4 +0.7**
BNX PP **PP** **11 40 17.1 +5.3**
BNX S **S** **11 44 19.9 -1.9**
BNX sS **sS** **11 44 41.0 +3.7**
BNX pmax pmax
comp=Z,53nm,0.9s
BNX pmax pmax
comp=Z,290nm,6.8s
BNX LR LR
comp=Z,610nm,20.1s
BNX LR LR
comp=Z,570nm,15.2s
BNX LR LR
comp=Z,940nm,19.9s
GOMU GeErMu 35.34 320 ⇓*i*P **P** **11 38 56.0 +1.0**
GOMU pP pP 11 39 03.5 -2.0
GOMU PcP **PcP** **11 41 26.5 +1.6**
GOMU S **S** **11 44 29.6 +2.4**
GOMU pmax pmax
comp=Z,36nm,1.0s
GOMU pmax pmax
comp=Z,230nm,5.9s
GOMU LR LR
comp=Z,2μm,15.4s
GOMU LR LR
comp=Z,2μm,16.2s
GOMU LR LR
comp=Z,3μm,16.6s
QIS Mount Isa 35.62 151 P **P** **11 38 55.4 -1.7**
WRKA Warakurna 36.17 171 P **P** **11 39 01.2 -0.6**
AS31 Alice Springs 36.18 162 P **P** **11 39 00.2 -1.7**
ASAR Alice Springs 36.18 162 P **P** **11 39 00.0 -1.9**
comp=Z,13nm,0.4s,baz=341,slow=7.1,SNR=290
ASAR PcP **PcP** **11 41 26.5 -0.6**
comp=Z,8.0nm,1.0s,baz=335,slow=2.3,SNR=4.9
ASAR S **S** **11 44 34.9 -4.7**
comp=Z,3.8nm,1.1s,baz=350,slow=25,SNR=2.3
ASAR ScP **ScP** **11 45 11.2 +0.4**
comp=Z,3.4nm,1.0s,baz=345,slow=2.9,SNR=4.8
comp=Z,13nm,0.4s
ASAR Alice Springs 36.18 162 P **P** **11 39 00.7 -1.2**
ASAR Alice Springs 36.18 162 P **P** **11 39 00.7 -1.2**
TEY Ternei 36.25 17 ⇑*e*P **P** **11 39 02.2 +0.1**
TEY *e* 11 40 38.5
TEY *e* 11 44 37.0
TEY pmax pmax
comp=N,10.0nm,1.4s
TEY pmax pmax
comp=Z,20nm,1.4s
TEY pmax pmax
comp=E,10.0nm,1.4s
TEY pmax pmax
comp=Z,100nm,1.9s
TAPN Taplejung 36.30 302 *e*P **P** **11 39 03.7 +0.5**
comp=Z,202nm,0.6s
ODAN Odare 36.40 301 *e*P **P** **11 39 04.5 +0.4**
comp=Z,180nm,0.9s
RAMN Ramite 37.10 301 *e*P **P** **11 39 10.4 +0.4**
comp=Z,179nm,0.7s
MEEK Meekatharra 37.43 185 P **P** **11 39 12.6 +0.1**
JIRN Jiri 37.67 301 *e*P **P** **11 39 15.4 +0.4**
comp=Z,421nm,0.6s
GUN Gumba 38.01 302 *e*P **P** **11 39 18.3 +0.4**
comp=Z,370nm,0.7s
PKI Pulchoki 38.30 301 *e*P **P** **11 39 20.1 -0.2**
comp=Z,150nm,0.6s
PKIN Phulchoki 38.31 301 *e*P **P** **11 39 20.1 -0.2**
comp=Z,226nm,0.7s
HIA Hailar 38.34 357 P **P** **11 39 19.8 -0.2**
HIA IAmb IAmb 11 39 21.9
comp=Z,68nm,0.9s
HIA Hailar 38.34 357 P **P** **11 39 19.8 -0.2**
HIA pmax pmax
comp=Z,68nm,0.9s
HIA Hailar 38.34 357 P **P** **11 39 19.6 -0.3**
KKN Kakani 38.48 301 *e*P **P** **11 39 21.8 +0.2**
comp=Z,142nm,1.0s

DMN Daman 38.57 301 *e*P P **11 39 22.4 0.0**
comp=Z,312nm,1.0s
CTA Charters Tower 38.83 142 P P **11 39 22.4 -1.9**
comp=Z,4.9nm,0.7s,baz=315,slow=10.0,SNR=2.0
CTA PcP **PcP 11 41 33.6 -1.6**
comp=Z,14nm,0.9s,baz=326,slow=3.6,SNR=3.0
CTA LR LR 11 57 37.2
comp=Z,1µm,19.1s,baz=306,slow=40
comp=Z,4.9nm,0.7s
ULN Ulaanbaatar 39.02 344 P P **11 39 25.5 -0.3**
ULN IAmb IAmb 11 39 28.2
comp=Z,67nm,0.9s
ULN Ulaanbaatar 39.02 344*d i*P P **11 39 25.7 -0.1**
ULN pmax pmax
comp=Z,147nm,1.7s
ULN Ulaanbaatar 39.02 344 P P **11 39 25.7 -0.1**
ULN P P **11 39 25.7 -0.1**
ULN Ulaanbaatar 39.02 344 P P **11 39 25.8 -0.1**
ULN sP **pP 11 39 38.3 +1.9**
KLR Kul'dur 39.08 10 P P **11 39 26.5 +0.4**
comp=Z,31nm,0.9s,baz=212,slow=6.2,SNR=54
KLR PcP **PcP 11 41 34.4 -1.1**
comp=Z,4.3nm,0.7s,baz=258,slow=9.5,SNR=2.6
KLR LR LR 11 56 21.3
comp=Z,982nm,20.9s,baz=196,slow=37
comp=Z,31nm,0.9s
KLR Kul'dur 39.08 10*d i*P P **11 39 25.9 -0.2**
KLR pmax pmax
comp=Z,92nm,1.7s
KLR MLR MLR
comp=Z,1µm,18.0s
GKN Gorkha 39.08 301 *e*P P **11 39 26.3 -0.3**
comp=Z,122nm,0.7s
SONM Songino Array 39.18 343 P P **11 39 27.0 -0.1**
comp=Z,38nm,1.0s,baz=165,slow=8.3,SNR=94
SONM LR LR 11 56 45.5
comp=Z,5µm,20.4s,baz=156,slow=38
comp=Z,38nm,1.0s
SONM Songino Array 39.18 343 P P **11 39 26.9 -0.1**
SONM IAmb IAmb 11 39 29.3
comp=Z,62nm,1.0s
SONM Songino Array 39.18 343 P P **11 39 26.9 -0.1**
SONM pmax pmax
comp=Z,62nm,1.0s
DANN Dangsing 39.93 301 *e*P P **11 39 33.6 -0.2**
comp=Z,238nm,0.7s
YSS Yuzh-Sakhalins 39.98 22 P P **11 39 34.1 +0.6**
YSS IAmb IAmb 11 39 51.8
comp=Z,64nm,1.0s
YSS Yuzh-Sakhalins 39.98 22⇑ *e*P P **11 39 33.6 0.0**
YSS *e**PP **sP 11 39 49.2 +0.7**
YSS *e*PPP PPP 11 41 34.2
YSS *e*S **S 11 45 35.3 -1.2**
YSS pmax pmax
comp=Z,50nm,1.1s
YSS pmax pmax
comp=Z,200nm,2.9s
YSS smax smax
comp=N,300nm,15.0s
YSS smax smax
comp=E,300nm,16.0s
YSS MLR MLR
comp=Z,900nm,14.0s
YSS MLR MLR
comp=N,800nm,19.0s
YSS Yuzh-Sakhalins 39.98 22 P P **11 39 35.2 +1.6**
MORW Morawa 40.13 188 P P **11 39 34.9 -0.2**
MORW IAmb IAmb 11 39 36.8
comp=Z,102nm,0.8s
MORW Morawa 40.13 188 P P **11 39 35.6 +0.6**
OOD Oodnadatta 40.59 161 P P **11 39 38.1 -0.8**
PALK Pallekele 41.08 269 P P **11 39 42.9 -0.3**
comp=Z,7.7nm,0.8s,baz=119,slow=18,SNR=1.6
PALK LR LR 11 57 14.4
comp=Z,1µm,19.3s,baz=186,slow=37
comp=Z,7.7nm,0.8s
GRNR Gornyy 41.48 14 *e*P P **11 39 41.8 -4.2**
GRNR MLR MLR
comp=E,150nm,15.0s
GRNR MLR MLR
comp=N,310nm,19.0s
GRNR MLR MLR
comp=Z,510nm,20.0s
UGL Uglegorsk 41.55 20 *e*P P **11 39 47.6 +1.1**
UGL pmax pmax
comp=Z,130nm,1.1s
BLDU Ballidu 41.56 187 P P **11 39 47.0 +0.2**
comp=Z,57nm,1.1s
CIT Chita 41.64 352 *e*P P **11 39 48.0 +0.7**
CIT *e* 11 39 58.3
CIT *e* 11 40 05.5
CIT pmax pmax
comp=Z,258nm,1.7s
FORT Forrest 41.78 172 P P **11 39 47.9 -0.7**
FORT Forrest 41.78 172 P P **11 39 48.3 -0.3**
JBP Jabalpur 42.01 293 *e*P P **11 39 50.5 -0.1**
JBP *ex* P **11 39 50.5 -0.1**
baz=22,slow=28
JBP IAmb IAmb 11 39 53.3
comp=Z,144nm,1.1s
ZAK Zakamensk 42.37 342 *e*P P **11 39 52.7 -0.7**
ZAK pmax pmax
comp=Z,29nm,1.5s
INKA Innaminka 42.38 155 P P **11 39 53.4 -0.1**
KLBR Kellerberrin 42.42 186 P P **11 39 53.9 +0.1**
MULG Mulgathing 42.47 165 P P **11 39 53.3 -0.9**
HNR Honiara 42.64 117 LR LR 11 56 08.0
comp=Z,380nm,21.6s,baz=290,slow=34
HYBB Hyderabad (bro 42.72 284 *e*P P **11 39 57.2 +0.6**
HYBB *es*P **sP 11 40 09.5 -2.0**
HYBB *e*PcP **PcP 11 41 48.0 0.0**
QLP Quilpie 42.95 150 P P **11 39 57.6 -0.6**
ZEA Zeya 42.96 4 *e*P P **11 39 57.7 -0.2**
ZEA *e* 11 41 40.1
ZEA *e*S **S 11 46 14.3 -6.3**
ZEA *e* 11 49 51.9
ZEA pmax pmax
comp=N,100nm,5.5s
ZEA pmax pmax
comp=Z,200nm,6.0s
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA smax smax
comp=N,200nm,12.0s
ZEA smax smax
comp=E,200nm,15.9s
ZEA MLR MLR
comp=E,300nm,17.0s
ZEA MLR MLR
comp=N,700nm,19.0s
ZEA MLR MLR
comp=Z,700nm,18.0s
MUN Mundaring 42.97 187 P P **11 39 58.8 +0.5**
TYV Tymovskoe 43.29 19 *e*P P **11 40 02.1 +1.5**
TYV *e*S **S 11 46 30.4 +5.0**
TYV pmax pmax
comp=Z,200nm,3.8s
TYV pmax pmax
comp=Z,29nm,1.6s
TYV smax smax
comp=N,100nm,4.3s
TYV smax smax
comp=E,300nm,4.3s
IRK Irkutsk 43.75 344 *e*P P **11 40 03.9 -0.5**
IRK pmax pmax
comp=Z,215nm,1.4s
NWAO Narrogin (SRO) 43.79 186 P P **11 40 05.3 +0.4**
NWAO Narrogin (SRO) 43.79 186 P P **11 40 05.3 +0.4**
NWAO pmax pmax
comp=Z,126nm,0.7s
NWAO Narrogin (SRO) 43.79 186 P P **11 40 05.3 +0.4**
NWAO P P **11 40 05.3 +0.4**
NWAO Narrogin (SRO) 43.79 186 P P **11 40 05.6 +0.7**
NWAO Narrogin (SRO) 43.79 186 P P **11 40 05.2 +0.4**
NWAO pP **pP 11 40 15.3 -0.3**
NWAO sP **sP 11 40 19.9 +0.9**
LCRK Leigh Creek 43.87 160 P P **11 40 05.3 -0.2**
MOY Mondy 44.20 341 *e*P P **11 40 08.2 +0.1**
MOY pmax pmax
comp=Z,71nm,2.5s
WMQ Urumqi 44.33 324 *e*P P **11 40 10.8 +1.5**
WMQ pP pP 11 40 19.9 0.0
WMQ pmax pmax
comp=Z,32nm,0.7s
WMQ pmax pmax
comp=Z,310nm,5.5s
WMQ LR LR
comp=Z,3µm,17.9s
WMQ LR LR
comp=Z,2µm,17.9s
WMQ LR LR
comp=Z,2µm,20.5s
KNGR Kungurtug, Tuv 44.51 338⇓ *e*P P **11 40 11.2 +0.6**
KNGR pmax pmax
comp=Z,9.0nm,0.7s
PCHI Peechi 44.99 274⇓ *e*P P **11 40 15.8 +0.9**
RMQ Roma 45.23 146 P P **11 40 17.5 +1.0**
comp=Z,10nm,0.9s
BBOO Buckleboo 45.40 164 P P **11 40 17.2 -0.5**
BBOO Buckleboo 45.40 164 P P **11 40 16.8 -0.9**
RKGY Rocky Gully 45.48 186 P P **11 40 19.7 +1.4**
EIDS Eidsvold 45.72 142 P P **11 40 19.7 -0.7**
EIDS IAmb IAmb 11 40 22.2
comp=Z,47nm,1.3s
EIDS Eidsvold 45.72 142 P P **11 40 19.7 -0.7**
WHYH Whyalla 46.05 162 P P **11 40 21.9 -0.9**
comp=Z,45nm,0.8s
STKA Stephens Creek 46.38 157 P P **11 40 23.7 -1.8**
comp=Z,25nm,0.8s,baz=334,slow=7.8,SNR=33
comp=Z,25nm,0.8s
STKA Stephens Creek 46.38 157 P P **11 40 24.4 -1.1**
STKA Stephens Creek 46.38 157 P P **11 40 24.4 -1.1**
STKA pmax pmax
comp=Z,7.0nm,0.9s
STKA Stephens Creek 46.38 157 P P **11 40 24.3 -1.1**
HTT Hallett 46.84 161 P P **11 40 28.7 -0.4**
BOD Bodaibo 47.28 354 *e*P P **11 40 32.1 0.0**
BOD pmax pmax
comp=Z,96nm,1.5s
CMSA Cobar Meteorol 47.80 153 P P **11 40 36.1 -0.5**
ZSN Zaisan 48.10 326 *e*P P **11 40 38.6 -0.2**
ZSN Zaisan 48.10 326 *e*P P **11 40 38.7 -0.2**
baz=326
TWOA Tennyson Woods 48.21 162 P P **11 40 39.1 -0.6**
comp=Z,83nm,0.9s
SKR Severo-Kuril's 48.49 28⇑ *e*P P **11 40 41.9 +0.3**
SHLS Shalkode 49.02 319 *e*P P **11 40 43.6 -2.4**
SHLS pmax pmax
comp=Z,16nm,1.0s
SHLS Shalkode 49.02 319 *e*P P **11 40 43.7 -2.4**
comp=Z,16nm,1.0s,baz=319
MK31 Makanchi Array 49.16 324 P P **11 40 46.7 -0.3**
MK31 Makanchi Array 49.16 324 P P **11 40 46.7 -0.3**
MK31 pmax pmax
comp=Z,12nm,0.9s
MKAR Makanchi Array 49.16 324 P P **11 40 46.3 -0.6**
comp=Z,13nm,0.8s,baz=125,slow=7.8,SNR=37
MKAR PcP **PcP 11 42 09.7 -0.3**
comp=Z,14nm,0.9s,baz=122,slow=5.9,SNR=6.9
MKAR LR LR 12 03 32.2
comp=Z,2µm,18.7s,baz=122,slow=38
comp=Z,13nm,0.8s
MKAR Makanchi Array 49.16 324*ce*P P **11 40 46.2 -0.8**
MKAR pmax pmax
comp=Z,13nm,0.8s
UZB Uzynbulak 49.30 319 *e*P P **11 40 47.9 -0.3**
UZB *e*S **S 11 47 51.3 -1.0**
UZB Uzynbulak 49.30 319 *e*P P **11 40 47.9 -0.3**
baz=319
UZB *e*S **S 11 47 51.3 -1.0**
baz=319
MAKZ Makanchi 49.35 324 P P **11 40 48.2 -0.2**
MAKZ Makanchi 49.35 324 P P **11 40 48.2 -0.2**
MAKZ pmax pmax
comp=Z,23nm,1.2s
MAKZ Makanchi 49.35 324 P P **11 40 48.7 +0.3**
PRZ Przheval'sk 49.41 318 P P **11 40 50.2 +1.1**
PRZ Przheval'sk 49.41 318 P P **11 40 50.2 +1.1**
SATY Saty 49.66 318 *e*P P **11 40 51.2 +0.2**
SATY pmax pmax
comp=Z,31nm,1.2s
SATY Saty 49.66 318 *e*P P **11 40 51.2 +0.2**
comp=Z,31nm,1.2s,baz=318
KPKS Kokpek 49.67 319 *e*P P **11 40 50.6 -0.3**
KPKS pmax pmax
comp=Z,37nm,1.2s
KPKS Kokpek 49.67 319 *e*P P **11 40 50.7 -0.3**
comp=Z,37nm,1.2s,baz=319
ZHN Zhinishke 49.69 318 *e*P P **11 40 51.3 +0.1**
ZHN pmax pmax
comp=Z,20nm,1.1s
ZHN Zhinishke 49.69 318 *e*P P **11 40 51.4 +0.1**
comp=Z,20nm,1.1s,baz=318
ARMA Armidale 49.87 146 P P **11 40 52.9 +0.3**
ARMA Armidale 49.87 146 P P **11 40 52.4 -0.2**
KSH Kashi 49.87 313 P P **11 40 54.6 +2.0**
KSH pP sP 11 41 06.8 -0.8
KSH PP **PP 11 42 51.5 +3.9**
KSH pmax pmax
comp=Z,59nm,1.2s
KSH LR LR
comp=Z,1µm,22.2s
KSH LR LR
comp=Z,1µm,21.9s
KSH LR LR
comp=Z,1µm,23.5s
NIL Nilore 50.08 305 P P **11 40 54.6 +0.5**
NIL Nilore 50.08 305 P P **11 40 54.6 +0.5**
NIL pmax pmax
comp=Z,401nm,0.9s
NIL Nilore 50.08 305 P P **11 40 54.6 +0.5**
NIL P P **11 40 54.6 +0.5**
NIL Nilore 50.08 305 P P **11 40 54.7 +0.5**
NIL sP **pP 11 41 06.0 +1.0**
TDK Taldyqorghan 50.56 321 *e*P P **11 40 57.6 0.0**
TDK Taldyqorghan 50.56 321 *e*P P **11 40 57.6 0.0**
baz=320
NRN Naryn 50.59 315 P P **11 40 58.5 +0.3**
NRN IAmb IAmb 11 41 01.3
comp=Z,52nm,1.0s
NRN Naryn 50.59 315 P P **11 40 58.5 +0.3**
NRN pmax pmax
comp=Z,52nm,1.0s
MDOK Medeo 50.60 318 *e*P P **11 40 58.4 +0.3**
MDOK Medeo 50.60 318 *e*P P **11 40 58.5 +0.3**
baz=318
AAA Alma-Ata 50.71 318 *e*P P **11 40 59.3 +0.5**
AAA Alma-Ata 50.71 318 *e*P P **11 40 59.4 +0.5**
baz=318
ULHL Ulahol 50.75 316 P P **11 41 00.1 +0.8**
SNR=67
PEA0B Petropavlovsk- 50.86 27 P P **11 41 00.2 +0.6**
PEA0B IAmb IAmb 11 41 02.2
comp=Z,63nm,1.1s
PEA0B Petropavlovsk- 50.86 27*d i*P P **11 40 59.8 +0.1**
PETK Petropavlovsk- 50.86 27 P P **11 40 59.1 -0.6**
comp=Z,40nm,1.0s,baz=212,slow=8.1,SNR=38
PETK LR LR 12 02 53.7
comp=Z,798nm,20.0s,baz=228,slow=36
comp=Z,40nm,1.0s
PETK Petropavlovsk- 50.86 27 P P **11 40 59.7 0.0**
PETK Petropavlovsk- 50.86 27 P P **11 40 59.7 0.0**
ARPS Mount Arapiles 50.86 160 P P **11 40 58.8 -1.0**
PET Petropavlovsk 51.23 27 P P **11 41 02.9 +0.5**
PET IAmb IAmb 11 41 19.5
comp=Z,54nm,1.2s
PET Petropavlovsk 51.23 27 *e*P P **11 41 02.6 +0.2**
PET *e*S **S 11 48 16.9 -1.5**
PET *e*SS **SS 11 51 53.2 -0.9**
PET pmax pmax
comp=Z,45nm,1.1s
PET pmax pmax
comp=Z,200nm,18.8s
PET MLR MLR
comp=Z,500nm,20.0s
PET MLR MLR
comp=Z,500nm,19.0s
PET Petropavlovsk 51.23 27 P P **11 41 04.0 +1.6**
comp=Z,101nm,0.9s
PET Petropavlovsk 51.23 27 P P **11 41 02.5 +0.2**
YAK Yakutsk 51.38 5 P P **11 41 02.3 -1.1**
comp=Z,4.6nm,0.3s,baz=202,slow=1.8,SNR=1.7
YAK PcP **PcP 11 42 17.1 -0.5**
comp=Z,5.5nm,0.4s,baz=30,slow=0.3,SNR=1.3
YAK LR LR 12 04 47.3
comp=Z,740nm,19.3s,baz=260,slow=38
comp=Z,4.6nm,0.3s
YAK Yakutsk 51.38 5 P P **11 41 03.6 +0.2**
YAK IAmb IAmb 11 41 07.2
comp=Z,53nm,1.0s
YAK Yakutsk 51.38 5 *e*P P **11 41 03.5 +0.2**
YAK *e**PP **pP 11 41 12.2 -2.2**
YAK *e* 11 42 16.4
YAK *e* 11 42 58.7
YAK *e*S **S 11 48 20.1 -0.1**
YAK *e**SS **sS 11 48 41.2 +5.1**
YAK *e* 11 50 48.1
YAK *e*SSS SSS 11 53 37.5
YAK pmax pmax
comp=Z,48nm,1.0s
YAK pmax pmax
comp=N,21nm,1.0s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK pmax pmax
comp=Z,57nm,1.9s
YAK pmax pmax
comp=N,69nm,2.2s
YAK pmax pmax
comp=E,31nm,1.6s
YAK smax smax
comp=E,51nm,2.2s
YAK smax smax
comp=N,82nm,2.7s
YAK MLR MLR
comp=Z,745nm,25.0s
YAK MLR MLR
comp=N,585nm,24.0s
YAK MLR MLR
comp=E,573nm,19.0s
KUU Kurty 51.38 318 *e*P P **11 41 03.6 -0.2**
KUU Kurty 51.38 318 *e*P P **11 41 03.7 -0.2**
baz=318
TKM2 Tokmak 2 51.46 317 P P **11 41 04.3 -0.3**
SNR=41
TKM2 Tokmak 2 51.46 317 *i*P P **11 41 04.8 +0.1**
TKM2 pmax pmax
comp=Z,24nm,0.7s
KBK Karagaybulak 51.79 316 P P **11 41 08.1 +1.0**
SNR=29
UCH Uchtor 51.92 316 P P **11 41 09.1 +0.7**
SNR=102
CHMS Chumysh 52.06 317 P P **11 41 09.2 +0.3**
SNR=20
CHMS Chumysh 52.06 317 *i*P P **11 41 08.9 0.0**
CHMS pmax pmax
comp=Z,67nm,1.2s
AAK Ala-Archa 52.09 316 P P **11 41 09.6 +0.3**
comp=Z,34nm,1.0s,baz=138,slow=5.2,SNR=36
AAK PcP **PcP 11 42 20.2 -0.8**
comp=Z,12nm,0.8s,baz=286,slow=5.1,SNR=2.2
AAK LR LR 12 07 17.5
comp=Z,545nm,18.4s,baz=110,slow=41
comp=Z,34nm,1.0s
AAK Ala-Archa 52.09 316 P P **11 41 11.4 +2.1**
SNR=16
AAK Ala-Archa 52.09 316 P P **11 41 10.0 +0.7**
AAK IAmb IAmb 11 41 13.5
comp=Z,53nm,1.1s
AAK Ala-Archa 52.09 316 P P **11 41 10.0 +0.7**
AAK pmax pmax
comp=Z,53nm,1.2s
AAK Ala-Archa 52.09 316 P P **11 41 10.4 +1.1**
AAK Ala-Archa 52.09 316 P P **11 41 10.2 +0.9**
ZAA0 Zalesovo Array 52.23 333 P P **11 41 09.4 -0.5**
ZALV Zalesovo Beam 52.23 333 P P **11 41 08.7 -1.2**
comp=Z,12nm,0.8s,baz=125,slow=7.0,SNR=30
ZALV LR LR 12 04 47.7
comp=Z,2µm,19.6s,baz=124,slow=38
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 52.23 333 P P **11 41 09.1 -0.7**
ZALV Zalesovo Beam 52.23 333 *i*P P **11 41 08.6 -1.3**
ZALV pmax pmax
comp=Z,10.0nm,0.7s
BRAT Ballarat 52.30 158 P P **11 41 12.6 +2.1**
comp=Z,9.5nm,0.9s
SEM Semipalatinsk 52.30 327 *e*P P **11 41 10.6 -0.2**
SEM Semipalatinsk 52.30 327 *e*P P **11 41 10.6 -0.2**
baz=327
SGDS Sogindy 52.32 317 *e*P P **11 41 10.1 -0.8**
SGDS Sogindy 52.32 317 *e*P P **11 41 10.1 -0.8**
baz=317
USP Ospenovka 52.34 317 P P **11 41 11.4 +0.5**
SNR=33
AML Almayashu 52.45 315 P P **11 41 13.3 +1.0**
SNR=33
CAN Canberra 52.47 152 P P **11 41 11.9 -0.1**
CAN IAmb IAmb 11 41 34.0
comp=Z,61nm,1.3s
CAN Canberra 52.47 152 P P **11 41 11.9 -0.1**
CAN pmax pmax
comp=Z,61nm,1.3s
CAN Canberra 52.47 152 P P **11 41 12.0 0.0**
CAN Canberra 52.47 152 P P **11 41 11.3 -0.7**
CAN pP **pP 11 41 20.8 -2.1**
CAN sP **sP 11 41 27.3 +0.5**
EKS2 Erkin-Say 52.59 316 P P **11 41 13.9 +1.0**
SNR=43
CNB Canberra Magne 52.64 152 P P **11 41 13.2 0.0**
TOO Toolangi 52.91 157 P P **11 41 14.7 -0.4**
TOO IAmb IAmb 11 41 31.0
comp=Z,43nm,1.1s
TOO Toolangi 52.91 157 P P **11 41 14.7 -0.4**
TOO pmax pmax
comp=Z,43nm,1.2s
TOO Toolangi 52.91 157 P P **11 41 15.7 +0.6**
comp=Z,30nm,0.9s
MA2 Magadan 53.13 18 LR LR 12 06 15.6
comp=Z,411nm,19.2s,baz=222,slow=39
MA2 Magadan 53.13 18 P P **11 41 17.8 +1.3**
MA2 IAmb IAmb 11 41 19.0
comp=Z,62nm,1.1s
MA2 Magadan 53.13 18⇓ *e*P P **11 41 17.4 +1.0**
MA2 pmax pmax
comp=Z,77nm,1.7s
MA2 MLR MLR
comp=Z,568nm,19.0s
MA2 Magadan 53.13 18 P P **11 41 16.4 0.0**
MA2 Magadan 53.13 18 P P **11 41 17.6 +1.2**
MA2 sP **sP 11 41 32.8 +1.2**
KURBB Kurchatov Arra 53.34 327 LR LR 12 04 54.9
comp=Z,881nm,21.1s,baz=107,slow=37
KURBB Kurchatov Arra 53.34 327 P P **11 41 17.8 -0.3**
KURK Kurchatov 53.34 327 P P **11 41 17.6 -0.6**
KURK Kurchatov 53.34 327*d i*P P **11 41 17.5 -0.6**
KURK pmax pmax
comp=Z,146nm,1.3s
KURK Kurchatov 53.34 327 P P **11 41 17.9 -0.2**
KURK P P **11 41 17.9 -0.2**
KURK Kurchatov 53.34 327 P P **11 41 17.7 -0.4**
KURK pP **pP 11 41 28.1 -0.9**
KURK sP **sP 11 41 34.0 +0.8**
BTLS Baital 53.35 319 *e*P P **11 41 17.8 -0.6**
BTLS pmax pmax
comp=Z,17nm,0.7s
BTLS Baital 53.35 319 *e*P P **11 41 17.8 -0.6**
comp=Z,17nm,0.7s,baz=319
KBL Kabul 53.69 305 P P **11 41 21.6 +0.3**
KBL Kabul 53.69 305 P P **11 41 21.6 +0.3**
KBL pmax pmax
comp=Z,134nm,0.9s
KBL Kabul 53.69 305 P P **11 41 22.0 +0.7**
SNR=58
KBL P P **11 41 22.0 +0.7**
SNR=58
GAR Garm 53.84 311 P P **11 41 22.8 +0.7**
DZA Taraz 54.35 315 *e*P P **11 41 26.0 +0.2**
DZA Taraz 54.35 315 *e*P P **11 41 26.0 +0.2**
baz=315
DZM Mont Dzumac 54.37 127 LR LR 12 05 06.1
comp=Z,229nm,20.9s,baz=275,slow=37
DZM Mont Dzumac 54.37 127 *e*LR LR 11 57 15.0
comp=Z,2µm,25.1s
CHGR Chuyangaron 54.61 310 P P **11 41 28.2 +0.5**
CHGR Chuyangaron 54.61 310 P P **11 41 28.3 +0.5**
CHGR pmax pmax
comp=Z,119nm,0.8s
KK31 Karatay Array 54.99 315 P P **11 41 30.0 -0.3**
KK31 IAmb IAmb 11 41 32.7
comp=Z,39nm,0.8s
KK31 Karatay Array 54.99 315 P P **11 41 30.0 -0.3**
KK31 pmax pmax
comp=Z,39nm,0.8s

KKAR	**Karatay Array**	**54.99**	**315**	P	**P**	**11 41 29.8**	**-0.5**
KKAR				IAmb	IAmb	11 41 32.7	
	comp=Z,39nm,0.8s						
KKAR	**Karatay Array**	**54.99**	**315**	P	**P**	**11 41 30.2**	**-0.1**
KKAR	**Karatay Array**	**54.99**	**315**	P	**P**	**11 41 30.3**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,39nm,0.8s						
IUG	**Iuzhnay**	**55.01**	**314**	*de*P	**P**	**11 41 30.7**	**+0.1**
IUG	**Iuzhnay**	**55.01**	**314**	⇓*e*P	**P**	**11 41 30.8**	**+0.1**
	baz=314						
BRZS	**Berezniki**	**56.30**	**324**	*e*P	**P**	**11 41 39.1**	**-0.5**
BRZS				pmax	pmax		
	comp=Z,23nm,1.1s						
BRZS	**Berezniki**	**56.30**	**324**	*e*P	**P**	**11 41 39.1**	**-0.5**
	comp=Z,23nm,1.1s,baz=324						
SEY	**Seymchan**	**56.31**	**16**	P	**P**	**11 41 39.8**	**+0.4**
	comp=Z,14nm,0.9s,baz=223,slow=4.9,SNR=25						
	comp=Z,14nm,0.9s						
SEY	**Seymchan**	**56.31**	**16**	⇓*e*P	**P**	**11 41 41.3**	**+1.9**
SEY				pmax	pmax		
	comp=Z,56nm,2.5s						
SEY				MLR	MLR		
	comp=Z,2μm,21.0s						
SHEM	**Shemya Is, Ala**	**58.87**	**34**	LR	LR	12 05 58.8	
	comp=Z,194nm,19.9s,baz=266,slow=35						
BRVK	**Borovoye**	**58.99**	**326**	P	**P**	**11 41 57.8**	**-0.7**
BRVK	**Borovoye**	**58.99**	**326**	P	**P**	**11 41 57.8**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,74nm,1.1s						
BRVK	**Borovoye**	**58.99**	**326**	P	**P**	**11 41 57.9**	**-0.6**
BRVK				P	**P**	**11 41 57.9**	**-0.6**
BRVK	**Borovoye**	**58.99**	**326**	P	**P**	**11 41 57.8**	**-0.6**
BRVK				pP	**pP**	**11 42 07.9**	**-1.7**
HRA	**Herat**	**59.18**	**304**	P	**P**	**11 41 59.7**	**-0.7**
HRA				IAmb	IAmb	11 42 13.9	
	comp=Z,48nm,1.1s						
TIXI	**Tiksi**	**60.89**	**2**	P	**P**	**11 42 10.3**	**-0.9**
	comp=Z,80nm,1.0s,baz=88,slow=23,SNR=14						
	comp=Z,80nm,1.0s						
TIXI	**Tiksi**	**60.89**	**2**	P	**P**	**11 42 10.5**	**-0.6**
TIXI	**Tiksi**	**60.89**	**2**	*ce*P	**P**	**11 42 10.6**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,91nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,664nm,18.0s						
TIXI	**Tiksi**	**60.89**	**2**	P	**P**	**11 42 10.2**	**-0.9**
TIXI				pP	**pP**	**11 42 21.2**	**-1.2**
WBK	**Wadi Bani Khal**	**61.26**	**290**	P	**P**	**11 42 14.6**	**0.0**
WBK				P	**P**	**11 42 14.6**	**0.0**
WSAR	**Wadi Sarin**	**61.57**	**291**	LR	LR	12 11 24.6	
	comp=Z,312nm,20.3s,baz=99,slow=38						
WSAR	**Wadi Sarin**	**61.57**	**291**	P	**P**	**11 42 16.4**	**-0.3**
BIDO	**Bidbid**	**62.03**	**291**	P	**P**	**11 42 20.4**	**+0.6**
BIDO				P	**P**	**11 42 20.4**	**+0.6**
MSVF	**Nonsavu**	**62.06**	**117**	LR	LR	12 05 53.7	
	comp=Z,419nm,21.8s,baz=303,slow=33						
JMDO	**Jabal Madar**	**62.06**	**290**	P	**P**	**11 42 19.8**	**-0.2**
JMDO				P	**P**	**11 42 19.8**	**-0.2**
SMDO	**Samad**	**62.11**	**290**	P	**P**	**11 42 20.2**	**-0.2**
SMDO				P	**P**	**11 42 20.2**	**-0.2**
MHTO	**MHTO**	**62.22**	**288**	P	**P**	**11 42 20.7**	**-0.3**
MHTO				P	**P**	**11 42 20.7**	**-0.3**
NRIK	**Noril'sk**	**62.49**	**347**	P	**P**	**11 42 21.6**	**-0.4**
	comp=Z,68nm,0.9s,baz=130,slow=6.2,SNR=39						
NRIK				LR	LR	12 11 43.6	
	comp=Z,3μm,18.9s,baz=148,slow=38						
	comp=Z,68nm,0.9s						
NRIK	**Noril'sk**	**62.49**	**347**	P	**P**	**11 42 22.0**	**0.0**
NRIK	**Noril'sk**	**62.49**	**347**	*ce*P	**P**	**11 42 21.2**	**-0.8**
NRIK				MLR	MLR		
	comp=Z,3μm,19.0s						
DQM	**DQM**	**62.65**	**287**	P	**P**	**11 42 21.6**	**-2.3**
DQM				P	**P**	**11 42 21.6**	**-2.3**
HOQ	**Hoqain**	**62.78**	**291**	P	**P**	**11 42 24.3**	**-0.6**
HOQ				P	**P**	**11 42 24.3**	**-0.6**
BSY	**Bisya**	**62.90**	**290**	P	**P**	**11 42 25.7**	**+0.1**
GEYT	**Alibeck**	**62.97**	**307**	P	**P**	**11 42 26.6**	**+0.8**
	comp=Z,69nm,0.9s,baz=143,slow=5.2,SNR=43						
	comp=Z,69nm,0.9s						
GEYT	**Alibeck**	**62.97**	**307**	P	**P**	**11 42 26.1**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**62.97**	**307**	P	**P**	**11 42 26.8**	**+0.9**
SOHO	**SOHO**	**63.49**	**292**	P	**P**	**11 42 29.1**	**-0.4**
SOHO				P	**P**	**11 42 29.1**	**-0.4**
SOHO	**SOHO**	**63.49**	**292**	P	**P**	**11 42 29.3**	**-0.2**
ARQ	**Araqi**	**63.51**	**291**	P	**P**	**11 42 29.6**	**-0.1**
ARQ				P	**P**	**11 42 29.6**	**-0.1**
MDH	**Madha**	**63.70**	**293**	P	**P**	**11 42 30.3**	**-0.5**
UOSS	**Minazif**	**63.79**	**292**	P	**P**	**11 42 31.5**	**+0.1**
UOSS				IAmb	IAmb	11 42 47.1	
	comp=Z,31nm,1.2s						
UOSS	**Minazif**	**63.79**	**292**	P	**P**	**11 42 31.3**	**-0.1**
UOSS				P	**P**	**11 42 31.3**	**-0.1**
UOSS	**Minazif**	**63.79**	**292**	P	**P**	**11 42 31.0**	**-0.5**
AB31	**Akbulak array**	**63.81**	**320**	*i* P	**P**	**11 42 30.1**	**-1.0**
ABKAR	**Akbulak array**	**63.81**	**320**	P	**P**	**11 42 30.6**	**-0.5**
ABKAR				IAmb	IAmb	11 42 32.9	
	comp=Z,47nm,1.1s						
ABKAR	**Akbulak array**	**63.81**	**320**	P	**P**	**11 42 30.4**	**-0.8**
MASF	**Masafi**	**63.83**	**293**	P	**P**	**11 42 33.3**	**+1.6**
	SNR=5.5						
MASF				P	**P**	**11 42 33.3**	**+1.6**
	SNR=5.5						
MSFE	**Esma-Masafi**	**63.83**	**293**	*i* P	**P**	**11 42 33.2**	**+1.5**
	SNR=9.3						
SHME	**Shamm**	**63.85**	**294**	P	**P**	**11 42 32.1**	**+0.4**
	SNR=9.2						
SHME				P	**P**	**11 42 32.1**	**+0.4**
	SNR=9.2						
SHME	**Shamm**	**63.85**	**294**	*i* P	**P**	**11 42 32.2**	**+0.4**
	SNR=9.2						
ASHO	**Ashiyiah**	**63.92**	**292**	P	**P**	**11 42 32.2**	**-0.2**
ASHO				P	**P**	**11 42 32.2**	**-0.2**
ASHO	**Ashiyiah**	**63.92**	**292**	P	**P**	**11 42 32.4**	**0.0**
BILL	**Bilibino**	**63.98**	**17**	P	**P**	**11 42 31.9**	**0.0**
BILL				IAmb	IAmb	11 42 34.0	
	comp=Z,32nm,1.1s						
BILL	**Bilibino**	**63.98**	**17**	*d* *i* P	**P**	**11 42 32.1**	**+0.2**
BILL				*i*		11 42 39.7	
BILL				*i*		11 43 04.7	
BILL				*i*		11 44 52.6	
BILL				*i* S	**S**	**11 51 08.1**	**+2.9**
BILL				pmax	pmax		
	comp=Z,73nm,2.5s						
BILL				MLR	MLR		
	comp=Z,586nm,20.0s						
BILL	**Bilibino**	**63.98**	**17**	P	**P**	**11 42 31.7**	**-0.2**
ALNE	**Al Ain**	**64.21**	**291**	P	**P**	**11 42 34.6**	**+0.3**
	SNR=14						
ALNE	**Al Ain**	**64.21**	**291**	P	**P**	**11 42 34.5**	**+0.3**
FAQ	**Al Faqa, Dubai**	**64.34**	**292**	P	**P**	**11 42 35.1**	**0.0**
FAQ	**Al Faqa, Dubai**	**64.34**	**292**	P	**P**	**11 42 35.1**	**0.0**
ASUD	**Al Ashush, Dub**	**64.58**	**292**	P	**P**	**11 42 36.4**	**-0.3**
ASUD	**Al Ashush, Dub**	**64.58**	**292**	*i* P	**P**	**11 42 36.3**	**-0.3**
	SNR=7.4						
UMZA	**Um Al Zommool**	**64.78**	**290**	P	**P**	**11 42 37.7**	**-0.2**
DMTO	**DMTO**	**65.22**	**285**	P	**P**	**11 42 40.1**	**-0.8**
DMTO				P	**P**	**11 42 40.1**	**-0.8**
AKTO	**Aktyubinsk**	**65.31**	**321**	LR	LR	12 12 50.9	
	comp=Z,1μm,19.9s,baz=103,slow=38						
MZWR	**Madinat Zayed**	**65.92**	**291**	P	**P**	**11 42 45.1**	**-0.3**
RBK	**Rabkut**	**65.94**	**284**	P	**P**	**11 42 45.4**	**-0.2**
RBK				P	**P**	**11 42 45.4**	**-0.2**
MZR	**Muzera**	**66.32**	**290**	P	**P**	**11 42 48.4**	**+0.5**
	SNR=13						
MZR				P	**P**	**11 42 48.4**	**+0.5**
	SNR=13						
MZR	**Muzera**	**66.32**	**290**	*i* P	**P**	**11 42 48.2**	**+0.3**
	SNR=7.1						
WHFO	**Wadi Hawf**	**66.33**	**285**	P	**P**	**11 42 48.1**	**0.0**
WHFO				P	**P**	**11 42 48.1**	**0.0**
ARU	**Arti**	**66.53**	**327**	P	**P**	**11 42 47.7**	**-0.9**
ARU				IAmb	IAmb	11 42 49.7	
	comp=Z,53nm,1.3s						
ARU	**Arti**	**66.53**	**327**	*c* *i* P	**P**	**11 42 47.8**	**-0.9**
ARU				*PP	**pP**	**11 42 59.1**	**-0.8**
ARU						11 43 16.7	
ARU						11 45 13.2	
ARU				S	**S**	**11 51 34.0**	**-2.9**
ARU				pmax	pmax		
	comp=Z,31nm,0.9s						
ARU				MLR	MLR		
	comp=Z,624nm,16.0s						
ARU	**Arti**	**66.53**	**327**	P	**P**	**11 42 48.0**	**-0.6**
ABTO	**Aybut**	**66.82**	**284**	P	**P**	**11 42 49.5**	**-1.7**
ABTO				P	**P**	**11 42 49.5**	**-1.7**
JRN	**Qarnain Island**	**66.83**	**293**	P	**P**	**11 42 50.7**	**-0.4**
JRN				P	**P**	**11 42 50.7**	**-0.4**
GHWR	**Ruwais**	**66.84**	**291**	P	**P**	**11 42 50.3**	**-0.9**
SLWR	**Sila**	**67.92**	**292**	P	**P**	**11 42 58.9**	**+0.9**
SHMA	**Al-Shehemyia**	**68.51**	**294**	P	**P**	**11 43 02.2**	**+0.5**
SMRA	**Abu-Samra**	**68.68**	**292**	P	**P**	**11 43 03.4**	**+0.6**
NIKH	**Nikolski High**	**68.77**	**37**	P	**P**	**11 43 02.6**	**-0.2**
	baz=260						
SPIA	**Saint Paul Isl**	**68.84**	**33**	P	**P**	**11 43 02.3**	**-0.8**
	baz=257						
SAKB	**Bahrain**	**68.89**	**294**	P	**P**	**11 43 04.9**	**+0.8**
GAMB	**Gambell**	**69.86**	**26**	P	**P**	**11 43 08.8**	**-0.6**
	baz=253						
AFI	**Afiamalu**	**69.97**	**109**	LR	LR	12 08 28.2	
	comp=Z,788nm,21.9s,baz=290,slow=31						
LBZ	**Lake Benmore**	**70.08**	**145**	P	**P**	**11 43 10.4**	**-0.6**
LBZ				IAmb	IAmb	11 43 11.2	
	comp=Z,62nm,1.3s						
RPZ	**Rata Peaks**	**70.15**	**144**	LR	LR	12 12 10.1	
	comp=Z,548nm,21.7s,baz=274,slow=34						
RAO	**Raoul Island**	**70.16**	**127**	LR	LR	12 12 33.7	
	comp=Z,203nm,21.7s,baz=300,slow=35						
UNV	**Unalaska Valle**	**70.30**	**37**	P	**P**	**11 43 11.8**	**-0.4**
	baz=261						
URZ	**Urewera**	**70.80**	**137**	LR	LR	12 12 05.8	
	comp=Z,511nm,21.7s,baz=22,slow=34						
BKZ	**Black Stump Fm**	**70.87**	**138**	P	**P**	**11 43 15.0**	**-1.0**
KIRV	**Kirov**	**71.82**	**328**	*de*P	**P**	**11 43 20.2**	**-1.1**
TNA	**Tin City**	**71.91**	**24**	P	**P**	**11 43 21.1**	**-0.6**
	baz=256						
BELG	**Belogornoye**	**72.04**	**322**	*ce*P	**P**	**11 43 22.2**	**-0.6**
BELG				pmax	pmax		
	comp=Z,18nm,1.0s						
GROC	**Groznyy**	**72.73**	**312**	*e*P	**P**	**11 43 25.7**	**-1.4**
GROC				*e**PP	**pP**	**11 43 39.7**	**+1.2**
GROC				*e*		11 46 07.7	
GROC				pmax	pmax		
	comp=Z,102nm,0.7s						
ANM	**Nome**	**72.74**	**26**	P	**P**	**11 43 26.2**	**-0.6**
	baz=259						
S12K	**Black Hills**	**73.08**	**35**	P	**P**	**11 43 28.3**	**-0.7**
	baz=264						
GNI	**Garni**	**73.50**	**309**	*e*P	**P**	**11 43 34.0**	**+2.1**
GNI	**Garni**	**73.50**	**309**	P	**P**	**11 43 31.8**	**-0.2**
GNI	**Garni**	**73.50**	**309**	*de*P	**P**	**11 43 33.4**	**+1.4**
GNI				pmax	pmax		
	comp=Z,67nm,1.3s						
GNI	**Garni**	**73.50**	**309**	P	**P**	**11 43 31.6**	**-0.4**
GNI	**Garni**	**73.50**	**309**	P	**P**	**11 43 34.1**	**+2.1**
RAYN	**Ar Rayn**	**73.61**	**291**	P	**P**	**11 43 33.0**	**+0.3**
RAYN	**Ar Rayn**	**73.61**	**291**	P	**P**	**11 43 33.0**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,101nm,1.0s						
RAYN	**Ar Rayn**	**73.61**	**291**	P	**P**	**11 43 33.1**	**+0.3**
RAYN	**Ar Rayn**	**73.61**	**291**	P	**P**	**11 43 33.2**	**+0.5**
ZEI	**Tsey**	**74.11**	**311**	*e*P	**P**	**11 43 34.1**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,50nm,1.3s						
PRGR	**Permogore**	**74.12**	**331**	*e*P	**P**	**11 43 33.5**	**-1.4**
PRGR				*e*		11 43 48.1	
CLDR	**Caldiran**	**74.15**	**308**	*e*P	**P**	**11 43 35.4**	**-0.5**
NCK	**Nalchik**	**74.34**	**312**	⇓*e*P	**P**	**11 43 36.8**	**+0.2**
NCK				pmax	pmax		
	comp=Z,27nm,1.2s						
CHNA	**Chernabura Isl**	**74.43**	**36**	P	**P**	**11 43 36.4**	**-0.5**
	baz=267						
AKH	**Akhalkalaki**	**74.43**	**310**	*e*P	**P**	**11 43 39.5**	**+2.1**
CUKT	**Cukurca**	**74.44**	**306**	*e*P	**P**	**11 43 36.9**	**-0.6**
ONI	**Oni**	**74.45**	**311**	*e*P	**P**	**11 43 37.6**	**+0.3**
ONI	**Oni**	**74.45**	**311**	P	**P**	**11 43 38.6**	**+1.3**
ONI				IAmb	IAmb	11 43 41.2	
	comp=Z,51nm,1.2s						
ONI	**Oni**	**74.45**	**311**	P	**P**	**11 43 38.6**	**+1.3**
ONI				pmax	pmax		
	comp=Z,51nm,1.2s						
S14K	**Fog Glacier**	**74.54**	**35**	P	**P**	**11 43 37.1**	**-0.5**
	baz=266						
GOF	**Gofitskoye**	**74.73**	**314**	⇑*e*P	**P**	**11 43 38.9**	**+0.1**
GOF				pmax	pmax		
	comp=Z,72nm,1.1s						
KARS	**Kars**	**74.76**	**309**	P	**P**	**11 43 39.9**	**+0.6**
KARS	**Kars**	**74.76**	**309**	P	**P**	**11 43 39.9**	**+0.6**
KARS				pmax	pmax		
	comp=Z,112nm,1.0s						
GEVA	**Gevas**	**74.84**	**307**	P	**P**	**11 43 40.5**	**+0.6**
GEVA				IAmb	IAmb	11 43 42.6	
	comp=Z,45nm,0.8s						
KBZ	**Khabaz**	**74.84**	**312**	P	**P**	**11 43 38.7**	**-0.8**
	comp=Z,29nm,1.0s,baz=114,slow=3.0,SNR=25						
KBZ				LR	LR	12 21 11.6	
	comp=Z,585nm,18.7s,baz=66,slow=39						
	comp=Z,29nm,1.0s						
KBZ	**Khabaz**	**74.84**	**312**	*de*P	**P**	**11 43 39.0**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,41nm,1.0s						
AGRB	**Hanur-Agry**	**74.85**	**308**	*e*P	**P**	**11 43 41.8**	**+1.9**
AKDM	**Akdamar-Van**	**74.90**	**307**	*e*P	**P**	**11 43 41.4**	**+1.2**
KVAR	**Kislovodsk Arr**	**74.99**	**313**	LR	LR	12 21 03.0	
	comp=Z,282nm,18.6s,baz=252,slow=39						
KIV	**Kislovodsk**	**74.99**	**313**	*e*P	**P**	**11 43 41.4**	**+0.9**
KIV	**Kislovodsk**	**74.99**	**313**	P	**P**	**11 43 40.9**	**+0.4**
KIV				IAmb	IAmb	11 43 43.1	
	comp=Z,57nm,0.8s						
KIV	**Kislovodsk**	**74.99**	**313**	*e*P	**P**	**11 43 40.3**	**-0.2**
KIV				*e*S	**S**	**11 53 14.6**	**-1.3**
KIV				pmax	pmax		
	comp=Z,40nm,4.1s						
KIV				pmax	pmax		
	comp=Z,72nm,1.0s						
KIV				MLR	MLR		
	comp=Z,541nm,18.0s						
KIV	**Kislovodsk**	**74.99**	**313**	P	**P**	**11 43 41.4**	**+0.9**
KIV				P	**P**	**11 43 41.4**	**+0.9**
KIV	**Kislovodsk**	**74.99**	**313**	*i* P	**P**	**11 43 40.8**	**+0.4**
	SNR=7.1						
N16K	**Nishlik Lake**	**75.23**	**30**	P	**P**	**11 43 41.0**	**-0.4**
	baz=266						
O16K	**Kokwok River B**	**75.52**	**31**	P	**P**	**11 43 42.5**	**-0.5**
	baz=267,SNR=5.8						
P16K	**Nushagak River**	**75.54**	**32**	P	**P**	**11 43 42.9**	**-0.3**
	baz=267						
GURO	**Guroymak-BITLI**	**75.64**	**307**	*e*P	**P**	**11 43 45.8**	**+1.4**
GURO	**Guroymak-BITLI**	**75.64**	**307**	P	**P**	**11 43 45.9**	**+1.5**
VRH	**Novokhopyorsk**	**75.64**	**320**	*e*P	**P**	**11 43 42.0**	**-1.9**
VRH				pmax	pmax		
	comp=Z,70nm,1.3s						
O17K	**Koliganek Bris**	**76.03**	**31**	P	**P**	**11 43 45.9**	**-0.1**
	baz=268						
Q16K	**King Salmon**	**76.21**	**32**	P	**P**	**11 43 47.4**	**+0.4**
	baz=268						
P17K	**Kvichak River**	**76.34**	**32**	P	**P**	**11 43 47.9**	**+0.2**
	baz=268,SNR=9.2						
GCSA	**Galena City Sc**	**76.39**	**26**	P	**P**	**11 43 48.5**	**+0.6**
	baz=266,SNR=9.4						
N18K	**Kilae Creek**	**76.66**	**30**	P	**P**	**11 43 50.2**	**+0.6**
N18K				IAmb	IAmb	11 43 52.4	
	comp=Z,57nm,1.9s						
N18K	**Kilae Creek**	**76.66**	**30**	P	**P**	**11 43 49.8**	**+0.2**
	baz=268						
BNGB	**Bingl**	**76.67**	**308**	*e*P	**P**	**11 43 51.9**	**+1.7**
TTA	**Tatalina**	**76.68**	**28**	P	**P**	**11 43 50.5**	**+0.8**
TTA	**Tatalina**	**76.68**	**28**	P	**P**	**11 43 50.5**	**+0.8**
TTA				pmax	pmax		
	comp=Z,20nm,1.2s						
TTA	**Tatalina**	**76.68**	**28**	P	**P**	**11 43 50.8**	**+1.1**
	baz=268,SNR=6.1						
MARD	**Mardin**	**76.69**	**306**	P	**P**	**11 43 51.2**	**+0.8**
CHIR	**Chirikof Islan**	**76.72**	**35**	P	**P**	**11 43 50.2**	**+0.2**
	baz=270						
KOPT	**Kop Dagi**	**76.75**	**309**	P	**P**	**11 43 51.9**	**+1.0**
KOPT				IAmb	IAmb	11 44 07.2	
	comp=Z,51nm,1.2s						
SVW2	**Spanovohn**	**76.83**	**30**	P	**P**	**11 43 51.6**	**+1.1**
MAZI	**Mazidag**	**76.95**	**306**	*e*P	**P**	**11 43 52.3**	**+0.5**
A21K	**Barrow**	**76.97**	**19**	P	**P**	**11 43 51.9**	**+0.8**
	baz=265						
O18K	**Koktuh Hills**	**76.98**	**31**	P	**P**	**11 43 52.8**	**+1.3**
O18K				IAmb	IAmb	11 44 05.3	
	comp=Z,52nm,1.1s						
O18K	**Koktuh Hills**	**76.98**	**31**	P	**P**	**11 43 51.7**	**+0.3**
	baz=269,SNR=8.7						
KLMR	**Klimovskoe**	**77.02**	**330**	*e*P	**P**	**11 43 48.5**	**-3.0**
KLMR				*e*		11 46 43.9	
KLMR				pmax	pmax		
	comp=Z,96nm,1.6s						
KLMR				MLR	MLR		
	comp=Z,2μm,19.0s						
KLMR	**Klimovskoe**	**77.02**	**330**	*e*P	**P**	**11 43 48.6**	**-3.0**
KLMR				AMP		11 43 52.5	
	comp=Z,96nm,1.6s						
KLMR				*e*PP	**PP**	**11 46 44.0**	**-0.9**
KLMR				LQ	LQ	12 13 45.9	
KLMR				LQ	LQ	12 13 45.9	
KLMR				LR	LR	12 18 10.6	
KLMR				AMP		12 22 08.3	
	comp=Z,2μm,18.9s						
SOC	**Sochi**	**77.16**	**312**	*e*P	**P**	**11 43 51.7**	**-1.0**
SOC				*e*		11 46 43.6	
SOC				*e*PPP	PPP	11 48 33.4	
SOC				*e*S	**S**	**11 53 38.5**	**-1.0**
SOC				*e*SSS	SSS	12 01 57.0	
SOC				pmax	pmax		
	comp=Z,37nm,0.7s						
SOC				MLR	MLR		
	comp=Z,495nm,17.0s						
DYBB	**Diyarbakir**	**77.16**	**307**	*e*P	**P**	**11 43 53.7**	**+0.8**
L19K	**White Mountain**	**77.20**	**29**	P	**P**	**11 43 53.3**	**+0.7**
L19K				IAmb	IAmb	11 43 55.3	
	comp=Z,53nm,1.6s						
L19K	**White Mountain**	**77.20**	**29**	P	**P**	**11 43 53.5**	**+0.9**
	baz=269,SNR=7.7						
VORR	**Voronezh**	**77.21**	**321**	*e*P	**P**	**11 43 52.5**	**-0.3**
VORR				pmax	pmax		
	comp=Z,50nm,0.4s						
VSR	**Storozhevoye**	**77.25**	**320**	*e*P	**P**	**11 43 51.5**	**-1.5**
VSR				pmax	pmax		
	comp=Z,40nm,1.1s						
N19K	**Bonanza Creek**	**77.36**	**30**	P	**P**	**11 43 54.5**	**+0.9**
N19K	**Bonanza Creek**	**77.36**	**30**	P	**P**	**11 43 54.1**	**+0.6**
	baz=270,SNR=12						
LPSR	**Galich'ya Gora**	**77.36**	**322**	*e*P	**P**	**11 43 52.0**	**-1.6**
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
CASY	**Casey**	**77.40**	**185**	P	**P**	**11 43 53.2**	**-0.2**
M19K	**Big River Lodg**	**77.41**	**29**	P	**P**	**11 43 54.8**	**+1.0**
M19K	**Big River Lodg**	**77.41**	**29**	P	**P**	**11 43 54.2**	**+0.4**
	baz=269						
O19K	**Port Alsworth**	**77.43**	**31**	P	**P**	**11 43 54.9**	**+1.1**
O19K	**Port Alsworth**	**77.43**	**31**	P	**P**	**11 43 54.5**	**+0.6**
	baz=270						
SII	**Sitkinak Islan**	**77.53**	**34**	P	**P**	**11 43 54.9**	**+0.3**
	baz=271						
ATD	**Arta Tunnel**	**77.55**	**279**	P	**P**	**11 43 55.9**	**+0.4**
ATD				IAmb	IAmb	11 43 58.9	
	comp=Z,36nm,0.9s						
ATD	**Arta Tunnel**	**77.55**	**279**	P	**P**	**11 43 57.5**	**+1.9**
J20K	**Nowinta River**	**77.55**	**26**	P	**P**	**11 43 55.2**	**+0.8**
J20K				IAmb	IAmb	11 43 57.5	
	comp=Z,74nm,1.4s						
J20K	**Nowinta River**	**77.55**	**26**	P	**P**	**11 43 54.8**	**+0.3**
	baz=269,SNR=20						
K20K	**Telida**	**77.58**	**27**	P	**P**	**11 43 55.4**	**+0.7**
	baz=269,SNR=20						
L20K	**Farewell, AK**	**77.66**	**28**	P	**P**	**11 43 55.8**	**+0.7**
	baz=270,SNR=6.7						
PTK	**Pertek**	**77.68**	**308**	*e*P	**P**	**11 43 57.3**	**+1.3**
IMAR	**Indian Mountai**	**77.75**	**25**	P	**P**	**11 43 56.0**	**+0.4**
Q19K	**Cape Douglas,**	**77.78**	**32**	P	**P**	**11 43 56.2**	**+0.2**
	baz=271						
G21K	**Allakaket**	**77.86**	**24**	P	**P**	**11 43 57.1**	**+1.0**
	baz=269						
F21K	**Alatna River**	**77.88**	**23**	P	**P**	**11 43 57.0**	**+0.7**
	baz=269,SNR=5.9						
P19K	**Oil Pt**	**77.98**	**31**	P	**P**	**11 43 57.6**	**+0.6**
	baz=271						
OHAK	**Old Harbor**	**78.00**	**34**	P	**P**	**11 43 57.3**	**+0.2**
	baz=271						
M20K	**Styx River**	**78.01**	**29**	P	**P**	**11 43 57.5**	**+0.3**
M20K	**Styx River**	**78.01**	**29**	P	**P**	**11 43 57.4**	**+0.3**
	baz=270,SNR=10.0						
MOS	**Moscow**	**78.04**	**325**	*e*P	**P**	**11 43 54.9**	**-2.5**
MOS				*e*		11 44 04.0	
MOS				pmax	pmax		
	comp=Z,54nm,0.9s						
MOS				MLR	MLR		
	comp=Z,1μm,20.0s						
H21K	**Melozitna Rive**	**78.14**	**25**	P	**P**	**11 43 57.9**	**+0.1**
	baz=270,SNR=24						
URFA	**Urfa**	**78.24**	**306**	*e*P	**P**	**11 43 55.9**	**-3.1**
O20K	**Slope Mountain**	**78.28**	**31**	P	**P**	**11 43 57.8**	**-0.9**
	baz=271						
CHUM	**Lake Minchumin**	**78.36**	**27**	P	**P**	**11 43 59.1**	**+0.2**
	baz=271,SNR=6.3						
KDAK	**Kodiak Island**	**78.37**	**33**	P	**P**	**11 43 58.7**	**-0.4**
	baz=272						
F22K	**John River**	**78.38**	**23**	P	**P**	**11 43 59.6**	**+0.5**
	baz=270,SNR=31						
PPLA	**Purkeypile**	**78.43**	**28**	P	**P**	**11 43 59.1**	**-0.5**
	baz=271						
Q20K	**Shuyak Island**	**78.44**	**32**	P	**P**	**11 43 59.2**	**-0.3**
	baz=272						
N20K	**Mount Spurr**	**78.46**	**30**	P	**P**	**11 43 59.3**	**-0.4**
	baz=272						
SPCR	**Spurr Chakacha**	**78.46**	**30**	P	**P**	**11 43 59.1**	**-0.6**
	baz=272						
CAST	**Castle Rocks**	**78.47**	**27**	P	**P**	**11 44 00.7**	**+1.1**
CAST				IAmb	IAmb	11 44 02.0	
	comp=Z,58nm,1.1s						
CAST	**Castle Rocks**	**78.47**	**27**	P	**P**	**11 43 59.5**	**-0.1**
	baz=271,SNR=19						
I21K	**Tanana**	**78.48**	**25**	P	**P**	**11

APA *i* S **S** **11 53 56.0 -8.6**
APA *i* 11 54 09.0
APA *i* PS PnS 11 55 11.0 +19
APA MLR MLR
comp=Z,3µm,19.0s
ABPO Ambohimpanom 79.58 248 P **P** **11 44 07.5 +0.8**
ABPO Ambohimpanom 79.58 248 P **P** **11 44 07.5 +0.8**
ABPO pmax pmax
comp=Z,24nm,1.2s
D24K Happy Valley 79.58 21 P **P** **11 44 05.8 +0.2**
baz=273
I23K Minto, Yukon-K 79.59 25 P **P** **11 44 06.4 +0.7**
I23K Minto, Yukon-K 79.59 25 P **P** **11 44 06.1 +0.4**
baz=273,SNR=22
C24K Franklin Bluff 79.60 21 P **P** **11 44 05.7 +0.1**
baz=273
O22K Cooper Landing 79.71 30 P **P** **11 44 06.5 +0.1**
baz=274
NEA2 Nenana 79.75 26 P **P** **11 44 07.4 +0.8**
NEA2 IAmb IAmb 11 44 09.2
comp=Z,31nm,0.9s
NEA2 Nenana 79.75 26 P **P** **11 44 07.0 +0.4**
baz=274,SNR=25
TOKT Tokat 79.75 309 *e*P **P** **11 44 08.2 +1.0**
KMRS Kahramanmaras 79.75 306 *e*P **P** **11 44 08.1 +0.9**
E24K Your Creek 79.77 22 P **P** **11 44 06.9 +0.2**
baz=274,SNR=30
MCK McKinley 79.86 27 P **P** **11 44 06.7 -0.6**
MCK IAmb IAmb 11 44 08.9
comp=Z,65nm,1.0s
MCK McKinley 79.86 27 P **P** **11 44 06.7 -0.6**
MCK pmax pmax
comp=Z,65nm,1.0s
MCK McKinley 79.86 27 P **P** **11 44 07.1 -0.2**
baz=274,SNR=29
SEW Seward 79.87 31 P **P** **11 44 07.5 +0.2**
baz=274
PMR Palmer 79.92 29 P **P** **11 44 07.5 0.0**
baz=274,SNR=8.1
RND Reindeer 79.92 27 P **P** **11 44 07.7 0.0**
RND IAmb IAmb 11 44 09.1
comp=Z,69nm,1.4s
RND Reindeer 79.92 27 P **P** **11 44 07.7 0.0**
RND pmax pmax
comp=Z,69nm,1.4s
F24K Squaw Lake 80.03 23 P **P** **11 44 08.5 +0.4**
baz=274,SNR=37
SARI SarD1z-Kayseri 80.04 307 *e*P **P** **11 44 07.8 -1.1**
KVT Kavak 80.05 310 *e*P **P** **11 44 09.6 +0.8**
WAT1 Susitna Watana 80.10 28 P **P** **11 44 08.1 -0.5**
baz=274
H24K Noodor Dome 80.16 25 P **P** **11 44 09.8 +0.9**
H24K IAmb IAmb 11 44 11.7
comp=Z,33nm,1.0s
H24K Noodor Dome 80.16 25 P **P** **11 44 09.2 +0.4**
baz=274,SNR=35
TCOL CIGO, UAF Yank 80.24 26 P **P** **11 44 08.7 -0.5**
TCOL CIGO, UAF Yank 80.24 26 P **P** **11 44 09.5 +0.2**
baz=275,SNR=6.2
COLA College 80.25 26 P **P** **11 44 09.5 +0.2**
COLA College 80.25 26*d i*P **P** **11 44 09.0 -0.2**
COLA pmax pmax
comp=Z,13nm,0.9s
COLA College 80.25 26 P **P** **11 44 09.1 -0.1**
baz=275
G24K Hadweenzic Riv 80.25 24 P **P** **11 44 10.0 +0.7**
baz=275,SNR=37
KNK Knik Glacier 80.26 29 P **P** **11 44 09.6 +0.1**
KNK IAmb IAmb 11 44 11.3
comp=Z,71nm,1.4s
KNK Knik Glacier 80.26 29 P **P** **11 44 09.3 -0.1**
baz=275,SNR=5.5
SML Sawmill 80.28 29 P **P** **11 44 08.9 -0.7**
baz=275,SNR=9.8
PWL Port Wells 80.36 30 P **P** **11 44 09.4 -0.6**
baz=275,SNR=6.6
POKR Poker Plat Res 80.41 25 P **P** **11 44 11.8 +1.6**
POKR Poker Plat Res 80.41 25 P **P** **11 44 10.3 +0.2**
baz=275,SNR=8.9
BNN Bunyan 80.44 308 P **P** **11 44 10.7 -0.3**
D25K Kavik River 80.44 21 P **P** **11 44 10.5 +0.2**
baz=275,SNR=52
WAT6 Susitna Watana 80.49 28 P **P** **11 44 10.9 0.0**
baz=275,SNR=23
M23K Glacier View 80.57 29 P **P** **11 44 10.9 -0.2**
baz=275
DIKM Dikmen 80.59 311 ⇓P **P** **11 44 12.1 +0.5**
KOZT Kozan 80.61 306 *e*P **P** **11 44 10.8 -1.0**
DHY Denali Highway 80.61 27 P **P** **11 44 11.7 +0.2**
baz=275,SNR=9.8
IL31 80.67 26 P **P** **11 44 11.9 +0.4**
ILAR Eielson Array 80.67 26 P **P** **11 44 10.8 -0.7**
comp=Z,5.2nm,0.8s,baz=314,slow=4.9,SNR=52
ILAR LR LR 12 18 56.0
comp=Z,248nm,22.0s,baz=292,slow=35
comp=Z,5.2nm,0.8s
HDA Harding Lake 80.68 26 P **P** **11 44 11.1 -0.4**
HDA Harding Lake 80.68 26 P **P** **11 44 11.2 -0.4**
baz=276,SNR=13
CEYT Ceyhan 80.72 306 *e*P **P** **11 44 14.2 +1.8**
VOI Vohitsoka 80.74 246 P **P** **11 44 13.5 +0.7**
VOI Vohitsoka 80.74 246 P P 11 44 24.7 +12
SCM Sheep Creek Mo 80.76 29 P **P** **11 44 12.4 +0.3**
baz=276,SNR=7.2
E25K Arctic Village 80.85 22 P **P** **11 44 13.4 +0.9**
baz=276,SNR=22
F25K Christian Rive 80.88 23 P **P** **11 44 13.4 +0.7**
baz=276,SNR=44
C26K Camden Bay 80.89 20 P **P** **11 44 13.7 +1.1**
baz=276,SNR=11
H25K Birch Creek 80.96 24 P **P** **11 44 13.5 +0.5**
baz=276
GLI Glacier Island 80.96 30 P **P** **11 44 13.5 +0.3**
baz=276
SIM Simferopol' 81.06 314 *e*P **P** **11 44 12.3 -1.7**
SIM *e* 11 47 17.6
SIM pmax pmax
comp=Z,66nm,0.9s
SIM pmax pmax
comp=Z,32nm,14.6s
SIM MLR MLR
comp=Z,755nm,23.5s
FYU Fort Yukon 81.16 24 P **P** **11 44 15.4 +1.4**
FYU IAmb IAmb 11 44 17.2
comp=Z,40nm,1.1s
PRP Porcupine Dome 81.16 25 P **P** **11 44 14.1 -0.2**
baz=277,SNR=12
VALR Valaam 81.18 331*de*P **P** **11 44 13.9 -0.4**
VALR pmax pmax
comp=Z,47nm,1.3s
CORM Corum 81.22 309 *e*P **P** **11 44 14.1 -1.1**
KARA Karaisali 81.24 306 *e*P **P** **11 44 16.4 +1.2**
CMRD Camardi-Nigde 81.24 307 *e*P **P** **11 44 16.0 +0.7**
K24K Donnelly Dome 81.25 27 P **P** **11 44 15.1 +0.4**
baz=277,SNR=8.3
M24K Tolsona, Glenn 81.27 28 P **P** **11 44 15.1 +0.3**
baz=277
BMAR Burnt Mountain 81.31 23 P **P** **11 44 15.5 +0.6**
J25K Salcha River, 81.33 26 P **P** **11 44 14.9 -0.3**
baz=277,SNR=9.0
C27K Jago River 81.34 21 P **P** **11 44 15.2 +0.1**
baz=278,SNR=38
FOMA Nahampoana Res 81.41 243 P **P** **11 44 17.3 +1.1**
F26K Sheenjek River 81.44 23 P **P** **11 44 15.7 0.0**
baz=278,SNR=19
KLU Klutina 81.46 29 P **P** **11 44 16.1 +0.2**
baz=277
MMAI Mount Meron Ar 81.49 302 LR LR 12 24 35.5
comp=Z,315nm,21.3s,baz=245,slow=39
PAX Paxson 81.49 27 P **P** **11 44 16.2 +0.1**
baz=277,SNR=12
MMLI Mount Malkishu 81.55 301 *e*P **P** **11 44 18.4 +1.5**
GHAJ Ghor Haditha 81.57 300 P **P** **11 44 17.6 +0.6**
EYAK Cordova Ski Ar 81.66 30 P **P** **11 44 17.0 +0.1**
baz=277
RIDG Independent Ri 81.67 27 P **P** **11 44 16.8 -0.2**
RIDG IAmb IAmb 11 44 18.7
comp=Z,58nm,1.1s
RIDG Independent Ri 81.67 27 P **P** **11 44 16.9 0.0**
baz=278,SNR=18
G26K Porcupine Rive 81.68 23 P **P** **11 44 17.9 +1.0**
baz=278,SNR=38
KEV Kevo 81.68 339 P **P** **11 44 16.4 -0.4**
KEV IAmb IAmb 11 44 18.3
comp=Z,33nm,1.1s
KEV Kevo 81.68 339 P **P** **11 44 16.4 -0.4**
KEV pmax pmax
comp=Z,33nm,1.1s
HARP HAARP 81.71 28 P **P** **11 44 17.6 +0.4**
baz=277
MERS Mersin 81.71 306 *e*P **P** **11 44 16.7 -1.1**
ILGA Ilgaz 81.81 310 P **P** **11 44 18.3 -0.1**
ILGA IAmb IAmb 11 44 20.5
comp=Z,61nm,1.2s
YAYX Yaylak 82.00 308 *e*P **P** **11 44 19.3 0.0**
SCRK Sand Creek 82.02 26 P **P** **11 44 19.3 +0.5**
SCRK Sand Creek 82.02 26 P **P** **11 44 19.5 +0.6**
baz=278,SNR=16
KAMT Kaman 82.03 309 *e*P **P** **11 44 19.2 -0.2**
DOT Dot Lake 82.03 27 P **P** **11 44 18.9 +0.1**
BR131 Keskin Array S 82.03 309 P **P** **11 44 19.2 -0.3**
BR131 IAmb IAmb 11 44 21.0
comp=Z,31nm,0.9s
BR131 Keskin Array S 82.03 309*ce*P **P** **11 44 18.8 -0.7**
BR131 Keskin Array S 82.03 309 P **P** **11 44 19.6 +0.1**
SNR=9.2
BR131 P **P** **11 44 19.6 +0.1**
SNR=9.2
BRTR Keskin Array B 82.04 309 P **P** **11 44 18.8 -0.7**
comp=Z,16nm,0.9s,baz=120,slow=4.9,SNR=40
BRTR PP **PP** **11 47 27.3 -0.2**
comp=Z,2.9nm,0.9s,baz=76,slow=5.2,SNR=5.2
comp=Z,16nm,0.9s
BRTR Keskin Array B 82.04 309 *e*P **P** **11 44 19.2 -0.3**
BRTR Keskin Array B 82.04 309 *i* P **P** **11 44 18.7 -0.7**
BRTR pmax pmax
comp=Z,17nm,0.9s
KIZK Mersin 82.06 306 *e*P **P** **11 44 19.9 +0.4**
N25K Chitina, Valde 82.07 29 P **P** **11 44 20.3 +1.2**
N25K IAmb IAmb 11 44 21.9
comp=Z,36nm,1.2s
N25K Chitina, Valde 82.07 29 P **P** **11 44 19.8 +0.7**
baz=278,SNR=7.0
J26L Joseph Creek 82.12 26 P **P** **11 44 19.9 +0.5**
J26L Joseph Creek 82.12 26 P **P** **11 44 19.5 +0.1**
baz=278,SNR=17
BMRM Bremner River 82.16 29 P **P** **11 44 18.7 -0.9**
baz=278
I26K Coal Creek Min 82.17 25 P **P** **11 44 20.1 +0.6**
I26K IAmb IAmb 11 44 21.6
comp=Z,49nm,1.1s
I26K Coal Creek Min 82.17 25 P **P** **11 44 19.4 -0.1**
baz=279
SERE Sereflikochisa 82.19 308 *e*P **P** **11 44 20.1 -0.2**
YESY Yesilyurt 82.21 307 *e*P **P** **11 44 21.0 +0.6**
ARA0 ARCESS Array S 82.24 339 *e*P **P** **11 44 19.5 -0.3**
ARA0 IAmb IAmb 11 44 21.1
comp=Z,46nm,1.0s
ARCES ARCESS Array B 82.24 339 P **P** **11 44 19.0 -0.8**
comp=Z,49nm,0.9s,baz=72,slow=4.0,SNR=64
ARCES LR LR 12 25 08.8
comp=Z,984nm,18.9s,baz=84,slow=39
comp=Z,49nm,0.9s
ARCES ARCESS Array B 82.24 339 P **P** **11 44 19.7 -0.1**
ARCES IAmb IAmb 11 44 21.4
comp=Z,68nm,1.0s
ARCES ARCESS Array B 82.24 339 P **P** **11 44 19.7 -0.1**
ARCES pmax pmax
comp=Z,68nm,1.0s
E27K Coleen River 82.32 22 P **P** **11 44 20.6 +0.4**
baz=280,SNR=44
EIL Elat 82.32 299 *e*P **P** **11 44 22.3 +1.3**
SULT Sultanhani-AKS 82.33 307 *e*P **P** **11 44 21.8 +0.8**
KEBE Keben-Mersin 82.41 306 *e*P **P** **11 44 22.2 +0.8**
L26K Log Cabin Wild 82.44 27 P **P** **11 44 20.9 -0.1**
baz=279,SNR=9.8
IKL Isikli 82.46 305 *e*P **P** **11 44 22.2 +0.6**
AFSR Afar-Bala (An 82.51 309 *e*P **P** **11 44 20.5 -1.4**
G27K Doyon Strip 82.53 23 P **P** **11 44 22.0 +0.6**
baz=280,SNR=52
TEVE Tevekalti-Mers 82.63 306 *e*P **P** **11 44 22.9 +0.3**
HAMF Hammerfest 82.64 341 *e*P **P** **11 44 21.3 -0.5**
HAMF IAmb IAmb 11 44 22.7
comp=Z,37nm,0.9s
SPB2 Spitsbergen Ar 82.65 348 P **P** **11 44 21.4 -0.3**
SPA0 Spitsbergen Ar 82.65 348 *e*P **P** **11 44 22.2 +0.4**
SPA0 IAmb IAmb 11 44 34.8
comp=Z,145nm,1.2s
SPITS Spitsbergen Ar 82.65 348 P **P** **11 44 21.7 -0.1**
SPITS pmax pmax
comp=Z,176nm,1.2s
ANTO Ankara 82.66 309 P **P** **11 44 23.3 +0.6**
ANTO IAmb IAmb 11 44 24.4
comp=Z,22nm,0.7s
ANTO Ankara 82.66 309 P **P** **11 44 23.3 +0.6**
ANTO pmax pmax
comp=Z,22nm,0.7s
ANTO Ankara 82.66 309 P **P** **11 44 23.4 +0.7**
ANTO P **P** **11 44 23.4 +0.7**
H27K Steamboat Moun 82.68 24 P **P** **11 44 22.7 +0.5**
baz=280
M26K Nabesna, AK 82.70 28 P **P** **11 44 23.1 +0.7**
M26K IAmb IAmb 11 44 24.8
comp=Z,25nm,0.9s
M26K Nabesna, AK 82.70 28 P **P** **11 44 22.7 +0.3**
baz=279,SNR=13
I27K Kandik River 82.76 25 P **P** **11 44 23.4 +0.7**
baz=280
CHBY Cihanbeyli 82.77 308 *e*P **P** **11 44 23.1 -0.2**
BERE Bereket-Mersin 82.82 306 *e*P **P** **11 44 24.0 +0.3**
K27K Chicken 82.84 26 P **P** **11 44 24.1 +1.1**
K27K IAmb IAmb 11 44 26.3
comp=Z,48nm,1.0s
K27K Chicken 82.84 26 P **P** **11 44 23.4 +0.4**
baz=280
MCARA McCarthy VSAT 82.86 29 P **P** **11 44 23.6 +0.5**
baz=279
CRQE Cirque 82.92 30 P **P** **11 44 23.9 +0.2**
baz=279
CSS Mathiatis 82.93 304 *e*P **P** **11 44 24.6 +0.5**
CSS Mathiatis 82.93 304 P **P** **11 44 24.5 +0.5**
TEKE Tekeli-Mersin 82.93 305 *e*P **P** **11 44 23.9 -0.2**
BGLC Bering Glacier 82.94 30 P **P** **11 44 23.7 +0.2**
baz=279
RAR Rarotonga 82.97 113 LR LR 12 15 35.4
comp=Z,425nm,20.6s,baz=276,slow=32
EGAK Eagle 83.10 25 P **P** **11 44 24.7 +0.4**
EGAK IAmb IAmb 11 44 26.4
comp=Z,18nm,0.8s
EGAK Eagle 83.10 25 P **P** **11 44 24.4 +0.1**
baz=281,SNR=18
L27K Beaver Creek, 83.12 27 P **P** **11 44 25.7 +1.2**
L27K Beaver Creek, 83.12 27 P **P** **11 44 24.8 +0.2**
baz=280,SNR=16
BCAR Beaver Creek A 83.14 27 P **P** **11 44 25.2 +0.5**
HSPB Hornsund (broa 83.19 347 *e*P **P** **11 44 24.4 -0.2**
HSPB Hornsund (broa 83.19 347 *e*P **P** **11 44 24.6 +0.1**
M27K Edge Creek, AK 83.22 28 P **P** **11 44 26.0 +0.8**
M27K Edge Creek, AK 83.22 28 P **P** **11 44 25.8 +0.6**
baz=280,SNR=7.2
KBS Kingsbay 83.23 349*de*P **P** **11 44 25.0 +0.3**
KBS pmax pmax
comp=Z,27nm,1.3s
KBS Kingsbay 83.23 349 *e*P **P** **11 44 24.3 -0.5**
LADK Ladik-KÖNYA 83.23 307 *e*P **P** **11 44 24.6 -1.1**
LEF Lefka 83.26 304 *e*P **P** **11 44 26.8 +1.0**
YUVA Yuva-Kibriscik 83.43 310 *e*P **P** **11 44 27.0 +0.3**
FIA1 FINESS Array S 83.45 331 P **P** **11 44 25.7 -0.5**
FIA1 IAmb IAmb 11 44 27.2
comp=Z,66nm,1.3s
FINES FINESS Array B 83.45 331 P **P** **11 44 24.5 -1.7**
comp=Z,14nm,0.9s,baz=90,slow=5.7,SNR=21
comp=Z,14nm,0.9s
FINES FINESS Array B 83.45 331 P **P** **11 44 25.2 -1.0**
FINES FINESS Array B 83.45 331 *i* P **P** **11 44 25.7 -0.5**
FINES pmax pmax
comp=Z,14nm,0.9s
KIZT Kizilcal 83.50 308 *e*P **P** **11 44 26.3 -0.8**
AKASG Malin Array Be 83.55 320 P **P** **11 44 25.0 -1.9**
comp=Z,13nm,0.9s,baz=66,slow=5.8,SNR=7.4
comp=Z,13nm,0.9s
AKASG Malin Array Be 83.55 320 P **P** **11 44 26.3 -0.6**
AKASG Malin Array Be 83.55 320 *i* P **P** **11 44 25.2 -1.7**
AKASG pmax pmax
comp=Z,17nm,0.9s
AKBB Malin Array Si 83.55 320 P **P** **11 44 25.7 -1.2**
AKBB IAmb IAmb 11 44 27.6
comp=Z,26nm,1.1s
AKBB Malin Array Si 83.55 320*ce*P **P** **11 44 25.6 -1.3**
GAZI Gazipasa 83.56 306 *e*P **P** **11 44 26.8 -0.5**
VSU Vasula 83.67 328*ce*P **P** **11 44 27.4 +0.1**
VSU pmax pmax
comp=Z,210nm,1.1s
VSU Vasula 83.67 328 *e*P **P** **11 44 27.3 +0.1**
BVCY Beaver Creek 83.68 28 P **P** **11 44 28.4 +1.0**
baz=281
AUSIV SIVRIHISAR 83.68 309 *e*P **P** **11 44 27.2 -0.8**
SVRH Sivrihisar-ESK 83.69 309 *e*P **P** **11 44 26.1 -1.9**
MNK Minsk 83.73 324 *i* P **P** **11 44 25.4 -2.3**
MNK *i* *PP **pP** **11 44 39.9 +0.7**
MNK *i* 11 47 38.4
MNK *i* PPP PPP 11 49 30.4
MNK *i* S **S** **11 54 42.8 -5.1**
MNK pmax pmax
comp=Z,15nm,1.0s
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK MLR MLR
comp=Z,884nm,19.0s
MNK MLR MLR
comp=E,153nm,19.0s
MNK Minsk 83.73 324 *i* P **P** **11 44 25.4 -2.3**
comp=E,4.0nm,1.0s
MNK *i* P **P** **11 44 25.4 -2.3**
MNK *i* P **P** **11 44 25.4 -2.3**
comp=Z,15nm,1.0s,baz=80
MNK *i* pP **pP** **11 44 40.0 +0.7**
MNK *i* sP **sP** **11 44 45.8 +2.6**
MNK *i* PP **PP** **11 47 38.5 -2.3**
MNK *i* PPP PPP 11 49 30.4
MNK *i* S **S** **11 54 42.8 -5.1**
MNK *i* SSS SSS 12 01 42.8
MNK *i* LQ LQ 12 13 29.7
MNK *i* LR LR 12 19 20.9
MNK *i* LRM MLR 12 23 00.6
comp=Z,884nm,19.0s
MNK *i* LRM MLR 12 23 05.2
MNK *i* LRM MLR 12 23 07.4
comp=E,153nm,19.0s
CTG Chitna Glacier 83.73 29 P **P** **11 44 28.8 +1.0**
baz=281,SNR=13
SEYD Seydisehir-KON 83.76 307 *e*P **P** **11 44 28.3 -0.2**
JETT Jettan, Norway 83.98 340 *e*P **P** **11 44 28.6 -0.2**
JETT IAmb IAmb 11 44 29.9
comp=Z,35nm,0.9s
YUK3 Moose Creek 83.99 28 P **P** **11 44 30.1 +0.9**
baz=282,SNR=7.0
DAWY Dawson 83.99 26 P **P** **11 44 29.9 +0.9**
DAWY IAmb IAmb 11 44 31.8
comp=Z,36nm,1.2s
DAWY Dawson 83.99 26 P **P** **11 44 29.3 +0.3**
baz=282,SNR=21
CIFT Cifteler, Eski 84.06 309 *e*P **P** **11 44 29.6 -0.3**
I29M Ogilvie Camp, 84.16 25 P **P** **11 44 30.6 +0.9**
baz=283,SNR=26
SRCK Saricakaya, Es 84.28 310 *e*P **P** **11 44 30.0 -0.9**
NACGM Naroch 84.29 325 ⇓*i*P **P** **11 44 30.7 +0.1**
baz=80
GULT Gulveren 84.30 310 *e*P **P** **11 44 30.2 -0.9**
O28M Mount Upton 84.32 29 P **P** **11 44 31.3 +0.3**
baz=282,SNR=9.3
J29M Klondike Camp 84.41 25 P **P** **11 44 32.5 +1.4**
J29M Klondike Camp 84.41 25 P **P** **11 44 31.8 +0.6**
baz=283
SUTC Sutluce-Ispart 84.41 307 *e*P **P** **11 44 31.3 -0.5**
KIS Kishinev 84.43 317 *e*P **P** **11 44 30.0 -1.5**
comp=Z,40nm,1.0s
KIS *e*L L 12 22 26.0
KIS LRM MLR 12 26 11.0
comp=Z,200nm,19.0s
KIS Kishinev 84.43 317 *e*P **P** **11 44 30.0 -1.5**
KIS pmax pmax
comp=Z,40nm,1.0s
KIS MLR MLR
comp=Z,200nm,19.0s
PINM Pinnacle 84.43 30 P **P** **11 44 31.6 +0.2**
baz=282
BORA Eskisehir 84.44 309 *e*P **P** **11 44 31.5 -0.4**
BORA Eskisehir 84.44 309 P **P** **11 44 31.4 -0.4**
MILM Milestii Mici 84.44 317 ⇓*i*P **P** **11 44 30.0 -1.5**
comp=Z,70nm,0.8s
MILM Milestii Mici 84.44 317 *e*PcP PcP 11 44 46.0 +11
MILM *e*L L 12 17 33.0
MILM LRM MLR 12 26 09.0
comp=Z,500nm,20.0s
MILM Milestii Mici 84.44 317*d i*P **P** **11 44 30.0 -1.5**
MILM *e* 11 44 46.0
MILM pmax pmax
comp=Z,170nm,2.3s
MILM MLR MLR
comp=E,500nm,20.0s
MILM MLR MLR
comp=Z,600nm,20.0s
TRO Tromso 84.46 340 *e*P **P** **11 44 31.5 +0.4**
MEF Metsahovi 84.50 330 *e*P **P** **11 44 31.1 -0.4**
ISAL Salakas 84.53 325 *e*P **P** **11 44 31.9 +0.1**
EPYK Eagle Plains 84.55 23 P **P** **11 44 32.2 +0.5**
EPYK Eagle Plains 84.55 23 P **P** **11 44 31.8 0.0**
baz=284,SNR=44
SHUT Suhut-Afyon 84.58 308 *e*P **P** **11 44 32.5 -0.1**
KIBK Kibwezi 84.67 267 P **P** **11 44 34.4 +0.9**
KIBK IAmb IAmb 11 44 36.9
comp=Z,38nm,1.0s
KIBK Kibwezi 84.67 267 P **P** **11 44 35.0 +1.6**
SNR=5.5
ISP Isparta 84.73 307 *e*P **P** **11 44 32.6 -0.7**
ISP Isparta 84.73 307 P **P** **11 44 32.7 -0.7**
ISP Isparta 84.73 307*ce*P **P** **11 44 32.2 -1.1**
ISP pmax pmax
comp=Z,96nm,1.0s
TLCR 84.74 315 ⇓P **P** **11 44 32.5 -0.5**
AUBOZ BOZOYUK 84.75 309 *e*P **P** **11 44 33.0 -0.4**
M29M Somme Creek 84.76 27 P **P** **11 44 33.3 +0.3**
baz=283
CAVI Cavuskoy 84.85 310 *e*P **P** **11 44 34.3 +0.5**
ADVT Abdulvahap 84.89 310 *e*P **P** **11 44 32.6 -1.3**
YUK4 Talbot Arm 84.93 29 P **P** **11 44 34.3 +0.3**
baz=283,SNR=11
PNL Peninsula 84.94 30 P **P** **11 44 34.3 +0.5**
baz=283
KORT Korkueli 85.00 307 *e*P **P** **11 44 34.2 -0.6**
TPGR Topolog 85.08 315 ⇑P **P** **11 44 34.8 -0.1**
MTSE Matsula 85.11 329 *e*P **P** **11 44 34.1 -0.6**
VLDR Vladesti 85.13 316 ⇑P **P** **11 44 34.7 -0.4**
TIRR Tirgusor 85.15 314 ⇓P **P** **11 44 34.4 -0.8**
TIRR Tirgusor 85.15 314 P **P** **11 44 34.3 -0.8**
TIRR Tirgusor 85.15 314 P **P** **11 44 34.3 -0.8**
TIRR pmax pmax
comp=Z,95nm,0.9s
YUK6 Outpost Mounta 85.16 29 P **P** **11 44 35.2 0.0**
baz=284
VASR Vaslui 85.18 316 ⇓P **P** **11 44 35.2 -0.1**
O29M Mount Kennedy 85.20 30 P **P** **11 44 35.3 0.0**
baz=283
INK Inuvik 85.21 21 P **P** **11 44 34.6 -0.3**
comp=Z,54nm,0.9s,baz=284,slow=5.6,SNR=79
comp=Z,54nm,0.9s
INK Inuvik 85.21 21 P **P** **11 44 35.3 +0.4**
INK Inuvik 85.21 21 P **P** **11 44 35.3 +0.4**
INK pmax pmax
comp=Z,91nm,1.1s
INK Inuvik 85.21 21 P **P** **11 44 35.4 +0.4**
baz=287,SNR=41
CFR Carcaliu 85.21 315 ⇓P **P** **11 44 34.6 -0.9**
KMBO Kilima Mbogo 85.22 268 P **P** **11 44 37.6 +1.2**
comp=Z,20nm,0.9s,baz=49,slow=7.6,SNR=30
KMBO LR LR 12 22 19.9
comp=Z,511nm,18.4s,baz=90,slow=35
comp=Z,20nm,0.9s
KMBO Kilima Mbogo 85.22 268 P **P** **11 44 37.7 +1.2**
KMBO IAmb IAmb 11 44 40.0
comp=Z,26nm,0.9s
KMBO Kilima Mbogo 85.22 268 *i* P **P** **11 44 38.2 +1.8**
KMBO pmax pmax
comp=Z,20nm,0.9s
KMBO Kilima Mbogo 85.22 268 P **P** **11 44 38.2 +1.8**
KMBO P **P** **11 44 38.2 +1.8**
KMBO Kilima Mbogo 85.22 268 *i* P **P** **11 44 38.0 +1.6**
SNR=16
SCTR Scanteiesti 85.22 315 ⇓P **P** **11 44 35.2 -0.3**
TVSB Tavsanli 85.27 309 *e*P **P** **11 44 34.5 -1.5**
ELL Elmali 85.39 306 *e*P **P** **11 44 38.1 +1.4**
SLCR Slobozia Conac 85.39 315 ⇓P **P** **11 44 35.1 -1.2**
HARR Harsova 85.45 314 ⇑P **P** **11 44 36.4 -0.3**
PSN Preselentsi 85.45 313 P **P** **11 44 37.2 +0.5**
HYT Haines Junctio 85.59 29 P **P** **11 44 39.0 +1.7**

HYT IAmb IAmb 11 44 40.2
comp=Z,33nm,0.9s
HYT Haines Junctio 85.59 29 P **P 11 44 37.6 +0.4**
baz=284,SNR=12
MAYO Mayo, Yukon 85.61 26 P **P 11 44 38.8 +1.7**
N30M Aishikik Lake 85.63 28 P **P 11 44 38.1 +0.8**
baz=285,SNR=19
VSVD Vaisvydziai 85.66 326 *eP* **P 11 44 37.7 +0.3**
PABE Paberze 85.75 326 P **P 11 44 37.5 -0.3**
PABE Paberze 85.75 326 *eP* **P 11 44 37.8 -0.1**
PANC Panciu 85.77 316 ⇓P **P 11 44 38.0 -0.2**
P29M Windy Craggy 85.77 30 P **P 11 44 38.4 +0.3**
baz=284,SNR=6.9
ODBI Odobesti 85.85 316 ⇓P **P 11 44 37.6 -1.0**
TESR Tescani 85.98 316 ⇑P **P 11 44 38.6 -0.7**
P30M Million Dollar 86.03 30 P **P 11 44 39.8 +0.5**
baz=285
KULA Kula-Manisa 86.05 308 *eP* **P 11 44 39.4 -0.5**
VRI Vrincioaia 86.06 316 ⇑P **P 11 44 39.4 -0.3**
VRI Vrincioaia 86.06 316 *eP* **P 11 44 40.9 +1.2**
FETY Fethiye 86.06 306 *eP* **P 11 44 38.4 -1.5**
PRD Provadia 86.11 313 P **P 11 44 40.0 +0.1**
PLOR Plostina 86.11 316 ⇑P **P 11 44 39.9 -0.1**
MANT Manisa 86.13 308 P **P 11 44 40.5 0.0**
N31M Braeburn, Yuko 86.23 28 P **P 11 44 41.3 +1.1**
N31M Braeburn, Yuko 86.23 28 P **P 11 44 40.7 +0.5**
baz=286,SNR=12
LODK Lodwar 86.23 273 P **P 11 44 42.4 +1.1**
LODK IAmb IAmb 11 44 44.7
comp=Z,28nm,1.1s
LODK Lodwar 86.23 273 P **P 11 44 42.7 +1.5**
SNR=11
BIZ Bicaz 86.26 317 ⇓P **P 11 44 40.7 0.0**
STEI Steigen 86.26 339 *eP* **P 11 44 38.3 -1.9**
O30N Mendenhall 86.28 29 P **P 11 44 40.8 +0.3**
baz=286,SNR=7.0
ISR Istrita 86.33 315 ⇓P **P 11 44 42.0 +0.8**
COVR Voineasa-Covas 86.42 316 ⇓P **P 11 44 41.1 -0.4**
FAUS Fauske 86.43 338 *eP* **P 11 44 39.7 -1.4**
FAUS IAmb IAmb 11 44 41.5
comp=Z,13nm,0.8s
NEHR Nehoiu 86.44 315 ⇓P **P 11 44 41.5 -0.1**
PLBC Pleasant Camp 86.49 30 P **P 11 44 42.0 +0.5**
baz=285
M31M Drury Creek, Y 86.66 27 P **P 11 44 43.5 +1.2**
M31M Drury Creek, Y 86.66 27 P **P 11 44 42.9 +0.6**
baz=287,SNR=8.5
MLR Muntele Rosu 86.67 316 ⇓P **P 11 44 42.0 -0.9**
MLR Muntele Rosu 86.67 316 P **P 11 44 42.5 -0.4**
MLR IAmb IAmb 11 44 44.5
comp=Z,39nm,0.9s
MLR Muntele Rosu 86.67 316 P **P 11 44 42.5 -0.4**
MLR pmax pmax
comp=Z,39nm,0.9s
SECR 86.68 315 ⇓P **P 11 44 42.5 -0.3**
BURAR Bucovina Array 86.71 318 ⇓P **P 11 44 42.4 -0.5**
BURAR Bucovina Array 86.71 318 P **P 11 44 42.5 -0.5**
BUR08 Bucovina Ar. S 86.72 318 P **P 11 44 42.6 -0.4**
BUR08 IAmb IAmb 11 44 44.7
comp=Z,41nm,0.9s
AYDB Zeytinkoy-Aydi 86.75 308 *eP* **P 11 44 43.3 -0.1**
JMB Yambol 86.84 312 P **P 11 44 41.5 -2.1**
EDRB Edirne 86.85 312 *eP* **P 11 44 42.7 -0.9**
WHY Whitehorse 86.88 29 P **P 11 44 45.0 +1.4**
WHY IAmb IAmb 11 44 57.4
comp=Z,32nm,1.1s
WHY Whitehorse 86.88 29 P **P 11 44 44.6 +1.0**
baz=286,SNR=8.2
LVV L'vov 86.99 320 *eP* **P 11 44 44.1 -0.1**
SKAG Skagway 87.00 30 P **P 11 44 44.9 +1.0**
baz=286
FARO Faro, Yukon 87.12 27 P **P 11 44 45.4 +0.8**
FARO IAmb IAmb 11 45 00.5
comp=Z,32nm,0.9s
VOIR 87.30 316 ⇑P **P 11 44 45.0 -0.9**
SIT Sitka 87.68 32 P **P 11 44 48.1 +0.8**
baz=286
P32M Atlin 87.75 30 P **P 11 44 49.0 +1.3**
baz=288
P33M Teslin, Yukon 87.99 29 P **P 11 44 49.3 +0.4**
baz=288
C36M Paulatuk 88.02 19 P **P 11 44 49.9 +1.2**
baz=296
VLAD Vladila 88.07 314 ⇓P **P 11 44 49.7 +0.3**
KOLS Kolonicke sedl 88.32 319 *eP* **P 11 44 50.4 -0.2**
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 88.32 319 *eP* **P 11 44 50.4 -0.2**
UZH Uzhgorod 88.38 319 ⇑ *iP* **P 11 44 51.0 +0.2**
UZH *e**PP **pP 11 45 04.1 +1.7**
UZH *i* 11 48 21.7
UZH *i* S **S 11 55 29.8 -3.8**
UZH MLR MLR
comp=N,200nm,18.0s
UZH MLR MLR
comp=E,100nm,18.0s
UZH MLR MLR
comp=Z,70nm,18.0s
DRGR 88.56 317 ⇑P **P 11 44 51.4 -0.5**
MPEP Malo Peshtene 88.68 314 P **P 11 44 52.7 +0.3**
CRVS Cervenica-Dubn 88.84 320 *eP* **P 11 44 53.2 +0.2**
CRVS pmax pmax
comp=Z,81nm,1.1s
CRVS Cervenica-Dubn 88.84 320 *eP* **P 11 44 53.2 +0.2**
MAW Mawson 88.89 199 P **P 11 44 51.6 -1.0**
comp=Z,1.3nm,0.8s,baz=204,slow=18,SNR=2.4
comp=Z,1.3nm,0.8s
MMB Musomiste 89.11 312 P **P 11 44 53.4 -1.1**
R33M Jennings River 89.14 29 P **P 11 44 55.2 +0.8**
baz=290
VTS Vitosha 89.22 313 P **P 11 44 56.0 +0.9**
HERR Herculane 89.24 316 ⇓P **P 11 44 53.7 -1.3**
CRAG Craig 89.32 33 P **P 11 44 55.3 +0.3**
baz=288
SIRR Siria 89.40 317 ⇓P **P 11 44 55.3 -0.4**
NIE Niedzica 89.44 320 *eP* **P 11 44 56.2 +0.3**
KKB Krupnik 89.51 312 P **P 11 44 55.5 -0.8**
OJC Ojcow 89.53 321 *eP* **P 11 44 54.5 -1.7**
OJC Ojcow 89.53 321 P **P 11 44 55.0 -1.2**
OJC IAmb IAmb 11 44 56.9
comp=Z,24nm,1.0s
OJC Ojcow 89.53 321 P **P 11 44 55.0 -1.2**
OJC pmax pmax
comp=Z,24nm,1.0s
DLBC Dease Lake 89.93 30 P **P 11 44 58.3 +0.3**
baz=291
PSZ Piszkesteto 90.11 319 P **P 11 44 58.4 -0.7**
PSZ Piszkesteto 90.11 319 P **P 11 44 58.4 -0.7**
PSZ pmax pmax
comp=Z,12nm,1.0s
T35M Bob Quinn 90.34 31 P **P 11 45 00.6 +0.7**
baz=291
LIT Litokhoron 90.38 311 P **P 11 44 59.2 -1.2**
LIT Litokhoron 90.38 311 P **P 11 44 59.2 -1.2**
LIT pmax pmax
comp=Z,53nm,1.2s
NB2 NORSAR Subarra 90.43 333 P **P 11 44 58.1 -2.1**
comp=Z,18nm,1.0s,baz=67,slow=4.6
NB2 NORSAR Subarra 90.43 333 P **P 11 44 58.1 -2.1**
baz=67,slow=4.6
NOA NORSAR Array B 90.43 333 P **P 11 44 58.6 -1.7**
comp=Z,9.4nm,1.0s,baz=66,slow=4.6,SNR=16
comp=Z,9.4nm,1.0s
VYHS Vyhne 90.63 320 *eP* **P 11 45 01.0 -0.4**
VYHS pmax pmax
comp=Z,7.0nm,1.0s
VYHS Vyhne 90.63 320 *eP* **P 11 45 01.0 -0.4**
OKC Ostrava-Krasne 90.66 321 AMS AMS 12 28 30.0
comp=Z,500nm,18.6s
VNDA Vanda 91.04 172 P **P 11 45 02.0 -0.6**
comp=Z,13nm,1.0s,baz=308,slow=5.6,SNR=35
comp=Z,13nm,1.0s
VNDA Vanda 91.04 172 P **P 11 45 03.0 +0.4**
VNDA IAmb IAmb 11 45 21.6
comp=Z,22nm,1.1s
VNDA Vanda 91.04 172 P **P 11 45 03.0 +0.4**
VNDA pmax pmax
comp=Z,22nm,1.2s
MORC Moravsky Berou 91.05 321 P **P 11 45 03.4 0.0**
MORC Moravsky Berou 91.05 321 P **P 11 45 03.4 0.0**
MORC pmax pmax
comp=Z,8.0nm,1.0s
MORC Moravsky Berou 91.05 321 *eP* **P 11 45 02.8 -0.6**
DIVS Divibare 91.12 315 P **P 11 45 03.2 -0.7**
DIVS IAmb IAmb 11 45 04.9
comp=Z,16nm,1.0s
SRO Srobarova 91.16 319 *eP* **P 11 45 04.3 +0.5**
SRO Srobarova 91.16 319 *eP* **P 11 45 04.3 +0.5**
JAVC Velka Javorina 91.25 320 *eP* **P 11 45 04.5 +0.1**
KRLC Kraliky 91.42 322 AMS AMS 12 31 00.0
comp=Z,400nm,19.0s
KSP Ksiaz 91.47 322 *eP* **P 11 45 04.6 -0.7**
MBAR Mbarara 91.52 270 LR LR 12 25 34.7
comp=Z,658nm,19.0s,baz=66,slow=35
MBAR Mbarara 91.52 270/ *eP* **P 11 45 08.0 +1.6**
MBAR pmax pmax
comp=Z,8.0nm,0.9s
MBAR Mbarara 91.52 270 P **P 11 45 07.9 +1.6**
MBAR P **P 11 45 07.9 +1.6**
PPT Papeete 91.58 107 LR LR 12 19 11.6
comp=Z,188nm,21.3s,baz=278,slow=31
PPT2 Papeete2 91.59 107 *eS* **S 11 55 59.3 -5.2**
comp=Z,203nm,25.0s
PPT2 Papeete2 91.59 107 *e*LR LR 12 14 30.4
comp=Z,419nm,23.2s
RES Resolute Bay 91.60 9 P **P 11 45 05.0 -0.3**
RES IAmb IAmb 11 45 07.2
comp=Z,23nm,0.9s
RES Resolute Bay 91.60 9 P **P 11 45 05.0 -0.3**
RES pmax pmax
comp=Z,23nm,1.0s
OSTC Ostas 91.61 322 *e*PCP **P 11 45 05.9 0.0**
OSTC *ex* **pP 11 45 18.0 +0.5**
OSTC AMS AMS 12 28 00.0
comp=Z,600nm,20.5s
DPC Dobruska-Polom 91.61 322 *eP* **P 11 45 05.9 -0.1**
DPC *ep*P **pP 11 45 17.6 0.0**
DPC *eS*S SS 12 02 30.4 +20
DPC AMS AMS 12 29 30.0
comp=Z,500nm,16.1s
MODS Modra-Piesok 91.65 320 *eP* **P 11 45 07.1 +0.9**
MODS pmax pmax
comp=Z,20nm,1.1s
MODS Modra-Piesok 91.65 320 *eP* **P 11 45 07.1 +0.9**
CHVC Chvalec 91.70 322 AMS AMS 12 28 10.0
UPC Upice 91.75 322 *eP* **P 11 45 07.0 +0.5**
UPC AMS AMS 12 28 10.0
comp=Z,700nm,23.8s
AKN Aaknes 91.76 335 *eP* **P 11 45 06.6 +0.3**
AKN IAmb IAmb 11 45 07.7
comp=Z,25nm,1.1s
VRAC Vranov 91.78 321 ⇑P **P 11 45 06.4 -0.4**
VRAC Vranov 91.78 321 *eP* **P 11 45 06.6 -0.1**
KRUC Moravsky 91.99 321 *eP* **P 11 45 07.4 -0.3**
SBA Scott Base 91.99 171 P **P 11 45 07.1 +0.2**
SBA IAmb IAmb 11 45 20.5
comp=Z,29nm,1.4s
SBA Scott Base 91.99 171 P **P 11 45 07.1 +0.2**
SBA pmax pmax
comp=Z,29nm,1.5s
PDG Podgorica 92.11 314 ⇓P **P 11 45 07.9 -0.4**
PDG Podgorica 92.11 314 P **P 11 45 06.9 -1.5**
PDG IAmb IAmb 11 45 08.9
comp=Z,17nm,0.9s
TREC Trest 92.47 321 AMS AMS 12 29 40.0
comp=Z,400nm,17.3s
RONA Rosalia, Austr 92.49 319 *i* P **P 11 45 09.9 -0.2**
comp=Z,8.6nm,1.1s,SNR=6.3
RONA *eP* **PP 11 48 48.6 -2.6**
comp=Z,4.3nm,1.5s
PVCC Panska Ves 92.61 322 AMS AMS 12 28 30.0
comp=Z,600nm,19.5s
CONA Conrad Observa 92.69 320 *i* P **P 11 45 10.4 -0.7**
comp=Z,6.2nm,1.0s,SNR=6.0
CONA *eP* **PP 11 48 52.7 -0.1**
comp=Z,5.6nm,1.1s
TBI Tubuai 92.75 113 *e*LR LR 12 15 02.0
comp=Z,1μm,24.2s
PRU Pruhonice 92.81 322 *eP* **P 11 45 11.0 -0.5**
PRU *eS*S SS 12 02 40.3 +13
PRU AMS AMS 12 28 50.0
comp=Z,600nm,21.4s
BRG Berggiesshubel 92.86 323 *i* P **P 11 45 11.3 -0.3**
BRG Amp 11 45 13.3
comp=Z,30nm,1.0s
BRG *ex* **pP 11 45 22.4 -0.8**
BRG Amp 11 45 24.8
comp=Z,24nm,1.2s
BRG Berggiesshubel 92.86 323 *i* P **P 11 45 11.3 -0.3**
BRG *e* 11 45 22.4
BRG 11 56 05.0
BRG pmax pmax
comp=Z,30nm,1.0s
BRG pmax pmax
comp=Z,24nm,1.2s
KOGS Kog 92.93 318 *i* P **P 11 45 11.7 -0.4**
ARSA Arzberg 93.14 319 *i* P **P 11 45 12.4 -0.6**
comp=Z,9.6nm,1.0s,SNR=6.7
ARSA *eP* **PP 11 48 57.3 +1.1**
comp=Z,3.7nm,1.2s
BBB Bella Bella 93.25 35 LR LR 12 24 07.9
comp=Z,93nm,19.6s,baz=229,slow=34
CLL Collm 93.25 324 P **P 11 45 12.7 -0.7**
CLL IAmb IAmb 11 45 14.5
comp=Z,16nm,1.1s
CLL Collm 93.25 324 *eP* **P 11 45 13.0 -0.4**
CLL *e* 11 45 24.0
CLL pmax pmax
comp=Z,18nm,1.2s
CLL MLR MLR
comp=Z,700nm,21.0s
CLL Collm 93.25 324 LmV 12 32 00.0
comp=Z,700nm,21.0s
CLL Collm 93.25 324 *eP* **P 11 45 13.0 -0.4**
comp=Z,18nm,1.2s
CLL Collm 93.25 324 *ep*P pP 11 45 24.0 -1.1
CLL Collm 93.25 324 *e*PP PP 11 48 58.0 +1.0
CLL Collm 93.25 324 *e*PPPP 11 52 30.0
CLL Collm 93.25 324 *e*SKSac **SKSac 11 55 54.0 +9.0**
CLL Collm 93.25 324 *e*PS PS 11 57 36.0 +0.9
CLL Collm 93.25 324 *e*SS SS 12 02 36.0 +2.5
CLL Collm 93.25 324 *e*SSS SSS 12 06 06.0
CLL Collm 93.25 324 *ex* x 12 08 30.0
CLL Collm 93.25 324 *e*SSSS 12 09 54.0
CKRC Cesky Krumlov 93.36 321 *eP* **P 11 45 13.5 -0.6**
CKRC *ex* **pP 11 45 21.9 -3.8**
CKRC *eS*S SS 12 02 56.8 +21
SOKA Soboth 93.64 319 *i* P **P 11 45 14.7 -0.7**
comp=Z,9.3nm,1.0s,SNR=8.5
SOKA *eP* **PP 11 48 56.8 -3.6**
comp=Z,8.2nm,1.2s
KHC Kasperske Hory 93.70 321 P **P 11 45 15.0 -0.6**
KHC IAmb IAmb 11 45 17.1
comp=Z,12nm,1.0s
KHC Kasperske Hory 93.70 321 P **P 11 45 15.0 -0.6**
KHC pmax pmax
comp=Z,12nm,1.0s
KHC Kasperske Hory 93.70 321 *eP* **P 11 45 15.2 -0.4**
KHC *ep*P **pP 11 45 27.3 0.0**
KHC *eS*S SS 12 02 42.4 +2.2
KHC AMS AMS 12 31 40.0
comp=Z,500nm,19.1s
GEC2 GERESS Array S 93.73 321 P **P 11 45 15.4 -0.5**
GEC2 IAmb IAmb 11 45 17.2
comp=Z,18nm,1.0s
GERES GERESS Array B 93.73 321 P **P 11 45 14.9 -0.9**
comp=Z,9.1nm,0.9s,baz=70,slow=4.4,SNR=53
GERES PP **PP 11 49 00.4 -0.5**
comp=Z,2.2nm,1.0s,baz=82,slow=9.6,SNR=4.9
comp=Z,9.1nm,0.9s
GERES GERESS Array B 93.73 321 P **P 11 45 15.2 -0.7**
GERES GERESS Array B 93.73 321 P **P 11 45 15.2 -0.7**
MOA Molln 93.73 320 *i* P **P 11 45 15.2 -0.5**
comp=Z,24nm,0.9s,SNR=18
OBKA Obir 94.02 319 *i* P **P 11 45 16.3 -0.9**
comp=Z,8.0nm,1.0s,SNR=5.6
OBKA *eP* **PP 11 49 03.5 +0.3**
comp=Z,6.3nm,1.4s
BIOA Bad Ischl, Aus 94.18 320 *eP* **P 11 45 17.7 -0.2**
comp=Z,7.5nm,0.8s
LJU Ljubljana 94.19 318 *i* P **P 11 45 17.5 -0.4**
MYKA Terra Mystica 94.56 319 *eP* **P 11 45 19.5 -0.1**
comp=Z,0.8nm,0.4s
KBA Koelnbreinsper 94.59 320 *i* P **P 11 45 19.1 -0.9**
comp=Z,8.3nm,1.1s,SNR=7.2
KBA *eP* **PP 11 49 06.7 -1.1**
comp=Z,4.4nm,1.5s
YKA Yellowknife Ar 94.83 23 P **P 11 45 20.6 +0.2**
comp=Z,10nm,0.9s,baz=306,slow=4.6,SNR=24
comp=Z,10nm,0.9s
YKA Yellowknife Ar 94.83 23 P **P 11 45 20.9 +0.5**
YKA Yellowknife Ar 94.83 23 *i* P **P 11 45 20.6 +0.2**
YKA pmax pmax
comp=Z,11nm,0.9s
TIP Timpagrande 94.89 311 P **P 11 45 22.0 +0.6**
TIP IAmb IAmb 11 45 22.6
comp=Z,28nm,1.2s
ABTA Abfaltersbach 95.24 319 *i* P **P 11 45 21.2 -1.6**
comp=Z,8.8nm,0.9s,SNR=6.1
STAL STALIGIAL 95.29 319 P **P 11 45 21.9 -1.1**
STAL IAmb IAmb 11 45 23.2
comp=Z,15nm,1.0s
WTTA Wattenberg 95.60 320 *i* P **P 11 45 23.3 -1.3**
comp=Z,16nm,1.2s,SNR=13
WTTA *eP* **PP 11 49 17.1 +1.4**
comp=Z,6.1nm,1.1s
WATA Walderalm 95.61 320 *i* P **P 11 45 23.2 -1.3**
comp=Z,14nm,1.0s,SNR=7.2
SQTA Sankt Quirin 95.89 320 *i* P **P 11 45 24.7 -1.1**
comp=Z,15nm,1.2s,SNR=7.6
MOTA Moosalm 95.91 320 *i* P **P 11 45 24.5 -1.4**
comp=Z,12nm,0.9s,SNR=11
RETA Reutte 96.06 321 *eP* **P 11 45 25.3 -1.3**
comp=Z,2.9nm,0.8s
NRCA Norcia 96.27 316 P **P 11 45 27.6 +0.1**
NRCA IAmb IAmb 11 45 28.7
comp=Z,16nm,1.2s
FETA Feichten 96.27 320 *i* P **P 11 45 26.7 -0.8**
comp=Z,14nm,0.9s,SNR=10.0
MURB Monte Urbino 96.51 316 P **P 11 45 28.7 +0.1**
DAVA Damuels 96.69 321 *eP* **P 11 45 29.2 -0.3**
comp=Z,1.2nm,0.6s
VAE Valguarnera 97.18 310 LR LR 12 37 21.0
comp=Z,127nm,18.5s,baz=76,slow=40
BTNL Ternell 97.51 325 *d*PcP **P 11 45 33.3 +0.4**
MEM Membach 97.57 325 *d*PcP Pdif 11 45 33.2 0.0
BHOU Houvegnez 97.69 325 *d*PcP **P 11 45 34.2 +0.5**
BSTI Sart Tilman 97.83 325 *d*PcP **P 11 45 34.5 +0.2**
WLF Walferdange 97.92 324 *d*PcP **P 11 45 35.1 +0.3**
BCLA Clavier 98.06 325 *d*PcP **P 11 45 35.2 -0.1**
RCHB Rochefort 98.22 325 *d*PcP **P 11 45 34.8 -1.2**
BMRD Maredsous 98.41 325 *d*PcP **P 11 45 36.2 -0.7**
DOU Dourbes 98.61 325 *d*PcP **P 11 45 37.6 -0.2**
G03D McMinnville, O 98.99 41 P Pdif 11 45 39.1 -0.5
baz=295
TAOE Nuku Hiva Isla 99.11 97 *e*LR LR 12 17 58.8
comp=Z,943nm,24.1s
J01E Myrtle Point 99.42 43 P **Pdif 11 45 41.4 -0.2**
baz=294
H04D Lebanon 99.63 41 P **Pdif 11 45 41.4 -1.1**
baz=296
BORG Borgarnes 99.77 345 LR LR 12 36 42.3
comp=Z,433nm,18.2s,baz=49,slow=39
K02D Willamette Mer 99.79 43 P **Pdif 11 45 42.4 -1.0**
baz=295
L02F Cave Junction 100.09 44 P **Pdif 11 45 43.5 -1.2**
baz=295
I04A Tendick Farm, 100.15 42 P **Pdif 11 45 43.6 -1.3**
baz=296
G05D Wamic, OR 100.22 40 P **Pdif 11 45 43.0 -2.2**
baz=297
J04D Umpqua Nationa 100.59 42 P **Pdif 11 45 45.4 -1.7**
baz=296
I05D Terrebonne, OR 100.61 41 P **Pdif 11 45 45.4 -1.6**
baz=297
L04D Klamath Falls 100.90 43 P **Pdif 11 45 47.2 -1.3**
baz=296
NEW Newport 101.30 36 P **Pdif 11 45 48.8 -1.1**
baz=301
KEST Kesra 101.61 310 PP **PP 11 50 02.4 +0.6**
comp=Z,6.7nm,0.9s,baz=31,slow=5.9,SNR=5.3
KEST Kesra 101.61 310 P **Pdif 11 45 52.1 +0.5**
NVAR Mina Array Bea 105.33 45 PP **PP 11 50 30.2 +0.6**
comp=Z,0.7nm,1.0s,baz=272,slow=6.2,SNR=2.0
PKM Mcpherson Peak 105.83 49 P **PKiKP 11 50 21.5 -1.7**
baz=296
ARVC Arvin 106.45 48 P **PKiKP 11 50 23.7 -0.4**
baz=296
ISA Isabella, Lake 106.47 48 P **PKiKP 11 50 23.3 -0.9**
baz=297
GSC Goldstone, Bar 107.85 47 P **PKiKP 11 50 25.3 -1.5**
baz=298
MURC Murrieta 108.34 49 P **PKiKP 11 50 26.2 -1.6**
baz=297
BW06 Boulder Array 108.75 38 P **PKiKP 11 50 27.6 -0.8**
baz=306
PDAR Pinedale Array 108.75 38 PKiKP **PKiKP 11 50 27.9 -0.6**
comp=Z,0.2nm,0.6s,baz=318,slow=1.2,SNR=1.5
PDAR PP **PP 11 50 53.9 -0.5**
comp=Z,0.5nm,0.9s,baz=309,slow=4.5,SNR=2.3
PDAR PKKPab **PKKPab 12 01 50.9 -0.7**
comp=Z,0.1nm,0.3s,baz=113,slow=6.9,SNR=2.4
BELC Belle Mtn. Jos 109.04 48 P **PKiKP 11 50 28.0 -1.1**
baz=298
ESDC Sonseca Array 109.15 319 PKiKP **PKiKP 11 50 28.6 -0.4**
comp=Z,0.9nm,1.0s,baz=46,slow=3.7,SNR=4.7
ESDC PP **PP 11 50 57.1 -0.1**
comp=Z,3.0nm,1.0s,baz=50,slow=7.9,SNR=9.7
IKP In-Ko-Pah, Jac 109.59 50 P **PKiKP 11 50 29.7 -0.4**
baz=298
K22A Casper 110.61 36 P **PKiKP 11 50 32.0 +0.1**
baz=308
MDND Maddock 110.80 29 P **PKiKP 11 50 32.0 +0.1**
baz=316
O20A White River Ci 111.09 39 P **PKiKP 11 50 32.7 -0.2**
baz=306
N23A Red Feather La 112.03 38 P **PKiKP 11 50 34.2 -0.6**
baz=308
SDCO Great Sand Dun 114.22 40 P **PKiKP 11 50 38.9 -0.2**
baz=307
ECSD EROS Data Cent 115.22 30 P **PKPdf 11 50 40.9 +0.4**
baz=317
ANMO Albuquerque 115.26 43 P **PKiKP 11 50 40.8 -0.2**
baz=306
T25A Trinidad 115.28 40 P **PKiKP 11 50 40.8 -0.2**
baz=308
121A Cooks Peak, D 115.70 46 P **PKiKP 11 50 41.8 -0.1**
baz=304
TOA0 Torodi Ar. Sit 116.30 291 **PKPdf 11 50 42.7 -0.5**
TOA0 Torodi Ar. Sit 116.30 291 P **PKPdf 11 50 42.7 -0.5**
TORD Torodi Ar. Bea 116.30 291 PKP **PKPdf 11 50 41.9 -1.4**
comp=Z,5.2nm,0.8s,baz=51,slow=1.9,SNR=25
TORD PP **PP 11 51 49.9 +0.8**
comp=Z,8.7nm,1.0s,baz=53,slow=4.7,SNR=6.1
TORD Torodi Ar. Bea 116.30 291 PKPdf **PKPdf 11 50 42.2 -1.0**
MNTX Cornudas Mount 117.86 45 **PKPdf 11 50 44.8 -1.1**
MNTX Cornudas Mount 117.86 45 P **PKiKP 11 50 46.5 +0.6**
baz=305
MSTX Muleshoe 118.28 42 P **PKPdf 11 50 45.9 -0.9**
baz=308
JFWS Jewell Farm 118.83 27 P **PKiKP 11 50 47.7 +0.2**
baz=323
L40A Anamosa 119.07 28 **PKPdf 11 50 47.1 -0.8**
N41A Harden Midland 120.30 29 **PKPdf 11 50 48.8 -1.5**
TX31 Lajitas Ar. Si 120.42 47 **PKiKP 11 50 51.2 +0.1**
TX32 Lajitas Array 120.42 47 **PKiKP 11 50 51.2 +0.1**
TXAR Lajitas Array 120.42 47 PKP **PKiKP 11 50 51.1 0.0**
comp=Z,1.9nm,0.8s,baz=258,slow=0.6,SNR=16
TXAR PKKPab **PKKPab 12 00 59.8 +0.1**
comp=Z,0.3nm,0.8s,baz=134,slow=6.4,SNR=1.8
TXAR Lajitas Array 120.42 47 **PKPdf 11 50 50.5 -0.5**
TXAR Lajitas Array 120.42 47 PKIKP **PKPdf 11 50 50.5 -0.5**
TUL1 Leonard 121.30 36 P **PKPdf 11 50 52.3 0.0**
baz=315
S39A Bolivar 121.37 33 **PKiKP 11 50 52.8 +0.2**
L48A N Adams 122.05 23 **PKiKP 11 50 53.9 +0.1**
HHAR Hobbs 122.07 34 PKPdf **PKiKP 11 50 54.4 +0.4**
CCM Cathedral Cave 122.17 31 P **PKPdf 11 50 53.1 -0.8**
baz=320
SFIN Lafayette 122.27 26 P **PKPdf 11 50 53.9 -0.2**
baz=326
JCT Junction City 122.42 43 P **PKPdf 11 50 53.6 -1.1**
baz=309
LONY Lake Ozonia 122.73 14 P **PKPdf 11 50 53.6 -1.3**
baz=340
WHTX Lake Whitney, 122.97 40 P **PKPdf 11 50 54.3 -1.4**
baz=312
PKME Peaks-Kenny Pk 123.19 10 P **PKPdf 11 50 54.6 -1.0**
baz=346
O48B Farmland 123.19 25 P **PKPdf 11 50 54.9 -0.9**
baz=328
FCAR Ozark Folk Cen 123.35 33 **PKPdf 11 50 56.2 -0.1**
MIAR Mount Ida 123.54 35 PKPdf **PKiKP 11 50 57.2 +0.2**
MIAR Mount Ida 123.54 35 PKIKP **PKiKP 11 50 57.2 +0.2**
LBNH Lisbon 123.69 12 P **PKPdf 11 50 56.2 -0.5**
baz=343
M53A WI Miller and 123.87 21 P **PKPdf 11 50 56.4 -0.7**

baz=333
P49A Miami Univ. Ec 123.98 25 P PKPdf 11 50 57.4 0.0
baz=328
833A Chaparral WMA, 124.03 45 P PKiKP 11 50 58.2 +0.1
baz=308
ACSO Alum Creek Sta 124.08 23 P PKPdf 11 50 57.3 -0.3
baz=330
KIC Kosan Boka 124.46 285⇑*i*PKIKP PKiKP 11 50 59.4 +0.1
comp=Z,8.8nm,0.6s
DBIC Dimbokro 124.47 286 PKP PKPdf 11 50 58.1 -0.9
comp=Z,6.9nm,0.8s,baz=35,slow=1.8,SNR=4.8
TIC Toumodi 124.63 286⇑*i*PKIKP PKiKP 11 50 59.6 -0.1
comp=Z,5.0nm,0.3s
BINY Binghamton 124.64 16 P PKiKP 11 50 59.0 +0.1
baz=338
O53A New Philadelph 124.73 22 P PKiKP 11 50 59.1 0.0
baz=332
LIC Lamto 124.77 285⇑*i*PKIKP PKiKP 11 50 59.8 -0.1
comp=Z,34nm,0.6s
P52A Corning 124.92 23 P PKPdf 11 50 59.3 0.0
baz=331
L61B Northampton 125.23 13 P PKPdf 11 50 59.2 -0.5
baz=342
WVT Waverly 125.37 30 P PKPdf 11 51 00.1 0.0
baz=323
SSPA Standing Stone 125.51 19 P PKiKP 11 51 00.6 -0.1
baz=336
OXF Oxford 125.84 32 P PKiKP 11 51 01.6 +0.1
baz=321
T50A Nancy 126.04 27 PKPdf 11 51 01.5 +0.1
S51A Beattyville 126.05 25 PKiKP 11 51 01.9 0.0
PAL Palisades 126.30 15 P PKiKP 11 51 02.4 +0.2
baz=340
V52A Sevierville 127.57 26 PKiKP 11 51 05.5 +0.5
BLA Blacksburg 127.69 23 P PKPdf 11 51 04.7 +0.1
baz=332
V53A Saluda 128.05 26 PKiKP 11 51 05.8 -0.2
LRAL Lakeview Retre 128.24 31 P PKPdf 11 51 05.9 +0.2
baz=323
KMSC Kings Mountain 129.13 25 P PKiKP 11 51 08.2 +0.1
baz=330
GOGA Godfrey 129.66 28 P PKiKP 11 51 08.8 -0.3
baz=327
AY01 Puyuhuapi 144.20 162 PKPbc 11 51 33.3 +0.4
GO07 Milladeo Hill, 145.03 160 PKPbc 11 51 35.1 -0.5
LL02 Futaleuf 145.56 162 PKPbc 11 51 37.4 +0.1
SRBA San Rafael, Bu 147.70 53 PKPbc 11 51 43.3 -1.3
PLCA Paso Flores 148.19 161 PKPbc PKPbc 11 51 44.7 -0.4
comp=Z,7.6nm,0.9s,baz=209,slow=2.0,SNR=12
PLCA Paso Flores 148.19 161 PKPdf 11 51 40.5 -1.3
PLCA Paso Flores 148.19 161 PKIKP PKPdf 11 51 40.5 -1.3
DR12 Loma Pena Alta 148.42 21 PKiKP 11 51 47.7 -0.2
CDITO Canoas 148.48 53 PKPdf 11 51 44.6 +1.7
GO06 Curarrehue 148.93 159 PKiKP 11 51 48.1 -0.3
BCIP Isla Barro Col 150.42 49 PKPbc 11 51 50.1 -1.2
BCIP Isla Barro Col 150.42 49 PKIKP PKPbc 11 51 50.1 -1.2
ML02 Panimavida 152.31 156 PKPdf PKPdf 11 51 46.7 -1.6
ML02 **sPKPdf 11 52 04.7 +0.2**
GO05 Huala 152.74 154 PKPdf PKPdf 11 51 48.0 -1.0
GO05 PKPab **PKPab 11 52 06.4 -0.5**
BO01 Tunca 153.63 155 PKPdf PKPdf 11 51 48.6 -1.6
BO01 **PKPbc 11 51 57.4 -0.6**
BO01 PKPab **PKPab 11 52 11.1 +0.6**
MT01 Popeta 154.01 154 PKPdf PKPdf 11 51 49.4 -1.4
MT01 **PKPab 11 52 11.8 -0.3**
MT03 Universidad Ad 154.64 155 PKPdf PKPdf 11 51 51.6 -0.3
MT03 **PKPab 11 52 15.1 +0.1**
BAUV El Baul 157.86 28 PKPdf PKPdf 11 51 54.5 -2.0
BAUV PKPab **PKPab 11 52 28.8 -0.3**
TER01 Tubaro-SC 160.62 204 *eP* PKPdf 11 52 01.9 +2.6
SJMB Sao Joao De Ma 162.12 242 *eP* PKPdf 11 52 02.5 +1.4
DIAM Diamantina, MG 164.44 240 *eP* PKPdf 11 52 03.6 0.0
CPUP Villa Florida 164.60 182 PKP PKPdf 11 52 03.6 +0.3
comp=Z,1.5nm,0.6s,baz=75,slow=3.3,SNR=4.1
CPUP PKPab **PKPab 11 52 57.4 -0.7**
comp=Z,6.2nm,1.1s,baz=217,slow=5.1,SNR=5.3
CPUP PP **PP 11 56 43.5 +0.6**
comp=Z,1.4nm,0.9s,baz=140,slow=4.3,SNR=1.5
CPUP Villa Florida 164.60 182 PKPdf PKPdf 11 52 04.4 +1.2
CPUP **PKPab 11 52 58.0 -0.2**
CPUP Villa Florida 164.60 182 PKP2 PKPab 11 52 58.0 -0.2
MC01 Montes Claros 165.31 245 *eP* PKPdf 11 52 04.8 +0.6
JANB Januaria 166.18 251 *eP* PKPdf 11 52 05.2 +0.3
BOAV Boa Vista 166.57 12 PKPdf PKPdf 11 52 05.0 -0.3
BOAV **PKPab 11 53 06.5 -0.7**
BOAV Boa Vista 166.57 12 *eP* PKPdf 11 52 05.9 +0.6
PMNB Patos De Minas 166.60 234 *eP* PKPdf 11 52 05.9 +0.6
SDBA SAO DESIDERIO 167.24 262 *eP* PKPdf 11 52 06.3 +0.5
MCPB Macapa, AP 168.10 331 *eP* PKPdf 11 52 06.9 +0.5
LPAZ La Paz 168.63 119 PKP PKPdf 11 52 07.7 +0.3
comp=Z,2.8nm,0.8s,baz=333,slow=1.3,SNR=12
LPAZ La Paz 168.63 119 *eP* PKPdf 11 52 06.7 -0.7
ITRB Ituirama 168.63 218 *eP* PKPdf 11 52 06.9 +0.3
SMTB Santa Maria do 169.72 280 *eP* PKPdf 11 52 07.7 +0.3
ETMB Extrema 171.69 84 *eP* PKPdf 11 52 08.8 +0.4
ITTB Itaituba 173.23 342 *eP* PKPdf 11 52 08.8 -0.3
SALV Santo Antonio 174.57 202 *eP* PKPdf 11 52 10.0 +0.6
PTLB Pontes e Lacer 175.26 165 PKPdf PKPdf 11 52 10.6 +0.9
PTLB **PKPab 11 53 44.2 -1.3**
PTLB Pontes e Lacer 175.26 165 *eP* PKPdf 11 52 11.7 +2.0
NPGB Novo Progresso 175.49 327 *eP* PKPdf 11 52 10.7 +0.8

*IDC **15** 11:34:34.0±0.7, 10.˚78N×122.˚20E, h0km, mb4.3/17, mbtmp4.3/17, Error ellipse: s-maj=35.2km s-min=14.8km az=71.0*
*NEIC **15** 11:34:38.6±1.5, 10.˚8N±0.˚1×122.˚4E±0.˚1, h27km±2km, mb4.9/22, Error ellipse: s-maj=22.3km s-min=12.1km az=52.0*
*MAN **15** 11:34:39, 10.˚73N×122.˚00E, h59km, Ms3.4*
ISC 15 11:34:39.2±0.9, 10.˚78N±0.˚03×122.˚10E±0.˚03, h30km±6km, n67, σ1§84/79, mb4.4/29, 4C-10D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JAP	**San Jose, Anti**	**0.15**	**260**	⇑*i*	*eP*	**Pn**	**11 34 46.8**	**+1.3**
JAP				*i*	S	**Sb**	**11 34 50.3**	**+1.3**
GUIM	**Jordan**	**0.50**	**107**	⇓	*eP*	**Pn**	**11 34 49.9**	**-0.4**
GUIM					*eS*	**Sn**	**11 35 00.2**	**+2.3**
RCP	**Roxas**	**1.00**	**39**	⇑	*eP*	Pb	11 35 01.4	+3.3
RCP					*eS*	**Sn**	**11 35 13.0**	**+2.6**
CUYO	**Cuyo Island**	**1.07**	**274**	⇓	*eP*	**Pn**	**11 34 58.6**	**+0.5**
CUYO					*eS*	**Sb**	**11 35 14.9**	**+2.2**
CNOP	**Candoni, Negro**	**1.08**	**151**	⇑	*iP*	**Pb**	**11 34 59.9**	**+0.6**
CNOP					*i* S	Sb	11 35 20.5	+7.4
LLP	**Lapu-Lapu**	**1.89**	**104**		*eP*	**Pb**	**11 35 12.3**	**-0.7**
LLP					*eS*	**Sb**	**11 35 37.5**	**+1.2**
SJMP	**San Jose**	**1.93**	**330**	⇓	*eP*	**Pn**	**11 35 08.7**	**-1.3**
SJMP					*eS*	Sn	11 35 21.6	-12
MMPH	**Masbate**	**2.17**	**43**	⇑	*iP*	**Pb**	**11 35 16.9**	**-0.9**
MMPH					*eS*	**Sb**	**11 35 42.5**	**-1.8**
BUSP	**Coron**	**2.23**	**303**	⇓	*eP*	**Pn**	**11 35 14.3**	**+0.2**
BUSP					*eS*	**Sn**	**11 35 35.0**	**-5.6**
OCLP	**Ormoc**	**2.48**	**83**	⇓	*eP*	**Pb**	**11 35 22.9**	**-0.2**
OCLP					*eS*	**Sb**	**11 35 53.8**	**+0.7**
BOAC	**Boac**	**2.68**	**355**	⇓	*eP*	**Pn**	**11 35 19.3**	**-1.0**
BOAC					*eS*	**Sn**	**11 35 54.4**	**+2.7**
MSLP	**Maasin**	**2.79**	**103**	⇓	*iP*	**Pb**	**11 35 24.9**	**-3.4**
MSLP					*i* S	**Sb**	**11 36 05.9**	**+3.8**
PAGZ	**Pagadian**	**3.17**	**156**	⇓	*eP*	**Pb**	**11 35 30.9**	**-4.0**
PAGZ					*eS*	**Sb**	**11 36 14.7**	**+1.5**
BESP	**Borongan**	**3.38**	**76**	⇓	*eP*	**Pn**	**11 35 31.3**	**+1.5**
BESP					*eS*	**Sb**	**11 36 14.9**	**-4.0**
ZCP	**Zamboanga City**	**3.82**	**180**	⇓	*iP*	**Pn**	**11 35 39.0**	**+3.0**
ZCP					*i* S	**Sn**	**11 36 17.3**	**-2.5**
DAV	**Davao City (W)**	**5.04**	**137**		Pn	**Pn**	**11 35 48.9**	**-3.8**
QIZ	**Qiongzhong**	**14.40**	**306**		Pn	**Pn**	**11 37 58.4**	**-2.7**
BATI	**Baumata**	**20.90**	**176**		P	**P**	**11 39 18.6**	**-0.8**
	93nm,0.9s,baz=36,slow=18,SNR=3.1							
	93nm,0.9s							
KULM	**Kulim**	**21.92**	**257**		P	**P**	**11 39 32.8**	**+2.5**
KULM					IAmb	IAmb	11 39 40.0	
	comp=Z,41nm,1.1s							
CM31	**Chiang Mai Arr**	**23.66**	**292**		P	**P**	**11 39 49.4**	**+1.1**
CM31					IAmb	IAmb	11 39 55.5	
	comp=Z,29nm,1.1s							
CMAR	**Chiang Mai Arr**	**23.66**	**292**		P	**P**	**11 39 48.4**	**+0.1**
	comp=Z,7.7nm,1.0s,baz=106,slow=6.5,SNR=5.2							
	comp=Z,7.7nm,1.0s							
CMAR	**Chiang Mai Arr**	**23.66**	**292**		P	**P**	**11 39 49.2**	**+0.9**
MTN	**Manton Dam**	**25.12**	**159**		P	**P**	**11 39 59.0**	**-2.6**
KSRS	**Korea Array**	**27.08**	**10**		P	**P**	**11 40 23.2**	**+4.1**
	comp=Z,1.9nm,0.9s,baz=188,slow=9.2,SNR=2.9							
FITZ	**Fitzroy Crossi**	**28.90**	**173**		P	**P**	**11 40 35.3**	**-0.3**
	comp=Z,5.8nm,0.8s,baz=27,slow=8.8,SNR=1.5							
	comp=Z,5.8nm,0.8s							
MBWA	**Marble Bar**	**31.82**	**184**		P	**P**	**11 41 01.4**	**+0.1**
MBWA					IAmb	IAmb	11 41 07.9	
	comp=Z,11nm,0.7s							
PSA00	**Pilbara Seismi**	**32.22**	**184**		P	**P**	**11 41 04.7**	**-0.2**
PSA00					IAmb	IAmb	11 41 11.2	
	comp=Z,18nm,0.8s							
WB0	**Warramunga Arr**	**32.67**	**158**		P	**P**	**11 41 07.3**	**-1.6**
WB0					IAmb	IAmb	11 41 30.7	
	comp=Z,46nm,1.7s							
WRAB	**Tennant Creek**	**32.81**	**158**		P	**P**	**11 41 08.6**	**-1.5**
WRAB					IAmb	IAmb	11 41 29.6	
	comp=Z,17nm,1.1s							
WRA	**Warramunga Arr**	**32.82**	**158**		P	**P**	**11 41 08.1**	**-2.1**
	comp=Z,0.9nm,0.5s,baz=340,slow=9.3,SNR=1.3							
	comp=Z,0.9nm,0.5s							
WB2	**Warramunga Arr**	**32.82**	**158**		P	**P**	**11 41 08.4**	**-1.8**
USRK	**Ussuriysk Ar.**	**34.38**	**13**		P	**P**	**11 41 23.3**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=206,slow=7.8,SNR=1.5							
	comp=Z,1.8nm,0.6s							
AS31	**Alice Springs**	**36.12**	**161**		P	**P**	**11 41 36.9**	**-1.9**
ASAR	**Alice Springs**	**36.12**	**161**		P	**P**	**11 41 38.0**	**-0.8**
	comp=Z,6.1nm,0.9s,baz=341,slow=6.5,SNR=4.3							
	comp=Z,6.1nm,0.9s							
ASAR	**Alice Springs**	**36.12**	**161**		P	**P**	**11 41 38.2**	**-0.6**
SONM	**Songino Array**	**39.23**	**343**		P	**P**	**11 42 04.5**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=153,slow=9.5,SNR=2.3							
	comp=Z,3.7nm,0.8s							
SONM	**Songino Array**	**39.23**	**343**		P	**P**	**11 42 04.5**	**-0.4**
FORT	**Forrest**	**41.71**	**172**		P	**P**	**11 42 24.6**	**-0.8**
HYBB	**Hyderabad (bro**	**42.68**	**284**		*eP*	**P**	**11 42 35.4**	**+1.7**
NWAO	**Narrogin (SRO)**	**43.70**	**186**		P	**P**	**11 42 43.2**	**+1.7**
BBOO	**Buckleboo**	**45.34**	**163**		P	**P**	**11 42 54.5**	**-0.2**
BBOO					IAmb	IAmb	11 42 60.0	
	comp=Z,14nm,0.7s							
STKA	**Stephens Creek**	**46.34**	**157**		P	**P**	**11 43 02.1**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=310,slow=7.4,SNR=1.1							
	comp=Z,3.3nm,0.7s							
MKAR	**Makanchi Array**	**49.19**	**324**		P	**P**	**11 43 24.8**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=126,slow=7.3,SNR=1.0							
	comp=Z,1.9nm,0.8s							
NIL	**Nilore**	**50.08**	**305**		P	**P**	**11 43 32.1**	**+0.6**
PETK	**Petropavlovsk-**	**50.96**	**27**		P	**P**	**11 43 41.2**	**+3.4**
	comp=Z,5.2nm,1.0s,baz=233,slow=7.0,SNR=2.9							
ZALV	**Zalesovo Beam**	**52.27**	**333**		P	**P**	**11 43 48.0**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=118,slow=8.1,SNR=1.6							
	comp=Z,0.9nm,0.5s							
KURBB	**Kurchatov Arra**	**53.37**	**327**		P	**P**	**11 43 55.7**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=132,slow=6.5,SNR=2.5							
	comp=Z,2.3nm,0.8s							
KURK	**Kurchatov**	**53.37**	**327**		P	**P**	**11 43 56.6**	**+0.8**
KURK					IAmb	IAmb	11 43 57.8	
	comp=Z,7.1nm,0.8s							
KK31	**Karatay Array**	**55.00**	**316**		P	**P**	**11 44 08.8**	**+0.9**
KK31					IAmb	IAmb	11 44 14.4	
	comp=Z,6.2nm,0.7s							
KKAR	**Karatay Array**	**55.00**	**316**		P	**P**	**11 44 08.6**	**+0.7**
ABKAR	**Akbulak array**	**63.83**	**320**		P	**P**	**11 45 09.3**	**+0.6**
MLY	**Manley**	**79.11**	**26**		P	**P**	**11 46 40.3**	**-0.3**
H23K	**Yukon River**	**79.58**	**25**		P	**P**	**11 46 42.9**	**-0.2**
ILAR	**Eielson Array**	**80.77**	**26**		P	**P**	**11 46 48.7**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=259,slow=5.8,SNR=2.0							
	comp=Z,0.4nm,0.7s							
BMAR	**Burnt Mountain**	**81.41**	**23**		P	**P**	**11 46 53.0**	**+0.1**
BRTR	**Keskin Array B**	**82.03**	**309**		P	**P**	**11 46 57.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=68,slow=9.5,SNR=2.2							
	comp=Z,1.3nm,0.7s							
ARCES	**ARCESS Array B**	**82.29**	**339**		P	**P**	**11 46 56.8**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=81,slow=5.6,SNR=1.9							
	comp=Z,2.0nm,0.8s							
ARCES	**ARCESS Array B**	**82.29**	**339**		P	**P**	**11 46 56.9**	**-0.6**
BCAR	**Beaver Creek A**	**83.24**	**27**		P	**P**	**11 46 59.8**	**-2.9**
FINES	**FINESS Array B**	**83.49**	**331**		P	**P**	**11 47 02.4**	**-1.4**
	comp=Z,3.3nm,1.0s,baz=55,slow=7.3,SNR=1.7							
	comp=Z,3.3nm,1.0s							
INK	**Inuvik**	**85.31**	**21**		P	**P**	**11 47 12.5**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=315,slow=5.9,SNR=1.8							
	comp=Z,2.8nm,0.9s							
INK	**Inuvik**	**85.31**	**21**		P	**P**	**11 47 11.7**	**-1.2**
INK					IAmb	IAmb	11 47 18.6	
	comp=Z,7.7nm,0.8s							
BURAR	**Bucovina Array**	**86.73**	**318**		P	**P**	**11 47 19.6**	**-0.9**
BURAR					IAmb	IAmb	11 47 26.4	
	comp=Z,4.5nm,0.8s							
VNDA	**Vanda**	**90.97**	**172**		P	**P**	**11 47 39.6**	**-0.1**
VNDA					IAmb	IAmb	11 48 59.3	
	comp=Z,4.9nm,1.2s							
GERES	**GERESS Array B**	**93.75**	**321**		P	**P**	**11 47 53.2**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=60,slow=2.4,SNR=1.8							
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**116.26**	**290**		PKP	**PKPdf**	**11 53 19.8**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=68,slow=1.2,SNR=1.1							
TXAR	**Lajitas Array**	**120.53**	**47**		PKP	**PKPdf**	**11 53 28.2**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=338,slow=1.9,SNR=2.8							

DNK 15 11:43:12.6±1.8, 58.˚06N×14.˚93E, h0km, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LNKU	**Linkoeping**	**0.35**	**61**		P	Pg	11 43 19.0	-0.3
LNKU					S	Sg	11 43 23.7	0.0
EKSU	**Eksjoe**	**0.53**	**158**		P	Pg	11 43 22.3	-0.4
EKSU					S	Sg	11 43 29.3	-0.1
FKPU	**Falk**	**0.65**	**280**		P	Pg	11 43 24.6	-0.4
FKPU					S	Sg	11 43 33.2	-0.2
ASKU	**Askersund**	**0.84**	**356**		P	Pg	11 43 28.2	-0.5
VSTU	**Vaestervik**	**0.95**	**114**		P	Pg	11 43 29.8	-0.9
GNOU	**Gnosjoe**	**1.00**	**220**		P	Pg	11 43 31.0	-0.7
VIKU	**Vikbolandet**	**1.03**	**64**		P	Pg	11 43 31.5	-0.9
VXJU	**Vaexsjoe**	**1.14**	**180**		P	Pg	11 43 33.7	-0.7
BORU	**Boraas**	**1.23**	**251**	*i*	P	Pg	11 43 35.0	-1.2
BORU					P	Pb	11 43 35.4	-1.3
BYXU	**Byxelkrok**	**1.36**	**124**		P	Pg	11 43 37.2	-1.3
ESKU	**Eskilstuna**	**1.40**	**32**		P	Pn	11 43 38.4	-1.0
NRAU	**Nora**	**1.52**	**2**		P	Pn	11 43 40.5	-0.5
VANU	**Vaenersborg**	**1.57**	**287**		P	Pn	11 43 41.0	-0.7
FABU	**Falkenberg**	**1.60**	**229**		P	Pn	11 43 41.3	-0.7
DEL	**Delary**	**1.69**	**200**	*i*	P	Pn	11 43 43.0	-0.4
DEL					P	Pb	11 43 43.5	-1.1
DEL				*i*	S	Sb	11 44 06.2	-0.1
DEL					IAML		11 44 17.5	
	comp=Z,8.4nm,0.9s							
ONAU	**Onsala**	**1.75**	**249**	*i*	P	Pn	11 43 43.9	-0.3
ONAU				*i*	S	Sn	11 44 07.1	+0.1
BLEU	**Blekinge**	**1.82**	**164**	*i*	P	Pn	11 43 45.1	0.0
BLEU				*i*	S	Sn	11 44 09.0	+0.1
STRU	**Stroemstad**	**2.20**	**298**	*i*	S	Sn	11 44 15.5	-2.6
BSD	**Bornholm Skovb**	**2.95**	**180**	*i*	P	Pn	11 43 58.2	-2.4
BSD				*i*	S	Sn	11 44 33.4	-3.3
BSD					IAML		11 44 36.4	
	comp=Z,0.8nm,0.1s							

*IDC **15** 11:45:44.7±9.0, 22.˚14S×65.˚78W, h274km±81km, mb3.3/1, mbtmp3.7/2, Error ellipse: s-maj=96.0km s-min=66.5km az=174.0*
ISC 15 11:45:41.0±1.2, 22.˚50S±0.˚07×66.˚04W±0.˚10, h250km, n18, σ1§14/24, 4C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LVC	**Limon Verde**	**2.65**	**267**	⇑	*iP*	**Pn**	**11 46 31.6**	**+1.4**
PB09	**IPOC Station P**	**3.05**	**283**	⇑	*eP*	**Pn**	**11 46 36.0**	**+1.9**
PB09					*e*		11 46 49.5	
PB09					*eS*	**S**	**11 47 17.2**	**+1.0**
PB15	**IPOC Station P**	**3.24**	**257**		*eP*	**Pn**	**11 46 37.9**	**+1.5**
PB15					*eS*	**S**	**11 47 19.9**	**-0.2**
PB06	**IPOC Station P**	**3.27**	**266**		*eP*	**Pn**	**11 46 37.7**	**+1.1**
PB06					*eS*	**S**	**11 47 20.2**	**-0.3**
PB01	**IPOC Station P**	**3.51**	**294**	*i*	P	**Pn**	**11 46 40.3**	**+1.0**
PB01					*eS*	**S**	**11 47 24.6**	**-0.9**
PB07	**IPOC Station P**	**3.65**	**281**	⇑	*iP*	**Pn**	**11 46 41.7**	**+0.8**
PB07					*eS*	**S**	**11 47 26.2**	**-2.2**
PB02	**IPOC Station P**	**3.77**	**287**	*i*	P	**Pn**	**11 46 42.9**	**+0.7**
PB04	**IPOC Station P**	**3.80**	**272**	⇑	*iP*	**Pn**	**11 46 43.3**	**+0.6**
GO01	**Chusmiza**	**4.07**	**313**	*i*	P	**Pn**	**11 46 47.8**	**+1.6**
GO02	**Mina Guanaco**	**4.19**	**230**		*eP*	**Pn**	**11 46 48.1**	**+0.7**
TA01	**Diego Aracena**	**4.30**	**296**		*eP*	**Pn**	**11 46 48.5**	**+0.1**
PB14	**IPOC Station P**	**4.53**	**241**		*eP*	**Pn**	**11 46 51.5**	**+0.2**
AC01	**Pan de Azucar**	**5.52**	**228**		*eP*	**Pn**	**11 47 02.1**	**-1.1**
PB12	**IPOC Station P**	**5.57**	**313**		*eP*	**Pn**	**11 47 03.2**	**-0.8**
LPAZ	**La Paz**	**6.48**	**342**		P	**Pn**	**11 47 17.3**	**+1.4**
	1.8nm,0.5s,baz=187,slow=6.0,SNR=9.5							
LPAZ					S	**S**	**11 48 30.8**	**-0.9**
	1.0nm,0.8s,baz=328,slow=15,SNR=1.6							
TORD	**Torodi Ar. Bea**	**75.21**	**69**		P	**P**	**11 56 55.8**	**-0.9**
	0.5nm,0.4s,baz=256,slow=5.8,SNR=9.4							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**133.36**	**207**		PKP	**PKPdf**	**12 04 28.2**	**+0.1**
	0.3nm,1.0s,baz=159,slow=1.8,SNR=1.2							
MKAR	**Makanchi Array**	**144.81**	**39**		PKP	**PKPdf**	**12 04 48.7**	**+0.6**
	0.2nm,0.4s,baz=325,slow=2.3,SNR=2.5							

HEL 15 11:47:23.5±0.5, 67.˚74N×20.˚19E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LANU	**Lannavaara**	**0.75**	**65**		SB	Sg	11 47 46.9	-0.5
KIF	**Kilpisjarvi**	**1.29**	**10**		PG	Pg	11 47 47.4	-0.8
KIF					SG	Sg	11 48 03.3	-1.5
KIF					MSG		11 48 03.7	
	comp=Z,11nm,0.2s							
PAJU	**Pajala**	**1.34**	**121**		PN	Pg	11 47 48.5	-0.7
HEF	**Hetta**	**1.47**	**61**		PG	Pn	11 47 50.1	-1.1
	baz=240							
HEF					MSG		11 48 07.6	
	comp=Z,3.4nm,0.2s							
HEF					SG	Sg	11 48 08.6	-1.9
KLF	**Kolari**	**1.54**	**108**		SN	Sg	11 48 14.0	+1.1
TRO	**Tromso**	**1.96**	**347**		SG	Sb	11 48 24.2	-0.6
KALU	**Kalix**	**2.27**	**145**		PG	Pb	11 48 04.5	-0.7
KALU					SG	Sg	11 48 35.6	-0.7
TOF	**Tornio**	**2.33**	**134**		MSG		11 48 32.7	
	comp=Z,2.1nm,0.2s							
TOF					SG	Sn	11 48 33.5	+1.1
SGF	**Sodankyl**	**2.45**	**94**		SG	Sb	11 48 39.8	+0.9
RNF	**Rovaniemi**	**2.54**	**114**		SG	Sb	11 48 42.6	+1.0
KEV	**Kevo**	**3.20**	**48**		MSG		11 48 57.5	
	comp=Z,1.4nm,0.2s							
KEV					SB	Sb	11 48 59.1	-1.5

HEL 15 11:47:41.3±0.6, 68.˚07N×25.˚67E, h0km, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HEF	**Hetta**	**0.82**	**295**		PB	Pg	11 47 57.1	+0.1
KLF	**Kolari**	**1.06**	**219**		PG	Pg	11 47 59.1	-2.5
PAJU	**Pajala**	**1.44**	**224**		PG	Pn	11 48 07.5	-1.1
ARA0	**ARCESS Array S**	**1.47**	**358**		PB	Pn	11 48 08.8	-0.3
ARA0	**ARCESS Array S**	**1.47**	**358**		PN	Pn	11 48 08.8	-0.3
ARA0					SN	Sg	11 48 26.4	-2.2
RNF	**Rovaniemi**	**1.47**	**175**		PG	Pn	11 48 08.4	-0.6
RNF					SG	Sg	11 48 26.9	-1.7
OBF4	**Vikkela, Lumij**	**3.28**	**184**		SG	Sn	11 49 13.5	+0.1
OBF4	**Vikkela, Lumij**	**3.28**	**184**		SN	Sn	11 49 13.5	+0.1

*SOME **15** 12:51:57.2, 40.˚82N×78.˚20E, h5km*
*NNC **15** 12:51:57.7±1.3, 40.˚77N×78.˚16E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=8.6km s-min=5.6km az=169.0*
*KRNET **15** 12:51:57.1±0.1, 41.˚29N×78.˚76E, mb2.9*
ISC 15 12:51:56.0±2.5, 40.˚7N±0.˚1×78.˚02E±0.˚04, h10km, n39, σ1§52/60, 5C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ULHL	**Ulahol**	**2.05**	**320**	⇓	*iP*	**Pg**	**12 52 36.0**	**+0.7**
	baz=98							
ULHL				⇓	*iS*	**Sg**	**12 53 04.4**	**+2.5**
	baz=98							
BOOM	**Boomskoye usch**	**2.38**	**320**	⇓	*eP*	**Pg**	**12 52 40.3**	**-1.4**
	baz=1.0							
BOOM				⇓	*iS*	**Sg**	**12 53 11.7**	**-0.8**
	baz=1.0							
SATY	**Saty**	**2.38**	**7**		*eP*	**Pg**	**12 52 40.8**	**-1.0**
	14nm,0.5s							
SATY					*eS*	**Sg**	**12 53 12.3**	**-0.3**
	45nm,0.3s							
SATY	**Saty**	**2.38**	**7**		Pg	**Pg**	**12 52 40.8**	**-1.0**
	14nm,0.5s							
SATY					Lg	Lg	12 53 12.3	
	45nm,0.3s							
ZHN	**Zhinishke**	**2.50**	**7**		*eP*	**Pg**	**12 52 42.6**	**-1.2**
	20nm,0.2s							
ZHN					*eS*	**Sg**	**12 53 15.2**	**-1.0**
	49nm,0.3s							
ZHN	**Zhinishke**	**2.50**	**7**		Pg	**Pg**	**12

	5.1nm,0.3s								
KTBS					*e*S		**Sg**	**12 53 36.6**	**-1.5**
	26nm,0.5s								
KTBS	**Karatobe**	**3.18**	**342**		Pg		**Pg**	**12 52 54.9**	**-2.0**
	5.1nm,0.3s								
KTBS					Lg		Lg	12 53 36.6	
	26nm,0.5s								
KTMS	**Ketmen**	**3.25**	**31**		*e*P		**Pb**	**12 52 54.3**	**+0.3**
	1.2nm,0.2s								
KTMS					*e*S		**Sb**	**12 53 35.2**	**+1.5**
	11nm,0.4s								
KTMS	**Ketmen**	**3.25**	**31**		Pg		**Pb**	**12 52 54.3**	**+0.3**
	1.2nm,0.2s								
KTMS					Lg		Lg	12 53 35.2	
	11nm,0.4s								
CHMS	**Chumysh**	**3.36**	**314**	⇑	Pg		**Pb**	**12 52 57.7**	**+2.0**
	3.8nm,0.7s								
CHMS				⇓	Lg		Lg	12 53 44.1	
	13nm,1.1s								
KUU	**Kurty**	**3.44**	**339**		*e*P		**Pg**	**12 53 00.3**	**-1.5**
	1.9nm,0.2s								
KUU					*e*S		**Sg**	**12 53 45.8**	**-0.5**
	8.8nm,0.3s								
KUU	**Kurty**	**3.44**	**339**		Pg		**Pg**	**12 53 00.3**	**-1.5**
	1.9nm,0.2s								
KUU					Lg		Lg	12 53 45.8	
	8.8nm,0.3s								
KRBS	**Karabastau**	**3.47**	**331**		*e*P		**Pg**	**12 53 01.1**	**-1.4**
	2.9nm,0.4s								
KRBS					*e*S		**Sg**	**12 53 46.9**	**-0.6**
	9.8nm,0.7s								
KRBS	**Karabastau**	**3.47**	**331**		Pg		**Pg**	**12 53 01.1**	**-1.4**
	2.9nm,0.4s								
KRBS					Lg		Lg	12 53 46.9	
	9.8nm,0.7s								
ARXS	**Arharly**	**3.52**	**358**		*e*P		**Pg**	**12 53 01.2**	**-2.3**
	1.9nm,0.0s								
ARXS					*e*S		**Sg**	**12 53 47.0**	**-2.2**
	14nm,0.4s								
ARXS	**Arharly**	**3.52**	**358**		Pg		**Pg**	**12 53 01.2**	**-2.3**
	1.9nm,0.0s								
ARXS					Lg		Lg	12 53 47.0	
	14nm,0.4s								
DJR	**Jarkent**	**3.87**	**19**		*e*P		**Pb**	**12 53 05.9**	**+1.5**
	0.8nm,0.2s								
DJR					*e*S		**Sb**	**12 53 55.4**	**+4.1**
	9.3nm,0.4s								
DJR	**Jarkent**	**3.87**	**19**		Pg		**Pb**	**12 53 05.9**	**+1.5**
	0.8nm,0.2s								
DJR					Lg		Lg	12 53 55.4	
	9.3nm,0.4s								
BTLS	**Baital**	**5.24**	**327**		*e*P		**Pg**	**12 53 34.0**	**-2.2**
	0.5nm,0.4s								
BTLS					*e*S		**Sg**	**12 54 43.5**	**-0.7**
	1.8nm,1.0s								
BTLS	**Baital**	**5.24**	**327**		Pg		**Pg**	**12 53 34.1**	**-2.2**
	0.5nm,0.4s								
BTLS					Lg		Lg	12 54 43.5	
	1.8nm,1.0s								

*TIR **15** 13:09:19.0,42°.03N×20°.37E,h10km,Md2.5,Ml2.5*
*RHSSO **15** 13:09:19.6±0.8,41°.99N×20°.33E,h5km±3km,ML2.3/6*
*PDG **15** 13:09:19.8±0.3,42°.04N×20°.30E,h11km±1km,ML2.4/12,*
Error ellipse: s-maj=0.6km s-min=1.2km az=0.0
*SKO **15** 13:09:20.8,42°.04N×20°.27E,h10km*
*BEO **15** 13:09:20.5±0.3,42°.04N×20°.33E,h14km±2km,ML2.0/14*

ISC 15 13:09:19.5±1.0,42°.00N±0°.02×20°.33E±0°.02,h10km±9km,
n54,σ0°99/96,4C-9D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.33**	**165**		P	**Pg**	**13 09 26.5**	**+0.5**
	baz=171							
PHP					S	**Sb**	**13 09 32.0**	**-0.8**
	baz=171							
PHP					AMP			
	comp=N,2.5nm,0.1s,baz=171							
BCI	**Bajram Curri**	**0.41**	**332**		P	**Pg**	**13 09 27.5**	**-0.1**
	baz=327							
BCI					S	**Sg**	**13 09 33.5**	**+0.5**
	baz=327							
BCI					AMP			
	comp=N,4.5nm,0.5s,baz=327							
PVY	**Plav**	**0.65**	**336**	⇑	*i*Pg	**Pg**	**13 09 31.8**	**-0.3**
PVY					*i* Sg	**Sg**	**13 09 40.8**	**+0.1**
TIR	**Tirane**	**0.74**	**208**		*e*Pg	**Pb**	**13 09 34.9**	**+0.5**
TIR					*e*Sg	**Sb**	**13 09 45.2**	**+0.6**
TIR	**Tirane**	**0.74**	**208**		*e*Pg	**Pb**	**13 09 34.3**	**-0.1**
TIR					*i* Sg	**Sb**	**13 09 45.5**	**+0.9**
TIR	**Tirane**	**0.74**	**208**		P	**Pn**	**13 09 35.6**	**-0.4**
	baz=210							
TIR					S	**Sn**	**13 09 46.3**	**-1.0**
	baz=210							
TIR					AMP			
	comp=E,0.3nm,0.4s,baz=210							
ULC	**Ulcinj**	**0.81**	**268**		*i*Pg	**Pg**	**13 09 34.9**	**-0.1**
ULC	**Ulcinj**	**0.81**	**268**	⇑	*i*Pg	**Pg**	**13 09 34.6**	**-0.4**
ULC					*i* Sg	**Sb**	**13 09 47.0**	**+0.4**
DRME	**Dracevica, Mon**	**0.87**	**283**	⇑	*i*Pg	**Pg**	**13 09 35.4**	**-0.8**
DRME					*e*Sg	**Sg**	**13 09 47.3**	**-0.2**
DRME	**Dracevica, Mon**	**0.87**	**283**	⇑	*i*Pg	**Pg**	**13 09 35.1**	**-1.1**
DRME					*i* Sg	**Sb**	**13 09 48.8**	**+0.4**
PDG	**Podgorica**	**0.90**	**299**		*e*Pg	**Pg**	**13 09 35.3**	**-1.5**
PDG					*e*Sg	**Sg**	**13 09 48.6**	**0.0**
PDG	**Podgorica**	**0.90**	**299**		*e*Pg	**Pg**	**13 09 35.5**	**-1.3**
PDG					*e*Sg	**Sg**	**13 09 48.6**	**0.0**
PDG	**Podgorica**	**0.90**	**299**		*e*Pg	**Pg**	**13 09 35.5**	**-1.3**
TTG	**Podgorica**	**0.90**	**299**	⇓	*i*Pg	**Pg**	**13 09 35.3**	**-1.5**
TTG					*i* Sg	**Sb**	**13 09 49.7**	**+0.4**
BEY	**Berane**	**0.93**	**340**		*i*Pg	**Pg**	**13 09 37.0**	**-0.4**
IVA	**Berane**	**0.93**	**340**	⇓	*i*Pg	**Pg**	**13 09 36.8**	**-0.5**
IVA					*i* Sg	**Sb**	**13 09 49.9**	**-0.3**
OHR	**Ohrid**	**0.96**	**158**		*i*Pg	**Pn**	**13 09 38.6**	**-0.5**
OHR					*i* Sg	**Sn**	**13 09 53.2**	**+0.4**
OHR					*e*Lg	Lg	13 09 53.4	
	comp=N,44nm,0.4s							
KOME	**Kolasin**	**1.04**	**325**	⇓	*i*Pg	**Pg**	**13 09 38.0**	**-1.4**
KOME					*i* Sg	**Sb**	**13 09 54.1**	**+0.7**
BUM	**Brajici-Budva**	**1.11**	**286**	⇓	*i*Pg	**Pg**	**13 09 39.8**	**-0.9**
BUM					*i* Sg	**Sn**	**13 09 56.9**	**+0.4**
CEME	**Cevo**	**1.18**	**298**	⇓	*i*Pg	**Pg**	**13 09 40.3**	**-1.8**
CEME					*i* Sg	**Sn**	**13 09 58.8**	**+0.5**
NKME	**Niksic**	**1.27**	**307**	⇓	*i*Pg	**Pn**	**13 09 41.7**	**-1.7**
NKME					*i* Sg	**Sn**	**13 10 02.0**	**+1.4**
SJES	**Sjenica**	**1.29**	**348**		*e*Pg	**Pn**	**13 09 43.4**	**-0.3**
SJES					*e*Sg	**Sb**	**13 10 00.5**	**0.0**
SJES	**Sjenica**	**1.29**	**348**		*e*Pg	**Pn**	**13 09 43.7**	**0.0**
SJES					*e*Sg	**Sb**	**13 10 00.5**	**0.0**
SELS	**Selova**	**1.35**	**25**		*e*Pg	**Pb**	**13 09 44.8**	**-0.1**
SELS					*e*Sg	**Sb**	**13 10 02.0**	**-0.3**
BARS	**Barje**	**1.37**	**53**		*e*Pg	**Pb**	**13 09 45.0**	**-0.3**
BARS					*e*Sg	**Sg**	**13 10 03.7**	**+0.1**
BARS	**Barje**	**1.37**	**53**		*i*Pg	**Pg**	**13 09 46.0**	**+0.2**
BARS					*i* Sg	**Sg**	**13 10 04.9**	**+1.3**
PRVS	**Prvonek**	**1.40**	**68**		*e*Pg	**Pg**	**13 09 45.9**	**-0.3**
PRVS					*e*Sg	**Sg**	**13 10 04.0**	**-0.3**
HCY	**Herceg Novi**	**1.43**	**289**		*e*Pg	**Pn**	**13 09 44.8**	**-0.7**
HCY					*e*Sg	**Sg**	**13 10 05.5**	**0.0**
HCY	**Herceg Novi**	**1.43**	**289**	⇓	*i*Pg	**Pn**	**13 09 45.4**	**-0.1**
HCY					*i* Sg	**Sg**	**13 10 07.8**	**+2.3**
IVAS	**Ivanjica**	**1.58**	**355**		*e*Pg	**Pn**	**13 09 48.0**	**+0.4**
IVAS					*e*Sg	**Sb**	**13 10 09.1**	**+0.2**
UPM	**Unac-Piva**	**1.59**	**319**		*e*Pn	**Pb**	**13 09 48.9**	**-0.3**
UPM					*e*Sn	**Sb**	**13 10 09.7**	**+0.2**
UPM	**Unac-Piva**	**1.59**	**319**	⇓	*i*Pg	**Pb**	**13 09 48.6**	**-0.6**
UPM					*i* Sg	**Sg**	**13 10 12.0**	**+1.2**
BRY	**Bratogost**	**1.60**	**305**		*e*Pn	**Pn**	**13 09 48.0**	**0.0**
BRY					*e*Sn	**Sb**	**13 10 09.7**	**+0.2**
BRY	**Bratogost**	**1.60**	**305**	⇓	*i*Pg	**Pn**	**13 09 47.9**	**0.0**
BRY					*i* Sg	**Sg**	**13 10 13.1**	**+2.2**
TREB	**Trebinje**	**1.63**	**297**		*e*Pn	**Pb**	**13 09 49.5**	**-0.1**
TREB					*e*Sn	**Sb**	**13 10 10.4**	**+0.1**
TREB	**Trebinje**	**1.63**	**297**		*e*Pg	**Pb**	**13 09 49.7**	**+0.1**
TREB					*e*Sg	**Sg**	**13 10 13.6**	**+1.8**
BOSS	**Bosilegrad**	**1.68**	**72**		*e*Pn	**Pn**	**13 09 48.6**	**-0.3**
BOSS					*e*Sn	**Sn**	**13 10 10.3**	**-0.2**
DBRK	**Dubrovnik**	**1.75**	**293**		*e*Pn	**Pn**	**13 09 50.4**	**+0.5**
RUDO	**Rudo**	**1.76**	**337**		*e*Pn	**Pn**	**13 09 50.4**	**+0.3**
RUDO					*e*Sn	**Sb**	**13 10 13.9**	**-0.2**
RUDO	**Rudo**	**1.76**	**337**		*e*Pn	**Pn**	**13 09 50.4**	**+0.3**
RUDO					*e*Sg	**Sb**	**13 10 14.5**	**+0.4**
LSK	**Leskovik**	**1.86**	**173**		P	**Pg**	**13 09 54.3**	**-0.8**
	baz=174							
LSK					S	**Sg**	**13 10 21.6**	**+2.3**
	baz=174							
GRUS	**Gruza**	**1.91**	**9**		*e*Pn	**Pn**	**13 09 52.5**	**+0.4**
GRUS					*e*Sn	**Sn**	**13 10 15.4**	**-0.8**
BOVS	**Bovan**	**1.92**	**31**		*e*Sn	**Sn**	**13 10 15.1**	**-1.5**
BBLS	**Lazići**	**1.98**	**340**		*e*Pn	**Pn**	**13 09 53.7**	**+0.5**
BBLS					*e*Sn	**Sn**	**13 10 19.1**	**+0.9**
DIVS	**Divibare**	**2.11**	**353**		*e*Pn	**Pn**	**13 09 55.5**	**+0.5**
DIVS					*e*Sn	**Sn**	**13 10 22.6**	**+1.3**
DIVS	**Divibare**	**2.11**	**353**		*e*Pn	**Pn**	**13 09 53.9**	**-1.1**
DIVS					*e*Sn	**Sn**	**13 10 21.0**	**-0.3**
ZAPS	**Zavoj**	**2.13**	**52**		*e*Pn	**Pn**	**13 09 55.7**	**+0.6**
STON	**Ston**	**2.13**	**295**		*e*Pn	**Pb**	**13 09 56.7**	**-1.4**
IGT	**Igoumenitsa**	**2.47**	**180**		P	**Pb**	**13 10 03.7**	**-0.2**
	baz=181							
IGT					S	**Sg**	**13 10 36.4**	**-2.3**
	baz=181							
LSTV	**Lastovo**	**2.66**	**288**		*e*Pn	**Pb**	**13 10 05.1**	**-2.0**
RICI	**Ricice**	**2.79**	**303**		*e*Pn	**Pb**	**13 10 07.3**	**-2.0**
KIJV	**Kijevo**	**3.50**	**306**		*e*Pn	**Pn**	**13 10 17.1**	**+3.1**
DUGI	**Dugi Otok**	**4.34**	**299**		*e*Pn	**Pn**	**13 10 27.2**	**+1.6**
VIRC	**Vir**	**4.49**	**302**		*e*Pn	**Pn**	**13 10 29.1**	**+1.7**

*IPEC **15** 13:31:19.7±0.2,49°.85N×18°.58E,h0km±3km,ML2.5/4,*
Error ellipse: s-maj=1.8km s-min=1.1km az=165.0

ISC 15 13:31:19.4±0.8,49°.84N±0°.03×18°.57E±0°.02,h0km,n48,
σ1§15/83,3C-9D,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**270**		*e*PG	**Pg**	**13 31 25.6**	**+0.9**
OKC					*e*SG	**Sg**	**13 31 27.7**	**-0.5**
	comp=Z,148nm,0.4s							
MORC	**Moravsky Berou**	**0.67**	**265**	⇓	P	**Pb**	**13 31 33.2**	**-0.8**
MORC				⇓	S	**Sg**	**13 31 41.6**	**+0.7**
MORC	**Moravsky Berou**	**0.67**	**265**		*e*Pg	**Pg**	**13 31 32.7**	**+0.5**
	baz=83							
MORC					*e*Sg	**Sg**	**13 31 40.6**	**-0.3**
	107nm,0.5s,baz=83							
MORC	**Moravsky Berou**	**0.67**	**265**		*e*PG	**Pg**	**13 31 32.8**	**+0.5**
MORC					*e*SG	**Sg**	**13 31 40.7**	**-0.2**
ANAC	**Anensky vrch**	**0.81**	**288**		*e*Pg	**Pg**	**13 31 35.0**	**+0.2**
	baz=105							
OJC	**Ojcow**	**0.88**	**64**		*e*Pg	**Pg**	**13 31 36.1**	**-0.2**
OJC					*e*Sg	**Sg**	**13 31 48.3**	**+0.6**
LANS	**Liptovska Anna**	**0.90**	**139**		*e*PG	**Pb**	**13 31 37.5**	**-0.5**
LANS					*e*SG	**Sb**	**13 31 50.8**	**+0.2**
LANS					*e*LG	Lg	13 31 54.0	
JAVC	**Velka Javorina**	**1.14**	**211**		*e*Pg	**Pb**	**13 31 42.1**	**0.0**
	baz=31							
JAVC	**Velka Javorina**	**1.14**	**211**		*e*PG	**Pb**	**13 31 42.2**	**+0.1**
KRLC	**Kraliky**	**1.18**	**282**		*e*PG	**Pg**	**13 31 41.4**	**-0.6**
KRLC					*e*SG	**Sg**	**13 31 56.7**	**-0.6**
	comp=Z,77nm,0.6s							
NIE	**Niedzica**	**1.20**	**110**		*e*Pg	**Pn**	**13 31 43.3**	**-0.2**
NIE					*e*Sg	**Sn**	**13 32 00.5**	**-0.1**
VYHS	**Vyhne**	**1.36**	**172**		*e*PG	**Pg**	**13 31 45.3**	**-0.1**
VYHS					*e*SG	**Sn**	**13 32 04.1**	**-0.2**
VYHS					*e*LG	Lg	13 32 06.3	
VRAC	**Vranov**	**1.39**	**248**	⇓	P	**Pg**	**13 31 46.0**	**-0.1**
VRAC				⇓	S	**Sg**	**13 32 03.2**	**-0.9**
VRAC	**Vranov**	**1.39**	**248**		*e*Pg	**Pg**	**13 31 45.7**	**-0.4**
	baz=66							
VRAC					*e*Sg	**Sg**	**13 32 03.5**	**-0.6**
	69nm,0.4s,baz=66							
VRAC	**Vranov**	**1.39**	**248**		*e*PG	**Pg**	**13 31 45.7**	**-0.4**
VRAC					*e*SG	**Sg**	**13 32 03.6**	**-0.6**
DPC	**Dobruska-Polom**	**1.54**	**290**		*e*PG	**Pn**	**13 31 48.0**	**-0.1**
DPC					*e*SG	**Sg**	**13 32 08.0**	**-0.7**
	comp=Z,41nm,0.3s							
KRUC	**Moravsky**	**1.62**	**242**		*e*Pg	**Pn**	**13 31 49.1**	**-0.1**
	baz=60							
KRUC					*e*Sg	**Sn**	**13 32 10.5**	**-0.3**
	36nm,0.3s,baz=60							
KRUC	**Moravsky**	**1.62**	**242**		*e*PG	**Pn**	**13 31 49.2**	**0.0**
KRUC					*e*SG	**Sn**	**13 32 10.5**	**-0.3**
OSTC	**Ostas**	**1.68**	**296**		*e*PG	**Pn**	**13 31 50.4**	**+0.4**
OSTC					*e*SG	**Sb**	**13 32 12.9**	**+0.1**
	comp=Z,58nm,0.8s							
MODS	**Modra-Piesok**	**1.69**	**211**		*e*PG	**Pn**	**13 31 50.7**	**+0.4**
MODS					*e*SG	**Sn**	**13 32 12.4**	**-0.3**
MODS					*e*LG	Lg	13 32 13.8	
UPC	**Upice**	**1.78**	**293**		*e*PG	**Pn**	**13 31 52.1**	**+0.7**
UPC					*e*SG	**Sb**	**13 32 15.4**	**-0.3**
	comp=Z,36nm,0.7s							
CHVC	**Chvalec**	**1.78**	**296**		*e*PG	**Pg**	**13 31 53.4**	**-0.2**
CHVC					*e*SG	**Sg**	**13 32 16.8**	**+0.2**
TREC	**Trest**	**2.08**	**256**		*e*SG	**Sb**	**13 32 24.3**	**-0.1**
	comp=Z,21nm,0.4s							
CRVS	**Cervenica-Dubn**	**2.11**	**115**		*e*PN	**Pg**	**13 32 00.0**	**+0.2**
CRVS					*e*SN	**Sg**	**13 32 27.9**	**+0.7**
KOLS	**Kolonicke sedl**	**2.58**	**109**		*e*PG	**Pg**	**13 32 10.0**	**+1.1**
PRU	**Pruhonice**	**2.61**	**275**		*e*PG	**Pb**	**13 32 08.0**	**+1.0**
PRU					*e*SG	**Sg**	**13 32 41.4**	**-1.8**
	comp=Z,15nm,0.4s							
RONA	**Rosalia, Austr**	**2.62**	**216**		*e*Pn	**Pn**	**13 32 03.4**	**+0.4**
	1.6nm,0.2s							
RONA					*e*Sg	**Sn**	**13 32 35.3**	**-0.1**
	5.3nm,0.4s							
CONA	**Conrad Observa**	**2.62**	**224**		*e*Pn	**Pn**	**13 32 02.5**	**-0.6**
	2.4nm,0.3s							
CONA					*e*Sg	**Sn**	**13 32 35.2**	**-0.3**
	3.4nm,0.2s							
PVCC	**Panska Ves**	**2.66**	**287**		*e*SG	**Sg**	**13 32 44.5**	**-0.4**
	comp=Z,32nm,0.7s							
CKRC	**Cesky Krumlov**	**2.97**	**252**		*e*PG	**Pb**	**13 32 14.1**	**+0.9**
CKRC					*e*SG	**Sb**	**13 32 52.1**	**+2.1**
KOLS	**Kolonicke sedl**	**2.58**	**109**		*e*PG	**Pg**	**13 32 10.0**	**+1.1**
BRG	**Berggiesshubel**	**3.14**	**291**		Pg	**Pb**	**13 32 16.6**	**+0.5**
BRG					Sg	**Sg**	**13 32 58.7**	**-1.5**
BRG					Amp		13 33 03.5	
	comp=Z,11nm,0.5s							
ARSA	**Arzberg**	**3.29**	**219**		*e*Pn	**Pn**	**13 32 12.7**	**+0.5**
	comp=Z,0.5nm,0.2s							
ARSA					*e*Sg	**Sg**	**13 33 08.0**	**+3.0**
	comp=Z,1.2nm,0.3s							
KHC	**Kasperske Hory**	**3.33**	**260**		*e*PN	**Pn**	**13 32 13.0**	**+0.2**
KHC					*e*PG	**Pb**	**13 32 21.2**	**+1.8**
KHC					*e*SN	**Sn**	**13 32 52.0**	**-1.1**
KHC					*e*SG	**Sg**	**13 33 03.8**	**-2.6**
	comp=Z,13nm,0.5s							
MOA	**Molln**	**3.47**	**237**		*e*Pn	**Pn**	**13 32 14.1**	**-0.6**
	comp=Z,1.0nm,0.3s							
MOA					*e*Sg	**Sg**	**13 33 08.7**	**-2.1**
	comp=Z,7.5nm,0.5s							
CLL	**Collm**	**3.84**	**295**		*e*Sg	**Sg**	**13 33 21.0**	**-1.8**
	comp=Z,11nm,0.6s							
BIOA	**Bad Ischl, Aus**	**3.91**	**239**		*e*Pn	**Pb**	**13 32 30.5**	**+1.3**
	comp=Z,1.1nm,0.3s							
BIOA					*e*Sg	**Sg**	**13 33 22.8**	**-2.1**
	comp=Z,7.9nm,0.4s							
BMR	**Baia Mare**	**3.91**	**122**	⇓	S	**Sn**	**13 33 07.1**	**-0.2**
DRGR		**4.11**	**136**	⇑	P	**Pn**	**13 32 23.1**	**-0.5**
DRGR				⇑	S	**Sn**	**13 33 10.8**	**-1.6**
SIRR	**Siria**	**4.13**	**149**	⇑	P	**Pn**	**13 32 23.7**	**0.0**
SIRR				⇓	S	**Sn**	**13 33 09.9**	**-2.8**
KBA	**Koelnbreinsper**	**4.44**	**234**		*e*Pn	**Pn**	**13 32 29.5**	**+1.3**
	comp=Z,0.4nm,0.2s							
KBA					*e*Sg	**Sg**	**13 33 39.9**	**-2.1**
	comp=Z,2.0nm,0.3s							
BZS	**Buzias**	**4.70**	**153**	⇓	P	**Pn**	**13 32 30.3**	**-1.2**
BZS				⇓	S	**Sn**	**13 33 24.8**	**-1.9**
BUR01	**Bucovina Ar. S**	**4.93**	**114**	⇓	P	**Pn**	**13 32 35.9**	**+1.1**
WATA	**Walderalm**	**5.27**	**244**		*e*Sg	**Sg**	**13 34 05.1**	**-3.6**
	comp=Z,4.4nm,0.4s							
WTTA	**Wattenberg**	**5.28**	**243**		*e*Sg	**Sg**	**13 34 08.2**	**-0.6**
	comp=Z,1.4nm,0.4s							
MOTA	**Moosalm**	**5.55**	**246**		*e*Sg	**Sg**	**13 34 18.5**	**+0.9**
	comp=Z,7.3nm,0.6s							
RETA	**Reutte**	**5.68**	**249**		*e*Sg	**Sg**	**13 34 22.7**	**+0.9**
	comp=Z,7.5nm,1.0s							
FETA	**Feichten**	**5.93**	**245**		*e*Sg	**Sg**	**13 34 31.7**	**+1.8**
	comp=Z,0.9nm,0.4s							
DAVA	**Damuels**	**6.31**	**249**		*e*Sg	**Sg**	**13 34 44.6**	**+2.7**
	comp=Z,3.4nm,0.4s							

*IDC **15** 13:56:56.6±1.4,5°.63S×129°.01E,h300km±16km,mb3.0/4,*
mbtmp3.9/8,Error ellipse: s-maj=27.9km s-min=14.7km
az=90.0
*NEIC **15** 13:56:56.9±1.4,5°.67S±0°.07×128°.91E±0°.09,h294km±9km,*
mb4.2/13,Error ellipse: s-maj=12.9km s-min=9.2km
az=70.0

ISC 15 13:56:56.4±0.5,5°.68S±0°.05×128°.98E±0°.07,h300km,n31,
σ1§37/37,mb3.5/7,Banda Sea

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.25**	**135**		Pn	**Pn**	**13 57 55.2**	**+0.5**
FAKI	**Fak Fak**	**4.26**	**50**			**Pn**	**13 58 06.0**	**+0.3**
SIJI	**Sorong**	**5.30**	**26**		P	**Pn**	**13 58 17.0**	**-0.5**
	34nm,0.3s,baz=48,slow=23,SNR=46							
SIJI					S	**S**	**13 59 18.9**	**-3.8**
	37nm,0.3s,baz=68,slow=23,SNR=20							
BATI	**Baumata**	**6.92**	**229**		P	**Pn**	**13 58 37.5**	**+0.6**
	190nm,0.4s,baz=69,slow=3.3,SNR=60							
BATI					S	**S**	**13 59 56.2**	**-1.9**
	48nm,0.6s,baz=270,slow=20,SNR=2.9							
MTN	**Manton Dam**	**7.43**	**164**			**Pn**	**13 58 43.1**	**0.0**
KNRA	**Kununurra**	**9.94**	**181**			**Pn**	**13 59 13.7**	**-0.1**
TOLI2	**Tolitoli**	**10.61**	**309**		P	**P**	**13 59 24.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**12.76**	**195**		P	**Pn**	**13 59 47.7**	**-0.5**
	2.6nm,0.5s,baz=33,slow=11,SNR=20							
FITZ					S	**S**	**14 02 06.2**	**-3.6**
	1.4nm,0.4s,baz=204,slow=18,SNR=1.9							
WB0	**Warramunga Arr**	**14.96**	**160**		P	**P**	**14 00 14.0**	**+0.8**
JAGI	**Jajag, Banyuwa**	**14.97**	**258**		P	**P**	**14 00 13.6**	**+0.3**
WRAB	**Tennant Creek**	**15.10**	**160**		P	**P**	**14 00 15.5**	**+0.9**
WRAB					IAmb	IAmb	14 00 38.3	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**15.11**	**160**		P	**P**	**14 00 15.1**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=340,slow=11,SNR=28							
WRA					S	**S**	**14 02 55.9**	**-3.4**
	comp=Z,2.2nm,0.5s,baz=344,slow=21,SNR=7.4							
WB2	**Warramunga Arr**	**15.11**	**160**		P	**P**	**14 00 15.6**	**+0.8**
WB2					IAmb	IAmb	14 00 30.1	
	comp=Z,7.4nm,1.1s							
COEN	**Coen**	**16.22**	**122**		P	**P**	**14 00 28.4**	**+1.4**
MBWA	**Marble Bar**	**17.81**	**209**		P	**P**	**14 00 44.0**	**0.0**
MBWA					IAmb	IAmb	14 01 26.6	
	comp=Z,15nm,1.4s							
PSA00	**Pilbara Seismi**	**18.10**	**208**		P	**P**	**14 00 47.6**	**+0.3**
PSA00					IAmb	IAmb	14 01 25.0	
	comp=Z,22nm,1.5s							
AS31	**Alice Springs**	**18.50**	**166**		P	**P**	**14 00 52.7**	**+1.2**
ASAR	**Alice Springs**	**18.50**	**166**		P	**P**	**14 00 53.0**	**+1.5**
	comp=Z,2.9nm,0.3s,baz=346,slow=12,SNR=100							
ASAR					S	**S**	**14 04 05.7**	**-1.0**
	comp=Z,4.2nm,0.9s,baz=346,slow=20,SNR=17							
ASAR					ScP	**ScP**	**14 08 12.8**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=337,slow=1.8,SNR=5.5							
ASAR	**Alice Springs**	**18.50**	**166**		P	**P**	**14 00 52.7**	**+1.2**
SBUM	**Sibu**	**18.58**	**295**		P	**P**	**14 00 52.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**38.11**	**310**		P	**P**	**14 03 47.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=123,slow=6.6,SNR=0.8							
	comp=Z,0.3nm,0.3s							
MJAR	**Matsushiro Arr**	**42.88**	**11**		P	**P**	**14 04 24.8**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=181,slow=11,SNR=4.5							
	comp=Z,0.9nm,0.8s							
KSRS	**Korea Array**	**42.92**	**359**		P	**P**	**14 04 26.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=172,slow=9.2,SNR=4.1							
	comp=Z,0.5nm,0.5s							
CASY	**Casey**	**61.84**	**188**		P	**P**	**14 06 44.4**	**+0.6**
CASY					IAmb	IAmb	14 07 17.9	
	comp=Z,7.4nm,1.2s							
PEA0B	**Petropavlovsk-**	**63.41**	**19**		P	**P**	**14 06 55.8**	**+1.4**
MK31	**Makanchi Array**	**66.57**	**327**		P	**P**	**14 07 15.5**	**+0.7**

comp=Z,1.3nm,0.7s,baz=96,slow=8.5,SNR=13
comp=Z,1.3nm,0.7s
H11N1 WAKE ISLAND Hy 42.77 352 T T 15 02 33.0
baz=172
H11N3 WAKE ISLAND Hy 42.77 352 T T 15 02 31.5
baz=172
H11N2 WAKE ISLAND Hy 42.78 352 T T 15 02 32.4
baz=172
FITZ Fitzroy Crossi 44.39 267 P **P** **14 17 10.9 -1.6**
GUMO Guam 45.50 320 LR LR 14 33 57.0
comp=Z,131nm,20.3s,baz=124,slow=33
SIJI Sorong 45.99 293 LR LR 14 36 08.5
comp=Z,86nm,19.3s,baz=172,slow=36
MORW Morawa 51.08 250 P **P** **14 18 03.4 -0.9**
KAPI Kappang 54.24 281 LR LR 14 42 26.9
comp=Z,56nm,18.4s,baz=63,slow=37
VNDA Vanda 54.93 183 P **P** **14 18 31.3 -0.6**
VNDA comp=Z,0.7nm,0.8s,baz=1.5,slow=6.7,SNR=4.1 LR LR 14 38 31.1
comp=Z,142nm,20.1s,baz=4.0,slow=32
comp=Z,0.7nm,0.8s
VNDA Vanda 54.93 183 P **P** **14 18 33.5 +1.7**
SBA Scott Base 55.08 182 P **P** **14 18 34.1 +1.1**
CASY Casey 58.20 205 P **P** **14 18 59.2 +3.9**
CASY IAmb IAmb 14 19 36.0
comp=Z,6.5nm,1.2s
QSPA South Pole Qui 67.17 180 P **P** **14 19 54.7 -0.6**
comp=Z,6.8nm,1.0s,baz=18,slow=3.8,SNR=15
QSPA LR LR 14 47 01.3
comp=Z,50nm,18.3s,baz=56,slow=34
comp=Z,6.8nm,1.0s
QSPA South Pole Qui 67.17 180 P **P** **14 19 55.0 -0.3**
MJAR Matsushiro Arr 67.60 330 P **P** **14 19 57.7 -0.5**
comp=Z,1.0nm,1.0s,baz=146,slow=7.5,SNR=3.1
MJAR LR LR 14 44 21.5
comp=Z,28nm,21.8s,baz=152,slow=31
comp=Z,1.0nm,1.0s
KSRS Korea Array 73.47 324 LR LR 14 49 04.4
comp=Z,20nm,21.8s,baz=125,slow=33
SHEM Shemya Is, Ala 75.32 1 LR LR 14 48 42.5
comp=Z,17nm,21.7s,baz=282,slow=32
MAW Mawson 76.33 202 P **P** **14 20 49.8 -0.2**
comp=Z,4.1nm,0.9s,baz=128,slow=6.2,SNR=5.1
MAW LR LR 14 51 21.5
comp=Z,25nm,19.0s,baz=136,slow=33
comp=Z,4.1nm,0.9s
PSI Prapat 76.39 279 LR LR 14 57 54.0
comp=Z,102nm,18.3s,baz=198,slow=38
PETK Petropavlovsk- 76.84 351 LR LR 14 47 47.5
comp=Z,54nm,21.1s,baz=144,slow=30
BELA Belgrano 2 78.14 174 P **P** **14 20 58.6 -1.6**
BELA IAmb IAmb 14 21 08.0
comp=Z,7.7nm,1.2s
KLR Kul'dur 80.63 334 LR LR 14 54 28.9
comp=Z,28nm,19.2s,baz=154,slow=34
MA2 Magadan 84.17 349 LR LR 14 57 27.6
comp=Z,54nm,18.2s,baz=139,slow=34
TROLL Troll, Antarti 85.10 183 P **P** **14 21 35.7 -1.4**
SNAA Sanae 85.63 181 P **P** **14 21 38.7 -1.0**
SNAA Sanae 85.63 181 LR LR 14 56 43.9
comp=Z,52nm,20.4s,baz=144,slow=34
SNAA Sanae 85.63 181 P **P** **14 21 43.2 +3.5**
SNAA IAmb IAmb 14 21 50.9
comp=Z,5.4nm,1.1s
VNA3 Neumayer Olymp 86.09 179 P **P** **14 21 40.1 -1.8**
VNA2 Neumayer--Watz 86.42 180 P **P** **14 21 41.9 -1.6**
baz=184,slow=3.5
VNA1 Neumayer--Stat 86.70 180 P **P** **14 21 44.0 -0.8**
PFO Pinyon Flats O 87.59 52 LR LR 14 54 26.0
comp=Z,15nm,18.3s,baz=210,slow=31
YBH Yreka Blue Hor 87.61 42 LR LR 14 53 51.8
comp=Z,34nm,18.6s,baz=240,slow=31
TPNV Topopah Spring 89.38 49 P **P** **14 21 59.8 +1.5**
TPNV IAmb IAmb 14 22 24.9
comp=Z,3.7nm,1.4s
BBB Bella Bella 90.71 32 LR LR 14 55 53.1
comp=Z,48nm,18.8s,baz=214,slow=31
YAK Yakutsk 91.41 341 LR LR 15 02 52.6
comp=Z,40nm,18.3s,baz=129,slow=35
ELK Elko 91.91 46 LR LR 14 57 00.8
comp=Z,34nm,18.6s,baz=264,slow=31
SONM Songino Array 92.20 322 LR LR 15 00 49.2
comp=Z,27nm,21.9s,baz=77,slow=34
ILAR Eielson Array 92.74 16 LR LR 14 57 09.2
comp=Z,72nm,21.1s,baz=212,slow=31
NEW Newport 94.41 39 LR LR 15 00 07.5
comp=Z,32nm,18.5s,baz=260,slow=32
INK Inuvik 98.96 18 LR LR 15 01 05.8
comp=Z,45nm,20.9s,baz=228,slow=32
TIXI Tiksi 99.04 347 LR LR 15 02 47.4
comp=Z,38nm,20.9s,baz=183,slow=33
CLL Collm 147.66 336 *e*PKPbc **PKPbc** **14 28 46.0 +0.4**
GERES GERESS Array B 149.32 333 PKPbc **PKiKP** **14 28 52.1 +0.8**
comp=Z,0.2nm,0.5s,baz=56,slow=5.3,SNR=4.1
TORD Torodi Ar. Bea 167.20 222 PKPab **PKPab** **14 30 14.0 +1.5**
comp=Z,0.9nm,0.9s,baz=159,slow=4.3,SNR=3.0

IDC 15 14:24:18.0±3.6, 52°93N×35°54W, h0km, mb3.6/2, mbtmp3.6/2, MS3.0/6, Error ellipse: s-maj=121.3km s-min=45.4km az=43.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.47**	**288**	LR	LR	14 34 14.6	
	comp=Z,37nm,21.4s,baz=113,slow=32						
FRB	**Frobisher Bay**	**20.17**	**315**	LR	LR	14 35 01.7	
	comp=Z,42nm,19.3s,baz=285,slow=32						
ESDC	**Sonseca Array**	**25.29**	**109**	P	P	14 29 46.0	0.0
	1.9nm,1.0s,baz=317,slow=7.3,SNR=10						
ESDC				LR	LR	14 37 18.3	
	comp=Z,32nm,20.2s,baz=335,slow=31						
	1.9nm,1.0s						
NOA	**NORSAR Array B**	**26.21**	**53**	LR	LR	14 38 03.5	
	comp=Z,16nm,18.1s,baz=265,slow=32						
SADO	**Sadowa**	**29.43**	**272**	LR	LR	14 41 29.1	
	comp=Z,44nm,18.1s,baz=67,slow=35						
VRAC	**Vranov**	**32.33**	**75**	LR	LR	14 43 22.4	
	comp=Z,23nm,18.5s,baz=297,slow=35						
MKAR	**Makanchi Array**	**67.41**	**41**	P	P	14 35 15.0	+0.1
	0.2nm,0.4s,baz=319,slow=6.3,SNR=2.4						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**146.15**	**17**	PKPbc	PKPdf	14 43 58.3	-0.8
	0.6nm,0.9s,baz=343,slow=3.4,SNR=2.9						
ASAR	**Alice Springs**	**149.69**	**19**	PKPbc	PKPbc	14 44 09.6	+0.1
	0.1nm,0.5s,baz=346,slow=1.7,SNR=1.5						

IDC 15 14:26:24.8±2.5, 10°50S×126°59E, h0km, mb3.8/1, mbtmp3.8/3, ML3.9/2, Error ellipse: s-maj=189.0km s-min=30.7km az=53.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.00**	**142**	Pn	Pn	14 29 16.5	-0.7
	0.7nm,0.3s,baz=325,slow=13,SNR=40						
WRA				Sn	Sn	14 31 26.6	-5.3
	0.5nm,0.3s,baz=319,slow=24,SNR=6.5						
	3.0nm,0.8s						
ASAR	**Alice Springs**	**14.84**	**153**	Pn	Pn	14 29 56.9	+0.9
	0.6nm,0.3s,baz=320,slow=10,SNR=55						
ASAR				Sn	Sn	14 32 37.5	-3.7
	0.1nm,0.3s,baz=308,slow=20,SNR=5.5						
	0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**39.65**	**316**	P	P	14 33 58.6	-0.1
	0.5nm,0.3s,baz=130,slow=8.4,SNR=1.9						
	0.5nm,0.3s						

NOU 15 15:00:05.0, 15°91S×167°54E, h16km, MLv4.6/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.91**	**161**	P	Pn	15 00 38.1	+1.2
KOUNC	**Koumac, New Ca**	**5.55**	**213**	P	Pn	15 01 25.9	-1.2
DZM	**Mont Dzumac**	**6.21**	**189**	P	Pn	15 01 34.5	-1.7
NOUC	**Port Laguerre**	**6.27**	**191**	P	Pn	15 01 36.7	-0.2
PINNC	**Pines Island,**	**6.67**	**181**	P	Pn	15 01 42.9	+0.6

IDC 15 15:03:32.9±3.2, 22°67N×11°94W, h0km, mb3.5/1, mbtmp3.7/3, ML3.5/2, Error ellipse: s-maj=106.8km s-min=38.4km az=83.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.05**	**124**	Pn	Pn	15 07 20.1	+0.1
	0.1nm,0.3s,baz=315,slow=11,SNR=2.6						
TORD				Sn	Sn	15 10 11.8	-6.9
	0.1nm,0.3s,baz=299,slow=21,SNR=1.9						
TORD				Lg	Lg	15 12 08.7	
	0.1nm,0.3s,baz=307,slow=29,SNR=2.4						
	0.4nm,0.5s						
DBIC	**Dimboloo**	**17.30**	**156**	P	Pn	15 07 36.4	+0.3
	0.5nm,0.3s,baz=356,slow=8.8,SNR=5.5						
	5.7nm,0.9s						
GERES	**GERESS Array B**	**33.09**	**32**	P	P	15 10 10.7	+0.1
	0.3nm,0.4s,baz=221,slow=12,SNR=3.5						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**148.50**	**91**	PKPbc	PKPbc	15 23 22.1	-0.3
	0.3nm,0.9s,baz=288,slow=2.6,SNR=1.4						
ASAR	**Alice Springs**	**148.62**	**99**	PKPbc	PKPbc	15 23 21.5	-1.1
	0.2nm,0.6s,baz=274,slow=2.8,SNR=5.5						

IDC ***15*** *15:18:58.4±1.2, 29°.50S×179°.03W, h335km±12km, mb3.5/4, mbtmp4.3/6, Error ellipse: s-maj=33.8km s-min=23.3km az=147.0*

ISC 15 15:18:56.9±0.8, 29°.76S±0°.07×178°.7W±0°.2, h350km, n43, σ1°59/62, mb3.6/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**0.82**	**53**	P	**Pn**	**15 19 42.6**	**+0.5**
GLKZ				S	**S**	**15 20 17.2**	**-1.0**
RIZ	**Raoul Island**	**0.83**	**52**	P	**Pn**	**15 19 40.0**	**-2.2**
RAO	**Raoul Island**	**0.83**	**53**	P	**Pn**	**15 19 42.8**	**+0.7**
	472nm,0.3s,baz=101,slow=2.2,SNR=13						
RAO				S	**S**	**15 20 14.8**	**-3.4**
	195nm,0.3s,baz=82,slow=22,SNR=6.7						
WMGZ	**Waiomatatini S**	**8.40**	**196**	P	**P**	**15 21 01.2**	**+2.8**
WMGZ				S	**S**	**15 22 32.0**	**-0.5**
HAZ	**Te Kaha**	**8.50**	**199**	P	**Pn**	**15 20 57.6**	**+0.7**
HAZ				S	**S**	**15 22 33.9**	**-1.0**
PKGZ	**Pakihiroa**	**8.55**	**198**	P	**Pn**	**15 20 57.5**	**0.0**
PKGZ				S	**S**	**15 22 34.2**	**-1.8**
PUZ	**Puketiti**	**8.67**	**196**	P	**P**	**15 21 01.9**	**+0.4**
PUZ				S	**S**	**15 22 37.1**	**-1.6**
RUGZ	**Raukumara Rang**	**8.73**	**199**	P	**P**	**15 21 02.3**	**+0.1**
RUGZ				S	**S**	**15 22 38.6**	**-1.5**
CNGZ	**Carnagh Statio**	**9.08**	**196**	P	**P**	**15 21 08.2**	**+2.2**
CNGZ				S	**S**	**15 22 47.5**	**0.0**
MWZ	**Matawai**	**9.11**	**199**	P	**Pn**	**15 21 03.9**	**-0.3**
MWZ				S	**S**	**15 22 44.7**	**-3.6**
TKGZ	**Te Karaka**	**9.12**	**197**	P	**P**	**15 21 08.8**	**+2.4**
TKGZ				S	**S**	**15 22 47.0**	**-1.5**
URZ	**Urewera**	**9.17**	**201**	P	**P**	**15 21 07.8**	**+0.8**
	2.3nm,0.3s,baz=260,slow=5.2,SNR=41						
URZ				S	**S**	**15 22 47.1**	**-2.4**
	6.7nm,0.5s,baz=177,slow=20,SNR=11						
URZ	**Urewera**	**9.17**	**201**	P	**P**	**15 21 07.2**	**+0.2**
URZ				S	**S**	**15 22 48.0**	**-1.5**
RIGZ	**Rimuhau**	**9.40**	**197**	P	**P**	**15 21 09.6**	**0.0**
RIGZ				S	**S**	**15 22 53.6**	**-1.0**
MUGZ	**Murupara**	**9.48**	**202**	P	**P**	**15 21 10.3**	**-0.1**
SNGZ	**Shannon Statio**	**9.58**	**199**	P	**P**	**15 21 12.1**	**+0.4**
SNGZ				S	**S**	**15 22 57.2**	**-1.5**
KNZ	**Kokohu**	**9.72**	**197**	P	**P**	**15 21 14.7**	**+1.6**
KNZ				S	**S**	**15 22 58.6**	**-3.0**
RAHZ	**Arahi**	**9.78**	**200**	P	**P**	**15 21 15.3**	**+1.5**
RAHZ				S	**S**	**15 23 01.1**	**-1.9**
MTHZ	**Maungataniwha**	**9.80**	**201**	P	**P**	**15 21 15.9**	**+1.9**
MTHZ				S	**S**	**15 23 02.1**	**-1.3**
MRHZ	**Matea Rd**	**9.92**	**203**	P	**P**	**15 21 17.1**	**+1.7**
NMHZ	**Naumai**	**10.03**	**201**	P	**P**	**15 21 17.3**	**+0.6**
NMHZ				S	**S**	**15 23 07.5**	**-1.1**
ARHZ	**Aropaoanui**	**10.13**	**199**	P	**P**	**15 21 18.9**	**+1.3**
BKZ	**Black Stump Fm**	**10.19**	**202**	P	**P**	**15 21 20.3**	**+1.8**
KWHZ	**Kaweka Forest**	**10.45**	**201**	P	**P**	**15 21 22.6**	**+1.3**
OTVZ	**Oturere**	**10.48**	**205**	P	**P**	**15 21 23.0**	**+1.3**
BHHZ	**Black Hill Sta**	**10.63**	**203**	P	**P**	**15 21 23.6**	**+0.3**
WNVZ	**Wahianoa**	**10.65**	**205**	P	**P**	**15 21 24.3**	**+0.7**
KAHZ	**Kahuranaki**	**10.66**	**199**	P	**P**	**15 21 25.4**	**+1.8**
KRHZ	**Kereru**	**10.67**	**201**	P	**P**	**15 21 23.9**	**+0.3**
PXZ	**Pawanui**	**10.88**	**198**	P	**P**	**15 21 27.0**	**+1.0**
PNHZ	**Pukenui**	**10.97**	**201**	P	**P**	**15 21 27.7**	**+0.7**
WPHZ	**Waipukurau**	**11.03**	**200**	P	**P**	**15 21 29.4**	**+1.8**
PRHZ	**Porangahau**	**11.16**	**199**	P	**P**	**15 21 30.7**	**+1.6**
MSVF	**Nonsavu**	**12.34**	**345**	P	**P**	**15 21 40.7**	**-1.8**
	9.3nm,0.6s,baz=250,slow=23,SNR=9.5						
RPZ	**Rata Peaks**	**16.16**	**208**	S	**S**	**15 25 14.6**	**-1.1**
	7.5nm,1.0s,baz=53,slow=7.4,SNR=1.9						
CTA	**Charters Tower**	**33.12**	**279**	P	**P**	**15 25 01.5**	**-0.2**
	4.4nm,0.7s,baz=84,slow=10,SNR=1.5						
	4.4nm,0.7s						
ASAR	**Alice Springs**	**42.56**	**267**	P	**P**	**15 26 20.1**	**+0.2**
	1.7nm,0.6s,baz=96,slow=7.4,SNR=40						
ASAR				ScP	**ScP**	**15 31 26.3**	**+4.5**
	0.3nm,0.9s,baz=116,slow=4.7,SNR=1.8						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**43.49**	**272**	P	**P**	**15 26 26.9**	**-0.2**
	2.8nm,0.5s,baz=111,slow=7.0,SNR=80						
	2.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**51.77**	**270**	P	**P**	**15 27 31.0**	**+0.8**
	2.2nm,0.8s,baz=104,slow=8.3,SNR=5.6						
	2.2nm,0.8s						
FINES	**FINESS Array B**	**144.34**	**340**	PKP	**PKPdf**	**15 37 51.7**	**+0.8**
	1.9nm,0.5s,baz=56,slow=4.4,SNR=18						
NB2	**NORSAR Subarra1**	**148.03**	**351**	PKP	**PKiKP**	**15 38 03.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=16,slow=2.8						
NOA	**NORSAR Array B**	**148.03**	**351**	PKPbc	**PKiKP**	**15 38 02.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=15,slow=4.3,SNR=3.9						
AKASG	**Malin Array Be**	**150.44**	**323**	PKPbc	**PKiKP**	**15 38 09.2**	**+1.6**
	comp=Z,1.3nm,0.6s,baz=55,slow=2.8,SNR=4.5						

SKHL ***15*** *15:28:01.8±0.6, 45°.70N×143°.00E, h9km±4km, mb5.2/21, ms4.1/1*

NIED ***15*** *15:28:01.7, 45°.64N×143°.20E, h6km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.58; Mθθ-2.66; Mφφ0.09; Mrθ0.98; Mrφ-0.03; Mθφ-0.17; Fault plane solution: M₀2.80000×10¹⁵ NP1: ϕs266.00000°, δ35.00000°, λ84.00000°. NP2:ϕs93.00000°, δ55.00000°, λ94.00000°.*

MOS ***15*** *15:28:01.3±1.0, 45°.70N×142°.93E, h15km, mb4.7/35 Error ellipse: s-maj=7.1km s-min=5.0km az=96.7*

MOS Felt (III-IV) at Novikovo, Korsakov, (II-III) at Nevel'sk, (II) at Ozyorskiy, Shebunino, Gornozavodsk, Aniva.

JMA ***15*** *15:28:01.7±0.3, 45°.6N±0°.8×14°.3E±°, h6km±3km, MD4.5/40, MV4.9/40, NE OFF HOKKAIDO*

JMA Felt II J1 at NE OFF HOKKAIDO .

BJI ***15*** *15:28:04.0±0.0, 45°.90N×142°.90E, h15km, mb4.6/49, mB4.8/21, Ms4.2/23, Ms7 4.0/24*

IDC ***15*** *15:28:07.7±2.2, 45°.79N×142°.80E, h53km±19km, mb3.9/21, mbtmp4.1/28, ML3.0/6, MS3.3/19, Error ellipse: s-maj=13.1km s-min=11.7km az=121.0*

NEIC ***15*** *15:28:07.7±1.2, 45°.84N±0°.05×142°.9E±0°.1, h47km±6km, mb4.7/179, Error ellipse: s-maj=10.8km s-min=6.8km az=95.0*

ISC 15 15:28:03.2±0.7, 45°75N±0°02×143°01E±0°03, h18km±4km, n555, σ1°04/559, mb4.7/142, MS3.6/21, 10C-17D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.84**	**201**	⇓P	**Pg**	**15 28 17.8**	**-1.8**
JSE				⇓*e*S	**Sg**	**15 28 28.4**	**-2.3**
JSE	**Soyaes**	**0.84**	**201**	A	A	15 28 17.8	
	comp=E,37nm,0.9s,comp=E,22nm,2.1s						
JWK2	**Keihoku**	**0.89**	**242**	⇓P	**Pn**	**15 28 20.4**	**-0.4**
JWK2				⇓*e*S	**Sn**	**15 28 33.8**	**+0.6**
JWK2	**Keihoku**	**0.89**	**242**	A	A	15 28 20.4	
	comp=E,21nm,1.7s,comp=E,16nm,1.1s						
YSS	**Yuzh-Sakhalins**	**1.22**	**352**		**Pg**	**15 28 25.8**	**-1.0**
YSS				Sn	**Sg**	**15 28 40.8**	**-2.0**
YSS	**Yuzh-Sakhalins**	**1.22**	**352**	*i* PN	**Pg**	**15 28 25.8**	**-1.0**
YSS				*e*S	**Sg**	**15 28 42.3**	**-0.5**
YSS				pmax	pmax		
	comp=Z,1μm,0.4s						
YSS				smax	smax		
	comp=E,27μm,1.0s						
YSS	**Yuzh-Sakhalins**	**1.22**	**352**	*i* P	**Pg**	**15 28 26.2**	**-0.6**
YSS				AMB	AMB	15 28 29.3	
	comp=E,3μm,0.3s						
YSS				*e*S	**Sg**	**15 28 43.0**	**+0.2**
YSS				A	A	15 28 44.5	
	comp=E,26μm,1.0s						
YSS				A	A	15 28 44.5	
	comp=E,15μm,1.0s						
YSS				A	A	15 28 45.2	
	comp=E,24μm,0.5s						
YSS				A	A	15 28 45.2	
	comp=E,11μm,0.5s						
YSS				AMS	AMS	15 29 07.0	
	comp=E,8μm,9.0s						
YSS				AMS	AMS	15 29 07.0	
	comp=E,5μm,9.0s						
YSS				AMS	AMS	15 29 07.0	
	comp=E,8μm,9.0s						
JRR	**Rishiri**	**1.34**	**244**	P	**Pb**	**15 28 27.1**	**-0.7**
JRR	**Rishiri**	**1.34**	**244**	A	A	15 28 27.1	
	comp=E,24nm,3.7s,comp=E,28nm,4.4s						
JRBN	**Rebuntou**	**1.40**	**257**	P	**Pn**	**15 28 27.5**	**-0.4**
JRBN				*e*S	**Sg**	**15 28 46.0**	**-2.4**
JRBN	**Rebuntou**	**1.40**	**257**	A	A	15 28 27.5	
	comp=E,11nm,0.6s,comp=E,15nm,0.4s						
KHLM	**Kholmsk**	**1.47**	**334**	*i* P	**Pg**	**15 28 30.3**	**-1.2**
KHLM				P	**Pb**	**15 28 32.1**	**+2.1**
	comp=E,4μm,0.4s						
KHLM				*e*Sg	**Sg**	**15 28 52.0**	**+1.4**
KHLM				A	A	15 28 54.1	
	comp=E,20μm,0.4s						
KHLM				A	A	15 28 54.1	
	comp=E,6μm,0.4s						
JSS	**Shosan**	**1.57**	**212**	⇓P	**Pn**	**15 28 30.4**	**+0.1**
JSS	**Shosan**	**1.57**	**212**	A	A	15 28 30.4	
	comp=E,16nm,3.6s,comp=E,17nm,3.8s						
ASAJ	**Asahikawa**	**1.65**	**190**	PN	**Pg**	**15 28 37.7**	**+2.7**
ASAJ	**Asahikawa**	**1.65**	**190**	⇓P	**Pn**	**15 28 29.7**	**-1.7**
ASAJ	**Asahikawa**	**1.65**	**190**	A	A	15 28 29.7	
	comp=E,13nm,1.0s,comp=E,15nm,0.8s						
JKA	**Kamikawa-asahi**	**1.65**	**190**	Pn	**Pg**	**15 28 37.7**	**+2.6**
JYG	**Yagishiri**	**1.73**	**221**	*e*P	**Pn**	**15 28 31.8**	**-0.5**
JYG				*e*S	**Sn**	**15 28 54.1**	**+0.1**
JMP	**Maruseppu**	**1.76**	**172**	⇓P	**Pn**	**15 28 30.5**	**-2.3**
JMP	**Maruseppu**	**1.76**	**172**	A	A	15 28 30.5	
	comp=E,10.0nm,1.4s,comp=E,13nm,0.9s						
JKK2	**Kamakawa 2**	**1.88**	**186**	A	A	15 28 33.7	
	comp=E,6.0nm,1.9s,comp=E,8.0nm,1.3s						
JTKR	**Abashiri--Toko**	**1.89**	**160**	⇓P	**Pn**	**15 28 32.4**	**-2.2**
JTKR	**Abashiri--Toko**	**1.89**	**160**	A	A	15 28 32.4	
	comp=E,5.0nm,0.6s,comp=E,6.0nm,1.4s						
JHR	**Hokuryu**	**2.20**	**205**	A	A	15 28 39.2	
	comp=E,7.0nm,2.9s,comp=E,5.0nm,2.4s						
RUSJ	**Misakicho**	**2.29**	**135**	*e*PN	**Pn**	**15 28 39.5**	**-0.6**
RUSJ				*e*S	**Sn**	**15 29 05.4**	**-2.4**
JAB	**Ashibetsu**	**2.31**	**194**	A	A	15 28 40.3	
	comp=E,6.0nm,1.5s,comp=E,6.0nm,5.8s						
JNSB	**Nemuroshibetsu**	**2.43**	**143**	A	A	15 28 40.5	
	comp=E,10.0nm,5.7s,comp=E,10.0nm,1.6s						
JAR	**Ashorobuto**	**2.51**	**167**	A	A	15 28 42.1	
	comp=E,7.0nm,0.8s,comp=E,6.0nm,1.9s						
YUK	**Yuzh-Kuril'sk**	**2.65**	**129**	*e*PN	**Pn**	**15 28 44.7**	**-0.4**
YUK				*e*S	**Sn**	**15 29 14.7**	**-2.1**
YUK				pmax	pmax		
	comp=Z,567nm,0.3s						
YUK				pmax	pmax		
	comp=N,172nm,0.5s						
YUK				pmax	pmax		
	comp=E,212nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,901nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.65**	**129**	*e*P	**Pn**	**15 28 44.9**	**-0.2**
YUK				AMB	AMB	15 28 46.4	
	comp=E,460nm,0.3s						
YUK				*e*S	**Sn**	**15 29 14.9**	**-1.9**
YUK				A	A	15 29 17.5	
	comp=E,2μm,0.4s						
YUK				A	A	15 29 17.5	
	comp=E,3μm,0.4s						
JISS	**Ishikarishitsu**	**2.72**	**205**	A	A	15 28 46.6	
	comp=E,6.0nm,1.7s,comp=E,7.0nm,2.4s						
JOB	**Onbets**	**2.90**	**168**	A	A	15 28 47.8	
	comp=E,7.0nm,6.5s,comp=E,6.0nm,4.3s						
JAK	**Akkeshi**	**3.00**	**156**	A	A	15 28 49.0	
	comp=E,6.0nm,1.7s,comp=E,4.0nm,1.8s						
AKK	**Akkeshi**	**3.03**	**154**	*e*P	**Pn**	**15 28 49.3**	**-1.0**
AKK				AMB	AMB	15 28 56.9	
	comp=E,300nm,0.6s						
AKK				*e*S	**Sn**	**15 29 24.3**	**-1.8**
AKK				A	A	15 29 26.7	
	comp=E,600nm,0.7s						
AKK				A	A	15 29 26.7	
	comp=E,800nm,0.7s						
NMR	**Nemuro--Hokkai**	**3.07**	**140**	*e*PN	**Pn**	**15 28 49.9**	**-0.9**
NMR	**Nemuro--Hokkai**	**3.07**	**140**	*i* P	**Pn**	**15 28 50.1**	**-0.7**
NMR				AMB	AMB	15 28 52.3	
	comp=E,90nm,0.8s						
NMR				*e*S	**Sn**	**15 29 26.3**	**-0.8**
NMR				A	A	15 29 29.5	
	comp=E,300nm,0.6s						
NMR				A	A	15 29 29.5	
	comp=E,200nm,0.6s						
JEW	**Eniwo**	**3.11**	**202**		**Pn**	**15 28 54.8**	**+3.4**
SHO	**Shikotan**	**3.31**	**123**	*e*PN	**Pn**	**15 28 54.1**	**0.0**
SHO				pmax	pmax		
	comp=N,85nm,0.6s						
SHO				pmax	pmax		
	comp=Z,206nm,0.6s						
SHO				pmax	pmax		
	comp=E,119nm,0.7s						
SHO	**Shikotan**	**3.31**	**123**	*e*P	**Pn**	**15 28 54.0**	**0.0**
SHO				*e*S	**Sn**	**15 29 32.0**	**-0.9**
SHO				A	A	15 29 34.2	
	comp=E,600nm,0.6s						
SHO				A	A	15 29 34.2	
	comp=E,1μm,0.6s						
UGL	**Uglegorsk**	**3.40**	**350**	*e*PN	**Pb**	**15 28 59.0**	**-3.8**
UGL				pmax	pmax		
	comp=Z,34nm,0.3s						
UGL				MLR	MLR		
	comp=Z,3μm,3.2s						
UGL				MLR	MLR		
	comp=N,3μm,2.1s						
UGL				MLR	MLR		
	comp=E,3μm,2.6s						
UGL	**Uglegorsk**	**3.40**	**350**	*e*P	**Pn**	**15 28 57.6**	**+2.3**
UGL				AMB	AMB	15 29 07.7	
	comp=E,220nm,0.5s						
UGL				*e*S	**Sn**	**15 29 37.2**	**+2.1**
UGL				A	A	15 29 38.9	
	comp=E,500nm,0.6s						
UGL				A	A	15 29 38.9	
	comp=E,500nm,0.6s						
UGL				A	A	15 29 56.4	
	comp=E,2μm,2.0s						
UGL				A	A	15 29 56.4	
	comp=E,2μm,2.0s						
KUR	**Kuril'sk**	**3.46**	**97**	*e*PN	**Pn**	**15 28 56.7**	**+0.6**
KUR				pmax	pmax		
	comp=N,29nm,0.4s						
KUR				pmax	pmax		
	comp=E,45nm,0.4s						
KUR				pmax	pmax		
	comp=Z,103nm,0.4s						
KUR	**Kuril'sk**	**3.46**	**97**	*e*P	**Pn**	**15 28 57.0**	**+0.9**
KUR				AMB	AMB	15 28 58.2	
	comp=Z,130nm,

comp=E,44nm,0.8s
TYV Tymovskoe 5.13 358 *e*P **Pn 15 29 21.3 +2.2**
TYV AMB AMB 15 29 28.2
comp=E,40nm,0.7s
TYV AMB AMB 15 29 30.2
comp=E,133nm,2.0s
TYV *e*S **Sn 15 30 20.0 +2.2**
TYV A A 15 30 23.0
comp=E,500nm,6.0s
TYV A A 15 30 23.0
comp=E,300nm,6.0s
TYV A A 15 30 28.4
comp=E,48nm,0.7s
TYV A A 15 30 28.4
comp=E,44nm,0.7s
JTM Tenmabayashi 5.15 197 Pn **Pn 15 29 21.3 +1.8**
GRNR Gornyy 6.68 321 *e*PN **Pn 15 29 41.9 +1.5**
GRNR pmax pmax
comp=E,8.0nm,0.4s
GRNR pmax pmax
comp=N,8.0nm,0.3s
GRNR pmax pmax
comp=Z,3.0nm,0.2s
GRNR MLR MLR
comp=E,370nm,11.0s
GRNR MLR MLR
comp=N,290nm,15.0s
GRNR MLR MLR
comp=Z,430nm,12.0s
GRNR Gornyy 6.68 321 *e*P **Pn 15 29 41.9 +1.5**
GRNR AMB AMB 15 30 11.1
comp=Z,8.0nm,0.4s
GRNR AMB AMB 15 30 11.1
comp=Z,8.0nm,0.4s
GRNR AMB AMB 15 30 11.1
comp=Z,3.0nm,0.4s
GRNR *e*S **Sn 15 30 55.6 -0.4**
USRK Ussuriysk Ar. 7.96 263 P **Pn 15 30 00.2 +2.2**
comp=Z,0.3nm,0.3s,baz=73,slow=16,SNR=2.9
comp=Z,2.1nm,0.7s
VLA Vladivostok 8.38 256⇑ *e*PN **Pn 15 30 05.7 +2.0**
VLA pmax pmax
comp=Z,26nm,1.2s
KLR Kul'dur 8.38 299 P **Pn 15 30 05.7 +1.9**
comp=Z,0.3nm,0.3s,baz=127,slow=17,SNR=9.2
KLR S **Sn 15 31 35.2 -2.7**
comp=Z,3.2nm,0.3s,baz=278,slow=16,SNR=5.6
KLR LR LR 15 33 30.7
comp=Z,151nm,18.2s,baz=100,slow=39
comp=Z,4.8nm,0.7s
KLR Kul'dur 8.38 299⇓ *e*PN **Pn 15 30 05.1 +1.3**
KLR Kul'dur 8.38 299 *e*P **Pn 15 30 05.0 +1.3**
JSD Sado 8.47 206 Pn **Pn 15 30 07.9 +2.9**
MAJO Matsushiro 9.88 203 Pn **Pn 15 30 26.9 +2.6**
MAJO Matsushiro 9.88 203⇑ *e*PN **Pn 15 30 25.9 +1.6**
MJAR Matsushiro Arr 9.88 203 P **Pn 15 30 26.5 +2.2**
comp=Z,0.1nm,0.3s,baz=6.8,slow=3.5,SNR=11
MJAR LR LR 15 33 58.7
comp=Z,134nm,18.9s,baz=18,slow=36
comp=Z,0.7nm,0.6s
PEA0B Petropavlovsk- 12.06 47 Pn **Pn 15 30 57.9 +3.8**
PEA0B Petropavlovsk- 12.06 47 PN **Pn 15 30 57.9 +3.8**
PETK Petropavlovsk- 12.06 47 P **Pn 15 30 57.4 +3.3**
comp=Z,0.3nm,0.3s,baz=37,slow=0.7,SNR=9.5
PETK S **Sn 15 33 05.9 -2.1**
comp=Z,2.0nm,0.8s,baz=247,slow=10,SNR=2.0
PETK LR LR 15 35 33.6
comp=Z,186nm,18.4s,baz=221,slow=37
comp=Z,2.2nm,0.7s
PETK Petropavlovsk- 12.06 47 Pn **Pn 15 30 57.9 +3.8**
PETK Petropavlovsk- 12.06 47 PN **Pn 15 30 57.9 +3.8**
CN2 Changchun 12.63 267 *e*P Pn 15 31 06.3 +4.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,300nm,12.0s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,600nm,12.0s
JHJ Hachijo jima 2 12.85 192 LR LR 15 36 02.1
comp=Z,162nm,18.2s,baz=284,slow=37
ZEA Zeya 12.93 314 *e*PN **P 15 31 15.2 -1.4**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,20nm,0.5s
ZEA pmax pmax
comp=Z,30nm,0.7s
ZEA MLR MLR
comp=E,400nm,13.0s
ZEA MLR MLR
comp=N,200nm,14.0s
ZEA MLR MLR
comp=Z,400nm,14.0s
KSRS Korea Array 13.98 239 P **Pn 15 31 23.2 +2.9**
comp=Z,0.1nm,0.3s,baz=53,slow=12,SNR=13
KSRS LR LR 15 36 02.3
comp=Z,157nm,18.8s,baz=50,slow=34
comp=Z,2.9nm,0.8s
MA2 Magadan 14.62 16 LR LR 15 36 59.7
comp=Z,23nm,21.2s,baz=246,slow=36
MA2 Magadan 14.62 16 P **P 15 31 35.1 -0.1**
MA2 Magadan 14.62 16 P **P 15 31 35.1 -0.1**
NAWB Namwon 15.69 234 Pn **P 15 31 45.7 -1.6**
SEY Seymchan 18.03 14 P **P 15 32 14.6 +1.6**
comp=Z,0.2nm,0.3s,baz=193,slow=11,SNR=11
comp=Z,8.7nm,1.1s
SEY Seymchan 18.03 14 *de*P **P 15 32 16.0 +3.0**
SEY pmax pmax
comp=Z,25nm,2.5s
SEY Seymchan 18.03 14 *e*P **P 15 32 16.0 +3.0**
YAK Yakutsk 18.04 339 P **Pn 15 32 12.3 -0.4**
comp=Z,2.5nm,0.4s,baz=322,slow=2.8,SNR=5.2
YAK LR LR 15 38 34.8
comp=Z,86nm,21.6s,baz=87,slow=35
YAK Yakutsk 18.04 339 **Pn 15 32 12.3 -0.4**
YAK Yakutsk 18.04 339 *e*P **P 15 32 13.8 +0.7**
YAK *e*S **Sn 15 35 31.5 -1.9**
YAK pmax pmax
comp=Z,9.0nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,58nm,2.2s
YAK pmax pmax
comp=N,74nm,2.3s
YAK pmax pmax
comp=E,30nm,2.2s
YAK smax smax
comp=E,77nm,3.3s
YAK smax smax
comp=N,62nm,3.3s
YAK MLR MLR
comp=Z,131nm,14.0s
YAK Yakutsk 18.04 339 *e*P **P 15 32 14.3 +1.2**
CIT Chita 20.27 299 *e*P Pn 15 32 38.8 -0.9
CIT *e* 15 33 11.9
BJI Beijing 20.42 263 P Pn 15 32 40.1 -1.3
BJI pmax pmax
comp=Z,7.0nm,0.8s
BJI LR LR
comp=Z,49nm,13.7s
BJI LR LR
comp=Z,260nm,14.0s
BJI LR LR
comp=Z,350nm,14.8s
SHEM Shemya Is, Ala 21.35 60 LR LR 15 39 48.7
comp=Z,32nm,21.4s,baz=294,slow=33
BOD Bodaibo 21.44 315 *e*P **P 15 32 50.4 +0.3**
BOD pmax pmax
comp=Z,23nm,0.8s
TIA Tai'an 21.66 253 ⇓P **P 15 32 52.3 -0.4**
TIA pmax pmax
comp=Z,8.0nm,0.6s
JOW Kunigami 22.23 217 P **P 15 33 00.0 +1.1**
HNS HongShan 22.66 258 ⇓P **P 15 33 05.8 +2.4**
HNS pP **sP 15 33 11.6 +0.9**
HNS *e*S **S 15 37 14.3 +3.6**
HNS pmax pmax
comp=Z,20nm,1.1s
HNS LR LR
comp=Z,150nm,13.1s
HNS LR LR
comp=Z,230nm,14.5s
HNS LR LR
comp=Z,210nm,13.9s
NJ2 Nanjing 23.13 242 *e*P **P 15 33 09.3 +1.0**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
HHC Hu-ho-hao-te 23.31 269 *e*P **P 15 33 10.8 +0.5**
HHC pmax pmax
comp=Z,23nm,0.9s
HHC pmax pmax
comp=Z,89nm,4.5s
HHC LR LR
comp=Z,310nm,11.4s
HHC LR LR
comp=Z,700nm,12.1s
HHC LR LR
comp=Z,780nm,12.1s
ULN Ulaanbaatar 24.57 288 *ce*P **P 15 33 22.8 +0.7**
ULN pmax pmax
comp=Z,6.0nm,1.7s
SONM Songino Array 25.01 288 P **P 15 33 24.9 -1.2**
comp=Z,2.7nm,0.7s,baz=83,slow=9.4,SNR=14
comp=Z,2.7nm,0.7s
SONM Songino Array 25.01 288 P **P 15 33 25.7 -0.4**
SONM Songino Array 25.01 288 P **P 15 33 25.7 -0.4**
SONM pmax pmax
comp=Z,2.0nm,0.8s
BILL Bilibino 25.39 20 *i* P **P 15 33 29.4 +0.3**
BILL *i* 15 33 36.4
BILL *i* 15 34 05.8
BILL pmax pmax
comp=Z,6.0nm,0.9s
BILL MLR MLR
comp=Z,55nm,15.0s
BILL Bilibino 25.39 20 *e*P **P 15 33 31.5 +2.4**
YOJ Yonaguni jima 26.67 224 P **P 15 33 39.8 -1.3**
YOJ Yonaguni jima 26.67 224 P **P 15 33 39.8 -1.3**
YOJ pmax pmax
comp=Z,86nm,1.5s
ZAK Zakamensk 26.72 294 *e*P **P 15 33 41.2 -0.3**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
XAN Xi'an 28.43 258 P **P 15 33 57.1 +0.2**
XAN pmax pmax
comp=Z,9.0nm,1.5s
XAN pmax pmax
comp=Z,110nm,4.8s
LZH Lanzhou 30.86 266 *e*P **P 15 34 19.8 +1.3**
LZH pmax pmax
comp=Z,30nm,1.4s
LZH LR LR
comp=Z,150nm,11.0s
LZH LR LR
comp=Z,150nm,11.0s
LZH LR LR
comp=Z,190nm,10.7s
GTA Gaotai 32.12 274 ⇑P **P 15 34 30.0 +0.4**
GTA PcP **PcP 15 37 19.4 +1.0**
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,32nm,4.3s
GTA LR LR
comp=Z,86nm,9.5s
GTA LR LR
comp=Z,170nm,13.1s
GTA LR LR
comp=Z,200nm,10.9s
ANM Nome 33.73 38 P **P 15 34 43.9 +0.7**
baz=262
SDPT Sand Point 36.23 54 P **P 15 35 05.0 +0.2**
N16K Nishlik Lake 36.60 45 P **P 15 35 08.3 +0.3**
baz=273
S14K Fog Glacier 36.61 52 P **P 15 35 08.4 +0.2**
baz=278
CHNA Chernabura Isl 36.82 54 P **P 15 35 11.3 +1.4**
baz=280
CNBA Chernabura Isl 36.82 54 P **P 15 35 10.2 +0.3**
GOMU GeErMu 37.12 273 P **P 15 35 12.9 -0.2**
GOMU pmax pmax
comp=Z,6.0nm,0.6s
GOMU LR LR
comp=Z,210nm,13.9s
GOMU LR LR
comp=Z,110nm,12.6s
GOMU LR LR
comp=Z,130nm,11.6s
CHGN Chignik 37.23 52 P **P 15 35 13.8 +0.5**
CHGN lAmb lAmb 15 35 27.3
comp=Z,13nm,1.0s
ZALV Zalesovo Beam 37.44 304 P **P 15 35 14.8 -0.4**
comp=Z,1.3nm,0.4s,baz=87,slow=8.8,SNR=8.6
ZALV LR LR 15 50 47.0
comp=Z,24nm,18.6s,baz=17,slow=36
comp=Z,1.3nm,0.4s
ZALV Zalesovo Beam 37.44 304 *i* P **P 15 35 15.6 +0.5**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
O17K Koliganek Bris 37.49 46 P **P 15 35 16.6 +1.1**
baz=276
P17K Kvichak River 37.88 47 P **P 15 35 19.8 +1.0**
baz=277
PZH PanZhiHua 37.95 254 P **P 15 35 20.1 +0.2**
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,110nm,4.5s
N18K Kilae Creek 38.00 44 P **P 15 35 21.3 +1.4**
N18K Kilae Creek 38.00 44 P **P 15 35 20.7 +0.8**
baz=276
A21K Barrow 38.06 27 P **P 15 35 20.1 -0.1**
baz=261
SVW2 Sparrevohn 38.12 44 P **P 15 35 21.8 +1.0**
SVW2 lAmb lAmb 15 35 49.4
comp=Z,9.5nm,1.3s
KMI Kunming 38.21 251⇑ P **P 15 35 22.8 +0.6**
O18K Koktuh Hills 38.43 46 P **P 15 35 23.8 +0.3**
baz=277
J20K Nowinta River 38.58 39 P **P 15 35 25.5 +0.8**
J20K lAmb lAmb 15 35 31.6
comp=Z,6.9nm,0.9s
J20K Nowinta River 38.58 39 P **P 15 35 25.4 +0.7**
baz=272
WMQ Urumqi 38.64 288 *e*P **P 15 35 21.9 -3.6**
WMQ pP sP 15 35 38.6 +5.5
WMQ pmax pmax
comp=Z,33nm,0.7s
WMQ pmax pmax
comp=Z,250nm,4.1s
WMQ LR LR
comp=N,150nm,15.1s
WMQ LR LR
comp=E,360nm,13.7s
WMQ LR LR
comp=Z,140nm,15.7s
K20K Telida 38.66 40 P **P 15 35 26.1 +0.7**
K20K Telida 38.66 40 P **P 15 35 25.9 +0.6**
baz=274
N19K Bonanza Creek 38.68 44 P **P 15 35 26.6 +1.0**
baz=276
IMAR Indian Mountai 38.70 36 P **P 15 35 25.8 +0.1**
G21K Allakaket 38.80 35 P **P 15 35 27.4 +0.9**
baz=270,SNR=10
F21K Alatna River 38.82 34 P **P 15 35 27.0 +0.3**
baz=269
CHIR Chirikof Islan 38.86 52 P **P 15 35 28.1 +1.0**
CHIR Chirikof Islan 38.86 52 P **P 15 35 28.6 +1.5**
baz=282
H21K Melozitna Rive 39.10 36 P **P 15 35 29.1 +0.1**
H21K Melozitna Rive 39.10 36 P **P 15 35 28.8 -0.2**
baz=272
M20K Styx River 39.21 42 P **P 15 35 31.2 +1.2**
M20K Styx River 39.21 42 P **P 15 35 31.4 +1.3**
baz=276
F22K John River 39.32 33 P **P 15 35 31.1 +0.2**
baz=270,SNR=9.7
Q19K Cape Douglas, 39.35 47 P **P 15 35 31.5 +0.3**
Q19K Cape Douglas, 39.35 47 P **P 15 35 32.2 +1.0**
baz=279
P19K Oil Pt 39.45 46 P **P 15 35 33.5 +1.5**
P19K lAmb lAmb 15 36 07.9
comp=Z,19nm,1.1s
E22K Anaktuvuk Pass 39.47 32 P **P 15 35 32.0 -0.1**
baz=270,SNR=13
SII Sitkinak Islan 39.50 51 P **P 15 35 32.9 +0.5**
baz=282
CAST Castle Rocks 39.54 40 P **P 15 35 34.1 +1.3**
PPLA Purkeypile 39.54 41 P **P 15 35 34.0 +1.1**
PPLA lAmb lAmb 15 35 41.3
comp=Z,16nm,1.3s
PPLA Purkeypile 39.54 41 P **P 15 35 33.3 +0.4**
baz=276
H22K Ishtalitna Cre 39.68 36 P **P 15 35 34.1 +0.2**
baz=273
OHAK Old Harbor 39.85 50 P **P 15 35 35.4 +0.1**
OHAK lAmb lAmb 15 36 18.2
comp=Z,20nm,1.4s
OHAK Old Harbor 39.85 50 P **P 15 35 35.1 -0.2**
baz=282
D23K Nanushuk River 39.89 31 P **P 15 35 36.1 +0.5**
baz=270,SNR=10.0
C23K Itkillik River 39.92 30 P **P 15 35 35.9 +0.1**
baz=269,SNR=8.2
MLY Manley 40.00 37 P **P 15 35 36.7 +0.2**
baz=274
KDAK Kodiak Island 40.11 49 P **P 15 35 37.6 +0.2**
KDAK lAmb lAmb 15 35 40.9
comp=Z,17nm,1.1s
KDAK Kodiak Island 40.11 49 P **P 15 35 37.6 +0.2**
KDAK pmax pmax
comp=Z,17nm,1.1s
KDAK Kodiak Island 40.11 49 P **P 15 35 38.1 +0.7**
baz=282
G23K Bananza Creek 40.19 35 P **P 15 35 38.0 -0.1**
baz=273,SNR=8.6
HOM Homer 40.24 46 P **P 15 35 38.8 +0.3**
baz=280
TOLK Toolik Lake Re 40.29 32 P **P 15 35 38.9 0.0**
TOLK lAmb lAmb 15 35 45.5
comp=Z,8.9nm,1.0s
TOLK Toolik Lake Re 40.29 32 P **P 15 35 38.9 0.0**
baz=271,SNR=7.0
TRF Thorofare Moun 40.34 40 P **P 15 35 39.6 +0.1**
TRF lAmb lAmb 15 36 15.3
comp=Z,13nm,1.4s
TRF Thorofare Moun 40.34 40 P **P 15 35 39.6 +0.1**
baz=277
H23K Yukon River 40.44 36 P **P 15 35 40.9 +0.7**
H23K lAmb lAmb 15 35 48.0
comp=Z,19nm,1.4s
H23K Yukon River 40.44 36 P **P 15 35 40.5 +0.3**
baz=275,SNR=6.0
D24K Happy Valley 40.55 31 P **P 15 35 41.5 +0.5**
baz=271
I23K Minto, Yukon-K 40.57 37 P **P 15 35 41.8 +0.6**
I23K Minto, Yukon-K 40.57 37 P **P 15 35 41.7 +0.5**
baz=276
C24K Franklin Bluff 40.59 30 P **P 15 35 41.9 +0.6**
baz=271
E24K Your Creek 40.71 32 P **P 15 35 42.9 +0.5**
baz=273,SNR=8.3
NEA2 Nenana 40.75 38 P **P 15 35 43.2 +0.5**
NEA2 Nenana 40.75 38 P **P 15 35 43.2 +0.5**
baz=276
MCK McKinley 40.91 39 P **P 15 35 43.9 -0.2**
MCK McKinley 40.91 39 P **P 15 35 43.9 -0.2**
MCK pmax pmax
comp=Z,8.0nm,1.3s
MCK McKinley 40.91 39 P **P 15 35 43.8 -0.2**
baz=278
RC01 Rabbit Creek A 40.93 43 P **P 15 35 44.6 +0.3**
baz=280
F24K Squaw Lake 40.97 33 P **P 15 35 44.7 +0.1**
baz=274
RND Reindeer 40.99 40 P **P 15 35 44.7 -0.1**
RND Reindeer 40.99 40 P **P 15 35 44.7 -0.1**
RND pmax pmax
comp=Z,9.0nm,1.4s
MK31 Makanchi Array 41.06 294 P **P 15 35 44.8 -0.7**
MK31 Makanchi Array 41.06 294 *d* *i* P **P 15 35 45.2 -0.3**
MKAR Makanchi Array 41.06 294 P **P 15 35 44.4 -1.2**
comp=Z,1.1nm,0.6s,baz=78,slow=8.5,SNR=14
MKAR PcP **PcP 15 37 44.2 -0.8**
comp=Z,0.7nm,0.6s,baz=43,slow=2.0,SNR=5.4
MKAR LR LR 15 52 08.6
comp=Z,34nm,18.1s,baz=106,slow=35
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 41.06 294 **P 15 35 44.5 -1.0**
MKAR Makanchi Array 41.06 294 *i* P **P 15 35 45.2 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
H24K Noodor Dome 41.12 36 P **P 15 35 46.1 +0.4**
H24K Noodor Dome 41.12 36 P **P 15 35 45.6 -0.2**
baz=276
WRH Wood River Hil 41.18 38 P **P 15 35 46.3 +0.1**
WRH lAmb lAmb 15 35 53.4
comp=Z,13nm,1.4s
G24K Hadweenzic Riv 41.20 34 P **P 15 35 46.3 -0.1**
baz=275,SNR=7.6
GHO Glory Hole Cre 41.20 42 P **P 15 35 46.4 -0.2**
GHO lAmb lAmb 15 35 53.0
comp=Z,11nm,0.9s
WAT1 Susitna Watana 41.21 40 P **P 15 35 46.1 -0.5**
baz=279
COLA College 41.24 37 *de*P **P 15 35 47.4 +0.7**
COLA pmax pmax
comp=Z,8.0nm,0.9s
SEW Seward 41.25 45 P **P 15 35 47.2 +0.4**
baz=281
MAKZ Makanchi 41.25 294 P **P 15 35 46.2 -0.9**
MAKZ Makanchi 41.25 294 P **P 15 35 46.2 -0.9**
MAKZ pmax pmax
comp=Z,5.0nm,1.2s
CCB Clear Creek Bu 41.28 38 P **P 15 35 47.2 +0.1**
D25K Kavik River 41.42 30 P **P 15 35 48.3 +0.1**
baz=273,SNR=14
SML Sawmill 41.47 42 P **P 15 35 48.7 -0.1**
SML lAmb lAmb 15 36 22.1
comp=Z,19nm,1.2s
SML Sawmill 41.47 42 P **P 15 35 48.5 -0.3**
baz=280
KNK Knik Glacier 41.48 43 P **P 15 35 48.8 0.0**
baz=280
WAT6 Susitna Watana 41.62 41 P **P 15 35 50.0 -0.1**
baz=280
IL31 41.66 37 P **P 15 35 49.7 -0.4**
ILAR Eielson Array 41.66 37 P **P 15 35 50.2 0.0**
comp=Z,2.2nm,0.7s,baz=255,slow=6.0,SNR=17
ILAR PcP **PcP 15 37 45.8 -0.8**
comp=Z,0.2nm,0.6s,baz=264,slow=4.5,SNR=1.2
ILAR LR LR 15 55 20.9
comp=Z,32nm,21.1s,baz=236,slow=39
comp=Z,2.2nm,0.7s
ILAR Eielson Array 41.66 37 P **P 15 35 49.6 -0.5**
HDA Harding Lake 41.68 38 P **P 15 35 50.6 +0.2**
baz=278
DHY Denali Highway 41.70 40 P **P 15 35 50.2 -0.5**
DHY Denali Highway 41.70 40 P **P 15 35 51.2 +0.5**
baz=280
E25K Arctic Village 41.80 32 P **P 15 35 52.0 +0.6**
baz=275,SNR=7.4
F25K Christian Rive 41.83 33 P **P 15 35 51.6 +0.1**
baz=276,SNR=8.2
C26K Camden Bay 41.90 29 P **P 15 35 52.4 +0.3**
baz=274
H25K Birch Creek 41.90 35 P **P 15 35 52.6 +0.4**
baz=277
SCM Sheep Creek Mo 41.94 42 P **P 15 35 52.2 -0.4**
SCM lAmb lAmb 15 36 07.7
comp=Z,14nm,1.2s
SCM Sheep Creek Mo 41.94 42 P **P 15 35 52.2 -0.4**
SCM pmax pmax
comp=Z,14nm,1.2s
SCM Sheep Creek Mo 41.94 42 P **P 15 35 53.0 +0.4**
baz=281
KURK Kurchatov 41.97 301 P **P 15 35 52.1 -0.7**
KURK Kurchatov 41.97 301 *de*P **P 15 35 52.2 -0.7**
KURK pmax pmax
comp=Z,5.0nm,1.3s
KURBB Kurchatov Arra 42.05 301 P **P 15 35 52.5 -1.0**
comp=Z,2.4nm,0.4s,baz=72,slow=8.6,SNR=25
KURBB PcP **PcP 15 37 47.4 -0.7**
comp=Z,1.2nm,0.7s,baz=79,slow=3.1,SNR=6.4
comp=Z,2.4nm,0.4s
PRP Porcupine Dome 42.12 36 P **P 15 35 54.2 +0.1**
PRP Porcupine Dome 42.12 36 P **P 15 35 54.0 -0.1**
baz=278
BMAR Burnt Mountain 42.25 33 P **P 15 35 55.4 +0.4**
C27K Jago River 42.34 30 P **P 15 35 56.3 +0.7**
baz=275,SNR=13
F26K Sheenjek River 42.38 33 P **P 15 35 56.7 +0.6**
baz=277,SNR=7.6
M24K Tolsona, Glenn 42.42 41 P **P 15 35 57.3 +0.8**
M24K lAmb lAmb 15 36 00.9

comp=Z,33nm,1.4s
KWAJ Kwajalein Atol 42.46 142 P P 15 35 58.3 +1.1
KWAJ Kwajalein Atol 42.46 142 P P 15 35 58.3 +1.1
KWAJ pmax pmax
comp=Z,224nm,1.4s
PAX Paxson 42.57 40 P P 15 35 57.2 -0.6
baz=281
G26K Porcupine Rive 42.62 34 P P 15 35 58.2 +0.3
baz=278,SNR=8.3
KLU Klutina 42.66 42 P P 15 35 59.0 +0.5
KLU IAmb IAmb 15 36 16.0
comp=Z,17nm,1.4s
KLU Klutina 42.66 42 P P 15 35 57.5 -1.0
baz=282
RIDG Independent Ri 42.70 39 P P 15 35 58.0 -0.8
RIDG IAmb IAmb 15 35 58.6
comp=Z,12nm,1.4s
RIDG Independent Ri 42.70 39 P P 15 35 58.0 -0.8
baz=281
SCRK Sand Creek 43.03 38 P P 15 36 00.7 -0.8
SCRK Sand Creek 43.03 38 P P 15 36 01.0 -0.6
baz=281
DOT Dot Lake 43.06 39 P P 15 36 00.9 -0.7
CRAI Chiangrai 43.18 248 P P 15 36 03.7 +0.6
N25K Chitina, Valde 43.26 42 P P 15 36 04.0 +0.7
baz=283
E27K Coleen River 43.27 32 P P 15 36 03.5 +0.2
baz=279
BMRM Bremner River 43.40 43 P P 15 36 05.3 +0.8
baz=284
G27K Doyon Strip 43.47 34 P P 15 36 06.1 +1.2
baz=280
H27K Steamboat Moun 43.63 35 P P 15 36 06.9 +0.7
baz=281
I27K Kandik River 43.71 36 P P 15 36 07.7 +0.8
baz=282
K27K Chicken 43.85 38 P P 15 36 08.5 +0.6
baz=283
EGAK Eagle 44.07 37 P P 15 36 09.5 -0.2
EGAK Eagle 44.07 37 P P 15 36 09.5 -0.2
baz=283
CRQE Cirque 44.17 43 P P 15 36 10.5 -0.2
baz=285
L27K Beaver Creek, 44.18 39 P P 15 36 10.7 +0.1
L27K Beaver Creek, 44.18 39 P P 15 36 11.2 +0.5
baz=284
BCAR Beaver Creek A 44.19 39 P P 15 36 11.2 +0.4
M27K Edge Creek, AK 44.33 40 P P 15 36 12.7 +0.7
M27K IAmb IAmb 15 36 23.6
comp=Z,16nm,1.4s
M27K Edge Creek, AK 44.33 40 P P 15 36 12.4 +0.4
baz=285
I29M Ogilvie Camp, 45.11 35 P P 15 36 18.5 +0.5
baz=284
CHTO Chiang Mai 45.13 248 P P 15 36 18.6 -0.1
CHTO Chiang Mai 45.13 248 P P 15 36 18.6 -0.1
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CMAR Chiang Mai Arr 45.39 248 P P 15 36 19.6 -1.1
comp=Z,0.5nm,0.3s,baz=30,slow=7.7,SNR=5.0
comp=Z,0.5nm,0.3s
CMAR Chiang Mai Arr 45.39 248 *i* P **P 15 36 21.1 +0.3**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
EPYK Eagle Plains 45.49 34 P P 15 36 21.1 0.0
EPYK IAmb IAmb 15 36 23.5
comp=Z,9.1nm,1.1s
EPYK Eagle Plains 45.49 34 P P 15 36 21.6 +0.5
baz=285
BRVK Borovoye 46.00 307 P P 15 36 25.8 +0.6
BRVK Borovoye 46.00 307 ⇑ *e*P **P 15 36 26.1 +0.9**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 46.00 307 *e*P **P 15 36 26.1 +0.9**
INK Inuvik 46.19 31 P P 15 36 26.6 +0.2
baz=286
PNL Peninsula 46.26 43 P P 15 36 27.2 +0.1
baz=289
YUK6 Outpost Mounta 46.34 41 P P 15 36 28.6 +0.6
baz=289
HYT Haines Junctio 46.77 41 P P 15 36 32.2 +0.9
HYT IAmb IAmb 15 36 33.7
comp=Z,7.6nm,0.9s
HYT Haines Junctio 46.77 41 P P 15 36 31.9 +0.6
baz=289
BOOM Boomskoye usch 46.98 291 P P 15 36 32.6 -0.7
BOOM IAmb IAmb 15 36 34.5
comp=Z,7.3nm,0.9s
BOOM Boomskoye usch 46.98 291 P P 15 36 32.6 -0.7
BOOM pmax pmax
comp=Z,7.0nm,1.0s
P29M Windy Craggy 47.06 43 P P 15 36 33.9 +0.4
baz=290
N31M Braeburn, Yuko 47.34 40 P P 15 36 37.0 +1.3
N31M IAmb IAmb 15 37 12.0
comp=Z,19nm,1.4s
PLBC Pleasant Camp 47.78 43 P P 15 36 39.4 +0.4
baz=291
KSH Kashi 48.41 288 P P 15 36 48.0 +3.7
KSH pmax pmax
comp=Z,5.0nm,0.8s
C36M Paulatuk 49.10 28 P P 15 36 49.0 0.0
P33M Teslin, Yukon 49.16 41 P P 15 36 50.1 +0.3
baz=293
KK31 Karatay Array 50.18 295 P P 15 36 56.8 -0.9
KK31 Karatay Array 50.18 295 P P 15 36 56.8 -0.9
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 50.18 295 P P 15 36 56.8 -0.9
KKAR Karatay Array 50.18 295 P P 15 36 56.8 -0.9
ARU Arti 50.86 315 LR LR 15 58 46.3
comp=Z,27nm,18.4s,baz=52,slow=36
ARU Arti 50.86 315 *c i*P **P 15 37 02.5 0.0**
ARU 15 38 16.4
ARU 15 38 58.2
ARU S **S 15 44 21.8 +4.2**
ARU SS **SS 15 47 51.8 0.0**
ARU pmax pmax
comp=Z,7.0nm,1.4s
ARU Arti 50.86 315 *e*P **P 15 37 02.6 0.0**
CRAG Craig 50.99 47 P P 15 37 04.0 +0.4
baz=297
DLBC Dease Lake 51.20 42 P P 15 37 05.5 +0.3
baz=296
GAR Garm 52.42 290 P P 15 37 13.9 -0.8
CHGR Chuyangaron 53.37 290 P P 15 37 20.7 -0.9
CHGR Chuyangaron 53.37 290 P P 15 37 20.7 -0.9
CHGR pmax pmax
comp=Z,24nm,0.6s
NIL Nilore 53.42 283 P P 15 37 21.8 -0.2
NIL IAmb IAmb 15 37 23.0
comp=Z,8.3nm,0.8s
NIL Nilore 53.42 283 P P 15 37 21.8 -0.2
NIL pmax pmax
comp=Z,8.0nm,0.8s
ABKAR Akbulak array 53.51 306 P P 15 37 21.6 -0.7
ABKAR Akbulak array 53.51 306 P P 15 37 21.7 -0.7
ABKAR IAmb IAmb 15 37 23.4
comp=Z,4.2nm,0.8s
RES Resolute Bay 53.89 16 P P 15 37 24.5 -0.3
RES Resolute Bay 53.89 16 P P 15 37 24.5 -0.3
RES pmax pmax
comp=Z,11nm,0.8s
AKTO Aktyubinsk 53.99 308 LR LR 16 03 23.7
comp=Z,33nm,18.2s,baz=52,slow=39
KIRV Kirov 54.19 320 ⇑ *e*P **P 15 37 26.8 -0.3**
KULM Kulim 54.50 235 P P 15 37 30.3 +0.3
LVZ Lovozero 54.74 334 P P 15 37 32.1 +1.0
LVZ Lovozero 54.74 334 P P 15 37 32.1 +1.0
LVZ pmax pmax
comp=Z,32nm,1.4s
KBL Kabul 55.76 286 P P 15 37 37.6 -1.6
KBL IAmb IAmb 15 37 38.6
comp=Z,7.2nm,0.8s
KBL Kabul 55.76 286 P P 15 37 37.6 -1.6
KBL pmax pmax
comp=Z,7.0nm,0.8s
YKA Yellowknife Ar 55.77 33 P P 15 37 37.9 -0.7
comp=Z,3.2nm,0.7s,baz=305,slow=6.8,SNR=8.5
comp=Z,3.2nm,0.7s
KEV Kevo 55.78 338 P P 15 37 38.9 +0.4
KEV IAmb IAmb 15 38 20.9
comp=Z,13nm,1.5s
KEV Kevo 55.78 338 P P 15 37 38.9 +0.4
KEV pmax pmax
comp=Z,13nm,1.5s

ARCES ARCESS Array B 56.32 338 P P 15 37 42.6 +0.2
comp=Z,2.5nm,1.0s,baz=40,slow=7.9,SNR=5.0
comp=Z,2.5nm,1.0s
ARCES ARCESS Array B 56.32 338 P P 15 37 42.6 +0.2
ARCES IAmb IAmb 15 37 51.5
comp=Z,7.3nm,1.3s
COEN Coen 59.42 180 P P 15 38 05.3 +0.6
GSI Gunungsitoli 59.51 236 P P 15 38 05.4 0.0
NLWA Neilton Lookou 60.14 51 P P 15 38 10.9 +1.4
NLWA IAmb IAmb 15 38 17.6
comp=Z,8.5nm,0.8s
GEYT Alibeck 60.90 296 P P 15 38 13.9 -0.9
comp=Z,4.5nm,0.5s,baz=60,slow=3.6,SNR=4.8
comp=Z,4.5nm,0.5s
GEYT Alibeck 60.90 296 P P 15 38 14.2 -0.7
GEYT IAmb IAmb 15 38 15.3
comp=Z,6.9nm,0.9s
GYA0 ALIBECK ARRAY 60.90 296 P P 15 38 13.9 -1.0
GYA0B ALIBECK ARRAY 60.90 296 P P 15 38 13.9 -0.9
GYA0B IAmb IAmb 15 38 15.2
comp=Z,7.5nm,1.0s
HEBO Mount Hebo 61.51 53 P P 15 38 20.9 +1.9
FIA1 FINESS Array S 61.72 331 P P 15 38 19.2 -0.8
FINES FINESS Array B 61.73 331 P P 15 38 18.6 -1.3
comp=Z,2.2nm,0.5s,baz=35,slow=5.1,SNR=14
FINES LR LR 16 08 26.1
comp=Z,58nm,18.2s,baz=70,slow=39
comp=Z,2.2nm,0.5s
FINES FINESS Array B 61.73 331 P P 15 38 19.2 -0.8
FINES FINESS Array B 61.73 331 P P 15 38 19.2 -0.8
HOOD Mount Hood Mea 62.62 52 P P 15 38 28.0 +1.6
H04A Detroit Lake 62.72 53 P P 15 38 27.9 +1.0
H04A IAmb IAmb 15 38 29.0
comp=Z,9.3nm,1.0s
G05D Wamic, OR 62.85 52 P P 15 38 28.6 +0.8
baz=309
I04A Tendick Farm, 63.14 54 P P 15 38 30.9 +1.1
baz=309
NEW Newport 63.20 48 P P 15 38 30.8 +0.7
NEW IAmb IAmb 15 38 36.7
comp=Z,5.2nm,1.0s
NEW Newport 63.20 48 P P 15 38 30.8 +0.7
NEW pmax pmax
comp=Z,5.0nm,1.0s
NEW Newport 63.20 48 P P 15 38 30.3 +0.2
baz=310
I05D Terrebonne, OR 63.40 53 P P 15 38 32.8 +1.2
baz=309
L02F Cave Junction 63.52 56 P P 15 38 32.6 +0.3
baz=309
J04D Umpqua Nationa 63.66 54 P P 15 38 33.9 +0.5
baz=309
PINE Pine Mountain 63.97 53 P P 15 38 36.4 +0.9
PINE IAmb IAmb 15 38 43.8
comp=Z,9.0nm,0.8s
J05D Fort Rock, OR 64.13 54 P P 15 38 37.4 +1.0
baz=310
L04D Klamath Falls 64.19 55 P P 15 38 37.9 +1.0
baz=309
WALA Waterton Lakes 64.31 45 P P 15 38 38.3 +0.7
WALA IAmb IAmb 15 38 44.5
comp=Z,7.5nm,1.0s
XMIS Christmas Isla 65.26 221 P P 15 38 45.1 +1.2
BMO Blue Mountains 65.29 51 P P 15 38 44.8 +0.8
BMO IAmb IAmb 15 38 46.3
comp=Z,5.2nm,1.1s
BMO Blue Mountains 65.29 51 P P 15 38 44.8 +0.8
BMO pmax pmax
comp=Z,5.0nm,1.1s
FITZ Fitzroy Crossi 65.46 198 P P 15 38 44.6 -0.5
comp=Z,3.3nm,0.9s,baz=163,slow=3.1,SNR=4.7
comp=Z,3.3nm,0.9s
WB0 Warramunga Arr 65.67 189 P P 15 38 44.9 -1.5
WB0 IAmb IAmb 15 38 47.4
comp=Z,11nm,1.1s
MSO Missoula 65.77 47 P P 15 38 47.5 +0.4
MSO IAmb IAmb 15 38 48.9
comp=Z,12nm,1.2s
MSO Missoula 65.77 47 P P 15 38 47.3 +0.3
baz=312
WR0 Warramunga Arr 65.84 189 P P 15 38 46.8 -0.7
WB2 Warramunga Arr 65.84 189 P P 15 38 46.8 -0.8
WB2 IAmb IAmb 15 38 54.0
comp=Z,13nm,1.2s
WRA Warramunga Arr 65.84 189 P P 15 38 46.9 -0.6
comp=Z,4.1nm,0.9s,baz=5.5,slow=6.7,SNR=34
comp=Z,4.1nm,0.9s
WRA Warramunga Arr 65.84 189 P P 15 38 47.0 -0.6
WRA Warramunga Arr 65.84 189 *i* P **P 15 38 45.9 -1.6**
WRA pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 66.22 309 *e*P **P 15 38 50.4 +0.4**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,41nm,17.0s
KIV Kislovodsk 66.22 309 *e*P **P 15 38 50.4 +0.4**
NB2 NORSAR Subarra 66.64 337 P P 15 38 52.2 -0.1
comp=Z,0.9nm,0.6s,baz=32,slow=6.9
NOA NORSAR Array B 66.64 337 P P 15 38 51.9 -0.4
comp=Z,0.7nm,0.6s,baz=37,slow=6.3,SNR=5.9
NOA LR LR 16 12 25.0
comp=Z,14nm,18.4s,baz=5.0,slow=40
comp=Z,0.7nm,0.6s
BEKR Beckworth 66.83 56 P P 15 38 54.6 +0.6
HRY Holter Researc 66.92 46 P P 15 38 55.0 +0.6
MFID Camas Ranch 67.04 51 P P 15 38 56.0 +0.7
MFID IAmb IAmb 15 38 57.6
comp=Z,6.2nm,1.2s
EGMT Eagleton 67.06 44 P P 15 38 55.6 +0.4
EGMT Eagleton 67.06 44 P P 15 38 55.6 +0.4
baz=314,SNR=5.9
LRM Limekiln Ridge 67.21 47 P P 15 38 56.9 +0.5
PAHR Pah Rah Range 67.50 56 P P 15 38 58.6 +0.4
PAHR IAmb IAmb 15 39 05.2
comp=Z,4.6nm,0.9s
MCMT McKenzie Canyo 67.68 48 P P 15 38 59.8 +0.4
HLID Hailey 67.71 50 P P 15 39 00.0 +0.5
baz=313
BOZ Bozeman (W) 67.78 47 P P 15 39 00.7 +0.7
BOZ IAmb IAmb 15 39 07.3
comp=Z,8.1nm,0.8s
BOZ Bozeman (W) 67.78 47 P P 15 39 00.7 +0.7
BOZ pmax pmax
comp=Z,8.0nm,0.8s
BOZ Bozeman (W) 67.78 47 P P 15 39 00.2 +0.2
baz=313,SNR=12
AKASG Malin Array Be 68.20 321 P P 15 39 01.6 -0.6
comp=Z,0.7nm,0.6s,baz=38,slow=5.8,SNR=2.2
comp=Z,0.7nm,0.6s
BMN Battle Mountai 68.26 54 P P 15 39 03.8 +0.8
BMN IAmb IAmb 15 39 11.4
comp=Z,5.1nm,0.8s
BMN Battle Mountai 68.26 54 P P 15 39 03.8 +0.8
BMN pmax pmax
comp=Z,5.0nm,0.8s
QLMT Earthquake Lak 68.41 47 P P 15 39 04.8 +0.8
GCMT Greycliff 68.65 46 P P 15 39 06.3 +1.0
KVN Kaiserville 68.68 56 P P 15 39 06.6 +0.9
KVN IAmb IAmb 15 39 13.3
comp=Z,3.9nm,0.8s
KVN Kaiserville 68.68 56 P P 15 39 06.6 +0.9
KVN pmax pmax
comp=Z,4.0nm,0.8s
NVAR Mina Array Bea 68.97 56 P P 15 39 08.8 +1.1
comp=Z,1.8nm,0.6s,baz=299,slow=5.9,SNR=20
comp=Z,1.8nm,0.6s
NVAR Mina Array Bea 68.97 56 P P 15 39 08.2 +0.6
LHV Little Huntoon 68.98 57 P P 15 39 08.6 +1.3
LHV IAmb IAmb 15 39 15.6
comp=Z,5.3nm,0.9s
NV11 Mina Array Sit 69.06 56 P P 15 39 08.7 +0.6
H17A Grant Village 69.16 47 P P 15 39 10.9 +2.2
baz=314
ELK Elko 69.16 53 P P 15 39 09.4 +0.6
ELK Elko 69.16 53 P P 15 39 09.4 +0.6
ELK pmax pmax
comp=Z,2.0nm,1.1s
IMW Indian Meadow 69.31 48 P P 15 39 10.7 +0.9
IMW IAmb IAmb 15 39 17.8
comp=Z,5.9nm,0.9s
RLMT Red Lodge 69.31 46 P P 15 39 10.3 +0.7
RLMT IAmb IAmb 15 39 17.1
comp=Z,4.9nm,0.8s
RLMT Red Lodge 69.31 46 P P 15 39 09.8 +0.2
baz=315,SNR=6.2

DGMT Dagmar 69.37 41 P P 15 39 10.1 +0.4
DGMT Dagmar 69.37 41 P P 15 39 09.6 -0.1
baz=317
FXWY Fox Creek 69.45 48 P P 15 39 11.2 +0.7
FXWY IAmb IAmb 15 39 18.5
comp=Z,5.2nm,0.9s
MOOW Moose Ponds 69.52 48 P P 15 39 11.7 +0.8
MOOW IAmb IAmb 15 39 18.9
comp=Z,6.1nm,1.0s
AS31 Alice Springs 69.57 189 P P 15 39 11.8 +0.8
ASAR Alice Springs 69.57 189 P P 15 39 11.4 +0.4
comp=Z,6.9nm,0.7s,baz=2.3,slow=4.7,SNR=92
comp=Z,6.9nm,0.7s
ASAR Alice Springs 69.57 189 P P 15 39 11.3 +0.3
TPAW Teton Pass 69.59 48 P P 15 39 12.0 +0.5
TPAW IAmb IAmb 15 39 19.2
comp=Z,10nm,1.0s
LOHW Long Hollow 69.69 48 P P 15 39 12.7 +0.8
LOHW IAmb IAmb 15 39 20.6
comp=Z,8.7nm,1.2s
HVU Hansel Valley 69.81 51 P P 15 39 13.4 +0.8
HVU Hansel Valley 69.81 51 P P 15 39 13.4 +0.8
HVU pmax pmax
comp=Z,3.0nm,1.0s
CWC Cottonwood Cre 70.45 58 P P 15 39 16.9 +0.3
baz=313
PKM Mcpherson Peak 70.46 60 P P 15 39 16.4 -0.4
baz=313
GRAC Grapevine Rang 70.49 57 P P 15 39 17.2 +0.5
baz=313
HWUT Hardware Ranch 70.58 50 P P 15 39 18.2 +0.8
HWUT IAmb IAmb 15 39 25.6
comp=Z,8.2nm,1.0s
R11A Troy Canyon, C 70.60 55 P P 15 39 18.1 +0.5
R11A Troy Canyon, C 70.60 55 P P 15 39 17.8 +0.3
baz=314
ISA Isabella, Lake 70.74 59 P P 15 39 18.7 +0.4
baz=313
BW06 Boulder Array 70.82 48 P P 15 39 19.2 +0.2
BW06 IAmb IAmb 15 39 25.9
comp=Z,7.2nm,0.8s
BW06 Boulder Array 70.82 48 P P 15 39 19.2 +0.2
baz=315,SNR=9.2
PD31 Pinedale Array 70.82 48 P P 15 39 19.1 +0.1
PD31 IAmb IAmb 15 39 25.9
comp=Z,6.7nm,0.8s
PDAR Pinedale Array 70.82 48 P P 15 39 19.5 +0.6
comp=Z,3.7nm,0.7s,baz=321,slow=1.9,SNR=33
comp=Z,3.7nm,0.7s
PDAR Pinedale Array 70.82 48 P P 15 39 19.2 +0.3
DUG Dugway, Tooele 70.88 52 P P 15 39 20.1 +0.9
DUG IAmb IAmb 15 39 27.6
comp=Z,13nm,1.4s
DUG Dugway, Tooele 70.88 52 P P 15 39 20.1 +0.9
DUG pmax pmax
comp=Z,13nm,1.4s
DUG Dugway, Tooele 70.88 52 P P 15 39 19.7 +0.5
baz=314
MPMC Manual Prospec 71.06 58 P P 15 39 20.7 +0.3
baz=313
FURC Furnace Creek, 71.14 57 P P 15 39 21.6 +1.0
baz=314
SCZ2 Santa Cruz Isl 71.17 61 P P 15 39 21.4 +0.5
baz=313
TPNV Topopah Spring 71.17 56 P P 15 39 21.6 +0.6
baz=314
GWY Greenwater Val 71.45 57 P P 15 39 23.2 +0.4
QSM Queen of Sheba 71.49 57 P P 15 39 23.3 +0.5
PRN Pahroc Range 71.55 55 P P 15 39 24.3 +1.0
PRN IAmb IAmb 15 39 39.1
comp=Z,8.8nm,1.5s
EDW2 Edwards Air Fo 71.56 59 P P 15 39 23.9 +0.6
baz=313
SNCC San Nicolas Is 71.74 61 P P 15 39 24.5 +0.1
baz=313
MARD Mardin 71.78 305 P P 15 39 24.4 -0.3
MARD IAmb IAmb 15 39 25.7
comp=Z,6.6nm,0.7s
BFSC Mount Baldy Ra 72.20 59 P P 15 39 27.6 +0.3
baz=314
BURAR Bucovina Array 72.25 321 P P 15 39 26.6 -0.7
RDMU Red Mountain 72.38 50 P P 15 39 28.9 +0.6
RDMU IAmb IAmb 15 39 35.8
comp=Z,11nm,0.9s
TMUT Trail Mountain 72.39 52 P P 15 39 29.1 +0.6
TMUT IAmb IAmb 15 39 35.9
comp=Z,6.2nm,1.1s
TUQ Turquoise Moun 72.41 57 P P 15 39 29.0 +0.5
baz=314
MSU Marysvale 72.41 53 P P 15 39 29.6 +1.0
MSU Marysvale 72.41 53 P P 15 39 29.6 +1.0
P17A Butcher Ranch, 72.52 51 P P 15 39 29.9 +0.8
P17A IAmb IAmb 15 39 36.8
comp=Z,7.1nm,1.1s
SCI2 San Clemente I 72.52 61 P P 15 39 29.5 +0.5
baz=314
HEC Hector,Ludlow 72.58 58 P P 15 39 30.2 +0.7
baz=314
RSSD Black Hills 72.63 44 P P 15 39 29.9 +0.2
RSSD IAmb IAmb 15 39 36.4
comp=Z,6.5nm,0.9s
RSSD Black Hills 72.63 44 P P 15 39 29.9 +0.2
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD Black Hills 72.63 44 P P 15 39 29.9 +0.2
baz=318
P18A Preston Nutter 72.68 51 P P 15 39 30.7 +0.5
P18A IAmb IAmb 15 39 32.5
comp=Z,11nm,1.4s
SRU San Rafael Swe 72.90 51 P P 15 39 31.6 +0.2
SRU San Rafael Swe 72.90 51 P P 15 39 31.6 +0.2
SRU pmax pmax
comp=Z,4.0nm,0.8s
GMRC Granite Mounta 73.01 58 P P 15 39 32.4 +0.3
baz=314
AGMN Agassiz Nation 73.16 37 P P 15 39 32.2 -0.4
baz=321
PFO Pinyon Flats O 73.35 59 P P 15 39 34.3 +0.2
baz=314
BELC Belle Mtn. Jos 73.36 58 P P 15 39 34.4 +0.3
baz=314
TPFO Pinon Flats 73.36 59 P P 15 39 34.2 +0.1
baz=314
IRM Iron Mountain 73.75 58 P P 15 39 36.7 +0.4
baz=315
U15A North Rim 73.81 54 P P 15 39 37.5 +0.6
U15A IAmb IAmb 15 39 44.9
comp=Z,7.7nm,1.2s
BC3 Big Chuckawall 73.92 58 P P 15 39 37.6 +0.2
baz=315
B35A Bob, Littlefor 73.99 35 P P 15 39 36.6 -0.8
B35A IAmb IAmb 15 39 43.2
comp=Z,10.0nm,0.7s
BRTR Keskin Array B 74.02 311 P P 15 39 37.1 -0.8
comp=Z,1.2nm,0.7s,baz=64,slow=5.6,SNR=3.7
comp=Z,1.2nm,0.7s
BRTR Keskin Array B 74.02 311 *ce*P **P 15 39 37.4 -0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
N23A Red Feather La 74.04 47 P P 15 39 38.0 -0.2
baz=317
PV23 Carpenter Ridg 74.19 51 P P 15 39 39.8 +0.6
PV23 IAmb IAmb 15 39 46.5
comp=Z,10.0nm,1.0s
IKP In-Ko-Pah, Jac 74.23 59 P P 15 39 39.9 +0.8
baz=315
PDMCI Parker Dam,Lak 74.24 57 P P 15 39 39.9 +0.8
baz=315
PV11 David Mesa, Pa 74.38 51 P P 15 39 41.0 +0.8
PV11 IAmb IAmb 15 39 48.7
comp=Z,14nm,1.1s
PV07 Paradox Valley 74.40 51 P P 15 39 40.8 +0.5
VRAC Vranov 74.47 327 LR LR 16 15 51.3
comp=Z,27nm,19.4s,baz=38,slow=38
PV13 Radium Mtn., P 74.51 51 P P 15 39 42.2 +1.2
PV13 IAmb IAmb 15 39 48.3
comp=Z,9.2nm,1.0s
PV15 Paradox Valley 74.56 51 P P 15 39 42.1 +0.9
PV15 IAmb IAmb 15 39 48.5
comp=Z,12nm,1.3s
SUSD Miller 74.79 41 P P 15 39 42.2 0.0
baz=320
WUAZ Wupatki 74.98 54 P P 15 39 44.6 +1.0
WUAZ Wupatki 74.98 54 P P 15 39 43.7 0.0
baz=316
ISCO Idaho Springs 75.02 48 P P 15 39 43.7 -0.2

baz=318
EYMN Ely 75.22 34 P P 15 39 44.0 -0.6
EYMN IAmb IAmb 15 39 50.4
comp=Z,6.4nm,0.7s
EYMN Ely 75.22 34 P P 15 39 44.5 -0.1
baz=324,SNR=5.8
MVCO Mesa Verde 75.37 51 P P 15 39 46.2 +0.3
baz=317
X16A Lo Mia Camp, P 75.73 55 P P 15 39 48.6 +0.7
X16A IAmb IAmb 15 39 55.9
comp=Z,5.1nm,0.9s
Q24A Divide 75.88 48 P P 15 39 49.0 +0.1
baz=318
S22A 4UR Ranch, Cre 75.89 50 P P 15 39 49.4 +0.4
baz=318
OGNE Ogallala 75.98 45 P P 15 39 49.5 +0.3
OGNE Ogallala 75.98 45 P P 15 39 49.1 -0.1
baz=319
ARMA Armidale 76.21 172 P P 15 39 51.6 +1.3
E38A The Farm, Brul 76.28 35 P P 15 39 50.1 -0.6
E38A IAmb IAmb 15 39 56.5
comp=Z,11nm,0.8s
ECSD EROS Data Cent 76.40 40 P P 15 39 50.8 -0.6
ECSD IAmb IAmb 15 39 57.6
comp=Z,11nm,0.8s
ECSD EROS Data Cent 76.40 40 P P 15 39 51.4 -0.1
baz=322,SNR=8.0
SDCO Great Sand Dun 76.60 49 P P 15 39 53.3 +0.3
baz=318
SCHQ Schefferville 76.65 17 LR LR 16 16 19.6
comp=Z,20nm,18.2s,baz=336,slow=38
214A Organ Pipe Nat 76.69 58 P P 15 39 53.9 +0.7
214A Organ Pipe Nat 76.69 58 P P 15 39 54.0 +0.8
baz=316
STKA Stephens Creek 77.27 181 P P 15 39 56.4 +0.3
comp=Z,2.6nm,1.0s,baz=0.6,slow=9.6,SNR=2.9
comp=Z,2.6nm,1.0s
T25A Trinidad 77.63 49 P P 15 39 59.0 +0.3
T25A IAmb IAmb 15 40 05.7
comp=Z,5.1nm,0.8s
T25A Trinidad 77.63 49 P P 15 39 58.6 -0.1
baz=319
TUC Tucson 77.63 56 P P 15 39 58.7 +0.1
baz=317
ANMO Albuquerque 78.16 52 *ce* P P 15 40 03.7 +2.1
ANMO pmax pmax
comp=Z,5.0nm,1.7s
ANMO Albuquerque 78.16 52 P P 15 40 01.8 +0.2
baz=318
DAVOX Davos/Dischmat 79.07 329 LR LR 16 19 18.1
comp=Z,39nm,18.4s,baz=90,slow=39
319A Douglas 79.19 56 P P 15 40 07.9 +0.6
319A IAmb IAmb 15 40 14.9
comp=Z,6.2nm,0.9s
121A Cookes Peak, D 79.19 54 P P 15 40 08.0 +0.6
baz=318
SCIA State Center 79.37 39 P P 15 40 08.1 +0.1
SCIA State Center 79.37 39 P P 15 40 07.7 -0.2
baz=324
VLDQ Val d'Or 80.05 26 P P 15 40 10.1 -1.3
VLDQ IAmb IAmb 15 40 11.0
comp=Z,14nm,0.9s
L40A Anamosa 80.11 38 P P 15 40 11.0 -0.9
L40A IAmb IAmb 15 40 18.0
comp=Z,7.9nm,0.9s
N38A Joes South For 80.26 40 P P 15 40 13.0 +0.2
AMTX Amarillo 80.78 49 P P 15 40 16.0 +0.2
baz=320
MSTX Muleshoe 80.89 50 P P 15 40 16.5 +0.1
baz=320
P38A Dawn 81.07 41 P P 15 40 17.0 -0.1
MNTX Cornudas Mount 81.17 53 P P 15 40 18.5 +0.7
MNTX Cornudas Mount 81.17 53 P P 15 40 18.3 +0.4
baz=319
GDL2 Guadalupe Moun 81.36 52 P P 15 40 19.8 +0.8
CLN7 Carlsbad 7 81.51 52 P P 15 40 20.3 +0.6
P40A Paris 81.82 40 P P 15 40 21.0 0.0
P40A IAmb IAmb 15 40 27.6
comp=Z,13nm,0.9s
T35A Sooner Cattle 81.82 44 P P 15 40 21.4 +0.2
HDIL Hopedale 82.18 37 P P 15 40 22.8 -0.2
baz=326
WMOK Wichita Mounta 82.40 47 P P 15 40 24.0 -0.2
WMOK IAmb IAmb 15 40 31.1
comp=Z,7.2nm,1.1s
WMOK Wichita Mounta 82.40 47 P P 15 40 24.0 -0.2
WMOK pmax pmax
comp=Z,7.0nm,1.1s
WMOK Wichita Mounta 82.40 47 P P 15 40 24.0 -0.2
baz=322
S39A Bolivar 82.72 42 P P 15 40 25.4 -0.5
S39A IAmb IAmb 15 40 32.2
comp=Z,6.9nm,1.1s
R40A Maddies Statio 82.72 41 P P 15 40 25.6 -0.3
R40A IAmb IAmb 15 40 32.0
comp=Z,10.0nm,0.8s
L48A N Adams 82.99 34 P P 15 40 26.7 -0.5
CCM Cathedral Cave 83.38 40 P P 15 40 28.9 -0.3
CCM IAmb IAmb 15 40 35.6
comp=Z,8.2nm,0.9s
CCM Cathedral Cave 83.38 40 P P 15 40 29.0 -0.3
CCM pmax pmax
comp=Z,8.0nm,0.9s
CCM Cathedral Cave 83.38 40 P P 15 40 29.2 0.0
baz=325
MGMO Mountain Grove 83.65 41 P P 15 40 30.9 +0.2
MGMO IAmb IAmb 15 40 32.1
comp=Z,11nm,1.4s
P46A Rosedale 83.84 37 P P 15 40 31.2 -0.4
BATG Bathurst New B 83.91 19 P P 15 40 31.9 0.0
BATG IAmb IAmb 15 40 37.9
comp=Z,5.1nm,0.8s
TX31 Lajitas Ar. Si 83.92 54 P P 15 40 32.8 +0.5
TX32 Lajitas Array 83.92 54 P P 15 40 32.8 +0.5
TX32 IAmb IAmb 15 40 39.8
comp=Z,7.1nm,1.1s
TXAR Lajitas Array 83.92 54 P P 15 40 33.2 +0.8
comp=Z,2.6nm,0.7s,baz=300,slow=3.9,SNR=34
comp=Z,2.6nm,0.7s
TXAR Lajitas Array 83.92 54 P P 15 40 32.9 +0.6
TXAR Lajitas Array 83.92 54 P P 15 40 32.9 +0.6
N49A Columbus Grove 83.96 34 P P 15 40 31.7 -0.4
LONY Lake Ozonia 84.06 26 P P 15 40 31.9 -0.8
baz=335
O48B Farmland 84.14 35 P P 15 40 32.4 -0.7
baz=329
Z35A Perchaven, San 84.28 47 P P 15 40 34.2 +0.3
FCAR Ozark Folk Cen 84.75 42 P P 15 40 35.8 -0.4
M53A WI Miller and 84.84 31 P P 15 40 36.1 -0.6
baz=331
PKME Peaks-Kenny Pk 84.99 22 P P 15 40 36.7 -0.6
baz=338
ACSO Alum Creek Sta 85.02 34 P P 15 40 37.3 -0.3
baz=330
LCAR Lake Charles 85.05 41 P P 15 40 37.7 0.0
LCAR IAmb IAmb 15 40 45.0
comp=Z,6.1nm,0.9s
MIAR Mount Ida 85.14 44 P P 15 40 38.7 +0.4
MIAR IAmb IAmb 15 40 45.7
comp=Z,9.5nm,1.1s
MIAR Mount Ida 85.14 44 P P 15 40 38.7 +0.4
MIAR pmax pmax
comp=Z,9.0nm,1.1s
MIAR Mount Ida 85.14 44 P P 15 40 38.3 +0.1
baz=324
WHAR Wooly Hollow 85.16 42 P P 15 40 38.4 +0.1
JCT Junction City 85.18 50 P P 15 40 38.4 -0.2
baz=322
LBNH Lisbon 85.20 24 P P 15 40 37.9 -0.5
baz=336
N53A Lisbon 85.33 32 P P 15 40 38.6 -0.5
N53A IAmb IAmb 15 40 40.0
comp=Z,7.0nm,0.8s
O52A Adamsville 85.56 33 P P 15 40 39.9 -0.4
O53A New Philadelph 85.68 32 P P 15 40 40.6 -0.3
O53A New Philadelph 85.68 32 P P 15 40 40.4 -0.4
baz=331
BINY Binghamton 85.79 28 P P 15 40 40.8 -0.7
baz=334
WLAR White Oak Lake 86.06 44 P P 15 40 43.2 +0.4
T47A Sharon Grove 86.09 38 P P 15 40 42.9 -0.1
L59A Walton 86.11 27 P P 15 40 42.4 -0.6
M57A Sunshine Farm, 86.18 29 P P 15 40 42.9 -0.4
M57A IAmb IAmb 15 40 49.7
comp=Z,8.0nm,0.9s
WVT Waverly 86.50 39 P P 15 40 45.1 +0.2

WVT Waverly 86.50 39 P P 15 40 45.1 +0.2
WVT pmax pmax
comp=Z,6.0nm,0.7s
WVT Waverly 86.50 39 P P 15 40 45.1 +0.2
baz=327
SSPA Standing Stone 86.54 30 P P 15 40 44.6 -0.5
SSPA IAmb IAmb 15 40 51.4
comp=Z,4.5nm,0.8s
SSPA Standing Stone 86.54 30 P P 15 40 44.6 -0.5
baz=333
HRV Adam Dziewonsk 86.89 25 P P 15 40 46.1 -0.7
baz=337
T50A Nancy 87.03 36 P P 15 40 47.6 +0.1
T50A IAmb IAmb 15 40 48.1
comp=Z,5.0nm,0.7s
TZTN Tazewell 87.97 36 P P 15 40 51.5 -0.6
baz=330
SWET Sewanee 88.10 38 P P 15 40 52.6 -0.1
V51A Loudon 88.27 37 P P 15 40 53.3 -0.2
V51A IAmb IAmb 15 41 00.5
comp=Z,6.5nm,0.9s
W50A Signal Mountai 88.38 38 P P 15 40 54.4 +0.3
CPCT Cooper Cave 88.50 37 P P 15 40 54.6 0.0
TKL Tuckaleechee C 88.64 36 P P 15 40 55.3 0.0
TKL IAmb IAmb 15 40 56.3
comp=Z,5.9nm,0.8s
TKL Tuckaleechee C 88.64 36 P P 15 40 55.3 0.0
TKL pmax pmax
comp=Z,6.0nm,0.9s
LRAL Lakeview Retre 89.47 40 P P 15 40 58.9 -0.3
baz=328
ESDC Sonseca Array 89.95 335 P P 15 41 00.2 -1.2
comp=Z,0.5nm,0.8s,baz=4.3,slow=3.5,SNR=4.5
ESDC LR LR 16 25 30.9
comp=Z,22nm,18.4s,baz=315,slow=38
comp=Z,0.5nm,0.8s
VNDA Vanda 123.55 175 PKP PKPdf 15 46 57.6 -0.3
comp=Z,1.1nm,0.6s,baz=328,slow=5.1,SNR=19
NVL N'lazarevskaya 145.72 206 *e*PKIKP PKPdf 15 47 38.1 -1.1
NVL pmax pmax
comp=Z,19nm,0.7s
TROLL Troll, Antarti 147.82 202 PKPdf PKPbc 15 47 46.2 +0.4
SNAA Sanae 149.38 200 PKPdf PKPbc 15 47 49.5 -0.3
SNAA Sanae 149.38 200 pPKPdf PKPab 15 47 55.4 +0.8
VNA2 Neumayer--Watz 150.97 200 PKPdf PKPbc 15 47 53.7 +0.1
baz=115,slow=2.0
VNA2 Neumayer--Watz 150.97 200 pPKPdf PKPab 15 47 59.7 -1.4
VNA3 Neumayer Olymp 151.25 198 PKPdf PKPbc 15 47 54.0 -0.2
VNA3 Neumayer Olymp 151.25 198 pPKPdf PKPab 15 47 59.9 -2.4
VNA1 Neumayer--Stat 151.37 200 PKPdf PKPbc 15 47 54.5 +0.1
VNA1 Neumayer--Stat 151.37 200 pPKPdf PKPab 15 48 00.6 -2.1

IDC ***15*** *15:35:14.3±0.6, 1°.25N×126°.17E, h0km, mb4.1/12, mbtmp4.1/14, ML3.7/2, MS2.9/2, Error ellipse: s-maj=34.1km s-min=10.8km az=73.0*
NEIC ***15*** *15:35:16.5±1.0, 1°.33N±0°.09×126°.32E±0°.06, h10km±1km, mb4.6/27, Error ellipse: s-maj=15.4km s-min=10.6km az=190.0*
DJA ***15*** *15:35:20.5±0.4, 1°N±3°×12°6E±°, h33km±7km, M4.2/13, mb4.4/6, mB4.8/1, MLv4.1/13, Mw(mB)4.1/1*
ISC 15 15:35:20.0±0.4,1°.35N±0°.05×126°.40E±0°.05,h35km,n65,
σ1s87/70,mb4.3/25,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.13**	**121**		**Pn**	**15 35 38.4**	**-0.9**
TNTI	**Ternate**	**1.13**	**121**	P	**Pn**	**15 35 38.6**	**-0.7**
LBMI	**Labuha**	**2.26**	**151**	P	**Pn**	**15 35 55.0**	**0.0**
SGSI	**Sangihe**	**2.48**	**340**	P	**Pn**	**15 35 58.3**	**+0.3**
KMSI	**Cibinong**	**2.54**	**252**	P	**Pn**	**15 36 00.0**	**+1.3**
SANI	**Sanana**	**3.40**	**187**	P	**Pn**	**15 36 10.8**	**+0.2**
GTOI	**Gorontalo**	**3.46**	**258**	P	**Pn**	**15 36 13.3**	**+1.9**
LUWI	**Luwuk**	**4.33**	**237**	Pn	**Pn**	**15 36 21.3**	**-2.2**
MRSI	**Marisa**	**4.54**	**259**	P	**Pn**	**15 36 29.8**	**+3.5**
NLAI	**Namlea**	**4.61**	**171**	P	**Pn**	**15 36 28.7**	**+1.4**
APSI	**Ampana**	**5.25**	**245**	P	**Pn**	**15 36 39.8**	**+3.7**
	0.4nm1jan65nm,0.5s						
SIJI	**Sorong**	**5.34**	**114**	Pn	**Pn**	**15 36 38.5**	**+1.1**
	0.7nm,0.3s,baz=56,slow=8.1,SNR=3.7						
SIJI				Sn	**Sn**	**15 37 43.2**	**+5.5**
	baz=204,slow=20						
SIJI				LR	LR	15 39 00.8	
	comp=Z,116nm,21.1s,baz=43,slow=41						
	10nm,0.6s						
KCP	**Kidapawan**	**5.77**	**347**	*eP*	Pn	15 36 55.0	+12
KCP				*i* S	**Sn**	**15 37 54.7**	**+6.2**
BBSI	**Bau Bau**	**7.79**	**209**	P	**Pn**	**15 37 14.5**	**+3.5**
	0.0nm4.9nm,1.1s						
TTSI	**Tana Toraja**	**7.89**	**236**	P	**Pn**	**15 37 14.7**	**+2.3**
	0.1nm34nm,0.7s						
BKSI	**Bulukumba**	**9.12**	**223**	P	**Pn**	**15 37 32.9**	**+3.7**
	16nm,1.1s						
EDFI	**Ende, Flores**	**11.07**	**205**	P	**Pn**	**15 38 00.5**	**+4.4**
	5.5nm,0.8s						
SBUM	**Sibu**	**14.21**	**275**	Pn	**Pn**	**15 38 37.1**	**-1.8**
ABJI	**Asem Bagus**	**15.15**	**233**	pP	**P**	**15 39 00.9**	**+4.6**
KNRA	**Kununurra**	**17.08**	**172**		**Pn**	**15 39 15.4**	**-0.8**
KNRA				IAmb	IAmb	15 39 20.3	
	comp=Z,14nm,0.6s						
UGM	**Wanagama**	**18.31**	**240**	P	**P**	**15 39 29.6**	**-1.8**
FITZ	**Fitzroy Crossi**	**19.34**	**182**	P	**P**	**15 39 41.3**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=25,slow=12,SNR=11						
	comp=Z,2.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.34**	**182**	P	**P**	**15 39 40.8**	**-1.7**
WB0	**Warramunga Arr**	**22.40**	**160**		**P**	**15 40 14.2**	**-1.5**
WB0				IAmb	IAmb	15 40 16.8	
	comp=Z,20nm,0.8s						
TPUB	**Ta-pu**	**22.53**	**346**	P	**P**	**15 40 15.5**	**-1.5**
TPUB				IAmb	IAmb	15 40 39.8	
	comp=Z,68nm,1.3s						
WRAB	**Tennant Creek**	**22.54**	**160**	P	**P**	**15 40 15.7**	**-1.5**
WRAB				IAmb	IAmb	15 40 19.9	
	comp=Z,20nm,0.9s						
WRA	**Warramunga Arr**	**22.55**	**160**	P	**P**	**15 40 16.1**	**-1.2**
	comp=Z,9.2nm,0.5s,baz=338,slow=11,SNR=55						
WRA				PcP	**PcP**	**15 44 10.7**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=334,slow=1.7,SNR=1.3						
WRA				S	**S**	**15 44 24.1**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=332,slow=18,SNR=4.2						
	comp=Z,9.2nm,0.5s						
WRA	**Warramunga Arr**	**22.55**	**160**	P	**P**	**15 40 15.5**	**-1.8**
WB2	**Warramunga Arr**	**22.55**	**160**		**P**	**15 40 15.9**	**-1.4**
WB2				IAmb	IAmb	15 40 18.3	
	comp=Z,21nm,0.9s						
WR0	**Warramunga Arr**	**22.63**	**160**	P	**P**	**15 40 16.8**	**-1.4**
WR0				IAmb	IAmb	15 40 19.1	
	comp=Z,11nm,0.8s						
PSA00	**Pilbara Seismi**	**23.66**	**195**	P	**P**	**15 40 27.4**	**-1.1**
PSA00				IAmb	IAmb	15 40 48.2	
	comp=Z,7.7nm,1.0s						
TATO	**Taipei**	**23.96**	**349**	P	**P**	**15 40 29.9**	**-1.3**
AS31	**Alice Springs**	**25.91**	**164**	P	**P**	**15 40 48.4**	**-0.7**
ASAR	**Alice Springs**	**25.91**	**164**	P	**P**	**15 40 48.6**	**-0.5**
	comp=Z,4.1nm,0.6s,baz=343,slow=8.2,SNR=34						
ASAR				PcP	**PcP**	**15 44 17.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=342,slow=2.3,SNR=4.9						
ASAR				S	**S**	**15 45 16.9**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=351,slow=24,SNR=2.1						
	comp=Z,4.1nm,0.6s						
ASAR	**Alice Springs**	**25.91**	**164**	P	**P**	**15 40 48.2**	**-0.9**
MORW	**Morawa**	**31.83**	**197**	P	**P**	**15 41 40.8**	**-0.9**
MORW				IAmb	IAmb	15 42 15.5	
	comp=Z,35nm,1.5s						
FORT	**Forrest**	**31.99**	**177**	P	**P**	**15 41 42.8**	**-0.2**
JMN	**Monobe**	**32.97**	**12**	P	**P**	**15 41 51.2**	**-0.4**
JTU	**Tsushima**	**33.13**	**5**	P	**P**	**15 41 51.7**	**-1.2**
NWAO	**Narrogin (SRO)**	**35.17**	**193**	P	**P**	**15 42 09.9**	**-0.8**
BBOO	**Buckleboo**	**35.18**	**166**	P	**P**	**15 42 10.7**	**-0.1**
BBOO				IAmb	IAmb	15 42 24.2	
	comp=Z,42nm,1.5s						
KSRS	**Korea Array**	**35.96**	**2**	P	**P**	**15 42 17.9**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=184,slow=10,SNR=5.6						
	comp=Z,0.9nm,0.7s						
STKA	**Stephens Creek**	**36.05**	**158**	P	**P**	**15 42 17.2**	**-1.1**
	comp=Z,3.1nm,0.8s,baz=313,slow=11,SNR=7.1						
	comp=Z,3.1nm,0.8s						
STKA	**Stephens Creek**	**36.05**	**158**	P	**P**	**15 42 17.7**	**-0.6**
MJAR	**Matsushiro Arr**	**36.69**	**16**	P	**P**	**15 42 23.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=181,slow=9.4,SNR=5.8						
	comp=Z,1.1nm,0.8s						
MAJO	**Matsushiro**	**36.69**	**16**	P	**P**	**15 42 23.3**	**-0.4**
MAJO				IAmb	IAmb	15 42 44.3	
	comp=Z,8.1nm,1.4s						
KLR	**Kul'dur**	**47.92**	**5**	P	**P**	**15 43 55.2**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=180,slow=7.8,SNR=4.0						
KLR				LR	LR	16 01 29.4	
	comp=Z,14nm,19.9s,baz=171,slow=33						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**49.44**	**342**	P	**P**	**15 44 06.5**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=160,slow=7.4,SNR=3.0						
	comp=Z,0.5nm,0.5s						
MK31	**Makanchi Array**	**59.32**	**326**	P	**P**	**15 45 17.7**	**-0.9**
MKAR	**Makanchi Array**	**59.32**	**326**	P	**P**	**15 45 17.8**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=118,slow=7.4,SNR=20						
	comp=Z,1.0nm,0.4s						
MAKZ	**Makanchi**	**59.51**	**326**	P	**P**	**15 45 19.1**	**-0.8**
MAKZ				IAmb	IAmb	15 45 21.0	
	comp=Z,3.9nm,1.4s						
YAK	**Yakutsk**	**60.58**	**2**	P	**P**	**15 45 27.7**	**+0.9**
YAK				IAmb	IAmb	15 45 28.7	
	comp=Z,6.1nm,0.7s						
ZALV	**Zalesovo Beam**	**62.55**	**334**	P	**P**	**15 45 38.7**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=148,slow=6.4,SNR=2.3						
	comp=Z,0.5nm,0.4s						
KKAR	**Karatay Array**	**64.75**	**318**	P	**P**	**15 45 54.6**	**-0.5**
AMKA	**Amchitka**	**66.67**	**33**	P	**P**	**15 46 07.5**	**+0.3**
GEYT	**Alibeck**	**72.13**	**309**	P	**P**	**15 46 40.8**	**-0.6**
GEYT				IAmb	IAmb	15 46 41.7	
	comp=Z,1.9nm,0.7s						
NRIK	**Noril'sk**	**72.65**	**347**	P	**P**	**15 46 44.1**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=105,slow=9.0,SNR=4.2						
	comp=Z,1.7nm,0.5s						
ABKAR	**Akbulak array**	**73.78**	**321**	P	**P**	**15 46 49.9**	**-1.0**
RAYN	**Ar Rayn**	**81.11**	**293**	P	**P**	**15 47 31.0**	**-1.5**
RAYN				IAmb	IAmb	15 47 40.9	
	comp=Z,7.0nm,1.5s						
VNDA	**Vanda**	**81.12**	**173**	P	**P**	**15 47 31.2**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=311,slow=7.2,SNR=6.6						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**81.12**	**173**	P	**P**	**15 47 31.6**	**+0.2**
VNDA				IAmb	IAmb	15 48 07.8	
	comp=Z,3.9nm,1.4s						
SBA	**Scott Base**	**82.04**	**172**	P	**P**	**15 47 37.4**	**+1.3**
BCAR	**Beaver Creek A**	**89.64**	**27**	P	**P**	**15 48 14.6**	**+0.4**
ARCES	**ARCESS Array B**	**92.56**	**340**	P	**P**	**15 48 26.4**	**-1.1**
	comp=Z,4.5nm,1.2s,baz=72,slow=7.8,SNR=4.6						
	comp=Z,4.5nm,1.2s						
TXAR	**Lajitas Array**	**123.30**	**53**	PKP	**PKPdf**	**15 54 15.1**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=298,slow=2.7,SNR=4.0						

TAP ***15*** *15:44:58.4, 24°.80N×122°.11E, h13km, ML3.7, C*
JMA ***15*** *15:44:58.4±0.1, 24°.8N±0°.6×122°.2E±0°.3, h45km±4km, MV3.4/9, TAIWAN REGION*
ISC 15 15:44:57.6±0.9,24°.79N±0°.02×122°.18E±0°.02,h12km±7km,
n108,σ0s97/184,4C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.23**	**283**	⇓ *iP*	**Pb**	**15 45 02.9**	**-0.8**
	baz=285						
EGS				*i* S	**Sg**	**15 45 05.8**	**0.0**
	baz=285						
TWB1	**Santiao Chiao**	**0.27**	**322**	⇓ *iP*	**Pg**	**15 45 03.8**	**+0.5**
	baz=343						
TWB1				*i* S	**Sg**	**15 45 07.2**	**+0.1**
	baz=343						
NTC	**Toucheng**	**0.32**	**281**	⇓ *iP*	**Pb**	**15 45 04.7**	**-0.5**
	baz=281						
NTC				S	**Sb**	**15 45 08.5**	**-2.0**
	baz=281						
TWC	**Suao**	**0.35**	**238**	⇑ *iP*	**Pg**	**15 45 04.8**	**+0.2**
	baz=228						
TWC				*i* S	**Sg**	**15 45 08.8**	**-0.5**
	baz=228						
TIPB	**Shuangxi**	**0.36**	**299**	⇓ *iP*	**Pb**	**15 45 05.7**	**-0.4**
	baz=304						
TIPB				S	**Sg**	**15 45 09.2**	**-0.7**
	baz=304						
ILA	**Ilan**	**0.39**	**266**	⇓ *iP*	**Pb**	**15 45 05.9**	**-0.6**
	baz=250						
ILA				S	**Sb**	**15 45 11.3**	**-1.2**
	baz=250						
SXI1	**Grass Mountain**	**0.41**	**318**	⇓ *iP*	**Pb**	**15 45 06.6**	**-0.2**
	baz=330						
SXI1				S	**Sb**	**15 45 11.8**	**-1.2**
	baz=330						
NDS	**Dongshan**	**0.45**	**249**	⇓ *iP*	**Pg**	**15 45 05.7**	**-0.8**
	baz=236						
NDS				S	**Sg**	**15 45 11.2**	**-1.3**
	baz=236						
NWF	**Wu-fen Shan**	**0.45**	**308**	P	**Pb**	**15 45 07.5**	**-0.1**
	baz=306						
NWF				*e*S	**Sb**	**15 45 13.4**	**-0.9**
	baz=306						
WFSB	**Wu-fen Shan**	**0.45**	**308**	P	**Pb**	**15 45 07.5**	**-0.1**
	baz=305						
TWE	**Neicheng**	**0.47**	**261**	⇓ *iP*	**Pb**	**15 45 07.1**	**-0.7**
	baz=256						
TWE				S	**Sb**	**15 45 13.5**	**-1.2**
	baz=256						
EWUT	**Wuta**	**0.50**	**226**	P	**Pg**	**15 45 06.6**	**-0.9**
	baz=212						
EWUT				S	**Sg**	**15 45 14.0**	**-0.1**
	baz=212						
TNOU	**National Taiwa**	**0.51**	**314**	P	**Pb**	**15 45 08.7**	**+0.2**
	baz=313						
FUSB	**Fushanzhiwuyua**	**0.54**	**267**	⇓ *iP*	**Pb**	**15 45 08.4**	**-0.6**
	baz=263						
FUSB				S	**Sg**	**15 45 14.8**	**-0.4**
	baz=263						
ENA	**Nanau**	**0.54**	**227**	⇑ *iP*	**Pg**	**15 45 08.2**	**0.0**
	baz=213						
ENA				*e*S	**Sg**	**15 45 14.9**	**-0.4**
	baz=213						
TWA	**Mucha**	**0.57**	**289**	*eP*	**Pb**	**15 45 09.4**	**-0.1**
	baz=282						
TWA				*e*S	**Sb**	**15 45 17.9**	**+0.3**
	baz=282						
ENTT	**Nioudou**	**0.57**	**255**	⇓ *iP*	**Pg**	**15 45 07.8**	**-1.1**
	baz=249						
ENTT				S	**Sg**	**15 45 15.3**	**-1.2**
	baz=249						
NWLT	**Wulai**	**0.61**	**269**	*eP*	**Pb**	**15 45 09.8**	**-0.4**
	baz=266						
NWLT				*e*S	**Sb**	**15 45 17.5**	**-1.4**
	baz=266						
NHDH	**Xindian Distri**	**0.61**	**286**	*eP*	**Pb**	**15 45 10.6**	**+0.3**
	baz=278						
NDT	**Datong Townshi**	**0.63**	**253**	*eP*	**Pg**	**15 45 08.6**	**-1.3**
	baz=249						
NDT				*e*S	**Sb**	**15 45 18.2**	**-1.2**
	baz=249						
LATG	**Datong**	**0.64**	**247**	P	**Pg**	**15 45 10.2**	**+0.1**
	baz=242						
LATG				S	**Sb**	**15 45 19.2**	**-0.6**
	baz=242						
YM01	**YM01**	**0.65**	**303**	P	**Pb**	**15 45 11.5**	**+0.5**
	baz=297						
TAP	**Taipei**	**0.66**	**292**	*eP*	**Pb**	**15 45 11.3**	**+0.3**
	baz=286						
TAP				*e*S	**Sn**	**15 45 20.6**	**-2.4**
	baz=286						
YM08	**YM08**	**0.66**	**307**	P	**Pb**	**15 45 11.5**	**+0.4**
	baz=302						
TWY	**Chenhua**	**0.71**	**313**	*eP*	**Pn**	**15 45 12.7**	**-0.8**
	baz=318						
TWY				*e*S	**Sn**	**15 45 23.9**	**-0.5**
	baz=318						
ANP	**Anpu**	**0.71**	**303**	*eP*	**Pn**	**15 45 13.3**	**-0.4**
	baz=306						
YHNB	**Yeheng**	**0.74**	**261**	⇓ *iP*	**Pg**	**15 45 11.9**	**-0.1**
	baz=253						
YHNB				S	**Sg**	**15 45 20.7**	**-1.0**
	baz=253						
TWS1	**Kuangyinshan**	**0.75**	**294**	P	**Pn**	**15 45 13.7**	**-0.3**
	baz=295						
JYNG	**Yonagunijimaku**	**0.78**	**116**	P	**Pg**	**15 45 13.3**	**+0.6**
JYNG				*e*S	**Sg**	**15 45 24.3**	**+1.4**
ETL	**Fush Village**	**0.81**	**219**	P	**Pg**	**15 45 13.2**	**-0.1**
	baz=206						
ETL				*e*S	**Sb**	**15 45 24.4**	**-0.1**
	baz=206						
NNSB	**Datong**	**0.81**	**243**	P	**Pg**	**15 45 13.1**	**-0.2**
	baz=228						
NNSB				S	**Sb**	**15 45 23.6**	**-1.0**
	baz=228						
NNS	**Nan Shan**	**0.81**	**244**	P	**Pg**	**15 45 12.4**	**-1.0**
	baz=229						
NNS				S	**Sb**	**15 45 23.5**	**-1.1**
	baz=229						
NACB	**Ninganchiao**	**0.81**	**221**	⇑ *iP*	**Pg**	**15 45 13.0**	**-0.3**

	baz=206								
NACB				S	Sb	15 45 24.1	-0.6		
	baz=206								
YOJ	**Yonaguni jima**	**0.83**	**113**	P	Pg	15 45 13.9	+0.3		
	baz=111								
YOJ				S	Sg	15 45 25.7	+1.2		
	baz=111								
YOJ	**Yonaguni jima**	**0.83**	**113**	P	Pg	15 45 14.0	+0.3		
YOJ				S	Sg	15 45 25.5	+1.1		
PCYT	**Pengchaiyu**	**0.84**	**354**	*eP*	Pg	15 45 14.3	+0.5		
	baz=2.0								
PCYT				*eS*	Sb	15 45 26.2	+0.8		
	baz=2.0								
ETLH	**Xiulin Townshi**	**0.86**	**227**	P	Pg	15 45 14.1	-0.1		
	baz=221								
ETLH				S	Sb	15 45 26.0	-0.1		
	baz=221								
TWD	**Chiawan**	**0.89**	**217**	*eP*	Pg	15 45 14.4	-0.3		
	baz=210								
TWD				*eS*	Sb	15 45 27.3	+0.6		
	baz=210								
NCU	**National Centr**	**0.92**	**281**	*eP*	Pn	15 45 16.8	+0.5		
	baz=281								
NCU				*eS*	Sn	15 45 30.1	+0.7		
	baz=281								
NCUH	**Zhongli**	**0.92**	**281**	*eP*	Pn	15 45 16.9	+0.6		
	baz=281								
NCUH				*eS*	Sn	15 45 28.1	-1.3		
	baz=281								
HWA	**Hwalien**	**0.96**	**213**	*eP*	Pn	15 45 17.4	+0.5		
	baz=213								
HWA				*eS*	Sn	15 45 31.2	+0.6		
	baz=213								
NFF	**Wufeng Townshi**	**0.97**	**261**	*eP*	Pn	15 45 16.8	-0.5		
	baz=265								
NFF				*eS*	Sn	15 45 30.3	-0.7		
	baz=265								
FUSS	**Fushou**	**1.01**	**238**	*eP*	Pb	15 45 17.1	0.0		
	baz=232								
FUSS				*eS*	Sb	15 45 30.3	-0.1		
	baz=232								
ETM	**Tongmen**	**1.03**	**217**	*i* P	Pb	15 45 17.3	-0.2		
	baz=207								
NHW	**Xinwu Township**	**1.05**	**282**	*eP*	Pn	15 45 19.7	+1.6		
	baz=281								
WHF	**Hehuan Shan**	**1.05**	**232**	P	Pb	15 45 18.1	+0.1		
	baz=226								
WHF				S	Sn	15 45 32.1	-1.3		
	baz=226								
HSN1	**Hsinchu**	**1.05**	**269**	*eP*	Pn	15 45 20.1	+1.9		
	baz=289								
HSN1				*eS*	Sn	15 45 35.5	+2.7		
	baz=289								
TWT	**Tachien**	**1.06**	**240**	P	Pn	15 45 19.0	+0.6		
	baz=227								
TWT				S	Sn	15 45 32.0	-1.2		
	baz=227								
TEYL	**Yanliau Villag**	**1.06**	**210**	*eP*	Pn	15 45 19.7	+1.4		
	baz=204								
LIOB	**Emei**	**1.06**	**262**	*i* P	Pn	15 45 19.7	+1.3		
	baz=259								
LIOB				S	Sn	15 45 35.0	+1.8		
	baz=259								
TDCB	**Techi**	**1.07**	**240**	P	Pn	15 45 18.6	-0.1		
	baz=227								
TDCB				*eS*	Sg	15 45 31.6	-0.7		
	baz=227								
NSTT	**Nanjuang**	**1.08**	**262**	*eP*	Pn	15 45 18.8	+0.2		
	baz=258								
NSTT				*eS*	Sn	15 45 35.0	+1.5		
	baz=258								
SBCB	**Hsinchu**	**1.08**	**270**	*eP*	Pn	15 45 19.9	+1.3		
	baz=289								
SBCB				*eS*	Sn	15 45 35.1	+1.6		
	baz=289								
HSN	**Hsinchu**	**1.10**	**271**	*eP*	Pn	15 45 19.9	+1.2		
	baz=287								
HSN				*eS*	Sn	15 45 34.0	+0.2		
	baz=287								
CHGB	**Renai**	**1.17**	**232**	P	Pb	15 45 19.9	+0.1		
	baz=226								
CHGB				S	Sn	15 45 35.5	-0.5		
	baz=226								
ESL	**Shilin**	**1.19**	**215**	P	Pb	15 45 19.9	-0.1		
	baz=215								
ESL				S	Sn	15 45 37.1	+0.9		
	baz=215								
WHP	**Taichung City**	**1.23**	**246**	*eP*	Pg	15 45 21.8	+0.5		
	baz=241								
WHP				*eS*	Sn	15 45 37.4	0.0		
	baz=241								
OWD	**Renai**	**1.24**	**228⇑**	*iP*	Pb	15 45 21.1	+0.1		
	baz=221								
OWD				S	Sb	15 45 36.8	-0.2		
	baz=221								
WUSB	**Renai**	**1.25**	**231**	P	Pg	15 45 21.5	-0.2		
	baz=225								
WUSB				S	Sg	15 45 38.0	0.0		
	baz=225								
NMLH	**Miaoli**	**1.28**	**259**	*eP*	Pg	15 45 24.0	+1.7		
	baz=255								
NMLH				*eS*	Sg	15 45 41.6	+2.5		
	baz=255								
EGFH	**Guangfu**	**1.31**	**212**	*eP*	Pb	15 45 22.7	+0.5		
	baz=221								
EGFH				*eS*	Sg	15 45 40.4	+0.5		
	baz=221								
TWQ1	**Liyutan**	**1.35**	**251**	P	Pg	15 45 24.9	+1.3		
	baz=246								
TWQ1				S	Sg	15 45 43.8	+2.6		
	baz=246								
WCS	**Beigang Elemen**	**1.36**	**238**	*eP*	Pb	15 45 23.0	-0.1		
	baz=223								
VWDT	**VWDT**	**1.40**	**223**	*eP*	Pg	15 45 24.4	-0.2		
	baz=213								
VWDT				*eS*	Sg	15 45 43.5	+0.8		
	baz=213								
HGSD	**Ruisui**	**1.47**	**208**	*eP*	Pb	15 45 25.3	+0.4		
	baz=203								
HGSD				*eS*	Sg	15 45 47.9	+3.1		
	baz=203								
WDJ	**Dajia District**	**1.47**	**253**	*eP*	Pg	15 45 27.1	+1.3		
	baz=248								
WDJ				*eS*	Sg	15 45 46.9	+2.1		
	baz=248								
SMLT	**Sun Moon Lake**	**1.48**	**232**	P	Pg	15 45 26.0	0.0		
	baz=226								
SMLT				*eS*	Sg	15 45 45.2	+0.1		
	baz=226								
IRIF	**Iriomote-Funau**	**1.49**	**108**	P	Pn	15 45 23.2	-0.9		
IRIF				*eS*	Sn	15 45 42.3	-1.2		
SSLB	**Suanglung**	**1.50**	**228**	P	Pb	15 45 25.6	+0.2		
	baz=222								
SSLB				S	Sg	15 45 45.5	-0.3		
	baz=222								
EHY	**Hungye**	**1.50**	**211**	*eP*	Pn	15 45 24.6	+0.2		
	baz=206								
TCU	**Taichung**	**1.51**	**245**	*eP*	Pg	15 45 28.5	+1.9		
	baz=248								
TCU				*eS*	Sg	15 45 49.2	+2.9		
	baz=248								
YULB	**Yu-li**	**1.61**	**210**	*eP*	Pn	15 45 26.7	+0.8		
	baz=205								
YULB				*eS*	Sg	15 45 48.9	-0.5		
	baz=205								
WHYT	**Xinyi Township**	**1.63**	**228**	*eP*	Pg	15 45 29.8	+0.9		
	baz=222								
WHYT				*eS*	Sg	15 45 50.2	+0.2		
	baz=222								
WCHH	**Zhanghua**	**1.64**	**245**	*eP*	Pg	15 45 29.7	+0.6		
	baz=238								
WCHH				*eS*	Sg	15 45 51.7	+1.4		
	baz=238								
WNT	**Mingjian**	**1.64**	**236**	P	Pg	15 45 30.0	+1.0		
	baz=230								
WNT				S	Sg	15 45 52.4	+2.0		
	baz=230								
EYUL	**Yuli**	**1.64**	**209**	*eP*	Pn	15 45 27.2	+1.0		
	baz=217								
HATJ	**Hateruma jima**	**1.66**	**116**	P	Pn	15 45 26.2	-0.3		
HATJ				*eS*	Sn	15 45 47.3	-0.4		
YUS	**Yu-Shan**	**1.71**	**221**	*eP*	Pb	15 45 29.5	+0.2		
	baz=202								
JKRS	**Kuro-shima**	**1.76**	**108**	P	Pn	15 45 27.5	-0.4		
JKRS				*eS*	Sn	15 45 50.2	0.0		
FULB	**Fuli**	**1.78**	**207**	*eP*	Pn	15 45 29.4	+1.2		
	baz=185								
ALS	**Alishan**	**1.79**	**225**	*eP*	Pg	15 45 31.4	-0.6		
	baz=205								
ALS				*eS*	Sg	15 45 56.1	+0.9		
	baz=205								
JIJ	**Ishigaki jima**	**1.84**	**103**	P	Pn	15 45 28.1	-1.0		
JIJ				*eS*	Sn	15 45 50.9	-1.4		
WDLH	**Douliu**	**1.85**	**234**	*eP*	Pg	15 45 33.5	+0.3		
	baz=226								
WRL	**Guolierlin Hig**	**1.86**	**242**	*eP*	Pb	15 45 31.5	-0.1		
	baz=235								
WRL				*eS*	Sg	15 45 56.1	-1.5		
	baz=235								
ELDTW	**Lidau**	**1.92**	**214**	*eP*	Pn	15 45 31.5	+1.3		
	baz=194								
WTK	**Tuku**	**1.97**	**236**	*eP*	Pb	15 45 34.1	+0.7		
	baz=229								
EDH	**Donghe**	**1.98**	**204**	*eP*	Pn	15 45 31.3	+0.3		
	baz=184								
CHN2	**Minshiung**	**2.00**	**231**	*eP*	Pg	15 45 35.8	-0.1		
	baz=223								
TPUB	**Ta-pu**	**2.05**	**224**	*eP*	Pb	15 45 35.7	+0.9		
	baz=205								
TPUB				*eS*	Sg	15 46 03.2	-0.4		
	baz=205								
CHY	**Chiayi**	**2.06**	**231**	*eP*	Pg	15 45 36.0	-1.0		
	baz=223								
STYH	**Taoyuan**	**2.06**	**219**	*eP*	Pn	15 45 33.6	+1.6		
	baz=197								
WTP	**Ta-pu**	**2.10**	**223**	P	Pb	15 45 36.5	+0.8		
	baz=203								
WTP				S	Sg	15 46 05.6	+0.4		
	baz=203								
LONT	**Longtian**	**2.11**	**207**	*eP*	Pn	15 45 33.4	+0.7		
	baz=186								
WSF	**Szhu**	**2.12**	**238**	*eP*	Pb	15 45 36.3	+0.3		
	baz=230								
WSF				*eS*	Sg	15 46 04.6	-1.3		
	baz=230								
TWK	**Hsinying**	**2.17**	**226**	P	Pb	15 45 37.4	+0.6		
	baz=217								
TWK				S	Sg	15 46 06.3	-1.0		
	baz=217								
WSL	**Shuilin Townsh**	**2.18**	**235**	*eP*	Pb	15 45 37.6	+0.5		
	baz=227								
SNST	**Tainan City**	**2.19**	**225**	*eP*	Pb	15 45 38.0	+0.7		
	baz=216								
CHN1	**Nanshi**	**2.20**	**224**	*eP*	Pb	15 45 38.3	+0.9		
	baz=215								
CHN1				*eS*	Sg	15 46 07.9	-0.4		
	baz=215								
LDUT	**Ludao**	**2.21**	**197**	*eP*	Pn	15 45 34.0	-0.1		
	baz=179								
SGST	**Jiashian**	**2.24**	**221**	P	Pb	15 45 37.6	-0.5		
	baz=200								
SGST				*eS*	Sg	15 46 08.6	-1.1		
	baz=200								
ICHU	**Yijhu**	**2.24**	**231**	*eP*	Pb	15 45 38.8	+0.7		
	baz=223								
ICHU				*eS*	Sg	15 46 08.9	-0.8		
	baz=223								
CHN8	**Yiju**	**2.30**	**232**	*eP*	Pb	15 45 40.2	+1.1		
	baz=223								
CHN8				*eS*	Sg	15 46 10.6	-1.1		
	baz=223								
SSD	**Sandimen**	**2.48**	**215**	*eP*	Pb	15 45 42.0	-0.2		
	baz=194								
TSMG	**Majia**	**2.51**	**214**	*eP*	Pb	15 45 42.4	-0.2		
	baz=193								
MASBT	**Mashibuluo**	**2.59**	**213**	*eP*	Pb	15 45 42.2	-1.8		
	baz=192								
EAST	**Anshuo**	**2.69**	**207**	*eP*	Pb	15 45 44.4	-1.3		
	baz=190								
XPSS	**Dashiqiu**	**2.78**	**320**	*eP*	Pn	15 45 42.5	+0.5		
	baz=326								
LYJJ	**Jianjiangzhen**	**2.79**	**309**	*eP*	Pn	15 45 42.2	0.0		
	baz=310								

GUC ***15*** *16:14:52.6±0.7, 18°.88S×69°.37W, h105km±5km, ML3.5*
IDC ***15*** *16:14:53.7±1.6, 19°.00S×69°.05W, h123km±12km, mb3.7/3, mbtmp3.9/6, Error ellipse: s-maj=33.4km s-min=9.8km az=101.0*
VAO ***15*** *16:14:54.9±0.7, 18°.78S×69°.11W, h123km±6km, mb4.0*
ISC 15 16:14:51.1±0.7, 18°.90S±0°.04×69°.42W±0°.07, h113km±8km, n45, σ1°64/54, 3C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.57**	**352⇓**	*iP*		**Pn**	**16 15 10.2**	**+0.7**
PB16				*i* S		**Sn**	**16 15 23.7**	**+0.5**
PB16				IAML			16 15 25.6	
	comp=E,3μm,0.5s							
GO01	**Chusmiza**	**0.79**	**164⇓**	*iP*		**Pn**	**16 15 12.3**	**+1.2**
GO01				*i* S		**Sn**	**16 15 27.6**	**+1.4**
GO01				IAML			16 15 29.6	
	comp=E,3μm,0.0s							
PB12	**IPOC Station P**	**0.91**	**288⇑**	*iP*		**Pn**	**16 15 12.1**	**+0.4**
PB12				*i* S		**Sn**	**16 15 27.6**	**+0.3**
PB12				IAML			16 15 29.0	
	comp=N,1μm,0.4s							
AP01	**Chacalluta**	**1.02**	**301⇑**	*iP*		**Pn**	**16 15 13.5**	**+0.8**
AP01				*i* S		**Sn**	**16 15 29.6**	**+0.5**
AP01				IAML			16 15 31.4	
	comp=N,2μm,0.2s							
TA02	**Huaiquique**	**1.52**	**206**	*eP*		**Pn**	**16 15 19.0**	**+0.7**
TA02				*eS*		**Sn**	**16 15 39.2**	**+0.2**
TA02				IAML			16 15 42.0	
	comp=N,1μm,0.1s							
TA01	**Diego Aracena**	**1.80**	**203**	*eP*		**Pn**	**16 15 22.4**	**+0.6**
TA01				*eS*		**Sn**	**16 15 44.6**	**-0.6**
TA01				IAML			16 15 48.7	
	comp=E,288nm,0.4s							
PB01	**IPOC Station P**	**2.13**	**182⇑**	*iP*		**Pn**	**16 15 27.4**	**+1.4**
PB01				*i* S		**Sn**	**16 15 53.1**	**+0.5**
PB01				IAML			16 15 55.4	
	comp=E,239nm,0.4s							
PB02	**IPOC Station P**	**2.45**	**190⇓**	*iP*		**Pn**	**16 15 31.4**	**+1.3**
PB02				*i* S		**Sn**	**16 15 56.3**	**-3.6**
PB07	**IPOC Station P**	**2.84**	**189**	*eP*		**Pn**	**16 15 37.2**	**+1.9**
PB07				*i* S		**Sn**	**16 16 07.4**	**-2.0**
LPAZ	**La Paz**	**2.88**	**26**	P		**Pn**	**16 15 38.6**	**+2.4**
	comp=E,3.7nm,0.3s,baz=193,slow=5.3,SNR=25							
LPAZ				S		**Sn**	**16 16 13.5**	**+2.8**
	comp=E,9.2nm,0.6s,baz=195,slow=6.0,SNR=3.7							
LPAZ	**La Paz**	**2.88**	**26**	*eP*		**Pn**	**16 15 38.5**	**+2.4**
LPAZ	**La Paz**	**2.88**	**26**	*eP*		**Pn**	**16 15 38.9**	**+2.7**
PB09	**IPOC Station P**	**2.88**	**177**	*eP*		**Pn**	**16 15 36.9**	**+1.1**
PB04	**IPOC Station P**	**3.48**	**191**	*eP*		**Pn**	**16 15 44.3**	**+0.6**
LVC	**Limon Verde**	**3.72**	**173**	P		**Pn**	**16 15 49.8**	**+2.7**
	comp=E,3.8nm,0.3s,baz=13,slow=7.7,SNR=14							
LVC				S		**Sn**	**16 16 30.2**	**-0.2**
	comp=E,12nm,0.3s,baz=351,slow=10,SNR=4.3							
LVC	**Limon Verde**	**3.72**	**173**	*eP*		**Pn**	**16 15 50.1**	**+3.0**
LVC	**Limon Verde**	**3.72**	**173**	*eP*		**Pn**	**16 15 51.5**	**+4.4**
PB06	**IPOC Station P**	**3.79**	**182**	*eP*		**Pn**	**16 15 48.5**	**+0.7**
PB15	**IPOC Station P**	**4.28**	**181**	*eP*		**Pn**	**16 15 55.6**	**+1.1**
SIV	**San Ignacio**	**8.48**	**71**	P		**Pn**	**16 16 49.3**	**-1.8**
	comp=E,6.3nm,0.6s,baz=260,slow=9.3,SNR=32							
SIV				S		**Sn**	**16 18 20.7**	**-4.4**
	comp=E,0.7nm,0.5s,baz=287,slow=22,SNR=3.1							
ETMB	**Extrema**	**9.55**	**19**	*eP*		**Pn**	**16 17 04.9**	**-0.7**
PTLB	**Pontes e Lacer**	**10.41**	**72**	*eP*		**Pn**	**16 17 15.1**	**-2.2**
VILB	**Vilhena**	**10.66**	**58**	*eP*		**Pn**	**16 17 20.2**	**-0.5**
SALV	**Santo Antonio**	**13.44**	**79**	*eP*		**Pn**	**16 17 56.9**	**-0.5**
CLDB	**Colider**	**15.39**	**61**	*eP*		**Pn**	**16 18 22.1**	**-0.1**
H03N1	**Juan Fernandez**	**16.78**	**209**	T		T	16 35 42.0	
	baz=30,slow=74,SNR=2.8							
H03N2	**Juan Fernandez**	**16.79**	**209**	T		T	16 36 27.8	
	baz=30							
H03N3	**Juan Fernandez**	**16.80**	**209**	T		T	16 35 40.9	
	baz=30,slow=74,SNR=2.8							
PTGB	**Pitanga**	**17.12**	**113**	*eP*		**Pn**	**16 18 45.4**	**+1.8**
SNDB	**Serra Nova Dou**	**18.77**	**71**	*eP*		**P**	**16 19 01.2**	**-0.3**
ITTB	**Itaituba**	**19.68**	**44**	*eP*		**P**	**16 19 10.3**	**-1.1**
BB19B	**Bebedouro**	**19.75**	**100**	*eP*		**P**	**16 19 12.3**	**0.0**
IPMB	**Ipameri, GO**	**20.14**	**91**	*eP*		**P**	**16 19 16.6**	**+0.1**
BDFB	**Brasilia**	**20.70**	**84**	P		**P**	**16 19 21.7**	**-0.8**
	comp=E,3.8nm,0.4s,baz=292,slow=12,SNR=6.6							
	comp=E,3.8nm,0.4s							
BDFB	**Brasilia**	**20.70**	**84**	*eP*		**P**	**16 19 22.6**	**+0.1**
PMNB	**Patos De Minas**	**21.77**	**93**	*eP*		**P**	**16 19 33.1**	**-0.9**
SMTB	**Santa Maria do**	**23.40**	**68**	*eP*		**P**	**16 19 50.6**	**+0.5**
JANB	**Januaria**	**24.31**	**85**	*eP*		**P**	**16 19 57.8**	**-0.6**
MC01	**Montes Claros**	**24.35**	**89**	*eP*		**P**	**16 19 59.1**	**+0.4**
DIAM	**Diamantina, MG**	**24.41**	**93**	*eP*		**P**	**16 19 59.7**	**+0.4**
SDBA	**SAO DESIDERIO**	**24.46**	**78**	*eP*		**P**	**16 19 59.6**	**-0.1**
MCPB	**Macapa, AP**	**25.10**	**45**	*eP*		**P**	**16 20 06.8**	**+1.3**
GDU01	**Guandu, BA**	**29.08**	**84**	*eP*		**P**	**16 20 41.1**	**0.0**
DBIC	**Dimbokro**	**68.48**	**75**	P		**P**	**16 25 41.5**	**-0.1**
	comp=E,1.2nm,0.5s,baz=225,slow=10.0,SNR=1.2							
	comp=E,1.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**76.95**	**71**	P		**P**	**16 26 31.1**	**-0.7**
	comp=E,0.5nm,0.4s,baz=258,slow=5.7,SNR=6.2							
	comp=E,0.5nm,0.4s							

IDC ***15*** *16:15:29.0±1.7, 5°.29S×133°.28E, h0km, mb3.7/1, mbtmp4.1/5, ML4.0/4, Error ellipse: s-maj=66.4km s-min=22.7km az=72.0*
ISC 15 16:15:33.4±0.9, 5°.13S±0°.09×133°.4E±0°.2, h35km, n17, σ1°92/18, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.46**	**333**	P		**Pn**	**16 16 11.7**	**+0.5**
SIJI	**Sorong**	**4.73**	**333**	Pn		**Pn**	**16 16 43.1**	**+0.9**
	baz=108,slow=20							
SIJI				Sn		**Sn**	**16 17 33.2**	**-2.7**
	6.7nm,0.3s,baz=254,slow=23,SNR=8.2							
KDU	**Kakadu**	**7.56**	**187**	P		**Pn**	**16 17 22.3**	**+1.0**
MTN	**Manton Dam**	**7.98**	**196**	P		**Pn**	**16 17 28.2**	**+1.2**
KNRA	**Kununurra**	**11.42**	**203**	P		**Pn**	**16 18 14.6**	**+0.5**
WRA	**Warramunga Arr**	**14.76**	**176**	Pn		**Pn**	**16 18 54.9**	**-4.8**
	0.4nm,0.3s,baz=352,slow=13,SNR=29							
	1.7nm,0.5s							
FITZ	**Fitzroy Crossi**	**14.94**	**210**	Pn		**Pn**	**16 18 60.0**	**-2.2**
	0.7nm,0.3s,baz=33,slow=10,SNR=27							
	2.8nm,0.3s							
FITZ	**Fitzroy Crossi**	**14.94**	**210**	P		**Pn**	**16 19 03.0**	**+0.8**
QIS	**Mount Isa**	**16.49**	**159**	P		**Pn**	**16 19 21.2**	**-1.0**
MTSU	**Mount Surprise**	**16.78**	**141**	P		**P**	**16 19 27.8**	**0.0**
ASAR	**Alice Springs**	**18.44**	**178**	P		**P**	**16 19 44.5**	**-1.6**
	0.8nm,0.3s,baz=3.7,slow=10,SNR=44							
	8.5nm,0.9s							
CTA	**Charters Tower**	**19.45**	**141**	P		**Pn**	**16 19 56.9**	**-1.6**
	0.2nm,0.3s,baz=324,slow=11,SNR=1.7							
	0.3nm,0.8s							
WRKA	**Warakurna**	**20.39**	**193**	P		**P**	**16 20 08.8**	**+1.4**
OOD	**Oodnadatta**	**22.65**	**175**	P		**P**	**16 20 33.6**	**+2.0**
MULG	**Mulgathing**	**25.03**	**179**	P		**P**	**16 20 55.0**	**+0.7**
LCRK	**Leigh Creek**	**25.59**	**170**	P		**P**	**16 21 00.3**	**+0.8**
MKAR	**Makanchi Array**	**68.57**	**325**	P		**P**	**16 26 34.2**	**+1.5**
	0.4nm,0.5s,baz=119,slow=8.3,SNR=6.9							
	0.4nm,0.5s							

ANF ***15*** *16:17:20.9±1.2, 36°.63N×121°.34W, h0km±17km, ML3.8/23, Error ellipse: s-maj=17.2km s-min=5.3km az=114.0*
NCEDC ***15*** *16:17:21.5±3.1, 36°.702N±0°.009×121°.34W±0°.01, h4km±5km, Mwr3.6/5, ML3.4/74(NEIC), Error ellipse: s-maj=1.7km s-min=1.4km az=93.0*
NEIC ***15*** *16:17:21.3±1.4, 36°.66N±0°.01×121°.39W±0°.02, h14km±2km, Error ellipse: s-maj=1.9km s-min=1.6km az=77.0*
NEIC ***15*** *16:17:21.5, 36°.70N×121°.34W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.54; $M_{\theta\theta}$-2.96; $M_{\phi\phi}$2.42; $M_{r\theta}$-0.57; $M_{\theta\phi}$1.61; $M_{\phi r}$-0.85; Fault plane solution: M_o3.33000×10^{14} NP1:ϕ_s242.24000°, δ79.45000°, λ17.79000°. NP2:ϕ_s148.88000°, δ72.53000°, λ168.93000°. Principal axes: T 3.2202, Plg20.0000°, Azm106.0000°; N 0.2178, Plg69.0000°, Azm272.0000°; P -3.4380, Plg5.0000°, Azm15.0000°;*
ISC 15 16:17:21.5±0.9, 36°.67N±0°.02×121°.37W±0°.02, h13km±5km, n268, σ0°96/274, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BJOM	**Mount Johnson**	**0.06**	**130**			**Pg**	**16 17 23.6**	**-0.5**
SCZ	**Santa Cruz**	**0.07**	**198**			**Pg**	**16 17 25.4**	**+1.1**
BLRM	**Lewis Ranch**	**0.08**	**92**			**Pg**	**16 17 23.4**	**-1.0**
BSLM	**Silva Ranch**	**0.11**	**11**			**Pg**	**16 17 24.2**	**-0.5**
SAO	**San Andreas Ge**	**0.11**	**328**	Pg		**Pg**	**16 17 23.8**	**-1.0**
BSRM	**Salinas Radio**	**0.12**	**269**			**Pg**	**16 17 24.6**	**-0.2**
BJCM	**Johnson Can.**	**0.12**	**187**			**Pg**	**16 17 24.7**	**-0.2**
FRP	**Fremont Peak**	**0.13**	**312**			**Pg**	**16 17 24.2**	**-0.8**
HJSM	**John Smith Roa**	**0.16**	**22**			**Pg**	**16 17 24.9**	**-0.5**
HSFM	**Saint Francis**	**0.17**	**325**			**Pg**	**16 17 25.4**	**-0.3**
BVL	**Bear Valley**	**0.17**	**122**			**Pg**	**16 17 25.3**	**-0.3**
HJGM	**San Juan Grade**	**0.21**	**309**			**Pg**	**16 17 25.7**	**-0.4**
HLTM	**Lone Tree Road**	**0.22**	**14**			**Pg**	**16 17 25.8**	**-0.6**
HBTM	**San Juan Bauti**	**0.23**	**322**			**Pg**	**16 17 26.4**	**-0.1**
BPIM	**Pinnacles**	**0.24**	**137**			**Pg**	**16 17 26.5**	**-0.2**
HTUM	**Tustin Road**	**0.27**	**306**			**Pg**	**16 17 27.0**	**-0.2**
OCR	**O'Connell Ranc**	**0.27**	**337**			**Pg**	**16 17 26.5**	**-0.7**
BSCM	**Shirttail Gulc**	**0.27**	**159**			**Pg**	**16 17 27.1**	**-0.1**
ANZ	**Anzar Road**	**0.28**	**321**			**Pg**	**16 17 27.0**	**-0.3**
BAVM	**Antelope Valle**	**0.28**	**95**			**Pg**	**16 17 27.4**	**+0.1**
BBGB	**Big Mountain B**	**0.28**	**109**			**Pb**	**16 17 27.9**	**-0.7**
BBGB	**Big Mountain B**	**0.28**	**109**			**Sb**	**16 17 33.3**	**+0.1**
BBNM	**San Benito**	**0.29**	**124**			**Pb**	**16 17 27.7**	**-0.8**
BSMM	**Soledad Missio**	**0.29**	**189**			**Pb**	**16 17 28.1**	**-0.5**
HERM	**Elkhorn Road**	**0.30**	**296**			**Pg**	**16 17 28.0**	**+0.2**
HAST	**Hastings Reser**	**0.31**	**207**			**Pg**	**16 17 28.5**	**+0.5**
HAST						**Sg**	**16 17 33.5**	**+1.1**
HFEM	**San Felipe**	**0.31**	**356**			**Pg**	**16 17 28.1**	**+0.1**
CSR	**Chase Ranch**	**0.33**	**330**			**Pg**	**16 17 28.5**	**+0.1**
HCOM	**Corn Cob Canyo**	**0.34**	**309**			**Pg**	**16 17 28.6**	**+0.1**
PACP

BGH	Bear Gulch	1.02	311			Pg	16 17 40.5	-0.7
CVLM	Vallecito	1.02	339			Pg	16 17 41.0	-0.3
MYLM	Yosemite Lake	1.04	47			Pg	16 17 40.7	-0.9
CNIC	Niles Canyon	1.05	333			Pg	16 17 40.9	-0.9
CYD1	Coyote D'meter	1.06	327			Pg	16 17 40.6	-1.4
JHPM	Huddart Park	1.07	316			Pg	16 17 41.3	-0.9
PWKM	Work Ranch	1.10	140			Pg	16 17 42.0	-0.8
PHFM	Heflinger Ranc	1.11	135			Pg	16 17 42.1	-0.8
CTM	Castle Mountai	1.11	131			Pn	16 17 43.2	+0.3
CDOM	Doolan Road	1.12	341			Pn	16 17 43.9	+1.0
PHAM	Harlan Ranch	1.15	136			Pg	16 17 42.5	-1.1
PCMM	Cholame Hills	1.16	138			Pg	16 17 43.0	-0.9
JCHM	Cahill Ridge	1.17	317			Pg	16 17 42.1	-1.9
CBSNC	Byron Hot Spri	1.17	350			Pg	16 17 43.5	-0.5
GHC	Gold Hill	1.18	135			Pg	16 17 43.1	-1.1
PCBM	Cambria	1.18	167			Pg	16 17 43.0	-1.2
PKEM	Kettleman Hill	1.19	120			Pn	16 17 44.6	+0.8
CMOB	Morgan Territo	1.19	343			Pg	16 17 43.0	-1.5
JCPM	Coyote Point	1.19	321			Pg	16 17 42.6	-1.8
BLDC	Black Mountain	1.20	161			Pg	16 17 43.6	-0.9
BLDC	Black Mountain	1.20	161			Pg	16 17 43.6	-0.9
PSRM	Scobie Ranch	1.20	132			Pg	16 17 43.6	-1.0
CLCB	Lake Chabot	1.20	333			Pg	16 17 43.3	-1.4
CSLM	San Leandro Hi	1.21	331			Pg	16 17 42.5	-2.3
PKLM	Kerr Lake	1.22	137			Pg	16 17 43.8	-1.3
ARDC	Alexander Ranc	1.25	165			Pg	16 17 43.9	-1.5
TCAS	Cass Winery, P	1.25	148			Pg	16 17 44.0	-1.5
TCHL	Shandon	1.26	141			Pg	16 17 44.3	-1.4
BGC	Bolinger Road	1.27	335			Pg	16 17 44.2	-1.7
PMRM	Maxey Ranch	1.27	133			Pg	16 17 44.6	-1.4
CRHM	Round Hill Res	1.29	338			Pb	16 17 47.4	+1.8
JSBM	San Bruno Moun	1.30	321			Pn	16 17 43.6	-1.7
PAGB	Antelope Grade	1.30	136	Pn		Pn	16 17 44.5	-2.1
JMGM	Milagra Ridge	1.31	318			Pn	16 17 44.4	-1.0
SMCB	Saint Mary's C	1.31	333			Pn	16 17 44.7	-0.7
THIS	South End of C	1.32	135			Pg	16 17 45.2	-1.8
TRAM	Private Proper	1.33	138			Pn	16 17 45.4	-0.4
BDM	Black Diamond	1.34	343			Pg	16 17 48.1	+0.8
PTAM	Tassajara Cree	1.38	157			Pn	16 17 46.2	-0.4
BKS	Berkeley--Byer	1.39	331			Pn	16 17 45.6	-1.0
CVPM	Vollmer Peak	1.39	331			Pn	16 17 45.6	-1.0
TSCN	Private Proper	1.40	143			Pn	16 17 46.3	-0.4
JPRM	Presidio of Sa	1.43	322			Pn	16 17 45.8	-1.3
LSDC	Los Osos Digit	1.44	162			Pg	16 17 48.8	-0.3
MCUB	Copperopolis B	1.44	25			Pn	16 17 46.3	-0.9
EFD	Emergency Oper	1.45	158			Pn	16 17 46.9	-0.5
CPIM	Pinole Ridge	1.48	333			Pn	16 17 47.0	-0.8
TSCS	Shell Creek So	1.48	146			Pn	16 17 47.2	-0.6
VPIC	Valencia Peak	1.48	164			Pn	16 17 47.5	-0.4
DPD	Davis Peak	1.51	161			Pn	16 17 47.8	-0.5
DCD	Diablo Creek	1.52	163			Pn	16 17 48.0	-0.3
CPMM	Point Molate	1.52	327			Pn	16 17 46.8	-1.6
CMB	Columbia Colle	1.57	30			Pn	16 17 48.5	-0.7
CMB	Columbia Colle	1.57	30			Sn	16 18 08.7	-0.7
VOG	Valley Oaks Go baz=284	1.64	102	P		Pn	16 17 49.9	-0.1
FARB	Farallon Islan	1.66	309			Pn	16 17 48.9	-1.3
YEG	Yeguas Mountai	1.68	137			Pn	16 17 51.0	+0.3
SNT	Sears Point	1.74	331			Pn	16 17 50.4	-0.9
SMMC	Simmler	1.75	140			Pn	16 17 51.2	-0.4
SMMC	Simmler baz=322,SNR=39	1.75	140	P		Pn	16 17 51.7	0.0
SMMC				S		Sb	16 18 15.3	-0.2
	baz=322							
KCC	Kaiser Creek	1.77	68			Pn	16 17 52.9	+1.0
NOLM	Olema	1.77	321			Pn	16 17 50.7	-1.1
BCH	Branch Mountai	1.81	144			Pn	16 17 51.9	-0.7
CARC	Carrizo Plain	1.84	137			Pn	16 17 52.5	-0.3
NBRB	Beebe Ranch Br	1.84	330			Pn	16 17 52.1	-0.7
PMLM	Mount Lospe	1.88	160			Pn	16 17 53.0	-0.3
CVS	Carmenet Viney	1.88	333			Pn	16 17 52.1	-1.2
MRHM	Rocky Hill	1.88	101			Pn	16 17 52.7	-0.7
HELL	Mitchell Peak,	1.89	89			Pn	16 17 53.5	-0.1
MCCM	Marconi Confer	1.90	321	Pn		Pn	16 17 52.2	-1.4
MCCM	comp=N,302nm,1.0s			IAML			16 18 27.0	
MCCM	comp=E,300nm,0.8s			IAML			16 18 29.0	
NAPC	Atlas Peak	1.90	339			Pn	16 17 52.9	-0.8
CRGC	Crocker Grade	1.95	136			Pn	16 17 54.5	+0.1
NTYM	Taylor	2.00	330			Pn	16 17 54.2	-0.7
VES	Vestal, Richgr	2.03	113			Pn	16 17 55.4	+0.1
VES	Vestal, Richgr baz=296,SNR=27	2.03	113	P		Pn	16 17 55.2	-0.1
VES	baz=296			S		Sn	16 18 21.1	+0.6
MRDM	Red Cones	2.07	63			Pn	16 17 57.3	+1.1
MDPB	Devils Postpil	2.07	62			Pn	16 17 55.6	-0.6
MMPM	Mammoth Pass	2.10	63			Pn	16 17 58.2	+1.6
NBPM	Berryessa Peak	2.10	342			Pn	16 17 56.4	+0.1
MLIM	Lincoln Peak	2.12	62			Pb	16 17 58.9	-1.0
OMMB	Old Mammoth Mi	2.12	63	Pn		Pn	16 17 57.2	+0.3
OMMB	comp=N,370nm,0.7s			IAML			16 18 33.9	
OMMB	comp=E,256nm,1.1s			IAML			16 18 35.6	
MDYM	Dry Creek	2.13	62			Pn	16 17 58.8	+1.7
MDCM	Deadman Creek	2.13	60			Pn	16 17 58.3	+1.2
MMLB	Mammoth Lakes	2.15	62			Pn	16 17 58.7	+1.4
MLCM	Laurel Creek C	2.18	64			Pn	16 17 59.4	+1.7
PKM	Mcpherson Peak	2.18	144			Pn	16 17 58.3	+0.6
PKM	Mcpherson Peak baz=326,SNR=48	2.18	144	P		Pn	16 17 57.7	+0.1
MEMM	East Mammoth H	2.18	62			Pn	16 17 59.5	+1.7
MCSM	Casa Diablo Ho	2.20	63			Pn	16 17 59.7	+1.6
MCBM	Casa Benchmark	2.21	63			Pn	16 17 60.0	+1.9
LMCR	Lookout Mounta	2.21	61			Pn	16 18 00.1	+2.0
NHSM	Mount Saint He	2.21	334			Pn	16 17 57.4	-0.7
LUL	Lundy Lake	2.23	51			Pn	16 18 00.1	+1.8
GATR	Gnd/Air Tx Cnt	2.23	161			Pn	16 17 57.8	-0.4
MCVM	Convict Lake	2.23	65			Pn	16 17 59.9	+1.5
FIGC	Figueroa Mtn.	2.24	149			Pn	16 17 58.2	-0.2
MLAC	Mammoth, Mammo	2.24	64			Pn	16 18 00.3	+1.7
MLAC	Mammoth, Mammo baz=246,SNR=35	2.24	64	P		Pn	16 17 58.6	+0.1
MDRNC	Doe Ridge	2.25	64			Pn	16 18 00.3	+1.7
RCCR	Rock Creek Can	2.27	68			Pn	16 18 00.6	+1.6
NMTM	Middletown	2.30	339			Pn	16 17 58.4	-0.7
GAXM	Alexander Vall	2.31	332			Pn	16 17 57.9	-1.4
FTR	Fort Ross	2.33	323			Pn	16 17 58.8	-0.8
NJQ	Nojoqui County	2.34	155			Pn	16 17 59.8	+0.1
BCW	Bitter Crk WRg	2.35	137			Pn	16 18 00.4	+0.5
BCW	comp=E,365nm,0.7s			IAML			16 18 44.8	
MTUM	Tungsten Hills	2.35	72			Pn	16 18 01.6	+1.6
ORC	Owens River	2.38	65			Pn	16 18 02.4	+2.0
BHPR	Bishop	2.40	74			Pn	16 18 02.3	+1.6
GDXM	Geysers	2.41	333			Pn	16 17 59.1	-1.7
GHCM	House Creek	2.42	324			Pn	16 17 59.7	-1.0
SYP	Santa Ynez Pea	2.42	152			Pn	16 18 00.6	-0.3
MGNR	McGee Canyon	2.42	61			Pn	16 18 03.3	+2.2
GSQM	Seigler Mounta	2.44	335			Pn	16 18 00.5	-0.4
WASM	Alta Sierra Ca	2.46	111			Pn	16 18 01.6	+0.4
BENR	Benton	2.47	64			Pn	16 18 03.8	+2.1
MFBM	Five Bridges	2.48	71			Pb	16 18 04.3	-1.6
MRCM	Red Rock Canyo	2.50	66			Pb	16 18 05.1	-1.2
MCDM	Chidago Canyon	2.50	69			Pb	16 18 04.7	-1.6
EMB	Emerald Bay	2.51	23			Pn	16 18 01.7	-0.6
EMB	comp=N,289nm,1.0s			IAML			16 18 44.2	
EMB	comp=E,236nm,0.6s			IAML			16 18 49.4	
WLHM	Little Horse	2.52	101			Pn	16 18 03.4	+0.9
TIN	Tinemaha, Big	2.55	80			Pn	16 18 04.9	+2.2
TIN	Tinemaha, Big baz=263	2.55	80	P		Pn	16 18 04.1	+1.5
TIN	baz=263			Sb		Sb	16 18 40.0	+1.6
ISA	Isabella, Lake	2.55	112			Pn	16 18 02.7	+0.1
ISA	comp=N,217nm,0.9s			IAML			16 18 39.2	
ISA	comp=E,152nm,0.7s			IAML			16 18 51.4	
ISA	Isabella, Lake baz=295,SNR=109	2.55	112	P		Pn	16 18 03.3	+0.6
ISA	baz=295			S		Sn	16 18 35.4	+1.8
ARVC	Arvin baz=308,SNR=6.5	2.58	126	P		Pn	16 18 03.1	+0.2
MLNR	Milner Canyon	2.59	68			Pn	16 18 05.8	+2.5
TEJ	El Tejon	2.61	123			Pn	16 18 03.5	+0.1
HCK	Huntoon Valley	2.62	57			Pb	16 18 06.9	-1.5
CWC	Cottonwood Cre	2.66	94			Pn	16 18 06.3	+2.1
CWC	Cottonwood Cre baz=277	2.66	94	P		Pn	16 18 05.6	+1.4
OHCM	Honcut	2.66	358			Pn	16 18 05.5	+1.5
HOPS	Hopland Field	2.68	330	Pn		Pn	16 18 03.1	-1.2
HOPS	comp=E,120nm,1.5s			IAML			16 19 01.8	
HOPS	comp=N,99nm,2.1s			IAML			16 19 15.8	
GHLM	Highland Sprin	2.70	332			Pn	16 18 03.4	-1.3
TNK	Tinkers Knob	2.75	19			Pn	16 18 08.6	+3.1
LHV	Little Huntoon	2.78	54			Pn	16 18 05.7	+0.1
PNTR	Pine Nut	2.79	30			Pn	16 18 06.1	0.0
PNTR	comp=N,231nm,0.9s			IAML			16 18 55.1	
PNTR	comp=E,254nm,1.0s			IAML			16 19 20.6	
MPK	Martis Peak	2.83	22	Pn		Pn	16 18 06.9	+0.3
ORV	Oroville	2.88	358			Pn	16 18 07.4	+0.3
ORV	comp=E,88nm,1.2s			IAML			16 18 59.3	
VCNR	Virginia City	2.95	27			Pn	16 18 06.3	-2.0
VCNR	comp=E,147nm,1.1s			IAML			16 18 57.5	
VCNR	comp=N,156nm,0.7s			IAML			16 19 00.3	
OSI	Osito Audit: C baz=315	2.98	133	P		Pn	16 18 09.0	+0.5
NVAR	Mina Array Bea	3.01	53			Pn	16 18 06.3	-2.7
CCAC	Calif City Air	3.12	118			Pn	16 18 10.5	+0.1
MPMC	Manual Prospec baz=283,SNR=27	3.19	100	P		Pn	16 18 12.0	+0.4
LRMC	Laurel Mtn Rad baz=294,SNR=8.2	3.22	111	P		Pn	16 18 12.4	+0.5
EDW2	Edwards Air Fo baz=305,SNR=13	3.28	122	P		Pn	16 18 13.4	+0.8
BEKR	Beckworth	3.29	14			Pn	16 18 13.2	+0.3
BEKR	comp=E,87nm,1.1s			IAML			16 19 09.6	
PAHR	Pah Rah Range	3.41	27			Pn	16 18 12.7	-1.9
PAHR	comp=E,67nm,1.3s			IAML			16 19 17.6	
KCPM	Cahto Peak	3.48	331	Pn		Pn	16 18 15.1	-0.3
KCPM	comp=N,48nm,3.5s			IAML			16 19 30.3	
KCPM	comp=E,53nm,2.9s			IAML			16 20 14.0	
FURC	Furnace Creek, baz=275,SNR=13	3.64	92	P		Pn	16 18 18.0	+0.5
QSM	Queen of Sheba	3.71	100	Pn		Pn	16 18 19.1	+0.7
QSM	comp=N,74nm,0.8s			IAML			16 19 33.0	
QSM	comp=E,46nm,1.1s			IAML			16 19 52.6	
GWY	Greenwater Val	3.83	96	Pn		Pn	16 18 19.4	-0.8
GWY	comp=E,53nm,0.6s			IAML			16 19 26.1	
GWY	comp=N,56nm,1.8s			IAML			16 19 40.7	
BFSC	Mount Baldy Ra baz=310,SNR=6.3	3.88	128	P		Pn	16 18 21.7	+0.7
GSC	Goldstone, Bar	3.95	109			Pn	16 18 21.8	0.0
GSC	comp=E,59nm,0.9s			IAML			16 19 28.3	
GSC	comp=N,56nm,1.0s			IAML			16 19 38.5	
GSC	Goldstone, Bar baz=292,SNR=13	3.95	109	P		Pn	16 18 22.4	+0.5
KMRM	Mail Ridge	3.99	333	Pn		Pn	16 18 22.8	+0.4
KMRM	comp=N,36nm,4.3s			IAML			16 20 06.4	
KMRM	comp=E,38nm,2.3s			IAML			16 20 33.9	
TPNV	Topopah Spring	4.12	85	Pn		Pn	16 18 24.4	+0.1
TPNV	comp=E,72nm,1.4s			IAML			16 19 40.0	
TPNV	Topopah Spring baz=268,SNR=19	4.12	85	P		Pn	16 18 25.3	+1.0
KMPM	Mount Pierce	4.32	331	Pn		Pn	16 18 27.0	+0.1
KMPM	comp=E,51nm,2.6s			IAML			16 19 29.2	
KMPM	comp=N,56nm,3.8s			IAML			16 19 47.5	
SCI2	San Clemente I baz=329	4.35	147	S		Sn	16 19 20.3	+2.4
ELS	Elsinore Mount	4.42	132	Pn		Pn	16 18 27.9	-0.5
HEC	Hector,Ludlow baz=296	4.49	113	P		Pn	16 18 28.7	-0.6
TUQ	Turquoise Moun baz=288	4.58	104	P		Pn	16 18 31.2	+0.6
KHMM	Horse Mountain	4.58	337	Pn		Pn	16 18 31.4	+0.8
KHMM	comp=E,32nm,3.3s			IAML			16 19 12.1	
KHMM	comp=N,29nm,2.0s			IAML			16 20 18.4	
R11A	Troy Canyon, C	4.90	68	Pn		Pn	16 18 34.9	-0.1
R11A	comp=N,23nm,2.9s			IAML			16 20 04.4	
BMN	Battle Mountai	4.97	40	Pn		Pn	16 18 35.3	-0.7
SHPR	Sheep Range	5.00	90	Pn		Pn	16 18 36.5	+0.1
GMRC	Granite Mounta baz=294,SNR=8.5	5.01	110	P		Pn	16 18 36.4	-0.2
PFO	Pinyon Flats O	5.05	126			Pn	16 18 37.2	+0.2
PFO	Pinyon Flats O baz=309	5.05	126	P		Pn	16 18 37.5	+0.4
PMD	Palm Desert	5.08	125	Pn		Pn	16 18 36.9	-0.5
PMD	comp=N,11nm,1.6s			IAML			16 20 15.2	
PMD	comp=E,11nm,2.0s			IAML			16 20 23.5	
BELC	Belle Mtn. Jos baz=303	5.14	120	P		Pn	16 18 38.1	-0.1
MONP2	Monument Peak baz=315	5.55	131	P		Pn	16 18 44.4	+0.4
BAR	Barrett	5.55	134	Pn		Pn	16 18 43.4	-0.4
IRM	Iron Mountain baz=298	5.67	114	P		Pn	16 18 45.6	+0.1
BC3	Big Chuckawall baz=304	5.71	120	P		Pn	16 18 46.0	0.0
HUMO	Hull Mountain	6.05	349	Pn		Pn	16 18 50.5	-0.3
W13A	Hualapai Mount	6.28	102	Pn		Pn	16 18 54.4	+0.4
PDMCI	Parker Dam,Lak baz=294	6.36	110	P		Pn	16 18 55.5	+0.6
GLA	Glamis	6.48	122	Pn		Pn	16 18 57.1	+0.5
Y14A	Wickenburg	7.36	109	Pn		Pn	16 19 08.8	0.0

IDC 15 16:17:42.4±2.8,5°21'S×133°41'E,h0km,mb3.6/1, mbtmp3.9/5,ML3.8/4,Error ellipse: s-maj=108.8km s-min=25.7km az=80.0,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong 4.2nm,0.3s,baz=161,slow=22,SNR=7.6	4.82	334	Pn	Pn	16 18 55.8	-0.6
SIJI	9.0nm,0.3s,baz=261,slow=23,SNR=4.7 9.7nm,0.3s			Sn	Sn	16 19 47.0	-5.9
WRA	Warramunga Arr 0.3nm,0.3s,baz=358,slow=13,SNR=4.1 0.9nm,0.5s	14.67	177	Pn	Pn	16 21 09.9	-1.5
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=33,slow=14,SNR=2.3	14.89	210	Pn	Pn	16 21 15.3	+1.0
FITZ	0.9nm,0.3s,baz=182,slow=16,SNR=6.9 1.6nm,0.5s			Sn	Sn	16 23 52.6	-7.6
ASAR	Alice Springs 0.5nm,0.3s,baz=3.3,slow=10,SNR=16 6.1nm,0.7s	18.35	179	P	Pn	16 21 58.6	0.0
MKAR	Makanchi Array 0.3nm,0.5s,baz=117,slow=8.2,SNR=5.4 0.3nm,0.5s	68.66	325	P	P	16 28 47.9	+0.2

*NNC **15** 16:45:02.7±3.9,38°43'N×72°60'E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=30.0km s-min=20.5km az=171.0*
*SOME **15** 16:45:03.3,39°07'N×72°83'E,h15km*
*IDC **15** 16:45:03.0±4.1,37°57'N×72°40'E,h165km±37km,mb3.1/4, mbtmp3.5/6,Error ellipse: s-maj=35.9km s-min=24.1km az=171.0*

ISC 15 16:45:01.5±1.1,37°96'N±0°09×72°56'E±0°06,h150km,n18, σ3°07/25,mb3.3/4,1C-5D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay 448nm,0.2s	4.61	336	eP	Pn	16 46 11.6	+1.9
IUG	107nm,0.3s			eS	Sn	16 47 01.0	-2.0
CHM	Chimkent 101nm,0.1s	4.91	333	eP	Pn	16 46 16.6	+3.0
CHM	88nm,0.3s			eS	Sn	16 47 09.2	-0.7
DZA	Taraz 59nm,0.1s	5.01	350	eP	Pn	16 46 16.9	+1.8
DZA	149nm,0.5s			eS	Sn	16 47 09.9	-2.6
CHMS	Chumysh 3.7nm,0.6s	5.30	18	⇓P	Pn	16 46 16.4	-2.4
CHMS	3.1nm,0.6s			⇓S	Sn	16 47 14.0	-5.3
KK31	Karatay Array 13nm,0.2s,baz=153,slow=12,SNR=596	5.37	344	P	Pn	16 46 19.8	+0.1
KK31	5.7nm,0.2s,baz=162,slow=22,SNR=16			S	Sn	16 47 17.2	-3.7
TKM2	Tokmak 2 1.8nm,0.7s	5.46	24	⇑P	Pn	16 46 19.3	-1.9
TKM2	2.4nm,0.5s			⇓S	Sn	16 47 20.9	-2.6
KST	Kastek 1.9nm,0.8s	5.70	26	eP	Pn	16 46 25.8	+1.6
KST	5.8nm,0.3s			eS	Sn	16 47 25.2	-3.7
KRBS	Karabastau 0.7nm,0.2s	6.19	21	eP	Pn	16 46 38.3	+7.5
KRBS	1.9nm,0.5s			eS	Sn	16 47 46.7	+6.1
MDOK	Medeo 0.9nm,0.2s	6.21	32	eP	Pn	16 46 41.2	+10
MDOK	3.4nm,0.5s			eS	Sn	16 47 51.9	+11
KUU	Kurty 0.6nm,0.3s	6.58	25	eP	Pn	16 46 44.5	+8.7
KUU	2.3nm,0.0s			eS	Sn	16 47 57.3	+7.6
BTLS	Baital 1.2nm,0.2s	7.16	8	eP	Pn	16 46 55.5	+12
BTLS	4.5nm,0.1s			eS	Sn	16 48 16.2	+13
MKAR	Makanchi Array 0.1nm,0.3s,baz=208,slow=10,SNR=5.2	11.38	36	P	P	16 47 47.1	-0.2
GEYT	Alibeck 1.4nm,0.4s,baz=97,slow=12,SNR=5.4	11.41	274	P	Pn	16 47 39.6	-0.4
GEYT	1.6nm,0.3s,baz=112,slow=24,SNR=5.2			S	Sn	16 49 44.6	-1.5
AB31	Akbulak array 0.6nm,0.3s,baz=130,slow=14,SNR=44	14.50	325	⇓P	P	16 48 21.5	-0.5
AB31	1.4nm,0.7s,baz=133,slow=24,SNR=8.7			⇓S	Sn	16 51 00.7	+0.5
FINES	FINESS Array B 1.7nm,1.0s,baz=113,slow=14,SNR=2.0 1.7nm,1.0s	36.99	325	P	P	16 51 58.2	+2.2
ARCES	ARCESS Array B 0.3nm,0.5s,baz=111,slow=9.8,SNR=1.2 0.3nm,0.5s	40.29	337	P	P	16 52 25.1	+1.7
TORD	Torodi Ar. Bea 0.3nm,0.5s,baz=30,slow=6.1,SNR=2.2 0.3nm,0.5s	67.00	269	P	P	16 55 39.0	+0.5
WRA	Warramunga Arr 0.2nm,0.9s,baz=320,slow=4.2,SNR=1.1 0.2nm,0.9s	81.72	123	P	P	16 57 02.0	-1.4

*IDC **15** 16:48:43.0±1.7,17°02S×174°11W,h0km,mb4.3/3, mbtmp4.3/4,ML3.8/1,MS3.7/22,Error ellipse: s-maj=63.8km s-min=27.4km az=132.0*

ISC 15 16:48:47.2±1.2,17°0S±0°3×174°0W±0°3,h35km,n26, σ0°61/7,mb4.1/3,MS3.8/20,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu 6.8nm,0.3s,baz=6.1,slow=2.5,SNR=11	3.75	36	Pn	Pn	16 49 42.6	0.0
AFI	12nm,0.3s,baz=134,slow=22,SNR=1.8			Sn	Sn	16 50 25.9	+0.3
AFI	60nm,0.5s,baz=229,slow=23,SNR=4.3 39nm,0.6s			T	T	16 53 24.2	
MSVF	Nonsavu comp=Z,931nm,19.7s,baz=71,slow=32	7.59	263	LR	LR	16 52 47.4	
DZM	Mont Dzumac comp=Z,232nm,19.4s,baz=32,slow=33	19.08	251	LR	LR	16 59 03.1	
PPT	Papeete comp=Z,53nm,19.4s,baz=268,slow=33	23.36	95	LR	LR	17 01 35.2	
HNR	Honiara comp=Z,151nm,21.2s,baz=114,slow=31	26.39	283	LR	LR	17 02 20.0	
RPZ	Rata Peaks 19nm,1.1s,baz=87,slow=13,SNR=3.2 19nm,1.1s	29.50	202	P	P	16 54 48.3	+0.2
CTA	Charters Tower comp=Z,68nm,18.1s,baz=80,slow=34	37.72	259	LR	LR	17 10 18.7	
STKA	Stephens Creek comp=Z,63nm,18.4s,baz=40,slow=34	42.73	241	LR	LR	17 12 48.1	
WRA	Warramunga Arr 1.8nm,0.8s,baz=88,slow=6.4,SNR=14	48.91	258	P	P	16 57 30.9	+0.7
WRA	comp=Z,70nm,18.2s,baz=174,slow=35 1.8nm,0.8s			LR	LR	17 17 12.5	
ASAR	Alice Springs 1.5nm,0.7s,baz=84,slow=8.2,SNR=14	49.06	253	P	P	16 57 31.1	-0.1
ASAR	comp=Z,128nm,20.9s,baz=109,slow=34 1.5nm,0.7s			LR	LR	17 16 04.8	
FITZ	Fitzroy Crossi comp=Z,87nm,21.8s,baz=80,slow=33	57.30	259	LR	LR	17 20 04.2	
JCJ	Chichijima comp=Z,68nm,19.9s,baz=135,slow=30	61.02	315	LR	LR	17 19 36.4	
PETK	Petropavlovsk- comp=Z,69nm,21.6s,baz=126,slow=30	73.94	343	LR	LR	17 25 04.7	
LPIG	La Paz comp=Z,52nm,18.8s,baz=291,slow=29	74.38	58	LR	LR	17 24 27.4	
PFO	Pinyon Flats O comp=Z,54nm,19.1s,baz=214,slow=32	74.44	47	LR	LR	17 28 26.1	
KSRS	Korea Array comp=Z,22nm,19.7s,baz=75,slow=33	76.86	316	LR	LR	17 30 41.5	
ELK	Elko comp=Z,32nm,18.3s,baz=71,slow=31	79.16	41	LR	LR	17 29 18.3	
MA2	Magadan comp=Z,41nm,20.7s,baz=162,slow=31	81.47	343	LR	LR	17 31 05.1	
TXAR	Lajitas Array comp=Z,53nm,18.9s,baz=157,slow=31	81.99	56	LR	LR	17 30 59.8	
ANMO	Albuquerque comp=Z,46nm,20.9s,baz=222,slow=30	82.28	50	LR	LR	17 29 45.2	
PMSA	Palmer Station comp=Z,31nm,18.6s,baz=65,slow=35	82.99	156	LR	LR	17 36 57.5	
PDAR	Pinedale Array comp=Z,18nm,18.9s,baz=212,slow=31	83.84	42	LR	LR	17 32 10.1	
ILAR	Eielson Array comp=Z,52nm,20.9s,baz=113,slow=30	84.10	11	LR	LR	17 30 30.4	
SNAA	Sanae comp=Z,38nm,21.8s,baz=106,slow=32	91.37	177	LR	LR	17 37 45.5	
BRTR	Keskin Array B 1.6nm,0.8s,baz=57,slow=5.8,SNR=3.5	146.96	319	PKPbc	PKPab	17 08 27.5	-0.5
GERES	GERESS Array B 0.2nm,0.4s,baz=27,slow=2.4,SNR=2.5	147.59	350	PKPbc	PKiKP	17 08 29.3	-0.8

IDC 15 16:54:09.9±7.5,7°46S×154°51E,h66km±60km,mb3.0/2, mbtmp3.4/3,ML3.4/1,Error ellipse: s-maj=65.8km s-min=31.8km az=96.0,Bougainville-Solomon Islands region

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

ML3.7
ISC 15 17:02:49.3±1.3, 30.49N±0.06 × 114.19W±0.04, h15km±14km, n10, σ1.09/15, 4C, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.79**	**314**	*eP*	**Pg**	**17 03 04.8**	**+0.2**
SFX				*eS*	**Sg**	**17 03 14.8**	**-0.2**
SFX				IAML		17 03 17.1	
	comp=N,3μm,0.6s						
SFX				⇑*e*		17 03 17.1	
ECBX	**El Chinero**	**1.23**	**323**	*eP*	**Pn**	**17 03 10.7**	**-1.2**
SPIG	**San Pedro Mart**	**1.23**	**297**	*eP*	**Pn**	**17 03 12.3**	**+0.1**
SPIG				*i* S	**Sg**	**17 03 29.7**	**+0.6**
SPIG	**San Pedro Mart**	**1.23**	**297**	*eP*	**Pn**	**17 03 12.4**	**+0.2**
SPIG				⇑*e*		17 03 38.1	
SPIG				IAML		17 03 38.1	
	comp=N,931nm,0.8s						
LAPR	**La Primavera**	**1.61**	**89**	*eP*	**Pg**	**17 03 22.5**	**+2.2**
LAPR				*eS*	**Sg**	**17 03 40.9**	**-0.5**
LAPR	**La Primavera**	**1.61**	**89**	*eP*	**Pg**	**17 03 19.1**	**-1.2**
LAPR				IAML		17 04 01.4	
	comp=E,1μm,0.7s						
LAPR				⇑*e*		17 04 01.4	
LAPR				IAML		17 04 02.6	
	comp=N,1μm,0.8s						
LAPR				⇑*e*		17 04 02.6	
BAHB	**Baha de los**	**1.64**	**160**	*eP*	**Pg**	**17 03 20.1**	**-0.5**
214A	**Organ Pipe Nat**	**1.88**	**39**	*eP*	**Pn**	**17 03 21.4**	**+0.5**
214A				*eS*	**Sg**	**17 03 49.3**	**-0.5**
SVX	**San Vicente**	**1.96**	**296**	*eP*	**Pn**	**17 03 23.7**	**+1.8**
TJIG	**Tijuana**	**2.87**	**313**	*eP*	**Pg**	**17 03 44.1**	**-0.3**
TJIG				*eS*	**Sb**	**17 04 14.5**	**-0.8**

*GCMT **15** 17:06:19.8±0.4, 30.60N±0.05 × 114.38W±0.04, h19km±1km, MW4.7/74, Moment Tensor Solution. s14,c15; s74,c92; Duration: 0 Moment tensor: Scale 10^16^Nm; Mr=1.52±.14; Mθθ=0.26±.08; Mϕϕ=1.26±.09; Mrθ=0.32±.24; Mrϕ=0.34±.05; Mθϕ=0.50±.18; Best double couple: M=1.55800×10^16^ NP1:ϕ=202.00000°, δ=56.00000°, λ=-84.00000°. NP2: ϕ=12.00000°, δ=34.00000°, λ=-98.00000°. Principal axes: T 1.4730, Plg=11.0000°, Azm=288.0000°; N 0.1730, Plg=5.0000°, Azm=19.0000°; P -1.6430, Plg=78.0000°, Azm=132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **15** 17:06:20.7±1.0, 30.61N × 114.07W, h0km, mb4.3/13, mbtmp4.1/20, ML3.7/6, MS3.8/3 Error ellipse: s-maj=25.4km s-min=10.4km az=47.0*

*ECX **15** 17:06:20.0±0.4, 30.55N × 114.16W, h17km±8km, ML4.4, Fault plane solution: NP1:ϕ=110.00000°, δ=26.00000°, λ=118.00000°.*

*NEIC **15** 17:06:21.8±2.0, 30.64N±0.06 × 114.31W±0.08, h10km±1km, mb4.5/156, Md4.3/16(MEX), ML4.2(ECX), Error ellipse: s-maj=12.7km s-min=8.3km az=229.0*

*ANF **15** 17:06:24.9±0.5, 30.89N × 114.20W, h10km, ML4.4/20, Error ellipse: s-maj=8.8km s-min=2.1km az=12.0*

*MEX **15** 17:06:26.3±0.3, 30.61N × 114.25W, h10km, MD4.3*

ISC 15 17:06:21.5±1.1, 30.60N±0.03 × 114.23W±0.03, h12km±7km, n596, σ1.944/576, mb4.5/81, MS3.8/31, 1C-18D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.69**	**309**	Pg	**Pg**	**17 06 33.9**	**-1.0**
SFX	**San Felipe**	**0.69**	**309**	⇓*iP*	**Pg**	**17 06 33.5**	**-1.3**
SFX				*eS*	**Sg**	**17 06 43.9**	**+0.1**
SFX				IAML		17 06 46.4	
	comp=N,23μm,0.6s						
SFX				IAML		17 06 52.6	
	comp=E,22μm,0.7s						
ECBX	**El Chinero**	**1.11**	**321**	*eP*	**Pb**	**17 06 39.5**	**-3.2**
SPIG	**San Pedro Mart**	**1.15**	**293**	*i* Pn	**Pb**	**17 06 41.5**	**-2.0**
SPIG				*eP*	**Pn**	**17 06 44.9**	**+1.2**
SPIG				*i* Pg	**Pg**	**17 06 47.1**	**+3.4**
SPIG				*i* S	**Sg**	**17 06 59.0**	**+0.3**
SPIG	**San Pedro Mart**	**1.15**	**293**	⇓*eP*	**Pb**	**17 06 41.2**	**-2.3**
LAPR	**La Primavera**	**1.65**	**93**	*i* Pn	**Pn**	**17 06 46.9**	**-3.4**
LAPR				*eP*	**Pb**	**17 06 52.0**	**+0.1**
LAPR				*i* Pg	**Pg**	**17 06 54.8**	**+1.6**
LAPR	**La Primavera**	**1.65**	**93**	⇑*eP*	**Pn**	**17 06 47.0**	**-3.3**
RITX	**Riito Sonora**	**1.68**	**338**	*eP*	**Pg**	**17 06 56.8**	**+3.1**
BAHB	**Baha de los**	**1.75**	**160**	*i* Pn	**Pn**	**17 06 47.7**	**-4.0**
BAHB				*eP*	**Pb**	**17 06 53.3**	**-0.3**
BAHB				*i* Pg	**Pg**	**17 06 56.0**	**+0.8**
BAHB				*eS*	**Sn**	**17 07 09.6**	**-4.3**
BAHB	**Baha de los**	**1.75**	**160**	⇓*eP*	**Pn**	**17 06 47.9**	**-3.7**
214A	**Organ Pipe Nat**	**1.81**	**42**	Pn	**Pn**	**17 06 49.9**	**-2.7**
214A	**Organ Pipe Nat**	**1.81**	**42**	*eP*	**Pn**	**17 06 49.6**	**-3.0**
214A				*i* S	**Sb**	**17 07 17.7**	**+0.3**
214A	**Organ Pipe Nat**	**1.81**	**42**	P	**Pn**	**17 06 50.0**	**-2.6**
	baz=228,SNR=139						
214A				S	**Sb**	**17 07 17.6**	**+0.3**
	baz=228						
214A	**Organ Pipe Nat**	**1.81**	**42**	⇓*eP*	**Pn**	**17 06 50.1**	**-2.5**
GUVIX	**Guadalupe Vict**	**1.84**	**337**	Pn	**Pn**	**17 06 53.2**	**+0.3**
SVX	**San Vicente**	**1.88**	**293**	*eP*	**Pn**	**17 06 52.5**	**-0.9**
SVX				IAML		17 07 20.9	
	comp=E,3μm,1.0s						
SVX				IAML		17 07 30.4	
	comp=N,3μm,1.2s						
YMD	**Yuma Desert**	**1.96**	**352**	⇓*eP*	**Pn**	**17 06 52.9**	**-1.6**
113A	**Mohawk Valley,**	**2.19**	**10**		**Pn**	**17 06 55.6**	**-2.1**
UABX	**UABC, Campus M**	**2.27**	**333**	Pn	**Pn**	**17 06 57.6**	**-1.1**
CCX	**Cicese**	**2.44**	**302**	Pn	**Pn**	**17 06 59.8**	**-1.3**
CCX	**Cicese**	**2.44**	**302**	⇓*eP*	**Pb**	**17 07 05.2**	**0.0**
CCX				IAML		17 07 53.4	
	comp=E,2μm,0.9s						
CCX				IAML		17 08 00.9	
	comp=N,1μm,1.2s						
GLA	**Glamis**	**2.49**	**348**	Pn	**Pn**	**17 06 59.9**	**-2.1**
GLA	**Glamis**	**2.49**	**348**	P	**Pn**	**17 06 59.8**	**-2.1**
	baz=166,SNR=21						
GLA	**Glamis**	**2.49**	**348**	⇓*eP*	**Pn**	**17 07 00.3**	**-1.6**
YUH	**Yuha Desert**	**2.50**	**325**		**Pn**	**17 07 01.5**	**-0.4**
YUH2	**Yuha Desert**	**2.50**	**325**	⇓*eP*	**Pn**	**17 07 02.0**	**+0.1**
RMX	**La Rumorosa**	**2.54**	**322**	Pn	**Pn**	**17 07 00.2**	**-2.4**
IKP	**In-Ko-Pah, Jac**	**2.59**	**322**	P	**Pn**	**17 07 02.8**	**-0.6**
	baz=137,SNR=50						
IKP	**In-Ko-Pah, Jac**	**2.59**	**322**	*eP*	**Pb**	**17 07 09.4**	**+1.5**
CBX	**Cerro Bola**	**2.69**	**310**	Pn	**Pn**	**17 07 03.4**	**-1.3**
CBX	**Cerro Bola**	**2.69**	**310**	⇓*eP*	**Pn**	**17 07 03.6**	**-1.1**
CBX				IAML		17 07 53.3	
	comp=E,2μm,1.1s						
CBX				IAML		17 08 09.0	
	comp=N,2μm,0.7s						
SWSC	**Sam W. Stewart**	**2.69**	**331**	P	**Pn**	**17 07 03.8**	**-0.8**
	baz=146						
SWSC	**Sam W. Stewart**	**2.69**	**331**	⇓*eP*	**Pg**	**17 07 15.6**	**+2.5**
TJIG	**Tijuana**	**2.77**	**312**	*eP*	**Pn**	**17 07 04.7**	**-1.0**
TJIG				*eS*	**Sn**	**17 07 34.3**	**-4.8**
TKX	**Tecate**	**2.82**	**315**	Pn	**Pn**	**17 07 05.1**	**-1.3**
BAR	**Barrett**	**2.94**	**315**		**Pn**	**17 07 06.1**	**-1.9**
BAR	**Barrett**	**2.94**	**315**	*eP*	**Pn**	**17 07 07.9**	**-0.1**
MONP2	**Monument Peak**	**2.95**	**321**	P	**Pn**	**17 07 07.3**	**-1.0**
	baz=136,SNR=25						
MONP2	**Monument Peak**	**2.95**	**321**	⇓*eP*	**Pb**	**17 07 15.4**	**+1.3**
TJX	**Tijuana**	**3.07**	**309**	Pn	**Pn**	**17 07 08.9**	**-0.9**
SDRC	**San Diego Road**	**3.14**	**313**	⇓*eP*	**Pb**	**17 07 19.1**	**+1.8**
BLYC	**Blythe**	**3.15**	**356**	Pn	**Pn**	**17 07 09.6**	**-1.2**
EML	**El Monte Cty P**	**3.19**	**316**	*eP*	**Pb**	**17 07 18.6**	**+0.6**
BC3	**Big Chuckawall**	**3.21**	**342**	P	**Pn**	**17 07 11.5**	**-0.4**
	baz=159						
HSIG		**3.26**	**118**	Pn	**Pn**	**17 07 10.4**	**-2.1**
HSIG		**3.26**	**118**	*eP*	**Pn**	**17 07 12.2**	**-0.2**
109C	**Camp Elliot, M**	**3.34**	**314**		**Pn**	**17 07 14.5**	**+1.0**
109C	**Camp Elliot, M**	**3.34**	**314**	Pb	**Pb**	**17 07 22.0**	**+1.3**
	baz=128						
109C				Sb	**Sb**	**17 08 03.2**	**+1.9**
	baz=128						
TUC	**Tucson**	**3.40**	**59**		**Pn**	**17 07 12.1**	**-2.4**
TUC	**Tucson**	**3.40**	**59**	*eP*	**Pn**	**17 07 11.7**	**-2.7**
TUC	**Tucson**	**3.40**	**59**	P	**Pn**	**17 07 12.7**	**-1.8**
	baz=245						
TUC				Sb	**Sg**	**17 08 07.2**	**-3.6**
	baz=245						
Y14A	**Wickenburg**	**3.48**	**17**		**Pn**	**17 07 14.3**	**-1.2**
TPFO	**Pinon Flats**	**3.54**	**328**	P	**Pn**	**17 07 14.8**	**-1.5**
	baz=144						
PMD	**Palm Desert**	**3.54**	**330**	Pn	**Pn**	**17 07 15.3**	**-0.9**
PFO	**Pinyon Flats O**	**3.54**	**328**	Pn	**Pn**	**17 07 17.6**	**+1.2**
	comp=N,0.8nm,0.3s,baz=154,slow=15,SNR=3.1						
PFO				Pg	**Pg**	**17 07 28.4**	**-1.0**
	comp=N,3.4nm,0.3s,baz=188,slow=14,SNR=14						
PFO				Lg	Lg	17 08 18.0	
	comp=N,17nm,0.3s,baz=41,slow=3.9,SNR=5.9						
PFO				LR	LR	17 08 45.6	
	comp=N,2μm,20.8s,baz=164,slow=40 comp=N,7.8nm,0.6s						
PFO	**Pinyon Flats O**	**3.54**	**328**		**Pn**	**17 07 16.6**	**+0.2**
PFO	**Pinyon Flats O**	**3.54**	**328**	P	**Pn**	**17 07 15.2**	**-1.2**
	baz=144						
IRM	**Iron Mountain**	**3.63**	**348**	P	**Pn**	**17 07 16.1**	**-1.4**
	baz=166						
PDMCI	**Parker Dam,Lak**	**3.69**	**1**	P	**Pn**	**17 07 18.0**	**-0.3**
	baz=181,SNR=11						
BELC	**Belle Mtn. Jos**	**3.70**	**337**	P	**Pn**	**17 07 18.3**	**-0.3**
	baz=154						
SRIG	**Santa Rosalia**	**3.71**	**151**	Pn	**Pn**	**17 07 19.9**	**+1.4**
MURC	**Murrieta**	**3.90**	**321**	Pg	**Pg**	**17 07 35.0**	**-1.3**
	baz=136						
MURC				Sb	**Sb**	**17 08 20.6**	**+3.1**
	baz=136						
ELS	**Elsinore Mount**	**4.07**	**319**	Pn	**Pn**	**17 07 22.7**	**-0.9**
319A	**Douglas**	**4.32**	**78**		**Pn**	**17 07 25.2**	**-1.9**
GMRC	**Granite Mounta**	**4.34**	**344**	P	**Pn**	**17 07 29.2**	**+1.8**
	baz=162						
X16A	**Lo Mia Camp, P**	**4.47**	**31**	Pn	**Pn**	**17 07 28.1**	**-1.1**
W13A	**Hualapai Mount**	**4.49**	**4**		**Pn**	**17 07 29.6**	**0.0**
BFSC	**Mount Baldy Ra**	**4.64**	**322**	Pg	**Pg**	**17 07 48.3**	**-2.1**
	baz=138						
RRX	**Edison Barstow**	**4.85**	**332**	Pg	**Pg**	**17 07 53.6**	**-0.9**
	baz=149						
PASC	**Pasadena Art C**	**4.88**	**318**	Pn	**Pn**	**17 07 34.6**	**-0.2**
DECC	**Green Verdugo**	**5.03**	**317**	P	**Pn**	**17 07 37.3**	**+0.6**
	baz=133						
GSC	**Goldstone, Bar**	**5.16**	**336**	Pn	**Pn**	**17 07 38.5**	**-0.1**
EDW2	**Edwards Air Fo**	**5.31**	**324**	Pb	**Pb**	**17 07 55.6**	**+1.2**
	baz=140						
X18A	**Snowflake**	**5.33**	**42**		**Pn**	**17 07 40.2**	**-0.8**
WUAZ	**Wupatki**	**5.46**	**25**		**Pn**	**17 07 42.7**	**0.0**
WUAZ	**Wupatki**	**5.46**	**25**	P	**Pn**	**17 07 42.8**	**0.0**
	baz=208,SNR=8.0						
CCAC	**Calif City Air**	**5.54**	**326**	Pn	**Pn**	**17 07 43.8**	**0.0**
LRMC	**Laurel Mtn Rad**	**5.66**	**330**	Pg	**Pg**	**17 08 09.0**	**-0.9**
	baz=147						
SCZ2	**Santa Cruz Isl**	**5.69**	**308**	Pg	**Pg**	**17 08 09.4**	**-1.1**
	baz=123						
QSM	**Queen of Sheba**	**5.78**	**338**	Pn	**Pn**	**17 07 45.4**	**-1.7**
121A	**Cookes Peak, D**	**5.83**	**69**		**Pn**	**17 07 46.7**	**-1.2**
121A	**Cookes Peak, D**	**5.83**	**69**	P	**Pn**	**17 07 47.4**	**-0.5**
	baz=255						
W18A	**Petrified Fore**	**5.88**	**39**		**Pn**	**17 07 48.0**	**-0.6**
W18A	**Petrified Fore**	**5.88**	**39**	P	**Pn**	**17 07 48.1**	**-0.6**
	baz=223,SNR=16						
GWY	**Greenwater Val**	**5.93**	**341**	Pn	**Pn**	**17 07 48.1**	**-1.2**
SHPR	**Sheep Range**	**5.94**	**353**	Pn	**Pn**	**17 07 51.1**	**+1.8**
U15A	**North Rim**	**6.03**	**15**		**Pn**	**17 07 51.8**	**+1.1**
MPMC	**Manual Prospec**	**6.08**	**334**	Pg	**Pg**	**17 08 17.3**	**-0.8**
	baz=151						
BCW	**Bitter Crk WRg**	**6.14**	**316**	Pn	**Pn**	**17 07 51.6**	**-0.5**
ISA	**Isabella, Lake**	**6.17**	**326**	Pn	**Pn**	**17 07 50.9**	**-1.6**
ISA	**Isabella, Lake**	**6.17**	**326**	Pg	**Pg**	**17 08 18.9**	**-0.8**
	baz=142						
LCMT	**Little Creek M**	**6.44**	**7**		**Pn**	**17 07 57.3**	**+1.0**
TPNV	**Topopah Spring**	**6.55**	**346**		**Pn**	**17 07 58.0**	**+0.2**
CWC	**Cottonwood Cre**	**6.65**	**332**	P	**Pn**	**17 08 01.2**	**+2.1**
	baz=149						
PRN	**Pahroc Range**	**6.82**	**354**		**Pn**	**17 08 02.0**	**+0.6**
GRAC	**Grapevine Rang**	**6.89**	**339**	Pn	**Pn**	**17 08 01.4**	**-0.9**
CCUT	**Cedar City**	**6.97**	**6**	Pn	**Pn**	**17 08 05.1**	**+1.6**
PKCU	**Pink Cliffs**	**7.01**	**13**		**Pn**	**17 08 05.5**	**+1.3**
SZCU	**Shurtz Canyon**	**7.04**	**7**		**Pn**	**17 08 05.8**	**+1.3**
S11A	**Rachel**	**7.13**	**351**	Pn	**Pn**	**17 08 04.1**	**-1.6**
PAGB	**Antelope Grade**	**7.18**	**317**		**Pn**	**17 08 04.8**	**-1.6**
LCH	**Last Chance Ra**	**7.19**	**338**		**Pn**	**17 08 06.0**	**-0.6**
LPIG	**La Paz**	**7.36**	**151**	LR	LR	17 10 49.1	
	comp=N,1μm,20.4s,baz=337,slow=37						
MTPU	**Mount Pierson**	**7.61**	**12**		**Pn**	**17 08 13.9**	**+1.4**
MNTX	**Cornudas Mount**	**7.66**	**80**	Pn	**Pn**	**17 08 12.1**	**-0.9**
MNTX	**Cornudas Mount**	**7.66**	**80**	P	**Pn**	**17 08 12.5**	**-0.5**
	baz=266						
R11A	**Troy Canyon, C**	**7.81**	**352**		**Pn**	**17 08 15.1**	**0.0**
R11A	**Troy Canyon, C**	**7.81**	**352**	P	**Pn**	**17 08 14.7**	**-0.4**
	baz=171						
ANMO	**Albuquerque**	**7.85**	**54**	Pn	**Pn**	**17 08 15.8**	**+0.2**
	comp=N,0.4nm,0.3s,baz=244,slow=12,SNR=4.5						
ANMO				Lg	Lg	17 10 34.8	
	comp=N,0.5nm,0.3s,baz=324,slow=16,SNR=3.1						
ANMO				LR	LR	17 11 42.7	
	comp=N,650nm,20.0s,baz=240,slow=42 comp=N,3.8nm,0.9s						
ANMO	**Albuquerque**	**7.85**	**54**	Pn	**Pn**	**17 08 13.0**	**-2.7**
ANMO	**Albuquerque**	**7.85**	**54**	P	**Pn**	**17 08 16.5**	**+0.9**
	baz=240						
TPH	**Tonopah**	**7.85**	**342**		**Pn**	**17 08 13.8**	**-1.9**
SLBS	**Sierra La Lagu**	**7.88**	**150**	Pn	**Pn**	**17 08 16.1**	**+0.2**
PSUT	**Pine Spring**	**7.92**	**2**		**Pn**	**17 08 16.8**	**+0.2**
MVU	**Marysvale**	**8.05**	**11**		**Pn**	**17 08 22.8**	**+4.3**
MSU	**Marysvale**	**8.07**	**12**		**Pn**	**17 08 20.9**	**+2.2**
TCRU	**Three Creeks R**	**8.12**	**10**	Pn	**Pn**	**17 08 20.3**	**+0.9**
MVCO	**Mesa Verde**	**8.13**	**34**	Pn	**Pn**	**17 08 20.5**	**+1.0**
MVCO	**Mesa Verde**	**8.13**	**34**	P	**Pn**	**17 08 19.6**	**+0.1**
	baz=218						
SPR3	**Spring Creek 3**	**8.38**	**359**	Pn	**Pn**	**17 08 21.6**	**-1.3**
LHV	**Little Huntoon**	**8.40**	**336**	Pn	**Pn**	**17 08 23.3**	**+0.3**
NV11	**Mina Array Sit**	**8.45**	**339**		**Pn**	**17 08 22.1**	**-1.7**
NVAR	**Mina Array Bea**	**8.50**	**338**	Pn	**Pn**	**17 08 28.2**	**+3.7**
	comp=N,1.8nm,0.9s,baz=166,slow=14,SNR=6.5						
NVAR	**Mina Array Bea**	**8.50**	**338**	Pn	**Pn**	**17 08 24.6**	**0.0**
Q16A	**Castle Valley**	**8.67**	**16**		**Pn**	**17 08 28.2**	**+1.4**
RYN	**Ryan**	**8.75**	**337**	Pn	**Pn**	**17 08 27.1**	**-0.8**
PV13	**Radium Mtn., P**	**8.76**	**29**	Pn	**Pn**	**17 08 28.4**	**+0.2**
PV10	**Paradox Valley**	**8.86**	**28**	Pn	**Pn**	**17 08 30.1**	**+0.6**
PV11	**David Mesa, Pa**	**8.86**	**29**	Pn	**Pn**	**17 08 28.9**	**-0.6**
PV23	**Carpenter Ridg**	**8.93**	**27**		**Pn**	**17 08 32.4**	**+1.8**
CMB	**Columbia Colle**	**8.99**	**327**	Pn	**Pn**	**17 08 30.0**	**-1.1**
KVN	**Kaiserville**	**9.01**	**340**	Pn	**Pn**	**17 08 30.2**	**-1.3**
SRU	**San Rafael Swe**	**9.02**	**19**		**Pn**	**17 08 33.4**	**+1.7**
TMUT	**Trail Mountain**	**9.02**	**15**		**Pn**	**17 08 34.0**	**+2.3**
PV21	**Cone Mtn., Par**	**9.04**	**27**	Pn	**Pn**	**17 08 31.9**	**-0.1**
PV15	**Paradox Valley**	**9.06**	**30**	Pn	**Pn**	**17 08 31.1**	**-1.2**
PV07	**Paradox Valley**	**9.07**	**29**		**Pn**	**17 08 33.6**	**+1.2**
PV22	**Blue Mesa, Par**	**9.09**	**28**	Pn	**Pn**	**17 08 32.6**	**-0.1**
CPRX	**Cap Rock**	**9.14**	**72**	Pn	**Pn**	**17 08 33.2**	**-0.1**
TX31	**Lajitas Ar. Si**	**9.25**	**95**	Pn	**Pn**	**17 08 35.6**	**+0.8**
TX32	**Lajitas Array**	**9.25**	**95**	Pn	**Pn**	**17 08 35.2**	**+0.4**
TXAR	**Lajitas Array**	**9.25**	**95**	Pn	**Pn**	**17 08 35.4**	**+0.6**
	comp=N,0.9nm,0.3s,baz=260,slow=15,SNR=22						
TXAR				Lg	Lg	17 11 13.1	
	comp=N,0.4nm,0.3s,baz=273,slow=24,SNR=4.5 comp=N,0.9nm,0.3s						
P17A	**Butcher Ranch,**	**9.30**	**17**		**Pn**	**17 08 36.0**	**+0.6**
YERR	**Yerington**	**9.32**	**335**	Pn	**Pn**	**17 08 34.7**	**-1.0**
S22A	**4UR Ranch, Cre**	**9.40**	**39**	Pn	**Pn**	**17 08 37.8**	**+0.8**
S22A	**4UR Ranch, Cre**	**9.40**	**39**	P	**Pn**	**17 08 38.1**	**+1.2**
	baz=224						
NLU	**North Lily Min**	**9.49**	**10**	Pn	**Pn**	**17 08 38.2**	**0.0**
PNTR	**Pine Nut**	**9.54**	**334**	Pn	**Pn**	**17 08 38.2**	**-0.7**
P18A	**Preston Nutter**	**9.57**	**19**		**Pn**	**17 08 39.9**	**+0.5**
MPU	**Maple Canyon**	**9.63**	**12**	Pn	**Pn**	**17 08 40.6**	**+0.6**
DUG	**Dugway, Tooele**	**9.64**	**7**	Pn	**Pn**	**17 08 40.8**	**+0.7**
DUG	**Dugway, Tooele**	**9.64**	**7**	P	**Pn**	**17 08 41.2**	**+1.1**
	baz=187						
EMB	**Emerald Bay**	**9.64**	**332**	Pn	**Pn**	**17 08 37.6**	**-2.7**
MPK	**Martis Peak**	**9.89**	**333**	Pn	**Pn**	**17 08 42.1**	**-1.6**
PAHR	**Pah Rah Range**	**10.01**	**337**	Pn	**Pn**	**17 08 47.7**	**+2.4**
BMN	**Battle Mountai**	**10.10**	**347**	Pn	**Pn**	**17 08 46.8**	**+0.3**
SDCO	**Great Sand Dun**	**10.15**	**43**	Pn	**Pn**	**17 08 48.0**	**+0.7**
SDCO	**Great Sand Dun**	**10.15**	**43**	P	**Pn**	**17 08 49.1**	**+1.9**
	baz=229						
ELK	**Elko**	**10.15**	**356**	Pn	**Pn**	**17 08 48.1**	**+0.9**
	comp=N,0.1nm,0.3s,baz=167,slow=10,SNR=5.3						
ELK				LR	LR	17 12 57.3	
	comp=N,276nm,18.7s,baz=180,slow=39 comp=N,1.5nm,0.9s						
ELK	**Elko**	**10.15**	**356**	Pn	**Pn**	**17 08 47.4**	**+0.2**
JLU	**Jordanelle**	**10.23**	**12**	Pn	**Pn**	**17 08 48.0**	**-0.3**
MSTX	**Muleshoe**	**10.26**	**68**	Pn	**Pn**	**17 08 49.0**	**+0.3**
MSTX	**Muleshoe**	**10.26**	**68**	P	**Pn**	**17 08 50.8**	**+2.1**
	baz=255						
CTU	**Camp Tracy**	**10.27**	**11**	Pn	**Pn**	**17 08 49.0**	**+0.3**
BGU	**Big Grassy Mou**	**10.35**	**5**	Pn	**Pn**	**17 08 48.3**	**-1.5**
SMCO	**Snowmass**	**10.42**	**33**	Pn	**Pn**	**17 08 50.9**	**-0.1**
T25A	**Trinidad**	**10.44**	**49**	Pn	**Pn**	**17 08 54.8**	**+3.6**
T25A	**Trinidad**	**10.44**	**49**	P	**Pn**	**17 08 53.4**	**+2.2**
	baz=235						
BEKR	**Beckworth**	**10.51**	**333**	Pn	**Pn**	**17 08 50.3**	**-1.8**
RDMU	**Red Mountain**	**10.64**	**20**		**Pn**	**17 08 55.3**	**+1.4**
O20A	**White River Ci**	**10.69**	**26**		**Pn**	**17 08 55.8**	**+1.2**
O20A	**White River Ci**	**10.69**	**26**	P	**Pn**	**17 08 55.7**	**+1.1**
	baz=210						
TCUT	**Toone Canyon**	**10.74**	**12**	Pn	**Pn**	**17 08 56.8**	**+1.5**
HWUT	**Hardware Ranch**	**11.19**	**10**	Pn	**Pn**	**17 09 02.9**	**+1.5**
HVU	**Hansel Valley**	**11.21**	**6**	Pn	**Pn**	**17 09 02.2**	**+0.5**
AMTX	**Amarillo**	**11.39**	**65**		**Pn**	**17 09 04.2**	**0.0**
AMTX	**Amarillo**	**11.39**	**65**	P	**Pn**	**17 09 04.7**	**+0.6**
	baz=253						
ISCO	**Idaho Springs**	**11.56**	**35**	Pn	**Pn**	**17 09 06.7**	**+0.1**
ISCO	**Idaho Springs**	**11.56**	**35**	P	**Pn**	**17 09 07.2**	**+0.6**
	baz=221						
N23A	**Red Feather La**	**12.27**	**31**	Pn	**Pn**	**17 09 18.1**	**+1.8**
N23A	**Red Feather La**	**12.27**	**31**	P	**Pn**	**17 09 16.7**	**+0.4**
	baz=216						
MOD	**Modoc Plateau**	**12.29**	**338**		**Pn**	**17 09 20.1**	**+3.7**
WVOR	**Wild Horse Val**	**12.32**	**345**		**Pn**	**17 09 17.8**	**+1.0**
AHID	**Auburn Hatcher**	**12.39**	**11**		**Pn**	**17 09 19.4**	**+1.5**
RWWY	**Rawlins**	**12.43**	**25**	Pn	**Pn**	**17 09 18.5**	**+0.2**
JCT	**Junction City**	**12.44**	**87**	Pn	**Pn**	**17 09 18.9**	**+0.5**
ABTX	**Abilene, Hawle**	**12.60**	**77**	Pn	**Pn**	**17 09 20.2**	**-0.3**
ABTX	**Abilene, Hawle**	**12.60**	**77**	P	**Pn**	**17 09 22.0**	**+1.5**
	baz=266						
KSCO	**Kaye Shedlock'**	**12.69**	**46**	Pn	**Pn**	**17 09 20.7**	**-1.2**
BW06	**Boulder Array**	**12.70**	**16**		**Pn**	**17 09 26.4**	**+4.2**
BW06	**Boulder Array**	**12.70**	**16**	P	**Pn**	**17 09 23.8**	**+1.7**
	baz=199						
PD31	**Pinedale Array**	**12.70**	**16**		**Pn**	**17 09 24.7**	**+2.6**
PDAR	**Pinedale Array**	**12.70**	**16**	Pn	**Pn**	**17 09 25.2**	**+3.1**
	comp=N,0.1nm,0.3s,baz=194,slow=12,SNR=11						
PDAR				Lg	Lg	17 13 04.9	
	comp=N,0.2nm,0.3s,baz=221,slow=37,SNR=2.1 comp=N,1.2nm,0.8s						
PDAR	**Pinedale Array**	**12.70**	**16**	Pn	**Pn**	**17 09 24.1**	**+2.0**
PHWY	**Pilot Hill**	**12.81**	**31**	Pn	**Pn**	**17 09 24.7**	**+1.0**
MFID	**Camas Ranch**	**12.85**	**355**	Pn	**Pn**	**17 09 28.2**	**+4.2**
HLID	**Hailey**	**12.94**	**359**	Pn	**Pn**	**17 09 26.6**	**+1.3**
HLID	**Hailey**	**12.94**	**359**	P	**Pn**	**17 09 26.2**	**+1.0**
	baz=179						
REDW	**Red Top Meadow**	**13.02**	**11**	Pn	**Pn**	**17 09 27.6**	**+1.2**
ZAIG	**Zacatecas**	**13.02**	**124**	Pn	**Pn**	**17 09 26.9**	**+0.4**
TPAW	**Teton Pass**	**13.12**	**11**		**Pn**	**17 09 29.1**	**+1.2**
833A	**Chaparral WMA,**	**13.13**	**96**	Pn	**Pn**	**17 09 27.5**	**-0.3**
SNOW	**Snow King Moun**	**13.13**	**11**	Pn	**Pn**	**17 09 26.1**	**-1.8**
J08A	**Circle Bar Ran**	**13.17**	**346**		**Pn**	**17 09

HRY	**Holter Researc**	**16.19**	**6**	Pn		**Pn**	**17 10 08.1**	**-0.8**
MSO	**Missoula**	**16.20**	**1**			**Pn**	**17 10 08.7**	**-0.3**
MSO	**Missoula**	**16.20**	**1**	P		**Pn**	**17 10 10.0**	**+1.0**
	baz=181							
HAWA	**Hanford**	**16.29**	**347**	Pn		**Pn**	**17 10 09.8**	**-0.2**
TUL1	**Leonard**	**16.30**	**66**	Pn		**Pn**	**17 10 08.3**	**-1.9**
TUL1	**Leonard**	**16.30**	**66**	P		**Pn**	**17 10 11.5**	**+1.2**
	baz=257							
X37A	**Clayton**	**16.38**	**71**	P		**P**	**17 10 15.2**	**+1.1**
Z38A	**Mt. Pleasant**	**16.55**	**76**	Pn		**Pn**	**17 10 12.9**	**-0.6**
Z38A				IAmb		IAmb	17 10 19.2	
	comp=Z,39nm,1.2s							
KSU1	**Kansas State U**	**16.75**	**55**			**Pn**	**17 10 15.8**	**-0.1**
KSU1				IAmb		IAmb	17 10 20.8	
	comp=Z,40nm,1.2s							
KSU1	**Kansas State U**	**16.75**	**55**	P		**P**	**17 10 17.6**	**-0.5**
	baz=246							
NATX	**Nacogdoches**	**16.79**	**81**	Pn		**Pn**	**17 10 15.7**	**-0.8**
NATX				IAmb		IAmb	17 10 32.1	
	comp=Z,39nm,1.2s							
RLO	**Rose Lookout**	**16.97**	**66**	Pn		**Pn**	**17 10 18.2**	**-0.5**
RLO				IAmb		IAmb	17 10 47.4	
	comp=Z,12nm,1.1s							
JTMT	**Jette**	**17.12**	**360**	Pn		**Pn**	**17 10 18.2**	**-2.4**
LAO	**LASA Array**	**17.22**	**19**	P		**Pn**	**17 10 22.5**	**+0.7**
LAO				IAmb		IAmb	17 10 31.0	
	comp=Z,54nm,1.1s							
LAO	**LASA Array**	**17.22**	**19**	P		**P**	**17 10 23.8**	**+0.5**
	baz=204,SNR=23							
K31A	**O'Neill**	**17.24**	**42**			**Pn**	**17 10 22.5**	**+0.4**
C09A	**Chrisman Ranch**	**17.45**	**351**	Pn		**Pn**	**17 10 24.1**	**-0.5**
E03A	**Lebam**	**17.49**	**338**	Pn		**Pn**	**17 10 23.6**	**-1.5**
E03A				IAmb		IAmb	17 10 34.0	
	comp=Z,49nm,1.0s							
U38A	**Gravette**	**17.53**	**65**	Pn		**Pn**	**17 10 23.0**	**-2.7**
D05A	**Enumclaw**	**17.61**	**342**	Pn		**Pn**	**17 10 23.5**	**-3.1**
D05A				IAmb		IAmb	17 10 49.5	
	comp=Z,56nm,1.3s							
EGMT	**Eagleton**	**17.73**	**10**	P		**P**	**17 10 30.7**	**+1.6**
EGMT	**Eagleton**	**17.73**	**10**	P		**P**	**17 10 30.3**	**+1.3**
	baz=193,SNR=13							
NEW	**Newport**	**17.77**	**354**	P		**P**	**17 10 31.2**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=179,slow=14,SNR=5.0							
NEW				LR		LR	17 17 48.6	
	comp=Z,240nm,18.6s,baz=178,slow=39							
	comp=Z,5.1nm,0.8s							
NEW	**Newport**	**17.77**	**354**	P		**P**	**17 10 30.9**	**+1.4**
NEW	**Newport**	**17.77**	**354**	P		**P**	**17 10 29.7**	**+0.2**
	baz=172							
MIAR	**Mount Ida**	**17.84**	**72**	P		**P**	**17 10 30.8**	**+0.5**
MIAR	**Mount Ida**	**17.84**	**72**	P		**P**	**17 10 31.3**	**+1.1**
	baz=264							
HHAR	**Hobbs**	**17.85**	**66**	Pn		**Pn**	**17 10 27.7**	**-2.0**
B08A	**Colville Reser**	**18.16**	**349**	P		**P**	**17 10 34.2**	**+0.6**
N35A	**Tabor**	**18.20**	**51**	Pn		**Pn**	**17 10 31.2**	**-2.8**
SUSD	**Miller**	**18.33**	**37**			**P**	**17 10 37.2**	**+1.6**
SUSD				IAmb		IAmb	17 10 39.7	
	comp=Z,53nm,1.1s							
WALA	**Waterton Lakes**	**18.43**	**1**	P		**Pn**	**17 10 38.0**	**+1.1**
S39A	**Bolivar**	**18.67**	**62**	P		**P**	**17 10 39.6**	**+0.2**
WHAR	**Wooly Hollow**	**18.99**	**70**	P		**P**	**17 10 42.9**	**0.0**
E28A	**Huff**	**19.09**	**30**	P		**Pn**	**17 10 45.0**	**+0.3**
P38A	**Dawn**	**19.14**	**56**	P		**P**	**17 10 44.5**	**-0.1**
ECSD	**EROS Data Cent**	**19.15**	**42**	P		**Pn**	**17 10 45.5**	**0.0**
ECSD	**EROS Data Cent**	**19.15**	**42**	P		**Pn**	**17 10 46.5**	**+0.9**
	baz=233,SNR=6.9							
FCAR	**Ozark Folk Cen**	**19.21**	**68**	P		**P**	**17 10 44.8**	**-0.6**
MGMO	**Mountain Grove**	**19.35**	**64**	P		**Pn**	**17 10 47.5**	**-0.4**
DGMT	**Dagmar**	**19.42**	**20**	P		**Pn**	**17 10 48.9**	**+0.3**
DGMT	**Dagmar**	**19.42**	**20**	P		**Pn**	**17 10 49.4**	**+0.7**
	baz=207							
R40A	**Maddies Statio**	**19.64**	**61**	P		**Pn**	**17 10 50.9**	**-0.5**
N38A	**Joes South For**	**19.81**	**53**	P		**P**	**17 10 52.4**	**+0.6**
P40A	**Paris**	**20.18**	**58**	P		**P**	**17 10 56.6**	**+0.8**
VBMS	**Vicksburg**	**20.30**	**79**	P		**P**	**17 10 56.5**	**-0.6**
VBMS	**Vicksburg**	**20.30**	**79**	P		Pn	17 10 58.5	-0.7
	baz=272							
SCIA	**State Center**	**20.30**	**50**	P		Pn	17 10 58.2	-1.0
SCIA				IAmb		IAmb	17 11 02.7	
	comp=Z,15nm,0.8s							
SCIA	**State Center**	**20.30**	**50**	P		Pn	17 10 59.5	+0.3
	baz=244							
CCM	**Cathedral Cave**	**20.36**	**62**	P		**P**	**17 10 57.9**	**+0.2**
CCM	**Cathedral Cave**	**20.36**	**62**	P		**P**	**17 10 58.4**	**+0.6**
	baz=256							
MDND	**Maddock**	**20.55**	**29**			**P**	**17 11 00.3**	**+0.4**
MDND	**Maddock**	**20.55**	**29**	P		Pn	17 11 01.6	-0.5
	baz=219							
F33A	**5 Mile Ranch,**	**20.66**	**38**	P		**P**	**17 11 01.4**	**+0.3**
LLLB	**Lillooet**	**20.79**	**346**	P		**P**	**17 11 03.0**	**+0.6**
LLLB				IAmb		IAmb	17 11 09.3	
	comp=Z,24nm,1.3s							
K38A	**Parkersburg**	**20.94**	**49**	P		**P**	**17 11 03.8**	**-0.2**
K38A				IAmb		IAmb	17 11 33.3	
	comp=Z,26nm,1.1s							
FVM	**French Village**	**20.97**	**63**	P		**P**	**17 11 04.7**	**+0.3**
FVM				IAmb		IAmb	17 11 08.3	
	comp=Z,25nm,1.5s							
I37A	**Lemond, Waseca**	**21.23**	**45**	P		**P**	**17 11 07.2**	**+0.1**
I37A				IAmb		IAmb	17 11 20.8	
	comp=Z,35nm,1.2s							
SLM	**Saint Louis**	**21.27**	**61**	P		**P**	**17 11 07.4**	**-0.2**
N41A	**Harden Midland**	**21.45**	**56**	P		**P**	**17 11 10.3**	**+0.8**
L40A	**Anamosa**	**21.71**	**52**	P		**P**	**17 11 13.0**	**+0.6**
S44A	**Carbondale**	**21.81**	**64**	P		**P**	**17 11 14.2**	**+0.7**
S44A				IAmb		IAmb	17 11 15.4	
	comp=Z,19nm,1.1s							
P43A	**Skaggs, Pawnee**	**22.08**	**59**	P		**P**	**17 11 16.9**	**+0.6**
P43A				IAmb		IAmb	17 11 21.0	
	comp=Z,34nm,1.2s							
CMIG	**Matias Romero**	**22.18**	**123**	P		**P**	**17 11 17.9**	**+0.3**
	comp=Z,20nm,1.1s,baz=323,slow=11,SNR=14							
CMIG				LR		LR	17 19 51.6	
	comp=Z,380nm,18.2s,baz=292,slow=37							
	comp=Z,20nm,1.1s							
F36A	**Milaca**	**22.19**	**41**	P		**P**	**17 11 18.5**	**+1.0**
F36A				IAmb		IAmb	17 11 21.2	
	comp=Z,15nm,1.1s							
SPMN	**Marine on St.**	**22.24**	**43**	P		**P**	**17 11 18.2**	**+0.2**
SPMN				IAmb		IAmb	17 11 51.4	
	comp=Z,7.6nm,0.6s							
Q44A	**Meyer Farm, Va**	**22.26**	**61**	P		**P**	**17 11 18.8**	**+0.6**
Q44A				IAmb		IAmb	17 11 20.2	
	comp=Z,20nm,0.9s							
Z47A	**Carrollton**	**22.34**	**77**	P		**P**	**17 11 18.7**	**-0.5**
PLAL	**Pickwick Lake**	**22.39**	**72**	P		**P**	**17 11 19.8**	**0.0**
HDIL	**Hopedale**	**22.52**	**57**	P		**P**	**17 11 20.9**	**-0.1**
HDIL	**Hopedale**	**22.52**	**57**	P		**P**	**17 11 21.4**	**+0.3**
	baz=252							
AGMN	**Agassiz Nation**	**22.56**	**33**	P		**P**	**17 11 21.8**	**+0.4**
AGMN				IAmb		IAmb	17 11 54.2	
	comp=Z,23nm,1.4s							
AGMN	**Agassiz Nation**	**22.56**	**33**	P		**P**	**17 11 22.0**	**+0.6**
	baz=225							
WVT	**Waverly**	**22.69**	**69**	P		**P**	**17 11 23.3**	**+0.3**
WVT	**Waverly**	**22.69**	**69**	P		**P**	**17 11 23.5**	**+0.5**
	baz=264							
JFWS	**Jewell Farm**	**22.72**	**51**	P		**P**	**17 11 22.8**	**-0.4**
JFWS				IAmb		IAmb	17 11 26.6	
	comp=Z,27nm,1.2s							
JFWS	**Jewell Farm**	**22.72**	**51**	P		**P**	**17 11 23.8**	**+0.6**
	baz=246							
L42A	**Oliver, Polo**	**22.75**	**53**	P		**P**	**17 11 23.4**	**-0.1**
I40A	**Norwalk**	**22.91**	**48**	P		**P**	**17 11 25.0**	**-0.1**
I40A				IAmb		IAmb	17 11 31.7	
	comp=Z,21nm,1.1s							
OLIL	**Olney**	**22.92**	**62**	P		**P**	**17 11 25.8**	**+0.5**
OLIL				IAmb		IAmb	17 11 27.2	
	comp=Z,23nm,1.1s							
O44A	**Mansfield**	**23.00**	**59**	P		**P**	**17 11 26.0**	**-0.1**
O44A				IAmb		IAmb	17 11 30.2	
	comp=Z,20nm,1.2s							
X48A	**Hartselle**	**23.21**	**73**	P		**P**	**17 11 28.3**	**0.0**
X48A				IAmb		IAmb	17 11 31.1	
	comp=Z,12nm,1.1s							
LRAL	**Lakeview Retre**	**23.25**	**77**	P		**P**	**17 11 29.5**	**+0.8**
	baz=272							
T47A	**Sharon Grove**	**23.38**	**67**	P		**P**	**17 11 30.6**	**+0.6**
T47A				IAmb		IAmb	17 11 34.8	
	comp=Z,14nm,1.2s							
B35A	**Bob, Littlefor**	**23.64**	**36**	P		**P**	**17 11 32.7**	**+0.2**
B35A				IAmb		IAmb	17 12 01.4	
	comp=Z,28nm,1.5s							
M44A	**Midewin, Midew**	**23.68**	**56**	P		**P**	**17 11 32.8**	**-0.1**
M44A				IAmb		IAmb	17 11 37.3	
	comp=Z,21nm,1.0s							
Y49A	**Blount Mountai**	**23.73**	**75**	P		**P**	**17 11 33.4**	**-0.1**
Y49A				IAmb		IAmb	17 12 07.8	
	comp=Z,14nm,1.4s							
E38A	**The Farm, Brul**	**23.74**	**41**	P		**P**	**17 11 34.1**	**+0.7**
E38A				IAmb		IAmb	17 11 35.4	
	comp=Z,19nm,1.2s							
P46A	**Rosedale**	**23.80**	**60**	P		**P**	**17 11 34.5**	**+0.5**
P46A				IAmb		IAmb	17 11 36.4	
	comp=Z,24nm,1.3s							
G40A	**Rib Lake**	**23.83**	**45**	P		**P**	**17 11 34.3**	**-0.1**
BBB	**Bella Bella**	**23.86**	**339**	LR		LR	17 21 18.2	
	comp=Z,219nm,19.8s,baz=170,slow=38							
CLTN	**Cedars of Leba**	**23.90**	**69**	P		**P**	**17 11 35.7**	**+0.6**
CLTN				IAmb		IAmb	17 11 38.4	
	comp=Z,19nm,1.2s							
SFIN	**Lafayette**	**24.07**	**59**	P		**P**	**17 11 36.3**	**-0.3**
SFIN				IAmb		IAmb	17 11 39.0	
	comp=Z,14nm,1.1s							
SFIN	**Lafayette**	**24.07**	**59**	P		**P**	**17 11 37.0**	**+0.4**
	baz=255							
SWET	**Sewanee**	**24.16**	**72**	P		**P**	**17 11 38.8**	**+1.2**
SWET				IAmb		IAmb	17 11 39.8	
	comp=Z,16nm,1.3s							
BLO	**Bloomington**	**24.21**	**62**	P		**P**	**17 11 38.5**	**+0.5**
U49A	**Red Boiling Sp**	**24.38**	**68**	P		**P**	**17 11 39.9**	**+0.3**
U49A				IAmb		IAmb	17 11 42.3	
	comp=Z,12nm,1.2s							
FPAL	**Fort Paine**	**24.40**	**73**	P		**P**	**17 11 40.0**	**+0.2**
FPAL				IAmb		IAmb	17 11 51.9	
	comp=Z,9.6nm,1.0s							
EYMN	**Ely**	**24.55**	**39**	P		**P**	**17 11 40.8**	**-0.2**
EYMN				IAmb		IAmb	17 12 10.3	
	comp=Z,11nm,1.4s							
EYMN	**Ely**	**24.55**	**39**	P		**P**	**17 11 41.3**	**+0.3**
	baz=234							
W50A	**Signal Mountai**	**24.67**	**72**	P		**P**	**17 11 43.4**	**+1.2**
W50A				IAmb		IAmb	17 11 45.4	
	comp=Z,18nm,1.1s							
COWI	**Conover**	**24.89**	**45**	P		**P**	**17 11 44.5**	**+0.4**
COWI				IAmb		IAmb	17 11 46.7	
	comp=Z,22nm,1.4s							
X51A	**Calhoun**	**25.02**	**73**	P		**P**	**17 11 46.6**	**+1.3**
P48A	**Milroy**	**25.10**	**62**	P		**P**	**17 11 45.9**	**-0.2**
P48A				IAmb		IAmb	17 11 51.8	
	comp=Z,14nm,1.1s							
152A	**Waverly Hall**	**25.18**	**78**	P		**P**	**17 11 46.6**	**-0.2**
152A				IAmb		IAmb	17 11 50.8	
	comp=Z,14nm,1.1s							
T50A	**Nancy**	**25.18**	**67**	P		**P**	**17 11 46.6**	**-0.2**
N47A	**Urbana**	**25.23**	**58**	P		**P**	**17 11 46.4**	**-0.8**
N47A				IAmb		IAmb	17 11 49.5	
	comp=Z,8.7nm,1.1s							
CPCT	**Cooper Cave**	**25.32**	**71**	P		**P**	**17 11 49.7**	**+1.6**
CPCT				IAmb		IAmb	17 11 59.0	
	comp=Z,17nm,1.4s							
O48B	**Farmland**	**25.48**	**60**	P		**P**	**17 11 50.4**	**+1.0**
	baz=257							
TKL	**Tuckaleechee C**	**25.94**	**71**	P		**P**	**17 11 56.0**	**+2.2**
	comp=Z,4.6nm,0.9s,baz=253,slow=6.5,SNR=6.1							
TKL	**Tuckaleechee C**	**25.94**	**71**	P		**P**	**17 11 56.1**	**+2.4**
TKL				IAmb		IAmb	17 11 57.4	
	comp=Z,7.5nm,0.9s							
O49A	**Covington**	**26.08**	**60**	P		**P**	**17 11 53.2**	**-1.7**
O49A				IAmb		IAmb	17 11 56.7	
	comp=Z,12nm,0.9s							
BG3	**Lake Jocassee**	**26.61**	**72**	P		**P**	**17 11 58.9**	**-0.9**
V53A	**Saluda**	**26.72**	**71**	P		**P**	**17 12 01.1**	**+0.2**
V53A				IAmb		IAmb	17 12 06.9	
	comp=Z,10nm,1.4s							
P51A	**Williamsport**	**26.91**	**62**	P		**P**	**17 12 03.2**	**+0.8**
ACSO	**Alum Creek Sta**	**27.10**	**61**	P		**P**	**17 12 03.8**	**-0.3**
ACSO	**Alum Creek Sta**	**27.10**	**61**	P		**P**	**17 12 04.7**	**+0.6**
	baz=260							
R53A	**Huicane**	**27.61**	**65**	P		**P**	**17 12 09.1**	**+0.5**
Q54A	**Coxs Mills**	**28.55**	**64**	P		**P**	**17 12 17.0**	**-0.1**
Q54A				IAmb		IAmb	17 12 18.5	
	comp=Z,17nm,1.4s							
M53A	**WI Miller and**	**29.05**	**59**	P		**P**	**17 12 22.2**	**+0.7**
	baz=259							
DLBC	**Dease Lake**	**29.86**	**343**	P		**P**	**17 12 30.6**	**+2.0**
	comp=Z,3.5nm,0.8s,baz=160,slow=5.9,SNR=5.9							
DLBC				LR		LR	17 25 10.1	
	comp=Z,346nm,19.1s,baz=173,slow=38							
	comp=Z,3.5nm,0.8s							
SADO	**Sadowa**	**30.90**	**53**	LR		LR	17 25 23.2	
	comp=Z,114nm,20.0s,baz=288,slow=37							
SSPA	**Standing Stone**	**31.00**	**61**	P		**P**	**17 12 37.8**	**-1.0**
	baz=263							
L56A	**Greenwood**	**31.46**	**58**	P		**P**	**17 12 43.2**	**+0.3**
YKA	**Yellowknife Ar**	**31.90**	**360**	LR		LR	17 27 19.7	
	comp=Z,182nm,20.0s,baz=178,slow=40							
PECO	**Prince Edward**	**32.20**	**55**	P		**P**	**17 12 49.6**	**+0.3**
J59A	**Piesco**	**33.90**	**57**	P		**P**	**17 13 04.1**	**-0.1**
LONY	**Lake Ozonia**	**34.03**	**55**	P		**P**	**17 13 06.2**	**+0.9**
	baz=260							
M27K	**Edge Creek, AK**	**36.45**	**339**	P		**P**	**17 13 27.5**	**+1.3**
	baz=138							
N25K	**Chitina, Valde**	**36.82**	**336**	P		**P**	**17 13 30.6**	**+1.5**
	baz=133							
L27K	**Beaver Creek,**	**36.97**	**339**	P		**P**	**17 13 32.6**	**+2.3**
	baz=138							
DAWY	**Dawson**	**37.05**	**342**	P		**P**	**17 13 30.4**	**-0.6**
DAWY				IAmb		IAmb	17 13 38.0	
	comp=Z,17nm,1.4s							
DAWY	**Dawson**	**37.05**	**342**	P		**P**	**17 13 32.9**	**+1.9**
	baz=142							
HARP	**HAARP**	**37.55**	**337**	P		**P**	**17 13 37.2**	**+1.9**
	baz=133							
KDAK	**Kodiak Island**	**37.82**	**327**	P		**P**	**17 13 37.0**	**-0.5**
	baz=119							
I29M	**Ogilvie Camp,**	**37.82**	**344**	P		**P**	**17 13 37.6**	**+0.1**
I29M				IAmb		IAmb	17 13 44.0	
	comp=Z,11nm,1.3s							
I29M	**Ogilvie Camp,**	**37.82**	**344**	P		**P**	**17 13 38.6**	**+1.1**
	baz=145							
SII	**Sitkinak Islan**	**38.02**	**325**	P		**P**	**17 13 38.8**	**-0.5**
	baz=116							
BRSE	**Bradley Lake S**	**38.02**	**331**	P		**P**	**17 13 39.2**	**-0.1**
	baz=123							
PAX	**Paxson**	**38.05**	**337**	P		**P**	**17 13 40.9**	**+1.3**
	baz=133							
EGAK	**Eagle**	**38.08**	**342**	P		**P**	**17 13 38.4**	**-1.3**
EGAK				IAmb		IAmb	17 13 46.5	
	comp=Z,9.3nm,1.1s							
EGAK	**Eagle**	**38.08**	**342**	P		**P**	**17 13 38.8**	**-0.9**
	baz=141							
KNK	**Knik Glacier**	**38.09**	**334**	P		**P**	**17 13 40.5**	**+0.6**
	baz=128							
SCRK	**Sand Creek**	**38.30**	**339**	P		**P**	**17 13 42.9**	**+1.3**
SCRK	**Sand Creek**	**38.30**	**339**	P		**P**	**17 13 42.7**	**+1.1**
	baz=136,SNR=5.6							
EPYK	**Eagle Plains**	**38.31**	**346**	P		**P**	**17 13 43.2**	**+1.6**
	baz=148							
HOM	**Homer**	**38.36**	**330**	P		**P**	**17 13 42.3**	**+0.3**
	baz=122							
RC01	**Rabbit Creek A**	**38.39**	**333**	P		**P**	**17 13 43.8**	**+1.5**
	baz=126							
RIDG	**Independent Ri**	**38.39**	**339**	P		**P**	**17 13 43.5**	**+1.1**
	baz=135							
PMR	**Palmer**	**38.46**	**334**	P		**P**	**17 13 44.1**	**+1.2**
	baz=127							
J26L	**Joseph Creek**	**38.55**	**340**	P		**P**	**17 13 46.5**	**+2.7**
J26L				IAmb		IAmb	17 13 48.2	
	comp=Z,8.7nm,1.3s							
J26L	**Joseph Creek**	**38.55**	**340**	P		**P**	**17 13 46.6**	**+2.8**
	baz=137,SNR=5.8							
WAT6	**Susitna Watana**	**38.57**	**336**	P		**P**	**17 13 46.6**	**+2.6**
	baz=130,SNR=5.1							
DHY	**Denali Highway**	**38.77**	**337**	P		**P**	**17 13 46.7**	**+1.0**
	baz=131							
I26K	**Coal Creek Min**	**39.04**	**341**	P		**P**	**17 13 50.1**	**+2.3**
	baz=138							
J25K	**Salcha River,**	**39.17**	**339**	P		**P**	**17 13 50.3**	**+1.3**
J25K				IAmb		IAmb	17 13 56.0	
	comp=Z,23nm,1.5s							
J25K	**Salcha River,**	**39.17**	**339**	P		**P**	**17 13 51.6**	**+2.7**
	baz=135,SNR=6.9							
ILSW	**Iliamna Southw**	**39.18**	**330**	P		**P**	**17 13 49.0**	**-0.1**
ILSW				IAmb		IAmb	17 13 52.9	
	comp=Z,14nm,1.1s							
H27K	**Steamboat Moun**	**39.32**	**343**	P		**P**	**17 13 52.1**	**+2.0**
	baz=141							
INK	**Inuvik**	**39.39**	**349**	P		**P**	**17 13 52.6**	**+2.0**
	comp=Z,1.8nm,0.3s,baz=143,slow=5.6,SNR=1.5							
INK				LR		LR	17 31 42.6	
	comp=Z,251nm,19.8s,baz=174,slow=39							
	comp=Z,1.8nm,0.3s							
INK	**Inuvik**	**39.39**	**349**	P		**P**	**17 13 52.7**	**+2.1**
	baz=153							
MCK	**McKinley**	**39.73**	**337**	P		**P**	**17 13 55.2**	**+1.6**
MCK				IAmb		IAmb	17 14 00.0	
	comp=Z,13nm,1.0s							
MCK	**McKinley**	**39.73**	**337**	P		**P**	**17 13 55.0**	**+1.5**
	baz=130							
IL31		**39.75**	**339**	P		**P**	**17 13 55.2**	**+1.5**
ILAR	**Eielson Array**	**39.75**	**339**	P		**P**	**17 13 56.2**	**+2.5**
	comp=Z,3.1nm,0.8s,baz=151,slow=7.6,SNR=23							
	comp=Z,3.1nm,0.8s							
ILAR	**Eielson Array**	**39.75**	**339**	P		**P**	**17 13 56.1**	**+2.4**
G27K	**Doyon Strip**	**39.80**	**343**	P		**P**	**17 13 55.8**	**+1.7**
	baz=142							
PRP	**Porcupine Dome**	**39.87**	**340**	P		**P**	**17 13 56.9**	**+2.1**
PRP	**Porcupine Dome**	**39.87**	**340**	P		**P**	**17 13 56.6**	**+1.8**
	baz=136							
TRF	**Thorofare Moun**	**40.02**	**336**	P		**P**	**17 13 57.2**	**+1.0**
TRF	**Thorofare Moun**	**40.02**	**336**	P		**P**	**17 13 57.3**	**+1.1**
	baz=128							
CHGN	**Chignik**	**40.07**	**323**	P		**P**	**17 13 58.4**	**+1.9**
	baz=111							
N19K	**Bonanza Creek**	**40.17**	**331**	P		**P**	**17 13 58.7**	**+1.4**
	baz=120							
M20K	**Styx River**	**40.18**	**333**	P		**P**	**17 13 57.6**	**+0.2**
M20K				IAmb		IAmb	17 14 03.8	
	comp=Z,10nm,1.1s							
M20K	**Styx River**	**40.18**	**333**	P		**P**	**17 13 58.2**	**+0.8**
	baz=123							
KTH	**Kantishna Hill**	**40.31**	**336**	P		**P**	**17 13 59.0**	**+0.5**
KTH				IAmb		IAmb	17 14 04.5	
	comp=Z,13nm,1.0s							
NEA2	**Nenana**	**40.33**	**338**	P		**P**	**17 13 59.0**	**+0.5**
NEA2				IAmb		IAmb	17 14 04.8	
	comp=Z,10nm,1.2s							
NEA2	**Nenana**	**40.33**	**338**	P		**P**	**17 13 59.9**	**+1.4**
	baz=130							
PPLA	**Purkeypile**	**40.39**	**334**	P		**P**	**17 14 01.1**	**+1.9**
PPLA	**Purkeypile**	**40.39**	**334**	P		**P**	**17 13 59.1**	**-0.1**
	baz=125							
G26K	**Porcupine Rive**	**40.45**	**343**	P		**P**	**17 14 02.5**	**+3.1**
	baz=139,SNR=19							
H25K	**Birch Creek**	**40.49**	**341**	P		**P**	**17 14 01.4**	**+1.7**
	baz=136							
FYU	**Fort Yukon**	**40.55**	**342**	P		**P**	**17 14 00.8**	**+0.5**
CAST	**Castle Rocks**	**40.65**	**335**	P		**P**	**17 14 02.5**	**+1.2**
CAST				IAmb		IAmb	17 14 03.5	
	comp=Z,19nm,1.3s							
CAST	**Castle Rocks**	**40.65**	**335**	P		**P**	**17 14 02.9**	**+1.7**
	baz=126							
BPAW	**Bear Paw Mtn.**	**40.67**	**336**	P		**P**	**17 14 02.3**	**+0.9**
	baz=128							
N18K	**Kilae Creek**	**40.71**	**330**	P		**P**	**17 14 02.6**	**+0.9**
	baz=118							
H24K	**Noodor Dome**	**40.79**	**340**	P		**P**	**17 14 05.1**	**+2.8**
H24K				IAmb		IAmb	17 14 09.1	
	comp=Z,13nm,1.4s							
H24K	**Noodor Dome**	**40.79**	**340**	P		**P**	**17 14 03.8**	**+1.5**
	baz=133							
I23K	**Minto, Yukon-K**	**40.79**	**338**	P		**P**	**17 14 04.1**	**+1.9**
	baz=130							
L20K	**Farewell, AK**	**40.80**	**333**	P		**P**	**17 14 03.1**	**+0.7**
	baz=122							
E27K	**Coleen River**	**40.88**	**345**	P		**P**	**17 14 05.1**	**+2.0**
	baz=143							
CHUM	**Lake Minchumin**	**41.01**	**335**	P		**P**	**17 14 05.4**	**+1.3**
	baz=126							
BMAR	**Burnt Mountain**	**41.02**	**343**	P		**P**	**17 14 05.6**	**+1.4**
L19K	**White Mountain**	**41.03**	**332**	P		**P**	**17 14 06.0**	**+1.6**
	baz=121							
F26K	**Sheenjek River**	**41.11**	**343**	P		**P**	**17 14 08.0**	**+3.1**
	baz=139,SNR=7.3							
MLY	**Manley**	**41.16**	**337**	P		**P**	**17 14 07.5**	**+2.1**
MLY				IAmb		IAmb	17 14 11.3	
	comp=Z,6.2nm,0.8s							
MLY	**Manley**	**41.16**	**337**	P		**P**	**17 14 07.0**	**+1.6**
	baz=129,SNR=8.0							
O16K	**Kokwok River B**	**41.20**	**328**	P		**P**	**17 14 07.0**	**+1.2**
	baz=115							
G24K	**Hadweenzic Riv**	**41.27**	**341**	P		**P**	**17 14 08.5**	**+2.2**
	baz=134							
H23K	**Yukon River**	**41.29**	**339**	P		**P**	**17 14 07.6**	**+1.2**
H23K				IAmb		IAmb	17 14 10.2	
	comp=Z,8.2nm,0.9s							
H23K	**Yukon River**	**41.29**	**339**	P		**P**	**17 14 09.0**	**+2.5**
	baz=131,SNR=5.6							
K20K	**Telida**	**41.35**	**334**	P		**P**	**17 14 09.1**	**+2.1**

ETMB	**Extrema**	**61.15**	**123**	P	**P**	**17 16 34.7**	**-1.3**
ETMB				IAmb	IAmb	17 16 36.2	
	comp=Z,6.8nm,1.1s						
MDP	**Montagnes des**	**63.04**	**101**	LR	LR	17 48 31.9	
	comp=Z,37nm,18.2s,baz=324,slow=40						
LPAZ	**La Paz**	**64.34**	**130**	P	**P**	**17 16 58.8**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=338,slow=6.5,SNR=3.5						
LPAZ				LR	LR	17 43 22.2	
	comp=Z,85nm,19.5s,baz=266,slow=35						
	comp=Z,0.6nm,0.4s						
PETK	**Petropavlovsk-**	**65.06**	**318**	LR	LR	17 39 58.8	
	comp=Z,37nm,21.8s,baz=90,slow=31						
TA01	**Diego Aracena**	**66.19**	**135**	P	**P**	**17 17 09.6**	**+0.5**
VILB	**Vilhena**	**67.61**	**121**	P	**P**	**17 17 18.2**	**-0.2**
VILB				IAmb	IAmb	17 17 20.0	
	comp=Z,64nm,1.4s						
SPITS	**Spitsbergen Ar**	**67.67**	**10**	LR	LR	17 49 31.7	
	comp=Z,68nm,18.0s,baz=293,slow=38						
PTLB	**Pontes e Lacer**	**70.02**	**123**	P	**P**	**17 17 33.1**	**-0.3**
PTLB				IAmb	IAmb	17 17 37.0	
	comp=Z,12nm,1.5s						
YAK	**Yakutsk**	**74.45**	**334**	LR	LR	17 51 08.6	
	comp=Z,54nm,19.0s,baz=78,slow=36						
ARCES	**ARCESS Array B**	**75.95**	**14**	P	**P**	**17 18 07.8**	**0.0**
	comp=Z,5.0nm,0.9s,baz=318,slow=7.1,SNR=10						
ARCES				LR	LR	17 54 13.3	
	comp=Z,46nm,18.4s,baz=5.5,slow=38						
	comp=Z,5.0nm,0.9s						
ARCES	**ARCESS Array B**	**75.95**	**14**	P	**P**	**17 18 08.5**	**+0.7**
EKA	**Eskdalemuir Ar**	**76.20**	**33**	LR	LR	17 50 41.8	
	comp=Z,60nm,18.9s,baz=286,slow=35						
LMEL	**Las Melosas**	**76.40**	**143**	P	**P**	**17 18 12.2**	**+1.3**
NB2	**NORSAR Subarra**	**78.51**	**24**	P	**P**	**17 18 23.2**	**+0.9**
	comp=Z,13nm,1.4s,baz=313,slow=5.9						
NOA	**NORSAR Array B**	**78.51**	**24**	P	**P**	**17 18 23.0**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=317,slow=5.8,SNR=4.3						
	comp=Z,1.9nm,0.9s						
CPUP	**Villa Florida**	**78.52**	**130**	P	**P**	**17 18 22.5**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=325,slow=6.3,SNR=7.0						
	comp=Z,3.9nm,0.9s						
CPUP	**Villa Florida**	**78.52**	**130**	P	**P**	**17 18 22.7**	**0.0**
CPUP				IAmb	IAmb	17 18 23.4	
	comp=Z,8.1nm,1.1s						
PMOZ	**Porto Moniz, M**	**79.38**	**58**	*e*LR	LR	17 43 12.1	
	comp=Z,155nm,18.0s						
PGAV	**Gavieira, Arco**	**80.75**	**47**	A	A	17 56 09.1	
	comp=Z,93nm,16.0s						
KLR	**Kul'dur**	**81.23**	**323**	LR	LR	17 53 18.6	
	comp=Z,36nm,20.4s,baz=76,slow=35						
PVIS	**Viseu**	**81.67**	**47**	*e*P	**P**	**17 18 41.1**	**+1.3**
PSBE	**So Bento**	**81.75**	**49**	*e*P	**P**	**17 18 41.5**	**+1.3**
MVO	**Moncorvo**	**81.97**	**47**	A	A	17 54 17.8	
	comp=Z,80nm,18.0s						
MTE	**Manteigas**	**82.07**	**48**	*e*P	**P**	**17 18 42.6**	**+0.7**
MTE				A	A	17 54 39.3	
	comp=Z,84nm,18.0s						
PMTG	**Montargil**	**82.36**	**49**	*e*P	**P**	**17 18 44.2**	**+0.8**
PMRV	**Marv??o**	**82.70**	**48**	*e*P	**P**	**17 18 46.0**	**+0.8**
PMRV	**Marv??o**	**82.70**	**48**	*e*LR	LR	17 45 09.6	
	comp=Z,89nm,20.0s						
FINES	**FINESS Array B**	**82.79**	**18**	P	**P**	**17 18 46.3**	**+1.1**
	comp=Z,3.4nm,0.8s,baz=7.6,slow=5.8,SNR=11						
	comp=Z,3.4nm,0.8s						
FINES	**FINESS Array B**	**82.79**	**18**	P	**P**	**17 18 45.8**	**+0.6**
EVO	**Evora**	**82.80**	**49**	*e*P	**P**	**17 18 46.9**	**+1.2**
PESTR	**Estremoz**	**82.89**	**49**	*e*P	**P**	**17 18 47.4**	**+1.2**
RCBR	**Riachuelo**	**82.97**	**101**	LR	LR	18 00 42.8	
	comp=Z,40nm,18.2s,baz=2.5,slow=39						
MESJ	**Messejana**	**83.04**	**50**	*e*P	**P**	**17 18 47.5**	**+0.5**
MESJ				IAmb	IAmb	17 18 48.7	
	comp=Z,28nm,1.4s						
MESJ	**Messejana**	**83.04**	**50**	*e*P	**P**	**17 18 47.5**	**+0.5**
BMRD	**Maredsous**	**83.07**	**34**	*d*P	**P**	**17 18 47.7**	**+0.9**
DOU	**Dourbes**	**83.12**	**35**	*dx*	**P**	**17 18 49.2**	**+2.2**
BSTI	**Sart Tilman**	**83.27**	**34**	*dx*	**P**	**17 18 49.6**	**+1.7**
RCHB	**Rochefort**	**83.39**	**34**	*dx*	**P**	**17 18 49.6**	**+1.1**
MEM	**Membach**	**83.47**	**34**	*dP*	**P**	**17 18 49.0**	**+0.1**
PVAQ	**Vaqueiros**	**83.61**	**50**	*e*P	**P**	**17 18 52.3**	**+2.4**
PBAR	**Barrancos**	**83.63**	**49**	*e*P	**P**	**17 18 50.8**	**+0.8**
USRK	**Ussuriysk Ar.**	**84.15**	**319**		**P**	**17 18 52.6**	**+0.1**
WLF	**Walferdange**	**84.16**	**34**	P	**P**	**17 18 52.3**	**-0.2**
WLF	**Walferdange**	**84.16**	**34**	*dx*	**P**	**17 18 54.5**	**+2.0**
ESDC	**Sonseca Array**	**84.74**	**47**	P	**P**	**17 18 56.0**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=308,slow=5.2,SNR=12						
ESDC				LR	LR	17 55 51.7	
	comp=Z,84nm,18.6s,baz=302,slow=35						
	comp=Z,1.4nm,0.8s						
ESDC	**Sonseca Array**	**84.74**	**47**	P	**P**	**17 18 56.5**	**+0.8**
MJAR	**Matsushiro Arr**	**84.79**	**310**	LR	LR	17 50 02.6	
	comp=Z,83nm,20.2s,baz=58,slow=31						
CLL	**Collm**	**86.17**	**30**	*e*P	**P**	**17 19 03.0**	**+0.5**
CLL				*e*PP	**PP**	**17 22 24.0**	**+1.8**
CLL				LmV		18 05 00.0	
	comp=Z,100nm,18.5s						
DAVA	**Damuels**	**87.60**	**34**	*e*P	**P**	**17 19 11.7**	**+1.9**
	comp=Z,3.6nm,1.1s						
MOTA	**Moosalm**	**88.15**	**34**	*e*P	**P**	**17 19 13.0**	**+0.6**
	comp=Z,2.7nm,1.2s						
FETA	**Feichten**	**88.20**	**34**	*e*P	**P**	**17 19 13.3**	**+0.7**
	comp=Z,3.2nm,0.9s						
GERES	**GERESS Array B**	**88.27**	**31**	P	**P**	**17 19 12.0**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=272,slow=3.5,SNR=4.9						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**88.27**	**31**	P	**P**	**17 19 12.2**	**-0.6**
SQTA	**Sankt Quirin**	**88.29**	**34**	*e*P	**P**	**17 19 13.6**	**+0.6**
	comp=Z,3.2nm,0.9s						
MDT	**Midelt**	**88.32**	**53**	LR	LR	17 57 42.4	
	comp=Z,34nm,18.7s,baz=338,slow=35						
WATA	**Walderalm**	**88.38**	**33**	*e*P	**P**	**17 19 15.4**	**+1.9**
	comp=Z,2.1nm,0.8s						
WTTA	**Wattenberg**	**88.46**	**34**	*e*P	**P**	**17 19 16.0**	**+2.1**
	comp=Z,2.3nm,1.0s						
BBTS	**Babate**	**89.11**	**74**	LR	LR	17 56 16.3	
	comp=Z,71nm,19.5s,baz=298,slow=34						
ABTA	**Abfaltersbach**	**89.25**	**33**	*e*P	**P**	**17 19 17.7**	**+0.3**
	comp=Z,3.4nm,1.2s						
MOA	**Molln**	**89.26**	**32**	*e*P	**P**	**17 19 21.7**	**+4.3**
	comp=Z,2.4nm,1.4s						
KBA	**Koelnbreinsper**	**89.40**	**33**	*e*P	**P**	**17 19 18.9**	**+0.6**
	comp=Z,2.2nm,1.0s						
CONA	**Conrad Observa**	**89.92**	**31**	*e*P	**P**	**17 19 18.9**	**-1.6**
	comp=Z,2.9nm,1.6s						
ARSA	**Arzberg**	**90.27**	**32**	*e*P	**P**	**17 19 21.7**	**-0.5**
	comp=Z,2.6nm,1.0s						
RONA	**Rosalia, Austr**	**90.28**	**31**	*e*P	**P**	**17 19 20.9**	**-1.3**
	comp=Z,2.4nm,1.0s						
OBKA	**Obir**	**90.38**	**33**	*e*P	**P**	**17 19 22.2**	**-0.6**
	comp=Z,3.0nm,0.9s						
SOKA	**Soboth**	**90.48**	**32**	*e*P	**P**	**17 19 22.3**	**-1.0**
	comp=Z,2.5nm,0.8s						
KSRS	**Korea Array**	**90.79**	**315**	LR	LR	17 55 11.2	
	comp=Z,22nm,20.5s,baz=30,slow=32						
DZM	**Mont Dzumac**	**92.36**	**246**	*e*LR	LR	17 49 07.4	
	comp=Z,96nm,22.2s						
AKASG	**Malin Array Be**	**92.84**	**22**	P	**P**	**17 19 34.0**	**+0.1**
	comp=Z,0.2nm,0.2s,baz=332,slow=4.0,SNR=7.6						
	comp=Z,0.2nm,0.2s						
SONM	**Songino Array**	**93.81**	**334**	LR	LR	18 02 43.0	
	comp=Z,50nm,18.7s,baz=40,slow=36						
ZALV	**Zalesovo Beam**	**94.19**	**349**	P	**P**	**17 19 41.2**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=27,slow=6.8,SNR=3.8						
	comp=Z,0.6nm,0.5s						
HHC	**Hu-ho-hao-te**	**97.24**	**327**	*e*P	**P**	**17 19 53.3**	**-1.1**
HHC				pmax	pmax		
	comp=Z,29nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
NJ2	**Nanjing**	**99.92**	**316**	*e*P	**Pdif**	**17 20 03.3**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VNA3	**Neumayer Olymp**	**123.33**	**158**	PKPdf	**PKPdf**	**17 25 17.2**	**-0.2**
VNA3	**Neumayer Olymp**	**123.33**	**158**	pPKPdf	pPKPdf	17 25 20.8	-0.8
VNA2	**Neumayer--Watz**	**124.09**	**158**	PKPdf	**PKPdf**	**17 25 18.8**	**-0.1**
	baz=321,slow=4.8						
VNA2	**Neumayer--Watz**	**124.09**	**158**	pPKPdf	pPKPdf	17 25 21.8	-1.2
SNAA	**Sanae**	**125.45**	**159**	PKPdf	**PKPdf**	**17 25 21.5**	**-0.1**
SNAA	**Sanae**	**125.45**	**159**	pPKPdf	pPKPdf	17 25 24.7	-1.1
TROLL	**Troll, Antarti**	**127.02**	**160**	PKPdf	**PKiKP**	**17 25 25.2**	**+0.1**

*IDC **15** 17:28:32.2±1.0, 8°.03S×129°.82E, h0km, mb3.7/5, mbtmp3.9/10, ML3.8/5, MS3.2/2, Error ellipse: s-maj=32.0km s-min=17.3km az=84.0*
ISC 15 17:28:35.1±0.8, 8°.14S±0°.06×129°.94E±0°.10, h22km, n10, σ1s72/14, mb3.9/5, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.53**	**251**	Pn	**Pn**	**17 30 10.6**	**+0.7**
	1.7nm,0.3s,baz=101,slow=16,SNR=1.7						
BATI				Sn	**Sn**	**17 31 22.6**	**-1.2**
	1.6nm,0.3s,baz=321,slow=14,SNR=1.8						
	4.4nm,0.3s						
SIJI	**Sorong**	**7.34**	**10**	Pn	**Pn**	**17 30 21.2**	**+0.1**
	2.3nm,0.3s,baz=24,slow=21,SNR=21						
SIJI				Sn	**Sn**	**17 31 42.0**	**-1.7**
	1.4nm,0.3s,baz=232,slow=23,SNR=1.5						
SIJI				LR	LR	17 33 59.5	
	comp=Z,120nm,18.2s,slow=45						
	8.6nm,0.2s						
FITZ	**Fitzroy Crossi**	**10.75**	**202**	Pn	**Pn**	**17 31 08.0**	**+0.2**
	1.3nm,0.3s,baz=25,slow=10,SNR=63						
FITZ				Sn	Sn	17 33 00.3	-7.3
	3.9nm,0.3s,baz=83,slow=21,SNR=14						
	2.9nm,0.3s						
WRA	**Warramunga Arr**	**12.49**	**160**	Pn	**Pn**	**17 31 31.6**	**0.0**
	0.4nm,0.3s,baz=347,slow=13,SNR=29						
WRA				Sn	**Sn**	**17 33 48.6**	**-1.6**
	1.4nm,0.3s,baz=337,slow=22,SNR=10						
	2.9nm,0.9s						
ASAR	**Alice Springs**	**15.90**	**167**	Pn	**Pn**	**17 32 18.0**	**+0.2**
	0.2nm,0.3s,baz=18,slow=14,SNR=19						
ASAR				Sn	**Sn**	**17 35 09.8**	**-3.8**
	0.3nm,0.3s,baz=121,slow=31,SNR=1.6						
ASAR				LR	LR	17 38 17.7	
	comp=Z,112nm,21.5s,baz=351,slow=36						
	0.8nm,0.7s						
STKA	**Stephens Creek**	**26.00**	**157**	P	**P**	**17 34 08.7**	**+2.2**
	2.5nm,0.9s,baz=327,slow=12,SNR=2.1						
	2.5nm,0.9s						
SONM	**Songino Array**	**59.49**	**342**	P	**P**	**17 38 37.2**	**+0.5**
	0.3nm,0.6s,baz=144,slow=3.4,SNR=2.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**69.14**	**327**	P	**P**	**17 39 38.6**	**-1.2**
	0.4nm,0.3s,baz=120,slow=8.2,SNR=8.1						
	0.4nm,0.3s						
VNDA	**Vanda**	**71.33**	**173**	P	**P**	**17 39 54.7**	**+2.0**
	0.4nm,0.7s,baz=314,slow=6.7,SNR=3.5						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**72.57**	**334**	P	**P**	**17 39 59.8**	**-0.6**
	0.7nm,0.5s,baz=128,slow=5.1,SNR=3.5						
	0.7nm,0.5s						

*DDA **15** 17:41:20.0±0.0, 41°.18N×43°.96E, h7km±3km, ML3.1*
*ISK **15** 17:41:21.6, 41°.12N×43°.97E, h5km, ML2.9/8*
*TIF **15** 17:41:21.5, 41°.15N×43°.97E, h15km*
*MOS **15** 17:41:22.6±0.0, 41°.22N×43°.93E, h3km, MPVA3.9*
*NORS **15** 17:41:23.1±0.0, 41°.30N×44°.01E, h1km, MPVA4.1*
*DRS **15** 17:41:24.5±0.0, 41°.11N×44°.09E, h16km*
*AZER **15** 17:41:27.5±0.1, 40°.92N×44°.31E, h2km, Error ellipse: s-maj=1.3km s-min=0.8km az=306.0*
ISC 15 17:41:21.4±1.0, 41°.10N±0°.01×43°.93E±0°.01, h5km±9km, n124, σ1s41/230, 3C-1D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.30**	**41**	P	**Pg**	**17 41 27.4**	**+0.1**
DMNI				S	**Sg**	**17 41 31.6**	**+0.4**
DMNI	**Dmanisi**	**0.30**	**41**	*e*PG	**Pg**	**17 41 27.3**	**0.0**
BGD	**Bogdanovka**	**0.30**	**302**	P	**Pg**	**17 41 28.2**	**+0.8**
BGD				S	**Sb**	**17 41 33.1**	**-1.7**
BGD	**Bogdanovka**	**0.30**	**302**	*e*PG	**Pg**	**17 41 28.2**	**+0.8**
BGD				*e*S	**Sb**	**17 41 33.1**	**-1.7**
KZRT	**Kazreti**	**0.45**	**51**	P	**Pg**	**17 41 30.1**	**0.0**
KZRT				S	**Sg**	**17 41 36.1**	**+0.1**
KZRT	**Kazreti**	**0.45**	**51**	*e*PG	**Pg**	**17 41 30.1**	**0.0**
TRLG	**Trialeti**	**0.45**	**16**	P	**Pb**	**17 41 31.1**	**-1.0**
TRLG				S	**Sg**	**17 41 37.3**	**+1.1**
TRLG	**Trialeti**	**0.45**	**16**	*e*PG	**Pb**	**17 41 31.0**	**-1.0**
EAK	**Akyaka**	**0.48**	**211**	P	**Pg**	**17 41 30.6**	**-0.2**
EAK				S	**Sg**	**17 41 38.4**	**+1.3**
EAK				*i* AML	AML	17 41 48.0	
	comp=N,960nm,0.6s						
BRNG	**Burnasheti**	**0.53**	**351**	P	**Pg**	**17 41 31.8**	**+0.2**
BRNG				S	**Sb**	**17 41 39.7**	**-1.6**
BKRG	**Bakuriani**	**0.72**	**335**	P	**Pg**	**17 41 35.6**	**+0.2**
BKRG				S	**Sb**	**17 41 45.8**	**-1.2**
BKRG	**Bakuriani**	**0.72**	**335**	*e*PG	**Pg**	**17 41 35.6**	**+0.2**
BKRG				*e*S	**Sb**	**17 41 45.8**	**-1.2**
KARS	**Kars**	**0.81**	**234**	PG	**Pb**	**17 41 37.9**	**-0.1**
DIGO	**Kars**	**0.81**	**212**	P	**Pg**	**17 41 36.8**	**-0.2**
DIGO				S	**Sg**	**17 41 48.0**	**+0.5**
DIGO				*i* AML	AML	17 41 51.0	
	comp=E,962nm,0.3s						
DIGO				*i* AML	AML	17 41 53.0	
	comp=N,1μm,0.5s						
BTNK	**Botanikuri**	**0.87**	**48**	P	Pg	17 41 30.9	-7.3
BTNK				S	**Sg**	**17 41 42.7**	**-6.8**
BTNK	**Botanikuri**	**0.87**	**48**	*e*PG	Pg	17 41 30.8	-7.4
SEAG	**Tbilisi Sea**	**0.93**	**44**	P	**Pg**	**17 41 38.8**	**-0.5**
SEAG				S	**Sg**	**17 41 51.6**	**+0.3**
SEAG	**Tbilisi Sea**	**0.93**	**44**	*e*PG	**Pg**	**17 41 38.8**	**-0.5**
SEAG				*e*S	**Sg**	**17 41 51.6**	**+0.3**
EPOS	**Posof**	**0.99**	**294**	P	**Pg**	**17 41 39.6**	**-0.9**
EPOS				S	**Sg**	**17 41 53.0**	**-0.4**
EPOS				*i* AML	AML	17 41 55.0	
	comp=N,645nm,0.4s						
ABS	**Abastumani**	**1.06**	**308**	P	**Pg**	**17 41 41.6**	**-0.3**
ABS				S	**Sb**	**17 41 56.3**	**-0.5**
ABS	**Abastumani**	**1.06**	**308**	*e*PG	**Pg**	**17 41 41.6**	**-0.3**
ABS				*e*S	**Sb**	**17 41 56.3**	**-0.5**
QZX	**Qazax, Azerbai**	**1.09**	**92**	P	**Pg**	**17 41 42.2**	**-0.2**
	SNR=7.2						
QZX				S	**Sb**	**17 41 56.9**	**-0.4**
GNI	**Garni**	**1.13**	**147**	PN	**Pn**	**17 41 43.9**	**-0.2**
GNI				SN	**Sn**	**17 42 00.2**	**0.0**
GNI	**Garni**	**1.13**	**147**	*c i*PG	**Pb**	**17 41 43.6**	**0.0**
GNI				*i* S	**Sn**	**17 42 01.0**	**+0.8**
GNI				pmax	pmax		
	comp=Z,52nm,0.8s						
GNI				smax	smax		
	comp=Z,138nm,1.1s						
DGRG	**David-gareji**	**1.14**	**72**	P	**Pg**	**17 41 42.3**	**-1.0**
DGRG				S	**Sg**	**17 41 58.1**	**0.0**
DGRG	**David-gareji**	**1.14**	**72**	*e*PG	**Pg**	**17 41 42.3**	**-1.0**
TASB	**TASBURUN-IGDIR**	**1.14**	**168**	PN	**Pn**	**17 41 43.9**	**-0.3**
TASB				SN	**Sn**	**17 42 00.4**	**+0.2**
IGDI	**IGDIR**	**1.24**	**175**	P	**Pn**	**17 41 44.7**	**-0.8**
IGDI				S	**Sb**	**17 42 01.9**	**+0.2**
SENK	**Senkaya-Erzuru**	**1.32**	**246**	PN	**Pg**	**17 41 47.2**	**+0.5**
KOTA	**Agri, Merkez-K**	**1.41**	**203**	P	**Pg**	**17 41 49.5**	**+1.0**
KOTA				S	**Sg**	**17 42 09.3**	**+2.4**
GUDG	**Gudauri**	**1.42**	**16**	P	**Pn**	**17 41 47.7**	**-0.5**
GUDG				S	**Sg**	**17 42 07.4**	**+0.3**
GUDG	**Gudauri**	**1.42**	**16**	*e*PG	**Pn**	**17 41 47.6**	**-0.5**
GUDG				*e*S	**Sg**	**17 42 07.3**	**+0.3**
GDB	**GEDABAY**	**1.43**	**105**	P	**Pn**	**17 41 47.5**	**-0.7**
	SNR=37						
GDB				S	**Sb**	**17 42 05.9**	**-1.4**
TKB	**Tkibuli**	**1.43**	**331**	P	**Pb**	**17 41 48.2**	**-0.4**
TKB				S	**Sg**	**17 42 07.4**	**0.0**
TKB	**Tkibuli**	**1.43**	**331**	*e*PG	**Pb**	**17 41 48.2**	**-0.4**
TKB				*e*S	**Sg**	**17 42 07.4**	**0.0**
DAGI	**Agillar**	**1.53**	**270**	P	**Pg**	**17 41 50.5**	**-0.2**
DAGI				S	**Sg**	**17 42 10.2**	**-0.3**
ONI	**Oni**	**1.53**	**347**	P	**Pn**	**17 41 49.4**	**-0.1**
ONI				S	**Sg**	**17 42 10.3**	**-0.3**
ONI	**Oni**	**1.53**	**347**	PN	**Pb**	**17 41 49.6**	**-0.7**
ONI	**Oni**	**1.53**	**347**	*i* PG	**Pn**	**17 41 49.4**	**-0.1**
ONI				pmax	pmax		
	comp=Z,34nm,0.6s						
HYR	**Heyderabad**	**1.55**	**153**	P	**Pb**	**17 41 50.9**	**+0.2**
HYR				S	**Sn**	**17 42 10.0**	**-0.3**
PNSH	**Pansheti**	**1.61**	**18**	P	**Pb**	**17 41 51.0**	**-0.8**
PNSH				S	**Sg**	**17 42 13.8**	**+0.5**
PNSH	**Pansheti**	**1.61**	**18**	*e*PN	**Pb**	**17 41 51.0**	**-0.8**
PNSH				*e*S	**Sg**	**17 42 13.8**	**+0.5**
EATA	**Eleskirt**	**1.66**	**222**	P	**Pb**	**17 41 52.7**	**0.0**
EATA				S	**Sg**	**17 42 16.4**	**+1.6**
DDEM	**Demirkent**	**1.67**	**263**	P	**Pb**	**17 41 52.5**	**-0.1**
DDEM				S	**Sg**	**17 42 15.4**	**+0.4**
DDEM				*i* AML	AML	17 42 19.0	
	comp=Z,246nm,0.4s						
DDEM				*i* AML	AML	17 42 20.0	
	comp=Z,275nm,0.5s						
DDFL	**Dedoflistskaro**	**1.68**	**78**	P	**Pg**	**17 41 55.6**	**+1.9**
DDFL				S	**Sg**	**17 42 20.9**	**+5.4**
DDFL	**Dedoflistskaro**	**1.68**	**78**	*e*PN	**Pg**	**17 41 55.6**	**+1.9**
DDFL				*e*S	**Sg**	**17 42 20.8**	**+5.4**
ZEI	**Tsey**	**1.68**	**359**	*e*PN	**Pb**	**17 41 52.7**	**-0.3**
ZEI				*e*S	**Sg**	**17 42 15.7**	**+0.1**
ZEI	**Tsey**	**1.68**	**359**	*e*Pg	**Pb**	**17 41 52.4**	**-0.6**
ZEI				*e*Sg	**Sg**	**17 42 15.6**	**0.0**
AGRB	**Hanur-Agry**	**1.69**	**206**	PN	**Pb**	**17 41 53.1**	**0.0**
DBAD	**Bademkaya**	**1.70**	**268**	P	**Pg**	**17 41 53.8**	**-0.2**
DBAD				S	**Sg**	**17 42 16.4**	**+0.5**
DBOC	**Borcka**	**1.73**	**279**	P	**Pb**	**17 41 53.4**	**-0.2**
DBOC				S	**Sg**	**17 42 16.2**	**-0.8**
LACR	**Lac**	**1.74**	**9**	*e*PN	**Pb**	**17 41 53.5**	**-0.5**
LACR				*e*S	**Sg**	**17 42 18.1**	**+0.6**
BATM	**Batumi**	**1.76**	**287**	P	**Pb**	**17 41 54.4**	**+0.2**
BATM				S	**Sg**	**17 42 17.9**	**0.0**
BATM	**Batumi**	**1.76**	**287**	*e*PN	**Pb**	**17 41 54.4**	**+0.2**
BCA	**Borcka**	**1.78**	**282**	PN	**Pb**	**17 41 54.7**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.81**	**352**	*e*PN	**Pg**	**17 41 56.3**	**+0.1**
DIGR				*e*S	**Sg**	**17 42 22.0**	**+2.3**
DIGR	**Digorskoe uzhe**	**1.81**	**352**	*e*Pg	**Pg**	**17 41 56.6**	**+0.4**
DIGR				*e*Sg	**Sg**	**17 42 21.8**	**+2.0**
GANJ	**Ganja**	**1.87**	**103**	P	**Pb**	**17 41 55.3**	**-0.7**
	SNR=8.6						
GANJ				S	**Sb**	**17 42 19.2**	**-0.5**
LGD	**Lagodekhi**	**1.88**	**66**	P	**Pb**	**17 41 55.8**	**-0.6**
LGD				S	**Sg**	**17 42 21.1**	**-0.8**
LGD	**Lagodekhi**	**1.88**	**66**	*e*PN	**Pb**	**17 41 55.7**	**-0.6**
HOPA	**Hopa-Artvin**	**1.90**	**279**	PN	**Pb**	**17 41 56.2**	**-0.3**
KOPR	**Koprukoy-ERZUR**	**1.94**	**236**	PN	**Pb**	**17 41 56.7**	**-0.6**
KORR	**Kora**	**1.98**	**3**	*e*PN	**Pg**	**17 41 59.0**	**-0.5**
KORR				*e*S	**Sg**	**17 42 27.0**	**+1.8**
KORR	**Kora**	**1.98**	**3**	*e*Pg	**Pg**	**17 41 59.0**	**-0.5**
KORR				*e*Sg	**Sg**	**17 42 27.0**	**+1.8**
VLKR	**Vladikavkaz**	**2.02**	**16**	*e*PN	**Pg**	**17 41 59.3**	**-0.8**
VLKR				*e*S	**Sg**	**17 42 27.9**	**+1.6**
VLKR	**Vladikavkaz**	**2.02**	**16**	*e*Pg	**Pg**	**17 42 00.3**	**+0.2**
VLKR				*e*Sg	**Sg**	**17 42 27.6**	**+1.3**
KMGR	**Komgaron**	**2.07**	**19**	*e*PN	**Pg**	**17 42 00.6**	**-0.5**
KMGR				*e*S	**Sg**	**17 42 29.6**	**+1.6**
KMGR	**Komgaron**	**2.07**	**19**	*e*Pg	**Pg**	**17 42 01.1**	**-0.1**
KMGR				*e*Sg	**Sg**	**17 42 29.7**	**+1.6**
ARNR	**Ardon**	**2.09**	**7**	*e*PN	**Pg**	**17 42 01.0**	**-0.5**
ARNR				*e*S	**Sg**	**17 42 30.0**	**+1.4**
ARNR	**Ardon**	**2.09**	**7**	*e*Pg	**Pg**	**17 42 01.0**	**-0.5**
ARNR				*e*Sg	**Sg**	**17 42 30.0**	**+1.4**
ZKTA	**Zakatala**	**2.09**	**74**	P	**Pb**	**17 42 00.4**	**+0.5**
	SNR=6.3						
ZKTA				S	**Sg**	**17 42 27.7**	**-1.0**
SBZ	**Shahbuz**	**2.11**	**143**	P	**Pb**	**17 42 00.6**	**+0.4**
SBZ				S	**Sb**	**17 42 28.1**	**+1.4**
LSNR	**Lesken**	**2.17**	**358**	*e*PN	**Pg**	**17 42 02.1**	**-1.0**
LSNR				*e*S	**Sg**	**17 42 31.4**	**+0.1**
LSNR	**Lesken**	**2.17**	**358**	*e*Pg	**Pg**	**17 42 02.3**	**-0.8**
LSNR				*e*Sg	**Sg**	**17 42 31.6**	**+0.3**
STDR	**Stavd-Durt**	**2.27**	**2**	*e*PN	**Pb**	**17 42 03.6**	**+0.8**
STDR				*e*S	**Sg**	**17 42 33.0**	**-1.2**
STDR	**Stavd-Durt**	**2.27**	**2**	*e*Pg	**Pb**	**17 42 03.6**	**+0.8**
STDR				*e*Sg	**Sg**	**17 42 33.0**	**-1.2**
NAX	**Nakhchivan**	**2.27**	**148**	P	**Pg**	**17 42 04.5**	**-0.4**
	SNR=4.2						
NAX				S	**Sb**	**17 42 31.5**	**+0.2**
BTKR	**Batakoyurt**	**2.31**	**11**	*e*PN	**Pb**	**17 42 03.9**	**+0.2**
BTKR				*e*S	**Sg**	**17 42 35.5**	**-0.2**
BTKR	**Batakoyurt**	**2.31**	**11**	*e*Pg	**Pb**	**17 42

comp=Z,36nm,0.5s
DLMR smax smax
comp=E,191nm,0.7s
DLMR smax smax
comp=N,197nm,0.4s
DLMR smax smax
comp=N,141nm,0.5s
DBC Dubki 2.88 47 *e*PN **Pb 17 42 14.2 +0.8**
DBC *e*S **Sg 17 42 51.5 -2.6**
DBC *i* S **Sb 17 42 52.1 +3.1**
DBC pmax pmax
comp=Z,7.0nm,0.1s
DBC smax smax
comp=E,42nm,0.6s
DBC smax smax
comp=N,26nm,0.4s
DBC smax smax
comp=E,38nm,0.6s
AKT Akhty 2.88 81 *e*PN **Pb 17 42 13.1 -0.4**
AKT *e*S **Sb 17 42 49.7 +0.6**
AKT Akhty 2.88 81 *e*Pn **Pb 17 42 13.1 -0.4**
AKT *e*Sn **Sb 17 42 49.7 +0.6**
BAYB BAYBURT 2.92 254 P **Pb 17 42 15.3 +1.1**
BAYB S **Sg 17 42 56.7 +1.5**
QBL Gabala 2.96 92 P **Pb 17 42 14.0 -0.7**
SNR=7.5
QBL S **Sb 17 42 50.2 -0.9**
URKR Urkarakh 2.97 68 *e*PN **Pb 17 42 13.4 -1.5**
URKR *e*S **Sb 17 42 51.5 0.0**
URKR Urkarakh 2.97 68 *e*Pn **Pb 17 42 13.4 -1.5**
URKR *e*Sn **Sb 17 42 51.5 0.0**
KIV Kislovodsk 3.00 342 *e*PN **Pn 17 42 11.1 +1.4**
KIV *e*S **Sn 17 42 48.5 +2.5**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 3.00 342 *e*Pn **Pb 17 42 16.4 +1.1**
KIV *e*Sn **Sb 17 42 53.3 +1.0**
XNQ Khinaliq 3.18 87 P **Pb 17 42 16.9 -1.6**
SNR=6.3
XNQ S **Sn 17 42 53.2 +2.6**
IML Ismayilli 3.23 94 P **Pb 17 42 17.7 -1.7**
SNR=6.3
IML S **Sb 17 42 55.7 -3.4**
QSAR Qusar 3.29 81 P **Pb 17 42 19.4 -0.9**
QSAR S **Sb 17 42 57.2 -3.4**
POL Pirkuli 3.54 94 P **Pb 17 42 22.5 -2.2**
KELT Kelkit 3.69 257 P **Pb 17 42 28.4 +1.3**
KELT S **Sg 17 43 17.0 -2.8**
AHMR Akhmetovskaya 3.72 326 *e*PN **Pb 17 42 26.0 -1.7**
AHMR *e*S **Sb 17 43 09.7 -3.4**
AHMR Akhmetovskaya 3.72 326 *e*Pn **Pb 17 42 26.1 -1.7**
AHMR *e*Sn **Sb 17 43 09.7 -3.4**
SIZA Siyzn 3.75 89 P **Pb 17 42 25.4 -2.8**
SIZA S **Sn 17 43 06.2 +1.6**
YRD Yardimli 3.96 122 P **Pb 17 42 28.1 -3.8**
YRD S **Sn 17 43 09.7 -0.3**

FUNV ***15*** *17:42:21.9, 8.˚47N×71.˚49W, h5km, MW3.4*
ISC 15 17:42:22.4±1.3, 8.˚45N±0.˚06×71.˚44W±0.˚03, h14km±10km, n15, σ1§20/26, Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.60**	**106**	*e*P		**Pg**	**17 42 34.0**	**0.0**
SOCV				*e*S		**Sg**	**17 42 42.2**	**+0.1**
SOCV	**Socops**	**0.60**	**106**	*e*P		**Pg**	**17 42 34.1**	**0.0**
SOCV				*e*S		**Sg**	**17 42 42.9**	**+0.9**
CAPV	**Capacho**	**1.04**	**236**	*e*P		**Pg**	**17 42 41.2**	**-1.4**
CAPV				*e*S		**Sg**	**17 42 55.1**	**-1.2**
PAMC	**Pamplona, Colo**	**1.67**	**229**	*e*P		**Pg**	**17 42 54.4**	**-0.1**
PAMC				*e*S		**Sg**	**17 43 16.7**	**+0.5**
PAMC				*i*			17 43 22.4	
comp=Z,39nm,0.3s								
TAMC	**Tame, Arauca**	**2.03**	**190**	*e*P		**Pg**	**17 43 01.5**	**+0.1**
TAMC				*e*S		**Sg**	**17 43 28.5**	**+0.8**
TAMC				*i*			17 43 32.8	
comp=Z,26nm,0.3s								
CURV	**Curarigua**	**2.13**	**43**	*e*S		**Sn**	**17 43 25.3**	**+1.4**
BARC	**Barichara**	**2.53**	**223**	*e*P		**Pg**	**17 43 09.4**	**-1.5**
BARC				*e*S		**Sg**	**17 43 43.7**	**-0.1**
BARC				*i*			17 43 45.2	
comp=Z,34nm,0.4s								
BRRC	**Barranca, Sant**	**2.62**	**240**	*e*P		Pn	17 42 59.3	-4.9
BRRC				*e*S		**Sb**	**17 43 42.4**	**+1.3**
BRRC				*i*			17 43 48.8	
comp=Z,14nm,0.8s								
SIQV	**Siquisique**	**2.71**	**36**	*e*P		**Pn**	**17 43 05.7**	**+0.1**
SIQV				*e*S		**Sn**	**17 43 38.0**	**-0.3**
MAPV	**Macapo**	**3.25**	**65**	*e*P		**Pn**	**17 43 13.2**	**+0.3**
MAPV				*e*S		**Sn**	**17 43 50.1**	**-1.3**
BAUV	**El Baul**	**3.39**	**81**	*e*P		**Pn**	**17 43 16.0**	**+1.1**
BAUV				*e*S		**Sn**	**17 43 55.0**	**+0.1**
ZARC	**Zaragoza, Cauc**	**3.52**	**255**	*e*P		**Pn**	**17 43 19.7**	**+3.0**
ZARC				*e*S		**Sb**	**17 44 05.5**	**-1.5**
ZARC				*i*			17 44 13.1	
comp=Z,6.9nm,0.3s								
BENV	**Beln**	**4.08**	**68**	*e*P		**Pn**	**17 43 24.5**	**+0.1**
BENV				*e*S		**Sn**	**17 44 10.3**	**-1.7**
PAYV	**Puerto Ayacuch**	**4.81**	**128**	*e*P		**Pn**	**17 43 34.4**	**0.0**
PAYV				*e*S		**Sn**	**17 44 28.1**	**-1.8**
CACV	**CAICARA DEL OR**	**4.93**	**100**	*e*P		Pn	17 43 42.7	+6.7

IDC ***15*** *17:50:11.4±1.0, 29.˚04S×71.˚57W, h0km, mb4.0/3, mbtmp3.9/7, ML3.8/4, MS3.2/6, Error ellipse: s-maj=36.4km s-min=27.1km az=108.0*
SJA ***15*** *17:50:12.5±1.4, 28.˚81S×71.˚72W, h28km±6km, ML4.3, MW4.3*
GUC ***15*** *17:50:14.7±0.4, 28.˚92S×71.˚44W, h41km±2km, ML4.2*
NEIC ***15*** *17:50:15.7±3.0, 28.˚86S±0.˚05×71.˚59W±0.˚07, h39km±9km, Error ellipse: s-maj=8.7km s-min=6.2km az=109.0*
NEIC ***15*** *17:50:16, 28.˚88S×71.˚50W, h31km, Moment Tension Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=6.04; Mθθ-0.31; Mϕϕ-5.73; Mrθ 0.16; Mrϕ-0.02; Mθϕ-5.55; Fault plane solution: M₀8.09000×10¹⁴ NP1:ϕs178.96000°, δ66.67000°, λ,89.03000°. NP2:ϕs1.41000°, δ23.35000°, λ92.25000°. Principal axes: T 8.2420, Plg68.0000°, Azm87.0000°; N -0.3103, Plg1.0000°, Azm179.0000°; P -7.9317, Plg22.0000°, Azm270.0000°;*
ISC 15 17:50:12.8±1.0, 28.˚82S±0.˚02×71.˚69W±0.˚04, h19km±3km, n130, σ1§92/162, mb4.3/5, 4C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.82**	**41**	Pn		**Pn**	**17 50 30.2**	**+0.9**
AC04	**Llanos de Chal**	**0.82**	**41**	⇓*i*P		**Pn**	**17 50 30.3**	**+0.9**
AC04				*i* S		**Sn**	**17 50 41.1**	**+0.1**
AC04				IAML			17 50 43.6	
comp=E,10μm,0.3s								
AC04	**Llanos de Chal**	**0.82**	**41**	*e*P		**Pn**	**17 50 30.7**	**+1.3**
AC04				*e*S		**Sn**	**17 50 41.0**	**+0.1**
LCO	**Las Campanas**	**0.88**	**102**			**Pb**	**17 50 29.5**	**-0.2**
LCO				Sn		**Sb**	**17 50 38.8**	**-2.4**
LCO	**Las Campanas**	**0.88**	**102**	*e*P		**Pb**	**17 50 28.8**	**-0.9**
LCO				*i* S		**Sb**	**17 50 38.1**	**-3.1**
CO05	**La Serena**	**1.16**	**160**			**Pg**	**17 50 34.9**	**-0.4**
CO05	**La Serena**	**1.16**	**160**	⇓*i*P		**Pg**	**17 50 35.0**	**-0.4**
CO05				*i* S		**Sb**	**17 50 48.2**	**-0.6**
CO05				IAML			17 50 50.2	
comp=E,6μm,0.3s								
AC05	**El Transito**	**1.24**	**91**	Pn		**Pn**	**17 50 35.3**	**0.0**
AC05				Sn		**Sb**	**17 50 48.2**	**-3.1**
AC05	**El Transito**	**1.24**	**91**	⇓*i*P		**Pn**	**17 50 35.4**	**+0.2**
AC05				*i* S		**Sb**	**17 50 49.4**	**-1.9**
AC05				IAML			17 50 50.3	
comp=E,10μm,0.5s								
AC05	**El Transito**	**1.24**	**91**	*e*P		**Pn**	**17 50 35.4**	**+0.2**
AC05				*e*S		**Sb**	**17 50 49.7**	**-1.6**
AC05				IAML			17 50 50.2	
comp=Z,6μm,0.2s								
GO04	**Tololo Observa**	**1.55**	**150**	Pn		**Pb**	**17 50 40.7**	**-0.4**
GO04	**Tololo Observa**	**1.55**	**150**	⇓*i*P		**Pb**	**17 50 40.6**	**-0.4**
GO04				*i* S		**Sn**	**17 50 59.2**	**-0.1**
GO04				IAML			17 51 02.8	
comp=N,16μm,0.4s								
GO04	**Tololo Observa**	**1.55**	**150**	*e*P		**Pb**	**17 50 40.6**	**-0.4**
GO04				*e*S		**Sb**	**17 51 00.5**	**+0.1**
GO03	**Copiap**	**1.77**	**47**	Pn		**Pb**	**17 50 44.2**	**-0.5**
GO03	**Copiap**	**1.77**	**47**	⇑*i*P		**Pb**	**17 50 44.3**	**-0.5**
GO03				*e*S		**Sb**	**17 51 06.6**	**0.0**
GO03				IAML			17 51 10.1	
comp=E,4μm,0.5s								
GO03	**Copiap**	**1.77**	**47**	*e*P		**Pb**	**17 50 44.3**	**-0.4**
GO03				*e*S		**Sb**	**17 51 07.2**	**+0.6**
CO01	**Juntas del Tor**	**1.80**	**130**			**Pb**	**17 50 44.3**	**-1.1**
CO01				Sn		**Sn**	**17 51 04.1**	**-1.5**
CO01	**Juntas del Tor**	**1.80**	**130**	⇓*i*P		**Pb**	**17 50 44.5**	**-0.9**
CO01				*i* S		**Sn**	**17 51 05.2**	**-0.4**
CO01				IAML			17 51 07.3	
comp=N,3μm,0.3s								
CO01	**Juntas del Tor**	**1.80**	**130**	*e*P		**Pb**	**17 50 44.6**	**-0.8**
CO01				*e*S		**Sn**	**17 51 05.8**	**+0.2**
CO01				IAML			17 51 07.0	
comp=Z,3μm,0.3s								
CO06	**Fray Jorge**	**1.84**	**179**			**Pb**	**17 50 44.7**	**-1.2**
CO06	**Fray Jorge**	**1.84**	**179**	⇓*i*P		**Pb**	**17 50 44.7**	**-1.2**
CO06				*i* S		**Sb**	**17 51 07.9**	**-0.7**
AC06	**Mina Casimiro**	**1.88**	**39**			**Pb**	**17 50 46.3**	**-0.2**
CO03	**El Pedregal**	**2.19**	**157**			**Pn**	**17 50 49.5**	**+1.2**
CO03	**El Pedregal**	**2.19**	**157**	⇑*i*P		**Pn**	**17 50 49.7**	**+1.4**
CO03				*i* S		**Sn**	**17 51 15.2**	**+0.4**
CO03				IAML			17 51 20.7	
comp=E,2μm,0.4s								
CO03	**El Pedregal**	**2.19**	**157**	*e*P		**Pn**	**17 50 49.7**	**+1.4**
CO03				*e*S		**Sb**	**17 51 20.5**	**+1.9**
CO03				IAML			17 51 22.5	
comp=Z,1μm,0.4s								
AROD	**Rodeo**	**2.35**	**125**	*e*P		**Pb**	**17 50 54.1**	**-0.6**
AROD				*e*S		**Sb**	**17 51 22.1**	**-1.3**
CO02	**Combarbal**	**2.44**	**166**			**Pn**	**17 50 53.1**	**+1.3**
CO02	**Combarbal**	**2.44**	**166**	*e*P		**Pn**	**17 50 53.2**	**+1.4**
CO02				*i* S		**Sn**	**17 51 22.4**	**+1.2**
CO02	**Combarbal**	**2.44**	**166**	*e*P		**Pn**	**17 50 53.2**	**+1.4**
CO02				IAML			17 51 31.7	
comp=Z,3μm,0.5s								
ACDV	**Cuesta del Vie**	**2.61**	**122**	*e*P		**Pb**	**17 50 57.5**	**-1.5**
ACDV				*e*S		**Sb**	**17 51 30.4**	**-0.4**
ACDV				IAML			17 51 31.3	
comp=Z,755nm,0.3s								
AC01	**Pan de Azucar**	**2.83**	**20**	Pn		**Pn**	**17 50 58.3**	**+1.3**
AC01	**Pan de Azucar**	**2.83**	**20**	⇑*i*P		**Pn**	**17 50 58.4**	**+1.3**
AC01				*e*S		**Sn**	**17 51 30.6**	**-0.2**
AC01				IAML			17 51 49.6	
comp=E,769nm,0.6s								
AC01	**Pan de Azucar**	**2.83**	**20**	*e*P		**Pn**	**17 50 58.4**	**+1.3**
AC01				*e*S		**Sg**	**17 51 43.6**	**-0.4**
AC01				IAML			17 51 48.5	
comp=Z,873nm,0.6s								
ACCO	**Cerro Coronel**	**2.88**	**128**	*e*P		**Pb**	**17 51 02.0**	**-1.8**
ACCO				*e*S		**Sn**	**17 51 32.0**	**-0.2**
AC02	**Maricunga**	**3.01**	**49**	Pn		**Pn**	**17 51 02.5**	**+2.7**
AC02	**Maricunga**	**3.01**	**49**	*i* P		**Pn**	**17 51 02.7**	**+2.8**
AC02				*i* S		**Sn**	**17 51 39.5**	**-3.1**
AC02				IAML			17 51 44.9	
comp=E,1μm,0.5s								
AC02	**Maricunga**	**3.01**	**49**	*e*P		**Pn**	**17 51 02.0**	**+2.1**
AC02				*e*S		**Sn**	**17 51 38.5**	**+2.8**
AC02				IAML			17 51 44.9	
comp=Z,884nm,0.4s								
RTLS	**Leoncito**	**3.61**	**146**	*e*P		**Pb**	**17 51 12.3**	**-4.0**
RTLS				*e*S		**Sb**	**17 51 58.1**	**-1.8**
RTLS				IAML			17 52 06.8	
comp=Z,1μm,0.6s								
RTLL	**Cerro Villicun**	**3.74**	**133**	*e*P		**Pn**	**17 51 09.0**	**-0.5**
RTLL				*e*S		**Sn**	**17 51 56.1**	**+3.1**
RTLL				*e*S		**Sn**	**17 51 57.0**	**+3.9**
VA06	**Catapilco**	**3.74**	**175**	Pn		**Pn**	**17 51 11.1**	**+1.6**
VA06	**Catapilco**	**3.74**	**175**	*e*P		**Pn**	**17 51 10.7**	**+1.2**
VA06				*e*S		**Sn**	**17 51 51.4**	**-1.6**
ZON	**Zonda**	**3.76**	**137**			**Pn**	**17 51 11.9**	**+2.1**
VA03	**San Esteban**	**4.05**	**166**			**Pn**	**17 51 16.1**	**+2.3**
VA03	**San Esteban**	**4.05**	**166**	*e*P		**Pn**	**17 51 16.3**	**+2.5**
VA03	**San Esteban**	**4.05**	**166**	*e*P		**Pn**	**17 51 17.0**	**+3.2**
VA03				*e*S		**Sn**	**17 52 06.0**	**+5.3**
VA03				IAML			17 52 19.2	
comp=Z,440nm,0.6s								
GO02	**Mina Guanaco**	**4.10**	**28**	Pn		**Pn**	**17 51 16.6**	**+1.9**
GO02	**Mina Guanaco**	**4.10**	**28**	*e*P		**Pn**	**17 51 17.0**	**+2.3**
GO02				*e*S		**Sb**	**17 52 14.5**	**+0.7**
AVFE	**Valle Fertil**	**4.11**	**117**	*e*P		**Pn**	**17 51 17.6**	**+3.0**
AVFE				*e*S		**Sn**	**17 52 03.7**	**+1.5**
AVFE				IAML			17 52 13.5	
comp=Z,667nm,0.5s								
ROCH	**El Roble**	**4.17**	**172**	⇑*e*P		**Pn**	**17 51 17.2**	**+1.5**
ROC1	**El Roble**	**4.18**	**172**			**Pn**	**17 51 17.0**	**+1.3**
ROC1	**El Roble**	**4.18**	**172**	*e*P		**Pn**	**17 51 17.5**	**+1.7**
ROC1				*e*S		**Sg**	**17 52 23.0**	**-4.0**
ACLC	**CERRO LA CRUZ**	**4.18**	**99**	*e*P		**Pn**	**17 51 18.6**	**+2.8**
ACLC				*e*S		**Sn**	**17 52 09.0**	**+4.8**
ACLC				IAML			17 52 16.3	
comp=Z,446nm,0.5s								
VA01	**Torpederas**	**4.19**	**180**	Pn		**Pn**	**17 51 15.6**	**-0.1**
PB14	**IPOC Station P**	**4.33**	**16**	Pn		**Pn**	**17 51 18.3**	**+0.3**
PB14	**IPOC Station P**	**4.33**	**16**	*e*P		**Pn**	**17 51 17.9**	**0.0**
PB14	**IPOC Station P**	**4.33**	**16**	*e*P		**Pn**	**17 51 18.0**	**0.0**
PB14				*e*S		**Sb**	**17 52 14.8**	**-5.8**
PB14				*e*S		**Sb**	**17 52 19.5**	**-1.2**
PB14				IAML			17 52 38.0	
comp=Z,319nm,0.5s								
PEL	**Peldehue**	**4.39**	**169**			**Pn**	**17 51 20.4**	**+1.9**
PEL	**Peldehue**	**4.39**	**169**	*e*P		**Pn**	**17 51 20.5**	**+2.0**
PEL	**Peldehue**	**4.39**	**169**	*e*P		**Pn**	**17 51 20.9**	**+2.4**
PEL				*e*S		**Sn**	**17 52 14.3**	**+5.1**
MT02	**Curacav**	**4.45**	**174**			**Pn**	**17 51 20.1**	**+0.9**
MT02	**Curacav**	**4.45**	**174**	*e*P		**Pn**	**17 51 20.3**	**+1.0**
MT02	**Curacav**	**4.45**	**174**	*e*P		**Pn**	**17 51 20.3**	**+1.0**
MT02				*e*S		**Sn**	**17 52 13.7**	**+3.2**
MT02				IAML			17 52 35.8	
comp=Z,178nm,0.5s								
MT05	**Renca**	**4.62**	**170**			**Pn**	**17 51 23.0**	**+1.2**
MT05	**Renca**	**4.62**	**170**	*e*P		**Pn**	**17 51 24.9**	**+3.1**
MT05	**Renca**	**4.62**	**170**	*e*P		**Pn**	**17 51 23.6**	**+1.8**
MT05				*e*S		**Sb**	**17 52 22.9**	**-5.8**
MT05				IAML			17 52 44.3	
comp=Z,364nm,0.8s								
ARCO	**CERRO ARCO**	**4.65**	**150**	*e*P		Pn	17 51 27.0	+4.8
ARCO				*e*S		**Sn**	**17 52 19.0**	**+3.2**
ARCO				IAML			17 52 40.3	
comp=Z,253nm,0.7s								
APLL	**PUNTA DE LOS L**	**4.76**	**110**	*e*S		**Sn**	**17 52 21.5**	**+3.3**
MT03	**Universidad Ad**	**4.76**	**168**			**Pn**	**17 51 25.2**	**+1.6**
MT03	**Universidad Ad**	**4.76**	**168**	*e*P		**Pn**	**17 51 27.2**	**+3.6**
VA05	**Santo Domingo**	**4.82**	**179**			**Pn**	**17 51 24.3**	**0.0**
AAGR	**Agrelo**	**4.91**	**151**	*e*P		Pn	17 51 31.0	+5.4
AAGR				*e*S		**Sb**	**17 52 39.0**	**+2.2**
ACHE	**Chepes**	**4.94**	**119**	*e*P		**Pn**	**17 51 28.7**	**+2.6**
ACHE				*e*S		**Sn**	**17 52 23.8**	**+0.9**
MT09	**Talagante**	**4.97**	**173**			**Pn**	**17 51 28.0**	**+1.4**
MT01	**Popeta**	**5.04**	**176**			**Pn**	**17 51 28.8**	**+1.5**
MT01	**Popeta**	**5.04**	**176**	*e*P		**Pn**	**17 51 29.0**	**+1.6**
MT01				IAML			17 52 59.5	
comp=Z,91nm,0.8s								
LMEL	**Las Melosas**	**5.17**	**166**	Pn		**Pn**	**17 51 28.9**	**-0.3**
PB10	**IPOC Station P**	**5.39**	**11**			**Pn**	**17 51 33.4**	**+1.3**
BO01	**Tunca**	**5.57**	**175**			**Pn**	**17 51 36.1**	**+1.4**
PB15	**IPOC Station P**	**5.94**	**20**			**Pn**	**17 51 41.2**	**+1.3**
BO02	**Sierra Bellavi**	**6.00**	**173**			**Pn**	**17 51 42.6**	**+2.0**
GO05	**Huala**	**6.17**	**182**	Pn		**Pn**	**17 51 42.4**	**-0.5**
PB06	**IPOC Station P**	**6.38**	**18**	Pn		**Pn**	**17 51 45.7**	**-0.3**
PB04	**IPOC Station P**	**6.61**	**12**			**Pn**	**17 51 48.6**	**-0.5**
AF01	**San Pedro de A**	**6.64**	**29**	Pn		**Pn**	**17 51 50.3**	**+0.5**
LVC	**Limon Verde**	**6.67**	**23**	Pn		**Pn**	**17 51 52.1**	**+1.0**
comp=Z,1.0nm,0.3s,baz=195,slow=9.2,SNR=16								
LVC					Sn	Sn	17 53 15.6	+10
comp=Z,6.3nm,0.3s,baz=296,slow=17,SNR=4.4								
comp=Z,2.1nm,0.3s								
ML02	**Panimavida**	**6.92**	**178**	Pn		**Pn**	**17 51 51.1**	**-2.1**
PB07	**IPOC Station P**	**7.25**	**13**	Pn		**Pn**	**17 51 58.7**	**+0.7**
PB09	**IPOC Station P**	**7.34**	**18**			**Pn**	**17 52 00.7**	**+1.5**
PB02	**IPOC Station P**	**7.65**	**13**	Pn		**Pn**	**17 52 04.2**	**+0.9**
H03N1	**Juan Fernandez**	**7.72**	**232**	Pn		**Pn**	**17 52 05.4**	**+1.5**
baz=110,slow=18								
H03N1					T	T	18 00 05.6	
baz=59,slow=72,SNR=2093								
H03N2	**Juan Fernandez**	**7.73**	**232**	Pn		**Pn**	**17 52 05.9**	**+1.9**
baz=110,slow=18								
H03N2					T	T	18 00 03.5	
baz=59,slow=72,SNR=1871								
H03N3	**Juan Fernandez**	**7.73**	**232**	Pn		**Pn**	**17 52 05.8**	**+1.6**
baz=110,slow=18								
H03N3					T	T	18 00 02.2	
baz=59,slow=72,SNR=1919								
VA04	**Juan Fernndez**	**7.78**	**230**	Pn		**Pn**	**17 52 05.6**	**+0.6**
H03S3	**Juan Fernandez**	**7.94**	**229**	Pn		**Pn**	**17 52 08.0**	**+1.0**
H03S1	**Juan Fernandez**	**7.95**	**229**	Pn		**Pn**	**17 52 07.5**	**+0.4**
H03S2	**Juan Fernandez**	**7.96**	**229**	Pn		**Pn**	**17 52 08.0**	**+0.8**
PB01	**IPOC Station P**	**8.00**	**15**	Pn		**Pn**	**17 52 07.1**	**-1.1**
GO01	**Chusmiza**	**9.39**	**15**	Pn		**Pn**	**17 52 27.0**	**-0.7**
PB12	**IPOC Station P**	**10.24**	**7**	Pn		**Pn**	**17 52 38.5**	**-0.3**
PB16	**IPOC Station P**	**10.63**	**11**	Pn		**Pn**	**17 52 44.3**	**-0.4**
PLCA	**Paso Flores**	**11.92**	**176**	LR		LR	17 57 26.8	
comp=Z,135nm,20.4s,baz=358,slow=37								
LPAZ	**La Paz**	**12.90**	**15**	Pn		**Pn**	**17 53 20.4**	**+4.7**
comp=Z,0.2nm,0.3s,baz=205,slow=12,SNR=4.8								
LPAZ				LR		LR	17 59 24.7	
comp=Z,61nm,19.6s,baz=148,slow=42								
comp=Z,1.4nm,0.6s								
LPAZ	**La Paz**	**12.90**	**15**			**Pn**	**17 53 13.3**	**-2.5**
CPUP	**Villa Florida**	**12.97**	**82**	Pn		**Pn**	**17 53 16.1**	**-0.1**
comp=Z,0.2nm,0.3s,baz=263,slow=12,SNR=3.7								
CPUP				Lg		Lg	17 56 48.0	
comp=Z,0.2nm,0.3s,baz=6.5,slow=20,SNR=2.0								
CPUP				LR		LR	17 58 59.8	
comp=Z,59nm,20.9s,baz=226,slow=41								
comp=Z,0.9nm,0.5s								
CPUP	**Villa Florida**	**12.97**	**82**	Pn		**Pn**	**17 53 14.6**	**-1.6**
ITQB	**Itaqui**	**13.18**	**97**	Pn		**Pn**	**17 53 19.7**	**+0.7**
PLTB	**Pedras Altas**	**15.89**	**105**	P		**Pn**	**17 53 55.6**	**+0.2**
PLTB				IAmb		IAmb	17 54 19.4	
comp=Z,21nm,1.5s								
SIV	**San Ignacio**	**16.09**	**40**	Pn		**P**	**17 54 01.6**	**+0.3**
baz=219,slow=13,SNR=7.1								
SIV				LR		LR	18 01 23.3	
comp=Z,121nm,20.5s,baz=112,slow=42								
comp=Z,1.3nm,0.5s								
COYC	**Coyhaique**	**16.72**	**181**	Pn		**Pn**	**17 54 04.4**	**-1.5**
COYC				IAmb		IAmb	17 54 34.6	
comp=Z,20nm,1.3s								
AQDB	**Aquidauana**	**16.73**	**64**	Pn		**Pn**	**17 54 03.8**	**-2.4**
AQDB				IAmb		IAmb	17 54 11.7	
comp=Z,8.7nm,1.4s								
ETMB	**Extrema**	**19.59**	**16**	Pn		**Pn**	**17 54 41.2**	**-0.1**
ETMB				IAmb		IAmb	17 54 48.9	
comp=Z,2.5nm,0.6s								
SAML	**Samuel**	**21.33**	**24**	P		**P**	**17 54 58.0**	**-0.7**
SAML				IAmb		IAmb	17 55 04.7	
comp=Z,4.0nm,0.9s								
MDP	**Montagnes des**	**38.39**	**32**	LR		LR	18 15 37.0	
comp=Z,34nm,21.0s,baz=250,slow=40								
RCBR	**Riachuelo**	**40.84**	**63**	LR		LR	18 16 56.7	
comp=Z,72nm,20.8s,baz=318,slow=39								
DR12	**Loma Pena Alta**	**47.38**	**3**	P		**P**	**17 58 45.0**	**-0.9**
SNAA	**Sanae**	**56.28**	**159**	P		**P**	**17 59 52.8**	**+1.0**
QSPA	**South Pole Qui**	**61.40**	**180**	P		**P**	**18 00 24.9**	**-2.6**
QSPA				IAmb		IAmb	18 00 32.7	
comp=Z,4.9nm,1.4s								
TXAR	**Lajitas Array**	**65.41**	**329**	P		**P**	**18 00 57.0**	**+2.6**
comp=Z,0.1nm,0.5s,baz=168,slow=13,SNR=1.9								
comp=Z,0.1nm,0.5s								
TORD	**Torodi Ar. Bea**	**82.18**	**70**	P		**P**	**18 02 33.9**	**+1.0**
comp=Z,1.7nm,0.6s,baz=273,slow=6.7,SNR=8.1								
comp=Z,1.7nm,0.6s								
BOSA	**Boshof**	**82.22**	**118**	P		**P**	**18 02 33.9**	**+0.7**
comp=Z,7.8nm,1.2s,baz=281,slow=3.5,SNR=3.8								
comp=Z,7.8nm,1.2s								
ASAR	**Alice Springs**	**122.29**	**208**	PKP		**PKiKP**	**18 09 08.4**	**+1.1**
comp=Z,0.3nm,0.7s,baz=136,slow=1.7,SNR=0.7								
WRA	**Warramunga Arr**	**125.39**	**210**	PKP		**PKiKP**	**18 09 15.2**	**+1.6**
comp=Z,0.4nm,0.6s,baz=151,slow=1.8,SNR=5.0								
H11S2	**WAKE ISLAND Hyl**	**25.99**	**273**	T		T	20 28 03.5	
baz=112,slow=75,SNR=17								
H11S1	**WAKE ISLAND Hyl**	**26.00**	**273**	T		T	20 28 06.0	
baz=112,slow=75,SNR=20								
H11S3	**WAKE ISLAND Hyl**	**26.01**	**273**	T		T	20 28 05.8	
baz=112,slow=75,SNR=20								
H11N3	**WAKE ISLAND Hyl**	**26.27**	**274**	T		T	20 28 24.5	
baz=114,slow=76,SNR=51								
H11N1	**WAKE ISLAND Hyl**	**26.29**	**274**	T		T	20 28 25.7	
baz=114,slow=76,SNR=27								
H11N2	**WAKE ISLAND Hyl**	**26.29**	**274**	T		T	20 28 25.7	
baz=114,slow=76,SNR=28								
ZALV	**Zalesovo Beam**	**149.60**	**28**	PKPbc		**PKiKP**	**18 10 03.0**	**+1.4**
comp=Z,4.4nm,0.7s,baz=311,slow=3.7,SNR=18								
MKAR	**Makanchi Array**	**152.91**	**41**	PKPbc		**PKiKP**	**18 10 10.4**	**+1.6**
comp=Z,0.8nm,0.7s,baz=316,slow=2.3,SNR=8.9								

NEIC ***15*** *18:00:59.3±2.0, 22.˚50S±0.˚

HNR LR LR 18 11 11.0
comp=Z,1µm,19.1s,baz=150,slow=34 76nm,0.9s
HNR Honiara 17.84 314 P 18 05 07.7 -0.7
BFZ Birch Farm 18.43 172 P P 18 05 12.4 -2.4
NNZ Nelson 18.74 179 P Pn 18 05 18.9 +0.3
NNZ IAmb IAmb 18 05 24.3
comp=Z,337nm,2.0s
SNZO South Karori 18.90 175 Pn 18 05 20.9 +0.5
SNZO IAmb IAmb 18 05 25.3
comp=Z,315nm,1.7s
TUWZ Tuamarina 18.97 177 P Pn 18 05 22.8 +1.5
MSWZ Moikau Station 19.05 174 P Pn 18 05 22.0 -0.3
PLWZ Palliser 19.20 174 P Pn 18 05 23.6 -0.6
BSWZ Blackbirch Sta 19.25 177 P P 18 05 24.1 +0.3
THZ Tophouse 19.28 180 P P 18 05 22.4 -1.7
KHZ Kahutara 19.94 178 P P 18 05 31.8 +0.5
KHZ IAmb IAmb 18 05 36.3
comp=Z,120nm,1.5s
EIDS Eidsvold 20.03 257 P Pn 18 05 33.6 -0.6
EIDS IAmb IAmb 18 05 46.1
comp=Z,130nm,1.6s
LTZ Lake Taylor 20.30 181 P Pn 18 05 37.0 -0.3
LTZ IAmb IAmb 18 05 39.8
comp=Z,149nm,1.4s
ARMA Armidale 20.51 243 Pn 18 05 41.0 +1.1
ARMA IAmb IAmb 18 05 50.6
comp=Z,213nm,2.0s
ARMA Armidale 20.51 243 P Pn 18 05 43.5 +3.6
OXZ Oxford 20.85 181 P P 18 05 42.0 +0.9
OXZ IAmb IAmb 18 05 44.9
comp=Z,173nm,1.5s
RPZ Rata Peaks 21.27 183 P P 18 05 46.9 +1.1
comp=Z,50nm,1.3s,baz=29,slow=5.5,SNR=5.8
RPZ LR LR 18 12 48.7
comp=Z,884nm,20.7s,baz=356,slow=33 comp=Z,50nm,1.3s
RPZ Rata Peaks 21.27 183 P P 18 05 42.6 -3.1
RPZ IAmb IAmb 18 05 50.1
comp=Z,139nm,1.6s
LBZ Lake Benmore 22.00 185 P P 18 05 52.8 -0.8
LBZ IAmb IAmb 18 05 57.7
comp=Z,102nm,1.5s
RMQ Roma 22.21 255 P P 18 06 00.7 +4.7
MLZ Mavora Lakes 23.19 188 P P 18 06 05.2 -0.9
MLZ IAmb IAmb 18 06 10.5
comp=Z,71nm,1.2s
WHZ Wether Hill Ro 23.73 188 P P 18 06 11.2 -0.3
WHZ IAmb IAmb 18 06 16.9
comp=Z,99nm,1.4s
CNB Canberra Magne 24.11 233 P P 18 06 19.1 +3.8
CAN Canberra 24.38 233 P P 18 06 19.3 +1.5
CAN Canberra 24.38 233 P P 18 06 19.3 +1.5
CAN pmax pmax
comp=Z,208nm,1.9s
CAN Canberra 24.38 233 P P 18 06 21.7 +4.0
CTA Charters Tower 24.80 270 LR LR 18 16 02.5
comp=Z,1µm,18.4s,baz=92,slow=36
RAR Rarotonga 25.52 92 LR LR 18 16 21.7
comp=Z,448nm,18.2s,baz=264,slow=36
CMSA Cobar Meteorol 25.72 244 P P 18 06 32.1 +2.3
KRVT Keravat (AS076 26.97 309 P P 18 06 41.8 +0.5
comp=Z,28nm,0.8s,baz=231,slow=24,SNR=6.1 comp=Z,28nm,0.8s
TOO Toolangi 27.89 231 P P 18 06 51.0 +1.6
TOO IAmb IAmb 18 06 52.8
comp=Z,28nm,1.1s
TOO Toolangi 27.89 231 P P 18 06 51.0 +1.6
TOO pmax pmax
comp=Z,28nm,1.2s
STKA Stephens Creek 29.20 244 P P 18 07 01.8 +0.7
comp=Z,2.8nm,0.8s,baz=90,slow=9.7,SNR=4.5
STKA LR LR 18 17 41.3
comp=Z,422nm,19.7s,baz=71,slow=34 comp=Z,2.8nm,0.8s
STKA Stephens Creek 29.20 244 P P 18 07 01.3 +0.2
STKA Stephens Creek 29.20 244⇑ *e*P P 18 07 02.1 +1.0
TBI Tubuai 34.75 99 *e*S S 18 13 21.4 +1.0
comp=Z,203nm,23.2s
TBI *e*LR LR 18 17 04.3
comp=Z,2µm,30.2s
PPT2 Papeete2 35.65 89 *e*S S 18 13 35.4 +0.9
comp=Z,327nm,24.5s
PPT2 *e*LR LR 18 17 29.8
comp=Z,2µm,26.5s
PPT Papeete 35.66 89 LR LR 18 18 37.9
comp=Z,574nm,20.3s,baz=214,slow=30
ASAR Alice Springs 35.70 260 P P 18 07 58.0 -0.2
comp=Z,2.3nm,0.8s,baz=85,slow=8.3,SNR=11
ASAR LR LR 18 22 17.5
comp=Z,816nm,20.9s,baz=104,slow=36 comp=Z,2.3nm,0.8s
ASAR Alice Springs 35.70 260 P P 18 07 55.9 -2.3
ASAR Alice Springs 35.70 260 P P 18 07 58.0 -0.2
WRA Warramunga Arr 35.85 267 P P 18 07 58.0 -1.4
comp=Z,0.6nm,0.7s,baz=96,slow=8.7,SNR=6.3
WRA LR LR 18 22 57.8
comp=Z,940nm,18.9s,baz=98,slow=37 comp=Z,0.6nm,0.7s
WRA Warramunga Arr 35.85 267 P P 18 07 58.0 -1.4
FORT Forrest 40.61 248 P P 18 08 37.1 -2.3
FORT IAmb IAmb 18 08 43.8
comp=Z,30nm,0.8s
H11S2 WAKE ISLAND Hy 41.10 351 T T 18 52 28.0
baz=171,slow=76,SNR=291
H11S3 WAKE ISLAND Hy 41.10 351 T T 18 52 27.0
baz=171,slow=76,SNR=140
H11S1 WAKE ISLAND Hy 41.12 351 T T 18 52 27.8
baz=171,slow=76,SNR=289
H11N1 WAKE ISLAND Hy 42.28 352 T T 18 53 49.4
baz=173,slow=76,SNR=30
H11N3 WAKE ISLAND Hy 42.28 352 T T 18 53 55.2
baz=173,slow=76,SNR=11
H11N2 WAKE ISLAND Hy 42.29 352 T T 18 53 56.1
baz=173,slow=76,SNR=17
FITZ Fitzroy Crossi 44.28 267 P P 18 09 08.8 -0.6
comp=Z,6.4nm,1.0s,baz=122,slow=6.9,SNR=5.8
FITZ LR LR 18 26 37.0
comp=Z,332nm,21.4s,baz=107,slow=35 comp=Z,6.4nm,1.0s
FITZ Fitzroy Crossi 44.28 267 P P 18 09 09.7 +0.3
GUMO Guam 45.04 320 LR LR 18 26 03.5
comp=Z,486nm,21.7s,baz=126,slow=33
SIJI Sorong 45.68 292 P P 18 09 21.2 +0.6
comp=Z,7.1nm,0.8s,baz=145,slow=12,SNR=2.4 comp=Z,7.1nm,0.8s
TAOE Nuku Hiva Isla 47.12 81 *e*S S 18 16 24.3 -0.4
comp=Z,377nm,26.1s
TAOE *e*LR LR 18 22 47.2
comp=Z,2µm,26.8s
BATI Baumata 48.46 276 LR LR 18 30 19.1
comp=Z,2µm,20.8s,baz=150,slow=36
KAPI Kappang 54.02 280 LR LR 18 34 41.9
comp=Z,134nm,19.0s,baz=110,slow=37
DAV Davao City (W) 54.71 297 LR LR 18 33 01.3
comp=Z,164nm,20.9s,baz=114,slow=35
VNDA Vanda 55.40 183 P P 18 10 34.1 +0.9
comp=Z,5.0nm,0.9s,baz=358,slow=7.0,SNR=20
VNDA LR LR 18 30 19.7
comp=Z,267nm,21.8s,baz=16,slow=32 comp=Z,5.0nm,0.9s
VNDA Vanda 55.40 183 P P 18 10 33.7 +0.5
VNDA Vanda 55.40 183 P P 18 10 33.7 +0.5
VNDA pmax pmax
comp=Z,66nm,1.9s
SBA Scott Base 55.55 182 P P 18 10 35.8 +1.5
SBA Scott Base 55.55 182 P P 18 10 35.8 +1.5
SBA pmax pmax
comp=Z,104nm,1.1s
JCJ Chichijima 57.43 327 LR LR 18 34 17.2
comp=Z,104nm,20.2s,baz=164,slow=35
CASY Casey 58.58 205 P P 18 10 55.8 0.0
JHJ Hachijo jima 2 63.57 329 LR LR 18 40 38.9
comp=Z,59nm,18.2s,baz=275,slow=37
LEM Lembang 64.47 273 LR LR 18 39 31.2
comp=Z,369nm,21.8s,baz=116,slow=36
JOW Kunigami 65.20 316 P P 18 11 41.6 +0.7
JOW IAmb IAmb 18 11 42.9
comp=Z,18nm,1.1s
KSM Kuching 65.28 283 P P 18 11 42.1 +0.3
KSM IAmb IAmb 18 11 50.3
comp=Z,14nm,1.0s
INU Inuyama 66.71 329 P P 18 11 50.9 +0.4
INU IAmb IAmb 18 11 52.2
comp=Z,16nm,1.2s
JMN Monobe 67.01 325 P P 18 11 52.9 +0.4

MJAR Matsushiro Arr 67.12 330 P P 18 11 52.8 -0.3
comp=Z,4.0nm,1.0s,baz=158,slow=7.9,SNR=6.6 comp=Z,4.0nm,1.0s
MAJO Matsushiro 67.12 330⇑ *e*P P 18 11 53.4 +0.3
MAJO pmax pmax
comp=Z,36nm,4.0s
QSPA South Pole Qui 67.64 180 LR LR 18 39 29.7
comp=Z,115nm,18.1s,baz=36,slow=34
QSPA South Pole Qui 67.64 180 P P 18 11 55.7 -0.6
JSD Sado 68.33 331 P P 18 12 01.2 +0.6
JHS Saijyo 68.39 326 P P 18 12 01.8 +0.6
RPN Rapa Nui 69.83 112 LR LR 18 34 23.6
comp=Z,328nm,21.9s,baz=270,slow=29
TJN Taejon 72.52 323⇓ *e*P P 18 12 27.6 +1.2
KSRS Korea Array 73.00 324 P P 18 12 30.1 +1.0
comp=Z,4.6nm,1.0s,baz=147,slow=6.4,SNR=15 comp=Z,4.6nm,1.0s
KSAR Wonju Array Be 73.01 324 P P 18 12 28.8 -0.4
KSAR Wonju Array Be 73.01 324 P P 18 12 28.8 -0.4
YSS Yuzh-Sakhalins 74.19 339 P P 18 12 37.8 +1.9
YSS Yuzh-Sakhalins 74.19 339 *e*P P 18 12 37.5 +1.6
YSS *e*S S 18 22 09.0 -0.2
YSS pmax pmax
comp=Z,70nm,0.9s
YSS pmax pmax
comp=Z,500nm,6.5s
YSS smax smax
comp=N,200nm,10.7s
YSS MLR MLR
comp=Z,300nm,13.0s
SKR Severo-Kuril's 74.26 349 *de*P P 18 12 36.9 +0.7
NJ2 Nanjing 74.78 315 *e*P P 18 12 43.4 +3.7
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
SHEM Shemya Is, Ala 74.85 1 LR LR 18 41 40.5
comp=Z,121nm,20.0s,baz=243,slow=33
MSHR Mys Shultsa 75.21 330 *ce*P P 18 12 43.6 +1.6
MSHR pmax pmax
comp=Z,15nm,2.5s
USRK Ussuriysk Ar. 76.09 331 P P 18 12 48.2 +1.3
comp=Z,3.9nm,0.8s,baz=157,slow=4.1,SNR=4.3 comp=Z,3.9nm,0.8s
USRK Ussuriysk Ar. 76.09 331 P P 18 12 47.5 +0.5
USRK Ussuriysk Ar. 76.09 331 P P 18 12 47.5 +0.5
PET Petropavlovsk 76.13 351 P P 18 12 47.7 +0.7
PET Petropavlovsk 76.13 351 *e*P P 18 12 48.1 +1.1
PET *e*S S 18 22 28.6 -1.9
PET *e*SS SS 18 27 20.6 -3.9
PET pmax pmax
comp=Z,48nm,1.6s
PET MLR MLR
comp=Z,100nm,19.0s
PSI Prapat 76.18 279 LR LR 18 48 58.0
comp=Z,201nm,18.8s,baz=134,slow=38
PEA0B Petropavlovsk- 76.35 351 P P 18 12 49.5 +1.2
PEA0B Petropavlovsk- 76.35 351 *ce*P P 18 12 49.8 +1.5
PETK Petropavlovsk- 76.35 351 P P 18 12 49.3 +1.0
comp=Z,43nm,0.9s,baz=163,slow=7.7,SNR=40
PETK LR LR 18 41 41.3
comp=Z,150nm,20.0s,baz=161,slow=32 comp=Z,43nm,0.9s
PETK Petropavlovsk- 76.35 351 P P 18 12 48.2 -0.1
PETK Petropavlovsk- 76.35 351 P P 18 12 48.2 -0.1
MAW Mawson 76.72 202 P P 18 12 51.5 +1.2
comp=Z,12nm,0.9s,baz=92,slow=8.0,SNR=14
MAW LR LR 18 44 58.4
comp=Z,50nm,18.4s,baz=92,slow=34 comp=Z,12nm,0.9s
MAW Mawson 76.72 202 P P 18 12 50.8 +0.5
MAW Mawson 76.72 202 P P 18 12 50.8 +0.5
MAW pmax pmax
comp=Z,4.0nm,1.2s
MDJ Mudanjiang 77.50 330 P P 18 12 55.5 +0.5
MDJ IAmb IAmb 18 12 56.9
comp=Z,19nm,1.2s
BELA Belgrano 2 78.63 174 P P 18 12 59.2 -1.7
BELA IAmb IAmb 18 13 00.8
comp=Z,19nm,1.3s
CN2 Changchun 78.90 327 *e*P P 18 13 03.1 +0.4
CN2 pmax pmax
comp=Z,20nm,1.4s
BNX BinXian 79.37 330 ⇑P P 18 13 03.8 -1.4
BNX pmax pmax
comp=Z,8.0nm,1.3s
BNX pmax pmax
comp=Z,140nm,4.1s
GRNR Gornyy 79.62 338⇓ *i*P P 18 13 08.2 +1.7
GRNR pmax pmax
comp=N,10.0nm,1.0s
GRNR pmax pmax
comp=Z,30nm,1.2s
GRNR MLR MLR
comp=E,60nm,17.0s
GRNR MLR MLR
comp=N,80nm,16.0s
GRNR MLR MLR
comp=Z,100nm,20.0s
SMAI San Martin Ant 79.76 161 P P 18 13 07.2 +0.1
SMAI IAmb IAmb 18 13 08.9
comp=Z,27nm,1.2s
KLR Kul'dur 80.14 334 *ce*P P 18 13 11.0 +1.6
KLR pmax pmax
comp=Z,23nm,2.5s
PMSA Palmer Station 82.78 159 LR LR 18 46 11.5
comp=Z,81nm,18.2s,baz=248,slow=33
CMAR Chiang Mai Arr 82.80 293 P P 18 13 25.8 +1.7
comp=Z,0.2nm,0.4s,baz=70,slow=1.7,SNR=4.3
CMAR LR LR 18 53 28.7
comp=Z,53nm,18.8s,baz=140,slow=38 comp=Z,0.2nm,0.4s
R17K Ugashik Creek 83.84 16 P P 18 13 28.9 +0.4
baz=208
XLT XiLinHaoTe 83.96 323 *e*P P 18 13 37.8 +8.1
XLT pmax pmax
comp=Z,11nm,0.6s
XLT pmax pmax
comp=Z,86nm,5.1s
PZH PanZhiHua 84.19 302 P P 18 13 32.4 +1.1
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,120nm,4.8s
OHAK Old Harbor 84.31 18 P P 18 13 30.8 -0.1
baz=211
P16K Nushagak River 84.68 15 P P 18 13 32.5 -0.3
baz=207
Q16K King Salmon 84.69 15 P P 18 13 33.1 +0.3
baz=208
HHC Hu-ho-hao-te 84.78 318 *e*P P 18 13 35.9 +2.0
HHC pmax pmax
comp=Z,40nm,0.7s
HHC pmax pmax
comp=Z,140nm,4.7s
HHC LR LR
comp=Z,230nm,16.5s
HHC LR LR
comp=Z,300nm,15.9s
HHC LR LR
comp=Z,350nm,16.5s
KDAK Kodiak Island 84.99 18 P P 18 13 34.3 0.0
baz=212
O16K Kokwok River B 85.16 14 P P 18 13 34.2 -1.0
baz=207
P17K Kvichak River 85.20 15 P P 18 13 34.6 -0.8
baz=208
ZEA Zeya 85.41 335 *e*P P 18 13 37.1 +0.5
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=Z,100nm,20.0s
SAO San Andreas Ge 85.49 47 P P 18 13 36.3 -1.2
SAO IAmb IAmb 18 13 38.9
comp=Z,12nm,0.9s
SAO San Andreas Ge 85.49 47 P P 18 13 36.3 -1.2
SAO pmax pmax
comp=Z,12nm,1.0s
TROLL Troll, Antarti 85.57 183 P P 18 13 36.3 -1.2
PKM Mcpherson Peak 85.64 50 P P 18 13 37.7 -0.8
baz=239
Q19K Cape Douglas, 85.68 17 P P 18 13 38.3 +0.4
baz=211
N16K Nishlik Lake 85.80 14 P P 18 13 39.7 +1.3
baz=206
CIS Catalina Islan 85.89 51 P P 18 13 39.2 -0.4
baz=240
O18K Koktuh Hills 86.08 16 P P 18 13 39.3 -0.5

O18K IAmb IAmb 18 13 40.5
comp=Z,12nm,0.9s
O18K Koktuh Hills 86.08 16 P P 18 13 39.4 -0.5
baz=209
SNAA Sanae 86.10 181 P P 18 13 38.2 -1.9
SNAA Sanae 86.10 181 LR LR 18 49 08.3
comp=Z,65nm,20.7s,baz=300,slow=34
SNAA Sanae 86.10 181 P P 18 13 38.5 -1.6
SNAA Sanae 86.10 181 P P 18 13 38.5 -1.6
SNAA pmax pmax
comp=Z,40nm,1.8s
FMP Fort Macarthur 86.13 51 P P 18 13 40.4 -0.3
baz=240
VNA3 Neumayer Olymp 86.56 179 P P 18 13 40.6 -1.8
SEY Seymchan 86.59 351 *ce*P P 18 13 42.9 +0.7
SEY pmax pmax
comp=Z,37nm,1.7s
O19K Port Alsworth 86.60 16 P P 18 13 41.7 -0.6
O19K Port Alsworth 86.60 16 P P 18 13 42.6 +0.2
baz=210
N18K Kilae Creek 86.64 15 P P 18 13 43.3 +0.7
baz=209
ILSW Iliamna Southw 86.72 16 P P 18 13 41.8 -1.3
ILSW IAmb IAmb 18 13 44.2
comp=Z,28nm,1.1s
BFSC Mount Baldy Ra 86.85 51 P P 18 13 44.0 -0.4
baz=240
CMB Columbia Colle 86.88 47 P P 18 13 41.9 -2.5
CMB IAmb IAmb 18 13 45.4
comp=Z,9.6nm,1.1s
CMB Columbia Colle 86.88 47 P P 18 13 41.9 -2.5
CMB pmax pmax
comp=Z,10.0nm,1.1s
VNA2 Neumayer--Watz 86.90 180 P P 18 13 42.4 -1.5
baz=177,slow=5.0
EDW2 Edwards Air Fo 86.93 50 P P 18 13 45.0 +0.3
baz=240
ISA Isabella, Lake 86.98 49 P P 18 13 43.7 -1.2
ISA IAmb IAmb 18 13 46.2
comp=Z,15nm,0.9s
ISA Isabella, Lake 86.98 49 P P 18 13 43.7 -1.2
ISA pmax pmax
comp=Z,15nm,1.0s
ISA Isabella, Lake 86.98 49 P P 18 13 44.9 0.0
baz=240
MONP2 Monument Peak 87.09 53 P P 18 13 45.3 -0.4
baz=241
VNA1 Neumayer--Stat 87.17 180 P P 18 13 43.9 -1.4
IKP In-Ko-Pah, Jac 87.21 53 P P 18 13 46.5 +0.4
baz=241
K02D Willamette Mer 87.29 41 P P 18 13 46.3 0.0
baz=236
YBH Yreka Blue Hor 87.35 43 P P 18 13 46.5 -0.1
comp=Z,3.1nm,0.9s,baz=319,slow=2.2,SNR=4.2
YBH LR LR 18 45 21.7
comp=Z,93nm,21.6s,baz=236,slow=30 comp=Z,3.1nm,0.9s
J01E Myrtle Point 87.39 41 P P 18 13 47.3 +0.7
baz=236
PFO Pinyon Flats O 87.41 52 LR LR 18 51 11.6
comp=Z,82nm,18.1s,baz=242,slow=34
MDPB Devils Postpil 87.56 48 P P 18 13 47.8 -0.1
MDPB IAmb IAmb 18 13 49.2
comp=Z,9.2nm,1.2s
SWSC Sam W. Stewart 87.58 53 P P 18 13 47.9 +0.2
baz=241
CWC Cottonwood Cre 87.65 49 P P 18 13 48.5 +0.2
baz=240
SEW Seward 87.83 18 P P 18 13 49.2 +0.9
baz=214
BEKR Beckworth 87.86 45 P P 18 13 48.9 -0.3
L04D Klamath Falls 87.87 42 P P 18 13 49.6 +0.5
baz=237
MPMC Manual Prospec 87.87 50 P P 18 13 49.3 -0.1
baz=240
LPIG La Paz 87.87 63 LR LR 18 43 43.4
comp=Z,144nm,21.8s,baz=228,slow=29
BELC Belle Mtn. Jos 87.94 52 P P 18 13 49.7 0.0
baz=241
I02E Swisshome, OR 87.97 40 P P 18 13 50.7 +1.3
baz=236
GSC Goldstone, Bar 87.98 50 P P 18 13 48.6 -1.2
GSC Goldstone, Bar 87.98 50 P P 18 13 48.6 -1.2
GSC pmax pmax
comp=Z,4.0nm,0.8s
M19K Big River Lodg 88.06 15 P P 18 13 51.1 +1.7
baz=210
YERR Yerington 88.14 46 P P 18 13 49.9 -0.7
YERR IAmb IAmb 18 13 51.8
comp=Z,15nm,1.3s
BC3 Big Chuckawall 88.17 52 P P 18 13 50.8 +0.1
baz=241
L19K White Mountain 88.19 15 P P 18 13 49.4 -0.7
L19K IAmb IAmb 18 13 50.8
comp=Z,9.7nm,1.1s
L19K White Mountain 88.19 15 P P 18 13 49.9 -0.1
baz=210
LHV Little Huntoon 88.26 47 P P 18 13 51.0 +0.1
LHV IAmb IAmb 18 13 52.6
comp=Z,15nm,1.2s
PAHR Pah Rah Range 88.42 46 P P 18 13 51.0 -0.8
PAHR IAmb IAmb 18 13 53.1
comp=Z,13nm,1.2s
GRAC Grapevine Rang 88.42 49 P P 18 13 51.3 -0.5
GRAC IAmb IAmb 18 13 53.2
comp=Z,18nm,1.4s
GRAC Grapevine Rang 88.42 49 P P 18 13 51.2 -0.5
baz=240
RYN Ryan 88.44 47 P P 18 13 50.7 -1.3
RYN IAmb IAmb 18 13 52.6
comp=Z,9.9nm,1.3s
NVAR Mina Array Bea 88.49 47 P P 18 13 52.1 -0.2
comp=Z,3.5nm,0.9s,baz=228,slow=8.0,SNR=20
NVAR PP PP 18 17 24.8 +4.1
comp=Z,0.3nm,0.6s,baz=243,slow=6.5,SNR=3.8
NVAR LR LR 18 46 42.6
comp=Z,32nm,20.2s,baz=264,slow=31 comp=Z,3.5nm,0.9s
NVAR Mina Array Bea 88.49 47 P P 18 13 51.4 -0.9
J04D Umpqua Nationa 88.55 42 P P 18 13 52.5 +0.1
baz=237
GMRC Granite Mounta 88.56 51 P P 18 13 52.2 -0.4
baz=241
NV11 Mina Array Sit 88.59 47 P P 18 13 51.6 -1.0
IRM Iron Mountain 88.63 52 P P 18 13 52.7 -0.1
baz=242
I04A Tendick Farm, 88.66 41 P P 18 13 52.3 -0.4
baz=237
L20K Farewell, AK 88.68 15 P P 18 13 53.8 +1.4
baz=210
PWL Port Wells 88.76 18 P P 18 13 54.0 +1.3
baz=215
BLYC Blythe 88.90 53 P P 18 13 51.4 -2.6
KVN Kaiserville 88.94 47 P P 18 13 53.5 -0.9
KVN Kaiserville 88.94 47 P P 18 13 53.5 -0.9
KVN pmax pmax
comp=Z,8.0nm,1.1s
MOD Modoc Plateau 88.96 43 P P 18 13 52.2 -2.1
MOD IAmb IAmb 18 13 55.6
comp=Z,12nm,1.2s
K05A Summer Lake 89.02 42 P P 18 13 54.4 -0.3
K05A IAmb IAmb 18 13 56.3
comp=Z,11nm,1.1s
TPH Tonopah 89.05 48 P P 18 13 54.7 -0.2
TPH Tonopah 89.05 48 P P 18 13 54.7 -0.2
TPH pmax pmax
comp=Z,46nm,1.1s
J05D Fort Rock, OR 89.11 42 P P 18 13 55.2 +0.2
baz=238
TPNV Topopah Spring 89.18 49 P P 18 13 54.6 -0.9
TPNV Topopah Spring 89.18 49 P P 18 13 54.6 -0.9
TPNV pmax pmax
comp=Z,6.0nm,0.9s
TPNV Topopah Spring 89.18 49 P P 18 13 55.2 -0.3
baz=241
EYAK Cordova Ski Ar 89.27 19 P P 18 13 55.7 +0.6
baz=218
PDMCI Parker Dam,Lak 89.44 52 P P 18 13 57.0 +0.5
baz=242
HSIG 89.49 58 P P 18 13 56.7 -0.2
HSIG IAmb IAmb 18 13 58.1
comp=Z,14nm,1.1s
SML Sawmill 89.54 17 P P 18 13 58.2 +1.8
baz=215
PINE Pine Mountain 89.56 42 P P 18 13 56.8 -0.3
PINE IAmb IAmb 18 13 58.8
comp=Z,8.5nm,1.1s

M23K Glacier View 89.69 18 P P 18 13 59.2 +2.0
baz=216
SHPR Sheep Range 89.73 50 P P 18 13 57.3 -0.8
SCM Sheep Creek Mo 89.84 18 P P 18 13 57.7 -0.2
baz=216
BMRM Bremner River 89.95 19 P P 18 13 58.1 -0.3
baz=219
KLU Klutina 89.97 18 P P 18 13 58.6 +0.1
baz=218
W13A Hualapai Mount 89.99 52 P P 18 13 59.6 +0.2
J20K Nowinta River 90.09 14 P P 18 13 59.3 +0.5
baz=210
CRAG Craig 90.17 27 P P 18 13 59.9 +0.5
baz=228
MESA MESA 90.19 21 P P 18 14 00.4 +0.8
baz=221
BMN Battle Mountai 90.21 46 P P 18 14 00.3 0.0
BMN IAmb IAmb 18 14 01.6
comp=Z,18nm,1.1s
BMN Battle Mountai 90.21 46 P P 18 14 00.3 0.0
BMN pmax pmax
comp=Z,18nm,1.1s
PRN Pahroc Range 90.24 49 P P 18 14 00.8 +0.4
PRN IAmb IAmb 18 14 02.0
comp=Z,11nm,1.2s
CRQE Cirque 90.25 20 P P 18 13 59.4 -0.5
baz=220
WVOR Wild Horse Val 90.30 44 P P 18 14 00.3 -0.3
WVOR Wild Horse Val 90.30 44 P P 18 14 00.3 -0.3
WVOR pmax pmax
comp=Z,9.0nm,1.2s
R11A Troy Canyon, C 90.31 48 P P 18 14 00.2 -0.6
R11A Troy Canyon, C 90.31 48 P P 18 14 00.4 -0.4
baz=241
WAT1 Susitna Watana 90.31 17 P P 18 13 59.0 -1.0
baz=215
BILL Bilibino 90.33 358 *i* P P 18 13 58.1 -1.8
BILL *i* 18 14 04.4
BILL *i* 18 17 36.4
BILL pmax pmax
comp=Z,5.0nm,0.9s
WAT6 Susitna Watana 90.33 17 P P 18 13 59.6 -0.6
baz=216
BBB Bella Bella 90.38 32 LR LR 18 46 05.0
comp=Z,115nm,21.7s,baz=228,slow=30
TRF Thorofare Moun 90.38 16 P P 18 13 59.2 -1.3
baz=214
M24K Tolsona, Glenn 90.39 18 P P 18 13 60.0 -0.4
baz=217
N25K Chitina, Valde 90.45 19 P P 18 14 00.7 -0.1
baz=219
I07A Izee 90.59 42 P P 18 14 01.5 -0.4
RND Reindeer 90.71 16 P P 18 14 00.7 -1.2
RND IAmb IAmb 18 14 01.7
comp=Z,20nm,1.3s
RND Reindeer 90.71 16 P P 18 14 00.7 -1.2
RND pmax pmax
comp=Z,20nm,1.3s
BPAW Bear Paw Mtn. 90.75 15 P P 18 14 02.1 +0.1
baz=213
MCARA McCarthy VSAT 90.76 20 P P 18 14 01.8 -0.3
baz=220
DHY Denali Highway 90.83 17 P P 18 14 02.2 -0.4
baz=216
HARP HAARP 90.91 18 P P 18 14 02.3 -0.5
baz=218
YAK Yakutsk 90.91 341 P P 18 14 01.7 -1.0
YAK Yakutsk 90.91 341 *e*P P 18 14 01.7 -1.0
YAK pmax pmax
comp=Z,12nm,0.9s
CTG Chitna Glacier 90.98 21 P P 18 14 03.4 +0.1
baz=222
TUC Tucson 91.05 55 P P 18 14 04.3 0.0
TUC Tucson 91.05 55 P P 18 14 04.3 0.0
TUC pmax pmax
comp=Z,7.0nm,1.1s
TUC Tucson 91.05 55 P P 18 14 03.7 -0.5
baz=244
O28M Mount Upton 91.21 21 P P 18 14 03.9 -0.7
baz=222
P29M Windy Craggy 91.23 23 P P 18 14 04.2 -0.1
baz=225
PAX Paxson 91.27 18 P P 18 14 03.7 -0.9
baz=218
LCMT Little Creek M 91.33 50 P P 18 14 05.9 +0.4
ULN Ulaanbaatar 91.38 322⇑ *e*P P 18 14 05.7 +0.2
ULN pmax pmax
comp=Z,2.0nm,1.0s
O29M Mount Kennedy 91.42 22 P P 18 14 04.3 -1.0
baz=224
I21K Tanana 91.43 14 P P 18 14 04.3 -0.8
I21K IAmb IAmb 18 14 06.2
comp=Z,8.1nm,1.1s
I21K Tanana 91.43 14 P P 18 14 04.5 -0.6
baz=212
X16A Lo Mia Camp, P 91.48 53 P P 18 14 06.4 +0.1
X16A IAmb IAmb 18 14 07.7
comp=Z,7.1nm,1.0s
SPR3 Spring Creek 3 91.48 48 P P 18 14 05.3 -1.1
SPR3 IAmb IAmb 18 14 07.2
comp=Z,8.6nm,1.2s
CCUT Cedar City 91.49 50 P P 18 14 05.9 -0.4
CCUT IAmb IAmb 18 14 07.9
comp=Z,9.0nm,1.1s
G08A Pilot Rock 91.55 41 P P 18 14 05.8 -0.5
M26K Nabesna, AK 91.55 19 P P 18 14 05.2 -0.5
M26K IAmb IAmb 18 14 06.2
comp=Z,13nm,1.1s
M26K Nabesna, AK 91.55 19 P P 18 14 05.0 -0.8
baz=220,SNR=6.3
MLY Manley 91.59 15 P P 18 14 04.9 -1.0
baz=213
PSUT Pine Spring 91.60 49 P P 18 14 06.6 -0.3
PLBC Pleasant Camp 91.60 23 P P 18 14 05.7 -0.4
baz=226
H21K Melozitna Rive 91.66 14 P P 18 14 06.3 +0.1
baz=211
ELK Elko 91.69 46 LR LR 18 53 52.8
comp=Z,33nm,18.2s,baz=242,slow=35
ELK Elko 91.69 46 P P 18 14 06.4 -0.8
ELK Elko 91.69 46 P P 18 14 06.4 -0.8
ELK pmax pmax
comp=Z,6.0nm,1.1s
GTA Gaotai 91.70 312 *e*P P 18 14 04.8 -2.4
GTA pP pP 18 14 10.4 +0.4
GTA sP pwP 18 14 14.0 +4.0
GTA pmax pmax
comp=Z,2.0nm,2.2s
GTA pmax pmax
comp=Z,53nm,6.2s
GTA LR LR
comp=Z,71nm,17.1s
GTA LR LR
comp=Z,140nm,21.1s
GTA LR LR
comp=Z,120nm,24.7s
SZCU Shurtz Canyon 91.71 50 P P 18 14 06.6 -0.7
ORCD Orcadas 91.73 163 P P 18 14 05.0 -1.8
ORCD IAmb IAmb 18 14 05.5
comp=Z,18nm,1.5s
SONM Songino Array 91.74 322 P P 18 14 07.0 -0.2
comp=Z,1.1nm,1.0s,baz=143,slow=4.7,SNR=7.6
comp=Z,1.1nm,1.0s
SONM Songino Array 91.74 322 P P 18 14 06.6 -0.6
SONM Songino Array 91.74 322 P P 18 14 06.6 -0.6
SONM pmax pmax
comp=Z,5.0nm,1.3s
U15A North Rim 91.75 51 P P 18 14 08.2 +0.6
U15A IAmb IAmb 18 14 09.2
comp=Z,12nm,0.9s
WRH Wood River Hil 91.78 16 P P 18 14 05.6 -1.1
WRH IAmb IAmb 18 14 07.0
comp=Z,19nm,1.3s
H03S2 Juan Fernandez 91.82 128 T T 19 56 00.1
baz=241,SNR=8.8
H03S1 Juan Fernandez 91.83 128 T T 19 55 54.8
baz=241,SNR=7.1
H03S3 Juan Fernandez 91.84 128 T T 19 55 53.7
baz=241,SNR=6.6
K24K Donnelly Dome 91.85 17 P P 18 14 06.3 -0.8
baz=218
M27K Edge Creek, AK 91.86 19 P P 18 14 06.7 -0.7
M27K IAmb IAmb 18 14 08.0
comp=Z,12nm,1.1s
M27K Edge Creek, AK 91.86 19 P P 18 14 06.6 -0.7
baz=221

YUK3 Moose Creek 91.86 20 P P 18 14 07.2 -0.3
baz=222
L26K Log Cabin Wild 91.92 18 P P 18 14 07.0 -0.5
L26K Log Cabin Wild 91.92 18 P P 18 14 07.2 -0.3
baz=220
RDOG Red Dog Mine 91.98 9 P P 18 14 07.9 +0.2
baz=202
H03N3 Juan Fernandez 92.00 127 T T 19 55 59.9
baz=244,slow=73,SNR=9.8
H03N2 Juan Fernandez 92.00 127 T T 19 56 02.5
baz=244,slow=73,SNR=6.2
WUAZ Wupatki 92.01 52 P P 18 14 08.9 +0.1
WUAZ IAmb IAmb 18 14 10.0
comp=Z,11nm,1.2s
WUAZ Wupatki 92.01 52 P P 18 14 08.1 -0.7
baz=244
H03N1 Juan Fernandez 92.02 127 T T 19 56 02.9
baz=244,slow=73,SNR=11
I23K Minto, Yukon-K 92.02 15 P P 18 14 07.9 +0.1
baz=214
HDA Harding Lake 92.02 16 P P 18 14 06.5 -1.4
HDA Harding Lake 92.02 16 P P 18 14 06.8 -1.0
baz=217,SNR=6.8
RIDG Independent Ri 92.05 17 P P 18 14 07.0 -1.1
RIDG Independent Ri 92.05 17 P P 18 14 07.2 -0.9
baz=218,SNR=8.2
MDM Murphy Dome 92.14 16 P P 18 14 06.7 -1.7
TCOL CIGO, UAF Yank 92.16 16 P P 18 14 07.8 -0.6
baz=216
HYT Haines Junctio 92.16 22 P P 18 14 07.9 -0.9
baz=225
COLA College 92.16 16⇑ *e*P P 18 14 07.3 -1.2
COLA pmax pmax
comp=Z,14nm,1.1s
COLA College 92.16 16 P P 18 14 07.8 -0.6
baz=216
H22K Ishtalitna Cre 92.17 14 P P 18 14 08.2 -0.3
baz=213
PKCU Pink Cliffs 92.19 50 P P 18 14 08.7 -1.0
DOT Dot Lake 92.20 18 P P 18 14 08.0 -0.8
G21K Allakaket 92.25 13 P P 18 14 08.4 -0.5
baz=211
IL31 92.33 16 P P 18 14 07.7 -1.5
IL31 IAmb IAmb 18 14 08.7
comp=Z,9.8nm,1.1s
ILAR Eielson Array 92.33 16 P P 18 14 07.8 -1.4
comp=Z,4.8nm,0.9s,baz=236,slow=6.4,SNR=28
ILAR LR LR 18 49 49.3
comp=Z,136nm,20.3s,baz=214,slow=32
comp=Z,4.8nm,0.9s
ILAR Eielson Array 92.33 16 P P 18 14 06.9 -2.4
L27K Beaver Creek, 92.40 19 P P 18 14 09.1 -0.7
L27K Beaver Creek, 92.40 19 P P 18 14 09.3 -0.5
baz=221
BCAR Beaver Creek A 92.42 19 P P 18 14 09.1 -0.7
SCRK Sand Creek 92.48 18 P P 18 14 08.8 -1.3
SCRK IAmb IAmb 18 14 10.5
comp=Z,11nm,1.0s
SCRK Sand Creek 92.48 18 P P 18 14 09.5 -0.7
baz=218,SNR=8.2
J25K Salcha River, 92.60 17 P P 18 14 09.0 -1.6
J25K IAmb IAmb 18 14 10.1
comp=Z,6.4nm,1.0s
J25K Salcha River, 92.60 17 P P 18 14 09.5 -1.1
baz=218,SNR=5.7
MVU Marysvale 92.73 49 P P 18 14 11.4 -0.7
J26L Joseph Creek 93.00 17 P P 18 14 12.1 -0.4
J26L Joseph Creek 93.00 17 P P 18 14 11.3 -1.2
baz=220,SNR=12
K27K Chicken 93.06 18 P P 18 14 12.4 -0.3
K27K IAmb IAmb 18 14 13.7
comp=Z,12nm,1.1s
K27K Chicken 93.06 18 P P 18 14 12.6 -0.1
baz=221
G23K Bananza Creek 93.16 14 P P 18 14 12.6 -0.5
baz=214
PRP Porcupine Dome 93.27 16 P P 18 14 12.7 -1.1
PRP IAmb IAmb 18 14 14.4
comp=Z,10nm,1.2s
PRP Porcupine Dome 93.27 16 P P 18 14 13.2 -0.6
baz=218,SNR=6.2
F22K John River 93.37 13 P P 18 14 14.1 0.0
baz=212
DLBC Dease Lake 93.39 26 LR LR 18 50 29.3
comp=Z,108nm,18.9s,baz=284,slow=32
121A Cookes Peak, D 93.44 56 P P 18 14 14.2 -1.2
baz=246
HLID Hailey 93.55 44 P P 18 14 14.9 -0.8
baz=242
R33M Jennings River 93.62 25 P P 18 14 15.4 -0.1
baz=230
I26K Coal Creek Min 93.73 17 P P 18 14 15.1 -0.6
I26K Coal Creek Min 93.73 17 P P 18 14 15.1 -0.6
baz=220,SNR=12
G24K Hadweenzic Riv 93.74 15 P P 18 14 15.2 -0.5
baz=216
EGAK Eagle 93.89 18 P P 18 14 16.1 -0.4
EGAK IAmb IAmb 18 14 17.5
comp=Z,13nm,0.9s
EGAK Eagle 93.89 18 P P 18 14 15.5 -1.0
baz=222,SNR=12
PLCA Paso Flores 93.97 137 LR LR 18 46 38.2
comp=Z,89nm,20.5s,baz=244,slow=29
E22K Anaktuvuk Pass 93.97 13 P P 18 14 16.0 -0.8
baz=212
NEW Newport 94.13 39 LR LR 18 48 45.7
comp=Z,64nm,20.9s,baz=237,slow=30
F24K Squaw Lake 94.30 14 P P 18 14 17.3 -1.1
baz=216,SNR=7.9
I27K Kandik River 94.38 17 P P 18 14 17.1 -1.7
baz=221
E24K Your Creek 94.62 14 P P 18 14 19.0 -0.9
baz=215
PALK Pallekele 94.63 276 LR LR 18 59 41.7
comp=Z,151nm,18.4s,baz=229,slow=37
G26K Porcupine Rive 94.83 16 P P 18 14 19.0 -1.7
baz=220,SNR=15
TOLK Toolik Lake Re 94.86 13 P P 18 14 20.8 -0.1
TOLK IAmb IAmb 18 14 30.3
comp=Z,13nm,1.5s
TOLK Toolik Lake Re 94.86 13 P P 18 14 20.0 -0.9
baz=214
H27K Steamboat Moun 94.87 17 P P 18 14 20.6 -0.4
baz=222
F25K Christian Rive 94.88 15 P P 18 14 20.7 -0.4
baz=218,SNR=6.2
D23K Nanushuk River 94.90 12 P P 18 14 20.4 -0.7
baz=214,SNR=5.1
BMAR Burnt Mountain 95.01 15 P P 18 14 21.6 0.0
I29M Ogilvie Camp, 95.14 19 P P 18 14 21.6 -0.7
baz=224
G27K Doyon Strip 95.27 17 P P 18 14 21.9 -0.9
baz=222
E25K Arctic Village 95.32 14 P P 18 14 21.9 -1.1
baz=218
F26K Sheenjek River 95.32 15 P P 18 14 22.2 -0.8
baz=215
TXAR Lajitas Array 95.42 61 P P 18 14 24.1 -0.4
comp=Z,0.9nm,1.0s,baz=201,slow=6.7,SNR=5.7
TXAR LR LR 18 49 26.7
comp=Z,101nm,20.4s,baz=230,slow=30
comp=Z,0.9nm,1.0s
ANMO Albuquerque 95.43 55 LR LR 18 48 46.9
comp=Z,100nm,21.6s,baz=244,slow=30
ANMO Albuquerque 95.43 55 P P 18 14 23.6 -0.9
ANMO Albuquerque 95.43 55⇑ *e*P P 18 14 24.2 -0.3
ANMO pmax pmax
comp=Z,6.0nm,2.5s
ANMO Albuquerque 95.43 55 P P 18 14 22.4 -2.1
baz=246
D24K Happy Valley 95.44 13 P P 18 14 23.1 -0.4
baz=215
C23K Itkillik River 95.64 12 P P 18 14 23.8 -0.6
baz=214,SNR=6.1
C24K Franklin Bluff 95.92 13 P P 18 14 25.2 -0.5
baz=215
D25K Kavik River 96.09 14 P P 18 14 25.2 -1.3
baz=217,SNR=5.4
EPYK Eagle Plains 96.32 18 P P 18 14 26.8 -0.8
baz=226
E27K Coleen River 96.32 16 P P 18 14 27.4 -0.2
baz=222
PDAR Pinedale Array 96.39 46 PP PP 18 18 33.5 +11
comp=Z,0.3nm,0.7s,baz=276,slow=4.3,SNR=4.1
PDAR LR LR 18 50 44.4
comp=Z,35nm,20.1s,baz=248,slow=31
C26K Camden Bay 96.88 14 P P 18 14 30.0 0.0
baz=219,SNR=5.6
C27K Jago River 96.92 14 P P 18 14 30.6 +0.4
baz=220
CMIG Matias Romero 98.46 75 LR LR 18 48 49.5
comp=Z,146nm,21.7s,baz=207,slow=29
INK Inuvik 98.55 18 LR LR 18 53 15.6
comp=Z,104nm,21.3s,baz=184,slow=32
WMQ Urumqi 101.78 313 *e*P Pdif 18 14 54.9 +2.3
WMQ LR LR
comp=Z,130nm,20.9s
WMQ LR LR
comp=Z,260nm,20.9s
WMQ LR LR
comp=Z,140nm,24.3s
PKME Peaks-Kenny Pk 125.09 50 P PKPdf 18 19 58.5 -1.3
baz=273
NACGM Naroch 138.81 331 *e*PKP PKPdf 18 20 20.9 -4.5
baz=54
LVV L'vov 143.25 326 *e*PKIKP PKPdf 18 20 33.6 0.0
CFR Carcaliu 143.30 317⇑ P PKPdf 18 20 34.3 +0.5
CFR Carcaliu 143.30 317⇑ PKIKP PKPdf 18 20 34.3 +0.5
BIZ Bicaz 143.70 320 ⇓P PKPbc 18 20 32.4 +0.4
BUR08 Bucovina Ar. S 143.85 322 PKPbc 18 20 32.5 -0.1
BURAR Bucovina Array 143.86 322⇑ P PKPbc 18 20 32.4 -0.1
BURAR Bucovina Array 143.86 322 PKPdf PKPbc 18 20 32.1 -0.5
BURAR Bucovina Array 143.86 322⇑ PKIKP PKPbc 18 20 32.4 -0.2
VRI Vrincioaia 143.86 319 ⇓P PKPbc 18 20 32.4 -0.1
VRI Vrincioaia 143.86 319 ⇓PKIKP PKPbc 18 20 32.4 -0.1
PLOR Plostina 143.91 319 ⇓P PKPbc 18 20 32.9 +0.2
PLOR Plostina 143.91 319 ⇓PKIKP PKPbc 18 20 32.9 +0.2
OZUR 144.32 319 ⇓P PKPdf 18 20 34.5 -1.2
MLR Muntele Rosu 144.52 318 ⇓P PKPab 18 20 33.3 -1.2
MLR Muntele Rosu 144.52 318 PKPdf PKPab 18 20 33.9 -0.6
MLR Muntele Rosu 144.52 318 ⇓PKIKP PKPab 18 20 33.3 -1.2
DOPR Dopca 144.62 319⇑ P PKPbc 18 20 35.0 +0.1
ARCR ARCALIA 144.64 322 ⇓P PKPdf 18 20 35.8 -0.4
KOLS Kolonicke sedl 144.70 326 *e*PKIKP PKPdf 18 20 35.5 -0.7
KOLS Kolonicke sedl 144.70 326 *e*PKP PKPdf 18 20 35.5 -0.7
BMR Baia Mare 144.79 323⇑ P PKPdf 18 20 35.5 -0.9
BMR Baia Mare 144.79 323⇑ PKIKP PKPdf 18 20 35.5 -0.9
UZH Uzhgorod 144.88 325⇑ *i* PKHKP PKPpre 18 20 32.6
UZH *i* 18 20 35.2
UZH *e* 18 20 40.5
UZH *i* 18 20 46.5
VOIR 145.09 319⇑ P PKPdf 18 20 36.5 -0.5
VOIR 145.09 319⇑ PKIKP PKPdf 18 20 36.5 -0.5
OJC Ojcow 145.10 329 PKPbc 18 20 33.9 -2.3
OJC Ojcow 145.10 329 PKP2 PKPbc 18 20 33.9 -2.3
CRVS Cervenica-Dubn 145.14 326 *e*PKIKP PKPdf 18 20 36.4 -0.5
CRVS Cervenica-Dubn 145.14 326 *e*PKP PKPdf 18 20 36.4 -0.5
HUMR Humele 145.59 318⇑ P PKPdf 18 20 37.1 -0.7
DRGR 145.74 322⇑ P PKPab 18 20 38.9 0.0
DRGR 145.74 322⇑ PKP2 PKPab 18 20 38.9 0.0
LANS Liptovska Anna 145.98 328 *e*PKP2 PKPab 18 20 39.4 -0.3
LANS Liptovska Anna 145.98 328 *e*PKP PKPab 18 20 39.4 -0.3
OKC Ostrava-Krasne 146.13 330 *e*PKP2 PKPab 18 20 41.0 +0.9
OKC Ostrava-Krasne 146.13 330 *e*PKP PKPab 18 20 41.0 +0.9
MORC Moravsky Berou 146.45 331 ⇓P PKPbc 18 20 39.7 -0.9
MORC Moravsky Berou 146.45 331 PKPdf PKPdf 18 20 39.3 +0.1
MORC Moravsky Berou 146.45 331 ⇓PKP2 PKPbc 18 20 39.7 -0.9
MORC Moravsky Berou 146.45 331 *e*PKP PKPbc 18 20 39.8 -0.7
OSTC Ostas 146.47 333 *e*PKP PKPbc 18 20 39.7 -0.8
GZR Gura Zlata 146.48 320 ⇓P PKPdf 18 20 38.4 -1.0
GZR Gura Zlata 146.48 320 ⇓PKHKP PKPpre 18 20 38.4
PSZ Piszkesteto 146.57 326⇑ P PKPdf 18 20 39.6 +0.1
PSZ Piszkesteto 146.57 326 PKPdf PKPdf 18 20 39.7 +0.1
PSZ Piszkesteto 146.57 326⇑ PKP2 PKPdf 18 20 39.6 +0.1
PSZ Piszkesteto 146.57 326 PKP PKPab 18 20 41.7 -0.3
DPC Dobruska-Polom 146.58 332 *e*PKP2 PKPdf 18 20 39.6 +0.2
DPC Dobruska-Polom 146.58 332 *e*PKP PKPdf 18 20 39.6 +0.2
DPC *e*pPKP sPKPab 18 20 46.5 +1.0
KRLC Kraliky 146.58 332 *e*PKP2 PKPdf 18 20 39.4 0.0
KRLC Kraliky 146.58 332 *e*PKP PKPdf 18 20 39.4 0.0
KRLC *ex* x 18 20 47.3
UPC Upice 146.59 333 *e*PKP2 PKPbc 18 20 39.8 -1.1
UPC Upice 146.59 333 *e*PKP PKPbc 18 20 39.8 -1.1
UPC *e*pPKP sPKPab 18 20 46.8 +1.4
SIRR Siria 146.63 322⇑ P PKPbc 18 20 40.5 -0.7
VYHS Vyhne 146.73 328 *e*PKP2 PKPbc 18 20 40.8 -0.5
VYHS Vyhne 146.73 328 *e*PKP PKPbc 18 20 40.8 -0.5
HERR Herculane 146.97 320 ⇓P PKPbc 18 20 41.4 -0.8
BZS Buzias 147.03 322⇑ P PKPbc 18 20 41.3 -1.0
BZS Buzias 147.03 322⇑ PKP2 PKPbc 18 20 41.3 -1.0
JAVC Velka Javorina 147.04 329 *e*PKP PKPab 18 20 42.8 -1.0
BRG Berggiesshubel 147.15 335 *i* PKP PKPbc 18 20 41.7 -0.7
BRG Amp 18 20 44.7
comp=Z,12nm,1.0s
BRG *ex* x 18 20 49.3
BRG Amp 18 20 50.7
comp=Z,8.5nm,1.0s
BRG Berggiesshubel 147.15 335 *i* PKP2 PKPbc 18 20 41.7 -0.7
BRG pmax pmax
comp=Z,12nm,1.0s
BRG pmax pmax
comp=Z,9.0nm,1.0s
CLL Collm 147.16 336 PKPdf PKPdf 18 20 40.5 +0.3
CLL Collm 147.16 336 PKIKP PKPdf 18 20 40.5 +0.3
CLL Collm 147.16 336 *i* PKPbc PKPbc 18 20 41.2 -1.2
comp=Z,13nm,1.1s
CLL *i* PKiKP pPKPbc 18 20 45.2 +0.9
CLL *ex* x 18 20 49.0
CLL *i* x x 18 20 55.0
CLL *e*PP PP 18 24 09.0 +2.0
CLL *e*SSS SSS 18 48 35.0
CLL *ex* x 18 51 12.0
CLL *e*SSSS 18 52 54.0
VRAC Vranov 147.22 331 ⇓P PKPbc 18 20 41.7 -1.0
VRAC Vranov 147.22 331 ⇓PKP2 PKPbc 18 20 41.7 -1.0
VRAC Vranov 147.22 331 *e*PKP PKPbc 18 20 42.0 -0.7
KRUC Moravsky 147.49 331 *e*PKP PKPbc 18 20 42.6 -0.8
MODS Modra-Piesok 147.57 329 *e*PKP2 PKPbc 18 20 43.3 -0.4
MODS Modra-Piesok 147.57 329 *e*PKP PKPbc 18 20 43.3 -0.4
PRU Pruhonice 147.60 333 *e*PKP2 PKPbc 18 20 42.3 -1.4
PRU Pruhonice 147.60 333 *e*PKP PKPbc 18 20 42.3 -1.4
BOVS Bovan 148.07 318⇑ P PKPbc 18 20 43.7 -1.5
MPLH Magyarpolny 148.27 327 PKP PKPbc 18 20 45.2 -0.3
MORH Mrgy, Hungar 148.32 325 ⇓P PKPbc 18 20 44.3 -1.4
MORH Mrgy, Hungar 148.32 325 PKP PKPbc 18 20 44.3 -1.4
FRGS Fruska Gora 148.33 322 ⇓P PKPdf 18 20 41.8 -0.6
RONA Rosalia, Austr 148.51 329 *e*P PKPbc 18 20 45.1 -1.2
comp=Z,7.2nm,1.2s
CONA Conrad Observa 148.55 330 *i* P PKPbc 18 20 45.2 -1.2
comp=Z,8.4nm,1.6s,SNR=7.5
CKRC Cesky Krumlov 148.59 332 *e*PKP PKPbc 18 20 45.3 -1.1
CKRC *ex* PKPab 18 20 49.4 -0.5
KHC Kasperske Hory 148.66 333 PKPbc 18 20 45.2 -1.4
KHC Kasperske Hory 148.66 333 PKP2 PKPbc 18 20 45.2 -1.4
KHC Kasperske Hory 148.66 333 *e*PKP PKPbc 18 20 45.5 -1.1
KOVH Kovagotottos 148.69 325 PKP PKPbc 18 20 45.4 -1.3
GEC2 GERESS Array S 148.83 333 PKPbc 18 20 45.9 -1.2
GERES GERESS Array B 148.83 333 PKPbc PKPbc 18 20 45.7 -1.4
comp=Z,2.9nm,1.0s,baz=42,slow=2.2,SNR=22
GERES GERESS Array B 148.83 333 PKPbc 18 20 45.2 -1.9
DIVS Divibare 148.85 320 PKPbc 18 20 45.6 -1.7
ARSA Arzberg 149.20 329 *e*P PKiKP 18 20 50.1 +0.8
comp=Z,4.9nm,1.4s
MOA Molln 149.34 331 *e*P PKPbc 18 20 46.8 -1.6
comp=Z,6.3nm,1.2s
BIOA Bad Ischl, Aus 149.74 331 *e*P PKPbc 18 20 47.5 -1.9
comp=Z,2.1nm,0.6s
SOKA Soboth 149.84 329 *i* P PKPbc 18 20 48.1 -1.6
comp=Z,10nm,1.2s,SNR=6.7
BTNL Ternell 150.01 343 *d*PKP PKPbc 18 20 48.6 -1.3
BTNL *d*PKPab PKPab 18 20 55.2 -0.3
MEM Membach 150.02 343 *d*PKP PKPbc 18 20 49.0 -0.9
MEM *d*PKPab PKPab 18 20 55.3 -0.2
BSTI Sart Tilman 150.16 343 *d*PKP PKPbc 18 20 49.4 -0.8
BSTI *d*PKPab PKPab 18 20 56.0 -0.2
OBKA Obir 150.20 329 *e*P PKPbc 18 20 48.0 -2.6
comp=Z,2.2nm,0.9s
PDG Podgorica 150.24 318⇑ P PKPbc 18 20 48.1 -2.6
BHOU Houvegnez 150.25 343 *d*PKP PKPbc 18 20 49.6 -0.8
BHOU *d*PKPab PKPab 18 20 56.5 0.0
KBA Koelnbreinsper 150.33 331 *e*P PKPbc 18 20 48.7 -2.2
comp=Z,6.8nm,1.3s
MYKA Terra Mystica 150.53 330 *e*P PKPbc 18 20 49.1 -2.2
comp=Z,4.7nm,1.1s
LJU Ljubljana 150.54 328 *e*PKPab PKPbc 18 20 49.7 -1.6
BOJS Bojanci 150.56 327 *e*PKPab PKPbc 18 20 50.0 -1.3
BMRD Maredsous 150.63 344 *d*PKP PKPbc 18 20 50.6 -0.7
RCHB Rochefort 150.64 344 *d*PKP PKPbc 18 20 50.3 -1.1
WLF Walferdange 150.84 342 PKPdf PKPdf 18 20 45.0 -1.2

WLF	**Walferdange**	**150.84**	**342**	PKIKP	**PKPdf**	**18 20 45.0**	**-1.2**
WLF	**Walferdange**	**150.84**	**342**	*d*PKP	**PKPbc**	**18 20 51.2**	**-0.7**
WLF				*d*PKPab	**PKPbc**	**18 20 58.9**	**-0.1**
DOU	**Dourbes**	**150.86**	**344**	*d*PKP	**PKPbc**	**18 20 50.8**	**-1.1**
WATA	**Walderalm**	**150.90**	**333**	*eP*	**PKPbc**	**18 20 50.2**	**-2.1**
	comp=Z,3.9nm,0.8s						
WTTA	**Wattenberg**	**150.93**	**333**	*i* P	**PKPbc**	**18 20 51.0**	**-1.4**
	comp=Z,12nm,1.6s,SNR=5.3						
ABTA	**Abfaltersbach**	**150.96**	**331**	*eP*	**PKPbc**	**18 20 50.2**	**-2.1**
	comp=Z,7.0nm,1.2s						
CLUD	**Cludinico**	**151.01**	**331**		**PKPdf**	**18 20 43.9**	**-2.8**
MOTA	**Moosalm**	**151.09**	**334**	*eP*	**PKPbc**	**18 20 50.6**	**-2.2**
	comp=Z,7.7nm,1.4s						
RETA	**Reutte**	**151.11**	**334**	*eP*	**PKPbc**	**18 20 51.2**	**-1.4**
	comp=Z,5.6nm,0.9s						
SQTA	**Sankt Quirin**	**151.15**	**333**	*eP*	**PKPbc**	**18 20 50.8**	**-2.0**
	comp=Z,5.7nm,1.1s						
STAL	**STALIGIAL**	**151.24**	**331**		**PKPbc**	**18 20 50.8**	**-2.2**
BFO	**Black Forest**	**151.32**	**338**		**PKPbc**	**18 20 51.5**	**-1.6**
BFO	**Black Forest**	**151.32**	**338**	PKIKP	**PKPbc**	**18 20 51.5**	**-1.6**
CIMO	**Cimolais**	**151.32**	**331**		**PKPbc**	**18 20 50.4**	**-2.8**
FETA	**Feichten**	**151.50**	**334**	*eP*	**PKPab**	**18 21 01.7**	**-0.4**
	comp=Z,12nm,1.0s						
DAVA	**Damuels**	**151.63**	**335**	*eP*	**PKPab**	**18 20 58.2**	**-4.3**
	comp=Z,11nm,1.0s						
ECH	**Echery**	**151.81**	**339**		**PKPbc**	**18 20 52.5**	**-1.7**
ECH	**Echery**	**151.81**	**339**	PKIKP	**PKPbc**	**18 20 52.5**	**-1.7**
ESDC	**Sonseca Array**	**162.58**	**352**	PKPab	**PKPab**	**18 21 48.0**	**-1.6**
	comp=Z,1.8nm,0.9s,baz=13,slow=2.7,SNR=12						
ESDC	**Sonseca Array**	**162.58**	**352**	PKPab	**PKPab**	**18 21 49.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**167.45**	**224**	PKPab	**PKPab**	**18 22 10.7**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=184,slow=4.3,SNR=2.5						

*NEIC **15** 18:02:09.5±1.3, 6°.1S±0°.2×148°.2E±0°.2, h92km±26km, mb4.1/9, Error ellipse: s-maj=37.8km s-min=6.4km az=141.0*
*IDC **15** 18:02:12.9±3.5, 6°.17S×148°.63E, h172km±62km, mb3.3/3, mbtmp3.9/5, Error ellipse: s-maj=92.3km s-min=24.0km az=120.0*
ISC 15 18:02:09.0±0.9, **6°.2S**±0°.1×**148°.2E**±0°.1, **h100**km, **n17,** σ1§**60**/18, **mb3.1**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.28**	**65**	P		**Pn**	**Pn**	**18 03 12.1**	**0.0**
	33nm,0.3s,baz=236,slow=0.5,SNR=18								
RABL	**Rabaul**	**4.46**	**64**	Pn		**Pn**	**Pn**	**18 03 14.4**	**0.0**
COEN	**Coen**	**9.15**	**212**	Pn		**Pn**	**Pn**	**18 04 19.9**	**+1.6**
COEN				Sn		**Sn**	**Sn**	**18 05 56.3**	**-3.3**
WB0	**Warramunga Arr**	**19.01**	**223**	P		**Pn**	**Pn**	**18 06 24.3**	**-0.7**
WB0				IAmb	IAmb			18 07 00.1	
	comp=Z,8.8nm,1.3s								
WR0	**Warramunga Arr**	**19.04**	**223**	P		**Pn**	**Pn**	**18 06 25.0**	**-0.3**
WR0				IAmb	IAmb			18 06 25.8	
	comp=Z,5.1nm,0.5s								
WRAB	**Tennant Creek**	**19.16**	**223**	P		**Pn**	**Pn**	**18 06 25.6**	**-1.0**
WRAB				IAmb	IAmb			18 06 27.0	
	comp=Z,5.2nm,0.5s								
WB2	**Warramunga Arr**	**19.16**	**223**	P		**Pn**	**Pn**	**18 06 25.7**	**-1.0**
WB2				IAmb	IAmb			18 06 27.2	
	comp=Z,5.6nm,0.5s								
WRA	**Warramunga Arr**	**19.17**	**223**	P		**Pn**	**Pn**	**18 06 26.6**	**-0.2**
	comp=Z,2.8nm,0.4s,baz=51,slow=11,SNR=82								
WRA	**Warramunga Arr**	**19.17**	**223**	P		**P**	**P**	**18 06 24.9**	**+0.1**
KNRA	**Kununurra**	**21.23**	**242**	P		**P**	**P**	**18 06 46.6**	**-0.5**
TNTI	**Ternate**	**21.86**	**288**	P		**P**	**P**	**18 06 55.8**	**+1.9**
AS31	**Alice Springs**	**22.14**	**217**	P		**P**	**P**	**18 06 58.6**	**+1.8**
ASAR	**Alice Springs**	**22.14**	**217**	P		**P**	**P**	**18 06 58.6**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=55,slow=9.0,SNR=35								
	comp=Z,0.5nm,0.5s								
ASAR	**Alice Springs**	**22.14**	**217**	P		**P**	**P**	**18 06 58.9**	**+2.1**
FITZ	**Fitzroy Crossi**	**24.96**	**240**	P		**P**	**P**	**18 07 23.9**	**+0.6**
	comp=Z,3.7nm,0.4s,baz=54,slow=12,SNR=29								
	comp=Z,3.7nm,0.4s								
FITZ	**Fitzroy Crossi**	**24.96**	**240**	P		**P**	**P**	**18 07 24.1**	**+0.8**
FITZ				IAmb	IAmb			18 07 27.8	
	comp=Z,4.9nm,0.7s								
MKAR	**Makanchi Array**	**78.36**	**320**	P		**P**	**P**	**18 13 55.9**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=98,slow=8.1,SNR=2.2								
	comp=Z,0.1nm,0.3s								

*HEL **15** 18:03:19.3±0.2, 67°.74N×20°.12E, h0km, ML1.9, Explosion*
*IDC **15** 18:03:22.0±1.4, 67°.81N×20°.71E, h0km, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=19.8km s-min=7.9km az=116.0*
ISC 15 18:03:20.2±1.0, **67°.80N**±0°.03×**20°.41E**±0°.05, **h0**km, **n20,** σ1§**50**/30, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.65**	**67**	PG		**Pb**	**Pb**	**18 03 33.4**	**-1.0**
LANU				SG		**Sb**	**Sb**	**18 03 43.2**	**-0.8**
KIF	**Kilpisjarvi**	**1.22**	**7**	*eP*		**Pg**	**Pg**	**18 03 43.4**	**-0.1**
KIF	**Kilpisjarvi**	**1.22**	**7**	PG		**Pg**	**Pg**	**18 03 43.3**	**-0.2**
KIF				SG		**Sg**	**Sg**	**18 03 58.4**	**-0.8**
KIF				MSG				18 03 59.5	
	comp=Z,13nm,0.2s								
PAJU	**Pajala**	**1.30**	**125**	PN		**Pg**	**Pg**	**18 03 44.9**	**-0.2**
	baz=303								
PAJU				SN		**Sn**	**Sn**	**18 04 04.5**	**+0.7**
HEF	**Hetta**	**1.36**	**62**	*eP*		**Pb**	**Pb**	**18 03 46.2**	**-0.4**
HEF	**Hetta**	**1.36**	**62**	PG		**Pg**	**Pg**	**18 03 46.0**	**-0.3**
HEF				MSG				18 04 03.9	
	comp=Z,8.8nm,0.2s								
HEF				SG		**Sn**	**Sn**	**18 04 05.6**	**+0.4**
KLF	**Kolari**	**1.48**	**111**	PN		**Pb**	**Pb**	**18 03 48.7**	**+0.1**
	baz=294								
KLF				SN		**Sn**	**Sn**	**18 04 10.9**	**+2.9**
TRO	**Tromso**	**1.92**	**344**	PG		**Pn**	**Pn**	**18 03 54.5**	**+0.4**
TRO				SG		**Sn**	**Sn**	**18 04 19.4**	**+0.6**
KALU	**Kalix**	**2.27**	**148**	PG		**Pb**	**Pb**	**18 04 01.0**	**-1.0**
TOF	**Tornio**	**2.32**	**136**	PG		**Pn**	**Pn**	**18 04 01.4**	**+1.9**
TOF				MSG				18 04 29.0	
	comp=Z,7.2nm,0.2s								
SGF	**Sodankyl**	**2.37**	**96**	PG		**Pb**	**Pb**	**18 04 03.4**	**-0.3**
SGF				SG		**Sg**	**Sg**	**18 04 34.7**	**-1.5**
RNF	**Rovaniemi**	**2.49**	**116**	PG		**Pb**	**Pb**	**18 04 05.0**	**-0.8**
RNF				SG		**Sg**	**Sg**	**18 04 39.1**	**-1.0**
ARA0	**ARCESS Array S**	**2.55**	**45**	PB		**Pn**	**Pn**	**18 04 04.1**	**+1.3**
	baz=229								
ARA0				SN		**Sn**	**Sn**	**18 04 34.1**	**-0.4**
ARCES	**ARCESS Array B**	**2.55**	**45**	Pn		**Pb**	**Pb**	**18 04 04.7**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=225,slow=15,SNR=29								
ARCES				Lg		Lg	Lg	18 04 38.2	
	comp=Z,1.5nm,0.3s,baz=226,slow=23,SNR=9.1								
	comp=Z,0.7nm,0.3s								
KEV	**Kevo**	**3.10**	**48**	SN		**Sn**	**Sn**	**18 04 50.0**	**+2.1**
KEV				MSG				18 04 53.9	
	comp=Z,3.7nm,0.2s								
OBF4	**Vikkela, Lumij**	**3.55**	**146**	SN		**Sn**	**Sn**	**18 04 55.3**	**-3.7**
OLKF	**Oulanka, Finla**	**3.82**	**109**	PB		**Pn**	**Pn**	**18 04 23.2**	**+3.0**
MSF	**Maaselka**	**3.90**	**115**	PN		**Pn**	**Pn**	**18 04 20.5**	**-0.8**
FINES	**FINESS Array B**	**6.83**	**156**	Pn		**Pn**	**Pn**	**18 05 03.9**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=349,slow=11,SNR=1.7								
FINES				Sn		**Sn**	**Sn**	**18 06 19.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=356,slow=22,SNR=2.4								
FINES				Lg		Lg	Lg	18 06 55.5	
	comp=Z,0.3nm,0.3s,baz=343,slow=24,SNR=5.7								
	comp=Z,2.6nm,1.0s								
NOA	**NORSAR Array B**	**7.86**	**215**	Pn		**Pn**	**Pn**	**18 05 16.4**	**+0.7**
	baz=30,slow=13,SNR=2.4								
NOA				Lg		Lg	Lg	18 07 27.2	
	baz=305,slow=4.2,SNR=5.2								
	comp=Z,0.1nm,0.4s								

*IDC **15** 18:13:33.4±0.7, 7°.96S×129°.83E, h0km, mb4.0/8, mbtmp4.0/13, ML4.0/5, MS3.8/4, Error ellipse: s-maj=32.4km s-min=15.8km az=85.0*
*NEIC **15** 18:13:41.2±1.9, 7°.92S±0°.02×129°.68E±0°.06, h49km±8km, mb4.2/21, Error ellipse: s-maj=9.4km s-min=2.4km az=104.0*
ISC 15 18:13:38.6±0.5, **8°.05S**±0°.05×**129°.79E**±0°.06, **h35**km, **n62,** σ2§**21**/60, **mb4.0**/15, **MS3.9**/4, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.50**	**88**			**Pn**	**Pn**	**18 14 06.5**	**+3.5**
SAUI	**Saumlaki**	**1.50**	**88**	P		**Pn**	**Pn**	**18 14 07.3**	**+4.2**
MTN	**Manton Dam**	**4.94**	**165**	Pn		**Pn**	**Pn**	**18 14 53.2**	**+2.7**
MTN	**Manton Dam**	**4.94**	**165**	P		**Pn**	**Pn**	**18 14 54.4**	**+3.9**
KDU	**Kakadu**	**5.31**	**150**	P		**Pn**	**Pn**	**18 14 57.4**	**+1.9**
FAKI	**Fak Fak**	**5.66**	**26**			**Pn**	**Pn**	**18 15 00.7**	**+0.5**
BATI	**Baumata**	**6.42**	**250**	Pn		**Pn**	**Pn**	**18 15 11.3**	**+0.6**
	1.6nm,0.3s,baz=264,slow=22,SNR=1.7								
BATI				Sn		**Sn**	**Sn**	**18 16 26.6**	**+3.8**
	3.4nm,0.3s,baz=94,slow=20,SNR=1.6								
	9.7nm,0.7s								
SIJI	**Sorong**	**7.28**	**12**	Pn		**Pn**	**Pn**	**18 15 21.2**	**-1.4**
	5.4nm,0.3s,baz=27,slow=1.9,SNR=48								
SIJI				Sn		**Sn**	**Sn**	**18 16 43.2**	**-1.0**
	2.1nm,0.3s,baz=174,slow=22,SNR=1.9								
	11nm,0.3s								
KNRA	**Kununurra**	**7.65**	**187**			**Pn**	**Pn**	**18 15 28.1**	**+0.5**
KNRA	**Kununurra**	**7.65**	**187**	P		**Pn**	**Pn**	**18 15 27.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**10.77**	**202**	Pn		**Pn**	**Pn**	**18 16 09.7**	**-0.8**
	2.2nm,0.3s,baz=23,slow=10,SNR=120								
FITZ				Sn		Sn		18 17 58.8	-11
	3.7nm,0.3s,baz=49,slow=15,SNR=13								
	8.3nm,0.5s								
FITZ	**Fitzroy Crossi**	**10.77**	**202**	P		**Pn**	**Pn**	**18 16 09.7**	**-0.8**
WB0	**Warramunga Arr**	**12.47**	**160**			**Pn**	**Pn**	**18 16 31.6**	**-2.2**
WRAB	**Tennant Creek**	**12.61**	**160**			**Pn**	**Pn**	**18 16 33.4**	**-2.3**
WRA	**Warramunga Arr**	**12.62**	**160**	Pn		**Pn**	**Pn**	**18 16 33.4**	**-2.3**
	0.8nm,0.3s,baz=342,slow=12,SNR=44								
WRA				Sn		**Sn**	**Sn**	**18 18 49.3**	**-5.8**
	1.8nm,0.3s,baz=333,slow=23,SNR=10.0								
WRA				Lg		Lg	Lg	18 20 16.5	
	baz=344,slow=24								
	1.9nm,0.4s								
WRA	**Warramunga Arr**	**12.62**	**160**			**Pn**	**Pn**	**18 16 31.9**	**-3.9**
WB2	**Warramunga Arr**	**12.62**	**160**			**Pn**	**Pn**	**18 16 33.5**	**-2.3**
WR0	**Warramunga Arr**	**12.70**	**159**			**Pn**	**Pn**	**18 16 34.8**	**-2.2**
COEN	**Coen**	**14.39**	**115**	Pn		**Pn**	**Pn**	**18 16 58.5**	**-1.5**
AS31	**Alice Springs**	**16.02**	**166**			**Pn**	**Pn**	**18 17 19.9**	**-1.6**
ASAR	**Alice Springs**	**16.02**	**166**	Pn		**Pn**	**Pn**	**18 17 19.2**	**-2.2**
	0.3nm,0.3s,baz=338,slow=8.4,SNR=33								
ASAR				Sn		**Sn**	**Sn**	**18 20 12.7**	**-5.5**
	0.6nm,0.3s,baz=355,slow=26,SNR=5.5								
ASAR				Lg		Lg	Lg	18 22 06.7	
	baz=340,slow=29								
	1.2nm,0.5s								
ASAR	**Alice Springs**	**16.02**	**166**	Pn		**Pn**	**Pn**	**18 17 20.4**	**-1.1**
MBWA	**Marble Bar**	**16.25**	**216**	Pn		**Pn**	**Pn**	**18 17 21.2**	**-3.2**
MBWA				IAmb	IAmb			18 17 47.7	
	comp=Z,16nm,1.2s								
PSA00	**Pilbara Seismi**	**16.51**	**214**	Pn		**Pn**	**Pn**	**18 17 25.4**	**-2.3**
PSA00				IAmb	IAmb			18 17 37.7	
	comp=Z,8.3nm,0.9s								
PSA00	**Pilbara Seismi**	**16.51**	**214**	Pn		**Pn**	**Pn**	**18 17 25.4**	**-2.3**
PSA00				IAmb	IAmb			18 17 44.9	
	comp=Z,7.7nm,1.4s								
WRKA	**Warakurna**	**16.95**	**185**	P		**Pn**	**Pn**	**18 17 30.8**	**-2.5**
CTA	**Charters Tower**	**19.93**	**129**	P		Pn		18 18 11.5	+2.0
	comp=Z,4.2nm,0.7s,baz=321,slow=9.3,SNR=6.3								
CTAO	**Charters Tower**	**19.93**	**129**			Pn		18 18 11.6	+2.1
CTAO				IAmb	IAmb			18 18 32.5	
	comp=Z,39nm,1.4s								
FORT	**Forrest**	**22.67**	**184**	P		**P**	**P**	**18 18 37.9**	**+0.9**
MORW	**Morawa**	**24.59**	**210**	P		**P**	**P**	**18 18 57.2**	**+1.6**
MORW				IAmb	IAmb			18 19 10.7	
	comp=Z,18nm,1.2s								
BBOO	**Buckleboo**	**25.32**	**168**	P		**P**	**P**	**18 19 03.7**	**+1.6**
BBOO				IAmb	IAmb			18 19 04.4	
	comp=Z,29nm,1.4s								
STKA	**Stephens Creek**	**26.13**	**157**	P		**P**	**P**	**18 19 10.3**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=332,slow=12,SNR=6.8								
	comp=Z,3.4nm,0.8s								
STKA	**Stephens Creek**	**26.13**	**157**	P		**P**	**P**	**18 19 11.7**	**+2.1**
CAN	**Canberra**	**32.35**	**150**	P		**P**	**P**	**18 20 08.1**	**+3.2**
MJAR	**Matsushiro Arr**	**45.05**	**10**	P		**P**	**P**	**18 21 48.8**	**-2.4**
	comp=Z,0.5nm,0.7s,baz=170,slow=8.8,SNR=4.7								
	comp=Z,0.5nm,0.7s								
RPZ	**Rata Peaks**	**50.54**	**142**	P		**P**	**P**	**18 22 36.4**	**+2.7**
TUWZ	**Tuamarina**	**51.25**	**138**	P		**P**	**P**	**18 22 40.2**	**+1.2**
USRK	**Ussuriysk Ar.**	**52.04**	**2**	LR		LR	LR	18 44 52.4	
	comp=Z,49nm,20.2s,baz=223,slow=36								
KLR	**Kul'dur**	**57.06**	**2**	LR		LR	LR	18 46 52.5	
	comp=Z,108nm,19.9s,baz=153,slow=35								
PEA0B	**Petropavlovsk-**	**65.38**	**18**			**P**	**P**	**18 24 18.7**	**+1.3**
PETK	**Petropavlovsk-**	**65.38**	**18**	P		**P**	**P**	**18 24 18.1**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=169,slow=4.8,SNR=9.0								
	comp=Z,1.6nm,0.6s								
PETK	**Petropavlovsk-**	**65.38**	**18**	P		**P**	**P**	**18 24 17.6**	**+0.2**
MK31	**Makanchi Array**	**68.98**	**327**	P		**P**	**P**	**18 24 38.6**	**-1.9**
MKAR	**Makanchi Array**	**68.98**	**327**	P		**P**	**P**	**18 24 40.4**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=124,slow=7.4,SNR=12								
	comp=Z,1.0nm,0.6s								
MKAR	**Makanchi Array**	**68.98**	**327**	P		**P**	**P**	**18 24 38.1**	**-2.4**
MAKZ	**Makanchi**	**69.16**	**327**	P		**P**	**P**	**18 24 39.8**	**-1.8**
MAKZ				IAmb	IAmb			18 25 16.8	
	comp=Z,2.5nm,1.1s								
YAK	**Yakutsk**	**69.87**	**360**	P		**P**	**P**	**18 24 46.0**	**+0.4**
VNDA	**Vanda**	**71.44**	**173**	P		**P**	**P**	**18 24 56.7**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=311,slow=7.1,SNR=7.1								
	comp=Z,0.8nm,0.8s								
VNDA	**Vanda**	**71.44**	**173**	P		**P**	**P**	**18 24 56.7**	**+1.7**
VNDA				IAmb	IAmb			18 25 07.1	
	comp=Z,1.5nm,0.9s								
ZAA0	**Zalesovo Array**	**72.43**	**334**	P		**P**	**P**	**18 25 01.1**	**-0.1**
ZAA0				IAmb	IAmb			18 25 03.2	
	comp=Z,1.3nm,0.8s								
ZALV	**Zalesovo Beam**	**72.43**	**334**	P		**P**	**P**	**18 24 59.7**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=143,slow=8.0,SNR=4.7								
	comp=Z,0.7nm,0.5s								
ZALV	**Zalesovo Beam**	**72.43**	**334**	P		**P**	**P**	**18 25 01.4**	**+0.1**
KURBB	**Kurchatov Arra**	**73.29**	**329**	P		**P**	**P**	**18 25 06.7**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=129,slow=4.9,SNR=5.5								
	comp=Z,0.6nm,0.4s								
MAW	**Mawson**	**73.90**	**202**	P		**P**	**P**	**18 25 10.1**	**+0.3**
KK31	**Karatay Array**	**73.99**	**319**	P		**P**	**P**	**18 25 10.7**	**-0.1**
KK31				IAmb	IAmb			18 25 33.5	
	comp=Z,2.0nm,1.2s								
KKAR	**Karatay Array**	**73.99**	**319**	P		**P**	**P**	**18 25 10.6**	**-0.2**
KKAR	**Karatay Array**	**73.99**	**319**	P		**P**	**P**	**18 25 10.2**	**-0.5**
KKAR				IAmb	IAmb			18 25 33.5	
	comp=Z,2.0nm,1.2s								
TIXI	**Tiksi**	**79.53**	**360**	P		**P**	**P**	**18 25 41.8**	**+0.5**
TIXI				IAmb	IAmb			18 25 45.4	
	comp=Z,7.3nm,0.9s								
NRIK	**Noril'sk**	**82.52**	**346**	LR		LR	LR	19 05 00.3	
	comp=Z,104nm,20.3s,baz=84,slow=37								
BELG	**Belogorsk**	**91.56**	**323**	LR		LR	LR	19 11 48.4	
	comp=Z,40nm,21.1s,baz=271,slow=38								
ILAR	**Eielson Array**	**94.38**	**25**	P		**P**	**P**	**18 26 53.5**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=241,slow=5.6,SNR=4.3								
	comp=Z,0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**128.80**	**280**	PKP		**PKiKP**		**18 32 44.2**	**0.0**
	comp=Z,0.7nm,0.6s,baz=90,slow=1.2,SNR=3.0								

ROM 15 18:18:03.6±0.1, **42°.807N**±0°.004×**13°.360E**±0°.007, **h17**km±1km, **ML1.0**/2, **Error ellipse: s-maj=0.6km s-min=0.1km az=56.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.18**	**278**	P		P	Pb	18 18 08.5	0.0
NRCA				S		S	Sb	18 18 11.8	0.0
GUMA	**Gualdo di Mace**	**0.26**	**356**	P		P	Pb	18 18 09.7	0.0
TERO	**Teramo**	**0.26**	**136**	P		P	Pb	18 18 09.8	0.0
TERO				S		S	Sb	18 18 14.1	+0.1
OFFI	**Offida**	**0.27**	**62**	P		P	Pg	18 18 09.8	+0.2
CAMP	**Campotosto**	**0.27**	**172**	P		P	Pg	18 18 09.4	-0.3
CAMP				S		S	Sg	18 18 14.2	+0.3
FEMA	**Monte Fema**	**0.28**	**304**	P		P	Pb	18 18 10.3	+0.1
FEMA				S		S	Sb	18 18 14.6	0.0
FDMO	**Fiordimonte**	**0.30**	**319**	P		P	Pg	18 18 10.0	-0.2
FDMO				S		S	Sg	18 18 14.9	+0.2
FDMO				AML	AML				
	comp=E,23μm,0.7s								
FDMO				AML	AML				
	comp=N,45μm,0.3s								
LNSS	**Leonessa**	**0.31**	**229**	P		P	Pg	18 18 10.4	+0.1
LNSS				S		S	Sb	18 18 15.7	+0.2
LNSS				AML	AML				
	comp=E,56μm,0.2s								
LNSS				AML	AML				
	comp=N,37μm,0.3s								
RM33	**Pellescritta (**	**0.32**	**200**	P		P	Pg	18 18 10.6	+0.2
RM33				S		S	Sb	18 18 15.5	-0.2
GIGS	**Gran Sasso**	**0.39**	**157**	P		P	Pg	18 18 11.5	-0.2
GIGS				S		S	Sb	18 18 17.8	+0.1

IDC 15 18:19:40.6±5.5, **38°.99N**×**110°.18E**, **h0**km, **mb3.3**/2, **mbtmp3.3**/3, **ML1.6**/1, **Error ellipse: s-maj=116.4km s-min=25.6km az=86.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.26**	**344**			Pn	Pn	18 21 55.5	0.0
	baz=168,slow=15,SNR=5.3								
SONM				Lg		Lg	Lg	18 24 34.3	
	0.1nm,0.3s,baz=164,slow=27,SNR=5.0								
	0.6nm,0.7s								
MKAR	**Makanchi Array**	**21.79**	**300**	P		P	P	18 24 34.4	+0.3
	0.6nm,0.8s,baz=94,slow=13,SNR=4.7								
	0.6nm,0.8s								
CMAR	**Chiang Mai Arr**	**22.67**	**209**	P		P	P	18 24 43.5	-0.2
	2.5nm,1.1s,baz=17,slow=8.5,SNR=6.5								
	2.5nm,1.1s								

*IDC **15** 18:24:06.2±2.1, 36°.74N×140°.71E, h0km, mb3.3/2, mbtmp3.3/2, MS3.1/1, Error ellipse: s-maj=30.0km s-min=20.1km az=12.0*
*JMA **15** 18:24:06.9±0.0, 37°.1N±0°.1×140°.8E±0°.2, h9km, MV3.2/20, EASTERN FUKUSHIMA PREF*
JMA Felt I J1 at EASTERN FUKUSHIMA PREF .
ISC 15 18:24:06.3±1.0, **37°.05N**±0°.03×**140°.79E**±0°.05, **h10**km±6km, **n19,** σ0§**77**/21, **4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.06**	**10**	P		**Pg**		**18 24 08.7**	**+0.2**
ONAJ				S		**Sg**		**18 24 10.1**	**-0.1**
JFFD	**Fukushimafurud**	**0.19**	**284**	*i* P		**Pg**		**18 24 10.5**	**+0.2**
JFFD				S		**Sg**		**18 24 12.9**	**-0.1**
JFK	**Kawauchi**	**0.33**	**12**	⇓*i*P		**Pg**		**18 24 13.2**	**+0.3**
JFK				⇓S		**Sg**		**18 24 17.8**	**+0.4**
JHO	**Hitachi**	**0.47**	**202**	*i* P		**Pg**		**18 24 16.1**	**+0.6**
JHO				S		**Sb**		**18 24 22.6**	**-1.0**
JFT	**Otama**	**0.59**	**323**	*i* P		**Pg**		**18 24 18.1**	**+0.2**
JFT				S		**Sg**		**18 24 25.8**	**+0.2**
JSB	**Shiboa**	**0.70**	**264**	*i* P		**Pb**		**18 24 20.6**	**0.0**
JSB				S		**Sb**		**18 24 29.9**	**-0.3**
JMM	**Marumori**	**0.82**	**0**	⇓*i*P		**Pb**		**18 24 21.9**	**-0.7**
JMM				⇓S		**Sb**		**18 24 32.7**	**-1.0**
JFY	**Yanaizu**	**0.94**	**293**	*i* P		**Pb**		**18 24 24.2**	**-0.4**
JFY				S		**Sb**		**18 24 36.1**	**-1.0**
JYT	**Yasato**	**0.95**	**210**	*i* P		**Pb**		**18 24 24.4**	**-0.4**
JYT				S		**Sn**		**18 24 38.0**	**-1.1**
MJAR	**Matsushiro Arr**	**2.13**	**257**	Pg		**Pn**		**18 24 41.9**	**0.0**
	1.1nm,0.3s,baz=82,slow=17,SNR=110								
MJAR				Lg		Lg		18 25 10.2	
	1.1nm,0.3s,baz=85,slow=30,SNR=6.4								
YAK	**Yakutsk**	**25.95**	**348**	LR		LR		18 39 24.9	
	comp=Z,46nm,20.5s,baz=90,slow=35								
H11N2	**WAKE ISLAND Hy**	**28.59**	**120**	T		T		18 59 51.7	
	baz=313,slow=75,SNR=8.0								
H11N1	**WAKE ISLAND Hy**	**28.59**	**120**	T		T		18 59 51.9	
	baz=313,slow=75,SNR=7.1								
H11N3	**

KBG	**Krutoberegovo**	**1.09 279**	P	**Pn**	**19 21 16.6**	**-1.8**	KLR	LR	19 34 33.1
KBG		S	**Sn**	**19 21 31.9**	**-0.8**		comp=Z,204nm,18.2s,baz=59,slow=39		
BKI	**Bering**	**1.18 139**	PN	Pn	19 21 16.5	-3.0		comp=Z,1.5nm,0.5s	
BKI		S	**Sn**	**19 21 33.0**	**-1.8**	**KLR**	**Kul'dur**	**20.94 265**⇈ *e*P	**P**
BKI	**Bering**	**1.18 139**	P	Pn	19 21 16.5	-3.0	KLR	pmax	pmax
BKI		S	**Sn**	**19 21 33.0**	**-1.8**		comp=Z,2.0nm,1.0s		
SMKR	**Semkarok**	**1.83 287**	PN	**Pn**	**19 21 29.1**	**+0.5**	**USRK**	**Ussuriysk Ar.**	**23.83 254** P
SMKR		S	**Sb**	**19 21 52.4**	**-1.5**		comp=Z,1.4nm,0.7s,baz=45,slow=14,SNR=2.7		
SMKR	**Semkarok**	**1.83 287** *e*P	**Pn**	**19 21 29.1**	**+0.5**	USRK	LR	LR	19 34 52.9
SMKR		*e*S	**Sb**	**19 21 52.4**	**-1.5**		comp=Z,285nm,20.4s,baz=231,slow=35		
BDR	**Baidarnaya**	**1.97 285**	PN	**Pn**	**19 21 31.4**	**+0.9**		comp=Z,1.4nm,0.7s	
BDR		S	**Sb**	**19 21 56.0**	**-1.8**	**COLA**	**College**	**24.41 50**⇈ *e*P	**P**
BDR	**Baidarnaya**	**1.97 285**	P	**Pn**	**19 21 31.4**	**+0.9**	COLA	pmax	pmax
BDR		S	**Sb**	**19 21 56.0**	**-1.8**		comp=Z,2.0nm,0.7s		
SRKR	**Sorokina**	**2.01 287**	PN	**Pn**	**19 21 31.5**	**+0.4**	**DHY**	**Denali Highway**	**24.74 54** P
SRKR		S	**Sb**	**19 21 56.9**	**-2.1**	**ILAR**	**Eielson Array**	**24.83 50** P	**P**
SRKR	**Sorokina**	**2.01 287** *e*P	**Pn**	**19 21 31.5**	**+0.4**		comp=Z,0.4nm,0.6s,baz=251,slow=9.5,SNR=4.8		
SRKR		*e*S	**Sb**	**19 21 56.9**	**-2.1**	ILAR	LR	LR	19 37 10.1
KLY	**Klyuchi**	**2.24 277**	PN	**Pn**	**19 21 33.1**	**-1.0**		comp=Z,136nm,18.4s,baz=220,slow=39	
KLY		S	**Sn**	**19 22 00.7**	**-0.3**		comp=Z,0.4nm,0.6s		
KLY	**Klyuchi**	**2.24 277**	P	**Pn**	**19 21 33.1**	**-1.0**	**MSHR**	**Mys Shultsa**	**25.37 252**⇊ *e*P
KLY		S	**Sn**	**19 22 00.7**	**-0.3**	MSHR	pmax	pmax	
MKZ	**Mys Kozlova**	**2.27 228**	PN	**Pn**	**19 21 33.8**	**-0.8**		comp=Z,7.0nm,0.9s	
MKZ		S	**Sn**	**19 22 00.7**	**-1.1**	**SCRK**	**Sand Creek**	**26.15 51** P	**P**
MKZ	**Mys Kozlova**	**2.27 228**	P	**Pn**	**19 21 33.8**	**-0.8**	**MAJO**	**Matsushiro**	**26.48 234** P
MKZ		S	**Sn**	**19 22 00.7**	**-1.1**	MAJO	IAmb	IAmb	19 26 53.0
KRSR	**Krestovskiy**	**2.28 275**	PN	**Pn**	**19 21 36.4**	**+1.5**		comp=Z,10nm,0.9s	
KRSR	**Krestovskiy**	**2.28 275**	P	**Pn**	**19 21 36.4**	**+1.5**	**MAJO**	**Matsushiro**	**26.48 234**⇈ *e*P
BZWR	**Bezymyannyi-We**	**2.33 268**	PN	**Pn**	**19 21 36.7**	**+1.1**	MAJO	pmax	pmax
BZWR		S	**Sb**	**19 22 06.2**	**-2.1**		comp=Z,4.0nm,1.2s		
BZWR	**Bezymyannyi-We**	**2.33 268**	P	**Pn**	**19 21 36.7**	**+1.1**	**MJAR**	**Matsushiro Arr**	**26.48 234** P
BZWR		S	**Sb**	**19 22 06.2**	**-2.1**		comp=Z,4.0nm,1.0s,baz=23,slow=7.4,SNR=11		
BZMR	**Bezymyannaya**	**2.33 268**	PN	**Pn**	**19 21 36.4**	**+0.8**	MJAR	LR	LR
BZMR		S	**Sb**	**19 22 07.1**	**-1.4**		comp=Z,134nm,21.0s,baz=32,slow=39		
BZMR	**Bezymyannaya**	**2.33 268**	P	**Pn**	**19 21 36.4**	**+0.8**		comp=Z,4.0nm,1.0s	
BZMR		S	**Sb**	**19 22 07.1**	**-1.4**	**BCAR**	**Beaver Creek A**	**27.26 53** P	**P**
KIRR	**Kirishev**	**2.42 268**	PN	**Pn**	**19 21 38.0**	**+1.2**	**KSRS**	**Korea Array**	**30.79 248** P
KIRR		S	**Sn**	**19 22 07.0**	**+1.4**		comp=Z,0.6nm,0.5s,baz=33,slow=8.8,SNR=4.7		
KIRR	**Kirishev**	**2.42 268**	P	**Pn**	**19 21 38.0**	**+1.2**	KSRS	LR	LR
KIRR		S	**Sn**	**19 22 07.0**	**+1.4**		comp=Z,82nm,19.9s,baz=45,slow=38		
KPT	**Kopyto**	**2.48 269**	PN	**Pn**	**19 21 39.0**	**+1.4**		comp=Z,0.6nm,0.5s	
KPT		S	**Sb**	**19 22 10.5**	**-2.1**	**DLBC**	**Dease Lake**	**34.16 58** LR
KPT	**Kopyto**	**2.48 269**	P	**Pn**	**19 21 39.0**	**+1.4**		comp=Z,112nm,20.2s,baz=296,slow=37	
KPT		S	**Sb**	**19 22 10.5**	**-2.1**	**NRIK**	**Noril'sk**	**35.03 323** LR	LR
KMNR	**Kamenistaya**	**2.50 264**	PN	**Pn**	**19 21 39.8**	**+1.9**		comp=Z,40nm,19.6s,baz=80,slow=39	
KMNR	**Kamenistaya**	**2.50 264**	P	**Pn**	**19 21 39.8**	**+1.9**	**NRIK**	**Noril'sk**	**35.03 323**⇊ *e*P
KOZ	**Kozyrevsk**	**2.67 271**	PN	**Pn**	**19 21 41.1**	**+1.0**	NRIK	pmax	pmax
KOZ		S	**Sb**	**19 22 16.3**	**-1.7**		comp=Z,3.0nm,1.0s		
KOZ	**Kozyrevsk**	**2.67 271**	P	**Pn**	**19 21 41.1**	**+1.0**	**ULN**	**Ulaanbaatar**	**35.45 281**⇈ *e*P
KOZ		S	**Sb**	**19 22 16.3**	**-1.7**	ULN	pmax	pmax	
TUMR	**Tumrok**	**2.67 254**	PN	**Pn**	**19 21 41.5**	**+1.3**		comp=Z,2.0nm,1.1s	
TUMR		S	**Sn**	**19 22 15.1**	**+3.2**	**SONM**	**Songino Array**	**35.83 282** P
TUMR	**Tumrok**	**2.67 254** *e*P	**Pn**	**19 21 41.5**	**+1.3**	SONM	LR	LR	19 43 57.5
TUMR		*e*S	**Sn**	**19 22 15.1**	**+3.2**		comp=Z,97nm,18.3s,baz=52,slow=39		
SRDR	**Sredinnyy**	**2.76 277**	PN	**Pn**	**19 21 42.4**	**+1.0**		comp=Z,0.5nm,0.4s	
SRDR		S	**Sb**	**19 22 17.1**	**-3.4**	**SONM**	**Songino Array**	**35.83 282** P	**P**
SRDR	**Sredinnyy**	**2.76 277** *e*P	**Pn**	**19 21 42.4**	**+1.0**	SONM	IAmb	IAmb	19 27 59.1
SRDR		*e*S	**Sb**	**19 22 17.1**	**-3.4**		comp=Z,4.6nm,1.4s		
KII	**Karymskiy**	**3.63 237**	PN	**Pn**	**19 21 54.2**	**+0.8**	**SONM**	**Songino Array**	**35.83 282** P
KII	**Karymskiy**	**3.63 237**	P	**Pn**	**19 21 54.2**	**+0.8**	SONM	pmax	pmax
PALN	**Palana**	**3.91 322**	PN	**Pn**	**19 21 57.6**	**+0.5**		comp=Z,5.0nm,1.4s	
PALN	**Palana**	**3.91 322** *e*P	**Pn**	**19 21 57.6**	**+0.5**	**H11N2**	**WAKE ISLAND Hy**	**36.35 176** T
SPN	**Mys Shipunski**	**4.03 224**	PN	**Pn**	**19 21 59.7**	**+0.9**		baz=359,slow=76,SNR=450	
SPN	**Mys Shipunski**	**4.03 224**	P	**Pn**	**19 21 59.7**	**+0.9**	**H11N3**	**WAKE ISLAND Hy**	**36.37 176** T
SPN		S	**Sn**	**19 22 43.3**	**-1.9**		baz=359,slow=76,SNR=501		
SDLR	**Sedlovina**	**4.38 232**	PN	**Pn**	**19 22 04.5**	**+0.8**	**H11N1**	**WAKE ISLAND Hy**	**36.37 176** T
SDLR	**Sedlovina**	**4.38 232** *e*P	**Pn**	**19 22 04.5**	**+0.8**		baz=359,slow=76,SNR=480		
KRER	**Koryakskii**	**4.42 233**	PN	**Pn**	**19 22 05.3**	**+1.0**	**H11S1**	**WAKE ISLAND Hy**	**37.56 177** T
KRER		S	**Sn**	**19 22 56.7**	**+1.6**		baz=359,slow=76,SNR=15		
KRER	**Koryakskii**	**4.42 233**	P	**Pn**	**19 22 05.3**	**+1.0**	**H11S3**	**WAKE ISLAND Hy**	**37.58 177** T
KRER		S	**Sn**	**19 22 56.7**	**+1.6**		baz=359,slow=76,SNR=15		
KRX	**Arik**	**4.43 234**	PN	**Pn**	**19 22 05.5**	**+1.1**	**H11S2**	**WAKE ISLAND Hy**	**37.58 177** T
KRX	**Arik**	**4.43 234**	P	**Pn**	**19 22 05.5**	**+1.1**		baz=359,slow=76,SNR=18	
TILK	**Tilichiki**	**4.43 10**	PN	**Pn**	**19 22 04.8**	**+0.6**	**BBB**	**Bella Bella**	**38.18 67** LR
TILK		S	**Sn**	**19 22 55.3**	**+0.3**		comp=Z,54nm,18.1s,baz=282,slow=36		
TILK	**Tilichiki**	**4.43 10**	P	**Pn**	**19 22 04.8**	**+0.6**	**RES**	**Resolute Bay**	**39.52 24** LR
TILK		S	**Sn**	**19 22 55.3**	**+0.3**		comp=Z,36nm,18.2s,baz=305,slow=41		
AVH	**Avacha**	**4.45 233**	PN	**Pn**	**19 22 06.9**	**+2.3**	**ZALV**	**Zalesovo Beam**	**43.40 302** LR
AVH	**Avacha**	**4.45 233**	P	**Pn**	**19 22 06.9**	**+2.3**		comp=Z,51nm,19.5s,baz=29,slow=38	
AVH		S	**Sn**	**19 22 56.8**	**+1.1**	**NEW**	**Newport**	**46.17 65** LR	LR
UGLR	**Uglovaya**	**4.45 232**	PN	**Pn**	**19 22 05.8**	**+1.1**		comp=Z,56nm,18.0s,baz=322,slow=38	
UGLR	**Uglovaya**	**4.45 232**	P	**Pn**	**19 22 05.8**	**+1.1**	**KURK**	**Kurchatov**	**48.39 302** P
KOK	**Koryaka**	**4.48 234**	PN	**Pn**	**19 22 06.0**	**+1.0**	KURK	IAmb	IAmb
KOK	**Koryaka**	**4.48 234**	P	**Pn**	**19 22 06.0**	**+1.0**		comp=Z,3.9nm,0.9s	
GNL	**Ganaly**	**4.55 241**	PN	**Pn**	**19 22 07.8**	**+1.7**	**KURK**	**Kurchatov**	**48.39 302** *de*P
GNL	**Ganaly**	**4.55 241**	P	**Pn**	**19 22 07.8**	**+1.7**	KURK	pmax	pmax
DALK	**Dalny**	**4.60 231**	PN	**Pn**	**19 22 07.3**	**+0.7**		comp=Z,3.0nm,0.9s	
DALK	**Dalny**	**4.60 231**	P	**Pn**	**19 22 07.3**	**+0.7**	**MKAR**	**Makanchi Array**	**49.23 296** P
DALK		S	**Sn**	**19 22 59.1**	**-0.2**		comp=Z,0.8nm,0.4s,baz=59,slow=8.2,SNR=20		
PET	**Petropavlovsk**	**4.65 231**		**Pn**	**19 22 08.8**	**+1.5**	MKAR	LR	LR
PET	**Petropavlovsk**	**4.65 231** *e*PN		**Pn**	**19 22 08.9**	**+1.7**		comp=Z,85nm,19.7s,baz=42,slow=38	
PET		pmax	pmax					comp=Z,0.8nm,0.4s	
	comp=Z,56nm,0.3s						**BRVK**	**Borovoye**	**50.60 309**⇈ *e*P
PET		MLR	MLR				BRVK	pmax	pmax
	comp=Z,500nm,17.0s							comp=Z,3.0nm,0.6s	
PET	**Petropavlovsk**	**4.65 231** *e*P		**Pn**	**19 22 09.0**	**+1.7**	**ARCES**	**ARCESS Array B**	**51.22 343** P
PET		*e*S		**Sn**	**19 23 00.9**	**+0.4**		comp=Z,1.7nm,0.8s,baz=43,slow=11,SNR=4.3	
KRMR	**Karymshinskiy**	**5.01 232**	PN	**Pn**	**19 22 14.1**	**+1.8**		comp=Z,1.7nm,0.8s	
KRMR	**Karymshinskiy**	**5.01 232**	P	**Pn**	**19 22 14.1**	**+1.8**	**RLMT**	**Red Lodge**	**52.27 63** P
KRMR		S		**Sn**	**19 23 10.9**	**+1.5**	**ELK**	**Elko**	**52.30 71** LR
PEA0B	**Petropavlovsk-**	**5.03 236**		**Pn**	**19 22 14.5**	**+2.1**		comp=Z,42nm,20.7s,baz=324,slow=33	
PEA0B	**Petropavlovsk-**	**5.03 236**⇈ *e*PN		**Pn**	**19 22 13.5**	**+1.0**	**NVAR**	**Mina Array Bea**	**52.32 75** P
PETK	**Petropavlovsk-**	**5.03 236** Pn		**Pn**	**19 22 13.6**	**+1.1**		comp=Z,0.8nm,0.7s,baz=297,slow=7.5,SNR=5.7	
	comp=Z,3.9nm,0.3s,baz=66,slow=19,SNR=11							comp=Z,0.8nm,0.7s	
PETK		Sn		**Sn**	**19 23 12.6**	**+2.8**	**FXWY**	**Fox Creek**	**52.43 66** P
	comp=Z,4.5nm,0.3s,baz=282,slow=41,SNR=3.0						FXWY	IAmb	IAmb
PETK		LR	LR		19 24 26.2			comp=Z,4.8nm,1.4s	
	comp=Z,566nm,22.0s,baz=53,slow=42						**ARU**	**Arti**	**52.95 318** LR
	comp=Z,5.0nm,0.4s							comp=Z,130nm,18.0s,baz=42,slow=39	
PETK	**Petropavlovsk-**	**5.03 236** Pn		**Pn**	**19 22 13.7**	**+1.2**	**ARU**	**Arti**	**52.95 318** P
RUS	**Russkaya**	**5.14 227**	PN	**Pn**	**19 22 14.0**	**0.0**	ARU	IAmb	IAmb
RUS	**Russkaya**	**5.14 227** *e*P		**Pn**	**19 22 14.0**	**0.0**		comp=Z,4.6nm,1.1s	
RUS		*e*S		**Sn**	**19 23 10.3**	**-2.1**	**ARU**	**Arti**	**52.95 318** *d i*P
GRL	**Gorelyy**	**5.23 230**	PN	**Pn**	**19 22 17.3**	**+1.9**	ARU	S	S
GRL	**Gorelyy**	**5.23 230**	P	**Pn**	**19 22 17.3**	**+1.9**	ARU	SS	SS
GRL		S		**Sn**	**19 23 15.2**	**+0.1**	ARU	pmax	pmax
MTVR	**Mutnovka**	**5.24 229**	PN	**Pn**	**19 22 16.9**	**+1.4**		comp=Z,3.0nm,0.7s	
MTVR	**Mutnovka**	**5.24 229**	P	**Pn**	**19 22 16.9**	**+1.4**	**JMIC**	**Jan Mayen**	**53.12 357** LR
MTVR		S		**Sn**	**19 23 14.5**	**-0.7**		comp=Z,20nm,18.2s,baz=45,slow=36	
APC	**Apacha**	**5.39 237**	PN	**Pn**	**19 22 20.5**	**+3.0**	**PZH**	**PanZhiHua**	**53.39 264** P
APC	**Apacha**	**5.39 237**	P	**Pn**	**19 22 20.5**	**+3.0**	PZH	S	S
KDTR	**Khodutka, Kamc**	**5.79 225**	PN	**Pn**	**19 22 23.4**	**+0.5**	PZH	pmax	pmax
KDTR	**Khodutka, Kamc**	**5.79 225**	P	**Pn**	**19 22 23.4**	**+0.5**		comp=Z,10.0nm,0.8s	
KDTR		S		**Sn**	**19 23 25.5**	**-2.9**	PZH	pmax	pmax
KMSK	**Kamenskaya**	**6.44 7**	PN	**Pn**	**19 22 31.9**	**+0.1**		comp=Z,80nm,5.3s	
KMSK	**Kamenskaya**	**6.44 7**	P	**Pn**	**19 22 31.9**	**+0.1**	PZH	LR	LR
SHEM	**Shemya Is, Ala**	**6.47 118** Pn		**Pn**	**19 22 34.9**	**+2.6**		comp=N,380nm,18.1s	
	comp=Z,6.7nm,0.3s,baz=270,slow=20,SNR=6.4						PZH	LR	LR
SHEM		Sn		**Sn**	**19 23 43.6**	**-1.7**		comp=E,380nm,17.2s	
	comp=Z,1.9nm,0.3s,baz=289,slow=18,SNR=1.7						PZH	LR	LR
SHEM		LR	LR		19 24 18.1			comp=Z,280nm,14.7s	
	comp=Z,179nm,19.1s,baz=294,slow=30						**FRB**	**Frobisher Bay**	**53.66 26** LR
	comp=Z,21nm,0.4s							comp=Z,44nm,18.8s,baz=360,slow=40	
SKR	**Severo-Kuril's**	**7.44 227** *e*PN		**Pn**	**19 22 48.0**	**+2.4**	**BW06**	**Boulder Array**	**53.80 66** P
SKR		pmax	pmax				BW06	IAmb	IAmb
	comp=Z,38nm,0.7s							comp=Z,2.4nm,0.8s	
SKR		MLR	MLR				**PD31**	**Pinedale Array**	**53.80 66** P
	comp=Z,200nm,16.0s						**PDAR**	**Pinedale Array**	**53.80 66** P
SKR	**Severo-Kuril's**	**7.44 227** *e*P		**Pn**	**19 22 47.1**	**+1.5**		comp=Z,0.5nm,0.5s,baz=304,slow=6.4,SNR=6.3	
MA2	**Magadan**	**8.18 301** LR		LR	19 26 11.7		PDAR	LR	LR
	comp=Z,212nm,20.7s,baz=102,slow=39							comp=Z,34nm,18.6s,baz=342,slow=35	
GRNR	**Gornyy**	**17.56 264**⇊ *i*P		**P**	**19 25 03.7**	**+1.1**		comp=Z,0.5nm,0.5s	
GRNR		pmax	pmax				**SFJD**	**Kangerlussuaq**	**54.42 16** LR
	comp=Z,6.0nm,1.0s							comp=Z,50nm,21.3s,baz=350,slow=36	
GRNR		MLR	MLR				**KIRV**	**Kirov**	**54.51 324** LR
	comp=E,160nm,16.0s							comp=Z,80nm,19.5s,baz=43,slow=37	
GRNR		MLR	MLR				**AAK**	**Ala-Archa**	**56.09 297** LR
	comp=N,180nm,15.0s							comp=Z,76nm,20.9s,baz=43,slow=36	
GRNR		MLR	MLR				**PV13**	**Radium Mtn., P**	**57.57 69** P
	comp=Z,210nm,17.0s						PV13	IAmb	IAmb
YAK	**Yakutsk**	**18.75 303** LR		LR	19 32 33.1			comp=Z,2.9nm,0.8s	
	comp=Z,174nm,18.4s,baz=114,slow=38						**KK31**	**Karatay Array**	**57.70 300** P
YAK	**Yakutsk**	**18.75 303**⇈ *e*P		**P**	**19 25 14.8**	**-0.6**	KK31	IAmb	IAmb
YAK		pmax	pmax					comp=Z,4.0nm,0.9s	
	comp=Z,5.0nm,0.8s						**KK31**	**Karatay Array**	**57.70 300** P
ERM	**Erimo**	**19.80 234** P		**P**	**19 25 27.7**	**+0.6**	KK31	pmax	pmax
ERM	**Erimo**	**19.80 234** P		**P**	**19 25 27.7**	**+0.6**		comp=Z,4.0nm,1.0s	
ERM		pmax	pmax				**KKAR**	**Karatay Array**	**57.70 300** P
	comp=Z,30nm,0.8s						KKAR	IAmb	IAmb
KLR	**Kul'dur**	**20.94 265** P		**P**	**19 25 39.1**	**-0.3**		comp=Z,4.0nm,0.9s	
	comp=Z,1.5nm,0.5s,baz=41,slow=11,SNR=5.0						**KKAR**	**Karatay Array**	**57.70 300** P
							KKAR	**Karatay Array**	**57.70 300** P
							AKTO	**Aktyubinsk**	**57.70 314** LR
								comp=Z,57nm,18.5s,baz=29,slow=37	
							FINES	**FINES Array B**	**58.36 338** P
								comp=Z,1.0nm,0.7s,baz=13,slow=13,SNR=1.7	
							FINES	LR	LR
								comp=Z,54nm,18.6s,baz=38,slow=40	
								comp=Z,1.0nm,0.7s	
							NB2	**NORSAR Subarra**	**61.34 346** P
								comp=Z,1.3nm,0.6s,baz=17,slow=6.9	
							NOA	**NORSAR Array B**	**61.34 346** P
								comp=Z,1.2nm,0.8s,baz=18,slow=6.9,SNR=5.4	
							NOA	LR	LR
								comp=Z,14nm,21.6s,baz=10.0,slow=37	
								comp=Z,1.2nm,0.8s	
							CMAR	**Chiang Mai Arr**	**61.34 260** P
								comp=Z,0.9nm,0.7s,baz=19,slow=6.8,SNR=6.4	
							CMAR	LR	LR
								comp=Z,72nm,20.4s,baz=30,slow=37	
								comp=Z,0.9nm,0.7s	
							HNR	**Honiara**	**65.41 185** LR
								comp=Z,39nm,18.5s,baz=357,slow=36	
							TXAR	**Lajitas Array**	**67.09 71** P
								comp=Z,0.6nm,0.6s,baz=303,slow=4.5,SNR=7.8	
								comp=Z,0.6nm,0.6s	
							AKASG	**Malin Array Be**	**67.33 331** LR
								comp=Z,49nm,19.6s,baz=40,slow=38	
							KBZ	**Khabaz**	**69.09 319** LR
								comp=Z,92nm,18.2s,baz=126,slow=40	
							GNI	**Garni**	**71.46 316** LR
								comp=Z,77nm,19.7s,baz=18,slow=40	
							VRAC	**Vranov**	**71.63 339** LR
								comp=Z,42nm,18.4s,baz=24,slow=40	
							TKL	**Tuckaleechee C**	**71.77 53** LR
								comp=Z,86nm,18.5s,baz=26,slow=38	
							GERES	**GERESS Array B**	**72.64 340** P
								comp=Z,0.3nm,0.6s,baz=16,slow=5.3,SNR=3.8	
								comp=Z,0.3nm,0.6s	
							MLR	**Muntele Rosu**	**72.98 331** LR
								comp=Z,86nm,20.9s,baz=76,slow=39	
							MSVF	**Nonsavu**	**74.41 167** LR
								comp=Z,52nm,21.3s,baz=337,slow=30	
							DAVOX	**Davos/Dischmat**	**75.32 342** LR
								comp=Z,48nm,18.4s,baz=79,slow=38	
							BRTR	**Keskin Array B**	**75.89 323** LR
								comp=Z,40nm,18.3s,baz=68,slow=39	
							CTA	**Charters Tower**	**77.47 198** LR
								comp=Z,23nm,20.4s,baz=73,slow=31	
							WRA	**Warramunga Arr**	**79.96 209** P
								comp=Z,0.4nm,0.9s,baz=28,slow=6.1,SNR=1.6	
								comp=Z,0.4nm,0.9s	
							PALK	**Pallekele**	**80.62 269** LR
								comp=Z,48nm,18.2s,baz=204,slow=41	
							RAR	**Rarotonga**	**82.69 147** LR
								comp=Z,41nm,21.7s,baz=145,slow=29	
							PPT	**Papeete**	**82.86 136** LR
								comp=Z,48nm,21.6s,baz=1.0,slow=30	
							ASAR	**Alice Springs**	**83.63 208** P
								comp=Z,0.2nm,0.7s,baz=12,slow=4.8,SNR=1.6	
								comp=Z,0.2nm,0.7s	

IDC ***15*** *19:32:25.3±2.9, 43.80N×105.69W, h0km, mbtmp3.0/3, ML4.7/1, Error ellipse: s-maj=38.0km s-min=22.4km az=173.0*

NEIC ***15*** *19:32:25.4±0.7, 43.57N±0.06×105.33W±0.09, h0km±2km, ML3.5/65, Error ellipse: s-maj=11.2km s-min=9.3km az=77.0*

ISC 15 19:32:23.6±0.9, 43.56N±0.05×105.31W±0.04, h0km, n61, σ1.870/60, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.08**	**58**	Pg	**Pb**		**19 32 45.7**	**+0.5**
K22A	**Casper**	**1.27**	**225**	Pg	**Pg**		**19 32 47.9**	**-0.1**
K22A				IAML			19 33 11.8	
	comp=N,501nm,0.5s							
K22A				IAML			19 33 13.7	
	comp=E,498nm,0.7s							
PHWY	**Pilot Hill**	**2.26**	**183**	Pn	**Pb**		**19 33 04.2**	**-1.2**
RWWY	**Rawlins**	**2.34**	**218**		**Pb**		**19 33 06.2**	**-0.5**
RWWY				IAML			19 33 38.7	
	comp=E,374nm,1.1s							
N23A	**Red Feather La**	**2.71**	**190**	Pn	**Pn**		**19 33 10.4**	**+1.9**
N23A				IAML			19 33 49.2	
	comp=E,145nm,1.0s							
N23A				IAML			19 33 53.3	
	comp=N,178nm,0.8s							
LAO	**LASA Array**	**3.19**	**349**	Pn	**Pn**		**19 33 16.8**	**+1.7**
LAO				IAML			19 34 16.9	
	comp=N,190nm,0.9s							
LAO				IAML			19 34 32.9	
	comp=N,186nm,1.1s							
BW06	**Boulder Array**	**3.21**	**257**		**Pn**		**19 33 16.9**	**+1.4**
PD31	**Pinedale Array**	**3.21**	**257**	Pn	**Pn**		**19 33 16.4**	**+1.0**
PDAR	**Pinedale Array**	**3.21**	**257**	Pn	**Pn**		**19 33 17.2**	**+1.7**
	comp=N,13nm,0.3s,baz=77,slow=17,SNR=34							
PDAR				Lg	Lg		19 33 59.0	
	comp=N,22nm,0.3s,baz=74,slow=28,SNR=3.0							
	comp=N,4.5nm,0.4s							
RLMT	**Red Lodge**	**3.24**	**300**	Pn	**Pn**		**19 33 18.1**	**+2.2**
RLMT				IAML			19 34 15.4	
	comp=N,102nm,1.1s							
RLMT				IAML			19 34 25.7	
	comp=N,74nm,1.4s							
OGNE	**Ogallala**	**3.57**	**136**	Pn	**Pn**		**19 33 22.7**	**+2.4**
ISCO	**Idaho Springs**	**3.76**	**184**		**Pn**		**19 33 25.6**	**+2.5**
GCMT	**Greycliff**	**3.83**	**307**		**Pn**		**19 33 25.8**	**+1.9**
LOHW	**Long Hollow**	**3.85**	**273**		**Pn**		**19 33 25.4**	**+1.2**
FLWY	**Flagg Ranch**	**3.94**	**279**		**Pn**		**19 33 26.9**	**+1.5**
FLWY				IAML			19 34 39.0	
	comp=N,79nm,1.6s							
MOOW	**Moose Ponds**	**3.95**	**275**	Pn	**Pn**		**19 33 27.0**	**+1.4**
SNOW	**Snow King Moun**	**3.96**	**270**		**Pn**		**19 33 27.1**	**+1.3**
SNOW				IAML			19 34 57.7	
	comp=N,73nm,1.6s							
YPP	**Pitchstone Pla**	**4.04**	**282**		**Pn**		**19 33 28.3**	**+1.5**
YPP				IAML			19 34 36.6	
	comp=E,36nm,1.6s							
YPP				IAML			19 34 52.1	
	comp=N,36nm,1.5s							
YNR	**Norris Junctio**	**4.04**	**288**		**Pn**		**19 33 29.1**	**+2.3**
REDW	**Red Top Meadow**	**4.04**	**269**		**Pn**		**19 33 27.3**	**+0.4**
REDW				IAML			19 34 43.0	
	comp=N,95nm,1.0s							
O20A	**White River Ci**	**4.06**	**214**		**Pn**		**19 33 27.7**	**+0.5**
O20A				IAML			19 35 12.8	
	comp=E,87nm,1.7s							
IMW	**Indian Meadow**	**4.10**	**277**		**Pn**		**19 33 29.2**	**+1.6**
IMW				IAML			19 34 39.2	
	comp=E,49nm,0.8s							
IMW				IAML			19 34 54.0	
	comp=E,44nm,0.6s							
TPAW	**Teton Pass**	**4.11**	**271**		**Pn**		**19 33 29.3**	**+1.5**
TPAW				IAML			19 34 56.7	
	comp=E,36nm,1.1s							
TPAW				IAML			19 35 04.4	
	comp=E,56nm,2.3s							
FXWY	**Fox Creek**	**4.16**	**273**		**Pn**		**19 33 30.1**	**+1.7**
AHID	**Auburn Hatcher**	**4.31**	**261**		**Pn**		**19 33 32.1**	**+1.5**
AHID				IAML			19 34 46.6	
	comp=E,60nm,1.4s							
AHID				IAML			19 34 52.8	
	comp=E,41nm,1.1s							
RDMU	**Red Mountain**	**4.36**	**228**		**Pg**		**19 33 45.5**	**-1.5**
RDMU				IAML			19 34 48.2	
	comp=E,59nm,1.0s							
RDMU				IAML			19 34 52.3	
	comp=N,48nm,1.3s							
YHL	**Hebgen Lake**	**4.42**	**289**		**Pn**		**19 33 33.7**	**+1.6**
YHL				IAML			19 34 57.7	
	comp=E,60nm,0.9s							
YHL				IAML			19 34 58.3	
	comp=N,70nm,1.2s							
E28A	**Huff**	**4.45**	**46**	Pn	**Pn**		**19 33 34.8**	**+2.6**
Q24A	**Divide**	**4.59**	**178**	Pn	**Pn**		**19 33 36.3**	**+1.8**
Q24A				IAML			19 34 52.9	
	comp=N,25nm,1.3s							
Q24A				IAML			19 34 54.0	
	comp=E,47nm,1.1s							
K31A	**O'Neill**	**4.89**	**99**		**Pg**		**19 33 56.6**	**-0.7**
BOZ

HWUT				IAML			19 35 26.5		
	comp=E,41nm,1.4s								
TCUT	**Toone Canyon**	**5.14**	**244**		**Pn**		**19 33 42.8**	**+0.8**	
P18A	**Preston Nutter**	**5.40**	**225**		**Pn**		**19 33 47.0**	**+1.4**	
P18A				IAML			19 35 21.0		
	comp=E,32nm,1.4s								
P18A				IAML			19 35 26.2		
	comp=N,34nm,1.4s								
EGMT	**Eagleton**	**5.44**	**327**		**Pn**		**19 33 48.7**	**+2.8**	
JLU	**Jordanelle**	**5.44**	**239**		**Pn**		**19 33 46.2**	**+0.1**	
MCMT	**McKenzie Canyo**	**5.57**	**286**		**Pn**		**19 33 51.9**	**+4.0**	
LRM	**Limekiln Ridge**	**5.57**	**296**		**Pn**		**19 33 49.9**	**+2.0**	
HRY	**Holter Researc**	**5.59**	**307**	Pn	**Pn**		**19 33 48.5**	**+0.5**	
PV07	**Paradox Valley**	**5.71**	**207**		**Pn**		**19 33 50.8**	**+1.0**	
PV15	**Paradox Valley**	**5.74**	**206**		**Pn**		**19 33 51.0**	**+0.8**	
P17A	**Butcher Ranch,**	**5.77**	**227**		**Pn**		**19 33 51.6**	**+1.0**	
HVU	**Hansel Valley**	**5.79**	**255**		**Pn**		**19 33 53.4**	**+2.6**	
SDCO	**Great Sand Dun**	**5.81**	**182**	Pn	**Pn**		**19 33 53.1**	**+1.8**	
PV23	**Carpenter Ridg**	**5.82**	**210**		**Pn**		**19 33 52.5**	**+1.1**	
MDND	**Maddock**	**5.86**	**41**	Pn	**Pn**		**19 33 53.2**	**+1.6**	
MDND					**Pg**		**19 34 13.4**	**-2.4**	
S22A	**4UR Ranch, Cre**	**5.92**	**192**	Pn	**Pn**		**19 33 53.9**	**+1.1**	
SRU	**San Rafael Swe**	**5.93**	**223**		**Pn**		**19 33 53.4**	**+0.6**	
PV13	**Radium Mtn., P**	**6.02**	**207**		**Pn**		**19 33 54.9**	**+0.9**	
TMUT	**Trail Mountain**	**6.15**	**228**		**Pn**		**19 33 56.9**	**+1.0**	
ECSD	**EROS Data Cent**	**6.31**	**85**	Pn	**Pn**		**19 33 58.2**	**+0.3**	
Q16A	**Castle Valley**	**6.41**	**226**		**Pn**		**19 34 00.2**	**+0.9**	
T25A	**Trinidad**	**6.45**	**174**	Pn	**Pn**		**19 34 00.4**	**+0.4**	
DUG	**Dugway, Tooele**	**6.53**	**242**	Pn	**Pn**		**19 34 02.6**	**+1.6**	
ELK	**Elko**	**7.90**	**253**	Pn	**Pn**		**19 34 21.3**	**+1.4**	
	comp=N,0.3nm,0.3s,baz=86,slow=15,SNR=2.3								
ELK				Lg	Lg		19 36 26.7		
	comp=N,0.1nm,0.3s,baz=166,slow=18,SNR=1.1								
PSUT	**Pine Spring**	**8.18**	**235**		**Pn**		**19 34 24.9**	**+1.3**	
I56US	**NEWPORT INFRAS**	**9.48**	**304**	*i*			20 25 10.0		
	baz=118,slow=314,SNR=3.9								
NVAR	**Mina Array Bea**	**11.07**	**247**	Pn	**Pn**		**19 35 07.3**	**+4.0**	
	comp=N,0.1nm,0.3s,baz=69,slow=11,SNR=1.7								
TXAR	**Lajitas Array**	**14.26**	**174**	Pg	Pg		19 36 51.3		
	baz=357,slow=14,SNR=3.1								
TXAR				Lg	Lg		19 39 55.0		
	baz=354,slow=34,SNR=3.6								

IDC 15 19:47:40.2±5.3, 18°45S×178°24W, h617km±26km, mb2.9/3, mbtmp3.9/4, Error ellipse: s-maj=129.7km s-min=76.7km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.60**	**281**	P	P	19 49 04.4	-0.1
	7.5nm,0.3s,baz=133,slow=14,SNR=9.4						
STKA	**Stephens Creek**	**38.52**	**242**	P	P	19 54 11.8	+0.1
	0.5nm,0.3s,baz=78,slow=14,SNR=4.0						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**44.70**	**260**	P	P	19 55 00.5	0.0
	0.8nm,0.4s,baz=97,slow=7.4,SNR=53						
WRA				PcP	PcP	19 56 28.8	-0.4
	0.4nm,0.8s,baz=93,slow=3.4,SNR=2.0						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**44.80**	**255**	P	P	19 55 01.0	-0.2
	1.3nm,0.4s,baz=89,slow=7.6,SNR=14						
	1.3nm,0.4s						

IDC 15 20:11:51.2±3.1, 32°82S×178°61W, h0km, mb3.5/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=72.5km s-min=46.8km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.45**	**212**	Pn	Pn	20 13 26.3	-1.0
	1.3nm,0.3s,baz=323,slow=15,SNR=6.2						
URZ				Sn	Sn	20 14 37.5	-4.1
	1.9nm,0.3s,baz=197,slow=17,SNR=5.8						
	3.0nm,0.3s						
ASAR	**Alice Springs**	**42.52**	**270**	P	P	20 19 48.6	0.0
	0.4nm,0.8s,baz=98,slow=7.3,SNR=4.7						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**43.73**	**275**	P	P	20 19 58.3	-0.1
	0.5nm,0.5s,baz=114,slow=7.4,SNR=16						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**147.22**	**338**	PKPbc	PKPbc	20 31 35.0	-0.6
	2.5nm,0.9s,baz=62,slow=4.5,SNR=5.0						

*MOS **15** 20:26:36.8±0.0, 42°.15N×46°.03E, h17km, MPVA3.4*
*NORS **15** 20:26:36.7±0.0, 42°.17N×46°.02E, h8km, MPVA3.5*
*DRS **15** 20:26:37.9±0.0, 42°.13N×46°.01E, h13km*
ISC 15 20:26:37.9±1.1, 42°.14N±0°.03×46°.03E±0°.02, h15km±9km, n29, σ1§48/56, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGD	**Lagodekhi**	**0.34**	**152**	P	**Pb**	**20 26 44.9**	**-0.7**
LGD				S	**Sb**	**20 26 50.1**	**-0.7**
XNZR	**Khunzakh**	**0.64**	**51**	*e*Pg	**Pb**	**20 26 50.9**	**0.0**
XNZR				*e*Sg	**Sn**	**20 27 01.4**	**-1.3**
DDFL	**Dedoflistskaro**	**0.69**	**175**	P	**Pn**	**20 26 55.8**	**+2.6**
KMKR	**Kumukh**	**0.79**	**90**	*e*Pg	**Pn**	**20 26 54.0**	**-0.7**
KMKR				*e*Sg	**Sn**	**20 27 05.7**	**-0.6**
UNCR	**Uncukul**	**0.81**	**44**	*e*Pg	**Pb**	**20 26 53.7**	**0.0**
UNCR				*e*Sg	**Sn**	**20 27 06.2**	**-0.3**
DVE	**Vedeno**	**0.82**	**5**	*e*Pg	**Pg**	**20 26 53.3**	**-0.6**
DVE				*e*Sg	**Sb**	**20 27 06.0**	**+1.1**
ARKR	**Arakani**	**0.85**	**56**	*e*Pg	**Pn**	**20 26 55.1**	**-0.3**
ARKR				*e*Sg	**Sn**	**20 27 07.7**	**+0.1**
KRNR	**Karanay**	**0.95**	**43**	*e*Pg	**Pn**	**20 26 56.5**	**-0.2**
KRNR				*e*Sg	**Sn**	**20 27 10.0**	**0.0**
BTNK	**Botanikuri**	**1.03**	**244**	P	Pb	20 26 49.2	-8.1
BTNK				S	**Sb**	**20 27 04.9**	**-5.7**
DLMR	**Dylym**	**1.03**	**25**	*e*Pg	**Pn**	**20 26 57.7**	**-0.1**
DLMR				*e*Sg	**Sn**	**20 27 12.7**	**+0.7**
DBC	**Dubki**	**1.06**	**33**	*e*Pg	**Pn**	**20 26 58.8**	**+0.5**
DBC				*e*Sg	**Sn**	**20 27 14.2**	**+1.4**
GROC	**Groznyy**	**1.08**	**351**	*e*Pg	**Pg**	**20 26 58.8**	**0.0**
GROC				*e*Sg	**Sn**	**20 27 14.2**	**+1.0**
PNSH	**Pansheti**	**1.16**	**296**	P	**Pn**	**20 26 57.5**	**-2.2**
PNSH				S	**Sb**	**20 27 10.8**	**-4.0**
GUDG	**Gudauri**	**1.20**	**286**	P	**Pn**	**20 26 58.0**	**-2.3**
GUDG				S	**Sb**	**20 27 12.3**	**-3.5**
KMGR	**Komgaron**	**1.26**	**317**	*e*Pg	**Pn**	**20 27 01.6**	**+0.5**
KMGR				*e*Sg	**Sg**	**20 27 19.5**	**+0.8**
AKT	**Akhty**	**1.43**	**117**	*e*Pg	**Pg**	**20 27 04.7**	**-0.7**
AKT				*e*Sg	**Sg**	**20 27 25.7**	**+1.7**
LACR	**Lac**	**1.46**	**299**	*e*Pg	**Pb**	**20 27 04.9**	**+0.2**
LACR				*e*Sg	**Sg**	**20 27 25.2**	**+0.3**
TRLG	**Trialeti**	**1.56**	**248**	P	**Pn**	**20 27 06.0**	**+0.8**
TRLG				S	**Sb**	**20 27 26.9**	**+0.7**
DMNI	**Dmanisi**	**1.60**	**240**	P	**Pn**	**20 27 05.4**	**-0.3**
DMNI				S	**Sn**	**20 27 26.3**	**+0.2**
ARNR	**Ardon**	**1.66**	**310**	*e*Pg	**Pn**	**20 27 05.7**	**-0.8**
ARNR				*e*Sg	**Sn**	**20 27 28.1**	**+0.6**
BRNG	**Burnasheti**	**1.72**	**253**	P	**Pn**	**20 27 08.7**	**+0.3**
BRNG				S	**Sb**	**20 27 31.6**	**+0.7**
KORR	**Kora**	**1.73**	**304**	*e*Pg	**Pb**	**20 27 09.7**	**+0.2**
KORR				*e*Sg	**Sb**	**20 27 33.3**	**+2.3**
TRKR	**Terskaya**	**1.85**	**329**	*e*Pg	**Pb**	**20 27 11.4**	**0.0**
TRKR				*e*Sg	**Sg**	**20 27 36.8**	**-0.7**
BKRG	**Bakuriani**	**1.91**	**260**	P	**Pn**	**20 27 10.4**	**+0.4**
BKRG				S	**Sb**	**20 27 35.9**	**-0.3**
ONI	**Oni**	**1.96**	**284**	P	**Pn**	**20 27 12.3**	**+1.6**
ONI				S	**Sb**	**20 27 38.3**	**+0.6**
ONI	**Oni**	**1.96**	**284**	*e*Pg	**Pn**	**20 27 12.2**	**+1.8**
ONI				*e*Sg	**Sb**	**20 27 38.5**	**+0.8**
LSNR	**Lesken**	**1.99**	**306**	*e*Pg	**Pb**	**20 27 13.6**	**-0.2**
LSNR				*e*Sg	**Sb**	**20 27 39.5**	**+1.2**
TKB	**Tkibuli**	**2.27**	**276**	P	**Pn**	**20 27 16.5**	**+1.7**
TKB				S	**Sb**	**20 27 45.8**	**-0.5**
ABS	**Abastumani**	**2.43**	**262**	P	**Pn**	**20 27 19.2**	**+2.0**
ABS				S	**Sb**	**20 27 51.2**	**0.0**

*NEIC **15** 20:35:31.4±1.5, 11°.4S±0°.1×166°.2E±0°.2, h67km±12km, mb4.6/10, Error ellipse: s-maj=32.5km s-min=18.6km az=70.0*
*IDC **15** 20:35:33.2±3.7, 11°.38S×166°.36E, h87km±29km, mb3.4/7, mbtmp3.9/9, Error ellipse: s-maj=32.4km s-min=17.6km az=61.0*
ISC 15 20:35:29.8±0.7, 11°.33S±0°.08×166°.5E±0°.1, h59km, n28, σ1§46/31, mb4.2/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.68**	**286**	P	**Pn**	**20 37 06.9**	**+1.5**
	43nm,0.5s,baz=183,slow=6.0,SNR=1.9						
HNR				S	**Sn**	**20 38 21.8**	**+1.6**
	38nm,0.3s,baz=155,slow=1.0,SNR=1.1						
KOUNC	**Koumac, New Ca**	**9.41**	**193**	Pn	**Pn**	**20 37 41.7**	**-1.0**
MARNC	**Mare, Loyalty**	**10.21**	**172**	Pn	**Pn**	**20 37 55.6**	**+2.0**
DZM	**Mont Dzumac**	**10.69**	**180**	P	**Pn**	**20 38 04.4**	**+4.1**
	4.0nm,0.3s,baz=232,slow=18,SNR=14						
DZM				S	**Sn**	**20 39 58.4**	**0.0**
	3.0nm,0.4s,baz=277,slow=19,SNR=1.5						
OUENC	**Ouen Island, N**	**11.04**	**178**	Pn	Pn	20 38 11.7	+6.8
PINNC	**Pines Island,**	**11.27**	**175**	Pn	**Pn**	**20 38 07.1**	**-0.9**
BKZ	**Black Stump Fm**	**29.13**	**164**	P	**P**	**20 41 25.7**	**+0.5**
BFZ	**Birch Farm**	**30.49**	**165**	P	**P**	**20 41 36.8**	**-0.4**
BFZ				IAmb	IAmb	20 41 44.0	
	comp=Z,46nm,1.4s						
MSWZ	**Moikau Station**	**30.95**	**167**	P	**P**	**20 41 40.9**	**-0.4**
PLWZ	**Palliser**	**31.10**	**167**	P	**P**	**20 41 42.5**	**-0.1**
KHZ	**Kahutara**	**31.58**	**170**	P	**P**	**20 41 46.8**	**+0.1**
KHZ				IAmb	IAmb	20 41 47.2	
	comp=Z,12nm,1.1s						
LTZ	**Lake Taylor**	**31.75**	**172**	P	**P**	**20 41 48.6**	**+0.4**
WB0	**Warramunga Arr**	**31.97**	**251**	P	**P**	**20 41 46.0**	**-4.5**
WB0				IAmb	IAmb	20 42 05.8	
	comp=Z,4.9nm,1.1s						
WRAB	**Tennant Creek**	**32.04**	**251**	P	**P**	**20 41 50.5**	**-0.6**
WRAB				IAmb	IAmb	20 42 07.7	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**32.05**	**251**	P	**P**	**20 41 50.6**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=84,slow=8.6,SNR=1.9						
WRA				PcP	**PcP**	**20 44 39.9**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=82,slow=3.4,SNR=1.7						
	comp=Z,0.4nm,0.9s						
RPZ	**Rata Peaks**	**32.52**	**174**	P	**P**	**20 41 56.3**	**+1.3**
RPZ				IAmb	IAmb	20 42 23.9	
	comp=Z,11nm,1.0s						
ASAR	**Alice Springs**	**33.30**	**244**	P	**P**	**20 42 02.2**	**0.0**
	comp=Z,0.4nm,0.9s,baz=80,slow=10,SNR=6.9						
ASAR				PcP	**PcP**	**20 44 43.0**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=72,slow=2.5,SNR=7.0						
	comp=Z,0.4nm,0.9s						
PSA00	**Pilbara Seismi**	**45.70**	**251**	P	**P**	**20 43 43.7**	**-1.7**
PSA00				IAmb	IAmb	20 43 58.2	
	comp=Z,15nm,1.4s						
JMN	**Monobe**	**54.49**	**327**	P	**P**	**20 44 51.2**	**-0.4**
VNDA	**Vanda**	**66.23**	**181**	P	**P**	**20 46 10.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=73,slow=3.7,SNR=4.5						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**66.23**	**181**	P	**P**	**20 46 11.3**	**+0.2**
QSPA	**South Pole Qui**	**78.68**	**180**	P	**P**	**20 47 25.2**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=297,slow=2.2,SNR=4.3						
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**78.68**	**180**	P	**P**	**20 47 25.2**	**-0.3**
SONM	**Songino Array**	**79.31**	**324**	P	**P**	**20 47 30.1**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=125,slow=4.2,SNR=2.6						
	comp=Z,0.3nm,0.6s						
ILAR	**Eielson Array**	**83.55**	**18**	P	**P**	**20 47 52.0**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=228,slow=6.1,SNR=2.2						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**94.21**	**317**	P	**P**	**20 48 42.6**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=88,slow=6.2,SNR=15						
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**116.78**	**346**	PKP	**PKPdf**	**20 54 06.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=77,slow=1.7,SNR=10						
ESDC	**Sonseca Array**	**150.51**	**345**	PKPbc	**PKPbc**	**20 55 13.7**	**-1.6**
	comp=Z,0.7nm,1.0s,baz=5.8,slow=3.4,SNR=4.4						

*IDC **15** 20:40:10.3±0.6, 15°.05S×173°.66W, h0km, mb4.2/13, mbtmp4.3/13, MS3.8/45, Error ellipse: s-maj=28.4km s-min=15.0km az=132.0*
*NEIC **15** 20:40:12.8±2.6, 15°.15S±0°.08×173°.29W±0°.08, h10km±1km, mb4.7/79, Error ellipse: s-maj=16.4km s-min=10.8km az=135.0*
*NOU **15** 20:40:26.1, 14°.20S×172°.38W, h80km, MLv4.2/5, Samoa Islands*
ISC 15 20:40:11.2±0.4, 15°.15S±0°.07×173°.24W±0°.07, h10km, n171, σ1§83/123, mb4.7/49, MS3.9/43, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.88**	**49**	Pn	**Pn**	**20 40 41.7**	**-1.8**
AFI	263nm,0.3s,baz=222,slow=6.9,SNR=111			Sn	**Sn**	**20 41 00.9**	**-6.4**
	502nm,0.3s,baz=236,slow=22,SNR=27						
AFI				LR	LR	20 41 26.0	
	comp=Z,1μm,19.3s,baz=236,slow=36						
AFI	**Afiamalu**	**1.88**	**49**	Pn	**Pn**	**20 40 42.5**	**-1.1**
AFI				Sn	**Sn**	**20 41 01.0**	**-6.3**
AFI	**Afiamalu**	**1.88**	**49**	P	**Pn**	**20 40 42.4**	**-1.1**
NIUE	**Niue**	**5.03**	**141**	Pn	**Pn**	**20 41 25.7**	**-1.1**
NIUE				Sn	Sn	20 42 16.9	-8.1
MSVF	**Nonsavu**	**8.74**	**252**	Pn	**Pn**	**20 42 16.8**	**-1.1**
	2.1nm,0.3s,baz=126,slow=19,SNR=7.0						
MSVF				LR	LR	20 45 18.0	
	comp=Z,608nm,19.0s,baz=117,slow=37						
MSVF	**Nonsavu**	**8.74**	**252**	Pn	**Pn**	**20 42 16.6**	**-1.4**
RAR	**Rarotonga**	**14.14**	**117**	Pn	**Pn**	**20 43 30.2**	**-1.5**
	1.4nm,0.3s,baz=270,slow=19,SNR=2.4						
RAR				LR	LR	20 47 38.5	
	comp=Z,200nm,20.5s,baz=316,slow=31						
RAO	**Raoul Island**	**14.69**	**196**	LR	LR	20 48 40.8	
	comp=Z,422nm,20.6s,baz=36,slow=35						
MARNC	**Mare, Loyalty**	**18.86**	**248**	P	**Pn**	**20 44 33.1**	**+0.9**
DZM	**Mont Dzumac**	**20.44**	**247**	P	**P**	**20 44 46.5**	**-2.5**
	9.1nm,1.0s,baz=131,slow=20,SNR=2.0						
DZM				LR	LR	20 51 33.2	
	comp=Z,171nm,20.2s,baz=74,slow=34						
	9.1nm,1.0s						
DZM	**Mont Dzumac**	**20.44**	**247**	*e*P	Pn	20 45 05.4	+14
	57nm,24.0s						
DZM				*e*LR	LR	20 50 06.8	
	comp=Z,399nm,25.4s						
PAE	**Paea**	**22.83**	**100**	*e*T	T	21 08 40.7	
	2.2nm,0.2s						
PPT	**Papeete**	**22.83**	**99**	LR	LR	20 51 36.6	
	comp=Z,90nm,20.9s,baz=194,slow=30						
PPT2	**Papeete2**	**22.83**	**99**	*e*LR	LR	20 50 30.7	
	comp=Z,295nm,26.8s						
PPT2	**Papeete2**	**22.83**	**99**	*e*T	T	21 08 40.9	
	2.9nm,0.2s						
TBI	**Tubuai**	**23.86**	**114**	*e*LR	LR	20 51 00.9	
	comp=Z,415nm,27.5s						
TBI	**Tubuai**	**23.86**	**114**	*e*T	T	21 09 44.5	
	6.8nm,0.2s						
URZ	**Urewera**	**24.55**	**199**	P	**P**	**20 45 32.3**	**+1.1**
	2.8nm,0.3s,baz=20,slow=5.0,SNR=2.3						
URZ				LR	LR	20 53 38.5	
	comp=Z,538nm,21.1s,baz=31,slow=33						
	2.8nm,0.3s						
URZ	**Urewera**	**24.55**	**199**	P	**P**	**20 45 30.5**	**-0.6**
URZ				IAmb	IAmb	20 45 40.4	
	comp=Z,15nm,1.1s						
HNR	**Honiara**	**26.80**	**279**	LR	LR	20 53 41.8	
	comp=Z,106nm,20.4s,baz=75,slow=31						
KHZ	**Kahutara**	**29.46**	**200**	P	**P**	**20 46 13.2**	**-2.0**
LTZ	**Lake Taylor**	**30.22**	**201**	P	**P**	**20 46 19.9**	**-2.1**
OXZ	**Oxford**	**30.78**	**201**	P	**P**	**20 46 25.3**	**-1.6**
RPZ	**Rata Peaks**	**31.47**	**202**	LR	LR	20 57 57.9	
	comp=Z,453nm,21.4s,baz=40,slow=34						
TAOE	**Nuku Hiva Isla**	**32.94**	**83**	*e*T	T	21 21 17.5	
	comp=Z,34nm,0.2s						
ARMA	**Armidale**	**35.60**	**239**	P	**P**	**20 47 07.9**	**-1.5**
ARMA				IAmb	IAmb	20 47 08.4	
	comp=Z,12nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**38.83**	**329**	T	T	21 29 11.1	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**38.84**	**329**	T	T	21 28 49.5	
	baz=148,slow=74						
H11S1	**WAKE ISLAND Hy**	**38.85**	**329**	T	T	21 29 06.1	
	baz=148,slow=74						
H11N3	**WAKE ISLAND Hy**	**39.77**	**330**	T	T	21 30 16.1	
	baz=151,slow=76						
H11N1	**WAKE ISLAND Hy**	**39.78**	**330**	T	T	21 30 12.9	
	baz=151,slow=76						
H11N2	**WAKE ISLAND Hy**	**39.79**	**330**	T	T	21 30 14.7	
	baz=151,slow=76						
TOO	**Toolangi**	**42.74**	**231**	P	**P**	**20 48 07.5**	**-1.4**
TOO				IAmb	IAmb	20 48 08.1	
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**44.30**	**240**	P	**P**	**20 48 19.4**	**-2.1**
	comp=Z,8.8nm,1.0s,baz=48,slow=15,SNR=11						
STKA				LR	LR	21 05 35.4	
	comp=Z,79nm,18.2s,baz=41,slow=35						
	comp=Z,8.8nm,1.0s						
STKA	**Stephens Creek**	**44.30**	**240**	P	**P**	**20 48 20.0**	**-1.5**
WB0	**Warramunga Arr**	**50.01**	**257**	P	**P**	**20 49 04.4**	**-1.9**
WB0				IAmb	IAmb	20 49 12.0	
	comp=Z,9.9nm,1.4s						
WB2	**Warramunga Arr**	**50.04**	**257**	P	**P**	**20 49 04.9**	**-1.7**
WB2				IAmb	IAmb	20 49 28.9	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**50.04**	**257**	P	**P**	**20 49 04.9**	**-1.6**
WRAB				IAmb	IAmb	20 49 32.1	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**50.05**	**257**	P	**P**	**20 49 04.5**	**-2.1**
	comp=Z,1.6nm,0.6s,baz=91,slow=7.4,SNR=51						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**50.05**	**257**	P	**P**	**20 49 04.4**	**-2.2**
GUMO	**Guam**	**50.33**	**302**	LR	LR	21 07 04.8	
	comp=Z,34nm,20.5s,baz=263,slow=32						
AS31	**Alice Springs**	**50.34**	**252**	P	**P**	**20 49 06.8**	**-2.0**
ASAR	**Alice Springs**	**50.34**	**252**	P	**P**	**20 49 06.8**	**-2.0**
	comp=Z,5.4nm,0.6s,baz=89,slow=7.7,SNR=84						
ASAR				LR	LR	21 08 48.3	
	comp=Z,99nm,19.7s,baz=106,slow=34						
	comp=Z,5.4nm,0.6s						
FORT	**Forrest**	**55.67**	**243**	P	**P**	**20 49 45.8**	**-2.1**
FITZ	**Fitzroy Crossi**	**58.41**	**258**	P	**P**	**20 50 06.2**	**-1.4**
FITZ				IAmb	IAmb	20 50 21.7	
	comp=Z,13nm,1.5s						
RPN	**Rapa Nui**	**60.24**	**113**	LR	LR	21 09 39.9	
	comp=Z,49nm,21.6s,baz=213,slow=29						
JCJ	**Chichijima**	**60.29**	**314**	LR	LR	21 12 00.6	
	comp=Z,53nm,19.7s,baz=148,slow=32						
PSA00	**Pilbara Seismi**	**63.43**	**253**	P	**P**	**20 50 40.5**	**-1.1**
PSA00	**Pilbara Seismi**	**63.43**	**253**	P	**P**	**20 50 40.8**	**-0.9**
PSA00				IAmb	IAmb	20 50 57.0	
	comp=Z,13nm,1.2s						
MBWA	**Marble Bar**	**63.58**	**254**	P	**P**	**20 50 41.5**	**-1.1**
MBWA				IAmb	IAmb	20 51 02.9	
	comp=Z,6.4nm,1.2s						
VNDA	**Vanda**	**63.64**	**186**	P	**P**	**20 50 43.5**	**+1.3**
	comp=Z,4.5nm,1.0s,baz=7.8,slow=6.1,SNR=24						
VNDA				PcP	**PcP**	**20 51 19.6**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=329,slow=5.5,SNR=5.4						
VNDA				LR	LR	21 12 29.8	
	comp=Z,28nm,21.4s,baz=335,slow=30						
	comp=Z,4.5nm,1.0s						
VNDA	**Vanda**	**63.64**	**186**	P	**P**	**20 50 43.9**	**+1.8**
VNDA				IAmb	IAmb	20 50 44.8	
	comp=Z,6.9nm,1.1s						
DAV	**Davao City (W)**	**64.52**	**286**	LR	LR	21 13 28.4	
	comp=Z,43nm,21.5s,baz=123,slow=31						
SHEM	**Shemya Is, Ala**	**68.48**	**352**	LR	LR	21 14 38.8	
	comp=Z,152nm,21.6s,baz=120,slow=30						
MJAR	**Matsushiro Arr**	**68.85**	**320**	P	P	20 51 12.6	-3.5
	comp=Z,0.7nm,0.7s,baz=132,slow=3.6,SNR=2.1						
MJAR				LR	LR	21 15 50.9	
	comp=Z,102nm,20.7s,baz=130,slow=31						
	comp=Z,0.7nm,0.7s						
CASY	**Casey**	**70.70**	**205**	P	**P**	**20 51 26.5**	**-0.5**
CASY				IAmb	IAmb	20 51 27.8	
	comp=Z,5.6nm,0.8s						
SAO	**San Andreas Ge**	**71.04**	**42**	P	**P**	**20 51 30.8**	**+1.2**
SAO				IAmb	IAmb	20 52 09.9	
	comp=Z,5.4nm,0.8s						
JNU	**Nakatsue**	**71.74**	**313**	P	**P**	**20 51 32.8**	**-1.1**
CHGN	**Chignik**	**72.26**	**9**	P	**P**	**20 51 37.6**	**+1.2**
PETK	**Petropavlovsk-**	**72.44**	**342**	LR	LR	21 19 00.4	
	comp=Z,27nm,20.9s,baz=135,slow=32						
PFO	**Pinyon Flats O**	**72.64**	**47**	LR	LR	21 15 38.8	
	comp=Z,104nm,21.3s,baz=221,slow=29						
LPIG	**La Paz**	**72.77**	**58**	LR	LR	21 16 11.5	
	comp=Z,42nm,19.3s,baz=328,slow=30						
YBH	**Yreka Blue Hor**	**73.31**	**37**	P	**P**	**20 51 45.2**	**+2.0**
	comp=Z,2.6nm,0.6s,baz=162,slow=3.8,SNR=5.4						
YBH				LR	LR	21 16 15.8	
	comp=Z,83nm,21.6s,baz=174,slow=30						
	comp=Z,2.6nm,0.6s						
YBH	**Yreka Blue Hor**	**73.31**	**37**	P	**P**	**20 51 46.2**	**+3.1**
YBH				IAmb	IAmb	20 52 13.1	
	comp=Z,5.6nm,1.1s						
BEKR	**Beckworth**	**73.58**	**40**	P	**P**	**20 51 46.7**	**+1.8**
NVAR	**Mina

FXWY				IAmb	IAmb	20 52 32.8	
	comp=Z,6.9nm,1.5s						
S22A	**4UR Ranch, Cre**	**81.48**	**47**	P	**P**	**20 52 30.8**	**+1.4**
S22A				IAmb	IAmb	20 52 49.9	
	comp=Z,8.4nm,1.4s						
IMW	**Indian Meadow**	**81.66**	**40**	P	**P**	**20 52 31.5**	**+1.4**
IMW				IAmb	IAmb	20 52 33.2	
	comp=Z,3.9nm,0.8s						
WRH	**Wood River Hil**	**81.68**	**11**	P	**P**	**20 52 30.5**	**+1.2**
LOHW	**Long Hollow**	**81.72**	**41**	P	**P**	**20 52 32.2**	**+1.8**
DOT	**Dot Lake**	**81.73**	**13**	P	**P**	**20 52 31.1**	**+1.4**
DOT				IAmb	IAmb	20 52 32.1	
	comp=Z,5.0nm,0.9s						
MLY	**Manley**	**81.75**	**9**	P	**P**	**20 52 30.5**	**+0.7**
MLY				IAmb	IAmb	20 52 32.1	
	comp=Z,3.9nm,0.6s						
HDA	**Harding Lake**	**81.83**	**11**	P	**P**	**20 52 31.2**	**+1.0**
HDA				IAmb	IAmb	20 52 33.3	
	comp=Z,6.6nm,1.0s						
SMAI	**San Martin Ant**	**81.94**	**159**	P	**P**	**20 52 31.4**	**+0.6**
BW06	**Boulder Array**	**81.97**	**42**	P	**P**	**20 52 32.8**	**+1.1**
PD31	**Pinedale Array**	**81.97**	**42**	P	**P**	**20 52 32.8**	**+1.1**
PDAR	**Pinedale Array**	**81.97**	**42**	P	**P**	**20 52 32.6**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=228,slow=3.6,SNR=10						
PDAR				LR	LR	21 23 44.8	
	comp=Z,66nm,18.5s,baz=249,slow=32						
	comp=Z,1.1nm,0.7s						
PDAR	**Pinedale Array**	**81.97**	**42**	P	**P**	**20 52 33.0**	**+1.2**
YHL	**Hebgen Lake**	**81.99**	**39**	P	**P**	**20 52 34.5**	**+2.7**
YHL				IAmb	IAmb	20 52 35.5	
	comp=Z,9.0nm,1.0s						
SCRK	**Sand Creek**	**82.03**	**13**	P	**P**	**20 52 33.1**	**+1.7**
SCRK				IAmb	IAmb	20 52 33.9	
	comp=Z,3.6nm,0.8s						
I23K	**Minto, Yukon-K**	**82.08**	**10**	P	**P**	**20 52 32.5**	**+1.1**
I23K				IAmb	IAmb	20 52 33.5	
	comp=Z,7.6nm,1.2s						
TCOL	**CIGO, UAF Yank**	**82.09**	**11**	P	**P**	**20 52 32.7**	**+1.2**
COLA	**College**	**82.09**	**11**	P	**P**	**20 52 32.8**	**+1.4**
BOZ	**Bozeman (W)**	**82.10**	**39**	P	**P**	**20 52 34.1**	**+1.9**
BOZ				IAmb	IAmb	20 52 35.2	
	comp=Z,5.6nm,1.3s						
ILAR	**Eielson Array**	**82.17**	**11**	P	**P**	**20 52 32.2**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=204,slow=6.4,SNR=8.2						
ILAR				LR	LR	21 22 06.4	
	comp=Z,56nm,21.5s,baz=214,slow=31						
	comp=Z,1.8nm,1.0s						
ILAR	**Eielson Array**	**82.17**	**11**	P	**P**	**20 52 33.1**	**+1.2**
J25K	**Salcha River,**	**82.32**	**12**	P	**P**	**20 52 34.3**	**+1.5**
J25K				IAmb	IAmb	20 52 35.2	
	comp=Z,7.5nm,1.1s						
HRY	**Holter Researc**	**82.55**	**38**	P	**P**	**20 52 36.5**	**+2.0**
J26L	**Joseph Creek**	**82.58**	**12**	P	**P**	**20 52 36.1**	**+1.9**
J26L				IAmb	IAmb	20 52 37.4	
	comp=Z,8.9nm,1.3s						
PRP	**Porcupine Dome**	**83.10**	**11**	P	**P**	**20 52 38.6**	**+1.7**
PRP				IAmb	IAmb	20 52 40.1	
	comp=Z,5.4nm,0.9s						
RLMT	**Red Lodge**	**83.30**	**40**	P	**P**	**20 52 41.0**	**+2.4**
RLMT				IAmb	IAmb	20 52 41.7	
	comp=Z,5.4nm,1.1s						
CMIG	**Matias Romero**	**83.65**	**70**	LR	LR	21 22 36.7	
	comp=Z,18nm,20.5s,baz=182,slow=30						
BELA	**Belgrano 2**	**84.22**	**172**	P	**P**	**20 52 42.9**	**+0.3**
PMSA	**Palmer Station**	**84.34**	**156**	LR	LR	21 21 20.5	
	comp=Z,67nm,21.5s,baz=261,slow=29						
BMAR	**Burnt Mountain**	**84.98**	**11**	P	**P**	**20 52 48.9**	**+2.5**
H03S2	**Juan Fernandez**	**85.21**	**124**	T	T	22 26 56.0	
	baz=252						
H03S1	**Juan Fernandez**	**85.22**	**124**	T	T	22 27 24.2	
	baz=252						
H03S3	**Juan Fernandez**	**85.23**	**124**	T	T	22 27 18.3	
	baz=252						
INK	**Inuvik**	**87.99**	**14**	LR	LR	21 25 04.4	
	comp=Z,72nm,20.4s,baz=183,slow=31						
MAW	**Mawson**	**88.08**	**199**	P	**P**	**20 53 02.0**	**+0.3**
	comp=Z,4.8nm,0.6s,baz=136,slow=6.8,SNR=12						
MAW				LR	LR	21 30 09.3	
	comp=Z,92nm,20.3s,baz=124,slow=34						
	comp=Z,4.8nm,0.6s						
MAW	**Mawson**	**88.08**	**199**	P	**P**	**20 53 01.9**	**+0.2**
PLCA	**Paso Flores**	**89.56**	**132**	LR	LR	21 24 14.5	
	comp=Z,56nm,19.4s,baz=268,slow=29						
YKA	**Yellowknife Ar**	**89.81**	**23**	LR	LR	21 27 36.3	
	comp=Z,82nm,19.1s,baz=222,slow=32						
FCAR	**Ozark Folk Cen**	**91.74**	**53**	P	**P**	**20 53 21.7**	**+2.3**
CMAR	**Chiang Mai Arr**	**92.69**	**288**	LR	LR	21 30 42.5	
	comp=Z,16nm,20.9s,baz=105,slow=33						
ATAH	**Atahualpa**	**92.80**	**98**	LR	LR	21 27 38.4	
	comp=Z,41nm,19.0s,baz=178,slow=31						
TROLL	**Troll, Antarti**	**93.01**	**179**	P	**P**	**20 53 25.0**	**+0.2**
VNA3	**Neumayer Olymp**	**93.09**	**175**	P	**P**	**20 53 25.4**	**+0.3**
SNAA	**Sanae**	**93.15**	**177**	P	**P**	**20 53 26.2**	**+0.8**
SNAA	**Sanae**	**93.15**	**177**	P	**P**	**20 53 24.9**	**-0.4**
SNAA				IAmb	IAmb	20 53 27.4	
	comp=Z,5.0nm,1.1s						
VNA2	**Neumayer--Watz**	**93.59**	**175**	P	**P**	**20 53 28.2**	**+0.9**
	baz=199,slow=3.1						
VNA1	**Neumayer--Stat**	**93.79**	**175**	P	**P**	**20 53 29.1**	**+0.9**
SIUC	**Southern Illin**	**94.50**	**52**	P	**P**	**20 53 30.4**	**-1.6**
SONM	**Songino Array**	**94.76**	**318**	LR	LR	21 30 33.5	
	comp=Z,55nm,22.0s,baz=73,slow=32						
TKL	**Tuckaleechee C**	**98.24**	**55**	LR	LR	21 34 18.4	
	comp=Z,36nm,19.0s,baz=338,slow=33						
R50A	**Paris**	**98.39**	**53**	P	**P**	**20 53 50.9**	**+1.2**
ARCES	**ARCESS Array B**	**124.38**	**352**	PKhKP	PKPpre	20 59 05.5	
	comp=Z,1.6nm,0.9s,baz=49,slow=9.7,SNR=1.9						
OSTC	**Ostas**	**143.86**	**350**	*e*PKP	PKPbc	20 59 46.4	+1.9
DPC	**Dobruska-Polom**	**144.04**	**350**	*e*PKP	PKPbc	20 59 46.9	+1.8
KRLC	**Kraliky**	**144.23**	**349**	*e*PKP	PKPbc	20 59 47.0	+1.3
MORC	**Moravsky Berou**	**144.36**	**348**	*e*PKP	**PKPab**	**20 59 47.1**	**+1.3**
VRAC	**Vranov**	**145.00**	**349**	*e*PKP	**PKPdf**	**20 59 50.0**	**+1.1**
JAVC	**Velka Javorina**	**145.21**	**347**	*e*PKP	**PKPdf**	**20 59 50.8**	**+1.5**
KRUC	**Moravsky**	**145.27**	**349**	*e*PKP	**PKPbc**	**20 59 50.2**	**+1.2**
KHC	**Kasperske Hory**	**145.65**	**352**	*e*PKP	**PKPbc**	**20 59 51.8**	**+1.5**
CKRC	**Cesky Krumlov**	**145.85**	**351**	*e*PKP	**PKPdf**	**20 59 51.4**	**+1.0**
GERES	**GERESS Array B**	**145.92**	**352**	PKPbc	**PKPdf**	**20 59 51.4**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=36,slow=2.5,SNR=12						
BRTR	**Keskin Array B**	**146.38**	**321**	PKPbc	**PKPdf**	**20 59 53.0**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=64,slow=3.4,SNR=3.0						
ESDC	**Sonseca Array**	**153.82**	**19**	PKPab	**PKPab**	**21 00 25.9**	**+1.9**
	comp=Z,0.6nm,1.0s,baz=341,slow=3.1,SNR=3.7						

*SOME **15** 20:46:56.8,39.57N×73.25E,h0km*
*KRNET **15** 20:46:57.9±0.1,39.45N×73.50E,mb3.6*
*NNC **15** 20:47:02.1±1.8,39.58N×73.55E,h0km,mb4.0,mpv3.6,*
Error ellipse: s-maj=13.5km s-min=7.3km az=179.0

ISC 15 20:46:58.7±1.1,39.49N±0.05×73.45E±0.03,h10km,n47,
σ3805/78,24C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.16**	**334**	↑*e*P	**Pb**	**20 47 20.8**	**0.0**
	baz=33						
OHH				↑*i*S	**Sn**	**20 47 37.4**	**+0.5**
	baz=33						
DRK	**Karamyk**	**1.28**	**270**	↑*i*P	**Pn**	**20 47 22.7**	**-0.2**
	baz=72						
DRK				↑*e*S	**Sn**	**20 47 41.0**	**+0.8**
	baz=72						
ARLS	**Aral**	**2.46**	**15**	↑*e*P	**Pb**	**20 47 41.6**	**-1.5**
	baz=14						
ARLS				↑*e*S	**Sb**	**20 48 13.3**	**-0.3**
	baz=14						
GAR	**Garm**	**2.48**	**260**	↑*e*P	**Pb**	**20 47 41.8**	**-1.6**
	baz=61						
GAR				↑*e*S	**Sb**	**20 48 14.0**	**-0.1**
	baz=61						
TRKS	**Terek-Say**	**2.70**	**320**	↓*e*P	**Pn**	**20 47 44.2**	**+2.0**
	baz=19						
TRKS				↓*e*S	**Sn**	**20 48 18.0**	**+3.0**
	baz=19						
UCH	**Uchtor**	**2.85**	**16**	↑*e*P	**Pb**	**20 47 47.0**	**-3.0**
	baz=15						
UCH				↑*e*S	**Sb**	**20 48 22.9**	**-2.2**
	baz=15						
EKS2	**Erkin-Say**	**3.18**	**4**	↑*e*P	**Pn**	**20 47 51.7**	**+2.8**
	baz=4.0						
EKS2				↑*e*S	**Sn**	**20 48 30.7**	**+3.8**
	baz=4.0						
AAK	**Ala-Archa**	**3.25**	**14**	↑*e*P	**Pn**	**20 47 52.4**	**+2.6**
	baz=13						
AAK				↑*e*S	**Sn**	**20 48 32.2**	**+3.7**
	baz=13						
MRKS	**Merke**	**3.26**	**357**	*e*P	**Pb**	**20 47 56.9**	**+0.3**
	2.6nm,0.2s						
MRKS				*e*S	**Sg**	**20 48 40.4**	**-2.9**
	27nm,0.4s						
MRKS	**Merke**	**3.26**	**357**	Pg	**Pb**	**20 47 56.9**	**+0.3**
	7.4nm,0.2s						
MRKS				Lg	Lg	20 48 40.4	
	27nm,0.4s						
KBK	**Karagaybulak**	**3.36**	**19**	↑*e*P	**Pn**	**20 47 54.0**	**+2.6**
	baz=18						
KBK				↑*e*S	**Sn**	**20 48 34.9**	**+3.4**
	baz=18						
CHGR	**Chuyangaron**	**3.44**	**257**	↓*i*P	**Pn**	**20 47 54.9**	**+2.5**
	baz=58						
CHGR				↓*e*S	**Sn**	**20 48 36.7**	**+3.4**
	baz=58						
CHMS	**Chumysh**	**3.64**	**15**	↑Pn	**Pb**	**20 47 59.3**	**-3.9**
	4.9nm,0.6s						
CHMS				↑Lg	Lg	20 48 54.6	
	8.3nm,0.5s						
IUG	**Iuzhnay**	**3.71**	**317**	*e*P	**Pb**	**20 48 03.0**	**-1.5**
	178nm,0.6s						
IUG				*e*S	**Sb**	**20 48 50.7**	**+1.2**
	53nm,0.9s						
IUG	**Iuzhnay**	**3.71**	**317**	Pg	**Pb**	**20 48 02.9**	**-1.5**
	338nm,0.5s						
IUG				Lg	Lg	20 48 50.6	
	65nm,0.6s						
DZA	**Taraz**	**3.76**	**335**	*e*P	**Pb**	**20 48 03.9**	**-1.2**
	14nm,0.3s						
DZA				*e*S	**Sb**	**20 48 51.6**	**+0.9**
	66nm,0.6s						
TKM2	**Tokmak 2**	**3.79**	**25**	↑Pg	**Pg**	**20 48 12.7**	**+1.4**
	4.6nm,0.6s						
TKM2				↓Lg	Lg	20 49 00.8	
	14nm,0.7s						
KST	**Kastek**	**4.03**	**27**	*e*P	**Pg**	**20 48 12.6**	**-3.1**
	5.1nm,0.3s						
KST				*e*S	**Sg**	**20 49 07.1**	**-0.8**
	31nm,0.8s						
KST	**Kastek**	**4.03**	**27**	Pg	**Pg**	**20 48 12.6**	**-3.1**
	7.7nm,0.3s						
KST				Lg	Lg	20 49 07.1	
	31nm,0.8s						
CHM	**Chimkent**	**4.06**	**315**	*e*P	**Pb**	**20 48 09.9**	**-0.4**
	61nm,0.2s						
CHM				*e*S	**Sb**	**20 49 02.4**	**+2.9**
	90nm,0.2s						
KK31	**Karatay Array**	**4.24**	**329**	Pn	**Pn**	**20 48 07.5**	**+4.2**
	0.5nm,0.2s,baz=132,slow=13,SNR=59						
KK31				↑Pg	**Pg**	**20 48 17.7**	**-2.1**
	0.9nm,0.2s						
KK31				↑Sn	**Sb**	**20 48 60.0**	**-4.5**
	5.1nm,0.4s,baz=143,slow=24,SNR=5.7						
KK31				↑Lg	Lg	20 49 13.6	
	10.0nm,0.5s						
MTBS	**Maitube**	**4.28**	**31**	*e*P	**Pg**	**20 48 16.8**	**-3.7**
	6.1nm,0.2s						
MTBS				*e*S	**Sg**	**20 49 14.4**	**-1.5**
	11nm,0.3s						
MTBS	**Maitube**	**4.28**	**31**	Pg	**Pg**	**20 48 16.8**	**-3.7**
	8.0nm,0.3s						
MTBS				Lg	Lg	20 49 14.4	
	11nm,0.3s						
KRBS	**Karabastau**	**4.52**	**21**	*e*P	**Pg**	**20 48 21.4**	**-3.8**
	4.4nm,0.6s						
KRBS				*e*S	**Sg**	**20 49 22.5**	**-1.3**
	7.8nm,0.8s						
KRBS	**Karabastau**	**4.52**	**21**	Pg	**Pg**	**20 48 21.4**	**-3.8**
	4.4nm,0.6s						
KRBS				Lg	Lg	20 49 22.5	
	7.8nm,0.8s						
MDOK	**Medeo**	**4.56**	**35**	*e*P	**Pg**	**20 48 22.4**	**-3.6**
	4.3nm,0.3s						
MDOK				*e*S	**Sg**	**20 49 24.3**	**-0.8**
	11nm,0.5s						
MDOK	**Medeo**	**4.56**	**35**	Pg	**Pg**	**20 48 22.0**	**-4.0**
	5.1nm,0.7s						
MDOK				Pg	**Sg**	**20 48 22.4**	**-3.6**
	4.3nm,0.3s						
MDOK				↑Lg	Lg	20 49 24.1	
	14nm,0.7s						
MDOK				Lg	Lg	20 49 24.3	
	11nm,0.5s						
KTBS	**Karatobe**	**4.87**	**29**	*e*P	**Pg**	**20 48 27.5**	**-4.4**
	2.7nm,0.3s						
KTBS				*e*S	**Sg**	**20 49 32.6**	**-2.2**
	7.1nm,0.2s						
KTBS	**Karatobe**	**4.87**	**29**	Pg	**Pg**	**20 48 27.5**	**-4.4**
	2.7nm,0.3s						
KTBS				Lg	Lg	20 49 32.6	
	7.1nm,0.2s						
KUU	**Kurty**	**4.90**	**25**	*e*P	**Pg**	**20 48 28.8**	**-3.8**
	1.7nm,0.1s						
KUU				↑*i*S	**Sg**	**20 49 35.3**	**-0.8**
	7.6nm,0.5s						
KUU	**Kurty**	**4.90**	**25**	Pg	**Pg**	**20 48 28.8**	**-3.8**
	1.7nm,0.1s						
KUU				Lg	Lg	20 49 35.3	
	7.6nm,0.5s						
SATY	**Saty**	**5.16**	**45**	*e*P	**Pg**	**20 48 33.9**	**-3.6**
	4.2nm,0.5s						
SATY				*e*S	**Sg**	**20 49 44.0**	**-0.5**
	10nm,0.4s						
SATY	**Saty**	**5.16**	**45**	Pg	**Pg**	**20 48 33.9**	**-3.6**
	4.2nm,0.5s						
SATY				Lg	Lg	20 49 44.0	
	10nm,0.4s						
ZHN	**Zhinishke**	**5.25**	**44**	*e*P	**Pg**	**20 48 36.0**	**-3.3**
	4.4nm,0.1s						
ZHN				*e*S	**Sg**	**20 49 47.6**	**+0.3**
	6.1nm,0.2s						
ZHN	**Zhinishke**	**5.25**	**44**	Pg	**Pg**	**20 48 36.0**	**-3.3**
	4.4nm,0.1s						
ZHN				Lg	Lg	20 49 47.6	
	6.1nm,0.2s						
UZB	**Uzynbulak**	**5.56**	**47**	*e*P	**Pg**	**20 48 41.4**	**-3.8**
	2.6nm,0.4s						
UZB				*e*S	**Sg**	**20 49 56.6**	**-0.6**
	5.0nm,0.5s						
UZB	**Uzynbulak**	**5.56**	**47**	Pg	**Pg**	**20 48 41.4**	**-3.8**
	2.6nm,0.4s						
UZB				Lg	Lg	20 49 56.6	
	5.0nm,0.5s						
BTLS	**Baital**	**5.57**	**4**	*e*P	**Pb**	**20 48 40.3**	**+4.4**
	2.2nm,0.3s						
BTLS				*e*S	**Sg**	**20 49 54.9**	**-2.5**
	4.8nm,0.5s						
BTLS	**Baital**	**5.57**	**4**	Pg	**Pb**	**20 48 40.3**	**+4.4**
	2.2nm,0.3s						
BTLS				Lg	Lg	20 49 54.9	
	8.4nm,0.5s						
KPKS	**Kokpek**	**5.59**	**43**	*e*P	**Pg**	**20 48 41.0**	**-4.7**
	3.3nm,0.3s						
KPKS				*e*S	**Sg**	**20 49 56.0**	**-2.0**
	6.9nm,0.7s						
KPKS	**Kokpek**	**5.59**	**43**	Pg	**Pg**	**20 48 41.0**	**-4.7**
	3.3nm,0.3s						
KPKS				Lg	Lg	20 49 56.0	
	6.9nm,0.7s						
ARXS	**Arharly**	**5.74**	**33**	*e*P	**Pg**	**20 48 43.9**	**-4.7**
	6.2nm,0.7s						
ARXS				*e*S	**Sg**	**20 50 01.2**	**-1.7**
	9.3nm,0.4s						
ARXS	**Arharly**	**5.74**	**33**	Pg	**Pg**	**20 48 43.9**	**-4.7**
	6.2nm,0.7s						
ARXS				Lg	Lg	20 50 01.2	
	9.3nm,0.4s						
SHLS	**Shalkode**	**5.82**	**49**	*e*P	**Pg**	**20 48 50.8**	**+0.7**
	2.3nm,0.4s						
SHLS				*e*S	**Sg**	**20 50 13.0**	**+7.5**
	3.4nm,0.5s						
SHLS	**Shalkode**	**5.82**	**49**	Pg	**Pg**	**20 48 50.8**	**+0.7**
	2.3nm,0.4s						
SHLS				Lg	Lg	20 50 13.0	
	3.4nm,0.5s						
KTMS	**Ketmen**	**6.52**	**50**	*e*P	**Pg**	**20 48 59.5**	**-3.9**
	0.6nm,0.3s						
KTMS				*e*S	**Sg**	**20 50 27.8**	**0.0**
	1.5nm,0.2s						
KTMS	**Ketmen**	**6.52**	**50**	Pg	**Pg**	**20 48 59.5**	**-3.9**
	0.6nm,0.3s						
KTMS				Lg	Lg	20 50 27.8	
	1.5nm,0.2s						

*KRSC **15** 20:59:17.7±1.0,53.57N×160.89E,h44km±18km,ML3.9*
*IDC **15** 20:59:20.2±3.8,54.48N×159.24E,h0km,mb3.7/4,*
mbtmp3.7/4,Error ellipse: s-maj=95.0km s-min=21.9km
az=108.0

ISC 15 20:59:14.1±1.0,53.43N±0.05×161.19E±0.05,h20km±5km,
n35,σ2804/55,mb3.9/4,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLC	**Nalytchevo**	**1.14**	**258**	P	**Pb**	**20 59 36.8**	**+1.7**
NLC				S	**Sb**	**20 59 49.2**	**-0.2**
MKZ	**Mys Kozlova**	**1.17**	**15**	P	**Pb**	**20 59 38.4**	**+2.7**
MKZ				S	**Sb**	**20 59 52.3**	**+1.9**
KII	**Karymskiy**	**1.20**	**301**	P	**Pn**	**20 59 36.0**	**+0.2**
KII				S	**Sn**	**20 59 47.9**	**-3.7**
SDLR	**Sedlovina**	**1.39**	**265**	P	**Pb**	**20 59 40.3**	**+0.8**
UGLR	**Uglovaya**	**1.44**	**262**	P	**Pb**	**20 59 41.3**	**+1.0**
KRER	**Koryakskii**	**1.47**	**266**	P	**Pb**	**20 59 41.9**	**+1.0**
KRER				S	**Sn**	**20 59 57.8**	**-0.5**
AVH	**Avacha**	**1.48**	**265**	P	**Pb**	**20 59 41.8**	**+0.8**
AVH				S	**Sn**	**20 59 57.8**	**-0.6**
DALK	**Dalny**	**1.52**	**256**	P	**Pb**	**20 59 42.2**	**+0.6**
DALK				S	**Sn**	**20 59 59.0**	**-0.2**
KRX	**Arik**	**1.52**	**268**	P	**Pn**	**20 59 42.0**	**+1.7**
KRX				S	**Sn**	**20 59 57.7**	**-1.9**
KOK	**Koryaka**	**1.54**	**266**	P	**Pb**	**20 59 42.5**	**+0.5**
KOK				S	**Sn**	**20 59 58.6**	**-1.3**
PET	**Petropavlovsk**	**1.58**	**256**	P	**Pb**	**20 59 43.4**	**+0.8**
PET				S	**Sn**	**21 00 00.4**	**-0.3**
RUS	**Russkaya**	**1.90**	**239**	P	**Pb**	**20 59 49.5**	**+1.4**
RUS				S	**Sn**	**21 00 10.7**	**+2.0**
KRMR	**Karymshinskiy**	**1.94**	**253**	P	**Pb**	**20 59 48.7**	**0.0**
KRMR				S	**Sn**	**21 00 10.3**	**+0.7**
TUMR	**Tumrok**	**1.96**	**342**	P	**Pn**	**20 59 48.3**	**+2.1**
TUMR				S	**Sn**	**21 00 09.2**	**-1.0**
GNL	**Ganaly**	**1.96**	**279**	P	**Pn**	**20 59 47.9**	**+1.7**
MTVR	**Mutnovka**	**2.05**	**244**	P	**Pb**	**20 59 51.1**	**+0.3**
MTVR				S	**Sn**	**21 00 14.5**	**+1.9**
GRL	**Gorelyy**	**2.08**	**246**	P	**Pb**	**20 59 51.5**	**+0.3**
PETK	**Petropavlovsk-**	**2.12**	**263**	Pn	**Pn**	**20 59 50.0**	**+1.6**
	9.3nm,0.3s,baz=69,slow=20,SNR=73						
PETK				Sn	**Sn**	**21 00 14.6**	**+0.4**
	16nm,0.3s,baz=82,slow=16,SNR=12						
KMNR	**Kamenistaya**	**2.40**	**347**	P	**Pn**	**20 59 55.3**	**+3.0**
APC	**Apacha**	**2.48**	**260**	*e*P	**Pn**	**20 59 56.5**	**+3.2**
APC				S	**Sn**	**21 00 24.9**	**+2.0**
KDTR	**Khodutka, Kamc**	**2.50**	**231**	P	**Pb**	**20 59 59.1**	**+0.9**
KDTR				S	**Sb**	**21 00 26.8**	**-1.7**
KOZ	**Kozyrevsk**	**2.74**	**344**	P	**Pn**	**20 59 59.4**	**+2.4**
ESO	**Esso**	**2.89**	**331**	P	**Pb**	**21 00 05.4**	**+0.4**
KLY	**Klyuchi**	**2.91**	**354**	P	**Pn**	**21 00 02.9**	**+3.7**
KLY				S	**Sn**	**21 00 34.5**	**+1.0**
KBTR	**Krutoberegovo**	**2.94**	**18**	P	**Pb**	**21 00 04.1**	**-1.7**
KBTR				S	**Sn**	**21 00 38.0**	**+3.7**
SRDR	**Sredinnyy**	**3.02**	**344**	P	**Pn**	**21 00 02.8**	**+2.0**
BDR	**Baidarnaya**	**3.15**	**0**	P	**Pb**	**21 00 07.3**	**-2.1**
SMKR	**Semkarok**	**3.16**	**3**	P	**Pn**	**21 00 06.8**	**+4.0**
SMKR				S	**Sn**	**21 00 40.9**	**+1.0**
SRKR	**Sorokina**	**3.23**	**360**	P	**Pn**	**21 00 08.2**	**+4.5**
BKI	**Bering**	**3.32**	**56**	P	**Pb**	**21 00 11.1**	**-1.1**
BKI				S	**Sb**	**21 00 47.4**	**-4.6**
KURBB	**Kurchatov Arra**	**48.22**	**302**	P	**P**	**21 07 49.9**	**-3.0**
	0.3nm,0.4s,baz=58,slow=7.6,SNR=4.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.60**	**296**	P	**P**	**21 07 53.2**	**-2.7**
	1.4nm,1.1s,baz=58,slow=8.5,SNR=2.1						
	1.4nm,1.1s						
FINES	**FINESS Array B**	**60.07**	**337**	P	**P**	**21 09 19.5**	**+0.4**
	0.4nm,0.3s,baz=26,slow=6.5,SNR=7.2						
	0.4nm,0.3s						
NB2	**NORSAR Subarra**	**63.40**	**344**	P	**P**	**21 09 41.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=24,slow=6.9						
NOA	**NORSAR Array B**	**63.40**	**344**	P	**P**	**21 09 41.3**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=22,slow=6.8,SNR=4.0						
	comp=Z,0.5nm,0.6s						

IDC 15 21:00:57.2±39.0,49.52N×149.59E,h547km±401km,
mb2.7/5,mbtmp3.7/5,Error ellipse: s-maj=380.4km
s-min=171.6km az=141.0,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**28.29**	**283**	P	P	21 06 06.9	0.0
	0.4nm,0.8s,baz=73,slow=9.1,SNR=3.1						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**39.11**	**302**	P	P	21 07 37.0	-0.4
	0.2nm,0.3s,baz=81,slow=6.6,SNR=1.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**43.63**	**293**	P	P	21 08 12.9	-0.4
	0.7nm,0.7s,baz=73,slow=9.0,SNR=2.6						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**43.99**	**300**	P	P	21 08 16.0	0.0
	1.3nm,0.7s,baz=67,slow=8.7,SNR=7.9						
	1.3nm,0.7s						
FINES	**FINESS Array B**	**60.51**	**333**	P	P	21 10 14.0	0.0
	2.5nm,0.9s,baz=36,slow=7.4,SNR=3.6						
	2.5nm,0.9s						

*ANF **15** 21:02:15.2±0.1,33.97N×116.72W,h15km,ML3.2/30,*
Error ellipse: s-maj=0.9km s-min=0.8km az=28.0
*NEIC **15** 21:02:15.8±0.6,33.977N±0.009×116.72W±0.01,*
h18km±1km,Error ellipse: s-maj=1.4km s-min=1.2km
az=202.0
*PAS **15** 21:02:16.4±0.9,33.980N±0.008×116.718W±0.009,*
h12km±2km,ML3.3/337,ML3.1/56(NEIC),Error ellipse:
s-maj=1.1km s-min=1.1km az=49.0

ISC 15 21:02:16.0±0.8,33.97N±0.01×116.72W±0.01,h16km±7km,
n139,σ056/209,Southern California

| Code | Station Name | Δ°

HLNC	**Highland**	**0.44**	**291**			**Pg**	**21 02 24.8**	**0.0**
HLNC						**Sg**	**21 02 31.1**	**+0.2**
GTM	**Goat Mountain**	**0.45**	**43**			**Pg**	**21 02 24.3**	**-0.7**
GTM						**Sg**	**21 02 30.1**	**-1.0**
BZNA	**Buzz No.'s Pla**	**0.47**	**174**			**Pg**	**21 02 25.8**	**+0.3**
BZNA						**Sg**	**21 02 32.4**	**+0.5**
FRD	**Ford Ranch, An**	**0.48**	**168**			**Pg**	**21 02 25.8**	**+0.2**
FRD						**Sg**	**21 02 32.5**	**+0.3**
FRD	**Ford Ranch, An**	**0.48**	**168**			**Pg**	**21 02 25.8**	**+0.2**
FRD						**Sg**	**21 02 32.4**	**+0.3**
CFSC	**Central Fire S**	**0.49**	**287**			**Pg**	**21 02 25.6**	**0.0**
CFSC	**Central Fire S**	**0.49**	**287**			**Sg**	**21 02 25.8**	**+0.1**
CFSC						**Sg**	**21 02 32.7**	**+0.5**
RSBC	**Riverside Bore**	**0.50**	**271**			**Pg**	**21 02 25.8**	**-0.2**
RSBC						**Sg**	**21 02 32.7**	**-0.1**
RSBC	**Riverside Bore**	**0.50**	**271**			**Pg**	**21 02 25.8**	**-0.2**
RSBC						**Sg**	**21 02 32.6**	**-0.2**
CLTC	**Calectric**	**0.51**	**285**			**Pg**	**21 02 26.4**	**+0.2**
CLTC						**Sb**	**21 02 34.2**	**+0.4**
MURC	**Murrieta**	**0.54**	**227**			**Pg**	**21 02 26.6**	**0.0**
MURC						**Sg**	**21 02 34.0**	**+0.2**
MURC	**Murrieta**	**0.54**	**227**	P		**Pg**	**21 02 26.6**	**0.0**
	baz=46,SNR=47							
MURC				S		**Sg**	**21 02 34.0**	**+0.2**
	baz=46							
RVR	**Riverside**	**0.54**	**273**			**Pg**	**21 02 26.5**	**-0.2**
RVR						**Sg**	**21 02 33.9**	**-0.1**
SME	**Santa Rosa Min**	**0.55**	**255**			**Pg**	**21 02 26.5**	**-0.3**
TPC	**Twentynine Pal**	**0.58**	**76**			**Pg**	**21 02 27.0**	**-0.8**
BELC	**Belle Mtn. Jos**	**0.60**	**86**			**Pb**	**21 02 27.6**	**-0.6**
BELC						**Sg**	**21 02 35.9**	**-0.1**
BELC	**Belle Mtn. Jos**	**0.60**	**86**	P		**Pb**	**21 02 27.6**	**-0.6**
	baz=268,SNR=274							
BELC				S		**Sg**	**21 02 35.8**	**-0.1**
	baz=268							
FON	**Fontana**	**0.61**	**283**			**Pb**	**21 02 27.7**	**-0.6**
FON						**Sb**	**21 02 36.1**	**-0.6**
PLM	**Palomar**	**0.62**	**191**			**Pb**	**21 02 28.3**	**-0.3**
PLM						**Sg**	**21 02 36.9**	**+0.3**
CSP	**Cedar Springs**	**0.62**	**302**			**Pb**	**21 02 27.9**	**-0.7**
ELS	**Elsinore Mount**	**0.67**	**242**	Pg		**Pb**	**21 02 28.6**	**-0.7**
ELS				Sg		**Sb**	**21 02 37.6**	**-0.7**
ELS				IAML			21 02 37.9	
	comp=N,708nm,0.4s							
ELS				IAML			21 02 38.0	
	comp=E,1µm,0.2s							
CTCC	**Cactus City**	**0.68**	**117**			**Pb**	**21 02 29.3**	**-0.2**
CTCC						**Sb**	**21 02 38.7**	**-0.1**
SS2	**San Sevaine**	**0.69**	**291**			**Pb**	**21 02 29.3**	**-0.4**
MLSC	**Mira Loma**	**0.70**	**273**			**Pb**	**21 02 29.2**	**-0.6**
MLSC						**Sb**	**21 02 38.7**	**-0.5**
CRNC	**Corona**	**0.70**	**263**			**Pb**	**21 02 29.8**	**-0.1**
CRNC						**Sb**	**21 02 38.6**	**-0.7**
BORC	**Borrego Spring**	**0.74**	**160**			**Pb**	**21 02 30.4**	**-0.1**
CTW	**Cottonwood Mou**	**0.76**	**112**			**Pb**	**21 02 30.5**	**-0.4**
CTW						**Sb**	**21 02 41.0**	**-0.1**
MATG	**Mataguay Scout**	**0.77**	**175**			**Pb**	**21 02 31.0**	**0.0**
MATG						**Sb**	**21 02 41.1**	**-0.1**
VTV	**Victorville**	**0.78**	**320**			**Pb**	**21 02 30.5**	**-0.7**
VTV						**Sb**	**21 02 40.5**	**-1.0**
BFSC	**Mount Baldy Ra**	**0.82**	**290**			**Pb**	**21 02 31.4**	**-0.7**
BFSC						**Sb**	**21 02 42.4**	**-0.5**
BFSC	**Mount Baldy Ra**	**0.82**	**290**	P		**Pb**	**21 02 31.2**	**-0.8**
	baz=108,SNR=46							
BFSC				S		**Sb**	**21 02 42.6**	**-0.4**
	baz=108							
ADO	**Adelanto Recei**	**0.83**	**315**			**Pb**	**21 02 31.8**	**-0.3**
ADO						**Sb**	**21 02 43.1**	**+0.1**
SSK	**Sunset Peak**	**0.84**	**287**			**Pb**	**21 02 31.8**	**-0.5**
SLH	**Sleepy Hollow**	**0.86**	**153**			**Pb**	**21 02 32.8**	**+0.2**
JUEM	**Julian Eagle M**	**0.89**	**173**			**Pb**	**21 02 33.0**	**-0.1**
JUEM						**Sb**	**21 02 44.8**	**0.0**
HAY	**Hayfield**	**0.90**	**106**			**Pb**	**21 02 33.6**	**+0.4**
HAY						**Sb**	**21 02 45.9**	**+0.8**
PSRC	**Puddingstone R**	**0.91**	**278**			**Pb**	**21 02 33.0**	**-0.4**
PSRC						**Sb**	**21 02 45.3**	**0.0**
GORC	**Green Oak Ranc**	**0.91**	**208**			**Pb**	**21 02 32.9**	**-0.5**
GORC						**Sb**	**21 02 45.0**	**-0.4**
HEC	**Hector,Ludlow**	**0.92**	**20**			**Pb**	**21 02 33.1**	**-0.6**
HEC						**Sb**	**21 02 44.9**	**-0.7**
HEC	**Hector,Ludlow**	**0.92**	**20**	P		**Pb**	**21 02 33.0**	**-0.6**
	baz=200,SNR=87							
HEC				S		**Sb**	**21 02 45.2**	**-0.5**
	baz=200							
SALN	**Salton City**	**0.92**	**138**			**Pb**	**21 02 33.7**	**+0.2**
RRX	**Edison Barstow**	**0.94**	**346**			**Pb**	**21 02 33.5**	**-0.4**
RRX						**Sb**	**21 02 46.0**	**-0.1**
RRX	**Edison Barstow**	**0.94**	**346**	P		**Pb**	**21 02 33.4**	**-0.4**
	baz=166,SNR=17							
RRX				S		**Sb**	**21 02 46.0**	**-0.1**
	baz=166							
PEM	**Pine Mountain**	**0.97**	**282**			**Pb**	**21 02 34.1**	**-0.4**
DPP	**Dos Picos Cty**	**0.98**	**191**			**Pb**	**21 02 34.1**	**-0.6**
DPP						**Sb**	**21 02 46.9**	**-0.4**
XTL	**Crystal Lake,**	**1.00**	**290**			**Pb**	**21 02 34.4**	**-0.7**
FRK	**Frink**	**1.06**	**122**			**Pb**	**21 02 34.7**	**-1.3**
RHC	**Rose Hills Cem**	**1.07**	**272**			**Pb**	**21 02 36.4**	**+0.2**
BC3	**Big Chuckawall**	**1.10**	**106**			**Pb**	**21 02 35.9**	**-0.8**
BC3	**Big Chuckawall**	**1.10**	**106**	P		**Pb**	**21 02 35.9**	**-0.8**
	baz=288,SNR=114							
BC3				Sb		**Sb**	**21 02 51.1**	**+0.2**
	baz=288							
MONP2	**Monument Peak**	**1.10**	**167**			**Pb**	**21 02 36.8**	**0.0**
MONP2	**Monument Peak**	**1.10**	**167**	P		**Pb**	**21 02 36.7**	**0.0**
	baz=347,SNR=41							
MONP2				Sb		**Sb**	**21 02 51.4**	**+0.4**
	baz=347							
109C	**Camp Elliot, M**	**1.12**	**197**			**Pn**	**21 02 36.2**	**-0.8**
109C				Sg		**Sb**	**21 02 50.8**	**-0.5**
109C	**Camp Elliot, M**	**1.12**	**197**	P		**Pn**	**21 02 36.2**	**-0.8**
	baz=16,SNR=15							
109C				S		**Sb**	**21 02 50.8**	**-0.5**
	baz=16							
CPE	**Camp Elliot**	**1.12**	**197**			**Pn**	**21 02 36.4**	**-0.6**
JNH	**Juniper Hills**	**1.13**	**296**			**Pn**	**21 02 36.8**	**-0.5**
HYS	**Haystack Butte**	**1.14**	**322**			**Pn**	**21 02 37.0**	**-0.4**
MWC	**Mount Wilson**	**1.14**	**283**			**Pn**	**21 02 36.8**	**-0.6**
CHFC	**Chilao Flat St**	**1.14**	**289**			**Pn**	**21 02 37.1**	**-0.3**
SBB	**Saddle Back Bu**	**1.16**	**309**			**Pn**	**21 02 37.3**	**-0.3**
GMRC	**Granite Mounta**	**1.20**	**47**	P		**Pn**	**21 02 37.6**	**-0.6**
	baz=228,SNR=153							
GMRC				S		**Sb**	**21 02 53.5**	**-0.2**
	baz=228							
PASC	**Pasadena Art C**	**1.23**	**280**			**Pn**	**21 02 38.3**	**-0.3**
PASC				Sg		**Sb**	**21 02 54.2**	**-0.3**
PASC				IAML			21 02 56.1	
	comp=E,566nm,0.3s							
SDRC	**San Diego Road**	**1.24**	**189**			**Pn**	**21 02 38.2**	**-0.4**
SWSC	**Sam W. Stewart**	**1.28**	**143**	P		**Pn**	**21 02 38.1**	**-1.0**
	baz=324,SNR=70							
DSCC	**Desert Studies**	**1.28**	**23**			**Pn**	**21 02 38.8**	**-0.4**
BAR	**Barrett**	**1.28**	**178**			**Pn**	**21 02 39.0**	**-0.3**
IRM	**Iron Mountain**	**1.32**	**81**	P		**Pn**	**21 02 38.7**	**-1.1**
	baz=263,SNR=67							
FMP	**Fort Macarthur**	**1.33**	**260**	S		**Sn**	**21 02 57.3**	**0.0**
	baz=78							
GSC	**Goldstone, Bar**	**1.33**	**357**	Pn		**Pn**	**21 02 40.2**	**+0.1**
GSC				IAML			21 03 02.7	
	comp=N,351nm,0.5s							
GSC				IAML			21 03 08.9	
	comp=E,291nm,1.2s							
GSC	**Goldstone, Bar**	**1.33**	**357**	Pb		**Pn**	**21 02 40.0**	**0.0**
	baz=177							
GSC				S		**Sn**	**21 02 57.1**	**-0.4**
	baz=177							
DECC	**Green Verdugo**	**1.37**	**283**	Pb		**Pn**	**21 02 40.6**	**+0.2**
	baz=101							
DECC				Sb		**Sb**	**21 02 59.0**	**+0.5**
	baz=101							
EDW2	**Edwards Air Fo**	**1.39**	**311**	Pb		**Pn**	**21 02 40.8**	**0.0**
	baz=130,SNR=134							
EDW2				Sb		**Sb**	**21 02 59.7**	**+0.4**
	baz=130							
TKX	**Tecate**	**1.40**	**176**	Pn		**Pn**	**21 02 41.0**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**1.41**	**158**	P		**Pn**	**21 02 40.5**	**-0.5**
	baz=339,SNR=60							
IKP				Sb		**Sb**	**21 03 00.7**	**+1.0**
	baz=339							
RMX	**La Rumorosa**	**1.46**	**158**	Pn		**Pn**	**21 02 42.1**	**+0.3**
RMX				IAML			21 03 05.9	
	comp=E,216nm,0.2s							
YUH	**Yuha Desert**	**1.48**	**153**			**Pn**	**21 02 41.1**	**-0.8**
CIS	**Catalina Islan**	**1.52**	**249**	P		**Pn**	**21 02 42.5**	**0.0**
	baz=67							
CIS				Sb		**Sb**	**21 03 03.1**	**+0.3**
	baz=67							
CCAC	**Calif City Air**	**1.59**	**318**	Pn		**Pn**	**21 02 43.7**	**+0.1**
CCAC				IAML			21 03 10.4	
	comp=E,340nm,0.4s							
TUQ	**Turquoise Moun**	**1.61**	**24**	Pg		**Pb**	**21 02 46.0**	**+0.6**
	baz=204							
TUQ				Sb		**Sb**	**21 03 06.1**	**+0.6**
	baz=204							
CBX	**Cerro Bola**	**1.65**	**178**	Pn		**Pn**	**21 02 44.8**	**+0.4**
LRMC	**Laurel Mtn Rad**	**1.71**	**333**	Pg		**Pb**	**21 02 47.8**	**+0.7**
	baz=152							
OSI	**Osito Audit: C**	**1.78**	**292**	P		**Pn**	**21 02 45.2**	**-1.0**
	baz=110,SNR=9.6							
OSI				Sb		**Sb**	**21 03 11.1**	**+0.7**
	baz=110							
GLA	**Glamis**	**1.83**	**119**	Pn		**Pn**	**21 02 46.6**	**-0.2**
GLA				IAML			21 03 17.3	
	comp=E,225nm,0.6s							
GLA				IAML			21 03 18.3	
	comp=N,200nm,0.5s							
GLA	**Glamis**	**1.83**	**119**	P		**Pn**	**21 02 46.0**	**-0.7**
	baz=301,SNR=13							
BLYC	**Blythe**	**1.84**	**96**	Pn		**Pn**	**21 02 46.1**	**-0.9**
BLYC				IAML			21 03 16.0	
	comp=E,198nm,0.5s							
BLYC				IAML			21 03 16.5	
	comp=N,245nm,0.5s							
NEE2	**Needles Airpor**	**1.92**	**65**	Pg		**Pb**	**21 02 51.4**	**+0.8**
	baz=246							
NEE2				Sb		**Sb**	**21 03 15.5**	**+1.3**
	baz=246							
SHOC	**Shoshone, Teco**	**1.96**	**11**	P		**Pn**	**21 02 48.5**	**-0.2**
	baz=191							
SHOC				Sb		**Sb**	**21 03 17.5**	**+1.8**
	baz=191							
QSM	**Queen of Sheba**	**2.00**	**357**	Pn		**Pn**	**21 02 49.1**	**0.0**
QSM				IAML			21 03 20.5	
	comp=E,136nm,0.4s							
QSM				IAML			21 03 21.7	
	comp=N,131nm,0.2s							
ARVC	**Arvin**	**2.09**	**304**	P		**Pn**	**21 02 50.5**	**+0.1**
	baz=123							
ARVC				Sb		**Sb**	**21 03 20.9**	**+1.6**
	baz=123							
PDMCI	**Parker Dam,Lak**	**2.17**	**80**	Sb		**Sb**	**21 03 22.6**	**+1.2**
	baz=262							
MPMC	**Manual Prospec**	**2.18**	**343**	P		**Pn**	**21 02 51.8**	**0.0**
	baz=163,SNR=64							
MPMC				Sb		**Sb**	**21 03 24.1**	**+2.0**
	baz=163							
GWY	**Greenwater Val**	**2.22**	**1**	Pn		**Pn**	**21 02 52.1**	**-0.2**
GWY				IAML			21 03 30.1	
	comp=N,148nm,0.4s							
ISA	**Isabella, Lake**	**2.22**	**320**	Pn		**Pn**	**21 02 52.3**	**0.0**
ISA	**Isabella, Lake**	**2.22**	**320**	P		**Pn**	**21 02 52.0**	**-0.3**
	baz=139,SNR=60							
ISA				Sb		**Sb**	**21 03 25.3**	**+2.1**
	baz=139							
BCW	**Bitter Crk WRg**	**2.43**	**294**	Pn		**Pn**	**21 02 55.7**	**+0.6**
SNCC	**San Nicolas Is**	**2.45**	**254**	Pn		**Pn**	**21 02 55.4**	**+0.1**
SNCC				IAML			21 03 33.0	
	comp=E,65nm,0.8s							
SNCC				IAML			21 03 33.6	
	comp=N,83nm,0.7s							
W13A	**Hualapai Mount**	**2.60**	**63**	Pn		**Pn**	**21 02 57.6**	**0.0**
W13A				IAML			21 03 39.3	
	comp=N,46nm,0.4s							
113A	**Mohawk Valley,**	**2.75**	**115**	Pn		**Pn**	**21 02 59.0**	**-0.3**
SHPR	**Sheep Range**	**2.84**	**26**	Pn		**Pn**	**21 03 01.1**	**+0.3**
TPNV	**Topopah Spring**	**3.00**	**7**	Pn		**Pn**	**21 03 04.0**	**+0.9**
TPNV				IAML			21 03 52.3	
	comp=N,64nm,0.4s							
TPNV	**Topopah Spring**	**3.00**	**7**	P		**Pn**	**21 03 03.8**	**+0.7**
	baz=188							
GRAC	**Grapevine Rang**	**3.07**	**350**	Pn		**Pn**	**21 03 05.2**	**+1.4**
GRAC				IAML			21 04 00.2	
	comp=E,50nm,0.8s							
GRAC				IAML			21 04 00.6	
	comp=N,58nm,0.8s							
SFX	**San Felipe**	**3.32**	**151**	Pn		**Pn**	**21 03 07.8**	**+0.5**
LCH	**Last Change Ra**	**3.35**	**347**	Pn		**Pn**	**21 03 08.5**	**+0.7**
PRN	**Pahroc Range**	**3.69**	**21**	Pn		**Pn**	**21 03 13.9**	**+1.3**
S11A	**Rachel**	**3.75**	**12**	Pn		**Pn**	**21 03 13.8**	**+0.4**
LCMT	**Little Creek M**	**4.16**	**42**	Pn		**Pn**	**21 03 18.7**	**-0.3**
U15A	**North Rim**	**4.38**	**55**	Pn		**Pn**	**21 03 23.1**	**+1.0**
X16A	**Lo Mia Camp, P**	**4.40**	**83**	Pn		**Pn**	**21 03 22.0**	**-0.3**
PKCU	**Pink Cliffs**	**4.99**	**45**	Pn		**Pn**	**21 03 30.9**	**+0.4**
CMB	**Columbia Colle**	**5.03**	**325**	Pn		**Pn**	**21 03 32.1**	**+1.2**
PSUT	**Pine Spring**	**5.11**	**26**	Pn		**Pn**	**21 03 31.5**	**-0.6**
KVN	**Kaiserville**	**5.20**	**348**	Pn		**Pn**	**21 03 33.1**	**-0.1**
PNTR	**Pine Nut**	**5.61**	**336**	Pn		**Pn**	**21 03 39.1**	**+0.1**
X18A	**Snowflake**	**5.64**	**82**	Pn		**Pn**	**21 03 39.9**	**+0.5**
PV23	**Carpenter Ridg**	**7.67**	**52**	Pn		**Pn**	**21 04 06.1**	**-1.2**

MOS ***15*** *21:12:23.4±1.2,39°.18N×140°.62E,h132km,mb4.3/12, Error ellipse: s-maj=8.4km s-min=5.7km az=95.8*
JMA ***15*** *21:12:25.7±0.1,39.2N±0.4×140.6E±0.6,h135km±1km, MD4.0/40,MV4.0/40,SOUTHERN AKITA PREF*
JMA Felt I J1 at SOUTHERN AKITA PREF .
IDC ***15*** *21:12:25.5±0.7,39.12N×140.47E,h140km±7km, mb3.9/24, mbtmp4.2/28,MS3.6/7,Error ellipse: s-maj=11.6km s-min=10.1km az=109.0*
NEIC ***15*** *21:12:26.5±2.5,39.13N±0.06×140.59E±0.09, h141km±6km,mb4.3/62,Error ellipse: s-maj=11.1km s-min=7.7km az=112.0*
ISC 15 21:12:25.5±0.5,39.17N±0.04×140.67E±0.05,h138km±4km, n215,σ1$37/225,mb4.2/73,9C-30D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.23**	**353**	*i*	P	**Pn**	**21 12 44.4**	**+0.1**
JRG					⇓S	**Sn**	**21 12 58.6**	**-0.1**
JRG	**Rokugo**	**0.23**	**353**		A		21 12 44.4	
	comp=E,25nm,0.3s,comp=E,19nm,0.5s							
JYK	**Kaneyama**	**0.35**	**224**	*i*	P	**Pn**	**21 12 44.6**	**-0.2**
JYK					⇓S	**Sn**	**21 12 58.8**	**-0.5**
JMK	**Ichinoseki**	**0.48**	**117**	*i*	P	**Pn**	**21 12 45.4**	**+0.1**
JMK					⇓S	**Sn**	**21 12 59.9**	**-0.4**
JMK	**Ichinoseki**	**0.48**	**117**		A		21 12 45.4	
	comp=E,7.0nm,1.5s,comp=E,4.0nm,0.7s							
JYW	**Yuwa**	**0.51**	**316**		A		21 12 45.3	
	comp=E,23nm,1.0s,comp=E,31nm,1.3s							
JOM	**Ohasama**	**0.57**	**58**	*i*	P	**Pn**	**21 12 46.2**	**+0.4**
JOM					⇓S	**Sn**	**21 13 01.6**	**+0.3**
JYYZ	**Yamagatayuza**	**0.59**	**255**		A		21 12 45.6	
	comp=E,17nm,1.8s,comp=E,17nm,1.4s							
JOFO	**Osakifurukawao**	**0.60**	**161**		A		21 12 46.1	
	comp=E,19nm,1.1s,comp=E,24nm,0.4s							
JKMT	**Kesennumamotoy**	**0.72**	**120**		A		21 12 47.2	
	comp=E,5.0nm,0.9s,comp=E,8.0nm,0.4s							
JOU	**Okura**	**0.81**	**180**	*i*	P	**Pn**	**21 12 47.5**	**0.0**
JOU					⇓S	**Sn**	**21 13 04.4**	**+0.2**
JOU	**Okura**	**0.81**	**180**		A		21 12 47.5	
	comp=E,5.0nm,1.3s,comp=E,4.0nm,4.2s							
JIO	**Ouri**	**0.89**	**143**	*i*	P	**Pn**	**21 12 47.9**	**-0.3**
JIO					⇓S	**Sn**	**21 13 04.3**	**-1.1**
JIO	**Ouri**	**0.89**	**143**		A		21 12 47.9	
	comp=E,7.0nm,0.4s,comp=E,8.0nm,0.6s							
JYA	**Atsumi**	**0.94**	**232**	*i*	P	**Pn**	**21 12 48.2**	**-0.4**
JYA					⇓S	**Sn**	**21 13 05.0**	**-1.2**
JYA	**Atsumi**	**0.94**	**232**		A		21 12 48.2	
	comp=E,15nm,0.8s,comp=E,9.0nm,0.6s							
JAH	**Hinai**	**1.02**	**359**	*i*	P	**Pn**	**21 12 49.6**	**+0.4**
JAH					S	**Sn**	**21 13 07.5**	**+0.1**
JYS	**Shirataka**	**1.06**	**207**	*i*	P	**Pn**	**21 12 49.5**	**-0.2**
JYS					⇓S	**Sn**	**21 13 08.2**	**+0.2**
JMM	**Marumori**	**1.31**	**176**		Pn	**Pn**	**21 12 51.7**	**-0.4**
JAW	**Awa shima**	**1.32**	**238**	*i*	P	**Pn**	**21 12 51.7**	**-0.5**
JAW					⇓S	**Sn**	**21 13 11.2**	**-1.3**
JYAR	**Yonezawaarcadi**	**1.32**	**198**		A		21 12 52.2	
	comp=E,9.0nm,1.2s,comp=E,8.0nm,1.3s							
JANG	**Nango**	**1.37**	**28**	*i*	P	**Pn**	**21 12 53.1**	**+0.4**
JANG					S	**Sn**	**21 13 13.5**	**0.0**
JOG3	**Oga3**	**1.44**	**302**		A		21 12 48.9	
	comp=E,6.0nm,2.3s,comp=E,6.0nm,4.8s							
JTM	**Tenmabayashi**	**1.64**	**11**		Pn	**Pn**	**21 12 56.1**	**+0.4**
JFT	**Otama**	**1.67**	**189**	*i*	P	**Pn**	**21 12 56.1**	**0.0**
JFT					S	**Sn**	**21 13 19.1**	**-0.3**
JNS	**Sasagawa**	**1.72**	**219**	⇓*i*	P	**Pn**	**21 12 56.3**	**-0.3**
JNS				⇓*e*	S	**Sn**	**21 13 19.6**	**-0.8**

JSD	**Sado**	**2.20**	**240**		Pn	**Pn**	**21 13 01.5**	**-0.8**
JSD	**Sado**	**2.20**	**240**	⇓*i*	P	**Pn**	**21 13 01.7**	**-0.7**
JYT	**Yasato**	**2.96**	**187**		Pn	**Pn**	**21 13 09.8**	**-2.1**
MAJO	**Matsushiro**	**3.27**	**217**		Pn	**Pn**	**21 13 15.7**	**-0.1**
MAJO	**Matsushiro**	**3.27**	**217**	*d*	P	**Pn**	**21 13 15.8**	**-0.1**
MJAR	**Matsushiro Arr**	**3.27**	**217**		P	**Pn**	**21 13 13.7**	**-2.2**
	24nm,0.6s,baz=22,slow=14,SNR=94							
MJAR					S	**Sn**	**21 13 53.1**	**-1.8**
	10nm,0.7s,baz=41,slow=24,SNR=5.6							
ERM	**Erimo**	**3.41**	**33**		Pn	**Pn**	**21 13 17.3**	**-0.4**
ERM	**Erimo**	**3.41**	**33**	*de*	P	**Pn**	**21 13 17.7**	**0.0**
JEW	**Eniwo**	**3.71**	**9**		Pn	**Pn**	**21 13 21.5**	**-0.1**
JGF	**Kuroka**	**4.43**	**218**		Pn	**Pn**	**21 13 32.1**	**+0.9**
INU	**Inuyama**	**4.80**	**218**		Pn	**Pn**	**21 13 36.8**	**+0.7**
NMR	**Nemuro--Hokkai**	**5.67**	**41**	*e*	P	**Pn**	**21 13 45.3**	**-2.2**
NMR				*e*	S	**Sn**	**21 14 45.4**	**-6.1**
RUSJ	**Misakicho**	**6.00**	**33**	*e*	P	**Pn**	**21 13 50.9**	**-1.1**
RUSJ				*e*	S	**Sn**	**21 14 56.5**	**-3.1**
JHJ	**Hachijo jima 2**	**6.08**	**187**		P	**Pn**	**21 13 50.5**	**-2.7**
	86nm,0.6s,baz=90,slow=22,SNR=0.8							
JHJ					S	**Sn**	**21 14 55.4**	**-6.3**
	140nm,0.3s,baz=47,slow=16,SNR=7.8							
YUK	**Yuzh-Kuril'sk**	**6.22**	**37**	*e*	P	**Pn**	**21 13 53.5**	**-1.5**
YUK				*e*	S	**Sn**	**21 14 59.4**	**-5.5**
YUK					pmax	pmax		
	comp=Z,214nm,0.4s							
YUK					pmax	pmax		
	comp=E,126nm,0.3s							
YUK					pmax	pmax		
	comp=N,66nm,0.1s							
YUK					smax	smax		
	comp=N,683nm,0.4s							
YUK					smax	smax		
	comp=E,756nm,0.4s							
SHO	**Shikotan**	**6.59**	**43**	*e*	P	**Pn**	**21 13 56.9**	**-3.0**
SHO				*e*	S	Sn	21 15 05.4	-8.3
SHO					pmax	pmax		
	comp=Z,6.0nm,0.4s							
SHO					pmax	pmax		
	comp=N,17nm,0.3s							
SHO					pmax	pmax		
	comp=E,12nm,0.2s							
SHO					smax	smax		
	comp=E,307nm,0.4s							
SHO					smax	smax		
	comp=N,128nm,0.2s							
JHS	**Saijyo**	**7.33**	**238**		Pn	**Pn**	**21 14 10.6**	**+0.6**
VLA	**Vladivostok**	**7.71**	**304**	*d*	P	**Pn**	**21 14 13.3**	**-1.6**
YSS	**Yuzh-Sakhalins**	**7.93**	**10**		Pn	**Pn**	**21 14 17.9**	**+0.1**
YSS	**Yuzh-Sakhalins**	**7.93**	**10**	*e*	P	**Pn**	**21 14 17.4**	**-0.4**
YSS				*e*	S	**Sn**	**21 15 42.5**	**-3.4**
YSS					pmax	pmax		
	comp=Z,40nm,0.3s							
YSS					smax	smax		
	comp=N,50nm,0.3s							
YSS					smax	smax		
	comp=E,40nm,0.3s							
MSHR	**Mys Shultsa**	**7.97**	**298**	*de*	P	**Pn**	**21 14 18.1**	**-0.3**
USA0B	**Ussuriysk Arra**	**8.21**	**311**		Pn	**Pn**	**21 14 22.2**	**+0.6**
USA0B	**Ussuriysk Arra**	**8.21**	**311**		P	**Pn**	**21 14 22.2**	**+0.6**
USRK	**Ussuriysk Ar.**	**8.21**	**311**		P	**Pn**	**21 14 20.4**	**-1.2**
	comp=E,7.2nm,0.5s,baz=114,slow=14,SNR=15							
USRK	**Ussuriysk Ar.**	**8.21**	**311**		Pn	**Pn**	**21 14 22.1**	**+0.5**
USRK	**Ussuriysk Ar.**	**8.21**	**311**		P	**Pn**	**21 14 22.1**	**+0.5**
MDJ	**Mudanjiang**	**9.88**	**307**		Pn	**Pn**	**21 14 46.8**	**+2.7**
KSRS	**Korea Array**	**10.16**	**264**		P	**Pn**	**21 14 45.7**	**-2.1**
	comp=E,1.6nm,0.9s,baz=79,slow=12,SNR=2.6							
ZEA	**Zeya**	**17.21**	**332**	*e*	P	**P**	**21 16 16.3**	**-0.4**
HIA	**Hailar**	**18.02**	**311**	*i*	P	**Pn**	**21 16 26.2**	**-0.9**
XLT	**XiLinHaoTe**	**18.98**	**292**	*e*	P	**P**	**21 16 34.4**	**-1.8**
XLT					pP	pP	21 16 57.8	-2.3
XLT					pmax	pmax		
	comp=Z,15nm,0.8s							
XLT					pmax	pmax		
	comp=Z,92nm,5.1s							
MA2	**Magadan**	**21.41**	**14**		P	**P**	**21 17 04.0**	**+2.0**
MA2	**Magadan**	**21.41**	**14**		P	**P**	**21 17 04.1**	**

KDAK IAmb IAmb 21 21 14.8
comp=Z,8.0nm,1.1s
KDAK Kodiak Island 45.92 43 P **P** **21 20 34.8 +0.8**
KDAK pmax pmax
comp=Z,8.0nm,1.2s
MLY Manley 46.37 33 P **P** **21 20 39.4 +1.9**
H23K Yukon River 46.85 32 P **P** **21 20 43.3 +2.1**
H23K IAmb IAmb 21 20 44.2
comp=Z,4.1nm,0.8s
NEA2 Nenana 47.09 34 P **P** **21 20 44.5 +1.4**
RND Reindeer 47.26 35 P **P** **21 20 45.7 +1.2**
RND IAmb IAmb 21 20 45.8
comp=Z,3.4nm,0.8s
RND Reindeer 47.26 35 P **P** **21 20 45.7 +1.2**
RND pmax pmax
comp=Z,3.0nm,0.8s
H24K Noodor Dome 47.54 32 P **P** **21 20 48.5 +1.9**
CCB Clear Creek Bu 47.63 34 P **P** **21 20 49.2 +2.0**
CCB IAmb IAmb 21 21 17.5
comp=Z,6.2nm,1.4s
ILAR Eielson Array 48.02 33 P **P** **21 20 50.2 0.0**
comp=Z,1.1nm,0.7s,baz=270,slow=6.1,SNR=23
comp=Z,2.1nm,0.7s
BMAR Burnt Mountain 48.76 30 P **P** **21 20 58.0 +2.1**
BRVK Borovoye 48.77 311 *ce*P **P** **21 20 54.5 -1.6**
BRVK pmax pmax
comp=Z,3.0nm,0.9s
SCRK Sand Creek 49.36 34 P **P** **21 21 01.4 +0.7**
SCRK IAmb IAmb 21 21 01.6
comp=Z,3.5nm,0.7s
L27K Beaver Creek, 50.46 35 P **P** **21 21 10.4 +1.6**
L27K IAmb IAmb 21 21 11.6
comp=Z,3.1nm,0.9s
BCAR Beaver Creek A 50.48 35 P **P** **21 21 11.0 +2.0**
M27K Edge Creek, AK 50.56 36 P **P** **21 21 11.1 +1.3**
M27K IAmb IAmb 21 21 48.8
comp=Z,6.1nm,1.2s
EPYK Eagle Plains 51.98 30 P **P** **21 21 21.8 +1.8**
INK Inuvik 52.76 28 P **P** **21 21 26.7 +1.0**
comp=Z,2.6nm,0.3s,baz=304,slow=6.8,SNR=7.3
comp=Z,2.6nm,0.3s
HYT Haines Junctio 52.95 37 P **P** **21 21 29.7 +2.3**
ARU Arti 54.38 317 P **P** **21 21 37.3 -0.4**
comp=Z,6.0nm,0.5s,baz=77,slow=4.0,SNR=15
ARU LR LR 21 48 55.8
comp=Z,36nm,19.9s,baz=34,slow=40
comp=Z,6.0nm,0.5s
ARU Arti 54.38 317 P **P** **21 21 37.4 -0.3**
ARU Arti 54.38 317 *d* P **P** **21 21 37.3 -0.4**
ARU S **S** **21 29 04.9 -0.1**
ARU SS **SS** **21 32 42.9 -5.7**
ARU pmax pmax
comp=Z,6.0nm,0.6s
FARO Faro, Yukon 54.46 35 P **P** **21 21 40.0 +1.7**
FARO IAmb IAmb 21 22 10.2
comp=Z,5.3nm,1.3s
KNRA Kununurra 55.69 194 P **P** **21 21 47.8 +0.4**
C36M Paulatuk 55.74 25 P **P** **21 21 48.1 +0.8**
ABKAR Akbulak array 56.13 309 P **P** **21 21 49.4 -1.0**
AKTO Aktyubinsk 56.82 311 P **P** **21 21 55.0 -0.3**
comp=Z,2.1nm,0.6s,baz=71,slow=12,SNR=7.2
AKTO LR LR 21 46 26.5
comp=Z,35nm,20.8s,baz=54,slow=36
comp=Z,2.1nm,0.6s
AKTO Aktyubinsk 56.82 311 P **P** **21 21 55.0 -0.3**
KIRV Kirov 58.20 322 P **P** **21 22 03.8 -0.9**
comp=Z,8.8nm,0.4s,baz=83,slow=3.8,SNR=8.0
comp=Z,8.8nm,0.4s
KIRV Kirov 58.20 322 *de*P **P** **21 22 04.2 -0.5**
WB0 Warramunga Arr 58.92 187 P **P** **21 22 09.4 -0.7**
WB2 Warramunga Arr 59.10 187 P **P** **21 22 11.0 -0.4**
WRA Warramunga Arr 59.10 187 P **P** **21 22 10.4 -1.0**
comp=Z,1.5nm,0.7s,baz=1.4,slow=7.3,SNR=23
WRA pP **pP** **21 22 43.6 -0.6**
comp=Z,1.9nm,0.8s,baz=5.0,slow=7.4,SNR=6.9
comp=Z,1.5nm,0.7s
WRA Warramunga Arr 59.10 187 P **P** **21 22 10.8 -0.6**
WRA Warramunga Arr 59.10 187 P **P** **21 22 10.8 -0.6**
KEV Kevo 61.24 339 P **P** **21 22 25.1 -0.2**
KEV IAmb IAmb 21 22 54.9
comp=Z,5.3nm,1.0s
KEV Kevo 61.24 339 P **P** **21 22 25.1 -0.2**
KEV pmax pmax
comp=Z,5.0nm,1.0s
ARCES ARCESS Array B 61.79 339 P **P** **21 22 28.4 -0.8**
comp=Z,1.7nm,0.6s,baz=54,slow=8.0,SNR=19
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 61.79 339 P **P** **21 22 28.9 -0.2**
ARCES ARCESS Array B 61.79 339 P **P** **21 22 28.9 -0.2**
ARCES pmax pmax
comp=Z,10.0nm,1.5s
YKA Yellowknife Ar 62.26 30 P **P** **21 22 32.8 +0.5**
comp=Z,1.4nm,0.6s,baz=306,slow=6.3,SNR=4.4
comp=Z,1.4nm,0.6s
ASAR Alice Springs 62.83 187 P **P** **21 22 35.5 -1.0**
comp=Z,1.2nm,0.7s,baz=5.0,slow=6.7,SNR=13
ASAR pP **pP** **21 23 09.2 -0.4**
comp=Z,0.7nm,0.8s,baz=10,slow=7.6,SNR=3.8
comp=Z,1.2nm,0.7s
OBN Obninsk 66.04 322 ⇓ *eP* **P** **21 22 57.0 0.0**
OBN pmax pmax
comp=Z,7.0nm,1.0s
FIA1 FINESS Array S 66.65 332 P **P** **21 23 00.1 -0.7**
FINES FINESS Array B 66.65 332 P **P** **21 23 00.3 -0.5**
comp=Z,4.4nm,0.6s,baz=35,slow=8.0,SNR=22
comp=Z,4.4nm,0.6s
LTY Liberty 67.61 47 P **P** **21 23 08.6 +1.3**
LTY IAmb IAmb 21 23 08.9
comp=Z,2.7nm,0.5s
SUMG Summit 68.55 360 P **P** **21 23 13.5 +0.4**
SUMG IAmb IAmb 21 23 44.5
comp=Z,9.3nm,1.3s
SUMG Summit 68.55 360 P **P** **21 23 13.5 +0.4**
SUMG pmax pmax
comp=Z,9.0nm,1.3s
KIV Kislovodsk 69.07 310 *eP* **P** **21 23 16.9 +0.4**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,25nm,17.0s
KBZ Khabaz 69.08 310 P **P** **21 23 15.2 -1.1**
comp=Z,3.2nm,0.9s,baz=56,slow=6.2,SNR=5.1
comp=Z,3.2nm,0.9s
KBZ Khabaz 69.08 310 ⇑ *eP* **P** **21 23 16.6 +0.3**
KBZ pmax pmax
comp=Z,10.0nm,2.2s
PINE Pine Mountain 69.41 50 P **P** **21 23 20.8 +2.1**
PINE IAmb IAmb 21 23 21.6
comp=Z,4.9nm,0.7s
K05A Summer Lake 70.05 51 P **P** **21 23 24.9 +2.3**
K05A IAmb IAmb 21 23 25.5
comp=Z,4.1nm,0.9s
STKA Stephens Creek 70.69 179 ⇑ *eP* **P** **21 23 26.9 +0.7**
MOD Modoc Plateau 70.88 51 P **P** **21 23 29.9 +2.3**
NB2 NORSAR Subarra 71.99 337 P **P** **21 23 33.6 -0.2**
comp=Z,1.6nm,0.6s,baz=39,slow=6.5
NOA NORSAR Array B 71.99 337 P **P** **21 23 33.4 -0.4**
comp=Z,2.5nm,0.7s,baz=39,slow=6.0,SNR=15
comp=Z,2.5nm,0.7s
NBO00 NORSAR Array S 72.13 337 P **P** **21 23 34.3 -0.3**
AKASG Malin Array Be 72.25 322 P **P** **21 23 34.8 -0.6**
comp=Z,1.9nm,0.4s,baz=46,slow=6.1,SNR=14
comp=Z,1.9nm,0.4s
AKBB Malin Array Si 72.25 322 P **P** **21 23 35.0 -0.5**
AKBB IAmb IAmb 21 23 35.6
comp=Z,4.7nm,0.8s
AKBB Malin Array Si 72.25 322 ⇑ *eP* **P** **21 23 34.5 -0.9**
LRM Limekiln Ridge 73.03 44 P **P** **21 23 41.6 +1.1**
BOZ Bozeman (W) 73.62 44 P **P** **21 23 45.3 +1.5**
BOZ IAmb IAmb 21 23 45.9
comp=Z,4.7nm,0.7s
BOZ Bozeman (W) 73.62 44 P **P** **21 23 45.3 +1.5**
BOZ pmax pmax
comp=Z,5.0nm,0.7s
KVN Kaiserville 73.93 53 P **P** **21 23 47.7 +1.9**
KVN IAmb IAmb 21 23 48.4
comp=Z,3.9nm,0.9s
KVN Kaiserville 73.93 53 P **P** **21 23 47.7 +1.9**
KVN pmax pmax
comp=Z,4.0nm,0.9s
NVAR Mina Array Bea 74.18 53 P **P** **21 23 49.0 +1.6**
comp=Z,1.6nm,0.8s,baz=288,slow=4.3,SNR=11
comp=Z,1.6nm,0.8s
YHL Hebgen Lake 74.34 45 P **P** **21 23 50.3 +2.1**
YHL IAmb IAmb 21 23 50.6
comp=Z,3.1nm,0.7s

HVU Hansel Valley 75.41 48 P **P** **21 23 56.1 +1.9**
HVU Hansel Valley 75.41 48 P **P** **21 23 56.2 +1.9**
HVU pmax pmax
comp=Z,2.0nm,0.7s
BUR08 Bucovina Ar. S 76.26 321 P **P** **21 23 59.4 +0.5**
BUR08 IAmb IAmb 21 24 22.8
comp=Z,5.9nm,1.5s
BURAR Bucovina Array 76.28 321 P **P** **21 23 59.1 +0.1**
BURAR Bucovina Array 76.28 321 P **P** **21 23 59.1 +0.1**
PD31 Pinedale Array 76.59 45 P **P** **21 24 01.3 +0.3**
PD31 IAmb IAmb 21 24 23.5
comp=Z,3.2nm,0.6s
PDAR Pinedale Array 76.59 45 P **P** **21 24 01.9 +0.9**
comp=Z,1.5nm,0.6s,baz=270,slow=2.4,SNR=14
comp=Z,1.5nm,0.6s
PDAR Pinedale Array 76.59 45 P **P** **21 24 01.7 +0.7**
BRTR Keskin Array B 77.00 311 P **P** **21 24 03.3 0.0**
comp=Z,0.6nm,0.5s,baz=102,slow=6.0,SNR=2.6
comp=Z,0.6nm,0.5s
MLR Muntele Rosu 77.38 319 P **P** **21 24 05.2 -0.1**
comp=Z,0.7nm,0.4s,baz=345,slow=16,SNR=2.4
MLR LR LR 22 02 49.1
comp=Z,65nm,20.5s,baz=59,slow=39
comp=Z,0.7nm,0.4s
MLR Muntele Rosu 77.38 319 P **P** **21 24 05.6 +0.4**
MLR Muntele Rosu 77.38 319 P **P** **21 24 05.6 +0.4**
MLR pmax pmax
comp=Z,4.0nm,1.4s
MORC Moravsky Berou 78.25 326 *eP* **P** **21 24 10.1 +0.2**
DPC Dobruska-Polom 78.34 327 *eP* **P** **21 24 10.0 -0.3**
DPC Dobruska-Polom 78.34 327 *eP* **P** **21 24 10.0 -0.3**
KRLC Kraliky 78.35 327 *eP* **P** **21 24 09.9 -0.5**
KRLC Kraliky 78.35 327 *eP* **P** **21 24 09.9 -0.5**
JAVC Velka Javorina 78.88 326 *eP* **P** **21 24 14.6 +1.2**
CLL Collm 78.95 330 ⇑ *iP* **P** **21 24 13.3 -0.3**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 78.95 330 ⇑ *iP* **P** **21 24 13.3 -0.3**
comp=Z,5.0nm,0.9s
CLL epPcP 21 24 59.0
VRAC Vranov 79.01 326 LR LR 22 01 36.0
comp=Z,62nm,21.1s,baz=38,slow=37
VRAC Vranov 79.01 326 *eP* **P** **21 24 14.7 +0.7**
KRUC Moravsky 79.28 326 *eP* **P** **21 24 15.6 +0.1**
PV10 Paradox Valley 79.80 49 P **P** **21 24 21.0 +2.2**
MMAI Mount Meron Ar 80.26 305 LR LR 22 04 09.3
comp=Z,45nm,18.7s,baz=304,slow=39
CKRC Cesky Krumlov 80.36 327 *eP* **P** **21 24 21.3 0.0**
RONA Rosalia, Austr 80.36 326 *eP* **P** **21 24 22.0 +0.7**
comp=Z,5.0nm,1.4s
CONA Conrad Observa 80.38 326 *eP* **P** **21 24 22.0 +0.5**
comp=Z,1.6nm,0.7s
KHC Kasperske Hory 80.42 328 *eP* **P** **21 24 21.9 +0.3**
KHC Kasperske Hory 80.42 328 *eP* **P** **21 24 21.9 +0.3**
GERES GERESS Array B 80.59 328 P **P** **21 24 21.0 -1.6**
comp=Z,0.7nm,0.6s,baz=40,slow=5.2,SNR=9.5
comp=Z,0.7nm,0.6s
GERES GERESS Array B 80.59 328 P **P** **21 24 21.0 -1.6**
VTS Vitosha 80.79 318 P **P** **21 24 24.6 +0.8**
VTS IAmb IAmb 21 24 25.1
comp=Z,3.7nm,0.7s
VTS Vitosha 80.79 318 P **P** **21 24 24.6 +0.8**
VTS pmax pmax
comp=Z,4.0nm,0.7s
EYMN Ely 81.66 32 P **P** **21 24 28.2 +0.1**
EYMN IAmb IAmb 21 24 29.0
comp=Z,3.3nm,0.8s
SOKA Soboth 81.70 326 *eP* **P** **21 24 28.1 -0.4**
comp=Z,1.8nm,1.0s
OBKA Obir 82.04 326 *eP* **P** **21 24 30.1 -0.2**
comp=Z,2.5nm,0.9s
KBA Koelnbreinsper 82.12 327 *eP* **P** **21 24 31.3 +0.5**
comp=Z,0.8nm,0.5s
ECSD EROS Data Cent 82.60 38 P **P** **21 24 33.5 +0.3**
ECSD IAmb IAmb 21 24 34.2
comp=Z,3.1nm,0.7s
ABTA Abfaltersbach 82.73 327 *eP* **P** **21 24 33.6 -0.3**
comp=Z,2.8nm,1.0s
MOTA Moosalm 82.85 328 *eP* **P** **21 24 34.3 -0.3**
comp=Z,2.9nm,1.0s
RETA Reutte 82.87 328 *eP* **P** **21 24 34.7 +0.1**
comp=Z,4.2nm,0.8s
SQTA Sankt Quirin 82.90 328 *eP* **P** **21 24 34.4 -0.3**
comp=Z,0.1nm,0.2s
CIMO Cimolais 83.11 327 P **P** **21 24 34.4 -1.3**
CIMO IAmb IAmb 21 24 35.4
comp=Z,2.7nm,1.3s
FETA Feichten 83.26 328 *eP* **P** **21 24 36.4 -0.3**
comp=Z,1.9nm,0.7s
DAVA Damuels 83.39 329 *eP* **P** **21 24 37.6 +0.3**
comp=Z,3.5nm,0.8s
ANMO Albuquerque 83.66 50 ⇑ *eP* **P** **21 24 40.4 +1.4**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
E43A Lone Tree Farm 84.75 31 P **P** **21 24 44.1 +0.1**
E43A IAmb IAmb 21 24 44.7
comp=Z,9.9nm,1.4s
VAE Valguarnera 89.11 320 LR LR 22 07 36.3
comp=Z,48nm,18.1s,baz=138,slow=37
TXAR Lajitas Array 89.28 52 P **P** **21 25 07.3 +1.0**
comp=Z,0.7nm,0.7s,baz=287,slow=3.1,SNR=8.5
TXAR pP **pP** **21 25 42.3 +0.9**
comp=Z,0.1nm,0.6s,baz=212,slow=8.4,SNR=1.7
comp=Z,0.7nm,0.7s
VNA2 Neumayer--Watz 144.19 197 PKP PKPbc 21 31 42.3 0.0
baz=128,slow=4.3
VNA3 Neumayer Olymp 144.47 196 PKP PKPbc 21 31 42.9 -0.2
LPAZ La Paz 146.05 56 PKPbc **PKPbc** **21 31 49.9 -0.5**
comp=Z,1.3nm,0.5s,baz=276,slow=5.1,SNR=7.2

*IDC **15** 21:31:36.9±1.9, 7.°34S×73.°40W, h0km, mb3.5/3, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=80.2km s-min=29.2km az=44.0*
*VAO **15** 21:31:55.1±1.9, 8.°81S×73.°89W, h138km±6km, mbR3.9*
ISC 15 21:31:50.8±3.2, 8.°9S±0.°1×74.°3W±0.°3, h150km, n16, σ1§32/14, mb3.1/3, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.93**	**55**	*eP*	**Pn**	**21 32 24.7**	**-0.4**
ETMB	**Extrema**	**8.03**	**98**	*eP*	**Pn**	**21 33 42.8**	**-1.9**
LPAZ	**La Paz**	**9.53**	**141**	Pn	**Pn**	**21 34 06.4**	**+1.2**
	0.3nm,0.3s,baz=327,slow=2.3,SNR=5.1						
	0.9nm,0.5s						
LPAZ	**La Paz**	**9.53**	**141**	*eP*	**Pn**	**21 34 06.2**	**+1.0**
VILB	**Vilhena**	**14.43**	**108**	*eP*	**P**	**21 35 09.5**	**-1.3**
PTLB	**Pontes e Lacer**	**16.20**	**115**	*eP*	**P**	**21 35 31.3**	**+0.9**
PDRB	**Porto dos Gac**	**17.50**	**101**	*eP*	**Pn**	**21 35 46.6**	**+0.7**
BOAV	**Boa Vista**	**17.70**	**51**	*eP*	**Pn**	**21 35 50.2**	**+2.0**
CLDB	**Colider**	**18.33**	**98**	*eP*	**P**	**21 35 54.3**	**+0.3**
NPGB	**Novo Progresso**	**18.84**	**86**	*eP*	**P**	**21 35 59.9**	**+0.5**
ITTB	**Itaituba**	**18.96**	**78**	*eP*	**P**	**21 36 01.2**	**+0.4**
SNDB	**Serra Nova Dou**	**22.83**	**100**	*eP*	**P**	**21 36 41.8**	**+0.5**
MCPB	**Macapa, AP**	**23.70**	**70**	*eP*	**P**	**21 36 49.4**	**+0.2**
TXAR	**Lajitas Array**	**47.35**	**324**	P	P	21 40 08.1	-1.9
	0.5nm,0.5s,baz=152,slow=8.8,SNR=10						
	0.5nm,0.5s						
PDAR	**Pinedale Array**	**60.61**	**331**	P	P	21 41 43.3	-2.8
	0.1nm,0.4s,baz=122,slow=9.7,SNR=2.5						
	0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**78.55**	**75**	P	**P**	**21 43 34.1**	**-2.2**
	0.2nm,0.5s,baz=267,slow=5.4,SNR=5.6						
	0.2nm,0.5s						

*IDC **15** 21:41:09.0±0.7, 4.°94S×150.°94E, h181km±9km, mb3.5/10, mbtmp4.0/11, MS3.3/1, Error ellipse: s-maj=26.9km s-min=14.0km az=114.0*
*NEIC **15** 21:41:08.7±1.2, 4.°8S±0.°1×151.°55E±0.°09, h223km±8km, mb4.5/16, Error ellipse: s-maj=21.1km s-min=7.9km az=208.0*
*DJA **15** 21:41:08.8±0.7, 5.°S±23.°×15.°1E±1.°8, h205km±22km, M4.5/7, mb4.4/7, MLv4.5/2*
ISC 15 21:41:08.9±0.6, 4.°95S±0.°08×151.°38E±0.°08, h200km, n44, σ1§67/46, mb4.4/17, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.91**	**46**	P	**Pn**	**21 41 38.8**	**+0.7**
	854nm,0.7s,baz=265,slow=2.8,SNR=43						
KRVT				S	**Sn**	**21 42 01.9**	**+1.1**
	307nm,0.6s,baz=267,slow=9.9,SNR=5.6						
RABL	**Rabaul**	**1.09**	**46**	Pn	**Pn**	**21 41 39.7**	**+0.4**
MANU	**Manus Island**	**4.93**	**306**	Pn	**Pn**	**21 42 23.7**	**+1.2**

HNR Honiara 9.60 118 Pn **Pn** **21 43 21.6 -1.4**
COEN Coen 12.06 222 **P** **21 44 00.0 +0.8**
CTA Charters Tower 15.85 198 P **Pn** **21 44 42.2 +0.6**
6.4nm,0.8s,baz=10.0,slow=14,SNR=5.0
CTAO Charters Tower 15.85 198 P **Pn** **21 44 42.4 +0.8**
CTAO IAmb IAmb 21 44 47.0
comp=Z,51nm,1.4s
FAKI Fak Fak 19.19 275 P **P** **21 45 17.3 -0.5**
QIS Mount Isa 19.28 215 P **P** **21 45 18.5 -0.2**
KDU Kakadu 20.19 246 P **P** **21 45 26.9 -1.6**
MTN Manton Dam 21.47 247 P **P** **21 45 39.8 -2.2**
MTN IAmb IAmb 21 46 07.2
comp=Z,12nm,0.5s
RMQ Roma 21.56 186 P **P** **21 45 43.8 +0.9**
WB0 Warramunga Arr 22.15 227 P **P** **21 45 47.0 -1.7**
WB0 IAmb IAmb 21 45 48.6
comp=Z,13nm,1.1s
WR0 Warramunga Arr 22.16 226 P **P** **21 45 47.0 -1.9**
WR0 IAmb IAmb 21 45 49.2
comp=Z,10.0nm,0.8s
WRAB Tennant Creek 22.28 227 P **P** **21 45 48.6 -1.4**
WRAB IAmb IAmb 21 45 50.3
comp=Z,9.2nm,0.6s
WRAB Tennant Creek 22.28 227 P **P** **21 45 48.6 -1.4**
WB2 Warramunga Arr 22.29 227 P **P** **21 45 48.1 -1.9**
WB2 IAmb IAmb 21 45 50.4
comp=Z,11nm,0.7s
WRA Warramunga Arr 22.30 227 P **P** **21 45 48.6 -1.5**
comp=Z,6.4nm,0.4s,baz=51,slow=10,SNR=106
WRA ScP **ScP** **21 53 00.4 +3.2**
comp=Z,1.3nm,0.9s,baz=49,slow=2.6,SNR=6.4
comp=Z,6.4nm,0.4s
WRA Warramunga Arr 22.30 227 P **P** **21 45 47.4 -2.7**
QLP Quilpie 22.57 197 P **P** **21 45 53.3 +0.8**
KNRA Kununurra 24.64 243 P **P** **21 46 10.9 -0.4**
KNRA Kununurra 24.64 243 P **P** **21 46 11.4 +0.1**
AS31 Alice Springs 25.10 220 P **P** **21 46 15.0 -0.5**
ASAR Alice Springs 25.10 220 P **P** **21 46 14.9 -0.6**
comp=Z,6.9nm,0.7s,baz=56,slow=8.6,SNR=46
ASAR ScP **ScP** **21 53 08.4 +3.6**
comp=Z,1.1nm,0.8s,baz=47,slow=3.7,SNR=6.7
comp=Z,6.9nm,0.7s
ASAR Alice Springs 25.10 220 P **P** **21 46 14.4 -1.1**
STKA Stephens Creek 28.32 198 P **P** **21 46 44.2 +0.1**
comp=Z,1.8nm,0.4s,baz=27,slow=14,SNR=7.1
comp=Z,1.8nm,0.4s
STKA Stephens Creek 28.32 198 P **P** **21 46 43.6 -0.5**
FITZ Fitzroy Crossi 28.34 240 P **P** **21 46 43.0 -1.4**
comp=Z,4.2nm,0.5s,baz=47,slow=6.1,SNR=13
comp=Z,4.2nm,0.5s
FITZ Fitzroy Crossi 28.34 240 P **P** **21 46 43.2 -1.3**
FITZ Fitzroy Crossi 28.34 240 P **P** **21 46 43.7 -0.8**
BBOO Buckleboo 31.19 205 P **P** **21 47 08.7 -0.8**
JCJ Chichijima 33.07 345 LR LR 22 01 06.4
comp=Z,49nm,18.8s,baz=80,slow=36
FORT Forrest 33.79 218 P **P** **21 47 30.8 -1.3**
MBWA Marble Bar 34.67 239 P **P** **21 47 38.9 -0.8**
MBWA IAmb IAmb 21 47 39.3
comp=Z,4.8nm,0.7s
PSA00 Pilbara Seismi 34.74 239 P **P** **21 47 37.5 -2.9**
MORW Morawa 41.15 230 P **P** **21 48 32.9 -1.0**
MORW IAmb IAmb 21 48 34.3
comp=Z,16nm,1.3s
CMAR Chiang Mai Arr 56.66 296 P **P** **21 50 30.7 -1.1**
comp=Z,0.3nm,0.3s,baz=142,slow=4.6,SNR=1.7
comp=Z,0.3nm,0.3s
AMKA Amchitka 60.99 20 P **P** **21 50 56.6 -4.4**
SONM Songino Array 65.70 328 P **P** **21 51 31.5 -0.6**
comp=Z,0.2nm,0.5s,baz=132,slow=2.1,SNR=2.7
comp=Z,0.2nm,0.5s
VNDA Vanda 72.74 178 P **P** **21 52 16.9 +2.2**
comp=Z,0.3nm,0.7s,baz=304,slow=6.0,SNR=3.7
comp=Z,0.3nm,0.7s
MKAR Makanchi Array 79.51 319 P **P** **21 52 55.3 +1.8**
comp=Z,1.0nm,1.0s,baz=94,slow=6.6,SNR=2.1
comp=Z,1.0nm,1.0s
ZALV Zalesovo Beam 80.49 327 P **P** **21 52 60.0 +1.5**
comp=Z,0.5nm,0.5s,baz=157,slow=4.7,SNR=2.3
comp=Z,0.5nm,0.5s
ILAR Eielson Array 82.83 22 P **P** **21 53 13.1 +2.6**
comp=Z,0.2nm,0.4s,baz=249,slow=7.5,SNR=2.5
comp=Z,0.2nm,0.4s
TORD Torodi Ar. Bea 149.00 287 PKPbc **PKiKP** **22 00 35.2 -0.3**
comp=Z,1.1nm,0.6s,baz=86,slow=3.0,SNR=12

*IDC **15** 21:45:51.2±0.7, 29.°17S×61.°15E, h0km, mb3.9/10, mbtmp3.9/11, ML4.5/1, MS3.5/21, Error ellipse: s-maj=28.2km s-min=21.4km az=54.0*
*NEIC **15** 21:45:53.3±2.8, 29.°18S±0.°07×60.°9E±0.°1, h10km±1km, mb4.5/8, Error ellipse: s-maj=21.0km s-min=12.1km az=257.0*
ISC 15 21:45:52.8±0.6, 29.°3S±0.°1×61.°0E±0.°1, h10km, n56, σ0§98/34, mb4.1/13, MS3.5/21, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.35**	**328**	Pn	**Pn**	**21 48 05.7**	**-2.0**
ROCAM	**Rodrigues Isla**	**9.69**	**13**	Pn	**Pn**	**21 48 12.4**	**0.0**
FOMA	**Nahampoana Res**	**13.19**	**286**	Pn	**Pn**	**21 48 58.7**	**-1.5**
VOI	**Vohitsoka**	**14.74**	**296**	Pn	**Pn**	**21 49 21.8**	**+0.1**
OPO	**Ambohidratompo**	**16.48**	**307**	Pn	**Pn**	**21 49 44.6**	**+0.1**
	0.2nm,0.3s,baz=117,slow=16,SNR=8.5						
OPO				Sn	Sn	21 52 33.7	-14
	0.1nm,0.3s,baz=62,slow=18,SNR=1.8						
	2.0nm,0.3s						
BOSA	**Boshof**	**31.21**	**262**	LR	LR	22 03 04.8	
	comp=Z,59nm,18.2s,baz=194,slow=33						
KMBO	**Kilima Mbogo**	**35.97**	**317**	LR	LR	22 04 18.4	
	comp=Z,84nm,21.9s,baz=95,slow=31						
MAW	**Mawson**	**38.40**	**179**	LR	LR	22 06 21.9	
	comp=Z,67nm,18.5s,baz=340,slow=32						
MBAR	**Mbarara**	**40.54**	**309**	LR	LR	22 09 14.2	
	comp=Z,54nm,18.9s,baz=128,slow=35						
TSUM	**Tsumeb**	**40.63**	**274**	LR	LR	22 08 17.4	
	comp=Z,35nm,20.5s,baz=150,slow=33						
PALK	**Pallekele**	**40.97**	**31**	LR	LR	22 06 24.1	
	comp=Z,69nm,20.9s,baz=292,slow=30						
ATD	**Arta Tunnel**	**44.16**	**334**	LR	LR	22 09 44.2	
	comp=Z,67nm,19.2s,baz=32,slow=32						
H01W2	**Cape Leeuwin H**	**44.95**	**111**	T	T	22 42 09.2	
	baz=261,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**44.95**	**111**	T	T	22 42 09.4	
	baz=261,slow=75,SNR=12						
H01W1	**Cape Leeuwin H**	**44.97**	**111**	T	T	22 42 12.5	
	baz=261,slow=75,SNR=10						
PSI	**Prapat**	**48.33**	**55**	LR	LR	22 11 52.4	
	comp=Z,109nm,18.1s,baz=179,slow=32						
WSAR	**Wadi Sarin**	**52.23**	**357**	LR	LR	22 12 51.3	
	comp=Z,17nm,19.3s,baz=202,slow=31						
SNAA	**Sanae**	**54.34**	**200**	LR	LR	22 13 31.6	
	comp=Z,53nm,21.9s,baz=188,slow=30						
CMAR	**Chiang Mai Arr**	**59.92**	**42**	P	**P**	**21 55 58.6**	**-0.7**
	0.4nm,0.3s,baz=322,slow=13,SNR=5.4						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**60.91**	**180**	P	**P**	**21 56 05.8**	**+0.1**
	0.9nm,0.7s,baz=272,slow=6.4,SNR=1.9						
	0.9nm,0.7s						
EIL	**Elat**	**63.64**	**335**	LR	LR	22 20 49.8	
	comp=Z,39nm,19.4s,baz=90,slow=33						
VNDA	**Vanda**	**63.98**	**166**	P	**P**	**21 56 26.3**	**+0.5**
	0.6nm,0.8s,baz=290,slow=4.1,SNR=5.2						
VNDA				LR	LR	22 22 21.9	
	comp=Z,79nm,18.4s,baz=264,slow=34						
	0.6nm,0.8s						
VNDA	**Vanda**	**63.98**	**166**	P	**P**	**21 56 26.3**	**+0.5**
VNDA				IAmb	IAmb	21 56 55.3	
	comp=Z,3.4nm,1.5s						
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	**21 56 30.2**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=244,slow=5.8,SNR=11						
	comp=Z,1.1nm,0.7s						
AS31	**Alice Springs**	**64.57**	**104**	P	**P**	**21 56 29.7**	**-0.9**
WRA	**Warramunga Arr**	**66.39**	**100**	P	**P**	**21 56 41.4**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=248,slow=5.5,SNR=6.4						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**66.39**	**100**	P	**P**	**21 56 43.0**	**+0.5**
WB2	**Warramunga Arr**	**66.41**	**100**	P	**P**	**21 56 41.9**	**-0.6**
WB2				IAmb	IAmb	21 56 48.8	
	comp=Z,8.0nm,1.4s						
WB0	**Warramunga Arr**	**66.51**	**100**	P	**P**	**21 56 42.3**	**-0.9**
GNI	**Garni**	**70.68**	**347**	LR	LR	22 25 36.0	
	comp=Z,42nm,21.6s,baz=152,slow=34						
TOA0	**Torodi Ar. Sit**	**71.05**	**298**	P	**P**	**21 57 12.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**71.05**	**298**	P	**P**	**21 57 12.2**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=122,slow=4.5,SNR=5.4						
	comp=Z,1.1nm,0.9s						

TORD	**Torodi Ar. Bea**	**71.05**	**298**	P	**P**	**21 57 12.2**	**+0.7**
TORD				IAmb	IAmb	21 57 16.9	
	comp=Z,4.2nm,1.3s						
KKAR	**Karatay Array**	**72.52**	**7**	P	**P**	**21 57 20.6**	**+0.9**
AAK	**Ala-Archa**	**72.60**	**10**	LR	LR	22 26 27.8	
	comp=Z,24nm,19.6s,baz=192,slow=34						
KBZ	**Khabaz**	**74.49**	**346**	LR	LR	22 28 26.1	
	comp=Z,38nm,21.3s,baz=153,slow=34						
GTA	**Gaotai**	**77.28**	**30**	*eP*	**P**	**21 57 48.3**	**+0.8**
GTA				pP	pwP	21 57 55.9	+0.6
GTA				sP	PcP	21 57 59.9	+1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MK31	**Makanchi Array**	**78.10**	**15**	P	**P**	**21 57 51.7**	**0.0**
MK31				IAmb	IAmb	21 58 08.0	
	comp=Z,9.0nm,1.3s						
MKAR	**Makanchi Array**	**78.10**	**15**	P	**P**	**21 57 51.1**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=183,slow=4.9,SNR=5.5						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**78.10**	**15**	P	**P**	**21 57 51.6**	**-0.2**
ABKAR	**Akbulak array**	**78.15**	**359**	P	**P**	**21 57 52.3**	**+0.4**
AKTO	**Aktyubinsk**	**79.37**	**358**	LR	LR	22 30 21.7	
	comp=Z,20nm,18.9s,baz=225,slow=34						
KURBB	**Kurchatov Arra**	**81.02**	**11**	P	**P**	**21 58 07.9**	**+0.4**
	comp=Z,0.3nm,0.2s,baz=209,slow=6.4,SNR=4.2						
	comp=Z,0.3nm,0.2s						
BELG	**Belogornoye**	**82.13**	**352**	LR	LR	22 36 57.4	
	comp=Z,12nm,18.2s,baz=128,slow=37						
ZALV	**Zalesovo Beam**	**85.38**	**14**	P	**P**	**21 58 27.8**	**-2.1**
	comp=Z,0.8nm,0.4s,baz=224,slow=5.8,SNR=4.3						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**85.38**	**14**	P	**P**	**21 58 29.2**	**-0.7**
BBTS	**Babate**	**86.53**	**289**	LR	LR	22 35 49.8	
	comp=Z,40nm,18.9s,baz=110,slow=35						
ESDC	**Sonseca Array**	**91.35**	**316**	P	**P**	**21 59 00.3**	**+1.4**
	comp=Z,1.0nm,1.1s,baz=130,slow=2.4,SNR=4.8						
ESDC				LR	LR	22 42 04.8	
	comp=Z,20nm,18.2s,baz=147,slow=37						
	comp=Z,1.0nm,1.1s						
MJAR	**Matsushiro Arr**	**97.61**	**52**	LR	LR	22 42 50.7	
	comp=Z,14nm,18.7s,baz=197,slow=35						
NOA	**NORSAR Array B**	**98.62**	**338**	LR	LR	22 43 27.8	
	comp=Z,7.7nm,20.4s,baz=245,slow=35						
YKA	**Yellowknife Ar**	**146.62**	**356**	PKPbc	**PKPdf**	**22 05 30.7**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=60,slow=3.7,SNR=2.3						
EYMN	**Ely**	**151.75**	**319**		**PKiKP**	**22 05 47.9**	**0.0**
E38A	**The Farm, Brul**	**152.47**	**317**		**PKPbc**	**22 05 48.4**	**-0.8**
PDAR	**Pinedale Array**	**164.51**	**333**	PKP	**PKPdf**	**22 05 55.4**	**-1.7**
	comp=Z,0.8nm,0.8s,baz=119,slow=1.9,SNR=5.1						
TXAR	**Lajitas Array**	**166.61**	**274**	PKP	**PKPdf**	**22 05 58.4**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=95,slow=3.2,SNR=4.6						
NVAR	**Mina Array Bea**	**170.82**	**357**	PKP	**PKPdf**	**22 06 02.9**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=216,slow=1.3,SNR=3.5						

NEIC ***15*** *21:49:22.2±1.0,34.04S±0.07×178.5W±0.1,h10km±2km, mb4.4/9,Error ellipse: s-maj=21.7km s-min=7.3km az=117.0*

IDC ***15*** *21:49:31.9±8.0,33.80S×178.57W,h91km±63km,mb3.7/2, mbtmp4.1/3,ML3.9/1,Error ellipse: s-maj=57.1km s-min=41.1km az=42.0*

ISC 15 21:49:22.3±1.0,34.06S±0.07×178.7W±0.1,h10km,n21, σ1872/21,mb4.3/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.26**	**214**	Pn	**Pn**	**21 50 27.8**	**+0.5**
RAO	**Raoul Island**	**4.84**	**8**		**Pn**	**21 50 34.0**	**-1.1**
URZ	**Urewera**	**5.40**	**218**	P	Pb	21 50 53.1	-3.5
	3.6nm,0.3s,baz=329,slow=0.8,SNR=8.9						
URZ				S	**Sb**	**21 51 58.1**	**-3.3**
	23nm,0.6s,baz=357,slow=17,SNR=5.9						
	13nm,0.4s						
OUZ	**Omahuta**	**6.47**	**258**	Pn	**Pn**	**21 50 59.8**	**+2.2**
PLWZ	**Palliser**	**8.90**	**211**	Pn	**Pn**	**21 51 35.6**	**+4.7**
KHZ	**Kahutara**	**10.34**	**214**	Pn	**Pn**	**21 51 50.7**	**+0.1**
MARNC	**Mare, Loyalty**	**17.16**	**313**	Pn	**Pn**	**21 53 20.0**	**-2.2**
COEN	**Coen**	**39.87**	**291**	P	**P**	**21 56 57.6**	**+1.3**
AS31	**Alice Springs**	**42.47**	**271**	P	**P**	**21 57 18.4**	**+0.7**
ASAR	**Alice Springs**	**42.47**	**271**	P	**P**	**21 57 18.9**	**+1.1**
	1.7nm,0.7s,baz=112,slow=7.3,SNR=14						
	1.7nm,0.7s						
ASAR	**Alice Springs**	**42.47**	**271**	P	**P**	**21 57 18.7**	**+0.9**
WR0	**Warramunga Arr**	**43.62**	**276**	P	**P**	**21 57 27.4**	**+0.4**
WR0				IAmb	IAmb	21 57 36.6	
	comp=Z,5.8nm,1.1s						
WB2	**Warramunga Arr**	**43.78**	**276**	P	**P**	**21 57 28.8**	**+0.4**
WB2				IAmb	IAmb	21 57 48.7	
	comp=Z,19nm,1.5s						
WRA	**Warramunga Arr**	**43.79**	**276**	P	**P**	**21 57 28.8**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=116,slow=7.6,SNR=12						
	comp=Z,1.8nm,0.7s						
WRA	**Warramunga Arr**	**43.79**	**276**	P	**P**	**21 57 28.6**	**+0.1**
WB0	**Warramunga Arr**	**43.83**	**277**	P	**P**	**21 57 28.9**	**+0.1**
WB0				IAmb	IAmb	21 58 09.6	
	comp=Z,12nm,1.4s						
VNDA	**Vanda**	**44.41**	**186**	P	**P**	**21 57 32.3**	**-0.3**
VNDA				IAmb	IAmb	21 58 02.7	
	comp=Z,3.4nm,1.4s						
MTN	**Manton Dam**	**50.09**	**282**	P	**P**	**21 58 18.3**	**+0.6**
QSPA	**South Pole Qui**	**56.06**	**180**	P	**P**	**21 59 01.6**	**+0.4**
QSPA				IAmb	IAmb	21 59 25.3	
	comp=Z,6.1nm,1.4s						
FINES	**FINESS Array B**	**148.34**	**337**	PKPbc	**PKPbc**	**22 09 06.6**	**-1.4**
	comp=Z,4.3nm,1.0s,baz=22,slow=2.1,SNR=6.2						
TORD	**Torodi Ar. Bea**	**159.18**	**181**	PKPab	**PKPab**	**22 09 57.0**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=188,slow=2.9,SNR=1.9						

IDC 15 21:52:47.5±2.7,16.76S×169.98W,h0km,mb3.5/3, mbtmp3.5/3,MS3.5/2,Error ellipse: s-maj=90.6km s-min=40.2km az=9.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**52.75**	**257**	P	P	22 02 04.3	-0.4
	0.7nm,1.1s,baz=96,slow=7.7,SNR=2.0						
WRA				LR	LR	22 23 23.8	
	comp=Z,25nm,18.2s,baz=164,slow=35						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**52.83**	**253**	P	P	22 02 05.5	+0.1
	0.4nm,0.4s,baz=89,slow=7.8,SNR=7.5						
	0.4nm,0.4s						
VNDA	**Vanda**	**62.39**	**187**	P	P	22 03 11.7	0.0
	0.3nm,0.6s,baz=18,slow=6.4,SNR=3.4						
	0.3nm,0.6s						
KAPI	**Kappang**	**69.69**	**271**	LR	LR	22 33 37.2	
	comp=Z,56nm,18.2s,baz=34,slow=35						
TORD	**Torodi Ar. Bea**	**171.19**	**113**	PKPab	PKPab	22 14 18.0	-0.5
	0.7nm,1.0s,baz=245,slow=2.5,SNR=3.5						

IDC ***15*** *21:56:30.3±0.7,26.13S×11.52W,h0km,mb3.9/14, mbtmp3.9/14,MS3.3/4,Error ellipse: s-maj=21.7km s-min=16.8km az=160.0*

NEIC ***15*** *21:56:32.2±0.9,26.15S±0.09×11.5W±0.1,h10km±1km, mb4.6/27,Error ellipse: s-maj=21.5km s-min=9.1km az=125.0*

ISC 15 21:56:31.9±0.5,26.1S±0.1×11.53W±0.09,h10km,n44, σ0994/41,mb4.5/27,MS3.3/4,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**32.68**	**103**	P	**P**	**22 03 03.6**	**-1.0**
	7.8nm,1.0s,baz=289,slow=6.7,SNR=7.0						
	7.8nm,1.0s						
BOSA	**Boshof**	**32.68**	**103**	P	**P**	**22 03 03.4**	**-1.3**
BOSA				IAmb	IAmb	22 03 05.7	
	comp=Z,10nm,1.0s						
SOE	**Somerset East**	**32.85**	**110**	P	**P**	**22 03 05.1**	**-0.9**
DBIC	**Dimbokro**	**33.23**	**12**	P	**P**	**22 03 08.2**	**-1.1**
DBIC				IAmb	IAmb	22 03 33.7	
	comp=Z,10.0nm,1.2s						
LBTB	**Lobatse**	**33.44**	**96**	LR	LR	22 15 16.0	
	comp=Z,37nm,18.1s,baz=204,slow=34						
LBTB	**Lobatse**	**33.44**	**96**	P	**P**	**22 03 09.8**	**-1.4**
LBTB				IAmb	IAmb	22 03 49.6	
	comp=Z,14nm,1.4s						
BDFB	**Brasilia**	**35.54**	**280**	P	**P**	**22 03 28.5**	**-1.0**
	comp=Z,2.2nm,0.5s,baz=164,slow=7.4,SNR=4.0						
	comp=Z,2.2nm,0.5s						
BDFB	**Brasilia**	**35.54**	**280**	P	**P**	**22 03 28.6**	**-0.9**
BDFB				IAmb	IAmb	22 04 10.9	
	comp=Z,8.7nm,1.3s						

PLTB	**Pedras Altas**	**37.08**	**251**	P	**P**	**22 03 42.8**	**+0.4**
PLTB				IAmb	IAmb	22 03 45.1	
	comp=Z,11nm,1.1s						
MATP	**Matopo**	**37.10**	**90**	P	**P**	**22 03 41.5**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=258,slow=10.0,SNR=6.2						
	comp=Z,2.4nm,0.8s						
LSZ	**Lusaka**	**38.55**	**82**	P	**P**	**22 03 56.0**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=236,slow=8.1,SNR=5.6						
	comp=Z,1.9nm,0.8s						
CPUP	**Villa Florida**	**40.92**	**259**	P	**P**	**22 04 13.6**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=136,slow=13,SNR=3.6						
CPUP				LR	LR	22 18 11.1	
	comp=Z,40nm,19.8s,baz=218,slow=32						
	comp=Z,1.3nm,0.7s						
CPUP	**Villa Florida**	**40.92**	**259**	P	**P**	**22 04 14.3**	**-0.3**
KOWA	**Kowa**	**41.03**	**11**	P	**P**	**22 04 15.2**	**-0.3**
TOA0	**Torodi Ar. Sit**	**41.10**	**20**	P	**P**	**22 04 14.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**41.10**	**20**	P	**P**	**22 04 14.9**	**-1.2**
	comp=Z,2.0nm,1.0s,baz=199,slow=7.5,SNR=5.7						
	comp=Z,2.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**41.10**	**20**	P	**P**	**22 04 15.5**	**-0.6**
SNAA	**Sanae**	**45.84**	**176**	P	**P**	**22 04 53.5**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=308,slow=9.3,SNR=5.7						
	comp=Z,2.1nm,0.9s						
SNAA	**Sanae**	**45.84**	**176**	P	**P**	**22 04 53.0**	**-0.9**
SIV	**San Ignacio**	**47.08**	**272**	P	**P**	**22 05 05.1**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=107,slow=11,SNR=3.6						
	comp=Z,0.6nm,0.4s						
PLCA	**Paso Flores**	**50.48**	**238**	P	**P**	**22 05 30.1**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=57,slow=17,SNR=3.1						
	comp=Z,2.4nm,0.9s						
LMEL	**Las Melosas**	**50.82**	**247**	P	**P**	**22 05 32.7**	**-0.2**
BO02	**Sierra Bellavi**	**51.17**	**245**	P	**P**	**22 05 34.3**	**-1.1**
BO02				IAmb	IAmb	22 05 35.4	
	comp=Z,8.4nm,0.8s						
CO01	**Juntas del Tor**	**51.35**	**251**	P	**P**	**22 05 37.2**	**+0.1**
MT09	**Tagante**	**51.48**	**246**	P	**P**	**22 05 36.6**	**-1.2**
AC05	**El Transito**	**51.73**	**253**	P	**P**	**22 05 39.2**	**-0.6**
SAML	**Samuel**	**51.78**	**279**	P	**P**	**22 05 40.2**	**+0.1**
GO02	**Mina Guanaco**	**51.96**	**258**	P	**P**	**22 05 42.4**	**+0.6**
GO02				IAmb	IAmb	22 05 48.6	
	comp=Z,13nm,1.1s						
LVC	**Limon Verde**	**52.03**	**261**	P	**P**	**22 05 43.3**	**+0.9**
LVC				IAmb	IAmb	22 05 52.0	
	comp=Z,7.8nm,1.3s						
PB15	**IPOC Station P**	**52.37**	**260**	P	**P**	**22 05 44.6**	**-0.1**
BELA	**Belgrano 2**	**52.93**	**186**	P	**P**	**22 05 47.9**	**+0.1**
BELA				IAmb	IAmb	22 05 48.5	
	comp=Z,4.7nm,0.8s						
PB01	**IPOC Station P**	**53.00**	**263**	P	**P**	**22 05 49.1**	**-0.2**
PB01				IAmb	IAmb	22 05 49.2	
	comp=Z,5.4nm,0.9s						
PB07	**IPOC Station P**	**53.15**	**262**	P	**P**	**22 05 50.1**	**-0.3**
PB07				IAmb	IAmb	22 05 52.8	
	comp=Z,8.3nm,0.9s						
QSPA	**South Pole Qui**	**64.09**	**180**	P	**P**	**22 07 07.0**	**+1.0**
QSPA				IAmb	IAmb	22 07 15.1	
	comp=Z,7.1nm,1.2s						
PESTR	**Estremoz**	**64.76**	**3**	P	**P**	**22 07 12.0**	**+1.6**
PESTR				IAmb	IAmb	22 07 12.5	
	comp=Z,3.2nm,1.0s						
ESDC	**Sonseca Array**	**65.84**	**6**	P	**P**	**22 07 18.0**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=190,slow=8.0,SNR=4.5						
	comp=Z,0.4nm,0.7s						
ESBB	**Sonseca Array**	**65.84**	**6**	P	**P**	**22 07 19.4**	**+2.0**
ESBB				IAmb	IAmb	22 07 31.7	
	comp=Z,4.8nm,1.2s						
SDV	**Santo Domingo**	**67.11**	**293**	LR	LR	22 34 11.3	
	comp=Z,38nm,19.8s,baz=184,slow=34						
VNDA	**Vanda**	**76.52**	**179**	P	**P**	**22 08 22.6**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=216,slow=7.1,SNR=5.2						
	comp=Z,0.6nm,0.8s						
BRTR	**Keskin Array B**	**77.87**	**34**	P	**P**	**22 08 31.6**	**+1.7**
	comp=Z,1.0nm,0.8s,baz=236,slow=6.8,SNR=2.3						
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**77.97**	**17**	P	**P**	**22 08 30.3**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=234,slow=3.3,SNR=1.8						
	comp=Z,0.1nm,0.4s						
MLR	**Muntele Rosu**	**79.01**	**26**	P	**P**	**22 08 36.2**	**+0.2**
MLR				IAmb	IAmb	22 08 37.7	
	comp=Z,9.1nm,1.4s						
VRAC	**Vranov**	**79.17**	**18**	LR	LR	22 40 40.8	
	comp=Z,17nm,21.9s,baz=108,slow=34						
AKASG	**Malin Array Be**	**84.54**	**25**	P	**P**	**22 09 05.0**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=220,slow=4.2,SNR=2.1						
	comp=Z,0.5nm,0.6s						

NEIC ***15*** *22:18:28.4±1.2,18.69N±0.04×145.6E±0.1,h197km±7km, mb4.5/99,Error ellipse: s-maj=19.7km s-min=5.8km az=96.0*

IDC ***15*** *22:18:31.8±4.4,18.77N×145.51E,h235km±42km, mb3.6/16,mbtmp4.2/17,Error ellipse: s-maj=19.8km s-min=11.8km az=93.0*

ISC 15 22:18:28.3±0.5,18.68N±0.06×145.6E±0.1,h200km,n283, σ0961/279,mb4.4/62,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.11**	**187**	S	**Sn**	**22 20 42.9**	**-1.1**
	59nm,0.4s,baz=31,slow=23,SNR=1.9						
JOW	**Kunigami**	**17.86**	**300**	P	**Pn**	**22 22 23.7**	**-1.1**
JOW				IAmb	IAmb	22 22 31.0	
	comp=Z,20nm,0.9s						
JYT	**Yasato**	**18.11**	**346**	P	**P**	**22 22 26.2**	**+0.9**
INU	**Inuyama**	**18.24**	**337**		**Pn**	**22 22 29.3**	**+0.1**
INU				IAmb	IAmb	22 22 29.9	
	comp=Z,21nm,1.2s						
JMN	**Monobe**	**18.26**	**327**	P	**P**	**22 22 26.9**	**-0.1**
JMN				IAmb	IAmb	22 22 30.5	
	comp=Z,10nm,0.8s						
JGF	**Kuroka**	**18.35**	**338**	P	**Pn**	**22 22 30.0**	**-0.4**
JGF				IAmb	IAmb	22 22 30.6	
	comp=Z,9.0nm,0.6s						
MJAR	**Matsushiro Arr**	**18.93**	**342**	P	**P**	**22 22 33.6**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=174,slow=10,SNR=15						
MAJO	**Matsushiro**	**18.93**	**342**	P	**P**	**22 22 34.5**	**+0.2**
MAJO				IAmb	IAmb	22 22 36.7	
	comp=Z,10nm,0.5s						
JMM	**Marumori**	**19.56**	**349**	P	**P**	**22 22 42.5**	**+1.6**
JHS	**Saijyo**	**19.65**	**328**	P	**P**	**22 22 42.0**	**+0.1**
H11S3	**WAKE ISLAND Hy 20.04**	**87**		T	T	22 43 53.7	
	baz=275,slow=75,SNR=6.1						
H11S1	**WAKE ISLAND Hy 20.05**	**87**		T	T	22 43 56.2	
	baz=275,slow=75,SNR=5.5						
H11S2	**WAKE ISLAND Hy 20.05**	**87**		T	T	22 43 50.5	
	baz=275,slow=75,SNR=6.1						
H11N1	**WAKE ISLAND Hy 20.18**	**84**		T	T	22 44 04.4	
	baz=267,slow=74,SNR=5.1						
H11N2	**WAKE ISLAND Hy 20.19**	**84**		T	T	22 44 05.0	
	baz=267,slow=74,SNR=6.6						
H11N3	**WAKE ISLAND Hy 20.20**	**84**		T	T	22 44 05.6	
	baz=267,slow=74,SNR=5.4						
JSD	**Sado**	**20.31**	**343**	P	**P**	**22 22 48.9**	**0.0**
JSD				IAmb	IAmb	22 22 51.6	
	comp=Z,11nm,0.7s						
JTM	**Tenmabayashi**	**22.36**	**351**	P	**P**	**22 23 11.1**	**+1.2**
KSRS	**Korea Array**	**24.25**	**324**	P	**P**	**22 23 26.4**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=142,slow=9.1,SNR=6.7						
	comp=Z,1.2nm,0.5s						
USRK	**Ussuriysk Ar.**	**27.87**	**339**	P	**P**	**22 23 59.2**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=140,slow=9.3,SNR=4.9						
	comp=Z,1.0nm,0.6s						
COEN	**Coen**	**32.52**	**184**	P	**P**	**22 24 41.9**	**+1.3**
MTN	**Manton Dam**	**34.40**	**205**	P	**P**	**22 24 55.5**	**-1.3**
PETK	**Petropavlovsk-**	**35.64**	**13**	P	**P**	**22 25 07.8**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=176,slow=5.7,SNR=3.8						
	comp=Z,2.9nm,0.7s						
PETK	**Petropavlovsk-**	**35.64**	**13**	P	**P**	**22 25 07.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**36.51**	**315**	*eP*	**P**	**22 25 16.5**	**+1.8**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
WB0	**Warramunga Arr**	**39.75**	**197**	P	**P**	**22 25 42.1**	**+0.4**
WB0				IAmb	IAmb	22 25 59.1	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**39.89**	**196**	P	**P**	**22 25 42.6**	**-0.3**
WRAB	**Tennant Creek**	**39.92**	**197**	P	**P**	**22 25 44.3**	**+1.1**
WRAB				IAmb	IAmb	22 26 02.0	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**39.93**	**197**	P	**P**	**22 25 43.9**	**+0.7**
WRA	**Warramunga Arr**	**39.93**	**197**	P	**P**	**22 25 43.6**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=14,slow=8.1,SNR=24						
WRA				PcP	**PcP**	**22 27 43.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=13,slow=3.4,SNR=5.7						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**39.93**	**197**	P	**P**	**22 25 43.4**	**+0.2**

PZH	**PanZhiHua**	**41.03**	**289**	P	**P**	**22 25 53.3**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,5.0s						
FITZ	**Fitzroy Crossi**	**41.46**	**209**	P	**P**	**22 25 56.3**	**+0.5**
ULN	**Ulaanbaatar**	**42.70**	**322**	P	**P**	**22 26 06.1**	**+0.4**
SONM	**Songino Array**	**43.07**	**321**	P	**P**	**22 26 07.9**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=138,slow=9.5,SNR=9.0						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**43.07**	**321**	P	**P**	**22 26 08.5**	**-0.1**
ASAR	**Alice Springs**	**43.60**	**196**	P	**P**	**22 26 13.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=18,slow=6.6,SNR=5.6						
	comp=Z,0.4nm,0.7s						
YAK	**Yakutsk**	**44.71**	**349**	P	**P**	**22 26 21.5**	**+0.2**
NIKH	**Nikolski High**	**49.10**	**35**	P	**P**	**22 26 55.3**	**-0.1**
	baz=244						
UNV	**Unalaska Valle**	**50.75**	**35**	P	**P**	**22 27 08.0**	**+0.2**
	baz=245						
GAMB	**Gambell**	**53.52**	**22**	P	**P**	**22 27 28.0**	**+0.1**
	baz=233						
S12K	**Black Hills**	**53.84**	**34**	P	**P**	**22 27 29.8**	**-0.8**
	baz=248						
WMQ	**Urumqi**	**54.21**	**311**	*eP*	**P**	**22 27 34.1**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,59nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.7s						
SDPT	**Sand Point**	**54.56**	**35**	P	**P**	**22 27 35.8**	**+0.1**
SDPT	**Sand Point**	**54.56**	**35**	P	**P**	**22 27 35.8**	**+0.1**
	baz=250						
CHNA	**Chernabura Isl**	**54.87**	**35**	P	**P**	**22 27 38.2**	**+0.3**
	baz=251						
MORW	**Morawa**	**55.37**	**212**	P	**P**	**22 27 42.5**	**+0.7**
S14K	**Fog Glacier**	**55.37**	**34**	P	**P**	**22 27 41.5**	**-0.1**
	baz=250						
TNA	**Tin City**	**55.88**	**21**	P	**P**	**22 27 44.8**	**-0.1**
	baz=236						
CHGN	**Chignik**	**55.98**	**34**	P	**P**	**22 27 45.6**	**-0.1**
CHGN				IAmb	IAmb	22 27 47.8	
	comp=Z,13nm,1.0s						
CHGN	**Chignik**	**55.98**	**34**	P	**P**	**22 27 45.4**	**-0.3**
	baz=252						
P16K	**Nushagak River**	**57.09**	**31**	P	**P**	**22 27 53.3**	**-0.2**
	baz=250						
N16K	**Nishlik Lake**	**57.23**	**29**	P	**P**	**22 27 54.9**	**+0.3**
	baz=248,SNR=5.2						
O16K	**Kokwok River B**	**57.23**	**30**	P	**P**	**22 27 54.5**	**0.0**
	baz=250						
CHIR	**Chirikof Islan**	**57.33**	**35**	P	**P**	**22 27 56.3**	**+1.0**
CHIR	**Chirikof Islan**	**57.33**	**35**	P	**P**	**22 27 56.1**	**+0.8**
	baz=254						
R17K	**Ugashik Creek**	**57.44**	**33**	P	**P**	**22 27 56.3**	**+0.2**
	baz=253						
O17K	**Koliganek Bris**	**57.77**	**30**	P	**P**	**22 27 58.3**	**0.0**
	baz=251,SNR=6.4						
P17K	**Kvichak River**	**57.90**	**31**	P	**P**	**22 27 59.1**	**0.0**
	baz=252						
ZAA0	**Zalesovo Array**	**57.94**	**323**	P	**P**	**22 27 59.2**	**-0.4**
ZALV	**Zalesovo Beam**	**57.94**	**323**	P	**P**	**22 27 58.6**	**-1.0**
	comp=Z,3.3nm,0.6s,baz=102,slow=7.9,SNR=15						
ZALV				PcP	**pwP**	**22 28 48.1**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=107,slow=9.7,SNR=1.9						
	comp=Z,3.3nm,0.6s						
ZALV	**Zalesovo Beam**	**57.94**	**323**	P	**P**	**22 27 59.0**	**-0.6**
SII	**Sitkinak Islan**	**58.30**	**34**	P	**P**	**22 28 02.7**	**+0.7**
SII	**Sitkinak Islan**	**58.30**	**34**	P	**P**	**22 28 02.1**	**0.0**
	baz=255						
MK31	**Makanchi Array**	**58.37**	**314**	P	**P**	**22 28 02.6**	**-0.2**
MK31				IAmb	IAmb	22 28 36.0	
	comp=Z,12nm,1.5s						
MKAR	**Makanchi Array**	**58.37**	**314**	P	**P**	**22 28 02.6**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=94,slow=6.9,SNR=26						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	**58.37**	**314**	P	**P**	**22 28 03.0**	**+0.2**
MAKZ	**Makanchi**	**58.59**	**314**	P	**P**	**22 28 04.7**	**+0.4**
MAKZ				IAmb	IAmb	22 28 06.5	
	comp=Z,7.7nm,1.1s						
N18K	**Kilae Creek**	**58.63**	**29**	P	**P**	**22 28 05.0**	**+0.7**
N18K				IAmb	IAmb	22 28 05.5	
	comp=Z,5.5nm,0.7s						
N18K	**Kilae Creek**	**58.63**	**29**	P	**P**	**22 28 04.3**	**0.0**
	baz=251						
O18K	**Koktuh Hills**	**58.70**	**31**	P	**P**	**22 28 05.4**	**+0.6**
O18K	**Koktuh Hills**	**58.70**	**31**	P	**P**	**22 28 04.8**	**0.0**
	baz=252						
SVW2	**Sparrevohn**	**58.91**	**29**	P	**P**	**22 28 07.0**	**+0.8**
SVW2				IAmb	IAmb	22 28 07.

	comp=Z,7.4nm,1.4s							
RC01	**Rabbit Creek A**	61.64	30	P	P	22 28 24.5	-0.2	
RC01	**Rabbit Creek A**	61.64	30	P	P	22 28 23.4	-1.2	
	baz=257							
I21K	**Tanana**	61.73	25	P	P	22 28 25.2	+0.1	
I21K				IAmb	IAmb	22 28 26.7		
	comp=Z,14nm,1.2s							
I21K	**Tanana**	61.73	25	P	P	22 28 25.3	+0.1	
	baz=253,SNR=6.2							
F21K	**Alatna River**	61.81	23	P	P	22 28 25.7	-0.1	
	baz=250							
BPAW	**Bear Paw Mtn.**	61.83	26	P	P	22 28 25.9	0.0	
BPAW				IAmb	IAmb	22 28 26.9		
	comp=Z,10nm,1.0s							
BPAW	**Bear Paw Mtn.**	61.83	26	P	P	22 28 25.2	-0.7	
	baz=254,SNR=5.2							
TRF	**Thorofare Moun**	61.96	27	P	P	22 28 26.6	-0.4	
	baz=255							
H22K	**Ishtalitna Cre**	62.18	24	P	P	22 28 28.3	0.0	
	baz=253							
MLY	**Manley**	62.19	25	P	P	22 28 28.3	0.0	
MLY				IAmb	IAmb	22 28 29.0		
	comp=Z,5.9nm,0.6s							
MLY	**Manley**	62.19	25	P	P	22 28 27.7	-0.6	
	baz=254,SNR=8.2							
PWL	**Port Wells**	62.26	30	P	P	22 28 28.5	-0.3	
PWL	**Port Wells**	62.26	30	P	P	22 28 28.6	-0.2	
	baz=258							
KNK	**Knik Glacier**	62.31	30	P	P	22 28 29.1	0.0	
KNK	**Knik Glacier**	62.31	30	P	P	22 28 29.2	0.0	
	baz=258							
A21K	**Barrow**	62.35	18	P	P	22 28 29.2	0.0	
	baz=245							
F22K	**John River**	62.38	23	P	P	22 28 29.7	+0.1	
	baz=251							
SML	**Sawmill**	62.45	29	P	P	22 28 29.6	-0.5	
SML	**Sawmill**	62.45	29	P	P	22 28 29.7	-0.4	
	baz=258							
P23K	**Montague Islan**	62.54	31	P	P	22 28 31.1	+0.4	
	baz=260							
WAT1	**Susitna Watana**	62.58	28	P	P	22 28 30.6	-0.3	
	baz=257							
E22K	**Anaktuvuk Pass**	62.71	22	P	P	22 28 32.0	+0.2	
	baz=251							
M23K	**Glacier View**	62.73	29	P	P	22 28 31.8	-0.1	
	baz=258							
NEA2	**Nenana**	62.77	26	P	P	22 28 31.8	-0.3	
	baz=256							
I23K	**Minto, Yukon-K**	62.79	26	P	P	22 28 32.0	-0.2	
I23K	**Minto, Yukon-K**	62.79	26	P	P	22 28 31.7	-0.5	
	baz=255,SNR=6.1							
WAT6	**Susitna Watana**	62.89	29	P	P	22 28 33.0	-0.1	
	baz=258							
H23K	**Yukon River**	62.89	25	P	P	22 28 32.9	0.0	
H23K				IAmb	IAmb	22 28 34.2		
	comp=Z,4.2nm,0.8s							
H23K	**Yukon River**	62.89	25	P	P	22 28 33.5	+0.5	
	baz=255							
SCM	**Sheep Creek Mo**	62.92	29	P	P	22 28 33.3	0.0	
SCM	**Sheep Creek Mo**	62.92	29	P	P	22 28 33.6	+0.3	
	baz=259							
G23K	**Bananza Creek**	62.94	24	P	P	22 28 34.0	+0.7	
	baz=254							
FID	**Port Fidalgo**	63.13	31	P	P	22 28 33.8	-0.7	
WRH	**Wood River Hil**	63.15	26	P	P	22 28 33.8	-0.8	
WRH				IAmb	IAmb	22 28 34.5		
	comp=Z,3.7nm,0.6s							
DHY	**Denali Highway**	63.15	28	P	P	22 28 34.4	-0.4	
	baz=258							
MDM	**Murphy Dome**	63.20	26	P	P	22 28 35.4	+0.4	
MDM				IAmb	IAmb	22 28 36.4		
	comp=Z,5.8nm,0.5s							
CCB	**Clear Creek Bu**	63.31	26	P	P	22 28 34.2	-1.4	
D23K	**Nanushuk River**	63.37	21	P	P	22 28 36.9	+0.9	
	baz=252							
EYAK	**Cordova Ski Ar**	63.45	31	P	P	22 28 36.8	+0.1	
EYAK	**Cordova Ski Ar**	63.45	31	P	P	22 28 37.0	+0.4	
	baz=261							
M24K	**Tolsona, Glenn**	63.51	29	P	P	22 28 37.3	+0.2	
	baz=260							
KLU	**Klutina**	63.52	30	P	P	22 28 37.6	+0.4	
KLU				IAmb	IAmb	22 29 19.4		
	comp=Z,17nm,1.5s							
KLU	**Klutina**	63.52	30	P	P	22 28 37.5	+0.4	
	baz=260							
H24K	**Noodor Dome**	63.56	25	P	P	22 28 37.2	-0.2	
H24K				IAmb	IAmb	22 28 38.3		
	comp=Z,3.0nm,0.6s							
H24K	**Noodor Dome**	63.56	25	P	P	22 28 37.0	-0.3	
	baz=256,SNR=5.4							
POKR	**Poker Plat Res**	63.57	26	P	P	22 28 36.7	-0.7	
	baz=257							
HDA	**Harding Lake**	63.62	27	P	P	22 28 37.1	-0.6	
	baz=258							
TOLK	**Toolik Lake Re**	63.66	22	P	P	22 28 38.8	+0.9	
TOLK				IAmb	IAmb	22 28 39.4		
	comp=Z,9.6nm,1.1s							
TOLK	**Toolik Lake Re**	63.66	22	P	P	22 28 37.9	-0.1	
	baz=253							
C23K	**Itkillik River**	63.67	20	P	P	22 28 37.2	-0.7	
	baz=252							
IL31		63.72	26	P	P	22 28 36.6	-1.7	
IL31				IAmb	IAmb	22 28 37.8		
	comp=Z,6.1nm,1.0s							
ILAR	**Eielson Array**	63.72	26	P	P	22 28 36.9	-1.5	
	comp=Z,4.5nm,0.9s,baz=257,slow=5.0,SNR=26							
	comp=Z,4.5nm,0.9s							
ILAR	**Eielson Array**	63.72	26	P	P	22 28 36.3	-2.0	
E24K	**Your Creek**	63.89	22	P	P	22 28 39.3	-0.2	
	baz=255							
G24K	**Hadweenzic Riv**	63.92	24	P	P	22 28 39.3	-0.3	
	baz=256							
F24K	**Squaw Lake**	63.97	23	P	P	22 28 40.2	+0.2	
	baz=255							
PAX	**Paxson**	63.99	28	P	P	22 28 40.1	-0.1	
PAX				IAmb	IAmb	22 28 40.9		
	comp=Z,4.4nm,0.5s							
PAX	**Paxson**	63.99	28	P	P	22 28 39.7	-0.5	
	baz=260							
K24K	**Donnelly Dome**	64.00	27	P	P	22 28 39.9	-0.4	
	baz=259							
HARP	**HAARP**	64.03	29	P	P	22 28 40.3	-0.1	
	baz=260							
D24K	**Happy Valley**	64.07	21	P	P	22 28 39.9	-0.7	
	baz=254,SNR=5.8							
BMRM	**Bremner River**	64.07	31	P	P	22 28 40.0	-0.8	
BMRM				IAmb	IAmb	22 28 42.7		
	comp=Z,10nm,1.0s							
BMRM	**Bremner River**	64.07	31	P	P	22 28 40.5	-0.2	
	baz=262							
N25K	**Chitina, Valde**	64.17	30	P	P	22 28 40.8	-0.6	
	baz=261							
J25K	**Salcha River,**	64.33	27	P	P	22 28 40.8	-1.6	
J25K				IAmb	IAmb	22 28 41.7		
	comp=Z,3.0nm,0.7s							
J25K	**Salcha River,**	64.33	27	P	P	22 28 41.5	-0.9	
	baz=259							
RIDG	**Independent Ri**	64.40	28	P	P	22 28 42.1	-0.7	
RIDG				IAmb	IAmb	22 28 43.3		
	comp=Z,7.9nm,0.8s							
RIDG	**Independent Ri**	64.40	28	P	P	22 28 42.2	-0.7	
	baz=260							
H25K	**Birch Creek**	64.47	25	P	P	22 28 42.7	-0.5	
	baz=258							
DOT	**Dot Lake**	64.73	28	P	P	22 28 44.2	-0.7	
DOT				IAmb	IAmb	22 28 45.3		
	comp=Z,6.1nm,0.8s							
SCRK	**Sand Creek**	64.81	27	P	P	22 28 44.8	-0.8	
SCRK				IAmb	IAmb	22 28 46.2		
	comp=Z,6.1nm,1.1s							
SCRK	**Sand Creek**	64.81	27	P	P	22 28 44.9	-0.7	
	baz=261							
F25K	**Christian Rive**	64.82	23	P	P	22 28 44.9	-0.6	
	baz=258,SNR=7.2							
MCARA	**McCarthy VSAT**	64.88	30	P	P	22 28 45.4	-0.6	
	baz=263							
D25K	**Kavik River**	64.95	21	P	P	22 28 45.7	-0.6	
	baz=256,SNR=8.3							
E25K	**Arctic Village**	64.96	23	P	P	22 28 45.7	-0.7	
	baz=257							
J26L	**Joseph Creek**	65.08	27	P	P	22 28 46.4	-0.9	
J26L				IAmb	IAmb	22 28 47.7		
	comp=Z,11nm,1.3s							
J26L	**Joseph Creek**	65.08	27	P	P	22 28 46.8	-0.5	
	baz=261							
BMAR	**Burnt Mountain**	65.19	24	P	P	22 28 48.4	+0.6	
MESA	**MESA**	65.28	32	P	P	22 28 48.0	-0.7	
	baz=264							
G26K	**Porcupine Rive**	65.40	24	P	P	22 28 48.7	-0.5	
	baz=260							
F26K	**Sheenjek River**	65.40	23	P	P	22 28 49.1	-0.1	
	baz=259,SNR=6.5							
M27K	**Edge Creek, AK**	65.54	29	P	P	22 28 50.1	-0.2	
M27K				IAmb	IAmb	22 29 08.7		
	comp=Z,10.0nm,1.5s							
M27K	**Edge Creek, AK**	65.54	29	P	P	22 28 49.8	-0.5	
	baz=264							
C26K	**Camden Bay**	65.59	21	P	P	22 28 50.3	0.0	
	baz=257,SNR=6.5							
L27K	**Beaver Creek,**	65.64	28	P	P	22 28 50.8	-0.1	
L27K	**Beaver Creek,**	65.64	28	P	P	22 28 51.2	+0.4	
	baz=263							
CTG	**Chitna Glacier**	65.65	31	P	P	22 28 50.8	-0.3	
	baz=265							
BCAR	**Beaver Creek A**	65.66	28	P	P	22 28 50.7	-0.3	
C27K	**Jago River**	65.94	21	P	P	22 28 52.1	-0.4	
	baz=258							
I27K	**Kandik River**	66.06	26	P	P	22 28 53.4	0.0	
	baz=262							
PINM	**Pinnacle**	66.11	32	P	P	22 28 53.9	-0.1	
	baz=266							
EGAK	**Eagle**	66.14	27	P	P	22 28 54.4	+0.5	
EGAK	**Eagle**	66.14	27	P	P	22 28 54.5	+0.5	
	baz=263							
YUK3	**Moose Creek**	66.14	30	P	P	22 28 54.9	+0.6	
	baz=265							
H27K	**Steamboat Moun**	66.18	25	P	P	22 28 54.9	+0.6	
	baz=262							
O28M	**Mount Upton**	66.19	31	P	P	22 28 54.5	-0.3	
	baz=266							
G27K	**Doyon Strip**	66.21	24	P	P	22 28 54.9	+0.5	
	baz=262							
E27K	**Coleen River**	66.44	23	P	P	22 28 55.6	-0.2	
	baz=261							
BRVK	**Borovoye**	66.46	320	P	P	22 28 56.0	-0.2	
BRVK				IAmb	IAmb	22 28 57.8		
	comp=Z,6.3nm,0.9s							
KK31	**Karatay Array**	66.67	310	P	P	22 28 58.4	+0.7	
KKAR	**Karatay Array**	66.67	310	P	P	22 28 58.3	+0.5	
KKAR	**Karatay Array**	66.67	310	P	P	22 28 58.0	+0.3	
DAWY	**Dawson**	66.83	28	P	P	22 28 58.3	-0.1	
	baz=265							
O29M	**Mount Kennedy**	66.96	32	P	P	22 28 59.6	+0.2	
	baz=267							
YUK6	**Outpost Mounta**	67.10	31	P	P	22 28 60.0	-0.4	
	baz=267							
M29M	**Somme Creek**	67.13	29	P	P	22 29 00.2	-0.2	
	baz=266							
P29M	**Windy Craggy**	67.36	32	P	P	22 29 02.5	+0.7	
P29M				IAmb	IAmb	22 29 16.8		
	comp=Z,17nm,1.1s							
P29M	**Windy Craggy**	67.36	32	P	P	22 29 02.0	+0.2	
	baz=268							
I29M	**Ogilvie Camp,**	67.40	26	P	P	22 29 02.3	+0.3	
	baz=265							
HYT	**Haines Junctio**	67.51	31	P	P	22 29 03.5	+0.6	
HYT				IAmb	IAmb	22 29 05.1		
	comp=Z,13nm,1.2s							
HYT	**Haines Junctio**	67.51	31	P	P	22 29 02.8	0.0	
	baz=268							
N30M	**Aishikik Lake**	67.73	30	P	P	22 29 04.3	+0.1	
	baz=268							
P30M	**Million Dollar**	67.76	32	P	P	22 29 04.4	0.0	
	baz=269							
PLBC	**Pleasant Camp**	68.06	33	P	P	22 29 06.4	+0.4	
	baz=270							
EPYK	**Eagle Plains**	68.12	25	P	P	22 29 06.3	-0.1	
EPYK				IAmb	IAmb	22 29 06.6		
	comp=Z,7.7nm,1.1s							
EPYK	**Eagle Plains**	68.12	25	P	P	22 29 06.9	+0.4	
	baz=266							
O30N	**Mendenhall**	68.20	31	P	P	22 29 07.1	0.0	
	baz=269							
N31M	**Braeburn, Yuko**	68.36	30	P	P	22 29 08.9	+0.9	
	baz=269							
WHY	**Whitehorse**	68.80	31	P	P	22 29 11.6	+0.8	
	baz=270							
M31M	**Drury Creek, Y**	69.03	30	P	P	22 29 11.5	-0.6	
M31M	**Drury Creek, Y**	69.03	30	P	P	22 29 12.4	+0.4	
	baz=270							
P32M	**Atlin**	69.41	32	P	P	22 29 14.7	+0.3	
	baz=272							
INK	**Inuvik**	69.44	23	P	P	22 29 13.2	-1.2	
	comp=Z,3.0nm,0.5s,baz=272,slow=6.5,SNR=8.2							
	comp=Z,3.0nm,0.5s							
INK	**Inuvik**	69.44	23	P	P	22 29 14.8	+0.4	
INK	**Inuvik**	69.44	23	P	P	22 29 13.6	-0.8	
	baz=269							
P33M	**Teslin, Yukon**	69.83	32	P	P	22 29 17.2	+0.1	
	baz=272							
CRAG	**Craig**	69.93	37	P	P	22 29 18.3	+0.7	
	baz=274							
WRAK	**Wrangell Islan**	70.30	36	P	P	22 29 20.2	+0.3	
	baz=274							
R33M	**Jennings River**	70.81	33	P	P	22 29 22.8	-0.4	
	baz=274							
DLBC	**Dease Lake**	71.38	34	P	P	22 29 26.2	-0.3	
	baz=275							
C36M	**Paulatuk**	72.81	22	P	P	22 29 33.9	-0.8	
C36M	**Paulatuk**	72.81	22	P	P	22 29 35.0	+0.3	
	baz=277							
ABKAR	**Akbulak array**	73.25	317	P	P	22 29 37.1	-0.5	
YKA	**Yellowknife Ar**	78.07	28	P	P	22 30 04.1	-0.6	
	comp=Z,2.5nm,0.5s,baz=288,slow=5.5,SNR=9.1							
	comp=Z,2.5nm,0.5s							
YKA	**Yellowknife Ar**	78.07	28	P	P	22 30 03.9	-0.8	
K02D	**Willamette Mer**	78.14	49	P	P	22 30 05.9	+0.3	
	baz=284							
I04A	**Tendick Farm,**	78.75	48	P	P	22 30 08.8	0.0	
	baz=285							
LTY	**Liberty**	79.02	44	P	P	22 30 09.7	-0.6	
L04D	**Klamath Falls**	79.23	49	P	P	22 30 10.9	-0.8	
	baz=285							
B08A	**Colville Reser**	79.58	42	P	P	22 30 12.6	-0.7	
J05D	**Fort Rock, OR**	79.70	48	P	P	22 30 13.0	-1.2	
	baz=286							
PINE	**Pine Mountain**	79.77	47	P	P	22 30 14.3	-0.3	
PINE				IAmb	IAmb	22 30 16.0		
	comp=Z,7.6nm,0.8s							
K05A	**Summer Lake**	80.10	48	P	P	22 30 16.6	+0.2	
K05A				IAmb	IAmb	22 30 17.6		
	comp=Z,7.9nm,0.8s							
BEKR	**Beckworth**	81.30	51	P	P	22 30 22.3	-0.5	
BEKR				IAmb	IAmb	22 30 23.4		
	comp=Z,4.8nm,0.8s							
PNTR	**Pine Nut**	82.09	52	P	P	22 30 26.9	-0.1	
PNTR				IAmb	IAmb	22 30 29.3		
	comp=Z,7.7nm,0.7s							
ARCES	**ARCESS Array B**	82.47	342	P	P	22 30 27.0	-1.0	
	comp=Z,0.9nm,0.6s,baz=64,slow=8.2,SNR=9.8							
	comp=Z,0.9nm,0.6s							
ARCES	**ARCESS Array B**	82.47	342	P	P	22 30 27.0	-1.0	
ARCES				IAmb	IAmb	22 31 09.9		
	comp=Z,8.2nm,1.3s							
KVN	**Kaiserville**	83.21	51	P	P	22 30 32.6	-0.2	
KVN				IAmb	IAmb	22 30 33.5		
	comp=Z,4.8nm,0.8s							
NVAR	**Mina Array Bea**	83.26	52	P	P	22 30 32.9	-0.1	
	comp=Z,4.1nm,0.7s,baz=269,slow=5.7,SNR=36							
	comp=Z,4.1nm,0.7s							
NV11	**Mina Array Sit**	83.37	52	P	P	22 30 33.4	-0.1	
MSO	**Missoula**	83.53	43	P	P	22 30 33.7	-0.4	
	baz=290							
HLID	**Hailey**	84.34	46	P	P	22 30 37.9	-0.4	
	baz=290							
MPMC	**Manual Prospec**	84.64	54	P	P	22 30 39.2	-0.7	
	baz=289							
ELK	**Elko**	84.74	49	P	P	22 30 40.1	-0.3	
CIS	**Catalina Islan**	84.77	57	P	P	22 30 40.7	+0.2	
	baz=289							
TPNV	**Topopah Spring**	85.28	53	P	P	22 30 43.3	+0.2	
	baz=290							
R11A	**Troy Canyon, C**	85.30	51	P	P	22 30 43.3	0.0	
	baz=290							
BOZ	**Bozeman (W)**	85.47	43	P	P	22 30 43.0	-0.8	
	baz=292							
PFO	**Pinyon Flats O**	86.25	56	P	P	22 30 47.5	-0.4	
	baz=290							
TPFO	**Pinon Flats**	86.25	56	P	P	22 30 47.7	-0.2	
	baz=290							
GMRC	**Granite Mounta**	86.47	55	P	P	22 30 48.4	-0.6	
	baz=290							
DUG	**Dugway, Tooele**	86.66	49	P	P	22 30 49.7	-0.1	
	baz=292							
FINES	**FINESS Array B**	86.84	335	P	P	22 30 47.5	-2.5	
	comp=Z,1.9nm,0.5s,baz=80,slow=4.6,SNR=13							
	comp=Z,1.9nm,0.5s							
RLMT	**Red Lodge**	87.19	43	P	P	22 30 52.9	+0.5	
	baz=294							
NEE2	**Needles Airpor**	87.28	54	P	P	22 30 53.0	+0.3	
	baz=291							
PDMCI	**Parker Dam,Lak**	87.81	55	P	P	22 30 55.7	+0.5	
	baz=291							
PDAR	**Pinedale Array**	87.94	45	P	P	22 30 55.0	-1.0	
	comp=Z,0.2nm,0.4s,baz=185,slow=1.7,SNR=3.9							
	comp=Z,0.2nm,0.4s							
WUAZ	**Wupatki**	89.47	53	P	P	22 31 03.0	-0.2	
	baz=293							
214A	**Organ Pipe Nat**	89.70	56	P	P	22 31 04.3	+0.1	
	baz=292							
N23A	**Red Feather La**	91.17	46	P	P	22 31 10.5	-0.7	
	baz=296							
LPAZ	**La Paz**	147.81	91	PKPbc	PKPbc	22 37 51.1	-0.2	
	comp=Z,3.5nm,0.9s,baz=342,slow=6.4,SNR=12							

NEIC ***15*** *22:28:02.8±1.5,32.13S±0.08×176.41W±0.06,h10km±2km, mb4.5/8,Error ellipse: s-maj=14.3km s-min=8.7km az=183.0*

IDC ***15*** *22:28:12.5±2.9,32.06S×178.13W,h0km,mb3.8/2, mbtmp3.8/3,ML3.5/1,MS3.2/2,Error ellipse: s-maj=68.0km s-min=36.0km az=118.0*

ISC 15 22:28:09.3±2.4,32.1S±0.1×177.6W±0.4,h10km,n20, σ1ꝑ40/17,mb4.4/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	2.81	355	Pn	Pn	22 28 52.9	-1.5
URZ	**Urewera**	7.53	213	Pn	Pn	22 30 00.6	+1.5
	0.8nm,0.3s,baz=18,slow=6.4,SNR=1.9						
URZ				Sn	Sn	22 31 22.5	-2.0
	2.0nm,0.3s,baz=53,slow=20,SNR=8.4						
	2.9nm,0.5s						
URZ	**Urewera**	7.53	213	Pn	Pn	22 29 60.0	+0.9
OUZ	**Omahuta**	7.96	244	Pn	Pn	22 30 10.9	+5.9
BKZ	**Black Stump Fm**	8.54	212	Pn	Pn	22 30 13.5	+0.4
BFZ	**Birch Farm**	9.91	208	Pn	Pn	22 30 32.2	+0.4
RPZ	**Rata Peaks**	14.64	214	Pn	Pn	22 31 35.0	-1.6
RPZ				IAmb	IAmb	22 31 47.4	
	comp=Z,23nm,1.3s						
MSVF	**Nonsavu**	14.79	344	LR	LR	22 36 28.5	
	comp=Z,81nm,18.3s,baz=223,slow=34						
DZM	**Mont Dzumac**	17.30	301	LR	LR	22 37 44.4	
	comp=Z,91nm,18.0s,baz=58,slow=34						
AFI	**Afiamalu**	18.85	18	P	P	22 32 18.5	-11
CAN	**Canberra**	27.87	254	P	P	22 34 00.3	+1.0
CAN				IAmb	IAmb	22 34 05.5	
	comp=Z,10nm,1.3s						
ASAR	**Alice Springs**	43.35	269	P	P	22 36 13.6	+1.6
	comp=Z,0.5nm,0.5s,baz=104,slow=7.5,SNR=9.4						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	43.35	269	P	P	22 36 11.0	-1.0
WR0	**Warramunga Arr**	44.31	274	P	P	22 36 21.2	+1.6
WR0				IAmb	IAmb	22 37 00.4	
	comp=Z,9.0nm,1.4s						
WB2	**Warramunga Arr**	44.48	274	P	P	22 36 22.2	+1.2
WB2				IAmb	IAmb	22 36 42.2	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	44.49	274	P	P	22 36 22.4	+1.3
	comp=Z,0.9nm,0.5s,baz=113,slow=7.7,SNR=25						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	44.49	274	P	P	22 36 22.9	+1.8
WB0	**Warramunga Arr**	44.52	274	P	P	22 36 22.5	+1.2
PSA00	**Pilbara Seismi**	56.09	264	P	P	22 37 48.5	-0.5
FINES	**FINESS Array B**	146.81	339	PKPbc	PKiKP	22 47 54.4	+0.8
	comp=Z,0.8nm,0.5s,baz=57,slow=3.1,SNR=12						

CNRM ***15*** *22:42:43.2,36.33N×1.48W,h30km,ml2.8*

LDG ***15*** *22:42:44.9±0.2,36.15N×1.53W,h20km,Ml2.6/4,Error ellipse: s-maj=5.6km s-min=2.6km az=156.0*

IGIL ***15*** *22:42:44.6,36.18N×1.56W,h29km*

MDD ***15*** *22:42:44.8±0.5,36.18N×1.56W,h29km±6km,mb_Lg2.8/27, Error ellipse: s-maj=3.7km s-min=1.9km az=145.0*

SFS ***15*** *22:42:44.0,36.19N×1.55W,ML2.9,MAR MEDITERRANEO (ARGELIA)*

INMG ***15*** *22:42:45.0±1.7,36.26N×1.57W,h31km±14km,ML2.6, Error ellipse: s-maj=6.4km s-min=4.2km az=132.0*

ISC 15 22:42:43.8±1.3,36.29N±0.03×1.56W±0.03,h31km±13km, n88,σ1ꝑ76/152,3C-4D,Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENIJ	**Nijar**	0.86	322	ǁP	Pn	22 42 59.8	+0.1
ENIJ				S	Sn	22 43 10.9	-0.3
EBER	**Berja**	1.23	300	P	Pn	22 43 05.0	0.0
EBER				S	Sn	22 43 21.7	+1.0
CHAS	**Isla Isabel II**	1.32	213	P	Pn	22 43 05.1	-0.9
CHAS				S	Sn	22 43 20.3	-2.2
TLOR	**Lorca, Murcia**	1.36	356	⇑P	Pn	22 43 07.6	+0.9
TLOR				S	Sn	22 43 23.9	+0.2
CART	**Cartagena**	1.37	19	P	Pn	22 43 06.3	-0.4
CART				S	Sn	22 43 22.2	-1.5
CART	**Cartagena**	1.37	19	P	Pn	22 43 06.5	-0.1
CART				S	Sn	22 43 21.7	-2.0
WMELI	**Melilla**	1.50	230	P	Pn	22 43 07.8	-0.6
WMELI				S	Sn	22 43 25.6	-1.4
EMEL	**Melilla**	1.51	229	P	Pn	22 43 08.0	-0.7
EMEL				S	Sn	22 43 25.5	-1.7
EMUR	**La Murta**	1.57	9	ǁP	Pn	22 43 09.9	+0.4
EMUR				S	Sn	22 43 29.0	+0.2
EMUR				*i* Vmb_Lg		22 43 32.8	
EZAR	**Zarzadilla de**	1.58	356	ǁP	Pn	22 43 09.7	-0.1
EZAR				S	Sn	22 43 28.8	-0.5
GOG	**Mont Gurugu**	1.59	228	P	Pn	22 43 09.0	-0.8
GOG	**Mont Gurugu**	1.59	228	P	Pn	22 43 09.2	-0.6
GOG				S	Sb	22 43 31.7	-0.5
TAF	**Taforalt**	1.63	206	P	Pb	22 43 13.0	-0.3
TAF	**Taforalt**	1.63	206	P	Pn	22 43 10.9	+0.4
TAF				S	Sn	22 43 31.6	+1.1
ELGU	**Los Guajares,**	1.76	290	⇑P	Pn	22 43 11.9	-0.3
ELGU				S	Sn	22 43 32.3	-1.4
ELGU				*i* Vmb_Lg		22 43 35.7	
EQUE	**Quentar**	1.77	302	P	Pb	22 43 14.3	-1.3
EQUE				S	Sb	22 43 39.3	+2.0
EQUE				*i* Vmb_Lg		22 43 46.2	
EQES	**Quesada**	1.93	322	P	Pb

EIBI				*i* Vmb_Lg			22 44 18.5	
ESDC	**Sonseca Array**	**3.87**	**331**	P		**Pn**	**22 43 43.4**	**+2.2**
ESDC				S		**Sn**	**22 44 24.2**	**-1.5**
ESDC				*i* Vmb_Lg			22 44 26.9	
PAB	**San Pablo**	**3.93**	**327**	P		**Pn**	**22 43 43.1**	**+1.2**
PAB				S		**Sn**	**22 44 25.7**	**-1.4**
PAB				*i* Vmb_Lg			22 44 27.3	
ECOL	**Islas Columbre**	**4.01**	**25**	P		**Pn**	**22 43 43.9**	**+0.9**
ECOL				S		**Sn**	**22 44 27.1**	**-1.8**
EMOS	**Mosqueruela**	**4.15**	**12**	P		**Pn**	**22 43 47.8**	**+2.6**
EMOS				S		**Sn**	**22 44 34.4**	**+1.6**
EMOS				*i* Vmb_Lg			22 44 36.3	
UCM	**Universidad Co**	**4.22**	**342**	P		**Pn**	**22 43 49.1**	**+3.1**
UCM				S		**Sn**	**22 44 34.5**	**+0.2**
MDT	**Midelt**	**4.29**	**217**	P		**Pn**	**22 43 48.0**	**+1.0**
MDT	**Midelt**	**4.29**	**217**	P		**Pn**	**22 43 48.0**	**+1.0**
MD31	**MD31**	**4.32**	**219**	P		**Pn**	**22 43 48.8**	**+1.4**
EMIN	**Mina Concepcio**	**4.35**	**291**	P		**Pn**	**22 43 47.7**	**0.0**
EMIN				S		**Sn**	**22 44 36.4**	**-1.0**
EMIN				*i* Vmb_Lg			22 44 37.9	
ETOR	**Torete**	**4.54**	**355**	P		**Pn**	**22 43 52.2**	**+1.9**
PBAR	**Barrancos**	**4.76**	**295**	*e*P		**Pn**	**22 43 54.6**	**+1.2**
PBAR				*e*S		**Sn**	**22 44 45.4**	**-2.1**
PBAR				A		A	22 45 26.6	
	4.2nm,0.6s							
GUD	**Guadarrama**	**4.80**	**336**	P		**Pn**	**22 43 56.6**	**+2.6**
ERTA	**Horta de San J**	**4.89**	**17**	P		**Pn**	**22 43 57.0**	**+1.9**
ERTA				S		**Sn**	**22 44 50.0**	**-0.6**
ERTA				*i* Vmb_Lg			22 44 54.9	
ETOS	**Mallorca**	**4.89**	**44**	P		**Pn**	**22 43 56.1**	**+0.9**
ETOS				S		**Sn**	**22 44 47.9**	**-2.8**
ETOS				*i* Vmb_Lg			22 44 53.2	
EGRO	**El Granado**	**4.91**	**286**	P		**Pn**	**22 43 55.9**	**+0.5**
EGRO				S		**Sn**	**22 44 48.9**	**-2.2**
EBAD	**Badajoz**	**4.99**	**301**	P		**Pn**	**22 43 57.0**	**+0.6**
EBAD				S		**Sn**	**22 44 51.2**	**-1.8**
EBAD				*i* Vmb_Lg			22 44 53.7	
PVAQ	**Vaqueiros**	**5.06**	**284**	P		**Pn**	**22 43 57.5**	**0.0**
PVAQ	**Vaqueiros**	**5.06**	**284**	P		**Pn**	**22 43 57.5**	**0.0**
PVAQ	**Vaqueiros**	**5.06**	**284**	*e*P		**Pn**	**22 43 57.5**	**0.0**
PVAQ				*e*S		**Sn**	**22 44 52.9**	**-2.1**
PVAQ				A		A	22 44 54.7	
	4.8nm,0.4s							
PBDV	**Barranco-do-Ve**	**5.21**	**282**	*e*P		**Pn**	**22 44 00.8**	**+1.3**
PBDV				*e*S		**Sn**	**22 44 57.0**	**-1.5**
PBDV				A		A	22 45 03.8	
	3.6nm,1.1s							
PCVE	**Castro Verde**	**5.36**	**286**	*e*P		**Pn**	**22 44 02.4**	**+0.8**
PCVE				*e*S		**Sn**	**22 45 01.3**	**-1.0**
PESTR	**Estremoz**	**5.44**	**300**	P		**Pn**	**22 44 04.1**	**+1.4**
PESTR	**Estremoz**	**5.44**	**300**	P		**Pn**	**22 44 04.1**	**+1.4**
PESTR	**Estremoz**	**5.44**	**300**	*e*P		**Pn**	**22 44 04.3**	**+1.6**
PESTR				*e*S		**Sn**	**22 45 02.5**	**-1.7**
PESTR				A		A	22 45 45.5	
	5.0nm,0.6s							
EPOB	**Poblet**	**5.45**	**21**	P		**Pn**	**22 44 04.2**	**+1.3**
EPOB				S		**Sn**	**22 45 05.3**	**+0.6**
EPOB				*i* Vmb_Lg			22 45 06.4	
MESJ	**Messejana**	**5.55**	**288**	*e*P		**Pn**	**22 44 03.9**	**-0.3**
MESJ	**Messejana**	**5.55**	**288**	*e*P		**Pn**	**22 44 04.8**	**+0.6**
MESJ				*e*S		**Sn**	**22 45 05.1**	**-1.8**
MESJ				A		A	22 45 07.4	
	3.1nm,0.6s							
PMRV	**Marv??o**	**5.58**	**306**	*e*P		**Pn**	**22 44 06.0**	**+1.4**
PMRV				*e*S		**Sn**	**22 45 05.0**	**-2.6**
PMRV				A		A	22 45 47.7	
	5.7nm,0.8s							
EVO	**Evora**	**5.60**	**295**	P		**Pn**	**22 44 05.7**	**+0.8**
EVO				S		**Sn**	**22 45 05.0**	**-3.3**
EVO	**Evora**	**5.60**	**295**	*e*P		**Pn**	**22 44 05.8**	**+0.8**
EVO				*e*S		**Sn**	**22 45 06.2**	**-2.1**
EVO				A		A	22 45 09.0	
	3.3nm,0.2s							
MORF	**Marmelete**	**5.78**	**282**	*e*P		**Pn**	**22 44 08.4**	**+1.0**
PNCL	**Nicolau / Gran**	**5.85**	**290**	*e*P		**Pn**	**22 44 09.0**	**+0.6**
PCBR	**Castelo Branco**	**5.86**	**309**	*e*P		**Pn**	**22 44 10.9**	**+2.4**
PCBR				*e*S		**Sn**	**22 45 11.8**	**-2.8**
PCBR				A		A	22 45 57.9	
	5.9nm,0.6s							
PMTG	**Montargil**	**5.97**	**300**	*e*P		**Pn**	**22 44 11.6**	**+1.6**
PMTG				*e*S		**Sn**	**22 45 14.2**	**-3.1**
PMTG				A		A	22 46 02.5	
	4.0nm,0.7s							
EMIR	**Miracle**	**6.10**	**22**	P		**Pn**	**22 44 13.6**	**+1.8**
EMIR				S		**Sn**	**22 45 23.3**	**+2.6**
MVO	**Moncorvo**	**6.48**	**320**	*e*P		**Pn**	**22 44 19.8**	**+2.8**
MVO				*e*S		**Sn**	**22 45 28.2**	**-1.6**
MVO				A		A	22 46 17.2	
	5.6nm,0.6s							
ECHI	**Chisagues Biel**	**6.50**	**11**	P		**Pn**	**22 44 19.6**	**+2.1**
PSBE	**So Bento**	**6.56**	**301**	*e*P		**Pn**	**22 44 19.7**	**+1.5**
PSBE				*e*S		**Sn**	**22 45 29.3**	**-2.7**
PSBE				A		A	22 46 26.2	
	5.0nm,0.7s							
EORO	**Oroz-Betelu**	**6.59**	**2**	P		**Pn**	**22 44 22.1**	**+3.5**
PCAS	**Casmilo, Conde**	**6.63**	**307**	*e*P		**Pn**	**22 44 22.1**	**+3.0**
PCAS				*e*S		**Sn**	**22 45 30.5**	**-3.1**
PCAS				A		A	22 46 21.4	
	6.6nm,0.6s							
ETSF	**Etsaut**	**6.64**	**6**	*e*Pn		**Pn**	**22 44 21.7**	**+2.4**
ETSF				*e*Sn		**Sn**	**22 45 33.1**	**-0.8**
	0.6nm,0.4s							
PVIS	**Viseu**	**6.65**	**314**	*e*P		**Pn**	**22 44 21.8**	**+2.5**
PVIS				*e*S		**Sn**	**22 45 33.2**	**-0.8**
PVIS				A		A	22 46 28.3	
	4.5nm,0.6s							
SJPF	**Ste Jean**	**6.82**	**2**	*e*Pn		**Pn**	**22 44 24.4**	**+2.8**
SJPF				*e*Sn		**Sn**	**22 45 37.2**	**-0.9**
	0.2nm,0.3s							
EPF	**Esparros**	**6.89**	**12**	*e*Pn		**Pn**	**22 44 25.3**	**+2.7**
EPF				*e*Sn		**Sn**	**22 45 38.8**	**-1.1**
	0.8nm,0.3s							
EALK	**Alkurruntz**	**6.92**	**0**	P		**Pn**	**22 44 26.6**	**+3.5**
ECAL	**Calabor**	**6.93**	**326**	P		**Pn**	**22 44 25.2**	**+2.0**
ECAL				S		**Sn**	**22 45 39.6**	**-1.4**
POLO	**Lamas de Olo**	**7.03**	**318**	*e*P		**Pn**	**22 44 26.9**	**+2.3**
POLO				*e*S		**Sn**	**22 45 41.3**	**-2.2**
ELOB	**Lobios**	**7.52**	**320**	P		**Pn**	**22 44 35.2**	**+3.9**
ELOB				S		**Sn**	**22 45 51.8**	**-3.7**
ELOB				*i* Vmb_Lg			22 45 57.5	
EARI	**Arriondas**	**7.54**	**339**	P		**Pn**	**22 44 33.1**	**+1.5**
EARI				S		**Sn**	**22 45 55.1**	**-1.0**
MTLF	**Montolieu**	**7.61**	**21**	*e*Pn		**Pn**	**22 44 34.1**	**+1.6**
MTLF				*e*Sn		**Sn**	**22 45 56.7**	**-1.0**
PGAV	**Gavieira, Arco**	**7.70**	**319**	*e*P		**Pn**	**22 44 36.9**	**+3.1**
PGAV				*e*S		**Sn**	**22 45 57.6**	**-2.4**
PGAV				A		A	22 46 10.6	
	1.6nm,0.4s							
LFF	**La Frestale**	**8.81**	**11**	*e*Pn		**Pn**	**22 44 50.8**	**+1.9**
CAF	**Calviac**	**9.05**	**17**	*e*Pn		**Pn**	**22 44 54.1**	**+1.8**
LMR	**La Mourre**	**9.37**	**39**	*e*Pn		**Pn**	**22 44 57.1**	**+0.5**
LMR				*e*Sn		**Sn**	**22 46 37.1**	**-3.8**
	0.4nm,0.2s							
SBF	**Sospel**	**10.22**	**40**	*e*Pn		**Pn**	**22 45 09.0**	**+0.7**
PGF	**Pioggiola**	**10.28**	**49**	*e*Pn		**Pn**	**22 45 09.8**	**+0.7**
QUIF	**Quistinic**	**11.68**	**355**	*e*Pn		**Pn**	**22 45 28.5**	**+0.4**

NEIC ***15*** *22:44:59.3±0.7,4°.3S±0°.1×149°.6E±0°.1, h574km±11km, mb4.2/18, Error ellipse: s-maj=21.5km s-min=16.3km az=57.0*

IDC ***15*** *22:45:00.3±1.4,4°.59S×149°.49E, h561km±16km, mb3.1/5, mbtmp4.1/7, Error ellipse: s-maj=28.3km s-min=16.0km az=121.0*

ISC 15 22:45:00.2±0.7,4°.5S±0°.1×149°.7E±0°.1, h577km, n34, σ1§10/36, mb4.2/14, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.33**	**85**	P	**P**	**22 46 12.8**	**-1.1**
	49nm,0.4s,baz=207,slow=4.5,SNR=4.4						
RABL	**Rabaul**	**2.48**	**82**	P	**P**	**22 46 13.1**	**-1.6**
MANU	**Manus Island**	**3.39**	**317**	P	**P**	**22 46 20.2**	**+0.3**
COEN	**Coen**	**11.37**	**214**	P	**P**	**22 47 32.5**	**+0.1**
CTA	**Charters Tower**	**15.83**	**192**	P	**P**	**22 48 17.4**	**+0.4**
	5.7nm,0.5s,baz=4.6,slow=10,SNR=7.3						
CTAO	**Charters Tower**	**15.83**	**192**	P	**P**	**22 48 17.6**	**+0.6**
EIDS	**Eidsvold**	**20.77**	**176**	P	**P**	**22 49 02.5**	**+0.6**
WB0	**Warramunga Arr**	**21.26**	**223**	P	**P**	**22 49 06.4**	**-0.1**
WB0				IAmb	IAmb	22 49 39.2	
	comp=Z,8.5nm,1.2s						
WR0	**Warramunga Arr**	**21.29**	**223**	P	**P**	**22 49 06.6**	**-0.1**
WR0				IAmb	IAmb	22 49 08.7	
	comp=Z,5.8nm,0.9s						
WB2	**Warramunga Arr**	**21.41**	**223**	P	**P**	**22 49 07.6**	**-0.1**
WB2				IAmb	IAmb	22 49 08.9	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**21.42**	**223**	P	**P**	**22 49 07.6**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=48,slow=9.3,SNR=61						
WRA				S	**S**	**22 52 25.5**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=58,slow=13,SNR=5.7						
WRA				PcP	**PcP**	**22 52 48.3**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=47,slow=1.9,SNR=5.0						
	comp=Z,2.6nm,0.4s						
WRA	**Warramunga Arr**	**21.42**	**223**	P	**P**	**22 49 06.6**	**-1.2**
AS31	**Alice Springs**	**24.38**	**217**	P	**P**	**22 49 33.8**	**-0.3**
AS31				IAmb	IAmb	22 49 35.2	
	comp=Z,2.7nm,0.5s						
ASAR	**Alice Springs**	**24.38**	**217**	P	**P**	**22 49 34.0**	**-0.2**
	comp=Z,4.8nm,0.6s,baz=48,slow=7.9,SNR=56						
	comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**24.38**	**217**	P	**P**	**22 49 33.6**	**-0.5**
ARMA	**Armidale**	**25.82**	**176**	P	**P**	**22 49 48.4**	**+1.6**
ARMA				IAmb	IAmb	22 50 14.8	
	comp=Z,21nm,1.4s						
FITZ	**Fitzroy Crossi**	**27.12**	**238**	P	**P**	**22 49 57.0**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=39,slow=6.7,SNR=9.8						
	comp=Z,1.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**27.12**	**238**	P	**P**	**22 49 57.4**	**-0.9**
FITZ				IAmb	IAmb	22 49 58.6	
	comp=Z,2.6nm,0.8s						
STKA	**Stephens Creek**	**28.25**	**195**	P	**P**	**22 50 07.1**	**-0.9**
BBOO	**Buckleboo**	**30.89**	**203**	P	**P**	**22 50 29.9**	**-0.8**
FORT	**Forrest**	**33.13**	**216**	P	**P**	**22 50 49.4**	**-0.4**
MBWA	**Marble Bar**	**33.47**	**238**	P	**P**	**22 50 51.7**	**-1.0**
MBWA				IAmb	IAmb	22 51 05.9	
	comp=Z,9.3nm,1.4s						
MORW	**Morawa**	**40.16**	**229**	P	**P**	**22 51 46.8**	**-0.6**
MORW				IAmb	IAmb	22 52 19.2	
	comp=Z,14nm,1.4s						
TUWZ	**Tuamarina**	**42.67**	**153**	P	**P**	**22 52 07.6**	**+0.6**
MSWZ	**Moikau Station**	**43.27**	**152**	P	**P**	**22 52 12.0**	**+0.3**
MQZ	**McQueen's Vall**	**43.97**	**156**	P	**P**	**22 52 17.5**	**+0.5**
MQZ				IAmb	IAmb	22 52 26.3	
	comp=Z,5.7nm,1.1s						
SONM	**Songino Array**	**64.48**	**329**	P	**P**	**22 54 41.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=118,slow=2.1,SNR=1.5						
	comp=Z,0.1nm,0.3s						
VNDA	**Vanda**	**73.23**	**177**	P	**P**	**22 55 33.7**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=333,slow=7.2,SNR=19						
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	**73.23**	**177**	P	**P**	**22 55 33.7**	**+1.0**
SBA	**Scott Base**	**73.83**	**176**	P	**P**	**22 55 38.6**	**+2.5**
RND	**Reindeer**	**81.69**	**24**	P	**P**	**22 56 18.4**	**-0.3**
RND				IAmb	IAmb	22 56 25.4	
	comp=Z,9.4nm,1.5s						
ILAR	**Eielson Array**	**83.08**	**23**	P	**P**	**22 56 22.8**	**-2.9**
GERES	**GERESS Array B**	**122.18**	**327**	PKP	**PKiKP**	**23 02 51.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=27,slow=1.1,SNR=2.3						
TORD	**Torodi Ar. Bea**	**147.28**	**287**	PKPbc	**PKPbc**	**23 03 41.4**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=96,slow=2.9,SNR=21						

IDC ***15*** *22:56:25.7±1.8,52°.02N×178°.27E, h119km±15km, mb3.6/17, mbtmp4.0/19, Error ellipse: s-maj=23.9km s-min=11.2km az=170.0*

AEIC ***15*** *22:56:25±2.3,52°.0N±0°.1×178°.2E±0°.1, h148km±6km, Error ellipse: s-maj=19.1km s-min=8.2km az=191.0*

NEIC ***15*** *22:56:27.4±2.2,51°.9N±0°.1×178°.17E±0°.10, h137km±8km, mb4.3/94, ML3.6(AEIC), Error ellipse: s-maj=20.2km s-min=8.1km az=191.0*

ISC 15 22:56:27.1±0.5,51°.97N±0°.10×178°.11E±0°.04, h150km, n279, σ1§27/238, mb4.2/50, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.95**	**128**		**Pn**	**22 56 49.9**	**-1.6**
AMKA				Sn	**Sn**	**22 57 06.4**	**-3.6**
SHEM	**Shemya Is, Ala**	**2.57**	**289**	P	**Pn**	**22 57 08.0**	**-1.1**
	160nm,0.3s,baz=59,slow=4.9,SNR=53						
SHEM				S	**Sn**	**22 57 39.8**	**-1.7**
	172nm,0.3s,baz=331,slow=22,SNR=19						
SMY	**Shemya**	**2.57**	**289**		**Pn**	**22 57 07.9**	**-1.2**
SMY				Sn	**Sn**	**22 57 39.5**	**-2.0**
KIWB	**Kanaga Island**	**2.94**	**90**	Pn	**Pn**	**22 57 12.1**	**-1.5**
ADK	**Adak**	**3.22**	**90**	Pn	**Pn**	**22 57 15.5**	**-1.7**
GSTR	**Great Sitkin T**	**3.60**	**86**	Pn	**Pn**	**22 57 20.4**	**-1.8**
CLES	**Cleveland East**	**7.39**	**79**	Pn	**Pn**	**22 58 13.0**	**+0.8**
NIKH	**Nikolski High**	**8.03**	**78**	Pn	**Pn**	**22 58 20.9**	**+0.2**
NIKH	**Nikolski High**	**8.03**	**78**	P	**Pn**	**22 58 19.1**	**-1.7**
	baz=268						
SPIA	**Saint Paul Isl**	**8.53**	**48**	Pn	**Pn**	**22 58 29.1**	**+1.7**
SPIA	**Saint Paul Isl**	**8.53**	**48**	P	**Pn**	**22 58 27.4**	**0.0**
	baz=237						
UNV	**Unalaska Valle**	**9.48**	**73**	Pn	**Pn**	**22 58 39.1**	**-1.1**
UNV	**Unalaska Valle**	**9.48**	**73**	P	**Pn**	**22 58 39.5**	**-0.6**
	baz=264						
PETK	**Petropavlovsk-**	**12.48**	**283**	P	**P**	**22 59 20.9**	**-4.2**
	4.9nm,0.9s,baz=92,slow=10,SNR=4.1						
PETK				S	**Sn**	**23 01 31.7**	**-5.5**
	0.8nm,0.4s,baz=94,slow=14,SNR=1.8						
GAMB	**Gambell**	**12.99**	**20**	P	**P**	**22 59 26.3**	**-4.4**
	baz=209						
SDPT	**Sand Point**	**13.13**	**67**	Pn	**Pn**	**22 59 25.8**	**-1.9**
SDPT	**Sand Point**	**13.13**	**67**	P	**Pn**	**22 59 26.5**	**-1.2**
	baz=264						
CHNA	**Chernabura Isl**	**13.60**	**69**	P	**Pn**	**22 59 32.3**	**-1.3**
	baz=267						
CNBA	**Chernabura Isl**	**13.60**	**69**	Pn	**Pn**	**22 59 30.5**	**-3.1**
CHGN	**Chignik**	**14.40**	**63**	Pn	**P**	**22 59 44.2**	**-2.2**
O16K	**Kokwok River B**	**15.34**	**51**	P	**P**	**22 59 55.0**	**-1.8**
	baz=250						
N16K	**Nishlik Lake**	**15.35**	**47**	P	**P**	**22 59 55.0**	**-1.9**
	baz=246						
TNA	**Tin City**	**15.37**	**22**	P	**P**	**22 59 56.5**	**-0.5**
	baz=214						
R17K	**Ugashik Creek**	**15.70**	**59**	P	**P**	**22 59 60.0**	**-0.8**
	baz=260						
O17K	**Koliganek Bris**	**15.88**	**51**	P	**P**	**23 00 01.8**	**-0.9**
	baz=251						
CHIR	**Chirikof Islan**	**15.91**	**66**	P	**P**	**23 00 02.0**	**-1.2**
	baz=267						
P17K	**Kvichak River**	**16.03**	**53**	P	**P**	**23 00 03.7**	**-0.6**
	baz=254						
N18K	**Kilae Creek**	**16.75**	**48**	P	**Pn**	**23 00 14.2**	**+1.6**
N18K				IAmb	IAmb	23 00 49.2	
	comp=Z,15nm,1.4s						
N18K	**Kilae Creek**	**16.75**	**48**	P	**Pn**	**23 00 12.6**	**0.0**
	baz=250						
SII	**Sitkinak Islan**	**16.76**	**63**	P	**Pn**	**23 00 12.2**	**-0.7**
SII	**Sitkinak Islan**	**16.76**	**63**	P	**Pn**	**23 00 13.0**	**+0.1**
	baz=266						
O18K	**Koktuh Hills**	**16.81**	**52**	P	**Pn**	**23 00 14.7**	**+1.3**
O18K				IAmb	IAmb	23 00 18.4	
	comp=Z,7.8nm,0.6s						
O18K	**Koktuh Hills**	**16.81**	**52**	P	**Pn**	**23 00 14.7**	**+1.3**
	baz=254						
SVW2	**Sparrevohn**	**17.03**	**47**	P	**Pn**	**23 00 16.3**	**+0.2**
OHAK	**Old Harbor**	**17.31**	**61**	P	**Pn**	**23 00 16.8**	**-2.5**
OHAK				IAmb	IAmb	23 00 20.3	
	comp=Z,9.4nm,0.9s						
OHAK	**Old Harbor**	**17.31**	**61**	P	**Pn**	**23 00 18.5**	**-0.8**
	baz=264						
O19K	**Port Alsworth**	**17.34**	**51**	P	**Pn**	**23 00 22.1**	**+2.4**
	baz=254						
Q19K	**Cape Douglas,**	**17.37**	**55**	P	**Pn**	**23 00 19.8**	**-0.4**
	baz=258						
N19K	**Bonanza Creek**	**17.44**	**49**	P	**Pn**	**23 00 22.5**	**+1.5**
N19K				IAmb	IAmb	23 00 27.4	
	comp=Z,9.9nm,0.8s						
N19K	**Bonanza Creek**	**17.44**	**49**	P	**Pn**	**23 00 20.5**	**-0.5**
	baz=252						
TTA	**Tatalina**	**17.58**	**41**	P	**Pn**	**23 00 21.9**	**-0.8**
	baz=243						
P19K	**Oil Pt**	**17.73**	**53**	P	**Pn**	**23 00 24.9**	**+0.5**
P19K	**Oil Pt**	**17.73**	**53**	P	**Pn**	**23 00 23.6**	**-0.8**
	baz=257						
KDAK	**Kodiak Island**	**17.74**	**59**	P	**Pn**	**23 00 23.2**	**-1.4**
	baz=263						
L19K	**White Mountain**	**17.75**	**44**	P	**Pn**	**23 00 25.2**	**+0.5**
L19K	**White Mountain**	**17.75**	**44**	P	**Pn**	**23 00 23.6**	**-1.1**
	baz=247						
ILSW	**Iliamna Southw**	**17.85**	**52**	P	**Pn**	**23 00 26.8**	**+0.9**
ILSW				IAmb	IAmb	23 00 27.9	
	comp=Z,18nm,1.2s						
M19K	**Big River Lodg**	**17.85**	**45**	P	**Pn**	**23 00 25.9**	**0.0**
M19K	**Big River Lodg**	**17.85**	**45**	P	**Pn**	**23 00 24.5**	**-1.3**
	baz=248						
Q20K	**Shuyak Island**	**17.95**	**57**	P	**Pn**	**23 00 25.3**	**-1.7**
	baz=261						
O20K	**Slope Mountain**	**18.13**	**52**	P	**Pn**	**23 00 27.5**	**-1.7**
	baz=256						
L20K	**Farewell, AK**	**18.29**	**44**	P	**Pn**	**23 00 30.2**	**-0.8**
	baz=248						
M20K	**Styx River**	**18.40**	**46**	P	**Pn**	**23 00 32.7**	**+0.3**
M20K	**Styx River**	**18.40**	**46**	P	**Pn**	**23 00 31.3**	**-1.1**
	baz=250						
K20K	**Telida**	**18.56**	**41**	P	**Pn**	**23 00 35.0**	**+0.8**
K20K	**Telida**	**18.56**	**41**	P	**Pn**	**23 00 32.5**	**-1.6**
	baz=245						
SPU	**Mount Spurr**	**18.68**	**49**	P	**Pn**	**23 00 36.0**	**+0.4**
CNPM	**China Poot**	**18.70**	**54**	P	**Pn**	**23 00 34.0**	**-1.8**
CNPM				IAmb	IAmb	23 00 54.0	
	comp=Z,21nm,1.2s						
J20K	**Nowinta River**	**18.89**	**39**	P	**Pn**	**23 00 37.5**	**-0.5**
J20K	**Nowinta River**	**18.89**	**39**	P	**Pn**	**23 00 36.7**	**-1.3**
	baz=243						
BRSE	**Bradley Lake S**	**18.98**	**54**	P	**Pn**	**23 00 37.0**	**-2.1**
	baz=259						
SKT	**Skwentna**	**19.15**	**47**	P	**Pn**	**23 00 39.4**	**-1.7**
	baz=252						
PPLA	**Purkeypile**	**19.17**	**44**	P	**Pn**	**23 00 41.0**	**-0.4**
PPLA				IAmb	IAmb	23 00 45.8	
	comp=Z,18nm,0.8s						
PPLA	**Purkeypile**	**19.17**	**44**	P	**Pn**	**23 00 39.3**	**-2.1**
	baz=249,SNR=6.9						
SUA	**Susitna One**	**19.36**	**48**	P	**Pn**	**23 00 41.4**	**-2.3**
	baz=254						
CAST	**Castle Rocks**	**19.41**	**42**	P	**Pn**	**23 00 42.1**	**-2.0**
	baz=248,SNR=6.9						
SEW	**Seward**	**19.69**	**53**	P	**Pn**	**23 00 45.7**	**-1.6**
SEW				IAmb	IAmb	23 00 50.9	
	comp=Z,18nm,0.9s						
SEW	**Seward**	**19.69**	**53**	P	**Pn**	**23 00 45.2**	**-2.1**
	baz=260						
RC01	**Rabbit Creek A**	**19.75**	**50**	P	**Pn**	**23 00 47.9**	**-0.1**
RC01				IAmb	IAmb	23 01 25.3	
	comp=Z,17nm,1.0s						
IMAR	**Indian Mountai**	**19.93**	**34**	P	**Pn**	**23 00 47.9**	**-2.2**
KTH	**Kantishna Hill**	**19.94**	**42**	P	**Pn**	**23 00 48.7**	**-1.7**
KTH				IAmb	IAmb	23 00 52.4	
	comp=Z,15nm,0.8s						
H21K	**Melozitna Rive**	**20.10**	**36**	P	Pn	23 00 50.3	-1.8
H21K				IAmb	IAmb	23 00 53.9	
	comp=Z,10nm,0.9s						
H21K	**Melozitna Rive**	**20.10**	**36**	P	Pn	23 00 49.8	-2.4
	baz=241,SNR=6.3						
BPAW	**Bear Paw Mtn.**	**20.12**	**41**	P	Pn	23 00 51.7	-0.7
BPAW				IAmb	IAmb	23 00 53.3	
	comp=Z,7.6nm,0.5s						
BPAW	**Bear Paw Mtn.**	**20.12**	**41**	P	Pn	23 00 50.5	-2.0
	baz=247						
TRF	**Thorofare Moun**	**20.17**	**43**	P	Pn	23 00 50.7	-2.5
TRF				IAmb	IAmb	23 00 53.5	
	comp=Z,11nm,0.7s						
TRF	**Thorofare Moun**	**20.17**	**43**	P	Pn	23 00 49.8	-3.4
	baz=250						
I21K	**Tanana**	**20.18**	**38**	P	Pn	23 00 50.5	-2.6
I21K				IAmb	IAmb	23 00 55.3	
	comp=Z,11nm,1.1s						
I21K	**Tanana**	**20.18**	**38**	P	Pn	23 00 50.3	-2.8
	baz=243						
G21K	**Allakaket**	**20.29**	**33**	P	Pn	23 00 51.6	-2.8
	baz=238						
PWL	**Port Wells**	**20.37**	**51**	P	Pn	23 00 51.8	-3.6
PWL	**Port Wells**	**20.37**	**51**	P	Pn	23 00 52.5	-2.9
	baz=259						
KNK	**Knik Glacier**	**20.42**	**49**	P	Pn	23 00 53.6	-2.4
KNK	**Knik Glacier**	**20.42**	**49**	P	Pn	23 00 53.2	-2.8
	baz=257						
SML	**Sawmill**	**20.57**	**48**	P	Pn	23 00 55.5	-2.3
SML				IAmb	IAmb	23 00 57.2	
	comp=Z,14nm,1.0s						
SML	**Sawmill**	**20.57**	**48**	P	Pn	23 00 54.5	-3.3
	baz=256						
MLY	**Manley**	**20.59**	**39**	P	Pn	23 00 55.9	-2.1
MLY	**Manley**	**20.59**	**39**	P	Pn	23 00 55.4	-2.7
	baz=245,SNR=7.9						
F21K	**Alatna River**	**20.68**	**32**	P	Pn	23 00 55.8	-3.3
	baz=236,SNR=7.5						
P23K	**Montague Islan**	**20.69**	**54**	P	Pn	23 00 55.5	-3.7
	baz=

comp=Z,7.3nm,0.6s
RIDG Independent Ri 22.58 44 P P 23 01 15.1 +0.5
baz=256,SNR=6.7
J25K Salcha River, 22.59 42 P P 23 01 15.1 +0.4
baz=253
TOLK Toolik Lake Re 22.69 31 lAmb lAmb 23 01 19.4
comp=Z,4.6nm,0.6s
TOLK Toolik Lake Re 22.69 31 P P 23 01 16.3 +0.7
baz=239,SNR=5.4
F24K Squaw Lake 22.71 34 P P 23 01 16.8 +1.1
baz=244,SNR=19
E24K Your Creek 22.76 32 P P 23 01 17.2 +1.0
baz=242
CRQE Cirque 22.90 52 P P 23 01 18.4 +0.7
baz=265
DOT Dot Lake 22.90 45 lAmb lAmb 23 01 19.1
comp=Z,9.1nm,0.7s
H25K Birch Creek 22.95 38 P P 23 01 18.9 +1.0
baz=249
MCARA McCarthy VSAT 23.00 51 P P 23 01 19.6 +1.1
baz=263
SCRK Sand Creek 23.01 44 P P 23 01 18.7 +0.1
baz=256,SNR=7.5
C23K Itkillik River 23.03 27 P P 23 01 19.8 +1.1
baz=235
L26K Log Cabin Wild 23.09 46 lAmb lAmb 23 01 23.9
comp=Z,11nm,1.0s
L26K Log Cabin Wild 23.09 46 P P 23 01 20.8 +1.5
baz=259,SNR=5.2
M26K Nabesna, AK 23.14 48 P P 23 01 21.1 +1.2
baz=261
D24K Happy Valley 23.19 30 P P 23 01 21.1 +0.9
baz=239
J26L Joseph Creek 23.32 43 P P 23 01 21.8 +0.4
baz=256,SNR=25
F25K Christian Rive 23.52 35 P P 23 01 23.8 +0.5
baz=246,SNR=11
M27K Edge Creek, AK 23.65 48 P P 23 01 24.7 +0.1
baz=262
I26K Coal Creek Min 23.69 41 P P 23 01 25.1 +0.4
baz=254
CTG Chitna Glacier 23.77 52 P P 23 01 26.2 +0.6
baz=266
L27K Beaver Creek, 23.78 47 P P 23 01 26.4 +0.8
baz=261,SNR=25
K27K Chicken 23.84 44 P P 23 01 27.1 +1.0
baz=258
G26K Porcupine Rive 23.95 37 P P 23 01 27.9 +0.8
baz=250,SNR=12
D25K Kavik River 24.03 30 P P 23 01 28.8 +1.0
baz=242,SNR=17
F26K Sheenjek River 24.09 35 P P 23 01 29.4 +1.0
baz=248,SNR=8.6
YUK3 Moose Creek 24.25 50 P P 23 01 30.7 +0.5
baz=265,SNR=6.3
PINM Pinnacle 24.27 54 P P 23 01 30.1 -0.1
baz=269
O28M Mount Upton 24.32 52 P P 23 01 30.9 +0.1
baz=268,SNR=8.9
EGAK Eagle 24.39 43 P P 23 01 32.1 +1.1
EGAK Eagle 24.39 43 P P 23 01 31.9 +0.9
baz=258,SNR=15
I27K Kandik River 24.39 41 P P 23 01 31.8 +0.6
baz=255
G27K Doyon Strip 24.70 38 P P 23 01 34.8 +0.8
baz=253,SNR=5.7
C26K Camden Bay 24.77 30 P P 23 01 35.9 +1.5
baz=242,SNR=9.7
C27K Jago River 25.01 31 P P 23 01 37.6 +1.0
baz=245,SNR=7.5
DAWY Dawson 25.01 45 P P 23 01 37.7 +0.9
baz=261,SNR=11
E27K Coleen River 25.16 35 P P 23 01 39.1 +1.0
baz=250,SNR=10
M29M Somme Creek 25.24 49 P P 23 01 39.8 +0.9
baz=266
HYT Haines Junctio 25.64 52 lAmb lAmb 23 01 48.2
comp=Z,8.2nm,0.7s
HYT Haines Junctio 25.64 52 P P 23 01 43.0 +0.4
baz=270
I29M Ogilvie Camp, 25.69 42 lAmb lAmb 23 01 46.9
comp=Z,10.0nm,1.1s
I29M Ogilvie Camp, 25.69 42 P P 23 01 43.9 +1.1
baz=260
N30M Aishikik Lake 25.85 51 P P 23 01 45.3 +1.0
baz=269
P30M Million Dollar 25.92 54 P P 23 01 46.2 +1.1
baz=272
EPYK Eagle Plains 26.51 40 P P 23 01 51.4 +1.2
baz=259
INK Inuvik 28.09 36 P P 23 02 05.7 +1.5
comp=Z,2.7nm,0.3s,baz=221,slow=7.1,SNR=5.3
comp=Z,2.7nm,0.3s
INK Inuvik 28.09 36 P P 23 02 05.2 +1.0
baz=259
KLR Kul'dur 29.17 283 P P 23 02 16.1 +2.1
comp=Z,2.0nm,0.7s,baz=44,slow=9.1,SNR=5.5
comp=Z,2.0nm,0.7s
USRK Ussuriysk Ar. 31.32 274 P P 23 02 35.2 +2.3
comp=Z,1.1nm,0.5s,baz=72,slow=4.7,SNR=2.6
comp=Z,1.1nm,0.5s
H11N2 WAKE ISLAND Hy 33.35 199 T T 23 38 19.0
baz=11,slow=76,SNR=10
H11N3 WAKE ISLAND Hy 33.36 199 T T 23 38 17.6
baz=11,slow=76,SNR=15
H11N1 WAKE ISLAND Hy 33.37 199 T T 23 38 16.5
baz=11,slow=76,SNR=11
H11S1 WAKE ISLAND Hy 34.58 199 T T 23 39 49.6
YKA Yellowknife Ar 36.22 46 P P 23 03 16.4 +1.4
comp=Z,4.9nm,0.7s,baz=283,slow=8.2,SNR=11
comp=Z,4.9nm,0.7s
KSRS Korea Array 37.72 268 P P 23 03 30.5 +2.5
comp=Z,0.5nm,0.5s,baz=61,slow=9.9,SNR=1.6
comp=Z,0.5nm,0.5s
G05D Wamic, OR 39.58 75 P P 23 03 43.1 -0.4
baz=302
NEW Newport 40.47 69 P P 23 03 50.8 0.0
baz=300
L04D Klamath Falls 40.66 80 P P 23 03 52.5 0.0
baz=305
J05D Fort Rock, OR 40.70 77 P P 23 03 52.6 -0.3
baz=304
WALA Waterton Lakes 41.90 66 P P 23 04 03.0 +0.5
WALA lAmb lAmb 23 04 04.2
comp=Z,5.4nm,1.1s
MOD Modoc Plateau 42.05 79 lAmb lAmb 23 04 06.3
comp=Z,3.1nm,0.6s
MSO Missoula 43.06 69 P P 23 04 12.0 +0.1
baz=303
HLID Hailey 44.62 73 P P 23 04 23.8 -0.7
baz=306
SONM Songino Array 44.65 294 P P 23 04 27.4 +2.7
comp=Z,0.3nm,0.5s,baz=71,slow=7.9,SNR=2.6
comp=Z,0.3nm,0.5s
BOZ Bozeman (W) 45.08 69 P P 23 04 27.6 -0.4
baz=305
NVAR Mina Array Bea 45.37 81 P P 23 04 31.9 +1.3
comp=Z,1.4nm,0.6s,baz=298,slow=7.5,SNR=16
comp=Z,1.4nm,0.6s
ELK Elko 45.80 77 P P 23 04 34.3 +0.3
PAGB Antelope Grade 45.90 86 P P 23 04 36.6 +2.1
HVU Hansel Valley 46.65 74 P P 23 04 40.2 -0.2
RLMT Red Lodge 46.71 68 P P 23 04 40.4 -0.5
baz=306
PKM Mcpherson Peak 46.72 86 P P 23 04 40.8 -0.3
baz=311
CWC Cottonwood Cre 46.78 83 P P 23 04 41.3 -0.2
baz=310
GRAC Grapevine Rang 46.86 82 P P 23 04 41.2 -0.7
baz=310
ISA Isabella, Lake 47.04 84 P P 23 04 44.2 +0.8
baz=311
SBC Santa Barbara 47.08 86 P P 23 04 43.7 +0.1
baz=312
R11A Troy Canyon, C 47.08 79 P P 23 04 44.7 +0.9
R11A Troy Canyon, C 47.08 79 P P 23 04 44.2 +0.4
baz=309,SNR=5.5
MPMC Manual Prospec 47.39 83 P P 23 04 46.2 -0.1
baz=311
TPNV Topopah Spring 47.57 81 P P 23 04 48.9 +1.3
TPNV lAmb lAmb 23 04 49.9
comp=Z,4.3nm,0.9s
TPNV Topopah Spring 47.57 81 P P 23 04 47.7 +0.1
baz=310
DUG Dugway, Tooele 47.60 76 P P 23 04 48.8 +1.1
DUG lAmb lAmb 23 04 49.8
comp=Z,7.0nm,1.4s
DUG Dugway, Tooele 47.60 76 P P 23 04 47.9 +0.2
baz=308
BW06 Boulder Array 47.95 71 P P 23 04 50.1 -0.4
baz=308
PDAR Pinedale Array 47.95 71 P P 23 04 50.6 +0.1
comp=Z,1.4nm,0.6s,baz=299,slow=3.5,SNR=13
comp=Z,1.4nm,0.6s
PSUT Pine Spring 48.02 78 lAmb lAmb 23 04 52.4
comp=Z,2.1nm,0.6s
GSC Goldstone, Bar 48.30 83 P P 23 04 53.5 +0.3
GSC lAmb lAmb 23 04 55.3
comp=Z,5.4nm,0.9s
GSC Goldstone, Bar 48.30 83 P P 23 04 53.5 +0.3
baz=311
BFSC Mount Baldy Ra 48.48 85 P P 23 04 55.2 +0.6
baz=312
CCUT Cedar City 48.94 79 P P 23 04 58.9 +0.7
GMRC Granite Mounta 49.35 83 P P 23 05 01.7 +0.5
baz=312
SPITS Spitsbergen Ar 49.63 355 P P 23 05 03.7 +1.1
comp=Z,2.3nm,0.6s,baz=97,slow=6.8,SNR=2.1
comp=Z,2.3nm,0.6s
TPFO Pinon Flats 49.65 85 P P 23 05 03.8 +0.3
baz=312
BELC Belle Mtn. Jos 49.66 84 P P 23 05 03.7 +0.1
baz=312
K22A Casper 49.78 69 P P 23 05 04.8 +0.4
baz=308
MONP2 Monument Peak 50.15 86 P P 23 05 07.3 0.0
baz=313
BC3 Big Chuckawall 50.23 84 P P 23 05 07.7 -0.1
baz=312
U15A North Rim 50.32 79 lAmb lAmb 23 05 10.5
comp=Z,2.6nm,0.5s
O20A White River Ci 50.36 73 P P 23 05 08.7 -0.1
baz=310
GLA Glamis 51.03 84 P P 23 05 13.3 -0.4
baz=313
WUAZ Wupatki 51.48 79 P P 23 05 16.7 -0.6
baz=312
MVCO Mesa Verde 52.10 76 P P 23 05 22.8 +0.9
MVCO Mesa Verde 52.10 76 P P 23 05 21.9 +0.1
baz=311
ISCO Idaho Springs 52.12 71 P P 23 05 21.2 -0.9
baz=310
AGMN Agasaiz Nation 52.16 58 P P 23 05 22.0 +0.1
baz=309
X18A Snowflake 53.01 79 P P 23 05 30.2 +1.7
LZH Lanzhou 53.37 284 *e*P **P 23 05 31.3 +0.2**
LZH pmax pmax
comp=Z,19nm,1.3s
TUC Tucson 54.02 82 P P 23 05 35.2 -0.5
baz=314
EYMN Ely 54.64 56 P P 23 05 39.3 -0.7
baz=311
HSIG 56.21 85 P P 23 05 52.6 +1.1
ARCES ARCESS Array B 57.16 349 P P 23 05 58.7 +1.2
comp=Z,1.1nm,0.8s,baz=29,slow=10,SNR=1.6
comp=Z,1.1nm,0.8s
KURK Kurchatov 57.20 312 P P 23 06 00.6 +2.5
WMQ Urumqi 57.39 301 *e*P P 23 06 04.8 +5.1
WMQ sP PcP 23 06 51.9 +0.1
WMQ PP PP 23 08 14.8 +6.6
WMQ pmax pmax
comp=Z,22nm,0.9s
MNTX Cornudas Mount 57.73 79 P P 23 06 03.5 +1.4
MNTX Cornudas Mount 57.73 79 P P 23 06 01.9 -0.2
baz=315
E43A Lone Tree Farm 57.97 54 P P 23 06 04.3 +0.8
MK31 Makanchi Array 58.14 306 P P 23 06 06.6 +1.8
MK31 lAmb lAmb 23 06 15.5
comp=Z,6.2nm,1.4s
MKAR Makanchi Array 58.14 306 P P 23 06 08.7 +3.9
comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=6.3
comp=Z,0.4nm,0.4s
MAKZ Makanchi 58.29 307 P P 23 06 09.9 +4.1
E46A Sault Ste Mari 59.32 53 P P 23 06 14.0 +1.2
TX31 Lajitas Ar. Si 60.45 79 P P 23 06 22.3 +1.3
TX31 lAmb lAmb 23 06 22.6
comp=Z,3.8nm,0.7s
TX32 Lajitas Array 60.45 79 P P 23 06 22.4 +1.4
TXAR Lajitas Array 60.45 79 P P 23 06 22.1 +1.2
comp=Z,0.8nm,0.6s,baz=303,slow=4.8,SNR=9.3
comp=Z,0.8nm,0.6s
SCHQ Schefferville 60.71 37 P P 23 06 23.1 +0.9
comp=Z,1.4nm,0.4s,baz=320,slow=5.6,SNR=7.9
comp=Z,1.4nm,0.4s
SCHQ Schefferville 60.71 37 P P 23 06 23.2 +1.0
SCHQ lAmb lAmb 23 06 23.9
comp=Z,6.5nm,1.1s
PZH PanZhiHua 61.35 277 P P 23 06 28.8 +1.7
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,110nm,5.1s
CCM Cathedral Cave 61.52 64 P P 23 06 27.7 -0.2
baz=315
JCT Junction City 61.96 76 P P 23 06 30.4 -0.6
baz=316
SFIN Lafayette 62.13 59 P P 23 06 31.6 -0.3
baz=316
FCAR Ozark Folk Cen 62.57 66 P P 23 06 34.4 -0.6
MIAR Mount Ida 62.71 68 P P 23 06 36.0 +0.1
baz=316
FINES FINESS Array B 64.75 346 P P 23 06 49.4 +0.6
comp=Z,1.7nm,0.9s,baz=339,slow=10,SNR=1.4
comp=Z,1.7nm,0.9s
OXF Oxford 65.10 65 P P 23 06 51.6 +0.1
baz=317
LONY Lake Ozonia 65.26 49 P P 23 06 51.9 -0.5
baz=320
PLAL Pickwick Lake 65.50 64 P P 23 06 54.2 +0.1
PLAL lAmb lAmb 23 06 54.9
comp=Z,2.5nm,0.5s
M55A Ridgway 65.62 53 P P 23 06 55.5 +0.6
M55A lAmb lAmb 23 07 17.5
comp=Z,6.9nm,1.3s
L56A Greenwood 65.71 52 P P 23 06 56.2 +0.8
K57A Scipio Center 65.77 51 P P 23 06 56.2 +0.5
K57A lAmb lAmb 23 06 56.8
comp=Z,4.3nm,0.8s
SSPA Standing Stone 66.68 54 P P 23 07 02.1 +0.6
SSPA lAmb lAmb 23 07 02.2
comp=Z,3.3nm,0.9s
SSPA Standing Stone 66.68 54 P P 23 07 01.3 -0.3
baz=319
H62A Milan 66.86 47 P P 23 07 02.4 -0.2
BATG Bathurst New B 66.93 42 P P 23 07 03.5 +0.5
BATG lAmb lAmb 23 07 04.1
comp=Z,7.1nm,1.2s
EMMW East Machias 68.38 44 P P 23 07 11.9 -0.2
EMMW lAmb lAmb 23 07 44.8
comp=Z,5.2nm,1.0s
AKASG Malin Array Be 74.36 340 P P 23 07 48.7 +0.8
comp=Z,0.2nm,0.2s,baz=315,slow=0.4,SNR=1.9
comp=Z,0.2nm,0.2s
BUR08 Bucovina Ar. S 78.09 342 P P 23 08 11.3 +2.2
BURAR Bucovina Array 78.11 342 P P 23 08 10.9 +1.6
WB0 Warramunga Arr 80.97 221 P P 23 08 26.2 +1.4
WB0 lAmb lAmb 23 08 28.1
comp=Z,4.0nm,1.0s
WRA Warramunga Arr 81.15 221 P P 23 08 27.9 +2.2
comp=Z,0.5nm,0.6s,baz=32,slow=6.0,SNR=6.9
comp=Z,0.5nm,0.6s
TORD Torodi Ar. Bea 115.08 356 PKP **PKPdf 23 14 51.8 +1.3**
comp=Z,0.6nm,0.9s,baz=332,slow=2.4,SNR=1.3
CPUP Villa Florida 131.42 80 PKP **PKiKP 23 15 21.5 -0.9**
comp=Z,1.4nm,0.3s,baz=47,slow=1.3,SNR=6.3
BOSA Boshof 149.13 309 PKPbc **PKPab 23 16 00.1 -2.3**
comp=Z,2.4nm,0.9s,baz=18,slow=3.2,SNR=2.1

IDC 15 23:40:07.3±1.6, 18.99S×170.18E, h0km, mb3.6/4, mbtmp3.6/4, MS3.5/2, Error ellipse: s-maj=42.6km s-min=40.1km az=144.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.77**	**262**	P	P	23 46 50.9	-0.2
	0.4nm,0.9s,baz=94,slow=8.7,SNR=1.4						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**34.05**	**256**	P	P	23 46 53.6	0.0
	0.6nm,0.7s,baz=83,slow=7.6,SNR=4.9						
	0.6nm,0.7s						
SIJI	**Sorong**	**42.18**	**291**	LR	LR	00 06 48.7	
	comp=Z,101nm,18.6s,baz=44,slow=38						
VNDA	**Vanda**	**58.71**	**182**	P	P	23 50 06.2	-0.1
	0.6nm,0.7s,baz=18,slow=6.4,SNR=8.7						
	0.6nm,0.7s						
KLR	**Kul'dur**	**76.02**	**335**	LR	LR	00 22 06.2	
	comp=Z,15nm,20.4s,baz=138,slow=33						
ILAR	**Eielson Array**	**89.74**	**17**	P	P	23 53 07.0	0.0
	0.2nm,0.5s,baz=224,slow=5.7,SNR=4.2						
	0.2nm,0.5s						

DDA ***15*** *23:58:13.1±0.0, 35.56N×26.72E, h4km, 2km, MW3.6*
ISK ***15*** *23:58:16.9, 35.63N×26.87E, h9km, ML3.4/20*
ATH ***15*** *23:58:16.7, 35.63N×26.94E, h26km±1km, ML3.4/3, Error ellipse: s-maj=3.4km s-min=1.0km az=151.0*
THE ***15*** *23:58:17.8, 35.63N×26.89E, h2km±1km, ML3.3/8, Error ellipse: s-maj=1.7km s-min=0.5km az=135.0*
NIC ***15*** *23:58:18.5±0.0, 35.54N×27.00E, h20km, Ml3.9/5*
GII ***15*** *23:58:19.1±0.0, 35.32N×27.01E, h5km*
IDC ***15*** *23:58:19.8±8.3, 35.53N×26.19E, h0km, mb3.3/2, mbtmp3.3/3, ML3.5/1, MS2.9/1, Error ellipse: s-maj=155.7km s-min=39.6km az=87.0*

ISC 15 23:58:17.8±0.8, 35.57N±0.02×26.90E±0.02, h17km±6km, n92, σ1.9°07/131, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.22**	**96**	P	**Pg**	**23 58 22.8**	**-0.1**
KARP				S	**Sg**	**23 58 26.7**	**+0.3**
	29μm,0.1s						
KARP	**Karpathos**	**0.22**	**96**	PG	**Pg**	**23 58 22.6**	**-0.3**
KARP				SG	**Sg**	**23 58 26.6**	**+0.2**
KARP	**Karpathos**	**0.22**	**96**	P	**Pg**	**23 58 22.7**	**-0.3**
KARP				S	**Sg**	**23 58 26.4**	**0.0**
KARP				AML	AML	23 58 26.6	
	75nm,0.1s						
KARP				AML	AML	23 58 26.6	
	75nm,0.1s						
KARP				AML	AML	23 58 26.8	
	39nm,0.1s						
KARP				AML	AML	23 58 26.8	
	39nm,0.1s						
KARP	**Karpathos**	**0.22**	**96**	P	**Pg**	**23 58 22.7**	**-0.3**
KARP				S	**Sg**	**23 58 26.3**	**0.0**
KARP				AML	AML	23 58 27.1	
	comp=E,74671μm,0.1s						
KARP				AML	AML	23 58 27.2	
	comp=N,39570μm,0.1s						
ZKR	**Zakros**	**0.72**	**231**	P	**Pb**	**23 58 32.3**	**+0.4**
ZKR				S	**Sn**	**23 58 44.0**	**+0.2**
	comp=N,1μm,0.5s						
ZKR	**Zakros**	**0.72**	**231**	PG	**Pg**	**23 58 31.8**	**-0.1**
ZKR				SG	**Sb**	**23 58 42.3**	**+0.9**
ZKR	**Zakros**	**0.72**	**231**	P	**Pb**	**23 58 32.5**	**+0.6**
ZKR				S	**Sn**	**23 58 44.9**	**+1.1**
ZKR	**Zakros**	**0.72**	**231**	P	**Pb**	**23 58 32.5**	**+0.6**
ZKR				S	**Sn**	**23 58 43.8**	**0.0**
ZKR				AML	AML	23 58 50.3	
	comp=E,2546μm,0.5s						
ZKR				AML	AML	23 58 51.8	
	comp=N,1288μm,0.4s						
STIA	**Sitia Lasithi**	**0.76**	**241**	P	**Pb**	**23 58 32.9**	**+0.4**
STIA				S	**Sn**	**23 58 44.8**	**+0.1**
STIA	**Sitia Lasithi**	**0.76**	**241**	P	**Pb**	**23 58 32.6**	**+0.1**
STIA				S	**Sb**	**23 58 44.2**	**+1.8**
NIS1	**Nisyros Isl.**	**1.05**	**12**	P	**Pb**	**23 58 36.8**	**-0.8**
NIS1				S	**Sb**	**23 58 51.7**	**+0.5**
	comp=N,2μm,0.5s						
NIS1	**Nisyros Isl.**	**1.05**	**12**	PG	**Pb**	**23 58 36.9**	**-0.7**
NIS1				SG	**Sg**	**23 58 51.1**	**-1.0**
NIS1	**Nisyros Isl.**	**1.05**	**12**	P	**Pb**	**23 58 36.7**	**-1.4**
FRMA	**Ierapetra Chan**	**1.10**	**240**	P	**Pb**	**23 58 38.1**	**-0.3**
FRMA				S	**Sg**	**23 58 53.4**	**-0.1**
	comp=N,712nm,0.5s						
FRMA	**Ierapetra Chan**	**1.10**	**240**	P	**Pb**	**23 58 37.7**	**-0.6**
FRMA				S	**Sb**	**23 58 52.5**	**+0.1**
KOSK	**Kos Island**	**1.18**	**3**	P	**Pb**	**23 58 38.9**	**-0.9**
KOSK				S	**Sb**	**23 58 54.5**	**-0.3**
	comp=N,725nm,0.6s						
KOSK	**Kos Island**	**1.18**	**3**	PN	**Pb**	**23 58 38.9**	**-0.9**
KOSK				SN	**Sb**	**23 58 55.1**	**+0.3**
KOSK	**Kos Island**	**1.18**	**3**	P	**Pb**	**23 58 38.7**	**-1.0**
ARG	**Arkhangelos**	**1.19**	**57**	P	**Pn**	**23 58 39.4**	**-0.2**
ARG				S	**Sb**	**23 58 55.3**	**+0.3**
	comp=N,2μm,0.4s						
ARG	**Arkhangelos**	**1.19**	**57**	PN	**Pn**	**23 58 39.4**	**-0.2**
ARG	**Arkhangelos**	**1.19**	**57**	P	**Pn**	**23 58 39.5**	**-0.2**
ARG				S	**Sb**	**23 58 54.9**	**-0.1**
ARG	**Arkhangelos**	**1.19**	**57**	P	**Pn**	**23 58 39.0**	**-0.7**
ARG				S	**Sb**	**23 58 54.4**	**-0.6**
ARG				AML	AML	23 58 56.8	
	comp=N,2915μm,0.5s						
ARG				AML	AML	23 58 58.5	
	comp=E,3652μm,0.3s						
SANT	**Santorini**	**1.41**	**305**	P	**Pn**	**23 58 42.6**	**-0.2**
SANT				S	**Sn**	**23 59 01.2**	**+0.1**
	comp=E,1μm,0.6s						
SANT	**Santorini**	**1.41**	**305**	PN	**Pn**	**23 58 42.6**	**-0.2**
SANT	**Santorini**	**1.41**	**305**	P	**Pn**	**23 58 42.3**	**-0.5**
HRKL	**Herakleio**	**1.49**	**261**	P	**Pn**	**23 58 43.8**	**0.0**
HRKL				S	**Sg**	**23 59 05.0**	**-0.9**
	comp=E,2μm,0.7s						
HRKL	**Herakleio**	**1.49**	**261**	PN	**Pn**	**23 58 44.2**	**+0.4**
HRKL	**Herakleio**	**1.49**	**261**	P	**Pn**	**23 58 43.9**	**+0.2**
IACM	**Heraklion**	**1.52**	**260**	P	**Pn**	**23 58 44.3**	**+0.2**
IACM				S	**Sg**	**23 59 06.0**	**-0.7**
IACM	**Heraklion**	**1.52**	**260**	P	**Pn**	**23 58 44.3**	**+0.2**
KSTL	**Kastelli Herak**	**1.52**	**260**	P	**Pn**	**23 58 42.7**	**-1.4**
BODT	**Bodrum**	**1.53**	**13**	PN	**Pn**	**23 58 44.0**	**-0.3**
BDRM	**Kayabasi**	**1.56**	**16**	P	**Pn**	**23 58 43.2**	**-1.5**
BDRM				S	**Sb**	**23 59 06.0**	**+0.4**
TURN	**Turunc**	**1.62**	**42**	PN	**Pn**	**23 58 46.1**	**+0.5**
TURN	**Turunc**	**1.62**	**42**	P	**Pn**	**23 58 45.0**	**-0.6**
TURN				S	**Sn**	**23 59 07.6**	**+1.5**
IDI	**Anoyia**	**1.66**	**261**	P	**Pn**	**23 58 46.2**	**-0.1**
IDI				S	**Sn**	**23 59 08.2**	**+1.0**
IDI	**Anoyia**	**1.66**	**261**	PN	**Pn**	**23 58 46.8**	**+0.5**
IDI	**Anoyia**	**1.66**	**261**	P	**Pn**	**23 58 46.1**	**-0.1**
APE	**Apeiranthos**	**1.86**	**324**	P	**Pn**	**23 58 48.2**	**-0.7**
APE	**Apeiranthos**	**1.86**	**324**	PN	**Pn**	**23 58 49.1**	**+0.2**
APE	**Apeiranthos**	**1.86**	**324**	P	**Pn**	**23 58 48.1**	**-0.9**
DALY	**Dalyan (Mula)**	**1.89**	**48**	PN	**Pn**	**23 58 50.1**	**+0.8**
DDIM	**Aydin, Didim**	**1.90**	**8**	P	**Pb**	**23 58 52.6**	**+0.5**
DDIM				S	**Sg**	**23 59 17.5**	**-1.6**
YER	**Yerkesik**	**1.92**	**35**	PN	**Pn**	**23 58 49.8**	**0.0**
MULA	**Mugla, Merkez-**	**2.04**	**34**	P	**Pn**	**23 58 51.2**	**-0.2**
MULA				S	**Sb**	**23 59 21.0**	**+1.5**
FETY	**Fethiye**	**2.06**	**58**	PN	**Pn**	**23 58 52.7**	**+1.0**
FETY	**Fethiye**	**2.06**	**58**	P	**Pn**	**23 58 49.6**	**-2.1**
FETY				S	**Sg**	**23 59 23.9**	**-0.3**
GCAM	**G?zelcaml?**	**2.14**	**7**	PN	**Pn**	**23 58 53.4**	**+0.6**
AYDN	**Tasoluk**	**2.23**	**20**	P	**Pn**	**23 58 55.8**	**+1.8**
AYDN				S	**Sb**	**23 59 24.6**	**-0.5**
AKAS	**Kas**	**2.29**	**72**	PN	**Pn**	**23 58 56.3**	**+1.3**
AKAS	**Kas**	**2.29**	**72**	P	**Pn**	**23 58 55.1**	**+0.1**
CAME	**Cameli-Denizli**	**2.38**	**54**	PN	**Pn**	**23 58 57.2**	**+1.0**
IMMV	**Iera Moni Meta**	**2.38**	**268**	P	**Pn**	**23 58 56.1**	**0.0**
DGB	**zmir**	**2.48**	**360**	P	**Pn**	**23 58 56.3**	**-1.1**
DGB				S	**Sg**	**23 59 37.9**	**+0.4**
TAVA	**DENIZLI_Tavas**	**2.49**	**40**	P	**Pn**	**23 58 59.4**	**+1.7**
TAVA				S	**Sn**	**23 59 29.6**	**+1.8**
CAEL	**Denizli, Camel**	**2.50**	**51**	P	**Pn**	**23 59 00.3**	**+2.6**
CAEL				S	**Sg**	**23 59 41.1**	**+3.0**
AYDB	**Zeytinkoy-Aydi**	**2.50**	**18**	PN	**Pn**	**23 58 58.4**	**+0.5**
ELL	**Elmali**	**2.71**	**63**	PN	**Pn**	**23 59 01.9**	**+1.3**
ELL	**Elmali**	**2.71**	**63**	P	**Pn**	**23 59 00.4**	**-0.3**
APMY	**Acipayam-Deniz**	**2.71**	**45**	PN	**Pn**	**23 59 01.9**	**+1.2**
GOLH	**Golhisar**	**2.72**	**51**	P	**Pn**	**23 59 02.3**	**+1.5**
GOLH				S	**Sb**	**23 59 41.9**	**+2.8**
URLA	**Izmir**	**2.79**	**355**	PN	**Pn**	**23 59 02.6**	**+0.8**
KORT	**Korkueli**	**3.13**	**62**	PN	**Pn**	**23 59 08.1**	**+1.6**
MANT	**Manisa**	**3.20**	**24**	P	**Pn**	**23 59 07.9**	**+0.3**
KULA	**Kula-Manisa**	**3.26**	**25**	PN	**Pn**	**23 59 09.4**	**+1.2**
BRDR	**BURDUR-Merkez**	**3.31**	**49**	P	**Pn**	**23 59 11.9**	**+2.9**
BRDR				S	**Sg**	**00 00 01.6**	**-2.6**
PASA	**Karahalli, USA**	**3.46**	**36**	P	**Pn**	**23 59 11.3**	**+0.3**
DEMI	**Demirci**	**3.76**	**22**	P	**Pn**	**23 59 15.7**	**+0.7**
KEPZ	**Antalya-Kepez**	**4.03**	**69**	P	**Pn**	**23 59 21.3**	**+2.5**
OSC1	**CSNet OBS 1**	**4.16**	**118**	P	**Pn**	**23 59 20.3**	**-0.2**
OSC1				S	**Sn**	**00 00 08.5**	**-0.3**
SEDI	**Konya, Seydise**	**4.34**	**63**	P	**Pn**	**23 59 26.9**	**+3.7**
YVAC	**Isparta, Yalva**	**4.40**	**51**	P	**Pn**	**23 59 26.9**	**+2.9**
AKMS	**Akamas**	**4.48**	**95**	P	**Pn**	**23 59 25.5**	**+0.6**
AKMS				AML	AML	00 00 18.8	

	comp=E,0.5nm,0.9s							
AKMS					AML	AML	00 00 19.3	
	comp=E,0.4nm,0.5s							
ALFC	**Alefka**	**4.68**	**93**	P		**Pn**	**23 59 27.7**	**0.0**
ALFC					AML	AML	00 00 24.3	
	comp=E,0.3nm,0.5s							
ALFC					AML	AML	00 00 27.3	
	comp=E,0.3nm,0.5s							
NATA	**Nata**	**4.71**	**98**	P		**Pn**	**23 59 28.4**	**+0.2**
NATA					AML	AML	00 00 36.5	
	comp=E,0.9nm,0.7s							
NATA					AML	AML	00 00 38.7	
	comp=E,0.5nm,0.6s							
SZAC	**Souni**	**4.97**	**98**	P		**Pn**	**23 59 31.6**	**-0.1**
SZAC					AML	AML	00 00 36.3	
	comp=E,0.2nm,0.6s							
ASGA	**Asgata**	**5.26**	**97**	P		**Pn**	**23 59 35.5**	**-0.1**
MVOU	**Mavrovouni**	**5.54**	**94**	P		**Pn**	**23 59 39.4**	**0.0**
GEM	**Giv'at Ha'Em**	**7.62**	**105**	Pn		**Pn**	**00 00 08.2**	**+0.2**
KZIT	**Kziot**	**7.81**	**124**	Pn		**Pn**	**00 00 10.8**	**+0.1**
KZIT				Sn		**Sn**	**00 01 36.6**	**-2.2**
HMDT	**Nahal Hemdat**	**7.90**	**112**	Pn		**Pn**	**00 00 11.9**	**0.0**
HMDT				Sn		**Sn**	**00 01 41.6**	**+0.8**
YTIR	**Yattir**	**8.04**	**119**	Pn		**Pn**	**00 00 14.3**	**+0.3**
YTIR				Sn		**Sn**	**00 01 43.8**	**-0.8**
GHAJ	**Ghor Haditha**	**8.40**	**118**	Pn		**Pn**	**00 00 19.3**	**+0.6**
GHAJ				Sn		**Sn**	**00 01 52.6**	**-0.6**
KRMI	**Paran Flat**	**8.54**	**127**	Pn		**Pn**	**00 00 20.7**	**0.0**
PRNI	**Paran**	**8.57**	**125**	Pn		**Pn**	**00 00 21.4**	**+0.3**
HRFI	**Mount Harif**	**8.79**	**127**	Pn		**Pn**	**00 00 24.4**	**+0.2**
HRFI				Sn		**Sn**	**00 02 00.7**	**-2.3**
MBRI	**Mt Berech**	**8.88**	**128**	Pn		**Pn**	**00 00 25.8**	**+0.4**
EIL	**Elat**	**8.98**	**129**	Pn		**Pn**	**00 00 26.8**	**0.0**
GERES	**GERESS Array B**	**16.44**	**328**	Pn		**P**	**00 02 10.1**	**-0.3**
	comp=E,0.1nm,0.3s,baz=147,slow=10,SNR=5.8							
	comp=E,0.4nm,0.7s							
ESDC	**Sonseca Array**	**24.72**	**289**	P		**P**	**00 03 37.5**	**-0.7**
	comp=E,0.5nm,0.7s,baz=82,slow=9.2,SNR=9.1							
	comp=E,0.5nm,0.7s							
GEYT	**Alibeck**	**25.07**	**75**	LR		LR	00 17 04.2	
	comp=E,22nm,18.3s,baz=184,slow=44							
TORD	**Torodi Ar. Bea**	**31.85**	**232**	P		**P**	**00 04 42.6**	**+0.6**
	comp=E,0.3nm,0.5s,baz=38,slow=9.0,SNR=7.0							
	comp=E,0.3nm,0.5s							

*IDC **15** 23:59:45.1±2.9, 43°.22N×89°.48E, h0km, mb3.8/2, mbtmp3.8/5, ML3.4/3, MS2.3/1, Error ellipse: s-maj=55.7km s-min=23.3km az=29.0*
*NEIC **15** 23:59:51.5±1.8, 43°.69N±0°.04×89°.4E±0°.2, h22km±10km, mb4.1/4, Error ellipse: s-maj=25.0km s-min=5.8km az=83.0*
*NNC **15** 23:59:56.0±1.6, 44°.30N×89°.29E, h9km±10km, mb4.1, mpv3.5, Error ellipse: s-maj=23.5km s-min=12.2km az=28.0*

ISC 15 23:59:50.7±1.5, 43°.9N±0°.1×89°.4E±0°.1, h10km, n18, σ1s60/26, 10C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**5.79**	**302**		**Pn**	**00 01 18.4**	**+1.8**
MK31				Sn	**Sn**	**00 02 24.8**	**+1.8**
MK31	**Makanchi Array**	**5.79**	**302**	⇓Pn	**Pn**	**00 01 18.2**	**+1.6**
	3.3nm,0.5s,baz=51,slow=20,SNR=77						
MK31				⇑Sn	**Sn**	**00 02 23.6**	**+0.7**
	7.1nm,0.5s,baz=123,slow=22,SNR=5.8						
MK31				⇑Lg	Lg	00 02 52.2	
	23nm,0.7s						
MKAR	**Makanchi Array**	**5.79**	**302**	Pn	**Pn**	**00 01 18.1**	**+1.6**
	2.2nm,0.3s,baz=117,slow=14,SNR=88						
MKAR				Sn	**Sn**	**00 02 23.0**	**0.0**
	3.9nm,0.3s,baz=107,slow=23,SNR=8.2						
MKAR				Lg	Lg	00 03 05.1	
	2.7nm,0.3s,baz=126,slow=27,SNR=6.0						
MKAR				LR	LR	00 04 06.8	
	comp=Z,27nm,19.1s,baz=297,slow=42						
	4.3nm,0.4s						
MKAR	**Makanchi Array**	**5.79**	**302**		**Pn**	**00 01 18.2**	**+1.6**
MKAR				Sn	**Sn**	**00 02 24.5**	**+1.5**
MAKZ	**Makanchi**	**5.98**	**302**		**Pn**	**00 01 21.1**	**+1.8**
MAKZ				Sn	**Sn**	**00 02 30.3**	**+2.4**
MAKZ	**Makanchi**	**5.98**	**302**	⇓Pn	**Pn**	**00 01 20.6**	**+1.3**
	2.0nm,0.3s						
MAKZ				⇑Sn	**Sn**	**00 02 27.4**	**-0.5**
	4.6nm,0.3s						
MAKZ				⇓Lg	Lg	00 02 57.5	
	20nm,0.8s						
KURBB	**Kurchatov Arra**	**9.98**	**316**	Pn	**Pn**	**00 02 14.8**	**+0.7**
	0.6nm,0.3s,baz=129,slow=13,SNR=31						
KURBB				Sn	**Sn**	**00 04 06.2**	**+0.2**
	0.3nm,0.3s,baz=129,slow=17,SNR=7.0						
KURBB				Lg	Lg	00 05 21.6	
	0.2nm,0.3s,baz=137,slow=30,SNR=4.7						
	1.8nm,0.3s						
KURBB	**Kurchatov Arra**	**9.98**	**316**	⇑Pn	**Pn**	**00 02 15.3**	**+1.3**
	2.4nm,0.4s						
KURBB				⇑Sn	**Sn**	**00 04 05.2**	**-0.8**
	12nm,0.5s						
KURBB				⇓Lg	Lg	00 05 01.0	
	27nm,0.7s						
KURK	**Kurchatov**	**9.99**	**317**		**Pn**	**00 02 15.2**	**+1.0**
KURK	**Kurchatov**	**9.99**	**317**	⇑Pn	**Pn**	**00 02 15.1**	**+0.9**
	2.8nm,0.3s						
KURK				⇑Sn	**Sn**	**00 04 03.9**	**-2.4**
	4.2nm,0.6s						
KURK				⇑Lg	Lg	00 05 02.6	
	13nm,0.9s						
ZALV	**Zalesovo Beam**	**10.48**	**345**	Pn	Pn	00 02 25.6	+4.7
	0.3nm,0.3s,baz=169,slow=13,SNR=4.7						
ZALV				Lg	Lg	00 05 37.4	
	0.2nm,0.3s,baz=156,slow=28,SNR=2.4						
	0.6nm,0.3s						
SONM	**Songino Array**	**12.47**	**66**	Lg	Lg	00 06 36.1	
	0.2nm,0.3s,baz=238,slow=40,SNR=2.2						
GAR	**Garm**	**15.13**	**258**		**Pn**	**00 03 23.7**	**-0.8**
GAR				IAmb	IAmb	00 03 46.7	
	comp=Z,11nm,1.4s						
BVA0	**Borovoye Array**	**15.52**	**313**	⇑Pn	**P**	**00 03 32.1**	**-1.8**
	comp=Z,3.1nm,1.1s,baz=117,slow=16,SNR=6.8						
BVA0				⇑Sn	**Sn**	**00 06 18.7**	**-2.7**
	comp=Z,1.7nm,0.9s,baz=233,slow=36,SNR=4.4						
BRVK	**Borovoye**	**15.60**	**313**	Pn	**Pn**	**00 03 30.4**	**0.0**
CHGR	**Chuyangaron**	**16.09**	**258**	Pn	**Pn**	**00 03 35.0**	**-2.0**
CHGR				IAmb	IAmb	00 03 45.3	
	comp=Z,10nm,0.6s						
ILAR	**Eielson Array**	**63.09**	**24**	P	**P**	**00 10 19.8**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=316,slow=5.0,SNR=3.5						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**72.20**	**11**	P	**P**	**00 11 13.9**	**-1.4**
	comp=Z,1.7nm,0.9s,baz=342,slow=5.8,SNR=3.1						
	comp=Z,1.7nm,0.9s						

IDC 16 00:02:27.6±2.9, 4°.31N×128°.01E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=227.5km s-min=28.3km az=67.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.89**	**166**	P	P	00 07 53.1	+0.7
	0.3nm,0.4s,baz=346,slow=9.8,SNR=5.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**28.40**	**169**	P	P	00 08 23.1	-0.9
	0.2nm,0.7s,baz=348,slow=12,SNR=1.8						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**57.82**	**324**	P	P	00 12 21.0	0.0
	0.3nm,0.5s,baz=115,slow=7.2,SNR=4.9						
	0.3nm,0.5s						

IDC 16 00:20:05.4±1.7, 29°.07S×69°.08W, h0km, mbtmp3.4/1, ML3.8/1, Error ellipse: s-maj=149.9km s-min=55.2km az=163.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**10.77**	**78**	Pn	Pn	00 22 41.0	+0.1
	0.2nm,0.3s,baz=246,slow=15,SNR=1.8						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**126.29**	**208**	PKP	PKPdf	00 39 10.6	-0.2
	0.4nm,0.8s,baz=149,slow=2.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**148.71**	**30**	PKPbc	PKPbc	00 39 53.8	-0.4
	0.7nm,0.4s,baz=306,slow=3.2,SNR=4.7						
MKAR	**Makanchi Array**	**151.54**	**44**	PKPbc	PKPbc	00 40 00.8	-0.5
	0.1nm,0.3s,baz=288,slow=0.7,SNR=1.6						

*RHSSO **16** 01:00:23.0±0.9, 41°.66N×20°.33E, h5km±4km, ML1.9/6*
*SKO **16** 01:00:24.8, 41°.69N×20°.19E, h20km*
*BEO **16** 01:00:25.6±0.5, 41°.68N×20°.25E, h4km±5km, ML1.6/6*
*PDG **16** 01:00:27.6±0.1, 41°.77N×19°.97E, h6km, ML2.0/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

ISC 16 01:00:24.6±1.2, 41°.70N±0°.02×20°.14E±0°.03, h1km±10km, n46, σ0s64/87, 10C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.41**	**211**	*e*Pg	**Pg**	**01 00 32.9**	**+0.4**
TIR				*e*Sg	**Sb**	**01 00 41.1**	**-0.2**
TIR	**Tirane**	**0.41**	**211**	*i* Pg	**Pg**	**01 00 32.9**	**+0.4**
TIR				*i* Sg	**Sb**	**01 00 41.4**	**+0.1**
ULC	**Ulcinj**	**0.72**	**292**	*i* Pg	**Pg**	**01 00 38.6**	**+0.1**
ULC	**Ulcinj**	**0.72**	**292**	⇓*i*Pg	**Pg**	**01 00 38.3**	**-0.1**
ULC				*i* Sg	**Sg**	**01 00 46.8**	**-1.0**
ULC	**Ulcinj**	**0.72**	**292**	⇑*i*Pg	**Pg**	**01 00 38.3**	**-0.1**
ULC				*i* Sg	**Sg**	**01 00 47.1**	**-0.7**
OHR	**Ohrid**	**0.77**	**140**	*i* Pg	**Pg**	**01 00 38.4**	**-0.9**
OHR				*i* Sg	**Sg**	**01 00 49.7**	**+0.5**
OHR				*e*Lg	Lg	01 00 50.5	
	comp=N,13nm,0.3s						
DRME	**Dracevica, Mon**	**0.86**	**304**	*e*Pg	**Pg**	**01 00 40.6**	**-0.6**
DRME				*e*Sg	**Sb**	**01 00 55.0**	**+0.5**
DRME	**Dracevica, Mon**	**0.86**	**304**	⇓*i*Pg	**Pg**	**01 00 40.8**	**-0.4**
DRME				*i* Sg	**Sg**	**01 00 51.6**	**-0.8**
DRME	**Dracevica, Mon**	**0.86**	**304**	⇓*i*Pg	**Pg**	**01 00 40.9**	**-0.3**
DRME				*i* Sg	**Sg**	**01 00 52.2**	**-0.2**
PVY	**Plav**	**0.90**	**351**	⇓*i*Pg	**Pg**	**01 00 41.3**	**-0.6**
PVY				*i* Sg	**Sb**	**01 00 55.4**	**-0.3**
PVY	**Plav**	**0.90**	**351**	⇑*i*Pg	**Pg**	**01 00 41.5**	**-0.4**
PVY				*i* Sg	**Sb**	**01 00 55.7**	**0.0**
PDG	**Podgorica**	**0.98**	**318**	*e*Pg	**Pg**	**01 00 42.5**	**-1.0**
PDG				*e*Sg	**Sb**	**01 00 58.2**	**+0.3**
PDG	**Podgorica**	**0.98**	**318**	*e*Pg	**Pg**	**01 00 43.1**	**-0.4**
PDG				*e*Sg	**Sn**	**01 00 59.3**	**-0.8**
PDG	**Podgorica**	**0.98**	**318**	*i* Pg	**Pg**	**01 00 42.9**	**-0.6**
PDG				*i* Sg	**Sn**	**01 00 59.1**	**-0.9**
TTG	**Podgorica**	**0.98**	**318**	⇓*i*Pg	**Pg**	**01 00 43.1**	**-0.4**
TTG				*i* Sg	**Sg**	**01 00 56.1**	**-0.2**
TTG	**Podgorica**	**0.98**	**318**	⇑*i*Pg	**Pg**	**01 00 43.2**	**-0.3**
TTG				*i* Sg	**Sg**	**01 00 56.4**	**+0.1**
BUM	**Brajici-Budva**	**1.11**	**303**	⇓*i*Pg	**Pg**	**01 00 45.2**	**-0.7**
BUM				*i* Sg	**Sg**	**01 01 00.1**	**-0.1**
BUM	**Brajici-Budva**	**1.11**	**303**	⇑*i*Pg	**Pg**	**01 00 45.4**	**-0.5**
BUM				*i* Sg	**Sg**	**01 01 00.2**	**0.0**
BEY	**Berane**	**1.19**	**351**	*i* Pg	**Pb**	**01 00 48.2**	**+0.3**
IVA	**Berane**	**1.19**	**351**	⇓*i*Pg	**Pb**	**01 00 48.2**	**+0.3**
IVA				*i* Sg	**Sb**	**01 01 04.7**	**+1.0**
IVA	**Berane**	**1.19**	**351**	⇑*i*Pg	**Pg**	**01 00 47.7**	**+0.4**
IVA				*i* Sg	**Sb**	**01 01 04.8**	**+1.0**
KOME	**Kolasin**	**1.24**	**338**	⇓*i*Pg	**Pg**	**01 00 48.5**	**+0.1**
KOME				*i* Sg	**Sb**	**01 01 05.8**	**+0.4**
KOME	**Kolasin**	**1.24**	**338**	⇑*i*Pg	**Pg**	**01 00 48.5**	**+0.1**
KOME				*i* Sg	**Sb**	**01 01 06.2**	**+0.8**
CEME	**Cevo**	**1.24**	**313**	⇑*i*Pg	**Pg**	**01 00 47.8**	**-0.7**
CEME				*i* Sg	**Sg**	**01 01 04.8**	**+0.2**
CEME	**Cevo**	**1.24**	**313**	⇓*i*Pg	**Pg**	**01 00 47.7**	**-0.7**
CEME				*i* Sg	**Sg**	**01 01 05.0**	**+0.4**
NKME	**Niksic**	**1.39**	**321**	⇓*i*Pg	**Pn**	**01 00 50.5**	**-0.6**
NKME				*i* Sg	**Sb**	**01 01 09.8**	**+0.3**
NKME	**Niksic**	**1.39**	**321**	⇓*i*Pg	**Pn**	**01 00 50.5**	**-0.6**
NKME				*i* Sg	**Sn**	**01 01 10.3**	**+0.3**
HCY	**Herceg Novi**	**1.44**	**302**	*e*Pg	**Pn**	**01 00 51.1**	**-0.7**
HCY				*e*Sg	**Sn**	**01 01 13.6**	**+2.3**
HCY	**Herceg Novi**	**1.44**	**302**	⇓*i*Pg	**Pn**	**01 00 51.1**	**-0.7**
HCY				*i* Sg	**Sb**	**01 01 11.1**	**+0.2**
HCY	**Herceg Novi**	**1.44**	**302**	⇓*i*Pg	**Pn**	**01 00 51.2**	**-0.6**
HCY				*i* Sg	**Sn**	**01 01 11.5**	**+0.2**
SJES	**Sjenica**	**1.56**	**355**	*e*Pn	**Pb**	**01 00 54.4**	**0.0**
SJES				*e*Sn	**Sb**	**01 01 15.3**	**+0.6**
PRVS	**Prvonek**	**1.65**	**60**	*e*Pn	**Pn**	**01 00 54.8**	**+0.1**
PRVS				*e*Sn	**Sn**	**01 01 15.3**	**-1.2**
BARS	**Barje**	**1.67**	**47**	*e*Pn	**Pn**	**01 00 55.7**	**+0.8**
TREB	**Trebinje**	**1.68**	**308**	*e*Pn	**Pn**	**01 00 54.6**	**-0.4**
TREB				*e*Sn	**Sb**	**01 01 17.9**	**+0.1**
TREB	**Trebinje**	**1.68**	**308**	*e*Pn	**Pn**	**01 00 55.4**	**+0.4**
TREB				*e*Sn	**Sg**	**01 01 20.0**	**+1.6**
BRY	**Bratogost**	**1.69**	**316**	*e*Pn	**Pn**	**01 00 55.3**	**-0.1**
BRY				*e*Sn	**Sb**	**01 01 18.2**	**+0.2**
BRY	**Bratogost**	**1.69**	**316**	⇑*i*Pg	**Pn**	**01 00 56.0**	**+0.6**
BRY				*i* Sg	**Sg**	**01 01 20.1**	**+1.2**
BRY	**Bratogost**	**1.69**	**316**	⇑*i*Pg	**Pn**	**01 00 56.0**	**+0.6**
BRY				*i* Sg	**Sg**	**01 01 19.8**	**+0.9**
UPM	**Unac-Piva**	**1.76**	**329**	*e*Pn	**Pn**	**01 00 56.0**	**-0.4**
UPM				*e*Sn	**Sn**	**01 01 19.9**	**+0.4**
UPM	**Unac-Piva**	**1.76**	**329**	⇓*i*Pn	**Pb**	**01 00 57.7**	**-0.1**
UPM				*i* Sn	**Sg**	**01 01 21.6**	**+0.5**
UPM	**Unac-Piva**	**1.76**	**329**	⇑*i*Pn	**Pb**	**01 00 57.6**	**-0.2**
UPM				*i* Sn	**Sg**	**01 01 22.0**	**+0.9**
IVAS	**Ivanjica**	**1.88**	**0**	*e*Pn	**Pn**	**01 00 58.5**	**+0.7**
RUDO	**Rudo**	**2.00**	**344**	*e*Pn	**Pn**	**01 00 58.6**	**-0.9**
RUDO				*e*Sn	**Sn**	**01 01 24.8**	**-0.4**
RUDO	**Rudo**	**2.00**	**344**	*e*Pn	**Pn**	**01 01 00.2**	**+0.7**
RUDO				*e*Sn	**Sb**	**01 01 27.3**	**+0.1**
BBLS	**Lazići**	**2.23**	**346**	*e*Sn	**Sn**	**01 01 30.6**	**-0.4**
DIVS	**Divibare**	**2.40**	**357**	*e*Pn	**Pn**	**01 01 04.1**	**-1.0**
DIVS				*e*Sn	**Sn**	**01 01 34.2**	**-0.9**

*IDC **16** 01:39:47.8±1.2, 50°.02N×78°.68E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=20.1km s-min=6.5km az=70.0*
*NNC **16** 01:39:47.3±0.4, 50°.03N×78°.87E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=8.7km s-min=2.0km az=68.0, Suspected Mining explosion.*
*ASRS **16** 01:39:48.4±0.4, 50°.N±1°×7°.9E±°, h5km, MLh3.3/8, Error ellipse: s-maj=4.1km s-min=3.1km az=80.1, confirmed*

ISC 16 01:39:47.4±0.9, 49°.97N±0°.03×78°.87E±0°.04, h0km, n30, σ1s95/51, 17C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.65**	**340**	⇑P	**Pg**	**01 39 58.9**	**-1.0**
KUR07				⇑S	**Sg**	**01 40 07.9**	**-0.5**
KUR14	**Kurchatov Arra**	**0.67**	**345**	⇓P	**Pg**	**01 39 59.2**	**-1.0**
KUR14				⇓S	**Sg**	**01 40 08.3**	**-0.5**
KUR06	**Kurchatov Arra**	**0.67**	**341**	⇑P	**Pg**	**01 39 59.3**	**-0.9**
KUR06				⇑S	**Sg**	**01 40 08.8**	**-0.1**
KUR15	**Kurchatov Arra**	**0.68**	**343**	⇓P	**Pg**	**01 39 59.3**	**-1.0**
KUR15				⇓S	**Sg**	**01 40 08.3**	**-0.6**
KURBB	**Kurchatov Arra**	**0.69**	**342**	Pg	**Pg**	**01 39 59.2**	**-1.3**
	3.2nm,0.3s,baz=166,slow=17,SNR=104						
KURBB				Lg	Lg	01 40 08.8	
	3.5nm,0.3s,baz=170,slow=32,SNR=22						
KURBB	**Kurchatov Arra**	**0.69**	**342**	⇑P	**Pg**	**01 39 59.5**	**-1.0**
	15nm,0.3s						
KURBB				⇑S	**Sg**	**01 40 09.1**	**-0.4**
	46nm,0.3s						
KUR16	**Kurchatov Arra**	**0.70**	**340**	⇑P	**Pg**	**01 39 59.7**	**-1.0**
KUR16				⇑S	**Sg**	**01 40 09.0**	**-0.8**
KUR05	**Kurchatov Arra**	**0.70**	**343**	⇑P	**Pg**	**01 39 59.9**	**-0.9**
KUR05				⇓S	**Sg**	**01 40 09.0**	**-1.1**
KUR17	**Kurchatov Arra**	**0.71**	**339**	⇑P	**Pg**	**01 39 59.9**	**-1.1**
KUR17				⇓S	**Sg**	**01 40 09.4**	**-0.8**
KUR04	**Kurchatov Arra**	**0.72**	**343**	⇑P	**Pg**	**01 40 00.4**	**-0.9**
KUR04				⇓S	**Sg**	**01 40 09.4**	**-1.2**
KURK	**Kurchatov**	**0.76**	**348**	⇑P	**Pg**	**01 40 01.0**	**-1.0**
	6.3nm,0.3s						
KURK				⇑S	**Sg**	**01 40 10.6**	**-1.3**
	28nm,0.8s						
KURK	**Kurchatov**	**0.76**	**348**	Pg	**Pg**	**01 40 01.0**	**-1.0**
KURK				Sg	**Sg**	**01 40 11.7**	**-0.2**
MAKZ	**Makanchi**	**3.78**	**146**	⇑Pg	**Pg**	**01 40 58.1**	**-1.7**
	4.7nm,1.1s						
MAKZ				⇓Lg	Lg	01 41 48.5	
	10nm,0.7s						
MAKZ	**Makanchi**	**3.78**	**146**	Pn	**Pn**	**01 40 46.9**	**0.0**
MAKZ				Pg	**Pg**	**01 40 58.7**	**-1.2**
MAKZ				Sg	**Sg**	**01 41 49.4**	**+0.5**
UKR	**Ust'-Kan**	**3.90**	**73**	Pn	**Pn**	**01 40 51.2**	**+2.6**
UKR				Pg	**Pg**	**01 41 01.6**	**-0.4**
UKR				S	**Sn**	**01 41 31.4**	**-3.6**
UKR				Sg	**Sg**	**01 41 52.1**	**-0.4**
MK31	**Makanchi Array**	**3.91**	**143**	⇓Pn	**Pn**	**01 40 50.8**	**+2.1**
	0.1nm,0.1s,baz=284,slow=6.1,SNR=23						
MK31				⇑Pg	**Pb**	**01 40 59.4**	**+2.2**
	0.3nm,0.2s,baz=326,slow=14,SNR=14						
MK31				⇑Lg	Lg	01 41 53.1	
	6.7nm,0.5s,baz=340,slow=26,SNR=19						
MKAR	**Makanchi Array**	**3.91**	**143**	Pn	**Pn**	**01 40 51.9**	**+3.1**
	0.4nm,0.3s,baz=321,slow=10,SNR=33						
MKAR				Pg	**Pb**	**01 40 57.7**	**+0.5**
	0.7nm,0.3s,baz=320,slow=13,SNR=13						
MKAR				Lg	Lg	01 41 51.4	
	1.0nm,0.3s,baz=324,slow=26,SNR=10						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**3.91**	**143**	Pn	**Pn**	**01 40 51.9**	**+3.1**
MKAR				Pg	**Pg**	**01 41 01.4**	**-1.0**
MKAR				Sg	**Sg**	**01 41 53.7**	**+0.7**
ZALV	**Zalesovo Beam**	**5.42**	**40**	Pn	**Pn**	**01 41 12.3**	**+3.0**
	0.6nm,0.3s,baz=229,slow=14,SNR=6.0						
ZALV				Lg	Lg	01 42 42.0	
	0.2nm,0.3s,baz=229,slow=26,SNR=3.5						
	1.1nm,0.4s						
NVS	**Novosibirsk**	**5.56**	**27**	Sg	**Sg**	**01 42 50.4**	**+4.5**
NVSII	**Novosibirsk**	**5.56**	**27**	Sg	**Sg**	**01 42 50.4**	**+4.5**
CHBI	**Chibit, Altay**	**5.56**	**83**	Sg	**Sg**	**01 42 47.6**	**+1.6**
ARTR	**Artybash**	**5.63**	**68**	Sg	**Sg**	**01 42 46.3**	**-1.8**
AKAR	**Aktash**	**5.64**	**83**	S	**Sn**	**01 42 14.7**	**-3.3**
AKAR				Sg	**Sg**	**01 42 46.3**	**-2.1**
ELT	**Eltsovka**	**5.65**	**52**	Sg	**Sg**	**01 42 47.1**	**-1.6**
ULGR	**Ulagan, Altay**	**5.86**	**80**	S	**Sn**	**01 42 21.2**	**-2.4**
ULGR				Sg	**Sg**	**01 42 52.0**	**-3.6**
CUR	**Chagan-Uzun**	**6.11**	**85**	S	**Sn**	**01 42 26.3**	**-3.4**
CUR				Sg	**Sg**	**01 43 05.9**	**+2.4**
BVA0	**Borovoye Array**	**6.11**	**303**	⇑Sn	**Sn**	**01 42 29.1**	**-0.5**
	2.8nm,0.7s,baz=110,slow=24,SNR=4.9						
BVA0				⇓Lg	Lg	01 42 59.9	
	2.1nm,0.7s						
AAK	**Ala-Archa**	**7.94**	**204**	Lg	Lg	01 43 58.8	
	0.5nm,0.3s,baz=267,slow=19,SNR=1.9						
I31KZ	**AKTYUBINSK INF**	**13.36**	**280**	*i*		02 53 46.2	
	baz=84,slow=315,SNR=1.3						

KRSC 16 01:41:22.2±1.6, 48°.17N×155°.70E, h16km±23km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**3.95**	**22**	*e*P	Pn	01 42 25.6	+3.5
KDTR				*e*S	Sn	01 43 12.8	+4.7
MTVR	**Mutnovka**	**4.60**	**19**	*e*P	Pn	01 42 35.0	+3.8
MTVR				*e*S	Sn	01 43 29.6	+5.3
RUS	**Russkaya**	**4.63**	**22**	*e*P	Pn	01 42 34.6	+3.1
RUS				*e*S	Sn	01 43 28.8	+3.9
GRL	**Gorelyy**	**4.64**	**18**	*e*P	Pn	01 42 36.2	+4.5
GRL				*e*S	Sn	01 43 31.3	+6.0
UGLR	**Uglovaya**	**5.42**	**20**	*e*P	Pn	01 42 47.0	+4.6
KOK	**Koryaka**	**5.45**	**19**	*e*P	Pn	01 42 48.6	+5.7
SDLR	**Sedlovina**	**5.50**	**20**	*e*P	Pn	01 42 47.7	+4.2
GNL	**Ganaly**	**5.71**	**14**	*e*P	Pn	01 42 50.2	+3.8

*IDC **16** 01:49:42.2±3.5, 2°.61S×101°.61E, h82km±31km, mb3.8/12, mbtmp4.1/13, MS3.3/3, Error ellipse: s-maj=34.0km s-min=13.2km az=63.0*
*NEIC **16** 01:49:43.0±1.4, 2°.62S±0°.08×101°.5E±0°.1, h89km±7km, mb4.3/12, Error ellipse: s-maj=16.3km s-min=8.9km az=61.0*
*DJA **16** 01:49:43.6±0.3, 3°.S±3°×10°.1E±°, h76km±4km, M4.5/12, mb4.7/4, mB5.1/1, MLv4.3/12, Mw(mB)4.5/1*

ISC 16 01:49:43.3±0.5, 2°.64S±0°.06×101°.52E±0°.06, h100km, n55, σ0s87/59, mb4.2/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**0.54**	**354**	P	**Pn**	**01 49 58.5**	**-1.1**
KRJI				S	**Sn**	**01 50 10.9**	**-0.8**
MASI	**Maura Aman, Be**	**0.88**	**125**	P	**Pn**	**01 50 01.7**	**-0.8**
MASI				S	**Sn**	**01 50 16.3**	**-0.7**
PPSI	**Pulau Pagai**	**1.51**	**265**	P	**Pn**	**01 50 09.4**	**-0.3**
PPSI				S

comp=Z,1.7nm,1.0s,baz=107,slow=5.8,SNR=1.7
comp=Z,1.7nm,1.0s
NVAR Mina Array Bea 129.12 40 PKP PKiKP 02 08 42.0 +0.8
comp=Z,0.5nm,0.7s,baz=237,slow=2.4,SNR=3.7
TXAR Lajitas Array 144.25 39 PKP PKPdf 02 09 08.0 -0.5
comp=Z,2.4nm,0.4s,baz=254,slow=0.4,SNR=65
FCAR Ozark Folk Cen 144.58 19 PKPab 02 09 07.3 -0.1
CPUP Villa Florida 144.68 214 PKP PKPdf 02 09 09.8 +0.6
comp=Z,4.0nm,0.9s,baz=133,slow=5.3,SNR=8.0
LCAR Lake Charles 144.72 18 PKPab 02 09 07.7 -0.2
R58B Mineral 144.84 359 PKPab 02 09 07.6 -0.7
S51A Beattyville 144.85 7 PKPab 02 09 08.0 -0.4
S57A Dark Hollow, R 145.04 1 PKPbc 02 09 07.8 -1.2
JCT Junction City 145.73 34 PKPdf 02 09 09.6 -1.3
V48A Smith Brothers 146.16 12 PKPdf 02 09 10.1 -1.3

NEIC ***16*** *01:59:51.7±2.2, 19.3S±0.1×177.6W±0.1, h550km±3km, mb4.0/16, Error ellipse: s-maj=19.1km s-min=16.1km az=129.0*
IDC ***16*** *01:59:53.2±1.2, 19.19S×177.83W, h572km±12km, mb3.2/9, mbtmp4.1/11, Error ellipse: s-maj=21.9km s-min=12.8km az=148.0*
ISC 16 01:59:51.0±0.4, 19.24S±0.08×177.59W±0.07, h550km, n79, σ1s27/83, mb3.8/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.40	289	P	P	02 01 18.0	+2.0
	35nm,0.5s,baz=141,slow=13,SNR=8.6						
MSVF				S	S	02 02 27.1	+1.8
	4.5nm,0.3s,baz=241,slow=19,SNR=5.4						
MSVF	Nonsavu	4.40	289	P	P	02 01 17.3	+1.3
NIUE	Niue	7.25	90	P	P	02 01 41.7	+0.4
AFI	Afiamalu	7.69	47	P	P	02 01 45.0	-0.8
	34nm,0.8s,baz=258,slow=14,SNR=2.2						
AFI				S	S	02 03 15.8	-4.1
	24nm,0.5s,baz=192,slow=22,SNR=3.0						
RAO	Raoul Island	9.98	182	P	P	02 02 08.8	+0.3
FUNA	Funafuti	11.09	343	P	P	02 02 20.6	+0.4
MARNC	Mare, Loyalty	13.67	258	P	P	02 02 45.6	-1.1
PINNC	Pines Island,	14.38	254	P	P	02 02 53.0	-1.1
DZM	Mont Dzumac	15.21	257	P	P	02 03 03.5	+0.8
	10nm,0.9s,baz=80,slow=18,SNR=2.1						
DZM	Mont Dzumac	15.21	257	P	P	02 03 03.3	+0.6
CTAO	Charters Tower	34.02	262	P	P	02 05 49.6	-0.1
COEN	Coen	37.90	272	P	P	02 06 21.7	-0.2
COEN				IAmb	IAmb	02 06 29.1	
	comp=Z,9.8nm,1.1s						
STKA	Stephens Creek	38.69	243	P	P	02 06 28.6	+0.5
BBOO	Buckleboo	43.46	242	P	P	02 07 05.1	-0.8
BBOO				IAmb	IAmb	02 07 22.1	
	comp=Z,6.6nm,1.1s						
WB0	Warramunga Arr	45.14	261	P	P	02 07 17.9	-1.2
WB2	Warramunga Arr	45.16	261	P	P	02 07 18.1	-1.0
WB2				IAmb	IAmb	02 07 19.7	
	comp=Z,3.3nm,1.1s						
WRA	Warramunga Arr	45.17	261	P	P	02 07 18.2	-1.1
	comp=Z,0.6nm,0.3s,baz=97,slow=7.7,SNR=41						
WRA				PcP	PcP	02 08 47.5	-0.4
	comp=Z,0.4nm,0.4s,baz=94,slow=3.4,SNR=7.4						
	comp=Z,0.6nm,0.3s						
WRA	Warramunga Arr	45.17	261	P	P	02 07 18.1	-1.1
ASAR	Alice Springs	45.19	255	P	P	02 07 18.9	-0.6
	comp=Z,0.8nm,0.4s,baz=86,slow=8.5,SNR=15						
ASAR				PcP	PcP	02 08 47.5	-0.5
	comp=Z,0.8nm,0.5s,baz=101,slow=3.9,SNR=5.7						
ASAR				S	S	02 13 15.7	-3.9
	comp=Z,0.7nm,0.8s,baz=91,slow=15,SNR=7.2						
	comp=Z,0.8nm,0.4s						
FITZ	Fitzroy Crossi	53.58	261	P	P	02 08 21.0	-0.2
VNDA	Vanda	59.20	185	P	P	02 08 59.6	+0.8
	comp=Z,0.3nm,0.6s,baz=342,slow=6.5,SNR=8.1						
	comp=Z,0.3nm,0.6s						
VNDA	Vanda	59.20	185	P	P	02 08 59.6	+0.8
ADK	Adak	70.82	1	P	P	02 10 12.1	0.0
QSPA	South Pole Qui	70.83	180	P	P	02 10 12.4	+0.2
QSPA				IAmb	IAmb	02 10 13.4	
	comp=Z,3.2nm,0.8s						
PETK	Petropavlovsk-	75.15	345	P	P	02 10 37.1	+0.1
	comp=Z,3.4nm,0.8s,baz=117,slow=5.0,SNR=2.9						
	comp=Z,3.4nm,0.8s						
NVAR	Mina Array Bea	79.85	43	P	P	02 11 04.0	+1.1
	comp=Z,0.8nm,0.7s,baz=226,slow=8.2,SNR=8.6						
	comp=Z,0.8nm,0.7s						
TUC	Tucson	81.90	52	P	P	02 11 14.4	+0.9
TUC				IAmb	IAmb	02 11 16.5	
	comp=Z,3.1nm,1.0s						
U15A	North Rim	82.83	48	P	P	02 11 19.9	+1.5
U15A				IAmb	IAmb	02 11 20.9	
	comp=Z,2.5nm,0.7s						
TXAR	Lajitas Array	86.05	57	P	P	02 11 35.8	+1.7
	comp=Z,1.0nm,0.7s,baz=225,slow=6.2,SNR=10						
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	87.00	13	P	P	02 11 36.9	-0.7
	comp=Z,1.0nm,0.6s,baz=230,slow=5.0,SNR=15						
	comp=Z,1.0nm,0.6s						
YHL	Hebgen Lake	87.78	41	P	P	02 11 43.8	+1.7
YHL				IAmb	IAmb	02 11 46.0	
	comp=Z,5.2nm,1.1s						
PDAR	Pinedale Array	87.78	43	P	P	02 11 42.5	+0.4
	comp=Z,0.5nm,0.7s,baz=204,slow=3.3,SNR=6.7						
	comp=Z,0.5nm,0.7s						
MSTX	Muleshoe	88.66	53	P	P	02 11 47.4	+1.2
SNAA	Sanae	89.26	178	P	P	02 11 47.3	-0.9
SNAA				IAmb	IAmb	02 12 00.5	
	comp=Z,1.4nm,1.1s						
CMAR	Chiang Mai Arr	90.06	289	P	P	02 11 53.9	+1.0
	comp=Z,1.0nm,0.3s,baz=101,slow=2.9,SNR=4.5						
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	110.61	314	PKiKP	PKiKP	02 17 19.8	-1.5
	comp=Z,0.5nm,0.5s,baz=91,slow=1.6,SNR=6.9						
ARCES	ARCESS Array B	127.75	350	PKP	PKPdf	02 17 53.0	-0.4
	comp=Z,1.1nm,0.4s,baz=7.0,slow=1.4,SNR=28						
FINES	FINESS Array B	134.67	344	PKhKP	PKPpre	02 17 56.6	
	comp=Z,2.4nm,0.9s,baz=11,slow=1.4,SNR=1.5						
NOA	NORSAR Array B	137.78	354	PKP	PKPdf	02 18 13.4	+0.8
	comp=Z,0.3nm,0.5s,baz=14,slow=3.7,SNR=1.8						
AKASG	Malin Array Be	142.09	332	PKhKP	PKPpre	02 18 15.8	
	comp=Z,0.6nm,0.4s,baz=45,slow=3.7,SNR=6.2						
BUR08	Bucovina Ar. S	146.13	332		PKPdf	02 18 28.0	+0.2
BURAR	Bucovina Array	146.14	332		PKPdf	02 18 28.0	+0.2
BRTR	Keskin Array B	146.26	314	PKPbc	PKPdf	02 18 29.9	+1.5
	comp=Z,1.6nm,0.5s,baz=139,slow=3.5,SNR=5.4						
OSTC	Ostas	146.87	344	*e*PKP	PKPbc	02 18 31.9	+0.2
CLL	Collm	146.92	348		PKPdf	02 18 28.1	-0.8
CLL	Collm	146.92	348	*i* PKPbc	PKPdf	02 18 31.7	+2.8
	comp=Z,8.0nm,1.0s						
CLL				*i* (PKiKP)		02 18 34.5	
	comp=Z,5.0nm,1.0s						
DPC	Dobruska-Polom	147.03	344	*e*PKP	PKPbc	02 18 32.4	+0.2
KRLC	Kraliky	147.16	343	*e*PKP	PKPdf	02 18 30.6	+1.2
MORC	Moravsky Berou	147.21	342	*e*PKP	PKPbc	02 18 32.8	+0.1
PRU	Pruhonice	147.82	345	*e*PKP	PKPbc	02 18 34.1	-0.1
VRAC	Vranov	147.90	342	*e*PKP	PKPbc	02 18 34.6	+0.2
JAVC	Velka Javorina	147.98	341	*e*PKP	PKPbc	02 18 35.5	+0.8
KRUC	Moravsky	148.18	342	*e*PKP	PKPbc	02 18 35.2	+0.1
KHC	Kasperske Hory	148.85	346		PKPdf	02 18 32.7	+0.5
KHC	Kasperske Hory	148.85	346	*e*PKP	PKPdf	02 18 35.9	+3.7
KHC				*ex*	x	02 18 43.1	
CKRC	Cesky Krumlov	148.96	345	*e*PKP	PKPbc	02 18 36.4	-0.7
GEC2	GERESS Array S	149.09	345		PKPdf	02 18 32.2	-0.4
GERES	GERESS Array B	149.09	345	PKPbc	PKPbc	02 18 37.1	-0.3
	comp=Z,2.1nm,0.7s,baz=48,slow=2.0,SNR=23						
GERES	GERESS Array B	149.09	345		PKPdf	02 18 36.5	+3.9
CONA	Conrad Observa	149.36	342	*i* P	PKPbc	02 18 38.2	+0.1
	comp=Z,4.4nm,0.7s,SNR=7.3						
RONA	Rosalia, Austr	149.44	341	*e*P	PKPbc	02 18 38.3	+0.1
	comp=Z,5.7nm,0.6s						
MOA	Molln	149.87	344	*e*P	PKPbc	02 18 38.6	-0.6
	comp=Z,1.7nm,0.6s						
BIOA	Bad Ischl, Aus	150.18	345	*e*P	PKPbc	02 18 39.4	-0.6
	comp=Z,2.2nm,0.6s						
SOKA	Soboth	150.73	342	*i* P	PKPbc	02 18 40.5	-0.9
	comp=Z,4.4nm,1.2s,SNR=5.5						
KBA	Koelnbreinsper	150.82	345	*e*P	PKPbc	02 18 40.7	-1.0
	comp=Z,2.9nm,0.5s						
WATA	Walderalm	150.99	347	*i* P	PKPbc	02 18 41.3	-0.7
	comp=Z,2.4nm,0.5s,SNR=6.7						
RETA	Reutte	151.01	348	*e*P	PKPbc	02 18 41.7	-0.3
	comp=Z,1.7nm,0.5s						
OBKA	Obir	151.02	343	*e*P	PKPbc	02 18 43.0	+1.0
	comp=Z,2.0nm,0.6s						
WTTA	Wattenberg	151.04	347	*i* P	PKPbc	02 18 41.8	-0.4
	comp=Z,6.7nm,0.5s,SNR=11						
MOTA	Moosalm	151.07	348	*e*P	PKPbc	02 18 41.9	-0.4
	comp=Z,6.5nm,1.2s						
MYKA	Terra Mystica	151.16	344	*e*P	PKPbc	02 18 41.1	-1.2
	comp=Z,2.7nm,0.5s						
SQTA	Sankt Quirin	151.17	348	*e*P	PKPbc	02 18 42.0	-0.4
	comp=Z,4.1nm,0.6s						
ABTA	Abfaltersbach	151.33	345	*i* P	PKPbc	02 18 41.8	-1.0
	comp=Z,5.9nm,0.5s,SNR=11						
PRED	Cave del Predi	151.35	344		PKPbc	02 18 41.5	-1.3
DAVA	Damuels	151.36	349	*e*P	PKPbc	02 18 43.2	+0.3
	comp=Z,7.5nm,1.2s						
FETA	Feichten	151.46	348	*e*P	PKPbc	02 18 43.0	-0.1
	comp=Z,2.8nm,0.7s						
CIMO	Cimolais	151.76	345		PKPbc	02 18 42.8	-0.9
ESDC	Sonseca Array	158.90	14	PKPab	PKPab	02 19 25.8	-0.3
	comp=Z,0.3nm,0.8s,baz=344,slow=4.2,SNR=2.2						
TORD	Torodi Ar. Bea	173.91	173	PKP	PKPdf	02 18 56.2	-2.2
	comp=Z,0.4nm,0.9s,baz=131,slow=1.7,SNR=1.7						
TORD				PKPab	PKPab	02 20 32.1	-0.6
	comp=Z,1.7nm,1.3s,baz=169,slow=3.9,SNR=2.3						

IDC ***16*** *02:52:43.6±5.2, 20.33S×178.99W, h624km±34km, mb2.8/5, mbtmp3.8/6, Error ellipse: s-maj=151.5km s-min=19.9km az=149.0*
ISC 16 02:52:41.1±1.6, 20.8S±0.4×178.7W±0.2, h600km, n9, σ2s54/9, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.28	314	P	P	02 54 09.4	+0.6
	4.8nm,0.3s,baz=165,slow=4.4,SNR=12						
ASAR	Alice Springs	43.81	257	P	P	02 59 55.5	-0.1
	1.3nm,0.6s,baz=94,slow=7.5,SNR=21						
	1.3nm,0.6s						
WRA	Warramunga Arr	43.90	262	P	P	02 59 55.8	-0.5
	0.8nm,0.3s,baz=97,slow=7.7,SNR=40						
	0.8nm,0.3s						
NVAR	Mina Array Bea	81.67	44	P	P	03 03 58.5	+0.4
	0.3nm,0.6s,baz=224,slow=7.6,SNR=3.0						
	0.3nm,0.6s						
ILAR	Eielson Array	88.71	13	P	P	03 04 30.1	-1.1
	0.2nm,0.5s,baz=217,slow=5.2,SNR=6.1						
	0.2nm,0.5s						
PDAR	Pinedale Array	89.61	43	P	P	03 04 36.0	-0.1
	0.3nm,0.6s,baz=202,slow=4.6,SNR=2.8						
	0.3nm,0.6s						
ARCES	ARCESS Array B	129.04	349	PKP	PKPdf	03 10 40.2	-0.9
	2.1nm,1.0s,baz=23,slow=3.2,SNR=2.1						
AKASG	Malin Array Be	142.90	330	PKP	PKPdf	03 11 04.0	-3.2
	1.7nm,0.5s,baz=46,slow=3.5,SNR=7.9						
GERES	GERESS Array B	150.25	343	PKPbc	PKPdf	03 11 24.7	+5.1
	0.2nm,0.5s,baz=76,slow=4.1,SNR=3.6						

NOU ***16*** *02:56:06.4, 37.81S×176.44E, h232km, mb4.2/6, North Island, New Zealand*
IDC ***16*** *02:56:13.7±0.7, 38.40S×176.15E, h153km±12km, mb3.2/2, mbtmp3.6/3, Error ellipse: s-maj=37.6km s-min=17.9km az=128.0*
WEL ***16*** *02:56:16.0±0.6, 38°S±3'×17°6E±', h151km±5km, M3.3/60, ML2.5/9, MLv3.3/60, Error ellipse: s-maj=0.0km s-min=0.0km az=166.4*
ISC 16 02:56:13.9±0.9, 38.16S±0.04×176.25E±0.04, h176km±6km, n150, σ1s16/165, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UTU	Utuhina	0.05	247	P	Pn	02 56 37.3	+0.1
NGRZ	Ngongotaha	0.07	318	P	Pn	02 56 37.0	-0.3
KARZ	Kaharoa	0.14	358	P	Pn	02 56 36.9	-0.4
HSRZ	Hossack Road	0.15	182	P	Pn	02 56 37.3	0.0
MKRZ	Makatiti	0.17	84	P	Pn	02 56 37.7	+0.3
LIRZ	Lichensteins R	0.19	35	P	Pn	02 56 37.1	-0.3
TARZ	Mount Tarawera	0.22	111	P	Pn	02 56 37.4	-0.1
GRRZ	Galatos Road	0.22	210	P	Pn	02 56 37.6	+0.2
HRRZ	Handcock Road	0.23	174	P	Pn	02 56 37.4	-0.1
PRRZ	Plateau Road	0.36	162	P	Pn	02 56 37.6	-0.1
WPRZ	Whakapapatarin	0.37	191	P	Pn	02 56 37.9	+0.1
MARZ	Manawahe	0.38	63	P	Pn	02 56 37.6	-0.3
KMRZ	Kinmai	0.40	322	P	Pn	02 56 37.6	-0.3
OPRZ	Ohinepanea	0.40	38	P	Pn	02 56 37.2	-0.7
TGRZ	Tauranga	0.43	1	P	Pn	02 56 37.5	-0.6
TGRZ				S	Sn	02 56 55.2	-1.2
KUTZ	Kaahu Road	0.47	225	P	Pn	02 56 38.3	+0.2
MUGZ	Murupara	0.52	128	P	Pn	02 56 37.9	-0.4
WHTZ	Whakaora	0.56	204	P	Pn	02 56 39.1	+0.5
TLZ	Tolley Road	0.59	253	P	Pn	02 56 38.6	-0.1
TLZ				S	Sn	02 56 57.3	-0.4
WHRZ	Whale Island	0.65	62	P	Pn	02 56 39.5	+0.5
WATZ	Wairara	0.68	216	P	Pn	02 56 39.5	+0.4
URZ	Urewera	0.69	99	P	Pn	02 56 38.4	-0.7
	658nm,0.3s,baz=254,slow=3.7,SNR=1450						
URZ				S	Sn	02 56 55.3	-3.2
	300nm,0.3s,baz=16,slow=23,SNR=28						
URZ	Urewera	0.69	99	P	Pn	02 56 38.6	-0.5
URZ				S	Sn	02 56 56.1	-2.4
URZ	Urewera	0.69	99	P	Pn	02 56 38.6	-0.5
MRHZ	Matea Rd	0.69	169	P	Pn	02 56 39.4	+0.2
MRHZ				S	Sn	02 56 56.7	-2.2
TOZ	Tahuroa Road	0.73	306	P	Pn	02 56 39.2	-0.2
TOZ				S	Sn	02 56 57.2	-1.7
HATZ	Hinemaiaia	0.74	190	P	Pn	02 56 39.7	+0.2
RATZ	Rangitukua	0.80	208	P	Pn	02 56 40.2	+0.3
MTHZ	Maungataniwha	0.83	146	P	Pn	02 56 40.4	+0.3
MTHZ				S	Sn	02 56 59.8	-0.6
RITZ	Rihia Road	0.87	200	P	Pn	02 56 41.0	+0.6
MYRZ	Mayor Island	0.88	360	P	Pn	02 56 40.1	-0.3
KATZ	Kakaramea	0.93	208	P	Pn	02 56 41.3	+0.4
RAGZ	Rawiri	0.98	111	P	Pn	02 56 41.4	+0.2
RAGZ				S	Sn	02 57 01.0	-1.1
RAHZ	Arahi	1.00	139	P	Pn	02 56 42.0	+0.7
RAHZ				S	Sn	02 57 02.3	-0.1
MWZ	Matawai	1.02	100	P	Pn	02 56 41.3	-0.1
MWZ				S	Sn	02 57 00.7	-1.9
BKZ	Black Stump Fm	1.02	169	P	Pn	02 56 41.8	+0.3
BKZ				S	Sn	02 57 01.2	-1.7
BKZ	Black Stump Fm	1.02	169	P	Pn	02 56 41.7	+0.3
NMHZ	Naumai	1.03	155	P	Pn	02 56 42.7	+1.1
NTVZ	North Tongariro	1.04	205	P	Pn	02 56 42.0	+0.4
TMVZ	Te Maari	1.05	204	P	Pn	02 56 42.1	+0.4
KRVZ	Karewarewa	1.05	207	P	Pn	02 56 42.0	+0.3
SNGZ	Shannon Statio	1.06	126	P	Pn	02 56 42.3	+0.6
SNGZ				S	Sn	02 57 02.2	-1.0
ETVZ	East Tongariro	1.06	203	P	Pn	02 56 42.2	+0.4
WTVZ	West Tongariro	1.09	208	P	Pn	02 56 42.4	+0.3
NNVZ	North Ngauruho	1.09	207	P	Pn	02 56 42.5	+0.4
OTVZ	Oturere	1.10	204	P	Pn	02 56 42.8	+0.6
OTVZ				S	Sn	02 57 03.9	-0.3
TWVZ	Taurewa	1.11	215	P	Pn	02 56 42.6	+0.4
SNVZ	South Ngauruho	1.13	205	P	Pn	02 56 42.9	+0.4
NGZ	Ngauruhoe	1.14	206	P	Pn	02 56 42.9	+0.4
RUGZ	Raukumara Rang	1.14	81	P	Pn	02 56 41.4	-1.1
RUGZ				S	Sn	02 57 00.3	-4.2
HIZ	Hauiti	1.15	252	P	Pn	02 56 42.9	+0.5
HIZ				S	Sn	02 57 04.4	0.0
HIZ	Hauiti	1.15	252	P	Pn	02 56 42.9	+0.5
WHHZ	Waihua	1.20	140	P	Pn	02 56 43.7	+0.9
TUVZ	Tukino	1.20	203	P	Pn	02 56 43.6	+0.6
WHVZ	Whangaehu Hut	1.24	205	P	Pn	02 56 43.7	+0.3
DRZ	Dome Shelter	1.24	205	P	Pn	02 56 44.3	+0.8
ARHZ	Aropaoanui	1.25	152	P	Pn	02 56 44.3	+1.1
TRVZ	Turoa	1.27	206	P	Pn	02 56 44.3	+0.7
KWHZ	Kaweka Forest	1.27	174	P	Pn	02 56 44.1	+0.6
WNVZ	Wahianoa	1.27	203	P	Pn	02 56 44.1	+0.4
HAZ	Te Kaha	1.28	72	P	Pn	02 56 42.6	-0.9
TKGZ	Te Karaka	1.29	103	P	Pn	02 56 44.0	+0.5
MOVZ	Moawhango	1.31	197	P	Pn	02 56 44.0	+0.2
RIGZ	Rimuhau	1.31	115	P	Pn	02 56 44.4	+0.7
PKVZ	Pokaka	1.33	212	P	Pn	02 56 44.5	+0.4
BHHZ	Black Hill Sta	1.34	186	P	Pn	02 56 44.4	+0.3
MKAZ	Moumakai	1.36	320	P	Pn	02 56 44.2	-0.1
TWGZ	Tauwhareparae	1.36	91	P	Pn	02 56 44.8	+0.5
MTVZ	Mangateitei	1.37	206	P	Pn	02 56 45.1	+0.7
KNZ	Kokohu	1.41	128	P	Pn	02 56 45.2	+0.6
PKGZ	Pakihiroa	1.47	80	P	Pn	02 56 45.2	-0.1
KUZ	Kuaotunu	1.47	343	P	Pn	02 56 44.9	-0.4
KRHZ	Kereru	1.49	176	P	Pn	02 56 46.0	+0.6
VRZ	Vera Road	1.52	230	P	Pn	02 56 46.6	+1.0
CNGZ	Carnagh Statio	1.57	103	P	Pn	02 56 47.2	+1.0
PUZ	Puketiti	1.58	88	P	Pn	02 56 46.4	0.0
ETAZ	East Tamaki Re	1.60	318	P	Pn	02 56 46.4	-0.1
CKHZ	Cape Kidnapper	1.63	157	P	Pn	02 56 47.9	+1.1
MHGZ	Mahia Peninsul	1.63	128	P	Pn	02 56 47.8	+1.0
AWAZ	Awhitu Peninsu	1.68	310	P	Pn	02 56 47.2	-0.1
KAHZ	Kahuranaki	1.71	164	P	Pn	02 56 48.6	+1.0
MXZ	Matakaoa Point	1.73	71	P	Pn	02 56 48.1	+0.3
WMGZ	Waiomatatini S	1.74	79	P	Pn	02 56 48.1	+0.1
EPAZ	Eden Park BICE	1.75	316	P	Pn	02 56 47.9	-0.1
PNHZ	Pukenui	1.75	181	P	Pn	02 56 48.4	+0.3
MBAZ	Motutapu North	1.75	322	P	Pn	02 56 48.1	0.0
HBAZ	Herne Bay Bore	1.78	317	P	Pn	02 56 48.1	-0.2
WTAZ	Waiatarua	1.81	312	P	Pn	02 56 48.8	+0.1
WAZ	Wanganui	1.88	211	P	Pn	02 56 50.0	+0.7
WPHZ	Waipukurau	1.91	176	P	Pn	02 56 50.2	+0.5
TSZ	Takapari Road	1.91	187	P	Pn	02 56 50.0	+0.3
ABAZ	Army Bay	1.92	324	P	Pn	02 56 50.0	+0.1
PXZ	Pawanui	1.93	166	P	Pn	02 56 50.6	+0.7
LREZ	Lake Rotokare	1.94	227	P	Pn	02 56 51.4	+1.4
GRZ	Great Barrier	2.01	341	P	Pn	02 56 50.6	-0.2
NEZ	North Egmont	2.02	236	P	Pn	02 56 52.4	+1.4
PKE	Pukeiti	2.05	239	P	Pn	02 56 52.5	+1.3
KHEZ	Kahui Hut	2.08	236	P	Pn	02 56 53.1	+1.4
PRHZ	Porangahau	2.13	172	P	Pn	02 56 52.6	+0.5
DVHZ	Dannevirke	2.14	182	P	Pn	02 56 52.3	+0.1
NBEZ	Newall Road No	2.17	239	P	Pn	02 56 53.9	+1.4
POWZ	Post Office Ro	2.26	189	P	Pn	02 56 53.6	0.0
ANWZ	Angora Road	2.31	176	P	Pn	02 56 54.6	+0.6
PRWZ	Pori Road	2.40	185	P	Pn	02 56 55.5	+0.3
BFZ	Birch Farm	2.52	180	P	Pn	02 56 56.5	-0.1
BFZ	Birch Farm	2.52	180	P	Pn	02 56 56.7	+0.1
MRZ	Mangatainoka R	2.55	192	P	Pn	02 56 56.6	-0.3
TIWZ	Tintock	2.63	186	P	Pn	02 56 57.7	-0.2
WCZ	Waipu Caves	2.69	325	P	Pn	02 56 58.8	+0.2
CPWZ	Castlepoint	2.75	181	P	Pn	02 56 59.7	+0.4
OGWZ	Otaki Gorge	2.78	197	P	Pn	02 56 59.2	-0.4
HOWZ	Holdsworth Sta	2.79	192	P	Pn	02 56 59.2	-0.7
KIW	Kapiti Island	2.89	201	P	Pn	02 57 00.1	-0.9
TMWZ	Te Maipa	2.96	185	P	Pn	02 57 01.2	-0.6
MTW	Mount Morrison	3.05	191	P	Pn	02 57 02.0	-1.0
CAW	Cannon Point	3.08	197	P	Pn	02 57 02.6	-0.8
DUWZ	D'Urville Isla	3.20	214	P	Pn	02 57 03.8	-1.0
TRWZ	Traveller	3.27	187	P	Pn	02 57 04.8	-0.8
PAWZ	Paruwai Farm	3.28	191	P	Pn	02 57 04.7	-1.1
WEL	Wellington	3.33	200	P	Pn	02 57 05.5	-0.8
MSWZ	Moikau Station	3.34	193	P	Pn	02 57 05.3	-1.2
TCW	Tory Channel	3.41	206	P	Pn	02 57 06.3	-1.1
PLWZ	Palliser	3.49	192	P	Pn	02 57 07.0	-1.4
OUZ	Omahuta	3.63	323	P	Pn	02 57 10.7	+0.6
TUWZ	Tuamarina	3.72	208	P	Pn	02 57 10.0	-1.2
NNZ	Nelson	3.77	215	P	Pn	02 57 10.7	-1.2
TKNZ	Takaka Hill	3.83	220	P	Pn	02 57 11.2	-1.5
CMWZ	Cape Campbell	3.91	203	P	Pn	02 57 13.2	-0.6
QRZ	Quartz Range	3.92	226	P	Pn	02 57 12.0	-1.8
QRZ	Quartz Range	3.92	226	P	Pn	02 57 12.5	-1.3
BSWZ	Blackbirch Sta	3.99	206	P	Pn	02 57 13.4	-1.4
MRNZ	Matariki Terra	4.21	219	P	Pn	02 57 15.7	-1.8
THZ	Tophouse	4.42	214	P	Pn	02 57 19.1	-1.2
KHZ	Kahutara	4.73	205	P	Pn	02 57 22.6	-1.6
KHZ	Kahutara	4.73	205	P	Pn	02 57 22.9	-1.3
DSZ	Denniston Nort	4.95	222	P	Pn	02 57 24.7	-2.4
GVZ	Greta Valley S	5.39	206	P	Pn	02 57 31.0	-1.8
LTZ	Lake Taylor	5.53	212	P	Pn	02 57 32.1	-2.5
OKCZ	Okains Bay	6.06	202	P	Pn	02 57 39.3	-2.2
MQZ	McQueen's Vall	6.17	205	P	Pn	02 57 39.8	-3.3
AKCZ	Akaroa Harbour	6.24	203	P	Pn	02 57 41.4	-2.6
RPZ

s146,c258; Duration: 1ᵈ1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.41±.02; $M_{\theta\theta}$-0.06±.02; $M_{\phi\phi}$0.46±.02; $M_{r\theta}$0.28±.01; $M_{r\phi}$0.12±.02; $M_{\theta\phi}$-1.19±.02; Best double couple: $M_0$1.30600×10^{17} NP1:ϕ_s348.00000°,δ81.00000°, λ-100.00000°. NP2:ϕ_s216.00000°,δ13.00000°, λ-44.00000°. Principal axes: T 1.3000, Pl35.0000°, Azm87.0000°; N 0.0130, Plg10.0000°, Azm350.0000°; P -1.3120, Plg53.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC ***16*** *02:58:42, 22.˙61S×68.˙87W, h100km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.39; $M_{\theta\theta}$0.05; $M_{\phi\phi}$0.34; $M_{r\theta}$0.14; $M_{\theta\phi}$0.13; $M_{r\phi}$-1.46; Fault plane solution: $M_0$1.52000×10^{17} NP1: ϕ_s217.00000°,δ9.00000°,λ-49.00000°. NP2:ϕ_s355.00000°, δ83.00000°,λ-95.00000°. Principal axes: T 1.4748, Plg38.0000°, Azm91.0000°; N 0.0777, Plg6.0000°, Azm356.0000°; P -1.5524, Plg51.0000°, Azm259.0000°;*

ISC 16 02:58:38.5±0.3, 22˙46S±0˙03×68˙74W±0˙03, h111km±2km, h111km:pP-P,n887,σ1ˢ40/823,mb5.0/214,11C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		
LVC	**Limon Verde**	**0.22**	**225**	**P**	**Pn**	**02 58 54.5**	**-0.1**
	15μm,0.4s,baz=58,slow=5.5						
LVC				S	Sn	02 59 05.4	-1.1
	28μm,0.3s,baz=174,slow=19,SNR=21						
LVC	**Limon Verde**	**0.22**	**225**		**Pn**	**02 58 54.4**	**-0.1**
LVC			Sn		**Sn**	**02 59 05.9**	**-0.7**
LVC	**Limon Verde**	**0.22**	**225**	*eP*	**Pn**	**02 58 54.3**	**-0.3**
AF01	**San Pedro de A**	**0.72**	**133**		**Pn**	**02 58 57.7**	**+0.3**
AF01	**San Pedro de A**	**0.72**	**133**	*eP*	**Pn**	**02 58 58.1**	**+0.7**
AF01				*i* S	**Sn**	**02 59 13.5**	**+1.8**
PB09	**IPOC Station P**	**0.80**	**325**		**Pn**	**02 58 57.9**	**-0.2**
PB09	**IPOC Station P**	**0.80**	**325**	*eP*	**Pn**	**02 58 58.6**	**+0.6**
PB09				*i* S	**Sn**	**02 59 13.6**	**+0.8**
PB09				IAML		02 59 16.9	
	comp=E,45μm,0.4s						
PB09	**IPOC Station P**	**0.80**	**325**	*eP*	**Pn**	**02 58 58.6**	**+0.6**
PB09				*eS*	**Sn**	**02 59 14.3**	**+1.5**
PB09				IAML		02 59 14.7	
	comp=Z,40μm,0.8s						
PB06	**IPOC Station P**	**0.80**	**252**		**Pn**	**02 58 57.5**	**-0.5**
PB06			Sn		**Sn**	**02 59 12.4**	**-0.4**
PB06	**IPOC Station P**	**0.80**	**252**	↑*iP*	**Pn**	**02 58 57.8**	**-0.2**
PB06				*i* S	**Sn**	**02 59 13.0**	**+0.2**
PB06				IAML		02 59 15.2	
	comp=E,52μm,0.2s						
PB06	**IPOC Station P**	**0.80**	**252**	*eP*	**Pn**	**02 58 57.8**	**-0.2**
PB06				*eS*	**Sn**	**02 59 14.2**	**+1.5**
PB06				*eS*	**Sn**	**02 59 14.3**	**+1.5**
PB06				IAML		02 59 16.7	
	comp=Z,29μm,0.4s						
PB15	**IPOC Station P**	**1.00**	**222**		**Pn**	**02 58 59.7**	**-0.3**
PB15	**IPOC Station P**	**1.00**	**222**	*eP*	**Pn**	**02 59 00.1**	**+0.1**
PB15				*i* S	**Sn**	**02 59 17.0**	**+0.7**
PB07	**IPOC Station P**	**1.28**	**304**		**Pn**	**02 59 02.2**	**-0.8**
PB07	**IPOC Station P**	**1.28**	**304**	↑*iP*	**Pn**	**02 59 02.9**	**-0.1**
PB07				*i* S	**Sn**	**02 59 20.9**	**-0.7**
PB07	**IPOC Station P**	**1.28**	**304**	*eP*	**Pn**	**02 59 02.9**	**-0.1**
PB07				*eS*	**Sn**	**02 59 21.4**	**-0.2**
PB07				IAML		02 59 23.3	
	comp=Z,33μm,0.3s						
PB04	**IPOC Station P**	**1.31**	**275**		**Pn**	**02 59 02.1**	**-1.1**
PB04	**IPOC Station P**	**1.31**	**275**	↑*iP*	**Pn**	**02 59 02.9**	**-0.4**
PB04				*i* S	**Sn**	**02 59 21.5**	**-0.5**
PB04				IAML		02 59 28.4	
	comp=N,35μm,0.3s						
PB04	**IPOC Station P**	**1.31**	**275**	*eP*	**Pn**	**02 59 02.0**	**-1.3**
PB04				*eS*	**Sn**	**02 59 22.2**	**+0.2**
PB04				IAML		02 59 23.7	
	comp=Z,25μm,0.3s						
PB02	**IPOC Station P**	**1.56**	**316**		**Pn**	**02 59 05.2**	**-1.0**
PB02	**IPOC Station P**	**1.56**	**316**	↑*iP*	**Pn**	**02 59 05.9**	**-0.2**
PB02				*i* S	**Sn**	**02 59 26.4**	**-0.8**
PB02				IAML		02 59 29.2	
	comp=E,57μm,0.2s						
PB02	**IPOC Station P**	**1.56**	**316**	*eP*	**Pn**	**02 59 06.0**	**-0.2**
PB02				*eS*	**Sn**	**02 59 26.7**	**-0.4**
PB02				IAML		02 59 29.3	
	comp=Z,40μm,0.2s						
PB01	**IPOC Station P**	**1.57**	**334**		**Pn**	**02 59 06.0**	**-0.3**
PB01	**IPOC Station P**	**1.57**	**334**	↑*iP*	**Pn**	**02 59 06.2**	**-0.1**
PB01				*i* S	**Sn**	**02 59 27.2**	**-0.2**
PB01				IAML		02 59 30.8	
	comp=E,25μm,0.4s						
TA01	**Diego Aracena**	**2.31**	**324**		**Pn**	**02 59 14.2**	**-1.3**
TA01	**Diego Aracena**	**2.31**	**324**	↑*iP*	**Pn**	**02 59 14.1**	**-1.4**
TA01				*i* S	**Sn**	**02 59 42.6**	**-1.2**
TA01				IAML		02 59 50.1	
	comp=E,14μm,0.4s						
TA01	**Diego Aracena**	**2.31**	**324**	*eP*	**Pn**	**02 59 14.2**	**-1.3**
TA01				*eS*	**Sn**	**02 59 44.9**	**+1.1**
TA01				IAML		02 59 47.3	
	comp=Z,7μm,0.6s						
TA02	**Huaiquique**	**2.53**	**329**		**Pn**	**02 59 16.9**	**-1.4**
TA02	**Huaiquique**	**2.53**	**329**	*eP*	**Pn**	**02 59 17.1**	**-1.2**
TA02				*i* S	**Sn**	**02 59 47.8**	**-1.2**
TA02				IAML		02 59 49.8	
	comp=N,14μm,0.2s						
TA02	**Huaiquique**	**2.53**	**329**	*eP*	**Pn**	**02 59 16.9**	**-1.4**
TA02				*eS*	**Sn**	**02 59 48.7**	**-0.2**
TA02				IAML		02 59 54.9	
	comp=Z,6μm,0.6s						
PB14	**IPOC Station P**	**2.64**	**215**		**Pn**	**02 59 18.9**	**-1.2**
PB14	**IPOC Station P**	**2.64**	**215**	*eP*	Pn	02 59 14.2	-5.9
PB14				*eP*	**Pn**	**02 59 19.0**	**-1.2**
PB14				*eS*	**Sn**	**02 59 50.4**	**-1.7**
PB14				IAML		02 59 55.0	
	comp=Z,11μm,0.5s						
GO02	**Mina Guanaco**	**2.80**	**196**	Pn	**Pn**	**02 59 21.4**	**-0.8**
GO02	**Mina Guanaco**	**2.80**	**196**	*eP*	**Pn**	**02 59 21.7**	**-0.5**
GO02				*i* S	**Sn**	**02 59 53.0**	**-2.8**
GO02	**Mina Guanaco**	**2.80**	**196**	*eP*	**Pn**	**02 59 22.0**	**-0.2**
GO02				*eS*	**Sn**	**02 59 53.0**	**-2.8**
GO01	**Chusmiza**	**2.81**	**351**		**Pn**	**02 59 22.2**	**-0.2**
GO01	**Chusmiza**	**2.81**	**351**	*eP*	**Pn**	**02 59 22.1**	**-0.4**
HJA	**Humahuaca**	**3.17**	**104**	*eP*	**Pn**	**02 59 29.0**	**+1.9**
AZAP	**Zapla**	**3.81**	**118**	*eP*	**Pn**	**02 59 36.9**	**+1.3**
AZAP				*eS*	**Sn**	**03 00 26.6**	**+7.0**
AC01	**Pan de Azucar**	**4.05**	**204**	Pn	**Pn**	**02 59 36.3**	**-2.2**
AC01	**Pan de Azucar**	**4.05**	**204**	*eP*	**Pn**	**02 59 36.2**	**-2.2**
AC01				*eS*	**Sn**	**03 00 21.4**	**-3.6**
AC01				IAML		03 00 23.4	
	comp=Z,3μm,0.3s						
PB12	**IPOC Station P**	**4.10**	**338**	Pn	**Pn**	**02 59 37.2**	**-2.1**
PB12	**IPOC Station P**	**4.10**	**338**	*eP*	**Pn**	**02 59 37.4**	**-1.9**
PB12				*eS*	**Sn**	**03 00 22.7**	**-3.8**
PB12				IAML		03 00 49.7	
	comp=Z,3μm,0.8s						
PB16	**IPOC Station P**	**4.16**	**350**	Pn	**Pn**	**02 59 40.5**	**-0.1**
PB16	**IPOC Station P**	**4.16**	**350**	*eP*	**Pn**	**02 59 41.0**	**+0.4**
AP01	**Chacalluta**	**4.33**	**339**	Pn	**Pn**	**02 59 41.0**	**-1.4**
AC02	**Maricunga**	**4.37**	**185**	Pn	**Pn**	**02 59 43.0**	**-0.3**
PB18	**Visviri**	**4.89**	**352**	Pn	**Pn**	**02 59 50.4**	**0.0**
AC06	**Mina Casimiro**	**5.09**	**196**		**Pn**	**02 59 49.7**	**-2.9**
GO03	**Copiap**	**5.29**	**195**	Pn	**Pn**	**02 59 52.7**	**-2.6**
AC04	**Llanos de Chal**	**6.10**	**200**	Pn	**Pn**	**03 00 01.9**	**-4.2**
LPAZ	**La Paz**	**6.16**	**5**	P	**Pn**	**03 00 08.7**	**+1.0**
	comp=Z,31nm,0.3s,baz=184,slow=6.2,SNR=344						
LPAZ	**La Paz**	**6.16**	**5**		**Pn**	**03 00 07.9**	**+0.2**
AC05	**El Transito**	**6.50**	**192**	Pn	**Pn**	**03 00 08.7**	**-3.0**
LCO	**Las Campanas**	**6.76**	**195**		**Pn**	**03 00 11.3**	**-4.1**
CO01	**Juntas del Tor**	**7.59**	**189**		**Pn**	**03 00 24.0**	**-2.6**
CO05	**La Serena**	**7.76**	**196**		Pn	03 00 23.8	-4.9
GO04	**Tololo Observa**	**7.90**	**193**	Pn	**Pn**	**03 00 26.3**	**-4.5**
ZON	**Zonda**	**9.05**	**180**		**Pn**	**03 00 44.1**	**-2.1**
SIV	**San Ignacio**	**9.69**	**50**	P	**Pn**	**03 00 51.0**	**-3.9**
	comp=Z,122nm,0.6s,baz=248,slow=11,SNR=241						
SIV				S	Sn	03 02 32.3	-10
	comp=Z,68nm,0.6s,baz=114,slow=20,SNR=3.1						
VA06	**Catapilco**	**10.32**	**192**	Pn	Pn	03 00 57.5	-5.8
VA03	**San Esteban**	**10.39**	**188**		**Pn**	**03 00 59.6**	**-4.8**
ROC1	**El Roble**	**10.67**	**190**		**Pn**	**03 01 07.3**	**-1.0**
PEL	**Peldehue**	**10.78**	**189**		**Pn**	**03 01 09.3**	**-0.4**
MT02	**Curacav**	**10.97**	**191**		**Pn**	**03 01 11.0**	**-1.1**
CPUP	**Villa Florida**	**11.09**	**113**	P	**Pn**	**03 01 11.1**	**-2.8**
	comp=Z,44nm,0.8s,baz=289,slow=11,SNR=96						
CPUP				LR	LR	03 06 08.0	
	comp=Z,1μm,20.0s,baz=318,slow=41						
CPUP	**Villa Florida**	**11.09**	**113**	Pn	**Pn**	**03 01 10.7**	**-3.1**
CPUP	**Villa Florida**	**11.09**	**113**	*eP*	**Pn**	**03 01 11.3**	**-2.5**
MT03	**Universidad Ad**	**11.11**	**188**		**Pn**	**03 01 13.2**	**-0.9**
LMEL	**Las Melosas**	**11.42**	**186**		**Pn**	**03 01 17.1**	**-1.3**
MT09	**Talagante**	**11.45**	**189**		Pn	03 01 12.6	-6.1
PTLB	**Pontes e Lacer**	**11.45**	**54**	Pn	**Pn**	**03 01 14.5**	**-4.2**
PTLB	**Pontes e Lacer**	**11.45**	**54**	*eP*	**Pn**	**03 01 15.4**	**-3.3**
MT01	**Popeta**	**11.58**	**190**		Pn	03 01 12.8	-7.4
ANTJ	**Antonio Joao (**	**11.81**	**90**	*eP*	**Pn**	**03 01 21.1**	**-2.3**
BO01	**Tunca**	**12.07**	**189**		**Pn**	**03 01 24.4**	**-2.3**
AQDB	**Aquidauana**	**12.30**	**85**	Pn	**Pn**	**03 01 26.6**	**-3.3**
AQDB	**Aquidauana**	**12.30**	**83**	*eP*	**Pn**	**03 01 27.2**	**-2.7**
BO02	**Sierra Bellavi**	**12.42**	**188**		**Pn**	**03 01 26.9**	**-4.6**
VILB	**Vilhena**	**12.47**	**42**	Pn	**Pn**	**03 01 30.0**	**-2.2**
VILB	**Vilhena**	**12.47**	**42**	*eP*	**Pn**	**03 01 29.7**	**-2.5**
ETMB	**Extrema**	**12.80**	**11**	Pn	**Pn**	**03 01 33.3**	**-3.2**
ETMB	**Extrema**	**12.80**	**11**	*eP*	**Pn**	**03 01 34.0**	**-2.5**
GO05	**Huala**	**12.81**	**192**		Pn	03 01 29.8	-6.8
NNA	**Nana**	**12.96**	**322**	P	**Pn**	**03 01 44.3**	**-0.7**
	comp=Z,21nm,0.7s,baz=164,slow=12,SNR=6.6						
NNA				S	**Sn**	**03 03 53.4**	**-8.1**
	comp=Z,13nm,0.4s,baz=156,slow=5.6,SNR=2.0						
NNA	**Nana**	**12.96**	**322**	P	**Pn**	**03 01 40.7**	**+2.0**
ITQB	**Itaqui**	**13.04**	**126**	Pn	**Pn**	**03 01 36.8**	**-2.7**
ITQB	**Itaqui**	**13.04**	**126**	*eP*	**Pn**	**03 01 37.7**	**-1.9**
ML02	**Paniavaida**	**13.46**	**186**		**Pn**	**03 01 40.1**	**-1.9**
MCR1	**Marechal Candi**	**13.65**	**101**	*eP*	**Pn**	**03 01 46.2**	**-1.2**
SALV	**Santo Antonio**	**13.94**	**64**	*eP*	**Pn**	**03 01 48.7**	**-2.6**
UNIS	**Unistalda (Bra**	**13.96**	**121**	*eP*	**Pn**	**03 01 50.7**	**-0.8**
CRSM	**Crissiumal (Br**	**14.24**	**114**	*eP*	**Pn**	**03 01 54.4**	**-0.7**
VA04	**Juan Fernndez**	**14.25**	**216**	P	**Pn**	**03 01 53.9**	**-1.3**
RODS	**Rosario do Sul**	**14.45**	**126**	*eP*	**Pn**	**03 01 56.0**	**-1.7**
FRBT	**Francisco Belt**	**14.73**	**107**	*eP*	**Pn**	**03 02 01.0**	**-0.4**
CZSB	**Cruzeiro do Su**	**15.13**	**345**	Pn	**Pn**	**03 02 04.6**	**-1.9**
CZSB	**Cruzeiro do Su**	**15.13**	**345**	*eP*	**Pn**	**03 02 05.5**	**-1.0**
C2SB	**Chapadao do Su**	**15.34**	**79**	*eP*	**Pn**	**03 02 08.3**	**-0.7**
PTGB	**Pitanga**	**15.46**	**102**	*eP*	**Pn**	**03 02 10.6**	**0.0**
ALGR	**Alto Alegre (B**	**15.51**	**117**	*eP*	**Pn**	**03 02 10.2**	**-1.0**
PDRB	**Porto dos Gac**	**15.74**	**49**	*eP*	**Pn**	**03 02 11.8**	**-2.4**
ITAB	**Concordia**	**15.81**	**111**		**Pn**	**03 02 13.7**	**-1.2**
ITAB	**Concordia**	**15.81**	**111**	*eP*	**Pn**	**03 02 13.6**	**-1.2**
CPSB	**Cacapava Do Su**	**15.82**	**123**	*eP*	**Pn**	**03 02 13.2**	**-1.7**
PCMB	**Pacaembu**	**16.23**	**90**	*eP*	**Pn**	**03 02 18.7**	**-1.4**
PLTB	**Pedras Altas**	**16.34**	**128**	Pn	**Pn**	**03 02 18.7**	**-2.8**
CLDB	**Colider**	**16.91**	**49**	*eP*	**Pn**	**03 02 27.1**	**-1.4**
GO06	**Curarrehue**	**17.23**	**187**		**P**	**03 02 30.9**	**-1.3**
ITRB	**Iturama**	**17.38**	**84**	*eP*	**P**	**03 02 32.7**	**-1.1**
LR03	**Panguipulli**	**17.39**	**189**	P	**Pn**	**03 02 34.1**	**0.0**
CNLB	**Canela**	**17.48**	**117**	*eP*	**P**	**03 02 33.0**	**-1.9**
ATAH	**Atahualpa**	**17.85**	**327**	P	**Pn**	**03 02 42.4**	**+2.1**
	comp=Z,9.5nm,0.8s,baz=139,slow=4.4,SNR=8.6						
PLCA	**Paso Flores**	**18.29**	**184**	P	**P**	**03 02 43.5**	**-0.2**
	comp=Z,12nm,0.7s,baz=1.5,slow=11,SNR=21						
PLCA				LR	LR	03 11 01.5	
	comp=Z,376nm,20.8s,baz=2.0,slow=41						
PLCA	**Paso Flores**	**18.29**	**184**	*eP*	**P**	**03 02 44.0**	**+0.3**
LL04	**Puerto Octay**	**18.66**	**189**	P	**P**	**03 02 47.9**	**+0.3**
TER01	**Tubaro-SC**	**18.70**	**113**	*eP*	**P**	**03 02 46.6**	**-1.7**
BB19B	**Bebedouro**	**18.83**	**90**	*eP*	**P**	**03 02 48.6**	**-1.1**
LL05	**Los Muermos**	**19.31**	**191**	P	**P**	**03 02 54.6**	**-0.1**
RCLB	**Rio Claro- Sao**	**19.61**	**94**	*eP*	**P**	**03 02 56.5**	**-1.7**
SNDB	**Serra Nova Dou**	**19.64**	**61**	*eP*	**P**	**03 02 56.8**	**-1.7**
IPMB	**Ipameri, GO**	**19.77**	**81**	*eP*	**P**	**03 02 58.1**	**-1.9**
PET01	**Itanhaem-SP**	**19.79**	**100**	*eP*	**P**	**03 02 59.1**	**-1.1**
NPGB	**Novo Progresso**	**20.03**	**42**	*eP*	**P**	**03 03 00.3**	**-2.5**
VAO	**Valinhos**	**20.10**	**96**	*eP*	**P**	**03 03 01.6**	**-1.9**
LL01	**San Ignacio de**	**20.10**	**188**	P	**P**	**03 03 03.0**	**-0.3**
MACA	**Manacapuru-AM**	**20.71**	**23**	P	**P**	**03 03 09.2**	**-0.9**
MACA	**Manacapuru-AM**	**20.71**	**23**	*eP*	**P**	**03 03 08.9**	**-1.2**
BDFB	**Brasilia**	**20.72**	**75**	P	**P**	**03 03 08.1**	**-2.3**
	comp=Z,146nm,0.7s,baz=264,slow=11,SNR=106						
	comp=Z,146nm,0.7s						
BDFB	**Brasilia**	**20.72**	**75**	P	**P**	**03 03 08.9**	**-1.4**
BDFB	**Brasilia**	**20.72**	**75**	*eP*	**P**	**03 03 08.5**	**-1.9**
LL02	**Futaleuf**	**20.84**	**186**	P	**P**	**03 03 09.7**	**-1.5**
GO07	**Milladeo Hill,**	**21.00**	**190**	P	**P**	**03 03 12.9**	**-0.1**
PMNB	**Patos De Minas**	**21.25**	**83**	*eP*	**P**	**03 03 14.3**	**-1.7**
PARB	**Paraibuna**	**21.32**	**97**	*eP*	**P**	**03 03 14.6**	**-2.1**
BOSC	**San Juan Bosco**	**21.40**	**332**	P	**P**	**03 03 18.6**	**+1.0**
ARNL	**Arenillas**	**21.77**	**328**	P	**P**	**03 03 22.8**	**+1.5**
ITTB	**Itaituba**	**21.96**	**37**	*eP*	**P**	**03 03 20.8**	**-2.6**
AY01	**Puyuhuapi**	**22.14**	**187**	P	**P**	**03 03 23.8**	**-1.2**
PORT	**Chimborazo Vol**	**23.03**	**334**	P	**P**	**03 03 36.4**	**+1.5**
CHSH	**Refugio Sur-Vo**	**23.05**	**333**	P	**P**	**03 03 35.8**	**+0.8**
COYC	**Coyhaique**	**23.22**	**186**	P	**P**	**03 03 34.4**	**-1.3**
PTLC	**Puerto Leguiza**	**23.25**	**345**	*eP*	**P**	**03 03 33.1**	**-3.1**
VAS01	**Vassouras-RJ**	**23.39**	**94**	*eP*	**P**	**03 03 35.7**	**-1.8**
SLOR	**San Lorenzo -**	**23.59**	**335**	P	**P**	**03 03 40.3**	**+0.4**
DIAM	**Diamantina, MG**	**23.85**	**85**	*eP*	**P**	**03 03 40.6**	**-1.3**
MC01	**Montes Claros**	**24.04**	**81**	*eP*	**P**	**03 03 41.5**	**-2.0**
JANB	**Januaria**	**24.25**	**77**	*eP*	**P**	**03 03 43.9**	**-1.5**
DUB01	**Friburgo-RJ**	**24.40**	**94**	*eP*	**P**	**03 03 45.2**	**-1.5**
SMTB	**Santa Maria do**	**24.40**	**60**	*eP*	**P**	**03 03 45.8**	**-0.9**
IMBA	**Imbabura, San**	**24.40**	**337**	P	**P**	**03 03 47.9**	**+0.7**
PRPB	**Paraiupebas**	**24.41**	**51**	*eP*	**P**	**03 03 44.6**	**-2.2**
OTAV	**Otavalo**	**24.46**	**336**	P	**P**	**03 03 48.4**	**+0.7**
OTAV	**Otavalo**	**24.46**	**336**	*eP*	**P**	**03 03 49.2**	**+1.5**
FLF1	**Flavio Alfaro-**	**24.48**	**332**	*eP*	**P**	**03 03 49.4**	**+2.0**
SDBA	**SAO DESIDERIO**	**24.81**	**70**	*eP*	**P**	**03 03 48.1**	**-2.4**
FLOC	**Florencia**	**24.83**	**343**	*eP*	**P**	**03 03 51.4**	**+0.8**
MALB	**Monte Alegre**	**24.85**	**36**	*eP*	**P**	**03 03 49.1**	**-1.6**
GCUF	**Volcan Galeras**	**24.99**	**339**	*eP*	**P**	**03 03 54.7**	**+2.1**
CAM01	**Campos-RJ**	**25.09**	**94**	*eP*	**P**	**03 03 51.9**	**-1.0**
GUVC	**San Jose del G**	**25.14**	**351**	*eP*	**P**	**03 03 50.7**	**-2.6**
CRUC	**La Cruz**	**25.18**	**340**	*eP*	**P**	**03 03 58.0**	**+3.8**
GARC	**Garzon, Huila**	**25.36**	**344**	*eP*	**P**	**03 03 58.0**	**+2.3**
BOAV	**Boa Vista**	**25.97**	**19**	P	**P**	**03 04 01.2**	**+0.3**
BOAV				IAmb	IAmb	03 04 03.7	
	comp=Z,49nm,1.1s						
BOAV	**Boa Vista**	**25.97**	**19**	*eP*	**P**	**03 04 00.8**	**-0.1**
POPC	**Popayan, Colom**	**26.02**	**342**	*eP*	**P**	**03 04 03.7**	**+2.1**
SJMB	**Sao Joao De Ma**	**26.05**	**87**	*eP*	**P**	**03 03 59.9**	**-1.7**
ALF01	**Guarapari-ES**	**26.11**	**91**	*eP*	**P**	**03 04 01.5**	**-0.7**
RIB01	**Linhares ES**	**26.65**	**89**	*eP*	**P**	**03 04 05.5**	**-1.6**
PRAC	**Prado**	**26.69**	**346**	*eP*	**P**	**03 04 08.5**	**+1.1**
PTGC	**Puerto Gaitan,**	**26.70**	**352**	*eP*	**P**	**03 04 08.2**	**+0.7**
VILC	**Villavicencio,**	**26.85**	**349**	*eP*	**P**	**03 04 10.5**	**+1.6**
GR1C	**Gorgona, Isla**	**26.93**	**339**	*eP*	**P**	**03 04 10.2**	**+0.7**
NAN01	**Guarapari, ES**	**27.23**	**86**	*eP*	**P**	**03 04 09.7**	**-2.5**
YOTC	**Yotoco, Valle**	**27.31**	**343**	*eP*	**P**	**03 04 13.2**	**+0.1**
MCPB	**Macae, AP**	**27.32**	**39**	*eP*	**P**	**03 04 12.4**	**-0.6**
CHIC	**Chingaza**	**27.36**	**349**	*eP*	**P**	**03 04 15.5**	**+1.7**
ROSC	**El Rosal**	**27.67**	**348**	P	**P**	**03 04 21.4**	**+4.8**
	comp=Z,11nm,0.5s,baz=152,slow=11,SNR=7.1						
ROSC				LR	LR	03 15 44.2	
	comp=Z,82nm,20.9s,baz=222,slow=37						
ROSC	**El Rosal**	**27.67**	**348**	*eP*	**P**	**03 04 21.1**	**+4.5**
GUA01	**Guaratinga, BA**	**27.87**	**83**	*eP*	**P**	**03 04 16.3**	**-1.6**
PLMC	**San Jos del P**	**28.18**	**344**	*eP*	**P**	**03 04 21.9**	**+1.2**
GUY2C	**Guyana, Caldas**	**28.26**	**346**	*eP*	**P**	**03 04 22.3**	**+0.3**
TMAB	**Tom-Au,PA,Br**	**28.30**	**48**	*eP*	**P**	**03 04 21.4**	**-0.3**
SPBC	**San Pablo de B**	**28.42**	**349**	*eP*	**P**	**03 04 23.1**	**+0.2**
NORC	**Norcasia**	**28.49**	**347**	*eP*	**P**	**03 04 24.5**	**+1.0**
RUSC	**La Rusia**	**28.49**	**351**	*eP*	**P**	**03 04 24.4**	**+0.4**
CMC01	**Camacan, BA**	**28.50**	**81**	*eP*	**P**	**03 04 22.6**	**-0.9**
GDU01	**Guandu, BA**	**29.01**	**78**	*eP*	**P**	**03 04 26.9**	**-1.2**
CBOC	**Ciudad Bolivar**	**29.03**	**345**	*eP*	**P**	**03 04 28.7**	**+0.3**
BARC	**Barichara**	**29.20**	**351**	*eP*	**P**	**03 04 28.3**	**-1.6**
HELC	**Santa Helena**	**29.24**	**346**	*eP*	**P**	**03 04 30.1**	**-0.4**
MG05	**Puerto Natales**	**29.32**	**185**	P	**P**	**03 04 30.6**	**+0.2**
MG05				IAmb	IAmb	03 04 32.8	
	comp=Z,27nm,0.9s						
PTBC	**PUERTO BERRIO,**	**29.36**	**348**	*eP*	**P**	**03 04 29.7**	**-1.4**
ZARC	**Zaragoza, Cauc**	**30.36**	**348**	*eP*	**P**	**03 04 38.0**	**-2.0**
SOCV	**Socops**	**30.62**	**356**	*eP*	**P**	**03 04 41.3**	**-1.0**
ROSB	**Rosario**	**30.80**	**54**	*eP*	**P**	**03 04 43.4**	**-0.4**
SDV	**Santo Domingo**	**31.20**	**356**	LR	LR	03 20 07.3	
	comp=Z,449nm,19.7s,baz=170,slow=41						
SDV	**Santo Domingo**	**31.20**	**356**	*eP*	**P**	**03 04 47.9**	**+0.3**
BAUV	**El Baul**	**31.21**	**1**	P	**P**	**03 04 46.7**	**-0.7**
MDP	**Montagnes des**	**31.60**	**32**	P	**P**	**03 04 50.2**	**-0.6**
	comp=Z,20nm,0.6s,baz=201,slow=9.6,SNR=24						
MDP				LR	LR	03 18 20.8	
	comp=Z,723nm,21.2s,baz=209,slow=38						
	comp=Z,20nm,0.6s						
MPGF	**Montagnes des**	**31.60**	**32**	P	**P**	**03 04 50.3**	**-0.7**
NBLA	**Lagarto - SE**	**31.69**	**74**	*eP*	**P**	**03 04 49.7**	**-2.1**
ARGC	**Ariguani, Magd**	**32.56**	**350**	*eP*	**P**	**03 04 57.7**	**-1.6**
BCIP	**Isla Barro Col**	**33.26**	**340**	*eP*	**P**	**03 05 04.6**	**-0.7**
NBAN	**Anadia - AL**	**33.60**	**73**	*eP*	**P**	**03 05 06.4**	**-2.0**
SRBA	**San Rafael, Bu**	**34.60**	**334**	P	**P**	**03 05 18.0**	**+0.9**
PEZE	**Perez Zeledon,**	**34.86**	**334**	P	**P**	**03 05 20.0**	**+0.6**
PEZE				IAmb	IAmb	03 05 23.7	
	comp=Z,19nm,0.8s						
NBRF	**Rio Formoso -**	**35.06**	**72**	*eP*	**P**	**03 05 20.0**	**-1.0**
RIMA	**Rio Macho**	**35.29**	**334**	P	**P**	**03 05 24.1**	**+1.0**
RCBR	**Riachuelo**	**35.75**	**67**	P	**P**	**03 05 26.5**	**-0.5**
	comp=Z,99nm,0.8s,baz=267,slow=18,SNR=56						
RCBR				LR	LR	03 20 40.2	
	comp=Z,323nm,20.2s,baz=34,slow=37						
	comp=Z,99nm,0.8s						
RCBR	**Riachuelo**	**35.75**	**67**	P	**P**	**03 05 26.1**	**-0.9**
RCBR	**Riachuelo**	**35.75**	**67**	*eP*	**P**	**03 05 26.5**	**-0.5**
RCBR	**Riachuelo**	**35.75**	**67**	P	**P**	**03 05 26.5**	**-0.5**
RCBR				sP	**sP**	**03 06 03.2**	**-3.2**
JTS	**Las Juntas de**	**36.22**	**332**	P	**P**	**03 05 31.7**	**+0.9**
JTS	**Las Juntas de**	**36.22**	**332**	P	**P**	**03 05 33.5**	**+2.7**
JTS				pP	**pP**	**03 05 56.9**	**+0.4**
JTS				sP	**sP**	**03 06 11.2**	**+1.7**
ORTG	**Ortega, Santa**	**36.50**	**332**	P	**P**	**03 05 34.4**	**+1.1**
ORTG				IAmb	IAmb	03 05 36.7	
	comp=Z,25nm,0.9s						
HZTE	**Horizontes, Gu**	**36.87**	**332**	P	**P**	**03 05 36.9**	**+0.5**
FDF	**Fort de France**	**37.70**	**12**	P	**P**	**03 05 42.1**	**-1.3**
OBIP	**Obispado

KMSC IAmb IAmb 03 08 54.0
comp=Z,48nm,1.6s
KMSC Kings Mountain 58.52 348 P **P** **03 08 23.9 +0.8**
baz=166
KMSC Kings Mountain 58.52 348 P **P** **03 08 22.2 -0.9**
baz=166
BG3 Lake Jocassee 58.70 346 P **P** **03 08 24.4 0.0**
BG3 IAmb IAmb 03 08 54.1
comp=Z,9.1nm,0.7s
CASEE Lake Jocassee 58.70 346 P **P** **03 08 25.1 +0.7**
baz=165,SNR=5.8
X51A Calhoun 58.74 344 P **P** **03 08 24.9 +0.1**
X51A IAmb IAmb 03 08 26.8
comp=Z,20nm,0.8s
X51A Calhoun 58.74 344 P **P** **03 08 25.1 +0.4**
baz=162,SNR=7.0
X51A P **P** **03 08 25.1 +0.4**
baz=162,SNR=7.0
V58A Windy Hill, Pi 58.76 350 P **P** **03 08 25.0 +0.2**
V58A Windy Hill, Pi 58.76 350 P **P** **03 08 25.5 +0.7**
baz=169,SNR=12
V58A P **P** **03 08 25.5 +0.7**
baz=169,SNR=12
143A Socs Landing, 58.97 338 P **P** **03 08 26.4 +0.1**
W52A Murphy 59.02 345 P **P** **03 08 26.9 +0.2**
W52A IAmb IAmb 03 09 10.4
comp=Z,19nm,1.1s
W52A Murphy 59.02 345 P **P** **03 08 27.0 +0.3**
baz=164
U59A Littleton 59.11 351 P **P** **03 08 27.6 +0.4**
U59A Littleton 59.11 351 P **P** **03 08 28.1 +0.9**
baz=170,SNR=6.9
U59A P **P** **03 08 28.1 +0.9**
baz=170,SNR=6.9
VNA3 Neumayer Olymp 59.12 161 P **P** **03 08 27.2 +0.2**
V55A Taylorsville 59.18 348 P **P** **03 08 28.3 +0.6**
V55A Taylorsville 59.18 348 P **P** **03 08 28.9 +1.2**
baz=166,SNR=16
V55A P **P** **03 08 28.9 +1.2**
baz=166,SNR=16
X48A Hartselle 59.21 342 P **P** **03 08 27.9 -0.1**
X48A Hartselle 59.21 342 P **P** **03 08 27.9 -0.1**
baz=160,SNR=24
V53A Saluda 59.33 347 P **P** **03 08 29.3 +0.5**
V53A Saluda 59.33 347 P **P** **03 08 29.4 +0.6**
baz=165,SNR=6.9
V53A P **P** **03 08 29.4 +0.6**
baz=165,SNR=6.9
VNA1 Neumayer--Stat 59.34 160 P **P** **03 08 29.7 +1.3**
NATX Nacogdoches 59.35 334 P **P** **03 08 29.2 +0.2**
NATX Nacogdoches 59.35 334 P **P** **03 08 30.5 +1.5**
baz=152
NATX Nacogdoches 59.35 334 P **P** **03 08 29.1 +0.1**
baz=152
Y45A Yeager Farm, C 59.41 340 P **P** **03 08 29.3 0.0**
Y45A Yeager Farm, C 59.41 340 P **P** **03 08 30.0 +0.7**
baz=158
W50A Signal Mountai 59.46 344 P **P** **03 08 29.2 -0.5**
W50A IAmb IAmb 03 08 59.0
comp=Z,18nm,0.8s
W50A Signal Mountai 59.46 344 P **P** **03 08 29.6 0.0**
baz=162,SNR=13
SHEL Horse Pasture 59.48 96 P **P** **03 08 28.6 -1.7**
CPCT Cooper Cave 59.50 345 P **P** **03 08 29.9 -0.1**
CPCT IAmb IAmb 03 09 13.5
comp=Z,20nm,1.0s
U56A King 59.51 349 P **P** **03 08 30.3 +0.3**
U56A King 59.51 349 P **P** **03 08 31.4 +1.4**
baz=168
U56A P **P** **03 08 31.4 +1.4**
baz=168
TKL Tuckaleechee C 59.53 346 LR LR 03 36 23.5
comp=Z,96nm,21.8s,baz=161,slow=38
TKL Tuckaleechee C 59.53 346 P **P** **03 08 30.0 -0.1**
TKL IAmb IAmb 03 09 13.6
comp=Z,20nm,0.9s
TKL Tuckaleechee C 59.53 346 P **P** **03 08 30.1 -0.1**
baz=164,SNR=9.5
SWET Sewanee 59.63 344 P **P** **03 08 30.4 -0.5**
V52A Sevierville 59.66 346 P **P** **03 08 30.9 -0.1**
V52A IAmb IAmb 03 09 00.0
comp=Z,21nm,0.8s
V52A Sevierville 59.66 346 P **P** **03 08 31.1 0.0**
baz=164,SNR=13
T59A Double "B" Far 59.69 352 P **P** **03 08 31.6 +0.4**
T59A Double "B" Far 59.69 352 P **P** **03 08 32.0 +0.8**
baz=170,SNR=12
T59A P **P** **03 08 32.0 +0.8**
baz=170,SNR=12
VNA2 Neumayer--Watz 59.70 160 P **P** **03 08 31.7 +0.8**
baz=286,slow=8.2
435B Jarrell 59.74 331 P **P** **03 08 31.9 +0.3**
435B IAmb IAmb 03 08 33.1
comp=Z,14nm,0.7s
435B Jarrell 59.74 331 P **P** **03 08 31.3 -0.3**
baz=149
T60A Surry 59.75 353 P **P** **03 08 32.1 +0.5**
T60A Surry 59.75 353 P **P** **03 08 32.5 +0.9**
baz=171
T60A P **P** **03 08 32.5 +0.9**
baz=171
V51A Loudon 59.80 345 P **P** **03 08 31.1 -0.9**
V51A IAmb IAmb 03 09 15.3
comp=Z,14nm,0.8s
V51A Loudon 59.80 345 P **P** **03 08 31.9 0.0**
baz=163,SNR=5.2
U54A Nelsons Funny 59.95 348 P **P** **03 08 31.7 -1.3**
U54A Nelsons Funny 59.95 348 P **P** **03 08 33.5 +0.5**
baz=166,SNR=10
U54A P **P** **03 08 33.5 +0.5**
baz=166,SNR=10
T57A Hurt 59.96 350 P **P** **03 08 31.9 -1.1**
T57A Hurt 59.96 350 P **P** **03 08 34.0 +0.9**
baz=169,SNR=7.0
T57A P **P** **03 08 34.0 +0.9**
baz=169,SNR=7.0
OXF Oxford 59.96 340 P **P** **03 08 31.4 -1.7**
baz=158
PLAL Pickwick Lake 60.00 342 P **P** **03 08 32.5 -0.9**
PLAL IAmb IAmb 03 09 03.0
comp=Z,18nm,1.0s
237A Washetta, Mont 60.03 333 P **P** **03 08 33.4 -0.2**
237A Washetta, Mont 60.03 333 P **P** **03 08 34.7 +1.1**
baz=151,SNR=5.9
CCAR Cane Creek 60.20 338 P **P** **03 08 35.3 +0.6**
CCAR Cane Creek 60.20 338 P **P** **03 08 35.4 +0.6**
baz=155,SNR=5.3
TZTN Tazewell 60.33 346 P **P** **03 08 35.8 +0.2**
TZTN IAmb IAmb 03 09 19.1
comp=Z,18nm,1.1s
TZTN Tazewell 60.33 346 P **P** **03 08 34.5 -1.1**
baz=164
V48A Smith Brothers 60.36 343 P **P** **03 08 35.5 -0.3**
V48A Smith Brothers 60.36 343 P **P** **03 08 35.7 -0.1**
baz=161,SNR=26
BLA Blacksburg 60.36 349 P **P** **03 08 36.6 +0.7**
BLA Blacksburg 60.36 349 P **P** **03 08 36.9 +1.0**
baz=168
BLA Blacksburg 60.36 349 P **P** **03 08 35.3 -0.5**
baz=168
WLAR White Oak Lake 60.47 337 P **P** **03 08 37.5 +0.9**
W45A Hickory Valley 60.49 341 P **P** **03 08 36.1 -0.6**
W45A Hickory Valley 60.49 341 P **P** **03 08 36.1 -0.6**
baz=158,SNR=5.9
JCT Junction City 60.50 329 P **P** **03 08 36.0 -0.9**
JCT Junction City 60.50 329 P **P** **03 08 37.3 +0.4**
baz=147,SNR=21
JCT Junction City 60.50 329 P **P** **03 08 36.8 -0.1**
baz=147,SNR=21
CLTN Cedars of Leba 60.56 344 P **P** **03 08 36.6 -0.5**
CLTN IAmb IAmb 03 09 06.4
comp=Z,19nm,0.8s
S57A Dark Hollow, R 60.66 351 P **P** **03 08 38.1 +0.3**
S57A Dark Hollow, R 60.66 351 P **P** **03 08 38.6 +0.8**
baz=169
S57A P **P** **03 08 38.6 +0.8**
baz=169
R58B Mineral 60.71 352 P **P** **03 08 38.3 +0.2**
R58B Mineral 60.71 352 P **P** **03 08 39.0 +0.9**
baz=170,SNR=12
R58B P **P** **03 08 39.0 +0.9**
baz=170,SNR=12
WHTX Lake Whitney, 60.72 332 P **P** **03 08 38.6 +0.4**
WHTX IAmb IAmb 03 08 40.3
comp=Z,22nm,0.8s
WHTX Lake Whitney, 60.72 332 P **P** **03 08 38.7 +0.4**
baz=149,SNR=5.3
WHTX Lake Whitney, 60.72 332 P **P** **03 08 37.5 -0.8**
baz=149,SNR=5.3
HPIG 60.72 322 P **P** **03 08 38.8 +0.1**
HPIG IAmb IAmb 03 08 40.5
comp=Z,14nm,1.0s
Z38A Mt. Pleasant 60.80 335 P **P** **03 08 39.1 +0.3**
Z38A Mt. Pleasant 60.80 335 P **P** **03 08 39.3 +0.4**
baz=152,SNR=5.9
U49A Red Boiling Sp 60.82 344 P **P** **03 08 38.2 -0.7**
U49A IAmb IAmb 03 08 40.0
comp=Z,12nm,0.6s
U49A Red Boiling Sp 60.82 344 P **P** **03 08 38.6 -0.3**
baz=162,SNR=14
CBN Corbin Frederi 60.88 352 P **P** **03 08 38.9 -0.4**
baz=171
SLBS Sierra La Lagu 60.90 316 P **P** **03 08 40.4 +0.6**
SLBS IAmb IAmb 03 08 43.5
comp=Z,16nm,0.7s
SLBS Sierra La Lagu 60.90 316 P **P** **03 08 41.9 +2.1**
SLBS pP **pP** **03 09 09.3 +1.6**
WVT Waverly 61.00 342 P **P** **03 08 39.9 -0.3**
WVT Waverly 61.00 342 P **P** **03 08 39.6 -0.5**
baz=160,SNR=41
WVT Waverly 61.00 342 P **P** **03 08 39.1 -1.1**
baz=160
WVT Waverly 61.00 342 P **P** **03 08 39.5 -0.7**
WVT pP **pP** **03 09 07.8 -0.7**
WVT sP **PcP** **03 09 22.4 +0.1**
T50A Nancy 61.07 345 P **P** **03 08 40.7 +0.1**
T50A IAmb IAmb 03 09 10.8
comp=Z,59nm,1.8s
T50A Nancy 61.07 345 P **P** **03 08 40.0 -0.6**
baz=163
T50A P **P** **03 08 40.0 -0.6**
baz=163
S54A Dingess, Beckl 61.09 349 P **P** **03 08 41.0 +0.3**
S54A IAmb IAmb 03 09 11.0
comp=Z,32nm,0.9s
S54A Dingess, Beckl 61.09 349 P **P** **03 08 40.9 +0.2**
baz=167
S54A P **P** **03 08 40.9 +0.2**
baz=167
UALR University of 61.17 338 P **P** **03 08 41.4 +0.1**
UALR IAmb IAmb 03 08 41.9
comp=Z,15nm,0.8s
SNAA Sanae 61.33 161 P **P** **03 08 42.7 +0.7**
SNAA Sanae 61.33 161 P **P** **03 08 42.3 +0.2**
comp=Z,12nm,0.8s,baz=279,slow=7.2,SNR=53
SNAA LR LR 03 33 08.1
comp=Z,83nm,21.9s,baz=267,slow=34
comp=Z,12nm,0.8s
SNAA Sanae 61.33 161 P **P** **03 08 42.1 0.0**
SNAA IAmb IAmb 03 09 25.4
comp=Z,30nm,1.3s
SNAA Sanae 61.33 161 *jj i* P **P** **03 08 41.7 -0.4**
R55A Marlinton 61.35 350 P **P** **03 08 42.4 -0.2**
R55A Marlinton 61.35 350 P **P** **03 08 43.5 +0.9**
baz=168,SNR=5.8
R55A P **P** **03 08 43.5 +0.9**
baz=168,SNR=5.8
S51A Beattyville 61.39 347 P **P** **03 08 41.8 -0.9**
S51A IAmb IAmb 03 09 13.0
comp=Z,34nm,1.5s
S51A Beattyville 61.39 347 P **P** **03 08 42.5 -0.2**
baz=164
S51A P **P** **03 08 42.5 -0.2**
baz=164
MIAR Mount Ida 61.41 337 P **P** **03 08 43.3 +0.4**
MIAR Mount Ida 61.41 337 P **P** **03 08 43.2 +0.3**
baz=154,SNR=35
MIAR Mount Ida 61.41 337 P **P** **03 08 42.9 -0.1**
baz=154,SNR=35
GNAR Gosnell 61.49 340 P **P** **03 08 43.8 +0.3**
TX31 Lajitas Ar. Si 61.50 325 P **P** **03 08 44.0 +0.2**
TX31 IAmb IAmb 03 09 26.1
comp=Z,28nm,1.1s
TX31 Lajitas Ar. Si 61.50 325 P **P** **03 08 44.1 +0.3**
baz=143,SNR=15
TX32 Lajitas Array 61.50 325 P **P** **03 08 44.7 +0.9**
TXAR Lajitas Array 61.50 325 P **P** **03 08 44.2 +0.4**
comp=Z,2.1nm,0.6s,baz=151,slow=8.8,SNR=48
TXAR pP **pP** **03 09 11.7 -0.1**
comp=Z,2.5nm,0.8s,baz=144,slow=11,SNR=6.5
comp=Z,2.1nm,0.6s
TXAR Lajitas Array 61.50 325 P **P** **03 08 44.1 +0.3**
T47A Sharon Grove 61.61 343 P **P** **03 08 44.1 -0.1**
T47A Sharon Grove 61.61 343 P **P** **03 08 44.0 -0.3**
baz=161,SNR=16
WHAR Wooly Hollow 61.62 338 P **P** **03 08 44.6 +0.3**
WHAR IAmb IAmb 03 08 48.3
comp=Z,15nm,0.8s
Z35A Perchaven, San 61.78 333 P **P** **03 08 45.6 +0.2**
Z35A Perchaven, San 61.78 333 P **P** **03 08 45.3 -0.1**
baz=150,SNR=9.4
LCAR Lake Charles 61.95 340 P **P** **03 08 46.4 -0.1**
LCAR IAmb IAmb 03 08 47.2
comp=Z,13nm,0.8s
SDMD Soldier's Deli 62.01 353 P **P** **03 08 47.2 +0.4**
SDMD Soldier's Deli 62.01 353 P **P** **03 08 47.5 +0.6**
baz=172
T45B Paducah 62.06 342 P **P** **03 08 46.9 -0.3**
baz=159,SNR=23
T45A Paducah 62.06 342 P **P** **03 08 47.2 0.0**
FCAR Ozark Folk Cen 62.11 339 P **P** **03 08 47.2 -0.4**
FCAR IAmb IAmb 03 08 47.7
comp=Z,12nm,0.6s
X37A Clayton 62.12 335 P **P** **03 08 48.0 +0.3**
baz=152,SNR=30
Q54A Coxs Mills 62.16 349 P **P** **03 08 48.2 +0.4**
baz=167
Q54A P **P** **03 08 48.2 +0.4**
baz=167
R50A Paris 62.16 346 pP 03 09 16.3 -0.1
R50A Paris 62.16 346 P **P** **03 08 47.6 -0.3**
baz=164
R50A P **P** **03 08 47.6 -0.3**
baz=164
ABTX Abilene, Hawle 62.22 331 IAmb IAmb 03 09 17.6
comp=Z,29nm,1.1s
ABTX Abilene, Hawle 62.22 331 P **P** **03 08 48.6 +0.2**
baz=148,SNR=9.0
ABTX Abilene, Hawle 62.22 331 P **P** **03 08 48.3 -0.1**
baz=148,SNR=9.0
P57A Homestead Farm 62.22 352 IAmb IAmb 03 09 19.4
comp=Z,51nm,1.5s
P57A Homestead Farm 62.22 352 P **P** **03 08 49.9 +1.6**
baz=170
P57A P **P** **03 08 49.9 +1.6**
baz=170
GEDE Greenville 62.28 354 P **P** **03 08 49.5 +0.9**
baz=173
LOOK Love County 62.32 333 **P** **03 08 49.8 +0.7**
LOOK IAmb IAmb 03 08 50.6
comp=Z,31nm,0.7s
R49A Shelbyville 62.37 345 pP **pP** **03 09 17.3 -0.4**
R49A IAmb IAmb 03 09 32.4
comp=Z,25nm,1.2s
PBMO Poplar Bluff 62.37 340 IAmb IAmb 03 09 18.5
comp=Z,30nm,0.8s
PBMO Poplar Bluff 62.37 340 P **P** **03 08 48.6 -0.7**
baz=157,SNR=18
PSUB Penn St. - Bra 62.38 354 P **P** **03 08 49.7 +0.5**
baz=173
Q52A Bidwell 62.40 348 pP 03 09 17.8 -0.1
MVL Millersville 62.54 353 pP **pP** **03 09 20.6 +1.8**
MVL IAmb IAmb 03 09 36.5
comp=Z,12nm,0.9s
TUPA Temple Univers 62.59 354 P **P** **03 08 51.2 +0.5**
baz=173,SNR=7.2
CGM3 Cape Girardeau 62.62 341 IAmb IAmb 03 09 20.3
comp=Z,24nm,0.9s
MCWV Mont Chateau 62.66 350 IAmb IAmb 03 09 21.9
comp=Z,25nm,0.8s
MCWV Mont Chateau 62.66 350 P **P** **03 08 51.9 +0.7**
baz=168
MCWV Mont Chateau 62.66 350 P **P** **03 08 51.6 +0.5**
baz=168
Q51A Peebles 62.67 347 pP pP 03 09 19.5 -0.2
P53A Whipple 62.74 349 IAmb IAmb 03 09 22.9
comp=Z,35nm,1.1s
P53A Whipple 62.74 349 P **P** **03 08 52.5 +0.8**
baz=167
P53A P **P** **03 08 52.5 +0.8**
baz=167
PANJ Princeton 62.76 355 P **P** **03 08 52.6 +0.9**
baz=174
PAGS Pennsylvania G 62.80 353 IAmb IAmb 03 09 22.6
comp=Z,50nm,1.6s
S44A Carbondale 62.87 342 IAmb IAmb 03 09 22.9
comp=Z,37nm,1.1s
P52A Corning 63.02 348 **pP** **03 09 22.1 +0.1**
P52A IAmb IAmb 03 09 24.1
comp=Z,18nm,0.8s
P52A Corning 63.02 348 P **P** **03 08 52.1 -1.5**
baz=166
TROLL Troll, Antarti 63.05 161 P **P** **03 08 54.5 +0.9**
BRNJ Basking Ridge 63.05 355 IAmb IAmb 03 08 56.1
comp=Z,14nm,0.6s
BRNJ Basking Ridge 63.05 355 P **P** **03 08 53.9 +0.2**
baz=174
BBTS Babate 63.06 59 LR LR 03 36 42.0
comp=Z,185nm,18.4s,baz=242,slow=36
HHAR Hobbs 63.09 337 IAmb IAmb 03 08 56.4
comp=Z,22nm,0.7s
X34A Smith Ranch, M 63.12 333 IAmb IAmb 03 08 55.8
comp=Z,26nm,0.7s
MGMO Mountain Grove 63.30 339 IAmb IAmb 03 08 56.5
comp=Z,20nm,0.6s
PAL Palisades 63.32 356 P **P** **03 08 56.2 +0.8**
baz=175
SSPA Standing Stone 63.34 352 P **P** **03 08 55.7 0.0**
baz=170
SSPA Standing Stone 63.34 352 P **P** **03 08 56.4 +0.7**
SSPA pP **pP** **03 09 25.4 +1.2**
SSPA sP **sP** **03 09 38.8 +2.1**
RLO Rose Lookout 63.38 336 IAmb IAmb 03 08 57.4
comp=Z,39nm,0.6s
U38A Gravette 63.39 337 IAmb IAmb 03 08 57.7
comp=Z,15nm,0.6s
U38A Gravette 63.39 337 P **P** **03 08 55.6 -0.5**
baz=153,SNR=19
N58A Sunbury 63.41 353 IAmb IAmb 03 09 26.9
comp=Z,29nm,1.2s
O52A Adamsville 63.44 349 IAmb IAmb 03 09 27.1
comp=Z,14nm,0.8s
TUL1 Leonard 63.45 336 IAmb IAmb 03 08 57.7
comp=Z,23nm,0.8s
TUL1 Leonard 63.45 336 P **P** **03 08 56.1 -0.4**
baz=152,SNR=11
TUL1 Leonard 63.45 336 P **P** **03 08 56.4 -0.1**
baz=152,SNR=11
ODNJ Ogdensburg 63.45 355 IAmb IAmb 03 09 26.8
comp=Z,50nm,1.9s
ODNJ Ogdensburg 63.45 355 P **P** **03 08 56.3 -0.1**
baz=174
P49A Miami Univ. Ec 63.45 346 IAmb IAmb 03 09 26.9
comp=Z,25nm,0.9s
P49A Miami Univ. Ec 63.45 346 P **P** **03 08 55.8 -0.6**
baz=163
P49A Miami Univ. Ec 63.45 346 P **P** **03 08 55.3 -1.1**
baz=163
O53A New Philadelph 63.46 349 P **P** **03 08 55.7 -0.8**
baz=167
FVM French Village 63.48 341 P **P** **03 08 56.8 +0.1**
baz=158,SNR=26
FNO Franklin 63.51 334 **P** **03 08 57.1 +0.2**
FNO IAmb IAmb 03 08 58.7
comp=Z,22nm,0.8s
BLO Bloomington 63.52 345 IAmb IAmb 03 09 27.5
comp=Z,21nm,0.7s
WMOK Wichita Mounta 63.63 333 P **P** **03 08 57.2 -0.6**
baz=149,SNR=5.8
WMOK Wichita Mounta 63.63 333 P **P** **03 08 57.2 -0.6**
baz=149,SNR=5.8
DEOK Depew 63.66 335 P **P** **03 08 58.2 +0.4**
DEOK IAmb IAmb 03 08 59.0
comp=Z,52nm,0.7s
ACSO Alum Creek Sta 63.76 348 IAmb IAmb 03 09 29.7
comp=Z,33nm,1.1s
ACSO Alum Creek Sta 63.76 348 P **P** **03 08 57.3 -1.1**
baz=165
PSWB Penn State Wil 63.79 354 P **P** **03 08 59.7 +1.1**
baz=172
CCM Cathedral Cave 63.80 340 P **P** **03 08 58.9 +0.2**
CCM Cathedral Cave 63.80 340 P **P** **03 08 58.7 0.0**
baz=157,SNR=35
CCM Cathedral Cave 63.80 340 P **P** **03 08 58.7 0.0**
baz=157
CCM Cathedral Cave 63.80 340 P **P** **03 08 58.5 -0.3**
CCM pP **pP** **03 09 27.2 +0.2**
Q44A Meyer Farm, Va 63.93 342 IAmb IAmb 03 09 28.4
comp=Z,34nm,0.8s
BCOK Bluff Creek, N 63.94 334 IAmb IAmb 03 09 01.1
comp=Z,22nm,0.7s
M57A Sunshine Farm, 63.94 353 IAmb IAmb 03 09 45.0
comp=Z,54nm,1.7s
M57A Sunshine Farm, 63.94 353 P **P** **03 09 00.9 +1.3**
baz=171
M57A P **P** **03 09 00.9 +1.3**
baz=171
KSPA Keystone Colle 64.02 354 IAmb IAmb 03 09 44.2
comp=Z,71nm,1.9s
KSPA Keystone Colle 64.02 354 P **P** **03 09 01.3 +1.2**
baz=173,SNR=5.4
QUOK Quay 64.03 335 IAmb IAmb 03 09 01.4
comp=Z,46nm,0.7s
BRYW Bryant College 64.10 358 IAmb IAmb 03 09 32.5
comp=Z,31nm,0.8s
P46A Rosedale 64.12 344 pP 03 09 28.5 -0.9
S39A Bolivar 64.14 338 P **P** **03 09 01.2 +0.2**
baz=155,SNR=32
O48B Farmland 64.24 346 P **P** **03 09 01.0 -0.6**
baz=163
O48B Farmland 64.24 346 P **P** **03 09 01.0 -0.6**
baz=163
MNTX Cornudas Mount 64.27 326 P **P** **03 09 01.7 -0.3**
baz=142,SNR=19
MNTX Cornudas Mount 64.27 326 P **P** **03 09 01.9 -0.1**
baz=142,SNR=19
M55A Ridgway 64.28 352 IAmb IAmb 03 09 32.4
comp=Z,44nm,1.4s
R40A Maddies Statio 64.34 340 IAmb IAmb 03 09 03.0
comp=Z,24nm,0.6s
R40A Maddies Statio 64.34 340 P **P** **03 09 01.9 -0.3**
baz=156,SNR=30
CSTR Hydro, Custer 64.37 333 IAmb IAmb 03 09 04.0
comp=Z,4.3nm,0.7s
M53A WI Miller and 64.53 350 P **P** **03 09 03.4 -0.1**
baz=168
L59A Walton 64.58 355 IAmb IAmb 03 09 48.2
comp=Z,23nm,0.8s
L59A Walton 64.58 355 P **P** **03 09 04.9 +1.0**
baz=174,SNR=6.0
L59A P **P** **03 09 04.9 +1.0**
baz=174,SNR=6.0
T35B Sooner Cattle 64.60 336 P **P** **03 09 04.6 +0.5**
baz=152,SNR=12
BINY Binghamton 64.68 354 IAmb IAmb 03 09 37.6
comp=Z,18nm,0.9s
BINY Binghamton 64.68 354 P **P** **03 09 05.3 +0.9**
baz=172
BINY Binghamton 64.68 354 P **P** **03 09 05.0 +0.6**
baz=172
HRV Adam Dziewonsk 64.69 358 P **P** **03 09 04.9 +0.5**
baz=177
HRV Adam Dziewonsk 64.69 358 P **P** **03 09 05.2 +0.7**
baz=177
HRV Adam Dziewonsk 64.69 358 P **P** **03 09 05.3 +0.9**
HRV pP **pP** **03 09 34.6 +1.5**
P43A Skaggs, Pawnee 64.75 342 IAmb IAmb 03 09 33.6
comp=Z,34nm,0.8s
L56A Greenwood 64.78 353 IAmb IAmb 03 09 35.7
comp=Z,25nm,1.1s
L56A Greenwood 64.78 353 P **P** **03 09 05.6 +0.5**
baz=171,SNR=5.3
L56A P **P** **03 09 05.6 +0.5**
baz=171,SNR=5.3
MSTX Muleshoe 64.79 329 IAmb IAmb 03 09 34.5
comp=Z,32nm,1.1s
MSTX Muleshoe 64.79 329 P **P** **03 09 05.7 +0.3**
baz=145,SNR=12
MSTX Muleshoe 64.79 329 P **P** **03 09 05.1 -0.4**
baz=145,SNR=12
SFIN Lafayette 64.81 345 P **P** **03 09 04.2 -1.1**
baz=161
SFIN Lafayette 64.81 345 P **P** **03 09 03.8 -1.5**
baz=161
CROK Carrier 64.82 334 IAmb IAmb 03 09 06.5
comp=Z,41nm,0.7s
TRY Troy 65.02 356 IAmb IAmb 03 09 38.8
comp=Z,20nm,0.7s
AMTX Amarillo 65.04 330 IAmb IAmb 03 09 13.4
comp=Z,10nm,0.8s
AMTX Amarillo 65.04 330 P **P** **03 09 07.1 0.0**

baz=146
AMTX Amarillo 65.04 330 P **P** 03 09 07.0 0.0
baz=146
HCNY Howe Caverns 65.04 355 P **P** 03 09 08.4 +1.7
baz=174,SNR=7.6
ELIS Ellis County 65.04 333 IAmb IAmb 03 09 08.5
comp=Z,19nm,0.8s
ERPA Erie 65.08 351 P **P** 03 09 06.8 -0.2
baz=168
U32A Winter Ranch, 65.13 333 IAmb IAmb 03 09 10.1
comp=Z,23nm,0.8s
U32A Winter Ranch, 65.13 333 P **P** 03 09 07.7 +0.2
baz=149,SNR=6.6
WVNY West Valley, N 65.18 352 IAmb IAmb 03 09 38.4
comp=Z,52nm,1.4s
KS20 Mayfield South 65.28 335 IAmb IAmb 03 09 09.7
comp=Z,40nm,0.6s
HSIG 65.36 320 P **P** 03 09 09.1 0.0
HSIG IAmb IAmb 03 09 11.3
comp=Z,16nm,1.0s
P40A Paris 65.40 340 IAmb IAmb 03 09 38.6
comp=Z,22nm,0.8s
P40A Paris 65.40 340 P **P** 03 09 09.2 0.0
baz=156,SNR=13
MMNY Mt. Morris Dam 65.41 353 IAmb IAmb 03 09 39.6
comp=Z,27nm,1.2s
HDIL Hopedale 65.54 343 IAmb IAmb 03 09 38.5
comp=Z,20nm,0.9s
HDIL Hopedale 65.54 343 P **P** 03 09 09.9 -0.1
baz=159
ACCN Adirondack Com 65.67 356 IAmb IAmb 03 09 56.5
comp=Z,38nm,1.7s
ACCN Adirondack Com 65.67 356 P **P** 03 09 12.0 +1.2
baz=175
J58A Remsen 65.77 355 P **P** 03 09 12.1 +0.7
baz=173
J58A P **P** 03 09 12.1 +0.7
baz=173
J59A Piesco 65.81 355 IAmb IAmb 03 09 42.7
comp=Z,61nm,1.6s
J59A Piesco 65.81 355 P **P** 03 09 13.0 +1.3
baz=174,SNR=7.8
J59A P **P** 03 09 13.0 +1.3
baz=174,SNR=7.8
J56A Wolcott 65.83 354 IAmb IAmb 03 09 42.5
comp=Z,20nm,0.9s
J57A Williamstown 65.88 354 P **P** 03 09 12.4 +0.3
baz=173
J57A P **P** 03 09 12.4 +0.3
baz=173
P38A Dawn 65.96 339 P **P** 03 09 12.7 0.0
baz=155,SNR=27
319A Douglas 66.14 323 IAmb IAmb 03 09 47.7
comp=Z,18nm,0.8s
K50A Casco 66.16 349 IAmb IAmb 03 09 14.9
comp=Z,17nm,0.7s
121A Cookes Peak, D 66.19 324 P **P** 03 09 16.1 +1.5
baz=140,SNR=11
121A Cookes Peak, D 66.19 324 P **P** 03 09 15.8 +1.2
baz=140,SNR=11
MCVT Middlebury Col 66.20 357 P **P** 03 09 15.5 +1.3
baz=176,SNR=6.9
I63A Otisfield 66.20 359 P **P** 03 09 15.8 +1.7
baz=178
I63A P **P** 03 09 15.8 +1.7
baz=178
NCB Newcomb 66.29 356 IAmb IAmb 03 09 59.1
comp=Z,24nm,1.6s
NCB Newcomb 66.29 356 P **P** 03 09 15.8 +1.0
baz=174
WCNY West Carthage 66.41 355 P **P** 03 09 16.5 +1.0
baz=173,SNR=5.5
LBNH Lisbon 66.43 358 P **P** 03 09 16.9 +1.3
baz=177
LBNH Lisbon 66.43 358 P **P** 03 09 16.9 +1.3
baz=177
KSU1 Kansas State U 66.56 337 IAmb IAmb 03 09 17.3
comp=Z,24nm,0.6s
KSU1 Kansas State U 66.56 337 P **P** 03 09 16.2 -0.4
baz=152
KSU1 Kansas State U 66.56 337 P **P** 03 09 16.2 -0.4
baz=152
R32A Long Quarter, 66.77 335 P **P** 03 09 18.9 +1.0
baz=150,SNR=9.7
Y22A Socorro 66.85 326 P **P** 03 09 20.1 +1.3
baz=142,SNR=6.1
N38A Joes South For 66.92 340 IAmb IAmb 03 09 48.8
comp=Z,27nm,0.8s
N38A Joes South For 66.92 340 P **P** 03 09 19.0 +0.2
baz=155,SNR=7.7
LONY Lake Ozonia 66.96 355 IAmb IAmb 03 09 50.0
comp=Z,58nm,1.8s
LONY Lake Ozonia 66.96 355 P **P** 03 09 20.0 +0.9
baz=174,SNR=5.6
FRNY Flat Rock 67.11 356 IAmb IAmb 03 09 22.5
comp=Z,14nm,1.0s
FRNY Flat Rock 67.11 356 P **P** 03 09 21.1 +1.2
baz=175,SNR=9.7
DELO Deloro Mine 67.14 353 IAmb IAmb 03 09 49.8
comp=Z,33nm,1.7s
BMNY Brushton-Moira 67.18 356 P **P** 03 09 21.4 +1.1
baz=174,SNR=7.8
GGN Saint George 67.27 1 IAmb IAmb 03 09 23.5
comp=Z,13nm,0.7s
G65A Princeton 67.34 1 IAmb IAmb 03 09 23.6
comp=Z,14nm,0.6s
G65A Princeton 67.34 1 P **P** 03 09 22.6 +1.3
baz=181,SNR=8.5
G65A P **P** 03 09 22.6 +1.3
baz=181,SNR=8.5
G62A West of Eustis 67.37 359 IAmb IAmb 03 09 24.6
comp=Z,22nm,0.8s
G62A West of Eustis 67.37 359 P **P** 03 09 23.0 +1.4
baz=178,SNR=14
G62A P **P** 03 09 23.0 +1.4
baz=178,SNR=14
ANMO Albuquerque 67.38 327 P **P** 03 09 22.4 +0.3
ANMO IAmb IAmb 03 09 25.2
comp=Z,14nm,0.8s
ANMO Albuquerque 67.38 327 P **P** 03 09 23.9 +1.8
baz=142,SNR=38
ANMO Albuquerque 67.38 327 P **P** 03 09 23.5 +1.4
baz=142
ANMO Albuquerque 67.38 327 P **P** 03 09 23.5 +1.4
ANMO pP **pP** 03 09 51.8 +1.2
ANMO sP **sP** 03 10 03.8 +0.8
PKME Peaks-Kenny Pk 67.39 360 IAmb IAmb 03 09 23.8
comp=Z,13nm,0.6s
PKME Peaks-Kenny Pk 67.39 360 P **P** 03 09 22.8 +1.1
baz=179,SNR=6.9
PKME Peaks-Kenny Pk 67.39 360 P **P** 03 09 22.6 +1.0
baz=179,SNR=6.9
L40A Anamosa 67.48 342 IAmb IAmb 03 09 24.0
comp=Z,27nm,1.1s
L40A Anamosa 67.48 342 P **P** 03 09 22.3 0.0
baz=158,SNR=8.2
CBKS Cedar Bluff 67.52 334 P **P** 03 09 23.6 +0.9
baz=149,SNR=7.0
CBKS Cedar Bluff 67.52 334 P **P** 03 09 23.3 +0.6
baz=149,SNR=7.0
SADO Sadowa 67.57 352 LR LR 03 41 27.1
comp=Z,41nm,20.7s,baz=175,slow=38
TUC Tucson 67.68 322 P **P** 03 09 24.2 +0.2
TUC IAmb IAmb 03 09 27.0
comp=Z,59nm,1.8s
TUC Tucson 67.68 322 P **P** 03 09 24.8 +0.9
baz=138
TUC Tucson 67.68 322 P **P** 03 09 25.6 +1.6
TUC pP **pP** 03 09 53.3 +0.8
TUC sP **sP** 03 10 06.0 +1.1
QSPA South Pole Qui 67.74 180 LR LR 03 40 52.7
comp=Z,88nm,20.9s,baz=146,slow=37
QSPA South Pole Qui 67.74 180 P **P** 03 09 23.3 -0.6
QSPA IAmb IAmb 03 09 26.8
comp=Z,18nm,0.6s
QSPA South Pole Qui 67.74 180 P **P** 03 09 25.0 +1.1
QSPA pP **pP** 03 09 53.9 +1.4
QSPA sP **sP** 03 10 05.1 +0.1
MNTQ Montreal, Queb 67.78 356 IAmb IAmb 03 09 26.6
comp=Z,28nm,0.6s
N35A Tabor 67.78 338 P **P** 03 09 24.2 -0.1
baz=153,SNR=16
SCIA State Center 67.93 341 pP 03 09 54.5 +0.5
SCIA State Center 67.93 341 P **P** 03 09 25.6 +0.5
baz=156,SNR=5.8
SCIA State Center 67.93 341 P **P** 03 09 24.7 -0.4
baz=156,SNR=5.8
F64A Sherman 67.99 0 P **P** 03 09 26.5 +1.1
baz=180,SNR=22
F64A P **P** 03 09 26.5 +1.1
baz=180,SNR=22
JFWS Jewell Farm 68.00 343 IAmb IAmb 03 09 26.9
comp=Z,29nm,0.7s
JFWS Jewell Farm 68.00 343 P **P** 03 09 25.9 +0.3
baz=158,SNR=12
JFWS Jewell Farm 68.00 343 P **P** 03 09 24.9 -0.7
baz=158,SNR=12
LMN Caledonia Moun 68.08 3 P **P** 03 09 26.2 +0.2
LMN IAmb IAmb 03 09 27.9
comp=Z,17nm,0.8s
T25A Trinidad 68.14 330 P **P** 03 09 28.0 +1.1
baz=144,SNR=11
K38A Parkersburg 68.47 341 IAmb IAmb 03 09 29.3
comp=Z,20nm,0.6s
K38A Parkersburg 68.47 341 P **P** 03 09 28.2 -0.3
baz=156,SNR=10
LIC Lamto 68.51 73⇑ *i*PKP1 **P** 03 09 29.9 +0.5
comp=Z,26nm,0.7s
E63A Oxbow 68.55 0 P **P** 03 09 29.6 +0.7
baz=180,SNR=5.3
E63A P **P** 03 09 29.6 +0.7
baz=180,SNR=5.3
TRQ Mont Tremblant 68.55 356 IAmb IAmb 03 09 30.7
comp=Z,22nm,0.6s
I42A Draeger Farm, 68.57 344 IAmb IAmb 03 09 30.4
comp=Z,18nm,0.6s
I42A Draeger Farm, 68.57 344 P **P** 03 09 29.4 +0.3
baz=160,SNR=11
214A Organ Pipe Nat 68.59 321 IAmb IAmb 03 09 32.2
comp=Z,17nm,0.9s
214A Organ Pipe Nat 68.59 321 P **P** 03 09 31.1 +1.6
baz=136,SNR=12
TIC Toumodi 68.71 73⇑ *i*PKP1 **P** 03 09 29.9 -0.8
comp=Z,14nm,0.8s
E62A Clayton Lake 68.75 359 IAmb IAmb 03 09 49.8
comp=Z,18nm,0.7s
E62A Clayton Lake 68.75 359 P **P** 03 09 31.6 +1.4
baz=179,SNR=11
E62A P **P** 03 09 31.6 +1.4
baz=179,SNR=11
PQI Presque Isle 68.80 1 P **P** 03 09 31.0 +0.5
PQI IAmb IAmb 03 10 21.1
comp=Z,57nm,1.9s
KIC Kosan Boka 68.83 73⇑ *i*PKP1 **P** 03 09 30.7 -0.7
comp=Z,32nm,0.6s
H43A Windswept, Lux 68.84 346 IAmb IAmb 03 09 31.9
comp=Z,13nm,0.7s
DBIC Dimbokro 68.86 73 P **P** 03 09 30.3 -1.3
comp=Z,10.0nm,0.7s,baz=243,slow=6.1,SNR=19
DBIC pP **pP** 03 09 59.5 -0.8
comp=Z,22nm,0.9s,baz=246,slow=6.3,SNR=4.8
DBIC LR LR 03 37 44.1
comp=Z,126nm,20.9s,baz=258,slow=34
comp=Z,10.0nm,0.7s
DBIC Dimbokro 68.86 73 P **P** 03 09 30.3 -1.3
DBIC Dimbokro 68.86 73 *e*P **P** 03 09 31.1 -0.5
DBIC Dimbokro 68.86 73 P **P** 03 09 31.1 -0.5
DBIC pP **pP** 03 09 59.6 -0.7
DBIC sP **sP** 03 10 13.0 +0.4
KSCO Kaye Shedlock' 68.89 332 P **P** 03 09 33.0 +1.7
baz=146,SNR=6.4
KSCO Kaye Shedlock' 68.89 332 P **P** 03 09 32.2 +0.8
baz=146,SNR=6.4
G45A Suttons Bay 68.92 347 **PcP** 03 09 53.5 -1.4
I40A Norwalk 69.01 343 IAmb IAmb 03 09 32.9
comp=Z,70nm,1.9s
I40A Norwalk 69.01 343 P **P** 03 09 31.9 0.0
baz=158
L34A Svendsen Farm, 69.01 338 P **P** 03 09 32.3 +0.4
baz=153,SNR=14
SDCO Great Sand Dun 69.14 329 P **P** 03 09 34.6 +1.5
baz=144,SNR=34
SDCO Great Sand Dun 69.14 329 P **P** 03 09 34.3 +1.1
baz=144,SNR=34
BGNE Belgrade 69.15 337 P **P** 03 09 33.5 +0.7
baz=151,SNR=14
BGNE Belgrade 69.15 337 P **P** 03 09 33.0 +0.3
baz=151,SNR=14
SFX San Felipe 69.17 319 P **P** 03 09 32.9 -0.2
SFX IAmb IAmb 03 09 35.9
comp=Z,16nm,0.8s
BATG Bathurst New B 69.45 2 P **P** 03 09 35.1 +0.6
TAOE Nuku Hiva Isla 69.54 269 *e*LR LR 03 30 54.5
comp=Z,207nm,41.9s
LATQ La Tuque 69.61 357 IAmb IAmb 03 09 55.6
comp=Z,13nm,0.6s
S22A 4UR Ranch, Cre 69.78 329 P **P** 03 09 38.3 +1.2
baz=143,SNR=11
I37A Lemond, Waseca 69.90 341 IAmb IAmb 03 09 38.4
comp=Z,25nm,0.6s
I37B Waseca 69.90 341 P **P** 03 09 37.4 +0.1
baz=156,SNR=13
E46A Sault Ste Mari 69.94 349 P **P** 03 09 37.2 -0.3
baz=165
Q24A Divide 69.97 330 IAmb IAmb 03 09 40.7
comp=Z,20nm,0.8s
Q24A Divide 69.97 330 P **P** 03 09 39.0 +0.7
baz=144,SNR=18
MVCO Mesa Verde 70.18 327 IAmb IAmb 03 09 41.6
comp=Z,17nm,0.9s
MVCO Mesa Verde 70.18 327 P **P** 03 09 40.7 +1.2
baz=141,SNR=17
G40A Rib Lake 70.18 344 IAmb IAmb 03 09 40.3
comp=Z,32nm,1.9s
G40A Rib Lake 70.18 344 P **P** 03 09 38.8 -0.2
baz=159
OGNE Ogallala 70.26 334 IAmb IAmb 03 09 41.7
comp=Z,23nm,0.8s
OGNE Ogallala 70.26 334 P **P** 03 09 40.2 +0.6
baz=147
WUAZ Wupatki 70.39 324 IAmb IAmb 03 09 45.0
comp=Z,19nm,0.9s
WUAZ Wupatki 70.39 324 P **P** 03 09 42.6 +1.9
baz=138,SNR=10
K31A O'Neill 70.43 337 IAmb IAmb 03 10 13.2
comp=Z,39nm,0.9s
E43A Lone Tree Farm 70.48 347 P **P** 03 09 39.9 -0.9
baz=162,SNR=5.6
GLA Glamis 70.57 320 P **P** 03 09 43.1 +1.4
baz=135
ECSD EROS Data Cent 70.66 339 P **P** 03 09 41.9 -0.1
baz=153,SNR=14
ECSD EROS Data Cent 70.66 339 P **P** 03 09 41.5 -0.5
baz=153,SNR=14
COWI Conover 70.70 345 P **P** 03 09 41.4 -0.8
baz=160
SPMN Marine on St. 70.84 342 IAmb IAmb 03 10 12.4
comp=Z,23nm,1.2s
SPMN Marine on St. 70.84 342 P **P** 03 09 42.8 -0.2
baz=156,SNR=6.0
SPMN Marine on St. 70.84 342 P **P** 03 09 42.5 -0.5
baz=156,SNR=6.0
ISCO Idaho Springs 70.85 331 P **P** 03 09 44.6 +1.0
baz=144,SNR=16
ISCO Idaho Springs 70.85 331 P **P** 03 09 44.4 +0.8
baz=144,SNR=16
SMCO Snowmass 70.98 329 IAmb IAmb 03 09 47.3
comp=Z,13nm,0.7s
PV15 Paradox Valley 71.05 328 IAmb IAmb 03 10 16.1
comp=Z,31nm,1.2s
PDMCI Parker Dam,Lak 71.06 321 P **P** 03 09 45.7 +1.2
baz=136
PV13 Radium Mtn., P 71.08 328 IAmb IAmb 03 10 15.9
comp=Z,21nm,1.1s
BC3 Big Chuckawall 71.36 320 P **P** 03 09 48.0 +1.4
baz=135,SNR=6.9
MONP2 Monument Peak 71.41 319 P **P** 03 09 48.7 +1.7
baz=134
BAR Barrett 71.42 319 IAmb IAmb 03 10 30.3
comp=Z,76nm,1.9s
D41A Chassel 71.47 346 IAmb IAmb 03 09 48.1
comp=Z,21nm,0.8s
D41A Chassel 71.47 346 P **P** 03 09 47.1 +0.4
baz=161,SNR=11
IRM Iron Mountain 71.53 321 P **P** 03 09 49.3 +1.8
baz=135,SNR=5.3
F36A Milaca 71.62 342 P **P** 03 09 47.5 -0.2
baz=156,SNR=16
E38A The Farm, Brul 71.77 344 P **P** 03 09 48.6 0.0
baz=158
N23A Red Feather La 71.89 331 IAmb IAmb 03 09 52.2
comp=Z,15nm,0.7s
N23A Red Feather La 71.89 331 P **P** 03 09 50.6 +0.8
baz=144,SNR=13
TPFO Pinon Flats 71.92 320 P **P** 03 09 51.4 +1.4
baz=134
BELC Belle Mtn. Jos 71.93 320 P **P** 03 09 52.0 +2.0
baz=134
PFO Pinyon Flats O 71.93 320 LR LR 03 38 49.7
comp=Z,32nm,19.8s,baz=148,slow=34
PFO Pinyon Flats O 71.93 320 P **P** 03 09 52.0 +2.0
baz=134
GMRC Granite Mounta 72.28 321 P **P** 03 09 53.5 +1.4
baz=136,SNR=11
PKCU Pink Cliffs 72.33 325 IAmb IAmb 03 11 08.5
comp=Z,62nm,2.0s
O20A White River Ci 72.34 329 IAmb IAmb 03 09 55.0
comp=Z,23nm,0.8s
O20A White River Ci 72.34 329 P **P** 03 09 54.0 +1.6
baz=142,SNR=30
F33A 5 Mile Ranch, 72.44 340 P **P** 03 09 52.7 +0.2
baz=153,SNR=11
SRU San Rafael Swe 72.66 327 IAmb IAmb 03 09 56.7
comp=Z,19nm,0.7s
HEC Hector,Ludlow 72.70 320 P **P** 03 09 56.7 +2.2
baz=134
SZCU Shurtz Canyon 72.86 324 IAmb IAmb 03 10 40.6
comp=Z,41nm,1.8s
TUQ Turquoise Moun 72.89 321 P **P** 03 09 57.2 +1.5
baz=135
P18A Preston Nutter 72.92 328 IAmb IAmb 03 09 58.7
comp=Z,17nm,0.7s
EYMN Ely 73.00 344 P **P** 03 09 55.6 -0.3
baz=158,SNR=11
EYMN Ely 73.00 344 P **P** 03 09 55.6 -0.3
baz=158,SNR=11
BFSC Mount Baldy Ra 73.09 319 P **P** 03 09 58.6 +1.7
baz=133
RWWY Rawlins 73.09 331 IAmb IAmb 03 09 60.0
comp=Z,16nm,0.8s
SHPR Sheep Range 73.21 322 IAmb IAmb 03 10 29.2
comp=Z,40nm,1.9s
KOWA Kowa 73.26 66 P **P** 03 09 57.1 -0.9
KOWA IAmb IAmb 03 10 01.5
comp=Z,18nm,0.8s
TCRU Three Creeks R 73.27 326 IAmb IAmb 03 10 46.7
comp=Z,9.6nm,0.5s
GSC Goldstone, Bar 73.31 321 IAmb IAmb 03 10 01.6
comp=Z,58nm,1.9s
GSC Goldstone, Bar 73.31 321 P **P** 03 09 59.6 +1.5
baz=134,SNR=5.5
RDMU Red Mountain 73.31 329 IAmb IAmb 03 10 00.4
comp=Z,16nm,0.6s
TBI Tubuai 73.33 251 *e*P **P** 03 10 01.4 +2.9
TBI *e*pP **pP** 03 10 26.0 -1.1
comp=Z,124nm,27.8s
TBI Tubuai 73.33 251 *e*LR LR 03 32 39.5
comp=Z,273nm,34.8s
SHOC Shoshone, Teco 73.42 321 P **P** 03 09 60.0 +1.4
baz=135
K22A Casper 73.56 332 IAmb IAmb 03 10 03.1
comp=Z,21nm,1.1s
K22A Casper 73.56 332 P **P** 03 10 01.0 +1.4
baz=144,SNR=8.4
K22A Casper 73.56 332 P **P** 03 10 00.9 +1.4
baz=144,SNR=8.4
RSSD Black Hills 73.72 334 P **P** 03 10 01.0 +0.6
RSSD IAmb IAmb 03 10 02.7
comp=Z,14nm,0.8s
RSSD Black Hills 73.72 334 P **P** 03 10 01.7 +1.2
baz=146,SNR=14
RSSD Black Hills 73.72 334 P **P** 03 10 01.4 +0.9
baz=146
EDW2 Edwards Air Fo 73.73 320 P **P** 03 10 02.0 +1.5
baz=133
PMOZ Porto Moniz, M 73.77 43 *e*S **S** 03 19 26.2 +2.9
QSM Queen of Sheba 73.81 321 IAmb IAmb 03 10 32.1
comp=Z,40nm,1.8s
D32A Dogwood Acres, 73.82 340 IAmb IAmb 03 10 01.7
comp=Z,22nm,0.7s
CCAC Calif City Air 73.92 320 IAmb IAmb 03 10 46.1
comp=Z,14nm,0.8s
LRMC Laurel Mtn Rad 73.95 320 P **P** 03 10 03.4 +1.5
baz=134
B35A Bob, Littlefor 73.96 343 P **P** 03 10 01.5 0.0
baz=156
TPNV Topopah Spring 74.14 322 P **P** 03 10 04.4 +1.4
baz=135,SNR=15
FURC Furnace Creek, 74.15 321 P **P** 03 10 04.4 +1.5
baz=134
MPMC Manual Prospec 74.23 321 P **P** 03 10 04.9 +1.3
baz=134,SNR=13
S11A Rachel 74.35 323 IAmb IAmb 03 10 59.4
comp=Z,29nm,1.2s
AGMN Agassiz Nation 74.51 342 P **P** 03 10 04.9 +0.2
baz=154,SNR=11
AGMN Agassiz Nation 74.51 342 P **P** 03 10 04.2 -0.4
baz=154,SNR=11
E28A Huff 74.54 338 P **P** 03 10 05.7 +0.8
baz=150,SNR=7.3
ISA Isabella, Lake 74.55 320 P **P** 03 10 06.9 +1.7
baz=133,SNR=10
SPR3 Spring Creek 3 74.55 325 IAmb IAmb 03 10 07.5
comp=Z,7.1nm,0.9s
DUG Dugway, Tooele 74.64 326 P **P** 03 10 06.9 +1.1
baz=138,SNR=13
R11A Troy Canyon, C 74.76 324 P **P** 03 10 08.5 +1.9
baz=136,SNR=18
GRAC Grapevine Rang 74.81 322 P **P** 03 10 08.7 +2.0
baz=134,SNR=5.2
PKM Mcpherson Peak 74.83 319 P **P** 03 10 08.7 +1.6
baz=132
CWC Cottonwood Cre 74.84 321 P **P** 03 10 08.8 +1.7
baz=134
SBA Scott Base 74.92 190 P **P** 03 10 07.6 +0.9
BW06 Boulder Array 75.01 330 P **P** 03 10 08.7 +0.7
baz=141,SNR=8.4
PDAR Pinedale Array 75.01 330 P **P** 03 10 09.0 +1.0
comp=Z,2.4nm,0.6s,baz=134,slow=8.4,SNR=21
PDAR LR LR 03 46 33.9
comp=Z,34nm,19.5s,baz=149,slow=38
comp=Z,2.4nm,0.6s
VES Vestal, Richgr 75.03 320 P **P** 03 10 09.2 +1.2
baz=133,SNR=5.0
HWUT Hardware Ranch 75.07 328 IAmb IAmb 03 10 11.6
comp=Z,16nm,0.7s
SMMC Simmler 75.23 319 P **P** 03 10 11.0 +1.8
baz=132
PPT2 Papeete2 75.25 257 *e*P **P** 03 10 12.5 +2.7
comp=Z,162nm,27.0s
PPT2 *e*S **S** 03 19 42.2 +1.8
comp=Z,207nm,25.8s
PPT2 Papeete2 75.25 257 *e*LR LR 03 33 32.5
comp=Z,916nm,39.5s
MDND Maddock 75.28 339 P **P** 03 10 10.2 +1.1
baz=151,SNR=16
MDND Maddock 75.28 339 P **P** 03 10 09.6 +0.5
baz=151,SNR=16
AHID Auburn Hatcher 75.73 329 IAmb IAmb 03 10 14.2
comp=Z,25nm,0.7s
VNDA Vanda 75.94 190 P **P** 03 10 13.6 +1.0
comp=Z,2.4nm,0.8s,baz=128,slow=4.4,SNR=19
VNDA LR LR 03 44 16.1
comp=Z,50nm,18.4s,baz=158,slow=36
comp=Z,2.4nm,0.8s
MLAC Mammoth, Mammo 76.10 321 P **P** 03 10 15.8 +1.5
baz=133
SNOW Snow King Moun 76.11 330 IAmb IAmb 03 10 17.4
comp=Z,16nm,0.8s
LOHW Long Hollow 76.15 330 IAmb IAmb 03 10 16.8
comp=Z,11nm,0.6s
ELK Elko 76.30 325 LR LR 03 43 58.5
comp=Z,43nm,18.8s,baz=143,slow=36
NVAR Mina Array Bea 76.34 322 P **P** 03 10 16.9 +1.3
comp=Z,3.1nm,0.7s,baz=156,slow=6.3,SNR=31
NVAR pP **pP** 03 10 45.1 +0.5
comp=Z,2.2nm,0.8s,baz=167,slow=7.5,SNR=3.5
NVAR LR LR 03 42 20.7
comp=Z,36nm,18.1s,baz=97,slow=34
comp=Z,3.1nm,0.7s
FLWY Flagg Ranch 76.56 330 IAmb IAmb 03 10 19.6
comp=Z,26nm,0.7s
LAO LASA Array 76.71 335 P **P** 03 10 18.6 +1.2
baz=145
RLMT Red Lodge 76.73 332 IAmb IAmb 03 10 20.6
comp=Z,14nm,0.8s
RLMT Red Lodge 76.73 332 P **P** 03 10 19.1 +1.4
baz=142,SNR=27
H17A Grant Village 76.74 331 P **P** 03 10 20.2 +2.4
baz=141,SNR=6.5
SCHQ Schefferville 76.99 1 P **P** 03 10 19.2 +0.6
comp=Z,4.6nm,0.6s,baz=172,slow=3.6,SNR=13
comp=Z,4.6nm,0.6s
YMR Madison River 77.13 331 IAmb IAmb 03 10 24.2

comp=Z,39nm,1.3s
YHL Hebgen Lake 77.37 331 IAmb IAmb 03 10 25.0
comp=Z,15nm,0.6s
DGMT Dagmar 77.41 337 IAmb IAmb 03 10 23.6
comp=Z,22nm,0.7s
DGMT Dagmar 77.41 337 P **P** **03 10 22.8 +1.6**
baz=147
DGMT Dagmar 77.41 337 P **P** **03 10 22.3 +1.2**
baz=147
CVNA Calvinia 77.41 119 *e*P **P** **03 10 20.8 -1.1**
CVNA IAmb IAmb 03 10 23.4
comp=Z,79nm,1.5s
TORD Torodi Ar. Bea 77.53 70 P **P** **03 10 22.0 -0.6**
comp=Z,24nm,0.4s,baz=257,slow=5.6,SNR=183
TORD pP **pP** **03 10 50.8 -1.0**
comp=Z,22nm,0.7s,baz=251,slow=4.9,SNR=4.9
TORD S **S** **03 20 06.8 +1.7**
comp=Z,1.7nm,1.0s,baz=234,slow=9.4,SNR=4.7
TORD LR LR 03 43 51.8
comp=Z,111nm,19.0s,baz=214,slow=35
comp=Z,24nm,0.4s
TORD Torodi Ar. Bea 77.53 70 IAmb IAmb 03 10 27.0
comp=Z,31nm,0.6s
PAHR Pah Rah Range 77.83 322 IAmb IAmb 03 10 26.8
comp=Z,20nm,0.7s
HLID Hailey 77.93 328 IAmb IAmb 03 10 27.4
comp=Z,17nm,0.8s
HLID Hailey 77.93 328 P **P** **03 10 26.2 +1.9**
baz=138,SNR=46
SUR Sutherland 77.97 120 LR LR 03 42 22.2
comp=Z,81nm,18.5s,baz=230,slow=34
BOZ Bozeman (W) 78.14 331 P **P** **03 10 26.8 +1.3**
baz=140,SNR=9.1
MFID Camas Ranch 78.53 327 IAmb IAmb 03 11 11.6
comp=Z,34nm,1.6s
PLTX Planet X, Gerl 78.55 323 IAmb IAmb 03 10 30.9
comp=Z,23nm,0.6s
ORV Oroville 78.93 321 IAmb IAmb 03 10 31.9
comp=Z,15nm,0.8s
GRAN Grantham 79.08 120 *e*P **P** **03 10 32.0 +1.0**
GRAN IAmb IAmb 03 10 37.7
comp=Z,11nm,0.7s
EGMT Eagleton 79.22 333 IAmb IAmb 03 10 34.2
comp=Z,24nm,1.4s
EGMT Eagleton 79.22 333 P **P** **03 10 31.5 +0.3**
baz=142,SNR=5.2
KEIM Keimoes 79.31 117 *e*P **P** **03 10 32.6 +0.3**
KEIM IAmb IAmb 03 10 37.6
comp=Z,20nm,0.9s
TSUM Tsumeb 79.62 107 LR LR 03 43 13.8
comp=Z,146nm,20.1s,baz=312,slow=34
TSUM Tsumeb 79.62 107 P **P** **03 10 32.7 -1.5**
TSUM Tsumeb 79.62 107 *e*P **P** **03 10 33.8 -0.4**
TSUM IAmb IAmb 03 10 35.8
comp=Z,148nm,1.9s
PLID Pearl Lake 79.82 328 IAmb IAmb 03 10 37.0
comp=Z,19nm,0.7s
BRAK Brakfontein 79.83 120 *e*P **P** **03 10 35.9 +0.8**
BRAK IAmb IAmb 03 10 43.8
comp=Z,200nm,2.2s
MSO Missoula 80.13 330 IAmb IAmb 03 11 29.6
comp=Z,39nm,1.9s
MSO Missoula 80.13 330 P **P** **03 10 37.7 +1.5**
baz=138,SNR=6.1
K05A Summer Lake 80.70 324 IAmb IAmb 03 10 42.4
comp=Z,19nm,0.8s
GRAF Camdeboo Natio 80.93 121 *e*P **P** **03 10 42.5 +1.5**
GRAF IAmb IAmb 03 11 02.2
comp=Z,498nm,3.0s
YBH Yreka Blue Hor 81.06 322 P **P** **03 10 41.5 +0.2**
comp=Z,4.2nm,0.7s,baz=93,slow=6.6
YBH LR LR 03 47 23.9
comp=Z,28nm,18.1s,baz=142,slow=36
comp=Z,4.2nm,0.7s
L04D Klamath Falls 81.15 323 P **P** **03 10 42.1 +0.3**
baz=131
J05D Fort Rock, OR 81.27 324 P **P** **03 10 43.2 +0.8**
baz=132,SNR=5.5
PINE Pine Mountain 81.45 325 IAmb IAmb 03 10 46.2
comp=Z,21nm,0.7s
J04D Umpqua Nationa 81.71 324 P **P** **03 10 45.7 +0.8**
baz=132
E09A Wood Farm, Sta 81.89 328 IAmb IAmb 03 10 48.1
comp=Z,34nm,1.8s
I05D Terrebonne, OR 82.03 325 P **P** **03 10 46.9 +0.6**
baz=132,SNR=16
I04A Tendick Farm, 82.24 324 P **P** **03 10 47.9 +0.5**
baz=131
MDT Midelt 82.24 50 LR LR 03 46 39.1
comp=Z,126nm,20.4s,baz=247,slow=35
HAWA Hanford 82.49 327 IAmb IAmb 03 10 51.5
comp=Z,14nm,0.8s
G05D Wamic, OR 82.62 326 P **P** **03 10 50.9 +1.6**
baz=132
NEW Newport 82.65 330 P **P** **03 10 49.4 0.0**
comp=Z,2.8nm,0.7s,baz=132,slow=4.6,SNR=7.4
NEW LR LR 03 49 56.1
comp=Z,27nm,19.8s,baz=132,slow=37
comp=Z,2.8nm,0.7s
NEW Newport 82.65 330 P **P** **03 10 49.5 +0.2**
baz=136
D08A Wollman Farm, 82.65 328 IAmb IAmb 03 10 52.1
comp=Z,46nm,1.9s
J01E Myrtle Point 82.67 323 P **P** **03 10 50.8 +1.3**
baz=130
I03D Drain, OR 82.69 323 P **P** **03 10 51.4 +1.8**
baz=131
PVAQ Vaqueiros 82.70 45 *e*LR LR 03 37 59.2
comp=Z,112nm,20.0s
BUCK Buck Mountain 82.82 324 IAmb IAmb 03 10 53.5
comp=Z,36nm,1.1s
HOOD Mount Hood Mea 82.85 325 IAmb IAmb 03 10 55.4
comp=Z,13nm,0.8s
BOSA Boshof 82.86 118 P **P** **03 10 51.0 -0.3**
comp=Z,5.9nm,0.5s,baz=250,slow=3.4,SNR=22
BOSA LR LR 03 44 32.7
comp=Z,90nm,19.2s,baz=198,slow=33
comp=Z,5.9nm,0.5s
BOSA Boshof 82.86 118 IAmb IAmb 03 10 52.6
comp=Z,19nm,1.0s
BOSA Boshof 82.86 118 *e*P **P** **03 10 51.4 +0.2**
BOSA IAmb IAmb 03 11 34.9
comp=Z,871nm,4.0s
RAR Rarotonga 83.04 250 LR LR 03 40 05.0
comp=Z,45nm,21.5s,baz=112,slow=30
PMTG Montargil 83.34 43 *e*P **P** **03 10 54.6 +1.5**
comp=Z,45nm,1.9s
MAW Mawson 83.37 163 P **P** **03 10 54.1 +1.2**
comp=Z,9.6nm,0.7s,baz=207,slow=5.9,SNR=18
MAW LR LR 03 47 58.9
comp=Z,67nm,20.4s,baz=229,slow=36
comp=Z,9.6nm,0.7s
SWZ Schweizer 83.45 117 *e*P **P** **03 10 54.5 +0.2**
PBAR Barrancos 83.58 44 *e*P **P** **03 10 55.8 +1.5**
PMRV Marv??o 84.07 43 *e*S **S** **03 21 13.7 +1.4**
PMRV Marv??o 84.07 43 *e*LR LR 03 35 38.1
comp=Z,93nm,22.0s
PCBR Castelo Branco 84.26 43 *e*P **P** **03 10 59.0 +1.3**
D05A Enumclaw 84.27 327 IAmb IAmb 03 10 59.3
comp=Z,15nm,0.8s
LBTB Lobatse 84.48 115 LR LR 03 44 35.4
comp=Z,67nm,18.8s,baz=228,slow=33
LBTB Lobatse 84.48 115 IAmb IAmb 03 11 01.1
comp=Z,22nm,1.3s
LBTB Lobatse 84.48 115 *e*P **P** **03 10 59.6 +0.1**
MTE Manteigas 84.54 42 *e*P **P** **03 11 00.7 +1.4**
comp=Z,21nm,1.5s
MTE Manteigas 84.54 42 *e*S **S** **03 21 15.2 -1.8**
MTE Manteigas 84.54 42 *e*LR LR 03 39 09.0
comp=Z,105nm,20.0s
PGAV Gavieira, Arco 85.01 41 *e*S **S** **03 21 21.3 -0.3**
PGAV Gavieira, Arco 85.01 41 *e*LR LR 03 39 08.7
comp=Z,122nm,24.0s
TAM Tamanrasset 85.11 63 IAmb IAmb 03 10 58.7
comp=Z,39nm,1.7s
MVO Moncorvo 85.30 42 *e*P **P** **03 11 03.8 +0.7**
comp=Z,32nm,2.0s
MVO Moncorvo 85.30 42 *e*S **S** **03 21 20.2 -4.3**
MVO Moncorvo 85.30 42 *e*LR LR 03 39 36.0
comp=Z,87nm,20.0s
FRB Frobisher Bay 85.92 0 LR LR 03 51 34.0
comp=Z,36nm,19.3s,baz=202,slow=37
ESDC Sonseca Array 86.41 44 P **P** **03 11 08.4 -0.2**
comp=Z,14nm,1.4s,baz=239,slow=4.7,SNR=22
ESDC LR LR 03 48 20.4
comp=Z,101nm,19.5s,baz=237,slow=34
comp=Z,14nm,1.4s
ESDC Sonseca Array 86.41 44 IAmb IAmb 03 11 10.7
comp=Z,29nm,1.6s
ESBB Sonseca Array 86.41 44 IAmb IAmb 03 11 11.5
comp=Z,31nm,1.7s
SLR Silverton 86.45 116 *e*P **P** **03 11 10.0 +0.7**
LLLB Lillooet 86.51 329 IAmb IAmb 03 11 11.1
comp=Z,15nm,1.2s
MATP Matopo 88.72 111 *e*P **P** **03 11 20.8 +0.6**
BLWY Bulawayo 88.93 111 *e*P **P** **03 11 19.1 -2.1**
MOPA Mopani 89.93 115 *e*P **P** **03 11 25.0 -0.7**
SFJD Kangerlussuaq 90.21 7 LR LR 03 51 53.4
comp=Z,35nm,21.9s,baz=174,slow=35
LSZ Lusaka 90.48 107 LR LR 03 50 13.2
comp=Z,147nm,19.1s,baz=214,slow=34
CASY Casey 91.54 180 P **P** **03 11 33.2 +0.9**
CASY IAmb IAmb 03 11 36.1
comp=Z,15nm,0.9s
YKA Yellowknife Ar 92.14 341 P **P** **03 11 35.5 +0.7**
comp=Z,8.7nm,0.6s,baz=134,slow=4.4,SNR=54
YKA pP **pP** **03 12 03.8 -1.1**
comp=Z,2.9nm,0.7s,baz=131,slow=4.3,SNR=3.1
comp=Z,8.7nm,0.6s
URZ Urewera 93.65 226 LR LR 03 46 57.6
comp=Z,152nm,18.1s,baz=216,slow=31
BORG Borgarnes 94.28 18 LR LR 03 49 04.8
comp=Z,52nm,21.1s,baz=215,slow=32
RPZ Rata Peaks 94.35 219 LR LR 03 48 01.3
comp=Z,140nm,18.0s,baz=147,slow=31
DLBC Dease Lake 95.12 332 P **P** **03 11 49.4 +0.6**
DLBC comp=Z,2.4nm,0.6s,baz=57,slow=4.9,SNR=4.8
LR LR 03 59 34.6
comp=Z,47nm,18.3s,baz=225,slow=38
comp=Z,2.4nm,0.6s
DLBC Dease Lake 95.12 332 P **P** **03 11 49.9 +1.1**
baz=126
EKA Eskdalemuir Ar 95.35 32 LR LR 03 51 36.0
comp=Z,68nm,20.5s,baz=228,slow=33
VAE Valguarnera 98.19 53 LR LR 03 59 23.1
comp=Z,95nm,18.2s,baz=156,slow=37
RES Resolute Bay 98.36 353 LR LR 03 59 33.7
comp=Z,32nm,19.8s,baz=210,slow=37
MBAR Mbarara 98.54 94 LR LR 03 55 27.1
comp=Z,105nm,18.9s,baz=244,slow=35
DAVOX Davos/Dischmat 98.66 43 LR LR 03 57 41.9
comp=Z,120nm,18.5s,baz=243,slow=36
DAVA Damuels 98.86 42 *e*P Pdif 03 12 08.1 +2.1
comp=Z,5.7nm,1.4s
DAVA *e*P **PP** **03 16 07.0 -2.3**
comp=Z,9.8nm,1.7s
FETA Feichten 99.29 43 *e*P **Pdif** **03 12 08.2 +0.2**
comp=Z,3.4nm,1.4s
FETA *e*P **PP** **03 16 10.9 -1.7**
comp=Z,4.6nm,1.7s
RETA Reutte 99.49 43 *e*P **Pdif** **03 12 10.3 +1.6**
comp=Z,2.2nm,0.8s
RETA *e*P **PP** **03 16 10.3 -3.7**
comp=Z,7.1nm,1.9s
MOTA Moosalm 99.65 43 *e*P **Pdif** **03 12 08.5 -1.1**
comp=Z,3.1nm,0.8s
MOTA *e*P **PP** **03 16 11.3 -4.0**
comp=Z,7.8nm,1.5s
SQTA Sankt Quirin 99.67 43 *e*P **Pdif** **03 12 09.9 +0.3**
comp=Z,3.9nm,0.7s
WATA Walderalm 99.94 43 *e*P **Pdif** **03 12 14.6 +3.8**
comp=Z,1.9nm,0.6s
WTTA Wattenberg 99.95 43 *e*P **Pdif** **03 12 15.6 +4.6**
comp=Z,4.6nm,0.7s
ABTA Abfaltersbach 100.31 44 *e*P **Pdif** **03 12 13.5 +1.0**
comp=Z,3.1nm,1.4s
ABTA *e*P **PP** **03 16 21.6 +1.3**
comp=Z,6.1nm,1.6s
KBA Koelnbreinsper 100.97 44 *e*P **Pdif** **03 12 16.4 +0.9**
comp=Z,2.2nm,0.9s
KBA *e*P **PP** **03 16 22.4 -3.0**
comp=Z,0.2nm,0.3s
MYKA Terra Mystica 101.00 44 *e*P **PP** **03 16 22.0 -3.5**
comp=Z,3.9nm,1.0s
OBKA Obir 101.54 44 *e*P **Pdif** **03 12 18.9 +1.0**
comp=Z,3.5nm,1.4s
OBKA *e*P **PP** **03 16 27.8 -1.8**
comp=Z,3.8nm,1.0s
MOA Molln 101.82 43 *e*P **Pdif** **03 12 22.1 +3.0**
comp=Z,1.3nm,0.6s
MOA *e*P **PP** **03 16 28.9 -2.7**
comp=Z,4.9nm,1.3s
SOKA Soboth 101.91 44 *e*P **PP** **03 16 27.9 -4.5**
comp=Z,0.2nm,0.4s
CLL Collm 102.26 39 *e*SKSac **SKSac** **03 22 48.0 -1.9**
CLL *e*Sdif **Sdif** **03 23 59.0 +4.4**
CLL *ex* x 03 24 51.0
CLL *e*SP **SP** **03 25 35.0 +6.2**
CLL *es*PS 03 26 14.0
CLL *e*SS **SS** **03 31 00.0 -3.3**
CLL *ex* x 03 37 03.0
CLL LmV 03 58 00.0
comp=Z,100nm,18.5s
CLL Lm MLR 17 35 00.0
comp=Z,100nm,21.5s
CONA Conrad Observa 102.86 43 *e*P **Pdif** **03 12 24.9 +1.1**
comp=Z,2.8nm,1.2s
CONA *e*P **PP** **03 16 37.0 -2.5**
comp=Z,3.4nm,1.2s
ILAR Eielson Array 105.17 334 Pdiff **Pdif** **03 12 33.6 +0.1**
comp=Z,0.2nm,0.6s,baz=135,slow=4.0,SNR=5.5
ILAR PP **PP** **03 16 58.3 +2.3**
comp=Z,0.2nm,0.6s,baz=96,slow=7.3,SNR=2.7
Q19K Cape Douglas, 106.38 327 P **PKiKP** **03 16 51.1 +1.4**
baz=106
BPAW Bear Paw Mtn. 106.64 333 P **PKiKP** **03 16 50.5 +0.5**
baz=107
C23K Itkillik River 108.11 339 P **PKiKP** **03 16 53.1 +0.6**
baz=106
DZM Mont Dzumac 110.36 234 *e*P **Pdif** **03 12 59.7 +1.9**
DZM *ep*P **pPdif** **03 13 25.8 -1.8**
comp=Z,147nm,40.0s
DZM Mont Dzumac 110.36 234 *e*LR LR 03 49 48.4
comp=Z,232nm,31.9s
AKASG Malin Array Be 112.00 43 PP **PP** **03 17 43.8 -2.2**
comp=Z,0.2nm,0.3s,baz=260,slow=6.8,SNR=5.6
KBZ Khabaz 120.59 52 PKP **PKiKP** **03 17 18.2 +1.0**
comp=Z,1.9nm,0.7s,baz=304,slow=3.6,SNR=5.7
ARU Arti 128.85 35 PKPdf **PKPdf** **03 17 32.8 +0.2**
ASAR Alice Springs 129.14 207 PKP **PKPdf** **03 17 34.2 0.0**
comp=Z,4.4nm,0.8s,baz=144,slow=2.1,SNR=34
ASAR pPKP **pPKPdf** **03 18 05.0 -0.4**
comp=Z,2.5nm,0.9s,baz=142,slow=1.7,SNR=3.1
ASAR Alice Springs 129.14 207 PKPdf **PKPdf** **03 17 32.8 -1.5**
ABKAR Akbulak array 131.74 43 PKPdf **PKPdf** **03 17 38.4 +0.1**
WRA Warramunga Arr 132.21 210 PKP **PKPdf** **03 17 40.6 +0.5**
comp=Z,3.6nm,0.6s,baz=159,slow=1.7,SNR=52
WRA SKPbc **SKPab** **03 20 57.5 -0.2**
comp=Z,2.4nm,0.9s,baz=155,slow=3.5,SNR=8.2
ZALV Zalesovo Beam 142.75 26 PKhKP PKPpre 03 17 55.5
comp=Z,4.4nm,0.6s,baz=316,slow=4.7,SNR=10
KSH Kashi 145.57 52 PKPbc **PKPbc** **03 18 04.4 0.0**
KSH pPKP pPKPdf 03 18 34.6 -0.5
MKAR Makanchi Array 146.31 37 PKPbc **PKPbc** **03 18 05.9 -0.3**
comp=Z,7.6nm,0.7s,baz=325,slow=2.3,SNR=43
KLR Kul'dur 148.74 334 PKPbc **PKPbc** **03 18 12.7 0.0**
comp=Z,7.4nm,0.6s,baz=53,slow=3.9,SNR=11
HYBB Hyderabad (bro 148.89 93 *e*PKiKP **PKPbc** **03 18 14.5 +0.4**
WMQ Urumqi 151.14 37 *e*PKPbc **PKPdf** **03 18 13.8 +1.0**
WMQ LR LR
comp=Z,86nm,23.5s
USRK Ussuriysk Ar. 152.39 327 **PKiKP** **03 18 22.0 +0.3**
MJAR Matsushiro Arr 152.78 307 PKPbc **PKiKP** **03 18 22.8 0.0**
comp=Z,3.5nm,0.7s,baz=100,slow=3.8,SNR=8.3
MJAR PKPab **PKPab** **03 18 34.5 +0.6**
comp=Z,2.1nm,0.7s,baz=105,slow=4.8,SNR=5.9
MAJO Matsushiro 152.78 307 **PKPbc** **03 18 21.9 -0.7**
BNX BinXian 153.30 334 ⇑P **PKPbc** **03 18 23.5 0.0**
BNX pmax pmax
comp=Z,6.0nm,0.7s
BNX pmax pmax
comp=Z,51nm,4.7s
SONM Songino Array 154.38 8 PKP **PKPdf** **03 18 18.2 +0.7**
comp=Z,1.9nm,0.8s,baz=298,slow=0.8,SNR=11
SONM PKPab **PKPab** **03 18 40.5 +0.1**
comp=Z,1.8nm,0.6s,baz=329,slow=3.4,SNR=6.1
KSRS Korea Array 159.27 320 PKP **PKPdf** **03 18 25.2 +1.3**
comp=Z,1.4nm,0.8s,baz=114,slow=2.4,SNR=6.0
KSRS PKPab **PKPab** **03 19 02.5 +0.9**
comp=Z,3.4nm,0.8s,baz=49,slow=4.7,SNR=10
GTA Gaotai 160.49 27 *e*PKP **PKPdf** **03 18 26.9 +1.5**
GTA pPKP pPKPdf 03 18 58.0 +1.3
HHC Hu-ho-hao-te 161.66 359 *e*PKP **PKPdf** **03 18 28.0 +1.4**
CMAR Chiang Mai Arr 167.79 107 PP **PP** **03 23 29.7 +0.9**
comp=Z,0.9nm,0.4s,baz=270,slow=4.5,SNR=4.2
XAN Xi'an 168.28 10 PKP **PKPdf** **03 18 33.4 +1.0**
CD2 Chengdu 169.24 37 PKP **PKPdf** **03 18 33.3 +0.2**
PZH PanZhiHua 170.44 63 PKP **PKPdf** **03 18 31.6 -2.4**
GYA Guiyang 174.22 45 ⇑P **PKPdf** **03 18 32.8 -2.9**
GYA pmax pmax
comp=Z,12nm,0.8s

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*SKHL **16** 03:00:12.8±0.8, 50°.30N×142°.50E, h7km±1km, mb4.5/4*
*IDC **16** 03:00:12.8±2.9, 50°.26N×142°.67E, h0km, mb3.4/3, mbtmp3.3/5, ML2.5/2, MS2.8/2, Error ellipse: s-maj=81.8km s-min=25.9km az=155.0*
ISC 16 03:00:14.2±0.9, 50°.33N±0°.06×142°.44E±0°.10, h10km, n8, σ2s17/10, mb3.2/3, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.55**	**14**	*e*Pg	**Pg**	**03 00 24.2**	**-0.7**
TYV				AMB	AMB	03 00 27.0	
	240nm,0.3s						
TYV				*e*Sg	**Sg**	**03 00 31.6**	**-0.5**
TYV				A	A	03 00 32.0	
	542nm,0.3s						
TYV				A	A	03 00 32.0	
	417nm,0.3s						
UGL	**Uglegorsk**	**1.28**	**191**	*e*P	**Pb**	**03 00 37.2**	**-1.1**
UGL				AMB	AMB	03 00 40.0	
	200nm,0.4s						
UGL				*e*S	**Sn**	**03 00 55.0**	**-0.3**
UGL				A	A	03 00 58.2	
	430nm,0.6s						
UGL				A	A	03 00 58.2	
	700nm,0.6s						
KLR	**Kul'dur**	**7.01**	**265**	Pn	**Pn**	**03 02 00.1**	**+3.3**
	0.2nm,0.3s,baz=80,slow=17,SNR=1.9						
KLR				Sn	**Sn**	**03 03 12.6**	**-4.1**
	0.3nm,0.3s,baz=58,slow=19,SNR=3.9						
	0.6nm,0.3s						
USRK	**Ussuriysk Ar.**	**9.38**	**233**	Pn	**Pn**	**03 02 30.2**	**+0.8**
	0.3nm,0.3s,baz=43,slow=12,SNR=2.0						
USRK				LR	LR	03 06 39.7	
	comp=Z,73nm,22.0s,baz=198,slow=41						
	1.4nm,0.7s						
SHEM	**Shemya Is, Ala**	**19.76**	**71**	LR	LR	03 13 42.4	
	comp=Z,20nm,18.9s,baz=295,slow=41						
ILAR	**Eielson Array**	**38.33**	**41**	P	**P**	**03 07 34.5**	**-0.2**
	0.3nm,0.6s,baz=278,slow=8.5,SNR=7.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**39.02**	**289**	P	**P**	**03 07 41.2**	**+0.5**
	0.3nm,0.6s,baz=66,slow=9.6,SNR=2.7						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**39.53**	**296**	P	**P**	**03 07 46.5**	**+1.6**
	0.4nm,0.7s,baz=68,slow=8.9,SNR=2.4						
	0.4nm,0.7s						

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*SKHL **16** 03:01:00.9±0.8, 50°.30N×142°.50E, h7km±1km, mb4.7/4*
*NEIC **16** 03:01:00.3±1.7, 50°.27N±0°.10×142°.6E±0°.2, h10km±1km, mb4.1/7, Error ellipse: s-maj=18.7km s-min=16.9km az=94.0*
*IDC **16** 03:01:01.2±0.7, 50°.23N×142°.54E, h0km, mb3.8/12, mbtmp3.8/14, ML2.8/2, MS2.7/3, Error ellipse: s-maj=21.4km s-min=14.0km az=150.0*
*MOS **16** 03:01:01.4±2.9, 50°.47N×142°.08E, h11km, mb4.3/1, Error ellipse: s-maj=21.2km s-min=9.7km az=70.8*
ISC 16 03:01:01.6±0.5, 50°.30N±0°.03×142°.48E±0°.07, h10km, n38, σ2s13/44, mb3.9/16, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.57**	**11**	*e*PN	**Pg**	**03 01 12.7**	**-0.1**
TYV				*e*S	**Sg**	**03 01 20.2**	**-0.1**
TYV				pmax	pmax		
	comp=Z,176nm,0.4s						
TYV				smax	smax		
	comp=N,1μm,0.3s						
TYV				smax	smax		
	comp=E,1μm,0.3s						
TYV				smax	smax		
	comp=N,1μm,0.4s						
TYV	**Tymovskoe**	**0.57**	**11**	*e*Pg	**Pg**	**03 01 12.5**	**-0.3**
TYV				AMB	AMB	03 01 12.9	
	comp=N,200nm,0.4s						
TYV				*e*Sg	**Sg**	**03 01 20.1**	**-0.2**
TYV				A	A	03 01 20.4	
	comp=N,1μm,0.3s						
TYV				A	A	03 01 20.4	
	comp=N,1μm,0.3s						
UGL	**Uglegorsk**	**1.25**	**192**	PN	**Pn**	**03 01 23.2**	**-2.0**
UGL				*e*S	**Sn**	**03 01 43.2**	**+1.2**
UGL				pmax	pmax		
	comp=Z,262nm,0.8s						
UGL				smax	smax		
	comp=E,707nm,0.6s						
UGL				smax	smax		
	comp=N,438nm,0.5s						
UGL	**Uglegorsk**	**1.25**	**192**	*e*P	**Pn**	**03 01 25.2**	**0.0**
UGL				AMB	AMB	03 01 28.7	
	comp=N,350nm,0.5s						
UGL				*e*S	**Sb**	**03 01 41.5**	**0.0**
UGL				S	**Sn**	**03 01 46.7**	**+4.7**
	comp=N,1μm,0.7s						
UGL				S	**Sn**	**03 01 46.7**	**+4.7**
	comp=N,2μm,0.7s						
YSS	**Yuzh-Sakhalins**	**3.35**	**177**		**Pn**	**03 01 51.8**	**-2.2**
YSS				Sn	**Sn**	**03 02 31.9**	**-2.0**
YSS	**Yuzh-Sakhalins**	**3.35**	**177**	*e*PN	**Pg**	**03 02 06.3**	**+0.4**
YSS				*e*		03 02 50.5	
YSS				smax	smax		
	comp=N,70nm,0.5s						
YSS				MLR	MLR		
	comp=Z,400nm,5.0s						
KLR	**Kul'dur**	**7.03**	**265**	Pn	**Pn**	**03 02 46.3**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=60,slow=16,SNR=1.9						
KLR				Sn	**Sn**	**03 03 59.6**	**-4.9**
	comp=Z,0.6nm,0.3s,baz=292,slow=13,SNR=5.3						
KLR				Lg	Lg	03 04 46.4	
	comp=Z,0.8nm,0.3s,baz=339,slow=21,SNR=6.7						
KLR				LR	LR	03 05 01.5	
	comp=Z,36nm,21.9s,baz=94,slow=34						
	comp=Z,1.2nm,0.4s						
USA0B	**Ussuriysk Arra**	**9.38**	**233**	Pn	**Pn**	**03 03 15.6**	**-1.2**
USA0B	**Ussuriysk Arra**	**9.38**	**233**	PN	**Pn**	**03 03 15.6**	**-1.2**
USRK	**Ussuriysk Ar.**	**9.38**	**233**	Pn	**Pn**	**03 03 18.6**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=35,slow=14,SNR=4.5						
USRK				Lg	Lg	03 05 59.9	
	comp=Z,0.3nm,0.3s,baz=35,slow=28,SNR=4.5						
	comp=Z,1.3nm,0.4s						
PETK	**Petropavlovsk-**	**9.86**	**68**	LR	LR	03 06 58.1	
	comp=Z,56nm,21.2s,baz=272,slow=36						
INU	**Inuyama**	**15.46**	**197**	Pn	**Pn**	**03 04 35.1**	**-4.6**
INU				IAmb	IAmb	03 05 10.9	
	comp=Z,15nm,1.3s						
KS19	**Wonju Array Si**	**16.53**	**225**	Pn	**Pn**	**03 04 49.9**	**-3.6**
KS19				IAmb	IAmb	03 04 54.8	
	comp=Z,17nm,1.2s						
KSRS	**Korea Array**	**16.54**	**225**	LR	LR	03 11 05.6	
	comp=Z,48nm,19.1s,baz=170,slow=36						
KSAR	**Wonju Array Be**	**16.57**	**225**	Pn	**Pn**	**03 04 52.4**	**-1.6**
KSAR	**Wonju Array Be**	**16.57**	**225**	P	**Pn**	**03 04 52.4**	**-1.6**
KSCHJ	**Chungju**	**17.00**	**223**	Pn	**Pn**	**03 04 57.7**	**-1.7**
KSCHJ				IAmb	IAmb	03 05 25.8	
	comp=Z,14nm,0.9s						
AMKA	**Amchitka**	**23.13**	**73**	P	**P**	**03 06 02.8**	**-4.8**
IMAR	**Indian Mountai**	**35.31**	**39**	P	**P**	**03 07 57.8**	**+1.4**
L19K	**White Mountain**	**35.34**	**46**	P	**P**	**03 07 57.2**	**+0.5**
L19K				IAmb	IAmb	03 08 12.2	
	comp=Z,3.3nm,1.2s						
ILAR	**Eielson Array**	**38.34**	**41**	P	**P**	**03 08 23.2**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=280,slow=8.4,SNR=33						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**39.05**	**289**	P	**P**	**03 08 30.1**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=76,slow=7.6,SNR=7.0						
	comp=Z,1.1nm,0.7s						
KURK	**Kurchatov**	**39.47**	**296**	P	**P**	**03 08 30.6**	**-1.2**
KURK	**Kurchatov**	**39.47**	**296**	P	**P**	**03 08 30.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**39.56**	**296**	P	**P**	**03 08 33.9**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=68,slow=8.8,SNR=6.9						
	comp=Z,1.4nm,0.6s						
INK	**Inuvik**	**42.50**	**33**	P	**P**	**03 08 57.5**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=311,slow=9.4,SNR=7.8						
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**50.63**	**303**	P	**P**	**03 10 00.3**	**-0.2**

ABKAR	**Akbulak array**	**50.63**	**303**	P	**P**	**03 10 00.0**	**-0.5**
ABKAR				IAmb	IAmb	03 10 03.0	
	comp=Z,2.7nm,1.3s						
YKA	**Yellowknife Ar**	**52.19**	**35**	P	**P**	**03 10 13.0**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=301,slow=7.4,SNR=3.0						
	comp=Z,0.6nm,0.6s						
KRVT	**Keravat (AS076**	**55.01**	**168**	P	**P**	**03 10 33.1**	**-0.1**
	comp=Z,75nm,0.5s,baz=199,slow=1.3,SNR=5.5						
NVAR	**Mina Array Bea**	**66.78**	**58**	P	**P**	**03 11 55.0**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=328,slow=8.5,SNR=19						
	comp=Z,0.7nm,0.5s						
PDAR	**Pinedale Array**	**68.07**	**49**	P	**P**	**03 12 03.0**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=357,slow=3.6,SNR=3.2						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**70.30**	**188**	P	**P**	**03 12 15.6**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=356,slow=5.1,SNR=2.8						
	comp=Z,1.0nm,1.0s						
GERES	**GERESS Array B**	**71.90**	**327**	P	**P**	**03 12 25.7**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=78,slow=5.2,SNR=1.6						
	comp=Z,0.1nm,0.4s						
ASAR	**Alice Springs**	**74.03**	**188**	P	**P**	**03 12 38.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=9.7,slow=6.6,SNR=3.1						
	comp=Z,0.4nm,0.7s						
VLDQ	**Val d'Or**	**76.12**	**26**	P	**P**	**03 12 46.9**	**-2.3**
TXAR	**Lajitas Array**	**81.52**	**54**	P	**P**	**03 13 21.5**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=270,slow=4.2,SNR=5.1						
	comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**85.67**	**335**	P	**P**	**03 13 41.7**	**+1.2**
	comp=Z,0.9nm,1.0s,baz=345,slow=5.2,SNR=4.2						
	comp=Z,0.9nm,1.0s						

*SKHL **16** 03:16:18.2±0.5, 50.50N×142.10E, h10km±5km, mb4.6/5*
*MOS **16** 03:16:19.2±2.1, 50.60N×142.06E, h11km, mb3.7/1, Error ellipse: s-maj=22.2km s-min=13.6km az=71.9*
*IDC **16** 03:16:19.5±1.4, 50.43N×142.45E, h0km, mb3.6/6, mbtmp3.6/8, ML2.8/2, MS3.5/6, Error ellipse: s-maj=48.6km s-min=16.4km az=160.0*

ISC 16 03:16:20.3±0.7, 50.49N±0.04×142.19E±0.05, h10km, n21, σ1s92/22, mb3.7/6, MS3.8/4, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.48**	**38**	*e*PN		**Pg**	**03 16 29.3**	**-0.3**
TYV				*e*S		**Sg**	**03 16 36.3**	**+0.4**
TYV				pmax	pmax			
	comp=Z,213nm,0.5s							
TYV				smax	smax			
	comp=N,2μm,0.6s							
TYV				smax	smax			
	comp=E,2μm,0.6s							
TYV				smax	smax			
	comp=N,1μm,0.4s							
TYV				smax	smax			
	comp=E,2μm,0.4s							
TYV	**Tymovskoe**	**0.48**	**38**	*e*Pg		**Pg**	**03 16 29.1**	**-0.5**
TYV				AMB	AMB		03 16 29.5	
	comp=E,210nm,0.5s							
TYV				*e*Sg		**Sg**	**03 16 36.4**	**+0.5**
TYV				A	A		03 16 36.8	
	comp=E,2μm,0.4s							
TYV				A	A		03 16 36.8	
	comp=E,2μm,0.4s							
UGL	**Uglegorsk**	**1.42**	**183**	*e*PN		**Pn**	**03 16 43.8**	**-2.3**
UGL				pmax	pmax			
	comp=Z,331nm,0.5s							
UGL	**Uglegorsk**	**1.42**	**183**	*e*P		**Pn**	**03 16 44.2**	**-1.9**
UGL				AMB	AMB		03 16 47.7	
	comp=Z,640nm,0.6s							
UGL				*e*S		**Sn**	**03 17 02.3**	**-2.4**
UGL				A	A		03 17 05.4	
	comp=Z,900nm,0.5s							
UGL				A	A		03 17 05.4	
	comp=Z,3μm,0.5s							
YSS	**Yuzh-Sakhalins**	**3.56**	**174**	*e*PN		**Pb**	**03 17 20.8**	**-2.5**
YSS				pmax	pmax			
	comp=Z,80nm,0.4s							
YSS	**Yuzh-Sakhalins**	**3.56**	**174**	*e*P		**Pn**	**03 17 15.2**	**-0.3**
YSS				*e*Pg		**Pg**	**03 17 28.4**	**0.0**
YSS				AMB	AMB		03 17 30.3	
	comp=Z,80nm,0.8s							
YSS				*e*Sg		**Sg**	**03 18 17.4**	**+2.9**
YSS				A	A		03 18 17.7	
	comp=Z,80nm,0.7s							
YSS				A	A		03 18 17.7	
	comp=Z,60nm,0.7s							
GRNR	**Gornyy**	**3.68**	**277**	*e*PN		**Pn**	**03 17 14.1**	**-3.2**
GRNR				*e*			03 18 01.9	
GRNR				pmax	pmax			
	comp=E,10.0nm,0.4s							
GRNR				pmax	pmax			
	comp=N,9.0nm,0.2s							
GRNR				pmax	pmax			
	comp=Z,9.0nm,0.3s							
GRNR				smax	smax			
	comp=N,60nm,0.3s							
GRNR				MLR	MLR			
	comp=N,340nm,16.0s							
GRNR				MLR	MLR			
	comp=E,320nm,16.0s							
GRNR				MLR	MLR			
	comp=Z,220nm,19.0s							
GRNR	**Gornyy**	**3.68**	**277**	*e*P		**Pn**	**03 17 14.1**	**-3.2**
GRNR				*e*Pg		**Pg**	**03 17 29.4**	**-1.4**
GRNR				AMB	AMB		03 17 30.2	
	comp=Z,9.0nm,0.3s							
KLR	**Kul'dur**	**6.87**	**263**	Pn		**Pn**	**03 18 03.1**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=65,slow=17,SNR=3.3							
KLR				Lg	Lg		03 20 01.4	
	comp=Z,1.2nm,0.3s,baz=163,slow=20,SNR=5.3							
KLR				LR	LR		03 21 05.3	
	comp=Z,90nm,21.0s,baz=36,slow=41							
	comp=Z,1.2nm,0.3s							
USRK	**Ussuriysk Ar.**	**9.35**	**232**	Pn		**Pn**	**03 18 36.8**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=40,slow=17,SNR=1.7							
USRK				Lg	Lg		03 21 19.2	
	comp=Z,0.6nm,0.3s,baz=43,slow=28,SNR=7.5							
	comp=Z,1.6nm,0.5s							
KSRS	**Korea Array**	**16.55**	**224**	LR		LR	03 26 32.8	
	comp=Z,33nm,18.3s,baz=100,slow=37							
ILAR	**Eielson Array**	**38.31**	**41**	P		**P**	**03 23 40.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=280,slow=8.6,SNR=7.4							
	comp=Z,0.4nm,0.7s							
MKAR	**Makanchi Array**	**38.82**	**289**	P		**P**	**03 23 47.6**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=66,slow=9.7,SNR=4.7							
	comp=Z,1.1nm,0.8s							
NOA	**NORSAR Array B**	**62.08**	**335**	P		**P**	**03 26 42.6**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=31,slow=6.4,SNR=3.4							
	comp=Z,0.5nm,0.8s							
HFS	**Hagfors**	**62.15**	**334**	LR		LR	03 56 13.3	
	comp=Z,56nm,21.1s,baz=240,slow=38							
NVAR	**Mina Array Bea**	**66.83**	**57**	P		**P**	**03 27 12.8**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=284,slow=6.2,SNR=6.8							
	comp=Z,0.8nm,0.7s							
PDAR	**Pinedale Array**	**68.09**	**49**	P		**P**	**03 27 20.4**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=270,slow=0.9,SNR=5.0							
	comp=Z,0.5nm,0.7s							
MLR	**Muntele Rosu**	**69.62**	**318**	LR		LR	04 02 05.9	
	comp=Z,60nm,18.4s,baz=260,slow=39							
MMAI	**Mount Meron Ar**	**74.80**	**304**	LR		LR	04 06 45.0	
	comp=Z,50nm,20.2s,baz=58,slow=40							
EIL	**Elat**	**77.63**	**302**	LR		LR	04 07 01.9	
	comp=Z,150nm,20.6s,baz=270,slow=39							
TXAR	**Lajitas Array**	**81.56**	**54**	P		**P**	**03 28 38.6**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=285,slow=5.9,SNR=5.5							
	comp=Z,0.7nm,1.0s							

*IDC **16** 04:13:22.8±2.3, 17.61S×178.48W, h632km±22km, mb2.8/5, mbtmp3.7/6, Error ellipse: s-maj=66.6km s-min=22.9km az=148.0*

ISC 16 04:13:20.2±1.8, 17.6S±0.4×178.4W±0.3, h600km, n7, σ0s60/6, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.36**	**266**	P		P	04 14 46.4	+4.8
	3.7nm,0.5s,baz=122,slow=21,SNR=7.2							
WRA	**Warramunga Arr**	**44.68**	**259**	P		**P**	**04 20 41.3**	**-0.2**
	0.7nm,0.4s,baz=94,slow=7.2,SNR=23							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**44.87**	**254**	P		**P**	**04 20 43.0**	**+0.1**
	2.3nm,0.6s,baz=86,slow=8.5,SNR=19							
	2.3nm,0.6s							
MJAR	**Matsushiro Arr**	**67.61**	**323**	P		**P**	**04 23 18.9**	**+0.5**
	0.5nm,0.5s,baz=114,slow=10,SNR=2.5							
	0.5nm,0.5s							
ILAR	**Eielson Array**	**85.54**	**13**	P		**P**	**04 24 55.0**	**-0.5**
	0.2nm,0.5s,baz=225,slow=4.6,SNR=5.1							
	0.2nm,0.5s							
TXAR	**Lajitas Array**	**85.82**	**58**	P		**P**	**04 24 58.2**	**+0.4**
	0.2nm,0.8s,baz=218,slow=5.9,SNR=3.9							
	0.2nm,0.8s							
GERES	**GERESS Array B**	**147.26**	**345**	PKPbc		**PKPbc**	**04 31 56.6**	**-0.7**
	0.4nm,0.5s,baz=10,slow=3.0,SNR=4.0							

*SKHL **16** 04:23:02.9±0.7, 45.70N×142.90E, h10km±4km, mb3.8/4*
*JMA **16** 04:23:03.1±0.3, 45.6N±0.7×143.1E±1.0, h0km, MV2.7/25, NE OFF HOKKAIDO*

ISC 16 04:23:02.6±1.4, 45.67N±0.04×143.09E±0.09, h10km, n7, σ0s35/11, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.79**	**207**	*e*P		**Pb**	**04 23 18.7**	**+0.3**
JSE				*e*S		**Sb**	**04 23 29.4**	**+0.1**
JWK2	**Keihoku**	**0.91**	**248**	*e*P		**Pn**	**04 23 21.4**	**+0.1**
JWK2				*e*S		**Sn**	**04 23 34.7**	**+0.2**
YSS	**Yuzh-Sakhalins**	**1.31**	**350**	*e*Pg		**Pn**	**04 23 26.9**	**0.0**
YSS				AMB	AMB		04 23 29.0	
	10.0nm,0.2s							
YSS				*e*Sg		**Sb**	**04 23 44.0**	**0.0**
YSS				A	A		04 23 45.9	
	150nm,0.4s							
YSS				A	A		04 23 45.9	
	70nm,0.4s							
JRBN	**Rebuntou**	**1.44**	**261**	*e*P		**Pn**	**04 23 28.6**	**-0.1**
JRBN				*e*S		**Sn**	**04 23 46.9**	**-0.8**
KHLM	**Kholmsk**	**1.56**	**333**	*e*Sg		**Sb**	**04 23 51.4**	**0.0**
KHLM				A	A		04 23 53.0	
	200nm,0.3s							
KHLM				A	A		04 23 53.0	
	200nm,0.3s							
ASAJ	**Asahikawa**	**1.59**	**193**	*e*P		**Pb**	**04 23 32.3**	**+0.3**
JMP	**Maruseppu**	**1.67**	**173**	*e*P		**Pn**	**04 23 31.6**	**-0.3**

*NEIC **16** 04:25:06.9±1.2, 50.29N±0.08×142.56E±0.08, h10km±1km, mb4.6/10, Error ellipse: s-maj=14.3km s-min=8.6km az=188.0*
*IDC **16** 04:25:06.3±0.7, 50.36N×142.46E, h0km, mb3.8/12, mbtmp3.8/14, ML2.8/2, MS2.7/3, Error ellipse: s-maj=24.6km s-min=13.5km az=152.0*
*SKHL **16** 04:25:07.2±1.1, 50.40N×142.30E, h12km±3km, mb4.6/6*

ISC 16 04:25:07.6±0.5, 50.45N±0.04×142.46E±0.07, h10km, n36, σ1s80/38, mb4.0/18, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.43**	**17**	*e*Pg		**Pb**	**04 25 17.3**	**-0.1**
TYV				AMB	AMB		04 25 19.7	
	300nm,0.4s							
TYV				*e*Sg		**Sb**	**04 25 24.4**	**+0.4**
TYV				A	A		04 25 25.2	
	2μm,0.5s							
TYV				A	A		04 25 25.2	
	2μm,0.5s							
UGL	**Uglegorsk**	**1.39**	**191**	*i* P		**Pn**	**04 25 31.2**	**-1.8**
UGL				AMB	AMB		04 25 33.6	
	500nm,0.9s							
UGL				*e*S		**Sb**	**04 25 49.3**	**-2.2**
UGL				A	A		04 25 51.5	
	1μm,0.5s							
UGL				A	A		04 25 51.5	
	2μm,0.5s							
YSS	**Yuzh-Sakhalins**	**3.50**	**177**			**Pn**	**04 25 59.5**	**-2.5**
YSS	**Yuzh-Sakhalins**	**3.50**	**177**	*e*P		**Pn**	**04 26 02.0**	**0.0**
YSS				*e*P		**Pb**	**04 26 10.0**	**+0.4**
YSS				P		**Pb**	**04 26 10.9**	**+1.3**
	70nm,0.8s							
YSS				*e*Pg		**Pg**	**04 26 17.7**	**+3.1**
YSS				*e*Sg		**Sg**	**04 27 04.6**	**+4.7**
YSS				A	A		04 27 08.6	
	200nm,0.6s							
YSS				A	A		04 27 08.6	
	150nm,0.6s							
KLR	**Kul'dur**	**7.03**	**264**	Pn		**Pn**	**04 26 51.0**	**+0.5**
	0.4nm,0.3s,baz=70,slow=13,SNR=6.2							
KLR				Lg	Lg		04 28 47.2	
	0.5nm,0.3s,baz=165,slow=21,SNR=3.9							
	1.9nm,0.5s							
USA0B	**Ussuriysk Arra**	**9.46**	**233**	Pn		**Pn**	**04 27 21.1**	**-2.7**
USRK	**Ussuriysk Ar.**	**9.46**	**233**	Pn		**Pn**	**04 27 22.8**	**-1.0**
	0.4nm,0.3s,baz=35,slow=13,SNR=5.0							
USRK				Lg	Lg		04 30 02.5	
	0.3nm,0.3s,baz=25,slow=24,SNR=4.8							
	2.1nm,0.5s							
PEA0B	**Petropavlovsk-**	**9.81**	**68**	Pn		**Pn**	**04 27 27.0**	**-1.6**
PETK	**Petropavlovsk-**	**9.81**	**68**	LR		LR	04 31 13.9	
	comp=Z,58nm,19.3s,baz=257,slow=37							
MAJO	**Matsushiro**	**14.23**	**194**	Pn		Pn	04 28 24.1	-5.0
INU	**Inuyama**	**15.60**	**197**	Pn		**Pn**	**04 28 41.5**	**-5.9**
KSRS	**Korea Array**	**16.64**	**224**	LR		LR	04 35 18.8	
	comp=Z,24nm,20.1s,baz=265,slow=37							
SHEM	**Shemya Is, Ala**	**19.71**	**71**	LR		LR	04 38 22.2	
	comp=Z,22nm,18.6s,baz=266,slow=40							
SONM	**Songino Array**	**23.59**	**278**	P		**P**	**04 30 19.6**	**+1.1**
	0.5nm,0.5s,baz=74,slow=11,SNR=4.3							
	0.5nm,0.5s							
AKUT	**Akutan**	**31.29**	**63**	P		**P**	**04 31 27.4**	**0.0**
ILAR	**Eielson Array**	**38.23**	**41**	P		**P**	**04 32 28.4**	**+1.2**
	1.2nm,0.6s,baz=283,slow=8.5,SNR=12							
	1.2nm,0.6s							
MKAR	**Makanchi Array**	**38.99**	**289**	P		**P**	**04 32 35.3**	**+1.4**
	1.2nm,0.7s,baz=66,slow=8.4,SNR=10							
	1.2nm,0.7s							
INK	**Inuvik**	**42.39**	**33**	P		**P**	**04 33 02.9**	**+1.3**
	1.7nm,0.6s,baz=280,slow=9.7,SNR=8.0							
	1.7nm,0.6s							
ABKAR	**Akbulak array**	**50.55**	**303**	P		**P**	**04 34 06.7**	**+0.9**
ABKAR	**Akbulak array**	**50.55**	**303**	P		**P**	**04 34 05.8**	**0.0**
ABKAR				IAmb	IAmb		04 34 10.1	
	comp=Z,1.6nm,0.8s							
YKA	**Yellowknife Ar**	**52.08**	**35**	P		**P**	**04 34 16.8**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=307,slow=7.2,SNR=4.1							
	comp=Z,1.0nm,0.7s							
LUWI	**Luwuk**	**53.99**	**205**	P		**P**	**04 34 29.4**	**-2.3**
NOA	**NORSAR Array B**	**62.19**	**336**	P		**P**	**04 35 29.0**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=33,slow=6.2,SNR=3.3							
	comp=Z,0.7nm,0.8s							
KVN	**Kaiserville**	**66.37**	**57**	P		**P**	**04 35 56.1**	**-0.6**
KVN				IAmb	IAmb		04 35 58.6	
	comp=Z,1.8nm,0.8s							
NVAR	**Mina Array Bea**	**66.71**	**58**	P		**P**	**04 35 59.5**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=310,slow=6.3,SNR=8.8							
	comp=Z,0.7nm,0.7s							
PDAR	**Pinedale Array**	**67.98**	**49**	P		**P**	**04 36 07.5**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=324,slow=2.7,SNR=12							
	comp=Z,0.8nm,0.6s							
SPR3	**Spring Creek 3**	**68.40**	**55**	P		**P**	**04 36 08.8**	**-0.9**
SPR3				IAmb	IAmb		04 36 14.9	
	comp=Z,4.6nm,1.3s							
B35A	**Bob, Littlefor**	**70.39**	**36**	P		**P**	**04 36 21.2**	**-0.2**
B35A				IAmb	IAmb		04 36 22.0	
	comp=Z,3.2nm,0.7s							
WRA	**Warramunga Arr**	**70.44**	**188**	P		**P**	**04 36 20.9**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=357,slow=6.3,SNR=5.1							
	comp=Z,1.3nm,1.0s							
EYMN	**Ely**	**71.56**	**35**	P		**P**	**04 36 28.5**	**-0.1**
EYMN				IAmb	IAmb		04 36 29.1	
	comp=Z,4.8nm,0.8s							
ECSD	**EROS Data Cent**	**73.05**	**41**	P		**P**	**04 36 37.5**	**0.0**
ECSD				IAmb	IAmb		04 36 40.7	
	comp=Z,3.7nm,0.9s							
ASAR	**Alice Springs**	**74.17**	**188**	P		**P**	**04 36 45.3**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=357,slow=4.9,SNR=4.7							
	comp=Z,0.4nm,0.5s							
VLDQ	**Val d'Or**	**75.99**	**26**	P		**P**	**04 36 53.5**	**-0.9**
VLDQ				IAmb	IAmb		04 36 55.0	
	comp=Z,9.6nm,1.1s							
TXAR	**Lajitas Array**	**81.44**	**54**	P		**P**	**04 37 26.1**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=298,slow=5.5,SNR=11							
	comp=Z,0.6nm,0.7s							
ESDC	**Sonseca Array**	**85.54**	**335**	P		**P**	**04 37 45.9**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=12,slow=4.2,SNR=6.4							
	comp=Z,0.7nm,0.9s							
CPUP	**Villa Florida**	**151.53**	**40**	PKPbc		**PKPbc**	**04 45 01.0**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=52,slow=4.0,SNR=2.9							

*SKHL **16** 04:57:06.9±0.3, 50.30N×142.60E, h6km±1km, mb4.7/4*

*IDC **16** 04:57:07.5±0.7, 50.47N×142.41E, h0km, mb3.9/12, mbtmp3.8/15, ML3.2/3, MS3.2/15, Error ellipse: s-maj=24.1km s-min=13.1km az=149.0*
*MOS **16** 04:57:07.1±1.2, 50.48N×142.39E, h9km, mb4.5/4, Error ellipse: s-maj=16.1km s-min=8.2km az=74.9*
*NEIC **16** 04:57:09.1±1.5, 50.57N±0.10×142.5E±0.2, h10km±1km, mb4.4/21, Error ellipse: s-maj=17.6km s-min=15.7km az=65.0*

ISC 16 04:57:08.2±0.5, 50.35N±0.03×142.58E±0.07, h10km, n69, σ1s02/68, mb4.1/25, MS3.2/10, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.52**	**5**	*e*PN		**Pg**	**04 57 18.0**	**-0.3**
TYV				*e*S		**Sg**	**04 57 25.6**	**+0.5**
TYV				pmax	pmax			
	comp=Z,232nm,0.6s							
TYV				smax	smax			
	comp=N,2μm,0.4s							
TYV				smax	smax			
	comp=E,3μm,0.4s							
TYV				smax	smax			
	comp=N,2μm,0.4s							
TYV				smax	smax			
	comp=E,3μm,0.4s							
TYV	**Tymovskoe**	**0.52**	**5**	*e*Pg		**Pg**	**04 57 18.0**	**-0.3**
TYV				AMB	AMB		04 57 19.6	
	comp=E,300nm,0.6s							
TYV				*e*Sg		**Sg**	**04 57 25.6**	**+0.5**
TYV				A	A		04 57 25.8	
	comp=E,2μm,0.3s							
TYV				A	A		04 57 25.8	
	comp=E,3μm,0.3s							
UGL	**Uglegorsk**	**1.31**	**195**	*e*PN		**Pn**	**04 57 31.5**	**-1.1**
UGL				*e*S		**Sb**	**04 57 49.2**	**-0.7**
UGL				pmax	pmax			
	comp=Z,147nm,0.4s							
UGL				smax	smax			
	comp=E,1μm,0.7s							
UGL				smax	smax			
	comp=N,1μm,0.4s							
UGL	**Uglegorsk**	**1.31**	**195**	*e*P		**Pn**	**04 57 31.3**	**-1.3**
UGL				AMB	AMB		04 57 34.0	
	comp=N,400nm,0.5s							
UGL				*e*S		**Sb**	**04 57 49.0**	**-0.9**
UGL				A	A		04 57 51.9	
	comp=N,2μm,0.7s							
UGL				A	A		04 57 51.9	
	comp=N,2μm,0.7s							
NKL	**Nikolayevsk**	**3.04**	**338**	*e*PN		**Pn**	**04 57 54.9**	**-1.5**
NKL				pmax	pmax			
	comp=N,56nm,0.3s							
NKL				pmax	pmax			
	comp=E,37nm,0.3s							
NKL				pmax	pmax			
	comp=Z,114nm,0.4s							
YSS	**Yuzh-Sakhalins**	**3.40**	**178**			**Pb**	**04 58 06.3**	**-2.2**
YSS				Sn		**Sb**	**04 58 46.8**	**-3.0**
YSS	**Yuzh-Sakhalins**	**3.40**	**178**	*e*PN		**Pb**	**04 58 06.8**	**-1.7**
YSS				pmax	pmax			
	comp=Z,90nm,0.6s							
YSS				MLR	MLR			
	comp=Z,500nm,6.0s							
YSS	**Yuzh-Sakhalins**	**3.40**	**178**	*e*P		**Pn**	**04 58 01.7**	**+0.4**
YSS				AMB	AMB		04 58 03.4	
	comp=Z,50nm,0.4s							
YSS				*e*Pg		**Pg**	**04 58 13.7**	**+0.4**
YSS				AMB	AMB		04 58 17.7	
	comp=Z,90nm,0.6s							
YSS				*e*S		**Sn**	**04 58 41.1**	**-0.5**
YSS				A	A		04 58 44.8	
	comp=Z,80nm,0.7s							
YSS				A	A		04 58 44.8	
	comp=Z,60nm,0.7s							
YSS				*e*Sg		**Sg**	**04 59 00.0**	**+2.7**
YSS				A	A		04 59 02.5	
	comp=Z,200nm,0.8s							
YSS				A	A		04 59 02.5	
	comp=Z,100nm,0.8s							
GRNR	**Gornyy**	**3.95**	**278**	*e*PN		**Pn**	**04 58 08.4**	**-0.5**
GRNR				pmax	pmax			
	comp=N,6.0nm,0.3s							
GRNR				pmax	pmax			
	comp=E,20nm,0.3s							
GRNR				pmax	pmax			
	comp=Z,20nm,0.3s							
GRNR				MLR	MLR			
	comp=E,320nm,12.0s							
GRNR				MLR	MLR			
	comp=N,440nm,19.0s							
GRNR				MLR	MLR			
	comp=Z,390nm,15.0s							
GRNR	**Gornyy**	**3.95**	**278**	*e*P		**Pn**	**04 58 08.4**	**-0.5**
KLR	**Kul'dur**	**7.10**	**265**	Pn		**Pn**	**04 58 52.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=83,slow=14,SNR=5.1							
KLR				Lg	Lg		05 00 49.8	
	comp=Z,2.5nm,0.3s,baz=342,slow=22,SNR=9.8							
KLR				LR	LR		05 02 01.1	
	comp=Z,145nm,19.5s,baz=52,slow=42							
	comp=Z,2.9nm,0.6s							
USA0B	**Ussuriysk Arra**	**9.46**	**234**	Pn		**Pn**	**04 59 25.3**	**+0.8**
USA0B	**Ussuriysk Arra**	**9.46**	**234**	PN		**Pn**	**04 59 25.3**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.46**	**234**	Pn		**Pn**	**04 59 24.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=41,slow=17,SNR=1.8							
USRK				Lg	Lg		05 02 05.7	
	comp=Z,0.7nm,0.3s,baz=42,slow=33,SNR=8.8							
	comp=Z,1.4nm,0.4s							
USRK	**Ussuriysk Ar.**	**9.46**	**234**	Pn		**Pn**	**04 59 26.5**	**+2.0**
USRK	**Ussuriysk Ar.**	**9.46**	**234**	PN		**Pn**	**04 59 24.0**	**-0.5**
PETK	**Petropavlovsk-**	**9.78**	**68**	LR		LR	05 03 36.3	
	comp=Z,113nm,18.8s,baz=260,slow=40							
MJAR	**Matsushiro Arr**	**14.16**	**195**	LR		LR	05 06 30.1	
	comp=Z,73nm,18.2s,baz=27,slow=40							
KSRS	**Korea Array**	**16.62**	**225**	Pn		**P**	**05 01 03.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=37,slow=11,SNR=7.4							
KSRS				LR	LR		05 07 09.4	
	comp=Z,66nm,18.7s,baz=30,slow=36							
	comp=Z,1.6nm,0.9s							
SHEM	**Shemya Is, Ala**	**19.67**	**71**	LR		LR	05 09 19.8	
	comp=Z,29nm,20.4s,baz=344,slow=37							
BILL	**Bilibino**	**21.23**	**25**	*e*P		**P**	**05 01 55.3**	**+1.4**
BILL				pmax	pmax			
	comp=Z,13nm,1.2s							
SONM	**Songino Array**	**23.68**	**278**	P		**P**	**05 02 19.4**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=76,slow=6.1,SNR=

comp=Z,1.3nm,0.9s,baz=308,slow=7.8,SNR=4.0
YKA LR LR 05 29 26.7
comp=Z,23nm,18.0s,baz=322,slow=37
comp=Z,1.3nm,0.9s
NOA NORSAR Array B 62.31 336 P **P 05 07 29.8 -0.3**
comp=Z,0.7nm,0.7s,baz=33,slow=6.5,SNR=3.5
comp=Z,0.7nm,0.7s
HRY Holter Researc 63.98 48 P **P 05 07 41.4 -0.2**
PAHR Pah Rah Range 65.20 57 P **P 05 07 50.8 +1.1**
PAHR IAmb IAmb 05 07 51.7
comp=Z,2.2nm,0.8s
GCMT Greycliff 65.67 47 P **P 05 07 53.5 +0.8**
YERR Yerington 65.79 58 P **P 05 07 53.9 +0.3**
YERR IAmb IAmb 05 07 55.8
comp=Z,3.5nm,0.8s
KVN Kaiserville 66.36 57 P **P 05 07 57.0 -0.3**
KVN IAmb IAmb 05 08 01.8
comp=Z,3.3nm,1.0s
KVN Kaiserville 66.36 57 P **P 05 07 57.0 -0.3**
KVN pmax pmax
comp=Z,3.0nm,1.0s
RLMT Red Lodge 66.36 47 P **P 05 07 56.5 -0.7**
NVAR Mina Array Bea 66.70 58 P **P 05 08 01.1 +1.7**
comp=Z,1.0nm,0.7s,baz=293,slow=5.8,SNR=12
comp=Z,1.0nm,0.7s
HWUT Hardware Ranch 67.87 51 P **P 05 08 05.9 -0.9**
HWUT IAmb IAmb 05 08 08.5
comp=Z,2.5nm,0.8s
PD31 Pinedale Array 67.99 49 P **P 05 08 07.5 -0.1**
PDAR Pinedale Array 67.99 49 P **P 05 08 08.2 +0.6**
comp=Z,0.9nm,0.6s,baz=340,slow=1.9,SNR=14
PDAR LR LR 05 38 51.1
comp=Z,7.4nm,18.0s,baz=314,slow=37
comp=Z,0.9nm,0.6s
PDAR Pinedale Array 67.99 49 P **P 05 08 07.6 0.0**
SPR3 Spring Creek 3 68.39 55 P **P 05 08 09.6 -0.7**
SPR3 IAmb IAmb 05 08 16.0
comp=Z,4.2nm,1.3s
TPNV Topopah Spring 68.89 57 P **P 05 08 12.5 -0.7**
TPNV IAmb IAmb 05 08 17.5
comp=Z,4.1nm,0.9s
TPNV Topopah Spring 68.89 57 P **P 05 08 12.5 -0.7**
TPNV pmax pmax
comp=Z,4.0nm,1.0s
WRA Warramunga Arr 70.36 188 P **P 05 08 23.4 +1.4**
comp=Z,1.8nm,1.1s,baz=8.7,slow=6.4,SNR=5.5
comp=Z,1.8nm,1.1s
B35A Bob, Littlefor 70.42 36 P **P 05 08 22.0 -0.3**
O20A White River Ci 70.63 50 P **P 05 08 24.4 +0.5**
EYMN Ely 71.60 35 P **P 05 08 29.2 -0.2**
PV13 Radium Mtn., P 71.86 52 P **P 05 08 32.1 +0.7**
PV13 IAmb IAmb 05 08 33.6
comp=Z,2.6nm,0.9s
SMCO Snowmass 71.99 50 P **P 05 08 31.9 -0.5**
E38A The Farm, Brul 72.70 36 P **P 05 08 35.6 -0.4**
ECSD EROS Data Cent 73.08 41 P **P 05 08 38.4 +0.1**
ECSD IAmb IAmb 05 08 41.3
comp=Z,3.6nm,0.8s
ASAR Alice Springs 74.08 188 P **P 05 08 46.2 +1.9**
comp=Z,0.5nm,0.5s,baz=358,slow=6.5,SNR=5.7
comp=Z,0.5nm,0.5s
TXAR Lajitas Array 81.44 54 P **P 05 09 26.9 +1.3**
comp=Z,0.8nm,0.8s,baz=297,slow=5.2,SNR=12
comp=Z,0.8nm,0.8s
LPIG La Paz 81.98 62 LR LR 05 44 49.0
comp=Z,11nm,18.0s,baz=228,slow=35
ESDC Sonseca Array 85.66 335 P **P 05 09 47.1 +0.1**
comp=Z,0.7nm,0.8s,baz=39,slow=3.6,SNR=5.3
comp=Z,0.7nm,0.8s
CPUP Villa Florida 151.56 40 PKPbc **PKPbc 05 17 02.0 -0.4**
comp=Z,2.1nm,0.8s,baz=309,slow=4.4,SNR=4.8
CPUP Villa Florida 151.56 40 PKIKP **PKPbc 05 17 02.0 -0.4**

*NEIC **16** 05:07:44.1±1.6, 18.70N±0.07×145.5E±0.1, h178km±8km, mb4.3/53, Error ellipse: s-maj=19.6km s-min=8.6km az=75.0*
*IDC **16** 05:07:45.6±2.1, 18.65N×145.64E, h196km±21km, mb3.5/10, mbtmp4.1/12, Error ellipse: s-maj=22.2km s-min=13.2km az=92.0*
ISC 16 05:07:45.6±0.5, 18.66N±0.06×145.5E±0.2, h200km, n80, σ0.77/75, mb4.2/36, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.08**	**187**	P	**Pn**	**05 09 00.9**	**-0.2**
	48nm,0.3s,baz=309,slow=8.2,SNR=4.6						
GUMO				S	**Sn**	**05 10 01.0**	**+0.3**
	64nm,0.3s,baz=114,slow=18,SNR=5.0						
GUMO	**Guam**	**5.08**	**187**	Pn	**Pn**	**05 08 60.0**	**-1.2**
MJAR	**Matsushiro Arr**	**18.94**	**342**	P	**Pn**	**05 11 53.9**	**-0.8**
	0.7nm,0.3s,baz=170,slow=10,SNR=4.0						
JMM	**Marumori**	**19.58**	**349**	P	**P**	**05 11 57.0**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**20.06**	**87**	T	T	05 33 27.2	
	baz=275,slow=75,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**20.07**	**87**	T	T	05 33 26.3	
	baz=275,slow=75,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**20.08**	**87**	T	T	05 33 25.2	
	baz=275,slow=75,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**20.21**	**84**	T	T	05 33 45.5	
	baz=265,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**20.21**	**83**	T	T	05 33 37.3	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**20.22**	**84**	T	T	05 33 25.7	
	baz=265						
JSD	**Sado**	**20.32**	**343**	P	**P**	**05 12 05.6**	**-0.7**
JSD				IAmb	IAmb	05 12 16.3	
	comp=Z,22nm,1.5s						
COEN	**Coen**	**32.49**	**184**	P	**P**	**05 13 57.7**	**+0.1**
MTN	**Manton Dam**	**34.37**	**205**	P	**P**	**05 14 13.4**	**-0.4**
WB0	**Warramunga Arr**	**39.72**	**197**	P	**P**	**05 14 58.7**	**-0.2**
WB0				IAmb	IAmb	05 14 59.3	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**39.87**	**196**	P	**P**	**05 14 59.8**	**-0.2**
WB2	**Warramunga Arr**	**39.90**	**197**	P	**P**	**05 14 59.9**	**-0.4**
WB2				IAmb	IAmb	05 15 25.4	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**39.90**	**197**	P	**P**	**05 15 00.4**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=13,slow=8.3,SNR=30						
	comp=Z,1.4nm,0.3s						
WRA	**Warramunga Arr**	**39.90**	**197**	P	**P**	**05 14 59.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**41.43**	**209**	P	**P**	**05 15 13.5**	**+0.7**
FITZ				IAmb	IAmb	05 15 26.9	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**43.07**	**321**	P	**P**	**05 15 26.8**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=146,slow=9.6,SNR=6.1						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**43.07**	**321**	P	**P**	**05 15 26.6**	**+0.6**
AS31	**Alice Springs**	**43.57**	**196**	P	**P**	**05 15 31.6**	**+1.5**
ASAR	**Alice Springs**	**43.57**	**196**	P	**P**	**05 15 30.7**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=15,slow=8.2,SNR=9.3						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**43.57**	**196**	P	**P**	**05 15 31.0**	**+0.9**
MBWA	**Marble Bar**	**46.95**	**214**	P	**P**	**05 15 57.0**	**+0.4**
UNV	**Unalaska Valle**	**50.78**	**35**	P	**P**	**05 16 25.2**	**0.0**
FORT	**Forrest**	**51.95**	**199**	P	**P**	**05 16 34.4**	**+0.2**
BBOO	**Buckleboo**	**51.98**	**190**	P	**P**	**05 16 34.6**	**+0.3**
SDPT	**Sand Point**	**54.59**	**35**	P	**P**	**05 16 53.0**	**-0.2**
CNBA	**Chernabura Isl**	**54.90**	**35**	P	**P**	**05 16 55.5**	**+0.1**
MORW	**Morawa**	**55.34**	**212**	P	**P**	**05 16 58.7**	**-0.2**
ZALV	**Zalesovo Beam**	**57.95**	**323**	P	**P**	**05 17 17.0**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=87,slow=5.1,SNR=2.2						
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**58.37**	**314**	P	**P**	**05 17 20.8**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=90,slow=7.7,SNR=5.7						
	comp=Z,0.5nm,0.5s						
IMAR	**Indian Mountai**	**61.32**	**24**	P	**P**	**05 17 39.2**	**-0.5**
BPAW	**Bear Paw Mtn.**	**61.86**	**26**	P	**P**	**05 17 44.1**	**+0.7**
BPAW				IAmb	IAmb	05 17 45.0	
	comp=Z,5.9nm,0.9s						
PMR	**Palmer**	**62.06**	**29**	P	**P**	**05 17 44.0**	**-0.7**
PMR				IAmb	IAmb	05 18 23.5	
	comp=Z,5.9nm,1.1s						
MLY	**Manley**	**62.22**	**25**	P	**P**	**05 17 46.5**	**+0.7**
MLY				IAmb	IAmb	05 17 47.5	
	comp=Z,3.9nm,0.7s						
PWL	**Port Wells**	**62.29**	**30**	P	**P**	**05 17 45.8**	**-0.5**
PWL				IAmb	IAmb	05 17 51.1	
	comp=Z,12nm,1.2s						
SML	**Sawmill**	**62.48**	**29**	P	**P**	**05 17 47.0**	**-0.6**
I23K	**Minto, Yukon-K**	**62.82**	**26**	P	**P**	**05 17 50.4**	**+0.8**
I23K				IAmb	IAmb	05 17 51.3	
	comp=Z,7.1nm,1.3s						
GLI	**Glacier Island**	**62.88**	**30**	P	**P**	**05 17 49.3**	**-0.9**
H23K	**Yukon River**	**62.92**	**25**	P	**P**	**05 17 51.8**	**+1.4**
H23K				IAmb	IAmb	05 17 52.4	
	comp=Z,3.0nm,0.8s						
SCM	**Sheep Creek Mo**	**62.96**	**29**	P	**P**	**05 17 51.0**	**+0.2**
FID	**Port Fidalgo**	**63.16**	**31**	P	**P**	**05 17 50.8**	**-1.3**
WRH	**Wood River Hil**	**63.18**	**26**	P	**P**	**05 17 51.8**	**-0.3**
WRH				IAmb	IAmb	05 17 52.6	
	comp=Z,1.9nm,0.6s						
MDM	**Murphy Dome**	**63.23**	**26**	P	**P**	**05 17 53.5**	**+1.0**
MDM				IAmb	IAmb	05 17 54.5	
	comp=Z,3.2nm,0.6s						
H24K	**Noodor Dome**	**63.59**	**25**	P	**P**	**05 17 55.5**	**+0.7**
H24K				IAmb	IAmb	05 17 56.4	
	comp=Z,1.8nm,0.5s						
TOLK	**Toolik Lake Re**	**63.69**	**22**	P	**P**	**05 17 56.8**	**+1.3**
TOLK				IAmb	IAmb	05 18 12.9	
	comp=Z,6.4nm,1.3s						
ILAR	**Eielson Array**	**63.75**	**26**	P	**P**	**05 17 55.0**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=250,slow=5.6,SNR=16						
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**63.75**	**26**	P	**P**	**05 17 55.5**	**-0.4**
PAX	**Paxson**	**64.02**	**28**	P	**P**	**05 17 58.8**	**+1.0**
PAX				IAmb	IAmb	05 17 58.9	
	comp=Z,2.5nm,0.6s						
J25K	**Salcha River,**	**64.36**	**27**	P	**P**	**05 17 59.6**	**-0.3**
DOT	**Dot Lake**	**64.76**	**28**	P	**P**	**05 18 03.0**	**+0.5**
DOT				IAmb	IAmb	05 18 03.1	
	comp=Z,2.8nm,0.6s						
SCRK	**Sand Creek**	**64.84**	**27**	P	**P**	**05 18 03.0**	**-0.1**
SCRK				IAmb	IAmb	05 18 03.7	
	comp=Z,4.7nm,1.2s						
J26L	**Joseph Creek**	**65.11**	**27**	P	**P**	**05 18 04.9**	**+0.2**
J26L				IAmb	IAmb	05 18 06.4	
	comp=Z,3.0nm,0.9s						
BMAR	**Burnt Mountain**	**65.22**	**24**	P	**P**	**05 18 07.5**	**+2.1**
I26K	**Coal Creek Min**	**65.41**	**26**	P	**P**	**05 18 05.5**	**-1.0**
I26K				IAmb	IAmb	05 18 08.8	
	comp=Z,5.1nm,1.4s						
L27K	**Beaver Creek,**	**65.67**	**28**	P	**P**	**05 18 09.4**	**+1.1**
K27K	**Chicken**	**65.68**	**27**	P	**P**	**05 18 09.7**	**+1.4**
BCAR	**Beaver Creek A**	**65.69**	**28**	P	**P**	**05 18 09.7**	**+1.2**
EGAK	**Eagle**	**66.17**	**27**	P	**P**	**05 18 12.9**	**+1.5**
DAWY	**Dawson**	**66.86**	**28**	P	**P**	**05 18 16.4**	**+0.5**
HYT	**Haines Junctio**	**67.54**	**31**	P	**P**	**05 18 20.2**	**-0.2**
HYT				IAmb	IAmb	05 18 22.3	
	comp=Z,6.5nm,1.0s						
EPYK	**Eagle Plains**	**68.15**	**25**	P	**P**	**05 18 23.9**	**0.0**
EPYK				IAmb	IAmb	05 18 27.7	
	comp=Z,9.1nm,1.5s						
M31M	**Drury Creek, Y**	**69.06**	**30**	P	**P**	**05 18 29.9**	**+0.4**
M31M				IAmb	IAmb	05 18 36.9	
	comp=Z,7.4nm,1.4s						
INK	**Inuvik**	**69.47**	**23**	P	**P**	**05 18 32.1**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=324,slow=7.7,SNR=8.9						
	comp=Z,2.9nm,0.8s						
ABKAR	**Akbulak array**	**73.26**	**317**	P	**P**	**05 18 54.4**	**-0.5**
YKA	**Yellowknife Ar**	**78.10**	**28**	P	**P**	**05 19 22.2**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=289,slow=5.7,SNR=9.2						
	comp=Z,1.7nm,0.7s						
B08A	**Colville Reser**	**79.61**	**42**	P	**P**	**05 19 31.0**	**+0.3**
PINE	**Pine Mountain**	**79.80**	**47**	P	**P**	**05 19 32.6**	**+0.5**
PINE				IAmb	IAmb	05 19 33.9	
	comp=Z,5.9nm,0.8s						
BEKR	**Beckworth**	**81.33**	**51**	P	**P**	**05 19 40.0**	**-0.2**
BEKR				IAmb	IAmb	05 19 41.2	
	comp=Z,3.5nm,0.8s						
PNTR	**Pine Nut**	**82.12**	**52**	P	**P**	**05 19 45.4**	**+0.9**
PNTR				IAmb	IAmb	05 19 45.9	
	comp=Z,4.3nm,0.7s						
RYN	**Ryan**	**83.06**	**52**	P	**P**	**05 19 49.8**	**+0.6**
KVN	**Kaiserville**	**83.25**	**51**	P	**P**	**05 19 50.6**	**+0.4**
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**05 19 51.0**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=265,slow=5.8,SNR=30						
	comp=Z,2.5nm,0.7s						
HRY	**Holter Researc**	**84.95**	**42**	P	**P**	**05 19 58.9**	**+0.4**
TPNV	**Topopah Spring**	**85.31**	**53**	P	**P**	**05 20 01.1**	**+0.5**
TPNV				IAmb	IAmb	05 20 01.6	
	comp=Z,2.7nm,0.7s						
YHL	**Hebgen Lake**	**86.07**	**44**	P	**P**	**05 20 05.2**	**+0.9**
YHL				IAmb	IAmb	05 20 05.7	
	comp=Z,2.2nm,0.6s						
PDAR	**Pinedale Array**	**87.97**	**45**	P	**P**	**05 20 13.2**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=177,slow=3.0,SNR=3.9						
	comp=Z,0.3nm,0.4s						
LPAZ	**La Paz**	**147.84**	**91**	PKPbc	**PKiKP**	**05 27 08.9**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=301,slow=4.1,SNR=8.2						

*VAO **16** 05:33:47.3±1.6, 19.78S×71.31W, h10km, mb4.0*
*GUC **16** 05:33:51.5±0.8, 19.78S×71.17W, h26km±12km, ML4.0*
*NEIC **16** 05:33:52.5±1.9, 19.79S±0.05×71.2W±0.1, h31km±10km, mb4.1/5, ML3.9(GUC), Error ellipse: s-maj=18.1km s-min=6.8km az=93.0*
*IDC **16** 05:33:56.6±3.7, 19.78S×70.81W, h57km±29km, mb3.6/4, mbtmp3.9/7, ML3.2/3, MS3.0/7, Error ellipse: s-maj=40.6km s-min=18.0km az=91.0*
ISC 16 05:33:50.3±2.5, 19.81S±0.03×71.14W±0.08, h18km±13km, n76, σ1.915/78, mb4.1/4, MS3.2/4, 12C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**1.06**	**116**		**Pb**	**05 34 10.0**	**0.0**
TA02	**Huaiquique**	**1.06**	**116**	↑*iP*	**Pb**	**05 34 09.8**	**-0.2**
TA02				*i* S	**Sb**	**05 34 23.9**	**+0.4**
TA02				IAML		05 34 25.2	
	comp=N,6μm,0.4s						
TA01	**Diego Aracena**	**1.18**	**130**	Pn	**Pn**	**05 34 12.5**	**+0.6**
TA01	**Diego Aracena**	**1.18**	**130**	↑*iP*	**Pn**	**05 34 12.1**	**+0.2**
TA01				*i* S	**Sb**	**05 34 26.5**	**-0.5**
TA01				IAML		05 34 32.0	
	comp=N,4μm,0.6s						
PB12	**IPOC Station P**	**1.41**	**33**	Pn	**Pn**	**05 34 15.1**	**-0.1**
PB12	**IPOC Station P**	**1.41**	**33**	↑*iP*	**Pn**	**05 34 14.7**	**-0.4**
PB12				*i* S	**Sn**	**05 34 32.4**	**-1.0**
PB12				IAML		05 34 37.2	
	comp=N,3μm,0.6s						
AP01	**Chacalluta**	**1.61**	**28**		**Pn**	**05 34 17.6**	**-0.2**
AP01	**Chacalluta**	**1.61**	**28**	↓*iP*	**Pn**	**05 34 17.9**	**+0.1**
AP01				*i* S	**Sn**	**05 34 38.7**	**+0.5**
AP01				IAML		05 34 44.0	
	comp=N,5μm,0.2s						
GO01	**Chusmiza**	**1.84**	**86**		**Pn**	**05 34 21.7**	**+0.3**
GO01	**Chusmiza**	**1.84**	**86**	↑*iP*	**Pn**	**05 34 21.4**	**0.0**
GO01				*i* S	**Sn**	**05 34 44.2**	**-0.2**
GO01				IAML		05 34 47.8	
	comp=N,4μm,0.4s						
PB02	**IPOC Station P**	**1.91**	**142**		**Pn**	**05 34 22.9**	**+0.9**
PB02	**IPOC Station P**	**1.91**	**142**	↑*iP*	**Pn**	**05 34 22.8**	**+0.9**
PB02				*i* S	**Sn**	**05 34 46.0**	**+0.4**
PB02				IAML		05 34 57.4	
	comp=E,4μm,0.6s						
PB01	**IPOC Station P**	**1.98**	**129**		**Pn**	**05 34 24.1**	**+1.2**
PB01	**IPOC Station P**	**1.98**	**129**	↑*iP*	**Pn**	**05 34 23.8**	**+0.8**
PB01				*i* S	**Sn**	**05 34 47.9**	**+0.5**
PB01				IAML		05 34 55.5	
	comp=N,1μm,0.3s						
PB16	**IPOC Station P**	**2.13**	**47**	Pn	**Pn**	**05 34 26.5**	**+1.1**
PB16	**IPOC Station P**	**2.13**	**47**	↑*iP*	**Pn**	**05 34 25.6**	**+0.2**
PB16				*i* S	**Sn**	**05 34 52.0**	**+0.3**
PB16				IAML		05 35 00.1	
	comp=E,835nm,0.5s						
PB07	**IPOC Station P**	**2.24**	**149**		**Pn**	**05 34 27.7**	**+1.0**
PB07	**IPOC Station P**	**2.24**	**149**	↑*iP*	**Pn**	**05 34 27.5**	**+0.8**
PB07				*i* S	**Sn**	**05 34 53.9**	**-0.2**
PB07				IAML		05 35 11.4	
	comp=E,1μm,0.5s						
PB09	**IPOC Station P**	**2.66**	**138**		**Pn**	**05 34 34.4**	**+2.0**
PB09	**IPOC Station P**	**2.66**	**138**	↑*iP*	**Pn**	**05 34 34.2**	**+1.8**
PB09				IAML		05 35 19.2	
	comp=N,1μm,0.7s						
PB04	**IPOC Station P**	**2.68**	**160**		**Pn**	**05 34 33.6**	**+0.9**
PB04	**IPOC Station P**	**2.68**	**160**	↑*eP*	**Pn**	**05 34 33.5**	**+0.7**
PB04				*i* S	**Sn**	**05 35 03.4**	**-1.4**
PB04				IAML		05 35 28.2	
	comp=N,715nm,0.7s						
PB18	**Visviri**	**2.71**	**36**	Pn	**Pn**	**05 34 36.2**	**+2.8**
PB18	**Visviri**	**2.71**	**36**	↑*iP*	**Pn**	**05 34 36.2**	**+2.8**
PB18				*i* S	**Sb**	**05 35 12.5**	**+0.9**
PB06	**IPOC Station P**	**3.24**	**153**		**Pn**	**05 34 41.2**	**+0.8**
PB06	**IPOC Station P**	**3.24**	**153**	↑*iP*	**Pn**	**05 34 41.0**	**+0.6**
PB06				*i* S	**Sn**	**05 35 17.9**	**-0.6**
PB06				IAML		05 35 39.8	
	comp=N,478nm,0.7s						
LVC	**Limon Verde**	**3.48**	**144**	P	**Pn**	**05 34 46.2**	**+2.3**
	comp=N,8.3nm,0.3s,baz=316,slow=9.8,SNR=42						
LVC				S	**Sn**	**05 35 25.3**	**+0.4**
	comp=N,69nm,0.6s,baz=9.9,slow=17,SNR=4.2						
LVC				LR	LR	05 36 08.0	
	comp=N,216nm,20.7s,baz=320,slow=40						
	comp=N,16nm,0.3s						
LVC	**Limon Verde**	**3.48**	**144**	Pn	**Pn**	**05 34 46.0**	**+2.1**
LVC	**Limon Verde**	**3.48**	**144**	*eP*	**Pn**	**05 34 45.2**	**+1.3**
PB15	**IPOC Station P**	**3.73**	**156**		**Pn**	**05 34 48.0**	**+0.9**
AF01	**San Pedro de A**	**4.17**	**139**		**Pn**	**05 34 56.5**	**+3.2**
LPAZ	**La Paz**	**4.52**	**40**	P	**Pn**	**05 35 00.1**	**+1.7**
	comp=N,0.1nm,0.3s,baz=198,slow=8.4,SNR=5.9						
LPAZ				LR	LR	05 36 14.2	
	comp=N,51nm,21.9s,baz=260,slow=32						
	comp=N,1.3nm,0.3s						
LPAZ	**La Paz**	**4.52**	**40**		**Pn**	**05 35 01.4**	**+3.0**
GO02	**Mina Guanaco**	**5.52**	**165**	Pn	**Pn**	**05 35 12.9**	**+1.1**
AC02	**Maricunga**	**7.24**	**166**	Pn	**Pn**	**05 35 36.9**	**+1.3**
AC06	**Mina Casimiro**	**7.55**	**175**	Pn	**Pn**	**05 35 40.6**	**+1.1**
GO03	**Copiap**	**7.80**	**174**	Pn	**Pn**	**05 35 44.7**	**+1.8**
AC05	**El Transito**	**9.03**	**175**	Pn	**Pn**	**05 35 59.9**	**+0.1**
SIV	**San Ignacio**	**10.31**	**70**	P	**Pn**	**05 36 17.7**	**+0.3**
	comp=N,0.1nm,0.3s,baz=259,slow=11,SNR=18						
SIV				LR	LR	05 39 40.8	
	comp=N,38nm,21.4s,baz=296,slow=34						
	comp=N,4.5nm,0.6s						
ETMB	**Extrema**	**11.01**	**26**		**Pn**	**05 36 27.4**	**+0.4**
PTLB	**Pontes e Lacer**	**12.23**	**71**	Pn	**Pn**	**05 36 45.1**	**+1.4**
PTLB	**Pontes e Lacer**	**12.23**	**71**	*eP*	**Pn**	**05 36 44.7**	**+1.0**
VILB	**Vilhena**	**12.51**	**59**	Pn	**Pn**	**05 36 46.8**	**-0.8**
VILB	**Vilhena**	**12.51**	**59**	*eP*	**Pn**	**05 36 47.3**	**-0.3**
CPUP	**Villa Florida**	**14.27**	**120**	*eP*	**Pn**	**05 37 10.5**	**-1.0**
ANTJ	**Antonio Joao (**	**14.31**	**101**	*eP*	**Pn**	**05 37 12.0**	**-0.2**
AQDB	**Aquidauana**	**14.52**	**95**	*eP*	**Pn**	**05 37 15.2**	**+0.3**
SALV	**Santo Antonio**	**15.21**	**78**	*eP*	**Pn**	**05 37 24.7**	**+0.5**
H03N1	**Juan Fernandez**	**15.25**	**205**	T	T	05 53 16.4	
	baz=32,slow=72,SNR=38						
H03N2	**Juan Fernandez**	**15.25**	**206**	T	T	05 53 18.1	
	baz=32,slow=72,SNR=22						
H03N3	**Juan Fernandez**	**15.26**	**205**	T	T	05 53 17.2	
	baz=32,slow=72,SNR=18						
PDRB	**Porto dos Gac**	**16.08**	**62**	*eP*	**Pn**	**05 37 36.1**	**+0.5**
ITQB	**Itaqui**	**16.43**	**130**	*eP*	**Pn**	**05 37 38.5**	**-1.4**
MCR1	**Marechal Candi**	**16.51**	**109**	*eP*	**Pn**	**05 37 41.1**	**+0.1**
CLDB	**Colider**	**17.25**	**61**	*eP*	**Pn**	**05 37 49.4**	**-1.0**
CRSM	**Crissiumal (Br**	**17.42**	**119**	*eP*	**Pn**	**05 37 52.8**	**+0.4**
MACA	**Manacapuru-AM**	**19.44**	**33**	P	**P**	**05 38 15.0**	**-0.9**
MACA				IAmb	IAmb	05 38 25.1	
	comp=Z,6.3nm,0.6s						
TRQA	**Tornquist**	**19.86**	**158**		**P**	**05 38 20.6**	**+0.3**
NPGB	**Novo Progresso**	**19.89**	**53**	*eP*	**P**	**05 38 20.2**	**-0.6**
PLCA	**Paso Flores**	**20.87**	**179**	P	Pn	**05 38 35.1**	**+1.2**
	comp=Z,3.2nm,1.1s,baz=208,slow=23,SNR=1.3						
	comp=Z,3.2nm,1.1s						
PLCA	**Paso Flores**	**20.87**	**179**	P	**P**	**05 38 32.8**	**+1.4**
PLCA				IAmb	IAmb	05 39 05.0	
	comp=Z,18nm,1.4s						
ITTB	**Itaituba**	**21.47**	**46**	*eP*	**P**	**05 38 37.2**	**-0.8**
BDFB	**Brasilia**	**22.41**	**83**	P	**P**	**05 38 48.8**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=217,slow=10,SNR=2.0						
	comp=Z,0.9nm,0.4s						
BDFB	**Brasilia**	**22.41**	**83**	P	**P**	**05 38 47.5**	**-0.7**
BOAV	**Boa Vista**	**24.40**	**26**	P	**P**	**05 39 07.4**	**-0.4**
BOAV				IAmb	IAmb	05 39 09.2	
	comp=Z,5.4nm,1.0s						
ROSC	**El Rosal**	**24.69**	**352**	LR	LR	05 49 40.7	
	comp=Z,63nm,20.1s,baz=234,slow=38						
MDP	**Montagnes des**	**30.72**	**38**	LR	LR	05 52 06.6	
	comp=Z,38nm,18.1s,baz=218,slow=36						
NBLA	**Lagarto - SE**	**33.27**	**80**	*eP*	**P**	**05 40 25.7**	**-1.3**
RPN	**Rapa Nui**	**35.68**	**251**	LR	LR	05 51 49.9	
	comp=Z,49nm,20.1s,baz=149,slow=30						
RCBR	**Riachuelo**	**36.96**	**73**	LR	LR	05 57 07.2	
	comp=Z,74nm,20.7s,baz=335,slow=38						
TORD	**Torodi Ar. Bea**	**76.78**	**72**	P	**P**	**05 45 51.2**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=260,slow=5.7,SNR=10						
	comp=Z,1.5nm,0.7s						
YKA	**Yellowknife Ar**	**88.91**	**341**	P	**P**	**05 46 44.0**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=145,slow=4.4,SNR=4.1						
	comp=Z,0.8nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**25.57**	**279**	T	T	08 12 21.0	
	baz=101,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**25.58**	**279**	T	T	08 12 15.6	
	baz=101,slow=74,SNR=3.6						
H11S3	**WAKE ISLAND Hy**	**25.59**	**279**	T	T	08 12 20.8	
	baz=101,slow=74,SNR=3.7						
MKAR	**Makanchi Array**	**145.42**	**33**	PKPbc	**PKPdf**	**05 53 27.9**	**+0.7**
	comp=Z,1.0nm,1.0s,baz=318,slow=3.4,SNR=4.7						

*IDC **16** 05:38:29.3±1.4, 33.40N×106.33E, h0km, mb3.6/5, mbtmp3.7/6, ML4.2/1, Error ellipse: s-maj=75.4km s-min=21.8km az=54.0*
**ISC 16 05:38:34.4±1.5, 33.3N±0.2×106.2E±0.3, h35km, n6, σ0.

RUS	Russkaya	11.11	280	*eP*		Pn	05 52 53.3	+0.9
KRMR	Karymshinskiy	11.32	282	*eP*		Pn	05 52 57.9	+2.6
GRL	Gorelyy	11.37	281	*eP*		Pn	05 52 58.8	+2.7
GNL	Ganaly	11.43	286	*eP*		Pn	05 52 58.8	+2.0
PETK	Petropavlovsk-	11.57	283	P		Pn	05 52 60.0	+1.3
	4.2nm,0.6s,baz=94,slow=18,SNR=21							
PETK				S		Sn	05 55 03.5	-2.4
	1.5nm,0.7s,baz=87,slow=26,SNR=1.9							
ILAR	Eielson Array	22.69	41	P		P	05 55 09.6	-1.3
	0.3nm,0.8s,baz=253,slow=9.6,SNR=2.7							
	0.3nm,0.6s							
YKA	Yellowknife Ar	36.94	46	P		P	05 57 18.1	+1.0
	0.4nm,0.6s,baz=285,slow=7.0,SNR=2.0							
	0.4nm,0.6s							
SONM	Songino Array	43.82	294	P		P	05 58 15.3	+1.2
	0.6nm,0.5s,baz=60,slow=9.7,SNR=4.1							
	0.6nm,0.5s							
SPITS	Spitsbergen Ar	49.61	355	P		P	05 58 58.3	-0.5
	1.0nm,0.4s,baz=37,slow=5.7,SNR=7.9							
	1.0nm,0.4s							
KURBB	Kurchatov Arra	56.64	311	P		P	05 59 51.1	+0.4
	1.6nm,0.6s,baz=44,slow=6.5,SNR=8.8							
	1.6nm,0.6s							
ARCES	ARCESS Array B	57.03	348	P		P	05 59 52.5	-0.6
	1.4nm,0.9s,baz=24,slow=8.4,SNR=5.5							
	1.4nm,0.9s							
MKAR	Makanchi Array	57.42	306	P		P	05 59 55.9	-0.4
	0.6nm,0.6s,baz=55,slow=7.1,SNR=5.5							
	0.6nm,0.6s							
NOA	NORSAR Array B	66.79	352	P		P	06 00 58.0	-0.7
	0.2nm,0.4s,baz=1.4,slow=5.6,SNR=3.9							
	0.2nm,0.4s							
AKASG	Malin Array Be	74.09	339	P		P	06 01 42.8	-0.4
	0.6nm,0.4s,baz=24,slow=6.5,SNR=4.5							
	0.6nm,0.4s							

*NNC **16** 05:54:39.6±1.9,54.˙49N×86.˙33E,h0km,mb2.8,mpv2.7, Error ellipse: s-maj=52.2km s-min=9.7km az=152.0, Suspected Mining explosion.*

IDC 16 05:54:43.2±2.3,54.˙16N×86.˙30E,h0km,mbtmp3.2/2, ML2.7/2,2C-4D,Error ellipse: s-maj=18.6km s-min=11.8km az=56.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
I46RU	ZALESOVO INFRA	0.90	257	*i*		05	59	50.0	
	baz=75,slow=316,SNR=2.3								
ZAA0	Zalesovo Array	0.90	257	⇓P	Pg	05	54	59.3	-1.1
	0.3nm,0.2s								
ZAA0				⇓S	Sb	05	55	13.7	-0.5
	6.8nm,0.9s								
ZAA0				⇑Rg	Rg	05	55	18.9	
ZALV	Zalesovo Beam	0.90	257	Pg	Pg	05	54	59.4	-1.1
	1.9nm,0.3s,baz=73,slow=17,SNR=27								
ZALV				Lg	Lg	05	55	13.3	
	4.8nm,0.3s,baz=78,slow=29,SNR=25								
ZALV				Rg	Rg	05	55	18.0	
	47nm,1.0s,baz=71,slow=29,SNR=7.2								
KURBB	Kurchatov Arra	5.93	236	Pn	Pn	05	56	13.1	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=18								
KURBB				Lg	Lg	05	57	53.0	
	baz=57,slow=31,SNR=2.6								
	2.5nm,0.8s								
KURBB	Kurchatov Arra	5.93	236	⇓Pn	Pn	05	56	13.2	+1.0
	2.6nm,0.7s								
KURBB				⇑Lg	Lg	05	57	55.4	
	3.5nm,0.5s								
MK31	Makanchi Array	7.81	201	⇓Pn	Pn	05	56	39.2	+1.2
	0.3nm,0.5s,baz=25,slow=13,SNR=25								
MK31				Lg	Lg	05	58	54.1	
	2.5nm,0.9s,baz=27,slow=31,SNR=3.8								
MKAR	Makanchi Array	7.81	201	Pn	Pn	05	56	38.9	+0.9
	0.2nm,0.3s,baz=21,slow=13,SNR=15								
MKAR				Lg	Lg	05	58	52.2	
	baz=28,slow=29								
	0.3nm,0.2s								

*PDG **16** 06:05:56.8±0.1,42.˙70N×20.˙42E,h16km,ML2.2/12,Error ellipse: s-maj=0.3km s-min=0.6km az=0.0*
*BEO **16** 06:05:56.1±0.3,42.˙77N×20.˙61E,h1km±2km,ML2.3/9*
*RHSSO **16** 06:05:56.1±0.8,42.˙82N×20.˙58E,h4km±3km,ML2.1/7*

ISC 16 06:05:54.7±1.1,42.˙74N±0.˙02×20.˙57E±0.˙01,h4km±10km, n65,σ0s66/123,32C-11D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PVY	Plav	0.47	252	⇑*i*Pg	Pg	06	06	03.7	-0.1
PVY				*i* Sg	Sg	06	06	09.4	-0.6
PVY	Plav	0.47	252	⇑*i*Pg	Pg	06	06	03.9	+0.1
PVY				*i* Sg	Sg	06	06	10.1	+0.1
IVA	Berane	0.52	285	⇓*i*Pg	Pg	06	06	04.9	+0.3
IVA				*i* Sg	Sg	06	06	11.5	+0.2
IVA	Berane	0.52	285	⇑*i*Pg	Pg	06	06	04.8	+0.2
IVA				*i* Sg	Sg	06	06	12.1	+0.8
SELS	Selova	0.63	40	*e*Pg	Pg	06	06	06.5	-0.2
SELS				*e*Sg	Sg	06	06	15.2	+0.3
SJES	Sjenica	0.68	320	*e*Pg	Pg	06	06	08.2	+0.4
SJES				*e*Sg	Sg	06	06	17.1	+0.4
KOME	Kolasin	0.79	278	⇓*i*Pg	Pg	06	06	09.3	-0.5
KOME				*i* Sg	Sg	06	06	20.2	+0.3
KOME	Kolasin	0.79	278	⇑*i*Pg	Pg	06	06	09.9	+0.1
KOME				*i* Sg	Sg	06	06	20.3	+0.3
IVAS	Ivanjica	0.89	340	*e*Pg	Pg	06	06	11.6	-0.2
IVAS				*e*Sg	Sg	06	06	23.7	+0.3
BARS	Barje	0.92	85	*e*Pg	Pg	06	06	12.2	-0.1
BARS				*e*Sg	Sg	06	06	24.8	+0.6
PDG	Podgorica	1.02	253	⇑P	Pn	06	06	16.5	+0.7
PDG				⇑S	Sb	06	06	29.0	+0.3
PDG	Podgorica	1.02	253	*e*Pg	Pg	06	06	14.2	0.0
PDG				*e*Sg	Sb	06	06	29.0	+0.3
PDG	Podgorica	1.02	253	*e*Pg	Pb	06	06	15.1	+0.2
PDG				*e*Sg	Sb	06	06	28.9	+0.3
TTG	Podgorica	1.02	253	⇑*i*Pg	Pg	06	06	13.2	-1.0
TTG				*i* Sg	Sg	06	06	27.5	0.0
TTG	Podgorica	1.02	253	⇑*i*Pg	Pg	06	06	13.2	-1.0
TTG				*i* Sg	Sg	06	06	27.8	+0.3
PLE	Pljevlja	1.05	305	⇓*i*Pg	Pg	06	06	14.9	+0.1
PLE				*i* Sg	Sb	06	06	30.4	+0.7
PRVS	Prvonek	1.13	101	*e*Pg	Pg	06	06	16.7	+0.3
PRVS				*e*Sg	Sb	06	06	31.6	-0.4
GRUS	Gruza	1.15	5	*e*Pg	Pg	06	06	17.0	+0.2
GRUS				*e*Sg	Sb	06	06	31.9	+0.1
NKY	Niksic	1.16	274	⇑*i*Pg	Pg	06	06	16.4	-0.6
NKY				*i* Sg	Sb	06	06	32.9	-0.1
NKY	Niksic	1.16	274	⇑*i*Pg	Pg	06	06	16.6	-0.4
NKY				*i* Sg	Sb	06	06	33.2	+0.2
DRME	Dracevica, Mon	1.17	242	*e*Pg	Pg	06	06	17.1	+0.1
DRME				*e*Sg	Sn	06	06	34.8	+0.6
DRME	Dracevica, Mon	1.17	242	⇑*i*Pg	Pg	06	06	16.2	-0.8
DRME				*i* Sg	Sg	06	06	32.5	+0.4
DRME	Dracevica, Mon	1.17	242	⇓*i*Pg	Pg	06	06	16.3	-0.8
DRME				*i* Sg	Sb	06	06	33.1	+0.2
BOVS	Bovan	1.22	42	*e*Pg	Pg	06	06	17.3	-0.8
BOVS				*e*Sg	Sg	06	06	33.4	-0.5
CEME	Cevo	1.23	262	⇑*i*Pg	Pg	06	06	17.5	-0.9
CEME				*i* Sg	Sg	06	06	34.8	+0.4
CEME	Cevo	1.23	262	⇑*i*Pg	Pg	06	06	17.4	-0.9
CEME				*i* Sg	Sb	06	06	35.3	+0.4
RUDO	Rudo	1.24	315	⇑*i*Pg	Pg	06	06	17.3	-1.2
RUDO				*e*Sg	Sg	06	06	33.6	-1.0
ULC	Ulcinj	1.25	232	⇓*i*Pg	Pg	06	06	18.0	-0.7
ULC				*i* Sg	Sb	06	06	35.8	+0.4
ULC	Ulcinj	1.25	232	⇓*i*Pg	Pg	06	06	17.9	-0.7
ULC				*i* Sg	Sn	06	06	35.9	-0.4
UPM	Unac-Piva	1.31	291	*e*Pg	Pn	06	06	19.7	-0.2
UPM				*e*Sg	Sb	06	06	37.2	0.0
UPM	Unac-Piva	1.31	291	⇑*i*Pg	Pn	06	06	19.4	-0.5
UPM				*i* Sg	Sn	06	06	38.3	+0.3
UPM	Unac-Piva	1.31	291	⇓*i*Pg	Pn	06	06	19.5	-0.5
UPM				*i* Sg	Sn	06	06	38.9	+0.9
BUM	Brajici-Budva	1.31	251	⇑*i*Pg	Pn	06	06	18.7	-1.2
BUM				*i* Sg	Sb	06	06	37.3	0.0
BUM	Brajici-Budva	1.31	251	⇑*i*Pg	Pn	06	06	18.8	-1.2
BUM				*i* Sg	Sn	06	06	37.7	-0.3
BBLS	Lazići	1.41	323	*e*Pg	Pn	06	06	20.6	-0.7
BBLS				*e*Sg	Sb	06	06	39.0	-1.1
BBLS	Lazići	1.41	323	*e*Pg	Pb	06	06	21.7	0.0
DIVS	Divibare	1.42	343	*e*Pg	Pn	06	06	20.7	-0.7
DIVS				*e*Sg	Sb	06	06	39.5	-0.9
DIVS	Divibare	1.42	343	*e*Pg	Pb	06	06	22.0	+0.1
DIVS				*e*Sg	Sb	06	06	39.8	-0.6
BOSS	Bosilegrad	1.43	99	*e*Pg	Pn	06	06	21.2	-0.3
BOSS				*e*Sg	Sb	06	06	39.5	-1.0
TRUS	Trudelj	1.49	355	*e*Pg	Pn	06	06	22.6	+0.3
TRUS				*e*Sg	Sg	06	06	42.8	+0.3
BRY	Bratogost	1.50	277	⇑*i*Pg	Pn	06	06	22.9	+0.3
BRY				*e*Sg	Sg	06	06	44.1	+1.1
BRY	Bratogost	1.50	277	⇓*i*Pg	Pn	06	06	22.6	0.0
BRY				*i* Sg	Sg	06	06	43.4	+0.4
BRY	Bratogost	1.50	277	⇓*i*Pg	Pn	06	06	22.6	0.0
BRY				*i* Sg	Sg	06	06	43.9	+0.9
HCY	Herceg Novi	1.56	260	⇑*i*Pn	Pg	06	06	25.5	+0.9
HCY				*e*Sn	Sg	06	06	45.9	+1.0
HCY	Herceg Novi	1.56	260	⇑*i*Pg	Pn	06	06	23.4	+0.1
HCY				*i* Sg	Sb	06	06	44.4	+0.1
HCY	Herceg Novi	1.56	260	⇑*i*Pg	Pn	06	06	23.4	+0.1
HCY				*i* Sg	Sg	06	06	45.0	+0.1
ZAPS	Zavoj	1.60	70	*e*Pg	Pn	06	06	24.2	+0.3
ZAPS				*e*Sg	Sn	06	06	45.0	-0.1
ZAGS	Zajecar	1.62	48	*e*Pg	Pn	06	06	23.0	-1.0
ZAGS				*e*Sg	Sg	06	06	46.6	-0.1
TREB	Trebinje	1.64	270	*e*Pn	Pb	06	06	25.8	+0.3
TREB				*e*Sn	Sg	06	06	47.5	+0.2
TREB	Trebinje	1.64	270	*e*Pn	Pg	06	06	26.3	+0.2
TREB				*e*Sn	Sg	06	06	48.9	+1.6
BLKB	Belogradchik	1.77	59	⇑P	Pg	06	06	30.7	+2.0
DBRK	Dubrovnik	1.79	269	*e*Pn	Pb	06	06	27.6	-0.5
KUBS	Kucevo	1.85	25	*e*Pn	Pn	06	06	27.7	+0.4
VTS	Vitosha	1.97	93	⇑P	Pb	06	06	31.1	-0.1
VTS				⇑S	Sg	06	06	57.8	-0.1
VTS	Vitosha	1.97	93	*e*Pn	Pn	06	06	29.1	+0.1
VTS				*e*Sn	Sn	06	06	54.3	+0.1
MDVR	Moldovita	2.20	22	⇑P	Pg	06	06	36.3	-0.6
MDVR				⇑S	Sg	06	07	05.5	0.0
FRGS	Fruska Gora	2.48	347	⇓P	Pb	06	06	40.1	+0.3
FRGS				⇑S	Sg	06	07	13.6	-0.7
FRGS	Fruska Gora	2.48	347	*e*Sn	Sn	06	07	05.7	-0.9
HERR	Herculane	2.52	31	⇑P	Pb	06	06	41.6	+1.1
HERR				⇑S	Sg	06	07	14.8	-1.0
RICI	Ricice	2.63	288	*e*Pn	Pb	06	06	41.0	-1.3
MAKA	Makarska	2.66	283	*e*Pn	Pb	06	06	43.7	+0.8
LSTV	Lastovo	2.71	272	*e*Pn	Pb	06	06	42.6	-1.1
BZS	Buzias	2.97	14	⇑P	Pb	06	06	47.8	-0.4
BZS				⇓S	Sb	06	07	26.6	+1.6
BZS	Buzias	2.97	14	*e*Pn	Pn	06	06	44.3	+1.6
BZS				*e*Sn	Sn	06	07	19.4	+0.6
BZS				*e*Sg	Sg	06	07	29.7	-0.5
GZR	Gura Zlata	3.09	30	⇑P	Pb	06	06	49.7	-0.6
GZR				⇑S	Sb	06	07	28.5	+0.1

*TUL **16** 06:08:14.4±0.8,35.˙66N±0.˙01×97.˙15W±0.˙01,h6km±4km, ML3.7,mb_Lg3.5/111(NEIC),Mwr3.3/15(SLM),Error ellipse: s-maj=1.7km s-min=1.3km az=138.0*
*ANF **16** 06:08:14.4±0.2,35.˙69N×97.˙16W,h5km,ML3.9/11,Error ellipse: s-maj=2.5km s-min=2.1km az=138.0*
*NEIC **16** 06:08:14.7±0.7,35.˙66N±0.˙01×97.˙16W±0.˙01,h5km±1km, Error ellipse: s-maj=2.9km s-min=1.9km az=122.0*
*NEIC **16** 06:08:14.4,35.˙66N×97.˙16W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.00; $M_{\theta\theta}$0.65; $M_{\phi\phi}$-0.65; $M_{r\theta}$-0.08; $M_{\theta\phi}$0.77; $M_{r\phi}$0.03; Fault plane solution: $M_0$1.01000×10^{14} NP1:ϕs200.00000°, δ85.00000°,λ180.00000°. NP2:ϕs290.00000°,δ90.00000°, λ5.00000°. Principal axes: T 1.0118, Plg4.0000°, Azm155.0000°; N 0.0000, Plg85.0000°, Azm290.0000°; P -1.0118, Plg4.0000°, Azm65.0000°;*

ISC 16 06:08:14.6±0.9,35.˙66N±0.˙02×97.˙15W±0.˙02,h6km±7km, n113,σ0s57/96,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
OK005	Luther M Schoo	0.03	260	Pg	Pg	06	08	15.6	-0.3
OK025	Westminster Rd	0.17	242	Pg	Pg	06	08	18.1	0.0
OK025				Sg	Sg	06	08	20.8	+0.4
OK009	Oakdale Elemen	0.23	250		Pg	06	08	19.2	0.0
OK029	Liberty Lake	0.28	299	Pg	Pg	06	08	20.3	+0.1
OK029				Sg	Sg	06	08	24.3	+0.4
OKCSW	OKLAHOMA CITY	0.34	223	Pg	Pg	06	08	21.3	0.0
OKCSW				Sg	Sg	06	08	26.1	+0.2
BCOK	Bluff Creek, N	0.37	270	Pg	Pg	06	08	21.9	0.0
BCOK				Sg	Sg	06	08	27.2	+0.5
OK031	S. Brethren Rd	0.39	41	Pg	Pg	06	08	22.3	+0.2
OK031				Sg	Sg	06	08	27.7	+0.5
OK030	Cody Creek RV	0.40	48	Pg	Pg	06	08	22.6	+0.2
OK030				Sg	Sg	06	08	28.0	+0.4
FNO	Franklin	0.45	207	Pg	Pg	06	08	24.4	+0.1
FNO				Sg	Sg	06	08	29.5	-0.3
OK034	N. Norfolk Rd.	0.50	45	Pg	Pg	06	08	24.4	+0.1
OK034				Sg	Sg	06	08	31.2	+0.4
DEOK	Depew	0.56	71	Pg	Pg	06	08	25.3	-0.1
DEOK				IAmb_Lg		06	08	32.2	
	comp=Z,401nm,0.8s								
DEOK				Sg	Sg	06	08	33.1	+0.4
QUOK	Quay	0.62	35	Pg	Pg	06	08	26.5	-0.1
QUOK				IAmb_Lg		06	08	34.1	
	comp=Z,101nm,0.8s								
QUOK				Sg	Sg	06	08	35.0	+0.2
CROK	Carrier	1.08	322		Pg	06	08	34.8	-0.5
CROK				IAmb_Lg		06	08	48.4	
	comp=Z,178nm,0.9s								
CROK				Sg	Sg	06	08	49.4	+0.1
TUL1	Leonard	1.13	77		Pg	06	08	35.0	-1.3
TUL1				Sg	Sg	06	08	50.8	-0.3
TUL1	Leonard	1.13	77	S	Sg	06	08	50.8	-0.3
	baz=258								
X34A	Smith Ranch, M	1.20	208	Pg	Pg	06	08	37.2	-0.4
X34A				Sg	Sb	06	08	53.8	+0.4
CSTR	Hydro, Custer	1.25	270		Pg	06	08	37.8	-0.9
CSTR				Sg	Sg	06	08	54.7	-0.1
GC02	Grant County #	1.32	335		Pn	06	08	39.0	-0.5
T35A	Sooner Cattle	1.35	22	Pn	Pn	06	08	39.4	-0.7
T35B	Sooner Cattle	1.36	22	P	Pn	06	08	39.4	-0.7
	baz=203,SNR=101								
T35B				S	Sb	06	08	57.8	-0.2
	baz=203								
KAN13	South Haven SW	1.38	349		Pn	06	08	40.0	-0.3
OK032	Salt Plains WL	1.43	323		Pn	06	08	40.8	-0.3
KAN14	Manchester OK	1.45	333		Pn	06	08	41.1	-0.3
KAN17	Caldwell West	1.47	340		Pn	06	08	41.5	-0.1
OK038	West end E0370	1.52	303		Pn	06	08	41.3	-1.1
KAN05	Bluff City Nor	1.56	338		Pn	06	08	43.0	+0.1
KAN05				IAmb_Lg		06	09	06.8	
	comp=Z,303nm,0.8s								
KAN01	Argonia South	1.57	342		Pn	06	08	43.1	+0.1
KS20	Mayfield South	1.60	348		Pn	06	08	43.6	+0.1
KS20				IAmb_Lg		06	09	07.2	
	comp=Z,282nm,0.9s								
WMOK	Wichita Mounta	1.62	236	Pn	Pn	06	08	43.2	-0.5
WMOK	Wichita Mounta	1.62	236	P	Pn	06	08	43.3	-0.4
	baz=55,SNR=454								
WMOK				S	Sn	06	09	05.2	+0.3
	baz=55								
OK035	E0210 Rd and N	1.64	310		Pn	06	08	44.0	+0.1
KAN10	Anthony SW Sta	1.65	333		Pn	06	08	44.3	+0.2
U32A	Winter Ranch,	1.66	296		Pn	06	08	44.5	+0.2
U32A	Winter Ranch,	1.66	296	P	Pn	06	08	44.5	+0.2
	baz=115								
U32A				S	Sg	06	09	07.6	-0.5
	baz=115								
LOOK	Love County	1.66	181	Pn	Pn	06	08	44.6	+0.3
LOOK				IAmb_Lg		06	09	09.7	
	comp=Z,238nm,0.9s								
KS21	Milan North St	1.67	346		Pn	06	08	44.9	+0.5
KAN06	Argonia West S	1.68	340		Pn	06	08	44.9	+0.3
KAN08	Anthony NE Sta	1.70	337		Pn	06	08	44.8	0.0
KAN08				IAmb_Lg		06	09	10.7	
	comp=Z,391nm,0.9s								
KAN16	Harper SW Stat	1.73	335		Pn	06	08	45.8	+0.6
KAN16				IAmb_Lg		06	09	13.1	
	comp=Z,166nm,0.8s								
NOKA	Waynoka	1.74	305		Pn	06	08	45.5	+0.1
NOKA				IAmb_Lg		06	09	09.1	
	comp=Z,82nm,0.7s								
KAN12	Harper NE Stat	1.77	338		Pn	06	08	46.1	+0.3
RLO	Rose Lookout	1.80	73		Pn	06	08	46.2	+0.1
X37A	Clayton	1.81	126		Pn	06	08	46.6	+0.3
X37A				IAmb_Lg		06	09	16.4	
	comp=Z,251nm,0.8s								
X37A	Clayton	1.81	126	P	Pn	06	08	46.6	+0.3
	baz=307,SNR=283								
X37A				S	Sb	06	09	11.3	+0.3
	baz=307								
ELIS	Ellis County	1.89	283		Pn	06	08	47.8	+0.4
Z35A	Perchaven, San	2.33	182		Pn	06	08	54.1	+0.7
Z35A				IAmb_Lg		06	09	31.8	
	comp=Z,130nm,0.8s								
Z35A	Perchaven, San	2.33	182	P	Pn	06	08	53.8	+0.4
	baz=1.9,SNR=11								
Z35A				S	Sb	06	09	24.8	-1.1
	baz=1.9								
U38A	Gravette	2.37	70	Pn	Pn	06	08	54.3	+0.2
U38A				IAmb_Lg		06	09	30.8	
	comp=Z,188nm,0.9s								
U38A	Gravette	2.37	70	P	Pn	06	08	54.7	+0.7
	baz=252,SNR=34								
HHAR	Hobbs	2.68	76	Pn	Pn	06	08	58.3	+0.1
HHAR				IAmb_Lg		06	09	39.7	
	comp=Z,104nm,0.9s								
HHAR	Hobbs	2.68	76	P	Pn	06	08	58.6	+0.3
	baz=258								
Z38A	Mt. Pleasant	2.99	143	Pn	Pn	06	09	02.5	0.0
Z38A				IAmb_Lg		06	09	56.7	
	comp=Z,84nm,0.8s								
Z38A	Mt. Pleasant	2.99	143	P	Pn	06	09	03.1	+0.6
	baz=324								
R32A	Long Quarter,	3.03	336		Pn	06	09	04.7	+1.6
R32A				IAmb_Lg		06	09	58.6	
	comp=Z,84nm,0.9s								
MIAR	Mount Ida	3.13	110	Pn	Pn	06	09	04.8	+0.3
MIAR	Mount Ida	3.13	110	P	Pn	06	09	05.1	+0.6
	baz=292,SNR=28								
MIAR				S	Sn	06	09	43.6	+1.4
	baz=292								
KSU1	Kansas State U	3.46	7	Pn	Pn	06	09	09.5	+0.5
KSU1				IAmb_Lg		06	10	12.3	
	comp=Z,187nm,0.9s								
ABTX	Abilene, Hawle	3.67	215	IAmb_Lg		06	10	12.2	
	comp=Z,112nm,0.8s								
ABTX	Abilene, Hawle	3.67	215	P	Pn	06	09	11.8	-0.1
	baz=33								
S39A	Bolivar	3.69	56		Pn	06	09	12.1	0.0
S39A				IAmb_Lg		06	10	15.4	
	comp=Z,147nm,0.8s								
S39A	Bolivar	3.69	56	P	Pn	06	09	12.1	0.0
	baz=238,SNR=5.6								
CBKS	Cedar Bluff	3.76	328	IAmb_Lg		06	10	20.3	
	comp=Z,73nm,0.8s								
AMTX	Amarillo	3.79	259	Pn	Pn	06	09	14.3	+0.7
WLAR	White Oak Lake	3.87	119	IAmb_Lg		06	10	26.8	
	comp=Z,88nm,0.7s								
WHAR	Wooly Hollow	3.99	94	Pn	Pn	06	09	16.4	+0.1
WHAR				IAmb_Lg		06	10	22.9	
	comp=Z,91nm,0.9s								
UALR	University of	4.04	101	IAmb_Lg		06	10	25.8	
	comp=Z,152nm,0.9s								
FCAR	Ozark Folk Cen	4.09	85		Pn	06	09	16.8	-0.9
FCAR				IAmb_Lg		06	10	29.8	
	comp=Z,130nm,0.8s								
MGMO	Mountain Grove	4.21	68		Pn	06	09	19.5	+0.1
MGMO				IAmb_Lg		06	10	39.6	
	comp=Z,90nm,0.8s								
R40A	Maddies Statio	4.71	55		Pn	06	09	25.9	-0.2
CCAR	Cane Creek	4.76	110	IAmb_Lg		06	10	54.7	
	comp=Z,84nm,0.8s								
435B	Jarrell	4.88	184	IAmb_Lg		06	11	00.2	
	comp=Z,104nm,0.7s								
LCAR

RSNC 16 06:18:39.7±1.1, 6°82N×73°13W, h150km±4km, ML3.1, Mw3.5, 6C-2D, Fault plane solution: NP1:ϕ=58.00000°, δ10.00000°, λ-148.00000°., Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**194**	⇑*i*P	Pn	06 18 59.9	-0.5
BARC				*e*S	Sn	06 19 15.1	-0.9
BARC				*i*		06 19 17.9	
	comp=Z,354nm,0.7s						
BRRC	**Barranca, Sant**	**0.65**	**296**	⇓*i*P	Pn	06 19 01.7	-0.1
BRRC				*e*S	Sn	06 19 18.8	+0.1
BRRC				*i*		06 19 21.4	
	comp=Z,100nm,0.1s						
PAMC	**Pamplona, Colo**	**0.67**	**39**	*e*P	Pn	06 19 02.7	+0.1
PAMC				*e*S	Sn	06 19 19.8	-0.1
PAMC				*i*		06 19 21.6	
	comp=Z,114nm,0.6s						
RUSC	**La Rusia**	**0.92**	**177**	⇑*i*P	Pn	06 19 03.7	-0.6
RUSC				*e*S	Sn	06 19 22.5	-0.7
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	⇑*i*P	Pn	06 19 06.3	-1.4
PTBC				*e*S	Sn	06 19 27.8	-1.3
PTBC				*i*		06 19 35.1	
	comp=Z,200nm,0.4s						
TAMC	**Tame, Arauca**	**1.38**	**106**	⇓*i*P	Pn	06 19 08.0	0.0
TAMC				*e*S	Sn	06 19 29.4	-0.3
TAMC				*i*		06 19 31.3	
	comp=Z,62nm,0.3s						
SPBC	**San Pablo de B**	**1.49**	**219**	⇑*i*P	Pn	06 19 08.7	-0.6
SPBC				*e*S	Sn	06 19 31.2	-0.7
SPBC				*i*		06 19 36.6	
	comp=Z,229nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P	Pn	06 19 12.4	-0.6
ZARC				*e*S	Sn	06 19 38.0	-0.6
ZARC				*i*		06 19 44.1	
	comp=Z,107nm,0.3s						
NORC	**Norcasia**	**2.13**	**234**	*e*P	Pn	06 19 15.7	-0.7
NORC				*e*S	Sn	06 19 43.7	-1.0
NORC				*i*		06 19 49.3	
	comp=Z,161nm,0.4s						
CHIC	**Chingaza**	**2.25**	**196**	*e*P	Pn	06 19 17.9	-0.3
CHIC				*e*S	Sn	06 19 47.8	-0.1
CHIC				*i*		06 19 52.9	
	comp=Z,48nm,0.3s						
ROSC	**El Rosal**	**2.29**	**211**	⇑*i*P	Pn	06 19 19.5	+0.8
ROSC				*e*S	Sn	06 19 51.0	+2.3
ROSC				*i*		06 19 55.7	
	comp=Z,164nm,0.5s						
HELC	**Santa Helena**	**2.47**	**256**	*e*P	Pn	06 19 20.7	-0.1
HELC				*e*S	Sn	06 19 52.7	+0.4
HELC				*i*		06 19 58.8	
	comp=Z,78nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	Pn	06 19 20.0	-1.6
UREC				*e*S	Sn	06 19 50.1	-3.7
UREC				*i*		06 20 01.4	
	comp=Z,88nm,0.2s						
SOCV	**Socops**	**2.68**	**57**	*e*P	Pn	06 19 22.4	-0.7
SOCV				*e*S	Sn	06 19 54.2	-2.4
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*e*P	Pn	06 19 24.1	-0.1
GUY2C				*e*S	Sn	06 19 58.8	+0.4
GUY2C				*i*		06 20 06.2	
	comp=Z,138nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.74**	**351**	*e*P	Pn	06 19 25.3	+1.5
LL1C				*e*S	Sn	06 20 01.3	+3.4
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	Pn	06 19 23.2	-0.8
VILC				*e*S	Sn	06 19 58.2	-0.1
VILC				*i*		06 20 01.5	
	comp=Z,58nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.78**	**159**	⇑*i*P	Pn	06 19 22.8	-1.5
PTGC				*e*S	Sn	06 19 56.2	-2.6
PTGC				*i*		06 20 03.8	
	comp=Z,45nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.90**	**357**	*e*P	Pn	06 19 24.7	-1.1
LL6C				*e*S	Sn	06 19 59.0	-2.6
LL6C				*i*		06 20 07.8	
	comp=Z,15nm,0.5s						
LL5C	**La Loma 5 El P**	**2.97**	**349**	*e*P	Pn	06 19 25.8	-0.9
LL5C				*i*		06 20 01.6	
	comp=Z,38nm,0.4s						
LL5C				*e*S	Sn	06 20 02.0	-1.2
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*e*P	Pn	06 19 27.5	0.0
CBOC				*e*S	Sn	06 20 03.5	-0.9
CBOC				*i*		06 20 17.9	
	comp=Z,37nm,0.8s						
DBBC	**Dabeiba**	**3.07**	**274**	*e*P	Pn	06 19 27.5	-0.5
DBBC				*e*S	Sn	06 20 05.2	-0.2
DBBC				*i*		06 20 08.5	
	comp=Z,17nm,0.3s						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	Pn	06 19 30.2	+0.4
ARGC				*e*S	Sn	06 20 09.2	+0.4
ARGC				*i*		06 20 16.4	
	comp=Z,19nm,0.3s						
ANIL	**Santa Ana**	**3.24**	**225**	*e*P	Pn	06 19 31.1	+0.7
ANIL				*e*S	Sn	06 20 10.1	+0.6
ANIL				*i*		06 20 26.4	
	comp=Z,95nm,0.4s						
PRAC	**Prado**	**3.55**	**210**	*e*P	Pn	06 19 33.1	-1.0
PRAC				*e*S	Sn	06 20 16.1	-0.2
PRAC				*i*		06 20 22.3	
	comp=Z,75nm,0.2s						
PLMC	**San Jos del P**	**3.67**	**239**	*e*P	Pn	06 19 35.5	-0.2
PLMC				*e*S	Sn	06 20 18.2	-0.9
PLMC				*i*		06 20 24.3	
	comp=Z,40nm,0.4s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*e*P	Pn	06 19 34.0	-1.7
SJCC				*e*Pg	Pn	06 19 34.9	-0.9
SJCC				*e*S	Sn	06 20 15.3	-4.0
SJCC				*i*		06 20 18.8	
	comp=Z,21nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*e*P	Pn	06 19 40.2	-2.3
CRJC				*e*S	Sn	06 20 27.0	-4.3
CRJC				*i*		06 20 36.9	
	comp=Z,16nm,0.2s						
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	Pn	06 19 41.8	-1.8
GUVC				*e*S	Sn	06 20 31.1	-2.2
GUVC				*i*		06 20 37.0	
	comp=Z,24nm,0.2s						
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P	Pn	06 19 53.8	-1.8
GARC				*e*S	Sn	06 20 49.3	-5.5
GARC				*i*		06 20 56.7	
	comp=Z,20nm,0.2s						
POPC	**Popayan, Colom**	**5.53**	**220**	*e*P	Pn	06 19 59.4	-1.0
POPC				*e*S	Sn	06 21 02.5	-0.9
FLOC	**Florencia**	**5.78**	**206**	*e*P	Pn	06 20 02.2	-1.3
FLOC				*e*S	Sn	06 21 02.9	-6.1
FLOC				*i*		06 21 12.7	
	comp=Z,3.0nm,0.3s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	*e*P	Pn	06 20 10.9	+0.4
BBAC				*e*S	Sn	06 21 16.4	-5.1
BBAC				*i*		06 21 25.5	
	comp=Z,4.1nm,0.4s						

IDC 16 06:23:24.8±4.7, 5°62S×151°95E, h56km±36km, mb3.2/2, mbtmp3.4/2, Error ellipse: s-maj=105.0km s-min=23.5km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.30**	**3**	P	Pn	06 23 46.1	-0.7
	830nm,0.3s,baz=316,slow=1.9,SNR=215						
KRVT				S	Sn	06 24 03.2	0.0
	1μm,0.3s,baz=136,slow=21,SNR=38						
WRA	**Warramunga Arr**	**22.27**	**229**	P	P	06 28 17.3	-0.1
	0.7nm,0.5s,baz=52,slow=9.9,SNR=9.5						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**24.98**	**222**	P	P	06 28 43.6	+0.2
	0.6nm,0.5s,baz=58,slow=8.5,SNR=8.5						
	0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**149.74**	**286**	PKPbc	PKPbc	06 43 08.9	-0.6
	0.8nm,0.6s,baz=73,slow=2.8,SNR=5.7						

IDC 16 06:59:05.6±3.5, 29°88S×60°90E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=538.5km s-min=34.0km az=20.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**24.65**	**28**	T	T	07 29 06.1	
	baz=204,slow=76,SNR=3.9						
H08S2	**Diego Garcia H**	**24.65**	**29**	T	T	07 29 07.9	
	baz=204						
H08S3	**Diego Garcia H**	**24.67**	**28**	T	T	07 29 08.0	
	baz=204,slow=76,SNR=3.7						
H01W2	**Cape Leeuwin H**	**44.80**	**111**	T	T	07 55 03.2	
	baz=258,slow=74,SNR=5.3						
H01W3	**Cape Leeuwin H**	**44.80**	**111**	T	T	07 55 12.3	
	baz=258						
H01W1	**Cape Leeuwin H**	**44.81**	**111**	T	T	07 55 03.8	
	baz=258,slow=74,SNR=5.5						
ASAR	**Alice Springs**	**64.49**	**104**	P	P	07 09 45.2	+0.7
	0.6nm,0.7s,baz=241,slow=6.4,SNR=6.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**66.36**	**100**	P	P	07 09 55.6	-1.0
	0.3nm,0.8s,baz=245,slow=6.3,SNR=1.9						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.27**	**298**	P	P	07 10 27.2	0.0
	1.0nm,0.8s,baz=116,slow=3.4,SNR=3.5						
	1.0nm,0.8s						

*IDC **16** 06:59:47.1±3.2, 53°77N×88°20E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=29.7km s-min=19.6km az=50.0*

*NNC **16** 06:59:47.7±1.1, 53°65N×88°12E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=9.3km s-min=5.1km az=55.0, Suspected Mining explosion.*

ISC 16 06:59:48.0±3.4, 53°8N±0°1×88°0E±0°2, h0km, n7, σ0s80/9, 5C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.91**	**277**	*i*		07 12 10.0	
	0.2nm,0.9s,baz=93,slow=318,SNR=8.2						
ZAA0	**Zalesovo Array**	**1.91**	**277**	⇑Pn	**Pn**	**07 00 22.2**	**+0.4**
	1.0nm,0.5s						
ZAA0				⇑Sn	**Sg**	**07 00 49.0**	**-0.3**
	4.7nm,0.5s						
ZALV	**Zalesovo Beam**	**1.91**	**277**	Pn	**Pb**	**07 00 23.2**	**-0.5**
	2.9nm,0.3s,baz=90,slow=12,SNR=12						
ZALV				Lg	Lg	07 00 50.5	
	6.3nm,0.3s,baz=98,slow=30,SNR=6.6						
ZALV				*i*		07 12 23.4	
	baz=85,slow=20,SNR=6.5						
	6.1nm,0.3s						
KURBB	**Kurchatov Arra**	**6.62**	**246**	Pn	**Pn**	**07 01 27.2**	**+0.6**
	0.2nm,0.3s,baz=62,slow=14,SNR=6.7						
KURBB				Lg	Lg	07 03 21.3	
	baz=66,slow=31,SNR=4.1						
	1.2nm,0.3s						
KURBB	**Kurchatov Arra**	**6.62**	**246**	⇓Pn	**Pn**	**07 01 26.7**	**+0.2**
	1.6nm,0.3s						
KURBB				⇑Sn	**Sn**	**07 02 43.4**	**+0.8**
	3.2nm,0.6s						
KURBB				⇑Lg	Lg	07 03 17.3	
	5.9nm,0.8s						
MK31	**Makanchi Array**	**7.87**	**210**	Pn	**Pn**	**07 01 43.0**	**-0.7**
	0.5nm,0.6s,baz=249,slow=23,SNR=6.2						
MK31				⇓Sn	**Sn**	**07 03 12.8**	**-0.6**
	0.3nm,0.5s,baz=30,slow=24,SNR=5.2						
MK31				⇑Lg	Lg	07 03 54.7	
	2.0nm,0.8s						
MKAR	**Makanchi Array**	**7.87**	**210**	Pn	**Pn**	**07 01 44.9**	**+1.2**
	0.2nm,0.3s,baz=86,slow=14,SNR=5.8						
MKAR				Lg	Lg	07 04 01.4	
	0.2nm,0.3s,baz=32,slow=27,SNR=2.3						
	0.3nm,0.4s						

*NNC **16** 07:04:35.1±0.5, 49°98N×78°71E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=11.8km s-min=2.1km az=75.0, Suspected Mining explosion.*

*ASRS **16** 07:04:38.4±0.4, 50°N±2°×7°9E±°, h0km, MLh3.6/8, Error ellipse: s-maj=4.8km s-min=3.6km az=35.7, confirmed*

ISC 16 07:04:36.1±0.9, 50°07N±0°03×78°85E±0°04, h0km, n26, σ1s69/52, 18C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.56**	**338**	⇑P	**Pg**	**07 04 47.2**	**+0.3**
KUR07				⇑S	**Sb**	**07 04 56.0**	**-1.4**
KUR14	**Kurchatov Arra**	**0.57**	**343**	⇓P	**Pg**	**07 04 47.4**	**+0.4**
KUR14				⇓S	**Sb**	**07 04 56.3**	**-1.4**
KUR06	**Kurchatov Arra**	**0.58**	**339**	⇑P	**Pg**	**07 04 47.5**	**+0.3**
KUR06				⇑S	**Sb**	**07 04 56.5**	**-1.3**
KUR15	**Kurchatov Arra**	**0.58**	**342**	⇑P	**Pg**	**07 04 47.5**	**+0.2**
KUR15				⇑S	**Sb**	**07 04 57.1**	**-0.9**
KURBB	**Kurchatov Arra**	**0.59**	**340**	⇑P	**Pg**	**07 04 47.8**	**+0.3**
	32nm,0.3s						
KURBB				⇑S	**Sb**	**07 04 57.4**	**-1.0**
	124nm,0.5s						
KUR16	**Kurchatov Arra**	**0.60**	**338**	⇓P	**Pg**	**07 04 47.9**	**+0.3**
KUR16				⇑S	**Sb**	**07 04 57.2**	**-1.4**
KUR05	**Kurchatov Arra**	**0.61**	**341**	⇑P	**Pg**	**07 04 48.1**	**+0.3**
KUR05				⇑S	**Sg**	**07 04 56.7**	**+1.0**
KUR17	**Kurchatov Arra**	**0.62**	**337**	⇑P	**Pg**	**07 04 48.1**	**+0.1**
KUR17				⇑S	**Sb**	**07 04 57.7**	**-1.2**
KUR04	**Kurchatov Arra**	**0.63**	**342**	⇑P	**Pg**	**07 04 48.4**	**+0.3**
KUR04				⇓S	**Sg**	**07 04 57.6**	**+1.4**
KURK	**Kurchatov**	**0.67**	**347**	⇑P	**Pg**	**07 04 49.0**	**+0.1**
	15nm,0.4s						
KURK				⇓S	**Sb**	**07 04 59.6**	**-0.8**
	52nm,0.6s						
KURK	**Kurchatov**	**0.67**	**347**	Pg	**Pg**	**07 04 49.0**	**+0.1**
KURK				Sg	**Sb**	**07 04 60.0**	**-0.4**
MAKZ	**Makanchi**	**3.87**	**146**	⇓Pn	**Pn**	**07 05 37.3**	**+0.4**
	0.5nm,0.5s						
MAKZ				⇑Pg	**Pb**	**07 05 45.2**	**0.0**
	0.7nm,0.2s						
MAKZ				⇓Lg	Lg	07 06 36.1	
	9.6nm,0.5s						
MAKZ	**Makanchi**	**3.87**	**146**	Pn	**Pn**	**07 05 37.9**	**+1.0**
MAKZ				Pg	**Pb**	**07 05 47.3**	**+2.1**
MAKZ				Sg	**Sb**	**07 06 36.4**	**+3.8**
UKR	**Ust'-Kan**	**3.88**	**75**	Pg	**Pg**	**07 05 49.1**	**-1.4**
UKR				Sg	**Sg**	**07 06 39.4**	**-1.3**
MK31	**Makanchi Array**	**4.00**	**144**	⇑Pn	**Pn**	**07 05 39.0**	**+0.4**
	0.2nm,0.1s,baz=86,slow=5.4,SNR=56						
MK31				⇓Pg	**Pb**	**07 05 47.8**	**+0.4**
	0.4nm,0.2s,baz=306,slow=10,SNR=10						
MK31				⇓Lg	Lg	07 06 41.6	
	10nm,0.5s,baz=343,slow=22,SNR=24						
MKAR	**Makanchi Array**	**4.00**	**144**	Pn	**Pn**	**07 05 40.0**	**+1.4**
MKAR				Pg	**Pb**	**07 05 50.2**	**+2.8**
MKAR				Sg	**Sg**	**07 06 41.9**	**-2.6**
BSTK	**Bystrovka, Nov**	**5.08**	**26**	Sg	**Sg**	**07 07 18.7**	**-0.3**
NVS	**Novosibirsk**	**5.48**	**28**	Sg	**Sg**	**07 07 33.3**	**+1.3**
NVSII	**Novosibirsk**	**5.48**	**28**	Sg	**Sg**	**07 07 33.3**	**+1.2**
CHBI	**Chibit, Altay**	**5.56**	**84**	Pn	**Pn**	**07 06 00.3**	**0.0**
CHBI				S	**Sn**	**07 07 04.3**	**-0.6**
CHBI				Sg	**Sg**	**07 07 33.6**	**-1.2**
ELT	**Eltsovka**	**5.60**	**52**	Pn	**Pn**	**07 06 02.8**	**+2.2**
ELT				Sg	**Sg**	**07 07 39.1**	**+3.2**
ARTR	**Artybash**	**5.61**	**69**	Pn	**Pn**	**07 05 59.5**	**-1.2**
ARTR				Sg	**Sg**	**07 07 37.7**	**+1.6**
AKAR	**Aktash**	**5.64**	**84**	Pn	**Pn**	**07 06 03.6**	**+2.4**
AKAR				S	**Sn**	**07 07 03.8**	**-3.0**
AKAR				Sg	**Sg**	**07 07 37.3**	**+0.2**
ULGR	**Ulagan, Altay**	**5.86**	**81**	Pn	**Pn**	**07 06 08.0**	**+3.7**
ULGR				S	**Sn**	**07 07 08.0**	**-4.2**
ULGR				Sg	**Sg**	**07 07 43.4**	**-0.9**
CUR	**Chagan-Uzun**	**6.12**	**86**	Sg	**Sg**	**07 07 54.5**	**+2.1**
KK31	**Karatay Array**	**9.02**	**223**	⇑Pn	**Pn**	**07 06 44.6**	**-2.9**
	0.1nm,0.3s,baz=34,slow=12,SNR=4.3						
KK31				⇓Lg	Lg	07 09 17.7	
	1.3nm,0.6s,baz=209,slow=18,SNR=2.9						

*NEIC **16** 07:17:06.2±1.1, 33°2S±0°1×178°3W±0°2, h10km±1km, mb4.6/18, Error ellipse: s-maj=23.7km s-min=21.4km az=95.0*

*IDC **16** 07:17:20.9±5.3, 34°27S×178°39W, h152km±47km, mb3.6/4, mbtmp4.1/6, MS3.4/9, Error ellipse: s-maj=46.3km s-min=29.5km az=7.0*

ISC 16 07:17:06.3±0.8, 33°2S±0°1×178°6W±0°1, h10km, n46, σ1s40/38, mb4.6/14, MS3.4/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.03**	**210**	Pn	**Pn**	**07 18 23.5**	**+1.6**
URZ	**Urewera**	**6.14**	**214**	P	**Pn**	**07 18 38.3**	**+1.2**
	21nm,0.3s,baz=83,slow=2.2,SNR=46						
URZ				S	**Sn**	**07 19 43.7**	**-3.7**
	32nm,0.8s,baz=2.6,slow=18,SNR=1.8						
URZ	**Urewera**	**6.14**	**214**		**Pn**	**07 18 39.1**	**+2.0**
BKZ	**Black Stump Fm**	**7.16**	**213**		**Pn**	**07 18 52.1**	**+0.9**
RPZ	**Rata Peaks**	**13.26**	**215**	P	**Pn**	**07 20 12.4**	**-2.2**
	3.3nm,0.4s,baz=53,slow=3.9,SNR=5.7						
RPZ				S	Sn	07 22 31.7	-10
	8.3nm,0.9s,baz=3.0,slow=4.9,SNR=4.5						
DZM	**Mont Dzumac**	**17.30**	**306**	LR	LR	07 26 46.1	
	comp=Z,270nm,18.0s,baz=185,slow=31						
EIDS	**Eidsvold**	**27.55**	**279**	P	**P**	**07 22 55.3**	**+1.9**
EIDS				IAmb	IAmb	07 23 23.1	
	comp=Z,32nm,1.4s						
PPT	**Papeete**	**30.33**	**66**	LR	LR	07 34 30.4	
	comp=Z,49nm,18.4s,baz=236,slow=34						
STKA	**Stephens Creek**	**33.48**	**261**	LR	LR	07 36 57.1	
	comp=Z,134nm,18.1s,baz=33,slow=35						
CTA	**Charters Tower**	**33.90**	**284**	LR	LR	07 35 41.2	
	comp=Z,44nm,18.6s,baz=92,slow=32						
CTAO	**Charters Tower**	**33.90**	**284**	P	**P**	**07 23 50.8**	**+1.2**
BBOO	**Buckleboo**	**37.83**	**258**	P	**P**	**07 24 23.4**	**+0.2**
COEN	**Coen**	**39.68**	**290**	P	**P**	**07 24 39.2**	**+0.4**
COEN				IAmb	IAmb	07 25 13.0	
	comp=Z,28nm,1.4s						
AS31	**Alice Springs**	**42.57**	**270**	P	**P**	**07 25 03.1**	**+0.5**
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**07 25 02.9**	**+0.2**
	comp=Z,3.7nm,0.6s,baz=110,slow=7.7,SNR=58						
ASAR				LR	LR	07 41 07.0	
	comp=Z,53nm,18.5s,baz=148,slow=33						
	comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**07 25 03.1**	**+0.5**
WR0	**Warramunga Arr**	**43.64**	**275**	P	**P**	**07 25 11.4**	**+0.1**
WR0				IAmb	IAmb	07 25 32.4	
	comp=Z,9.1nm,1.2s						
WB2	**Warramunga Arr**	**43.80**	**275**	P	**P**	**07 25 13.3**	**+0.7**
WB2				IAmb	IAmb	07 25 22.0	
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**43.81**	**275**	P	**P**	**07 25 12.7**	**0.0**
WRAB				IAmb	IAmb	07 25 29.8	
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**43.81**	**275**	P	**P**	**07 25 12.9**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=114,slow=7.9,SNR=58						
	comp=Z,3.5nm,0.7s						
WRA	**Warramunga Arr**	**43.81**	**275**	P	**P**	**07 25 12.7**	**0.0**
WB0	**Warramunga Arr**	**43.85**	**276**	P	**P**	**07 25 13.2**	**+0.3**
WB0				IAmb	IAmb	07 25 31.7	
	comp=Z,15nm,1.3s						
FORT	**Forrest**	**44.94**	**258**	P	**P**	**07 25 21.9**	**+0.3**
VNDA	**Vanda**	**45.25**	**186**	P	**P**	**07 25 23.2**	**-0.2**
MTN	**Manton Dam**	**50.02**	**282**	P	**P**	**07 26 00.7**	**-0.6**
MTN				IAmb	IAmb	07 26 33.6	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**50.51**	**277**	P	**P**	**07 26 05.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**51.95**	**272**	P	**P**	**07 26 16.4**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=149,slow=5.9,SNR=1.9						
	comp=Z,1.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.95**	**272**	P	**P**	**07 26 16.5**	**+0.7**
CASY	**Casey**	**52.44**	**209**	P	**P**	**07 26 19.8**	**+1.1**
CASY				IAmb	IAmb	07 26 20.4	
	comp=Z,4.3nm,0.6s						
QSPA	**South Pole Qui**	**56.90**	**180**	P	**P**	**07 26 53.0**	**+1.7**
QSPA				IAmb	IAmb	07 26 54.7	
	comp=Z,5.0nm,0.8s						
RPN	**Rapa Nui**	**59.18**	**104**	LR	LR	07 48 56.8	
	comp=Z,34nm,18.5s,baz=182,slow=32						
KAPI	**Kappang**	**63.69**	**282**	LR	LR	07 54 54.8	
	comp=Z,25nm,19.2s,baz=97,slow=35						
TROLL	**Troll, Antarti**	**75.06**	**180**	P	**P**	**07 28 47.7**	**-0.3**
SNAA	**Sanae**	**75.36**	**179**	P	**P**	**07 28 51.0**	**+1.4**
SNAA	**Sanae**	**75.36**	**179**	P	**P**	**07 28 49.6**	**0.0**
SNAA				IAmb	IAmb	07 29 01.2	
	comp=Z,8.5nm,1.5s						
VNA3	**Neumayer Olymp**	**75.53**	**176**	P	**P**	**07 28 50.9**	**+0.3**
VNA2	**Neumayer--Watz**	**75.95**	**177**	P	**P**	**07 28 53.6**	**+0.7**
	baz=175,slow=3.9						
VNA1	**Neumayer--Stat**	**76.19**	**177**	P	**P**	**07 28 55.1**	**+0.8**
KSRS	**Korea Array**	**86.20**	**320**	LR	LR	08 06 29.4	
	comp=Z,9.9nm,19.3s,baz=230,slow=34						
LPIG	**La Paz**	**86.42**	**58**	LR	LR	08 02 42.0	
	comp=Z,18nm,19.2s,baz=188,slow=31						
NVAR	**Mina Array Bea**	**90.62**	**43**	P	**P**	**07 30 09.2**	**0.0**
	comp=Z,0.1nm,0.5s,baz=201,slow=7.3,SNR=1.7						
	comp=Z,0.1nm,0.5s						
ARCES	**ARCESS Array B**	**141.23**	**347**	PKP	**PKPdf**	**07 36 31.9**	**-4.3**
	comp=Z,1.2nm,0.8s,baz=5.4,slow=2.6,SNR=4.4						
FINES	**FINESS Array B**	**147.60**	**338**	PKPbc	**PKPbc**	**07 36 49.0**	**-1.2**
	comp=Z,4.7nm,0.6s,baz=41,slow=3.6,SNR=18						
NB2	**NORSAR Subarra**	**151.45**	**350**	PKP	**PKiKP**	**07 36 58.5**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.45**	**350**	PKPbc	**PKiKP**	**07 36 58.9**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=14,slow=4.0,SNR=7.0						
TORD	**Torodi Ar. Bea**	**160.02**	**181**	PKPab	PKPab	07 37 36.6	-9.2
	comp=Z,0.3nm,0.6s,baz=140,slow=5.8,SNR=2.0						

*KRNET **16** 07:29:35.9±0.1, 41°06N×73°46E, h16km, mb3.1*

*SOME **16** 07:29:36.9, 41°20N×73°40E, h5km*

*NNC **16** 07:29:39.6±2.9, 41°08N×73°63E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.6km s-min=11.1km az=166.0*

ISC 16 07:29:34.7±1.1, 41°02N±0°04×73°46E±0°03, h16km±14km, n27, σ1s53/47, 8C-25D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.71**	**226**	⇑*i*P	**Pg**	**07 29 49.8**	**+1.1**
	baz=24						
OHH				⇑*i*S	**Sg**	**07 30 00.1**	**+2.0**
	baz=24						
ARLS	**Aral**	**1.06**	**38**	⇑*i*P	**Pb**	**07 29 55.2**	**+0.4**
	baz=39						
ARLS				⇑*i*S	**Sg**	**07 30 09.7**	**+0.5**
	baz=39						
UCH	**Uchtor**	**1.44

IUG	**Iuzhnay**	**2.81**	**295**	*e*P		**Pg**	**07 30 27.9**	**-0.6**
	63nm,0.3s							
IUG				*e*S		**Sg**	**07 31 04.1**	**-0.8**
	83nm,0.6s							
IUG	**Iuzhnay**	**2.81**	**295**	Pg		**Pg**	**07 30 27.9**	**-0.6**
	63nm,0.3s							
IUG				Lg		Lg	07 31 04.6	
	83nm,0.6s							
KK31	**Karatay Array**	**3.02**	**314**	⇓Pn		**Pb**	**07 30 30.9**	**+2.8**
	0.7nm,0.2s,baz=132,slow=14,SNR=26							
KK31				Sn		**Sg**	**07 31 10.0**	**-1.8**
	3.5nm,0.3s,baz=132,slow=32,SNR=11							
KKAR	**Karatay Array**	**3.02**	**314**	⇓*i*P		**Pb**	**07 30 26.1**	**-2.1**
	baz=14							
KKAR				⇓*i*S		**Sb**	**07 31 03.0**	**-1.9**
	baz=14							
KRBS	**Karabastau**	**3.14**	**31**	*e*P		**Pb**	**07 30 32.8**	**+2.7**
	1.7nm,0.6s							
KRBS				*e*S		**Sg**	**07 31 12.4**	**-3.1**
	16nm,0.7s							
KRBS	**Karabastau**	**3.14**	**31**	Pg		**Pb**	**07 30 32.8**	**+2.7**
	1.7nm,0.6s							
KRBS				Lg		Lg	07 31 12.4	
	16nm,0.7s							
GAR	**Garm**	**3.15**	**231**	⇓*i*P		**Pb**	**07 30 28.7**	**-1.6**
	baz=31							
GAR				⇓*i*S		**Sb**	**07 31 07.1**	**-1.4**
	baz=31							
MDOK	**Medeo**	**3.42**	**50**	⇓Pn		**Pb**	**07 30 34.3**	**-0.7**
	1.4nm,0.3s							
MDOK				⇑Lg		Lg	07 31 23.8	
	19nm,0.8s							
KTBS	**Karatobe**	**3.60**	**41**	*e*P		**Pg**	**07 30 42.1**	**-1.5**
	2.4nm,0.4s							
KTBS				*e*S		**Sg**	**07 31 28.4**	**-1.8**
	20nm,0.3s							
KTBS	**Karatobe**	**3.60**	**41**	Pg		**Pg**	**07 30 42.1**	**-1.5**
	2.4nm,0.4s							
KTBS				Lg		Lg	07 31 28.4	
	20nm,0.3s							

*BEO **16** 07:56:16.5±0.4, 43°.54N×17°.26E, h6km±3km, ML2.8/10*
*RHSSO **16** 07:56:16.9±0.3, 43°.46N×17°.31E, h5km±1km, ML3.1/19*
*PRU **16** 07:56:16.8±0.0, 43°.43N×17°.51E, h1km*
*PDG **16** 07:56:16.1±0.4, 43°.46N×17°.31E, h4km, ML3.1/14, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

ISC 16 07:56:16.3±1.0, **43°.47N**±0°.02×**17°.33E**±0°.02, **h5**km±8km, **n138**, σ1**1**3/231, **25C-21D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RICI	**Ricice**	**0.15**	**278**	*e*Pg	**Pg**	**07 56 19.7**	**+0.4**
RICI				Sg	**Sg**	**07 56 22.3**	**+1.0**
MAKA	**Makarska**	**0.29**	**231**	*e*Pg	**Pg**	**07 56 22.1**	**+0.1**
MAKA				Sg	**Sg**	**07 56 26.7**	**+0.8**
SRKY	**Kupres RS**	**0.61**	**348**	⇓*i*Pg	**Pg**	**07 56 27.3**	**-0.7**
SRKY				*e*Sg	**Sb**	**07 56 37.0**	**-1.4**
STON	**Ston**	**0.66**	**156**	*i* Pg	**Pg**	**07 56 27.3**	**-1.6**
STON				Sg	**Sg**	**07 56 37.5**	**+0.1**
LSTV	**Lastovo**	**0.78**	**205**	*i* Pg	**Pg**	**07 56 30.1**	**-1.0**
KIJV	**Kijevo**	**0.86**	**309**	*i* Pg	**Pg**	**07 56 32.0**	**-0.8**
KIJV				Sg	**Sb**	**07 56 45.7**	**+0.2**
MGRS	**Mrkonjic Grad**	**0.96**	**349**	⇑*i*Pg	**Pg**	**07 56 34.5**	**-0.2**
MGRS				*e*Sg	**Sb**	**07 56 48.1**	**-0.4**
DBRK	**Dubrovnik**	**1.00**	**143**	*i* Pg	**Pg**	**07 56 33.6**	**-1.8**
DBRK				Sg	**Sg**	**07 56 48.2**	**-0.2**
BRY	**Bratogost**	**1.05**	**123**	*e*Pg	**Pg**	**07 56 35.4**	**-1.0**
BRY				*e*Sg	**Sb**	**07 56 51.3**	**+0.2**
BRY	**Bratogost**	**1.05**	**123**	⇓*i*Pg	**Pg**	**07 56 35.6**	**-0.8**
BRY				*i* Sg	**Sb**	**07 56 51.0**	**-0.1**
BRY	**Bratogost**	**1.05**	**123**	⇓*i*Pg	**Pg**	**07 56 35.5**	**-1.0**
BRY				*i* Sg	**Sn**	**07 56 52.5**	**-0.4**
TREB	**Trebinje**	**1.06**	**135**	*e*Pg	**Pg**	**07 56 35.7**	**-0.9**
TREB				*e*Sg	**Sn**	**07 56 51.9**	**-1.0**
TREB	**Trebinje**	**1.06**	**135**	*e*Pg	**Pg**	**07 56 35.8**	**-0.9**
TREB				*e*Sg	**Sn**	**07 56 51.9**	**-1.0**
UPM	**Unac-Piva**	**1.18**	**103**	*e*Pg	**Pg**	**07 56 38.3**	**-0.6**
UPM				*e*Sg	**Sn**	**07 56 55.2**	**-0.9**
UPM	**Unac-Piva**	**1.18**	**103**	⇑*i*Pg	**Pn**	**07 56 39.5**	**-0.1**
UPM				*i* Sg	**Sn**	**07 56 57.7**	**+1.6**
UPM	**Unac-Piva**	**1.18**	**103**	⇑*i*Pg	**Pg**	**07 56 38.2**	**-0.6**
UPM				*i* Sg	**Sn**	**07 56 57.0**	**+0.9**
MORI	**Morici**	**1.24**	**289**	*e*Pn	**Pb**	**07 56 39.0**	**-1.3**
BLY	**Banja Luka**	**1.28**	**355**	⇓*i*Pg	**Pn**	**07 56 40.1**	**-0.7**
BLY				*e*Sg	**Sn**	**07 56 58.6**	**+0.2**
BLY	**Banja Luka**	**1.28**	**355**	*e*Pg	**Pn**	**07 56 40.5**	**-0.3**
BLY				*e*Sg	**Sb**	**07 56 57.1**	**-0.5**
HCY	**Herceg Novi**	**1.33**	**140**	*e*Pg	**Pn**	**07 56 41.0**	**-0.5**
HCY				*e*Sg	**Sn**	**07 56 59.6**	**0.0**
HCY	**Herceg Novi**	**1.33**	**140**	⇑*i*Pg	**Pn**	**07 56 40.0**	**-1.6**
HCY				*i* Sg	**Sb**	**07 56 58.8**	**-0.3**
HCY	**Herceg Novi**	**1.33**	**140**	⇑*i*Pg	**Pn**	**07 56 39.9**	**-1.6**
HCY				*i* Sg	**Sn**	**07 57 01.4**	**+1.8**
DOB	**Doboj**	**1.38**	**23**	*e*Pg	**Pn**	**07 56 41.2**	**-0.9**
DOB				*e*Sg	**Sg**	**07 57 01.1**	**+0.6**
NKME	**Niksic**	**1.38**	**120**	⇓*i*Pg	**Pn**	**07 56 42.2**	**0.0**
NKME				*i* Sg	**Sg**	**07 57 02.4**	**+1.8**
NKME	**Niksic**	**1.38**	**120**	⇑*i*Pg	**Pn**	**07 56 42.1**	**-0.1**
NKME				*i* Sg	**Sg**	**07 57 03.6**	**+3.0**
NKY	**Niksic**	**1.38**	**118**	⇓*i*Pg	**Pb**	**07 56 42.3**	**-0.4**
NKY				*i* Sg	**Sn**	**07 57 02.9**	**+1.9**
NKY	**Niksic**	**1.38**	**118**	⇑*i*Pg	**Pn**	**07 56 42.1**	**-0.2**
NKY				*i* Sg	**Sn**	**07 57 03.8**	**+2.8**
CEME	**Cevo**	**1.48**	**128**	⇓*i*Pg	**Pn**	**07 56 43.6**	**-0.1**
CEME				*i* Sg	**Sg**	**07 57 05.2**	**+1.2**
CEME	**Cevo**	**1.48**	**128**	⇑*i*Pg	**Pn**	**07 56 43.2**	**-0.5**
CEME				*i* Sg	**Sg**	**07 57 06.5**	**+2.5**
RUDO	**Rudo**	**1.49**	**84**	*e*Pg	**Pn**	**07 56 43.2**	**-0.5**
RUDO				*e*Sg	**Sg**	**07 57 04.2**	**+0.1**
PLE	**Pljevlja**	**1.50**	**95**	⇓*i*Pg	**Pn**	**07 56 44.1**	**+0.1**
PLE				*i* Sg	**Sg**	**07 57 07.6**	**+3.0**
UDBI	**Udbina**	**1.55**	**313**	*e*Pn	**Pb**	**07 56 45.1**	**-0.4**
BBLS	**Lazići**	**1.55**	**75**	*e*Pn	**Pb**	**07 56 45.0**	**-0.6**
BBLS				*e*Sn	**Sg**	**07 57 07.0**	**+0.8**
BBLS	**Lazići**	**1.55**	**75**	*e*Pg	**Pb**	**07 56 45.0**	**-0.6**
BBLS				*e*Sg	**Sg**	**07 57 07.0**	**+0.8**
PRIJ	**Prijedor**	**1.57**	**344**	*e*Pn	**Pn**	**07 56 44.7**	**-0.1**
PRIJ				*e*Sn	**Sg**	**07 57 06.4**	**-0.3**
A051A	**Mrakovica**	**1.57**	**349**	⇓*i*Pn	**Pb**	**07 56 45.3**	**-0.6**
A051A				*e*Sn	**Sb**	**07 57 05.9**	**-0.1**
A052A	**Srbac**	**1.64**	**4**	*e*Pn	**Pb**	**07 56 46.6**	**-0.3**
A052A				*e*Sn	**Sb**	**07 57 07.8**	**0.0**
BUM	**Brajici-Budva**	**1.64**	**135**	⇓*i*Pg	**Pn**	**07 56 45.9**	**+0.1**
BUM				*i* Sg	**Sn**	**07 57 05.5**	**-1.8**
BUM	**Brajici-Budva**	**1.64**	**135**	⇓*i*Pn	**Pn**	**07 56 45.9**	**+0.1**
BUM				*i* Sn	**Sg**	**07 57 10.7**	**+1.8**
KOME	**Kolasin**	**1.71**	**111**	⇓*i*Pg	**Pg**	**07 56 48.7**	**-0.4**
KOME				*i* Sg	**Sg**	**07 57 13.6**	**+2.3**
KOME	**Kolasin**	**1.71**	**111**	⇑*i*Pn	**Pb**	**07 56 47.7**	**-0.6**
KOME				*i* Sn	**Sg**	**07 57 13.1**	**+1.8**
DUGI	**Dugi Otok**	**1.73**	**288**	*e*Pn	**Pb**	**07 56 47.8**	**-0.8**
DUGI				Sn	**Sb**	**07 57 10.9**	**+0.3**
PDG	**Podgorica**	**1.75**	**126**	⇑P	**Pb**	**07 56 49.2**	**+0.3**
PDG	**Podgorica**	**1.75**	**126**	*e*Pn	**Pb**	**07 56 48.1**	**-0.8**
PDG				*e*Sn	**Sb**	**07 57 10.8**	**-0.4**
PDG	**Podgorica**	**1.75**	**126**	*e*Pn	**Pb**	**07 56 49.3**	**+0.3**
PDG				*e*Sn	**Sg**	**07 57 12.1**	**-0.5**
TTG	**Podgorica**	**1.75**	**126**	⇓*i*Pg	**Pb**	**07 56 48.7**	**-0.2**
TTG				*i* Sg	**Sg**	**07 57 13.4**	**+0.8**
TTG	**Podgorica**	**1.75**	**126**	⇑*i*Pn	**Pb**	**07 56 48.5**	**-0.4**
TTG				*i* Sn	**Sg**	**07 57 13.8**	**+1.2**
A251A	**Rujevac**	**1.82**	**336**	*e*Pn	**Pb**	**07 56 50.0**	**-0.1**
VIRC	**Vir**	**1.84**	**297**	*e*Pn	**Pb**	**07 56 49.6**	**-0.8**
PLIT	**Plitvice**	**1.87**	**319**	*i* Pn	**Pb**	**07 56 50.7**	**-0.2**
DRME	**Dracevica, Mon**	**1.87**	**133**	*e*Pn	**Pb**	**07 56 49.8**	**-1.2**
DRME				*e*Sn	**Sb**	**07 57 13.6**	**-1.0**
DRME	**Dracevica, Mon**	**1.87**	**133**	⇓*i*Pn	**Pb**	**07 56 50.2**	**-0.8**
DRME				*i* Sn	**Sg**	**07 57 15.7**	**-0.7**
DRME	**Dracevica, Mon**	**1.87**	**133**	⇓*i*Pn	**Pb**	**07 56 50.1**	**-0.9**
DRME				*i* Sn	**Sg**	**07 57 16.7**	**+0.3**
BLJ	**Bijeljina**	**1.91**	**46**	*e*Pn	**Pn**	**07 56 49.5**	**0.0**
BLJ				*e*Sn	**Sn**	**07 57 13.9**	**0.0**
TEKS	**Tekeris**	**1.91**	**55**	*e*Pn	**Pn**	**07 56 48.3**	**-1.3**
TEKS				*e*Sn	**Sn**	**07 57 13.1**	**-1.0**
SJES	**Sjenica**	**1.94**	**95**	*e*Pn	**Pb**	**07 56 51.4**	**-0.7**
SJES				*e*Sn	**Sb**	**07 57 16.0**	**-0.6**
SJES	**Sjenica**	**1.94**	**95**	*e*Pn	**Pb**	**07 56 52.1**	**0.0**
SJES				*e*Sn	**Sn**	**07 57 14.7**	**0.0**
IVA	**Berane**	**1.97**	**107**	⇑*i*Pn	**Pb**	**07 56 52.8**	**+0.2**
IVA				*i* Sn	**Sg**	**07 57 20.1**	**+0.7**
IVA	**Berane**	**1.97**	**107**	⇓*i*Pn	**Pb**	**07 56 52.3**	**-0.3**
IVA				*i* Sn	**Sg**	**07 57 19.2**	**-0.2**
A252A	**Venje**	**2.00**	**10**	*e*Pn	**Pn**	**07 56 50.1**	**-0.6**
DIVS	**Divibare**	**2.02**	**71**	*e*Pn	**Pb**	**07 56 52.3**	**-1.3**
DIVS				*e*Sn	**Sb**	**07 57 17.8**	**-1.3**
DIVS	**Divibare**	**2.02**	**71**	*e*Pn	**Pn**	**07 56 51.1**	**0.0**
DIVS				*e*Sn	**Sn**	**07 57 17.1**	**+0.3**
IVAS	**Ivanjica**	**2.05**	**86**	*e*Pn	**Pn**	**07 56 52.5**	**+1.0**
ULC	**Ulcinj**	**2.06**	**136**	⇑*i*Pn	**Pb**	**07 56 52.8**	**-1.4**
ULC				*i* Sn	**Sb**	**07 57 20.1**	**-0.1**
ULC	**Ulcinj**	**2.06**	**136**	⇓*i*Pn	**Pn**	**07 56 52.6**	**+1.0**
ULC				*i* Sn	**Sb**	**07 57 20.9**	**+0.7**
NVLJ	**Novalja**	**2.08**	**302**	*e*Pn	**Pn**	**07 56 52.7**	**+0.8**
PVY	**Plav**	**2.12**	**114**	⇓*i*Pn	**Pb**	**07 56 54.4**	**-0.8**
PVY				*i* Sn	**Sg**	**07 57 23.0**	**-1.2**
PVY	**Plav**	**2.12**	**114**	⇓*i*Pn	**Pb**	**07 56 54.1**	**-1.1**
PVY				*i* Sn	**Sg**	**07 57 23.0**	**-1.2**
MOSL	**Moslavina**	**2.18**	**349**	*e*Pn	**Pn**	**07 56 52.9**	**-0.4**
RABC	**Rab**	**2.24**	**306**	*e*Pn	**Pn**	**07 56 54.4**	**+0.4**
TRUS	**Trudelj**	**2.35**	**70**	*e*Pn	**Pn**	**07 56 55.4**	**-0.1**
TRUS				*e*Sn	**Sn**	**07 57 25.7**	**+1.0**
A250A	**Rusevo Krmpots**	**2.37**	**314**	*i* Pn	**Pb**	**07 56 57.7**	**-1.8**
FRGS	**Fruska Gora**	**2.45**	**46**	⇑P	**Pn**	**07 56 57.7**	**+0.8**
FRGS	**Fruska Gora**	**2.45**	**46**	*e*Pn	**Pn**	**07 56 57.7**	**+0.8**
FRGS				*e*Sn	**Sn**	**07 57 27.8**	**+0.6**
FRGS	**Fruska Gora**	**2.45**	**46**	*e*Pn	**Pn**	**07 56 56.0**	**-0.9**
FRGS				*e*Sn	**Sn**	**07 57 27.4**	**+0.2**
GRUS	**Gruza**	**2.49**	**79**	*e*Pn	**Pn**	**07 56 57.5**	**+0.1**
GRUS				*e*Sn	**Sn**	**07 57 29.3**	**+1.1**
BOJS	**Bojanci**	**2.52**	**324**	*e*Pn	**Pn**	**07 56 59.0**	**+1.1**
BOJS				*e*Sn	**Sn**	**07 57 29.7**	**+0.8**
BOJS	**Bojanci**	**2.52**	**324**	*e*Pn	**Pb**	**07 56 59.8**	**-2.1**
BOJS				*e*Sn	**Sb**	**07 57 31.4**	**-1.9**
BOJS				IAML		07 57 41.6	
	comp=Z,34nm,0.3s						
OZLJ	**Ozalj**	**2.52**	**329**	*e*Pn	**Pn**	**07 56 59.4**	**+1.5**
PTJ	**Puntijarka**	**2.62**	**339**	*e*Pn	**Pn**	**07 56 59.8**	**+0.4**
KOVH	**Kovagotottos**	**2.67**	**12**	P	**Pn**	**07 57 00.8**	**+0.9**
CRES	**Cresnjev**	**2.71**	**331**	⇑*i*Pn	**Pn**	**07 57 01.0**	**+0.5**
CRES				*e*Sn	**Sn**	**07 57 34.0**	**+0.4**
CRES	**Cresnjev**	**2.71**	**331**	*i* Pn	**Pn**	**07 57 01.8**	**+1.3**
CRES				*e*Sn	**Sb**	**07 57 35.9**	**-2.8**
CRES				IAML		07 57 37.5	
	comp=Z,102nm,0.9s						
KALN	**Kalnik**	**2.73**	**347**	*e*Pn	**Pn**	**07 57 00.7**	**-0.1**
SMRN	**Sveta Marina**	**2.77**	**305**	*e*Pn	**Pn**	**07 57 01.8**	**+0.6**
SELS	**Selova**	**2.77**	**94**	*e*Pn	**Pn**	**07 57 02.3**	**+0.9**
LOBO	**Lobor**	**2.83**	**342**	*e*Pn	**Pn**	**07 57 02.4**	**+0.3**
MATE	**Matera**	**2.86**	**190**	⇑P	**Pn**	**07 57 02.4**	**-0.1**
MORH	**Mrgy, Hungar**	**2.90**	**18**	⇑P	**Pn**	**07 57 03.0**	**-0.1**
MORH	**Mrgy, Hungar**	**2.90**	**18**	*e*Pn	**Pn**	**07 57 04.1**	**+1.1**
MORH				*e*Sn	**Sn**	**07 57 39.8**	**+1.6**
MORH	**Mrgy, Hungar**	**2.90**	**18**	*e*Pn	**Pn**	**07 57 02.2**	**-0.8**
MORH	**Mrgy, Hungar**	**2.90**	**18**	P	**Pn**	**07 57 02.2**	**-0.8**
BRJN	**Brijuni**	**2.95**	**300**	*e*Pn	**Pn**	**07 57 04.1**	**+0.3**
BEHE	**Becsehely**	**3.02**	**353**	*e*Pn	**Pn**	**07 57 05.3**	**+0.5**
BEHE	**Becsehely**	**3.02**	**353**	P	**Pn**	**07 57 06.1**	**+1.3**
BEHE				S	**Sn**	**07 57 44.2**	**+2.8**
CEY	**Cerknica**	**3.07**	**319**	*e*Pn	**Pn**	**07 57 06.0**	**+0.5**
CEY				*e*Sn	**Sn**	**07 57 42.9**	**+0.2**
SKDS	**Skadanscina**	**3.15**	**312**	*e*Pn	**Pn**	**07 57 06.9**	**+0.3**
SKDS				*e*Sn	**Sn**	**07 57 44.1**	**-0.5**
BOVS	**Bovan**	**3.18**	**86**	⇑P	**Pn**	**07 57 08.9**	**+1.9**
BOVS	**Bovan**	**3.18**	**86**	*e*Pn	**Pn**	**07 57 06.8**	**-0.2**
BARS	**Barje**	**3.34**	**100**	*e*Pn	**Pn**	**07 57 10.6**	**+1.4**
BARS	**Barje**	**3.34**	**100**	*e*Pn	**Pn**	**07 57 11.1**	**+1.9**
BARS				*e*Sn	**Sn**	**07 57 50.7**	**+1.4**
BARS				*e*Sn	**Sn**	**07 57 51.4**	**+2.1**
JAVS	**Javornik**	**3.36**	**317**	*i* Pn	**Pn**	**07 57 11.0**	**+1.4**
JAVS				*e*Sn	**Sn**	**07 57 52.3**	**+2.4**
JAVS				IAML		07 58 09.8	
	comp=Z,39nm,0.5s						
MDVR	**Moldovita**	**3.41**	**66**	⇑P	**Pn**	**07 57 11.7**	**+1.5**
ZAGS	**Zajecar**	**3.57**	**83**	*e*Pn	**Pn**	**07 57 12.5**	**+0.2**
SOKA	**Soboth**	**3.60**	**334**	Pn	**Pn**	**07 57 14.0**	**+1.3**
	comp=Z,12nm,0.2s,SNR=15						
SOKA				*e*Sn	**Sn**	**07 57 56.1**	**+0.5**
	comp=Z,18nm,0.5s						
PRVS	**Prvonek**	**3.61**	**104**	*e*Pn	**Pn**	**07 57 13.8**	**+0.9**
PRVS				*e*Sn	**Sn**	**07 57 58.4**	**+2.5**
OBKA	**Obir**	**3.62**	**328**	*e*Pn	**Pn**	**07 57 13.7**	**+0.6**
OBKA				*e*Sn	**Sn**	**07 57 56.3**	**0.0**
OBKA	**Obir**	**3.62**	**328**	*e*Pn	**Pn**	**07 57 13.2**	**+0.1**
	comp=Z,1.4nm,0.2s						
OBKA				*e*Sn	**Sn**	**07 57 56.6**	**+0.3**
	comp=Z,6.9nm,0.3s						
MPLH	**Magyarpolny**	**3.70**	**2**	P	**Pn**	**07 57 15.4**	**+1.3**
BZS	**Buzias**	**3.74**	**54**	⇑P	**Pn**	**07 57 15.5**	**+0.9**
BZS	**Buzias**	**3.74**	**54**	*e*Pn	**Pn**	**07 57 15.1**	**+0.5**
ZAPS	**Zavoj**	**3.87**	**91**	*e*Pn	**Pn**	**07 57 18.4**	**+1.9**
ZAPS				*e*Sn	**Sn**	**07 58 02.7**	**+0.4**
BLKB	**Belogradchik**	**3.89**	**86**	⇑P	**Pn**	**07 57 18.9**	**+2.2**
BOSS	**Bosilegrad**	**3.90**	**103**	*e*Pn	**Pn**	**07 57 18.3**	**+1.4**
BOSS				*e*Sn	**Sn**	**07 58 04.5**	**+1.5**
HERR	**Herculane**	**3.92**	**67**	⇑P	**Pn**	**07 57 18.5**	**+1.4**
ARSA	**Arzberg**	**3.99**	**342**	⇑*i*Pn	**Pn**	**07 57 18.6**	**+0.5**
ARSA				*e*Sn	**Sn**	**07 58 04.6**	**-0.6**
ARSA	**Arzberg**	**3.99**	**342**	Pn	**Pn**	**07 57 18.6**	**+0.5**
	comp=Z,17nm,0.4s,SNR=14						
ARSA				*e*Sn	**Sn**	**07 58 05.9**	**+0.8**
	comp=Z,2.7nm,0.3s						
MYKA	**Terra Mystica**	**4.10**	**322**	*e*Pn	**Pn**	**07 57 20.1**	**+0.4**
	comp=Z,0.6nm,0.2s						
MYKA				*e*Sn	**Sn**	**07 58 09.2**	**+1.2**
	comp=Z,4.0nm,0.3s						
RONA	**Rosalia, Austr**	**4.29**	**351**	*e*Pn	**Pn**	**07 57 22.8**	**+0.5**
	comp=Z,0.6nm,0.1s						
RONA				*e*Sn	**Sn**	**07 58 12.4**	**-0.3**
	comp=Z,7.4nm,0.6s						
TIP	**Timpagrande**	**4.31**	**186**	⇑P	**Pn**	**07 57 22.7**	**+0.1**
GZR	**Gura Zlata**	**4.34**	**62**	⇓P	**Pn**	**07 57 24.7**	**+1.7**
VTS	**Vitosha**	**4.41**	**99**	⇓P	**Pn**	**07 57 26.3**	**+2.3**
VTS	**Vitosha**	**4.41**	**99**	*e*Pn	**Pn**	**07 57 25.9**	**+1.9**
CONA	**Conrad Observa**	**4.57**	**347**	Pn	**Pn**	**07 57 27.7**	**+1.5**
	comp=Z,2.3nm,0.3s,SNR=6.4						
CONA				*e*Sn	**Sn**	**07 58 19.9**	**+0.2**
	comp=Z,3.3nm,0.3s						
KBA	**Koelnbreinsper**	**4.57**	**323**	*e*Pn	**Pn**	**07 57 27.2**	**+0.9**
	comp=Z,2.0nm,0.3s						
KBA				*e*Sn	**Sn**	**07 58 21.5**	**+1.6**
	comp=Z,2.9nm,0.4s						
ABTA	**Abfaltersbach**	**4.73**	**315**	*e*Pn	**Pn**	**07 57 28.2**	**-0.1**
	comp=Z,1.6nm,0.3s						
ABTA				*e*Sn	**Sn**	**07 58 25.7**	**+2.1**
	comp=Z,2.7nm,0.3s						
PSZ	**Piszkesteto**	**4.79**	**21**	P	**Pn**	**07 57 29.4**	**+0.2**
MOA	**Molln**	**4.88**	**335**	*e*Pn	**Pn**	**07 57 27.0**	**-3.3**
MOA	**Molln**	**4.88**	**335**	*e*Sn	**Sn**	**07 58 27.9**	**+0.8**
	comp=Z,2.6nm,0.4s						
MODS	**Modra-Piesok**	**4.90**	**360**	*e*SN	**Sn**	**07 58 25.1**	**-2.6**
BIOA	**Bad Ischl, Aus**	**4.95**	**330**	*e*Pn	**Pn**	**07 57 33.3**	**+2.0**
	comp=Z,2.5nm,0.2s						
BIOA				*e*Sn	**Sn**	**07 58 30.3**	**+1.3**
VYHS	**Vyhne**	**5.13**	**11**	*e*PN	**Pn**	**07 57 33.9**	**+0.1**
VYHS				*e*SN	**Sn**	**07 58 32.9**	**-0.4**
WTTA	**Wattenberg**	**5.52**	**315**	*e*Pn	**Pn**	**07 57 40.8**	**+1.5**
	comp=Z,10nm,0.4s						
WTTA				*e*Sn	**Sn**	**07 58 45.6**	**+2.5**
	comp=Z,6.8nm,0.4s						
WATA	**Walderalm**	**5.60**	**316**	*e*Pn	**Pn**	**07 57 41.9**	**+1.6**
	comp=Z,1.4nm,0.2s						
WATA				*e*Sn	**Sn**	**07 58 47.0**	**+1.9**
	comp=Z,2.3nm,0.4s						
MOTA	**Moosalm**	**5.85**	**314**	*e*Pn	**Pn**	**07 57 43.8**	**+0.1**
	comp=Z,7.4nm,0.5s						
MOTA				*e*Sn	**Sn**	**07 58 52.9**	**+1.7**
	comp=Z,1.5nm,0.2s						
FETA	**Feichten**	**5.86**	**310**	*e*Pn	**Pn**	**07 57 44.6**	**+0.7**
	comp=Z,0.3nm,0.2s						
FETA				*e*Sn	**Sn**	**07 58 51.4**	**-0.1**
	comp=Z,2.3nm,0.6s						
VOIR		**5.86**	**68**	⇑P	**Pn**	**07 57 44.7**	**+0.8**
KHC	**Kasperske Hory**	**6.23**	**337**	*e*PN	**Pn**	**07 57 49.9**	**+1.0**
KHC				*e*SN	**Sn**	**07 59 00.2**	**-0.2**

ISC 16 08:15:50.0±1.3, **49°.90N**±0°.08×**17°.87E**±0°.04, **h10**km, **n7**, σ0**8**79/**11**, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORC	**Moravsky Berou**	**0.24**	**241**	*e*PG	**Pg**	**08 15 55.3**	**+0.3**
MORC				*e*SG	**Sg**	**08 15 59.0**	**+0.7**
VRAC	**Vranov**	**1.02**	**235**	*e*PG	**Pn**	**08 16 10.1**	**-0.2**
JAVC	**Velka Javorina**	**1.05**	**187**	*e*PG	**Pn**	**08 16 10.4**	**-0.3**
KRUC	**Moravsky**	**1.27**	**230**	*e*PG	**Pg**	**08 16 14.3**	**-0.1**
LANS	**Liptovska Anna**	**1.28**	**125**	*e*PG	**Pg**	**08 16 14.2**	**-0.3**
LANS				*e*SG	**Sg**	**08 16 33.0**	**+1.9**
OJC	**Ojcow**	**1.28**	**75**	*e*Pg	**Pn**	**08 16 13.7**	**-0.3**
OJC				*e*Sg	**Sn**	**08 16 31.4**	**+0.2**
VYHS	**Vyhne**	**1.54**	**155**	*e*PG	**Pb**	**08 16 17.9**	**-0.6**
VYHS				*e*SG	**Sn**	**08 16 37.3**	**-0.2**

*EAF **16** 08:22:01.5±0.7, 27°.27S×26°.85E, h10km, MD3.5*
*PRE **16** 08:22:01.5±1.5, 27°.00S×26°.61E, h2km, ML2.7*

ISC 16 08:22:01.5±0.8, **27°.06S**±0°.04×**26°.64E**±0°.05, **h10**km, **n12**, σ2**9**00/**24**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWZ	**Schweizer**	**1.17**	**263**	*e*P	**Pb**	**08 22 24.6**	**+0.6**
SWZ				*e*S	**Sb**	**08 22 38.9**	**-0.3**
SWZ				IAML		08 22 45.2	
	comp=Z,130nm,0.2s						
KSR	**Koster**	**1.22**	**11**	*e*P	**Pn**	**08 22 24.0**	**-0.8**
KSR				*e*S	**Sb**	**08 22 40.4**	**-0.3**
KSR				IAML		08 22 46.4	
	comp=Z,307nm,0.5s						
SNKL	**Senekal, Frees**	**1.58**	**141**	*e*P	**Pg**	**08 22 33.1**	**+1.3**
SNKL				*e*S	**Sg**	**08 22 53.6**	**+1.4**
SNKL				IAML		08 22 58.2	
	comp=Z,74nm,0.7s						
SLR	**Silverton**	**1.97**	**49**	*e*P	**Pn**	**08 22 37.1**	**+2.0**
SLR				*e*S	**Sn**	**08 23 01.8**	**+1.7**
SLR				IAML		08 23 07.5	
	comp=Z,65nm,0.4s						
BOSA	**Boshof**	**1.98**	**218**	*i* P	**Pn**	**08 22 34.0**	**-1.2**
BOSA				*i* S	**Sn**	**08 22 59.0**	**-1.1**
BOSA	**Boshof**	**1.98**	**218**	*i* P	**Pn**	**08 22 34.0**	**-1.2**
BOSA				*i* S	**Sn**	**08 22 59.0**	**-1.1**
LBTB	**Lobatse**	**2.24**	**335**	*i* P	**Pb**	**08 22 42.0**	**-0.1**
LBTB				*i* S	**S

ZALV				Lg		Lg	08 55 51.5		
	7.5nm,0.3s,baz=71,slow=29,SNR=24								
KURBB	**Kurchatov Arra**	**5.92**	**235**	Pn		Pn	08 56 53.0	+1.0	
	0.2nm,0.3s,baz=52,slow=14,SNR=14								
KURBB				Lg		Lg	08 58 33.8		
	0.1nm,0.3s,baz=52,slow=33,SNR=6.1								
	2.5nm,0.6s								
KURBB	**Kurchatov Arra**	**5.92**	**235**	⇓Pn		Pn	08 56 50.6	-1.5	
	3.9nm,0.7s								
KURBB				⇓Sn		Sn	08 57 59.9	-0.7	
	2.3nm,0.5s								
KURBB				⇑Lg		Lg	08 58 30.3		
	6.5nm,1.0s								
MK31	**Makanchi Array**	**7.89**	**200**	⇑Pn		Pn	08 57 17.7	-1.3	
	2.9nm,0.9s,baz=26,slow=13,SNR=9.9								
MK31				⇓Sn		Sn	08 58 48.5	-0.5	
	0.6nm,0.6s								
MKAR	**Makanchi Array**	**7.89**	**200**	Pn		Pn	08 57 19.9	+0.8	
	0.3nm,0.3s,baz=21,slow=12,SNR=13								
MKAR				Sn		Sn	08 58 48.9	-0.1	
	0.1nm,0.3s,baz=22,slow=25,SNR=5.4								
MKAR				Lg		Lg	08 59 33.0		
	0.1nm,0.3s,baz=28,slow=32,SNR=3.9								
	1.2nm,0.5s								

KRNET ***16*** *09:07:26.7±0.1, 40°.43N×78°.31E, mb2.7*
NNC ***16*** *09:07:30.0±1.2, 40°.84N×78°.25E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=8.5km s-min=5.6km az=172.0*

ISC 16 09:07:28.4±2.8, 40°.6N±0°.2×78°.17E±0°.07, h10km, n18, σ1§44/24, 11C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**2.21**	**320**	⇑*e*P	**Pn**	**09 08 05.9**	**+0.5**
	baz=20						
ULHL				⇑*i*S	**Sb**	**09 08 34.7**	**-1.5**
	baz=20						
SATY	**Saty**	**2.49**	**4**	Pg	**Pb**	**09 08 11.4**	**-1.9**
	6.6nm,0.5s						
SATY				Lg	Lg	09 08 42.0	
	20nm,0.3s						
BOOM	**Boomskoye usch**	**2.54**	**320**	⇑*i*P	**Pn**	**09 08 10.8**	**+0.8**
	baz=20						
BOOM				⇑*i*S	**Sn**	**09 08 42.8**	**+1.7**
	baz=20						
UZB	**Uzynbulak**	**2.65**	**14**	Pg	**Pn**	**09 08 13.2**	**+1.8**
	1.3nm,0.2s						
UZB				Lg	Lg	09 08 44.7	
	18nm,0.3s						
MDOK	**Medeo**	**2.72**	**342**	Pg	**Pn**	**09 08 15.0**	**+2.6**
	2.9nm,0.4s						
MDOK				Pg	**Pb**	**09 08 15.1**	**-2.2**
	5.3nm,0.3s						
MDOK				Lg	Lg	09 08 48.4	
	17nm,0.5s						
MDOK				⇑Lg	Lg	09 08 49.5	
	20nm,0.6s						
SHLS	**Shalkode**	**2.76**	**20**	Pg	**Pb**	**09 08 17.2**	**-0.6**
	3.7nm,0.2s						
SHLS				Lg	Lg	09 08 51.8	
	15nm,0.4s						
MTBS	**Maitube**	**2.87**	**334**	Pg	**Pb**	**09 08 19.4**	**-0.3**
	4.6nm,0.2s						
MTBS				Lg	Lg	09 08 55.5	
	14nm,0.5s						
KURS	**Kuram**	**2.91**	**360**	Pg	**Pb**	**09 08 19.0**	**-1.5**
	6.7nm,0.3s						
KURS				Lg	Lg	09 08 54.9	
	11nm,0.7s						
KPKS	**Kokpek**	**2.92**	**7**	Pg	**Pb**	**09 08 18.6**	**-2.0**
	12nm,0.2s						
KPKS				Lg	Lg	09 08 54.6	
	34nm,0.5s						
KST	**Kastek**	**2.97**	**327**	Pg	**Pb**	**09 08 21.2**	**-0.4**
	3.5nm,0.4s						
KST				Lg	Lg	09 08 58.4	
	13nm,0.6s						
TKM2	**Tokmak 2**	**3.04**	**321**	⇑Pg	**Pb**	**09 08 22.1**	**-0.6**
	0.6nm,0.2s						
TKM2				⇑Lg	Lg	09 09 01.9	
	5.0nm,0.5s						
TKM2	**Tokmak 2**	**3.04**	**321**	⇑*e*P	**Pn**	**09 08 17.6**	**+0.9**
	baz=22						
TKM2				⇑*i*S	**Sn**	**09 08 54.2**	**+1.0**
	baz=22						
ARLS	**Aral**	**3.17**	**295**	⇑*e*P	**Pn**	**09 08 18.9**	**+0.3**
	baz=97						
ARLS				⇑*e*S	**Sn**	**09 08 57.0**	**+0.4**
	baz=97						
UCH	**Uchtor**	**3.21**	**302**	⇓*e*P	**Pn**	**09 08 19.8**	**+0.5**
	baz=3.0						
UCH				⇓*e*S	**Sn**	**09 08 58.7**	**+0.8**
	baz=3.0						
KTMS	**Ketmen**	**3.30**	**29**	Pg	**Pb**	**09 08 25.3**	**-1.8**
	1.3nm,0.2s						
KTMS				Lg	Lg	09 09 06.0	
	5.7nm,0.2s						
KTBS	**Karatobe**	**3.33**	**341**	Pg	**Pb**	**09 08 25.3**	**-2.2**
	1.6nm,0.3s						
KTBS				Lg	Lg	09 09 05.6	
	29nm,0.3s						
KRBS	**Karabastau**	**3.63**	**330**	Pg	**Pb**	**09 08 32.1**	**-0.6**
	2.0nm,0.2s						
KRBS				Lg	Lg	09 09 17.2	
	8.5nm,0.8s						
DJR	**Jarkent**	**3.94**	**17**	Pg	**Pb**	**09 08 37.4**	**-0.7**
	1.4nm,0.2s						
DJR				Lg	Lg	09 09 26.1	
	4.2nm,0.3s						

MOS ***16*** *09:07:38.2±0.0, 41°.27N×47°.16E, h12km, MPVA3.7*
DRS ***16*** *09:07:40.7±0.0, 41°.22N×47°.03E, h18km*

ISC 16 09:07:38.9±1.5, 41°.21N±0°.06×47°.07E±0°.04, h13km±11km, n19, σ1§07/36, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKT	**Akhty**	**0.57**	**61**	*i* Pg	**Pg**	**09 07 49.7**	**-0.3**
AKT				*e*Sg	**Sg**	**09 07 57.1**	**-0.4**
DDFL	**Dedoflistskaro**	**0.75**	**289**	P	**Pn**	**09 07 57.3**	**+2.1**
LGD	**Lagodekhi**	**0.88**	**315**	P	**Pb**	**09 07 56.0**	**0.0**
LGD				S	**Sn**	**09 08 09.5**	**-0.1**
KMKR	**Kumukh**	**0.92**	**1**	*i* Pg	**Pb**	**09 07 56.2**	**-0.6**
KMKR				*e*Sg	**Sn**	**09 08 09.6**	**-1.3**
URKR	**Urkarakh**	**1.04**	**24**	*e*Pg	**Pn**	**09 07 59.1**	**-0.2**
URKR				*e*Sg	**Sn**	**09 08 13.9**	**+0.1**
SGKR	**Sergokala**	**1.32**	**19**	*e*Pg	**Pb**	**09 08 03.8**	**+0.2**
SGKR				*e*Sg	**Sg**	**09 08 21.6**	**0.0**
XNZR	**Khunzakh**	**1.36**	**349**	*e*Pg	**Pb**	**09 08 04.3**	**+0.1**
XNZR				*e*Sg	**Sg**	**09 08 23.4**	**+0.7**
ARKR	**Arakani**	**1.39**	**358**	*e*Pg	**Pb**	**09 08 04.8**	**+0.1**
ARKR				*e*Sg	**Sg**	**09 08 24.2**	**+0.4**
UNCR	**Uncukul**	**1.52**	**352**	*e*Pg	**Pb**	**09 08 07.4**	**+0.5**
UNCR				*e*Sg	**Sg**	**09 08 28.6**	**+0.9**
BUJR	**Buynaksk**	**1.61**	**1**	*e*Pg	**Pb**	**09 08 08.5**	**0.0**
BUJR				*e*Sg	**Sg**	**09 08 31.3**	**+0.5**
BTNK	**Botanikuri**	**1.77**	**286**	P	Pn	09 08 03.8	-5.4
BTNK				S	**Sn**	**09 08 28.0**	**-3.5**
DBC	**Dubki**	**1.82**	**354**	*e*Pg	**Pb**	**09 08 11.4**	**-0.6**
DBC				*e*Sg	**Sg**	**09 08 36.7**	**-0.6**
DVE	**Vedeno**	**1.88**	**338**	*e*Pg	**Pb**	**09 08 13.6**	**+0.5**
DVE				*e*Sg	**Sg**	**09 08 38.6**	**-0.7**
DLMR	**Dylym**	**1.89**	**350**	*e*Pg	**Pb**	**09 08 13.0**	**-0.2**
DLMR				*e*Sg	**Sg**	**09 08 38.2**	**-1.3**
DMNI	**Dmanisi**	**2.17**	**274**	P	**Pn**	**09 08 16.4**	**+1.6**
DMNI				S	**Sb**	**09 08 45.1**	**+0.2**
TRLG	**Trialeti**	**2.26**	**279**	P	**Pb**	**09 08 18.8**	**-0.7**
TRLG				S	**Sb**	**09 08 48.1**	**+0.8**
PNSH	**Pansheti**	**2.32**	**309**	P	**Pb**	**09 08 19.4**	**-1.2**
PNSH				S	**Sb**	**09 08 49.7**	**+0.5**
BRNG	**Burnasheti**	**2.47**	**281**	P	**Pb**	**09 08 22.4**	**-0.8**
BRNG				S	**Sb**	**09 08 55.7**	**+2.1**
LACR	**Lac**	**2.62**	**309**	*e*Pn	**Pb**	**09 08 24.5**	**-1.2**
LACR				*e*Sn	**Sb**	**09 08 57.3**	**-0.5**

IDC 16 09:07:39.8±3.2, 32°.84S×178°.47W, h0km, mb3.7/2, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=73.5km s-min=46.8km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.49**	**212**	Pn	Pn	09 09 15.8	-0.8
	1.6nm,0.3s,baz=264,slow=4.2,SNR=12						
URZ				Sn	Sn	09 10 27.1	-4.3
	1.8nm,0.3s,baz=330,slow=23,SNR=9.5						
	4.7nm,0.3s						
ASAR	**Alice Springs**	**42.64**	**270**	P	P	09 15 38.3	+0.1
	0.5nm,0.7s,baz=104,slow=7.8,SNR=7.1						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**43.85**	**275**	P	P	09 15 47.9	-0.1
	0.6nm,0.4s,baz=115,slow=7.6,SNR=33						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**147.28**	**338**	PKPbc	PKPbc	09 27 23.7	-0.7
	4.2nm,0.9s,baz=64,slow=6.3,SNR=3.9						

WEL 16 09:09:16.5, 40°S±8°×17°4E±1°0, h145km±19km, M2.5/36, ML2.3/8, MLv2.5/36, Error ellipse: s-maj=0.0km s-min=0.0km az=77.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LREZ	**Lake Rotokare**	**0.28**	**357**	P	Pn	09 09 37.1	+0.8
WAZ	**Wanganui**	**0.43**	**93**	P	Pn	09 09 39.3	+2.4
PREZ	**Palmer Road**	**0.44**	**332**	P	Pn	09 09 37.5	+0.5
NEZ	**North Egmont**	**0.53**	**331**	P	Pn	09 09 37.5	+0.1
KHEZ	**Kahui Hut**	**0.54**	**324**	P	Pn	09 09 37.5	-0.1
PKE	**Pukeiti**	**0.64**	**328**	P	Pn	09 09 37.6	-0.4
VRZ	**Vera Road**	**0.66**	**23**	P	Pn	09 09 37.8	-0.4
PKVZ	**Pokaka**	**0.84**	**58**	P	Pn	09 09 40.0	+0.5
WNVZ	**Wahianoa**	**0.99**	**66**	P	Pn	09 09 41.5	+0.6
WHVZ	**Whangaehu Hut**	**1.01**	**64**	P	Pn	09 09 41.6	+0.5
TWVZ	**Tauriwa**	**1.03**	**50**	P	Pn	09 09 40.7	-0.4
TUVZ	**Tukino**	**1.06**	**64**	P	Pn	09 09 42.2	+0.7
NGZ	**Ngauruhoe**	**1.07**	**59**	P	Pn	09 09 41.9	+0.4
MOVZ	**Moawhango**	**1.08**	**73**	P	Pn	09 09 41.9	+0.4
SNVZ	**South Ngauruho**	**1.09**	**60**	P	Pn	09 09 42.3	+0.6
NNVZ	**North Ngauruho**	**1.10**	**57**	P	Pn	09 09 42.1	+0.2
OTVZ	**Oturere**	**1.12**	**60**	P	Pn	09 09 36.8	-5.2
DUWZ	**D'Urville Isla**	**1.13**	**200**	P	Pn	09 09 42.2	+0.3
KRVZ	**Karewarewa**	**1.14**	**56**	P	Pn	09 09 42.2	+0.1
NTVZ	**North Tongariro**	**1.16**	**57**	P	Pn	09 09 35.3	-7.0
ETVZ	**East Tongariro**	**1.16**	**59**	P	Pn	09 09 36.4	-6.0
TMVZ	**Te Maari**	**1.17**	**58**	P	Pn	09 09 42.1	-0.3
KIW	**Kapiti Island**	**1.18**	**162**	P	Pn	09 09 43.3	+0.9
OGWZ	**Otaki Gorge**	**1.22**	**152**	P	Pn	09 09 44.0	+1.2
POWZ	**Post Office Ro**	**1.22**	**123**	P	Pn	09 09 44.1	+1.3
TSZ	**Takapari Road**	**1.23**	**106**	P	Pn	09 09 44.3	+1.5
KATZ	**Kakaramea**	**1.24**	**53**	P	Pn	09 09 42.6	-0.5
HIZ	**Hauiti**	**1.27**	**16**	P	Pn	09 09 41.0	-2.2
MRZ	**Mangatainoka R**	**1.28**	**137**	P	Pn	09 09 44.3	+1.0
BHHZ	**Black Hill Sta**	**1.29**	**80**	P	Pn	09 09 43.5	0.0
PNHZ	**Pukenui**	**1.38**	**98**	P	Pn	09 09 45.4	+1.1
HOWZ	**Holdsworth Sta**	**1.43**	**145**	P	Pn	09 09 45.5	+0.6
PRWZ	**Pori Road**	**1.44**	**125**	P	Pn	09 09 46.2	+1.3
DVHZ	**Dannevirke**	**1.45**	**113**	P	Pn	09 09 46.0	+0.9
CAW	**Cannon Point**	**1.46**	**161**	P	Pn	09 09 45.6	+0.5
TCW	**Tory Channel**	**1.48**	**184**	P	Pn	09 09 45.5	+0.2
KRHZ	**Kereru**	**1.50**	**87**	P	Pn	09 09 46.2	+0.5
KWHZ	**Kaweka Forest**	**1.57**	**79**	P	Pn	09 09 46.9	+0.5
WPHZ	**Waipukurau**	**1.58**	**103**	P	Pn	09 09 47.8	+1.2
MTW	**Mount Morrison**	**1.64**	**150**	P	Pn	09 09 47.3	+0.1
NNZ	**Nelson**	**1.68**	**208**	P	Pn	09 09 46.0	-1.5
BFZ	**Birch Farm**	**1.69**	**125**	P	Pn	09 09 46.7	-0.9
BKZ	**Black Stump Fm**	**1.70**	**71**	P	Pn	09 09 47.1	-0.7
ANWZ	**Angora Road**	**1.73**	**115**	P	Pn	09 09 49.1	+1.0
TUWZ	**Tuamarina**	**1.73**	**192**	P	Pn	09 09 47.4	-0.7
TMWZ	**Te Maipa**	**1.77**	**141**	P	Pn	09 09 48.8	+0.2
PRHZ	**Porangahau**	**1.78**	**108**	P	Pn	09 09 49.4	+0.7
MRHZ	**Matea Rd**	**1.79**	**60**	P	Pn	09 09 47.1	-1.8
MSWZ	**Moikau Station**	**1.79**	**160**	P	Pn	09 09 48.5	-0.3
CPWZ	**Castlepoint**	**1.79**	**131**	P	Pn	09 09 47.4	-1.4
PAWZ	**Paruwai Farm**	**1.81**	**155**	P	Pn	09 09 48.8	-0.3
KAHZ	**Kahuranaki**	**1.89**	**93**	P	Pn	09 09 50.4	+0.4
PLWZ	**Palliser**	**1.94**	**161**	P	Pn	09 09 49.9	-0.6
BSWZ	**Blackbirch Sta**	**2.02**	**192**	P	Pn	09 09 51.3	-0.2
ARHZ	**Aropaoanui**	**2.04**	**77**	P	Pn	09 09 51.5	-0.2
MUGZ	**Murupara**	**2.22**	**56**	P	Pn	09 09 51.0	-2.8
THZ	**Tophouse**	**2.33**	**209**	P	Pn	09 09 52.8	-2.5
MHGZ	**Mahia Peninsul**	**2.76**	**79**	P	Pn	09 09 59.3	-1.3
KHZ	**Kahutara**	**2.76**	**194**	P	Pn	09 09 57.9	-2.6
RIGZ	**Rimuhau**	**2.79**	**69**	P	Pn	09 09 58.7	-2.3
PRGZ	**Paritu Road**	**2.80**	**74**	P	Pn	09 09 59.0	-2.1
TKGZ	**Te Karaka**	**2.96**	**65**	P	Pn	09 10 00.3	-2.8
RUGZ	**Raukumara Rang**	**3.10**	**56**	P	Pn	09 10 00.3	-4.6
TWGZ	**Tauwhareparae**	**3.18**	**62**	P	Pn	09 10 02.6	-3.4
LTZ	**Lake Taylor**	**3.45**	**207**	P	Pn	09 10 04.8	-4.5
WMGZ	**Waiomatatini S**	**3.66**	**60**	P	Pn	09 10 07.3	-4.8
OXZ	**Oxford**	**4.01**	**206**	P	Pn	09 10 10.9	-5.8
MQZ	**McQueen's Vall**	**4.18**	**198**	P	Pn	09 10 12.6	-6.2
RACZ	**Rakaia**	**4.34**	**202**	P	Pn	09 10 14.8	-6.1
ARCZ	**Arundel**	**4.86**	**209**	P	Pn	09 10 21.0	-6.8
TMZ	**Timaru**	**5.29**	**208**	P	Pn	09 10 27.0	-6.6
ODZ	**Otahua Downs**	**6.00**	**207**	P	Pn	09 10 36.3	-6.6

IDC 16 09:11:28.7±3.8, 54°.22N×87°.50E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=34.0km s-min=20.4km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.60**	**261**	*i*		09 19 51.6	
	baz=79,slow=315,SNR=17						
ZALV	**Zalesovo Beam**	**1.60**	**261**	Pg	Pn	09 11 57.3	-1.0
	0.6nm,0.3s,baz=76,slow=15,SNR=5.2						
ZALV				Lg	Lg	09 12 20.2	
	1.3nm,0.3s,baz=83,slow=24,SNR=4.1						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	09 13 06.5	+0.1
	0.1nm,0.3s,baz=56,slow=14,SNR=2.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.14**	**206**	Pn	Pn	09 13 29.5	+1.4
	0.1nm,0.3s,baz=24,slow=12,SNR=4.1						
	0.2nm,0.4s						

IDC 16 09:13:38.9±2.4, 3°.12N×96°.60E, h0km, mb3.4/3, mbtmp3.3/4, ML2.4/1, MS3.1/2, Error ellipse: s-maj=84.9km s-min=28.3km az=49.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.34**	**98**	Pn	Pn	09 14 19.3	+0.5
	0.9nm,0.3s,baz=330,slow=8.1,SNR=6.5						
	2.7nm,0.3s						
KAPI	**Kappang**	**24.50**	**109**	LR	LR	09 30 12.6	
	comp=Z,40nm,19.8s,baz=320,slow=41						
WRA	**Warramunga Arr**	**43.57**	**123**	P	P	09 21 45.0	0.0
	0.4nm,0.5s,baz=301,slow=9.0,SNR=15						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**45.04**	**128**	P	P	09 21 56.4	-0.4
	0.3nm,0.5s,baz=308,slow=7.9,SNR=5.4						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**45.25**	**346**	P	P	09 21 58.0	-0.1
	0.4nm,0.7s,baz=142,slow=7.3,SNR=4.0						
	0.4nm,0.7s						
GUMO	**Guam**	**48.78**	**75**	LR	LR	09 42 43.2	
	comp=Z,23nm,21.7s,baz=262,slow=36						

SJA ***16*** *09:27:25.3±1.2, 29°.83S×71°.72W, h10km, ML4.0, MW3.6*
GUC ***16*** *09:27:28.9±0.8, 29°.89S×71°.62W, h36km±5km, ML3.9*
NEIC ***16*** *09:27:28.9±2.8, 29°.85S±0°.05×71°.63W±0°.10, h24km±8km, mb4.0/1, ML3.9(GUC), Error ellipse: s-maj=12.2km s-min=6.4km az=79.0*
IDC ***16*** *09:27:29.7±1.2, 29°.95S×71°.58W, h31km±7km, mb3.3/3, mbtmp3.6/7, ML3.7/4, MS3.1/6, Error ellipse: s-maj=37.8km s-min=32.9km az=147.0*

ISC 16 09:27:28.8±0.8, 29°.89S±0°.04×71°.73W±0°.05, h27km±5km, n106, σ1§66/108, mb3.6/4, MS3.1/3, 8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.43**	**94**		**Pb**	**09 27 36.7**	**-1.2**
CO05				Sg	**Sb**	**09 27 42.5**	**-1.5**
CO05	**La Serena**	**0.43**	**94**	⇓*i*P	**Pb**	**09 27 36.9**	**-1.0**
CO05				*i* S	**Sb**	**09 27 42.5**	**-1.5**
CO05				IAML		09 27 43.0	
	comp=E,11μm,0.3s						
CO06	**Fray Jorge**	**0.78**	**174**	Pn	**Pn**	**09 27 43.5**	**-0.7**
CO06	**Fray Jorge**	**0.78**	**174**	⇓*i*P	**Pn**	**09 27 43.4**	**-0.7**
CO06				*i* S	**Sn**	**09 27 54.2**	**-0.8**
CO06				IAML		09 27 56.9	
	comp=E,4μm,0.3s						

GO04	**Tololo Observa**	**0.85**	**109**			**Pn**	**09 27 43.8**	**-1.5**	
GO04	**Tololo Observa**	**0.85**	**109**	⇓*i*P		**Pn**	**09 27 43.8**	**-1.5**	
GO04				*i* S		**Sn**	**09 27 54.1**	**-2.9**	
GO04	**Tololo Observa**	**0.85**	**109**	*i* P		**Pn**	**09 27 43.0**	**-2.3**	
GO04				*e*S		**Sn**	**09 27 54.7**	**-2.3**	
LCO	**Las Campanas**	**1.25**	**46**			**Pn**	**09 27 49.8**	**-1.1**	
LCO	**Las Campanas**	**1.25**	**46**	⇓*i*P		**Pn**	**09 27 49.7**	**-1.1**	
LCO				*i* S		**Sn**	**09 28 05.3**	**-1.7**	
LCO	**Las Campanas**	**1.25**	**46**	*i* P		**Pn**	**09 27 49.5**	**-1.4**	
LCO				*e*S		**Sn**	**09 28 07.3**	**+0.3**	
LCO				IAML			09 28 08.8		
	comp=Z,32μm,1.0s								
CO03	**El Pedregal**	**1.30**	**137**			**Pn**	**09 27 50.9**	**-0.5**	
CO03	**El Pedregal**	**1.30**	**137**	⇓*i*P		**Pn**	**09 27 50.7**	**-0.7**	
CO03				*i* S		**Sn**	**09 28 07.0**	**-1.0**	
CO03				IAML			09 28 10.7		
	comp=E,2μm,0.3s								
CO01	**Juntas del Tor**	**1.42**	**94**			**Pn**	**09 27 52.6**	**-0.5**	
CO01	**Juntas del Tor**	**1.42**	**94**	⇓*i*P		**Pn**	**09 27 52.6**	**-0.5**	
CO01				*i* S		**Sn**	**09 28 10.0**	**-1.1**	
CO01				IAML			09 28 12.8		
	comp=N,3μm,0.3s								
CO01	**Juntas del Tor**	**1.42**	**94**	*i* P		**Pn**	**09 27 52.0**	**-1.1**	
CO01				IAML			09 28 12.3		
	comp=Z,3μm,0.3s								
CO02	**Combarbal**	**1.45**	**155**			**Pn**	**09 27 53.6**	**+0.2**	
CO02	**Combarbal**	**1.45**	**155**	*e*P		**Pn**	**09 27 53.7**	**+0.2**	
CO02				*i* S		**Sn**	**09 28 12.3**	**+0.6**	
AC05	**El Transito**	**1.65**	**51**			**Pn**	**09 27 56.3**	**+0.1**	
AC05	**El Transito**	**1.65**	**51**	⇓*i*P		**Pn**	**09 27 56.2**	**+0.1**	
AC05				*i* S		**Sn**	**09 28 16.8**	**+0.3**	
AC05				IAML			09 28 20.2		
	comp=E,3μm,0.3s								
AC05	**El Transito**	**1.65**	**51**	*i* P		**Pn**	**09 27 56.0**	**-0.2**	
AC05				*e*S		**Sn**	**09 28 18.0**	**+1.5**	
AC05				IAML			09 28 19.0		
	comp=Z,2μm,0.8s								
AC04	**Llanos de Chal**	**1.78**	**19**			**Pn**	**09 27 56.8**	**-1.0**	
AC04	**Llanos de Chal**	**1.78**	**19**	⇓*i*P		**Pn**	**09 27 56.7**	**-1.0**	
AC04				IAML			09 28 29.1		
	comp=E,2μm,0.5s								
AC04	**Llanos de Chal**	**1.78**	**19**	*i* P		**Pn**	**09 27 56.5**	**-1.3**	
AC04				*e*S		**Sn**	**09 28 21.4**	**+1.9**	
AC04				IAML			09 28 29.6		
	comp=Z,1μm,0.3s								
AROD	**Rodeo**	**1.98**	**99**	*i* P		**Pn**	**09 28 03.1**	**+2.2**	
AROD				*e*S		**Sn**	**09 28 28.0**	**+3.1**	
ACDV	**Cuesta del Vie**	**2.28**	**98**	*i* P		**Pn**	**09 28 07.4**	**+2.5**	
ACDV				*e*S		**Sb**	**09 28 37.6**	**+0.4**	
ACDV				IAML			09 28 41.0		
	comp=Z,444nm,0.4s								
ACCO	**Cerro Coronel**	**2.41**	**107**	*i* P		**Pn**	**09 28 10.0**	**+3.2**	
ACCO				IAML			09 28 47.9		
	comp=Z,290nm,0.3s								
GO03	**Copiap**	**2.64**	**30**			**Pn**	**09 28 09.1**	**-0.6**	
GO03	**Copiap**	**2.64**	**30**	*e*P		**Pn**	**09 28 09.3**	**-0.4**	
GO03	**Copiap**	**2.64**	**30**	*i* P		**Pn**	**09 28 09.0**	**-0.7**	
VA06	**Catapilco**	**2.69**	**172**	Pn		**Pn**	**09 28 11.6**	**+1.3**	
VA06	**Catapilco**	**2.69**	**172**	*e*P		**Pn**	**09 28 11.4**	**+1.1**	
VA06				IAML			09 29 02.4		
	comp=N,1μm,0.4s								
AC06	**Mina Casimiro**	**2.80**	**26**			**Pn**	**09 28 11.5**	**-0.4**	
AC06	**Mina Casimiro**	**2.80**	**26**	*e*P		**Pn**	**09 28 11.5**	**-0.4**	
AC06				IAML			09 28 58.5		
	comp=N,672nm,0.5s								
RTLS	**Leoncito**	**2.83**	**133**	*i* P		**Pn**	**09 28 15.0**	**+2.5**	
RTLS				IAML			09 28 59.7		
	comp=Z,190nm,0.6s								
VA03	**San Esteban**	**3.04**	**161**			**Pn**	**09 28 17.4**	**+2.2**	
VA03	**San Esteban**	**3.04**	**161**	*e*P		**Pn**	**09 28 17.2**	**+2.0**	
VA03				IAML			09 29 12.0		
	comp=N,650nm,0.5s								
VA03	**San Esteban**	**3.04**	**161**	*i* P		**Pn**	**09 28 17.0**	**+1.8**	
VA03				IAML			09 29 12.6		
	comp=Z,468nm,0.8s								
ZON	**Zonda**	**3.10**	**123**			**Pn**	**09 28 15.8**	**-0.2**	
ZON	**Zonda**	**3.10**	**123**	*i* P		**Pn**	**09 28 20.0**	**+3.9**	
ZON				IAML			09 29 13.8		
	comp=Z,220nm,0.6s								
VA01	**Torpederas**	**3.12**	**179**	Pn		**Pn**	**09 28 15.2**	**-1.1**	
ROC1	**El Roble**	**3.13**	**169**			**Pn**	**09 28 19.4**	**+2.7**	
ROC1	**El Roble**	**3.13**	**169**	*i* P		**Pn**	**09 28 19.0**	**+2.3**	
RTLL	**Cerro Villicun**	**3.15**	**118**	*i* P		**Pn**	**09 28 18.8**	**+2.0**	
PEL	**

comp=Z,0.1nm,0.3s,baz=187,slow=8.0,SNR=9.9
comp=Z,1.6nm,0.6s

LPAZ La Paz 13.94 14 Pn Pn 09 30 47.5 +2.3
SIV San Ignacio 16.95 38 Pn **Pn 09 31 25.2 +1.0**
baz=200,slow=10,SNR=9.3
SIV LR LR 09 38 29.1
comp=Z,27nm,18.7s,baz=129,slow=39
comp=Z,1.9nm,0.6s
ATAH Atahualpa 23.49 343 LR LR 09 39 27.9
comp=Z,54nm,20.0s,baz=169,slow=30
BDFB Brasilia 25.99 62 LR LR 09 45 22.6
comp=Z,59nm,20.9s,baz=38,slow=41
SDV Santo Domingo 38.57 2 LR LR 09 51 35.9
comp=Z,25nm,18.8s,baz=76,slow=37
QSPA South Pole Qui 60.33 180 P **P 09 37 36.0 +0.9**
QSPA IAmb IAmb 09 37 58.0
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 66.31 330 P **P 09 38 15.9 +0.9**
comp=Z,0.1nm,0.4s,baz=156,slow=8.6,SNR=4.4
comp=Z,0.1nm,0.4s
TXAR Lajitas Array 66.31 330 P **P 09 38 15.6 +0.5**
PDAR Pinedale Array 80.23 333 P **P 09 39 38.1 +0.9**
comp=Z,0.2nm,0.5s,baz=138,slow=8.3,SNR=2.7
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 82.57 70 P **P 09 39 49.5 -0.3**
comp=Z,0.3nm,0.6s,baz=246,slow=5.9,SNR=4.6
TORD pP **pP 09 39 59.3 +1.2**
comp=Z,0.5nm,0.6s,baz=279,slow=4.9,SNR=2.9
comp=Z,0.3nm,0.6s
WRA Warramunga Arr 124.45 210 PKP **PKPdf 09 46 25.4 -0.8**
comp=Z,0.7nm,1.1s,baz=153,slow=1.6,SNR=2.1
WRA pPKP **pPKPdf 09 46 35.5 +0.9**
comp=Z,0.3nm,0.6s,baz=150,slow=1.8,SNR=1.8
H11S2 WAKE ISLAND Hyl 26.00 272 T T 12 05 25.7
baz=114,slow=75,SNR=26
H11S1 WAKE ISLAND Hyl 26.01 272 T T 12 05 18.2
baz=114,slow=75,SNR=34
H11S3 WAKE ISLAND Hyl 26.01 272 T T 12 05 17.1
baz=114,slow=75,SNR=25
ZALV Zalesovo Beam 150.56 29 PKPbc **PKiKP 09 47 18.9 +0.5**
comp=Z,0.9nm,0.5s,baz=298,slow=3.1,SNR=1.5
ZALV pPKPbc **pPKPbc 09 47 28.4 +2.3**
comp=Z,1.9nm,0.6s,baz=298,slow=3.1,SNR=2.4

IDC 16 09:51:13.0±2.9, 53°58N×87°91E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=25.6km s-min=15.6km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.87**	**283**	Pn		Pn	Pn	09 51 45.8	-0.4
	1.9nm,0.3s,baz=101,slow=15,SNR=14								
ZALV						Lg	Lg	09 52 12.2	
	3.5nm,0.3s,baz=102,slow=27,SNR=12								
I46RU	**ZALESOVO INFRA**	**1.87**	**283**	*i*				10 03 00.0	
	0.1nm,0.9s,baz=100,slow=318,SNR=23								
KURBB	**Kurchatov Arra**	**6.49**	**247**	Pn		Pn	Pn	09 52 50.2	+0.5
	0.2nm,0.3s,baz=62,slow=14,SNR=5.0								
KURBB						Lg	Lg	09 54 39.0	
	0.1nm,0.3s,baz=63,slow=34,SNR=2.6								
	1.9nm,0.5s								
MKAR	**Makanchi Array**	**7.69**	**210**	Pn		Pn	Pn	09 53 07.3	+1.1
	0.1nm,0.3s,baz=28,slow=14,SNR=6.4								
MKAR						Sn	Sn	09 54 34.5	+0.5
	0.1nm,0.3s,baz=27,slow=24,SNR=6.8								
MKAR						Lg	Lg	09 55 16.2	
	0.2nm,0.3s,baz=28,slow=32,SNR=6.0								
	0.2nm,0.3s								

*HEL **16** 09:59:43.1±0.2, 64°68N×30°75E, h0km, ML2.0, Explosion*
*KOLA **16** 09:59:44.6, 64°46N×29°43E, h0km, ML2.2*
*IDC **16** 09:59:46.8±1.6, 64°72N×29°79E, h0km, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=22.3km s-min=7.3km az=105.0*
ISC 16 09:59:40.8±0.8, 64°62N±0°02×30°52E±0°04, h0km, n29, σ1§75/46, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.48**	**212**	PG		**Pg**	**Pb**	**09 59 53.1**	**+1.0**
KU6	**Riekki**	**1.43**	**350**	PG		**Pg**	**Pn**	**10 00 07.9**	**-0.1**
	baz=165								
KU6				MSG				10 00 25.1	
	comp=Z,8.3nm,0.2s								
KU6				SN		**Sn**	**Sn**	**10 00 29.2**	**+1.7**
MSF	**Maaselka**	**1.44**	**335**	PG		**Pg**	**Pg**	**10 00 08.1**	**-0.1**
	baz=152								
MSF				SN		**Sn**	**Sn**	**10 00 29.1**	**+1.6**
JOF	**Joensuu**	**1.75**	**168**	PG		**Pg**	**Pg**	**10 00 14.7**	**+0.5**
JOF				SG		**Sg**	**Sg**	**10 00 39.7**	**+2.9**
OLKF	**Oulanka, Finla**	**1.77**	**345**	PG		**Pg**	**Pb**	**10 00 13.7**	**-0.3**
OLKF				SN		**Sg**	**Sg**	**10 00 38.6**	**+1.2**
OUL	**Oulu**	**2.03**	**285**	PG		**Pg**	**Pg**	**10 00 20.2**	**+0.6**
OUL				SG		**Sg**	**Sg**	**10 00 48.5**	**+2.7**
OBF4	**Vikkela, Lumij**	**2.33**	**277**	PB		**Pg**	**Pg**	**10 00 25.2**	**-0.2**
	baz=92								
OBF4				SG		**Sg**	**Sg**	**10 00 59.0**	**+3.4**
OUF	**Merijarvi**	**2.52**	**267**	PN		**Pb**	**Pb**	**10 00 26.7**	**0.0**
OUF				MSG				10 01 00.3	
	comp=Z,15nm,0.2s								
OUF				SG		**Sg**	**Sg**	**10 01 02.3**	**+0.7**
OBF0	**Syolatti, Pyha**	**2.72**	**270**	PB		**Pg**	**Pg**	**10 00 32.0**	**-0.8**
RNF	**Rovaniemi**	**2.73**	**319**	PG		**Pg**	**Pb**	**10 00 31.5**	**+1.0**
	baz=131								
RNF				SG		**Sg**	**Sg**	**10 01 07.7**	**-0.7**
TOF	**Tornio**	**2.98**	**302**	PB		**Pb**	**Pb**	**10 00 34.5**	**-0.1**
TOF				MSG				10 01 12.2	
	comp=Z,6.1nm,0.2s								
TOF				SG		**Sg**	**Sg**	**10 01 14.6**	**-1.8**
KAF	**Kangasniemi**	**3.15**	**219**	PB		**Pg**	**Pg**	**10 00 39.6**	**-1.6**
KAF				SG		**Sg**	**Sg**	**10 01 21.4**	**-0.6**
APA0	**Apatity Array**	**3.16**	**17**	P		**Pb**	**Pb**	**10 00 38.3**	**+0.6**
APA0				S		**Sg**	**Sg**	**10 01 20.7**	**-1.5**
VRF	**Varrio**	**3.16**	**354**	PB		**Pb**	**Pb**	**10 00 36.5**	**-1.2**
VRF				MSG				10 01 14.6	
	comp=Z,2.9nm,0.2s								
VRF				SG		**Sg**	**Sg**	**10 01 19.9**	**-2.3**
KALU	**Kalix**	**3.26**	**296**	PG		**Pg**	**Pg**	**10 00 43.8**	**+0.6**
	baz=107								
KALU				SG		**Sg**	**Sg**	**10 01 27.7**	**+2.4**
SGF	**Sodankyl**	**3.27**	**332**	PG		**Pg**	**Pb**	**10 00 40.6**	**+1.1**
SGF				SG		**Sg**	**Sb**	**10 01 21.2**	**+1.5**
KEF	**Keuruu**	**3.54**	**228**	PB		**Pb**	**Pb**	**10 00 43.9**	**-0.3**
KLF	**Kolari**	**3.75**	**317**	PB		**Pb**	**Pb**	**10 00 45.4**	**-2.4**
FIA0	**FINESS Array S**	**3.78**	**214**	PG		**Pg**	**Pg**	**10 00 53.3**	**+0.2**
	baz=30								
FINES	**FINESS Array B**	**3.78**	**214**	Pn		**Pg**	**Pb**	**10 00 45.4**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=37,slow=14,SNR=1.4								
FINES				SN			**Sb**	**10 01 30.0**	**-4.5**
	comp=Z,0.5nm,0.3s,baz=28,slow=24,SNR=5.4								
FINES				Lg		Lg	Lg	10 01 42.1	
	comp=Z,1.3nm,0.3s,baz=31,slow=31,SNR=9.6								
	comp=Z,1.9nm,0.8s								
VAF	**Ylistaro**	**3.82**	**249**	PN		**Pb**	**Pb**	**10 00 46.2**	**-2.8**
PAJU	**Pajala**	**3.88**	**312**	PG		**Pg**	**Pg**	**10 00 54.5**	**-0.6**
	baz=125								
PAJU				SG		**Sg**	**Sg**	**10 01 45.4**	**0.0**
VJF	**Virojoki**	**4.32**	**200**	SG		**Sg**	**Sg**	**10 02 00.4**	**+0.9**
PVF	**Pernaja**	**4.62**	**210**	SG		**Sg**	**Sg**	**10 02 10.8**	**+1.7**
HEF	**Hetta**	**4.69**	**327**	PG		**Pg**	**Pg**	**10 01 07.8**	**-2.6**
ARCES	**ARCESS Array B**	**5.31**	**341**	Pn		**Pn**	**Pn**	**10 01 02.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=155,slow=14,SNR=32								
ARCES				Sn		**Sn**	**Sn**	**10 02 02.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=158,slow=24,SNR=5.8								
ARCES				Lg		Lg	Lg	10 02 24.9	
	comp=Z,0.3nm,0.3s,baz=156,slow=30,SNR=6.5								
	comp=Z,0.4nm,0.3s								
ARCES	**ARCESS Array B**	**5.31**	**341**	P		**Pn**	**Pn**	**10 01 04.8**	**+3.7**
ARCES				S		**Sn**	**Sn**	**10 02 03.0**	**+0.1**
I37NO	**I37NO**	**6.47**	**319**	*i*				10 37 49.3	
	baz=130,slow=325,SNR=3.4								
NOA	**NORSAR Array B**	**9.52**	**257**	Pn		**Pn**	**Pn**	**10 01 58.2**	**-0.7**
	baz=59,slow=15,SNR=1.8								
	comp=Z,0.6nm,0.9s								

*SOME **16** 10:21:13.8, 43°77N×69°52E*
NNC 16 10:21:17.0±2.5, 43°66N×69°78E, h0km, mb4.0, mpv3.2, 2C, Error ellipse: s-maj=16.4km s-min=13.4km az=69.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.77**	**136**	⇑P		Pg		10 21 31.2	-0.7
	0.4nm,0.2s,baz=301,slow=18,SNR=84								
KK31				⇑S		Sg		10 21 43.0	+1.1
	21nm,0.5s,baz=302,slow=29,SNR=120								
IUG	**Iuzhnay**	**1.52**	**173**	P		Pn		10 21 45.8	+0.1
	275nm,0.4s								
IUG				S		Sn		10 22 08.9	+2.6
	44nm,0.5s								
MRKS	**Merke**	**2.68**	**109**	Pg		Pg		10 22 11.1	+2.6
	3.0nm,0.4s								
MRKS				Lg		Lg		10 22 52.3	
	10nm,0.5s								
BTLS	**Baital**	**3.36**	**64**	Pg		Pg		10 22 20.9	-0.5
	9.3nm,0.6s								
BTLS				Lg		Lg		10 23 09.6	
	3.3nm,0.5s								
SGDS	**Sogindy**	**3.54**	**92**	Pg		Pb		10 22 21.3	+0.8
	2.7nm,0.4s								
SGDS				Lg		Lg		10 23 09.8	
	4.4nm,0.5s								
KRBS	**Karabastau**	**4.28**	**87**	Pg		Pb		10 22 34.9	+1.7
	2.8nm,0.6s								
KRBS				Lg		Lg		10 23 34.1	
	3.5nm,0.7s								
KTBS	**Karatobe**	**5.01**	**87**	Pg		Pg		10 22 49.7	-3.4
KTBS				Lg		Lg		10 23 58.9	

*IDC **16** 10:21:19.5±3.2, 44°62N×148°35E, h0km, mb3.5/3, mbtmp3.6/4, ML2.7/1, Error ellipse: s-maj=90.1km s-min=35.4km az=167.0*
*MOS **16** 10:21:31.4±1.4, 44°64N×149°99E, h69km, mb3.8/1, Error ellipse: s-maj=30.4km s-min=17.0km az=150.9*
*SKHL **16** 10:21:40.6±0.0, 45°10N×148°30E, h147km±2km, mb4.3/3, msha5.0/3*
*JMA **16** 10:21:41.5±0.6, 45°N±3°×14°8E±°, h151km, MV3.5/27, SE OFF ETOROFU*
ISC 16 10:21:38.7±1.1, 44°9N±0°1×148°5E±0°1, h157km±7km, n35, σ1§77/41, mb3.3/3, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.54**	**304**	*e*	*i*	PN	**Pn**	**10 22 01.0**	**0.0**
KUR						S	**Sn**	**10 22 16.3**	**-1.8**
KUR						pmax	pmax		
	comp=N,39nm,0.3s								
KUR						pmax	pmax		
	comp=Z,112nm,0.3s								
KUR						smax	smax		
	comp=E,82nm,0.5s								
KUR						smax	smax		
	comp=N,74nm,0.6s								
KUR	**Kuril'sk**	**0.54**	**304**	*e*		P	**Pn**	**10 22 00.8**	**-0.2**
KUR						AMB	AMB	10 22 01.4	
	comp=N,170nm,0.4s								
KUR						*e*S	**Sn**	**10 22 15.9**	**-2.2**
KUR						A	A	10 22 27.7	
	comp=N,90nm,0.3s								
KUR						A	A	10 22 27.7	
	comp=N,140nm,0.3s								
SHO	**Shikotan**	**1.60**	**229**	*e*	PN	**Pn**	**Pn**	**10 22 11.1**	**+1.3**
SHO					*e*S	**Sn**	**Sn**	**10 22 34.2**	**+0.5**
SHO					pmax	pmax			
	comp=Z,28nm,0.1s								
SHO					smax	smax			
	comp=N,387nm,0.2s								
SHO					smax	smax			
	comp=E,341nm,0.2s								
SHO	**Shikotan**	**1.60**	**229**	*e*	P	**Pn**	**Pn**	**10 22 11.1**	**+1.3**
SHO					AMB	AMB	AMB	10 22 11.7	
	comp=E,20nm,0.5s								
SHO					*e*S	**Sn**	**Sn**	**10 22 33.8**	**+0.1**
SHO					A	A	A	10 22 34.7	
	comp=E,450nm,0.4s								
SHO					A	A	A	10 22 34.7	
	comp=E,460nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**2.09**	**246**	*e*	PN	**Pn**	**Pn**	**10 22 17.5**	**+2.2**
YUK					*e*S	**Sn**	**Sn**	**10 22 46.0**	**+2.6**
YUK					smax	smax			
	comp=N,133nm,0.4s								
YUK					smax	smax			
	comp=E,217nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**2.09**	**246**	*e*	P	**Pn**	**Pn**	**10 22 16.5**	**+1.2**
YUK					AMB	AMB	AMB	10 22 18.4	
	comp=E,100nm,0.2s								
YUK					*e*S	**Sn**	**Sn**	**10 22 43.2**	**-0.2**
YUK					A	A	A	10 22 46.5	
	comp=E,220nm,0.5s								
YUK					A	A	A	10 22 46.5	
	comp=E,190nm,0.5s								
RUSJ	**Misakicho**	**2.47**	**252**	*e*	PN	**Pn**	**Pn**	**10 22 21.7**	**+1.9**
NEM2	**Nemuro 2**	**2.53**	**233**	*e*	P	**Pn**	**Pn**	**10 22 21.4**	**+0.9**
NEM2					*e*S	**Sn**	**Sn**	**10 22 51.9**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.54**	**233**	*e*	PN	**Pn**	**Pn**	**10 22 21.4**	**+0.8**
NMR	**Nemuro--Hokkai**	**2.54**	**233**	*e*	P	**Pn**	**Pn**	**10 22 21.4**	**+0.8**
NMR					*e*S	**Sn**	**Sn**	**10 22 52.7**	**-0.2**
JRA	**Rausu**	**2.62**	**249**	*e*	P	**Pn**	**Pn**	**10 22 23.2**	**+1.6**
JNSB	**Nemuroshibetsu**	**2.76**	**247**	*e*	P	**Pn**	**Pn**	**10 22 25.3**	**+1.9**
JNK	**Nakash**	**3.03**	**245**	*e*	P	**Pn**	**Pn**	**10 22 28.2**	**+1.5**
JKHN	**Kushirohamanak**	**3.04**	**234**	*e*	P	**Pn**	**Pn**	**10 22 27.9**	**+1.1**
JKHN					*e*S	**Sn**	**Sn**	**10 23 03.3**	**-0.7**
JAK	**Akkeshi**	**3.36**	**236**	*e*	P	**Pn**	**Pn**	**10 22 31.8**	**+0.9**
JAK					*e*S	**Sn**	**Sn**	**10 23 10.0**	**-1.3**
JTKR	**Abashiri--Toko**	**3.43**	**255**	*e*	P	**Pn**	**Pn**	**10 22 33.0**	**+1.3**
JAR	**Ashorobuto**	**3.78**	**246**	*e*	P	**Pn**	**Pn**	**10 22 38.3**	**+2.1**
JAR					*e*S	**Sn**	**Sn**	**10 23 23.0**	**+2.0**
JKK2	**Kamakawa 2**	**4.26**	**258**	*e*	P	**Pn**	**Pn**	**10 22 44.1**	**+1.7**
JCH	**Churui**	**4.38**	**240**	*e*	P	**Pn**	**Pn**	**10 22 45.0**	**+0.9**
JCH					*e*S	**Sn**	**Sn**	**10 23 34.1**	**-0.9**
JNBK	**Urakawa-nobuka**	**4.95**	**240**	*e*	P	**Pn**	**Pn**	**10 22 51.5**	**0.0**
JNBK					*e*S	**Sn**	**Sn**	**10 23 47.3**	**-1.0**
JOT	**Ohata**	**6.50**	**240**	*e*	S	**Sn**	**Sn**	**10 24 20.7**	**-4.6**
JANG	**Nango**	**6.87**	**231**	*e*	S	**Sn**	**Sn**	**10 24 30.1**	**-4.2**
JOSM	**Okushiri--Mats**	**7.15**	**250**	*e*	P	**Pn**	**Pn**	**10 23 21.0**	**+0.3**
JMK	**Ichinoseki**	**8.07**	**225**	*e*	S	**Sn**	**Sn**	**10 24 59.8**	**-3.1**
PETK	**Petropavlovsk-**	**10.16**	**33**	Pn		Pn	Pn	10 23 51.3	-9.3
	comp=E,0.3nm,0.3s,baz=233,slow=16,SNR=1.7								
	comp=E,1.4nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**29.41**	**143**	T		T		10 58 50.9	
	baz=334,slow=76,SNR=13								
H11N1	**WAKE ISLAND Hy**	**29.42**	**143**	T		T		10 58 52.5	
	baz=334,slow=76,SNR=7.2								
H11N3	**WAKE ISLAND Hy**	**29.42**	**143**	T		T		10 58 52.8	
	baz=334,slow=76,SNR=9.9								
H11S1	**WAKE ISLAND Hy**	**30.41**	**144**	T		T		11 00 04.5	
	baz=335,slow=76,SNR=15								
H11S3	**WAKE ISLAND Hy**	**30.42**	**144**	T		T		11 00 11.0	
	baz=335,slow=76,SNR=18								
H11S2	**WAKE ISLAND Hy**	**30.43**	**144**	T		T		11 00 05.5	
	baz=335,slow=76,SNR=14								
INK	**Inuvik**	**44.89**	**31**	P		**P**		**10 29 37.4**	**+0.5**
	comp=E,1.3nm,1.1s,baz=283,slow=6.2,SNR=6.1								
	comp=E,1.3nm,1.1s								
MKAR	**Makanchi Array**	**44.91**	**297**	P		**P**		**10 29 36.0**	**-1.5**
	comp=E,0.5nm,0.6s,baz=74,slow=8.3,SNR=5.6								
	comp=E,0.5nm,0.6s								
MKAR	**Makanchi Array**	**44.91**	**297**	P		**P**		**10 29 36.0**	**-1.5**
TXAR	**Lajitas Array**	**81.19**	**57**	P		**P**		**10 33 38.8**	**+1.7**
	comp=E,0.2nm,0.5s,baz=300,slow=4.1,SNR=3.9								
	comp=E,0.2nm,0.5s								

*IDC **16** 10:47:08.8±1.8, 15°29S×174°00W, h0km, mb3.7/6, mbtmp3.7/7, ML3.9/1, MS3.3/8, Error ellipse: s-maj=116.3km s-min=19.0km az=148.0*
*NEIC **16** 10:47:09.4±1.2, 15°4S±0°2×173°9W±0°1, h10km±2km, mb4.4/7, Error ellipse: s-maj=39.8km s-min=9.0km az=324.0*
ISC 16 10:47:12.9±0.8, 15°4S±0°2×173°9W±0°2, h35km, n33, σ1§19/20, mb4.1/11, MS3.5/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.56**	**54**	Pn		Pn	**Pn**	**10 47 51.3**	**-0.7**
	22nm,0.3s,baz=185,slow=3.6,SNR=25								
AFI						Sn	**Sn**	**10 48 20.7**	**-1.2**
	111nm,0.3s,baz=47,slow=22,SNR=12								
	52nm,0.3s								
AFI	**Afiamalu**	**2.56**	**54**	Pn		**Pn**	**Pn**	**10 47 51.0**	**-1.0**
MSVF	**Nonsavu**	**8.03**	**252**	Pn		**Pn**	**Pn**	**10 49 07.8**	**+0.6**
RAR	**Rarotonga**	**14.62**	**115**	LR		LR	LR	10 54 41.7	
	comp=Z,30nm,21.9s,baz=273,slow=31								
MARNC	**Mare, Loyalty**	**18.14**	**248**	Pn		Pn	**Pn**	**10 51 19.4**	**-2.7**
DZM	**Mont Dzumac**	**19.72**	**247**	*e*		LR	LR	10 56 27.4	
	comp=Z,93nm,22.8s								

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAE	**Paea**	**23.44**	**99**	*e*		T		11 15 22.0	
	1.1nm,0.3s								
PPT2	**Papeete2**	**23.44**	**99**	*e*		LR	LR	10 57 07.5	
	comp=Z,54nm,26.8s								
PPT2	**Papeete2**	**23.44**	**99**	*e*		T	T	11 15 25.3	
	2.0nm,0.3s								
TBI	**Tubuai**	**24.36**	**113**	*e*		LR	LR	10 57 28.0	
	comp=Z,115nm,27.8s								
TBI	**Tubuai**	**24.36**	**113**	*e*		T	T	11 16 12.8	
	4.1nm,0.3s								
HNR	**Honiara**	**26.19**	**280**	LR		LR	LR	11 02 00.6	
	comp=Z,124nm,20.0s,baz=154,slow=34								
EIDS	**Eidsvold**	**34.17**	**247**	P		**P**		**10 53 54.5**	**-0.6**
STKA	**Stephens Creek**	**43.59**	**240**	P		**P**		**10 55 14.5**	**+0.7**
	2.0nm,0.9s,baz=68,slow=5.4,SNR=2.3								
	2.0nm,0.9s								
WR0	**Warramunga Arr**	**49.16**	**257**	P		**P**		**10 55 56.8**	**-0.9**
WR0						IAmb	IAmb	10 56 01.0	
	comp=Z,8.2nm,1.4s								
WB0	**Warramunga Arr**	**49.31**	**257**	P		**P**		**10 55 58.5**	**-0.4**
WB0						IAmb	IAmb	10 56 14.4	
	comp=Z,4.4nm,1.1s								
WB2	**Warramunga Arr**	**49.34**	**257**	P		**P**		**10 55 59.0**	**-0.1**
WB2						IAmb	IAmb	10 56 18.9	
	comp=Z,6.9nm,1.1s								
WRA	**Warramunga Arr**	**49.35**	**257**	P		**P**		**10 56 00.5**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=96,slow=6.9,SNR=12								
	comp=Z,0.3nm,0.5s								
WRA	**Warramunga Arr**	**49.35**	**257**	P		**P**		**10 55 58.7**	**-0.5**
AS31	**Alice Springs**	**49.62**	**252**	P		**P**		**10 56 01.2**	**-0.1**
AS31						IAmb	IAmb	10 56 15.1	
	comp=Z,1.0nm,0.6s								
ASAR	**Alice Springs**	**49.62**	**252**	P		**P**		**10 56 02.1**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=89,slow=8.2,SNR=35								
	comp=Z,1.6nm,0.6s								
ASAR	**Alice Springs**	**49.62**	**252**	P		**P**		**10 55 59.7**	**-1.6**
FITZ	**Fitzroy Crossi**	**57.71**	**258**	LR		LR		11 19 21.1	
	comp=Z,7.7nm,18.3s,baz=70,slow=34								
SBA	**Scott Base**	**63.19**	**185**	P		**P**		**10 57 37.3**	**+0.3**
SBA						IAmb	IAmb	10 58 04.6	
	comp=Z,2.8nm,1.1s								
MJAR	**Matsushiro Arr**	**68.63**	**320**	LR		LR	LR	11 22 23.5	
	comp=Z,33nm,20.6s,baz=162,slow=31								
SHEM	**Shemya Is, Ala**	**68.65**	**352**	LR		LR		11 21 13.9	
	comp=Z,37nm,21.6s,baz=160,slow=30								
PETK	**Petropavlovsk-**	**72.49**	**343**	LR		LR		11 23 12.3	
	comp=Z,14nm,21.6s,baz=181,slow=30								
YBH	**Yreka Blue Hor**	**73.92**	**37**	LR		LR		11 23 02.4	
	comp=Z,28nm,20.0s,baz=226,slow=29								
NVAR	**Mina Array Bea**	**74.68**	**42**	P		**P**		**10 58 51.1**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=222,slow=9.9,SNR=5.9								
	comp=Z,0.5nm,0.8s								
KSRS	**Korea Array**	**75.82**	**316**	LR		LR		11 27 45.4	
	comp=Z,9.6nm,20.5s,baz=115,slow=32								
ILAR	**Eielson Array**	**82.56**	**11**	P		**P**		**10 59 32.9**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=221,slow=6.2,SNR=5.1								
	comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**82.62**	**42**	P		**P**		**10 59 33.9**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=228,slow=1.8,SNR=5.2								
	comp=Z,0.6nm,0.8s								
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc		**PKPdf**		**11 06 48.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=113,slow=3.7,SNR=1.7								

*TRN **16** 10:57:41.0, 11°55N×62°04W, h126km, MD3.9*
*IDC **16** 10:57:41.4±2.5, 11°58N×62°10W, h142km±25km, mb3.1/6, mbtmp3.6/6, Error ellipse: s-maj=22.8km s-min=20.1km az=103.0*
*FUNV **16** 10:57:43.1, 11°16N×62°01W, h9km, MW3.9*
ISC 16 10:57:40.6±0.8, 11°54N±0°04×62°07W±0°04, h134km±7km, n46, σ1§33/62, mb3.6/6, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRFF	**Grenada Fort F**	**0.60**	**33**	*e*	P	**Pn**	**Pn**	**10 58 01.1**	**+0.4**
GRFF					*e*S	**Sn**	**Sn**	**10 58 16.4**	**+0.4**
GRGR	**Grenville**	**0.72**	**35**	*e*	P	**Pn**	**Pn**	**10 58 01.9**	**+0.4**
GRGR					*e*S	**Sn**	**Sn**	**10 58 17.4**	**0.0**
TRN	**Trinidad (W)**	**1.10**	**143**	*e*	P	**Pn**	**Pn**	**10 58 06.4**	**+1.6**
GCMP	**Grenada, Carri**	**1.13**	**34**	*e*	P	**Pn**	**Pn**	**10 58 04.9**	**-0.1**
GCMP					*e*S	**Sn**	**Sn**	**10 58 22.6**	**-1.1**
TPP	**Prospect**	**1.32**	**105**	*e*	P	**Pn**	**Pn**	**10 58 07.9**	**+1.0**
TPP	**Pointe-a-Pierr**	**1.36**	**153**	*e*	P	**Pn**	**Pn**	**10 58 09.8**	**+2.4**
TPP					*e*S	**Sn**	**Sn**	**10 58 27.8**	**-0.1**
BOT	**Bacolet**	**1.38**	**105**	*e*	P	**Pn**	**Pn**	**10 58 08.2**	**+0.6**
TBH	**Brigand Hill**	**1.44**	**137**	*e*	P	**Pn**	**Pn**	**10 58 09.6**	**+1.3**
TOSP	**Speyside**	**1.53**	**99**	⇑*i*	P	**Pn**	**Pn**	**10 58 08.7**	**-0.5**
TOSP					*e*S	**Sn**	**Sn**	**10 58 29.3

s-min=7.2km az=90.0
*GUC **16** 11:19:08.6±0.8,28°.72S×69°.95W,h113$^{km}_{\pm 4}$,4^{km},ML3.5*
ISC 16 11:19:06.9±0.9,**28°.67S**±0′.04×**70°.07W**±0′.09,**h138**$^{km}_{\pm 7}$**km, n47,σ1°23/60,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC05	**El Transito**	**0.24**	**226**		**Pn**	**11 19 26.4**	**+0.4**
AC05				Sn	**Sn**	**11 19 38.7**	**-1.8**
AC05	**El Transito**	**0.24**	**226**	*i* S	**Sn**	**11 19 38.6**	**-1.8**
LCO	**Las Campanas**	**0.65**	**238**	Pn	**Pn**	**11 19 29.3**	**+1.2**
LCO				Sn	**Sn**	**11 19 44.3**	**+0.1**
LCO	**Las Campanas**	**0.65**	**238**	*e*P	**Pn**	**11 19 28.6**	**+0.5**
LCO				*i* S	**Sn**	**11 19 44.2**	**0.0**
AC04	**Llanos de Chal**	**0.99**	**297**		**Pn**	**11 19 32.5**	**+1.9**
AC04				Sn	**Sn**	**11 19 49.3**	**+0.9**
AC04	**Llanos de Chal**	**0.99**	**297**	*e*P	**Pn**	**11 19 32.4**	**+1.9**
AC04				*i* S	**Sn**	**11 19 49.4**	**+0.9**
GO03	**Copiap**	**1.08**	**352**		**Pn**	**11 19 32.5**	**+1.1**
GO03	**Copiap**	**1.08**	**352**	*e*P	**Pn**	**11 19 32.3**	**+0.9**
GO03				*i* S	**Sn**	**11 19 49.6**	**-0.4**
GO03				IAML		11 19 50.2	
	comp=E,3μm,0.2s						
CO01	**Juntas del Tor**	**1.30**	**181**		**Pn**	**11 19 35.6**	**+1.8**
AC06	**Mina Casimiro**	**1.33**	**349**		**Pn**	**11 19 34.9**	**+1.1**
AC06	**Mina Casimiro**	**1.33**	**349**	*e*P	**Pn**	**11 19 35.1**	**+1.2**
AC06				*i* S	**Sn**	**11 19 54.3**	**-0.1**
CO05	**La Serena**	**1.61**	**219**	Pn	**Pn**	**11 19 37.5**	**+0.7**
CO05	**La Serena**	**1.61**	**219**	*e*P	**Pn**	**11 19 37.6**	**+0.8**
CO05				*i* S	**Sn**	**11 20 00.4**	**+0.8**
CO05				IAML		11 20 02.8	
	comp=N,294nm,0.2s						
GO04	**Tololo Observa**	**1.63**	**203**		**Pn**	**11 19 38.9**	**+1.6**
GO04	**Tololo Observa**	**1.63**	**203**	*e*P	**Pn**	**11 19 38.8**	**+1.6**
GO04				*i* S	**Sn**	**11 20 01.3**	**+0.8**
GO04				IAML		11 20 04.5	
	comp=E,867nm,0.4s						
AC02	**Maricunga**	**2.01**	**25**		**Pn**	**11 19 43.8**	**+1.8**
AC02	**Maricunga**	**2.01**	**25**	*e*P	**Pn**	**11 19 43.8**	**+1.8**
AC02				*i* S	**Sn**	**11 20 09.2**	**+0.4**
CO03	**El Pedregal**	**2.23**	**194**		**Pn**	**11 19 46.0**	**+1.7**
CO03	**El Pedregal**	**2.23**	**194**	*e*P	**Pn**	**11 19 45.9**	**+1.7**
CO03				*i* S	**Sn**	**11 20 13.9**	**+1.1**
CO03				IAML		11 20 15.0	
	comp=N,285nm,0.2s						
CO06	**Fray Jorge**	**2.42**	**214**	Pn	**Pn**	**11 19 48.1**	**+1.7**
CO06	**Fray Jorge**	**2.42**	**214**	*e*P	**Pn**	**11 19 48.2**	**+1.7**
CO06				*i* S	**Sn**	**11 20 14.7**	**-2.2**
CO06				IAML		11 20 18.5	
	comp=N,94nm,0.5s						
AC01	**Pan de Azucar**	**2.55**	**349**	Pn	**Pn**	**11 19 50.1**	**+1.9**
CO02	**Combarbal**	**2.65**	**197**	Pn	**Pn**	**11 19 51.0**	**+1.5**
CO02	**Combarbal**	**2.65**	**197**	*e*P	**Pn**	**11 19 51.0**	**+1.5**
CO02				*i* S	**Sn**	**11 20 23.4**	**+1.0**
CO02				IAML		11 20 24.9	
	comp=N,458nm,0.1s						
ZON	**Zonda**	**3.11**	**157**		**Pn**	**11 19 56.9**	**+1.6**
GO02	**Mina Guanaco**	**3.52**	**7**		**Pn**	**11 20 02.2**	**+1.3**
VA06	**Catapilco**	**4.02**	**195**	Pn	**Pn**	**11 20 08.1**	**+1.0**
PB14	**IPOC Station P**	**4.04**	**356**	Pn	**Pn**	**11 20 08.4**	**+0.6**
VA03	**San Esteban**	**4.10**	**186**	Pn	**Pn**	**11 20 09.9**	**+1.6**
ROC1	**El Roble**	**4.37**	**190**	Pn	**Pn**	**11 20 12.2**	**+0.3**
MT02	**Curacav**	**4.67**	**191**	Pn	**Pn**	**11 20 16.1**	**+0.4**
MT05	**Renca**	**4.74**	**187**	Pn	**Pn**	**11 20 17.1**	**+0.4**
MT09	**Talagante**	**5.15**	**189**	Pn	**Pn**	**11 20 22.9**	**+0.6**
MT01	**Popeta**	**5.28**	**191**	Pn	**Pn**	**11 20 24.1**	**+0.3**
PB15	**IPOC Station P**	**5.46**	**6**	Pn	**Pn**	**11 20 27.3**	**+0.6**
BO01	**Tunca**	**5.77**	**188**	Pn	**Pn**	**11 20 30.4**	**0.0**
PB06	**IPOC Station P**	**5.96**	**4**	Pn	**Pn**	**11 20 33.3**	**+0.2**
LVC	**Limon Verde**	**6.12**	**10**	Pn	**Pn**	**11 20 35.8**	**+0.2**
BO02	**Sierra Bellavi**	**6.13**	**185**	Pn	**Pn**	**11 20 36.1**	**+0.8**
PB04	**IPOC Station P**	**6.31**	**359**	Pn	**Pn**	**11 20 36.8**	**-1.1**
PB09	**IPOC Station P**	**6.88**	**6**	Pn	**Pn**	**11 20 45.9**	**+0.2**
PB07	**IPOC Station P**	**6.92**	**1**	Pn	**Pn**	**11 20 44.9**	**-1.2**
PB02	**IPOC Station P**	**7.32**	**1**	Pn	**Pn**	**11 20 50.2**	**-1.2**
PB01	**IPOC Station P**	**7.61**	**4**	Pn	**Pn**	**11 20 54.3**	**-1.0**
PB18	**Visviri**	**11.04**	**3**	Pn	**Pn**	**11 21 40.3**	**-1.3**
SNAA	**Sanae**	**55.92**	**159**	P	**P**	**11 28 29.1**	**-1.1**
SNAA				IAmb	IAmb	11 28 60.0	
	comp=Z,5.2nm,1.5s						
QSPA	**South Pole Qui**	**61.55**	**180**	P	**P**	**11 29 09.6**	**+0.4**
QSPA				IAmb	IAmb	11 29 26.0	
	comp=Z,4.1nm,1.4s						

UCR 16 11:26:19.1±1.3,**9°.50N**×**84°.84W**,**h19**$^{km}_{\pm 3}$**km,MW3.7, 1C-2D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAFE	**Finca La Fe, P**	**0.31**	**347**	*e*P	Pg	11 26 25.6	-0.4
JTS	**Las Juntas de**	**0.79**	**352**	*e*P	Pb	11 26 33.1	-1.2
ARE1	**Arenal 1**	**0.96**	**7**	*e*P	Pb	11 26 36.6	-0.6
FORC	**Fortuna**	**0.97**	**10**	⇑*i*P	Pb	11 26 36.8	-0.6
FORC				*e*S	Sb	11 26 50.3	+0.4
CEDE	**Laguna Cedeo**	**0.99**	**8**	*e*P	Pb	11 26 37.3	-0.4
RIMA	**Rio Macho**	**1.00**	**74**	*e*P	Pb	11 26 37.0	-0.9
GUAI	**GUAI**	**1.01**	**319**	*e*P	Pb	11 26 37.5	-0.6
GUAI				*e*S	Sg	11 26 52.2	0.0
CDM	**Cerro de Muert**	**1.06**	**87**	*e*P	Pb	11 26 38.4	-0.8
ACAL	**Aguas Claras**	**1.14**	**350**	*e*P	Pn	11 26 39.4	-0.8
CUI	**Cuipilapa**	**1.20**	**344**	*e*P	Pn	11 26 40.1	-0.8
CUI				*e*S	Sn	11 26 57.1	+0.5
COLC	**Colonia**	**1.21**	**343**	*e*P	Pn	11 26 40.3	-0.8
PTEN	**Parque Tenorio**	**1.22**	**353**	⇓*i*P	Pn	11 26 40.8	-0.4
PTEN				*e*S	Sg	11 26 58.4	-0.2
HORNC	**Hornillas**	**1.25**	**344**	*e*P	Pn	11 26 40.8	-0.9
GUAB	**Guayabo de Bag**	**1.26**	**342**	*e*P	Pn	11 26 41.0	-0.7
VMAR	**Armenia, Volca**	**1.33**	**348**	*e*P	Pn	11 26 42.5	-0.3
GPS2	**Hotel Rincn d**	**1.34**	**338**	*e*P	Pn	11 26 42.5	-0.5
VERA	**Finca Concepci**	**1.34**	**359**	*e*P	Pn	11 26 42.7	-0.2
LAPC	**Finca la Perla**	**1.39**	**335**	⇓*e*P	Pn	11 26 43.1	-0.4
BUEV	**Buena Vista**	**1.41**	**337**	*e*P	Pn	11 26 43.5	-0.3
GBS3	**Finca Las Img**	**1.41**	**335**	*e*P	Pn	11 26 43.5	-0.3
GB1A	**Boringuen Arri**	**1.42**	**337**	*e*P	Pn	11 26 43.7	-0.4
BUAI	**Buenos Aires**	**1.45**	**340**	*e*P	Pn	11 26 44.6	+0.2
SRBA	**San Rafael, Bu**	**1.48**	**100**	*e*P	Pn	11 26 44.3	-0.6

*NEIC **16** 11:27:51.5±1.6,3°.99S±0′.04×129°.8E±0°.1,h35$^{km}_{\pm 1}$km, mb4.2/16,Error ellipse: s-maj=20.6km s-min=7.8km az=90.0*
*IDC **16** 11:27:55.5±2.8,3°.86S×130°.20E,h65$^{km}_{\pm 27}$km,mb3.7/11, mbtmp4.0/14,ML4.0/3,MS2.8/1,Error ellipse: s-maj=33.4km s-min=13.5km az=83.0*
*DJA **16** 11:27:55.2±0.7,4°.S±6°×13°.0E±°,h65$^{km}_{\pm 13}$km,M4.1/9, MLv4.1/9*
ISC 16 11:27:54.1±0.5,**3°.95S**±0′.04×**130°.18E**±0′.04,**h65**km,**n58, σ2s69/63,mb3.9/13,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.63**	**206**	P	**Pn**	**11 28 10.8**	**+2.9**
BNDI				S	**Sn**	**11 28 22.4**	**+4.5**
MSAI	**Masohi**	**1.38**	**296**	P	**Pn**	**11 28 17.5**	**+0.1**
MSAI				S	**Sn**	**11 28 34.7**	**-0.2**
AAI	**Ambon**	**1.99**	**278**	P	**Pn**	**11 28 26.5**	**+0.9**
AAI				S	**Sn**	**11 28 48.7**	**-0.9**
FAKI	**Fak Fak**	**2.31**	**64**	Pn	**Pn**	**11 28 31.2**	**+1.3**
FAKI	**Fak Fak**	**2.31**	**64**	P	**Pn**	**11 28 31.4**	**+1.5**
FAKI				S	**Sn**	**11 28 55.5**	**-1.8**
FAKI	**Fak Fak**	**2.31**	**64**	P	Pn	11 28 31.8	+1.9
NLAI	**Namlea**	**3.15**	**283**	P	**Pn**	**11 28 42.9**	**+1.5**
SIJI	**Sorong**	**3.25**	**20**	P	**Pn**	**11 28 42.5**	**-0.3**
	31nm,0.3s,baz=217,slow=18,SNR=133						
SIJI				S	**Sn**	**11 29 15.5**	**-4.8**
	497nm,0.2s,baz=218,slow=19,SNR=17 60nm,0.3s						
LBMI	**Labuha**	**4.24**	**321**	P	**Pn**	**11 28 55.8**	**-0.5**
SANI	**Sanana**	**4.59**	**294**	P	**Pn**	**11 28 58.8**	**-2.2**
SANI	**Sanana**	**4.59**	**294**	P	**Pn**	**11 29 00.2**	**-0.8**
MTN	**Manton Dam**	**8.88**	**174**	P	**Pn**	**11 30 02.6**	**+2.8**
KDU	**Kakadu**	**8.97**	**165**	P	**Pn**	**11 30 01.7**	**+0.7**
KNRA	**Kununurra**	**11.73**	**187**	P	**Pn**	**11 30 40.3**	**+1.5**
DAV	**Davao City (W)**	**11.87**	**337**	LR	LR	11 35 17.1	
	comp=Z,54nm,21.3s,baz=141,slow=37						
FITZ	**Fitzroy Crossi**	**14.74**	**197**	P	**P**	**11 31 22.8**	**-0.8**
	0.4nm,0.3s,baz=17,slow=8.7,SNR=15						
FITZ				S	**Sn**	**11 33 52.4**	**-9.0**
	1.2nm,0.6s,baz=183,slow=15,SNR=1.5 1.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**14.74**	**197**	Pn	Pn	11 31 13.5	-5.6
FITZ	**Fitzroy Crossi**	**14.74**	**197**	P	**P**	**11 31 20.8**	**-2.8**
COEN	**Coen**	**16.23**	**129**	Pn	**P**	**11 31 38.8**	**-1.4**
COEN				IAmb	IAmb	11 31 46.2	
	comp=Z,36nm,1.4s						
COEN	**Coen**	**16.23**	**129**	P	**P**	**11 31 40.0**	**-0.2**
WB0	**Warramunga Arr**	**16.25**	**166**		**P**	**11 31 38.5**	**-1.8**
WRAB	**Tennant Creek**	**16.40**	**166**	Pn	**P**	**11 31 39.6**	**-2.4**
WRAB				IAmb	IAmb	11 32 00.7	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**16.40**	**166**	P	**P**	**11 31 42.1**	**+0.1**
WRA	**Warramunga Arr**	**16.40**	**166**	P	**P**	**11 31 40.9**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=348,slow=13,SNR=19						
WRA				S	**Sn**	**11 34 34.3**	**-7.4**
	comp=Z,0.7nm,0.6s,baz=335,slow=25,SNR=3.7 comp=Z,0.8nm,0.5s						
WB2	**Warramunga Arr**	**16.41**	**166**	Pn	**Pn**	**11 31 38.3**	**-2.1**
WR0	**Warramunga Arr**	**16.47**	**165**	Pn	**Pn**	**11 31 39.6**	**-1.5**
WR0				IAmb	IAmb	11 32 10.5	
	comp=Z,9.5nm,1.2s						
QIS	**Mount Isa**	**18.89**	**152**	P	**Pn**	**11 32 12.7**	**+2.0**
AS31	**Alice Springs**	**19.93**	**170**	P	**Pn**	**11 32 20.5**	**-2.5**
AS31				IAmb	IAmb	11 32 29.7	
	comp=Z,3.2nm,0.4s						
ASAR	**Alice Springs**	**19.93**	**170**	P	**Pn**	**11 32 23.4**	**+0.4**
	comp=Z,3.6nm,0.3s,baz=350,slow=11,SNR=112						
ASAR				S	**S**	**11 35 54.2**	**-7.5**
	comp=Z,0.2nm,0.6s,baz=353,slow=23,SNR=2.2 comp=Z,3.6nm,0.3s						
ASAR	**Alice Springs**	**19.93**	**170**	P	**P**	**11 32 20.1**	**-0.7**
PSA00	**Pilbara Seismi**	**20.18**	**209**	P	**P**	**11 32 19.0**	**-4.6**
WRKA	**Warakurna**	**21.04**	**185**	P	**P**	**11 32 35.0**	**+2.2**
OOD	**Oodnadatta**	**24.29**	**168**	P	**P**	**11 33 07.8**	**+2.4**
MULG	**Mulgathing**	**26.44**	**172**	P	**P**	**11 33 29.7**	**+4.7**
FORT	**Forrest**	**26.76**	**184**	P	**P**	**11 33 28.4**	**+0.5**
FORT	**Forrest**	**26.76**	**184**	P	**P**	**11 33 32.0**	**+4.2**
LCRK	**Leigh Creek**	**27.43**	**165**	P	**P**	**11 33 37.7**	**+3.8**
BBOO	**Buckleboo**	**29.23**	**170**	P	**P**	**11 33 49.4**	**-0.5**
BBOO				IAmb	IAmb	11 33 53.6	
	comp=Z,17nm,1.5s						
STKA	**Stephens Creek**	**29.78**	**160**	P	**P**	**11 33 57.1**	**+2.4**
	comp=Z,2.1nm,0.3s,baz=342,slow=9.0,SNR=14 comp=Z,2.1nm,0.3s						
STKA	**Stephens Creek**	**29.78**	**160**	P	**P**	**11 33 57.0**	**+2.2**
STKA	**Stephens Creek**	**29.78**	**160**	P	**P**	**11 33 57.4**	**+2.6**
TOO	**Toolangi**	**36.28**	**159**	P	**P**	**11 34 52.1**	**+0.7**
TOO				IAmb	IAmb	11 35 02.9	
	comp=Z,8.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**37.98**	**307**	P	**P**	**11 35 07.5**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=137,slow=8.1,SNR=6.4 comp=Z,0.9nm,0.6s						
JHS	**Saijyo**	**38.84**	**4**	P	**P**	**11 35 13.5**	**+0.4**
KSRS	**Korea Array**	**41.25**	**357**	P	**P**	**11 35 33.6**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=175,slow=9.6,SNR=6.1 comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**61.40**	**19**	P	**P**	**11 38 04.1**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=206,slow=13,SNR=4.8 comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**65.80**	**326**	P	**P**	**11 38 32.8**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=126,slow=7.3,SNR=3.7 comp=Z,0.8nm,0.6s						
SEY	**Seymchan**	**68.80**	**11**	P	**P**	**11 38 52.3**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=217,slow=20,SNR=2.8 comp=Z,2.1nm,0.6s						
KURBB	**Kurchatov Arra**	**70.03**	**328**	P	**P**	**11 38 59.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=130,slow=5.6,SNR=7.1 comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**75.43**	**173**	P	**P**	**11 39 32.2**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=328,slow=6.8,SNR=5.6 comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**75.43**	**173**	P	**P**	**11 39 30.7**	**+0.1**
VNDA				IAmb	IAmb	11 39 38.7	
	comp=Z,2.3nm,1.4s						
MAW	**Mawson**	**77.83**	**201**	P	**P**	**11 39 46.1**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=58,slow=19,SNR=2.0 comp=Z,0.8nm,0.6s						
ABKAR	**Akbulak array**	**80.25**	**321**	P	**P**	**11 39 56.4**	**-1.5**
QSPA	**South Pole Qui**	**86.00**	**180**	P	**P**	**11 40 28.9**	**+1.6**
QSPA				IAmb	IAmb	11 40 52.8	
	comp=Z,4.9nm,1.4s						
OHAK	**Old Harbor**	**86.05**	**32**	P	**P**	**11 40 29.3**	**+1.8**
KDAK	**Kodiak Island**	**86.55**	**32**	P	**P**	**11 40 31.4**	**+1.4**
ILAR	**Eielson Array**	**90.53**	**25**	P	**P**	**11 40 49.3**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=269,slow=4.5,SNR=1.9 comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**128.33**	**284**	PKP	**PKiKP**	**11 46 55.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=82,slow=1.8,SNR=2.5						

*IDC **16** 11:30:19.7±3.5,20°.86S×70°.89W,h0^{km},mb3.6/1, mbtmp3.5/2,ML3.4/1,Error ellipse: s-maj=150.7km s-min=47.1km az=113.0*
*GUC **16** 11:30:26.2±0.8,19°.89S×71°.06W,h31$^{km}_{\pm 6}$km,ML3.7*
ISC 16 11:30:25.8±2.1,**19°.92S**±0°.03×**71°.06W**±0°.10,**h29**$^{km}_{\pm 15}$**km, n26,σ1°07/30,4C-3D,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.94**	**112**	*e*P	**Pn**	**11 30 41.9**	**-1.2**
TA02				*i* S	**Sn**	**11 30 54.6**	**-0.9**
TA02				IAML		11 30 56.5	
	comp=N,5μm,0.1s						
TA01	**Diego Aracena**	**1.05**	**128**	⇓*i*P	**Pn**	**11 30 44.2**	**-0.3**
TA01				*i* S	**Sn**	**11 30 57.6**	**-0.5**
TA01				IAML		11 31 00.1	
	comp=E,2μm,0.5s						
PB12	**IPOC Station P**	**1.47**	**28**	⇑*i*P	**Pn**	**11 30 50.0**	**-0.4**
PB12				*i* S	**Sn**	**11 31 08.7**	**-0.1**
PB12				IAML		11 31 10.2	
	comp=N,1μm,0.6s						
AP01	**Chacalluta**	**1.68**	**24**	⇓*i*P	**Pn**	**11 30 53.9**	**+0.6**
AP01				*i* S	**Sn**	**11 31 14.3**	**+0.5**
AP01				IAML		11 31 21.5	
	comp=N,2μm,0.3s						
PB02	**IPOC Station P**	**1.77**	**142**	⇑*i*P	**Pn**	**11 30 55.1**	**+0.6**
PB02				*i* S	**Sn**	**11 31 16.7**	**+0.5**
PB02				IAML		11 31 27.9	
	comp=E,2μm,0.6s						
GO01	**Chusmiza**	**1.77**	**82**	⇓*e*P	**Pn**	**11 30 54.7**	**-0.2**
GO01				*i* S	**Sn**	**11 31 16.8**	**0.0**
PB01	**IPOC Station P**	**1.85**	**127**	⇑*i*P	**Pn**	**11 30 56.0**	**+0.4**
PB01				*i* S	**Sn**	**11 31 18.2**	**+0.1**
PB01				IAML		11 31 25.8	
	comp=E,949nm,0.3s						
PB07	**IPOC Station P**	**2.11**	**149**	*e*P	**Pn**	**11 30 59.8**	**+0.5**
PB07				*i* S	**Sn**	**11 31 24.0**	**-0.6**
PB07				IAML		11 31 37.2	
	comp=E,407nm,0.7s						
PB16	**IPOC Station P**	**2.15**	**43**	*e*P	**Pn**	**11 31 00.2**	**0.0**
PB16				*i* S	**Sn**	**11 31 27.5**	**+1.2**
PB16				IAML		11 31 35.5	
	comp=N,514nm,0.4s						
PB09	**IPOC Station P**	**2.53**	**138**	⇑*i*P	**Pn**	**11 31 06.6**	**+1.6**
PB09				*i* S	**Sn**	**11 31 36.2**	**+1.3**
PB09				IAML		11 31 48.5	
	comp=E,569nm,0.6s						
PB04	**IPOC Station P**	**2.55**	**161**	*e*P	**Pn**	**11 31 05.7**	**+0.3**
PB04				*i* S	**Sn**	**11 31 34.3**	**-1.2**
PB04				IAML		11 31 56.4	
	comp=N,308nm,0.1s						
PB18	**Visviri**	**2.76**	**33**	*e*P	**Pb**	**11 31 13.0**	**-1.8**
PB18				*i* S	**Sb**	**11 31 49.1**	**+0.7**
PB06	**IPOC Station P**	**3.10**	**154**	*e*P	**Pn**	**11 31 13.3**	**+0.3**
PB06				*i* S	**Sn**	**11 31 49.7**	**+0.6**
PB06				IAML		11 32 05.4	
	comp=N,168nm,0.4s						
LVC	**Limon Verde**	**3.34**	**144**	*e*P	**Pn**	**11 31 18.3**	**+1.8**
LPAZ	**La Paz**	**4.56**	**38**	Pn	Pb	11 31 39.5	-6.0
LPAZ				Sn	**Sb**	**11 32 43.5**	**+3.2**
	comp=N,0.4nm,0.3s,baz=230,slow=7.9,SNR=1.4 comp=N,2.0nm,0.4s						
H03N1	**Juan Fernandez**	**15.18**	**206**	T	T	11 49 45.8	
	baz=32,slow=72,SNR=35						
H03N2	**Juan Fernandez**	**15.18**	**206**	T	T	11 49 44.9	
	baz=32,slow=72,SNR=32						
H03N3	**Juan Fernandez**	**15.19**	**206**	T	T	11 49 44.3	
	baz=32,slow=72,SNR=27						
TORD	**Torodi Ar. Bea**	**78.75**	**72**	P	**P**	**11 42 25.5**	**-0.6**
	comp=N,0.4nm,0.7s,baz=258,slow=5.5,SNR=2.0 comp=N,0.4nm,0.7s						
H11S2	**WAKE ISLAND Hyl**	**25.66**	**279**	T	T	14 08 53.2	
	baz=101,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hyl**	**25.67**	**279**	T	T	14 08 49.6	
	baz=101,slow=74,SNR=5.9						
H11S3	**WAKE ISLAND Hyl**	**25.68**	**279**	T	T	14 08 51.0	
	baz=101,slow=74,SNR=3.5						
H11N3	**WAKE ISLAND Hyl**	**25.71**	**280**	T	T	14 08 51.7	
	baz=103						
H11N2	**WAKE ISLAND Hyl**	**25.73**	**280**	T	T	14 08 51.3	
	baz=103						
H11N1	**WAKE ISLAND Hyl**	**25.73**	**280**	T	T	14 08 53.7	
	baz=103						
MKAR	**Makanchi Array**	**145.47**	**33**	PKPbc	**PKPdf**	**11 50 01.2**	**+0.1**
	comp=N,0.2nm,0.8s,baz=323,slow=1.8,SNR=3.6						

*IDC **16** 11:55:15.1±1.8,63°.35S×172°.17E,h0^{km},mb4.0/3, mbtmp4.0/4,ML3.2/1,MS3.8/24,Error ellipse: s-maj=77.9km s-min=26.4km az=68.0*
*NEIC **16** 11:55:19.2±2.2,63°.60S±0°.07×170°.9E±0°.5,h10$^{km}_{\pm 2}$km, mb4.4/10,Error ellipse: s-maj=35.7km s-min=8.0km az=102.0*
ISC 16 11:55:18.2±0.9,**63°.56S**±0′.09×**171°.4E**±0′.3,**h10**km,**n60, σ1°27/22,mb4.4/7,MS3.8/24,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**14.35**	**188**	Pn	**Pn**	**11 58 42.1**	**+1.1**
VNDA	0.1nm,0.3s,baz=23,slow=17,SNR=22			LR	LR	12 03 02.0	
	comp=Z,516nm,20.1s,baz=22,slow=32 4.2nm,1.1s						
VNDA	**Vanda**	**14.35**	**188**		**Pn**	**11 58 42.2**	**+1.2**
SBA	**Scott Base**	**14.44**	**184**		**Pn**	**11 58 42.3**	**0.0**
WHZ	**Wether Hill Ro**	**17.81**	**352**	Pn	**P**	**11 59 26.2**	**-0.4**
WHZ				IAmb	IAmb	11 59 39.7	
	comp=Z,46nm,1.4s						
ODZ	**Otahua Downs**	**18.55**	**358**		**Pn**	**11 59 35.9**	**+0.9**
RPZ	**Rata Peaks**	**19.88**	**359**	LR	LR	12 06 02.1	
	comp=Z,338nm,20.7s,baz=176,slow=33						
CASY	**Casey**	**25.03**	**237**	P	**P**	**12 00 42.4**	**+0.5**
CASY				IAmb	IAmb	12 00 49.5	
	comp=Z,12nm,1.2s						
URZ	**Urewera**	**25.57**	**11**	LR	LR	12 08 46.9	
	comp=Z,315nm,21.3s,baz=211,slow=32						
QSPA	**South Pole Qui**	**26.53**	**180**	P	**P**	**12 00 55.2**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=25,slow=0.9,SNR=2.7						
QSPA				LR	LR	12 09 46.3	
	comp=Z,234nm,20.2s,baz=30,slow=33 comp=Z,1.6nm,1.0s						
QSPA	**South Pole Qui**	**26.53**	**180**	P	**P**	**12 00 55.7**	**-0.1**
QSPA				IAmb	IAmb	12 01 07.6	
	comp=Z,12nm,1.5s						
STKA	**Stephens Creek**	**36.81**	**315**	LR	LR	12 15 37.5	
	comp=Z,96nm,18.1s,baz=191,slow=33						
MAW	**Mawson**	**39.51**	**215**	LR	LR	12 19 00.1	
	comp=Z,216nm,19.0s,baz=158,slow=36						
DZM	**Mont Dzumac**	**41.60**	**353**	LR	LR	12 17 36.3	
	comp=Z,111nm,20.6s,baz=190,slow=32						
DZM	**Mont Dzumac**	**41.60**	**353**	*e*LR	LR	12 15 33.8	
	comp=Z,147nm,21.9s						
H01W1	**Cape Leeuwin H**	**44.88**	**282**	T	T	12 51 45.2	
	baz=148,slow=75,SNR=364						
H01W2	**Cape Leeuwin H**	**44.88**	**282**	T	T	12 51 45.6	
	baz=148,slow=75,SNR=268						
H01W3	**Cape Leeuwin H**	**44.90**	**282**	T	T	12 51 46.3	
	baz=148,slow=75,SNR=267						
SNAA	**Sanae**	**44.98**	**183**	LR	LR	12 21 41.0	
	comp=Z,241nm,18.0s,baz=198,slow=35						
PMSA	**Palmer Station**	**45.66**	**150**	LR	LR	12 21 37.6	
	comp=Z,114nm,18.1s,baz=130,slow=35						
MSVF	**Nonsavu**	**46.01**	**9**	LR	LR	12 22 05.4	
	comp=Z,123nm,18.4s,baz=194,slow=35						
MSVF	**Nonsavu**	**46.01**	**9**	P	**P**	**12 03 43.7**	**+2.0**
MSVF				IAmb	IAmb	12 03 47.1	
	comp=Z,7.6nm,1.1s						
RAR	**Rarotonga**	**46.57**	**38**	LR	LR	12 18 17.1	
	comp=Z,48nm,19.8s,baz=212,slow=30						
CTA	**Charters Tower**	**46.65**	**327**	LR	LR	12 20 07.5	
	comp=Z,95nm,19.6s,baz=126,slow=32						
ASAR	**

2.8nm,0.3s,baz=30,slow=8.1,SNR=10
URZ Urewera 18.37 192 P P 12 08 40.9 -1.9
CTA Charters Tower 33.23 264 P P 12 10 54.2 +0.7
4.4nm,0.7s,baz=89,slow=8.6,SNR=7.3
4.4nm,0.7s
CTAO Charters Tower 33.23 264 P P 12 10 54.4 +0.9
PATS Pohnpei 35.42 317 P P 12 11 12.4 +0.7
BBOO Buckleboo 42.40 243 P P 12 12 06.7 -1.0
WR0 Warramunga Arr 44.16 262 P P 12 12 21.7 +0.1
WR0 IAmb IAmb 12 13 00.2
comp=Z,5.4nm,1.3s
AS31 Alice Springs 44.30 257 P P 12 12 23.1 +0.5
ASAR Alice Springs 44.30 257 P P 12 12 23.1 +0.4
comp=Z,1.9nm,0.7s,baz=91,slow=7.8,SNR=30
comp=Z,1.9nm,0.7s
ASAR Alice Springs 44.30 257 P P 12 12 22.5 -0.1
WB0 Warramunga Arr 44.33 262 P P 12 12 23.2 +0.3
WB0 IAmb IAmb 12 12 57.4
comp=Z,8.4nm,1.4s
WB2 Warramunga Arr 44.34 262 P P 12 12 23.1 +0.2
WB2 IAmb IAmb 12 12 23.6
comp=Z,8.7nm,1.1s
WRAB Tennant Creek 44.34 262 P P 12 12 23.0 +0.1
WRAB IAmb IAmb 12 13 00.7
comp=Z,11nm,1.4s
WRA Warramunga Arr 44.35 262 P P 12 12 23.1 0.0
comp=Z,1.0nm,0.3s,baz=96,slow=7.7,SNR=100
comp=Z,1.0nm,0.3s
WRA Warramunga Arr 44.35 262 P P 12 12 22.3 -0.8
MTN Manton Dam 48.88 270 P P 12 12 57.6 +0.5
MTN IAmb IAmb 12 13 35.5
comp=Z,12nm,1.1s
KNRA Kununurra 50.39 266 P P 12 13 09.2 +1.0
KNRA IAmb IAmb 12 13 38.5
comp=Z,28nm,1.5s
FITZ Fitzroy Crossi 52.78 262 P P 12 13 25.2 -0.1
FITZ IAmb IAmb 12 13 35.9
comp=Z,5.5nm,1.2s
SBA Scott Base 58.08 184 P P 12 14 02.0 +0.9
VNDA Vanda 58.12 185 P P 12 14 02.4 +1.1
comp=Z,0.3nm,0.6s,baz=0.1,slow=8.3,SNR=6.1
comp=Z,0.3nm,0.6s
VNDA Vanda 58.12 185 P P 12 14 02.2 +0.9
QSPA South Pole Qui 69.80 180 P P 12 15 16.2 +0.6
comp=Z,1.3nm,0.7s,baz=42,slow=8.7,SNR=8.9
comp=Z,1.3nm,0.7s
QSPA South Pole Qui 69.80 180 P P 12 15 16.1 +0.4
QSPA IAmb IAmb 12 15 20.6
comp=Z,3.2nm,1.1s
ILAR Eielson Array 88.15 13 P P 12 16 51.4 -0.8
comp=Z,0.2nm,0.4s,baz=218,slow=5.7,SNR=2.8
comp=Z,0.2nm,0.4s
CMAR Chiang Mai Arr 89.77 290 P P 12 17 03.1 +2.4
comp=Z,0.7nm,0.4s,baz=123,slow=3.3,SNR=2.6
comp=Z,0.7nm,0.4s
AKASG Malin Array Be 142.67 331 PKhKP PKPpre 12 23 26.4
comp=Z,0.5nm,0.3s,baz=43,slow=4.4,SNR=6.0

*UCR **16** 12:23:04.2±2.3,8.61N×83.21W,h12km±5km,MW3.9*
*UPA **16** 12:23:04.4±1.3,8.62N×83.11W,h4km±3km,MW3.5*
ISC 16 12:23:04.1±1.2,8.62N±0.04×83.18W±0.03,h8km±9km,n30,
σ1§12/48,3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDSV	**San Vito**	**0.28**	**47**	*eP*	**Pb**	**12 23 11.1**	**-0.5**
EDSV				*eS*	**Sb**	**12 23 17.3**	**+0.8**
CDITO	**Canoas**	**0.31**	**99**	*eP*	**Pg**	**12 23 10.4**	**+0.1**
CDITO				*eS*	**Sg**	**12 23 13.9**	**-0.5**
MLIR3	**Monte Lirio, C**	**0.39**	**65**	*eP*	**Pb**	**12 23 13.6**	**+0.2**
MLIR3				*eS*	**Sg**	**12 23 17.5**	**+0.5**
EDPN	**Palmar Norte**	**0.43**	**321⇓**	*eP*	**Pg**	**12 23 12.4**	**-0.2**
EDPN				*eS*	**Sg**	**12 23 19.5**	**+1.2**
BRU2	**Volcan**	**0.51**	**71⇓**	*iP*	**Pg**	**12 23 14.3**	**+0.2**
BRU2				*eS*	**Sb**	**12 23 22.6**	**-0.5**
EDBA	**Buenos Aires**	**0.54**	**350⇓**	*eP*	**Pg**	**12 23 14.9**	**+0.2**
EDBA				*eS*	**Sb**	**12 23 23.9**	**0.0**
LIMO3	**Limones**	**0.61**	**149**	*eP*	**Pb**	**12 23 16.4**	**-0.5**
SRBA	**San Rafael, Bu**	**0.63**	**344**	*eP*	**Pg**	**12 23 16.0**	**-0.4**
SRBA				*eS*	**Sg**	**12 23 25.1**	**+0.5**
BCO2	**Palmira**	**0.65**	**82**	*eP*	**Pg**	**12 23 16.8**	**0.0**
BCO2				*eS*	**Sb**	**12 23 26.7**	**-0.4**
PTAR3	**Potrerillos Ar**	**0.68**	**84**	*eP*	**Pg**	**12 23 16.9**	**-0.4**
PTAR3				*eS*	**Sb**	**12 23 27.2**	**-0.7**
DVD	**David**	**0.75**	**104**	*eP*	**Pg**	**12 23 17.8**	**-0.7**
DVD				*eS*	**Sb**	**12 23 28.6**	**-1.1**
CHIR3	**Chiriqui UPA,**	**0.87**	**105**	*eP*	**Pg**	**12 23 19.9**	**-1.0**
CHIR3				*eS*	**Sb**	**12 23 33.7**	**+0.4**
PEZE	**Perez Zeledon,**	**0.90**	**327**	*eP*	**Pg**	**12 23 19.9**	**-1.6**
PEZE				*eS*	**Sg**	**12 23 33.1**	**-0.1**
CNI2	**El Empalme, Bo**	**1.06**	**41**	*eS*	**Sg**	**12 23 38.4**	**+0.1**
CDM	**Cerro de Muert**	**1.09**	**328**	*eP*	**Pg**	**12 23 23.4**	**-1.7**
RIMA	**Rio Macho**	**1.32**	**329**	*eP*	**Pn**	**12 23 26.4**	**-2.7**
LCR2	**La Lucha 2**	**1.38**	**324**	*eP*	**Pn**	**12 23 29.1**	**-0.7**
BATAN	**Batan**	**1.48**	**353**	*eP*	**Pn**	**12 23 30.2**	**-0.8**
BATAN				*eS*	**Sg**	**12 23 52.2**	**+0.5**
HDC	**Heredia**	**1.65**	**326**	*eP*	**Pn**	**12 23 34.2**	**+0.6**
HDC				*eS*	**Sg**	**12 23 58.0**	**+0.8**
FORC	**Fortuna**	**2.35**	**321**	*eP*	**Pn**	**12 23 44.5**	**+1.4**
CEDE	**Laguna Cedeo**	**2.38**	**321**	*eP*	**Pn**	**12 23 45.2**	**+1.6**
JTS	**Las Juntas de**	**2.41**	**314**	*eP*	**Pn**	**12 23 44.0**	**+0.1**
JTS				*eS*	**Sb**	**12 24 16.8**	**-0.8**
CACAO	**El Cacao, Vera**	**2.63**	**119**	*eP*	**Pn**	**12 23 47.0**	**+0.2**
CACAO				*eS*	**Sn**	**12 24 19.4**	**+0.5**
ACAL	**Aguas Claras**	**2.71**	**318**	*eP*	**Pn**	**12 23 50.7**	**+2.7**
CUI	**Cuipilapa**	**2.81**	**316**	*eP*	**Pn**	**12 23 51.5**	**+2.1**
GUAI	**GUAI**	**2.82**	**306**	*eP*	**Pn**	**12 23 49.7**	**+0.2**
AZU	**Azuero**	**2.99**	**106**	*eP*	**Pn**	**12 23 53.4**	**+1.5**
AZU				*eS*	**Sn**	**12 24 29.2**	**+1.2**
LAPC	**Finca la Perla**	**3.08**	**314**	*eP*	**Pn**	**12 23 55.3**	**+2.2**
GBS3	**Finca Las Img**	**3.10**	**314**	*eP*	**Pn**	**12 23 55.9**	**+2.4**
BCIP	**Isla Barro Col**	**3.35**	**80**	*eP*	**Pn**	**12 23 56.4**	**-0.4**
BCIP				*eS*	**Sn**	**12 24 35.6**	**-1.1**

*VAO **16** 12:27:34.8±0.4,19°.85S×71°.28W,h10km,mb4.4*
*NEIC **16** 12:27:36.3±1.8,19°.92S±0°.04×71°.08W±0°.04,h16km±4km,*
mb4.6/12,Mwr4.3/39,Mwr4.5(GUC),Error ellipse:
s-maj=7.1km s-min=3.5km az=51.0
*NEIC **16** 12:27:38.1,19°.92S×71°.09W,h20km,Moment Tensor*
Solution. Moment tensor: Scale 10^{15}Nm; M_w3.57;
$M_{w0.17}$; M_{w0}-3.74; $M_{w0.02}$; $M_{w0.87}$; $M_{w0.30}$; Fault
plane solution: $M_0$3.77000×10^{15} NP1:$\phi_1$167.16000°,
δ42.71000°, λ88.81000°. NP2:$\phi_2$348.78000°, δ47.30000°,
λ91.10000°. Principal axes: T 3.5828, Plg88.0000°,
Azm277.0000°; N 0.3510, Plg1.0000°, Azm168.0000°; P
-3.9338, Plg2.0000°, Azm78.0000°;
*GUC **16** 12:27:39.1±0.7, 19°.88S×70°.98W,h39km, ML4.4*
*IDC **16** 12:27:41.8±3.8, 19°.78S×70°.69W,h40km±34km,mb3.8/7,*
mbtmp4.0/10,ML3.9/3,MS3.6/12,Error ellipse:
s-maj=28.6km s-min=26.6km az=112.0
ISC 16 12:27:35.4±1.6,19°.88S±0°.03×71°.07W±0°.05,h6km±10km,
n130,σ1§35/117,mb4.6/11,MS3.6/9,8C-1D,Off coast of
northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.96**	**114**		**Pg**	**12 27 54.0**	**+0.1**
TA02				Sn	**Sg**	**12 28 06.7**	**+0.2**
TA02	**Huaiquique**	**0.96**	**114**	*i* P	**Pg**	**12 27 53.9**	**-0.1**
TA02				*i* S	**Sg**	**12 28 06.4**	**-0.1**
TA02				IAML		12 28 07.6	
comp=E,12μm,0.4s							
TA01	**Diego Aracena**	**1.08**	**129**	Pn	**Pg**	**12 27 56.5**	**+0.4**
TA01				Sn	**Sg**	**12 28 09.8**	**-0.3**
TA01	**Diego Aracena**	**1.08**	**129⇓**	*iP*	**Pg**	**12 27 56.4**	**+0.3**
TA01				*i* S	**Sg**	**12 28 09.8**	**-0.3**
TA01				IAML		12 28 14.7	
comp=N,11μm,0.3s							
PB12	**IPOC Station P**	**1.45**	**29**		**Pn**	**12 28 02.2**	**0.0**
PB12				Sn	**Sb**	**12 28 20.4**	**-1.1**
PB12	**IPOC Station P**	**1.45**	**29⇑**	*iP*	**Pn**	**12 28 02.2**	**0.0**
PB12				*i* S	**Sb**	**12 28 20.2**	**-1.2**
AP01	**Chacalluta**	**1.66**	**25**		**Pn**	**12 28 05.1**	**+0.1**
AP01	**Chacalluta**	**1.66**	**25**	*eP*	**Pn**	**12 28 05.4**	**+0.4**
AP01				*i* S	**Sn**	**12 28 25.1**	**-1.5**
AP01				IAML		12 28 29.9	
comp=E,8μm,0.7s							
GO01	**Chusmiza**	**1.78**	**83**		**Pn**	**12 28 07.0**	**-0.2**
GO01	**Chusmiza**	**1.78**	**83⇑**	*iP*	**Pn**	**12 28 07.0**	**-0.2**
GO01				*eS*	**Sn**	**12 28 28.6**	**-1.7**
GO01				IAML		12 28 31.5	
comp=N,6μm,0.6s							
PB02	**IPOC Station P**	**1.80**	**143**		**Pn**	**12 28 07.1**	**-0.1**
PB02	**IPOC Station P**	**1.80**	**143⇑**	*iP*	**Pn**	**12 28 07.3**	**+0.1**
PB02				*eS*	**Sn**	**12 28 28.5**	**-2.0**
PB02				IAML		12 28 36.9	
comp=N,13μm,0.4s							
PB01	**IPOC Station P**	**1.88**	**128**		**Pn**	**12 28 08.3**	**+0.1**
PB01	**IPOC Station P**	**1.88**	**128⇑**	*iP*	**Pn**	**12 28 08.3**	**+0.1**
PB01				*eS*	**Sn**	**12 28 30.6**	**-1.7**
PB01				IAML		12 28 37.2	
comp=N,5μm,0.5s							
PB16	**IPOC Station P**	**2.13**	**44**		**Pn**	**12 28 12.5**	**+0.3**
PB16	**IPOC Station P**	**2.13**	**44⇑**	*iP*	**Pn**	**12 28 12.4**	**+0.3**
PB16				*eS*	**Sn**	**12 28 38.7**	**-0.5**
PB07	**IPOC Station P**	**2.14**	**149**		**Pn**	**12 28 11.8**	**-0.1**
PB07	**IPOC Station P**	**2.14**	**149⇑**	*iP*	**Pn**	**12 28 11.9**	**0.0**
PB07				*i* S	**Sn**	**12 28 36.3**	**-2.6**
PB07				IAML		12 28 50.0	
comp=E,3μm,0.5s							
PB09	**IPOC Station P**	**2.56**	**138**		**Pn**	**12 28 18.8**	**+1.1**
PB09	**IPOC Station P**	**2.56**	**138⇑**	*iP*	**Pn**	**12 28 18.8**	**+1.1**
PB09				IAML		12 29 00.8	
comp=E,5μm,0.5s							
PB04	**IPOC Station P**	**2.59**	**161**		**Pn**	**12 28 17.8**	**-0.1**
PB04	**IPOC Station P**	**2.59**	**161**	*i* P	**Pn**	**12 28 17.9**	**-0.1**
PB04				IAML		12 29 05.2	
comp=N,2μm,0.6s							
PB18	**Visviri**	**2.73**	**34**		**Pn**	**12 28 23.4**	**+3.1**
PB18	**Visviri**	**2.73**	**34**	*eS*	**Sb**	**12 29 01.5**	**+2.4**
PB06	**IPOC Station P**	**3.14**	**154**		**Pn**	**12 28 24.8**	**-0.8**
PB06	**IPOC Station P**	**3.14**	**154**	*eP*	**Pn**	**12 28 25.2**	**-0.3**
PB06				*eS*	**Sn**	**12 29 03.2**	**-0.3**
PB06				IAML		12 29 22.9	
comp=N,1μm,0.3s							
LVC	**Limon Verde**	**3.38**	**144**	Pn	**Pn**	**12 28 30.4**	**+1.3**
comp=N,13nm,0.3s,baz=313,slow=9.7,SNR=58							
LVC				Sn	**Sn**	**12 29 07.8**	**-1.9**
comp=N,25nm,0.3s,baz=108,slow=11,SNR=4.1							
LVC				Lg	Lg	12 29 18.0	
comp=N,78nm,0.3s,baz=100,slow=9.2,SNR=8.9							
LVC				LR	LR	12 30 07.0	
comp=N,783nm,20.7s,baz=322,slow=44							
comp=N,53nm,0.4s							
LVC	**Limon Verde**	**3.38**	**144**	Pn	**Pn**	**12 28 29.8**	**+0.7**
LVC	**Limon Verde**	**3.38**	**144⇑**	*iP*	**Pn**	**12 28 30.4**	**+1.3**
LVC				*eS*	**Sn**	**12 29 08.7**	**-1.0**
LVC	**Limon Verde**	**3.38**	**144**	*eP*	**Pn**	**12 28 30.3**	**+1.2**
PB15	**IPOC Station P**	**3.63**	**156**		**Pn**	**12 28 31.9**	**-0.5**
PB15	**IPOC Station P**	**3.63**	**156**	*i* P	**Pn**	**12 28 32.0**	**-0.4**
AF01	**San Pedro de A**	**4.07**	**139**	Pn	**Pn**	**12 28 38.0**	**-0.5**
LPAZ	**La Paz**	**4.54**	**38**	Pn	**Pn**	**12 28 47.7**	**+2.5**
comp=N,0.2nm,0.3s,baz=185,slow=7.8,SNR=7.2							
LPAZ				Lg	Lg	12 30 00.6	
comp=N,2.1nm,0.3s,baz=240,slow=16,SNR=1.5							
LPAZ				LR	LR	12 30 38.1	
comp=N,618nm,18.9s,baz=241,slow=42							
LPAZ	**La Paz**	**4.54**	**38**		**Pn**	**12 28 47.5**	**+2.2**
PB14	**IPOC Station P**	**4.76**	**173**	Pn	**Pn**	**12 28 45.9**	**-2.1**
GO02	**Mina Guanaco**	**5.43**	**166**	Pn	**Pn**	**12 28 56.4**	**-0.8**
AC01	**Pan de Azucar**	**6.25**	**176**	Pn	**Pn**	**12 29 06.6**	**-1.6**
AC02	**Maricunga**	**7.15**	**166**	Pn	**Pn**	**12 29 19.5**	**-1.5**
AC06	**Mina Casimiro**	**7.47**	**175**	Pn	**Pn**	**12 29 23.7**	**-1.3**
GO03	**Copiap**	**7.71**	**174**	Pn	**Pn**	**12 29 26.7**	**-1.7**
AC04	**Llanos de Chal**	**8.28**	**180**	Pn	**Pn**	**12 29 34.3**	**-1.8**
AC05	**El Transito**	**8.94**	**175**	Pn	**Pn**	**12 29 43.6**	**-1.7**
NNA	**Nana**	**9.61**	**324**	Pn	**Pn**	**12 30 01.8**	**+7.4**
comp=N,1.0nm,0.3s,baz=228,slow=14,SNR=1.5							
NNA				Sn	**Sn**	**12 31 43.2**	**+0.3**
comp=N,1.4nm,0.3s,baz=283,slow=5.6,SNR=1.8							
NNA				LR	LR	12 33 53.8	
comp=N,157nm,18.8s,baz=162,slow=38							
NNA	**Nana**	**9.61**	**324**	Pn	**Pn**	**12 29 54.0**	**-0.4**
SIV	**San Ignacio**	**10.27**	**69**	Pn	**Pn**	**12 30 00.9**	**-2.6**
comp=N,0.2nm,0.3s,baz=256,slow=9.7,SNR=20							
SIV				Sn	**Sn**	**12 31 58.3**	**-0.8**
baz=330,slow=21,SNR=1.2							
comp=N,5.0nm,0.6s							
CO06	**Fray Jorge**	**10.76**	**183**	Pn	**Pn**	**12 30 08.9**	**-1.1**
CO03	**El Tabedegal**	**10.91**	**178**	Pn	**Pn**	**12 30 11.5**	**-0.8**
ETMB	**Extrema**	**11.05**	**26**	Pn	**Pn**	**12 30 13.4**	**-0.7**
ETMB	**Extrema**	**11.05**	**26**	*eP*	**Pn**	**12 30 14.4**	**+0.3**
CO02	**Combarbal**	**11.27**	**180**	Pn	**Pn**	**12 30 15.3**	**-1.9**
CZSB	**Cruzeiro do Su**	**12.19**	**352**	Pn	**Pn**	**12 30 27.4**	**-2.2**
CZSB	**Cruzeiro do Su**	**12.19**	**352**	*eP*	**Pn**	**12 30 28.2**	**-1.5**
PTLB	**Pontes e Lacer**	**12.20**	**71**	Pn	**Pn**	**12 30 27.9**	**-1.9**
PTLB	**Pontes e Lacer**	**12.20**	**71**	*eP*	**Pn**	**12 30 30.9**	**+1.0**
VILB	**Vilhena**	**12.50**	**58**	Pn	**Pn**	**12 30 32.1**	**-1.9**
VILB	**Vilhena**	**12.50**	**58**	*eP*	**Pn**	**12 30 35.9**	**+2.0**
SAML	**Samuel**	**13.28**	**36**	Pn	**Pn**	**12 30 40.6**	**-4.1**
MT02	**Curacav**	**13.32**	**180**	Pn	**Pn**	**12 30 41.7**	**-3.4**
MT09	**Talagante**	**13.84**	**180**	Pn	**Pn**	**12 30 51.1**	**-1.2**
MT01	**Popeta**	**13.93**	**181**	Pn	**Pn**	**12 30 51.6**	**-1.8**
CPUP	**Villa Florida**	**14.17**	**119**	Pn	**Pn**	**12 30 57.0**	**+0.2**
comp=N,0.1nm,0.3s,baz=313,slow=11,SNR=3.3							
comp=N,1.1nm,0.6s							
AQDB	**Aquidauana**	**14.45**	**95**	*eP*	**Pn**	**12 31 01.3**	**+0.7**
SALV	**Santo Antonio**	**15.16**	**77**	*eP*	**Pn**	**12 31 12.1**	**+1.9**
H03N1	**Juan Fernandez**	**15.20**	**206**	T	T	12 46 52.1	
baz=32,slow=72,SNR=96							
H03N2	**Juan Fernandez**	**15.21**	**206**	T	T	12 46 55.1	
baz=32,slow=72,SNR=70							
H03N3	**Juan Fernandez**	**15.22**	**206**	T	T	12 46 50.8	
baz=32,slow=72,SNR=62							
PDRB	**Porto dos Gac**	**16.06**	**61**	*eP*	**Pn**	**12 31 23.4**	**+1.4**
BOSC	**San Juan Bosco**	**18.14**	**336**		**Pn**	**12 31 46.4**	**-2.0**
PTGB	**Pitanga**	**18.23**	**109**	*eP*	**Pn**	**12 31 50.8**	**+1.5**
ITAB	**Concordia**	**18.83**	**116**	P	**P**	**12 31 54.2**	**-1.9**
ITAB				IAmb	IAmb	12 32 03.6	
comp=Z,29nm,1.3s							
CPSB	**Cacapava Do Su**	**19.07**	**127**	*eP*	**P**	**12 32 00.0**	**+1.4**
MACA	**Manacapuru-AM**	**19.47**	**33**	*eP*	**P**	**12 32 02.8**	**-0.3**
TRQA	**Tornquist**	**19.76**	**158**	P	**P**	**12 32 07.7**	**+1.5**
NPGB	**Novo Progresso**	**19.88**	**52**	*eP*	**P**	**12 32 06.6**	**-1.1**
CNLB	**Canela**	**20.62**	**121**	*eP*	**P**	**12 32 17.0**	**+1.4**
PLCA	**Paso Flores**	**20.79**	**179**	P	**P**	**12 32 21.4**	**+4.0**
comp=Z,1.9nm,0.7s,baz=341,slow=13,SNR=2.3							
comp=Z,1.9nm,0.7s							
PLCA	**Paso Flores**	**20.79**	**179**	P	**P**	**12 32 15.7**	**-1.7**
PLCA	**Paso Flores**	**20.79**	**179**	*eP*	**P**	**12 32 16.0**	**-1.4**
OTAV	**Otavalo**	**21.26**	**339**	*eP*	**P**	**12 32 20.2**	**-2.8**
TER01	**Tubaro-SC**	**21.76**	**118**	*eP*	**P**	**12 32 29.0**	**+1.1**
RCLB	**Rio Claro- Sao**	**22.09**	**101**	*eP*	**P**	**12 32 33.3**	**+1.7**
BDFB	**Brasilia**	**22.35**	**83**	P	**P**	**12 32 33.3**	**-1.2**
comp=Z,4.6nm,0.5s,baz=245,slow=11,SNR=5.0							
comp=Z,4.6nm,0.5s							
BDFB	**Brasilia**	**22.35**	**83**	*eP*	**P**	**12 32 34.3**	**-0.2**
PET01	**Itanhaem-SP**	**22.47**	**106**	*eP*	**P**	**12 32 37.1**	**+1.5**
PMNB	**Patos De Minas**	**23.30**	**91**	*eP*	**P**	**12 32 45.6**	**+1.3**
BOAV	**Boa Vista**	**24.44**	**26**	P	**P**	**12 32 54.5**	**-0.7**
BOAV				IAmb	IAmb	12 32 55.8	
comp=Z,13nm,0.8s							
BOAV	**Boa Vista**	**24.44**	**26**	*eP*	**P**	**12 32 55.0**	**-0.2**
ROSC	**El Rosal**	**24.77**	**352**	P	**P**	**12 32 56.2**	**-2.4**
ROSC				IAmb	IAmb	12 33 07.8	
comp=Z,9.6nm,0.8s							
SMTB	**Santa Maria do**	**25.21**	**68**	*eP*	**P**	**12 33 01.9**	**-0.3**
DIAM	**Diamantina, MG**	**25.93**	**91**	*eP*	**P**	**12 33 08.0**	**-0.9**
JANB	**Januaria**	**25.96**	**84**	*eP*	**P**	**12 33 06.7**	**-2.3**
BAUV	**El Baul**	**28.80**	**6**	P	**P**	12 33 31.9	-2.5
BAUV				IAmb	IAmb	12 33 46.2	
comp=Z,22nm,1.0s							
MDP	**Montagnes des**	**30.74**	**38**	LR	LR	12 46 51.6	
comp=Z,222nm,18.9s,baz=204,slow=38							
ROSB	**Rosrio**	**31.26**	**61**	*eP*	**P**	**12 33 56.5**	**+0.3**
RPN	**Rapa Nui**	**35.72**	**251**	LR	LR	12 45 35.1	
comp=Z,111nm,19.5s,baz=76,slow=30							
RCBR	**Riachuelo**	**36.92**	**73**	LR	LR	12 51 31.0	
comp=Z,114nm,18.3s,baz=344,slow=39							
TKL	**Tuckaleechee C**	**56.53**	**348**	LR	LR	13 02 37.6	
comp=Z,40nm,19.1s,baz=143,slow=37							
LPIG	**La Paz**	**58.07**	**317**	LR	LR	12 57 38.8	
comp=Z,30nm,19.2s,baz=338,slow=31							
TXAR	**Lajitas Arpu**	**58.16**	**326**	P	**P**	**12 37 32.4**	**+2.0**
comp=Z,0.7nm,1.0s,baz=138,slow=6.8,SNR=2.4							
comp=Z,0.7nm,1.0s							
TX31	**Lajitas Ar. Si**	**58.16**	**326**	P	**P**	**12 37 29.4**	**-1.0**
TX31				IAmb	IAmb	12 37 37.2	
comp=Z,9.3nm,1.4s							
MIAR	**Mount Ida**	**58.21**	**338**	P	**P**	**12 37 29.9**	**-0.6**
WHAR	**Wooly Hollow**	**58.45**	**340**	P	**P**	**12 37 31.0**	**-1.2**
VNA3	**Neumayer Olymp**	**62.25**	**161**	P	**P**	**12 37 59.8**	**+2.0**
VNA1	**Neumayer--Stat**	**62.48**	**160**	P	**P**	**12 38 01.8**	**+2.6**
VNA2	**Neumayer--Watz**	**62.84**	**161**	P	**P**	**12 38 03.7**	**+2.0**
baz=269,slow=2.5							
SNAA	**Sanae**	**64.46**	**161**	P	**P**	**12 38 13.9**	**+1.5**
SNAA	**Sanae**	**64.46**	**161**	P	**P**	**12 38 11.4**	**-1.0**
SADO	**Sadowa**	**64.76**	**354**	LR	LR	13 09 02.7	
comp=Z,22nm,18.3s,baz=191,slow=38							
TROLL	**Troll, Antarti**	**66.18**	**161**	P	**P**	**12 38 25.4**	**+1.7**
QSPA	**South Pole Qui**	**70.30**	**180**	P	**P**	**12 38 49.5**	**-0.1**
QSPA				IAmb	IAmb	12 38 54.2	
comp=Z,12nm,1.4s							
NVAR	**Mina Array Bea**	**72.98**	**323**	P	**P**	**12 39 08.5**	**+2.2**
comp=Z,0.4nm,0.7s,baz=166,slow=4.6,SNR=4.2							
comp=Z,0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**78.74**	**72**	P	**P**	**12 39 37.8**	**-1.6**
comp=Z,4.1nm,0.7s,baz=253,slow=4.8,SNR=23							
comp=Z,4.1nm,0.7s							
MDT	**Midelt**	**82.29**	**51**	LR	LR	13 15 45.1	
comp=Z,40nm,19.7s,baz=186,slow=35							
BOSA	**Boshof**	**85.99**	**119**	LR	LR	13 16 01.2	
comp=Z,27nm,19.9s,baz=192,slow=34							
ESDC	**Sonseca Array**	**86.13**	**45**	P	**P**	**12 40 17.8**	**+0.2**
comp=Z,1.6nm,1.1s,baz=246,slow=5.8,SNR=5.8							
comp=Z,1.6nm,1.1s							
LBTB	**Lobatse**	**87.53**	**116**	LR	LR	13 16 29.2	
comp=Z,40nm,19.8s,baz=215,slow=34							
YKA	**Yellowknife Ar**	**89.01**	**341**	P	**P**	**12 40 31.4**	**+0.6**
comp=Z,1.8nm,1.0s,baz=138,slow=4.4,SNR=5.0							
comp=Z,1.8nm,1.0s							
H11S2	**WAKE ISLAND Hyl**	**25.65**	**279**	T	T	15 05 58.2	
baz=101,slow=74,SNR=34							
H11S1	**WAKE ISLAND Hyl**	**25.66**	**279**	T	T	15 05 59.3	
baz=101,slow=74,SNR=23							
H11S3	**WAKE ISLAND Hyl**	**25.67**	**279**	T	T	15 06 02.3	
baz=101,slow=74,SNR=12							
H11N3	**WAKE ISLAND Hyl**	**25.69**	**280**	T	T	15 06 03.5	
baz=102,slow=74,SNR=15							
H11N2	**WAKE ISLAND Hyl**	**25.71**	**280**	T	T	15 06 01.4	
baz=102,slow=74,SNR=15							
H11N1	**WAKE ISLAND Hyl**	**25.71**	**280**	T	T	15 06 15.6	
baz=102,slow=74,SNR=8.6							
ASAR	**Alice Springs**	**130.34**	**211**	PKP	**PKPdf**	**12 46 48.3**	**+0.7**
comp=Z,0.5nm,1.0s,baz=138,slow=1.6,SNR=2.8							
WRA	**Warramunga Arr**	**133.24**	**214**	PKP	**PKPdf**	**12 46 53.6**	**+0.5**
comp=Z,0.5nm,0.9s,baz=159,slow=1.6,SNR=2.6							
ZALV	**Zalesovo Beam**	**141.30**	**23**	PKP	**PKPdf**	**12 47 05.8**	**-1.1**
comp=Z,0.9nm,0.6s,baz=332,slow=2.5,SNR=2.8							
MKAR	**Makanchi Array**	**145.45**	**33**	PKPbc	**PKPbc**	**12 47 14.8**	**+0.3**
comp=Z,2.0nm,0.7s,baz=339,slow=4.3,SNR=16							
KSH	**Kashi**	**145.60**	**48**	PKPbc	**PKPdf**	**12 47 16.0**	**+0.9**
KSH				pPKP	PKiKP	12 47 24.9	+5.8
SONM	**Songino Array**	**152.04**	**4**	PKPbc	**PKPbc**	**12 47 32.8**	**+1.0**
comp=Z,1.1nm,0.7s,baz=323,slow=0.3,SNR=6.5							

WEL 16 12:39:18.3±0.7,45°S±3°×16°7E±°,h12km,M3.7/13,
ML3.9/16,MLv3.7/13,Error ellipse: s-maj=0.0km
s-min=0.0km az=112.3,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.36**	**195**	P	Pb	12 39 26.9	+0.3
DCZ				S	Sb	12 39 32.1	-0.1
MSZ	**Milford Sound**	**0.63**	**46**	P	Pg	12 39 30.5	-0.1
MSZ				S	Sg	12 39 38.9	0.0
MLZ	**Mavora Lakes**	**0.64**	**113**	P	Pb	12 39 31.7	+0.3
MLZ				S	Sb	12 39 40.4	+0.1
WHZ	**Wether Hill Ro**	**0.91**	**149**	P	Pg	12 39 35.8	+0.1
PYZ	**Puysegur Point**

BBOO	**Buckleboo**	**33.35**	**234**	P	**P**	**12 51 05.7 -0.4**
KNRA	**Kununurra**	**37.74**	**265**	P	**P**	**12 51 44.3 +0.6**
FITZ	**Fitzroy Crossi**	**40.51**	**261**	P	**P**	**12 52 07.4 +0.8**
	comp=Z,0.8nm,0.3s,baz=84,slow=8.6,SNR=9.3					
	comp=Z,0.8nm,0.3s					
FITZ	**Fitzroy Crossi**	**40.51**	**261**	P	**P**	**12 52 07.5 +0.8**
FITZ				IAmb	IAmb	12 52 19.7
	comp=Z,6.3nm,1.4s					
TOLI2	**Tolitoli**	**49.69**	**286**	P	**P**	**12 53 17.9 -1.1**
TOLI2				IAmb	IAmb	12 53 37.3
	comp=Z,6.2nm,0.9s					
QSPA	**South Pole Qui**	**73.93**	**180**	P	**P**	**12 56 01.4 +1.1**
QSPA				IAmb	IAmb	12 56 15.4
	comp=Z,5.6nm,1.4s					
ARCES	**ARCESS Array B**	**121.76**	**345**	PKP	**PKiKP**	**13 03 18.3 +1.2**
	comp=Z,1.4nm,0.4s,baz=67,slow=2.2,SNR=20					

NIED ***16*** *13:00:25.6,25.83N×125.56E,h16km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.42; $M_{\theta\theta}$5.93; $M_{\phi\phi}$-0.51; $M_{r\theta}$4.63; $M_{\theta\phi}$1.01; $M_{\phi r}$3.63; Fault plane solution: $M_0$8.24000×10^{14} NP1: ϕ_s101.00000°,δ27.00000°,λ-54.00000°. NP2: ϕ_s241.00000°,δ69.00000°,λ-107.00000°.*

JMA ***16*** *13:00:25.6±0.2,25.8N±0.6×125.6E±0.7,h16km±2km, MV3.8/20,NW OFF MIYAKOJIMA ISLAND*

IDC ***16*** *13:00:36.7±5.2,25.67N×125.72E,h96km±51km,mb3.4/5, mbtmp3.7/6,MS3.3/11,Error ellipse: s-maj=49.6km s-min=18.6km az=74.0*

ISC 16 13:00:25.5±2.3,25.79N±0.06×125.58E±0.05,h7km±15km, n37,σ1§24/35,mb3.8/5,MS3.3/9,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.92**	**199**	*eP*	**Pb**	**13 00 43.3**	**-0.5**
JIKM				*eS*	**Sg**	**13 00 56.5**	**+1.5**
JIRB	**Irabujima**	**1.03**	**201**	P	**Pb**	**13 00 45.1**	**-0.6**
JIRB				*eS*	**Sb**	**13 00 58.9**	**-0.5**
JOGS	**Gusukube**	**1.04**	**189**	P	**Pb**	**13 00 45.2**	**-0.6**
JOGS				S	**Sb**	**13 00 59.3**	**-0.4**
JMJ2	**Miyako jima3**	**1.07**	**193**	P	**Pb**	**13 00 46.0**	**-0.5**
JMJ2				*eS*	**Sb**	**13 01 00.7**	**+0.1**
JKE	**Kume jima 2**	**1.21**	**64**	P	**Pn**	**13 00 47.7**	**-1.2**
JKE				S	**Sb**	**13 01 03.6**	**-1.0**
JTJ	**Tarama**	**1.40**	**215**	P	**Pn**	**13 00 51.1**	**-0.4**
JTJ				S	**Sn**	**13 01 09.1**	**-1.0**
JAGN	**Aguni-jima**	**1.69**	**62**	P	**Pn**	**13 00 55.2**	**-0.3**
JAGN				*eS*	**Sn**	**13 01 15.9**	**-1.6**
JIJ	**Ishigaki jima**	**1.93**	**223**	P	**Pn**	**13 00 58.4**	**-0.4**
JIJ				*eS*	**Sn**	**13 01 22.1**	**-1.3**
JJT3	**Tamagusuku3**	**2.01**	**79**	*eP*	**Pn**	**13 01 00.2**	**+0.2**
JJT3				S	**Sb**	**13 01 25.9**	**-1.8**
JKRS	**Kuro-shima**	**2.10**	**223**	P	**Pn**	**13 01 01.3**	**0.0**
JKRS				S	**Sn**	**13 01 27.1**	**-0.6**
IRIF	**Iriomote-Funau**	**2.22**	**230**	P	**Pn**	**13 01 03.0**	**+0.2**
IRIF				*eS*	**Sn**	**13 01 30.1**	**-0.4**
JNTH	**Nagotoyohara**	**2.31**	**71**	P	**Pn**	**13 01 03.9**	**-0.2**
JNTH				S	**Sn**	**13 01 32.7**	**0.0**
HATJ	**Hateruma jima**	**2.36**	**223**	P	**Pn**	**13 01 04.9**	**+0.1**
JIH	**Iheya**	**2.47**	**59**	P	**Pn**	**13 01 07.1**	**+0.8**
JIH				S	**Sn**	**13 01 36.8**	**0.0**
JOW	**Kunigami**	**2.63**	**66**	P	**Pn**	**13 01 09.1**	**+0.6**
YOJ	**Yonaguni jima**	**2.68**	**241**	P	**Pb**	**13 01 11.7**	**-2.2**
JYNG	**Yonagunijimaku**	**2.74**	**241**	P	**Pb**	**13 01 12.4**	**-2.4**
KSRS	**Korea Array**	**11.80**	**9**	P	Pn	13 03 22.3	+8.0
	2.0nm,0.9s,baz=184,slow=13,SNR=8.8						
KSRS				LR	LR	13 08 01.6	
	comp=Z,72nm,18.7s,baz=210,slow=38						
DAV	**Davao City (W)**	**18.62**	**180**	LR	LR	13 13 27.0	
	comp=Z,50nm,18.2s,baz=129,slow=42						
KLR	**Kul'dur**	**23.89**	**10**	LR	LR	13 13 57.1	
	comp=Z,38nm,20.9s,baz=176,slow=33						
SONM	**Songino Array**	**26.69**	**330**	P	**P**	**13 06 09.9**	**+4.4**
	1.8nm,0.9s,baz=142,slow=11,SNR=10						
SONM				LR	LR	13 18 11.7	
	comp=Z,60nm,21.8s,baz=144,slow=39						
	1.8nm,0.9s						
SIJI	**Sorong**	**27.07**	**167**	LR	LR	13 14 25.1	
	comp=Z,52nm,21.0s,baz=106,slow=31						
H11N1	**WAKE ISLAND Hy**	**38.46**	**90**	T	T	13 48 19.6	
	baz=290						
H11N2	**WAKE ISLAND Hy**	**38.46**	**90**	T	T	13 48 03.7	
	baz=290						
H11N3	**WAKE ISLAND Hy**	**38.47**	**90**	T	T	13 48 10.0	
	baz=290						
H11S3	**WAKE ISLAND Hy**	**38.64**	**92**	T	T	13 48 31.7	
	baz=287						
H11S1	**WAKE ISLAND Hy**	**38.65**	**92**	T	T	13 48 29.5	
	baz=287						
H11S2	**WAKE ISLAND Hy**	**38.66**	**92**	T	T	13 48 37.5	
	baz=287						
MKAR	**Makanchi Array**	**40.07**	**313**	P	**P**	**13 08 02.2**	**+0.6**
	0.3nm,0.6s,baz=98,slow=10,SNR=3.1						
MKAR				LR	LR	13 25 40.9	
	comp=Z,37nm,18.6s,baz=120,slow=37						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**41.18**	**324**	LR	LR	13 25 50.2	
	comp=Z,29nm,18.2s,baz=173,slow=37						
WRA	**Warramunga Arr**	**46.25**	**169**	P	**P**	**13 08 51.2**	**-0.6**
	0.7nm,0.6s,baz=352,slow=8.6,SNR=12						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**49.82**	**170**	P	**P**	**13 09 19.3**	**-0.1**
	0.4nm,0.5s,baz=356,slow=9.3,SNR=9.7						
	0.4nm,0.5s						
ARU	**Arti**	**56.27**	**322**	LR	LR	13 35 58.1	
	comp=Z,53nm,19.4s,baz=116,slow=38						
KIRV	**Kirov**	**61.22**	**325**	LR	LR	13 38 57.1	
	comp=Z,30nm,18.8s,baz=75,slow=38						
KVAR	**Kislovodsk Arr**	**67.67**	**309**	LR	LR	13 42 38.8	
	comp=Z,117nm,21.3s,baz=96,slow=37						
NOA	**NORSAR Array B**	**78.64**	**333**	LR	LR	13 50 10.3	
	comp=Z,19nm,19.0s,baz=80,slow=38						
YKA	**Yellowknife Ar**	**79.91**	**24**	P	**P**	**13 12 34.8**	**-0.1**
	1.8nm,1.0s,baz=308,slow=4.8,SNR=5.1						
	1.8nm,1.0s						

ROM 16 13:13:18.0±0.2,39.993N±0.007×15.96E±0.01,h11km±1km, ML1.2/3,1C-1D,Error ellipse: s-maj=0.9km s-min=0.8km az=240.0,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMN	**Mormanno**	**0.11**	**166**	⇑P	Pg	13 13 21.4	+0.6
MMN				S	Sg	13 13 23.5	+0.9
MMN				AML	AML		
	comp=E,176μm,0.3s						
MMN				AML	AML		
	comp=N,339μm,0.3s						
CUC	**Castrocucco**	**0.11**	**270**	P	Pg	13 13 21.2	+0.3
CUC				S	Sg	13 13 23.2	+0.3
CUC				AML	AML		
	comp=E,424μm,0.5s						
CUC				AML	AML		
	comp=N,344μm,0.2s						
CUC				AML	AML		
	comp=E,553μm,0.5s						
CUC				AML	AML		
	comp=N,415μm,0.2s						
SIRI	**Monte Sirino -**	**0.20**	**340**	⇓P	Pb	13 13 23.4	-0.5
SIRI				S	Sg	13 13 27.2	+1.8
SIRI				AML	AML		
	comp=N,144μm,1.5s						
SIRI				AML	AML		
	comp=E,141μm,1.5s						
SIRI				AML	AML		
	comp=N,145μm,1.5s						
SCHR	**S. Chirico Rap**	**0.23**	**24**	P	Pg	13 13 22.7	-0.1
SCHR				S	Sg	13 13 27.2	+1.2
MTSN	**Montesano sull**	**0.32**	**330**	P	Pg	13 13 25.0	+0.6
MGR	**Morigerati**	**0.34**	**295**	P	Pg	13 13 25.5	+0.6
MGR				S	Sg	13 13 30.5	+1.0
MGR				AML	AML		
	comp=E,40μm,0.5s						
MGR				AML	AML		
	comp=N,35μm,1.6s						

ROM 16 13:14:19.1±0.1,42.672N±0.004×12.682E±0.007, h10km,ML1.2/3,4C-1D,Error ellipse: s-maj=0.6km s-min=0.4km az=233.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESX	**Cesi**	**0.10**	**231**	⇑P	Pg	13 14 22.0	+0.4
CESX				AML	AML		
	comp=E,334μm,0.7s						
CESX				AML	AML		
	comp=N,385μm,0.2s						
CESX				AML	AML		
	comp=N,385μm,0.2s						
CESX				AML	AML		
	comp=E,334μm,0.7s						
CESX				AML	AML		
	comp=N,385μm,0.2s						
CESX				AML	AML		
	comp=E,334μm,0.7s						
CESX	**Cesi**	**0.10**	**231**	P	Pg	13 14 22.0	+0.3
CESX				S	Sg	13 14 23.9	+0.4
ARRO	**Arrone**	**0.11**	**146**	P	Pg	13 14 22.6	+0.8
ARRO				S	Sg	13 14 24.9	+1.1
LNSS	**Leonessa**	**0.27**	**104**	⇑P	Pg	13 14 25.2	+0.6
LNSS				S	Sb	13 14 29.7	-1.2
LNSS				AML	AML		
	comp=E,100μm,1.0s						
LNSS				AML	AML		
	comp=N,78μm,0.6s						
LNSS				AML	AML		
	comp=N,77μm,0.6s						
LNSS				AML	AML		
	comp=E,101μm,1.0s						
NRCA	**Norcia**	**0.36**	**63**	P	Pg	13 14 26.6	+0.4
NRCA				S	Sb	13 14 32.2	-1.1
NRCA				AML	AML		
	comp=E,94μm,0.7s						
NRCA				AML	AML		
	comp=N,88μm,0.1s						
NRCA				AML	AML		
	comp=E,94μm,0.7s						
NRCA				AML	AML		
	comp=N,88μm,0.1s						
ASSB	**Assisi San Ben**	**0.37**	**357**	⇑P	Pg	13 14 26.7	+0.2
ASSB				AML	AML		
	comp=E,40μm,1.0s						
ASSB				AML	AML		
	comp=N,38μm,0.9s						
ASSB				AML	AML		
	comp=N,38μm,0.9s						
ASSB				AML	AML		
	comp=E,40μm,1.0s						
ASSB				AML	AML		
	comp=N,38μm,0.9s						
ASSB				AML	AML		
	comp=E,40μm,1.0s						
ASSB	**Assisi San Ben**	**0.37**	**357**	P	Pg	13 14 26.6	+0.1
ASSB				S	Sb	13 14 32.9	-0.8
CESI	**CESI - Serrava**	**0.37**	**26**	⇑P	Pg	13 14 26.8	+0.4
CESI				AML	AML		
	comp=E,54μm,1.1s						
CESI				AML	AML		
	comp=N,90μm,0.3s						
CESI				AML	AML		
	comp=N,90μm,0.3s						
CESI				AML	AML		
	comp=E,54μm,1.1s						
CESI				AML	AML		
	comp=N,90μm,0.3s						
CESI				AML	AML		
	comp=E,54μm,1.1s						
CESI	**CESI - Serrava**	**0.37**	**26**	P	Pg	13 14 26.8	+0.3
CESI				S	Sb	13 14 33.1	-0.6
RM33	**Pellescritta (**	**0.43**	**112**	P	Pg	13 14 27.9	+0.4
RM33				S	Sb	13 14 34.6	-0.7
FDMO	**Fiordimonte**	**0.47**	**39**	P	Pg	13 14 28.4	+0.1
FDMO				S	Sb	13 14 36.1	-0.5
MGAB	**Montegabbione**	**0.48**	**300**	⇓P	Pb	13 14 29.6	-0.1
MGAB				AML	AML		
	comp=E,27μm,0.2s						
MGAB				AML	AML		
	comp=N,43μm,1.3s						
MGAB				AML	AML		
	comp=N,43μm,1.3s						
MGAB				AML	AML		
	comp=E,27μm,0.2s						
MGAB				AML	AML		
	comp=N,43μm,1.3s						
MGAB				AML	AML		
	comp=E,27μm,0.2s						
MGAB	**Montegabbione**	**0.48**	**300**	P	Pb	13 14 29.2	-0.5
MGAB				S	Sb	13 14 36.5	-0.4
FIAM	**Fiamignano**	**0.52**	**141**	P	Pg	13 14 29.3	+0.1
FIAM				S	Sb	13 14 37.2	-0.7
FIAM				AML	AML		
	comp=N,17μm,0.5s						
FIAM				AML	AML		
	comp=E,19μm,1.1s						
CSP1	**Cessapalombo**	**0.57**	**42**	P	Pg	13 14 30.4	+0.2
CSP1				S	Sb	13 14 39.3	-0.2
CERT	**Cerreto**	**0.76**	**163**	P	Pg	13 14 33.2	-0.4
CERT				S	Sb	13 14 44.6	-0.2

IDC 16 13:26:14.0±385.0,57.58N×29.65E,h0km,Error ellipse: s-maj=93.7km s-min=28.5km az=160.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.21**	**99**	*i*		13 54 20.0	
	baz=282,slow=317,SNR=1.0						
I37NO	**I37NO**	**12.52**	**341**	*i*		14 37 10.0	
	baz=152,slow=327,SNR=2.5						
I26DE	**FREYUNG INFRAS**	**12.92**	**234**	*i*		14 46 50.0	
	baz=39,slow=327,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**18.06**	**101**	*i*		15 24 50.0	
	baz=304,slow=314,SNR=0.7						

SKHL ***16*** *13:53:55.8±0.6,50.30N×142.50E,h8km±2km,mb4.6/5 MOS* ***16*** *13:53:56.3±2.0,50.37N×142.68E,h5km,mb3.7/1,Error ellipse: s-maj=25.3km s-min=11.5km az=79.7*

IDC ***16*** *13:53:57.1±0.9,50.60N×142.38E,h0km,mb3.5/7, mbtmp3.5/9,ML2.6/2,MS2.6/5,Error ellipse: s-maj=36.6km s-min=21.0km az=139.0*

ISC 16 13:53:57.4±0.6,50.40N±0.03×142.28E±0.07,h10km,n20, σ1§44/24,mb3.5/7,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.52**	**27**	*e*PN	**Pg**	**13 54 06.7**	**-0.9**
TYV				*eS*	**Sg**	**13 54 13.7**	**-0.7**
TYV				pmax	pmax		
	comp=Z,400nm,2.2s						
TYV				pmax	pmax		
	comp=Z,257nm,0.4s						
TYV				smax	smax		
	comp=N,1μm,0.4s						
TYV				smax	smax		
	comp=E,1μm,0.4s						
TYV				smax	smax		
	comp=N,2μm,0.5s						
TYV				smax	smax		
	comp=E,2μm,0.5s						
TYV	**Tymovskoe**	**0.52**	**27**	*e*Pg	**Pg**	**13 54 06.7**	**-0.9**
TYV				AMB	AMB	13 54 06.8	
	comp=E,257nm,0.3s						
TYV				*e*Sg	**Sg**	**13 54 13.9**	**-0.5**
TYV				A	A	13 54 14.1	
	comp=E,2μm,0.3s						
TYV				A	A	13 54 14.1	
	comp=E,2μm,0.3s						
UGL	**Uglegorsk**	**1.33**	**186**	*e*PN	**Pn**	**13 54 20.8**	**-1.2**
UGL				*eS*	**Sb**	**13 54 38.6**	**-0.9**
UGL				pmax	pmax		
	comp=Z,194nm,0.6s						
UGL				smax	smax		
	comp=N,259nm,0.3s						
UGL				smax	smax		
	comp=E,1μm,0.9s						
UGL	**Uglegorsk**	**1.33**	**186**	*e*Pg	**Pn**	**13 54 21.1**	**-0.9**
UGL				AMB	AMB	13 54 21.4	
	comp=E,200nm,0.4s						
UGL				*e*Sg	**Sg**	**13 54 39.2**	**-1.0**
UGL				A	A	13 54 42.0	
	comp=E,800nm,0.7s						
UGL				A	A	13 54 42.0	
	comp=E,1μm,0.7s						

YSS	**Yuzh-Sakhalins**	**3.46**	**175**	*e*PN	**Pn**	**13 54 50.5 -0.8**
YSS				pmax	pmax	
	comp=Z,70nm,0.6s					
YSS				MLR	MLR	
	comp=Z,100nm,8.0s					
YSS	**Yuzh-Sakhalins**	**3.46**	**175**	*e*P	**Pn**	**13 54 50.3 -1.0**
YSS				*e*Pg	**Pg**	**13 55 02.5 -1.2**
YSS				AMB	AMB	13 55 02.6
	comp=Z,40nm,0.6s					
YSS				*eS*	**Sn**	**13 55 30.0 -2.3**
YSS				*eSg*	**Sg**	**13 55 50.5 +2.0**
YSS				A	A	13 55 54.3
	comp=Z,80nm,0.7s					
YSS				A	A	13 55 54.3
	comp=Z,70nm,0.7s					
GRNR	**Gornyy**	**3.75**	**278**	*e*PN	**Pb**	**13 55 02.0 -1.7**
GRNR				*e*		13 55 49.0
GRNR				pmax	pmax	
	comp=N,2.0nm,0.2s					
GRNR				pmax	pmax	
	comp=E,6.0nm,0.2s					
GRNR				pmax	pmax	
	comp=Z,2.0nm,0.3s					
GRNR				smax	smax	
	comp=N,10.0nm,0.3s					
KLR	**Kul'dur**	**6.92**	**264**	LR	LR	13 58 22.6
	comp=N,66nm,21.5s,baz=50,slow=38					
USRK	**Ussuriysk Ar.**	**9.34**	**232**	Pn	**Pn**	**13 56 11.4 -0.6**
	comp=N,0.4nm,0.3s,baz=39,slow=16,SNR=3.0					
USRK				Lg	Lg	13 58 51.2
	comp=N,0.3nm,0.3s,baz=146,slow=24,SNR=2.8					
PETK	**Petropavlovsk-**	**9.94**	**68**	Pn	**Pn**	**13 56 20.7 +0.6**
	comp=N,0.1nm,0.3s,baz=231,slow=6.9,SNR=2.1					
PETK				LR	LR	14 00 43.6
	comp=N,27nm,20.6s,baz=275,slow=42					
	comp=N,3.8nm,1.1s					
MA2	**Magadan**	**10.40**	**25**	LR	LR	14 00 08.4
	comp=N,44nm,18.4s,baz=142,slow=36					
KSRS	**Korea Array**	**16.53**	**224**	Pn	**P**	**13 57 54.1 +2.4**
	comp=N,0.1nm,0.3s,baz=46,slow=11,SNR=2.4					
KSRS				LR	LR	14 03 50.9
	comp=N,20nm,20.9s,baz=345,slow=36					
	comp=N,0.4nm,0.5s					
SHEM	**Shemya Is, Ala**	**19.83**	**71**	LR	LR	14 06 19.3
	comp=N,18nm,20.4s,baz=252,slow=38					
ILAR	**Eielson Array**	**38.34**	**41**	P	**P**	**14 01 17.6 -0.4**
	comp=N,0.5nm,0.8s,baz=289,slow=8.2,SNR=3.2					
	comp=N,0.5nm,0.8s					
MKAR	**Makanchi Array**	**38.90**	**289**	P	**P**	**14 01 24.1 +1.2**
	comp=N,0.6nm,0.8s,baz=58,slow=9.2,SNR=6.0					
	comp=N,0.6nm,0.8s					
NVAR	**Mina Array Bea**	**66.83**	**57**	P	**P**	**14 04 49.8 +0.3**
	comp=N,0.4nm,0.6s,baz=317,slow=4.9,SNR=3.5					
	comp=N,0.4nm,0.6s					
PDAR	**Pinedale Array**	**68.10**	**49**	P	**P**	**14 04 56.9 -0.5**
	comp=N,0.3nm,0.6s,baz=272,slow=4.2,SNR=2.2					
	comp=N,0.3nm,0.6s					
WRA	**Warramunga Arr**	**70.38**	**188**	P	**P**	**14 05 12.1 +0.7**
	comp=N,0.3nm,0.8s,baz=8.0,slow=6.7,SNR=1.8					
	comp=N,0.3nm,0.8s					
ASAR	**Alice Springs**	**74.11**	**188**	P	**P**	**14 05 37.2 +3.7**
	comp=N,0.2nm,0.6s,baz=6.5,slow=5.7,SNR=6.6					
	comp=N,0.2nm,0.6s					
TXAR	**Lajitas Array**	**81.56**	**54**	P	**P**	**14 06 15.9 +0.5**
	comp=N,0.4nm,0.8s,baz=324,slow=4.5,SNR=3.8					
	comp=N,0.4nm,0.8s					

NEIC ***16*** *14:06:08.2±0.9,17.85S±0.2×177.9W±0.2,h530km±9km, mb4.2/13,Error ellipse: s-maj=33.9km s-min=20.7km az=60.0*

IDC ***16*** *14:06:10.2±2.8,17.87S×178.26W,h528km±23km,mb3.1/5, mbtmp4.1/6,Error ellipse: s-maj=110.5km s-min=28.7km az=156.0*

ISC 16 14:06:11.0±1.2,18.0S±0.2×178.3W±0.2,h550km,n22, σ1§19/22,mb4.1/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**274**	P	**P**	**14 07 27.1**	**-2.6**
	23nm,0.5s,baz=167,slow=23,SNR=49						
MSVF	**Nonsavu**	**3.54**	**274**	P	**P**	**14 07 27.4**	**-2.3**
RAO	**Raoul Island**	**11.20**	**179**	P	**P**	**14 08 39.5**	**-1.6**
QRZ	**Quartz Range**	**24.09**	**197**	P	**P**	**14 10 44.9**	**+1.5**
RPZ	**Rata Peaks**	**27.17**	**197**	P	**P**	**14 11 09.8**	**-0.9**
RPZ				IAmb	IAmb	14 11 21.0	
	comp=Z,11nm,1.1s						
ARMA	**Armidale**	**30.02**	**240**	P	**P**	**14 11 37.0**	**+1.2**
ARMA				IAmb	IAmb	14 12 14.9	
	comp=Z,14nm,1.4s						
CTA	**Charters Tower**	**33.58**	**261**	P	**P**	**14 12 06.9**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=98,slow=16,SNR=1.3						
	comp=Z,4.6nm,0.9s						
CTAO	**Charters Tower**	**33.58**	**261**	P	**P**	**14 12 07.0**	**+0.8**
COEN	**Coen**	**37.26**	**270**	P	**P**	**14 12 37.1**	**+0.4**
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**14 12 49.6**	**+1.3**
	comp=Z,1.8nm,0.6s,baz=90,slow=10,SNR=5.5						
	comp=Z,1.8nm,0.6s						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**14 12 49.7**	**+1.4**
BBOO	**Buckleboo**	**43.49**	**241**	P	**P**	**14 13 26.9**	**+0.7**
WR0	**Warramunga Arr**	**44.58**	**260**	P	**P**	**14 13 34.9**	**+0.1**
WR0				IAmb	IAmb	14 14 05.4	
	comp=Z,7.4nm,1.2s						
WB0	**Warramunga Arr**	**44.73**	**260**	P	**P**	**14 13 36.3**	**+0.3**
WB0				IAmb	IAmb	14 14 13.2	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**44.76**	**260**	P	**P**	**14 13 36.2**	**+0.1**
WB2				IAmb	IAmb	14 13 55.9	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**44.77**	**260**	P	**P**	**14 13 36.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=98,slow=7.5,SNR=39						
	comp=Z,0.4nm,0.3s						
AS31	**Alice Springs**	**44.91**	**254**	P	**P**	**14 13 37.9**	**+0.6**
ASAR	**Alice Springs**	**44.91**	**254**	P	**P**	**14 13 38.3**	**+1.0**
	comp=Z,5.3nm,0.6s,baz=89,slow=8.0,SNR=148						
	comp=Z,5.3nm,0.6s						
ASAR	**Alice Springs**	**44.91**	**254**	P	**P**	**14 13 37.5**	**+0.2**
KAPI	**Kappang**	**61.85**	**274**	P	**P**	**14 15 36.8**	**-0.7**
KAPI				IAmb	IAmb	14 16 05.4	
	comp=Z,16nm,1.3s						
QSPA	**South Pole Qui**	**72.05**	**180**	P	**P**	**14 16 40.0**	**+0.6**
TXAR	**Lajitas Array**	**85.92**	**58**	P	**P**	**14 17 54.3**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=224,slow=3.8,SNR=3.1						
	comp=Z,0.4nm,0.8s						

IDC ***16*** *14:35:17.6±2.1,40.15N×12.68E,h518km±33km,mb2.6/4, mbtmp3.6/9,Error ellipse: s-maj=34.5km s-min=19.8km az=137.0*

ISC 16 14:35:16.8±1.1,40.1N±0.2×12.7E±0.1,h500km,n9, σ1§31/9,mb3.1/4,Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GERES	**GERESS Array B**	**8.79**	**4**	P	**P**	**14 37 21.0**	**-0.3**
	2.7nm,0.4s,baz=181,slow=11,SNR=24						
MLR	**Muntele Rosu**	**11.11**	**57**	P	**P**	**14 37 47.6**	**+1.7**
	1.9nm,0.4s,baz=312,slow=24,SNR=4.6						
ESDC	**Sonseca Array**	**12.83**	**274**	P	**P**	**14 38 04.0**	**-0.1**
	0.4nm,0.3s,baz=71,slow=10,SNR=5.1						
AKASG	**Malin Array Be**	**15.68**	**42**	P	**P**	**14 38 34.3**	**+0.5**
	0.9nm,0.3s,baz=235,slow=8.4,SNR=2.3						
EKA	**Eskdalemuir Ar**	**18.56**	**331**	P	**P**	**14 39 01.8**	**-0.1**
	0.3nm,0.3s,baz=140,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**28.53**	**203**	P	**P**	**14 40 31.7**	**+0.3**
	0.3nm,0.5s,baz=13,slow=9.9,SNR=2.1						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**46.00**	**54**	P	**P**	**14 42 51.7**	**-2.6**
	0.3nm,0.7s,baz=279,slow=7.4,SNR=2.1						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**48.95**	**48**	P	**P**	**14 43 16.3**	**-0.1**
	0.7nm,0.4s,baz=287,slow=8.7,SNR=2.9						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**49.45**	**58**	P	**P**	**14 43 20.5**	**+0.2**
	0.2nm,0.3s,baz=270,slow=7.2,SNR=2.6						
	0.2nm,0.3s						

THE ***16*** *14:38:40.7,41.18N×19.47E,h22km±6km,ML2.0/3,Error ellipse: s-maj=8.7km s-min=1.2km az=331.0*

TIR ***16*** *14:38:41.4,41.03N×19.67E,h20km±27km,Md2.9,Ml2.3*

SKO ***16*** *14:38:41.7,40.99N×19.73E,h9km*

**ISC 16 14:38:42.3±

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**27**	P	**Pb**	**14 38 48.3**	**-0.9**
TIR				S	**Sb**	**14 38 53.8**	**0.0**
TIR	**Tirane**	**0.30**	**27**	*i* Sg	**Sb**	**14 38 55.3**	**+1.5**
TIR	**Tirane**	**0.30**	**27**	P	**Pb**	**14 38 48.4**	**-0.7**
	baz=25						
TIR				S	**Sb**	**14 38 54.7**	**+0.9**
	baz=25						
TIR				AMP			
	comp=N,1.5nm,0.3s,baz=25						
TIR	**Tirane**	**0.30**	**27**	*i* Pg	**Pb**	**14 38 48.4**	**-0.7**
PHP	**Peshkopia**	**0.83**	**43**	P	**Pb**	**14 38 56.1**	**-2.0**
PHP				S	**Sn**	**14 39 10.7**	**+0.4**
PHP	**Peshkopia**	**0.83**	**43**	P	**Pb**	**14 38 56.1**	**-2.0**
	baz=41						
PHP				S	**Sn**	**14 39 11.7**	**+1.3**
	baz=41						
PHP				AMP			
	comp=N,0.4nm,0.4s,baz=41						
OHR	**Ohrid**	**0.84**	**87**	*i* Sg	**Sb**	**14 39 08.5**	**-0.7**
OHR	**Ohrid**	**0.84**	**87**	*i* Pg	**Pb**	**14 38 56.5**	**-1.8**
ULC	**Ulcinj**	**0.94**	**340**	*i* Pg	**Pn**	**14 39 00.2**	**0.0**
LSK	**Leskovik**	**1.16**	**143**	P	**Pb**	**14 39 02.7**	**-1.0**
LSK				S	**Sn**	**14 39 21.9**	**+3.4**
LSK	**Leskovik**	**1.16**	**143**	P	**Pb**	**14 39 03.4**	**-0.4**
	baz=140						
LSK				AMP			
	comp=E,0.2nm,0.5s,baz=140						
SRN	**Sarande**	**1.22**	**168**	P	**Pb**	**14 39 05.4**	**+0.7**
	baz=167						
SRN				S	**Sn**	**14 39 20.9**	**+1.1**
	baz=167						
SRN				AMP			
	comp=E,0.1nm,0.2s,baz=167						
NEST	**Nestorio**	**1.23**	**122**	P	**Pb**	**14 39 04.5**	**-0.4**
NEST				S	**Sn**	**14 39 22.5**	**+2.3**
	comp=E,22nm,0.7s						
BCI	**Bajram Curri**	**1.32**	**12**	P	**Pb**	**14 39 07.5**	**+1.1**
	baz=12						
BCI				S	**Sb**	**14 39 26.8**	**+3.9**
	baz=12						
BCI				AMP			
	comp=N,0.4nm,0.5s,baz=12						
SCTE	**Santa Cesarea**	**1.37**	**223**	P	**Pb**	**14 39 06.4**	**-0.8**
	baz=225						
SCTE				S	**Sb**	**14 39 25.1**	**+1.0**
	baz=225						
KEK	**Kerkira**	**1.37**	**176**	P	**Pb**	**14 39 05.9**	**-1.3**
KEK				S	**Sb**	**14 39 24.5**	**+0.3**
	comp=N,58nm,0.6s						
PDG	**Podgorica**	**1.39**	**347**	*i* Pg	**Pb**	**14 39 08.7**	**+1.1**
IGT	**Igoumenitsa**	**1.62**	**162**	P	**Pb**	**14 39 10.7**	**-0.8**
IGT				S	**Sb**	**14 39 31.8**	**+0.3**
	comp=N,32nm,0.6s						
IGT	**Igoumenitsa**	**1.62**	**162**	P	**Pb**	**14 39 10.7**	**-0.8**
	baz=161						
IGT				S	**Sb**	**14 39 33.0**	**+1.5**
	baz=161						
DBRK	**Dubrovnik**	**1.96**	**325**	*e*Pn	**Pn**	**14 39 13.0**	**-1.2**
DBRK				Sn	**Sn**	**14 39 37.8**	**-0.3**
STON	**Ston**	**2.32**	**321**	*e*Pn	**Pn**	**14 39 16.9**	**-2.3**
STON				Sn	**Sn**	**14 39 46.1**	**-0.9**
LSTV	**Lastovo**	**2.68**	**310**	*e*Pn	**Pn**	**14 39 21.5**	**-2.5**
MAKA	**Makarska**	**2.96**	**319**	*e*Pn	**Pn**	**14 39 27.8**	**-0.1**

KRNET ***16*** *14:43:19.3±0.1, 39°.46N×73°.58E, mb3.8*
SOME ***16*** *14:43:20.0, 39°.53N×73°.48E, h5km*
NNC ***16*** *14:43:24.1±1.5, 39°.67N×73°.54E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=13.2km s-min=6.7km az=166.0*
ISC 16 14:43:23.8±1.0, 39°.69N±0°.05×73°.42E±0°.03, h10km, n45, σ2ş30/71, 11C-19D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.97**	**330**	⇓*e*P	**Pb**	**14 43 42.6**	**-0.1**
	baz=30						
OHH				⇓*i*S	**Sn**	**14 43 59.8**	**+2.4**
	baz=30						
ARLS	**Aral**	**2.28**	**17**	⇓*e*P	**Pn**	**14 44 02.8**	**+1.2**
	baz=13						
ARLS				⇓*i*S	**Sb**	**14 44 34.5**	**+1.1**
	baz=13						
AML	**Almayashu**	**2.45**	**5**	P	**Pb**	**14 44 07.3**	**-0.9**
	SNR=124						
GAR	**Garm**	**2.50**	**255**	⇓*i*P	**Pn**	**14 44 04.5**	**-0.1**
	baz=61						
GAR				⇓*i*S	**Sb**	**14 44 37.4**	**-2.3**
	baz=61						
TRKS	**Terek-Say**	**2.53**	**317**	⇑*e*P	**Pn**	**14 44 06.1**	**+1.0**
	baz=18						
TRKS				⇑*i*S	**Sb**	**14 44 40.6**	**0.0**
	baz=18						
UCH	**Uchtor**	**2.67**	**18**	P	**Pb**	**14 44 09.9**	**-2.0**
	SNR=32						
UCH	**Uchtor**	**2.67**	**18**	⇓*e*P	**Pn**	**14 44 08.5**	**+1.2**
	baz=14						
UCH				⇓*i*S	**Sb**	**14 44 44.4**	**-0.6**
	baz=14						
EKS2	**Erkin-Say**	**2.98**	**5**	P	**Pb**	**14 44 14.8**	**-2.4**
	SNR=7.8						
EKS2	**Erkin-Say**	**2.98**	**5**	⇓*e*P	**Pn**	**14 44 13.0**	**+1.7**
	baz=3.0						
EKS2				⇓*e*S	**Sb**	**14 44 52.1**	**-1.6**
	baz=3.0						
AAK	**Ala-Archa**	**3.06**	**15**	P	**Pb**	**14 44 16.7**	**-1.7**
	SNR=11						
AAK	**Ala-Archa**	**3.06**	**15**	⇑*e*P	**Pn**	**14 44 13.9**	**+1.6**
	baz=12						
AAK				⇑*e*S	**Sb**	**14 44 53.5**	**-2.3**
	baz=12						
KBK	**Karagaybulak**	**3.18**	**21**	P	**Pb**	**14 44 18.3**	**-2.2**
	SNR=8.6						
KBK	**Karagaybulak**	**3.18**	**21**	⇓*e*P	**Pn**	**14 44 15.3**	**+1.2**
	baz=18						
KBK				⇓*e*S	**Sb**	**14 44 56.1**	**-3.4**
	baz=18						
ULHL	**Ulahol**	**3.33**	**39**	P	**Pb**	**14 44 23.3**	**+0.2**
	SNR=6.3						
BOOM	**Boomskoye usch**	**3.39**	**33**	⇑*e*P	**Pn**	**14 44 17.4**	**+0.5**
	baz=30						
BOOM				⇑*e*S	**Sn**	**14 44 59.9**	**+2.7**
	baz=30						
CHMS	**Chumysh**	**3.46**	**16**	P	**Pn**	**14 44 18.1**	**+0.3**
	SNR=6.7						
CHMS	**Chumysh**	**3.46**	**16**	⇓Pn	**Pn**	**14 44 20.3**	**+2.6**
	4.2nm,0.4s						
CHMS				⇓Lg	Lg	14 45 14.0	
	30nm,0.8s						
CHGR	**Chuyangaron**	**3.47**	**254**	⇑*e*P	**Pn**	**14 44 17.7**	**-0.2**
	baz=58						
CHGR				⇑*e*S	**Sn**	**14 45 00.3**	**+1.2**
	baz=58						
IUG	**Iuzhnay**	**3.55**	**315**	*e*P	**Pb**	**14 44 27.7**	**+0.9**
	260nm,0.5s						
IUG				*e*S	**Sg**	**14 45 16.4**	**-1.5**
	46nm,0.4s						
IUG	**Iuzhnay**	**3.55**	**315**	Pg	**Pg**	**14 44 30.4**	**-1.4**
	260nm,0.5s						
IUG				Lg	Lg	14 45 21.4	
	46nm,0.4s						
TKM2	**Tokmak 2**	**3.62**	**26**	⇑Pn	**Pb**	**14 44 23.7**	**-4.4**
	11nm,0.8s						
TKM2				⇑Lg	Lg	14 45 19.9	
	23nm,0.6s						
KST	**Kastek**	**3.86**	**29**	*e*P	**Pb**	**14 44 33.7**	**+1.7**
	12nm,0.5s						
KST				*e*S	**Sg**	**14 45 27.2**	**-0.6**
	39nm,0.9s						
KST	**Kastek**	**3.86**	**29**	Pg	**Pb**	**14 44 33.3**	**+1.2**
	12nm,0.5s						
KST				Lg	Lg	14 45 26.6	
	39nm,0.9s						
SGDS	**Sogindy**	**3.87**	**13**	*e*P	**Pb**	**14 44 33.9**	**+1.7**
	4.4nm,0.6s						
SGDS				*e*S	**Sg**	**14 45 27.0**	**-1.0**
	16nm,0.9s						
SGDS	**Sogindy**	**3.87**	**13**	Pg	**Pb**	**14 44 34.5**	**+2.3**
	4.4nm,0.6s						
SGDS				Lg	Lg	14 45 28.5	
	16nm,0.9s						
KK31	**Karatay Array**	**4.05**	**328**	Pn	**Pn**	**14 44 28.8**	**+2.9**
	0.6nm,0.3s,baz=132,slow=11,SNR=39						
KK31				⇓Pg	**Pg**	**14 44 38.0**	**-3.4**
	3.9nm,0.5s,baz=148,slow=15,SNR=12						
KK31				⇓Sn	**Sn**	**14 45 17.2**	**+3.7**
	2.9nm,0.2s,baz=151,slow=56,SNR=5.1						
KK31				⇑Lg	Lg	14 45 31.9	
	15nm,0.4s,baz=142,slow=30,SNR=2.9						
MTBS	**Maitube**	**4.12**	**32**	*e*P	**Pb**	**14 44 38.4**	**+2.0**
	8.0nm,0.6s						
MTBS				*e*S	**Sg**	**14 45 35.1**	**-1.0**
	22nm,0.5s						
MTBS	**Maitube**	**4.12**	**32**	Pg	**Pb**	**14 44 37.9**	**+1.5**
	12nm,0.6s						
MTBS				Lg	Lg	14 45 34.9	
	22nm,0.5s						
KRBS	**Karabastau**	**4.35**	**22**	*e*P	**Pb**	**14 44 42.7**	**+2.4**
	5.3nm,0.5s						
KRBS				*e*S	**Sg**	**14 45 42.9**	**-0.5**
	9.1nm,0.8s						
KRBS	**Karabastau**	**4.35**	**22**	Pg	**Pb**	**14 44 42.3**	**+2.0**
	5.3nm,0.5s						
KRBS				Lg	Lg	14 45 42.6	
	9.1nm,0.8s						
MDOK	**Medeo**	**4.42**	**37**	*e*P	**Pb**	**14 44 43.0**	**+1.4**
	7.6nm,0.8s						
MDOK				*e*S	**Sg**	**14 45 42.5**	**-3.1**
	16nm,0.8s						
MDOK	**Medeo**	**4.42**	**37**	Pg	**Pb**	**14 44 42.6**	**+1.0**
	7.6nm,0.8s						
MDOK				⇓Pg	Pg	14 44 43.4	-5.0
	7.6nm,0.7s						
MDOK				Lg	Lg	14 45 42.7	
	16nm,0.8s						
MDOK				⇓Lg	Lg	14 45 44.8	
	21nm,0.7s						
KTBS	**Karatobe**	**4.71**	**30**	*e*P	**Pb**	**14 44 48.0**	**+1.7**
	3.8nm,0.4s						
KTBS				*e*S	**Sg**	**14 45 52.1**	**-2.8**
	14nm,0.6s						
KTBS	**Karatobe**	**4.71**	**30**	Pg	**Pb**	**14 44 48.4**	**+2.0**
	3.8nm,0.4s						
KTBS				Lg	Lg	14 45 53.2	
	14nm,0.6s						
KUU	**Kurty**	**4.74**	**26**	*e*P	**Pb**	**14 44 49.5**	**+2.6**
	2.5nm,0.5s						
KUU				*e*S	**Sg**	**14 45 53.7**	**-2.1**
	18nm,0.7s						
KUU	**Kurty**	**4.74**	**26**	Pg	**Pb**	**14 44 49.1**	**+2.2**
	2.5nm,0.5s						
KUU				Lg	Lg	14 45 53.7	
	18nm,0.7s						
KURS	**Kuram**	**5.21**	**42**	*e*P	**Pg**	**14 44 59.2**	**-4.3**
	4.8nm,0.9s						
KURS				*e*S	**Sg**	**14 46 11.2**	**+0.2**
	13nm,1.4s						
KURS	**Kuram**	**5.21**	**42**	Pg	**Pb**	**14 44 58.1**	**+3.1**
	4.7nm,0.5s						
KURS				Lg	Lg	14 46 08.7	
	13nm,1.4s						
UZB	**Uzynbulak**	**5.45**	**49**	*e*P	**Pb**	**14 45 00.2**	**+1.1**
	1.4nm,0.1s						
UZB				*e*S	**Sg**	**14 46 12.7**	**-6.0**
	7.3nm,0.5s						
UZB	**Uzynbulak**	**5.45**	**49**	Pg	**Pb**	**14 45 02.6**	**+3.4**
	1.4nm,0.1s						
UZB				Lg	Lg	14 46 16.4	
	7.3nm,0.5s						
KPKS	**Kokpek**	**5.46**	**45**	*e*P	**Pb**	**14 45 01.5**	**+2.1**
	4.2nm,0.4s						
KPKS				*e*S	**Sg**	**14 46 14.6**	**-4.6**
	8.6nm,0.9s						
KPKS	**Kokpek**	**5.46**	**45**	Pg	**Pb**	**14 44 59.7**	**+0.4**
	2.2nm,0.3s						
KPKS				Lg	Lg	14 46 11.6	
	8.6nm,0.9s						
ARXS	**Arharly**	**5.59**	**35**	*e*P	**Pb**	**14 45 04.6**	**+3.1**
	6.8nm,0.8s						
ARXS				*e*S	**Sg**	**14 46 20.1**	**-3.1**
	9.5nm,0.7s						
SHLS	**Shalkode**	**5.71**	**51**	*e*P	**Pg**	**14 45 11.6**	**-1.6**
	3.0nm,0.5s						
SHLS				*e*S	**Sg**	**14 46 31.6**	**+4.4**
	6.5nm,1.6s						
AB31	**Akbulak array**	**13.55**	**319**	Pn	**Pn**	**14 46 38.4**	**+2.4**
	0.5nm,0.7s,baz=129,slow=15,SNR=6.7						
AB31				⇓Sn	**Sn**	**14 49 06.2**	**-0.2**
	0.6nm,0.7s,baz=127,slow=25,SNR=2.6						

IDC 16 14:43:28.0±576.0, 54°.94N×40°.49E, h0km, Error ellipse: s-maj=189.5km s-min=30.8km az=148.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**2.57**	**315**	*i*		15 00 50.0	
	baz=130,slow=322,SNR=1.4						
I37NO	**I37NO**	**17.33**	**333**	*i*		16 31 00.0	
	baz=134,slow=328,SNR=1.0						
I26DE	**FREYUNG INFRAS**	**17.55**	**261**	*i*		16 28 00.0	
	baz=64,slow=321,SNR=0.6						

IDC ***16*** *15:02:26.1±8.4, 25°.96S×28°.99E, h0km, mbtmp2.9/1, ML2.5/1, Error ellipse: s-maj=85.0km s-min=57.6km az=140.0*
BUL ***16*** *15:02:33.3±1.8, 26°.16S×29°.43E, h10km±17km, MD3.7*
EAF ***16*** *15:02:33.0±2.4, 26°.19S×29°.54E, h19km±31km, MD3.5*
ISC 16 15:02:30.6±1.5, 26°.17S±0°.07×29°.50E±0°.07, h10km, n15, σ2ş13/22, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.15**	**34**	*i* P	**Pn**	**15 03 19.6**	**-0.8**
MOPA				*i* S	**Sn**	**15 03 56.8**	**-1.2**
MOPA	**Mopani**	**3.15**	**34**	*i* P	**Pn**	**15 03 19.6**	**-0.8**
MOPA				*i* S	**Sn**	**15 03 56.8**	**-1.2**
LBTB	**Lobatse**	**3.71**	**287**	*i* P	**Pn**	**15 03 28.5**	**+0.4**
LBTB				*i* S	**Sn**	**15 04 10.2**	**-1.8**
LBTB	**Lobatse**	**3.71**	**287**	*i* P	**Pn**	**15 03 28.5**	**+0.4**
LBTB				*i* S	**Sn**	**15 04 10.2**	**-1.8**
MUSN	**Musina, Limpop**	**3.88**	**5**	*i* P	**Pn**	**15 03 33.4**	**+3.1**
MUSN				*i* S	**Sn**	**15 04 15.7**	**-0.3**
MUSN	**Musina, Limpop**	**3.88**	**5**	*i* P	**Pn**	**15 03 33.4**	**+3.1**
MUSN				*i* S	**Sn**	**15 04 15.7**	**-0.3**
BOSA	**Boshof**	**4.49**	**236**	Pn	Pn	15 03 32.0	-6.9
	0.2nm,0.3s,baz=54,slow=15,SNR=1.9						
BOSA				Pg	Pb	15 03 44.4	-5.3
	1.0nm,0.3s,baz=46,slow=17,SNR=7.6						
BOSA				Lg	Lg	15 04 39.8	
	1.5nm,0.3s,baz=150,slow=14,SNR=9.4						
	2.4nm,0.8s						
BOSA	**Boshof**	**4.49**	**236**	*i* P	**Pn**	**15 03 41.1**	**+2.2**
BOSA				*i* S	**Sn**	**15 04 29.3**	**-2.1**
BOSA	**Boshof**	**4.49**	**236**	*i* P	**Pn**	**15 03 41.1**	**+2.2**
BOSA				*i* S	**Sn**	**15 04 29.3**	**-2.1**
I47ZA	**BOSHOF INFRASO**	**4.51**	**236**	*i*		15 32 20.0	
	baz=53,slow=333,SNR=1.4						
MATP	**Matopo**	**5.79**	**351**	*i* P	**Pn**	**15 03 59.0**	**+2.3**
MATP				*i* S	**Sn**	**15 05 00.2**	**-3.1**
MATP	**Matopo**	**5.79**	**351**	*i* P	**Pn**	**15 03 59.0**	**+2.3**
MATP				*i* S	**Sn**	**15 05 00.2**	**-3.1**
BLWY	**Bulawayo**	**6.05**	**352**	*i* P	**Pn**	**15 04 02.5**	**+2.1**
BLWY	**Bulawayo**	**6.05**	**352**	*i* P	**Pn**	**15 04 02.5**	**+2.1**
I35NA	**TSUMEB INFRASO**	**13.01**	**300**	*i*		16 24 15.0	
	baz=122,slow=311,SNR=9.7						

MOS ***16*** *15:24:09.3±1.1, 40°.53N×141°.34E, h97km, mb4.2/11, Error ellipse: s-maj=8.8km s-min=5.7km az=70.3*
NIED ***16*** *15:24:09.9, 40°.44N×141°.38E, h90km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-0.64; Mθθ7.07; Mϕϕ-6.42; Mrθ2.33; Mθϕ-1.74; Mϕr-4.00; Fault plane solution: M₀8.38000×10¹⁴ NP1:ϕs54.00000°, δ57.00000°, λ-174.00000°. NP2:ϕs321.00000°, δ85.00000°, λ-33.00000°.*
JMA ***16*** *15:24:09.9±0.1, 40°.4N±0°.3×141°.4E±0°.5, h90km, MV3.8/40, EASTERN AOMORI PREF*
JMA Felt II J1 at EASTERN AOMORI PREF .
NEIC ***16*** *15:24:09.9±2.5, 40°.43N±0°.06×141°.44E±0°.09, h80km±5km, mb4.4/52, Error ellipse: s-maj=10.5km s-min=7.3km az=120.0*
IDC ***16*** *15:24:11.3±2.4, 40°.40N×141°.30E, h105km±23km, mb3.6/15, mbtmp3.9/19, MS2.6/1, Error ellipse: s-maj=16.4km s-min=13.6km az=104.0*
ISC 16 15:24:10.2±0.5, 40°.46N±0°.03×141°.41E±0°.04, h92km±4km, n152, σ1ş16/165, mb4.3/55, 6C-8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.12**	**138**	⇓*i*P	**Pn**	**15 24 22.5**	**-0.7**
JANG				⇓S	**Sn**	**15 24 31.7**	**-1.1**
JKEN	**Kujiedanarisaw**	**0.34**	**138**	⇓*i*P	**Pn**	**15 24 23.6**	**-0.4**
JKEN				⇓S	**Sn**	**15 24 33.9**	**-0.5**
JTM	**Tenmabayashi**	**0.42**	**321**		**Pn**	**15 24 23.6**	**-1.0**
JTM				Sn	**Sn**	**15 24 32.9**	**-2.4**
JTM	**Tenmabayashi**	**0.42**	**321**	*i* P	**Pn**	**15 24 23.9**	**-0.7**
JTM				S	**Sn**	**15 24 34.1**	**-1.1**
JAH	**Hinai**	**0.65**	**246**	*i* P	**Pn**	**15 24 25.6**	**-0.8**
JAH				S	**Sn**	**15 24 37.3**	**-1.3**
JOT	**Ohata**	**0.96**	**343**	*i* P	**Pn**	**15 24 29.3**	**-0.3**
JOT				S	**Sn**	**15 24 44.2**	**+0.1**
JOM	**Ohasama**	**0.99**	**185**	*i* P	**Pn**	**15 24 29.5**	**-0.4**
JOM				S	**Sn**	**15 24 44.1**	**-0.6**
JIW	**Iwasaki**	**1.08**	**278**	⇓*i*P	**Pn**	**15 24 30.4**	**-0.6**
JIW				⇓*e*S	**Sn**	**15 24 45.7**	**-0.8**
JRG	**Rokugo**	**1.22**	**210**	*i* P	**Pn**	**15 24 32.4**	**-0.2**
JRG				S	**Sn**	**15 24 49.7**	**+0.2**
JSR	**Shiriuchi**	**1.31**	**325**	*i* P	**Pn**	**15 24 33.3**	**-0.4**
JSR				*e*S	**Sn**	**15 24 50.8**	**-0.5**
JKB	**Kayabe**	**1.46**	**349**	*i* P	**Pn**	**15 24 35.6**	**+0.2**
JKB				S	**Sn**	**15 24 54.8**	**+0.3**
JOMM	**Oshimamatsumae**	**1.50**	**315**	*i* P	**Pn**	**15 24 35.5**	**-0.5**
JOMM				*e*S	**Sn**	**15 24 54.5**	**-1.2**
JMK	**Ichinoseki**	**1.51**	**186**	*i* P	**Pn**	**15 24 35.8**	**-0.5**
JMK				S	**Sn**	**15 24 55.1**	**-0.7**
JYK	**Kaneyama**	**1.74**	**208**	*i* P	**Pn**	**15 24 38.7**	**-0.4**
ERM	**Erimo**	**2.04**	**40**		**Pn**	**15 24 42.7**	**-0.2**
ERM	**Erimo**	**2.04**	**40**	*e*P	**Pn**	**15 24 42.9**	**0.0**
JEW	**Eniwo**	**2.38**	**1**	Pn	**Pn**	**15 24 47.4**	**-0.1**
JMM	**Marumori**	**2.63**	**191**	Pn	**Pn**	**15 24 50.1**	**-0.8**
JSD	**Sado**	**3.44**	**226**	Pn	**Pn**	**15 25 01.3**	**-0.4**
JYT	**Yasato**	**4.33**	**193**	Pn	**Pn**	**15 25 11.7**	**-2.0**
NMR	**Nemuro--Hokkai**	**4.34**	**46**	*e*P	**Pn**	**15 25 12.3**	**-1.5**
NMR				*e*S	**Sn**	**15 25 59.4**	**-3.7**
RUSJ	**Misakicho**	**4.62**	**37**	*e*P	**Pn**	**15 25 17.7**	**+0.1**
RUSJ				*e*S	**Sn**	**15 26 10.4**	**+0.4**
MAJO	**Matsushiro**	**4.65**	**214**	Pn	**Pn**	**15 25 18.4**	**+0.4**
MAJO	**Matsushiro**	**4.65**	**214**	P	**Pn**	**15 25 18.5**	**+0.4**
MJAR	**Matsushiro Arr**	**4.65**	**214**	P	**Pn**	**15 25 17.2**	**-0.9**
	9.9nm,0.8s,baz=26,slow=14,SNR=33						
MJAR				LR	LR	15 27 10.3	
	comp=Z,65nm,18.1s,baz=346,slow=39						
YUK	**Yuzh-Kuril'sk**	**4.86**	**41**	*e*P	**Pn**	**15 25 20.5**	**-0.4**
YUK				*e*S	**Sn**	**15 26 13.8**	**-2.1**
YUK				pmax	pmax		
	comp=E,180nm,0.2s						
YUK				pmax	pmax		
	comp=Z,270nm,0.2s						
YUK				pmax	pmax		
	comp=N,215nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.6s						
YUK				smax	smax		
	comp=N,1μm,0.7s						
INU	**Inuyama**	**6.17**	**216**	Pn	**Pn**	**15 25 40.0**	**+1.2**
YSS	**Yuzh-Sakhalins**	**6.56**	**8**	Pn	**Pn**	**15 25 44.0**	**-0.1**
YSS	**Yuzh-Sakhalins**	**6.56**	**8**	*e*P	**Pn**	**15 25 43.6**	**-0.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,11.0s						
KUR	**Kuril'sk**	**6.72**	**43**	*e*P	**Pn**	**15 25 47.1**	**+0.9**
KUR				*e*S	**Sn**	**15 26 59.0**	**-2.3**
KUR				pmax	pmax		
	comp=Z,65nm,0.5s						
KUR				pmax	pmax		
	comp=N,36nm,0.2s						
KUR				smax	smax		
	comp=N,128nm,0.2s						
KUR				smax	smax		
	comp=E,53nm,0.2s						
JHJ2	**Mitsune**	**7.45**	**190**	Pn	**Pn**	**15 25 56.6**	**+0.4**
VLA	**Vladivostok**	**7.60**	**294**	*i* P	**Pn**	**15 25 57.2**	**-1.0**
USA0B	**Ussuriysk Arra**	**7.92**	**301**	Pn	**Pn**	**15 26 04.0**	**+1.6**
USA0B	**Ussuriysk Arra**	**7.92**	**301**	P	**Pn**	**15 26 04.1**	**+1.6**
USRK	**Ussuriysk Ar.**	**7.92**	**301**	P	**Pn**	**15 26 04.2**	**+1.7**
	comp=E,14nm,0.6s,baz=108,slow=14,SNR=22						
USRK	**Ussuriysk Ar.**	**7.92**	**301**		**Pn**	**15 26 03.9**	**+1.4**
JHS	**Saijyo**	**8.54**	**233**	Pn	**Pn**	**15 26 11.4**	**+0.3**
JMN	**Monobe**	**9.02**	**224**	Pn	**Pn**	**15 26 17.4**	**-0.2**
SEHB	**SEOHWA**	**10.42**	**262**	Pn	**Pn**	**15 26 37.1**	**+0.4**
KSRS	**Korea Array**	**10.93**	**258**	P	**Pn**	**15 26 44.8**	**+1.3**
	comp=E,1.8nm,0.8s,baz=75,slow=12,SNR=7.5						
KSAR	**Wonju Array Be**	**10.96**	**258**	Pn	**Pn**	**15 26 43.7**	**-0.2**
KSAR	**Wonju Array Be**	**10.96**	**258**	P	**Pn**	**15 26 43.7**	**-0.2**
PEA0B	**Petropavlovsk-**	**16.81**	**36**		**Pn**	**15 27 59.8**	**+0.1**
PEA0B				IAmb	IAmb	15 28 12.7	
	comp=Z,21nm,1.1s						
PEA0B	**Petropavlovsk-**	**16.81**	**36**	P	**Pn**	**15 27 59.8**	**+0.1**
PEA0B				pmax	pmax		
	comp=Z,21nm,1.2s						
PETK	**Petropavlovsk-**	**16.81**	**36**	P	**Pn**	**15 27 59.7**	**0.0**
	comp=Z,2.3nm,0.9s,baz=223,slow=9.8,SNR=4.8						
PETK	**Petropavlovsk-**	**16.81**	**36**		**Pn**	**15 27 59.9**	**+0.2**
PETK	**Petropavlovsk-**	**16.81**	**36**	P	**Pn**	**15 27 59.9**	**+0.2**
NJ2	**Nanjing**	**20.00**	**252**	*e*P	**P**	**15 28 31.6**	**-3.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MA2	**Magadan**	**20.02**	**14**	P	**P**	**15 28 35.3**	**-0.1**
MA2				IAmb	IAmb	15 28 37.6	
	comp=Z,34nm,1.1s						
MA2	**Magadan**	**20.02**	**14**	P	**P**	**15 28 35.3**	**-0.1**
MA2				pmax	pmax		
	comp=Z,34nm,1.1s						
HHC	**Hu-ho-hao-te**	**22.60**	**281**	*e*P	**P**	**15 29 04.8**	**+1.5**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,92nm,5.5s						
YAK	**Yakutsk**	**22.74**	**346**	P	**P**	**15 29 04.4**	**0.0**
YAK				IAmb	IAmb	15 29 05.4	
	comp=Z,6.0nm,0.5s						
SEY	**Seymchan**	**23.44**	**13**	*ce*P	**P**	**15 29 09.8**	**-1.2**
SEY				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SSLB	**Suanglung**	**23.92**	**232**	P	**P**	**15 29 14.8**	**-0.9**
SSLB				IAmb	IAmb	15 29 40.3	
	comp=Z,26nm,1.2s				

PZH	**PanZhiHua**	**35.59**	**259**	P	**P**	**15 31 00.8**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,80nm,4.7s						
GOMU	**GeErMu**	**36.47**	**279**	P	**P**	**15 31 05.1**	**-1.7**
GOMU				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,42nm,4.9s						
WMQ	**Urumqi**	**39.39**	**293**	*e*P	**P**	**15 31 33.5**	**+2.6**
ZAA0	**Zalesovo Array**	**39.67**	**309**	P	**P**	**15 31 32.4**	**-0.6**
ZAA0				IAmb	IAmb	15 31 33.5	
	comp=Z,2.5nm,0.5s						
ZALV	**Zalesovo Beam**	**39.67**	**309**	P	**P**	**15 31 32.1**	**-0.9**
	comp=Z,2.9nm,0.5s,baz=95,slow=7.7,SNR=13						
	comp=Z,2.9nm,0.5s						
CRAI	**Chiangrai**	**40.30**	**252**	P	**P**	**15 31 38.5**	**-0.2**
CHTO	**Chiang Mai**	**42.24**	**252**	P	**P**	**15 31 55.3**	**+0.8**
CHTO				IAmb	IAmb	15 32 00.8	
	comp=Z,7.9nm,1.4s						
CHTO	**Chiang Mai**	**42.24**	**252**	P	**P**	**15 31 55.3**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MK31	**Makanchi Array**	**42.38**	**299**	P	**P**	**15 31 54.5**	**-0.8**
MK31				IAmb	IAmb	15 31 56.4	
	comp=Z,3.3nm,0.7s						
MK31	**Makanchi Array**	**42.38**	**299**	*i* P	**P**	**15 31 54.3**	**-1.0**
MKAR	**Makanchi Array**	**42.38**	**299**	P	**P**	**15 31 54.4**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=84,slow=9.7,SNR=35						
	comp=Z,3.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.47**	**252**	P	**P**	**15 31 56.3**	**0.0**
	comp=Z,0.7nm,0.6s,baz=45,slow=7.1,SNR=4.2						
	comp=Z,0.7nm,0.6s						
MAKZ	**Makanchi**	**42.59**	**299**	P	**P**	**15 31 56.5**	**-0.5**
MAKZ				IAmb	IAmb	15 31 58.2	
	comp=Z,4.4nm,0.7s						
MAKZ	**Makanchi**	**42.59**	**299**	P	**P**	**15 31 56.5**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
N18K	**Kilae Creek**	**42.70**	**40**	P	**P**	**15 31 59.6**	**+1.9**
N18K				IAmb	IAmb	15 32 17.4	
	comp=Z,5.4nm,1.2s						
CHIR	**Chirikof Islan**	**43.17**	**47**	P	**P**	**15 32 02.5**	**+1.0**
J20K	**Nowinta River**	**43.51**	**35**	P	**P**	**15 32 04.2**	**+0.1**
J20K				IAmb	IAmb	15 32 13.6	
	comp=Z,2.6nm,0.7s						
IMAR	**Indian Mountai**	**43.73**	**32**	P	**P**	**15 32 07.0**	**+1.1**
SII	**Sitkinak Islan**	**43.88**	**46**	P	**P**	**15 32 08.1**	**+0.9**
KURK	**Kurchatov**	**43.88**	**305**	P	**P**	**15 32 06.1**	**-1.2**
KURK				IAmb	IAmb	15 32 08.0	
	comp=Z,7.5nm,0.7s						
KURK	**Kurchatov**	**43.88**	**305**	*ce*P	**P**	**15 32 05.9**	**-1.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
Q19K	**Cape Douglas,**	**43.92**	**43**	P	**P**	**15 32 08.1**	**+0.5**
KURBB	**Kurchatov Arra**	**43.96**	**305**	P	**P**	**15 32 07.2**	**-0.7**
	comp=Z,4.7nm,0.4s,baz=80,slow=8.5,SNR=27						
	comp=Z,4.7nm,0.4s						
H21K	**Melozitna Rive**	**44.11**	**33**	P	**P**	**15 32 10.1**	**+1.2**
OHAK	**Old Harbor**	**44.29**	**45**	P	**P**	**15 32 10.8**	**+0.4**
OHAK				IAmb	IAmb	15 32 52.0	
	comp=Z,17nm,1.4s						
KDAK	**Kodiak Island**	**44.60**	**44**	P	**P**	**15 32 13.3**	**+0.4**
KDAK	**Kodiak Island**	**44.60**	**44**	P	**P**	**15 32 13.3**	**+0.4**
KDAK				pmax	pmax		
	comp=Z,24nm,1.4s						
MLY	**Manley**	**44.98**	**34**	P	**P**	**15 32 17.6**	**+1.7**
CNPM	**China Poot**	**45.10**	**42**	P	**P**	**15 32 18.4**	**+1.5**
CNPM				IAmb	IAmb	15 32 32.9	
	comp=Z,17nm,1.3s						
H23K	**Yukon River**	**45.46**	**33**	P	**P**	**15 32 21.5**	**+1.8**
H23K				IAmb	IAmb	15 32 22.5	
	comp=Z,4.5nm,0.7s						
NEA2	**Nenana**	**45.71**	**34**	P	**P**	**15 32 23.2**	**+1.6**
NEA2				IAmb	IAmb	15 32 31.1	
	comp=Z,3.0nm,0.7s						
MDM	**Murphy Dome**	**46.05**	**34**	P	**P**	**15 32 25.7**	**+1.4**
H24K	**Noodor Dome**	**46.14**	**33**	P	**P**	**15 32 26.9**	**+1.8**
H24K				IAmb	IAmb	15 32 53.8	
	comp=Z,6.7nm,1.4s						
ILAR	**Eielson Array**	**46.63**	**34**	P	**P**	**15 32 29.7**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=272,slow=6.3,SNR=15						
	comp=Z,1.1nm,0.6s						
FYU	**Fort Yukon**	**47.17**	**32**	P	**P**	**15 32 35.6**	**+2.7**
FYU				IAmb	IAmb	15 32 36.3	
	comp=Z,6.7nm,0.6s						
J25K	**Salcha River,**	**47.30**	**34**	P	**P**	**15 32 36.1**	**+2.0**
BMAR	**Burnt Mountain**	**47.36**	**30**	P	**P**	**15 32 36.6**	**+2.1**
RIDG	**Independent Ri**	**47.63**	**35**	P	**P**	**15 32 37.6**	**+1.0**
RIDG				IAmb	IAmb	15 32 39.0	
	comp=Z,8.9nm,1.4s						
SCRK	**Sand Creek**	**47.97**	**35**	P	**P**	**15 32 40.0**	**+0.6**
SCRK				IAmb	IAmb	15 32 40.4	
	comp=Z,3.0nm,0.6s						
DOT	**Dot Lake**	**47.99**	**35**	P	**P**	**15 32 40.1**	**+0.7**
BOOM	**Boomskoye usch**	**47.99**	**295**	P	**P**	**15 32 39.6**	**-0.3**
BOOM	**Boomskoye usch**	**47.99**	**295**	P	**P**	**15 32 39.6**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,94nm,1.2s						
BRVK	**Borovoye**	**48.37**	**310**	P	**P**	**15 32 41.8**	**-0.7**
BRVK	**Borovoye**	**48.37**	**310**	*ce*P	**P**	**15 32 40.9**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
EGAK	**Eagle**	**49.06**	**34**	P	**P**	**15 32 48.3**	**+0.7**
EGAK				IAmb	IAmb	15 32 58.0	
	comp=Z,1.8nm,0.7s						
L27K	**Beaver Creek,**	**49.08**	**36**	P	**P**	**15 32 48.4**	**+0.6**
L27K				IAmb	IAmb	15 32 57.8	
	comp=Z,3.3nm,1.2s						
BCAR	**Beaver Creek A**	**49.09**	**36**	P	**P**	**15 32 48.7**	**+0.7**
M27K	**Edge Creek, AK**	**49.19**	**37**	P	**P**	**15 32 50.0**	**+1.2**
M27K				IAmb	IAmb	15 32 57.9	
	comp=Z,6.0nm,1.2s						
LOGN	**Logan Glacier**	**49.92**	**39**	P	**P**	**15 32 54.9**	**+0.5**
EPYK	**Eagle Plains**	**50.58**	**31**	P	**P**	**15 33 01.0**	**+1.9**
KULM	**Kulim**	**50.60**	**237**	P	**P**	**15 32 59.8**	**-0.1**
INK	**Inuvik**	**51.36**	**28**	P	**P**	**15 33 05.6**	**+0.8**
	comp=Z,3.4nm,0.5s,baz=301,slow=10,SNR=4.2						
	comp=Z,3.4nm,0.5s						
KKAR	**Karatay Array**	**51.47**	**298**	P	**P**	**15 33 04.9**	**-1.2**
KKAR	**Karatay Array**	**51.47**	**298**	P	**P**	**15 33 04.9**	**-1.2**
MTN	**Manton Dam**	**53.88**	**192**	P	**P**	**15 33 23.8**	**-0.2**
CHGR	**Chuyangaron**	**54.26**	**293**	P	**P**	**15 33 28.1**	**+1.4**
CHGR	**Chuyangaron**	**54.26**	**293**	P	**P**	**15 33 28.1**	**+1.4**
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ABKAR	**Akbulak array**	**55.77**	**308**	P	**P**	**15 33 36.3**	**-1.1**
KNRA	**Kununurra**	**57.07**	**195**	P	**P**	**15 33 46.3**	**-0.6**
WB0	**Warramunga Arr**	**60.27**	**188**	P	**P**	**15 34 07.5**	**-1.5**
WB0				IAmb	IAmb	15 34 40.2	
	comp=Z,6.5nm,1.4s						
WR0	**Warramunga Arr**	**60.45**	**187**	P	**P**	**15 34 08.9**	**-1.3**
WR0				IAmb	IAmb	15 34 41.3	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**60.45**	**188**	P	**P**	**15 34 09.0**	**-1.3**
WRA	**Warramunga Arr**	**60.45**	**188**	P	**P**	**15 34 09.0**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=3.3,slow=7.1,SNR=42						
	comp=Z,0.5nm,0.3s						
YKA	**Yellowknife Ar**	**60.86**	**31**	P	**P**	**15 34 12.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=301,slow=6.4,SNR=3.7						
	comp=Z,0.4nm,0.6s						
AS31	**Alice Springs**	**64.18**	**188**	P	**P**	**15 34 34.2**	**-0.8**
ASAR	**Alice Springs**	**64.18**	**188**	P	**P**	**15 34 34.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=0.8,slow=6.5,SNR=17						
	comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**64.18**	**188**	P	**P**	**15 34 34.1**	**-0.9**
OBN	**Obninsk**	**65.37**	**322**	⇓*e*P	**P**	**15 34 41.5**	**-1.0**
OBN				*PP	**pP**	**15 35 06.0**	**+0.3**
OBN						15 35 12.0	
OBN				SS	SS	15 47 28.0	-4.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,18nm,14.0s						
FINES	**FINESS Array B**	**65.80**	**332**	P	**P**	**15 34 45.8**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=77,slow=7.3,SNR=4.8						
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**65.80**	**332**	P	**P**	**15 34 46.2**	**+1.1**
FINES	**FINESS Array B**	**65.80**	**332**	*ce*P	**P**	**15 34 46.4**	**+1.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIV	**Kislovodsk**	**68.69**	**310**	P	**P**	**15 35 05.4**	**+1.6**
NOA	**NORSAR Array B**	**71.04**	**337**	P	**P**	**15 35 17.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=36,slow=3.0,SNR=1.7						
	comp=Z,0.3nm,0.6s						
ARMA	**Armidale**	**71.15**	**171**	P	**P**	**15 35 19.5**	**+0.6**
ARMA				IAmb	IAmb	15 35 31.5	
	comp=Z,21nm,1.5s						
EGMT	**Eagleton**	**71.71**	**42**	P	**P**	**15 35 23.5**	**+1.3**
EGMT				IAmb	IAmb	15 35 25.6	
	comp=Z,4.8nm,1.4s						
KVN	**Kaiserville**	**72.69**	**53**	P	**P**	**15 35 30.1**	**+1.7**
KVN	**Kaiserville**	**72.69**	**53**	P	**P**	**15 35 30.1**	**+1.7**
KVN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**72.95**	**54**	P	**P**	**15 35 31.0**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=2.8						
	comp=Z,0.2nm,0.5s						
R11A	**Troy Canyon, C**	**74.67**	**53**	P	**P**	**15 35 41.5**	**+1.6**
PDAR	**Pinedale Array**	**75.28**	**46**	P	**P**	**15 35 42.8**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=343,slow=2.0,SNR=3.9						
	comp=Z,0.3nm,0.7s						
QSM	**Queen of Sheba**	**75.39**	**55**	P	**P**	**15 35 45.4**	**+1.5**
TXAR	**Lajitas Array**	**88.03**	**52**	P	**P**	**15 36 50.7**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=289,slow=2.8,SNR=2.3						
	comp=Z,0.2nm,0.6s						

IDC 16 15:28:21.7±4.0, 32.09N×141.12E, h0km, mb3.4/3, mbtmp3.5/5, ML3.0/2, Error ellipse: s-maj=157.6km s-min=20.1km az=70.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**5.05**	**332**	Pn	Pn	15 29 36.9	-1.8
	0.2nm,0.3s,baz=157,slow=12,SNR=8.9						
MJAR				Sn	Sn	15 30 36.9	-0.9
	0.1nm,0.3s,baz=18,slow=10,SNR=2.3						
	1.2nm,0.3s						
JCJ	**Chichijima**	**5.06**	**169**	Pn	Pn	15 29 40.0	+1.2
	2.2nm,0.3s,baz=274,slow=22,SNR=2.3						
JCJ				Sn	Sn	15 30 39.0	+0.9
	3.6nm,0.3s,baz=276,slow=21,SNR=2.2						
	34nm,0.6s						
MKAR	**Makanchi Array**	**46.69**	**306**	P	P	15 36 53.2	+1.1
	0.7nm,0.8s,baz=91,slow=9.3,SNR=4.7						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**52.14**	**188**	P	P	15 37 33.9	-0.1
	0.3nm,0.6s,baz=6.1,slow=7.7,SNR=6.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**55.87**	**188**	P	P	15 38 00.1	-1.1
	0.4nm,1.1s,baz=358,slow=4.6,SNR=1.9						
	0.4nm,1.1s						

*KRNET **16** 16:06:07.5±0.1, 42.45N×73.00E, h17km, mb2.5*
*SOME **16** 16:06:07.2, 42.53N×72.95E, h10km*
*KNET **16** 16:06:08.1±0.6, 42.46N×73.07E, h14km±3km, ml1.6, Error ellipse: s-maj=4.1km s-min=3.2km az=88.0*
*NNC **16** 16:06:08.6±0.6, 42.61N×72.96E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=10.2km s-min=2.7km az=175.0*

ISC 16 16:06:07.6±1.2, 42.49N±0.03×73.01E±0.02, h10km±12km, n36, σ0 92/65, 26C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKS2	**Erkin-Say**	**0.59**	**73**	⇓P	**Pg**	**16 06 19.4**	**+0.2**
	3.5nm,0.2s,SNR=16						
EKS2				⇓S	**Sb**	**16 06 28.4**	**-0.3**
	6.8nm,0.1s						
EKS2	**Erkin-Say**	**0.59**	**73**	⇓*e*P	**Pg**	**16 06 19.2**	**0.0**
	baz=70						
EKS2				⇓*e*S	**Sg**	**16 06 27.7**	**+0.6**
	baz=70						
AML	**Almayashu**	**0.62**	**125**	⇑P	**Pg**	**16 06 19.0**	**-0.8**
	4.2nm,0.1s,SNR=15						
AML				⇑S	**Sg**	**16 06 28.3**	**+0.3**
	18nm,0.2s						
ARK	**Arkit**	**1.04**	**229**	⇑*e*P	**Pb**	**16 06 26.5**	**-1.3**
	baz=30						
ARK				⇑*e*S	**Sb**	**16 06 40.3**	**-1.2**
	baz=30						
AAK	**Ala-Archa**	**1.11**	**82**	⇑*i*P	**Pb**	**16 06 28.7**	**-0.3**
	baz=80						
AAK				⇑*e*S	**Sb**	**16 06 43.7**	**+0.2**
	baz=80						
UCH	**Uchtor**	**1.15**	**103**	⇑P	**Pb**	**16 06 29.1**	**-0.7**
	2.1nm,0.1s,SNR=6.7						
UCH				⇓S	**Sg**	**16 06 45.7**	**+1.1**
	5.7nm,0.2s						
UCH	**Uchtor**	**1.15**	**103**	⇑*e*P	**Pb**	**16 06 29.3**	**-0.5**
	baz=1.0						
UCH				⇑*e*S	**Sb**	**16 06 44.7**	**-0.2**
	baz=1.0						
ARLS	**Aral**	**1.16**	**122**	⇑*e*P	**Pn**	**16 06 29.2**	**-0.9**
	baz=21						
ARLS				⇑*e*S	**Sb**	**16 06 44.7**	**-0.3**
	baz=21						
USP	**Ospenovka**	**1.34**	**54**	⇓P	**Pb**	**16 06 33.0**	**0.0**
	4.3nm,0.2s,SNR=9.1						
USP				⇓S	**Sg**	**16 06 51.5**	**+0.6**
	9.7nm,0.2s						
USP	**Ospenovka**	**1.34**	**54**	⇓*e*P	**Pb**	**16 06 33.1**	**+0.2**
	baz=53						
USP				⇓*e*S	**Sg**	**16 06 51.3**	**+0.4**
	baz=53						
CHMS	**Chumysh**	**1.38**	**68**	⇑P	**Pb**	**16 06 33.6**	**0.0**
	1.5nm,0.5s						
CHMS				⇑S	**Sg**	**16 06 53.7**	**+1.6**
	3.9nm,0.5s						
CHMS	**Chumysh**	**1.38**	**68**	⇑*e*P	**Pb**	**16 06 33.6**	**0.0**
	baz=66						
CHMS				⇑*e*S	**Sg**	**16 06 52.3**	**+0.2**
	baz=66						
KBK	**Karagaybulak**	**1.44**	**83**	⇑P	**Pg**	**16 06 35.6**	**+0.2**
	4.3nm,0.1s,SNR=12						
KBK				⇑S	**Sg**	**16 06 55.2**	**+1.1**
	15nm,0.2s						
KBK	**Karagaybulak**	**1.44**	**83**	⇓*e*P	**Pn**	**16 06 34.4**	**+0.4**
	baz=81						
KBK				⇓*e*S	**Sg**	**16 06 54.1**	**0.0**
	baz=81						
SGDS	**Sogindy**	**1.53**	**50**	*e*P	**Pb**	**16 06 36.1**	**0.0**
	2.2nm,0.3s						
SGDS				*e*S	**Sg**	**16 06 57.3**	**+0.4**
	28nm,0.3s						
SGDS	**Sogindy**	**1.53**	**50**	P	**Pb**	**16 06 36.1**	**0.0**
	2.2nm,0.3s						
SGDS				S	**Sg**	**16 06 57.3**	**+0.4**
	28nm,0.3s						
TRKS	**Terek-Say**	**1.69**	**236**	⇑*e*P	**Pn**	**16 06 38.5**	**+1.2**
	baz=35						
TRKS				⇑*e*S	**Sb**	**16 07 01.3**	**+1.1**
	baz=35						
KK31	**Karatay Array**	**1.94**	**289**	Pn	**Pn**	**16 06 41.6**	**+1.0**
	1.2nm,0.3s,baz=107,slow=15,SNR=50						
KK31				Sn	**Sb**	**16 07 07.7**	**+0.4**
	1.6nm,0.2s,baz=108,slow=29,SNR=10						
TKM2	**Tokmak 2**	**1.96**	**76**	⇓P	**Pb**	**16 06 43.7**	**+0.3**
	2.2nm,0.1s,SNR=6.2						
TKM2				⇑S	**Sg**	**16 07 10.4**	**-0.2**
	18nm,0.1s						
TKM2	**Tokmak 2**	**1.96**	**76**	⇑Pn	**Pb**	**16 06 44.0**	**+0.5**
	1.9nm,0.5s						
TKM2				⇑Sn	**Sg**	**16 07 10.3**	**-0.2**
	8.4nm,0.5s						
TKM2	**Tokmak 2**	**1.96**	**76**	⇑*e*P	**Pb**	**16 06 43.3**	**-0.2**
	baz=75						
TKM2				⇑*e*S	**Sg**	**16 07 09.5**	**-1.0**
	baz=75						
BOOM	**Boomskoye usch**	**2.17**	**89**	⇑*e*P	**Pb**	**16 06 46.2**	**-0.9**
	baz=88						
BOOM				⇑*e*S	**Sb**	**16 07 14.4**	**+0.4**
	baz=88						
IUG	**Iuzhnay**	**2.23**	**262**	*e*P	**Pb**	**16 06 47.8**	**-0.4**
	90nm,0.2s						
IUG				*e*S	**Sb**	**16 07 17.4**	**+1.6**
	23nm,0.4s						
IUG	**Iuzhnay**	**2.23**	**262**	Pg	**Pb**	**16 06 47.7**	**-0.4**
	90nm,0.2s						
IUG				Lg	Lg	16 07 17.4	
	23nm,0.4s						
KST	**Kastek**	**2.25**	**75**	*e*P	**Pb**	**16 06 49.0**	**+0.6**
	3.0nm,0.4s						
KST				*e*S	**Sg**	**16 07 19.2**	**-0.6**
	12nm,0.8s						
KST	**Kastek**	**2.25**	**75**	Pg	**Pb**	**16 06 49.0**	**+0.6**
	3.0nm,0.4s						
KST				Lg	Lg	16 07 19.2	
	12nm,0.8s						
KRBS	**Karabastau**	**2.30**	**57**	*e*P	**Pb**	**16 06 49.8**	**+0.6**
	2.0nm,0.3s						
KRBS				*e*S	**Sg**	**16 07 20.6**	**-0.9**
	14nm,0.4s						
KRBS	**Karabastau**	**2.30**	**57**	Pg	**Pb**	**16 06 49.8**	**+0.6**
	2.0nm,0.3s						
KRBS				Lg	Lg	16 07 20.6	
	14nm,0.4s						
BTLS	**Baital**	**2.66**	**16**	*e*P	**Pb**	**16 06 53.5**	**-1.8**
	1.2nm,0.6s						
BTLS				*e*S	**Sb**	**16 07 26.8**	**-1.3**
	3.2nm,0.3s						
BTLS	**Baital**	**2.66**	**16**	Pg	**Pb**	**16 06 53.5**	**-1.8**
	1.2nm,0.6s						
BTLS				Lg	Lg	16 07 26.8	
	3.2nm,0.3s						
KUU	**Kurty**	**2.81**	**59**	*e*P	**Pb**	**16 06 58.8**	**+0.9**
	0.6nm,0.2s						
KUU				*e*S	**Sg**	**16 07 35.8**	**-2.1**
	7.7nm,0.3s						
KUU	**Kurty**	**2.81**	**59**	Pg	**Pb**	**16 06 58.8**	**+0.9**
	0.6nm,0.2s						
KUU				Lg	Lg	16 07 35.8	
	7.7nm,0.3s						
KTBS	**Karatobe**	**2.96**	**64**	*e*P	**Pb**	**16 07 01.3**	**+0.9**
	0.6nm,0.4s						
KTBS				*e*S	**Sg**	**16 07 40.3**	**-2.3**
	0.7nm,0.6s						
KTBS	**Karatobe**	**2.96**	**64**	Pg	**Pb**	**16 07 01.3**	**+0.9**
	0.6nm,0.4s						
KTBS				Lg	Lg	16 07 40.3	
	0.7nm,0.6s						
MDOK	**Medeo**	**3.05**	**76**	*e*P	**Pb**	**16 07 03.4**	**+1.4**
	1.7nm,0.5s						
MDOK				*e*S	**Sg**	**16 07 43.8**	**-1.7**
	4.1nm,0.6s						
MDOK	**Medeo**	**3.05**	**76**	Pg	**Pb**	**16 07 03.4**	**+1.4**
	1.7nm,0.5s						
MDOK				Lg	Lg	16 07 43.8	
	4.1nm,0.6s						

*BJI **16** 16:13:19.7±0.0, 10.94S×162.92E, h8km, mb4.6/29, mB5.0/18, Ms4.6/4, Ms7 4.4/4*
*NEIC **16** 16:13:21.1±1.5, 11.13S±0.09×163.0E±0.1, h10km±1km, mb4.8/31, Error ellipse: s-maj=19.6km s-min=13.0km az=61.0*
*GCMT **16** 16:13:25.1±0.3, 11.17S±0.02×162.98E±0.04, h18km±1km, MW4.8/68, Moment Tensor Solution. s32,c40; s68,c88; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.05±.15; Mθθ -2.24±.11; Mφφ 0.18±.10; Mrθ 0.74±.24; Mθφ 0.32±.07; Mφr 0.72±.32; Best double couple: M0 2.40700×10^16 NP1: θs 78.00000°, δ57.00000°, λ67.00000°. NP2: φs 296.00000°, δ40.00000°, λ121.00000°. Principal axes: T 2.4320, Plg69.0000°, Azm298.0000°; N -0.0580, Plg19.0000°, Azm92.0000°; P -2.3810, Plg9.0000°, Azm185.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **16** 16:13:26.8±2.5, 11.35S×163.03E, h67km±21km, mb3.9/16, mbtmp4.2/19, MS3.9/38 Error ellipse: s-maj=19.7km s-min=12.4km az=71.0*
*NOU **16** 16:13:26.1, 11.15S×163.01E, h77km, mb4.8/10, Solomon Islands*

ISC 16 16:13:24.1±0.4, 11.14S±0.06×162.94E±0.07, h34km, n113, σ1 48/83, mb4.7/38, MS3.9/37, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.40**	**300**	P	**Pn**	**16 14 18.1**	**+3.3**
	814nm,0.7s,baz=158,slow=2.6,SNR=58						
HNR				S	**Sb**	**16 15 02.6**	**-2.0**
	499nm,0.5s,baz=180,slow=20,SNR=1.8						
HNR				LR	LR	16 15 39.9	
	comp=Z,1μm,20.9s,baz=139,slow=37						
HNR	**Honiara**	**3.40**	**300**	Pn	**Pn**	**16 14 15.7**	**+0.9**
HNR	**Honiara**	**3.40**	**300**	P	**Pn**	**16 14 17.7**	**+2.9**
KOUNC	**Koumac, New Ca**	**9.45**	**172**	Pn	**Pn**	**16 15 38.7**	**+0.8**
KOUNC	**Koumac, New Ca**	**9.45**	**172**	P	**Pn**	**16 15 38.7**	**+0.8**
DZM	**Mont Dzumac**	**11.38**	**163**	P	**Pn**	**16 16 03.1**	**-1.3**
	12nm,1.0s,baz=26,slow=11,SNR=11						
DZM				S	**Sn**	**16 18 07.9**	**-2.6**
	7.2nm,0.7s,baz=86,slow=6.0,SNR=2.2						
DZM				LR	LR	16 20 16.7	
	comp=Z,1μm,18.3s,baz=5.5,slow=37						
DZM	**Mont Dzumac**	**11.38**	**163**	*e*P	**Pn**	**16 16 07.7**	**+3.3**
	242nm,29.4s						
DZM				*e*LR	LR	16 18 38.5	
	comp=Z,1μm,29.9s						
DZM	**Mont Dzumac**	**11.38**	**163**	Pn	**Pn**	**16 16 04.3**	**-0.1**
DZM	**Mont Dzumac**	**11.38**	**163**	P	**Pn**	**16 16 05.8**	**+1.4**
YATNC	**Mamie plateau,**	**11.50**	**161**	P	**Pn**	**16 16 07.1**	**+1.1**
KRVT	**Keravat (AS076**	**12.77**	**301**	LR	LR	16 22 24.0	
	comp=Z,1μm,18.4s,baz=266,slow=42						
CTA	**Charters Tower**	**18.36**	**239**	P	**Pn**	**16 17 37.9**	**+1.7**
	15nm,1.0s,baz=62,slow=16,SNR=4.1						
CTA				LR	LR	16 24 08.4	
	comp=Z,198nm,19.6s,baz=62,slow=35						
CTA	**Charters Tower**	**18.36**	**239**	P	**P**	**16 17 35.0**	**-1.0**
CTAO	**Charters Tower**	**18.36**	**239**	P	**Pn**	**16 17 38.7**	**+2.5**
CTAO	**Charters Tower**	**18.36**	**239**	P	**P**	**16 17 35.3**	**-0.7**
PATS	**Pohnpei**	**18.44**	**345**		**Pn**	**16 17 37.6**	**+0.4**
COEN	**Coen**	**19.50**	**260**	P	**Pn**	**16 17 49.8**	**-0.1**
COEN				IAmb	IAmb	16 17 54.3	
	comp=Z,42nm,1.2s						
STKA	**Stephens Creek**	**28.54**	**220**	P	**P**	**16 19 16.0**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=37,slow=10,SNR=4.4						
STKA				LR	LR	16 30 02.0	
	comp=Z,236nm,19.1s,baz=32,slow=35						
	comp=Z,2.4nm,0.7s						
WR0	**Warramunga Arr**	**28.70**	**249**	P	**P**	**16 19 17.3**	**-1.0**
WB0	**Warramunga Arr**	**28.79**	**249**	P	**P**

PPT **Papeete** 46.35 104 LR LR 16 39 27.4
comp=Z,130nm,18.1s,baz=354,slow=34
PPT2 **Papeete2** 46.35 104 *e*LR LR 16 34 49.3
comp=Z,86nm,23.5s
TBI **Tubuai** 46.85 112 *e*LR LR 16 35 03.3
comp=Z,76nm,28.5s
MHA **Mahukona** 51.08 53 P **P** **16 22 23.3 -0.3**
MJAR **Matsushiro Arr** 52.84 335 P **P** **16 22 36.8 +0.3**
comp=Z,1.0nm,0.8s,baz=360,slow=6.7,SNR=2.0
MJAR LR LR 16 45 31.9
comp=Z,85nm,19.8s,baz=156,slow=36
comp=Z,1.0nm,0.8s
KSRS **Korea Array** 58.44 328 P **P** **16 23 17.3 +0.7**
comp=Z,1.9nm,0.9s,baz=146,slow=7.7,SNR=7.6
KSRS LR LR 16 46 41.3
comp=Z,82nm,20.7s,baz=130,slow=34
comp=Z,1.9nm,0.9s
NJ2 **Nanjing** 60.18 317 *e*P **P** **16 23 27.3 -1.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
USRK **Ussuriysk Ar.** 61.84 335 P **P** **16 23 41.0 +1.3**
comp=Z,6.1nm,1.0s,baz=150,slow=6.3,SNR=16
comp=Z,6.1nm,1.0s
PETK **Petropavlovsk-** 64.14 356 LR LR 16 48 01.7
comp=Z,93nm,20.6s,baz=154,slow=32
SHEM **Shemya Is, Ala** 64.33 8 LR LR 16 48 53.7
comp=Z,212nm,19.1s,baz=172,slow=33
CN2 **Changchun** 64.44 331 *e*P **P** **16 24 00.8 +3.7**
CN2 S **S** **16 32 27.3 -6.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,16.0s
KLR **Kul'dur** 66.08 338 LR LR 16 51 01.7
comp=Z,45nm,20.4s,baz=154,slow=34
VNDA **Vanda** 66.37 180 P **P** **16 24 06.4 -2.7**
comp=Z,0.4nm,1.0s,baz=347,slow=7.3,SNR=2.5
VNDA LR LR 16 49 59.9
comp=Z,115nm,18.4s,baz=0.5,slow=33
comp=Z,0.4nm,1.0s
VNDA **Vanda** 66.37 180 P **P** **16 24 09.7 +0.6**
VNDA lAmb lAmb 16 24 24.7
comp=Z,13nm,1.9s
SBA **Scott Base** 66.73 179 P **P** **16 24 12.6 +1.2**
CRAI **Chiangrai** 68.99 297 P **P** **16 24 26.0 -0.6**
CRAI lAmb lAmb 16 25 00.6
comp=Z,12nm,1.6s
XLT **XiLinHaoTe** 69.36 326⇑ *i*P **P** **16 24 29.6 +1.1**
XLT sP pP 16 24 36.3 -1.2
XLT pmax pmax
comp=Z,15nm,0.9s
XLT pmax pmax
comp=Z,67nm,3.7s
CMAR **Chiang Mai Arr** 69.64 294 P **P** **16 24 30.5 -0.2**
comp=Z,0.5nm,0.3s,baz=120,slow=3.7,SNR=8.5
CMAR LR LR 16 56 12.7
comp=Z,32nm,18.9s,baz=125,slow=37
comp=Z,0.5nm,0.3s
CMAR **Chiang Mai Arr** 69.64 294 P **P** **16 24 30.1 -0.6**
HHC **Hu-ho-hao-te** 70.14 321 *e*P **P** **16 24 35.3 +1.8**
HHC pmax pmax
comp=Z,41nm,0.9s
HHC pmax pmax
comp=Z,100nm,5.6s
PZH **PanZhiHua** 70.22 303 P **P** **16 24 35.1 +0.9**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,4.4s
MA2 **Magadan** 71.15 353 LR LR 16 54 15.8
comp=Z,43nm,19.6s,baz=138,slow=34
ULN **Ulaanbaatar** 76.78 325 P **P** **16 25 12.5 +0.1**
ULN lAmb lAmb 16 25 14.6
comp=Z,18nm,1.2s
SONM **Songino Array** 77.13 325 P **P** **16 25 14.8 +0.4**
comp=Z,4.7nm,0.8s,baz=136,slow=5.7,SNR=28
comp=Z,4.7nm,0.8s
SONM **Songino Array** 77.13 325 P **P** **16 25 14.8 +0.4**
SONM lAmb lAmb 16 25 16.4
comp=Z,11nm,1.2s
GTA **Gaotai** 77.16 315 ⇓P **P** **16 25 16.0 +1.3**
GTA pP pP 16 25 21.3 -2.5
GTA sP PcP 16 25 24.6 -0.8
GTA pmax pmax
comp=Z,5.0nm,1.6s
YAK **Yakutsk** 77.43 345 LR LR 16 59 06.5
comp=Z,35nm,19.6s,baz=91,slow=35
YAK **Yakutsk** 77.43 345 P **P** **16 25 14.8 -0.8**
YAK lAmb lAmb 16 25 16.1
comp=Z,8.5nm,0.9s
KDAK **Kodiak Island** 77.70 23 P **P** **16 25 17.2 +0.1**
Q19K **Cape Douglas,** 78.13 21 P **P** **16 25 19.6 +0.1**
P19K **Oil Pt** 78.80 2 P **P** **16 25 23.3 0.0**
QSPA **South Pole Qui** 78.87 180 LR LR 16 56 46.2
comp=Z,50nm,18.6s,baz=3.0,slow=33
QSPA **South Pole Qui** 78.87 180 P **P** **16 25 24.6 +0.8**
QSPA lAmb lAmb 16 25 39.5
comp=Z,12nm,1.2s
SEW **Seward** 80.48 22 P **P** **16 25 33.3 +1.0**
RPN **Rapa Nui** 83.00 116 LR LR 16 56 19.8
comp=Z,75nm,21.1s,baz=33,slow=31
IMAR **Indian Mountai** 83.27 16 P **P** **16 25 47.3 +0.5**
H21K **Melozitna Rive** 83.30 17 P **P** **16 25 48.1 +1.0**
H21K lAmb lAmb 16 26 35.6
comp=Z,16nm,1.8s
MLY **Manley** 83.46 18 P **P** **16 25 47.9 -0.1**
MLY lAmb lAmb 16 25 49.2
comp=Z,6.0nm,1.3s
MAW **Mawson** 83.60 202 LR LR 17 00 04.4
comp=Z,74nm,18.3s,baz=34,slow=34
PALK **Pallekele** 83.84 279 LR LR 17 05 51.9
comp=Z,36nm,20.1s,baz=222,slow=38
ILAR **Eielson Array** 84.49 19 P **P** **16 25 51.6 -1.5**
comp=Z,0.7nm,0.8s,baz=224,slow=4.8,SNR=4.6
ILAR LR LR 16 59 47.9
comp=Z,135nm,19.3s,baz=246,slow=33
comp=Z,0.7nm,0.8s
DOT **Dot Lake** 84.73 21 P **P** **16 25 55.1 +0.7**
DOT lAmb lAmb 16 26 16.0
comp=Z,6.4nm,1.1s
M27K **Edge Creek, AK** 84.74 23 P **P** **16 25 55.6 +0.9**
M27K lAmb lAmb 16 26 09.4
comp=Z,8.9nm,1.1s
J25K **Salcha River,** 84.89 20 P **P** **16 25 55.6 +0.4**
L27K **Beaver Creek,** 85.18 22 P **P** **16 25 58.2 +1.5**
L27K lAmb lAmb 16 26 13.9
comp=Z,8.1nm,1.4s
BCAR **Beaver Creek A** 85.20 22 P **P** **16 25 57.8 +1.0**
BBB **Bella Bella** 86.22 35 LR LR 16 59 23.0
comp=Z,48nm,18.6s,baz=224,slow=32
EGAK **Eagle** 86.42 21 P **P** **16 26 03.6 +0.8**
EGAK lAmb lAmb 16 26 20.2
comp=Z,15nm,1.4s
WMQ **Urumqi** 87.22 316 *e*P **P** **16 26 08.8 +1.5**
DLBC **Dease Lake** 87.81 29 LR LR 17 00 16.0
comp=Z,254nm,19.1s,baz=260,slow=32
HYBB **Hyderabad (bro** 88.02 288 *e*P **P** **16 26 11.9 +0.3**
NVAR **Mina Array Bea** 88.19 50 P **P** **16 26 12.1 -0.2**
comp=Z,0.6nm,0.8s,baz=233,slow=7.0,SNR=4.4
comp=Z,0.6nm,0.8s
PFO **Pinyon Flats O** 88.39 55 LR LR 16 58 58.4
comp=Z,71nm,19.2s,baz=206,slow=31
BELA **Belgrano 2** 90.58 176 P **P** **16 26 23.2 +0.7**
BELA lAmb lAmb 16 26 37.3
comp=Z,8.9nm,1.0s
INK **Inuvik** 90.89 19 LR LR 17 03 49.9
comp=Z,104nm,19.5s,baz=208,slow=33
ELK **Elko** 91.07 49 LR LR 17 00 12.0
comp=Z,35nm,21.0s,baz=226,slow=31
NEW **Newport** 91.61 41 LR LR 17 02 19.8
comp=Z,100nm,19.1s,baz=260,slow=32
MK31 **Makanchi Array** 91.71 317 P **P** **16 26 28.0 -0.3**
MK31 lAmb lAmb 16 26 29.2
comp=Z,3.0nm,1.1s
MKAR **Makanchi Array** 91.71 317 P **P** **16 26 28.4 +0.1**
comp=Z,1.9nm,0.7s,baz=100,slow=5.8,SNR=16
comp=Z,1.9nm,0.7s
MKAR **Makanchi Array** 91.71 317 P **P** **16 26 28.0 -0.2**
ZALV **Zalesovo Beam** 92.03 325 P **P** **16 26 28.7 -0.8**
comp=Z,1.0nm,0.6s,baz=122,slow=7.7,SNR=5.4
ZALV LR LR 17 06 45.0
comp=Z,43nm,21.1s,baz=105,slow=35
comp=Z,1.0nm,0.6s

KSH **Kashi** 94.67 309 P **P** **16 26 44.8 +2.6**
KSH pmax pmax
comp=Z,6.0nm,0.8s
PDAR **Pinedale Array** 95.64 48 LR LR 17 02 39.9
comp=Z,62nm,20.5s,baz=236,slow=31
TROLL **Troll, Antarti** 96.02 186 P **P** **16 26 48.8 +1.0**
YKA **Yellowknife Ar** 96.32 28 P **P** **16 26 48.1 -0.9**
comp=Z,1.0nm,0.9s,baz=248,slow=5.3,SNR=5.9
YKA LR LR 17 05 42.7
comp=Z,127nm,18.8s,baz=289,slow=32
comp=Z,1.0nm,0.9s
SNAA **Sanae** 96.83 184 P **P** **16 26 52.0 +0.6**
SNAA **Sanae** 96.83 184 LR LR 17 09 05.0
comp=Z,60nm,18.7s,baz=195,slow=34
VNA3 **Neumayer Olymp** 97.66 182 P Pdif 16 26 57.2 +2.1
KEST **Kesra** 145.77 320 PKPbc **PKPdf** **16 32 58.2 -1.6**
comp=Z,3.1nm,0.7s,baz=74,slow=9.7,SNR=3.7
ESDC **Sonseca Array** 149.29 340 PKPbc **PKPbc** **16 33 09.4 -0.4**
comp=Z,0.2nm,0.4s,baz=22,slow=4.5,SNR=2.2

*DJA **16** 16:21:22.5±0.2,8˚S±3˚×10˚9E±˚, h63^{km}±4^{km}, M4.9/30, mB5.4/9, mb4.8/30, MLv5.0/29, Mw(mB)4.9/9*
*IDC **16** 16:21:24.7±1.1, 7.89S×109.39E, h102^{km}±10^{km}, mb4.1/22, mbtmp4.4/25, MS3.4/8, Error ellipse: s-maj=13.1km s-min=9.2km az=43.0*
*NEIC **16** 16:21:24.7±1.5, 8.26S±0.09×109.34E±0.06, h83^{km}±7^{km}, mb4.7/49, Error ellipse: s-maj=12.8km s-min=7.9km az=192.0*
ISC 16 16:21:22.8±0.8,**8.30S**±0.05×**109.25E**±0.03,**h82**^{km}±7^{km}, **n197**,σ1§**87**/197,**mb4.5**/50,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
YOGI	**Yogyakarta**	**1.14**	**65**	P	**Pn**	**16 21 43.2**	**-0.5**
UGM	**Wanagama**	**1.32**	**73**		**Pn**	**16 21 45.7**	**-0.2**
UGM				Sn	**Sn**	**16 22 01.8**	**-1.6**
UGM	**Wanagama**	**1.32**	**73**	P	**Pn**	**16 21 45.7**	**-0.2**
UGM				S	**Sn**	**16 22 01.7**	**-1.6**
UGM	**Wanagama**	**1.32**	**73**	P	**Pn**	**16 21 45.8**	**-0.1**
SMRI	**Semarang**	**1.71**	**44**		**Pn**	**16 21 51.7**	**+0.7**
SMRI	**Semarang**	**1.71**	**44**	P	**Pn**	**16 21 51.7**	**+0.7**
SMRI				S	**Sn**	**16 22 14.3**	**+1.9**
SMRI	**Semarang**	**1.71**	**44**	P	**Pn**	**16 21 52.2**	**+1.2**
PCJI	**Pacitan**	**1.91**	**87**	P	**Pn**	**16 21 54.0**	**+0.4**
PCJI				S	**Sn**	**16 22 16.5**	**-0.6**
LEM	**Lembang**	**2.18**	**312**	P	**Pn**	**16 21 59.2**	**+2.0**
	796nm,0.4s,baz=56,slow=8.2,SNR=158						
LEM				S	**Sn**	**16 22 24.2**	**+0.7**
	1μm,0.5s,baz=63,slow=20,SNR=7.0						
LEM				LR	LR	16 22 45.4	
	comp=Z,440nm,20.7s,baz=174,slow=39						
LEM	**Lembang**	**2.18**	**312**	P	**Pn**	**16 21 58.4**	**+1.1**
LEM				S	**Sn**	**16 22 26.0**	**+2.4**
CNJI	**Cibinong**	**2.31**	**295**	P	**Pn**	**16 21 58.9**	**0.0**
CNJI				S	**Sn**	**16 22 25.9**	**-0.7**
NGJI	**Ngawi**	**2.38**	**67**	P	**Pn**	**16 22 00.8**	**+1.0**
NGJI				S	**Sn**	**16 22 30.1**	**+1.9**
PWJI	**Pagerwojo**	**2.55**	**84**	P	**Pn**	**16 22 02.2**	**+0.2**
PWJI				S	**Sn**	**16 22 32.0**	**-0.2**
SKJI	**Sukabumi**	**2.96**	**296**	P	**Pn**	**16 22 08.2**	**+0.6**
SKJI				S	**Sn**	**16 22 42.9**	**+0.7**
TBJI	**Tambak Boyo**	**2.97**	**61**	P	**Pn**	**16 22 08.0**	**+0.3**
TBJI				S	**Sn**	**16 22 42.9**	**+0.5**
DBJI	**Dramaga**	**3.02**	**305**	P	**Pn**	**16 22 10.2**	**+1.7**
TNG	**Tangerang**	**3.33**	**309**	P	**Pn**	**16 22 15.8**	**+3.1**
SBJI	**Serang**	**3.77**	**305**	P	**Pn**	**16 22 19.6**	**+0.9**
XMI	**Christmas Isla**	**4.11**	**238**	P	**Pn**	**16 22 22.6**	**-0.7**
GMJI	**Gumukmas**	**4.16**	**90**	P	**Pn**	**16 22 23.8**	**0.0**
XMIS	**Christmas Isla**	**4.16**	**238**		**Pn**	**16 22 22.4**	**-1.4**
XMIS	**Christmas Isla**	**4.16**	**238**	P	**Pn**	**16 22 22.9**	**-1.0**
BWJI	**Bawean**	**4.17**	**55**	P	**Pn**	**16 22 24.8**	**+0.8**
BLJI	**Banyuglugur**	**4.34**	**83**	P	**Pn**	**16 22 27.3**	**+0.9**
KMMI	**Kalianget**	**4.84**	**75**	P	**Pn**	**16 22 33.3**	**+0.1**
JAGI	**Jajag, Banyuwa**	**4.86**	**92**	Pn	**Pn**	**16 22 33.8**	**+0.4**
JAGI	**Jajag, Banyuwa**	**4.86**	**92**	P	**Pn**	**16 22 34.2**	**+0.8**
JAGI	**Jajag, Banyuwa**	**4.86**	**92**	P	**Pn**	**16 22 35.3**	**+1.9**
BLSI	**Bandar Lampung**	**4.92**	**306**	P	**Pn**	**16 22 35.8**	**+1.4**
ABJI	**Asem Bagus**	**4.96**	**85**	P	**Pn**	**16 22 36.2**	**+1.3**
KASI	**Kota Agung**	**5.46**	**300**	P	**Pn**	**16 22 43.6**	**+1.9**
	1.0nm2μm239nm,1.1s						
KLI	**Kotabumi**	**5.54**	**308**	P	**Pn**	**16 22 44.3**	**+1.6**
	1.2nm13μm205nm,0.8s						
IGBI	**Denpasar**	**5.86**	**96**	P	**Pn**	**16 22 47.7**	**+0.6**
	1.0nm4μm90nm,0.5s						
SRBI	**Singaraja**	**5.91**	**88**	P	**Pn**	**16 22 49.2**	**+1.4**
	1.1nm142nm,0.6s						
DNP	**Denpasar**	**5.91**	**94**	P	**Pn**	**16 22 49.0**	**+1.2**
	3.8nm438nm,0.4s						
PBKI	**Pangkalan Bun**	**6.06**	**24**	P	**Pn**	**16 22 53.3**	**+3.5**
	1.0nm148nm,0.9s						
LWLI	**Liwa**	**6.10**	**302**	P	**Pn**	**16 22 52.6**	**+2.2**
	0.9nm7μm171nm,0.8s						
PPBI	**Pangkal Pinang**	**6.84**	**333**	P	**Pn**	**16 23 02.3**	**+1.9**
	0.5nm5μm48nm,0.8s						
BBKI	**Banjar Baru**	**7.35**	**50**	P	Pn	16 23 18.1	+11
MNAI	**Manna**	**7.37**	**302**	Pn	**Pn**	**16 23 08.4**	**+0.7**
MNAI	**Manna**	**7.37**	**302**	P	**Pn**	**16 23 08.5**	**+0.7**
	1.4nm8μm195nm,0.5s						
MNAI	**Manna**	**7.37**	**302**	P	**Pn**	**16 23 08.5**	**+0.7**
TWSI	**Taliwang, Sumb**	**7.57**	**94**	P	**Pn**	**16 23 10.7**	**+0.3**
	0.2nm993nm52nm,0.7s						
KSI	**Kapahiang**	**8.07**	**305**	P	**Pn**	**16 23 18.0**	**+0.7**
	19nm,0.5s						
PLAI	**Plampang**	**8.45**	**94**	P	**Pn**	**16 23 22.8**	**+0.3**
	172nm,0.9s						
PLAI	**Plampang**	**8.45**	**94**	P	**Pn**	**16 23 23.0**	**+0.5**
STKI	**Sintang**	**8.60**	**15**	P	**Pn**	**16 23 27.1**	**+2.6**
	8.0nm,0.5s						
DSRI	**Dabo**	**9.05**	**329**	P	**Pn**	**16 23 32.9**	**+2.2**
	32nm,1.1s						
KSM	**Kuching**	**9.76**	**6**	Pn	**Pn**	**16 23 41.7**	**+1.3**
KSM	**Kuching**	**9.76**	**6**	P	**Pn**	**16 23 42.2**	**+1.8**
KRJI	**Kerinci**	**9.90**	**308**	P	**Pn**	**16 23 40.5**	**-1.9**
	140nm,0.8s						
WBSI	**Waikabubak, Su**	**10.11**	**98**	P	**Pn**	**16 23 45.5**	**+0.3**
	62nm,1.3s						
KAPI	**Kappang**	**10.93**	**73**	P	**Pn**	**16 23 54.3**	**-2.0**
	6.5nm,0.8s,baz=254,slow=8.3,SNR=1.8						
KAPI				LR	LR	16 28 19.5	
	comp=Z,154nm,18.1s,baz=288,slow=39						
SBUM	**Sibu**	**11.08**	**16**	Pn	**Pn**	**16 24 00.8**	**+2.4**
BKSI	**Bulukumba**	**11.20**	**75**	P	**Pn**	**16 24 00.3**	**+0.4**
	36nm,1.0s						
MYKOM	**Kota Tinggi**	**11.37**	**332**		**Pn**	**16 24 04.2**	**+1.9**
TTSI	**Tana Toraja**	**11.74**	**64**	P	**Pn**	**16 24 09.4**	**+2.1**
	25nm,1.1s						
EDFI	**Ende, Flores**	**12.32**	**93**	P	**Pn**	**16 24 10.8**	**-4.4**
	453nm17nm,1.0s						
MMRI	**Maumere**	**12.86**	**92**		**Pn**	**16 24 19.3**	**-3.1**
MMRI	**Maumere**	**12.86**	**92**	P	**Pn**	**16 24 19.5**	**-2.9**
	52nm,0.7s						
MNSI	**Mandailing Nat**	**13.21**	**313**	P	**Pn**	**16 24 26.6**	**-0.5**
BATI	**Baumata**	**14.36**	**99**	P	**Pn**	**16 24 39.2**	**-2.9**
	28nm,0.5s,baz=24,slow=2.4,SNR=12						
BATI				S	Sn	16 27 09.8	-10
	9.7nm,0.4s,baz=326,slow=23,SNR=2.0						
BATI	**Baumata**	**14.36**	**99**	P	**Pn**	**16 24 38.5**	**-3.6**
	40nm,0.9s						
APSI	**Ampana**	**14.37**	**60**	P	**Pn**	**16 24 41.3**	**-1.0**
	28nm,1.2s						
TOLI2	**Tolitoli**	**14.82**	**51**	P	**P**	**16 24 53.6**	**+1.7**
GSI	**Gunungsitoli**	**15.04**	**309**	Pn	**Pn**	**16 24 45.6**	**-5.4**
GSI				lAmb	lAmb	16 24 56.4	
	comp=Z,38nm,0.9s						
GIRL	**Giralia**	**15.05**	**162**	Pn	**Pn**	**16 24 48.3**	**-2.6**
GIRL	**Giralia**	**15.05**	**162**	P	**Pn**	**16 24 49.1**	**-1.9**
PSI	**Prapat**	**15.08**	**317**	LR	LR	16 30 18.9	
	comp=Z,100nm,21.7s,baz=108,slow=36						
IPM	**Ipoh**	**15.11**	**327**	Pn	**Pn**	**16 24 51.8**	**-0.1**
IPM	**Ipoh**	**15.11**	**327**	P	**Pn**	**16 24 52.1**	**+0.3**
MRSI	**Marisa**	**15.37**	**56**	P	**P**	**16 25 00.9**	**+3.0**
KULM	**Kulim**	**15.99**	**327**	Pn	**Pn**	**16 25 03.7**	**+0.8**
MBWA	**Marble Bar**	**16.31**	**143**		**Pn**	**16 25 05.3**	**-1.5**
MBWA				lAmb	lAmb	16 25 20.2	
	comp=Z,19nm,0.6s						
MBWA	**Marble Bar**	**16.31**	**143**	P	**Pn**	**16 25 06.3**	**-0.5**
GTOI	**Gorontalo**	**16.34**	**58**	P	**P**	**16 25 09.9**	**+1.1**
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**16.69**	**143**		**Pn**	**16 25 11.2**	**-0.5**
PSA00	**Pilbara Seismi**	**16.69**	**143**	P	**Pn**	**16 25 11.3**	**-0.3**
NLAI	**Namlea**	**18.45**	**75**	P	**Pn**	**16 25 34.1**	**+1.0**
	comp=Z,28nm,0.6s						

FITZ **Fitzroy Crossi** 18.68 123 P **Pn** **16 25 36.2 +0.4**
comp=Z,10nm,0.8s,baz=287,slow=6.4,SNR=20
FITZ S **S** **16 28 55.5 -7.3**
comp=Z,5.6nm,0.7s,baz=189,slow=19,SNR=3.7
FITZ **Fitzroy Crossi** 18.68 123 P **Pn** **16 25 36.7 +0.9**
MEEK **Meekatharra** 20.29 155 P Pn 16 25 54.7 -0.1
KNRA **Kununurra** 20.44 113 P **P** **16 25 54.4 +0.7**
KNRA lAmb lAmb 16 25 55.0
comp=Z,38nm,0.5s
KNRA **Kununurra** 20.44 113 P **P** **16 25 54.9 +1.2**
MORW **Morawa** 21.63 164 P **P** **16 26 05.0 -1.3**
MTN **Manton Dam** 21.98 104 P **P** **16 26 10.3 +0.1**
MTN lAmb lAmb 16 26 28.9
comp=Z,19nm,0.7s
SIJI **Sorong** 23.14 73 P **P** **16 26 20.2 -2.1**
comp=Z,12nm,0.6s,baz=257,slow=4.1,SNR=8.1
comp=Z,12nm,0.6s
FAKI **Fak Fak** 23.50 78 P **P** **16 26 25.1 -0.5**
FAKI lAmb lAmb 16 26 57.9
comp=Z,63nm,1.3s
WRKA **Warakurna** 24.64 135 P **P** **16 26 37.1 +1.2**
H01W3 **Cape Leeuwin H** 26.84 171 T T 16 55 00.7
baz=341,slow=76,SNR=5.6
H01W1 **Cape Leeuwin H** 26.85 171 T T 16 55 00.4
baz=341,slow=76,SNR=5.0
H01W2 **Cape Leeuwin H** 26.85 171 T T 16 54 59.2
baz=341,slow=76,SNR=5.1
WB0 **Warramunga Arr** 26.88 118 P **P** **16 26 56.9 +0.7**
WB0 lAmb lAmb 16 27 19.0
comp=Z,9.7nm,0.8s
WRA **Warramunga Arr** 26.90 118 P **P** **16 26 57.3 +1.0**
comp=Z,5.9nm,0.9s,baz=290,slow=12,SNR=29
WRA PcP **PcP** **16 30 16.8 0.0**
comp=Z,1.1nm,0.5s,baz=295,slow=2.1,SNR=5.8
comp=Z,5.9nm,0.9s
WRA **Warramunga Arr** 26.90 118 P **P** **16 26 57.0 +0.7**
WRAB **Tennant Creek** 26.91 118 P **P** **16 26 57.3 +0.9**
WRAB lAmb lAmb 16 27 23.3
comp=Z,11nm,0.8s
WRAB **Tennant Creek** 26.91 118 P **P** **16 26 58.0 +1.6**
WB2 **Warramunga Arr** 26.91 118 P **P** **16 26 57.0 +0.6**
WB2 lAmb lAmb 16 27 22.1
comp=Z,10nm,0.8s
AS31 **Alice Springs** 28.13 126 P **P** **16 27 07.6 +0.3**
ASAR **Alice Springs** 28.13 126 P **P** **16 27 08.2 +0.9**
comp=Z,4.4nm,0.6s,baz=308,slow=9.3,SNR=109
ASAR PcP **PcP** **16 30 20.1 +0.3**
comp=Z,1.7nm,0.5s,baz=326,slow=1.5,SNR=7.6
ASAR ScP **ScP** **16 33 52.2 -1.4**
comp=Z,0.4nm,0.7s,baz=340,slow=5.2,SNR=2.4
comp=Z,4.4nm,0.6s
ASAR **Alice Springs** 28.13 126 P **P** **16 27 08.0 +0.7**
FORT **Forrest** 28.45 144 P **P** **16 27 11.9 +1.9**
CMAR **Chiang Mai Arr** 28.46 339 P **P** **16 27 09.3 -0.9**
comp=Z,1.6nm,0.7s,baz=174,slow=8.6,SNR=7.4
CMAR PcP **PcP** **16 30 20.3 -0.2**
comp=Z,1.2nm,0.7s,baz=207,slow=2.9,SNR=5.4
CMAR LR LR 16 38 09.0
comp=Z,49nm,19.9s,baz=135,slow=36
comp=Z,1.6nm,0.7s
OOD **Oodnadatta** 31.62 131 P **P** **16 27 39.3 +1.2**
QIS **Mount Isa** 31.76 116 P **P** **16 27 40.7 +1.3**
MULG **Mulgathing** 31.90 137 P **P** **16 27 42.1 +1.6**
PALK **Pallekele** 32.39 298 P **P** **16 27 46.5 +1.5**
COEN **Coen** 33.74 103 P **P** **16 27 57.0 +0.3**
COEN lAmb lAmb 16 28 33.8
comp=Z,28nm,1.1s
COEN **Coen** 33.74 103 P **P** **16 27 57.2 +0.5**
comp=Z,19nm,1.1s
BBOO **Buckleboo** 34.80 138 P **P** **16 28 06.6 +0.9**
BBOO **Buckleboo** 34.80 138 P **P** **16 28 07.1 +1.4**
LCRK **Leigh Creek** 34.91 133 P **P** **16 28 08.7 +2.0**
YOJ **Yonaguni jima** 35.22 22 P **P** **16 28 11.1 +1.8**
PZH **PanZhiHua** 35.35 348 P **P** **16 28 14.9 +4.3**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,90nm,4.6s
MTSU **Mount Surprise** 35.45 110 P **P** **16 28 13.1 +1.6**
comp=Z,11nm,1.1s
INKA **Innaminka** 35.48 127 P **P** **16 28 13.7 +2.1**
H08S2 **Diego Garcia H** 36.40 268 T T 17 06 38.0
baz=94,slow=76,SNR=62
H08S3 **Diego Garcia H** 36.41 268 T T 17 06 43.4
baz=94,slow=76,SNR=71
H08S1 **Diego Carcia H** 36.41 268 T T 17 06 39.5
baz=94,slow=76,SNR=65
HTT **Hallett** 37.09 137 P **P** **16 28 28.1 +2.8**
comp=Z,16nm,1.6s
CTA **Charters Tower** 37.65 112 LR LR 16 43 18.3
comp=Z,55nm,21.2s,baz=314,slow=35
CTAO **Charters Tower** 37.65 112 P **P** **16 28 31.0 +0.8**
QLP **Quilpie** 37.83 123 P **P** **16 28 33.9 +2.3**
STKA **Stephens Creek** 38.13 132 P **P** **16 28 35.5 +1.5**
comp=Z,5.6nm,0.8s,baz=311,slow=9.6,SNR=13
STKA PcP **PcP** **16 30 48.1 +0.6**
comp=Z,4.8nm,0.7s,baz=329,slow=5.8,SNR=3.5
STKA LR LR 16 46 28.4
comp=Z,92nm,18.6s,baz=15,slow=39
comp=Z,5.6nm,0.8s
STKA **Stephens Creek** 38.13 132 P **P** **16 28 35.5 +1.5**
STKA **Stephens Creek** 38.13 132 P **P** **16 28 36.3 +2.3**
CMSA **Cobar Meteorol** 41.03 129 P **P** **16 29 01.2 +3.0**
comp=Z,11nm,0.8s
NJ2 **Nanjing** 41.16 12 *e*P P 16 29 04.9 +5.8
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
ARMA **Armidale** 45.27 125 P **P** **16 29 33.8 +1.3**
ARMA lAmb lAmb 16 29 34.4
comp=Z,15nm,1.5s
GOMU **GeErMu** 46.30 344 P P 16 29 35.8 -4.9
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,66nm,4.8s
GTA **Gaotai** 48.27 350 *e*P **P** **16 29 56.8 +1.1**
GTA pP pP 16 30 13.0 -2.8
GTA sP sP 16 30 23.9 -1.2
GTA pmax pmax
comp=Z,2.0nm,1.2s
HHC **Hu-ho-hao-te** 48.95 2 *e*P **P** **16 30 05.5 +4.6**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,200nm,4.9s
JHJ2 **Mitsune** 50.42 34 P **P** **16 30 12.5 +0.5**
JGF **Kuroka** 51.08 30 P **P** **16 30 18.2 +1.2**
MJAR **Matsushiro Arr** 52.24 30 P **P** **16 30 21.9 -3.8**
comp=Z,1.7nm,0.7s,baz=197,slow=8.6,SNR=10
comp=Z,1.7nm,0.7s
WMQ **Urumqi** 55.43 341 *e*P **P** **16 30 49.3 +0.5**
WMQ pP pP 16 31 13.8 +4.3
WMQ sP sP 16 31 19.3 +0.6
WMQ PcP **PcP** **16 31 51.0 +2.8**
WMQ pmax pmax
comp=Z,48nm,0.7s
SONM **Songino Array** 55.94 358 P **P** **16 30 50.2 -2.3**
comp=Z,0.7nm,0.5s,baz=179,slow=8.4,SNR=5.1
comp=Z,0.7nm,0.5s
USRK **Ussuriysk Ar.** 56.16 20 P **P** **16 30 49.7 -4.2**
comp=Z,1.2nm,0.5s,baz=199,slow=5.5,SNR=4.3
comp=Z,1.2nm,0.5s
MK31 **Makanchi Array** 59.87 339 P **P** **16 31 16.5 -3.4**
MKAR **Makanchi Array** 59.87 339 P **P** **16 31 16.8 -3.1**
comp=Z,2.1nm,0.4s,baz=152,slow=7.5,SNR=28
comp=Z,2.1nm,0.4s
MKAR **Makanchi Array** 59.87 339 P **P** **16 31 16.4 -3.5**
KLR **Kul'dur** 60.59 17 P **P** **16 31 21.1 -3.5**
comp=Z,2.5nm,0.6s,baz=201,slow=4.1,SNR=8.8
comp=Z,2.5nm,0.6s
UOSS **Minazif** 61.31 304 P **P** **16 31 29.8 -0.3**
UOSS lAmb lAmb 16 31 31.6
comp=Z,15nm,1.4s
WHZ **Wether Hill Ro** 62.50 138 P **P** **16 31 39.6 +1.9**
RPZ **Rata Peaks** 64.04 135 P **P** **16 31 49.3 +1.3**
KURK **Kurchatov** 64.49 339 P **P** **16 31 48.5 -2.0**
ZAA0 **Zalesovo Array** 65.36 344 P **P** **16 31 53.0 -3.2**
ZALV **Zalesovo Beam** 65.36 344 P **P** **16 31 53.2 -3.0**
comp=Z,1.4nm,0.3s,baz=153,slow=5.5,SNR=8.7
comp=Z,1.4nm,0.3s
ZALV **Zalesovo Beam** 65.36 344 P **P** **16 31 54.1 -2.1**
GEYT **Alibeck** 66.21 318 P **P** **16 32 00.8 -1.3**
comp=Z,1.6nm,0.4s,baz=193,slow=5.6,SNR=2.5
comp=Z,1.6nm,0.4s
MAW **Mawson** 66.79 198 P **P** **16 32 07.3 +2.1**
comp=Z,5.2nm,0.8s,baz=70,slow=5.3,SNR=12

comp=Z,5.2nm,0.8s
MAW Mawson 66.79 198 P **P** **16 32 07.3 +2.1**
RAYN Ar Rayn 69.82 299 P **P** **16 32 23.6 -1.4**
RAYN IAmb IAmb 16 32 24.7
comp=Z,5.6nm,1.1s
KIBK Kibwezi 71.06 270 P **P** **16 32 33.6 +0.7**
KIBK IAmb IAmb 16 32 34.9
comp=Z,6.0nm,0.7s
ABKAR Akbulak array 71.67 328 P **P** **16 32 32.9 -2.7**
KMBO Kilima Mbogo 72.02 272 P **P** **16 32 39.8 +1.0**
comp=Z,5.3nm,0.9s,baz=66,slow=8.6,SNR=7.1
comp=Z,5.3nm,0.9s
KMBO Kilima Mbogo 72.02 272 P **P** **16 32 39.2 +0.4**
KMBO IAmb IAmb 16 32 41.1
comp=Z,7.0nm,1.0s
FURI Furi 72.34 282 P **P** **16 32 37.1 -3.7**
PEA0B Petropavlovsk- 73.66 28 P **P** **16 32 45.4 -2.0**
PETK Petropavlovsk- 73.66 28 P **P** **16 32 45.3 -2.1**
comp=Z,1.1nm,0.5s,baz=208,slow=3.9,SNR=9.3
comp=Z,1.1nm,0.5s
VNDA Vanda 74.30 170 P **P** **16 32 52.5 +1.8**
comp=Z,2.9nm,0.8s,baz=310,slow=6.1,SNR=21
comp=Z,2.9nm,0.8s
VNDA Vanda 74.30 170 P **P** **16 32 52.3 +1.6**
LODK Lodwar 74.59 276 P **P** **16 32 55.0 +1.3**
LODK IAmb IAmb 16 32 56.1
comp=Z,8.3nm,1.5s
POGA Pongola 75.20 244 P **P** **16 32 58.6 +1.6**
SBA Scott Base 75.36 169 P **P** **16 32 59.4 +2.5**
KBZ Khabaz 79.10 317 P **P** **16 33 17.6 -0.7**
comp=Z,3.3nm,0.9s,baz=152,slow=3.3,SNR=5.9
comp=Z,3.3nm,0.9s
LSZ Lusaka 79.28 256 LR LR 17 01 43.3
comp=Z,29nm,20.4s,baz=133,slow=30
SOE Somerset East 80.28 238 P **P** **16 33 27.1 +2.0**
SOE IAmb IAmb 16 33 55.2
comp=Z,23nm,1.2s
LBTB Lobatse 80.81 246 P **P** **16 33 29.5 +1.3**
LBTB IAmb IAmb 16 33 30.3
comp=Z,6.4nm,0.8s
BOSA Boshof 80.83 242 P **P** **16 33 29.6 +1.4**
comp=Z,6.6nm,0.9s,baz=104,slow=4.3,SNR=9.9
comp=Z,6.6nm,0.9s
BOSA Boshof 80.83 242 P **P** **16 33 29.2 +1.0**
BOSA IAmb IAmb 16 33 33.1
comp=Z,21nm,1.5s
QSPA South Pole Qui 81.70 180 P **P** **16 33 33.3 +1.2**
QSPA IAmb IAmb 16 33 34.5
comp=Z,5.6nm,1.0s
BR131 Keskin Array S 84.35 311 P **P** **16 33 45.1 -1.1**
BR131 IAmb IAmb 16 33 46.0
comp=Z,13nm,0.7s
BRTR Keskin Array B 84.35 311 P **P** **16 33 45.2 -1.1**
comp=Z,8.8nm,0.8s,baz=135,slow=7.2,SNR=26
comp=Z,8.8nm,0.8s
TROLL Troll, Antarti 87.26 197 P **P** **16 34 01.8 +1.7**
KLMR Klimovskoe 87.54 333 *e*P **P** **16 33 58.7 -2.6**
KLMR AMP 16 34 02.1
comp=Z,5.0nm,0.7s
TSUM Tsumeb 88.87 251 P **P** **16 34 10.3 +1.6**
TSUM IAmb IAmb 16 34 46.9
comp=Z,13nm,1.4s
SNAA Sanae 88.95 197 P **P** **16 34 09.9 +1.9**
SNAA Sanae 88.95 197 pP pP 16 34 30.5 +1.3
SNAA Sanae 88.95 197 P **P** **16 34 10.0 +2.1**
SNAA IAmb IAmb 16 34 11.0
comp=Z,5.9nm,0.8s
AKASG Malin Array Be 90.09 321 P **P** **16 34 11.1 -2.4**
comp=Z,0.8nm,0.4s,baz=84,slow=5.4,SNR=8.0
comp=Z,0.8nm,0.4s
VNA2 Neumayer--Watz 90.60 197 P **P** **16 34 17.8 +2.2**
baz=96,slow=3.8
VNA1 Neumayer--Stat 90.98 197 P **P** **16 34 18.6 +1.3**
VNA1 Neumayer--Stat 90.98 197 pP pP 16 34 42.3 +3.7
VNA3 Neumayer Olymp 91.10 196 P **P** **16 34 19.8 +1.9**
VNA3 Neumayer Olymp 91.10 196 pP pP 16 34 41.5 +2.3
BELA Belgrano 2 91.65 187 P **P** **16 34 21.3 +0.9**
BELA IAmb IAmb 16 34 22.2
comp=Z,2.6nm,1.0s
BURAR Bucovina Array 92.06 318 P **P** **16 34 22.1 -0.8**
BURAR IAmb IAmb 16 34 23.4
comp=Z,2.3nm,0.8s
BUR08 Bucovina Ar. S 92.07 318 P **P** **16 34 22.3 -0.7**
BUR08 IAmb IAmb 16 34 23.2
comp=Z,4.0nm,1.1s
FINES FINESS Array B 93.97 331 P **P** **16 34 29.5 -1.7**
comp=Z,2.5nm,1.0s,baz=90,slow=2.1,SNR=4.1
comp=Z,2.5nm,1.0s
ARCES ARCESS Array B 95.52 339 P **P** **16 34 35.6 -2.6**
comp=Z,1.6nm,0.8s,baz=76,slow=5.4,SNR=5.1
ARCES LR LR 17 22 11.0
comp=Z,41nm,19.4s,baz=260,slow=38
comp=Z,1.6nm,0.8s
YKA Yellowknife Ar 117.28 21 PKP **PKPdf** **16 39 56.6 -1.7**
comp=Z,0.8nm,0.7s,baz=347,slow=2.5,SNR=7.1
PDAR Pinedale Array 131.68 38 PKP **PKPdf** **16 40 26.7 -0.1**
comp=Z,0.2nm,0.5s,baz=256,slow=2.5,SNR=1.9
TXAR Lajitas Array 142.69 52 PKhKP PKPpre 16 40 42.4
comp=Z,0.4nm,0.5s,baz=196,slow=1.6,SNR=5.7
CPUP Villa Florida 143.19 200 PKP PKPbc 16 40 46.0 +0.7
comp=Z,1.2nm,0.7s,baz=52,slow=2.4,SNR=4.3
BDFB Brasilia 147.24 223 PKPbc **PKPbc** **16 40 57.5 -0.3**
comp=Z,5.3nm,0.7s,baz=134,slow=1.9,SNR=6.9
LPAZ La Paz 155.44 186 PKPab **PKPab** **16 41 35.3 +1.2**
comp=Z,1.9nm,0.7s,baz=133,slow=4.1,SNR=8.1

NEIC ***16*** *16:52:06.9±1.3, 18°.4N±0°.1×145°.8E±0°.2, h121km±9km, mb4.6/134, Error ellipse: s-maj=32.9km s-min=13.6km az=102.0*

IDC ***16*** *16:52:08.7±0.5, 18°.34N×145°.99E, h146km±4km, mb3.8/19, mbtmp4.2/22, MS2.9/4, Error ellipse: s-maj=14.9km s-min=8.5km az=98.0*

ISC 16 16:52:08.9±0.4**, 18°.38N**±0°.05×**145°.78E**±0°.09**, h145**km**, n343**, σ0**93**/347**, mb4.5**/89**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.84**	**191**	P	**Pn**	**16 53 20.1**	**-0.1**
	154nm,0.2s,baz=120,slow=4.3,SNR=35						
GUMO				S	**Sn**	**16 54 16.0**	**+0.3**
	120nm,0.3s,baz=187,slow=21,SNR=5.4						
GUMO				LR	LR	16 54 51.0	
	comp=Z,75nm,18.4s,baz=246,slow=34						
GUMO	**Guam**	**4.84**	**191**		**Pn**	**16 53 19.9**	**-0.3**
JCJ	**Chichijima**	**9.29**	**340**	P	**Pn**	**16 54 19.1**	**-0.4**
	50nm,0.8s,baz=59,slow=20,SNR=9.5						
JCJ				S	**Sn**	**16 55 58.0**	**-4.5**
	19nm,0.4s,baz=289,slow=22,SNR=1.6						
PATS	**Pohnpei**	**16.75**	**132**	P	**P**	**16 55 53.7**	**-1.2**
PATS				IAmb	IAmb	16 56 21.3	
	comp=Z,61nm,1.1s						
MJAR	**Matsushiro Arr**	**19.29**	**341**	P	**P**	**16 56 23.1**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=125,slow=14,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**19.83**	**86**	T	T	17 17 26.9	
	baz=274,slow=74,SNR=33						
H11S1	**WAKE ISLAND Hy**	**19.84**	**86**	T	T	17 17 27.7	
	baz=274,slow=74,SNR=56						
H11S2	**WAKE ISLAND Hy**	**19.85**	**86**	T	T	17 17 28.1	
	baz=274,slow=74,SNR=41						
H11N1	**WAKE ISLAND Hy**	**20.00**	**83**	T	T	17 17 50.3	
	baz=267,slow=74,SNR=20						
H11N2	**WAKE ISLAND Hy**	**20.00**	**83**	T	T	17 17 50.5	
	baz=267,slow=74,SNR=17						
H11N3	**WAKE ISLAND Hy**	**20.02**	**83**	T	T	17 17 35.8	
	baz=267,slow=74,SNR=23						
MANU	**Manus Island**	**20.35**	**175**	P	**P**	**16 56 34.4**	**+0.3**
SIJI	**Sorong**	**23.87**	**218**	LR	LR	17 05 53.9	
	comp=Z,24nm,18.1s,baz=291,slow=34						
KSRS	**Korea Array**	**24.62**	**324**	P	**P**	**16 57 17.5**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=141,slow=8.8,SNR=2.7						
KSRS				pP	**pP**	**16 57 47.5**	**+2.7**
	comp=Z,4.6nm,1.0s,baz=144,slow=8.8,SNR=7.3						
KSRS				S	**S**	**17 01 19.4**	**-7.1**
	comp=Z,0.7nm,0.4s,baz=154,slow=14,SNR=4.9						
	comp=Z,0.4nm,0.6s						
MTN	**Manton Dam**	**34.22**	**206**	P	**P**	**16 58 41.3**	**+0.4**
MTN				IAmb	IAmb	16 59 08.8	
	comp=Z,21nm,1.4s						
PETK	**Petropavlovsk-**	**35.89**	**12**	P	**P**	**16 58 55.9**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=158,slow=7.7,SNR=9.7						
	comp=Z,2.2nm,0.6s						
PETK	**Petropavlovsk-**	**35.89**	**12**	P	**P**	**16 58 55.4**	**+0.6**
HHC	**Hu-ho-hao-te**	**36.88**	**315**	*e*P	**P**	**16 59 06.0**	**+2.4**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.4s						
KNRA	**Kununurra**	**37.76**	**207**	P	**P**	**16 59 11.2**	**+0.1**
KNRA				IAmb	IAmb	16 59 12.9	
	comp=Z,8.8nm,0.8s						
WB0	**Warramunga Arr**	**39.52**	**197**	P	**P**	**16 59 24.9**	**-0.8**
WB0				IAmb	IAmb	16 59 28.0	
	comp=Z,6.5nm,0.7s						
WR0	**Warramunga Arr**	**39.66**	**197**	P	**P**	**16 59 26.2**	**-0.7**
WR0				IAmb	IAmb	16 59 29.2	
	comp=Z,8.7nm,1.0s						
WB2	**Warramunga Arr**	**39.70**	**197**	P	**P**	**16 59 26.8**	**-0.4**
WB2				IAmb	IAmb	16 59 30.1	
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**39.70**	**197**	P	**P**	**16 59 27.5**	**+0.3**
	comp=Z,8.7nm,0.9s,baz=17,slow=8.7,SNR=35						
WRA				ScP	**ScP**	**17 05 04.8**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=16,slow=4.4,SNR=6.2						
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**39.70**	**197**	P	**P**	**16 59 26.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.30**	**210**	P	**P**	**16 59 40.4**	**+0.1**
PZH	**PanZhiHua**	**41.34**	**289**	P	**P**	**16 59 41.4**	**+0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,4.3s						
AS31	**Alice Springs**	**43.36**	**196**	P	**P**	**16 59 56.7**	**-0.3**
ASAR	**Alice Springs**	**43.37**	**196**	P	**P**	**16 59 56.5**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=16,slow=6.5,SNR=36						
ASAR				ScP	**ScP**	**17 05 19.1**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=3.3,slow=4.1,SNR=5.5						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**43.45**	**322**	P	**P**	**16 59 57.6**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=143,slow=7.5,SNR=2.6						
CMAR	**Chiang Mai Arr**	**44.34**	**278**	P	**P**	**17 00 07.7**	**+2.7**
	comp=Z,0.2nm,0.4s,baz=61,slow=7.4,SNR=1.9						
CMAR				pP	**pwP**	**17 00 39.6**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=66,slow=6.7,SNR=3.7						
CMAR				LR	LR	17 19 39.3	
	comp=Z,10nm,18.3s,baz=175,slow=37						
	comp=Z,0.2nm,0.4s						
SEY	**Seymchan**	**44.75**	**4**	P	**P**	**17 00 08.8**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=178,slow=11,SNR=7.2						
	comp=Z,2.9nm,0.7s						
GTA	**Gaotai**	**44.81**	**308**	*e*P	P	17 00 16.3	+7.7
GTA				pP	pP	17 00 40.3	+0.4
GTA				sP	sP	17 00 56.3	+0.6
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STKA	**Stephens Creek**	**50.13**	**185**	P	**P**	**17 00 50.2**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=350,slow=8.4,SNR=4.3						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**50.13**	**185**	P	**P**	**17 00 50.3**	**+0.8**
UNV	**Unalaska Valle**	**50.87**	**34**	P	**P**	**17 00 55.6**	**+0.8**
	baz=245						
BBOO	**Buckleboo**	**51.74**	**190**	P	**P**	**17 01 01.8**	**+0.3**
GAMB	**Gambell**	**53.72**	**22**	P	**P**	**17 01 16.2**	**+0.6**
	baz=233						
WMQ	**Urumqi**	**54.58**	**311**	*e*P	**P**	**17 01 25.3**	**+2.9**
P16K	**Nushagak River**	**57.23**	**31**	P	**P**	**17 01 41.3**	**+0.4**
	baz=250						
O16K	**Kokwok River B**	**57.38**	**30**	P	**P**	**17 01 41.7**	**-0.2**
	baz=249						
N16K	**Nishlik Lake**	**57.38**	**29**	P	**P**	**17 01 42.6**	**+0.7**
	baz=248						
R17K	**Ugashik Creek**	**57.58**	**33**	P	**P**	**17 01 42.8**	**-0.5**
	baz=252						
O17K	**Koliganek Bris**	**57.92**	**30**	P	**P**	**17 01 45.0**	**-0.6**
	baz=250,SNR=6.8						
ZALV	**Zalesovo Beam**	**58.32**	**323**	P	**P**	**17 01 49.1**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=111,slow=8.0,SNR=2.5						
ZALV				pP	**pP**	**17 02 21.5**	**0.0**
	comp=Z,0.4nm,0.4s,baz=25,slow=18,SNR=1.8						
	comp=Z,0.4nm,0.4s						
SII	**Sitkinak Islan**	**58.43**	**34**	P	**P**	**17 01 49.6**	**+0.4**
SII	**Sitkinak Islan**	**58.43**	**34**	P	**P**	**17 01 49.5**	**+0.3**
	baz=255						
MKAR	**Makanchi Array**	**58.74**	**314**	P	**P**	**17 01 52.2**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=99,slow=8.9,SNR=3.1						
MKAR				pP	**pP**	**17 02 25.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=99,slow=7.9,SNR=4.1						
	comp=Z,0.2nm,0.5s						
N18K	**Kilae Creek**	**58.79**	**29**	P	**P**	**17 01 52.4**	**+0.7**
N18K				IAmb	IAmb	17 01 53.0	
	comp=Z,4.5nm,0.8s						
N18K	**Kilae Creek**	**58.79**	**29**	P	**P**	**17 01 52.0**	**+0.3**
	baz=251						
O18K	**Koktuh Hills**	**58.85**	**30**	P	**P**	**17 01 53.0**	**+0.9**
O18K	**Koktuh Hills**	**58.85**	**30**	P	**P**	**17 01 52.8**	**+0.7**
	baz=252						
SVW2	**Sparrevohn**	**59.07**	**29**	P	**P**	**17 01 54.3**	**+0.7**
SVW2				IAmb	IAmb	17 01 55.2	
	comp=Z,7.3nm,1.0s						
OHAK	**Old Harbor**	**59.07**	**34**	P	**P**	**17 01 54.1**	**+0.4**
OHAK	**Old Harbor**	**59.07**	**34**	P	**P**	**17 01 54.0**	**+0.4**
	baz=255						
Q19K	**Cape Douglas,**	**59.34**	**32**	P	**P**	**17 01 54.3**	**-1.2**
	baz=254						
O19K	**Port Alsworth**	**59.38**	**30**	P	**P**	**17 01 55.7**	**0.0**
	baz=253						
N19K	**Bonanza Creek**	**59.49**	**29**	P	**P**	**17 01 57.1**	**+0.5**
N19K				IAmb	IAmb	17 01 58.3	
	comp=Z,7.8nm,0.8s						
N19K	**Bonanza Creek**	**59.49**	**29**	P	**P**	**17 01 56.8**	**+0.2**
	baz=252,SNR=5.1						
TTA	**Tatalina**	**59.50**	**27**	P	**P**	**17 01 56.3**	**-0.3**
TTA				IAmb	IAmb	17 01 57.8	
	comp=Z,3.1nm,0.7s						
TTA	**Tatalina**	**59.50**	**27**	P	**P**	**17 01 57.0**	**+0.4**
	baz=250						
KDAK	**Kodiak Island**	**59.58**	**33**	P	**P**	**17 01 57.7**	**+0.6**
	baz=256						
P19K	**Oil Pt**	**59.75**	**31**	P	**P**	**17 01 57.7**	**-0.6**
P19K	**Oil Pt**	**59.75**	**31**	P	**P**	**17 01 57.7**	**-0.6**
	baz=254						
L19K	**White Mountain**	**59.75**	**28**	P	**P**	**17 01 58.2**	**-0.1**
L19K				IAmb	IAmb	17 01 59.7	
	comp=Z,8.5nm,1.2s						
L19K	**White Mountain**	**59.75**	**28**	P	**P**	**17 01 58.3**	**+0.1**
	baz=251						
GCSA	**Galena City Sc**	**59.81**	**25**	P	**P**	**17 01 58.5**	**-0.1**
	baz=248						
M19K	**Big River Lodg**	**59.87**	**28**	P	**P**	**17 01 59.7**	**+0.6**
	baz=252						
Q20K	**Shuyak Island**	**59.89**	**32**	P	**P**	**17 01 58.9**	**-0.3**
	baz=255						
L20K	**Farewell, AK**	**60.28**	**28**	P	**P**	**17 02 02.8**	**+1.0**
	baz=252						
M20K	**Styx River**	**60.43**	**28**	P	**P**	**17 02 03.6**	**+0.6**
M20K				IAmb	IAmb	17 02 12.9	
	comp=Z,9.7nm,1.3s						
M20K	**Styx River**	**60.43**	**28**	P	**P**	**17 02 04.0**	**+1.0**
	baz=253						
K20K	**Telida**	**60.47**	**27**	P	**P**	**17 02 04.0**	**+0.8**
K20K				IAmb	IAmb	17 02 05.1	
	comp=Z,8.0nm,0.8s						
K20K	**Telida**	**60.47**	**27**	P	**P**	**17 02 03.7**	**+0.5**
	baz=251,SNR=6.8						
CNPM	**China Poot**	**60.69**	**31**	P	**P**	**17 02 03.7**	**-1.1**
J20K	**Nowinta River**	**60.71**	**26**	P	**P**	**17 02 04.5**	**-0.2**
J20K	**Nowinta River**	**60.71**	**26**	P	**P**	**17 02 05.8**	**+1.1**
	baz=251,SNR=8.2						
BRSE	**Bradley Lake S**	**60.99**	**31**	P	**P**	**17 02 06.4**	**-0.3**
	baz=256						
PPLA	**Purkeypile**	**61.15**	**28**	P	**P**	**17 02 08.1**	**+0.2**
PPLA				IAmb	IAmb	17 02 08.7	
	comp=Z,18nm,1.5s						
PPLA	**Purkeypile**	**61.15**	**28**	P	**P**	**17 02 08.1**	**+0.2**
	baz=253						
SKT	**Skwentna**	**61.18**	**29**	P	**P**	**17 02 07.6**	**-0.4**
	baz=254						
CAST	**Castle Rocks**	**61.34**	**27**	P	**P**	**17 02 09.4**	**+0.4**
CAST	**Castle Rocks**	**61.34**	**27**	P	**P**	**17 02 09.5**	**+0.4**
	baz=253,SNR=9.3						
CHUM	**Lake Minchumin**	**61.38**	**26**	P	**P**	**17 02 09.7**	**+0.4**
	baz=253,SNR=7.7						
IMAR	**Indian Mountai**	**61.48**	**24**	P	**P**	**17 02 10.0**	**+0.1**
SEW	**Seward**	**61.70**	**31**	P	**P**	**17 02 11.4**	**0.0**
	baz=257						
H21K	**Melozitna Rive**	**61.74**	**24**	P	**P**	**17 02 11.9**	**+0.3**
H21K				IAmb	IAmb	17 02 13.2	
	comp=Z,5.4nm,0.8s						
H21K	**Melozitna Rive**	**61.74**	**24**	P	**P**	**17 02 11.2**	**-0.4**
	baz=251,SNR=6.0						
G21K	**Allakaket**	**61.75**	**23**	P	**P**	**17 02 11.8**	**+0.1**
	baz=250						
RC01	**Rabbit Creek A**	**61.79**	**30**	P	**P**	**17 02 11.3**	**-0.8**
RC01				IAmb	IAmb	17 02 12.1	
	comp=Z,8.1nm,0.8s						
RC01	**Rabbit Creek A**	**61.79**	**30**	P	**P**	**17 02 11.7**	**-0.4**
	baz=256						
KTH	**Kantishna Hill**	**61.88**	**27**	P	**P**	**17 02 12.6**	**-0.1**
I21K	**Tanana**	**61.91**	**25**	P	**P**	**17 02 12.3**	**-0.4**
I21K				IAmb	IAmb	17 02 14.5	
	comp=Z,7.5nm,0.7s						
I21K	**Tanana**	**61.91**	**25**	P	**P**	**17 02 12.4**	**-0.4**
	baz=252,SNR=8.3						
F21K	**Alatna River**	**62.01**	**23**	P	**P**	**17 02 13.5**	**+0.1**
	baz=250						
BPAW	**Bear Paw Mtn.**	**62.01**	**26**	P	**P**	**17 02 13.2**	**-0.3**
BPAW	**Bear Paw Mtn.**	**62.01**	**26**	P	**P**	**17 02 13.6**	**+0.1**
	baz=254,SNR=7.1						
TRF	**Thorofare Moun**	**62.13**	**27**	P	**P**	**17 02 13.8**	**-0.7**
TRF				IAmb	IAmb	17 02 15.0	
	comp=Z,10.0nm,0.8s						
TRF	**Thorofare Moun**	**62.13**	**27**	P	**P**	**17 02 13.9**	**-0.6**
	baz=255,SNR=8.6						
PMR	**Palmer**	**62.19**	**29**	P	**P**	**17 02 14.4**	**-0.3**
	baz=257						
GHO	**Glory Hole Cre**	**62.33**	**29**	P	**P**	**17 02 15.4**	**-0.4**
H22K	**Ishtalitna Cre**	**62.37**	**24**	P	**P**	**17 02 16.4**	**+0.5**
	baz=252						
MLY	**Manley**	**62.37**	**25**	P	**P**	**17 02 15.7**	**-0.2**
MLY				IAmb	IAmb	17 02 17.2	
	comp=Z,7.8nm,0.6s						
MLY	**Manley**	**62.37**	**25**	P	**P**	**17 02 16.0**	**0.0**
	baz=254,SNR=12						
PWL	**Port Wells**	**62.41**	**30**	P	**P**	**17 02 15.8**	**-0.3**
PWL	**Port Wells**	**62.41**	**30**	P	**P**	**17 02 16.2**	**0.0**
	baz=258						
KNK	**Knik Glacier**	**62.47**	**30**	P	**P**	**17 02 16.7**	**+0.1**
KNK	**Knik Glacier**	**62.47**	**30**	P	**P**	**17 02 16.7**	**+0.1**
	baz=258						
A21K	**Barrow**	**62.58**	**18**	P	**P**	**17 02 17.4**	**+0.3**
	baz=245						
F22K	**John River**	**62.58**	**23**	P	**P**	**17 02 18.5**	**+1.3**
	baz=251,SNR=12						
SML	**Sawmill**	**62.61**	**29**	P	**P**	**17 02 17.3**	**-0.3**
SML	**Sawmill**	**62.61**	**29**	P	**P**	**17 02 17.6**	**0.0**
	baz=258,SNR=10						
G22K	**Bettles**	**62.64**	**23**	P	**P**	**17 02 17.5**	**-0.1**
	baz=252						
WAT1	**Susitna Watana**	**62.74**	**28**	P	**P**	**17 02 18.1**	**-0.4**
	baz=257						
RND	**Reindeer**	**62.74**	**27**	P	**P**	**17 02 17.8**	**-0.6**
RND				IAmb	IAmb	17 02 19.3	
	comp=Z,7.8nm,0.8s						
MCK	**McKinley**	**62.79**	**27**	P	**P**	**17 02 18.2**	**-0.4**
	baz=256						
M23K	**Glacier View**	**62.89**	**29**	P	**P**	**17 02 19.6**	**+0.2**
	baz=258,SNR=5.4						
E22K	**Anaktuvuk Pass**	**62.91**	**22**	P	**P**	**17 02 19.5**	**0.0**
	baz=251,SNR=7.7						
NEA2	**Nenana**	**62.94**	**26**	P	**P**	**17 02 19.3**	**-0.4**
NEA2				IAmb	IAmb	17 02 20.8	
	comp=Z,4.8nm,0.8s						
NEA2	**Nenana**	**62.94**	**26**	P	**P**	**17 02 20.0**	**+0.4**
	baz=255						
GLI	**Glacier Island**	**63.01**	**30**	P	**P**	**17 02 20.0**	**-0.1**
GLI	**Glacier Island**	**63.01**	**30**	P	**P**	**17 02 20.0**	**-0.1**
	baz=259						
WAT6	**Susitna Watana**	**63.05**	**28**	P	**P**	**17 02 20.5**	**-0.1**
	baz=258,SNR=8.4						
H23K	**Yukon River**	**63.07**	**25**	P	**P**	**17 02 20.0**	**-0.5**
H23K				IAmb	IAmb	17 02 22.0	
	comp=Z,5.6nm,0.8s						
H23K	**Yukon River**	**63.07**	**25**	P	**P**	**17 02 21.3**	**+0.8**
	baz=254,SNR=6.7						
SCM	**Sheep Creek Mo**	**63.08**	**29**	P	**P**	**17 02 20.5**	**-0.3**
SCM	**Sheep Creek Mo**	**63.08**	**29**	P	**P**	**17 02 21.3**	**+0.6**
	baz=258,SNR=8.8						
G23K	**Bananza Creek**	**63.13**	**24**	P	**P**	**17 02 21.7**	**+0.8**
	baz=253						
FID	**Port Fidalgo**	**63.28**	**31**	P	**P**	**17 02 21.9**	**-0.1**
DHY	**Denali Highway**	**63.32**	**28**	P	**P**	**17 02 21.9**	**-0.5**
DHY	**Denali Highway**	**63.32**	**28**	P	**P**	**17 02 22.9**	**+0.6**
	baz=258						
WRH	**Wood River Hil**	**63.32**	**26**	P	**P**	**17 02 21.0**	**-1.1**
WRH				IAmb	IAmb	17 02 22.3	
	comp=Z,4.6nm,0.8s						
MDM	**Murphy Dome**	**63.38**	**26**	P	**P**	**17 02 21.6**	**-1.0**
MDM				IAmb	IAmb	17 02 24.2	
	comp=Z,8.0nm,0.6s						
CCB	**Clear Creek Bu**	**63.48**	**26**	P	**P**	**17 02 22.3**	**-0.9**
D23K	**Nanushuk River**	**63.58**	**21**	P	**P**	**17 02 24.9**	**+1.2**
	baz=252						
EYAK	**Cordova Ski Ar**	**63.60**	**31**	P	**P**	**17 02 24.7**	**+0.7**
EYAK	**Cordova Ski Ar**	**63.60**	**31**	P	**P**	**17 02 24.4**	**+0.4**
	baz=260						
M24K	**Tolsona, Glenn**	**63.67**	**29**	P	**P**	**17 02 25.2**	**+0.6**
M24K				IAmb	IAmb	17 03 05.4	
	comp=Z,12nm,1.0s						
M24K	**Tolsona, Glenn**	**63.67**	**29**	P	**P**	**17 02 25.8**	**+1.2**
	baz=259						
KLU	**Klutina**	**63.68**	**30**	P	**P**	**17 02 25.1**	**+0.4**
KLU				IAmb	IAmb	17 02 25.8	
	comp=Z,8.9nm,0.7s						
KLU	**Klutina**	**63.68**	**30**	P	**P**	**17 02 25.0**	**+0.4**
	baz=260						
H24K	**Noodor Dome**	**63.74**	**25**	P	**P**	**17 02 25.2**	**+0.2**
H24K				IAmb	IAmb	17 02 25.8	
	comp=Z,4.4nm,0.7s						
H24K	**Noodor Dome**	**63.74**	**25**	P	**P**	**17 02 25.7**	**+0.8**
	baz=256,SNR=7.3						
POKR	**Poker Plat Res**	**63.75**	**26**	P	**P**	**17 02 24.7**	**-0.3**
	baz=257						
HDA	**Harding Lake**	**63.79**	**27**	P	**P**	**17 02 24.7**	**-0.5**
	baz=258						
TOLK	**Toolik Lake Re**	**63.86**	**22**	P	**P**	**17 02 26.4**	**+0.7**
TOLK	**Toolik Lake Re**	**63.86**	**22**	P	**P**	**17 02 26.7**	**+1.0**
	baz=253,SNR=7.1						
C23K	**Itkillik River**	**63.88**	**20**	P	**P**	**17 02 26.8**	**+1.1**
	baz=251						
IL31		**63.90**	**26**	P	**P**	**17 02 24.6**	**-1.3**
IL31				IAmb	IAmb	17 02 25.6	
	comp=Z,9.1nm,1.0s						
ILAR	**Eielson Array**	**63.90**	**26**	P	**P**	**17 02 24.6**	**-1.3**
	comp=Z,4.5nm,0.7s,baz=259,slow=5.1,SNR=40						
ILAR				LR	LR	17 26 41.9	
	comp=Z

DOT IAmb IAmb 17 02 33.1
comp=Z,9.2nm,0.7s
SCRK Sand Creek 64.98 27 P P 17 02 32.2 -0.9
SCRK IAmb IAmb 17 02 33.8
comp=Z,9.6nm,1.1s
SCRK Sand Creek 64.98 27 P P 17 02 33.0 -0.2
baz=260,SNR=9.1
F25K Christian Rive 65.01 23 P P 17 02 34.5 +1.2
baz=257,SNR=8.7
MCARA McCarthy VSAT 65.04 30 P P 17 02 33.9 +0.5
baz=263
L26K Log Cabin Wild 65.11 28 P P 17 02 34.0 0.0
L26K IAmb IAmb 17 02 35.1
comp=Z,6.3nm,0.8s
L26K Log Cabin Wild 65.11 28 P P 17 02 34.5 +0.6
baz=262
D25K Kavik River 65.16 21 P P 17 02 35.0 +0.9
baz=256,SNR=6.8
E25K Arctic Village 65.16 23 P P 17 02 34.8 +0.7
baz=257
M26K Nabesna, AK 65.19 29 P P 17 02 35.0 +0.6
baz=262
J26L Joseph Creek 65.25 27 P P 17 02 34.9 +0.1
baz=261,SNR=11
BMAR Burnt Mountain 65.38 23 P P 17 02 36.4 +0.9
I26K Coal Creek Min 65.55 26 P P 17 02 35.8 -0.8
baz=261
G26K Porcupine Rive 65.59 24 P P 17 02 37.9 +1.1
baz=259,SNR=6.7
F26K Sheenjek River 65.59 23 P P 17 02 38.1 +1.2
baz=259,SNR=11
M27K Edge Creek, AK 65.70 29 P P 17 02 38.0 +0.2
M27K IAmb IAmb 17 02 38.6
comp=Z,5.9nm,0.8s
M27K Edge Creek, AK 65.70 29 P P 17 02 38.6 +0.8
baz=263
CTG Chitna Glacier 65.80 31 P P 17 02 39.4 +0.9
baz=264
CTGM Chitina Glacie 65.80 31 P P 17 02 39.1 +0.6
L27K Beaver Creek, 65.81 28 P P 17 02 38.5 +0.2
L27K IAmb IAmb 17 02 39.1
comp=Z,4.4nm,0.7s
L27K Beaver Creek, 65.81 28 P P 17 02 38.7 +0.4
baz=263,SNR=6.4
K27K Chicken 65.82 27 P P 17 02 38.9 +0.5
baz=262
BCAR Beaver Creek A 65.83 28 P P 17 02 38.6 +0.1
TABL Table Mountain 65.84 31 P P 17 02 39.4 +0.6
LOGN Logan Glacier 65.95 31 P P 17 02 40.0 +0.5
LOGN IAmb IAmb 17 02 40.5
comp=Z,8.5nm,0.7s
RPZ Rata Peaks 65.99 160 P P 17 02 36.9 -2.7
comp=Z,4.8nm,0.8s,baz=7.1,slow=8.1,SNR=2.3
comp=Z,4.8nm,0.8s
C27K Jago River 66.14 21 P P 17 02 41.1 +0.8
baz=258
BVCY Beaver Creek 66.17 29 P P 17 02 41.2 +0.5
baz=264
I27K Kandik River 66.23 26 P P 17 02 41.1 0.0
baz=262
YUK3 Moose Creek 66.30 30 P P 17 02 43.1 +1.3
baz=265
EGAK Eagle 66.32 27 P P 17 02 41.0 -0.5
EGAK Eagle 66.32 27 P P 17 02 42.3 +0.8
baz=263
O28M Mount Upton 66.34 31 P P 17 02 42.5 +0.4
baz=265,SNR=6.3
H27K Steamboat Moun 66.36 25 P P 17 02 42.8 +1.0
baz=262
G27K Doyon Strip 66.39 24 P P 17 02 42.5 +0.5
baz=261
E27K Coleen River 66.63 23 P P 17 02 44.2 +0.7
baz=261
DAWY Dawson 67.00 27 P P 17 02 45.9 0.0
DAWY Dawson 67.00 27 P P 17 02 46.7 +0.8
baz=265
O29M Mount Kennedy 67.11 32 P P 17 02 48.2 +1.4
baz=267
YUK4 Talbot Arm 67.13 30 P P 17 02 48.6 +1.5
baz=267
YUK6 Outpost Mounta 67.25 31 P P 17 02 49.0 +1.2
baz=267
M29M Somme Creek 67.29 29 P P 17 02 48.9 +1.1
baz=266
P29M Windy Craggy 67.50 32 P P 17 02 49.5 +0.3
P29M IAmb IAmb 17 02 51.1
comp=Z,11nm,0.8s
P29M Windy Craggy 67.50 32 P P 17 02 50.4 +1.2
baz=268
I29M Ogilvie Camp, 67.58 26 P P 17 02 50.2 +0.6
baz=265
HYT Haines Junctio 67.66 31 P P 17 02 50.6 +0.3
HYT Haines Junctio 67.66 31 P P 17 02 51.6 +1.3
baz=268
N30M Aishikik Lake 67.89 30 P P 17 02 52.6 +1.0
baz=268
P30M Million Dollar 67.91 32 P P 17 02 52.9 +1.2
baz=268
PLBC Pleasant Camp 68.19 33 P P 17 02 54.2 +0.8
baz=269
EPYK Eagle Plains 68.31 25 P P 17 02 54.1 0.0
EPYK IAmb IAmb 17 02 54.8
comp=Z,6.1nm,0.7s
EPYK Eagle Plains 68.31 25 P P 17 02 54.3 +0.2
baz=266
O30N Mendenhall 68.35 31 P P 17 02 55.1 +0.7
baz=269
N31M Braeburn, Yuko 68.52 30 P P 17 02 54.6 -0.8
N31M IAmb IAmb 17 02 57.3
comp=Z,14nm,0.9s
N31M Braeburn, Yuko 68.52 30 P P 17 02 56.7 +1.2
baz=269
WHY Whitehorse 68.94 31 P P 17 02 59.5 +1.3
baz=270
M31M Drury Creek, Y 69.18 30 P P 17 02 59.6 +0.1
M31M IAmb IAmb 17 03 00.8
comp=Z,21nm,1.5s
M31M Drury Creek, Y 69.18 30 P P 17 03 00.1 +0.5
baz=270
JIS Juneau Island 69.23 34 P P 17 03 00.7 +0.9
JIS IAmb IAmb 17 03 02.8
comp=Z,15nm,1.3s
P32M Atlin 69.54 32 P P 17 03 02.7 +0.8
baz=272
INK Inuvik 69.64 23 P P 17 03 01.7 -0.4
comp=Z,6.6nm,0.6s,baz=250,slow=5.3,SNR=11
comp=Z,6.6nm,0.6s
INK Inuvik 69.64 23 P P 17 03 01.7 -0.4
baz=268
FARO Faro, Yukon 69.67 30 P P 17 03 02.8 +0.2
FARO IAmb IAmb 17 03 03.9
comp=Z,9.1nm,1.3s
FARO Faro, Yukon 69.67 30 P P 17 03 02.6 +0.1
baz=271
P33M Teslin, Yukon 69.98 32 P P 17 03 04.9 +0.3
baz=272
DIB Dawson Inlet, 70.59 39 P P 17 03 08.9 +0.6
MMPY Sheldon Lake, 70.63 29 P P 17 03 08.9 +0.5
baz=273
R33M Jennings River 70.95 33 P P 17 03 11.6 +1.0
baz=274
DLBC Dease Lake 71.51 33 P P 17 03 14.4 +0.5
DLBC IAmb IAmb 17 03 15.6
comp=Z,7.6nm,0.8s
DLBC Dease Lake 71.51 33 P P 17 03 15.2 +1.3
baz=275
T35M Bob Quinn 71.53 35 P P 17 03 15.0 +1.1
baz=275
GRNB Grenville Isla 72.02 38 P P 17 03 16.9 0.0
TGTN Hyland Airport 72.11 30 P P 17 03 18.4 +1.1
baz=276
C36M Paulatuk 73.02 22 P P 17 03 21.9 -0.5
baz=277
BBB Bella Bella 73.34 40 P P 17 03 24.9 +0.2
HOLB Holberg 73.57 41 P P 17 03 27.0 +0.9
WRGLY Wrigley 74.12 28 P P 17 03 29.6 +0.6
baz=279
OZB Mount Ozzard 75.55 43 P P 17 03 38.1 +0.6
I02E Swisshome, OR 77.71 47 P P 17 03 50.6 +0.9
F04D Rainier, OR 77.81 45 P P 17 03 51.6 +1.3
baz=284
J01E Myrtle Point 77.87 48 P P 17 03 50.5 -0.2
baz=284
YKA Yellowknife Ar 78.23 28 P P 17 03 51.9 -0.4
comp=Z,4.4nm,0.7s,baz=290,slow=5.5,SNR=25
YKA pP pP 17 04 28.0 +0.9
comp=Z,3.6nm,1.0s,baz=290,slow=5.6,SNR=5.8
comp=Z,4.4nm,0.7s
YKA Yellowknife Ar 78.23 28 P P 17 03 51.1 -1.1
KRPM Rodgers 78.29 50 P P 17 03 53.9 +0.8
L02F Cave Junction 78.38 49 P P 17 03 54.2 +0.6
baz=284
KHMM Horse Mountain 78.57 51 P P 17 03 55.7 +0.9
HUMO Hull Mountain 78.70 49 P P 17 03 55.2 -0.1
HUMO IAmb IAmb 17 04 20.1
comp=Z,16nm,1.5s
H04A Detroit Lake 78.72 47 P P 17 03 55.5 +0.1
H04A IAmb IAmb 17 03 56.4
comp=Z,11nm,1.0s
I04A Tendick Farm, 78.79 48 P P 17 03 56.2 +0.4
baz=285
YBH Yreka Blue Hor 79.10 50 P P 17 03 55.1 -2.5
comp=Z,5.0nm,0.9s,baz=278,slow=1.9,SNR=4.4
comp=Z,5.0nm,0.9s
YBH Yreka Blue Hor 79.10 50 P P 17 03 58.5 +1.0
J04D Umpqua Nationa 79.14 48 P P 17 03 57.8 -0.1
baz=285
L04D Klamath Falls 79.27 49 P P 17 03 59.1 +0.6
baz=285
B08A Colville Reser 79.66 42 P P 17 04 00.5 +0.1
B08A IAmb IAmb 17 04 01.3
comp=Z,8.2nm,0.7s
J05D Fort Rock, OR 79.75 48 P P 17 04 02.0 +0.9
baz=286
PINE Pine Mountain 79.82 47 P P 17 04 01.9 +0.4
K05A Summer Lake 80.14 48 P P 17 04 03.6 +0.3
D08A Wollman Farm, 80.28 44 P P 17 04 03.8 0.0
D08A IAmb IAmb 17 04 04.8
comp=Z,11nm,1.1s
MOD Modoc Plateau 80.79 49 P P 17 04 05.6 -1.2
NEW Newport 81.10 42 P P 17 04 06.1 -2.0
comp=Z,4.4nm,0.7s,baz=323,slow=3.4,SNR=6.0
NEW pP pP 17 04 44.5 +1.4
comp=Z,0.9nm,0.4s,baz=28,slow=5.8,SNR=3.2
comp=Z,4.4nm,0.7s
NEW Newport 81.10 42 P P 17 04 08.6 +0.5
baz=286
BEKR Beckworth 81.32 51 P P 17 04 09.2 -0.5
BEKR IAmb IAmb 17 04 10.8
comp=Z,7.8nm,0.9s
MPK Martis Peak 81.73 51 P P 17 04 12.2 +0.3
MPK IAmb IAmb 17 04 13.7
comp=Z,18nm,1.2s
WVOR Wild Horse Val 81.82 48 P P 17 04 11.8 -0.4
CMB Columbia Colle 81.83 53 P P 17 04 12.1 -0.1
BMO Blue Mountains 82.01 45 P P 17 04 12.7 -0.4
PAHR Pah Rah Range 82.09 51 P P 17 04 12.9 -0.8
PNTR Pine Nut 82.11 52 P P 17 04 13.9 0.0
PNTR IAmb IAmb 17 04 15.1
comp=Z,8.1nm,0.8s
YERR Yerington 82.41 52 P P 17 04 15.0 -0.4
YERR IAmb IAmb 17 04 16.4
comp=Z,7.8nm,0.9s
ARCES ARCESS Array B 82.82 342 P P 17 04 16.1 -0.6
comp=Z,1.3nm,0.6s,baz=60,slow=7.2,SNR=8.4
comp=Z,1.3nm,0.6s
LHV Little Huntoon 83.18 52 P P 17 04 19.3 +0.3
LHV IAmb IAmb 17 04 21.2
comp=Z,9.0nm,1.3s
KVN Kaiserville 83.23 51 P P 17 04 19.4 -0.2
KVN IAmb IAmb 17 04 20.6
comp=Z,8.6nm,1.1s
NVAR Mina Array Bea 83.27 52 P P 17 04 20.0 +0.1
comp=Z,4.8nm,0.8s,baz=266,slow=5.9,SNR=26
NVAR pP pP 17 04 56.4 +1.3
comp=Z,3.5nm,0.7s,baz=264,slow=6.0,SNR=7.8
comp=Z,4.8nm,0.8s
NVAR Mina Array Bea 83.27 52 P P 17 04 19.5 -0.3
NV11 Mina Array Sit 83.38 52 P P 17 04 20.3 0.0
NV11 IAmb IAmb 17 04 21.4
comp=Z,6.1nm,1.0s
BMN Battle Mountai 83.44 50 P P 17 04 20.6 -0.1
CWC Cottonwood Cre 84.06 54 P P 17 04 24.1 +0.2
baz=288
HLID Hailey 84.40 46 P P 17 04 24.9 -0.5
HLID Hailey 84.40 46 P P 17 04 25.1 -0.3
baz=290
EDW2 Edwards Air Fo 84.62 55 P P 17 04 28.3 +1.8
baz=289
MPMC Manual Prospec 84.64 54 P P 17 04 27.5 +0.7
baz=289
CIS Catalina Islan 84.76 57 P P 17 04 27.0 -0.3
baz=289
ELK Elko 84.77 49 P P 17 04 27.0 -0.4
LRM Limekiln Ridge 84.92 43 P P 17 04 27.6 -0.5
FURC Furnace Creek, 84.98 53 P P 17 04 29.2 +1.0
baz=289
MCMT McKenzie Canyo 85.01 44 P P 17 04 27.8 -0.8
BFSC Mount Baldy Ra 85.09 56 P P 17 04 29.0 0.0
baz=289
TPNV Topopah Spring 85.29 53 P P 17 04 30.3 +0.3
baz=289
R11A Troy Canyon, C 85.32 51 P P 17 04 30.6 +0.5
baz=290
BOZ Bozeman (W) 85.54 43 P P 17 04 29.4 -1.7
BOZ Bozeman (W) 85.54 43 P P 17 04 30.9 -0.1
baz=292
QLMT Earthquake Lak 85.95 44 P P 17 04 33.3 +0.1
SPR3 Spring Creek 3 86.02 50 P P 17 04 33.8 0.0
SPR3 IAmb IAmb 17 04 35.1
comp=Z,5.0nm,1.2s
YHL Hebgen Lake 86.11 44 P P 17 04 34.2 +0.2
YHL IAmb IAmb 17 04 35.6
comp=Z,9.9nm,1.1s
HVU Hansel Valley 86.15 47 P P 17 04 33.5 -0.6
HVU IAmb IAmb 17 04 35.5
comp=Z,7.6nm,1.3s
GMRC Granite Mounta 86.47 55 P P 17 04 35.9 +0.1
baz=290
BELC Belle Mtn. Jos 86.47 55 P P 17 04 36.0 +0.1
baz=290
MONP2 Monument Peak 86.50 57 P P 17 04 36.2 +0.1
baz=290
PSUT Pine Spring 86.53 51 P P 17 04 35.4 -0.8
PSUT IAmb IAmb 17 04 36.9
comp=Z,4.2nm,0.7s
IMW Indian Meadow 86.63 45 P P 17 04 36.7 +0.1
FXWY Fox Creek 86.67 45 P P 17 04 36.7 0.0
DUG Dugway, Tooele 86.70 49 P P 17 04 37.1 +0.3
baz=291
FLWY Flagg Ranch 86.72 45 P P 17 04 37.1 +0.1
FLWY IAmb IAmb 17 04 38.6
comp=Z,5.7nm,0.8s
GCMT Greycliff 86.73 43 P P 17 04 37.0 +0.1
LOHW Long Hollow 86.96 45 P P 17 04 38.2 +0.1
HWUT Hardware Ranch 87.06 47 P P 17 04 37.6 -1.0
HWUT IAmb IAmb 17 04 39.4
comp=Z,5.1nm,0.8s
IRM Iron Mountain 87.08 55 P P 17 04 38.8 +0.2
baz=290
FINES FINESS Array B 87.21 335 P P 17 04 36.9 -1.8
comp=Z,1.1nm,0.5s,baz=54,slow=4.2,SNR=8.7
comp=Z,1.1nm,0.5s
RLMT Red Lodge 87.26 43 P P 17 04 41.0 +1.5
MTPU Mount Pierson 87.94 51 P P 17 04 43.4 +0.3
PDAR Pinedale Array 87.99 45 P P 17 04 42.0 -1.2
comp=Z,0.6nm,0.6s,baz=236,slow=1.1,SNR=3.8
PDAR pP pP 17 05 18.2 -0.4
comp=Z,0.3nm,0.5s,baz=80,slow=41,SNR=2.6
comp=Z,0.6nm,0.6s
Q16A Castle Valley 88.35 49 P P 17 04 44.8 0.0
Q16A IAmb IAmb 17 04 45.5
comp=Z,4.0nm,0.9s
U15A North Rim 88.45 52 P P 17 04 45.0 -0.5
LAO LASA Array 88.55 41 P P 17 04 44.7 -0.7
LAO IAmb IAmb 17 04 46.1
comp=Z,5.0nm,0.6s
P18A Preston Nutter 88.74 49 P P 17 04 45.9 -0.9
SRU San Rafael Swe 88.74 49 P P 17 04 45.7 -0.9
SRU IAmb IAmb 17 04 47.2
comp=Z,4.7nm,0.7s
RDMU Red Mountain 88.85 47 P P 17 04 46.9 -0.3
WUAZ Wupatki 89.48 53 P P 17 04 51.1 +0.9
baz=292
214A Organ Pipe Nat 89.69 56 P P 17 04 51.7 +0.7
baz=292
PV13 Radium Mtn., P 90.34 49 P P 17 04 53.5 -0.7
PV13 IAmb IAmb 17 04 54.7
comp=Z,5.3nm,0.7s
N23A Red Feather La 91.22 46 P P 17 04 57.6 -0.7
N23A IAmb IAmb 17 04 59.8
comp=Z,5.1nm,0.9s
N23A Red Feather La 91.22 46 P P 17 04 58.8 +0.5
baz=296
ISCO Idaho Springs 91.93 47 P P 17 05 02.2 +0.6
baz=296
S22A 4UR Ranch, Cre 91.94 49 P P 17 05 01.4 -0.3
S22A IAmb IAmb 17 05 02.8
comp=Z,2.4nm,0.7s
S22A 4UR Ranch, Cre 91.94 49 P P 17 05 02.6 +0.9
baz=295
Q24A Divide 92.61 48 P P 17 05 05.1 +0.3
baz=296
SDCO Great Sand Dun 92.90 49 P P 17 05 05.4 -0.7
SDCO Great Sand Dun 92.90 49 P P 17 05 06.6 +0.5
baz=296
121A Cookes Peak, D 93.39 54 P P 17 05 08.2 -0.1
baz=294
ANMO Albuquerque 93.40 52 P P 17 05 09.1 +0.8
baz=295
PLCA Paso Flores 141.72 133 PKhKP PKPpre 17 11 19.1
comp=Z,2.8nm,0.9s,baz=249,slow=3.6,SNR=3.5
LPAZ La Paz 147.59 92 PKPbc PKPbc 17 11 38.1 +0.3
comp=Z,2.6nm,0.7s,baz=256,slow=4.1,SNR=8.1
CPUP Villa Florida 157.23 114 PKPab PKPab 17 12 15.7 -4.1
comp=Z,1.7nm,0.7s,baz=284,slow=3.5,SNR=2.9

WEL 16 16:54:35.2±0.3, 40°S±2°×17°5E±°, h19km±4km, M3.2/55, ML3.5/55, MLv3.2/55, Error ellipse: s-maj=0.0km s-min=0.0km az=82.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHWZ	**Ohakea**	**0.36**	**104**	P	Pb	16 54 44.2	+1.1
OHWZ				S	Sn	16 54 50.8	-1.2
WAZ	**Wanganui**	**0.38**	**15**	P	Pb	16 54 44.5	+1.0
WAZ				S	Sn	16 54 51.3	-1.2
OGWZ	**Otaki Gorge**	**0.73**	**161**	P	Pb	16 54 49.5	+0.1
OGWZ				S	Sg	16 54 59.4	-0.1
KIW	**Kapiti Island**	**0.74**	**177**	P	Pb	16 54 49.3	-0.2
KIW				S	Sb	16 54 58.8	-0.5
POWZ	**Post Office Ro**	**0.74**	**111**	P	Pn	16 54 50.3	-0.5
POWZ				S	Sn	16 55 00.8	-0.8
LREZ	**Lake Rotokare**	**0.75**	**332**	P	Pg	16 54 50.4	+0.4
LREZ				S	Sn	16 55 02.3	+0.6
MRZ	**Mangatainoka R**	**0.77**	**135**	P	Pg	16 54 50.5	+0.2
MRZ				S	Sg	16 55 01.1	+0.6
TSZ	**Takapari Road**	**0.85**	**86**	P	Pg	16 54 51.6	-0.1
TSZ				S	Sg	16 55 03.1	+0.1
MTVZ	**Mangateitei**	**0.87**	**33**	P	Pb	16 54 51.3	-0.6
MTVZ				S	Sn	16 55 05.1	+0.2
PKVZ	**Pokaka**	**0.91**	**24**	P	Pb	16 54 51.9	-0.6
HOWZ	**Holdsworth Sta**	**0.92**	**147**	P	Pb	16 54 52.7	+0.1
PREZ	**Palmer Road**	**0.95**	**325**	P	Pn	16 54 53.7	0.0
WNVZ	**Wahianoa**	**0.98**	**36**	P	Pb	16 54 53.0	-0.7
TRVZ	**Turoa**	**0.98**	**33**	P	Pb	16 54 53.0	-0.7
DUWZ	**D'Urville Isla**	**0.99**	**226**	P	Pb	16 54 52.8	-1.0
MOVZ	**Moawhango**	**0.99**	**44**	P	Pb	16 54 53.0	-0.9
CANV	**Cannon Point**	**1.00**	**171**	P	Pb	16 54 54.1	+0.1
VRZ	**Vera Road**	**1.00**	**355**	P	Pb	16 54 54.0	0.0
DRZ	**Dome Shelter**	**1.00**	**33**	P	Pb	16 54 53.8	-0.5
WHVZ	**Whangaehu Hut**	**1.01**	**34**	P	Pb	16 54 53.5	-0.8
DVHZ	**Dannevirke**	**1.01**	**100**	P	Pg	16 54 55.0	0.0
FWVZ	**Far West T-bar**	**1.02**	**32**	P	Pb	16 54 53.5	-0.9
TIWZ	**Tintock**	**1.02**	**130**	P	Pg	16 54 54.9	-0.2
NEZ	**North Egmont**	**1.04**	**325**	P	Pn	16 54 54.8	-0.1
NMEZ	**Namu Road**	**1.04**	**313**	P	Pn	16 54 54.9	+0.1
PNHZ	**Pukenui**	**1.05**	**79**	P	Pb	16 54 54.6	-0.2
TUVZ	**Tukino**	**1.05**	**36**	P	Pb	16 54 54.3	-0.6
KHEZ	**Kahui Hut**	**1.05**	**321**	P	Pn	16 54 55.3	+0.2
DREZ	**Durham Road**	**1.06**	**331**	P	Pb	16 54 54.8	-0.3
NGZ	**Ngauruhoe**	**1.10**	**31**	P	Pb	16 54 54.9	-0.9
SNVZ	**South Ngauruho**	**1.11**	**33**	P	Pb	16 54 55.1	-0.9
BHHZ	**Black Hill Sta**	**1.12**	**56**	P	Pn	16 54 55.0	-1.0
MHEZ	**Mangahewa**	**1.12**	**338**	P	Pb	16 54 56.6	+0.5
OTVZ	**Oturere**	**1.14**	**33**	P	Pn	16 54 55.4	-1.0
TWVZ	**Taurewa**	**1.14**	**23**	P	Pn	16 54 55.0	-1.3
MTW	**Mount Morrison**	**1.14**	**155**	P	Pn	16 54 55.9	-0.4
NBEZ	**Newall Road No**	**1.15**	**318**	P	Pb	16 54 56.7	+0.2
NNVZ	**North Ngauruho**	**1.15**	**31**	P	Pn	16 54 55.4	-1.1
PKE	**Pukeiti**	**1.15**	**324**	P	Pb	16 54 56.9	+0.4
WTVZ	**West Tongariro**	**1.15**	**29**	P	Pn	16 54 55.4	-1.1
WEL	**Wellington**	**1.16**	**183**	P	Pn	16 54 56.1	-0.5
TCW	**Tory Channel**	**1.17**	**202**	P	Pn	16 54 55.4	-1.3
ETVZ	**East Tongariro**	**1.18**	**34**	P	Pn	16 54 56.0	-0.9
KRVZ	**Karewarewa**	**1.19**	**31**	P	Pn	16 54 56.0	-1.0
BFZ	**Birch Farm**	**1.20**	**118**	P	Pn	16 54 56.9	-0.1
TMVZ	**Te Maari**	**1.20**	**33**	P	Pn	16 54 56.2	-0.9
NTVZ	**North Tongarir**	**1.20**	**32**	P	Pn	16 54 56.4	-0.8
WPHZ	**Waipukurau**	**1.21**	**88**	P	Pb	16 54 58.0	+0.4
KRHZ	**Kereru**	**1.26**	**68**	P	Pn	16 54 57.8	-0.1
TMWZ	**Te Maipa**	**1.26**	**142**	P	Pn	16 54 57.6	-0.2
ANWZ	**Angora Road**	**1.28**	**106**	P	Pn	16 54 58.6	-0.1
CPWZ	**Castlepoint**	**1.29**	**128**	P	Pg	16 54 59.0	-0.5
KATZ	**Kakaramea**	**1.31**	**30**	P	Pn	16 54 58.2	-0.6
MSWZ	**Moikau Station**	**1.32**	**167**	P	Pn	16 54 59.1	+0.3
PAWZ	**Paruwai Farm**	**1.33**	**161**	P	Pn	16 54 59.1	+0.2
PRHZ	**Porangahau**	**1.37**	**97**	P	Pb	16 54 59.9	-0.4
RITZ	**Rihia Road**	**1.38**	**34**	P	Pn	16 54 59.8	+0.3
KWHZ	**Kaweka Forest**	**1.39**	**60**	P	Pn	16 54 59.9	+0.1
TRWZ	**Traveller**	**1.42**	**154**	P	Pb	16 55 00.8	-0.3
RATZ	**Rangitukua**	**1.44**	**30**	P	Pb	16 55 01.0	-0.5
PLWZ	**Palliser**	**1.48**	**168**	P	Pn	16 55 01.1	+0.2
TUWZ	**Tuamarina**	**1.48**	**208**	P	Pn	16 54 59.6	-1.3
PXZ	**Pawanui**	**1.54**	**87**	P	Pn	16 55 02.0	+0.3
HATZ	**Hinemaiaia**	**1.56**	**38**	P	Pb	16 55 03.1	-0.4
WATZ	**Wairara**	**1.57**	**26**	P	Pn	16 55 02.6	+0.5
NNZ	**Nelson**	**1.57**	**225**	P	Pn	16 55 01.8	-0.3
BKZ	**Black Stump Fm**	**1.58**	**53**	P	Pn	16 55 03.0	+0.7
KAHZ	**Kahuranaki**	**1.58**	**79**	P	Pn	16 55 03.0	+0.6
HIZ	**Hauiti**	**1.61**	**360**	P	Pn	16 55 02.4	-0.2
WHTZ	**Whakaora**	**1.68**	**31**	P	Pg	16 55 07.6	-0.1
CMWZ	**Cape Campbell**	**1.70**	**197**	P	Pb	16 55 05.5	-0.4
TKNZ	**Takaka Hill**	**1.71**	**237**	P	Pn	16 55 03.9	-0.2
BSWZ	**Blackbirch Sta**	**1.76**	**205**	P	Pn	16 55 04.6	-0.1
MRHZ	**Matea Rd**	**1.76**	**44**	P	Pn	16 55 04.9	+0.1
KUTZ	**Kaahu Road**	**1.79**	**25**	P	Pb	16 55 07.8	+0.3
NMHZ	**Naumai**	**1.82**	**56**	P	Pb	16 55 07.1	-0.9
ARHZ	**Aropaoanui**	**1.86**	**63**	P	Pn	16 55 07.2	+1.2
TLZ	**Tolley Road**	**1.87**	**17**	P	Pn	16 55 05.1	-1.2
WPRZ	**Whakapapatarin**	**1.89**	**33**	P	Pb	16 55 08.8	-0.4
QRZ	**Quartz Range**	**1.91**	**248**	P	Pn	16 55 06.2	-0.6
ALRZ	**Allen Road**	**1.94**	**37**	P	Pn	16 55 07.4	+0.2
MTHZ	**Maungataniwha**	**1.99**	**51**	P	Pb	16 55 09.6	-1.3
PRRZ	**Plateau Road**	**2.01**	**37**	P	Pn	16 55 08.6	+0.4
MRNZ	**Matariki Terra**	**2.04**	**231**	P	Pn	16 55 09.1	+0.4
HRRZ	**Handcock Road**	**2.05**	**33**	P	Pb	16 55 11.4	-0.5
RAHZ	**Arahi**	**2.10**	**56**	P	Pn	16 55 10.3	+0.8
WHHZ	**Waihua**	**2.11**	**61**	P	Pn	16 55 10.8	+1.3
RRRZ	**Republican Roa**	**2.19**	**36**	P	Pn	16 55 12.5	+1.8
THZ	**Tophouse**	**2.21**	**222**	P	Pn	16 55 11.1	+0.1
MUGZ	**Murupara**	**2.21**	**43**	P	Pn	16 55 11.9	+0.9
SNGZ	**Shannon Statio**	**2.34**	**56**	P	Pn	16 55 13.3	+0.5
KNZ	**Kokohu**	**2.44**	**64**	P	Pn	16 55 13.8	-0.2
TOZ	**Tahuroa Road**	**2.44**	**12**	P	Pn	16 55 12.9	-1.2
KHZ	**Kahutara**	**2.50**	**203**	P	Pn	16 55 14.3	-0.6
MHGZ	**Mahia Peninsul**	**2.54**	**69**	P	Pn	16 55 15.5	0.0
URZ	**Urewera**	**2.55**	**44**	P	Pn	16 55 15.1	-0.5
PRGZ	**Paritu Road**	**2.63**	**64**	P	Pn	16 55 16.3	-0.4
TGRZ	**Tauranga**	**2.63**	**25**	P	Pb	16 55 19.3	-2.4
OPRZ	**Ohinepanea**	**2.63**	**31**	P	Pn	16 55 18.3	+1.6
RIGZ	**Rimuhau**	**2.66**	**59**	P	Pn	16 55 17.1	0.0
MWZ	**Matawai**	**2.73**	**50**	P	Pn	16 55 18.2	0.0
DSZ	**Denniston Nort**	**2.83**	**234**	P	Pn	16 55 19.4	-0.1
TKGZ	**Te Karaka**	**2.86**	**55**	P	Pn	16 55 19.6	-0.3
MKAZ	**Moumakai**	**3.02**	**5**	P	Pn	16 55 21.5	-0.6
AWAZ	**Awhitu Peninsu**	**3.06**	**357**	P	Pn	16 55 22.9	+0.3
RUGZ	**Raukumara Rang**	**3.07**	**46**	P	Pn	16 55 22.4	-0.5
TWGZ	**Tauwhareparae**	**3.11**	**52**	P	Pn	16 55 23.6	+0.3
GVZ	**Greta Valley S**	**3.16**	**205**	P	Pn	16 55 22.7	-1.3
HAZ	**Te Kaha**	**3.28**	**45**	P	Pn	16 55 24.6	-1.1
LTZ	**Lake Taylor**	**3.29**	**215**	P	Pn	16 55 24.9	-1.0
PKGZ	**Pakihiroa**	**3.35**	**49**	P	Pn	16 55 26.0	-0.7
WMGZ	**Waiomatatini S**	**3.60**	**51**	P	Pn	16 55 29.0	-1.0
INZ	**Inchbonnie**	**3.66**	**224**	P	Pn	16 55 30.3	-0.5
MXZ	**Matakaoa Point**	**3.71**	**48**	P	Pn	16 55 31.1	-0.4
OKCZ	**Okains Bay**	**3.84**	**200**	P	Pn	16 55 31.2	-2.1
AKCZ	**Akaroa Harbour**	**4.02**	**201**	P	Pn	16 55 33.9	-1.9
WVZ	**Waitaha Valley**	**4.27**	**225**	P	Pn	16 55 41.0	+1.7
TMZ	**Timaru**	**5.13**	**213**	P	Pn	16 55 49.4	-1.7
ODZ	**Otahua Downs**	**5.82**	**211**	P	Pn	16 55 58.0	-2.5

*IDC **16** 17:03:31.1±3.5, 7.°00S×125.°03E, h545km±49km, mb2.7/2, mbtmp3.7/7, Error ellipse: s-maj=135.9km s-min=18.6km az=56.0*

ISC 16 17:03:31.0±1.3, 7.°0S±0.°2×125.°1E±0.°2, h543km, n7, σ0.°75/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.53**	**204**	P			**P**	**17 04 49.4**	**+0.4**
	56nm,0.3s,baz=78,slow=1.9,SNR=41								
BATI				S			**S**	**17 05 51.9**	**-0.6**
	21nm,0.6s,baz=45,slow=9.9,SNR=3.5								
KAPI	**Kappang**	**5.69**	**290**	P			**P**	**17 05 07.2**	**+0.7**
	7.1nm,0.8s,baz=121,slow=12,SNR=3.1								
FITZ	**Fitzroy Crossi**	**11.07**	**177**	P			**P**	**17 05 59.5**	**-0.4**
	0.6nm,0.3s,baz=11,slow=10,SNR=12								
WRA	**Warramunga Arr**	**15.69**	**146**	P			**P**	**17 06 47.3**	**-0.4**
	0.9nm,0.5s,baz=322,slow=11,SNR=46								
ASAR	**Alice Springs**	**18.62**	**154**	P			**P**	**17 07 14.8**	**-0.2**
	0.8nm,0.4s,baz=337,slow=9.1,SNR=48								
STKA	**Stephens Creek**	**29.16**	**150**	P			**P**	**17 08 49.4**	**+0.8**
	0.5nm,0.3s,baz=333,slow=9.0,SNR=5.0								
	0.5nm,0.3s								
MKAR	**Makanchi Array**	**65.63**	**329**	P			**P**	**17 13 20.8**	**-0.8**
	0.3nm,0.6s,baz=137,slow=6.1,SNR=4.2								
	0.3nm,0.6s								

*UPP **16** 17:05:41.9±0.1, 67.°06N×20.°99E, h0km, ML2.3, Explosion*
*IDC **16** 17:05:42.9±1.1, 67.°03N×21.°09E, h0km, mbtmp2.9/3, ML1.8/3, Error ellipse: s-maj=19.2km s-min=9.0km az=110.0*
*BER **16** 17:05:42.6±2.9, 66.°77N×21.°49E, h0km, ML1.7, Suspected explosion*
*HEL **16** 17:05:43.2, 67.°06N±0.°02×20.°97E±0.°02, h0km, ML2.1, Explosion*

ISC 16 17:05:42.2±0.7, 67.°06N±0.°02×20.°97E±0.°02, h0km, n50, σ1°13/80, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**293**	P			**Pg**	**17 05 45.5**	**+0.1**
DUNU				S			**Sg**	**17 05 48.2**	**+0.6**
DUNU	**Dundret**	**0.17**	**293**	*i* P			**Pg**	**17 05 45.5**	**+0.1**
DUNU				*i* S			**Sg**	**17 05 48.2**	**+0.6**
PAJU	**Pajala**	**0.84**	**91**	P			**Pg**	**17 05 57.7**	**-0.6**
PAJU	**Pajala**	**0.84**	**91**	*e*P			**Pg**	**17 05 57.7**	**-0.6**
	baz=279								
PAJU				*e*S			**Sg**	**17 06 05.7**	**-3.4**
HARU	**Harads**	**0.90**	**180**	P			**Pg**	**17 05 58.6**	**-0.6**
HARU	**Harads**	**0.90**	**180**	*e*P			**Pg**	**17 05 58.6**	**-0.6**
KUA	**Kurravaara**	**0.94**	**345**	P			**Pg**	**17 05 59.4**	**-0.7**
KUA				S			**Sg**	**17 06 11.8**	**-0.3**
KUA	**Kurravaara**	**0.94**	**345**	*e*P			**Pg**	**17 05 59.4**	**-0.7**
KUA				*e*S			**Sg**	**17 06 11.8**	**-0.3**
SALU	**Saltoluokta**	**1.01**	**290**	*e*P			**Pg**	**17 06 01.2**	**-0.3**
LANU	**Lannavaara**	**1.07**	**21**	*e*P			**Pg**	**17 06 01.9**	**-0.8**
LANU				*e*SB			**Sb**	**17 06 18.2**	**0.0**
KLF	**Kolari**	**1.18**	**80**	*e*P			**Pg**	**17 06 04.0**	**-0.8**
KLF				*e*SB			**Sg**	**17 06 20.8**	**+0.7**
KOVU	**Salmi**	**1.21**	**346**	P			**Pg**	**17 06 04.4**	**-1.0**
KOVU				S			**Sg**	**17 06 20.0**	**-1.1**
KOVU	**Salmi**	**1.21**	**346**	*e*P			**Pg**	**17 06 04.4**	**-1.0**
KOVU				*e*S			**Sg**	**17 06 20.0**	**-1.1**
KALU	**Kalix**	**1.54**	**140**	P			**Pn**	**17 06 10.1**	**-0.6**
KALU	**Kalix**	**1.54**	**140**	*e*P			**Pn**	**17 06 10.2**	**-0.6**
	baz=327								
KALU				*e*SN			**Sn**	**17 06 31.5**	**+0.2**
SJUU	**Sjulsmark**	**1.57**	**170**	P			**Pn**	**17 06 10.8**	**-0.4**
SJUU				S			**Sn**	**17 06 32.1**	**-0.2**
SJUU	**Sjulsmark**	**1.57**	**170**	*e*P			**Pn**	**17 06 10.8**	**-0.4**
SJUU				*e*S			**Sn**	**17 06 32.1**	**-0.2**
TOF	**Tornio**	**1.66**	**125**	*e*P			**Pn**	**17 06 12.6**	**+0.1**
TOF				MSG				17 06 32.5	
	comp=Z,27nm,0.2s								
TOF				*e*SG			**Sn**	**17 06 34.5**	**+0.1**
HEF	**Hetta**	**1.70**	**36**	*e*P			**Pn**	**17 06 13.0**	**-0.1**
HEF				*e*S			**Sb**	**17 06 36.7**	**+0.5**
HEF	**Hetta**	**1.70**	**36**	*e*P			**Pn**	**17 06 13.0**	**-0.1**
	baz=218								
HEF				MSG				17 06 33.0	
	comp=Z,14nm,0.2s								
HEF				*e*SN			**Sb**	**17 06 36.4**	**+0.2**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*P			**Pb**	**17 06 18.1**	**-0.6**
KIF				*e*S			**Sg**	**17 06 46.5**	**+1.5**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*PG			**Pb**	**17 06 18.2**	**-0.4**
KIF				MSG				17 06 42.0	
	comp=Z,16nm,0.2s								
RNF	**Rovaniemi**	**2.04**	**100**	*e*PB			**Pn**	**17 06 18.8**	**+1.0**
RNF				*e*SG			**Sb**	**17 06 46.3**	**+0.3**
SGF	**Sodankyl**	**2.19**	**77**	*e*PB			**Pn**	**17 06 21.0**	**+1.1**
	baz=267								
I37NO	**I37NO**	**2.21**	**337**	*i*				17 19 42.9	
	baz=160,slow=333,SNR=7.1								
FAUS	**Fauske**	**2.24**	**281**	*e*P			**Pn**	**17 06 21.2**	**+0.8**
FAUS				IAML				17 06 55.7	
	comp=Z,19nm,0.5s								
STEI	**Steigen**	**2.37**	**294**	*e*P			**Pn**	**17 06 23.0**	**+0.8**
STEI				*e*S			**Sg**	**17 06 57.9**	**-0.4**
STEI				IAML				17 07 01.3	
	comp=Z,3.9nm,0.4s								
BURU	**Burvik**	**2.49**	**176**	*e*P			**Pn**	**17 06 24.9**	**+1.1**
	baz=2.0								
BURU				*e*SG			**Sb**	**17 06 59.4**	**+0.6**
JETT	**Jettan, Norway**	**2.52**	**356**	*e*P			**Pb**	**17 06 27.5**	**-0.8**
JETT				*e*S			**Sb**	**17 07 01.3**	**+1.5**
JETT				IAML				17 07 08.6	
	comp=Z,12nm,0.2s								
TRO	**Tromso**	**2.70**	**345**	*e*SB			**Sb**	**17 07 03.6**	**-1.2**
MOR8	**Moi Rana**	**2.75**	**254**	*e*P			**Pn**	**17 06 27.9**	**+0.4**
MOR8				IAML				17 07 06.9	
	comp=Z,6.8nm,0.2s								
OBF4	**Vikkela, Lumij**	**2.82**	**141**	*e*P			**Pn**	**17 06 29.3**	**+1.0**
OUL	**Oulu**	**2.82**	**132**	*e*P			**Pn**	**17 06 29.4**	**+1.1**
OUL				*e*SG			**Sb**	**17 07 10.4**	**+2.1**
OBF0	**Syolatti, Pyha**	**2.90**	**151**	*e*P			**Pn**	**17 06 30.6**	**+1.1**
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*P			**Pn**	**17 06 31.7**	**+0.7**
ARA0				IAML				17 07 15.9	
	comp=Z,5.4nm,0.2s								
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn			**Pn**	**17 06 31.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=32								
ARCES				Sn			**Sn**	**17 07 09.0**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=210,slow=24,SNR=10.0								
	comp=Z,0.5nm,0.2s								
LOF	**Lofoten**	**3.04**	**294**	*e*P			**Pn**	**17 06 31.4**	**-0.1**
LOF				IAML				17 07 25.1	
	comp=Z,4.8nm,0.5s								
OUF	**Merijarvi**	**3.12**	**148**	*e*P			**Pn**	**17 06 33.7**	**+1.3**
OUF				MSG				17 07 14.7	
	comp=Z,2.3nm,0.2s								
VRF	**Varrio**	**3.41**	**74**	*e*P			**Pn**	**17 06 37.0**	**+0.5**
	baz=265								
VRF				*e*SG			**Sb**	**17 07 26.6**	**+1.3**
MSF	**Maaselka**	**3.43**	**106**	*e*P			**Pn**	**17 06 37.8**	**+1.0**
	baz=290								
MSF				*e*SG			**Sb**	**17 07 27.9**	**+1.9**
OLKF	**Oulanka, Finla**	**3.43**	**99**	*e*P			**Pn**	**17 06 37.7**	**+0.9**
OLKF				*e*SG			**Sb**	**17 07 27.8**	**+1.9**
KEV	**Kevo**	**3.51**	**37**	*e*P			**Pn**	**17 06 39.5**	**+1.7**
KEV	**Kevo**	**3.51**	**37**	*e*P			**Pn**	**17 06 38.8**	**+0.9**
KEV				*e*S			**Sn**	**17 07 20.4**	**+0.4**
KU6	**Riekki**	**3.71**	**102**	*e*P			**Pn**	**17 06 41.7**	**+1.0**
	baz=287								
HUSU	**Husum**	**3.80**	**192**	*e*P			**Pn**	**17 06 42.9**	**+1.0**
HUSU				*e*S			**Sn**	**17 07 27.0**	**-0.2**
VAF	**Ylistaro**	**4.09**	**169**	*e*P			**Pn**	**17 06 47.1**	**+1.2**
VAF				*e*S			**Sn**	**17 07 36.0**	**+1.6**
HEMU	**Hemsoen**	**4.57**	**197**	*e*P			**Pn**	**17 06 52.7**	**+0.2**
HEMU				*e*S			**Sn**	**17 07 46.3**	**+0.1**
RMF	**Romuvaara**	**4.68**	**123**	*e*P			**Pn**	**17 06 55.6**	**+1.7**
FINES	**FINESS Array B**	**6.06**	**156**	Pn			**Pn**	**17 07 14.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=8.6								
FINES				Sn			**Sn**	**17 08 21.3**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=344,slow=23,SNR=5.4								
	comp=Z,8.5nm,1.2s								
NOA	**NORSAR Array B**	**7.39**	**220**	Pn			**Pn**	**17 07 31.6**	**+0.4**
	baz=48,slow=17,SNR=1.4								
NOA				Sn			**Sn**	**17 08 50.9**	**-4.8**
	baz=58,slow=21,SNR=1.4								
	comp=Z,0.4nm,0.8s								

IDC 16 17:16:39.4±539.0, 55.°39N×39.°78E, h0km, Error ellipse: s-maj=166.0km s-min=31.9km az=144.0, Baltic

States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**1.96**	**314**	*i*				17 30 10.0	
	baz=129,slow=321,SNR=0.6								
I37NO	**I37NO**	**16.75**	**333**	*i*				19 00 10.0	
	baz=135,slow=328,SNR=1.1								
I26DE	**FREYUNG INFRAS**	**17.23**	**259**	*i*				18 55 50.0	
	baz=62,slow=323,SNR=0.5								

*LDG **16** 17:34:28.9±0.0, 43.°05N×0.°24W, h11km, Md2.7/2, Ml2.6/19, Error ellipse: s-maj=0.7km s-min=0.6km az=79.0*
*STR **16** 17:34:29.0±0.5, 43.°N±4°×°±°, h0km, MLv2.3/7, Error ellipse: s-maj=0.0km s-min=0.0km az=18.1, preliminary*
*MRB **16** 17:34:29.2±0.3, 43.°03N×0.°26W, h5km±2km, ML2.1/25, Error ellipse: s-maj=1.3km s-min=1.0km az=182.0*
*MDD **16** 17:34:30.4±0.3, 43.°07N×0.°27W, h12km, mb_Lg2.3/12, Error ellipse: s-maj=2.4km s-min=1.7km az=3.0*

ISC 16 17:34:29.3±0.8, 43.°09N±0.°02×0.°24W±0.°01, h14km±5km, n72, σ1°85/136, 2C-1D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PYLO	**Lourdes**	**0.14**	**85**	P			**Pg**	**17 34 32.7**	**-0.4**
PYLO				S			**Sg**	**17 34 35.5**	**0.0**
	8μm,0.2s								
PYLO	**Lourdes**	**0.14**	**85**	⇑Pg			**Pg**	**17 34 32.1**	**-0.9**
PYLO				Sg			**Sg**	**17 34 34.4**	**-1.2**
VIEF	**Viey**	**0.28**	**136**	⇑Pg			**Pg**	**17 34 34.1**	**-1.2**
VIEF				Sg			**Sg**	**17 34 37.8**	**-1.5**
ETSF	**Etsaut**	**0.30**	**231**	*e*Pg			**Pg**	**17 34 34.4**	**-1.1**
ETSF				*e*Sg			**Sg**	**17 34 38.5**	**-1.3**
	216nm,0.3s								
ETSF	**Etsaut**	**0.30**	**231**	Pg			**Pg**	**17 34 34.4**	**-1.1**
ETSF				Sg			**Sg**	**17 34 38.5**	**-1.3**
ATE	**Arette**	**0.34**	**270**	P			**Pg**	**17 34 35.3**	**-0.9**
ATE				S			**Sg**	**17 34 39.9**	**-0.9**
	61nm,0.2s								
ATE	**Arette**	**0.34**	**270**	⇓Pg			**Pg**	**17 34 35.2**	**-0.9**
ATE				Sg			**Sg**	**17 34 40.1**	**-0.7**
EPF	**Esparros**	**0.43**	**97**	*e*Pg			**Pg**	**17 34 37.2**	**-0.7**
EPF				*e*Sg			**Sg**	**17 34 43.1**	**-0.7**
	71nm,0.3s								
EPF	**Esparros**	**0.43**	**97**	Pg			**Pg**	**17 34 37.2**	**-0.7**
ECHI	**Chisagues Biel**	**0.53**	**142**	P			**Pg**	**17 34 38.5**	**-1.3**
ECHI				S			**Sg**	**17 34 45.4**	**-1.5**
	150nm,0.1s								
ECHI	**Chisagues Biel**	**0.53**	**142**	Pg			**Pg**	**17 34 38.6**	**-1.2**
ECHI				Sg			**Sg**	**17 34 45.1**	**-1.8**
ECHI				*i* Vmb_Lg				17 34 45.5	
ECHI	**Chisagues Biel**	**0.53**	**142**	Pg			**Pg**	**17 34 38.5**	**-1.3**
ECHI				Sg			**Sg**	**17 34 45.4**	**-1.5**
SJPF	**Ste Jean**	**0.72**	**272**	*e*Pg			**Pg**	**17 34 42.6**	**-0.7**
SJPF				*e*Sg			**Sg**	**17 34 52.6**	**-0.2**
	20nm,0.3s								
SJPF	**Ste Jean**	**0.72**	**272**	Pg			**Pg**	**17 34 42.6**	**-0.7**
SJPF				Sg			**Sg**	**17 34 52.6**	**-0.2**
OSSF	**Osses**	**0.76**	**283**	Pg			**Pg**	**17 34 43.9**	**-0.3**
OSSF				Sg			**Sg**	**17 34 54.7**	**+0.6**
EORO	**Oroz-Betelu**	**0.81**	**256**	Pg			**Pb**	**17 34 45.1**	**0.0**
EORO				Sg			**Sg**	**17 34 55.2**	**-0.3**
EORO				*i* Vmb_Lg				17 34 57.5	
CARA	**Val d'Aran**	**0.87**	**116**	P			**Pg**	**17 34 45.5**	**-0.6**
CARA				S			**Sg**	**17 34 57.4**	**-0.1**
	69nm,0.2s								
EALK	**Alkurruntz**	**0.93**	**279**	Pg			**Pg**	**17 34 47.2**	**-0.2**
EALK				Sg			**Sg**	**17 34 59.2**	**-0.4**
EALK				*i* Vmb_Lg				17 35 08.5	
CTRE	**Tremp**	**1.07**	**135**	P			**Pg**	**17 34 48.3**	**-1.6**
CTRE				S			**Sg**	**17 35 02.8**	**-1.1**
	9.6nm,0.2s								
CEST	**Esterri de Car**	**1.21**	**113**	P			**Pg**	**17 34 51.3**	**-1.2**
CEST				S			**Sg**	**17 35 07.5**	**-0.7**
	11nm,0.2s								
CSOR	**Sort**	**1.24**	**125**	P			**Pg**	**17 34 51.4**	**-1.7**
CSOR				S			**Sg**	**17 35 08.2**	**-1.1**
	28nm,0.2s								
ESAC	**San Caprasio**	**1.37**	**187**	Pg			**Pg**	**17 34 55.0**	**-0.8**
ESAC				Sg			**Sn**	**17 35 13.1**	**+1.0**
ESAC				*i* Vmb_Lg				17 35 17.4	
CAVN	**Les Avellanes**	**1.41**	**148**	P			**Pn**	**17 34 53.7**	**-0.9**
CAVN				S			**Sb**	**17 35 12.3**	**-0.9**
	97nm,0.2s								
PAND	**Andorre**	**1.43**	**113**	P			**Pn**	**17 34 55.5**	**+0.4**
PAND				S			**Sb**	**17 35 14.9**	**+0.9**
	16nm,0.2s								
PAND	**Andorre**	**1.43**	**113**	Pg			**Pg**	**17 34 57.8**	**+0.9**
CORG	**Organya**	**1.44**	**126**	P			**Pn**	**17 34 54.8**	**-0.1**
CORG				S			**Sb**	**17 35 13.8**	**-0.1**
	6.0nm,0.3s								
ARBS	**La Rabassa**	**1.47**	**115**	P			**Pn**	**17 34 55.9**	**+0.4**
ARBS				S			**Sb**	**17 35 15.6**	**+0.6**
	29nm,0.3s								
MONQ	**Montcuq**	**1.65**	**39**	Pn			**Pn**	**17 35 00.2**	**+2.4**
MONQ				Sn			**Sb**	**17 35 22.4**	**+2.2**
FNEB	**Nbias**	**1.73**	**95**	Pn			**Pb**	**17 35 02.0**	**+1.0**
FNEB				Sn			**Sg**	**17 35 25.0**	**-0.1**
CLLI	**Llivia**	**1.74**	**110**	P			**Pn**	**17 34 59.2**	**-0.1**
CLLI				S			**Sn**	**17 35 23.1**	**+1.8**
	12nm,0.4s								
MTLF	**Montolieu**	**1.82**	**81**	*e*P			**Pn**	**17 35 00.6**	**+0.5**
MTLF	**Montolieu**	**1.82**	**81**	*e*Pg			**Pb**	**17 35 02.8**	**+0.5**
MTLF				*e*Sg			**Sb**	**17 35 26.4**	**+1.5**
	8.0nm,0.2s								
LRVF	**chteau la Riv**	**1.86**	**359**	Pn			**Pb**	**17 35 03.9**	**+0.9**
LRVF				Sn			**Sb**	**17 35 29.4**	**+3.2**
CBRU	**Bruguera**	**1.96**	**113**	P			**Pn**	**17 35 02.7**	**+0.5**
CBRU				S			**Sn**	**17 35 27.8**	**+1.1**
	11nm,0.3s								
LFF	**La Frestale**	**1.98**	**21**	*e*P			**Pn**	**17 35 03.4**	**+1.0**
LFF	**La Frestale**	**1.98**	**21**	*e*Pg			**Pb**	**17 35 06.4**	**+1.3**
LFF				*e*Sg			**Sb**	**17 35 32.2**	**+2.5**
	23nm,0.3s								
EPOB	**Poblet**	**1.99**	**150**	P			**Pn**	**17 35 02.6**	**0.0**
EPOB				S			**Sn**	**17 35 27.7**	**+0.3**
	12nm,0.4s								
EPOB	**Poblet**	**1.99**	**150**	Pg			**Pb**	**17 35 05.3**	**0.0**
EPOB				Sg			**Sg**	**17 35 31.3**	**-2.1**
EPOB				*i* Vmb_Lg				17 35 32.9	
CORI	**Orista**	**2.03**	**122**	S			**Sn**	**17 35 29.3**	**+1.1**
	24nm,0.2s								
FILF	**Fillols**	**2.13**	**103**	P			**Pn**	**17 35 04.0**	**-0.5**
FILF				S			**Sn**	**17 35 29.6**	**-1.2**
	6.2nm,0.3s								
ERTA	**Horta de San J**	**2.17**	**168**	P			**Pn**	**17 35 04.8**	**-0.3**
ERTA				S			**Sn**	**17 35 32.1**	**+0.3**
	11nm,0.3s								
ERTA	**Horta de San J**	**2.17**	**168**	Pg			**Pb**	**17 35 08.8**	**+0.4**
ERTA				Sg			**Sg**	**17 35 36.4**	**-2.7**
ERTA				*i* Vmb_Lg				17 35 38.6	
CBEU	**Beuda**	**2.31**	**110**	P			**Pn**	**17 35 07.7**	**+0.7**
CBEU				S			**Sn**	**17 35 36.7**	**+1.5**
	16nm,0.3s								
SJAF	**Saint Jean de**	**2.38**	**104**	P			**Pn**	**17 35 08.7**	**+0.8**
SJAF				S			**Sn**	**17 35 38.2**	**+1.4**
	5.9nm,0.3s								
CFON	**Fontmartina**	**2.38**	**123**	P			**Pn**	**17 35 08.6**	**+0.6**
CFON				S			**Sn**	**17 35 37.9**	**+0.9**
	34nm,0.2s								
EJON	**La Jonquera**	**2.39**	**104**	Sg			**Sb**	**17 35 43.8**	**+2.3**
EJON				*i* Vmb_Lg				17 35 47.7	
CMAS	**Mas de Barbera**	**2.40**	**170**	P			**Pn**	**17 35 08.0**	**-0.1**
CMAS				S			**Sn**	**17 35 36.8**	**-0.4**
	13nm,0.3s								
CGAR	**Garraf**	**2.40**	**137**	S			**Sn**	**17 35 38.1**	**+0.6**
	7.3nm,0.6s								
CAF	**Calviac**	**2.48**	**41**	*e*Pn			**Pn**	**17 35 07.8**	**-1.5**
CAF	**Calviac**	**2.48**	**41**	*e*Pg			**Pb**	**17 35 15.5**	**+1.9**
CAF				*e*Sn			**Sn**	**17 35 36.3**	**-3.1**
	2.1nm,0.3s								
CAF				*e*Sg			**Sb**	**17 35 47.6**	**+3.5**
	9.2nm,0.2s								
RJF	**Les Rejaudoux**	**2.55**	**29**	*e*Pn			**Pn**	**17 35 08.7**	**-1.6**
RJF	**Les Rejaudoux**	**2.55**	**29**	*e*P			**Pn**	**17 35 11.7**	**+1.4**
RJF	**Les Rejaudoux**	**2.55**	**29**	*e*Pg			**Pb**	**17 35 16.8**	**+1.9**
RJF				*e*Sn			**Sn**	**17 35 38.2**	**-2.9**
	8.0nm,0.2s								
RJF				*e*Sg			**Sb**	**17 35 50.0**	**+3.9**
	11nm,0.3s								
CCAS	**Cassa de la Se**	**2.62**	**116**	P			**Pn**	**17 35 11.7**	**+0.5**
CCAS				S			**Sn**	**17 35 43.4**	**+0.7**
	5.1nm,0.3s								
CPAL	**Palau Saverder**	**2.63**	**106**	P			**Pn**	**17 35 12.0**	**+0.7**
CPAL				S			**Sn**	**17 35 44.2**	**+1.2**
	3.4nm,0.9s								
ETOR	**Torete**	**2.64**	**211**	Pn			**Pn**	**17 35 12.7**	**+1.2**
ETOR				Sn			**Sn**	**17 35 44.3**	**+1.0**
ETOR				Sg			**Sg**	**17 35 50.8**	**-3.3**
ETOR				*i* Vmb_Lg				17 36 41.8	
EMOS	**Mosqueruela**	**2.73**	**184**	P			**Pn**	**17 35 12.6**	**-0.2**
EMOS				S			**Sn**	**17 35 45.2**	**-0.5**
	3.2nm,0.4s								
EMOS	**Mosqueruela**	**2.73**	**184**	Pg			**Pb**	**17 35 18.6**	**+0.7**
EMOS				Sn			**Sn**	**17 35 45.0**	**-0.7**
EMOS				Sg			**Sb**	**17 35 52.8**	**+1.5**
EMOS				*i* Vmb_Lg				17 35 55.8	
LASF	**Ste Croix**	**3.14**	**70**	*e*P			**Pn**	**17 35 19.7**	**+1.4**
LASF	**Ste Croix**	**3.14**	**70**	*e*Pg			**Pb**	**17 35 27.4**	**+2.5**
LASF				*e*Sg			**Sb**	**17 36 07.7**	**+4.7**
	1.7nm,0.2s								
MFF	**Saint Martin d**	**3.52**	**1**	*e*Pn			**Pn**	**17 35 22.2**	**-1.3**
MFF	**Saint Martin d**	**3.52**	**1**	*e*Pg			**Pb**	**17 35 34.7**	**+3.4**
MFF				*e*Sn			**Sn**	**17 36 01.4**	**-3.4**
	1.3nm,0.4s								
MFF				*e*Sg			**Sg**	**17 36 20.2**	**-2.0**
	2.6nm,0.4s								
TCF	**Toulx Ste Croi**	**3.65**	**28**	*e*Pg			**Pb**	**17 35 37.2**	**+3.7**
TCF				*e*Sn			**Sn**	**17 36 04.5**	**-3.7**
TCF				*e*Sg			**Sg**	**17 36 24.3**	**-2.1**
	4.5nm,0.2s								
VIVF	**Saint-Julien-l**	**3.96**	**62**	*e*Pn			**Pn**	**17 35 28.0**	**-1.7**
VIVF	**Saint-Julien-l**	**3.96**	**62**	*e*Pg			**Pb**	**17 35 43.0**	**+4.1**
VIVF				*e*Sn			**Sn**	**17 36 11.8**	**-4.2**
	0.5nm,0.3s								
VIVF				*e*Sg			**Sg**	**17 36 33.6**	**-3.0**
	1.3nm,0.2s								
BGF	**Bois d'Agland**	**4.11**	**31**	*e*Pn			**Pn**	**17 35 29.7**	**-1.9**
BGF	**Bois d'Agland**	**4.11**	**31**	*e*Pg			**Pb**	**17 35 45.5**	**+4.1**
BGF				*e*Sg			**Sg**	**17 36 38.5**	**-2.6**
	14nm,0.4s								
AVF	**Avril sur Loir**	**4.50**	**33**	*e*Pn			**Pn**	**17 35 36.0**	**-1.0**
AVF				*e*Sg			**Sg**	**17 36 50.6**	**-3.0**
	2.2nm,0.3s								
SMF	**Signal de Mont**	**4.59**	**38**	*e*Pg			**Pb**	**17 35 54.4**	**+4.8**
SMF				*e*Sg			**Sg**	**17 36 53.7**	**-3.0**
	2.2nm,0.3s								
SSF	**Saint Saulge**	**4.78**	**32**	*e*Pg			Pb	17 35 58.0	+5.2
SSF				*e*Sn			**Sn**	**17 36 31.3**	**-4.7**
SSF				*e*Sg			**Sg**	**17 36 59.4**	**-3.3**
	2.4nm,0.3s								
LOR	**Lormes**	**5.09**	**33**	*e*Pn			**Pn**	**17 35 43.4**	**-1.7**
LOR	**Lormes**	**5.09**	**33**	*e*Pg			**Pg**	**17 36 03.6**	**-3.1**
	baz=213								
LOR				*e*Sg			**Sg**	**17 37 09.4**	**-3.2**
	2.1nm,0.4s,baz=214								

*DJA **16** 17:38:01.7±2.7, 14.°N±21.°×12.°2E±4.°8, h10km, M4.7/6, mB5.6/1, mb4.7/6, Mw(mB)5.1/1*
*IDC **16** 17:38:03.6±0.5, 14.°85N×122.°17E, h0km, mb4.4/29, mbtmp4.4/29, MS3.5/19, Error ellipse: s-maj=15.7km s-min=10.6km az=85.0*
*MAN **16** 17:38:06, 14.°97N×122.°07E, h16km, Ms4.5*
*NEIC **16** 17:38:09.8±1.6, 14.°87N±0.°07×122.°13E±0.°08, h41km±6km, mb4.7/66, Error ellipse: s-maj=12.3km s-min=8.3km az=124.0*

ISC 16 17:38:05.9±1.2, 14.°90N±0.°03×122.°09E±0.°03, h14km±8km, n166, σ1°93/164, mb4.6/66, MS3.6/20, 7C-15D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCNP	**Jose Panganiba**	**0.84**	**135**	⇓*e*P			**Pn**	**17 38 23.2**	**-0.2**
JCNP				*e*S			**Sn**	**17 38 36.5**	**+0.9**
LQP	**Lukban**	**0.94**	**214**	⇓*i*P			**Pb**	**17 38 24.1**	**0.0**
LQP				*i* S			**Sn**	**17 38 39.0**	**+0.7**
BALP	**Baler**	**0.97**	**330**	⇓*e*P

PZH LR LR
comp=E,380nm,15.4s
PZH LR LR
comp=Z,440nm,17.6s
JCJ Chichijima 22.31 54 LR LR 17 50 08.4
comp=Z,120nm,20.8s,baz=230,slow=32
JHS Saijyo 22.34 24 P **P** **17 43 03.2 -0.3**
JHS IAmb IAmb 17 43 07.0
comp=Z,28nm,1.0s
CM31 Chiang Mai Arr 22.45 282 P **P** **17 43 06.6 +1.8**
CM31 IAmb IAmb 17 43 35.5
comp=Z,25nm,1.4s
CMAR Chiang Mai Arr 22.45 282 P **P** **17 43 06.7 +1.9**
comp=Z,3.1nm,0.7s,baz=98,slow=7.7,SNR=20
CMAR LR LR 17 52 05.6
comp=Z,188nm,19.0s,baz=85,slow=37
comp=Z,3.1nm,0.7s
CMAR Chiang Mai Arr 22.45 282 P **P** **17 43 05.4 +0.6**
XAN Xi'an 22.47 330 P **P** **17 43 03.4 -1.5**
XAN pP pP 17 43 09.5 +0.6
XAN pmax pmax
comp=Z,11nm,0.9s
XAN LR LR
comp=N,200nm,12.7s
XAN LR LR
comp=E,280nm,12.4s
XAN LR LR
comp=Z,310nm,13.7s
INCN Inchon 22.86 9 P **P** **17 43 07.6 -1.4**
INCN IAmb IAmb 17 43 11.2
comp=Z,28nm,0.9s
KSAR Wonju Array Be 23.04 12 P **P** **17 43 10.6 -0.3**
KSRS Korea Array 23.06 12 P **P** **17 43 10.3 -0.6**
comp=Z,2.4nm,0.7s,baz=195,slow=10,SNR=12
KSRS LR LR 17 52 50.3
comp=Z,51nm,19.6s,baz=200,slow=38
comp=Z,2.4nm,0.7s
KS19 Wonju Array Si 23.09 12 P **P** **17 43 10.9 -0.5**
HNS HongShan 23.35 345 ⇓P **P** **17 43 14.8 +0.8**
HNS pmax pmax
comp=Z,16nm,1.0s
EDFI Ende, Flores 23.50 181 P P 17 43 24.3 +8.6
INU Inuyama 24.39 31 P **P** **17 43 24.4 +0.5**
NGJI Ngawi 24.50 206 P P 17 43 33.2 +8.2
JMBI JAMBI 24.55 230 P P 17 43 39.7 +14
BATI Baumata 24.99 176 P **P** **17 43 29.0 -0.5**
comp=Z,12nm,0.6s,baz=9.2,slow=18,SNR=2.2
comp=Z,12nm,0.6s
BJT Baijiatuan 25.56 349 P **P** **17 43 32.5 -1.9**
PSI Prapat 25.81 244 P **P** **17 43 38.0 +0.8**
comp=Z,3.5nm,0.4s,baz=61,slow=19,SNR=0.9
PSI LR LR 17 55 00.5
comp=Z,129nm,18.6s,baz=31,slow=39
comp=Z,3.5nm,0.4s
RPSI Rantau Prapat 25.86 244 P **P** **17 43 38.0 +0.5**
RPSI Rantau Prapat 25.86 244 P **P** **17 43 37.4 0.0**
RPSI IAmb IAmb 17 43 39.3
comp=Z,21nm,1.4s
MJAR Matsushiro Arr 25.92 31 P **P** **17 43 37.4 -0.3**
comp=Z,1.1nm,0.7s,baz=188,slow=8.4,SNR=7.0
MJAR LR LR 17 53 34.0
comp=Z,38nm,19.4s,baz=217,slow=36
comp=Z,1.1nm,0.7s
MNSI Mandailing Nat 26.28 240 P P 17 43 52.7 +11
LZH Lanzhou 26.67 326 *eP* **P** **17 43 49.8 +5.0**
LZH pP sP 17 43 56.8 +6.1
LZH pmax pmax
comp=Z,19nm,1.4s
USRK Ussuriysk Ar. 30.40 14 P **P** **17 44 19.0 +1.3**
comp=Z,3.1nm,0.7s,baz=175,slow=12,SNR=2.4
comp=Z,3.1nm,0.7s
KNRA Kununurra 31.09 167 P **P** **17 44 23.7 -0.2**
KNRA IAmb IAmb 17 45 05.9
comp=Z,16nm,1.4s
GTA Gaotai 31.28 326 *eP* P 17 44 36.9 +11
GTA pmax pmax
comp=Z,2.0nm,1.1s
FITZ Fitzroy Crossi 32.97 174 P **P** **17 44 39.9 -0.6**
comp=Z,1.2nm,0.8s,baz=0.0,slow=6.1,SNR=1.8
comp=Z,1.2nm,0.8s
FITZ Fitzroy Crossi 32.97 174 P **P** **17 44 39.0 -1.5**
FITZ IAmb IAmb 17 45 13.1
comp=Z,18nm,1.5s
KLR Kul'dur 35.15 11 P **P** **17 44 60.0 +0.8**
comp=Z,5.8nm,1.0s,baz=232,slow=8.1,SNR=8.8
KLR LR LR 18 01 05.1
comp=Z,59nm,18.1s,baz=186,slow=39
comp=Z,5.8nm,1.0s
ULN Ulaanbaatar 35.16 342 P **P** **17 44 59.7 +0.3**
SONM Songino Array 35.33 342 P **P** **17 45 01.0 +0.1**
comp=Z,0.8nm,0.6s,baz=165,slow=9.4,SNR=7.8
SONM LR LR 18 01 15.2
comp=Z,116nm,19.0s,baz=150,slow=39
comp=Z,0.8nm,0.6s
SONM Songino Array 35.33 342 P **P** **17 44 59.6 -1.3**
WB0 Warramunga Arr 36.51 160 P **P** **17 45 09.2 -2.0**
WB0 IAmb IAmb 17 45 19.6
comp=Z,7.1nm,1.1s
WRA Warramunga Arr 36.66 160 P **P** **17 45 10.8 -1.6**
comp=Z,1.4nm,0.6s,baz=342,slow=9.1,SNR=22
comp=Z,1.4nm,0.6s
WRA Warramunga Arr 36.66 160 P **P** **17 45 09.7 -2.7**
WB2 Warramunga Arr 36.66 160 P **P** **17 45 10.3 -2.1**
WB2 IAmb IAmb 17 45 33.3
comp=Z,12nm,1.2s
WR0 Warramunga Arr 36.74 160 P **P** **17 45 11.7 -1.4**
AS31 Alice Springs 40.03 163 P **P** **17 45 39.9 -0.9**
ASAR Alice Springs 40.03 163 P **P** **17 45 40.0 -0.8**
comp=Z,0.8nm,0.4s,baz=343,slow=7.7,SNR=27
ASAR PcP **PcP** **17 47 45.5 -0.3**
comp=Z,0.8nm,0.6s,baz=344,slow=2.8,SNR=4.6
comp=Z,0.8nm,0.4s
ASAR Alice Springs 40.03 163 P **P** **17 45 38.8 -2.0**
PALK Pallekele 41.26 264 LR LR 18 02 28.5
comp=Z,78nm,18.3s,baz=182,slow=35
CTA Charters Tower 42.11 145 P **P** **17 45 57.0 -1.0**
comp=Z,11nm,1.1s,baz=321,slow=9.0,SNR=2.1
comp=Z,11nm,1.1s
CTAO Charters Tower 42.11 145 P **P** **17 45 56.5 -1.4**
CTAO IAmb IAmb 17 45 58.7
comp=Z,24nm,1.2s
H11S3 WAKE ISLAND Hy 42.79 79 T T 18 32 55.5
baz=274,slow=75,SNR=1710
H11S1 WAKE ISLAND Hy 42.80 79 T T 18 32 54.1
baz=274,slow=75,SNR=19
H11S2 WAKE ISLAND Hy 42.81 79 T T 18 32 56.0
baz=274,slow=75,SNR=1077
HNR Honiara 44.64 120 LR LR 18 02 22.3
comp=Z,80nm,19.3s,baz=288,slow=33
FORT Forrest 45.77 173 P **P** **17 46 26.3 -0.9**
MK31 Makanchi Array 45.89 322 P **P** **17 46 28.6 +0.5**
MK31 IAmb IAmb 17 46 34.9
comp=Z,7.2nm,0.8s
MKAR Makanchi Array 45.89 322 P **P** **17 46 29.0 +0.9**
comp=Z,8.6nm,0.7s,baz=125,slow=9.0,SNR=52
MKAR LR LR 18 06 50.8
comp=Z,62nm,18.2s,baz=110,slow=38
comp=Z,8.6nm,0.7s
MKAR Makanchi Array 45.89 322 P **P** **17 46 28.8 +0.7**
MAKZ Makanchi 46.09 322 P **P** **17 46 29.7 +0.1**
MAKZ IAmb IAmb 17 46 35.8
comp=Z,4.5nm,0.8s
KSH Kashi 47.13 310 P P 17 46 44.6 +6.6
KSH pmax pmax
comp=Z,6.0nm,0.8s
PEA0B Petropavlovsk- 47.34 29 P **P** **17 46 39.4 +0.1**
PETK Petropavlovsk- 47.34 29 P **P** **17 46 40.1 +0.8**
comp=Z,9.2nm,0.8s,baz=207,slow=9.0,SNR=7.7
comp=Z,9.2nm,0.8s
PETK Petropavlovsk- 47.34 29 P **P** **17 46 38.8 -0.5**
YAK Yakutsk 47.38 5 LR LR 18 07 37.7
comp=Z,61nm,19.0s,baz=92,slow=37
YAK Yakutsk 47.38 5 P **P** **17 46 39.4 0.0**
YAK IAmb IAmb 17 46 40.5
comp=Z,10nm,0.7s
NRN Naryn 47.73 313 P **P** **17 46 43.4 +0.5**
NRN IAmb IAmb 17 46 51.6
comp=Z,11nm,1.2s
NWAO Narrogin (SRO) 47.78 186 P **P** **17 46 41.7 -1.1**
NIL Nilore 47.80 302 P **P** **17 46 42.4 -0.8**
NIL IAmb IAmb 17 46 48.8
comp=Z,6.9nm,0.8s
ZAA0 Zalesovo Array 48.63 332 P **P** **17 46 48.8 -0.5**
ZAA0 IAmb IAmb 17 46 50.4
comp=Z,7.5nm,1.0s
ZALV Zalesovo Beam 48.63 332 P **P** **17 46 49.4 +0.1**
comp=Z,3.7nm,0.7s,baz=123,slow=7.3,SNR=17
comp=Z,3.7nm,0.7s
ZALV Zalesovo Beam 48.63 332 P **P** **17 46 48.8 -0.5**
AAK Ala-Archa 49.19 314 LR LR 18 08 39.7
comp=Z,79nm,20.2s,baz=90,slow=37
BBOO Buckleboo 49.28 164 P **P** **17 46 52.8 -1.7**
MA2 Magadan 49.34 19 LR LR 18 09 10.6
comp=Z,28nm,19.1s,baz=186,slow=38
MA2 Magadan 49.34 19 P **P** **17 46 54.8 +0.2**
KURK Kurchatov 49.96 325 P **P** **17 46 60.0 +0.5**
STKA Stephens Creek 50.13 158 P **P** **17 47 00.1 -0.9**
comp=Z,2.4nm,0.8s,baz=293,slow=7.7,SNR=4.9
comp=Z,2.4nm,0.8s
STKA Stephens Creek 50.13 158 P **P** **17 47 00.5 -0.5**
GAR Garm 51.22 308 P **P** **17 47 09.4 0.0**
CHGR Chuyangaron 52.03 308 P **P** **17 47 15.2 -0.2**
CHGR IAmb IAmb 17 47 18.2
comp=Z,19nm,1.3s
KK31 Karatay Array 52.12 313 P **P** **17 47 15.4 -0.5**
KKAR Karatay Array 52.12 313 P **P** **17 47 15.2 -0.7**
KKAR IAmb IAmb 17 47 23.5
comp=Z,3.9nm,0.8s
KKAR Karatay Array 52.12 313 P **P** **17 47 16.1 +0.2**
SHEM Shemya Is, Ala 55.62 36 LR LR 18 11 58.3
comp=Z,17nm,18.0s,baz=270,slow=37
BRVK Borovoye 55.63 325 P **P** **17 47 41.8 +0.4**
BRVK IAmb IAmb 17 47 47.4
comp=Z,5.7nm,0.8s
TIXI Tiksi 56.88 3 P **P** **17 47 49.2 -0.7**
TIXI IAmb IAmb 17 47 50.6
comp=Z,7.7nm,0.8s
NRIK Noril'sk 58.57 346 P **P** **17 48 02.3 +0.4**
comp=Z,11nm,0.8s,baz=135,slow=5.5,SNR=13
comp=Z,11nm,0.8s
NRIK Noril'sk 58.57 346 P **P** **17 48 01.9 +0.1**
WSAR Wadi Sarin 60.16 288 LR LR 18 19 32.1
comp=Z,24nm,18.3s,baz=96,slow=41
BILL Bilibino 60.17 18 P **P** **17 48 12.9 0.0**
GEYT Alibeck 60.53 305 P **P** **17 48 17.2 +1.1**
comp=Z,2.5nm,0.6s,baz=84,slow=5.9,SNR=2.2
comp=Z,2.5nm,0.6s
GEYT Alibeck 60.53 305 P **P** **17 48 16.1 0.0**
GEYT IAmb IAmb 17 48 24.8
comp=Z,8.8nm,0.8s
GYA0B ALIBECK ARRAY 60.53 305 P **P** **17 48 15.5 -0.6**
GYA0B IAmb IAmb 17 48 28.8
comp=Z,9.2nm,0.8s
ABKAR Akbulak array 60.73 318 P **P** **17 48 16.8 -0.3**
ABKAR Akbulak array 60.73 318 P **P** **17 48 16.9 -0.2**
ABKAR IAmb IAmb 17 48 22.7
comp=Z,3.7nm,0.6s
AKTO Aktyubinsk 62.18 319 P **P** **17 48 27.2 +0.3**
comp=Z,2.2nm,0.6s,baz=94,slow=9.5,SNR=3.2
comp=Z,2.2nm,0.6s
ARU Arti 63.14 326 P **P** **17 48 33.0 -0.2**
comp=Z,5.7nm,0.5s,baz=122,slow=4.5,SNR=5.1
comp=Z,5.7nm,0.5s
ARU Arti 63.14 326 P **P** **17 48 31.3 -1.9**
KIRV Kirov 68.38 327 P **P** **17 49 06.4 -0.5**
comp=Z,11nm,0.7s,baz=45,slow=7.1,SNR=2.8
comp=Z,11nm,0.7s
BELG Belogornoye 68.86 321 P **P** **17 49 10.0 0.0**
comp=Z,11nm,0.7s,baz=117,slow=2.3,SNR=2.6
comp=Z,11nm,0.7s
KBZ Khabaz 72.09 312 P **P** **17 49 30.4 +0.5**
comp=Z,1.9nm,0.6s,baz=94,slow=5.0,SNR=4.2
comp=Z,1.9nm,0.6s
LBZ Lake Benmore 73.45 146 P **P** **17 49 37.5 -0.5**
RPZ Rata Peaks 73.48 145 P **P** **17 49 37.6 -0.5**
RPZ IAmb IAmb 17 49 42.9
comp=Z,16nm,1.2s
KLMR Klimovskoe 73.50 330 *eP* **P** **17 49 35.7 -2.3**
KLMR AMP 17 49 42.9
comp=Z,10.0nm,0.9s
O18K Koktuh Hills 73.59 31 P **P** **17 49 39.4 +0.7**
O18K IAmb IAmb 17 49 42.0
comp=Z,16nm,1.2s
K20K Telida 74.05 28 P **P** **17 49 42.6 +1.4**
IMAR Indian Mountai 74.14 25 P **P** **17 49 43.0 +1.3**
H21K Melozitna Rive 74.54 25 P **P** **17 49 45.2 +1.2**
H21K IAmb IAmb 17 49 50.7
comp=Z,7.5nm,1.4s
M20K Styx River 74.54 29 P **P** **17 49 47.5 +3.3**
M20K IAmb IAmb 17 49 51.5
comp=Z,8.4nm,1.3s
BPAW Bear Paw Mtn. 75.39 27 P **P** **17 49 49.4 +0.4**
BPAW IAmb IAmb 17 49 52.1
comp=Z,5.7nm,0.9s
MLY Manley 75.43 26 P **P** **17 49 50.4 +1.1**
BMAR Burnt Mountain 77.65 23 P **P** **17 50 03.2 +1.4**
M24K Tolsona, Glenn 77.78 29 P **P** **17 50 03.2 +0.5**
ARCES ARCESS Array B 78.45 339 P **P** **17 50 06.2 +0.1**
comp=Z,2.2nm,0.8s,baz=72,slow=6.0,SNR=9.6
comp=Z,2.2nm,0.8s
ARCES ARCESS Array B 78.45 339 P **P** **17 50 06.4 +0.2**
ARCES IAmb IAmb 17 50 07.3
comp=Z,11nm,1.3s
I26K Coal Creek Min 78.57 25 P **P** **17 50 04.3 -2.6**
I26K IAmb IAmb 17 50 06.3
comp=Z,6.5nm,1.4s
SPB2 Spitsbergen Ar 78.70 348 P **P** **17 50 07.6 +0.3**
SPB2 IAmb IAmb 17 50 25.3
comp=Z,18nm,1.2s
SPITS Spitsbergen Ar 78.70 348 P **P** **17 50 07.6 +0.2**
comp=Z,7.7nm,0.9s,baz=69,slow=8.2,SNR=2.9
comp=Z,7.7nm,0.9s
K27K Chicken 79.28 26 P **P** **17 50 11.0 +0.2**
BCAR Beaver Creek A 79.61 27 P **P** **17 50 14.8 +2.2**
FINES FINESS Array B 79.90 331 P **P** **17 50 14.2 +0.1**
comp=Z,1.8nm,0.6s,baz=57,slow=5.1,SNR=8.9
comp=Z,1.8nm,0.6s
FINES FINESS Array B 79.90 331 P **P** **17 50 14.8 +0.7**
AKASG Malin Array Be 80.42 320 P **P** **17 50 16.4 -0.8**
comp=Z,0.1nm,0.3s,baz=74,slow=3.5,SNR=4.8
CASY Casey 81.40 185 P **P** **17 50 20.6 -1.3**
CASY IAmb IAmb 17 51 02.4
comp=Z,5.9nm,0.6s
HFS Hagfors 86.07 332 P **P** **17 50 45.7 -0.5**
comp=Z,4.5nm,1.1s,baz=73,slow=5.0,SNR=5.5
comp=Z,4.5nm,1.1s
NB2 NORSAR Subarra 86.82 333 P **P** **17 50 49.5 -0.4**
comp=Z,6.6nm,1.7s,baz=62,slow=5.3
NOA NORSAR Array B 86.82 333 P **P** **17 50 49.5 -0.4**
comp=Z,1.5nm,0.9s,baz=66,slow=5.2,SNR=6.6
NOA LR LR 18 34 07.9
comp=Z,55nm,18.2s,baz=250,slow=39
comp=Z,1.5nm,0.9s
YKA Yellowknife Ar 91.16 23 P **P** **17 51 11.2 +0.8**
comp=Z,2.2nm,0.9s,baz=311,slow=4.6,SNR=10
comp=Z,2.2nm,0.9s

*IDC **16** 17:42:33.5±2.0, 41˚.50N×113˚.29W, h0km, mbtmp1.7/1, ML2.9/1, Error ellipse: s-maj=109.5km s-min=11.1km az=150.0*
*NEIC **16** 17:42:35.1±1.2, 41˚.08N±0˚.03×112˚.86W±0˚.05, h0km±2km, ML1.9/48, Error ellipse: s-maj=7.1km s-min=6.6km az=311.0*

ISC 16 17:42:35.0±1.0, 41˚.08N±0˚.03×112˚.86W±0˚.03, h0km, n31, σ0s94/31, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BGU	**Big Grassy Mou**	**0.20**	**220**	Pg	**Pg**	**17 42 39.7**	**+0.9**
HVU	**Hansel Valley**	**0.70**	**5**		**Pg**	**17 42 47.8**	**-0.7**
HVU				IAML		17 43 05.3	
	comp=E,50nm,0.4s						
HVU				IAML		17 43 05.5	
	comp=N,77nm,0.4s						
DUG	**Dugway, Tooele**	**0.88**	**178**	Pg	**Pb**	**17 42 53.4**	**+0.2**
DUG				IAML		17 43 09.4	
	comp=N,30nm,0.5s						
DUG				IAML		17 43 14.2	
	comp=N,51nm,0.5s						
CTU	**Camp Tracy**	**0.92**	**114**	Pg	**Pb**	**17 42 53.7**	**-0.3**
CTU				IAML		17 43 11.3	
	comp=N,32nm,0.5s						
TCUT	**Toone Canyon**	**1.10**	**87**		**Pb**	**17 42 56.9**	**-0.1**
HWUT	**Hardware Ranch**	**1.11**	**61**	Pg	**Pg**	**17 42 56.2**	**0.0**
JLU	**Jordanelle**	**1.17**	**114**		**Pg**	**17 42 57.2**	**-0.2**
NLU	**North Lily Min**	**1.27**	**152**		**Pg**	**17 42 59.8**	**+0.5**
MPU	**Maple Canyon**	**1.41**	**138**	Pn	**Pn**	**17 43 01.6**	**-0.6**
ELK	**Elko**	**1.83**	**260**	Pn	**Pn**	**17 43 08.1**	**+0.1**
ELK				IAML		17 43 38.6	
	comp=N,7.7nm,0.4s						
AHID	**Auburn Hatcher**	**2.14**	**37**	Pn	**Pn**	**17 43 11.9**	**-0.1**
TMUT	**Trail Mountain**	**2.18**	**144**		**Pn**	**17 43 12.7**	**-0.1**
TMUT				IAML		17 43 53.8	
	comp=E,10nm,0.7s						
TMUT				IAML		17 43 54.1	
	comp=N,9.7nm,0.7s						
SPR3	**Spring Creek 3**	**2.37**	**209**	Pn	**Pn**	**17 43 17.0**	**+1.7**
SPR3				IAML		17 44 06.0	
	comp=N,5.9nm,0.7s						
SPR3				IAML		17 44 06.5	
	comp=E,4.8nm,1.2s						
MSU	**Marysvale**	**2.62**	**168**	Pn	**Pn**	**17 43 18.4**	**-0.3**
MVU	**Marysvale**	**2.62**	**169**	Pn	**Pn**	**17 43 19.5**	**+0.8**
PSUT	**Pine Spring**	**2.66**	**197**		**Pn**	**17 43 19.6**	**+0.4**
PSUT				IAML		17 43 55.2	
	comp=N,4.0nm,3.3s						
PSUT				IAML		17 44 15.3	
	comp=E,3.9nm,0.6s						
SRU	**San Rafael Swe**	**2.66**	**137**	Pn	**Pn**	**17 43 19.3**	**+0.1**
SRU				IAML		17 44 04.5	
	comp=N,3.6nm,0.7s						
SRU				IAML		17 44 14.6	
	comp=E,3.7nm,1.5s						
HLID	**Hailey**	**2.74**	**336**	Pn	**Pn**	**17 43 21.4**	**+1.1**
HLID				IAML		17 44 01.9	
	comp=E,3.9nm,2.4s						
HLID				IAML		17 44 03.2	
	comp=E,3.5nm,1.6s						
TPAW	**Teton Pass**	**2.79**	**30**	Pn	**Pn**	**17 43 21.0**	**-0.2**
TPAW				IAML		17 44 24.7	
	comp=E,5.0nm,3.7s						
BW06	**Boulder Array**	**2.98**	**55**		**Pn**	**17 43 23.3**	**-0.4**
BW06				IAML		17 44 13.3	
	comp=E,3.8nm,0.7s						
BW06				IAML		17 45 05.6	
	comp=E,3.4nm,4.6s						
PD31	**Pinedale Array**	**2.98**	**55**		**Pn**	**17 43 23.2**	**-0.6**
PDAR	**Pinedale Array**	**2.98**	**55**	Pn	**Pn**	**17 43 24.3**	**+0.6**
	comp=E,0.2nm,0.3s,baz=245,slow=12,SNR=3.2						
PDAR				Pg	**Pb**	**17 43 29.7**	**+0.5**
	comp=E,0.9nm,0.3s,baz=233,slow=14,SNR=15						
PDAR				Lg	Lg	17 44 10.3	
	comp=E,0.9nm,0.3s,baz=214,slow=24,SNR=8.1						
	comp=E,0.2nm,0.3s						
PDAR	**Pinedale Array**	**2.98**	**55**		**Pn**	**17 43 24.1**	**+0.3**
MOOW	**Moose Ponds**	**3.09**	**30**		**Pn**	**17 43 25.0**	**-0.3**
MOOW				IAML		17 44 23.9	
	comp=E,4.1nm,5.0s						
MOOW				IAML		17 44 44.0	
	comp=E,2.7nm,4.4s						
IMW	**Indian Meadow**	**3.15**	**26**		**Pn**	**17 43 26.0**	**-0.1**
MFID	**Camas Ranch**	**3.21**	**318**	Pn	**Pn**	**17 43 26.3**	**-0.5**
MFID				IAML		17 45 23.0	
	comp=E,4.3nm,4.9s						
R11A	**Troy Canyon, C**	**3.44**	**219**		**Pn**	**17 43 29.9**	**-0.2**
R11A				IAML		17 44 29.2	
	comp=N,3.1nm,0.4s						
R11A				IAML		17 44 32.8	
	comp=E,4.0nm,3.0s						
MCMT	**McKenzie Canyo**	**3.75**	**0**		**Pn**	**17 43 37.4**	**+3.1**
YHL	**Hebgen Lake**	**3.97**	**18**	Pn	**Pn**	**17 43 38.3**	**+1.0**
NVAR	**Mina Array Bea**	**4.96**	**240**	Pg	**Pb**	**17 44 00.5**	**-2.3**
	comp=E,0.2nm,0.3s,baz=56,slow=15,SNR=3.4						
NVAR				Lg	Lg	17 45 13.8	
	comp=E,0.2nm,0.3s,baz=38,slow=35,SNR=2.7						
I56US	**NEWPORT INFRAS**	**7.80**	**339**	*i*		18 27 10.0	
	comp=E,0.1nm,1.1s,baz=159,slow=309,SNR=5.1						

DJA 16 17:47:47.4±0.6, 8˚S±4˚×11˚0E±˚, h14km±4km, M4.0/13, mb4.0/3, MLv3.9/13, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**0.63**	**24**	P	Pb	17 48 00.7	+0.5
UGM				S	Sb	17 48 08.9	+0.1
YOGI	**Yogyakarta**	**0.67**	**2**	P	Pb	17 48 01.2	+0.3
PCJI	**Pacitan**	**0.94**	**72**	P	Pg	17 48 05.9	+0.2
PCJI				S	Sb	17 48 17.6	-0.3
SMRI	**Semarang**	**1.44**	**7**	P	Pb	17 48 13.7	-0.4
SMRI				S	Sb	17 48 32.2	-0.1
PWJI	**Pagerwojo**	**1.59**	**73**	P	Pn	17 48 14.9	-0.2
NGJI	**Ngawi**	**1.62**	**47**	P	Pb	17 48 17.4	+0.2
TBJI	**Tambak Boyo**	**2.28**	**43**	P	Pn	17 48 25.4	+0.7
LEM	**Lembang**	**3.10**	**302**	P	Pn	17 48 34.6	-1.6
GMJI	**Gumukmas**	**3.15**	**86**	P	Pn	17 48 37.7	+1.1
CNJI	**Cibinong**	**3.33**	**290**	P	Pn	17 48 39.2	+0.2
BLJI	**Banyuglugur**	**3.37**	**78**	P	Pn	17 48 40.0	+0.3
JAGI	**Jajag, Banyuwa**	**3.84**	**90**	P	Pn	17 48 46.6	+0.5
ABJI	**Asem Bagus**	**3.98**	**80**	P	Pn	17 48 48.5	+0.4
TWSI	**Taliwang, Sumb**	**6.54**	**93**	P	Pn	17 49 23.0	-0.3
	0.1nm8.9nm,1.3s						
PLAI	**Plampang**	**7.43**	**93**	P	Pn	17 49 37.8	+2.3

*NEIC **16** 17:48:26.3±0.6, 36˚.515N±0˚.010×97˚.22W±0˚.02, h8km±6km, Error ellipse: s-maj=1.9km s-min=1.3km az=65.0*
*TUL **16** 17:48:26.4±0.8, 36˚.51N±0˚.01×97˚.21W±0˚.01, h6km±6km, ML3.1, mb_Lg3.1/86(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=51.0*
*ANF **16** 17:48:26.8±0.4, 36˚.52N×97˚.20W, h6km, ML3.6/9, Error ellipse: s-maj=4.7km s-min=3.8km az=161.0*

ISC 16 17:48:26.2±1.0, 36˚.51N±0˚.02×97˚.23W±0˚.02, h8km±10km, n103, σ0s84/96, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QUOK	**Quay**	**0.54**	**129**	Pg	**Pg**	**17 48 36.9**	**+0.4**
QUOK				Sg	**Sg**	**17 48 43.2**	**-0.4**
KAN13	**South Haven SW**	**0.54**	**338**		**Pg**	**17 48 37.0**	**+0.4**
KAN13				Sg	**Sg**	**17 48 44.0**	**+0.3**
CROK	**Carrier**	**0.61**	**270**		**Pg**	**17 48 38.3**	**+0.3**
CROK				Sg	**Sg**	**17 48 46.6**	**+0.7**
GC02	**Grant County #**	**0.61**	**304**		**Pg**	**17 48 38.2**	**+0.2**
GC02				Sg	**Sg**	**17 48 46.6**	**+0.6**
OK031	**S. Brethren Rd**	**0.64**	**151**	Pg	**Pg**	**17 48 38.7**	**+0.3**
OK031				Sg	**Sg**	**17 48 47.2**	**+0.4**
OK034	**N. Norfolk Rd.**	**0.65**	**140**	Pg	**Pg**	**17 48 38.9**	**+0.3**
OK034				Sg	**Sg**	**17 48 47.5**	**+0.4**
OK030	**Cody Creek RV**	**0.68**	**148**	Pg	**Pg**	**17 48 39.5**	**+0.2**
OK030				Sg	**Sg**	**17 48 47.6**	**-0.6**
KAN17	**Caldwell West**	**0.69**	**321**		**Pg**	**17 48 39.6**	**+0.2**
KAN17				Sg	**Sg**	**17 48 48.5**	**+0.1**
T35A	**Sooner Cattle**	**0.70**	**54**		**Pg**	**17 48 39.7**	**0.0**
T35A				Sg	**Sg**	**17 48 49.0**	**+0.1**
T35B	**Sooner Cattle**	**0.70**	**54**	P	**Pg**	**17 48 39.9**	**+0.1**
	baz=235,SNR=241						
T35B				S	**Sg**	**17 48 49.1**	**+0.2**
	baz=235						
OK029	**Liberty Lake**	**0.74**	**195**		**Pg**	**17 48 40.6**	**+0.3**
KAN14	**Manchester OK**	**0.74**	**307**		**Pg**	**17 48 40.6**	**+0.2**
KS20	**Mayfield South**	**0.77**	**340**		**Pg**	**17 48 41.1**	**+0.1**
KS20				Sg	**Sg**	**17 48 51.2**	**+0.3**
KAN01	**Argonia South**	**0.77**	**326**	Pg	**Pg**	**17 48 41.2**	**+0.1**
KAN01				Sg	**Sg**	**17 48 51.6**	**+0.5**
KAN05	**Bluff City Nor**	**0.79**	**319**		**Pg**	**17 48 41.5**	**+0.1**
KAN05				Sg	**Sg**	**17 48 52.3**	**+0.5**
OK032	**Salt Plains WL**	**0.84**	**291**		**Pg**	**17 48 42.4**	**0.0**
KS21	**Milan North St**	**0.85**	**336**		**Pg**	**17 48 42.6**	**0.0**
KS21				Sg	**Sg**	**17 48 54.1**	**+0.5**
OK005	**Luther M Schoo**	**0.85**	**178**	Pg	**Pg**	**17 48 42.8**	**+0.2**
OK005				Sg	**Sg**	**17 48 54.7**	**+1.0**
DEOK	**Depew**	**0.89**	**138**	Pg	**Pg**	**17 48 43.1**	**-0.2**
DEOK				Sg	**Sg**	**17 48 55.0**	**+0.3**
KAN06	**Argonia West S**	**0.90**	**326**		**Pg**	**17 48 43.4**	**+0.1**
BCOK	**Bluff Creek, N**	**0.91**	**200**		**Pg**	**17 48 43.6**	**+0.1**
KAN10	**Anthony SW Sta**	**0.93**	**312**		**Pg**	**17 48 44.0**	**0.0**
OK025	**Westminster Rd**	**0.93**	**186**		**Pg**	**17 48 44.1**	**+0.1**
OK025				Sg	**Sg**	**17 48 56.7**	**+0.6**
KAN08	**Anthony NE Sta**	**0.93**	**320**		**Pg**	**17 48 44.1**	**0.0**
OK009	**Oakdale Elemen**	**0.94**	**190**	Pg	**Pg**	**17 48 43.8**	**-0.5**
KAN16	**Harper SW Stat**	**0.98**	**317**		**Pg**	**17 48 45.0**	**0.0**
KAN12	**Harper NE Stat**	**1.00**	**322**	Pg	**Pg**	**17 48 45.5**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**1.11**	**189**		**Pg**	**17 48 47.3**	**-0.3**
OK035	**E0210 Rd and N**	**1.21**	**280**		**Pg**	**17 48 48.9**	**-0.5**
OK038	**West end E0370**	**1.22**	**269**		**Pg**	**17 48 48.2**	**-1.4**
FNO	**Franklin**	**1.26**	**187**		**Pg**	**17 48 49.8**	**-0.2**
TUL1	**Leonard**	**1.30**	**117**	Pn	**Pn**	**17 48 50.4**	**-0.2**
TUL1	**Leonard**	**1.30**	**117**	P	**Pn**	**17 48 50.5**	**-0.2**
	baz=298						
TUL1				S	**Sb**	**17 49 08.1**	**+0.3**
	baz=298						
NOKA	**Waynoka**	**1.38**	**276**	Pn	**Pn**	**17 48 51.8**	**+0.1**
U32A	**Winter Ranch,**	**1.44**	**265**	Pn	**Pn**	**17 48 52.9**	**+0.4**
U32A	**Winter Ranch,**	**1.44**	**265**	Pb	**Pn**	**17 48 53.0**	**+0.5**

baz=84
CSTR Hydro, Custer 1.47 234 Pn 17 48 53.3 +0.4
RLO Rose Lookout 1.81 100 Pn 17 48 58.0 +0.4
X34A Smith Ranch, M 1.97 195 Pn **Pb 17 49 01.7 -0.5**
X34A lAmb_Lg 17 49 29.8
comp=Z,126nm,1.0s
WMOK Wichita Mounta 2.17 216 Pn 17 49 03.5 +0.9
WMOK lAmb_Lg 17 49 38.4
comp=Z,67nm,0.9s
WMOK Wichita Mounta 2.17 216 P **Pn 17 49 04.2 +1.5**
baz=35,SNR=122
WMOK S **Sb 17 49 32.5 -0.4**
baz=35
R32A Long Quarter, 2.25 329 Pn 17 49 04.0 +0.3
R32A Long Quarter, 2.25 329 S **Sn 17 49 33.7 +2.2**
baz=148
U38A Gravette 2.29 91 Pn 17 49 05.5 +1.3
U38A lAmb_Lg 17 49 45.5
comp=Z,50nm,0.8s
U38A Gravette 2.29 91 P **Pb 17 49 06.5 -1.2**
baz=273,SNR=39
X37A Clayton 2.44 141 Pn **Pn 17 49 06.8 +0.5**
X37A lAmb_Lg 17 49 47.3
comp=Z,52nm,0.7s
X37A Clayton 2.44 141 P **Pn 17 49 08.4 +2.1**
baz=323,SNR=23
LOOK Love County 2.51 179 Pn 17 49 08.1 +0.8
LOOK lAmb_Lg 17 49 48.9
comp=Z,38nm,0.8s
KSU1 Kansas State U 2.63 10 Pn **Pn 17 49 09.7 +0.8**
HHAR Hobbs 2.66 94 Pn 17 49 09.1 -0.2
CBKS Cedar Bluff 3.04 320 Pn 17 49 11.8 -2.8
Z35A Perchaven, San 3.17 180 Pn 17 49 14.9 -1.4
S39A Bolivar 3.33 68 Pn 17 49 19.2 +0.6
S39A lAmb_Lg 17 50 16.6
comp=Z,51nm,0.8s
MIAR Mount Ida 3.56 122 Pn 17 49 22.1 +0.4
MIAR lAmb_Lg 17 50 23.6
comp=Z,42nm,0.8s
Z38A Mt. Pleasant 3.73 150 Pn 17 49 24.3 +0.3
Z38A lAmb_Lg 17 50 32.2
comp=Z,92nm,0.8s
AMTX Amarillo 3.97 247 lAmb_Lg 17 50 35.9
comp=Z,45nm,0.7s
MGMO Mountain Grove 4.03 79 Pn **Pn 17 49 27.0 -1.2**
FCAR Ozark Folk Cen 4.17 97 Pn 17 49 29.2 -0.8
FCAR lAmb_Lg 17 50 44.9
comp=Z,28nm,0.9s
WHAR Wooly Hollow 4.19 105 Pn 17 49 30.6 +0.3
N33B J Bar K, Exete 4.22 358 P **Pn 17 49 31.7 +0.9**
baz=177
N33A J Bar K, Exete 4.23 358 lAmb_Lg 17 50 46.1
comp=Z,44nm,0.7s
P38A Dawn 4.26 42 Pn 17 49 31.2 -0.1
P38A lAmb_Lg 17 50 52.7
comp=Z,27nm,0.7s
R40A Maddies Statio 4.33 64 Pn 17 49 32.3 +0.1
R40A Maddies Statio 4.33 64 P **Pn 17 49 33.4 +1.2**
baz=247,SNR=20
UALR University of 4.34 112 lAmb_Lg 17 50 51.2
comp=Z,29nm,0.8s
ABTX Abilene, Hawle 4.36 208 Pn 17 49 31.2 -1.5
WLAR White Oak Lake 4.39 129 lAmb_Lg 17 50 47.0
comp=Z,30nm,0.7s
WHTX Lake Whitney, 4.51 182 Pn 17 49 34.0 -0.8
N35A Tabor 4.52 15 Pn **Pn 17 49 33.7 -1.1**
BGNE Belgrade 4.94 352 Pn 17 49 39.9 -0.8
BGNE lAmb_Lg 17 51 10.5
comp=Z,48nm,0.7s
KSCO Kaye Shedlock' 4.96 302 Pn 17 49 41.6 +0.6
CCM Cathedral Cave 5.01 70 Pn 17 49 38.9 -2.8
CCM lAmb_Lg 17 51 03.5
comp=Z,45nm,0.8s
P40A Paris 5.08 52 Pn 17 49 39.6 -2.9
P40A lAmb_Lg 17 51 11.6
comp=Z,39nm,0.7s
CCAR Cane Creek 5.16 118 lAmb_Lg 17 51 20.2
comp=Z,54nm,1.1s
NATX Nacogdoches 5.19 155 lAmb_Lg 17 51 24.1
comp=Z,40nm,0.9s
MSTX Muleshoe 5.20 242 Pn 17 49 45.1 +0.8
N38A Joes South For 5.29 35 Pn 17 49 45.5 0.0
PBMO Poplar Bluff 5.47 85 lAmb_Lg 17 51 26.0
comp=Z,23nm,0.8s
L34A Svendsen Farm, 5.49 7 Pn **Pn 17 49 48.8 +0.6**
FVM French Village 5.62 73 Pn **Pn 17 49 49.7 -0.2**
FVM lAmb_Lg 17 51 26.0
comp=Z,22nm,0.8s
435B Jarrell 5.72 183 Pn 17 49 50.1 -1.2
435B lAmb_Lg 17 51 38.9
comp=Z,40nm,0.7s
T25A Trinidad 5.80 278 Pn 17 49 52.3 -0.4
T25A lAmb_Lg 17 51 34.9
comp=Z,19nm,0.7s
OGNE Ogallala 5.81 321 Pn 17 49 52.6 -0.1
OGNE lAmb_Lg 17 51 40.5
comp=Z,27nm,0.8s
SLM Saint Louis 5.94 67 lAmb_Lg 17 51 34.7
comp=Z,44nm,0.8s
CGM3 Cape Girardeau 6.11 80 lAmb_Lg 17 51 53.5
comp=Z,19nm,0.8s
LNXT Lenox 6.26 91 lAmb_Lg 17 51 49.2
comp=Z,48nm,0.7s
JCT Junction City 6.39 200 lAmb_Lg 17 52 01.4
comp=Z,23nm,0.8s
S44A Carbondale 6.48 77 lAmb_Lg 17 51 51.7
comp=Z,43nm,0.8s
W45A Hickory Valley 6.67 99 lAmb_Lg 17 52 11.9
comp=Z,31nm,0.8s
OXF Oxford 6.68 105 lAmb_Lg 17 52 08.0
comp=Z,23nm,0.8s
T45A Paducah 6.91 83 lAmb_Lg 17 52 24.4
comp=Z,27nm,0.8s
K38A Parkersburg 7.03 28 lAmb_Lg 17 52 23.0
comp=Z,39nm,0.9s
L40A Anamosa 7.24 38 lAmb_Lg 17 52 27.1
comp=Z,23nm,0.8s
ISCO Idaho Springs 7.38 299 Pn 17 50 14.2 -0.2
L42A Oliver, Polo 8.03 45 lAmb_Lg 17 52 49.7
comp=Z,20nm,0.7s
I37A Lemond, Waseca 8.04 20 lAmb_Lg 17 52 52.1
comp=Z,22nm,0.9s
N23A Red Feather La 8.10 305 lAmb_Lg 17 52 49.6
comp=Z,23nm,0.8s
JFWS Jewell Farm 8.35 38 lAmb_Lg 17 53 05.1
comp=Z,21nm,0.8s
M44A Midewin, Midew 8.65 53 lAmb_Lg 17 52 59.7
comp=Z,28nm,0.8s
I40A Norwalk 8.94 32 lAmb_Lg 17 53 25.7
comp=Z,15nm,0.7s
RSSD Black Hills 9.21 328 lAmb_Lg 17 53 23.1
comp=Z,10nm,0.8s
K22A Casper 9.44 313 lAmb_Lg 17 53 51.8
comp=Z,12nm,0.9s
I42A Draeger Farm, 9.73 38 lAmb_Lg 17 53 42.0
comp=Z,12nm,0.7s

*SJA **16** 17:50:43.9±1.5, 19°.86S×70°.95W, h10km, ML4.8, MW4.4*
*IDC **16** 17:50:45.7±0.6, 19°.66S×70°.70W, h0km, mb4.4/12, mbtmp4.3/16, ML3.9/4, MS4.0/12, Error ellipse: s-maj=20.5km s-min=13.0km az=54.0*
*NEIC **16** 17:50:46.4±1.8, 19°.80S±0°.03×71°.00W±0°.06, h11km±3km, mb4.9/135, Mwr4.7/49, Error ellipse: s-maj=8.5km s-min=4.2km az=80.0*
*GUC **16** 17:50:47.5±0.8, 19°.78S×71°.03W, h13km±9km, ML4.7*
*NEIC **16** 17:50:47, 19°.79S×71°.00W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.95; Mθθ-0.36; Mϕϕ-0.59; Mrθ0.17; Mrϕ0.64; Mθϕ-0.94; Fault plane solution: M0 1.42000×10^16^ NP1:ϕs159.98000°, δ67.24000°, λ108.41000°. NP2:ϕs299.26000°, δ28.96000°, λ53.02000°. Principal axes: T 1.4045, Plg63.0000°, Azm100.0000°; N 0.0254, Plg17.0000°, Azm333.0000°; P -1.4300, Plg20.0000°, Azm236.0000°;*
*VAO **16** 17:50:48.0±0.4, 19°.59S×70°.82W, h10km, mb4.5*
ISC 16 17:50:44.7±1.6, 19°.77S±0°.02×71°.00W±0°.04, h2km±9km, n294, σ1§28/299, mb4.9/73, MS3.9/9, 7C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.95**	**121**			**Pn**	**17 51 05.2**	**+0.2**
TA02					Sn	**Sn**	**17 51 18.4**	**-0.9**

TA02 Huaiquique 0.95 121 ⇑P Pn 17 51 05.3 +0.2
TA02 *i* S **Sn 17 51 18.4 -0.9**
TA02 lAML 17 51 20.7
comp=E,39μm,0.3s
TA02 Huaiquique 0.95 121 *e*P **Pn 17 51 05.0 -0.1**
TA02 lAML 17 51 20.1
comp=Z,24μm,1.0s
TA02 lAML 17 51 22.4
comp=Z,16μm,0.5s
TA01 Diego Aracena 1.10 136 Pn 17 51 07.5 +0.4
TA01 Sn **Sn 17 51 21.9 -1.0**
TA01 Diego Aracena 1.10 136 ⇑P Pn 17 51 07.5 +0.4
TA01 *i* S **Sb 17 51 20.9 -0.3**
TA01 lAML 17 51 27.4
comp=E,20μm,0.6s
TA01 Diego Aracena 1.10 136 *e*P **Pb 17 51 07.0 +0.6**
TA01 *e*S **Sn 17 51 24.1 +1.2**
TA01 lAML 17 51 26.9
comp=Z,34μm,0.6s
TA01 lAML 17 51 26.9
comp=Z,33μm,0.6s
PB12 IPOC Station P 1.31 29 Pn 17 51 09.8 -0.3
PB12 Sn **Sb 17 51 27.6 0.0**
PB12 IPOC Station P 1.31 29 ⇑P Pn 17 51 10.2 +0.1
PB12 *i* S **Sb 17 51 27.4 -0.1**
PB12 lAML 17 51 33.6
comp=N,17μm,0.5s
PB12 IPOC Station P 1.31 29 *e*P **Pn 17 51 10.4 +0.3**
PB12 *e*S **Sg 17 51 28.8 +1.8**
PB12 lAML 17 51 33.2
comp=Z,6μm,0.5s
AP01 Chacalluta 1.53 24 Pn 17 51 13.2 +0.2
AP01 Sn **Sn 17 51 33.1 -0.3**
AP01 Chacalluta 1.53 24 *e*P **Pn 17 51 12.8 -0.2**
AP01 *i* S **Sn 17 51 31.9 -1.4**
AP01 lAML 17 51 44.2
comp=E,23μm,0.9s
AP01 Chacalluta 1.53 24 *e*P **Pn 17 51 14.0 +1.0**
AP01 lAML 17 51 38.9
comp=Z,11μm,0.9s
AP01 lAML 17 51 43.1
comp=Z,12μm,1.0s
GO01 Chusmiza 1.70 87 Pb 17 51 16.9 -0.1
GO01 Sn **Sg 17 51 39.9 +0.4**
GO01 Chusmiza 1.70 87 ⇑P Pb 17 51 16.9 -0.1
GO01 *i* S **Sg 17 51 40.3 +0.9**
GO01 lAML 17 51 44.6
comp=N,20μm,0.2s
GO01 Chusmiza 1.70 87 *e*P **Pb 17 51 17.0 0.0**
GO01 *e*S **Sg 17 51 40.5 +1.0**
PB02 IPOC Station P 1.85 146 Pn 17 51 18.3 +0.8
PB02 Sn **Sn 17 51 40.1 -1.5**
PB02 IPOC Station P 1.85 146 ⇑P Pn 17 51 18.4 +0.8
PB02 *i* S **Sn 17 51 41.7 0.0**
PB02 IPOC Station P 1.85 146 *e*P **Pn 17 51 18.0 +0.4**
PB02 *e*S **Sn 17 51 41.4 -0.3**
PB02 lAML 17 51 50.3
comp=Z,13μm,0.7s
PB02 lAML 17 51 50.5
comp=Z,12μm,1.2s
PB01 IPOC Station P 1.90 132 Pn 17 51 19.1 +0.9
PB01 Sn **Sn 17 51 41.8 -0.9**
PB01 IPOC Station P 1.90 132 ⇑P Pn 17 51 19.3 +1.1
PB01 *i* S **Sb 17 51 43.1 -1.3**
PB01 lAML 17 51 51.6
comp=N,12μm,0.8s
PB01 IPOC Station P 1.90 132 *e*P **Pn 17 51 19.0 +0.8**
PB01 *e*S **Sn 17 51 38.0 -4.8**
PB01 lAML 17 51 49.5
comp=Z,6μm,1.2s
PB01 lAML 17 51 50.0
comp=Z,7μm,0.9s
PB16 IPOC Station P 2.01 45 Pn 17 51 21.2 +1.1
PB16 IPOC Station P 2.01 45 ⇑P Pn 17 51 21.2 +1.1
PB16 *i* S **Sg 17 51 49.0 -0.3**
PB16 lAML 17 51 55.2
comp=N,7μm,0.5s
PB16 IPOC Station P 2.01 45 *e*P **Pn 17 51 21.0 +0.9**
PB16 *e*P **Pb 17 51 21.6 -0.7**
PB16 *e*S **Sb 17 51 47.7 -0.3**
PB16 lAML 17 51 59.0
comp=Z,14μm,1.6s
PB16 lAML 17 51 59.7
comp=Z,13μm,0.7s
PB07 IPOC Station P 2.21 152 Pn 17 51 23.2 +0.7
PB07 IPOC Station P 2.21 152 *e*P **Pn 17 51 23.3 +0.8**
PB07 *i* S **Sb 17 51 52.0 -1.2**
PB07 lAML 17 52 05.0
comp=E,5μm,0.5s
PB09 IPOC Station P 2.60 141 Pn 17 51 29.6 +1.7
PB09 IPOC Station P 2.60 141 *e*P **Pn 17 51 29.7 +1.8**
PB09 *i* S **Sn 17 52 01.6 +1.4**
PB09 lAML 17 52 15.8
comp=N,8μm,0.6s
PB09 IPOC Station P 2.60 141 *e*P **Pn 17 51 30.0 +2.1**
PB09 *e*S **Sg 17 52 08.3 +0.1**
PB09 lAML 17 52 14.1
comp=Z,6μm,0.8s
PB09 lAML 17 52 19.4
comp=Z,5μm,0.6s
PB04 IPOC Station P 2.67 163 Pn 17 51 28.4 -0.4
PB04 IPOC Station P 2.67 163 *e*P **Pn 17 51 28.2 -0.6**
PB04 *i* S **Sn 17 51 58.8 -3.0**
PB04 IPOC Station P 2.67 163 *e*P **Pn 17 51 29.0 +0.2**
PB04 *e*S **Sg 17 52 10.5 0.0**
PB04 lAML 17 52 21.8
comp=Z,5μm,1.0s
PB04 lAML 17 52 21.9
comp=Z,5μm,1.0s
PB06 IPOC Station P 3.21 156 Pn 17 51 36.4 +0.1
PB06 IPOC Station P 3.21 156 *e*P **Pn 17 51 36.9 +0.6**
PB06 *i* S **Sn 17 52 14.0 -1.2**
PB06 lAML 17 52 35.3
comp=N,2μm,0.6s
LVC Limon Verde 3.43 146 Pn **Pn 17 51 41.6 +2.2**
comp=N,41nm,0.3s,baz=310,slow=9.5,SNR=40
LVC Sn **Sn 17 52 22.2 +1.3**
comp=N,100nm,0.3s,baz=357,slow=19,SNR=3.9
LVC Lg Lg 17 52 32.5
comp=N,216nm,0.3s,baz=60,slow=19,SNR=13
comp=N,75nm,0.3s
LVC Limon Verde 3.43 146 Pn **Pn 17 51 41.5 +2.0**
LVC Limon Verde 3.43 146 *e*P **Pn 17 51 41.7 +2.2**
LVC Limon Verde 3.43 146 *e*P **Pn 17 51 42.0 +2.5**
LVC *e*S **Sb 17 52 31.0 +2.3**
LVC lAML 17 52 39.9
comp=Z,1μm,0.8s
LVC lAML 17 52 44.9
comp=Z,1μm,0.8s
LVC Limon Verde 3.43 146 *e*P **Pn 17 51 42.0 +2.5**
PB15 IPOC Station P 3.70 158 Pn 17 51 43.2 +0.1
PB10 IPOC Station P 3.75 174 Pn **Pn 17 51 42.1 -1.4**
PB10 IPOC Station P 3.75 174 *e*P **Pn 17 51 43.4 0.0**
PB10 *i* S **Sn 17 52 22.6 -5.6**
PB10 IPOC Station P 3.75 174 *e*P **Pn 17 51 43.5 0.0**
PB10 *e*S **Sn 17 52 26.0 -2.2**
PB10 lAML 17 52 57.4
comp=Z,540nm,0.9s
AF01 San Pedro de A 4.11 141 Pn 17 51 49.6 +0.8
LPAZ La Paz 4.41 39 Pn **Pn 17 51 56.2 +3.0**
comp=Z,0.8nm,0.3s,baz=210,slow=9.9,SNR=28
LPAZ Lg Lg 17 53 07.9
comp=Z,3.7nm,0.3s,baz=217,slow=20,SNR=1.7
LPAZ La Paz 4.41 39 Pn **Pn 17 51 54.8 +1.6**
PB14 IPOC Station P 4.86 174 Pn **Pn 17 51 58.5 -0.7**
GO02 Mina Guanaco 5.52 167 Pn 17 52 08.7 +0.5
AC01 Pan de Azucar 6.36 177 Pn **Pn 17 52 18.8 -0.7**
AC02 Maricunga 7.24 167 Pn **Pn 17 52 33.0 +1.1**
AC06 Mina Casimiro 7.57 176 Pn 17 52 36.1 0.0
GO03 Copiap 7.82 175 Pn 17 52 37.8 -1.7
AC05 El Transito 9.05 176 Pn **Pn 17 52 56.4 0.0**
LCO Las Campanas 9.20 178 Pn **Pn 17 52 58.3 -0.4**
NNA Nana 9.56 323 Pn **Pn 17 53 05.6 +2.1**
comp=Z,1.7nm,0.3s,baz=156,slow=10.0,SNR=1.9
NNA Sn **Sn 17 54 53.1 +1.3**
comp=Z,2.2nm,0.3s,baz=219,slow=17,SNR=1.8
NNA Lg Lg 17 55 34.5
comp=Z,1.4nm,0.3s,baz=108,slow=20,SNR=4.3
NNA LR LR 17 56 51.8
comp=Z,278nm,20.8s,baz=156,slow=38
comp=Z,2.9nm,0.3s
NNA Nana 9.56 323 Pn **Pn 17 53 03.5 -0.1**
CO05 La Serena 10.10 181 Pn **Pn 17 53 10.0 -0.8**
SIV San Ignacio 10.17 70 Pn **Pn 17 53 09.1 -2.8**
baz=265,slow=10,SNR=3.4
SIV Sn **Sn 17 55 00.5 -6.0**
comp=Z,0.1nm,0.3s,baz=270,slow=20,SNR=1.2
comp=Z,4.4nm,0.7s
CO01 Juntas del Tor 10.19 176 Pn **Pn 17 53 14.4 +2.2**
GO04 Tololo Observa 10.36 179 Pn **Pn 17 53 15.5 +1.0**
CO06 Fray Jorge 10.87 183 Pn **Pn 17 53 20.9 -0.4**
ETMB Extrema 10.92 26 Pn **Pn 17 53 22.7 +0.6**
CO02 Combarbal 11.38 180 Pn **Pn 17 53 27.7 -0.8**
CZSB Cruzeiro do Su 12.09 352 Pn **Pn 17 53 37.3 -0.7**
CZSB Cruzeiro do Su 12.09 352 *e*P **Pn 17 53 39.1 +1.0**
PTLB Pontes e Lacer 12.10 71 Pn **Pn 17 53 36.7 -1.5**
PTLB Pontes e Lacer 12.10 71 *e*P **Pn 17 53 38.0 -0.2**
VILB Vilhena 12.38 58 Pn **Pn 17 53 42.1 0.0**
VA06 Catapilco 12.74 181 Pn **Pn 17 53 45.7 -1.2**
VA03 San Esteban 12.94 178 Pn **Pn 17 53 49.0 -0.8**
ROC1 El Roble 13.15 180 Pn **Pn 17 53 49.4 -3.4**
SAML Samuel 13.15 36 Pn **Pn 17 53 48.4 -4.2**
VA01 Torpederas 13.21 182 Pn **Pn 17 53 51.6 -1.7**
MT02 Curacav 13.43 181 Pn **Pn 17 53 56.0 -0.4**
MT03 Universidad Ad 13.67 178 Pn **Pn 17 53 57.6 -2.2**
VA05 Santo Domingo 13.84 182 Pn **Pn 17 54 01.0 -0.9**
CPUP Villa Florida 14.17 120 Pn **Pn 17 54 06.7 +0.2**
comp=Z,0.1nm,0.3s,baz=298,slow=13,SNR=1.7
CPUP LR LR 18 00 33.5
comp=Z,718nm,18.2s,baz=300,slow=42
comp=Z,1.8nm,0.9s
CPUP Villa Florida 14.17 120 Pn 17 54 08.3 +1.9
AQDB Aquidauana 14.39 95 Pn **Pn 17 54 08.9 -0.6**
AQDB Aquidauana 14.39 95 *e*P **Pn 17 54 10.4 +0.9**
ATAH Atahualpa 14.47 329 LR LR 18 00 09.1
comp=Z,363nm,18.6s,baz=94,slow=39
SALV Santo Antonio 15.07 78 *e*P **Pn 17 54 19.4 +0.6**
H03N1 Juan Fernandez 15.33 206 T T 18 10 12.4
baz=32,slow=72,SNR=190
H03N2 Juan Fernandez 15.34 206 T T 18 10 12.2
baz=32,slow=72,SNR=167
H03N3 Juan Fernandez 15.35 206 T T 18 10 11.2
baz=32,slow=72,SNR=143
ML02 Panimavida 15.93 181 P **Pn 17 54 29.2 -0.8**
ML02 lAmb lAmb 17 54 43.5
comp=Z,137nm,1.4s
PDRB Porto dos Gac 15.95 62 *e*P **Pn 17 54 30.8 +0.5**
CLDB Colider 17.11 61 *e*P **Pn 17 54 44.6 -0.6**
C2SB Chapadao do Su 17.18 90 *e*P **Pn 17 54 46.4 +0.4**
UNIS Unistalda (Bra 17.19 126 *e*P **P 17 54 49.2 +1.5**
CRSM Crissiumal (Br 17.32 120 *e*P **Pn 17 54 47.9 +0.2**
FRBT Francisco Belt 17.64 114 *e*P **P 17 54 53.4 +0.6**
RODS Rosario do Sul 17.75 129 *e*P **P 17 54 56.6 +2.7**
BOSC San Juan Bosco 18.07 335 Pn **Pn 17 54 53.6 -3.7**
PTGB Pitanga 18.20 109 *e*P **P 17 54 59.9 +0.9**
PCMB Pacaembu 18.56 99 *e*P **Pn 17 55 03.9 +0.9**
ALGR Alto Alegre (B 18.66 122 *e*P **Pn 17 55 05.0 +0.6**
CPSB Cacapava Do Su 19.08 127 *e*P **Pn 17 55 09.4 +0.1**
MACA Manacapuru-AM 19.34 33 P **P 17 55 08.5 -3.0**
MACA lAmb lAmb 17 55 13.6
comp=Z,59nm,1.0s
MACA Manacapuru-AM 19.34 33 *e*P **P 17 55 10.7 -0.8**
ITRB Iturama 19.43 93 *e*P **P 17 55 12.5 0.0**
NPGB Novo Progresso 19.76 52 *e*P **P 17 55 14.9 -1.3**
SNDB Serra Nova Dou 20.46 71 *e*P **P 17 55 23.4 -0.3**
CNLB Canela 20.61 121 *e*P Pn 17 55 28.4 +0.7
PLCA Paso Flores 20.89 179 P Pn 17 55 30.9 0.0
comp=Z,9.2nm,1.0s,baz=354,slow=10,SNR=11
comp=Z,9.2nm,1.0s
PLCA Paso Flores 20.89 179 P **P 17 55 25.7 -2.7**
PLCA Paso Flores 20.89 179 *e*P Pn 17 55 32.1 +1.3
BB19B Bebedouro 21.10 97 *e*P **P 17 55 30.8 +0.1**
OTAV Otavalo 21.19 339 *e*P **P 17 55 33.4 +1.4**
ITTB Itaituba 21.35 46 *e*P **P 17 55 31.3 -2.0**
IPMB Ipameri, GO 21.63 89 *e*P **P 17 55 35.6 -0.9**
FLOC Florencia 21.71 347 *e*P **P 17 55 38.6 +1.3**
TER01 Tubaro-SC 21.75 118 *e*P **P 17 55 39.3 +1.7**
GCUF Volcan Galeras 21.78 343 *e*P **P 17 55 46.5 +8.1**
BDFB Brasilia 22.27 83 P **P 17 55 41.6 -1.9**
comp=Z,2.0nm,0.4s,baz=246,slow=14,SNR=4.0
BDFB LR LR 18 06 00.5
comp=Z,964nm,18.1s,baz=266,slow=42
comp=Z,2.0nm,0.4s
BDFB Brasilia 22.27 83 P **P 17 55 41.5 -1.9**
BDFB Brasilia 22.27 83 *e*P **P 17 55 45.0 +1.6**
VAO Valinhos 22.60 102 *e*P **P 17 55 46.8 0.0**
POPC Popayan, Colom 22.86 345 *e*P **P 17 55 52.1 +2.3**
PMNB Patos De Minas 23.23 91 *e*P **P 17 55 52.7 -0.8**
PRAC Prado 23.65 350 *e*P **P 17 55 57.5 -0.1**
PARB Paraibuna 23.86 103 *e*P **P 17 56 00.8 +1.2**
YOTC Yotoco, Valle 24.19 347 *e*P **P 17 56 06.5 +3.7**
BOAV Boa Vista 24.31 26 P **P 17 56 03.5 -0.4**
BOAV lAmb lAmb 17 56 04.8
comp=Z,33nm,0.9s
BOAV Boa Vista 24.31 26 *e*P **P 17 56 04.0 +0.2**
PRPB Parauapebas 24.63 60 *e*P **P 17 56 06.3 -0.5**
PLMC San Jos del P 25.07 347 *e*P **P 17 56 12.7 +2.0**
SMTB Santa Maria do 25.11 68 *e*P **P 17 56 10.9 -0.2**
GUY2C Guyana, Caldas 25.21 350 *e*P **P 17 56 13.9 +1.5**
SPBC San Pablo de B 25.45 353 *e*P **P 17 56 13.8 -0.4**
NORC Norcasia 25.46 351 *e*P **P 17 56 14.8 +0.5**
RUSC La Rusia 25.59 355 *e*P **P 17 56 16.7 +0.8**
DIAM Diamantina, MG 25.86 91 *e*P **P 17 56 17.1 -1.0**
CBOC Ciudad Bolivar 25.95 349 *e*P **P 17 56 20.7 +1.9**
SDBA SAO DESIDERIO 26.10 78 *e*P **P 17 56 18.9 -1.3**
BARC Barichara 26.29 355 *e*P **P 17 56 21.6 -0.4**
PTBC PUERTO BERRIO, 26.37 352 *e*P **P 17 56 21.1 -1.4**
MCPB Macapa, AP 26.77 46 *e*P **P 17 56 25.4 -0.7**
ZARC Zaragoza, Cauc 27.36 352 *e*P **P 17 56 31.4 0.0**
SJMB Sao Joao De Ma 28.15 93 *e*P **P 17 56 39.9 +1.3**
SDV Santo Domingo 28.48 1 P **P 17 56 42.8 +1.1**
comp=Z,4.5nm,0.3s,baz=191,slow=5.2,SNR=3.1
SDV LR LR 18 07 25.0
comp=Z,288nm,19.5s,baz=220,slow=35
comp=Z,4.5nm,0.3s
BAUV El Baul 28.68 6 P **P 17 56 42.8 -0.4**
MDP Montagnes des 30.61 38 LR LR 18 10 00.5
comp=Z,703nm,20.1s,baz=212,slow=38
TOSP Speyside 32.55 19 P **P 17 57 17.1 -0.3**
JTS Las Juntas de 32.88 334 P **P 17 57 19.3 -1.0**
JTS lAmb lAmb 17 57 31.0
comp=Z,31nm,1.5s
RPN Rapa Nui 35.82 251 LR LR 18 08 45.0
comp=Z,481nm,18.6s,baz=68,slow=30
RCBR Riachuelo 36.82 73 P **P 17 57 54.0 -0.5**
comp=Z,23nm,0.9s,baz=221,slow=8.2,SNR=5.7
RCBR LR LR 18 14 02.4
comp=Z,528nm,20.9s,baz=24,slow=38
comp=Z,23nm,0.9s
SJG San Juan 37.95 8 LR LR 18 15 05.0
comp=Z,175nm,18.9s,baz=250,slow=39
CBYP Canovanas 38.14 8 P **P 17 58 03.1 -2.5**
CBYP lAmb lAmb 17 58 45.4
comp=Z,28nm,1.1s
CMIG Matias Romero 43.50 326 LR LR 18 14 32.5
comp=Z,112nm,21.3s,baz=152,slow=33
PMSA Palmer Station 45.22 176 LR LR 18 17 56.7
comp=Z,140nm,18.1s,baz=26,slow=36
152A Waverly Hall 53.77 346 P **P 18 00 07.1 -1.5**
BIRD Birdtown, Kers 54.86 350 P **P 18 00 15.9 -0.6**
BIRD lAmb lAmb 18 00 18.3
comp=Z,11nm,0.9s
KMSC Kings Mountain 55.49 350 P **P 18 00 19.6 -1.4**
V58A Windy Hill, Pi 55.80 352 P **P 18 00 22.3 -0.9**
V58A lAmb lAmb 18 00 24.9
comp=Z,14nm,1.1s
W52A Murphy 55.93 347 P **P 18 00 24.6 +0.3**
W52A lAmb lAmb 18 00 26.7
comp=Z,13nm,1.3s
X48A Hartselle 56.05 344 P **P 18 00 23.9 -1.1**
X48A lAmb lAmb 18 00 26.0
comp=Z,11nm,1.4s
V55A Taylorsville 56.16 350 P **P 18 00 26.5 +0.6**
V55A lAmb lAmb 18 00 27.8
comp=Z,9.6nm,0.9s
U59A Littleton 56.19 353 P **P 18 00 25.4 -0.6**
V53A Saluda 56.27 348 P **P 18 00 26.4 -0.2**
CPCT Cooper Cave 56.40 347 P **P 18 00 27.5 0.0**
CPCT lAmb lAmb 18 00 28.7
comp=Z,10nm,1.2s
TKL Tuckaleechee C 56.44 348 LR LR 18 25 44.2
comp=Z,75nm,18.6s,baz=172,slow=37
TKL Tuckaleechee C 56.44 348 P **P 18 00 27.5 -0.4**
U56A King 56.52 351 P **P 18 00 29.5 +1.1**
U56A lAmb lAmb 18 00 31.2
comp=Z,16nm,1.1s
V52A Sevierville 56.58 348 P **P 18 00 28.4 -0.5**

V52A IAmb IAmb 18 00 30.5
comp=Z,18nm,1.2s
V51A Loudon 56.70 347 P P 18 00 29.6 -0.2
V51A IAmb IAmb 18 00 30.8
comp=Z,6.8nm,0.9s
237A Washetta, Mont 56.71 335 P P 18 00 31.4 +1.6
OXF Oxford 56.76 342 P P 18 00 29.5 -0.6
T59A Double "B" Far 56.78 354 P P 18 00 29.6 -0.6
T59A IAmb IAmb 18 00 32.1
comp=Z,16nm,1.2s
PLAL Pickwick Lake 56.82 343 P P 18 00 29.5 -1.1
PLAL IAmb IAmb 18 00 31.5
comp=Z,10nm,1.2s
U54A Nelsons Funny 56.91 350 P P 18 00 30.1 -1.2
U54A IAmb IAmb 18 00 32.7
comp=Z,8.9nm,0.8s
T57A Hurt 57.00 352 P P 18 00 32.1 +0.3
T57A IAmb IAmb 18 00 34.4
comp=Z,15nm,1.2s
WLAR White Oak Lake 57.19 338 P P 18 00 34.3 +1.1
V48A Smith Brothers 57.21 345 P P 18 00 32.9 -0.4
BLA Blacksburg 57.37 351 P P 18 00 34.6 +0.1
BLA IAmb IAmb 18 00 36.0
comp=Z,7.5nm,0.8s
CLTN Cedars of Leba 57.42 345 P P 18 00 34.4 -0.4
Z38A Mt. Pleasant 57.50 336 P P 18 00 35.2 -0.2
Z38A IAmb IAmb 18 00 47.1
comp=Z,22nm,1.1s
S57A Dark Hollow, R 57.71 353 P P 18 00 36.8 0.0
S57A IAmb IAmb 18 00 39.0
comp=Z,6.7nm,0.8s
R58B Mineral 57.79 354 P P 18 00 37.7 +0.4
R58B IAmb IAmb 18 00 39.7
comp=Z,15nm,1.4s
WVT Waverly 57.84 344 P P 18 00 36.5 -1.2
WVT IAmb IAmb 18 00 38.1
comp=Z,6.5nm,0.8s
T50A Nancy 57.98 347 P P 18 00 37.7 -1.0
T50A IAmb IAmb 18 00 39.6
comp=Z,9.1nm,1.0s
S54A Dingess, Beckl 58.08 350 P P 18 00 39.1 -0.4
S54A IAmb IAmb 18 00 41.0
comp=Z,9.8nm,0.8s
TXAR Lajitas Array 58.11 326 P P 18 00 41.4 +1.4
comp=Z,0.6nm,0.9s,baz=153,slow=8.1,SNR=5.2
comp=Z,0.6nm,0.9s
TXAR Lajitas Array 58.11 326 P P 18 00 40.4 +0.5
TX31 Lajitas Ar. Si 58.11 326 P P 18 00 40.6 +0.7
TX32 Lajitas Array 58.11 326 P P 18 00 40.7 +0.8
MIAR Mount Ida 58.13 338 P P 18 00 40.0 +0.1
MIAR IAmb IAmb 18 00 41.7
comp=Z,11nm,1.1s
WHAR Wooly Hollow 58.37 340 P P 18 00 41.8 +0.3
R55A Marlinton 58.38 352 P P 18 00 41.5 -0.1
R55A IAmb IAmb 18 00 43.5
comp=Z,7.3nm,0.9s
T47A Sharon Grove 58.47 345 P P 18 00 40.6 -1.5
X37A Clayton 58.82 337 P P 18 00 45.7 +1.1
X37A IAmb IAmb 18 00 47.1
comp=Z,14nm,0.9s
PARMO Parma 58.86 342 P P 18 00 45.0 +0.1
FCAR Ozark Folk Cen 58.87 340 P P 18 00 44.3 -0.6
R50A Paris 59.09 348 P P 18 00 46.2 -0.2
R50A IAmb IAmb 18 00 47.4
comp=Z,16nm,1.4s
CGM3 Cape Girardeau 59.43 343 P P 18 00 48.5 -0.3
CGM3 IAmb IAmb 18 00 49.9
comp=Z,19nm,1.4s
USIN University of 59.53 345 P P 18 00 49.1 -0.4
MVL Millersville 59.67 355 P P 18 00 50.2 -0.2
MVL IAmb IAmb 18 00 52.5
comp=Z,5.2nm,0.7s
S44A Carbondale 59.69 343 P P 18 00 49.8 -0.8
SIUC Southern Illin 59.70 343 P P 18 00 50.2 -0.5
HHAR Hobbs 59.83 339 P P 18 00 51.5 -0.1
HHAR IAmb IAmb 18 00 53.2
comp=Z,10nm,1.1s
MGMO Mountain Grove 60.07 340 P P 18 00 53.0 -0.3
MGMO IAmb IAmb 18 00 55.8
comp=Z,15nm,1.4s
RLO Rose Lookout 60.10 338 P P 18 00 52.7 -0.7
RLO IAmb IAmb 18 00 55.3
comp=Z,18nm,1.4s
FVM French Village 60.28 342 P P 18 00 54.3 -0.4
FVM IAmb IAmb 18 00 55.9
comp=Z,8.8nm,0.8s
DEOK Depew 60.36 336 P P 18 00 55.0 -0.2
DEOK IAmb IAmb 18 00 57.5
comp=Z,28nm,1.3s
OK030 Cody Creek RV 60.54 336 P P 18 00 56.6 +0.1
OK030 IAmb IAmb 18 00 58.5
comp=Z,14nm,1.1s
OK034 N. Norfolk Rd. 60.59 336 P P 18 00 56.8 0.0
OK034 IAmb IAmb 18 00 58.4
comp=Z,11nm,0.8s
CCM Cathedral Cave 60.59 342 P P 18 00 56.7 0.0
CCM IAmb IAmb 18 00 58.5
comp=Z,7.0nm,1.1s
BELA Belgrano 2 60.73 172 P P 18 00 57.5 +0.2
QUOK Quay 60.73 336 P P 18 00 58.1 +0.4
QUOK IAmb IAmb 18 01 16.2
comp=Z,10nm,0.7s
MNTX Cornudas Mount 60.88 327 P P 18 00 58.8 -0.1
S39A Bolivar 60.90 340 P P 18 00 58.6 -0.3
S39A IAmb IAmb 18 01 00.2
comp=Z,8.9nm,1.1s
R40A Maddies Statio 61.11 341 P P 18 00 59.5 -0.8
R40A IAmb IAmb 18 01 01.5
comp=Z,14nm,1.3s
T35A Sooner Cattle 61.31 337 P P 18 01 02.2 +0.5
T35A IAmb IAmb 18 01 04.3
comp=Z,12nm,1.0s
M55A Ridgway 61.35 353 P P 18 01 01.5 -0.4
MSTX Muleshoe 61.42 330 P P 18 01 02.9 +0.3
MSTX IAmb IAmb 18 01 05.1
comp=Z,9.4nm,1.0s
CROK Carrier 61.51 335 P P 18 01 03.8 +0.7
CROK IAmb IAmb 18 01 04.6
comp=Z,19nm,0.5s
N49A Columbus Grove 61.62 349 P P 18 01 03.5 -0.2
KAN13 South Haven SW 61.76 336 P P 18 01 05.2 +0.5
L59A Walton 61.76 357 P P 18 01 05.4 +0.7
L59A IAmb IAmb 18 01 08.1
comp=Z,12nm,0.9s
BINY Binghamton 61.83 356 P P 18 01 06.3 +1.2
HRV Adam Dziewonsk 61.97 360 P P 18 01 06.3 +0.3
P40A Paris 62.19 342 P P 18 01 07.5 -0.1
P40A IAmb IAmb 18 01 08.7
comp=Z,8.1nm,1.1s
TRY Troy 62.24 358 P P 18 01 08.1 +0.3
WVNY West Valley, N 62.26 354 P P 18 01 08.7 +0.6
VNA3 Neumayer Olymp 62.33 161 P P 18 01 10.2 +2.0
MMNY Mt. Morris Dam 62.52 354 P P 18 01 09.8 +0.1
VNA2 Neumayer--Watz 62.92 161 P P 18 01 13.8 +1.7
baz=288,slow=7.6
VNA2 S S 18 09 44.6 +2.0
N41A Harden Midland 62.94 343 P P 18 01 12.4 -0.2
J59A Piesco 63.01 357 P P 18 01 13.4 +0.4
HNH Hanover 63.17 359 P P 18 01 14.5 +0.5
LBNH Lisbon 63.70 359 P P 18 01 18.6 +1.1
LBNH IAmb IAmb 18 01 20.1
comp=Z,15nm,1.1s
LONY Lake Ozonia 64.16 357 P P 18 01 20.6 0.0
LONY IAmb IAmb 18 01 22.6
comp=Z,15nm,1.1s
L40A Anamosa 64.31 343 P P 18 01 20.3 -1.2
L40A IAmb IAmb 18 01 22.4
comp=Z,14nm,1.0s
SNAA Sanae 64.54 161 P P 18 01 24.7 +1.8
SNAA Sanae 64.54 161 P P 18 01 23.7 +0.8
G62A West of Eustis 64.68 0 P P 18 01 24.6 +0.6
F64A Sherman 65.37 2 P P 18 01 29.6 +1.2
SDCO Great Sand Dun 65.78 331 P P 18 01 32.4 +0.8
SDCO IAmb IAmb 18 01 34.5
comp=Z,7.6nm,1.1s
E62A Clayton Lake 66.09 1 IAmb IAmb 18 01 35.5
comp=Z,10nm,0.9s
TROLL Troll, Antarti 66.26 161 P P 18 01 36.3 +2.2
VLDQ Val d'Or 67.82 355 IAmb IAmb 18 01 46.5
comp=Z,11nm,1.1s
F36A Milaca 68.45 343 IAmb IAmb 18 01 49.1
comp=Z,9.2nm,1.1s
CCUT Cedar City 69.58 325 P P 18 01 57.5 +1.9
CCUT IAmb IAmb 18 01 59.8
comp=Z,5.2nm,0.8s
SHPR Sheep Range 69.81 323 P P 18 01 58.5 +1.6
DBIC Dimbokro 70.15 75 P P 18 01 58.1 -1.2
comp=Z,7.6nm,1.0s,baz=258,slow=6.6,SNR=5.2
comp=Z,7.6nm,1.0s
GWY Greenwater Val 70.44 322 P P 18 02 01.9 +1.0
GWY IAmb IAmb 18 02 04.9
comp=Z,7.8nm,1.3s
TPNV Topopah Spring 70.74 323 P P 18 02 04.2 +1.6
B35A Bob, Littlefor 70.81 344 IAmb IAmb 18 02 03.5
comp=Z,9.5nm,1.2s
ISA Isabella, Lake 71.15 321 P P 18 02 06.8 +1.8
ISA IAmb IAmb 18 02 09.4
comp=Z,9.6nm,1.4s
AGMN Agassiz Nation 71.32 343 IAmb IAmb 18 02 07.0
comp=Z,7.2nm,1.1s
PDAR Pinedale Array 71.65 331 P P 18 02 09.2 +1.1
comp=Z,0.6nm,0.7s,baz=138,slow=6.8,SNR=5.3
comp=Z,0.6nm,0.7s
OMMB Old Mammoth Mi 72.78 322 IAmb IAmb 18 02 19.3
comp=Z,10nm,1.3s
ELK Elko 72.90 326 P P 18 02 16.9 +1.3
NVAR Mina Array Bea 72.94 323 P P 18 02 18.2 +2.3
comp=Z,1.6nm,0.9s,baz=146,slow=5.9,SNR=11
comp=Z,1.6nm,0.9s
HLID Hailey 74.55 329 IAmb IAmb 18 02 30.1
comp=Z,6.9nm,0.5s
EGMT Eagleton 75.89 334 IAmb IAmb 18 02 35.1
comp=Z,8.9nm,1.0s
PLID Pearl Lake 76.45 329 P P 18 02 36.3 +0.2
WALA Waterton Lakes 78.44 333 IAmb IAmb 18 02 49.8
comp=Z,7.4nm,0.9s
TOA0 Torodi Ar. Sit 78.64 72 P P 18 02 47.1 -1.6
TOA0 IAmb IAmb 18 02 48.9
comp=Z,16nm,0.8s
TORD Torodi Ar. Bea 78.64 72 P P 18 02 47.8 -0.9
comp=Z,15nm,0.9s,baz=253,slow=4.8,SNR=52
comp=Z,15nm,0.9s
TORD Torodi Ar. Bea 78.64 72 IAmb IAmb 18 02 48.9
comp=Z,16nm,0.9s
TSUM Tsumeb 82.42 108 P P 18 03 09.5 +0.3
TSUM IAmb IAmb 18 03 10.5
comp=Z,17nm,1.4s
LLLB Lillooet 83.14 330 P P 18 03 12.6 +0.5
LLLB IAmb IAmb 18 03 15.1
comp=Z,13nm,1.4s
PESTR Estremoz 83.17 45 eP P 18 03 13.3 +0.9
PVIS Viseu 83.95 43 eP P 18 03 17.5 +1.0
MTE Manteigas 84.01 43 eP P 18 03 18.2 +1.4
MVO Moncorvo 84.75 43 eP P 18 03 21.3 +0.8
PBRG Braganca 85.27 43 eP P 18 03 23.5 +0.4
ESDC Sonseca Array 86.00 45 P P 18 03 26.9 +0.1
comp=Z,3.1nm,1.1s,baz=251,slow=4.9,SNR=16
comp=Z,3.1nm,1.1s
ESDC Sonseca Array 86.00 45 P P 18 03 25.7 -1.1
MAW Mawson 86.53 164 P P 18 03 30.6 +1.7
comp=Z,2.4nm,0.7s,baz=218,slow=4.0,SNR=4.6
comp=Z,2.4nm,0.7s
YKA Yellowknife Ar 88.92 341 P P 18 03 41.2 +1.0
comp=Z,8.4nm,1.0s,baz=136,slow=4.7,SNR=42
comp=Z,8.4nm,1.0s
YKA Yellowknife Ar 88.92 341 P P 18 03 39.8 -0.4
H11S2 WAKE ISLAND Hyl 25.70 279 T T 20 29 26.0
baz=102,slow=74,SNR=58
H11S1 WAKE ISLAND Hyl 25.71 279 T T 20 29 23.8
baz=102,slow=74,SNR=33
H11S3 WAKE ISLAND Hyl 25.72 279 T T 20 29 28.1
baz=102,slow=74,SNR=26
H11N3 WAKE ISLAND Hyl 25.74 280 T T 20 29 29.2
baz=102,slow=75,SNR=36
H11N2 WAKE ISLAND Hyl 25.76 280 T T 20 29 31.1
baz=102,slow=75,SNR=26
H11N1 WAKE ISLAND Hyl 25.76 280 T T 20 29 26.2
baz=102,slow=75,SNR=24
ASAR Alice Springs 130.46 210 PKP PKPdf 18 09 58.4 +0.5
comp=Z,0.8nm,0.8s,baz=149,slow=2.7,SNR=5.5
WRA Warramunga Arr 133.37 214 PKP PKiKP 18 10 04.8 +0.3
comp=Z,0.5nm,0.7s,baz=150,slow=2.0,SNR=3.1
KURBB Kurchatov Arra 140.92 31 PKP PKPdf 18 10 16.1 -0.2
comp=Z,0.6nm,0.9s,baz=320,slow=2.7,SNR=5.3
ZALV Zalesovo Beam 141.18 23 PKP PKPdf 18 10 17.6 +1.0
comp=Z,1.4nm,0.7s,baz=329,slow=1.7,SNR=7.6
MK31 Makanchi Array 145.32 33 PKPab 18 10 24.4 +0.3
MKAR Makanchi Array 145.32 33 PKPbc PKPdf 18 10 24.7 +0.5
comp=Z,5.7nm,1.0s,baz=315,slow=2.9,SNR=26
MKAR Makanchi Array 145.32 33 PKPbc 18 10 24.3 +0.3
NIL Nilore 145.39 59 PKPbc 18 10 24.3 -0.3
KSH Kashi 145.47 48 PKPbc PKPab 18 10 25.6 +0.6
PRZ Przheval'sk 145.68 42 PKPdf PKPdf 18 10 24.4 -0.8
MJAR Matsushiro Arr 149.47 309 PKPbc PKiKP 18 10 37.4 +0.4
comp=Z,1.2nm,0.7s,baz=26,slow=3.4,SNR=5.1
HYBB Hyderabad (bro 151.06 90 ePKiKP PKPbc 18 10 39.9 -0.4
SONM Songino Array 151.93 4 PKPbc PKiKP 18 10 42.1 +0.3
comp=Z,2.6nm,1.0s,baz=331,slow=1.2,SNR=11
KSRS Korea Array 155.87 321 PKP PKPdf 18 10 42.1 +1.4
comp=Z,0.7nm,0.6s,baz=70,slow=0.3,SNR=5.0
PZH PanZhiHua 170.54 44 PKP PKPdf 18 10 54.6 -0.6

IDC 16 17:57:55.8±385.0, 57.65N×29.54E, h0km, Error ellipse: s-maj=103.1km s-min=39.4km az=159.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.28**	**99**	*i*		18 26 44.5	
	baz=282,slow=315						
I37NO	**I37NO**	**12.44**	**342**	*i*		19 09 24.7	
	baz=152,slow=327,SNR=2.3						
I26DE	**FREYUNG INFRAS**	**12.91**	**234**	*i*		19 17 40.0	
	baz=39,slow=321,SNR=0.7						
I31KZ	**AKTYUBINSK INF**	**18.14**	**101**	*i*		19 55 50.0	
	baz=304,slow=322,SNR=0.7						

*IDC **16** 17:59:58.0±2.5, 31.79S×178.23W, h0km, mb4.0/4, mbtmp4.1/5, ML3.8/1, MS3.2/2, Error ellipse: s-maj=60.4km s-min=26.0km az=130.0*
*NEIC **16** 17:59:59.5±2.8, 32.3S±0.1×178.4W±0.2, h10km±2km, mb4.4/11, Error ellipse: s-maj=29.3km s-min=21.1km az=122.0*

ISC 16 17:59:58.7±1.3, 32.2S±0.1×178.2W±0.2, h10km, n34, σ1§55/26, mb4.3/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.98**	**5**	Pn	Pn	18 00 39.1	-6.8
	19nm,0.3s,baz=125,slow=19,SNR=1.6						
RAO				Sn	Sn	18 01 12.3	-9.4
	55nm,0.3s,baz=150,slow=20,SNR=1.9						
	266nm,0.8s						
MXZ	**Matakaoa Point**	**6.04**	**207**	Pn	**Pn**	**18 01 28.3**	**+0.3**
URZ	**Urewera**	**7.12**	**211**	Pn	**Pn**	**18 01 43.7**	**+0.7**
	0.4nm,0.3s,baz=30,slow=20,SNR=7.7						
URZ				Sn	**Sn**	**18 03 06.2**	**+2.3**
	1.0nm,0.3s,baz=66,slow=20,SNR=9.1						
URZ	**Urewera**	**7.12**	**211**	Pn	**Pn**	**18 01 42.1**	**-0.9**
BFZ	**Birch Farm**	**9.54**	**206**	Pn	**Pn**	**18 02 14.1**	**-2.0**
NNZ	**Nelson**	**11.21**	**214**	Pn	**Pn**	**18 02 37.4**	**-1.7**
KHZ	**Kahutara**	**12.09**	**210**	Pn	**Pn**	**18 02 48.5**	**-2.5**
OXZ	**Oxford**	**13.48**	**212**	Pn	Pn	18 03 05.9	-4.1
RPZ	**Rata Peaks**	**14.23**	**213**	Pn	**Pn**	**18 03 19.2**	**-1.1**
	0.2nm,0.3s,baz=244,slow=18,SNR=1.2						
RPZ				Sn	Sn	18 05 47.2	-11
	0.2nm,0.3s,baz=69,slow=19,SNR=1.2						
WKZ	**Wanaka**	**16.03**	**215**	Pn	**Pn**	**18 03 41.9**	**-2.4**
WKZ				IAmb	IAmb	18 03 45.3	
	comp=Z,20nm,1.3s						
DZM	**Mont Dzumac**	**16.96**	**303**	LR	LR	18 09 07.8	
	comp=Z,210nm,21.4s,baz=24,slow=33						
RAR	**Rarotonga**	**19.77**	**61**	LR	LR	18 11 35.5	
	comp=Z,35nm,19.6s,baz=227,slow=36						
STKA	**Stephens Creek**	**33.91**	**260**	P	**P**	**18 06 44.4**	**+2.4**
	comp=Z,1.6nm,0.9s,baz=111,slow=8.6,SNR=1.9						
	comp=Z,1.6nm,0.9s						
STKA	**Stephens Creek**	**33.91**	**260**		**P**	**18 06 41.8**	**-0.2**
CTA	**Charters Tower**	**33.94**	**282**	P	**P**	**18 06 43.3**	**+1.0**
	comp=Z,6.8nm,1.0s,baz=98,slow=7.1,SNR=1.4						
	comp=Z,6.8nm,1.0s						
CTAO	**Charters Tower**	**33.94**	**282**	P	**P**	**18 06 40.4**	**-1.9**
ASAR	**Alice Springs**	**42.84**	**269**	P	**P**	**18 07 57.7**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=106,slow=7.4,SNR=17						
	comp=Z,1.1nm,0.7s						
WR0	**Warramunga Arr**	**43.82**	**274**	P	**P**	**18 08 03.6**	**-1.5**
WR0				IAmb	IAmb	18 08 26.0	
	comp=Z,5.9nm,1.3s						
WB2	**Warramunga Arr**	**43.99**	**274**	P	**P**	**18 08 06.7**	**+0.2**
WB2				IAmb	IAmb	18 08 27.7	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**44.00**	**274**	P	**P**	**18 08 06.7**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=119,slow=8.5,SNR=23						
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**44.00**	**274**	P	**P**	**18 08 05.0**	**-1.6**
WB0	**Warramunga Arr**	**44.03**	**274**	P	**P**	**18 08 06.7**	**-0.1**
WB0				IAmb	IAmb	18 08 09.9	
	comp=Z,7.9nm,1.2s						
FORT	**Forrest**	**45.41**	**257**	P	**P**	**18 08 18.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**52.18**	**271**	P	**P**	**18 09 07.2**	**-2.7**
FITZ				IAmb	IAmb	18 09 12.1	
	comp=Z,8.8nm,1.3s						
CASY	**Casey**	**53.44**	**208**	P	**P**	**18 09 19.3**	**+0.8**
CASY				IAmb	IAmb	18 09 21.3	
	comp=Z,2.7nm,0.8s						
QSPA	**South Pole Qui**	**57.89**	**180**	P	**P**	**18 09 50.2**	**-0.4**
QSPA				IAmb	IAmb	18 10 05.7	
	comp=Z,6.6nm,0.8s						
TROLL	**Troll, Antarti**	**76.05**	**180**	P	P	18 11 56.1	+10
SNAA	**Sanae**	**76.34**	**179**	P	P	18 11 58.5	+11
VNA3	**Neumayer Olymp**	**76.50**	**176**	P	P	18 11 58.7	+10
VNA2	**Neumayer--Watz**	**76.94**	**177**	P	P	18 11 58.1	+7.1
	baz=173,slow=4.7						
VNA1	**Neumayer--Stat**	**77.17**	**177**	P	P	18 12 00.7	+8.6
FINES	**FINESS Array B**	**146.78**	**339**	PKPbc	**PKPdf**	**18 19 39.4**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=48,slow=2.1,SNR=9.1						
NOA	**NORSAR Array B**	**150.52**	**351**	PKPbc	**PKPbc**	**18 19 49.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=13,slow=4.1,SNR=2.1						
CLL	**Collm**	**159.22**	**340**	ePKPab	**PKPab**	**18 20 36.0**	**+2.1**
CLL				Lm	MLR	18 47 00.0	
	comp=Z,100nm,18.7s						

*IDC **16** 18:06:26.2±2.4, 2.27S×136.64E, h0km, mb3.7/2, mbtmp3.9/5, ML3.7/3, MS3.5/4, Error ellipse: s-maj=48.6km s-min=26.1km az=67.0*
*NEIC **16** 18:06:32.1±2.9, 2.4S±0.1×136.58E±0.02, h48km±14km, mb4.1/9, Error ellipse: s-maj=16.3km s-min=2.0km az=185.0*

ISC 16 18:06:30.8±1.0, 2.4S±0.1×136.66E±0.09, h42km, n23, σ1§42/21, mb3.9/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.44**	**263**		**Pn**	**18 07 36.6**	**+1.0**
FAKI				Sn	**Sn**	**18 08 24.9**	**-1.1**
SIJI	**Sorong**	**5.59**	**285**	Pn	**Pn**	**18 07 51.7**	**+0.2**
	1.1nm,0.3s,baz=150,slow=14,SNR=6.5						
SIJI				Sn	**Sn**	**18 08 54.5**	**+0.1**
	0.7nm,0.3s,baz=132,slow=24,SNR=1.5						
	7.5nm,0.6s						
MTN	**Manton Dam**	**11.75**	**207**	Pn	**Pn**	**18 09 17.2**	**+1.2**
COEN	**Coen**	**13.19**	**151**	Pn	**Pn**	**18 09 37.0**	**+1.3**
KNRA	**Kununurra**	**15.34**	**210**	Pn	**Pn**	**18 10 02.0**	**-2.5**
KNRA				IAmb	IAmb	18 10 20.0	
	comp=Z,7.9nm,0.7s						
WR0	**Warramunga Arr**	**17.60**	**187**	P	**P**	**18 10 32.9**	**-0.8**
WR0				IAmb	IAmb	18 11 00.2	
	comp=Z,4.3nm,1.1s						
WB2	**Warramunga Arr**	**17.61**	**187**	P	**P**	**18 10 32.5**	**-1.3**
WB2				IAmb	IAmb	18 10 36.3	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**17.61**	**187**	P	**P**	**18 10 34.1**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=7.4,slow=12,SNR=18						
WRA				S	Sn	18 13 34.2	-14
	comp=Z,0.5nm,0.7s,baz=345,slow=25,SNR=1.9						
WRA				LR	LR	18 18 21.4	
	comp=Z,77nm,18.6s,baz=12,slow=40						
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**17.61**	**187**	P	**P**	**18 10 32.4**	**-1.4**
FITZ	**Fitzroy Crossi**	**19.00**	**214**	P	**Pn**	**18 10 51.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=49,slow=11,SNR=3.5						
	comp=Z,3.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.00**	**214**	P	**Pn**	**18 10 47.8**	**-2.3**
CTA	**Charters Tower**	**19.95**	**153**	LR	LR	18 19 16.3	
	comp=Z,93nm,21.9s,baz=78,slow=38						
CTAO	**Charters Tower**	**19.95**	**153**	P	**Pn**	**18 10 58.5**	**-2.9**
CTAO				IAmb	IAmb	18 11 14.3	
	comp=Z,41nm,1.4s						
AS31	**Alice Springs**	**21.34**	**187**	P	**P**	**18 11 15.5**	**+1.1**
ASAR	**Alice Springs**	**21.34**	**187**	P	**P**	**18 11 15.8**	**+1.4**
	comp=Z,5.0nm,0.9s,baz=14,slow=11,SNR=36						
	comp=Z,5.0nm,0.9s						
ASAR	**Alice Springs**	**21.34**	**187**	P	**P**	**18 11 14.6**	**+0.1**
LEM	**Lembang**	**29.27**	**260**	LR	LR	18 25 29.0	
	comp=Z,130nm,18.8s,baz=46,slow=39						
JOW	**Kunigami**	**30.14**	**345**	P	**P**	**18 12 36.0**	**-0.8**
JOW				IAmb	IAmb	18 12 55.5	
	comp=Z,7.6nm,1.2s						
BBOO	**Buckleboo**	**30.29**	**181**		**P**	**18 12 38.9**	**+0.9**
PLWZ	**Palliser**	**52.19**	**144**	P	P	18 15 40.6	+3.1
AFI	**Afiamalu**	**52.20**	**106**	LR	LR	18 36 22.0	
	comp=Z,91nm,22.0s,baz=49,slow=34						
BFZ	**Birch Farm**	**52.25**	**142**	P	**P**	**18 15 37.1**	**-0.8**
MKAR	**Makanchi Array**	**68.28**	**323**	P	**P**	**18 17 28.4**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=104,slow=4.9,SNR=3.0						
	comp=Z,0.5nm,0.9s						

*ECX **16** 18:09:57.6±0.6, 32.20N×115.28W, h10km±15km, MD2.6, ML2.7*
*MEX **16** 18:09:58.5±0.9, 32.19N×115.20W, h15km, MD3.0*

ISC 16 18:09:56.2±1.1, 32.17N±0.04×115.31W±0.03, h18km±5km, n20, σ0§79/33, 9C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBIG	**Mexicali**	**0.25**	**21**	*i* P	**Pg**	**18 10 02.0**	**+0.1**
MBIG				*i* S	**Sg**	**18 10 07.2**	**+1.3**
MBIG	**Mexicali**	**0.25**	**21**	⇓*i* P	**Pg**	**18 10 02.1**	**+0.1**
RITX	**Riito Sonora**	**0.29**	**90**	⇑*i* P	**Pg**	**18 10 02.6**	**0.0**
RITX				*e* S	**Sb**	**18 10 07.4**	**0.0**
CTLX	**Tlaxcala, TLX**	**0.33**	**24**	⇓*i* P	**Pg**	**18 10 03.0**	**-0.3**
CTLX				*e* S	**Sg**	**18 10 08.2**	**+0.1**
CTLX				⇓*e*		18 10 09.1	
CTLX				IAML		18 10 09.1	
	comp=E,2μm,0.2s						
CTLX				IAML		18 10 09.2	
	comp=N,2μm,0.2s						
CTLX				⇑*e*		18 10 09.2	
SGL	**Mount Signal**	**0.60**	**324**	⇑*i* P	**Pg**	**18 10 08.1**	**0.0**
SGL				*e* S	**Sg**	**18 10 16.3**	**+0.3**
EMSC	**East Mesa**	**0.63**	**25**	*e* P	**Pg**	**18 10 08.3**	**-0.4**
EMSC				*e* S	**Sg**	**18 10 16.2**	**-0.9**
WESC	**Westside Schoo**	**0.69**	**329**	*e* P	**Pg**	**18 10 09.9**	**+0.1**
YUH2	**Yuha Desert**	**0.71**	**313**	*e* S	**Sg**	**18 10 19.7**	**+0.1**
YUH2				⇑*e*		18 10 20.3	
YUH2				IAML		18 10 20.3	
	comp=N,205nm,0.1s						
YUH2				⇓*e*		18 10 20.4	
YUH2				IAML		18 10 20.4	
	comp=E,314nm,0.4s						
COA	**Coachella**	**0.71**	**12**	⇓*i* P	**Pg**	**18 10 09.0**	**-1.2**
YMD	**Yuma Desert**	**0.75**	**59**	*e* P	**Pg**	**18 10 09.6**	**-1.3**
COK2	**Cook Ranch 2**	**0.77**	**332**	*e* P	**Pg**	**18 10 10.7**	**-0.6**
RMX	**La Rumorosa**	**0.78**	**304**	⇑*i* P	**Pg**	**18 10 10.4**	**-1.2**
RMX				*e* S	**Sg**	**18 10 20.5**	**-1.6**
RMX				IAML		18 10 21.4	
	comp=E,189nm,0.1s						
RMX				⇑*e*		18 10 21.4	
IKP	**In-Ko-Pah, Jac**	**0.83**	**305**	*e* P	**Pb**	**18 10 12.1**	**-0.1**
IKP				*e* S	**Sb**	**18 10 23.6**	**+0.4**
CRR	**Carrizo Plain**	**0.91**	**322**	⇑*i* P	**Pb**	**18 10 13.3**	**-0.1**
CRR				*e* S	**Sb**	**18 10 25.9**	**+0.6**
SPIG	**San Pedro Mart**	**1.13**	**187**	*i* P	**Pb**	**18 10 16.8**	**-0.6**
SPIG				*e* S	**Sb**	**18 10 31.6**	**-0.3**
CBX	**Cerro Bola**	**1.16**	**277**	*e* P	**Pn**	**18 10 17.6**	**-0.1**
CBX				*e* S	**Sb**	**18 10 34.4**	**+1.8**
MONP2	**Monument Peak**	**1.19**	**308**	*e* P	**Pn**	**18 10 18.5**	**+0.4**
TJIG	**Tijuana**	**1.19**	**283**	*e* P	**Pn**	**18 10 17.4**	**-0.6**
TJIG				*e* S	**Sb**	**18 10 33.6**	**+0.3**
SFX	**San Felipe**	**1.19**	**161**	*e* P	**Pn**	**18 10 18.5**	**+0.5**
SFX				*e* S	**Sb**	**18 10 34.7**	**+1.4**
SFX				⇑*e*		18 10 36.5	
SFX				IAML		18 10 36.5	
	comp=E,92nm,0.1s						
BAR	**Barrett**	**1.26**	**294**	*e* P	**Pn**	**18 10 18.7**	**-0.3**
BAR				*e* S	**Sn**	**18 10 36.6**	**+1.0**
BAR				⇑*e*		18 10 37.2	
BAR				IAML		18 10 37.2

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comp=E,104nm,0.2s

IDC **16** *18:17:03.5±0.8, 1°.98S×119°.34E, h0km, mb3.9/8, mbtmp4.0/10, ML4.0/2, MS4.1/4, Error ellipse: s-maj=35.2km s-min=14.7km az=63.0*

DJA **16** *18:17:06.9±0.3, 2°.5S×11°.9E±°, h10km, M4.4/16, mb4.7/6, mB5.0/2, MLv4.3/16, Mw(mB)4.4/2*

NEIC **16** *18:17:10.2±2.2, 1°.99S±0°.07×119°.32E±0°.03, h46km±10km, mb4.1/9, Error ellipse: s-maj=10.3km s-min=3.0km az=157.0*

ISC 16 18:17:09.7±0.6,**2°.00S**±0°.04×**119°.26E**±0°.06,**h45**km,**n50,** σ1§**31**/53,**mb4.0**/11,**MS4.3**/4,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.18**	**151**	P	**Pn**	**18 17 28.2**	**-1.6**
TTSI				S	**Sn**	**18 17 45.9**	**+1.2**
SPSI	**Sidrap Palu**	**2.02**	**165**	P	**Pn**	**18 17 40.6**	**-0.6**
SPSI				S	**Sn**	**18 18 07.9**	**+2.7**
MPSI	**Mapaga**	**2.41**	**15**	P	**Pn**	**18 17 44.7**	**-2.0**
BKB	**Balikpapan**	**2.47**	**287**	Pn	**Pn**	**18 17 48.0**	**+0.5**
BKB	**Balikpapan**	**2.47**	**287**	P	**Pn**	**18 17 46.9**	**-0.6**
APSI	**Ampana**	**2.63**	**66**	P	**Pn**	**18 17 49.4**	**-0.2**
APSI				S	**Sn**	**18 18 23.3**	**+3.0**
KAPI	**Kappang**	**3.03**	**171**	Pn	**Pn**	**18 17 54.9**	**-0.3**
	14nm,0.3s,baz=333,slow=13,SNR=16						
KAPI				Sn	**Sn**	**18 18 32.0**	**+1.7**
	36nm,0.3s,baz=86,slow=22,SNR=7.7						
	42nm,0.4s						
KAPI	**Kappang**	**3.03**	**171**		**Pn**	**18 17 55.3**	**+0.1**
BKSI	**Bulukumba**	**3.41**	**165**	P	**Pn**	**18 18 00.0**	**-0.4**
BKSI				S	**Sn**	**18 18 41.9**	**+2.3**
TOLI2	**Tolitoli**	**3.45**	**26**		**Pn**	**18 18 00.4**	**-0.5**
LUWI	**Luwuk**	**3.64**	**75**		**Pn**	**18 18 02.6**	**-1.0**
LUWI	**Luwuk**	**3.64**	**75**	P	**Pn**	**18 18 03.0**	**-0.6**
MRSI	**Marisa**	**3.64**	**48**	P	**Pn**	**18 18 02.6**	**-1.0**
BSSI	**Bau Bau, Buton**	**4.29**	**163**	P	**Pn**	**18 18 13.0**	**+0.4**
MTKI	**Muara Teweh, K**	**4.48**	**284**	P	**Pn**	**18 18 13.9**	**-1.3**
GTOI	**Gorontalo**	**4.58**	**55**	P	**Pn**	**18 18 15.6**	**-0.8**
BBKI	**Banjar Baru**	**4.64**	**252**	P	**Pn**	**18 18 16.9**	**-0.4**
BBSI	**Bau Bau**	**4.79**	**136**	P	**Pn**	**18 18 19.4**	**+0.1**
KMSI	**Cibinong**	**5.37**	**62**	P	**Pn**	**18 18 27.8**	**+0.4**
	0.6nm2µm138nm,0.5s						
SANI	**Sanana**	**6.73**	**91**	P	**Pn**	**18 18 43.1**	**-2.9**
	0.2nm764nm41nm,0.7s						
MYLDM	**Lahad Datu**	**7.17**	**354**	Pn	**Pn**	**18 18 53.1**	**+1.0**
WBSI	**Waikabubak, Su**	**7.59**	**179**	P	**Pn**	**18 19 00.0**	**+2.1**
	0.2nm50nm,1.2s						
LBMI	**Labuha**	**8.35**	**81**	P	**Pn**	**18 19 07.9**	**-0.4**
	82nm,0.9s						
KKM	**Kota Kinabalu**	**8.55**	**339**	Pn	**Pn**	**18 19 13.2**	**+2.1**
DAV	**Davao City (W)**	**11.00**	**35**	LR	LR	18 24 16.0	
	comp=Z,70nm,18.4s,baz=194,slow=40						
SIJI	**Sorong**	**12.06**	**85**	Pn	**Pn**	**18 19 57.4**	**-1.7**
	1.4nm,0.3s,baz=241,slow=19,SNR=5.0						
	3.5nm,0.3s						
KRJI	**Kerinci**	**17.78**	**269**	P	**Pn**	**18 21 14.1**	**-0.1**
MBWA	**Marble Bar**	**19.05**	**179**	P	**Pn**	**18 21 28.8**	**-0.5**
PSA00	**Pilbara Seismi**	**19.46**	**178**	P	**Pn**	**18 21 35.7**	**+1.4**
PSA00	**Pilbara Seismi**	**19.46**	**178**	P	**Pn**	**18 21 35.3**	**+1.0**
PSA00				IAmb	IAmb	18 22 04.6	
	comp=Z,8.0nm,1.4s						
RPSI	**Rantau Prapat**	**20.85**	**283**	P	**P**	**18 21 48.7**	**+0.7**
PSI	**Prapat**	**20.88**	**283**	P	**P**	**18 21 48.7**	**+0.3**
	comp=Z,9.5nm,0.6s,baz=109,slow=11,SNR=2.0						
PSI				LR	LR	18 30 10.4	
	comp=Z,92nm,18.4s,baz=28,slow=38						
	comp=Z,9.5nm,0.6s						
WB0	**Warramunga Arr**	**23.04**	**141**	P	**P**	**18 22 08.9**	**-2.4**
WB0				IAmb	IAmb	18 22 10.8	
	comp=Z,9.8nm,1.2s						
WRA	**Warramunga Arr**	**23.14**	**141**	P	**P**	**18 22 10.5**	**-1.7**
	comp=Z,3.1nm,0.9s,baz=319,slow=11,SNR=15						
	comp=Z,3.1nm,0.9s						
WB2	**Warramunga Arr**	**23.14**	**141**	P	**P**	**18 22 09.8**	**-2.4**
WB2				IAmb	IAmb	18 22 42.0	
	comp=Z,9.5nm,1.2s						
WR0	**Warramunga Arr**	**23.27**	**141**	P	**P**	**18 22 11.8**	**-1.7**
WR0				IAmb	IAmb	18 22 20.8	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**25.79**	**148**	P	**P**	**18 22 36.2**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=318,slow=7.9,SNR=17						
ASAR				PcP	**PcP**	**18 26 05.6**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=344,slow=1.7,SNR=2.4						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**25.79**	**148**	P	**P**	**18 22 36.5**	**-0.2**
STKA	**Stephens Creek**	**36.42**	**147**	P	**P**	**18 24 09.5**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=315,slow=8.5,SNR=4.3						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**50.89**	**349**	P	**P**	**18 26 06.9**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=170,slow=8.1,SNR=8.1						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**50.89**	**349**	P	**P**	**18 26 07.0**	**+0.7**
SONM				IAmb	IAmb	18 26 10.2	
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**58.44**	**331**	P	**P**	**18 27 01.5**	**+0.5**
MK31				IAmb	IAmb	18 27 29.0	
	comp=Z,3.3nm,1.5s						
MKAR	**Makanchi Array**	**58.44**	**331**	P	**P**	**18 27 01.5**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=136,slow=7.4,SNR=8.2						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**58.44**	**331**	P	**P**	**18 27 01.0**	**+0.1**
ZALV	**Zalesovo Beam**	**62.66**	**338**	P	**P**	**18 27 29.0**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=159,slow=4.6,SNR=4.8						
	comp=Z,1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**62.66**	**338**	P	**P**	**18 27 29.0**	**-0.6**
YAK	**Yakutsk**	**64.36**	**5**	P	**P**	**18 27 39.5**	**-1.0**
VNDA	**Vanda**	**78.82**	**171**	P	**P**	**18 29 07.7**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=315,slow=5.9,SNR=11						
VNDA				LR	LR	19 05 13.1	
	comp=Z,128nm,18.2s,baz=138,slow=37						
	comp=Z,0.7nm,0.7s						
MLR	**Muntele Rosu**	**93.74**	**315**	LR	LR	19 20 49.7	
	comp=Z,186nm,20.5s,baz=276,slow=41						
IDI	**Anoyia**	**94.71**	**305**	LR	LR	19 21 23.2	
	comp=Z,108nm,19.9s,baz=270,slow=41						

NEIC **16** *18:17:31, 19°.74S×71°.12W, h16km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr3.22; Mθθ0.18; Mϕϕ-3.41; Mrθ1.58; Mθϕ1.53; Mϕr-2.96; Fault plane solution: M₀4.96000×10¹⁶ NP1:ϕs348.07000°, δ24.03000°, λ103.22000°. NP2:ϕs153.65000°, δ66.65000°, λ84.18000°. Principal axes: T 4.5708, Plg68.0000°, Azm53.0000°; N 0.7041, Plg5.0000°, Azm156.0000°; P -5.2750, Plg21.0000°, Azm248.0000°;*

SJA **16** *18:17:32.3±1.4, 19°.77S×71°.04W, h26km±7km, ML5.1, MW5.1*

IDC **16** *18:17:32.2±0.5, 19°.64S×70°.71W, h0km, mb4.6/15, mbtmp4.6/20, ML3.9/4, MS4.5/48, Error ellipse: s-maj=17.9km s-min=11.0km az=57.0*

NEIC **16** *18:17:32.2±2.2, 19°.76S±0°.03×71°.10W±0°.03, h18km±3km, mb5.2/162, Mwr5.1/47, Mww5.1, Mwr5.3(GUC), Error ellipse: s-maj=5.8km s-min=2.2km az=218.0*

VAO **16** *18:17:32.6±0.4, 19°.70S×70°.89W, h12km, mb4.9*

BJI **16** *18:17:33.3±0.0, 19°.80S×71°.10W, h10km, mB5.1/6, Ms5.3/11, Ms7 5.2/10*

GUC **16** *18:17:34.9±0.7, 19°.72S×70°.92W, h38km±2km, ML5.0*

NEIC **16** *18:17:36, 19°.66S×71°.09W, h20km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁶Nm; Mrr3.96; Mθθ0.60; Mϕϕ-4.55; Mrθ1.43; Mθϕ1.74; Mϕr-4.47; Fault plane solution: M₀6.59000×10¹⁶ NP1: ϕs344.00000°, δ22.00000°, λ91.00000°. NP2: ϕs162.00000°, δ68.00000°, λ89.00000°. Principal axes: T 5.9507, Plg67.0000°, Azm71.0000°; N 1.1299, Plg0.0000°, Azm163.0000°; P -7.0806, Plg23.0000°, Azm253.0000°;*

GCMT **16** *18:17:39.2±0.2, 19°.65S±0°.01×71°.21W±0°.01, h19km, MW5.2/117, Moment Tensor Solution. s62,c81; s117,c171; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.86±.18; Mθθ-0.22±.10; Mϕϕ-4.64±.13; Mrθ0.46±.20; Mθϕ1.41±.07; Mϕr-5.11±.29; Best double couple: M₀7.13500×10¹⁶ NP1:ϕs172.00000°, δ68.00000°, λ96.00000°. NP2:ϕs335.00000°, δ23.00000°, λ75.00000°. Principal axes: T 7.0890, Plg66.0000°, Azm93.0000°; N 0.0940, Plg6.0000°, Azm349.0000°; P -7.1800, Plg23.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

ISC 16 18:17:33.2±0.7,**19°.77S**±0°.02×**70°.97W**±0°.04,**h20**km±3km, **n554,** σ1§**49**/500,**mb5.2**/101,**MS4.6**/62,**11C,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.93**	**122**	Pn	**Pn**	**18 17 51.9**	**+0.6**
TA02				Sg	**Sn**	**18 18 04.9**	**+0.7**
TA02	**Huaiquique**	**0.93**	**122**	↑ *i*P	**Pn**	**18 17 51.9**	**+0.6**
TA02				*i* S	**Sn**	**18 18 05.0**	**+0.9**
TA02				IAML		18 18 07.0	
	comp=N,32µm,0.4s						
TA02	**Huaiquique**	**0.93**	**122**	*i* P	**Pn**	**18 17 52.0**	**+0.6**
TA02				*e*S	**Sn**	**18 18 05.0**	**+0.9**
TA02				IAML		18 18 06.7	
	comp=Z,44µm,1.1s						
TA01	**Diego Aracena**	**1.09**	**137**	Pn	**Pg**	**18 17 54.2**	**-0.2**
TA01				Sn	**Sn**	**18 18 08.3**	**+0.5**
TA01	**Diego Aracena**	**1.09**	**137**	↑ *i*P	**Pg**	**18 17 54.1**	**-0.2**
TA01				*i* S	**Sn**	**18 18 08.6**	**+0.7**
TA01				IAML		18 18 13.9	
	comp=N,21µm,0.5s						
TA01	**Diego Aracena**	**1.09**	**137**	*i* P	**Pg**	**18 17 54.0**	**-0.3**
TA01				*e*S	**Sn**	**18 18 10.4**	**+2.5**
TA01				IAML		18 18 20.4	
	comp=Z,68µm,1.0s						
PB12	**IPOC Station P**	**1.30**	**28**	Pn	**Pn**	**18 17 56.8**	**+0.4**
PB12				Sn	**Sn**	**18 18 13.5**	**+0.2**
PB12	**IPOC Station P**	**1.30**	**28**	↑ *i*P	**Pn**	**18 17 56.8**	**+0.4**
PB12				*i* S	**Sn**	**18 18 13.7**	**+0.4**
PB12				IAML		18 18 19.8	
	comp=N,30µm,0.6s						
PB12	**IPOC Station P**	**1.30**	**28**	*i* P	**Pn**	**18 17 57.0**	**+0.6**
PB12				*e*S	**Sn**	**18 18 14.6**	**+1.3**
PB12				IAML		18 18 18.6	
	comp=Z,15µm,0.9s						
AP01	**Chacalluta**	**1.51**	**23**		**Pn**	**18 17 59.7**	**+0.4**
AP01				Sn	**Sn**	**18 18 18.4**	**0.0**
AP01	**Chacalluta**	**1.51**	**23**	*i* P	**Pn**	**18 17 59.8**	**+0.5**
AP01				*i* S	**Sn**	**18 18 18.7**	**+0.3**
AP01				IAML		18 18 30.5	
	comp=N,82µm,0.8s						
AP01	**Chacalluta**	**1.51**	**23**	*i* P	**Pn**	**18 18 00.0**	**+0.8**
AP01				*e*S	**Sn**	**18 18 20.6**	**+2.2**
AP01				IAML		18 18 28.9	
	comp=Z,30µm,1.6s						
GO01	**Chusmiza**	**1.68**	**87**	Pn	**Pb**	**18 18 03.4**	**-0.3**
GO01				Sn	**Sb**	**18 18 25.9**	**+1.3**
GO01	**Chusmiza**	**1.68**	**87**	↑ *i*P	**Pb**	**18 18 03.5**	**-0.3**
GO01				*i* S	**Sb**	**18 18 25.1**	**+0.5**
GO01				IAML		18 18 29.4	
	comp=N,21µm,0.4s						
GO01	**Chusmiza**	**1.68**	**87**	*i* P	**Pb**	**18 18 04.0**	**+0.2**
GO01				*e*S	**Sg**	**18 18 26.4**	**-1.2**
PB02	**IPOC Station P**	**1.84**	**147**	Pn	**Pb**	**18 18 04.9**	**-1.5**
PB02	**IPOC Station P**	**1.84**	**147**	↑ *i*P	**Pb**	**18 18 05.0**	**-1.4**
PB02				*i* S	**Sb**	**18 18 27.0**	**-2.0**
PB02				IAML		18 18 43.0	
	comp=E,19µm,0.5s						
PB02	**IPOC Station P**	**1.84**	**147**	*i* P	**Pb**	**18 18 05.0**	**-1.4**
PB02				IAML		18 18 37.3	
	comp=Z,22µm,0.6s						
PB01	**IPOC Station P**	**1.88**	**133**	Pn	**Pb**	**18 18 06.0**	**-1.0**
PB01	**IPOC Station P**	**1.88**	**133**	↑ *i*P	**Pb**	**18 18 05.8**	**-1.2**
PB01				IAML		18 18 38.6	
	comp=N,12µm,0.6s						
PB01	**IPOC Station P**	**1.88**	**133**	*i* P	**Pb**	**18 18 06.0**	**-1.0**
PB01				IAML		18 18 39.2	
	comp=Z,9µm,1.2s						
PB16	**IPOC Station P**	**1.99**	**44**	Pn	**Pn**	**18 18 07.5**	**+1.2**
PB16	**IPOC Station P**	**1.99**	**44**	↑ *i*P	**Pn**	**18 18 07.6**	**+1.3**
PB16				*i* S	**Sb**	**18 18 34.6**	**+0.9**
PB16				IAML		18 18 41.8	
PB16	**IPOC Station P**	**1.99**	**44**	*i* P	**Pn**	**18 18 08.0**	**+1.7**
PB16				*e*S	**Sb**	**18 18 35.4**	**+1.7**
PB16				IAML		18 18 45.0	
	comp=Z,26µm,1.7s						
PB07	**IPOC Station P**	**2.20**	**153**	Pn	**Pn**	**18 18 09.6**	**+0.8**
PB07	**IPOC Station P**	**2.20**	**153**	*i* P	**Pn**	**18 18 09.6**	**+0.8**
PB07				IAML		18 18 54.8	
	comp=N,9µm,0.7s						
PB07	**IPOC Station P**	**2.20**	**153**	*i* P	**Pb**	**18 18 10.0**	**-2.4**
PB07				IAML		18 18 50.1	
	comp=Z,14µm,0.7s						
PB09	**IPOC Station P**	**2.59**	**142**	Pn	**Pb**	**18 18 16.4**	**-2.7**
PB09	**IPOC Station P**	**2.59**	**142**	↑ *i*P	**Pb**	**18 18 16.2**	**-2.9**
PB09				IAML		18 19 01.7	
	comp=N,19µm,0.8s						
PB09	**IPOC Station P**	**2.59**	**142**	*i* P	**Pb**	**18 18 16.5**	**-2.6**
PB09				IAML		18 19 00.7	
	comp=Z,10µm,0.9s						
PB18	**Visviri**	**2.59**	**33**	Pn	**Pn**	**18 18 15.1**	**+0.5**
PB04	**IPOC Station P**	**2.67**	**163**	Pn	**Pn**	**18 18 15.7**	**+0.4**
PB04	**IPOC Station P**	**2.67**	**163**	*e*P	**Pn**	**18 18 15.6**	**+0.3**
PB04				IAML		18 19 12.2	
	comp=N,6µm,0.7s						
PB04	**IPOC Station P**	**2.67**	**163**	*i* P	**Pn**	**18 18 16.0**	**+0.7**
PB04				IAML		18 19 04.6	
	comp=Z,8µm,0.9s						
PB06	**IPOC Station P**	**3.20**	**156**	Pn	**Pn**	**18 18 23.0**	**+0.4**
PB06	**IPOC Station P**	**3.20**	**156**	*e*P	**Pn**	**18 18 23.1**	**+0.4**
PB06				*e*S	**Sn**	**18 19 00.6**	**+0.2**
PB06				IAML		18 19 18.1	
	comp=E,9µm,0.9s						
PB06	**IPOC Station P**	**3.20**	**156**	*i* P	**Pn**	**18 18 23.0**	**+0.4**
PB06				IAML		18 19 18.1	
	comp=Z,8µm,1.1s						
LVC	**Limon Verde**	**3.42**	**146**	Pn	**Pn**	**18 18 28.6**	**+2.8**
	comp=Z,39nm,0.3s,baz=354,slow=8.1,SNR=21						
LVC				Pg	**Pb**	**18 18 34.6**	**+1.2**
	comp=Z,71nm,0.3s,baz=321,slow=11,SNR=19						
LVC				Sn	**Sn**	**18 19 08.5**	**+2.5**
	comp=Z,47nm,0.3s,baz=349,slow=19,SNR=4.8						
LVC				Lg	Lg	18 19 19.7	
	comp=Z,152nm,0.3s,baz=252,slow=20,SNR=15						
	comp=Z,76nm,0.3s						
LVC	**Limon Verde**	**3.42**	**146**	Pn	**Pn**	**18 18 28.0**	**+2.2**
LVC	**Limon Verde**	**3.42**	**146**	*i* P	**Pn**	**18 18 27.9**	**+2.2**
LVC	**Limon Verde**	**3.42**	**146**	*i* P	**Pn**	**18 18 28.4**	**+2.5**
LVC				IAML		18 19 26.5	
	comp=Z,2µm,0.9s						
LVC	**Limon Verde**	**3.42**	**146**	*e*P	**Pn**	**18 18 26.5**	**+0.7**
PB15	**IPOC Station P**	**3.70**	**158**	Pn	**Pn**	**18 18 29.9**	**+0.5**
PB10	**IPOC Station P**	**3.75**	**174**		**Pn**	**18 18 29.6**	**-0.4**
PB10	**IPOC Station P**	**3.75**	**174**	*i* P	**Pn**	**18 18 30.0**	**0.0**
PB10				IAML		18 19 51.1	
	comp=Z,1µm,0.9s						
AF01	**San Pedro de A**	**4.10**	**141**		**Pn**	**18 18 34.4**	**-0.7**
LPAZ	**La Paz**	**4.39**	**38**	Pn	**Pn**	**18 18 43.5**	**+4.1**
	comp=Z,11nm,0.3s,baz=210,slow=11,SNR=47						
LPAZ				Pg	**Pb**	**18 18 47.7**	**-2.4**
	comp=Z,21nm,0.3s,baz=223,slow=19,SNR=32						
LPAZ				Lg	Lg	18 19 45.9	
	comp=Z,6.3nm,0.3s,baz=234,slow=19,SNR=1.2						
LPAZ	**La Paz**	**4.39**	**38**	Pn	**Pn**	**18 18 39.2**	**-0.3**
PB14	**IPOC Station P**	**4.86**	**174**	Pn	**Pn**	**18 18 45.1**	**-0.5**
GO02	**Mina Guanaco**	**5.52**	**167**	Pn	**Pn**	**18 18 54.6**	**-0.1**
AC01	**Pan de Azucar**	**6.36**	**177**		**Pn**	**18 19 05.1**	**-0.8**
AC02	**Maricunga**	**7.23**	**167**	Pn	**Pn**	**18 19 16.9**	**-1.5**
AC06	**Mina Casimiro**	**7.57**	**176**		**Pn**	**18 19 20.6**	**-2.0**
GO03	**Copiap**	**7.82**	**175**	Pn	**Pn**	**18 19 23.8**	**-2.2**
AC05	**El Transito**	**9.05**	**176**	Pn	**Pn**	**18 19 42.1**	**-0.8**
LCO	**Las Campanas**	**9.20**	**179**	Pn	**Pn**	**18 19 43.3**	**-1.9**
NNA	**Nana**	**9.58**	**323**	Pn	**Pn**	**18 19 53.7**	**+3.5**
	comp=Z,1.4nm,0.3s,baz=198,slow=15,SNR=1.7						
NNA				LR	LR	18 23 24.6	
	comp=Z,1µm,20.3s,baz=157,slow=37						
	comp=Z,3.7nm,0.3s						
NNA	**Nana**	**9.58**	**323**	Pn	**Pn**	**18 19 47.8**	**-2.4**
SIV	**San Ignacio**	**10.14**	**70**	Pn	**Pn**	**18 19 57.1**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=251,slow=12,SNR=42						
SIV				Lg	Lg	18 22 48.5	
	baz=188,slow=21						
	comp=Z,17nm,0.6s						
CO01	**Juntas del Tor**	**10.20**	**176**	Pn	**Pn**	**18 19 56.1**	**-2.6**
GO04	**Tololo Observa**	**10.36**	**179**	Pn	**Pn**	**18 19 58.2**	**-2.8**
CO06	**Fray Jorge**	**10.87**	**183**	Pn	**Pn**	**18 20 05.3**	**-2.6**
ETMB	**Extrema**	**10.91**	**26**	Pn	**Pn**	**18 20 06.7**	**-1.7**
ETMB	**Extrema**	**10.91**	**26**	*e*P	**Pn**	**18 20 08.8**	**+0.5**
CO03	**El Pedregal**	**11.03**	**179**	Pn	**Pn**	**18 20 07.2**	**-2.8**
CO02	**Combarbal**	**11.39**	**180**	Pn	**Pn**	**18 20 14.8**	**-0.2**
ZON	**Zonda**	**11.91**	**170**	Pn	**Pn**	**18 20 20.1**	**-2.0**
PTLB	**Pontes e Lacer**	**12.07**	**71**	Pn	**Pn**	**18 20 22.1**	**-2.2**
PTLB	**Pontes e Lacer**	**12.07**	**71**	*e*P	**Pn**	**18 20 23.6**	**-0.7**
CZSB	**Cruzeiro do Su**	**12.09**	**352**	Pn	**Pn**	**18 20 23.9**	**-0.6**
VILB	**Vilhena**	**12.36**	**58**	Pn	**Pn**	**18 20 27.1**	**-1.1**
VA06	**Catapilco**	**12.74**	**181**	Pn	**Pn**	**18 20 33.5**	**+0.2**
VA03	**San Esteban**	**12.95**	**178**	Pn	**Pn**	**18 20 35.0**	**-1.3**
SAML	**Samuel**	**13.13**	**36**	Pn	**Pn**	**18 20 35.1**	**-3.8**
ROC1	**El Roble**	**13.15**	**180**	Pn	**Pn**	**18 20 35.8**	**-3.4**
VA01	**Torpederas**	**13.21**	**182**	Pn	**Pn**	**18 20 39.1**	**-0.6**
PEL	**Peldehue**	**13.32**	**179**	Pn	**Pn**	**18 20 39.0**	**-2.4**
MT02	**Curacav**	**13.44**	**181**	Pn	**Pn**	**18 20 41.5**	**-1.3**
MT05	**Renca**	**13.57**	**179**	Pn	**Pn**	**18 20 41.5**	**-3.3**
MT03	**Universidad Ad**	**13.68**	**178**	Pn	**Pn**	**18 20 44.1**	**-2.1**
VA05	**Santo Domingo**	**13.84**	**182**	Pn	**Pn**	**18 20 47.3**	**-1.1**
MT09	**Talagante**	**13.95**	**180**		**Pn**	**18 20 48.9**	**-1.1**
LMEL	**Las Melosas**	**14.04**	**177**		**Pn**	**18 20 51.4**	**+0.1**
MT01	**Popeta**	**14.04**	**181**	Pn	**Pn**	**18 20 51.3**	**+0.2**
CPUP	**Villa Florida**	**14.15**	**120**	Pn	**Pn**	**18 20 53.5**	**+0.9**
	comp=Z,9.8nm,0.9s,baz=296,slow=16,SNR=5.2						
CPUP				Lg	Lg	18 24 54.9	
	comp=Z,0.2nm,0.3s,baz=217,slow=20,SNR=1.4						
CPUP				LR	LR	18 26 57.5	
	comp=Z,2µm,19.5s,baz=300,slow=40						
CPUP	**Villa Florida**	**14.15**	**120**		**Pn**	**18 20 53.8**	**+1.1**
CPUP	**Villa Florida**	**14.15**	**120**	*e*P	**Pn**	**18 20 53.1**	**+0.4**
ANTJ	**Antonio Joao (**	**14.16**	**102**	*e*P	**Pn**	**18 20 52.4**	**-0.6**
AQDB	**Aquidauana**	**14.36**	**95**	Pn	**Pn**	**18 20 54.2**	**-1.4**
AQDB	**Aquidauana**	**14.36**	**95**	*e*P	**Pn**	**18 20 54.0**	**-0.8**
ATAH	**Atahualpa**	**14.48**	**329**	Pn	**Pn**	**18 21 00.6**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=147,slow=9.4,SNR=1.4						
ATAH				LR	LR	18 26 54.7	
	comp=Z,1µm,18.1s,baz=101,slow=39						
	comp=Z,1.9nm,0.6s						
BO01	**Tunca**	**14.57**	**180**		**Pn**	**18 20 55.7**	**-2.6**
SALV	**Santo Antonio**	**15.04**	**78**	*e*P	**Pn**	**18 21 04.1**	**-0.8**
H03N1	**Juan Fernandez**	**15.35**	**206**	T	T	18 36 56.2	
	baz=32,slow=72,SNR=63						
H03N2	**Juan Fernandez**	**15.35**	**206**	T	T	18 37 03.2	
	baz=32,slow=72,SNR=205						
H03N3	**Juan Fernandez**	**15.37**	**206**	T	T	18 36 58.3	
	baz=32,slow=72,SNR=112						
PDRB	**Porto dos Gac**	**15.92**	**61**	*e*P	**Pn**	**18 21 14.9**	**-1.5**
ML02	**Panimavida**	**15.94**	**181**		**Pn**	**18 21 14.4**	**-2.0**
ITQB	**Itaqui**	**16.33**	**130**	Pn	**Pn**	**18 21 18.9**	**-2.5**
ITQB	**Itaqui**	**16.33**	**130**	*e*P	**Pn**	**18 21 21.6**	**+0.1**
MCR1	**Marechal Candi**	**16.37**	**110**	*e*P	**Pn**	**18 21 22.1**	**+0.1**
CLDB	**Colider**	**17.09**	**61**	*e*P	**Pn**	**18 21 30.5**	**-0.6**
C2SB	**Chapadao do Su**	**17.15**	**90**	*e*P	**Pn**	**18 21 32.0**	**+0.1**
UNIS	**Unistalda (Bra**	**17.17**	**126**	*e*P	**Pn**	**18 21 31.2**	**-0.9**
CRSM	**Crissiumal (Br**	**17.30**	**120**	*e*P	**Pn**	**18 21 33.5**	**-0.2**
FRBT	**Francisco Belt**	**17.61**	**114**	*e*P	**Pn**	**18 21 37.4**	**-0.3**
RODS	**Rosario do Sul**	**17.73**	**130**	*e*P	**P**	**18 21 39.4**	**-0.5**
BOSC	**San Juan Bosco**	**18.08**	**335**	P	**Pn**	**18 21 40.9**	**-2.7**
PTGB	**Pitanga**	**18.18**	**109**	*e*P	**P**	**18 21 45.8**	**+0.9**
PCMB	**Pacaembu**	**18.53**	**99**	*e*P	**P**	**18 21 47.4**	**-1.3**
ALGR	**Alto Alegre (B**	**18.64**	**122**	*e*P	**Pn**	**18 21 50.3**	**-0.1**
ITAB	**Concordia**	**18.80**	**117**	P	**P**	**18 21 50.1**	**-1.4**
ITAB	**Concordia**	**18.80**	**117**	*e*P	**P**	**18 21 51.5**	**-0.1**
LPA	**La Plata**	**18.99**	**145**	*i* P	**Pn**	**18 21 58.4**	**+4.1**
LPA				sP	**pwP**	**18 22 04.0**	**+2.7**
LPA				pPP		18 22 09.7	
LPA				PPP	PPP	18 23 02.4	
LPA				S	**Sn**	**18 25 25.7**	**-0.7**
LPA	**La Plata**	**18.99**	**145**	SN	**S**	**18 25 32.5**	**+4.1**
LPA				SS	**SnSn**	**18 25 43.8**	**+3.1**
LPA				PS		18 25 51.6	
LPA				PCP	**PcP**	**18 26 21.0**	**+2.3**
LPA				SSS	SSS	18 28 09.2	
LPA				SCS	**ScS**	**18 33 33.0**	**

BIRV **Birongo** **30.41 9** P **P** **18 23 43.3 -1.2**
BIRV IAmb IAmb 18 23 58.2
comp=Z,84nm,1.8s
MDP **Montagnes des** **30.59 38** LR LR 18 36 47.2
comp=Z,3µm,19.4s,baz=216,slow=38
GDU01 **Guandu, BA** **30.63 84** *e*P **P** **18 23 45.5 -1.0**
BRU2 **Volcan** **30.64 337** P **P** **18 23 44.6 -2.0**
BRU2 IAmb IAmb 18 24 02.3
comp=Z,30nm,1.1s
ROSB **Rosrio** **31.12 61** *e*P **P** **18 23 50.2 -0.6**
RIMA **Rio Macho** **31.98 335** P **P** **18 23 57.6 -0.9**
RIMA IAmb IAmb 18 24 12.0
comp=Z,61nm,1.7s
NBLA **Lagarto - SE** **33.11 80** *e*P **P** **18 24 07.2 -1.1**
NBAN **Anadia - AL** **34.96 78** *e*P **P** **18 24 23.6 -0.8**
RPN **Rapa Nui** **35.84 251** LR LR 18 35 30.7
comp=Z,2µm,19.0s,baz=78,slow=30
NBRF **Rio Formoso -** **36.37 78** *e*P **P** **18 24 35.9 -0.6**
RCBR **Riachuelo** **36.80 73** P **P** **18 24 40.5 +0.4**
comp=Z,33nm,0.9s,baz=33,slow=9.9,SNR=8.7
RCBR LR LR 18 41 06.7
comp=Z,2µm,18.3s,baz=28,slow=39
comp=Z,33nm,0.9s
RCBR **Riachuelo** **36.80 73** P **P** **18 24 38.2 -2.0**
RCBR **Riachuelo** **36.80 73** *e*P **P** **18 24 40.5 +0.4**
CRPR **Cabo Rojo, PR** **37.73 6** P **P** **18 24 45.7 -2.1**
OBIP **Obispado Ponce** **37.82 7** P **P** **18 24 46.7 -1.9**
OBIP IAmb IAmb 18 25 00.2
comp=Z,55nm,1.2s
SJG **San Juan** **37.94 7** LR LR 18 41 51.2
comp=Z,512nm,18.4s,baz=246,slow=39
SJG **San Juan** **37.94 7** P **P** **18 24 47.3 -2.3**
SJG IAmb IAmb 18 24 58.0
comp=Z,66nm,1.2s
CBYP **Canovanas** **38.14 8** P **P** **18 24 48.4 -3.0**
CMIG **Matias Romero** **43.52 326** P **P** **18 25 38.5 +2.8**
comp=Z,1.8nm,0.7s,baz=186,slow=9.2,SNR=2.2
CMIG LR LR 18 43 48.8
comp=Z,254nm,18.6s,baz=157,slow=36
comp=Z,1.8nm,0.7s
PMSA **Palmer Station** **45.22 176** LR LR 18 44 35.0
comp=Z,292nm,18.1s,baz=354,slow=36
352A **Blakely** **52.69 345** IAmb IAmb 18 26 48.5
comp=Z,32nm,1.1s
152A **Waverly Hall** **53.77 346** P **P** **18 26 55.5 +1.1**
baz=164
HAW **Hawthorne Fire** **53.80 349** P **P** **18 26 55.8 +1.2**
baz=168,SNR=5.5
GOGA **Godfrey** **54.21 347** P **P** **18 26 55.7 -1.8**
GOGA IAmb IAmb 18 27 33.4
comp=Z,27nm,0.9s
GOGA **Godfrey** **54.21 347** P **P** **18 26 58.7 +1.1**
baz=166
GOGA **Godfrey** **54.21 347** P **P** **18 26 57.5 -0.1**
baz=166
JSC **Jenkinsville** **54.64 350** P **P** **18 26 59.8 -0.9**
LRAL **Lakeview Retre** **54.70 343** P **P** **18 27 01.6 +0.5**
baz=162
BIRD **Birdtown, Kers** **54.86 350** IAmb IAmb 18 27 13.4
comp=Z,30nm,0.9s
BIRD **Birdtown, Kers** **54.86 350** P **P** **18 27 03.9 +1.6**
baz=169,SNR=5.8
833A **Chaparral WMA,** **55.15 329** P **P** **18 27 05.2 +0.8**
baz=147
KMSC **Kings Mountain** **55.49 350** P **P** **18 27 07.6 +0.8**
baz=168
X51A **Calhoun** **55.63 346** P **P** **18 27 08.9 +1.1**
baz=164
X51A P **P** **18 27 08.9 +1.1**
baz=164
V58A **Windy Hill, Pi** **55.80 352** IAmb IAmb 18 27 20.0
comp=Z,26nm,1.1s
V58A **Windy Hill, Pi** **55.80 352** P **P** **18 27 10.3 +1.3**
baz=171
V58A P **P** **18 27 10.3 +1.3**
baz=171
W52A **Murphy** **55.93 347** IAmb IAmb 18 27 11.0
comp=Z,42nm,1.4s
X48A **Hartselle** **56.05 344** IAmb IAmb 18 27 12.3
comp=Z,27nm,1.4s
U59A **Littleton** **56.19 353** IAmb IAmb 18 27 22.9
comp=Z,31nm,1.3s
CPCT **Cooper Cave** **56.40 347** P **P** **18 27 11.5 -1.8**
TKL **Tuckaleechee C** **56.44 347** LR LR 18 52 30.5
comp=Z,332nm,18.9s,baz=160,slow=37
U56A **King** **56.52 351** IAmb IAmb 18 27 44.9
comp=Z,20nm,0.8s
U56A **King** **56.52 351** P **P** **18 27 16.0 +1.8**
baz=170
U56A P **P** **18 27 16.0 +1.8**
baz=170
V52A **Sevierville** **56.59 348** P **P** **18 27 15.4 +0.7**
baz=166,SNR=5.3
OXF **Oxford** **56.76 342** P **P** **18 27 16.7 +0.8**
baz=159
T59A **Double "B" Far** **56.77 354** IAmb IAmb 18 27 27.0
comp=Z,31nm,0.9s
T59A **Double "B" Far** **56.77 354** P **P** **18 27 17.0 +1.1**
baz=173,SNR=6.9
T59A P **P** **18 27 17.0 +1.1**
baz=173,SNR=6.9
PLAL **Pickwick Lake** **56.82 343** P **P** **18 27 14.9 -1.4**
U54A **Nelsons Funny** **56.92 350** IAmb IAmb 18 27 27.8
comp=Z,24nm,0.9s
T57A **Hurt** **57.00 352** IAmb IAmb 18 27 28.9
comp=Z,28nm,1.2s
T57A **Hurt** **57.00 352** P **P** **18 27 18.6 +1.0**
baz=171,SNR=8.6
T57A P **P** **18 27 18.6 +1.0**
baz=171,SNR=8.6
V48A **Smith Brothers** **57.21 345** IAmb IAmb 18 27 29.4
comp=Z,17nm,0.9s
V48A **Smith Brothers** **57.21 345** P **P** **18 27 19.8 +0.7**
baz=162
TZTN **Tazewell** **57.26 348** P **P** **18 27 16.8 -2.6**
TZTN **Tazewell** **57.26 348** P **P** **18 27 19.5 +0.1**
baz=166
BLA **Blacksburg** **57.37 351** P **P** **18 27 21.4 +1.2**
baz=170
WHTX **Lake Whitney,** **57.38 333** P **P** **18 27 20.8 +0.5**
baz=150
U49A **Red Boiling Sp** **57.70 346** P **P** **18 27 22.7 +0.1**
baz=164
S57A **Dark Hollow, R** **57.71 353** IAmb IAmb 18 27 25.2
comp=Z,29nm,1.2s
S57A **Dark Hollow, R** **57.71 353** P **P** **18 27 23.9 +1.3**
baz=171,SNR=6.4
S57A P **P** **18 27 23.9 +1.3**
baz=171,SNR=6.4
R58B **Mineral** **57.79 354** IAmb IAmb 18 27 34.6
comp=Z,38nm,1.4s
R58B **Mineral** **57.79 354** P **P** **18 27 24.4 +1.3**
baz=172,SNR=5.8
R58B P **P** **18 27 24.4 +1.3**
baz=172,SNR=5.8
WVT **Waverly** **57.84 344** P **P** **18 27 23.2 -0.3**
baz=161
WVT **Waverly** **57.84 344** P **P** **18 27 23.2 -0.3**
baz=161
T50A **Nancy** **57.98 347** P **P** **18 27 23.6 -0.8**
T50A **Nancy** **57.98 347** P **P** **18 27 24.8 +0.3**
baz=165
T50A P **P** **18 27 24.8 +0.3**
baz=165
S54A **Dingess, Beckl** **58.08 350** IAmb IAmb 18 27 36.0
comp=Z,25nm,1.0s
TXAR **Lajitas Array** **58.12 326** P **P** **18 27 28.0 +2.3**
comp=Z,2.3nm,1.1s,baz=139,slow=9.9,SNR=5.3
TXAR LR LR 18 52 05.9
comp=Z,268nm,18.4s,baz=140,slow=36
comp=Z,2.3nm,1.1s
MIAR **Mount Ida** **58.14 338** P **P** **18 27 24.6 -1.0**
MIAR IAmb IAmb 18 27 36.9
comp=Z,30nm,1.1s
MIAR **Mount Ida** **58.14 338** P **P** **18 27 26.8 +1.1**
baz=155,SNR=13
MIAR **Mount Ida** **58.14 338** P **P** **18 27 26.4 +0.8**
baz=155
WHAR **Wooly Hollow** **58.38 340** P **P** **18 27 23.9 -3.4**
R55A **Marlinton** **58.38 352** IAmb IAmb 18 27 39.1
comp=Z,56nm,1.8s
R55A **Marlinton** **58.38 352** P **P** **18 27 29.1 +1.7**
baz=170
R55A P **P** **18 27 29.1 +1.7**
baz=170
T47A **Sharon Grove** **58.47 345** P **P** **18 27 25.4 -2.5**
T47A **Sharon Grove** **58.47 345** P **P** **18 27 28.9 +1.0**
baz=162
X37A **Clayton** **58.83 337** P **P** **18 27 32.5 +2.0**
baz=153,SNR=11
FCAR **Ozark Folk Cen** **58.87 340** P **P** **18 27 28.8 -2.0**
ABTX **Abilene, Hawle** **58.88 332** P **P** **18 27 28.7 -2.2**
ABTX **Abilene, Hawle** **58.88 332** P **P** **18 27 32.0 +1.2**
baz=148
Q56A **Snyder Ridge,** **59.01 353** P **P** **18 27 33.0 +1.4**
baz=171
Q56A P **P** **18 27 33.0 +1.4**
baz=171
LOOK **Love County** **59.01 335** P **P** **18 27 30.4 -1.4**
LOOK IAmb IAmb 18 27 43.5
comp=Z,22nm,1.0s
R50A **Paris** **59.09 348** P **P** **18 27 30.2 -2.0**
PBMO **Poplar Bluff** **59.17 342** P **P** **18 27 30.4 -2.3**
PBMO IAmb IAmb 18 27 42.7
comp=Z,11nm,0.7s
Q54A **Coxs Mills** **59.17 351** P **P** **18 27 30.5 -2.2**
Q54A IAmb IAmb 18 27 43.3
comp=Z,12nm,0.8s
Q54A **Coxs Mills** **59.17 351** P **P** **18 27 33.7 +1.0**
baz=169
Q54A P **P** **18 27 33.7 +1.0**
baz=169
CGM3 **Cape Girardeau** **59.43 343** P **P** **18 27 32.0 -2.5**
CGM3 IAmb IAmb 18 27 45.1
comp=Z,19nm,0.9s
Q51A **Peebles** **59.62 349** IAmb IAmb 18 27 46.6
comp=Z,16nm,1.0s
S44A **Carbondale** **59.69 343** P **P** **18 27 36.9 +0.5**
baz=160
SIUC **Southern Illin** **59.70 343** P **P** **18 27 35.5 -0.9**
P53A **Whipple** **59.75 351** P **P** **18 27 35.3 -1.4**
P53A IAmb IAmb 18 27 47.6
comp=Z,24nm,1.0s
P53A **Whipple** **59.75 351** P **P** **18 27 37.8 +1.1**
baz=169
P53A P **P** **18 27 37.8 +1.1**
baz=169
HHAR **Hobbs** **59.83 339** P **P** **18 27 36.9 -0.5**
HHAR IAmb IAmb 18 27 48.5
comp=Z,30nm,1.3s
HHAR **Hobbs** **59.83 339** P **P** **18 27 39.0 +1.6**
baz=155
P51A **Williamsport** **60.02 349** P **P** **18 27 36.8 -1.7**
P51A IAmb IAmb 18 27 48.7
comp=Z,17nm,0.9s
MGMO **Mountain Grove** **60.08 340** P **P** **18 27 38.3 -0.8**
MGMO IAmb IAmb 18 27 49.8
comp=Z,17nm,1.0s
RLO **Rose Lookout** **60.11 338** P **P** **18 27 37.7 -1.5**
RLO IAmb IAmb 18 27 50.6
comp=Z,22nm,1.0s
U38A **Gravette** **60.13 338** P **P** **18 27 39.2 -0.2**
TUL1 **Leonard** **60.16 337** P **P** **18 27 37.9 -1.8**
TUL1 **Leonard** **60.16 337** P **P** **18 27 40.8 +1.1**
baz=153
FVM **French Village** **60.29 342** P **P** **18 27 40.4 -0.1**
FVM IAmb IAmb 18 27 51.1
comp=Z,24nm,0.9s
FVM **French Village** **60.29 342** P **P** **18 27 41.3 +0.9**
baz=159
WMOK **Wichita Mounta** **60.31 334** P **P** **18 27 41.0 +0.3**
baz=150
DEOK **Depew** **60.37 336** **P** **18 27 40.5 -0.5**
DEOK IAmb IAmb 18 27 52.2
comp=Z,42nm,1.1s
P49A **Miami Univ. Ec** **60.38 348** IAmb IAmb 18 27 50.8
comp=Z,23nm,1.0s
P49A **Miami Univ. Ec** **60.38 348** P **P** **18 27 41.0 -0.1**
baz=165
P49A **Miami Univ. Ec** **60.38 348** P **P** **18 27 41.8 +0.7**
baz=165
SSPA **Standing Stone** **60.44 354** P **P** **18 27 41.2 -0.2**
SSPA IAmb IAmb 18 27 56.5
comp=Z,41nm,1.5s
SSPA **Standing Stone** **60.44 354** P **P** **18 27 42.7 +1.3**
baz=173
SSPA **Standing Stone** **60.44 354** P **P** **18 27 42.9 +1.5**
baz=173
O53A **New Philadelph** **60.47 351** P **P** **18 27 42.5 +0.8**
baz=169
N58A **Sunbury** **60.53 355** P **P** **18 27 41.5 -0.6**
CCM **Cathedral Cave** **60.59 342** P **P** **18 27 41.0 -1.5**
CCM IAmb IAmb 18 27 53.1
comp=Z,15nm,1.1s
CCM **Cathedral Cave** **60.59 342** P **P** **18 27 43.1 +0.6**
baz=158,SNR=6.6
CCM **Cathedral Cave** **60.59 342** P **P** **18 27 42.7 +0.2**
baz=158
BELA **Belgrano 2** **60.73 172** IAmb IAmb 18 27 56.6
comp=Z,32nm,1.7s
ACSO **Alum Creek Sta** **60.73 349** P **P** **18 27 42.5 -0.9**
ACSO **Alum Creek Sta** **60.73 349** P **P** **18 27 43.8 +0.4**
baz=167
ACSO **Alum Creek Sta** **60.73 349** P **P** **18 27 43.7 +0.2**
baz=167
QUOK **Quay** **60.73 336** IAmb IAmb 18 27 54.7
comp=Z,28nm,1.0s
Q44A **Meyer Farm, Va** **60.77 344** P **P** **18 27 44.0 +0.4**
baz=161
MNTX **Cornudas Mount** **60.89 327** P **P** **18 27 43.2 -1.5**
MNTX **Cornudas Mount** **60.89 327** P **P** **18 27 46.0 +1.3**
baz=143,SNR=7.4
MNTX **Cornudas Mount** **60.89 327** P **P** **18 27 45.6 +0.8**
baz=143
S39A **Bolivar** **60.90 340** P **P** **18 27 43.0 -1.7**
S39A IAmb IAmb 18 27 55.5
comp=Z,16nm,1.0s
S39A **Bolivar** **60.90 340** P **P** **18 27 45.4 +0.7**
baz=156,SNR=5.1
M57A **Sunshine Farm,** **61.06 355** IAmb IAmb 18 28 00.9
comp=Z,31nm,1.4s
R40A **Maddies Statio** **61.12 341** P **P** **18 27 44.8 -1.3**
R40A IAmb IAmb 18 28 01.0
comp=Z,15nm,0.8s
R40A **Maddies Statio** **61.12 341** P **P** **18 27 46.6 +0.5**
baz=157,SNR=5.2
O48B **Farmland** **61.16 348** P **P** **18 27 45.8 -0.6**
baz=165
T35B **Sooner Cattle** **61.32 337** P **P** **18 27 49.3 +1.7**
baz=153,SNR=7.3
M55A **Ridgway** **61.35 353** P **P** **18 27 49.0 +1.4**
baz=172,SNR=7.2
M55A P **P** **18 27 49.0 +1.4**
baz=172,SNR=7.2
MSTX **Muleshoe** **61.43 330** P **P** **18 27 48.9 +0.5**
baz=146
N49A **Columbus Grove** **61.62 349** P **P** **18 27 50.2 +0.8**
baz=166,SNR=5.3
N49A P **P** **18 27 50.2 +0.8**
baz=166,SNR=5.3
SFIN **Lafayette** **61.70 346** P **P** **18 27 49.5 -0.4**
baz=163
L59A **Walton** **61.76 357** P **P** **18 27 51.5 +1.1**
baz=176,SNR=7.7
L59A P **P** **18 27 51.5 +1.1**
baz=176,SNR=7.7
BCX **Boston College** **61.79 360** IAmb IAmb 18 27 53.0
comp=Z,16nm,0.7s
BINY **Binghamton** **61.83 356** P **P** **18 27 49.1 -1.8**
BINY IAmb IAmb 18 28 02.4
comp=Z,21nm,1.0s
BINY **Binghamton** **61.83 356** P **P** **18 27 52.4 +1.5**
baz=175
BINY **Binghamton** **61.83 356** P **P** **18 27 52.2 +1.3**
baz=175
L56A **Greenwood** **61.89 354** P **P** **18 27 52.8 +1.4**
baz=173
L56A P **P** **18 27 52.8 +1.4**
baz=173
HRV **Adam Dziewonsk** **61.96 360** P **P** **18 27 51.1 -0.6**
HRV IAmb IAmb 18 28 02.5
comp=Z,21nm,1.1s
HRV **Adam Dziewonsk** **61.96 360** P **P** **18 27 52.7 +1.0**
baz=180
P40A **Paris** **62.19 342** IAmb IAmb 18 28 03.8
comp=Z,14nm,1.0s
WVNY **West Valley, N** **62.26 354** P **P** **18 27 54.9 +1.2**
baz=172,SNR=6.9
VNA3 **Neumayer Olymp** **62.33 161** P **P** **18 27 56.5 +2.6**
HDIL **Hopedale** **62.39 344** P **P** **18 27 55.5 +0.9**
baz=161
K57A **Scipio Center** **62.40 355** IAmb IAmb 18 28 05.6
comp=Z,19nm,0.8s
VNA1 **Neumayer--Stat** **62.55 161** P **P** **18 27 58.5 +3.1**
baz=153,SNR=11
ACCN **Adirondack Com** **62.89 358** IAmb IAmb 18 28 00.2
comp=Z,33nm,1.5s
VNA2 **Neumayer--Watz** **62.91 161** P **P** **18 28 00.4 +2.6**
baz=287,slow=8.5
N41A **Harden Midland** **62.95 343** IAmb IAmb 18 28 08.4
comp=Z,25nm,1.0s
J59A **Piesco** **63.00 357** P **P** **18 27 59.9 +1.2**
baz=176,SNR=11
J59A P **P** **18 27 59.9 +1.2**
baz=176,SNR=11
J57A **Williamstown** **63.03 356** IAmb IAmb 18 28 09.9
comp=Z,18nm,1.0s
KSU1 **Kansas State U** **63.29 338** P **P** **18 28 01.4 +0.8**
baz=153
MCVT **Middlebury Col** **63.44 358** P **P** **18 28 03.9 +2.4**
baz=178
NCB **Newcomb** **63.50 357** P **P** **18 28 01.8 -0.2**
NCB IAmb IAmb 18 28 05.2
comp=Z,18nm,1.1s
NCB **Newcomb** **63.50 357** P **P** **18 28 03.4 +1.5**
baz=177,SNR=7.0
BBTS **Babate** **63.54 62** LR LR 18 55 01.2
comp=Z,806nm,18.4s,baz=237,slow=36
L44A **Lake County Fo** **63.59 346** P **P** **18 28 03.3 +0.7**
baz=162
LBNH **Lisbon** **63.70 359** P **P** **18 28 01.8 -1.5**
LBNH IAmb IAmb 18 28 06.4
comp=Z,29nm,1.2s
LBNH **Lisbon** **63.70 359** P **P** **18 28 04.7 +1.4**
baz=179
ANMO **Albuquerque** **64.01 328** LR LR 18 55 37.3
comp=Z,180nm,19.8s,baz=136,slow=36
ANMO **Albuquerque** **64.01 328** P **P** **18 28 04.8 -1.0**
ANMO **Albuquerque** **64.01 328** P **P** **18 28 06.4 +0.6**
baz=143
WVL **Waterville** **64.03 1** IAmb IAmb 18 28 08.3
comp=Z,18nm,1.1s
WVL **Waterville** **64.03 1** P **P** **18 28 07.4 +2.0**
baz=182
LONY **Lake Ozonia** **64.16 357** IAmb IAmb 18 28 17.1
comp=Z,14nm,0.8s
LONY **Lake Ozonia** **64.16 357** P **P** **18 28 07.5 +1.2**
baz=176
CBKS **Cedar Bluff** **64.21 335** P **P** **18 28 07.6 +0.8**
baz=150
EMMW **East Machias** **64.24 3** P **P** **18 28 06.5 -0.3**
EMMW IAmb IAmb 18 28 17.6
comp=Z,18nm,1.0s
L40A **Anamosa** **64.31 343** IAmb IAmb 18 28 17.6
comp=Z,23nm,1.0s
L40A **Anamosa** **64.31 343** P **P** **18 28 08.2 +0.9**
baz=159
BMNY **Brushton-Moira** **64.38 357** P **P** **18 28 08.3 +0.7**
baz=176,SNR=6.4
SNAA **Sanae** **64.54 161** P **P** **18 28 10.0 +1.4**
SNAA **Sanae** **64.54 161** LR LR 18 56 41.4
comp=Z,228nm,18.4s,baz=317,slow=36
SNAA **Sanae** **64.54 161** P **P** **18 28 09.2 +0.6**
SNAA IAmb IAmb 18 28 12.1
comp=Z,29nm,1.4s
SADO **Sadowa** **64.66 354** LR LR 18 58 36.8
comp=Z,276nm,19.2s,baz=180,slow=38
G62A **West of Eustis** **64.67 0** P **P** **18 28 11.2 +1.5**
baz=181,SNR=22
G62A P **P** **18 28 11.2 +1.5**
baz=181,SNR=22
GGN **Saint George** **64.68 3** IAmb IAmb 18 28 12.3
comp=Z,28nm,1.2s
G65A **Princeton** **64.73 3** P **P** **18 28 10.2 +0.2**
G65A IAmb IAmb 18 28 12.6
comp=Z,27nm,1.2s
G65A **Princeton** **64.73 3** P **P** **18 28 11.2 +1.2**
baz=184,SNR=6.6
G65A P **P** **18 28 11.2 +1.2**
baz=184,SNR=6.6
PKME **Peaks-Kenny Pk** **64.74 1** IAmb IAmb 18 28 20.9
comp=Z,17nm,0.8s
PKME **Peaks-Kenny Pk** **64.74 1** P **P** **18 28 11.8 +1.7**
baz=182,SNR=6.4
PKME **Peaks-Kenny Pk** **64.74 1** P **P** **18 28 11.0 +1.0**
baz=182
T25A **Trinidad** **64.79 331** P **P** **18 28 12.4 +1.5**
baz=145
JFWS **Jewell Farm** **64.85 344** IAmb IAmb 18 28 21.3
comp=Z,19nm,0.8s
JFWS **Jewell Farm** **64.85 344** P **P** **18 28 11.2 +0.3**
baz=160
214A **Organ Pipe Nat** **65.21 321** P **P** **18 28 15.1 +1.6**
baz=136
F64A **Sherman** **65.36 2** IAmb IAmb 18 28 16.7
comp=Z,25nm,1.2s
F64A **Sherman** **65.36 2** P **P** **18 28 14.7 +0.6**
baz=183,SNR=7.1
F64A P **P** **18 28 14.7 +0.6**
baz=183,SNR=7.1
LMN **Caledonia Moun** **65.55 5** IAmb IAmb 18 28 17.3
comp=Z,26nm,1.2s
SDCO **Great Sand Dun** **65.79 330** P **P** **18 28 19.4 +2.0**
baz=144,SNR=16
SDCO **Great Sand Dun** **65.79 330** P **P** **18 28 19.7 +2.2**
baz=144
W18A **Petrified Fore** **65.83 326** P **P** **18 28 19.5 +1.9**
baz=140
BGNE **Belgrade** **65.88 338** P **P** **18 28 19.0 +1.4**
baz=152
E62A **Clayton Lake** **66.09 1** P **P** **18 28 18.1 -0.7**
E62A IAmb IAmb 18 28 30.0
comp=Z,18nm,0.8s
E62A **Clayton Lake** **66.09 1** P **P** **18 28 20.2 +1.5**
baz=182
E62A P **P** **18 28 20.2 +1.5**
baz=182
PQI **Presque Isle** **66.18 2** P **P** **18 28 16.9 -2.5**
PQI IAmb IAmb 18 28 22.6
comp=Z,18nm,1.1s
TROLL **Troll, Antarti** **66.25 161** P **P** **18 28 22.5 +2.7**
S22A **4UR Ranch, Cre** **66.42 330** P **P** **18 28 22.1 +0.6**
baz=143
Q24A **Divide** **66.62 332** P **P** **18 28 24.1 +1.4**
baz=145
MVCO **Mesa Verde** **66.81 328** P **P** **18 28 23.5 -0.4**
baz=142
BATG **Bathurst New B** **66.88 4** P **P** **18 28 21.0 -2.8**
BATG IAmb IAmb 18 28 26.3
comp=Z,18nm,1.1s
OGNE **Ogallala** **66.94 335** P **P** **18 28 25.8 +1.3**
baz=148
E43A **Lone Tree Farm** **67.41 348** IAmb IAmb 18 28 37.5
comp=Z,14nm,0.9s
ECSD **EROS Data Cent** **67.43 340** P **P** **18 28 25.5 -1.9**
ECSD IAmb IAmb 18 28 38.6
comp=Z,24nm,1.2s
ECSD **EROS Data Cent** **67.43 340** P **P** **18 28 28.2 +0.8**
baz=154,SNR=11
ECSD **EROS Data Cent** **67.43 340** P **P** **18 28 28.2 +0.8**
baz=154
ISCO **Idaho Springs** **67.51 332** P **P** **18 28 30.8 +2.5**
baz=145,SNR=6.0
ISCO **Idaho Springs** **67.51 332** P **P** **18 28 29.9 +1.5**
baz=145,SNR=6.0
TAOE **Nuku Hiva Isla** **67.53 268** *e*LR LR 18 48 44.3
comp=Z,254nm,24.8s
COWI **Conover** **67.59 346** IAmb IAmb 18 28 39.1
comp=Z,27nm,1.4s
VLDQ **Val d'Or** **67.82 355** IAmb IAmb 18 28 40.9
comp=Z,25nm,1.1s
BC3 **Big Chuckawall** **67.98 321** P **P** **18 28 33.2 +2.0**
baz=135
MONP2 **Monument Peak** **68.03 320** P **P** **18 28 32.4 +0.7**
baz=134
IRM **Iron Mountain** **68.15 321** P **P** **18 28 33.4 +1.2**
baz=135
D41A **Chassel** **68.39 347** P **P** **18 28 34.3 +1.0**
baz=162
F36A **Milaca** **68.45 343** P **P** **18 28 34.6 +0.8**
baz=157,SNR=6.1
TPFO **Pinon Flats** **68.54 320** P **P** **18 28 35.3 +0.5**
baz=134
N23A **Red Feather La** **68.55 332** P **P** **18 28 35.8 +1.0**
baz=145,SNR=5.1
GMRC **Granite Mounta** **68.89 322** P **P** **18 28 36.9 0.0**
baz=135
CIS **Catalina Islan** **69.60 319** P **P** **18 28 41.4 +0.2**
baz=132
BFSC **Mount Baldy Ra** **69.70 320** P **P** **18 28 41.7 -0.3**
baz=133
DRLN **Deer Lake** **69.75 9** P **P** **18 28 40.5 -1.3**
LIC **Lamto** **69.79 75** *e*P **P** **18 28 42.0 -0.8**

	comp=Z,28nm,1.2s							
EYMN	**Ely**	**69.88**	**345**	P		**P**	**18 28 43.1**	**+0.5**
	baz=160							
EYMN	**Ely**	**69.88**	**345**	P		**P**	**18 28 42.8**	**+0.3**
	baz=160							
TIC	**Toumodi**	**69.97**	**75**⇑	*i*P		**P**	**18 28 43.1**	**-0.8**
KIC	**Kosan Boka**	**70.11**	**75**⇑	*i*P		**P**	**18 28 44.0**	**-0.8**
	comp=Z,9.6nm,0.8s							
DBIC	**Dimbokro**	**70.12**	**75**	P		**P**	**18 28 44.4**	**-0.4**
	comp=Z,16nm,1.1s,baz=241,slow=6.6,SNR=8.0							
DBIC				LR		LR	18 57 56.9	
	comp=Z,624nm,20.7s,baz=247,slow=35							
	comp=Z,16nm,1.1s							
DBIC	**Dimbokro**	**70.12**	**75**	IAmb		IAmb	18 29 22.3	
	comp=Z,17nm,0.9s							
K22A	**Casper**	**70.23**	**333**	P		**P**	**18 28 46.3**	**+1.3**
	baz=145							
EDW2	**Edwards Air Fo**	**70.34**	**320**	P		**P**	**18 28 46.0**	**+0.2**
	baz=133							
QSPA	**South Pole Qui**	**70.41**	**180**	LR		LR	18 58 27.9	
	comp=Z,175nm,21.4s,baz=162,slow=35							
QSPA	**South Pole Qui**	**70.41**	**180**	P		**P**	**18 28 46.1**	**+0.2**
QSPA				IAmb		IAmb	18 28 59.0	
	comp=Z,26nm,1.1s							
RSSD	**Black Hills**	**70.42**	**335**	P		**P**	**18 28 47.1**	**+0.9**
	baz=147							
NLU	**North Lily Min**	**70.71**	**328**			pP	18 28 51.6	-1.6
TPNV	**Topopah Spring**	**70.75**	**323**	P		**P**	**18 28 48.6**	**+0.2**
	baz=135							
FURC	**Furnace Creek,**	**70.77**	**322**	P		**P**	**18 28 49.2**	**+0.9**
	baz=134							
B35A	**Bob, Littlefor**	**70.81**	**344**	P		**P**	**18 28 48.8**	**+0.5**
	baz=158,SNR=7.5							
MPMC	**Manual Prospec**	**70.85**	**322**	P		**P**	**18 28 49.3**	**+0.2**
	baz=134							
ISA	**Isabella, Lake**	**71.16**	**321**	P		**P**	**18 28 48.1**	**-2.7**
ISA	**Isabella, Lake**	**71.16**	**321**	P		**P**	**18 28 51.0**	**+0.2**
	baz=133							
DUG	**Dugway, Tooele**	**71.26**	**327**	P		**P**	**18 28 48.9**	**-2.5**
DUG				IAmb		IAmb	18 29 00.4	
	comp=Z,24nm,1.4s							
DUG	**Dugway, Tooele**	**71.26**	**327**	P		**P**	**18 28 52.8**	**+1.4**
	baz=139,SNR=7.8							
AGMN	**Agassiz Nation**	**71.33**	**343**	P		**P**	**18 28 52.3**	**+0.9**
	baz=155							
AGMN	**Agassiz Nation**	**71.33**	**343**	P		**P**	**18 28 52.1**	**+0.6**
	baz=155							
R11A	**Troy Canyon, C**	**71.38**	**324**	P		**P**	**18 28 53.2**	**+1.0**
	baz=136,SNR=6.7							
PKM	**Mcpherson Peak**	**71.45**	**319**	P		**P**	**18 28 53.1**	**+0.4**
	baz=132							
CWC	**Cottonwood Cre**	**71.46**	**321**	P		**P**	**18 28 53.2**	**+0.5**
	baz=134							
PDAR	**Pinedale Array**	**71.66**	**331**	P		**P**	**18 28 56.0**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=163,slow=6.3,SNR=9.6							
PDAR				LR		LR	19 01 39.8	
	comp=Z,170nm,18.1s,baz=123,slow=37							
	comp=Z,0.5nm,0.6s							
MDND	**Maddock**	**72.05**	**340**	P		**P**	**18 28 57.4**	**+1.7**
	baz=152							
TBI	**Tubuai**	**72.23**	**251**	*e*S		**S**	**18 38 18.6**	**-1.1**
	comp=Z,198nm,26.0s							
TBI	**Tubuai**	**72.23**	**251**	*e*LR		LR	18 50 55.2	
	comp=Z,742nm,26.2s							
NV11	**Mina Array Sit**	**72.87**	**323**			pP	18 29 04.6	-1.6
ELK	**Elko**	**72.92**	**326**	LR		LR	19 01 45.0	
	comp=Z,214nm,18.2s,baz=136,slow=36							
NVAR	**Mina Array Bea**	**72.95**	**323**	P		**P**	**18 29 05.1**	**+3.4**
	comp=Z,2.5nm,0.9s,baz=148,slow=6.2,SNR=15							
	comp=Z,2.5nm,0.9s							
PMOZ	**Porto Moniz, M**	**73.31**	**45**	*e*LR		LR	18 55 39.9	
	comp=Z,215nm,20.0s							
RLMT	**Red Lodge**	**73.39**	**333**	P		**P**	**18 29 06.1**	**+2.0**
	baz=143							
LAO	**LASA Array**	**73.41**	**336**	P		**P**	**18 29 06.1**	**+2.2**
	baz=146,SNR=5.1							
LAO	**LASA Array**	**73.41**	**336**	P		**P**	**18 29 05.6**	**+1.6**
	baz=146							
PPT2	**Papeete2**	**73.83**	**257**	*e*P		**P**	**18 29 06.7**	**-0.5**
	comp=Z,70nm,23.5s							
PPT2				*e*S		**SKiKP**	**18 38 36.3**	**+0.6**
	comp=Z,257nm,24.5s							
PPT2	**Papeete2**	**73.83**	**257**	*e*LR		LR	18 51 40.0	
	comp=Z,560nm,24.8s							
PPT	**Papeete**	**73.84**	**257**	LR		LR	18 53 07.7	
	comp=Z,273nm,21.6s,baz=136,slow=29							
KOWA	**Kowa**	**74.13**	**68**	P		**P**	**18 29 07.4**	**-1.4**
DGMT	**Dagmar**	**74.14**	**338**	P		**P**	**18 29 10.2**	**+2.0**
	baz=148							
SCHQ	**Schefferville**	**74.38**	**2**	P		**P**	**18 29 10.2**	**+0.8**
	comp=Z,5.6nm,0.9s,baz=156,slow=6.5,SNR=4.2							
SCHQ				LR		LR	19 06 00.6	
	comp=Z,150nm,18.0s,baz=192,slow=39							
	comp=Z,5.6nm,0.9s							
HLID	**Hailey**	**74.56**	**329**	P		**P**	**18 29 12.1**	**+1.2**
	baz=138							
BOZ	**Bozeman (W)**	**74.80**	**332**	P		**P**	**18 29 14.2**	**+1.9**
	baz=141							
EGMT	**Eagleton**	**75.90**	**334**	P		**P**	**18 29 19.7**	**+1.3**
	baz=143							
MSO	**Missoula**	**76.78**	**331**	P		**P**	**18 29 24.9**	**+1.4**
	baz=139							
YBH	**Yreka Blue Hor**	**77.67**	**323**	LR		LR	19 02 17.8	
	comp=Z,70nm,21.1s,baz=130,slow=35							
L04D	**Klamath Falls**	**77.76**	**324**	P		**P**	**18 29 30.0**	**+0.9**
	baz=131							
J05D	**Fort Rock, OR**	**77.88**	**325**	P		**P**	**18 29 31.1**	**+1.3**
	baz=132							
TORD	**Torodi Ar. Bea**	**78.62**	**72**	P		**P**	**18 29 34.0**	**-0.3**
	comp=Z,29nm,1.1s,baz=254,slow=4.8,SNR=78							
TORD				LR		LR	19 02 32.0	
	comp=Z,668nm,21.5s,baz=204,slow=34							
	comp=Z,29nm,1.1s							
K02D	**Willamette Mer**	**78.83**	**323**	P		**P**	**18 29 35.4**	**+0.4**
	baz=130							
I04A	**Tendick Farm,**	**78.86**	**325**	P		**P**	**18 29 35.5**	**+0.5**
	baz=132							
HAWA	**Hanford**	**79.12**	**328**			pP	18 29 40.2	-1.7
NEW	**Newport**	**79.29**	**331**	LR		LR	19 07 32.9	
	comp=Z,103nm,18.1s,baz=126,slow=38							
I02E	**Swisshome, OR**	**79.85**	**324**	P		**P**	**18 29 41.6**	**+1.2**
	baz=130							
SUR	**Sutherland**	**81.12**	**121**	LR		LR	19 04 11.1	
	comp=Z,261nm,18.3s,baz=266,slow=35							
RAR	**Rarotonga**	**81.99**	**250**	LR		LR	18 57 56.8	
	comp=Z,388nm,18.4s,baz=112,slow=30							
MDT	**Midelt**	**82.15**	**51**	LR			19 05 11.5	
	comp=Z,213nm,19.7s,baz=250,slow=35							
MESJ	**Messejana**	**82.18**	**45**	*e*P		**P**	**18 29 52.4**	**-0.5**
MESJ				*e*SS		SS	18 45 28.6	+0.9
MESJ				IAMs_20		IAMs_20	19 07 42.1	
	comp=Z,338nm,20.6s							
PVAQ	**Vaqueiros**	**82.29**	**46**	*e*LR		LR	18 58 59.5	
	comp=Z,285nm,16.0s							
TSUM	**Tsumeb**	**82.39**	**108**	LR		LR	19 03 08.6	
	comp=Z,259nm,20.9s,baz=258,slow=33							
TSUM	**Tsumeb**	**82.39**	**108**	P		**P**	**18 29 52.8**	**-2.0**
TSUM				IAmb		IAmb	18 29 57.4	
	comp=Z,17nm,1.1s							
PMTG	**Montargil**	**82.84**	**44**	*e*P		**P**	**18 29 57.3**	**+0.9**
	comp=Z,23nm,1.2s							
PESTR	**Estremoz**	**83.15**	**45**	*e*P		**P**	**18 29 59.2**	**+1.2**
	comp=Z,22nm,1.5s							
PBAR	**Barrancos**	**83.15**	**45**	*e*P		**P**	**18 29 59.1**	**+1.1**
	comp=Z,14nm,1.4s							
FRB	**Frobisher Bay**	**83.26**	**1**	LR		LR	19 06 46.4	
	comp=Z,306nm,22.0s,baz=192,slow=36							
PMRV	**Marv??o**	**83.58**	**44**	*e*P		**P**	**18 30 00.8**	**+0.6**
	comp=Z,16nm,1.5s							
PMRV	**Marv??o**	**83.58**	**44**	*e*LR		LR	19 00 22.7	
	comp=Z,332nm,16.0s							
PCBR	**Castelo Branco**	**83.74**	**44**	*e*P		**P**	**18 30 01.7**	**+0.7**
	comp=Z,20nm,1.7s							
PVIS	**Viseu**	**83.94**	**43**	*e*P		**P**	**18 30 02.7**	**+0.6**
	comp=Z,24nm,1.5s							
MTE	**Manteigas**	**83.99**	**43**	*e*P		**P**	**18 30 03.1**	**+0.7**
	comp=Z,32nm,1.5s							
MTE	**Manteigas**	**83.99**	**43**	*e*LR		LR	19 00 45.7	
	comp=Z,526nm,16.0s							
PGAV	**Gavieira, Arco**	**84.37**	**42**	*e*LR		LR	19 00 54.9	
	comp=Z,606nm,20.0s							
MVO	**Moncorvo**	**84.73**	**43**	*e*P		**P**	**18 30 07.0**	**+0.9**
	comp=Z,26nm,1.7s							
MVO	**Moncorvo**	**84.73**	**43**	*e*LR		LR	19 00 48.5	
	comp=Z,483nm,20.0s							
PBRG	**Bragança**	**85.25**	**43**	*e*P		**P**	**18 30 09.3**	**+0.6**
	comp=Z,26nm,1.4s							

PAB	**San Pablo**	**85.66**	**45**	P		**P**	**18 30 10.2**	**-0.6**
PAB				IAmb		IAmb	18 30 13.0	
	comp=Z,16nm,1.2s							
BOSA	**Boshof**	**85.97**	**119**	P		**P**	**18 30 14.9**	**+2.1**
	comp=Z,7.0nm,1.1s,baz=225,slow=5.7,SNR=4.3							
	comp=Z,7.0nm,1.1s							
ESDC	**Sonseca Array**	**85.98**	**45**	P		**P**	**18 30 13.4**	**+1.0**
	comp=Z,6.5nm,1.1s,baz=246,slow=5.2,SNR=31							
ESDC				LR		LR	19 08 21.4	
	comp=Z,260nm,18.1s,baz=238,slow=36							
	comp=Z,6.5nm,1.1s							
ESBB	**Sonseca Array**	**85.98**	**45**	IAmb		IAmb	18 30 14.7	
	comp=Z,18nm,1.3s							
MAW	**Mawson**	**86.53**	**164**	P		**P**	**18 30 16.9**	**+2.3**
	comp=Z,6.5nm,1.0s,baz=234,slow=6.9,SNR=8.0							
MAW				LR		LR	19 11 48.8	
	comp=Z,150nm,18.1s,baz=234,slow=38							
	comp=Z,6.5nm,1.0s							
MAW	**Mawson**	**86.53**	**164**	P		**P**	**18 30 13.2**	**-1.3**
BBB	**Bella Bella**	**87.15**	**329**	LR		LR	19 12 26.8	
	comp=Z,56nm,18.4s,baz=128,slow=38							
SFJD	**Kangerlussuaq**	**87.83**	**8**	LR		LR	19 08 23.1	
	comp=Z,154nm,21.7s,baz=194,slow=35							
YKA	**Yellowknife Ar**	**88.93**	**341**	P		**P**	**18 30 27.0**	**+1.1**
	comp=Z,16nm,1.0s,baz=136,slow=4.8,SNR=63							
YKA				LR		LR	19 13 36.6	
	comp=Z,288nm,20.3s,baz=139,slow=38							
	comp=Z,16nm,1.0s							
YKA	**Yellowknife Ar**	**88.93**	**341**	P		**P**	**18 30 24.4**	**-1.5**
WRAK	**Wrangell Islan**	**91.65**	**331**	P		**P**	**18 30 40.7**	**+2.0**
	baz=124							
DLBC	**Dease Lake**	**91.79**	**333**	LR		LR	19 14 42.8	
	comp=Z,277nm,19.6s,baz=106,slow=37							
DLBC	**Dease Lake**	**91.79**	**333**	P		**P**	**18 30 41.0**	**+1.6**
	baz=126							
BORG	**Borgarnes**	**92.42**	**19**	LR		LR	19 10 23.6	
	comp=Z,126nm,19.4s,baz=224,slow=34							
LSZ	**Lusaka**	**93.25**	**107**	LR		LR	19 09 52.4	
	comp=Z,289nm,21.8s,baz=250,slow=34							
KEST	**Kesra**	**93.82**	**53**	LR		LR	19 13 46.5	
	comp=Z,312nm,20.7s,baz=198,slow=36							
URZ	**Urewera**	**93.98**	**227**	LR		LR	19 03 59.3	
	comp=Z,436nm,20.4s,baz=191,slow=30							
EKA	**Eskdalemuir Ar**	**94.17**	**32**	LR		LR	19 08 13.5	
	comp=Z,130nm,21.5s,baz=252,slow=32							
RPZ	**Rata Peaks**	**95.09**	**220**	LR		LR	19 04 01.2	
	comp=Z,339nm,20.9s,baz=86,slow=29							
AFI	**Afiamalu**	**95.23**	**253**	LR		LR	19 05 53.7	
	comp=Z,204nm,18.2s,baz=50,slow=30							
RES	**Resolute Bay**	**95.47**	**354**	LR		LR	19 18 23.8	
	comp=Z,166nm,18.3s,baz=130,slow=38							
DAVOX	**Davos/Dischmat**	**98.12**	**43**	LR		LR	19 15 36.2	
	comp=Z,205nm,18.4s,baz=258,slow=36							
VAE	**Valguarnera**	**98.25**	**53**	LR		LR	19 15 55.6	
	comp=Z,259nm,20.1s,baz=286,slow=36							
JMIC	**Jan Mayen**	**100.08**	**17**	LR		LR	19 13 35.6	
	comp=Z,74nm,20.4s,baz=244,slow=34							
GERES	**GERESS Array B**	**101.22**	**42**	P		**Pdif**	**18 31 22.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=298,slow=2.1,SNR=4.9							
KHC	**Kasperske Hory**	**101.23**	**42**	AMS		AMS	19 14 00.0	
	comp=Z,300nm,18.8s							
PRU	**Pruhonice**	**102.08**	**41**	AMS		AMS	19 20 20.0	
	comp=Z,200nm,15.7s							
PVCC	**Panska Ves**	**102.25**	**41**	AMS		AMS	19 16 30.0	
	comp=Z,200nm,16.3s							
TREC	**Trest**	**102.48**	**42**	AMS		AMS	19 14 40.0	
	comp=Z,200nm,17.1s							
UPC	**Upice**	**103.13**	**41**	AMS		AMS	19 12 50.0	
	comp=Z,200nm,18.2s							
OSTC	**Ostas**	**103.27**	**41**	AMS		AMS	19 13 00.0	
	comp=Z,200nm,17.5s							
DPC	**Doruska-Polom**	**103.28**	**41**	AMS		AMS	19 12 50.0	
	comp=Z,200nm,21.2s							
KRLC	**Kraliky**	**103.49**	**41**	AMS		AMS	19 17 40.0	
	comp=Z,200nm,13.9s							
OKC	**Ostrava-Krasne**	**104.29**	**42**	AMS		AMS	19 15 30.0	
	comp=Z,200nm,22.2s							
DZM	**Mont Dzumac**	**110.17**	**236**	*e*LR		LR	19 08 31.3	
	comp=Z,344nm,22.4s							
STKA	**Stephens Creek**	**119.90**	**212**	PKP		**PKiKP**	**18 36 26.1**	**+3.1**
	comp=Z,1.2nm,0.7s,baz=90,slow=3.0,SNR=3.3							
H11S2	**WAKE ISLAND Hyl**	**25.72**	**279**	T		T	20 55 52.9	
	baz=101,slow=74,SNR=180							
H11S1	**WAKE ISLAND Hyl**	**25.73**	**279**	T		T	20 55 57.5	
	baz=101,slow=74,SNR=43							
H11S3	**WAKE ISLAND Hyl**	**25.74**	**279**	T		T	20 55 54.4	
	baz=101,slow=74,SNR=64							
H11N3	**WAKE ISLAND Hyl**	**25.77**	**280**	T		T	20 55 58.3	
	baz=102,slow=74,SNR=36							
H11N2	**WAKE ISLAND Hyl**	**25.78**	**280**	T		T	20 55 58.5	
	baz=102,slow=74,SNR=42							
H11N1	**WAKE ISLAND Hyl**	**25.78**	**280**	T		T	20 55 59.5	
	baz=102,slow=74,SNR=28							
ASAR	**Alice Springs**	**130.48**	**210**	PKP		**PKiKP**	**18 36 44.8**	**+0.6**
	comp=Z,2.4nm,1.1s,baz=148,slow=2.7,SNR=8.3							
ABKAR	**Akbulak array**	**131.16**	**41**	PKPdf		**PKPdf**	**18 36 40.4**	**-3.3**
WRA	**Warramunga Arr**	**133.39**	**214**	PKP		**PKiKP**	**18 36 50.1**	**0.0**
	comp=Z,1.7nm,1.1s,baz=148,slow=1.9,SNR=8.2							
KURBB	**Kurchatov Arra**	**140.90**	**31**	PKP		**PKPdf**	**18 37 01.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=318,slow=2.0,SNR=2.8							
ZALV	**Zalesovo Beam**	**141.16**	**23**	PKhKP		PKPpre	18 36 56.3	
	comp=Z,0.3nm,0.3s,baz=168,slow=30,SNR=2.2							
ZALV				PKP		**PKPdf**	**18 37 02.9**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=318,slow=2.0,SNR=12							
ZALV	**Zalesovo Beam**	**141.16**	**23**	PKPdf		**PKPdf**	**18 36 59.1**	**-3.0**
MKAR	**Makanchi Array**	**145.30**	**33**	PKPbc		**PKPab**	**18 37 10.6**	**+0.9**
	comp=Z,13nm,1.1s,baz=320,slow=3.2,SNR=51							
KSH	**Kashi**	**145.45**	**48**	PKPbc		**PKPab**	**18 37 11.8**	**+1.2**
KSH				LR		LR		
	comp=Z,320nm,14.1s							
KSH				LR		LR		
	comp=Z,350nm,17.9s							
USRK	**Ussuriysk Ar.**	**149.01**	**327**	PKPbc		**PKiKP**	**18 37 22.3**	**+0.9**
	comp=Z,5.6nm,0.9s,baz=42,slow=3.1,SNR=12							
USRK	**Ussuriysk Ar.**	**149.01**	**327**			**PKiKP**	**18 37 21.6**	**+0.3**
MJAR	**Matsushiro Arr**	**149.49**	**309**	PKP		**PKPdf**	**18 37 18.1**	**+1.1**
MJAR				PKPbc		**sPKPdf**	**18 37 24.0**	**-0.6**
	comp=Z,1.3nm,1.1s,baz=100,slow=2.0,SNR=1.7							
	comp=Z,6.5nm,1.1s,baz=144,slow=2.0,SNR=8.1							
WMQ	**Urumqi**	**150.11**	**32**	*e*PKPbc		**PKPdf**	**18 37 16.8**	**-1.0**
WMQ				LR		LR		
	comp=Z,410nm,19.7s							
WMQ				LR		LR		
	comp=Z,300nm,20.5s							
HYBB	**Hyderabad (bro**	**151.04**	**90**	*e*PKiKP		**PKPbc**	**18 37 24.9**	**-0.9**
SONM	**Songino Array**	**151.92**	**4**	PKP		**PKPdf**	**18 37 22.4**	**+1.8**
	comp=Z,1.0nm,1.0s,baz=170,slow=0.9,SNR=6.3							
SONM				PKPbc		**PKiKP**	**18 37 28.5**	**+1.0**
	comp=Z,6.4nm,1.1s,baz=316,slow=1.4,SNR=20							
SONM	**Songino Array**	**151.92**	**4**	PKPdf		**PKPdf**	**18 37 18.8**	**-1.7**
SONM						**PKPdf**	**18 37 22.4**	**+1.8**
KSRS	**Korea Array**	**155.88**	**321**	PKP		**PKPdf**	**18 37 28.1**	**+1.8**
	comp=Z,1.7nm,1.0s,baz=8.4,slow=1.2,SNR=8.1							
GTA	**Gaotai**	**158.87**	**20**	*e*P		**PKPab**	**18 38 01.0**	**-5.1**
GTA				pP		sPKPab	18 38 16.4	+2.8
GTA				sP		pPKPab	18 38 23.3	+12
GTA				pmax		pmax		
	comp=Z,3.0nm,1.1s							
GTA	**Gaotai**	**158.87**	**20**	*e*PKP		**PKPdf**	**18 37 32.6**	**+2.4**
GTA				SS		SS	19 01 51.1	+3.3
GTA				LR		LR		
	comp=Z,95nm,19.6s							
GTA				LR		LR		
	comp=Z,110nm,20.0s							
GTA				LR		LR		
	comp=Z,180nm,18.9s							
HHC	**Hu-ho-hao-te**	**158.88**	**355**	*e*PKP		**PKPdf**	**18 37 25.8**	**-4.3**
PSI	**Prapat**	**160.46**	**148**	PKPab		**PKPab**	**18 38 15.6**	**+2.0**
	comp=Z,4.3nm,0.6s,baz=172,slow=7.1,SNR=1.9							
CD2	**Chengdu**	**167.93**	**22**	PKP		**PKPdf**	**18 37 36.8**	**-2.1**
CMAR	**Chiang Mai Arr**	**170.38**	**96**	PKP		**PKPdf**	**18 37 41.9**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=245,slow=3.9,SNR=4.2							
CMAR				PKPab		**PKPab**	**18 38 57.9**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=283,slow=5.6,SNR=6.5							
PZH	**PanZhiHua**	**170.52**	**44**	PKP		**PKPdf**	**18 37 39.3**	**-1.4**

IDC ***16*** *18:31:07.9±0.8, 19.°09N×122.°71E, h0km, mb4.0/8, mbtmp3.9/9, ML3.4/1, MS4.3/4, Error ellipse: s-maj=45.1km s-min=16.4km az=79.0*

MAN ***16*** *18:31:10, 19.°36N×121.°23E, h33km, Ms3.6*

NEIC ***16*** *18:31:12.8±1.7, 19.°22N±0.°10×120.°9E±0.°2, h46km±9km, mb4.7/10, Error ellipse: s-maj=21.7km s-min=14.1km az=83.0*

ISC 16 18:31:11.6±0.6,**19.°30N**±0.°04×**121.°28E**±0.°09,**h35**km,**n45**, σ1§**91**/**44**,**mb4.3**/14,**MS4.2**/5,**2C-6D**,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SGCP	**Gonzaga**	**1.28**	**145**	⇓	*e*P		**Pn**	**18 31 33.2**	**+0.1**
SGCP					*e*S		**Sn**	**18 31 49.8**	**+0.8**
SIPP	**Brgy, Tapao**	**1.58**	**210**	⇓	*e*P		**Pn**	**18 31 38.6**	**+1.4**
SIPP					*e*S		Sn	18 32 08.7	+12
SAMP	**Sagada Mountai**	**2.24**	**189**	⇓	*e*P		**Pn**	**18 31 46.7**	**+0.4**
SAMP					*e*S		**Sn**	**18 32 13.7**	**+1.0**
PALP	**Palanan**	**2.48**	**154**	⇓	*e*P		**Pn**	**18 31 50.8**	**+1.2**
PALP					*e*S		**Sn**	**18 32 22.6**	**+4.0**
SMPP	**San Manuel, Pa**	**3.19**	**190**	⇓	*e*P		**Pn**	**18 31 59.5**	**+0.2**
SMPP					*e*S		**Sn**	**18 32 38.1**	**+2.0**
TWG	**Pinlang**	**3.51**	**357**	P	n		**Pn**	**18 32 05.2**	**+1.6**
BALP	**Baler**	**3.55**	**175**	⇓	*e*P		**Pn**	**18 32 05.4**	**+1.1**
BALP					*e*S		**Sn**	**18 32 51.0**	**+5.9**
PCPH	**Palayan**	**3.72**	**183**	⇑	*e*P		**Pn**	**18 32 07.8**	**+1.1**
TPUB	**Ta-pu**	**4.03**	**351**	P	n		**Pn**	**18 32 12.1**	**+1.2**
YULB	**Yu-li**	**4.07**	**0**				**Pn**	**18 32 12.7**	**+1.2**
SSLB	**Suanglung**	**4.47**	**356**				**Pn**	**18 32 18.8**	**+1.7**
NACB	**Ninganchiao**	**4.86**	**3**	P	n		**Pn**	**18 32 24.3**	**+2.1**
LQP	**Lukban**	**5.17**	**177**	⇑	*e*P		**Pn**	**18 32 30.3**	**+3.5**
YHNB	**Yeheng**	**5.34**	**1**				**Pn**	**18 32 31.4**	**+2.4**
YOJ	**Yonaguni jima**	**5.38**	**17**	P	n		Pn	18 32 34.8	+5.4
KNMB	**Chin-men Tao**	**5.79**	**333**	P	n		**Pn**	**18 32 33.8**	**-1.4**
KSRS	**Korea Array**	**19.00**	**16**	P			**P**	**18 35 29.4**	**-0.8**
	0.1nm,0.3s,baz=196,slow=11,SNR=4.6								
	0.5nm,0.5s								
CMAR	**Chiang Mai Arr**	**21.15**	**271**	LR			LR	18 43 46.3	
	comp=Z,46nm,20.4s,baz=85,slow=34								
BATI	**Baunata**	**29.42**	**175**	P			**P**	**18 37 12.1**	**+0.1**
	5.7nm,0.4s,baz=329,slow=5.9,SNR=2.6								
	5.7nm,0.4s								
ULN	**Ulaanbaatar**	**30.75**	**341**				**P**	**18 37 22.9**	**-0.8**
ULN				IAmb			IAmb	18 37 39.1	
	comp=Z,19nm,1.3s								
FITZ	**Fitzroy Crossi**	**37.41**	**173**	P			**P**	**18 38 18.2**	**-3.3**
	comp=Z,2.3nm,1.0s,baz=344,slow=7.4,SNR=2.6								
	comp=Z,2.3nm,1.0s								
WRA	**Warramunga Ar**	**41.05**	**161**	P			**P**	**18 38 48.1**	**-3.9**
	comp=Z,0.5nm,0.5s,baz=342,slow=9.0,SNR=20								
WRA				PcP			**PcP**	**18 40 50.9**	**-0.6**
	comp=Z,1.2nm,1.2s,baz=342,slow=2.8,SNR=1.8								
	comp=Z,0.5nm,0.5s								
MKAR	**Makanchi Array**	**42.00**	**320**	P			P	18 39 10.8	+11
	comp=Z,0.6nm,0.6s,baz=114,slow=8.2,SNR=4.2								
	comp=Z,0.6nm,0.6s								
ASAR	**Alice Springs**	**44.45**	**163**	P			**P**	**18 39 16.7**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=343,slow=7.0,SNR=44								
ASAR				PcP			**PcP**	**18 41 01.9**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=341,slow=3.5,SNR=1.4								
	comp=Z,0.9nm,0.3s								
KURBB	**Kurchatov Arra**	**45.97**	**323**	P			P	18 39 39.0	+7.8
	comp=Z,1.0nm,0.6s,baz=119,slow=7.8,SNR=7.9								
	comp=Z,1.0nm,0.6s								
BBOO	**Buckleboo**	**53.71**	**165**	P			**P**	**18 40 28.5**	**-1.8**
ABKAR	**Akbulak array**	**56.97**	**317**	P			**P**	**18 40 54.8**	**+1.1**
ABKAR	**Akbulak array**	**56.97**	**317**	P			**P**	**18 40 54.6**	**+1.1**
ABKAR				IAmb			IAmb	18 41 08.1	
	comp=Z,1.1nm,0.8s								
O18K	**Koktuh Hills**	**70.28**	**32**	P			**P**	**18 42 22.8**	**+1.5**
O18K				IAmb			IAmb	18 42 57.0	
	comp=Z,10nm,1.2s								
RSO	**Redoubt South**	**71.44**	**31**	P			**P**	**18 42 28.0**	**-0.5**
OHAK	**Old Harbor**	**71.54**	**35**	P			**P**	**18 42 29.1**	**+0.2**
OHAK				IAmb			IAmb	18 42 52.9	
	comp=Z,5.0nm,1.1s								
ILAR	**Eielson Array**	**73.51**	**27**	P			**P**	**18 42 39.6**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=279,slow=5.1,SNR=2.4								
	comp=Z,0.2nm,0.6s								
KEV	**Kevo**	**73.53**	**339**	P			**P**	**18 42 40.4**	**-0.1**
PWL	**Port Wells**	**73.54**	**31**	P			**P**	**18 42 41.0**	**+0.2**

ROCH ⇑eP Pb 18 43 10.2 +0.1
ROCH eS Sn 18 43 23.6 -0.7
ROCH eS Sb 18 43 24.0 +0.6
ROCH IAML 18 43 31.3
comp=N,16μm,0.6s
ROCH IAML 18 43 31.3
comp=N,19μm,0.3s
MT05 Renca 1.10 81 Pb 18 43 10.8 -0.1
MT05 Renca 1.10 81⇓eP Pb 18 43 10.8 -0.1
MT05 eS Sn 18 43 24.4 -1.0
MT05 IAML 18 43 28.1
comp=E,16μm,0.2s
MT05 Renca 1.10 81 eP Pb 18 43 11.0 +0.1
MT05 IAML 18 43 33.3
comp=Z,8μm,0.8s
BO01 Tunca 1.14 136 Pn 18 43 10.8 -0.5
BO01 Tunca 1.14 136⇓eP Pb 18 43 10.9 -0.6
BO01 eS Sb 18 43 24.2 -1.7
BO01 IAML 18 43 32.8
comp=N,11μm,0.9s
BO01 Tunca 1.14 136 eP Pb 18 43 10.9 -0.6
BO01 eP Pb 18 43 11.0 -0.6
BO01 eS Sn 18 43 26.4 +0.1
BO01 IAML 18 43 37.2
comp=Z,4μm,0.6s
VA06 Catapilco 1.18 32 Pn Pb 18 43 12.1 0.0
VA06 Sb 18 43 27.4 +0.4
VA06 Catapilco 1.18 32⇑eP Pb 18 43 12.3 +0.1
VA06 eS Sb 18 43 27.7 +0.6
VA06 IAML 18 43 31.9
comp=E,25μm,0.4s
PEL Peldehue 1.21 70 Pn Pb 18 43 12.9 +0.2
PEL Peldehue 1.21 70⇑eP Pb 18 43 12.7 0.0
PEL eS Sb 18 43 28.3 +0.4
PEL IAML 18 43 35.9
comp=N,10μm,0.2s
PEL Peldehue 1.21 70 eP Pb 18 43 13.0 +0.3
MT03 Universidad Ad 1.28 87 Pn 18 43 13.5 -0.4
MT03 Universidad Ad 1.28 87⇓eP Pb 18 43 13.7 -0.2
MT03 *i* S Sb 18 43 29.8 -0.1
MT03 IAML 18 43 36.0
comp=N,14μm,0.2s
MT03 Universidad Ad 1.28 87 eP Pb 18 43 14.0 +0.1
MT03 eS Sb 18 43 32.5 +2.5
MT03 IAML 18 43 37.9
comp=Z,13μm,0.8s
GO05 Huala 1.44 176 Pn Pn 18 43 15.8 +0.4
GO05 Huala 1.44 176 eP Pn 18 43 15.8 +0.4
GO05 eS Sn 18 43 33.3 -0.4
GO05 Huala 1.44 176 eP Pn 18 43 02.1 -13
GO05 eS Sb 18 43 39.1 +4.6
FCH Farellones 1.48 81⇓eP Pb 18 43 17.2 -0.3
FCH eS Sb 18 43 36.2 +0.2
FCH IAML 18 43 42.0
comp=N,10μm,0.3s
VA03 San Esteban 1.48 58 Pb 18 43 17.1 -0.3
VA03 San Esteban 1.48 58⇑eP Pb 18 43 17.2 -0.3
VA03 eS Sb 18 43 35.6 -0.3
VA03 IAML 18 43 43.5
comp=N,13μm,0.6s
VA03 San Esteban 1.48 58 eP Pb 18 43 17.4 0.0
VA03 eS Sb 18 43 38.4 +2.5
VA03 IAML 18 43 43.4
comp=Z,8μm,1.3s
LMEL Las Melosas 1.56 101 Pn 18 43 17.3 +0.2
LMEL Las Melosas 1.56 101⇓eP Pb 18 43 17.7 -0.9
LMEL eS Sb 18 43 37.1 -0.8
LMEL IAML 18 43 46.2
comp=N,7μm,0.2s
BO02 Sierra Bellavi 1.60 140 Pn 18 43 18.0 +0.3
BO02 Sierra Bellavi 1.60 140⇑eP Pb 18 43 18.4 -1.1
BO02 eS Sb 18 43 38.3 -1.1
BO02 IAML 18 43 41.4
comp=N,11μm,0.5s
BO02 Sierra Bellavi 1.60 140 eP Pb 18 43 18.6 -0.9
BO02 eS Sb 18 43 42.5 +3.2
BO02 IAML 18 43 43.6
comp=Z,8μm,0.2s
ML02 Panimavida 2.25 167 Pn Pn 18 43 25.9 -0.6
ML02 Panimavida 2.25 167⇑eP Pb 18 43 29.6 -0.7
ML02 *i* S Sb 18 43 57.3 -0.4
ML02 IAML 18 44 05.2
comp=E,9μm,0.6s
CO02 Combarbal 2.52 21 Pn 18 43 31.2 +0.9
CO02 Combarbal 2.52 21 eP Pn 18 43 31.1 +0.9
CO02 eS Sb 18 44 05.1 -0.5
CO02 IAML 18 44 13.2
comp=Z,3μm,1.0s
ARCO CERRO ARCO 2.70 75 eP Pb 18 43 37.0 -1.2
ARCO eS Sb 18 44 17.4 +6.4
ARCO IAML 18 44 19.3
comp=Z,2μm,1.1s
AAGR Agrelo 2.73 81 eP Pb 18 43 36.9 -1.7
AAGR eP Pb 18 43 37.0 -1.7
AAGR eS Sb 18 44 13.6 +1.8
AAGR IAML 18 44 29.5
comp=Z,1μm,1.4s
ASAL Salagasta 2.86 71 eP Pb 18 43 39.7 -1.2
ASAL eP Pn 18 43 40.0 +5.0
ASAL eS Sb 18 44 16.1 +0.6
CO06 Fray Jorge 2.91 7 Pn 18 43 35.4 -0.2
RTLS Leoncito 2.91 53 eP Pb 18 43 40.0 -1.8
RTLS IAML 18 44 25.1
comp=Z,916nm,0.7s
CO03 El Pedregal 2.95 23 Pn 18 43 37.2 +0.9
CO03 El Pedregal 2.95 23 eP Pn 18 43 37.0 +0.7
CO03 eP Pb 18 43 37.6 -4.8
CO03 eS Sb 18 44 16.6 -1.5
CO03 IAML 18 44 31.7
comp=Z,1μm,1.1s
RFA San Rafael 3.20 113 eP Pn 18 43 38.6 -1.0
RFA eP Pb 18 43 42.5 -4.0
RFA eS Sb 18 44 38.1 +13
RFA IAML 18 44 42.4
comp=Z,468nm,0.8s
BI05 Punta Hualpn 3.31 196 Pn 18 43 40.2 -0.9
ZON Zonda 3.48 56 Pn 18 43 45.4 +1.9
GO04 Tololo Observa 3.55 18 Pn Pn 18 43 45.2 +0.7
GO04 Tololo Observa 3.55 18 eP Pn 18 43 45.0 +0.4
GO04 eS Sn 18 44 30.6 +4.6
CO05 La Serena 3.70 11 Pn 18 43 46.4 0.0
RTLL Cerro Villicun 3.75 54 eP Pn 18 43 50.0 +2.8
RTLL eS Sb 18 44 43.8 +2.8
ACCO Cerro Coronel 3.90 41 eP Pn 18 43 53.0 +3.5
CO01 Juntas del Tor 3.95 25 Pn 18 43 51.4 +1.4
CO01 Juntas del Tor 3.95 25 eP Pn 18 43 52.0 +1.9
CO01 eS Sn 18 44 38.6 +2.7
CO01 IAML 18 44 53.3
comp=Z,512nm,1.2s
LCO Las Campanas 4.69 15 Pn Pn 18 44 00.2 0.0
AC05 El Transito 4.95 18 Pn Pn 18 44 04.6 +0.8
AC04 Llanos de Chal 5.41 9 Pn 18 44 09.4 -0.6
VA04 Juan Fernndez 5.67 267 Pn Pn 18 44 13.8 +0.4
H03S1 Juan Fernandez 5.73 265 T T 18 50 15.0
baz=95
H03S3 Juan Fernandez 5.73 266 T T 18 50 32.2
baz=95
H03N1 Juan Fernandez 5.74 269 T T 18 50 11.6
baz=98,slow=74,SNR=87
H03S2 Juan Fernandez 5.75 265 T T 18 50 11.4
baz=95
H03N3 Juan Fernandez 5.75 269 T T 18 50 16.5
baz=98,slow=74,SNR=92
H03N2 Juan Fernandez 5.76 269 T T 18 50 17.3
baz=98,slow=74,SNR=135
GO06 Curarrehue 6.02 176 Pn Pn 18 44 17.5 -0.9
GO03 Copiap 6.16 15 Pn Pn 18 44 20.1 -0.2
AC06 Mina Casimiro 6.36 14 Pn 18 44 22.6 -0.5
LR04 Corral 6.40 190 Pn Pn 18 44 23.5 +0.1
AC02 Maricunga 7.17 21 Pn Pn 18 44 34.5 -0.1
PLCA Paso Flores 7.25 171 Pn Pn 18 44 36.6 +1.4
comp=Z,0.9nm,0.3s,baz=326,slow=8.9,SNR=15
PLCA Lg Lg 18 46 32.2
comp=Z,0.6nm,0.3s,baz=263,slow=21,SNR=1.9
PLCA LR LR 18 47 34.7
comp=Z,720nm,18.0s,baz=360,slow=40
comp=Z,3.8nm,0.5s
PLCA Paso Flores 7.25 171 Pn Pn 18 44 35.4 +0.1
PLCA Paso Flores 7.25 171 eP Pn 18 44 35.2 -0.1
AC01 Pan de Azucar 7.50 10 Pn Pn 18 44 37.6 -1.1
LL03 Petrohue 7.56 182 Pn Pn 18 44 39.4 -0.1
GO02 Mina Guanaco 8.64 15 Pn Pn 18 44 52.5 -2.2
PB14 IPOC Station P 9.03 10 Pn Pn 18 44 56.3 -3.6

PB06 IPOC Station P 11.04 12 Pn Pn 18 45 25.8 -1.6
LVC Limon Verde 11.26 15 Pn Pn 18 45 29.9 -0.7
comp=Z,0.4nm,0.3s,baz=209,slow=10,SNR=2.8
LVC LR LR 18 50 17.2
comp=Z,514nm,19.3s,baz=193,slow=40
comp=Z,1.4nm,0.3s
LVC Limon Verde 11.26 15 Pn Pn 18 45 25.5 -5.0
LVC Limon Verde 11.26 15 eP Pn 18 45 30.6 0.0
PB07 IPOC Station P 11.95 10 Pn Pn 18 45 36.9 -3.0
PB09 IPOC Station P 11.99 13 Pn Pn 18 45 37.7 -2.6
ITQB Itaqui 13.70 78 Pn 18 46 02.6 -0.9
ITQB Itaqui 13.70 78 eP Pn 18 46 02.0 -1.5
CPUP Villa Florida 14.64 64 Pn Pn 18 46 15.9 -0.5
comp=Z,0.1nm,0.3s,baz=246,slow=11,SNR=8.7
CPUP Sn Sn 18 48 57.8 -0.3
comp=Z,0.2nm,0.3s,baz=259,slow=16,SNR=2.0
CPUP LR LR 18 53 00.7
comp=Z,194nm,18.4s,baz=238,slow=42
comp=Z,2.7nm,0.8s
CPUP Villa Florida 14.64 64 Pn 18 46 14.2 -2.2
CPUP Villa Florida 14.64 64 eP Pn 18 46 17.5 +1.1
RODS Rosario do Sul 14.65 82 eP Pn 18 46 17.1 +0.5
PB12 IPOC Station P 14.97 6 Pn Pn 18 46 18.8 -2.3
UNIS Unistalda (Bra 15.18 77 eP Pn 18 46 22.8 -0.9
PB16 IPOC Station P 15.34 9 Pn 18 46 23.5 -2.8
PLTB Pedras Altas 15.63 88 Pn 18 46 28.4 -1.2
PLTB Pedras Altas 15.63 88 eP Pn 18 46 28.8 -0.8
PB18 Visviri 16.08 9 Pn 18 46 34.2 -1.6
PB18 IAmb IAmb 18 46 51.0
comp=Z,35nm,1.0s
CPSB Cacapava Do Su 16.09 84 eP Pn 18 46 36.2 +0.7
ALGR Alto Alegre (B 16.95 79 eP Pn 18 46 46.1 -0.3
LPAZ La Paz 17.57 13 P Pn 18 46 54.9 +0.2
comp=Z,0.3nm,0.3s,baz=182,slow=7.4,SNR=32
comp=Z,12nm,0.8s
LPAZ La Paz 17.57 13 P Pn 18 46 55.1 +0.4
LPAZ La Paz 17.57 13 eP P 18 46 55.9 +0.2
FRBT Francisco Belt 18.11 70 eP P 18 47 00.7 -0.4
MCR1 Marechal Candi 18.15 65 eP P 18 47 02.0 +0.4
ANTJ Antonio Joao (18.25 55 eP P 18 47 03.1 +0.4
ITAB Concordia 18.29 75 eP P 18 47 04.0 +1.0
CNLB Canela 18.56 83 eP Pn 18 47 06.8 +0.4
AQDB Aquidauana 19.51 52 P P 18 47 15.7 -0.7
AQDB Aquidauana 19.51 52 eP P 18 47 16.5 0.0
PTGB Pitanga 19.53 68 eP Pn 18 47 17.0 -1.0
SIV San Ignacio 20.11 32 P P 18 47 22.3 -0.7
comp=Z,3.5nm,0.7s,baz=213,slow=12,SNR=6.0
SIV LR LR 18 56 14.0
comp=Z,356nm,18.0s,baz=288,slow=40
comp=Z,3.5nm,0.7s
TER01 Tubaro-SC 20.25 82 eP P 18 47 24.3 -0.1
EFI East Falkland 20.75 155 P P 18 47 29.2 -0.4
PTLB Pontes e Lacer 21.49 36 P P 18 47 37.5 -0.4
PTLB IAmb IAmb 18 47 39.2
comp=Z,17nm,1.0s
PTLB Pontes e Lacer 21.49 36 eP P 18 47 38.1 +0.2
TIJ01 Guaruva-PR 21.64 74 eP P 18 47 39.0 -0.7
PCMB Pacaembu 21.89 62 eP P 18 47 41.3 -0.9
C2SB Chapadao do Su 22.62 54 eP P 18 47 49.9 -0.1
SALV Santo Antonio 22.96 44 eP P 18 47 52.4 -1.3
VILB Vilhena 23.19 31 P P 18 47 56.4 +0.4
VILB IAmb IAmb 18 47 57.9
comp=Z,32nm,1.1s
VILB Vilhena 23.19 31 eP P 18 47 57.2 +1.2
PET01 Itanhaem-SP 23.52 73 eP P 18 47 59.0 -0.2
ITRB Iturama 23.73 60 eP P 18 48 00.6 -0.7
ETMB Extrema 24.24 14 P P 18 48 06.8 +0.8
ETMB IAmb IAmb 18 48 09.9
comp=Z,14nm,0.9s
ETMB Extrema 24.24 14 eP P 18 48 07.6 +1.5
BB19B Bebedouro 24.25 65 eP P 18 48 05.3 -1.0
RCLB Rio Claro- Sao 24.27 69 eP P 18 48 05.6 -0.7
VAO Valinhos 24.40 71 eP P 18 48 07.0 -0.6
PARB Paranhana 25.30 73 eP P 18 48 16.3 +0.6
CZSB Cruzeiro do Su 25.72 358 P P 18 48 18.9 -0.6
CZSB IAmb IAmb 18 48 24.3
comp=Z,21nm,0.7s
CZSB Cruzeiro do Su 25.72 358 eP P 18 48 19.7 +0.2
SAML Samuel 25.83 20 P P 18 48 19.1 -1.4
SAML IAmb IAmb 18 48 23.7
comp=Z,16nm,0.8s
PDRB Porto dos Gac 25.96 36 eP P 18 48 21.9 +0.2
IPMB Ipameri, GO 26.39 60 eP P 18 48 24.4 -1.3
MAN01 Ângra dos Reis 26.86 74 eP P 18 48 29.2 -0.7
CLDB Colider 27.06 37 eP P 18 48 31.5 -0.1
PMNB Patos De Minas 27.34 63 eP P 18 48 34.0 -0.2
VAS01 Vassouras-RJ 27.57 73 eP P 18 48 36.5 +0.3
BDFB Brasilia 28.09 56 P P 18 48 39.8 -1.2
comp=Z,4.9nm,0.8s,baz=222,slow=13,SNR=5.7
BDFB LR LR 19 01 04.0
comp=Z,810nm,18.4s,baz=298,slow=39
comp=Z,4.9nm,0.8s
BDFB Brasilia 28.09 56 P P 18 48 39.1 -1.9
BDFB IAmb IAmb 18 48 41.1
comp=Z,23nm,1.4s
BDFB Brasilia 28.09 56 eP P 18 48 40.6 -0.4
DUB01 Friburgo-RJ 28.52 74 eP P 18 48 45.7 +0.9
SNDB Serra Nova Dou 28.66 46 eP P 18 48 45.2 -0.7
DIAM Diamantina, MG 29.57 66 eP P 18 48 54.6 +0.4
NPGB Novo Progresso 30.58 34 eP P 18 49 02.3 -0.7
JANB Januaria 31.12 60 eP P 18 49 08.0 +0.2
SJMB Sao Joao De Ma 31.26 70 eP P 18 49 09.4 +0.5
PMSA Palmer Station 31.61 173 LR LR 19 01 04.2
comp=Z,245nm,20.0s,baz=326,slow=35
SDBA SAO DESIDERIO 32.50 56 eP P 18 49 19.3 -0.7
NAN01 Guarapari, ES 32.58 69 eP P 18 49 20.3 -0.2
RPN Rapa Nui 32.69 271 LR LR 18 58 59.7
comp=Z,243nm,18.6s,baz=56,slow=30
SMTB Santa Maria do 33.35 48 eP P 18 49 26.9 -0.4
CMC01 Camacan, BA 34.51 66 eP P 18 49 37.1 -0.2
MALB Monte Alegre 35.67 32 eP P 18 49 47.0 -0.4
BOAV Boa Vista 37.39 19 P P 18 50 01.6 -0.4
BOAV IAmb IAmb 18 50 03.0
comp=Z,9.9nm,0.8s
BOAV Boa Vista 37.39 19 eP P 18 50 02.2 +0.2
MCPB Macapa, AP 37.99 34 eP P 18 50 07.0 -0.1
NBLA Lagarto - SE 38.56 62 eP P 18 50 10.7 -1.2
NBAN Anadia - AL 40.55 62 eP P 18 50 28.1 -0.5
BAUV El Baul 42.45 6 P P 18 50 44.1 +0.1
BAUV IAmb IAmb 18 50 45.3
comp=Z,16nm,0.8s
MDP Montagnes des 42.62 29 LR LR 19 10 21.4
comp=Z,149nm,19.1s,baz=214,slow=39
RCBR Riachuelo 43.42 59 LR LR 19 09 10.6
comp=Z,198nm,18.4s,baz=28,slow=37
BELA Belgrano 2 47.30 170 P P 18 51 20.8 -1.3
BELA IAmb IAmb 18 51 38.8
comp=Z,12nm,1.4s
VNA3 Neumayer Olymp 49.76 158 P P 18 51 42.2 +1.2
VNA1 Neumayer--Stat 50.07 157 P P 18 51 45.0 +1.7
VNA2 Neumayer--Watz 50.41 157 P P 18 51 47.1 +1.2
baz=172,slow=5.2
SNAA Sanae 51.98 158 P P 18 51 59.0 +1.2
SNAA Sanae 51.98 158 P P 18 51 58.5 +0.7
TROLL Troll, Antarti 53.69 158 P P 18 52 11.7 +1.2
VNDA Vanda 64.52 191 P P 18 53 27.2 +2.0
comp=Z,0.4nm,0.9s,baz=148,slow=6.4,SNR=2.3
comp=Z,0.4nm,0.9s
TBI Tubuai 67.42 256 eLR LR 19 14 05.0
comp=Z,148nm,30.5s
W57A Gilead 68.77 353 P P 18 53 51.8 -1.0
W57A IAmb IAmb 18 53 53.7
comp=Z,4.2nm,0.8s
X51A Calhoun 68.84 349 P P 18 53 52.8 -0.4
JCT Junction City 68.90 334 P P 18 53 54.0 +0.2
JCT IAmb IAmb 18 53 56.4
comp=Z,7.2nm,0.8s
BG3 Lake Jocassee 68.96 350 P P 18 53 54.0 0.0
BG3 IAmb IAmb 18 53 55.3
comp=Z,5.1nm,0.9s
X48A Hartselle 69.11 347 P P 18 53 55.2 +0.2
X48A IAmb IAmb 18 53 56.8
comp=Z,5.9nm,0.9s
TX32 Lajitas Array 69.36 331 P P 18 53 56.5 -0.2
TXAR Lajitas Array 69.36 331 P P 18 53 58.0 +1.3
comp=Z,1.0nm,0.6s,baz=149,slow=8.2,SNR=10
comp=Z,1.0nm,0.6s
TX31 Lajitas Ar. Si 69.36 331 P P 18 53 55.9 -0.8
TX31 IAmb IAmb 18 53 59.0
comp=Z,5.0nm,0.8s
W50A Signal Mountai 69.53 348 P P 18 53 57.3 -0.3
V53A Saluda 69.61 351 P P 18 53 57.8 -0.3
V53A IAmb IAmb 18 54 00.1
comp=Z,10nm,1.4s

CPCT Cooper Cave 69.65 349 P P 18 53 58.3 +0.1
CPCT IAmb IAmb 18 53 59.8
comp=Z,4.9nm,0.9s
PLAL Pickwick Lake 69.83 346 P P 18 53 59.0 -0.4
PLAL IAmb IAmb 18 54 00.8
comp=Z,5.7nm,0.8s
PPT2 Papeete2 70.30 262 eLR LR 19 15 23.9
comp=Z,123nm,24.8s
WVT Waverly 70.89 347 P P 18 54 04.9 -0.9
MNTX Cornudas Mount 72.14 331 P P 18 54 12.7 -0.8
HHAR Hobbs 72.44 342 P P 18 54 14.2 -1.0
HHAR IAmb IAmb 18 54 16.8
comp=Z,5.2nm,0.8s
CCM Cathedral Cave 73.47 344 P P 18 54 21.4 +0.2
MAW Mawson 73.59 164 P P 18 54 22.3 +0.6
comp=Z,3.3nm,0.8s,baz=225,slow=3.5,SNR=6.1
comp=Z,3.3nm,0.8s
DBIC Dimbokro 75.04 71 P P 18 54 31.2 +0.3
comp=Z,4.9nm,0.7s,baz=208,slow=6.3,SNR=8.3
comp=Z,4.9nm,0.7s
ECSD EROS Data Cent 80.14 342 P P 18 54 58.1 -0.6
ECSD IAmb IAmb 18 55 00.6
comp=Z,6.4nm,0.9s
BOSA Boshof 80.27 118 P P 18 55 00.5 +0.3
comp=Z,1.1nm,0.6s,baz=180,slow=9.1,SNR=1.5
comp=Z,1.1nm,0.6s
PDAR Pinedale Array 83.38 333 P P 18 55 16.9 +0.8
comp=Z,0.2nm,0.3s,baz=134,slow=4.3,SNR=3.6
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 83.53 325 P P 18 55 18.5 +1.5
comp=Z,0.6nm,0.7s,baz=161,slow=5.8,SNR=4.0
comp=Z,0.6nm,0.7s
HVU Hansel Valley 83.81 331 P P 18 55 17.8 -0.4
TOA0 Torodi Ar. Sit 84.06 70 P P 18 55 19.0 -1.0
TORD Torodi Ar. Bea 84.06 70 P P 18 55 20.0 0.0
comp=Z,6.3nm,0.8s,baz=237,slow=4.5,SNR=33
comp=Z,6.3nm,0.8s
TORD Torodi Ar. Bea 84.06 70 P P 18 55 19.1 -0.9
ULM Lac du Bonnet 86.08 345 LR LR 19 32 58.8
comp=Z,51nm,19.5s,baz=176,slow=35
MCMT McKenzie Canyo 86.39 332 P P 18 55 32.2 +1.0
SCHQ Schefferville 88.16 3 LR LR 19 37 45.6
comp=Z,27nm,18.2s,baz=146,slow=37
LSZ Lusaka 89.94 108 LR LR 19 32 01.8
comp=Z,91nm,20.2s,baz=190,slow=33
ESDC Sonseca Array 96.28 46 P P 18 56 18.0 +0.7
comp=Z,0.4nm,0.7s,baz=260,slow=5.1,SNR=2.7
comp=Z,0.4nm,0.7s
DZM Mont Dzumac 101.49 234 eLR LR 19 29 54.0
comp=Z,408nm,21.4s
ASAR Alice Springs 117.95 207 PKP **PKiKP 19 01 36.1 0.0**
comp=Z,0.5nm,0.8s,baz=141,slow=1.8,SNR=6.4
WRA Warramunga Arr 121.14 209 PKP **PKiKP 19 01 42.3 -0.1**
comp=Z,1.0nm,0.8s,baz=163,slow=1.6,SNR=11
AKASG Malin Array Be 121.90 47 PKP **PKPdf 19 01 42.0 -0.7**
comp=Z,0.1nm,0.3s,baz=252,slow=0.3,SNR=1.3
H11S2 WAKE ISLAND Hy 125.78 269 T T 21 20 42.1
baz=118,slow=74,SNR=61
H11S1 WAKE ISLAND Hy 125.79 269 T T 21 20 44.0
baz=118,slow=74,SNR=46
H11S3 WAKE ISLAND Hy 125.79 269 T T 21 20 42.3
baz=118,slow=74,SNR=49
KURBB Kurchatov Arra 152.56 43 PKP **PKPdf 19 02 38.9 +1.0**
comp=Z,0.5nm,0.8s,baz=302,slow=3.2,SNR=5.2
KURBB PKPbc **pPKPdf 19 02 45.6 +0.9**
comp=Z,2.5nm,0.8s,baz=302,slow=3.3,SNR=16
KURBB PKPab **pPKPbc 19 02 53.3 +1.7**
comp=Z,1.3nm,0.8s,baz=295,slow=3.2,SNR=6.2
ZALV Zalesovo Beam 153.86 32 PKP **PKPdf 19 02 40.6 +0.9**
comp=Z,3.0nm,0.4s,baz=320,slow=6.0,SNR=2.3
ZALV PKPbc **PKiKP 19 02 48.2 +0.5**
comp=Z,3.0nm,0.6s,baz=294,slow=3.7,SNR=15
ZALV PKPab **PKPab 19 03 01.0 +0.3**
comp=Z,6.3nm,0.8s,baz=306,slow=4.6,SNR=12
MKAR Makanchi Array 156.48 48 PKP **PKPdf 19 02 44.1 +0.5**
comp=Z,0.9nm,0.8s,baz=322,slow=1.0,SNR=6.7
MKAR PKPab **PKPab 19 03 12.8 +0.5**
comp=Z,1.1nm,0.6s,baz=309,slow=4.1,SNR=9.3
SONM Songino Array 165.70 4 PKPab **PKPab 19 03 53.3 +0.8**
comp=Z,0.6nm,0.8s,baz=351,slow=2.9,SNR=4.0

IDC ***16*** *18:55:57.3±3.5, 11°.24S×163°.16E, h56km±28km, mb3.5/5, mbtmp3.9/7, ML3.8/2, MS3.4/3, Error ellipse: s-maj=32.2km s-min=21.2km az=59.0*

ISC 16 18:55:55.3±1.1, 11°.1S±0°.1×163°.3E±0°.1, h35km, n15, σ1°.68/8, mb3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.68**	**297**	P	**Pn**	**18 56 49.6**	**-0.1**
	20nm,0.3s,baz=174,slow=10,SNR=17						
HNR				S	**Sn**	**18 57 34.0**	**+2.1**
	323nm,0.8s,baz=60,slow=20,SNR=2.8						
	294nm,0.8s						
DZM	**Mont Dzumac**	**11.32**	**165**	P	**Pn**	**18 58 36.2**	**+1.6**
	0.3nm,0.3s,baz=330,slow=20,SNR=2.0						
DZM				LR	LR	19 01 58.5	
	comp=Z,140nm,20.0s,baz=172,slow=32						
	12nm,1.1s						
CTA	**Charters Tower**	**18.66**	**239**	LR	LR	19 06 49.8	
	comp=Z,78nm,19.9s,baz=64,slow=35						
WRA	**Warramunga Arr**	**29.20**	**249**	P	**P**	**19 01 52.3**	**-1.5**
	0.5nm,0.8s,baz=78,slow=9.2,SNR=8.3						
	0.5nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.60**	**7**	T	T	19 33 01.5	
	baz=188,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**29.60**	**7**	T	T	19 33 03.2	
	baz=188,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**29.62**	**7**	T	T	19 33 04.3	
	baz=188,slow=76,SNR=18						
ASAR	**Alice Springs**	**30.62**	**242**	P	**P**	**19 02 04.2**	**-2.2**
	0.8nm,0.9s,baz=69,slow=10,SNR=8.3						
	0.8nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**30.83**	**7**	T	T	19 34 40.6	
	baz=188,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**30.84**	**7**	T	T	19 34 40.9	
	baz=188,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**30.85**	**7**	T	T	19 34 26.2	
	baz=188,slow=76,SNR=11						
RPZ	**Rata Peaks**	**33.18**	**170**	LR	LR	19 16 08.5	
	comp=Z,112nm,18.1s,baz=292,slow=37						
SONM	**Songino Array**	**77.30**	**325**	P	**P**	**19 07 46.9**	**+0.5**
	1.8nm,1.0s,baz=138,slow=5.7,SNR=8.1						
	1.8nm,1.0s						
ILAR	**Eielson Array**	**84.35**	**19**	P	**P**	**19 08 23.0**	**-0.5**
	0.3nm,0.6s,baz=232,slow=5.4,SNR=2.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**91.92**	**317**	P	**P**	**19 09 00.0**	**-0.2**
	0.7nm,0.7s,baz=109,slow=5.6,SNR=6.3						
	0.7nm,0.7s						

REN ***16*** *18:59:45.3±0.9, 37°.99N±0°.01×118°.08W±0°.02, h6km±5km, ML3.0/10, ML2.9/86(NEIC), Error ellipse: s-maj=2.5km s-min=1.8km az=72.0*

NEIC ***16*** *18:59:45.3±1.1, 37°.99N±0°.01×118°.07W±0°.02, h5km±1km, Error ellipse: s-maj=2.9km s-min=2.3km az=288.0*

ISC 16 18:59:45.1±0.8, 38°.01N±0°.02×118°.06W±0°.02, h4km, n105, σ0°.93/91, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCKR	**Birch Creek**	**0.40**	**219**		**Pg**	**18 59 52.7**	**0.0**
ANTCA	**Antelope Range**	**0.41**	**258**		**Pg**	**18 59 52.9**	**-0.1**
HCK	**Huntoon Valley**	**0.43**	**279**		**Pg**	**18 59 53.6**	**+0.3**
LHV	**Little Huntoon**	**0.43**	**305**		**Pg**	**18 59 53.8**	**+0.5**
LHV					**Sg**	**19 00 00.2**	**+1.4**
LHV	**Little Huntoon**	**0.43**	**305**	IAML		19 00 02.2	
	comp=N,2μm,1.0s						
LHV				IAML		19 00 05.5	
	comp=E,1μm,0.8s						
NV11	**Mina Array Sit**	**0.43**	**350**		**Pg**	**18 59 53.9**	**+0.5**
NV11					**Sg**	**19 00 00.3**	**+1.2**
NV11	**Mina Array Sit**	**0.43**	**350**	IAML		19 00 03.0	
	comp=E,29nm,1.1s						
NV08	**Mina Array Sit**	**0.45**	**333**		**Pg**	**18 59 54.0**	**+0.3**
NVAR	**Mina Array Bea**	**0.46**	**336**		**Pg**	**18 59 54.4**	**+0.3**
MLNR	**Milner Canyon**	**0.47**	**209**		**Pg**	**18 59 54.1**	**0.0**
NV09	**Mina Array Sit**	**0.48**	**333**		**Pg**	**18 59 54.7**	**+0.4**
BENR	**Benton**	**0.50**	**235**		**Pg**	**18 59 54.5**	**-0.2**
MGNR	**McGee Canyon**	**0.54**	**249**		**Pg**	**18 59 55.3**	**-0.1**
ORC	**Owens River**	**0.60**	**232**		**Pg**	**18 59 56.5**	**-0.2**
MZP	**Montezuma Peak**	**0.62**	**120**		**Pg**	**18 59 57.3**	**+0.4**
MZP					**Sg**	**19 00 06.3**	**+1.4**
DSP	**Deep Springs**	**0.64**	**174**		**Pg**	**18 59 57.5**	**+0.2**
DSP					**Sb**	**19 00 06.7**	**-1.3**

TPH	Tonopah	0.66	84			Pg	18 59 58.4	+0.5
POCCA	Poleta Canyon	0.67	195			Pg	18 59 57.8	-0.1
TVH1	TV Hill, Hawth	0.71	309			Pg	18 59 59.0	+0.2
RYN	Ryan	0.72	330			Pg	18 59 59.0	+0.1
RYN	Ryan	0.72	330		IAML		19 00 14.5	
	comp=N,368nm,0.5s							
RYN					IAML		19 00 19.4	
	comp=E,364nm,0.8s							
MLAC	Mammoth, Mammo	0.72	239			Pg	18 59 58.9	0.0
RCCR	Rock Creek Can	0.74	226			Pg	18 59 59.0	-0.2
MCBM	Casa Benchmark	0.76	242			Pg	18 59 59.5	-0.1
SCHCA	Scheelite	0.82	218			Pg	19 00 00.5	-0.3
MDYM	Dry Creek	0.83	245			Pg	19 00 00.9	-0.1
LCH	Last Change Ra	0.84	157			Pg	19 00 01.1	-0.1
LCH	Last Change Ra	0.84	157		IAML		19 00 18.5	
	comp=E,433nm,0.3s							
LCH					IAML		19 00 20.8	
	comp=N,365nm,0.4s							
OMMB	Old Mammoth Mi	0.84	242			Pg	19 00 00.9	-0.3
OMMB	Old Mammoth Mi	0.84	242		IAML		19 00 05.2	
	comp=E,115nm,0.6s							
OMMB					IAML		19 00 12.3	
	comp=N,81nm,0.3s							
LUL	Lundy Lake	0.89	273			Pg	19 00 02.1	0.0
MDPB	Devils Postpil	0.89	245			Pg	19 00 01.7	-0.4
GMN	Gold Mountain	0.95	138			Pg	19 00 03.5	+0.2
TIN	Tinemaha, Big	0.96	188			Pg	19 00 03.6	+0.1
KVN	Kaiserville	1.04	358			Pg	19 00 04.9	-0.2
KVN	Kaiserville	1.04	358		IAML		19 00 23.2	
	comp=N,458nm,0.5s							
Q09A	Carvers	1.08	40			Pg	19 00 06.1	+0.4
GRAC	Grapevine Rang	1.15	151			Pb	19 00 07.7	+0.1
GRAC	Grapevine Rang	1.15	151	Pg		Pg	19 00 07.2	+0.1
KCC	Kaiser Creek	1.21	236			Pg	19 00 07.4	-0.8
SGV	South Grapevin	1.31	141			Pg	19 00 10.1	-0.1
YERR	Yerington	1.35	317			Pn	19 00 10.2	-0.6
YERR	Yerington	1.35	317		IAML		19 00 31.8	
	comp=N,215nm,0.7s							
YERR					IAML		19 00 33.4	
	comp=E,297nm,0.4s							
MCA	Marble Canyon	1.49	155			Pb	19 00 13.0	-0.4
CWC	Cottonwood Cre	1.56	181			Pb	19 00 14.3	-0.4
PNTR	Pine Nut	1.62	312			Pn	19 00 14.8	+0.1
PNTR	Pine Nut	1.62	312		IAML		19 00 41.1	
	comp=N,142nm,0.8s							
PNTR					IAML		19 00 53.2	
	comp=E,166nm,0.9s							
WCT	Wildcat Mounta	1.67	136			Pn	19 00 15.3	+0.2
TPNV	Topopah Spring	1.79	126			Pn	19 00 17.1	+0.2
TPNV	Topopah Spring	1.79	126		IAML		19 00 51.4	
	comp=E,126nm,0.8s							
VCNR	Virginia City	1.79	316			Pn	19 00 17.8	+0.9
VCNR	Virginia City	1.79	316		IAML		19 00 48.3	
	comp=N,143nm,0.8s							
FURC	Furnace Creek,	1.81	148			Pb	19 00 18.8	+0.1
CMB	Columbia Colle	1.84	272			Pn	19 00 17.4	0.0
CMB	Columbia Colle	1.84	272	Pn		Pn	19 00 16.5	-0.9
CMB	Columbia Colle	1.84	272		IAML		19 00 44.2	
	comp=N,77nm,0.6s							
S11A	Rachel	1.87	100			Pb	19 00 20.0	+0.2
EMB	Emerald Bay	1.87	302			Pn	19 00 18.1	0.0
EMB	Emerald Bay	1.87	302		IAML		19 00 51.6	
	comp=N,73nm,1.0s							
EMB					IAML		19 00 52.8	
	comp=E,57nm,0.8s							
SDH	Striped Hills	1.93	134			Pn	19 00 19.4	+0.6
R11A	Troy Canyon, C	1.98	79			Pn	19 00 19.3	-0.2
PAHR	Pah Rah Range	1.99	329			Pn	19 00 19.6	0.0
PAHR	Pah Rah Range	1.99	329		IAML		19 00 51.6	
	comp=E,89nm,1.0s							
AMDNV	Amargosa	2.10	137			Pn	19 00 21.9	+0.8
GWY	Greenwater Val	2.13	148			Pn	19 00 21.5	-0.1
GWY	Greenwater Val	2.13	148		IAML		19 01 02.7	
	comp=E,67nm,0.6s							
GWY					IAML		19 01 08.7	
	comp=N,55nm,0.7s							
QSM	Queen of Sheba	2.25	155			Pn	19 00 23.1	0.0
ISA	Isabella, Lake	2.36	188			Pn	19 00 24.1	-0.6
ISA				Pg		Pb	19 00 28.6	+0.4
ISA					IAML		19 01 02.0	
	comp=N,70nm,0.6s							
ISA					IAML		19 01 02.6	
	comp=E,74nm,0.8s							
WVA	Winnemucca Val	2.37	325			Pn	19 00 24.7	-0.3
PRN	Pahroc Range	2.46	103			Pn	19 00 26.4	+0.3
BMN	Battle Mountai	2.51	15			Pn	19 00 27.2	+0.4
BMN	Battle Mountai	2.51	15		IAML		19 01 06.3	
	comp=N,80nm,0.3s							
BMN					IAML		19 01 07.2	
	comp=E,58nm,0.7s							
BEKR	Beckworth	2.58	317			Pn	19 00 28.2	+0.4
SHPR	Sheep Range	2.76	122			Pn	19 00 30.8	+0.6
SHPR	Sheep Range	2.76	122		IAML		19 01 30.6	
	comp=E,25nm,0.7s							
BBGB	Big Mountain B	2.77	240			Pn	19 00 31.7	+1.4
PMPB	Monarch Peak	2.83	232			Pn	19 00 33.3	+2.2
PMPB					IAML		19 01 21.4	
	comp=E,53nm,1.0s							
PMPB					IAML		19 01 26.5	
	comp=N,47nm,0.9s							
PAGB	Antelope Grade	2.87	218	Pn		Pn	19 00 33.5	+1.8
PAGB					IAML		19 01 29.6	
	comp=N,23nm,0.6s							
PAGB					IAML		19 01 34.5	
	comp=E,29nm,2.0s							
GSC	Goldstone, Bar	2.88	159			Pn	19 00 32.2	+0.3
GSC					IAML		19 01 27.4	
	comp=E,44nm,1.0s							
PLTX	Planet X, Gerl	2.91	338			Pn	19 00 32.4	+0.1
PLTX					IAML		19 01 19.2	
	comp=N,94nm,0.7s							
PLTX					IAML		19 01 29.0	
	comp=E,94nm,0.7s							
SAO	San Andreas Ge	2.97	246			Pn	19 00 31.1	-1.9
SPR3	Spring Creek 3	3.09	70			Pn	19 00 33.5	-1.4
ORV	Oroville	3.10	301	Pn		Pn	19 00 34.4	-0.4
BCW	Bitter Crk WRg	3.25	200			Pn	19 00 34.9	-2.0
BCW					IAML		19 01 30.3	
	comp=N,46nm,0.6s							
PSUT	Pine Spring	3.35	80			Pn	19 00 37.9	-0.5
ICU	Indian Springs	3.40	103			Pn	19 00 39.1	+0.1
ELK	Elko	3.50	38			Pn	19 00 40.6	+0.1
CCUT	Cedar City	3.75	96			Pn	19 00 43.5	-0.4
LCMT	Little Creek M	3.96	103			Pn	19 00 45.6	-1.1
SZCU	Shurtz Canyon	3.96	94			Pn	19 00 45.3	-1.4
HOPS	Hopland Field	4.05	286	Pn		Pn	19 00 48.0	+0.1
MOD	Modoc Plateau	4.25	337			Pn	19 00 48.2	-2.5
MOD					IAML		19 02 04.9	
	comp=E,9.2nm,1.8s							
MOD					IAML		19 02 15.9	
	comp=N,8.4nm,2.0s							
W13A	Hualapai Mount	4.44	130			Pn	19 00 52.6	-0.8
WVOR	Wild Horse Val	4.44	354			Pn	19 00 51.7	-1.6
WVOR					IAML		19 02 07.7	
	comp=N,7.5nm,3.3s							
DNR	Dunn Ranch,Anz	4.58	165			Sn	19 01 49.5	+0.5
DUG	Dugway, Tooele	4.63	60	Pn		Pn	19 00 54.6	-1.3
DUG					IAML		19 02 14.6	
	comp=N,14nm,0.8s							
DUG					IAML		19 02 14.8	
	comp=N,12nm,1.0s							
MVU	Marysvale	4.63	82			Pn	19 00 53.8	-2.2
MTPU	Mount Pierson	4.64	88			Pn	19 00 52.3	-4.0
MSU	Marysvale	4.66	82	Pn		Pn	19 00 55.7	-0.7
BGU	Big Grassy Mou	4.86	52			Pn	19 00 58.0	-1.1
U15A	North Rim	4.87	107			Pn	19 01 00.3	+1.0
HVU	Hansel Valley	5.54	46			Pn	19 01 02.1	-6.3
MFID	Camas Ranch	5.66	17	Pn		Pn	19 01 04.1	-6.0
HWUT	Hardware Ranch	6.16	52	Pn		Pn	19 01 11.3	-5.7
HLID	Hailey	6.20	25	Pn		Pn	19 01 15.7	-1.8

*NEIC **16** 19:01:22.8±1.5, 32°.23N±0°.03×115°.22W±0°.02, h29km±2km, Error ellipse: s-maj=4.5km s-min=2.7km az=178.0*
*PAS **16** 19:01:22.6±2.0, 32°.19N±0°.02×115°.22W±0°.01, h24km±6km, Error ellipse: s-maj=3.6km s-min=1.7km az=174.0*
*ECX **16** 19:01:23.6±0.6, 32°.18N×115°.30W, h10km±12km, MD2.9, ML3.1*
*MEX **16** 19:01:24.6±1.0, 32°.18N×115°.18W, h15km, MD3.0*
ISC 16 19:01:22.5±0.9, 32°.20N±0°.02×115°.24W±0°.02, h27km±5km, n89, σ0s85/112, 10C-8D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUVIX	Guadalupe Vict	0.18	53			Pb	19 01 27.7	-0.4
GUVIX	Guadalupe Vict	0.18	53			Sb	19 01 31.6	-0.3
GUVIX	Guadalupe Vict	0.18	53		IAML		19 01 29.4	
	comp=N,408nm,0.2s							
GUVIX	Guadalupe Vict	0.18	53	*eP*		Pb	19 01 27.7	-0.4
GUVIX				*eS*		Sb	19 01 31.6	-0.3
MBIG	Mexicali	0.21	10	*i P*		Pb	19 01 28.3	-0.2
MBIG				*i S*		Sb	19 01 33.4	+0.7
MBIG	Mexicali	0.21	10	⇓*iP*		Pb	19 01 28.4	-0.2
RITX	Riito Sonora	0.24	97	⇑*iP*		Pb	19 01 29.0	+0.1
RITX				*eS*		Sb	19 01 33.5	+0.3
CTLX	Tlaxcala, TLX	0.29	16	*eP*		Pb	19 01 29.3	-0.3
CTLX				*i S*		Sb	19 01 34.9	+0.6
YUCAX	Ej. Yucatɲn	0.43	17	*eP*		Pb	19 01 31.8	+0.2
UABX	UABC, Campus M	0.47	339			Pb	19 01 32.7	+0.5
UABX						Sb	19 01 40.3	+1.4
UABX	UABC, Campus M	0.47	339		IAML		19 01 40.8	
	comp=N,8μm,0.5s							
UABX					IAML		19 01 41.0	
	comp=E,4μm,0.3s							
EMSC	East Mesa	0.58	22			Pb	19 01 34.1	-0.1
EMSC						Sb	19 01 43.0	+0.9
EMSC	East Mesa	0.58	22	⇓*eP*		Pb	19 01 34.1	-0.1
EMSC				*eS*		Sb	19 01 43.0	+0.9
SGL	Mount Signal	0.61	318			Pb	19 01 34.1	-0.6
SGL	Mount Signal	0.61	318			Sb	19 01 42.6	-0.3
SGL	Mount Signal	0.61	318	⇑*iP*		Pb	19 01 34.1	-0.6
DREC	Desert Rsrch C	0.63	344			Pb	19 01 35.0	0.0
DREC						Sn	19 01 45.4	+0.5
DREC	Desert Rsrch C	0.63	344	*eP*		Pb	19 01 35.1	+0.1
COA	Coachella	0.67	9			Pb	19 01 35.1	-0.6
COA	Coachella	0.67	9	⇓*iP*		Pb	19 01 35.3	-0.4
SNR	Schaffner Ranc	0.68	346			Pb	19 01 36.1	+0.3
SNR						Sn	19 01 46.9	+0.8
YMD	Yuma Desert	0.69	59			Pb	19 01 35.8	-0.1
YMD						Sb	19 01 45.0	-0.1
YMD	Yuma Desert	0.69	59	*eP*		Pb	19 01 35.8	-0.1
WESC	Westside Schoo	0.70	324			Pb	19 01 35.9	-0.2
WESC						Sn	19 01 46.6	+0.1
WESC	Westside Schoo	0.70	324	*eP*		Pb	19 01 35.9	-0.2
YUH2	Yuha Desert	0.73	308	*eP*		Pb	19 01 35.9	-0.8
YUH2				*eS*		Sb	19 01 45.8	-0.5
YUH	Yuha Desert	0.73	308			Pb	19 01 36.1	-0.5
YUH					IAML		19 01 46.5	
	comp=N,797nm,0.1s							
YUH					IAML		19 01 46.7	
	comp=E,1μm,0.3s							
YUH	Yuha Desert	0.73	308			Sb	19 01 45.9	-0.4
YUH	Yuha Desert	0.73	308	Pg		Pb	19 01 35.9	-0.8
YUH	Yuha Desert	0.73	308	Sg		Sb	19 01 45.4	-0.9
ECBX	El Chinero	0.74	167	*eP*		Pb	19 01 36.3	-0.5
ECBX				*eS*		Sn	19 01 46.9	-0.6
ECBX					IAML		19 01 48.2	
	comp=N,1μm,0.4s							
ECBX				⇑*e*			19 01 48.2	
COK2	Cook Ranch 2	0.77	328			Pb	19 01 37.1	-0.2
COK2						Sb	19 01 48.2	+0.7
COK2	Cook Ranch 2	0.77	328	⇑*iP*		Pb	19 01 37.2	-0.2
RUN	Ruthven	0.81	16			Pb	19 01 36.9	-1.1
RMX	La Rumorosa	0.82	300			Pb	19 01 36.7	-1.5
RMX					IAML		19 01 47.6	
	comp=E,850nm,0.1s							
RMX	La Rumorosa	0.82	300			Sb	19 01 46.8	-2.1
RMX	La Rumorosa	0.82	300	⇑*iP*		Pb	19 01 36.7	-1.5
RMX				*eS*		Sb	19 01 46.3	-2.6
RMX					IAML		19 01 47.8	
	comp=E,975nm,0.3s							
IKP	In-Ko-Pah, Jac	0.86	302			Pb	19 01 38.2	-0.8
IKP						Sb	19 01 49.9	-0.3
IKP	In-Ko-Pah, Jac	0.86	302	⇑*eP*		Pb	19 01 38.1	-0.8
IKP				*eS*		Sb	19 01 49.4	-0.7
SWSC	Sam W. Stewart	0.88	328			Pb	19 01 37.9	-1.4
SWSC						Sb	19 01 49.1	-1.6
GLA	Glamis	0.92	22			Pb	19 01 38.7	-1.3
GLA					IAML		19 02 01.1	
	comp=N,302nm,0.7s							
GLA					IAML		19 02 01.7	
	comp=E,238nm,0.4s							
GLA	Glamis	0.92	22			Sb	19 01 51.3	-0.5
GLA	Glamis	0.92	22	⇓*eP*		Pb	19 01 38.8	-1.1
CRR	Carrizo Plain	0.92	318			Pb	19 01 39.5	-0.4
CRR						Sb	19 01 52.1	+0.3
CRR	Carrizo Plain	0.92	318	⇑*iP*		Pb	19 01 39.6	-0.3
SPIG	San Pedro Mart	1.16	190	*i P*		Pn	19 01 43.3	0.0
SPIG				*eS*		Sb	19 01 57.1	-1.9
SPIG	San Pedro Mart	1.16	190	⇓*iP*		Pn	19 01 43.3	0.0
SFX	San Felipe	1.20	164			Pn	19 01 44.0	+0.5
SFX					IAML		19 02 02.5	
	comp=N,136nm,0.5s							
SFX					IAML		19 02 04.8	
	comp=E,139nm,0.7s							
SFX	San Felipe	1.20	164			Sn	19 02 01.4	+2.5
SFX	San Felipe	1.20	164	*eP*		Pb	19 01 44.7	+0.1
CBX	Cerro Bola	1.21	276			Pn	19 01 43.8	+0.1
CBX	Cerro Bola	1.21	276		Sn	Sn	19 01 59.4	0.0
CBX					IAML		19 02 01.3	
	comp=E,248nm,0.5s							
CBX					IAML		19 02 01.5	
	comp=N,365nm,0.4s							
CBX	Cerro Bola	1.21	276	⇑*eP*		Pn	19 01 43.8	+0.1
CBX				*eS*		Sn	19 02 00.3	+1.0
CBX					IAML		19 02 01.4	
	comp=E,241nm,0.4s							
CBX				⇓*e*			19 02 01.4	
CBX					IAML		19 02 01.5	
	comp=N,347nm,0.5s							
TKX	Tecate	1.21	288			Pn	19 01 43.9	+0.2
MONP2	Monument Peak	1.22	305			Pn	19 01 44.1	+0.2
MONP2						Sn	19 02 00.1	+0.5
MONP2	Monument Peak	1.22	305	*eP*		Pn	19 01 44.4	+0.5
TJIG	Tijuana	1.24	281	*eP*		Pn	19 01 44.0	0.0
TJIG				*eS*		Sb	19 02 00.4	-0.3
SALN	Salton City	1.25	330			Sn	19 01 59.2	-0.8
CCX	Cicese	1.25	255			Pn	19 01 43.6	-0.6
CCX	Cicese	1.25	255			Sb	19 02 02.4	+1.3
BAR	Barrett	1.30	292		Pn	Pn	19 01 45.0	+0.1
BAR					IAML		19 02 03.7	
	comp=E,448nm,0.1s							
BAR	Barrett	1.30	292			Sb	19 02 02.8	+0.1
BAR	Barrett	1.30	292	⇓*eP*		Pn	19 01 44.8	-0.1
BAR				*eS*		Sb	19 02 02.6	-0.1
BAR				⇓*e*			19 02 03.7	
BAR					IAML		19 02 03.7	
	comp=E,441nm,0.2s							
BAR					IAML		19 02 04.2	
	comp=N,523nm,0.2s							
BAR				⇓*e*			19 02 04.2	
SLH	Sleepy Hollow	1.31	320			Sb	19 02 04.3	+1.4
SLH	Sleepy Hollow	1.31	320	*eP*		Pb	19 01 46.1	-0.4
DUZA	Dulzura	1.36	288			Pn	19 01 45.9	+0.2
113A	Mohawk Valley,	1.37	65			Pn	19 01 45.6	-0.2
113A					IAML		19 02 12.7	
	comp=N,128nm,0.7s							
113A					IAML		19 02 13.0	
	comp=E,108nm,0.6s							
JUEM	Julian Eagle M	1.45	308			Pb	19 01 49.1	+0.2
JUEM						Sb	19 02 07.4	+0.5
SDRC	San Diego Road	1.54	291			Sb	19 02 09.8	+0.5
MATG	Mataguay Scout	1.55	311			Sb	19 02 11.1	+1.2
MATG	Mataguay Scout	1.55	311			Pb	19 01 51.4	+0.8
TJX	Tijuana	1.57	282			Pn	19 01 48.4	-0.1
TJX					IAML		19 02 15.9	
	comp=N,269nm,0.5s							
TJX					IAML		19 02 18.7	
	comp=E,315nm,1.1s							
BLYC	Blythe	1.66	21			Pn	19 01 51.0	+1.1
BLYC					IAML		19 02 22.3	
	comp=E,70nm,0.9s							
109C	Camp Elliot, M	1.72	294		Pn	Pn	19 01 51.0	+0.4
CPE	Camp Elliot	1.72	294			Sb	19 02 15.0	+0.4
PMD	Palm Desert	1.73	327			Pn	19 01 50.4	-0.5
PMD					IAML		19 02 17.9	
	comp=N,32nm,0.4s							
PMD					IAML		19 02 19.2	
	comp=E,48nm,0.6s							
PMD	Palm Desert	1.73	327			Sn	19 02 10.7	-1.4
PFO	Pinyon Flats O	1.74	324			Pn	19 01 50.2	-1.0
TPC	Twentynine Pal	2.02	341			Pn	19 01 52.3	-2.6
BACC	Bachelor Mtn.	2.07	314			Sn	19 02 19.9	-0.5
214A	Organ Pipe Nat	2.08	96			Pn	19 01 55.0	-0.6
214A	Organ Pipe Nat	2.08	96	*eP*		Pn	19 01 55.1	-0.5
214A				*eS*		Sb	19 02 24.7	-0.3
214A	Organ Pipe Nat	2.08	96	*eP*		Pn	19 01 55.1	-0.5
ELS	Elsinore Mount	2.34	309		Pn	Pn	19 01 59.1	-0.2
ELS					IAML		19 02 34.9	
	comp=N,37nm,0.3s							
ELS					IAML		19 02 39.9	
	comp=E,43nm,0.6s							
Y14A	Wickenburg	2.56	47			Pn	19 02 01.5	-0.7
PSRC	Puddingstone R	2.87	312			Pn	19 02 08.1	+1.7
SSK	Sunset Peak	2.87	315			Pb	19 02 14.7	+1.5
PASC	Pasadena Art C	3.16	309			Pn	19 02 12.1	+1.7
PASC	Pasadena Art C	3.16	309		IAML		19 03 01.4	
	comp=N,24nm,1.0s							
PASC					IAML		19 03 07.0	
	comp=E,17nm,0.3s							

*JMA **16** 19:01:47.9±0.2, 25°.N±2°×122°.5E±0°.8, h0km, MV2.7/6, NW OFF ISHIGAKIJIMA IS*
*TAP **16** 19:01:47.2, 24°.86N×122°.46E, h17km±1km, ML2.8, C*
ISC 16 19:01:47.6±1.0, 24°.85N±0°.03×122°.46E±0°.02, h14km±8km, n52, σ0s50/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.46	291		P	Pg	19 01 56.7	0.0
	baz=288							
TWB1					S	Sg	19 02 03.0	+0.2
	baz=288							
EGS		0.48	270		P	Pb	19 01 57.6	-0.2
	baz=267							
EGS					S	Sg	19 02 04.2	+0.7
	baz=267							
NTC	Toucheng	0.57	271	*eP*		Pb	19 01 59.2	-0.1
	baz=269							
SXI1	Grass Mountain	0.58	295		P	Pb	19 01 59.6	-0.1
	baz=293							
SXI1					S	Sb	19 02 07.8	0.0
	baz=293							
TIPB	Shuangxi	0.59	282		P	Pb	19 01 59.6	-0.1
	baz=280							
TIPB					S	Sb	19 02 08.1	+0.3
	baz=280							
JYNG	Yonagunijimaku	0.59	132		P	Pb	19 01 59.5	-0.2
JYNG					S	Sb	19 02 07.9	-0.1
TWC	Suao	0.60	247		P	Pg	19 01 59.6	+0.1
	baz=244							
TWC					S	Sb	19 02 09.9	+1.6
	baz=244							
YOJ	Yonaguni jima	0.63	127		P	Pg	19 02 00.0	0.0
	baz=128							
YOJ					S	Sg	19 02 08.6	+0.2
	baz=128							
YOJ	Yonaguni jima	0.63	127		P	Pg	19 01 59.9	-0.1
YOJ					S	Sg	19 02 08.7	+0.2
NWF	Wu-fen Shan	0.65	290		P	Pb	19 02 01.0	+0.2
	baz=288							
NWF					S	Sg	19 02 09.7	+0.6
	baz=288							
NDS	Dongshan	0.71	253	*eP*		Pg	19 02 01.1	-0.3
	baz=251							
NDS				*eS*		Sb	19 02 11.3	+0.1
	baz=251							
TWE	Neicheng	0.73	260	*eP*		Pb	19 02 02.3	+0.2
	baz=258							
TWE				*eS*		Sb	19 02 12.6	+0.6
	baz=258							
EWUT	Wuta	0.74	237		P	Pg	19 02 01.6	-0.4
	baz=236							
EWUT				*eS*		Sg	19 02 11.6	-0.1
	baz=236							
ENA	Nanau	0.77	238	*eP*		Pb	19 02 02.9	+0.1
	baz=236							
ENA				*eS*		Sg	19 02 12.8	0.0
	baz=236							
FUSB	Fushanzhiwuyua	0.80	264	*eP*		Pb	19 02 03.4	+0.1
	baz=262							
FUSB				*eS*		Sb	19 02 14.9	+1.0
	baz=262							
TWA	Mucha	0.81	280	*eP*		Pg	19 02 03.2	-0.1
	baz=278							
TWA				*eS*		Sb	19 02 14.4	+0.3
	baz=278							
ENTT	Nioudou	0.84	256	*eP*		Pg	19 02 03.8	-0.1
	baz=254							
ENTT				*eS*		Sb	19 02 16.1	+1.1
	baz=254							
PCYT	Pengchaiyu	0.85	336	*eP*		Pg	19 02 03.5	-0.7
	baz=335							
PCYT				*eS*		Sg	19 02 15.2	-0.2
	baz=335							
NHDH	Xindian Distri	0.85	278	*eP*		Pg	19 02 04.2	0.0
	baz=276							
NHDH				*eS*		Sb	19 02 16.1	+0.6
	baz=276							
YM01	YM01	0.86	291	*eP*		Pb	19 02 04.8	+0.4
	baz=289							
YM01				*eS*		Sb	19 02 16.2	+0.5
	baz=289							
TWY	Chenhua	0.89	299	*eP*		Pb	19 02 05.2	+0.5
	baz=297							
TWY				*eS*		Sg	19 02 16.7	+0.2
	baz=297							
NDT	Datong Townshi	0.89	254	*eP*		Pg	19 02 05.0	0.0
	baz=253							
NDT				*eS*		Sb	19 02 17.6	+1.0
	baz=253							
LATG	Datong	0.90	250	*eP*		Pb	19 02 05.5	+0.4
	baz=248							
LATG				*eS*		Sb	19 02 17.8	+0.8
	baz=248							
NTST	Danshui	0.97	289	*eP*		Pg	19 02 06.3	0.0
	baz=288							
NTST				*eS*		Sb	19 02 19.5	+0.7
	baz=288							
TWS1	Kuangyinshan	0.98	285	*eP*		Pg	19 02 06.2	-0.4
	baz=284							
TWS1				*eS*		Sg	19 02 19.2	-0.1
	baz=284							
YHNB	Yeheng	1.00	260	*eP*		Pb	19 02 07.0	+0.2
	baz=258							
YHNB				*eS*		Sg	19 02 19.4	-0.6
	baz=258							
NACB	Ninganchiao	1.03	230	*eP*		Pg	19 02 07.2

LIOB				*e*S	**Sb**	19 02 29.1	0.0
	baz=260						
NSTT	**Nanjuang**	**1.34**	**261**	*e*P	**Pn**	19 02 11.2	-0.7
	baz=259						
NSTT				*e*S	**Sb**	19 02 29.2	-0.4
	baz=259						
ESL	**Shilin**	**1.39**	**222**	*e*P	**Pg**	19 02 14.2	-0.2
	baz=221						
CHGB	**Renai**	**1.41**	**236**	*e*P	**Pn**	19 02 12.5	-0.5
	baz=235						
CHGB				*e*S	**Sb**	19 02 30.9	-0.8
	baz=235						
OWD	**Renai**	**1.47**	**233**	*e*P	**Pb**	19 02 15.2	+0.5
	baz=232						
OWD				*e*S	**Sn**	19 02 32.5	-0.3
	baz=232						
WHP	**Taichung City**	**1.49**	**248**	*e*P	**Pn**	19 02 13.8	-0.2
	baz=247						
WHP				*e*S	**Sn**	19 02 33.2	-0.1
	baz=247						
EGFH	**Guangfu**	**1.50**	**219**	*e*P	**Pb**	19 02 15.6	+0.3
	baz=218						
TWQ1	**Liyutan**	**1.61**	**252**	*e*P	**Pn**	19 02 15.4	-0.3
	baz=251						
TWQ1				*e*S	**Sn**	19 02 36.0	-0.2
	baz=251						
WCS	**Beigang Elemen**	**1.61**	**241**	*e*P	**Pn**	19 02 15.9	+0.2
	baz=240						
WCS				*e*S	**Sn**	19 02 35.3	-0.9
	baz=240						
VWDT	**VWDT**	**1.62**	**228**	*e*P	**Pn**	19 02 16.4	+0.7
	baz=227						
VWDT				*e*S	**Sn**	19 02 36.3	-0.1
	baz=227						
HGSD	**Ruisui**	**1.65**	**215**	*e*P	**Pn**	19 02 16.2	+0.1
	baz=214						
HGSD				*e*S	**Sn**	19 02 37.3	+0.3
	baz=214						
SMLT	**Sun Moon Lake**	**1.71**	**236**	*e*P	**Pn**	19 02 17.3	+0.2
	baz=235						
SMLT				*e*S	**Sn**	19 02 39.1	+0.2
	baz=235						
SSLB	**Suanglung**	**1.73**	**233**	*e*P	**Pn**	19 02 17.7	+0.4
	baz=232						
SSLB				*e*S	**Sn**	19 02 39.0	-0.2
	baz=232						
YULB	**Yu-li**	**1.79**	**216**	*e*P	**Pn**	19 02 18.3	+0.1
	baz=215						
YULB				*e*S	**Sn**	19 02 40.9	+0.2
	baz=215						
WHYT	**Xinyi Township**	**1.86**	**232**	*e*P	**Pn**	19 02 19.7	+0.6
	baz=231						
WHYT				*e*S	**Sn**	19 02 42.4	0.0
	baz=231						

IDC 16 19:06:31.4±488.0, 58˚81N×54˚07E, h0km, Error ellipse: s-maj=159.8km s-min=60.8km az=138.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**8.73**	**163**	*i*		20 02 30.0	
	baz=348,slow=322,SNR=0.9						
I43RU	**DUBNA INFRASON**	**9.25**	**264**	*i*		20 04 40.0	
	baz=70,slow=324,SNR=0.8						
I37NO	**I37NO**	**18.34**	**319**	*i*		20 59 10.0	
	baz=106,slow=327,SNR=1.5						

*IDC **16** 19:13:33.0±1.0, 36˚43N×140˚78E, h0km, mb3.6/8, mbtmp3.7/10, ML3.5/2, Error ellipse: s-maj=26.8km s-min=19.2km az=66.0*
*JMA **16** 19:13:41.1±0.1, 36˚4N±0˚2×140˚6E±0˚5, h55km, MV3.7/40, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .

ISC 16 19:13:40.0±0.8, 36˚40N±0˚05×140˚72E±0˚07, h56km±6km, n27, σ1§03/29, mb3.5/8, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.12**	**243**	P	**Pn**	19 13 49.6	+1.0
JHYU				S	**Sn**	19 13 55.6	+0.8
JHO	**Hitachi**	**0.25**	**330**	P	**Pn**	19 13 49.8	+0.5
JHO				S	**Sn**	19 13 55.8	-0.3
JYT	**Yasato**	**0.46**	**248**	⇓P	**Pn**	19 13 51.7	+0.4
JYT				⇓S	**Sn**	19 13 58.8	-0.5
ONAJ	**Iwakimizuishiy**	**0.70**	**5**	P	**Pn**	19 13 54.2	0.0
ONAJ				S	**Sn**	19 14 03.6	-0.9
JSB	**Shiboa**	**0.86**	**312**	⇓P	**Pn**	19 13 56.1	-0.1
JSB				⇓S	**Sn**	19 14 06.9	-1.0
JFK	**Kawauchi**	**0.97**	**7**	P	**Pn**	19 13 57.6	0.0
JAG	**Ashikaga**	**1.02**	**272**	⇓P	**Pn**	19 13 58.4	+0.1
JFT	**Otama**	**1.16**	**345**	⇓P	**Pn**	19 14 00.4	+0.3
JFT				S	**Sn**	19 14 14.2	-0.8
JKT	**Katashina**	**1.24**	**288**	P	**Pn**	19 14 01.3	+0.1
JFY	**Yanaizu**	**1.30**	**321**	⇓P	**Pn**	19 14 02.1	+0.2
JFY				⇓S	**Sn**	19 14 17.8	-0.5
MJAR	**Matsushiro Arr**	**2.03**	**275**	Pn	**Pn**	19 14 10.3	-1.6
	3.2nm,0.3s,baz=109,slow=10.0,SNR=221						
MJAR				Sn	**Sn**	19 14 35.9	-0.2
	4.7nm,0.3s,baz=3.6,slow=15,SNR=13						
	23nm,0.3s						
JCJ	**Chichijima**	**9.36**	**172**	Pn	**Pn**	19 15 49.3	-2.9
	2.8nm,0.3s,baz=300,slow=20,SNR=1.8						
JCJ				Sn	Sn	19 17 26.6	-9.4
	2.2nm,0.3s,baz=127,slow=20,SNR=1.9						
	33nm,0.8s						
KSRS	**Korea Array**	**10.30**	**280**	Pn	**Pn**	19 16 07.7	+2.6
	0.1nm,0.3s,baz=90,slow=14,SNR=4.0						
SONM	**Songino Array**	**27.69**	**305**	P	**P**	19 19 22.4	-0.4
	0.3nm,0.4s,baz=108,slow=9.0,SNR=2.6						
	0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.31**	**119**	T	T	19 49 26.9	
	baz=312,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.32**	**119**	T	T	19 49 29.1	
	baz=312,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.33**	**119**	T	T	19 49 29.1	
	baz=312,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.99**	**121**	T	T	19 50 19.7	
	baz=314,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.99**	**121**	T	T	19 50 20.2	
	baz=314,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.01**	**121**	T	T	19 50 20.2	
	baz=314,slow=76						
ZALV	**Zalesovo Beam**	**41.94**	**313**	P	**P**	19 21 25.5	+0.5
	1.2nm,0.6s,baz=92,slow=6.9,SNR=5.5						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**43.99**	**303**	P	**P**	19 21 41.5	-0.2
	0.3nm,0.6s,baz=81,slow=9.5,SNR=2.7						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**50.33**	**32**	P	**P**	19 22 31.8	+1.1
	0.4nm,0.8s,baz=267,slow=6.9,SNR=2.9						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**56.36**	**187**	P	**P**	19 23 15.8	+0.3
	0.3nm,0.5s,baz=0.8,slow=7.5,SNR=13						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**60.09**	**187**	P	**P**	19 23 42.7	+1.3
	0.3nm,0.7s,baz=8.7,slow=6.7,SNR=4.1						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**69.12**	**332**	P	**P**	19 24 39.9	0.0
	1.8nm,0.9s,baz=76,slow=5.9,SNR=3.8						
	1.8nm,0.9s						
NOA	**NORSAR Array B**	**74.56**	**337**	P	**P**	19 25 12.9	+0.3
	0.3nm,0.6s,baz=40,slow=5.8,SNR=2.2						
	0.3nm,0.6s						

*IDC **16** 19:15:13.5±2.4, 43˚26N×105˚16W, h0km, mbtmp3.4/2, ML3.4/2, Error ellipse: s-maj=46.2km s-min=8.7km az=153.0*
*NEIC **16** 19:15:16.6±1.9, 43˚65N±0˚05×105˚25W±0˚07, h0km±2km, ML3.3/55, Error ellipse: s-maj=9.7km s-min=6.4km az=316.0*

ISC 16 19:15:15.1±1.0, 43˚65N±0˚05×105˚26W±0˚06, h0km, n41, σ1§70/41, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**62**		**Pb**	19 15 35.6	+0.1
K22A	**Casper**	**1.36**	**223**		**Pg**	19 15 39.4	-1.8
PHWY	**Pilot Hill**	**2.35**	**184**		**Pn**	19 15 55.8	+0.5
RWWY	**Rawlins**	**2.43**	**217**		**Pn**	19 15 58.2	+1.8
RWWY				IAML		19 16 40.6	
	176nm,0.9s						

N23A	**Red Feather La**	**2.80**	**191**	Pn	**Pn**	19 16 02.4	+1.0
N23A				IAML		19 16 46.1	
	comp=N,111nm,0.7s						
N23A				IAML		19 16 47.2	
	comp=E,157nm,0.6s						
LAO	**LASA Array**	**3.11**	**348**		**Pn**	19 16 06.1	+0.5
RLMT	**Red Lodge**	**3.23**	**298**		**Pn**	19 16 08.2	+0.9
RLMT				IAML		19 18 05.1	
	comp=E,53nm,4.0s						
BW06	**Boulder Array**	**3.27**	**256**		**Pn**	19 16 07.4	-0.4
PD31	**Pinedale Array**	**3.27**	**256**		**Pn**	19 16 08.4	+0.6
PDAR	**Pinedale Array**	**3.27**	**256**	Pn	**Pn**	19 16 09.1	+1.3
	comp=E,3.4nm,0.3s,baz=84,slow=18,SNR=16						
PDAR				Lg	Lg	19 16 55.4	
	comp=E,8.4nm,0.3s,baz=86,slow=31,SNR=12						
	comp=E,1.9nm,0.4s						
PDAR	**Pinedale Array**	**3.27**	**256**	Pn	**Pn**	19 16 06.5	-1.4
OGNE	**Ogallala**	**3.61**	**137**	Pn	**Pn**	19 16 14.3	+1.9
GCMT	**Greycliff**	**3.80**	**306**		**Pn**	19 16 15.6	+0.5
LKWY	**Lake**	**3.81**	**286**		**Pn**	19 16 17.6	+2.2
LKWY				IAML		19 17 37.0	
	comp=E,62nm,1.5s						
ISCO	**Idaho Springs**	**3.86**	**184**		**Pn**	19 16 16.9	+0.9
LOHW	**Long Hollow**	**3.88**	**271**		**Pn**	19 16 18.1	+1.8
LOHW				IAML		19 17 25.4	
	comp=E,31nm,1.1s						
LOHW				IAML		19 17 47.4	
	comp=E,30nm,1.9s						
FLWY	**Flagg Ranch**	**3.96**	**278**		**Pn**	19 16 20.3	+3.0
FLWY				IAML		19 17 30.1	
	comp=E,61nm,2.5s						
MOOW	**Moose Ponds**	**3.98**	**273**	Pn	**Pn**	19 16 20.1	+2.5
SNOW	**Snow King Moun**	**4.00**	**269**		**Pn**	19 16 19.3	+1.3
SNOW				IAML		19 17 53.9	
	comp=E,51nm,1.6s						
YNR	**Norris Junctio**	**4.04**	**287**	Pn	**Pn**	19 16 18.2	-0.3
YNR				IAML		19 17 46.1	
	comp=E,31nm,2.6s						
YNR				IAML		19 17 46.1	
	comp=N,27nm,2.5s						
YPP	**Pitchstone Pla**	**4.05**	**281**		**Pn**	19 16 18.6	-0.1
YPP				IAML		19 17 31.8	
	comp=E,35nm,2.5s						
YPP				IAML		19 17 45.3	
	comp=N,30nm,2.7s						
REDW	**Red Top Meadow**	**4.08**	**268**		**Pn**	19 16 20.9	+1.9
IMW	**Indian Meadow**	**4.12**	**275**		**Pn**	19 16 21.5	+1.9
IMW				IAML		19 17 40.2	
	comp=N,34nm,0.6s						
IMW				IAML		19 17 43.9	
	comp=N,30nm,1.3s						
TPAW	**Teton Pass**	**4.14**	**270**		**Pn**	19 16 22.8	+3.0
TPAW				IAML		19 17 43.4	
	comp=N,48nm,1.1s						
TPAW				IAML		19 17 47.0	
	comp=N,29nm,1.9s						
O20A	**White River Ci**	**4.16**	**213**		**Pn**	19 16 21.7	+1.7
FXWY	**Fox Creek**	**4.19**	**272**		**Pn**	19 16 17.7	-2.8
FXWY				IAML		19 17 40.7	
	comp=N,24nm,2.7s						
AHID	**Auburn Hatcher**	**4.36**	**260**		**Pn**	19 16 25.6	+2.7
AHID				IAML		19 17 45.4	
	comp=N,43nm,1.4s						
AHID				IAML		19 17 50.8	
	comp=N,38nm,1.0s						
YHL	**Hebgen Lake**	**4.42**	**288**		**Pn**	19 16 25.7	+1.9
YHL				IAML		19 17 44.5	
	comp=N,45nm,1.6s						
YHL				IAML		19 17 55.8	
	comp=E,45nm,1.2s						
ECR	**Eagle Creek**	**4.50**	**264**		**Pn**	19 16 25.6	+0.9
QLMT	**Earthquake Lak**	**4.59**	**287**		**Pn**	19 16 26.7	+0.7
DGMT	**Dagmar**	**4.88**	**8**	Pn	**Pn**	19 16 33.1	+3.3
BOZ	**Bozeman (W)**	**4.95**	**295**		**Pn**	19 16 32.4	+1.5
BOZ				IAML		19 17 54.8	
	comp=E,17nm,2.6s						
HWUT	**Hardware Ranch**	**5.08**	**248**	Pn	**Pn**	19 16 35.1	+2.4
P18A	**Preston Nutter**	**5.49**	**225**		**Pn**	19 16 38.9	+0.5
LRM	**Limekiln Ridge**	**5.56**	**295**		**Pn**	19 16 40.6	+1.2
PV07	**Paradox Valley**	**5.80**	**207**		**Pn**	19 16 43.4	+0.8
HVU	**Hansel Valley**	**5.84**	**254**		**Pn**	19 16 44.5	+1.3
SRU	**San Rafael Swe**	**6.02**	**223**		**Pn**	19 16 47.1	+1.5
PV13	**Radium Mtn., P**	**6.11**	**207**		**Pn**	19 16 48.2	+1.3
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	19 17 28.9	-0.1
	comp=E,0.7nm,0.3s,baz=230,slow=11,SNR=4.8						
ULM				Sn	**Sn**	19 19 12.0	-1.2
	comp=E,0.3nm,0.3s,baz=300,slow=20,SNR=2.3						
ULM				Lg	Lg	19 20 01.2	
	comp=E,0.2nm,0.3s,baz=316,slow=21,SNR=1.4						
	comp=E,1.3nm,0.3s						
I56US	**NEWPORT INFRAS**	**9.46**	**303**	*i*		20 07 40.0	
	baz=117,slow=311,SNR=2.1						

*IDC **16** 19:21:26.1±1.1, 32˚94S×178˚44W, h0km, mb4.3/5, mbtmp4.4/7, ML4.5/2, MS3.6/8, Error ellipse: s-maj=35.5km s-min=24.2km az=140.0*
*NEIC **16** 19:21:28.7±2.6, 32˚74S±0˚08×178˚6W±0˚1, h10km±1km, mb4.8/18, Error ellipse: s-maj=22.0km s-min=12.0km az=112.0*

ISC 16 19:21:31.2±0.7, 32˚83S±0˚07×178˚7W±0˚1, h32km, n61, σ1§53/50, mb4.7/12, MS3.5/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.63**	**11**	Pn	**Pn**	19 22 24.9	-0.2
	73nm,0.3s,baz=311,slow=19,SNR=2.1						
RAO				Sn	**Sn**	19 23 06.1	-0.7
	56nm,0.3s,baz=126,slow=19,SNR=1.5						
	247nm,0.5s						
RAO	**Raoul Island**	**3.63**	**11**	Pn	**Pn**	19 22 21.7	-3.5
MXZ	**Matakaoa Point**	**5.33**	**207**	Pn	**Pn**	19 22 47.1	-1.4
URZ	**Urewera**	**6.41**	**211**	Pn	**Pn**	19 23 03.0	-0.4
	5.7nm,0.3s,baz=259,slow=3.6,SNR=33						
URZ				Sn	**Sn**	19 24 14.2	-1.1
	10nm,0.3s,baz=90,slow=22,SNR=10.0						
URZ				LR	LR	19 25 49.3	
	comp=Z,395nm,18.3s,baz=34,slow=41						
	13nm,0.3s						
URZ	**Urewera**	**6.41**	**211**		**Pn**	19 23 01.6	-1.7
BKZ	**Black Stump Fm**	**7.43**	**210**		**Pn**	19 23 13.3	-4.1
HIZ	**Hauiti**	**7.73**	**221**	Pn	**Pn**	19 23 21.5	0.0
BFZ	**Birch Farm**	**8.83**	**206**	Pn	**Pn**	19 23 31.4	-5.1
NNZ	**Nelson**	**10.50**	**215**	Pn	**Pn**	19 23 55.2	-4.2
RPZ	**Rata Peaks**	**13.52**	**214**	Pn	**Pn**	19 24 35.8	-4.9
	0.4nm,0.3s,baz=19,slow=5.5,SNR=2.6						
RPZ				Sn	Sn	19 26 55.6	-14
	0.7nm,0.3s,baz=33,slow=19,SNR=6.2						
RPZ	**Rata Peaks**	**13.52**	**214**	Pn	**Pn**	19 24 33.5	-7.2
DZM	**Mont Dzumac**	**16.98**	**305**	LR	LR	19 30 42.0	
	comp=Z,378nm,18.6s,baz=238,slow=32						
RAR	**Rarotonga**	**20.40**	**60**	LR	LR	19 34 49.4	
	comp=Z,64nm,18.0s,baz=277,slow=40						
EIDS	**Eidsvold**	**27.38**	**278**	P	**P**	19 27 14.4	+0.7
EIDS				IAmb	IAmb	19 27 48.5	
	comp=Z,22nm,1.2s						
TAU	**Tasmania Unive**	**28.49**	**239**	P	**P**	19 27 24.4	+1.0
PPT	**Papeete**	**30.28**	**67**	LR	LR	19 37 42.4	
	comp=Z,55nm,19.3s,baz=237,slow=32						
STKA	**Stephens Creek**	**33.43**	**261**	P	**P**	19 28 07.2	0.0
	comp=Z,2.6nm,0.9s,baz=102,slow=10,SNR=4.1						
	comp=Z,2.6nm,0.9s						
CTA	**Charters Tower**	**33.70**	**283**	P	**P**	19 28 11.9	+2.3
	comp=Z,8.7nm,0.7s,baz=123,slow=9.7,SNR=9.3						
	comp=Z,8.7nm,0.7s						
CTAO	**Charters Tower**	**33.70**	**283**	P	**P**	19 28 12.0	+2.4
BBOO	**Buckleboo**	**37.81**	**257**	P	**P**	19 28 44.7	0.0
RABL	**Rabaul**	**39.42**	**310**	P	**P**	19 28 55.5	-2.9
COEN	**Coen**	**39.45**	**289**	P	**P**	19 28 56.9	-1.7
AS31	**Alice Springs**	**42.46**	**270**	P	**P**	19 29 24.9	+1.5
ASAR	**Alice Springs**	**42.46**	**270**	P	**P**	19 29 24.9	+1.5
	comp=Z,2.4nm,0.7s,baz=110,slow=7.3,SNR=40						
	comp=Z,2.4nm,0.7s						
ASAR	**Alice Springs**	**42.46**	**270**	P	**P**	19 29 24.2	+0.8
WR0	**Warramunga Arr**	**43.49**	**275**	P	**P**	19 29 33.0	+1.3
WB2	**Warramunga Ar**	**43.66**	**275**	P	**P**	19 29 34.5	+1.5
WB2				IAmb	IAmb	19 30 56.8	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**43.66**	**275**	P	**P**	19 29 34.5	+1.3
WRA	**Warramunga Arr**	**43.66**	**275**	P	**P**	19 29 34.1	+0.9
	comp=Z,5.8nm,0.5s,baz=114,slow=7.7,SNR=158						
WRA				ScP	**ScP**	19 35 12.4	+3.1
	comp=Z,0.6nm,1.0s,baz=101,slow=3.8,SNR=2.7						
	comp=Z,5.8nm,0.5s						
WRA	**Warramunga Arr**	**43.66**	**275**	P	**P**	19 29 33.6	+0.4

WB0	**Warramunga Arr**	**43.70**	**275**	P	**P**	19 29 34.8	+1.3
WB0				IAmb	IAmb	19 29 37.1	
	comp=Z,12nm,0.8s						
FORT	**Forrest**	**44.91**	**258**	P	**P**	19 29 43.6	+0.6
FORT				IAmb	IAmb	19 29 53.5	
	comp=Z,18nm,0.9s						
KNRA	**Kununurra**	**50.35**	**277**	P	**P**	19 30 26.1	+0.7
KNRA				IAmb	IAmb	19 30 28.0	
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.82**	**272**	P	**P**	19 30 36.5	+0.1
FITZ				IAmb	IAmb	19 30 53.7	
	comp=Z,32nm,1.9s						
CASY	**Casey**	**52.73**	**209**		**P**	19 30 43.0	+0.5
QSPA	**South Pole Qui**	**57.29**	**180**	LR	LR	19 55 14.5	
	comp=Z,51nm,18.1s,baz=92,slow=36						
QSPA	**South Pole Qui**	**57.29**	**180**	P	**P**	19 31 16.2	+0.6
QSPA				IAmb	IAmb	19 31 19.6	
	comp=Z,12nm,1.4s						
RPN	**Rapa Nui**	**59.38**	**104**	LR	LR	19 52 20.7	
	comp=Z,21nm,20.7s,baz=94,slow=31						
TROLL	**Troll, Antarti**	**75.45**	**180**	P	**P**	19 33 12.9	+1.2
SNAA	**Sanae**	**75.75**	**179**	P	**P**	19 33 14.2	+0.9
SNAA	**Sanae**	**75.75**	**179**	P	**P**	19 33 13.7	+0.3
VNA3	**Neumayer Olymp**	**75.93**	**176**	P	**P**	19 33 14.7	+0.4
VNA2	**Neumayer--Watz**	**76.35**	**177**	P	**P**	19 33 17.5	+0.8
VNA1	**Neumayer--Stat**	**76.59**	**177**	P	**P**	19 33 19.4	+1.4
H03N3	**Juan Fernandez**	**79.82**	**123**	T	T	21 02 28.2	
	baz=240						
H03N2	**Juan Fernandez**	**79.82**	**123**	T	T	21 02 22.5	
	baz=240						
H03N1	**Juan Fernandez**	**79.84**	**123**	T	T	21 02 25.4	
	baz=240						
KSRS	**Korea Array**	**85.82**	**320**	P	**P**	19 34 08.5	+1.2
	comp=Z,0.9nm,0.7s,baz=144,slow=5.2,SNR=4.2						
	comp=Z,0.9nm,0.7s						
NNA	**Nana**	**93.31**	**106**	LR	LR	20 12 23.1	
	comp=Z,40nm,18.2s,baz=212,slow=33						
ATAH	**Atahualpa**	**94.74**	**102**	LR	LR	20 08 51.2	
	comp=Z,59nm,21.9s,baz=297,slow=30						
KURBB	**Kurchatov Arra**	**122.32**	**313**	PKP	**PKPdf**	19 40 21.9	-0.6
	comp=Z,0.5nm,0.6s,baz=103,slow=2.1,SNR=5.3						
ARCES	**ARCESS Array B**	**140.82**	**347**	PKhKP	PKPpre	19 40 51.2	
	comp=Z,1.9nm,0.9s,baz=57,slow=3.3,SNR=4.9						
KBZ	**Khabaz**	**145.91**	**301**	PKPbc	**PKPdf**	19 41 06.8	+0.3
	comp=Z,1.6nm,0.9s,baz=76,slow=4.2,SNR=2.6						
FINES	**FINESS Array B**	**147.20**	**338**	PKPbc	**PKPbc**	19 41 11.0	+0.6
	comp=Z,6.1nm,0.5s,baz=50,slow=3.7,SNR=33						
NB2	**NORSAR Subarra**	**151.05**	**350**	PKP	**PKiKP**	19 41 20.9	+0.1
	comp=Z,1.2nm,0.6s,baz=16,slow=2.5						
NOA	**NORSAR Array B**	**151.05**	**350**	PKPbc	**PKiKP**	19 41 20.6	-0.1
	comp=Z,1.0nm,0.8s,baz=22,slow=4.7,SNR=15						
HFS	**Hagfors**	**151.49**	**347**	PKPbc	**PKPbc**	19 41 21.0	-0.2
	comp=Z,4.7nm,0.7s,baz=151,slow=3.4,SNR=8.0						
AKASG	**Malin Array Be**	**152.82**	**319**	PKPbc	**PKiKP**	19 41 25.3	+0.6
	comp=Z,1.0nm,0.6s,baz=47,slow=3.5,SNR=5.0						
BRTR	**Keskin Array B**	**153.15**	**294**	PKPbc	**PKiKP**	19 41 26.3	+0.4
	comp=Z,0.8nm,0.5s,baz=191,slow=4.0,SNR=2.2						
TORD	**Torodi Ar. Bea**	**160.41**	**181**	PKPab	**PKPab**	19 42 08.3	-0.6
	comp=Z,0.8nm,0.8s,baz=193,slow=1.9,SNR=3.7						
GERES	**GERESS Array B**	**161.50**	**333**	PKPab	**PKPab**	19 42 13.4	+0.3
	comp=Z,0.5nm,0.7s,baz=35,slow=3.6,SNR=5.4						

NNC 16 19:21:37.8±1.5, 36˚86N×71˚10E, h141km±27km, mb3.0, mpv3.7,2C-1D, Error ellipse: s-maj=19.9km s-min=7.4km az=44.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.26**	**356**	P	Pn	19 23 07.8	0.0
	2.1nm,0.3s,baz=175,slow=12,SNR=118						
KK31				⇑S	Sn	19 24 18.8	+0.6
	2.3nm,0.6s,baz=188,slow=24,SNR=6.8						
CHMS	**Chumysh**	**6.75**	**23**	⇓P	Pn	19 23 14.4	0.0
	2.5nm,0.3s						
TKM2	**Tokmak 2**	**6.98**	**28**	⇑P	Pn	19 23 17.7	+0.1
	1.6nm,0.5s						
AB31	**Akbulak array**	**14.81**	**330**	P	Pn	19 25 00.1	0.0
	0.5nm,0.5s,baz=168,slow=12,SNR=12						

*BJI **16** 19:22:23.6±0.0, 25˚39N×125˚67E, h17km, mb4.2/52, mB4.7/36, ML4.3/4, Ms4.5/50, Ms7 4.3/47*
*NIED **16** 19:22:24.8, 25˚85N×125˚56E, h24km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-4.64; Mθθ5.17; Mφφ-0.52; Mrθ4.65; Mθφ0.96; Mφr3.33; Fault plane solution: M0 7.61000×10¹⁵ NP1: φs100.00000°, δ25.00000°, λ-54.00000°. NP2: φs241.00000°, δ70.00000°, λ-105.00000°.*
*JMA **16** 19:22:24.8±0.2, 25˚9N±0˚6×125˚6E±0˚8, h24km±3km, MD4.9/20, MW4.6/20, NW OFF MIYAKOJIMA ISLAND*
JMA Felt I J1 at NW OFF MIYAKOJIMA ISLAND.
*NEIC **16** 19:22:29.3±1.3, 25˚67N±0˚08×125˚66E±0˚06, h42km±7km, mb4.8/107, Error ellipse: s-maj=12.3km s-min=6.6km az=148.0*
*IDC **16** 19:22:33.3±3.6, 25˚73N×125˚56E, h83km±32km, mb3.8/22, mbtmp4.1/24, MS4.0/51, Error ellipse: s-maj=18.3km s-min=12.4km az=68.0*

ISC 16 19:22:26.8±0.6, 25˚73N±0˚03×125˚63E±0˚03, h25km±4km, n270, σ1§27/220, mb4.8/78, MS4.1/56, 3C-5D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.87**	**203**	*i* P	**Pb**	19 22 42.6	-0.7
JIKM				S	**Sb**	19 22 55.5	+1.0
JIKM	**Ikemajima**	**0.87**	**203**	A	A	19 22 42.6	
	comp=E,88nm,4.1s,comp=E,77nm,1.5s						
**

NACB **Ninganchiao** 3.97 248 Pn **Pn** 19 23 27.7 +1.6
YHNB **Yeheng** 3.99 256 Pn **Pn** 19 23 27.7 +1.3
YHNB **Yeheng** 3.99 256 P **Pb** 19 23 31.7 -4.8
YULB **Yu-li** 4.58 240 Pn **Pn** 19 23 34.6 +0.2
SSLB **Suanglung** 4.67 246 Pn **Pn** 19 23 36.6 +0.9
SSLB **Suanglung** 4.67 246 P **Pn** 19 23 38.3 +2.6
TWG **Pinlang** 5.07 236 **Pn** 19 23 40.5 -0.6
TPUB **Ta-pu** 5.15 243 **Pn** 19 23 45.0 +2.7
TPUB **Ta-pu** 5.15 243 P **Pn** 19 23 45.3 +3.0
SSE **Sheshan** 6.62 325 Pn Pn 19 24 05.3 +2.8
SSE Sn Sb 19 25 25.3 -15
SSE smax smax
comp=N,67nm,1.0s
SSE smax smax
comp=E,88nm,1.2s
SSE LR LR
comp=N,870nm,14.3s
SSE LR LR
comp=E,690nm,14.4s
KNMB **Chin-men Tao** 6.68 261 Pn **Pn** 19 24 05.2 +1.9
JSU **Suzuyama** 7.15 35 Pn **Pn** 19 24 11.6 +1.8
JMN **Monobe** 10.72 40 Pn **Pn** 19 24 56.7 -2.0
KSAR **Wonju Array Be** 11.83 9 Pn Pn 19 25 15.8 +1.9
KSRS **Korea Array** 11.85 9 P Pn 19 25 18.2 +4.1
4.8nm,0.8s,baz=188,slow=13,SNR=23
KSRS LR LR 19 30 00.4
comp=Z,605nm,19.4s,baz=185,slow=38
KS19 **Wonju Array Si** 11.89 9 **Pn** 19 25 16.0 +1.3
SEHB **SEOHWA** 12.70 9 Pn Pn 19 25 27.8 +2.1
TIA **Tai'an** 12.73 327 P P 19 25 38.9 +1.8
TIA S Sn 19 28 17.3 +30
TIA pmax pmax
comp=Z,5.0nm,1.1s
TIA AMB AMB
comp=Z,130nm,4.6s
TIA LR LR
comp=N,870nm,9.4s
TIA LR LR
comp=E,710nm,10.2s
TIA LR LR
comp=Z,920nm,8.6s
DL2 **Dalian** 13.56 347 P P 19 25 50.8 +4.5
DL2 *e*S S 19 28 35.8 +5.6
DL2 pmax pmax
comp=Z,7.0nm,0.9s
DL2 pmax pmax
comp=Z,140nm,4.7s
DL2 LR LR
comp=N,480nm,16.1s
DL2 LR LR
comp=E,710nm,9.3s
DL2 LR LR
comp=Z,640nm,15.9s
LYN **LuoYang** 14.37 311 ⇑P P 19 25 59.3 +4.0
LYN S S 19 28 53.0 +6.2
LYN pmax pmax
comp=Z,20nm,1.6s
LYN pmax pmax
comp=Z,70nm,6.3s
LYN LR LR
comp=N,1μm,10.7s
LYN LR LR
comp=E,530nm,7.6s
LYN LR LR
comp=Z,1μm,13.5s
HNS **HongShan** 14.88 324 ⇓P P 19 26 03.0 +2.0
HNS *e*S **S** **19 28 53.1 -4.1**
HNS LR LR
comp=Z,640nm,13.6s
HNS LR LR
comp=Z,980nm,13.1s
HNS LR LR
comp=Z,1μm,14.1s
ENH **Enshi** 14.95 291 P **P** **19 26 02.6 +0.8**
MJAR **Matsushiro Arr** 15.22 42 P **P** **19 26 05.7 +0.9**
comp=Z,1.7nm,0.8s,baz=225,slow=11,SNR=4.7
SNY **Shenyang** 16.14 354 ⇓P **P** **19 26 18.8 +3.8**
SNY pmax pmax
comp=Z,24nm,1.2s
SNY pmax pmax
comp=Z,280nm,4.3s
SNY LR LR
comp=Z,1μm,13.3s
SNY LR LR
comp=Z,590nm,10.8s
SNY LR LR
comp=Z,2μm,13.5s
BJT **Baijiatuan** 16.30 333 P **P** **19 26 17.3 +0.6**
XAN **Xi'an** 16.67 304 P P 19 26 25.3 +4.4
XAN pP sP 19 26 31.4 +1.2
XAN pmax pmax
comp=Z,11nm,1.2s
XAN pmax pmax
comp=Z,170nm,4.1s
XAN LR LR
comp=Z,1μm,11.8s
XAN LR LR
comp=Z,830nm,13.2s
XAN LR LR
comp=Z,1μm,13.1s
GYA **Guiyang** 17.05 277 ⇑P **Pn** **19 26 21.3 -2.3**
GYA pmax pmax
comp=Z,9.0nm,0.8s
GYA LR LR
comp=Z,570nm,9.6s
CN2 **Changchun** 18.03 360 *e*P **P** **19 26 37.9 +2.1**
CN2 S **S** **19 30 01.3 -0.1**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=Z,500nm,13.0s
CN2 LR LR
comp=Z,500nm,13.0s
CN2 LR LR
comp=Z,500nm,14.0s
DAV **Davao City (W)** 18.56 180 LR LR 19 33 28.4
comp=Z,274nm,21.7s,baz=26,slow=35
HHC **Hu-ho-hao-te** 19.08 326 *e*P **Pn** **19 26 51.8 +3.4**
HHC pmax pmax
comp=Z,50nm,1.0s
HHC pmax pmax
comp=Z,430nm,4.9s
HHC LR LR
comp=Z,1μm,14.0s
HHC LR LR
comp=Z,890nm,14.2s
HHC LR LR
comp=Z,1μm,13.4s
MDJ **Mudanjiang** 19.12 9 P **Pn** **19 26 50.5 +1.8**
MDJ **Mudanjiang** 19.12 9 P Pn 19 26 54.4 +5.7
MDJ pmax pmax
comp=Z,3.0nm,0.5s
MDJ pmax pmax
comp=Z,99nm,3.6s
MDJ LR LR
comp=Z,390nm,15.7s
MDJ LR LR
comp=Z,660nm,10.8s
MDJ LR LR
comp=Z,360nm,16.2s
USRK **Ussuriysk Ar.** 19.14 14 P **Pn** **19 26 52.9 +3.9**
comp=Z,1.1nm,0.6s,baz=201,slow=12,SNR=1.5
USRK **Ussuriysk Ar.** 19.14 14 P **Pn** **19 26 48.8 -0.2**
BTO **Baotou** 19.72 323 *e*P Pn 19 27 00.1 +4.0
XLT **XiLinHaoTe** 19.72 339 ⇓P **Pn** **19 26 59.0 +2.9**
XLT pP sP 19 27 07.4 +3.6
XLT sP pwP 19 27 12.9 +9.3
XLT S Sn 19 30 45.3 +8.4
XLT pmax pmax
comp=Z,16nm,1.1s
XLT pmax pmax
comp=Z,240nm,3.8s
XLT LR LR
comp=Z,460nm,13.5s
XLT LR LR
comp=Z,550nm,13.5s
JTM **Tenmabayashi** 19.76 37 P **Pn** **19 26 55.7 -0.7**
JTM IAmb IAmb 19 27 05.1
comp=Z,85nm,1.4s
CD2 **Chengdu** 19.92 290 P **Pn** **19 27 00.0 +1.5**
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 LR LR
comp=Z,1μm,10.0s
CD2 LR LR
comp=Z,700nm,9.6s
CD2 LR LR
comp=Z,760nm,11.2s
BNX **BinXian** 20.02 4 ⇓P **Pn** **19 27 03.3 +3.9**
BNX pP **sP** **19 27 04.8 -2.1**
BNX sP **pwP** **19 27 06.8 +0.1**
BNX PP **PnPn** **19 27 16.9 +2.9**
BNX S Sn 19 30 52.8 +9.0
BNX pmax pmax
comp=Z,7.0nm,1.0s
BNX pmax pmax
comp=Z,75nm,5.5s
BNX LR LR
comp=Z,710nm,13.4s
BNX LR LR
comp=Z,510nm,8.4s
BNX LR LR
comp=Z,820nm,13.4s
KMI **Kunming** 20.68 273 ⇑P Pn 19 27 08.4 +0.8
KMI pP sP 19 27 17.3 +2.7
KMI pmax pmax
comp=Z,10.0nm,1.7s
KMI LR LR
comp=Z,330nm,15.8s
KMI LR LR
comp=Z,430nm,13.4s
KMI LR LR
comp=Z,370nm,12.5s
LZH **Lanzhou** 21.31 304 *e*P **P** **19 27 13.8 +2.0**
LZH pP sP 19 27 21.3 +0.1
LZH sP pwP 19 27 26.0 +5.1
LZH S Sn 19 31 15.5 +0.2
LZH pmax pmax
comp=Z,12nm,1.3s
LZH LR LR
comp=Z,710nm,12.7s
LZH LR LR
comp=Z,970nm,12.0s
LZH LR LR
comp=Z,890nm,12.0s
PZH **PanZhiHua** 21.45 277 P **P** **19 27 15.8 +2.3**
PZH S **S** **19 31 06.1 -4.3**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,120nm,4.9s
PZH LR LR
comp=Z,970nm,12.2s
PZH LR LR
comp=Z,550nm,11.0s
PZH LR LR
comp=Z,880nm,17.3s
UBPT **Khong Chiam** 21.52 245 P **P** **19 27 14.4 +0.3**
UBPT IAmb IAmb 19 27 17.4
comp=Z,72nm,1.5s
MYLDM **Lahad Datu** 21.54 200 P **P** **19 27 12.6 -1.7**
KKM **Kota Kinabalu** 21.55 206 P **P** **19 27 12.7 -1.7**
GUMO **Guam** 21.74 120 LR LR 19 33 47.4
comp=Z,209nm,20.9s,baz=268,slow=31
CRAI **Chiangrai** 23.87 262 P **P** **19 27 38.4 0.0**
KLR **Kul'dur** 23.94 10 P P 19 27 45.0 +6.2
comp=Z,1.6nm,0.8s,baz=191,slow=12,SNR=3.1
KLR LR LR 19 36 43.8
comp=Z,189nm,20.3s,baz=16,slow=36
TNTI **Ternate** 24.87 176 P **P** **19 27 46.6 -0.9**
TOLI2 **Tolitoli** 24.92 192 P **P** **19 27 45.2 -2.8**
TOLI2 IAmb IAmb 19 28 07.4
comp=Z,28nm,1.3s
GTA **Gaotai** 25.57 309 ⇓P **P** **19 27 53.9 0.0**
GTA pP sP 19 27 58.8 -4.8
GTA sP pwP 19 28 01.3 -2.1
GTA S **S** **19 32 20.9 +0.6**
GTA sS sS 19 32 38.3 +6.6
GTA pmax pmax
comp=Z,3.0nm,1.5s
GTA pmax pmax
comp=Z,64nm,5.9s
GTA LR LR
comp=Z,760nm,12.0s
GTA LR LR
comp=Z,420nm,15.1s
GTA LR LR
comp=Z,610nm,13.1s
CMAR **Chiang Mai Arr** 25.73 259 P **P** **19 27 56.1 +0.7**
comp=Z,2.2nm,1.0s,baz=58,slow=8.2,SNR=7.8
comp=Z,2.2nm,1.0s
CMAR **Chiang Mai Arr** 25.73 259 P **P** **19 27 55.8 +0.4**
MPSI **Mapaga** 25.84 193 P **P** **19 27 57.3 +1.0**
comp=Z,304nmcomp=Z,20nm,1.0s
SBUM **Sibu** 26.50 211 P **P** **19 28 02.7 +0.4**
SBUM IAmb IAmb 19 28 05.6
comp=Z,28nm,0.9s
ULN **Ulaanbaatar** 26.50 331 P **P** **19 28 03.9 +1.7**
ULN IAmb IAmb 19 28 13.3
comp=Z,37nm,1.2s
SONM **Songino Array** 26.77 330 P **P** **19 28 06.7 +2.1**
comp=Z,6.4nm,0.9s,baz=140,slow=9.7,SNR=36
SONM LR LR 19 40 11.0
comp=Z,443nm,21.0s,baz=116,slow=40
comp=Z,6.4nm,0.9s
SONM **Songino Array** 26.77 330 P **P** **19 28 06.1 +1.5**
SlJl **Sorong** 27.00 167 LR LR 19 37 27.9
comp=Z,318nm,19.9s,baz=41,slow=33
KSM **Kuching** 28.27 214 P **P** **19 28 16.7 -1.6**
KSM IAmb IAmb 19 28 22.9
comp=Z,28nm,1.1s
SMPI **Sarmi** 30.33 153 P P 19 28 44.3 +7.9
LSA **Lhasa** 30.71 285 P **P** **19 28 41.2 +0.9**
LSA IAmb IAmb 19 28 51.3
comp=Z,28nm,2.0s
KAPI **Kappang** 31.09 191 LR LR 19 41 18.4
comp=Z,190nm,21.8s,baz=59,slow=36
WMQ **Urumqi** 35.62 310 *e*P P 19 29 26.0 +3.5
WMQ LR LR
comp=Z,570nm,18.7s
WMQ LR LR
comp=Z,300nm,19.7s
WMQ LR LR
comp=Z,350nm,19.7s
PETK **Petropavlovsk-** 36.36 33 LR LR 19 44 35.0
comp=Z,159nm,18.7s,baz=27,slow=36
YAK **Yakutsk** 36.39 3 LR LR 19 45 17.4
comp=Z,217nm,19.5s,baz=96,slow=38
MA2 **Magadan** 38.07 21 LR LR 19 45 40.1
comp=Z,135nm,19.9s,baz=200,slow=36
H11N1 **WAKE ISLAND Hy** 38.42 90 T T 20 09 55.0
baz=283,slow=74
H11N2 **WAKE ISLAND Hy** 38.42 90 T T 20 09 58.2
baz=283,slow=74
H11N3 **WAKE ISLAND Hy** 38.43 90 T T 20 09 56.2
baz=283,slow=74
H11S3 **WAKE ISLAND Hy** 38.60 92 T T 20 10 20.9
baz=289,slow=74
H11S1 **WAKE ISLAND Hy** 38.61 92 T T 20 10 25.7
baz=289,slow=74
H11S2 **WAKE ISLAND Hy** 38.62 92 T T 20 10 26.9
baz=289,slow=74
MTN **Manton Dam** 38.71 171 P **P** **19 29 47.7 -1.2**
MTN IAmb IAmb 19 29 55.1
comp=Z,18nm,0.8s
RABL **Rabaul** 39.33 135 P **P** **19 29 53.2 -1.0**
KRVT **Keravat (AS076** 39.34 136 LR LR 19 44 34.4
comp=Z,140nm,19.3s,baz=84,slow=34
MK31 **Makanchi Array** 40.14 313 P **P** **19 30 00.2 -0.4**
MKAR **Makanchi Array** 40.14 313 P **P** **19 30 00.7 +0.1**
comp=Z,1.8nm,0.9s,baz=101,slow=10,SNR=10
MKAR PcP **PcP** **19 32 03.7 -1.0**
comp=Z,0.7nm,0.7s,baz=103,slow=4.6,SNR=2.0
comp=Z,1.8nm,0.9s
MKAR **Makanchi Array** 40.14 313 P **P** **19 30 00.2 -0.4**
MAKZ **Makanchi** 40.35 313 P **P** **19 30 01.4 -0.9**
MAKZ **Makanchi** 40.35 313 P **P** **19 30 03.5 +1.1**
MAKZ sP pwP 19 30 19.4 +7.3
ZAA0 **Zalesovo Array** 41.25 324 P **P** **19 30 08.9 -0.7**
ZALV **Zalesovo Beam** 41.25 324 P **P** **19 30 09.3 -0.3**
comp=Z,1.7nm,0.7s,baz=105,slow=11,SNR=7.7
ZALV LR LR 19 48 32.8
comp=Z,201nm,18.3s,baz=118,slow=38
comp=Z,1.7nm,0.7s
ZALV **Zalesovo Beam** 41.25 324 P **P** **19 30 08.9 -0.7**
KNRA **Kununurra** 41.27 175 P **P** **19 30 09.2 -0.9**
KNRA IAmb IAmb 19 30 17.0
comp=Z,13nm,0.9s
PRZ **Przheval'sk** 41.95 306 P **P** **19 30 15.8 0.0**
PRZ IAmb IAmb 19 31 48.4
comp=Z,22nm,1.1s
COEN **Coen** 42.99 155 P **P** **19 30 24.5 +0.3**
COEN IAmb IAmb 19 30 32.0
comp=Z,21nm,0.9s
KSH **Kashi** 43.50 301 P P 19 30 32.6 +4.3
KSH pmax pmax
comp=Z,5.0nm,1.2s
KSH LR LR
comp=Z,320nm,13.7s
KSH LR LR
comp=Z,320nm,15.1s
KSH LR LR
comp=Z,360nm,17.9s
FITZ **Fitzroy Crossi** 43.56 180 P **P** **19 30 28.8 +0.1**
KURK **Kurchatov** 43.59 318 P **P** **19 30 28.5 -0.2**
KURK **Kurchatov** 43.59 318 P **P** **19 30 29.4 +0.7**
KURBB **Kurchatov Arra** 43.62 317 P **P** **19 30 28.1 -0.7**
comp=Z,3.0nm,0.9s,baz=107,slow=8.3,SNR=16
KURBB PcP **PcP** **19 32 14.4 -1.7**
comp=Z,0.8nm,0.8s,baz=108,slow=3.0,SNR=2.9
comp=Z,3.0nm,0.9s
NRN **Naryn** 43.62 304 P **P** **19 30 29.8 +0.4**
HYBB **Hyderabad (bro** 44.36 269 *e*P **P** **19 30 35.2 -0.2**
AAK **Ala-Archa** 44.84 305 LR LR 19 52 09.5
comp=Z,225nm,19.6s,baz=62,slow=40
SMY **Shemya** 45.06 40 P **P** **19 30 41.0 +0.6**
NIL **Nilore** 45.77 293 P **P** **19 30 46.5 +0.1**
NIL IAmb IAmb 19 30 48.3
comp=Z,13nm,1.1s
TIXI **Tiksi** 45.99 1 LR LR 19 51 34.4
comp=Z,249nm,19.0s,baz=180,slow=38
WB0 **Warramunga Arr** 46.02 168 P **P** **19 30 47.7 -0.6**
WB0 IAmb IAmb 19 30 55.4
comp=Z,10nm,0.8s
WRAB **Tennant Creek** 46.17 169 P **P** **19 30 48.5 -1.0**
WRAB IAmb IAmb 19 30 56.6
comp=Z,11nm,0.9s
WRAB **Tennant Creek** 46.17 169 P P 19 30 44.7 -4.8
WRAB x x 19 30 50.4
WRAB pP pP 19 30 56.2 -0.5
WRAB sP pwP 19 31 01.1 +1.9
WRA **Warramunga Arr** 46.18 169 P **P** **19 30 50.0 +0.4**
comp=Z,3.5nm,0.9s,baz=349,slow=8.1,SNR=9.7
WRA LR LR 19 49 29.2
comp=Z,93nm,20.6s,baz=34,slow=35
comp=Z,3.5nm,0.9s
WRA **Warramunga Arr** 46.18 169 P **P** **19 30 49.5 -0.2**
WB2 **Warramunga Arr** 46.19 169 P **P** **19 30 48.7 -1.0**
WR0 **Warramunga Arr** 46.24 168 P **P** **19 30 49.5 -0.5**
WR0 IAmb IAmb 19 30 57.1
comp=Z,11nm,0.8s
PSA00 **Pilbara Seismi** 47.35 187 P **P** **19 30 58.5 -0.2**
KK31 **Karatay Array** 47.79 306 P **P** **19 31 02.5 +0.4**
KK31 **PcP** **19 32 31.0 +0.2**
KKAR **Karatay Array** 47.79 306 P **P** **19 31 02.8 +0.7**
KKAR **PcP** **19 32 31.2 +0.4**
KKAR **Karatay Array** 47.79 306 P **P** **19 31 02.3 +0.3**
KKAR IAmb IAmb 19 32 38.8
comp=Z,3.8nm,0.9s
AMKA **Amchitka** 47.83 43 P **P** **19 31 01.9 -0.3**
GAR **Garm** 47.88 300 P **P** **19 31 03.1 +0.2**
GAR IAmb IAmb 19 31 59.4
comp=Z,8.7nm,1.0s
HNR **Honiara** 48.34 132 LR LR 19 49 34.7
comp=Z,75nm,20.6s,baz=304,slow=34
NRIK **Noril'sk** 49.03 343 P **P** **19 31 10.0 -1.1**
comp=Z,1.1nm,0.4s,baz=135,slow=9.4,SNR=4.5
NRIK LR LR 19 54 29.6
comp=Z,376nm,18.4s,baz=138,slow=39
comp=Z,1.1nm,0.4s
NRIK **Noril'sk** 49.03 343 P **P** **19 31 10.9 -0.3**
NRIK IAmb IAmb 19 31 18.3
comp=Z,10nm,1.2s
BRVK **Borovoye** 49.17 319 P **P** **19 31 12.5 0.0**
KBL **Kabul** 49.17 294 P **P** **19 31 13.2 +0.1**
AS31 **Alice Springs** 49.75 170 P **P** **19 31 17.6 +0.3**
ASAR **Alice Springs** 49.76 170 P **P** **19 31 16.8 -0.5**
comp=Z,1.2nm,0.5s,baz=358,slow=7.6,SNR=10
ASAR PcP **PcP** **19 32 37.4 -0.6**
comp=Z,1.5nm,1.0s,baz=1.4,slow=3.7,SNR=2.0
ASAR LR LR 19 51 44.6
comp=Z,77nm,21.6s,baz=351,slow=35
comp=Z,1.2nm,0.5s
ASAR **Alice Springs** 49.76 170 P **P** **19 31 17.2 0.0**
CTA **Charters Tower** 49.76 154 LR LR 19 51 18.8
comp=Z,96nm,21.0s,baz=323,slow=35
HRA **Herat** 54.76 295 P **P** **19 31 54.8 0.0**
HRA IAmb IAmb 19 32 05.2
comp=Z,11nm,1.5s
MORW **Morawa** 55.26 190 P **P** **19 31 57.7 -0.2**
ABKAR **Akbulak array** 55.28 313 P **P** **19 31 58.0 +0.1**
FORT **Forrest** 56.24 177 P **P** **19 32 04.2 -0.7**
ARU **Arti** 56.34 322 LR LR 19 58 17.1
comp=Z,266nm,20.0s,baz=88,slow=38
ARU **Arti** 56.34 322 P **P** **19 32 04.9 -0.5**
ARU **Arti** 56.34 322 P **P** **19 32 05.6 +0.2**
AKTO **Aktyubinsk** 56.52 315 LR LR 19 58 07.2
comp=Z,165nm,18.2s,baz=102,slow=38
GEYT **Alibeck** 57.51 300 P **P** **19 32 14.7 +0.6**
comp=Z,1.9nm,0.7s,baz=124,slow=6.8,SNR=4.5
GEYT LR LR 20 00 39.9
comp=Z,164nm,19.1s,baz=123,slow=40
comp=Z,1.9nm,0.7s
GEYT **Alibeck** 57.51 300 P **P** **19 32 14.1 0.0**
GEYT IAmb IAmb 19 33 03.4
comp=Z,12nm,1.5s
GYA0B **ALIBECK ARRAY** 57.51 300 P **P** **19 32 14.0 -0.1**
GYA0B IAmb IAmb 19 33 03.4
comp=Z,14nm,1.6s
STKA **Stephens Creek** 59.28 164 P **P** **19 32 26.6 +0.3**
comp=Z,4.3nm,1.0s,baz=9.9,slow=4.4,SNR=4.7
STKA LR LR 20 00 12.7
comp=Z,52nm,18.8s,baz=21,slow=38
comp=Z,4.3nm,1.0s
STKA **Stephens Creek** 59.28 164 P **P** **19 32 26.5 +0.3**
KIRV **Kirov** 61.29 325 LR LR 20 01 29.5
comp=Z,165nm,20.9s,baz=100,slow=38
DZM **Mont Dzumac** 61.84 137 LR LR 19 58 26.0
comp=Z,57nm,18.9s,baz=61,slow=35
SVW2 **Sparrevohn** 62.45 33 P **P** **19 32 47.7 +0.1**
SVW2 IAmb IAmb 19 32 52.5
comp=Z,19nm,1.7s
O18K **Koktuh Hills** 62.72 34 P **P** **19 32 49.9 +0.4**
L19K **White Mountain** 62.72 31 P **P** **19 32 49.4 0.0**
L19K IAmb IAmb 19 33 33.0
comp=Z,16nm,1.6s
BELG **Belogornoye** 62.86 318 LR LR 20 03 32.1
comp=Z,102nm,20.1s,baz=145,slow=39
J20K **Nowinta River** 62.92 29 P **P** **19 32 51.3 +0.7**
IMAR **Indian Mountai** 62.99 27 P **P** **19 32 52.1 +1.0**
K20K **Telida** 63.01 30 P **P** **19 32 51.6 +0.4**
K20K IAmb IAmb 19 32 59.7
comp=Z,8.0nm,1.1s
H21K **Melozitna Rive** 63.40 27 P **P** **19 32 54.2 +0.4**
H21K IAmb IAmb 19 33 12.1
comp=Z,8.2nm,1.2s
SII **Sitkinak Islan** 63.60 38 P **P** **19 32 55.0 -0.3**
Q19K **Cape Douglas,** 63.61 35 P **P** **19 32 54.8 -0.5**
P19K **Oil Pt** 63.74 34 P **P** **19 32 56.2 +0.1**
I21K **Tanana** 63.78 28 P **P** **19 32 56.9 +0.6**
RSO **Redoubt South** 63.88 33 P **P** **19 32 57.1 -0.3**
CAST **Castle Rocks** 63.89 30 P **P** **19 32 57.6 +0.5**
CAST IAmb IAmb 19 33 05.8
comp=Z,8.8nm,1.1s
KDAK **Kodiak Island** 64.31 36 P **P** **19 33 00.3 +0.5**
KDAK **Kodiak Island** 64.31 36 P **P** **19 32 58.9 -1.0**
KDAK pP **pwP** **19 33 10.6 +0.7**
BPAW **Bear Paw Mtn.** 64.31 29 P **P** **19 33 00.8 +0.9**
MLY **Manley** 64.32 28 P **P** **19 33 00.6 +0.7**
MLY IAmb IAmb 19 33 08.0
comp=Z,8.9nm,1.2s
H23K **Yukon River** 64.73 27 P **P** **19 33 04.1 +1.6**
H23K IAmb IAmb 19 33 11.2
comp=Z,6.9nm,1.1s
NEA2 **Nenana** 65.08 28 P **P** **19 33 05.2 +0.4**
NEA2 IAmb IAmb 19 33 13.2
comp=Z,10nm,1.1s
MCK **McKinley** 65.25 29 P **P** **19 33 06.2 +0.1**
MCK IAmb IAmb 19 33 14.8
comp=Z,9.8nm,1.1s
RND **Reindeer** 65.34 30 P **P** **19 33 06.3 -0.3**
MDM **Murphy Dome** 65.39 28 P **P** **19 33 07.2 +0.4**
MDM IAmb IAmb 19 33 15.3
comp=Z,15nm,1.1s
H24K **Noodor Dome** 65.41 27 P **P** **19 33 06.2 -0.8**

H24K					IAmb	IAmb	19 33 22.9		
	comp=Z,9.7nm,1.3s								
WRH	**Wood River Hil**	**65.52**	**28**	P		**P**	**19 33 08.0**	**+0.3**	
WRH					IAmb	IAmb	19 33 16.1		
	comp=Z,13nm,1.3s								
ILAR	**Eielson Array**	**65.98**	**28**	P		**P**	**19 33 09.7**	**-1.0**	
	comp=Z,0.4nm,0.6s,baz=255,slow=5.7,SNR=6.0								
	comp=Z,0.4nm,0.6s								
PWL	**Port Wells**	**65.98**	**32**	P		**P**	**19 33 11.0**	**+0.3**	
HDA	**Harding Lake**	**66.01**	**28**	P		**P**	**19 33 10.4**	**-0.5**	
SCM	**Sheep Creek Mo**	**66.29**	**31**	P		**P**	**19 33 13.3**	**+0.5**	
BMAR	**Burnt Mountain**	**66.45**	**25**	P		**P**	**19 33 13.9**	**+0.2**	
M24K	**Tolsona, Glenn**	**66.77**	**31**	P		**P**	**19 33 14.9**	**-0.9**	
FID	**Port Fidalgo**	**66.90**	**32**	P		**P**	**19 33 17.1**	**+0.5**	
RIDG	**Independent Ri**	**67.05**	**29**	P		**P**	**19 33 17.2**	**-0.4**	
RIDG					IAmb	IAmb	19 33 26.8		
	comp=Z,12nm,1.2s								
GNI	**Garni**	**67.24**	**305**	LR		LR	20 06 38.7		
	comp=Z,79nm,18.5s,baz=100,slow=39								
SCRK	**Sand Creek**	**67.37**	**29**	P		**P**	**19 33 18.9**	**-0.8**	
DOT	**Dot Lake**	**67.41**	**29**	P		**P**	**19 33 19.8**	**0.0**	
DOT					IAmb	IAmb	19 33 27.2		
	comp=Z,5.8nm,0.9s								
I26K	**Coal Creek Min**	**67.43**	**27**	P		**P**	**19 33 20.1**	**+0.3**	
I26K					IAmb	IAmb	19 33 40.5		
	comp=Z,13nm,1.6s								
J26L	**Joseph Creek**	**67.44**	**28**	P		**P**	**19 33 19.6**	**-0.5**	
J26L					IAmb	IAmb	19 33 26.9		
	comp=Z,7.8nm,1.1s								
KBZ	**Khabaz**	**67.66**	**309**	P		**P**	**19 33 20.3**	**-1.4**	
	comp=Z,3.9nm,0.9s,baz=101,slow=3.1,SNR=6.6								
KBZ				LR		LR	20 07 16.6		
	comp=Z,140nm,18.5s,baz=70,slow=40								
	comp=Z,3.9nm,0.9s								
L26K	**Log Cabin Wild**	**67.86**	**29**	P		**P**	**19 33 23.0**	**+0.3**	
L26K					IAmb	IAmb	19 33 32.8		
	comp=Z,11nm,1.3s								
GLB	**Gilahina Butte**	**68.01**	**31**	P		**P**	**19 33 24.6**	**+0.9**	
GLB					IAmb	IAmb	19 33 35.6		
	comp=Z,16nm,1.3s								
M26K	**Nabesna, AK**	**68.16**	**30**	P		**P**	**19 33 24.9**	**+0.3**	
M26K					IAmb	IAmb	19 33 33.4		
	comp=Z,11nm,1.0s								
K27K	**Chicken**	**68.18**	**28**	P		**P**	**19 33 25.2**	**+0.6**	
K27K					IAmb	IAmb	19 33 27.1		
	comp=Z,10nm,1.4s								
EGAK	**Eagle**	**68.38**	**27**	P		**P**	**19 33 26.7**	**+0.8**	
EGAK					IAmb	IAmb	19 33 34.8		
	comp=Z,8.3nm,1.1s								
MCARA	**McCarthy VSAT**	**68.39**	**31**	P		**P**	**19 33 27.1**	**+1.1**	
L27K	**Beaver Creek,**	**68.52**	**29**	P		**P**	**19 33 26.5**	**-0.3**	
L27K					IAmb	IAmb	19 33 41.2		
	comp=Z,12nm,1.5s								
BCAR	**Beaver Creek A**	**68.54**	**29**	P		**P**	**19 33 27.6**	**+0.7**	
TGL	**Tana Glacier**	**68.64**	**32**	P		**P**	**19 33 28.2**	**+0.5**	
OBN	**Obninsk**	**68.78**	**322**	LR		LR	20 05 41.3		
	comp=Z,30nm,20.4s,baz=30,slow=38								
SPITS	**Spitsbergen Ar**	**68.83**	**348**	LR		LR	20 07 44.4		
	comp=Z,99nm,18.3s,baz=13,slow=39								
I29M	**Ogilvie Camp,**	**69.39**	**26**	P		**P**	**19 33 31.2**	**-0.9**	
I29M					IAmb	IAmb	19 33 42.3		
	comp=Z,12nm,1.3s								
ARCES	**ARCESS Array B**	**69.61**	**338**	LR		LR	20 11 36.0		
	comp=Z,95nm,18.4s,baz=90,slow=42								
GURO	**Guroymak-BITLI**	**69.70**	**304**	P		**P**	**19 33 35.3**	**+0.6**	
EPYK	**Eagle Plains**	**69.71**	**25**	P		**P**	**19 33 34.3**	**+0.1**	
EPYK					IAmb	IAmb	19 33 42.4		
	comp=Z,15nm,1.1s								
INK	**Inuvik**	**70.26**	**23**	P		**P**	**19 33 38.1**	**+0.7**	
	comp=Z,1.7nm,0.3s,baz=251,slow=2.8,SNR=6.7								
	comp=Z,1.7nm,0.3s								
INK	**Inuvik**	**70.26**	**23**	P		**P**	**19 33 38.0**	**+0.6**	
INK					IAmb	IAmb	19 33 47.9		
	comp=Z,12nm,1.1s								
HYT	**Haines Junctio**	**71.12**	**31**	P		**P**	**19 33 43.6**	**+0.7**	
HYT					IAmb	IAmb	19 33 51.4		
	comp=Z,9.9nm,1.2s								
N31M	**Braeburn, Yuko**	**71.69**	**30**	P		**P**	**19 33 46.7**	**+0.4**	
N31M					IAmb	IAmb	19 34 00.0		
	comp=Z,8.8nm,1.0s								
RAYN	**Ar Rayn**	**71.74**	**288**	P		**P**	**19 33 47.2**	**-0.1**	
RAYN					IAmb	IAmb	19 34 05.9		
	comp=Z,12nm,1.3s								
RAYN	**Ar Rayn**	**71.74**	**288**	P		**P**	**19 33 48.2**	**+0.9**	
RAYN				sP		**PcP**	**19 34 04.6**	**-1.7**	
M31M	**Drury Creek, Y**	**72.06**	**29**	P		**P**	**19 33 49.2**	**+0.7**	
FINES	**FINESS Array B**	**72.14**	**330**	P		**P**	**19 33 49.4**	**+0.5**	
	comp=Z,3.0nm,1.0s,baz=75,slow=5.9,SNR=1.8								
FINES				LR		LR	20 08 29.2		
	comp=Z,140nm,18.6s,baz=63,slow=38								
	comp=Z,3.0nm,1.0s								
WHY	**Whitehorse**	**72.39**	**31**	P		**P**	**19 33 51.0**	**+0.4**	
WHY					IAmb	IAmb	19 34 01.3		
	comp=Z,13nm,1.3s								
FARO	**Faro, Yukon**	**72.50**	**29**	P		**P**	**19 33 52.2**	**+1.0**	
FARO					IAmb	IAmb	19 33 60.0		
	comp=Z,13nm,0.9s								
C36M	**Paulatuk**	**72.98**	**20**	P		**P**	**19 33 54.3**	**+0.5**	
P33M	**Teslin, Yukon**	**73.51**	**31**	P		**P**	**19 33 58.3**	**+1.2**	
P33M					IAmb	IAmb	19 34 05.6		
	comp=Z,9.4nm,1.1s								
AKASG	**Malin Array Be**	**74.38**	**319**	P		**P**	**19 34 02.0**	**-0.3**	
	comp=Z,0.2nm,0.3s,baz=56,slow=7.2,SNR=5.7								
AKASG				LR		LR	20 07 50.4		
	comp=Z,121nm,21.9s,baz=59,slow=37								
	comp=Z,0.2nm,0.3s								
BRTR	**Keskin Array B**	**75.48**	**307**	P		**P**	**19 34 08.3**	**-0.8**	
	comp=Z,2.0nm,0.9s,baz=126,slow=3.5,SNR=5.4								
	comp=Z,2.0nm,0.9s								
BRTR	**Keskin Array B**	**75.48**	**307**	P		**P**	**19 34 08.5**	**-0.6**	
DLBC	**Dease Lake**	**75.54**	**32**	P		**P**	**19 34 10.1**	**+1.1**	
RES	**Resolute Bay**	**76.47**	**10**	LR		LR	20 10 13.8		
	comp=Z,52nm,19.5s,baz=18,slow=37								
MMAI	**Mount Meron Ar**	**76.63**	**300**	LR		LR	20 13 27.4		
	comp=Z,36nm,18.4s,baz=50,slow=40								
BURAR	**Bucovina Array**	**78.01**	**317**	P		**P**	**19 34 22.5**	**-0.7**	
HFS	**Hagfors**	**78.16**	**332**	LR		LR	20 12 12.8		
	comp=Z,87nm,18.2s,baz=50,slow=38								
JMIC	**Jan Mayen**	**78.34**	**346**	LR		LR	20 12 37.5		
	comp=Z,49nm,18.1s,baz=196,slow=38								
NB2	**NORSAR Subarra**	**78.71**	**333**	P		**P**	**19 34 25.7**	**-1.0**	
	comp=Z,6.7nm,1.4s,baz=54,slow=6.2								
NOA	**NORSAR Array B**	**78.71**	**333**	P		**P**	**19 34 25.3**	**-1.4**	
	comp=Z,0.5nm,0.6s,baz=57,slow=5.7,SNR=3.8								
NOA				LR		LR	20 13 13.4		
	comp=Z,184nm,18.9s,baz=60,slow=39								
	comp=Z,0.5nm,0.6s								
URZ	**Urewera**	**79.87**	**141**	LR		LR	20 04 48.0		
	comp=Z,77nm,21.3s,baz=211,slow=32								
YKA	**Yellowknife Ar**	**79.95**	**24**	P		**P**	**19 34 33.7**	**+0.3**	
	comp=Z,4.1nm,1.0s,baz=312,slow=5.0,SNR=18								
YKA				LR		LR	20 13 16.0		
	comp=Z,96nm,19.0s,baz=322,slow=38								
	comp=Z,4.1nm,1.0s								
YKA	**Yellowknife Ar**	**79.95**	**24**	P		**P**	**19 34 32.7**	**-0.7**	
RPZ	**Rata Peaks**	**80.70**	**148**	P		**P**	**19 34 37.9**	**+0.3**	
	comp=Z,8.7nm,1.1s,baz=323,slow=10,SNR=2.3								
RPZ				LR		LR	20 07 37.2		
	comp=Z,92nm,21.4s,baz=298,slow=34								
	comp=Z,8.7nm,1.1s								
VYHS	**Vyhne**	**81.43**	**320**	*eP*		**P**	**19 34 42.7**	**+1.1**	
VTS	**Vitosha**	**81.46**	**313**	P		**P**	**19 34 42.7**	**+0.6**	
VRAC	**Vranov**	**82.30**	**321**	LR		LR	20 13 57.7		
	comp=Z,120nm,18.2s,baz=70,slow=38								
IDI	**Anoyia**	**83.64**	**306**	LR		LR	20 19 02.6		
	comp=Z,32nm,18.3s,baz=78,slow=41								
GERES	**GERESS Array B**	**84.16**	**322**	LR		LR	20 16 27.8		
	comp=Z,127nm,18.5s,baz=41,slow=38								
BORG	**Borgarnes**	**86.23**	**346**	LR		LR	20 16 56.8		
	comp=Z,33nm,18.6s,baz=12,slow=38								
DAVOX	**Davos/Dischmat**	**87.45**	**322**	P		**P**	**19 35 11.7**	**-0.7**	
	comp=Z,1.0nm,0.8s,baz=8.1,slow=14,SNR=2.0								
DAVOX				LR		LR	20 18 55.6		
	comp=Z,172nm,19.2s,baz=76,slow=39								
	comp=Z,1.0nm,0.8s								
SFJD	**Kangerlussuaq**	**87.52**	**359**	LR		LR	20 16 40.6		
	comp=Z,24nm,18.1s,baz=350,slow=37								
KMRM	**Mail Ridge**	**88.05**	**46**	P		**P**	**19 35 12.4**	**-2.9**	
EKA	**Eskdalemuir Ar**	**88.19**	**334**	LR		LR	20 18 24.2		
	comp=Z,167nm,20.5s,baz=53,slow=38								
FRB	**Frobisher Bay**	**90.13**	**6**	LR		LR	20 18 33.1		
	comp=Z,70nm,19.9s,baz=330,slow=37								
MFID	**Camas Ranch**	**91.05**	**40**	P		**P**	**19 35 28.1**	**-1.2**	
MFID					IAmb	IAmb	19 35 38.0		
	comp=Z,5.2nm,1.1s								
HLID	**Hailey**	**91.77**	**39**	P		**P**	**19 35 32.3**	**-0.4**	
HLID					IAmb	IAmb	19 35 41.8		
	comp=Z,5.3nm,1.0s								
NVAR	**Mina Array Bea**	**92.53**	**45**	P		**P**	**19 35 36.4**	**+0.1**	
	comp=Z,0.1nm,0.3s,baz=260,slow=5.4,SNR=1.4								
	comp=Z,0.1nm,0.3s								
YHL	**Hebgen Lake**	**92.74**	**37**	P		**P**	**19 35 36.9**	**-0.4**	
YHL					IAmb	IAmb	19 35 46.0		
	comp=Z,4.4nm,1.1s								
PDAR	**Pinedale Array**	**95.00**	**37**	P		**P**	**19 35 46.8**	**-0.9**	
	comp=Z,0.2nm,0.3s,baz=270,slow=2.6,SNR=1.8								
	comp=Z,0.2nm,0.3s								
WUAZ	**Wupatki**	**98.69**	**44**	P		Pdif	19 36 03.1	-1.3	
SCHQ	**Schefferville**	**99.06**	**7**	LR		LR	20 23 43.9		
	comp=Z,78nm,19.9s,baz=324,slow=37								
ESDC	**Sonseca Array**	**99.73**	**323**	LR		LR	20 25 49.3		
	comp=Z,85nm,18.1s,baz=24,slow=38								

IDC ***16*** *19:44:56.4±2.1,30.26S×177.50W,h0km,mb4.0/3, mbtmp4.0/4,ML3.4/1,MS3.7/1,Error ellipse: s-maj=49.1km s-min=26.1km az=106.0*

NEIC ***16*** *19:44:59.2±1.4,30.17S±0.06×177.6W±0.2,h10km±1km, mb4.5/9,Error ellipse: s-maj=23.1km s-min=7.6km az=71.0*

ISC 16 19:45:02.1±1.3,30.19S±0.06×177.7W±0.2,h35km,n30, σ1s78/24,mb4.4/7,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.96**	**346**	Pn	**Pn**	**19 45 18.4**	**-0.7**
	243nm,0.3s,baz=85,slow=9.4,SNR=11						
RAO				Sn	**Sn**	**19 45 29.2**	**-2.4**
	777nm,0.3s,baz=104,slow=23,SNR=16						
RAO	**Raoul Island**	**0.96**	**346**		**Pn**	**19 45 18.4**	**-0.7**
RAO				Sg	**Sn**	**19 45 30.1**	**-1.5**
URZ	**Urewera**	**9.14**	**207**	Pn	**Pn**	**19 47 08.6**	**-2.8**
	0.4nm,0.3s,baz=12,slow=19,SNR=0.9						
URZ				Sn	**Sn**	**19 48 51.4**	**-1.6**
	1.2nm,0.3s,baz=193,slow=23,SNR=6.9						
	2.3nm,0.6s						
URZ	**Urewera**	**9.14**	**207**	Pn	**Pn**	**19 47 08.8**	**-2.6**
THZ	**Tophouse**	**13.83**	**211**	Pn	**Pn**	**19 48 15.4**	**-0.4**
KHZ	**Kahutara**	**14.10**	**208**	Pn	**Pn**	**19 48 14.6**	**-4.7**
CTAO	**Charters Tower**	**34.06**	**279**	P	**P**	**19 51 45.8**	**+2.5**
BBOO	**Buckleboo**	**39.31**	**254**	P	**P**	**19 52 28.6**	**+0.7**
BBOO				IAmb	IAmb	19 52 51.4	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**43.41**	**267**	P	**P**	**19 53 02.7**	**+1.0**
ASAR	**Alice Springs**	**43.41**	**267**	P	**P**	**19 53 02.5**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=104,slow=7.5,SNR=33						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**43.41**	**267**	P	**P**	**19 53 01.9**	**+0.2**
WB2	**Warramunga Arr**	**44.37**	**272**	P	**P**	**19 53 10.4**	**+0.9**
WB2				IAmb	IAmb	19 53 52.7	
	comp=Z,9.5nm,1.4s						
WRA	**Warramunga Arr**	**44.38**	**272**	P	**P**	**19 53 09.4**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=110,slow=8.1,SNR=39						
	comp=Z,0.9nm,0.4s						
WB0	**Warramunga Arr**	**44.41**	**272**	P	**P**	**19 53 10.0**	**+0.3**
WB0				IAmb	IAmb	19 53 22.6	
	comp=Z,7.4nm,1.2s						
KNRA	**Kununurra**	**50.98**	**274**	P	**P**	**19 54 01.6**	**+0.9**
KNRA				IAmb	IAmb	19 54 08.6	
	comp=Z,13nm,1.3s						
FITZ	**Fitzroy Crossi**	**52.65**	**270**	P	**P**	**19 54 13.8**	**+0.7**
	comp=Z,3.4nm,1.1s,baz=141,slow=6.5,SNR=1.7						
FITZ				LR	LR	20 14 41.9	
	comp=Z,66nm,18.7s,baz=316,slow=34						
	comp=Z,3.4nm,1.1s						
NWAO	**Narrogin (SRO)**	**54.75**	**249**	P	**P**	**19 54 29.4**	**+1.0**
CASY	**Casey**	**55.46**	**208**	P	**P**	**19 54 33.5**	**+0.5**
QSPA	**South Pole Qui**	**59.92**	**180**	P	**P**	**19 55 06.7**	**+2.3**
H03S2	**Juan Fernandez**	**80.33**	**123**	T	T	21 26 25.4	
	baz=238						
H03S1	**Juan Fernandez**	**80.35**	**123**	T	T	21 26 25.4	
	baz=238						
H03S3	**Juan Fernandez**	**80.35**	**123**	T	T	21 26 24.3	
	baz=238						
H03N3	**Juan Fernandez**	**80.53**	**123**	T	T	21 26 39.5	
	baz=234						
H03N2	**Juan Fernandez**	**80.53**	**123**	T	T	21 26 43.0	
	baz=234						
H03N1	**Juan Fernandez**	**80.54**	**123**	T	T	21 26 32.7	
	baz=234						
H10N3	**ASCENSION HYDR**	**138.87**	**154**	T	T	22 40 10.0	
	baz=204,slow=75						
H10N1	**ASCENSION HYDR**	**138.88**	**154**	T	T	22 40 08.2	
	baz=204,slow=75						
H10N2	**ASCENSION HYDR**	**138.89**	**154**	T	T	22 40 10.1	
	baz=204,slow=75						
FINES	**FINESS Array B**	**145.05**	**340**	PKPbc	**PKPab**	**20 04 34.1**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=70,slow=4.6,SNR=19						
NOA	**NORSAR Array B**	**148.59**	**352**	PKPbc	**PKPbc**	**20 04 43.9**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=16,slow=4.1,SNR=2.7						

IDC ***16*** *19:51:44.5±1.9,57.05S×26.09W,h0km,mb4.1/2, mbtmp4.1/2,MS3.4/1,Error ellipse: s-maj=74.9km s-min=42.4km az=6.0*

NEIC ***16*** *19:51:56.3±1.8,57.0S±0.1×26.4W±0.2,h90km±10km, mb4.0/10,Error ellipse: s-maj=16.4km s-min=15.3km az=174.0*

ISC 16 19:51:55.8±0.8,56.99S±0.10×26.42W±0.10,h86km,n20, σ0s70/17,mb4.0/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.31**	**291**	Pn	**Pn**	**19 53 27.3**	**+1.2**
HOPE				Sn	**Sn**	**19 54 36.5**	**-0.1**
ORCD	**Orcadas**	**10.19**	**241**	Pn	**Pn**	**19 54 18.3**	**-0.6**
SNAA	**Sanae**	**17.71**	**155**		**Pn**	**19 55 57.0**	**+0.5**
PMSA	**Palmer Station**	**19.62**	**231**	LR	LR	20 03 19.1	
	comp=Z,97nm,18.4s,baz=69,slow=35						
BELA	**Belgrano 2**	**21.17**	**185**	P	**P**	**19 56 33.1**	**-0.5**
MG01	**Puerto William**	**22.91**	**258**	P	**P**	**19 56 51.4**	**-0.7**
MG02	**Cerro Sombrero**	**24.67**	**261**	P	**P**	**19 57 07.2**	**-0.9**
QSPA	**South Pole Qui**	**33.26**	**180**	P	**P**	**19 58 26.0**	**+1.4**
QSPA				IAmb	IAmb	19 59 03.6	
	comp=Z,2.5nm,1.4s						
SHEL	**Horse Pasture**	**43.84**	**29**	P	**P**	**19 59 52.6**	**-0.7**
H10N1	**ASCENSION HYDR**	**149.91**	**16**	T	T	20 54 39.9	
	baz=196,slow=76						
H10N3	**ASCENSION HYDR**	**149.91**	**16**	T	T	20 54 34.4	
	baz=196,slow=76						
H10N2	**ASCENSION HYDR**	**149.92**	**16**	T	T	20 54 35.4	
	baz=196,slow=76						
LPAZ	**La Paz**	**51.27**	**305**	P	**P**	**20 00 52.0**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=130,slow=4.4,SNR=8.0						
	comp=Z,1.5nm,0.3s						
LPAZ	**La Paz**	**51.27**	**305**	P	**P**	**20 00 51.5**	**0.0**
LPAZ				IAmb	IAmb	20 01 08.3	
	comp=Z,2.6nm,1.1s						
BOAV	**Boa Vista**	**65.28**	**322**	P	**P**	**20 02 28.2**	**-0.2**
BOAV				IAmb	IAmb	20 02 38.1	
	comp=Z,8.3nm,1.5s						
TOA0	**Torodi Ar. Sit**	**73.67**	**29**	P	**P**	**20 03 19.6**	**-0.4**
TOA0				IAmb	IAmb	20 03 36.0	
	comp=Z,3.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.67**	**29**	P	**P**	**20 03 19.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=200,slow=6.2,SNR=16						
	comp=Z,0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.67**	**29**	P	**P**	**20 03 19.8**	**-0.2**
SONM	**Songino Array**	**150.35**	**88**	PKPbc	**PKPbc**	**20 11 36.1**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=220,slow=4.1,SNR=10						
ILAR	**Eielson Array**	**151.05**	**310**	PKPbc	**PKiKP**	**20 11 37.9**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=127,slow=2.4,SNR=4.8						

ANF ***16*** *19:58:40.8±0.2,56.99N×157.91W,h3km±1km,ML4.8/26, Error ellipse: s-maj=2.2km s-min=1.3km az=112.0*

AEIC ***16*** *19:58:40.1±1.3,56.99N±0.02×157.90W±0.05,h3km±4km, ML4.3/55,mb4.5/44(NEIC),ML4.5/42(NEIC), Mwr4.3/53(NEIC),Error ellipse: s-maj=4.9km s-min=2.0km az=124.0*

NEIC ***16*** *19:58:41.1±1.6,56.99N±0.04×157.94W±0.07,h11km±4km, Error ellipse: s-maj=6.8km s-min=3.8km az=127.0*

NEIC ***16*** *19:58:41,56.98N×157.83W,h10km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.20; $M_{\theta\theta}$-2.55; $M_{\phi\phi}$-0.65; $M_{r\theta}$0.02; $M_{r\phi}$-1.54; $M_{\theta\phi}$0.53; Fault plane solution: M_o3.35000×10^{15} NP1:ϕ_s249.28000°, δ43.22000°, λ102.29000°. NP2:ϕ_s52.64000°, δ48.00000°, λ78.69000°. Principal axes: T 3.2761, Plg81.0000°, Azm257.0000°; N 0.1425, Plg8.0000°, Azm60.0000°; P -3.4186, Plg2.0000°, Azm151.0000°;*

MOS ***16*** *19:58:43.7±0.9,57.17N×157.81W,h44km,mb4.5/11 Error ellipse: s-maj=11.9km s-min=6.6km az=79.5*

IDC ***16*** *19:58:45.8±3.4,57.11N×157.86W,h47km±31km,mb3.7/17, mbtmp4.0/20,ML3.9/3,MS3.4/20,Error ellipse: s-maj=26.9km s-min=13.7km az=11.0*

ISC 16 19:58:41.1±0.9,56.96N±0.02×157.86W±0.03,h12km±5km, n372,σ0s97/377,mb4.4/48,MS3.5/20,1D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANNE	**Aniakchak Nort**	**0.12**	**247**		**Pg**	**19 58 44.1**	**-0.2**
ANPK	**Aniakchak Peak**	**0.19**	**231**		**Pg**	**19 58 45.5**	**+0.2**
ANNW	**Aniakchak Nort**	**0.19**	**272**		**Pg**	**19 58 45.9**	**-0.7**
AZAC	**Aniakchak**	**0.21**	**253**		**Pg**	**19 58 46.1**	**+0.3**
ANPB	**Aniakchak Plen**	**0.28**	**236**		**Pg**	**19 58 47.1**	**+0.2**
R16K	**Pilot Point**	**0.63**	**14**		**Pg**	**19 58 52.8**	**-0.6**
R16K					**Sb**	**19 59 02.1**	**-0.7**
R16K	**Pilot Point**	**0.63**	**14**	P	**Pg**	**19 58 52.7**	**-0.6**
	baz=197,SNR=46						
R16K				S	**Sg**	**19 59 01.8**	**+0.1**
	baz=197						
CHGN	**Chignik**	**0.73**	**205**		**Pg**	**19 58 54.3**	**-0.9**
CHGN				Sg	**Sg**	**19 59 04.0**	**-0.7**
CHGN	**Chignik**	**0.73**	**205**	P	**Pg**	**19 58 54.5**	**-0.7**
	baz=22,SNR=171						
CHGN				S	**Sg**	**19 59 04.5**	**-0.1**
	baz=22						
PLBL	**Peulik Blue Cr**	**0.93**	**37**		**Pg**	**19 58 58.3**	**-0.8**
VNHG	**Veniaminof 1**	**1.03**	**225**		**Pb**	**19 59 00.2**	**-0.7**
R17K	**Ugashik Creek**	**1.05**	**49**		**Pb**	**19 58 59.8**	**-1.4**
R17K					**Sb**	**19 59 14.8**	**-0.1**
R17K	**Ugashik Creek**	**1.05**	**49**	P	**Pb**	**19 59 00.0**	**-1.2**
	baz=232,SNR=511						
R17K				S	**Sg**	**19 59 15.0**	**0.0**
	baz=232						
PLK1	**Peulik 1**	**1.08**	**38**		**Pb**	**19 59 01.0**	**-0.8**
PLK3	**Peulik 3**	**1.13**	**49**		**Pb**	**19 59 01.7**	**-0.9**
PLK3					**Sn**	**19 59 18.7**	**+0.5**
S14K	**Fog Glacier**	**1.15**	**235**	P	**Pb**	**19 59 02.4**	**-0.6**
	baz=52,SNR=104						
VNFG	**Fog Glacier, M**	**1.15**	**235**		**Pb**	**19 59 02.7**	**-0.3**
VNFG					**Sn**	**19 59 21.3**	**+2.5**
PLK5	**Peulik 5**	**1.17**	**27**		**Pb**	**19 59 02.5**	**-0.7**
CHIR	**Chirikof Islan**	**1.69**	**132**	Pn	**Pn**	**19 59 11.1**	**+0.7**
CHIR				Sn	**Sb**	**19 59 33.6**	**+0.5**
CHIR				IAML		19 59 37.1	
	comp=E,4μm,1.0s						
CHIR				IAML		19 59 42.5	
	comp=N,6μm,1.0s						
CHIR	**Chirikof Islan**	**1.69**	**132**	P	**Pb**	**19 59 11.3**	**-0.7**
	baz=314,SNR=91						
CHIR				S	**Sb**	**19 59 34.5**	**+1.3**
	baz=314						
Q16K	**King Salmon**	**1.84**	**20**	P	**Pn**	**19 59 12.4**	**0.0**
	baz=202						
Q16K				S	**Sn**	**19 59 35.6**	**0.0**
	baz=202						
KELA	**Mount Kelaz**	**1.87**	**37**		**Pn**	**19 59 12.7**	**-0.3**
KVTA	**Katmai Vly 10**	**1.98**	**43**		**Pn**	**19 59 14.6**	**+0.1**
SII	**Sitkinak Islan**	**2.06**	**100**	Pn	**Pn**	**19 59 16.4**	**+0.8**
SII	**Sitkinak Islan**	**2.06**	**100**	P	**Pn**	**19 59 16.6**	**+1.0**
	baz=284,SNR=86						
P16K	**Nushagak River**	**2.08**	**358**		**Pn**	**19 59 15.8**	**+0.1**
P16K	**Nushagak River**	**2.08**	**358**	P	**Pn**	**19 59 15.4**	**-0.3**
	baz=179,SNR=45						
SDPT	**Sand Point**	**2.18**	**223**	Pn	**Pn**	**19 59 17.5**	**+0.4**
SDPT				IAML		19 59 54.2	
	comp=N,2μm,1.2s						
SDPT	**Sand Point**	**2.18**	**223**		**Sb**	**19 59 46.2**	**-1.0**
SDPT	**Sand Point**	**2.18**	**223**	P	**Pn**	**19 59 17.5**	**+0.4**
	baz=40						
SDPT				S	**Sb**	**19 59 46.3**	**-1.0**
	baz=40						
KAHC	**Katmai Hardscr**	**2.28**	**41**		**Pn**	**19 59 18.7**	**+0.1**
CHNA	**Chernabura Isl**	**2.34**	**205**	P	**Pn**	**19 59 19.5**	**+0.2**
	baz=23,SNR=44						
CNBA	**Chernabura Isl**	**2.35**	**205**	Pn	**Pn**	**19 59 19.2**	**-0.3**
CNBA				IAML		19 59 56.6	
	comp=E

comp=N,896nm,1.1s
HOM IAML 20 01 34.0
comp=E,661nm,0.9s
SVW2 Sparrevohn 4.32 15 Pn 19 59 45.7 -0.8
SVW2 IAML 20 01 07.0
comp=N,611nm,0.9s
SVW2 IAML 20 01 11.6
comp=E,517nm,1.3s
CNPM China Poot 4.34 51 Pn 19 59 47.3 +0.4
RED Redoubt Volcan 4.37 35 Pn 19 59 48.0 +0.8
RDWB Redoubt West 4.40 34 Pn 19 59 48.3 +0.5
RSO Redoubt South 4.41 35 Pn 19 59 48.2 +0.3
NCT North Crescent 4.43 33 Pn 19 59 48.9 +0.7
RDJH Redoubt Jeurge 4.49 34 Pn 19 59 49.8 +0.8
DFR Drift River 4.53 34 Pn 19 59 50.2 +0.7
BRLK Bradley Lake 4.63 50 Pn 19 59 51.6 +0.8
CKL Chakachamna La 5.12 32 Pn 19 59 58.9 +1.4
SPWE Spurr West 5.12 30 Pn 19 59 59.1 +1.5
SPCR Spurr Chakacha 5.16 32 Sb Sb 20 01 16.6 +3.7
baz=217
SPNN North Nagishla 5.16 29 Pn 19 59 59.4 +1.2
CAPN Captain Cook N 5.17 40 Pn Pn 19 59 58.2 +0.1
SPU Mount Spurr 5.19 33 Pn 19 59 58.5 +0.1
M19K Big River Lodg 5.27 18 Pn 19 59 59.3 -0.2
M19K IAML 20 01 38.8
comp=N,295nm,1.4s
M19K Big River Lodg 5.27 18 P Pn 19 59 59.8 +0.3
baz=202,SNR=31
AKUT Akutan 5.31 241 Pn Pn 19 59 58.6 -1.5
SEW Seward 5.42 51 Pn 20 00 03.0 +1.5
L19K White Mountain 5.46 15 Pn 20 00 02.3 +0.2
L19K White Mountain 5.46 15 P Pn 20 00 01.9 -0.3
baz=198,SNR=58
M20K Styx River 5.50 24 Pn 20 00 03.2 +0.4
M20K Styx River 5.50 24 P Pn 20 00 03.3 +0.6
baz=208,SNR=23
O22K Cooper Landing 5.52 47 Pn 20 00 04.2 +1.3
FIS Fire Island 5.76 40 Pn Pn 20 00 05.9 -0.3
UNV Unalaska Valle 5.83 241 Pn 20 00 08.2 +1.0
UNV Unalaska Valle 5.83 241 P Pn 20 00 08.6 +1.4
baz=54
L20K Farewell, AK 5.89 18 P Pn 20 00 08.3 +0.2
baz=202,SNR=39
L20K S **Sn 20 01 16.0 +0.6**
baz=202
RC01 Rabbit Creek A 5.89 42 Pn 20 00 08.7 +0.6
TTA Tatalina 6.06 8 Pn 20 00 09.7 -0.8
TTA Tatalina 6.06 8 P Pn 20 00 09.7 -0.8
TTA Tatalina 6.06 8 P Pn 20 00 10.1 -0.4
baz=190,SNR=13
M22K Willow 6.22 36 Pn 20 00 13.7 +1.1
PWL Port Wells 6.29 48 Pn 20 00 13.7 +0.1
PWL Port Wells 6.29 48 P Pn 20 00 14.0 +0.4
baz=236
PMR Palmer 6.45 40 Pn 20 00 15.9 +0.2
PMR Palmer 6.45 40 P Pn 20 00 15.9 +0.2
Q23K Middleton Isla 6.57 63 Pn Pn 20 00 18.0 +0.7
MID Middleton Isla 6.58 63 Pn Pn 20 00 18.0 +0.6
MID Middleton Isla 6.58 63 P Pn 20 00 18.0 +0.6
KNK Knik Glacier 6.58 43 Pn 20 00 17.5 0.0
PPLA Purkeypile 6.60 23 Pn 20 00 18.3 +0.4
PPLA Purkeypile 6.60 23 P Pn 20 00 18.9 +1.0
baz=208,SNR=15
GHO Glory Hole Cre 6.64 40 Pn 20 00 17.6 -0.8
CUT Chulitna 6.67 32 Pn Pn 20 00 18.7 -0.1
K20K Telida 6.69 15 Pn 20 00 18.7 -0.4
K20K Telida 6.69 15 P Pn 20 00 18.6 -0.4
baz=198,SNR=11
SPIA Saint Paul Isl 6.76 277 Pn 20 00 19.9 0.0
SPIA Saint Paul Isl 6.76 277 P Pn 20 00 20.5 +0.6
baz=86
GLI Glacier Island 6.82 50 Pn Pn 20 00 22.6 +1.8
HIN Hinchinbrook I 6.85 55 Pn Pn 20 00 21.6 +0.3
SML Sawmill 6.88 41 Pn 20 00 21.9 +0.2
SML Sawmill 6.88 41 P Pn 20 00 22.1 +0.4
baz=230
FID Port Fidalgo 7.02 52 Pn 20 00 23.5 -0.1
CAST Castle Rocks 7.09 22 Pn 20 00 24.6 0.0
CAST Castle Rocks 7.09 22 P Pn 20 00 24.8 +0.2
baz=207,SNR=15
EYAK Cordova Ski Ar 7.25 55 Pn Pn 20 00 27.9 +1.2
SCM Sheep Creek Mo 7.26 43 Pn 20 00 27.4 +0.5
SCM Sheep Creek Mo 7.26 43 P Pn 20 00 27.4 +0.5
KTH Kantishna Hill 7.46 25 Pn 20 00 29.5 -0.1
CHUM Lake Minchumin 7.47 19 P Pn 20 00 29.6 0.0
baz=204,SNR=16
J20K Nowinta River 7.47 13 Pn 20 00 29.6 0.0
J20K Nowinta River 7.47 13 P Pn 20 00 29.9 +0.2
baz=196
WAT1 Susitna Watana 7.52 35 P Pn 20 00 31.1 +0.7
baz=223
TRF Thorofare Moun 7.52 27 Pn 20 00 31.2 +0.7
TRF Thorofare Moun 7.52 27 P Pn 20 00 31.1 +0.5
baz=214,SNR=14
WAT6 Susitna Watana 7.60 38 P Pn 20 00 32.2 +0.5
baz=227
KLU Klutina 7.62 48 Pn 20 00 31.1 -0.8
KLU Klutina 7.62 48 P Pn 20 00 32.5 +0.6
baz=239
KAIM Kayak Island 7.65 62 Pn Pn 20 00 33.1 +0.9
RAGM Ragged Mountai 7.68 58 Pn Pn 20 00 33.5 +0.8
GCSA Galena City Sc 7.83 3 P Pn 20 00 34.3 -0.3
baz=184
HMT Hamilton 7.86 59 Pn Pn 20 00 35.5 +0.5
M24K Tolsona, Glenn 7.86 44 Pn 20 00 35.8 +0.6
RND Reindeer 7.87 31 Pn 20 00 34.3 -0.9
RND Reindeer 7.87 31 P Pn 20 00 34.3 -0.9
BPAW Bear Paw Mtn. 7.92 22 Pn 20 00 36.2 +0.3
BPAW Bear Paw Mtn. 7.92 22 P Pn 20 00 36.3 +0.3
baz=209,SNR=15
BMRM Bremner River 7.94 54 Pn Pn 20 00 36.3 +0.1
DHY Denali Highway 8.07 36 Pn 20 00 37.9 -0.1
MCK McKinley 8.10 29 Pn 20 00 36.6 -1.8
MCK McKinley 8.10 29 P Pn 20 00 36.6 -1.8
BERG Berg Lake 8.14 59 Pn Pn 20 00 36.5 -2.4
N25K Chitina, Valde 8.23 50 Pn Pn 20 00 41.0 +0.8
N25K Chitina, Valde 8.23 50 P Pn 20 00 40.6 +0.4
baz=242
BWN Browne 8.33 26 Pn Pn 20 00 43.9 +2.4
ANM Nome 8.46 337 Pn Pn 20 00 43.3 0.0
ANM Nome 8.46 337 P Pn 20 00 43.3 0.0
ANM Nome 8.46 337 P Pn 20 00 43.3 0.0
baz=151
SNH Sunshine Point 8.49 61 Pn Pn 20 00 43.8 +0.1
GLB Gilahina Butte 8.49 52 Pn 20 00 43.5 -0.3
WAX Waxell Ridge 8.56 60 Pn Pn 20 00 42.3 -2.4
PAX Paxson 8.65 41 Pn 20 00 45.0 -0.9
PAX Paxson 8.65 41 P Pn 20 00 45.0 -0.9
PAX Paxson 8.65 41 P Pn 20 00 46.7 +0.7
baz=232,SNR=8.9
I21K Tanana 8.72 17 Pn 20 00 47.5 +0.6
I21K Tanana 8.72 17 P Pn 20 00 47.3 +0.4
baz=202,SNR=15
NEA2 Nenana 8.77 26 Pn Pn 20 00 48.8 +1.2
MLY Manley 8.80 20 Pn 20 00 47.4 -0.6
MLY Manley 8.80 20 P Pn 20 00 48.4 +0.4
baz=206,SNR=15
ISLE Juniper Island 8.85 59 Pn Pn 20 00 48.0 -0.7
WRH Wood River Hil 8.92 28 Pn 20 00 50.1 +0.6
H21K Melozitna Rive 9.06 13 Pn Pn 20 00 50.3 -1.2
H21K Melozitna Rive 9.06 13 P Pn 20 00 51.0 -0.4
baz=198,SNR=30
YAH Yahtse 9.06 61 Pn 20 00 51.9 +0.2
CCB Clear Creek Bu 9.13 28 Pn 20 00 51.5 -0.9
HDA Harding Lake 9.18 31 Pn 20 00 53.2 0.0
HDA Harding Lake 9.18 31 P Pn 20 00 53.9 +0.8
baz=221,SNR=7.8
IMAR Indian Mountai 9.27 11 Pn 20 00 53.7 -0.6
M26K Nabesna, AK 9.28 48 Pn 20 00 54.4 -0.1
MDM Murphy Dome 9.28 26 Pn 20 00 53.7 -0.9
COLA College 9.30 27 *i* P **Pn 20 00 55.1 +0.3**
RIDG Independent Ri 9.36 38 Pn 20 00 54.7 -0.9
TABL Table Mountain 9.37 61 Pn 20 00 55.3 -0.6
CTG Chitna Glacier 9.42 58 P Pn 20 00 57.5 +0.9
baz=252
CTGM Chitina Glacie 9.43 58 Pn 20 00 56.9 +0.2
IL31 9.47 30 Pn 20 00 57.3 +0.2
ILAR Eielson Array 9.47 30 P Pn 20 00 56.9 -0.3
comp=N,0.8nm,0.3s,baz=217,slow=13,SNR=35
ILAR Lg Lg 20 03 36.0
comp=N,0.2nm,0.3s,baz=214,slow=25,SNR=4.4
comp=N,2.6nm,0.6s
ILAR Eielson Array 9.47 30 Pn 20 00 56.7 -0.5
ILAR Eielson Array 9.47 30 P Pn 20 00 56.7 -0.5
H22K Ishtalitna Cre 9.48 16 P Pn 20 00 57.7 +0.4
baz=202,SNR=23
LOGN Logan Glacier 9.54 59 Pn Pn 20 00 58.0 -0.2
DOT Dot Lake 9.57 40 Pn Pn 20 00 58.1 -0.4
POKR Poker Plat Res 9.61 27 Pn 20 00 57.6 -1.4
POKR Poker Plat Res 9.61 27 P Pn 20 00 59.4 +0.4
baz=217
GAMB Gambell 9.66 321 Pn Pn 20 00 58.9 -0.8
GAMB Gambell 9.66 321 P Pn 20 00 59.2 -0.5
baz=129
M27K Edge Creek, AK 9.72 50 Pn Pn 20 00 59.9 -0.7
M27K Edge Creek, AK 9.72 50 P Pn 20 01 01.2 +0.6
baz=244
PCA Pinnacle 9.72 64 Pn Pn 20 00 59.1 -1.5
H23K Yukon River 9.74 21 Pn Pn 20 00 59.7 -1.1
H23K Yukon River 9.74 21 P Pn 20 01 01.1 +0.3
baz=208,SNR=10
J25K Salcha River, 9.79 33 Pn 20 01 01.1 -0.4
J25K Salcha River, 9.79 33 P Pn 20 01 02.1 +0.5
baz=224
SCRK Sand Creek 9.80 38 Pn Pn 20 01 01.8 +0.1
G21K Allakaket 9.81 10 P Pn 20 01 01.7 0.0
baz=194,SNR=12
TNA Tin City 9.88 335 Pn Pn 20 01 04.0 +1.3
TNA Tin City 9.88 335 P Pn 20 01 03.0 +0.3
baz=146
O28M Mount Upton 9.91 60 P Pn 20 01 04.2 +0.9
baz=255
L27K Beaver Creek, 10.07 46 Pn 20 01 05.4 0.0
L27K Beaver Creek, 10.07 46 P Pn 20 01 05.8 +0.4
baz=240
PNL Peninsula 10.08 67 P Pn 20 01 05.9 +0.4
baz=263
BCAR Beaver Creek A 10.09 46 Pn Pn 20 01 05.4 -0.3
H24K Noodor Dome 10.10 24 Pn 20 01 06.3 +0.6
H24K Noodor Dome 10.10 24 P Pn 20 01 06.3 +0.6
baz=213
J26L Joseph Creek 10.28 37 Pn 20 01 08.3 0.0
PRP Porcupine Dome 10.42 29 Pn 20 01 09.2 -1.0
PRP Porcupine Dome 10.42 29 P Pn 20 01 10.4 +0.2
baz=220
G23K Bananza Creek 10.45 17 P Pn 20 01 11.1 +0.5
baz=204,SNR=46
F21K Alatna River 10.50 9 P Pn 20 01 11.7 +0.5
baz=193,SNR=11
K27K Chicken 10.50 41 Pn Pn 20 01 11.8 +0.5
F22K John River 10.91 12 P Pn 20 01 17.5 +0.7
baz=197,SNR=16
G24K Hadweenzic Riv 10.92 22 P Pn 20 01 17.6 +0.7
baz=212
I26K Coal Creek Min 10.95 34 Pn 20 01 17.0 -0.4
I26K Coal Creek Min 10.95 34 P Pn 20 01 17.8 +0.4
baz=227
HYT Haines Junctio 11.20 61 Pn Pn 20 01 20.6 -0.4
M29M Somme Creek 11.21 53 P Pn 20 01 21.3 +0.4
baz=250
DAWY Dawson 11.52 44 Pn 20 01 23.4 -1.8
N30M Aishikik Lake 11.54 58 P Pn 20 01 25.5 +0.1
baz=256
F24K Squaw Lake 11.55 19 P Pn 20 01 26.0 +0.4
baz=208
GSTR Great Sitkin T 11.63 253 Pn Pn 20 01 27.8 +1.1
E24K Your Creek 11.95 17 P Pn 20 01 32.4 +1.4
baz=206,SNR=18
G26K Porcupine Rive 11.97 27 P Pn 20 01 31.1 -0.2
baz=220
F25K Christian Rive 12.06 23 P Pn 20 01 32.6 +0.1
baz=214
ADK Adak 12.07 253 Pn Pn 20 01 31.6 -1.0
ADK Adak 12.07 253 P Pn 20 01 31.6 -1.0
BMAR Burnt Mountain 12.16 25 Pn Pn 20 01 33.5 -0.3
TOLK Toolik Lake Re 12.30 14 Pn 20 01 34.4 -1.5
WHY Whitehorse 12.45 63 Pn Pn 20 01 38.1 +0.1
WHY Whitehorse 12.45 63 P Pn 20 01 40.0 +2.0
baz=263
F26K Sheenjek River 12.47 25 P Pn 20 01 38.0 -0.2
baz=217
I29M Ogilvie Camp, 12.59 40 Pn 20 01 38.8 -1.0
EPYK Eagle Plains 13.69 38 Pn 20 01 52.3 -2.5
EPYK Eagle Plains 13.69 38 P Pn 20 01 55.1 +0.3
baz=237
AMKA Amchitka 14.46 257 Pn Pn 20 02 07.1 +1.8
MMPY Sheldon Lake, 14.47 56 P Pn 20 02 07.2 +1.8
baz=259
DLBC Dease Lake 14.91 73 P Pn 20 02 12.3 +0.8
comp=N,0.2nm,0.3s,baz=262,slow=17,SNR=4.1
comp=N,3.6nm,0.9s
DLBC Dease Lake 14.91 73 Pn 20 02 09.8 -1.7
DLBC Dease Lake 14.91 73 P Pn 20 02 10.7 -0.8
baz=276
T35M Bob Quinn 15.02 78 P Pn 20 02 14.5 +1.5
baz=282
TGTN Hyland Airport 15.73 61 P Pn 20 02 23.2 +1.0
baz=266
INK Inuvik 15.80 34 P Pn 20 02 22.6 -0.4
comp=N,0.6nm,0.3s,baz=293,slow=11,SNR=4.3
comp=N,2.1nm,0.4s
INK Inuvik 15.80 34 Pn 20 02 22.4 -0.7
INK Inuvik 15.80 34 P Pn 20 02 22.4 -0.7
INK pmax pmax
comp=E,9.0nm,1.0s
INK Inuvik 15.80 34 P Pn 20 02 22.8 -0.2
baz=236
C36M Paulatuk 19.32 37 P P 20 03 04.0 -1.6
C36M IAmb IAmb 20 03 12.0
comp=E,8.6nm,0.4s
C36M Paulatuk 19.32 37 P P 20 03 04.5 -1.1
baz=247
BILL Bilibino 19.59 319 *e*P **Pn 20 03 10.2 +0.3**
BILL *e*S **S 20 06 48.3 -0.8**
BILL pmax pmax
comp=E,26nm,1.9s
BILL MLR MLR
comp=E,109nm,16.0s
YKA Yellowknife Ar 22.15 58 P P 20 03 36.4 +0.1
comp=E,3.1nm,0.7s,baz=275,slow=10.0,SNR=17
YKA PcP **PcP 20 07 32.0 -0.7**
comp=E,0.7nm,0.6s,baz=288,slow=1.8,SNR=6.0
comp=E,3.1nm,0.7s
YKA Yellowknife Ar 22.15 58 P P 20 03 34.1 -2.2
B08A Colville Reser 24.61 94 P P 20 04 01.5 +0.5
SEY Seymchan 25.07 304 P P 20 04 04.7 -0.2
comp=E,3.7nm,0.7s,baz=86,slow=15,SNR=4.1
comp=E,3.7nm,0.7s
SEY Seymchan 25.07 304 *i* P **P 20 04 04.5 -0.4**
SEY pmax pmax
comp=E,27nm,2.6s
HOOD Mount Hood Mea 25.21 102 P P 20 04 07.0 +0.4
HOOD IAmb IAmb 20 04 14.4
comp=E,9.6nm,0.8s
PETK Petropavlovsk- 25.41 280 P P 20 04 07.6 -0.4
comp=E,1.8nm,0.5s,baz=72,slow=12,SNR=3.3
comp=E,1.8nm,0.5s
NEW Newport 25.87 92 LR LR 20 12 59.7
comp=E,62nm,18.7s,baz=289,slow=33
E09A Wood Farm, Sta 26.35 96 P P 20 04 16.8 +0.1
MA2 Magadan 26.59 297 LR LR 20 14 49.3
comp=E,80nm,21.7s,baz=252,slow=36
G08A Pilot Rock 26.68 99 P P 20 04 20.3 +0.5
J05D Fort Rock, OR 26.80 105 P P 20 04 24.3 +3.4
baz=314
YBH Yreka Blue Hor 27.12 109 LR LR 20 13 42.9
comp=Z,49nm,18.2s,baz=321,slow=33
F10A Beach Ranch, E 27.19 96 P P 20 04 23.5 -0.9
SKR Severo-Kuril's 27.44 277 *i* P **P 20 04 27.0 +0.6**
EGMT Eagleton 30.04 86 IAmb IAmb 20 04 55.7
comp=Z,4.3nm,0.7s
EGMT Eagleton 30.04 86 P P 20 04 50.1 +0.4
baz=306
HLID Hailey 30.27 97 P P 20 04 52.9 +1.0
baz=312
PAHR Pah Rah Range 30.32 108 P P 20 04 53.1 +0.8
KVN Kaiserville 31.48 108 P P 20 05 03.8 +1.2
KVN IAmb IAmb 20 05 06.2
comp=Z,7.0nm,1.4s
KVN Kaiserville 31.48 108 P P 20 05 03.8 +1.2
KVN pmax pmax
comp=Z,7.0nm,1.4s
RYN Ryan 31.57 109 IAmb IAmb 20 05 11.9
comp=Z,6.2nm,1.2s
ELK Elko 31.77 102 LR LR 20 16 53.8
comp=Z,48nm,18.6s,baz=308,slow=34
ELK Elko 31.77 102 P P 20 05 05.8 +0.6
ELK Elko 31.77 102 P P 20 05 05.8 +0.6
ELK pmax pmax
comp=Z,6.0nm,1.5s
NVAR Mina Array Bea 31.84 109 P P 20 05 07.5 +1.8
comp=Z,2.1nm,0.6s,baz=304,slow=8.5,SNR=12
NVAR LR LR 20 15 42.2
comp=Z,72nm,20.5s,baz=280,slow=32
comp=Z,2.1nm,0.6s
OMMB Old Mammoth Mi 32.09 110 IAmb IAmb 20 05 15.6
comp=Z,12nm,1.5s
Q09A Carvers 32.12 107 P P 20 05 07.3 -0.9
TIXI Tiksi 32.49 326 P P 20 05 10.8 -0.1
TIXI IAmb IAmb 20 05 14.7
comp=Z,4.0nm,0.7s
TIXI Tiksi 32.49 326 *i* P **P 20 05 11.5 +0.6**
TIXI pmax pmax
comp=Z,14nm,2.0s
LCH Last Change Ra 33.08 109 P P 20 05 16.7 +0.1
LCH IAmb IAmb 20 05 20.4
comp=Z,5.9nm,1.4s
R11A Troy Canyon, C 33.32 106 P P 20 05 16.5 -2.2
R11A IAmb IAmb 20 05 24.7
comp=Z,3.0nm,0.7s
R11A Troy Canyon, C 33.32 106 P P 20 05 20.2 +1.5
baz=318,SNR=8.1
ISA Isabella, Lake 33.86 112 P P 20 05 25.4 +2.0
baz=322
TPNV Topopah Spring 34.02 108 P P 20 05 25.2 +0.4
TPNV Topopah Spring 34.02 108 P P 20 05 25.2 +0.4
TPNV pmax pmax
comp=Z,12nm,1.3s
TPNV Topopah Spring 34.02 108 P P 20 05 26.7 +1.9
baz=320
MPMC Manual Prospec 34.06 110 P P 20 05 27.2 +2.0
baz=321
FURC Furnace Creek, 34.07 109 P P 20 05 27.5 +2.5
baz=320
PRN Pahroc Range 34.30 106 P P 20 05 27.8 +0.6
PRN IAmb IAmb 20 05 30.6
comp=Z,8.2nm,1.1s
GWY Greenwater Val 34.38 109 P P 20 05 28.8 +0.9
GWY IAmb IAmb 20 05 34.1
comp=Z,4.9nm,0.6s
QSM Queen of Sheba 34.45 110 P P 20 05 29.0 +0.6
QSM IAmb IAmb 20 05 34.6
comp=Z,4.9nm,0.6s
GSC Goldstone, Bar 35.00 110 P P 20 05 35.6 +2.4
baz=321
YAK Yakutsk 35.35 309 LR LR 20 19 34.3
comp=Z,77nm,20.3s,baz=92,slow=35
YAK Yakutsk 35.35 309 P P 20 05 34.4 -1.4
YAK Yakutsk 35.35 309 *i* P **P 20 05 35.1 -0.7**
YAK pmax pmax
comp=Z,9.0nm,0.7s
BFSC Mount Baldy Ra 35.40 113 P P 20 05 38.9 +2.2
baz=322
RSSD Black Hills 35.58 88 P P 20 05 38.6 +0.3
RSSD IAmb IAmb 20 05 43.6
comp=Z,5.7nm,0.6s
RSSD Black Hills 35.58 88 P P 20 05 38.6 +0.3
RSSD pmax pmax
comp=Z,6.0nm,0.6s
GMRC Granite Mounta 35.99 110 P P 20 05 43.6 +1.9
baz=321
ULM Lac du Bonnet 36.23 74 P P 20 05 42.5 -1.0
comp=Z,1.6nm,0.5s,baz=315,slow=8.6,SNR=2.5
comp=Z,1.6nm,0.5s
BELC Belle Mtn. Jos 36.43 111 P P 20 05 47.3 +1.8
baz=322
PFO Pinyon Flats O 36.50 112 LR LR 20 17 19.2
comp=Z,80nm,21.8s,baz=162,slow=30
PFO Pinyon Flats O 36.50 112 *i* P **P 20 05 47.1 +1.0**
PFO pmax pmax
comp=Z,10.0nm,1.6s
IRM Iron Mountain 36.74 110 P P 20 05 50.1 +2.0
baz=322
AGMN Agassiz Nation 37.39 76 P P 20 05 53.7 +0.3
baz=307
WUAZ Wupatki 37.67 105 P P 20 05 57.7 +1.6
baz=320
GLA Glamis 37.77 111 P P 20 05 58.7 +1.9
baz=323
X16A Lo Mia Camp, P 38.47 106 P P 20 06 02.4 -0.5
B35A Bob, Littlefor 38.49 75 P P 20 06 02.0 -0.7
B35A IAmb IAmb 20 06 04.0
comp=Z,14nm,1.4s
214A Organ Pipe Nat 39.68 110 P P 20 06 13.6 +0.8
baz=323
EYMN Ely 39.92 74 P P 20 06 14.0 -0.6
EYMN IAmb IAmb 20 06 16.1
comp=Z,20nm,1.3s
EYMN Ely 39.92 74 P P 20 06 14.8 +0.2
baz=309,SNR=8.5
ANMO Albuquerque 40.73 100 LR LR 20 21 57.9
comp=Z,34nm,19.3s,baz=322,slow=34
ANMO Albuquerque 40.73 100 *i* P **P 20 06 23.7 +2.0**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
E38A The Farm, Brul 40.73 75 P P 20 06 20.8 -0.6
E38A IAmb IAmb 20 06 22.5
comp=Z,7.8nm,0.6s
KLR Kul'dur 41.21 290 *i* P **P 20 06 25.2 -0.1**
KLR pmax pmax
comp=Z,15nm,3.8s
I37A Lemond, Waseca 41.44 80 P P 20 06 27.1 -0.1
I37A IAmb IAmb 20 06 40.9
comp=Z,7.7nm,0.9s
G40A Rib Lake 42.32 76 P P 20 06 34.0 -0.5
G40A IAmb IAmb 20 06 38.8
comp=Z,4.6nm,0.8s
I40A Norwalk 43.01 78 P P 20 06 40.9 +0.8
E43A Lone Tree Farm 43.28 73 P P 20 06 42.9 +0.7
E43A IAmb IAmb 20 06 43.6
comp=Z,6.9nm,0.6s
MNTX Cornudas Mount 43.79 102 P P 20 06 46.9 +0.5
MNTX Cornudas Mount 43.79 102 P P 20 06 47.7 +1.2
baz=321
WMOK Wichita Mounta 45.06 94 P P 20 06 57.0 +0.5
WMOK IAmb IAmb 20 06 58.3
comp=Z,6.9nm,1.4s
WMOK Wichita Mounta 45.06 94 P P 20 06 57.1 +0.5
WMOK pmax pmax
comp=Z,7.0nm,1.4s
NRIK Noril'sk 45.47 333 *i* P **P 20 07 00.5 +1.1**
NRIK pmax pmax
comp=Z,3.0nm,0.6s
HDIL Hopedale 46.02 80 P P 20 07 03.7 -0.4
TX31 Lajitas Ar. Si 46.56 103 P P 20 07 09.0 +0.5
TX32 Lajitas Array 46.56 103 P P 20 07 09.2 +0.6
TX32 IAmb IAmb 20 07 13.9
comp=Z,2.3nm,0.8s
TXAR Lajitas Array 46.56 103 P P 20 07 09.0 +0.4
comp=Z,1.5nm,0.7s,baz=302,slow=4.8,SNR=8.3
TXAR PcP **PcP 20 08 40.6 -2.0**
comp=Z,0.3nm,0.6s,baz=341,slow=1.9,SNR=2.0
TXAR LR LR 20 24 43.4
comp=Z,48nm,18.2s,baz=324,slow=33
comp=Z,1.5nm,0.7s
LPIG La Paz 47.34 114 LR LR 20 26 27.3
comp=Z,28nm,18.4s,baz=328,slow=35
SCHQ Schefferville 47.41 52 P P 20 07 14.5 -0.3
comp=Z,2.5nm,0.7s,baz=278,slow=9.4,SNR=4.6
comp=Z,2.5nm,0.7s
MIAR Mount Ida 48.05 89 P P 20 07 20.5 +0.5
baz=319
WVT Waverly 50.02 83 P P 20 07 35.0 0.0
baz=318
HKT Hockley 50.31 95 *i* P **P 20 07 37.7 +0.4**
HKT pmax pmax
comp=Z,13nm,1.4s
KSRS Korea Array 51.30 281 P P 20 07 44.0 -0.7
comp=Z,1.7nm,0.7s,baz=42,slow=7.5,SNR=8.3
KSRS LR LR 20 30 31.0
comp=Z,25nm,18.3s,baz=45,slow=37
comp=Z,1.7nm,0.7s
SSPA Standing Stone 52.03 72 P P 20 07 49.6 -0.5
baz=317
L59A Walton 52.36 69 P P 20 07 51.5 -1.2
BORG Borgarnes 54.19 21 LR LR 20 36 41.6
comp=Z,41nm,18.8s,baz=350,slow=42
SONM Songino Array 54.46 305 P P 20 08 08.2 +0.1
comp=Z,1.3nm,0.7s,baz=41,slow=6.3,SNR=8.0
SONM PcP **PcP 20 09 11.3 -0.2**
comp=Z,1.5nm,0.6s,baz=53,slow=1.8,SNR=9.1
SONM LR LR 20 32 41.3
comp=Z,76nm,18.6s,baz=56,slow=37
comp=Z,1.3nm,0.7s
HHC Hu-ho-hao-te 57.25 296 *e*P **P 20 08 27.6 -0.6**
HHC pmax pmax

comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,150nm,5.7s
ZALV Zalesovo Beam 58.25 322 P **P** **20 08 34.3 -0.5**
comp=Z,0.4nm,0.4s,baz=19,slow=4.9,SNR=2.6
comp=Z,0.4nm,0.4s
FINES FINESS Array B 61.90 358 P **P** **20 08 59.0 -0.7**
comp=Z,1.0nm,0.6s,baz=27,slow=9.4,SNR=4.3
comp=Z,1.0nm,0.6s
FINES FINESS Array B 61.90 358 *i* P **P** **20 09 01.7 +2.0**
FINES pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 62.03 6 P **P** **20 08 59.8 -0.9**
comp=Z,0.6nm,0.6s,baz=353,slow=6.9
NOA NORSAR Array B 62.03 6 P **P** **20 08 59.4 -1.3**
comp=Z,0.7nm,0.6s,baz=354,slow=6.8,SNR=6.6
NOA LR LR 20 37 45.1
comp=Z,14nm,18.1s,baz=60,slow=38
comp=Z,0.7nm,0.6s
BRVK Borovoye 63.49 330 *i* P **P** **20 09 11.9 +1.5**
BRVK pmax pmax
comp=Z,4.0nm,1.8s
MKAR Makanchi Array 65.13 319 P **P** **20 09 21.7 +0.4**
comp=Z,0.4nm,0.6s,baz=53,slow=7.8,SNR=4.6
MKAR PP **PP** **20 11 43.4 -0.6**
comp=Z,0.4nm,0.6s,baz=40,slow=8.2,SNR=3.7
MKAR LR LR 20 40 31.9
comp=Z,33nm,21.1s,baz=57,slow=38
comp=Z,0.4nm,0.6s
WMQ Urumqi 65.60 314 *e*P **P** **20 09 27.6 +3.1**
WMQ pmax pmax
comp=Z,16nm,0.7s
AKTO Aktyubinsk 68.94 336 LR LR 20 42 19.4
comp=Z,30nm,20.1s,baz=40,slow=38
BELG Belogornoye 69.02 344 *i* P **P** **20 09 48.1 +2.2**
BELG pmax pmax
comp=Z,2.0nm,1.4s
ABKAR Akbulak array 69.61 335 P **P** **20 09 49.4 -0.2**
ABKAR IAmb IAmb 20 10 05.8
comp=Z,4.1nm,1.4s
AAK Ala-Archa 71.47 322 LR LR 20 44 51.8
comp=Z,36nm,20.2s,baz=40,slow=39
CLL Collm 71.83 6 *i* Px Px 20 10 02.0
AKASG Malin Array Be 72.55 355 P **P** **20 10 05.6 -1.8**
comp=Z,0.5nm,0.4s,baz=4.6,slow=5.8,SNR=2.3
comp=Z,0.5nm,0.4s
PZH PanZhiHua 73.58 293 P **P** **20 10 16.8 +2.8**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,90nm,5.1s
KHC Kasperske Hory 74.04 6 *e*P **P** **20 10 16.3 0.0**
KHC Kasperske Hory 74.04 6 *e*P **P** **20 10 16.3 0.0**
GERES GERESS Array B 74.33 6 P **P** **20 10 17.1 -1.0**
comp=Z,0.2nm,0.3s,baz=350,slow=5.0,SNR=2.3
comp=Z,0.2nm,0.3s
GEYT Alibeck 80.70 332 LR LR 20 51 45.7
comp=Z,32nm,18.8s,baz=148,slow=40
ESDC Sonseca Array 81.24 20 P **P** **20 10 55.2 -1.4**
comp=Z,0.9nm,0.9s,baz=338,slow=5.1,SNR=6.2
comp=Z,0.9nm,0.9s
CMAR Chiang Mai Arr 81.69 291 P **P** **20 10 58.1 -1.1**
comp=Z,1.2nm,0.6s,baz=11,slow=5.5,SNR=9.9
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 83.19 351 LR LR 20 54 54.0
comp=Z,19nm,19.3s,baz=80,slow=41
BATI Baumata 92.27 255 LR LR 20 57 52.5
comp=Z,103nm,18.4s,baz=180,slow=38
BOSA Boshof 151.58 354 PKPbc **PKPbc** **20 18 33.1 -1.7**
comp=Z,2.2nm,0.7s,baz=98,slow=1.6,SNR=4.8
VNA3 Neumayer Olymp 160.43 149 PKPab **PKPab** **20 19 18.7 -1.3**
VNA2 Neumayer--Watz 161.23 150 PKPab **PKPab** **20 19 24.2 +0.7**

*IDC **16** 20:01:04.3±0.7, 36.°90N×140.°66E, h0km, mb3.8/12, mbtmp3.9/13, ML4.5/1, MS3.2/3, Error ellipse: s-maj=17.1km s-min=13.8km az=164.0*
*NEIC **16** 20:01:04.8±1.7, 36.°92N±0.°02×140.°81E±0.°07, h2km±5km, mb4.4/15, Error ellipse: s-maj=8.9km s-min=1.5km az=105.0*
*JMA **16** 20:01:06.1±0.0, 36.°9N±0.°1×140.°7E±0.°2, h7km, MV3.9/20, EASTERN FUKUSHIMA PREF*
JMA Felt I J1 at EASTERN FUKUSHIMA PREF .
*NIED **16** 20:01:06.1, 36.°94N×140.°67E, h7km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=5.79; $M_{\theta\theta}$3.57; $M_{\phi\phi}$2.22; $M_{r\theta}$-1.98; $M_{\theta\phi}$-1.45; $M_{r\phi}$2.68; Fault plane solution: $M_0$6.10000×10^{14} NP1: ϕ=298.00000°, δ30.00000°, λ=-103.00000°. NP2: ϕ=133.00000°, δ61.00000°, λ=-83.00000°.*

ISC 16 20:01:04.9±1.2, 36.°88N±0.°04×140.°72E±0.°04, h6km±8km, n76, σ1°$\frac{s}{t}$47/75, mb4.2/22, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.23**	**16**	*i* P		**Pg**		**20 01 10.0**	**+0.4**
ONAJ				S		**Sg**		**20 01 13.0**	**+0.2**
JFFD	**Fukushimafurud**	**0.25**	**330**	*i* P		**Pg**		**20 01 09.8**	**-0.1**
JFFD				S		**Sg**		**20 01 12.3**	**-0.9**
JHO	**Hitachi**	**0.29**	**205**	*i* P		**Pb**		**20 01 12.7**	**+0.1**
JFK	**Kawauchi**	**0.51**	**14**	*i* P		**Pg**		**20 01 14.8**	**+0.1**
JFK				S		**Sg**		**20 01 21.1**	**-0.3**
JSB	**Shiboa**	**0.65**	**278**	*i* P		**Pb**		**20 01 18.5**	**-0.2**
JSB				S		**Sb**		**20 01 27.0**	**-0.9**
JFT	**Otama**	**0.71**	**335**	*i* P		**Pg**		**20 01 18.5**	**-0.1**
JFT				S		**Sg**		**20 01 26.9**	**-0.9**
JYT	**Yasato**	**0.77**	**213**	Pg		**Pb**		**20 01 21.1**	**+0.4**
JYT				Sg		**Sb**		**20 01 32.0**	**+0.6**
JYT	**Yasato**	**0.77**	**213**	*i* P		**Pb**		**20 01 21.2**	**+0.5**
JYT				S		**Sb**		**20 01 32.4**	**+0.9**
JFY	**Yanaizu**	**0.97**	**303**	P		**Pg**		**20 01 23.4**	**-0.1**
JFY				S		**Sg**		**20 01 35.0**	**-1.1**
JMM	**Marumori**	**0.99**	**3**	Pg		**Pg**		**20 01 23.1**	**-0.8**
JMM				Sg		**Sg**		**20 01 35.3**	**-1.5**
JMM	**Marumori**	**0.99**	**3**	*i* P		**Pg**		**20 01 23.2**	**-0.8**
JMM				S		**Sg**		**20 01 35.6**	**-1.2**
MJAR	**Matsushiro Arr**	**2.04**	**261**	Pg		**Pn**		**20 01 39.4**	**-0.5**
	5.2nm,0.3s,baz=84,slow=16,SNR=155								
MJAR				Lg		Lg		20 02 08.0	
	13nm,0.3s,baz=86,slow=22,SNR=14								
MJAR				LR		LR		20 02 35.1	
	comp=Z,168nm,19.5s,baz=74,slow=45								
MAJO	**Matsushiro**	**2.05**	**261**	Pn		**Pb**		**20 01 41.4**	**-1.1**
MAJO				Sn		**Sb**		**20 02 08.0**	**-0.2**
JSD	**Sado**	**2.27**	**301**			**Pn**		**20 01 43.0**	**-0.1**
JSD				Sn		**Sn**		**20 02 11.2**	**-0.2**
JGF	**Kuroka**	**3.00**	**246**			**Pn**		**20 01 55.2**	**+2.1**
JGF				Sn		**Sb**		**20 02 33.0**	**-2.7**
INU	**Inuyama**	**3.36**	**244**			**Pn**		**20 02 00.2**	**+2.2**
JTM	**Tenmabayashi**	**3.92**	**4**	Pn		**Pn**		**20 02 07.6**	**+2.0**
ERM	**Erimo**	**5.47**	**19**	Pn		**Pn**		**20 02 25.5**	**-1.4**
JEW	**Eniwo**	**5.98**	**5**	Pn		**Pn**		**20 02 32.9**	**-1.1**
JMN	**Monobe**	**6.41**	**243**	Pn		**Pn**		**20 02 42.3**	**+2.3**
JHS	**Saijyo**	**6.45**	**255**	Pn		**Pn**		**20 02 44.2**	**+3.8**
JNU	**Nakatsue**	**8.90**	**248**	Pn		**Pn**		**20 03 15.5**	**+1.4**
JCJ	**Chichijima**	**9.83**	**172**	Pn		**Pn**		**20 03 25.6**	**-1.2**
	4.6nm,0.3s,baz=294,slow=20,SNR=1.7								
JCJ				Sn		**Sn**		**20 05 11.0**	**-6.5**
	5.3nm,0.3s,baz=285,slow=20,SNR=1.3								
JCJ				LR		LR		20 08 12.7	
	comp=Z,32nm,18.1s,baz=159,slow=44								
	34nm,0.8s								
JCJ	**Chichijima**	**9.83**	**172**	Pn		**Pn**		**20 03 26.0**	**-0.9**
USA0B	**Ussuriysk Arra**	**9.88**	**320**	Pn		**Pn**		**20 03 30.5**	**+3.1**
USRK	**Ussuriysk Ar.**	**9.88**	**320**	Pn		Pn		20 03 32.6	+5.2
	0.3nm,0.3s,baz=119,slow=12,SNR=3.7								
USRK	**Ussuriysk Ar.**	**9.88**	**320**			**Pn**		**20 03 31.1**	**+3.7**
YSS	**Yuzh-Sakhalins**	**10.18**	**8**	Pn		**Pn**		**20 03 31.5**	**-0.1**
KSRS	**Korea Array**	**10.23**	**277**	Pn		Pn		20 03 38.2	+5.9
	0.2nm,0.3s,baz=97,slow=14,SNR=8.2								
HHC	**Hu-ho-hao-te**	**23.00**	**289**	*e*P		**P**		**20 06 09.8**	**-0.7**
HHC				pmax		pmax			
	comp=Z,26nm,0.8s								
HHC				pmax		pmax			
	comp=Z,280nm,6.5s								
YAK	**Yakutsk**	**26.11**	**348**	P		**P**		**20 06 38.6**	**-0.6**
YAK				IAmb		IAmb		20 06 59.7	
	comp=Z,11nm,1.3s								
SONM	**Songino Array**	**27.41**	**304**	P		**P**		**20 06 50.8**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=109,slow=9.3,SNR=7.3								
	comp=Z,0.7nm,0.6s								
SONM	**Songino Array**	**27.41**	**304**	P		**P**		**20 06 51.1**	**-0.3**
SMY	**Shemya**	**28.17**	**45**	P		**P**		**20 06 57.2**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**28.55**	**120**	T		T		20 36 46.8	
	baz=313,slow=75								
H11N1	**WAKE ISLAND Hy**	**28.56**	**120**	T		T		20 36 47.4	
	baz=313,slow=75								
H11N3	**WAKE ISLAND Hy**	**28.57**	**120**	T		T		20 36 48.3	
	baz=313,slow=75								
H11S1	**WAKE ISLAND Hy**	**29.25**	**122**	T		T		20 37 42.5	
	baz=314,slow=75								
H11S3	**WAKE ISLAND Hy**	**29.25**	**122**	T		T		20 37 42.5	
	baz=314,slow=75								
H11S2	**WAKE ISLAND Hy**	**29.26**	**122**	T		T		20 37 43.7	
	baz=314,slow=75								
PZH	**PanZhiHua**	**34.53**	**264**	P		**P**		**20 07 56.5**	**+2.2**
PZH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
PZH				pmax		pmax			
	comp=Z,140nm,5.7s								
SIJI	**Sorong**	**38.57**	**195**	LR		LR		20 21 15.3	
	comp=Z,43nm,20.9s,baz=252,slow=31								
WMQ	**Urumqi**	**40.41**	**297**	*e*P		**P**		**20 08 45.8**	**+1.9**
WMQ				pP		sP		20 08 50.9	+4.3
ZALV	**Zalesovo Beam**	**41.61**	**313**	P		**P**		**20 08 54.0**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=115,slow=7.5,SNR=3.7								
	comp=Z,0.8nm,0.6s								
MK31	**Makanchi Array**	**43.73**	**302**	P		**P**		**20 09 10.8**	**-0.1**
MK31				IAmb		IAmb		20 09 16.8	
	comp=Z,3.2nm,1.4s								
MK31	**Makanchi Array**	**43.73**	**302**	P		**P**		**20 09 10.8**	**-0.1**
MK31	**Makanchi Array**	**43.73**	**302**	pmax		pmax			
	comp=Z,3.0nm,1.5s								
MKAR	**Makanchi Array**	**43.73**	**302**	P		**P**		**20 09 10.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=95,slow=8.2,SNR=6.6								
	comp=Z,0.5nm,0.5s								
MKAR	**Makanchi Array**	**43.73**	**302**	P		**P**		**20 09 10.3**	**-0.6**
KDAK	**Kodiak Island**	**47.59**	**42**	P		**P**		**20 09 42.8**	**+1.6**
KDAK				IAmb		IAmb		20 09 43.9	
	comp=Z,8.5nm,1.2s								
ILAR	**Eielson Array**	**49.92**	**32**	P		**P**		**20 09 59.7**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=259,slow=5.3,SNR=4.8								
	comp=Z,0.4nm,0.6s								
KSH	**Kashi**	**49.96**	**294**	P		P		20 10 05.0	+5.1
KSH				pmax		pmax			
	comp=Z,4.0nm,0.5s								
FID	**Port Fidalgo**	**50.44**	**37**	P		**P**		**20 10 02.2**	**-0.9**
GSI	**Gunungsitoli**	**53.24**	**239**	P		**P**		**20 10 23.7**	**-0.8**
KNRA	**Kununurra**	**53.47**	**194**	P		**P**		**20 10 25.6**	**-0.4**
KNRA				IAmb		IAmb		20 11 07.8	
	comp=Z,12nm,1.1s								
FITZ	**Fitzroy Crossi**	**56.50**	**197**	P		**P**		**20 10 48.8**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=14,slow=4.2,SNR=1.9								
	comp=Z,1.7nm,0.9s								
FITZ	**Fitzroy Crossi**	**56.50**	**197**	P		**P**		**20 10 50.6**	**+2.7**
FITZ				IAmb		IAmb		20 11 32.3	
	comp=Z,6.9nm,1.4s								
WB0	**Warramunga Arr**	**56.65**	**187**	P		**P**		**20 10 49.3**	**+0.3**
WB0				IAmb		IAmb		20 10 53.9	
	comp=Z,7.5nm,1.2s								
WR0	**Warramunga Arr**	**56.83**	**187**	P		**P**		**20 10 50.3**	**+0.1**
WR0				IAmb		IAmb		20 11 10.4	
	comp=Z,2.8nm,0.9s								
WB2	**Warramunga Arr**	**56.83**	**187**	P		**P**		**20 10 50.7**	**+0.4**
WRA	**Warramunga Arr**	**56.83**	**187**	P		**P**		**20 10 50.3**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=1.9,slow=7.3,SNR=27								
	comp=Z,1.5nm,0.6s								
WRA	**Warramunga Arr**	**56.83**	**187**	P		**P**		**20 10 50.2**	**-0.1**
ABKAR	**Akbulak array**	**57.62**	**310**	P		**P**		**20 10 55.2**	**-0.4**
ABKAR	**Akbulak array**	**57.62**	**310**	P		**P**		**20 10 55.5**	**-0.1**
ABKAR				IAmb		IAmb		20 10 59.0	
	comp=Z,3.4nm,1.5s								
KIRV	**Kirov**	**60.04**	**323**	LR		LR		20 38 08.2	
	comp=Z,47nm,18.9s,baz=11,slow=37								
ASAR	**Alice Springs**	**60.56**	**187**	P		**P**		**20 11 16.9**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=11,slow=9.5,SNR=9.2								
	comp=Z,1.0nm,0.8s								
STKA	**Stephens Creek**	**68.40**	**179**	P		**P**		**20 12 07.8**	**+0.5**
FINES	**FINESS Array B**	**68.69**	**332**	P		**P**		**20 12 08.4**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=64,slow=3.2,SNR=4.3								
	comp=Z,4.2nm,0.9s								
FINES	**FINESS Array B**	**68.69**	**332**	P		**P**		**20 12 09.1**	**+0.2**
NOA	**NORSAR Array B**	**74.12**	**337**	P		**P**		**20 12 42.2**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=39,slow=5.9,SNR=2.8								
	comp=Z,0.6nm,0.8s								
NVAR	**Mina Array Bea**	**75.53**	**53**	P		**P**		**20 12 51.6**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=287,slow=6.4,SNR=4.0								
	comp=Z,0.4nm,0.4s								
GERES	**GERESS Array B**	**82.55**	**328**	P		**P**		**20 13 27.9**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=18,slow=4.4,SNR=2.4								
	comp=Z,2.2nm,0.5s								
TXAR	**Lajitas Array**	**90.66**	**52**	P		**P**		**20 14 09.4**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=329,slow=3.4,SNR=3.8								
	comp=Z,0.4nm,0.6s								
H03N2	**Juan Fernandez**	**147.56**	**96**	T		T		23 05 35.7	
	baz=291,slow=76								
H03N3	**Juan Fernandez**	**147.57**	**96**	T		T		23 05 38.2	
	baz=291,slow=76								
H03N1	**Juan Fernandez**	**147.58**	**96**	T		T		23 05 38.7	
	baz=291,slow=76								

*IDC **16** 20:35:05.4±2.8, 33.°03S×178.°46W, h0km, mb3.8/2, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=65.3km s-min=32.2km az=114.0*
*WEL **16** 20:35:10.8±0.7, 33.°5S±15.°×17.°9W±3.°7, h33km, M4.1/8, mB4.6/7, ML4.4/12, MLv4.3/8, Mw(mB)3.8/7, Error ellipse: s-maj=0.1km s-min=0.0km az=111.8*
*NEIC **16** 20:35:13.4±0.2, 33.°42S±0.°05×179.°2W±0.°2, h10km±2km, mb4.4/6, Error ellipse: s-maj=31.0km s-min=9.1km az=90.0*

ISC 16 20:35:08.7±1.2, 32.°78S±0.°10×178.°9W±0.°2, h10km, n31, σ1°$\frac{s}{t}$63/40, mb4.3/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.61**	**13**	S		**Sn**		**20 36 44.0**	**-3.3**
MXZ	**Matakaoa Point**	**5.29**	**205**	Pn		Pn		20 36 23.0	-4.9
MXZ	**Matakaoa Point**	**5.29**	**205**	P		**Pn**		**20 36 28.8**	**+0.9**
MXZ				S		**Sn**		**20 37 29.0**	**0.0**
WMGZ	**Waiomatatini S**	**5.49**	**203**	P		**Pn**		**20 36 32.5**	**+1.9**
HAZ	**Te Kaha**	**5.66**	**208**	P		**Pn**		**20 36 33.1**	**+0.1**
HAZ				S		**Sn**		**20 37 39.2**	**+1.2**
PKGZ	**Pakihiroa**	**5.67**	**205**	P		**Pn**		**20 36 30.3**	**-2.8**
PKGZ				S		**Sn**		**20 37 37.6**	**-0.6**
RUGZ	**Raukumara Rang**	**5.88**	**208**	P		**Pn**		**20 36 36.7**	**+0.6**
RUGZ				S		**Sn**		**20 37 42.9**	**-0.8**
TWGZ	**Tauwhareparae**	**5.96**	**205**	P		**Pn**		**20 36 38.2**	**+1.1**
TWGZ				S		**Sn**		**20 37 45.6**	**+0.2**
CNGZ	**Carnagh Statio**	**6.16**	**202**	P		**Pn**		**20 36 40.9**	**+1.1**
MWZ	**Matawai**	**6.26**	**207**	P		**Pn**		**20 36 39.5**	**-1.7**
MWZ				S		**Sn**		**20 37 52.0**	**-0.9**
URZ	**Urewera**	**6.37**	**210**	Pn		**Pn**		**20 36 40.1**	**-2.5**
	2.4nm,0.3s,baz=276,slow=2.9,SNR=12								
URZ				Sn		**Sn**		**20 37 54.0**	**-1.4**
	2.6nm,0.3s,baz=118,slow=24,SNR=7.1								
	2.6nm,0.3s								
URZ	**Urewera**	**6.37**	**210**	Pn		**Pn**		**20 36 38.5**	**-4.1**
URZ	**Urewera**	**6.37**	**210**	P		**Pn**		**20 36 42.2**	**-0.3**
URZ				S		**Sn**		**20 37 54.6**	**-0.7**
RIGZ	**Rimuhau**	**6.51**	**204**	P		**Pn**		**20 36 44.6**	**0.0**
RIGZ				S		**Sn**		**20 37 56.6**	**-2.3**
MUGZ	**Murupara**	**6.69**	**211**	P		**Pn**		**20 36 48.1**	**+1.0**
MUGZ				S		**Sn**		**20 38 03.4**	**0.0**
SNGZ	**Shannon Statio**	**6.73**	**206**	P		**Pn**		**20 36 48.2**	**+0.6**
SNGZ				S		**Sn**		**20 38 03.5**	**-0.7**
MTHZ	**Maungataniwha**	**6.98**	**209**	P		**Pn**		**20 36 51.9**	**+0.8**
MTHZ				S		**Sn**		**20 38 08.3**	**-2.3**
BKZ	**Black Stump Fm**	**7.39**	**209**	Pn		Pn		20 36 51.7	-5.0
OTVZ	**Oturere**	**7.75**	**213**	P		**Pn**		**20 37 02.9**	**+1.2**
BFZ	**Birch Farm**	**8.80**	**205**	Pn		Pn		20 37 10.9	-5.1
RPZ	**Rata Peaks**	**13.47**	**213**	Pn		**Pn**		**20 38 16.9**	**-2.9**
	0.1nm,0.3s,baz=49,slow=19,SNR=1.2								
	2.9nm,0.7s								
ASAR	**Alice Springs**	**42.29**	**270**	P		**P**		**20 43 03.8**	**+1.0**
	0.5nm,0.5s,baz=106,slow=7.4,SNR=11								
	0.5nm,0.5s								
WR0	**Warramunga Arr**	**43.32**	**275**	P		**P**		**20 43 13.3**	**+2.2**
WR0				IAmb		IAmb		20 43 54.4	
	comp=Z,13nm,1.4s								
WB2	**Warramunga Arr**	**43.49**	**275**	P		**P**		**20 43 14.6**	**+2.1**
WB2				IAmb		IAmb		20 43 17.5	
	comp=Z,9.7nm,1.4s								
WRA	**Warramunga Arr**	**43.50**	**275**	P		**P**		**20 43 13.8**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=115,slow=7.6,SNR=33								
	comp=Z,1.1nm,0.5s								
WB0	**Warramunga Arr**	**43.53**	**275**	P		**P**		**20 43 15.0**	**+2.2**
KNRA	**Kununurra**	**50.19**	**277**	P		**P**		**20 44 04.9**	**0.0**
FITZ	**Fitzroy Crossi**	**51.65**	**272**	P		**P**		**20 44 16.4**	**+0.4**
CASY	**Casey**	**52.69**	**209**	P		**P**		**20 44 22.7**	**-0.3**
CASY				IAmb		IAmb		20 44 47.6	
	comp=Z,4.8nm,1.5s								
QSPA	**South Pole Qui**	**57.33**	**180**	P		**P**		**20 44 56.9**	**+0.1**
QSPA				IAmb		IAmb		20 45 11.4	
	comp=Z,5.2nm,1.5s								
FINES	**FINESS Array B**	**147.10**	**338**	PKPbc		**PKPdf**		**20 54 49.8**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=48,slow=4.3,SNR=11								

IDC 16 20:54:29.2±1.8, 26.°12S×70.°49E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=64.4km s-min=32.3km az=69.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**18.47**	**6**	T		T		21 17 42.8	
	baz=186								
H08S2	**Diego Garcia H**	**18.48**	**6**	T		T		21 17 42.5	
	baz=186								
H08S3	**Diego Garcia H**	**18.49**	**6**	T		T		21 17 42.7	
	baz=186								
H01W2	**Cape Leeuwin H**	**38.36**	**114**	T		T		21 42 16.7	
	baz=270								
H01W3	**Cape Leeuwin H**	**38.36**	**114**	T		T		21 42 17.1	
	baz=270								
H01W1	**Cape Leeuwin H**	**38.38**	**114**	T		T		21 42 15.4	
	baz=270								
ASAR	**Alice Springs**	**57.07**	**102**	P		P		21 04 17.1	-0.4
	0.1nm,0.4s,baz=258,slow=6.2,SNR=4.5								
	0.1nm,0.4s								
WRA	**Warramunga Arr**	**58.59**	**98**	P		P		21 04 28.5	+0.3
	1.0nm,1.2s,baz=256,slow=6.8,SNR=2.2								
	1.0nm,1.2s								
VNDA	**Vanda**	**64.99**	**166**	P		P		21 05 10.4	-0.1
	0.6nm,0.9s,baz=301,slow=5.9,SNR=2.3								
	0.6nm,0.9s								
MKAR	**Makanchi Array**	**73.36**	**8**	P		P		21 06 02.7	+0.1
	0.7nm,0.7s,baz=187,slow=6.5,SNR=6.8								
	0.7nm,0.7s								
ZALV	**Zalesovo Beam**	**80.70**	**9**	P		P		21 06 43.7	0.0
	0.5nm,0.5s,baz=194,slow=2.4,SNR=2.6								
	0.5nm,0.5s								

*IDC **16** 20:55:21.9±0.9, 26.°04S×70.°84E, h0km, mb3.9/9, mbtmp3.9/9, MS3.3/1, Error ellipse: s-maj=32.4km s-min=21.0km az=85.0*
*NEIC **16** 20:55:24.3±1.3, 26.°1S±0.°1×71.°1E±0.°2, h10km±1km, mb4.4/5, Error ellipse: s-maj=26.0km s-min=21.0km az=223.0*

ISC 16 20:55:23.9±0.8, 26.°0S±0.°1×71.°0E±0.°2, h11km, n25, σ0°$\frac{s}{t}$96/18, mb4.0/11, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**18.34**	**5**	T		T		21 18 31.3	
	baz=186,slow=75								
H08S2	**Diego Garcia H**	**18.34**	**5**	T		T		21 18 30.3	
	baz=186,slow=75								
H08S3	**Diego Garcia H**	**18.36**	**5**	T		T		21 18 30.0	
	baz=186,slow=75								
H01W2	**Cape Leeuwin H**	**38.02**	**114**	T		T		21 43 07.5	
	baz=271,slow=75								
H01W3	**Cape Leeuwin H**	**38.02**	**114**	T		T		21 43 10.1	
	baz=271,slow=75								
H01W1	**Cape Leeuwin H**	**38.03**	**114**	T		T		21 43 09.5	
	baz=271,slow=75								
RPSI	**Rantau Prapat**	**39.35**	**48**	P		**P**		**21 02 53.2**	**-0.4**
RPSI				IAmb		IAmb		21 03 04.4	
	comp=Z,9.0nm,1.0s								
LSZ	**Lusaka**	**41.25**	**276**	LR		LR		21 17 26.3	
	comp=Z,42nm,20.7s,baz=175,slow=32								
CMAR	**Chiang Mai Arr**	**51.92**	**34**	P		**P**		**21 04 34.3**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=219,slow=7.0,SNR=6.1								
	comp=Z,0.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**51.92**	**34**	P		**P**		**21 04 32.0**	**-1.0**
ASAR	**Alice Springs**	**56.68**	**102**	P		**P**		**21 05 08.1**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=251,slow=6.4,SNR=8.6								
	comp=Z,0.6nm,0.6s								
WRA	**Warramunga Arr**	**58.19**	**98**	P		**P**		**21 05 18.5**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=248,slow=10,SNR=4.6								
	comp=Z,0.6nm,0.7s								
QSPA	**South Pole Qui**	**64.10**	**180**	P		**P**		**21 05 57.4**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=304,slow=2.5,SNR=5.4								
	comp=Z,0.7nm,0.7s								
QSPA	**South Pole Qui**	**64.10**	**180**	P		**P**		**21 05 58.5**	**+0.5**
VNDA	**Vanda**	**64.98**	**166**	P		**P**		**21 06 03.7**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=263,slow=8.2,SNR=9.2								
	comp=Z,1.5nm,0.9s								
VNDA	**Vanda**	**64.98**	**166**	P		**P**		**21 06 03.5**	**+0.1**
VNDA				IAmb		IAmb		21 06 04.5	
	comp=Z,2.6nm,1.0s								
KK31	**Kar

CNPM China Poot 15.65 50 Pn **Pn** **21 07 06.3 +0.4**
CNPM IAmb IAmb 21 07 19.3
comp=Z,5.5nm,1.0s
K20K Telida 16.26 36 **P**
K20K IAmb IAmb 21 08 00.9
comp=Z,7.7nm,1.4s
PEA0B Petropavlovsk- 16.56 286 P **Pn** **21 07 19.2 +1.7**
BPAW Bear Paw Mtn. 17.82 36 P **P** **21 07 34.4 +0.7**
H21K Melozitna Rive 18.13 31 P **P** **21 07 38.6 +1.5**
BWN Browne 18.42 37 P **Pn** **21 07 41.2 +0.7**
MLY Manley 18.43 34 P **P** **21 07 39.3 -1.2**
DHY Denali Highway 18.73 42 P **P** **21 07 42.8 -1.1**
DHY IAmb IAmb 21 07 52.9
comp=Z,5.9nm,1.5s
CCB Clear Creek Bu 19.28 37 P **P** **21 07 50.0 +0.2**
IL31 19.69 37 P **P** **21 07 54.6 +0.4**
IL31 IAmb IAmb 21 08 15.5
comp=Z,2.1nm,0.9s
ILAR Eielson Array 19.69 37 P **P** **21 07 54.4 +0.2**
comp=Z,0.2nm,0.3s,baz=228,slow=9.5,SNR=12
comp=Z,0.4nm,0.7s
H24K Noodor Dome 19.87 34 P **P** **21 07 55.7 -0.6**
H24K IAmb IAmb 21 08 00.3
comp=Z,4.2nm,1.0s
RIDG Independent Ri 20.04 41 P **P** **21 07 57.3 -0.8**
J25K Salcha River, 20.20 38 P **P** **21 07 57.8 -2.0**
J25K IAmb IAmb 21 08 08.4
comp=Z,5.0nm,1.3s
SCRK Sand Creek 20.49 41 P **P** **21 08 01.1 -1.9**
SCRK IAmb IAmb 21 08 05.5
comp=Z,3.5nm,1.0s
SEY Seymchan 20.59 316 LR LR 21 14 55.3
comp=Z,1µm,20.2s,baz=330,slow=34
J26L Joseph Creek 20.86 40 P **P** **21 08 05.7 -1.4**
BCAR Beaver Creek A 21.10 44 P **P** **21 08 09.9 +0.3**
I26K Coal Creek Min 21.35 38 P **P** **21 08 12.3 +0.1**
I26K IAmb IAmb 21 08 35.6
comp=Z,3.2nm,1.1s
H11N2 WAKE ISLAND Hy 34.77 210 T T 21 47 22.5
baz=20,slow=76,SNR=8.6
H11N3 WAKE ISLAND Hy 34.78 210 T T 21 47 38.1
baz=20,slow=76,SNR=7.7
H11N1 WAKE ISLAND Hy 34.79 210 T T 21 47 09.7
baz=20,slow=76,SNR=8.7
H11S1 WAKE ISLAND Hy 35.98 210 T T 21 49 11.8
baz=19,slow=76,SNR=15
H11S2 WAKE ISLAND Hy 36.00 210 T T 21 49 11.5
baz=19,slow=76,SNR=17
H11S3 WAKE ISLAND Hy 36.00 210 T T 21 48 57.3
baz=19,slow=76,SNR=3.5
PDAR Pinedale Array 44.12 75 P **P** **21 11 33.4 -0.2**
comp=Z,0.8nm,0.6s,baz=314,slow=3.3,SNR=8.8
comp=Z,0.8nm,0.6s
WRA Warramunga Arr 83.76 227 P **P** **21 15 52.0 -2.0**
comp=Z,0.7nm,1.1s,baz=31,slow=5.7,SNR=2.4
comp=Z,0.7nm,1.1s
ASAR Alice Springs 87.20 225 P **P** **21 16 10.0 -1.1**
comp=Z,0.4nm,0.7s,baz=25,slow=5.3,SNR=2.8
comp=Z,0.4nm,0.7s

MOS ***16*** *21:15:43.9±0.8,50°.44N×142°.33E,h7km,mb4.5/16, MS3.4/6, Error ellipse: s-maj=8.4km s-min=5.2km az=81.0*
BJI ***16*** *21:15:44.1±0.0,50°.44N×142°.86E,h27km,mb4.3/39, mB4.7/18, Ms4.5/23, Ms7 4.2/21*
IDC ***16*** *21:15:44.5±0.5,50°.37N×142°.39E,h0km,mb4.1/26, mbtmp4.1/30, ML3.0/4, MS3.4/24, Error ellipse: s-maj=15.8km s-min=10.7km az=156.0*
SKHL ***16*** *21:15:45.1±0.3,50°.40N×142°.50E,h8km±3km,mb5.3/6*
NEIC ***16*** *21:15:46.0±1.1,50°.34N±0°.07×142°.38E±0°.04,h10km±1km, mb4.6/82, Error ellipse: s-maj=12.7km s-min=4.0km az=165.0*
ISC 16 21:15:46.9±0.9,50°.44N±0°.03×142°.42E±0°.05,h15km±5km, n232,σ1§11/230,mb4.5/87,MS3.5/25,11C-8D,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.45**	**19**	*e*PN		**Pg**		**21 15 54.7**	**-1.1**
TYV				*e*S		**Sg**		**21 16 01.9**	**0.0**
TYV				pmax	pmax				
	comp=Z,1µm,0.4s								
TYV				pmax	pmax				
	comp=Z,2µm,2.2s								
TYV				smax	smax				
	comp=N,5µm,0.5s								
TYV				smax	smax				
	comp=E,5µm,0.5s								
TYV	**Tymovskoe**	**0.45**	**19**	*e*Pg		**Pg**		**21 15 54.7**	**-1.1**
TYV				AMB	AMB			21 15 55.3	
	comp=E,1µm,0.4s								
TYV				*e*Sg		**Sg**		**21 16 01.2**	**-0.7**
TYV				A	A			21 16 02.7	
	comp=E,5µm,0.4s								
TYV				A	A			21 16 02.7	
	comp=E,4µm,0.4s								
UGL	**Uglegorsk**	**1.39**	**190**	*i*PN		**Pn**		**21 16 08.7**	**-3.0**
UGL				*e*S		**Sn**		**21 16 27.6**	**-2.1**
UGL				pmax	pmax				
	comp=Z,1µm,0.5s								
UGL				smax	smax				
	comp=E,10µm,0.7s								
UGL				smax	smax				
	comp=N,3µm,0.7s								
UGL	**Uglegorsk**	**1.39**	**190**	*e*P		**Pn**		**21 16 10.0**	**-1.7**
UGL				AMB	AMB			21 16 13.2	
	comp=N,3µm,0.6s								
UGL				*e*S		**Sn**		**21 16 27.7**	**-2.0**
UGL				A	A			21 16 30.3	
	comp=N,6µm,0.5s								
UGL				A	A			21 16 30.3	
	comp=N,10µm,0.5s								
NKL	**Nikolayevsk**	**2.92**	**339**	*e*PN		**Pn**		**21 16 31.7**	**-1.1**
NKL				*e*S		**Sb**		**21 17 16.3**	**+2.2**
NKL				pmax	pmax				
	comp=N,107nm,0.4s								
NKL				pmax	pmax				
	comp=E,26nm,0.4s								
NKL				pmax	pmax				
	comp=Z,196nm,0.4s								
NKL				smax	smax				
	comp=N,252nm,0.5s								
NKL				smax	smax				
	comp=E,457nm,0.5s								
OKH	**Okha**	**3.13**	**6**	⇓*e*PN		Pn		21 16 27.8	-7.9
YSS	**Yuzh-Sakhalins**	**3.50**	**176**	Pn		**Pn**		**21 16 38.4**	**-2.3**
YSS	**Yuzh-Sakhalins**	**3.50**	**176**	*e*PN		**Pn**		**21 16 38.8**	**-2.0**
YSS				pmax	pmax				
	comp=Z,470nm,0.6s								
YSS				MLR	MLR				
	comp=Z,1µm,8.0s								
YSS	**Yuzh-Sakhalins**	**3.50**	**176**	*e*P		**Pn**		**21 16 40.7**	**-0.1**
YSS				*e*Pg		**Pg**		**21 16 53.5**	**-0.4**
YSS				AMB	AMB			21 16 57.3	
	comp=Z,130nm,0.6s								
YSS				*e*Sg		**Sg**		**21 17 41.4**	**+2.2**
YSS				A	A			21 17 44.0	
	comp=Z,700nm,0.8s								
YSS				A	A			21 17 44.0	
	comp=Z,400nm,0.8s								
GRNR	**Gornyy**	**3.84**	**277**	*e*PN		**Pn**		**21 16 43.7**	**-1.8**
GRNR				pmax	pmax				
	comp=E,20nm,0.3s								
GRNR				pmax	pmax				
	comp=N,9.0nm,0.2s								
GRNR				pmax	pmax				
	comp=Z,10.0nm,0.3s								
GRNR				MLR	MLR				
	comp=N,1µm,0.0s								
GRNR				MLR	MLR				
	comp=E,1µm,0.0s								
GRNR				MLR	MLR				
	comp=Z,820nm,12.0s								
TEY	**Ternei**	**6.68**	**218**	*e*PN		**Pn**		**21 17 22.7**	**-1.8**
KLR	**Kul'dur**	**7.01**	**264**	Pn		**Pn**		**21 17 28.5**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=73,slow=16,SNR=11								
KLR				Lg	Lg			21 19 25.9	
	comp=Z,8.5nm,0.3s,baz=341,slow=21,SNR=11								
KLR				LR	LR			21 20 29.1	
	comp=Z,716nm,18.1s,baz=80,slow=41								
	comp=Z,2.3nm,0.3s								
KLR	**Kul'dur**	**7.01**	**264**	*ce*PN		**Pn**		**21 17 28.5**	**-0.5**
KLR				pmax	pmax				
	comp=Z,4.0nm,0.8s								
ERM	**Erimo**	**8.45**	**176**	*i* PN		**Pn**		**21 17 51.0**	**+2.3**

USA0B Ussuriysk Arra 9.44 233 Pn **Pn** **21 18 01.2 -1.1**
USA0B Ussuriysk Arra 9.44 233 PN **Pn** **21 18 01.2 -1.1**
USRK Ussuriysk Ar. 9.44 233 Pn **Pn** **21 18 01.8 -0.5**
comp=Z,1.4nm,0.3s,baz=40,slow=16,SNR=9.6
USRK Lg Lg 21 20 41.1
comp=Z,1.8nm,0.3s,baz=58,slow=27,SNR=6.5
USRK LR LR 21 21 15.3
comp=Z,401nm,18.7s,baz=189,slow=35
comp=Z,3.8nm,0.4s
USRK Ussuriysk Ar. 9.44 233 Pn **Pn** **21 17 59.7 -2.6**
PEA0B Petropavlovsk- 9.84 68 Pn **Pn** **21 18 08.1 +0.3**
PEA0B Petropavlovsk- 9.84 68 *i* PN **Pn** **21 18 09.3 +1.5**
PETK Petropavlovsk- 9.84 68 Pn **Pn** **21 18 08.2 +0.4**
comp=Z,0.4nm,0.3s,baz=242,slow=11,SNR=7.9
PETK LR LR 21 22 22.6
comp=Z,312nm,18.2s,baz=252,slow=40
comp=Z,1.3nm,0.5s
PETK Petropavlovsk- 9.84 68 Pn **Pn** **21 18 08.9 +1.1**
PETK Petropavlovsk- 9.84 68 PN **Pn** **21 18 08.9 +1.1**
ZEA Zeya 9.90 295 *e*PN Pn 21 18 27.0 +18
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=E,200nm,8.0s
ZEA MLR MLR
comp=N,200nm,4.0s
ZEA MLR MLR
comp=Z,200nm,4.0s
MA2 Magadan 10.32 24 LR LR 21 22 43.9
comp=Z,102nm,19.7s,baz=214,slow=40
PET Petropavlovsk 10.39 69*ce*PN **Pn** **21 18 18.6 +3.3**
PET pmax pmax
comp=Z,37nm,2.5s
BNX BinXian 11.09 251 ⇓P **Pn** **21 18 24.3 -0.6**
JSD Sado 12.75 195 Pn **Pn** **21 18 44.8 -2.9**
CN2 Changchun 13.32 247 *e*P **Pn** **21 19 00.1 +4.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,400nm,12.0s
CN2 LR LR
comp=Z,500nm,14.0s
YAK Yakutsk 13.57 334 Lg Lg 21 22 56.0
baz=49,slow=19,SNR=6.0
YAK Yakutsk 13.57 334 Pn **Pn** **21 18 58.9 +0.2**
YAK Yakutsk 13.57 334 *e*P **Pn** **21 18 59.8 +1.2**
YAK *e*S **Sn** **21 21 33.0 +4.0**
YAK pmax pmax
comp=Z,7.0nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK smax smax
comp=N,74nm,2.5s
YAK smax smax
comp=E,55nm,2.3s
YAK MLR MLR
comp=Z,59nm,13.0s
MAJO Matsushiro 14.22 194 *i* P **Pn** **21 19 07.9 +0.1**
MJAR Matsushiro Arr 14.22 194 Pn **Pn** **21 19 06.6 -1.1**
baz=15,slow=14,SNR=4.8
MJAR LR LR 21 24 49.7
comp=Z,108nm,18.7s,baz=14,slow=38
comp=Z,2.8nm,1.1s
INU Inuyama 15.59 197 P **Pn** **21 19 26.7 +0.6**
KSRS Korea Array 16.62 224 Pn **P** **21 19 41.4 -0.3**
comp=Z,0.2nm,0.3s,baz=38,slow=11,SNR=14
KSAR Wonju Array Be 16.65 224 P **Pn** **21 19 39.7 +0.1**
KSAR Wonju Array Be 16.65 224 P **Pn** **21 19 39.7 +0.1**
SHEM Shemya Is, Ala 19.73 71 LR LR 21 27 27.8
comp=Z,107nm,21.3s,baz=284,slow=36
BILL Bilibino 21.19 25 P **P** **21 20 32.5 +1.0**
BILL IAmb IAmb 21 21 12.7
comp=Z,11nm,0.5s
BILL Bilibino 21.19 25⇓*e*P **P** **21 20 32.7 +1.2**
BILL *i* *PP **pP** **21 20 35.0 -0.8**
BILL *e*S **S** **21 24 23.3 -3.1**
BILL 21 24 36.0
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,77nm,16.0s
TIXI Tiksi 22.15 349 P **P** **21 20 43.5 +1.7**
comp=Z,4.9nm,0.8s,baz=270,slow=20,SNR=6.4
comp=Z,4.9nm,0.8s
TIXI Tiksi 22.15 349 P **P** **21 20 41.6 -0.2**
TIXI Tiksi 22.15 349*ce*P **P** **21 20 41.6 -0.2**
TIXI pmax pmax
comp=Z,16nm,1.7s
TIA Tai'an 23.11 242 ⇑P **P** **21 20 55.5 +3.3**
TIA pmax pmax
comp=Z,6.0nm,1.2s
TIA LR LR
comp=Z,210nm,9.9s
TIA LR LR
comp=Z,300nm,11.5s
TIA LR LR
comp=Z,410nm,17.1s
ULN Ulaanbaatar 23.14 277 P **P** **21 20 51.8 -0.9**
ULN Ulaanbaatar 23.14 277*ce*P **P** **21 20 52.9 +0.2**
ULN pmax pmax
comp=Z,8.0nm,1.3s
HHC Hu-ho-hao-te 23.46 258 *e*P **P** **21 20 54.1 -1.7**
HHC pmax pmax
comp=Z,35nm,0.9s
HHC pmax pmax
comp=Z,180nm,5.2s
HHC LR LR
comp=Z,840nm,9.5s
HHC LR LR
comp=Z,820nm,8.0s
HHC LR LR
comp=Z,710nm,11.9s
SONM Songino Array 23.57 278 P **P** **21 20 56.8 -0.1**
comp=Z,2.2nm,0.9s,baz=71,slow=8.7,SNR=10
SONM Lg Lg 21 28 12.2
baz=66,slow=25,SNR=8.7
comp=Z,2.2nm,0.9s
SONM Songino Array 23.57 278 P **P** **21 20 56.0 -0.9**
SONM Songino Array 23.57 278 P **P** **21 20 56.0 -0.9**
SONM pmax pmax
comp=Z,3.0nm,1.0s
HNS HongShan 23.68 247 ⇑P **P** **21 20 59.8 +1.9**
HNS LR LR
comp=Z,240nm,10.2s
HNS LR LR
comp=Z,160nm,10.8s
HNS LR LR
comp=Z,260nm,13.5s
ZAK Zakamensk 24.75 285 *e*P **P** **21 21 08.4 +0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.7s
GTA Gaotai 31.71 266 *e*P **P** **21 22 10.8 +0.7**
GTA pP sP 21 22 18.1 +1.6
GTA sP pP 21 22 21.6 +7.0
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,49nm,5.0s
GTA LR LR
comp=Z,160nm,11.6s
GTA LR LR
comp=Z,210nm,12.4s
GTA LR LR
comp=Z,290nm,13.8s
ZALV Zalesovo Beam 34.65 299 P **P** **21 22 35.2 -0.2**
comp=Z,0.3nm,0.3s,baz=76,slow=12,SNR=1.7
ZALV PcP **PcP** **21 25 08.9 -0.3**
comp=Z,1.4nm,0.8s,baz=66,slow=3.6,SNR=5.2
comp=Z,0.3nm,0.3s
IMAR Indian Mountai 35.22 40 P **P** **21 22 40.3 +0.1**
SPU Mount Spurr 36.78 47 P **P** **21 22 54.3 +0.6**
H23K Yukon River 36.95 39 P **P** **21 22 55.8 +0.8**
H23K IAmb IAmb 21 22 59.6
comp=Z,8.9nm,1.0s
WMQ Urumqi 37.08 281 *e*P **P** **21 22 56.8 +0.3**
WMQ pP pP 21 23 01.8 +0.7
WMQ sP sP 21 23 06.1 +3.1
WMQ PP **PnPn** **21 24 25.4 +4.3**
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ LR LR
comp=Z,360nm,14.1s
WMQ LR LR
comp=Z,200nm,17.9s
WMQ LR LR
comp=Z,88nm,17.3s
H24K Noodor Dome 37.62 39 P **P** **21 23 01.3 +0.5**
MDM Murphy Dome 37.65 41 P **P** **21 23 02.1 +1.1**
RND Reindeer 37.72 43 P **P** **21 23 02.1 +0.5**
RND Reindeer 37.72 43 P **P** **21 23 02.1 +0.5**
RND pmax pmax
comp=Z,4.0nm,0.8s
WRH Wood River Hil 37.81 41 P **P** **21 23 02.7 +0.4**
WRH IAmb IAmb 21 23 05.8
comp=Z,18nm,1.4s
COLA College 37.83 41 *i* P **P** **21 23 04.8 +2.4**
COLA pmax pmax
comp=Z,5.0nm,0.9s
CCB Clear Creek Bu 37.89 41 P **P** **21 23 03.0 +0.1**
IL31 38.25 41 P **P** **21 23 06.5 +0.5**
IL31 IAmb IAmb 21 23 09.1
comp=Z,14nm,1.5s
ILAR Eielson Array 38.25 41 P **P** **21 23 06.5 +0.4**
comp=Z,2.1nm,0.7s,baz=289,slow=8.1,SNR=18
ILAR LR LR 21 40 32.7
comp=Z,31nm,19.7s,baz=292,slow=39
comp=Z,2.1nm,0.7s
ILAR Eielson Array 38.25 41 P **P** **21 23 05.9 -0.1**
BMAR Burnt Mountain 38.61 36 P **P** **21 23 09.7 +0.7**
PRP Porcupine Dome 38.64 39 P **P** **21 23 09.5 0.0**
PRP IAmb IAmb 21 23 14.0
comp=Z,15nm,1.1s
MK31 Makanchi Array 38.97 289 P **P** **21 23 12.1 -0.2**
MK31 Makanchi Array 38.97 289 P **P** **21 23 12.1 -0.2**
MK31 pmax pmax
comp=Z,5.0nm,1.0s
MKAR Makanchi Array 38.97 289 P **P** **21 23 12.3 0.0**
comp=Z,3.9nm,0.8s,baz=65,slow=7.8,SNR=25
MKAR PcP **PcP** **21 25 22.6 +0.1**
comp=Z,0.6nm,0.8s,baz=66,slow=3.4,SNR=3.0
comp=Z,3.9nm,0.8s
MKAR Makanchi Array 38.97 289 P **P** **21 23 11.9 -0.4**
MKAR Makanchi Array 38.97 289 *i* P **P** **21 23 12.6 +0.3**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
PZH PanZhiHua 39.12 248 P **P** **21 23 13.0 -0.9**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,130nm,5.7s
MAKZ Makanchi 39.16 289 P **P** **21 23 13.3 -0.6**
MAKZ Makanchi 39.16 289 P **P** **21 23 13.3 -0.6**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 39.38 296 P **P** **21 23 14.9 -0.7**
KURK Kurchatov 39.38 296*ce*P **P** **21 23 15.0 -0.6**
KURK pmax pmax
comp=Z,9.0nm,1.0s
KMI Kunming 39.58 245 ⇑P **P** **21 23 19.5 +1.7**
KMI sP sP 21 23 28.9 +4.5
KMI pmax pmax
comp=Z,8.0nm,0.9s
K27K Chicken 40.46 41 P **P** **21 23 24.8 +0.4**
EGAK Eagle 40.62 40 P **P** **21 23 25.8 +0.1**
EGAK IAmb IAmb 21 23 29.1
comp=Z,13nm,1.4s
L27K Beaver Creek, 40.87 42 P **P** **21 23 27.8 -0.2**
BCAR Beaver Creek A 40.89 42 P **P** **21 23 28.3 +0.3**
INK Inuvik 42.41 33 P **P** **21 23 40.6 +0.3**
comp=Z,2.3nm,0.5s,baz=325,slow=6.2,SNR=4.9
INK LR LR 21 43 43.6
comp=Z,88nm,19.1s,baz=258,slow=40
comp=Z,2.3nm,0.5s
BRVK Borovoye 43.00 303*ce*P **P** **21 23 45.3 0.0**
BRVK pmax pmax
comp=Z,2.0nm,1.3s
LSA Lhasa 43.36 261 P **P** **21 23 47.6 -1.5**
LSA Lhasa 43.36 261 P **P** **21 23 45.5 -3.6**
LSA pmax pmax
comp=Z,3.0nm,2.0s
LSA Lhasa 43.36 261 P **P** **21 23 47.6 -1.5**
LSA pmax pmax
comp=Z,8.0nm,1.2s
AAK Ala-Archa 45.88 288 LR LR 21 42 12.7
comp=Z,60nm,19.4s,baz=62,slow=35
AAK Ala-Archa 45.88 288 P **P** **21 24 08.6 -0.1**
AAK Ala-Archa 45.88 288*ce*P **P** **21 24 07.7 -1.0**
AAK pmax pmax
comp=Z,3.0nm,1.0s
CMAR Chiang Mai Arr 46.97 243 P **P** **21 24 17.8 +0.4**
comp=Z,1.5nm,0.9s,baz=26,slow=6.7,SNR=6.8
comp=Z,1.5nm,0.9s
CMAR Chiang Mai Arr 46.97 243 P **P** **21 24 17.0 -0.3**
CMAR Chiang Mai Arr 46.97 243 P **P** **21 24 17.0 -0.3**
ARU Arti 47.37 311 LR LR 21 44 13.8
comp=Z,47nm,18.3s,baz=66,slow=36
ARU Arti 47.37 311 P **P** **21 24 20.1 +0.2**
ARU IAmb IAmb 21 24 22.9
comp=Z,3.8nm,0.9s
ARU Arti 47.37 311*d i*P **P** **21 24 18.7 -1.3**
ARU 21 25 46.3
ARU S **S** **21 31 13.0 0.0**
ARU SS SS 21 34 27.8 -12
ARU pmax pmax
comp=Z,5.0nm,0.9s
KK31 Karatay Array 48.02 291 P **P** **21 24 24.9 -0.3**
KK31 Karatay Array 48.02 291 P **P** **21 24 24.9 -0.3**
KK31 pmax pmax
comp=Z,4.0nm,1.3s
KKAR Karatay Array 48.02 291 P **P** **21 24 24.9 -0.4**
KKAR Karatay Array 48.02 291 P **P** **21 24 24.9 -0.4**
DLBC Dease Lake 48.06 45 LR LR 21 46 14.9
comp=Z,58nm,18.8s,baz=291,slow=38
ABKAR Akbulak array 50.53 303 P **P** **21 24 43.6 -0.7**
ABKAR Akbulak array 50.53 303 P **P** **21 24 43.6 -0.7**
ABKAR IAmb IAmb 21 24 47.3
comp=Z,3.3nm,0.8s
GAR Garm 50.58 286 P **P** **21 24 44.6 -0.4**
GAR IAmb IAmb 21 24 48.5
comp=Z,13nm,1.1s
AKTO Aktyubinsk 50.88 305 LR LR 21 45 55.7
comp=Z,46nm,18.9s,baz=43,slow=36
CHGR Chuyangaron 51.50 287 P **P** **21 24 51.7 -0.2**
CHGR IAmb IAmb 21 24 52.3
comp=Z,6.4nm,0.6s
CHGR Chuyangaron 51.50 287 P **P** **21 24 51.7 -0.2**
CHGR pmax pmax
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 51.83 336 P **P** **21 24 54.6 +0.8**
comp=Z,1.8nm,0.8s,baz=60,slow=7.2,SNR=5.4
comp=Z,1.8nm,0.8s
YKA Yellowknife Ar 52.10 35 P **P** **21 24 55.9 0.0**
comp=Z,0.9nm,0.8s,baz=307,slow=7.6,SNR=3.2
YKA LR LR 21 48 41.3
comp=Z,32nm,18.2s,baz=346,slow=38
comp=Z,0.9nm,0.8s
NIL Nilore 52.14 279 P **P** **21 24 56.8 +0.1**
NIL IAmb IAmb 21 24 59.9
comp=Z,9.1nm,0.9s
NIL Nilore 52.14 279 P **P** **21 24 56.8 +0.1**
NIL pmax pmax
comp=Z,9.0nm,1.0s
BBB Bella Bella 52.44 51 LR LR 21 47 38.1
comp=Z,39nm,18.4s,baz=312,slow=36
BELG Belogornoye 54.91 312 LR LR 21 50 16.4
comp=Z,34nm,19.2s,baz=165,slow=38
FINES FINESS Array B 57.46 329 P **P** **21 25 34.9 +0.2**
comp=Z,4.2nm,0.8s,baz=47,slow=8.2,SNR=7.3
comp=Z,4.2nm,0.8s
FINES FINESS Array B 57.46 329 P **P** **21 25 34.6 -0.1**
FINES FINESS Array B 57.46 329 *i* P **P** **21 25 34.5 -0.1**
FINES pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 58.06 319 LR LR 21 53 58.4
comp=Z,7.0nm,18.0s,baz=357,slow=40
OBN Obninsk 58.06 319⇓*e*P **P** **21 25 39.3 +0.3**
OBN *e*S **S** **21 33 37.4 -1.6**
OBN pmax pmax
comp=Z,4.0nm,0.5s
OBN MLR MLR
comp=Z,48nm,15.0s
B08A Colville Reser 59.22 50 P **P** **21 25 47.3 0.0**
B08A IAmb IAmb 21 25 51.0
comp=Z,5.3nm,1.1s
H04A Detroit Lake 60.27 55 P **P** **21 25 54.8 +0.2**
NEW Newport 60.36 49 LR LR 21 52 22.5
comp=Z,24nm,19.8s,baz=256,slow=36
WALA Waterton Lakes 61.33 47 P **P** **21 26 01.8 0.0**

PINE Pine Mountain 61.53 55 P P 21 26 03.8 +0.5
YBH Yreka Blue Hor 62.01 58 LR LR 21 49 20.3
comp=Z,22nm,20.0s,baz=318,slow=32
I07A Izee 62.07 54 P P 21 26 07.5 +0.6
I07A IAmb IAmb 21 26 11.5
comp=Z,7.1nm,1.1s
NB2 NORSAR Subarra 62.18 336 P P 21 26 07.0 -0.3
comp=Z,1.9nm,0.7s,baz=32,slow=6.9
NOA NORSAR Array B 62.18 336 P P 21 26 07.3 0.0
comp=Z,2.0nm,0.9s,baz=33,slow=6.5,SNR=6.9
NOA LR LR 21 57 50.1
comp=Z,16nm,18.2s,baz=10.0,slow=41
comp=Z,2.0nm,0.9s
BMO Blue Mountains 62.66 52 P P 21 26 11.2 +0.5
BMO IAmb IAmb 21 26 15.1
comp=Z,6.0nm,1.2s
BMO Blue Mountains 62.66 52 P P 21 26 11.2 +0.5
BMO pmax pmax
comp=Z,6.0nm,1.3s
MSO Missoula 62.90 49 P P 21 26 12.7 +0.3
MSO IAmb IAmb 21 26 16.3
comp=Z,5.1nm,1.1s
KIV Kislovodsk 63.02 307 P P 21 26 14.0 +0.8
KIV Kislovodsk 63.02 307 eP P 21 26 12.7 -0.5
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,46nm,17.0s
KBZ Khabaz 63.07 307 P P 21 26 14.3 +0.9
comp=Z,3.1nm,1.0s,baz=53,slow=5.8,SNR=3.8
comp=Z,3.1nm,1.0s
KBZ Khabaz 63.07 307 i P P 21 26 13.2 -0.1
KBZ pmax pmax
comp=Z,4.0nm,1.0s
J08A Circle Bar Ran 63.11 54 P P 21 26 14.4 +0.6
J08A IAmb IAmb 21 26 18.0
comp=Z,8.9nm,1.3s
PLID Pearl Lake 63.14 51 P P 21 26 14.8 +0.6
PLID IAmb IAmb 21 26 15.5
comp=Z,4.4nm,0.8s
MOD Modoc Plateau 63.18 56 P P 21 26 14.6 +0.3
MOD IAmb IAmb 21 26 18.3
comp=Z,6.3nm,1.2s
SHA1 Shidzhatmaz 63.19 307 i P P 21 26 14.7 +0.2
FRB Frobisher Bay 63.59 15 P P 21 26 16.2 -0.2
comp=Z,7.4nm,0.9s,baz=21,slow=7.4,SNR=3.1
FRB LR LR 21 55 23.1
comp=Z,49nm,21.3s,baz=11,slow=37
comp=Z,7.4nm,0.9s
ONI Oni 63.59 305 P P 21 26 17.4 +0.5
ONI IAmb IAmb 21 26 34.1
comp=Z,8.5nm,1.4s
ONI Oni 63.59 305 P P 21 26 17.4 +0.5
ONI pmax pmax
comp=Z,9.0nm,1.4s
WVOR Wild Horse Val 63.68 55 P P 21 26 18.3 +0.6
WVOR IAmb IAmb 21 26 22.2
comp=Z,6.3nm,1.0s
WVOR Wild Horse Val 63.68 55 P P 21 26 18.3 +0.6
WVOR pmax pmax
comp=Z,6.0nm,1.0s
HRY Holter Researc 63.99 47 P P 21 26 20.3 +0.7
AKASG Malin Array Be 64.33 320 P P 21 26 20.5 -1.0
comp=Z,1.1nm,0.5s,baz=38,slow=8.2,SNR=8.5
comp=Z,1.1nm,0.5s
AKASG Malin Array Be 64.33 320 i P P 21 26 20.5 -1.0
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 64.33 320 P P 21 26 20.5 -1.0
AKBB IAmb IAmb 21 26 23.6
comp=Z,4.9nm,1.1s
AKBB Malin Array Si 64.33 320 ce P P 21 26 20.5 -1.0
AKBB pmax pmax
comp=Z,4.0nm,1.0s
MCMT McKenzie Canyo 64.88 49 P P 21 26 25.6 +0.1
BOZ Bozeman (W) 64.90 48 P P 21 26 25.9 +0.3
BOZ IAmb IAmb 21 26 29.2
comp=Z,4.4nm,1.1s
BOZ Bozeman (W) 64.90 48 P P 21 26 25.9 +0.3
BOZ pmax pmax
comp=Z,4.0nm,1.1s
PAHR Pah Rah Range 65.23 57 P P 21 26 27.9 +0.1
ELK Elko 66.67 54 P P 21 26 37.7 +0.6
comp=Z,1.1nm,0.6s,baz=328,slow=9.0,SNR=6.9
comp=Z,1.1nm,0.6s
ELK Elko 66.67 54 P P 21 26 37.6 +0.4
ELK IAmb IAmb 21 26 41.8
comp=Z,3.7nm,1.1s
ELK Elko 66.67 54 P P 21 26 37.6 +0.4
ELK pmax pmax
comp=Z,4.0nm,1.1s
NVAR Mina Array Bea 66.73 58 P P 21 26 38.3 +0.7
comp=Z,2.9nm,0.8s,baz=303,slow=5.9,SNR=17
comp=Z,2.9nm,0.8s
NVAR Mina Array Bea 66.73 58 P P 21 26 37.6 -0.1
NV11 Mina Array Sit 66.81 57 P P 21 26 38.4 +0.3
NV11 IAmb IAmb 21 26 41.9
comp=Z,4.5nm,1.2s
LOHW Long Hollow 66.86 49 P P 21 26 38.9 +0.6
LOHW IAmb IAmb 21 26 43.1
comp=Z,5.2nm,1.1s
GURO Guroymak-BITLI 67.25 303 P P 21 26 41.1 +0.3
GURO IAmb IAmb 21 26 49.4
comp=Z,4.5nm,1.3s
TPH Tonopah 67.57 57 P P 21 26 43.2 +0.3
TPH Tonopah 67.57 57 P P 21 26 43.2 +0.3
TPH pmax pmax
comp=Z,20nm,1.0s
KWP Kalwaria Pacla 67.79 322 P P 21 26 44.0 +0.1
KWP Kalwaria Pacla 67.79 322 P P 21 26 44.0 +0.1
KWP pmax pmax
comp=Z,106nm,1.3s
HWUT Hardware Ranch 67.89 51 P P 21 26 45.0 +0.1
PD31 Pinedale Array 68.00 49 P P 21 26 45.2 -0.3
PD31 IAmb IAmb 21 26 49.4
comp=Z,4.0nm,1.0s
PDAR Pinedale Array 68.00 49 P P 21 26 45.6 0.0
comp=Z,2.0nm,0.7s,baz=327,slow=2.5,SNR=18
PDAR LR LR 21 58 52.4
comp=Z,20nm,19.2s,baz=340,slow=38
comp=Z,2.0nm,0.7s
PDAR Pinedale Array 68.00 49 P P 21 26 45.3 -0.3
ULM Lac du Bonnet 68.05 36 P P 21 26 45.6 +0.2
comp=Z,7.7nm,1.0s,baz=323,slow=7.2,SNR=7.6
comp=Z,7.7nm,1.0s
ULM Lac du Bonnet 68.05 36 P P 21 26 45.1 -0.3
DUG Dugway, Tooele 68.32 53 P P 21 26 47.7 +0.2
DUG IAmb IAmb 21 26 51.9
comp=Z,5.2nm,1.1s
DUG Dugway, Tooele 68.32 53 P P 21 26 47.7 +0.2
DUG pmax pmax
comp=Z,5.0nm,1.1s
BUR08 Bucovina Ar. S 68.37 320 P P 21 26 47.1 -0.5
BUR08 IAmb IAmb 21 26 48.3
comp=Z,4.0nm,1.2s
BURAR Bucovina Array 68.38 320 P P 21 26 47.3 -0.4
TPNV Topopah Spring 68.93 57 P P 21 26 51.1 -0.3
TPNV IAmb IAmb 21 26 55.0
comp=Z,5.8nm,0.8s
TPNV Topopah Spring 68.93 57 P P 21 26 51.1 -0.3
TPNV pmax pmax
comp=Z,6.0nm,0.9s
PSUT Pine Spring 69.02 55 P P 21 26 52.3 +0.4
PSUT IAmb IAmb 21 26 55.7
comp=Z,5.1nm,1.1s
RSSD Black Hills 69.54 45 P P 21 26 54.3 -0.8
RSSD Black Hills 69.54 45 P P 21 26 54.3 -0.8
RSSD pmax pmax
comp=Z,9.0nm,1.2s
MLR Muntele Rosu 69.76 318 P P 21 26 56.6 +0.3
MLR IAmb IAmb 21 26 59.1
comp=Z,6.8nm,1.3s
MLR Muntele Rosu 69.76 318 P P 21 26 56.6 +0.3
MLR pmax pmax
comp=Z,7.0nm,1.3s
SHPR Sheep Range 69.84 57 P P 21 26 57.4 +0.4
SHPR IAmb IAmb 21 27 01.6
comp=Z,6.0nm,1.2s
MVU Marysvale 69.89 54 P P 21 26 57.6 +0.2
CLL Collm 69.90 329 ǁ i P P 21 26 56.6 -0.3
CLL pmax pmax
comp=Z,7.0nm,1.2s
CLL Collm 69.90 329 ǁ i P P 21 26 56.6 -0.3
comp=Z,7.0nm,1.2s
MSU Marysvale 69.90 54 P P 21 26 57.7 +0.2
MSU Marysvale 69.90 54 P P 21 26 57.7 +0.2

VYHS Vyhne 70.20 324 eP P 21 27 01.3 +2.5
VYHS Vyhne 70.20 324 eP P 21 27 01.3 +2.5
WB0 Warramunga Arr 70.26 188 P P 21 26 58.2 -1.2
B35A Bob, Littlefor 70.41 36 P P 21 26 59.4 -0.7
WR0 Warramunga Arr 70.44 188 P P 21 26 59.0 -1.4
WR0 IAmb IAmb 21 27 42.0
comp=Z,10nm,1.5s
WRA Warramunga Arr 70.44 188 P P 21 26 59.3 -1.2
comp=Z,2.1nm,0.9s,baz=5.4,slow=6.7,SNR=11
comp=Z,2.1nm,0.9s
WRA Warramunga Arr 70.44 188 P P 21 26 59.0 -1.4
WRA Warramunga Arr 70.44 188 i P P 21 27 02.5 +2.0
WRA pmax pmax
comp=Z,2.0nm,0.9s
O20A White River Ci 70.65 50 P P 21 27 02.3 +0.4
BRTR Keskin Array B 70.69 309 P P 21 27 02.7 +0.5
comp=Z,1.1nm,0.8s,baz=316,slow=3.4,SNR=4.2
comp=Z,1.1nm,0.8s
BRTR Keskin Array B 70.69 309 P P 21 27 02.0 -0.1
PFO Pinyon Flats O 71.29 60 P P 21 27 06.7 +0.9
comp=Z,1.0nm,0.4s,baz=292,slow=8.0,SNR=3.8
comp=Z,1.0nm,0.4s
U15A North Rim 71.42 55 P P 21 27 07.3 +0.5
U15A IAmb IAmb 21 27 11.4
comp=Z,10nm,1.3s
EYMN Ely 71.58 35 P P 21 27 06.1 -1.1
GERES GÉRESS Array B 71.76 327 P P 21 27 08.6 +0.2
comp=Z,0.3nm,0.6s,baz=20,slow=4.3,SNR=3.9
comp=Z,0.3nm,0.6s
ISCO Idaho Springs 72.18 49 P P 21 27 11.5 +0.1
ISCO IAmb IAmb 21 27 15.1
comp=Z,4.2nm,1.1s
ISCO Idaho Springs 72.18 49 P P 21 27 11.5 +0.1
ISCO pmax pmax
comp=Z,4.0nm,1.1s
SCHQ Schefferville 72.28 17 LR LR 22 02 56.3
comp=Z,49nm,18.1s,baz=25,slow=39
E38A The Farm, Brul 72.68 36 P P 21 27 13.0 -0.9
OGNE Ogallala 72.96 46 P P 21 27 15.6 -0.1
ECSD EROS Data Cent 73.07 41 P P 21 27 15.6 -0.6
ECSD IAmb IAmb 21 27 18.8
comp=Z,8.5nm,1.0s
DIVS Divibare 73.37 321 P P 21 27 17.4 -0.7
X16A Lo Mia Camp, P 73.40 56 P P 21 27 19.1 +0.5
X16A IAmb IAmb 21 27 23.2
comp=Z,6.1nm,1.1s
ASAR Alice Springs 74.16 188 P P 21 27 22.5 -0.2
comp=Z,1.5nm,0.7s,baz=2.8,slow=5.1,SNR=14
comp=Z,1.5nm,0.7s
ASAR Alice Springs 74.16 188 P P 21 27 22.9 +0.2
E43A Lone Tree Farm 74.53 33 P P 21 27 23.5 -1.2
VLDQ Val d'Or 76.00 26 P P 21 27 31.9 -1.2
P40A Paris 78.46 40 P P 21 27 46.2 -0.9
P40A IAmb IAmb 21 27 49.6
comp=Z,7.1nm,1.0s
SADO Sadowa 78.53 29 LR LR 22 05 42.9
comp=Z,30nm,18.9s,baz=355,slow=38
MNTX Cornudas Mount 78.69 54 P P 21 27 48.4 -0.1
MNTX IAmb IAmb 21 27 52.3
comp=Z,7.1nm,1.1s
TX31 Lajitas Ar. Si 81.46 54 P P 21 28 03.8 +0.2
TXAR Lajitas Array 81.46 54 P P 21 28 04.0 +0.4
comp=Z,3.9nm,1.1s,baz=298,slow=5.1,SNR=13
comp=Z,3.9nm,1.1s
TXAR Lajitas Array 81.46 54 P P 21 28 03.6 0.0
TXAR Lajitas Array 81.46 54 P P 21 28 03.6 0.0
WHAR Wooly Hollow 81.95 42 P P 21 28 05.8 -0.2
WHAR IAmb IAmb 21 28 06.1
comp=Z,6.5nm,0.8s
KEST Kesra 84.74 323 P P 21 28 19.3 -1.1
comp=Z,2.4nm,0.8s,baz=72,slow=13,SNR=3.0
comp=Z,2.4nm,0.8s
TKL Tuaieechee 85.08 36 LR LR 22 08 02.6
comp=Z,28nm,19.7s,baz=346,slow=37
ESDC Sonseca Array 85.53 335 P P 21 28 24.2 0.0
comp=Z,2.1nm,0.9s,baz=12,slow=4.1,SNR=12
comp=Z,2.1nm,0.9s
ESDC Sonseca Array 85.53 335 P P 21 28 23.9 -0.4
ESDC IAmb IAmb 21 28 27.5
comp=Z,2.8nm,1.1s
CPUP Villa Florida 151.55 40 PKPbc PKPbc 21 35 40.0 -0.3
comp=Z,2.5nm,0.7s,baz=57,slow=2.6,SNR=7.2
CPUP Villa Florida 151.55 40 PKIKP PKPbc 21 35 40.0 -0.3

IDC 16 21:21:50.2±1.5, 26.10S×70.87E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=59.0km s-min=27.2km az=70.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	18.42	5	T	T	21 45 01.6	
	baz=186,slow=76,SNR=6.7						
H08S2	Diego Garcia H	18.42	5	T	T	21 45 00.3	
	baz=186,slow=76,SNR=10						
H08S3	Diego Garcia H	18.43	5	T	T	21 44 57.6	
	baz=186,slow=76,SNR=12						
H01W2	Cape Leeuwin H	38.06	114	T	T	22 09 35.0	
	baz=271,slow=75,SNR=11						
H01W3	Cape Leeuwin H	38.06	114	T	T	22 09 35.2	
	baz=271,slow=75,SNR=11						
H01W1	Cape Leeuwin H	38.08	114	T	T	22 09 36.4	
	baz=271,slow=75,SNR=11						
ASAR	Alice Springs	56.74	102	P	P	21 31 36.4	+0.1
	0.3nm,0.5s,baz=250,slow=6.6,SNR=5.1						
	0.3nm,0.5s						
WRA	Warramunga Arr	58.25	98	P	P	21 31 46.8	-0.1
	0.5nm,0.9s,baz=254,slow=7.8,SNR=2.2						
	0.5nm,0.9s						
VNDA	Vanda	64.93	166	P	P	21 32 31.0	-0.1
	1.0nm,0.8s,baz=283,slow=7.0,SNR=5.2						
	1.0nm,0.8s						
MKAR	Makanchi Array	73.28	8	P	P	21 33 22.9	-0.3
	0.7nm,0.6s,baz=192,slow=5.7,SNR=7.3						
	0.7nm,0.6s						
KURBB	Kurchatov Arra	76.68	5	P	P	21 33 43.1	+0.3
	0.6nm,0.8s,baz=198,slow=6.2,SNR=6.1						
	0.6nm,0.8s						
ZALV	Zalesovo Beam	80.62	8	P	P	21 34 04.5	+0.1
	0.7nm,0.5s,baz=177,slow=2.6,SNR=4.4						
	0.7nm,0.5s						

IDC 16 21:33:41.8±0.6,26.07S×70.81E,h0km,mb4.2/16, mbtmp4.2/16,MS3.9/49,Error ellipse: s-maj=18.6km s-min=16.3km az=165.0

GCMT 16 21:33:41.8±0.3,26.04S±0.03×70.74E±0.04,h16km±1km, MW4.9/101,Moment Tensor Solution. s18,c19; s101,c128; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.80±.20; Mθθ1.38±.13; Mϕϕ1.42±.12; Mrθ-0.58±.41; Mθϕ-0.83±.06; Mϕr1.93±.41; Best double couple: Mo3.20200×10^16 NP1:ϕ=151.00000°, δ64.00000°, λ-80.00000°. NP2:ϕ309.00000°, δ28.00000°, λ-110.00000°. Principal axes: T 2.8420, Plg19.0000°, Azm234.0000°; N 0.7200, Plg9.0000°, Azm327.0000°; P -3.5620, Plg69.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 16 21:33:43.8±1.3,26.1S±0.1×70.78E±0.04,h10km±1km, mb4.7/36 Error ellipse: s-maj=19.7km s-min=3.7km az=194.0

ISC 16 21:33:43.6±0.5, 26.04S±0.10×70.8E±0.1, h11km, n103, σ0s63/60, mb4.6/31, MS4.0/50, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Garcia H	18.37	5	T	T	21 56 56.2	
	baz=186,slow=76,SNR=24						
H08S2	Diego Garcia H	18.37	5	T	T	21 57 00.1	
	baz=186,slow=76,SNR=83						
H08S3	Diego Garcia H	18.39	5	T	T	21 56 53.6	
	baz=186,slow=76,SNR=33						
PALK	Pallekele	34.49	18	LR	LR	21 51 14.9	
	comp=Z,486nm,20.1s,baz=307,slow=30						
H01W2	Cape Leeuwin H	38.16	114	T	T	22 21 27.1	
	baz=271,slow=75,SNR=123						
H01W3	Cape Leeuwin H	38.16	114	T	T	22 21 29.1	
	baz=271,slow=75,SNR=132						
H01W1	Cape Leeuwin H	38.18	114	T	T	22 21 28.3	
	baz=271,slow=75,SNR=135						
MATP	Matopo	39.12	269	P	P	21 41 11.4	0.0
	2.1nm,0.6s,baz=104,slow=10.0,SNR=8.1						
	2.1nm,0.6s						

PSI Prapat 39.55 48 LR LR 21 53 44.0
comp=Z,294nm,21.2s,baz=218,slow=30
LEM Lembang 39.97 68 LR LR 21 54 14.3
comp=Z,237nm,20.8s,baz=176,slow=31
BOSA Boshof 40.33 256 P P 21 41 21.8 +0.3
2.2nm,0.7s,baz=52,slow=8.8,SNR=4.0
BOSA LR LR 21 55 01.4
comp=Z,527nm,19.6s,baz=115,slow=32
2.2nm,0.7s
BOSA Boshof 40.33 256 P P 21 41 19.8 -1.7
LBTB Lobatse 40.62 261 LR LR 21 55 47.8
comp=Z,506nm,18.9s,baz=104,slow=33
KMBO Kilima Mbogo 40.67 302 P P 21 41 25.9 +1.3
1.0nm,0.8s,baz=78,slow=9.6,SNR=3.2
1.0nm,0.8s
KMBO Kilima Mbogo 40.67 302 P P 21 41 23.2 -1.3
LSZ Lusaka 41.09 277 P P 21 41 28.6 +0.7
1.7nm,0.3s,baz=95,slow=6.6,SNR=7.9
LSZ LR LR 21 57 05.3
comp=Z,277nm,18.6s,baz=136,slow=34
1.7nm,0.3s
MAW Mawson 41.86 185 LR LR 21 55 09.7
comp=Z,490nm,19.5s,baz=0.5,slow=31
SUR Sutherland 43.74 250 LR LR 21 56 25.3
comp=Z,634nm,20.8s,baz=107,slow=31
MBAR Mbarara 46.10 297 LR LR 21 59 59.9
comp=Z,58nm,18.1s,baz=109,slow=34
MBAR Mbarara 46.10 297 P P 21 42 08.5 +0.2
CASY Casey 47.23 159 P P 21 42 17.7 +1.5
CASY IAmb IAmb 21 42 24.3
comp=Z,8.2nm,1.3s
TSUM Tsumeb 49.29 266 LR LR 22 00 12.0
comp=Z,127nm,21.6s,baz=150,slow=32
FITZ Fitzroy Crossi 51.16 93 LR LR 22 01 13.9
comp=Z,141nm,21.0s,baz=278,slow=32
FITZ Fitzroy Crossi 51.16 93 P P 21 42 46.5 -0.5
FITZ IAmb IAmb 21 42 55.2
comp=Z,13nm,1.2s
KAPI Kappang 51.24 75 LR LR 22 03 42.9
comp=Z,91nm,18.8s,baz=280,slow=35
CM31 Chiang Mai Arr 52.02 35 P P 21 42 53.2 -0.2
CM31 IAmb IAmb 21 43 09.1
comp=Z,9.9nm,1.1s
CMAR Chiang Mai Arr 52.02 35 P P 21 42 53.6 +0.2
comp=Z,2.3nm,0.8s,baz=220,slow=7.5,SNR=12
CMAR LR LR 22 01 08.4
comp=Z,146nm,21.6s,baz=210,slow=32
comp=Z,2.3nm,0.8s
CMAR Chiang Mai Arr 52.02 35 P P 21 42 53.2 -0.2
CRAI Chiangrai 54.24 35 P P 21 43 09.2 -0.5
ASAR Alice Springs 56.84 102 P P 21 43 28.1 -0.5
comp=Z,1.7nm,0.7s,baz=253,slow=6.4,SNR=18
ASAR LR LR 22 05 15.2
comp=Z,98nm,20.4s,baz=271,slow=33
comp=Z,1.7nm,0.7s
ASAR Alice Springs 56.84 102 P P 21 43 27.8 -0.8
WRA Warramunga Arr 58.35 98 P P 21 43 38.9 -0.4
comp=Z,2.2nm,0.8s,baz=253,slow=7.4,SNR=9.2
WRA LR LR 22 08 01.1
comp=Z,144nm,18.4s,baz=97,slow=35
comp=Z,2.2nm,0.8s
WRA Warramunga Arr 58.35 98 P P 21 43 38.0 -1.2
WB2 Warramunga Ar 58.36 98 P P 21 43 38.7 -0.6
WB2 IAmb IAmb 21 43 46.8
comp=Z,11nm,1.2s
LSA Lhasa 58.77 21 P P 21 43 42.5 +0.1
LSA IAmb IAmb 21 43 45.6
comp=Z,8.6nm,1.2s
KBL Kabul 60.27 358 P P 21 43 53.0 +0.6
SNAA Sanae 60.36 200 P P 21 43 52.4 0.0
comp=Z,1.7nm,0.8s,baz=84,slow=7.2,SNR=6.0
SNAA LR LR 22 06 59.9
comp=Z,58nm,18.1s,baz=30,slow=33
comp=Z,1.7nm,0.8s
SNAA Sanae 60.36 200 P P 21 43 52.0 -0.4
STKA Stephens Creek 61.26 114 LR LR 22 07 05.2
comp=Z,97nm,20.2s,baz=223,slow=33
DAV Davao City (W) 62.54 66 LR LR 22 08 00.1
comp=Z,101nm,21.9s,baz=235,slow=33
QSPA South Pole Qui 64.09 180 P P 21 44 17.0 -0.5
comp=Z,3.6nm,0.9s,baz=257,slow=1.8,SNR=11
comp=Z,3.6nm,0.9s
QSPA South Pole Qui 64.09 180 P P 21 44 17.2 -0.3
CHGR Chuyangaron 64.38 359 P P 21 44 19.8 +0.2
GEYT Alibeck 64.73 349 LR LR 22 08 13.9
comp=Z,72nm,20.2s,baz=177,slow=32
VNDA Vanda 65.01 166 LR LR 22 09 41.8
comp=Z,85nm,19.1s,baz=251,slow=33
VNDA Vanda 65.01 166 P P 21 44 23.6 +0.4
VNDA IAmb IAmb 21 44 30.7
comp=Z,8.9nm,1.1s
EIL Elat 65.18 326 LR LR 22 07 54.6
comp=Z,49nm,21.5s,baz=89,slow=32
NRN Naryn 67.31 4 P P 21 44 38.9 +0.2
AAK Ala-Archa 68.42 3 LR LR 22 12 22.5
comp=Z,103nm,21.0s,baz=176,slow=34
AAK Ala-Archa 68.42 3 P P 21 44 46.1 +0.6
AAK IAmb IAmb 21 44 48.0
comp=Z,11nm,1.4s
KK31 Karatay Array 68.80 360 P P 21 44 48.5 +0.8
KKAR Karatay Array 68.80 360 P P 21 44 47.6 -0.1
KKAR Karatay Array 68.80 360 P P 21 44 47.8 +0.1
KKAR IAmb IAmb 21 44 56.2
comp=Z,11nm,1.1s
CTA Charters Tower 68.84 103 LR LR 22 14 22.1
comp=Z,96nm,18.1s,baz=261,slow=36
GURO Guroymak-BITLI 69.67 336 P P 21 44 53.5 +0.2
GURO IAmb IAmb 21 45 02.5
comp=Z,4.9nm,1.0s
GNI Garni 70.17 339 LR LR 22 13 22.3
comp=Z,60nm,20.4s,baz=149,slow=34
MAKZ Makanchi 73.22 8 P P 21 45 14.2 -0.2
MK31 Makanchi Array 73.24 8 P P 21 45 13.9 -0.6
MK31 IAmb IAmb 21 45 22.0
comp=Z,11nm,1.2s
MKAR Makanchi Array 73.24 8 P P 21 45 14.1 -0.4
comp=Z,4.0nm,0.7s,baz=196,slow=6.5,SNR=31
MKAR LR LR 22 16 33.8
comp=Z,80nm,18.5s,baz=202,slow=35
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 73.24 8 P P 21 45 14.0 -0.6
KBZ Khabaz 73.99 339 LR LR 22 16 19.2
comp=Z,52nm,19.1s,baz=152,slow=34
BRTR Keskin Array B 74.03 331 P P 21 45 19.7 +0.2
comp=Z,1.1nm,0.7s,baz=134,slow=4.2,SNR=2.1
BRTR LR LR 22 14 29.7
comp=Z,56nm,21.3s,baz=122,slow=33
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 74.03 331 P P 21 45 19.6 +0.1
IDI Anoyia 74.86 323 LR LR 22 16 20.0
comp=Z,6.7nm,20.9s,baz=91,slow=34
ABKAR Akbulak array 75.58 353 P P 21 45 27.8 -0.2
ABKAR Akbulak array 75.58 353 P P 21 45 28.3 +0.3
ABKAR IAmb IAmb 21 45 35.9
comp=Z,7.3nm,1.2s
KURBB Kurchatov Arra 76.64 5 LR LR 22 18 27.7
comp=Z,89nm,18.6s,baz=142,slow=35
KURK Kurchatov 76.73 5 P P 21 45 35.1 +0.5
AKTO Aktyubinsk 76.97 352 LR LR 22 16 53.1
comp=Z,42nm,21.0s,baz=143,slow=34
TORD Torodi Ar. Bea 77.62 291 P P 21 45 39.9 -0.6
comp=Z,1.2nm,0.9s,baz=112,slow=6.2,SNR=5.4
TORD LR LR 22 20 47.5
comp=Z,43nm,18.2s,baz=214,slow=36
comp=Z,1.2nm,0.9s
TORD Torodi Ar. Bea 77.62 291 P P 21 45 39.5 -0.9
BRVK Borovoye 78.77 360 P P 21 45 45.4 -0.5
DBIC Dimbokro 80.13 282 LR LR 22 19 28.9
comp=Z,105nm,20.0s,baz=134,slow=34
SONM Songino Array 80.21 23 P P 21 45 55.0 +1.0
comp=Z,3.8nm,1.0s,baz=213,slow=4.2,SNR=24
SONM LR LR 22 19 57.2
comp=Z,63nm,20.3s,baz=186,slow=35
comp=Z,3.8nm,1.0s
SONM Songino Array 80.21 23 P P 21 45 54.5 +0.5
SONM IAmb IAmb 21 46 03.0
comp=Z,8.2nm,1.1s
KRVT Keravat (AS076 80.28 90 LR LR 22 20 46.6
comp=Z,69nm,20.9s,baz=331,slow=35
ULN Ulaanbaatar 80.48 24 P P 21 45 55.2 -0.3
ULN IAmb IAmb 21 46 03.5
comp=Z,10nm,1.1s
ZAA0 Zalesovo Array 80.58 8 P P 21 45 55.6 -0.1
ZAA0 IAmb IAmb 21 45 56.4
comp=Z,6.9nm,1.0s
ZALV Zalesovo Beam 80.58 8 P P 21 45 55.4 -0.3
comp=Z,5.5nm,0.8s,baz=193,slow=4.2,SNR=16

ZALV				LR	LR	22 21 46.3		
	comp=Z,29nm,18.4s,baz=129,slow=36							
	comp=Z,5.5nm,0.8s							
ZALV	**Zalesovo Beam**	**80.58**	**8**	P	**P**	**21 45 55.3**	**-0.4**	
BELG	**Belogornoye**	**80.69**	**346**	LR	LR	22 19 18.7		
	comp=Z,34nm,20.6s,baz=158,slow=34							
MLR	**Muntele Rosu**	**82.04**	**330**	P	**P**	**21 46 03.5**	**-0.4**	
MLR				IAmb	IAmb	21 46 11.6		
	comp=Z,5.5nm,1.0s							
GUMO	**Guam**	**82.09**	**71**	LR	LR	22 19 34.7		
	comp=Z,29nm,19.0s,baz=275,slow=34							
ARU	**Arti**	**82.80**	**353**	P	**P**	**21 46 07.5**	**+0.1**	
	comp=Z,2.2nm,0.7s,baz=179,slow=11,SNR=5.1							
ARU				LR	LR	22 20 13.6		
	comp=Z,50nm,18.8s,baz=126,slow=34							
	comp=Z,2.2nm,0.7s							
ARU	**Arti**	**82.80**	**353**	P	**P**	**21 46 07.0**	**-0.3**	
ARU				IAmb	IAmb	21 46 15.7		
	comp=Z,8.7nm,1.0s							
KSRS	**Korea Array**	**82.89**	**42**	LR	LR	22 21 23.0		
	comp=Z,94nm,20.0s,baz=245,slow=34							
PMSA	**Palmer Station**	**82.94**	**198**	LR	LR	22 20 05.9		
	comp=Z,96nm,18.4s,baz=142,slow=34							
DIVS	**Divibare**	**83.86**	**326**	P	**P**	**21 46 13.0**	**-0.3**	
DIVS				IAmb	IAmb	21 46 21.5		
	comp=Z,4.9nm,1.2s							
BURAR	**Bucovina Array**	**83.99**	**331**	P	**P**	**21 46 14.9**	**+1.0**	
BUR08	**Bucovina Ar. S**	**84.02**	**331**	P	**P**	**21 46 14.9**	**+0.9**	
AKASG	**Malin Array Be**	**84.77**	**335**	P	**P**	**21 46 16.6**	**-1.0**	
	comp=Z,0.2nm,0.3s,baz=139,slow=4.1,SNR=4.3							
	comp=Z,0.2nm,0.3s							
AKBB	**Malin Array Si**	**84.77**	**335**	P	**P**	**21 46 17.8**	**+0.2**	
AKBB				IAmb	IAmb	21 46 43.9		
	comp=Z,10nm,1.4s							
KIRV	**Kirov**	**86.17**	**349**	LR	LR	22 24 03.3		
	comp=Z,38nm,18.5s,baz=130,slow=35							
JCJ	**Chichijima**	**86.69**	**58**	LR	LR	22 20 24.7		
	comp=Z,51nm,19.9s,baz=122,slow=32							
MJAR	**Matsushiro Arr**	**88.91**	**48**	LR	LR	22 25 55.0		
	comp=Z,69nm,18.9s,baz=221,slow=35							
KLR	**Kul'dur**	**92.50**	**35**	LR	LR	22 29 24.2		
	comp=Z,91nm,18.4s,baz=211,slow=36							
MDT	**Midelt**	**92.53**	**305**	LR	LR	22 29 38.7		
	comp=Z,50nm,18.1s,baz=146,slow=36							
BBTS	**Babate**	**93.95**	**284**	LR	LR	22 26 57.2		
	comp=Z,67nm,18.7s,baz=142,slow=34							
FINES	**FINESS Array B**	**94.34**	**340**	LR	LR	22 27 17.4		
	comp=Z,48nm,20.6s,baz=56,slow=34							
NRIK	**Noril'sk**	**95.89**	**6**	LR	LR	22 30 58.0		
	comp=Z,117nm,19.9s,baz=202,slow=36							
MSVF	**Nonsavu**	**97.04**	**114**	LR	LR	22 25 21.2		
	comp=Z,66nm,19.8s,baz=202,slow=32							
YAK	**Yakutsk**	**99.56**	**24**	LR	LR	22 32 03.7		
	comp=Z,94nm,21.8s,baz=268,slow=35							
PDAR	**Pinedale Array**	**163.31**	**1**	PKP	**PKPdf**	**21 53 46.7**	**0.0**	
	comp=Z,0.2nm,0.6s,baz=162,slow=0.6,SNR=1.8							
PDAR				PKPab	**PKPab**	**21 54 36.8**	**-0.4**	
	comp=Z,0.4nm,0.5s,baz=358,slow=2.9,SNR=2.7							

*IDC **16** 21:49:35.7±2.0, 1°.97N×127°.53E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=138.6km s-min=26.5km az=66.0.*

ISC 16 21:49:48.1±2.4, 2°.N-1°×12°.7E°, h100km, n5, σ1s07/6, mb3.8/4, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**5.42**	**334**	⇓*e*P	**Pn**	**21 51 07.5**	**+0.9**
SKMP				*e*S	**Sn**	**21 52 06.3**	**-1.5**
WRA	**Warramunga Arr**	**22.62**	**162**	P	**P**	**21 54 40.5**	**-0.4**
	3.9nm,0.5s,baz=343,slow=11,SNR=35						
	3.9nm,0.5s						
ASAR	**Alice Springs**	**26.03**	**165**	P	**P**	**21 55 12.2**	**0.0**
	0.7nm,0.5s,baz=352,slow=7.7,SNR=14						
	0.7nm,0.5s						
STKA	**Stephens Creek**	**36.10**	**159**	P	**P**	**21 56 40.2**	**-0.3**
	2.6nm,0.4s,baz=345,slow=8.7,SNR=9.6						
	2.6nm,0.4s						
MKAR	**Makanchi Array**	**59.40**	**326**	P	**P**	**21 59 40.6**	**+0.4**
	0.2nm,0.5s,baz=123,slow=6.4,SNR=1.7						
	0.2nm,0.5s						

*NCEDC **16** 21:54:28.7±2.5, 36°.70N±0°.01×121°.34W±0°.01, h4km±5km, ML3.1/27, ML3.1/64(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=210.0*

NEIC 16 21:54:27.5±3.0, 36°.790N±0°.010×121°.28W±0°.01, h5km±5km, Error ellipse: s-maj=1.5km s-min=1.3km az=222.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAO	**San Andreas Ge**	**0.13**	**259**	Pg	Pg	21 54 31.0	+0.8
BJOM	**Mount Johnson**	**0.16**	**188**		Sg	21 54 32.2	-0.6
HSFM	**Saint Francis**	**0.17**	**277**		Pg	21 54 32.6	+1.7
SCZ	**Santa Cruz**	**0.21**	**207**		Pg	21 54 32.6	+1.0
HFEM	**San Felipe**	**0.21**	**334**		Pg	21 54 30.2	-1.5
PACP	**Pacheco Peak**	**0.22**	**359**		Pg	21 54 30.6	-1.1
HBTM	**San Juan Bauti**	**0.22**	**286**		Pg	21 54 33.8	+2.0
BAVM	**Antelope Valle**	**0.25**	**125**		Pg	21 54 34.4	+2.1
ANZ	**Anzar Road**	**0.27**	**291**		Pb	21 54 34.7	-0.1
HPCM	**Pacheco Lake**	**0.27**	**1**		Pg	21 54 31.5	-1.2
HPCM					Sg	21 54 36.7	+0.3
BBGB	**Big Mountain B**	**0.29**	**137**		Pb	21 54 35.1	-0.1
SLD	**San Luis Dam**	**0.29**	**10**		Pg	21 54 31.8	-1.3
SLD					Sg	21 54 37.0	0.0
HTUM	**Tustin Road**	**0.29**	**278**		Pb	21 54 34.3	-0.9
GHS	**Gilroy Hot Spr**	**0.33**	**337**		Pg	21 54 32.3	-1.7
HERM	**Elkhorn Road**	**0.34**	**272**		Pb	21 54 35.2	-0.9
HCOM	**Corn Cob Canyo**	**0.35**	**286**		Pb	21 54 35.9	-0.4
BRMM	**Rolling Bench**	**0.37**	**83**		Pg	21 54 33.6	-1.1
BRMM					Sg	21 54 38.7	-0.8
HLPM	**Lions Peak**	**0.38**	**312**		Pg	21 54 32.3	-2.4
BMSM	**Mercy Hot Spri**	**0.41**	**108**		Pb	21 54 38.2	+0.8
BSMM	**Soledad Missio**	**0.42**	**196**		Pg	21 54 35.1	-0.6
LRV	**Little Rabbit**	**0.42**	**150**		Pg	21 54 36.5	+0.8
HAST	**Hastings Reser**	**0.46**	**208**		Pg	21 54 35.6	-0.6
JELB	**Ellicott, Sant**	**0.46**	**288**		Pb	21 54 37.8	-0.3
CADM	**Anderson Res.**	**0.46**	**324**		Pg	21 54 34.5	-1.9
BCWM	**Chews Ridge**	**0.53**	**205**		Pg	21 54 37.2	-0.5
JTGM	**Trout Gulch Ro**	**0.53**	**297**		Pg	21 54 35.2	-2.5
HMOM	**Monterey**	**0.54**	**250**		Pg	21 54 38.0	0.0
JHLM	**Holstrom Ranch**	**0.54**	**306**		Pg	21 54 35.2	-2.8
CCOB	**Coe Ranch Numb**	**0.56**	**326**		Pg	21 54 37.3	-1.0
CMPM	**Mikes Peak**	**0.57**	**357**		Pg	21 54 37.5	-0.9
AMC	**Almaden**	**0.58**	**309**		Pg	21 54 36.0	-2.7
ARN	**Arnold Ranch**	**0.59**	**340**		Pg	21 54 37.2	-1.7
MHC	**Mount Hamilton**	**0.62**	**333**		Pg	21 54 37.9	-1.6
C054	**Valleyhaven Wa**	**0.65**	**318**		Pb	21 54 42.3	+1.0
BAPM	**Anderson Peak**	**0.68**	**205**		Pg	21 54 40.0	-0.5
CMMM	**Mount Mocho**	**0.69**	**346**		Pn	21 54 43.9	-0.2
PMPB	**Monarch Peak**	**0.69**	**146**		Pg	21 54 41.3	+0.5
JJOM	**Saint Joseph's**	**0.69**	**307**		Pg	21 54 38.1	-2.7
PCCM	**Crazy Canyon**	**0.70**	**172**		Pg	21 54 40.9	-0.2
COSM	**Mount Oso**	**0.72**	**354**		Pg	21 54 40.8	-0.6
CMLM	**Mount Lewis**	**0.75**	**337**		Pg	21 54 40.1	-1.8
CMLM					Pn	21 54 45.3	+0.5
JBNB	**Ben Lomond Mou**	**0.78**	**296**		Pb	21 54 43.6	+0.1
CALM	**Calaveras Res.**	**0.78**	**328**		Pg	21 54 40.7	-1.8
CALM					Pn	21 54 45.9	+0.7
JSGM	**Saratoga Golf**	**0.79**	**309**		Pn	21 54 44.7	-0.6
PJUM	**Juniper Ridge**	**0.79**	**135**		Pg	21 54 38.8	-3.8
PJUM					Pb	21 54 44.0	+0.2
PPTM	**Peach Tree Val**	**0.82**	**146**		Pg	21 54 43.5	+0.3
PSAM	**San Ardo**	**0.83**	**157**		Pg	21 54 43.2	-0.2
JSJM	**St Joseph**	**0.84**	**310**		Pn	21 54 46.0	-0.1
PDRM	**Domengine Ranc**	**0.86**	**121**		Pg	21 54 41.1	-2.9
PDRM					Pn	21 54 46.1	-0.3
PAPM	**Alder Peak**	**0.88**	**184**		Pg	21 54 43.7	-0.6
PSMM	**Smith Mountain**	**0.91**	**142**		Pg	21 54 40.6	-4.3
PSMM					Pb	21 54 45.7	-0.1
MYLM	**Yosemite Lake**	**0.91**	**49**		Pn	21 54 48.2	+1.2
WENL	**Wente Vineyard**	**0.91**	**336**		Pn	21 54 48.1	+1.1
JJRM	**Joaquin Road**	**0.91**	**307**		Pn	21 54 47.1	-0.1
JFP	**Foothills Park**	**0.92**	**308**		Pn	21 54 46.9	-0.3
PARM	**Anticline Ridg**	**0.93**	**125**		Pn	21 54 47.4	+0.1
JSFB	**Stanford Teles**	**0.94**	**311**		Pg	21 54 42.7	-2.9
CVLM	**Vallecito**	**0.94**	**332**		Pn	21 54 48.3	+0.8
PHPM	**Hope Ranch**	**0.97**	**146**		Pg	21 54 46.0	-0.2
JRSC	**Jasper Ridge**	**0.98**	**309**		Pn	21 54 47.6	-0.3
CNIC	**Niles Canyon**	**0.98**	**327**		Pn	21 54 48.1	+0.1
PHSB	**Hesperia Broad**	**0.98**	**169**		Pg	21 54 45.7	-0.6
BGH	**Bear Gulch**	**1.01**	**303**		Pb	21 54 47.8	+0.3
PKD	**Bear Valley Ra**	**1.03**	**144**		Pg	21 54 47.2	-0.1
JHPM	**Huddart Park**	**1.04**	**309**		Pn	21 54 48.7	-0.2
PANM	**San Antonio Re**	**1.05**	**163**		Pg	21 54 47.1	-0.5
PVCM	**Vineyard Canyo**	**1.06**	**145**		Pg	21 54 47.6	-0.1
PSTM	**Stockdale Moun**	**1.06**	**144**		Pg	21 54 47.9	0.0
PPO	**Portuguese Can**	**1.07**	**149**		Pg	21 54 48.0	0.0
CMOB	**Morgan Territo**	**1.10**	**338**		Pn	21 54 52.6	+2.9
PHCM	**Hearst Castle**	**1.11**	**175**		Pg	21 54 48.4	-0.4
CLCB	**Lake Chabot**	**1.13**	**327**		Pn	21 54 50.4	+0.3
JCHM	**Cahill Ridge**	**1.14**	**310**		Pb	21 54 49.8	+0.1
CTM	**Castle Mountai**	**1.15**	**138**		Pn	21 54 50.3	-0.1
PHFM	**Heflinger Ranc**	**1.15**	**142**		Pb	21 54 50.0	0.0
PWKM	**Work Ranch**	**1.16**	**147**		Pg	21 54 49.7	0.0
PHAM	**Harlan Ranch**	**1.19**	**143**		Pg	21 54 50.1	-0.2
PKEM	**Kettleman Hill**	**1.19**	**127**		Pn	21 54 51.9	+1.0
PCMM	**Cholame Hills**	**1.21**	**144**		Pg	21 54 50.5	-0.2
GHC	**Gold Hill**	**1.22**	**142**		Pg	21 54 50.4	-0.4
PSRM	**Scobie Ranch**	**1.23**	**139**		Pg	21 54 51.2	+0.1
BDM	**Black Diamond**	**1.25**	**338**		Pn	21 54 54.2	+2.5
PKLM	**Kerr Lake**	**1.27**	**143**		Pg	21 54 51.0	-0.9
PCBM	**Cambria**	**1.28**	**172**		Pg	21 54 50.3	-1.7
BLDC	**Black Mountain**	**1.29**	**166**		Pg	21 54 51.0	-1.2
BLDC	**Black Mountain**	**1.29**	**166**		Pg	21 54 51.0	-1.2
TCHL	**Shandon**	**1.31**	**147**		Pn	21 54 52.0	-0.5
PMRM	**Maxey Ranch**	**1.31**	**140**		Pn	21 54 52.5	-0.1
BKS	**Berkeley--Byer**	**1.32**	**325**		Pn	21 54 52.6	-0.1
ARDC	**Alexander Ranc**	**1.35**	**169**		Pn	21 54 52.6	-0.4
PAGB	**Antelope Grade**	**1.35**	**141**		Pn	21 54 52.8	-0.3
PAGB				IAML		21 55 18.8	
	comp=E,462nm,0.7s						
THIS	**South End of C**	**1.36**	**141**		Pn	21 54 53.2	-0.1
TRAM	**Private Proper**	**1.38**	**143**		Pn	21 54 53.3	-0.2
CMB	**Columbia Colle**	**1.43**	**30**		Pg	21 54 55.9	+0.9
TSCN	**Private Proper**	**1.46**	**148**		Pn	21 54 53.6	-0.9
LSDC	**Los Osos Digit**	**1.53**	**166**		Pn	21 54 53.2	-2.3
VPDC	**Valencia Peak**	**1.58**	**168**		Pn	21 54 54.7	-1.6
SMMC	**Simmler**	**1.80**	**144**		Pb	21 55 01.3	+0.2
MCCM	**Marconi Confer**	**1.86**	**317**		Pb	21 55 01.5	-0.4
MCCM				IAML		21 55 38.8	
	comp=N,122nm,0.7s						
MCCM				IAML		21 55 45.1	
	comp=E,110nm,0.9s						
CRGC	**Crocker Grade**	**2.00**	**140**		Pb	21 55 03.5	-0.9
OMMB	**Old Mammoth Mi**	**2.00**	**65**		Pb	21 55 05.0	+0.5
OMMB				IAML		21 55 35.1	
	comp=N,157nm,0.5s						
OMMB				IAML		21 55 35.2	
	comp=E,110nm,0.4s						
MDYM	**Dry Creek**	**2.01**	**64**		Pg	21 55 07.0	+1.0
MLCM	**Laurel Creek C**	**2.06**	**66**		Pg	21 55 07.8	+0.7
MCBM	**Casa Benchmark**	**2.09**	**65**		Pg	21 55 08.5	+1.0
BENR	**Benton**	**2.35**	**66**		Pg	21 55 11.7	-0.9
EMB	**Emerald Bay**	**2.37**	**23**		Pb	21 55 10.3	-0.6
EMB				IAML		21 55 51.4	
	comp=N,133nm,0.8s						
EMB				IAML		21 56 01.0	
	comp=E,87nm,0.7s						
BCW	**Bitter Crk WRg**	**2.39**	**140**		Pn	21 55 08.4	+1.0
BCW				IAML		21 55 57.7	
	comp=N,125nm,0.8s						
BCW				IAML		21 55 59.1	
	comp=E,154nm,0.6s						
ISA	**Isabella, Lake**	**2.53**	**116**		Pn	21 55 10.5	+1.1
ISA				IAML		21 55 46.2	
	comp=N,72nm,0.9s						
ISA				IAML		21 55 47.9	
	comp=E,64nm,0.7s						
LHV	**Little Huntoon**	**2.65**	**56**		Pb	21 55 14.8	-0.6
PNTR	**Pine Nut**	**2.65**	**30**		Pb	21 55 14.6	-1.1
PNTR				IAML		21 56 14.3	
	comp=E,108nm,1.0s						
PNTR				IAML		21 56 16.3	
	comp=N,82nm,1.1s						
MPK	**Martis Peak**	**2.69**	**21**	Pn	Pb	21 55 14.5	-1.8
DSP	**Deep Springs**	**2.71**	**77**	Pn	Pb	21 55 14.5	-2.0
DSP				IAML		21 56 05.0	
	comp=N,74nm,1.1s						
DSP				IAML		21 56 06.6	
	comp=E,62nm,0.9s						
YERR	**Yerington**	**2.72**	**36**		Pb	21 55 15.4	-1.4
YERR				IAML		21 56 02.2	
	comp=N,48nm,0.9s						
ORV	**Oroville**	**2.77**	**357**		Pb	21 55 16.3	-1.1
VCNR	**Virginia City**	**2.81**	**27**		Pb	21 55 16.0	-2.4
VCNR				IAML		21 56 07.8	
	comp=N,41nm,0.7s						
VCNR				IAML		21 56 22.0	
	comp=E,54nm,0.8s						
RYN	**Ryan**	**2.86**	**49**		Pb	21 55 17.1	-1.9
RYN				IAML		21 56 04.7	
	comp=E,58nm,0.5s						
RYN				IAML		21 56 11.9	
	comp=N,49nm,0.9s						
NVAR	**Mina Array Bea**	**2.88**	**54**		Pb	21 55 17.2	-2.3
LCH	**Last Change Ra**	**2.94**	**80**		Pb	21 55 18.1	-2.5
LCH				IAML		21 56 10.4	
	comp=N,47nm,0.7s						
LCH				IAML		21 56 12.2	
	comp=E,78nm,0.7s						
CCAC	**Calif City Air**	**3.11**	**121**		Pn	21 55 18.1	+0.8
CCAC				IAML		21 56 18.2	
	comp=E,72nm,1.2s						
CCAC				IAML		21 56 47.5	
	comp=N,79nm,1.2s						
GRAC	**Grapevine Rang**	**3.15**	**85**		Pn	21 55 20.6	+2.8
GRAC				IAML		21 56 21.5	
	comp=E,73nm,0.7s						
BEKR	**Beckworth**	**3.16**	**13**		Pb	21 55 21.3	-2.9
GMN	**Gold Mountain**	**3.26**	**80**	Pn	Pn	21 55 22.3	+2.7
GMN				IAML		21 56 22.6	
	comp=E,41nm,1.0s						
GMN				IAML		21 56 23.8	
	comp=N,60nm,0.7s						
PAHR	**Pah Rah Range**	**3.27**	**27**		Pb	21 55 23.0	-3.2
KVN	**Kaiserville**	**3.38**	**47**		Pb	21 55 25.1	-3.0
TPH	**Tonopah**	**3.48**	**67**		Pn	21 55 22.9	+0.4
QSM	**Queen of Sheba**	**3.66**	**102**		Pn	21 55 24.0	-0.7
GWY	**Greenwater Val**	**3.77**	**98**		Pn	21 55 27.8	+1.4
GSC	**Goldstone, Bar**	**3.92**	**111**		Pn	21 55 29.1	+0.6
GSC				IAML		21 56 36.9	
	comp=N,18nm,1.3s						
GSC				IAML		21 56 44.6	
	comp=E,25nm,0.8s						
TPNV	**Topopah Spring**	**4.04**	**86**		Pn	21 55 31.8	+1.6
TPNV				IAML		21 56 52.3	
	comp=E,24nm,1.1s						

*SKHL **16** 22:03:17.8±0.7, 45°.70N×142°.90E, h10km, mb4.3/3*
*JMA **16** 22:03:18.2±0.3, 45°.6N±0°.8×14°.3E°, h0km, MV2.8/21, NE OFF HOKKAIDO*

ISC 16 22:03:17.9±2.0, 45°.67N±0°.05×143°.0E±0°.1, h5km±20km, n5, σ0s15/10, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.77**	**203**	*e*P	**Pb**	**22 03 33.7**	**0.0**
JSE				*e*S	**Sb**	**22 03 44.5**	**+0.1**
JWK2	**Keihoku**	**0.86**	**246**	*e*P	**Pn**	**22 03 36.4**	**-0.1**
JWK2				*e*S	**Sn**	**22 03 49.6**	**+0.2**
YSS	**Yuzh-Sakhalins**	**1.29**	**352**	*e*Pg	**Pn**	**22 03 42.5**	**0.0**
YSS				AMB	AMB	22 03 43.0	
	10.0nm,0.2s						
YSS				*e*Sg	**Sg**	**22 03 59.6**	**+0.1**
YSS				A	A	22 04 00.8	
	120nm,0.5s						
YSS				A	A	22 04 00.8	
	50nm,0.5s						
JRBN	**Rebuntou**	**1.39**	**260**	*e*P	**Pn**	**22 03 43.7**	**-0.1**
JRBN				*e*S	**Sb**	**22 04 02.0**	**-0.1**
ASAJ	**Asahikawa**	**1.58**	**191**	*e*P	**Pb**	**22 03 47.4**	**-0.2**
ASAJ				*e*S	**Sg**	**22 04 08.7**	**+0.1**

*SOME **16** 22:05:16.5, 40°.65N×78°.30E, h20km*
*NNC **16** 22:05:17.6±0.9, 40°.74N×78°.23E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=6.0km s-min=4.0km az=168.0*
*KRNET **16** 22:05:18.7±0.1, 40°.94N×78°.33E, mb3.0*

ISC 16 22:05:20.9±1.9, 40°.82N±0°.09×78°.33E±0°.05, h10km, n38, σ1s53/60, 12C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.12**	**313**	⇑*e*P	**Pn**	**22 05 56.6**	**+0.1**
ULHL	baz=10.0			⇑*e*S	**Sb**	**22 06 24.2**	**-1.7**
	baz=10.0						
SATY	**Saty**	**2.24**	**2**	*e*P	**Pb**	**22 06 00.9**	**-0.6**
SATY	44nm,0.6s			*e*S	**Sg**	**22 06 33.1**	**+0.2**
	51nm,0.5s						
SATY	**Saty**	**2.24**	**2**	Pg	**Pb**	**22 06 00.7**	**-0.8**
SATY	44nm,0.6s			Lg	Lg	22 06 32.5	
	51nm,0.5s						
ZHN	**Zhinishke**	**2.35**	**2**	*e*P	**Pb**	**22 06 02.4**	**-1.0**
ZHN	12nm,0.3s			*e*S	**Sg**	**22 06 35.3**	**-1.1**
	26nm,0.6s						
ZHN	**Zhinishke**	**2.35**	**2**	Pg	**Pb**	**22 06 02.8**	**-0.6**
ZHN	12nm,0.3s			Lg	Lg	22 06 36.0	
	26nm,0.6s						
UZB	**Uzynbulak**	**2.38**	**12**	*e*P	**Pb**	**22 06 02.4**	**-1.6**
UZB	2.6nm,0.3s			*e*S	**Sg**	**22 06 35.4**	**-2.1**
	28nm,0.7s						
UZB	**Uzynbulak**	**2.38**	**12**	Pg	**Pb**	**22 06 02.4**	**-1.6**
UZB	2.6nm,0.3s			Lg	Lg	22 06 35.4	
	28nm,0.7s						
BOOM	**Boomskoye usch**	**2.45**	**314**	⇓*e*P	**Pn**	**22 06 01.1**	**+0.1**
BOOM	baz=12			⇓*e*S	**Sn**	**22 06 32.2**	**+1.1**
	baz=12						
SHLS	**Shalkode**	**2.49**	**20**	*e*P	**Pg**	**22 06 07.5**	**-1.0**
SHLS	7.1nm,0.5s			*e*S	**Sg**	**22 06 44.3**	**+3.5**
	40nm,0.7s						
SHLS	**Shalkode**	**2.49**	**20**	Pg	**Pg**	**22 06 07.5**	**-1.0**
SHLS	7.1nm,0.5s			Lg	Lg	22 06 44.3	
	40nm,0.7s						
MDOK	**Medeo**	**2.53**	**338**	*e*P	**Pb**	**22 06 04.6**	**-1.8**
MDOK	14nm,0.6s			*e*S	**Sb**	**22 06 38.8**	**+1.1**
	29nm,0.8s						
MDOK	**Medeo**	**2.53**	**338**	⇓Pg	**Pb**	**22 06 04.7**	**-1.8**
MDOK	10nm,0.6s			Pg	**Pn**	**22 06 04.9**	**+2.8**
	14nm,0.6s						
MDOK				Lg	Lg	22 06 39.8	
	29nm,0.8s						
MDOK				Lg	Lg	22 06 39.9	
	35nm,0.7s						
AAA	**Alma-Ata**	**2.61**	**337**	*e*P	**Pb**	**22 06 07.1**	**-0.7**
AAA	25nm,0.2s			*e*S	**Sg**	**22 06 43.7**	**-1.0**
	45nm,0.6s						
AAA	**Alma-Ata**	**2.61**	**337**	Pg	**Pb**	**22 06 07.1**	**-0.7**
AAA	25nm,0.2s			Lg	Lg	22 06 43.7	
	45nm,0.6s						
KPKS	**Kokpek**	**2.66**	**6**	*e*P	**Pb**	**22 06 07.8**	**-0.9**
KPKS	24nm,0.4s			*e*S	**Sg**	**22 06 44.6**	**-1.7**
	31nm,0.7s						
KPKS	**Kokpek**	**2.66**	**6**	Pg	**Pb**	**22 06 07.8**	**-0.9**
KPKS	24nm,0.4s			Lg	Lg	22 06 44.6	
	31nm,0.7s						
KST	**Kastek**	**2.84**	**322**	*e*P	**Pb**	**22 06 09.9**	**-1.8**
KST	14nm,0.6s			*e*S	**Sb**	**22 06 48.5**	**+1.9**
	30nm,1.0s						
KST	**Kastek**	**2.84**	**322**	Pg	**Pb**	**22 06 09.9**	**-1.8**
KST	14nm,0.6s			Lg	Lg	22 06 48.5	
	30nm,1.0s						
TKM2	**Tokmak 2**	**2.93**	**317**	⇓Pg	**Pb**	**22 06 11.3**	**-1.9**
TKM2	4.4nm,0.6s			⇓Lg	Lg	22 06 51.0	
	12nm,0.7s						
TKM2	**Tokmak 2**	**2.93**	**317**	⇑*e*P	**Pn**	**22 06 07.7**	**0.0**
TKM2	baz=15			⇑*e*S	**Sn**	**22 06 43.8**	**+0.8**
	baz=15						
KTMS	**Ketmen**	**3.03**	**29**	*e*P	**Pb**	**22 06 14.2**	**-0.8**
KTMS	1.5nm,0.4s			*e*S	**Sg**	**22 06 55.7**	**-2.4**
	12nm,0.6s						
KTMS	**Ketmen**	**3.03**	**29**	Pg	**Pb**	**22 06 14.1**	**-0.8**
KTMS	1.5nm,0.4s			Lg	Lg	22 06 55.7	
	12nm,0.6s						
KBK	**Karagaybulak**	**3.12**	**307**	⇑*e*P	**Pn**	**22 06 10.6**	**+0.2**
KBK	baz=5.0			⇑*e*S	**Sn**	**22 06 48.8**	**+1.0**
	baz=5.0						
KTBS	**Karatobe**	**3.14**	**338**	*e*P	**Pb**	**22 06 15.2**	**-1.6**
KTBS	5.9nm,0.7s			*e*S	**Sb**	**22 06 57.6**	**+2.4**
	12nm,0.3s						
KTBS	**Karatobe**	**3.14**	**338**	Pg	**Pb**	**22 06 15.2**	**-1.6**
KTBS	5.9nm,0.7s			Lg	Lg	22 06 57.6	
	12nm,0.3s						
ARLS	**Aral**	**3.19**	**290**	⇓*e*P	**Pn**	**22 06 12.0**	**+0.8**
ARLS	baz=88			⇓*e*S	**Sn**	**22 06 50.7**	**+1.3**
	baz=88						
UCH	**Uchtor**	**3.19**	**297**	⇑*e*P	**Pn**	**22 06 11.9**	**+0.4**
UCH	baz=95			⇑*e*S	**Sn**	**22 06 51.0**	**+1.2**
	baz=95						
**AA

δ63.61000°, λ34.67000°. NP2:ψ₈128.48000°, δ59.36000°, λ148.90000°. Principal axes: T 7.3339, Plg42.0000°, Azm94.0000°; N 0.5534, Plg47.0000°, Azm268.0000°; P -7.8873, Plg3.0000°, Azm1.0000°;

NEIC 16 22:05:28.5±1.2, 36.67N±0.01×121.39W±0.02, h16km±1km
Error ellipse: s-maj=2.6km s-min=1.4km az=66.0,
Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZ	**Santa Cruz**	**0.07**	**192**		Pg	22 05 32.5	+0.9
BSRM	**Salinas Radio**	**0.11**	**270**		Pg	22 05 31.7	-0.3
SAO	**San Andreas Ge**	**0.11**	**333**		Pg	22 05 31.1	-0.9
BSLM	**Silva Ranch**	**0.11**	**15**		Pg	22 05 31.3	-0.7
BJCM	**Johnson Can.**	**0.12**	**183**		Pg	22 05 31.6	-0.5
FRP	**Fremont Peak**	**0.12**	**316**		Pg	22 05 31.4	-0.8
HJSM	**John Smith Roa**	**0.16**	**25**		Pg	22 05 32.0	-0.7
HSFM	**Saint Francis**	**0.17**	**328**		Pg	22 05 32.6	-0.2
BVL	**Bear Valley**	**0.18**	**120**		Pg	22 05 32.1	-0.9
HJGM	**San Juan Grade**	**0.20**	**311**		Pg	22 05 33.0	-0.3
BPCNC	**Pine Canyon**	**0.22**	**244**		Pb	22 05 34.0	-0.1
HBTM	**San Juan Bauti**	**0.23**	**324**		Pg	22 05 33.6	-0.1
HTUM	**Tustin Road**	**0.26**	**308**		Pg	22 05 34.2	0.0
HTUM					Sg	22 05 38.6	+0.5
ANZ	**Anzar Road**	**0.27**	**323**		Pg	22 05 34.2	-0.2
BSGM	**Shirttail Gulc**	**0.27**	**157**		Pg	22 05 34.0	-0.4
BSMM	**Soledad Missio**	**0.28**	**187**		Pb	22 05 35.0	-0.4
BAVM	**Antelope Valle**	**0.29**	**94**		Pg	22 05 34.9	-0.3
BBGB	**Big Mountain B**	**0.29**	**108**		Pg	22 05 34.9	+0.1
BBGB					Sb	22 05 40.2	+0.1
BBGB	**Big Mountain B** comp=N,14μm,0.6s	**0.29**	**108**	IAML		22 05 40.5	
BBGB	comp=E,10μm,0.6s			IAML		22 05 40.5	
HERM	**Elkhorn Road**	**0.29**	**297**		Pb	22 05 35.2	-0.3
BBNM	**San Benito**	**0.29**	**122**		Pg	22 05 34.5	-0.2
HAST	**Hastings Reser**	**0.31**	**206**		Pb	22 05 35.5	-0.3
HAST					Sb	22 05 40.5	-0.1
HFEM	**San Felipe**	**0.32**	**358**		Pg	22 05 35.3	+0.1
HCOM	**Corn Cob Canyo**	**0.34**	**310**		Pg	22 05 35.8	+0.2
PACP	**Pacheco Peak**	**0.35**	**13**		Pg	22 05 35.7	-0.1
PACP					Sb	22 05 41.3	-0.5
LRV	**Little Rabbit**	**0.38**	**129**		Pg	22 05 36.2	-0.1
BCWM	**Chews Ridge**	**0.39**	**202**		Pb	22 05 37.0	-0.1
HPCM	**Pacheco Lake**	**0.40**	**13**		Pg	22 05 36.6	-0.1
HLPM	**Lions Peak**	**0.42**	**332**		Pb	22 05 37.4	-0.3
SLD	**San Luis Dam**	**0.43**	**18**		Pg	22 05 36.9	-0.3
GHS	**Gilroy Hot Spr**	**0.43**	**353**		Pg	22 05 37.4	+0.2
HMOM	**Monterey**	**0.43**	**261**		Pb	22 05 37.9	+0.1
JELB	**Ellicott, Sant**	**0.44**	**306**		Pb	22 05 37.7	-0.3
BMSM	**Mercy Hot Spri**	**0.47**	**91**		Pg	22 05 38.0	0.0
BRMM	**Rolling Bench**	**0.48**	**69**		Pb	22 05 38.5	-0.1
CADM	**Anderson Res.**	**0.53**	**339**		Pg	22 05 39.3	+0.2
BAPM	**Anderson Peak**	**0.53**	**203**		Pb	22 05 39.6	0.0
BPOM	**Post Ranch**	**0.54**	**215**		Pb	22 05 39.6	+0.1
JTGM	**Trout Gulch Ro**	**0.54**	**313**		Pb	22 05 40.0	+0.4
JLAB	**Laurel Hill**	**0.56**	**330**		Pb	22 05 40.0	0.0
JRGM	**Rodeo Gulch Ro**	**0.59**	**309**		Pg	22 05 40.0	-0.3
PCCM	**Crazy Canyon**	**0.60**	**163**		Pb	22 05 40.6	-0.1
AMC	**Almaden**	**0.61**	**323**		Pg	22 05 40.8	+0.1
CCOB	**Coe Ranch Numb**	**0.64**	**339**		Pb	22 05 41.8	+0.5
PMPB	**Monarch Peak**	**0.65**	**134**		Pg	22 05 40.9	-0.4
PMPB	**Monarch Peak** comp=E,994nm,0.9s	**0.65**	**134**	IAML		22 05 59.4	
ARN	**Arnold Ranch**	**0.69**	**350**		Pb	22 05 42.3	0.0
CMPM	**Mikes Peak**	**0.69**	**4**		Pb	22 05 42.3	0.0
MHC	**Mount Hamilton**	**0.70**	**343**		Pb	22 05 42.6	+0.1
JJOM	**Saint Joseph's**	**0.72**	**319**		Pg	22 05 42.4	-0.2
SCCB	**Santa Clara Co**	**0.73**	**328**		Pb	22 05 43.3	+0.4
PAPM	**Alder Peak**	**0.75**	**179**		Pb	22 05 43.5	+0.1
PSAM	**San Ardo**	**0.76**	**148**		Pg	22 05 42.9	-0.3
JBNB	**Ben Lomond Mou**	**0.77**	**307**		Pg	22 05 43.2	-0.3
PPTM	**Peach Tree Val**	**0.77**	**136**		Pg	22 05 43.0	-0.5
PJUM	**Juniper Ridge**	**0.77**	**124**		Pb	22 05 43.7	0.0
CMMM	**Mount Mocho**	**0.79**	**354**		Pb	22 05 44.1	+0.1
JSGM	**Saratoga Golf**	**0.81**	**319**		Pg	22 05 44.6	+0.2
CMLM	**Mount Lewis**	**0.84**	**345**		Pg	22 05 45.1	+0.3
COSM	**Mount Oso**	**0.84**	**1**		Pg	22 05 45.3	+0.4
CALM	**Calaveras Res.**	**0.85**	**337**		Pg	22 05 45.4	+0.3
JSJM	**St Joseph**	**0.87**	**320**		Pb	22 05 46.1	-0.1
PSMM	**Smith Mountain**	**0.87**	**133**		Pb	22 05 45.2	-0.2
PDRM	**Domengine Ranc**	**0.88**	**112**		Pg	22 05 46.0	+0.3
PHSB	**Hesperia Broad**	**0.88**	**162**		Pb	22 05 45.5	-0.1
JBMM	**Black Mountain**	**0.90**	**317**		Pg	22 05 45.9	0.0
PHPM	**Hope Ranch**	**0.93**	**137**		Pb	22 05 45.7	-0.6
PARM	**Anticline Ridg**	**0.94**	**116**		Pg	22 05 46.9	+0.2
JJRM	**Joaquin Road**	**0.94**	**316**		Pb	22 05 46.6	+0.1
JFP	**Foothills Park**	**0.95**	**317**		Pb	22 05 46.5	-0.1
PANM	**San Antonio Re**	**0.97**	**156**		Pb	22 05 46.9	-0.1
JSFB	**Stanford Teles**	**0.97**	**320**		Pb	22 05 47.0	0.0
PKD	**Bear Valley Ra**	**0.99**	**136**		Pb	22 05 46.8	-0.6
WENL	**Wente Vineyard**	**1.00**	**343**		Pg	22 05 47.9	0.0
PHCM	**Hearst Castle**	**1.00**	**169**		Pb	22 05 47.7	+0.2
JRSC	**Jasper Ridge**	**1.00**	**317**		Pb	22 05 47.3	-0.3
PPO	**Portuguese Can**	**1.01**	**142**		Pb	22 05 47.7	0.0
PVCM	**Vineyard Canyo**	**1.01**	**137**		Pb	22 05 47.3	-0.5
BGH	**Bear Gulch**	**1.02**	**312**		Pb	22 05 47.7	-0.1
PSTM	**Stockdale Moun**	**1.02**	**136**		Pb	22 05 47.3	-0.6
CVLM	**Vallecito**	**1.02**	**340**		Pn	22 05 48.2	-0.1
CNIC	**Niles Canyon**	**1.05**	**334**		Pb	22 05 48.2	-0.1
MYLM	**Yosemite Lake**	**1.05**	**47**		Pb	22 05 47.9	-0.5
JHPM	**Huddart Park**	**1.07**	**317**		Pb	22 05 48.5	-0.2
PWKM	**Work Ranch**	**1.11**	**140**		Pb	22 05 48.9	-0.4
PHFM	**Heflinger Ranc**	**1.12**	**134**		Pn	22 05 49.7	+0.1
CTM	**Castle Mountai**	**1.12**	**131**		Pg	22 05 50.5	+0.3
PHAM	**Harlan Ranch**	**1.15**	**136**		Pn	22 05 49.5	-0.5
JCHM	**Cahill Ridge**	**1.16**	**317**		Pn	22 05 49.6	-0.6
PCMM	**Cholame Hills**	**1.17**	**137**		Pn	22 05 50.0	-0.3
PCBM	**Cambria**	**1.18**	**167**		Pn	22 05 50.2	-0.2
GHC	**Gold Hill**	**1.18**	**135**		Pn	22 05 49.9	-0.5
JCPM	**Coyote Point**	**1.19**	**321**		Pn	22 05 49.8	-0.7
PKEM	**Kettleman Hill**	**1.19**	**120**		Pg	22 05 51.7	+0.2
BLDC	**Black Mountain**	**1.20**	**161**		Pn	22 05 50.7	0.0
BLDC	**Black Mountain**	**1.20**	**161**		Pb	22 05 50.8	0.0
CLCB	**Lake Chabot**	**1.20**	**333**		Pn	22 05 50.0	-0.7
PSRM	**Scobie Ranch**	**1.20**	**132**		Pn	22 05 50.9	+0.1
CSLM	**San Leandro Hi**	**1.21**	**331**		Pn	22 05 50.3	-0.5
PKLM	**Kerr Lake**	**1.23**	**136**		Pn	22 05 51.1	0.0
ARDC	**Alexander Ranc**	**1.25**	**165**		Pn	22 05 51.1	-0.2
TCAS	**Cass Winery, P**	**1.25**	**147**		Pn	22 05 51.0	-0.3
TCHL	**Shandon**	**1.26**	**141**		Pb	22 05 52.2	+0.2
BGC	**Bolinger Road**	**1.27**	**335**		Pn	22 05 51.7	0.0
PMRM	**Maxey Ranch**	**1.28**	**133**		Pn	22 05 51.5	-0.3
JSBM	**San Bruno Moun**	**1.29**	**322**		Pn	22 05 50.9	-1.1
PAGB	**Antelope Grade**	**1.31**	**135**		Pn	22 05 51.9	-0.4
PAGB	**Antelope Grade** comp=E,298nm,0.7s	**1.31**	**135**	IAML		22 06 18.6	
THIS	**South End of C**	**1.33**	**135**		Pb	22 05 52.9	-0.2
TRAM	**Private Proper**	**1.34**	**137**		Pb	22 05 53.0	-0.2
BDM	**Black Diamond**	**1.34**	**344**		Pb	22 05 53.5	+0.2
BKS	**Berkeley--Byer**	**1.39**	**331**		Pn	22 05 52.9	-0.4
PTAM	**Tassajara Cree**	**1.39**	**156**		Pb	22 05 54.1	0.0
CVPM	**Vollmer Peak**	**1.39**	**331**		Pn	22 05 53.3	0.0
BL67	**Building 67, L**	**1.39**	**330**		Pn	22 05 53.2	-0.2
TSCN	**Private Proper**	**1.40**	**143**		Pg	22 05 55.0	-0.5
MCUB	**Copperopolis B**	**1.44**	**25**		Pn	22 05 53.4	-0.6
VPDC	**Valencia Peak**	**1.48**	**163**		Pn	22 05 54.5	-0.1
CMB	**Columbia Colle**	**1.58**	**30**		Pn	22 05 55.9	-0.1
CMB	**Columbia Colle**	**1.58**	**30**		Pn	22 05 56.0	0.0
CMB	comp=E,81nm,0.7s			IAML		22 06 17.5	
CMB	comp=N,68nm,0.6s			IAML		22 06 23.8	
BCH	**Branch Mountai**	**1.82**	**144**		Pn	22 05 58.8	-0.5
NADM	**Allendale**	**1.85**	**346**		Pn	22 05 56.9	-2.8
CVS	**Carmenet Viney**	**1.88**	**333**		Pn	22 05 59.4	-0.7
NTYM	**Taylor**	**2.00**	**330**		Pn	22 06 01.4	-0.2
MDPB	**Devils Postpil**	**2.08**	**62**		Pn	22 06 04.4	+1.4
MDPB	comp=E,134nm,0.5s			IAML		22 06 38.7	
NBPM	**Berryessa Peak**	**2.10**	**342**		Pn	22 06 03.7	+0.7
OMMB	**Old Mammoth Mi**	**2.13**	**63**		Pn	22 06 04.8	+1.0
OMMB	comp=N,107nm,0.5s			IAML		22 06 35.0	
OMMB	comp=E,78nm,0.9s			IAML		22 06 38.3	
MEMM	**East Mammoth H**	**2.19**	**62**		Pb	22 06 07.0	-1.0
BCW	**Bitter Crk WRg**	**2.35**	**136**		Pn	22 06 08.2	+1.5
BCW	comp=N,81nm,0.8s			IAML		22 06 57.5	
BCW	comp=E,84nm,0.6s			IAML		22 07 00.6	
GDXM	**Geysers**	**2.41**	**333**		Pn	22 06 06.4	-1.1
ISA	**Isabella, Lake**	**2.56**	**112**		Pn	22 06 10.4	+0.9
ISA	comp=N,49nm,1.0s			IAML		22 06 46.0	
LHV	**Little Huntoon**	**2.79**	**55**		Pn	22 06 14.0	+1.5
PNTR	**Pine Nut**	**2.80**	**30**		Pn	22 06 14.2	+1.3
PNTR	comp=N,58nm,0.8s			IAML		22 07 14.5	
DSP	**Deep Springs**	**2.82**	**75**	Pn	Pn	22 06 14.9	+1.9
DSP	comp=N,54nm,0.9s			IAML		22 07 05.3	
DSP	comp=E,43nm,0.9s			IAML		22 07 06.4	
MPK	**Martis Peak**	**2.83**	**22**	Pn	Pn	22 06 13.1	-0.3
YERR	**Yerington**	**2.87**	**36**		Pn	22 06 14.7	+0.8
YERR	comp=N,36nm,0.7s			IAML		22 07 03.7	
VCNR	**Virginia City**	**2.96**	**27**		Pn	22 06 16.2	+1.0
VCNR	comp=N,47nm,0.7s			IAML		22 07 07.7	
VCNR	comp=E,66nm,0.6s			IAML		22 07 07.8	
RYN	**Ryan**	**3.00**	**48**		Pn	22 06 17.4	+1.8
RYN	comp=E,40nm,0.5s			IAML		22 07 08.1	
RYN	comp=N,38nm,0.8s			IAML		22 07 11.7	
NVAR	**Mina Array Bea**	**3.02**	**53**		Pn	22 06 15.7	-0.2
LCH	**Last Change Ra**	**3.05**	**78**		Pn	22 06 17.2	+1.0
LCH	comp=N,36nm,0.5s			IAML		22 07 08.9	
LCH	comp=E,49nm,0.7s			IAML		22 07 12.0	
BEKR	**Beckworth**	**3.29**	**14**		Pn	22 06 20.9	+1.2
BEKR	comp=E,25nm,0.6s			IAML		22 07 19.5	
PAHR	**Pah Rah Range**	**3.42**	**27**		Pn	22 06 22.8	+1.4
KVN	**Kaiserville**	**3.52**	**47**		Pn	22 06 23.8	+0.9
KVN	comp=E,17nm,1.3s			IAML		22 07 23.5	
KVN	comp=N,19nm,1.0s			IAML		22 07 26.2	
QSM	**Queen of Sheba**	**3.71**	**100**		Pn	22 06 26.2	+0.9
QSM	comp=N,16nm,1.8s			IAML		22 07 48.1	
GWY	**Greenwater Val**	**3.83**	**96**		Pn	22 06 28.6	+1.5
GSC	**Goldstone, Bar**	**3.96**	**109**		Pn	22 06 28.9	+0.2
GSC	comp=E,20nm,0.8s			IAML		22 07 44.4	
TPNV	**Topopah Spring**	**4.13**	**85**		Pn	22 06 31.0	-0.2
TPNV	comp=E,16nm,1.1s			IAML		22 07 52.1	
TPNV	comp=E,25nm,1.4s			IAML		22 07 52.2	
PLM	**Palomar**	**4.97**	**130**		Pn	22 06 42.3	-0.4
PRN	**Pahroc Range**	**5.12**	**80**		Pn	22 06 46.5	+1.8
PRN	comp=E,12nm,0.8s			IAML		22 08 17.9	
PSUT	**Pine Spring**	**6.26**	**70**	Pn	Pn	22 07 01.6	+1.1

*IDC **16** 22:35:30.4±2.9, 36.18N×70.94E, h127km±25km, mb3.8/20, mbtmp4.3/24, MS2.9/2, Error ellipse: s-maj=18.0km s-min=12.7km az=4.0*
*MOS **16** 22:35:31.0±0.9, 36.41N×70.91E, h132km, mb4.3/11, Error ellipse: s-maj=7.5km s-min=3.5km az=78.1*
*BJI **16** 22:35:33.4±0.0, 36.60N×70.98E, h147km, mb4.4/28, mB4.7/17*
*NEIC **16** 22:35:34.3±2.7, 36.45N±0.06×70.85E±0.07, h157km±5km, mb4.4/37, Error ellipse: s-maj=8.7km s-min=8.2km az=104.0*
*NNC **16** 22:35:34.9±2.4, 36.72N×70.71E, h142km±26km, mb4.1, mpv4.9, Error ellipse: s-maj=22.7km s-min=11.5km az=160.0*
*SOME **16** 22:35:39.2, 38.27N×72.27E, h20km*

ISC 16 22:35:33.3±0.3, 36.48N±0.03×70.87E±0.04, h150km, n274, σ1.272/302, mb4.3/54, 19C-18D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.44**	**218**	Pn	Pn	**22 36 14.3**	**+0.3**
KBL	**Kabul**	**2.44**	**218**	PN	Pn	**22 36 14.3**	**+0.3**
KBL	**Kabul**	**2.44**	**218**	P	Pn	**22 36 14.8**	**+0.8**
KBL				S	Sn	**22 36 45.1**	**-0.1**
GAR	**Garm**	**2.56**	**350**		Pn	**22 36 16.1**	**+0.9**
CHGR	**Chuyangaron**	**2.57**	**329**	Pn	Pn	**22 36 15.9**	**+0.6**
CHGR	**Chuyangaron**	**2.57**	**329**	PN	Pn	**22 36 15.9**	**+0.6**
CEP	**Cherat**	**2.78**	**162**	P	Pn	**22 36 19.6**	**+1.5**
CEP				S	Sn	**22 36 53.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.43**	**144**	P	Pn	**22 36 26.6**	**+0.4**
NIL	**Nilore**	**3.43**	**145**	Pn	Pn	**22 36 26.8**	**+0.6**
NIL	**Nilore**	**3.43**	**145**	PN	Pn	**22 36 26.8**	**+0.6**
NIL	**Nilore**	**3.43**	**145**	P	Pn	**22 36 26.8**	**+0.6**
THW	**Thamme Wali**	**3.74**	**169**	P	Pn	**22 36 30.3**	**0.0**
OHH	**Osh**	**4.31**	**20**	PN	Pn	**22 36 38.3**	**+0.6**
TAS	**Tashkent**	**5.00**	**346**	Pn	Pn	**22 36 47.1**	**+0.4**
TAS	**Tashkent**	**5.00**	**346**	PN	Pn	**22 36 47.1**	**+0.4**
KSH	**Kashi**	**5.04**	**51**	P	Pn	**22 36 43.0**	**-4.4**
KSH				S	Sn	22 37 35.0	-10
KSH	comp=Z,390nm,0.6s			pmax	pmax		
TRKS	**Terek-Say**	**5.05**	**2**	PN	Pn	**22 36 47.1**	**-0.4**
ARK	**Arkit**	**5.38**	**9**	PN	Pn	**22 36 51.7**	**-0.2**
THN	**Thein Dam**	**5.68**	**134**	*e*P	Pn	**22 36 55.1**	**-0.7**
THN				*e*S	Sn	**22 37 56.4**	**-3.8**
IUG	**luzhnay**	**5.70**	**354**	*d* iPN	Pn	**22 36 56.7**	**+0.7**
IUG	**luzhnay** 3μm,0.3s	**5.70**	**354**	*e*P	Pn	**22 36 56.8**	**+0.7**
IUG	603nm,0.4s			*e*S	Sn	**22 37 59.0**	**-1.8**
IUG	**luzhnay** baz=354	**5.70**	**354**	⇓ *i*P	Pn	**22 36 56.8**	**+0.7**
IUG	baz=354			*e*S	Sn	**22 37 59.8**	**-1.0**
CHM	**Chimkent** 9.0nm,0.3s	**5.92**	**351**	*e*P	Pn	**22 37 00.4**	**+1.5**
CHM	732nm,0.4s			*e*S	Sn	**22 38 04.9**	**-0.9**
ARLS	**Aral**	**6.01**	**25**	PN	Pn	**22 36 59.7**	**-0.5**
AML	**Almayashu** SNR=309	**6.06**	**20**	P	Pn	**22 37 01.3**	**+0.2**
NRN	**Naryn**	**6.36**	**37**	Pn	Pn	**22 37 03.2**	**-1.9**
NRN	**Naryn**	**6.36**	**37**	PN	Pn	**22 37 03.2**	**-1.9**
UCH	**Uchtor** SNR=56	**6.40**	**25**	P	Pn	**22 37 05.7**	**0.0**
DZA	**Taraz**	**6.42**	**3**	*d* iPN	Pn	**22 37 06.2**	**+0.7**
DZA	**Taraz** 685nm,0.8s	**6.42**	**3**	*e*P	Pn	**22 37 06.3**	**+0.7**
DZA	1μm,0.3s			*e*S	Sn	**22 38 15.4**	**-2.4**
DZA	**Taraz** baz=3.2	**6.42**	**3**	⇓ *i*P	Pn	**22 37 06.2**	**+0.7**
DZA	baz=3.2			*e*S	Sn	**22 38 15.8**	**-2.0**
EKS2	**Erkin-Say** SNR=70	**6.57**	**19**	P	Pn	**22 37 08.0**	**+0.3**
KK31	**Karatay Array**	**6.63**	**358**	Pn	Pn	**22 37 08.6**	**+0.3**
KK31	**Karatay Array**	**6.63**	**358**	PN	Pn	**22 37 08.6**	**+0.3**
KK31	**Karatay Array** 120nm,0.4s,baz=184,slow=14,SNR=837	**6.63**	**358**	⇓P	Pn	**22 37 08.6**	**+0.3**
KK31	58nm,0.4s,baz=172,slow=14,SNR=11			⇑S	Sn	**22 38 19.7**	**-3.1**
KKAR	**Karatay Array**	**6.63**	**358**	Pn	Pn	**22 37 08.5**	**+0.2**
KKAR	**Karatay Array**	**6.63**	**358**	PN	Pn	**22 37 08.5**	**+0.2**
AAK	**Ala-Archa** 37nm,0.3s,baz=208,slow=12,SNR=47	**6.76**	**23**	P	Pn	**22 37 10.7**	**+0.4**
AAK	186nm,0.7s,baz=358,slow=20,SNR=23			S	Sn	**22 38 25.0**	**-1.2**
AAK	comp=Z,38nm,18.6s,baz=154,slow=37			LR	LR	22 39 52.4	
AAK	**Ala-Archa** SNR=40	**6.76**	**23**	P	Pn	**22 37 10.7**	**+0.4**
AAK	**Ala-Archa**	**6.76**	**23**	Pn	Pn	**22 37 10.3**	**+0.1**
AAK	**Ala-Archa**	**6.76**	**23**	*ce*PN	Pn	**22 37 10.6**	**+0.4**
AAK	comp=Z,23nm,0.6s			pmax	pmax		
AAK	**Ala-Archa**	**6.76**	**23**	P	Pn	**22 37 10.7**	**+0.4**
AAK				S	Sn	**22 38 25.0**	**-1.2**
AAK	**Ala-Archa**	**6.76**	**23**	P	Pn	**22 37 10.5**	**+0.3**
BHK	**Bhakra**	**6.83**	**136**	*e*P	Pn	**22 37 09.4**	**-1.7**
BHK				*e*S	Sn	**22 38 21.6**	**-6.2**
KBK	**Karagaybulak** SNR=32	**6.93**	**26**	P	Pn	**22 37 12.9**	**+0.4**
ULHL	**Ulahol** SNR=31	**7.11**	**34**	P	Pn	**22 37 14.9**	**0.0**
CHMS	**Chumysh** SNR=53	**7.17**	**23**	P	Pn	**22 37 15.6**	**0.0**
CHMS	**Chumysh**	**7.17**	**23**	*i* PN	Pn	**22 37 15.3**	**-0.2**
CHMS	comp=Z,57nm,0.7s			pmax	pmax		
CHMS	**Chumysh** comp=Z,56nm,0.7s	**7.17**	**23**	⇑P	Pn	**22 37 15.4**	**-0.2**
CHMS	comp=Z,75nm,0.5s			⇓S	Sn	**22 38 32.0**	**-3.7**
BOOM	**Boomskoye usch**	**7.17**	**32**	Pn	Pn	**22 37 15.2**	**-0.5**
BOOM	**Boomskoye usch**	**7.17**	**32**	PN	Pn	**22 37 15.3**	**-0.5**
USP	**Ospenovka** SNR=99	**7.33**	**21**	P	Pn	**22 37 17.3**	**-0.5**
HRA	**Herat**	**7.34**	**256**	Pn	Pn	**22 37 17.1**	**-1.0**
TKM2	**Tokmak 2** SNR=94	**7.39**	**28**	P	Pn	**22 37 18.5**	**-0.2**
TKM2	**Tokmak 2**	**7.39**	**28**	*i* PN	Pn	**22 37 18.3**	**-0.5**
TKM2	comp=Z,32nm,0.4s			pmax	pmax		
TKM2	**Tokmak 2** comp=Z,32nm,0.5s	**7.39**	**28**	⇑P	Pn	**22 37 18.3**	**-0.5**
TKM2	comp=Z,49nm,0.6s			⇑S	Sn	**22 38 39.1**	**-2.4**
SMLA	**Simla**	**7.47**	**134**	*e*P	Pn	**22 37 17.7**	**-2.0**
SMLA				*e*S	Sn	**22 38 37.6**	**-5.6**
SMLA	comp=E,318nm,0.4s			IAML		22 38 40.9	
SMLA	comp=N,237nm,0.3s			IAML		22 38 45.3	
SGDS	**Sogindy**	**7.54**	**21**	*d* iPN	Pn	**22 37 19.9**	**-0.7**
SGDS	comp=Z,6.0nm,0.5s			pmax	pmax		
SGDS	**Sogindy** comp=Z,35nm,0.5s	**7.54**	**21**	*e*P	Pn	**22 37 19.9**	**-0.7**
SGDS	comp=Z,69nm,0.6s			*e*S	Sn	**22 38 40.2**	**-4.6**
SGDS	**Sogindy** comp=Z,5.9nm,0.5s,baz=21	**7.54**	**21**	⇓ *i*P	Pn	**22 37 20.0**	**-0.7**
KST	**Kastek** comp=Z,23nm,0.5s	**7.64**	**29**	*e*P	Pn	**22 37 21.9**	**-0.1**
KST	comp=Z,103nm,1.0s			*e*S	Sn	**22 38 44.2**	**-3.1**
AAA	**Alma-Ata**	**8.17**	**33**	*e*PN	Pn	**22 37 29.9**	**+0.9**
AAA	**Alma-Ata** baz=33	**8.17**	**33**	*e*P	Pn	**22 37 29.9**	**+0.9**
MDOK	**Medeo**	**8.20**	**34**	*i* PN	Pn	**22 37 29.6**	**+0.2**
MDOK	**Medeo** baz=33	**8.20**	**34**	*i* P	Pn	**22 37 29.6**	**+0.2**
MDOK	**Medeo** comp=Z,18nm,0.5s	**8.20**	**34**	⇓P	Pn	**22 37 29.2**	**-0.2**
PRZ	**Przheval'sk**	**8.36**	**42**		Pn	**22 37 31.8**	**+0.2**
PRZ	**Przheval'sk**	**8.36**	**42**	PN	Pn	**22 37 31.8**	**+0.2**
KUU	**Kurty**	**8.51**	**28**	*e*PN	Pn	**22 37 32.6**	**-0.8**
KUU	comp=Z,4.0nm,0.5s			pmax	pmax		
KUU	**Kurty** comp=Z,4.5nm,0.5s,baz=28	**8.51**	**28**	*e*P	Pn	**22 37 32.6**	**-0.8**
DDI	**Dehra Dun**	**8.58**	**134**	*e*P	Pn	**22 37 32.2**	**-2.4**
SATY	**Saty**	**8.77**	**39**	*e*PN	Pn	**22 37 36.9**	**-0.1**
SATY	comp=Z,6.0nm,0.9s			pmax	pmax		
SATY	**Saty** comp=Z,6.0nm,0.9s,baz=39	**8.77**	**39**	*e*P	Pn	**22 37 36.9**	**-0.1**
ZHN	**Zhinishke**	**8.86**	**39**	*e*PN	Pn	**22 37 37.7**	**-0.5**
ZHN	**Zhinishke** baz=38	**8.86**	**39**	*e*P	Pn	**22 37 37.7**	**-0.5**
BTLS	**Baital**	**8.89**	**15**	*ce*PN	Pn	**22 37 37.7**	**-0.7**
BTLS	comp=Z,7.0nm,0.6s			pmax	pmax		
BTLS	**Baital** comp=Z,6.8nm,0.6s,baz=15	**8.89**	**15**	⇑ *e*P	Pn	**22 37 37.8**	**-0.7**
UZB	**Uzunbulak**	**9.15**	**41**	*e*P	Pn	**22 37 41.6**	**-0.4**
UZB	**Uzunbulak** baz=41	**9.15**	**41**	*e*P	Pn	**22 37 41.6**	**-0.4**
KPKS	**Kokpek**	**9.20**	**38**	*e*P	Pn	**22 37 42.7**	**0.0**
KPKS	comp=Z,11nm,0.7s			pmax	pmax		
KPKS	**Kokpek** comp=Z,11nm,0.7s,baz=38	**9.20**	**38**	*e*P	Pn	**22 37 42.8**	**0.0**
ARXS	**Arharly**	**9.37**	**32**	*e*P	Pn	**22 37 43.4**	**-1.6**
SHLS	**Shalkode**	**9.39**	**42**	*e*P	Pn	**22 37 47.7**	**+2.5**
SHLS	comp=Z,4.0nm,0.7s			pmax	pmax		
SHLS	**Shalkode** comp=Z,4.1nm,0.7s,baz=43	**9.39**	**42**	*e*P	Pn	**22 37 47.7**	**+2.5**
NDI	**New Delhi**	**9.43**	**144**	*e*P	Pn	**22 37 44.0**	**-1.8**
NDI				*e*S	Sn	**22 39 23.0**	**-7.4**
KUDL	**Kundal**	**9.57**	**149**	*e*P	Pn	**22 37 44.9**	**-2.8**
KUDL				*e*S	Sn	22 39 22.8	-11
TDK	**Taldyqorghan**	**10.25**	**32**	*e*P	Pn	**22 37 55.9**	**-0.7**
TDK	comp=Z,7.0nm,0.8s			pmax	pmax		
TDK	**Taldyqorghan** comp=Z,6.5nm,0.8s,baz=31	**10.25**	**32**	*e*P	Pn	**22 37 55.9**	**-0.7**
GEYT	**Alibeck** comp=Z,9.5nm,0.3s,baz=108,slow=12,SNR=44	**10.28**	**282**	P	Pn	**22 37 56.0**	**-1.0**
GEYT	comp=Z,26nm,0.5s,baz=95,slow=18,SNR=5.7			S	Sn	**22 39 47.2**	**-3.5**
**GEY

GUN	**Gumba**	**15.29**	**120**	*e*P		**Pn**	**22 38 59.7**	**-2.1**
	comp=Z,13nm,0.3s							
JBP	**Jabalpur**	**15.43**	**147**	*e*P		**Pn**	**22 39 03.2**	**+0.1**
JBP				*e*S		Sn	22 41 40.4	-14
SEM	**Semipalatinsk**	**15.48**	**23**	*e*P		**Pn**	**22 39 02.9**	**-0.9**
SEM	**Semipalatinsk**	**15.48**	**23**	*e*P		**Pn**	**22 39 02.9**	**-0.9**
	baz=23							
JIRN	**Jiri**	**15.66**	**120**	*e*P		**Pn**	**22 39 04.0**	**-2.3**
	comp=Z,36nm,0.4s							
SHME	**Shamm**	**16.31**	**235**	P		**P**	**22 39 15.6**	**+1.6**
RAMN	**Ramite**	**16.39**	**121**	*e*P		**Pn**	**22 39 13.5**	**-1.6**
BVA0	**Borovoye Array**	**16.55**	**359**	⇑P		**Pn**	**22 39 17.7**	**+1.2**
	comp=Z,7.2nm,0.5s,baz=159,slow=11,SNR=52							
BRVK	**Borovoye**	**16.59**	**359**	P		**P**	**22 39 16.7**	**-0.1**
BRVK				IAmb		IAmb	22 39 22.1	
	comp=Z,9.3nm,0.5s							
BRVK	**Borovoye**	**16.59**	**359**	*ce*P		**Pn**	**22 39 17.2**	**+0.2**
BRVK				pmax		pmax		
	comp=Z,24nm,1.7s							
BRVK	**Borovoye**	**16.59**	**359**	P		**Pn**	**22 39 18.1**	**+1.1**
BRVK	**Borovoye**	**16.59**	**359**	⇑P		**Pn**	**22 39 17.8**	**+0.9**
	comp=Z,8.5nm,0.7s							
AKTO	**Aktyubinsk**	**16.75**	**330**	P		**Pn**	**22 39 20.7**	**+1.7**
	comp=Z,16nm,0.6s,baz=126,slow=10,SNR=56							
AKTO				S		**S**	**22 42 20.1**	**-4.9**
	comp=Z,3.1nm,0.6s,baz=41,slow=20,SNR=2.9							
AKTO	**Aktyubinsk**	**16.75**	**330**	⇑P		**Pn**	**22 39 20.2**	**+1.2**
	comp=Z,20nm,0.8s							
AKTO				⇓S		**S**	**22 42 19.3**	**-5.8**
	comp=Z,21nm,0.8s							
MSFE	**Esma-Masafi**	**16.77**	**233**	P		**Pn**	**22 39 21.0**	**+1.4**
WSAR	**Wadi Sarin**	**16.91**	**222**	P		**Pn**	**22 39 21.6**	**+0.5**
	comp=Z,9.2nm,0.8s,baz=65,slow=8.7,SNR=10.0							
WSAR				S		**S**	**22 42 23.5**	**-5.7**
	comp=Z,8.2nm,1.2s,baz=287,slow=14,SNR=1.6							
TAPN	**Taplejung**	**16.93**	**118**	*e*P		**P**	**22 39 20.2**	**-0.9**
	comp=Z,17nm,0.4s							
UOSS	**Minazif**	**17.04**	**232**	P		**P**	**22 39 21.7**	**-0.4**
UOSS				IAmb		IAmb	22 39 23.9	
	comp=Z,12nm,0.9s							
UOSS	**Minazif**	**17.04**	**232**	P		**Pn**	**22 39 22.5**	**-0.2**
UOSS	**Minazif**	**17.04**	**232**	P		**Pn**	**22 39 22.5**	**-0.2**
HATD	**Hatta, Dubai**	**17.17**	**232**	P		**Pn**	**22 39 25.0**	**+0.7**
HATD	**Hatta, Dubai**	**17.17**	**232**	P		**Pn**	**22 39 24.7**	**+0.4**
ASHO	**Ashiyiah**	**17.32**	**231**	P		**Pn**	**22 39 26.5**	**+0.4**
	SNR=20							
ASHO	**Ashiyiah**	**17.32**	**231**	*i* P		**Pn**	**22 39 26.4**	**+0.4**
	SNR=20							
NAZ	**Nazwa, Dubai**	**17.35**	**233**	P		**P**	**22 39 24.8**	**-0.7**
NAZ	**Nazwa, Dubai**	**17.35**	**233**	P		**Pn**	**22 39 27.0**	**+0.5**
FAQ	**Al Faqa, Dubai**	**17.57**	**233**	P		**Pn**	**22 39 29.3**	**+0.2**
ASUD	**Al Ashush, Dub**	**17.82**	**233**	P		**Pn**	**22 39 32.2**	**+0.1**
	SNR=6.9							
ASUD	**Al Ashush, Dub**	**17.82**	**233**	*i* P		**Pn**	**22 39 31.8**	**-0.2**
	SNR=6.8							
ALNE	**Al Ain**	**17.96**	**231**	P		**Pn**	**22 39 33.0**	**-0.8**
ALNE	**Al Ain**	**17.96**	**231**	*i* P		**Pn**	**22 39 33.6**	**-0.2**
	SNR=6.0							
ARQ	**Araqi**	**18.03**	**227**	P		**Pn**	**22 39 34.6**	**+0.1**
	SNR=7.9							
AJN	**Ajban**	**18.09**	**233**	P		**Pn**	**22 39 34.8**	**-0.4**
LSA	**Lhasa**	**18.27**	**106**	P		**Pn**	**22 39 37.1**	**-0.6**
LSA	**Lhasa**	**18.27**	**106**	P		**Pn**	**22 39 37.2**	**-0.6**
LSA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
SEKA	**Sheki**	**19.02**	**292**	P		**Pn**	**22 39 46.9**	**+0.9**
MAK	**Makhachkala**	**19.07**	**297**	*e*P		**P**	**22 39 42.0**	**-2.1**
MAK				*e*S		**S**	**22 43 10.3**	**-2.1**
MAK				pmax		pmax		
	comp=Z,135nm,1.2s							
GOMU	**GeErMu**	**19.29**	**84**	P		**Pn**	**22 39 51.8**	**+2.3**
GOMU				pmax		pmax		
	comp=Z,2.0nm,0.5s							
GOMU				pmax		pmax		
	comp=Z,58nm,5.1s							
GHWR	**Ruwais**	**19.89**	**236**	P		**P**	**22 39 53.3**	**+0.1**
ZAA0	**Zalesovo Array**	**19.98**	**25**	P		**P**	**22 39 54.0**	**+0.2**
ZAA0	**Zalesovo Array**	**19.98**	**25**	⇓P		**P**	**22 39 53.6**	**-0.2**
	comp=Z,2.6nm,0.6s							
ZALV	**Zalesovo Beam**	**19.98**	**25**	P		**P**	**22 39 54.3**	**+0.5**
	comp=Z,29nm,0.4s,baz=221,slow=11,SNR=136							
	comp=Z,29nm,0.4s							
ZALV	**Zalesovo Beam**	**19.98**	**25**	P		**P**	**22 39 54.0**	**+0.2**
ZALV	**Zalesovo Beam**	**19.98**	**25**	*i* P		**P**	**22 39 54.0**	**+0.2**
ZALV				pmax		pmax		
	comp=Z,29nm,0.4s							
MZR	**Muzera**	**20.16**	**233**	*i* P		**P**	**22 39 55.1**	**-0.9**
	SNR=9.2							
SLWR	**Sila**	**20.62**	**238**	P		**P**	**22 39 58.8**	**-2.2**
GNI	**Garni**	**20.80**	**288**	*i* P		**P**	**22 40 00.0**	**-2.9**
GNI				pmax		pmax		
	comp=Z,23nm,1.4s							
ARU	**Arti**	**21.62**	**341**	P		**P**	**22 40 11.9**	**+0.6**
ARU				IAmb		IAmb	22 40 15.0	
	comp=Z,8.8nm,0.7s							
ARU	**Arti**	**21.62**	**341**	*c i* P		**P**	**22 40 12.3**	**+1.0**
ARU							22 40 47.9	
ARU				S		**S**	**22 44 04.9**	**+3.9**
ARU				pmax		pmax		
	comp=Z,12nm,0.8s							
NCK	**Nalchik**	**21.98**	**297**	*i* P		**P**	**22 40 13.8**	**-1.4**
NCK				pmax		pmax		
	comp=Z,5.0nm,0.5s							
KBZ	**Khabaz**	**22.52**	**297**	P		**P**	**22 40 22.0**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=67,slow=13,SNR=1.3							
	comp=Z,0.9nm,0.7s							
KIV	**Kislovodsk**	**22.71**	**298**	*e*P		**P**	**22 40 19.6**	**-2.7**
KIV				*e*S		**S**	**22 44 17.5**	**-1.8**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.1s							
BELG	**Belogornoye**	**22.84**	**321**	P		**P**	**22 40 24.9**	**+1.5**
	comp=Z,8.2nm,0.4s,baz=57,slow=1.4,SNR=9.9							
	comp=Z,8.2nm,0.4s							
BELG	**Belogornoye**	**22.84**	**321**	*i* P		**P**	**22 40 20.7**	**-2.6**
BELG				pmax		pmax		
	comp=Z,3.0nm,1.0s							
GTA	**Gaotai**	**22.97**	**74**	*e*P		**P**	**22 40 26.3**	**+1.4**
GTA				pP		pP	22 40 57.3	+2.9
GTA				pmax		pmax		
	comp=Z,5.0nm,0.9s							
KNGR	**Kungurtug, Tuv**	**23.76**	**45**	*i* P		**P**	**22 40 32.9**	**+0.9**
KNGR				pmax		pmax		
	comp=Z,16nm,0.7s							
WHFO	**Wadi Hawf**	**23.87**	**224**	P		**P**	**22 40 33.2**	**+0.1**
	SNR=5.2							
ABTO	**Aybut**	**24.59**	**224**	P		**P**	**22 40 41.9**	**+2.3**
RAYN	**Ar Rayn**	**25.39**	**246**	P		**P**	**22 40 46.9**	**0.0**
RAYN				IAmb		IAmb	22 40 48.1	
	comp=Z,9.9nm,1.4s							
RAYN	**Ar Rayn**	**25.39**	**246**	P		**P**	**22 40 46.9**	**0.0**
RAYN				pmax		pmax		
	comp=Z,10.0nm,1.5s							
RAYN	**Ar Rayn**	**25.39**	**246**	P		**P**	**22 40 45.2**	**-1.8**
RAYN	**Ar Rayn**	**25.39**	**246**	P		**P**	**22 40 47.0**	**+0.1**
KIRV	**Kirov**	**26.22**	**334**	P		**P**	**22 40 55.6**	**+1.8**
	comp=Z,8.6nm,0.6s,baz=146,slow=7.3,SNR=4.5							
	comp=Z,8.6nm,0.6s							
KIRV	**Kirov**	**26.22**	**334**	*ce*P		**P**	**22 40 54.9**	**+1.1**
VORR	**Voronezh**	**27.08**	**314**	*e*P		P	22 41 15.1	+13
VORR				pmax		pmax		
	comp=Z,10.0nm,0.4s							
PZH	**PanZhiHua**	**28.04**	**102**	P		**P**	**22 41 14.3**	**+3.7**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
PZH				pmax		pmax		
	comp=Z,110nm,5.9s							
SONM	**Songino Array**	**28.43**	**55**	P		**P**	**22 41 14.3**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=263,slow=10.0,SNR=5.7							
	comp=Z,1.1nm,0.8s							
HHC	**Hu-ho-hao-te**	**31.87**	**70**	*e*P		**P**	**22 41 45.4**	**+1.1**
HHC				pmax		pmax		
	comp=Z,16nm,0.8s							
HHC				pmax		pmax		
	comp=Z,240nm,5.2s							
ELL	**Elmali**	**32.70**	**283**	P		**P**	**22 41 53.5**	**+1.8**
ELL	**Elmali**	**32.70**	**283**	P		**P**	**22 41 53.5**	**+1.8**
ELL				pmax		pmax		
	comp=Z,57nm,1.5s							
AKASG	**Malin Array Be**	**32.88**	**309**	P		**P**	**22 41 53.9**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=78,slow=7.6,SNR=9.1							
	comp=Z,1.2nm,0.6s							
AKASG	**Malin Array Be**	**32.88**	**309**	*i* P		**P**	**22 41 54.0**	**+1.2**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
NRIK	**Noril'sk**	**34.17**	**10**	P		**P**	**22 42 05.6**	**+1.8**
	comp=Z,13nm,0.5s,baz=199,slow=7.4,SNR=20							
	comp=Z,13nm,0.5s							
NRIK	**Noril'sk**	**34.17**	**10**	P		**P**	**22 42 05.2**	**+1.5**
NRIK	**Noril'sk**	**34.17**	**10**	*ce*P		**P**	**22 42 05.3**	**+1.5**
NRIK				pmax		pmax		
	comp=Z,10.0nm,0.6s							
MLR	**Muntele Rosu**	**34.70**	**299**	P		**P**	**22 42 09.2**	**+0.4**
MLR	**Muntele Rosu**	**34.70**	**299**	P		**P**	**22 42 09.2**	**+0.4**
MLR				pmax		pmax		
	comp=Z,4.0nm,1.3s							
BURAR	**Bucovina Array**	**35.21**	**303**	P		**P**	**22 42 14.2**	**+1.1**
BURAR	**Bucovina Array**	**35.21**	**303**	P		**P**	**22 42 14.5**	**+1.4**
BUR08	**Bucovina Ar. S**	**35.22**	**303**	P		**P**	**22 42 14.3**	**+1.1**
KWP	**Kalwaria Pacla**	**36.94**	**306**	P		**P**	**22 42 29.8**	**+2.1**
KWP	**Kalwaria Pacla**	**36.94**	**306**	P		**P**	**22 42 29.8**	**+2.1**
KWP				pmax		pmax		
	comp=Z,24nm,0.8s							
LVZ	**Lovozero**	**37.44**	**338**	P		**P**	**22 42 32.7**	**+1.0**
LVZ	**Lovozero**	**37.44**	**338**	P		**P**	**22 42 32.7**	**+1.0**
LVZ				pmax		pmax		
	comp=Z,79nm,1.5s							
FIA1	**FINESS Array S**	**37.45**	**326**	P		**P**	**22 42 33.0**	**+1.3**
FINES	**FINESS Array B**	**37.45**	**326**	P		**P**	**22 42 33.1**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=120,slow=8.9,SNR=40							
	comp=Z,1.9nm,0.3s							
FINES	**FINESS Array B**	**37.45**	**326**	P		**P**	**22 42 32.8**	**+1.1**
KEV	**Kevo**	**40.79**	**338**	P		**P**	**22 43 00.3**	**+1.0**
KEV	**Kevo**	**40.79**	**338**	P		**P**	**22 43 00.3**	**+1.0**
KEV				pmax		pmax		
	comp=Z,29nm,1.5s							
KEV	**Kevo**	**40.79**	**338**	*e*P		**P**	**22 43 01.0**	**+1.6**
ARA0	**ARCESS Array S**	**41.13**	**338**	*e*P		**P**	**22 43 04.0**	**+1.8**
ARA0				IAmb		IAmb	22 43 04.1	
	comp=Z,8.0nm,0.6s							
ARCES	**ARCESS Array B**	**41.13**	**338**	P		**P**	**22 43 03.8**	**+1.6**
	comp=Z,8.1nm,0.6s,baz=111,slow=8.4,SNR=76							
	comp=Z,8.1nm,0.6s							
ARCES	**ARCESS Array B**	**41.13**	**338**	P		**P**	**22 43 03.7**	**+1.5**
ARCES				IAmb		IAmb	22 43 04.3	
	comp=Z,6.1nm,0.7s							
HAMF	**Hammerfest**	**42.21**	**339**	*e*P		**P**	**22 43 13.1**	**+2.2**
HAMF				IAmb		IAmb	22 43 13.3	
	comp=Z,19nm,0.6s							
JETT	**Jettan, Norway**	**42.74**	**336**	*e*P		**P**	**22 43 17.1**	**+1.8**
JETT				IAmb		IAmb	22 43 19.9	
	comp=Z,27nm,1.4s							
GSI	**Gunungsitoli**	**42.84**	**139**	P		**P**	**22 43 17.6**	**+0.9**
GERES	**GERESS Array B**	**42.86**	**305**	P		**P**	**22 43 18.9**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=91,slow=12,SNR=2.0							
	comp=Z,0.1nm,0.3s							
TRO	**Tromso**	**43.25**	**336**	*e*P		**P**	**22 43 19.3**	**0.0**
TRO				IAmb		IAmb	22 43 20.8	
	comp=Z,3.9nm,0.5s							
FAUS	**Fauske**	**43.78**	**333**	*e*P		**P**	**22 43 25.2**	**+1.7**
FAUS				IAmb		IAmb	22 43 25.5	
	comp=Z,12nm,1.0s							
MOR8	**Moi Rana**	**43.79**	**331**	*e*P		**P**	**22 43 24.6**	**+0.9**
MOR8				IAmb		IAmb	22 43 25.2	
	comp=Z,13nm,1.0s							
STEI	**Steigen**	**43.95**	**333**	*e*P		**P**	**22 43 26.4**	**+1.5**
STEI				IAmb		IAmb	22 43 27.2	
	comp=Z,4.5nm,0.8s							
YAK	**Yakutsk**	**44.05**	**35**	*ce*P		**P**	**22 43 25.0**	**-0.8**
YAK				pmax		pmax		
	comp=Z,10.0nm,0.8s							
NC405	**NORSAR Array S**	**44.10**	**323**	P		**P**	**22 43 27.4**	**+1.2**
NC405				IAmb		IAmb	22 43 28.3	
	comp=Z,17nm,0.9s							
NC303	**NORSAR Array S**	**44.28**	**323**	*e*P		**P**	**22 43 29.4**	**+1.7**
NC303				IAmb		IAmb	22 43 29.4	
	comp=Z,10nm,0.8s							
NB2	**NORSAR Subarra**	**44.34**	**323**	P		**P**	**22 43 28.8**	**+0.6**
	comp=Z,3.0nm,0.5s,baz=96,slow=7.9							
NB2	**NORSAR Subarra**	**44.34**	**323**	P		**P**	**22 43 28.8**	**+0.6**
	baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.34**	**323**	P		**P**	**22 43 29.1**	**+0.9**
	comp=Z,4.0nm,0.7s,baz=96,slow=7.8,SNR=30							
	comp=Z,4.0nm,0.7s							
KONS	**Konsvik**	**44.38**	**331**	*e*P		**P**	**22 43 30.0**	**+1.7**
KONS				IAmb		IAmb	22 43 33.8	
	comp=Z,17nm,1.2s							
NSS	**Namsos**	**44.46**	**328**	*e*P		**P**	**22 43 30.8**	**+1.8**
LOF	**Lofoten**	**44.62**	**333**	*e*P		**P**	**22 43 31.6**	**+1.3**
LOF				IAmb		IAmb	22 43 31.7	
	comp=Z,24nm,1.3s							
KSRS	**Korea Array**	**44.99**	**71**	P		**P**	**22 43 33.4**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=276,slow=6.0,SNR=2.4							
	comp=Z,0.6nm,0.3s							
HOPEN	**Hopen**	**45.00**	**346**	*e*P		**P**	**22 43 36.3**	**+3.2**
KONO	**Kongsberg**	**45.04**	**321**	*e*P		**P**	**22 43 34.8**	**+1.2**
BJO1	**Bjornoya**	**45.26**	**343**	*e*P		**P**	**22 43 37.0**	**+1.8**
TIXI	**Tiksi**	**45.84**	**22**	P		**P**	**22 43 40.3**	**+0.5**
TIXI				IAmb		IAmb	22 43 40.7	
	comp=Z,4.1nm,0.9s							
TIXI	**Tiksi**	**45.84**	**22**	*i* P		**P**	**22 43 38.8**	**-1.0**
TIXI				pmax		pmax		
	comp=Z,12nm,2.4s							
HSPB	**Hornsund (broa**	**47.13**	**345**	*e*P		**P**	**22 43 52.4**	**+2.6**
HSPB				IAmb		IAmb	22 43 53.0	
	comp=Z,5.9nm,0.8s							
SPB2	**Spitsbergen Ar**	**47.49**	**347**	P		**P**	**22 43 54.4**	**+1.8**
SPB2				IAmb		IAmb	22 44 03.7	
	comp=Z,8.4nm,0.8s							
SPITS	**Spitsbergen Ar**	**47.49**	**347**	P		**P**	**22 43 54.5**	**+1.9**
SPITS				pmax		pmax		
	comp=Z,19nm,1.3s							
MEM	**Membach**	**47.60**	**309**	*d*P		**P**	**22 43 54.0**	**+0.2**
BMRD	**Maredsous**	**48.43**	**308**	*d*P		**P**	**22 44 00.7**	**+0.6**
	comp=Z,4.0nm,1.2s							
KBS	**Kingsbay**	**48.61**	**347**	P		**P**	**22 44 02.7**	**+1.5**
KBS				IAmb		IAmb	22 44 03.9	
	comp=Z,14nm,0.8s							
KBS	**Kingsbay**	**48.61**	**347**	P		**P**	**22 44 02.7**	**+1.5**
KBS				pmax		pmax		
	comp=Z,14nm,0.9s							
ESDC	**Sonseca Array**	**57.38**	**298**	P		**P**	**22 45 08.0**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=57,slow=7.3,SNR=4.1							
	comp=Z,0.3nm,0.8s							
MDT	**Midelt**	**60.70**	**291**	LR		LR	23 14 01.1	
	comp=Z,25nm,18.1s,baz=160,slow=38							
SUMG	**Summit**	**61.05**	**341**	P		**P**	**22 45 32.8**	**+1.7**
SUMG				IAmb		IAmb	22 45 33.8	
	comp=Z,6.3nm,0.7s							
SUMG	**Summit**	**61.05**	**341**	P		**P**	**22 45 32.8**	**+1.7**
SUMG				pmax		pmax		
	comp=Z,6.0nm,0.7s							
SUMG	**Summit**	**61.05**	**341**	*i* P		**P**	**22 45 32.0**	**+0.9**
TOAO	**Torodi Ar. Sit**	**65.61**	**269**	P		**P**	**22 46 00.1**	**-1.4**
TORD	**Torodi Ar. Bea**	**65.61**	**269**	P		**P**	**22 46 00.3**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=52,slow=6.1,SNR=23							
	comp=Z,0.9nm,0.5s							
TORD	**Torodi Ar. Bea**	**65.61**	**269**	P		**P**	**22 46 00.2**	**-1.3**
KOWA	**Kowa**	**69.47**	**273**	P		**P**	**22 46 25.4**	**-0.3**
KOWA				IAmb		IAmb	22 46 26.1	
	comp=Z,5.3nm,1.2s							
TOLK	**Toolik Lake Re**	**70.97**	**15**	P		**P**	**22 46 35.0**	**+0.9**
TOLK				IAmb		IAmb	22 46 38.3	
	comp=Z,11nm,1.2s							
IMAR	**Indian Mountai**	**72.23**	**18**	P		**P**	**22 46 41.5**	**0.0**
BMAR	**Burnt Mountain**	**72.99**	**14**	P		**P**	**22 46 47.4**	**+1.3**
J20K	**Nowinta River**	**73.59**	**19**	P		**P**	**22 46 50.3**	**+0.7**
C36M	**Paulatuk**	**73.91**	**5**	P		**P**	**22 46 52.5**	**+1.1**
INK	**Inuvik**	**73.94**	**9**	P		**P**	**22 46 52.9**	**+1.3**
	comp=Z,3.2nm,0.6s,baz=315,slow=4.3,SNR=4.2							
	comp=Z,3.2nm,0.6s							
K20K	**Telida**	**74.27**	**19**	P		**P**	**22 46 54.6**	**+1.0**
K20K				IAmb		IAmb	22 46 55.2	
	comp=Z,3.2nm,0.9s							
ILAR	**Eielson Array**	**74.83**	**16**	P		**P**	**22 46 57.5**	**+0.7**
	comp=Z,1.2nm,1.0s,baz=317,slow=4.3,SNR=8.3							
	comp=Z,1.2nm,1.0s							
I26K	**Coal Creek Min**	**75.14**	**14**	P		**P**	**22 47 00.6**	**+2.1**
BCAR	**Beaver Creek A**	**77.41**	**15**	P		**P**	**22 47 12.3**	**+0.8**
BOSA	**Boshof**	**77.66**	**220**	P		**P**	**22 47 12.1**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=20,slow=9.0,SNR=1.6							
	comp=Z,1.8nm,0.8s							
BOSA	**Boshof**	**77.66**	**220**	P		**P**	**22 47 13.0**	**-0.3**
BOSA				IAmb		IAmb	22 47 34.9	
	comp=Z,9.5nm,1.2s							
BOSA	**Boshof**	**77.66**	**220**	P		**P**	**22 47 13.0**	**-0.3**
BOSA				pmax		pmax		
	comp=Z,9.0nm,1.2s							
YKA	**Yellowknife Ar**	**81.27**	**3**	P		**P**	**22 47 33.4**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=351,slow=5.7,SNR=6.1							
	comp=Z,0.8nm,0.4s							
YKA	**Yellowknife Ar**	**81.27**	**3**	*ce*P		**P**	**22 47 33.7**	**+1.4**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.4s							
WRA	**Warramunga Arr**	**82.07**	**122**	P		**P**	**22 47 35.8**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=324,slow=4.9,SNR=12							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**82.07**	**122**	P		**P**	**22 47 35.9**	**-1.1**
WRA	**Warramunga Arr**	**82.07**	**122**	*i* P		**P**	**22 47 36.0**	**-1.1**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
WB2	**Warramunga Arr**	**82.07**	**122**	P		**P**	**22 47 36.1**	**-1.1**
WB2				IAmb		IAmb	22 48 02.6	
	comp=Z,8.6nm,1.2s							
ASAR	**Alice Springs**	**84.33**	**125**	P		**P**	**22 47 47.5**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=314,slow=4.8,SNR=8.2							
	comp=Z,0.7nm,0.7s							

IDC ***16*** *22:37:55.8±6.2, 30.70S×178.72W, h0km, mb3.6/2, mbtmp3.6/2, MS3.3/1, Error ellipse: s-maj=246.7km s-min=57.1km az=156.0*

WEL ***16*** *22:38:46.8±1.2, 41.5S±9.1×17.3E±7, h179km±7km, M2.1/2, MLv2.1/2, Error ellipse: s-maj=0.0km s-min=0.0km az=140.6*

ISC 16 22:38:51.6±1.1, 41.39S±0.09×172.67E±0.07, h150km, n15, σ2§28/19, South Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THZ	**Tophouse**	**0.41**	**155**	P		**Pn**	**22 39 13.1**	**+0.5**
THZ				S		**Sn**	**22 39 32.7**	**+3.9**
TKNZ	**Takaka Hill**	**0.42**	**32**	S		**Sn**	**22 39 31.4**	**+2.9**
NNZ	**Nelson**	**0.56**	**73**	P		**Pn**	**22 39 13.0**	**-0.3**
NNZ				S		**Sn**	**22 39 32.8**	**+3.1**
QRZ	**Quartz Range**	**0.57**	**349**	P		**Pn**	**22 39 12.4**	**-1.0**
DSZ	**Denniston Nort**	**0.74**	**241**	P		**Pn**	**22 39 13.4**	**-1.0**
DSZ				S		**Sn**	**22 39 33.7**	**+1.9**
TUWZ	**Tuamarina**	**0.96**	**93**	P		**Pn**	**22 39 15.4**	**-0.6**
TUWZ				S		**Sn**	**22 39 37.4**	**+2.8**
DUWZ	**D'Urville Isla**	**1.11**	**59**	P		**Pn**	**22 39 16.1**	**-1.2**
DUWZ				S		**Sn**	**22 39 40.1**	**+3.0**
LTZ	**Lake Taylor**	**1.43**	**192**	P		**Pn**	**22 39 19.4**	**-1.0**
LTZ				S		**Sn**	**22 39 43.9**	**+1.3**
INZ	**Inchbonnie**	**1.62**	**214**	P		**Pn**	**22 39 20.5**	**-1.9**
KIW	**Kapiti Island**	**1.77**	**74**	P		**Pn**	**22 39 21.5**	**-2.6**
PLWZ	**Palliser**	**1.95**	**96**	P		**Pn**	**22 39 24.1**	**-2.1**
MTW	**Mount Morrison**	**2.15**	**85**	P		**Pn**	**22 39 25.9**	**-2.6**
ASAR	**Alice Springs**	**36.79**	**287**	P		P	22 45 52.7	+7.7
	0.3nm,0.5s,baz=110,slow=7.5,SNR=4.4							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**38.87**	**292**	P		**P**	**22 46 01.0**	**-1.3**
	0.5nm,0.3s,baz=113,slow=7.7,SNR=16							
	0.5nm,0.3s							
PPT	**Papeete**	**40.08**	**65**	LR		LR	22 55 32.4	
	comp=Z,57nm,18.6s,baz=200,slow=36							

IDC ***16*** *22:46:58.6±3.3, 37.58N×142.27E, h0km, mb3.3/2, mbtmp3.2/3, ML2.7/1, MS2.7/1, Error ellipse: s-maj=70.3km s-min=43.3km az=54.0*

JMA ***16*** *22:47:05.8±0.2, 37.4N±0.4×141.7E±0.9, h43km±2km, MV3.7/35, E OFF FUKUSHIMA PREF*

ISC 16 22:47:02.4±2.1, 37.34N±0.05×141.87E±0.08, h11km±11km, n20, σ1§48/24, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JFK	**Kawauchi**	**0.80**	**272**	⇓*i* P		**Pg**	**22 47 18.9**	**+1.1**
JFK				⇓S		**Sg**	**22 47 27.9**	**-0.4**
JMST	**Minamisoumatoc**	**0.87**	**296**	⇓*i* P		**Pg**	**22 47 19.8**	**+0.5**
JMST				⇓S		**Sg**	**22 47 29.6**	**-1.1**
ONAJ	**Iwakimizuishiy**	**0.89**	**255**	*i* P		**Pg**	**22 47 20.5**	**+0.9**
ONAJ				S		**Sg**	**22 47 30.4**	**-0.8**
JMM	**Marumori**	**1.01**	**302**	⇓*i* P		**Pb**	**22 47 21.8**	**0.0**
JMM				⇓S		**Sb**	**22 47 33.4**	**-1.7**
JIKH	**Ishinomakikobu**	**1.02**

STKA	Stephens Creek	38.37	244	P		P	23 00 45.1	+0.2
QIS	Mount Isa	40.10	262	P		P	23 00 58.6	-0.4
LCRK	Leigh Creek	41.11	246	P		P	23 01 07.0	+0.2
BBOO	Buckleboo	43.13	243	P		P	23 01 22.1	-0.6
BBOO				IAmb		IAmb	23 01 23.2	
	comp=Z,8.1nm,0.7s							
BBOO	Buckleboo	43.13	243	P		P	23 01 22.7	0.0
OOD	Oodnadatta	43.23	250	P		P	23 01 24.2	+0.7
MULG	Mulgathing	44.69	247	P		P	23 01 34.5	-0.3
WR0	Warramunga Arr	44.89	261	P		P	23 01 35.3	-1.2
WR0				IAmb		IAmb	23 01 37.2	
	comp=Z,15nm,1.3s							
AS31	Alice Springs	45.03	256	P		P	23 01 37.2	-0.4
ASAR	Alice Springs	45.03	256	P		P	23 01 37.1	-0.5
	comp=Z,9.9nm,0.5s,baz=89,slow=8.0,SNR=152							
	comp=Z,9.9nm,0.5s							
WB0	Warramunga Arr	45.06	262	P		P	23 01 37.0	-0.8
WB2	Warramunga Arr	45.07	261	P		P	23 01 36.8	-1.1
WB2				IAmb		IAmb	23 01 37.5	
	comp=Z,18nm,1.2s							
WRAB	Tennant Creek	45.07	261	P		P	23 01 36.9	-1.0
WRA	Warramunga Arr	45.08	261	P		P	23 01 36.8	-1.2
	comp=Z,6.6nm,0.4s,baz=97,slow=7.5,SNR=291							
	comp=Z,6.6nm,0.4s							
WRA	Warramunga Arr	45.08	261	P		P	23 01 36.1	-1.9
MTN	Manton Dam	49.58	270	P		P	23 02 10.3	-1.5
FORT	Forrest	49.87	246	P		P	23 02 12.8	-0.9
FORT				IAmb		IAmb	23 02 32.4	
	comp=Z,15nm,0.8s							
WRKA	Warakurna	50.00	254	P		P	23 02 14.2	-0.6
KNRA	Kununurra	51.11	266	P		P	23 02 21.9	-1.0
KNRA				IAmb		IAmb	23 02 22.8	
	comp=Z,9.5nm,0.7s							
KNRA	Kununurra	51.11	266	P		P	23 02 22.1	-0.8
FAKI	Fak Fak	51.80	282	P		P	23 02 26.7	-1.3
FAKI				IAmb		IAmb	23 02 52.7	
	comp=Z,29nm,1.2s							
FITZ	Fitzroy Crossi	53.50	262	P		P	23 02 39.4	-0.6
SIJI	Sorong	53.52	284	P		P	23 02 39.6	-0.6
	comp=Z,15nm,0.5s,baz=65,slow=4.7,SNR=4.8							
	comp=Z,15nm,0.5s							
PSA00	Pilbara Seismi	58.18	257	P		P	23 03 11.3	-1.1
PSA00				IAmb		IAmb	23 03 30.6	
	comp=Z,19nm,1.5s							
SBA	Scott Base	58.38	184	P		P	23 03 14.6	+1.9
VNDA	Vanda	58.42	185	P		P	23 03 14.9	+1.9
	comp=Z,0.4nm,0.6s,baz=1.3,slow=5.1,SNR=5.9							
	comp=Z,0.4nm,0.6s							
VNDA	Vanda	58.42	185	P		P	23 03 14.6	+1.6
QSPA	South Pole Qui	70.05	180	P		P	23 04 27.7	+0.6
QSPA				IAmb		IAmb	23 04 31.7	
	comp=Z,6.3nm,1.4s							
CLL	Collm	147.69	348	*i* PKPbc		PKPbc	23 12 52.4	-0.7
GERES	GERESS Array B	149.85	345	PKPbc		PKPbc	23 12 57.4	-1.3
	comp=Z,0.5nm,0.6s,baz=48,slow=2.0,SNR=6.4							

GUC ***16*** *22:54:38.3±0.5, 21°.19S×68°.71W, h119km±3km, ML3.5*
IDC ***16*** *22:54:38.3±1.4, 21°.26S×68°.46W, h124km±11km, mb3.4/3, mbtmp3.8/5, Error ellipse: s-maj=43.5km s-min=15.2km az=115.0*

ISC 16 22:54:37.4±0.9,**21°.17S**±0°.04×**68°.74W**±0°.08,**h123**km±9km, **n17,** σ0**s94/29,2C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PB01	**IPOC Station P**	**0.71**	**280**	⇓ *i* P		**Pn**	**22 54 57.3**	**0.0**
PB01				*i* S		**Sn**	**22 55 11.9**	**-0.4**
PB01				IAML			22 55 13.5	
	comp=E,2μm,0.3s							
PB09	**IPOC Station P**	**0.78**	**217**	⇑ *i* P		**Pn**	**22 54 58.3**	**+0.4**
PB09				*i* S		**Sn**	**22 55 13.8**	**+0.4**
PB09				IAML			22 55 14.9	
	comp=N,679nm,0.5s							
PB02	**IPOC Station P**	**1.09**	**262**	*i* P		**Pn**	**22 55 01.1**	**+0.4**
PB02				*i* S		**Sn**	**22 55 18.3**	**-0.1**
PB02				IAML			22 55 21.0	
	comp=N,2μm,0.3s							
PB07	**IPOC Station P**	**1.21**	**243**	⇑ *i* P		**Pn**	**22 55 02.0**	**+0.1**
PB07				*i* S		**Sn**	**22 55 20.6**	**0.0**
PB07				IAML			22 55 23.2	
	comp=E,518nm,0.2s							
LVC	**Limon Verde**	**1.44**	**186**	P		**Pn**	**22 55 05.3**	**+0.6**
	comp=E,23nm,0.3s,baz=360,slow=11,SNR=7.5							
LVC				S		**Sn**	**22 55 25.9**	**+0.4**
	comp=E,83nm,0.3s,baz=262,slow=22,SNR=25							
LVC	**Limon Verde**	**1.44**	**186**	*eP*		**Pn**	**22 55 05.2**	**+0.6**
LVC				*i* S		**Sn**	**22 55 25.6**	**+0.1**
TA01	**Diego Aracena**	**1.48**	**294**	⇓ *i* P		**Pn**	**22 55 05.0**	**+0.2**
TA01				*i* S		**Sn**	**22 55 25.5**	**-0.2**
TA01				IAML			22 55 26.2	
	comp=E,1μm,0.2s							
GO01	**Chusmiza**	**1.56**	**344**	*eP*		**Pn**	**22 55 06.6**	**+0.4**
GO01				*i* S		**Sn**	**22 55 28.9**	**+0.8**
GO01				IAML			22 55 31.6	
	comp=N,1μm,0.1s							
TA02	**Huaiquique**	**1.59**	**304**	*eP*		**Pn**	**22 55 06.0**	**0.0**
TA02				*i* S		**Sn**	**22 55 27.4**	**-0.4**
PB06	**IPOC Station P**	**1.71**	**207**	⇓ *eP*		**Pn**	**22 55 07.9**	**+0.3**
PB06				*i* S		**Sn**	**22 55 30.9**	**+0.1**
PB06				IAML			22 55 31.4	
	comp=E,845nm,0.1s							
PB04	**IPOC Station P**	**1.75**	**228**	*eP*		**Pn**	**22 55 08.1**	**0.0**
PB04				*i* S		**Sn**	**22 55 31.6**	**0.0**
PB04				IAML			22 55 38.9	
	comp=E,435nm,0.2s							
PB16	**IPOC Station P**	**2.92**	**345**	*eP*		**Pn**	**22 55 24.4**	**+1.1**
PB16				*i* S		**Sn**	**22 55 59.8**	**+1.3**
PB16				IAML			22 56 03.7	
	comp=N,45nm,0.3s							
LPAZ	**La Paz**	**4.89**	**7**	P		**Pn**	**22 55 51.9**	**+2.3**
	comp=N,1.9nm,0.3s,baz=190,slow=8.5,SNR=8.9							
SIV	**San Ignacio**	**8.91**	**56**	P		**Pn**	**22 56 40.0**	**-3.2**
	comp=N,6.2nm,0.4s,baz=233,slow=12,SNR=38							
BDFB	**Brasilia**	**20.41**	**78**	P		**P**	**22 59 04.0**	**-0.9**
	comp=N,1.6nm,0.4s,baz=242,slow=7.9,SNR=4.3							
	comp=N,1.6nm,0.4s							
TORD	**Torodi Ar. Bea**	**77.09**	**70**	P		**P**	**23 06 17.7**	**0.0**
	comp=N,0.4nm,0.4s,baz=253,slow=5.6,SNR=13							
	comp=N,0.4nm,0.4s							
VNDA	**Vanda**	**77.20**	**190**	P		**P**	**23 06 17.4**	**+0.2**
	comp=N,0.3nm,0.4s,baz=117,slow=2.3,SNR=6.3							
	comp=N,0.3nm,0.4s							

DJA 16 23:15:23.7±0.8,**2°.S**±6°×**14°.0E**±°,**h10**km,**M4.1/4, mb4.1/1, MLv4.2/4, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GENI	**Genyem**	**0.55**	**146**	P		Pb	23 15 35.1	-0.3
GENI				S		Sb	23 15 42.6	-0.7
SMPI	**Sarmi**	**1.16**	**277**	P		Pb	23 15 44.9	-0.9
SMPI				S		Sb	23 16 00.9	0.0
WAMI	**Wamena**	**2.08**	**213**	P		Pn	23 15 59.7	+1.0
WAMI				S		Sb	23 16 27.1	-0.3
SRPI	**Serui, Papua**	**3.63**	**274**	P		Pn	23 16 20.6	+0.6
SRPI				S		Sn	23 17 04.1	+1.2
BAKI	**Biak**	**3.87**	**284**	P		Pg	23 16 40.7	+2.8
BAKI				S		Sn	23 16 50.8	-18
FAKI	**Fak Fak**	**7.64**	**264**	P		Pn	23 17 14.6	-0.6

SKHL ***16*** *23:38:03.1±0.6, 50°.30N×142°.30E, h7km±2km, mb4.6/6*
IDC ***16*** *23:38:04.0±0.9, 50°.26N×142°.44E, h0km, mb3.6/7, mbtmp3.6/10, ML2.6/3, MS2.7/5, Error ellipse: s-maj=30.3km s-min=15.7km az=160.0*

ISC 16 23:38:05.1±0.6,**50°.34N**±0°.03×**142°.40E**±0°.06,**h10**km,**n19,** σ1**s48/21, mb3.6/7, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TYV	**Tymovskoe**	**0.55**	**17**	*eP* g		**Pb**	**23 38 15.0**	**-1.9**
TYV				AMB		AMB	23 38 15.2	
	294nm,0.5s							
TYV				*eS* g		**Sb**	**23 38 23.4**	**-1.4**
TYV				A		A	23 38 24.0	
	1μm,0.2s							
TYV				A		A	23 38 24.0	
	1μm,0.2s							
UGL	**Uglegorsk**	**1.28**	**190**	*eP* g		**Pn**	**23 38 28.0**	**-1.0**
UGL				AMB		AMB	23 38 31.2	
	440nm,0.8s							
UGL				*eS* g		**Sb**	**23 38 45.0**	**-0.8**
UGL				A		A	23 38 49.0	
	1μm,0.7s							
UGL				A		A	23 38 49.0	
	2μm,0.7s							
NKL	**Nikolayevsk**	**3.01**	**340**	*eP*		**Pn**	**23 38 52.1**	**-0.7**
NKL				AMB		AMB	23 38 52.2	
	33nm,0.4s							
NKL				AMB		AMB	23 38 52.2	
	15nm,0.4s							
NKL				AMB		AMB	23 38 52.2	
	74nm,0.4s							
YSS	**Yuzh-Sakhalins**	**3.40**	**176**	*eP*		**Pn**	**23 38 57.2**	**-0.9**
YSS				*eP*		**Pb**	**23 39 02.2**	**-3.2**
YSS				*eP* g		**Pg**	**23 39 10.9**	**+0.7**
YSS				AMB		AMB	23 39 13.4	
	110nm,0.6s							
YSS				*eS*		**Sn**	**23 39 37.0**	**-1.4**
YSS				A		A	23 39 41.7	
	70nm,0.6s							
YSS				A		A	23 39 41.7	
	70nm,0.6s							
YSS				*eS* g		**Sg**	**23 39 57.9**	**+3.7**
YSS				A		A	23 40 00.9	
	70nm,0.6s							
YSS				A		A	23 40 00.9	
	70nm,0.6s							
GRNR	**Gornyy**	**3.84**	**279**	*eP* g		**Pg**	**23 39 18.1**	**-0.5**
GRNR				AMB		AMB	23 39 19.0	
	10.0nm,0.4s							
KLR	**Kul'dur**	**6.99**	**265**	Pn		**Pn**	**23 39 48.1**	**+0.6**
	0.3nm,0.3s,baz=71,slow=12,SNR=2.4							
KLR				Lg		Lg	23 41 46.8	
	2.1nm,0.3s,baz=334,slow=23,SNR=10							
	0.9nm,0.3s							
USRK	**Ussuriysk Ar.**	**9.37**	**233**	Pn		**Pn**	**23 40 19.6**	**-0.5**
	0.5nm,0.3s,baz=45,slow=16,SNR=1.9							
USRK				Lg		Lg	23 43 00.5	
	0.7nm,0.3s,baz=43,slow=34,SNR=6.3							
	1.9nm,0.4s							
PETK	**Petropavlovsk-**	**9.89**	**68**	Pn		**Pn**	**23 40 27.9**	**+0.7**
	0.1nm,0.3s,baz=255,slow=16,SNR=2.1							
PETK				LR		LR	23 44 13.8	
	comp=Z,50nm,19.2s,baz=293,slow=37							
	1.7nm,0.8s							
MA2	**Magadan**	**10.42**	**24**	LR		LR	23 44 22.6	
	comp=Z,33nm,22.0s,baz=74,slow=36							
KSRS	**Korea Array**	**16.54**	**224**	LR		LR	23 48 05.1	
	comp=Z,36nm,18.6s,baz=220,slow=36							
SHEM	**Shemya Is, Ala**	**19.78**	**71**	LR		LR	23 50 57.2	
	comp=Z,11nm,19.4s,baz=170,slow=39							
TIXI	**Tiksi**	**22.25**	**349**	LR		LR	23 52 55.6	
	comp=Z,20nm,20.7s,baz=0.0,slow=40							
SONM	**Songino Array**	**23.57**	**278**	P		**P**	**23 43 16.8**	**+1.0**
	0.3nm,0.5s,baz=90,slow=12,SNR=4.5							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**38.99**	**289**	P		**P**	**23 45 31.9**	**+0.5**
	1.1nm,0.8s,baz=64,slow=6.1,SNR=5.1							
	1.1nm,0.8s							
NVAR	**Mina Array Bea**	**66.80**	**57**	P		**P**	**23 48 57.8**	**+0.7**
	0.4nm,0.5s,baz=305,slow=6.3,SNR=3.8							
	0.4nm,0.5s							
PDAR	**Pinedale Array**	**68.08**	**49**	P		**P**	**23 49 05.5**	**+0.4**
	0.4nm,0.5s,baz=335,slow=2.5,SNR=4.2							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**70.33**	**188**	P		**P**	**23 49 19.0**	**+0.2**
	0.8nm,0.9s,baz=3.6,slow=7.5,SNR=5.5							
	0.8nm,0.9s							
ASAR	**Alice Springs**	**74.06**	**188**	P		**P**	**23 49 41.0**	**-0.1**
	0.5nm,0.8s,baz=5.6,slow=4.9,SNR=3.7							
	0.5nm,0.8s							
TXAR	**Lajitas Array**	**81.53**	**54**	P		**P**	**23 50 23.9**	**+0.9**
	0.3nm,0.6s,baz=316,slow=5.2,SNR=4.2							
	0.3nm,0.6s							

IDC ***16*** *23:53:37.5±4.4, 59°.98N×6°.14E, h0km, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=40.9km s-min=35.3km az=23.0*
DNK ***16*** *23:53:38.8±1.9, 59°.75N×6°.89E, h0km, ML2.7, Suspected explosion*
HEL ***16*** *23:53:38.8±0.2, 59°.76N×6°.67E, h10km, ML3.3, ML2.6(UPP), Confirmed Earthquake*
NAO ***16*** *23:53:38.1±0.6, 59°.83N×6°.48E, ML2.8*
BER ***16*** *23:53:39.1±3.1, 59°.80N×6°.47E, h0km±6km, ML2.6, ML2.8(NAO)*
UPP ***16*** *23:53:40.1±2.1, 59°.76N×7°.02E, h0km, ML2.6, Suspected explosion*

ISC 16 23:53:36.2±0.7,**59°.77N**±0°.02×**6°.48E**±0°.02,**h0**km,**n78,** σ2**s11/133,5C-2D, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ODD1	**Odda**	**0.16**	**26**	⇑ *i* P		**Pg**	**23 53 42.1**	**+2.8**
ODD1				*eS*		**Sg**	**23 53 44.1**	**+2.7**
ODD1				IAML			23 53 44.3	
	comp=Z,3μm,0.2s							
BLS5	**Blasjo**	**0.34**	**182**	Pg		**Pg**	**23 53 46.6**	**+3.8**
BLS5				Lg		Lg	23 53 52.2	
BLS5	**Blasjo**	**0.34**	**182**	⇑ *i* P		**Pg**	**23 53 46.6**	**+3.8**
BLS5				*eS*		**Sg**	**23 53 52.1**	**+4.8**
BLS5				IAML			23 53 52.2	
	comp=Z,440nm,0.3s							
KMY	**Karmoy**	**0.84**	**229**	Pg		**Pg**	**23 53 55.4**	**+3.1**
KMY				Lg		Lg	23 54 06.7	
KMY	**Karmoy**	**0.84**	**229**	⇑ *i* P		**Pg**	**23 53 55.4**	**+3.1**
KMY				*eS*		**Sg**	**23 54 06.9**	**+3.7**
KMY				IAML			23 54 09.9	
	comp=Z,287nm,0.3s							
BER	**Bergen**	**0.85**	**318**	Pg		**Pg**	**23 53 54.2**	**+1.8**
BER				Lg		Lg	23 54 05.1	
BER	**Bergen**	**0.85**	**318**	*eP*		**Pg**	**23 53 54.4**	**+1.9**
BER				*eS*		**Sg**	**23 54 05.2**	**+1.8**
BER				IAML			23 54 08.9	
	comp=Z,182nm,0.3s							
STAV	**Stavanger**	**0.93**	**206**	Pg		**Pg**	**23 53 56.8**	**+2.9**
STAV				Lg		Lg	23 54 09.5	
ASK	**Askoy**	**0.97**	**319**	*eP*		**Pg**	**23 53 56.2**	**+1.4**
ASK				*eS*		**Sg**	**23 54 08.9**	**+1.7**
ASK				IAML			23 54 11.8	
	comp=Z,563nm,0.2s							
SKAR	**Skarslia**	**1.29**	**44**	⇑ *i* P		**Pg**	**23 54 01.7**	**+0.7**
SKAR				*eS*		**Sg**	**23 54 17.9**	**+0.2**
SKAR				IAML			23 54 20.1	
	comp=Z,687nm,0.2s							
HYA	**Hoyanger**	**1.41**	**354**	Pg		**Pg**	**23 54 03.5**	**+0.2**
HYA				Lg		Lg	23 54 21.2	
HYA	**Hoyanger**	**1.41**	**354**	⇑ *i* P		**Pg**	**23 54 03.5**	**+0.2**
HYA				*eS*		**Sg**	**23 54 21.7**	**+0.1**
HYA				IAML			23 54 29.2	
	comp=Z,132nm,0.2s							
SNART	**Snartemo**	**1.48**	**165**	*i* P		**Pn**	**23 54 05.5**	**+1.5**
SNART				*i* S		**Sg**	**23 54 24.3**	**+0.5**
SNART	**Snartemo**	**1.48**	**165**	*eP*		**Pn**	**23 54 05.6**	**+1.5**
SNART				*eS*		**Sg**	**23 54 25.2**	**+1.5**
SNART				IAML			23 54 27.1	
	comp=Z,208nm,0.2s							
SUE	**Sulen**	**1.55**	**327**	*eP*		**Pn**	**23 54 05.5**	**+0.5**
SUE				*eS*		**Sg**	**23 54 26.2**	**+0.2**
SUE				IAML			23 54 27.3	
	comp=Z,142nm,0.3s							
KON	**Kongsberg**	**1.58**	**93**	Pg		**Pn**	**23 54 06.8**	**+1.3**
KON				Lg		Lg	23 54 26.9	
KONO	**Kongsberg**	**1.58**	**93**	*eP*		**Pn**	**23 54 06.8**	**+1.3**
KONO				*eS*		**Sn**	**23 54 27.0**	**+0.3**
KONO				IAML			23 54 27.8	
	comp=Z,99nm,0.3s							
HOMB	**Homborsund**	**1.83**	**144**	*i* P		**Pn**	**23 54 10.0**	**+1.2**
HOMB				*i* S		**Sn**	**23 54 32.7**	**0.0**
HOMB	**Homborsund**	**1.83**	**144**	*eP*		**Pn**	**23 54 10.2**	**+1.3**
HOMB				IAML		**Sg**	**23 54 35.6**	**+0.7**
	comp=Z,86nm,0.3s							
HOMB				*eSg*		**Sg**	**23 54 35.6**	**+0.7**
FOO	**Floro**	**1.97**	**340**	*eP*		**Pn**	**23 54 12.8**	**+2.0**
FOO				*eSg*		**Sn**	**23 54 38.0**	**+1.8**
FOO				IAML			23 54 39.5	
	comp=Z,110nm,0.3s							
OSL	**Oslo**	**2.15**	**84**	*eP*		**Pn**	**23 54 14.8**	**+1.5**
OSL				*eS*		**Sn**	**23 54 42.6**	**+2.1**
OSL				IAML			23 54 45.2	
	comp=Z,66nm,0.4s							
AKN	**Aaknes**	**2.43**	**6**	Pn		**Pn**	**23 54 18.9**	**+1.7**
AKN				Pg		**Pb**	**23 54 20.4**	**-0.4**
AKN				Lg		Lg	23 54 51.7	
AKN	**Aaknes**	**2.43**	**6**	Pn		**Pn**	**23 54 18.9**	**+1.7**
AKN				Pg		**Pb**	**23 54 20.4**	**-0.4**
AKN				Sg		**Sb**	**23 54 51.7**	**+0.3**
NAO01	**NORSAR Array S**	**2.44**	**62**	*eP*		**Pn**	**23 54 18.1**	**+0.7**
NAO01				*eS*		**Sn**	**23 54 51.5**	**+3.6**
NAO01				IAML			23 54 52.7	
	comp=Z,104nm,0.2s							
STRU	**Stroemstad**	**2.51**	**105**	*i* P		**Pn**	**23 54 18.3**	**+0.1**
STRU				P		Pb	23 54 18.4	-3.8
STRU				S		**Sn**	**23 54 47.4**	**-2.1**
STRU				*i* S		**Sb**	**23 54 55.2**	**+1.6**
STRU	**Stroemstad**	**2.51**	**105**	*eP*		**Pn**	**23 54 18.5**	**+0.2**
STRU				*e*			23 54 23.3	
STRU				*eS*		**Sb**	**23 54 55.1**	**+1.5**
STRU	**Stroemstad**	**2.51**	**105**	P		**Pn**	**23 54 18.4**	**+0.1**
STRU				S		**Sn**	**23 54 47.4**	**-2.1**
STRU	**Stroemstad**	**2.51**	**105**	*eP*		**Pn**	**23 54 18.4**	**+0.1**
STRU				*eS*		**Sn**	**23 54 47.4**	**-2.1**
DOMB	**Dombas**	**2.61**	**28**	*eP*		**Pn**	**23 54 24.0**	**+4.4**
DOMB				*eSg*		**Sb**	**23 54 57.6**	**+1.1**
DOMB				IAML			23 55 01.7	
	comp=Z,68nm,0.2s							
NB2	**NORSAR Subarra**	**2.67**	**59**	Pn		**Pn**	**23 54 20.7**	**+0.2**
	baz=244,slow=14							
NB2				Pg		**Pb**	**23 54 24.6**	**-0.3**
NB2				Lg		Lg	23 54 58.2	
	baz=245,slow=37							
NB2	**NORSAR Subarra**	**2.67**	**59**	Pn		**Pn**	**23 54 20.7**	**+0.2**
	baz=244,slow=14							
NB2				Pg		**Pb**	**23 54 24.6**	**-0.3**
NB2				Sg		**Sn**	**23 54 58.2**	**+4.6**
	baz=245,slow=37							
NOA	**NORSAR Array B**	**2.67**	**59**	Pn		**Pn**	**23 54 20.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=252,slow=10,SNR=42							
NOA				Pg		**Pb**	**23 54 24.9**	**0.0**
	comp=Z,0.6nm,0.3s,baz=242,slow=16,SNR=24							
NOA				Sn		**Sn**	**23 54 56.5**	**+2.9**
	comp=Z,2.1nm,0.3s,baz=228,slow=24,SNR=13							
	comp=Z,1.1nm,0.3s							
NRA0	**NORESS Array S**	**2.70**	**67**	Pn		**Pn**	**23 54 21.5**	**+0.6**
	baz=242,slow=12							
NRA0				Pg		**Pb**	**23 54 25.1**	**-0.3**
	baz=258,slow=16							
NRA0				Lg		Lg	23 54 58.9	
	baz=249,slow=28							
NRA0	**NORESS Array S**	**2.70**	**67**	Pn		**Pn**	**23 54 21.5**	**+0.6**
	baz=242,slow=12							
NRA0				Pg		**Pb**	**23 54 25.1**	**-0.3**
	baz=258,slow=16							
NRA0				Sg		**Sn**	**23 54 58.9**	**+4.7**
	baz=249,slow=28							
MOL	**Molde**	**2.86**	**10**	*eP*		**Pn**	**23 54 25.8**	**+2.7**
MOL				IAML			23 55 07.0	
	comp=Z,26nm,0.3s							
FINU	**Finntorp**	**3.07**	**94**	P		**Pn**	**23 54 26.1**	**+0.2**
FINU				S		**Sn**	**23 55 01.5**	**-1.9**
FINU	**Finntorp**	**3.07**	**94**	P		**Pn**	**23 54 26.1**	**+0.2**
FINU				S		**Sn**	**23 55 01.5**	**-1.9**
FINU	**Finntorp**	**3.07**	**94**	*eP*		**Pn**	**23 54 26.1**	**+0.2**
FINU				*eS*		**Sn**	**23 55 01.5**	**-1.9**
GOET	**G??ttrup**	**3.10**	**151**	*i* S		**Sn**	**23 55 03.1**	**-0.8**
GOET				IAML			23 55 27.8	
	comp=Z,40nm,0.4s							
VANU	**Vaenersborg**	**3.15**	**112**	P		**Pn**	**23 54 27.5**	**+0.5**
VANU				S		**Sn**	**23 55 03.1**	**-2.2**
VANU	**Vaenersborg**	**3.15**	**112**	P		**Pn**	**23 54 27.5**	**+0.5**
VANU				S		**Sn**	**23 55 03.1**	**-2.2**
VANU	**Vaenersborg**	**3.15**	**112**	*eP**		**Pn**	**23 54 27.5**	**+0.5**
VANU				*eS*		**Sn**	**23 55 03.1**	**-2.2**
UDD	**Uddeholm**	**3.60**	**82**	P		**Pn**	**23 54 33.4**	**+0.2**
UDD	**Uddeholm**	**3.60**	**82**	*eP*		**Pn**	**23 54 33.4**	**+0.2**
MUD	**Monsted U'grnd**	**3.62**	**156**	*i* P		**Pn**	**23 54 35.3**	**+1.9**
MUD				*i* S		**Sn**	**23 55 15.7**	**-1.0**
MUD				IAML			23 55 46.8	
	comp=Z,19nm,0.5s							
HFS	**Hagfors**	**3.65**	**81**	Pn		**Pn**	**23 54 34.3**	**+0.4**
	baz=264,slow=14							
HFS				Lg		Lg	23 55 28.1	
	baz=258,slow=28							
HFS	**Hagfors**	**3.65**	**81**	Pn		**Pn**	**23 54 34.3**	**+0.4**
	baz=264,slow=14							
HFS				Sg		**Sb**	**23 55 28.1**	**+1.9**
	baz=258,slow=28							
ONAU	**Onsala**	**3.71**	**128**	*i* P		**Pn**	**23 54 35.4**	**+0.8**
ONAU				P		Pb	23 54 35.5	-7.0
ONAU				*i* S		**Sn**	**23 55 15.9**	**-3.1**
ONAU	**Onsala**	**3.71**	**128**	P		**Pn**	**23 54 35.5**	**+0.8**
ONAU	**Onsala**	**3.71**	**128**	*eP*		**Pn**	**23 54 35.5**	**+0.8**
LRW	**Lerwick**	**3.87**	**279**	*eP*		**Pn**	**23 54 39.0**	**+2.1**
LRW				*eS*		**Sn**	**23 55 20.4**	**-2.7**
LRW				IAML			23 55 28.1	
	comp=Z,4.6nm,0.5s							
BORU	**Boraas**	**3.92**	**120**	P		**Pn**	**23 54 38.0**	**+0.5**
BORU				⇓ *i* P		**Pn**	**23 54 38.1**	**+0.5**
BORU				*i* S		**Sn**	**23 55 20.8**	**-3.4**
BORU	**Boraas**	**3.92**	**120**	P		**Pn**	**23 54 38.0**	**+0.5**
BORU	**Boraas**	**3.92**	**120**	*eP*		**Pn**	**23 54 38.0**	**+0.5**
FKPU	**Falk**	**4.08**	**110**	P		**Pn**	**23 54 39.9**	**+0.1**
FKPU	**Falk**	**4.08**	**110**	P		**Pn**	**23 54 39.9**	**+0.1**
FKPU	**Falk**	**4.08**	**110**	*eP*		**Pn**	**23 54 39.9**	**+0.1**
FABU	**Falkenberg**	**4.30**	**128**	*i* P		**Pn**	**23 54 43.3**	**+0.6**
FABU				*i* S

mb4.8/46,Error ellipse: s-maj=16.8km s-min=9.6km az=63.0
DJA ***16*** *23:56:55.2₀0.9,3˚N₀4˚₀9˚EE₀˚,h10ᵏᵐ,M4.9/13,mb5.1/4, mB5.1/1,MLv4.8/13,Mw(mB)4.5/1*
ISC 16 23:56:52.4₀0.5,2'74N₀0'05₀95'32E₀0'06,h25ᵏᵐ,n184, σ1ᵗ24/154,mb4.7/65,MS4.0/38,6C-2D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**2.56**	**72**	P	**Pn**	**23 57 32.9**	**+0.5**
GSI	**Gunungsitoli**	**2.67**	**122**	Pn	**Pn**	**23 57 34.0**	**+0.3**
GSI	**Gunungsitoli**	**2.67**	**122**	P	**Pn**	**23 57 34.1**	**+0.3**
GSI				S	**Sn**	**23 58 02.9**	**-2.4**
LHMI	**Lhok Sumawe**	**2.95**	**33**	Pn	**Pn**	**23 57 37.5**	**-0.2**
LHMI	**Lhok Sumawe**	**2.95**	**33**	P	**Pn**	**23 57 37.8**	**+0.1**
TSI	**Tuntungan**	**3.32**	**77**	P	**Pn**	**23 57 44.1**	**+1.3**
PSI	**Prapat**	**3.60**	**89**	Pn	**Pn**	**23 57 47.5**	**+0.8**
	14nm,0.3s,baz=282,slow=6.8,SNR=70						
PSI				Sn	**Sn**	**23 58 30.4**	**+2.0**
	8.1nm,0.3s,baz=236,slow=19,SNR=5.2						
	55nm,0.3s						
RPSI	**Rantau Prapat**	**3.60**	**91**	Pn	**Pn**	**23 57 46.9**	**+0.3**
RPSI	**Rantau Prapat**	**3.60**	**91**		**Pn**	**23 57 47.5**	**+0.9**
MNSI	**Mandailing Nat**	**4.67**	**114**	P	**Pn**	**23 58 02.5**	**+1.1**
MNSI				S	**Sn**	**23 58 52.6**	**-2.3**
SISI	**Saibi**	**5.52**	**137**	P	**Pn**	**23 58 13.6**	**+0.5**
SISI				S	**Sn**	**23 59 13.3**	**-2.6**
KULM	**Kulim**	**5.88**	**64**	Pn	**Pn**	**23 58 17.9**	**-0.2**
PPI	**Padang Panjang**	**5.99**	**122**	P	**Pn**	**23 58 21.0**	**+1.5**
BKNI	**Bangkinang**	**6.20**	**113**	Pn	**Pn**	**23 58 22.8**	**+0.4**
BKNI	**Bangkinang**	**6.20**	**113**	P	**Pn**	**23 58 23.0**	**+0.6**
	0.6nm162nm,1.0s						
SRIT	**Nakonsritamara**	**7.21**	**36**	Pn	**Pn**	**23 58 34.5**	**-1.7**
KRJI	**Kerinci**	**7.79**	**128**	P	**Pn**	**23 58 46.0**	**+1.6**
	1.8nm208nm,0.9s						
MYKOM	**Kota Tinggi**	**8.57**	**96**	Pn	**Pn**	**23 58 56.0**	**+1.0**
KSI	**Kapahiang**	**9.65**	**131**	P	Pn	23 59 23.0	+13
KSM	**Kuching**	**15.03**	**95**	P	**P**	**00 00 29.2**	**+0.7**
KSM				IAmb	IAmb	00 00 31.1	
	comp=Z,34nm,0.9s						
PALK	**Pallekele**	**15.24**	**288**	Sn	Sn	00 03 02.7	-12
	comp=Z,1.5nm,0.3s,baz=300,slow=20,SNR=3.0						
PALK				LR	LR	00 06 07.6	
	comp=Z,483nm,18.0s,baz=211,slow=37						
LEM	**Lembang**	**15.52**	**128**	LR	LR	00 07 06.0	
	comp=Z,545nm,18.3s,baz=276,slow=40						
CM31	**Chiang Mai Arr**	**16.02**	**13**	P	**P**	**00 00 37.9**	**-1.5**
CMAR	**Chiang Mai Arr**	**16.02**	**13**	Pn	**P**	**00 00 37.9**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=202,slow=11,SNR=96						
CMAR				LR	LR	00 07 42.9	
	comp=Z,503nm,18.9s,baz=195,slow=41						
	comp=Z,29nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.02**	**13**	Pn	**Pn**	**00 00 35.3**	**-0.8**
CHTO	**Chiang Mai**	**16.36**	**12**	Pn	**Pn**	**00 00 38.6**	**-1.9**
STKI	**Sintang**	**16.36**	**99**	P	**P**	**00 00 45.0**	**+1.7**
SBUM	**Sibu**	**16.88**	**91**	Pn	**Pn**	**00 00 47.3**	**+0.1**
CRAI	**Chiangrai**	**18.07**	**15**		**Pn**	**00 01 00.6**	**-1.3**
BWNR	**Bhubaneshwar**	**19.76**	**333**	*eP*	**Pn**	**00 01 22.9**	**+0.6**
KKM	**Kota Kinabalu**	**21.08**	**80**	P	**P**	**00 01 35.5**	**+0.2**
KKM				IAmb	IAmb	00 01 38.1	
	comp=Z,73nm,0.9s						
QIZ	**Qiongzhong**	**21.54**	**40**	P	**P**	**00 01 40.1**	**+0.1**
QIZ				LR	LR		
	comp=Z,950nm,15.5s						
QIZ				LR	LR		
	comp=Z,540nm,11.8s						
QIZ				LR	LR		
	comp=Z,760nm,18.4s						
HYBB	**Hyderabad (bro**	**22.00**	**313**	*eP*	**P**	**00 01 45.1**	**+0.1**
BOK	**Bokaro**	**22.83**	**337**	*eP*	**P**	**00 01 54.5**	**+0.7**
BOK				IAmb	IAmb	00 01 59.2	
	comp=Z,9.1nm,0.8s						
MYLDM	**Lahad Datu**	**23.25**	**83**	P	**P**	**00 01 59.0**	**+0.9**
KMI	**Kunming**	**23.37**	**17**	⇑P	**P**	**00 02 00.1**	**+0.6**
KMI				pP	sP	00 02 08.0	-1.5
KMI				S	**S**	**00 06 12.3**	**+1.1**
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
KMI				LR	LR		
	comp=Z,920nm,14.2s						
KMI				LR	LR		
	comp=Z,470nm,11.1s						
KMI				LR	LR		
	comp=Z,1μm,14.4s						
PZH	**PanZhiHua**	**24.41**	**14**	P	**P**	**00 02 08.6**	**-0.6**
PZH				pmax	pmax		
	comp=Z,40nm,0.9s						
PZH				pmax	pmax		
	comp=Z,170nm,3.8s						
PZH				LR	LR		
	comp=Z,1μm,15.5s						
PZH				LR	LR		
	comp=Z,650nm,16.5s						
PZH				LR	LR		
	comp=Z,2μm,15.3s						
H08S2	**Diego Garcia H**	**25.01**	**245**	T	T	00 28 23.6	
	baz=66,slow=75,SNR=3762						
H08S3	**Diego Garcia H**	**25.01**	**246**	T	T	00 28 25.8	
	baz=66,slow=75,SNR=2342						
H08S1	**Diego Garcia H**	**25.02**	**245**	T	T	00 28 25.0	
	baz=66,slow=75,SNR=1802						
ODAN	**Odare**	**25.16**	**343**	*eP*	**P**	**00 02 16.8**	**+0.7**
	comp=Z,80nm,1.9s						
RAMN	**Ramite**	**25.48**	**342**	*eP*	**P**	**00 02 20.6**	**+1.6**
TAPN	**Taplejung**	**25.53**	**344**	*eP*	**P**	**00 02 19.1**	**-0.4**
KAPI	**Kappang**	**25.59**	**107**	P	**P**	**00 02 21.1**	**+1.2**
	comp=Z,22nm,0.8s,baz=298,slow=6.6,SNR=7.8						
	comp=Z,22nm,0.8s						
KAPI	**Kappang**	**25.59**	**107**	P	**P**	**00 02 20.8**	**+0.9**
KAPI				IAmb	IAmb	00 02 35.5	
	comp=Z,46nm,1.1s						
GYA	**Guiyang**	**25.97**	**24**	⇑P	**P**	**00 02 23.4**	**+0.1**
GYA				pmax	pmax		
	comp=Z,28nm,1.2s						
JIRN	**Jiri**	**26.27**	**341**	*eP*	**P**	**00 02 26.9**	**+0.6**
	comp=Z,124nm,1.2s						
PKI	**Pulchoki**	**26.45**	**340**	*eP*	**P**	**00 02 30.2**	**+2.3**
PKIN	**Phulchoki**	**26.46**	**340**	*eP*	**P**	**00 02 30.2**	**+2.3**
	comp=Z,4.8nm,0.4s						
GUN	**Gumba**	**26.60**	**341**	*eP*	**P**	**00 02 30.1**	**+0.8**
KKN	**Kakani**	**26.69**	**340**	*eP*	**P**	**00 02 31.5**	**+1.5**
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**27.10**	**352**	P	**P**	**00 02 33.5**	**-0.4**
LSA				IAmb	IAmb	00 02 47.7	
	comp=Z,16nm,0.8s						
LSA	**Lhasa**	**27.10**	**352**	P	**P**	**00 02 34.8**	**+0.9**
LSA				pmax	pmax		
	comp=Z,18nm,0.7s						
LSA				LR	LR		
	comp=Z,95nm,15.7s						
LSA				LR	LR		
	comp=Z,120nm,17.1s						
LSA				LR	LR		
	comp=Z,65nm,7.8s						
GKN	**Gorkha**	**27.11**	**339**	*eP*	**P**	**00 02 35.9**	**+2.2**
DANN	**Dangsing**	**27.75**	**338**	*eP*	**P**	**00 02 42.0**	**+2.4**
CD2	**Chengdu**	**29.13**	**15**	P	**P**	**00 02 50.0**	**-1.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,830nm,14.1s						
CD2				LR	LR		
	comp=Z,390nm,16.1s						
CD2				LR	LR		
	comp=Z,750nm,14.2s						
BATI	**Baumata**	**31.01**	**115**	LR	LR	00 17 37.4	
	comp=Z,461nm,18.3s,baz=251,slow=40						
GOMU	**GeErMu**	**33.29**	**359**	P	**P**	**00 03 28.4**	**-0.1**
GOMU				sP	pP	00 03 35.8	0.0
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,47nm,4.8s						
XAN	**Xi'an**	**33.62**	**21**	⇑P	**P**	**00 03 29.8**	**-1.3**
XAN				pP	pP	00 03 36.3	-2.1
XAN				S	**S**	**00 08 50.4**	**-2.0**
XAN				pmax	pmax		
	comp=Z,20nm,1.1s						
XAN				pmax	pmax		
	comp=Z,120nm,3.8s						
XAN				LR	LR		
	comp=Z,380nm,14.1s						
XAN				LR	LR		
	comp=Z,370nm,14.1s						
XAN				LR	LR		
	comp=Z,530nm,14.6s						
LZH	**Lanzhou**	**34.10**	**12**	*eP*	**P**	**00 03 34.3**	**-1.0**
LZH				sP	pP	00 03 44.1	+1.4
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,4.3s						
LZH				LR	LR		
	comp=Z,330nm,13.1s						
LZH				LR	LR		
	comp=Z,290nm,11.7s						
LZH				LR	LR		
	comp=Z,170nm,11.3s						
THN	**Thein Dam**	**34.81**	**330**	*eP*	**P**	**00 03 45.7**	**+4.4**
LYN	**LuoYang**	**35.45**	**25**	⇑P	**P**	**00 03 46.0**	**-0.8**
LYN				pP	pP	00 03 53.0	-1.1
LYN				sP	sP	00 03 59.3	+2.2
LYN				S	**S**	**00 09 18.4**	**-2.0**
LYN				sS	sS	00 09 34.6	+2.0
LYN				pmax	pmax		
	comp=Z,30nm,0.8s						
LYN				pmax	pmax		
	comp=Z,120nm,4.7s						
LYN				LR	LR		
	comp=Z,680nm,15.0s						
LYN				LR	LR		
	comp=Z,270nm,15.2s						
LYN				LR	LR		
	comp=Z,610nm,14.9s						
FITZ	**Fitzroy Crossi**	**36.34**	**126**	P	**P**	**00 03 54.2**	**-0.4**
	baz=309,slow=6.5						
FITZ	**Fitzroy Crossi**	**36.34**	**126**	P	**P**	**00 03 54.0**	**-0.6**
GTA	**Gaotai**	**36.73**	**6**	*eP*	**P**	**00 03 57.1**	**-0.7**
GTA				pP	pP	00 04 01.1	-4.1
GTA				sP	sP	00 04 04.3	-3.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,80nm,6.0s						
GTA				LR	LR		
	comp=Z,130nm,13.8s						
GTA				LR	LR		
	comp=Z,140nm,16.4s						
GTA				LR	LR		
	comp=Z,180nm,14.9s						
NIL	**Nilore**	**37.03**	**329**	P	**P**	**00 03 59.7**	**-0.6**
NIL				IAmb	IAmb	00 04 30.6	
	comp=Z,12nm,0.9s						
HNS	**HongShan**	**38.82**	**25**	⇑P	**P**	**00 04 15.9**	**+0.6**
HNS				pP	**pP**	**00 04 23.3**	**+0.6**
HNS				*eS*	**S**	**00 10 13.4**	**+1.8**
HNS				pmax	pmax		
	comp=Z,81nm,0.8s						
HNS				LR	LR		
	comp=Z,270nm,14.9s						
HNS				LR	LR		
	comp=Z,320nm,16.4s						
HNS				LR	LR		
	comp=Z,470nm,16.1s						
TIA	**Tai'an**	**38.92**	**29**	⇓P	**P**	**00 04 16.0**	**-0.3**
TIA				pmax	pmax		
	comp=Z,11nm,0.7s						
TIA				LR	LR		
	comp=Z,330nm,13.1s						
TIA				LR	LR		
	comp=Z,350nm,12.8s						
TIA				LR	LR		
	comp=Z,600nm,14.5s						
BTO	**Baotou**	**39.97**	**18**	*eP*	**P**	**00 04 24.8**	**-0.2**
KSH	**Kashi**	**40.61**	**337**	P	**P**	**00 04 27.8**	**-2.6**
KSH				pP	pP	00 04 34.8	-3.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
H01W3	**Cape Leeuwin H**	**41.39**	**156**	T	T	00 48 32.7	
	baz=332,slow=76,SNR=330						
H01W2	**Cape Leeuwin H**	**41.40**	**156**	T	T	00 48 28.2	
	baz=332,slow=76,SNR=441						
H01W1	**Cape Leeuwin H**	**41.40**	**156**	T	T	00 48 35.1	
	baz=332,slow=76,SNR=360						
WMQ	**Urumqi**	**41.46**	**352**	*eP*	**P**	**00 04 38.5**	**+1.2**
WMQ				pP	pP	00 04 45.9	+1.2
WMQ				sP	sP	00 04 51.0	+3.4
WMQ				pmax	pmax		
	comp=Z,16nm,1.5s						
BJI	**Beijing**	**41.66**	**24**	P	**P**	**00 04 39.6**	**+0.7**
BJI				pP	**pP**	**00 04 47.3**	**+1.0**
BJI				sP	**sP**	**00 04 49.8**	**+0.5**
BJI				pmax	pmax		
	comp=Z,31nm,0.9s						
NRN	**Naryn**	**42.26**	**338**	P	**P**	**00 04 44.3**	**+0.1**
SHLS	**Shalkode**	**42.65**	**343**	⇓*eP*	**P**	**00 04 45.9**	**-1.1**
	baz=343						
GAR	**Garm**	**42.68**	**331**	P	**P**	**00 04 47.1**	**-0.2**
GAR				IAmb	IAmb	00 05 03.4	
	comp=Z,17nm,1.0s						
UZB	**Uzynbulak**	**42.77**	**342**	*eP*	**P**	**00 04 48.2**	**+0.1**
	baz=342						
SATY	**Saty**	**42.88**	**342**	*eP*	**P**	**00 04 49.1**	**+0.2**
	baz=342						
CHGR	**Chuyangaron**	**42.99**	**330**	P	**P**	**00 04 48.6**	**-1.3**
CHGR				IAmb	IAmb	00 05 01.9	
	comp=Z,19nm,0.8s						
KPKS	**Kokpek**	**43.16**	**342**	*eP*	**P**	**00 04 50.9**	**-0.3**
	baz=342						
BOOM	**Boomskoye usch**	**43.20**	**339**	P	**P**	**00 04 51.8**	**+0.2**
BOOM				IAmb	IAmb	00 05 07.7	
	comp=Z,20nm,1.4s						
MDOK	**Medeo**	**43.41**	**340**	*eP*	**P**	**00 04 53.4**	**0.0**
	baz=340						
JSU	**Suzuyama**	**43.74**	**45**	P	**P**	**00 04 55.1**	**-0.8**
JSU				IAmb	IAmb	00 05 31.0	
	comp=Z,17nm,1.2s						
AAK	**Ala-Archa**	**43.86**	**338**	P	**P**	**00 04 57.1**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=157,slow=10.0,SNR=4.6						
AAK				LR	LR	00 25 56.4	
	comp=Z,82nm,19.0s,baz=146,slow=40						
	comp=Z,1.6nm,0.4s						
AAK	**Ala-Archa**	**43.86**	**338**	P	**P**	**00 04 56.6**	**-0.4**
KUU	**Kurty**	**44.30**	**340**	*eP*	**P**	**00 04 59.9**	**-0.4**
	baz=340						
WB0	**Warramunga Arr**	**44.41**	**122**	P	**P**	**00 05 00.6**	**-0.8**
WRA	**Warramunga Arr**	**44.44**	**122**	P	**P**	**00 05 02.0**	**+0.3**
	comp=Z,5.0nm,0.9s,baz=301,slow=9.1,SNR=26						
WRA				LR	LR	00 23 53.9	
	comp=Z,132nm,21.2s,baz=310,slow=36						
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**44.44**	**122**	P	**P**	**00 05 01.4**	**-0.3**
WRAB	**Tennant Creek**	**44.44**	**122**	P	**P**	**00 05 01.3**	**-0.5**
WB2	**Warramunga Arr**	**44.45**	**122**	P	**P**	**00 05 01.6**	**-0.2**
SGDS	**Sogindy**	**44.51**	**338**	*eP*	**P**	**00 05 01.8**	**-0.3**
	baz=338						
WR0	**Warramunga Arr**	**44.62**	**122**	P	**P**	**00 05 02.3**	**-0.8**
TDK	**Taldyqorghan**	**44.64**	**343**	*eP*	**P**	**00 05 02.7**	**-0.3**
	baz=343						
XLT	**XiLinHaoTe**	**44.92**	**21**	⇑*iP*	**P**	**00 05 05.6**	**+0.3**
XLT				pP	pP	00 05 14.3	+1.5
XLT				sP	sP	00 05 18.6	+2.8
XLT				S	**S**	**00 11 48.3**	**+6.3**
XLT				pmax	pmax		
	comp=Z,14nm,0.9s						
XLT				pmax	pmax		
	comp=Z,100nm,3.5s						
XLT				LR	LR		
	comp=Z,28nm,12.7s						
XLT				LR	LR		
	comp=Z,200nm,14.5s						
XLT				LR	LR		
	comp=Z,410nm,15.6s						
IUG	**Iuzhnay**	**45.30**	**333**	*eP*	**P**	**00 05 08.5**	**+0.1**
	baz=333						
MK31	**Makanchi Array**	**45.32**	**347**	P	**P**	**00 05 08.1**	**-0.3**
MK31				IAmb	IAmb	00 05 09.7	
	comp=Z,9.5nm,0.8s						
MKAR	**Makanchi Array**	**45.32**	**347**	P	**P**	**00 05 08.7**	**+0.4**
	comp=Z,14nm,0.7s,baz=169,slow=8.1,SNR=92						
MKAR				LR	LR	00 28 20.2	
	comp=Z,52nm,19.6s,baz=182,slow=42						
	comp=Z,14nm,0.7s						
MKAR	**Makanchi Array**	**45.32**	**347**	P	**P**	**00 05 08.2**	**-0.1**
MAKZ	**Makanchi**	**45.40**	**347**	P	**P**	**00 05 08.6**	**-0.4**
MAKZ				IAmb	IAmb	00 05 10.3	
	comp=Z,10nm,0.8s						
ZSN	**Zaisan**	**45.45**	**350**	*eP*	**P**	**00 05 09.2**	**-0.1**
	baz=350						
KSRS	**Korea Array**	**45.70**	**37**	P	**P**	**00 05 11.1**	**-0.3**
	comp=Z,4.4nm,0.7s,baz=222,slow=9.0,SNR=12						
KSRS				LR	LR	00 26 54.6	
	comp=Z,137nm,18.2s,baz=235,slow=40						
	comp=Z,4.4nm,0.7s						
AS31	**Alice Springs**	**45.81**	**127**	P	**P**	**00 05 11.4**	**-1.3**
ASAR	**Alice Springs**	**45.81**	**127**	P	**P**	**00 05 13.2**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=298,slow=7.7,SNR=20						
	comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**45.81**	**127**	P	**P**	**00 05 12.6**	**0.0**
KK31	**Karatay Array**	**45.86**	**335**	P	**P**	**00 05 12.8**	**+0.2**
KK31				IAmb	IAmb	00 05 24.5	
	comp=Z,28nm,1.7s						
KKAR	**Karatay Array**	**45.86**	**335**	P	**P**	**00 05 12.6**	**-0.1**
SONM	**Songino Array**	**45.93**	**10**	P	**P**	**00 05 13.2**	**-0.1**
	comp=Z,12nm,0.8s,baz=188,slow=8.8,SNR=56						
SONM				LR	LR	00 26 31.1	
	comp=Z,194nm,19.5s,baz=188,slow=39						
	comp=Z,12nm,0.8s						
SONM	**Songino Array**	**45.93**	**10**	P	**P**	**00 05 12.5**	**-0.8**
SONM				IAmb	IAmb	00 05 14.0	
	comp=Z,16nm,0.9s						
ULN	**Ulaanbaatar**	**46.08**	**11**	P	**P**	**00 05 13.0**	**-1.5**
ULN				IAmb	IAmb	00 05 15.0	
	comp=Z,8.7nm,0.9s						
BTLS	**Baital**	**46.10**	**339**	*eP*	**P**	**00 05 14.6**	**+0.1**
	baz=339						
JMN	**Monobe**	**47.37**	**45**	P	**P**	**00 05 25.5**	**+0.8**
JMN				IAmb	IAmb	00 05 26.6	
	comp=Z,22nm,0.9s						
GEYT	**Alibeck**	**48.84**	**321**	P	**P**	**00 05 36.1**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=154,slow=18,SNR=3.5						
	comp=Z,1.8nm,0.7s						
GEYT	**Alibeck**	**48.84**	**321**	P	**P**	**00 05 35.9**	**-0.1**
SEM	**Semipalatinsk**	**49.18**	**347**	*eP*	**P**	**00 05 38.2**	**-0.4**
	baz=347						
KURBB	**Kurchatov Arra**	**49.78**	**346**	P	**P**	**00 05 43.1**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=167,slow=6.8,SNR=37						
	comp=Z,3.8nm,0.7s						
KURK	**Kurchatov**	**49.84**	**346**	P	**P**	**00 05 43.2**	**-0.1**
KURK				IAmb	IAmb	00 05 52.6	
	comp=Z,8.3nm,0.9s						
BRZS	**Berezniki**	**50.84**	**341**	*eP*	**P**	**00 05 50.6**	**-0.4**
	baz=341						
ZAA0	**Zalesovo Array**	**51.77**	**352**	P	**P**	**00 05 57.5**	**-0.3**
ZALV	**Zalesovo Beam**	**51.77**	**352**	P	**P**	**00 05 58.2**	**+0.4**
	comp=Z,30nm,0.7s,baz=182,slow=6.3,SNR=123						
	comp=Z,30nm,0.7s						
ZALV	**Zalesovo Beam**	**51.77**	**352**	P	**P**	**00 05 58.1**	**+0.3**
MJAR	**Matsushiro Arr**	**51.86**	**44**	LR	LR	00 31 13.7	
	comp=Z,101nm,18.0s,baz=208,slow=40						
USRK	**Ussuriysk Ar.**	**52.46**	**33**	P	**P**	**00 06 03.9**	**+0.8**
ATD	**Arta Tunnel**	**52.72**	**282**	LR	LR	00 24 44.7	
	comp=Z,64nm,21.6s,baz=78,slow=32						
BRVK	**Borovoye**	**54.26**	**342**	P	**P**	**00 06 15.8**	**-0.4**
BRVK				IAmb	IAmb	00 06 16.8	
	comp=Z,6.1nm,0.8s						
CTA	**Charters Tower**	**54.87**	**117**	LR	LR	00 32 55.1	
	comp=Z,121nm,18.4s,baz=261,slow=40						
ABKAR	**Akbulak array**	**55.28**	**333**	P	**P**	**00 06 23.6**	**-0.1**
KLR	**Kul'dur**	**55.75**	**28**	P	**P**	**00 06 27.4**	**+0.4**
	comp=Z,8.8nm,1.0s,baz=285,slow=10.0,SNR=4.1						
	comp=Z,8.8nm,1.0s						
AKTO	**Aktyubinsk**	**57.00**	**332**	P	**P**	**00 06 35.9**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=134,slow=7.4,SNR=8.2						
	comp=Z,2.8nm,0.9s						
GNI	**Garni**	**58.89**	**316**	LR	LR	00 34 01.4	
	comp=Z,41nm,20.1s,baz=120,slow=38						
YSS	**Yuzh-Sakhalins**	**60.16**	**36**	P	**P**	**00 06 57.9**	**-0.1**
ARU	**Arti**	**61.05**	**338**	P	**P**	**00 07 03.7**	**-0.2**
	comp=Z,3.5nm,0.7s,baz=173,slow=4.2,SNR=10						
ARU				LR	LR	00 35 21.4	
	comp=Z,61nm,20.4s,baz=132,slow=38						
	comp=Z,3.5nm,0.7s						
ARU	**Arti**	**61.05**	**338**	P	**P**	**00 07 03.5**	**-0.4**
MMAI	**Mount Meron Ar**	**63.49**	**306**	LR	LR	00 36 57.0	
	comp=Z,51nm,18.0s,baz=268,slow=38						
YAK	**Yakutsk**	**64.49**	**17**	LR	LR	00 38 22.7	
	comp=Z,266nm,18.9s,baz=256,slow=39						
YAK	**Yakutsk**	**64.49**	**17**	P	**P**	**00 07 25.0**	**-1.7**
MBAR	**Mbarara**	**64.65**	**268**	LR	LR	00 33 33.5	
	comp=Z,79nm,18.4s,baz=86,slow=34						
NRIK	**Noril'sk**	**66.69**	**357**	P	**P**	**00 07 40.8**	**0.0**
	comp=Z,1.6nm,0.5s,baz=165,slow=7.9,SNR=4.8						
	comp=Z,1.6nm,0.5s						
NRIK	**Noril'sk**	**66.69**	**357**	P	**P**	**00 07 39.9**	**-0.9**
LSZ	**Lusaka**	**68.77**	**253**	LR	LR	00 34 46.0	
	comp=Z,66nm,18.2s,baz=160,slow=33						
PETK	**Petropavlovsk-**	**71.51**	**34**	LR	LR	00 43 10.3	
	comp=Z,102nm,18.0s,baz=218,slow=39						
TIXI	**Tiksi**	**72.01**	**11**	LR	LR	00 42 49.6	
	comp=Z,110nm,18.2s,baz=183,slow=38						
TIXI	**Tiksi**	**72.01**	**11**	P	**P**	**00 08 12.7**	**-1.0**
TIXI				IAmb	IAmb	00 08 20.9	
	comp=Z,12nm,1.1s						
LBTB	**Lobatse**	**72.90**	**243**	LR	LR	00 36 54.9	
	comp=Z,122nm,19.2s,baz=49,slow=33						
MLR	**Muntele Rosu**	**73.67**	**317**	P	**P**	**00 08 24.3**	**+0.1**
MLR				IAmb	IAmb	00 08 34.8	
	comp=Z,9.6nm,1.2s						
BOSA	**Boshof**	**73.93**	**239**	LR	LR	00 38 36.8	
	comp=Z,90nm,19.8s,baz=20,slow=34						
BUR08	**Bucovina Ar. S**	**74.65**	**319**	P	**P**	**00 08 30.2**	**+0.2**
FINES	**FINESS Array B**	**77.77**	**333**	P	**P**	**00 08 47.4**	**+0.2**
	comp=Z,5.5nm,0.9s,baz=101,slow=6.0,SNR=8.6						
	comp=Z,5.5nm,0.9s						
ARCES	**ARCESS Array B**	**80.46**	**340**	P	**P**	**00 09 02.6**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=96,slow=6.1,SNR=8.5						
ARCES				LR	LR	00 49 33.4	
	comp=Z,27nm,19.9s,baz=132,slow=39						
	comp=Z,1.3nm,0.6s						
KRLC	**Kraliky**	**80.55**	**320**	*eP*	**P**	**00 09 02.8**	**+0.1**
DPC	**Dobruska-Polom**	**80.88**	**320**	*eP*	**P**	**00 09 05.9**	**+1.4**
CONA	**Conrad Observa**	**80.91**	**318**	*eP*	P	00 09 14.2	+10
	comp=Z,2.2nm,1.0s						
ARSA	**Arzberg**	**81.07**	**317**	*eP*	P	00 09 14.8	+9.2
	comp=Z,3.5nm,1.0s						
SOKA	**Soboth**	**81.35**	**317**	*eP*	P	00 09 16.6	+10
	comp=Z,5.6nm,1.0s						
RPZ	**Rata Peaks**	**81.62**	**135**	LR	LR	00 48 14.6	
	comp=Z,67nm,18.0s,baz=278,slow=38						
MOA	**Molln**	**81.97**	**318**	*eP*	P	00 09 18.2	+8.0
	comp=Z,2.7nm,1.3s						
CKRC	**Cesky Krumlov**	**82.02**	**319**	*eP*	**P**	**00 09 15.3**	**+4.8**
GEC2	**GERESS Array S**	**82.42**	**319**	P	**P**

comp=Z,37nm,18.9s,baz=136,slow=34
TXAR Lajitas Array 143.28 28 PKP PKPbc 00 16 23.2 +0.8
comp=Z,0.7nm,0.9s,baz=207,slow=1.4,SNR=4.3
JCT Junction City 143.94 23 PKPdf PKPbc 00 16 24.9 +0.7
833A Chaparral WMA, 146.03 24 PKPdf **PKPbc 00 16 30.6 -0.2**

BJI ***16*** *23:57:52.8±0.0, 18°.38N×146°.37E, h200km, mb4.6/30, mB4.7/11*
DJA ***16*** *23:57:56.0±1.8, 18°N±13°×14°6E±°, h189km±11km, M5.3/19, mb5.0/19, mB5.3/3, MLv5.5/1, Mw(mB)4.7/3, MwMwp4.8/1, Mwp5.1/1*
NEIC ***16*** *23:57:58.6±2.1, 18°.45N±0°.07×145°.8E±0°.1, h196km±5km, mb4.9/188, Error ellipse: s-maj=15.0km s-min=10.2km az=84.0*
IDC ***16*** *23:57:58.9±0.4, 18°.47N×145°.71E, h208km±3km, mb4.3/39, mbtmp4.8/42, Error ellipse: s-maj=9.6km s-min=5.7km az=82.0*
GCMT ***16*** *23:58:00.6±0.3, 18°.41N±0°.02×145°.99E±0°.02, h190km±2km, MW5.0/111, Moment Tensor Solution. s44,c48; s111,c150; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.39±.12; Mθθ-0.45±.16; Mφφ-2.94±.16; Mrθ-2.17±.10; Mrφ 1.57±.15; Mθφ0.65±.12; Best double couple: M=4.20500×10^16 NP1:φs312.00000°,δ61.00000°, λ66.00000°. NP2:φs174.00000°,δ37.00000°,λ126.00000°. Principal axes: T 4.3680, Plg66.0000°, Azm179.0000°; N -0.3260, Plg21.0000°, Azm324.0000°; P -4.0410, Plg13.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 23:57:58.9±0.3, 18°.49N±0°.04×145°.72E±0°.06, h207km±2km, h207km:pP-P, n514, σ1s26/490, mb4.8/147, 2C-1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.94**	**190**	P	**Pn**	**23 59 11.7**	**-1.1**
	275nm,0.6s,baz=104,slow=1.5,SNR=13						
GUMO				S	**S**	**00 00 09.3**	**-1.5**
	490nm,0.4s,baz=352,slow=22,SNR=4.3						
GUMO	**Guam**	**4.94**	**190**	Pn	**Pn**	**23 59 10.9**	**-1.8**
GUMO	**Guam**	**4.94**	**190**	P	**Pn**	**23 59 11.7**	**-1.1**
JCJ	**Chichijima**	**9.16**	**340**	P	**Pn**	**00 00 06.2**	**-0.9**
	39nm,0.3s,baz=103,slow=13,SNR=10						
JCJ				S	**S**	**00 01 43.5**	**-6.6**
	138nm,0.4s,baz=140,slow=23,SNR=9.4						
JCJ	**Chichijima**	**9.16**	**340**	Pn	**Pn**	**00 00 05.6**	**-1.5**
JHJ2	**Mitsune**	**15.49**	**341**		**Pn**	**00 01 28.5**	**+1.8**
PATS	**Pohnpei**	**16.87**	**132**	P	**Pn**	**00 01 44.0**	**+0.6**
JOW	**Kunigami**	**18.10**	**300**	P	**Pn**	**00 01 58.0**	**+0.2**
JOW	**Kunigami**	**18.10**	**300**	P	**Pn**	**00 01 58.8**	**+1.1**
INU	**Inuyama**	**18.48**	**337**	P	**P**	**00 01 59.9**	**+0.5**
JMN	**Monobe**	**18.50**	**327**	P	**Pn**	**00 02 02.9**	**+0.4**
JGF	**Kuroka**	**18.58**	**338**	P	**Pn**	**00 02 02.7**	**-0.6**
MJAR	**Matsushiro Arr**	**19.16**	**341**	P	**P**	**00 02 06.7**	**-0.1**
	5.2nm,0.4s,baz=166,slow=9.8,SNR=15						
MAJO	**Matsushiro**	**19.16**	**341**	P	**P**	**00 02 06.3**	**-0.5**
MAJO	**Matsushiro**	**19.16**	**341**	P	**Pn**	**00 02 10.5**	**+0.3**
JMM	**Marumori**	**19.78**	**348**	P	**Pn**	**00 02 15.9**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**19.89**	**87**	T	T	00 23 31.8	
	baz=274,slow=74,SNR=5.0						
JHS	**Saijyo**	**19.89**	**328**	P	**Pn**	**00 02 17.4**	**-1.6**
H11S1	**WAKE ISLAND Hy**	**19.90**	**87**	T	T	00 23 28.8	
	baz=274,slow=74,SNR=8.3						
H11S2	**WAKE ISLAND Hy**	**19.91**	**87**	T	T	00 23 37.7	
	baz=274,slow=74,SNR=8.7						
H11N1	**WAKE ISLAND Hy**	**20.04**	**83**	T	T	00 23 52.4	
	baz=267,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**20.05**	**83**	T	T	00 23 52.6	
	baz=267,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**20.06**	**83**	T	T	00 23 53.3	
	baz=267,slow=74,SNR=14						
JSD	**Sado**	**20.54**	**343**	P	**P**	**00 02 21.6**	**+0.2**
SMPI	**Sarmi**	**21.49**	**199**	P	**P**	**00 02 30.4**	**-1.2**
	2μm38nm,2.0s						
GENI	**Genyem**	**21.65**	**195**	P	**P**	**00 02 30.7**	**-2.5**
	175nm,1.0s						
GENI	**Genyem**	**21.65**	**195**	P	**P**	**00 02 33.5**	**+0.3**
SRPI	**Serui, Papua**	**22.28**	**206**	P	**P**	**00 02 39.1**	**-0.2**
	171nm,1.1s						
JTM	**Tenmabayashi**	**22.58**	**351**	P	**P**	**00 02 43.0**	**+1.3**
YULB	**Yu-li**	**23.31**	**286**	P	**P**	**00 02 48.8**	**+0.2**
KWAJ	**Kwajalein Atol**	**23.33**	**111**	P	**P**	**00 02 48.3**	**-0.5**
YHNB	**Yeheng**	**23.44**	**289**	P	**P**	**00 02 51.0**	**+1.2**
YHNB	**Yeheng**	**23.44**	**289**	P	**P**	**00 02 51.9**	**+2.1**
SSLB	**Suanglung**	**23.68**	**287**	P	**P**	**00 02 52.8**	**+0.9**
SSLB	**Suanglung**	**23.68**	**287**	P	**P**	**00 02 53.5**	**+1.6**
TPUB	**Ta-pu**	**23.91**	**286**	P	**P**	**00 02 54.5**	**+0.4**
SWI	**Sorong**	**23.92**	**218**	P	**P**	**00 02 53.2**	**-0.9**
	38nm,0.6s						
SIJI	**Sorong**	**23.92**	**218**	P	**P**	**00 02 55.4**	**+1.3**
	21nm,0.5s,baz=32,slow=11						
	21nm,0.5s						
KSCHJ	**Chungju**	**24.06**	**323**	P	**P**	**00 02 55.0**	**-0.2**
KSCHJ				IAmb	IAmb	00 03 37.2	
	comp=Z,40nm,1.7s						
KSRS	**Korea Array**	**24.50**	**324**	P	**P**	**00 02 59.2**	**+0.1**
	comp=Z,6.4nm,0.6s,baz=146,slow=9.0,SNR=35						
KSRS				pP	**pP**	**00 03 38.9**	**+1.2**
	comp=Z,10nm,0.9s,baz=145,slow=9.4,SNR=6.6						
	comp=Z,6.4nm,0.6s						
KSAR	**Wonju Array Be**	**24.51**	**324**	P	**P**	**00 02 59.5**	**+0.2**
KS19	**Wonju Array Si**	**24.56**	**324**	P	**P**	**00 02 59.2**	**-0.5**
FAKI	**Fak Fak**	**25.07**	**213**	P	**P**	**00 03 04.0**	**-0.6**
FAKI	**Fak Fak**	**25.07**	**213**	P	**P**	**00 03 02.9**	**-1.7**
	comp=Z,1μmcomp=Z,54nm,1.3s						
FAKI	**Fak Fak**	**25.07**	**213**	P	**P**	**00 03 04.5**	**-0.1**
MYLDM	**Lahad Datu**	**29.68**	**247**	P	**P**	**00 03 48.0**	**+2.4**
MYLDM				IAmb	IAmb	00 03 48.6	
	comp=Z,18nm,0.8s						
KKM	**Kota Kinabalu**	**31.31**	**250**	P	**P**	**00 04 01.1**	**+1.0**
KKM				IAmb	IAmb	00 04 01.8	
	comp=Z,19nm,0.6s						
COEN	**Coen**	**32.34**	**185**	P	**P**	**00 04 07.9**	**-1.0**
KLR	**Kul'dur**	**32.67**	**343**	P	**P**	**00 04 11.6**	**+0.1**
	comp=Z,12nm,0.4s,baz=161,slow=8.6,SNR=54						
	comp=Z,12nm,0.4s						
BJT	**Baijiatuau**	**33.29**	**316**	P	**P**	**00 04 17.1**	**+0.2**
BJT				pP	**pP**	**00 04 59.0**	**+0.7**
BJI	**Beijing**	**33.30**	**316**	P	**P**	**00 04 16.8**	**-0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KDU	**Kakadu**	**33.62**	**204**	P	**P**	**00 04 19.5**	**-0.5**
MTN	**Manton Dam**	**34.30**	**206**	P	**P**	**00 04 26.0**	**+0.2**
MTN	**Manton Dam**	**34.30**	**206**	P	**P**	**00 04 26.1**	**+0.3**
KAPI	**Kappang**	**34.65**	**230**	P	**P**	**00 04 29.7**	**+0.7**
	comp=Z,10nm,0.4s,baz=128,slow=1.6,SNR=4.4						
	comp=Z,10nm,0.4s						
SOEI	**Soe**	**35.16**	**219**	P	**P**	**00 04 31.7**	**-1.6**
SOEI	**Soe**	**35.16**	**219**	P	**P**	**00 04 34.0**	**+0.7**
PETK	**Petropavlovsk-**	**35.79**	**12**	P	**P**	**00 04 39.5**	**+1.4**
	comp=Z,1.2nm,0.5s,baz=178,slow=5.5,SNR=2.5						
PETK				PcP	**PcP**	**00 07 00.1**	**-1.0**
	comp=Z,2.9nm,0.6s,baz=171,slow=5.6,SNR=3.9						
	comp=Z,1.2nm,0.5s						
MTSU	**Mount Surprise**	**36.42**	**182**	P	**P**	**00 04 43.6**	**-0.3**
SBUM	**Sibu**	**36.48**	**248**	P	**P**	**00 04 45.7**	**+1.2**
SBUM				IAmb	IAmb	00 04 46.4	
	comp=Z,17nm,0.4s						
GYA	**Guiyang**	**36.84**	**290**	⇑P	**P**	**00 04 51.0**	**+3.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
KNRA	**Kununurra**	**37.84**	**207**	P	**P**	**00 04 56.0**	**+0.2**
KNRA	**Kununurra**	**37.84**	**207**	P	**P**	**00 04 56.2**	**+0.4**
CTA	**Charters Tower**	**38.34**	**179**	P	**P**	**00 05 00.2**	**+0.2**
	comp=Z,4.8nm,0.5s,baz=356,slow=8.5,SNR=8.2						
	comp=Z,4.8nm,0.5s						
CTAO	**Charters Tower**	**38.34**	**179**	P	**P**	**00 04 59.9**	**-0.1**
CTAO				IAmb	IAmb	00 05 51.2	
	comp=Z,38nm,1.4s						
UBPT	**Khong Chiam**	**38.59**	**272**	P	**P**	**00 05 03.6**	**+1.4**
QIS	**Mount Isa**	**39.27**	**189**	P	**P**	**00 05 08.5**	**+0.8**
WB0	**Warramunga Arr**	**39.61**	**197**	P	**P**	**00 05 10.4**	**-0.1**
WR0	**Warramunga Arr**	**39.76**	**197**	P	**P**	**00 05 11.2**	**-0.5**
WR0				IAmb	IAmb	00 05 12.4	
	comp=Z,59nm,1.2s						
WR0				PcP	**PcP**	**00 07 13.7**	**-0.1**
WRAB	**Tennant Creek**	**39.78**	**197**	P	**P**	**00 05 11.9**	**0.0**
WRAB	**Tennant Creek**	**39.78**	**197**	P	**P**	**00 05 11.7**	**-0.2**
WRAB	**Tennant Creek**	**39.78**	**197**	P	P	00 05 02.5	-9.4
WB2	**Warramunga Arr**	**39.79**	**197**	P	**P**	**00 05 11.8**	**-0.2**
WB2				PcP	**PcP**	**00 07 13.8**	**-0.1**
WRA	**Warramunga Arr**	**39.79**	**197**	P	**P**	**00 05 12.0**	**0.0**
	comp=Z,28nm,0.7s,baz=13,slow=8.7,SNR=91						
WRA				PcP	**PcP**	**00 07 13.7**	**-0.4**
	comp=Z,8.6nm,0.6s,baz=17,slow=3.5,SNR=12						
	comp=Z,28nm,0.7s						
WRA	**Warramunga Arr**	**39.79**	**197**	P	**P**	**00 05 11.8**	**-0.2**
WRA				PcP	**PcP**	**00 07 13.1**	**-0.9**
LZH	**Lanzhou**	**40.78**	**304**	⇑P	**P**	**00 05 22.3**	**+2.1**
LZH				sP	sP	00 06 31.3	+5.6
LZH				pmax	pmax		
	comp=Z,32nm,1.4s						
PZH	**PanZhiHua**	**41.25**	**289**	P	**P**	**00 05 26.6**	**+2.5**
PZH				pmax	pmax		
	comp=Z,20nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,4.7s						
FITZ	**Fitzroy Crossi**	**41.37**	**210**	P	**P**	**00 05 25.7**	**+0.7**
FITZ	**Fitzroy Crossi**	**41.37**	**210**	P	**P**	**00 05 25.5**	**+0.6**
KOUNC	**Koumac, New Ca**	**42.86**	**154**	P	**P**	**00 05 36.4**	**-0.5**
ULN	**Ulaanbaatar**	**42.95**	**322**	P	**P**	**00 05 37.0**	**-0.6**
ULN	**Ulaanbaatar**	**42.95**	**322**	P	**P**	**00 05 37.7**	**+0.2**
ULN				pP	**pP**	**00 06 22.1**	**+1.5**
SONM	**Songino Array**	**43.32**	**322**	P	**P**	**00 05 40.5**	**0.0**
	comp=Z,5.0nm,0.5s,baz=130,slow=8.6,SNR=18						
SONM				pP	**pP**	**00 06 22.9**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=124,slow=6.5,SNR=1.2						
	comp=Z,5.0nm,0.5s						
SONM	**Songino Array**	**43.32**	**322**	P	**P**	**00 05 40.3**	**-0.2**
AS31	**Alice Springs**	**43.46**	**196**	P	**P**	**00 05 41.4**	**-0.3**
ASAR	**Alice Springs**	**43.46**	**196**	P	**P**	**00 05 41.2**	**-0.5**
	comp=Z,5.8nm,0.5s,baz=16,slow=6.5,SNR=57						
ASAR				PcP	**PcP**	**00 07 25.8**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=19,slow=3.1,SNR=6.8						
ASAR				S	**S**	**00 11 53.2**	**-1.3**
	comp=Z,2.7nm,0.9s,baz=19,slow=21,SNR=10						
	comp=Z,5.8nm,0.5s						
ASAR	**Alice Springs**	**43.46**	**196**	P	**P**	**00 05 41.0**	**-0.7**
ASAR				PcP	**PcP**	**00 07 26.1**	**0.0**
EIDS	**Eidsvold**	**43.91**	**173**	P	**P**	**00 05 43.6**	**-1.6**
EIDS				IAmb	IAmb	00 06 57.1	
	comp=Z,40nm,1.5s						
CMAR	**Chiang Mai Arr**	**44.27**	**278**	P	**P**	**00 05 49.5**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=68,slow=6.3,SNR=10						
CMAR				pP	**pP**	**00 06 33.2**	**+1.9**
	comp=Z,6.3nm,1.0s,baz=65,slow=7.0,SNR=4.3						
	comp=Z,2.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.27**	**278**	P	**P**	**00 05 48.6**	**+0.3**
GTA	**Gaotai**	**44.69**	**308**	⇓P	**P**	**00 05 52.6**	**+1.1**
GTA				pP	pwP	00 06 40.3	+0.4
RMQ	**Roma**	**44.80**	**176**	P	**P**	**00 05 51.8**	**-0.5**
QLP	**Quilpie**	**44.83**	**182**	P	**P**	**00 05 52.5**	**0.0**
YAK	**Yakutsk**	**44.93**	**349**	P	**P**	**00 05 52.9**	**+0.1**
	comp=Z,10nm,0.3s,baz=154,slow=2.4,SNR=6.5						
	comp=Z,10nm,0.3s						
YAK	**Yakutsk**	**44.93**	**349**	P	**P**	**00 05 52.2**	**-0.6**
YAK				IAmb	IAmb	00 05 53.5	
	comp=Z,39nm,0.7s						
NOUC	**Port Laguerre**	**45.09**	**153**	P	**P**	**00 05 55.9**	**+1.3**
	comp=Z,59nm,1.3s						
DZM	**Mont Dzumac**	**45.12**	**152**	P	**P**	**00 05 55.3**	**+0.3**
	comp=Z,25nm,0.5s,baz=199,slow=8.2,SNR=17						
	comp=Z,25nm,0.5s						
DZM	**Mont Dzumac**	**45.12**	**152**	P	**P**	**00 05 55.3**	**+0.3**
DZM	**Mont Dzumac**	**45.12**	**152**	P	**P**	**00 05 56.2**	**+1.2**
DZM	**Mont Dzumac**	**45.12**	**152**	P	**P**	**00 05 55.1**	**0.0**
DZM				pP	**pP**	**00 06 39.8**	**+1.1**
DZM				sP	**sP**	**00 07 03.2**	**+1.7**
OUENC	**Ouen Island, N**	**45.60**	**152**	P	**P**	**00 05 58.3**	**-0.3**
OUENC	**Ouen Island, N**	**45.60**	**152**	P	**P**	**00 05 59.8**	**+1.2**
KULM	**Kulim**	**45.87**	**259**	P	**P**	**00 06 01.8**	**+0.8**
KULM				IAmb	IAmb	00 06 03.7	
	comp=Z,29nm,0.7s						
WRKA	**Warakurna**	**46.47**	**202**	P	**P**	**00 06 06.1**	**+0.6**
MBWA	**Marble Bar**	**46.91**	**214**	P	**P**	**00 06 08.1**	**-0.7**
MBWA				IAmb	IAmb	00 06 10.3	
	comp=Z,32nm,1.0s						
MBWA	**Marble Bar**	**46.91**	**214**	P	**P**	**00 06 09.1**	**+0.2**
MBWA	**Marble Bar**	**46.91**	**214**	P	**P**	**00 06 09.0**	**+0.2**
PSA00	**Pilbara Seismi**	**47.19**	**214**	P	**P**	**00 06 11.3**	**+0.3**
PSA00				IAmb	IAmb	00 06 12.6	
	comp=Z,86nm,1.4s						
PSA00	**Pilbara Seismi**	**47.19**	**214**	P	**P**	**00 06 11.6**	**+0.6**
MSVF	**Nonsavu**	**48.02**	**137**	P	**P**	**00 06 18.0**	**+0.5**
	comp=Z,18nm,0.8s,baz=294,slow=5.9,SNR=5.2						
	comp=Z,18nm,0.8s						
MSVF	**Nonsavu**	**48.02**	**137**	P	**P**	**00 06 19.1**	**+1.5**
TAVE	**Taveuni**	**48.66**	**134**	P	**P**	**00 06 24.3**	**+2.0**
	comp=Z,73nm,1.2s						
ARMA	**Armidale**	**48.96**	**173**	P	**P**	**00 06 23.6**	**-0.9**
ARMA	**Armidale**	**48.96**	**173**	P	**P**	**00 06 24.2**	**-0.3**
LCRK	**Leigh Creek**	**49.19**	**189**	P	**P**	**00 06 25.7**	**-0.4**
CMSA	**Cobar Meteorol**	**49.74**	**180**	P	**P**	**00 06 29.4**	**-0.9**
MULG	**Mulgathing**	**49.77**	**193**	P	**P**	**00 06 30.0**	**-0.5**
GSI	**Gunungsitoli**	**50.19**	**256**	P	**P**	**00 06 34.7**	**+0.6**
STKA	**Stephens Creek**	**50.24**	**185**	P	**P**	**00 06 32.9**	**-1.1**
	comp=Z,4.5nm,0.3s,baz=358,slow=9.3,SNR=3.9						
	comp=Z,4.5nm,0.3s						
STKA	**Stephens Creek**	**50.24**	**185**	P	**P**	**00 06 32.3**	**-1.7**
STKA	**Stephens Creek**	**50.24**	**185**	P	**P**	**00 06 33.1**	**-0.9**
GIRL	**Giralia**	**51.17**	**218**	P	**P**	**00 06 42.8**	**+1.7**
BBOO	**Buckleboo**	**51.84**	**190**	P	**P**	**00 06 44.5**	**-1.5**
BBOO				IAmb	IAmb	00 06 49.5	
	comp=Z,13nm,0.6s						
FORT	**Forrest**	**51.85**	**199**	P	**P**	**00 06 45.8**	**-0.2**
FORT				IAmb	IAmb	00 06 46.9	
	comp=Z,34nm,0.8s						
MEEK	**Meekatharra**	**52.01**	**211**	P	**P**	**00 06 47.4**	**+0.1**
HTT	**Hallett**	**52.04**	**187**	P	**P**	**00 06 47.1**	**-0.3**
CAN	**Canberra**	**53.61**	**177**	P	**P**	**00 06 58.4**	**-0.4**
CAN				IAmb	IAmb	00 06 59.8	
	comp=Z,35nm,1.5s						
CAN	**Canberra**	**53.61**	**177**	P	**P**	**00 06 58.0**	**-0.8**
CAN				pP	**pP**	**00 07 44.1**	**-0.3**
GAMB	**Gambell**	**53.64**	**22**	P	**P**	**00 07 00.4**	**+1.8**
GAMB				IAmb	IAmb	00 08 53.4	
	comp=Z,25nm,1.2s						
TIXI	**Tiksi**	**54.08**	**353**	P	**P**	**00 07 01.4**	**-0.3**
WMQ	**Urumqi**	**54.46**	**311**	*e*P	**P**	**00 07 06.1**	**+1.0**
WMQ				pP	pwP	00 07 54.1	-1.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
ARPS	**Mount Arapiles**	**55.08**	**184**	P	**P**	**00 07 09.2**	**-0.2**
MORW	**Morawa**	**55.29**	**212**	P	**P**	**00 07 11.0**	**0.0**
MORW	**Morawa**	**55.29**	**212**	P	**P**	**00 07 11.2**	**+0.1**
TOO	**Toolangi**	**55.76**	**180**	P	**P**	**00 07 14.1**	**-0.2**
TOO				IAmb	IAmb	00 07 15.0	
	comp=Z,14nm,0.9s						
BLDU	**Ballidu**	**56.24**	**210**	P	**P**	**00 07 17.7**	**-0.1**
KLBR	**Kellerberrin**	**56.57**	**209**	P	**P**	**00 07 19.7**	**-0.4**
P16K	**Nushagak River**	**57.17**	**31**	P	**P**	**00 07 25.9**	**+2.0**
	baz=250						
N16K	**Nishlik Lake**	**57.31**	**29**	P	**P**	**00 07 26.9**	**+2.0**
	baz=248						
O16K	**Kokwok River B**	**57.31**	**30**	P	**P**	**00 07 26.5**	**+1.5**
	baz=249						
O17K	**Koliganek Bris**	**57.85**	**30**	P	**P**	**00 07 30.2**	**+1.5**
	baz=250						
NWAO	**Narrogin (SRO)**	**57.93**	**208**	P	**P**	**00 07 29.6**	**+0.1**
NWAO	**Narrogin (SRO)**	**57.93**	**208**	P	**P**	**00 07 29.5**	**-0.1**
P17K	**Kvichak River**	**57.98**	**31**	P	**P**	**00 07 30.6**	**+1.1**
	baz=251						
ZAA0	**Zalesovo Array**	**58.19**	**323**	P	**P**	**00 07 30.8**	**-0.3**
ZALV	**Zalesovo Beam**	**58.19**	**323**	P	**P**	**00 07 30.4**	**-0.7**
	comp=Z,4.7nm,0.6s,baz=111,slow=7.5,SNR=5.0						
ZALV				pP	**pP**	**00 08 18.5**	**+1.6**
	comp=Z,4.7nm,0.7s,baz=95,slow=6.7,SNR=4.0						
	comp=Z,4.7nm,0.6s						
ZALV	**Zalesovo Beam**	**58.19**	**323**	P	**P**	**00 07 29.7**	**-1.4**
ZALV				PcP	**PcP**	**00 08 19.1**	**-1.1**
SII	**Sitkinak Islan**	**58.37**	**34**	P	**P**	**00 07 33.8**	**+1.4**
SII	**Sitkinak Islan**	**58.37**	**34**	P	**P**	**00 07 33.8**	**+1.4**
	baz=255						
MK31	**Makanchi Array**	**58.62**	**314**	P	**P**	**00 07 34.8**	**+0.5**
MK31				PcP	**PcP**	**00 08 21.7**	**-0.4**
MK31				IAmb	IAmb	00 08 25.2	
	comp=Z,21nm,1.1s						
MKAR	**Makanchi Array**	**58.62**	**314**	P	**P**	**00 07 34.9**	**+0.6**
	comp=Z,3.7nm,0.5s,baz=91,slow=7.4,SNR=35						
MKAR				pP	**PcP**	**00 08 21.6**	**-0.5**
	comp=Z,9.4nm,0.9s,baz=89,slow=7.8,SNR=7.2						
	comp=Z,3.7nm,0.5s						
MKAR	**Makanchi Array**	**58.62**	**314**	P	**P**	**00 07 34.2**	**-0.1**
N18K	**Kilae Creek**	**58.72**	**29**	P	**P**	**00 07 36.5**	**+1.8**
N18K	**Kilae Creek**	**58.72**	**29**	P	**P**	**00 07 36.1**	**+1.4**
	baz=251						
O18K	**Koktuh Hills**	**58.78**	**30**	P	**P**	**00 07 36.6**	**+1.5**
	baz=252						
MAKZ	**Makanchi**	**58.84**	**314**	P	**P**	**00 07 36.0**	**+0.2**
MAKZ				IAmb	IAmb	00 08 26.8	
	comp=Z,28nm,1.1s						
MAKZ	**Makanchi**	**58.84**	**314**	P	**P**	**00 07 36.5**	**+0.7**
MAKZ				pP	**pP**	**00 08 20.5**	**-1.1**
MAKZ				pwP	**pwP**	**00 08 25.3**	**-1.0**
MAKZ				sP	**sP**	**00 08 43.0**	**-0.8**
SVW2	**Sparrevohn**	**59.00**	**29**	P	**P**	**00 07 38.2**	**+1.6**
OHAK	**Old Harbor**	**59.01**	**34**	P	**P**	**00 07 38.1**	**+1.4**
OHAK	**Old Harbor**	**59.01**	**34**	P	**P**	**00 07 38.4**	**+1.7**
	baz=255						
N19K	**Bonanza Creek**	**59.42**	**29**	P	**P**	**00 07 41.5**	**+1.9**
N19K	**Bonanza Creek**	**59.42**	**29**	P	**P**	**00 07 41.0**	**+1.4**
	baz=252						
TTA	**Tatalina**	**59.42**	**27**	P	**P**	**00 07 40.0**	**+0.5**
TTA	**Tatalina**	**59.42**	**27**	P	**P**	**00 07 40.5**	**+0.9**
	baz=250						
L19K	**White Mountain**	**59.68**	**28**	P	**P**	**00 07 42.7**	**+1.5**
L19K	**White Mountain**	**59.68**	**28**	P	**P**	**00 07 42.8**	**+1.5**
	baz=251						
P19K	**Oil Pt**	**59.68**	**31**	P	**P**	**00 07 42.0**	**+0.7**
P19K				IAmb	IAmb	00 08 34.0	
	comp=Z,18nm,0.9s						
P19K	**Oil Pt**	**59.68**	**31**	P	**P**	**00 07 42.7**	**+1.4**
	baz=254						
Q20K	**Shuyak Island**	**59.82**	**32**	P	**P**	**00 07 43.0**	**+0.8**
	baz=255						
O20K	**Slope Mountain**	**60.09**	**31**	P	**P**	**00 07 45.0**	**+0.8**
	baz=254						
L20K	**Farewell, AK**	**60.20**	**28**	P	**P**	**00 07 46.4**	**+1.6**
	baz=252						
M20K	**Styx River**	**60.36**	**29**	P	**P**	**00 07 47.8**	**+1.8**
	baz=253						
K20K	**Telida**	**60.40**	**27**	P	**P**	**00 07 47.8**	**+1.6**
K20K				IAmb	IAmb	00 08 37.5	
	comp=Z,30nm,1.8s						
K20K	**Telida**	**60.40**	**27**	P	**P**	**00 07 47.8**	**+1.6**
	baz=251,SNR=5.1						
CNPM	**China Poot**	**60.63**	**31**	P	**P**	**00 07 48.4**	**+0.6**
CNPM				IAmb	IAmb	00 07 48.7	
	comp=Z,13nm,0.7s						
J20K	**Nowinta River**	**60.63**	**26**	P	**P**	**00 07 49.0**	**+1.3**
J20K				IAmb	IAmb	00 08 39.3	
	comp=Z,29nm,1.4s						
J20K	**Nowinta River**	**60.63**	**26**	P	**P**	**00 07 49.6**	**+1.9**
	baz=251,SNR=8.4						
PPLA	**Purkeypile**	**61.07**	**28**	IAmb	IAmb	00 08 42.0	
	comp=Z,27nm,1.3s						
PPLA	**Purkeypile**	**61.07**	**28**	P	**P**	**00 07 52.3**	**+1.5**
	baz=253						
SKT	**Skwentna**	**61.11**	**29**	P	**P**	**00 07 51.6**	**+0.7**
	baz=254						
CAST	**Castle Rocks**	**61.27**	**27**	P	**P**	**00 07 53.3**	**+1.3**
CAST				IAmb	IAmb	00 07 53.8	
	comp=Z,9.3nm,0.6s						
CAST	**Castle Rocks**	**61.27**	**27**	P	**P**	**00 07 52.9**	**+0.9**
	baz=253,SNR=11						
KURK	**Kurchatov**	**61.44**	**318**	P	**P**	**00 07 52.7**	**-0.6**
KURK	**Kurchatov**	**61.44**	**318**	P	**P**	**00 07 52.9**	**-0.4**
KURK				pP	**pP**	**00 08 38.1**	**-1.4**
KURK				pwP	**pwP**	**00 08 42.9**	**-1.3**
KURBB	**Kurchatov Arra**	**61.49**	**318**	P	**P**	**00 07 53.1**	**-0.5**
	comp=Z,8.1nm,0.6s,baz=93,slow=7.5,SNR=54						
KURBB				pP	**pP**	**00 08 42.1**	**+2.3**
	comp=Z,19nm,1.0s,baz=99,slow=6.4,SNR=8.6						
	comp=Z,8.1nm,0.6s						
SEW	**Seward**	**61.64**	**31**	P	**P**	**00 07 55.1**	**+0.7**
	baz=257						
H21K	**Melozitna Rive**	**61.66**	**24**	P	**P**	**00 07 55.6**	**+1.1**
H21K	**Melozitna Rive**	**61.66**	**24**	P	**P**	**00 07 56.0**	**+1.4**
	baz=251,SNR=8.2						
G21K	**Allakaket**	**61.67**	**23**	P	**P**	**00 07 55.9**	**+1.3**
	baz=250						
RC01	**Rabbit Creek A**	**61.72**	**30**	P	**P**	**00 07 55.1**	**+0.1**
RC01	**R

KATZ Kakaramea 63.69 154 P P 00 08 09.2 +0.8
HDA Harding Lake 63.72 27 IAmb IAmb 00 08 57.0
comp=Z,35nm,1.8s
HDA Harding Lake 63.72 27 P P 00 08 08.0 -0.1
baz=258
WTVZ West Tongariro 63.76 154 P P 00 08 09.2 +0.3
TOLK Toolik Lake Re 63.78 22 IAmb IAmb 00 08 10.7
comp=Z,8.1nm,0.7s
TOLK Toolik Lake Re 63.78 22 P P 00 08 10.0 +1.4
baz=253
NTVZ North Tongarir 63.78 154 P P 00 08 09.4 +0.4
NNVZ North Ngauruho 63.78 154 P P 00 08 09.5 +0.4
C23K Itkillik River 63.79 20 P P 00 08 09.9 +1.4
baz=251
PKVZ Pokaka 63.81 155 P P 00 08 09.5 +0.4
NGZ Ngauruhoe 63.82 154 P P 00 08 09.4 +0.2
IL31 63.82 26 IAmb IAmb 00 08 58.3
comp=Z,22nm,1.4s
ILAR Eielson Array 63.82 26 P P 00 08 08.4 -0.4
comp=Z,2.7nm,0.5s,baz=248,slow=6.2,SNR=33
ILAR pP pP 00 08 55.8 +0.2
comp=Z,4.7nm,0.9s,baz=264,slow=5.9,SNR=5.6
comp=Z,2.7nm,0.5s
OTVZ Oturere 63.83 154 P P 00 08 09.5 +0.1
SNVZ South Ngauruho 63.84 154 P P 00 08 09.7 +0.2
WHVZ Whangaehu Hut 63.90 155 P P 00 08 10.0 +0.1
MWZ Matawai 63.93 153 P P 00 08 08.9 -0.9
E24K Your Creek 64.00 22 P P 00 08 11.3 +1.3
baz=254
RAGZ Rawiri 64.01 153 P P 00 08 09.9 -0.6
G24K Hadweenzic Riv 64.03 24 P P 00 08 11.6 +1.4
baz=256
MTHZ Maungataniwha 64.06 153 P P 00 08 09.9 -0.8
MOVZ Moawhango 64.08 154 P P 00 08 10.2 -0.6
PAX Paxson 64.08 28 P P 00 08 11.5 +0.9
baz=260,SNR=9.9
BMRM Bremner River 64.15 31 IAmb IAmb 00 09 05.5
comp=Z,32nm,1.2s
BMRM Bremner River 64.15 31 P P 00 08 12.3 +1.2
baz=261
BKZ Black Stump Fm 64.18 154 P P 00 08 10.3 -1.2
BKZ Black Stump Fm 64.18 154 P P 00 08 10.2 -1.2
BKZ Black Stump Fm 64.18 154 P P 00 08 11.4 -0.1
D24K Happy Valley 64.19 21 P P 00 08 12.6 +1.5
baz=254
RAHZ Arahi 64.22 153 P P 00 08 11.3 -0.4
N25K Chitina, Valde 64.25 30 P P 00 08 12.8 +1.1
baz=261
NMHZ Naumai 64.25 154 P P 00 08 11.7 -0.3
BHHZ Black Hill Sta 64.27 154 P P 00 08 11.2 -0.9
RIGZ Rimuhau 64.34 153 P P 00 08 11.7 -0.8
C24K Franklin Bluff 64.39 21 P P 00 08 13.6 +1.2
baz=253
J25K Salcha River, 64.43 26 P P 00 08 12.3 -0.5
J25K Salcha River, 64.43 26 P P 00 08 12.5 -0.3
baz=259,SNR=6.4
RIDG Independent Ri 64.49 27 P P 00 08 14.0 +0.8
baz=260,SNR=6.9
KRHZ Kereru 64.53 154 P P 00 08 12.6 -1.1
G25K Bearman Lake 64.58 24 P P 00 08 15.0 +1.4
baz=257
H25K Birch Creek 64.58 25 P P 00 08 15.0 +1.3
baz=258
GLB Gilahina Butte 64.60 30 IAmb IAmb 00 09 03.6
comp=Z,18nm,1.3s
NNZ Nelson 64.71 157 P P 00 08 14.0 -0.8
CRQE Cirque 64.86 31 P P 00 08 16.4 +0.6
baz=263
KAHZ Kahuranaki 64.87 154 P P 00 08 15.4 -0.5
SCRK Sand Creek 64.91 27 IAmb IAmb 00 09 06.6
comp=Z,18nm,1.4s
SCRK Sand Creek 64.91 27 P P 00 08 16.5 +0.5
baz=260,SNR=5.8
F25K Christian Rive 64.93 23 P P 00 08 17.5 +1.5
baz=257,SNR=6.9
MCARA McCarthy VSAT 64.97 30 P P 00 08 17.6 +1.3
baz=263
KIW Kapiti Island 64.98 156 P P 00 08 15.5 -1.1
DVHZ Dannevirke 65.00 155 P P 00 08 15.4 -1.4
L26K Log Cabin Wild 65.04 28 P P 00 08 17.6 +0.8
baz=262
OGWZ Otaki Gorge 65.04 156 P P 00 08 16.1 -0.8
PXZ Pawanui 65.06 154 P P 00 08 15.9 -1.2
MRZ Mangatainoka R 65.07 155 P P 00 08 15.9 -1.2
D25K Kavik River 65.07 21 P P 00 08 18.2 +1.3
baz=256,SNR=6.6
E25K Arctic Village 65.08 23 P P 00 08 18.7 +1.7
baz=257
M26K Nabesna, AK 65.12 29 P P 00 08 18.5 +1.2
baz=262
PRHZ Porangahau 65.16 154 P P 00 08 16.8 -1.0
J26L Joseph Creek 65.18 27 P P 00 08 18.1 +0.4
baz=261,SNR=8.2
HOWZ Holdsworth Sta 65.25 155 P P 00 08 17.7 -0.6
CAW Cannon Point 65.25 156 P P 00 08 17.3 -1.0
TWZ Tintock 65.29 155 P P 00 08 18.2 -0.4
BMAR Burnt Mountain 65.30 23 P P 00 08 20.4 +2.0
BMAR PcP PcP 00 08 50.0 +1.1
BFZ Birch Farm 65.36 155 P P 00 08 18.0 -1.0
I26K Coal Creek Min 65.48 26 P P 00 08 19.4 -0.1
baz=261
G26K Porcupine Rive 65.51 24 P P 00 08 21.4 +1.8
baz=259,SNR=5.6
F26K Sheenjek River 65.51 23 P P 00 08 21.6 +1.8
baz=259,SNR=8.4
MSWZ Moikau Station 65.59 156 P P 00 08 18.8 -1.6
M27K Edge Creek, AK 65.63 29 P P 00 08 21.6 +0.9
baz=263
NIL Nilore 65.65 299 P P 00 08 22.1 +0.8
NIL Nilore 65.65 299 P P 00 08 22.3 +1.1
NIL pP pP 00 09 07.3 -0.6
NIL pwP pwP 00 09 12.9 -0.1
LTZ Lake Taylor 65.69 159 IAmb IAmb 00 08 21.2
comp=Z,14nm,0.6s
PLWZ Palliser 65.72 156 P P 00 08 19.8 -1.6
CTG Chitna Glacier 65.73 31 P P 00 08 22.7 +1.3
baz=264
L27K Beaver Creek, 65.73 28 P P 00 08 22.5 +1.2
baz=263
TRWZ Traveller 65.74 156 P P 00 08 20.6 -0.9
K27K Chicken 65.75 27 P P 00 08 22.5 +1.2
baz=262
KHZ Kahutara 65.81 158 IAmb IAmb 00 08 20.0
comp=Z,22nm,0.6s
C27K Jago River 66.06 21 P P 00 08 24.6 +1.5
baz=258
OXZ Oxford 66.09 159 IAmb IAmb 00 08 22.1
comp=Z,21nm,0.6s
RPZ Rata Peaks 66.12 160 P P 00 08 22.1 -1.7
comp=Z,12nm,0.4s,baz=269,slow=3.6,SNR=6.1
comp=Z,12nm,0.4s
YUK3 Moose Creek 66.23 30 P P 00 08 26.0 +1.3
baz=265
EGAK Eagle 66.24 27 P P 00 08 25.5 +1.1
baz=263
O28M Mount Upton 66.28 31 P P 00 08 26.6 +1.5
baz=265
H27K Steamboat Moun 66.28 25 P P 00 08 26.0 +1.3
baz=262
G27K Doyon Strip 66.31 24 P P 00 08 26.2 +1.3
baz=261
RAR Rarotonga 66.38 124 P P 00 08 26.2 +0.3
comp=Z,15nm,0.8s,baz=336,slow=4.3,SNR=3.5
comp=Z,15nm,0.8s
E27K Coleen River 66.55 23 P P 00 08 27.5 +1.1
baz=261
BRVK Borovoye 66.71 321 P P 00 08 27.4 -0.2
BRVK IAmb IAmb 00 08 29.0
comp=Z,20nm,0.7s
BRVK Borovoye 66.71 321 P P 00 08 27.4 -0.2
BRVK pP pP 00 09 13.2 -1.4
KKAR Karatay Array 66.92 310 P P 00 08 28.6 -0.5
DAWY Dawson 66.93 27 P P 00 08 30.4 +1.6
baz=265
O29M Mount Kennedy 67.04 32 P P 00 08 31.6 +1.9
baz=267
YUK4 Talbot Arm 67.06 30 P P 00 08 31.8 +1.9
baz=267
YUK6 Outpost Mounta 67.18 31 P P 00 08 32.0 +1.4
baz=267
M29M Somme Creek 67.22 29 P P 00 08 32.3 +1.6
baz=266
P29M Windy Craggy 67.43 32 P P 00 08 33.3 +1.2
baz=268
I29M Ogilvie Camp, 67.50 26 P P 00 08 33.3 +0.9
baz=265

HYT Haines Junctio 67.59 31 IAmb IAmb 00 09 25.2
comp=Z,15nm,1.0s
HYT Haines Junctio 67.59 31 P P 00 08 35.2 +2.1
baz=268,SNR=6.3
N30M Aishikik Lake 67.82 30 P P 00 08 36.3 +1.8
baz=268
P30M Million Dollar 67.84 32 P P 00 08 36.5 +1.9
baz=269
PLBC Pleasant Camp 68.13 33 P P 00 08 37.8 +1.5
baz=269
EPYK Eagle Plains 68.23 25 P P 00 08 37.8 +0.9
baz=266
O30N Mendenhall 68.28 31 P P 00 08 38.8 +1.5
baz=269
CHGR Chuyangaron 68.36 305 IAmb IAmb 00 08 39.6
comp=Z,24nm,0.7s
N31M Braeburn, Yuko 68.45 30 IAmb IAmb 00 09 29.8
comp=Z,15nm,0.9s
N31M Braeburn, Yuko 68.45 30 P P 00 08 40.2 +1.8
baz=269
WHY Whitehorse 68.88 31 P P 00 08 42.4 +1.3
baz=270
KBL Kabul 68.99 301 P P 00 08 42.5 +0.1
KBL IAmb IAmb 00 09 34.6
comp=Z,17nm,1.1s
M31M Drury Creek, Y 69.11 30 P P 00 08 43.6 +1.2
baz=270
INK Inuvik 69.55 23 P P 00 08 45.4 +0.5
comp=Z,3.2nm,0.3s,baz=270,slow=5.3,SNR=10
INK pP pP 00 09 33.2 +0.8
comp=Z,13nm,1.0s,baz=252,slow=7.8,SNR=5.6
comp=Z,3.2nm,0.3s
INK Inuvik 69.55 23 P P 00 08 45.5 +0.5
INK Inuvik 69.55 23 P P 00 08 45.7 +0.8
baz=268
N32M Quiet Lake 69.75 31 P P 00 08 47.8 +1.4
baz=272
P33M Teslin, Yukon 69.91 32 P P 00 08 48.4 +1.0
baz=272
MMPY Sheldon Lake, 70.56 29 P P 00 08 52.8 +1.6
baz=273
R33M Jennings River 70.89 33 P P 00 08 54.7 +1.3
baz=274
DLBC Dease Lake 71.45 34 IAmb IAmb 00 09 47.8
comp=Z,38nm,1.2s
DLBC Dease Lake 71.45 34 P P 00 08 58.6 +1.9
baz=275
T35M Bob Quinn 71.47 35 P P 00 08 58.3 +1.6
baz=275
C36M Paulatuk 72.93 22 P P 00 09 05.7 +0.5
C36M IAmb IAmb 00 09 06.0
comp=Z,9.8nm,0.5s
C36M Paulatuk 72.93 22 P P 00 09 05.7 +0.5
baz=277
ARU Arti 73.25 325 P P 00 09 07.4 +0.1
comp=Z,13nm,0.5s,baz=86,slow=4.0,SNR=21
comp=Z,13nm,0.5s
ARU Arti 73.25 325 P P 00 09 06.0 -1.2
ARU IAmb IAmb 00 09 07.9
comp=Z,14nm,0.6s
ABKAR Akbulak array 73.50 317 P P 00 09 07.8 -1.1
AKTO Aktyubinsk 74.53 318 P P 00 09 14.3 -0.5
comp=Z,3.9nm,0.6s,baz=88,slow=6.3,SNR=16
comp=Z,3.9nm,0.6s
HRA Herat 74.55 302 P P 00 09 16.0 +0.4
GEYT Alibeck 77.03 306 P P 00 09 29.8 +0.5
comp=Z,4.1nm,0.8s,baz=225,slow=10.0,SNR=5.2
comp=Z,4.1nm,0.8s
KIRV Kirov 77.64 328 P P 00 09 32.5 +0.3
comp=Z,9.9nm,0.5s,baz=46,slow=5.2,SNR=6.5
comp=Z,9.9nm,0.5s
EUNU Eureka 77.93 8 IAmb IAmb 00 09 36.0
comp=Z,20nm,0.8s
I03D Drain, OR 78.12 48 P P 00 09 37.1 +2.0
baz=284
YKA Yellowknife Ar 78.16 28 P P 00 09 35.4 +0.4
comp=Z,4.6nm,0.7s,baz=287,slow=5.5,SNR=11
YKA pP pP 00 10 18.9 -4.7
comp=Z,3.2nm,0.7s,baz=290,slow=5.2,SNR=4.5
comp=Z,4.6nm,0.7s
I04A Tendick Farm, 78.76 48 P P 00 09 40.1 +1.4
baz=285
L04D Klamath Falls 79.24 49 P P 00 09 42.4 +0.9
baz=285
KBS Kingsbay 79.49 352 eP P 00 09 42.5 +0.6
RES Resolute Bay 79.62 14 P P 00 09 43.5 +0.8
comp=Z,11nm,0.6s,baz=299,slow=3.1,SNR=14
comp=Z,11nm,0.6s
J05D Fort Rock, OR 79.72 48 P P 00 09 45.4 +1.4
baz=286
PINE Pine Mountain 79.78 47 IAmb IAmb 00 10 36.6
comp=Z,33nm,0.8s
HAWA Hanford 80.03 44 P P 00 09 45.8 +0.3
D08A Wollman Farm, 80.24 44 IAmb IAmb 00 10 38.2
comp=Z,21nm,1.0s
HSPB Hornsund (broa 80.30 350 eP P 00 09 47.4 +1.1
BELG Belogornoye 80.37 322 P P 00 09 47.3 +0.2
comp=Z,22nm,0.7s,baz=278,slow=1.7,SNR=10
comp=Z,22nm,0.7s
MOD Mooc Plateau 80.76 49 IAmb IAmb 00 10 41.3
comp=Z,19nm,1.8s
E09A Wood Farm, Sta 80.91 44 P P 00 09 51.3 +1.1
E09A IAmb IAmb 00 10 41.9
comp=Z,19nm,1.0s
NEW Newport 81.05 42 P P 00 09 52.0 +1.1
comp=Z,5.1nm,0.6s,baz=284,slow=1.3,SNR=9.8
NEW pP pP 00 10 41.1 +1.5
comp=Z,12nm,0.9s,baz=292,slow=5.2,SNR=9.5
comp=Z,5.1nm,0.6s
NEW Newport 81.05 42 IAmb IAmb 00 10 42.4
comp=Z,18nm,0.9s
NEW Newport 81.05 42 P P 00 09 51.8 +0.9
baz=288
J08A Circle Bar Ran 81.63 47 IAmb IAmb 00 10 46.0
comp=Z,19nm,1.0s
WVOR Wild Horse Val 81.79 48 IAmb IAmb 00 10 46.9
comp=Z,23nm,1.2s
BMO Blue Mountains 81.97 45 IAmb IAmb 00 10 48.4
comp=Z,35nm,1.4s
PNTR Pine Nut 82.08 52 IAmb IAmb 00 12 42.5
comp=Z,22nm,0.9s
YERR Yerington 82.38 52 IAmb IAmb 00 10 51.1
comp=Z,66nm,1.7s
HAMF Hammerfest 82.57 343 eP P 00 09 58.2 -0.1
HAMF IAmb IAmb 00 09 59.7
comp=Z,14nm,1.2s
ARA0 ARCESS Array S 82.69 342 eP P 00 09 58.7 -0.3
ARA0 IAmb IAmb 00 10 03.5
comp=Z,26nm,1.5s
ARCES ARCESS Array B 82.69 342 P P 00 09 58.7 -0.3
comp=Z,3.3nm,0.5s,baz=81,slow=8.5,SNR=54
ARCES pP pP 00 10 49.1 +1.0
comp=Z,4.1nm,0.8s,baz=46,slow=5.2,SNR=3.2
ARCES PKKPbc PKKPbc 00 28 20.1 -4.2
comp=Z,1.5nm,0.9s,baz=236,slow=4.0,SNR=5.0
comp=Z,3.3nm,0.5s
ARCES ARCESS Array B 82.69 342 P P 00 09 58.5 -0.5
ARCES IAmb IAmb 00 11 19.5
comp=Z,53nm,1.9s
LHV Little Huntoon 83.16 52 IAmb IAmb 00 10 54.6
comp=Z,18nm,1.1s
KVN Kaiserville 83.21 51 IAmb IAmb 00 10 54.5
comp=Z,26nm,1.1s
NVAR Mina Array Bea 83.25 52 P P 00 10 04.0 +1.3
comp=Z,6.4nm,0.7s,baz=264,slow=6.2,SNR=48
NVAR pP pP 00 10 53.6 +1.9
comp=Z,11nm,0.7s,baz=272,slow=5.4,SNR=11
comp=Z,6.4nm,0.7s
NV11 Mina Array Sit 83.36 52 IAmb IAmb 00 10 55.4
comp=Z,17nm,1.0s
MFID Camas Ranch 83.44 47 IAmb IAmb 00 10 55.5
comp=Z,38nm,1.3s
CWC Cottonwood Cre 84.04 54 P P 00 10 07.7 +1.0
baz=288
JETT Jettan, Norway 84.12 343 eP P 00 10 05.8 -0.5
JETT IAmb IAmb 00 10 06.4
comp=Z,18nm,0.7s
HLID Hailey 84.36 46 P P 00 10 08.8 +0.6
baz=290
TRO Tromso 84.47 344 eP P 00 10 07.1 -0.8
TRO IAmb IAmb 00 10 07.7
comp=Z,10nm,0.6s
EDW2 Edwards Air Fo 84.60 55 P P 00 10 09.7 +0.3
baz=289
MPMC Manual Prospec 84.62 54 P P 00 10 10.7 +1.0
baz=289
ELK Elko 84.74 49 P P 00 10 10.7 +0.5
ELK IAmb IAmb 00 11 02.4
comp=Z,24nm,1.1s
CIS Catalina Islan 84.74 57 P P 00 10 10.4 +0.3
baz=289
BFSC Mount Baldy Ra 85.07 56 P P 00 10 11.9 +0.1
baz=289
GWY Greenwater Val 85.20 54 IAmb IAmb 00 11 05.2
comp=Z,43nm,1.6s
TPNV Topopah Spring 85.27 53 IAmb IAmb 00 11 05.0
comp=Z,20nm,0.9s
TPNV Topopah Spring 85.27 53 P P 00 10 13.5 +0.6
baz=290
R11A Troy Canyon, C 85.30 51 P P 00 10 13.2 +0.2
R11A IAmb IAmb 00 11 05.3
comp=Z,27nm,1.4s
R11A Troy Canyon, C 85.30 51 P P 00 10 13.7 +0.7
baz=290
GSC Goldstone, Bar 85.39 54 P P 00 10 14.5 +1.1
baz=289
BOZ Bozeman (W) 85.49 43 IAmb IAmb 00 11 05.7
comp=Z,37nm,1.4s
BOZ Bozeman (W) 85.49 43 P P 00 10 14.7 +1.0
baz=292
MURC Murrieta 85.64 56 P P 00 10 15.5 +0.8
baz=289
EGMT Eagleton 85.76 41 P P 00 10 16.2 +1.2
baz=293
HEC Hector Ludlow 85.91 55 P P 00 10 17.0 +1.0
baz=290
PRN Pahroc Range 86.02 52 IAmb IAmb 00 11 08.9
comp=Z,21nm,1.1s
TUQ Turquoise Moun 86.02 54 P P 00 10 17.6 +1.1
baz=290
PFO Pinyon Flats O 86.22 56 P P 00 10 18.6 +1.1
baz=290
TPFO Pinon Flats 86.23 56 P P 00 10 18.8 +1.2
baz=290
SHPR Sheep Range 86.24 53 IAmb IAmb 00 11 10.2
comp=Z,17nm,1.1s
KBZ Khabaz 86.30 315 P P 00 10 17.6 +0.1
comp=Z,2.5nm,0.8s,baz=95,slow=7.0,SNR=4.6
comp=Z,2.5nm,0.8s
GMRC Granite Mounta 86.45 55 P P 00 10 19.8 +1.2
baz=290
YNR Norris Junctio 86.45 44 P P 00 10 20.4 +1.9
MONP2 Monument Peak 86.49 57 P P 00 10 19.1 +0.2
baz=290
PSUT Pine Spring 86.51 51 IAmb IAmb 00 11 11.1
comp=Z,23nm,0.9s
IMW Indian Meadow 86.59 45 IAmb IAmb 00 11 12.0
comp=Z,26nm,0.9s
STEI Steigen 86.61 343 eP P 00 10 17.6 -1.0
STEI IAmb IAmb 00 10 18.4
comp=Z,13nm,0.7s
FXWY Fox Creek 86.63 45 IAmb IAmb 00 11 12.0
comp=Z,27nm,1.1s
DUG Dugway, Tooele 86.67 49 IAmb IAmb 00 11 11.8
comp=Z,32nm,1.1s
DUG Dugway, Tooele 86.67 49 P P 00 10 20.3 +0.6
baz=291
MOOW Moose Ponds 86.78 45 IAmb IAmb 00 11 12.6
comp=Z,21nm,1.1s
IKP In-Ko-Pah, Jac 86.82 57 P P 00 10 21.3 +0.9
baz=290
LOF Lofoten 86.93 344 eP P 00 10 20.7 +0.6
LOF IAmb IAmb 00 10 24.1
comp=Z,20nm,1.3s
SWSC Sam W. Stewart 86.97 56 P P 00 10 21.9 +0.9
baz=290
FAUS Fauske 86.98 343 eP P 00 10 19.1 -1.2
FAUS IAmb IAmb 00 10 19.9
comp=Z,5.6nm,0.5s
FINES FINESS Array B 87.08 335 P P 00 10 18.9 -2.0
comp=Z,6.1nm,0.3s,baz=67,slow=4.9,SNR=72
FINES pP pP 00 11 09.8 -0.6
comp=Z,2.2nm,0.4s,baz=73,slow=4.1,SNR=2.6
comp=Z,6.1nm,0.3s
CCUT Cedar City 87.22 51 IAmb IAmb 00 11 15.2
comp=Z,24nm,1.0s
NLU North Lily Min 87.28 49 IAmb IAmb 00 11 14.8
comp=Z,26nm,1.0s
TCUT Toone Canyon 87.32 48 IAmb IAmb 00 11 14.8
comp=Z,26nm,0.9s
SZCU Shurtz Canyon 87.41 51 IAmb IAmb 00 11 15.8
comp=Z,17nm,0.9s
LCMT Little Creek M 87.50 52 P P 00 10 24.5 +0.8
LCMT IAmb IAmb 00 11 16.3
comp=Z,21nm,1.0s
GLA Glamis 87.69 56 P P 00 10 25.2 +0.7
baz=290
PDMCI Parker Dam,Lak 87.79 55 P P 00 10 26.0 +1.1
baz=291
MTPU Mount Pierson 87.91 51 IAmb IAmb 00 11 18.7
comp=Z,13nm,0.9s
BW06 Boulder Array 87.95 45 P P 00 10 26.6 +0.8
baz=293
PDAR Pinedale Array 87.95 45 P P 00 10 26.2 +0.4
comp=Z,0.6nm,0.3s,baz=222,slow=2.0,SNR=3.9
PDAR pP pP 00 11 16.9 +1.5
comp=Z,2.8nm,0.7s,baz=197,slow=4.6,SNR=7.9
comp=Z,0.6nm,0.3s
MOR8 Moi Rana 88.07 342 eP P 00 10 23.7 -1.8
MEF Metsahovi 88.46 335 eP P 00 10 25.3 -2.1
VSU Vasula 88.48 333 eP P 00 10 25.2 -2.4
P18A Preston Nutter 88.71 49 IAmb IAmb 00 11 21.8
comp=Z,17nm,0.9s
SRU San Rafael Swe 88.71 49 P P 00 10 29.8 +0.4
RAF Rauma 89.01 336 eP P 00 10 28.5 -1.5
WUAZ Wupatki 89.46 53 P P 00 10 34.3 +1.3
baz=292
X16A Lo Mia Camp, P 89.83 54 IAmb IAmb 00 11 27.7
comp=Z,11nm,1.0s
O20A White River Ci 89.92 47 P P 00 10 35.3 +0.3
baz=294
NSS Namsos 89.97 342 eP P 00 10 33.7 -0.8
NSS IAmb IAmb 00 10 40.1
comp=Z,15nm,1.3s
K22A Casper 90.04 45 P P 00 10 36.8 +1.3
baz=295
IIGN Ignalina 90.47 330 eP P 00 10 35.8 -1.2
SLIT Slitere, Latvi 90.89 333 eP P 00 10 27.8 -11
MVCO Mesa Verde 90.93 50 P P 00 10 40.7 +0.9
baz=294
RSSD Black Hills 91.02 43 P P 00 10 40.1 +0.1
RSSD IAmb IAmb 00 11 31.7
comp=Z,13nm,1.1s
RSSD Black Hills 91.02 43 P P 00 10 40.7 +0.6
baz=297
TUC Tucson 91.14 55 P P 00 10 41.2 +0.5
TUC Tucson 91.14 55 P P 00 10 42.1 +1.4
baz=293
N23A Red Feather La 91.19 46 P P 00 10 41.9 +0.9
baz=296
AKBB Malin Array Si 91.49 325 IAmb IAmb 00 13 34.6
comp=Z,8.4nm,0.6s
ISCO Idaho Springs 91.89 47 IAmb IAmb 00 11 37.0
comp=Z,16nm,1.0s
ISCO Idaho Springs 91.89 47 P P 00 10 44.9 +0.6
baz=296
S22A 4UR Ranch, Cre 91.92 49 IAmb IAmb 00 11 37.1
comp=Z,18nm,0.9s
S22A 4UR Ranch, Cre 91.92 49 P P 00 10 45.5 +1.0
baz=295
NB201 NORSAR Array S 92.74 340 eP P 00 10 45.9 -1.5
ULM Lac du Bonnet 92.76 34 pP pP 00 11 38.6 +1.1
comp=Z,11nm,0.8s,baz=284,slow=4.2,SNR=12
NB2 NORSAR Subarra 92.77 340 P P 00 10 45.7 -1.9
comp=Z,0.6nm,0.4s,baz=46,slow=4.3
NB2 NORSAR Subarra 92.77 340 P P 00 10 45.7 -1.9
baz=46,slow=4.3
NOA NORSAR Array B 92.77 340 P P 00 10 46.1 -1.5
comp=Z,0.4nm,0.4s,baz=28,slow=3.4,SNR=9.8
comp=Z,0.4nm,0.4s
SDCO Great Sand Dun 92.87 49 IAmb IAmb 00 11 41.1
comp=Z,11nm,0.9s
SDCO Great Sand Dun 92.87 49 P P 00 10 49.4 +0.5
baz=296
NBO00 NORSAR Array S 92.92 340 eP P 00 10 46.6 -1.6
ANMO Albuquerque 93.38 52 P P 00 10 51.3 +0.2
ANMO IAmb IAmb 00 11 43.8
comp=Z,16nm,1.1s
ANMO Albuquerque 93.38 52 P P 00 10 51.8 +0.7
baz=295
AGMN Agassiz Nation 93.84 36 P P 00 10 53.5 +0.8
baz=303
T25A Trinidad 93.91 49 P P 00 10 54.0 +0.5
baz=297
BRTR Keskin Array B 94.27 314 P P 00 10 53.5 -1.5
comp=Z,1.9nm,0.8s,baz=90,slow=6.2,SNR=4.8

	comp=Z,1.9nm,0.8s								
GKP	**Gorka Klasztor**	**95.89**	**332**	*e*P		**P**		**00 11 00.8**	**-1.1**
TXAR	**Lajitas Array**	**97.94**	**56**	P		Pdif		00 11 12.9	+1.0
	comp=Z,0.1nm,0.4s,baz=294,slow=6.8,SNR=1.9								
TXAR				pP		pP		00 12 03.2	+1.5
	comp=Z,1.7nm,0.8s,baz=272,slow=3.4,SNR=6.4								
	comp=Z,0.1nm,0.4s								
GERES	**GERESS Array B**	**100.54**	**330**	PKKPbc		PKKPbc		00 27 36.0	-2.5
	comp=Z,0.3nm,0.5s,baz=160,slow=4.3,SNR=4.1								
ESDC	**Sonseca Array**	**115.58**	**334**	PP		**PP**		**00 17 19.3**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=21,slow=7.9,SNR=4.3								
ESDC				PKKPbc		**PKKPbc**		**00 26 52.3**	**+1.1**
	comp=Z,1.3nm,1.0s,baz=214,slow=3.4,SNR=5.9								
TROLL	**Troll, Antarti**	**122.39**	**193**	P		**PKPdf**		**00 16 27.2**	**-1.7**
SNAA	**Sanae**	**123.73**	**191**	P		**PKPdf**		**00 16 29.9**	**-1.4**
VNA2	**Neumayer--Watz**	**125.17**	**190**	P		**PKPdf**		**00 16 33.0**	**-1.0**
	baz=270,slow=6.0								
VNA3	**Neumayer Olymp**	**125.27**	**189**	P		**PKPdf**		**00 16 32.1**	**-2.1**
VNA1	**Neumayer--Stat**	**125.56**	**190**	P		**PKPdf**		**00 16 33.8**	**-0.9**
UREC	**San Jos de Ur**	**131.67**	**61**	*e*P		**PKPdf**		**00 16 47.9**	**-0.2**
ZARC	**Zaragoza, Cauc**	**132.37**	**61**	*e*P		**PKPdf**		**00 16 48.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**132.60**	**309**	PKP		**PKPdf**		**00 16 48.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=91,slow=0.7,SNR=5.8								
TORD				SKPbc		**SKPbc**		**00 19 54.5**	**-3.0**
	comp=Z,1.3nm,0.8s,baz=33,slow=3.6,SNR=6.4								
YOTC	**Yotoco, Valle**	**132.93**	**66**	*e*P		**PKPdf**		**00 16 50.5**	**-0.1**
GUY2C	**Guyana, Caldas**	**133.15**	**64**	*e*P		PKPdf		00 16 39.4	-12
POPC	**Popayan, Colom**	**133.34**	**68**	*e*P		**PKPdf**		**00 16 50.2**	**-1.3**
PRAC	**Prado**	**134.32**	**65**	*e*P		**PKPdf**		**00 16 46.0**	**-7.2**
RUSC	**La Rusia**	**134.71**	**61**	*e*P		**PKPdf**		**00 16 52.7**	**-1.7**
CHIC	**Chingaza**	**134.84**	**63**	*e*P		**PKPdf**		**00 16 52.8**	**-1.8**
SOCV	**Socopo**	**135.17**	**57**	*e*P		**PKPdf**		**00 16 48.5**	**-6.2**
PTGC	**Puerto Gaitan,**	**136.42**	**63**	*e*P		**PKPdf**		**00 16 52.9**	**-4.1**
DBIC	**Dimbokro**	**141.69**	**308**	PKhKP		PKPpre		00 16 60.0	
	comp=Z,2.2nm,0.4s,baz=62,slow=4.0,SNR=6.0								
PLCA	**Paso Flores**	**141.85**	**133**	PKhKP		PKPpre		00 17 01.6	
	comp=Z,3.2nm,0.7s,baz=178,slow=0.8,SNR=8.1								
BO01	**Tunca**	**143.67**	**123**	PKPdf		PKPab		00 17 06.8	+0.1
LCO	**Las Campanas**	**145.18**	**114**			**PKPab**		**00 17 13.1**	**+0.1**
ZON	**Zonda**	**146.38**	**119**			**PKPbc**		**00 17 15.9**	**0.0**
BOAV	**Boa Vista**	**146.86**	**54**			**PKPbc**		**00 17 17.1**	**-0.6**
LVC	**Limon Verde**	**147.36**	**103**	PKPbc		**PKPbc**		**00 17 19.7**	**+0.3**
LPAZ	**La Paz**	**147.65**	**91**	PKPbc		**PKPdf**		**00 17 18.2**	**+0.7**
	comp=Z,15nm,0.5s,baz=339,slow=1.7,SNR=42								
LPAZ				pPKPbc		**pPKPab**		**00 18 13.6**	**-0.3**
	comp=Z,6.7nm,0.8s,baz=286,slow=2.5,SNR=2.8								
LPAZ	**La Paz**	**147.65**	**91**	*e*P		**PKPdf**		**00 17 18.7**	**+0.2**
ITQB	**Itaqui**	**156.81**	**123**	PKPab		**PKPab**		**00 18 01.5**	**+0.9**
CPUP	**Villa Florida**	**157.33**	**114**	PKPab		**PKPab**		**00 18 03.7**	**+0.7**
	comp=Z,3.1nm,0.7s,baz=255,slow=5.2,SNR=4.4								

*IDC **17** 00:03:49.2±1.7,22°.99S×173°.48E,h0km,mb4.0/3, mbtmp3.9/4,ML3.5/1,MS3.5/3,Error ellipse: s-maj=77.4km s-min=31.8km az=160.0*
*NEIC **17** 00:03:52.6±2.5,22°.9S±0°.2×173°.3E±0°.1,h10km±2km, mb4.5/10,Error ellipse: s-maj=28.7km s-min=15.0km az=342.0*

ISC 17 00:03:55.6±0.8,22°.9S±0°.1×173°.28E±0°.09,h35km,n33, σ1s00/28,mb4.4/9,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.05**	**285**	Pn		**Pn**	**00 05 10.8**	**+1.9**
PINNC	**Pines Island,**	**5.39**	**271**	Pn		**Pn**	**00 05 14.8**	**+1.3**
OUENC	**Ouen Island, N**	**5.96**	**273**			**Pn**	**00 05 20.9**	**-0.5**
ONTNC	**Ouen Toro**	**6.33**	**274**	Pn		**Pn**	**00 05 25.8**	**-0.7**
DZM	**Mont Dzumac**	**6.37**	**276**	Pn		**Pn**	**00 05 28.4**	**+1.4**
	0.9nm,0.3s,baz=116,slow=14,SNR=12							
DZM				Sn		**Sn**	**00 06 38.2**	**-0.4**
	0.7nm,0.3s,baz=156,slow=20,SNR=1.4							
	5.1nm,0.5s							
DZM	**Mont Dzumac**	**6.37**	**276**			**Pn**	**00 05 25.4**	**-1.7**
MSVF	**Nonsavu**	**6.78**	**42**	Pn		**Pn**	**00 05 33.3**	**+0.5**
	0.8nm,0.3s,baz=218,slow=18,SNR=5.8							
MSVF	**Nonsavu**	**6.78**	**42**	Pn		**Pn**	**00 05 32.7**	**0.0**
URZ	**Urewera**	**15.71**	**169**	LR		LR	00 12 04.7	
	comp=Z,188nm,18.9s,baz=31,slow=32							
RPZ	**Rata Peaks**	**20.89**	**185**	LR		LR	00 15 20.3	
	comp=Z,159nm,19.1s,baz=56,slow=33							
AS31	**Alice Springs**	**36.10**	**261**	P		**P**	**00 10 54.0**	**-0.5**
ASAR	**Alice Springs**	**36.10**	**261**	P		**P**	**00 10 54.9**	**+0.4**
	3.3nm,0.8s,baz=83,slow=8.5,SNR=14							
	3.3nm,0.8s							
ASAR	**Alice Springs**	**36.10**	**261**	P		**P**	**00 10 54.3**	**-0.2**
WB0	**Warramunga Arr**	**36.29**	**267**	P		**P**	**00 10 54.6**	**-1.4**
WB0				IAmb		IAmb	00 11 12.1	
	comp=Z,10.0nm,1.1s							
WB2	**Warramunga Arr**	**36.29**	**267**	P		**P**	**00 10 54.9**	**-1.1**
WB2				IAmb		IAmb	00 11 00.9	
	comp=Z,3.8nm,0.8s							
WRA	**Warramunga Arr**	**36.30**	**267**	P		**P**	**00 10 55.0**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=103,slow=8.0,SNR=5.0							
	comp=Z,1.2nm,0.8s							
WRA	**Warramunga Arr**	**36.30**	**267**	P		**P**	**00 10 55.9**	**-0.3**
WRA	**Warramunga Arr**	**36.30**	**267**	S		**P**	**00 10 56.3**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=23,slow=15,SNR=4.3							
FORT	**Forrest**	**40.90**	**249**	P		**P**	**00 11 35.7**	**+1.0**
H11S2	**WAKE ISLAND Hy**	**41.58**	**351**	T		T	00 56 14.2	
	baz=171,slow=76,SNR=4.5							
H11S3	**WAKE ISLAND Hy**	**41.59**	**351**	T		T	00 56 17.2	
	baz=171,slow=76,SNR=4.9							
H11S1	**WAKE ISLAND Hy**	**41.60**	**351**	T		T	00 56 17.3	
	baz=171,slow=76,SNR=3.5							
KNRA	**Kununurra**	**42.50**	**271**	P		**P**	**00 11 48.0**	**+0.2**
KNRA				IAmb		IAmb	00 12 27.7	
	comp=Z,21nm,1.4s							
FITZ	**Fitzroy Crossi**	**44.73**	**267**	P		**P**	**00 12 04.9**	**-1.0**
FITZ				IAmb		IAmb	00 12 08.3	
	comp=Z,5.6nm,1.0s							
MBWA	**Marble Bar**	**49.45**	**261**	P		**P**	**00 12 43.3**	**+0.7**
VNDA	**Vanda**	**55.01**	**183**	LR		LR	00 33 02.1	
	comp=Z,45nm,21.0s,baz=325,slow=32							
SBA	**Scott Base**	**55.15**	**182**	P		**P**	**00 13 25.6**	**+1.5**
SBA				IAmb		IAmb	00 13 34.2	
	comp=Z,5.1nm,1.2s							
QSPA	**South Pole Qui**	**67.23**	**180**	P		**P**	**00 14 45.4**	**-0.9**
QSPA				IAmb		IAmb	00 14 47.6	
	comp=Z,8.4nm,1.4s							
ILAR	**Eielson Array**	**92.59**	**16**	P		**P**	**00 17 02.2**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=234,slow=4.3,SNR=3.4							
	comp=Z,0.4nm,0.8s							
ARCES	**ARCESS Array B**	**129.48**	**346**	PKP		**PKPdf**	**00 22 59.0**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=46,slow=2.6,SNR=6.1							
CLL	**Collm**	**147.73**	**337**	*e*PKPbc		**PKPbc**	**00 23 37.0**	**+0.6**
CLL				*i* x		x	00 23 45.2	
GERES	**GERESS Array B**	**149.42**	**333**	PKPbc		**PKPbc**	**00 23 41.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=28,slow=3.2,SNR=4.7							
TORD	**Torodi Ar. Bea**	**167.47**	**221**	PKPab		**PKPab**	**00 25 03.4**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=144,slow=4.4,SNR=2.9							

*IDC **17** 00:21:55.3±1.0,14°.67N×52°.42E,h0km,mb3.7/12, mbtmp3.7/13,ML3.4/1,MS3.5/1,Error ellipse: s-maj=27.0km s-min=23.7km az=100.0*
*OMAN **17** 00:22:08.9±1.4,15°.48N×52°.64E,h32km±17km,ml3.1/3, Error ellipse: s-maj=22.5km s-min=12.4km az=87.0*

ISC 17 00:22:02.0±0.9,15°.1N±0°.1×52°.5E±0°.1,h35km,n22, σ1s83/24,mb3.6/12,Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABTO	**Aybut**	**2.42**	**19**	P		**Pn**	**00 22 40.2**	**+1.1**
	SNR=11							
ABTO				S		**Sn**	**00 23 04.0**	**-3.5**
RBK	**Rabkut**	**2.95**	**34**	P		**Pn**	**00 22 48.5**	**+2.1**
	SNR=17							
WHFO	**Wadi Hawf**	**3.11**	**24**	P		**Pn**	**00 22 48.2**	**-0.3**
	SNR=8.3							
WHFO				S		**Sn**	**00 23 21.5**	**-3.0**
DMTO	**DMTO**	**3.56**	**42**	P		**Pn**	**00 22 55.9**	**+1.2**
	SNR=47							
SHAO	**Shalim**	**4.23**	**45**	P		**Pn**	**00 23 05.4**	**+1.5**
UMZA	**Um Al Zommool**	**8.03**	**18**	P		**Pn**	**00 23 56.9**	**+0.7**
UMZA				S		**Sn**	**00 25 24.0**	**-1.7**
JMDO	**Jabal Madar**	**9.02**	**35**	P		**Pn**	**00 24 10.5**	**+0.7**
ATD	**Arta Tunnel**	**9.99**	**251**	Pn		**Pn**	**00 24 21.6**	**-1.6**
	3.6nm,0.3s,baz=144,slow=16,SNR=6.0							
WSAR	**Wadi Sarin**	**10.01**	**35**	Pn		**Pn**	**00 24 24.2**	**+0.9**
	0.3nm,0.3s,baz=210,slow=8.1,SNR=1.4							
WSAR				Sn		**Sn**	**00 26 11.9**	**-2.5**
	0.2nm,0.3s,baz=290,slow=16,SNR=2.0							
	4.3nm,1.0s							
AKASG	**Malin Array Be**	**40.20**	**337**	P		**P**	**00 29 35.7**	**+0.8**
	0.2nm,0.3s,baz=146,slow=8.1,SNR=1.7							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**40.23**	**32**	P		**P**	**00 29 37.4**	**+2.1**
	0.6nm,0.7s,baz=211,slow=8.1,SNR=4.5							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**41.25**	**25**	P		**P**	**00 29 45.9**	**+2.3**
	0.3nm,0.6s,baz=230,slow=8.4,SNR=3.2							
	0.3nm,0.6s							
GERES	**GERESS Array B**	**46.25**	**325**	P		**P**	**00 30 25.2**	**+1.3**
	0.3nm,0.6s,baz=134,slow=9.5,SNR=2.7							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**46.32**	**26**	P		**P**	**00 30 25.6**	**+1.3**
	0.7nm,0.4s,baz=241,slow=7.6,SNR=5.3							
	0.7nm,0.4s							
LBTB	**Lobatse**	**47.68**	**214**	P		P	00 30 31.7	-3.7
	3.9nm,1.0s,baz=14,slow=10,SNR=2.8							
	3.9nm,1.0s							
TSUM	**Tsumeb**	**48.35**	**226**	LR		LR	00 50 44.8	
	comp=Z,55nm,19.1s,baz=146,slow=36							
FINES	**FINESS Array B**	**50.03**	**344**	P		**P**	**00 30 54.8**	**+2.0**
	2.7nm,0.9s,baz=155,slow=6.9,SNR=1.7							
	2.7nm,0.9s							
ESDC	**Sonseca Array**	**54.79**	**308**	P		**P**	**00 31 27.7**	**-0.9**
	0.3nm,0.6s,baz=105,slow=7.7,SNR=3.4							
	0.3nm,0.6s							
SONM	**Songino Array**	**54.97**	**42**	P		**P**	**00 31 29.7**	**-0.1**
	0.3nm,0.5s,baz=243,slow=6.3,SNR=1.7							
	0.3nm,0.5s							
ARCES	**ARCESS Array B**	**57.00**	**349**	P		**P**	**00 31 44.3**	**+0.4**
	0.7nm,0.7s,baz=138,slow=9.5,SNR=1.5							
	0.7nm,0.7s							
WRA	**Warramunga Arr**	**87.66**	**111**	P		**P**	**00 34 45.5**	**-2.0**
	0.3nm,0.7s,baz=308,slow=3.7,SNR=1.9							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**88.36**	**115**	P		**P**	**00 34 48.8**	**-2.0**
	0.4nm,0.6s,baz=283,slow=4.3,SNR=5.7							
	0.4nm,0.6s							

*IDC **17** 00:38:38.4±2.1,7°.44S×129°.06E,h152km±25km,mb3.7/1, mbtmp4.4/6,MS3.1/1,Error ellipse: s-maj=34.3km s-min=20.6km az=94.0*
*NEIC **17** 00:38:39.2±1.5,7°.30S±0°.08×129°.03E±0°.07,h145km±11km, mb4.1/7,Error ellipse: s-maj=12.5km s-min=9.2km az=152.0*

ISC 17 00:38:37.4±0.7,7°.55S±0°.06×129°.07E±0°.07,h150km,n25, σ3s12/29,mb3.9/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**2.25**	**101**	Pn		**Pn**	**00 39 16.9**	**+1.4**
SOEI	**Soe**	**5.23**	**245**	Pn		**Pn**	**00 39 56.4**	**+2.3**
FAKI	**Fak Fak**	**5.58**	**35**	Pn		**Pn**	**00 39 58.3**	**-0.4**
MTN	**Manton Dam**	**5.64**	**159**	Pn		Pn	00 40 04.9	+5.5
BATI	**Baumata**	**5.96**	**243**	P		**Pn**	**00 40 05.9**	**+2.3**
	34nm,0.3s,baz=69,slow=7.6,SNR=17							
BATI				S		**Sn**	**00 41 07.7**	**-3.4**
	53nm,0.4s,baz=342,slow=20,SNR=6.8							
SIJI	**Sorong**	**6.99**	**18**	P		**Pn**	**00 40 17.1**	**-0.3**
	10nm,0.2s,baz=180,slow=20,SNR=7.0							
SIJI				S		**Sn**	**00 41 29.9**	**-5.9**
	5.3nm,0.5s,baz=229,slow=19,SNR=1.8							
KNRA	**Kununurra**	**8.08**	**182**			**Pn**	**00 40 35.2**	**+3.3**
FITZ	**Fitzroy Crossi**	**11.01**	**197**	P		**Pn**	**00 41 11.6**	**+0.9**
	4.4nm,0.3s,baz=32,slow=12,SNR=47							
FITZ				S		**Sn**	**00 43 06.2**	**-6.2**
	2.2nm,0.3s,baz=331,slow=18,SNR=2.7							
FITZ	**Fitzroy Crossi**	**11.01**	**197**	Pn		**Pn**	**00 41 11.7**	**+1.0**
WB0	**Warramunga Arr**	**13.20**	**157**			**Pn**	**00 41 41.0**	**+1.8**
WRA	**Warramunga Arr**	**13.34**	**158**	P		**Pn**	**00 41 42.6**	**+1.6**
	3.8nm,0.6s,baz=335,slow=12,SNR=25							
WRA				S		**Sn**	**00 44 05.0**	**-3.7**
	5.9nm,0.7s,baz=337,slow=22,SNR=11							
WRA				LR		LR	00 46 50.4	
	comp=Z,80nm,21.1s,baz=98,slow=37							
WRA	**Warramunga Arr**	**13.34**	**158**	Pn		**Pn**	**00 41 41.2**	**+0.2**
WB2	**Warramunga Arr**	**13.34**	**158**	Pn		**P**	**00 41 43.0**	**-2.3**
WR0	**Warramunga Arr**	**13.43**	**157**	Pn		**Pn**	**00 41 42.9**	**+0.7**
COEN	**Coen**	**15.25**	**116**	Pn		**P**	**00 42 08.2**	**+1.7**
COEN				IAmb		IAmb	00 42 24.2	
	comp=Z,16nm,1.1s							
PSA00	**Pilbara Seismi**	**16.54**	**212**			**Pn**	**00 42 24.9**	**+4.0**
PSA00				IAmb		IAmb	00 42 41.0	
	comp=Z,16nm,1.2s							
AS31	**Alice Springs**	**16.68**	**164**			**Pn**	**00 42 27.0**	**+4.5**
ASAR	**Alice Springs**	**16.68**	**164**	P		**Pn**	**00 42 26.0**	**+3.4**
	comp=Z,4.1nm,0.6s,baz=338,slow=9.4,SNR=48							
ASAR				S		**S**	**00 45 22.2**	**-5.9**
	comp=Z,0.9nm,0.4s,baz=334,slow=16,SNR=4.9							
ASAR	**Alice Springs**	**16.68**	**164**			**Pn**	**00 42 27.4**	**+4.9**
HNR	**Honiara**	**30.59**	**96**	P		**P**	**00 44 39.1**	**+1.7**
TUWZ	**Tuamarina**	**52.09**	**138**	P		**P**	**00 47 34.1**	**+2.0**
MK31	**Makanchi Array**	**68.18**	**327**	P		**P**	**00 49 22.1**	**+0.6**
MK31				IAmb		IAmb	00 49 43.0	
	comp=Z,2.4nm,1.2s							
MKAR	**Makanchi Array**	**68.18**	**327**	P		**P**	**00 49 21.7**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=142,slow=7.3,SNR=17							
	comp=Z,0.9nm,0.5s							
MAKZ	**Makanchi**	**68.36**	**327**	P		**P**	**00 49 23.2**	**+0.6**
MAKZ				IAmb		IAmb	00 49 58.2	
	comp=Z,6.4nm,1.4s							
KURK	**Kurchatov**	**72.51**	**329**	P		**P**	**00 49 48.3**	**+0.6**
KURK				IAmb		IAmb	00 49 49.1	
	comp=Z,2.1nm,0.9s							

*NOU **17** 00:42:55.6,41°.22S×174°.44E,h78km,MLv3.7/9,Cook Strait, New Zealand*
*WEL **17** 00:42:57.1±0.4,41°.S±4°.×17°.4E±°,h52km±5km,M3.0/27, ML3.2/28,MLv3.0/27,Error ellipse: s-maj=0.0km s-min=0.0km az=171.9*

ISC 17 00:42:55.1±1.3,41°.23S±0°.04×174°.37E±0°.03,h83km±7km, n102,σ0s99/114,Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TCW	**Tory Channel**	**0.07**	**284**	P		**Pn**	**00 43 06.7**	**-0.1**
TCW				S		**Sn**	**00 43 13.5**	**-2.1**
SNZO	**South Karori**	**0.27**	**108**	P		**Pn**	**00 43 08.0**	**+0.5**
WEL	**Wellington**	**0.30**	**101**	P		**Pn**	**00 43 08.3**	**+0.6**
TUWZ	**Tuamarina**	**0.38**	**238**	P		**Pn**	**00 43 08.2**	**0.0**
TUWZ				S		**Sn**	**00 43 16.0**	**-1.8**
CMWZ	**Cape Campbell**	**0.53**	**193**	P		**Pn**	**00 43 11.3**	**+1.9**
CMWZ				S		**Sn**	**00 43 21.3**	**+1.3**
CAW	**Cannon Point**	**0.54**	**77**	P		**Pn**	**00 43 10.3**	**+0.8**
DUWZ	**D'Urville Isla**	**0.55**	**321**	P		**Pn**	**00 43 09.2**	**-0.3**
KIW	**Kapiti Island**	**0.55**	**48**	P		**Pn**	**00 43 09.9**	**+0.3**
BSWZ	**Blackbirch Sta**	**0.61**	**217**	P		**Pn**	**00 43 10.8**	**+0.7**
BSWZ				S		**Sn**	**00 43 21.2**	**-0.1**
MSWZ	**Moikau Station**	**0.69**	**106**	P		**Pn**	**00 43 11.9**	**+1.1**
MSWZ				S		**Sn**	**00 43 22.6**	**0.0**
OGWZ	**Otaki Gorge**	**0.73**	**56**	P		**Pn**	**00 43 12.0**	**+0.7**
PLWZ	**Palliser**	**0.73**	**117**	P		**Pn**	**00 43 12.8**	**+1.3**
NNZ	**Nelson**	**0.75**	**271**	P		**Pn**	**00 43 11.5**	**+0.1**
PAWZ	**Paruwai Farm**	**0.81**	**101**	P		**Pn**	**00 43 13.2**	**+1.1**
PAWZ				S		**Sn**	**00 43 24.8**	**-0.1**
MTW	**Mount Morrison**	**0.86**	**86**	P		**Pn**	**00 43 13.5**	**+0.9**
MTW				S		**Sn**	**00 43 25.9**	**+0.1**
HOWZ	**Holdsworth Sta**	**0.93**	**69**	P		**Pn**	**00 43 14.2**	**+0.7**
HOWZ				S		**Sn**	**00 43 27.1**	**-0.1**
TRWZ	**Traveller**	**1.01**	**100**	P		**Pn**	**00 43 15.8**	**+1.4**
TRWZ				S		**Sn**	**00 43 29.3**	**+0.5**
MRZ	**Mangatainoka R**	**1.08**	**59**	P		**Pn**	**00 43 15.8**	**+0.6**
MRZ				S		**Sn**	**00 43 30.3**	**0.0**
TKNZ	**Takaka Hill**	**1.08**	**280**	P		**Pn**	**00 43 15.8**	**+0.5**
TKNZ				S		**Sn**	**00 43 30.0**	**-0.5**
TMWZ	**Te Maipa**	**1.15**	**84**	P		**Pn**	**00 43 17.1**	**+1.0**
THZ	**Tophouse**	**1.22**	**244**	P		**Pn**	**00 43 17.7**	**+0.6**
MRNZ	**Matariki Terra**	**1.23**	**261**	P		**Pn**	**00 43 17.8**	**+0.8**
MRNZ				S		**Sn**	**00 43 33.9**	**+0.3**
TIWZ	**Tintock**	**1.23**	**69**	P		**Pn**	**00 43 17.8**	**+0.7**
OHWZ	**Ohakea**	**1.25**	**35**	P		**Pn**	**00 43 18.6**	**+1.3**
KHZ	**Kahutara**	**1.34**	**207**	P		**Pn**	**00 43 20.0**	**+1.6**
KHZ	**Kahutara**	**1.34**	**207**	P		**Pn**	**00 43 20.0**	**+1.6**
POWZ	**Post Office Ro**	**1.35**	**52**	P		**Pn**	**00 43 18.9**	**+0.3**
PRWZ	**Pori Road**	**1.39**	**61**	P		**Pn**	**00 43 19.8**	**+0.7**
CPWZ	**Castlepoint**	**1.42**	**78**	P		**Pn**	**00 43 20.8**	**+1.3**
QRZ	**Quartz Range**	**1.45**	**286**	P		**Pn**	**00 43 20.3**	**+0.4**
QRZ	**Quartz Range**	**1.45**	**286**	P		**Pn**	**00 43 20.4**	**+0.5**
BFZ	**Birch Farm**	**1.52**	**70**	P		**Pn**	**00 43 21.1**	**+0.4**
BFZ	**Birch Farm**	**1.52**	**70**	P		**Pn**	**00 43 21.3**	**+0.5**
WAZ	**Wanganui**	**1.54**	**18**	P		**Pn**	**00 43 22.8**	**+1.7**
DVHZ	**Dannevirke**	**1.65**	**56**	P		**Pn**	**00 43 22.5**	**+0.1**
TSZ	**Takapari Road**	**1.68**	**47**	P		**Pn**	**00 43 23.4**	**+0.5**
LREZ	**Lake Rotokare**	**1.77**	**1**	P		**Pn**	**00 43 25.8**	**+1.9**
ANWZ	**Angora Road**	**1.77**	**65**	P		**Pn**	**00 43 24.3**	**+0.3**
PREZ	**Palmer Road**	**1.89**	**355**	P		**Pn**	**00 43 27.8**	**+2.2**
PNHZ	**Pukenui**	**1.92**	**47**	P		**Pn**	**00 43 26.1**	**+0.1**
KHEZ	**Kahui Hut**	**1.95**	**352**	P		**Pn**	**00 43 28.0**	**+1.5**
WPHZ	**Waipukurau**	**1.96**	**54**	P		**Pn**	**00 43 26.8**	**+0.3**
NEZ	**North Egmont**	**1.97**	**354**	P		**Pn**	**00 43 28.2**	**+1.5**
PRHZ	**Porangahau**	**1.97**	**62**	P		**Pn**	**00 43 26.6**	**-0.1**
DSZ	**Denniston Nort**	**2.00**	**254**	P		**Pn**	**00 43 27.5**	**+0.5**
GVZ	**Greta Valley S**	**2.00**	**209**	P		**Pn**	**00 43 28.2**	**+1.1**
MTVZ	**Mangateitei**	**2.02**	**25**	P		**Pn**	**00 43 28.6**	**+1.2**
PKE	**Pukeiti**	**2.05**	**352**	P		**Pn**	**00 43 29.3**	**+1.5**
PKVZ	**Pokaka**	**2.08**	**21**	P		**Pn**	**00 43 29.3**	**+1.1**
MOVZ	**Moawhango**	**2.10**	**31**	P		**Pn**	**00 43 28.8**	**+0.3**
WNVZ	**Wahianoa**	**2.12**	**27**	P		**Pn**	**00 43 29.9**	**+1.1**
VRZ	**Vera Road**	**2.12**	**8**	P		**Pn**	**00 43 30.4**	**+1.7**
MHEZ	**Mangahewa**	**2.15**	**359**	P		**Pn**	**00 43 31.0**	**+2.0**
WHVZ	**Whangaehu Hut**	**2.15**	**26**	P		**Pn**	**00 43 30.4**	**+1.0**
BHHZ	**Black Hill Sta**	**2.17**	**37**	P		**Pn**	**00 43 29.6**	**+0.3**
TUVZ	**Tukino**	**2.19**	**27**	P		**Pn**	**00 43 30.8**	**+1.1**
KRHZ	**Kereru**	**2.20**	**45**	P		**Pn**	**00 43 29.6**	**-0.1**
LTZ	**Lake Taylor**	**2.20**	**225**	P		**Pn**	**00 43 30.5**	**+0.7**
PXZ	**Pawanui**	**2.24**	**59**	P		**Pn**	**00 43 30.2**	**0.0**
NGZ	**Ngauruhoe**	**2.26**	**25**	P		**Pn**	**00 43 31.8**	**+1.2**
SNVZ	**South Ngauruho**	**2.26**	**26**	P		**Pn**	**00 43 31.9**	**+1.2**
OTVZ	**Oturere**	**2.29**	**26**	P		**Pn**	**00 43 32.2**	**+1.1**
NNVZ	**North Ngauruho**	**2.30**	**25**	P		**Pn**	**00 43 32.3**	**+1.1**
TWVZ	**Taurewa**	**2.31**	**21**	P		**Pn**	**00 43 32.0**	**+0.7**
WTVZ	**West Tongariro**	**2.31**	**24**	P		**Pn**	**00 43 32.4**	**+1.1**
ETVZ	**East Tongariro**	**2.33**	**27**	P		**Pn**	**00 43 32.6**	**+1.0**
KRVZ	**Karewarewa**	**2.34**	**25**	P		**Pn**	**00 43 33.0**	**+1.3**
TMVZ	**Te Maari**	**2.34**	**26**	P		**Pn**	**00 43 32.8**	**+1.0**
NTVZ	**North Tongarir**	**2.35**	**26**	P		**Pn**	**00 43 33.0**	**+1.1**
KAHZ	**Kahuranaki**	**2.39**	**54**	P		**Pn**	**00 43 32.2**	**-0.1**
KWHZ	**Kaweka Forest**	**2.39**	**42**	P		**Pn**	**00 43 32.2**	**-0.1**
KATZ	**Kakaramea**	**2.47**	**25**	P		**Pn**	**00 43 34.

BOOM *i* S **Sg** **01 01 37.7 +0.4**
BOOM Boomskoye usch **1.54 295** ⇑*i* P **Pn** **01 01 16.2 +0.1**
baz=97
BOOM ⇑*i* S **Sg** **01 01 37.7 +0.4**
baz=97
UZB Uzynbulak **1.57 34** *e* PN **Pn** **01 01 15.4 -0.9**
UZB *e* 01 01 35.9
UZB Uzynbulak **1.57 34** *e* P **Pn** **01 01 16.2 -0.2**
46nm,0.1s
UZB *e* S **Sb** **01 01 37.2 -0.3**
384nm,0.5s
UZB Uzynbulak **1.57 34** *e* Pn **Pn** **01 01 15.5 -0.9**
baz=29
UZB *e* Sn **Sn** **01 01 36.0 -1.2**
baz=29
UZB Uzynbulak **1.57 34** P **Pn** **01 01 16.2 -0.2**
46nm,0.1s
UZB S **Sb** **01 01 37.2 -0.3**
384nm,0.5s
MTBS Maitube **1.65 321** *e* P **Pg** **01 01 19.3 +0.1**
271nm,0.4s
MTBS *e* S **Sg** **01 01 44.1 +3.5**
2µm,0.3s
MTBS Maitube **1.65 321** P **Pg** **01 01 19.3 +0.1**
271nm,0.4s
MTBS S **Sg** **01 01 44.1 +3.5**
2µm,0.3s
KURS Kuram **1.66 9** *e* P **Pg** **01 01 19.3 -0.1**
412nm,0.5s
KURS *e* S **Sg** **01 01 42.6 +1.7**
1µm,0.3s
KURS Kuram **1.66 9** P **Pg** **01 01 19.3 -0.1**
412nm,0.5s
KURS S **Sg** **01 01 42.6 +1.7**
1µm,0.3s
KURS Kuram **1.66 9** *e* P **Pg** **01 01 19.3 -0.1**
baz=8.0
KURS *e* S **Sg** **01 01 42.6 +1.7**
baz=8.0
KPKS Kokpek **1.73 21** *e* PN **Pn** **01 01 18.7 +0.1**
KPKS *e* 01 01 41.7
KPKS Kokpek **1.73 21** *e* P **Pb** **01 01 20.2 +0.1**
458nm,0.3s
KPKS *e* S **Sg** **01 01 44.0 +0.6**
3µm,0.4s
KPKS Kokpek **1.73 21** *e* Pn **Pn** **01 01 18.8 +0.1**
baz=17
KPKS *e* Sn **Sb** **01 01 41.8 -0.5**
baz=17
KPKS Kokpek **1.73 21** P **Pb** **01 01 20.2 +0.1**
458nm,0.3s
KPKS S **Sg** **01 01 44.0 +0.6**
3µm,0.4s
KPKS Kokpek **1.73 21** *e* P **Pb** **01 01 20.2 +0.1**
baz=20
KPKS *e* S **Sg** **01 01 43.9 +0.6**
baz=20
SHLS Shalkode **1.78 42** *e* PN **Pg** **01 01 22.6 +0.9**
SHLS *e* 01 01 49.2
SHLS Shalkode **1.78 42** *e* P **Pg** **01 01 24.3 +2.6**
873nm,0.3s
SHLS *e* S **Sg** **01 01 51.1 +6.3**
840nm,0.3s
SHLS Shalkode **1.78 42** *e* Pg **Pg** **01 01 22.7 +0.9**
baz=46
SHLS *e* Lg Lg 01 01 49.3
baz=46
SHLS Shalkode **1.78 42** Pg **Pg** **01 01 24.3 +2.6**
873nm,0.3s
SHLS Lg Lg 01 01 51.1
840nm,0.3s
SHLS Shalkode **1.78 42** *e* P **Pg** **01 01 24.3 +2.6**
baz=47
SHLS *e* S **Sg** **01 01 51.1 +6.3**
baz=47
KST Kastek **1.82 311** *e* P **Pg** **01 01 23.3 +0.6**
343nm,0.3s
KST *e* S **Sg** **01 01 50.1 +3.8**
2µm,0.4s
KST Kastek **1.82 311** Pg **Pg** **01 01 23.3 +0.6**
343nm,0.3s
KST Lg Lg 01 01 50.1
2µm,0.4s
TKM2 Tokmak 2 **1.97 304** *i* PN **Pb** **01 01 24.8 +0.6**
SNR=135
TKM2 Tokmak 2 **1.97 304** *i* PN **Pb** **01 01 24.5 +0.4**
TKM2 pmax pmax
comp=Z,168nm,0.3s
TKM2 Tokmak 2 **1.97 304** ⇑Pn **Pb** **01 01 24.6 +0.4**
comp=Z,168nm,0.3s
TKM2 ⇓Lg Lg 01 01 53.5
comp=Z,903nm,0.5s
TKM2 Tokmak 2 **1.97 304** ⇓*i* P **Pb** **01 01 24.2 0.0**
baz=5.0
TKM2 ⇓*i* S **Sg** **01 01 51.1 +0.1**
baz=5.0
KTBS Karatobe **2.04 336** *e* P **Pg** **01 01 26.6 -0.2**
comp=Z,373nm,0.5s
KTBS *e* S **Sg** **01 01 56.0 +2.6**
comp=Z,5µm,0.4s
KTBS Karatobe **2.04 336** Pg **Pg** **01 01 26.6 -0.2**
comp=Z,373nm,0.5s
KTBS Lg Lg 01 01 56.0
comp=Z,5µm,0.4s
KBK Karagaybulak **2.29 292** P **Pb** **01 01 30.2 +0.6**
SNR=130
KBK Karagaybulak **2.29 292** *i* PN **Pb** **01 01 28.6 -0.9**
KBK *i* S **Sb** **01 01 58.4 +0.2**
KBK Karagaybulak **2.29 292** ⇑*i* P **Pb** **01 01 28.6 -0.9**
baz=93
KBK ⇑*i* S **Sb** **01 01 58.4 +0.2**
baz=93
KUU Kurty **2.32 332** *e* PN **Pb** **01 01 28.4 -1.5**
KUU *e* 01 01 31.6
KUU *e* 01 02 03.4
KUU Kurty **2.32 332** *e* P **Pg** **01 01 31.3 -0.7**
comp=Z,332nm,0.5s
KUU *e* S **Sg** **01 02 03.1 +1.0**
comp=Z,1µm,0.4s
KUU Kurty **2.32 332** *e* Pn **Pb** **01 01 28.5 -1.5**
baz=330
KUU *e* Pg **Pg** **01 01 31.7 -0.4**
baz=330
KUU *e* Sn **Sb** **01 01 57.9 -1.1**
baz=330
KUU *e* Lg Lg 01 02 03.5
baz=330
KUU Kurty **2.32 332** Pg **Pg** **01 01 31.3 -0.7**
comp=Z,332nm,0.5s
KUU Lg Lg 01 02 03.1
comp=Z,1µm,0.4s
ARXS Arharly **2.36 360** *e* PN **Pb** **01 01 30.0 -0.8**
ARXS *e* P **Pg** **01 01 32.2 -0.7**
ARXS Arharly **2.36 360** *e* P **Pb** **01 01 31.5 +0.7**
comp=Z,348nm,0.4s
ARXS *e* S **Sg** **01 02 03.6 0.0**
comp=Z,4µm,0.4s
ARXS Arharly **2.36 360** Pg **Pb** **01 01 31.5 +0.7**
comp=Z,348nm,0.4s
ARXS Lg Lg 01 02 03.6
comp=Z,4µm,0.4s
KRBS Karabastau **2.43 320** *e* P **Pg** **01 01 33.8 -0.5**
comp=Z,433nm,0.5s
KRBS *e* S **Sg** **01 02 07.0 +1.2**
comp=Z,948nm,0.4s
KRBS Karabastau **2.43 320** Pg **Pg** **01 01 33.8 -0.5**
comp=Z,433nm,0.5s
KRBS Lg Lg 01 02 07.0
comp=Z,948nm,0.4s
KTMS Ketmen **2.45 49** *e* P **Pn** **01 01 30.1 +1.6**
comp=Z,184nm,0.4s
KTMS *e* S **Sb** **01 02 02.5 -0.4**
comp=Z,660nm,0.4s
KTMS Ketmen **2.45 49** Pg **Pn** **01 01 30.1 +1.6**
comp=Z,184nm,0.4s
KTMS Lg Lg 01 02 02.5
comp=Z,660nm,0.4s
UCH Uchtor **2.50 280** P **Pb** **01 01 33.9 +0.5**
SNR=93
UCH Uchtor **2.50 280** *i* PN **Pn** **01 01 31.4 +2.0**
UCH *i* S **Sb** **01 02 03.8 -0.8**
UCH Uchtor **2.50 280** ⇑*i* P **Pn** **01 01 31.4 +2.0**
baz=81
UCH ⇑*i* S **Sb** **01 02 03.8 -0.8**
baz=81
CHMS Chumysh **2.55 298** P **Pb** **01 01 33.4 -0.6**
SNR=196
CHMS Chumysh **2.55 298** *i* PN **Pb** **01 01 32.8 -1.2**
CHMS pmax pmax
comp=Z,202nm,0.6s
CHMS Chumysh **2.55 298** ⇑Pn **Pb** **01 01 32.8 -1.2**
comp=Z,202nm,0.7s
CHMS ⇑Lg Lg 01 02 10.2
comp=Z,543nm,0.5s
CHMS Chumysh **2.55 298** ⇑*i* P **Pn** **01 01 31.7 +1.9**
baz=99
CHMS ⇑*i* S **Sb** **01 02 04.3 -1.4**
baz=99
AAK Ala-Archa **2.60 289** Pn **Pb** **01 01 35.1 +0.2**
comp=Z,127nm,0.3s,baz=105,slow=10,SNR=126
AAK Sn **Sg** **01 02 11.1 0.0**
comp=Z,67nm,0.3s,baz=266,slow=19,SNR=19
AAK LR LR 01 02 45.7
comp=Z,308nm,20.2s,baz=154,slow=42
AAK Ala-Archa **2.60 289** P **Pb** **01 01 35.3 +0.5**
SNR=164
AAK Ala-Archa **2.60 289** *ce* PN **Pb** **01 01 34.9 +0.1**
AAK pmax pmax
comp=Z,175nm,0.8s
AAK Ala-Archa **2.60 289** ⇓*i* P **Pn** **01 01 32.8 +2.3**
baz=90
AAK ⇓*i* S **Sb** **01 02 05.9 -1.3**
baz=90
ARLS Aral **2.62 271** *i* PN **Pn** **01 01 33.1 +2.3**
ARLS *i* S **Sb** **01 02 06.3 -1.5**
ARLS Aral **2.62 271** ⇑*i* P **Pn** **01 01 33.1 +2.3**
baz=72
ARLS ⇑*i* S **Sb** **01 02 06.3 -1.5**
baz=72
KSH Kashi **2.73 212** Pn **Pg** **01 01 39.3 -0.6**
KSH Sn **Sg** **01 02 21.1 +5.9**
KSH smax smax
comp=Z,430nm,0.8s
KSH smax smax
comp=Z,660nm,0.9s
USP Ospenovka **2.84 301** P **Pb** **01 01 36.7 -2.1**
SNR=175
USP Ospenovka **2.84 301** *i* PN **Pn** **01 01 35.9 +2.2**
USP *i* S **Sb** **01 02 11.3 -2.6**
USP Ospenovka **2.84 301** ⇑*i* P **Pn** **01 01 35.9 +2.2**
baz=2.0
USP ⇑*i* S **Sb** **01 02 11.3 -2.6**
baz=2.0
SGDS Sogindy **2.85 305** *e* PN **Pn** **01 01 35.8 +1.9**
SGDS *e* 01 01 42.3
SGDS Sogindy **2.85 305** *e* P **Pb** **01 01 40.5 +1.4**
comp=Z,113nm,0.2s
SGDS *e* S **Sg** **01 02 18.9 -0.3**
comp=Z,736nm,0.4s
SGDS Sogindy **2.85 305** *e* Pn **Pn** **01 01 35.9 +1.9**
baz=304
SGDS *e* Pb **Pb** **01 01 40.1 +1.0**
baz=304
SGDS *e* Pg **Pg** **01 01 42.4 +0.1**
baz=304
SGDS Sogindy **2.85 305** Pg **Pb** **01 01 40.5 +1.4**
comp=Z,113nm,0.2s
SGDS Lg Lg 01 02 18.9
comp=Z,736nm,0.4s
DJR Jarkent **2.87 29** *e* P **Pb** **01 01 39.4 0.0**
comp=Z,123nm,0.3s
DJR *e* S **Sg** **01 02 17.0 -2.7**
comp=Z,4µm,0.4s
DJR Jarkent **2.87 29** Pg **Pb** **01 01 39.4 0.0**
comp=Z,123nm,0.3s
DJR Lg Lg 01 02 17.0
comp=Z,4µm,0.4s
AML Almayashu **3.10 277** P **Pb** **01 01 43.7 +0.3**
SNR=148
AML Almayashu **3.10 277** *i* PN **Pn** **01 01 39.9 +2.3**
AML *i* S **Sn** **01 02 18.2 +3.0**
EKS2 Erkin-Say **3.12 286** P **Pb** **01 01 42.6 -1.0**
SNR=110
EKS2 Erkin-Say **3.12 286** *i* PN **Pn** **01 01 40.0 +2.4**
EKS2 *i* S **Sn** **01 02 18.5 +3.2**
EKS2 Erkin-Say **3.12 286** ⇓*i* P **Pn** **01 01 40.0 +2.4**
baz=87
EKS2 ⇓*i* S **Sn** **01 02 18.5 +3.2**
baz=87
TDK Taldyqorghan **3.18 7** *e* PN **Pn** **01 01 37.7 -0.7**
TDK *e* 01 01 45.7
TDK Taldyqorghan **3.18 7** *e* P **Pb** **01 01 45.6 +0.9**
comp=Z,201nm,0.4s
TDK *e* S **Sg** **01 02 27.5 -2.3**
comp=Z,3µm,0.5s
TDK Taldyqorghan **3.18 7** *e* Pn **Pn** **01 01 37.7 -0.7**
baz=5.2
TDK *e* Pg **Pb** **01 01 45.8 +1.1**
baz=5.2
MRKS Merke **3.53 286** *e* P **Pg** **01 01 55.3 0.0**
comp=Z,84nm,0.6s
MRKS *e* S **Sg** **01 02 44.8 +3.8**
comp=Z,403nm,0.5s
OHH Osh **4.03 252** *i* PN **Pn** **01 01 52.6 +2.5**
OHH *i* S **Sn** **01 02 40.7 +2.9**
OHH Osh **4.03 252** ⇑*i* P **Pn** **01 01 52.6 +2.5**
baz=53
OHH ⇑*i* S **Sn** **01 02 39.7 +1.9**
baz=53
BTLS Baital **4.21 320** *e* PN **Pn** **01 01 54.4 +1.8**
BTLS *e* 01 02 06.6
BTLS *e* 01 03 00.1
BTLS Baital **4.21 320** *e* P **Pb** **01 02 05.2 +2.9**
comp=Z,28nm,0.3s
BTLS *e* S **Sg** **01 03 01.1 -1.8**
comp=Z,113nm,0.8s
BTLS Baital **4.21 320** *e* Pn **Pn** **01 01 54.5 +1.8**
baz=320
BTLS *e* Pg **Pg** **01 02 06.7 -1.7**
baz=320
BTLS *e* Sb **Sg** **01 03 00.2 -2.8**
baz=320
BTLS Baital **4.21 320** Pg **Pb** **01 02 05.2 +2.9**
comp=Z,28nm,0.3s
BTLS Lg Lg 01 03 01.1
comp=Z,113nm,0.8s
DZA Taraz **4.92 284** *e* PN **Pb** **01 02 16.6 +2.2**
DZA Taraz **4.92 284** *e* P **Pg** **01 02 20.2 -1.8**
comp=Z,70nm,0.1s
DZA *e* S **Sg** **01 03 26.7 +0.9**
comp=Z,186nm,0.5s
DZA Taraz **4.92 284** *e* Pb **Pb** **01 02 16.7 +2.2**
baz=284
TRKS Terek-Say **5.02 269** *i* PN **Pn** **01 02 05.9 +2.1**
TRKS *i* S **Sn** **01 03 03.9 +1.6**
TRKS Terek-Say **5.02 269** ⇓*i* P **Pn** **01 02 05.9 +2.1**
baz=68
TRKS ⇓*i* S **Sn** **01 03 03.9 +1.6**
baz=68
KK31 Karatay Array **5.55 285** PN Pb 01 02 19.8 -5.3
KK31 P **Pg** **01 02 33.4 -0.7**
KK31 Karatay Array **5.55 285** ⇑Pn Pb 01 02 19.1 -6.1
comp=Z,1.3nm,0.7s,baz=126,slow=13,SNR=116
KK31 ⇑Pg **Pg** **01 02 33.0 -1.0**
comp=Z,8.4nm,0.4s,baz=104,slow=15,SNR=51
KK31 ⇑Lg Lg 01 03 43.8
comp=Z,57nm,0.6s,baz=98,slow=30,SNR=14
KKAR Karatay Array **5.55 285** ⇓*i* P **Pn** **01 02 13.5 +2.5**
baz=86
KKAR ⇓*i* S **Sn** **01 03 16.5 +1.2**
baz=86
MAKZ Makanchi **5.78 30** PN **Pn** **01 02 16.0 +1.9**
MAKZ 01 02 34.8
MAKZ 01 03 45.5
MAKZ Makanchi **5.78 30** ⇑Pn **Pn** **01 02 16.1 +1.9**
comp=Z,3.6nm,0.4s
MAKZ ⇓Pg **Pg** **01 02 34.9 -3.5**
comp=Z,16nm,0.7s
MAKZ ⇑Lg Lg 01 03 45.6
comp=Z,25nm,0.6s
IUG luzhnay **5.82 276** *e* P **Pg** **01 02 35.1 -4.0**
comp=Z,235nm,0.4s
IUG *e* S **Sg** **01 03 52.4 -2.1**
comp=Z,113nm,0.7s
IUG luzhnay **5.82 276** *e* Pg **Pg** **01 02 36.6 -2.5**
baz=276
MK31 Makanchi Array **5.89 31** *c* PN **Pn** **01 02 16.9 +1.3**
MK31 Makanchi Array **5.89 31** ⇑Pn **Pn** **01 02 17.0 +1.3**
comp=Z,3.3nm,0.3s,baz=206,slow=12,SNR=159
MK31 ⇓Pg **Pg** **01 02 36.9 -3.5**
comp=Z,13nm,0.5s,baz=207,slow=16,SNR=4.5
MK31 ⇓Sn **Sn** **01 03 27.2 +3.7**
comp=Z,23nm,0.6s
MK31 Lg Lg 01 03 49.7
comp=Z,22nm,0.5s,baz=210,slow=26,SNR=5.4
MKAR Makanchi Array **5.89 31** Pn **Pn** **01 02 17.1 +1.5**
comp=Z,2.9nm,0.3s,baz=202,slow=13,SNR=98
MKAR Sn **Sn** **01 03 26.2 +2.7**
comp=Z,5.1nm,0.3s,baz=215,slow=23,SNR=5.0
MKAR Lg Lg 01 03 47.9
comp=Z,7.9nm,0.3s,baz=209,slow=29,SNR=9.0
MKAR LR LR 01 04 02.3
comp=Z,24nm,21.7s,baz=141,slow=33
comp=Z,5.6nm,0.4s
CHM Chimkent **6.14 277** *e* P **Pg** **01 02 42.3 -2.9**
comp=Z,8.1nm,0.4s
CHM *e* S **Sg** **01 04 04.8 +0.1**
comp=Z,237nm,0.1s
WMQ Urumqi **7.51 72** *e* Pn **Pn** **01 02 37.1 -0.9**
WMQ smax smax
comp=Z,89nm,1.1s
WMQ smax smax
comp=Z,88nm,1.1s
WMQ LR LR
comp=Z,550nm,6.1s
WMQ LR LR
comp=Z,480nm,5.1s
ZSN Zaisan **7.52 39** *e* P **Pn** **01 02 37.6 -0.3**
ZSN *e* 01 04 03.5
ZSN Zaisan **7.52 39** *e* P Pg 01 03 05.5 -6.1
comp=Z,9.1nm,0.1s
ZSN *e* S **Sg** **01 04 44.5 -4.4**
comp=Z,41nm,0.5s
ZSN Zaisan **7.52 39** *e* Pn **Pn** **01 02 37.6 -0.3**
baz=39
ZSN *e* Sn **Sn** **01 04 03.6 0.0**
baz=39
ZSN *e* Lg Lg 01 04 45.0
baz=39
ZSN Zaisan **7.52 39** Pg Pg 01 03 05.5 -6.1
comp=Z,9.1nm,0.1s
SEM Semipalatinsk **8.72 10** *e* Lg Lg 01 05 24.7
baz=9.5
KURBB Kurchatov Arra **8.79 3** Pn **Pn** **01 02 55.9 +0.5**
comp=Z,0.3nm,0.3s,baz=185,slow=12,SNR=12
KURBB Sn **Sn** **01 04 37.9 +3.2**
comp=Z,0.3nm,0.3s,baz=182,slow=21,SNR=4.3
KURBB Lg Lg 01 05 24.1
comp=Z,1.3nm,0.3s,baz=185,slow=27,SNR=9.8
KURBB LR LR 01 06 38.6
comp=Z,78nm,18.1s,baz=168,slow=39
comp=Z,0.7nm,0.3s
KURBB Kurchatov Arra **8.79 3** P **Pn** **01 02 57.7 +2.4**
KURBB Kurchatov Arra **8.79 3** Pn **Pn** **01 02 57.7 +2.4**
KURBB Lg Lg 01 05 22.7
KURK Kurchatov **8.88 3** *ce* P **Pn** **01 02 57.4 +0.7**
KURK pmax pmax
comp=Z,2.0nm,0.5s
KURK Kurchatov **8.88 3** ⇑Pn **Pn** **01 02 57.1 +0.4**
comp=Z,3.4nm,0.5s
KURK ⇑Lg Lg 01 05 28.9
comp=Z,101nm,0.9s
BRZS Berezniki **8.89 338** *e* P **Pn** **01 02 58.0 +1.3**
BRZS Berezniki **8.89 338** *e* Pn **Pn** **01 02 58.1 +1.3**
baz=337
CHCP Chirah Chowk **8.94 205** P **Pn** **01 02 58.1 +0.6**
CEP Cherat **9.28 212** P **Pn** **01 03 02.1 -0.2**
THW Thamme Wali **10.25 210** P **Pn** **01 03 12.8 -2.7**
BVA0 Borovoye Array **12.25 338** P **Pn** **01 03 42.9 +0.1**
BVA0 Borovoye Array **12.25 338** ⇓P **Pn** **01 03 42.9 +0.1**
comp=Z,9.2nm,0.8s,baz=144,slow=14,SNR=14
BRVK Borovoye **12.31 338** *ce* P **Pn** **01 03 43.4 -0.2**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
ZALV Zalesovo Beam **12.97 19** Pn **Pn** **01 03 53.0 +0.4**
comp=Z,0.3nm,0.3s,baz=201,slow=12,SNR=15
ZALV Sn **Sn** **01 06 22.3 +5.1**
comp=Z,0.3nm,0.3s,baz=204,slow=24,SNR=2.2
ZALV Lg Lg 01 07 32.6
comp=Z,0.1nm,0.3s,baz=194,slow=27,SNR=2.2
comp=Z,4.4nm,0.9s
GOMU GeErMu **14.35 108** P Pn 01 04 07.5 -4.4
GOMU pP P 01 04 09.8 -9.3
GOMU sP 01 04 14.4
GOMU pmax pmax
comp=Z,11nm,0.6s
GOMU pmax pmax
comp=Z,66nm,4.5s
AB31 Akbulak array **14.53 307** P **Pn** **01 04 14.6 +0.7**
AB31 Akbulak array **14.53 307** P **Pn** **01 04 14.6 +0.7**
comp=Z,1.3nm,0.6s,baz=115,slow=14,SNR=9.8
DMN Daman **15.40 155** *e* P Pn 01 04 19.2 -6.8
PKIN Phulchoki **15.53 154** *e* P Pn 01 04 20.8 -6.8
comp=Z,26nm,0.6s
PKI Pulchoki **15.54 154** *e* P Pn 01 04 21.0 -6.8
comp=Z,34nm,0.7s
KNGR Kungurtug, Tuv **16.16 50** *i* P **Pn** **01 04 35.5 0.0**
AKTO Aktyubinsk **16.16 309** Pn **Pn** **01 04 33.5 -1.8**
comp=Z,0.1nm,0.3s,baz=119,slow=10,SNR=2.3
AKTO Sn **Sn** **01 07 32.1 -2.7**
baz=130,slow=14,SNR=2.1
AKTO Lg Lg 01 09 21.0
comp=Z,0.1nm,0.3s,baz=42,slow=20,SNR=2.0
comp=Z,0.6nm,0.5s
AKTO Aktyubinsk **16.16 309** ⇑P **Pn** **01 04 35.3 0.0**
comp=Z,2.2nm,0.8s
RAMN Ramite **16.52 151** *e* P Pn 01 04 33.7 -6.7
comp=Z,37nm,0.7s
GTA Gaotai **16.86 91** *e* P **Pn** **01 04 45.8 +1.2**
GTA pP pP 01 04 49.3 +0.2
GTA sP sP 01 04 51.8 +1.6
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA pmax pmax
comp=Z,44nm,5.1s
GTA LR LR
comp=Z,65nm,9.5s
GTA LR LR
comp=Z,130nm,12.7s
GTA LR LR
comp=Z,110nm,14.5s
ARU Arti **19.18 326** P **Pn** **01 05 13.4 +0.6**
baz=135,slow=8.3,SNR=10
ARU S **Sn** **01 08 48.6 +0.7**
comp=Z,0.6nm,0.3s,baz=311,slow=21,SNR=1.3
ARU Lg Lg 01 10 46.8
baz=174,slow=22,SNR=1.8
comp=Z,3.2nm,0.5s
ARU Arti **19.18 326** *c* P **Pn** **01 05 13.6 +0.8**
ARU S **S** **01 08 52.1 +2.5**
ARU pmax pmax
comp=Z,15nm,1.8s
SONM Songino Array **21.05 64** P **P** **01 05 31.2 -1.4**
comp=Z,3.4nm,0.7s,baz=269,slow=12,SNR=18
comp=Z,3.4nm,0.7s
ULN Ulaanbaatar **21.49 64** *i* P **P** **01 05 35.9 -1.4**
ULN pmax pmax
comp=Z,5.0nm,1.1s
MAK Makhachkala **22.36 283** *e* P **P** **01 05 45.0 -1.5**
MAK *e* S **S** **01 09 50.4 -2.3**
MAK pmax pmax
comp=Z,141nm,1.1s
BELG Belogornoye **22.94 308** *i* P **P** **01 05 52.9 +0.4**
BELG pmax pmax
comp=Z,2.0nm,1.3s
KIRV Kirov **24.44 323** *ce* P **P** **01 06 07.7 +0.6**
KIV Kislovodsk **25.71 287** *e* P **P** **01 06 21.4 +2.5**
KIV *e* S **S** **01 10 52.0 +3.8**
KIV pmax pmax
comp=Z,4.0nm,1.1s
NRIK Noril'sk **28.02 7** *ce* P **P** **01 06 38.9 -0.4**
NRIK pmax pmax
comp=Z,4.0nm,1.4s
OBN Obninsk **29.92 311** *e* P **P** **01 06 58.1 +1.8**
OBN *e* 01 07 54.7
OBN pmax pmax
comp=Z,3.0nm,0.9s
OBN MLR MLR
comp=Z,119nm,16.0s
BRTR Keskin Array B **33.25 281** P **P** **01 07 26.9 +0.9**
comp=Z,1.4nm,0.8s,baz=76,slow=10,SNR=4.1
comp=Z,1.4nm,0.8s
AKASG Malin Array Be **34.19 302** P **P** **01 07 33.8 -0.1**
comp=Z,0.3nm,0.3s,baz=72,slow=8.7,SNR=2.3
comp=Z,0.3nm,0.3s
PALK Pallekele **34.53 175** LR LR 01 20 51.4
comp=Z,47nm,18.9s,baz=72,slow=35
FINES FINESS Array B **36.37 320** P **P** **01 07 53.6 +1.2**
comp=Z,4.0nm,1.0s,baz=116,slow=9.4,SNR=5.0
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B **38.48 333** P **P** **01 08 11.2 +0.9**

comp=Z,1.5nm,0.6s,baz=100,slow=10.0,SNR=11
comp=Z,1.5nm,0.6s
HFS Hagfors 42.39 318 P **P** **01 08 43.3 +0.6**
comp=Z,1.4nm,0.6s,baz=96,slow=14,SNR=4.8
HFS LR LR 01 28 08.0
comp=Z,20nm,18.1s,baz=98,slow=38
comp=Z,1.4nm,0.6s
VRAC Vranov 42.45 302 ||P P 01 08 53.8 +10
VRAC Vranov 42.45 302 ||P P 01 08 53.8 +10
NB2 NORSAR Subarra 43.53 320 P **P** **01 08 52.1 +0.1**
comp=Z,1.5nm,0.8s,baz=86,slow=8.6
NOA NORSAR Array B 43.53 320 P **P** **01 08 52.4 +0.4**
comp=Z,0.4nm,0.5s,baz=86,slow=8.0,SNR=4.9
comp=Z,0.4nm,0.5s
GERES GERESS Array B 44.41 302 P **P** **01 08 59.0 -0.3**
comp=Z,0.1nm,0.3s,baz=64,slow=6.7,SNR=5.5
comp=Z,0.1nm,0.3s
GERES GERESS Array B 44.41 302 P **P** **01 08 59.0 -0.3**
YSS Yuzh-Sakhalins 45.48 60 *e*P **P** **01 09 09.6 +1.9**
DAVOX Davos/Dischmat 47.50 300 P **P** **01 09 23.8 0.0**
comp=Z,1.0nm,0.5s,baz=45,slow=11,SNR=3.4
DAVOX LR LR 01 31 34.8
comp=Z,30nm,18.5s,baz=78,slow=39
comp=Z,1.0nm,0.5s
ESDC Sonseca Array 59.67 298 P **P** **01 10 53.3 +0.3**
comp=Z,0.6nm,0.8s,baz=50,slow=7.3,SNR=7.5
ESDC LR LR 01 39 07.3
comp=Z,33nm,18.4s,baz=14,slow=38
comp=Z,0.6nm,0.8s
ILAR Eielson Array 68.10 19 P **P** **01 11 46.9 -1.1**
comp=Z,0.4nm,0.8s,baz=312,slow=3.5,SNR=4.6
ILAR LR LR 01 46 14.3
comp=Z,19nm,20.0s,baz=7.0,slow=40
comp=Z,0.4nm,0.8s
TORD Torodi Ar. Bea 71.06 271 P **P** **01 12 05.1 -2.0**
comp=Z,1.4nm,0.5s,baz=52,slow=5.7,SNR=31
comp=Z,1.4nm,0.5s
YKA Yellowknife Ar 75.53 6 P **P** **01 12 31.1 -1.6**
comp=Z,1.4nm,0.7s,baz=352,slow=6.0,SNR=4.3
comp=Z,1.4nm,0.7s
WRA Warramunga Arr 80.65 127 P **P** **01 12 58.4 -3.3**
comp=Z,0.4nm,0.6s,baz=323,slow=5.8,SNR=2.3
comp=Z,0.4nm,0.6s
ASAR Alice Springs 83.28 130 P **P** **01 13 12.2 -3.2**
comp=Z,0.6nm,0.6s,baz=322,slow=4.7,SNR=7.2
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 95.50 5 P **P** **01 14 12.2 -1.7**
comp=Z,0.2nm,0.6s,baz=339,slow=2.3,SNR=1.7
comp=Z,0.2nm,0.6s

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*IDC **17** 01:03:10.4±1.0, 10°.45S×161°.60E, h51km±7km, mb3.7/8, mbtmp4.0/8, MS3.4/12, Error ellipse: s-maj=20.1km s-min=10.1km az=30.0*
*NEIC **17** 01:03:12.8±1.1, 10°.3S±0°.1×161°.5E±0°.2, h57km±14km, mb4.4/8, Error ellipse: s-maj=25.6km s-min=13.7km az=51.0*
ISC 17 01:03:11.6±0.7, 10°.37S±0°.08×161°.5E±0°.1, h61km, n34, σ1§30/28, mb4.2/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.82**	**300**	P			**Pn**	**01 03 40.1**	**-0.6**
	1μm,0.7s,baz=77,slow=0.6,SNR=21								
HNR				S			**Sn**	**01 04 04.0**	**+1.2**
	2μm,0.3s,baz=112,slow=19,SNR=18								
HNR				LR			LR	01 04 37.0	
	comp=Z,616nm,19.6s,baz=168,slow=45								
HNR	**Honiara**	**1.82**	**300**	Pn			**Pn**	**01 03 40.4**	**-0.3**
KOUNC	**Koumac, New Ca**	**10.47**	**166**	Pn			**Pn**	**01 05 40.5**	**+1.5**
DZM	**Mont Dzumac**	**12.55**	**159**	P			**Pn**	**01 06 10.0**	**+2.4**
	4.9nm,0.6s,baz=20,slow=8.9,SNR=12								
DZM				S			**Sn**	**01 08 24.5**	**-1.3**
	3.4nm,0.5s,baz=240,slow=20,SNR=1.3								
DZM	**Mont Dzumac**	**12.55**	**159**	Pn			**Pn**	**01 06 09.3**	**+1.8**
MARNC	**Mare, Loyalty**	**12.69**	**151**				**Pn**	**01 06 11.4**	**+2.1**
OUENC	**Ouen Island, N**	**13.02**	**158**	Pn			**Pn**	**01 06 11.5**	**-2.3**
PATS	**Pohnpei**	**17.39**	**349**				**Pn**	**01 07 10.8**	**+0.6**
MSVF	**Nosu**	**17.60**	**116**	LR			LR	01 12 31.3	
	comp=Z,88nm,21.1s,baz=255,slow=32								
CTA	**Charters Tower**	**17.62**	**235**	LR			LR	01 12 58.8	
	comp=Z,130nm,19.4s,baz=78,slow=33								
WR0	**Warramunga Arr**	**27.71**	**247**	P			**P**	**01 08 54.0**	**-0.4**
WB0	**Warramunga Arr**	**27.79**	**247**	P			**P**	**01 08 55.4**	**+0.3**
WB0				IAmb		IAmb	IAmb	01 09 15.6	
	comp=Z,11nm,1.3s								
WB2	**Warramunga Arr**	**27.88**	**247**	P			**P**	**01 08 54.0**	**-2.0**
WB2				IAmb		IAmb	IAmb	01 08 58.3	
	comp=Z,6.8nm,1.1s								
WRA	**Warramunga Arr**	**27.89**	**247**	P			**P**	**01 08 56.0**	**0.0**
	comp=Z,1.7nm,0.7s,baz=77,slow=9.1,SNR=12								
WRA				LR			LR	01 18 50.8	
	comp=Z,132nm,18.9s,baz=62,slow=34								
	comp=Z,1.7nm,0.7s								
WRA	**Warramunga Arr**	**27.89**	**247**	P			**P**	**01 08 55.2**	**-0.9**
STKA	**Stephens Creek**	**28.26**	**218**	LR			LR	01 20 14.3	
	comp=Z,186nm,18.4s,baz=29,slow=36								
ASAR	**Alice Springs**	**29.48**	**240**	P			**P**	**01 09 10.1**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=64,slow=9.0,SNR=6.4								
ASAR				pP			**pP**	**01 09 23.5**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=67,slow=9.4,SNR=2.6								
ASAR				LR			LR	01 20 59.4	
	comp=Z,137nm,18.3s,baz=76,slow=36								
	comp=Z,1.0nm,0.9s								
KNRA	**Kununurra**	**32.34**	**257**	P			**P**	**01 09 35.6**	**+0.2**
KNRA				IAmb		IAmb	IAmb	01 09 36.3	
	comp=Z,14nm,0.8s								
BBOO	**Buckleboo**	**32.40**	**223**	P			**P**	**01 09 36.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**35.58**	**253**	P			**P**	**01 10 03.2**	**-0.3**
	comp=Z,4.6nm,0.9s,baz=80,slow=6.6								
FITZ				LR			LR	01 23 39.7	
	comp=Z,77nm,18.1s,baz=70,slow=34								
	comp=Z,4.6nm,0.9s								
FITZ	**Fitzroy Crossi**	**35.58**	**253**	P			**P**	**01 10 02.9**	**-0.6**
FITZ				IAmb		IAmb	IAmb	01 10 04.3	
	comp=Z,5.4nm,0.9s								
RAR	**Rarotonga**	**38.66**	**111**	LR			LR	01 23 08.5	
	comp=Z,39nm,19.0s,baz=192,slow=31								
DAV	**Davao City (W)**	**39.77**	**294**	LR			LR	01 26 46.3	
	comp=Z,20nm,19.7s,baz=300,slow=36								
KAPI	**Kappang**	**41.72**	**274**	LR			LR	01 28 15.7	
	comp=Z,27nm,18.7s,baz=70,slow=36								
MJAR	**Matsushiro Arr**	**51.57**	**336**	P			**P**	**01 12 11.5**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=169,slow=9.2,SNR=2.3								
	comp=Z,1.6nm,0.7s								
KSRS	**Korea Array**	**57.06**	**328**	P			**P**	**01 12 52.5**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=131,slow=5.5,SNR=6.5								
KSRS				LR			LR	01 36 14.6	
	comp=Z,15nm,19.9s,baz=340,slow=35								
	comp=Z,1.3nm,0.8s								
USRK	**Ussuriysk Ar.**	**60.57**	**336**	pP			pP	01 13 31.3	-0.3
	comp=Z,4.9nm,1.0s,baz=180,slow=6.9,SNR=2.7								
PETK	**Petropavlovsk-**	**63.31**	**357**	LR			LR	01 38 55.5	
	comp=Z,9.0nm,19.6s,baz=130,slow=34								
SONM	**Songino Array**	**75.71**	**325**	P			**P**	**01 14 51.2**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=143,slow=6.0,SNR=6.6								
SONM				pP			**pP**	**01 15 06.2**	**-1.5**
	comp=Z,3.0nm,0.8s,baz=142,slow=5.7,SNR=6.9								
	comp=Z,1.9nm,0.7s								
MAW	**Mawson**	**83.78**	**202**	pP			pP	01 15 48.0	-2.9
	comp=Z,2.5nm,0.8s,baz=88,slow=4.9,SNR=4.5								
ILAR	**Eielson Array**	**84.23**	**20**	P			**P**	**01 15 37.4**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=239,slow=5.5,SNR=3.3								
ILAR				pP			**pP**	**01 15 50.8**	**-2.4**
	comp=Z,1.0nm,0.9s,baz=238,slow=5.7,SNR=5.2								
	comp=Z,0.4nm,0.9s								
NVAR	**Mina Array Bea**	**88.77**	**51**	pP			pP	01 16 15.5	-0.9
	comp=Z,0.9nm,0.8s,baz=228,slow=8.1,SNR=5.6								
MKAR	**Makanchi Array**	**90.22**	**318**	P			**P**	**01 16 04.7**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=124,slow=4.6,SNR=2.7								
	comp=Z,0.4nm,0.7s								
ANMO	**Albuquerque**	**97.48**	**56**	LR			LR	01 52 24.1	
	comp=Z,15nm,19.7s,baz=13,slow=30								

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*ATH **17** 01:06:33.1, 40°.67N×21°.00E, h14km±3km, ML1.7/3, Error ellipse: s-maj=4.7km s-min=1.5km az=148.0*
*SKO **17** 01:06:33.8, 40°.85N×20°.90E, h18km*
TIR 17 01:06:30.3, 40.74N×20.90E, h2km±1km, Md2.1, Ml1.9, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.14**	**217**	P			Pg	01 06 33.8	+0.7
	baz=218								
KBN				S			Sg	01 06 35.9	+1.0
	baz=218								
KBN						AMP			
	comp=N,6.0nm,0.1s,baz=218								
NEST	**Nestorio**	**0.34**	**161**	P		Pg		01 06 38.0	+1.1
NEST				S		Sg		01 06 42.7	+1.4
NEST						AML	AML	01 06 44.6	
	comp=E,637μm,0.2s								
NEST						AML	AML	01 06 45.9	
	comp=N,426μm,0.2s								
OHR	**Ohrid**	**0.38**	**348**	*i* Pg		Pb		01 06 39.5	-0.3
OHR				*i* Sg		Sb		01 06 46.3	0.0
PENT	**Pentalofos**	**0.57**	**161**	P		Pg		01 06 42.1	+0.8
PENT				S		Sg		01 06 49.5	+0.9
LSK	**Leskovik**	**0.63**	**201**	P		Pg		01 06 43.1	+0.7
	baz=202								
LSK				S		Sb		01 06 53.3	-0.1
	baz=202								
LSK						AMP			
	comp=E,0.2nm,0.5s,baz=202								
KZN	**Kozani**	**0.79**	**123**	P		Pb		01 06 46.6	-0.2
KZN				S		Sg		01 06 56.6	+0.9
KZN						AML	AML	01 07 01.4	
	comp=N,191μm,0.2s								
KZN						AML	AML	01 07 03.0	
	comp=E,199μm,0.2s								
TIR	**Tirane**	**0.99**	**308**	*i* Pg		Pb		01 06 50.7	+0.4
TIR	**Tirane**	**0.99**	**308**	P		Pb		01 06 50.4	+0.1
	baz=309								
PHP	**Peshkopia**	**1.01**	**340**	P		Pb		01 06 50.5	0.0
	baz=341								
PHP				S		Sn		01 07 06.1	-0.3
	baz=341								
PHP						AMP			
	comp=N,0.1nm,0.3s,baz=341								
SRN	**Sarande**	**1.10**	**219**	P		Pb		01 06 52.2	+0.2
	baz=220								
SRN				S		Sn		01 07 09.7	+1.2
	baz=220								
GRG	**Griva**	**1.16**	**79**	*i* Pg		Pn		01 06 54.5	+0.9
GRG	**Griva**	**1.16**	**79**	P		Pn		01 06 53.7	+0.1
IGT	**Igoumenitsa**	**1.28**	**200**	P		Pn		01 06 56.7	+1.5
	baz=201								
IGT				S		Sn		01 07 15.6	+2.6
	baz=201								
IGT	**Igoumenitsa**	**1.28**	**200**	P		Pn		01 06 56.4	+1.2
KEK	**Kerkira**	**1.33**	**220**	P		Pb		01 06 57.0	+1.1
LIT	**Litokhoron**	**1.37**	**117**	P		Pn		01 06 56.5	0.0
THL	**Klokotos Trika**	**1.45**	**144**	P		Pn		01 06 57.5	0.0
THL						AML	AML	01 07 21.3	
	comp=E,27μm,0.5s								
THL						AML	AML	01 07 21.8	
	comp=N,38μm,0.5s								
KNT	**Kendrikon**	**1.57**	**74**	*i* Pn		Pg		01 07 00.3	-0.1
KNT	**Kendrikon**	**1.57**	**74**	P		Pb		01 07 00.2	+0.1
BCI	**Bajram Curri**	**1.74**	**339**	P		Pg		01 07 04.5	+0.8
	baz=340								
BCI				S		Sg		01 07 30.0	+3.6
	baz=340								
BCI						AMP			
	comp=N,0.1nm,0.6s,baz=340								
AGG	**Agios Georgios**	**2.04**	**147**	P		Pn		01 07 06.8	+1.1

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*ISK **17** 01:07:02.9, 38°.65N×38°.14E, h3km, ML4.2/37*
*DDA **17** 01:07:02.9±0.0, 38°.70N×38°.15E, h11km±5km, MW4.1*
*IDC **17** 01:07:04.2±0.8, 38°.71N×37°.98E, h0km, mb3.8/11, mbtmp3.8/17, ML3.2/5, MS3.3/29, Error ellipse: s-maj=14.5km s-min=8.8km az=168.0*
*GII **17** 01:07:05.6±0.0, 38°.65N×38°.15E, h5km, Mm4.2/1*
*NEIC **17** 01:07:06.1±1.9, 38°.63N±0°.07×38°.02E±0°.07, h12km±3km, mb4.0/18, ML4.2(ISK), Error ellipse: s-maj=9.7km s-min=7.6km az=191.0*
*MCSM **17** 01:07:06.3±0.5, 39°.N±.5°×3°.8E±°, h7km±3km, mb4.3*
*MOS **17** 01:07:07.0±1.0, 39°.08N×37°.94E, h12km, mb4.3/5, Error ellipse: s-maj=6.9km s-min=5.0km az=102.7*
ISC 17 01:07:05.2±0.6, 38°.70N±0°.02×38°.10E±0°.02, h10km±3km, n265, σ1§47/283, mb4.0/26, MS3.4/21, 7C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.21**	**329**	P			**Pg**	**01 07 08.2**	**-1.5**
HEKM				S			**Sg**	**01 07 13.5**	**+0.8**
AKCD	**Akcadag**	**0.43**	**199**	P			**Pg**	**01 07 11.0**	**-2.7**
AKCD				S			**Sg**	**01 07 18.7**	**-0.7**
ARPR	**Arapgir-MALATY**	**0.43**	**26**	PG			**Pg**	**01 07 11.9**	**-1.9**
ARPR				SG			**Sg**	**01 07 19.9**	**+0.4**
DARE	**Darende-Malaty**	**0.50**	**255**	PG			**Pg**	**01 07 12.7**	**-2.3**
DARE				SG			**Sg**	**01 07 21.6**	**+0.1**
CUGUR	**Gurin_SVAS**	**0.65**	**272**	P			**Pg**	**01 07 15.6**	**-2.1**
CUGUR				S			**Sb**	**01 07 28.1**	**+0.3**
CUGUR					*i*	AML	AML	01 07 30.0	
	comp=N,6μm,0.8s								
KEMA	**Kemaliye**	**0.65**	**29**	P			**Pg**	**01 07 14.8**	**-3.0**
KEMA				S			**Sg**	**01 07 26.1**	**-0.1**
ELZG	**Elazig**	**0.73**	**106**	P			**Pg**	**01 07 15.9**	**-3.4**
ELZG				S			**Sg**	**01 07 26.9**	**-2.0**
CUKAN	**kangal_SIVAS**	**0.78**	**322**	P			**Pg**	**01 07 18.1**	**-2.4**
CUKAN				S			**Sg**	**01 07 30.6**	**-0.1**
CUKAN					*i*	AML	AML	01 07 40.0	
	comp=N,2μm,0.6s								
CUKAN					*i*	AML	AML	01 07 48.0	
	comp=E,1μm,0.4s								
ELBS	**KAHRAMANMARAS**	**0.84**	**244**	P			**Pg**	**01 07 19.2**	**-2.4**
ELBS				S			**Sn**	**01 07 35.9**	**+0.1**
ELBS					*i*	AML	AML	01 07 41.0	
	comp=N,10μm,0.7s								
ELBS					*i*	AML	AML	01 07 41.0	
	comp=E,7μm,0.5s								
PTK	**Pertek**	**1.03**	**79**	PG			**Pg**	**01 07 21.3**	**-3.8**
PTK				SG			**Sg**	**01 07 37.1**	**-1.4**
CUAYA	**Sivas-Altinyay**	**1.19**	**299**	P			**Pb**	**01 07 25.2**	**-2.8**
CUAYA				S			**Sn**	**01 07 46.2**	**+1.8**
CUZAR	**Zara_SIVAS**	**1.21**	**348**	P			**Pb**	**01 07 26.5**	**-1.8**
CUZAR				S			**Sn**	**01 07 45.2**	**+0.3**
ATAB	**Bozova**	**1.24**	**173**	P			**Pn**	**01 07 26.2**	**-2.4**
ATAB				S			**Sg**	**01 07 45.3**	**+0.2**
REFA	**Refahiye_ERZN**	**1.31**	**23**	P			**Pn**	**01 07 27.2**	**-2.5**
REFA				S			**Sg**	**01 07 49.0**	**+1.6**
REFA					*i*	AML	AML	01 07 50.0	
	comp=N,1μm,0.9s								
REFA					*i*	AML	AML	01 07 54.0	
	comp=E,1μm,0.8s								
SARI	**SarD1z-Kayseri**	**1.35**	**258**	PN			**Pn**	**01 07 28.8**	**-1.5**
SARI				SN			**Sg**	**01 07 48.5**	**-0.1**
SCER	**sogukcermik**	**1.38**	**327**	P			**Pn**	**01 07 29.0**	**-1.7**
SCER				S			**Sg**	**01 07 50.6**	**+1.0**
GZT	**Gaziantep**	**1.41**	**197**	P			**Pn**	**01 07 29.5**	**-1.6**
GZT				S			**Sn**	**01 07 50.1**	**+0.3**
KAHM	**Kahramanmaras,**	**1.47**	**217**	P			**Pn**	**01 07 31.3**	**-0.6**
KAHM				S			**Sg**	**01 07 52.5**	**-0.1**
SVSK	**Karacayir**	**1.48**	**325**	PN			**Pn**	**01 07 32.2**	**+0.3**
SVSK				SN			**Sg**	**01 07 53.6**	**+0.7**
SUSE	**Susehri**	**1.51**	**3**	P			**Pn**	**01 07 30.6**	**-1.8**
SUSE				S			**Sg**	**01 07 53.5**	**-0.2**
KMRS	**Kahramanmaras**	**1.52**	**219**	PN			**Pn**	**01 07 31.7**	**-0.8**
KMRS				SN			**Sb**	**01 07 52.7**	**-0.2**
EUZM	**Uzumlu**	**1.60**	**51**	P			**Pn**	**01 07 31.8**	**-1.9**
EUZM				S			**Sg**	**01 07 56.7**	**0.0**
EUZM					*i*	AML	AML	01 07 57.0	
	comp=E,2μm,0.9s								
EUZM					*i*	AML	AML	01 08 09.0	
	comp=N,1μm,0.9s								
CUSAR	**Sarkisla-SIVAS**	**1.61**	**297**	P			**Pn**	**01 07 33.1**	**-0.8**
CUSAR				S			**Sg**	**01 07 59.8**	**+2.8**
HCB	**Kahramanmara**	**1.65**	**215**	P			**Pn**	**01 07 33.4**	**-0.9**
HCB				S			**Sg**	**01 07 57.6**	**-0.7**
SANL	**SANLIURFA_Merk**	**1.68**	**155**	P			**Pn**	**01 07 33.6**	**-1.1**
SANL				S			**Sn**	**01 07 56.7**	**+0.3**
SANL					*i*	AML	AML	01 08 04.0	
	comp=N,2μm,0.7s								
SANL					*i*	AML	AML	01 08 09.0	
	comp=E,2μm,1.2s								
KELT	**Kelkit**	**1.70**	**32**	P			**Pn**	**01 07 33.6**	**-1.5**
KELT				S			**Sg**	**01 08 00.1**	**+0.2**
ALUC	**Giresun/Alucra**	**1.72**	**17**	P			**Pn**	**01 07 35.1**	**-0.3**
ALUC				S			**Sg**	**01 08 01.0**	**+0.4**
SAIM	**ADANA**	**1.74**	**246**	P			**Pn**	**01 07 35.5**	**-0.1**
SAIM				S			**Sg**	**01 08 00.3**	**-0.9**
BNN	**Bunyan**	**1.77**	**276**	PN			**Pn**	**01 07 35.9**	**-0.1**
BNN	**Bunyan**	**1.77**	**276**	P			**Pn**	**01 07 35.0**	**-1.0**
BNN	**Bunyan**	**1.77**	**276**	Pn			**Pn**	**01 07 35.0**	**-1.0**
DYBB	**Diyarbakir**	**1.77**	**114**	PN			**Pn**	**01 07 34.5**	**-1.5**
ANDN	**Andirin**	**1.78**	**231**	P			**Pn**	**01 07 35.7**	**-0.4**
ANDN				S			**Sg**	**01 08 03.1**	**+0.7**
RSDY	**Resadiye-TOKAT**	**1.79**	**341**	PN			**Pn**	**01 07 36.8**	**+0.5**
HANI	**Diyarbakir_Han**	**1.83**	**98**	P			**Pn**	**01 07 35.6**	**-1.2**
HANI				S			**Sg**	**01 08 05.2**	**+1.1**
SURC	**SANLIURFA_SURC**	**1.87**	**167**	P			**Pn**	**01 07 36.2**	**-1.0**
SURC				S			**Sg**	**01 08 07.4**	**+2.2**
KAMA	**Osmaniye**	**1.89**	**217**	P			**Pn**	**01 07 38.7**	**+1.1**
KAMA				S			**Sb**	**01 08 04.2**	**+0.7**
GUNE	**Kayseri**	**1.94**	**277**	P			**Pn**	**01 07 39.1**	**+0.8**
GUNE				S			**Sg**	**01 08 10.8**	**+3.2**
TOKT	**Tokat**	**2.01**	**324**	PN			**Pn**	**01 07 39.7**	**+0.4**
BNGB	**Bingl**	**2.04**	**81**	PN			**Pn**	**01 07 38.7**	**-1.0**
YEDI	**Yedisu-Bingol**	**2.04**	**68**	PN			**Pn**	**01 07 39.2**	**-0.6**
TOKA	**Tokat**	**2.04**	**323**	Pn			**Pn**	**01 07 40.0**	**+0.3**
TOKA	**Tokat**	**2.04**	**323**	P			**Pn**	**01 07 39.5**	**-0.2**
TOKA				S			**Sn**	**01 08 06.1**	**+0.7**
KUZU	**Kuzuini**	**2.09**	**203**	P			**Pn**	**01 07 39.4**	**-1.0**
KUZU				S			**Sg**	**01 08 11.3**	**-1.0**
HACI	**Hacifakili, Ak**	**2.09**	**299**	P			**Pn**	**01 07 40.7**	**+0.3**
HACI				S			**Sg**	**01 08 13.5**	**+1.0**
KOZT	**Kozan**	**2.17**	**236**	PN			**Pn**	**01 07 41.5**	**+0.1**
ERBA	**Erbaa**	**2.23**	**333**	P			**Pn**	**01 07 42.1**	**-0.2**
ERBA				S			**Sg**	**01 08 17.4**	**+0.4**
YAHY	**KAYSERI_Yahyal**	**2.23**	**255**	P			**Pn**	**01 07 43.2**	**+0.8**
YAHY				S			**Sg**	**01 08 15.4**	**-1.5**
MAZI	**Mazidag**	**2.23**	**123**	PN			**Pn**	**01 07 41.3**	**-1.1**
ESPY	**Espiye-Giresun**	**2.26**	**12**	PN			**Pn**	**01 07 43.2**	**+0.5**
KOPT	**Kop Dagi**	**2.28**	**54**	Pn			**Pn**	**01 07 43.3**	**+0.1**
KOPT	**Kop Dagi**	**2.28**	**54**	P			**Pn**	**01 07 43.5**	**+0.4**
KOPT					*i*	AML	AML	01 08 42.0	
	comp=E,545nm,1.4s								
KOPT					*i*	AML	AML	01 08 48.0	
	comp=N,512nm,1.2s								
BAYB	**BAYBURT**	**2.28**	**46**	P			**Pn**	**01 07 43.5**	**+0.4**
BAYB				S			**Sg**	**01 08 19.1**	**+0.5**
BAYB					*i*	AML	AML	01 08 22.0	
	comp=E,460nm,0.8s								
BAYB					*i*	AML	AML	01 08 29.0	
	comp=N,610nm,0.9s								
SLHN	**Bingol, Solhan**	**2.30**	**83**	P			**Pn**	**01 07 43.7**	**+0.3**
SLHN				S			**Sg**	**01 08 23.5**	**+4.3**
SLHN					*i*	AML	AML	01 08 30.0	
	comp=E,749nm,0.8s								
SLHN					*i*	AML	AML	01 08 35.0	
	comp=N,492nm,0.8s								
BAYT	**Aydıntepe-Bayb**	**2.31**	**42**	PN			**Pn**	**01 07 43.9**	**+0.3**
YOZ	**Yozgat**	**2.35**	**294**	PN			**Pn**	**01 07 44.8**	**+0.8**
KARO	**Karliova-Bingo**	**2.38**	**74**	PN			**Pn**	**01 07 44.0**	**-0.5**
SVAN	**Silvan-Diyarba**	**2.50**	**102**	PN			**Pn**	**01 07 45.1**	**-0.9**
CEYT	**Ceyhan**	**2.51**	**228**	PN			**Pn**	**01 07 46.4**	**+0.3**
MARD	**Mardin**	**2.53**	**122**	Pn			**Pn**	**01 07 45.6**	**-0.9**
KOZK	**Kozakli-Nevseh**	**2.57**	**282**	PN			**Pn**	**01 07 47.4**	**+0.4**
KTUT	**Trabzon**	**2.62**	**29**	PN			**Pn**	**01 07 48.0**	**+0.4**
CMRD	**Camardi-Nigde**	**2.66**	**248**	PN			**Pn**	**01 07 48.7**	**+0.5**
VRTS	**Varto-Mus**	**2.66**	**79**	PN			**Pn**	**01 07 47.9**	**-0.4**
TAHT	**Tahtakopru-Hat**	**2.77**	**214**	PN			**Pn**	**01 07 49.7**	**0.0**
KARA	**Karaisali**	**2.80**	**240**	PN			**Pn**	**01 07 50.8**	**+0.7**
KVT	**Kavak**	**2.85**	**327**	PN			**Pn**	**01 07 52.1**	**+1.3**
KRTS	**Karatas**	**3.03**	**226**	PN			**Pn**	**01 07 53.6**	**+0.4**
GULA	**Gulagac**	**3.05**	**264**	PN			**Pn**	**01 07 54.1**	**+0.5**
CORM	**Corum**	**3.06**	**300**	PN			**Pn**	**01 07 54.8**	**+1.0**
GURO	**Guroymak-BITLI**	**3.09**	**92**	PN			**Pn**	**01 07 53.8**	**-0.4**
GURO	**Guroymak-BITLI**	**3.09**	**92**	Pn			**Pn**	**01 07 56.8**	**+2.6**
GURO	**Guroymak-BITLI**	**3.09**	**92**	Pn			**Pn**	**01 07 57.1**	**+2.9**
YAYL	**Yayladag**	**3.10**	**211**	PN			**Pn**	**01 07 53.9**	**-0.4**
CHOM	**Cayeli-Rize**	**3.15**	**40**	PN			**Pn**	**01 07 55.5**	**+0.6**
KOPR	**Koprukoy-ERZUR**	**3.19**	**65**	PN			**Pn**	**01 07 55.7**	**+0.2**
YAYX	**Yaylak**	**3.35**	**275**	PN			**Pn**	**01 07 58.5**	**+0.7**
KAMT	**Kaman**	**3.48**	**282**	PN			**Pn**	**01 08 00.1**	**+0.6**
MLAZ	**Malazgirt-MUS**	**3.50**	**81**	PN			**Pn**	**01 07 59.6**	**-0.3**
BR104	**Keskin Array S**	**3.60**	**288**	Pn			**Pn**	**01 08 01.7**	**+0.5**
BR104				Sg			**Sg**	**01 09 02.6**	**+1.6**
BR131	**Keskin Array S**	**3.61**	**288**	Pn			**Pn**	**01 08 01.3**	**-0.1**
BR131	**Keskin Array S**	**3.61**	**288**	P			**Pn**	**01 08 01.3**	**-0.1**
BRTR	**Keskin Array B**	**3.61**	**288**	Pn			**Pn**	**01 08 01.5**	**+0.2**
	1.5nm,0.3s,baz=114,slow=12,SNR=24								
BRTR						Pg

comp=Z,50nm,3.0s
DSI Dead Sea 7.46 198 Pn **Pn** **01 08 54.5 +0.5**
GHAJ Ghor Haditha 7.67 196 Pn **Pn** **01 08 56.7 -0.3**
MAK Makhachkala 8.30 56 *eP* Pn 01 08 59.0 -6.6
MAK pmax pmax
comp=Z,162nm,1.2s
MAK MLR MLR
comp=Z,354nm,11.0s
TIRR Tirgusor 9.25 311 Pn **Pn** **01 09 18.7 +0.1**
TIRR Tirgusor 9.25 311 P **Pn** **01 09 18.7 +0.1**
EIL Elat 9.38 197 Lg Lg 01 12 03.4
comp=Z,0.2nm,0.3s,baz=107,slow=20,SNR=2.0
EIL LR LR 01 13 16.9
comp=Z,457nm,19.8s,baz=60,slow=40
TLCR 9.47 316 ⇓P **Pn** **01 09 20.5 -1.1**
TLCR 9.47 316 ⇓P **Pn** **01 09 20.5 -1.1**
CFR Carcaliu 9.84 314 ⇓P **Pn** **01 09 25.7 -1.0**
CFR Carcaliu 9.84 314 ⇓P **Pn** **01 09 25.7 -1.0**
VRI Vrincioaia 11.04 314 ⇓P **Pn** **01 09 41.3 -1.9**
VRI Vrincioaia 11.04 314 ⇓P **Pn** **01 09 41.3 -1.9**
PLOR Plostina 11.08 314 ⇑P **Pn** **01 09 40.2 -3.5**
PLOR Plostina 11.08 314 ⇑P **Pn** **01 09 40.2 -3.5**
IDI Anoyia 11.10 256 LR LR 01 13 58.5
comp=Z,71nm,20.6s,baz=92,slow=38
MLR Muntele Rosu 11.28 311 ⇑P **Pn** **01 09 51.1 +4.5**
MLR Muntele Rosu 11.28 311 ⇑P **Pn** **01 09 51.1 +4.5**
COVR Voineasa-Covas 11.33 313 ⇓P Pn 01 09 42.0 -5.1
MTUR Matau 11.68 308 ⇓P Pn 01 10 28.2 +36
DOPR Dopca 11.87 312 ⇑P Pn 01 10 05.8 +11
BIZ Bicaz 12.04 317 ⇓P Pn 01 09 50.2 -6.6
VSR Storozhevoye 12.54 3 *eP* Pn 01 10 10.2 +6.7
VSR pmax pmax
comp=Z,4.0nm,0.6s
LOT Lotru 12.59 307 ⇑P Pn 01 10 10.8 +6.4
VRH Novokhopyorsk 12.76 10 *eP* **Pn** **01 10 07.8 +1.3**
VRH pmax pmax
comp=Z,6.0nm,0.7s
BURAR Bucovina Array 12.94 318 ⇓P **Pn** **01 10 08.9 -0.2**
BURAR Bucovina Array 12.94 318 Pn **Pn** **01 10 08.0 -1.1**
BURAR Bucovina Array 12.94 318 ⇓P **Pn** **01 10 08.9 -0.2**
KMPD K-Podol'skiy 12.95 323 Pn **Pn** **01 10 09.6 +0.4**
comp=Z,6.1nm,0.9s
KMPD pP 01 10 11.2
comp=Z,6.1nm,0.9s
BUR08 Bucovina Ar. S 12.96 318 Pn **Pn** **01 10 08.5 -1.0**
VORR Voronezh 12.99 3 *eP* **Pn** **01 10 07.6 -2.2**
VORR pmax pmax
comp=Z,10.0nm,0.4s
LUBAR Lubar, Ukraine 13.42 330 Pn **Pn** **01 10 16.1 +0.5**
comp=Z,3.6nm,0.9s
LUBAR pP P 01 10 18.3 -6.8
comp=Z,3.6nm,0.9s
AKASG Malin Array Be 13.54 335 Pn **Pn** **01 10 17.7 +0.5**
comp=Z,0.2nm,0.3s,baz=139,slow=12,SNR=7.2
AKBB Malin Array Si 13.54 335 Pn **Pn** **01 10 16.1 -1.1**
AKBB Malin Array Si 13.54 335 *iP* **Pn** **01 10 16.5 -0.7**
MI29 MI29, Kamyanyy 13.79 331 Pn **Pn** **01 10 22.8 +2.2**
comp=Z,6.5nm,0.8s
DRGR 13.88 311 ⇓P **P** **01 10 27.2 -3.1**
DRGR 13.88 311 ⇓P **P** **01 10 27.2 -3.1**
LPSR Galich'ya Gora 13.91 2 *eP* Pn 01 10 17.3 -5.0
LPSR pmax pmax
comp=Z,10.0nm,0.5s
MI28 MI28,Pidlybu 14.27 332 Pn **Pn** **01 10 27.9 +0.7**
MI28 pP P 01 10 29.7 -4.8
DIVS Divibare 14.61 297 P **P** **01 10 39.4 +0.9**
BELG Belogornoye 15.21 23 LR LR 01 16 49.2
comp=Z,64nm,21.0s,baz=149,slow=38
KOLS Kolonicke sedl 15.30 317 *eP* P 01 10 55.4 +9.4
PSZ Piszkesteto 16.10 311 P **P** **01 10 54.7 -0.3**
PSZ Piszkesteto 16.10 311 P **P** **01 10 54.7 -0.3**
PSZ pmax pmax
comp=Z,5.0nm,0.9s
MORH Mrgy, Hungar 16.18 304 ⇓P **P** **01 10 56.3 +0.6**
OBN Obninsk 16.45 357 LR LR 01 18 10.2
comp=Z,19nm,18.8s,baz=182,slow=40
TIP Timpagrande 16.61 278 ⇓P **P** **01 11 00.9 +0.2**
TIP Timpagrande 16.61 278 P **P** **01 11 00.6 -0.1**
MNK Minsk 17.26 340 *iP* **Pn** **01 11 04.4 -1.8**
MNK *iS* **Sn** **01 14 13.9 -4.2**
MNK pmax pmax
comp=Z,3.0nm,0.7s
MNK MLR MLR
comp=E,6.0nm,14.0s
MNK MLR MLR
comp=Z,83nm,14.0s
MNK Minsk 17.26 340 *iP* **Pn** **01 11 04.4 -1.8**
MNK *iP* **Pn** **01 11 04.4 -1.8**
MNK *iP* **Pn** **01 11 04.4 -1.8**
comp=Z,3.0nm,0.7s,baz=152
MNK *iPP* **sP** **01 11 14.0 +1.6**
MNK *iS* **Sn** **01 14 13.9 -4.2**
MNK *iLQ* LQ 01 16 05.2
MNK *iLR* LR 01 16 53.9
MNK *iLRM* MLR 01 20 11.4
comp=E,6.0nm,13.9s
MNK *iLRM* MLR 01 20 13.6
comp=Z,83nm,13.9s
CUC Castrocucco 17.28 281 P **P** **01 11 08.9 +0.9**
RONA Rosalia, Austr 18.21 307 *eP* **P** **01 11 19.2 +1.0**
comp=Z,2.1nm,0.9s
AKTO Aktyubinsk 18.35 44 LR LR 01 20 12.0
comp=Z,80nm,18.4s,baz=237,slow=43
CONA Conrad Observa 18.57 307 *eP* **Pn** **01 11 23.4 +0.9**
comp=Z,2.1nm,1.1s
ABKAR Akbulak array 18.87 49 P **P** **01 11 25.6 +0.2**
KRLC Kraliky 18.93 314 *eP* **Pn** **01 11 27.3 +0.5**
KRLC Kraliky 18.93 314 *eP* Pn **01 11 27.3 +0.5**
OBKA Obir 18.96 302 *eP* **Pn** **01 11 28.6 +1.4**
comp=Z,3.1nm,1.1s
AQU L'Aquila 19.10 289 P **Pn** **01 11 29.1 +0.2**
AQU IAmb IAmb 01 11 36.9
comp=Z,13nm,1.0s
AQU L'Aquila 19.10 289 P **Pn** **01 11 29.1 +0.2**
AQU pmax pmax
comp=Z,13nm,1.0s
DPC Dobruska-Polom 19.33 314 *eP* **Pn** **01 11 31.3 -0.3**
DPC Dobruska-Polom 19.33 314 *eP* **Pn** **01 11 31.3 -0.3**
DPC *ex* x 01 11 37.7
NRCA Norcia 19.34 290 P **Pn** **01 11 31.5 -0.3**
MOA Molln 19.55 306 *eP* **Pn** **01 11 35.0 +0.8**
comp=Z,3.2nm,1.0s
MURB Monte Urbino 19.80 291 P **Pn** **01 11 37.4 +0.1**
MURB IAmb IAmb 01 11 38.9
comp=Z,10.0nm,1.0s
CKRC Cesky Krumlov 19.86 308 *eP* **Pn** **01 11 37.5 -0.4**
CKRC *ex* x 01 11 40.4
CLUD Cludinico 20.06 301 P **P** **01 11 38.2 -0.3**
CLUD IAmb IAmb 01 11 49.2
comp=Z,6.7nm,0.9s
PRU Pruhonice 20.18 312 *eP* Pn 01 11 41.1 -0.6
PRU Pruhonice 20.18 312 *eP* Pn 01 11 41.1 -0.6
PRU *epP* sP 01 11 46.7 +2.2
GEC2 GERESS Array S 20.24 308 P **P** **01 11 41.0 +0.5**
GERES GERESS Array B 20.24 308 P **P** **01 11 41.3 +0.7**
comp=Z,2.3nm,0.8s,baz=122,slow=9.6,SNR=21
comp=Z,2.3nm,0.8s
GERES GERESS Array B 20.24 308 P **P** **01 11 40.2 -0.3**
PVCC Panska Ves 20.40 313 *eP* Pn 01 11 43.4 -0.9
PVCC Panska Ves 20.40 313 *eP* Pn 01 11 43.4 -0.9
KHC Kasperske Hory 20.42 309 *eP* **P** **01 11 42.5 +0.1**
KHC Kasperske Hory 20.42 309 *eP* **P** **01 11 42.5 +0.1**
TEOL Teolo 20.67 297 P **P** **01 11 45.2 0.0**
OSSC Osservatorio P 20.75 292 P **P** **01 11 47.0 +0.9**
OSSC IAmb IAmb 01 11 48.5
comp=Z,6.1nm,1.0s
CTI Castel Tesino 20.81 299 P **P** **01 11 47.3 +0.6**
CTI IAmb IAmb 01 11 48.6
comp=Z,6.4nm,0.8s
CTI Castel Tesino 20.81 299 P **P** **01 11 47.3 +0.6**
CTI pmax pmax
comp=Z,6.0nm,0.8s
WTTA Wattenberg 21.09 302 *eP* **P** **01 11 52.2 +2.4**
comp=Z,2.0nm,0.7s
KIRV Kirov 21.20 17 LR LR 01 20 35.6
comp=Z,53nm,20.6s,baz=186,slow=38
KIRV Kirov 21.20 17 *iP* **P** **01 11 51.2 +0.5**
SQTA Sankt Quirin 21.36 302 *eP* **P** **01 11 54.7 +2.0**
comp=Z,5.4nm,1.3s
MOTA Moosalm 21.46 302 *eP* **P** **01 11 54.5 +0.8**
comp=Z,8.2nm,0.8s
FETA Feichten 21.63 301 *eP* **P** **01 11 57.0 +1.4**
comp=Z,4.1nm,0.9s
CLL Collm 21.64 314 *eP* **P** **01 11 54.0 -1.5**
CLL *e* 01 11 58.0
CLL Collm 21.64 314 *eP* **P** **01 11 55.0 -0.5**
CLL *epP* **pP** **01 11 58.0 -0.7**
CLL *iSP* **sP** **01 12 01.6 +1.4**
RETA Reutte 21.72 303 *eP* **P** **01 11 56.9 +0.5**
comp=Z,2.1nm,1.1s
DAVOX Davos/Dischmat 22.15 300 P **P** **01 12 02.2 +1.0**
comp=Z,1.2nm,0.7s,baz=27,slow=3.1,SNR=3.4
comp=Z,1.2nm,0.7s
KLMR Klimovskoe 22.19 2 *eP* **P** **01 11 59.4 -1.9**
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR Klimovskoe 22.19 2 *eP* **P** **01 11 59.4 -1.9**
KLMR AMP 01 12 09.5
comp=Z,18nm,1.3s
DAVA Damuels 22.25 302 *eP* **P** **01 12 02.4 +0.1**
comp=Z,5.2nm,1.1s
ARU Arti 22.33 31 P **P** **01 12 02.9 +0.1**
comp=Z,11nm,0.8s,baz=303,slow=4.8,SNR=5.8
ARU LR LR 01 21 41.0
comp=Z,56nm,19.1s,baz=234,slow=39
comp=Z,11nm,0.8s
ARU Arti 22.33 31 *cP* **P** **01 12 02.1 -0.7**
ARU 01 12 23.2
ARU S **S** **01 16 08.4 +0.3**
ARU SS **SnSn** **01 16 34.8 -0.8**
ARU pmax pmax
comp=Z,20nm,1.1s
KEST Kesra 23.05 272 P **P** **01 12 11.6 +0.9**
comp=Z,8.6nm,0.9s,baz=96,slow=5.7,SNR=8.1
comp=Z,8.6nm,0.9s
KEST Kesra 23.05 272 P **P** **01 12 11.6 +0.9**
SENIN Lac Senin/Sane 23.84 299 P **P** **01 12 17.5 -1.2**
SENIN IAmb IAmb 01 12 35.9
comp=Z,2.6nm,0.9s
FINES FINESS Array B 23.96 346 P **P** **01 12 18.8 -0.6**
comp=Z,1.1nm,0.6s,baz=144,slow=7.1,SNR=6.9
comp=Z,1.1nm,0.6s
FINES FINESS Array B 23.96 346 P **P** **01 12 19.6 +0.2**
FINES FINESS Array B 23.96 346 P **P** **01 12 19.6 +0.2**
BNI Bardonecchia 24.14 295 P **P** **01 12 20.8 -0.6**
BNI IAmb IAmb 01 12 53.8
comp=Z,6.2nm,1.1s
BNI Bardonecchia 24.14 295 P **P** **01 12 20.8 -0.6**
BNI pmax pmax
comp=Z,6.0nm,1.1s
KKAR Karatay Array 24.80 69 P **P** **01 12 28.9 +1.6**
KKAR Karatay Array 24.80 69 P **P** **01 12 28.9 +1.6**
GAR Garm 25.03 79 P **P** **01 12 30.7 +1.2**
BRVK Borovoye 26.34 46 *iP* **P** **01 12 43.6 +2.5**
BRVK pmax pmax
comp=Z,6.0nm,1.2s
HFS Hagfors 26.40 332 P **P** **01 12 42.2 +0.7**
comp=Z,3.3nm,0.8s,baz=127,slow=11,SNR=5.4
comp=Z,3.3nm,0.8s
AAK Ala-Archa 27.75 70 LR LR 01 25 11.2
comp=Z,56nm,21.7s,baz=286,slow=39
AAK Ala-Archa 27.75 70 *iP* **P** **01 12 57.6 +3.5**
AAK pmax pmax
comp=Z,3.0nm,1.4s
KURBB Kurchatov Arra 30.75 54 P **P** **01 13 22.6 +2.1**
comp=Z,0.5nm,0.2s,baz=269,slow=8.9,SNR=1.8
KURBB LR LR 01 27 52.7
comp=Z,67nm,18.4s,baz=237,slow=40
comp=Z,0.5nm,0.2s
KURK Kurchatov 30.82 54 P **P** **01 13 22.6 +1.5**
ARCES ARCESS Array B 31.62 352 LR LR 01 27 14.1
comp=Z,32nm,20.7s,baz=129,slow=38
ESBB Sonseca Array 32.40 285 P **P** **01 13 34.5 -0.7**
ESBB IAmb IAmb 01 14 10.8
comp=Z,3.3nm,1.1s
ESDC Sonseca Array 32.40 285 P **P** **01 13 34.6 -0.6**
comp=Z,0.4nm,0.6s,baz=69,slow=8.7,SNR=7.5
comp=Z,0.4nm,0.6s
MK31 Makanchi Array 33.08 61 *iP* **P** **01 13 45.5 +4.5**
MKAR Makanchi Array 33.08 61 P **P** **01 13 42.3 +1.3**
comp=Z,0.4nm,0.6s,baz=283,slow=7.2,SNR=2.4
MKAR LR LR 01 29 12.1
comp=Z,67nm,18.1s,baz=258,slow=40
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 33.08 61 P P 01 13 47.2 +6.2
MDT Midelt 34.91 274 LR LR 01 31 24.0
comp=Z,20nm,18.3s,baz=117,slow=42
ZALV Zalesovo Beam 34.98 49 P **P** **01 13 59.6 +2.2**
comp=Z,0.6nm,0.7s,baz=256,slow=5.8,SNR=1.6
ZALV LR LR 01 30 31.0
comp=Z,26nm,20.0s,baz=236,slow=40
comp=Z,0.6nm,0.7s
ZALV Zalesovo Beam 34.98 49 P **P** **01 13 58.2 +0.8**
WMQ Urumqi 37.18 66 *eP* **P** **01 14 17.6 +1.2**
WMQ pP sP 01 14 21.3 0.0
WMQ pmax pmax
comp=Z,16nm,0.7s
KMBO Kilima Mbogo 39.64 181 LR LR 01 33 00.8
comp=Z,35nm,18.5s,baz=87,slow=39
MBAR Mbarara 39.69 192 LR LR 01 29 15.8
comp=Z,32nm,19.6s,baz=50,slow=34
TOA0 Torodi Ar. Sit 41.04 242 P **P** **01 14 48.2 -0.7**
TOA0 IAmb IAmb 01 14 50.7
comp=Z,4.7nm,1.1s
TORD Torodi Ar. Bea 41.04 242 P **P** **01 14 48.0 -0.9**
comp=Z,3.1nm,1.0s,baz=48,slow=7.0,SNR=12
comp=Z,3.1nm,1.0s
TORD Torodi Ar. Bea 41.04 242 P **P** **01 14 48.0 -0.9**
TORD IAmb IAmb 01 14 50.7
comp=Z,4.9nm,1.2s
SONM Songino Array 49.07 56 LR LR 01 39 01.9
comp=Z,135nm,19.3s,baz=314,slow=39
PZH PanZhiHua 54.01 83 P **P** **01 16 32.0 +2.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.4s
LSZ Lusaka 54.49 192 LR LR 01 38 02.1
comp=Z,38nm,18.1s,baz=167,slow=34
HHC Hu-ho-hao-te 54.93 63 *eP* **P** **01 16 36.3 0.0**
HHC pmax pmax
comp=Z,23nm,0.9s
HHC pmax pmax
comp=Z,190nm,6.1s
YAK Yakutsk 57.39 34 LR LR 01 44 41.9
comp=Z,29nm,18.7s,baz=267,slow=39
TSUM Tsumeb 60.73 202 LR LR 01 44 41.4
comp=Z,89nm,19.1s,baz=211,slow=37
FRB Frobisher Bay 62.74 331 LR LR 01 48 02.9
comp=Z,21nm,18.1s,baz=184,slow=39
KLR Kul'dur 64.05 47 LR LR 01 48 35.1
comp=Z,31nm,20.7s,baz=277,slow=39
LBTB Lobatse 64.46 193 LR LR 01 47 02.3
comp=Z,55nm,20.3s,baz=1.0,slow=37
MA2 Magadan 67.51 31 LR LR 01 50 07.7
comp=Z,29nm,19.2s,baz=280,slow=38
KSRS Korea Array 67.73 59 LR LR 01 50 25.3
comp=Z,24nm,19.2s,baz=210,slow=38
SUR Sutherland 72.53 195 LR LR 01 51 04.9
comp=Z,98nm,18.7s,baz=68,slow=36
MJAR Matsushiro Arr 75.02 55 LR LR 01 54 21.4
comp=Z,40nm,18.6s,baz=313,slow=38

*IDC **17** 01:45:59.1±1.1,27.13S×176.48W,h0km,mb3.7/4, mbtmp3.8/5,ML4.6/1,MS3.5/1,Error ellipse: s-maj=42.4km s-min=22.9km az=134.0*
*NEIC **17** 01:46:00.9±2.2,27.50S±0.10×175.9W±0.2,h10km±2km, mb4.6/7,Error ellipse: s-maj=23.5km s-min=14.9km az=108.0*
ISC 17 01:46:04.5±0.8,**27.55S**±0.08×**176.2W**±0.1,**h33**km,**n28,** σ1**65/27,mb4.1/8,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.28**	**222**	Pn	**Pn**	**01 46 42.1**	**+2.3**
	123nm,0.3s,baz=40,slow=17,SNR=8.0						
RAO				Sn	**Sb**	**01 47 12.8**	**+0.1**
	159nm,0.3s,baz=52,slow=19,SNR=4.6						
	446nm,0.2s						
RAO	**Raoul Island**	**2.28**	**222**	Pn	**Pn**	**01 46 41.8**	**+2.0**
MSVF	**Nonsavu**	**11.12**	**330**	Pn	**Pn**	**01 48 42.6**	**+1.2**
BFZ	**Birch Farm**	**14.51**	**204**	Pn	**Pn**	**01 49 24.1**	**-3.4**
MSWZ	**Moikau Station**	**15.51**	**205**	Pn	**Pn**	**01 49 39.7**	**-1.1**
PLWZ	**Palliser**	**15.64**	**204**		**P**	**01 49 46.4**	**+0.1**
CMWZ	**Cape Campbell**	**16.20**	**207**	P	**P**	**01 49 51.7**	**-0.7**
ONTNC	**Ouen Toro**	**16.58**	**285**	P	**P**	**01 49 58.0**	**+1.2**
ONTNC				IAmb	IAmb	01 50 03.4	
	comp=Z,83nm,1.4s						
CTA	**Charters Tower**	**35.05**	**274**	LR	LR	02 04 54.9	
	comp=Z,72nm,18.9s,baz=82,slow=33						
CTAO	**Charters Tower**	**35.05**	**274**	P	**P**	**01 52 54.5**	**-0.1**
ASAR	**Alice Springs**	**44.93**	**263**	P	**P**	**01 54 14.4**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=91,slow=7.1,SNR=7.2						
	comp=Z,0.3nm,0.4s						
WB2	**Warramunga Arr**	**45.66**	**268**	P	**P**	**01 54 21.2**	**-1.2**
WB2				IAmb	IAmb	01 54 26.8	
	comp=Z,7.9nm,1.2s						
WRA	**Warramunga Arr**	**45.67**	**268**	P	**P**	**01 54 19.2**	**-3.3**
	comp=Z,0.4nm,0.4s,baz=106,slow=8.4,SNR=7.2						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**45.67**	**268**	P	**P**	**01 54 20.0**	**-2.5**
CASY	**Casey**	**58.39**	**207**	P	**P**	**01 55 56.8**	**+0.5**
CASY				IAmb	IAmb	01 56 09.5	
	comp=Z,3.2nm,1.1s						
QSPA	**South Pole Qui**	**62.55**	**180**	P	**P**	**01 56 26.8**	**+1.8**
QSPA				IAmb	IAmb	01 56 28.2	
	comp=Z,6.8nm,1.1s						
TROLL	**Troll, Antarti**	**80.71**	**180**	P	**P**	**01 58 16.3**	**+2.2**
SNAA	**Sanae**	**80.94**	**178**	P	**P**	**01 58 16.0**	**+0.8**
SNAA	**Sanae**	**80.94**	**178**	P	**P**	**01 58 15.6**	**+0.3**
SNAA				IAmb	IAmb	01 58 17.1	
	comp=Z,9.7nm,1.5s						
VNA3	**Neumayer Olymp**	**81.02**	**176**	P	**P**	**01 58 16.1**	**+0.5**
VNA2	**Neumayer--Watz**	**81.48**	**176**	P	**P**	**01 58 19.8**	**+1.8**
VNA1	**Neumayer--Stat**	**81.70**	**176**	P	**P**	**01 58 20.1**	**+1.0**
NVAR	**Mina Array Bea**	**85.07**	**42**	P	**P**	**01 58 36.8**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=215,slow=7.6,SNR=5.2						
	comp=Z,0.8nm,1.0s						
PDAR	**Pinedale Array**	**92.98**	**43**	P	**P**	**01 59 14.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=233,slow=4.4,SNR=2.1						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**142.97**	**342**	PKhKP	PKPpre	02 05 28.5	
	comp=Z,2.0nm,0.9s,baz=64,slow=3.2,SNR=1.3						
NOA	**NORSAR Array B**	**146.15**	**354**	PKPbc	**PKPdf**	**02 05 39.1**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=13,slow=4.5,SNR=3.3						
AKASG	**Malin Array Be**	**149.89**	**327**	PKPbc	**PKPbc**	**02 05 49.5**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=38,slow=3.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	**165.53**	**172**	PKPab	**PKPab**	**02 07 04.7**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=191,slow=3.5,SNR=4.2						

ATH 17 01:07:51.7,37.43N×22.11E,h11km±3km,**ML1.7/7,Error ellipse: s-maj=3.2km s-min=1.0km az=163.0,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.29**	**211**	P	Pg	01 07 57.5	-0.2
ITM				S	Sg	01 08 01.8	+0.2
ITM				AML	AML	01 08 02.5	
	comp=N,345μm,0.2s						
ITM				AML	AML	01 08 02.5	
	comp=E,401μm,0.1s						
PYL	**PYLOS**	**0.61**	**209**	P	Pg	01 08 03.0	-0.6
DRO	**Drossia**	**0.61**	**329**	P	Pg	01 08 03.5	-0.1
DRO				AML	AML	01 08 18.8	
	comp=N,165μm,0.4s						
DRO				AML	AML	01 08 19.4	
	comp=E,238μm,0.3s						
KLV	**Kalavryta, Ach**	**0.61**	**3**	P	Pg	01 08 03.2	-0.5
KLV				S	Sb	01 08 12.6	-0.6
KLV				AML	AML	01 08 14.2	
	comp=E,235μm,0.4s						
KLV				AML	AML	01 08 15.0	
	comp=N,110μm,0.2s						
ACOR	**Acrocorinthos**	**0.76**	**52**	P	Pg	01 08 05.8	-0.5
ACOR				AML	AML	01 08 21.1	
	comp=N,52μm,0.5s						
ACOR				AML	AML	01 08 22.1	
	comp=E,94μm,0.6s						
RLS	**Riolos of Patr**	**0.81**	**321**	P	Pg	01 08 07.5	+0.1
RLS				S	Sg	01 08 18.0	0.0
LAKA	**Lakka**	**0.82**	**352**	P	Pg	01 08 06.9	-0.6
LAKA				AML	AML	01 08 21.9	
	comp=E,324μm,0.4s						
LAKA				AML	AML	01 08 23.1	
	comp=N,289μm,0.3s						
KRND	**KRANIDI**	**0.83**	**93**	P	Pg	01 08 07.6	0.0
VLI	**Veliai**	**0.97**	**137**	P	Pg	01 08 10.1	-0.3
SERG	**Sergoula**	**0.98**	**357**	P	Pg	01 08 09.7	-0.9
SERG				AML	AML	01 08 28.0	
	comp=N,130μm,0.3s						
SERG				AML	AML	01 08 28.2	
	comp=E,91μm,0.4s						
EFP	**Efpalio**	**1.01**	**351**	P	Pg	01 08 10.7	-0.5
LTHK	**Lithakia**	**1.05**	**286**	P	Pb	01 08 11.7	-0.2
ANX	**Ano Chora**	**1.17**	**353**	P	Pb	01 08 13.2	-0.8
ANX				AML	AML	01 08 35.5	
	comp=E,69μm,0.4s						
ANX				AML	AML	01 08 37.1	
	comp=N,71μm,0.4s						
PVO	**Paravola**	**1.27**	**339**	P	Pn	01 08 15.2	-0.2

*IDC **17** 01:51:45.0±1.5,6.72N×72.93W,h169km±15km,mb3.0/3, mbtmp3.6/5,Error ellipse: s-maj=37.5km s-min=21.9km az=118.0*
*RSNC **17** 01:51:45.7±1.0,6.80N×73.14W,h146km±3km,ML3.3, Mw3.5*
ISC 17 01:51:44.0±0.8,**6.81N**±0.03×**73.12W**±0.03,**h157**km±5km, **n43,**σ1**54/81,mb3.2/3,6C-1D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**197**	⇑*iP*	**Pn**	**01 52 05.4**	**-0.2**
BARC				*eS*	**Sn**	**01 52 20.3**	**-1.6**
BARC				*i*		01 52 21.3	
	comp=Z,884nm,0.3s						
BRRC	**Barranca, Sant**	**0.66**	**296**	⇑*iP*	**Pn**	**01 52 07.2**	**+0.2**
BRRC				*eS*	**Sn**	**01 52 23.8**	**-0.8**
BRRC				*i*		01 52 27.4	
	comp=Z,502nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**38**	⇓*iP*	**Pn**	**01 52 08.3**	**+0.7**
PAMC				*eS*	**Sn**	**01 52 25.0**	**-0.7**
PAMC				*i*		01 52 27.4	
	comp=Z,693nm,0.5s						
RUSC	**La Rusia**	**0.92**	**178**	⇑*iP*	**Pn**	**01 52 09.3**	**0.0**
RUSC				*eS*	**Sn**	**01 52 28.0**	**-0.8**
RUSC				*i*		01 52 29.0	
	comp=Z,252nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.36**	**259**	*eP*	**Pn**	**01 52 12.0**	**-0.7**
PTBC				*eS*	**Sn**	**01 52 33.0**	**-1.7**
PTBC				*i*		01 52 40.5	
	comp=Z,280nm,0.3s						
TAMC	**Tame, Arauca**	**1.37**	**106**	⇑*iP*	**Pn**	**01 52 13.8**	**+0.9**
TAMC				*eS*	**Sn**	**01 52 35.0**	**+0.1**
TAMC				*i*		01 52 35.8	
	comp=Z,183nm,0.2s						
SPBC	**San Pablo de B**	**1.50**	**220**	*eP*	**Pn**	**01 52 14.3**	**+0.2**
SPBC				*eS*	**Sn**	**01 52 36.7**	**-0.7**
SPBC				*i*		01 52 42.1	
	comp=Z,287nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*eP*	**Pn**	**01 52 18.1**	**+0.1**
ZARC				*eS*	**Sn**	**01 52 43.8**	**-0.2**
ZARC				*i*		01 52 49.4	
	comp=Z,359nm,0.2s						
NORC	**Norcasia**	**2.14**	**235**	*eP*	**Pn**	**01 52 21.4**	**+0.1**
NORC				*eS*	**Sn**	**01 52 49.3**	**-0.7**
NORC				*i*		01 52 54.4	
	comp=Z,175nm,0.2s						
CHIC	**Chingaza**	**2.25**	**196**	*eP*	**Pn**	**01 52 23.6**	**+0.7**
CHIC				*eS*	**Sn**	**01 52 52.4**	**-0.6**
CHIC				*i*		01 53 00.3	
	comp=Z,88nm,0.4s						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**01 52 25.3**	**+1.9**
	comp=Z,48nm,0.3s,baz=90,slow=19,SNR=53						
ROSC				S	**Sn**	**01 52 51.4**	**-2.4**
	comp=Z,117nm,0.6s,baz=121,slow=18,SNR=9.5						
ROSC	**El Rosal**	**2.30**	**211**	*eP*	**Pn**	**01 52 25.0**	**+1.5**
ROSC				*eS*	**Sn**	**01 52 53.9**	**0.0**
ROSC				*i*		01 52 59.3	
	comp=Z,211nm,0.5s						
HELC	**Santa Helena**	**2.48**	**256**	*eP*	**Pn**	**01 52 26.0**	**+0.5**
HELC				*eS*	**Sn**	**01 52 56.6**	**-0.9**
HELC				*i*		01 53 03.7	
	comp=Z,112nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*eP*	**Pn**	**01 52 25.7**	**-0.7**
UREC				*eS*	**Sn**	**01 52 56.7**	**-2.4**
UREC				*i*		01 53 07.3	
	comp=Z,119nm,0.1s						
SOCV	**Socops**	**2.67**	**57**	*iP*	**Pn**	**01 52 28.1**	**+0.5**
SOCV				*eS*	**Sn**	**01 53 00.7**	**-0.7**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	⇑*iP*	**Pn**	**01 52 29.7**	**+0.8**
GUY2C				*eS*	**Sn**	**01 53 04.5**	**+1.0**

GUY2C				*i*			01 53 12.0	
	comp=Z,127nm,0.3s							
VILC	**Villavicencio,**	**2.75**	**192**	*eP*		**Pn**	**01 52 29.1**	**+0.4**
VILC				*eS*		**Sn**	**01 53 03.1**	**-0.1**
VILC				*i*			01 53 07.5	
	comp=Z,152nm,0.3s							
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*eP*		**Pn**	**01 52 29.3**	**+0.8**
LL1C				*eS*		**Sn**	**01 53 03.8**	**+0.8**
LL1C				*i*			01 53 12.8	
	comp=Z,326nm,0.6s							
PTGC	**Puerto Gaitan,**	**2.77**	**159**	⇑*iP*		**Pn**	**01 52 28.5**	**-0.4**
PTGC				*eS*		**Sn**	**01 53 01.5**	**-2.1**
PTGC				*i*			01 53 04.4	
	comp=Z,130nm,0.3s							
LL6C	**La Loma 6 Bece**	**2.91**	**357**	*eP*		**Pn**	**01 52 30.5**	**0.0**
LL6C				*eS*		**Sn**	**01 53 05.3**	**-1.2**
LL6C				*i*			01 53 12.7	
	comp=Z,39nm,0.3s							
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*eP*		**Pn**	**01 52 33.3**	**+1.1**
CBOC				*eS*		**Sn**	**01 53 09.9**	**+0.4**
CBOC				*i*			01 53 22.0	
	comp=Z,37nm,0.6s							
SDV	**Santo Domingo**	**3.21**	**50**	P		**Pn**	**01 52 35.0**	**+0.5**
	comp=Z,37nm,0.3s,baz=246,slow=12,SNR=17							
SDV				S		**Sn**	**01 53 11.9**	**-1.6**
	comp=Z,39nm,0.5s,baz=269,slow=20,SNR=16							
ARGC	**Ariguani, Magd**	**3.23**	**340**	*eP*		**Pn**	**01 52 36.1**	**+1.6**
ARGC				*eS*		**Sn**	**01 53 14.5**	**+0.8**
ARGC				*i*			01 53 17.2	
	comp=Z,31nm,0.2s							
ANIL	**Santa Ana**	**3.24**	**225**	*eP*		**Pn**	**01 52 36.9**	**+1.9**
ANIL				*eS*		**Sn**	**01 53 15.9**	**+1.4**
ANIL				*i*			01 53 23.3	
	comp=Z,215nm,0.3s							
PRAC	**Prado**	**3.55**	**210**	*eP*		**Pn**	**01 52 39.0**	**+0.3**
PRAC				*eS*		**Sn**	**01 53 21.2**	**0.0**
PRAC				*i*			01 53 26.5	
	comp=Z,116nm,0.2s							
PLMC	**San Jos del P**	**3.68**	**239**	*eP*		**Pn**	**01 52 41.2**	**+0.8**
PLMC				*eS*		**Sn**	**01 53 23.9**	**-0.2**
PLMC				*i*			01 53 29.7	
	comp=Z,30nm,0.3s							
SJCC	**San Jacinto, C**	**3.68**	**326**	*eP*		**Pn**	**01 52 39.4**	**-1.0**
SJCC				*eS*		**Sn**	**01 53 19.9**	**-4.4**
SJCC				*i*			01 53 25.3	
	comp=Z,59nm,0.5s							
LCBC	**Los crdobas,**	**3.81**	**302**	*eP*		**Pn**	**01 52 41.4**	**-0.5**
LCBC				*eS*		**Sn**	**01 53 25.3**	**-1.8**
LCBC				*i*			01 53 31.7	
	comp=Z,47nm,0.2s							
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	*eP*		**Pn**	**01 52 45.8**	**-1.2**
CRJC				*eS*		**Sn**	**01 53 32.7**	**-3.4**
CRJC				*i*			01 53 46.4	
	comp=Z,40nm,0.1s							
GUVC	**San Jose del G**	**4.27**	**173**	*eP*		**Pn**	**01 52 46.5**	**-1.5**
GUVC				*eS*		**Sn**	**01 53 35.5**	**-2.4**
GUVC				*i*			01 53 41.6	
	comp=Z,38nm,0.2s							
YOTC	**Yotoco, Valle**	**4.27**	**229**	*eP*		**Pn**	**01 52 47.8**	**-0.3**
YOTC				*eS*		**Sn**	**01 53 38.9**	**+0.8**
SMRC	**Santa Marta, M**	**4.46**	**346**	*eP*		**Pn**	**01 52 50.2**	**-0.2**
SMRC				*eS*		**Sn**	**01 53 38.9**	**-3.4**
SMRC				*i*			01 53 39.6	
	comp=Z,22nm,0.1s							
CAPC	**Capurgana**	**4.57**	**294**	*eP*		**Pn**	**01 52 51.4**	**-0.5**
CAPC				*eS*		**Sn**	**01 53 40.6**	**-4.3**
CAPC				*i*			01 53 43.9	
	comp=Z,13nm,0.1s							
MACC	**Macarena, Meta**	**4.70**	**189**	*eP*		**Pn**	**01 52 51.4**	**-2.2**
MACC				*eS*		**Sn**	**01 53 43.8**	**-4.2**
MACC				*i*			01 53 50.5	
	comp=Z,17nm,0.2s							
GARC	**Garzon, Huila**	**5.17**	**207**	*eP*		**Pn**	**01 52 59.5**	**-0.6**
GARC				*eS*		**Sn**	**01 53 56.5**	**-3.0**
GARC				*i*			01 54 00.2	
	comp=Z,36nm,0.1s							
POPC	**Popayan, Colom**	**5.53**	**220**	*eP*		**Pn**	**01 53 05.3**	**+0.4**
POPC				*eS*		**Sn**	**01 54 05.1**	**-2.9**
FLOC	**Florencia**	**5.78**	**206**	*eP*		**Pn**	**01 53 08.2**	**+0.3**
FLOC				*eS*		**Sn**	**01 54 11.6**	**-2.0**
FLOC				*i*			01 54 19.6	
	comp=Z,6.3nm,0.4s							
BBAC	**Balboa, Cauca**	**6.29**	**221**	*eP*		**Pn**	**01 53 16.2**	**+1.3**
BBAC				*eS*		**Sn**	**01 54 25.3**	**-0.9**
BBAC				*i*			01 54 30.9	
	comp=Z,5.8nm,0.3s							
TXAR	**Lajitas Array**	**36.47**	**312**	P		**P**	**01 58 35.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=129,slow=9.7,SNR=5.6							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**48.09**	**324**	P		**P**	**02 00 09.3**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=123,slow=10,SNR=2.4							
	comp=Z,0.2nm,0.5s							
YKA	**Yellowknife Ar**	**63.27**	**340**	P		**P**	**02 01 56.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=145,slow=5.3,SNR=1.7							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc		**PKPbc**	**02 11 13.7**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=102,slow=3.9,SNR=4.3							
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc		**PKPbc**	**02 11 17.3**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=106,slow=2.9,SNR=9.4							

KEA ***17*** *02:17:37.6,38.°41N×128.°04E,h16km,ML3.2/4*
KMA ***17*** *02:17:38.7±0.1,38.°38N×128.°09E,h9km±1km, Error ellipse: s-maj=1.5km s-min=0.6km az=0.0*
ISC 17 02:17:37.8±1.1,38.°42N±0.°03×128.°06E±0.°04,h12km±12km, n22,σ0°62/26,North Korea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SEHB	**SEOHWA**	**0.21**	**134**	P		**Pg**	**02 17 42.3**	**-0.1**
	SNR=5402							
HWCB	**Hwacheon**	**0.36**	**238**	P		**Pg**	**02 17 45.8**	**+0.7**
	SNR=149							
KSSKC	**Sokcho**	**0.38**	**109**	P		**Pg**	**02 17 45.6**	**+0.1**
	SNR=213							
HWCA	**Hwacheon Acc B**	**0.42**	**213**	P		**Pg**	**02 17 46.6**	**+0.5**
	SNR=80							
KSIJA	**INJE**	**0.43**	**175**	P		**Pg**	**02 17 46.5**	**+0.2**
	SNR=15							
YAYA	**Ganghyeon**	**0.51**	**122**	P		**Pg**	**02 17 47.8**	**+0.1**
	SNR=54							
IJAA	**Inje Acc Boreh**	**0.51**	**156**	P		**Pg**	**02 17 47.9**	**0.0**
	SNR=16							
KSCWO	**Cheorwon**	**0.54**	**232**	P		**Pb**	**02 17 49.1**	**-0.1**
	SNR=73							
KSCHC	**Chuncheon**	**0.67**	**197**	P		**Pb**	**02 17 51.1**	**-0.2**
	SNR=189							
GAPB	**Gapyeong**	**0.72**	**218**	P		**Pb**	**02 17 52.3**	**0.0**
	SNR=9.9							
KSJMJ	**Jumunjin**	**0.76**	**134**	P		**Pg**	**02 17 52.6**	**0.0**
	SNR=87							
KSDGY	**Daegwallycong**	**0.87**	**146**	P		**Pg**	**02 17 54.6**	**-0.1**
	SNR=38							
WOSN	**Wonsan**	**0.90**	**326**	Pg		**Pg**	**02 17 55.4**	**+0.2**
KSDDC	**Dongducheon**	**0.94**	**237**	P		**Pn**	**02 17 57.2**	**+0.4**
	SNR=20							
KSWJU	**Wonju**	**1.01**	**180**	P		**Pg**	**02 17 57.4**	**+0.1**
	SNR=20							
YAPA	**Yangpyeong**	**1.03**	**206**	P		**Pn**	**02 17 58.0**	**0.0**
	SNR=27							
HHU	**Hamhung**	**1.56**	**345**	Pg		**Pb**	**02 18 07.2**	**+0.5**
HHU				Sg		**Sg**	**02 18 28.4**	**+0.2**
HHU				AML		AML		
	comp=N,139nm,0.3s							
HHU				AML		AML		
	comp=E,270nm,0.2s							
HHU				AML		AML		
	comp=Z,163nm,0.4s							
SRW	**Sariwon**	**1.82**	**273**	Pg		**Pg**	**02 18 12.2**	**+1.2**
HJU	**Haeju**	**1.88**	**259**	Pg		**Pb**	**02 18 12.6**	**+0.6**
HJU				Sg		**Sg**	**02 18 37.4**	**-0.8**
HJU				AML		AML		
	comp=N,568nm,0.3s							
HJU				AML		AML		
	comp=E,332nm,0.2s							
HJU				AML		AML		
	comp=Z,618nm,0.3s							
PYAG	**Pyongyang**	**1.91**	**290**	Sg		**Sg**	**02 18 38.9**	**-0.3**
PYS	**Pyongsong**	**1.92**	**297**	Pg		**Pb**	**02 18 13.3**	**+0.7**
PYS				Sg		**Sg**	**02 18 38.7**	**-0.7**
PYS				AML		AML		
	comp=N,674nm,0.9s							
PYS				AML		AML		
	comp=E,464nm,0.6s							
PYS				AML		AML		
	comp=Z,465nm,0.4s							
SUJ	**Sinuiju**	**3.24**	**302**	Pg		**Pg**	**02 18 38.4**	**-1.5**
SUJ				Sg		**Sg**	**02 19 20.7**	**-1.2**
SUJ				AML		AML		
	comp=N,140nm,0.7s							
SUJ				AML		AML		
	comp=E,90nm,0.1s							
SUJ				AML		AML		
	comp=Z,160nm,0.2s							

BJI ***17*** *02:22:39.3±0.0,5.°43S×145.°73E,h112km,mb4.9/38, mB4.8/17*
DJA ***17*** *02:22:39.9±0.3,6.°S±3.°×14.°5E±.°,h119km±4km,M4.7/24, mB5.0/6,mb4.7/24,MLv5.0/4,Mw(mB)4.3/6*
IDC ***17*** *02:22:40.2±2.9,5.°85S×145.°67E,h125km±28km,mb4.1/15, mbtmp4.5/17,MS3.2/3,Error ellipse: s-maj=20.8km s-min=12.1km az=104.0*
NEIC ***17*** *02:22:40.1±1.9,5.°81S±0.°08×145.°54E±0.°09,h114km±8km, mb4.5/43,Error ellipse: s-maj=13.2km s-min=11.0km az=92.0*
ISC 17 02:22:39.1±0.5,5.°77S±0.°06×145.°55E±0.°07,h109km,n108, σ1°48/102,mb4.6/48,2C-1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MANU	**Manus Island**	**4.12**	**26**			**Pn**	**02 23 41.3**	**+1.1**
GENI	**Genyem**	**6.23**	**300**	P		**Pn**	**02 24 07.0**	**-1.6**
	0.6nm117nm,0.8s							
KRVT	**Keravat (AS076**	**6.62**	**78**	P		**Pn**	**02 24 15.3**	**+1.5**
	36nm,0.6s,baz=171,slow=13,SNR=1.7							
RABL	**Rabaul**	**6.78**	**77**	Pn		**Pn**	**02 24 16.3**	**+0.2**
SMPI	**Sarmi**	**7.79**	**299**	P		**Pn**	**02 24 29.0**	**-0.8**
	0.2nm1μm39nm,0.7s							
COEN	**Coen**	**8.46**	**196**	Pn		**Pn**	**02 24 39.8**	**+0.9**
COEN	**Coen**	**8.46**	**196**	P		**Pn**	**02 24 40.0**	**+1.1**
CTA	**Charters Tower**	**14.25**	**177**	P		**P**	**02 26 00.2**	**+0.3**
	8.5nm,0.6s,baz=6.9,slow=13,SNR=15							
CTA				LR		LR	02 30 54.7	
	comp=Z,102nm,19.8s,baz=76,slow=35							
CTA	**Charters Tower**	**14.25**	**177**	P		**P**	**02 26 00.8**	**+0.9**
CTAO	**Charters Tower**	**14.25**	**177**	P		**P**	**02 26 00.4**	**+0.5**
CTAO	**Charters Tower**	**14.25**	**177**	P		**P**	**02 26 00.4**	**+0.5**
KDU	**Kakadu**	**14.62**	**241**	P		**Pn**	**02 26 02.6**	**+1.9**
SIJI	**Sorong**	**15.06**	**288**	P		**Pn**	**02 26 05.5**	**-0.9**
	30nm,0.9s,baz=79,slow=11,SNR=8.8							
SWI	**Sorong**	**15.07**	**288**	P		**Pn**	**02 26 05.4**	**-1.0**
	2μm196nm,0.7s							
MTN	**Manton Dam**	**15.86**	**243**	Pn		**Pn**	**02 26 16.0**	**-0.3**
MTN	**Manton Dam**	**15.86**	**243**	P		**Pn**	**02 26 16.8**	**+0.5**
WB0	**Warramunga Arr**	**17.64**	**217**	P		**P**	**02 26 37.1**	**-0.4**
WR0	**Warramunga Arr**	**17.70**	**216**	P		**P**	**02 26 37.3**	**-0.9**
WR0				IAmb		IAmb	02 26 48.3	
	comp=Z,34nm,1.3s							
WRAB	**Tennant Creek**	**17.80**	**217**	P		**P**	**02 26 38.2**	**-1.0**
WB2	**Warramunga Arr**	**17.80**	**217**	P		**P**	**02 26 39.0**	**-0.3**
WRA	**Warramunga Arr**	**17.81**	**217**	P		**P**	**02 26 38.3**	**-1.1**
	comp=Z,10nm,1.1s,baz=44,slow=12,SNR=30							
WRA				LR		LR	02 33 56.7	
	comp=Z,55nm,19.3s,baz=118,slow=38							
WRA	**Warramunga Arr**	**17.81**	**217**	P		**P**	**02 26 39.5**	**+0.1**
KNRA	**Kununurra**	**19.19**	**238**	P		**P**	**02 26 54.5**	**0.0**
KNRA				IAmb		IAmb	02 27 18.7	
	comp=Z,34nm,0.8s							
KNRA	**Kununurra**	**19.19**	**238**	P		**P**	**02 26 54.8**	**+0.3**
SANI	**Sanana**	**19.86**	**280**	P		**P**	**02 27 04.0**	**+2.2**
	comp=Z,28nm,1.1s							
EIDS	**Eidsvold**	**20.20**	**165**	P		Pn	02 27 11.0	+2.8
QLP	**Quilpie**	**20.73**	**183**	P		**P**	**02 27 12.4**	**+1.4**
AS31	**Alice Springs**	**21.03**	**211**	P		**P**	**02 27 12.4**	**-1.9**
ASAR	**Alice Springs**	**21.03**	**211**	P		**P**	**02 27 13.2**	**-1.1**
	comp=Z,6.5nm,0.9s,baz=42,slow=9.0,SNR=28							
ASAR				LR		LR	02 35 23.0	
	comp=Z,103nm,20.9s,baz=52,slow=36							
	comp=Z,6.5nm,0.9s							
ASAR	**Alice Springs**	**21.03**	**211**	P		**P**	**02 27 11.5**	**-2.8**
SOEI	**Soe**	**21.45**	**258**	P		**P**	**02 27 20.8**	**+1.8**
	comp=Z,43nm,1.1s							
BATI	**Baumata**	**22.11**	**257**	P		**P**	**02 27 27.2**	**+1.4**
	comp=Z,43nm,0.7s,baz=79,slow=2.8,SNR=4.8							
	comp=Z,43nm,0.7s							
BATI	**Baumata**	**22.11**	**257**	P		**P**	**02 27 26.3**	**+0.4**
	comp=Z,31nm,0.9s							
KMSI	**Cibinong**	**22.44**	**286**	P		**P**	**02 27 32.2**	**+3.0**
	comp=Z,108nm,0.6s							
FITZ	**Fitzroy Crossi**	**22.98**	**236**	P		**P**	**02 27 33.2**	**-1.3**
	comp=Z,15nm,0.6s,baz=65,slow=11,SNR=39							
	comp=Z,15nm,0.6s							
FITZ	**Fitzroy Crossi**	**22.98**	**236**	P		**P**	**02 27 32.7**	**-1.8**
FITZ				IAmb		IAmb	02 27 36.7	
	comp=Z,18nm,0.8s							
FITZ	**Fitzroy Crossi**	**22.98**	**236**	P		**P**	**02 27 33.8**	**-0.7**
GTOI	**Gorontalo**	**23.39**	**285**	P		**P**	**02 27 40.4**	**+2.0**
	comp=Z,464nmcomp=Z,50nm,0.8s							
OOD	**Oodnadatta**	**23.82**	**202**	P		**P**	**02 27 41.6**	**-0.6**
EDFI	**Ende, Flores**	**23.85**	**261**	P		**P**	**02 27 39.2**	**-3.5**
	comp=Z,11nm,0.8s							
ARMA	**Armidale**	**25.18**	**168**	P		**P**	**02 27 53.9**	**-0.7**
WRKA	**Warakurna**	**25.31**	**219**	P		**P**	**02 27 54.5**	**-1.3**
TOLI2	**Tolitoli**	**25.66**	**285**	P		**P**	**02 27 59.2**	**+0.1**
TOLI2				IAmb		IAmb	02 28 28.6	
	comp=Z,9.4nm,0.9s							
STKA	**Stephens Creek**	**26.23**	**188**	P		**P**	**02 28 03.4**	**-0.6**
	comp=Z,8.8nm,0.8s,baz=346,slow=9.5,SNR=16							
	comp=Z,8.8nm,0.8s							
STKA	**Stephens Creek**	**26.23**	**188**	P		**P**	**02 28 03.1**	**-0.9**
STKA	**Stephens Creek**	**26.23**	**188**	P		**P**	**02 28 04.9**	**+0.9**
MULG	**Mulgathing**	**26.67**	**203**	P		**P**	**02 28 07.4**	**-0.6**
FORT	**Forrest**	**29.82**	**211**	P		**P**	**02 28 36.2**	**+0.3**
H11S3	**WAKE ISLAND Hy**	**31.88**	**40**	T		T	03 02 24.8	
	SNR=13							
JCJ	**Chichijima**	**32.84**	**354**	P		**P**	**02 29 00.5**	**-1.9**
JMN	**Monobe**	**40.81**	**345**	P		**P**	**02 30 10.6**	**+0.6**
MJAR	**Matsushiro Arr**	**42.65**	**351**	P		**P**	**02 30 23.6**	**-1.3**
	comp=Z,4.9nm,0.9s,baz=161,slow=7.7,SNR=7.7							
	comp=Z,4.9nm,0.9s							
NJ2	**Nanjing**	**45.40**	**328**	*eP*		**P**	**02 30 45.5**	**-1.5**
NJ2				pmax		pmax		
	comp=Z,16nm,0.5s							
KSRS	**Korea Array**	**46.04**	**340**	P		**P**	**02 30 52.1**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=159,slow=9.4,SNR=21							
	comp=Z,5.3nm,0.9s							
KSAR	**Wonju Array Be**	**46.04**	**340**	P		**P**	**02 30 51.3**	**-0.6**
LYN	**LuoYang**	**50.82**	**324**	*eP*		**P**	**02 31 28.6**	**0.0**
USRK	**Ussuriysk Ar.**	**51.22**	**348**	P		**P**	**02 31 31.6**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=167,slow=8.2,SNR=9.1							
	comp=Z,4.6nm,0.8s							
CRAI	**Chngrai**	**51.37**	**302**	P		**P**	**02 31 34.6**	**+1.6**
HNS	**HongShan**	**51.69**	**329**	⇑*P*		**P**	**02 31 35.8**	**+0.8**
HNS				pmax		pmax		
	comp=Z,14nm,0.9s							
CMAR	**Chiang Mai Arr**	**51.87**	**299**	P		**P**	**02 31 38.9**	**+2.1**
	comp=Z,12nm,1.0s,baz=120,slow=5.8,SNR=32							
	comp=Z,12nm,1.0s							
CMAR	**Chiang Mai Arr**	**51.87**	**299**	P		**P**	**02 31 38.5**	**+1.7**
CHTO	**Chiang Mai**	**52.01**	**299**	P		**P**	**02 31 39.8**	**+2.0**
CHTO				IAmb		IAmb	02 31 40.8	
	comp=Z,11nm,0.9s							
MDJ	**Mudanjiang**	**52.17**	**346**	P		**P**	**02 31 38.8**	**+0.3**
MDJ				pmax		pmax		
	comp=Z,12nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,72nm,6.4s							
XAN	**Xi'an**	**52.60**	**321**	⇑*P*		**P**	**02 31 42.8**	**+0.9**
XAN				pmax		pmax		
	comp=Z,25nm,1.0s							
XAN				pmax		pmax		
	comp=Z,200nm,3.8s							
PZH	**PanZhiHua**	**53.19**	**309**	P		**P**	**02 31 49.8**	**+3.3**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.9s							
PZH				pmax		pmax		
	comp=Z,120nm,4.8s							
HHC	**Hu-ho-hao-te**	**55.89**	**329**	*eP*		**P**	**02 32 09.3**	**+3.5**
HHC				pmax		pmax		
	comp=Z,20nm,0.9s							
HHC				pmax		pmax		
	comp=Z,220nm,5.7s							
LZH	**Lanzhou**	**57.10**	**320**	*eP*		**P**	**02 32 16.4**	**+1.9**
LZH				pmax		pmax		
	comp=Z,23nm,1.2s							
PEA0B	**Petropavlovsk-**	**59.55**	**8**	P		**P**	**02 32 31.4**	**+0.4**
PETK	**Petropavlovsk-**	**59.55**	**8**	P		**P**	**02 32 31.3**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=182,slow=7.4,SNR=7.0							
	comp=Z,3.9nm,0.6s							
GTA	**Gaotai**	**61.65**	**321**	⇓*P*		**P**	**02 32 47.0**	**+1.3**
GTA				pmax		pmax		
	comp=Z,9.0nm,0.9s							
ULN	**Ulaanbaatar**	**63.22**	**332**	P		**P**	**02 32 55.9**	**-0.2**
ULN				IAmb		IAmb	02 32 58.1	
	comp=Z,6.6nm,0.9s							
SONM	**Songino Array**	**63.51**	**332**	P		**P**	**02 32 58.7**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=153,slow=5.7,SNR=13							
	comp=Z,1.7nm,0.6s							
SONM	**Songino Array**	**63.51**	**332**	P		**P**	**02 32 58.3**	**+0.4**
SONM				IAmb		IAmb	02 33 00.5	
	comp=Z,3.7nm,0.9s							
CASY	**Casey**	**65.10**	**195**	P		**P**	**02 33 07.7**	**-0.1**
CASY				IAmb		IAmb	02 33 08.6	
	comp=Z,4.3nm,0.8s							
WMQ	**Urumqi**	**71.68**	**320**	*eP*		**P**	**02 33 50.3**	**+1.0**
WMQ				pmax		pmax		
	comp=Z,28nm,0.7s							
VNDA	**Vanda**	**72.23**	**176**	P		**P**	**02 33 51.6**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=330,slow=5.9,SNR=8.9							
	comp=Z,1.1nm,0.8s							
VNDA	**Vanda**	**72.23**	**176**	P		**P**	**02 33 52.0**	**+0.1**
MK31	**Makanchi Array**	**76.41**	**321**	P		**P**	**02 34 17.0**	**+0.3**
MK31				IAmb		IAmb	02 34 18.6	
	comp=Z,6.8nm,1.1s							
MKAR	**Makanchi Array**	**76.41**	**321**	P		**P**	**02 34 17.4**	**+0.7**
	comp=Z,4.1nm,0.8s,baz=106,slow=6.8,SNR=29							
	comp=Z,4.1nm,0.8s							
MAKZ	**Makanchi**	**76.61**	**321**	P		**P**	**02 34 19.2**	**+1.4**
MAKZ				IAmb		IAmb	02 34 19.6	
	comp=Z,14nm,1.1s							
PRZ	**Przheval'sk**	**77.37**	**316**	P		**P**	**02 34 24.6**	**+2.2**
ZAA0	**Zalesovo Array**	**78.05**	**328**	P		**P**	**02 34 25.1**	**-0.5**
ZALV	**Zalesovo Beam**	**78.05**	**328**	P		**P**	**02 34 24.4**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=104,slow=6.3,SNR=8.3							
	comp=Z,2.5nm,0.6s							
ZALV	**Zalesovo Beam**	**78.05**	**328**	P		**P**	**02 34 24.9**	**-0.8**
KSH	**Kashi**	**78.15**	**312**	P		**P**	**02 34 29.1**	**+2.3**
KSH				pmax		pmax		
	comp=Z,7.0nm,0.8s							
NIL	**Nilore**	**78.62**	**306**	P		**P**	**02 34 30.9**	**+1.6**
BOOM	**Boomskoye usch**	**79.09**	**315**	P		**P**	**02 34 32.3**	**+0.4**
BOOM						**PcP**	**02 34 33.6**	**-6.4**
BOOM				IAmb		IAmb	02 34 34.1	
	comp=Z,12nm,0.7s							
AAK	**Ala-Archa**	**80.16**	**315**	P		**P**	**02 34 37.5**	**-0.2**
KURK	**Kurchatov**	**80.17**	**324**	P		**P**	**02 34 36.5**	**-0.8**
KURK				IAmb		IAmb	02 34 38.6	
	comp=Z,6.7nm,0.9s							
KBL	**Kabul**	**82.22**	**306**	P		**P**	**02 34 48.1**	**-0.8**
KBL				IAmb		IAmb	02 34 49.6	
	comp=Z,7.3nm,1.0s							
GAR	**Garm**	**82.24**	**310**	P		**P**	**02 34 49.3**	**+0.6**
GAR				IAmb		IAmb	02 34 50.4	
	comp=Z,13nm,1.1s							
CHGR	**Chuyangaron**	**83.04**	**310**	P		**P**	**02 34 53.4**	**+0.6**
KK31	**Karatay Array**	**83.10**	**315**	P		**P**	**02 34 52.7**	**-0.3**
KK31				IAmb		IAmb	02 34 54.8	
	comp=Z,14nm,1.4s							
KKAR	**Karatay Array**	**83.10**	**315**	P		**P**	**02 34 53.2**	**+0.3**
KKAR				IAmb		IAmb	02 34 54.8	
	comp=Z,14nm,1.4s							
KKAR	**Karatay Array**	**83.10**	**315**	P		**P**	**02 34 52.5**	**-0.4**
IMAR	**Indian Mountai**	**83.79**	**21**	P		**P**	**02 34 55.1**	**-0.9**
MLY	**Manley**	**84.46**	**22**	P		**P**	**02 34 58.6**	**-0.8**
MLY				IAmb		IAmb	02 34 59.8	
	comp=Z,4.2nm,0.9s							
NRIK	**Noril'sk**	**84.62**	**342**	P		**P**	**02 34 58.5**	**-1.5**
	comp=Z,4.2nm,0.7s,baz=142,slow=6.2,SNR=4.2							
NRIK				pP		**pP**	**02 35 32.2**	**+3.8**
	comp=Z,3.6nm,0.8s,baz=159,slow=5.6,SNR=2.4							
	comp=Z,4.2nm,0.7s							
CCB	**Clear Creek Bu**	**85.43**	**23**	IAmb		IAmb	02 35 03.4	
	comp=Z,3.8nm,1.0s							
BRVK	**Borovoye**	**85.81**	**324**	P		**P**	**02 35 06.8**	**+0.4**
IL31		**85.84**	**23**	IAmb		IAmb	02 35 05.0	
	comp=Z,3.5nm,0.8s							
ILAR	**Eielson Array**	**85.84**	**23**	P		**P**	**02 35 04.3**	**-1.9**
	comp=Z,2.9nm,0.8s,baz=252,slow=5.2,SNR=24							
	comp=Z,2.9nm,0.8s							
RIDG	**Independent Ri**	**86.29**	**25**	P		**P**	**02 35 08.1**	**-0.5**
RIDG				IAmb		IAmb	02 35 09.2	
	comp=Z,11nm,1.2s							
J25K	**Salcha River,**	**86.39**	**24**	IAmb		IAmb	02 35 08.8	
	comp=Z,6.0nm,1.0s							
K27K	**Chicken**	**87.54**	**25**	IAmb		IAmb	02 35 15.9	
	comp=Z,6.6nm,1.1s							
ABKAR	**Akbulak array**	**91.46**	**319**	IAmb		IAmb	02 35 33.3	
	comp=Z,3.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**143.63**	**284**	P

comp=N,98nm,0.4s
EVR Evrytania 0.73 109 P Pg 02 31 58.8 -0.5
EVR S Sb 02 32 09.4 0.0
EVR AML AML 02 32 12.5
comp=E,246µm,0.3s
EVR AML AML 02 32 13.2
comp=N,136µm,0.3s
FSK Fiskardo 0.76 202 P Pg 02 31 59.0 -0.7
FSK S Sn 02 32 11.5 -0.8
comp=N,232nm,0.4s
FSK Fiskardo 0.76 202 P Pg 02 31 59.1 -0.6
FSK S Sg 02 32 09.2 -0.4
FSK AML AML 02 32 16.5
comp=N,381µm,0.4s
FSK AML AML 02 32 17.1
comp=E,513µm,0.2s
THL Klokotos Trika 0.94 64 P Pb 02 32 02.9 -0.1
THL S Sg 02 32 16.1 +0.7
comp=E,72nm,0.7s
THL Klokotos Trika 0.94 64 P Pb 02 32 03.0 0.0
THL S Sg 02 32 15.7 +0.2
THL AML AML 02 32 20.1
comp=E,135µm,0.5s
THL AML AML 02 32 20.5
comp=N,165µm,0.6s
MAKR Makrakomi, Fth 0.95 98 P Pb 02 32 03.2 0.0
MAKR Makrakomi, Fth 0.95 98 P Pb 02 32 03.1 -0.2
MAKR S Sb 02 32 15.6 -0.1
MAKR AML AML 02 32 20.6
comp=N,458µm,0.6s
MAKR AML AML 02 32 23.1
comp=E,505µm,0.5s
ANX Ano Chora 0.96 126 P Pb 02 32 02.5 -1.0
ANX S Sn 02 32 17.0 -0.6
comp=E,175nm,0.5s
ANX Ano Chora 0.96 126 P Pb 02 32 02.6 -0.9
ANX S Sg 02 32 16.2 0.0
ANX AML AML 02 32 21.1
comp=E,258µm,0.5s
ANX AML AML 02 32 23.9
comp=N,443µm,0.5s
KASA Kassiopi 0.96 308 P Pb 02 32 03.3 -0.1
KEF4 Livadi, Kephal 0.98 204 P Pb 02 32 02.2 -1.5
KEF4 S Sn 02 32 18.1 +0.2
KEF4 Livadi, Kephal 0.98 204 P Pb 02 32 02.4 -1.4
SRN Sarande 1.01 316 P Pb 02 32 04.0 -0.3
SRN Sarande 1.01 316 P Pb 02 32 04.1 -0.1
baz=331
SRN S Sn 02 32 18.9 +0.2
baz=331
SRN AMP
comp=E,0.1nm,0.7s,baz=331
VLS Valsamata 1.02 195 P Pb 02 32 02.5 -1.8
VLS Valsamata 1.02 195 P Pb 02 32 02.8 -1.5
VLS AML AML 02 32 21.1
comp=E,315µm,0.3s
VLS AML AML 02 32 24.7
comp=N,319µm,0.3s
LSK Leskovik 1.02 346 P Pb 02 32 04.2 -0.2
LSK Leskovik 1.02 346 P Pn 02 32 06.8 +1.9
baz=0.0
LSK S Sn 02 32 22.7 +3.7
baz=0.0
LSK AMP
comp=E,0.9nm,0.9s,baz=0.0
KEK Kerkira 1.03 303 P Pb 02 32 04.2 -0.4
KEK S Sn 02 32 20.0 +0.8
comp=E,98nm,0.6s
KEK Kerkira 1.03 303 P Pb 02 32 04.0 -0.6
KEK AML AML 02 32 21.8
comp=N,158µm,0.7s
KEK AML AML 02 32 25.0
comp=E,220µm,0.3s
PENT Pentalofos 1.05 9 P Pb 02 32 04.7 -0.2
KEF3 Kipouria, Keph 1.06 205 P Pb 02 32 04.2 -0.8
KEF3 S Sn 02 32 20.4 +0.7
comp=E,410nm,0.4s
KEF3 Kipouria, Keph 1.06 205 P Pb 02 32 03.3 -1.7
EFP Efpalio 1.06 133 P Pb 02 32 05.2 +0.1
EFP AML AML 02 32 25.4
comp=E,250µm,0.4s
EFP AML AML 02 32 26.9
comp=N,293µm,0.5s
PSDA Pessada-Kefalo 1.08 194 P Pb 02 32 03.5 -1.9
PSDA Pessada-Kefalo 1.08 194 P Pb 02 32 03.6 -1.8
AGG Agios Georgios 1.10 97 P Pb 02 32 05.6 -0.2
AGG Agios Georgios 1.10 97 P Pb 02 32 05.5 -0.3
AGG AML AML 02 32 25.5
comp=E,180µm,0.5s
AGG AML AML 02 32 26.6
comp=N,182µm,0.6s
TYRN Tyrnavos 1.15 61 P Pg 02 32 07.0 -0.3
SERG Sergoula 1.16 130 P Pb 02 32 07.0 +0.2
SERG Sergoula 1.16 130 P Pb 02 32 06.8 0.0
SERG AML AML 02 32 29.8
comp=E,193µm,0.3s
SERG AML AML 02 32 29.9
comp=N,224µm,0.4s
RLS Riolos of Patr 1.18 159 P Pn 02 32 05.5 -1.5
RLS AML AML 02 32 31.5
comp=N,143µm,0.5s
RLS AML AML 02 32 31.7
comp=E,173µm,0.5s
LAKA Lakka 1.23 138 P Pn 02 32 07.7 -0.1
LAKA Lakka 1.23 138 P Pn 02 32 07.7 -0.1
LAKA AML AML 02 32 33.0
comp=E,99µm,0.9s
LAKA AML AML 02 32 35.7
comp=N,72µm,0.4s
LRSO Larissa Observ 1.25 65 P Pb 02 32 08.2 -0.1
NEST Nestorio 1.26 4 P Pg 02 32 08.9 -0.3
NEST Nestorio 1.26 4 P Pb 02 32 08.5 0.0
NEST AML AML 02 32 35.0
comp=N,145µm,0.8s
NEST AML AML 02 32 35.9
comp=E,196µm,0.5s
KZN Kozani 1.32 29 P Pb 02 32 09.6 +0.1
KZN Kozani 1.32 29 P Pb 02 32 09.6 0.0
KZN S Sn 02 32 26.9 +0.6
KZN AML AML 02 32 35.3
comp=N,108µm,0.4s
KZN AML AML 02 32 35.5
comp=E,154µm,0.4s
DRO Drossia 1.35 153 P Pn 02 32 09.2 -0.2
DRO Drossia 1.35 153 P Pn 02 32 09.1 -0.4
DRO AML AML 02 32 36.0
comp=N,358µm,0.5s
DRO AML AML 02 32 40.5
comp=E,256µm,0.4s
AXAR Agios Charalam 1.41 106 P Pb 02 32 11.3 +0.3
AXAR Agios Charalam 1.41 106 P Pb 02 32 11.4 +0.3
AXAR AML AML 02 32 35.9
comp=N,384µm,0.8s
AXAR AML AML 02 32 36.4
comp=E,328µm,0.5s
LTHK Lithakia 1.45 183 P Pn 02 32 11.1 +0.4
KBN Korca 1.47 356 P Pg 02 32 14.8 +1.6
baz=5.0
KBN S Sg 02 32 36.1 +3.8
baz=5.0
KBN AMP
comp=N,0.3nm,0.8s,baz=5.0
KLV Kalavryta, Ach 1.47 139 P Pn 02 32 11.3 +0.2
KLV Kalavryta, Ach 1.47 139 P Pn 02 32 11.2 +0.1
LIT Litokhoron 1.53 52 P Pb 02 32 13.6 +0.5
LIT Litokhoron 1.53 52 P Pb 02 32 13.7 +0.6
LKR Lokris 1.70 107 P Pn 02 32 14.8 +0.7
XOR Xorichti 1.77 83 P Pb 02 32 17.2 0.0
NEO Neokhori 1.79 85 P Pb 02 32 16.9 -0.7
OHR Ohrid 1.95 357 *i* Pn Pg 02 32 21.6 -0.8
VIL2 Platees 2.06 117 P Pb 02 32 21.7 -0.5
SCTE Santa Cesarea 2.10 296 P Pn 02 32 19.9 +0.2
baz=303
ITM Ithomi 2.13 158 P Pb 02 32 22.4 -0.9
DBRK Dubrovnik 4.09 330 *e*Pn Pn 02 32 45.3 -1.7
DBRK Sn Sn 02 33 30.1 -4.5
STON Ston 4.44 328 *e*Pn Pn 02 32 50.1 -1.7
LSTV Lastovo 4.72 321 *e*Pn Pn 02 32 54.6 -1.1
MAKA Makarska 5.07 326 *e*Pn Pn 02 33 00.1 -0.3
MAKA Sn Sn 02 33 54.8 -3.8
RICI Ricice 5.18 328 *e*Pn Pn 02 33 02.1 0.0
KIJV Kijevo 5.91 326 *e*Pn Pn 02 33 10.7 -1.2
KIJV Sn Sn 02 34 16.6 -2.9
MORI Morici 6.12 322 *e*Pn Pn 02 33 14.2 -0.6
DUGI Dugi Otok 6.53 320 *e*Pn Pn 02 33 20.0 -0.5
VIRC Vir 6.75 321 *e*Pn Pn 02 33 23.7 +0.2

IDC **17** *02:39:04.5±1.0,36°.27N×98°.35W,h0km,mbtmp3.4/5, ML3.8/4,Error ellipse: s-maj=12.9km s-min=10.7km az=141.0*
NEIC **17** *02:39:05.8,36°.24N×98°.45W,h5km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-0.09; Mθθ0.96; Mφφ-0.88; Mrθ-0.10; Mθφ0.29; Mrφ0.28; Fault plane solution: M₀1.01000×10¹⁴ NP1:ϕ₁218.00000°, δ75.00000°,λ-170.00000°. NP2:ϕ₂125.00000°, δ80.00000°,λ-15.00000°. Principal axes: T 1.0116, Plg3.0000°, Azm172.0000°; N -0.0002, Plg72.0000°, Azm272.0000°; P -1.0114, Plg18.0000°, Azm81.0000°;*
TUL **17** *02:39:05.8±1.1,36°.25N±0°.01×98°.45W±0°.02, h6km±6km, ML4.1,mb_Lg3.6/93(NEIC),Mwr3.3/14(SLM) Error ellipse: s-maj=2.6km s-min=1.6km az=79.0*
NEIC **17** *02:39:06.5±1.0,36°.25N±0°.01×98°.44W±0°.02, h4km±6km, Error ellipse: s-maj=2.3km s-min=1.6km az=78.0*
ANF **17** *02:39:06.1±0.7,36°.23N×98°.44W, h5km±6km, ML4.4/18, Error ellipse: s-maj=3.5km s-min=2.9km az=105.0*
ISC 17 02:39:06.2±0.9, 36°.25N±0°.02×98°.42W±0°.02, h13km±8km, n175, σ1$08/189, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK038	**West end E0370**	**0.35**	**311**		**Pg**	**02 39 11.7**	**-1.5**
OK038				Sg	**Sg**	**02 39 16.8**	**-1.2**
CROK	**Carrier**	**0.43**	**54**		**Pg**	**02 39 14.9**	**0.0**
CROK				Sg	**Sg**	**02 39 21.4**	**+0.8**
U32A	**Winter Ranch,**	**0.49**	**286**	Pg	**Pg**	**02 39 15.1**	**-0.8**
U32A				Sg	**Sg**	**02 39 21.9**	**-0.4**
U32A	**Winter Ranch,** baz=106,SNR=322	**0.49**	**286**	P	**Pg**	**02 39 15.1**	**-0.8**
U32A	baz=106			S	**Sg**	**02 39 21.9**	**-0.4**
OK035	**E0210 Rd and N**	**0.51**	**333**	Pg	**Pg**	**02 39 15.9**	**-0.4**
OK035				Sg	**Sg**	**02 39 23.1**	**-0.1**
NOKA	**Waynoka**	**0.56**	**313**		**Pg**	**02 39 16.6**	**-0.7**
NOKA				Sg	**Sg**	**02 39 24.4**	**-0.4**
OK032	**Salt Plains WL**	**0.58**	**17**	Pg	**Pg**	**02 39 17.2**	**-0.3**
OK032					**Sg**	**02 39 25.5**	**+0.3**
CSTR	**Hydro, Custer**	**0.64**	**200**		**Pg**	**02 39 18.0**	**-0.7**
CSTR				Sg	**Sg**	**02 39 27.1**	**-0.1**
GC02	**Grant County #**	**0.75**	**37**	Pg	**Pg**	**02 39 20.5**	**-0.3**
GC02				Sg	**Sg**	**02 39 30.9**	**+0.3**
KAN14	**Manchester OK**	**0.80**	**27**	Pg	**Pg**	**02 39 21.2**	**-0.5**
KAN14				Sg	**Sg**	**02 39 32.4**	**+0.3**
ELIS	**Ellis County**	**0.83**	**257**		**Pg**	**02 39 21.2**	**-1.0**
BCOK	**Bluff Creek, N**	**0.89**	**132**		**Pg**	**02 39 22.6**	**-0.7**
BCOK				Sg	**Sg**	**02 39 35.0**	**+0.1**
OK029	**Liberty Lake**	**0.90**	**120**	Pg	**Pg**	**02 39 23.3**	**-0.4**
OK029				Sg	**Sg**	**02 39 35.6**	**+0.2**
KAN10	**Anthony SW Sta**	**0.91**	**17**		**Pg**	**02 39 23.2**	**-0.6**
KAN17	**Caldwell West**	**0.95**	**33**		**Pg**	**02 39 23.9**	**-0.7**
KAN17				Sg	**Sg**	**02 39 36.8**	**-0.2**
KAN05	**Bluff City Nor**	**0.96**	**27**	Pg	**Pg**	**02 39 24.2**	**-0.6**
KAN05				Sg	**Sg**	**02 39 37.3**	**-0.1**
KAN16	**Harper SW Stat**	**1.01**	**16**		**Pg**	**02 39 25.1**	**-0.7**
KAN16				Sg	**Sg**	**02 39 39.0**	**0.0**
KAN08	**Anthony NE Sta**	**1.04**	**20**		**Pg**	**02 39 25.6**	**-0.7**
KAN08				Sg	**Sg**	**02 39 39.6**	**-0.2**
KAN01	**Argonia South**	**1.05**	**30**		**Pg**	**02 39 25.6**	**-0.8**
KAN01				Sg	**Sg**	**02 39 39.4**	**-0.6**
OK009	**Oakdale Elemen**	**1.05**	**129**	Pg	**Pg**	**02 39 25.9**	**-0.5**
OK009				Sg	**Sg**	**02 39 40.1**	**0.0**
KAN13	**South Haven SW**	**1.07**	**45**		**Pg**	**02 39 26.3**	**-0.6**
KAN13				Sg	**Sg**	**02 39 40.9**	**-0.1**
KAN06	**Argonia West S**	**1.09**	**24**		**Pg**	**02 39 25.5**	**-0.8**
KAN06				Sg	**Sg**	**02 39 41.5**	**-0.1**
BLOK	**Blackwell**	**1.10**	**62**	Pg	**Pg**	**02 39 26.7**	**-0.6**
BLOK				Sg	**Sg**	**02 39 41.5**	**-0.2**
KAN12	**Harper NE Stat**	**1.10**	**18**		**Pg**	**02 39 26.0**	**-1.4**
OK025	**Westminster Rd**	**1.10**	**127**	Pg	**Pg**	**02 39 26.6**	**-0.8**
OK005	**Luther M Schoo**	**1.16**	**120**	Pg	**Pg**	**02 39 27.6**	**-0.9**
OKCSW	**OKLAHOMA CITY**	**1.16**	**136**		**Pg**	**02 39 27.4**	**-1.2**
OKCSW				Sg	**Sg**	**02 39 43.3**	**-0.4**
KS20	**Mayfield South**	**1.20**	**35**	Pg	**Pg**	**02 39 28.3**	**-1.0**
KS21	**Milan North St**	**1.20**	**30**		**Pg**	**02 39 27.9**	**-1.4**
OK031	**S. Brethren Rd**	**1.31**	**103**		**Pn**	**02 39 30.2**	**-0.1**
OK030	**Cody Creek RV**	**1.36**	**103**		**Pn**	**02 39 30.9**	**0.0**
QUOK	**Quay**	**1.39**	**93**		**Pn**	**02 39 31.4**	**+0.1**
OK034	**N. Norfolk Rd.**	**1.40**	**99**		**Pn**	**02 39 31.7**	**+0.2**
WMOK	**Wichita Mounta**	**1.54**	**191**		**Pn**	**02 39 33.0**	**-0.4**
WMOK	**Wichita Mounta** baz=10	**1.54**	**191**	P	**Pn**	**02 39 33.2**	**-0.2**
WMOK	baz=10			S	**Sn**	**02 39 53.6**	**+0.4**
DEOK	**Depew**	**1.61**	**104**	Pn	**Pn**	**02 39 34.9**	**+0.5**
T35A	**Sooner Cattle**	**1.67**	**66**	Pn	**Pn**	**02 39 36.4**	**+1.2**
T35B	**Sooner Cattle** baz=247	**1.67**	**66**	P	**Pn**	**02 39 36.6**	**+1.4**
T35B	baz=247			S	**Sb**	**02 39 59.4**	**+1.5**
X34A	**Smith Ranch, M**	**1.71**	**164**	Pn	**Pn**	**02 39 37.0**	**+1.2**
TUL1	**Leonard**	**2.15**	**98**	Pn	**Pn**	**02 39 42.9**	**+1.0**
TUL1	comp=Z,308nm,1.1s			IAmb_Lg		02 40 20.1	
TUL1	**Leonard** baz=280	**2.15**	**98**	P	**Pn**	**02 39 43.1**	**+1.2**
TUL1	baz=280			S	**Sn**	**02 40 10.9**	**+2.4**
R32A	**Long Quarter,**	**2.18**	**354**	Pn	**Pn**	**02 39 43.4**	**+1.2**
R32A	**Long Quarter,** baz=174	**2.18**	**354**	P	**Pn**	**02 39 43.4**	**+1.2**
R32A	baz=174			S	**Sb**	**02 40 12.0**	**-0.6**
LOOK	**Love County**	**2.47**	**155**	Pn	**Pn**	**02 39 47.3**	**+1.1**
LOOK	comp=Z,186nm,0.8s			IAmb_Lg		02 40 30.5	
RLO	**Rose Lookout**	**2.75**	**91**	Pn	**Pn**	**02 39 50.6**	**+0.5**
CBKS	**Cedar Bluff**	**2.77**	**338**	Pn	**Pn**	**02 39 51.1**	**+0.8**
AMTX	**Amarillo**	**2.99**	**244**	Pn	**Pn**	**02 39 54.7**	**+1.3**
AMTX	comp=Z,198nm,1.0s			IAmb_Lg		02 40 46.6	
AMTX	**Amarillo** baz=62,SNR=13	**2.99**	**244**	P	**Pn**	**02 39 55.4**	**+2.0**
X37A	**Clayton**	**2.99**	**123**	Pn	**Pn**	**02 39 54.1**	**+0.8**
X37A	comp=Z,126nm,0.8s			IAmb_Lg		02 40 44.9	
X37A	**Clayton** baz=304,SNR=6.6	**2.99**	**123**	P	**Pn**	**02 39 54.4**	**+1.0**
X37A	baz=304			S	**Sn**	**02 40 31.5**	**+2.4**
Z35A	**Perchaven, San**	**3.07**	**161**	Pn	**Pn**	**02 39 55.5**	**+1.1**
Z35A	**Perchaven, San** baz=342,SNR=23	**3.07**	**161**	P	**Pn**	**02 39 55.7**	**+1.3**
KSU1	**Kansas State U**	**3.19**	**26**	Pn	**Pn**	**02 39 57.2**	**+1.2**
KSU1	**Kansas State U** baz=208	**3.19**	**26**	P	**Pn**	**02 39 57.5**	**+1.5**
U38A	**Gravette**	**3.26**	**85**	Pn	**Pn**	**02 39 57.6**	**+0.5**
HHAR	**Hobbs**	**3.62**	**88**	Pn	**Pn**	**02 40 02.2**	**+0.2**
ABTX	**Abilene, Hawle**	**3.76**	**196**	Pn	**Pn**	**02 40 04.3**	**+0.4**
ABTX	comp=Z,121nm,0.7s			IAmb_Lg		02 41 08.5	
ABTX	**Abilene, Hawle** baz=15,SNR=19	**3.76**	**196**	P	**Pn**	**02 40 04.4**	**+0.4**
Z38A	**Mt. Pleasant**	**4.11**	**136**	Pn	**Pn**	**02 40 09.7**	**+1.0**
Z38A	comp=Z,165nm,0.8s			IAmb_Lg		02 41 20.2	
MSTX	**Muleshoe**	**4.23**	**239**	Pn	**Pn**	**02 40 11.3**	**+0.8**
MSTX	comp=Z,96nm,1.0s			IAmb_Lg		02 41 20.4	
MIAR	**Mount Ida**	**4.31**	**112**	Pn	**Pn**	**02 40 12.6**	**+1.2**
MIAR	comp=Z,116nm,0.7s			IAmb_Lg		02 41 27.7	
MIAR	**Mount Ida** baz=295,SNR=14	**4.31**	**112**	P	**Pn**	**02 40 13.2**	**+1.8**
WHTX	**Lake Whitney,**	**4.32**	**169**	Pn	**Pn**	**02 40 12.3**	**+0.7**
WHTX	**Lake Whitney,** baz=349,SNR=15	**4.32**	**169**	P	**Pn**	**02 40 12.6**	**+0.9**
S39A	**Bolivar**	**4.33**	**69**	Pn	**Pn**	**02 40 12.4**	**+0.7**
S39A	comp=Z,115nm,0.7s			IAmb_Lg		02 41 26.2	
S39A	**Bolivar** baz=252	**4.33**	**69**	P	**Pn**	**02 40 12.6**	**+0.9**
KSCO	**Kaye Shedlock'**	**4.33**	**311**	Pn	**Pn**	**02 40 12.8**	**+0.9**
KSCO	comp=Z,114nm,0.7s			IAmb_Lg		02 41 31.2	
N33B	**J Bar K, Exete**	**4.54**	**9**	P	**Pn**	**02 40 14.2**	**-0.5**
	baz=190,SNR=16						
N33A	**J Bar K, Exete**	**4.54**	**9**	Pn	**Pn**	**02 40 14.3**	**-0.5**
N33A	comp=Z,88nm,0.8s			IAmb_Lg		02 41 32.3	
237A	**Washetta, Mont**	**4.76**	**152**	Pn	**Pn**	**02 40 17.4**	**-0.3**
237A	**Washetta, Mont** baz=334,SNR=12	**4.76**	**152**	P	**Pn**	**02 40 17.5**	**-0.1**
T25A	**Trinidad**	**4.90**	**282**	Pn	**Pn**	**02 40 20.4**	**+0.6**
T25A	comp=Z,129nm,0.8s			IAmb_Lg		02 41 40.7	
MGMO	**Mountain Grove**	**5.02**	**78**	Pn	**Pn**	**02 40 22.2**	**+0.8**
WLAR	**White Oak Lake**	**5.05**	**119**	Pn	**Pn**	**02 40 22.1**	**+0.5**
WLAR	comp=Z,100nm,0.7s			IAmb_Lg		02 41 59.5	
WHAR	**Wooly Hollow**	**5.08**	**99**	Pn	**Pn**	**02 40 22.1**	**+0.1**
WHAR	comp=Z,76nm,0.8s			IAmb_Lg		02 41 50.6	
N35A	**Tabor**	**5.09**	**24**	Pn	**Pn**	**02 40 22.1**	**-0.1**
FCAR	**Ozark Folk Cen**	**5.11**	**92**	Pn	**Pn**	**02 40 22.5**	**0.0**
FCAR	comp=Z,140nm,0.9s			IAmb_Lg		02 41 51.6	
P38A	**Dawn**	**5.12**	**47**	Pn	**Pn**	**02 40 24.0**	**+1.4**
P38A	comp=Z,136nm,0.9s			IAmb_Lg		02 41 56.1	
P38A	**Dawn** baz=230,SNR=7.2	**5.12**	**47**	P	**Pn**	**02 40 24.1**	**+1.4**
BGNE	**Belgrade**	**5.16**	**2**	Pn	**Pn**	**02 40 23.1**	**0.0**
BGNE	comp=Z,131nm,0.9s			IAmb_Lg		02 41 57.0	
BGNE	**Belgrade** baz=183,SNR=24	**5.16**	**2**	P	**Pn**	**02 40 23.6**	**+0.4**
UALR	**University of**	**5.17**	**105**	Pn	**Pn**	**02 40 24.3**	**+1.0**
UALR	comp=Z,87nm,0.8s			IAmb_Lg		02 41 55.9	
R40A	**Maddies Statio**	**5.31**	**66**	Pn	**Pn**	**02 40 25.6**	**+0.3**
R40A	comp=Z,92nm,0.9s			IAmb_Lg		02 42 02.2	
R40A	**Maddies Statio** baz=249	**5.31**	**66**	P	**Pn**	**02 40 25.9**	**+0.7**
OGNE	**Ogallala**	**5.47**	**330**	Pn	**Pn**	**02 40 28.6**	**+1.1**
OGNE	**Ogallala** baz=148,SNR=22	**5.47**	**330**	P	**Pn**	**02 40 29.3**	**+1.7**
435B	**Jarrell**	**5.50**	**172**	Pn	**Pn**	**02 40 28.3**	**+0.5**
435B	comp=Z,74nm,0.8s			IAmb_Lg		02 42 01.8	
HTMS	**Hat Mesa**	**5.73**	**230**	Pn	**Pn**	**02 40 32.2**	**+1.1**
SDCO	**Great Sand Dun**	**5.86**	**287**	Pn	**Pn**	**02 40 34.8**	**+1.7**
SDCO	**Great Sand Dun** baz=103,SNR=8.6	**5.86**	**287**	P	**Pn**	**02 40 35.6**	**+2.5**
JCT	**Junction City**	**5.87**	**192**	Pn	**Pn**	**02 40 33.5**	**+0.5**
JCT	comp=Z,120nm,1.0s			IAmb_Lg		02 42 12.3	
CLN7	**Carlsbad 7**	**5.88**	**231**	Pn	**Pn**	**02 40 34.3**	**+1.2**
LCAR	**Lake Charles**	**5.88**	**90**	Pn	**Pn**	**02 40 33.2**	**+0.1**
L34A	**Svendsen Farm,**	**5.92**	**15**	Pn	**Pn**	**02 40 32.6**	**-1.1**
CCAR	**Cane Creek**	**5.93**	**111**	Pn	**Pn**	**02 40 33.8**	**+0.1**
CCAR	comp=Z,91nm,0.8s			IAmb_Lg		02 42 30.5	
Q24A	**Divide**	**5.99**	**299**	Pn	**Pn**	**02 40 35.4**	**+0.5**
Q24A	comp=Z,56nm,0.9s			IAmb_Lg		02 42 24.0	
CCM	**Cathedral Cave**	**6.01**	**70**	Pn	**Pn**	**02 40 35.8**	**+1.0**
CCM	comp=Z,94nm,0.7s			IAmb_Lg		02 42 19.1	
P40A	**Paris**	**6.01**	**55**	Pn	**Pn**	**02 40 36.1**	**+1.3**
N38A	**Joes South For**	**6.09**	**40**	Pn	**Pn**	**02 40 35.8**	**-0.2**
HBAR	**Harrisburg**	**6.34**	**94**	Pn	**Pn**	**02 40 39.7**	**+0.3**
K31A	**O'Neill**	**6.37**	**358**	Pn	**Pn**	**02 40 39.1**	**-0.7**
PBMO	**Poplar Bluff** comp=Z,70nm,0.8s	**6.46**	**83**	IAmb_Lg		02 42 40.8	
FVM	**French Village**	**6.62**	**72**	Pn	**Pn**	**02 40 43.5**	**+0.3**
FVM	comp=Z,99nm,0.9s			IAmb_Lg		02 42 38.4	
ANMO	**Albuquerque** comp=Z,0.2nm,0.3s,baz=80,slow=11,SNR=3.4	**6.68**	**261**	Pn	**Pn**	**02 40 46.4**	**+2.2**
ANMO	comp=Z,0.9nm,0.3s,baz=85,slow=19,SNR=10			Pg	**Pb**	**02 41 06.1**	**+3.8**
ANMO	comp=Z,2.5nm,0.3s,baz=338,slow=19,SNR=7.5 comp=Z,0.4nm,0.3s			Lg	Lg	02 42 31.9	
ISCO	**Idaho Springs**	**6.69**	**304**	Pn	**Pn**	**02 40 45.7**	**+1.2**
143A	**Socs Landing,** comp=Z,78nm,0.8s	**6.79**	**119**	IAmb_Lg		02 43 00.8	
SLM	**Saint Louis** comp=Z,79nm,0.8s	**6.93**	**67**	IAmb_Lg		02 42 42.8	
SCIA	**State Center**	**6.95**	**34**	Pn	**Pn**	**02 40 49.5**	**+1.8**
SCIA	comp=Z,95nm,0.8s			IAmb_Lg		02 42 50.5	
PARMO	**Parma** comp=Z,84nm,0.7s	**7.00**	**84**	IAmb_Lg		02 42 55.8	
CGM3	**Cape Girardeau**	**7.11**	**79**	Pn	**Pn**	**02 40 50.4**	**+0.5**
CGM3	comp=Z,69nm,0.9s			IAmb_Lg		02 42 51.4	
Y22D	**IRIS PASSCAL I** comp=Z,71nm,0.8s	**7.29**	**255**	IAmb_Lg		02 43 16.5	
MNTX	**Cornudas Mount**	**7.35**	**234**	Pn	**Pn**	**02 40 53.8**	**+0.5**
HALT	**Halls** comp=Z,73nm,0.8s	**7.36**	**90**	IAmb_Lg		02 42 58.8	
GLAT	**Glass** comp=Z,83nm,0.8s	**7.38**	**87**	IAmb_Lg		02 43 07.6	
735A	**Kenedy** comp=Z,64nm,1.2s	**7.39**	**176**	IAmb_Lg		02 43 08.7	
N41A	**Harden Midland**	**7.42**	**51**	Pn	**Pn**	**02 40 54.8**	**+0.7**
HICK	**Hickman**	**7.42**	**85**	Pn	**Pn**	**02 40 54.8**	**+0.6**
PHWY	**Pilot Hill**	**7.46**	**315**	Pn	**Pn**	**02 40 55.4**	**+0.4**
PHWY	comp=Z,64nm,0.9s			IAmb_Lg		02 43 04.9	
S44A	**Carbondale**	**7.48**	**76**	Pn	**Pn**	**02 40 55.5**	**+0.6**
S44A	comp=Z,58nm,0.7s			IAmb_Lg		02 43 07.4	
S44A	**Carbondale** baz=262,SNR=6.7	**7.48**	**76**	P	**Pn**	**02 40 55.6**	**+0.6**
N23A	**Red Feather La**	**7.50**	**310**	Pn	**Pn**	**02 40 57.5**	**+2.0**
N23A	comp=Z,79nm,0.8s			IAmb_Lg		02 43 10.8	
OXF	**Oxford** comp=Z,75nm,0.9s	**7.56**	**101**	IAmb_Lg		02 43 18.5	
W45A	**Hickory Valley**	**7.59**	**96**	Pn	**Pn**	**02 40 57.7**	**+1.1**
W45A	comp=Z,65nm,0.7s			IAmb_Lg		02 43 18.2	
ECSD	**EROS Data Cent**	**7.60**	**10**	Pn	**Pn**	**02 40 55.9**	**-0.8**
Y45A	**Yeager Farm, C** comp=Z,53nm,0.9s	**7.66**	**106**	IAmb_Lg		02 43 22.1	
P43A	**Skaggs, Pawnee**	**7.80**	**62**	Pn	**Pn**	**02 41 00.6**	**+1.2**
Q44A	**Meyer Farm, Va**	**7.92**	**68**	Pn	**Pn**	**02 41 02.0**	**+0.9**
833A	**Chaparral WMA,**	**7.95**	**186**	Pn	**Pn**	**02 41 01.8**	**+0.3**
L40A	**Anamosa**	**8.06**	**42**	Pn	**Pn**	**02 41 01.9**	**-1.0**
TX31	**Lajitas Ar. Si**	**8.19**	**214**	Pn	**Pn**	**02 41 05.0**	**+0.1**
TX31	**Lajitas Ar. Si** baz=31,SNR=11	**8.19**	**214**	P	**Pn**	**02 41 05.1**	**+0.2**
TX32	**Lajitas Array**	**8.19**	**214**	Pn	**Pn**	**02 41 05.2**	**+0.4**
TXAR	**Lajitas Array** comp=Z,0.4nm,0.3s,baz=34,slow=11,SNR=33	**8.19**	**214**	Pn	**Pn**	**02 41 04.2**	**-0.7**
TXAR	comp=Z,2.1nm,0.3s,baz=36,slow=28,SNR=4.1 comp=Z,0.7nm,0.4s			Lg	Lg	02 43 18.2	
SUSD	**Miller** comp=Z,35nm,0.8s	**8.19**	**357**	IAmb_Lg		02 43 32.6	
HDIL	**Hopedale**	**8.35**	**56**	Pn	**Pn**	**02 41 06.7**	**-0.3**
PLAL	**Pickwick Lake**	**8.52**	**96**	Pn	**Pn**	**02 41 08.9**	**-0.4**
146A	**Union** comp=Z,42nm,1.1s	**8.53**	**112**	IAmb_Lg		02 43 58.7	
WVT	**Waverly**	**8.56**	**88**	Pn	**Pn**	**02 41 09.3**	**-0.6**
I37A	**Lemond, Waseca** comp=Z,62nm,1.1s	**8.65**	**25**	IAmb_Lg		02 44 02.6	
RWWY	**Rawlins**	**8.74**	**311**	Pn	**Pn**	**02 41 13.4**	**+0.9**
RWWY	comp=Z,62nm,1.2s			IAmb_Lg		02 43 51.7	
O44A	**Mansfield**	**8.75**	**61**	Pn	**Pn**	**02 41 12.5**	**+0.1**
L42A	**Oliver, Polo**	**8.90**	**47**	Pn	**Pn**	**02 41 16.2**	**+1.7**
K22A	**Casper**	**8.95**	**318**	Pn	**Pn**	**02 41 15.1**	**-0.2**
K22A	comp=Z,39nm,1.0s			IAmb_Lg		02 44 05.2	
RSSD	**Black Hills**	**8.96**	**333**	Pn	**Pn**	**02 41 16.0**	**+0.5**
T47A	**Sharon Grove**	**9.13**	**82**	Pn	**Pn**	**02 41 18.0**	**+0.4**
JFWS	**Jewell Farm**	**9.17**	**41**	Pn	**Pn**	**02 41 17.6**	**-0.5**
P46A	**Rosedale**	**9.47**	**66**	Pn	**Pn**	**02 41 21.5**	**-0.8**
M44A	**Midewin, Midew**	**9.58**	**54**	Pn	**Pn**	**02 41 23.8**	**0.0**
I40A	**Norwalk** comp=Z,28nm,0.8s	**9.69**	**36**	IAmb_Lg		02 44 23.5	
BLO	**Bloomington**	**9.87**	**69**	Pn	**Pn**	**02 41 27.8**	**0.0**
**

I42A	Draeger Farm,	10.54	41	Pn	Pn	02 41 36.8	-0.2
P48A	Milroy	10.76	69	Pn	Pn	02 41 38.2	-1.8
PDAR	Pinedale Array	10.78	311	Pn	Pn	02 41 40.9	+0.4
	comp=Z,0.3nm,0.3s,baz=124,slow=14,SNR=2.6						
PDAR				Lg	Lg	02 44 38.9	
	comp=Z,0.5nm,0.3s,baz=105,slow=35,SNR=2.4						
	comp=Z,0.2nm,0.3s						
T50A	Nancy	10.94	82	Pn	Pn	02 41 43.0	+0.5
CPCT	Cooper Cave	11.31	90	Pn	Pn	02 41 46.5	-1.1
V51A	Loudon	11.40	88	Pn	Pn	02 41 48.7	-0.1
O49A	Covington	11.75	66	Pn	Pn	02 41 51.8	-1.8
TKL	Tuckaleechee C	11.89	89	Pn	Pn	02 41 53.4	-2.0
	comp=Z,0.2nm,0.3s,baz=275,slow=11,SNR=1.7						
TKL				Sn	Sn	02 44 02.5	-5.4
	comp=Z,0.2nm,0.3s,baz=295,slow=22,SNR=1.6						
TKL				Lg	Lg	02 45 09.2	
	comp=Z,0.5nm,0.3s,baz=162,slow=20,SNR=3.6						
	comp=Z,0.7nm,0.3s						
TKL	Tuckaleechee C	11.89	89	Pn	Pn	02 41 55.0	-0.4
TZTN	Tazewell	11.99	84	Pn	Pn	02 41 56.6	-0.2
V52A	Sevierville	12.01	88	Pn	Pn	02 41 56.3	-0.8
L48A	N Adams	12.26	58	Pn	Pn	02 41 59.6	-0.8
Q51A	Peebles	12.27	72	Pn	Pn	02 41 59.3	-1.3
D41A	Chassel	13.06	31	Pn	Pn	02 42 09.8	-1.5
P52A	Corning	13.29	70	Pn	Pn	02 42 14.2	-0.3
N51A	Ashland	13.39	65	Pn	Pn	02 42 15.5	-0.4
V55A	Taylorsville	13.93	87	Pn	Pn	02 42 22.1	-1.3
KMSC	Kings Mountain	13.93	90	Pn	Pn	02 42 22.1	-1.3
ULM	Lac du Bonnet	14.11	7	Pn	Pn	02 42 21.6	-4.2
	comp=Z,0.7nm,0.3s,baz=190,slow=12,SNR=1.7						
ULM				Sn	Sn	02 44 50.0	-12
	baz=96,slow=19						
ULM				Lg	Lg	02 46 21.2	
	comp=Z,0.4nm,0.3s,baz=286,slow=19,SNR=3.1						
E46A	Sault Ste Mari	14.63	42	Pn	Pn	02 42 29.8	-3.0
R55A	Marlinton	14.71	77	Pn	Pn	02 42 31.4	-2.7

IDC ***17*** *02:52:08.4±1.5,30.˙87N×138.˙01E,h436km±27km,mb2.9/6, mbtmp3.7/8,Error ellipse: s-maj=54.5km s-min=13.8km az=72.0*

ISC 17 02:52:09.1±0.9,30.˙9N±0.˙1×138.˙2E±0.˙2,h450km,n8, σ0:95/9,mb3.2/6,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.16	136	P		P	P	02 53 35.7	+0.6
	57nm,0.9s,baz=255,slow=18,SNR=2.3								
JCJ				S		S	S	02 54 43.6	-1.5
	24nm,0.4s,baz=294,slow=22,SNR=7.3								
MJAR	Matsushiro Arr	5.65	0	P		P	P	02 53 39.9	+0.2
	1.4nm,0.3s,baz=172,slow=11,SNR=6.3								
MKAR	Makanchi Array	45.37	307	P		P	P	02 59 44.8	-0.9
	0.4nm,0.5s,baz=88,slow=9.6,SNR=6.7								
	0.4nm,0.5s								
KURBB	Kurchatov Array	47.89	312	P		P	P	03 00 03.8	-0.9
	0.6nm,0.5s,baz=91,slow=7.1,SNR=4.0								
	0.6nm,0.5s								
WRA	Warramunga Arr	50.66	185	P		P	P	03 00 26.0	+0.3
	0.4nm,0.4s,baz=359,slow=7.7,SNR=7.7								
	0.4nm,0.4s								
ASAR	Alice Springs	54.39	185	P		P	P	03 00 53.2	+0.7
	0.3nm,0.9s,baz=20,slow=12,SNR=4.3								
	0.3nm,0.9s								
ARCES	ARCESS Array B	68.80	340	P		P	P	03 02 27.2	+0.7
	0.4nm,0.5s,baz=61,slow=7.3,SNR=6.1								
	0.4nm,0.5s								
FINES	FINESS Array B	72.99	332	P		P	P	03 02 51.4	-0.1
	1.0nm,0.5s,baz=55,slow=5.3,SNR=7.6								
	1.0nm,0.5s								

BJI ***17*** *02:56:14.1±0.0,37.˙28N×141.˙80E,h49km,mb4.6/35, mB4.8/15,Ms4.0/4,Ms7 3.7/4*

MOS ***17*** *02:56:14.6±1.0,37.˙35N×141.˙62E,h38km,mb4.6/19,Error ellipse: s-maj=9.7km s-min=7.0km az=100.2*

NIED ***17*** *02:56:15.9,37.˙37N×141.˙72E,h45km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.02; Mθθ0.83; Mφφ -0.85; Mrθ-1.05; Mθφ-0.94; Mφr3.25; Fault plane solution: M₀3.64000×10¹⁵ NP1: φs250.00000°,δ20.00000°,λ179.00000°. NP2: φs341.00000°,δ90.00000°,λ70.00000°.*

JMA ***17*** *02:56:15.9±0.1,37.˙4N±0.˙4×141.˙7E±0.˙8,h45km±2km, MD4.4/40,MV4.7/40,E OFF FUKUSHIMA PREF*

JMA Felt II J1 at E OFF FUKUSHIMA PREF .

IDC ***17*** *02:56:16.4±0.6,37.˙30N×141.˙66E,h39km±4km,mb3.9/21, mbtmp4.2/24,ML3.1/2,MS3.3/19,Error ellipse: s-maj=14.7km s-min=13.2km az=104.0*

NEIC ***17*** *02:56:17.9±1.5,37.˙33N±0.˙06×141.˙66E±0.˙08,h46km±7km, mb4.4/72,Error ellipse: s-maj=9.3km s-min=8.3km az=93.0*

ISC 17 02:56:16.2±0.4,37.˙33N±0.˙04×141.˙74E±0.˙05,h39km±4km, h39km:pP-P,n219,σ1§13/209,mb4.4/80,MS3.4/17, 12C-22D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.69	273	⇓*i*P		P	P	02 56 29.2	-0.4
JFK				⇓S		S	S	02 56 38.2	-0.8
JFK	Kawauchi	0.69	273	A		A	A	02 56 29.2	
	comp=E,60nm,0.7s,comp=E,15nm,0.7s								
JMST	Minamisoumatoc	0.79	300	⇓*i*P		P	P	02 56 30.0	-0.7
JMST				⇓S		S	S	02 56 40.1	-1.2
JMST	Minamisoumatoc	0.79	300	A		A	A	02 56 30.0	
	comp=E,14nm,3.1s,comp=E,20nm,2.5s								
ONAJ	Iwakimizuishiy	0.79	253	⇓*i*P		P	P	02 56 30.6	-0.2
ONAJ				⇓S		S	S	02 56 40.6	-0.8
ONAJ	Iwakimizuishiy	0.79	253	A		A	A	02 56 30.6	
	comp=E,49nm,0.3s,comp=E,76nm,0.4s								
JMM	Marumori	0.92	306			P	P	02 56 31.8	-0.8
JMM	Marumori	0.92	306	⇓P		P	P	02 56 32.1	-0.5
JMM				⇓S		S	S	02 56 43.6	-1.0
JMM	Marumori	0.92	306	A		A	A	02 56 32.1	
	comp=E,12nm,0.5s,comp=E,15nm,0.5s								
JFFD	Fukushimafurud	0.97	256	⇓*i*P		P	P	02 56 33.2	-0.1
JFFD				⇓*e*S		S	S	02 56 45.4	-0.5
JFFD	Fukushimafurud	0.97	256	A		A	A	02 56 33.2	
	comp=E,21nm,1.0s,comp=E,11nm,0.5s								
JIKH	Ishinomakikobu	1.00	348	P		P	P	02 56 33.0	-0.7
JIKH				S		S	S	02 56 44.8	-1.8
JIKH	Ishinomakikobu	1.00	348	A		A	A	02 56 33.0	
	comp=E,46nm,0.4s,comp=E,18nm,0.9s								
JFT	Otama	1.13	280	⇓*i*P		P	P	02 56 36.1	+0.6
JFT				⇓S		S	S	02 56 50.4	+0.6
JFT	Otama	1.13	280	A		A	A	02 56 36.1	
	comp=E,47nm,0.8s,comp=E,19nm,0.5s								
JIO	Ouri	1.16	345	⇓P		P	P	02 56 35.4	-0.5
JIO				⇓S		S	S	02 56 48.8	-1.8
JHO	Hitachi	1.18	233	⇓P		P	P	02 56 35.9	-0.3
JHO				⇓*e*S		S	S	02 56 50.1	-0.9
JHO	Hitachi	1.18	233	A		A	A	02 56 35.9	
	comp=E,6.0nm,1.5s,comp=E,7.0nm,3.7s								
JOU	Okura	1.34	321	P		P	P	02 56 38.4	0.0
JOU				S		S	S	02 56 54.9	0.0
JOU	Okura	1.34	321	A		A	A	02 56 38.4	
	comp=E,11nm,2.2s,comp=E,17nm,2.0s								
JYAR	Yonezawaarcadi	1.40	295	A		A	A	02 56 39.0	
	comp=E,21nm,1.1s,comp=E,19nm,1.2s								
JSB	Shiboa	1.50	257	A		A	A	02 56 40.9	
	comp=E,35nm,1.2s,comp=E,33nm,1.1s								
JYS	Shirataka	1.60	304	P		P	P	02 56 42.5	+0.6
JYS				S		S	S	02 57 02.6	+1.3
JFY	Yanaizu	1.62	273	⇓P		P	P	02 56 42.9	+0.6
JFY				⇓*e*S		S	S	02 57 03.0	+1.1
JYT	Yasato	1.66	229	Pn		Pn	A	02 56 42.6	-0.1
JYT	Yasato	1.66	229	A		A	A	02 56 43.5	
	comp=E,8.0nm,0.4s,comp=E,8.0nm,0.3s								
JMK	Ichinoseki	1.67	346	⇓P		P	P	02 56 43.1	+0.2
JMK				⇓S		S	S	02 57 02.5	-0.5
JSD	Sado	2.85	285	Pn		Pn	P	02 56 59.3	+0.2
MJAR	Matsushiro Arr	2.94	256	Pn		Pn	P	02 56 59.4	-0.9
	3.0nm,0.3s,baz=80,slow=15,SNR=81								
MJAR				Lg		Lg	Lg	02 57 39.3	
	5.2nm,0.3s,baz=82,slow=30,SNR=1.7								
MJAR				LR		LR	LR	02 58 28.8	
	comp=Z,1μm,21.0s,baz=87,slow=46								
	20nm,0.4s								
MAJO	Matsushiro	2.94	256	Pn		Pn	P	02 57 01.9	+1.6
MAJO	Matsushiro	2.94	256	*d*iP		Pn	P	02 57 02.1	+1.8
JTM	Tenmabayashi	3.49	352	Pn		Pn	P	02 57 09.5	+1.6
JGF	Kuroka	3.93	245	Pn		Pn	P	02 57 15.5	+1.5
INU	Inuyama	4.30	244	Pn		Pn	P	02 57 20.7	+1.7
JHJ2	Mitsune	4.49	201	Pn		Pn	P	02 57 22.0	+0.3
ERM	Erimo	4.80	13	Pn		Pn	P	02 57 25.2	-0.7
ERM	Erimo	4.80	13	*c*iP		Pn	P	02 57 25.9	0.0
JMN	Monobe	7.35	243	Pn		Pn	P	02 58 01.9	+1.0
JHS	Saijyo	7.35	254	Pn		Pn	P	02 58 03.5	+2.5
YUK	Yuzh-Kuril'sk	7.39	24	*c*iP		Pn	P	02 58 03.1	+1.7
SYS	Yuzh-Sakhalins	9.65	4	*e*P		Pn	P	02 58 42.3	+10
YSS					pmax	pmax			
	comp=Z,10.0nm,1.0s								
YSS					MLR	MLR			
	comp=Z,200nm,17.0s								
USRK	Ussuriysk Ar.	10.09	316	Pn		Pn	P	02 58 41.0	+2.7
	comp=Z,0.5nm,0.3s,baz=152,slow=13,SNR=8.0								
JCJ	Chichijima	10.21	178	Pn		Pn	P	02 58 38.2	-1.9
	comp=Z,21nm,0.3s,baz=319,slow=20,SNR=9.7								
JCJ					Sn	Sn		03 00 21.9	-11
	comp=Z,16nm,0.3s,baz=273,slow=21,SNR=6.6								
KSRS	Korea Array	11.00	275	Pn		Pn	P	02 58 54.5	+3.7
	comp=Z,0.7nm,0.3s,baz=89,slow=14,SNR=23								
KSRS					LR	LR		03 02 39.3	
	comp=Z,248nm,20.8s,baz=80,slow=35								
TJN	Taejon	11.56	270	*c*iP		Pn	P	02 59 00.3	+1.8
KLR	Kul'dur	13.93	332	LR		LR	LR	03 04 18.8	
	comp=Z,42nm,19.2s,baz=154,slow=35								
KLR	Kul'dur	13.93	332	*e*P		Pn	P	02 59 32.0	+1.2
JOW	Kunigami	15.47	231	Pn		Pn	P	02 59 50.8	-0.7
JOW					IAmb	IAmb		02 59 57.0	
	comp=Z,35nm,1.5s								
PEA0B	Petropavlovsk-	19.30	30	P		Pn	P	03 00 37.9	-1.0
PEA0B	Petropavlovsk-	19.30	30	⇑*i*P		P	P	03 00 36.1	-1.5
PETK	Petropavlovsk-	19.30	30	P		Pn	P	03 00 38.1	-0.8
	comp=Z,0.3nm,0.3s,baz=217,slow=7.0,SNR=4.0								
PETK					LR	LR		03 07 50.7	
	comp=Z,66nm,21.2s,baz=219,slow=36								
	comp=Z,1.4nm,0.5s								
NJ2	Nanjing	19.53	261	*e*P		Pn	P	03 00 42.3	+0.6
NJ2					pmax	pmax			
	comp=Z,4.0nm,0.5s								
TIA	Tai'an	19.74	274	⇓P		Pn	P	03 00 44.3	0.0
TIA					pmax	pmax			
	comp=Z,11nm,1.1s								
XLT	XiLinHaoTe	20.51	297	*e*P		P	P	03 00 48.8	-2.2
XLT					pP	pP		03 01 02.0	+1.3
XLT					pmax	pmax			
	comp=Z,10.0nm,0.7s								
XLT					pmax	pmax			
	comp=Z,120nm,5.7s								
XLT					LR	LR			
	comp=Z,140nm,14.8s								
XLT					LR	LR			
	comp=Z,130nm,16.6s								
HNS	HongShan	21.46	278	⇑P		P	P	03 00 58.9	-2.3
HNS					pmax	pmax			
	comp=Z,17nm,1.0s								
YHNB	Yeheng	21.49	240	P		P	P	03 01 00.3	-1.3
YHNB					IAmb	IAmb		03 01 16.1	
	comp=Z,20nm,1.0s								
YULB	Yu-li	22.39	237	P		P	P	03 01 12.4	+1.2
YULB					IAmb	IAmb		03 01 15.1	
	comp=Z,12nm,1.0s								
MA2	Magadan	23.01	12	LR		LR	LR	03 10 21.1	
	comp=Z,60nm,18.2s,baz=226,slow=37								
HHC	Hu-ho-hao-te	23.63	288	*e*P		P	P	03 01 24.0	+0.2
HHC					pmax	pmax			
	comp=Z,29nm,0.8s								
HHC					pmax	pmax			
	comp=Z,250nm,5.9s								
HHC					LR	LR			
	comp=Z,240nm,11.4s								
HHC					LR	LR			
	comp=Z,230nm,10.3s								
HHC					LR	LR			
	comp=Z,160nm,12.1s								
WHN	Wuhan	23.66	261	⇑P		P	P	03 01 23.9	-0.1
SEY	Seymchan	26.45	11	P		P	P	03 01 49.8	+0.6
	comp=Z,3.6nm,0.7s,baz=202,slow=12,SNR=5.4								
	comp=Z,3.6nm,0.7s								
XAN	Xi'an	26.79	273	P		P	P	03 01 51.3	-1.2
XAN					pmax	pmax			
	comp=Z,11nm,0.8s								
ULN	Ulaanbaatar	27.41	304	*c*iP		P	P	03 01 57.4	-0.7
SONM	Songino Array	27.84	303	P		P	P	03 02 01.1	-0.8
	comp=Z,3.5nm,0.6s,baz=101,slow=8.9,SNR=19								
SONM					LR	LR		03 13 46.5	
	comp=Z,52nm,18.8s,baz=33,slow=38								
	comp=Z,3.5nm,0.6s								
SONM	Songino Array	27.84	303	P		P	P	03 02 00.9	-1.1
H11N2	WAKE ISLAND Hy	28.08	122	T		T		03 31 46.6	
	baz=315,slow=75,SNR=451								
H11N1	WAKE ISLAND Hy	28.09	122	T		T		03 31 46.4	
	baz=315,slow=75,SNR=462								
H11N3	WAKE ISLAND Hy	28.09	122	T		T		03 31 49.9	
	baz=315,slow=75,SNR=426								
H11S1	WAKE ISLAND Hy	28.80	124	T		T		03 32 44.7	
	baz=316,slow=76,SNR=335								
H11S3	WAKE ISLAND Hy	28.80	124	T		T		03 32 38.4	
	baz=316,slow=76,SNR=473								
H11S2	WAKE ISLAND Hy	28.82	124	T		T		03 32 39.4	
	baz=316,slow=76,SNR=346								
DAV	Davao City (W)	33.52	210	LR		LR	LR	03 13 58.8	
	comp=Z,61nm,21.8s,baz=326,slow=32								
BILL	Bilibino	33.67	16	*e*P		P		03 02 51.9	-1.0
BILL				*e**PP		sP		03 03 09.7	+1.5
BILL				*e*				03 04 07.3	
BILL				*e*				03 05 29.4	
BILL					pmax	pmax			
	comp=Z,4.0nm,1.0s								
PZH	PanZhiHua	35.39	264	P		P	P	03 03 09.5	+1.0
PZH					pmax	pmax			
	comp=Z,10.0nm,0.8s								
PZH					pmax	pmax			
	comp=Z,80nm,4.8s								
GOMU	GeErMu	37.31	283	P		P	P	03 03 22.3	-2.7
GOMU					pmax	pmax			
	comp=Z,6.0nm,0.4s								
GOMU					pmax	pmax			
	comp=Z,52nm,3.8s								
CRAI	Chiangrai	39.71	256	P		P	P	03 03 45.8	+0.9
CRAI					IAmb	IAmb		03 03 49.2	
	comp=Z,6.8nm,1.0s								
TNA	Tin City	40.47	30	P		P	P	03 03 52.3	+1.7
WMQ	Urumqi	40.94	297	*e*P		P	P	03 03 55.8	+0.9
WMQ					sP	sP		03 04 13.3	+2.8
WMQ					pmax	pmax			
	comp=Z,32nm,0.7s								
CMAR	Chiang Mai Arr	41.83	255	P		P	P	03 04 03.1	+0.8
	comp=Z,1.2nm,0.3s,baz=50,slow=7.4,SNR=1.7								
CMAR					LR	LR		03 22 37.2	
	comp=Z,48nm,19.4s,baz=55,slow=38								
	comp=Z,1.2nm,0.3s								
ZAA0	Zalesovo Array	41.91	312	P		P	P	03 04 02.9	+0.3
ZAA0					IAmb	IAmb		03 04 14.8	
	comp=Z,5.0nm,0.8s								
ZALV	Zalesovo Beam	41.91	312	P		P	P	03 04 02.5	-0.1
	comp=Z,1.5nm,0.3s,baz=99,slow=7.7,SNR=6.7								
ZALV					pP	pP		03 04 12.5	-1.1
	comp=Z,6.4nm,0.8s,baz=89,slow=7.1,SNR=10								
	comp=Z,1.5nm,0.3s								
ZALV	Zalesovo Beam	41.91	312	P		P	P	03 04 02.8	+0.2
ZALV	Zalesovo Beam	41.91	312	P		P	P	03 04 02.8	+0.2
MK31	Makanchi Array	44.18	302	P		P	P	03 04 20.5	-0.7
MK31	Makanchi Array	44.18	302	*i*P		P	P	03 04 20.5	-0.7
MK31					pmax	pmax			
	comp=Z,3.0nm,0.6s								
MKAR	Makanchi Array	44.18	302	P		P	P	03 04 20.9	-0.3
	comp=Z,3.2nm,0.6s,baz=86,slow=9.3,SNR=26								
MKAR					pP	pP		03 04 32.4	+0.2
	comp=Z,3.4nm,0.6s,baz=84,slow=8.6,SNR=11								
MKAR					LR	LR		03 22 48.3	
	comp=Z,22nm,19.8s,baz=56,slow=36								
	comp=Z,3.2nm,0.6s								
MKAR	Makanchi Array	44.18	302	P		P	P	03 04 21.0	-0.2
MAKZ	Makanchi	44.39	302	P		P	P	03 04 22.7	-0.1
MAKZ					IAmb	IAmb		03 04 36.6	
	comp=Z,5.1nm,0.8s								
MAKZ	Makanchi	44.39	302	P		P	P	03 04 22.7	-0.1
MAKZ					pmax	pmax			
	comp=Z,5.0nm,0.8s								
N18K	Kilae Creek	44.96	38	P		P	P	03 04 28.9	+1.8
N18K					IAmb	IAmb		03 04 29.6	
	comp=Z,4.7nm,0.8s								
SVW2	Sparrevohn	45.13	38	P		P	P	03 04 30.2	+1.7
SVW2					IAmb	IAmb		03 04 30.8	
	comp=Z,3.6nm,0.7s								
L19K	White Mountain	45.52	36	P		P	P	03 04 32.9	+1.4
K20K	Telida	45.94	34	P		P	P	03 04 36.4	+1.5
K20K					IAmb	IAmb		03 04 37.3	
	comp=Z,3.7nm,0.7s								
J20K	Nowinta River	45.95	33	P		P	P	03 04 36.2	+1.3
KURK	Kurchatov	45.96	308	P		P	P	03 04 34.8	-0.3
KURK	Kurchatov	45.96	308	*c*iP		P	P	03 04 34.5	-0.6
KURBB	Kurchatov Arra	46.03	308	P		P	P	03 04 35.1	-0.6
	comp=Z,5.1nm,0.6s,baz=82,slow=7.7,SNR=32								
KURBB					pP	pP		03 04 47.0	+0.2
	comp=Z,9.4nm,0.7s,baz=82,slow=7.6,SNR=15								
	comp=Z,5.1nm,0.6s								
Q19K	Cape Douglas,	46.09	41	P		P	P	03 04 36.9	+0.7
IMAR	Indian Mountai	46.26	31	P		P	P	03 04 38.1	+0.8
P19K	Oil Pt	46.28	40	P		P	P	03 04 38.5	+0.9
OHAK	Old Harbor	46.36	43	P		P	P	03 04 37.8	-0.4
H21K	Melozitna Rive	46.62	31	P		P	P	03 04 41.5	+1.3
KDAK	Kodiak Island	46.70	42	P		P	P	03 04 41.4	+0.5
KDAK	Kodiak Island	46.70	42	P		P	P	03 04 41.4	+0.5
KDAK					pmax	pmax			
	comp=Z,15nm,0.8s								
PPLA	Purkeypile	46.77	35	P		P	P	03 04 43.3	+1.8
CAST	Castle Rocks	46.83	34	P		P	P	03 04 43.5	+1.6
CAST					IAmb	IAmb		03 04 43.8	
	comp=Z,2.9nm,0.6s								
CNPM	China Poot	47.30	40	P		P	P	03 04 46.8	+1.2
BPAW	Bear Paw Mtn.	47.33	33	P		P	P	03 04 47.1	+1.3
KTH	Kantishna Hill	47.36	34	P		P	P	03 04 47.5	+1.5
KTH					IAmb	IAmb		03 05 23.6	
	comp=Z,9.7nm,1.3s								
MLY	Manley	47.46	32	P		P	P	03 04 47.7	+0.9
MLY					IAmb	IAmb		03 04 49.1	
	comp=Z,6.7nm,1.3s								
MDM	Murphy Dome	48.53	32	P		P	P	03 04 56.1	+1.1
MDM					IAmb	IAmb		03 04 57.1	
	comp=Z,5.9nm,0.9s								
H24K	Noodor Dome	48.66	31	P		P	P	03 04 57.5	+1.5
H24K					IAmb	IAmb		03 05 01.9	
	comp=Z,3.0nm,0.9s								
CCB	Clear Creek Bu	48.71	33	P		P	P	03 04 56.8	+0.4
POKR	Poker Plat Res	48.86	32	P		P	P	03 04 59.3	+1.8
SCM	Sheep Creek Mo	49.07	36	P		P	P	03 05 00.2	+0.9
SCM	Sheep Creek Mo	49.07	36	P		P	P	03 05 00.2	+0.9
SCM					pmax	pmax			
	comp=Z,10.0nm,1.1s								
IL31		49.10	32	P		P	P	03 05 00.1	+0.8
IL31					IAmb	IAmb		03 05 00.5	
	comp=Z,5.1nm,0.7s								
ILAR	Eielson Array	49.10	32	P		P	P	03 04 59.9	+0.5
	comp=Z,3.7nm,0.7s,baz=261,slow=5.8,SNR=56								
	comp=Z,3.7nm,0.7s								
M24K	Tolsona, Glenn	49.59	36	P		P	P	03 05 04.7	+1.4
KLU	Klutina	49.77	37	P		P	P	03 05 05.7	+1.1
BMAR	Burnt Mountain	49.95	29	P		P	P	03 05 07.5	+1.7
RIDG	Independent Ri	50.06	34	P		P	P	03 05 07.0	+0.3
RIDG					IAmb	IAmb		03 05 07.7	
	comp=Z,5.2nm,1.2s								
SCRK	Sand Creek	50.41	33	P		P	P	03 05 10.5	+1.0
SCRK					IAmb	IAmb		03 05 10.8	
	comp=Z,4.3nm,0.7s								
BVA0	Borovoye Array	50.57	312	*i*P		P	P	03 05 10.5	-0.2
AAK	Ala-Archa	50.58	298	LR		LR	LR	03 27 32.1	
	comp=Z,54nm,21.1s,baz=90,slow=37								
AAK	Ala-Archa	50.58	298	*i*P		P	P	03 05 11.0	-0.1
AAK					pmax	pmax			
	comp=Z,4.0nm,1.3s								
BRVK	Borovoye	50.62	312	*c*iP		P	P	03 05 10.6	-0.5
BRVK					pmax	pmax			
	comp=Z,2.0nm,1.1s								
L27K	Beaver Creek,	51.48	34	P		P	P	03 05 18.8	+1.3
L27K					IAmb	IAmb		03 05 19.4	
	comp=Z,3.7nm,0.9s								
BCAR	Beaver Creek A	51.50	34	P		P	P	03 05 19.3	+1.7
EGAK	Eagle	51.55	32	P		P	P	03 05 18.6	+0.8
EGAK					IAmb	IAmb		03 05 33.0	
	comp=Z,7.2nm,1.4s								
LOGN	Logan Glacier	52.23	37	P		P	P	03 05 24.3	+1.2
LOGN					IAmb	IAmb		03 05 50.0	
	comp=Z,9.3nm,1.1s								
EPYK	Eagle Plains	53.14	30	P		P	P	03 05 30.8	+1.1
KK31	Karatay Array	53.20	300	P		P	P	03 05 30.0	-0.5
INK	Inuvik	54.00	27	P		P	P	03 05 36.5	+0.7
	comp=Z,2.7nm,0.9s,baz=276,slow=7.5,SNR=4.4								
	comp=Z,2.7nm,0.9s								
INK	Inuvik	54.00	27	P		P	P	03 05 38.0	+2.1
INK					IAmb	IAmb		03 05 46.9	
	comp=Z,3.0nm,0.9s								
INK	Inuvik	54.00	27	P		P	P	03 05 38.0	+2.1
INK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
CHGR	Chuyangaron	55.77	295	P		P	P	03 05 49.1	-0.1
CHGR	Chuyangaron	55.77	295	P		P	P	03 05 49.2	-0.1
CHGR					pmax	pmax			

BMO				IAmb	IAmb	03 07 35.1	
	comp=Z,2.6nm,0.8s						
BMO	**Blue Mountains**	**71.54**	**47**	P	**P**	**03 07 34.1**	**+0.9**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
J08A	**Circle Bar Ran**	**71.68**	**49**	P	**P**	**03 07 34.6**	**+0.5**
J08A				IAmb	IAmb	03 07 36.4	
	comp=Z,7.8nm,1.2s						
MFID	**Camas Ranch**	**73.23**	**48**	P	**P**	**03 07 43.5**	**+0.2**
ILULI	**Ilulissat**	**73.35**	**5**	P	**P**	**03 07 45.7**	**+2.4**
ILULI	**Ilulissat**	**73.35**	**5**	P	**P**	**03 07 45.7**	**+2.4**
ILULI				pmax	pmax		
	comp=Z,25nm,1.1s						
LRM	**Limekiln Ridge**	**73.75**	**44**	P	**P**	**03 07 47.2**	**+0.7**
HFS	**Hagfors**	**73.93**	**336**	LR	LR	03 41 38.9	
	comp=Z,17nm,21.9s,baz=32,slow=37						
HLID	**Hailey**	**73.98**	**47**	P	**P**	**03 07 48.8**	**+1.0**
NB2	**NORSAR Subarra**	**74.01**	**337**	P	pP	03 07 59.8	+0.7
	comp=Z,3.1nm,0.8s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**74.01**	**337**	P	**P**	**03 07 48.2**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=49,slow=5.3,SNR=1.4						
NOA				pP	**pP**	**03 07 59.3**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=39,slow=5.9,SNR=11						
NOA				LR	LR	03 43 33.6	
	comp=Z,18nm,20.7s,baz=40,slow=38						
	comp=Z,0.6nm,0.8s						
AKASG	**Malin Array Be**	**74.22**	**322**	P	**P**	**03 07 48.4**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=45,slow=6.0,SNR=5.8						
AKASG				pP	**pP**	**03 08 00.8**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=46,slow=5.9,SNR=11						
AKASG				LR	LR	03 41 40.0	
	comp=Z,26nm,18.4s,baz=40,slow=37						
	comp=Z,0.6nm,0.4s						
AKBB	**Malin Array Si**	**74.22**	**322**	*ce*P	**P**	**03 07 47.3**	**-1.5**
AKBB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BOZ	**Bozeman (W)**	**74.35**	**44**	P	**P**	**03 07 50.4**	**+0.5**
BOZ				IAmb	IAmb	03 07 51.7	
	comp=Z,3.6nm,0.8s						
BOZ	**Bozeman (W)**	**74.35**	**44**	P	**P**	**03 07 50.4**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KVN	**Kaiserville**	**74.37**	**53**	P	**P**	**03 07 51.3**	**+1.1**
KVN				IAmb	IAmb	03 07 52.3	
	comp=Z,4.2nm,1.1s						
KVN	**Kaiserville**	**74.37**	**53**	P	**P**	**03 07 51.3**	**+1.1**
KVN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LHV	**Little Huntoon**	**74.58**	**54**	P	**P**	**03 07 52.8**	**+1.7**
LHV				IAmb	IAmb	03 07 53.9	
	comp=Z,6.0nm,1.0s						
NVAR	**Mina Array Bea**	**74.60**	**53**	P	**P**	**03 07 52.5**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=289,slow=6.1,SNR=14						
	comp=Z,1.7nm,0.8s						
YHL	**Hebgen Lake**	**75.05**	**45**	P	**P**	**03 07 55.4**	**+1.3**
TPH	**Tonopah**	**75.50**	**53**	P	**P**	**03 07 57.5**	**+0.8**
TPH	**Tonopah**	**75.50**	**53**	P	**P**	**03 07 57.5**	**+0.8**
TPH				pmax	pmax		
	comp=Z,15nm,0.9s						
SFJD	**Kangerlussuaq**	**75.57**	**5**	LR	LR	03 40 58.1	
	comp=Z,15nm,21.6s,baz=356,slow=36						
H17A	**Grant Village**	**75.67**	**45**	P	**P**	**03 07 59.4**	**+1.7**
H17A				IAmb	IAmb	03 08 01.5	
	comp=Z,8.1nm,0.9s						
IMW	**Indian Meadow**	**75.78**	**45**	P	**P**	**03 07 59.3**	**+1.0**
IMW				IAmb	IAmb	03 08 01.0	
	comp=Z,3.4nm,0.7s						
FXWY	**Fox Creek**	**75.89**	**46**	P	**P**	**03 08 00.7**	**+1.8**
RLMT	**Red Lodge**	**75.95**	**44**	P	**P**	**03 08 00.1**	**+0.9**
MOOW	**Moose Ponds**	**75.98**	**45**	P	**P**	**03 07 59.5**	**+0.1**
TPAW	**Teton Pass**	**76.02**	**46**	P	**P**	**03 08 00.2**	**+0.5**
TPAW				IAmb	IAmb	03 08 18.2	
	comp=Z,6.6nm,1.4s						
R11A	**Troy Canyon, C**	**76.37**	**52**	P	**P**	**03 08 02.7**	**+1.0**
TPNV	**Topopah Spring**	**76.79**	**54**	P	**P**	**03 08 05.5**	**+1.6**
TPNV				IAmb	IAmb	03 08 23.0	
	comp=Z,4.8nm,1.2s						
TPNV	**Topopah Spring**	**76.79**	**54**	P	**P**	**03 08 05.6**	**+1.6**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.3s						
HWUT	**Hardware Ranch**	**76.84**	**48**	P	**P**	**03 08 04.8**	**+0.6**
HWUT				IAmb	IAmb	03 08 06.6	
	comp=Z,5.6nm,1.3s						
DUG	**Dugway, Tooele**	**76.96**	**49**	P	**P**	**03 08 06.1**	**+1.2**
DUG				IAmb	IAmb	03 08 06.7	
	comp=Z,2.5nm,0.8s						
DUG	**Dugway, Tooele**	**76.96**	**49**	P	**P**	**03 08 06.1**	**+1.2**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BW06	**Boulder Array**	**77.27**	**46**	P	**P**	**03 08 07.0**	**+0.2**
PD31	**Pinedale Array**	**77.27**	**46**	P	**P**	**03 08 07.0**	**+0.3**
PDAR	**Pinedale Array**	**77.27**	**46**	P	**P**	**03 08 07.5**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=278,slow=2.7,SNR=9.8						
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**78.85**	**312**	pP	pP	03 08 28.4	+1.3
	comp=Z,1.2nm,0.8s,baz=96,slow=5.8,SNR=3.6						
DPC	**Dobruska-Polom**	**80.35**	**328**	*e*P	pP	03 08 36.5	+1.6
DPC	**Dobruska-Polom**	**80.35**	**328**	*ep*P	pP	03 08 36.5	+1.6
KRLC	**Kraliky**	**80.36**	**328**	*e*P	pP	03 08 36.4	+1.4
KRLC	**Kraliky**	**80.36**	**328**	*ep*P	**pP**	**03 08 36.4**	**+1.4**
KRLC				*es*P	sP	03 08 40.7	+1.2
VRAC	**Vranov**	**81.01**	**327**	LR	LR	03 50 42.4	
	comp=Z,13nm,19.3s,baz=62,slow=40						
CKRC	**Cesky Krumlov**	**82.36**	**328**	*ep*P	pP	03 08 46.9	+1.3
KHC	**Kasperske Hory**	**82.43**	**329**	*e*P	**P**	**03 08 35.5**	**+1.2**
KHC				*e*		03 08 46.5	
KHC	**Kasperske Hory**	**82.43**	**329**	*e*P	**P**	**03 08 35.5**	**+1.2**
KHC				*ep*P	**pP**	**03 08 46.5**	**+0.5**
GERES	**GERESS Array B**	**82.60**	**328**	P	**P**	**03 08 35.6**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=39,slow=5.0,SNR=2.6						
GERES				pP	**pP**	**03 08 47.9**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=42,slow=6.1,SNR=5.8						
	comp=Z,0.2nm,0.5s						
ECSD	**EROS Data Cent**	**83.52**	**38**	P	**P**	**03 08 40.2**	**+0.2**
ECSD				IAmb	IAmb	03 08 40.5	
	comp=Z,2.1nm,0.8s						
SCHQ	**Schefferville**	**84.98**	**16**	P	**P**	**03 08 47.5**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=356,slow=9.6,SNR=3.7						
SCHQ				LR	LR	03 49 38.2	
	comp=Z,24nm,19.1s,baz=151,slow=38						
	comp=Z,1.6nm,0.7s						
TXAR	**Lajitas Array**	**89.73**	**53**	P	**P**	**03 09 11.4**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=298,slow=2.8,SNR=12						
	comp=Z,1.2nm,0.6s						
LPAZ	**La Paz**	**146.32**	**60**	PKPbc	**PKPab**	**03 15 53.9**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=314,slow=1.0,SNR=8.0						
H03N2	**Juan Fernandez**	**146.79**	**96**	T	T	06 00 07.9	
	baz=291,slow=76,SNR=10						
H03N3	**Juan Fernandez**	**146.81**	**96**	T	T	06 00 07.9	
	baz=291,slow=76,SNR=13						
H03N1	**Juan Fernandez**	**146.81**	**96**	T	T	06 00 14.4	
	baz=291,slow=76,SNR=14						

*KNET **17** 03:11:50.8±0.2, 43°.03N×74°.91E, h12^{km}±1^{km}, ml1.2, Error ellipse: s-maj=2.1km s-min=1.1km az=0.0*
*NNC **17** 03:11:51.6±0.4, 43°.05N×74°.90E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=3.5km s-min=2.3km az=176.0*
*SOME **17** 03:11:52.3, 43°.13N×74°.93E, h5^{km}*

ISC 17 03:11:51.6±0.9, 43°.03N±0°.02×74°.90E±0°.02, h6^{km}±8^{km}, n31, σ0°80/54, 13C-10D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.11**	**253**	⇑P	**Pg**	**03 11 53.1**	**-0.8**
	73nm,0.2s,SNR=152						
CHMS				⇓S	**Sg**	**03 11 56.2**	**+0.6**
	82nm,0.1s						
CHMS	**Chumysh**	**0.11**	**253**	⇑P	**Pg**	**03 11 53.2**	**-0.8**
	12nm,0.2s						
CHMS				⇑S	**Sg**	**03 11 56.3**	**+0.6**
	43nm,0.3s						
USP	**Ospenovka**	**0.37**	**309**	⇑P	**Pg**	**03 11 58.0**	**-0.8**
	41nm,0.1s,SNR=121						
USP				⇑S	**Sg**	**03 12 04.6**	**+0.8**
	31nm,0.1s						
KBK	**Karagaybulak**	**0.38**	**174**	⇑P	**Pg**	**03 11 58.7**	**-0.2**
	34nm,0.1s,SNR=15						
SGDS	**Sogindy**	**0.46**	**335**	*e*P	**Pg**	**03 12 00.6**	**+0.1**
	3.6nm,0.1s						
SGDS				*e*S	**Sg**	**03 12 06.4**	**-0.2**
	5.8nm,0.1s						
SGDS	**Sogindy**	**0.46**	**335**	P	**Pg**	**03 12 00.6**	**+0.1**
	3.6nm,0.1s						
SGDS				S	**Sg**	**03 12 06.4**	**-0.2**
	5.8nm,0.1s						
AAK	**Ala-Archa**	**0.49**	**217**	⇓P	**Pg**	**03 12 00.6**	**-0.4**
	8.6nm,0.2s,SNR=7.5						
AAK				⇓S	**Sg**	**03 12 09.0**	**+1.4**
	11nm,0.2s						
TKM2	**Tokmak 2**	**0.53**	**102**	⇓P	**Pg**	**03 12 00.9**	**-0.8**
	6.7nm,0.1s,SNR=45						
TKM2				⇓S	**Sg**	**03 12 09.0**	**+0.4**
	41nm,0.1s						
TKM2	**Tokmak 2**	**0.53**	**102**	⇑P	**Pg**	**03 12 01.2**	**-0.5**
	0.7nm,0.1s						
TKM2				⇑S	**Sg**	**03 12 09.2**	**+0.6**
	3.4nm,0.1s						
KST	**Kastek**	**0.78**	**89**	*e*P	**Pg**	**03 12 06.8**	**+0.2**
	4.1nm,0.1s						
KST				*e*S	**Sb**	**03 12 17.5**	**-1.0**
	9.2nm,0.3s						
KST	**Kastek**	**0.78**	**89**	P	**Pg**	**03 12 07.0**	**+0.4**
	4.1nm,0.1s						
KST				S	**Sb**	**03 12 17.5**	**-1.0**
	9.2nm,0.3s						
UCH	**Uchtor**	**0.85**	**200**	⇓P	**Pg**	**03 12 07.4**	**-0.5**
	1.9nm,0.1s,SNR=19						
UCH				⇓S	**Sb**	**03 12 20.7**	**-0.2**
	2.9nm,0.2s						
KRBS	**Karabastau**	**0.87**	**40**	*e*P	**Pg**	**03 12 08.4**	**+0.1**
	3.7nm,0.1s						
KRBS				*e*S	**Sb**	**03 12 20.2**	**-0.9**
	8.0nm,0.2s						
KRBS	**Karabastau**	**0.87**	**40**	P	**Pg**	**03 12 08.4**	**+0.1**
	3.7nm,0.1s						
KRBS				S	**Sg**	**03 12 19.8**	**+0.2**
	8.0nm,0.2s						
EKS2	**Erkin-Say**	**0.90**	**246**	⇓P	**Pg**	**03 12 08.3**	**-0.6**
	5.7nm,0.1s,SNR=17						
EKS2				⇑S	**Sb**	**03 12 22.5**	**+0.4**
	4.3nm,0.1s						
AML	**Almayashu**	**1.27**	**225**	⇑P	**Pg**	**03 12 15.6**	**-0.2**
	2.7nm,0.2s,SNR=11						
AML				⇓S	**Sb**	**03 12 33.3**	**+0.6**
	3.1nm,0.2s						
ULHL	**Ulahol**	**1.27**	**128**	⇑P	**Pg**	**03 12 15.0**	**-0.9**
	1.3nm,0.1s,SNR=13						
KUU	**Kurty**	**1.36**	**50**	*e*P	**Pn**	**03 12 17.1**	**0.0**
	2.6nm,0.1s						
KUU				*e*S	**Sn**	**03 12 35.1**	**-0.3**
	5.8nm,0.2s						
KUU	**Kurty**	**1.36**	**50**	P	**Pb**	**03 12 17.2**	**-0.2**
	2.6nm,0.1s						
KUU				S	**Sn**	**03 12 35.1**	**-0.3**
	5.8nm,0.2s						
KTBS	**Karatobe**	**1.47**	**62**	*e*P	**Pn**	**03 12 18.9**	**+0.2**
	2.9nm,0.2s						
KTBS				*e*S	**Sb**	**03 12 37.9**	**-0.4**
	9.0nm,0.3s						
KTBS	**Karatobe**	**1.47**	**62**	P	**Pn**	**03 12 18.9**	**+0.2**
	2.9nm,0.2s						
KTBS				S	**Sb**	**03 12 37.9**	**-0.4**
	9.0nm,0.3s						
MDOK	**Medeo**	**1.58**	**85**	⇑Pn	**Pb**	**03 12 21.2**	**-0.1**
	1.9nm,0.2s						
MDOK				⇓Lg	Lg	03 12 45.6	
	2.7nm,0.4s						
BTLS	**Baital**	**2.10**	**343**	*e*P	**Pb**	**03 12 30.2**	**+0.2**
	2.9nm,0.2s						
BTLS				*e*S	**Sb**	**03 12 57.3**	**+0.9**
	6.5nm,0.3s						
BTLS	**Baital**	**2.10**	**343**	Pg	**Pb**	**03 12 30.2**	**+0.2**
	2.9nm,0.2s						
BTLS				Lg	Lg	03 12 57.3	
	6.5nm,0.3s						
ARXS	**Arharly**	**2.43**	**60**	*e*P	**Pb**	**03 12 35.8**	**0.0**
	1.5nm,0.2s						
ARXS				*e*S	**Sb**	**03 13 07.4**	**+1.4**
	3.5nm,0.3s						
ARXS	**Arharly**	**2.43**	**60**	Pg	**Pb**	**03 12 35.8**	**0.0**
	1.5nm,0.2s						
ARXS				Lg	Lg	03 13 07.4	
	3.5nm,0.3s						
KPKS	**Kokpek**	**2.80**	**80**	*e*P	**Pb**	**03 12 42.5**	**+0.5**
	2.3nm,0.2s						
KPKS				*e*S	**Sb**	**03 13 18.4**	**+1.8**
	4.9nm,0.3s						
KPKS	**Kokpek**	**2.80**	**80**	Pg	**Pb**	**03 12 42.5**	**+0.5**
	2.3nm,0.2s						
KPKS				Lg	Lg	03 13 18.4	
	4.9nm,0.3s						
UZB	**Uzynbulak**	**3.02**	**86**	*e*P	**Pb**	**03 12 47.1**	**+1.2**
	1.4nm,0.2s						
UZB				*e*S	**Sg**	**03 13 26.1**	**-2.5**
	2.2nm,0.2s						
UZB	**Uzynbulak**	**3.02**	**86**	Pg	**Pb**	**03 12 47.1**	**+1.2**
	1.4nm,0.2s						
UZB				Lg	Lg	03 13 26.1	
	2.2nm,0.2s						
KK31	**Karatay Array**	**3.21**	**273**	Pg	**Pg**	**03 12 51.4**	**-1.8**
	0.2nm,0.3s,baz=324,slow=28,SNR=7.1						
KK31				⇑Lg	Lg	03 13 32.7	
	0.3nm,0.3s,baz=90,slow=29,SNR=4.7						

*IDC **17** 03:15:48.2±0.8, 51°.10N×177°.28E, h0^{km}, mb3.8/13, mbtmp3.8/15, ML3.2/2, MS2.7/1, Error ellipse: s-maj=26.1km s-min=16.9km az=2.0*
*NEIC **17** 03:15:51.1±1.3, 51°.15N±0°.09×177°.30E±0°.08, h7^{km}±9^{km}, Error ellipse: s-maj=13.4km s-min=6.4km az=164.0*
*AEIC **17** 03:15:52.7±1.8, 51°.08N±0°.10×177°.36E±0°.09, h29^{km}±8^{km}, ML3.5/22, mb4.1/27(NEIC), Error ellipse: s-maj=13.9km s-min=8.2km az=186.0*

ISC 17 03:15:53.6±0.7, 51°.1N±0°.1×177°.27E±0°.04, h36^{km}, n77, σ0°97/73, mb4.0/23, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.15**	**42**		**Pn**	**03 16 12.1**	**-0.9**
LSSE	**Little Sitkin**	**1.16**	**44**		**Pn**	**03 16 12.4**	**-0.8**
LSNW	**Little Sitkin**	**1.16**	**41**		**Pn**	**03 16 12.1**	**-1.2**
LSPA	**Little Sitkin**	**1.18**	**43**		**Sn**	**03 16 27.0**	**-1.3**
AMKA	**Amchitka**	**1.30**	**77**		**Pn**	**03 16 13.3**	**-1.9**
AMKA	**Amchitka**	**1.30**	**77**		**Sn**	**03 16 29.4**	**-1.9**
CESW	**Semis' Southwe**	**1.64**	**60**		**Pn**	**03 16 19.8**	**0.0**
CERB	**Semis' Cerberu**	**1.69**	**60**		**Sn**	**03 16 42.7**	**+1.8**
CEAP	**Semis' Anvil P**	**1.70**	**57**		**Pn**	**03 16 20.8**	**+0.2**
CEAP					**Sn**	**03 16 42.9**	**+1.9**
CERAA	**Semis' Rag'd T**	**1.71**	**61**		**Pn**	**03 16 21.0**	**+0.2**
CEPE	**Semis' Perret**	**1.72**	**59**		**Pn**	**03 16 21.1**	**+0.2**
GASW	**Gareloi Southw**	**2.52**	**73**		**Pn**	**03 16 31.9**	**+0.1**
GASW					**Sn**	**03 17 01.6**	**+0.4**
SHEM	**Shemya Is, Ala**	**2.55**	**311**	Pn	**Pn**	**03 16 31.4**	**-0.9**
	22nm,0.3s,baz=120,slow=3.5,SNR=12						
SHEM				Sn	**Sn**	**03 17 00.8**	**-1.2**
	23nm,0.3s,baz=284,slow=20,SNR=7.7						
	31nm,0.5s						
SMY	**Shemya**	**2.55**	**311**		**Pn**	**03 16 33.7**	**+1.4**
GANO	**Gareloi North**	**2.56**	**72**		**Pn**	**03 16 32.5**	**+0.1**
GANE	**Gareloi Northe**	**2.57**	**72**		**Pn**	**03 16 32.8**	**+0.2**
TASE	**Tanaga Southea**	**3.02**	**74**		**Pn**	**03 16 39.1**	**+0.2**
TAFP	**Tanaga Falls P**	**3.07**	**73**		**Pn**	**03 16 39.3**	**-0.2**
TAFP					**Sn**	**03 17 16.0**	**+1.1**
KIMD	**Kanaga Island**	**3.50**	**77**		**Pn**	**03 16 45.6**	**+0.2**
KICM	**Kanaga Island**	**3.55**	**75**		**Pn**	**03 16 46.3**	**+0.2**
KIWB	**Kanaga Island**	**3.57**	**76**		**Pn**	**03 16 46.1**	**-0.2**
ADK	**Adak**	**3.86**	**76**		**Pn**	**03 16 50.2**	**0.0**
ADK	**Adak**	**3.86**	**76**		**Pn**	**03 16 50.6**	**+0.3**
UNV	**Unalaska Valle**	**10.27**	**68**	Pn	**Pn**	**03 18 18.8**	**+0.6**
PETK	**Petropavlovsk-**	**12.20**	**287**	Pn	**Pn**	**03 18 44.0**	**-0.6**
	0.2nm,0.3s,baz=96,slow=15,SNR=3.7						
	3.2nm,0.9s						
CHGN	**Chignik**	**15.27**	**61**	Pn	**Pn**	**03 19 27.4**	**+1.3**
MA2	**Magadan**	**17.19**	**310**	LR	LR	03 26 51.0	
	comp=Z,26nm,19.2s,baz=117,slow=38						
N18K	**Kilae Creek**	**17.72**	**47**	P	**P**	**03 19 59.1**	**+1.4**
SVW2	**Sparrevohn**	**18.01**	**46**	Pn	**Pn**	**03 19 58.2**	**-2.5**
OHAK	**Old Harbor**	**18.20**	**59**		**Pn**	**03 20 01.2**	**-1.7**
N19K	**Bonanza Creek**	**18.41**	**47**		**Pn**	**03 20 06.4**	**+0.7**
KDAK	**Kodiak Island**	**18.65**	**57**	P	**P**	**03 20 06.0**	**-1.9**
KDAK				IAmb	IAmb	03 20 21.5	
	comp=Z,18nm,1.1s						
P19K	**Oil Pt**	**18.68**	**51**	P	**Pn**	**03 20 09.0**	**+0.2**
P19K				IAmb	IAmb	03 20 49.4	
	comp=Z,16nm,1.1s						
ILSW	**Iliamna Southw**	**18.80**	**50**	P	**P**	**03 20 08.2**	**-1.5**
ILSW				IAmb	IAmb	03 20 10.3	
	comp=Z,15nm,0.6s						
K20K	**Telida**	**19.56**	**40**	P	**P**	**03 20 17.2**	**-0.7**
CNPM	**China Poot**	**19.64**	**52**	P	**P**	**03 20 18.4**	**-0.4**
CNPM				IAmb	IAmb	03 20 45.6	
	comp=Z,12nm,1.1s						
J20K	**Nowinta River**	**19.90**	**38**	P	**P**	**03 20 22.4**	**+0.8**
J20K				IAmb	IAmb	03 20 36.3	
	comp=Z,6.7nm,0.8s						
SKT	**Skwentna**	**20.13**	**45**	P	**P**	**03 20 25.0**	**+0.8**
PPLA	**Purkeypile**	**20.16**	**42**	P	Pn	03 20 26.1	-0.5
PPLA				IAmb	IAmb	03 20 44.0	
	comp=Z,9.0nm,0.8s						
IMAR	**Indian Mountai**	**20.94**	**34**	P	**P**	**03 20 33.1**	**+0.3**
H21K	**Melozitna Rive**	**21.11**	**35**	P	**P**	**03 20 35.2**	**+0.5**
H21K				IAmb	IAmb	03 20 51.3	
	comp=Z,6.8nm,0.9s						
BPAW	**Bear Paw Mtn.**	**21.12**	**40**	P	**P**	**03 20 35.7**	**+0.9**
BPAW				IAmb	IAmb	03 20 50.8	
	comp=Z,5.2nm,0.8s						
PWL	**Port Wells**	**21.33**	**49**	P	**P**	**03 20 37.6**	**+0.6**
PWL				IAmb	IAmb	03 20 46.9	
	comp=Z,15nm,1.2s						
MLY	**Manley**	**21.60**	**38**	P	**P**	**03 20 41.0**	**+1.1**
MLY				IAmb	IAmb	03 20 55.5	
	comp=Z,15nm,1.4s						
RND	**Reindeer**	**21.76**	**43**	P	**P**	**03 20 41.7**	**0.0**
RND				IAmb	IAmb	03 21 21.7	
	comp=Z,5.5nm,1.1s						
SCM	**Sheep Creek Mo**	**22.01**	**47**	P	**P**	**03 20 45.0**	**+0.6**
FID	**Port Fidalgo**	**22.20**	**50**	P	**P**	**03 20 44.1**	**-2.2**
DHY	**Denali Highway**	**22.30**	**44**	P	**P**	**03 20 47.4**	**-0.2**
DHY				IAmb	IAmb	03 21 01.1	
	comp=Z,7.5nm,0.7s						
CCB	**Clear Creek Bu**	**22.61**	**40**	P	**P**	**03 20 51.6**	**+0.9**
CCB				IAmb	IAmb	03 21 05.5	
	comp=Z,6.1nm,1.2s						
H24K	**Noodor Dome**	**23.02**	**37**	P	**P**	**03 20 56.4**	**+1.4**
H24K				IAmb	IAmb	03 21 09.2	
	comp=Z,6.5nm,0.8s						
IL31		**23.02**	**40**	P	**P**	**03 20 54.6**	**-0.4**
ILAR	**Eielson Array**	**23.02**	**40**	P	**P**	**03 20 54.5**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=250,slow=9.3,SNR=4.2						
	comp=Z,0.2nm,0.6s						
J25K	**Salcha River,**	**23.59**	**41**	P	**P**	**03 21 01.3**	**+0.6**
TOLK	**Toolik Lake Re**	**23.70**	**30**	P	**P**	**03 21 01.4**	**-0.3**
TOLK				IAmb	IAmb	03 21 16.3	
	comp=Z,6.3nm,0.7s						
DOT	**Dot Lake**	**23.89**	**44**	P	**P**	**03 21 02.1**	**-1.3**
DOT				IAmb	IAmb	03 21 16.4	
	comp=Z,7.6nm,1.2s						
KLR	**Kul'dur**	**28.87**	**284**	P	**P**	**03 21 49.2**	**+0.7**
	comp=Z,3.0nm,0.6s,baz=63,slow=7.4,SNR=8.1						
	comp=Z,3.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**32.36**	**198**	T	T	03 57 53.7	
	baz=11,slow=76,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**32.37**	**198**	T	T	03 57 54.8	
	baz=11,slow=76,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**32.38**	**198**	T	T	03 57 53.7	
	baz=11,slow=76,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**33.59**	**198**	T	T	03 59 13.7	
	baz=11						
H11S3	**WAKE ISLAND Hy**	**33.61**	**198**	T	T	03 59 25.4	
	baz=11						
H11S2	**WAKE ISLAND Hy**	**33.61**	**198**	T	T	03 59 15.6	
	baz=11						
SONM	**Songino Array**	**44.54**	**295**	P	**P**	**03 24 02.7**	**+1.1**
	comp=Z,1.5nm,0.3s,baz=62,slow=10.0,SNR=4.4						
	comp=Z,1.5nm,0.3s						
NVAR	**Mina Array Bea**	**46.03**	**80**	P	**P**	**03 24 14.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=294,slow=7.8,SNR=2.4						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**48.73**	**70**	P	**P**	**03 24 35.1**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=328,slow=5.3,SNR=4.0						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**57.91**	**349**	P	**P**	**03 25 40.9**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=34,slow=7.0,SNR=3.6						
	comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**58.24**	**306**	P	**P**	**03 25 43.5**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=50,slow=8.3,SNR=8.8						
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**61.13**	**78**	P	**P**	**03 26 04.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=304,slow=5.3,SNR=7.3						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**65.46**	**345**	P	**P**	**03 26 31.4**	**-0.8**
	comp=Z,4.2nm,1.1s,baz=15,slow=7.9,SNR=3.8						
	comp=Z,4.2nm,1.1s						
NB2	**NORSAR Subarra**	**67.65**	**353**	P	**P**	**03 26 46.3**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=10,slow=6.5						
NOA	**NORSAR Array B**	**67.65**	**353**	P	**P**	**03 26 46.4**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=10.0,slow=6.3,SNR=7.2						
	comp=Z,1.1nm,0.7s						
AKASG	**Malin Array Be**	**75.00**	**340**	P	**P**	**03 27 30.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=24,slow=6.1,SNR=4.4						
	comp=Z,0.5nm,0.4s	

comp=Z,7.9nm,1.4s
WRA Warramunga Arr 36.20 265 P **P** **03 23 05.5 +2.0**
comp=Z,0.4nm,0.5s,baz=96,slow=8.5,SNR=10
WRA LR LR 03 37 26.7
comp=Z,162nm,19.7s,baz=72,slow=36
comp=Z,0.4nm,0.5s
WRA Warramunga Arr 36.20 265 P **P** **03 23 01.4 -2.0**
H11S2 WAKE ISLAND Hy 40.29 351 T T 04 07 36.4
baz=171,slow=76,SNR=35
H11S3 WAKE ISLAND Hy 40.30 351 T T 04 07 34.3
baz=171,slow=76,SNR=29
H11S1 WAKE ISLAND Hy 40.31 351 T T 04 07 35.1
baz=171,slow=76,SNR=46
H11N1 WAKE ISLAND Hy 41.47 351 T T 04 09 06.8
baz=172,slow=76,SNR=9.4
H11N3 WAKE ISLAND Hy 41.47 351 T T 04 09 03.9
baz=172,slow=76,SNR=6.7
H11N2 WAKE ISLAND Hy 41.48 351 T T 04 09 06.1
baz=172,slow=76,SNR=7.5
SAUI Saumlaki 42.44 282 P **P** **03 23 54.4 -1.2**
FITZ Fitzroy Crossi 44.63 266 LR LR 03 42 37.4
comp=Z,70nm,19.5s,baz=106,slow=36
FITZ Fitzroy Crossi 44.63 266 P **P** **03 24 11.6 -1.5**
FITZ IAmb IAmb 03 24 22.4
comp=Z,4.4nm,0.9s
TAOE Nuku Hiva Isla 46.70 82 *e*LR LR 03 37 29.5
comp=Z,143nm,28.3s
KAPI Kapgang 54.15 280 LR LR 03 48 50.2
comp=Z,43nm,19.7s,baz=98,slow=36
VNDA Vanda 56.27 183 P **P** **03 25 40.1 -0.2**
comp=Z,1.0nm,0.6s,baz=354,slow=6.9,SNR=12
VNDA LR LR 03 46 06.1
comp=Z,32nm,18.3s,baz=292,slow=32
comp=Z,1.0nm,0.6s
VNDA Vanda 56.27 183 P **P** **03 25 39.7 -0.6**
VNDA IAmb IAmb 03 25 43.0
comp=Z,4.8nm,1.3s
SBA Scott Base 56.42 182 P **P** **03 25 41.1 -0.2**
CASY Casey 59.48 205 P **P** **03 26 02.3 -0.7**
CASY IAmb IAmb 03 26 03.3
comp=Z,5.9nm,0.9s
LEM Lembang 64.72 273 LR LR 03 55 42.6
comp=Z,59nm,18.5s,baz=140,slow=37
QSPA South Pole Qui 68.51 180 P **P** **03 27 02.2 -0.2**
QSPA IAmb IAmb 03 27 06.4
comp=Z,8.4nm,1.1s
MAW Mawson 77.63 202 P **P** **03 27 57.3 +1.2**
comp=Z,3.4nm,0.7s,baz=121,slow=7.3,SNR=6.5
comp=Z,3.4nm,0.7s
TROLL Troll, Antarti 86.45 183 P **P** **03 28 42.4 -0.2**
SNAA Sanae 86.97 181 P **P** **03 28 44.7 -0.3**
LPIG La Paz 87.22 63 LR LR 04 01 30.5
comp=Z,25nm,18.2s,baz=216,slow=31
VNA3 Neumayer Olymp 87.42 179 P **P** **03 28 47.3 +0.2**
NVAR Mina Array Bea 87.69 47 P P 03 28 57.9 +8.7
comp=Z,0.6nm,0.8s,baz=230,slow=6.9,SNR=4.7
comp=Z,0.6nm,0.8s
VNA2 Neumayer--Watz 87.76 180 P **P** **03 28 48.3 -0.4**
baz=185,slow=2.7
VNA1 Neumayer--Stat 88.03 180 P **P** **03 28 50.7 +0.7**
ILAR Eielson Array 91.41 16 P P 03 29 13.2 +7.5
comp=Z,1.4nm,1.1s,baz=206,slow=5.9,SNR=4.6
comp=Z,1.4nm,1.1s
TXAR Lajitas Array 94.74 60 LR LR 04 03 48.4
comp=Z,26nm,20.8s,baz=230,slow=30
GERES GERESS Array B 148.19 334 PKPbc **PKPab** **03 35 51.1 +2.1**
comp=Z,0.3nm,0.5s,baz=343,slow=4.0,SNR=4.7
TORD Torodi Ar. Bea 168.27 226 PKPab **PKPab** **03 37 17.3 +1.3**
comp=Z,0.5nm,0.9s,baz=108,slow=4.7,SNR=2.6

IDC ***17*** *03:19:16.9±2.3,3°.19N×126°.37E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=182.1km s-min=29.1km az=65.0,Talaud Islands*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.28**	**162**	P	P	03 24 36.0	-0.2
	0.5nm,0.4s,baz=340,slow=10,SNR=11						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**27.68**	**165**	P	P	03 25 07.5	+0.6
	0.2nm,0.5s,baz=348,slow=7.2,SNR=1.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**57.80**	**326**	P	P	03 29 09.7	-0.4
	0.4nm,0.6s,baz=140,slow=7.2,SNR=2.8						
	0.4nm,0.6s						

IDC ***17*** *03:41:49.3±1.1, 17°.95S×176°.66W,h0km,mb3.9/4, mbtmp4.0/6,ML4.4/2,MS3.8/42,Error ellipse: s-maj=43.3km s-min=23.8km az=145.0*

ISC 17 03:41:54.3±0.9,17°.8S±0°.2×176°.7W±0°.1,h35km,n48, σ0s89/12,mb3.9/4,MS3.9/38,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.05**	**270**	Pn	**Pn**	**03 43 07.0**	**-0.7**
	1.0nm,0.3s,baz=85,slow=18,SNR=2.6						
MSVF				LR	LR	03 45 02.4	
	comp=Z,4μm,18.4s,baz=99,slow=38						
	4.0nm,0.5s						
AFI	**Afiamalu**	**6.10**	**51**	Pn	**Pn**	**03 43 20.7**	**-1.4**
	2.1nm,0.3s,baz=240,slow=20,SNR=2.8						
AFI				LR	LR	03 44 56.2	
	comp=Z,286nm,19.5s,baz=177,slow=30						
	24nm,0.5s						
RAO	**Raoul Island**	**11.42**	**186**	LR	LR	03 48 15.2	
	comp=Z,1μm,20.0s,baz=72,slow=34						
RAR	**Rarotonga**	**16.25**	**105**	LR	LR	03 50 27.6	
	comp=Z,224nm,18.2s,baz=270,slow=32						
URZ	**Urewera**	**21.06**	**194**	LR	LR	03 54 09.0	
	comp=Z,489nm,19.4s,baz=32,slow=35						
HNR	**Honiara**	**24.21**	**287**	LR	LR	03 55 15.3	
	comp=Z,189nm,18.3s,baz=194,slow=33						
PPT	**Papeete**	**25.78**	**94**	LR	LR	03 54 41.3	
	comp=Z,212nm,20.1s,baz=262,slow=30						
KRVT	**Keravat (AS076**	**33.48**	**290**	LR	LR	04 01 01.0	
	comp=Z,265nm,19.2s,baz=251,slow=34						
CTA	**Charters Tower**	**35.11**	**260**	LR	LR	04 01 23.6	
	comp=Z,133nm,19.9s,baz=81,slow=34						
STKA	**Stephens Creek**	**40.13**	**242**	LR	LR	04 03 53.3	
	comp=Z,76nm,18.7s,baz=43,slow=33						
WRA	**Warramunga Arr**	**46.29**	**259**	P	**P**	**03 50 16.2**	**-0.7**
	1.4nm,0.9s,baz=96,slow=7.1,SNR=9.6						
WRA				LR	LR	04 08 02.0	
	comp=Z,224nm,21.6s,baz=94,slow=34						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**46.42**	**254**	P	**P**	**03 50 17.6**	**-0.4**
	3.0nm,0.5s,baz=90,slow=8.2,SNR=16						
ASAR				PcP	**PcP**	**03 51 52.8**	**+0.3**
	0.5nm,0.9s,baz=98,slow=4.0,SNR=1.3						
ASAR				LR	LR	04 08 08.6	
	comp=Z,78nm,18.3s,baz=129,slow=34						
	3.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**54.69**	**260**	LR	LR	04 14 28.4	
	comp=Z,112nm,18.3s,baz=105,slow=36						
VNDA	**Vanda**	**60.66**	**185**	P	**P**	**03 52 01.2**	**-0.2**
	1.0nm,1.1s,baz=8.7,slow=6.0,SNR=3.6						
	1.0nm,1.1s						
DAV	**Davao City (W)**	**62.17**	**288**	LR	LR	04 14 54.0	
	comp=Z,36nm,21.4s,baz=148,slow=32						
RPN	**Rapa Nui**	**62.25**	**112**	LR	LR	04 11 44.8	
	comp=Z,82nm,21.4s,baz=300,slow=29						
KAPI	**Kappang**	**63.37**	**273**	LR	LR	04 18 25.6	
	comp=Z,21nm,19.9s,baz=90,slow=35						
SHEM	**Shemya Is, Ala**	**70.73**	**354**	LR	LR	04 17 55.5	
	comp=Z,63nm,20.9s,baz=158,slow=31						
QSPA	**South Pole Qui**	**72.21**	**180**	LR	LR	04 22 55.5	
	comp=Z,28nm,18.5s,baz=12,slow=34						
PETK	**Petropavlovsk-**	**74.06**	**344**	LR	LR	04 19 44.3	
	comp=Z,21nm,21.5s,baz=162,slow=31						
LEM	**Lembang**	**74.40**	**268**	LR	LR	04 27 14.5	
	comp=Z,66nm,18.2s,baz=98,slow=37						
KSRS	**Korea Array**	**75.78**	**317**	LR	LR	04 23 39.2	
	comp=Z,14nm,19.4s,baz=210,slow=33						
PFO	**Pinyon Flats O**	**76.86**	**48**	LR	LR	04 20 32.0	
	comp=Z,59nm,18.5s,baz=216,slow=30						
YBH	**Yreka Blue Hor**	**77.42**	**38**	LR	LR	04 18 59.0	
	comp=Z,111nm,20.2s,baz=230,slow=29						
NVAR	**Mina Array Bea**	**78.22**	**43**	LR	LR	04 21 36.4	
	comp=Z,76nm,19.7s,baz=270,slow=30						
BBB	**Bella Bella**	**81.47**	**28**	LR	LR	04 22 20.3	
	comp=Z,51nm,20.4s,baz=200,slow=30						
ELK	**Elko**	**81.47**	**42**	LR	LR	04 21 27.3	
	comp=Z,51nm,21.4s,baz=248,slow=29						
NEW	**Newport**	**84.48**	**35**	LR	LR	04 23 50.5	
	comp=Z,42nm,21.8s,baz=226,slow=30						
MAW	**Mawson**	**84.48**	**199**	LR	LR	04 30 18.7	
	comp=Z,51nm,18.4s,baz=102,slow=34						
TXAR	**Lajitas Array**	**84.55**	**57**	LR	LR	04 24 34.2	
	comp=Z,36nm,19.7s,baz=240,slow=30						
ANMO	**Albuquerque**	**84.75**	**51**	LR	LR	04 28 46.8	
	comp=Z,43nm,18.6s,baz=243,slow=33						
DLBC	**Dease Lake**	**85.12**	**23**	LR	LR	04 24 35.8	
	comp=Z,89nm,21.5s,baz=270,slow=30						
ILAR	**Eielson Array**	**85.46**	**12**	P	**P**	**03 54 29.3**	**+1.4**
	0.5nm,0.6s,baz=214,slow=5.3,SNR=5.9						
ILAR				LR	LR	04 26 08.0	
	comp=Z,32nm,20.4s,baz=246,slow=31						
	0.5nm,0.6s						
PSI	**Prapat**	**85.55**	**274**	LR	LR	04 32 27.2	
	comp=Z,64nm,18.4s,baz=146,slow=36						
PDAR	**Pinedale Array**	**86.16**	**43**	LR	LR	04 26 56.5	
	comp=Z,46nm,18.0s,baz=252,slow=31						
CMIG	**Matias Romero**	**87.62**	**71**	LR	LR	04 25 10.8	
	comp=Z,38nm,20.4s,baz=229,slow=30						
CMAR	**Chiang Mai Arr**	**90.45**	**289**	LR	LR	04 32 00.4	
	comp=Z,19nm,21.5s,baz=120,slow=33						
INK	**Inuvik**	**91.39**	**15**	LR	LR	04 28 36.2	
	comp=Z,37nm,21.5s,baz=208,slow=31						
YKA	**Yellowknife Ar**	**93.58**	**24**	LR	LR	04 28 23.3	
	comp=Z,48nm,21.8s,baz=257,slow=30						
NNA	**Nana**	**95.50**	**104**	LR	LR	04 28 25.3	
	comp=Z,34nm,19.8s,baz=252,slow=29						
ATAH	**Atahualpa**	**95.63**	**99**	LR	LR	04 30 45.0	
	comp=Z,51nm,18.0s,baz=239,slow=31						
TIXI	**Tiksi**	**96.52**	**345**	LR	LR	04 35 08.9	
	comp=Z,35nm,19.5s,baz=184,slow=33						
LVC	**Limon Verde**	**98.73**	**117**	LR	LR	04 30 19.3	
	comp=Z,46nm,19.4s,baz=233,slow=30						
AKASG	**Malin Array Be**	**141.26**	**334**	PKP	**PKPdf**	**04 01 22.2**	**+1.0**
	0.1nm,0.3s,baz=66,slow=2.3,SNR=1.7						
CLL	**Collm**	**145.74**	**349**	*e*PKP	**PKPbc**	**04 01 30.0**	**+0.6**
	comp=Z,7.0nm,1.1s						
CLL				*ex*	x	04 01 38.0	
BRTR	**Keskin Array B**	**145.91**	**316**	PKPbc	**PKPab**	**04 01 31.4**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=158,slow=3.3,SNR=2.8						
GERES	**GERESS Array B**	**147.95**	**347**	PKPbc	**PKPbc**	**04 01 36.9**	**+0.8**
	comp=Z,1.0nm,0.9s,baz=20,slow=4.3,SNR=5.5						
DAVOX	**Davos/Dischmat**	**150.64**	**351**	PKPbc	**PKPbc**	**04 01 43.0**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=9.8,slow=6.4,SNR=7.4						

IDC ***17*** *03:45:47.5±1.4,37°.55N×50°.23E,h0km,mb4.0/15, mbtmp4.0/20,ML3.8/5,MS3.1/4,Error ellipse: s-maj=27.0km s-min=13.9km az=176.0*
TEH ***17*** *03:45:48.3,37°.57N×50°.38E,h12km,ML4.0*
NEIC ***17*** *03:45:53.5±1.8,38°.1N±0°.1×50°.58E±0°.08,h14km±5km, mb4.0/10,Error ellipse: s-maj=17.6km s-min=8.3km az=167.0*
AZER ***17*** *03:45:54.6±0.1,37°.82N×49°.90E,h22km±1km,Error ellipse: s-maj=2.5km s-min=1.6km az=328.0*

ISC 17 03:45:49.6±1.2,37°.60N±0°.03×50°.29E±0°.04,h15km±8km, n158,σ1s51/177,mb4.2/16,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHJ2	**Lahijan - Gila**	**0.47**	**202**	*e*Pg	**Pg**	**03 45 58.8**	**-0.1**
LHJ2				*e*Sg	**Sg**	**03 46 05.0**	**-0.2**
GIDE	**GILAN DEYLAMAN**	**0.74**	**204**	*e*Pg	**Pg**	**03 46 03.0**	**-1.0**
CSN1	**Caspian**	**0.95**	**268**	*e*Pg	**Pb**	**03 46 07.6**	**-0.1**
JIR1	**Jirandeh**	**0.97**	**204**	*e*Pg	**Pb**	**03 46 06.6**	**-1.6**
QALM	**Alamut, Qazvin**	**1.20**	**166**	*e*Pg	**Pn**	**03 46 09.3**	**-2.7**
IGZV	**Ghazvin**	**1.21**	**183**	*e*Pg	**Pn**	**03 46 10.3**	**-1.9**
IGZV				*e*		03 46 28.2	
	comp=Z,64μm,0.3s						
ASTR	**Astara**	**1.52**	**310**	*e*Pn	**Pb**	**03 46 17.3**	**-0.1**
ASTR	**Astara**	**1.52**	**310**	P	**Pb**	**03 46 17.4**	**-0.1**
	SNR=7.0						
ASTR				S	**Sn**	**03 46 35.3**	**-0.4**
ZNJK	**Zanjan**	**1.58**	**235**	*e*Pg	**Pn**	**03 46 16.8**	**-0.4**
LKRN	**Lenkeran, Azer**	**1.62**	**314**	*e*Pn	**Pb**	**03 46 20.2**	**+1.0**
LKRN	**Lenkeran, Azer**	**1.62**	**314**	P	**Pb**	**03 46 20.3**	**+1.0**
	SNR=12						
LKRN				S	**Sn**	**03 46 37.7**	**-0.6**
CHTH	**Charan**	**1.82**	**158**	*e*Pn	**Pn**	**03 46 20.0**	**-0.5**
LRK	**Lerik**	**1.85**	**305**	*e*Pn	**Pn**	**03 46 21.6**	**+0.6**
LRK	**Lerik**	**1.85**	**305**	P	**Pn**	**03 46 21.6**	**+0.6**
	SNR=16						
LRK				S	**Sn**	**03 46 43.9**	**-0.3**
IMHD	**Mahdasht**	**1.93**	**171**	*e*Pn	**Pn**	**03 46 22.4**	**+0.4**
IMHD				*e*		03 46 52.8	
	comp=Z,11μm,0.3s						
TEHA	**Amirabad Tehra**	**2.05**	**154**	*e*Pn	**Pn**	**03 46 23.6**	**0.0**
TEHA				*e*		03 46 57.9	
	comp=Z,12μm,0.7s						
TEH	**Tehran**	**2.06**	**154**	*e*Pn	**Pn**	**03 46 24.4**	**+0.7**
TEH				*e*		03 46 53.4	
	comp=Z,14μm,0.9s						
YRD	**Yardimli**	**2.08**	**310**	*e*Pn	**Pn**	**03 46 24.8**	**+0.7**
YRD	**Yardimli**	**2.08**	**310**	P	**Pn**	**03 46 24.9**	**+0.8**
	SNR=18						
YRD				S	**Sn**	**03 46 48.7**	**-1.0**
ISRB	**Sarab**	**2.09**	**277**	*e*Pn	**Pn**	**03 46 25.7**	**+1.5**
IPRN	**Peran**	**2.13**	**129**	*e*Pn	**Pn**	**03 46 24.1**	**-0.6**
IRAZ	**Razeghan**	**2.21**	**188**	*e*Pn	**Pn**	**03 46 25.6**	**-0.3**
GLBA	**Clilabad**	**2.21**	**318**	*e*Pn	**Pn**	**03 46 27.0**	**+1.3**
GLBA	**Clilabad**	**2.21**	**318**	P	**Pn**	**03 46 27.0**	**+1.3**
	SNR=9.0						
GLBA				S	**Sn**	**03 46 53.2**	**+0.3**
GRMI	**Germi**	**2.24**	**303**	*e*Pn	**Pn**	**03 46 27.3**	**+1.1**
IHSB	**Hasanabad**	**2.30**	**159**	*e*Pn	**Pn**	**03 46 27.9**	**+0.9**
DAMV	**Damavand**	**2.39**	**145**	*e*Pn	**Pn**	**03 46 29.2**	**+0.8**
IHSH	**Hashtrud**	**2.42**	**264**	*e*Pn	**Pn**	**03 46 30.5**	**+1.6**
IDMV	**Damavand**	**2.46**	**145**	*e*Pn	**Pn**	**03 46 30.0**	**+0.6**
IDMV				*e*		03 47 02.2	
	comp=Z,4μm,0.6s						
ALIB	**Äli-Bayra**	**2.56**	**337**	*e*Pn	**Pb**	**03 46 33.5**	**-1.7**
ALIB	**Äli-Bayra**	**2.56**	**337**	P	**Pb**	**03 46 33.8**	**-1.3**
ALIB				S	**Sn**	**03 47 04.2**	**+2.9**
IHRS	**Heris**	**2.66**	**287**	*e*Pn	**Pn**	**03 46 34.0**	**+1.9**
IBST	**Bostanabad**	**2.69**	**273**	*e*Pn	**Pn**	**03 46 34.7**	**+2.1**
IFIR	**Firoozkooh**	**2.79**	**134**	*e*Pn	**Pn**	**03 46 34.6**	**+0.7**
IFIR				*e*		03 47 16.7	
	comp=Z,3μm,0.3s						
IQOM	**Qom**	**2.82**	**167**	*e*Pn	**Pn**	**03 46 35.4**	**+1.0**
IQOM				*e*		03 47 26.9	
	comp=Z,5μm,0.4s						
GOBA	**Gobu**	**2.83**	**351**	*e*Pn	**Pb**	**03 46 38.7**	**-1.1**
GOBA	**Gobu**	**2.83**	**351**	P	**Pb**	**03 46 38.8**	**-1.1**
	SNR=5.5						
GOBA				S	**Sn**	**03 47 11.0**	**+2.9**
IVRN	**Varamin**	**2.85**	**155**	*e*Pn	**Pn**	**03 46 35.1**	**+0.6**
IVRN				*e*		03 47 15.2	
	comp=Z,4μm,0.4s						
HAGD	**Aghdareh**	**2.92**	**199**	*e*Pn	**Pn**	**03 46 36.1**	**+0.4**
NDR	**Nardaran**	**2.99**	**356**	*e*Pn	**Pb**	**03 46 41.5**	**-0.9**
NDR	**Nardaran**	**2.99**	**356**	P	**Pb**	**03 46 41.6**	**-0.9**
NDR				S	**Sb**	**03 47 17.2**	**-1.6**
ISHM	**Shahmirzad**	**3.01**	**126**	*e*Pn	**Pn**	**03 46 37.6**	**+0.7**
BLQ	**Beylaqan**	**3.01**	**316**	*e*Pn	**Pn**	**03 46 38.7**	**+2.0**
BLQ	**Beylaqan**	**3.01**	**316**	P	**Pn**	**03 46 38.4**	**+1.7**
BLQ				S	**Sn**	**03 47 11.2**	**-1.2**
IGLO	**Ghaloghah**	**3.04**	**110**	*e*Pn	**Pn**	**03 46 37.0**	**-0.3**
ASAO	**Ashtian**	**3.05**	**184**	*e*Pn	**Pn**	**03 46 38.0**	**+0.5**
ILAS	**Lasjerd**	**3.09**	**135**	*e*Pn	**Pn**	**03 46 38.9**	**+0.9**
GBS	**Qobustan**	**3.11**	**341**	S	**Sn**	**03 47 16.5**	**+1.4**
GHVR	**GHOM**	**3.22**	**165**	*e*Pn	**Pn**	**03 46 40.4**	**+0.8**
ZRD	**Zardab**	**3.36**	**324**	S	**Sn**	**03 47 20.7**	**-0.3**
IAZR	**Azarshahr**	**3.42**	**273**	*e*Pn	**Pn**	**03 46 45.0**	**+2.4**
ATGJ	**Altiaghaj**	**3.42**	**343**	S	**Sn**	**03 47 24.9**	**+2.1**
SNGE	**Sanandaj**	**3.45**	**224**	*e*Pn	**Pb**	**03 46 52.6**	**+2.2**
PQL	**Pirkuli**	**3.45**	**338**	*e*Pn	**Pn**	**03 46 45.8**	**+3.0**
PQL	**Pirkuli**	**3.45**	**338**	P	**Pn**	**03 46 45.8**	**+3.0**
PQL				S	**Sn**	**03 47 25.0**	**+1.5**
IML	**Ismayilli**	**3.58**	**334**	*e*Pn	**Pn**	**03 46 45.5**	**+0.8**
IML	**Ismayilli**	**3.58**	**334**	P	**Pn**	**03 46 46.1**	**+1.5**
IML				S	**Sn**	**03 47 26.6**	**-0.1**
BRDA	**Brd**	**3.60**	**319**	S	**Sn**	**03 47 26.8**	**-0.2**
ISFB	**Sefidab**	**3.61**	**153**	*e*Pn	**Pn**	**03 46 45.5**	**+0.5**
IANJ	**Anjilo**	**3.62**	**125**	*e*Pn	**Pn**	**03 46 45.4**	**+0.2**
IANJ				*e*		03 47 40.8	
	comp=Z,2μm,0.3s						
ORD	**Ordubad**	**3.63**	**293**	*e*Pn	**Pn**	**03 46 46.9**	**+1.7**
ORD	**Ordubad**	**3.63**	**293**	P	**Pn**	**03 46 47.0**	**+1.7**
	SNR=6.7						
ORD				S	**Sn**	**03 47 24.8**	**-3.0**
SIZA	**Siyzn**	**3.64**	**343**	*e*Pn	**Pn**	**03 46 48.4**	**+3.0**
SIZA	**Siyzn**	**3.64**	**343**	P	**Pn**	**03 46 48.4**	**+3.0**
	SNR=6.7						
SIZA				S	**Sn**	**03 47 30.6**	**+2.5**
HSAM	**Samen**	**3.64**	**203**	*e*Pn	**Pn**	**03 46 46.9**	**+1.2**
IBZA	**Bozab**	**3.69**	**213**	*e*Pn	**Pn**	**03 46 47.2**	**+0.9**
ISHB	**Shabestar**	**3.75**	**282**	*e*Pn	**Pn**	**03 46 49.4**	**+2.3**
QBL	**Gabala**	**3.84**	**331**	S	**Sn**	**03 47 33.2**	**+0.1**
KHMZ	**Khomeyn**	**3.86**	**184**	*e*Pn	**Pn**	**03 46 49.4**	**+0.8**
KRSH	**Karshahi**	**3.92**	**157**	*e*Pn	**Pn**	**03 46 49.9**	**+0.5**
KRSH				*e*		03 48 14.0	
	comp=Z,1μm,0.7s						
XNQ	**Khinaliq**	**3.94**	**336**	*e*Pn	**Pn**	**03 46 51.8**	**+2.2**
XNQ	**Khinaliq**	**3.94**	**336**	P	**Pn**	**03 46 51.8**	**+2.2**
	SNR=4.4						
XNQ				S	**Sn**	**03 47 35.6**	**0.0**
QAMS	**Qamsar**	**3.96**	**166**	*e*Pn	**Pn**	**03 46 50.3**	**+0.3**
QAMS				*e*		03 47 56.2	
	comp=Z,1μm,0.4s						
QUBA	**Quba, Azerbaij**	**4.00**	**340**	P	**Pn**	**03 46 52.8**	**+2.4**
	SNR=4.5						
QUBA				S	**Sn**	**03 47 38.2**	**+1.2**
QUB	**Quba**	**4.06**	**339**	*e*Pn	**Pn**	**03 46 52.6**	**+1.4**
NAX	**Nakhchivan**	**4.08**	**294**	*e*Pn	**Pn**	**03 46 52.2**	**+0.7**
NAX	**Nakhchivan**	**4.08**	**294**	P	**Pn**	**03 46 52.2**	**+0.7**
	SNR=7.4						
NAX				S	**Sn**	**03 47 37.7**	**-1.3**
IMND	**Minoodasht**	**4.09**	**93**	*e*Pn	**Pn**	**03 46 50.7**	**-0.9**
IMND				*e*		03 47 42.7	
	comp=Z,2μm,0.2s						
SBZ	**Shahbuz**	**4.12**	**297**	*e*Pn	**Pn**	**03 46 54.4**	**+2.3**
SBZ	**Shahbuz**	**4.12**	**297**	P	**Pn**	**03 46 54.5**	**+2.3**
SBZ				S	**Sn**	**03 47 40.8**	**+0.7**
IDOB	**Doab**	**4.17**	**205**	*e*Pn	**Pn**	**03 46 54.3**	**+1.4**
QSAR	**Qusar**	**4.21**	**339**	*e*Pn	**Pn**	**03 46 55.5**	**+2.2**
QSAR	**Qusar**	**4.21**	**339**	P	**Pn**	**03 46 55.5**	**+2.2**
QSAR				S	**Sn**	**03 47 41.8**	**-0.4**
IDHR	**Dehrash**	**4.28**	**229**	*e*Pn	**Pn**	**03 46 57.5**	**+3.2**
SEKA	**Sheki**	**4.33**	**327**	*e*Pn	**Pn**	**03 46 56.8**	**+2.0**
SEKA	**Sheki**	**4.33**	**327**	P	**Pn**	**03 46 56.8**	**+2.0**
	SNR=9.0						
SEKA				S	**Sn**	**03 47 45.2**	**+0.2**
GANJ	**Ganja**	**4.33**	**316**	*e*Pn	**Pn**	**03 46 56.0**	**+1.1**
GANJ	**Ganja**	**4.33**	**316**	P	**Pn**	**03 46 56.1**	**+1.1**
GANJ				S	**Sn**	**03 47 44.3**	**-0.8**
IKLH	**Kolahrood**	**4.40**	**166**	*e*Pn	**Pn**	**03 46 57.0**	**+1.0**
IKFM	**Kafar-mosalman**	**4.52**	**207**	*e*Pn	**Pn**	**03 47 00.3**	**+2.8**
MRVT	**Maraveh tapeh**	**4.61**	**87**	*e*Pn	**Pn**	**03 46 59.0**	**+0.3**
GDB	**GEDABAY**	**4.70**	**313**	*e*Pn	**Pn**	**03 47 02.3**	**+2.2**
GDB	**GEDABAY**	**4.70**	**313**	P	**Pn**	**03 47 02.4**	**+2.2**
	SNR=5.5						
GDB				S	**Sn**	**03 47 54.6**	**+0.1**
SHRO	**Shahrood**	**4.87**	**108**	*e*Pn	**Pn**	**03 47 03.2**	**+0.8**
ZKT	**Zaqatala**	**4.92**	**327**	*e*Pn	**Pn**	**03 47 06.0**	**+3.0**
ZKTA	**Zakatala**	**4.93**	**326**	P	**Pn**	**03 47 06.1**	**+3.0**
ZKTA				S	**Sn**	**03 48 00.4**	**+0.6**
IPIR	**Pirpir**	**4.93**	**174**	*e*Pn	**Pn**	**03 47 04.8**	**+1.4**
IZEF	**Zefreh**	**4.98**	**160**	*e*Pn	**Pn**	**03 47 04.7**	**+0.6**
GNI	**Garni**	**5.02**	**302**	*e*Pn	**Pn**	**03 47 06.8**	**+2.4**
QZX	**Qazax, Azerbai**	**5.14**	**314**	*e*Pn	**Pn**	**03 47 08.7**	**+2.7**
QZX	**Qazax, Azerbai**	**5.14**	**314**	P	**Pn**	**03 47 08.7**	**+2.7**
QZX				S	**Sn**	**03 48 06.1**	**+1.0**
NASN	**Na'in**	**5.21**	**156**	*e*Pn	**Pn**	**03 47 08.2**	**+0.9**
BJRD	**Bojnurd**	**5.65**	**87**	*e*Pn	**Pn**	**03 47 14.0**	**+0.8**
SBZV	**Sabzevar**	**5.99**	**99**	*e*Pn	**Pn**	**03 47 18.8**	**+1.0**
IRAM	**Ramesheh**	**6.03**	**163**	*e*Pn	**Pn**	**03 47 19.4**	**+1.0**
ISFR	**Sfrayin**	**6.17**	**93**	*e*Pn	**Pn**	**03 47 21.4**	**+1.0**
GEYT	**Alibeck**	**6.21**	**85**	Pn	**Pn**	**03 47 21.1**	**+0.3**
	comp=Z,2.5nm,0.3s,baz=262,slow=15,SNR=8.7						
GEYT				Sn	Sn	03 48 23.0	-8.5
	comp=Z,1.0nm,0.3s,baz=258,slow=28,SNR=2.0						
GEYT				LR	LR	03 50 39.6	
	comp=Z,72nm,20.9s,baz=194,slow=47						
	comp=Z,6.7nm,0.4s						
GEYT	**Alibeck**	**6.21**	**85**	Pn	**Pn**	**03 47 20.4**	**-0.4**
YZKH	**Yazd**	**6.28**	**145**	*e*Pn	**Pn**	**03 47 22.8**	**+1.0**
ISAD	**Sadrabad**	**6.32**	**153**	*e*Pn	**Pn**	**03 47 23.8**	**+1.3**
TABS	**Tabas**	**6.82**	**123**	*e*Pn	**Pn**	**03 47 30.2**	**+1.1**
IPAY	**Payeh**	**7.06**	**97**	*e*Pn	**Pn**	**03 47 33.2**	**+0.6**
IBAF	**Bafgh**	**7.41**	**142**	*e*Pn	**Pn**	**03 47 38.0**	**

comp=Z,0.5nm,0.4s,baz=138,slow=8.6,SNR=9.2
comp=Z,0.5nm,0.4s
SONM Songino Array 41.64 57 P **P** **03 53 38.3 +1.1**
comp=Z,0.7nm,0.5s,baz=264,slow=8.6,SNR=3.7
comp=Z,0.7nm,0.5s
ESDC Sonseca Array 41.88 290 P **P** **03 53 38.0 -1.2**
comp=Z,0.4nm,0.7s,baz=67,slow=7.8,SNR=3.1
comp=Z,0.4nm,0.7s
KSRS Korea Array 59.79 64 P **P** **03 55 54.1 +0.1**
comp=Z,0.8nm,0.5s,baz=283,slow=7.5,SNR=4.1
comp=Z,0.8nm,0.5s
ILAR Eielson Array 77.08 7 P **P** **03 57 42.3 +0.6**
comp=Z,0.5nm,0.8s,baz=353,slow=4.5,SNR=4.3
comp=Z,0.5nm,0.8s
SADO Sadowa 86.15 327 LR LR 04 39 41.1
comp=Z,57nm,18.7s,baz=206,slow=38

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*IDC **17** 04:09:20.1±2.5, 4.2°9N×95.3°83E, h0km, mb3.6/4, mbtmp3.6/5, MS3.4/4, Error ellipse: s-maj=109.0km s-min=25.9km az=49.0*
*DJA **17** 04:09:25.9±1.6, 5.1°N±8.3°×9.6°6E±1.1°, h12km±16km, M3.8/6, MLv3.8/6*
ISC 17 04:09:23.0±1.4, **4.53N**±0.08×**96.3E**±0.1, **h10**km, **n15, σ1§20/11, mb3.7/4, MS3.5/4, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**0.98**	**45**	P	**Pg**	**04 09 42.0**	**+0.2**
LHMI				S	**Sg**	**04 09 54.4**	**-0.2**
KCSI	**Kotacane, Aceh**	**1.82**	**123**	P	**Pn**	**04 09 53.4**	**-0.9**
KCSI				S	**Sn**	**04 10 15.8**	**-1.7**
PSI	**Prapat**	**3.17**	**123**	Pn	**Pn**	**04 10 15.5**	**+2.4**
	9.4nm,0.4s,baz=0.0,slow=12						
PSI				Sn	**Sb**	**04 10 59.0**	**+0.6**
	baz=179,slow=13						
JMBI	**JAMBI**	**9.59**	**130**	P	**Pn**	**04 11 41.5**	**+0.3**
H08S2	**Diego Garcia H**	**26.61**	**243**	T	T	04 42 23.9	
	baz=62						
H08S3	**Diego Garcia H**	**26.61**	**243**	T	T	04 42 34.1	
	baz=62						
H08S1	**Diego Carcia H**	**26.63**	**243**	T	T	04 42 34.5	
	baz=62						
FITZ	**Fitzroy Crossi**	**36.68**	**129**	P	**P**	**04 16 29.6**	**-0.8**
	2.4nm,1.0s,baz=319,slow=9.8,SNR=5.7						
	2.4nm,1.0s						
AAK	**Ala-Archa**	**42.59**	**336**	LR	LR	04 38 00.6	
	comp=Z,35nm,18.0s,baz=160,slow=40						
MKAR	**Makanchi Array**	**43.80**	**346**	P	**P**	**04 17 28.7**	**-0.3**
	0.3nm,0.7s,baz=152,slow=6.5,SNR=1.6						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**44.64**	**124**	P	**P**	**04 17 36.6**	**+0.5**
	0.7nm,0.5s,baz=302,slow=9.1,SNR=18						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**46.18**	**129**	P	**P**	**04 17 49.1**	**+0.7**
	0.3nm,0.5s,baz=298,slow=7.2,SNR=4.1						
	0.3nm,0.5s						
LBTB	**Lobatse**	**74.54**	**243**	LR	LR	04 49 33.2	
	comp=Z,38nm,19.1s,baz=164,slow=33						
VRAC	**Vranov**	**79.84**	**319**	LR	LR	05 01 26.0	
	comp=Z,31nm,20.6s,baz=16,slow=39						
DAVOX	**Davos/Dischmat**	**84.24**	**316**	LR	LR	05 09 18.0	
	comp=Z,12nm,18.1s,baz=54,slow=43						

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*UPA **17** 04:25:01.6±1.5, 8.3°N×82.8°W, h0km±4km, MW3.6*
*UCR **17** 04:25:02.9±1.4, 8.3°N×83.0°W, h5km, MW3.8*
ISC 17 04:24:59.9±1.6, **8.25N**±0.06×**82.92W**±0.04, **h4**km±10km, **n25, σ1§15/44, 4C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDITO	**Canoas**	**0.32**	**9**	*i*P	**Pg**	**04 25 07.7**	**+1.6**
CDITO				*i* S	**Sg**	**04 25 12.4**	**+2.0**
DVD	**David**	**0.50**	**69**	*i*P	**Pg**	**04 25 09.9**	**+0.4**
DVD				*e*S	**Sg**	**04 25 16.1**	**+0.1**
MLIR3	**Monte Lirio, C**	**0.55**	**10**	*e*P	**Pg**	**04 25 06.8**	**-3.6**
MLIR3				*e*S	**Sg**	**04 25 14.9**	**-2.6**
EDSV	**San Vito**	**0.56**	**355**	*e*P	**Pg**	**04 25 12.0**	**+1.2**
EDSV				*e*S	**Sb**	**04 25 20.4**	**-0.5**
BRU2	**Volcan**	**0.58**	**23**	⇓*i*P	**Pg**	**04 25 12.0**	**+0.9**
BRU2				*i* S	**Sb**	**04 25 20.4**	**-1.1**
BCO2	**Palmira**	**0.60**	**40**	⇓*i*P	**Pg**	**04 25 12.1**	**+0.5**
BCO2				*i* S	**Sg**	**04 25 20.5**	**+1.1**
SRBA	**San Rafael, Bu**	**1.06**	**336**	*e*P	**Pg**	**04 25 20.0**	**-0.4**
SRBA				*e*S	**Sg**	**04 25 34.6**	**+0.4**
REME3	**Remedios, Chir**	**1.08**	**91**	*e*P	**Pg**	**04 25 18.9**	**-1.7**
REME3				*e*S	**Sg**	**04 25 35.2**	**+0.6**
CNI2	**El Empalme, Bo**	**1.25**	**21**	⇓*e*P	**Pg**	**04 25 22.3**	**-1.5**
CNI2				*e*S	**Sg**	**04 25 39.1**	**-0.9**
PEZE	**Perez Zeledon,**	**1.35**	**326**	*e*P	**Pg**	**04 25 25.2**	**-0.5**
EDDO	**Dominical**	**1.36**	**317**	*e*P	**Pg**	**04 25 25.7**	**-0.3**
EDDO				*e*S	**Sn**	**04 25 45.2**	**+1.0**
CDM	**Cerro de Muert**	**1.54**	**327**	*e*P	**Pn**	**04 25 27.6**	**-0.9**
CDM				*e*S	**Sg**	**04 25 48.1**	**-1.2**
RIMA	**Rio Macho**	**1.77**	**328**	*e*P	**Pn**	**04 25 31.5**	**0.0**
RIMA				*e*S	**Sn**	**04 25 54.4**	**-0.1**
LCR2	**La Lucha 2**	**1.83**	**324**	*e*P	**Pn**	**04 25 33.4**	**+1.1**
BATAN	**Batan**	**1.89**	**346**	*e*P	**Pn**	**04 25 34.6**	**+1.8**
BATAN				*e*S	**Sb**	**04 25 58.9**	**0.0**
STIA3	**Santiago, Vera**	**1.94**	**94**	*e*P	**Pn**	**04 25 33.1**	**-0.4**
STIA3				*e*S	**Sn**	**04 25 57.5**	**-0.9**
MARI3	**Mariato, Verag**	**2.00**	**107**	*e*P	**Pn**	**04 25 34.7**	**+0.2**
MARI3				*e*S	**Sn**	**04 26 00.8**	**+0.7**
JACO	**JACO, Garabito**	**2.22**	**309**	*e*P	**Pn**	**04 25 38.0**	**+0.6**
CACAO	**El Cacao, Vera**	**2.23**	**114**	*e*P	**Pn**	**04 25 38.0**	**+0.3**
CACAO				*e*S	**Sn**	**04 26 07.0**	**+1.3**
CHIT3	**Chitre**	**2.50**	**97**	*e*P	**Pn**	**04 25 41.8**	**+0.5**
CHIT3				*e*S	**Sn**	**04 26 12.2**	**+0.1**
AZU	**Azuero**	**2.66**	**100**	*e*P	**Pn**	**04 25 43.9**	**+0.3**
AZU				*e*S	**Sn**	**04 26 17.4**	**+1.1**
JTS	**Las Juntas de**	**2.85**	**315**	*e*P	**Pn**	**04 25 46.5**	**+0.3**
INDI	**Punta indio, G**	**3.01**	**302**	*e*P	**Pn**	**04 25 48.6**	**+0.3**
CHOR3	**La Chorrera**	**3.19**	**78**	*e*P	**Pn**	**04 25 51.3**	**+0.6**
CHOR3				*e*S	**Sn**	**04 26 29.3**	**+0.1**
SAJU	**San Juanillo,**	**3.29**	**303**	*e*P	**Pn**	**04 25 52.6**	**+0.4**

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*TEH **17** 04:25:40.2, 35.9°N×53.2°1E, h8km, ML3.8*
*IDC **17** 04:25:44.9±2.6, 36.3°N×53.1°3E, h0km, mb3.5/4, mbtmp3.6/6, ML3.7/2, MS3.0/1, Error ellipse: s-maj=38.6km s-min=18.6km az=177.0*
*AZER **17** 04:25:45.1±0.8, 35.9°N×52.9°3E, h11km, Error ellipse: s-maj=15.4km s-min=6.1km az=42.0*
ISC 17 04:25:42.4±0.7, **35.91N**±0.03×**53.19E**±0.03, **h10**km, **n100, σ1§36/117, mb3.5/4, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISHM	**Shahmirzad**	**0.13**	**139**	*e*Pg	**Pg**	**04 25 43.3**	**-2.4**
ISHM				*e*Sg	**Sg**	**04 25 45.7**	**-2.4**
IFIR	**Firoozkooh**	**0.44**	**233**	*e*Pg	**Pg**	**04 25 49.4**	**-1.7**
ILAS	**Lasjerd**	**0.56**	**200**	*e*Pg	**Pg**	**04 25 51.7**	**-1.6**
IANJ	**Anjilo**	**0.74**	**126**	*e*Pg	**Pg**	**04 25 54.2**	**-2.5**
IPRN	**Peran**	**0.76**	**296**	*e*Pg	**Pg**	**04 25 55.4**	**-1.8**
IGLO	**Ghaloghah**	**0.79**	**41**	*e*Pg	**Pg**	**04 25 55.5**	**-2.2**
IGLO				*e*		04 26 14.1	
	comp=Z,41µm,0.7s						
IDMV	**Damavand**	**0.99**	**251**	*e*Pg	**Pg**	**04 25 59.7**	**-1.9**
IDMV				*e*Sg	**Sb**	**04 26 15.5**	**+0.3**
IDMV				*e*		04 26 18.7	
	comp=Z,15µm,0.5s						
DAMV	**Damavand**	**1.03**	**255**	*e*Pg	**Pg**	**04 26 00.3**	**-1.9**
TEHA	**Amirabad Tehra**	**1.47**	**264**	*e*Pn	**Pn**	**04 26 08.5**	**-0.7**
TEH	**Tehran**	**1.48**	**264**	*e*Pn	**Pn**	**04 26 08.4**	**-0.8**
IVRN	**Varamin**	**1.50**	**233**	*e*		04 26 11.1	
	comp=Z,14µm,0.3s						
IVRN				*e*Pn	**Pn**	**04 26 08.8**	**-0.7**
IHSB	**Hasanabad**	**1.62**	**254**	*e*Pn	**Pn**	**04 26 11.1**	**-0.1**
CHTH	**Charan**	**1.67**	**271**	*e*Pg	**Pn**	**04 26 12.1**	**+0.1**
ISFB	**Sefidab**	**1.73**	**207**	*e*Pn	**Pn**	**04 26 12.8**	**+0.1**
ISFB				*e*		04 26 38.5	
	comp=Z,13µm,0.2s						
IQOM	**Qom**	**2.03**	**239**	*e*Pn	**Pn**	**04 26 17.4**	**+0.5**
IQOM				*e*		04 26 19.3	
	comp=Z,8µm,0.4s						
IMHD	**Mahdasht**	**2.06**	**265**	*e*Pn	**Pn**	**04 26 18.4**	**+1.2**
IMHD				*e*		04 26 19.9	
	comp=Z,5µm,0.6s						
GHVR	**GHOM**	**2.10**	**228**	*e*Pn	**Pn**	**04 26 18.8**	**+1.0**
KRSH	**Karshahi**	**2.12**	**204**	*e*Pn	**Pn**	**04 26 18.3**	**+0.2**
QALM	**Alamut, Qazvin**	**2.12**	**285**	*e*Pn	**Pn**	**04 26 19.3**	**+1.1**
QALM				*e*		04 26 20.1	
	comp=Z,6µm,0.4s						
IMND	**Minoodasht**	**2.24**	**52**	*e*Pn	**Pn**	**04 26 19.2**	**-0.4**
IMND				*e*		04 27 02.2	
	comp=N,8µm,0.6s						
SHRO	**Shahrood**	**2.29**	**87**	*e*Pn	**Pn**	**04 26 20.7**	**+0.3**
IGZV	**Ghazvin**	**2.45**	**282**	*e*Pn	**Pn**	**04 26 24.7**	**+2.0**
IGZV				*e*		04 27 12.3	
	comp=Z,2µm,0.9s						
QAMS	**Qamsar**	**2.62**	**215**	*e*Pn	**Pn**	**04 26 25.3**	**+0.3**
IRAZ	**Razeghan**	**2.70**	**260**	*e*Pn	**Pn**	**04 26 27.0**	**+0.9**
IRAZ				*e*		04 26 37.7	
	comp=Z,5µm,0.6s						
LHJ2	**Lahijan - Gila**	**2.81**	**297**	*e*Pn	**Pn**	**04 26 27.5**	**+0.1**
GIDE	**GILAN DEYLAMAN**	**2.83**	**292**	*e*Pn	**Pn**	**04 26 28.5**	**+0.6**
JIR1	**Jirandeh**	**2.85**	**287**	*e*Pn	**Pn**	**04 26 29.0**	**+0.9**
JIR1				*e*		04 26 32.3	
	comp=Z,4µm,0.4s						
IKLH	**Kolahrood**	**2.90**	**208**	*e*Pn	**Pn**	**04 26 29.1**	**+0.2**
IKLH				*e*		04 27 11.8	
	comp=Z,4µm,0.3s						
MRVT	**Maraveh tapeh**	**2.91**	**52**	*e*Pn	**Pn**	**04 26 28.7**	**-0.2**
MRVT				*e*		04 27 14.9	
	comp=Z,99nm,0.4s						
ASAO	**Ashtian**	**2.92**	**243**	*e*Pn	**Pn**	**04 26 30.1**	**+0.9**
QABG	**Abgarm-Qazvin**	**2.94**	**267**	*e*Pn	**Pn**	**04 26 28.9**	**-0.5**
IZEF	**Zefreh**	**3.09**	**194**	*e*Pn	**Pn**	**04 26 32.1**	**+0.6**
NASN	**Na'in**	**3.12**	**186**	*e*Pn	**Pn**	**04 26 32.4**	**+0.4**
KHMZ	**Khomeyn**	**3.42**	**232**	*e*Pn	**Pn**	**04 26 37.1**	**+1.0**
HAGD	**Aghdareh**	**3.48**	**253**	*e*Pn	**Pn**	**04 26 38.0**	**+1.1**
SBZV	**Sabzevar**	**3.61**	**81**	*e*Pn	**Pn**	**04 26 38.6**	**-0.1**
IGAR	**Gharneh**	**3.62**	**196**	*e*Pn	**Pn**	**04 26 40.2**	**+1.4**
YZKH	**Yazd**	**3.70**	**161**	*e*Pn	**Pn**	**04 26 40.2**	**+0.5**
ZNJK	**Zanjan**	**3.71**	**283**	*e*Pn	**Pn**	**04 26 42.5**	**+2.4**
IPIR	**Pirpir**	**3.73**	**211**	*e*Pn	**Pn**	**04 26 42.0**	**+1.6**
IPIR				*e*		04 27 56.0	
	comp=Z,1µm,0.7s						
ICHK	**Chekchek**	**3.79**	**164**	*e*Pn	**Pn**	**04 26 41.3**	**+0.1**
BJRD	**Bojnurd**	**3.83**	**61**	*e*Pn	**Pn**	**04 26 42.1**	**+0.5**
TABS	**Tabas**	**3.94**	**124**	*e*Pn	**Pn**	**04 26 43.5**	**+0.4**
TKDS	**Koohdasht(Taba**	**3.97**	**124**	*e*Pn	**Pn**	**04 26 43.4**	**-0.1**
TKDS				*e*		04 28 08.7	
	comp=Z,2µm,1.0s						
ISAD	**Sadrabad**	**4.00**	**174**	*e*Pn	**Pn**	**04 26 44.6**	**+0.5**
HSAM	**Samen**	**4.12**	**247**	*e*Pn	**Pn**	**04 26 47.4**	**+1.7**
IRAM	**Ramesheh**	**4.14**	**190**	*e*Pn	**Pn**	**04 26 46.8**	**+0.8**
ASTR	**Astara**	**4.39**	**308**	P	**Pn**	**04 26 46.5**	**-2.7**
ASTR				S	**Sn**	**04 27 40.5**	**+0.1**
GEYT	**Alibeck**	**4.44**	**61**	Pn	**Pn**	**04 26 50.7**	**+0.8**
	comp=Z,5.1nm,0.3s,baz=248,slow=23,SNR=14						
GEYT				Pg	**Pb**	**04 27 03.5**	**+3.0**
	comp=Z,4.9nm,0.3s,baz=254,slow=10,SNR=9.1						
GEYT				Sn	**Sn**	**04 27 45.7**	**+4.1**
	comp=Z,1.1nm,0.3s,baz=241,slow=11,SNR=1.5						
GEYT				Lg	Lg	04 28 02.9	
	comp=Z,2.6nm,0.3s,baz=232,slow=34,SNR=1.6						
	comp=Z,13nm,0.5s						
IBZA	**Bozab**	**4.59**	**253**	*e*Pn	**Pn**	**04 26 52.7**	**+0.5**
IDOB	**Doab**	**4.63**	**244**	*e*Pn	**Pn**	**04 26 53.8**	**+1.1**
IMEH	**Mehriz**	**4.66**	**165**	*e*Pn	**Pn**	**04 26 53.3**	**+0.4**
IPAY	**Payeh**	**4.73**	**82**	*e*Pn	**Pn**	**04 26 54.2**	**+0.1**
LRK	**Lerik**	**4.73**	**307**	P	**Pn**	**04 26 53.8**	**-0.3**
LRK				S	**Sn**	**04 27 47.9**	**-1.1**
IBAF	**Bafgh**	**4.74**	**155**	*e*Pn	**Pn**	**04 26 54.4**	**+0.3**
ISRB	**Sarab**	**4.82**	**295**	*e*Pn	**Pn**	**04 26 56.4**	**+1.1**
SNGE	**Sanandaj**	**4.83**	**262**	*e*Pn	**Pn**	**04 26 57.2**	**+1.8**
TBHD	**Torbat heydari**	**4.95**	**94**	*e*Pn	**Pn**	**04 26 57.0**	**0.0**
YRD	**Yardimli**	**4.95**	**309**	P	**Pn**	**04 26 56.5**	**-0.6**
YRD				S	**Sn**	**04 27 53.0**	**-1.4**
IKOM	**Komasi**	**4.97**	**251**	*e*Pn	**Pn**	**04 26 57.2**	**0.0**
IKFM	**Kafar-mosalman**	**5.00**	**243**	*e*Pn	**Pn**	**04 26 57.1**	**-0.4**
GLBA	**Clilabad**	**5.06**	**313**	P	**Pn**	**04 26 57.9**	**-0.4**
GLBA				S	**Sn**	**04 27 56.2**	**-0.5**
KLNJ	**Kolanjah**	**5.06**	**196**	*e*Pn	**Pn**	**04 27 00.1**	**+1.3**
GRMI	**Germi**	**5.11**	**306**	*e*Pn	**Pn**	**04 26 59.6**	**+0.4**
ALIB	**Äli-Bayra**	**5.22**	**322**	S	**Sn**	**04 28 01.7**	**+0.9**
GOBA	**Gobu**	**5.25**	**330**	S	**Sn**	**04 28 02.0**	**+0.6**
NDR	**Nardaran**	**5.30**	**333**	S	**Sn**	**04 28 05.7**	**+2.9**
AMIS	**Naft Sefid**	**5.33**	**219**	*e*Pn	**Pn**	**04 27 03.0**	**+0.9**
IBST	**Bostanabad**	**5.36**	**291**	*e*Pn	**Pn**	**04 27 04.0**	**+1.3**
AFRZ	**Afriz**	**5.40**	**116**	*e*Pn	**Pn**	**04 27 03.8**	**+0.6**
IHRS	**Heris**	**5.47**	**298**	*e*Pn	**Pn**	**04 27 04.7**	**+0.5**
IMYA	**Miami**	**5.62**	**84**	*e*Pn	**Pn**	**04 27 06.6**	**+0.4**
IGHG	**Ghaleghazi**	**5.65**	**256**	*e*Pn	**Pn**	**04 27 08.1**	**+1.4**
IDHR	**Dehrash**	**5.69**	**260**	*e*Pn	**Pn**	**04 27 08.4**	**+1.2**
GBS	**Qobustan**	**5.70**	**325**	S	**Sn**	**04 28 13.2**	**+0.4**
JRKH	**Jarkhoshk**	**5.81**	**88**	*e*Pn	**Pn**	**04 27 09.5**	**+0.7**
TBJM	**Torbat-e-JAM**	**5.86**	**94**	*e*Pn	**Pn**	**04 27 09.9**	**+0.4**
PQL	**Pirkuli**	**6.06**	**325**	P	**Pn**	**04 27 12.9**	**+0.6**
PQL				S	**Sn**	**04 28 20.7**	**-1.1**
ZRD	**Zardab**	**6.15**	**317**	P	**Pn**	**04 27 12.9**	**-0.4**
ZRD				S	**Sn**	**04 28 23.7**	**-0.1**
SIZA	**Siyzn**	**6.16**	**328**	P	**Pn**	**04 27 15.0**	**+1.5**
SIZA				S	**Sn**	**04 28 23.9**	**-0.2**
IML	**Ismayilli**	**6.26**	**323**	S	**Sn**	**04 28 24.4**	**-2.3**
SHRT	**Shahrakht**	**6.27**	**109**	*e*Pn	**Pn**	**04 27 15.6**	**+0.6**
BSRN	**Basiran**	**6.31**	**127**	*e*Pn	**Pn**	**04 27 16.4**	**+0.7**
AGDM	**Agdam**	**6.37**	**313**	P	**Pn**	**04 27 15.3**	**-1.1**
AGDM				S	**Sn**	**04 28 28.1**	**-1.2**
QBL	**Gabala**	**6.55**	**322**	S	**Sn**	**04 28 31.3**	**-2.4**
QUBA	**Quba, Azerbaij**	**6.56**	**327**	P	**Pn**	**04 27 19.8**	**+0.7**
QUBA				S	**Sn**	**04 28 34.0**	**+0.1**
XNQ	**Khinaliq**	**6.58**	**325**	P	**Pn**	**04 27 19.6**	**+0.2**
XNQ				S	**Sn**	**04 28 31.2**	**-3.3**
KRBR	**Kerman**	**6.63**	**152**	*e*Pn	**Pn**	**04 27 20.1**	**-0.1**
QSAR	**Qusar**	**6.79**	**327**	P	**Pn**	**04 27 23.3**	**+1.1**
QSAR				S	**Sn**	**04 28 37.5**	**-2.2**
SEKA	**Sheki**	**7.07**	**320**	P	**Pn**	**04 27 25.7**	**-0.3**
SEKA				S	**Sn**	**04 28 43.0**	**-3.5**
GANJ	**Ganja**	**7.18**	**313**	P	**Pn**	**04 27 25.7**	**-1.8**
GANJ				S	**Sn**	**04 28 45.9**	**-3.2**
GDB	**GEDABAY**	**7.56**	**312**	P	**Pn**	**04 27 32.5**	**-0.4**
GDB				S	**Sn**	**04 28 56.4**	**-2.4**
ZKTA	**Zakatala**	**7.68**	**320**	S	**Sn**	**04 28 59.0**	**-2.4**
QZX	**Qazax, Azerbai**	**8.00**	**312**	P	**Pn**	**04 27 38.4**	**-0.3**
QZX				S	**Sn**	**04 29 08.1**	**-1.1**
AKTO	**Aktyubinsk**	**14.94**	**12**	Pn	Pn	04 29 08.6	-4.9
	comp=Z,0.2nm,0.3s,baz=183,slow=14,SNR=3.1						
AKTO				Sn	Sn	04 31 44.4	-15
	baz=356,slow=22,SNR=1.4						
	comp=Z,1.2nm,0.5s						
EIL	**Elat**	**16.54**	**253**	LR	LR	04 37 21.3	
	comp=Z,48nm,18.1s,baz=94,slow=42						
MLR	**Mumtele Rosu**	**22.67**	**303**	P	**P**	**04 30 45.6**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=132,slow=12,SNR=2.4						
	comp=Z,2.4nm,0.7s						
AKASG	**Malin Array Be**	**22.72**	**318**	P	**P**	**04 30 45.0**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=121,slow=8.6,SNR=2.2						
	comp=Z,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**23.44**	**43**	P	**P**	**04 30 52.3**	**+0.5**
	comp=Z,0.5nm,0.2s,baz=245,slow=11,SNR=2.9						
	comp=Z,0.5nm,0.2s						
MKAR	**Makanchi Array**	**24.27**	**54**	P	**P**	**04 31 00.8**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=246,slow=9.2,SNR=4.4						
	comp=Z,0.8nm,0.8s						

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*NEIC **17** 05:16:02.7±1.1, 20.89N±0.05×145.1E±0.1, h98km±8km, mb4.4/28, Error ellipse: s-maj=20.6km s-min=5.2km az=75.0*
*IDC **17** 05:16:03.9±2.7, 20.92N×145.08E, h115km±25km, mb3.6/11, mbtmp4.0/14, Error ellipse: s-maj=23.9km s-min=13.9km az=87.0*
ISC 17 05:16:00.6±0.6, **20.87N**±0.06×**145.1E**±0.1, **h83**km, **n52, σ0§90/47, mb4.2/23, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**6.74**	**338**	P	**Pn**	**05 17 38.8**	**+1.9**
	29nm,0.3s,baz=264,slow=20,SNR=13						
JCJ				S	**Sn**	**05 18 51.9**	**-0.3**
	62nm,0.5s,baz=114,slow=23,SNR=8.8						
GUMO	**Guam**	**7.24**	**182**	P	Pn	05 17 49.7	+5.9
	100nm,0.9s,baz=215,slow=9.5,SNR=1.8						
GUMO	**Guam**	**7.24**	**182**	Pn	**Pn**	**05 17 46.1**	**+2.3**
GUMO				Sn	**Sn**	**05 19 05.2**	**+0.6**
MJAR	**Matsushiro Arr**	**16.73**	**340**	P	**Pn**	**05 19 50.1**	**+0.3**
	1.0nm,0.4s,baz=169,slow=13,SNR=1.6						
JHS	**Saijyo**	**17.58**	**326**		**Pn**	**05 20 01.2**	**+0.9**
JHS				IAmb	IAmb	05 20 30.4	
	comp=Z,39nm,1.5s						
JSD	**Sado**	**18.10**	**342**		**Pn**	**05 20 06.4**	**-0.1**
JSD				IAmb	IAmb	05 20 29.2	
	comp=Z,48nm,1.2s						
PATS	**Pohnpei**	**18.95**	**136**		**Pn**	**05 20 16.3**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**20.49**	**93**	T	T	05 42 02.4	
	baz=280						
H11N1	**WAKE ISLAND Hy**	**20.50**	**89**	T	T	05 42 07.0	
	baz=276						
H11S1	**WAKE ISLAND Hy**	**20.50**	**93**	T	T	05 42 02.6	
	baz=280						
H11N2	**WAKE ISLAND Hy**	**20.50**	**89**	T	T	05 42 07.5	
	baz=276						
H11S2	**WAKE ISLAND Hy**	**20.51**	**93**	T	T	05 41 47.0	
	baz=280						
H11N3	**WAKE ISLAND Hy**	**20.52**	**89**	T	T	05 42 07.9	
	baz=276						
KSRS	**Korea Array**	**22.24**	**322**	P	**P**	**05 20 50.8**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=149,slow=8.7,SNR=12						
	comp=Z,2.4nm,0.8s						
SSLB	**Suanglung**	**22.49**	**282**	P	**P**	**05 20 51.5**	**-2.0**
TOLI2	**Tolitoli**	**30.78**	**233**	P	**P**	**05 22 08.9**	**+0.3**
TOLI2				IAmb	IAmb	05 22 10.9	
	comp=Z,6.1nm,1.0s						
LUWI	**Luwuk**	**30.82**	**228**	P	**P**	**05 22 06.6**	**-2.3**
MTN	**Manton Dam**	**36.19**	**203**	P	**P**	**05 22 55.1**	**-0.3**
SONM	**Songino Array**	**41.10**	**320**	P	**P**	**05 23 36.4**	**0.0**
	comp=Z,0.6nm,0.4s,baz=133,slow=6.8,SNR=8.5						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**41.10**	**320**	P	**P**	**05 23 37.2**	**+0.7**
WB0	**Warramunga Arr**	**41.71**	**195**	P	**P**	**05 23 41.5**	**-0.1**
WB0				IAmb	IAmb	05 23 44.5	
	comp=Z,11nm,1.5s						
WRAB	**Tennant Creek**	**41.88**	**195**	P	**P**	**05 23 43.2**	**+0.2**
WRAB				IAmb	IAmb	05 23 44.4	
	comp=Z,16nm,1.5s						
WB2	**Warramunga Arr**	**41.89**	**195**	P	**P**	**05 23 43.0**	**0.0**
WB2				IAmb	IAmb	05 23 43.6	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**41.90**	**195**	P	**P**	**05 23 43.4**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=15,slow=8.7,SNR=27						
	comp=Z,1.1nm,0.4s						
WRA	**Warramunga Arr**	**41.90**	**195**	P	**P**	**05 23 42.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**43.15**	**208**	P	**P**	**05 23 53.9**	**+0.6**
FITZ				IAmb	IAmb	05 24 11.6	
	comp=Z,12nm,1.5s						
ASAR	**Alice Springs**	**45.58**	**194**	P	**P**	**05 24 12.2**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=12,slow=8.4,SNR=9.5						
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**52.55**	**184**	P	**P**	**05 25 04.6**	**-1.0**
MK31	**Makanchi Array**	**56.55**	**313**	P	**P**	**05 25 34.7**	**+0.1**
MKAR	**Makanchi Array**	**56.55**	**313**	P	**P**	**05 25 34.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=90,slow=8.3,SNR=8.7						
	comp=Z,0.5nm,0.5s						
N18K	**Kilae Creek**	**56.97**	**30**	P	**P**	**05 25 37.3**	**-0.1**
N18K				IAmb	IAmb	05 25 46.9	
	comp=Z,3.5nm,1.0s						
SVW2	**Sparrevohn**	**57.24**	**30**	P	**P**	**05 25 40.3**	**+1.1**
TTA	**Tatalina**	**57.61**	**28**	P	**P**	**05 25 41.7**	**-0.1**
TTA				IAmb	IAmb	05 26 04.2	
	comp=Z,3.6nm,1.4s						
P19K	**Oil Pt**	**57.98**	**32**	P	**P**	**05 25 44.4**	**-0.1**
K20K	**Telida**	**58.58**	**27**	P	**P**	**05 25 49.2**	**+0.7**
K20K				IAmb	IAmb	05 25 50.8	
	comp=Z,3.5nm,0.9s						
J20K	**Nowinta River**	**58.78**	**27**	P	**P**	**

0.1nm,0.3s,baz=152,slow=25,SNR=1.2
DLBC Lg Lg 05 26 14.6
0.2nm,0.3s,baz=324,slow=20,SNR=2.0
0.7nm,0.3s
DLBC Dease Lake 7.03 5 Pn **Pn 05 24 25.0 +2.4**
FMW Mount Fremont 7.73 122 Pn **Pn 05 24 34.2 +1.8**
NBC5 NorthernBC 5 7.86 36 Pn **Pn 05 24 36.1 +2.1**
P33M Teslin, Yukon 8.82 355 Pn **Pn 05 24 48.8 +1.7**
NEW Newport 9.67 104 LR LR 05 28 57.5
comp=Z,17nm,19.6s,baz=286,slow=40
YBH Yreka Blue Hor 11.35 146 LR LR 05 29 06.7
comp=Z,75nm,21.4s,baz=327,slow=34
YKA Yellowknife Ar 14.25 33 Pn **Pn 05 25 59.4 -1.8**
0.1nm,0.3s,baz=228,slow=18,SNR=1.8
0.6nm,0.6s
ELK Elko 15.39 128 Pn **P 05 26 23.7 +2.1**
0.1nm,0.3s,baz=328,slow=9.5,SNR=2.2
ELK LR LR 05 32 00.4
comp=Z,39nm,21.8s,baz=313,slow=37
0.5nm,0.3s
ILAR Eielson Array 15.63 335 Pn **P 05 26 26.4 +2.6**
baz=148,slow=9.0,SNR=13
ILAR LR LR 05 32 14.7
comp=Z,59nm,18.4s,baz=231,slow=37
1.3nm,0.8s
NVAR Mina Array Bea 15.89 140 Pn **P 05 26 28.0 +0.8**
0.1nm,0.3s,baz=317,slow=10,SNR=2.5
NVAR LR LR 05 31 31.9
comp=Z,38nm,18.1s,baz=356,slow=33
0.2nm,0.6s
INK Inuvik 16.94 357 LR LR 05 33 25.7
comp=Z,48nm,20.7s,baz=168,slow=38
PDAR Pinedale Array 17.08 112 Pn **P 05 26 41.6 +1.2**
baz=316,slow=10,SNR=9.0
1.3nm,0.9s
ANMO Albuquerque 24.30 123 P **P 05 27 59.4 +2.3**
0.4nm,0.5s,baz=326,slow=8.1,SNR=3.9
0.4nm,0.5s
TXAR Lajitas Array 30.18 126 P **P 05 28 51.5 +1.6**
0.7nm,1.1s,baz=345,slow=6.5,SNR=3.1
0.7nm,1.1s
H11N2 WAKE ISLAND Hy 57.33 261 T T 06 34 32.7
baz=41,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 57.33 261 T T 06 34 47.9
baz=41,slow=75,SNR=20
H11N1 WAKE ISLAND Hy 57.34 261 T T 06 34 46.6
baz=41,slow=75,SNR=15
KLR Kul'dur 57.38 309 LR LR 05 57 06.3
comp=Z,20nm,18.2s,baz=153,slow=36
H11S1 WAKE ISLAND Hy 58.37 260 T T 06 36 26.3
baz=40
H11S2 WAKE ISLAND Hy 58.38 260 T T 06 36 14.5
baz=40
H11S3 WAKE ISLAND Hy 58.39 260 T T 06 36 16.0
baz=40

*NEIC **17** 05:38:55.0±2.8, 13°.85N±0°.05×96°.46W±0°.08, h17km±4km, mb4.2/35, Md4.3/107(MEX), Error ellipse: s-maj=11.5km s-min=7.9km az=81.0*
*MEX **17** 05:39:10.9±1.3, 15°.71N×96°.37W, h38km±10km, MD4.3*
*IDC **17** 05:39:10.4±2.6, 16°.23N×96°.33W, h0km, mb3.5/7, mbtmp3.4/8, ML3.4/1, MS3.2/9, Error ellipse: s-maj=46.6km s-min=15.9km az=170.0*
ISC 17 05:39:11.1±0.8, 15°.68N±0°.05×96°.41W±0°.02, h31km±5km, n122, σ2s62/138, mb3.8/14, MS3.1/7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
PANG	**Puerto Angel**	**0.07**	**261**	*i* P		**Pb**	**05 39 16.4**		**0.0**
PANG				*i* S		**Sb**	**05 39 21.3**		**+1.3**
HUIG	**Huatulco**	**0.30**	**72**	*i* P		**Pb**	**05 39 17.1**		**-1.5**
HUIG				*e*S		**Sb**	**05 39 21.6**		**-2.2**
PEIG	**Puerto Escondi**	**0.78**	**294**	*e*P		**Pn**	**05 39 24.0**		**-2.0**
PEIG				*e*S		**Sb**	**05 39 34.2**		**-2.4**
OXLC	**Oaxaca**	**1.41**	**348**	*e*P		**Pn**	**05 39 32.5**		**-2.4**
OXLC				*i* S		**Sn**	**05 39 48.6**		**-3.9**
OXBJ	**Oaxaca**	**1.42**	**348**	*e*P		**Pn**	**05 39 32.4**		**-2.5**
OXBJ				*i* S		**Sn**	**05 39 48.9**		**-3.8**
VHO	**Vista Hermosa**	**1.42**	**347**	*e*P		**Pn**	**05 39 32.4**		**-2.6**
VHO				*e*S		**Sn**	**05 39 48.8**		**-4.0**
YOIG	**Yosondua**	**1.60**	**317**	*e*P		**Pn**	**05 39 34.6**		**-3.0**
YOIG				*e*S		**Sn**	**05 39 54.5**		**-3.0**
PNIG	**Pinotepa**	**1.80**	**293**			**Pn**	**05 39 38.4**		**-1.7**
PNIG	**Pinotepa**	**1.80**	**293**	*e*P		**Pn**	**05 39 38.4**		**-1.7**
PNIG				*i* S		**Sn**	**05 39 58.9**		**-3.0**
NILT	**Santiago Nilte**	**1.93**	**63**	*i* P		**Pn**	**05 39 41.2**		**-0.7**
NILT				*i* S		**Sn**	**05 40 03.5**		**-1.6**
CMIG	**Matias Romero**	**2.03**	**46**	Pn		**Pn**	**05 39 40.2**		**-2.9**
	31nm,0.3s,baz=241,slow=13,SNR=344								
CMIG				Lg		Lg	05 40 02.3		
	151nm,0.3s,baz=308,slow=18,SNR=5.3								
CMIG				LR		LR	05 40 20.8		
	comp=Z,224nm,21.4s,baz=254,slow=43								
CMIG	**Matias Romero**	**2.03**	**46**	*e*P		**Pn**	**05 39 40.1**		**-3.1**
CMIG				*e*S		**Sn**	**05 40 03.4**		**-4.1**
TXIG	**Tlaxiaco**	**2.04**	**320**	*e*P		**Pn**	**05 39 42.3**		**-1.4**
TXIG				*e*S		**Sn**	**05 40 08.0**		**-0.2**
NEUV	**Arroyo Zacate**	**2.10**	**16**	*e*P		**Pn**	**05 39 43.0**		**-2.3**
NEUV				*i* S		**Sn**	**05 40 05.8**		**-3.6**
CARR	**Arriaga**	**2.46**	**76**	*i* P		**Pn**	**05 39 46.3**		**-2.9**
CARR				*i* S		**Sn**	**05 40 14.0**		**-4.2**
TOIG	**Toxpalan**	**2.49**	**345**	*e*P		**Pn**	**05 39 49.8**		**+0.2**
TOIG				*i* S		**Sn**	**05 40 17.8**		**-1.2**
HLIG	**Huajuapan de L**	**2.53**	**328**	*e*P		**Pn**	**05 39 51.6**		**+1.3**
HLIG				*i* S		**Sn**	**05 40 18.2**		**-1.9**
MGIG	**Malinaltepec**	**2.64**	**306**	*e*P		**Pn**	**05 39 51.4**		**-0.4**
MGIG				*e*S		**Sn**	**05 40 19.9**		**-2.9**
FTIG	**Fresnillo de T**	**2.77**	**324**	*e*P		**Pn**	**05 39 53.3**		**-0.2**
FTIG				*e*S		**Sn**	**05 40 23.6**		**-2.3**
TLIG	**Tlapa**	**2.79**	**312**	Pn		**Pb**	**05 39 57.6**		**-2.8**
TLIG	**Tlapa**	**2.79**	**312**	*e*P		**Pn**	**05 39 54.0**		**+0.1**
TLIG				*e*S		**Sn**	**05 40 25.8**		**-0.8**
CRIG	**Cruz Grande**	**2.82**	**292**			**Pn**	**05 39 53.2**		**-0.9**
CRIG	**Cruz Grande**	**2.82**	**292**	*e*P		**Pn**	**05 39 53.2**		**-0.9**
CRIG				*e*S		**Sn**	**05 40 22.1**		**-5.1**
THEZ	**Tehuacan**	**2.94**	**342**	*i* P		**Pn**	**05 39 59.2**		**+3.3**
THEZ				*i* S		**Sn**	**05 40 33.1**		**+2.8**
HMTT	**Tlapaneco**	**2.95**	**316**			**Pb**	**05 40 02.6**		**-0.5**
HMTT	**Tlapaneco**	**2.95**	**316**	*i* P		**Pb**	**05 40 02.6**		**-0.5**
HMTT				*i* S		**Sn**	**05 40 32.1**		**+1.6**
TUIG	**Tuzandepetl**	**3.02**	**39**	*i* P		**Pn**	**05 39 53.6**		**-3.2**
TUIG				*e*S		**Sn**	**05 40 30.0**		**-1.9**
OZST	**Orizaba**	**3.23**	**348**	*i* P		**Pb**	**05 40 06.0**		**-2.0**
OZST				*i* S		**Sb**	**05 40 45.9**		**-1.1**
TGIG		**3.34**	**70**			**Pn**	**05 39 59.6**		**-1.7**
TGIG		**3.34**	**70**	*i* P		**Pn**	**05 39 59.6**		**-1.7**
TGIG				*e*S		**Sn**	**05 40 42.1**		**+2.2**
DAIG	**Los Arroyos**	**3.39**	**294**			**Pn**	**05 40 01.3**		**-0.7**
DAIG	**Los Arroyos**	**3.39**	**294**	*i* P		**Pn**	**05 40 01.3**		**-0.7**
DAIG				*e*S		**Sn**	**05 40 35.9**		**-5.3**
JAUV	**Jalcomulco**	**3.69**	**354**	*e*P		**Pn**	**05 40 04.5**		**-1.6**
JAUV				*e*S		**Sb**	**05 40 54.5**		**-5.5**
MEIG	**Mezcala**	**3.81**	**306**			**Pn**	**05 40 08.2**		**+0.4**
MEIG	**Mezcala**	**3.81**	**306**	*e*P		**Pn**	**05 40 08.2**		**+0.4**
MEIG				*e*S		**Sn**	**05 40 50.5**		**-1.0**
CAIG	**El Cayaco**	**3.95**	**291**			**Pn**	**05 40 08.5**		**-1.1**
CAIG	**El Cayaco**	**3.95**	**291**	*i* P		**Pn**	**05 40 08.5**		**-1.1**
CAIG				*e*S		**Sn**	**05 40 48.6**		**-6.4**
PPM	**Popocatepetl**	**3.98**	**328**	*e*P		**Pn**	**05 40 12.6**		**+2.1**
PPM				*e*S		**Sn**	**05 40 57.5**		**+1.0**
PLIG	**Platanillo**	**4.01**	**313**	*e*P		**Pn**	**05 40 11.1**		**+0.6**
PLIG				*e*S		**Sn**	**05 40 53.7**		**-2.8**
LVIG	**Laguna Verde**	**4.02**	**360**	*e*P		**Pn**	**05 40 09.4**		**-1.3**
LVIG				*e*S		**Sn**	**05 40 56.6**		**-0.2**
PATR	**El Naranjo**	**4.06**	**97**	*e*P		**Pn**	**05 40 10.6**		**-0.8**
PATR				*e*S		**Sn**	**05 40 54.4**		**-3.6**
PAVE	**Pavencul**	**4.11**	**96**	*e*P		**Pn**	**05 40 11.0**		**-1.0**
PAVE				*e*S		**Sn**	**05 40 57.2**		**-1.9**
CCIG	**Comitan**	**4.15**	**81**			**Pn**	**05 40 09.6**		**-3.0**
CCIG	**Comitan**	**4.15**	**81**	*e*P		**Pn**	**05 40 11.9**		**-0.7**
CCIG				*i* S		**Sn**	**05 40 56.7**		**-3.4**
CHUJ	**Union Juarez**	**4.18**	**97**	*e*P		**Sn**	**05 40 12.2**		**-0.9**
CHUJ				*e*S		**Sn**	**05 40 58.6**		**-2.5**
THVM	**De Xico**	**4.37**	**326**	*e*		Pb	05 40 21.4		-6.0
THVM				*e*			05 41 09.7		
TLVM	**San Miguel Top**	**4.38**	**324**	*e*		**Pb**	**05 40 23.7**		**-4.0**
TLVM				*e*			05 41 16.3		
XCVM	**Xochimilco**	**4.40**	**324**	*e*		Pb	05 40 21.8		-6.0
XCVM				*e*			05 41 13.5		
MAVM	**Malinalco, Edo**	**4.40**	**318**			**Pb**	**05 40 23.2**		**-4.6**
MAVM				*e*			05 41 25.1		
UNM	**Universidad Na**	**4.49**	**324**	Pn		Pb	05 40 24.6		-4.9
BJVM	**Benito Juarez**	**4.53**	**325**	*e*		**Sb**	**05 41 21.4**		**-2.9**
AOVM	**Tlapan**	**4.53**	**322**	*e*		**Pn**	**05 40 20.4**		**+2.4**
AOVM				*e*			05 41 20.4		
ARIG	**Puente Sto Nin**	**4.58**	**305**			**Pn**	**05 40 19.5**		**+1.3**
ARIG	**Puente Sto Nin**	**4.58**	**305**	*e*P		**Pn**	**05 40 19.5**		**+1.3**
ARIG				*e*S		**Sn**	**05 41 08.6**		**-1.8**
CJVM	**Cuajimalpa**	**4.58**	**324**	*e*		**Pb**	**05 40 34.4**		**+3.4**
CJVM				*e*			05 41 24.2		
INVM	**La Marquesa**	**4.58**	**322**	*e*		**Pn**	**05 40 14.4**		**-4.3**
INVM				*e*			05 41 12.1		
GMVM	**Gustavo A Made**	**4.59**	**326**	*e*		Pb	05 40 25.6		-5.6
GMVM				*e*			05 41 22.8		
CXUV	**Coxquihui**	**4.61**	**346**	*e*P		**Pn**	**05 40 20.9**		**+2.1**
CXUV				*e*			05 41 11.6		
APVM	**Azcapotzalco**	**4.64**	**325**	*e*		**Sb**	**05 41 25.6**		**-1.9**
ZIIG	**Zihuatanejo**	**5.22**	**292**			**Pn**	**05 40 26.2**		**-0.8**
ZIIG	**Zihuatanejo**	**5.22**	**292**	*i* P		**Pn**	**05 40 26.2**		**-0.8**
ZIIG				*e*S		**Sn**	**05 41 20.7**		**-5.5**
DEIG	**Demacu**	**5.24**	**332**	*e*P		**Pn**	**05 40 29.8**		**+2.2**
DEIG				*e*S		**Sn**	**05 41 27.5**		**+0.5**
ACIG	**Acambay**	**5.41**	**323**	*e*		**Pb**	**05 40 47.4**		**+2.4**
ACIG				*e*			05 41 52.1		
MOIG	**Morelia**	**6.05**	**312**	Pn		**Pn**	**05 40 43.3**		**+4.5**
MOIG	**Morelia**	**6.05**	**312**	*e*		**Pn**	**05 40 41.5**		**+2.7**
MOIG				*e*			05 42 14.8		
JRQG	**Juriquilla Cam**	**6.30**	**323**	*e*			05 42 27.4		
PETF	**Flores**	**6.40**	**78**			**Pn**	**05 40 39.7**		**-3.6**
RPIG	**Rio Verde**	**7.04**	**332**	*e*		**Pb**	**05 41 09.7**		**-3.1**
RPIG				*e*			05 42 22.8		
MMIG	**Aquila**	**7.13**	**292**	*e*		**Pn**	**05 41 55.0**		**+1.6**
MMIG				*e*			05 42 39.6		
AAIG	**Aguscalientes**	**8.44**	**319**	*e*			05 43 31.6		
TEIG	**Tepich**	**8.96**	**58**			**Pn**	**05 41 14.4**		**-4.0**
JCT	**Junction City**	**15.06**	**349**			**P**	**05 42 50.6**		**+3.8**
TXAR	**Lajitas Array**	**15.15**	**335**	Pn		**Pn**	**05 42 43.2**		**+0.1**
	baz=159,slow=13,SNR=1.9								
TXAR				Lg		Lg	05 47 06.4		
	baz=165,slow=31,SNR=1.3								
TXAR				LR		LR	05 49 20.3		
	comp=Z,57nm,18.2s,baz=140,slow=42								
	0.1nm,0.6s								
TXAR	**Lajitas Array**	**15.15**	**335**	Pn		**P**	**05 42 48.3**		**+0.4**
TX31	**Lajitas Ar. Si**	**15.15**	**335**			**P**	**05 42 48.6**		**+0.7**
TX32	**Lajitas Array**	**15.15**	**335**			**P**	**05 42 49.0**		**+1.2**
LPIG	**La Paz**	**15.52**	**305**	LR		LR	05 48 13.2		
	comp=Z,77nm,18.8s,baz=178,slow=36								
ABTX	**Abilene, Hawle**	**17.13**	**351**	P		**P**	**05 43 14.8**		**+5.1**
ABTX					IAmb	IAmb	05 43 21.7		
	comp=Z,8.3nm,0.8s								
Z38A	**Mt. Pleasant**	**17.55**	**4**	P		**P**	**05 43 20.3**		**+5.9**
Z38A					IAmb	IAmb	05 43 27.2		
	comp=Z,18nm,0.9s								
Z35A	**Perchaven, San**	**17.59**	**358**	P		**P**	**05 43 20.5**		**+5.7**
Z35A					IAmb	IAmb	05 43 27.4		
	comp=Z,30nm,1.4s								
MNTX	**Cornudas Mount**	**17.93**	**334**			**P**	**05 43 20.3**		**+1.7**
LOOK	**Love County**	**18.25**	**358**	P		**P**	**05 43 24.1**		**+2.0**
LOOK					IAmb	IAmb	05 43 45.8		
	comp=Z,22nm,1.1s								
X34A	**Smith Ranch, M**	**18.89**	**356**			**Pn**	**05 43 34.3**		**+4.5**
X34A					IAmb	IAmb	05 43 59.5		
	comp=Z,15nm,1.0s								
Z47A	**Carrollton**	**19.01**	**22**	P		**Pn**	**05 43 36.4**		**+5.1**
Z47A					IAmb	IAmb	05 43 45.5		
	comp=Z,9.0nm,0.9s								
MSTX	**Muleshoe**	**19.10**	**344**			**P**	**05 43 31.4**		**-0.1**
MSTX					IAmb	IAmb	05 43 42.8		
	comp=Z,14nm,1.2s								
UALR	**University of**	**19.36**	**10**	P		**Pn**	**05 43 36.5**		**+1.0**
UALR					IAmb	IAmb	05 43 40.7		
	comp=Z,14nm,1.0s								
AMTX	**Amarillo**	**19.70**	**347**	P		**Pn**	**05 43 40.5**		**+0.8**
AMTX					IAmb	IAmb	05 43 56.0		
	comp=Z,7.5nm,0.9s								
WHAR	**Wooly Hollow**	**19.88**	**10**	P		**Pn**	**05 43 45.2**		**+3.6**
WHAR					IAmb	IAmb	05 44 10.4		
	comp=Z,11nm,1.0s								
BCOK	**Bluff Creek, N**	**19.93**	**357**			**Pn**	**05 43 45.8**		**+3.6**
BCOK					IAmb	IAmb	05 43 48.5		
	comp=Z,17nm,0.9s								
TUL1	**Leonard**	**20.16**	**1**	P		Pn	05 43 44.1		-0.8
TUL1						pP	05 43 51.2		-0.2
TUL1					IAmb	IAmb	05 43 57.9		
	comp=Z,13nm,0.8s								
OK034	**N. Norfolk Rd.**	**20.25**	**359**			Pn	05 43 47.4		+1.3
OK034					IAmb	IAmb	05 44 00.8		
	comp=Z,9.5nm,0.7s								
QUOK	**Quay**	**20.41**	**359**			Pn	05 43 50.3		+2.4
QUOK					IAmb	IAmb	05 43 56.6		
	comp=Z,11nm,0.7s								
CROK	**Carrier**	**20.79**	**356**			**P**	**05 43 50.1**		**+0.3**
CROK					IAmb	IAmb	05 43 58.1		
	comp=Z,30nm,0.8s								
BLOK	**Blackwell**	**21.01**	**358**		IAmb	IAmb	05 44 00.2		
	comp=Z,10nm,0.7s								
TUC	**Tucson**	**21.10**	**324**	P		**P**	**05 43 53.9**		**+0.6**
ANMO	**Albuquerque**	**21.20**	**337**	P		**P**	**05 43 53.4**		**-1.1**
	comp=Z,0.8nm,0.6s,baz=154,slow=13,SNR=3.0								
	comp=Z,0.8nm,0.6s								
ANMO	**Albuquerque**	**21.20**	**337**	P		**P**	**05 43 55.5**		**+1.0**
WVT	**Waverly**	**21.76**	**19**	P		**P**	**05 44 00.6**		**+0.4**
T25A	**Trinidad**	**22.53**	**343**	IAmb	IAmb		05 44 24.6		
	comp=Z,11nm,1.1s								
U49A	**Red Boiling Sp**	**22.81**	**23**	IAmb	IAmb		05 44 25.8		
	comp=Z,3.5nm,0.6s								
TKL	**Tuckaleechee C**	**22.88**	**27**	P		**P**	**05 44 09.7**		**-2.5**
	comp=Z,0.9nm,0.6s,baz=217,slow=15,SNR=1.3								
TKL					LR	LR	05 56 27.8		
	comp=Z,27nm,18.0s,baz=166,slow=46								
	comp=Z,0.9nm,0.6s								
SDCO	**Great Sand Dun**	**23.41**	**342**	P		**P**	**05 44 18.1**		**+0.3**
MVCO	**Mesa Verde**	**23.98**	**336**	P		**P**	**05 44 22.7**		**-0.5**
MVCO					IAmb	IAmb	05 44 38.0		
	comp=Z,9.4nm,1.4s								
ISCO	**Idaho Springs**	**25.34**	**343**	P		**P**	**05 44 37.7**		**+2.0**
ISCO					IAmb	IAmb	05 44 49.9		
	comp=Z,4.5nm,1.1s								
PFO	**Pinyon Flats O**	**25.43**	**318**	LR		LR	05 54 36.4		
	comp=Z,56nm,18.7s,baz=172,slow=37								
SDV	**Santo Domingo**	**26.05**	**102**	LR		LR	05 56 10.5		
	comp=Z,43nm,19.0s,baz=268,slow=39								
O49A	**Covington**	**26.59**	**21**	P		**P**	**05 44 47.9**		**+1.2**
PDAR	**Pinedale Array**	**29.26**	**340**	P		**P**	**05 45 09.7**		**-1.0**
	comp=Z,0.2nm,0.5s,baz=146,slow=6.6,SNR=2.5								
	comp=Z,0.2nm,0.5s								
NVAR	**Mina Array Bea**	**29.75**	**324**	P		**P**	**05 45 15.7**		**+0.6**
	comp=Z,1.0nm,0.7s,baz=140,slow=10.0,SNR=11								
NVAR					LR	LR	05 58 39.7		
	comp=Z,75nm,18.6s,baz=134,slow=40								
	comp=Z,1.0nm,0.7s								
ELK	**Elko**	**29.86**	**330**	P		**P**	**05 45 16.1**		**+0.1**
	comp=Z,0.4nm,0.5s,baz=146,slow=11,SNR=2.3								
	comp=Z,0.4nm,0.5s								
SNOW	**Snow King Moun**	**30.28**	**339**	P		**P**	**05 45 19.9**		**+0.2**
SNOW					IAmb	IAmb	05 45 22.4		
	comp=Z,3.2nm,0.9s								
LOHW	**Long Hollow**	**30.36**	**339**	IAmb	IAmb		05 45 40.4		
	comp=Z,4.0nm,1.4s								
SADO	**Sadowa**	**32.47**	**23**	LR		LR	06 02 13.5		
	comp=Z,28nm,19.1s,baz=166,slow=43								
YBH	**Yreka Blue Hor**	**34.47**	**324**	LR		LR	06 00 56.1		
	comp=Z,68nm,18.6s,baz=151,slow=38								
F10A	**Beach Ranch, E**	**34.88**	**334**	P		**P**	**05 45 59.5**		**-0.3**
F10A					IAmb	IAmb	05 46 16.0		
	comp=Z,3.9nm,0.9s								
H03N2	**Juan Fernandez**	**51.61**	**161**	T		T	06 43 59.1		
	baz=328,slow=77,SNR=9.1								
H03N1	**Juan Fernandez**	**51.62**	**161**	T		T	06 43 59.7		
	baz=328,slow=77,SNR=14								
H03N3	**Juan Fernandez**	**51.63**	**161**	T		T	06 44 14.0		
	baz=328,slow=77,SNR=7.3								
INK	**Inuvik**	**57.67**	**345**	LR		LR	06 18 32.5		
	comp=Z,50nm,18.3s,baz=226,slow=41								
ILAR	**Eielson Array**	**59.65**	**337**	P		**P**	**05 49 12.2**		**+0.1**
	comp=Z,0.6nm,0.9s,baz=113,slow=4.7,SNR=4.4								
	comp=Z,0.6nm,0.9s								
ESDC	**Sonseca Array**	**82.00**	**51**	P		**P**	**05 51 31.0**		**+2.5**
	comp=Z,0.1nm,0.3s,baz=305,slow=4.0,SNR=4.5								
	comp=Z,0.1nm,0.3s								

*IDC **17** 06:01:10.8±2.0, 10°.14S×124°.89E, h0km, mb3.6/1, mbtmp3.5/4, ML3.3/3, MS3.2/2, Error ellipse: s-maj=36.8km s-min=22.6km az=27.0*
ISC 17 06:01:15.0±1.5, 10°.2S±0°.2×124°.8E±0°.2, h35km, n6, σ1s48/5, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
BATI	**Baumata**	**1.15**	**267**	Pg		**Pn**	**06 01 34.0**		**-0.6**
	49nm,0.3s,baz=72,slow=3.2,SNR=17								
FITZ	**Fitzroy Crossi**	**7.94**	**174**	Pn		**Pn**	**06 03 08.3**		**+0.3**
	0.9nm,0.3s,baz=0.1,slow=11,SNR=26								
FITZ				LR		LR	06 05 58.1		
	comp=Z,74nm,20.1s,baz=358,slow=36								
	2.1nm,0.3s								
WRA	**Warramunga Arr**	**13.38**	**138**	Pn		**Pn**	**06 04 21.2**		**-1.2**
	0.1nm,0.3s,baz=314,slow=13,SNR=8.1								
	0.2nm,0.5s								
ASAR	**Alice Springs**	**15.99**	**148**	Pn		**Pn**	**06 04 56.8**		**-0.6**
	0.1nm,0.3s,baz=321,slow=12,SNR=11								
	0.8nm,0.6s								
MKAR	**Makanchi Array**	**68.21**	**330**	P		**P**	**06 12 13.4**		**+1.4**
	0.4nm,0.8s,baz=145,slow=7.9,SNR=1.9								
	0.4nm,0.8s								
GEYT	**Alibeck**	**78.43**	**312**	LR		LR	06 55 36.1		
	comp=Z,24nm,18.3s,baz=192,slow=42								

*IDC **17** 06:01:44.8±0.5, 10°.12S×124°.80E, h0km, mb4.6/17, mbtmp4.6/19, ML5.3/2, MS3.2/2, Error ellipse: s-maj=13.2km s-min=11.2km az=174.0*
*BJI **17** 06:01:45.0±0.0, 10°.30S×124°.70E, h10km, mb4.9/42, mB4.9/21, Ms4.3/4, Ms7 4.1/4*
*NEIC **17** 06:01:46.3±2.5, 10°.28S±0°.06×124°.70E±0°.06, h10km±1km, mb4.8/31, Error ellipse: s-maj=11.5km s-min=7.8km az=215.0*
*DJA **17** 06:01:48.6±0.3, 10°S±2°×12°5E±°, h14km±2km, M4.8/30, mb4.9/30, mB5.3/13, MLv4.9/17, Mw(mB)4.7/13, MwMwp4.9/2, Mwp5.2/2*
ISC 17 06:01:46.8±0.3, 10°.34S±0°.04×124°.61E±0°.04, h10km, n153, σ2s33/142, mb4.8/43, MS3.5/3, 2C-2D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SOEI	**Soe**	**0.67**	**330**			**Pg**	**06 02 01.7**		**+1.9**
SOEI	**Soe**	**0.67**	**330**	P		**Pg**	**06 02 01.0**		**+1.2**
SOEI				S		**Sb**	**06 02 11.7**		**+1.6**
SOEI	**Soe**	**0.67**	**330**	P		**Pg**	**06 02 01.7**		**+1.9**
BATI	**Baumata**	**0.94**	**278**	Pg		**Pg**	**06 02 06.7**		**+1.8**
	2µm,0.3s,baz=119,slow=19,SNR=138								
BATI				Lg		Lg	06 02 22.9		
	1µm,0.3s,baz=294,slow=22,SNR=7.0								
BATI				LR		LR	06 02 50.0		
	comp=Z,3µm,18.1s,baz=333,slow=58								
BATI	**Baumata**	**0.94**	**278**	P		**Pg**	**06 02 06.7**		**+1.8**
BATI				S		**Sg**	**06 02 20.0**		**+2.8**
MMRI	**Maumere**	**2.89**	**306**	Pn		**Pn**	**06 02 33.9**		**+1.0**
MMRI	**Maumere**	**2.89**	**306**	P		**Pn**	**06 02 32.7**		**-0.2**
MMRI	**Maumere**	**2.89**	**306**	P		**Pn**	**06 02 34.8**		**+1.9**
EDFI	**Ende, Flores**	**3.29**	**298**	P		**Pn**	**06 02 39.2**		**+0.8**
BASI	**Baing, Sumba**	**3.97**	**271**	P		**Pn**	**06 02 47.5**		**-0.3**
WBSI	**Waikabubak, Su**	**5.19**	**277**	P		**Pn**	**06 03 04.5**		**-0.1**
	0.9nm2µm133nm,0.8s								
BBSI	**Bau Bau**	**5.23**	**337**	P		**Pn**	**06 03 07.0**		**+2.0**
	0.1nm21nm,0.6s								
BSSI	**Bau Bau, Buton**	**5.83**	**315**	P		**Pn**	**06 03 13.5**		**+0.1**
	0.8nm3µm295nm,0.8s								
KNRA	**Kununurra**	**6.67**	**143**	Pn		**Pn**	**06 03 24.3**		**-0.6**
KNRA	**Kununurra**	**6.67**	**143**	P		**Pn**	**06 03 25.3**		**+0.4**
BKSI	**Bulukumba**	**6.68**	**318**	P		**Pn**	**06 03 25.4**		**+0.4**
	0.3nm3µm775nm92nm,0.7s								
MTN	**Manton Dam**	**6.86**	**112**	Pn		**Pn**	**06 03 28.4**		**+1.0**
MTN	**Manton Dam**	**6.86**	**112**	P		**Pn**	**06 03 28.7**		**+1.2**
PLAI	**Plampang**	**6.91**	**282**	P		**Pn**	**06 03 27.6**		**-0.5**
	0.9nm2µm286nm,0.8s								
PLAI	**Plampang**	**6.91**	**282**	P		**Pn**	**06 03 28.5**		**+0.4**
SAUI	**Saumlaki**	**7.00**	**71**	P		**Pn**	**06 03

BBOO	**Buckleboo**	**24.73**	**156**	P		**P**	**06 07 09.3**	**+0.8**
HTT	**Hallett**	**26.48**	**152**	P		**P**	**06 07 24.5**	**+0.1**
STKA	**Stephens Creek**	**26.58**	**146**	P		**P**	**06 07 23.9**	**-1.4**
	comp=Z,7.2nm,0.9s,baz=312,slow=11,SNR=9.0							
STKA				S		**S**	**06 12 05.4**	**+5.5**
	comp=Z,2.5nm,0.6s,baz=247,slow=21,SNR=2.4							
	comp=Z,7.2nm,0.9s							
STKA	**Stephens Creek**	**26.58**	**146**	P		**P**	**06 07 25.5**	**+0.3**
STKA	**Stephens Creek**	**26.58**	**146**	P		**P**	**06 07 26.1**	**+0.9**
JOW	**Kunigami**	**37.12**	**5**	P		**P**	**06 08 55.8**	**-1.9**
JOW				IAmb		IAmb	06 08 56.9	
	comp=Z,12nm,0.8s							
CMAR	**Chiang Mai Arr**	**38.21**	**318**	P		**P**	**06 09 05.8**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=146,slow=6.3,SNR=14							
CMAR				PcP		**PcP**	**06 11 21.3**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=176,slow=2.7,SNR=6.7							
	comp=Z,3.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**38.21**	**318**	P		P	06 09 04.9	-2.2
KMI	**Kunming**	**41.19**	**329**	⇑P		**P**	**06 09 36.4**	**+4.3**
KMI				pmax		pmax		
	comp=Z,15nm,0.5s							
NJ2	**Nanjing**	**42.51**	**353**	*e*P		**P**	**06 09 47.1**	**+4.7**
NJ2				pmax		pmax		
	comp=Z,11nm,0.6s							
PZH	**PanZhiHua**	**42.84**	**329**	P		**P**	**06 09 46.1**	**+0.7**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,80nm,4.8s							
JMN	**Monobe**	**44.70**	**11**	P		**P**	**06 09 59.3**	**-0.9**
CD2	**Chengdu**	**45.64**	**335**	P		**P**	**06 10 10.8**	**+3.1**
JHS	**Saijyo**	**45.80**	**10**	P		**P**	**06 10 07.2**	**-1.7**
XAN	**Xi'an**	**46.58**	**342**	⇑P		P	06 10 12.0	-3.1
XAN				pmax		pmax		
	comp=Z,24nm,0.8s							
XAN				pmax		pmax		
	comp=Z,97nm,4.6s							
KSAR	**Wonju Array Be**	**47.62**	**4**	P		**P**	**06 10 21.5**	**-1.5**
KSRS	**Korea Array**	**47.64**	**4**	P		**P**	**06 10 21.4**	**-1.8**
	comp=Z,4.5nm,0.8s,baz=184,slow=9.6,SNR=27							
KSRS				PcP		**PcP**	**06 11 51.9**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=182,slow=3.7,SNR=4.5							
	comp=Z,4.5nm,0.8s							
MJAR	**Matsushiro Arr**	**48.35**	**15**	P		P	06 10 26.3	-2.5
	comp=Z,4.8nm,0.6s,baz=183,slow=8.7,SNR=15							
	comp=Z,4.8nm,0.6s							
HNS	**HongShan**	**48.38**	**349**	⇓P		**P**	**06 10 27.0**	**-1.9**
HNS				pmax		pmax		
	comp=Z,10.0nm,0.7s							
SEHB	**SEOHWA**	**48.47**	**4**	IAmb		IAmb	06 10 30.2	
	comp=Z,11nm,0.9s							
LZH	**Lanzhou**	**50.16**	**338**	*e*P		**P**	**06 10 41.5**	**-1.3**
LZH				pP		pP	06 10 46.3	+1.0
LZH				pmax		pmax		
	comp=Z,22nm,1.1s							
BJT	**Baijiatuan**	**50.71**	**352**	P		P	06 10 44.2	-2.4
BJT				IAmb		IAmb	06 10 45.2	
	comp=Z,12nm,0.8s							
BJI	**Beijing**	**50.73**	**352**	P		P	06 10 44.3	-2.5
BJI				pmax		pmax		
	comp=Z,15nm,0.8s							
HHC	**Hu-ho-hao-te**	**52.34**	**348**	*e*P		**P**	**06 11 00.1**	**+1.1**
HHC				pmax		pmax		
	comp=Z,13nm,0.7s							
HYBB	**Hyderabad (bro**	**53.21**	**301**	*e*P		**P**	**06 11 04.4**	**-1.4**
XLT	**XiLinHaoTe**	**54.53**	**352**	⇓*i*P		**P**	**06 11 13.6**	**-1.4**
XLT				pP		pP	06 11 18.5	+0.9
XLT				sP		sP	06 11 21.3	+2.7
XLT				pmax		pmax		
	comp=Z,27nm,0.7s							
XLT				pmax		pmax		
	comp=Z,76nm,4.1s							
GTA	**Gaotai**	**54.60**	**337**	*e*P		**P**	**06 11 14.8**	**-0.9**
GTA				pP		pP	06 11 20.5	+2.3
GTA				sP		pwP	06 11 23.8	+2.8
GTA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
USRK	**Ussuriysk Ar.**	**54.69**	**6**	P		**P**	**06 11 14.7**	**-1.3**
	comp=Z,4.0nm,0.6s,baz=186,slow=7.2,SNR=7.6							
	comp=Z,4.0nm,0.6s							
MDJ	**Mudanjiang**	**54.88**	**4**	P		**P**	**06 11 17.3**	**-0.1**
MDJ				pmax		pmax		
	comp=Z,15nm,0.6s							
MDJ				pmax		pmax		
	comp=Z,78nm,4.5s							
ULN	**Ulaanbaatar**	**60.01**	**346**	P		**P**	**06 11 52.0**	**-1.8**
ULN				IAmb		IAmb	06 11 53.3	
	comp=Z,8.5nm,0.8s							
SONM	**Songino Array**	**60.13**	**346**	P		**P**	**06 11 53.4**	**-1.2**
	comp=Z,5.3nm,0.7s,baz=166,slow=8.2,SNR=24							
	comp=Z,5.3nm,0.7s							
SONM	**Songino Array**	**60.13**	**346**	IAmb		IAmb	06 11 54.1	
	comp=Z,5.8nm,0.8s							
WMQ	**Urumqi**	**63.49**	**331**	*e*P		**P**	**06 12 18.8**	**+1.6**
WMQ				pmax		pmax		
	comp=Z,14nm,0.7s							
KSH	**Kashi**	**67.05**	**321**	P		**P**	**06 12 38.5**	**-2.0**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MK31	**Makanchi Array**	**68.26**	**330**	P		**P**	**06 12 46.2**	**-1.7**
MKAR	**Makanchi Array**	**68.26**	**330**	P		**P**	**06 12 46.5**	**-1.4**
	comp=Z,14nm,0.6s,baz=134,slow=7.6,SNR=131							
	comp=Z,14nm,0.6s							
MAKZ	**Makanchi**	**68.43**	**330**	P		**P**	**06 12 47.4**	**-1.6**
MAKZ				IAmb		IAmb	06 12 48.0	
	comp=Z,8.8nm,0.8s							
PETK	**Petropavlovsk-**	**69.22**	**21**	P		**P**	**06 12 53.6**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=207,slow=9.2,SNR=7.0							
	comp=Z,2.9nm,0.5s							
AAK	**Ala-Archa**	**69.80**	**323**	P		**P**	**06 12 56.4**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=120,slow=2.6,SNR=2.5							
	comp=Z,3.7nm,0.6s							
AAK	**Ala-Archa**	**69.80**	**323**	P		**P**	**06 12 55.8**	**-1.9**
AAK				IAmb		IAmb	06 12 57.3	
	comp=Z,5.5nm,0.8s							
VNDA	**Vanda**	**69.85**	**172**	P		**P**	**06 12 58.9**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=316,slow=6.4,SNR=12							
	comp=Z,1.0nm,0.7s							
VNDA	**Vanda**	**69.85**	**172**	P		**P**	**06 12 57.6**	**+0.3**
MAW	**Mawson**	**69.93**	**201**	P		**P**	**06 12 59.5**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=85,slow=8.8,SNR=4.7							
	comp=Z,1.8nm,0.6s							
MAW	**Mawson**	**69.93**	**201**	P		**P**	**06 12 57.1**	**-0.8**
SBA	**Scott Base**	**70.81**	**171**	P		**P**	**06 13 03.2**	**+0.1**
SBA				IAmb		IAmb	06 14 01.9	
	comp=Z,20nm,1.9s							
ZAA0	**Zalesovo Array**	**72.36**	**337**	P		P	06 13 10.4	-2.4
ZALV	**Zalesovo Beam**	**72.36**	**337**	P		P	06 13 10.3	-2.4
	comp=Z,11nm,0.9s,baz=134,slow=4.3,SNR=21							
	comp=Z,11nm,0.9s							
ZALV	**Zalesovo Beam**	**72.36**	**337**	P		P	06 13 10.5	-2.2
KK31	**Karatay Array**	**72.47**	**322**	P		**P**	**06 13 13.5**	**-0.2**
KURBB	**Kurchatov Arra**	**72.70**	**331**	P		P	06 13 12.3	-2.6
	comp=Z,5.7nm,0.7s,baz=144,slow=5.6,SNR=50							
	comp=Z,5.7nm,0.7s							
KURK	**Kurchatov**	**72.72**	**331**	P		**P**	**06 13 13.1**	**-1.9**
KURK				IAmb		IAmb	06 13 14.1	
	comp=Z,13nm,0.9s							
BRVK	**Borovoye**	**78.22**	**330**	P		**P**	**06 13 44.5**	**-2.0**
BRVK				IAmb		IAmb	06 13 45.9	
	comp=Z,6.6nm,1.1s							
QSPA	**South Pole Qui**	**79.66**	**180**	P		**P**	**06 13 54.9**	**+0.5**
QSPA				IAmb		IAmb	06 13 58.5	
	comp=Z,7.3nm,0.9s							
TIXI	**Tiksi**	**81.85**	**1**	P		P	06 14 03.5	-2.3
TIXI				IAmb		IAmb	06 14 05.3	
	comp=Z,3.8nm,0.7s							
ABKAR	**Akbulak array**	**81.89**	**323**	P		**P**	**06 14 04.9**	**-1.5**
ABKAR	**Akbulak array**	**81.89**	**323**	IAmb		IAmb	06 14 05.2	
	comp=Z,4.3nm,0.6s							
AKTO	**Aktyubinsk**	**83.52**	**324**	P		**P**	**06 14 13.6**	**-1.3**
	comp=Z,8.3nm,0.6s,baz=108,slow=6.8,SNR=41							
	comp=Z,8.3nm,0.6s							
RAYN	**Ar Rayn**	**84.27**	**295**	P		**P**	**06 14 18.6**	**-0.8**
KMBO	**Kilima Mbogo**	**87.20**	**269**	P		**P**	**06 14 34.6**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=108,slow=7.1,SNR=3.8							
	comp=Z,2.1nm,0.7s							
GNI	**Garni**	**88.96**	**311**	LR		LR	07 02 17.7	
	comp=Z,5.2nm,18.2s,baz=172,slow=41							
TROLL	**Troll, Antarti**	**89.60**	**195**	P		**P**	**06 14 47.0**	**+2.4**
SNAA	**Sanae**	**91.16**	**195**	P		**P**	**06 14 53.1**	**+1.4**
BELA	**Belgrano 2**	**91.16**	**184**	P		**P**	**06 14 51.5**	**0.0**
VNA2	**Neumayer--Watz**	**92.76**	**194**	P		**P**	**06 15 00.6**	**+1.5**
	baz=105,slow=2.7							
VNA3	**Neumayer Olymp**	**93.07**	**193**	P		**P**	**06 15 02.5**	**+2.0**
BOSA	**Boshof**	**93.19**	**240**	P		**P**	**06 15 02.5**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=101,slow=3.8,SNR=4.7							
BOSA				LR		LR	06 57 37.4	
	comp=Z,17nm,18.6s,baz=191,slow=36							
	comp=Z,2.0nm,0.8s							
ILAR	**Eielson Array**	**98.63**	**26**	P		**P**	**06 15 24.1**	**-1.6**
	comp=Z,0.3nm,0.8s,baz=264,slow=3.6,SNR=0.9							
	comp=Z,0.3nm,0.8s							
AKASG	**Malin Array Be**	**101.32**	**320**	P		**Pdif**	**06 15 35.6**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=62,slow=4.3,SNR=2.2							
MNK	**Minsk**	**102.24**	**324**	*i* P		**Pdif**	**06 15 31.5**	**-11**
	comp=E,3.0nm,0.9s							
MNK				*i* P		**Pdif**	**06 15 31.5**	**-11**
	comp=N,7.0nm,0.8s							
MNK				*i* P		**Pdif**	**06 15 31.5**	**-11**
	comp=Z,14nm,0.6s,baz=270							
MNK				*i* PP		PP	06 19 44.3	-10
MNK				*i* PPP		PPP	06 21 54.3	
MNK				*i* S		SKSac	06 26 08.4	-13
MNK				*i* PS		**PS**	**06 28 52.0**	**-8.3**
MNK				*i* SS		SS	06 34 21.4	-10
MNK				*i* SSS		SSS	06 38 18.6	
MNK				*i* LR		LR	07 01 14.4	
MNK				*i* LRM		MLR	07 02 15.0	
	comp=E,21nm,21.3s							
MNK				*i* LRM		MLR	07 02 15.0	
	comp=N,12nm,16.1s							
MNK				*i* LRM		MLR	07 02 15.0	
	comp=Z,71nm,18.7s							
NVAR	**Mina Array Bea**	**117.53**	**52**	PKP		**PKPdf**	**06 20 32.8**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=216,slow=4.5,SNR=2.1							
PDAR	**Pinedale Array**	**123.01**	**45**	PKP		**PKPdf**	**06 20 42.5**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=305,slow=1.9,SNR=1.5							
ESDC	**Sonseca Array**	**125.94**	**312**	PKP		**PKPdf**	**06 20 48.6**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=31,slow=2.7,SNR=3.5							
TXAR	**Lajitas Array**	**131.20**	**60**	PKP		**PKPdf**	**06 20 59.6**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=270,slow=4.5,SNR=4.2							
SCHQ	**Schefferville**	**134.70**	**9**	PKP		**PKPdf**	**06 21 05.9**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=34,slow=3.6,SNR=1.9							
LPAZ	**La Paz**	**150.69**	**154**	PKPbc		**PKPbc**	**06 21 42.7**	**+1.7**
	comp=Z,4.6nm,0.9s,baz=182,slow=3.4,SNR=18							
BDFB	**Brasilia**	**153.18**	**196**	PKPbc		**PKPbc**	**06 21 46.1**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=141,slow=6.5,SNR=3.1							

*IDC **17** 06:12:43.5±5.1, 8.°55S×119.°19E, h144km±48km, mb3.1/2, mbtmp3.7/6, Error ellipse: s-maj=108.1km s-min=18.2km az=61.0*
*DJA **17** 06:12:45.2±0.6, 9.°5S±6.°×11.°9E±.°, h122km±7km, M3.7/7, MLv3.7/7*
ISC 17 06:12:42.9±1.0, 8.°66S±0.°07×119.°29E±0.°05, h170km, n11, σ2s11/16, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.98**	**174**	P			**Pn**	**06 13 09.0**	**-0.5**
WBSI				S			**Sn**	**06 13 27.3**	**-2.7**
PLAI	**Plampang**	**1.50**	**264**	P			**Pn**	**06 13 14.1**	**+0.1**
PLAI				S			**Sn**	**06 13 35.5**	**-2.6**
BASI	**Baing, Sumba**	**2.00**	**141**	P			**Pn**	**06 13 20.4**	**+1.1**
EDFI	**Ende, Flores**	**2.38**	**92**	P			**Pn**	**06 13 23.3**	**-0.3**
EDFI				S			**Sn**	**06 13 53.2**	**-2.0**
TWSI	**Taliwang, Sumb**	**2.38**	**268**	P			**Pn**	**06 13 24.0**	**+0.4**
KAPI	**Kappang**	**3.66**	**7**	P			**Pn**	**06 13 37.9**	**-1.4**
	2.3nm,0.3s,baz=180,slow=16.8,SNR=2.2								
BATI	**Baumata**	**4.58**	**110**	P			**Pn**	**06 13 53.0**	**+1.8**
	136nm,0.7s,baz=286,slow=7.4								
BATI				S			**Sn**	**06 14 43.6**	**-1.0**
	301nm,1.0s,baz=265,slow=13,SNR=1.8								
FITZ	**Fitzroy Crossi**	**11.23**	**147**	P			**Pn**	**06 15 21.5**	**+2.9**
	2.2nm,0.4s,baz=333,slow=13,SNR=23								
FITZ				S			**Sn**	**06 17 19.6**	**-3.7**
	2.5nm,0.8s,baz=96,slow=14,SNR=2.1								
WRA	**Warramunga Arr**	**18.38**	**129**	P			**Pn**	**06 16 48.5**	**+1.4**
	0.2nm,0.3s,baz=305,slow=13,SNR=9.6								
WRA				S			**S**	**06 20 04.7**	**-1.4**
	0.5nm,0.5s,baz=308,slow=24,SNR=5.5								
ASAR	**Alice Springs**	**20.45**	**139**	P			Pn	06 17 12.2	+0.4
	0.5nm,0.5s,baz=314,slow=9.4,SNR=5.7								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**64.29**	**333**	P			**P**	**06 23 02.5**	**+2.4**
	0.8nm,0.6s,baz=142,slow=7.4,SNR=6.7								
	0.8nm,0.6s								

*IDC **17** 06:13:20.5±4.1, 32.°64N×142.°78E, h0km, mb3.7/4, mbtmp3.7/7, ML3.3/3, MS2.3/1, Error ellipse: s-maj=127.8km s-min=24.2km az=68.0*
ISC 17 06:13:22.9±2.1, 32.°5N±0.°1×142.°4E±0.°3, h10km, n7, σ2s27/9, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**5.34**	**320**	Pn			**Pn**	**06 14 42.4**	**-0.3**
	0.3nm,0.3s,baz=144,slow=12,SNR=9.8								
MJAR				Sn			**Sn**	**06 15 40.9**	**-3.4**
	0.1nm,0.3s,baz=102,slow=29,SNR=6.9								
	2.0nm,0.4s								
JCJ	**Chichijima**	**5.38**	**182**	Pn			**Pn**	**06 14 43.7**	**+0.6**
	2.5nm,0.3s,baz=351,slow=18,SNR=1.5								
JCJ				Sn			**Sn**	**06 15 41.7**	**-3.4**
	1.0nm,0.3s,baz=92,slow=23,SNR=1.9								
	27nm,0.6s								
KSRS	**Korea Array**	**12.89**	**297**	Pn			**Pn**	**06 16 28.5**	**+2.4**
	0.3nm,0.3s,baz=108,slow=13,SNR=4.2								
KSRS				LR			LR	06 20 47.4	
	comp=Z,16nm,21.9s,baz=175,slow=34								
	0.6nm,0.3s								
SONM	**Songino Array**	**31.19**	**310**	P			**P**	**06 19 43.1**	**+0.8**
	0.4nm,0.3s,baz=122,slow=7.9,SNR=2.4								
	0.4nm,0.3s								
MKAR	**Makanchi Array**	**47.35**	**306**	P			**P**	**06 21 57.1**	**+0.2**
	1.0nm,0.6s,baz=90,slow=9.6,SNR=9.7								
	1.0nm,0.6s								
KURBB	**Kurchatov Arra**	**49.54**	**311**	P			**P**	**06 22 13.2**	**-0.6**
	0.5nm,0.6s,baz=89,slow=7.6,SNR=5.1								
	0.5nm,0.6s								
WRA	**Warramunga Arr**	**52.70**	**190**	P			**P**	**06 22 38.7**	**+1.0**
	0.4nm,0.6s,baz=7.6,slow=7.9,SNR=2.6								
	0.4nm,0.6s								

*IDC **17** 06:14:48.6±2.5, 54.°10N×86.°38E, h0km, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=19.3km s-min=12.6km az=51.0*
*NNC **17** 06:14:48.6±4.8, 54.°18N×86.°34E, h0km, mb3.6, mpv2.6, Error ellipse: s-maj=39.4km s-min=22.7km az=11.0, Suspected Mining explosion.*
ISC 17 06:14:50.0±3.2, 54.°5N±0.°2×83.°68E±0.°06, h0km, n8, σ1s20/13, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**126**	*i*				06 17 59.7	
	baz=82,slow=311,SNR=7.8								
ZAA0	**Zalesovo Array**	**0.83**	**126**	⇑P			**Pg**	**06 15 05.0**	**-0.9**
	0.2nm,0.3s								
ZAA0				⇑S			**Sb**	**06 15 19.4**	**+0.3**
	1.9nm,0.6s								
ZALV	**Zalesovo Beam**	**0.83**	**126**	Pg			**Pg**	**06 15 05.3**	**-0.7**
	1.1nm,0.3s,baz=81,slow=17,SNR=7.6								
ZALV				Lg			Lg	06 15 19.8	
	1.9nm,0.3s,baz=82,slow=31,SNR=19								
ZALV				Rg			Rg	06 15 25.2	
	53nm,1.1s,baz=81,slow=35,SNR=16								
KURK	**Kurchatov**	**4.85**	**222**	⇓Pn			**Pg**	**06 16 21.9**	**-0.9**
	1.1nm,0.6s								
KURK				⇑Sn			**Sg**	**06 17 27.4**	**+1.9**
	0.5nm,0.5s								
KURK				⇓Lg			Lg	06 17 57.3	
	3.5nm,0.9s								
KURBB	**Kurchatov Arra**	**4.95**	**221**	Pn			**Pb**	**06 16 18.5**	**+1.0**
	0.2nm,0.3s,baz=55,slow=14,SNR=7.9								
KURBB				Sn			**Sg**	**06 17 26.9**	**-2.2**
	baz=56,slow=22								
KURBB				Lg			Lg	06 17 57.9	
	baz=55,slow=31,SNR=4.4								
	1.7nm,0.5s								
KURBB	**Kurchatov Arra**	**4.95**	**221**	⇑Pn			**Pb**	**06 16 18.4**	**+0.8**
	1.6nm,0.5s								
KURBB				⇑Sn			**Sg**	**06 17 27.8**	**-1.3**
	2.0nm,0.5s								
KURBB				⇑Lg			Lg	06 17 59.5	
	4.1nm,0.6s								
MK31	**Makanchi Array**	**7.71**	**187**	Pn			**Pn**	**06 16 43.6**	**+0.1**
	baz=27,slow=14,SNR=14								
MK31				⇓Sn			**Sn**	**06 18 11.9**	**+0.4**
	0.8nm,0.7s								
MK31				⇑Lg			Lg	06 18 54.7	
	1.3nm,0.8s,baz=30,slow=33,SNR=3.7								
MKAR	**Makanchi Array**	**7.71**	**187**	Pn			**Pn**	**06 16 43.4**	**-0.1**
	0.3nm,0.3s,baz=20,slow=14,SNR=10								
MKAR				Sn			**Sn**	**06 18 12.2**	**+0.7**
	0.1nm,0.3s,baz=17,slow=31,SNR=4.2								
MKAR				Lg			Lg	06 18 54.9	
	baz=16,slow=26,SNR=5.4								
	0.4nm,0.3s								

*MEX **17** 06:26:09.9±0.9, 32.°16N×115.°20W, h10km, MD3.5*
*ECX **17** 06:26:09.0±0.6, 32.°20N×115.°27W, h20km±3km, MD2.2, ML2.5*
ISC 17 06:26:08.1±1.0, 32.°17N±0.°03×115.°32W±0.°03, h18km±6km, n21, σ0s83/31, 5C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUVIX	**Guadalupe Vict**	**0.24**	**58**	⇑*i*P			**Pg**	**06 26 13.3**	**-0.3**
GUVIX				*e*S			**Sg**	**06 26 17.1**	**-0.3**
MBIG	**Mexicali**	**0.25**	**23**	*e*P			**Pg**	**06 26 13.9**	**+0.1**
MBIG				*e*S			**Sb**	**06 26 18.8**	**+0.6**
MBIG	**Mexicali**	**0.25**	**23**	⇓*e*P			**Pg**	**06 26 13.9**	**+0.1**
RITX	**Riito Sonora**	**0.30**	**92**	⇑*i*P			**Pg**	**06 26 14.6**	**0.0**
RITX				*e*S			**Sb**	**06 26 19.5**	**-0.2**
CTLX	**Tlaxcala, TLX**	**0.33**	**26**	⇓*i*P			**Pg**	**06 26 14.9**	**-0.3**
CTLX				*e*S			**Sg**	**06 26 20.3**	**+0.3**
YUCAX	**Ej. Yucatɲn**	**0.47**	**24**	*e*P			**Pg**	**06 26 17.5**	**-0.1**
YUCAX				IAML				06 26 25.4	
	comp=N,412nm,0.1s								
YUCAX				*e*				06 26 25.4	
SGL	**Mount Signal**	**0.59**	**324**	⇑*i*P			**Pg**	**06 26 20.0**	**+0.2**
EMSC	**East Mesa**	**0.63**	**26**	*e*P			**Pg**	**06 26 19.7**	**-0.8**
DREC	**Desert Rsrch C**	**0.64**	**350**	*e*P			**Pg**	**06 26 20.6**	**-0.2**
YUH2	**Yuha Desert**	**0.70**	**313**	*e*P			**Pg**	**06 26 21.7**	**-0.2**
YUH2				*e*S			**Sg**	**06 26 31.4**	**+0.2**
COA	**Coachella**	**0.71**	**13**	⇓*i*P			**Pg**	**06 26 20.9**	**-1.2**
ECBX	**El Chinero**	**0.73**	**162**	*e*P			**Pg**	**06 26 21.8**	**-0.8**
ECBX				*e*S			**Sg**	**06 26 32.4**	**+0.1**
ECBX				⇑*e*				06 26 33.6	
ECBX				IAML				06 26 33.6	
	comp=N,212nm,0.3s								
ECBX				⇓*e*				06 26 34.3	
ECBX				IAML				06 26 34.3	
	comp=E,140nm,0.2s								
YMD	**Yuma Desert**	**0.76**	**60**	*e*P			**Pg**	**06 26 21.2**	**-1.7**
COK2	**Cook Ranch 2**	**0.76**	**333**	*e*P			**Pg**	**06 26 22.7**	**-0.3**
RMX	**La Rumorosa**	**0.77**	**304**	*e*P			**Pg**	**06 26 22.4**	**-0.9**
RMX				*e*S			**Sg**	**06 26 32.2**	**-1.4**
RMX				IAML				06 26 32.6	
	comp=E,191nm,0.1s								
RMX				⇑*e*				06 26 32.6	
RMX				⇓*e*				06 26 32.9	
RMX				IAML				06 26 32.9	
	comp=N,148nm,0.2s								
CRR	**Carrizo Plain**	**0.90**	**322**	⇓*i*P			**Pb**	**06 26 25.3**	**+0.1**
SPIG	**San Pedro Mart**	**1.13**	**187**	*e*P			**Pb**	**06 26 28.9**	**-0.5**
SPIG				*e*S			**Sb**	**06 26 45.2**	**+1.3**
CBX	**Cerro Bola**	**1.15**	**277**	*e*P			**Pn**	**06 26 29.4**	**-0.1**
TJIG	**Tijuana**	**1.18**	**283**	*e*P			**Pn**	**06 26 29.9**	**+0.1**
TJIG				*e*S			**Sb**	**06 26 46.0**	**+1.1**
BAR	**Barrett**	**1.25**	**294**	*e*P			**Pn**	**06 26 30.7**	**-0.1**
214A	**Organ Pipe Nat**	**2.14**	**95**	*e*P			**Pn**	**06 26 45.0**	**+2.1**
214A				*i* S			**Sb**	**06 27 11.2**	**-1.3**

*NNC **17** 06:28:52.0±8.9, 37.°51N×71.°60E, h193km±114km, mb2.4, mpv3.5, Error ellipse: s-maj=92.6km s-min=44.7km az=11.0*
ISC 17 06:28:52.0±3.4, 37.°5N±0.°2×71.°7E±0.°1, h200km, n10, σ0s82/12, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.88**	**18**	P			**Pn**	**06 30 05.1**	**-0.1**
	SNR=101								
UCH	**Uchtor**	**5.21**	**24**	P			**Pn**	**06 30 09.2**	**-0.2**
	SNR=49								
EKS2	**Erkin-Say**	**5.41**	**16**	P			**Pn**	**06 30 11.9**	**+0.2**
	SNR=16								
AAK	**Ala-Archa**	**5.57**	**22**	P			**Pn**	**06 30 14.1**	**+0.2**
	SNR=12								
KK31	**Karatay Array**	**5.68**	**351**	⇑P			**Pn**	**06 30 16.1**	**+0.9**
	1.3nm,0.3s,baz=172,slow=12,SNR=9.4								
KK31				⇑S		

	35nm,0.5s						
DJR	**Jarkent**	**5.05 280**	*e*P		Pn	06 44 43.2	+6.3
	10.0nm,0.2s						
DJR			*e*S		**Sb**	**06 45 43.5**	**-6.8**
	32nm,0.3s						
DJR	**Jarkent**	**5.05 280**	Pg		**Pg**	**06 44 57.4**	**-0.4**
	13nm,0.3s						
DJR			Lg		Lg	06 46 08.4	
	69nm,0.6s						
SHLS	**Shalkode**	**5.31 267**	*e*P		**Pn**	**06 44 44.2**	**+3.6**
	34nm,0.4s						
SHLS			*e*S		**Sn**	**06 45 44.9**	**+3.1**
	69nm,0.6s						
SHLS	**Shalkode**	**5.31 267**	Pg		**Pb**	**06 44 57.4**	**+3.4**
	34nm,0.4s						
SHLS			Lg		Lg	06 46 08.0	
	70nm,0.5s						
UZB	**Uzynbulak**	**5.63 268**	*e*P		Pb	06 44 53.1	-6.4
	8.7nm,0.3s						
UZB			*e*S		**Sb**	**06 46 00.0**	**-7.0**
	37nm,0.7s						
UZB	**Uzynbulak**	**5.63 268**	Pg		**Pg**	**06 45 10.0**	**+1.1**
	12nm,0.4s						
UZB			Lg		Lg	06 46 29.1	
	46nm,0.6s						
KPKS	**Kokpek**	**5.84 271**	Pg		**Pg**	**06 45 13.1**	**+0.2**
	12nm,0.4s						
KPKS			Lg		Lg	06 46 35.0	
	61nm,0.4s						
ZHN	**Zhinishke**	**6.05 268**	Pg		Pg	06 45 22.9	+6.0
	15nm,0.2s						
ZHN			Lg		Lg	06 46 52.6	
	56nm,0.3s						
SATY	**Saty**	**6.09 267**	Pg		**Pg**	**06 45 17.8**	**+0.1**
	15nm,0.4s						
SATY			Lg		Lg	06 46 43.0	
	28nm,0.7s						
TDK	**Taldyqorghan**	**6.12 286**	*e*P		**Pb**	**06 45 05.4**	**-2.4**
	72nm,0.4s						
TDK			*e*S		**Sb**	**06 46 20.4**	**-0.6**
	132nm,0.5s						
TDK	**Taldyqorghan**	**6.12 286**	Pg		**Pg**	**06 45 18.0**	**-0.2**
	56nm,0.3s						
TDK			Lg		Lg	06 46 43.4	
	182nm,0.6s						
KURS	**Kuram**	**6.21 272**	Pg		**Pg**	**06 45 23.9**	**+3.9**
	8.8nm,0.5s						
KURS			Lg		Lg	06 46 53.5	
	18nm,0.8s						
ARXS	**Arharly**	**6.45 278**	Pg		**Pg**	**06 45 24.6**	**+0.1**
	14nm,1.0s						
ARXS			Lg		Lg	06 46 54.8	
	62nm,0.7s						
MDOK	**Medeo**	**7.06 270**	Pg		**Pg**	**06 45 37.9**	**+1.7**
	8.1nm,0.3s						
MDOK			Lg		Lg	06 47 17.5	
	19nm,0.6s						
KTBS	**Karatobe**	**7.28 274**	Pg		**Pg**	**06 45 40.8**	**+0.4**
	6.2nm,0.5s						
KTBS			Lg		Lg	06 47 22.5	
	29nm,0.5s						
MTBS	**Maitube**	**7.51 270**	Pg		**Pg**	**06 45 45.0**	**+0.1**
	5.1nm,0.3s						
MTBS			Lg		Lg	06 47 29.7	
	16nm,0.5s						
KUU	**Kurty**	**7.52 276**	Pg		**Pg**	**06 45 44.8**	**-0.2**
	2.9nm,0.2s						
KUU			Lg		Lg	06 47 29.3	
	27nm,0.7s						
KST	**Kastek**	**7.86 269**	Pg		**Pg**	**06 45 51.4**	**-0.2**
	7.6nm,0.8s						
KST			Lg		Lg	06 47 40.6	
	16nm,1.1s						
KURBB	**Kurchatov Arra**	**8.95 324**	Pn		**Pn**	**06 45 29.7**	**-0.6**
	1.6nm,0.3s,baz=133,slow=13,SNR=82						
KURBB			Sn		**Sn**	**06 47 09.4**	**-1.6**
	0.3nm,0.3s,baz=119,slow=26,SNR=1.9						
KURBB			Lg		Lg	06 48 00.4	
	0.1nm,0.3s,baz=258,slow=24,SNR=2.3						
	5.5nm,0.3s						
KURBB	**Kurchatov Arra**	**8.95 324**	Pn		**Pn**	**06 45 30.1**	**-0.1**
KURBB			Lg		Lg	06 48 09.1	
KURK	**Kurchatov**	**8.98 325**	⇓Pn		**Pn**	**06 45 29.8**	**-0.9**
	2.5nm,0.3s						
KURK			Lg		Lg	06 48 09.1	
ZAA0	**Zalesovo Array**	**10.40 354**	⇑Pn		Pn	06 45 45.9	-4.3
	0.9nm,1.0s						
ZALV	**Zalesovo Beam**	**10.40 354**	Pn		**Pn**	**06 45 47.1**	**-3.1**
	2.4nm,0.3s,baz=174,slow=15,SNR=15						
ZALV			Lg		Lg	06 48 46.7	
	baz=182,slow=26						
	5.1nm,0.4s						
SONM	**Songino Array**	**14.36 66**	Pn		**Pn**	**06 46 41.6**	**-2.9**
	0.3nm,0.3s,baz=275,slow=16,SNR=2.1						
SONM			Lg		Lg	06 50 43.5	
	baz=256,slow=30						
	0.3nm,0.3s						
AKTO	**Aktyubinsk**	**20.63 299**	P		Pn	06 48 04.4	+1.7
	0.7nm,0.5s,baz=96,slow=10,SNR=2.6						
	0.7nm,0.5s						
ARU	**Arti**	**21.97 316**	P		**P**	**06 48 16.2**	**+1.3**
	7.0nm,0.2s,baz=139,slow=11,SNR=9.4						
	7.0nm,0.2s						
NRIK	**Noril'sk**	**25.78 1**	P		**P**	**06 48 50.5**	**-1.2**
	5.5nm,0.5s,baz=166,slow=8.3,SNR=8.2						
	5.5nm,0.5s						
KLR	**Kul'dur**	**31.17 64**	LR		LR	07 02 03.6	
	comp=Z,26nm,21.4s,baz=209,slow=36						
AKASG	**Malin Array Be**	**38.85 301**	P		**P**	**06 50 47.1**	**+1.0**
	0.3nm,0.3s,baz=63,slow=8.8,SNR=2.8						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**39.28 319**	P		**P**	**06 50 50.4**	**+0.8**
	3.0nm,0.9s,baz=77,slow=8.7,SNR=4.7						
	3.0nm,0.9s						
ARCES	**ARCESS Array B**	**39.95 331**	P		**P**	**06 50 55.8**	**+0.7**
	2.2nm,0.7s,baz=91,slow=9.0,SNR=16						
ARCES			PcP		**PcP**	**06 53 00.6**	**+0.4**
	0.8nm,0.7s,baz=53,slow=18,SNR=3.9						
	2.2nm,0.7s						
NB2	**NORSAR Subarra**	**46.44 319**	P		**P**	**06 51 48.3**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=76,slow=8.6						
NOA	**NORSAR Array B**	**46.44 319**	P		**P**	**06 51 48.4**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=75,slow=7.9,SNR=7.2						
NOA			LR		LR	07 12 59.5	
	comp=Z,18nm,18.3s,baz=120,slow=38						
	comp=Z,1.2nm,0.6s						
ILAR	**Eielson Array**	**64.12 23**	P		**P**	**06 53 53.0**	**-2.0**
	comp=Z,0.6nm,0.7s,baz=326,slow=5.6,SNR=7.6						
	comp=Z,0.6nm,0.7s						
ESDC	**Sonseca Array**	**64.50 301**	P		**P**	**06 53 59.3**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=52,slow=6.7,SNR=5.0						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**76.86 134**	P		**P**	**06 55 13.7**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=340,slow=5.4,SNR=6.8						
	comp=Z,1.1nm,0.9s						
ASAR	**Alice Springs**	**79.75 137**	P		**P**	**06 55 29.9**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=329,slow=5.6,SNR=5.9						
	comp=Z,0.5nm,0.7s						
LPAZ	**La Paz**	**145.37 314**	PKPbc		**PKPbc**	**07 02 59.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=297,slow=2.3,SNR=3.8						

IDC 17 06:45:43.2±1.9, 2°.59N×128°.79E, h0km, mb3.6/5, mbtmp3.7/5, Error ellipse: s-maj=113.5km s-min=22.2km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.79 188**		P	P	06 50 26.9	+0.7
	1.2nm,0.7s,baz=11,slow=11,SNR=2.1						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**23.05 167**		P	P	06 50 51.1	+0.8
	0.3nm,0.3s,baz=344,slow=11,SNR=24						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.57 169**		P	P	06 51 22.5	-0.7
	0.5nm,0.5s,baz=355,slow=8.1,SNR=14						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**36.37 161**		P	P	06 52 48.8	-0.5
	0.5nm,0.4s,baz=321,slow=16,SNR=3.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.66 325**		P	P	06 55 49.5	+0.1
	0.7nm,0.4s,baz=119,slow=8.3,SNR=9.9						
	0.7nm,0.4s						

KRSC 17 07:05:54.2±1.9, 53°.90N×167°.73E, h61km±34km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.66 323**		P	Pn	07 06 22.1	+1.0
BKI				S	Sn	07 06 44.0	+2.6
MKZ	**Mys Kozlova**	**3.58 283**		P	Pn	07 06 49.9	+2.7
MKZ				S	Sn	07 07 31.5	+3.3
KBTR	**Krutoberegovo**	**3.65 311**		P	Pn	07 06 50.1	+1.9
KBTR				S	Sn	07 07 32.8	+2.8
SMKR	**Semkarok**	**4.48 309**		P	Pn	07 07 04.5	+4.9
SPN	**Mys Shipunski**	**4.67 263**		P	Pn	07 07 05.9	+3.8
SPN				S	Sn	07 07 57.8	+2.8
NLC	**Nalytchevo**	**5.05 265**		P	Pn	07 07 11.0	+3.6
NLC				S	Sn	07 08 06.7	+2.4
SDLR	**Sedlovina**	**5.31 267**		P	Pn	07 07 14.7	+3.8
UGLR	**Uglovaya**	**5.36 266**		P	Pn	07 07 15.8	+4.2
AVH	**Avacha**	**5.39 267**		P	Pn	07 07 16.1	+4.0
AVH				S	Sn	07 08 17.7	+4.8
KRX	**Arik**	**5.43 268**		P	Pn	07 07 16.7	+4.0
KRX				S	Sn	07 08 18.5	+4.7
KOK	**Koryaka**	**5.45 267**		P	Pn	07 07 16.5	+3.6
RUS	**Russkaya**	**5.74 259**		P	Pn	07 07 20.0	+3.3
RUS				S	Sn	07 08 24.2	+3.1
GNL	**Ganaly**	**5.81 272**		P	Pn	07 07 22.4	+4.6
GNL				S	Sn	07 08 27.6	+4.6
KRMR	**Karymshinskiy**	**5.85 263**		S	Sn	07 08 26.4	+2.6
MTVR	**Mutnovka**	**5.91 260**		P	Pn	07 07 23.2	+4.0
MTVR				S	Sn	07 08 27.9	+2.3
GRL	**Gorelyy**	**5.96 261**		P	Pn	07 07 24.5	+4.7
GRL				S	Sn	07 08 31.3	+4.6
KDTR	**Khodutka, Kamc**	**6.21 254**		S	Sn	07 08 34.4	+1.7

IDC 17 07:11:23.3±1.9, 34°.89S×179°.74E, h0km, mb4.0/3, mbtmp4.1/4, ML4.6/1, Error ellipse: s-maj=46.8km s-min=32.6km az=62.0
WEL 17 07:11:33.3±1.0, 36°.5±9°×18°.0E±1°.0, h140km±19km, M4.5/50, ML4.8/30, MLv4.5/50, Error ellipse: s-maj=0.0km s-min=0.0km az=60.9
NOU 17 07:11:34.1, 36°.125×179°.87E, h232km, MLv4.9/9, Off E. Coast of N. Island, N.Z.
ISC 17 07:11:38.4±2.0, 35°.9S±0°.1×179°.6E±0°.1, h162km±13km, n130, σ2°.28/122, mb3.8/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.96 210**		P	**Pn**	**07 12 10.1**	**-3.7**
MXZ				S	**Sn**	**07 12 41.2**	**0.0**
WMGZ	**Waiomatatini S**	**2.15 205**		P	**Pn**	**07 12 14.5**	**-1.4**
PKGZ	**Pakihiroa**	**2.33 210**		P	**Pn**	**07 12 16.6**	**-1.6**
PKGZ				S	**Sn**	**07 12 49.0**	**0.0**
HAZ	**Te Kaha**	**2.35 217**		P	**Pn**	**07 12 16.8**	**-1.6**
HAZ				S	**Sn**	**07 12 51.4**	**+2.1**
PUZ	**Puketiti**	**2.43 205**		P	**Pn**	**07 12 17.6**	**-1.7**
PUZ				S	**Sn**	**07 12 51.8**	**+0.9**
WIZ	**White Island**	**2.52 228**		P	**Pn**	**07 12 16.6**	**-3.6**
WSRZ	**White Island S**	**2.52 229**		P	**Pn**	**07 12 17.4**	**-2.9**
WSRZ				S	**Sn**	**07 12 50.6**	**-2.2**
RUGZ	**Raukumara Rang**	**2.57 215**		P	**Pn**	**07 12 19.3**	**-1.7**
TWGZ	**Tauwhareparae**	**2.62 208**		P	**Pn**	**07 12 20.4**	**-1.2**
TWGZ				S	**Sn**	**07 12 57.0**	**+1.9**
CNGZ	**Carnagh Statio**	**2.82 202**		P	**Pn**	**07 12 22.8**	**-1.1**
CNGZ				S	**Sn**	**07 13 01.2**	**+1.8**
WHRZ	**Whale Island**	**2.86 225**		P	**Pn**	**07 12 23.8**	**-0.7**
TKGZ	**Te Karaka**	**2.90 207**		P	**Pn**	**07 12 23.2**	**-1.7**
TKGZ				S	**Sn**	**07 13 03.0**	**+1.8**
MWZ	**Matawai**	**2.94 213**		P	**Pn**	**07 12 23.8**	**-1.7**
MWZ				S	**Sn**	**07 13 03.0**	**+0.9**
URZ	**Urewera**	**3.08 219**		Pn	**Pn**	**07 12 25.0**	**-2.2**
	39nm,0.3s,baz=250,slow=3.4,SNR=310						
URZ				Sn	**Sn**	**07 13 05.0**	**-0.1**
	38nm,0.3s,baz=167,slow=14,SNR=9.5						
	166nm,0.3s						
URZ	**Urewera**	**3.08 219**		P	**Pn**	**07 12 25.6**	**-1.6**
URZ				S	**Sn**	**07 13 04.7**	**-0.5**
URZ	**Urewera**	**3.08 219**		P	**Pn**	**07 12 25.6**	**-1.6**
MARZ	**Manawahe**	**3.12 227**		P	**Pn**	**07 12 26.0**	**-1.8**
RAGZ	**Rawiri**	**3.12 212**		P	**Pn**	**07 12 26.1**	**-1.7**
RIGZ	**Rimuhau**	**3.17 206**		P	**Pn**	**07 12 26.3**	**-2.0**
RIGZ				S	**Sn**	**07 13 08.9**	**+1.7**
EDRZ	**Edgecumbe**	**3.17 224**		P	**Pn**	**07 12 26.9**	**-1.5**
KUZ	**Kuaotunu**	**3.21 253**		P	Pn	07 12 23.2	-5.7
LIRZ	**Lichensteins R**	**3.31 229**		P	**Pn**	**07 12 29.0**	**-1.1**
PRGZ	**Paritu Road**	**3.32 203**		P	**Pn**	**07 12 27.6**	**-2.6**
GRZ	**Great Barrier**	**3.34 262**		P	Pn	07 12 23.9	-6.5
MKRZ	**Makatiti**	**3.35 227**		P	**Pn**	**07 12 29.6**	**-1.1**
OMRZ	**Omania**	**3.38 228**		P	**Pn**	**07 12 28.9**	**-2.2**
TARZ	**Mount Tarawera**	**3.39 225**		P	**Pn**	**07 12 30.8**	**-0.5**
SNGZ	**Shannon Statio**	**3.40 211**		P	**Pn**	**07 12 29.6**	**-1.6**
SNGZ				S	**Sn**	**07 13 14.6**	**+2.2**
KARZ	**Kaharoa**	**3.41 230**		P	**Pn**	**07 12 30.9**	**-0.5**
MUGZ	**Murupara**	**3.42 220**		P	**Pn**	**07 12 29.3**	**-2.2**
RRRZ	**Republican Roa**	**3.46 224**		P	**Pn**	**07 12 30.9**	**-1.1**
KNZ	**Kokohu**	**3.48 205**		P	**Pn**	**07 12 29.7**	**-2.5**
HLRZ	**Highlands Stat**	**3.49 226**		P	**Pn**	**07 12 32.1**	**-0.3**
MHGZ	**Mahia Peninsul**	**3.52 201**		P	**Pn**	**07 12 31.1**	**-1.7**
UTU	**Utuhina**	**3.54 228**		P	**Pn**	**07 12 33.1**	**+0.1**
HSRZ	**Hossack Road**	**3.59 226**		P	**Pn**	**07 12 33.3**	**-0.4**
RAHZ	**Arahi**	**3.62 212**		P	**Pn**	**07 12 32.5**	**-1.5**
HRRZ	**Handcock Road**	**3.62 225**		P	**Pn**	**07 12 32.8**	**-1.3**
MTHZ	**Maungataniwha**	**3.67 215**		P	**Pn**	**07 12 33.2**	**-1.6**
WHHZ	**Waihua**	**3.69 209**		P	**Pn**	**07 12 33.4**	**-1.5**
GRRZ	**Galatos Road**	**3.70 227**		P	**Pn**	**07 12 33.8**	**-1.3**
ALRZ	**Allen Road**	**3.71 223**		P	**Pn**	**07 12 33.8**	**-1.4**
TOZ	**Tahuroa Road**	**3.74 239**		P	**Pn**	**07 12 33.2**	**-2.3**
MKAZ	**Moumakai**	**3.75 250**		P	**Pn**	**07 12 31.9**	**-3.7**
WPRZ	**Whakapapatarin**	**3.78 225**		P	**Pn**	**07 12 34.9**	**-1.2**
MBAZ	**Motutapu North**	**3.86 255**		P	**Pn**	**07 12 32.6**	**-4.5**
MRHZ	**Matea Rd**	**3.87 219**		P	**Pn**	**07 12 35.0**	**-2.3**
ETAZ	**East Tamaki Re**	**3.88 253**		P	**Pn**	**07 12 33.7**	**-3.7**
ARHZ	**Aropaoanui**	**3.95 210**		P	**Pn**	**07 12 36.4**	**-1.8**
KUTZ	**Kaahu Road**	**3.96 228**		P	**Pn**	**07 12 37.2**	**-1.2**
WHTZ	**Whakaora**	**4.00 225**		P	**Pn**	**07 12 39.0**	**0.0**
TLZ	**Tolley Road**	**4.04 231**		P	**Pn**	**07 12 38.0**	**-1.4**
HATZ	**Hinemaiaia**	**4.08 221**		P	**Pn**	**07 12 38.5**	**-1.6**
BKZ	**Black Stump Fm**	**4.09 216**		P	**Pn**	**07 12 38.1**	**-2.0**
BKZ	**Black Stump Fm**	**4.09 216**		P	**Pn**	**07 12 38.7**	**-1.4**
WATZ	**Wairara**	**4.16 226**		P	**Pn**	**07 12 39.8**	**-1.1**
RATZ	**Rangitukua**	**4.24 224**		P	**Pn**	**07 12 40.7**	**-1.4**
CKHZ	**Cape Kidnapper**	**4.26 207**		P	**Pn**	**07 12 40.9**	**-1.3**
KWHZ	**Kaweka Forest**	**4.33 214**		P	**Pn**	**07 12 40.7**	**-2.6**
KATZ	**Kakaramea**	**4.36 224**		P	**Pn**	**07 12 42.6**	**-1.2**
KAHZ	**Kahuranaki**	**4.45 208**		P	**Pn**	**07 12 43.1**	**-2.6**
TMVZ	**Te Maari**	**4.45 222**		P	**Pn**	**07 12 43.1**	**-1.9**
NTVZ	**North Tongarir**	**4.46 223**		P	**Pn**	**07 12 42.9**	**-2.0**
ETVZ	**East Tongariro**	**4.46 222**		P	**Pn**	**07 12 43.2**	**-1.9**
KRVZ	**Karewarewa**	**4.47 223**		P	**Pn**	**07 12 43.4**	**-1.7**
OTVZ	**Oturere**	**4.51 222**		P	**Pn**	**07 12 43.5**	**-2.2**
NNVZ	**North Ngauruho**	**4.51 223**		P	**Pn**	**07 12 44.2**	**-1.6**
WTVZ	**West Tongariro**	**4.52 223**		P	**Pn**	**07 12 43.8**	**-1.9**
KRHZ	**Kereru**	**4.53 213**		P	**Pn**	**07 12 42.7**	**-3.1**
SNVZ	**South Ngauruho**	**4.54 222**		P	**Pn**	**07 12 44.3**	**-1.8**
BHHZ	**Black Hill Sta**	**4.55 216**		P	**Pn**	**07 12 43.7**	**-2.4**
NGZ	**Ngauruhoe**	**4.55 222**		P	**Pn**	**07 12 45.0**	**-1.3**
TWVZ	**Taurewa**	**4.57 224**		P	**Pn**	**07 12 44.8**	**-1.6**
HIZ	**Hauiti**	**4.58 234**		P	**Pn**	**07 12 45.7**	**-0.8**
HIZ	**Hauiti**	**4.58 234**		P	**Pn**	**07 12 45.8**	**-0.7**
TUVZ	**Tukino**	**4.59 221**		P	**Pn**	**07 12 44.9**	**-1.8**
FWVZ	**Far West T-bar**	**4.63 222**		P	**Pn**	**07 12 45.6**	**-1.8**
WHVZ	**Whangaehu Hut**	**4.63 222**		P	**Pn**	**07 12 45.6**	**-1.8**
MOVZ	**Moawhango**	**4.64 219**		P	**Pn**	**07 12 44.6**	**-2.7**
PXZ	**Pawanui**	**4.66 206**		P	**Pn**	**07 12 44.1**	**-3.4**
WNVZ	**Wahianoa**	**4.66 221**		P	**Pn**	**07 12 45.0**	**-2.7**
TRVZ	**Turoa**	**4.67 222**		P	Pn	07 12 52.3	+4.4
MTVZ	**Mangateitei**	**4.77 222**		P	**Pn**	**07 12 47.1**	**-2.0**
PKVZ	**Pokaka**	**4.77 223**		P	**Pn**	**07 12 48.9**	**-0.1**
PNHZ	**Pukenui**	**4.83 212**		P	**Pn**	**07 12 47.0**	**-2.7**
OUZ	**Omahuta**	**4.90 276**		P	Pn	07 12 51.6	+0.9
	22nm,2.0s						
PRHZ	**Porangahau**	**4.95 207**		P	**Pn**	**07 12 49.2**	**-2.2**
VRZ	**Vera Road**	**5.00 228**		P	**Pn**	**07 12 50.5**	**-1.5**
TSZ	**Takapari Road**	**5.05 213**		P	**Pn**	**07 12 49.3**	**-3.4**
DVHZ	**Dannevirke**	**5.16 210**		P	**Pn**	**07 12 51.0**	**-3.1**
ANWZ	**Angora Road**	**5.18 207**		P	**Pn**	**07 12 51.8**	**-2.5**
WAZ	**Wanganui**	**5.30 222**		P	**Pn**	**07 12 53.6**	**-2.3**
DREZ	**Durham Road**	**5.39 231**		P	Pn	07 13 01.1	+4.0
POWZ	**Post Office Ro**	**5.41 212**		P	**Pn**	**07 12 55.8**	**-1.6**
LREZ	**Lake Rotokare**	**5.43 227**		P	Pn	07 13 01.5	+3.9
PRWZ	**Pori Road**	**5.46 210**		P	**Pn**	**07 12 55.3**	**-2.7**
BFZ	**Birch Farm**	**5.46 207**		P	**Pn**	**07 12 54.1**	**-3.9**
BFZ	**Birch Farm**	**5.46 207**		P	**Pn**	**07 12 53.7**	**-4.3**
NEZ	**North Egmont**	**5.50 230**		P	**Pn**	**07 12 59.7**	**+1.0**
KHEZ	**Kahui Hut**	**5.57 231**		P	Pn	07 13 02.5	+3.0
NBEZ	**Newall Road No**	**5.64 231**		P	Pn	07 13 04.7	+4.3
CPWZ	**Castlepoint**	**5.67 207**		P	**Pn**	**07 12 58.7**	**-2.1**
TIWZ	**Tintock**	**5.68 209**		P	**Pn**	**07 12 58.0**	**-3.0**
MRZ	**Mangatainoka R**	**5.71 212**		P	**Pn**	**07 12 57.5**	**-3.8**
HOWZ	**Holdsworth Sta**	**5.93 211**		P	**Pn**	**07 13 00.1**	**-4.2**
TMWZ	**Te Maipa**	**5.96 208**		P	**Pn**	**07 13 01.4**	**-3.3**
OGWZ	**Otaki Gorge**	**6.02 214**		P	**Pn**	**07 13 01.4**	**-4.0**
MTW	**Mount Morrison**	**6.16 210**		P	**Pn**	**07 13 03.2**	**-4.0**
KIW	**Kapiti Island**	**6.17 215**		P	**Pn**	**07 13 03.5**	**-3.9**
TRWZ	**Traveller**	**6.29 208**		P	**Pn**	**07 13 05.9**	**-3.1**
CAW	**Cannon Point**	**6.30 213**		P	**Pn**	**07 13 05.1**	**-4.0**
PAWZ	**Paruwai Farm**	**6.38 209**		P	**Pn**	**07 13 06.6**	**-3.6**
MSWZ	**Moikau Station**	**6.48 210**		P	**Pn**	**07 13 07.5**	**-4.0**
PLWZ	**Palliser**	**6.60 209**		P	Pn	07 13 08.7	-4.4
SNZO	**South Karori**	**6.62 213**		P	Pn	07 13 08.6	-4.8
QRZ	**Quartz Range**	**7.41 226**		P	Pn	07 13 19.0	-4.8
KHZ	**Kahutara**	**8.03 214**		P	Pn	07 13 27.1	-4.9
CTZ	**Chatham Island**	**8.39 161**		P	**Pn**	**07 13 39.2**	**+2.5**
RPZ	**Rata Peaks**	**10.20 217**		Pn	Pn	07 13 55.6	-5.1
	1.3nm,0.3s,baz=112,slow=2.1,SNR=7.7						
RPZ				Sn	Sn	07 15 46.3	-7.4
	2.2nm,0.3s,baz=149,slow=23,SNR=7.9						
RPZ	**Rata Peaks**	**10.20 217**		P	Pn	07 13 55.5	-5.1
ASAR	**Alice Springs**	**41.11 274**		P	**P**	**07 19 09.8**	**+3.3**
	1.8nm,0.7s,baz=112,slow=7.3,SNR=19						
	1.8nm,0.7s						
WRA	**Warramunga Arr**	**42.60 279**		P	**P**	**07 19 21.3**	**+2.6**
	1.5nm,0.5s,baz=119,slow=7.8,SNR=6.0						
	1.5nm,0.5s						
QSPA	**South Pole Qui**	**54.25 180**		P	P	07 20 57.9	+11
	0.7nm,0.6s,baz=340,slow=1.2,SNR=7.4						
	0.7nm,0.6s						
H03S2	**Juan Fernandez**	**79.14 124**		T	T	08 51 39.6	
	baz=233,SNR=11						
H03S1	**Juan Fernandez**	**79.15 124**		T	T	08 51 39.4	
	baz=233,SNR=13						
H03S3	**Juan Fernandez**	**79.16 124**		T	T	08 51 40.5	
	baz=233,SNR=13						
H03N3	**Juan Fernandez**	**79.37 124**		T	T	08 51 55.7	
	baz=236,slow=72,SNR=17						
H03N2	**Juan Fernandez**	**79.37 124**		T	T	08 51 54.5	
	baz=236,slow=72,SNR=18						
H03N1	**Juan Fernandez**	**79.39 124**		T	T	08 51 54.8	
	baz=236,slow=72,SNR=14						
FINES	**FINESS Array B**	**149.41 335**		PKPbc	**PKPab**	**07 31 10.6**	**-2.0**
	1.4nm,0.5s,baz=58,slow=5.4,SNR=9.3						

IDC 17 07:12:49.0±1.1, 4°.59N×126°.35E, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=95.9km s-min=16.6km az=83.0
MAN 17 07:12:59, 4°.68N×126°.50E, h135km, Ms3.4
NEIC 17 07:12:59.2±1.7, 4°.60N±0°.07×126°.64E±0°.07, h69km±14km, mb4.1/11, Error ellipse: s-maj=13.5km s-min=2.7km az=134.0
DJA 17 07:13:01.0±0.6, 4°.N±6°×12°.7E±°, h99km±4km, M4.5/13, mb4.7/13, mB5.0/7, MLv4.6/13, Mw(mB)4.4/7
ISC 17 07:13:00.4±0.7, 4°.50N±0°.05×126°.45E±0°.08, h100km, n39, σ1°.79/43, mb4.1/11, 3C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.22 229**		P	**Pn**	**07 13 23.2**	**-0.1**
SGSI				S	**Sn**	**07 13 40.4**	**-0.3**
GSPH	**General Santos**	**2.17 317**		⇑*i*P	**Pn**	**07 13 34.7**	**-0.6**
GSPH				*i* S	**Sn**	**07 14 01.0**	**-1.0**
KCP	**Kidapawan**	**2.83 332**		⇓*i*P	**Pn**	**07 13 44.5**	**+0.5**
KCP				*i* S	**Sn**	**07 14 19.9**	**+2.4**
CTBH	**Cotabato--PC H**	**3.48 321**		⇑*i*P	**Pn**	**07 13 52.3**	**-0.3**
CTBH				*i* S	**Sn**	**07 14 32.3**	**-0.6**
BIPH	**Bislig**	**3.66 359**		⇑*e*P	**Pn**	**07 13 54.6**	**-0.4**
BIPH				*e*S	**Sn**	**07 14 36.4**	**-0.9**
TNTI	**Ternate**	**3.82 166**			**Pn**	**07 13 56.7**	**-0.4**
**TNTI

MKAR Lg Lg 07 18 03.7
7.1nm,0.3s,baz=136,slow=30,SNR=6.7
MKAR LR LR 07 19 21.9
comp=Z,56nm,18.3s,baz=213,slow=44
8.0nm,0.4s
MAKZ Makanchi 6.34 316 ⇑Pn **Pn 07 16 23.2 +1.7**
2.2nm,0.2s
MAKZ ⇓Sn **Sn 07 17 31.2 -2.7**
17nm,0.7s
MAKZ ⇓Lg Lg 07 18 05.0
39nm,0.8s
KURBB Kurchatov Arra 10.63 324 Pn **Pn 07 17 20.9 +0.6**
0.1nm,0.3s,baz=137,slow=13,SNR=14
0.7nm,0.4s
KURBB Kurchatov Arra 10.63 324 ⇑Pn **Pn 07 17 21.6 +1.3**
5.5nm,0.7s
KURBB ⇓Lg Lg 07 20 28.8
16nm,0.6s
KURK Kurchatov 10.66 324 ⇓Pn **Pn 07 17 21.2 +0.5**
2.1nm,0.6s
KURK ⇑Lg Lg 07 20 27.9
10nm,0.8s
ZALV Zalesovo Beam 11.75 349 Pn **Pn 07 17 36.5 +0.9**
0.1nm,0.3s,baz=178,slow=11,SNR=1.6
ZALV Sn **Sn 07 19 42.0 -4.7**
0.9nm,0.3s,baz=178,slow=28,SNR=3.2
ZALV Lg Lg 07 21 07.6
baz=170,slow=26
1.1nm,0.3s
SONM Songino Array 13.76 61 Pn **Pn 07 18 05.4 +2.2**
0.2nm,0.3s,baz=257,slow=13,SNR=2.1
SONM Lg Lg 07 22 06.9
baz=254,slow=25
0.6nm,0.5s
AKTO Aktyubinsk 22.31 301 P **P 07 19 46.7 +1.2**
1.0nm,0.6s,baz=96,slow=10,SNR=5.3
1.0nm,0.6s
ARU Arti 23.69 316 P **P 07 19 59.5 -0.2**
4.9nm,0.5s,baz=129,slow=5.4,SNR=7.1
4.9nm,0.5s
CMAR Chiang Mai Arr 25.54 156 pP pP 07 20 22.8 +2.4
1.4nm,0.3s,baz=332,slow=9.6,SNR=7.7
NRIK Noril'sk 26.95 359 P **P 07 20 30.6 +1.4**
1.5nm,0.4s,baz=166,slow=16,SNR=2.3
1.5nm,0.4s
KSRS Korea Array 30.48 86 LR LR 07 34 51.4
comp=Z,6.4nm,18.7s,baz=185,slow=39
FINES FINESS Array B 40.99 320 P **P 07 22 29.2 -1.5**
1.7nm,0.8s,baz=77,slow=7.3,SNR=1.2
1.7nm,0.8s
MA2 Magadan 41.08 43 LR LR 07 40 34.2
comp=Z,14nm,21.5s,baz=320,slow=37
ARCES ARCESS Array B 41.58 332 P **P 07 22 36.0 +0.4**
0.9nm,0.7s,baz=84,slow=11,SNR=4.8
ARCES PcP **PcP 07 24 31.6 -0.8**
1.1nm,0.6s,baz=79,slow=3.1,SNR=6.2
ARCES pPcP 07 24 38.7
0.6nm,0.4s,baz=92,slow=3.2,SNR=9.6
0.9nm,0.7s
NOA NORSAR Array B 48.15 320 P **P 07 23 29.6 +1.6**
0.3nm,0.5s,baz=77,slow=7.8,SNR=2.3
0.3nm,0.5s
ILAR Eielson Array 64.71 23 P **P 07 25 25.8 -0.1**
1.0nm,0.8s,baz=310,slow=5.2,SNR=12
1.0nm,0.8s
ESDC Sonseca Array 66.19 303 LR LR 07 56 04.9
comp=Z,24nm,18.7s,baz=332,slow=37
WRA Warramunga Arr 75.14 136 P **P 07 26 29.2 -1.3**
0.3nm,0.7s,baz=336,slow=5.8,SNR=2.0
WRA pP **sP 07 26 36.2 +0.4**
0.8nm,0.8s,baz=336,slow=6.4,SNR=3.8
0.3nm,0.7s
ASAR Alice Springs 78.03 138 P **P 07 26 45.8 -1.0**
0.3nm,0.6s,baz=335,slow=6.1,SNR=4.5
ASAR pP **sP 07 26 52.0 0.0**
0.6nm,0.6s,baz=318,slow=5.1,SNR=3.9
0.3nm,0.6s
TORD Torodi Ar. Bea 78.87 278 P **P 07 26 49.1 -2.7**
0.3nm,0.6s,baz=42,slow=5.8,SNR=2.2
TORD pP **pP 07 26 56.2 +0.5**
0.5nm,0.6s,baz=20,slow=4.2,SNR=2.8
0.3nm,0.6s
LPAZ La Paz 147.09 315 PKPbc **PKPdf 07 34 30.6 +0.4**
0.5nm,0.7s,baz=0.0,slow=2.0,SNR=2.2

*IDC **17** 07:21:58.7±1.5,2°.82N×125°.70E, h0km, mb3.7/5, mbtmp3.7/5, MS2.8/1, Error ellipse: s-maj=168.7km s-min=19.3km az=65.0*
ISC 17 07:21:60.0±1.1,**2°.9N**±0°.2×**125°.8E**±0°.6,**h10**km,**n7**,σ0**°81**/7,
mb3.8/5,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**4.20**	**350**	⇓*eP*		**Pn**	**07 23 03.8**	**-0.3**
KCP				*eS*		**Sn**	**07 23 53.9**	**+0.6**
DAV	**Davao City (W)**	**4.20**	**357**	LR		LR	07 25 01.8	
comp=Z,97nm,18.1s,baz=355,slow=43								
WRA	**Warramunga Arr**	**24.14**	**160**	P		**P**	**07 27 17.0**	**+0.6**
1.0nm,0.5s,baz=338,slow=10,SNR=16								
1.0nm,0.5s								
ASAR	**Alice Springs**	**27.51**	**164**	P		**P**	**07 27 48.0**	**+1.2**
0.3nm,0.6s,baz=348,slow=6.4,SNR=5.7								
0.3nm,0.6s								
STKA	**Stephens Creek**	**37.65**	**158**	P		**P**	**07 29 14.7**	**-0.7**
1.9nm,0.8s,baz=315,slow=8.6,SNR=3.1								
1.9nm,0.8s								
MKAR	**Makanchi Array**	**57.76**	**326**	P		**P**	**07 31 51.3**	**0.0**
0.4nm,0.5s,baz=117,slow=7.5,SNR=11								
0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**61.99**	**328**	P		**P**	**07 32 20.1**	**-0.2**
0.7nm,0.7s,baz=126,slow=6.5,SNR=6.7								
0.7nm,0.7s								

*IDC **17** 07:34:25.4±2.8,53°.77N×88°.17E, h0km, mbtmp3.5/2, ML3.2/2, Error ellipse: s-maj=23.7km s-min=16.0km az=53.0*
*NNC **17** 07:34:26.1±2.0,53°.68N×88°.17E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=15.6km s-min=11.3km az=61.0, Suspected Mining explosion.*
ISC 17 07:34:25.6±3.8,**53°.8N**±0°.1×**88°.2E**±0°.2,**h0**km,**n8**,σ0**°62**/13,
9C,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.00**	**276**	*i*			07 47 00.0	
0.3nm,0.9s,baz=92,slow=319,SNR=21								
ZAA0	**Zalesovo Array**	**2.00**	**276**	⇑Pn		**Pn**	**07 35 00.3**	**-0.3**
2.0nm,0.6s								
ZAA0				⇑Sn		**Sb**	**07 35 28.4**	**+0.1**
7.4nm,0.7s								
ZALV	**Zalesovo Beam**	**2.00**	**276**	Pg		**Pn**	**07 35 00.6**	**0.0**
7.3nm,0.3s,baz=108,slow=16,SNR=46								
ZALV				Lg		Lg	07 35 27.6	
14nm,0.3s,baz=97,slow=27,SNR=32								
KURK	**Kurchatov**	**6.63**	**246**	⇑Pn		**Pn**	**07 36 04.2**	**-0.1**
1.5nm,0.6s								
KURK				⇑Sn		**Sn**	**07 37 21.2**	**+0.7**
1.6nm,0.5s								
KURK				⇑Lg		Lg	07 37 53.8	
6.5nm,0.9s								
KURBB	**Kurchatov Arra**	**6.73**	**246**	Pn		**Pn**	**07 36 05.8**	**+0.2**
0.4nm,0.3s,baz=63,slow=14,SNR=20								
KURBB				Sn		**Sn**	**07 37 23.5**	**+0.6**
0.1nm,0.3s,baz=51,slow=14,SNR=4.5								
KURBB				Lg		Lg	07 37 57.2	
0.1nm,0.3s,baz=64,slow=34,SNR=7.9								
2.5nm,0.3s								
KURBB	**Kurchatov Arra**	**6.73**	**246**	⇑Pn		**Pn**	**07 36 05.7**	**+0.2**
2.1nm,0.3s								
KURBB				⇑Sn		**Sn**	**07 37 22.1**	**-0.8**
5.2nm,0.6s								
KURBB				⇑Lg		Lg	07 37 56.1	
5.2nm,0.5s								
MK31	**Makanchi Array**	**7.96**	**211**	Pn		**Pn**	**07 36 23.1**	**+0.6**
0.5nm,0.5s,baz=30,slow=12,SNR=14								
MK31				Sn		**Sn**	**07 37 52.5**	**-0.7**
0.4nm,0.4s,baz=35,slow=25,SNR=7.1								
MK31				⇑Lg		Lg	07 38 33.1	
3.0nm,0.8s								
MKAR	**Makanchi Array**	**7.96**	**211**	Pn		**Pn**	**07 36 22.9**	**+0.5**
0.4nm,0.3s,baz=33,slow=14,SNR=18								
MKAR				Sn		**Sn**	**07 37 52.1**	**-1.1**
0.5nm,0.3s,baz=32,slow=26,SNR=8.8								
MKAR				Lg		Lg	07 38 33.5	
0.1nm,0.3s,baz=43,slow=24,SNR=2.2								
0.7nm,0.4s								

NNC 17 07:49:50.0±15.0,**37°.76N**×**71°.22E, h0**km,**mb3.5, mpv2.9, 2C-1D, Error ellipse: s-maj=239.8km s-min=93.9km az=102.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**5.37**	**354**	⇑P		Pn	07 51 12.6	+1.3
0.4nm,0.2s,baz=150,slow=10,SNR=15								
KK31				⇓S		Sn	07 52 14.8	+1.0
3.6nm,0.3s,baz=169,slow=21,SNR=33								
AB31	**Akbulak array**	**14.09**	**328**	P		Pn	07 53 09.4	-1.3
0.7nm,0.5s,baz=159,slow=9.7,SNR=21								
AKTO	**Aktyubinsk**	**15.79**	**328**	⇑P		Pn	07 53 32.2	-1.4
0.6nm,0.7s								

*IDC **17** 07:59:52.7±2.0, 16°.86N×147°.76E, h0km, mb3.9/10, mbtmp3.9/11, ML4.2/1, Error ellipse: s-maj=63.0km s-min=19.0km az=89.0*
*NEIC **17** 07:59:57.9±1.0, 16°.8N±0°.1×147°.6E±0°.1, h28km±7km, mb4.2/5, Error ellipse: s-maj=23.6km s-min=8.8km az=142.0*
ISC 17 07:59:58.2±0.8,**16°.75N**±0°.08×**147°.7E**±0°.1,**h41**km,**n19**,
σ0**°95**/20,**mb3.9**/13,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**4.20**	**222**	Pn		**Pn**	**08 00 59.8**	**+0.1**
12nm,0.3s,baz=63,slow=14,SNR=2.0								
GUMO				Sn		**Sn**	**08 01 47.5**	**0.0**
14nm,0.3s,baz=270,slow=24,SNR=1.5								
35nm,0.3s								
GUMO	**Guam**	**4.20**	**222**	Pn		**Pn**	**08 00 58.7**	**-1.0**
PATS	**Pohnpei**	**14.28**	**132**	Pn		**Pn**	**08 03 17.0**	**-0.9**
MJAR	**Matsushiro Arr**	**21.45**	**339**	P		**P**	**08 04 42.4**	**-0.6**
3.0nm,0.7s,baz=180,slow=8.6,SNR=9.9								
3.0nm,0.7s								
KSRS	**Korea Array**	**27.03**	**324**	P		**P**	**08 05 35.7**	**-0.8**
0.4nm,0.3s,baz=150,slow=11,SNR=1.9								
0.4nm,0.3s								
WB0	**Warramunga Arr**	**38.59**	**200**	P		**P**	**08 07 18.0**	**+0.6**
WB0				IAmb		IAmb	08 07 36.0	
comp=Z,6.4nm,1.1s								
WR0	**Warramunga Arr**	**38.72**	**200**	P		**P**	**08 07 18.7**	**+0.2**
WB2	**Warramunga Arr**	**38.77**	**200**	P		**P**	**08 07 20.2**	**+1.3**
WB2				IAmb		IAmb	08 07 35.0	
comp=Z,7.1nm,1.1s								
WRA	**Warramunga Arr**	**38.77**	**200**	P		**P**	**08 07 19.6**	**+0.7**
comp=Z,0.3nm,0.4s,baz=21,slow=8.8,SNR=13								
comp=Z,0.3nm,0.4s								
WRA	**Warramunga Arr**	**38.77**	**200**	P		**P**	**08 07 20.5**	**+1.5**
FITZ	**Fitzroy Crossi**	**40.90**	**213**	P		**P**	**08 07 38.0**	**+1.4**
FITZ				IAmb		IAmb	08 08 12.1	
comp=Z,2.4nm,1.1s								
ASAR	**Alice Springs**	**42.39**	**199**	P		**P**	**08 07 50.5**	**+1.7**
comp=Z,0.3nm,0.6s,baz=21,slow=8.0,SNR=2.6								
comp=Z,0.3nm,0.6s								
AMKA	**Amchitka**	**42.70**	**29**	P		**P**	**08 07 52.0**	**+1.0**
SONM	**Songino Array**	**45.87**	**322**	P		**P**	**08 08 15.9**	**-0.7**
comp=Z,0.4nm,0.5s,baz=134,slow=10,SNR=2.0								
comp=Z,0.4nm,0.5s								
CMAR	**Chiang Mai Arr**	**46.44**	**280**	P		**P**	**08 08 21.4**	**0.0**
comp=Z,1.8nm,0.3s,baz=84,slow=6.8,SNR=4.8								
comp=Z,1.8nm,0.3s								
ZALV	**Zalesovo Beam**	**60.73**	**323**	P		**P**	**08 10 05.5**	**0.0**
comp=Z,0.5nm,0.3s,baz=114,slow=6.5,SNR=1.8								
comp=Z,0.5nm,0.3s								
MKAR	**Makanchi Array**	**61.21**	**315**	P		**P**	**08 10 09.5**	**+0.6**
comp=Z,0.3nm,0.5s,baz=86,slow=9.1,SNR=4.2								
comp=Z,0.3nm,0.5s								
NRIK	**Noril'sk**	**64.09**	**340**	P		**P**	**08 10 28.4**	**+0.7**
comp=Z,1.3nm,0.4s,baz=116,slow=6.8,SNR=2.1								
comp=Z,1.3nm,0.4s								
FINES	**FINESS Array B**	**89.45**	**336**	P		**P**	**08 12 49.8**	**-0.8**
comp=Z,2.4nm,0.8s,baz=46,slow=4.0,SNR=2.0								
comp=Z,2.4nm,0.8s								

*IDC **17** 08:01:56.7±3.8, 20°.56S×179°.30W, h652km±29km, mb2.7/5, mbtmp3.7/6, Error ellipse: s-maj=112.1km s-min=19.4km az=150.0*
ISC 17 08:01:56.4±1.4,**20°.6S**±0°.4×**179°.3W**±0°.2,**h650**km,**n9**,
σ0**°94**/11,**mb3.3**/5,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.79**	**318**	P		**P**	**08 03 24.4**	**0.0**
31nm,0.6s,baz=138,slow=13,SNR=19								
ASAR	**Alice Springs**	**43.31**	**257**	P		**P**	**08 09 04.4**	**+0.4**
1.2nm,0.6s,baz=99,slow=7.3,SNR=13								
ASAR				PcP		**PcP**	**08 10 36.8**	**-0.7**
0.5nm,0.7s,baz=102,slow=3.3,SNR=5.1								
1.2nm,0.6s								
WRA	**Warramunga Arr**	**43.38**	**262**	P		**P**	**08 09 04.8**	**+0.3**
0.5nm,0.3s,baz=97,slow=7.6,SNR=30								
WRA				PcP		**PcP**	**08 10 38.4**	**+0.6**
0.5nm,0.9s,baz=90,slow=3.4,SNR=1.9								
0.5nm,0.3s								
NVAR	**Mina Array Bea**	**81.93**	**44**	P		**P**	**08 13 10.7**	**+0.2**
0.4nm,0.8s,baz=220,slow=7.9,SNR=2.8								
0.4nm,0.8s								
TXAR	**Lajitas Array**	**88.14**	**58**	P		**P**	**08 13 40.9**	**+0.5**
0.3nm,0.8s,baz=219,slow=3.2,SNR=3.4								
0.3nm,0.8s								
ILAR	**Eielson Array**	**88.68**	**13**	P		**P**	**08 13 42.1**	**+0.2**
0.2nm,0.4s,baz=216,slow=4.8,SNR=5.1								
0.2nm,0.4s								
ARCES	**ARCESS Array B**	**128.79**	**349**	PKP		**PKPdf**	**08 19 51.1**	**+0.1**
2.1nm,0.9s,baz=90,slow=0.9,SNR=3.6								
AKASG	**Malin Array Be**	**142.50**	**330**	PKP		**PKPdf**	**08 20 14.5**	**-2.4**
1.6nm,0.4s,baz=43,slow=4.2,SNR=11								
GERES	**GERESS Array B**	**149.94**	**343**	PKPbc		**PKPbc**	**08 20 35.5**	**+0.3**
0.5nm,0.5s,baz=72,slow=4.4,SNR=3.7								

IDC 17 08:28:17.8±3.2,**73°.92N**×**114°.57E, h0**km,**mb3.6**/3,
mbtmp3.6/4, ML3.5/1, MS2.8/2, Error ellipse: s-maj=49.7km s-min=41.3km az=117.0, Near coast of northern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRIK	**Noril'sk**	**9.61**	**255**	Pn		Pn	08 30 35.5	-1.6
0.4nm,0.3s,baz=63,slow=9.0,SNR=2.1								
NRIK				Pg			08 31 14.3	
0.3nm,0.3s,baz=50,slow=14,SNR=4.0								
NRIK				Lg		Lg	08 33 23.3	
0.2nm,0.3s,baz=345,slow=19,SNR=1.8								
1.5nm,0.5s								
ZALV	**Zalesovo Beam**	**23.41**	**228**	P		P	08 33 28.3	+0.4
0.5nm,0.4s,baz=30,slow=9.0,SNR=1.6								
ZALV				LR		LR	08 44 21.0	
comp=Z,18nm,20.1s,baz=54,slow=41								
0.5nm,0.4s								
ARCES	**ARCESS Array B**	**25.76**	**306**	P		P	08 33 49.7	+0.2
1.6nm,1.0s,baz=30,slow=12,SNR=1.6								
1.6nm,1.0s								
ARU	**Arti**	**27.74**	**262**	LR		LR	08 47 14.7	
comp=Z,24nm,20.6s,baz=5.0,slow=41								
MKAR	**Makanchi Array**	**30.72**	**226**	P		P	08 34 33.9	-0.1
0.4nm,0.6s,baz=26,slow=6.9,SNR=5.1								
0.4nm,0.6s								

*IDC **17** 08:29:35.1±3.6, 30°.02N×138°.68E, h395km±122km, mb2.6/2, mbtmp3.5/4, Error ellipse: s-maj=291.1km s-min=22.8km az=69.0*
*JMA **17** 08:29:35.0±0.5, 30°N±3°×13°9E±°, h425km, MV3.5/30, NEAR TORISHIMA IS*
ISC 17 08:29:34.8±1.1,**30°.27N**±0°.08×**139°.0E**±0°.1,**h400**km,**n14**,
σ2**°15**/17,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**4.24**	**137**	*eS*		**S**	**08 31 50.1**	**+0.5**
JCJ	**Chichijima**	**4.24**	**137**	P		**Pn**	**08 30 49.5**	**+0.2**
40nm,0.8s,baz=284,slow=21,SNR=1.2								
JCJ				S		**S**	**08 31 49.7**	**+0.1**
25nm,0.3s,baz=294,slow=22,SNR=7.1								
JIE	**Ise**	**4.54**	**336**	*eP*		**Pn**	**08 30 55.0**	**+3.0**
JTNC	**Tanabenakahech**	**4.55**	**322**	P		**Pn**	**08 30 54.3**	**+2.2**
JKN2	**Miekihoku**	**4.57**	**331**	*eP*		**Pn**	**08 30 54.2**	**+1.9**
BSO1	**Boso 1**	**4.69**	**21**	P		**Pn**	**08 30 55.7**	**+2.8**
BSO4	**Boso 4**	**4.85**	**13**	P		**Pn**	**08 30 57.5**	**+2.6**
JRY	**Ryogami san**	**5.73**	**359**	P		**Pn**	**08 31 06.6**	**+2.2**
JYT	**Yasato**	**6.03**	**9**	P		**Pn**	**08 31 08.8**	**+1.2**
JYT				*eS*		**S**	**08 32 20.9**	**-2.4**
JAG	**Ashikaga**	**6.15**	**4**	*eP*		**Pn**	**08 31 09.3**	**+0.4**
JAG				*eS*		**S**	**08 32 23.0**	**-2.8**
MJAR	**Matsushiro Arr**	**6.29**	**354**	P		**Pn**	**08 31 13.0**	**+2.5**
1.0nm,0.4s,baz=172,slow=11,SNR=4.7								
JHO	**Hitachi**	**6.46**	**11**	P		**Pn**	**08 31 13.9**	**+1.5**
WRA	**Warramunga Arr**	**50.12**	**186**	P		**P**	**08 37 50.0**	**-1.3**
0.2nm,0.3s,baz=2.0,slow=7.8,SNR=7.6								
0.2nm,0.3s								
ASAR	**Alice Springs**	**53.85**	**186**	P		**P**	**08 38 17.1**	**-1.4**
0.3nm,0.9s,baz=15,slow=4.8,SNR=1.7								
0.3nm,0.9s								

*MRB **17** 08:51:35.4±0.3, 43°.00N×0°.17W, h0km±4km, ML1.5/15, Error ellipse: s-maj=1.7km s-min=1.0km az=25.0*
*LDG **17** 08:51:35.5±0.1, 43°.03N×0°.15W, h5km, Md2.7/2, Ml2.3/5, Error ellipse: s-maj=1.5km s-min=1.2km az=14.0*
*STR **17** 08:51:35.6±0.5, 43°N±3°×±°, h0km, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=30.7, preliminary*
*MDD **17** 08:51:36.4±0.3, 43°.01N×0°.14W, h0km, mb_Lg1.8/12, Error ellipse: s-maj=2.6km s-min=1.8km az=9.0*
ISC 17 08:51:35.7±0.9,**43°.03N**±0°.02×**0°.15W**±0°.02,**h6**km±7km,**n46**,
σ0**°84**/82,**1C,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PYLO	**Lourdes**	**0.10**	**46**	P		**Pg**	**08 51 37.9**	**+0.1**
PYLO				S		**Sg**	**08 51 39.9**	**+0.5**
PYLO	**Lourdes**	**0.10**	**46**	⇑Pg		**Pg**	**08 51 37.7**	**-0.1**
PYLO				Sg		**Sg**	**08 51 39.4**	**0.0**
VIEF	**Viey**	**0.19**	**139**	Pg		**Pg**	**08 51 39.3**	**-0.2**
VIEF				Sg		**Sg**	**08 51 41.8**	**-0.2**
ETSF	**Etsaut**	**0.33**	**247**	*e*Pg		**Pg**	**08 51 41.7**	**-0.4**
ETSF				*e*Sg		**Sg**	**08 51 45.9**	**-0.6**
30nm,0.3s								
EPF	**Esparros**	**0.36**	**89**	*e*Pg		**Pg**	**08 51 42.2**	**-0.4**
EPF				*e*Sg		**Sg**	**08 51 47.3**	**0.0**
31nm,0.2s								
CANF	**Canfranc**	**0.38**	**226**	Pg		**Pg**	**08 51 42.7**	**-0.4**
ATE	**Arette**	**0.41**	**278**	P		**Pg**	**08 51 43.2**	**-0.4**
ATE				S		**Sg**	**08 51 49.3**	**+0.3**
23nm,0.2s								
ATE	**Arette**	**0.41**	**278**	Pg		**Pg**	**08 51 43.4**	**-0.2**
ATE				Sg		**Sg**	**08 51 49.2**	**+0.2**
ECHI	**Chisagues Biel**	**0.44**	**145**	P		**Pg**	**08 51 43.7**	**-0.5**
ECHI				S		**Sg**	**08 51 49.9**	**-0.1**
27nm,0.1s								
ECHI	**Chisagues Biel**	**0.44**	**145**	Pg		**Pg**	**08 51 43.8**	**-0.5**
ECHI				Sg		**Sg**	**08 51 49.3**	**-0.6**
ECHI				*i* Vmb_Lg			08 51 50.2	
ECHI	**Chisagues Biel**	**0.44**	**145**	Pg		**Pg**	**08 51 43.7**	**-0.5**
ECHI				Sg		**Sg**	**08 51 49.4**	**-0.6**
CARA	**Val d'Aran**	**0.78**	**114**	P		**Pg**	**08 51 50.4**	**-0.2**
CARA				S		**Sg**	**08 52 01.4**	**+0.7**
22nm,0.2s								
SJPF	**Ste Jean**	**0.80**	**277**	*e*Pg		**Pg**	**08 51 50.2**	**-0.7**
SJPF	**Ste Jean**	**0.80**	**277**	*e*Pn		**Pb**	**08 51 52.2**	**+0.3**
SJPF				*e*Sg		**Sg**	**08 52 00.1**	**-1.2**
4.6nm,0.3s								
OSSF	**Osses**	**0.85**	**286**	Pg		**Pg**	**08 51 52.1**	**+0.2**
EORO	**Oroz-Betelu**	**0.86**	**261**	Pg		**Pg**	**08 51 52.0**	**-0.3**
EORO				Sg		**Sg**	**08 52 03.5**	**0.0**
EORO				*i* Vmb_Lg			08 52 06.6	
CTRE	**Tremp**	**0.98**	**136**	P		**Pg**	**08 51 53.8**	**-0.6**
CTRE				S		**Sb**	**08 52 07.8**	**-0.5**
3.9nm,0.3s								
EALK	**Alkurruntz**	**1.01**	**281**	Pg		**Pg**	**08 51 55.1**	**-0.1**
EALK				Sg		**Sg**	**08 52 07.4**	**-0.9**
EALK				*i* Vmb_Lg			08 52 12.0	
CEST	**Esterri de Car**	**1.12**	**112**	P		**Pg**	**08 51 56.3**	**-0.8**
CEST				S		**Sb**	**08 52 12.2**	**-0.1**
4.5nm,0.2s								
CSOR	**Sort**	**1.15**	**124**	P		**Pg**	**08 51 57.0**	**-0.7**
CSOR				S		**Sg**	**08 52 12.6**	**+0.1**
8.7nm,0.3s								
CAVN	**Les Avellanes**	**1.32**	**150**	P		**Pg**	**08 51 59.8**	**-1.3**
CAVN				S		**Sg**	**08 52 17.8**	**-0.4**
21nm,0.2s								
ESAC	**San Caprasio**	**1.33**	**190**	Pg		**Pn**	**08 52 01.5**	**+0.6**
ESAC				Sg		**Sn**	**08 52 19.4**	**+0.5**
CORG	**Organya**	**1.34**	**126**	P		**Pg**	**08 52 00.4**	**-1.0**
CORG				S		**Sb**	**08 52 19.1**	**+0.3**
2.6nm,0.2s								
ARBS	**La Rabassa**	**1.38**	**114**	P		**Pg**	**08 52 00.9**	**-1.2**
ARBS				S		**Sg**	**08 52 20.0**	**0.0**
5.0nm,0.3s								
CLLI	**Llivia**	**1.66**	**109**	P		**Pn**	**08 52 05.7**	**+0.3**
CLLI				S		**Sn**	**08 52 28.0**	**+0.9**
1.5nm,0.2s								
MONQ	**Montcuq**	**1.66**	**36**	Pn		**Pb**	**08 52 06.7**	**+0.1**
MONQ				Sn		**Sg**	**08 52 29.3**	**+0.5**
FNEB	**Nbias**	**1.66**	**94**	Pg		**Pg**	**08 52 08.5**	**+1.0**
FNEB				Sg		**Sg**	**08 52 29.6**	**+0.6**
EMIR	**Miracle**	**1.66**	**131**	Sg		**Sg**	**08 52 29.2**	**0.0**
EMIR				*i* Vmb_Lg			08 52 31.3	
MTLF	**Montolieu**	**1.76**	**79**	*e*Pg		**Pb**	**08 52 08.5**	**+0.2**
MTLF				*e*Sg		**Sb**	**08 52 31.0**	**+0.3**
4.5nm,0.3s								
CBRU	**Bruguera**	**1.87**	**113**	P		**Pn**	**08 52 08.7**	**+0.3**
CBRU				S		**Sn**	**08 52 33.5**	**+1.1**
3.9nm,0.3s								
EPOB	**Poblet**	**1.91**	**151**	P		**Pn**	**08 52 08.9**	**+0.1**
EPOB				S		**Sn**	**08 52 33.8**	**+0.6**
3.2nm,0.2s								
EPOB	**Poblet**	**1.91**	**151**	Pg		**Pb**	**08 52 11.2**	**+0.3**
EPOB				Sg		**Sb**	**08 52 35.3**	**+0.3**
EPOB				*i* Vmb_Lg			08 52 36.7	
CORI	**Orista**	**1.94**	**122**	P		**Pn**	**08 52 09.4**	**+0.2**
CORI				S		**Sn**	**08 52 34.9**	**+1.1**
6.8nm,0.2s								
LFF	**La Frestale**	**2.02**	**18**	*e*Pn		**Pn**	**08 52 07.9**	**-2.3**
LFF	**La Frestale**	**2.02**	**18**	*e*Pg		**Pb**	**08 52 12.7**	**0.0**
LFF				*e*Sg		**Sb**	**08 52 39.3**	**+1.2**
8.9nm,0.3s								
FILF	**Fillols**	**2.05**	**102**	S		**Sn**	**08 52 34.8**	**-1.8**
1.8nm,0.3s								
ERTA	**Horta de San J**	**2.10**	**170**	Sg		**Sg**	**08 52 42.1**	**-1.0**
ERTA				*i* Vmb_Lg			08 52

BRRC				*i*			08 52 44.7	
	comp=Z,518nm,0.4s							
RUSC	**La Rusia**	**0.94**	**180**	⇑*iP*	**Pn**		**08 52 26.9**	**-0.1**
RUSC				*eS*	**Sn**		**08 52 45.8**	**-0.6**
RUSC				*i*			08 52 47.3	
	comp=Z,159nm,0.2s							
TAMC	**Tame, Arauca**	**1.35**	**107**	⇑*iP*	**Pn**		**08 52 31.4**	**+1.3**
TAMC				*eS*	**Sn**		**08 52 53.0**	**+1.0**
TAMC				*i*			08 52 53.6	
	comp=Z,269nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.39**	**258**	*eP*	**Pn**		**08 52 29.8**	**-0.7**
PTBC				*eS*	**Sn**		**08 52 51.2**	**-1.4**
PTBC				*i*			08 52 58.2	
	comp=Z,377nm,0.4s							
SPBC	**San Pablo de B**	**1.53**	**220**	⇑*iP*	**Pn**		**08 52 31.9**	**-0.1**
SPBC				*eS*	**Sn**		**08 52 54.2**	**-1.1**
SPBC				*i*			08 53 01.6	
	comp=Z,501nm,0.2s							
ZARC	**Zaragoza, Cauc**	**1.87**	**290**	*eP*	**Pn**		**08 52 35.3**	**-0.3**
ZARC				*eS*	**Sn**		**08 53 00.7**	**-1.1**
ZARC				*i*			08 53 06.8	
	comp=Z,503nm,0.6s							
NORC	**Norcasia**	**2.18**	**235**	*eP*	**Pn**		**08 52 38.9**	**-0.2**
NORC				*eS*	**Sn**		**08 53 07.2**	**-0.9**
NORC				*i*			08 53 12.9	
	comp=Z,351nm,0.2s							
CHIC	**Chingaza**	**2.28**	**196**	*eP*	**Pn**		**08 52 41.1**	**+0.3**
CHIC				*eS*	**Sn**		**08 53 10.4**	**-0.6**
CHIC				*i*			08 53 15.8	
	comp=Z,139nm,0.5s							
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**		**08 52 43.0**	**+1.6**
	comp=Z,100nm,0.3s,baz=123,slow=23,SNR=193							
ROSC				S	**Sn**		**08 53 13.4**	**+1.4**
	comp=Z,260nm,0.3s,baz=39,slow=22,SNR=13							
ROSC	**El Rosal**	**2.33**	**212**	*eP*	**Pn**		**08 52 42.9**	**+1.6**
ROSC				*eS*	**Sn**		**08 53 13.9**	**+1.9**
ROSC				*i*			08 53 17.2	
	comp=Z,352nm,0.8s							
HELC	**Santa Helena**	**2.51**	**255**	*eP*	**Pn**		**08 52 43.5**	**0.0**
HELC				*eS*	**Sn**		**08 53 15.4**	**-0.3**
HELC				*i*			08 53 21.2	
	comp=Z,190nm,0.3s							
UREC	**San Jos de Ur**	**2.59**	**291**	*eP*	**Pn**		**08 52 42.9**	**-1.2**
UREC				*eS*	**Sn**		**08 53 13.6**	**-3.3**
UREC				*i*			08 53 25.8	
	comp=Z,218nm,0.2s							
SOCV	**Socops**	**2.64**	**57**	⇓*iP*	**Pn**		**08 52 45.8**	**+1.1**
SOCV				*eS*	**Sn**		**08 53 17.6**	**-0.5**
LL1C	**La Loma 1 Cana**	**2.73**	**350**	*eP*	**Pn**		**08 52 48.4**	**+2.6**
LL1C				*eS*	**Sn**		**08 53 23.7**	**+3.7**
LL1C				*i*			08 53 30.0	
	comp=Z,360nm,0.4s							
VILC	**Villavicencio,**	**2.77**	**193**	*eP*	**Pn**		**08 52 46.8**	**+0.3**
VILC				*eS*	**Sn**		**08 53 21.1**	**-0.1**
VILC				*i*			08 53 31.5	
	comp=Z,231nm,0.4s							
GUY2C	**Guyana, Caldas**	**2.77**	**235**	*eP*	**Pn**		**08 52 47.2**	**+0.4**
GUY2C				*eS*	**Sn**		**08 53 22.6**	**+0.9**
GUY2C				*i*			08 53 30.8	
	comp=Z,164nm,0.6s							
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*eP*	**Pn**		**08 52 46.2**	**-0.3**
PTGC				*eS*	**Sn**		**08 53 19.6**	**-1.7**
PTGC				*i*			08 53 21.7	
	comp=Z,122nm,0.2s							
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*eP*	**Pn**		**08 52 50.7**	**+0.6**
CBOC				*eS*	**Sn**		**08 53 27.1**	**-0.6**
CBOC				*i*			08 53 44.3	
	comp=Z,46nm,0.6s							
DBBC	**Dabeiba**	**3.10**	**274**	*eP*	**Pn**		**08 52 50.6**	**0.0**
DBBC				*eS*	**Sn**		**08 53 25.4**	**-3.1**
DBBC				*i*			08 53 35.8	
	comp=Z,70nm,0.4s							
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**		**08 52 52.6**	**+1.1**
	comp=Z,63nm,0.3s,baz=195,slow=2.1,SNR=38							
SDV				S	**Sn**		**08 53 30.1**	**-0.1**
	comp=Z,43nm,0.4s,baz=77,slow=22,SNR=8.9							
ARGC	**Ariguani, Magd**	**3.21**	**339**	*eP*	**Pn**		**08 52 53.5**	**+1.6**
ARGC				*eS*	**Sn**		**08 53 31.4**	**+0.5**
ARGC				*i*			08 53 38.2	
	comp=Z,41nm,0.5s							
ANIL	**Santa Ana**	**3.28**	**225**	*eP*	**Pn**		**08 52 55.1**	**+2.1**
ANIL				*eS*	**Sn**		**08 53 34.6**	**+1.8**
PRAC	**Prado**	**3.58**	**210**	*eP*	**Pn**		**08 52 56.8**	**+0.2**
PRAC				*eS*	**Sn**		**08 53 39.3**	**-0.1**
PRAC				*i*			08 53 44.0	
	comp=Z,175nm,0.5s							
SJCC	**San Jacinto, C**	**3.68**	**326**	*eP*	**Pn**		**08 52 56.9**	**-1.0**
SJCC				*eS*	**Sn**		**08 53 38.4**	**-3.3**
SJCC				*i*			08 53 42.3	
	comp=Z,46nm,0.6s							
PLMC	**San Jos del P**	**3.71**	**239**	*eP*	**Pn**		**08 52 58.7**	**+0.4**
PLMC				*eS*	**Sn**		**08 53 42.6**	**+0.2**
PLMC				*i*			08 53 47.0	
	comp=Z,36nm,0.2s							
LCBC	**Los crdobas,**	**3.82**	**302**	*eP*	**Pn**		**08 53 03.1**	**+3.5**
LCBC				*eS*	**Sn**		**08 53 44.5**	**-0.3**
LCBC				*i*			08 53 48.8	
	comp=Z,59nm,0.2s							
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*eP*	**Pn**		**08 53 03.3**	**-0.9**
CRJC				*eS*	**Sn**		**08 53 51.5**	**-1.5**
CRJC				*i*			08 53 55.1	
	comp=Z,41nm,0.4s							
GUVC	**San Jose del G**	**4.29**	**174**	*eP*	**Pn**		**08 53 06.0**	**+0.2**
GUVC				*eS*	**Sn**		**08 53 55.7**	**-0.2**
GUVC				*i*			08 53 59.3	
	comp=Z,64nm,0.2s							
YOTC	**Yotoco, Valle**	**4.31**	**229**	*eP*	**Pn**		**08 53 05.7**	**-0.4**
YOTC				*eS*	**Sn**		**08 54 02.0**	**+5.7**
MACC	**Macarena, Meta**	**4.72**	**189**	*eP*	**Pn**		**08 53 10.1**	**-1.4**
MACC				*eS*	**Sn**		**08 54 02.9**	**-3.1**
MACC				*i*			08 54 09.3	
	comp=Z,34nm,0.4s							
GARC	**Garzon, Huila**	**5.20**	**208**	*eP*	**Pn**		**08 53 17.5**	**-0.6**
GARC				*eS*	**Sn**		**08 54 12.5**	**-5.2**
GARC				*i*			08 54 18.6	
	comp=Z,50nm,0.2s							
POPC	**Popayan, Colom**	**5.57**	**220**	*eP*	**Pn**		**08 53 22.9**	**+0.1**
POPC				*eS*	**Sn**		**08 54 25.4**	**-1.0**
FLOC	**Florencia**	**5.81**	**206**	*eP*	**Pn**		**08 53 25.9**	**-0.1**
FLOC				*eS*	**Sn**		**08 54 31.1**	**-0.9**
FLOC				*i*			08 54 36.9	
	comp=Z,6.8nm,0.6s							
GCUF	**Volcan Galeras**	**7.00**	**217**	*eP*	**Pn**		**08 53 44.5**	**+2.3**
GCUF				*i*			08 54 28.3	
	comp=Z,3.4nm,0.4s							
GCUF				*eS*	**Sn**		**08 55 00.1**	**-1.1**
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**		**08 58 52.5**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=122,slow=9.1,SNR=6.1							
	comp=Z,0.2nm,0.4s							
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**		**09 00 19.2**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=138,slow=6.5,SNR=2.2							
	comp=Z,0.9nm,0.3s							
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**		**09 00 26.7**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=128,slow=8.4,SNR=2.7							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**		**09 11 30.5**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=130,slow=3.1,SNR=5.9							
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**		**09 11 34.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=106,slow=2.9,SNR=19							

IDC 17 09:14:26.2±2.5, 53.61N×86.91E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=23.2km s-min=14.2km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.29**	**286**	*i*		09 22 34.5	
	baz=105,slow=317,SNR=4.7						
ZALV	**Zalesovo Beam**	**1.29**	**286**	Pn	Pg	09 14 49.3	-1.6
	0.7nm,0.3s,baz=106,slow=18,SNR=14						
ZALV				Lg	Lg	09 15 08.4	
	1.0nm,0.3s,baz=106,slow=27,SNR=13						
KURBB	**Kurchatov Arra**	**5.96**	**243**	Pn	Pn	09 15 57.0	+1.3
	baz=58,slow=14,SNR=5.4						
KURBB				Lg	Lg	09 17 34.5	
	baz=62,slow=32,SNR=1.9						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**7.43**	**205**	Pn	Pn	09 16 17.4	+1.5
	0.2nm,0.3s,baz=28,slow=14,SNR=7.3						
MKAR				Lg	Lg	09 18 20.6	
	0.1nm,0.3s,baz=24,slow=15,SNR=6.9						
	0.3nm,0.3s						

IDC 17 09:15:47.5±3.0, 53.60N×87.90E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=27.3km s-min=17.9km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**282**	*i*		09 27 18.5	
	0.1nm,0.8s,baz=101,slow=318,SNR=14						
ZALV	**Zalesovo Beam**	**1.86**	**282**	Pn	Pn	09 16 20.7	+0.1
	1.5nm,0.3s,baz=100,slow=13,SNR=8.4						
ZALV				Lg	Lg	09 16 46.5	
	2.0nm,0.3s,baz=98,slow=27,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.49**	**246**	Pn	Pn	09 17 24.6	+0.4
	0.1nm,0.3s,baz=62,slow=14,SNR=6.3						
KURBB				Lg	Lg	09 19 14.0	
	baz=61,slow=31,SNR=3.4						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	**7.70**	**210**	Pn	Pn	09 17 42.0	+1.2
	0.2nm,0.3s,baz=30,slow=14,SNR=5.4						
MKAR				Lg	Lg	09 19 51.8	
	0.1nm,0.3s,baz=20,slow=32,SNR=3.6						
	0.2nm,0.3s						

IDC 17 09:22:34.0±3.0, 54.22N×86.97E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=24.2km s-min=16.0km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**259**	*i*		09 31 00.0	
	baz=78,slow=310,SNR=7.7						
ZALV	**Zalesovo Beam**	**1.30**	**259**	Pg	Pg	09 22 57.1	-1.6
	1.1nm,0.3s,baz=74,slow=17,SNR=5.6						
ZALV				Lg	Lg	09 23 16.6	
	1.0nm,0.3s,baz=76,slow=30,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.29**	**239**	Pn	Pn	09 24 08.1	+0.2
	0.1nm,0.3s,baz=55,slow=14,SNR=6.2						
KURBB				Sn	Sn	09 25 19.9	-0.5
	baz=28,slow=41,SNR=1.3						
KURBB				Lg	Lg	09 25 54.1	
	baz=59,slow=34,SNR=4.2						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**8.01**	**204**	Pn	Pn	09 24 34.0	+2.5
	0.1nm,0.3s,baz=14,slow=16,SNR=2.7						
MKAR				Sn	Sn	09 26 01.8	-0.9
	0.2nm,0.3s,baz=21,slow=26,SNR=4.6						
MKAR				Lg	Lg	09 26 44.6	
	baz=49,slow=29,SNR=2.3						
	0.2nm,0.4s						

*IDC **17** 09:32:25.7±2.7, 37.80N×21.91E, h47km±32km, mb3.6/7, mbtmp3.8/9, ML3.5/2, Error ellipse: s-maj=25.7km s-min=21.3km az=78.0*
*ATH **17** 09:32:26.4, 37.69N×21.95E, h62km±2km, ML3.2/28, Error ellipse: s-maj=2.8km s-min=1.1km az=281.0*
*THE **17** 09:32:28.9, 37.66N×21.94E, h50km±2km, ML3.3/21, Error ellipse: s-maj=2.1km s-min=0.6km az=276.0*

ISC 17 09:32:26.7±0.8, 37.68N±0.03×21.91E±0.02, h59km±6km, n84, σ2933/122, mb3.8/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRO	**Drossia**	**0.31**	**329**	P	**Pn**	**09 32 37.4**	**+0.6**
DRO				S	**Sn**	**09 32 45.5**	**+1.4**
	6μm,0.4s						
DRO	**Drossia**	**0.31**	**329**	P	**Pn**	**09 32 37.3**	**+0.6**
DRO				S	**Sn**	**09 32 45.3**	**+1.2**
DRO				AML	AML	09 32 46.3	
	comp=E,14423μm,0.4s						
DRO				AML	AML	09 32 50.9	
	comp=N,11391μm,0.4s						
KLV	**Kalavryta, Ach**	**0.41**	**27**	P	**Pn**	**09 32 38.6**	**+0.9**
KLV				S	**Sn**	**09 32 46.6**	**+1.0**
	comp=N,1μm,0.7s						
KLV	**Kalavryta, Ach**	**0.41**	**27**	P	**Pn**	**09 32 38.4**	**+0.7**
KLV				S	**Sn**	**09 32 47.3**	**+1.6**
KLV				AML	AML	09 32 49.4	
	comp=E,2518μm,0.7s						
KLV				AML	AML	09 32 51.9	
	comp=N,2815μm,0.7s						
GUR	**Goura**	**0.42**	**53**	P	**Pn**	**09 32 38.9**	**+1.0**
ITM	**Ithomi**	**0.50**	**179**	P	**Pn**	**09 32 39.4**	**+0.8**
ITM				S	**Sn**	**09 32 48.6**	**+1.4**
	comp=N,3μm,0.5s						
ITM	**Ithomi**	**0.50**	**179**	P	**Pn**	**09 32 39.3**	**+0.8**
ITM				S	**Sn**	**09 32 49.4**	**+2.1**
ITM				AML	AML	09 32 51.1	
	comp=E,6484μm,0.6s						
ITM				AML	AML	09 32 52.8	
	comp=N,4410μm,0.5s						
RLS	**Riolos of Patr**	**0.52**	**317**	P	**Pn**	**09 32 39.9**	**+1.2**
RLS				S	**Sn**	**09 32 49.4**	**+2.0**
	comp=N,965nm,0.4s						
RLS	**Riolos of Patr**	**0.52**	**317**	P	**Pn**	**09 32 39.7**	**+1.0**
RLS				S	**Sn**	**09 32 49.6**	**+2.2**
RLS				AML	AML	09 32 49.8	
	comp=N,2237μm,0.5s						
RLS				AML	AML	09 32 55.1	
	comp=E,2062μm,0.6s						
LAKA	**Lakka**	**0.56**	**5**	P	**Pn**	**09 32 40.7**	**+1.5**
LAKA				S	**Sn**	**09 32 50.4**	**+2.0**
	comp=E,4μm,0.4s						
LAKA	**Lakka**	**0.56**	**5**	P	**Pn**	**09 32 40.4**	**+1.2**
LAKA				AML	AML	09 32 53.0	
	comp=N,1830μm,0.4s						
LAKA				AML	AML	09 32 56.0	
	comp=E,2177μm,0.5s						
UPR	**University Cam**	**0.61**	**351**	P	**Pn**	**09 32 41.9**	**+2.1**
UPR				S	**Sn**	**09 32 51.5**	**+2.2**
THAL	**Thalero**	**0.69**	**59**	P	**Pn**	**09 32 42.3**	**+1.6**
THAL				S	**Sn**	**09 32 53.0**	**+2.0**
	comp=E,4μm,0.4s						
THAL	**Thalero**	**0.69**	**59**	P	**Pn**	**09 32 42.1**	**+1.4**
THAL				AML	AML	09 33 00.6	
	comp=N,6237μm,0.4s						
THAL				AML	AML	09 33 03.3	
	comp=E,7686μm,0.5s						
EFP	**Efpalio**	**0.74**	**360**	P	**Pn**	**09 32 43.5**	**+2.1**
EFP				S	**Sn**	**09 32 54.8**	**+2.7**
	comp=E,1μm,0.5s						
EFP	**Efpalio**	**0.74**	**360**	P	**Pn**	**09 32 43.2**	**+1.8**
EFP				S	**Sn**	**09 32 53.6**	**+1.5**
EFP				AML	AML	09 32 58.5	
	comp=E,2902μm,0.5s						
EFP				AML	AML	09 32 59.0	
	comp=N,2723μm,0.4s						
ACOR	**Acrocorinthos**	**0.79**	**74**	P	**Pn**	**09 32 43.2**	**+1.3**
ACOR				S	**Sn**	**09 32 54.3**	**+1.2**
ACOR				AML	AML	09 32 59.1	
	comp=N,1576μm,0.5s						
ACOR				AML	AML	09 33 00.9	
	comp=E,1670μm,0.5s						
PYL	**PYLOS**	**0.80**	**190**	P	**Pn**	**09 32 43.2**	**+1.1**
PYL				S	**Sn**	**09 32 54.7**	**+1.4**
LTHK	**Lithakia**	**0.85**	**272**	P	**Pn**	**09 32 44.0**	**+1.2**
LTHK				S	**Sn**	**09 32 57.2**	**+2.6**
	comp=E,3μm,0.2s						
LOUT	**Loutraki**	**0.89**	**70**	P	**Pn**	**09 32 44.8**	**+1.5**
LOUT				S	**Sn**	**09 32 56.8**	**+1.3**
	comp=E,1μm,0.6s						
LOUT	**Loutraki**	**0.89**	**70**	P	**Pn**	**09 32 44.6**	**+1.3**
ANX	**Ano Chora**	**0.91**	**0**	P	**Pn**	**09 32 46.0**	**+2.4**
ANX				S	**Sn**	**09 32 59.1**	**+3.1**
	comp=E,3μm,0.6s						
ANX	**Ano Chora**	**0.91**	**0**	P	**Pn**	**09 32 45.8**	**+2.2**
ANX				AML	AML	09 33 02.9	
	comp=N,6398μm,0.7s						
ANX				AML	AML	09 33 03.5	
	comp=E,6594μm,0.5s						
DLFA	**Delphi**	**0.92**	**30**	P	**Pn**	**09 32 44.2**	**+0.6**
DLFA				AML	AML	09 32 58.9	
	comp=E,1994μm,0.4s						
DLFA				AML	AML	09 32 59.4	
	comp=N,1306μm,0.5s						
EPID	**Epidavros**	**0.96**	**94**	P	**Pn**	**09 32 45.8**	**+1.7**
EPID				S	**Sn**	**09 32 59.4**	**+2.3**
	comp=N,1μm,0.4s						
EPID	**Epidavros**	**0.96**	**94**	P	**Pn**	**09 32 46.0**	**+1.8**
PVO	**Paravola**	**0.98**	**342**	P	**Pn**	**09 32 47.2**	**+2.8**
PVO				S	**Sn**	**09 33 01.1**	**+3.6**
	comp=N,3μm,0.6s						
PVO	**Paravola**	**0.98**	**342**	P	**Pn**	**09 32 47.0**	**+2.6**
KRND	**KRANIDI**	**1.03**	**107**	P	**Pn**	**09 32 47.0**	**+2.0**
KRND				S	**Sn**	**09 33 00.8**	**+2.3**
	comp=N,2μm,0.5s						
KRND	**KRANIDI**	**1.03**	**107**	P	**Pn**	**09 32 47.2**	**+2.2**
KRND				S	**Sn**	**09 33 00.9**	**+2.3**
KRND				AML	AML	09 33 02.7	
	comp=N,5052μm,0.5s						
KRND				AML	AML	09 33 02.8	
	comp=E,3076μm,0.5s						
PSDA	**Pessada-Kefalo**	**1.14**	**293**	P	**Pn**	**09 32 47.6**	**+1.2**
PSDA				S	**Sn**	**09 33 05.4**	**+4.3**
VLS	**Valsamata**	**1.16**	**296**	P	**Pn**	**09 32 47.7**	**+1.0**
VLS				AML	AML	09 33 09.8	
	comp=E,1204μm,0.2s						
VLS				AML	AML	09 33 11.8	
	comp=N,1398μm,0.3s						
VIL2	**Platees**	**1.19**	**63**	P	**Pn**	**09 32 48.6**	**+1.4**
VIL2				AML	AML	09 33 05.5	
	comp=E,2393μm,0.7s						
VIL2				AML	AML	09 33 13.5	
	comp=N,1077μm,0.6s						
VILL	**Villia**	**1.21**	**66**	P	**Pn**	**09 32 48.6**	**+1.2**
VILL				S	**Sn**	**09 33 04.4**	**+1.5**
	comp=N,1μm,0.5s						
AXAR	**Agios Charalam**	**1.23**	**28**	P	**Pn**	**09 32 49.8**	**+2.0**
AXAR				S	**Sn**	**09 33 06.1**	**+2.6**
	comp=N,2μm,0.4s						
AXAR	**Agios Charalam**	**1.23**	**28**	P	**Pn**	**09 32 49.7**	**+2.0**
AXAR				AML	AML	09 33 10.0	
	comp=E,4861μm,0.4s						
AXAR				AML	AML	09 33 13.7	
	comp=N,2950μm,0.4s						
EVR	**Evrytania**	**1.23**	**356**	P	**Pn**	**09 32 50.9**	**+3.0**
EVR				AML	AML	09 33 12.3	
	comp=N,1958μm,0.9s						
EVR				AML	AML	09 33 14.5	
	comp=E,1657μm,0.5s						
ARGA	**Argostoli. Kep**	**1.24**	**294**	P	**Pn**	**09 32 50.5**	**+2.7**
ARGA				S	**Sn**	**09 33 07.9**	**+4.4**
ARGA				AML	AML	09 33 13.3	
	comp=N,2242μm,0.3s						
ARGA				AML	AML	09 33 13.7	
	comp=E,1412μm,0.2s						
VLI	**Veliai**	**1.26**	**139**	P	**Pn**	**09 32 50.3**	**+2.2**
VLI				S	**Sn**	**09 33 06.7**	**+2.5**
	comp=E,532nm,0.5s						
VLI	**Veliai**	**1.26**	**139**	P	**Pn**	**09 32 51.0**	**+2.9**
VLI				AML	AML	09 33 11.7	
	comp=E,1008μm,0.5s						
VLI				AML	AML	09 33 16.2	
	comp=N,1120μm,0.6s						
YDRA	**Hydra**	**1.28**	**105**	P	**Pn**	**09 32 50.5**	**+2.2**
KEF4	**Livadi, Kephal**	**1.31**	**296**	P	**Pn**	**09 32 51.1**	**+2.4**
FSK	**Fiskardo**	**1.32**	**306**	P	**Pn**	**09 32 52.4**	**+3.5**
FSK				AML	AML	09 33 17.0	
	comp=E,1077μm,0.4s						
FSK				AML	AML	09 33 17.1	
	comp=N,747μm,0.2s						
ATAL	**Atalanti**	**1.33**	**41**	P	**Pn**	**09 32 50.5**	**+1.4**
ATAL				S	**Sn**	**09 33 08.1**	**+2.2**
ATAL	**Atalanti**	**1.33**	**41**	P	**Pn**	**09 32 50.4**	**+1.3**
ATAL				AML	AML	09 33 10.6	
	comp=E,445μm,0.4s						
ATAL				AML	AML	09 33 11.4	
	comp=N,829μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.34**	**7**	P	**Pn**	**09 32 51.9**	**+2.7**
MAKR				S	**Sn**	**09 33 09.0**	**+2.9**
MAKR	**Makrakomi, Fth**	**1.34**	**7**	P	**Pn**	**09 32 51.9**	**+2.7**
MAKR				AML	AML	09 33 16.6	
	comp=E,2959μm,0.6s						
MAKR				AML	AML	09 33 17.1	
	comp=N,3124μm,0.5s						
EVGI	**Lefkada island**	**1.36**	**314**	P	**Pn**	**09 32 52.3**	**+2.8**
AGG	**Agios Georgios**	**1.38**	**14**	P	**Pn**	**09 32 51.7**	**+2.0**
AGG				S	**Sn**	**09 33 09.9**	**+2.9**
AGG	**Agios Georgios**	**1.38**	**14**	P	**Pn**	**09 32 51.7**	**+2.0**
AGG				AML	AML	09 33 13.0	
	comp=E,714μm,0.3s						
AGG				AML	AML	09 33 14.1	
	comp=N,1216μm,0.4s						
ATH	**Athens Observa**	**1.46**	**78**	P	**Pn**	**09 32 52.2**	**+1.5**
ATH				S	**Sn**	**09 33 10.3**	**+1.5**
	comp=N,572nm,0.4s						
ATH	**Athens Observa**	**1.46**	**78**	P	**Pn**	**09 32 52.1**	**+1.5**
ATH				AML	AML	09 33 12.2	
	comp=N,1052μm,0.4s						
ATH				AML	AML	09 33 12.4	
	comp=E,1226μm,0.3s						
LKD2	**Lefkada island**	**1.48**	**319**	P	**Pn**	**09 32 54.6**	**+3.5**
LKD2				AML	AML	09 33 18.9	
	comp=N,1083μm,0.3s						
LKD2				AML	AML	09 33 19.6	
	comp=E,1407μm,0.3s						
VLY	**Voula,Athens**	**1.50**	**83**	P	**Pn**	**09 32 52.8**	**+1.5**
VLY				S	**Sn**	**09 33 11.8**	**+1.9**
	comp=E,410nm,0.5s						
VLY	**Voula,Athens**	**1.50**	**83**	P	**Pn**	**09 32 52.9**	**+1.6**
VLY				AML	AML	09 33 11.8	
	comp=N,745μm,0.7s						
VLY				AML	AML	09 33 16.3	
	comp=E,885μm,0.3s						
ATHU	**Athens Univers**	**1.51**	**79**	P	**Pn**	**09 32 52.8**	**+1.4**
ATHU				S	**Sn**	**09 33 11.2**	**+1.1**
	comp=E,188nm,0.4s						
ATHU	**Athens Univers**	**1.51**	**79**	P	**Pn**	**09 32 52.8**	**+1.4**
TSLK	**Tsoukalades, L**	**1.51**	**319**	P	**Pn**	**09 32 54.5**	**+3.1**
TSLK				AML	AML	09 33 19.4	
	comp=E,913μm,0.5s						
TSLK				AML	AML	09 33 21.4	
	comp=N,982μm,0.4s						
DION	**Dionisos Attik**	**1.65**	**76**	P	**Pn**	**09 32 54.8**	**+1.5**
DION				S	**Sn**	**09 33 15.0**	**+1.6**
	comp=N,1μm,0.5s						
DION	**Dionisos Attik**	**1.65**	**76**	P	**Pn**	**09 32 54.8**	**+1.5**
DION				AML	AML	09 33 16.5	
	comp=E,1647μm,0.5s						
DION				AML	AML	09 33 16.6	
	comp=N,1400μm,0.4s						
KTHR	**Kythira**	**1.67**	**148**	P	**Pn**	**09 32 57.1**	**+3.5**
KTHR				AML	AML	09 33 27.2	
	comp=N,1292μm,0.5s						
KTHR				AML	AML	09 33 32.6	
	comp=E,1864μm,0.5s						
KTHA	**Kythira Island**	**1.69**	**147**	P	**Pn**	**09 32 57.3**	**+3.3**
KTHA				AML	AML	09 33 30.5	
	comp=E,661μm,0.4s						
KTHA				AML	AML	09 33 36.0	
	comp=N,461μm,0.6s						
IDI	**Anoyia**	**3.39**	**134**	P	**Pn**	**09 33 17.9**	**+0.8**
	comp=N,0.7nm,0.

comp=N,0.6nm,0.4s,baz=277,slow=7.8,SNR=6.7
comp=N,0.6nm,0.4s
ZALV Zalesovo Beam 45.20 48 P **P 09 40 36.9 -0.7**
comp=N,1.6nm,0.5s,baz=271,slow=9.4,SNR=4.8
comp=N,1.6nm,0.5s

IDC 17 09:36:15.4±8.1, 20°47S×174°44W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=351.3km s-min=40.7km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.77**	**256**	P	P	09 44 53.9	-0.9
	0.4nm,0.4s,baz=100,slow=7.2,SNR=9.1						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**47.91**	**261**	P	P	09 44 56.4	+0.6
	1.0nm,0.4s,baz=97,slow=8.2,SNR=76						
	1.0nm,0.4s						
ILAR	**Eielson Array**	**87.59**	**11**	P	P	09 49 04.9	0.0
	1.0nm,1.1s,baz=209,slow=6.8,SNR=4.3						
	1.0nm,1.1s						

*KRSC **17** 10:13:46.8±0.7, 54°.59N×161°.09E, h112km±8km, ML4.2*
*IDC **17** 10:13:48.6±2.7, 54°.89N×160°.46E, h115km±28km, mb3.1/6, mbtmp3.5/7, Error ellipse: s-maj=120.0km s-min=20.6km az=139.0*

ISC 17 10:13:48.6±0.8, 54°.59N±0°.03×161°.05E±0°.04, h110km±7km, n45, σ0s94/66, mb3.3/6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.40**	**94**	*eP*	**Pn**	**10 14 04.7**	**-0.1**
MKZ				*eS*	**Sn**	**10 14 16.7**	**-0.2**
TUMR	**Tumrok**	**0.87**	**324**	*eP*	**Pn**	**10 14 08.5**	**-0.1**
TUMR				*eS*	**Sn**	**10 14 23.6**	**0.0**
KII	**Karymskiy**	**1.09**	**240**	*eP*	**Pn**	**10 14 10.7**	**-0.1**
KMNR	**Kamenistaya**	**1.26**	**339**	*eP*	**Pn**	**10 14 12.4**	**-0.3**
KMNR				*eS*	**Sn**	**10 14 30.6**	**-0.3**
KIRR	**Kirishev**	**1.43**	**344**	*eS*	**Sn**	**10 14 34.8**	**+0.4**
ZLN	**Zelenaya**	**1.44**	**355**	P	**Pn**	**10 14 14.9**	**+0.1**
KPT	**Kopyto**	**1.46**	**341**	*eP*	**Pn**	**10 14 15.6**	**+0.6**
SPN	**Mys Shipunski**	**1.61**	**203**	*eP*	**Pn**	**10 14 15.9**	**-0.8**
SPN				*eS*	**Sn**	**10 14 37.0**	**-1.1**
KOZ	**Kozyrevsk**	**1.62**	**336**	*eP*	**Pn**	**10 14 16.2**	**-0.6**
NLC	**Nalytchevo**	**1.74**	**216**	*eP*	**Pn**	**10 14 18.2**	**-0.1**
NLC				*eS*	**Sn**	**10 14 40.5**	**-0.4**
KLY	**Klyuchi**	**1.74**	**353**	*eP*	**Pn**	**10 14 17.9**	**-0.4**
KLY				*eS*	**Sn**	**10 14 41.0**	**+0.1**
SDLR	**Sedlovina**	**1.83**	**225**	*eP*	**Pn**	**10 14 19.9**	**+0.3**
KRER	**Koryakskii**	**1.87**	**227**	*eP*	**Pn**	**10 14 20.8**	**+0.7**
KRER				*eS*	**Sn**	**10 14 45.3**	**+1.2**
KRX	**Arik**	**1.88**	**230**	*eP*	**Pn**	**10 14 20.7**	**+0.5**
KRX				*eS*	**Sn**	**10 14 44.9**	**+0.7**
SMAR	**Somma**	**1.88**	**226**	*eP*	**Pn**	**10 14 20.5**	**+0.3**
SMAR				*eS*	**Sn**	**10 14 44.5**	**+0.2**
SRDR	**Sredinnyy**	**1.89**	**337**	*eP*	**Pn**	**10 14 19.2**	**-1.0**
ESO	**Esso**	**1.90**	**316**	*i* P	**Pn**	**10 14 19.6**	**-0.7**
ESO				*eS*	**Sn**	**10 14 43.5**	**-0.9**
AVH	**Avacha**	**1.90**	**227**	*eP*	**Pn**	**10 14 21.0**	**+0.6**
AVH				*eS*	**Sn**	**10 14 45.3**	**+0.7**
UGLR	**Uglovaya**	**1.91**	**224**	*eP*	**Pn**	**10 14 21.2**	**+0.7**
UGLR				*eS*	**Sn**	**10 14 45.7**	**+0.9**
KBTR	**Krutoberegovo**	**1.91**	**31**	*eP*	**Pn**	**10 14 20.5**	**+0.1**
KBTR				*eS*	**Sn**	**10 14 44.8**	**+0.1**
KOK	**Koryaka**	**1.93**	**229**	*eP*	**Pn**	**10 14 21.4**	**+0.7**
KOK				*eS*	**Sn**	**10 14 46.2**	**+1.0**
BDR	**Baidarnaya**	**1.99**	**3**	*eP*	**Pn**	**10 14 21.5**	**0.0**
BDR				*eS*	**Sn**	**10 14 47.1**	**+0.6**
SMKR	**Semkarok**	**2.01**	**7**	*eP*	**Pn**	**10 14 21.6**	**-0.2**
GNL	**Ganaly**	**2.03**	**245**	*eP*	**Pn**	**10 14 22.4**	**+0.3**
DALK	**Dalny**	**2.07**	**222**	*i* P	**Pn**	**10 14 22.6**	**+0.2**
DALK				*eS*	**Sn**	**10 14 48.3**	**+0.1**
SRKR	**Sorokina**	**2.07**	**2**	*eP*	**Pn**	**10 14 22.5**	**0.0**
PET	**Petropavlovsk**	**2.11**	**223**	*eP*	**Pn**	**10 14 23.3**	**+0.3**
PET				*eS*	**Sn**	**10 14 49.6**	**+0.3**
KRMR	**Karymshinskiy**	**2.47**	**226**	*eP*	**Pn**	**10 14 27.7**	**+0.1**
KRMR				*eS*	**Sn**	**10 14 57.6**	**+0.1**
PETK	**Petropavlovsk-**	**2.48**	**235**	P	**Pn**	**10 14 27.0**	**-0.7**
	18nm,0.6s,baz=66,slow=16,SNR=53						
PETK				S	**Sn**	**10 14 52.9**	**-4.8**
	11nm,0.4s,baz=72,slow=19,SNR=6.0						
RUS	**Russkaya**	**2.64**	**216**	*eP*	**Pn**	**10 14 29.2**	**-0.6**
RUS				*eS*	**Sn**	**10 15 00.3**	**-1.1**
GRL	**Gorelyy**	**2.70**	**222**	*eP*	**Pn**	**10 14 31.5**	**+0.7**
GRL				*eS*	**Sn**	**10 15 04.8**	**+1.7**
MTVR	**Mutnovka**	**2.71**	**220**	*eP*	**Pn**	**10 14 31.4**	**+0.5**
MTVR				*eS*	**Sn**	**10 15 04.0**	**+0.5**
APC	**Apacha**	**2.85**	**236**	*eP*	**Pn**	**10 14 33.2**	**+0.7**
BKI	**Bering**	**2.91**	**76**	*eP*	**Pn**	**10 14 33.4**	**+0.1**
BKI				*eS*	**Sn**	**10 15 06.4**	**-1.4**
KDTR	**Khodutka, Kamc**	**3.31**	**214**	*eP*	**Pn**	**10 14 38.0**	**-0.6**
KDTR				*eS*	**Sn**	**10 15 15.0**	**-2.2**
PAU	**Pauzhetka**	**4.04**	**221**	*eP*	**Pn**	**10 14 48.7**	**+0.3**
MJAR	**Matsushiro Arr**	**23.93**	**230**	P	**P**	**10 18 51.7**	**-0.6**
	0.9nm,0.8s,baz=44,slow=13,SNR=2.1						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**27.37**	**47**	P	**P**	**10 19 23.2**	**+0.1**
	0.5nm,0.8s,baz=265,slow=6.9,SNR=6.4						
	0.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**35.08**	**170**	T	T	10 57 58.4	
	baz=355,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**35.10**	**170**	T	T	10 57 58.6	
	baz=355,slow=76,SNR=15						
H11N1	**WAKE ISLAND Hy**	**35.10**	**170**	T	T	10 57 59.7	
	baz=355,slow=76,SNR=32						
NVAR	**Mina Array Bea**	**54.72**	**72**	P	**P**	**10 23 08.1**	**+1.5**
	0.7nm,0.7s,baz=294,slow=7.4,SNR=7.7						
	0.7nm,0.7s						
PDAR	**Pinedale Array**	**56.31**	**62**	P	**P**	**10 23 16.8**	**-1.2**
	0.2nm,0.6s,baz=357,slow=3.1,SNR=2.9						
	0.2nm,0.6s						
TXAR	**Lajitas Array**	**69.54**	**68**	P	**P**	**10 24 46.5**	**+1.0**
	0.3nm,0.5s,baz=290,slow=5.2,SNR=5.8						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**77.68**	**206**	P	**P**	**10 25 32.6**	**-0.2**
	0.2nm,0.6s,baz=20,slow=5.9,SNR=1.3						
	0.2nm,0.6s						

IDC 17 10:34:41.0±2.0, 13°.45N×92°.80E, h0km, mb3.7/4, mbtmp3.7/5, ML4.1/1, MS3.3/1, Error ellipse: s-maj=64.2km s-min=26.6km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.73**	**49**	Pn	Pn	10 36 34.9	0.0
	0.8nm,0.3s,baz=243,slow=16,SNR=2.4						
CMAR				Sn	Sn	10 37 58.1	-5.0
	0.4nm,0.3s,baz=239,slow=28,SNR=8.3						
	1.3nm,0.3s						
LEM	**Lembang**	**24.94**	**143**	LR	LR	10 51 25.4	
	comp=Z,59nm,18.2s,baz=173,slow=40						
H08S3	**Diego Garcia H**	**29.08**	**225**	T	T	11 11 05.1	
	baz=43						
H08S2	**Diego Garcia H**	**29.08**	**225**	T	T	11 11 04.9	
	baz=43,slow=74						
H08S1	**Diego Garcia H**	**29.10**	**225**	T	T	11 11 09.8	
	baz=43,slow=74						
MKAR	**Makanchi Array**	**34.40**	**347**	P	P	10 41 30.1	+0.1
	1.1nm,0.8s,baz=160,slow=9.0,SNR=9.3						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**38.86**	**346**	P	P	10 42 07.8	-0.1
	1.1nm,0.7s,baz=158,slow=7.8,SNR=9.6						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**40.90**	**353**	P	P	10 42 24.4	-0.4
	1.4nm,0.5s,baz=174,slow=8.3,SNR=4.4						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**54.55**	**132**	P	P	10 44 11.2	-0.1
	0.3nm,0.8s,baz=309,slow=6.7,SNR=5.4						
	0.3nm,0.8s						

*IDC **17** 10:46:56.9±3.3, 34°.68N×23°.57E, h35km±28km, mb3.3/2, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=47.6km s-min=27.3km az=152.0*
*ATH **17** 10:46:57.0, 34°.84N×23°.49E, h32km±6km, ML3.1/6, Error ellipse: s-maj=6.3km s-min=1.2km az=71.0*
*THE **17** 10:46:58.9, 34°.94N×23°.54E, h12km±1km, ML3.0/8, Error ellipse: s-maj=1.4km s-min=0.6km az=40.0*

ISC 17 10:46:57.1±1.8, 34°.84N±0°.08×23°.52E±0°.05, h32km±12km, n21, σ0s68/34, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.47**	**90**	P	**Pn**	**10 47 07.8**	**+0.2**
GVD				S	**Sn**	**10 47 14.9**	**+0.2**
	8μm,0.4s						
GVD	**Gavdhos**	**0.47**	**90**	P	**Pn**	**10 47 07.3**	**-0.2**
GVD				S	**Sn**	**10 47 14.5**	**-0.2**
GVD				AML	AML	10 47 18.4	
	comp=N,14621μm,0.4s						
GVD				AML	AML	10 47 19.6	
	comp=E,15529μm,0.3s						
GVDS	**Gavdos**	**0.47**	**89**	P	**Pn**	**10 47 07.3**	**-0.3**
GVDS				S	**Sn**	**10 47 14.9**	**+0.1**
	comp=E,4μm,0.5s						
IMMV	**Iera Moni Meta**	**0.73**	**31**	P	**Pb**	**10 47 11.2**	**-0.3**
IMMV				S	**Sb**	**10 47 20.1**	**-1.0**
	comp=E,1μm,0.6s						
IMMV	**Iera Moni Meta**	**0.73**	**31**	P	**Pb**	**10 47 11.1**	**-0.3**
IMMV				S	**Sn**	**10 47 21.6**	**+0.4**
IMMV				AML	AML	10 47 24.4	
	comp=N,3232μm,0.8s						
IMMV				AML	AML	10 47 27.3	
	comp=E,2292μm,0.8s						
PRNS	**Prines Rethymn**	**0.96**	**57**	P	**Pn**	**10 47 14.5**	**+0.1**
PRNS				S	**Sb**	**10 47 27.2**	**-0.5**
	comp=E,1μm,0.6s						
ANKY	**Antikythira Is**	**1.04**	**350**	P	**Pb**	**10 47 16.3**	**-0.4**
ANKY				S	**Sb**	**10 47 30.4**	**+0.4**
	comp=E,408nm,0.8s						
ANKY	**Antikythira Is**	**1.04**	**350**	P	**Pb**	**10 47 16.2**	**-0.5**
ANKY				S	**Sb**	**10 47 30.1**	**0.0**
ANKY				AML	AML	10 47 34.7	
	comp=N,746μm,0.6s						
ANKY				AML	AML	10 47 35.4	
	comp=E,875μm,0.9s						
SIVA	**Sivas**	**1.07**	**80**	P	**Pb**	**10 47 17.0**	**-0.2**
SIVA				S	**Sb**	**10 47 31.9**	**+1.0**
SIVA				AML	AML	10 47 39.4	
	comp=E,5873μm,0.5s						
SIVA				AML	AML	10 47 39.6	
	comp=N,4279μm,0.5s						
IDI	**Anoyia**	**1.21**	**68**	Pg	**Pb**	**10 47 19.3**	**-0.2**
	comp=N,11nm,0.3s,baz=255,slow=11,SNR=79						
IDI				Lg	Lg	10 47 39.9	
	comp=N,29nm,0.3s,baz=260,slow=23,SNR=7.8						
IDI	**Anoyia**	**1.21**	**68**	P	**Pb**	**10 47 19.3**	**-0.2**
IDI				S	**Sb**	**10 47 35.8**	**+0.9**
	comp=N,432nm,0.4s						
IDI	**Anoyia**	**1.21**	**68**	P	**Pb**	**10 47 19.4**	**-0.2**
IDI				S	**Sb**	**10 47 35.6**	**+0.7**
IDI				AML	AML	10 47 40.5	
	comp=E,1007μm,0.5s						
IDI				AML	AML	10 47 44.3	
	comp=N,722μm,0.5s						
IACM	**Heraklion**	**1.35**	**69**	P	**Pb**	**10 47 22.2**	**+0.3**
IACM				S	**Sb**	**10 47 39.7**	**+0.8**
	comp=N,2μm,0.6s						
IACM	**Heraklion**	**1.35**	**69**	P	**Pb**	**10 47 21.9**	**0.0**
KTHA	**Kythira Island**	**1.46**	**345**	P	**Pn**	**10 47 22.4**	**+1.1**
KTHA				S	**Sb**	**10 47 41.7**	**-0.4**
	comp=N,260nm,0.7s						
KTHA	**Kythira Island**	**1.46**	**345**	P	**Pb**	**10 47 22.7**	**-1.0**
KTHA				AML	AML	10 47 48.7	
	comp=E,675μm,0.7s						
KTHA				AML	AML	10 47 57.6	
	comp=N,355μm,0.6s						
VLI	**Veliai**	**1.94**	**346**	P	**Pn**	**10 47 29.6**	**+1.8**
VLI	**Veliai**	**1.94**	**346**	P	**Pb**	**10 47 31.1**	**-0.7**
GERES	**GERESS Array B**	**15.77**	**336**	Pn	**P**	**10 50 40.9**	**+0.4**
	comp=N,0.2nm,0.3s,baz=143,slow=15,SNR=4.1						
	comp=N,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.26**	**228**	P	**P**	**10 52 56.8**	**+0.4**
	comp=N,0.2nm,0.5s,baz=39,slow=9.8,SNR=2.0						
	comp=N,0.2nm,0.5s						
MKAR	**Makanchi Array**	**45.07**	**56**	P	**P**	**10 55 08.6**	**-1.4**
	comp=N,0.4nm,0.4s,baz=267,slow=7.2,SNR=9.9						
	comp=N,0.4nm,0.4s						

ROM 17 10:52:05.2±0.4, 36°.08N±0°.02×14°.87E±0°.04, h11km, ML3.5/16, 6C-4D, Error ellipse: s-maj=4.0km s-min=1.3km az=294.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDD	**Wied Dalam**	**0.37**	**229**	P	Pg	10 52 13.1	+0.5
WDD				S	Sb	10 52 19.2	-0.3
SSY	**Sortino**	**1.08**	**9**	⇑P	Pb	10 52 25.3	-0.8
SSY				S	Sn	10 52 41.2	-0.3
SSY				AML	AML		
	comp=E,8245μm,0.4s						
SSY				AML	AML		
	comp=N,9645μm,0.4s						
HVZN	**Vizzini**	**1.10**	**354**	P	Pb	10 52 24.6	-1.8
HVZN				S	Sb	10 52 40.5	-0.3
RAFF	**Raffo Rosso**	**1.21**	**340**	⇑P	Pn	10 52 26.9	-1.3
RAFF				S	Sg	10 52 44.4	+0.1
RAFF				AML	AML		
	comp=N,5465μm,0.5s						
RAFF				AML	AML		
	comp=E,6795μm,0.7s						
HAGA	**Augusta**	**1.23**	**11**	⇑P	Pn	10 52 27.1	-1.1
HAGA				S	Sb	10 52 44.4	+0.2
HAGA				AML	AML		
	comp=E,3490μm,0.5s						
HAGA				AML	AML		
	comp=N,3135μm,0.4s						
HLNI	**Lentini**	**1.27**	**0**	P	Pn	10 52 27.7	-1.1
HLNI				S	Sb	10 52 45.1	-0.2
HLNI				AML	AML		
	comp=E,1875μm,0.8s						
HLNI				AML	AML		
	comp=N,2510μm,0.3s						
CLTA	**Licata**	**1.30**	**326**	⇓P	Pn	10 52 27.5	-1.8
CLTA				AML	AML		
	comp=E,1240μm,1.5s						
CLTA				AML	AML		
	comp=N,2105μm,0.8s						
FAVR	**Favara**	**1.53**	**321**	⇑P	Pn	10 52 31.2	-1.3
FAVR				AML	AML		
	comp=E,771μm,0.5s						
FAVR				AML	AML		
	comp=N,755μm,0.4s						
CAGR	**Agira**	**1.57**	**349**	P	Pb	10 52 33.8	-0.5
ESLN	**Serra La Nave**	**1.61**	**3**	P	Pb	10 52 35.1	-0.1
CMDO	**Montedoro**	**1.62**	**329**	P	Pn	10 52 34.0	+0.2
GALF	**Gagliano Caste**	**1.65**	**352**	P	Pn	10 52 34.8	+0.7
GALF				AML	AML		
	comp=N,1200μm,0.5s						
GALF				AML	AML		
	comp=E,842μm,0.5s						
RESU	**Resuttano**	**1.69**	**338**	P	Pb	10 52 36.4	0.0
EMSG	**Monte Spagnolo**	**1.74**	**2**	P	Pb	10 52 37.4	+0.1
EMSG				AML	AML		
	comp=E,1385μm,0.5s						
EMSG				AML	AML		
	comp=N,1530μm,0.6s						
EPZF	**Pizzo Felice**	**1.74**	**360**	P	Pb	10 52 36.5	-0.7
EPZF				AML	AML		
	comp=E,1550μm,0.5s						
EPZF				AML	AML		
	comp=N,1780μm,0.6s						
PETRA	**Petralia Sopra**	**1.85**	**341**	P	Pn	10 52 37.1	+0.1
PETRA				S	Sb	10 53 02.3	-0.1
PETRA				AML	AML		
	comp=E,891μm,0.6s						
PETRA				AML	AML		
	comp=N,731μm,0.5s						
MSFR	**San Fratello**	**1.96**	**354**	P	Pn	10 52 38.4	-0.1
MSFR				AML	AML		
	comp=N,396μm,0.8s						
MSFR				AML	AML		
	comp=E,366μm,1.1s						
CSLB	**Castelbuono**	**1.96**	**341**	P	Pn	10 52 39.0	+0.4
CSLB				AML	AML		
	comp=E,468μm,1.0s						
CSLB				AML	AML		
	comp=N,679μm,0.6s						
GIB	**Gibilmanna**	**2.02**	**341**	P	Pn	10 52 39.8	+0.4
GIB				AML	AML		
	comp=E,1200μm,0.5s						
GIB				AML	AML		
	comp=N,1195μm,0.5s						

CRJA	**Costa Raja**	**2.28**	**320**	⇑P	Pb	10 52 44.8	-1.6
PLAC	**Placanica**	**2.68**	**27**	⇓P	Pn	10 52 49.4	+1.1
PLAC				AML	AML		
	comp=N,122μm,1.0s						
PLAC				AML	AML		
	comp=E,114μm,0.4s						
CAR1	**CAROLEI**	**3.34**	**18**	⇓P	Pn	10 52 58.0	+0.5
CAR1				AML	AML		
	comp=E,144μm,0.7s						
CAR1				AML	AML		
	comp=N,134μm,0.6s						
MIGL	**Miglionico**	**4.68**	**15**	P	Pn	10 53 17.4	+1.6
LTRZ	**Laterza**	**4.77**	**18**	⇓P	Pn	10 53 16.9	-0.1
LTRZ				AML	AML		
	comp=E,29μm,0.5s						
LTRZ				AML	AML		
	comp=N,1000μm,1.6s						
LATB	**Latina**	**5.61**	**345**	⇑P	Pn	10 53 25.8	-2.7
VLO	**Vlora**	**5.70**	**38**	P	Pb	10 53 48.9	+4.3
MMUR	**Monte Murano**	**7.49**	**349**	P	Pn	10 53 52.7	-1.8
SSFR	**Montelago di S**	**7.52**	**348**	P	Pn	10 53 58.1	+3.3

*IDC **17** 10:54:39.8±1.1, 34°.88N×23°.17E, h0km, mb3.8/8, mbtmp3.7/11, ML3.6/2, Error ellipse: s-maj=24.3km s-min=14.0km az=173.0*
*ISK **17** 10:54:44.3, 34°.78N×23°.47E, h63km, ML3.6/10*
*ATH **17** 10:54:47.6, 34°.98N×23°.58E, h41km±2km, ML3.3/5, Error ellipse: s-maj=7.1km s-min=2.5km az=54.0*
*THE **17** 10:54:48.8, 34°.97N×23°.56E, h16km±1km, ML3.3/6, Error ellipse: s-maj=1.8km s-min=0.7km az=43.0*
*GII **17** 10:54:55.5±0.0, 34°.69N×24°.53E, h15km*

ISC 17 10:54:45.5±1.1, 34°.83N±0°.07×23°.56E±0°.07, h47km±9km, n54, σ2s65/70, mb3.7/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.43**	**88**	P	**Pn**	**10 54 57.2**	**+1.4**
GVD				S	**Sn**	**10 55 05.1**	**+1.9**
	11μm,0.4s						
GVD	**Gavdhos**	**0.43**	**88**	PG	**Pn**	**10 54 57.2**	**+1.4**
GVD				SG	**Sn**	**10 55 06.7**	**+3.5**
GVD	**Gavdhos**	**0.43**	**88**	P	**Pn**	**10 54 57.2**	**+1.4**
GVD				S	**Sn**	**10 55 06.0**	**+2.8**
GVD				AML	AML	10 55 07.9	
	comp=N,21674μm,0.5s						
GVD				AML	AML	10 55 09.0	
	comp=E,23626μm,0.3s						
IMMV	**Iera Moni Meta**	**0.72**	**29**	P	**Pn**	**10 55 00.6**	**+1.1**
IMMV				S	**Sn**	**10 55 09.1**	**-0.4**
	comp=E,2μm,0.4s						
IMMV	**Iera Moni Meta**	**0.72**	**29**	PG	**Pn**	**10 55 00.7**	**+1.2**
IMMV	**Iera Moni Meta**	**0.72**	**29**	P	**Pn**	**10 55 00.6**	**+1.1**
IMMV				S	**Sn**	**10 55 08.9**	**-0.7**
IMMV				AML	AML	10 55 13.8	
	comp=N,5168μm,0.4s						
IMMV				AML	AML	10 55 15.2	
	comp=E,4284μm,0.4s						
CHAN	**Chania**	**0.80**	**30**	P	**Pn**	**10 55 01.8**	**+1.4**
CHAN				AML	AML	10 55 19.7	
	comp=E,4831μm,0.5s						
CHAN				AML	AML	10 55 21.1	
	comp=N,5243μm,0.5s						
ANKY	**Antikythira Is**	**1.06**	**349**	P	**Pn**	**10 55 05.9**	**+1.9**
ANKY				S	**Sn**	**10 55 18.9**	**+1.3**
	comp=N,1μm,0.6s						
ANKY	**Antikythira Is**	**1.06**	**349**	P	**Pn**	**10 55 05.8**	**+1.9**
ANKY				AML	AML	10 55 26.5	
	comp=N,1868μm,0.6s						
ANKY				AML	AML	10 55 26.7	
	comp=E,2539μm,0.5s						
IDI	**Anoyia**	**1.19**	**67**	Pg	**Pn**	**10 55 08.5**	**+2.8**
	comp=E,23nm,0.3s,baz=255,slow=9.1,SNR=73						
IDI				Lg	Lg	10 55 29.0	
	comp=E,53nm,0.3s,baz=263,slow=23,SNR=8.5						
IDI	**Anoyia**	**1.19**	**67**	P	**Pn**	**10 55 08.7**	**+2.9**
IDI				S	**Sn**	**10 55 24.3**	**+3.5**
	comp=E,730nm,0.4s						
IDI	**Anoyia**	**1.19**	**67**	PN	**Pn**	**10 55 06.9**	**+1.1**
IDI				SN	**Sn**	**10 55 23.4**	**+2.6**
IDI	**Anoyia**	**1.19**	**67**	P	**Pn**	**10 55 08.6**	**+2.9**
IDI				AML	AML	10 55 30.0	
	comp=E,1728μm,0.5s						
IDI				AML	AML	10 55 33.8	
	comp=N,1191μm,0.5s						
IACM	**Heraklion**	**1.33**	**69**	P	**Pn**	**10 55 11.5**	**+3.9**
IACM				S	**Sn**	**10 55 28.8**	**+4.6**
	comp=N,3μm,0.6s						
IACM	**Heraklion**	**1.33**	**69**	P	**Pn**	**10 55 10.8**	**+3.2**
HRKL	**Herakleio**	**1.35**	**69**	PN	**Pn**	**10 55 09.3**	**+1.3**
HRKL	**Herakleio**	**1.35**	**69**	P	**Pn**	**10 55 11.3**	**+3.3**
KTHA	**Kythira Island**	**1.48**	**344**	P	**Pn**	**10 55 11.8**	**+2.0**
KTHA				S	**Sn**	**10 55 29.4**	**+1.4**
	comp=N,670nm,0.6s						
MHLO	**Agia Marina, M**	**1.98**	**20**	P	**Pn**	**10 55 17.5**	**+0.9**
SAP3	**Santorini-Thir**	**2.17**	**42**	P	**Pn**	**10 55 20.7**	**+1.6**
SANT	**Santorini**	**2.18**	**45**	PN	**Pn**	**10 55 20.9**	**+1.5**
SANT	**Santorini**	**2.18**	**45**	P	**Pn**	**10 55 21.0**	**+1.5**
ZKR	**Zakros**	**2.20**	**82**	PN	**Pn**	**10 55 21.1**	**+1.5**
ZKR	**Zakros**	**2.20**	**82**	P	**Pn**	**10 55 23.3**	**+3.7**
CMBO	**Columbo, Santo**	**2.23**	**42**	P	**Pn**	**10 55 21.6**	**+1.7**
APE	**Apeiranthos**	**2.75**	**35**	PN	**Pn**	**10 55 28.4**	**+1.2**
APE	**Apeiranthos**	**2.75**	**35**	P	**Pn**	**10 55 28.0**	**+0.8**
AMGA	**Amorgos Island**	**2.76**	**43**	P	**Pn**	**10 55 28.6**	**+1.3**
ARG	**Arkhangelos**	**3.98**	**68**	PN	**Pn**	**10 55 46.1**	**+2.2**
TURN	**Turunc**	**4.28**	**62**	PN	**Pn**	**10 55 50.5**	**+2.5**
DALY	**Dalyan (Mula)**	**4.59**	**63**	PN	**Pn**	**10 55 54.9**	**+2.5**
FETY	**Fethiye**	**4.84**	**67**	PN	**Pn**	**10 55 57.2**	**+1.3**
CAME	**Cameli-Denizli**	**5.12**	**64**	PN	**Pn**	**10 56 01.9**	**+2.1**
AKAS	**Kas**	**5.13**	**72**	PN	**Pn**	**10 56 02.0**	**+2.1**
ELL	**Elmali**	**5.51**	**68**	PN	**Pn**	**10 56 07.0**	**+1.9**
BRTR	**Keskin Array B**	**9.40**	**56**	Pn	**Pn**	**10 57 00.5**	**+2.1**
	comp=N,0.3nm,0.3s,baz=238,slow=13,SNR=2.5						
	comp=N,1.0nm,0.6s						
DSI	**Dead Sea**	**10.42**	**105**	Pn	**Pn**	**10 57 13.6**	**+1.3**
DSI				Sn	**Sn**	**10 59 00.9**	**-6.8**
MSBI	**Mazada**	**10.50**	**106**	Pn	**Pn**	**10 57 14.6**	**+1.2**
MSBI				Sn	**Sn**	**10 59 03.9**	**-5.7**
KRMI	**Paran Flat**	**10.53**	**113**	Pn	**Pn**	**10 57 15.2**	**+1.3**
KRMI				Sn	**Sn**	**10 59 04.9**	**-5.6**
PRNI	**Paran**	**10.63**	**112**	Pn	**Pn**	**10 57 15.8**	**+0.5**
PRNI				Sn	**Sn**	**10 59 07.4**	**-5.5**
MBRI

mbtmp3.2/3,**ML2.8**/2,**Error ellipse: s-maj=182.8km s-min=32.1km az=66.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.98**	**158**	Pn	Pn	11 15 11.1	+1.2
	baz=340,slow=13,SNR=2.8						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**19.31**	**164**	P	P	11 15 49.9	-0.5
	0.1nm,0.3s,baz=347,slow=11,SNR=5.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**65.58**	**327**	P	P	11 22 09.2	0.0
	0.2nm,0.3s,baz=132,slow=6.4,SNR=1.8						
	0.2nm,0.3s						

IDC ***17*** *11:48:21.8±0.9,21.58S×66.65W,h205km±13km,mb3.8/1, mbtmp4.1/7,Error ellipse: s-maj=21.5km s-min=11.0km az=112.0*

VAO ***17*** *11:48:22.8±0.5,21.48S×67.00W,h243km,mb3.9*

NEIC ***17*** *11:48:22.1±2.3,21.62S±0.05×66.78W±0.1,h215km±11km, mb4.4/3,Error ellipse: s-maj=15.1km s-min=7.3km az=97.0*

GUC ***17*** *11:48:23.5±0.6,21.61S×66.98W,h238km±9km,ML4.4*

SCB ***17*** *11:48:23.1±1.1,21.61S×66.76W,h221km±6km,ML4.2/4, Error ellipse: s-maj=4.0km s-min=2.4km az=0.0*

ISC 17 11:48:21.9±0.6,**21.58S**±0.04×**66.74W**±0.04,**h212**km±6km, **n97**,σ1**9**46/121,**mb4.2**/4,**5C**,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.08**	**73**	P	Pn	11 48 55.3	+1.3
MOCB				S	S	11 49 18.1	-0.5
MOCB				IAML		11 49 21.0	
	3μm,0.4s						
YJA	**Yavi**	**1.28**	**118**	P	Pn	11 48 56.8	+1.4
YJA				S	S	11 49 20.4	-0.9
YJA				IAML		11 49 24.8	
	486nm,0.5s						
AOVT	**TarijaAcel**	**1.90**	**89**	P	Pn	11 49 01.3	+0.8
LVC	**Limon Verde**	**2.26**	**243**	P	Pn	11 49 05.2	+0.9
	71nm,0.4s,baz=54,slow=7.1,SNR=123						
LVC				S	S	11 49 37.8	+0.8
	56nm,0.4s,baz=41,slow=20,SNR=33						
LVC	**Limon Verde**	**2.26**	**243**		Pn	11 49 05.5	+1.1
LVC				Sn	S	11 49 37.6	+0.6
LVC	**Limon Verde**	**2.26**	**243**	*i* P	Pn	11 49 05.2	+0.9
LVC				*i* S	S	11 49 37.9	+0.8
LVC	**Limon Verde**	**2.26**	**243**	P	Pn	11 49 04.7	+0.4
LVC				S	S	11 49 34.7	-2.3
LVC	**Limon Verde**	**2.26**	**243**	*e*P	Pn	11 49 05.4	+1.1
PB09	**IPOC Station P**	**2.34**	**264**		Pn	11 49 05.9	+0.9
PB09				Sn	S	11 49 38.9	+0.7
PB09	**IPOC Station P**	**2.34**	**264**	⇑*i* P	Pn	11 49 06.1	+1.2
PB09				*i* S	S	11 49 38.7	+0.6
PB01	**IPOC Station P**	**2.62**	**281**		Pn	11 49 08.2	+0.3
PB06	**IPOC Station P**	**2.85**	**246**		Pn	11 49 11.0	+0.3
PB06	**IPOC Station P**	**2.85**	**246**	*e*P	Pn	11 49 11.3	+0.7
PB06				*i* S	S	11 49 47.6	-0.7
PB06				IAML		11 49 49.7	
	comp=E,366nm,0.5s						
PB06	**IPOC Station P**	**2.85**	**246**	P	Pn	11 49 11.6	+1.0
PB07	**IPOC Station P**	**2.93**	**267**		Pn	11 49 11.9	+0.4
PB07	**IPOC Station P**	**2.93**	**267**	*e*P	Pn	11 49 11.7	+0.1
PB07				*i* S	S	11 49 48.5	-1.4
PB07				IAML		11 49 49.5	
	comp=N,748nm,0.7s						
PB02	**IPOC Station P**	**2.95**	**274**		Pn	11 49 11.9	+0.2
PB02	**IPOC Station P**	**2.95**	**274**	⇑*i* P	Pn	11 49 11.8	+0.2
PB02				*i* S	S	11 49 48.7	-1.5
PB02	**IPOC Station P**	**2.95**	**274**	P	Pn	11 49 12.1	+0.4
PB02				S	S	11 49 47.5	-2.7
PB02				IAML		11 49 49.6	
	comp=N,618nm,0.3s						
GO01	**Chusmiza**	**2.98**	**309**	Pn	Pn	11 49 13.5	+1.0
GO01	**Chusmiza**	**2.98**	**309**	⇑*i* P	Pn	11 49 13.5	+1.0
GO01	**Chusmiza**	**2.98**	**309**	P	Pn	11 49 13.4	+1.0
PB15	**IPOC Station P**	**3.00**	**237**		Pn	11 49 12.4	0.0
PB15	**IPOC Station P**	**3.00**	**237**	*i* P	Pn	11 49 12.9	+0.5
PB15				*i* S	S	11 49 51.6	+0.1
PB15	**IPOC Station P**	**3.00**	**237**	P	Pn	11 49 12.9	+0.5
PB04	**IPOC Station P**	**3.25**	**256**	Pn	Pn	11 49 15.2	-0.1
PB04	**IPOC Station P**	**3.25**	**256**	*e*P	Pn	11 49 15.7	+0.4
PB04				*i* S	S	11 49 54.2	-2.4
PB04	**IPOC Station P**	**3.25**	**256**	P	Pn	11 49 15.2	-0.1
PB04				S	S	11 49 53.6	-3.1
PB04				IAML		11 49 56.9	
	comp=N,253nm,0.2s						
TA01	**Diego Aracena**	**3.37**	**287**	Pn	Pn	11 49 16.0	-0.4
TA01	**Diego Aracena**	**3.37**	**287**	*e*P	Pn	11 49 16.1	-0.4
TA01				*i* S	S	11 49 56.3	-2.5
TA01	**Diego Aracena**	**3.37**	**287**	P	Pn	11 49 16.4	-0.1
TA01				S	S	11 49 55.7	-3.1
TA02	**Huaiquique**	**3.43**	**292**		Pn	11 49 16.8	-0.4
TA02	**Huaiquique**	**3.43**	**292**	P	Pn	11 49 17.2	0.0
PB16	**IPOC Station P**	**4.14**	**321**		Pn	11 49 28.1	+1.6
PB16	**IPOC Station P**	**4.14**	**321**	⇑*i* P	Pn	11 49 28.1	+1.6
PB16				*i* S	S	11 50 18.1	+1.2
GO02	**Mina Guanaco**	**4.42**	**216**	Pn	Pn	11 49 30.1	+0.4
GO02	**Mina Guanaco**	**4.42**	**216**	⇑*i* P	Pn	11 49 30.1	+0.4
GO02				*i* S	S	11 50 21.2	-1.6
GO02	**Mina Guanaco**	**4.42**	**216**	P	Pn	11 49 29.3	-0.4
GO02				S	S	11 50 18.2	-4.5
PB12	**IPOC Station P**	**4.48**	**311**		Pn	11 49 29.3	-0.9
PB12	**IPOC Station P**	**4.48**	**311**	*i* P	Pn	11 49 29.0	-1.2
PB12				*i* S	S	11 50 19.6	-4.0
PB14	**IPOC Station P**	**4.54**	**227**	Pn	Pn	11 49 31.2	+0.2
BBOE	**La Paz, Chanca**	**4.88**	**346**	P	Pn	11 49 37.2	+1.4
BBOD	**La Paz, Gloria**	**5.22**	**340**	P	Pn	11 49 41.0	+1.0
LPAZ	**La Paz**	**5.42**	**346**	P	Pn	11 49 43.7	+1.1
	comp=N,19nm,0.4s,baz=141,slow=7.9,SNR=88						
LPAZ				S	S	11 50 47.1	+0.9
	comp=N,25nm,1.0s,baz=75,slow=20,SNR=10						
LPAZ	**La Paz**	**5.42**	**346**	Pn	Pn	11 49 44.4	+1.8
LPAZ	**La Paz**	**5.42**	**346**	P	Pn	11 49 43.4	+0.7
AC02	**Maricunga**	**5.67**	**202**	Pn	Pn	11 49 46.0	+0.4
AC01	**Pan de Azucar**	**5.76**	**217**	Pn	Pn	11 49 45.0	-1.2
AC06	**Mina Casimiro**	**6.63**	**209**	Pn	Pn	11 49 55.8	-1.6
GO03	**Copiap**	**6.78**	**207**	Pn	Pn	11 49 58.1	-1.3
AC04	**Llanos de Chal**	**7.68**	**210**	Pn	Pn	11 50 08.0	-3.0
SIV	**San Ignacio**	**7.73**	**45**	P	Pn	11 50 11.1	-0.6
	comp=N,28nm,0.3s,baz=252,slow=11,SNR=125						
SIV				S	S	11 51 33.9	-5.4
	comp=N,3.7nm,0.4s,baz=305,slow=20,SNR=1.9						
SIV	**San Ignacio**	**7.73**	**45**	P	Pn	11 50 11.8	+0.1
AC05	**El Transito**	**7.90**	**203**	Pn	Pn	11 50 11.4	-2.6
LCO	**Las Campanas**	**8.22**	**205**	Pn	Pn	11 50 15.7	-2.6
CO01	**Juntas del Tor**	**8.89**	**199**	Pn	Pn	11 50 25.6	-1.3
GO04	**Tololo Observa**	**9.30**	**202**	Pn	Pn	11 50 30.1	-2.1
PTLB	**Pontes e Lacer**	**9.44**	**51**		Pn	11 50 32.8	-1.1
PTLB	**Pontes e Lacer**	**9.44**	**51**	P	Pn	11 50 35.2	+1.3
PTLB	**Pontes e Lacer**	**9.44**	**51**	*e*P	Pn	11 50 35.0	+1.1
CPUP	**Villa Florida**	**9.82**	**121**	P	Pn	11 50 38.8	+0.1
	comp=N,1.5nm,0.7s,baz=252,slow=17,SNR=2.2						
CPUP	**Villa Florida**	**9.82**	**121**	*e*P	Pn	11 50 41.7	+3.0
AQDB	**Aquidauana**	**10.37**	**86**		Pn	11 50 45.3	-0.5
AQDB	**Aquidauana**	**10.37**	**86**	*e*P	Pn	11 50 48.5	+2.7
VILB	**Vilhena**	**10.61**	**37**		Pn	11 50 49.5	+0.5
VILB	**Vilhena**	**10.61**	**37**	*e*P	Pn	11 50 50.0	+1.0
VA03	**San Esteban**	**11.64**	**196**	Pn	Pn	11 51 03.5	+1.5
VA06	**Catapilco**	**11.66**	**199**		P	11 51 05.0	-1.9
ETMB	**Extrema**	**11.71**	**3**	Pn	Pn	11 51 02.5	-0.4
ETMB	**Extrema**	**11.71**	**3**	*e*P	Pn	11 51 02.4	-0.5
SALV	**Santo Antonio**	**11.89**	**64**	*e*P	P	11 51 08.2	-1.4
MCR1	**Marechal Candi**	**12.05**	**106**	*e*P	P	11 51 10.6	-0.8
MT02	**Curacav**	**12.27**	**198**		Pn	11 51 09.2	-0.7
MT09	**Talagante**	**12.72**	**196**	P	P	11 51 20.4	+1.5
MT01	**Popeta**	**12.87**	**197**	P	P	11 51 22.0	+1.6
UNIS	**Unistalda (Bra**	**12.92**	**128**	*e*P	P	11 51 22.2	+1.2
CRSM	**Crissiumal (Br**	**12.97**	**120**	*e*P	P	11 51 21.0	-0.6
FRBT	**Francisco Belt**	**13.26**	**112**	*e*P	P	11 51 25.7	+0.7
RODS	**Rosario do Sul**	**13.56**	**132**	*e*P	P	11 51 28.9	+0.8
PDRB	**Porto dos Gac**	**13.79**	**46**	*e*P	P	11 51 30.6	-0.1
PTGB	**Pitanga**	**13.86**	**106**	*e*P	P	11 51 33.8	+2.2
ALGR	**Alto Alegre (B**	**14.34**	**123**	*e*P	P	11 51 37.9	+1.0
SNDB	**Serra Nova Dou**	**17.59**	**60**	*e*P	P	11 52 13.7	+1.0
IPMB	**Ipameri, GO**	**17.80**	**82**	*e*P	Pn	11 52 16.4	-0.7
PET01	**Itanhaem-SP**	**18.13**	**102**	*e*P	Pn	11 52 20.1	-0.9
VAO	**Valinhos**	**18.36**	**98**	*e*P	P	11 52 22.1	+1.1
BDFB	**Brasilia**	**18.70**	**75**	P	P	11 52 23.2	-1.6
	comp=N,1.0nm,0.3s,baz=180,slow=13,SNR=1.9						
PLCA	**Paso Flores**	**19.37**	**189**	P	P	11 52 32.4	+0.7
	comp=N,2.6nm,0.4s,baz=4.9,slow=10,SNR=20						
BOSC	**San Juan Bosco**	**21.59**	**326**	P	P	11 52 56.0	+0.6
BOSC				IAmb	IAmb	11 53 04.0	
	comp=Z,14nm,0.5s						
JANB	**Januaria**	**22.25**	**77**	*e*P	P	11 53 01.2	-0.5
GUA01	**Guaratinga, BA**	**25.92**	**84**	*e*P	P	11 53 35.0	+0.2
SNAA	**Sanae**	**61.55**	**161**	P	P	11 58 14.5	-1.9
SNAA				IAmb	IAmb	11 58 20.2	
	comp=Z,6.4nm,1.4s						
WUPA	**West Chester U**	**61.75**	**352**	P	P	11 58 19.2	+1.3
WUPA				IAmb	IAmb	11 58 36.2	
	comp=Z,7.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**75.49**	**69**	P	P	11 59 43.0	-0.3
	comp=Z,1.3nm,0.4s,baz=255,slow=6.0,SNR=23						
TORD				pP	pP	12 00 36.0	+1.1
	comp=Z,1.0nm,0.7s,baz=245,slow=5.2,SNR=4.3						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	**130.74**	**205**	PKP	PKPdf	12 07 09.2	+0.6
	comp=Z,0.4nm,0.6s,baz=120,slow=2.0,SNR=5.4						
WRA	**Warramunga Arr**	**133.87**	**208**	PKP	PKPdf	12 07 15.4	+0.9
	comp=Z,0.3nm,0.6s,baz=151,slow=1.8,SNR=9.6						
MKAR	**Makanchi Array**	**144.49**	**37**	PKP	PKPdf	12 07 33.8	+0.8
	comp=Z,0.6nm,0.6s,baz=339,slow=3.7,SNR=1.8						

SOME ***17*** *12:02:50.3,42.13N×83.65E,h15km*

NNC ***17*** *12:02:52.7±1.9,42.16N×83.51E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=15.3km s-min=7.5km az=156.0*

ISC 17 12:02:48.5±2.9,**42.1N**±0.1×**83.60E**±0.09,**h15**km,**n23**, σ2**9**07/34,**2C-1D**,**Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.22**	**290**	*e*P	Pb	12 03 45.9	+0.4
	21nm,0.3s						
SHLS				*e*S	Sb	12 04 26.3	+1.8
	92nm,0.5s						
SHLS	**Shalkode**	**3.22**	**290**	Pg	Pb	12 03 45.4	0.0
	21nm,0.3s						
SHLS				Lg	Lg	12 04 26.3	
	92nm,0.5s						
UZB	**Uzunbulak**	**3.53**	**288**	*e*P	Pg	12 03 54.9	-1.2
	2.0nm,0.2s						
UZB				*e*S	Sg	12 04 42.1	+0.3
	29nm,0.4s						
UZB	**Uzunbulak**	**3.53**	**288**	Pg	Pg	12 03 55.6	-0.4
	2.0nm,0.2s						
UZB				Lg	Lg	12 04 43.1	
	29nm,0.4s						
DJR	**Jarkent**	**3.55**	**310**	*e*P	Pb	12 03 53.2	+2.2
	6.7nm,0.5s						
DJR				*e*S	Sg	12 04 38.6	-3.7
	17nm,0.4s						
DJR	**Jarkent**	**3.55**	**310**	Pg	Pg	12 03 56.6	+0.2
	6.7nm,0.5s						
DJR				Lg	Lg	12 04 44.1	
	17nm,0.4s						
KPKS	**Kokpek**	**3.86**	**292**	*e*P	Pb	12 03 59.7	+3.5
	4.9nm,0.4s						
KPKS				*e*S	Sg	12 04 50.1	-2.2
	26nm,0.6s						
KPKS	**Kokpek**	**3.86**	**292**	Pg	Pg	12 04 00.2	-2.1
	4.9nm,0.4s						
KPKS				Lg	Lg	12 04 51.2	
	26nm,0.6s						
SATY	**Saty**	**3.95**	**285**	*e*P	Pg	12 04 03.2	-0.9
	3.4nm,0.2s						
SATY				*e*S	Sg	12 04 56.0	+0.8
	17nm,0.2s						
SATY	**Saty**	**3.95**	**285**	Pg	Pg	12 04 03.2	-0.9
	3.4nm,0.2s						
SATY				Lg	Lg	12 04 56.0	
	17nm,0.2s						
ZHN	**Zhinishke**	**3.95**	**287**	*e*P	Pg	12 04 02.7	-1.4
	7.7nm,0.1s						
ZHN				*e*S	Sg	12 04 55.5	+0.3
	31nm,0.3s						
ZHN	**Zhinishke**	**3.95**	**287**	Pg	Pg	12 04 02.7	-1.4
	7.7nm,0.1s						
ZHN				Lg	Lg	12 04 55.5	
	31nm,0.3s						
ARXS	**Arharly**	**4.71**	**298**	*e*P	Pg	12 04 16.4	-2.2
	4.5nm,0.8s						
ARXS				*e*S	Sg	12 05 18.3	-1.2
	19nm,0.5s						
ARXS	**Arharly**	**4.71**	**298**	Pg	Pg	12 04 16.4	-2.2
	4.5nm,0.8s						
ARXS				Lg	Lg	12 05 18.3	
	19nm,0.5s						
MK31	**Makanchi Array**	**4.75**	**349**	Pn	Pb	12 04 06.0	-5.4
	0.2nm,0.2s,baz=226,slow=4.3,SNR=15						
MK31				Pg	Pg	12 04 20.2	+0.8
	1.6nm,0.5s,baz=166,slow=16,SNR=15						
MK31				⇑Lg	Lg	12 05 20.3	
	13nm,0.6s,baz=169,slow=30,SNR=9.3						
MAKZ	**Makanchi**	**4.81**	**347**	⇓Pg	Pg	12 04 21.1	+0.4
	1.9nm,0.5s						
MAKZ				⇑Lg	Lg	12 05 22.5	
	13nm,0.9s						
MDOK	**Medeo**	**4.94**	**284**	*e*P	Pb	12 04 18.3	+3.5
	2.2nm,0.4s						
MDOK				*e*S	Sg	12 05 22.3	-4.8
	6.4nm,0.7s						
KTBS	**Karatobe**	**5.32**	**290**	*e*P	Pg	12 04 29.0	-1.3
	1.4nm,0.3s						
KTBS				*e*S	Sg	12 05 40.3	+1.1
	9.4nm,0.4s						
KTBS	**Karatobe**	**5.32**	**290**	Pg	Pg	12 04 29.0	-1.3
	1.4nm,0.3s						
KTBS				Lg	Lg	12 05 40.3	
	9.4nm,0.4s						
ZSN	**Zaisan**	**5.39**	**9**	*e*P	Pg	12 04 29.0	-2.6
	3.4nm,0.3s						
ZSN				*e*S	Sg	12 05 40.7	-0.6
	23nm,0.7s						
ZSN	**Zaisan**	**5.39**	**9**	Pg	Pg	12 04 29.0	-2.6
	3.4nm,0.3s						
ZSN				Lg	Lg	12 05 40.7	
	23nm,0.7s						
KRBS	**Karabastau**	**6.03**	**288**	*e*P	Pg	12 04 41.1	-2.8
	0.8nm,0.5s						
KRBS				*e*S	Sg	12 06 00.9	-0.9
	2.5nm,0.6s						
KRBS	**Karabastau**	**6.03**	**288**	Pg	Pg	12 04 41.1	-2.8
	0.8nm,0.5s						

IDC 17 12:16:46.9±47.0,**16.49S×175.60W**,**h0**km,**mb4.0**/3, **mbtmp4.0**/3,**Error ellipse: s-maj=880.0km s-min=167.6km az=78.0**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.66**	**240**	P	P	12 24 38.0	+0.7
	1.1nm,0.5s,baz=92,slow=7.5,SNR=4.9						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**47.54**	**258**	P	P	12 25 24.0	-0.5
	0.3nm,0.3s,baz=96,slow=7.6,SNR=11						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**47.77**	**253**	P	P	12 25 25.9	-0.3
	4.1nm,0.6s,baz=88,slow=8.1,SNR=57						
	4.1nm,0.6s						

KRSC ***17*** *12:21:02.7±0.7,53.21N×159.59E,h112km±6km,ML4.9*

MOS ***17*** *12:21:03.1±1.1,53.31N×159.29E,h122km,mb4.1/13, Error ellipse: s-maj=9.9km s-min=4.8km az=78.3*

MOS Felt (II) at Petropavlovsk-Kamchatskiy.

NEIC ***17*** *12:21:03.6±0.9,53.4N±0.2×159.38E±0.06,h117km±11km, mb4.3/7,Error ellipse: s-maj=28.5km s-min=5.2km az=183.0*

IDC ***17*** *12:21:04.5±0.5,53.42N×159.22E,h114km±4km,mb3.5/22, mbtmp3.9/22,MS2.5/1,Error ellipse: s-maj=17.0km s-min=8.3km az=155.0*

ISC 17 12:21:03.6±0.5,**53.26N**±0.04×**159.47E**±0.04,**h115**km±3km, **h115**km:**pP-P**,**n147**,σ1**9**27/181,**mb4.0**/34,**10C-5D**,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.12**	**220**	PN	Pn	12 21 19.7	+0.3
NLC				S	Sn	12 21 31.5	+0.3
NLC	**Nalytchevo**	**0.12**	**220**	*e*P	Pn	12 21 19.7	+0.3
NLC				*e*S	Sn	12 21 31.5	+0.3
SDLR	**Sedlovina**	**0.35**	**273**	PN	Pn	12 21 20.6	+0.3
SDLR	**Sedlovina**	**0.35**	**273**	*e*P	Pn	12 21 20.6	+0.3
SPN	**Mys Shipunski**	**0.37**	**116**	PN	Pn	12 21 20.3	+0.1
SPN				S	Sn	12 21 32.2	-0.5
SPN	**Mys Shipunski**	**0.37**	**116**	*e*P	Pn	12 21 20.3	+0.1
SPN				*e*S	Sn	12 21 32.2	-0.5
UGLR	**Uglovaya**	**0.39**	**262**	PN	Pn	12 21 21.2	+0.7
UGLR				S	Sn	12 21 33.7	+0.5
UGLR	**Uglovaya**	**0.39**	**262**	*e*P	Pn	12 21 21.2	+0.7
UGLR				*e*S	Sn	12 21 33.7	+0.5
SMAR	**Somma**	**0.40**	**270**	PN	Pn	12 21 21.0	+0.3
SMAR				S	Sn	12 21 33.4	-0.1
SMAR	**Somma**	**0.40**	**270**	*e*P	Pn	12 21 21.0	+0.3
SMAR				*e*S	Sn	12 21 33.4	-0.1
KRER	**Koryakskii**	**0.44**	**276**	PN	Pn	12 21 21.5	+0.7
KRER	**Koryakskii**	**0.44**	**276**	*i* P	Pn	12 21 21.5	+0.7
AVH	**Avacha**	**0.44**	**271**	PN	Pn	12 21 21.4	+0.7
AVH				S	Sn	12 21 34.5	+0.9
AVH	**Avacha**	**0.44**	**271**	*i* P	Pn	12 21 21.4	+0.7
AVH				*e*S	Sn	12 21 34.5	+0.9
DALK	**Dalny**	**0.49**	**242**	PN	Pn	12 21 20.9	0.0
DALK				S	Sn	12 21 33.4	-0.5
DALK	**Dalny**	**0.49**	**242**	*e*P	Pn	12 21 20.9	0.0
DALK				*e*S	Sn	12 21 33.4	-0.5
KOK	**Koryaka**	**0.50**	**274**	PN	Pn	12 21 21.5	+0.4
KOK				S	Sn	12 21 34.6	+0.3
KOK	**Koryaka**	**0.50**	**274**	*e*P	Pn	12 21 21.5	+0.4
KOK				*e*S	Sn	12 21 34.6	+0.3
KRX	**Arik**	**0.50**	**281**	PN	Pn	12 21 21.6	+0.5
KRX				S	Sn	12 21 34.3	-0.1
KRX	**Arik**	**0.50**	**281**	*e*P	Pn	12 21 21.6	+0.5
KRX				*e*S	Sn	12 21 34.3	-0.1
PET	**Petropavlovsk**	**0.55**	**245**	Pn	Pn	12 21 21.7	+0.5
PET	**Petropavlovsk**	**0.55**	**245**	*e*PN	Pn	12 21 21.4	+0.2
PET				*e*S	Sn	12 21 33.9	-0.6
PET				pmax	pmax		
	comp=Z,1μm,0.5s						
PET				smax	smax		
	comp=N,6μm,0.5s						
PET				smax	smax		
	comp=E,12μm,0.5s						
PET	**Petropavlovsk**	**0.55**	**245**	*e*P	Pn	12 21 21.4	+0.2
PET				*e*S	Sn	12 21 34.2	-0.3
KII	**Karymskiy**	**0.78**	**359**	PN	Pn	12 21 23.7	+0.6
KII	**Karymskiy**	**0.78**	**359**	*e*P	Pn	12 21 23.7	+0.6
KRMR	**Karymshinskiy**	**0.92**	**242**	PN	Pn	12 21 24.7	+0.4
KRMR				S	Sn	12 21 39.7	-0.3
KRMR	**Karymshinskiy**	**0.92**	**242**	*e*P	Pn	12 21 24.7	+0.4
KRMR				*e*S	Sn	12 21 39.7	-0.3
GNL	**Ganaly**	**1.01**	**296**	PN	Pn	12 21 25.9	+0.5
GNL	**Ganaly**	**1.01**	**296**	*i* P	Pn	12 21 25.9	+0.5
RUS	**Russkaya**	**1.01**	**215**	PN	Pn	12 21 25.5	+0.2
RUS				S	Sn	12 21 41.3	-0.4
RUS	**Russkaya**	**1.01**	**215**	*e*P	Pn	12 21 25.5	+0.2
RUS				*e*S	Sn	12 21 41.3	-0.4
PEA0B	**Petropavlovsk-**	**1.08**	**262**	Pn	Pn	12 21 26.6	+0.6
PEA0B				Sn	Sn	12 21 43.0	+0.1
PEA0B	**Petropavlovsk-**	**1.08**	**262**	*c i*Pn	Pn	12 21 26.4	+0.4
PETK	**Petropavlovsk-**	**1.08**	**262**	P	Pn	12 21 25.6	-0.4
	comp=E,1μm,0.4s,baz=91,slow=15						
PETK				S	Sn	12 21 42.5	-0.4
	comp=E,373nm,0.6s,baz=281,slow=27,SNR=21						
PETK	**Petropavlovsk-**	**1.08**	**262**		Pn	12 21 25.7	-0.2
PETK	**Petropavlovsk-**	**1.08**	**262**	PN	Pn	12 21 25.7	-0.2
MTVR	**Mutnovka**	**1.10**	**226**	PN	Pn	12 21 27.1	+0.7
MTVR				S	Sn	12 21 44.1	+0.5
MTVR	**Mutnovka**	**1.10**	**226**	*e*P	Pn	12 21 27.1	+0.7
MTVR				*e*S	Sn	12 21 44.1	+0.5
GRL	**Gorelyy**	**1.11**	**231**	PN	Pn	12 21 27.3	+0.9
GRL	**Gorelyy**	**1.11**	**231**	*e*P	Pn	12 21 27.3	+0.9
APC	**Apacha**	**1.44**	**257**	PN	Pn	12 21 31.1	+1.2
APC				S	Sn	12 21 50.9	+1.0
APC	**Apacha**	**1.44**	**257**	*i* P	Pn	12 21 31.1	+1.2
APC				*e*S	Sn	12 21 50.9	+1.0
KDTR	**Khodutka, Kamc**	**1.69**	**211**	PN	Pn	12 21 32.8	-0.1
KDTR				S	Sn	12 21 53.9	-1.3
KDTR	**Khodutka, Kamc**	**1.69**	**211**	*e*P	Pn	12 21 32.8	-0.1
KDTR				*e*S	Sn	12 21 53.9	-1.3
MKZ	**Mys Kozlova**	**1.86**	**45**	PN	Pn	12 21 35.5	+0.6
MKZ				S	Sn	12 21 58.3	-0.6
MKZ	**Mys Kozlova**	**1.86**	**45**	*e*P	Pn	12 21 35.5	+0.6
MKZ				*e*S	Sn	12 21 58.3	-0.6
TUMR	**Tumrok**	**2.06**	**11**	PN	Pn	12 21 39.6	+2.0
TUMR	**Tumrok**	**2.06**	**11**	*e*P	Pn	12 21 39.6	+2.0
PAU	**Pauzhetka**	**2.43**	**223**	PN	Pn	12 21 43.6	+1.4
PAU	**Pauzhetka**	**2.43**	**223**	*e*P	Pn	12 21 43.6	+1.4
KMNR	**Kamenistaya**	**2.54**	**10**	PN	Pn	12 21 45.6	+1.9
KMNR	**Kamenistaya**	**2.54**	**10**	*e*P	Pn	12 21 45.6	+1.9
ESO	**Esso**	**2.71**	**351**	PN	Pn	12 21 46.8	+1.0
ESO				S	Sn	12 22 20.2	+1.9
ESO	**Esso**	**2.71**	**351**

KSRS				pmax	pmax				
	comp=Z,1.0nm,0.7s								
ILAR	**Eielson Array**	**28.96**	**45**	P	**P**	**12 26 53.5**	**+1.8**		
	comp=Z,0.3nm,0.8s,baz=268,slow=6.2,SNR=3.2								
ILAR				pP	**pP**	**12 27 16.4**	**-0.3**		
	comp=Z,0.6nm,0.8s,baz=261,slow=8.3,SNR=4.7								
	comp=Z,0.3nm,0.8s								
SONM	**Songino Array**	**33.50**	**283**	P	**P**	**12 27 30.2**	**-1.6**		
	comp=Z,0.8nm,0.6s,baz=57,slow=7.6,SNR=4.5								
	comp=Z,0.8nm,0.6s								
SONM	**Songino Array**	**33.50**	**283**	*e*P	**P**	**12 27 32.8**	**+1.0**		
SONM				pmax	pmax				
	comp=Z,1.0nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**33.96**	**167**	T	T	13 03 46.0			
	baz=352,slow=76,SNR=33								
INK	**Inuvik**	**33.96**	**38**	P	**P**	**12 27 37.0**	**+1.6**		
	comp=Z,1.2nm,0.7s,baz=305,slow=9.2,SNR=7.4								
	comp=Z,1.2nm,0.7s								
H11N3	**WAKE ISLAND Hy**	**33.97**	**167**	T	T	13 03 38.1			
	baz=352,slow=76,SNR=50								
H11N1	**WAKE ISLAND Hy**	**33.97**	**167**	T	T	13 03 38.8			
	baz=352,slow=76,SNR=54								
H11S1	**WAKE ISLAND Hy**	**35.14**	**168**	T	T	13 05 17.5			
	baz=352,slow=76,SNR=18								
H11S3	**WAKE ISLAND Hy**	**35.15**	**168**	T	T	13 05 07.8			
	baz=352,slow=76,SNR=35								
H11S2	**WAKE ISLAND Hy**	**35.16**	**168**	T	T	13 05 13.6			
	baz=352,slow=76,SNR=14								
NJ2	**Nanjing**	**35.96**	**250**	*e*P	**P**	**12 27 50.6**	**-2.3**		
NJ2				pmax	pmax				
	comp=Z,13nm,0.6s								
GTA	**Gaotai**	**42.22**	**276**	*e*P	**P**	**12 28 44.9**	**-0.2**		
GTA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
ZALV	**Zalesovo Beam**	**42.37**	**302**	P	**P**	**12 28 44.9**	**-1.1**		
	comp=Z,1.1nm,0.8s,baz=45,slow=6.5,SNR=4.4								
	comp=Z,1.1nm,0.6s								
KURK	**Kurchatov**	**47.33**	**301**	P	**P**	**12 29 23.4**	**-1.8**		
KURK				IAmb	IAmb	12 29 24.9			
	comp=Z,5.6nm,0.8s								
KURK	**Kurchatov**	**47.33**	**301**	⇑*i*P	**P**	**12 29 23.8**	**-1.4**		
KURK				pmax	pmax				
	comp=Z,5.0nm,0.7s								
MK31	**Makanchi Array**	**47.74**	**295**	P	**P**	**12 29 26.8**	**-1.8**		
MK31	**Makanchi Array**	**47.74**	**295**	⇑*i*P	**P**	**12 29 27.0**	**-1.6**		
MKAR	**Makanchi Array**	**47.74**	**295**	P	**P**	**12 29 26.9**	**-1.7**		
	comp=Z,1.4nm,0.8s,baz=58,slow=7.4,SNR=9.4								
	comp=Z,1.4nm,0.8s								
MAKZ	**Makanchi**	**47.91**	**295**	P	**P**	**12 29 28.2**	**-1.6**		
MAKZ				IAmb	IAmb	12 29 28.8			
	comp=Z,4.5nm,1.1s								
MAKZ	**Makanchi**	**47.91**	**295**	P	**P**	**12 29 28.2**	**-1.6**		
MAKZ				pmax	pmax				
	comp=Z,4.0nm,1.1s								
BRVK	**Borovoye**	**50.02**	**308**	*ce*P	**P**	**12 29 44.4**	**-1.4**		
BRVK				pmax	pmax				
	comp=Z,1.0nm,0.6s								
YBH	**Yreka Blue Hor**	**51.31**	**70**	P	**P**	**12 29 58.2**	**+2.4**		
	comp=Z,2.6nm,0.6s,baz=178,slow=4.2,SNR=3.7								
	comp=Z,2.6nm,0.6s								
ARCES	**ARCESS Array B**	**53.01**	**342**	P	**P**	**12 30 06.6**	**-1.2**		
	comp=Z,1.4nm,0.9s,baz=46,slow=5.2,SNR=1.6								
	comp=Z,1.4nm,0.9s								
ARU	**Arti**	**53.02**	**317**	P	**P**	**12 30 07.1**	**-1.0**		
ARU	**Arti**	**53.02**	**317**	*c i*P	**P**	**12 30 07.1**	**-1.0**		
ARU				*PP	**pP**	**12 30 33.4**	**-2.1**		
ARU						12 32 05.3			
ARU				S	**S**	**12 37 28.1**	**-0.5**		
ARU				SS	**SS**	**12 41 02.2**	**-6.2**		
ARU				pmax	pmax				
	comp=Z,6.0nm,1.0s								
KIRV	**Kirov**	**55.03**	**323**	⇓*e*P	**P**	**12 30 20.9**	**-1.7**		
NVAR	**Mina Array Bea**	**56.03**	**70**	P	**P**	**12 30 33.1**	**+2.6**		
	comp=Z,0.3nm,0.8s,baz=278,slow=7.2,SNR=2.8								
NVAR				pP	**pP**	**12 30 57.4**	**-0.1**		
	comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=3.2								
	comp=Z,0.3nm,0.8s								
KKAR	**Karatay Array**	**56.48**	**299**	P	**P**	**12 30 31.9**	**-1.3**		
KKAR	**Karatay Array**	**56.48**	**299**	P	**P**	**12 30 31.9**	**-1.3**		
ABKAR	**Akbulak array**	**57.40**	**310**	P	**P**	**12 30 38.0**	**-1.6**		
PDAR	**Pinedale Array**	**57.77**	**61**	P	**P**	**12 30 45.9**	**+3.3**		
	comp=Z,0.3nm,0.3s,baz=21,slow=1.3,SNR=3.8								
	comp=Z,0.3nm,0.3s								
CMAR	**Chiang Mai Arr**	**57.85**	**257**	P	**P**	**12 30 44.5**	**+1.3**		
	comp=Z,1.4nm,0.7s,baz=24,slow=7.5,SNR=8.5								
	comp=Z,1.4nm,0.7s								
CMAR	**Chiang Mai Arr**	**57.85**	**257**	*e*P	**P**	**12 30 44.4**	**+1.3**		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
FINES	**FINESS Array B**	**59.81**	**336**	P	**P**	**12 30 56.0**	**-0.1**		
	comp=Z,2.7nm,0.8s,baz=18,slow=8.0,SNR=4.3								
	comp=Z,2.7nm,0.8s								
FINES	**FINESS Array B**	**59.81**	**336**	P	**P**	**12 30 56.0**	**-0.1**		
BELG	**Belogornoye**	**60.35**	**319**	⇓*e*P	**P**	**12 30 59.8**	**-0.1**		
BELG				pmax	pmax				
	comp=Z,1.0nm,0.9s								
OBN	**Obninsk**	**62.17**	**327**	*e*P	**P**	**12 31 11.3**	**-0.8**		
OBN				*i* *PP	**pP**	**12 31 41.2**	**+0.9**		
OBN				*e*		12 31 50.9			
OBN				pmax	pmax				
	comp=Z,10.0nm,0.5s								
NB2	**NORSAR Subarra**	**63.27**	**343**	P	**P**	**12 31 19.7**	**+0.3**		
	comp=Z,1.2nm,0.7s,baz=23,slow=6.9								
NOA	**NORSAR Array B**	**63.27**	**343**	P	**P**	**12 31 18.6**	**-0.8**		
	comp=Z,0.8nm,0.6s,baz=23,slow=6.7,SNR=3.9								
	comp=Z,0.8nm,0.6s								
NOA	**NORSAR Array B**	**63.27**	**343**	*e*P	**P**	**12 31 19.8**	**+0.3**		
NOA				pmax	pmax				
	comp=Z,1.0nm,0.6s								
AKASG	**Malin Array Be**	**68.28**	**329**	P	**P**	**12 31 50.4**	**-1.1**		
	comp=Z,0.7nm,0.4s,baz=26,slow=6.4,SNR=5.7								
	comp=Z,0.7nm,0.4s								
AKBB	**Malin Array Si**	**68.28**	**329**	⇑*e*P	**P**	**12 31 50.8**	**-0.8**		
AKBB				pmax	pmax				
	comp=Z,6.0nm,1.3s								
TXAR	**Lajitas Array**	**70.91**	**67**	P	**P**	**12 32 10.6**	**+2.4**		
	comp=Z,0.2nm,0.6s,baz=324,slow=4.5,SNR=1.9								
TXAR				pP	**pP**	**12 32 36.9**	**+0.1**		
	comp=Z,0.4nm,0.5s,baz=301,slow=5.4,SNR=5.0								
	comp=Z,0.2nm,0.6s								
CLL	**Collm**	**72.06**	**339**	*e*P	**P**	**12 32 14.0**	**-0.6**		
CLL				pmax	pmax				
	comp=Z,4.0nm,0.9s								
CLL	**Collm**	**72.06**	**339**	*e*P	**P**	**12 32 14.0**	**-0.6**		
	comp=Z,4.0nm,0.9s								
GERES	**GERESS Array B**	**74.21**	**337**	P	**P**	**12 32 27.6**	**+0.1**		
	comp=Z,0.4nm,0.5s,baz=47,slow=7.8,SNR=4.5								
	comp=Z,0.4nm,0.5s								
WRA	**Warramunga Arr**	**76.08**	**204**	P	**P**	**12 32 39.1**	**+0.9**		
	comp=Z,0.4nm,0.6s,baz=23,slow=6.2,SNR=7.9								
	comp=Z,0.4nm,0.6s								
WRA	**Warramunga Arr**	**76.08**	**204**	*e*P	**P**	**12 32 38.2**	**-0.1**		
ASAR	**Alice Springs**	**79.76**	**204**	P	**P**	**12 33 00.1**	**+1.4**		
	comp=Z,1.2nm,0.9s,baz=15,slow=5.5,SNR=8.1								
ASAR				pP	**pP**	**12 33 28.2**	**+0.4**		
	comp=Z,0.3nm,0.6s,baz=18,slow=4.9,SNR=2.2								
	comp=Z,1.2nm,0.9s								
ESDC	**Sonseca Array**	**86.33**	**347**	P	**P**	**12 33 33.1**	**+0.6**		
	comp=Z,1.7nm,0.8s,baz=2.1,slow=5.2,SNR=18								
	comp=Z,1.7nm,0.8s								
KEST	**Kesra**	**87.65**	**336**	P	**P**	**12 33 39.2**	**+0.2**		
	comp=Z,4.2nm,1.0s,baz=297,slow=8.2,SNR=4.2								
	comp=Z,4.2nm,1.0s								
H03N2	**Juan Fernandez**	**134.56**	**88**	T	T	15 10 51.8			
	baz=314,slow=77,SNR=4.7								
H03N1	**Juan Fernandez**	**134.57**	**88**	T	T	15 10 50.7			
	baz=314,slow=77,SNR=5.1								
H03N3	**Juan Fernandez**	**134.57**	**88**	T	T	15 10 51.7			
	baz=314,slow=77,SNR=4.8								

GII ***17*** *12:23:00.0±0.0, 33.˚66N×35.˚62E, h1km, MD1.8/3, Mm2.0/5*
GRAL ***17*** *12:23:00.1±0.4, 33.˚66N×35.˚49E, h2km±8km, MD2.9*

ISC 17 12:22:59.3±1.0, 33.73N±0.03°×35.55E±0.06°, h12km±6km, n17, σ0.55/27, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	**0.02**	**144**	*e*P	**Pg**	**12 23 01.7**	**+0.1**
DQRL				*e*S	**Sg**	**12 23 02.8**	**-0.4**
BEYL	**Beirut**	**0.15**	**341**	*e*P	**Pb**	**12 23 04.2**	**+0.1**
BHL	**Bhannes**	**0.20**	**25**	*e*P	**Pb**	**12 23 05.2**	**+0.3**
QRWL	**Qaraoun**	**0.21**	**149**	*e*P	**Pg**	**12 23 03.5**	**-0.3**
RCY	**Rachaya**	**0.33**	**134**	*e*P	**Pg**	**12 23 06.0**	**0.0**
RCY				*e*S	**Sg**	**12 23 10.5**	**0.0**
NATI	**Neve Ativ**	**0.49**	**162**	Pg	**Pg**	**12 23 08.6**	**-0.2**
NATI				Sg	**Sg**	**12 23 16.1**	**+0.8**
GEM	**Giv'at Ha'Em**	**0.52**	**170**	Pg	**Pg**	**12 23 09.4**	**-0.1**
GEM				Sg	**Sg**	**12 23 17.1**	**+0.7**
HWQ	**Hawqa**	**0.64**	**31**	*e*P	**Pn**	**12 23 14.2**	**-0.1**
MMC7	**Mount Meron ar**	**0.71**	**191**	Pg	**Pb**	**12 23 13.6**	**-0.1**
HNTI	**Hanita**	**0.71**	**206**	Pg	**Pn**	**12 23 14.3**	**-0.9**
HNTI				Sg	**Sn**	**12 23 24.8**	**-1.3**
MMA0B	**Mount Meron ar**	**0.72**	**190**	Pg	**Pb**	**12 23 13.8**	**0.0**
MMA0B				Sg	**Sb**	**12 23 23.8**	**+0.2**
KSHT	**Keshet**	**0.77**	**164**	Pg	**Pb**	**12 23 14.5**	**-0.2**
OFRI	**`Ofer**	**1.20**	**204**	Pg	**Pg**	**12 23 22.7**	**+0.3**
OFRI				Sg	**Sg**	**12 23 38.6**	**+0.6**
MMLI	**Mount Malkishu**	**1.29**	**185**	Pg	**Pg**	**12 23 23.8**	**-0.3**
MMLI				Sg	**Sg**	**12 23 41.8**	**+1.0**
HMDT	**Nahal Hemdat**	**1.47**	**181**	Pn	**Pb**	**12 23 26.3**	**-0.2**
HMDT				Sn	**Sg**	**12 23 46.8**	**+0.2**
SLTI	**Sal'it**	**1.54**	**196**	Pn	**Pb**	**12 23 27.8**	**0.0**
SLTI				Sn	**Sg**	**12 23 49.3**	**+0.4**
DSI	**Dead Sea**	**2.15**	**184**	Pn	**Pn**	**12 23 36.1**	**+1.1**

IDC ***17*** *12:26:41.9±1.5, 40.˚42N×19.˚82E, h0km, mb3.7/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=68.2km s-min=25.9km az=148.0*
ROM ***17*** *12:26:44.3±0.1, 40.˚542N±0.˚006×19.˚649E±0.˚009, h19km, ML3.5/14, Error ellipse: s-maj=0.7km s-min=0.7km az=88.0*
PDG ***17*** *12:26:44.6±0.4, 40.˚42N×19.˚48E, h21km±1km, ML3.2/11, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*
TIR ***17*** *12:26:44.2, 40.˚45N×19.˚55E, h25km±3km, Md3.3, Ml3.4*
BEO ***17*** *12:26:44.4±0.5, 40.˚37N×19.˚35E, h23km±4km, ML3.1/11*
THE ***17*** *12:26:45.5, 40.˚43N×19.˚48E, h21km±1km, ML3.0/6, Error ellipse: s-maj=4.0km s-min=1.1km az=274.0*
ATH ***17*** *12:26:46.1, 40.˚42N×19.˚60E, h15km±5km, ML3.1/3, Error ellipse: s-maj=6.5km s-min=1.5km az=171.0*

ISC 17 12:26:45.2±0.9, 40.44N±0.02°×19.59E±0.02°, h19km±2km, n135, σ1$21/182, mb3.9/3, 21C-27D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.08**	**292**	P	**Pg**	**12 26 48.7**	**-0.2**
VLO				S	**Sg**	**12 26 52.0**	**+0.6**
	100µm,0.2s						
VLO	**Vlora**	**0.08**	**292**	P	**Pg**	**12 26 48.3**	**-0.5**
	baz=299						
VLO				S	**Sg**	**12 26 51.2**	**-0.1**
	baz=299						
VLO				AMP			
	comp=E,414nm,0.2s,baz=299						
VLO	**Vlora**	**0.08**	**292**	P	**Pg**	**12 26 48.7**	**-0.2**
VLO				S	**Sg**	**12 26 51.9**	**+0.6**
VLO				AML	AML		
VLO				AML	AML		
FIER	**Fieri**	**0.28**	**357**	P	**Pg**	**12 26 51.1**	**-0.4**
	baz=3.0						
TPE	**Tepelena**	**0.35**	**114**	P	**Pb**	**12 26 52.9**	**+0.1**
	baz=112						
SRN	**Sarande**	**0.64**	**150**	P	**Pb**	**12 26 57.8**	**+0.1**
SRN				S	**Sn**	**12 27 08.7**	**-0.1**
	comp=E,910nm,0.4s						
SRN	**Sarande**	**0.64**	**150**	P	**Pg**	**12 26 57.1**	**-0.8**
	baz=148						
SRN				S	**Sn**	**12 27 07.8**	**-0.9**
	baz=148						
SRN				AMP			
	comp=N,3.0nm,0.4s,baz=148						
SRN	**Sarande**	**0.64**	**150**	P	**Pg**	**12 26 57.5**	**-0.4**
SRN				S	**Sn**	**12 27 07.9**	**-0.9**
KASA	**Kassiopi**	**0.74**	**159**	P	**Pg**	**12 26 59.9**	**+0.1**
KASA				S	**Sg**	**12 27 10.1**	**+0.5**
KASA				AML	AML	12 27 13.4	
	comp=E,7278µm,0.3s						
KASA				AML	AML	12 27 14.1	
	comp=N,4207µm,0.3s						
KEK	**Kerkira**	**0.74**	**167**	P	**Pg**	**12 26 59.6**	**-0.2**
KEK				S	**Sn**	**12 27 10.5**	**-0.8**
	comp=N,2µm,0.4s						
KEK	**Kerkira**	**0.74**	**167**	P	**Pg**	**12 26 59.9**	**+0.1**
KEK				S	**Sn**	**12 27 11.9**	**+0.5**
KEK	**Kerkira**	**0.74**	**167**	P	**Pg**	**12 26 59.7**	**-0.1**
KEK				S	**Sg**	**12 27 09.8**	**0.0**
KEK				AML	AML	12 27 14.7	
	comp=N,3293µm,0.4s						
KEK				AML	AML	12 27 15.0	
	comp=E,4682µm,0.3s						
LSK	**Leskovik**	**0.83**	**110**	P	**Pb**	**12 26 59.8**	**-1.1**
	baz=109						
LSK				S	**Sn**	**12 27 13.6**	**+0.1**
	baz=109						
LSK				AMP			
	comp=N,4.1nm,0.9s,baz=109						
TIR	**Tirane**	**0.93**	**13**	*e*Pg	**Pn**	**12 27 04.7**	**+1.5**
TIR				*e*Sg	**Sn**	**12 27 17.3**	**+1.3**
TIR	**Tirane**	**0.93**	**13**	P	**Pn**	**12 27 03.8**	**+0.6**
	baz=14						
TIR				S	**Sb**	**12 27 15.3**	**+0.7**
	baz=14						
TIR				AMP			
	comp=N,2.7nm,0.6s,baz=14						
TIR	**Tirane**	**0.93**	**13**	P	**Pb**	**12 26 59.6**	**-3.1**
KBN	**Korca**	**0.93**	**78**	P	**Pg**	**12 27 03.2**	**-0.2**
KBN				S	**Sn**	**12 27 17.5**	**+1.4**
KBN	**Korca**	**0.93**	**78**	P	**Pn**	**12 27 03.4**	**+0.1**
	baz=78						
KBN				S	**Sn**	**12 27 16.8**	**+0.7**
	baz=78						
KBN				AMP			
	comp=N,3.6nm,0.9s,baz=78						
KBN	**Korca**	**0.93**	**78**	P	**Pb**	**12 27 01.0**	**-1.8**
SCTE	**Santa Cesarea**	**0.93**	**247**	P	**Pb**	**12 27 03.1**	**+0.4**
	baz=247						
SCTE				S	**Sb**	**12 27 14.8**	**+0.1**
	baz=247						
SCTE				AMP			
	comp=E,9.4nm,0.5s,baz=247						
SCTE	**Santa Cesarea**	**0.93**	**247**	P	**Pg**	**12 27 03.4**	**0.0**
SCTE				S	**Sn**	**12 27 16.5**	**+0.5**
SCTE				AML	AML		
	comp=E,9200µm,0.6s						
SCTE				AML	AML		
	comp=N,9840µm,0.4s						
SCTE	**Santa Cesarea**	**0.93**	**247**	P	**Pg**	**12 27 03.3**	**0.0**
SCTE				S	**Sn**	**12 27 16.7**	**+0.7**
IGT	**Igoumenitsa**	**1.07**	**148**	P	**Pn**	**12 27 05.4**	**+0.3**
IGT				S	**Sn**	**12 27 19.4**	**0.0**
	comp=N,638nm,0.5s						
IGT	**Igoumenitsa**	**1.07**	**148**	*e*Pg	**Pg**	**12 27 05.6**	**-0.4**
IGT				*e*Sg	**Sg**	**12 27 20.8**	**+0.8**
IGT	**Igoumenitsa**	**1.07**	**148**	P	**Pn**	**12 27 05.4**	**+0.3**
	baz=146						
IGT				S	**Sg**	**12 27 20.9**	**+0.8**
	baz=146						
IGT	**Igoumenitsa**	**1.07**	**148**	P	**Pn**	**12 27 05.3**	**+0.3**
NEST	**Nestorio**	**1.11**	**91**	P	**Pg**	**12 27 06.8**	**0.0**
NEST				S	**Sg**	**12 27 23.0**	**+1.5**
	comp=N,460nm,0.6s						
NEST	**Nestorio**	**1.11**	**91**	P	**Pg**	**12 27 06.5**	**-0.3**
NEST				AML	AML	12 27 27.0	
	comp=N,945µm,0.8s						
NEST				AML	AML	12 27 32.7	
	comp=E,1277µm,0.5s						
PENT	**Pentalofos**	**1.21**	**101**	P	**Pg**	**12 27 08.5**	**-0.2**
PENT	**Pentalofos**	**1.21**	**101**	P	**Pg**	**12 27 08.4**	**-0.2**
JAN	**Janina**	**1.25**	**129**	P	**Pb**	**12 27 08.4**	**+0.4**
JAN				S	**Sg**	**12 27 24.5**	**-1.1**
	comp=E,1µm,0.5s						
JAN	**Janina**	**1.25**	**129**	P	**Pb**	**12 27 08.2**	**+0.1**
MESG	**Mesagne**	**1.33**	**277**	P	**Pn**	**12 27 08.7**	**0.0**
PHP	**Peshkopia**	**1.40**	**27**	P	**Pn**	**12 27 10.1**	**+0.4**
	baz=28						
PHP				S	**Sg**	**12 27 31.3**	**+0.7**
	baz=28						
PHP				AMP			
	comp=N,2.1nm,0.8s,baz=28						
ULC	**Ulcinj**	**1.54**	**350**	⇓*i*Pg	**Pn**	**12 27 11.8**	**+0.1**
ULC				*i* Sg	**Sb**	**12 27 33.9**	**+1.6**
DRME	**Dracevica, Mon**	**1.77**	**350**	⇑*i*Pn	**Pn**	**12 27 15.1**	**+0.3**
DRME				*i* Sn	**Sb**	**12 27 39.0**	**+0.1**
BUM	**Brajici-Budva**	**1.93**	**345**	⇓*i*Pn	**Pn**	**12 27 17.4**	**+0.4**
BUM				*i* Sn	**Sb**	**12 27 42.7**	**-0.8**
NOCI	**Noci**	**1.95**	**281**	P	**Pn**	**12 27 17.0**	**-0.3**
	baz=282						
NOCI	**Noci**	**1.95**	**281**	P	**Pn**	**12 27 17.1**	**-0.1**
NOCI				AML	AML		
	comp=E,1365µm,0.5s						
NOCI				AML	AML		
	comp=N,1950µm,0.4s						
BCI	**Bajram Curri**	**1.96**	**10**	P	**Pn**	**12 27 18.9**	**+1.6**
	baz=11						
BCI				AMP			
	comp=N,1.9nm,0.6s,baz=11						
PDG	**Podgorica**	**2.00**	**353**	*e*Pn	**Pn**	**12 27 18.1**	**+0.2**
PDG				*e*Sn	**Sn**	**12 27 43.7**	**+1.2**
TTG	**Podgorica**	**2.00**	**353**	⇑*i*Pn	**Pn**	**12 27 18.1**	**+0.2**
TTG				*i* Sn	**Sb**	**12 27 45.0**	**-0.5**
THL	**Klokotos Trika**	**2.06**	**114**	P	**Pn**	**12 27 19.3**	**+0.6**
LTRZ	**Laterza**	**2.12**	**275**	P	**Pn**	**12 27 20.0**	**+0.5**
LTRZ				AML	AML		
	comp=N,53050µm,0.8s						
LTRZ				AML	AML		
	comp=E,4582µm,0.4s						
CEME	**Cevo**	**2.17**	**347**	⇓*i*Pn	**Pn**	**12 27 20.2**	**0.0**
CEME				*i* Sn	**Sn**	**12 27 48.6**	**+2.1**
HCY	**Herceg Novi**	**2.17**	**338**	⇓*i*Pn	**Pn**	**12 27 20.0**	**-0.2**
HCY				*i* Sn	**Sn**	**12 27 48.5**	**+2.0**
AMUR	**Altamura**	**2.32**	**283**	P	**Pn**	**12 27 22.3**	**0.0**
AMUR				AML	AML		
	comp=N,616µm,1.1s						
AMUR				AML	AML		
	comp=E,624µm,0.7s						
NKME	**Niksic**	**2.37**	**349**	⇓*i*Pn	**Pn**	**12 27 23.3**	**+0.2**
NKME				*i* Sn	**Sn**	**12 27 53.7**	**+2.0**
MIGL	**Miglionico**	**2.41**	**275**	⇓P	**Pn**	**12 27 23.9**	**+0.4**
MIGL				AML	AML		
	comp=E,2050µm,0.7s						
MIGL				AML	AML		
	comp=N,2200µm,1.2s						
KOME	**Kolasin**	**2.41**	**359**	⇓*i*Pn	**Pn**	**12 27 24.6**	**+1.0**
KOME				*i* Sn	**Sn**	**12 27 54.8**	**+2.2**
IVA	**Berane**	**2.44**	**5**	⇓*i*Pn	**Pn**	**12 27 25.5**	**+1.4**
IVA				*i* Sn	**Sn**	**12 27 55.8**	**+2.4**
TREB	**Trebinje**	**2.46**	**338**	*e*Pn	**Pn**	**12 27 23.6**	**-0.6**
TREB				*e*Sn	**Sn**	**12 27 53.3**	**-0.4**
DBRK	**Dubrovnik**	**2.48**	**335**	*e*Pn	**Pn**	**12 27 23.1**	**-1.4**
SALB	**San Lorenzo Be**	**2.55**	**258**	P	**Pn**	**12 27 25.2**	**-0.3**
SALB				AML	AML		
	comp=E,405µm,0.4s						
SALB				AML	AML		
	comp=E,446µm,0.4s						
SALB				AML	AML		
	comp=N,332µm,0.8s						
SALB				AML	AML		
	comp=N,310µm,0.8s						
BRY	**Bratogost**	**2.58**	**343**	⇑*i*Pn	**Pn**	**12 27 26.4**	**+0.4**
BRY				*i* Sn	**Sn**	**12 27 58.6**	**+1.6**
MRVN	**Minervino Murg**	**2.65**	**285**	⇓P	**Pn**	**12 27 27.3**	**+0.4**
MRVN				AML	AML		
	comp=E,466µm,0.8s						
MRVN				AML	AML		
	comp=N,416µm,0.5s						
SPS2	**Spezzano della**	**2.75**	**246**	⇑P	**Pn**	**12 27 28.8**	**+0.5**
PRVS	**Prvonek**	**2.79**	**41**	*e*Pn	**Pn**	**12 27 29.6**	**+0.9**
PRVS				*e*Sn	**Sb**	**12 28 05.5**	**-2.6**
ACER	**Acerenza**	**2.80**	**278**	⇑P	**Pn**	**12 27 29.5**	**+0.6**
ACER				AML	AML		
	comp=N,1010µm,0.9s						
ACER				AML	AML		
	comp=E,1164µm,0.5s						
UPM	**Unac-Piva**	**2.81**	**350**	⇓*i*Pn	**Pn**	**12 27 30.1**	**+0.9**
UPM				*i* Sn	**Sn**	**12 28 04.3**	**+1.7**
STON	**Ston**	**2.81**	**330**	*e*Pn	**Pn**	**12 27 27.2**	**-1.8**
STON	**Ston**	**2.81**	**330**	*e*Pn	**Pn**	**12 27 27.4**	**-1.6**
STON				*e*Sn	**Sn**	**12 28 00.0**	**-2.4**
STON	**Ston**	**2.81**	**330**	⇑P	**Pn**	**12 27 27.5**	**-1.6**
STON				AML	AML		
	comp=N,169µm,0.3s						
STON				AML	AML		
	comp=E,156µm,1.2s						
SJES	**Sjenica**	**2.83**	**6**	*e*Pn	**Pn**	**12 27 30.7**	**+1.2**
SJES				*e*Sn	**Sn**	**12 28 04.7**	**+1.6**
CAR1	**CAROLEI**	**2.86**	**247**	⇓P	**Pn**	**12 27 31.8**	**+2.1**
CAR1				AML	AML		
	comp=E,274µm,0.8s						
CAR1				AML	AML		
	comp=N,241µm,0.6s						
SIRI	**Monte Sirino -**	**2.86**	**266**	P	**Pn**	**12 27 30.1**	**+0.4**
SIRI				AML	AML		
	comp=E,289µm,1.5s						
SIRI				AML	AML		
	comp=E,298µm,1.5s						
SIRI				AML	AML		
	comp=N,226µm,0.6s						
SIRI				AML	AML		
	comp=N,234µm,0.6s						
MCEL	**Monticello**	**2.90**	**269**	⇑P	**Pn**	**12 27 31.5**	**+1.2**
MCEL				AML	AML		
	comp=E,288µm,0.5s						
MCEL				AML	AML		
	comp=N,302µm,0.6s						
BARS	**Barje**	**2.90**	**34**	*e*Pn	**Pn**	**12 27 31.4**	**+1.1**
CUC	**Castrocucco**	**2.92**	**262**	⇑P	**Pn**	**12 27 32.0**	**+1.3**
CUC				AML	AML		
	comp=E,202µm,0.6s						
CUC				AML	AML		
	comp=E,232µm,0.7s						
CUC				AML	AML		
	comp=N,155µm,0.7s						
CUC				AML	AML		
	comp=N,125µm,0.9s						
MTSN

comp=E,360μm,0.8s
SNAL AML AML
comp=N,316μm,1.3s
SNAL AML AML
comp=E,346μm,0.8s
BBLS Lazići 3.43 358 *e*Pn **Pn 12 27 38.2 +0.6**
BBLS *e*Sn **Sn 12 28 18.2 +0.5**
MAKA Makarska 3.43 327 *e*Pn **Pn 12 27 37.5 -0.1**
VTS Vitosha 3.50 50 *e*P **Pn 12 27 39.8 +1.2**
VTS Vitosha 3.50 50 S **Sn 12 28 23.0 +3.5**
TREM Isole Tremiti 3.50 300 P **Pn 12 27 38.5 -0.1**
TREM AML AML
comp=E,292μm,0.6s
TREM AML AML
comp=N,322μm,0.6s
GRUS Gruza 3.55 13 *e*Pn **Pn 12 27 39.8 +0.6**
GRUS *e*Sn **Sn 12 28 22.1 +1.6**
BOVS Bovan 3.56 26 *e*Pn **Pn 12 27 39.4 +0.1**
MELA Melanico ??? S 3.60 292 ⇑P **Pn 12 27 40.6 +0.7**
MELA AML AML
comp=E,492μm,0.6s
MELA AML AML
comp=N,612μm,0.6s
SOI Samo 3.62 230 ⇓P **Pn 12 27 40.3 +0.1**
SOI AML AML
comp=E,94μm,0.9s
SOI AML AML
comp=N,66μm,0.6s
ZAPS Zavoj 3.63 38 *e*Pn **Pn 12 27 41.5 +1.1**
DIVS Divibare 3.67 5 *e*Pn **Pn 12 27 40.9 0.0**
DIVS *e*Sn **Sn 12 28 23.1 -0.6**
GMB Gambarie 3.69 233 P **Pn 12 27 40.8 -0.5**
CIGN Sant'Elia a Pi 3.74 290 ⇑P **Pn 12 27 42.8 +0.9**
CIGN AML AML
comp=N,175μm,0.8s
CIGN AML AML
comp=E,177μm,0.9s
SACR S. Croce Del S 3.82 286 S **Sn 12 28 32.0 +4.6**
MSRU Castanea 3.84 237 ⇓P **Pn 12 27 42.8 -0.4**
MSRU S **Sn 12 28 28.0 +0.3**
MSRU AML AML
comp=N,100μm,0.9s
MSRU AML AML
comp=E,121μm,1.4s
ZAGS Zajecar 3.90 29 *e*Pn **Pn 12 27 44.9 +0.9**
VAGA Valle Agricola 4.17 285 ⇓P **Pn 12 27 49.9 +2.1**
VAGA AML AML
comp=E,166μm,0.9s
VAGA AML AML
comp=N,216μm,1.5s
KIJV Kijevo 4.28 327 *e*Pn **Pn 12 27 49.3 +0.1**
RNI2 Rionero Sannit 4.30 289 ⇑P **Pn 12 27 51.5 +1.9**
RNI2 AML AML
comp=N,120μm,1.5s
RNI2 AML AML
comp=E,143μm,0.8s
LPEL Lama dei Pelig 4.38 293 P **Pn 12 27 52.2 +1.5**
LPEL AML AML
comp=N,93μm,0.2s
LPEL AML AML
comp=E,128μm,0.2s
MORI Morici 4.48 321 *e*Pn **Pn 12 27 51.7 -0.2**
POFI Posta Fibreno 4.62 288 ⇑P **Pn 12 27 55.6 +1.6**
POFI AML AML
comp=N,54μm,1.4s
POFI AML AML
comp=E,38μm,1.4s
BLY Banja Luka 4.66 338 *e*Sn **Sn 12 28 46.4 -1.5**
T0110 Collepietro 4.72 294 ⇑P **Pn 12 27 56.9 +1.5**
HLNI Lentini 4.80 232 ⇓P **Pn 12 27 54.1 -2.3**
SSY Sortino 4.82 229 ⇑P **Pn 12 27 54.2 -2.5**
DUGI Dugi Otok 4.89 318 *e*Pn **Pn 12 27 57.7 +0.1**
MEU Monte Lauro 4.94 229 ⇑P **Pn 12 27 56.4 -1.9**
TERO Teramo 4.99 298 ⇑P **Pn 12 28 00.1 +1.0**
VIRC Vir 5.11 320 *e*Pn **Pn 12 28 00.6 0.0**
LNSS Leonessa 5.37 296 ⇑P **Pn 12 28 06.1 +1.8**
NVLJ Novalja 5.40 321 *e*Pn **Pn 12 28 04.6 0.0**
NRCA Norcia 5.41 298 ⇑P **Pn 12 28 06.1 +1.3**
CING Cingoli 5.60 304 P **Pn 12 28 07.2 -0.2**
FOSV Fossato di Vic 5.84 301 ⇓P **Pn 12 28 11.3 +0.6**
BOJS Bojanci 5.98 329 ⇑P **Pn 12 28 13.1 +0.5**
ATFO Monte Foce - G 6.00 301 ⇑P **Pn 12 28 13.6 +0.7**
SMRN Sveta Marina 6.09 321 *e*Pn **Pn 12 28 14.4 +0.4**
PIEI Pieia 6.10 303 ⇑P **Pn 12 28 14.5 +0.3**
MGAB Montegabbione 6.12 296 ⇓P **Pn 12 28 16.6 +2.1**
CAFI Castiglion Fio 6.38 299 ⇓P **Pn 12 28 19.8 +1.7**
SOKA Soboth 7.06 334 *e*Pn **Pn 12 28 30.0 +2.6**
comp=E,0.7nm,0.2s
SOKA *e*Sn **Sn 12 29 43.2 -3.9**
OBKA Obir 7.09 331 *e*Pn **Pn 12 28 30.3 +2.5**
comp=E,2.3nm,0.4s
OBKA *e*Sn **Sn 12 29 46.1 -1.7**
comp=E,1.7nm,0.2s
ESDC Sonseca Array 18.04 275 P **P 12 30 56.0 +0.9**
comp=E,0.1nm,0.3s,baz=76,slow=11,SNR=5.0
comp=E,0.5nm,0.7s
TORD Torodi Ar. Bea 31.40 215 P **P 12 33 05.4 +0.4**
comp=E,0.2nm,0.5s,baz=34,slow=10,SNR=2.3
comp=E,0.2nm,0.5s
ZALV Zalesovo Beam 44.75 50 P **P 12 34 54.8 -2.2**
comp=E,0.5nm,0.3s,baz=292,slow=7.6,SNR=2.0
comp=E,0.5nm,0.3s
MKAR Makanchi Array 44.77 60 P **P 12 34 56.5 -0.9**
comp=E,0.9nm,0.6s,baz=279,slow=7.8,SNR=11
comp=E,0.9nm,0.6s

*TIR **17** 12:32:38.2,39.°95N×20.°67E,h7km±1km,Ml2.5*
*THE **17** 12:32:39.3,39.°93N×20.°71E,h8km±3km,ML2.3/5,Error ellipse: s-maj=3.2km s-min=0.6km az=13.0*
*ATH **17** 12:32:39.7,39.°95N×20.°68E,h7km±4km,ML2.5/8,Error ellipse: s-maj=4.2km s-min=1.0km az=301.0*
ISC 17 12:32:39.0±1.0,**39.°93N**±0.°02×**20.70E**±0.°02,**h8**km±9km,
n30,σ0**864/52,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSK	**Leskovik**	**0.23**	**341**	P	**Pg**	**12 32 43.0**	**-0.7**
	baz=346						
LSK				S	**Sg**	**12 32 46.3**	**-0.6**
	baz=346						
LSK				AMP			
	comp=N,16nm,0.2s,baz=346						
JAN	**Janina**	**0.29**	**157**	P	**Pg**	**12 32 44.3**	**-0.5**
JAN				S	**Sb**	**12 32 50.0**	**-1.6**
JAN	**Janina**	**0.29**	**157**	P	**Pg**	**12 32 44.7**	**-0.1**
JAN				S	**Sb**	**12 32 50.1**	**-1.6**
JAN				AML	AML	12 32 51.3	
	comp=N,3501μm,0.2s						
JAN				AML	AML	12 32 51.4	
	comp=E,4253μm,0.2s						
PENT	**Pentalofos**	**0.43**	**51**	P	**Pg**	**12 32 47.2**	**-0.2**
PENT				S	**Sg**	**12 32 54.4**	**+1.4**
	comp=E,420nm,0.3s						
PENT	**Pentalofos**	**0.43**	**51**	P	**Pg**	**12 32 47.4**	**+0.1**
PENT				S	**Sg**	**12 32 53.7**	**+0.7**
PENT				AML	AML	12 32 56.2	
	comp=E,1293μm,0.2s						
PENT				AML	AML	12 32 58.2	
	comp=N,455μm,0.5s						
IGT	**Igoumenitsa**	**0.49**	**216**	P	**Pg**	**12 32 48.2**	**-0.2**
IGT	**Igoumenitsa**	**0.49**	**216**	P	**Pg**	**12 32 48.2**	**-0.2**
	baz=212						
IGT				S	**Sb**	**12 32 55.8**	**-1.4**
	baz=212						
IGT	**Igoumenitsa**	**0.49**	**216**	P	**Pg**	**12 32 48.2**	**-0.2**
IGT				S	**Sg**	**12 32 55.5**	**+0.8**
IGT				AML	AML	12 33 01.4	
	comp=N,1078μm,0.5s						
IGT				AML	AML	12 33 02.1	
	comp=E,997μm,0.5s						
SRN	**Sarande**	**0.54**	**265**	P	**Pg**	**12 32 49.6**	**+0.2**
	baz=263						
SRN				S	**Sg**	**12 32 56.5**	**0.0**
	baz=263						
SRN				AMP			
	comp=E,1.1nm,0.2s,baz=263						
NEST	**Nestorio**	**0.55**	**29**	P	**Pg**	**12 32 49.6**	**-0.1**
NEST				S	**Sg**	**12 32 57.9**	**+0.9**
NEST	**Nestorio**	**0.55**	**29**	P	**Pg**	**12 32 49.7**	**-0.1**
NEST				S	**Sg**	**12 32 58.0**	**+1.0**
NEST				AML	AML	12 32 58.8	
	comp=E,1342μm,0.4s						
NEST				AML	AML	12 32 59.2	
	comp=N,1747μm,0.3s						
KASA	**Kassiopi**	**0.62**	**253**	P	**Pg**	**12 32 51.2**	**+0.3**
KASA				S	**Sg**	**12 32 59.6**	**+0.7**
KASA				AML	AML	12 33 02.3	
	comp=N,1487μm,0.9s						
KASA				AML	AML	12 33 02.6	
	comp=E,1486μm,0.3s						
KBN	**Korca**	**0.70**	**5**	P	**Pg**	**12 32 51.9**	**-0.6**
	baz=7.0						
KBN				S	**Sg**	**12 33 02.1**	**+0.6**
	baz=7.0						
KBN				AMP			
	comp=E,1.1nm,0.3s,baz=7.0						
KEK	**Kerkira**	**0.73**	**253**	P	**Pg**	**12 32 52.7**	**-0.3**
KEK				S	**Sb**	**12 33 04.5**	**+0.4**
	comp=E,445nm,0.5s						
KEK	**Kerkira**	**0.73**	**253**	P	**Pg**	**12 32 52.9**	**-0.1**
KEK				S	**Sb**	**12 33 03.6**	**-0.5**
KEK				AML	AML	12 33 07.4	
	comp=E,1198μm,0.8s						
KEK				AML	AML	12 33 07.5	
	comp=N,618μm,0.6s						
KZN	**Kozani**	**0.90**	**65**	P	**Pg**	**12 32 55.9**	**-0.4**
KZN				S	**Sb**	**12 33 09.0**	**-0.2**
	comp=N,192nm,0.4s						
KZN	**Kozani**	**0.90**	**65**	P	**Pg**	**12 32 55.9**	**-0.4**
THL	**Klokotos Trika**	**1.07**	**109**	P	**Pg**	**12 32 59.4**	**-0.2**
THL				S	**Sn**	**12 33 15.1**	**-0.4**
	comp=N,90nm,0.7s						
THL	**Klokotos Trika**	**1.07**	**109**	P	**Pb**	**12 32 59.7**	**-0.1**
THL				S	**Sn**	**12 33 15.0**	**-0.5**
THL				AML	AML	12 33 22.2	
	comp=N,191μm,0.6s						
THL				AML	AML	12 33 30.0	
	comp=E,169μm,0.7s						
LKD2	**Lefkada island**	**1.14**	**182**	P	**Pn**	**12 33 01.3**	**0.0**
LKD2				S	**Sn**	**12 33 17.4**	**+0.3**
	comp=E,195nm,0.5s						
LKD2	**Lefkada island**	**1.14**	**182**	P	**Pn**	**12 33 01.6**	**+0.3**
	baz=181						
LKD2				S	**Sn**	**12 33 18.0**	**+0.9**
	baz=181						
LKD2	**Lefkada island**	**1.14**	**182**	P	**Pn**	**12 33 01.6**	**+0.3**
OHR	**Ohrid**	**1.18**	**4**	*i* Pn	**Pg**	**12 33 01.5**	**-0.2**
EVGI	**Lefkada island**	**1.31**	**182**	P	**Pg**	**12 33 04.7**	**+0.6**
EVR	**Evrytania**	**1.32**	**139**	P	**Pn**	**12 33 03.8**	**-0.1**
LIT	**Litokhoron**	**1.38**	**82**	P	**Pg**	**12 33 05.5**	**0.0**
MAKR	**Makrakomi, Fth**	**1.44**	**129**	P	**Pg**	**12 33 07.1**	**+0.6**
MAKR				S	**Sg**	**12 33 25.7**	**+0.6**
MAKR				AML	AML	12 33 35.7	
	comp=N,732μm,0.7s						
MAKR				AML	AML	12 33 36.2	
	comp=E,673μm,1.0s						
SCTE	**Santa Cesarea**	**1.72**	**276**	P	**Pb**	**12 33 10.5**	**-0.4**
	baz=276						
SCTE				S	**Sg**	**12 33 34.9**	**+0.6**
	baz=276						
SCTE	**Santa Cesarea**	**1.72**	**276**	P	**Pb**	**12 33 10.5**	**-0.4**
PHP	**Peshkopia**	**1.77**	**354**	P	**Pn**	**12 33 10.8**	**+0.8**
	baz=355						
PHP				S	**Sg**	**12 33 36.4**	**+0.7**
	baz=355						

*ARE **17** 12:36:01±2.4, 16.°5S±0.°1×71.°7W±0.°2, h20km±9km, ML4.3, mb4.3/1(NEIC), Error ellipse: s-maj=21.5km s-min=13.6km az=115.0*
NEIC 17 12:36:01.6±2.5,**16.°50S**±0.°06×**72.0W**±0.°1,**h58**km±33km,
Error ellipse: s-maj=17.7km s-min=1.1km az=60.0,
Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**2.42**	**140**	Pn	Pn	12 36 36.7	-2.0
PB12	**IPOC Station P**	**2.62**	**144**	Pn	Pn	12 36 42.5	+1.0
PB16	**IPOC Station P**	**2.97**	**128**	Pn	Pn	12 36 48.4	+1.6
LPAZ	**La Paz**	**3.69**	**87**	Pn	Pn	12 36 56.1	-0.5
GO01	**Chusmiza**	**4.11**	**140**	Pn	Pn	12 37 01.0	-1.3
PB01	**IPOC Station P**	**5.09**	**153**		Pn	12 37 15.0	-0.4
PB02	**IPOC Station P**	**5.18**	**158**	Pn	Pn	12 37 15.2	-1.4
PB07	**IPOC Station P**	**5.56**	**160**	Pn	Pn	12 37 22.6	+0.7
PB09	**IPOC Station P**	**5.86**	**154**	Pn	Pn	12 37 27.2	+1.2
PB04	**IPOC Station P**	**6.05**	**164**	Pn	Pn	12 37 28.4	-0.2
PB06	**IPOC Station P**	**6.57**	**160**	Pn	Pn	12 37 34.6	-1.1
LVC	**Limon Verde**	**6.72**	**155**	Pn	Pn	12 37 38.1	+0.1
PB14	**IPOC Station P**	**8.21**	**170**	Pn	Pn	12 37 57.9	-0.5
GO02	**Mina Guanaco**	**8.90**	**166**	Pn	Pn	12 38 07.4	-0.4
ITQB	**Itaqui**	**19.23**	**136**	P	P	12 40 21.1	0.0
ITQB				IAmb	IAmb	12 40 46.7	
	comp=Z,25nm,1.2s						

*ARE **17** 12:36:22±2.0, 11.°6S±0.°1×77.°0W±0.°2, h113km±6km, ML4.6, mb4.2/1(NEIC), Error ellipse: s-maj=21.5km s-min=15.2km az=84.0*
NEIC 17 12:36:22.4±1.8,**11.°54S**±0.°05×**76.8W**±0.°1,**h108**km±7km,
Error ellipse: s-maj=17.3km s-min=3.7km az=111.0,
Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.45**	**185**		Pn	12 36 39.2	+0.5
NNA					Sn	12 36 50.0	-1.0
CZSB	**Cruzeiro do Su**	**5.54**	**47**	Pn	Pn	12 37 43.2	+0.8
BOSC	**San Juan Bosco**	**8.50**	**348**	Pn	Pn	12 38 22.3	-0.6
ARNL	**Arenillas**	**8.57**	**338**	Pn	Pn	12 38 20.2	-3.5
CHSH	**Refugio Sur-Vo**	**10.19**	**348**	Pn	Pn	12 38 48.0	+1.8
PORT	**Chimborazo Vol**	**10.20**	**349**	Pn	Pn	12 38 48.4	+2.0
ETMB	**Extrema**	**10.55**	**82**	Pn	Pn	12 38 50.0	-0.5
TA02	**Huaiquique**	**10.79**	**144**	Pn	Pn	12 38 53.1	-0.7
TA01	**Diego Aracena**	**11.00**	**146**	Pn	Pn	12 38 56.3	-0.2
BAUV	**El Baul**	**22.14**	**24**	P	P	12 41 08.6	-0.8
BAUV				IAmb	IAmb	12 41 13.2	
	comp=Z,16nm,1.2s						

*SJA **17** 13:00:17.4±0.7, 27.°88S×71.°52W, h16km±3km, ML4.5, MW4.2*
*IDC **17** 13:00:18.3±0.6, 27.°99S×70.°95W, h0km, mb4.1/8, mbtmp4.1/11, ML4.2/3, MS3.3/7, Error ellipse: s-maj=26.3km s-min=18.4km az=80.0*
*NEIC **17** 13:00:19.7, 27.°91S×71.°33W, h32km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.40; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-1.58; $M_{r\theta}$0.39; $M_{\theta\phi}$0.18; $M_{r\phi}$0.00; Fault plane solution: $M_0$1.56000×10^{15} NP1:ϕ_s10.19000°, δ46.63000°, λ113.18000°. NP2:ϕ_s158.24000°, δ48.07000°, λ67.38000°. Principal axes: T 1.5160, Plg73.0000°, Azm357.0000°; N 0.0830, Plg17.0000°, Azm174.0000°; P -1.5990, Plg1.0000°, Azm264.0000°;*
*VAO **17** 13:00:20.7±0.6, 27.°92S×71.°31W, h16km, mb4.3*
*GUC **17** 13:00:21.5±0.9, 28.°03S×71.°10W, h30km±2km, ML4.2*
*NEIC **17** 13:00:21.3±2.0, 27.°92S±0.°04×71.°27W±0.°10, h24km±5km, mb4.6/10, Mwr4.1/64, ML4.2(GUC), Error ellipse: s-maj=12.3km s-min=6.1km az=94.0*
ISC 17 13:00:17.8±1.4,**27.°96S**±0.°02×**71.°30W**±0.°04,**h1**km±9km,
n158,σ1**961/176,mb4.5/13,MS3.5/3,5C-6D,Near coast of**
northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.32**	**141**		**Pn**	**13 00 28.3**	**-1.3**
AC04				Sg	**Sb**	**13 00 32.5**	**+0.5**
AC04	**Llanos de Chal**	**0.32**	**141**	⇑*i* P	**Pn**	**13 00 28.3**	**-1.3**
AC04				*i* S	**Sb**	**13 00 32.3**	**+0.3**
AC04	**Llanos de Chal**	**0.32**	**141**	*e*P	**Pn**	**13 00 28.0**	**-1.6**
GO03	**Copiap**	**1.01**	**69**		**Pn**	**13 00 39.3**	**+0.1**
GO03				Sg	**Sb**	**13 00 51.6**	**-0.4**
GO03	**Copiap**	**1.01**	**69**	⇓*i* P	**Pn**	**13 00 39.1**	**0.0**
GO03				*i* S	**Sb**	**13 00 51.7**	**-0.3**
GO03				IAML		13 00 57.3	
	comp=N,12μm,0.4s						
GO03	**Copiap**	**1.01**	**69**	*e*P	**Pn**	**13 00 39.2**	**+0.1**
GO03				*e*S	**Sn**	**13 00 52.6**	**-1.5**
AC06	**Mina Casimiro**	**1.03**	**55**		**Pn**	**13 00 38.8**	**-0.6**
AC06	**Mina Casimiro**	**1.03**	**55**	⇓*i* P	**Pn**	**13 00 39.2**	**-0.2**
AC06				IAML		13 00 56.6	
	comp=E,12μm,0.3s						
LCO	**Las Campanas**	**1.18**	**153**		**Pg**	**13 00 42.3**	**+1.9**
LCO	**Las Campanas**	**1.18**	**153**	*e*P	**Pg**	**13 00 41.3**	**+0.9**
LCO				*i* S	**Sb**	**13 00 56.6**	**-0.2**
LCO	**Las Campanas**	**1.18**	**153**	*e*P	**Pg**	**13 00 42.0**	**+1.6**
AC05	**El Transito**	**1.26**	**134**		**Pg**	**13 00 43.5**	**+1.5**
AC05	**El Transito**	**1.26**	**134**	⇓*i* P	**Pg**	**13 00 43.3**	**+1.4**
AC05				*i* S	**Sb**	**13 00 58.2**	**-1.0**
AC05				IAML		13 01 02.9	
	comp=N,3μm,0.7s						
AC05	**El Transito**	**1.26**	**134**	*e*P	**Pn**	**13 00 38.2**	**-4.4**
AC05				*e*P	**Pg**	**13 00 43.4**	**+1.4**
AC05				*e*S	**Sn**	**13 01 01.4**	**+1.1**
AC01	**Pan de Azucar**	**1.91**	**19**		**Pb**	**13 00 51.8**	**-1.6**
AC01	**Pan de Azucar**	**1.91**	**19**	⇑*i* P	**Pb**	**13 00 52.4**	**-1.0**
AC01				IAML		13 01 24.6	
	comp=E,1μm,0.3s						
CO05	**La Serena**	**1.96**	**178**		**Pb**	**13 00 53.9**	**-0.3**
CO05	**La Serena**	**1.96**	**178**	*e*P	**Pb**	**13 00 53.7**	**-0.4**
CO05				*i* S	**Sb**	**13 01 19.4**	**+0.3**
CO05				IAML		13 01 23.0	
	comp=E,2μm,0.6s						
AC02	**Maricunga**	**2.23**	**60**	Pn	**Pb**	**13 00 58.6**	**-0.6**
AC02	**Maricunga**	**2.23**	**60**	⇑*i* P	**Pb**	**13 00 59.3**	**+0.1**
AC02				*i* S	**Sb**	**13 01 27.5**	**-0.1**
AC02				IAML		13 01 30.0	
	comp=E,5μm,0.6s						
AC02	**Maricunga**	**2.23**	**60**	*e*P	**Pb**	**13 00 59.0**	**-0.2**
AC02				*e*S	**Sg**	**13 01 29.1**	**-0.5**
AC02				IAML		13 01 31.2	
	comp=Z,2μm,0.5s						
GO04	**Tololo Observa**	**2.25**	**169**	Pn	**Pb**	**13 00 58.3**	**-1.0**
GO04	**Tololo Observa**	**2.25**	**169**	⇑*i* P	**Pb**	**13 00 58.4**	**-1.0**
GO04				IAML		13 01 35.2	
	comp=N,5μm,0.6s						
GO04	**Tololo Observa**	**2.25**	**169**	*e*P	**Pb**	**13 00 58.5**	**-0.9**
GO04				*e*S	**Sb**	**13 01 28.9**	**+1.1**
CO01	**Juntas del Tor**	**2.27**	**153**		**Pb**	**13 00 59.6**	**-0.2**
CO01	**Juntas del Tor**	**2.27**	**153**	*e*P	**Pb**	**13 00 59.6**	**-0.2**
CO01				*i* S	**Sb**	**13 01 26.9**	**-1.7**
CO01	**Juntas del Tor**	**2.27**	**153**	*e*P	**Pb**	**13 00 59.0**	**-0.8**
CO01				*e*P	**Pb**	**13 00 59.5**	**-0.2**
CO01				*e*S	**Sb**	**13 01 29.5**	**+1.0**
AROD	**Rodeo**	**2.72**	**144**	*e*P	**Pb**	**13 01 07.0**	**-0.5**
AROD				*e*S	**Sg**	**13 01 46.2**	**+0.9**
CO06	**Fray Jorge**	**2.72**	**186**	⇓*i* P	**Pb**	**13 01 03.3**	**+0.6**
ACDV	**Cuesta del Vie**	**2.92**	**140**	*e*P	**Pb**	**13 01 10.0**	**-0.7**
ACDV				*e*S	**Sg**	**13 01 50.7**	**-0.9**
CO03	**El Pedregal**	**2.92**	**170**		**Pn**	**13 01 07.4**	**+1.9**
CO03	**El Pedregal**	**2.92**	**170**	⇓*i* P	**Pn**	**13 01 07.7**	**+2.3**
CO03				IAML		13 02 00.2	
	comp=N,705nm,0.5s						
CO03	**El Pedregal**	**2.92**	**170**	*e*P	**Pn**	**13 01 07.8**	**+2.3**
CO03				*e*S	**Sb**	**13 01 44.7**	**-2.3**
GO02	**Mina Guanaco**	**3.18**	**29**		**Pn**	**13 01 10.5**	**+1.4**
GO02	**Mina Guanaco**	**3.18**	**29**	*e*	Pn	13 00 59.7	-9.5
GO02				⇑*i* P	**Pn**	**13 01 10.8**	**+1.6**
GO02				IAML		13 02 04.2	
	comp=E,2μm,0.5s						
GO02	**Mina Guanaco**	**3.18**	**29**	*e*P	**Pn**	**13 01 10.8**	**+1.6**
GO02				*e*S	**Sb**	**13 01 51.3**	**-3.3**
CO02	**Combarbal**	**3.25**	**175**		**Pn**	**13 01 11.4**	**+1.4**
CO02	**Combarbal**	**3.25**	**175**	⇓*i* P	**Pn**	**13 01 11.3**	**+1.4**
CO02				IAML		13 02 05.9	
	comp=N,2μm,0.7s						
CO02	**Combarbal**	**3.25**	**175**	*e*P	**Pn**	**13 01 11.4**	**+1.4**
CO02				*e*S	**Sb**	**13 01 55.2**	**-1.1**
CO02				IAML		13 02 04.2	
	comp=Z,924nm,0.9s						
ACCO	**Cerro Coronel**	**3.27**	**144**	*e*P	**Pb**	**13 01 15.7**	**-1.1**
ACCO				*e*S	**Sb**	**13 01 55.2**	**-2.0**
ACCO				*e*S	**Sg**	**13 02 00.2**	**-2.7**
PB14	**IPOC Station P**	**3.42**	**14**		**Pn**	**13 01 12.2**	**-0.2**
PB14	**IPOC Station P**	**3.42**	**14**	IAML		13 02 16.3	
	comp=N,230nm,0.5s						
PB14	**IPOC Station P**	**3.42**	**14**	*e*P	**Pn**	**13 01 12.8**	**+0.3**
PB14				*e*S	**Sn**	**13 01 52.5**	**-1.2**
PB14				IAML		13 02 11.3	
	comp=Z,512nm,0.6s						
ACLC	**CERRO LA CRUZ**	**4.09**	**112**	*e*P	**Pn**	**13 01 19.7**	**-1.9**
ACLC				*e*P	Pb	13 01 25.6	-5.2
ACLC				*e*S	**Sb**	**13 02 18.5**	**-2.3**
ACLC				IAML		13 02 20.6	
	comp=Z,433nm,0.8s						
RTLL	**Cerro Villicun**	**4.17**	**144**	*e*P	Pn	13 01 27.0	+4.5
RTLL				*e*S	**Sb**	**13 02 17.2**	**-5.5**
RTLS	**Leoncito**	**4.21**	**156**	*e*P	**Pb**	**13 01 28.6**	**-4.1**
RTLS				*e*S	**Sb**	**13 02 19.7**	**-4.5**
RTLS				IAML		13 02 37.2	
	comp=Z,429nm,0.9s						
AVFE	**Valle Fertil**	**4.30**	**130**	*e*P	**Pn**	**13 01 28.0**	**+3.5**
AVFE				*e*S	**Sn**	**13 02 18.7**	**+3.3**
AVFE				IAML		13 02 27.4	
	comp=Z,607nm,0.6s						
VA06	**Catapilco**	**4.59**	**180**	*e*P	**Pn**	**13 01 26.8**	**-1.5**
APLL	**PUNTA DE LOS L**	**4.83**	**121**	*e*P	**Pn**	**13 01 35.0**	**+3.3**
APLL				*e*S	**Sn**	**13 02 32.2**	**+3.9**
VA03	**San Esteban**	**4.83**	**172**		**Pn**	**13 01 33.5**	**+1.7**
VA03	**San Esteban**	**4.83**	**172**	*e*P	**Pn**	**13 01 34.3**	**+2.6**
VA03	**San Esteban**	**4.83**	**172**	*e*P	**Pn**	**13 01 35.0**	**+3.2**
VA03				*e*S	**Sb**	**13 02 38.2**	**-3.8**
VA03				IAML		13 02 55.6	
	comp=Z,358nm,0.7s						
ROC1	**El Roble**	**5.01**	**177**		**Pn**	**13 01 35.5**	**+1.2**
ROC1	**El Roble**	**5.01**	**177**	*e*P	**Pn**	**13 01 37.2**	**+2.9**
ROC1				*e*S	**Sn**	**13 02 34.7**	**+1.8**
PB15	**IPOC Station P**	**5.01**	**20**		**Pn**	**13 01 35.3**	**+1.0**
PB15	**IPOC Station P**	**5.01**	**20**	*e*P	**Pn**	**13 01 35.1**	**+0.7**
PB15	**IPOC Station P**	**5.01**	**20**	*e*P	**Pn**	**13 01 35.0**	**+0.7**
PB15				*e*P	Pb	13 01 35.8	-11
PB15				*e*S	**Sb**	**13 02 47.7**	**+0.5**
PB15				IAML		13 03 01.5	
	comp=Z,1μm,0.4s						
ACHE	**Chepes**	**5.15**	**129**	*e*P	Pn	13 01 27.3	-8.9
ACHE				*e*S	**Sn**	**13 02 38.2**	**+1.9**
PEL	**Peldehue**	**5.20**	**174**		**Pn**	**13 01 38.7**	**+2.0**
MT02	**Curacav**	**5.29**	**179**		**Pn**	**13 01 40.0**	**+2.1**
PB06	**IPOC Station P**	**5.46**	**17**		**Pn**	**13 01 39.8**	**-0.6**
PB04	**IPOC Station P**	**5.70**	**11**		**Pn**	**13 01 42.4**	**-1.3**
LVC	**Limon Verde**	**5.75**	**23**	Pn	**Pn**	**13 01 45.1**	**+0.5**
	comp=Z,7.6nm,0.3s,baz=178,slow=8.8,SNR=47						
LVC				Lg	Lg	13 03 11.0	
	comp=Z,39nm,0.3s,baz=80,slow=20,SNR=8.2						
LVC				LR	LR	13 04 15.4	
	comp=Z,319nm,18.1s,baz=223,slow=42						
	comp=Z,20nm,0.4s						
LVC	**Limon Verde**	**5.75**	**23**		**Pn**	**13 01 45.2**	**+0.6**
LVC	**Limon Verde**	**5.75**	**23**	*e*P	**Pn**	**13 01 44.9**	**+0.3**
MT09	**Talagante**	**5.81**	**177**		**Pn**	**13 01 45.9**	**+0.8**
MT01	**Popeta**	**5.89**	**180**		**Pn**	**13 01 47.1**	**+0.9**
PB07	**IPOC Station P**	**6.34**	**12**		**Pn**	**13 01 52.0**	**-0.4**
PB09	**IPOC Station P**	**6.41**	**17**		**Pn**	**13 01 53.2**	**-0.4**
BO01	**Tunca**	**6.42**	**178**		**Pn**	**13 01 54.3**	**+0.9**
PB02	**IPOC Station P**	**6.73**	**11**		**Pn**	**13 01 56.8**	**-1.1**
GO05	**Huala**	**7.05**	**184**	Pn	**Pn**	**13 02 01.0**	**-1.2**
PB01	**IPOC Station P**	**7.08**	**14**		**Pn**	**13 02 00.9**	**-1.7**
GO01	**Chusmiza**	**8.47**

ALGR	**Alto Alegre (B**	**16.11**	**97**	*eP*	**P**	**13 04 07.1**	**-1.9**
FRBT	**Francisco Belt**	**16.38**	**87**	*eP*	**Pn**	**13 04 09.3**	**+0.2**
PTLB	**Pontes e Lacer**	**16.80**	**45**	*eP*	**P**	**13 04 17.3**	**+0.7**
ITAB	**Concordia**	**17.01**	**92**	*eP*	**P**	**13 04 20.9**	**+2.0**
PTGB	**Pitanga**	**17.54**	**84**	*eP*	**P**	**13 04 24.9**	**-0.1**
CNLB	**Canela**	**18.00**	**99**	*eP*	**P**	**13 04 30.7**	**+0.7**
ETMB	**Extrema**	**18.67**	**16**	*eP*	**Pn**	**13 04 38.5**	**+0.9**
SALV	**Santo Antonio**	**18.78**	**54**	*eP*	**Pn**	**13 04 39.8**	**+0.9**
PCMB	**Pacaembu**	**19.25**	**75**	*eP*	**Pn**	**13 04 44.7**	**+0.1**
TIJ01	**Guaruva-PR**	**20.10**	**88**	*eP*	Pn	13 04 54.0	-0.8
ITRB	**Iturama**	**20.82**	**71**	*eP*	**P**	**13 05 01.0**	**+0.1**
PDRB	**Porto dos Gac**	**21.23**	**43**	*eP*	**P**	**13 05 05.5**	**+0.2**
BB19B	**Bebedouro**	**21.81**	**77**	*eP*	**P**	**13 05 12.1**	**+0.5**
CLDB	**Colider**	**22.38**	**44**	*eP*	**P**	**13 05 17.6**	**0.0**
VAO	**Valinhos**	**22.50**	**83**	*eP*	**P**	**13 05 18.8**	**-0.2**
IPMB	**Ipameri, GO**	**23.43**	**70**	*eP*	**P**	**13 05 28.3**	**-0.3**
SNDB	**Serra Nova Dou**	**24.57**	**54**	*eP*	**P**	**13 05 39.0**	**-0.3**
PMNB	**Patos De Minas**	**24.65**	**73**	*eP*	**P**	**13 05 40.4**	**+0.1**
BDFB	**Brasilia**	**24.80**	**65**	*eP*	**P**	**13 05 42.3**	**+0.7**
NPGB	**Novo Progresso**	**25.70**	**39**	*eP*	**P**	**13 05 49.7**	**0.0**
MACA	**Manacapuru-AM**	**26.66**	**24**	*eP*	**P**	**13 05 58.8**	**+0.5**
DUB01	**Friburgo-RJ**	**26.82**	**84**	*eP*	**P**	**13 06 01.0**	**+1.2**
DIAM	**Diamantina, MG**	**27.11**	**75**	*eP*	**P**	**13 06 04.4**	**+1.8**
ITTB	**Itaituba**	**27.75**	**35**	*eP*	**P**	**13 06 07.6**	**-0.5**
JANB	**Januaria**	**28.12**	**68**	*eP*	**P**	**13 06 11.1**	**-0.4**
SMTB	**Santa Maria do**	**29.34**	**54**	*eP*	**P**	**13 06 23.3**	**+1.0**
NAN01	**Guarapari, ES**	**30.35**	**77**	*eP*	**P**	**13 06 32.0**	**+0.7**
BOAV	**Boa Vista**	**31.91**	**21**	P	**P**	**13 06 44.7**	**-0.2**
BOAV	comp=Z,4.1nm,1.1s			IAmb	IAmb	13 07 19.0	
BOAV	**Boa Vista**	**31.91**	**21**	*eP*	**P**	**13 06 45.5**	**+0.6**
NBLA	**Lagarto - SE**	**35.66**	**68**	*eP*	**P**	**13 07 17.7**	**+0.1**
PMSA	**Palmer Station**	**37.12**	**175**	LR	LR	13 22 05.1	
	comp=Z,80nm,18.1s,baz=357,slow=35						
ORCD	**Orcadas**	**37.35**	**159**	P	**P**	**13 07 30.6**	**-1.0**
ORCD	comp=Z,9.0nm,1.0s			IAmb	IAmb	13 07 46.7	
RCBR	**Riachuelo**	**40.15**	**63**	LR	LR	13 24 54.6	
	comp=Z,67nm,19.7s,baz=320,slow=37						
ESPN	**Las Esperanzas**	**41.85**	**341**	P	**P**	**13 08 08.6**	**-0.9**
ESPN	comp=Z,17nm,1.0s			IAmb	IAmb	13 08 25.8	
MLPR	**Magueyes Islan**	**45.84**	**6**	P	**P**	**13 08 40.4**	**-1.1**
SJG	**San Juan**	**46.07**	**7**	LR	LR	13 29 30.5	
	comp=Z,16nm,19.6s,baz=167,slow=38						
VNA3	**Neumayer Olymp**	**54.74**	**160**	P	**P**	**13 09 49.2**	**+0.7**
VNA1	**Neumayer--Stat**	**55.01**	**159**	P	**P**	**13 09 51.4**	**+1.0**
VNA2	**Neumayer--Watz**	**55.37**	**159**	P	**P**	**13 09 53.6**	**+0.6**
	baz=281,slow=7.2						
SNAA	**Sanae**	**56.97**	**159**	P	**P**	**13 10 04.9**	**+0.4**
SNAA	**Sanae**	**56.97**	**159**	PcP	**PcP**	**13 11 00.2**	**+0.5**
SNAA	**Sanae**	**56.97**	**159**	P	**P**	**13 10 04.4**	**0.0**
	comp=Z,4.5nm,0.9s,baz=289,slow=5.7,SNR=18						
	comp=Z,4.5nm,0.9s						
SNAA	**Sanae**	**56.97**	**159**	P	**P**	**13 10 04.5**	**0.0**
SNAA	comp=Z,8.3nm,1.1s			IAmb	IAmb	13 10 05.7	
TROLL	**Troll, Antarti**	**58.68**	**160**	P	**P**	**13 10 17.2**	**+0.6**
TROLL	**Troll, Antarti**	**58.68**	**160**	PcP	**PcP**	**13 11 07.0**	**+0.5**
H06E1	**SOCORRO T-PHAS**	**60.24**	**316**	T	T	14 15 52.0	
	SNR=19						
QSPA	**South Pole Qui**	**62.26**	**180**	P	**P**	**13 10 41.9**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=187,slow=1.5,SNR=8.6						
	comp=Z,2.8nm,0.7s						
TXAR	**Lajitas Array**	**64.84**	**329**	P	**P**	**13 11 00.8**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=152,slow=9.3,SNR=9.7						
	comp=Z,0.8nm,0.7s						
CCM	**Cathedral Cave**	**68.28**	**343**	P	**P**	**13 11 21.1**	**+0.9**
CCM	comp=Z,5.2nm,0.8s			IAmb	IAmb	13 11 22.1	
DBIC	**Dimbokro**	**72.70**	**72**	P	**P**	**13 11 46.3**	**-1.5**
	comp=Z,5.1nm,0.8s,baz=275,slow=4.1,SNR=5.6						
	comp=Z,5.1nm,0.8s						
KOWA	**Kowa**	**77.59**	**66**	P	**P**	**13 12 16.2**	**+0.2**
KOWA	comp=Z,3.3nm,0.7s			IAmb	IAmb	13 12 16.9	
PDAR	**Pinedale Array**	**78.70**	**332**	P	**P**	**13 12 22.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=160,slow=4.7,SNR=4.1						
	comp=Z,0.2nm,0.3s						
NVAR	**Mina Array Bea**	**79.33**	**324**	P	**P**	**13 12 27.9**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=197,slow=4.6,SNR=3.6						
	comp=Z,0.3nm,0.7s						
TOA0	**Torodi Ar. Sit**	**81.57**	**70**	P	**P**	**13 12 37.1**	**-0.6**
TOA0	comp=Z,2.8nm,0.8s			IAmb	IAmb	13 12 37.9	
TORD	**Torodi Ar. Bea**	**81.57**	**70**	P	**P**	**13 12 37.0**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=260,slow=4.8,SNR=11						
	comp=Z,1.6nm,0.6s						
BOSA	**Boshof**	**82.34**	**118**	P	**P**	**13 12 41.1**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=198,slow=3.2,SNR=3.5						
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**123.21**	**208**	PKP	**PKiKP**	**13 19 16.6**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=118,slow=1.6,SNR=4.1						
H11S2	**WAKE ISLAND Hyl**	**126.28**	**273**	T	T	15 38 33.5	
	baz=112,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hyl**	**126.29**	**273**	T	T	15 38 34.0	
	baz=112,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hyl**	**126.30**	**273**	T	T	15 38 32.2	
	baz=112,slow=75,SNR=29						
WRA	**Warramunga Arr**	**126.31**	**210**	PKP	**PKiKP**	**13 19 23.1**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=149,slow=1.6,SNR=9.1						
KAPI	**Kappang**	**145.53**	**200**	PKPbc	**PKiKP**	**13 19 59.5**	**-3.0**
	comp=Z,3.2nm,0.4s,baz=146,slow=9.3,SNR=3.8						
KURBB	**Kurchatov Arra**	**147.85**	**37**	PKPbc	**PKPbc**	**13 20 03.1**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=301,slow=3.6,SNR=5.4						
ZALV	**Zalesovo Beam**	**148.68**	**27**	PKPbc	**PKiKP**	**13 20 07.1**	**-0.7**
	comp=Z,5.0nm,0.7s,baz=305,slow=3.2,SNR=16						
MKAR	**Makanchi Array**	**152.03**	**41**	PKPbc	**PKiKP**	**13 20 14.8**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=28,slow=2.9,SNR=6.6						

IDC 17 13:01:39.6±3.6, 6°60S×148°04E, h0km, mb3.4/2, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=99.7km s-min=47.1km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.79**	**224**	P	P	13 06 00.3	-0.4
	0.1nm,0.3s,baz=49,slow=11,SNR=7.1						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**21.74**	**217**	P	P	13 06 33.0	+0.1
	0.5nm,0.5s,baz=52,slow=9.7,SNR=17						
	0.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.65**	**240**	P	P	13 07 02.2	0.0
	1.0nm,0.5s,baz=56,slow=9.2,SNR=7.3						
	1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.23**	**284**	PKPbc	PKPdf	13 21 22.4	+0.2
	0.4nm,0.8s,baz=67,slow=3.7,SNR=2.5						

*NOU **17** 13:06:20.3, 21°.28S×174°.55W, h102km, mb5.0/29, Tonga Islands*

*BJI **17** 13:06:32.8±0.0, 19°.94S×175°.01W, h238km, mb4.8/28, mB4.9/13*

*NEIC **17** 13:06:35.7±2.3, 19°.8S±0°.1×175°.5W±0°.1, h231km±7km, mb4.6/70, Error ellipse: s-maj=16.8km s-min=14.2km az=143.0*

*IDC **17** 13:06:36.8±0.8, 19°.85S×175°.76W, h240km±7km, mb4.2/20, mbtmp4.8/23, Error ellipse: s-maj=12.7km s-min=9.3km az=127.0*

ISC 17 13:06:37.0±0.3, 19°.97S±0°.05×175°.64W±0°.07, h250km, h251km:pP-P, n450, σ1°17/462, mb4.6/75, 33C-8D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.47**	**299**	P	**Pn**	**13 07 35.7**	**+1.0**
TAVE	**Taveuni**	**5.20**	**308**	P	**Pn**	**13 07 55.9**	**+0.7**
MSVF	**Nonsavu**	**6.38**	**289**	P	**Pn**	**13 08 09.2**	**-0.8**
	188nm,1.0s,baz=124,slow=13,SNR=33						
MSVF	**Nonsavu**	**6.38**	**289**		**Pn**	**13 08 11.6**	**+1.6**
MSVF	**Nonsavu**	**6.38**	**289**	P	**Pn**	**13 08 12.5**	**+2.5**
AFI	**Afiamalu**	**7.07**	**32**	P	Pn	13 08 11.4	-7.3
	57nm,0.3s,baz=204,slow=3.8,SNR=53						
AFI				S	S	13 09 22.2	-18
	373nm,0.6s,baz=51,slow=21,SNR=16						
AFI	**Afiamalu**	**7.07**	**32**	P	Pn	13 08 11.4	-7.3
RAO	**Raoul Island**	**9.47**	**192**	S	**S**	**13 10 32.3**	**-3.2**
	219nm,0.3s,baz=86,slow=23,SNR=2.1						
GLKZ	**Green Lake**	**9.48**	**192**	P	**Pn**	**13 08 46.7**	**-2.2**
GLKZ				S	**S**	**13 10 31.1**	**-4.6**
MARNC	**Mare, Loyalty**	**15.36**	**262**	P	**Pn**	**13 10 02.6**	**+1.1**
MARNC	**Mare, Loyalty**	**15.36**	**262**	P	**Pn**	**13 10 02.4**	**+0.9**
DVP	**Devils Point**	**15.47**	**276**	P	**Pn**	**13 10 04.9**	**+2.0**
PINNC	**Pines Island,**	**15.98**	**258**	P	**Pn**	**13 10 11.1**	**+2.1**
PINNC	**Pines Island,**	**15.98**	**258**	P	**Pn**	**13 10 10.8**	**+1.9**
YATNC	**Mamie plateau,**	**16.45**	**260**	P	**Pn**	**13 10 16.0**	**+1.6**
OUENC	**Ouen Island, N**	**16.52**	**258**	P	**Pn**	**13 10 16.1**	**+0.9**
OUENC	**Ouen Island, N**	**16.52**	**258**	P	**Pn**	**13 10 16.5**	**+1.2**
DZM	**Mont Dzumac**	**16.86**	**260**	P	**P**	**13 10 18.6**	**+1.2**
	101nm,0.6s,baz=109,slow=20,SNR=76						
DZM	**Mont Dzumac**	**16.86**	**260**	P	**Pn**	**13 10 19.6**	**+0.2**
DZM	**Mont Dzumac**	**16.86**	**260**	P	**Pn**	**13 10 19.8**	**+0.4**
ONTNC	**Ouen Toro**	**16.87**	**259**	P	**Pn**	**13 10 20.3**	**+0.9**
NOUC	**Port Laguerre**	**16.99**	**260**	P	**Pn**	**13 10 21.1**	**+0.3**
OUZ	**Omahuta**	**17.92**	**210**	P	**Pn**	**13 10 30.6**	**-0.9**
OUZ	comp=Z,21nm,0.9s			IAmb	IAmb	13 10 42.8	
OUZ	**Omahuta**	**17.92**	**210**	P	**P**	**13 10 27.7**	**-0.9**
WCZ	**Waipu Caves**	**18.18**	**207**	P	**Pn**	**13 10 34.5**	**-0.1**
MXZ	**Matakaoa Point**	**18.30**	**195**	P	**Pn**	**13 10 36.2**	**+0.2**
KUZ	**Kuaotunu**	**18.34**	**203**	P	**Pn**	**13 10 35.8**	**-0.7**
HAZ	**Te Kaha**	**18.62**	**197**	P	**Pn**	**13 10 37.9**	**-1.9**
PKGZ	**Pakihiroa**	**18.67**	**196**	P	**P**	**13 10 37.1**	**+0.3**
MBAZ	**Motutapu North**	**18.67**	**204**	P	**Pn**	**13 10 38.7**	**-1.6**
PUZ	**Puketiti**	**18.80**	**195**	P	**Pn**	**13 10 39.2**	**-2.7**
KOUNC	**Koumac, New Ca**	**18.85**	**265**	P	**Pn**	**13 10 43.6**	**+1.0**
TWGZ	**Tauwhareparae**	**18.97**	**196**	P	**P**	**13 10 40.1**	**+0.2**
OPRZ	**Ohinepanea**	**19.06**	**199**	P	**Pn**	**13 10 44.3**	**-0.6**
MWZ	**Matawai**	**19.23**	**197**	P	**Pn**	**13 10 44.2**	**-2.8**
MWZ				S	**S**	**13 14 05.5**	**-1.5**
KMRZ	**Kaimai**	**19.26**	**201**	P	**Pn**	**13 10 46.7**	**-0.6**
URZ	**Urewera**	**19.28**	**198**	P	**P**	**13 10 43.3**	**+0.1**
	comp=Z,15nm,0.3s,baz=262,slow=3.1,SNR=44						
URZ				S	**S**	**13 14 05.7**	**-2.1**
	comp=Z,9.2nm,0.5s,baz=207,slow=22,SNR=7.0						
URZ	**Urewera**	**19.28**	**198**		**P**	**13 10 43.7**	**+0.5**
URZ	comp=Z,31nm,0.9s			IAmb	IAmb	13 10 45.8	
OMRZ	**Omania**	**19.36**	**199**	P	**Pn**	**13 10 47.5**	**-0.9**
RAGZ	**Rawiri**	**19.41**	**197**	P	**P**	**13 10 45.7**	**+0.9**
RIGZ	**Rimuhau**	**19.52**	**196**	P	**Pn**	**13 10 48.2**	**-2.2**
MUGZ	**Murupara**	**19.58**	**198**	P	**P**	**13 10 45.8**	**-0.7**
MUGZ				S	**S**	**13 14 13.4**	**-0.3**
PRRZ	**Plateau Road**	**19.71**	**199**	P	**P**	**13 10 49.0**	**+1.2**
ALRZ	**Allen Road**	**19.78**	**199**	P	**Pn**	**13 10 50.7**	**-2.7**
KNZ	**Kokohu**	**19.84**	**196**	P	**Pn**	**13 10 51.9**	**-2.2**
KNZ				S	**S**	**13 14 18.3**	**-0.4**
RAHZ	**Arahi**	**19.90**	**197**	P	Pn	13 10 51.8	-3.0
RAHZ				S	**S**	**13 14 22.0**	**+2.1**
MTHZ	**Maungataniwha**	**19.91**	**197**	P	**P**	**13 10 50.2**	**+0.2**
MTHZ				S	**S**	**13 14 20.8**	**+0.7**
MHGZ	**Mahia Peninsul**	**19.91**	**195**	P	Pn	13 10 52.2	-2.7
WHHZ	**Waihua**	**20.01**	**196**	P	Pn	13 10 53.9	-2.2
MRHZ	**Matea Rd**	**20.01**	**198**	P	**P**	**13 10 52.1**	**+1.0**
NMHZ	**Naumai**	**20.14**	**197**	P	Pn	13 10 55.1	-2.6
HIZ	**Hauiti**	**20.23**	**202**	P	Pn	13 10 55.6	-3.0
HIZ	**Hauiti**	**20.23**	**202**	P	Pn	13 10 56.2	-2.4
ARHZ	**Aropaoanui**	**20.25**	**197**	P	Pn	13 10 56.2	-2.6
NTVZ	**North Tongarir**	**20.48**	**200**	P	**P**	**13 10 56.3**	**+0.1**
TMVZ	**Te Maari**	**20.49**	**200**	P	Pn	13 10 58.3	-3.6
ETVZ	**East Tongariro**	**20.51**	**200**	P	**P**	**13 10 57.6**	**+1.2**
NNVZ	**North Ngauruho**	**20.53**	**200**	P	Pn	13 10 59.6	-2.7
TWVZ	**Taurewa**	**20.53**	**200**	P	**P**	**13 10 58.5**	**+1.7**
OTVZ	**Oturere**	**20.55**	**200**	P	**P**	**13 10 56.4**	**-0.6**
KWHZ	**Kaweka Forest**	**20.56**	**198**	P	**P**	**13 10 58.6**	**+1.7**
SNVZ	**South Ngauruho**	**20.57**	**200**	P	**P**	**13 10 56.9**	**-0.3**
NGZ	**Ngauruhoe**	**20.58**	**200**	P	**P**	**13 10 57.5**	**+0.3**
FWVZ	**Far West T-bar**	**20.66**	**200**	P	**P**	**13 10 59.9**	**+1.7**
WNVZ	**Wahianoa**	**20.72**	**200**	P	**P**	**13 10 57.6**	**-1.1**
BHHZ	**Black Hill Sta**	**20.72**	**198**	P	**P**	**13 10 58.1**	**-0.6**
PKVZ	**Pokaka**	**20.76**	**200**	P	**P**	**13 10 58.3**	**-0.8**
KRHZ	**Kereru**	**20.78**	**198**	P	**P**	**13 11 00.4**	**+1.2**
KAHZ	**Kahuranaki**	**20.78**	**196**	P	**P**	**13 11 00.2**	**+1.0**
VRZ	**Vera Road**	**20.81**	**201**	P	Pn	13 11 02.6	-2.8
PXZ	**Pawanui**	**21.00**	**196**	P	**Pn**	**13 11 01.2**	**-0.3**
NEZ	**North Egmont**	**21.17**	**203**	P	**P**	**13 11 06.2**	**+2.9**
ANWZ	**Angora Road**	**21.51**	**197**	P	**P**	**13 11 08.1**	**+1.8**
ANWZ				S	**S**	**13 14 53.1**	**+5.9**
BFZ	**Birch Farm**	**21.78**	**197**	P	**P**	**13 11 09.7**	**+0.9**
BFZ	comp=Z,23nm,1.1s			IAmb	IAmb	13 11 46.1	
BFZ	**Birch Farm**	**21.78**	**197**	P	**P**	**13 11 10.0**	**+1.1**
BFZ				S	**S**	**13 14 55.0**	**+3.3**
QRZ	**Quartz Range**	**23.11**	**203**	P	P	13 11 06.1	-15
RPZ	**Rata Peaks**	**26.16**	**202**	P	**P**	**13 11 49.9**	**+1.4**
	comp=Z,24nm,0.5s,baz=42,slow=1.9,SNR=23						
	comp=Z,24nm,0.5s						
EIDS	**Eidsvold**	**31.12**	**254**	P	**P**	**13 12 32.3**	**-0.3**
EIDS	comp=Z,9.1nm,0.6s			IAmb	IAmb	13 12 34.2	
EIDS	**Eidsvold**	**31.12**	**254**	P	**P**	**13 12 33.1**	**+0.5**
ARMA	**Armidale**	**31.29**	**244**	P	**P**	**13 12 35.2**	**+1.0**
ARMA	comp=Z,6.3nm,0.7s			IAmb	IAmb	13 12 36.0	
ARMA	**Armidale**	**31.29**	**244**	P	**P**	**13 12 35.1**	**+1.0**
MGCD	**Mangrove Creek**	**32.38**	**239**	P	**P**	**13 12 44.3**	**+0.9**
RMQ	**Roma**	**33.28**	**252**	P	**P**	**13 12 52.8**	**+1.5**
CNB	**Canberra Magne**	**34.36**	**236**	P	**P**	**13 13 01.1**	**+0.5**
CAN	**Canberra**	**34.65**	**236**	P	**P**	**13 13 02.9**	**-0.1**
CAN	comp=Z,16nm,1.0s			IAmb	IAmb	13 13 04.3	
CAN	**Canberra**	**34.65**	**236**	P	**P**	**13 13 03.4**	**+0.4**
CTA	**Charters Tower**	**35.75**	**263**	P	**P**	**13 13 12.5**	**-0.1**
	comp=Z,68nm,0.7s,baz=90,slow=10,SNR=82						
	comp=Z,68nm,0.7s						
CTAO	**Charters Tower**	**35.75**	**263**	P	**P**	**13 13 12.7**	**+0.1**
CMSA	**Cobar Meteorol**	**36.51**	**244**	P	**P**	**13 13 18.8**	**0.0**
QLP	**Quilpie**	**37.33**	**252**	P	**P**	**13 13 25.9**	**+0.1**
TOO	**Toolangi**	**38.00**	**234**	P	**P**	**13 13 31.1**	**-0.1**
TOO	comp=Z,11nm,0.8s			IAmb	IAmb	13 13 32.0	
COEN	**Coen**	**39.77**	**272**	P	**P**	**13 13 46.4**	**+0.3**
STKA	**Stephens Creek**	**40.01**	**244**	P	**P**	**13 13 48.0**	**0.0**
	comp=Z,5.5nm,0.6s,baz=91,slow=9.8,SNR=17						
STKA				PcP	**PcP**	**13 15 48.4**	**+0.6**
	comp=Z,5.0nm,0.9s,baz=90,slow=5.9,SNR=5.6						
	comp=Z,5.5nm,0.6s						
STKA	**Stephens Creek**	**40.01**	**244**	P	**P**	**13 13 47.9**	**0.0**
BBOO	**Buckleboo**	**44.77**	**243**	P	**P**	**13 14 25.2**	**-0.9**
GENI	**Genyem**	**46.45**	**286**	P	**P**	**13 14 39.9**	**+0.4**
	comp=Z,2µmcomp=Z,178nm,0.7s						
WR0	**Warramunga Arr**	**46.68**	**261**	P	**P**	**13 14 40.1**	**-1.1**
AS31	**Alice Springs**	**46.80**	**256**	P	**P**	**13 14 41.5**	**-0.6**
ASAR	**Alice Springs**	**46.80**	**256**	P	**P**	**13 14 41.5**	**-0.6**
	comp=Z,36nm,0.8s,baz=96,slow=8.1,SNR=381						
ASAR				PcP	**PcP**	**13 16 11.7**	**+0.6**
	comp=Z,14nm,0.7s,baz=103,slow=4.0,SNR=27						
ASAR				S	**S**	**13 21 11.2**	**-2.1**
	comp=Z,2.0nm,0.7s,baz=91,slow=15,SNR=15						
	comp=Z,36nm,0.8s						
WRA	**Warramunga Arr**	**46.87**	**261**	P	**P**	**13 14 41.5**	**-1.3**
	comp=Z,5.4nm,0.4s,baz=98,slow=8.2,SNR=319						
WRA				PcP	**PcP**	**13 16 12.0**	**+0.7**
	comp=Z,7.8nm,0.7s,baz=93,slow=3.7,SNR=18						
	comp=Z,5.4nm,0.4s						
WRA	**Warramunga Arr**	**46.87**	**261**	P	**P**	**13 14 41.3**	**-1.4**
SMPI	**Sarmi**	**48.03**	**286**	P	**P**	**13 14 51.2**	**-0.4**
	comp=Z,39nm,0.9s						
SRPI	**Serui, Papua**	**50.32**	**285**	P	**P**	**13 15 09.0**	**+0.1**
BAKI	**Biak**	**50.72**	**285**	P	**P**	**13 15 12.4**	**+0.5**
	comp=Z,79nm,0.7s						
MTN	**Manton Dam**	**51.38**	**269**	P	**P**	**13 15 16.0**	**-0.8**
KNRA	**Kununurra**	**52.91**	**265**	P	**P**	**13 15 27.1**	**-0.9**
KNRA	comp=Z,17nm,0.7s			IAmb	IAmb	13 15 28.3	
SIJI	**Sorong**	**55.26**	**283**	P	**P**	**13 15 45.0**	**0.0**
	comp=Z,63nm,0.7s,baz=78,slow=7.7,SNR=17						
	comp=Z,63nm,0.7s						
SWI	**Sorong**	**55.27**	**283**	P	**P**	**13 15 44.6**	**-0.4**
	comp=Z,1µmcomp=Z,123nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.30**	**261**	P	**P**	**13 15 44.8**	**-0.4**
	comp=Z,5.5nm,0.5s,baz=103,slow=5.5,SNR=50						
	comp=Z,5.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**55.30**	**261**	P	**P**	**13 15 44.8**	**-0.4**
FITZ	comp=Z,13nm,1.1s			IAmb	IAmb	13 15 46.7	
VNDA	**Vanda**	**58.64**	**186**	P	**P**	**13 16 09.9**	**+2.4**
	comp=Z,1.6nm,0.7s,baz=7.1,slow=5.5,SNR=11						
	comp=Z,1.6nm,0.7s						
VNDA	**Vanda**	**58.64**	**186**	P	**P**	**13 16 10.1**	**+2.5**
TNTI	**Ternate**	**59.49**	**283**	P	**P**	**13 16 12.8**	**-1.6**
TNTI	**Ternate**	**59.49**	**283**	P	**P**	**13 16 13.2**	**-1.2**
	comp=Z,56nm,0.8s						
PSA00	**Pilbara Seismi**	**59.95**	**256**	P	**P**	**13 16 16.1**	**-1.4**
PSA00	comp=Z,15nm,0.9s			IAmb	IAmb	13 16 17.6	
MBWA	**Marble Bar**	**60.13**	**257**	P	**P**	**13 16 17.9**	**-0.8**
MMRI	**Maumere**	**60.96**	**271**	P	**P**	**13 16 25.2**	**+0.8**
	comp=Z,53nm,1.1s						
EDFI	**Ende, Flores**	**61.44**	**271**	P	**P**	**13 16 26.4**	**-1.3**
	comp=Z,14nm,1.0s						
KMSI	**Cibinong**	**62.52**	**282**	P	**P**	**13 16 34.5**	**-0.3**
	comp=Z,2µmcomp=Z,51nm,0.5s						
BKSI	**Bulukumba**	**64.00**	**274**	P	**P**	**13 16 45.8**	**+1.3**
	comp=Z,15nm,0.9s						
PLAI	**Plampang**	**65.09**	**269**	P	**P**	**13 16 50.7**	**-0.8**
	comp=Z,54nm,1.2s						
CASY	**Casey**	**65.39**	**205**	P	**P**	**13 16 53.8**	**+1.3**
CASY	comp=Z,12nm,0.9s			IAmb	IAmb	13 16 55.2	
TWSI	**Taliwang, Sumb**	**65.96**	**269**	P	**P**	**13 16 56.2**	**-0.9**
	comp=Z,26nm,0.8s						
MPSI	**Mapaga**	**66.21**	**280**	P	**P**	**13 16 57.8**	**-0.8**
	comp=Z,26nm,0.9s						
JYT	**Yasato**	**69.78**	**323**	P	**P**	**13 17 20.3**	**0.0**
QSPA	**South Pole Qui**	**70.09**	**180**	P	**P**	**13 17 23.8**	**+1.8**
QSPA	comp=Z,11nm,1.1s			IAmb	IAmb	13 17 25.3	
MJAR	**Matsushiro Arr**	**71.13**	**322**	P	**P**	**13 17 27.9**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=154,slow=6.8,SNR=14						
	comp=Z,5.6nm,0.8s						
MAJO	**Matsushiro**	**71.13**	**322**	P	**P**	**13 17 27.4**	**-1.1**
MAJO	comp=Z,16nm,1.1s			IAmb	IAmb	13 17 29.2	
ADK	**Adak**	**71.55**	**359**	P	**P**	**13 17 30.2**	**-0.4**
LEM	**Lembang**	**75.27**	**268**	P	**P**	**13 17 53.0**	**-0.4**
	comp=Z,33nm,0.9s						
KSM	**Kuching**	**75.54**	**277**	P	**P**	**13 17 54.9**	**+0.2**
KSM	comp=Z,12nm,0.8s			IAmb	IAmb	13 17 56.1	
TPUB	**Ta-pu**	**75.57**	**302**	P	**P**	**13 17 53.0**	**-1.6**
PETK	**Petropavlovsk-**	**76.36**	**344**	P	**P**	**13 17 57.5**	**-0.8**
	comp=Z,8.3nm,0.9s,baz=147,slow=9.4,SNR=11						
	comp=Z,8.3nm,0.9s						
PETK	**Petropavlovsk-**	**76.36**	**344**	P	**P**	**13 17 58.4**	**0.0**
SPIA	**Saint Paul Isl**	**76.98**	**3**	P	P	13 18 04.7	+2.9
	baz=185						
BFSC	**Mount Baldy Ra**	**77.11**	**46**	P	**P**	**13 18 03.3**	**+0.1**
	baz=235						
S14K	**Fog Glacier**	**77.17**	**9**	P	**P**	**13 18 04.7**	**+1.8**
	baz=195						
EDW2	**Edwards Air Fo**	**77.26**	**45**	P	**P**	**13 18 05.1**	**+1.1**
	baz=234						
IKP	**In-Ko-Pah, Jac**	**77.29**	**48**	P	**P**	**13 18 05.1**	**+0.9**
	baz=236						
ISA	**Isabella, Lake**	**77.39**	**45**	P	**P**	**13 18 05.8**	**+1.1**
	baz=234						
PFO	**Pinyon Flats O**	**77.58**	**47**	P	**P**	**13 18 06.3**	**+0.5**
	baz=236						
TPFO	**Pinon Flats**	**77.58**	**47**	P	**P**	**13 18 06.6**	**+0.8**
	baz=236						

M19K Big River Lodg 83.34 10 P P 13 18 35.2 -0.4
baz=200
CRAG Craig 83.36 23 P P 13 18 37.0 +1.3
baz=220
RC01 Rabbit Creek A 83.43 12 P P 13 18 38.0 +2.0
baz=204
PWL Port Wells 83.51 13 P P 13 18 35.9 -0.5
baz=206
GAMB Gambell 83.53 2 P P 13 18 37.1 +0.8
GAMB Gambell 83.53 2 P P 13 18 37.7 +1.3
baz=184
L19K White Mountain 83.53 10 P P 13 18 36.9 +0.4
L19K White Mountain 83.53 10 P P 13 18 36.6 +0.1
baz=200
M20K Styx River 83.53 11 P P 13 18 36.6 0.0
baz=201
SUA Susitna One 83.58 12 P P 13 18 36.7 -0.2
baz=203
KAIM Kayak Island 83.58 15 P P 13 18 38.4 +1.6
baz=209
DUG Dugway, Tooele 83.64 43 P P 13 18 38.3 +0.5
baz=237
GLI Glacier Island 83.80 14 P P 13 18 38.1 +0.2
GLI Glacier Island 83.80 14 P P 13 18 37.2 -0.6
baz=207
EYAK Cordova Ski Ar 83.81 14 P P 13 18 37.5 -0.4
baz=208
SIT Sitka 83.83 21 P P 13 18 38.8 +0.8
baz=218
SKT Skwentna 83.91 11 P P 13 18 37.4 -1.1
baz=203
M22K Willow 83.96 12 P P 13 18 38.8 +0.1
baz=204
KNK Knik Glacier 83.99 13 P P 13 18 38.4 -0.4
baz=206
PMR Palmer 84.01 12 P P 13 18 38.6 -0.3
PMR IAmb IAmb 13 18 39.5
comp=Z,12nm,1.3s
PMR Palmer 84.01 12 P P 13 18 39.0 +0.1
baz=205
Q16A Castle Valley 84.04 45 P P 13 18 40.4 +0.5
TTA Tatalina 84.07 9 P P 13 18 39.7 +0.4
baz=198,SNR=6.8
GHO Glory Hole Cre 84.22 12 P P 13 18 39.7 -0.4
GHO IAmb IAmb 13 18 40.9
comp=Z,17nm,0.9s
WRAK Wrangell Islan 84.37 23 P P 13 18 41.5 +0.7
baz=220
PLID Pearl Lake 84.42 38 P P 13 18 41.7 0.0
BMRM Bremner River 84.45 15 P P 13 18 41.0 -0.2
BMRM IAmb IAmb 13 18 41.8
comp=Z,9.9nm,0.7s
BMRM Bremner River 84.45 15 P P 13 18 41.1 -0.2
baz=209
HLID Hailey 84.49 40 P P 13 18 43.1 +1.0
baz=236
CUT Chulitna 84.53 12 P P 13 18 41.1 -0.4
baz=204
SCM Sheep Creek Mo 84.60 13 P P 13 18 42.0 0.0
SCM Sheep Creek Mo 84.60 13 P P 13 18 41.7 -0.3
baz=206
KLU Klutina 84.61 14 P P 13 18 42.2 +0.2
baz=208
MNTX Cornudas Mount 84.65 54 P P 13 18 44.1 +1.3
baz=243
PNL Peninsula 84.69 18 P P 13 18 42.7 +0.3
baz=214
K20K Telida 84.76 10 P P 13 18 42.7 0.0
baz=200,SNR=5.7
TXAR Lajitas Array 84.91 56 P P 13 18 45.8 +1.5
comp=Z,3.8nm,0.9s,baz=214,slow=8.1,SNR=30
TXAR pP pP 13 19 43.8 +0.1
comp=Z,1.0nm,1.0s,baz=232,slow=5.9,SNR=2.8
comp=Z,3.8nm,0.9s
TXAR Lajitas Array 84.91 56 P P 13 18 44.7 +0.4
GRNC Granite Creek 84.95 16 P P 13 18 43.7 -0.2
GRNC IAmb IAmb 13 18 45.1
comp=Z,10nm,0.9s
N25K Chitina, Valde 85.01 14 P P 13 18 44.3 +0.3
N25K IAmb IAmb 13 18 45.2
comp=Z,12nm,0.7s
N25K Chitina, Valde 85.01 14 P P 13 18 44.2 +0.1
baz=209,SNR=8.2
GLB Gilahina Butte 85.05 15 P P 13 18 44.0 -0.2
GLB IAmb IAmb 13 18 45.2
comp=Z,9.2nm,0.8s
M24K Tolsona, Glenn 85.10 13 P P 13 18 44.9 +0.5
baz=208
P29M Windy Craggy 85.14 18 P P 13 18 45.4 +0.7
baz=215
CAST Castle Rocks 85.14 10 P P 13 18 42.9 -1.6
baz=202,SNR=6.5
WAT6 Susitna Watana 85.19 13 P P 13 18 43.6 -1.4
baz=206,SNR=9.2
MCARA McCarthy VSAT 85.19 15 P P 13 18 45.2 +0.3
baz=210
WAT1 Susitna Watana 85.25 12 P P 13 18 44.5 -0.7
baz=205
CTG Chitna Glacier 85.26 16 P P 13 18 45.6 +0.3
baz=212,SNR=5.2
CTGM Chitina Glacie 85.26 16 P P 13 18 44.0 -1.3
CTGM IAmb IAmb 13 18 46.6
comp=Z,10nm,0.8s
ANMO Albuquerque 85.35 50 P P 13 18 47.7 +1.1
baz=242
O28M Mount Upton 85.40 17 P P 13 18 46.5 +0.3
baz=213
PLBC Pleasant Camp 85.41 19 P P 13 18 46.9 +1.0
baz=217
O29M Mount Kennedy 85.45 18 P P 13 18 46.4 +0.1
baz=215
TRF Thorofare Moun 85.49 11 P P 13 18 45.8 -0.7
baz=204,SNR=13
J20K Nowinta River 85.52 9 P P 13 18 46.4 +0.1
J20K IAmb IAmb 13 18 47.2
comp=Z,8.2nm,0.8s
J20K Nowinta River 85.52 9 P P 13 18 46.5 +0.1
baz=200,SNR=8.4
CHUM Lake Minchumin 85.54 10 P P 13 18 45.6 -0.9
baz=202
T35M Bob Quinn 85.55 23 P P 13 18 48.0 +1.3
baz=222
HARP HAARP 85.58 14 P P 13 18 47.2 +0.5
baz=208
NEW Newport 85.66 35 P P 13 18 47.5 0.0
baz=234
GCSA Galena City Sc 85.68 8 P P 13 18 47.7 +0.6
baz=198
DHY Denali Highway 85.71 12 P P 13 18 47.2 -0.4
baz=206
RND Reindeer 85.72 12 P P 13 18 47.5 +0.1
SKAG Skagway 85.74 19 P P 13 18 48.5 +1.0
baz=218
P30M Million Dollar 85.77 18 P P 13 18 48.4 +0.7
baz=216
BPAW Bear Paw Mtn. 85.96 11 P P 13 18 47.8 -0.8
baz=203
MCK McKinley 86.00 12 P P 13 18 48.5 -0.3
baz=205,SNR=11
PAX Paxson 86.02 13 P P 13 18 48.3 -0.7
baz=208,SNR=5.8
YUK6 Outpost Mounta 86.04 17 P P 13 18 49.6 +0.3
baz=215
M26K Nabesna, AK 86.08 15 P P 13 18 49.4 +0.2
baz=210,SNR=11
YUK3 Moose Creek 86.17 16 P P 13 18 50.3 +0.4
baz=213,SNR=10
HYT Haines Junctio 86.19 18 P P 13 18 50.5 +0.6
baz=216
YUK4 Talbot Arm 86.30 17 P P 13 18 51.0 +0.5
baz=215
M27K Edge Creek, AK 86.31 15 P P 13 18 51.3 +0.8
baz=212,SNR=10
P32M Atlin 86.35 20 P P 13 18 51.2 +0.6
baz=219
S22A 4UR Ranch, Cre 86.41 48 P P 13 18 52.6 +0.9
baz=241
L26K Log Cabin Wild 86.54 14 P P 13 18 51.5 +0.1
baz=210,SNR=5.2
O30N Mendenhall 86.55 18 P P 13 18 52.0 +0.4
baz=217,SNR=5.4
MSO Missoula 86.60 37 P P 13 18 52.3 +0.1
baz=236
O20A White River Ci 86.61 45 P P 13 18 53.0 +0.5
baz=240
BVCY Beaver Creek 86.61 15 P P 13 18 52.4 +0.6
baz=212,SNR=9.3
K24K Donnelly Dome 86.69 13 P P 13 18 52.6 +0.4
baz=208
DLBC Dease Lake 86.72 22 P P 13 18 53.1 +0.6
baz=222
NEA2 Nenana 86.76 11 P P 13 18 52.2 -0.2
baz=205
I21K Tanana 86.80 10 P P 13 18 52.7 +0.1
I21K IAmb IAmb 13 18 53.4
comp=Z,5.9nm,0.8s
I21K Tanana 86.80 10 P P 13 18 52.4 -0.1
baz=202,SNR=6.5
N30M Aishikik Lake 86.82 17 P P 13 18 52.3 -0.6
baz=216
WHY Whitehorse 86.83 19 P P 13 18 53.3 +0.3
baz=218
RIDG Independent Ri 86.83 13 P P 13 18 52.9 +0.1
baz=209
MLY Manley 86.86 10 P P 13 18 52.6 -0.4
baz=203,SNR=7.3
L27K Beaver Creek, 86.92 15 P P 13 18 53.6 +0.3
baz=212
BCAR Beaver Creek A 86.94 15 P P 13 18 53.3 -0.1
HDA Harding Lake 86.99 12 P P 13 18 53.2 -0.4
HDA IAmb IAmb 13 18 53.8
comp=Z,5.5nm,0.6s
HDA Harding Lake 86.99 12 P P 13 18 53.4 -0.2
baz=207,SNR=5.3
CCB Clear Creek Bu 87.04 12 P P 13 18 52.9 -0.8
CCB IAmb IAmb 13 18 54.2
comp=Z,7.0nm,0.7s
BW06 Boulder Array 87.07 42 P P 13 18 54.6 -0.2
baz=239
PDAR Pinedale Array 87.07 42 P P 13 18 55.1 +0.4
comp=Z,0.6nm,0.5s,baz=200,slow=2.2,SNR=7.7
comp=Z,0.6nm,0.5s
BJI Beijing 87.09 314 P P 13 18 55.8 +1.2
BJI pmax pmax
comp=Z,7.0nm,0.7s
R33M Jennings River 87.11 21 P P 13 18 55.0 +0.7
baz=221
H21K Melozitna Rive 87.12 9 P P 13 18 54.5 +0.4
H21K IAmb IAmb 13 18 56.2
comp=Z,8.3nm,1.1s
H21K Melozitna Rive 87.12 9 P P 13 18 54.3 +0.2
baz=201,SNR=5.4
P33M Teslin, Yukon 87.12 20 P P 13 18 55.0 +0.7
baz=220
LYN LuoYang 87.16 308 eP P 13 18 55.5 +0.5
LYN pmax pmax
comp=Z,10.0nm,0.8s
LYN pmax pmax
comp=Z,150nm,5.2s
N31M Braeburn, Yuko 87.22 18 P P 13 18 55.4 +0.7
baz=217
SCRK Sand Creek 87.22 13 P P 13 18 55.0 +0.2
SCRK Sand Creek 87.22 13 P P 13 18 55.0 +0.2
baz=210,SNR=5.1
TCOL CIGO, UAF Yank 87.23 11 P P 13 18 54.0 -0.6
baz=206
COLA College 87.24 11 P P 13 18 54.3 -0.4
baz=206
MDM Murphy Dome 87.24 11 P P 13 18 54.6 -0.1
MDM IAmb IAmb 13 18 55.2
comp=Z,8.3nm,0.8s
M29M Somme Creek 87.25 16 P P 13 18 55.5 +0.6
baz=215
BOZ Bozeman (W) 87.27 39 P P 13 18 56.1 +0.6
baz=238
IMAR Indian Mountai 87.28 9 P P 13 18 54.2 -0.7
ILAR Eielson Array 87.33 12 P P 13 18 54.9 -0.3
comp=Z,1.6nm,0.6s,baz=224,slow=5.7,SNR=13
ILAR pP pwP 13 19 54.0 -3.7
comp=Z,0.9nm,0.8s,baz=216,slow=5.4,SNR=3.2
comp=Z,1.6nm,0.6s
SDCO Great Sand Dun 87.34 48 P P 13 18 56.8 +0.6
baz=242
J25K Salcha River, 87.49 13 P P 13 18 56.0 0.0
baz=208
H22K Ishtalitna Cre 87.56 10 P P 13 18 56.3 +0.1
baz=203,SNR=8.5
K27K Chicken 87.69 14 P P 13 18 56.9 0.0
K27K IAmb IAmb 13 18 58.9
comp=Z,6.2nm,1.1s
K27K Chicken 87.69 14 P P 13 18 57.9 +1.0
baz=211
J26L Joseph Creek 87.77 13 P P 13 18 58.2 +0.9
baz=210,SNR=15
G21K Allakaket 87.82 9 P P 13 18 57.6 +0.2
baz=201
H24K Noodor Dome 88.10 11 P P 13 18 58.8 0.0
baz=206
M31M Drury Creek, Y 88.19 18 P P 13 18 59.5 +0.2
baz=218
TROLL Troll, Antarti 88.25 179 P P 13 19 01.0 +1.3
DAWY Dawson 88.36 15 P P 13 19 00.5 +0.5
baz=214,SNR=8.1
RLMT Red Lodge 88.45 40 P P 13 19 02.0 +0.8
baz=240
SNAA Sanae 88.46 178 P P 13 19 01.8 +1.1
SNAA Sanae 88.46 178 P P 13 19 01.6 +0.9
SNAA IAmb IAmb 13 19 02.4
comp=Z,3.8nm,0.8s
F21K Alatna River 88.48 8 P P 13 19 00.8 +0.3
baz=201
VNA3 Neumayer Olymp 88.50 176 P P 13 19 02.1 +1.2
FARO Faro, Yukon 88.52 18 P P 13 19 01.2 +0.4
baz=210
G23K Bananza Creek 88.53 10 P P 13 19 01.0 +0.2
baz=204
EGAK Eagle 88.54 14 P P 13 19 01.1 +0.2
baz=212,SNR=5.1
I26K Coal Creek Min 88.56 13 P P 13 19 00.7 -0.2
I26K IAmb IAmb 13 19 02.5
comp=Z,8.2nm,1.2s
I26K Coal Creek Min 88.56 13 P P 13 19 01.5 +0.6
210
F22K John River 88.94 9 P P 13 19 03.0 +0.4
baz=202
VNA2 Neumayer--Watz 88.97 176 PKKP 13 36 33.6
VNA2 Neumayer--Stat 88.97 176 P P 13 19 04.5 +1.5
baz=182,slow=3.1
XLT XiLinHaoTe 89.03 318 eP P 13 19 04.1 +0.4
XLT pmax pmax
comp=Z,19nm,0.8s
XLT pmax pmax
comp=Z,81nm,4.6s
I27K Kandik River 89.14 13 P P 13 19 03.9 +0.1
baz=212
VNA1 Neumayer--Stat 89.19 176 P P 13 19 05.6 +1.6
MMPY Sheldon Lake, 89.44 19 P P 13 19 06.0 +0.8
baz=221
TGTN Hyland Airport 89.58 21 P P 13 19 06.5 +0.7
baz=224
XAN Xi'an 89.59 307 P P 13 19 07.8 +1.2
XAN pmax pmax
comp=Z,15nm,1.0s
F24K Squaw Lake 89.62 10 P P 13 19 06.3 +0.4
baz=206
H27K Steamboat Moun 89.70 13 P P 13 19 06.9 +0.6
baz=212
G26K Porcupine Rive 89.86 12 P P 13 19 07.5 +0.6
baz=210
E24K Your Creek 90.02 10 P P 13 19 08.4 +0.6
baz=205
F25K Christian Rive 90.08 11 P P 13 19 08.5 +0.5
baz=208
BMAR Burnt Mountain 90.12 11 P P 13 19 08.7 +0.4
G27K Doyon Strip 90.17 13 P P 13 19 08.9 +0.5
baz=212
F26K Sheenjek River 90.44 12 P P 13 19 10.4 +0.7
baz=209
D23K Nanushuk River 90.50 9 P P 13 19 10.6 +0.7
baz=203
E25K Arctic Village 90.56 11 P P 13 19 10.8 +0.6
baz=208
HHC Hu-ho-hao-te 90.59 314 eP P 13 19 12.3 +1.2
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,120nm,6.4s
EPYK Eagle Plains 90.90 15 P P 13 19 12.3 +0.4
baz=216
LAO LASA Array 91.07 40 P P 13 19 13.7 +0.6
baz=242
RSSD Black Hills 91.25 43 P P 13 19 14.4 +0.1
baz=243
C23K Itkillik River 91.31 8 P P 13 19 14.4 +0.7
baz=203
E27K Coleen River 91.36 12 P P 13 19 15.4 +1.5
baz=212
CMAR Chiang Mai Arr 92.04 289 P P 13 19 19.0 +0.8
comp=Z,5.1nm,0.9s,baz=125,slow=2.7,SNR=24
comp=Z,5.1nm,0.9s
CMAR Chiang Mai Arr 92.04 289 P P 13 19 19.2 +1.0
PZH PanZhiHua 92.43 297 PKP 13 20 28.5
PZH PanZhiHua 92.43 297 P P 13 19 21.4 +1.4
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,150nm,5.9s
ECSD EROS Data Cent 95.97 46 P P 13 19 35.6 0.0
baz=248
SONM Songino Array 96.82 318 P P 13 19 41.0 +1.5
comp=Z,0.7nm,0.6s,baz=147,slow=6.3,SNR=5.0
comp=Z,0.7nm,0.6s
GTA Gaotai 98.37 309 eP P 13 19 47.3 +0.6
GTA pP pP 13 20 43.1 -3.7
GTA pmax pmax
comp=Z,1.0nm,1.5s
TIXI Tiksi 98.82 345 P P 13 19 49.3 +1.5
comp=Z,2.0nm,0.5s,baz=90,slow=20,SNR=2.7
comp=Z,2.0nm,0.5s
WMQ Urumqi 108.26 311 eP Pdif 13 20 32.3 +1.8
MKAR Makanchi Array 112.45 313 PKiKP PKiKP 13 24 42.8 -0.5
comp=Z,0.9nm,0.6s,baz=92,slow=1.2,SNR=9.3
AKTO Aktyubinsk 128.14 319 PKP PKiKP 13 25 12.9 -0.9
comp=Z,0.7nm,0.6s,baz=47,slow=1.4,SNR=3.7
ARCES ARCESS Array B 128.78 351 PKP PKiKP 13 25 13.6 -1.1
comp=Z,1.4nm,0.5s,baz=14,slow=1.6,SNR=22
FINES FINESS Array B 135.86 345 PKP PKiKP 13 25 29.0 -0.1
comp=Z,1.8nm,0.7s,baz=349,slow=3.9,SNR=5.3
NOA NORSAR Array B 138.69 355 PKP PKiKP 13 25 34.4 -0.6
comp=Z,0.2nm,0.5s,baz=20,slow=3.5,SNR=1.4
MNK Minsk 141.16 338 i PKP PKPdf 13 25 35.0 -2.3
comp=E,4.0nm,0.9s
MNK i PKP PKPdf 13 25 35.0 -2.3
comp=N,8.0nm,0.9s
MNK i PKP PKPdf 13 25 35.0 -2.3
comp=Z,18nm,0.8s,baz=217
MNK i pPKP pPKPdf 13 26 38.8 -1.5
MNK i PP PP 13 28 39.4 -2.1
MNK i PPP PPP 13 31 47.4
MNK i SKS SKSdf 13 32 20.7 -2.5
MNK i SKKS SKKSdf 13 41 43.9 -4.4
MNK i SPP SPP 13 44 55.5
MNK i PPS PPS 13 44 55.5
MNK i SS SS 13 46 47.5 -1.1
MNK i SSS SSS 13 52 07.1
MNK i LRM MLR 14 27 51.5
comp=Z,42nm,19.2s
MNK i LRM MLR 14 27 58.5
comp=E,54nm,19.8s
MNK i LRM MLR 14 28 13.8
comp=N,13nm,16.0s
AKASG Malin Array Be 143.59 333 PKhKP PKPpre 13 25 38.7
comp=N,3.3nm,0.5s,baz=38,slow=4.8,SNR=22
VASR Vaslui 147.22 330 ⇑P PKPab 13 25 51.5 -1.6
BURAR Bucovina Array 147.64 333 ⇑P PKPab 13 25 53.7 -1.3
VLDR Vladesti 147.65 328 ⇑P PKPab 13 25 53.4 -1.4
KOLS Kolonicke sedl 147.72 338 ePKP PKPab 13 25 54.9 -0.2
TLCR 147.74 327 ⇑P PKiKP 13 25 52.6 -1.3
BIZ Bicaz 147.78 332 ⇑P PKPab 13 25 53.4 -1.9
KSP Ksiaz 147.78 346 ePKP PKPab 13 25 53.1 -2.1
SCTR Scanteiesti 147.81 328 ⇑P PKiKP 13 25 52.7 -1.4
GHRR 147.82 329 ⇑P PKPab 13 25 54.4 -1.1
NIE Niedzica 147.97 340 ePKP PKPab 13 25 53.9 -2.2
CLL Collm 148.00 350 e(PKPdf) PKPbc 13 25 51.0 -1.7
CLL ⇑iPKPbc PKPab 13 25 53.2 -2.9
comp=Z,20nm,0.8s
CLL ⇓iPKPab PKiKP 13 25 56.1 +1.8
comp=Z,14nm,0.7s
CLL epPKPbc pPKPdf 13 26 50.0 -2.3
CLL ex x 13 26 57.0
CRVS Cervenica-Dubn 148.03 339 ePKP PKPab 13 25 57.5 +1.2
CFR Carcaliu 148.09 327 ⇑P PKiKP 13 25 53.5 -1.1
BRTR Keskin Array B 148.09 314 PKPbc PKiKP 13 25 53.6 -1.4
comp=Z,7.9nm,0.8s,baz=131,slow=3.7,SNR=17
UPC Upice 148.16 346 ⇑ePKP PKPab 13 25 53.8 -3.0
UPC ePKPAB PKiKP 13 25 57.7 +3.0
TPGR Topolog 148.16 327 ⇑P PKiKP 13 25 53.8 -1.1
DPC Dobruska-Polom 148.24 345 ⇑ePKP PKPab 13 25 54.1 -3.0
DPC ePKPAB PKiKP 13 25 58.3 +3.4
BRG Berggiesshubel 148.25 348 ePKP PKPab 13 25 54.0 -3.1
BRG Amp 13 25 55.3
comp=Z,9.3nm,0.8s
VRI Vrincioaia 148.29 330 ⇑P PKPab 13 25 54.7 -2.8
PLOR Plostina 148.34 330 ⇑P PKiKP 13 25 53.9 -1.3
KRLC Kraliky 148.38 345 ⇑ePKP PKiKP 13 25 54.2 -1.0
KRLC ePKPAB PKPab 13 25 58.2 +0.5
ARCR ARCALIA 148.42 334 ⇑P PKiKP 13 25 54.1 -1.2
MORC Moravsky Berou 148.46 344 ⇑P PKiKP 13 25 54.4 -1.0
MORC Moravsky Berou 148.46 344 ePKP PKPab 13 25 54.6 -3.5
HARR Harsova 148.53 327 ⇑P PKiKP 13 25 54.8 -0.8
OZUR 148.56 331 ⇑P PKiKP 13 25 55.1 -0.6
DOPR Dopca 148.84 331 ⇑P PKiKP 13 25 55.7 -0.6
MLR Muntele Rosu 148.94 330 ⇑P PKiKP 13 25 56.2 -0.4
PRU Pruhonice 148.97 347 ⇑ePKP PKiKP 13 25 55.7 -0.7
VRAC Vranov 149.13 344 ePKP PKiKP 13 25 56.4 -0.4
SECR 149.21 329 ⇓P PKiKP 13 25 57.0 0.0
VYHS Vyhne 149.24 341 ePKP PKiKP 13 25 56.8 -0.2
VYHS e 13 26 02.4
JAVC Velka Javorina 149.26 343 ePKP PKPab 13 25 57.8 -3.6
MEM Membach 149.40 358 dPKiKP PKiKP 13 25 56.7 -0.5
KRUC Moravsky 149.41 344 ePKP PKiKP 13 25 56.8 -0.5
PSZ Piszkesteto 149.41 339 PKP PKiKP 13 25 57.5 +0.1
BTNL Ternell 149.42 358 dPKiKP PKiKP 13 25 56.9 -0.4
ARR Arges 149.64 331 ⇑P PKiKP 13 25 58.2 +0.2
BMRD Maredsous 149.74 359 dPKiKP PKiKP 13 25 57.4 -0.5
MODS Modra-Piesok 149.81 343 ePKP PKiKP 13 25 58.6 +0.4
RCHB Rochefort 149.88 359 dPKiKP PKiKP 13 25 57.8 -0.4
DOU Dourbes 149.94 360 dPKiKP PKiKP 13 25 58.3 -0.1
KHC Kasperske Hory 149.98 348 ⇑ePKP PKiKP 13 25 58.3 -0.3
KHC ePKPAB PKPab 13 26 05.0 +0.7
CKRC Cesky Krumlov 150.13 347 ⇑ePKP PKiKP 13 25 58.6 -0.2
SIRR Siria 150.18 335 ⇑P PKiKP 13 25 58.9 -0.1
GERES GERESS Array B 150.23 348 PKP PKPdf 13 25 52.6 -0.4
comp=Z,0.2nm,0.3s,baz=190,slow=5.4,SNR=4.6
GERES PKPbc PKiKP 13 25 58.9 -0.2
comp=Z,7.1nm,0.7s,baz=17,slow=1.4,SNR=51
WLF Walferdange 150.34 358 dPKiKP PKiKP 13 25 59.8 +0.6
GZR Gura Zlata 150.43 333 ⇑P PKiKP 13 25 58.7 -0.9
CONA Conrad Observa 150.60 344 iP PKiKP 13 26 00.1 +0.2
comp=Z,18nm,1.2s,SNR=11
SOP Sopron 150.64 343 PKP PKiKP 13 26 00.6 +0.8
RONA Rosalia, Austr 150.69 343 iP PKiKP 13 26 00.1 0.0
comp=Z,16nm,0.6s,SNR=9.6
BZS Buzias 150.73 335 ⇑P PKiKP 13 26 00.1 0.0
MPLH Magyarpolny 150.82 341 PKP PKiKP 13 26 00.5 +0.3
SRE Strehaia 150.82 332 ⇑P PKiKP 13 26 00.2 -0.2
HERR Herculane 151.00 333 ⇑P PKiKP 13 26 00.6 -0.1
MOA Molln 151.05 346 eP PKiKP 13 26 00.3 -0.4
comp=Z,7.5nm,0.7s
ARSA Arzberg 151.31 344 eP PKiKP 13 26 00.7 -0.6
comp=Z,1.3nm,0.5s
MORH Mrgy, Hungar 151.32 339 ⇑P PKiKP 13 26 00.8 -0.5
MORH Mrgy, Hungar 151.32 339 PKP PKiKP 13 26 00.9 -0.4
BIOA Bad Ischl, Aus 151.34 347 eP PKiKP 13 26 00.8 -0.6
comp=Z,8.7nm,0.8s
KOVH Kovagotottos 151.61 340 PKP PKiKP 13 26 01.8 -0.1
FRGS Fruska Gora 151.81 336 ⇑P PKiKP 13 26 01.6 -0.9
SOKA Soboth 151.97 344 iP PKiKP 13 26 02.3 -0.5
comp=Z,8.7nm,0.9s,SNR=6.6
KBA Koelnbreinsper 151.99 347 eP PKiKP 13 26 02.4 -0.6
comp=Z,8.8nm,0.6s
RETA Reutte 152.06 351 eP PKiKP 13 26 03.1 +0.2
comp=Z,8.6nm,1.0s
WATA Walderalm 152.08 349 eP PKiKP 13 26 03.0 -0.1
comp=Z,11nm,0.5s
WTTA Wattenberg 152.14 349 iP PKiKP 13 26 03.4 +0.2
comp=Z,25nm,0.5s,SNR=12
MOTA Moosalm 152.15 350 eP PKiKP 13 26 03.0 -0.2
comp=Z,12nm,0.9s
OBKA Obir 152.25 345 eP PKiKP 13 26 02.9 -0.4
comp=Z,4.6nm,0.8s
SQTA Sankt Quirin 152.25 350 eP PKiKP 13 26 03.8 +0.3
comp=Z,12nm,0.7s
MYKA Terra Mystica 152.35 346 eP PKiKP 13 26 03.0 -0.5
comp=Z,4.6nm,0.6s
VTS Vitosha 152.38 329 ⇑P PKPdf 13 25 56.5 -0.1
DAVA Damuels 152.39 352 eP PKiKP 13 26 03.8 +0.1
comp=Z,16nm,1.0s
ABTA Abfaltersbach 152.47 348 iP PKiKP 13 26 03.4 -0.4

comp=Z,17nm,0.6s,SNR=8.2
FETA Feichten 152.52 351 *i* P **PKiKP** **13 26 04.4 +0.4**
comp=Z,9.7nm,0.8s,SNR=5.8
PDKS Podkum 152.55 344 *i* PKPbc **PKiKP** **13 26 03.8 -0.2**
CRNS Crni Vrh 152.72 345 *i* PKPbc **PKiKP** **13 26 04.0 -0.3**
ESDC Sonseca Array 159.10 18 PKP **PKPdf** **13 26 06.2 +0.8**
comp=Z,0.1nm,0.2s,baz=0.0,slow=1.5,SNR=4.1
ESDC PKPab **PKPab** **13 26 43.1 -0.3**
comp=Z,2.1nm,0.8s,baz=332,slow=4.2,SNR=14
TORD Torodi Ar. Bea 172.75 159 PKP **PKPdf** **13 26 16.2 -0.7**
comp=Z,1.8nm,1.0s,baz=304,slow=2.2,SNR=7.1
TORD PKPab **sPKPdf** **13 27 45.5 +0.1**
comp=Z,0.5nm,0.7s,baz=215,slow=5.6,SNR=2.5

*IDC **17** 13:16:40.9±1.0,50.05N×78.75E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=14.1km s-min=6.7km az=65.0*
*NNC **17** 13:16:40.1±0.5,50.00N×78.72E,h0km,mb2.6,mpv2.5, Error ellipse: s-maj=14.8km s-min=2.2km az=72.0, Suspected Mining explosion.*
ISC 17 13:16:40.1±1.9,**50.04N**±0.08×**78.5E**±0.2,**h0**km,**n16, s0s88**/27,**11C-14D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.54**	**358**	⇓P	**Pb**	**13 16 51.8**	**-0.8**
KUR07				⇑S	**Sb**	**13 17 00.6**	**-0.3**
KUR06	**Kurchatov Arra**	**0.56**	**359**	⇑P	**Pb**	**13 16 52.0**	**-0.9**
KUR06				⇑S	**Sb**	**13 17 01.1**	**-0.3**
KUR14	**Kurchatov Arra**	**0.58**	**3**	⇓P	**Pg**	**13 16 51.8**	**+0.6**
KUR14				⇑S	**Sb**	**13 17 00.7**	**-1.2**
KUR15	**Kurchatov Arra**	**0.58**	**1**	⇑P	**Pg**	**13 16 52.1**	**+0.8**
KUR15				⇑S	**Sb**	**13 17 01.0**	**-0.9**
KURBB	**Kurchatov Arra**	**0.58**	**359**	Pg	**Pg**	**13 16 52.1**	**+0.8**
	2.1nm,0.3s,baz=167,slow=17,SNR=75						
KURBB				Lg		13 17 01.2	
	2.1nm,0.3s,baz=164,slow=40,SNR=7.6						
KURBB	**Kurchatov Arra**	**0.58**	**359**	⇑P	**Pb**	**13 16 52.4**	**-0.9**
	13nm,0.3s						
KURBB				⇑S	**Sb**	**13 17 01.7**	**-0.4**
	16nm,0.3s						
KUR16	**Kurchatov Arra**	**0.59**	**357**	⇓P	**Pb**	**13 16 52.5**	**-0.8**
KUR16				⇓S	**Sb**	**13 17 01.6**	**-0.6**
KUR17	**Kurchatov Arra**	**0.59**	**356**	⇑P	**Pb**	**13 16 52.9**	**-0.5**
KUR17				⇓S	**Sb**	**13 17 02.3**	**-0.1**
KUR05	**Kurchatov Arra**	**0.60**	**360**	⇓P	**Pg**	**13 16 52.5**	**+0.8**
KUR05				⇓S	**Sb**	**13 17 01.8**	**-0.8**
KUR04	**Kurchatov Arra**	**0.62**	**0**	⇑P	**Pb**	**13 16 53.0**	**-0.9**
KUR04				⇓S	**Sb**	**13 17 02.7**	**-0.5**
KURK	**Kurchatov**	**0.68**	**4**	⇑P	**Pg**	**13 16 53.7**	**+0.5**
	4.4nm,0.3s						
KURK				⇓S	**Sb**	**13 17 04.2**	**-0.6**
	3.2nm,0.4s						
MAKZ	**Makanchi**	**3.96**	**143**	⇓Pg	**Pb**	**13 17 51.4**	**+0.6**
	0.2nm,0.2s						
MAKZ				⇓Lg	Lg	13 18 40.6	
	1.4nm,0.4s						
MK31	**Makanchi Array**	**4.10**	**141**	⇓Pn	**Pn**	**13 17 44.5**	**+0.4**
	0.1nm,0.1s,baz=125,slow=14,SNR=24						
MK31				⇓Pg	**Pb**	**13 17 52.5**	**-0.7**
	0.1nm,0.2s,baz=333,slow=15,SNR=6.1						
MK31				⇓Lg	Lg	13 18 47.2	
	2.6nm,0.4s,baz=325,slow=26,SNR=9.4						
MKAR	**Makanchi Array**	**4.10**	**141**	Pn	**Pn**	**13 17 44.5**	**+0.5**
	0.2nm,0.3s,baz=321,slow=10,SNR=28						
MKAR				Pg	**Pb**	**13 17 50.8**	**-2.4**
	0.3nm,0.3s,baz=324,slow=14,SNR=7.8						
MKAR				Lg	Lg	13 18 46.9	
	2.0nm,0.3s,baz=327,slow=26,SNR=15						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**5.51**	**42**	Pn	**Pn**	**13 18 04.4**	**+1.1**
	0.6nm,0.3s,baz=232,slow=14,SNR=6.0						
	1.2nm,0.3s						
I31KZ	**AKTYUBINSK INF**	**13.13**	**279**	*i*		14 35 00.0	
	baz=85,slow=313,SNR=2.0						

*MOS **17** 13:17:25.5±0.9,51.72N×152.88E,h412km,mb4.1/22, Error ellipse: s-maj=8.7km s-min=5.9km az=69.1*
*KRSC **17** 13:17:25.5±1.6,51.31N×153.72E,h430km±18km,ML4.3*
*SKHL **17** 13:17:25.8±0.9,51.60N×153.00E,h395km±7km,mb4.7/3, msha4.6/3*
*NEIC **17** 13:17:26.1±0.8,51.8N±0.2×152.8E±0.2,h393km±11km, mb4.1/26,Error ellipse: s-maj=26.2km s-min=15.4km az=150.0*
*IDC **17** 13:17:26.2±0.9,51.78N×152.78E,h397km±9km,mb3.6/24, mbtmp4.3/27,Error ellipse: s-maj=11.4km s-min=8.4km az=160.0*
ISC 17 13:17:25.3±0.4,**51.68N**±0.06×**152.89E**±0.05,**h393**km, **n211,s151**/258,**mb4.1**/61,**6C-9D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.27**	**115**	*e*PN	**Pn**	**13 18 23.1**	**+0.8**
SKR				*e*S	**S**	**13 19 09.2**	**+0.8**
SKR				pmax	pmax		
	comp=Z,82nm,0.6s						
SKR				smax	smax		
	comp=N,64nm,0.7s						
SKR				smax	smax		
	comp=E,31nm,0.6s						
SKR	**Severo-Kuril's**	**2.27**	**115**	P	**Pn**	**13 18 23.1**	**+0.8**
SKR				S	**S**	**13 19 09.5**	**+1.1**
SKR	**Severo-Kuril's**	**2.27**	**115**	*e*P	**Pn**	**13 18 23.1**	**+0.8**
SKR				AMB	AMB	13 18 23.6	
	comp=E,80nm,0.6s						
SKR				*e*S	**S**	**13 19 09.2**	**+0.8**
SKR				A	A	13 19 10.8	
	comp=E,60nm,0.7s						
SKR				A	A	13 19 10.8	
	comp=E,30nm,0.7s						
PAU	**Pauzhetka**	**2.46**	**93**	PN	**Pn**	**13 18 24.9**	**+1.2**
PAU	**Pauzhetka**	**2.46**	**93**	P	**Pn**	**13 18 24.9**	**+1.2**
PAU	**Pauzhetka**	**2.46**	**93**	*e*P	**Pn**	**13 18 24.8**	**+1.1**
PAU				AMB	AMB	13 18 25.6	
	comp=E,340nm,0.6s						
PAU				*e*S	**S**	**13 19 13.2**	**+2.3**
PAU				A	A	13 19 14.3	
	comp=E,170nm,0.8s						
PAU				A	A	13 19 14.3	
	comp=E,100nm,0.8s						
APC	**Apacha**	**2.90**	**63**	PN	**Pn**	**13 18 28.5**	**+1.5**
APC				S	**S**	**13 19 17.3**	**+0.2**
APC	**Apacha**	**2.90**	**63**	P	**Pn**	**13 18 28.5**	**+1.5**
APC				S	**S**	**13 19 17.3**	**+0.2**
KDTR	**Khodutka, Kamc**	**3.23**	**86**	PN	**Pn**	**13 18 30.4**	**+0.6**
KDTR				S	**S**	**13 19 19.0**	**-3.1**
KDTR	**Khodutka, Kamc**	**3.23**	**86**	P	**Pn**	**13 18 30.4**	**+0.6**
KDTR				S	**S**	**13 19 19.0**	**-3.1**
PEA0B	**Petropavlovsk-**	**3.28**	**62**		**Pn**	**13 18 31.5**	**+1.3**
PEA0B	**Petropavlovsk-**	**3.28**	**62**	*d i*PN	**Pn**	**13 18 31.6**	**+1.3**
PETK	**Petropavlovsk-**	**3.28**	**62**	P	**Pn**	**13 18 30.8**	**+0.6**
	comp=E,11nm,0.6s,baz=230,slow=10,SNR=29						
PETK				S	**S**	**13 19 24.7**	**+1.9**
	comp=E,4.7nm,0.6s,baz=268,slow=19,SNR=2.7						
PETK	**Petropavlovsk-**	**3.28**	**62**		**Pn**	**13 18 30.4**	**+0.2**
GRL	**Gorelyy**	**3.31**	**73**	PN	**Pn**	**13 18 32.9**	**+2.2**
GRL	**Gorelyy**	**3.31**	**73**	P	**Pn**	**13 18 32.9**	**+2.2**
MTVR	**Mutnovka**	**3.37**	**74**	PN	**Pn**	**13 18 32.5**	**+1.3**
MTVR	**Mutnovka**	**3.37**	**74**	P	**Pn**	**13 18 32.5**	**+1.3**
KRMR	**Karymshinskiy**	**3.42**	**68**	PN	**Pn**	**13 18 32.7**	**+1.2**
KRMR				S	**S**	**13 19 25.7**	**+0.6**
KRMR	**Karymshinskiy**	**3.42**	**68**	P	**Pn**	**13 18 32.7**	**+1.2**
KRMR				S	**S**	**13 19 25.7**	**+0.6**
RUS	**Russkaya**	**3.55**	**76**	PN	**Pn**	**13 18 33.8**	**+1.1**
RUS				S	**S**	**13 19 25.4**	**-1.9**
RUS	**Russkaya**	**3.55**	**76**	P	**Pn**	**13 18 33.8**	**+1.1**
RUS				S	**S**	**13 19 25.4**	**-1.9**
RUS	**Russkaya**	**3.55**	**76**	*e*P	**Pn**	**13 18 33.8**	**+1.1**
GNL	**Ganaly**	**3.68**	**55**	PN	**Pn**	**13 18 35.5**	**+1.6**
GNL	**Ganaly**	**3.68**	**55**	P	**Pn**	**13 18 35.5**	**+1.6**
PET	**Petropavlovsk**	**3.78**	**67**	Pn	**Pn**	**13 18 35.5**	**+0.8**
PET	**Petropavlovsk**	**3.78**	**67**	*i*PN	**Pn**	**13 18 36.6**	**+1.8**
PET				*e*S	**S**	**13 19 30.5**	**-0.6**
PET				pmax	pmax		
	comp=Z,62nm,0.8s						
PET				smax	smax		
	comp=N,53nm,0.8s						
PET				smax	smax		
	comp=E,43nm,0.5s						
PET	**Petropavlovsk**	**3.78**	**67**	P	**Pn**	**13 18 36.4**	**+1.7**
PET				S	**S**	**13 19 30.6**	**-0.6**
PET	**Petropavlovsk**	**3.78**	**67**	*e*P	**Pn**	**13 18 36.5**	**+1.8**
PET				AMB	AMB	13 18 37.0	
	comp=E,60nm,0.8s						
PET				*e*S	**S**	**13 19 30.5**	**-0.6**
PET				A	A	13 19 36.5	
	comp=E,50nm,0.6s						
PET				A	A	13 19 36.5	
	comp=E,40nm,0.6s						
DALK	**Dalny**	**3.84**	**67**	PN	**Pn**	**13 18 37.1**	**+1.8**
DALK				S	**S**	**13 19 32.0**	**-0.1**
DALK	**Dalny**	**3.84**	**67**	P	**Pn**	**13 18 37.1**	**+1.8**
DALK				S	**S**	**13 19 32.0**	**-0.1**
KOK	**Koryaka**	**3.87**	**63**	PN	**Pn**	**13 18 37.8**	**+2.1**
KOK				S	**S**	**13 19 32.0**	**-0.8**
KOK	**Koryaka**	**3.87**	**63**	P	**Pn**	**13 18 37.8**	**+2.1**
KOK				S	**S**	**13 19 32.0**	**-0.8**
KOK	**Koryaka**	**3.87**	**63**	*e*P	**Pn**	**13 18 37.8**	**+2.1**
KRX	**Arik**	**3.90**	**62**	PN	**Pn**	**13 18 37.9**	**+1.9**
KRX				S	**S**	**13 19 34.9**	**+1.5**
KRX	**Arik**	**3.90**	**62**	P	**Pn**	**13 18 37.9**	**+1.9**
KRX				S	**S**	**13 19 34.9**	**+1.5**
AVH	**Avacha**	**3.91**	**64**	PN	**Pn**	**13 18 39.0**	**+2.9**
AVH				S	**S**	**13 19 34.1**	**+0.6**
AVH	**Avacha**	**3.91**	**64**	P	**Pn**	**13 18 39.0**	**+2.9**
AVH				S	**S**	**13 19 34.1**	**+0.6**
AVH	**Avacha**	**3.91**	**64**	*e*P	**Pn**	**13 18 39.0**	**+2.9**
KRER	**Koryakskii**	**3.94**	**63**	PN	**Pn**	**13 18 39.3**	**+2.9**
KRER				S	**S**	**13 19 35.6**	**+1.5**
KRER	**Koryakskii**	**3.94**	**63**	P	**Pn**	**13 18 39.3**	**+2.9**
KRER				S	**S**	**13 19 35.6**	**+1.5**
UGLR	**Uglovaya**	**3.94**	**65**	PN	**Pn**	**13 18 38.7**	**+2.3**
UGLR				S	**S**	**13 19 34.3**	**+0.2**
UGLR	**Uglovaya**	**3.94**	**65**	P	**Pn**	**13 18 38.7**	**+2.3**
UGLR				S	**S**	**13 19 34.3**	**+0.2**
SMAR	**Somma**	**3.95**	**64**	PN	**Pn**	**13 18 38.7**	**+2.1**
SMAR				S	**S**	**13 19 34.2**	**-0.2**
SMAR	**Somma**	**3.95**	**64**	P	**Pn**	**13 18 38.7**	**+2.1**
SMAR				S	**S**	**13 19 34.2**	**-0.2**
SDLR	**Sedlovina**	**4.00**	**64**	PN	**Pn**	**13 18 38.9**	**+1.9**
SDLR	**Sedlovina**	**4.00**	**64**	P	**Pn**	**13 18 38.9**	**+1.9**
SPN	**Mys Shipunski**	**4.60**	**69**	PN	**Pn**	**13 18 43.1**	**+0.4**
SPN				S	**S**	**13 19 41.2**	**-4.4**
SPN	**Mys Shipunski**	**4.60**	**69**	P	**Pn**	**13 18 43.1**	**+0.4**
SPN				S	**S**	**13 19 41.2**	**-4.4**
SPN	**Mys Shipunski**	**4.60**	**69**	*e*P	**Pn**	**13 18 43.1**	**+0.4**
ESO	**Esso**	**5.47**	**37**	PN	**Pn**	**13 18 54.5**	**+2.7**
ESO	**Esso**	**5.47**	**37**	P	**Pn**	**13 18 54.5**	**+2.7**
ESO	**Esso**	**5.47**	**37**	*e*P	**Pn**	**13 18 54.5**	**+2.7**
TUMR	**Tumrok**	**5.64**	**47**	PN	**Pn**	**13 18 57.4**	**+3.7**
TUMR				S	**S**	**13 20 07.5**	**+1.8**
TUMR	**Tumrok**	**5.64**	**47**	P	**Pn**	**13 18 57.4**	**+3.7**
TUMR				S	**S**	**13 20 07.5**	**+1.8**
MKZ	**Mys Kozlova**	**6.05**	**58**	PN	**Pn**	**13 18 58.3**	**+0.3**
MKZ				S	**S**	**13 20 08.8**	**-4.9**
MKZ	**Mys Kozlova**	**6.05**	**58**	P	**Pn**	**13 18 58.3**	**+0.3**
MKZ				S	**S**	**13 20 08.8**	**-4.9**
MKZ	**Mys Kozlova**	**6.05**	**58**	*e*P	**Pn**	**13 18 58.3**	**+0.3**
SRDR	**Sredinnyy**	**6.15**	**38**	PN	**Pn**	**13 19 01.7**	**+2.6**
SRDR	**Sredinnyy**	**6.15**	**38**	P	**Pn**	**13 19 01.7**	**+2.6**
BDR	**Baidarnaya**	**6.92**	**42**	PN	**P**	**13 19 11.1**	**+2.6**
BDR				S	**S**	**13 20 31.8**	**+0.4**
BDR	**Baidarnaya**	**6.92**	**42**	P	**P**	**13 19 11.1**	**+2.6**
BDR				S	**S**	**13 20 31.8**	**+0.4**
SRKR	**Sorokina**	**6.96**	**41**	PN	**P**	**13 19 11.6**	**+2.7**
SRKR	**Sorokina**	**6.96**	**41**	P	**P**	**13 19 11.6**	**+2.7**
SMKR	**Semkarok**	**7.04**	**42**	PN	**P**	**13 19 12.4**	**+2.6**
SMKR				S	**S**	**13 20 34.1**	**+0.2**
SMKR	**Semkarok**	**7.04**	**42**	P	**P**	**13 19 12.4**	**+2.6**
SMKR				S	**S**	**13 20 34.1**	**+0.2**
KBG	**Krutoberegovo**	**7.38**	**48**	PN	**P**	**13 19 14.4**	**+0.9**
KBG	**Krutoberegovo**	**7.38**	**48**	P	**P**	**13 19 14.4**	**+0.9**
KBG	**Krutoberegovo**	**7.38**	**48**	*e*P	**P**	**13 19 13.5**	**0.0**
KBTR	**Krutoberegovo**	**7.41**	**48**	PN	**P**	**13 19 13.8**	**0.0**
KBTR	**Krutoberegovo**	**7.41**	**48**	P	**P**	**13 19 13.8**	**0.0**
MA2	**Magadan**	**8.00**	**352**		**P**	**13 19 20.8**	**+0.2**
MA2	**Magadan**	**8.00**	**352**	*e*PN	**P**	**13 19 21.3**	**+0.7**
MA2				pmax	pmax		
	comp=Z,63nm,1.7s						
MA2	**Magadan**	**8.00**	**352**	*e*P	**P**	**13 19 21.3**	**+0.7**
BKI	**Bering**	**8.57**	**61**	PN	**P**	**13 19 27.5**	**+0.6**
BKI				S	**S**	**13 21 01.0**	**-5.0**
BKI	**Bering**	**8.57**	**61**	P	**P**	**13 19 27.5**	**+0.6**
BKI				S	**S**	**13 21 01.0**	**-5.0**
BKI	**Bering**	**8.57**	**61**	*e*P	**P**	**13 19 27.5**	**+0.6**
NMR	**Nemuro--Hokkai**	**9.62**	**213**	*e*S	S	13 21 17.8	-11
SEY	**Seymchan**	**11.29**	**359**	*e*PN	**Pn**	**13 19 59.0**	**+1.1**
SEY				pmax	pmax		
	comp=Z,17nm,2.5s						
SEY	**Seymchan**	**11.29**	**359**	*e*P	**Pn**	**13 19 59.0**	**+1.1**
JTM	**Tenmabayashi**	**13.60**	**221**	P	**P**	**13 20 21.7**	**-1.1**
KLR	**Kul'dur**	**13.68**	**268**	P	**Pn**	**13 20 25.2**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=49,slow=5.5,SNR=3.2						
KLR	**Kul'dur**	**13.68**	**268**	*e*P	**Pn**	**13 20 25.4**	**-0.5**
KLR				pmax	pmax		
	comp=Z,13nm,4.1s						
KLR	**Kul'dur**	**13.68**	**268**	*e*P	**Pn**	**13 20 25.4**	**-0.5**
BILL	**Bilibino**	**17.66**	**17**	*e*P	**P**	**13 21 06.1**	**+0.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BILL	**Bilibino**	**17.66**	**17**	*e*P	**P**	**13 21 06.1**	**+0.1**
MJA0	**Matsu Ar-Jizo**	**18.37**	**220**	*e*P	**P**	**13 21 14.9**	**+0.8**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	**Matsushiro Arr**	**18.39**	**220**	P	**P**	**13 21 14.9**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=28,slow=10,SNR=5.2						
HIA	**Hailar**	**21.13**	**277**	*e*P	**P**	**13 21 40.7**	**+0.3**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SEHB	**SEOHWA**	**21.86**	**242**	P	**P**	**13 21 48.7**	**+1.7**
SEHB				IAmb	IAmb	13 21 49.4	
	comp=Z,14nm,1.3s						
KSRS	**Korea Array**	**22.62**	**241**	P	**P**	**13 21 54.3**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=43,slow=10,SNR=6.9						
	comp=Z,1.2nm,0.6s						
KSRS	**Korea Array**	**22.62**	**241**	*e*P	**P**	**13 21 55.5**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSRS	**Korea Array**	**22.62**	**241**	*e*P	**P**	**13 21 55.5**	**+1.5**
TIXI	**Tiksi**	**22.72**	**341**	P	**P**	**13 21 54.3**	**-0.2**
TIXI				IAmb	IAmb	13 21 55.6	
	comp=Z,5.1nm,1.0s						
TIXI	**Tiksi**	**22.72**	**341**	⇓*e*P	**P**	**13 21 54.3**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TIXI	**Tiksi**	**22.72**	**341**	*e*P	**P**	**13 21 54.3**	**-0.2**
TTA	**Tatalina**	**28.99**	**47**	P	**P**	**13 22 50.9**	**+0.6**
TTA	**Tatalina**	**28.99**	**47**	P	**P**	**13 22 50.9**	**+0.6**
TTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
N18K	**Kilae Creek**	**29.18**	**52**	P	**P**	**13 22 52.7**	**+0.7**
ULN	**Ulaanbaatar**	**29.47**	**281**	⇓*e*P	**P**	**13 22 55.7**	**+0.9**
ULN				pmax	pmax		
	comp=Z,12nm,4.2s						
ULN	**Ulaanbaatar**	**29.47**	**281**	*e*P	**P**	**13 22 55.7**	**+0.9**
L19K	**White Mountain**	**29.56**	**49**	P	**P**	**13 22 56.1**	**+0.8**
L19K				IAmb	IAmb	13 23 03.5	
	comp=Z,16nm,1.4s						
K20K	**Telida**	**29.86**	**46**	P	**P**	**13 22 58.8**	**+0.9**
K20K				IAmb	IAmb	13 23 17.7	
	comp=Z,10.0nm,1.5s						
SONM	**Songino Array**	**29.88**	**281**	P	**P**	**13 22 58.8**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=59,slow=8.2,SNR=3.6						
SONM				PcP	**PcP**	**13 25 49.7**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=98,slow=3.2,SNR=2.7						
	comp=Z,0.5nm,0.5s						
IMAR	**Indian Mountai**	**30.00**	**41**	P	**P**	**13 22 59.3**	**+0.3**
H21K	**Melozitna Rive**	**30.38**	**42**	P	**P**	**13 23 02.6**	**+0.3**
SKT	**Skwentna**	**31.13**	**49**	P	**P**	**13 23 09.0**	**0.0**
SKT				IAmb	IAmb	13 23 23.1	
	comp=Z,9.0nm,1.5s						
SEW	**Seward**	**32.42**	**52**	P	**P**	**13 23 19.9**	**-0.1**
COLA	**College**	**32.49**	**43**	⇓*e*P	**P**	**13 23 20.5**	**-0.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.6s						
SML	**Sawmill**	**32.66**	**49**	P	**P**	**13 23 22.5**	**+0.4**
KNK	**Knik Glacier**	**32.66**	**50**	P	**P**	**13 23 22.6**	**+0.4**
ILAR	**Eielson Array**	**32.91**	**43**	P	**P**	**13 23 24.9**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=271,slow=8.9,SNR=17						
	comp=Z,1.5nm,0.8s						
M26K	**Nabesna, AK**	**35.01**	**47**	P	**P**	**13 23 43.3**	**+1.2**
K27K	**Chicken**	**35.09**	**44**	P	**P**	**13 23 42.9**	**+0.2**
BCAR	**Beaver Creek A**	**35.41**	**46**	P	**P**	**13 23 47.1**	**+1.6**
ZALV	**Zalesovo Beam**	**39.77**	**301**	P	**P**	**13 24 21.3**	**-0.3**
	comp=Z,2.4nm,0.3s,baz=58,slow=7.0,SNR=12						
ZALV				PcP	**PcP**	**13 26 18.4**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=103,slow=5.1,SNR=4.0						
	comp=Z,2.4nm,0.3s						
DLBC	**Dease Lake**	**42.38**	**50**	P	**P**	**13 24 44.4**	**+1.9**
DLBC				IAmb	IAmb	13 24 45.3	
	comp=Z,10nm,1.5s						
GOMU	**GeErMu**	**43.41**	**273**	P	**P**	**13 24 51.8**	**+0.4**
GOMU				PcP	**PcP**	**13 26 27.8**	**-3.8**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,73nm,4.9s						
KURK	**Kurchatov**	**44.65**	**299**	P	**P**	**13 25 00.0**	**-0.4**
KURK				IAmb	IAmb	13 25 01.8	
	comp=Z,6.7nm,0.7s						
KURK	**Kurchatov**	**44.65**	**299**	*c i*P	**P**	**13 25 00.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	**44.65**	**299**	*e*P	**P**	**13 25 00.4**	**0.0**
MK31	**Makanchi Array**	**44.71**	**293**	P	**P**	**13 25 01.4**	**+0.4**
MK31				IAmb	IAmb	13 25 01.9	
	comp=Z,4.3nm,0.3s						
MK31	**Makanchi Array**	**44.71**	**293**	*d i*P	**P**	**13 25 00.9**	**-0.1**
MKAR	**Makanchi Array**	**44.71**	**293**	P	**P**	**13 25 01.0**	**0.0**
	comp=Z,3.0nm,0.3s,baz=60,slow=6.6,SNR=50						
MKAR				ScP	**ScP**	**13 29 48.2**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=47,slow=5.3,SNR=4.8						
	comp=Z,3.0nm,0.3s						
MKAR	**Makanchi Array**	**44.71**	**293**	P	**P**	**13 25 00.7**	**-0.3**
YKA	**Yellowknife Ar**	**47.12**	**39**	P	**P**	**13 25 19.9**	**+0.6**
	comp=Z,4.5nm,0.7s,baz=302,slow=6.9,SNR=9.7						
	comp=Z,4.5nm,0.7s						
YKA	**Yellowknife Ar**	**47.12**	**39**	*e*P	**P**	**13 25 19.8**	**+0.6**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	**Borovoye**	**47.76**	**306**	P	**P**	**13 25 24.6**	**+0.3**
BRVK				IAmb	IAmb	13 25 25.5	
	comp=Z,5.3nm,0.8s						
BRVK	**Borovoye**	**47.76**	**306**	⇓*e*P	**P**	**13 25 24.5**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**47.76**	**306**	*e*P	**P**	**13 25 24.5**	**+0.3**
ARU	**Arti**	**51.35**	**315**	P	**P**	**13 25 50.8**	**-0.1**
	comp=Z,10nm,0.4s,baz=62,slow=7.7,SNR=12						
	comp=Z,10nm,0.4s						
ARU	**Arti**	**51.35**	**315**	P	**P**	**13 25 50.8**	**-0.1**
ARU	**Arti**	**51.35**	**315**	*d i*P	**P**	**13 25 50.7**	**-0.2**
ARU						13 26 56.2	
ARU				S	**S**	**13 32 38.4**	**-0.6**
ARU				SS	**SS**	**13 36 15.7**	**-4.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARU	**Arti**	**51.35**	**315**	*e*P	**P**	**13 25 50.7**	**-0.2**
AAK	**Ala-Archa**	**51.64**	**293**	P	**P**	**13 25 53.9**	**+0.4**
AAK				IAmb	IAmb	13 25 55.0	
	comp=Z,6.2nm,0.6s						
AAK	**Ala-Archa**	**51.64**	**293**	P	**P**	**13 25 53.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AAK	**Ala-Archa**	**51.64**	**293**	*e*P	**P**	**13 25 53.9**	**+0.4**
ARCES	**ARCESS Array B**	**53.16**	**340**	P	**P**	**13 26 03.1**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=45,slow=7.9,SNR=7.0						
	comp=Z,1.2nm,0.7s						
PRGR	**Permogore**	**53.18**	**325**	*e*P	**P**	**13 26 04.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**53.55**	**253**	P	**P**	**13 26 08.4**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=28,slow=6.7,SNR=6.7						
	comp=Z,0.9nm,0.3s						
KK31	**Karatay Array**	**53.61**	**296**	P	**P**	**13 26 07.5**	**0.0**
KK31	**Karatay Array**	**53.61**	**296**	P	**P**	**13 26 07.6**	**0.0**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	**Karatay Array**	**53.61**	**296**	P	**P**	**13 26 07.5**	**0.0**
KKAR	**Karatay Array**	**53.61**	**296**	P	**P**	**13 26 07.6**	**0.0**
KIRV	**Kirov**	**53.80**	**321**	⇓*e*P	**P**	**13 26 08.0**	**-0.5**
GUN	**Gumba**	**54.58**	**271**	*e*P	**P**	**13 26 15.5**	**+0.5**
	comp=Z,25nm,0.5s						
RAMN	**Ramite**	**54.81**	**270**	*e*P	**P**	**13 26 15.9**	**-0.7**
	comp=Z,45nm,0.5s						
PKI	**Pulchoki**	**55.11**	**271**	*e*P	**P**	**13 26 19.1**	**+0.3**
PKIN	**Phulchoki**	**55.11**	**271**	*e*P	**P**	**13 26 19.1**	**+0.3**
	comp=Z,14nm,0.5s						
ABKAR	**Akbulak array**	**55.23

comp=Z,2.1nm,0.3s,baz=339,slow=6.8,SNR=8.2
comp=Z,2.1nm,0.3s
BUR08 Bucovina Ar. S 71.39 326 P **P** **13 28 03.3 -0.5**
BUR08 IAmb IAmb 13 28 03.8
comp=Z,3.5nm,0.6s
BURAR Bucovina Array 71.41 326 P **P** **13 28 03.4 -0.4**
BURAR IAmb IAmb 13 28 03.8
comp=Z,3.3nm,0.6s
CRVS Cervenica-Dubn 71.57 329 *e*P **P** **13 28 03.3 -1.3**
CRVS Cervenica-Dubn 71.57 329 *e*P **P** **13 28 03.3 -1.3**
CLL Collm 71.92 335 *i* P **P** **13 28 05.7 -0.9**
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 71.92 335 *i* P **P** **13 28 05.7 -0.9**
comp=Z,7.0nm,0.9s
LANS Liptovska Anna 71.98 330 *e*P **P** **13 28 07.9 +0.8**
LANS Liptovska Anna 71.98 330 *e*P **P** **13 28 07.8 +0.7**
VYHS Vyhne 72.76 330 *e*P **P** **13 28 11.8 +0.2**
VYHS Vyhne 72.76 330 *e*P **P** **13 28 11.8 +0.2**
WRA Warramunga Arr 73.14 198 P **P** **13 28 14.1 0.0**
comp=Z,0.8nm,0.5s,baz=13,slow=6.1,SNR=14
comp=Z,0.8nm,0.5s
GERES GERESS Array B 73.97 333 P **P** **13 28 17.6 -1.0**
comp=Z,1.1nm,0.6s,baz=49,slow=6.2,SNR=5.2
comp=Z,1.1nm,0.6s
GERES GERESS Array B 73.97 333 *e*P **P** **13 28 19.2 +0.5**
GERES pmax pmax
comp=Z,1.0nm,0.7s
CONA Conrad Observa 74.17 332 *e*P **P** **13 28 19.0 -0.8**
comp=Z,2.1nm,0.5s
BRTR Keskin Array B 74.72 316 P **P** **13 28 23.1 0.0**
comp=Z,2.6nm,0.8s,baz=47,slow=2.5,SNR=5.0
comp=Z,2.6nm,0.8s
TX32 Lajitas Array 75.23 61 P **P** **13 28 26.9 +0.7**
TX32 IAmb IAmb 13 28 27.6
comp=Z,1.9nm,0.6s
TXAR Lajitas Array 75.23 61 P **P** **13 28 27.4 +1.2**
comp=Z,1.4nm,0.5s,baz=297,slow=4.6,SNR=20
comp=Z,1.4nm,0.5s
TXAR Lajitas Array 75.23 61 P **P** **13 28 26.8 +0.6**
TXAR Lajitas Array 75.23 61 P **P** **13 28 26.8 +0.6**
SOKA Soboth 75.54 332 *e*P **P** **13 28 25.4 -2.2**
comp=Z,2.8nm,0.7s
KBA Koelnbreinsper 75.67 333 *e*P **P** **13 28 26.7 -1.7**
comp=Z,11nm,0.9s
OBKA Obir 75.84 332 *e*P **P** **13 28 27.0 -2.3**
comp=Z,4.3nm,1.1s
WATA Walderalm 75.93 334 *e*P **P** **13 28 27.7 -2.1**
comp=Z,3.1nm,0.5s
WTTA Wattenberg 75.98 334 *e*P **P** **13 28 29.6 -0.6**
comp=Z,5.7nm,0.9s
MOTA Moosalm 76.05 334 *e*P **P** **13 28 29.1 -1.5**
comp=Z,4.5nm,0.9s
ABTA Abfaltersbach 76.21 333 *e*P **P** **13 28 30.1 -1.2**
comp=Z,4.3nm,0.6s
FETA Feichten 76.45 334 *e*P **P** **13 28 30.5 -2.3**
comp=Z,2.9nm,1.1s
ASAR Alice Springs 76.85 198 P **P** **13 28 36.0 +1.0**
comp=Z,1.2nm,0.5s,baz=9.7,slow=5.1,SNR=32
comp=Z,1.2nm,0.5s
CPUP Villa Florida 145.90 54 PKPbc **PKPdf** **13 36 18.4 +0.7**
comp=Z,1.6nm,0.6s,baz=356,slow=3.3,SNR=3.1
PLCA Paso Flores 148.45 87 PKPbc **PKPbc** **13 36 25.4 -0.4**
comp=Z,1.1nm,0.5s,baz=307,slow=7.5,SNR=5.9

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*BER **17** 13:20:32.6±1.3, 58.°29N×6.°37E, h0km, ML1.4, Explosion*
DNK 17 13:20:32.0±0.6, 58.°31N×6.°39E, h0km, ML2.1, ML1.4(BER)**, Explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STAV	**Stavanger**	**0.72**	**330**	*e*S	Sg	13 20 55.0	-0.1
KMY	**Karmoy**	**1.08**	**327**	*e*P	Pg	13 20 51.6	-1.1
KMY				*e*S	Sg	13 21 06.0	-0.6
KMY				IAML		13 21 09.1	
	comp=Z,11nm,0.4s						
KMY	**Karmoy**	**1.08**	**327**	*e*P	Pg	13 20 51.6	-1.1
KMY				*e*S	Sg	13 21 06.0	-0.6
KMY				IAML		13 21 09.1	
	comp=Z,11nm,0.4s						
HOMB	**Homborsund**	**1.12**	**91**	*e*P	Pg	13 20 52.9	-0.5
HOMB				*e*S	Sg	13 21 07.2	-0.8
HOMB				IAML		13 21 10.1	
	comp=Z,13nm,0.4s						
HOMB	**Homborsund**	**1.12**	**91**	*e*P	Pg	13 20 52.9	-0.5
HOMB				*e*S	Sg	13 21 07.2	-0.8
HOMB				IAML		13 21 10.1	
	comp=Z,13nm,0.4s						
ODD1	**Odda**	**1.61**	**4**	*e*P	Pn	13 21 01.2	-0.5
ODD1				*e*S	Sn	13 21 22.0	-1.1
ODD1				IAML		13 21 24.4	
	comp=Z,6.4nm,0.4s						
ODD1	**Odda**	**1.61**	**4**	*e*P	Pn	13 21 01.2	-0.5
ODD1				*e*S	Sn	13 21 22.0	-1.1
ODD1				IAML		13 21 24.4	
	comp=Z,6.4nm,0.4s						
ASK	**Askoy**	**2.26**	**345**	*e*P	Pn	13 21 10.4	-0.1
ASK	**Askoy**	**2.26**	**345**	*e*P	Pn	13 21 10.4	-0.1

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*BER **17** 13:22:08.6±1.6, 58.°25N×6.°30E, h0km, ML1.8, Suspected explosion*
DNK 17 13:22:04.3±3.6, 58.°12N×6.°23E, h0km, ML2.5, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNART	**Snartemo**	**0.56**	**67**	*i* P	Pb	13 22 16.5	-0.5
SNART				IAML		13 22 25.4	
	comp=Z,248nm,1.0s						
SNART				*i* S	Sn	13 22 27.7	-1.8
STAV	**Stavanger**	**0.86**	**341**	*e*P	Pb	13 22 21.6	-0.5
STAV				*e*S	Sg	13 22 31.7	-0.3
STAV				IAML		13 22 35.6	
	comp=Z,32nm,0.2s						
KMY	**Karmoy**	**1.21**	**335**	*e*P	Pb	13 22 27.9	-0.2
KMY				IAML		13 22 46.4	
	comp=Z,67nm,0.3s						
KMY	**Karmoy**	**1.21**	**335**	*e*P	Pb	13 22 27.9	-0.2
KMY				IAML		13 22 46.4	
	comp=Z,67nm,0.3s						
HOMB	**Homborsund**	**1.21**	**82**	*i* P	Pn	13 22 29.1	+0.7
HOMB				*e*P	Pn	13 22 29.1	+0.7
HOMB				*i* S	Sn	13 22 45.3	-0.3
HOMB				*e*S	Sb	13 22 45.6	+1.3
HOMB				IAML		13 22 47.3	
	comp=Z,36nm,0.8s						
HOMB	**Homborsund**	**1.21**	**82**	*e*P	Pn	13 22 29.1	+0.7
HOMB				*e*S	Sn	13 22 45.6	0.0
HOMB				IAML		13 22 47.3	
	comp=Z,36nm,0.8s						
ODD1	**Odda**	**1.81**	**6**	*e*P	Pb	13 22 37.6	-0.7
ODD1				*e*S	Sn	13 22 58.8	-1.6
ODD1				IAML		13 23 01.3	
	comp=Z,27nm,0.2s						
ODD1	**Odda**	**1.81**	**6**	*e*P	Pb	13 22 37.6	-0.7
ODD1				*e*S	Sn	13 22 58.8	-1.6
ODD1				IAML		13 23 01.3	
	comp=Z,27nm,0.2s						
GOET	**G??ttrup**	**1.95**	**123**	*i* S	Sg	13 23 10.3	+3.6
MUD	**Monsted U'grnd**	**2.31**	**135**	*i* P	Pb	13 22 45.9	-0.9
MUD				*i* S	Sn	13 23 09.4	-3.2
MUD				IAML		13 23 11.3	
	comp=Z,6.0nm,0.1s						
KONO	**Kongsberg**	**2.32**	**47**	*e*P	Pb	13 22 46.1	-1.0
KONO				*e*S	Sn	13 23 11.9	-1.0
KONO				IAML		13 23 19.4	
	comp=Z,7.5nm,0.3s						
KONO	**Kongsberg**	**2.32**	**47**	*e*P	Pb	13 22 46.1	-1.0
KONO				*e*S	Sn	13 23 11.9	-1.0
KONO				IAML		13 23 19.4	
	comp=Z,7.5nm,0.3s						
ASK	**Askoy**	**2.43**	**348**	*e*P	Pn	13 22 45.6	+0.5
ASK				*e*S	Sn	13 23 13.7	-1.8
ASK				IAML		13 23 22.0	
	comp=Z,29nm,0.3s						
ASK	**Askoy**	**2.43**	**348**	*e*P	Pn	13 22 45.6	+0.5
ASK				*e*S	Sn	13 23 13.7	-1.8
ASK				IAML		13 23 22.0	
	comp=Z,29nm,0.3s						
STRU	**Stroemstad**	**2.75**	**68**	*i* P	Pn	13 22 50.4	+0.8
STRU				*e*P	Pb	13 22 50.5	-3.7
STRU				*i* S	Sn	13 23 24.5	+1.1
STRU	**Stroemstad**	**2.75**	**68**	*e*P	Pn	13 22 50.5	+1.0
TJOU	**Tjoern**	**2.87**	**90**	*i* P	Pn	13 22 52.6	+1.5
TJOU				*i* S	Sn	13 23 25.6	-0.8
SUE	**Sulen**	**3.04**	**346**	*e*P	Pn	13 22 54.0	+0.4
SUE				IAML		13 23 43.8	
	comp=Z,5.9nm,0.6s						
SUE	**Sulen**	**3.04**	**346**	*e*P	Pn	13 22 54.0	+0.4
SUE				IAML		13 23 43.8	
	comp=Z,5.9nm,0.6s						
HYA	**Hoyanger**	**3.05**	**360**	*e*P	Pn	13 22 55.2	+1.4
HYA				*e*S	Sn	13 23 29.0	-1.9
HYA				IAML		13 23 39.2	
	comp=Z,10nm,0.5s						
HYA	**Hoyanger**	**3.05**	**360**	*e*P	Pn	13 22 55.2	+1.4
HYA				*e*S	Sn	13 23 29.0	-1.9
HYA				IAML		13 23 39.2	
	comp=Z,10nm,0.5s						
ONAU	**Onsala**	**3.13**	**101**	*i* P	Pn	13 22 53.9	-0.9
ONAU				*i* S	Sn	13 23 30.6	-2.3
BORU	**Boraas**	**3.53**	**95**	*i* P	Pn	13 23 02.6	+2.4
BORU				*i* S	Sn	13 23 41.0	-1.6
NAO01	**NORSAR Array S**	**3.62**	**39**	*e*P	Pn	13 23 01.4	-0.2
NAO01				*e*S	Sn	13 23 41.3	-3.6
NAO01				IAML		13 24 00.2	
	comp=Z,4.4nm,0.5s						
NAO01	**NORSAR Array S**	**3.62**	**39**	*e*P	Pn	13 23 01.4	-0.2
NAO01				*e*S	Sn	13 23 41.3	-3.6
NAO01				IAML		13 24 00.2	
	comp=Z,4.4nm,0.5s						
FABU	**Falkenberg**	**3.67**	**105**	*i* P	Pn	13 23 01.3	-0.9
FABU				*e*S	Sn	13 23 43.5	-2.6
NBO00	**NORSAR Array S**	**3.72**	**36**	*e*P	Pn	13 23 03.1	+0.1
NBO00				*e*S	Sn	13 23 43.9	-3.6
NBO00				IAML		13 24 04.5	
	comp=Z,3.8nm,0.5s						
NBO00	**NORSAR Array S**	**3.72**	**36**	IAML		13 24 04.5	
	comp=Z,3.8nm,0.5s						
NBO00	**NORSAR Array S**	**3.72**	**36**	IAML		13 24 04.5	
	comp=Z,3.8nm,0.5s						
NBO00	**NORSAR Array S**	**3.72**	**36**	*e*P	Pn	13 23 03.1	+0.1
NBO00				*e*S	Sn	13 23 43.9	-3.6
NBO00				IAML		13 24 04.5	
	comp=Z,3.8nm,0.5s						
NC602	**NORSAR Array S**	**3.77**	**44**	*e*P	Pn	13 23 04.1	+0.5
NC602				*e*S	Sn	13 23 44.7	-3.9
NC602	**NORSAR Array S**	**3.77**	**44**	*e*P	Pn	13 23 04.1	+0.5
NC602				*e*S	Sn	13 23 44.7	-3.9
NB201	**NORSAR Array S**	**3.90**	**39**	*e*P	Pn	13 23 05.8	+0.3
NB201	**NORSAR Array S**	**3.90**	**39**	*e*P	Pn	13 23 05.8	+0.3
NC204	**NORSAR Array S**	**3.91**	**34**	*e*P	Pn	13 23 06.2	+0.6
NC204				*e*S	Sn	13 23 48.1	-4.1
NC204	**NORSAR Array S**	**3.91**	**34**	*e*P	Pn	13 23 06.2	+0.6
NC204				*e*S	Sn	13 23 48.1	-4.1
DEL	**Delary**	**4.46**	**109**	*i* P	Pn	13 23 13.2	+0.1
DEL				*e*S	Sn	13 24 01.1	-4.6
BLEU	**Blekinge**	**5.52**	**105**	*e*S	Sn	13 24 27.4	-4.3

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*IDC **17** 13:34:28.4±1.0, 35.°68N×97.°13W, h0km, mb3.4/1, mbtmp3.7/7, ML4.3/4, MS3.2/18, Error ellipse: s-maj=14.7km s-min=12.0km az=132.0*
*TUL **17** 13:34:28.7±0.6, 35.°68N±0.°03×97.°08W±0.°04, h6km±6km, ML4.0, mb4.1/4(NEIC), mb_Lg4.3/124(NEIC), Mwr4.0/67(NEIC), Error ellipse: s-maj=4.8km s-min=4.0km az=64.0*
*ANF **17** 13:34:29.0±0.2, 35.°70N×97.°08W, h6km, ML4.9/19, Error ellipse: s-maj=2.3km s-min=2.1km az=140.0*
*NEIC **17** 13:34:29.3±0.8, 35.°68N±0.°02×97.°11W±0.°01, h2km±2km, Error ellipse: s-maj=3.9km s-min=3.0km az=167.0*
*NEIC **17** 13:34:29.4, 35.°69N×97.°09W, h2km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.15; $M_{\theta\theta}$1.16; $M_{\phi\phi}$-1.00; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.27; $M_{r\phi}$-0.34; Fault plane solution: $M_0$1.18000×10^{15} NP1:ϕ_s320.70000°, δ81.91000°, λ-17.84000°. NP2:ϕ_s53.29000°, δ72.35000°, λ-171.51000°. Principal axes: T 1.2069, Plg7.0000°, Azm8.0000°; N -0.0633, Plg70.0000°, Azm117.0000°; P -1.1435, Plg18.0000°, Azm276.0000°;*
ISC 17 13:34:28.8±0.8, 35.°69N±0.°02×97.°08W±0.°02, h12km±6km, n209,σ1$27/194, MS3.4/8, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.10**	**248**	Pg	**Pg**	**13 34 31.1**	**-0.6**
OK025	**Westminster Rd**	**0.24**	**242**	Pg	**Pg**	**13 34 33.6**	**-0.2**
OK025				Sg	**Sg**	**13 34 37.1**	**-0.1**
OK009	**Oakdale Elemen**	**0.30**	**248**		**Pg**	**13 34 34.9**	**-0.1**
OK029	**Liberty Lake**	**0.32**	**289**	Pg	**Pg**	**13 34 35.5**	**+0.1**
OK029				Sg	**Sg**	**13 34 40.1**	**+0.3**
OK031	**S. Brethren Rd**	**0.33**	**37**	Pg	**Pg**	**13 34 35.8**	**+0.3**
OK031				Sg	**Sg**	**13 34 40.6**	**+0.7**
OK030	**Cody Creek RV**	**0.34**	**46**	Pg	**Pg**	**13 34 35.9**	**+0.3**
OK030				Sg	**Sg**	**13 34 40.9**	**+0.7**
OK01	**Prague**	**0.38**	**123**		**Pg**	**13 34 36.5**	**0.0**
OKCSW	**OKLAHOMA CITY**	**0.41**	**226**	Pg	**Pg**	**13 34 36.7**	**-0.2**
BCOK	**Bluff Creek, N**	**0.43**	**265**	Pg	**Pg**	**13 34 37.3**	**-0.1**
DEOK	**Depew**	**0.50**	**72**	Pg	**Pg**	**13 34 38.7**	**+0.1**
DEOK				IAmb_Lg		13 34 45.3	
	comp=Z,1μm,0.8s						
FNO	**Franklin**	**0.51**	**211**	Pg	**Pg**	**13 34 38.5**	**-0.3**
QUOK	**Quay**	**0.57**	**32**	Pg	**Pg**	**13 34 40.1**	**+0.2**
QUOK				IAmb_Lg		13 34 47.5	
	comp=Z,886nm,0.8s						
TUL1	**Leonard**	**1.07**	**78**		**Pg**	**13 34 48.4**	**-1.0**
TUL1	**Leonard**	**1.07**	**78**	P	**Pg**	**13 34 48.5**	**-1.0**
	baz=258,SNR=328						
TUL1				S	**Sg**	**13 35 03.2**	**-0.1**
	baz=258						
TUL1	**Leonard**	**1.07**	**78**	P	**Pg**	**13 34 48.3**	**-1.2**
	baz=258,SNR=167						
TUL1				S	**Sg**	**13 35 03.2**	**-0.1**
	baz=258						
BLOK	**Blackwell**	**1.07**	**354**		**Pg**	**13 34 48.9**	**-0.6**
BLOK				IAmb_Lg		13 35 02.9	
	comp=Z,435nm,0.7s						
CROK	**Carrier**	**1.09**	**318**	Pg	**Pg**	**13 34 49.6**	**-0.3**
X34A	**Smith Ranch, M**	**1.25**	**210**		**Pg**	**13 34 52.1**	**-0.8**
T35A	**Sooner Cattle**	**1.30**	**20**	Pg	**Pn**	**13 34 52.8**	**-0.1**
T35B	**Sooner Cattle**	**1.30**	**20**	P	**Pn**	**13 34 52.9**	**0.0**
	baz=200,SNR=645						
T35B				S	**Sb**	**13 35 10.9**	**+0.9**
	baz=200						
CSTR	**Hydro, Custer**	**1.31**	**268**		**Pn**	**13 34 52.9**	**0.0**
CSTR				IAmb_Lg		13 35 09.8	
	comp=Z,60nm,1.1s						
GC02	**Grant County #**	**1.32**	**332**	Pg	**Pn**	**13 34 53.3**	**+0.3**
KAN13	**South Haven SW**	**1.36**	**346**	Pg	**Pn**	**13 34 53.9**	**+0.4**
OK032	**Salt Plains WL**	**1.44**	**321**	Pg	**Pn**	**13 34 55.5**	**+0.8**
KAN14	**Manchester OK**	**1.45**	**331**		**Pn**	**13 34 55.7**	**+0.9**
KAN11	**Caldwell West**	**1.46**	**338**	Pg	**Pn**	**13 34 55.6**	**+0.7**
KAN05	**Bluff City Nor**	**1.55**	**336**		**Pn**	**13 34 57.3**	**+1.0**
KAN05				IAmb_Lg		13 35 22.4	
	comp=Z,2μm,1.0s						
KAN01	**Argonia South**	**1.56**	**340**	Pg	**Pn**	**13 34 57.3**	**+1.0**
KAN01				IAmb_Lg		13 35 20.3	
	comp=Z,2μm,1.1s						
OK038	**West end E0370**	**1.56**	**301**		**Pn**	**13 34 56.2**	**-0.2**
KS20	**Mayfield South**	**1.58**	**346**	Pg	**Pn**	**13 34 57.5**	**+0.9**
KS20				IAmb_Lg		13 35 20.0	
	comp=Z,2μm,0.8s						
KAN10	**Anthony SW Sta**	**1.65**	**330**		**Pn**	**13 34 58.6**	**+1.0**
KAN10				IAmb_Lg		13 35 23.7	
	comp=Z,1μm,1.1s						
KS21	**Milan North St**	**1.66**	**344**		**Pn**	**13 34 59.3**	**+1.6**
OK035	**E0210 Rd and N**	**1.66**	**308**		**Pn**	**13 34 58.7**	**+0.9**
KAN06	**Argonia West S**	**1.68**	**338**		**Pn**	**13 34 59.3**	**+1.3**
KAN06				IAmb_Lg		13 35 24.3	
	comp=Z,2μm,0.9s						
WMOK	**Wichita Mounta**	**1.69**	**236**	Pn	**Pn**	**13 34 58.5**	**+0.5**
WMOK	**Wichita Mounta**	**1.69**	**236**	P	**Pn**	**13 34 58.6**	**+0.5**
	baz=56,SNR=934						
WMOK				S	**Sb**	**13 35 21.4**	**+0.5**
	baz=56						
WMOK	**Wichita Mounta**	**1.69**	**236**	P	**Pn**	**13 34 58.6**	**+0.5**
	baz=56,SNR=287						
WMOK				S	**Sb**	**13 35 21.4**	**+0.5**
	baz=56						
KAN08	**Anthony NE Sta**	**1.69**	**335**		**Pn**	**13 34 59.6**	**+1.4**
LOOK	**Love County**	**1.70**	**183**		**Pn**	**13 34 59.4**	**+1.2**
LOOK				IAmb_Lg		13 35 22.6	
	comp=Z,994nm,0.8s						
U32A	**Winter Ranch,**	**1.70**	**294**		**Pn**	**13 34 59.5**	**+1.2**
U32A	**Winter Ranch,**	**1.70**	**294**	P	**Pn**	**13 34 59.5**	**+1.2**
	baz=114,SNR=176						
U32A				S	**Sb**	**13 35 23.1**	**+1.7**
	baz=114						
KAN16	**Harper SW Stat**	**1.72**	**333**		**Pn**	**13 35 00.0**	**+1.4**
KAN16				IAmb_Lg		13 35 27.8	
	comp=Z,1μm,0.9s						
RLO	**Rose Lookout**	**1.73**	**74**	IAmb_Lg		13 35 27.8	
	comp=Z,1μm,0.7s						
NOKA	**Waynoka**	**1.77**	**303**		**Pn**	**13 35 00.6**	**+1.3**
X37A	**Clayton**	**1.78**	**128**		**Pn**	**13 35 00.6**	**+1.2**
X37A				IAmb_Lg		13 35 27.0	
	comp=Z,2μm,1.0s						
X37A	**Clayton**	**1.78**	**128**	P	**Pn**	**13 35 00.8**	**+1.4**
	baz=308,SNR=400						
X37A				S	**Sg**	**13 35 25.4**	**-0.7**
	baz=308						
ELIS	**Ellis County**	**1.94**	**282**	Pn	**Pn**	**13 35 03.0**	**+1.5**
U38A	**Gravette**	**2.31**	**70**		**Pn**	**13 35 08.6**	**+2.0**
U38A	**Gravette**	**2.31**	**70**	P	**Pn**	**13 35 08.4**	**+1.8**
	baz=252,SNR=84						
Z35A	**Perchaven, San**	**2.36**	**184**		**Pn**	**13 35 08.4**	**+1.0**
Z35A	**Perchaven, San**	**2.36**	**184**	P	**Pn**	**13 35 09.0**	**+1.7**
	baz=3.4,SNR=97						
Z35A				S	**Sb**	**13 35 39.6**	**-0.7**
	baz=3.4						
HHAR	**Hobbs**	**2.61**	**76**		**Pn**	**13 35 12.2**	**+1.4**
HHAR				IAmb_Lg		13 35 55.9	
	comp=Z,570nm,0.8s						
HHAR	**Hobbs**	**2.61**	**76**	P	**Pn**	**13 35 12.1**	**+1.2**
	baz=258						
Z38A	**Mt. Pleasant**	**2.98**	**144**		**Pn**	**13 35 17.0**	**+1.2**
Z38A				IAmb_Lg		13 36 09.6	
	comp=Z,1μm,0.9s						
Z38A	**Mt. Pleasant**	**2.98**	**144**	P	**Pn**	**13 35 17.3**	**+1.4**
	baz=325,SNR=16						
Z38A				S	**Sn**	**13 35 53.8**	**+2.3**
	baz=325						
R32A	**Long Quarter,**	**3.02**	**335**	Sb	**Sb**	**13 36 03.4**	**+4.0**
	baz=154						
MIAR	**Mount Ida**	**3.09**	**111**		**Pn**	**13 35 18.7**	**+1.3**
MIAR				IAmb_Lg		13 36 13.8	
	comp=Z,666nm,1.0s						
MIAR	**Mount Ida**	**3.09**	**111**	P	**Pn**	**13 35 18.7**	**+1.3**
	baz=293,SNR=82						
MIAR				S	**Sn**	**13 35 57.5**	**+3.2**
	baz=293						
MIAR	**Mount Ida**	**3.09**	**111**	P	**Pn**	**13 35 18.6**	**+1.3**
	baz=293						
KSU1	**Kansas State U**	**3.42**	**6**		**Pn**	**13 35 23.1**	**+1.1**
KSU1				IAmb_Lg		13 36 22.5	
	comp=Z,906nm,0.9s						
KSU1	**Kansas State U**	**3.42**	**6**	P	**Pn**	**13 35 23.2**	**+1.2**
	baz=186,SNR=10.0						
KSU1				Sb	**Sg**	**13 36 16.4**	**-2.3**
	baz=186						
KSU1	**Kansas State U**	**3.42**	**6**	P	**Pn**	**13 35 22.6**	**+0.6**
	baz=186,SNR=30						
S39A	**Bolivar**	**3.62**	**55**		**Pn**	**13 35 25.9**	**+1.2**
S39A	**Bolivar**	**3.62**	**55**	P	**Pn**	**13 35 26.0**	**+1.2**
	baz=237,SNR=15						
S39A				S	**Sn**	**13 36 09.8**	**+2.5**
	baz=237						
WHTX	**Lake Whitney,**	**3.71**	**185**		**Pn**	**13 35 26.8**	**+0.9**
WHTX	**Lake Whitney,**	**3.71**	**185**	P	**Pn**	**13 35 26.7**	**+0.9**
	baz=4.8,SNR=13						
WHTX	**Lake Whitney,**	**3.71**	**185**	P	**Pn**	**13 35 26.3**	**+0.5**
	baz=4.8,SNR=16						
WHTX				S	**Sn**	**13 36 09.6**	**+0.2**
	baz=4.8						
ABTX	**Abilene, Hawle**	**3.73**	**215**		**Pn**	**13 35 26.6**	**+0.4**
ABTX				IAmb_Lg		13 36 32.4	
	comp=Z,553nm,1.2s						
ABTX	**Abilene, Hawle**	**3.73**	**215**	P	**Pn**	**13 35 26.8**	**+0.7**
	baz=34,SNR=54						
ABTX	**Abilene, Hawle**	**3.73**	**215**	P	**Pn**	**13 35 26.6**	**+0.4**
	baz=34,SNR=13						
ABTX				S	**Sn**	**13 36 11.4**	**+1.4**
	baz=34						
CBKS	**Cedar Bluff**	**3.77**	**327**		**Pn**	**13 35 27.8**	**+1.0**
CBKS				IAmb_Lg		13 36 35.2	
	comp=Z,591nm,0.9s						
CBKS	**Cedar Bluff**	**3.77**	**327**	P	**Pn**	**13 35 27.5**	**+0.7**
	baz=145,SNR=12						
CBKS				S	**Sn**	**13 36 11.7**	**+0.6**
	baz=145						
237A	**Washetta, Mont**	**3.83**	**164**		**Pn**	**13 35 27.9**	**+0.4**
237A	**Washetta, Mont**	**3.83**	**164**	P	**Pn**	**13 35 28.2**	**+0.7**
	baz=344,SNR=16						
WLAR	**White Oak Lake**	**3.83**	**120**	IAmb_Lg		13 36 27.7	
	comp=Z,461nm,0.9s						
AMTX	**Amarillo**	**3.85**	**259**		**Pn**	**13 35 29.3**	**+1.4**
AMTX				IAmb_Lg		13 36 31.6	
	comp=Z,542nm,0.7s						
AMTX	**Amarillo**	**3.85**	**259**	P	**Pn**	**13 35 29.6**	**+1.7**
	baz=77,SNR=27						
AMTX	**Amarillo**	**3.85**	**259**	P	**Pn**	**13 35 29.3**	**+1.4**
	baz=77						
AMTX				S	**Sn**	**13 36 14.1**	**+1.0**
	baz=77						
WHAR	**Wooly Hollow**	**3.93**	**94**		**Pn**	**13 35 29.9**	**+1.0**
WHAR				IAmb_Lg		13 36 37.2	
	comp=Z,412nm,0.8s						
UALR	**University of**	**3.98**	**102**		**Pn**	**13 35 31.5**	**+1.8**
UALR				IAmb_Lg		13 36 45.1	
	comp=Z,691nm,1.3s						
FCAR	**Ozark Folk Cen**	**4.03**	**86**		**Pn**	**13 35 31.0**	**+0.6**
FCAR				IAmb_Lg		13 36 37.2	
	comp=Z,742nm,1.1s						
MGMO	**Mountain Grove**	**4.14**	**68**	IAmb_Lg		13 36 49.6	
	comp=Z,624nm,0.8s						
NATX	**Nacogdoches**	**4.41**	**152**	IAmb_Lg		13 36 57.3	
	comp=Z,399nm,0.8s						
NATX	**Nacogdoches**	**4.41**	**152**	S	**Sn**	**13 36 26.2**	**-0.6**
	baz=334						
R40A	**Maddies Statio**	**4.64**	**55**		**Pn**	**13 35 39.9**	**+1.1**
R40A				IAmb_Lg		13 36 59.1	
	comp=Z,509nm,0.7s						
CCAR	**Cane Creek**	**4.71**	**111**		**Pn**	**13 35 40.9**	**+1.2**
CCAR				IAmb_Lg		13 37 08.2	
	comp=Z,359nm,1.0s						
CCAR	**Cane Creek**	**4.71**	**111**	P	**Pn**	**13 35 41.3**	**+1.6**
	baz=294,SNR=14						
LCAR	**Lake Charles**	**4.83**	**84**	IAmb_Lg		13 37 10.7	
	comp=Z,327nm,1.1s						
P38A	**Dawn**	**4.83**	**35**	IAmb_Lg		13 37 03.1	
	comp=Z,439nm,0.7s						
435B	**Jarrell**	**4.91**	**185**		**Pn**	**13

JCT	**Junction City**	**5.68**	**204**	P	**Pn**	**13 35 53.0**	**0.0**
	baz=23,SNR=21						
JCT	**Junction City**	**5.68**	**204**	P	**Pn**	**13 35 52.8**	**-0.3**
	baz=23,SNR=7.4						
JCT				S	**Sn**	**13 36 57.1**	**-1.1**
	baz=23						
BGNE	**Belgrade**	**5.77**	**352**		**Pn**	**13 35 55.0**	**+0.8**
BGNE				IAmb_Lg		13 37 38.7	
	comp=Z,547nm,0.9s						
BGNE	**Belgrade**	**5.77**	**352**	P	**Pn**	**13 35 54.0**	**-0.2**
	baz=171						
BGNE				S	**Sn**	**13 36 58.6**	**-1.7**
	baz=171						
FVM	**French Village**	**5.81**	**65**		**Pn**	**13 35 55.0**	**+0.3**
FVM				IAmb_Lg		13 37 39.5	
	comp=Z,418nm,0.9s						
FVM	**French Village**	**5.81**	**65**	P	**Pn**	**13 35 55.0**	**+0.3**
	baz=249,SNR=8.7						
MET	**Memphis--Engin**	**5.86**	**93**	IAmb_Lg		13 37 44.2	
	comp=Z,484nm,1.1s						
PEBM	**Pemiscott Bayo**	**5.87**	**84**	IAmb_Lg		13 37 42.7	
	comp=Z,742nm,0.8s						
441A	**DeRidder**	**5.91**	**145**	IAmb_Lg		13 37 50.4	
	comp=Z,248nm,1.3s						
N38A	**Joes South For**	**5.92**	**30**		**Pn**	**13 35 57.2**	**+0.9**
PVMO	**Portageville**	**6.02**	**81**	IAmb_Lg		13 37 54.9	
	comp=Z,479nm,0.8s						
T25A	**Trinidad**	**6.08**	**286**		**Pn**	**13 36 00.2**	**+1.5**
T25A				IAmb_Lg		13 37 47.1	
	comp=Z,487nm,0.8s						
T25A	**Trinidad**	**6.08**	**286**	P	**Pn**	**13 35 59.2**	**+0.4**
	baz=102,SNR=8.8						
CGM3	**Cape Girardeau**	**6.19**	**73**		**Pn**	**13 36 00.8**	**+0.8**
CGM3				IAmb_Lg		13 37 51.4	
	comp=Z,313nm,0.8s						
SLM	**Saint Louis**	**6.21**	**60**	IAmb_Lg		13 37 49.4	
	comp=Z,724nm,0.8s						
HALT	**Halls**	**6.29**	**86**	IAmb_Lg		13 37 57.9	
	comp=Z,523nm,1.1s						
OXF	**Oxford**	**6.40**	**98**		**Pn**	**13 36 03.6**	**+0.8**
OXF				IAmb_Lg		13 38 07.8	
	comp=Z,433nm,1.2s						
OXF	**Oxford**	**6.40**	**98**	P	**Pn**	**13 36 03.4**	**+0.6**
	baz=283,SNR=7.4						
OXF	**Oxford**	**6.40**	**98**	P	**Pn**	**13 36 02.5**	**-0.3**
	baz=283,SNR=23						
W45A	**Hickory Valley**	**6.47**	**92**	IAmb_Lg		13 37 59.5	
	comp=Z,302nm,0.8s						
CLN7	**Carlsbad 7**	**6.47**	**242**		**Pn**	**13 36 05.4**	**+1.4**
OGNE	**Ogallala**	**6.53**	**325**	P	**Pn**	**13 36 05.6**	**+0.9**
	baz=142						
OGNE				S	**Sn**	**13 37 19.1**	**-0.1**
	baz=142						
S44A	**Carbondale**	**6.60**	**70**		**Pn**	**13 36 06.0**	**+0.5**
735A	**Kenedy**	**6.84**	**185**		**Pn**	**13 36 11.0**	**+2.0**
735A				IAmb_Lg		13 38 13.2	
	comp=Z,197nm,0.8s						
SCIA	**State Center**	**6.90**	**25**		**Pn**	**13 36 10.9**	**+1.2**
SCIA				IAmb_Lg		13 38 17.5	
	comp=Z,481nm,0.8s						
SCIA	**State Center**	**6.90**	**25**	P	**Pn**	**13 36 10.8**	**+1.1**
	baz=207,SNR=18						
SCIA	**State Center**	**6.90**	**25**	P	**Pn**	**13 36 10.0**	**+0.2**
	baz=207,SNR=8.2						
SCIA				S	**Sn**	**13 37 27.1**	**-1.0**
	baz=207						
K31A	**O'Neill**	**7.04**	**350**	IAmb_Lg		13 38 24.6	
	comp=Z,418nm,0.8s						
SDCO	**Great Sand Dun**	**7.07**	**289**		**Pn**	**13 36 13.4**	**+1.1**
SDCO				IAmb_Lg		13 38 17.8	
	comp=Z,223nm,1.1s						
SDCO	**Great Sand Dun**	**7.07**	**289**	P	**Pn**	**13 36 13.2**	**+0.9**
	baz=104,SNR=44						
P43A	**Skaggs, Pawnee**	**7.17**	**54**	Pn	**Pn**	**13 36 14.8**	**+1.3**
P43A				IAmb_Lg		13 38 19.1	
	comp=Z,585nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.18**	**61**	IAmb_Lg		13 38 31.5	
	comp=Z,555nm,0.8s						
Q24A	**Divide**	**7.21**	**299**	IAmb_Lg		13 38 22.1	
	comp=Z,230nm,0.8s						
PLAL	**Pickwick Lake**	**7.39**	**93**		**Pn**	**13 36 15.9**	**-0.6**
WVT	**Waverly**	**7.52**	**84**	P	**Pn**	**13 36 17.2**	**-1.1**
	baz=269						
WVT				S	**Sn**	**13 37 41.2**	**-2.1**
	baz=269						
833A	**Chaparral WMA,**	**7.60**	**196**		**Pn**	**13 36 19.4**	**0.0**
833A	**Chaparral WMA,**	**7.60**	**196**	P	**Pn**	**13 36 19.4**	**0.0**
	baz=14,SNR=10						
833A	**Chaparral WMA,**	**7.60**	**196**	P	**Pn**	**13 36 19.3**	**-0.1**
	baz=14						
ANMO	**Albuquerque**	**7.70**	**267**	Pn	**Pn**	**13 36 21.2**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=122,slow=4.3,SNR=4.1						
ANMO				Pg	Pb	13 36 48.7	+6.4
	comp=Z,2.4nm,0.3s,baz=84,slow=16,SNR=15						
ANMO				Lg	Lg	13 38 30.4	
	comp=Z,10nm,0.3s,baz=40,slow=6.7,SNR=6.7						
ANMO				LR	LR	13 39 29.9	
	comp=Z,305nm,19.1s,baz=91,slow=39						
ANMO	**Albuquerque**	**7.70**	**267**	P	**Pn**	**13 36 21.5**	**+0.6**
	baz=82						
K38A	**Parkersburg**	**7.71**	**24**	IAmb_Lg		13 38 47.5	
	comp=Z,248nm,0.8s						
HDIL	**Hopedale**	**7.82**	**49**		**Pn**	**13 36 23.4**	**+1.0**
HDIL	**Hopedale**	**7.82**	**49**	P	**Pn**	**13 36 21.4**	**-1.0**
	baz=234						
ISCO	**Idaho Springs**	**7.91**	**304**		**Pn**	**13 36 24.9**	**+1.1**
ISCO	**Idaho Springs**	**7.91**	**304**	P	**Pn**	**13 36 24.6**	**+0.8**
	baz=119,SNR=12						
MNTX	**Cornudas Mount**	**7.98**	**242**		**Pn**	**13 36 25.2**	**+0.6**
MNTX				IAmb_Lg		13 39 03.4	
	comp=Z,237nm,1.1s						
MNTX	**Cornudas Mount**	**7.98**	**242**	P	**Pn**	**13 36 25.4**	**+0.8**
	baz=58,SNR=11						
MNTX				S	**Sn**	**13 37 52.4**	**-2.4**
	baz=58						
ECSD	**EROS Data Cent**	**8.04**	**2**	P	**Pn**	**13 36 24.2**	**-1.2**
	baz=183,SNR=14						
S22A	**4UR Ranch, Cre**	**8.09**	**288**		**Pn**	**13 36 28.6**	**+2.2**
T47A	**Sharon Grove**	**8.15**	**78**		**Pn**	**13 36 27.6**	**+0.7**
Y22D	**IRIS PASSCAL I**	**8.25**	**262**	IAmb_Lg		13 39 07.7	
	comp=Z,503nm,1.0s						
TX31	**Lajitas Ar. Si**	**8.43**	**223**		**Pn**	**13 36 30.1**	**-0.8**
TXAR	**Lajitas Array**	**8.43**	**223**	Pn	**Pn**	**13 36 29.4**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=50,slow=11,SNR=25						
TXAR				Lg	Lg	13 38 51.1	
	comp=Z,6.2nm,0.3s,baz=45,slow=21,SNR=4.1						
TXAR				LR	LR	13 40 01.2	
	comp=Z,133nm,20.3s,baz=294,slow=40						
	comp=Z,1.6nm,0.4s						
L42A	**Oliver, Polo**	**8.55**	**40**		**Pn**	**13 36 33.8**	**+1.5**
PHWY	**Pilot Hill**	**8.63**	**313**	IAmb_Lg		13 39 13.8	
	comp=Z,199nm,0.9s						
N23A	**Red Feather La**	**8.69**	**309**	P	**Pn**	**13 36 35.9**	**+1.3**
	baz=124						
I37A	**Lemond, Waseca**	**8.78**	**18**	IAmb_Lg		13 39 17.4	
	comp=Z,173nm,0.8s						
SUSD	**Miller**	**8.86**	**351**	IAmb_Lg		13 39 16.5	
	comp=Z,195nm,0.8s						
JFWS	**Jewell Farm**	**8.94**	**34**	IAmb_Lg		13 39 20.4	
	comp=Z,289nm,0.8s						
JFWS	**Jewell Farm**	**8.94**	**34**	P	**Pn**	**13 36 37.2**	**-0.5**
	baz=218						
Y49A	**Blount Mountai**	**8.97**	**99**		**Pn**	**13 36 38.7**	**+0.6**
SFIN	**Lafayette**	**9.16**	**56**	IAmb_Lg		13 39 18.8	
	comp=Z,438nm,1.0s						
HQIL	**Hanson Quary C**	**9.44**	**47**	IAmb_Lg		13 39 32.4	
	comp=Z,679nm,1.2s						
I40A	**Norwalk**	**9.58**	**29**	IAmb_Lg		13 39 35.9	
	comp=Z,163nm,0.7s						
RSSD	**Black Hills**	**9.97**	**330**	IAmb_Lg		13 39 56.3	
	comp=Z,149nm,0.8s						
SPMN	**Marine on St.**	**10.06**	**18**	P	**Pn**	**13 36 52.3**	**-0.8**
	baz=200						
CPCT	**Cooper Cave**	**10.23**	**88**	Pn	**Pn**	**13 36 54.4**	**-1.0**
F36A	**Milaca**	**10.51**	**14**	Pn	**Pn**	**13 36 58.0**	**-1.2**
TKL	**Tuckaleechee C**	**10.83**	**86**	Pn	**Pn**	**13 37 04.2**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=240,slow=8.1,SNR=4.3						
TKL				LR	LR	13 41 25.2	
	comp=Z,61nm,21.9s,baz=291,slow=38						
	comp=Z,2.9nm,0.6s						
G40A	**Rib Lake**	**10.90**	**27**	Pn	**Pn**	**13 37 03.4**	**-1.1**
S51A	**Beattyville**	**11.01**	**76**		**Pn**	**13 37 04.9**	**-1.1**
E38A	**The Farm, Brul**	**11.67**	**19**		**Pn**	**13 37 13.3**	**-1.7**
PDAR	**Pinedale Array**	**11.97**	**310**	Pn	**Pn**	**13 37 20.1**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=127,slow=14,SNR=4.0						
PDAR				Lg	Lg	13 40 43.0	
	comp=Z,0.9nm,0.3s,baz=116,slow=26,SNR=3.7						
PDAR				LR	LR	13 42 06.6	
	comp=Z,90nm,18.3s,baz=116,slow=38						
	comp=Z,0.5nm,0.4s						
ACSO	**Alum Creek Sta**	**12.01**	**64**		**Pn**	**13 37 17.9**	**-1.9**
Q52A	**Bidwell**	**12.23**	**70**	Pn	**Pn**	**13 37 21.0**	**-1.9**
AGMN	**Agassiz Nation**	**12.63**	**4**	Pn	**Pn**	**13 37 25.1**	**-3.1**
B35A	**Bob, Littlefor**	**12.90**	**10**	Pn	**Pn**	**13 37 29.1**	**-2.7**
EYMN	**Ely**	**12.93**	**17**	Pn	**Pn**	**13 37 28.8**	**-3.5**
EYMN	**Ely**	**12.93**	**17**	P	Pn	13 37 28.5	-3.8
	baz=201,SNR=13						
D41A	**Chassel**	**13.02**	**27**		**Pn**	**13 37 30.6**	**-2.9**
E43A	**Lone Tree Farm**	**13.10**	**32**		**Pn**	**13 37 32.2**	**-2.3**
Q54A	**Coxs Mills**	**13.34**	**71**	Pn	**Pn**	**13 37 35.9**	**-2.0**
R55A	**Marlinton**	**13.80**	**74**		**Pn**	**13 37 42.1**	**-2.3**
ULM	**Lac du Bonnet**	**14.58**	**3**	Pn	Pn	13 37 50.4	-4.4
	comp=Z,2.5nm,0.4s,baz=184,slow=12,SNR=6.3						
ULM				Lg	Lg	13 42 02.6	
	comp=Z,0.4nm,0.3s,baz=104,slow=19,SNR=5.0						
ULM				LR	LR	13 43 32.6	
	comp=Z,225nm,18.6s,baz=90,slow=37						
ULM	**Lac du Bonnet**	**14.58**	**3**	Pn	Pn	13 37 50.2	-4.5
M55A	**Ridgway**	**15.43**	**63**	Pn	**Pn**	**13 38 06.1**	**-0.2**
M55A				IAmb	IAmb	13 38 11.8	
	comp=Z,6.2nm,0.7s						
PFO	**Pinyon Flats O**	**16.08**	**268**	LR	LR	13 44 47.2	
	comp=Z,98nm,19.9s,baz=83,slow=39						
LPIG	**La Paz**	**16.26**	**228**	LR	LR	13 43 52.0	
	comp=Z,30nm,19.3s,baz=46,slow=35						
SADO	**Sadowa**	**16.40**	**51**	Lg	Lg	13 42 59.4	
	comp=Z,0.5nm,0.3s,baz=166,slow=4.2,SNR=8.0						
SADO				LR	LR	13 44 39.5	
	comp=Z,33nm,21.7s,baz=265,slow=37						
L56A	**Greenwood**	**16.48**	**61**	P	**P**	**13 38 22.3**	**-0.2**
NVAR	**Mina Array Bea**	**17.16**	**285**	LR	LR	13 45 44.3	
	comp=Z,83nm,20.8s,baz=89,slow=40						
CMIG	**Matias Romero**	**18.63**	**173**	P	**Pn**	**13 38 48.0**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=342,slow=13,SNR=4.7						
CMIG				LR	LR	13 47 40.8	
	comp=Z,25nm,18.5s,baz=17,slow=43						
	comp=Z,1.6nm,0.4s						
KSCT	**Kent School, K**	**19.35**	**65**	P	**P**	**13 38 53.0**	**-1.1**
NCB	**Newcomb**	**19.36**	**58**	P	**P**	**13 38 54.4**	**+0.2**
NCB				IAmb	IAmb	13 39 07.0	
	comp=Z,17nm,1.2s						
YBH	**Yreka Blue Hor**	**20.85**	**295**	LR	LR	13 47 26.5	
	comp=Z,41nm,21.3s,baz=122,slow=37						
YKA	**Yellowknife Ar**	**28.97**	**343**	LR	LR	13 52 29.3	
	comp=Z,71nm,19.3s,baz=112,slow=37						
FRB	**Frobisher Bay**	**33.04**	**23**	LR	LR	13 54 36.0	
	comp=Z,89nm,19.4s,baz=216,slow=36						
INK	**Inuvik**	**38.49**	**339**	LR	LR	13 58 16.2	
	comp=Z,64nm,20.0s,baz=148,slow=37						
RES	**Resolute Bay**	**39.09**	**1**	LR	LR	13 58 05.9	
	comp=Z,84nm,19.4s,baz=356,slow=36						
SFJD	**Kangerlussuaq**	**41.02**	**26**	LR	LR	13 58 54.3	
	comp=Z,40nm,18.7s,baz=254,slow=36						
ILAR	**Eielson Array**	**41.41**	**330**	P	**P**	**13 42 17.1**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=124,slow=8.1,SNR=5.1						
	comp=Z,0.4nm,0.7s						
BORG	**Borgarnes**	**52.37**	**32**	LR	LR	14 03 29.7	
	comp=Z,36nm,18.6s,baz=267,slow=33						
NOA	**NORSAR Array B**	**67.48**	**30**	LR	LR	14 13 59.7	
	comp=Z,14nm,18.3s,baz=275,slow=35						
PZH	**PanZhiHua**	**115.63**	**341**	PKP	**PKiKP**	**13 53 12.0**	**+0.6**

IDC 17 13:36:44.8±410.0, 57.87N×29.61E, h0km, Error ellipse: s-maj=111.7km s-min=27.9km az=160.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.28**	**102**	*i*		14 06 45.0	
	0.2nm,1.3s,baz=285,slow=308,SNR=9.2						
I37NO	**I37NO**	**12.24**	**341**	*i*		14 46 20.0	
	baz=151,slow=320,SNR=3.9						
I26DE	**FREYUNG INFRAS**	**13.07**	**233**	*i*		14 57 30.0	
	baz=39,slow=324,SNR=0.9						

*IDC **17** 13:54:41.9±21.0, 31.19N×76.63E, h0km, mb3.5/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=715.1km s-min=50.8km az=85.0*
*NDI **17** 13:54:47.3±1.8, 31.97N×77.98E, h20km±13km, ML3.5*
ISC 17 13:54:50.0±1.5, 31.81N±0.06×78.07E±0.06, h25km±14km, n10, σ2s04/16, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHK	**Bhakra**	**1.47**	**255**	*e*Pg	**Pb**	**13 55 16.2**	**-0.4**
BHK				*i* Sg	**Sb**	**13 55 36.8**	**+2.0**
DDI	**Dehra Dun**	**1.48**	**181**	*e*P	**Pb**	**13 55 15.8**	**-1.1**
DDI				*e*S	**Sb**	**13 55 35.2**	**-0.2**
DDI				IAML		13 55 39.2	
	comp=N,753nm,0.4s						
DDI				IAML		13 55 42.2	
	comp=E,579nm,0.5s						
THN	**Thein Dam**	**2.09**	**288**	*e*Pg	**Pb**	**13 55 24.9**	**-2.4**
THN				*i* Sg	**Sb**	**13 55 53.1**	**+0.3**
JMU	**Jammu**	**2.83**	**289**	*e*x	**Pb**	**13 55 37.2**	**-2.7**
JMU				*i* Sg	**Sb**	**13 56 18.8**	**+4.7**
PTH	**Pithoragarh**	**2.92**	**140**	*e*Pg	**Pb**	**13 55 40.2**	**-1.2**
PTH				*i* Sg	**Sb**	**13 56 17.4**	**+0.7**
LGTI	**Lohaghat**	**3.01**	**141**	*e*P	**Pn**	**13 55 38.6**	**+2.5**
KUDL	**Kundal**	**3.90**	**201**	*e*P	**Pn**	**13 55 48.4**	**+0.1**
KUDL				*e*S	**Sn**	**13 56 32.5**	**-0.8**
MKAR	**Makanchi Array**	**15.31**	**11**	Pn	**P**	**13 58 28.9**	**-0.1**
	comp=E,0.2nm,0.3s,baz=201,slow=11,SNR=8.6						
	comp=E,0.4nm,0.4s						
WRA	**Warramunga Arr**	**74.52**	**126**	P	**P**	**14 06 26.3**	**-0.4**
	comp=E,0.3nm,0.7s,baz=319,slow=6.8,SNR=8.6						
	comp=E,0.3nm,0.7s						
ASAR	**Alice Springs**	**76.76**	**129**	P	**P**	**14 06 39.0**	**-0.5**
	comp=E,0.5nm,1.0s,baz=306,slow=5.8,SNR=2.3						
	comp=E,0.5nm,1.0s						

*SKHL **17** 14:03:16.5±0.7, 50.30N×142.50E, h12km±2km, mb5.2/10*
*MOS **17** 14:03:17.3±0.9, 50.39N×142.38E, h10km, mb4.7/34, MS3.8/12, Error ellipse: s-maj=8.6km s-min=5.0km az=82.0*
MOS Felt (III-IV) at Onor, (II-III) at Tymovskoye.
*IDC **17** 14:03:17.1±0.5, 50.37N×142.30E, h0km, mb4.3/22, mbtmp4.3/27, ML3.9/3, MS3.8/65, Error ellipse: s-maj=15.0km s-min=11.0km az=153.0*
*GCMT **17** 14:03:19.8±0.3, 50.50N±0.04×142.33E±0.04, h13km±1km, MW4.8/77, Moment Tensor Solution. s12,c13; s77,c107; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.46±.14; Mθθ-0.38±.08; Mϕϕ-1.08±.09; Mrθ-0.78±.27; Mϕθ 0.55±.05; Mϕr-0.59±.22; Best double couple: M0 1.66100×10^16 NP1:ϕs176.00000°, δ54.00000°, λ122.00000°. NP2: ϕs309.00000°, δ47.00000°, λ54.00000°. Principal axes: T 1.9330, Plg64.0000°, Azm146.0000°; N -0.5450, Plg25.0000°, Azm336.0000°; P -1.3900, Plg4.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **17** 14:03:19.8±1.0, 50.37N±0.07×142.4E±0.1, h14km±3km, mb4.6/62 Error ellipse: s-maj=11.5km s-min=9.8km az=119.0*
*BJI **17** 14:03:19.7±0.0, 50.53N×142.68E, h36km, mb4.5/29, mB5.0/16, ML5.3/1, Ms4.9/32, Ms7 4.7/31*
ISC 17 14:03:18.9±0.7, 50.38N±0.03×142.34E±0.04, h11km±4km, n432, σ1s24/411, mb4.6/95, MS3.8/66, 17C-9D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.52**	**23**	*e*PN	**Pg**	**14 03 28.2**	**-0.9**
TYV				*e*S	**Sg**	**14 03 35.7**	**-0.2**
TYV				pmax	pmax		
	comp=Z,2μm,0.7s						
TYV				pmax	pmax		
	comp=Z,11μm,2.7s						
TYV				smax	smax		
	comp=N,13μm,0.8s						
TYV				smax	smax		
	comp=E,18μm,0.8s						
TYV	**Tymovskoe**	**0.52**	**23**	*e*Pg	**Pg**	**14 03 28.1**	**-1.0**
TYV				AMB	AMB	14 03 31.1	
	comp=E,3μm,0.7s						
TYV				*e*Sg	**Sg**	**14 03 35.6**	**-0.3**
TYV				A	A	14 03 35.9	
	comp=E,13μm,0.6s						
TYV				A	A	14 03 35.9	
	comp=E,20μm,0.6s						
UGL	**Uglegorsk**	**1.32**	**188**	⇓*i*PN	**Pn**	**14 03 41.7**	**-1.5**
UGL				*e*S	**Sb**	**14 04 00.4**	**-0.1**
UGL				pmax	pmax		
	comp=Z,2μm,0.4s						
UGL				smax	smax		
	comp=E,8μm,0.4s						
UGL				smax	smax		
	comp=N,5μm,0.6s						
UGL	**Uglegorsk**	**1.32**	**188**	*e*Pg	**Pn**	**14 03 41.7**	**-1.5**
UGL				AMB	AMB	14 03 45.0	
	comp=N,2μm,0.4s						
UGL				*e*Sg	**Sb**	**14 03 59.8**	**-0.7**
UGL				A	A	14 04 05.1	
	comp=N,8μm,0.5s						
UGL				A	A	14 04 05.1	
	comp=N,9μm,0.5s						
NKL	**Nikolayevsk**	**2.96**	**340**	*e*PN	**Pn**	**14 04 05.3**	**-0.5**
NKL				*e*S	**Sn**	**14 04 40.8**	**-0.4**
NKL				pmax	pmax		
	comp=E,118nm,0.7s						
NKL				pmax	pmax		
	comp=N,152nm,0.5s						
NKL				pmax	pmax		
	comp=Z,334nm,0.5s						
NKL				smax	smax		
	comp=E,267nm,0.6s						
NKL				smax	smax		
	comp=N,476nm,0.7s						
NKL	**Nikolayevsk**	**2.96**	**340**	*e*P	**Pn**	**14 04 05.2**	**-0.5**
NKL				AMB	AMB	14 04 05.3	
	comp=N,334nm,0.5s						
NKL				*e*S	**Sn**	**14 04 40.8**	**-0.4**
NKL				A	A	14 04 42.7	
	comp=N,476nm,0.7s						
NKL				A	A	14 04 42.7	
	comp=N,267nm,0.7s						
OKH	**Okha**	**3.19**	**6**	⇓*i*PN	**Pn**	**14 04 09.6**	**+0.5**
OKH				*i* S	**Sn**	**14 04 49.5**	**+2.5**
OKH				pmax	pmax		
	comp=Z,394nm,0.5s						
OKH				smax	smax		
	comp=N,1μm,0.7s						
OKH	**Okha**	**3.19**	**6**	*e*P	**Pn**	**14 04 09.5**	**+0.5**
OKH				AMB	AMB	14 04 12.0	
	comp=N,400nm,0.5s						
OKH				*i* S	**Sn**	**14 04 47.3**	**+0.3**
OKH				A	A	14 04 50.9	
	comp=N,1μm,0.7s						
OKH				A	A	14 04 50.9	
	comp=N,1μm,0.7s						
YSS	**Yuzh-Sakhalins**	**3.44**	**175**	Pn	**Pn**	**14 04 12.3**	**-0.1**
YSS	**Yuzh-Sakhalins**	**3.44**	**175**	*e*PN	**Pn**	**14 04 12.0**	**-0.5**
YSS				*e*		14 05 00.5	
YSS				pmax	pmax		
	comp=Z,110nm,0.4s						
YSS				pmax	pmax		
	comp=Z,270nm,0.9s						
YSS				smax	smax		
	comp=N,410nm,0.7s						
YSS				smax	smax		
	comp=E,300nm,0.6s						
YSS				MLR	MLR		
	comp=N,2μm,13.0s						
YSS				MLR	MLR		
	comp=E,5μm,13.0s						
YSS				MLR	MLR		
	comp=Z,5μm,13.0s						
YSS	**Yuzh-Sakhalins**	**3.44**	**175**	*e*P	**Pn**	**14 04 11.5**	**-1.0**
YSS				*e*P	**Pb**	**14 04 16.1**	**-3.8**
YSS				*e*Pg	**Pg**	**14 04 23.9**	**-0.9**
YSS				AMB	AMB	14 04 24.0	
	comp=Z,300nm,0.6s						
YSS				*e*Sg	**Sg**	**14 05 11.0**	**+1.6**
YSS				A	A	14 05 17.9	
	comp=Z,480nm,0.8s						
YSS				A	A	14 05 17.9	
	comp=Z,300nm,0.8s						
GRNR	**Gornyy**	**3.79**	**278**	*e*PN	**Pn**	**14 04 17.5**	**+0.2**
GRNR				pmax	pmax		
	comp=E,20nm,0.3s						
GRNR				pmax	pmax		
	comp=N,6.0nm,0.2s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.3s						
GRNR				MLR	MLR		
	comp=E,3μm,11.0s						
GRNR				MLR	MLR		
	comp=N,4μm,14.0s						
GRNR				MLR	MLR		
	comp=Z,3μm,19.0s						
GRNR	**Gornyy**	**3.79**	**278**	*e*P	**Pn**	**14 04 17.5**	**+0.2**
TEY	**Ternei**	**6.60**	**218**	⇑*e*PN	**Pn**	**14 04 56.8**	**+1.0**
TEY				*e*		14 06 17.5	
TEY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TEY	**Ternei**	**6.60**	**218**	*e*P	**Pn**	**14 04 56.8**	**+1.0**
TEY				AMB	AMB	14 04 57.9	
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**6.95**	**265**	Pn	**Pn**	**14 05 01.3**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=62,slow=14,SNR=7.3						
KLR				Lg	Lg	14 06 56.1	
	comp=Z,6.6nm,0.3s,baz=342,slow=18,SNR=3.3						
KLR				LR	LR	14 08 11.8	
	comp=Z,1μm,20.5s,baz=80,slow=42						
	comp=Z,2.3nm,0.3s						
KLR	**Kul'dur**	**6.95**	**265**	*de*PN	**Pn**	**14 05 02.0**	**+1.4**
KLR				MLR	MLR		
	comp=Z,3μm,13.0s						
USA0B	**Ussuriysk Arra**	**9.36**	**233**	Pn	**Pn**	**14 05 34.7**	**+1.0**
USA0B	**Ussuriysk Arra**	**9.36**	**233**	PN	**Pn**	**14 05 34.7**	**+1.0**
USRK	**Ussuriysk Ar.**	**9.36**	**233**	Pn	**Pn**	**14 05 32.2**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=39,slow=16,SNR=25						
USRK				Lg	Lg	14 08 10.4	
	comp=Z,3.0nm,0.3s,baz=61,slow=33,SNR=6.9						
USRK				LR	LR	14 08 48.8	
	comp=Z,1μm,18.0s,baz=196,slow=36						
	comp=Z,5.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.36**	**233**		**Pn**	**14 05 34.8**	**+1.1**
USRK	**Ussuriysk Ar.**	**9.36**	**233**	PN	**Pn**	**14 05 34.8**	**+1.1**
ZEA	**Zeya**	**9.88**	**296**	*e*PN	**Pn**	**14 05 45.4**	**+4.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=E,500nm,6.0s						
ZEA				MLR	MLR		
	comp=N

YAK MLR MLR
comp=E,295nm,11.0s
MAJO Matsushiro 14.15 194⇑ *e*P **Pn 14 06 39.9 +0.6**
MJAR Matsushiro Arr 14.15 194 Pn **Pn 14 06 39.6 +0.4**
comp=E,2.1nm,1.0s,baz=17,slow=13,SNR=7.2
MJAR LR LR 14 12 50.5
comp=E,260nm,19.2s,baz=22,slow=41
INU Inuyama 15.52 196 P **P 14 07 00.6 -1.3**
SNY Shenyang 15.54 244 ⇑P **P 14 07 03.4 +1.2**
SNY S **Sn 14 09 47.3 -2.6**
SNY pmax pmax
comp=E,12nm,0.7s
SNY LR LR
comp=E,2µm,10.2s
SNY LR LR
comp=E,880nm,11.8s
SNY LR LR
comp=E,2µm,16.3s
SEHB SEOHWA 15.72 225 P **P 14 07 04.2 -0.1**
SEHB IAmb IAmb 14 07 11.9
comp=Z,46nm,1.4s
KS19 Wonju Array Si 16.53 224 P **P 14 07 13.1 -0.1**
KSRS Korea Array 16.54 224 Pn **P 14 07 12.2 -1.1**
comp=Z,2.7nm,0.7s,baz=37,slow=11,SNR=19
KSRS LR LR 14 13 20.9
comp=Z,744nm,18.9s,baz=35,slow=36
KSAR Wonju Array Be 16.57 224 P **P 14 07 12.7 -0.9**
KSAR Wonju Array Be 16.57 224 P **P 14 07 12.7 -0.9**
KSCHJ Chungju 17.00 223 P **P 14 07 18.1 -0.4**
KSCHJ IAmb IAmb 14 07 23.2
comp=Z,64nm,1.5s
INCN Inchon 17.11 227 P **P 14 07 19.4 -0.2**
INCN Inchon 17.11 227 P **P 14 07 19.4 -0.2**
INCN pmax pmax
comp=Z,19nm,1.0s
TJN Taejon 17.68 223 P **P 14 07 26.6 +0.7**
TJN IAmb IAmb 14 07 54.0
comp=Z,76nm,1.4s
TJN Taejon 17.68 223 P **P 14 07 26.7 +0.7**
TJN pmax pmax
comp=Z,76nm,1.4s
BOD Bodaibo 18.10 305 *e*P **P 14 07 31.0 +0.6**
BOD pmax pmax
comp=Z,10.0nm,1.8s
NAWB Namwon 18.48 222 **Pn 14 07 35.0 +0.2**
NAWB IAmb IAmb 14 07 41.3
comp=Z,54nm,1.5s
XLT XiLinHaoTe 18.94 260 *e*P **Pn 14 07 43.5 +3.0**
XLT sP sP 14 07 52.8 +8.3
XLT S **S 14 11 17.9 +2.9**
XLT sS sS 14 11 25.5 +5.6
XLT pmax pmax
comp=Z,12nm,1.0s
XLT pmax pmax
comp=Z,530nm,7.4s
XLT LR LR
comp=Z,2µm,11.5s
XLT LR LR
comp=Z,3µm,12.7s
SHEM Shemya Is, Ala 19.80 71 LR LR 14 15 01.9
comp=Z,361nm,21.5s,baz=299,slow=36
JSU Suzuyama 20.84 210 P **P 14 08 01.1 +0.6**
BJT Baijiatuan 21.05 251 P **P 14 08 04.2 +1.4**
BJT Baijiatuan 21.05 251 P **P 14 08 04.2 +1.4**
BJT pmax pmax
comp=Z,5.0nm,0.6s
BILL Bilibino 21.27 25 *e*P **P 14 08 07.8 +2.9**
BILL *e*S Sn 14 12 04.5 -3.4
BILL pmax pmax
comp=Z,7.0nm,0.4s
BILL MLR MLR
comp=Z,279nm,17.0s
TIXI Tiksi 22.20 349 LR LR 14 18 09.6
comp=Z,138nm,21.0s,baz=178,slow=40
TIXI Tiksi 22.20 349 P **P 14 08 14.2 -0.7**
TIXI IAmb IAmb 14 08 22.0
comp=Z,13nm,0.7s
TIXI Tiksi 22.20 349⇑ *e*P **P 14 08 14.9 +0.1**
TIXI pmax pmax
comp=Z,26nm,1.7s
TIXI MLR MLR
comp=Z,184nm,15.0s
ULN Ulaanbaatar 23.10 277 P **P 14 08 24.9 +0.2**
ULN Ulaanbaatar 23.10 277⇓ *e*P **P 14 08 25.6 +0.9**
ULN pmax pmax
comp=Z,13nm,1.3s
JCJ Chichijima 23.25 180 LR LR 14 17 26.2
comp=Z,117nm,21.9s,baz=60,slow=36
SONM Songino Array 23.53 278 P **P 14 08 29.2 +0.2**
comp=Z,3.0nm,1.0s,baz=73,slow=9.8,SNR=14
SONM LR LR 14 18 31.1
comp=Z,812nm,18.2s,baz=75,slow=39
comp=Z,3.0nm,1.0s
SONM Songino Array 23.53 278 P **P 14 08 29.8 +0.8**
HNS HongShan 23.61 247 ⇓P **P 14 08 32.3 +2.6**
HNS S **S 14 12 49.0 +5.1**
HNS sS Sn 14 13 00.3 -4.1
HNS SS SnSn 14 13 36.3 +16
HNS LR LR
comp=Z,720nm,15.9s
HNS LR LR
comp=Z,520nm,16.6s
HNS LR LR
comp=Z,800nm,13.9s
IRK Irkutsk 23.69 289 *e*P **P 14 08 30.6 +0.2**
IRK pmax pmax
comp=Z,33nm,2.5s
ZAK Zakamensk 24.71 285 *e*P **P 14 08 41.2 +1.1**
ZAK pmax pmax
comp=Z,18nm,1.8s
NJ2 Nanjing 25.27 232 *e*P **P 14 08 47.0 +2.0**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 LR LR
comp=Z,2µm,13.7s
NJ2 LR LR
comp=Z,810nm,10.9s
NJ2 LR LR
comp=Z,2µm,14.7s
NIKH Nikolski High 29.91 66 P **P 14 09 28.9 +2.5**
baz=285
LZH Lanzhou 31.09 258 *e*P P 14 09 32.4 -4.9
LZH pP pP 14 09 39.5 -1.1
LZH pmax pmax
comp=Z,18nm,1.5s
GTA Gaotai 31.65 266 *e*P **P 14 09 43.8 +1.7**
GTA pmax pmax
comp=Z,5.0nm,1.4s
GTA pmax pmax
comp=Z,87nm,4.5s
GTA LR LR
comp=Z,610nm,12.0s
GTA LR LR
comp=Z,780nm,12.4s
GTA LR LR
comp=Z,930nm,13.1s
NRIK Noril'sk 31.87 327 LR LR 14 23 30.3
comp=Z,92nm,19.1s,baz=86,slow=38
NRIK Noril'sk 31.87 327 P **P 14 09 44.4 +0.8**
NRIK IAmb IAmb 14 09 48.5
comp=Z,5.4nm,1.1s
NRIK Noril'sk 31.87 327 P **P 14 09 44.4 +0.8**
NRIK pmax pmax
comp=Z,5.0nm,1.1s
O16K Kokwok River B 34.27 51 P **P 14 10 05.5 +0.9**
baz=281
ZALV Zalesovo Beam 34.63 299 P **P 14 10 07.7 -0.1**
comp=Z,0.8nm,0.6s,baz=46,slow=4.2,SNR=2.4
ZALV PcP **PcP 14 12 41.4 -0.4**
comp=Z,1.5nm,0.6s,baz=83,slow=0.9,SNR=5.3
ZALV LR LR 14 25 13.5
comp=Z,376nm,18.3s,baz=66,slow=38
comp=Z,0.8nm,0.6s
TTA Tatalina 34.70 45 P **P 14 10 09.1 +0.7**
baz=278
O17K Koliganek Bris 34.73 51 P **P 14 10 10.2 +1.6**
baz=282
N18K Kilae Creek 35.14 49 P **P 14 10 13.5 +1.4**
baz=281
F21K Alatna River 35.30 37 P **P 14 10 13.6 +0.1**
baz=274,SNR=9.2
IMAR Indian Mountai 35.30 40 P **P 14 10 13.2 -0.3**
L19K White Mountain 35.34 46 P **P 14 10 14.1 +0.2**
G21K Allakaket 35.35 39 P **P 14 10 13.8 -0.1**
baz=275
J20K Nowinta River 35.35 43 **P 14 10 13.9 0.0**
J20K IAmb IAmb 14 10 16.4
comp=Z,7.4nm,0.9s
J20K Nowinta River 35.35 43 P **P 14 10 14.6 +0.7**
baz=278
K20K Telida 35.50 44 P **P 14 10 15.6 +0.4**
K20K IAmb IAmb 14 10 18.4
comp=Z,8.9nm,1.2s
K20K Telida 35.50 44 P **P 14 10 15.6 +0.4**
baz=279
M19K Big River Lodg 35.61 47 P **P 14 10 17.1 +0.9**
baz=281
H21K Melozitna Rive 35.72 40 P **P 14 10 17.8 +0.7**
H21K IAmb IAmb 14 10 20.7
comp=Z,14nm,1.4s
H21K Melozitna Rive 35.72 40 P **P 14 10 17.8 +0.7**
baz=277
F22K John River 35.78 37 P **P 14 10 17.8 +0.3**
baz=275,SNR=6.3
O19K Port Alsworth 36.00 49 P **P 14 10 20.8 +1.3**
baz=283
I21K Tanana 36.13 41 P **P 14 10 20.7 +0.1**
I21K IAmb IAmb 14 10 36.7
comp=Z,11nm,1.4s
I21K Tanana 36.13 41 P **P 14 10 20.8 +0.3**
baz=278
C23K Itkillik River 36.18 33 P **P 14 10 20.1 -0.9**
baz=273
CHUM Lake Minchumin 36.19 43 P **P 14 10 22.3 +1.2**
baz=280
M20K Styx River 36.20 46 P **P 14 10 22.6 +1.2**
baz=282
D23K Nanushuk River 36.22 34 P **P 14 10 20.9 -0.4**
baz=274
H22K Ishtalitna Cre 36.27 39 P **P 14 10 22.7 +0.8**
baz=278,SNR=8.9
CAST Castle Rocks 36.37 44 P **P 14 10 23.7 +0.9**
baz=281
PPLA Purkeypile 36.43 45 P **P 14 10 24.1 +0.8**
baz=281
TOLK Toolik Lake Re 36.65 35 P **P 14 10 25.3 +0.3**
baz=276
P19K Oil Pt 36.67 50 P **P 14 10 26.4 +1.1**
baz=285
MLY Manley 36.67 41 P **P 14 10 25.9 +0.6**
baz=280
G23K Bananza Creek 36.70 38 P **P 14 10 26.0 +0.5**
baz=278,SNR=5.7
GOMU GeErMu 36.74 266 P **P 14 10 22.9 -3.6**
GOMU pP pP 14 10 29.3 -0.6
GOMU sP sP 14 10 30.8 -0.5
GOMU PcP PcP 14 12 40.4 -8.4
GOMU S **ScP 14 16 40.5 +5.2**
GOMU GeErMu 36.74 266 ScS ScS 14 20 28.5 -14
GOMU pmax pmax
comp=Z,2.0nm,0.6s
GOMU pmax pmax
comp=Z,88nm,5.1s
GOMU LR LR
comp=N,460nm,12.5s
GOMU LR LR
comp=E,520nm,12.5s
GOMU LR LR
comp=Z,640nm,12.1s
GUMO Guam 36.75 176 LR LR 14 24 55.7
comp=Z,88nm,20.4s,baz=252,slow=35
SPCR Spurr Chakacha 36.78 47 P **P 14 10 27.0 +0.7**
baz=283
C24K Franklin Bluff 36.86 33 P **P 14 10 26.7 0.0**
baz=275
D24K Happy Valley 36.87 34 P **P 14 10 26.4 -0.4**
baz=276
H23K Yukon River 37.03 39 P **P 14 10 28.8 +0.5**
H23K IAmb IAmb 14 10 32.3
comp=Z,16nm,1.2s
H23K Yukon River 37.03 39 P **P 14 10 28.7 +0.4**
baz=279,SNR=10
E24K Your Creek 37.11 36 P **P 14 10 28.9 -0.1**
baz=277,SNR=8.4
TRF Thorofare Moun 37.16 43 P **P 14 10 29.1 -0.5**
baz=282
I23K Minto, Yukon-K 37.22 40 P **P 14 10 30.0 +0.1**
baz=280
CAPN Captain Cook N 37.38 48 P **P 14 10 31.6 +0.3**
baz=285
F24K Squaw Lake 37.41 36 P **P 14 10 31.3 -0.3**
baz=279
NEA2 Nenana 37.45 41 P **P 14 10 31.8 0.0**
NEA2 Nenana 37.45 41 P **P 14 10 32.1 +0.2**
baz=281
MCK McKinley 37.69 43 **P 14 10 34.0 +0.1**
MCK IAmb IAmb 14 10 37.3
comp=Z,14nm,1.1s
MCK McKinley 37.69 43 P **P 14 10 34.0 +0.1**
MCK pmax pmax
comp=Z,14nm,1.1s
MCK McKinley 37.69 43 P **P 14 10 35.0 +1.1**
baz=283
H24K Noodor Dome 37.70 39 P **P 14 10 34.7 +0.6**
H24K Noodor Dome 37.70 39 P **P 14 10 34.2 +0.2**
baz=281
G24K Hadweenzic Riv 37.71 38 P **P 14 10 34.4 +0.4**
baz=280
D25K Kavik River 37.71 33 P **P 14 10 33.3 -0.8**
baz=278,SNR=8.9
BRSE Bradley Lake S 37.86 49 P **P 14 10 36.6 +1.2**
baz=286
WRH Wood River Hil 37.89 41 P **P 14 10 35.8 +0.3**
WRH IAmb IAmb 14 10 39.1
comp=Z,10nm,0.9s
TCOL CIGO, UAF Yank 37.90 41 P **P 14 10 36.7 +1.1**
baz=282
COLA College 37.91 41 *c e*P **P 14 10 35.9 +0.3**
RC01 Rabbit Creek A 37.97 47 P **P 14 10 37.7 +1.4**
baz=285
POKR Poker Plat Res 38.03 40 P **P 14 10 38.1 +1.4**
baz=282
WAT1 Susitna Watana 38.07 44 P **P 14 10 37.2 0.0**
baz=284
E25K Arctic Village 38.19 35 P **P 14 10 38.1 +0.1**
baz=280
F25K Christian Rive 38.25 36 P **P 14 10 39.2 +0.5**
baz=280
IL31 38.33 41 P **P 14 10 39.1 -0.1**
IL31 IAmb IAmb 14 10 40.5
comp=Z,5.1nm,0.8s
ILAR Eielson Array 38.33 41 P **P 14 10 39.2 -0.1**
comp=Z,3.7nm,0.6s,baz=279,slow=8.3,SNR=46
ILAR PcP **PcP 14 12 51.5 -1.3**
comp=Z,0.6nm,0.6s,baz=282,slow=3.3,SNR=4.6
ILAR LR LR 14 26 23.6
comp=Z,92nm,20.1s,baz=288,slow=36
comp=Z,3.7nm,0.6s
ILAR Eielson Array 38.33 41 P **P 14 10 39.7 +0.4**
SEW Seward 38.38 49 P **P 14 10 40.7 +1.1**
baz=287
HDA Harding Lake 38.39 41 P **P 14 10 40.2 +0.4**
baz=283
SML Sawmill 38.43 46 P **P 14 10 40.7 +0.5**
baz=286
H25K Birch Creek 38.44 38 P **P 14 10 40.9 +0.7**
baz=282
KNK Knik Glacier 38.48 46 P **P 14 10 41.7 +1.1**
baz=286
WAT6 Susitna Watana 38.49 44 P **P 14 10 41.3 +0.5**
baz=285
DHY Denali Highway 38.53 43 P **P 14 10 41.7 +0.6**
baz=285
C27K Jago River 38.60 33 P **P 14 10 41.7 +0.3**
baz=280
PWL Port Wells 38.69 47 P **P 14 10 43.0 +0.6**
baz=287
PRP Porcupine Dome 38.72 39 P **P 14 10 43.5 +0.7**
baz=283
F26K Sheenjek River 38.80 36 P **P 14 10 43.4 +0.2**
baz=282
MK31 Makanchi Array 38.94 289 P **P 14 10 44.8 +0.2**
MK31 Makanchi Array 38.94 289 *c i*P **P 14 10 45.3 +0.7**
MKAR Makanchi Array 38.94 289 P **P 14 10 45.4 +0.7**
MKAR LR LR 14 26 48.8
comp=Z,122nm,19.2s,baz=62,slow=36
comp=Z,3.6nm,0.7s
MKAR Makanchi Array 38.94 289 P **P 14 10 44.8 +0.2**
J25K Salcha River, 39.00 41 P **P 14 10 44.9 -0.1**
baz=284
G26K Porcupine Rive 39.09 37 P **P 14 10 45.6 0.0**
baz=283,SNR=9.0
MAKZ Makanchi 39.12 289 P **P 14 10 46.5 +0.3**
MAKZ Makanchi 39.12 289 P **P 14 10 46.5 +0.3**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 39.36 296 P **P 14 10 48.1 +0.1**
KURK IAmb IAmb 14 10 49.0
comp=Z,7.5nm,0.8s
KURK Kurchatov 39.36 296 *c i*P **P 14 10 48.4 +0.4**
KURK pmax pmax
comp=Z,13nm,1.3s
PAX Paxson 39.39 43 P **P 14 10 48.6 +0.3**
baz=286
KURBB Kurchatov Arra 39.45 296 P **P 14 10 49.2 +0.4**
comp=Z,5.6nm,0.6s,baz=69,slow=8.8,SNR=46
KURBB LR LR 14 27 56.6
comp=Z,190nm,20.1s,baz=38,slow=38
comp=Z,5.6nm,0.6s
RIDG Independent Ri 39.45 42 P **P 14 10 48.4 -0.4**
baz=286
E27K Coleen River 39.63 35 P **P 14 10 48.7 -1.5**
baz=283
HARP HAARP 39.70 44 P **P 14 10 50.9 +0.1**
baz=287
I26K Coal Creek Min 39.74 39 P **P 14 10 50.7 -0.3**
baz=285
SCRK Sand Creek 39.75 41 P **P 14 10 50.5 -0.8**
baz=286
J26L Joseph Creek 39.78 41 P **P 14 10 50.8 -0.8**
baz=286
G27K Doyon Strip 39.94 37 P **P 14 10 52.6 -0.2**
baz=285,SNR=7.9
H27K Steamboat Moun 40.14 38 P **P 14 10 54.2 -0.2**
baz=285
N25K Chitina, Valde 40.19 45 P **P 14 10 55.6 +0.7**
baz=288
I27K Kandik River 40.28 39 P **P 14 10 55.1 -0.5**
baz=286
BMRM Bremner River 40.39 46 P **P 14 10 57.1 +0.5**
baz=289
K27K Chicken 40.54 41 P **P 14 10 57.8 0.0**
baz=287
M26K Nabesna, AK 40.65 44 P **P 14 10 59.7 +1.0**
baz=289
EGAK Eagle 40.70 40 P **P 14 10 58.6 -0.3**
baz=287,SNR=11
L27K Beaver Creek, 40.95 42 P **P 14 11 00.5 -0.7**
MCARA McCarthy VSAT 40.98 45 P **P 14 11 02.2 +0.8**
baz=289,SNR=5.4
MCARA IAmb IAmb 14 11 05.6
comp=Z,27nm,1.3s
MCARA McCarthy VSAT 40.98 45 P **P 14 11 01.2 -0.1**
baz=290
M27K Edge Creek, AK 41.16 43 P **P 14 11 02.4 -0.6**
baz=289
BVCY Beaver Creek 41.59 43 P **P 14 11 06.2 -0.2**
baz=290
DAWY Dawson 41.65 40 P **P 14 11 06.9 0.0**
baz=289
CTG Chitna Glacier 41.89 45 P **P 14 11 09.2 +0.2**
baz=291
EPYK Eagle Plains 41.95 37 P **P 14 11 08.7 -0.6**
baz=289
YUK3 Moose Creek 41.99 44 P **P 14 11 09.0 -0.9**
baz=291
O28M Mount Upton 42.48 45 P **P 14 11 13.5 -0.5**
baz=292
INK Inuvik 42.48 33 P **P 14 11 14.1 +0.6**
comp=Z,4.3nm,0.6s,baz=292,slow=7.1,SNR=12
INK LR LR 14 31 17.6
comp=Z,289nm,18.9s,baz=290,slow=40
comp=Z,4.3nm,0.6s
INK Inuvik 42.48 33 P **P 14 11 11.8 -1.7**
baz=289
M29M Somme Creek 42.62 42 P **P 14 11 15.4 +0.5**
baz=292
YUK4 Talbot Arm 42.95 44 P **P 14 11 17.9 +0.1**
baz=293
LSA Lhasa 43.30 261 P **P 14 11 21.8 +0.6**
LSA IAmb IAmb 14 11 26.6
comp=Z,6.6nm,0.8s
LSA Lhasa 43.30 261 P **P 14 11 21.8 +0.6**
LSA pmax pmax
comp=Z,7.0nm,0.8s
O29M Mount Kennedy 43.40 45 P **P 14 11 21.6 +0.4**
baz=294
HYT Haines Junctio 43.67 44 P **P 14 11 23.9 +0.5**
baz=294
P29M Windy Craggy 44.06 46 P **P 14 11 26.7 +0.3**
baz=295,SNR=6.3
N31M Braeburn, Yuko 44.16 43 P **P 14 11 26.9 -0.3**
baz=294
P30M Million Dollar 44.21 45 P **P 14 11 27.8 +0.1**
baz=295
O30N Mendenhall 44.33 44 P **P 14 11 28.8 +0.2**
baz=295
M31M Drury Creek, Y 44.46 42 P **P 14 11 29.6 0.0**
baz=295
PLBC Pleasant Camp 44.77 46 P **P 14 11 32.6 +0.5**
baz=296
FARO Faro, Yukon 44.89 41 P **P 14 11 33.1 0.0**
baz=296
WHY Whitehorse 44.91 44 P **P 14 11 33.3 -0.1**
baz=296
SKAG Skagway 45.24 45 P **P 14 11 36.1 +0.3**
baz=297
C36M Paulatuk 45.25 30 P **P 14 11 34.5 -1.2**
baz=296
DAV Davao City (W) 45.39 204 LR LR 14 29 31.3
comp=Z,113nm,18.6s,baz=352,slow=35
MMPY Sheldon Lake, 45.59 40 P **P 14 11 38.2 -0.5**
baz=297
P33M Teslin, Yukon 46.03 44 P **P 14 11 41.2 -0.9**
baz=298
CHTO Chiang Mai 46.62 244 P **P 14 11 47.7 +0.6**
CHTO Chiang Mai 46.62 244 P **P 14 11 47.7 +0.6**
CHTO pmax pmax
comp=Z,18nm,1.5s
CMAR Chiang Mai Arr 46.90 243 P **P 14 11 49.5 +0.2**
comp=Z,0.5nm,0.3s,baz=25,slow=7.4,SNR=8.0
CMAR LR LR 14 33 35.8
comp=Z,293nm,19.1s,baz=50,slow=39
comp=Z,0.5nm,0.3s
CMAR Chiang Mai Arr 46.90 243 P **P 14 11 50.3 +1.0**
R33M Jennings River 47.24 44 P **P 14 11 51.7 0.0**
baz=300
ARU Arti 47.37 311 LR LR 14 33 26.4
comp=Z,126nm,18.6s,baz=61,slow=38
ARU Arti 47.37 311 *c i*P **P 14 11 52.6 +0.1**
ARU 14 13 40.6
ARU S **S 14 18 48.8 +2.8**
ARU SS **SS 14 22 11.9 -1.0**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU MLR MLR
comp=Z,101nm,13.0s
SPITS Spitsbergen Ar 47.61 347 LR LR 14 34 28.0
comp=Z,53nm,19.0s,baz=340,slow=39
KK31 Karatay Array 47.99 291 P **P 14 11 57.7 +0.1**
KK31 Karatay Array 47.99 291 P **P 14 11 57.7 +0.1**
KK31 pmax pmax
comp=Z,3.0nm,1.2s
KKAR Karatay Array 47.99 291 P **P 14 11 57.6 0.0**
KKAR Karatay Array 47.99 291 P **P 14 11 57.6 0.0**
WRAK Wrangell Islan 48.11 48 P **P 14 11 58.2 -0.1**
baz=301
DLBC Dease Lake 48.14 45 LR LR 14 32 18.8
comp=Z,70nm,21.8s,baz=300,slow=36
DLBC Dease Lake 48.14 45 P **P 14 11 58.2 -0.5**
baz=301
CRAG Craig 48.23 49 P **P 14 11 59.5 +0.3**
baz=301
T35M Bob Quinn 48.80 47 P **P 14 12 04.2 +0.5**
baz=302
RES Resolute Bay 49.57 17 LR LR 14 37 24.0
comp=Z,54nm,18.2s,baz=34,slow=41
KIRV Kirov 50.41 317⇓ *e*P **P 14 12 16.6 +0.8**
ABKAR Akbulak array 50.52 303 P **P 14 12 16.6 -0.2**
ABKAR IAmb IAmb 14 12 19.4
comp=Z,12nm,1.4s
AKTO Aktyubinsk 50.87 305 LR LR 14 35 56.6
comp=Z,164nm,18.6s,baz=44,slow=38
CHGR Chuyangaron 51.47 287 P **P 14 12 24.1 -0.1**
CHGR Chuyangaron 51.47 287 P **P 14 12 24.1 -0.1**
CHGR pmax pmax
comp=Z,15nm,0.8s
ARCES ARCESS Array B 51.87 336 P **P 14 12 27.1 +0.4**
comp=Z,2.0nm,0.9s,baz=17,slow=8.9,SNR=7.0

ARCES LR LR 14 37 01.5
comp=Z,62nm,18.3s,baz=30,slow=39
comp=Z,2.0nm,0.9s
SIJI Sorong 51.93 194 LR LR 14 31 55.3
comp=Z,74nm,21.8s,baz=109,slow=33
NEEM North Greenlan 52.17 4 *i* P **P 14 12 29.1 -0.1**
NEEM IAmb IAmb 14 12 34.1
comp=Z,9.9nm,0.8s
YKA Yellowknife Ar 52.17 35 P **P 14 12 28.4 -0.7**
comp=Z,1.7nm,0.6s,baz=311,slow=7.4,SNR=4.5
YKA LR LR 14 35 18.9
comp=Z,65nm,21.9s,baz=320,slow=37
comp=Z,1.7nm,0.6s
BBB Bella Bella 52.52 51 LR LR 14 35 01.9
comp=Z,105nm,19.7s,baz=288,slow=36
SBUM Sibu 54.13 218 P **P 14 12 45.2 +1.2**
SBUM IAmb IAmb 14 12 56.7
comp=Z,8.2nm,1.1s
BELG Belogornoye 54.91 312 LR LR 14 36 15.3
comp=Z,86nm,18.2s,baz=301,slow=36
BELG Belogornoye 54.91 312⇑ *e*P **P 14 12 49.1 -0.1**
BELG pmax pmax
comp=Z,3.0nm,1.5s
DBG Daneborg 55.04 354 *i* P P 14 12 57.0 +7.1
DBG IAmb IAmb 14 13 38.2
comp=Z,223nm,2.0s
UPNV Upernavik 56.46 7 *i* P **P 14 12 58.4 -1.7**
UPNV IAmb IAmb 14 13 00.3
comp=Z,9.1nm,0.7s
SUMG Summit 57.34 0 P **P 14 13 07.6 +0.8**
SUMG Summit 57.34 0 P **P 14 13 07.6 +0.8**
SUMG pmax pmax
comp=Z,14nm,1.2s
SUMG Summit 57.34 0 *i* P **P 14 13 06.8 0.0**
SUMG IAmb IAmb 14 13 11.5
comp=Z,5.4nm,0.7s
FINES FINESS Array B 57.48 329 P **P 14 13 06.8 -0.7**
comp=Z,4.8nm,0.7s,baz=47,slow=8.4,SNR=11
FINES LR LR 14 42 02.6
comp=Z,82nm,18.7s,baz=48,slow=40
comp=Z,4.8nm,0.7s
OBN Obninsk 58.08 319 *e*P **P 14 13 10.4 -1.3**
OBN *e**PP **pP 14 13 14.9 -0.3**
OBN *e**SP **sP 14 13 16.9 +0.3**
OBN *e* 14 14 00.6
OBN *e* 14 15 18.8
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,106nm,15.0s
KAPI Kappang 58.52 207 LR LR 14 40 21.3
comp=Z,32nm,18.1s,baz=52,slow=38
GEYT Alibeck 58.59 293 LR LR 14 40 16.5
comp=Z,136nm,18.1s,baz=82,slow=38
PSI Prapat 59.88 233 LR LR 14 41 33.4
comp=Z,120nm,20.1s,baz=6.5,slow=38
I03D Drain, OR 60.40 56 P **P 14 13 28.2 +0.2**
baz=313
G05D Wamic, OR 60.42 54 P **P 14 13 28.5 +0.4**
baz=313
NEW Newport 60.44 49 LR LR 14 38 29.8
comp=Z,97nm,21.9s,baz=306,slow=35
NEW Newport 60.44 49 P **P 14 13 27.9 -0.4**
baz=314
J01E Myrtle Point 60.45 57 P **P 14 13 28.6 +0.2**
baz=313
I04A Tendick Farm, 60.83 56 P **P 14 13 31.1 0.0**
baz=313
ICESG Greenland Ices 60.84 1 *i* P **P 14 13 31.0 0.0**
ICESG IAmb IAmb 14 13 33.5
comp=Z,14nm,1.1s
I05D Terrebonne, OR 61.02 55 P **P 14 13 32.4 0.0**
baz=313
L02F Cave Junction 61.36 58 P **P 14 13 35.4 +0.9**
baz=313
J04D Umpqua Nationa 61.37 56 P **P 14 13 35.1 +0.2**
baz=314
HNR Honiara 61.51 160 LR LR 14 38 44.1
comp=Z,50nm,20.1s,baz=310,slow=35
J05D Fort Rock, OR 61.80 55 P **P 14 13 37.6 -0.2**
baz=314,SNR=5.9
L04D Klamath Falls 61.97 57 P **P 14 13 38.8 -0.1**
baz=314
F10A Beach Ranch, E 61.98 51 P **P 14 13 38.9 +0.1**
F10A IAmb IAmb 14 13 41.1
comp=Z,5.7nm,1.0s
MNK Minsk 62.00 323 *i* P P 14 13 30.8 -7.9
MNK *i* S **S 14 21 56.0 -6.7**
MNK *i* 14 23 22.7
MNK *i* SS **SS 14 25 59.7 -4.5**
MNK *i* SSS SSS 14 28 50.6
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,8.0nm,0.8s
MNK pmax pmax
comp=N,5.0nm,0.9s
MNK MLR MLR
comp=E,59nm,19.0s
MNK MLR MLR
comp=Z,118nm,15.0s
MNK MLR MLR
comp=N,13nm,17.0s
MNK Minsk 62.00 323 *i* P P 14 13 30.8 -7.8
comp=E,2.0nm,0.8s
MNK *i* P P 14 13 30.8 -7.8
comp=N,5.0nm,0.8s
MNK *i* P P 14 13 30.8 -7.8
comp=Z,8.0nm,0.8s,baz=221
MNK *i* PcP PcP 14 14 11.2 -8.0
MNK *i* PP **PP 14 15 47.2 -7.4**
MNK *i* PPP PPP 14 17 13.1
MNK *i* S **S 14 21 56.0 -6.7**
MNK *i* SS **SS 14 25 59.7 -4.5**
MNK *i* SSS SSS 14 28 50.6
MNK *i* LQ LQ 14 36 00.1
MNK *i* LR LR 14 40 43.3
MNK *i* LRM MLR 14 42 39.8
comp=E,59nm,19.2s
MNK *i* LRM MLR 14 42 57.1
comp=Z,118nm,15.3s
MNK *i* LRM MLR 14 43 01.6
comp=N,13nm,17.2s
YBH Yreka Blue Hor 62.09 58 LR LR 14 39 47.0
comp=N,50nm,18.3s,baz=323,slow=35
NB2 NORSAR Subarra 62.21 336 P **P 14 13 39.9 -0.2**
comp=Z,4.0nm,1.0s,baz=35,slow=6.2
NOA NORSAR Array B 62.21 336 P **P 14 13 39.9 -0.2**
comp=Z,1.9nm,0.7s,baz=33,slow=6.5,SNR=11
NOA LR LR 14 44 17.4
comp=Z,63nm,18.4s,baz=25,slow=40
comp=Z,1.9nm,0.7s
HFS Hagfors 62.29 334 LR LR 14 44 56.2
comp=Z,51nm,18.5s,baz=347,slow=40
BATI Baumata 62.50 201 LR LR 14 43 51.5
comp=Z,68nm,18.8s,baz=201,slow=39
SFJD Kangerlussuaq 62.53 6 LR LR 14 41 57.1
comp=Z,51nm,20.0s,baz=336,slow=37
MSO Missoula 62.98 48 P **P 14 13 45.3 -0.2**
MSO Missoula 62.98 48 P **P 14 13 44.8 -0.8**
baz=316
KIV Kislovodsk 63.01 307 *e*P **P 14 13 47.4 +1.7**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,96nm,17.0s
KBZ Khabaz 63.06 307 P **P 14 13 44.7 -1.2**
comp=Z,2.3nm,0.8s,baz=97,slow=2.9,SNR=5.2
KBZ LR LR 14 44 26.0
comp=Z,147nm,18.8s,baz=44,slow=39
comp=Z,2.3nm,0.8s
KBZ Khabaz 63.06 307⇓ *e*P **P 14 13 47.2 +1.3**
KBZ pmax pmax
comp=Z,7.0nm,1.3s
DY2G Dye2 63.29 4 *i* P **P 14 13 45.8 -1.5**
DY2G IAmb IAmb 14 13 50.7
comp=Z,9.7nm,0.8s
FRB Frobisher Bay 63.66 15 LR LR 14 45 26.5
comp=Z,106nm,18.1s,baz=355,slow=40
WVOR Wild Horse Val 63.76 55 P **P 14 13 51.4 +0.6**
WVOR Wild Horse Val 63.76 55 P **P 14 13 51.4 +0.6**
WVOR pmax pmax
comp=Z,10.0nm,1.2s
EGMT Eagleton 64.07 45 P **P 14 13 52.3 -0.4**
baz=317
AKASG Malin Array Be 64.34 320 P **P 14 13 53.5 -0.7**
comp=Z,2.9nm,0.6s,baz=39,slow=8.0,SNR=17
AKASG LR LR 14 42 35.4
comp=Z,66nm,18.7s,baz=50,slow=37
comp=Z,2.9nm,0.6s
AKBB Malin Array Si 64.34 320⇓ *e*P **P 14 13 54.1 -0.1**
AKBB pmax pmax
comp=Z,3.0nm,0.6s
GNI Garni 64.63 303 LR LR 14 45 11.7
comp=Z,108nm,18.9s,baz=62,slow=39
MCMT McKenzie Canyo 64.96 49 P **P 14 13 58.8 0.0**
BOZ Bozeman (W) 64.98 48 P **P 14 13 58.3 -0.5**
baz=317,SNR=12
HLID Hailey 65.11 51 P **P 14 13 59.6 0.0**
HLID IAmb IAmb 14 14 35.8
comp=Z,8.2nm,1.5s
HLID Hailey 65.11 51 P **P 14 13 59.8 +0.2**
baz=317
MPK Martis Peak 65.25 58 P **P 14 14 00.3 -0.5**
EMB Emerald Bay 65.44 58 P **P 14 14 01.9 0.0**
YHL Hebgen Lake 65.75 48 P **P 14 14 04.1 +0.2**
YHL IAmb IAmb 14 14 07.0
comp=Z,5.1nm,1.1s
YPP Pitchstone Pla 66.36 49 P **P 14 14 08.5 +0.7**
YPP IAmb IAmb 14 14 12.8
comp=Z,5.8nm,1.3s
H17A Grant Village 66.37 48 P **P 14 14 08.5 +0.6**
H17A IAmb IAmb 14 14 14.1
comp=Z,8.3nm,1.1s
RLMT Red Lodge 66.45 47 P **P 14 14 08.1 -0.2**
baz=319,SNR=12
KVN Kaiserville 66.47 57 P **P 14 14 09.0 +0.5**
KVN Kaiserville 66.47 57 P **P 14 14 09.0 +0.5**
KVN pmax pmax
comp=Z,8.0nm,0.6s
LAO LASA Array 66.66 44 P **P 14 14 09.0 -0.5**
baz=320
ELK Elko 66.74 54 LR LR 14 41 01.8
comp=Z,57nm,21.8s,baz=342,slow=34
NVAR Mina Array Bea 66.81 57 P **P 14 14 11.7 +1.0**
comp=Z,5.0nm,0.7s,baz=305,slow=6.0,SNR=42
NVAR LR LR 14 41 06.5
comp=Z,40nm,21.1s,baz=294,slow=34
comp=Z,5.0nm,0.7s
HVU Hansel Valley 67.24 52 P **P 14 14 13.8 +0.5**
HVU IAmb IAmb 14 14 31.1
comp=Z,2.8nm,1.0s
HVU Hansel Valley 67.24 52 P **P 14 14 13.8 +0.5**
HVU pmax pmax
comp=Z,3.0nm,1.0s
TPH Tonopah 67.65 57 P **P 14 14 16.1 0.0**
TPH Tonopah 67.65 57 P **P 14 14 16.1 0.0**
TPH pmax pmax
comp=Z,24nm,1.0s
LCH Last Change Ra 68.04 58 P **P 14 14 18.6 +0.2**
LCH IAmb IAmb 14 14 22.5
comp=Z,3.6nm,1.1s
BW06 Boulder Array 68.08 49 P **P 14 14 17.7 -1.1**
baz=319,SNR=8.3
PDAR Pinedale Array 68.08 49 P **P 14 14 18.6 -0.1**
comp=Z,3.2nm,0.6s,baz=340,slow=1.5,SNR=26
PDAR LR LR 14 44 24.3
comp=Z,54nm,21.6s,baz=346,slow=36
comp=Z,3.2nm,0.6s
ULM Lac du Bonnet 68.13 36 P **P 14 14 18.3 -0.3**
comp=Z,8.4nm,0.6s,baz=317,slow=6.8,SNR=16
ULM LR LR 14 46 53.7
comp=Z,85nm,20.8s,baz=326,slow=38
comp=Z,8.4nm,0.6s
SMMC Simmler 68.14 61 P **P 14 14 19.0 0.0**
baz=317
R11A Troy Canyon, C 68.32 56 P **P 14 14 19.7 -0.5**
baz=318,SNR=5.6
GRAC Grapevine Rang 68.36 58 P **P 14 14 21.3 +1.0**
baz=317
CWC Cottonwood Cre 68.38 59 P **P 14 14 20.8 +0.2**
baz=317
BURAR Bucovina Array 68.39 320⇑ P **P 14 14 20.7 +0.3**
DUG Dugway, Tooele 68.39 53 P **P 14 14 20.5 -0.1**
baz=318
TCUT Toone Canyon 68.42 51 P **P 14 14 21.0 +0.1**
PKM Mcpherson Peak 68.56 61 P **P 14 14 22.3 +0.5**
baz=317
TESR Tescani 68.66 318⇑ P **P 14 14 22.6 +0.7**
ISA Isabella, Lake 68.74 60 P **P 14 14 23.0 +0.3**
baz=317
MPMC Manual Prospec 68.99 59 P **P 14 14 24.4 0.0**
baz=318
TPNV Topopah Spring 69.00 57 P **P 14 14 24.7 +0.2**
TPNV Topopah Spring 69.00 57 P **P 14 14 24.7 +0.2**
TPNV pmax pmax
comp=Z,7.0nm,0.7s
TPNV Topopah Spring 69.00 57 P **P 14 14 24.6 +0.2**
baz=318,SNR=13
FURC Furnace Creek, 69.03 58 P **P 14 14 25.5 +1.1**
baz=318
PSUT Pine Spring 69.10 55 P **P 14 14 25.2 +0.1**
PSUT IAmb IAmb 14 14 27.1
comp=Z,5.6nm,0.7s
LRMC Laurel Mtn Rad 69.31 59 P **P 14 14 26.3 0.0**
baz=318
OZUR 69.36 318⇑ P **P 14 14 27.4 +1.0**
EDW2 Edwards Air Fo 69.58 60 P **P 14 14 27.9 0.0**
baz=318,SNR=6.6
K22A Casper 69.62 47 P **P 14 14 27.2 -1.0**
baz=320
RSSD Black Hills 69.62 45 P **P 14 14 26.6 -1.6**
baz=321
MORC Moravsky Berou 69.63 325 P **P 14 14 28.9 +0.9**
MORC IAmb IAmb 14 14 30.0
comp=Z,3.7nm,0.8s
MORC Moravsky Berou 69.63 325 P **P 14 14 28.9 +0.9**
MORC pmax pmax
comp=Z,4.0nm,0.8s
AGMN Agassiz Nation 69.72 37 P **P 14 14 27.3 -1.2**
baz=325
MLR Muntele Rosu 69.77 318⇑ P **P 14 14 30.4 +1.4**
MLR Muntele Rosu 69.77 318 LR LR 14 45 52.0
comp=Z,103nm,18.8s,baz=60,slow=37
GSC Goldstone, Bar 69.92 59 P **P 14 14 29.7 -0.4**
baz=318
CLL Collm 69.92 329 *e*P **P 14 14 29.0 -0.7**
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 69.92 329 *e*P **P 14 14 29.0 -0.7**
comp=Z,4.0nm,0.8s
CLL LmH 14 42 00.0
comp=N,100nm,21.6s
CLL LmH 14 42 00.0
comp=E,100nm,20.3s
P18A Preston Nutter 70.12 52 P **P 14 14 31.1 -0.4**
VOIR 70.19 318⇑ P **P 14 14 32.2 +0.6**
VYHS Vyhne 70.21 324 *e*P **P 14 14 32.7 +1.2**
VYHS pmax pmax
comp=Z,8.0nm,1.4s
VYHS Vyhne 70.21 324 *e*P **P 14 14 32.7 +1.2**
BFSC Mount Baldy Ra 70.24 60 P **P 14 14 32.1 0.0**
baz=318
CTA Charters Tower 70.24 176 LR LR 14 46 58.1
comp=Z,27nm,18.6s,baz=74,slow=37
TUQ Turquoise Moun 70.30 58 P **P 14 14 32.3 -0.1**
baz=318,SNR=7.2
MTPU Mount Pierson 70.33 54 P **P 14 14 33.6 +0.7**
MTPU IAmb IAmb 14 14 37.5
comp=Z,5.3nm,0.9s
WRA Warramunga Arr 70.37 188 P **P 14 14 31.5 -1.2**
comp=Z,1.4nm,0.9s,baz=0.5,slow=6.8,SNR=8.7
WRA LR LR 14 44 55.6
comp=Z,54nm,20.5s,baz=248,slow=36
comp=Z,1.4nm,0.9s
WRA Warramunga Arr 70.37 188 *i* P **P 14 14 31.5 -1.2**
WRA pmax pmax
comp=Z,2.0nm,1.0s
ARR Arges 70.42 319⇑ P **P 14 14 34.2 +1.3**
CIS Catalina Islan 70.43 61 P **P 14 14 33.3 +0.1**
baz=318
HEC Hector,Ludlow 70.53 59 P **P 14 14 33.9 +0.1**
baz=318,SNR=7.9
BRTR Keskin Array B 70.69 309 P **P 14 14 34.0 -0.8**
comp=Z,1.7nm,0.9s,baz=5.6,slow=5.9,SNR=5.4
BRTR LR LR 14 50 38.5
comp=Z,41nm,18.9s,baz=64,slow=40
comp=Z,1.7nm,0.9s
BRTR Keskin Array B 70.69 309 *i* P **P 14 14 37.5 +2.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
GMRC Granite Mounta 70.93 58 P **P 14 14 36.6 +0.3**
baz=319,SNR=6.5
N23A Red Feather La 71.25 48 P **P 14 14 37.5 -0.8**
baz=321
BELC Belle Mtn. Jos 71.33 59 P **P 14 14 39.0 +0.2**
baz=319
PFO Pinyon Flats O 71.37 60 LR LR 14 42 57.4
comp=Z,53nm,20.9s,baz=300,slow=33
PFO Pinyon Flats O 71.37 60 P **P 14 14 39.1 +0.2**
baz=319
TPFO Pinon Flats 71.38 60 P **P 14 14 38.6 -0.4**
baz=319
SUSD Miller 71.59 41 P **P 14 14 39.1 -0.9**
baz=324
EYMN Ely 71.66 35 P **P 14 14 38.9 -1.5**
baz=327,SNR=13
IRM Iron Mountain 71.68 59 P **P 14 14 40.6 -0.1**
baz=319
CONA Conrad Observa 71.79 325 *e*P **P 14 14 42.5 +1.3**
comp=Z,5.4nm,1.5s
RONA Rosalia, Austr 71.82 325 *e*P **P 14 14 43.6 +2.2**
comp=Z,3.4nm,0.8s
BC3 Big Chuckawall 71.89 59 P **P 14 14 42.2 +0.1**
baz=319
MONP2 Monument Peak 71.93 60 P **P 14 14 42.5 0.0**
baz=319
SWSC Sam W. Stewart 72.23 60 P **P 14 14 44.5 +0.5**
baz=319
ISCO Idaho Springs 72.26 49 P **P 14 14 44.9 +0.4**
ISCO IAmb IAmb 14 14 48.5
comp=Z,14nm,1.5s
ISCO Idaho Springs 72.26 49 P **P 14 14 44.9 +0.4**
ISCO pmax pmax
comp=Z,14nm,1.5s
ISCO Idaho Springs 72.26 49 P **P 14 14 42.9 -1.5**
baz=322
IKP In-Ko-Pah, Jac 72.28 60 P **P 14 14 44.8 +0.4**
baz=319
SCHQ Schefferville 72.35 17 LR LR 14 50 11.6
comp=Z,101nm,18.4s,baz=352,slow=39
MOA Molln 72.43 326 *e*P **P 14 14 43.9 -1.1**
comp=Z,1.4nm,0.5s
ARSA Arzberg 72.48 325 *e*P **P 14 14 45.0 -0.3**
comp=Z,0.5nm,0.2s
WUAZ Wupatki 72.67 55 P **P 14 14 46.3 -0.5**
WUAZ Wupatki 72.67 55 P **P 14 14 46.8 0.0**
baz=320
GLA Glamis 72.69 59 P **P 14 14 47.1 +0.3**
baz=319
BIOA Bad Ischl, Aus 72.78 326 *e*P P 14 14 52.5 +5.4
comp=Z,1.0nm,0.5s
MVCO Mesa Verde 72.85 52 P **P 14 14 48.0 0.0**
MVCO Mesa Verde 72.85 52 P **P 14 14 46.9 -1.0**
baz=321
OGNE Ogallala 73.04 46 P **P 14 14 47.1 -1.7**
baz=323
SOKA Soboth 73.14 325 *e*P **P 14 14 48.7 -0.7**
comp=Z,0.3nm,0.4s
ECSD EROS Data Cent 73.15 40 P **P 14 14 48.0 -1.3**
baz=325,SNR=14
VTS Vitosha 73.24 318⇑ P **P 14 14 50.8 +0.8**
S22A 4UR Ranch, Cre 73.27 51 P **P 14 14 49.7 -0.8**
baz=321
KBA Koelnbreinsper 73.41 326 *e*P **P 14 14 52.1 +1.1**
comp=Z,3.5nm,0.7s
OBKA Obir 73.46 325 *e*P **P 14 14 51.9 +0.7**
comp=Z,8.1nm,1.4s
MYKA Terra Mystica 73.69 326 *e*P **P 14 14 52.8 +0.3**
comp=Z,2.0nm,0.4s
WATA Walderalm 73.81 328 *e*P **P 14 14 54.1 +0.8**
comp=Z,3.0nm,0.6s
W18A Petrified Fore 73.83 54 P **P 14 14 53.0 -0.7**
baz=321
WTTA Wattenberg 73.85 327 *e*P **P 14 14 54.1 +0.5**
comp=Z,3.0nm,0.6s
SDCO Great Sand Dun 73.93 50 P **P 14 14 53.5 -0.8**
baz=322
RETA Reutte 73.95 328 *e*P **P 14 14 51.6 -2.4**
comp=Z,2.3nm,0.9s
MOTA Moosalm 73.96 328 *e*P **P 14 14 54.3 +0.1**
comp=Z,5.4nm,0.8s
ABTA Abfaltersbach 73.99 327 *e*P **P 14 14 54.8 +0.5**
comp=Z,2.1nm,1.1s
SQTA Sankt Quirin 74.03 328 *e*P **P 14 14 55.6 +1.0**
comp=Z,4.4nm,0.9s
AS31 Alice Springs 74.10 188 P **P 14 14 55.1 +0.2**
ASAR Alice Springs 74.10 188 P **P 14 14 54.5 -0.4**
comp=Z,1.8nm,0.6s,baz=1.7,slow=5.3,SNR=20
ASAR LR LR 14 47 20.6
comp=Z,46nm,19.5s,baz=28,slow=36
comp=Z,1.8nm,0.6s
ASAR Alice Springs 74.10 188 P **P 14 14 54.9 0.0**
ASAR Alice Springs 74.10 188 P **P 14 14 54.9 0.0**
FETA Feichten 74.37 328 *e*P **P 14 14 56.9 +0.3**
comp=Z,3.6nm,1.2s
214A Organ Pipe Nat 74.62 58 P **P 14 14 57.9 -0.2**
baz=320
MSVF Nonsavu 74.76 145 LR LR 14 40 16.0
comp=Z,51nm,20.9s,baz=219,slow=30
MMAI Mount Meron Ar 74.94 304 LR LR 14 52 11.5
comp=Z,121nm,20.4s,baz=203,slow=39
T25A Trinidad 74.94 49 P **P 14 14 59.6 -0.5**
baz=323
ANMO Albuquerque 75.65 52 LR LR 14 48 49.5
comp=Z,41nm,20.0s,baz=340,slow=36
ANMO Albuquerque 75.65 52 *de*P **P 14 15 05.5 +1.3**
ANMO pmax pmax
comp=Z,6.0nm,1.7s
ANMO Albuquerque 75.65 52 P **P 14 15 03.9 -0.3**
baz=322
121A Cookes Peak, D 76.86 55 P **P 14 15 10.7 -0.4**
baz=322,SNR=6.4
EIL Elat 77.77 302 LR LR 14 53 55.2
comp=Z,70nm,18.9s,baz=82,slow=39
AMTX Amarillo 78.06 49 P **P 14 15 16.6 -1.2**
baz=324
SADO Sadowa 78.61 29 LR LR 14 53 43.8
comp=Z,45nm,18.9s,baz=350,slow=38
MNTX Cornudas Mount 78.77 54 P **P 14 15 21.2 -0.3**
baz=323,SNR=8.7
HDIL Hopedale 78.77 38 P **P 14 15 20.0 -1.4**
baz=329
BATG Bathurst New B 79.68 19 P **P 14 15 26.9 +0.7**
BATG IAmb IAmb 14 15 27.4
comp=Z,7.3nm,0.8s
LONY Lake Ozonia 80.08 26 P **P 14 15 25.7 -2.8**
baz=337
CCM Cathedral Cave 80.12 40 P **P 14 15 27.5 -1.3**
baz=329
O48B Farmland 80.59 35 P **P 14 15 29.6 -1.7**
baz=332
ABTX Abilene, Hawle 80.89 49 P **P 14 15 32.2 -0.9**
baz=325
M53A WI Miller and 81.11 31 P **P 14 15 32.5 -1.6**
baz=334
ACSO Alum Creek Sta 81.39 33 P **P 14 15 34.6 -0.9**
baz=333
TXAR Lajitas Array 81.54 54 P **P 14 15 37.5 +0.8**
comp=Z,2.4nm,0.7s,baz=293,slow=5.3,SNR=27
TXAR LR LR 14 54 11.2
comp=Z,24nm,18.3s,baz=336,slow=37
comp=Z,2.4nm,0.7s
TXAR Lajitas Array 81.54 54 P **P 14 15 37.3 +0.6**
TXAR Lajitas Array 81.54 54 P **P 14 15 37.3 +0.6**
O53A New Philadelph 81.99 32 P **P 14 15 36.7 -2.0**
baz=334
MIAR Mount Ida 82.10 44 P **P 14 15 38.1 -1.3**
baz=328
LPIG La Paz 82.10 62 LR LR 14 49 53.5
comp=Z,29nm,19.3s,baz=308,slow=34
WHTX Lake Whitney, 82.45 48 P **P 14 15 40.1 -1.2**
baz=326
JCT Junction City 82.56 50 P **P 14 15 41.0 -0.9**
baz=325
HRV Adam Dziewonsk 82.86 25 P **P 14 15 41.2 -2.0**
baz=339
KEST Kesra 84.75 323 P **P 14 15 53.0 -0.1**
comp=Z,3.5nm,0.7s,baz=178,slow=4.1,SNR=4.2
KEST LR LR 14 57 05.3
comp=Z,63nm,18.5s,baz=230,slow=38
comp=Z,3.5nm,0.7s
TKL Tuckaleechee C 85.16 36 LR LR 14 56 19.0
comp=Z,76nm,19.2s,baz=330,slow=37
ESDC Sonseca Array 85.56 335 P **P 14 15 56.8 -0.3**
comp=Z,1.9nm,0.8s,baz=9.9,slow=4.0,SNR=14
comp=Z,1.9nm,0.8s
ESDC Sonseca Array 85.56 335 P **P 14 15 56.9 -0.3**
ESDC IAmb IAmb 14 15 59.7
comp=Z,4.8nm,1.2s
PPT Papeete 90.14 118 LR LR 14 48 54.1
comp=Z,42nm,20.2s,baz=327,slow=30

CPUP	**Villa Florida**	**151.63**	**39**	PKPbc	**PKPbc**		**14 23 13.2**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=308,slow=0.5,SNR=6.9							
PLCA	**Paso Flores**	**155.21**	**80**	PKPbc	PKPbc		14 23 19.6	
	comp=Z,2.0nm,0.6s,baz=236,slow=3.4,SNR=8.1							

*IDC **17** 14:27:55.2±1.1, 50°.36N×142°.44E, h0km, mb3.4/5, mbtmp3.4/7, ML2.1/2, MS2.7/1, Error ellipse: s-maj=43.6km s-min=22.6km az=146.0*
*MOS **17** 14:27:56.0±3.4, 50°.35N×142°.69E, h11km, mb3.5/1, Error ellipse: s-maj=22.9km s-min=11.1km az=84.6*
ISC 17 14:27:57.2±0.7, **50°.37N**±0°.04×**142°.41E**±0°.07, **h10**km, **n13, g1§29/15, mb3.5/5, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
TYV	**Tymovskoe**	**0.52**	**18**	*e*PN		**Pg**	**14 28 06.8**	**-0.4**
TYV				*e*S		**Sg**	**14 28 14.1**	**+0.1**
TYV				pmax		pmax		
	comp=Z,56nm,0.4s							
TYV				smax		smax		
	comp=N,543nm,0.4s							
TYV				smax		smax		
	comp=E,872nm,0.4s							
UGL	**Uglegorsk**	**1.31**	**190**	*e*PN		**Pn**	**14 28 20.7**	**-0.8**
UGL				*e*S		**Sb**	**14 28 38.6**	**-0.2**
UGL				pmax		pmax		
	comp=Z,239nm,0.6s							
UGL				smax		smax		
	comp=E,691nm,0.5s							
UGL				smax		smax		
	comp=N,317nm,0.4s							
NKL	**Nikolayevsk**	**2.98**	**340**	*e*PN		**Pn**	**14 28 43.5**	**-1.0**
NKL				*e*S		**Sb**	**14 29 29.5**	**+2.7**
NKL				pmax		pmax		
	comp=E,5.0nm,0.3s							
NKL				pmax		pmax		
	comp=N,13nm,0.5s							
NKL				pmax		pmax		
	comp=Z,26nm,0.4s							
NKL				smax		smax		
	comp=E,48nm,0.4s							
NKL				smax		smax		
	comp=N,30nm,0.6s							
YSS	**Yuzh-Sakhalins**	**3.43**	**176**	*e*PN		**Pn**	**14 28 52.0**	**+1.4**
YSS				*e*			14 29 35.7	
YSS				pmax		pmax		
	comp=Z,20nm,0.6s							
YSS				smax		smax		
	comp=E,70nm,1.0s							
YSS				smax		smax		
	comp=E,30nm,0.8s							
YSS				MLR		MLR		
	comp=Z,400nm,8.0s							
GRNR	**Gornyy**	**3.84**	**278**	*e*PN		**Pb**	**14 29 06.5**	**+1.6**
GRNR				*e*			14 29 49.7	
GRNR				pmax		pmax		
	comp=E,10.0nm,0.3s							
GRNR				pmax		pmax		
	comp=N,4.0nm,0.2s							
GRNR				pmax		pmax		
	comp=Z,10.0nm,0.3s							
GRNR				smax		smax		
	comp=E,9.0nm,0.3s							
USRK	**Ussuriysk Ar.**	**9.39**	**233**	Pn		**Pn**	**14 30 11.9**	**-0.5**
	comp=E,0.2nm,0.3s,baz=38,slow=17,SNR=2.0 comp=E,1.1nm,0.7s							
PETK	**Petropavlovsk-**	**9.87**	**68**	Pn		**Pn**	**14 30 20.1**	**+1.1**
	comp=E,1.0nm,0.3s,baz=272,slow=20,SNR=5.3 comp=E,1.9nm,1.0s							
KSRS	**Korea Array**	**16.56**	**224**	LR		LR	14 37 01.7	
	comp=E,26nm,19.4s,baz=325,slow=33							
ILAR	**Eielson Array**	**38.31**	**41**	P		**P**	**14 35 17.2**	**-0.3**
	comp=E,0.2nm,0.5s,baz=279,slow=8.6,SNR=1.9 comp=E,0.2nm,0.5s							
MKAR	**Makanchi Array**	**38.99**	**289**	P		**P**	**14 35 23.5**	**+0.1**
	comp=E,0.4nm,0.7s,baz=76,slow=5.6,SNR=3.6 comp=E,0.4nm,0.7s							
NVAR	**Mina Array Bea**	**66.78**	**58**	P		**P**	**14 38 48.9**	**0.0**
	comp=E,0.3nm,0.6s,baz=317,slow=6.3,SNR=3.6 comp=E,0.3nm,0.6s							
PDAR	**Pinedale Array**	**68.06**	**49**	P		**P**	**14 38 54.8**	**-2.2**
	comp=E,0.3nm,0.6s,baz=335,slow=4.0,SNR=2.3 comp=E,0.3nm,0.6s							
ASAR	**Alice Springs**	**74.09**	**188**	P		**P**	**14 39 32.9**	**-0.4**
	comp=E,0.4nm,0.9s,baz=1.7,slow=5.5,SNR=5.0 comp=E,0.4nm,0.9s							

*PRE **17** 14:29:30.3±2.0, 6°.55S×33°.08E, h10km, mb4.7*
*NEIC **17** 14:29:33.2±1.2, 6°.35S±0°.06×32°.99E±0°.09, h10km±1km, mb4.5/15, Error ellipse: s-maj=16.0km s-min=6.6km az=119.0*
*IDC **17** 14:29:35.1±0.7, 6°.38S×33°.06E, h30km±4km, mb3.7/14, mbtmp3.9/18, ML4.6/4, MS3.7/8, Error ellipse: s-maj=18.0km s-min=15.0km az=109.0*
ISC 17 14:29:32.7±0.4, **6°.35S**±0°.04×**33°.09E**±0°.05, **h10**km, **n87, g2§61**/100, **mb4.3**/21, **MS3.6**/5, **Tanzania**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
KARM1	**KARONGA**	**3.67**	**167**	*i* P		**Pb**	**14 30 40.0**	**+2.4**
KARM1				S		**Sn**	**14 31 08.4**	**-4.5**
KARM1	**KARONGA**	**3.67**	**167**	*i* P		**Pb**	**14 30 40.0**	**+2.4**
KARM1				S		**Sn**	**14 31 08.4**	**-4.5**
MBAR	**Mbarara**	**6.18**	**338**	Pn		**Pn**	**14 31 05.7**	**+1.5**
	36nm,0.3s,baz=324,slow=5.0,SNR=40							
MBAR				Sn		**Sn**	**14 32 11.1**	**-3.9**
	86nm,0.3s,baz=34,slow=23,SNR=6.2							
MBAR				Lg		Lg	14 32 45.5	
	162nm,0.3s,baz=240,slow=21,SNR=9.6							
MBAR				LR		LR	14 33 34.3	
	comp=Z,467nm,19.8s,baz=152,slow=39							
MBAR	**Mbarara**	**6.18**	**338**			**Pn**	**14 31 04.3**	**+0.1**
MBAR	**Mbarara**	**6.18**	**338**	*e*P		**Pn**	**14 31 06.1**	**+1.9**
MBAR				*e*S		**Sn**	**14 32 14.8**	**-0.3**
MBAR	**Mbarara**	**6.18**	**338**	*e*P		**Pn**	**14 31 06.2**	**+1.9**
MBAR				*e*S		**Sn**	**14 32 10.7**	**-4.3**
MBAR	**Mbarara**	**6.18**	**338**	*e*P		**Pn**	**14 31 06.0**	**+1.9**
MBAR				*e*S		**Sn**	**14 32 08.9**	**-6.1**
MBAR	**Mbarara**	**6.18**	**338**	*e*P		**Pn**	**14 31 06.2**	**+1.9**
MBAR				*e*S		**Sn**	**14 32 10.7**	**-4.3**
MBAR	**Mbarara**	**6.18**	**338**	*e*P		**Pn**	**14 31 05.7**	**+1.5**
KIBK	**Kibwezi**	**6.35**	**51**			**Pn**	**14 31 08.2**	**+1.7**
KMBO	**Kilima Mbogo**	**6.65**	**39**	Pn		**Pn**	**14 31 11.8**	**+1.0**
	5.6nm,0.3s,baz=215,slow=15,SNR=41							
KMBO				Sn		**Sn**	**14 32 23.1**	**-3.7**
	13nm,0.3s,baz=268,slow=23,SNR=2.2							
KMBO				Lg		Lg	14 32 58.8	
	18nm,0.3s,baz=206,slow=14,SNR=4.0 13nm,0.3s							
KMBO	**Kilima Mbogo**	**6.65**	**39**	*e*P		**Pn**	**14 31 12.8**	**+2.1**
KMBO				*e*S		**Sn**	**14 32 24.8**	**-2.1**
KMBO	**Kilima Mbogo**	**6.65**	**39**	*e*P		**Pn**	**14 31 12.3**	**+1.6**
KMBO				*e*S		**Sn**	**14 32 20.9**	**-5.9**
KMBO	**Kilima Mbogo**	**6.65**	**39**	*e*P		**Pn**	**14 31 12.9**	**+2.1**
KMBO				*e*S		**Sg**	**14 33 04.6**	**-1.8**
KMBO	**Kilima Mbogo**	**6.65**	**39**	*e*P		**Pn**	**14 31 12.3**	**+1.6**
KMBO				*e*S		**Sn**	**14 32 20.9**	**-5.9**
KMBO	**Kilima Mbogo**	**6.65**	**39**	*e*P		**Pn**	**14 31 12.9**	**+2.1**
LODK	**Lodwar**	**9.97**	**13**			**Pn**	**14 31 55.7**	**-0.6**
LODK	**Lodwar**	**9.97**	**13**	*e*P		**Pn**	**14 31 55.0**	**-1.3**
LODK				*e*S		Sn	14 34 44.0	+56
LODK	**Lodwar**	**9.97**	**13**	*e*P		**Pn**	**14 31 54.5**	**-1.7**
LODK				*e*S		Sn	14 34 43.7	+55
LODK	**Lodwar**	**9.97**	**13**	*e*P		**Pn**	**14 31 55.2**	**-1.0**
LODK				*e*S		Sn	14 33 36.4	-12
LSZ	**Lusaka**	**10.09**	**208**	Pn		**Pn**	**14 31 56.9**	**-1.0**
	4.6nm,0.3s,baz=26,slow=13,SNR=18							
LSZ				Sn		Sn	14 33 41.9	-9.3
	9.0nm,0.3s,baz=31,slow=14,SNR=3.4							
LSZ				Lg		Lg	14 34 46.6	
	43nm,0.3s,baz=116,slow=17,SNR=7.7							
LSZ				LR		LR	14 36 09.7	
	comp=Z,238nm,20.5s,baz=33,slow=39 13nm,0.4s							
LSZ	**Lusaka**	**10.09**	**208**			**Pn**	**14 31 57.0**	**-0.8**
LSZ	**Lusaka**	**10.09**	**208**	*i* P		**Pn**	**14 31 58.1**	**+0.3**
LSZ	**Lusaka**	**10.09**	**208**	*i* P		**Pn**	**14 31 58.1**	**+0.3**
BLWY	**Bulawayo**	**14.38**	**197**	*e*P		**Pn**	**14 32 54.8**	**-1.8**
BLWY				*e*S		Sn	14 35 22.8	-13
BLWY	**Bulawayo**	**14.38**	**197**	*i* P		**P**	**14 33 00.2**	**-3.5**
BLWY	**Bulawayo**	**14.38**	**197**	*i* P		**P**	**14 33 00.2**	**-3.5**
MATP	**Matopo**	**14.68**	**197**	Pn		**Pn**	**14 32 57.9**	**-2.8**
	0.6nm,0.3s,baz=19,slow=14,SNR=16							
MATP				Sn		**Sn**	**14 35 46.5**	**+2.8**
	2.4nm,0.3s,baz=105,slow=22,SNR=3.9							
MATP				Lg		Lg	14 37 08.2	
	3.5nm,0.3s,baz=107,slow=22,SNR=7.8							
MATP	**Matopo**	**14.68**	**197**	*e*P		**Pn**	**14 32 57.2**	**-3.5**
MATP				*e*S		Sn	14 35 29.8	-14
MATP	**Matopo**	**14.68**	**197**	*i* P		**P**	**14 33 04.3**	**-2.7**
MATP				*i* S		**Sn**	**14 35 40.0**	**-3.7**
MATP	**Matopo**	**14.68**	**197**	*i* P		**P**	**14 33 04.3**	**-2.7**
MATP				*i* S		**Sn**	**14 35 40.0**	**-3.7**
MUSN	**Musina, Limpop**	**16.14**	**191**	*e*P		**Pn**	**14 33 17.9**	**-2.0**
MUSN	**Musina, Limpop**	**16.14**	**191**	*i* P		**P**	**14 33 24.1**	**+1.0**
MUSN				*i* S		**Sn**	**14 36 15.5**	**-3.7**
MUSN	**Musina, Limpop**	**16.14**	**191**	*i* P		**P**	**14 33 24.1**	**+1.0**
MUSN				*i* S		**Sn**	**14 36 15.5**	**-3.7**
MOPA	**Mopani**	**17.14**	**185**	*e*P		**Pn**	**14 33 32.3**	**-0.2**
MOPA	**Mopani**	**17.14**	**185**	*i* P		P	14 33 41.3	+7.1
MOPA	**Mopani**	**17.14**	**185**	*i* P		P	14 33 41.3	+7.1
LEPH	**Lephalale, Lim**	**18.13**	**196**	*e*P		**Pn**	**14 33 44.8**	**-0.1**
ABPO	**Ambohimpanom**	**18.65**	**134**	P		**P**	**14 33 50.4**	**-0.7**
ABPO				IAmb		IAmb	14 34 06.7	
	comp=Z,18nm,0.9s							
TSUM	**Tsumeb**	**19.77**	**228**	P		**P**	**14 34 03.6**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=22,slow=19,SNR=1.9							
TSUM				LR		LR	14 42 06.9	
	comp=Z,515nm,18.4s,baz=333,slow=38							
TSUM	**Tsumeb**	**19.77**	**228**	P		**P**	**14 34 01.4**	**-1.9**
TSUM	**Tsumeb**	**19.77**	**228**	*e*P		**Pn**	**14 34 08.6**	**+3.8**
SLR	**Silverton**	**19.81**	**193**	*e*P		Pn	14 34 14.3	+9.0
LBTB	**Lobatse**	**19.89**	**200**	P		**P**	**14 34 04.0**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=2.9,slow=12,SNR=2.4 comp=Z,2.6nm,0.8s							
LBTB	**Lobatse**	**19.89**	**200**	P		**P**	**14 34 04.0**	**-0.6**
LBTB				IAmb		IAmb	14 34 29.2	
	comp=Z,16nm,0.7s							
LBTB	**Lobatse**	**19.89**	**200**	*e*P		**Pn**	**14 34 08.3**	**+2.1**
LBTB	**Lobatse**	**19.89**	**200**	*i* P		**Pn**	**14 34 10.6**	**+4.4**
LBTB	**Lobatse**	**19.89**	**200**	*i* P		**Pn**	**14 34 10.6**	**+4.4**
ATD	**Arta Tunnel**	**20.25**	**29**	LR		LR	14 42 02.7	
	comp=Z,170nm,21.4s,baz=167,slow=37							
VOI	**Vohitsoka**	**20.36**	**141**	P		**P**	**14 34 09.3**	**-0.4**
VOI				IAmb		IAmb	14 34 47.6	
	comp=Z,13nm,0.9s							
POGA	**Pongola**	**20.92**	**183**	P		**P**	**14 34 15.6**	**0.0**
POGA				IAmb		IAmb	14 34 32.8	
	comp=Z,20nm,0.9s							
PRYS	**Parys**	**21.17**	**194**	*e*P		**P**	**14 34 18.1**	**-0.4**
PRYS				IAmb		IAmb	14 34 33.2	
	comp=Z,99nm,1.9s							
NWCL	**Newcastle**	**21.48**	**188**	*e*P		**P**	**14 34 22.5**	**+0.7**
NWCL				IAmb		IAmb	14 34 23.7	
	comp=Z,27nm,0.8s							
SWZ	**Schweizer**	**21.99**	**199**	*e*P		**P**	**14 34 26.0**	**-1.2**
SWZ				IAmb		IAmb	14 34 38.5	
	comp=Z,21nm,0.8s							
MSEY	**Mahe Island**	**22.35**	**87**	P		**P**	**14 34 31.9**	**+0.8**
SNKL	**Senekal, Frees**	**22.38**	**192**	*e*P		**P**	**14 34 32.9**	**+1.5**
SNKL				IAmb		IAmb	14 34 43.1	
	comp=Z,45nm,0.7s							
BOSA	**Boshof**	**23.35**	**198**	P		**P**	**14 34 40.4**	**-1.1**
	comp=Z,5.5nm,0.9s,baz=5.9,slow=12,SNR=5.0 comp=Z,5.5nm,0.9s							
BOSA	**Boshof**	**23.35**	**198**	P		**P**	**14 34 40.4**	**-1.1**
BOSA				IAmb		IAmb	14 34 54.5	
	comp=Z,22nm,1.0s							
BOSA	**Boshof**	**23.35**	**198**	*i* P		**P**	**14 34 47.8**	**+6.2**
BOSA	**Boshof**	**23.35**	**198**	*i* P		**P**	**14 34 47.8**	**+6.2**
TOA0	**Torodi Ar. Sit**	**36.71**	**302**	P		**P**	**14 36 39.5**	**-0.9**
TOA0				IAmb		IAmb	14 36 52.1	
	comp=Z,7.1nm,1.1s							
TORD	**Torodi Ar. Bea**	**36.71**	**302**	P		**P**	**14 36 39.5**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=110,slow=8.2,SNR=8.9							
TORD				LR		LR	14 52 05.2	
	comp=Z,174nm,18.9s,baz=226,slow=37 comp=Z,1.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**36.71**	**302**	P		**P**	**14 36 38.8**	**-1.6**
DBIC	**Dimbokro**	**40.01**	**288**	P		**P**	**14 37 07.6**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=117,slow=11,SNR=3.3 comp=Z,2.2nm,0.8s							
DBIC	**Dimbokro**	**40.01**	**288**	P		**P**	**14 37 07.2**	**-1.0**
DBIC				IAmb		IAmb	14 37 42.0	
	comp=Z,11nm,1.4s							
BRTR	**Keskin Array B**	**45.85**	**1**	P		**P**	**14 37 55.8**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=197,slow=4.5,SNR=2.0 comp=Z,1.2nm,0.9s							
PALK	**Pallekele**	**49.39**	**75**	LR		LR	14 56 25.4	
	comp=Z,62nm,18.3s,baz=51,slow=33							
AIS	**Amsterdam Isla**	**51.03**	**134**	P		**P**	**14 38 36.4**	**+1.2**
TRIS	**Tristan da Cun**	**51.38**	**227**	P		**P**	**14 38 37.3**	**-0.5**
MDT	**Midelt**	**52.92**	**320**	LR		LR	15 01 43.9	
	comp=Z,54nm,19.3s,baz=122,slow=36							
AKASG	**Malin Array Be**	**56.92**	**357**	P		**P**	**14 39 17.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=187,slow=7.2,SNR=3.5 comp=Z,0.2nm,0.3s							
ESDC	**Sonseca Array**	**57.16**	**326**	P		**P**	**14 39 20.6**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=134,slow=7.6,SNR=2.6							
ESDC				pP		**sP**	**14 39 28.6**	**+3.7**
	comp=Z,1.2nm,0.9s,baz=133,slow=7.6,SNR=4.7 comp=Z,0.3nm,0.5s							
GERES	**GERESS Array B**	**57.53**	**345**	P		**P**	**14 39 21.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=182,slow=2.8,SNR=4.9							
GERES				pP		**pP**	**14 39 30.6**	**+4.6**
	comp=Z,0.3nm,0.3s,baz=110,slow=12,SNR=2.2 comp=Z,0.2nm,0.3s							
GERES	**GERESS Array B**	**57.53**	**345**	P		**P**	**14 39 21.9**	**-0.5**
GERES	**GERESS Array B**	**57.53**	**345**	*PP		pP	14 39 30.6	+4.6
ARU	**Arti**	**65.98**	**15**	P		**P**	**14 40 18.8**	**-0.2**
ARU				IAmb		IAmb	14 40 29.1	
	comp=Z,6.8nm,1.0s							
FINES	**FINESS Array B**	**67.81**	**356**	P		**P**	**14 40 29.7**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=132,slow=10,SNR=3.5							
FINES				pP		**sP**	**14 40 38.9**	**+3.2**
	comp=Z,3.7nm,1.0s,baz=178,slow=5.7,SNR=2.1 comp=Z,0.9nm,0.7s							
MK31	**Makanchi Array**	**68.51**	**34**	P		**P**	**14 40 35.8**	**+0.4**
MKAR	**Makanchi Array**	**68.51**	**34**	P		**P**	**14 40 35.7**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=232,slow=6.8,SNR=9.2							
MKAR				pP		**sP**	**14 40 44.1**	**+3.7**
	comp=Z,1.1nm,0.8s,baz=234,slow=6.4,SNR=7.4 comp=Z,0.9nm,0.7s							
MKAR	**Makanchi Array**	**68.51**	**34**	P		**P**	**14 40 35.5**	**+0.1**
NOA	**NORSAR Array B**	**69.34**	**349**	P		**P**	**14 40 40.0**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=156,slow=5.8,SNR=2.5 comp=Z,0.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**69.43**	**68**	P		**P**	**14 40 40.0**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=260,slow=7.8,SNR=6.3							
CMAR				pP		**sP**	**14 40 51.5**	**+4.9**
	comp=Z,2.0nm,0.6s,baz=260,slow=7.8,SNR=6.1 comp=Z,1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**74.03**	**29**	P		**P**	**14 41 07.7**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=236,slow=10,SNR=2.0 comp=Z,0.3nm,0.3s							
ARCES	**ARCESS Array B**	**75.90**	**357**	P		**P**	**14 41 17.0**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=157,slow=7.4,SNR=3.9 comp=Z,0.9nm,0.8s							
QSPA	**South Pole Qui**	**83.72**	**180**	P		**P**	**14 42 02.8**	**+1.0**
QSPA				IAmb		IAmb	14 42 20.7	
	comp=Z,6.1nm,1.4s							
ASAR	**Alice Springs**	**97.30**	**115**	P		Pdif	14 43 07.3	+0.4
	comp=Z,0.8nm,0.8s,baz=268,slow=4.3,SNR=9.7							
ASAR				pP		sP	14 43 15.8	+3.9
	comp=Z,0.6nm,0.7s,baz=265,slow=4.3,SNR=4.0 comp=Z,0.8nm,0.8s							
LPAZ	**La Paz**	**98.92**	**252**	LR		LR	15 26 37.5	
	comp=Z,54nm,18.5s,baz=326,slow=35							

*IDC **17** 14:35:28.6±0.7, 48°.36S×31°.57E, h0km, mb4.2/12, mbtmp4.2/13, ML4.2/1, MS3.6/17, Error ellipse: s-maj=29.0km s-min=16.1km az=63.0*
*NEIC **17** 14:35:31.8±2.7, 48°.31S±0°.04×31°.5E±0°.2, h10km±1km, mb4.5/19, Error ellipse: s-maj=21.3km s-min=5.5km az=83.0*
ISC 17 14:35:32.1±0.5, **48°.27S**±0°.08×**31°.5E**±0°.1, **h18**km, **n46, g1§29**/36, **mb4.5**/17, **MS3.6**/16, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
SUR	**Sutherland**	**17.81**	**329**	P		**Pn**	**14 39 38.8**	**-0.4**
	0.8nm,0.3s,baz=159,slow=14,SNR=9.3							
SUR				LR		LR	14 45 01.2	
	comp=Z,262nm,19.4s,baz=148,slow=32 8.4nm,0.8s							
SUR	**Sutherland**	**17.81**	**329**			**Pn**	**14 39 39.5**	**+0.3**
SUR				IAmb		IAmb	14 39 52.5	
	comp=Z,36nm,1.3s							
BOSA	**Boshof**	**20.21**	**344**	P		**P**	**14 40 06.5**	**+0.4**
	comp=Z,16nm,0.9s,baz=198,slow=6.5,SNR=3.9							
BOSA				LR		LR	14 46 26.7	
	comp=Z,136nm,21.4s,baz=156,slow=32 comp=Z,16nm,0.9s							
BOSA	**Boshof**	**20.21**	**344**	P		**P**	**14 40 06.7**	**+0.7**
BOSA				IAmb		IAmb	14 40 08.3	
	comp=Z,33nm,1.1s							
LBTB	**Lobatse**	**23.67**	**347**	LR		LR	14 48 30.8	
	comp=Z,92nm,20.0s,baz=180,slow=33							
MAW	**Mawson**	**25.06**	**152**	P		**P**	**14 40 53.8**	**-1.2**
	comp=Z,20nm,1.1s,baz=296,slow=11,SNR=15							
MAW				LR		LR	14 49 47.0	
	comp=Z,62nm,18.7s,baz=347,slow=34 comp=Z,20nm,1.1s							
MAW	**Mawson**	**25.06**	**152**	P		**P**	**14 40 53.4**	**-1.6**
PAF	**Port-aux-Franc**	**25.33**	**107**	P		**P**	**14 40 59.2**	**+1.6**
SNAA	**Sanae**	**28.32**	**202**	P		**P**	**14 41 23.5**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=39,slow=18,SNR=1.8							
SNAA				LR		LR	14 50 37.8	
	comp=Z,58nm,19.3s,baz=44,slow=32 comp=Z,0.7nm,0.9s							
SNAA	**Sanae**	**28.32**	**202**	P		**P**	**14 41 24.2**	**-0.2**
VOI	**Vohitsoka**	**29.01**	**30**	P		**P**	**14 41 30.4**	**-0.6**
VOI				IAmb		IAmb	14 41 56.7	
	comp=Z,24nm,1.3s							
TSUM	**Tsumeb**	**31.11**	**334**	LR		LR	14 53 49.9	
	comp=Z,191nm,18.4s,baz=150,slow=35							
LSZ	**Lusaka**	**33.01**	**354**	LR		LR	14 54 12.4	
	comp=Z,115nm,19.7s,baz=225,slow=34							
BELA	**Belgrano 2**	**38.34**	**198**	P		**P**	**14 42 53.0**	**+1.7**
HOPE	**Hope Point**	**41.45**	**235**	P		**P**	**14 43 17.8**	**+0.4**
QSPA	**South Pole Qui**	**41.95**	**180**	P		**P**	**14 43 19.8**	**-1.8**
	comp=Z,6.8nm,0.7s,baz=249,slow=2.3,SNR=16							
QSPA				LR		LR	14 59 21.7	
	comp=Z,26nm,19.9s,baz=250,slow=34 comp=Z,6.8nm,0.7s							
QSPA	**South Pole Qui**	**41.95**	**180**	P		**P**	**14 43 19.9**	**-1.8**
QSPA				IAmb		IAmb	14 43 27.4	
	comp=Z,22nm,1.2s							
CASY	**Casey**	**42.96**	**144**	P		**P**	**14 43 31.2**	**+1.7**
CASY				IAmb		IAmb	14 43 42.2	
	comp=Z,6.6nm,1.2s							
SHEL	**Horse Pasture**	**44.37**	**304**	P		**P**	**14 43 41.0**	**-0.5**
KMBO	**Kilima Mbogo**	**47.22**	**8**	LR		LR	15 03 37.5	
	comp=Z,52nm,18.0s,baz=96,slow=36							
KMBO	**Kilima Mbogo**	**47.22**	**8**	P		**P**	**14 44 04.8**	**+0.6**
KMBO				IAmb		IAmb	14 44 13.5	
	comp=Z,5.1nm,1.1s							
MBAR	**Mbarara**	**47.48**	**359**	LR		LR	15 03 23.5	
	comp=Z,86nm,20.1s,baz=102,slow=35							
PMSA	**Palmer Station**	**49.87**	**214**	LR		LR	15 00 16.1	
	comp=Z,26nm,21.8s,baz=114,slow=30							
PMSA	**Palmer Station**	**49.87**	**214**	P		**P**	**14 44 25.5**	**+1.7**
VNDA	**Vanda**	**50.80**	**168**	P		**P**	**14 44 29.4**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=251,slow=7.9,SNR=7.7							
VNDA				LR		LR	15 05 11.3	
	comp=Z,118nm,19.7s,baz=231,slow=35 comp=Z,1.1nm,0.7s							
VNDA	**Vanda**	**50.80**	**168**	P		**P**	**14 44 33.0**	**+2.4**
SBA	**Scott Base**	**51.20**	**169**	P		**P**	**14 44 35.4**	**+1.7**
SBA				IAmb		IAmb	14 44 50.4	
	comp=Z,9.0nm,1.3s							
DBIC	**Dimbokro**	**63.34**	**319**	P		**P**	**14 46 00.7**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=175,slow=7.4,SNR=4.9							
DBIC				LR		LR	15 11 26.8	
	comp=Z,36nm,18.2s,baz=92,slow=34 comp=Z,5.2nm,0.9s							
TOA0	**Torodi Ar. Sit**	**66.64**	**328**	P		**P**	**14 46 22.1**	**+0.6**
TOA0				IAmb		IAmb	14 46 35.4	
	comp=Z,5.4nm,1.3s							
TORD	**Torodi Ar. Bea**	**66.64**	**328**	P		**P**	**14 46 22.3**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=167,slow=6.9,SNR=6.1 comp=Z,1.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**66.64**	**328**	P		**P**	**14 46 22.7**	**+1.2**
TORD				IAmb		IAmb	14 46 33.4	
	comp=Z,3.2nm,1.1s							
PLCA	**Paso Flores**	**67.82**	**233**	P		**P**	**14 46 28.5**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=156,slow=18,SNR=2.9 comp=Z,3.4nm,1.0s							
CPUP	**Villa Florida**	**70.10**	**253**	P		**P**	**14 46 42.6**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=198,slow=4.6,SNR=4.1 comp=Z,2.4nm,0.8s							
ML02	**Panimavida**	**71.86**	**237**	P		**P**	**14 46 55.3**	**+1.5**
ASAR	**Alice Springs**	**80.48**	**115**	P		**P**	**14 47 42.3**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=208,slow=4.2,SNR=9.2 comp=Z,1.9nm,1.0s							
ASAR	**Alice Springs**	**80.48**	**115**	P		**P**	**14 47 42.5**	**-0.6**

IDC ***17*** *15:11:54.4±0.4,4.˚60S×149.˚69E,h558km±4km,mb4.3/28, mbtmp5.2/32,Error ellipse: s-maj=8.5km s-min=6.6km az=64.0*

NEIC ***17*** *15:11:54.4±1.9,4.˚60S±0.˚09×149.˚65E±0.˚09,h548km±5km, mb4.9/108,Error ellipse: s-maj=12.9km s-min=12.0km az=216.0*

BJI ***17*** *15:11:54.0±0.0,4.˚47S×149.˚79E,h563km,mb4.4/53, mB4.3/25*

DJA ***17*** *15:11:54.7±0.3,5.˚5S±3.˚×15.˚0E±.˚,h567km±4km,M4.9/73, mB5.4/50,mb5.2/73,MLv5.1/2,Mw(mB)4.9/50, MwMwp5.2/5,Mwp5.4/5*

GCMT ***17*** *15:11:56.4±0.2,4.˚73S±0.˚02×149.˚53E±0.˚02,h560km±1km, MW5.4/100,Moment Tensor Solution. s100,c152; Duration: 1s2 Moment tensor: Scale 10^17^Nm; Mrr-0.79±.03; Mθθ-0.33±.05; Mϕϕ1.12±.05; Mrθ0.48±.04; Mθϕ0.66±.05; Mϕr-0.62±.05; Best double couple: Mo1.43100×10^17^ NP1:ϕs349.00000°,δ66.00000°, λ-132.00000°. NP2:ϕs234.00000°,δ47.00000°, λ-34.00000°. Principal axes: T 1.4560, Plg11.0000°, Azm107.0000°; N -0.0530, Plg37.0000°, Azm8.0000°; P -1.4070, Plg50.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC ***17*** **15:11:54.6**±0.3,**4.˚67S**±0.˚04×**149.˚69E**±0.˚04,**h563**km±3km, **h564**km:**pP-P,n696,σ1s29**/761,**mb5.1**/92,**7C-14D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.35**	**81**	P		**P**		**15 13 06.5**	**-0.8**
	2µm,0.5s,baz=333,slow=0.1,SNR=822								
KRVT				S		**S**		**15 14 03.3**	**-2.9**
	2µm,1.0s,baz=31,slow=20,SNR=5.4								
RABL	**Rabaul**	**2.51**	**79**	P		**P**		**15 13 06.8**	**-1.2**
MANU	**Manus Island**	**3.49**	**318**	P		**P**		**15 13 14.6**	**+0.7**
GENI	**Genyem**	**9.73**	**282**	P		**P**		**15 14 09.7**	**-0.3**
	5µm17µm2µm,0.9s								
GENI	**Genyem**	**9.73**	**282**	P		**P**		**15 14 10.0**	**0.0**
HNR	**Honiara**	**11.22**	**116**	P		**P**		**15 14 24.3**	**-1.0**
	630nm,0.7s,baz=216,slow=2.9,SNR=45								
HNR	**Honiara**	**11.22**	**116**	P		**P**		**15 14 24.7**	**-0.6**
COEN	**Coen**	**11.25**	**214**	P		**P**		**15 14 27.3**	**+1.7**
	baz=11,SNR=29								
COEN	**Coen**	**11.25**	**214**	P		**P**		**15 14 26.6**	**+1.1**
COEN	**Coen**	**11.25**	**214**	P		**P**		**15 14 27.3**	**+1.7**
SMPI	**Sarmi**	**11.28**	**283**	P		**P**		**15 14 26.2**	**+0.3**
	2µm12µm1µm,1.1s								
SRPI	**Serui, Papua**	**13.71**	**281**	P		**P**		**15 14 50.0**	**-1.0**
	3µm197nm,0.5s								
BAKI	**Biak**	**14.00**	**284**	P		**P**		**15 14 53.4**	**-0.5**
	7µm636nm,1.0s								
PATS	**Pohnpei**	**14.30**	**37**	P		**P**		**15 14 56.9**	**-0.1**
	baz=14,SNR=11								
PATS	**Pohnpei**	**14.30**	**37**	P		**P**		**15 14 56.1**	**-0.8**
PATS	**Pohnpei**	**14.30**	**37**	P		**P**		**15 14 56.7**	**-0.2**
MTSU	**Mount Surprise**	**14.38**	**201**	P		**P**		**15 14 59.6**	**+1.9**
	baz=14,SNR=463								
MTSU	**Mount Surprise**	**14.38**	**201**	P		**P**		**15 14 59.8**	**+2.1**
CTA	**Charters Tower**	**15.69**	**192**	P		**P**		**15 15 11.6**	**+0.9**
	257nm,0.6s,baz=6.6,slow=10,SNR=274								
CTAO	**Charters Tower**	**15.69**	**192**	P		**P**		**15 15 10.9**	**+0.1**
CTAO	**Charters Tower**	**15.69**	**192**	P		**P**		**15 15 12.2**	**+1.5**
FAKI	**Fak Fak**	**17.49**	**275**	P		**P**		**15 15 26.9**	**-0.5**
FAKI	**Fak Fak**	**17.49**	**275**	P		**P**		**15 15 27.2**	**-0.2**
	2µm6µm692nm,0.9s								
FAKI	**Fak Fak**	**17.49**	**275**	P		**P**		**15 15 27.4**	**0.0**
SAUI	**Saumlaki**	**18.57**	**259**	P		**P**		**15 15 38.0**	**+0.7**
SAUI	**Saumlaki**	**18.57**	**259**	P		**P**		**15 15 39.5**	**+2.2**
QIS	**Mount Isa**	**18.60**	**211**	P		**P**		**15 15 38.4**	**+1.0**
	baz=19,SNR=383								
QIS	**Mount Isa**	**18.60**	**211**	P		**P**		**15 15 38.6**	**+1.2**
RK1H	**Rockhampton Ha**	**18.63**	**178**	P		**P**		**15 15 39.3**	**+1.7**
KDU	**Kakadu**	**18.78**	**244**	P		**P**		**15 15 38.9**	**-0.2**
	baz=19,SNR=306								
KDU	**Kakadu**	**18.78**	**244**	P		**P**		**15 15 39.0**	**-0.1**
SIJI	**Sorong**	**18.78**	**281**	P		**P**		**15 15 39.5**	**+0.3**
	79nm,0.3s,baz=110,slow=4.0,SNR=43								
SWI	**Sorong**	**18.79**	**281**	P		**P**		**15 15 38.6**	**-0.7**
	3µm246nm,0.6s								
BNDI	**Bandanaira**	**19.73**	**270**	P		**P**		**15 15 49.1**	**+1.4**
MTN	**Manton Dam**	**20.05**	**245**	P		**P**		**15 15 50.4**	**-0.3**
	baz=20,SNR=25								
MTN	**Manton Dam**	**20.05**	**245**	P		**P**		**15 15 50.1**	**-0.6**
MTN	**Manton Dam**	**20.05**	**245**	P		**P**		**15 15 50.6**	**0.0**
EIDS	**Eidsvold**	**20.63**	**176**	P		**P**		**15 15 56.7**	**+1.0**
	baz=21,SNR=25								
EIDS	**Eidsvold**	**20.63**	**176**	P		**P**		**15 15 55.5**	**-0.3**
EIDS	**Eidsvold**	**20.63**	**176**	P		**P**		**15 15 57.1**	**+1.3**
MSAI	**Masohi**	**20.75**	**273**	P		**P**		**15 15 57.1**	**0.0**
	641nm55nm,0.5s								
WB0	**Warramunga Arr**	**21.16**	**224**	P		**P**		**15 16 00.8**	**+0.2**
WR0	**Warramunga Arr**	**21.19**	**223**	P		**P**		**15 16 01.2**	**+0.3**
KOUNC	**Koumac, New Ca**	**21.23**	**139**	P		**P**		**15 16 02.8**	**+1.6**
WRAB	**Tennant Creek**	**21.30**	**223**	P		**P**		**15 16 02.3**	**+0.4**
WRAB	**Tennant Creek**	**21.30**	**223**	P		**P**		**15 16 02.5**	**+0.6**
WB2	**Warramunga Arr**	**21.30**	**223**	P		**P**		**15 16 02.1**	**+0.2**
WRA	**Warramunga Arr**	**21.31**	**223**	P		**P**		**15 16 02.0**	**0.0**
	231nm,0.8s,baz=48,slow=9.6,SNR=627								
WRA				S		**S**		**15 19 19.9**	**-1.8**
	63nm,0.7s,baz=55,slow=13,SNR=5.7								
WRA				PcP		**PcP**		**15 19 43.0**	**+0.5**
	25nm,0.7s,baz=52,slow=2.0,SNR=6.2								
WRA				ScP		**ScP**		**15 22 26.9**	**+0.1**
	23nm,0.9s,baz=30,slow=2.2,SNR=8.6								
WRA				PKiKP		**PKiKP**		**15 27 27.4**	**-1.7**
	0.5nm,0.3s,baz=323,slow=1.2,SNR=17								
	231nm,0.8s								
WRA	**Warramunga Arr**	**21.31**	**223**	P		**P**		**15 16 02.6**	**+0.6**
WRA				PcP		**PcP**		**15 19 43.0**	**+0.5**
AAI	**Ambon**	**21.46**	**272**	P		**P**		**15 16 03.8**	**+0.4**
	4µm342nm,0.6s								
RMQ	**Roma**	**21.72**	**182**	P		**P**		**15 16 06.7**	**+1.2**
	baz=22,SNR=94								
RMQ	**Roma**	**21.72**	**182**	P		**P**		**15 16 06.9**	**+1.4**
KWAJ	**Kwajalein Atol**	**22.32**	**53**	P		**P**		**15 16 11.4**	**+0.4**
QLP	**Quilpie**	**22.41**	**193**	P		**P**		**15 16 12.7**	**+0.9**
	baz=23,SNR=73								
QLP	**Quilpie**	**22.41**	**193**	P		**P**		**15 16 12.8**	**+1.1**
LBMI	**Labuha**	**22.52**	**280**	P		**P**		**15 16 11.9**	**-1.0**
	3µm320nm,0.8s								
NLAI	**Namlea**	**22.58**	**273**	P		**P**		**15 16 14.5**	**+1.1**
	3µm220nm,0.6s								
TNTI	**Ternate**	**22.95**	**283**	P		**P**		**15 16 15.9**	**-0.8**
TNTI	**Ternate**	**22.95**	**283**	P		**P**		**15 16 16.8**	**+0.1**
	105nm,0.9s								
KNRA	**Kununurra**	**23.30**	**240**	P		**P**		**15 16 19.6**	**-0.2**
	baz=23,SNR=31								
KNRA	**Kununurra**	**23.30**	**240**	P		**P**		**15 16 19.1**	**-0.7**
KNRA	**Kununurra**	**23.30**	**240**	P		**P**		**15 16 19.4**	**-0.3**
NOUC	**Port Laguerre**	**23.65**	**139**	P		**P**		**15 16 23.5**	**+0.7**
DZM	**Mont Dzumac**	**23.72**	**138**	P		**P**		**15 16 24.1**	**+0.6**
	17nm,0.5s,baz=260,slow=9.9,SNR=26								
	17nm,0.5s								
DZM	**Mont Dzumac**	**23.72**	**138**	*eP*		**P**		**15 16 25.3**	**+1.7**
	62nm,21.6s								
DZM				*eS*		**S**		**15 20 02.6**	**+2.8**
	248nm,26.7s								
DZM				*e*LR		LR		15 22 55.3	
	comp=Z,317nm,24.7s								
DZM	**Mont Dzumac**	**23.72**	**138**	P		**P**		**15 16 23.9**	**+0.4**
DZM				PcP		**PcP**		**15 19 49.9**	**+2.2**
DZM	**Mont Dzumac**	**23.72**	**138**	P		**P**		**15 16 24.3**	**+0.7**
SANI	**Sanana**	**23.80**	**275**	P		**P**		**15 16 24.3**	**0.0**
	2µm164nm,1.1s								
SANI	**Sanana**	**23.80**	**275**	P		**P**		**15 16 24.9**	**+0.6**
TARA	**Tarawa**	**23.97**	**76**	P		**P**		**15 16 25.6**	**-0.1**
TARA	**Tarawa**	**23.97**	**76**	P		**P**		**15 16 26.0**	**+0.2**
YATNC	**Mamie plateau,**	**24.01**	**138**	P		**P**		**15 16 27.2**	**+1.2**
OUENC	**Ouen Island, N**	**24.23**	**138**	P		**P**		**15 16 29.4**	**+1.5**
AS31	**Alice Springs**	**24.26**	**217**	P		**P**		**15 16 28.7**	**+0.4**
ASAR	**Alice Springs**	**24.27**	**217**	P		**P**		**15 16 28.7**	**+0.4**
	204nm,0.6s,baz=47,slow=8.1,SNR=2884								
ASAR				PcP		**PcP**		**15 19 49.4**	**+0.6**
	12nm,0.7s,baz=51,slow=1.9,SNR=4.9								
ASAR				S		**S**		**15 20 07.2**	**-1.0**
	15nm,1.0s,baz=45,slow=13,SNR=2.0								
ASAR				ScP		**ScP**		**15 22 35.0**	**+0.4**
	11nm,0.8s,baz=45,slow=2.7,SNR=7.7								
ASAR				PKiKP		**PKiKP**		**15 27 28.8**	**-1.8**
	0.7nm,0.7s,baz=24,slow=1.2,SNR=4.4								
	204nm,0.6s								
INKA	**Innaminka**	**24.48**	**199**	P		**P**		**15 16 30.7**	**+0.6**
SGSI	**Sangihe**	**25.53**	**289**	P		**P**		**15 16 40.2**	**+0.6**
	3µm245nm,0.9s								
ARMA	**Armidale**	**25.68**	**176**	P		**P**		**15 16 42.6**	**+1.8**
	baz=26,SNR=73								
ARMA	**Armidale**	**25.68**	**176**	P		**P**		**15 16 41.8**	**+1.0**
ARMA	**Armidale**	**25.68**	**176**	P		**P**		**15 16 43.1**	**+2.3**
KMSI	**Cibinong**	**26.21**	**281**	P		**P**		**15 16 46.0**	**+0.5**
	5µm497nm,0.6s								
BATI	**Baumata**	**26.38**	**256**	P		**P**		**15 16 48.4**	**+1.3**
	66nm,0.4s,baz=89,slow=3.3,SNR=25								
	66nm,0.4s								
BATI	**Baumata**	**26.38**	**256**	P		**P**		**15 16 48.6**	**+1.5**
	1µm86nm,0.9s								
OOD	**Oodnadatta**	**26.59**	**209**	P		**P**		**15 16 49.0**	**+0.3**
CMSA	**Cobar Meteorol**	**27.00**	**188**	P		**P**		**15 16 53.0**	**+0.8**
	baz=27,SNR=153								
CMSA	**Cobar Meteorol**	**27.00**	**188**	P		**P**		**15 16 53.0**	**+0.8**
BBSI	**Bau Bau**	**27.03**	**267**	P		**P**		**15 16 53.7**	**+0.9**
	118nm7.3nm,0.7s								
FITZ	**Fitzroy Crossi**	**27.04**	**238**	P		**P**		**15 16 52.3**	**-0.5**
	40nm,0.4s,baz=53,slow=8.4,SNR=251								
	40nm,0.4s								
FITZ	**Fitzroy Crossi**	**27.04**	**238**	P		**P**		**15 16 52.3**	**-0.5**
	baz=27,SNR=241								
FITZ	**Fitzroy Crossi**	**27.04**	**238**	P		**P**		**15 16 52.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**27.04**	**238**	P		**P**		**15 16 52.5**	**-0.3**
LUWI	**Luwuk**	**27.12**	**277**	P		**P**		**15 16 54.3**	**+0.7**
LUWI	**Luwuk**	**27.12**	**277**	P		**P**		**15 16 54.2**	**+0.7**
	2µm266nm,0.9s								
LUWI	**Luwuk**	**27.12**	**277**	P		**P**		**15 16 53.6**	**0.0**
KCP	**Kidapawan**	**27.16**	**295**	*eP*		**P**		**15 16 58.3**	**+4.3**
GTOI	**Gorontalo**	**27.17**	**280**	P		**P**		**15 16 55.2**	**+1.2**
	1µm146nm,0.7s								
MMRI	**Maumere**	**27.55**	**260**	P		**P**		**15 16 56.0**	**-1.3**
MMRI	**Maumere**	**27.55**	**260**	P		**P**		**15 16 56.7**	**-0.6**
	2µm123nm,0.6s								
MMRI	**Maumere**	**27.55**	**260**	P		**P**		**15 16 56.9**	**-0.4**
LCRK	**Leigh Creek**	**27.84**	**202**	P		**P**		**15 16 59.7**	**+0.1**
EDFI	**Ende, Flores**	**28.10**	**260**	P		**P**		**15 17 00.9**	**-1.3**
	662nm58nm,0.8s								
STKA	**Stephens Creek**	**28.12**	**195**	P		**P**		**15 17 01.9**	**-0.1**
	71nm,0.8s,baz=354,slow=9.1,SNR=131								
STKA				ScP		**ScP**		**15 22 47.0**	**+1.2**
	25nm,1.1s,baz=357,slow=7.5,SNR=5.1								
	71nm,0.8s								
STKA	**Stephens Creek**	**28.12**	**195**	P		**P**		**15 17 01.9**	**-0.1**
	baz=28,SNR=126								
STKA	**Stephens Creek**	**28.12**	**195**	P		**P**		**15 17 01.6**	**-0.4**
STKA	**Stephens Creek**	**28.12**	**195**	P		**P**		**15 17 02.1**	**+0.1**
LHI	**Lord Howe Isla**	**28.13**	**163**	P		**P**		**15 17 03.0**	**+0.9**
MRSI	**Marisa**	**28.19**	**280**	P		**P**		**15 17 01.9**	**-1.0**
	1µm79nm,0.7s								
APSI	**Ampana**	**28.25**	**277**	P		**P**		**15 17 04.1**	**+0.6**
	2µm199nm,0.7s								
MGCD	**Mangrove Creek**	**28.43**	**178**	P		**P**		**15 17 06.5**	**+1.8**
	baz=29,SNR=18								
MGCD	**Mangrove Creek**	**28.43**	**178**	P		**P**		**15 17 06.7**	**+2.0**
WRKA	**Warakurna**	**28.86**	**223**	P		**P**		**15 17 08.4**	**-0.2**
	baz=29,SNR=1000								
WRKA	**Warakurna**	**28.86**	**223**	P		**P**		**15 17 08.4**	**-0.2**
SYDH	**Sydney Hard Ro**	**28.97**	**178**	P		**P**		**15 17 11.0**	**+1.7**
MULG	**Mulgathing**	**29.45**	**208**	P		**P**		**15 17 13.6**	**0.0**
TOLI2	**Tolitoli**	**29.45**	**281**	P		**P**		**15 17 12.8**	**-1.1**
TOLI2				IAmb		IAmb		15 17 15.8	
	comp=Z,37nm,0.6s								
TOLI2	**Tolitoli**	**29.45**	**281**	P		**P**		**15 17 13.5**	**-0.3**
BKSI	**Bulukumba**	**29.46**	**267**	P		**P**		**15 17 14.6**	**+0.6**
	comp=Z,19nm,0.8s								
FUNA	**Funafuti**	**29.55**	**99**	P		**P**		**15 17 15.3**	**+0.6**
KAPI	**Kappang**	**29.84**	**268**	P		**P**		**15 17 17.9**	**+0.8**
	comp=Z,38nm,0.5s,baz=108,slow=3.3,SNR=25								
	comp=Z,38nm,0.5s								
KAPI	**Kappang**	**29.84**	**268**	P		**P**		**15 17 17.1**	**-0.1**
KAPI	**Kappang**	**29.84**	**268**	P		**P**		**15 17 18.0**	**+0.8**
KAPI	**Kappang**	**29.84**	**268**	P		**P**		**15 17 17.7**	**+0.5**
SPSI	**Sidrap Palu**	**29.85**	**270**	P		**P**		**15 17 17.2**	**-0.1**
	comp=Z,1µmcomp=Z,62nm,0.5s								
TTSI	**Tana Toraja**	**29.85**	**272**	P		**P**		**15 17 18.0**	**+0.7**
	comp=Z,17nm,0.6s								
MPSI	**Mapaga**	**30.18**	**279**	P		**P**		**15 17 19.5**	**-0.6**
	comp=Z,4µmcomp=Z,245nm,0.7s								
HTT	**Hallett**	**30.33**	**198**	P		**P**		**15 17 21.7**	**+0.4**
	baz=30,SNR=92								
HTT	**Hallett**	**30.33**	**198**	P		**P**		**15 17 21.6**	**+0.4**
PTPS	**Port Pirie**	**30.39**	**200**	P		**P**		**15 17 21.9**	**+0.3**
WHYH	**Whyalla**	**30.41**	**200**	P		**P**		**15 17 22.1**	**+0.3**
WBSI	**Waikabubak, Su**	**30.46**	**259**	P		**P**		**15 17 22.1**	**-0.5**
	comp=Z,2µmcomp=Z,140nm,0.8s								
CNB	**Canberra Magne**	**30.50**	**181**	P		**P**		**15 17 24.4**	**+1.7**
	baz=31,SNR=96								
CNB	**Canberra Magne**	**30.50**	**181**	P		**P**		**15 17 24.3**	**+1.7**
CAN	**Canberra**	**30.51**	**181**	P		**P**		**15 17 24.2**	**+1.5**
CAN	**Canberra**	**30.51**	**181**	P		**P**		**15 17 24.3**	**+1.5**
CAN	**Canberra**	**30.51**	**181**	P		**P**		**15 17 24.3**	**+1.5**
MSVF	**Nonsavu**	**30.64**	**117**	P		**P**		**15 17 25.8**	**+1.8**
	comp=Z,47nm,0.6s,baz=268,slow=9.2,SNR=73								
	comp=Z,47nm,0.6s								
MSVF	**Nonsavu**	**30.64**	**117**	P		**P**		**15 17 25.0**	**+0.9**
MSVF	**Nonsavu**	**30.64**	**117**	P		**P**		**15 17 25.9**	**+1.8**
MSVF	**Nonsavu**	**30.64**	**117**	P		**P**		**15 17 25.7**	**+1.6**
BBOO	**Buckleboo**	**30.76**	**203**	P		**P**		**15 17 24.8**	**-0.1**
	baz=31,SNR=135								
BBOO	**Buckleboo**	**30.76**	**203**	P		**P**		**15 17 24.5**	**-0.3**
BBOO				PcP		**PcP**		**15 20 05.0**	**+0.3**
BBOO	**Buckleboo**	**30.76**	**203**	P		**P**		**15 17 24.6**	**-0.3**
RCP	**Roxas**	**31.28**	**301**	*eP*		**P**		**15 17 29.9**	**+0.3**
GHSS	**Government Hou**	**31.81**	**197**	P		**P**		**15 17 34.7**	**+1.0**
TWOA	**Tennyson Woods**	**31.92**	**197**	P		**P**		**15 17 35.6**	**+0.9**
PLAI	**Plampang**	**31.95**	**261**	P		**P**		**15 17 33.6**	**-1.8**
	comp=Z,2µmcomp=Z,121nm,0.4s								
PLAI	**Plampang**	**31.95**	**261**	P		**P**		**15 17 33.5**	**-1.8**
TAVE	**Taveuni**	**32.12**	**114**	P		**P**		**15 17 38.2**	**+1.5**
MILA	**Mila**	**32.24**	**181**	P		**P**		**15 17 38.9**	**+1.5**
	baz=32,SNR=23								
MYLDM	**Lahad Datu**	**32.65**	**287**	P		**P**		**15 17 42.0**	**+0.7**
ARPS	**Mount Arapiles**	**32.76**	**192**	P		**P**		**15 17 42.7**	**+0.9**
	baz=33,SNR=18								
ARPS	**Mount Arapiles**	**32.76**	**192**	P		**P**		**15 17 42.6**	**+0.9**
TWSI	**Taliwang, Sumb**	**32.83**	**261**	P		**P**		**15 17 40.9**	**-1.8**
	comp=Z,459nmcomp=Z,40nm,0.9s								
TOO	**Toolangi**	**32.98**	**186**	P		**P**		**15 17 45.2**	**+1.5**
	baz=33,SNR=118								
TOO	**Toolangi**	**32.98**	**186**	P		**P**		**15 17 44.8**	**+1.1**
TOO	**Toolangi**	**32.98**	**186**	P		**P**		**15 17 45.2**	**+1.5**
FORT	**Forrest**	**33.01**	**216**	P		**P**		**15 17 44.0**	**0.0**
	baz=33,SNR=164								
FORT	**Forrest**	**33.01**	**216**	P		**P**		**15 17 43.8**	**-0.2**
FORT	**Forrest**	**33.01**	**216**	P		**P**		**15 17 44.0**	**0.0**
BRAT	**Ballarat**	**33.15**	**188**	P		**P**		**15 17 47.0**	**+2.0**
MBWA	**Marble Bar**	**33.38**	**238**	P		**P**		**15 17 46.3**	**-1.0**
MBWA				IAmb		IAmb		15 17 47.2	
	comp=Z,48nm,0.9s								
MBWA	**Marble Bar**	**33.38**	**238**	P		**P**		**15 17 46.5**	**-0.8**
MBWA	**Marble Bar**	**33.38**	**238**	P		**P**		**15 17 46.6**	**-0.7**
MBWA				pP		**pP**		**15 19 22.5**	**+1.2**
PSA00	**Pilbara Seismi**	**33.47**	**237**	P		**P**		**15 17 47.2**	**-0.8**
PSA00	**Pilbara Seismi**	**33.47**	**237**	P		**P**		**15 17 47.3**	**-0.7**
LQP	**Lukban**	**33.59**	**304**	*eP*		**P**		**15 17 49.3**	**0.0**
GEXS	**Deakin Univers**	**33.74**	**188**	P		**P**		**15 17 52.3**	**+2.3**
PPR	**Puerto Princes**	**34.02**	**295**	*iP*		**P**		**15 17 53.9**	**+1.1**
BBKI	**Banjar Baru**	**34.78**	**271**	P		**P**		**15 18 02.0**	**+2.9**
	comp=Z,5µmcomp=Z,66nm,0.7s								
KKM	**Kota Kinabalu**	**35.08**	**287**	P		**P**		**15 18 00.7**	**-1.0**
KKM				IAmb		IAmb		15 18 02.8	
	comp=Z,38nm,0.6s								
KKM	**Kota Kinabalu**	**35.08**	**287**	P		**P**		**15 18 02.2**	**+0.5**
JAGI	**Jajag, Banyuwa**	**35.50**	**262**	P		**P**		**15 18 03.1**	**-1.9**
JAGI	**Jajag, Banyuwa**	**35.50**	**262**	P		**P**		**15 18 03.2**	**-1.9**
GLAD	**Gladstone**	**36.19**	**182**	P		**P**		**15 18 12.3**	**+2.0**
MEEK	**Meekatharra**	**36.86**	**230**	P		**P**		**15 18 15.7**	**-0.5**
	baz=37,SNR=39								
MEEK	**Meekatharra**	**36.86**	**230**	P		**P**		**15 18 15.7**	**-0.5**
JOW	**Kunigami**	**37.55**	**328**	P		**P**		**15 18 22.3**	**+0.6**
JOW	**Kunigami**	**37.55**	**328**	P		**P**		**15 18 22.7**	**+1.0**
OUZ	**Omahuta**	**37.58**	**147**	P		**P**		**15 18 24.2**	**+2.4**
MOO	**Moorlands**	**37.68**	**183**	P		**P**		**15 18 24.4**	**+1.9**
	baz=38,SNR=21								
MOO	**Moorlands**	**37.68**	**183**	P		**P**		**15 18 24.4**	**+1.9**
PWJI	**Pagerwojo**	**37.79**	**263**	P		**P**		**15 18 22.9**	**-1.0**
	comp=Z,97nm,1.0s								
TAU	**Tasmania Unive**	**38.14**	**183**	P		**P**		**15 18 27.7**	**+1.5**
TAU	**Tasmania Unive**	**38.14**	**183**	P		**P**		**15 18 28.1**	**+1.8**
TAU	**Tasmania Unive**	**38.14**	**183**	P		**P**		**15 18 28.1**	**+1.8**
PCJI	**Pacitan**	**38.42**	**263**	P		**P**		**15 18 28.6**	**-0.4**
	comp=Z,271nm,0.8s								
STKI	**Sintang**	**38.46**	**276**	P		**P**		**15 18 31.1**	**+1.8**
	comp=Z,33nm,1.0s								
GIRL	**Giralia**	**38.65**	**239**	P		**P**		**15 18 31.3**	**+0.6**
	baz=39,SNR=9.2								
GIRL	**Giralia**	**38.65**	**239**	P		**P**		**15 18 31.3**	**+0.6**
YOJ	**Yonaguni jima**	**38.89**	**319**	P		**P**		**15 18 33.5**	**+0.9**
UGM	**Wanagama**	**39.05**	**263**	P		**P**		**15 18 34.4**	**+0.2**
AFI	**Afiamalu**	**39.06**	**106**	P		**P**		**15 18 34.3**	**+0.1**
	comp=Z,38nm,0.7s,baz=73,slow=3.8,SNR=6.5								
	comp=Z,38nm,0.7s								
AFI	**Afiamalu**	**39.06**	**106**	P		**P**		**15 18 35.6**	**+1.4**
	comp=Z,70nm,1.4s								
AFI	**Afiamalu**	**39.06**	**106**	P		**P**		**15 18 35.1**	**+0.9**
AFI				pP		**pP**		**15 20 09.5**	**-2.3**
AFI				sP		**sP**		**15 21 12.0**	**-3.7**
YULB	**Yu-li**	**39.31**	**316**	P		**P**		**15 18 35.4**	**-0.6**
YULB				IAmb		IAmb		15 18 37.8	
	comp=Z,38nm,0.9s								
TPUB	**Ta-pu**	**39.71**	**316**	P		**P**		**15 18 38.8**	**-0.5**
SSLB	**Suanglung**	**39.81**	**317**	P		**P**		**15 18 40.1**	**+0.1**
SSLB				IAmb		IAmb		15 18 42.2	
	comp=Z,31nm,0.6s								
SSLB				PcP		**PcP**		**15 20 31.3**	**-0.7**
SSLB	**Suanglung**	**39.81**	**317**	P		**P**		**15 18 40.3**	**+0.3**
KSM	**Kuching**	**39.82**	**278**	P		**P**		**15 18 40.8**	**+0.5**
KSM	**Kuching**	**39.82**	**278**	P		**P**		**15 18 41.2**	**+0.9**
MORW	**Morawa**	**40.06**	**229**	P		**P**		**15 18 41.4**	**-0.6**
	baz=40,SNR=12								
MORW	**Morawa**	**40.06**	**229**	P		**P**		**15 18 41.3**	**-0.6**
MORW	**Morawa**	**40.06**	**229**	P		**P**		**15 18 41.2**	**-0.8**
YHNB	**Yeheng**	**40.11**	**318**	P		**P**		**15 18 42.7**	**+0.2**
YHNB	**Yeheng**	**40.11**	**318**	P		**P**		**15 18 43.7**	**+1.2**
KLBR	**Kellerberrin**	**40.19**	**224**	P		**P**		**15 18 41.9**	**-1.1**
	baz=40,SNR=39								
KLBR	**Kellerberrin**	**40.19**	**224**	P		**P**		**15 18 42.0**	**-0.9**
TATO	**Taipei**	**40.25**	**318**	P		**P**		**15 18 43.4**	**-0.1**
TATO	**Taipei**	**40.25**	**318**	P		**P**		**15 18 43.8**	**+0.3**
BLDU	**Ballidu**	**40.38**	**226**	P		**P**		**15 18 43.7**	**-0.8**
	baz=40,SNR=67								
BLDU	**Ballidu**	**40.38**	**226**	P		**P**		**15 18 43.7**	**-0.8**
HIZ	**Hauiti**	**40.73**	**149**	P		**P**		**15 18 50.0**	**+2.9**
JMN	**Monobe**	**41.01**	**340**	P		**P**		**15 18 49.4**	**0.0**
NWAO	**Narrogin (SRO)**	**41.32**	**223**	P		**

CHTO Chiang Mai 55.15 297 P **P** 15 20 35.7 +0.8
CHTO pP **pP** 15 22 24.5 +2.3
PZH PanZhiHua 55.78 306 P **P** 15 20 39.8 +0.5
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,50nm,3.5s
CD2 Chengdu 56.32 312 P **P** 15 20 44.1 +1.2
CD2 pmax pmax
comp=Z,30nm,0.6s
HHC Hu-ho-hao-te 57.17 326 *e*P **P** 15 20 51.3 +2.7
HHC S **S** 15 28 01.6 -0.1
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,84nm,5.2s
KIP Kipapa 57.41 61 P **P** 15 20 51.4 +1.0
PEA0B Petropavlovsk- 57.95 6 P **P** 15 20 54.0 +0.5
PETK Petropavlovsk- 57.95 6 P **P** 15 20 54.2 +0.7
comp=Z,3.7nm,0.7s,baz=153,slow=5.9,SNR=18
PETK PcP **PcP** 15 21 37.6 -0.3
comp=Z,4.7nm,0.8s,baz=179,slow=6.8,SNR=4.6
PETK pP **pP** 15 22 41.1 -0.1
comp=Z,14nm,1.1s,baz=144,slow=5.3,SNR=3.4
comp=Z,3.7nm,0.7s
PETK Petropavlovsk- 57.95 6 P **P** 15 20 53.1 -0.3
PETK PcP **PcP** 15 21 37.9 -0.1
KHU Kahuku 58.81 64 P **P** 15 21 01.1 +0.8
HPAH Hawaii Prepara 58.99 63 P **P** 15 21 00.9 -0.3
HMH Humu'ula Sheep 59.04 64 P **P** 15 21 02.7 +0.9
HMH IAmb IAmb 15 21 04.0
comp=Z,135nm,1.0s
POHA Pohakuloa 59.05 64 P **P** 15 21 01.9 +0.1
POHA Pohakuloa 59.05 64 P **P** 15 21 02.6 +0.8
HIA Hailar 59.69 338 P **P** 15 21 06.2 +0.9
PPT2 Papeete2 60.72 107 *e*PKP2 **P** 15 21 14.0 +1.3
comp=Z,65nm,1.4s
PPT2 *e*S **S** 15 28 49.0 +1.9
comp=Z,192nm,29.2s
TIAR Tiarei 60.94 107 *e*PKP2 **P** 15 21 15.7 +1.6
comp=Z,16nm,1.1s
TBI Tubuai 61.44 114 *e*S **S** 15 28 57.4 +1.8
comp=Z,271nm,30.0s
PMOR Pomariorio Ree 62.17 104 *e*P **P** 15 21 23.7 +1.6
comp=Z,225nm,1.2s
DRV Dumont d'Urvil 62.26 184 P **P** 15 21 22.4 +0.7
GTA Gaotai 63.48 319 ⇓P **P** 15 21 31.3 +1.0
GTA PcP **PcP** 15 22 02.3 +1.4
GTA S **S** 15 29 20.9 +0.6
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,48nm,6.7s
ULN Ulaanbaatar 64.28 330 P **P** 15 21 35.7 +0.5
ULN Ulaanbaatar 64.28 330 P **P** 15 21 36.4 +1.1
ULN pP **pP** 15 23 30.5 +3.1
SONM Songino Array 64.59 329 P **P** 15 21 38.1 +1.0
comp=Z,6.6nm,0.7s,baz=148,slow=4.6,SNR=42
SONM PcP **PcP** 15 22 05.2 -0.2
comp=Z,2.9nm,0.3s,baz=150,slow=4.5,SNR=8.6
comp=Z,6.6nm,0.7s
SONM Songino Array 64.59 329 P **P** 15 21 38.0 +0.8
SONM PcP **PcP** 15 22 05.2 -0.2
LSA Lhasa 65.62 305 P **P** 15 21 44.6 +0.2
CASY Casey 67.26 196 P **P** 15 21 53.0 -0.2
CASY Casey 67.26 196 ⇓P **P** 15 21 53.4 +0.1
CASY PP **PP** 15 24 28.9 -2.5
TAPN Taplejung 67.69 302 *e*P **P** 15 21 57.4 +0.3
comp=Z,57nm,1.1s
ODAN Odare 67.82 301 *e*P **P** 15 21 57.0 -0.7
JIRN Jiri 69.08 302 *e*P **P** 15 22 06.0 +0.5
comp=Z,4.7nm,0.3s
GUN Gumba 69.41 302 *e*P **P** 15 22 07.8 +0.3
comp=Z,34nm,0.4s
PKI Pulchoki 69.71 301 *e*P **P** 15 22 09.2 -0.1
PKIN Phulchoki 69.72 301 *e*P **P** 15 22 09.2 -0.1
comp=Z,13nm,0.4s
KKN Kakani 69.88 302 *e*P **P** 15 22 09.8 -0.3
DMN Daman 69.98 301 *e*P **P** 15 22 11.0 +0.2
GKN Gorkha 70.49 302 *e*P **P** 15 22 13.7 +0.1
DANN Dangsing 71.33 302 *e*P **P** 15 22 18.5 -0.2
comp=Z,44nm,0.7s
VNDA Vanda 73.09 177 P **P** 15 22 28.4 +0.8
comp=Z,47nm,0.6s,baz=330,slow=6.3,SNR=588
comp=Z,47nm,0.6s
VNDA Vanda 73.09 177 P **P** 15 22 28.3 +0.8
VNDA IAmb IAmb 15 22 29.4
comp=Z,51nm,0.7s
HYBB Hyderabad (bro 73.53 290 *e*P **P** 15 22 31.2 -0.1
WMQ Urumqi 73.56 318 *e*P **P** 15 22 31.3 +0.3
WMQ PP **PP** 15 25 31.4 +6.0
WMQ S **S** 15 31 16.3 +0.1
WMQ pmax pmax
comp=Z,16nm,1.3s
SBA Scott Base 73.69 176 P **P** 15 22 32.4 +1.4
SBA IAmb IAmb 15 22 33.5
comp=Z,33nm,0.9s
N16K Nishlik Lake 76.30 24 P **P** 15 22 47.2 +1.4
baz=234
O17K Koliganek Bris 76.57 25 P **P** 15 22 48.7 +1.4
baz=235
O18K Koktuh Hills 77.40 25 P **P** 15 22 53.1 +1.2
baz=237
KDAK Kodiak Island 77.47 28 P **P** 15 22 53.5 +1.2
baz=240
P19K Oil Pt 78.14 26 P **P** 15 22 56.4 +0.5
baz=239
MK31 Makanchi Array 78.20 320 P **P** 15 22 55.5 -1.0
MKAR Makanchi Array 78.20 320 P **P** 15 22 56.8 +0.3
comp=Z,9.0nm,0.8s,baz=107,slow=6.2,SNR=68
MKAR PKKPbc **PKKPbc** 15 41 50.0 -1.9
comp=Z,0.6nm,0.6s,baz=277,slow=0.8,SNR=6.6
MKAR PKPPKP **P'P'df** 15 49 56.1 +3.4
comp=Z,0.6nm,1.0s,baz=0.0,slow=2.4,SNR=3.9
comp=Z,9.0nm,0.8s
N19K Bonanza Creek 78.23 24 P **P** 15 22 56.4 0.0
baz=237
MAKZ Makanchi 78.41 320 P **P** 15 22 57.8 +0.3
O20K Slope Mountain 78.63 26 P **P** 15 22 58.8 +0.3
baz=239
TTA Tatalina 78.80 22 P **P** 15 22 59.9 +0.6
baz=236
L19K White Mountain 78.82 23 P **P** 15 22 58.7 -0.7
L19K White Mountain 78.82 23 P **P** 15 23 00.4 +1.0
baz=237
M19K Big River Lodg 78.86 24 P **P** 15 23 00.8 +1.2
baz=237
ZALV Zalesovo Beam 79.34 327 P **P** 15 23 01.3 -1.0
comp=Z,6.1nm,0.5s,baz=109,slow=5.5,SNR=27
ZALV S **S** 15 32 18.3 +1.3
comp=Z,0.3nm,0.3s,baz=104,slow=11,SNR=4.0
comp=Z,6.1nm,0.5s
ZALV Zalesovo Beam 79.34 327 P **P** 15 23 00.8 -1.5
M20K Styx River 79.35 24 P **P** 15 23 03.3 +1.0
baz=238
L20K Farewell, AK 79.37 23 P **P** 15 23 03.6 +1.3
baz=238
K20K Telida 79.77 22 P **P** 15 23 05.5 +1.1
baz=237,SNR=5.2
J20K Nowinta River 80.19 22 P **P** 15 23 07.1 +0.6
J20K Nowinta River 80.19 22 P **P** 15 23 07.0 +0.5
baz=237
PPLA Purkeypile 80.25 23 P **P** 15 23 08.0 +0.9
baz=239
RC01 Rabbit Creek A 80.36 25 P **P** 15 23 07.2 -0.3
KSH Kashi 80.51 311 P **P** 15 23 10.1 +1.2
KSH S **S** 15 32 32.4 +2.5
KSH pmax pmax
comp=Z,17nm,1.2s
CAST Castle Rocks 80.56 23 P **P** 15 23 08.4 -0.1
baz=239,SNR=8.0
CHUM Lake Minchumin 80.71 22 P **P** 15 23 10.0 +0.7
baz=239,SNR=11
PWL Port Wells 80.86 26 P **P** 15 23 10.2 +0.1
baz=243
TRF Thorofare Moun 81.28 23 P **P** 15 23 11.2 -1.2
TRF Thorofare Moun 81.28 23 P **P** 15 23 12.1 -0.3
baz=241
SML Sawmill 81.30 25 P **P** 15 23 12.6 +0.2
baz=243
BPAW Bear Paw Mtn. 81.33 22 P **P** 15 23 11.8 -0.7
baz=240
NIL Nilore 81.35 305 P **P** 15 23 13.4 +0.1
GLI Glacier Island 81.42 26 P **P** 15 23 13.5 +0.6
baz=244
H21K Melozitna Rive 81.46 21 P **P** 15 23 13.6 +0.5
baz=238
I21K Tanana 81.51 21 P **P** 15 23 14.3 +1.0
baz=239
TKM2 Tokmak 2 81.61 314 P **P** 15 23 14.9 +0.2
SNR=20
WAT1 Susitna Watana 81.68 24 P **P** 15 23 14.5 +0.2
baz=243
G21K Allakaket 81.68 20 P **P** 15 23 14.5 +0.3
baz=238
SCM Sheep Creek Mo 81.73 25 P **P** 15 23 15.3 +0.7
baz=244
KURK Kurchatov 81.77 323 P **P** 15 23 14.7 -0.2
KURK IAmb IAmb 15 23 16.0
comp=Z,38nm,1.1s
KURBB Kurchatov Arra 81.79 322 P **P** 15 23 14.9 -0.1
comp=Z,16nm,0.9s,baz=114,slow=3.9,SNR=94
KURB pP **pP** 15 25 13.5 -1.1
comp=Z,1.6nm,0.9s,baz=111,slow=4.3,SNR=1.7
KURB S **S** 15 32 39.6 -2.4
comp=Z,0.4nm,0.8s,baz=129,slow=7.5,SNR=4.5
KURB PKKPbc **PKKPbc** 15 41 42.5 -1.5
comp=Z,1.1nm,0.6s,baz=292,slow=2.9,SNR=9.0
comp=Z,16nm,0.9s
MLY Manley 81.89 22 P **P** 15 23 15.3 0.0
baz=240,SNR=6.6
WAT6 Susitna Watana 81.90 25 P **P** 15 23 15.4 -0.2
baz=243
MCK McKinley 81.94 23 P **P** 15 23 14.7 -0.9
MCK McKinley 81.94 23 P **P** 15 23 15.1 -0.5
baz=242,SNR=6.9
KBK Karagaybulak 82.01 314 P **P** 15 23 17.9 +1.2
SNR=8.9
F21K Alatna River 82.07 19 P **P** 15 23 16.7 +0.5
baz=237
H22K Ishtalitna Cre 82.09 21 P **P** 15 23 16.9 +0.6
baz=240
KLU Klutina 82.19 26 P **P** 15 23 17.7 +0.7
baz=245
UCH Uchtor 82.22 314 P **P** 15 23 19.2 +1.2
SNR=32
CHMS Chumysh 82.24 314 P **P** 15 23 18.2 +0.6
SNR=15
DHY Denali Highway 82.27 24 P **P** 15 23 17.1 -0.3
DHY Denali Highway 82.27 24 P **P** 15 23 17.8 +0.4
baz=244,SNR=8.0
AAK Ala-Archa 82.33 314 P **P** 15 23 19.1 +0.9
SNR=11
AAK Ala-Archa 82.33 314 P **P** 15 23 19.0 +0.8
AAK IAmb IAmb 15 23 20.2
comp=Z,21nm,0.9s
M24K Tolsona, Glenn 82.34 25 P **P** 15 23 17.4 -0.3
baz=245
I23K Minto, Yukon-K 82.45 22 P **P** 15 23 17.8 -0.3
baz=242
USP Ospehovka 82.48 315 P **P** 15 23 19.4 +0.6
SNR=38
BMRM Bremner River 82.56 27 P **P** 15 23 18.7 -0.1
baz=246
G22K Bettles 82.57 20 P **P** 15 23 18.7 +0.1
baz=239
F22K John River 82.65 19 P **P** 15 23 19.5 +0.4
baz=239
H23K Yukon River 82.71 21 P **P** 15 23 20.2 +0.8
baz=241
AML Almayashu 82.80 313 P **P** 15 23 22.1 +1.2
SNR=55
EKS2 Erkin-Say 82.86 314 P **P** 15 23 22.1 +1.2
SNR=10.0
TCOL CIGO, UAF Yank 82.89 22 P **P** 15 23 20.1 -0.2
baz=243
COLA College 82.89 22 P **P** 15 23 19.9 -0.4
baz=243
HARP HAARP 82.90 25 P **P** 15 23 20.2 -0.3
baz=246
G23K Bananza Creek 82.97 20 P **P** 15 23 20.9 +0.1
baz=241
PAX Paxson 83.01 25 P **P** 15 23 22.3 +1.2
baz=245
HDA Harding Lake 83.03 23 P **P** 15 23 20.2 -0.8
baz=244
POKR Poker Plat Res 83.16 22 P **P** 15 23 21.3 -0.3
baz=243
ILAR Eielson Array 83.22 23 P **P** 15 23 20.5 -1.5
comp=Z,4.5nm,0.7s,baz=253,slow=5.1,SNR=49
ILAR pP **pP** 15 25 20.5 -2.0
comp=Z,6.8nm,0.8s,baz=250,slow=5.5,SNR=8.1
ILAR PKKPbc **PKKPbc** 15 41 38.1 -3.3
comp=Z,0.6nm,0.6s,baz=353,slow=1.3,SNR=7.9
ILAR PKPPKP **P'P'df** 15 49 44.0 +1.5
comp=Z,0.4nm,0.8s,baz=358,slow=1.8,SNR=4.1
comp=Z,4.5nm,0.7s
ILAR Eielson Array 83.22 23 P **P** 15 23 20.2 -1.7
H24K Noodor Dome 83.32 22 P **P** 15 23 22.7 +0.2
baz=243
RIDG Independent Ri 83.58 24 P **P** 15 23 23.6 -0.2
baz=246
J25K Salcha River, 83.73 23 P **P** 15 23 24.4 -0.3
baz=245,SNR=15
G24K Hadweenzic Riv 83.86 21 P **P** 15 23 25.6 +0.5
baz=243
D23K Nanushuk River 83.88 18 P **P** 15 23 26.0 +0.8
baz=240
L26K Log Cabin Wild 83.92 25 P **P** 15 23 26.3 +0.8
baz=247
SCRK Sand Creek 84.03 24 P **P** 15 23 26.7 +0.6
baz=247
CTG Chitna Glacier 84.03 27 P **P** 15 23 26.8 +0.5
baz=249
TOLK Toolik Lake Re 84.07 19 P **P** 15 23 26.8 +0.7
baz=241
F24K Squaw Lake 84.09 20 P **P** 15 23 26.7 +0.4
baz=243
E24K Your Creek 84.15 19 P **P** 15 23 27.3 +0.7
baz=242
H25K Birch Creek 84.27 22 P **P** 15 23 28.4 +1.3
baz=245
M27K Edge Creek, AK 84.29 26 P **P** 15 23 28.0 +0.5
baz=249,SNR=6.2
C23K Itkillik River 84.34 18 P **P** 15 23 28.0 +0.6
baz=249
J26L Joseph Creek 84.40 24 P **P** 15 23 28.2 +0.3
baz=247,SNR=7.7
O28M Mount Upton 84.49 28 P **P** 15 23 29.2 +0.5
baz=250
PNL Peninsula 84.50 29 P **P** 15 23 29.4 +0.9
baz=251
MAW Mawson 84.50 203 P **P** 15 23 28.5 +0.3
comp=Z,29nm,0.6s,baz=87,slow=6.0,SNR=98
comp=Z,29nm,0.6s
MAW Mawson 84.50 203 P **P** 15 23 28.5 +0.3
baz=84,SNR=53
D24K Happy Valley 84.55 18 P **P** 15 23 29.3 +0.8
baz=242
L27K Beaver Creek, 84.57 25 P **P** 15 23 29.1 +0.3
baz=249,SNR=5.4
BCAR Beaver Creek A 84.59 25 P **P** 15 23 29.8 +0.9
GAR Garm 84.69 310 IAmb IAmb 15 23 30.9
comp=Z,40nm,1.3s
YUK3 Moose Creek 84.71 27 P **P** 15 23 30.2 +0.5
baz=250
BVCY Beaver Creek 84.76 26 P **P** 15 23 30.4 +0.8
baz=250
K27K Chicken 84.82 24 P **P** 15 23 30.8 +1.0
baz=248
NRIK Noril'sk 84.85 342 P **P** 15 23 29.1 -0.8
comp=Z,8.1nm,0.6s,baz=114,slow=4.9,SNR=13
NRIK pP **pP** 15 25 29.3 -1.4
comp=Z,2.0nm,0.4s,baz=112,slow=3.4,SNR=1.8
comp=Z,8.1nm,0.6s
C24K Franklin Bluff 84.86 18 P **P** 15 23 30.7 +0.8
baz=242
I26K Coal Creek Min 84.88 23 P **P** 15 23 30.1 0.0
baz=247
F25K Christian Rive 84.90 20 P **P** 15 23 30.9 +0.6
baz=245
KBL Kabul 84.95 305 P **P** 15 23 30.1 -1.3
O29M Mount Kennedy 85.09 28 P **P** 15 23 32.0 +0.6
baz=252
E25K Arctic Village 85.15 20 P **P** 15 23 32.9 +1.4
baz=245
P29M Windy Craggy 85.29 29 P **P** 15 23 33.2 +0.9
baz=253
G26K Porcupine Rive 85.29 21 P **P** 15 23 33.0 +0.9
baz=247
QSPA South Pole Qui 85.29 180 P **P** 15 23 32.2 -0.1
comp=Z,47nm,0.8s,baz=328,slow=0.7,SNR=350
comp=Z,47nm,0.8s
QSPA South Pole Qui 85.29 180 P **P** 15 23 32.5 +0.2
KK31 Karatay Array 85.30 314 IAmb IAmb 15 23 33.8
comp=Z,30nm,1.0s
KKAR Karatay Array 85.30 314 P **P** 15 23 32.6 -0.1
KKAR IAmb IAmb 15 23 33.8
comp=Z,30nm,1.0s
YUK4 Talbot Arm 85.39 27 P **P** 15 23 34.1 +1.2
baz=252,SNR=5.6
YUK6 Outpost Mounta 85.39 28 P **P** 15 23 33.5 +0.4
baz=252
D25K Kavik River 85.41 19 P **P** 15 23 32.8 +0.2
baz=244
F26K Sheenjek River 85.46 21 P **P** 15 23 33.9 +0.9
baz=246
EGAK Eagle 85.47 24 P **P** 15 23 33.3 +0.4
baz=249,SNR=5.9
CHGR Chuyangaron 85.52 309 IAmb IAmb 15 23 37.9
comp=Z,30nm,0.9s
I27K Kandik River 85.59 23 P **P** 15 23 33.9 +0.3
baz=249
HYT Haines Junctio 85.76 28 P **P** 15 23 35.7 +1.1
baz=253,SNR=9.1
P30M Million Dollar 85.81 29 P **P** 15 23 35.9 +1.1
baz=253
M29M Somme Creek 85.82 26 P **P** 15 23 35.6 +0.7
baz=252
H27K Steamboat Moun 85.85 22 P **P** 15 23 35.5 +0.7
baz=249
PLBC Pleasant Camp 85.91 29 P **P** 15 23 36.5 +1.3
baz=254
DAWY Dawson 85.94 25 P **P** 15 23 36.0 +0.7
baz=251
G27K Doyon Strip 86.01 22 P **P** 15 23 36.6 +1.0
baz=249
C26K Camden Bay 86.13 18 P **P** 15 23 37.5 +1.5
baz=245
N30M Aishikik Lake 86.14 27 P **P** 15 23 37.0 +0.6
baz=253
C27K Jago River 86.39 19 P **P** 15 23 37.8 +0.5
baz=246
O30N Mendenhall 86.41 28 P **P** 15 23 38.5 +0.9
baz=254
SKAG Skagway 86.42 30 P **P** 15 23 38.7 +1.2
baz=255
E27K Coleen River 86.54 20 P **P** 15 23 38.8 +0.8
baz=248
N31M Braeburn, Yuko 86.75 28 P **P** 15 23 40.3 +1.1
baz=254
I29M Ogilvie Camp, 86.80 24 P **P** 15 23 40.0 +0.6
baz=252
WHY Whitehorse 86.95 29 P **P** 15 23 41.0 +0.8
baz=255
WRAK Wrangell Islan 87.23 33 P **P** 15 23 42.9 +1.4
baz=257
P32M Atlin 87.25 30 P **P** 15 23 42.6 +1.0
baz=256
BRVK Borovoye 87.35 324 P **P** 15 23 40.6 -1.6
M31M Drury Creek, Y 87.57 27 P **P** 15 23 43.1 +0.1
baz=255
EPYK Eagle Plains 87.73 23 P **P** 15 23 44.1 +0.4
baz=253
P33M Teslin, Yukon 87.83 29 P **P** 15 23 45.1 +0.8
baz=257
FARO Faro, Yukon 88.05 27 P **P** 15 23 45.8 +0.5
baz=256
R33M Jennings River 88.57 30 P **P** 15 23 48.6 +0.8
baz=258
C36M Paulatuk 93.00 21 P **P** 15 24 09.0 +1.1
baz=265
ABKAR Akbulak array 93.33 319 P **P** 15 24 08.0 -1.9
GEYT Alibeck 94.08 308 P **P** 15 24 12.8 -0.8
comp=Z,3.8nm,0.7s,baz=152,slow=6.7,SNR=5.0
comp=Z,3.8nm,0.7s
NVAR Mina Array Bea 94.44 52 P **P** 15 24 16.1 +0.7
comp=Z,0.8nm,0.8s,baz=246,slow=8.2,SNR=5.2
NVAR pP **pP** 15 26 19.3 +0.8
comp=Z,0.7nm,0.9s,baz=262,slow=6.3,SNR=1.8
NVAR PKKPbc **PKKPbc** 15 41 13.7 +0.7
comp=Z,0.2nm,0.5s,baz=62,slow=6.9,SNR=3.7
comp=Z,0.8nm,0.8s
CWC Cottonwood Cre 94.53 54 P **P** 15 24 16.5 +0.6
baz=268
EDW2 Edwards Air Fo 94.53 55 P **P** 15 24 16.5 +0.7
baz=268
AKTO Aktyubinsk 94.63 320 P **P** 15 24 14.1 -1.7
comp=Z,1.6nm,0.8s,baz=104,slow=3.7,SNR=5.2
comp=Z,1.6nm,0.8s
BFSC Mount Baldy Ra 94.78 56 P **P** 15 24 17.6 +0.6
baz=268
LRMC Laurel Mtn Rad 94.81 55 P **P** 15 24 17.9 +0.7
baz=268
MPMC Manual Prospec 94.99 54 P **P** 15 24 18.1 +0.1
baz=268
UOSS Minazif 95.10 295 P **P** 15 24 17.4 -1.1
UOSS IAmb IAmb 15 24 17.8
comp=Z,11nm,0.8s
BELA Belgrano 2 97.54 179 P Pdif 15 24 27.4 -0.9
BELA IAmb IAmb 15 24 28.6
comp=Z,7.8nm,0.6s
DUG Dugway, Tooele 98.71 50 P Pdif 15 24 33.9 -0.6
baz=271
BOZ Bozeman (W) 99.39 45 P **Pdif** 15 24 37.3 -0.1
baz=273
TROLL Troll, Antarti 100.57 190 Pdiff **Pdif** 15 24 41.9 -0.1
PDAR Pinedale Array 101.04 47 P **Pdif** 15 24 44.2 -0.7
comp=Z,0.5nm,0.7s,baz=240,slow=2.9,SNR=5.4
PDAR pP pP 15 26 49.2 +0.6
comp=Z,0.6nm,0.7s,baz=266,slow=4.2,SNR=3.9
PDAR PKKPbc **PKKPbc** 15 40 53.7 -1.5
comp=Z,0.6nm,0.5s,baz=103,slow=4.7,SNR=6.2
SNAA Sanae 101.72 189 PKiKP **PKiKP** 15 29 08.4 +1.6
SNAA Sanae 101.72 189 Pdiff **Pdif** 15 24 46.9 -0.2
SNAA Sanae 101.72 189 P **Pdif** 15 24 46.9 -0.2
comp=Z,3.2nm,0.8s,baz=150,slow=4.7,SNR=9.7
SNAA PP **PKiKP** 15 29 08.8 +2.1
comp=Z,4.5nm,1.0s,baz=215,slow=5.1,SNR=6.6
VNA3 Neumayer Olymp 103.02 187 PKiKP **PKiKP** 15 29 10.0 +1.0
VNA3 Neumayer Olymp 103.02 187 Pdiff **Pdif** 15 24 52.3 -0.5
VNA2 Neumayer--Watz 103.03 188 PKiKP **PKiKP** 15 29 09.6 +0.6
VNA2 Neumayer--Watz 103.03 188 Pdiff **Pdif** 15 24 52.8 -0.1
VNA1 Neumayer--Stat 103.40 187 Pdiff **Pdif** 15 24 54.3 -0.1
ARCES ARCESS Array B 105.82 342 Pdiff **Pdif** 15 25 04.6 -0.6
comp=Z,1.0nm,0.6s,baz=75,slow=7.7,SNR=6.4
ARCES PKiKP **PKiKP** 15 29 13.9 -0.2
comp=Z,1.3nm,0.5s,baz=93,slow=2.3,SNR=27
ARCES PKKPbc **PKKPbc** 15 40 36.7 -5.0
comp=Z,1.1nm,0.5s,baz=238,slow=2.5,SNR=16
TXAR Lajitas Array 106.78 61 PKiKP **PKiKP** 15 29 18.3 +1.1
comp=Z,0.4nm,0.7s,baz=53,slow=1.1,SNR=5.2
TXAR PP **PP** 15 29 43.5 -1.1
comp=Z,0.9nm,0.9s,baz=266,slow=6.9,SNR=5.5
TXAR SKiKP **SKiKP** 15 32 00.2 +0.7
comp=Z,0.7nm,0.8s,baz=222,slow=1.7,SNR=4.9
TXAR PKKPbc **PKKPbc** 15 40 38.0 +0.4
comp=Z,0.4nm,0.6s,baz=116,slow=4.8,SNR=6.0
FINES FINESS Array B 109.63 335 Pdiff **Pdif** 15 25 20.7 -1.6
comp=Z,2.0nm,0.8s,baz=72,slow=6.2,SNR=5.7
FINES PKiKP **PKiKP** 15 29 20.9 -0.6
comp=Z,5.0nm,0.9s,baz=76,slow=2.1,SNR=6.4
ECSD EROS Data Cent 110.24 45 P **PKiKP** 15 29 22.6 -0.6
baz=284
AKASG Malin Array Be 112.56 324 PKiKP **PKiKP** 15 29 25.9 -1.5
comp=Z,1.8nm,0.4s,baz=56,slow=2.8,SNR=11
AKASG PKKPbc **PKKPbc** 15 40 16.9 -3.0
comp=Z,0.7nm,0.4s,baz=264,slow=3.7,SNR=5.4
BRTR Keskin Array B 112.89 311 PKiKP **PKiKP** 15 29 27.7 -0.9
comp=Z,4.2nm,1.1s,baz=40,slow=4.0,SNR=4.4
MIAR Mount Ida 114.56 54 P PKPdf 15 29 31.7 0.0
baz=282
NB2 NORSAR Subarra 115.71 339 PKPdf **PKPdf** 15 29 31.9 -1.3
comp=Z,0.7nm,0.6s,baz=44,slow=1.9
NOA NORSAR Array B 115.71 339 PKP **PKPdf** 15 29 31.7 -1.5
comp=Z,1.2nm,0.6s,baz=48,slow=1.8,SNR=6.6
MLR Muntele Rosu 116.55 319 **PKPdf** 15 29 34.1 -1.2
MATP Matopo 117.14 244 PKP **PKPdf** 15 29 36.8 -0.4
comp=Z,8.7nm,0.4s,baz=128,slow=1.5,SNR=37
BOSA Boshof 117.20 235 PKP **PKPdf** 15 29 36.6 -0.6
comp=Z,4.9nm,0.6s,baz=83,slow=1.8,SNR=19
KOLS Kolonicke sedl 117.39 324 *e*PKP **PKiKP** 15 29 37.2 +0.4
CRVS Cervenica-Dubn 117.89 324 *e*PKP **PKiKP** 15 29 37.8 +0.1
LBTB Lobatse 118.23 239 PKP **PKPdf** 15 29 38.5 -0.7
comp=Z,5.3nm,0.5s,baz=103,slow=5.0,SNR=11
LSZ Lusaka 118.78 250 PKP **PKiKP** 15 29 40.9 +0.4
comp=Z,7.4nm,0.4s,baz=355,slow=0.2,SNR=13
LANS Liptovska Anna 118.92 325 *e*PKP **PKiKP** 15 29 40.7 +0.9
SNART Snartemo 119.05 338 *i* P PKiKP 15 29 51.0 +11
L48A N Adams 119.31 44 **PKPdf** 15 29 39.9 -0.8
O48B Farmland 119.42 46 P **PKPdf** 15 29 40.5 -0.4
baz=291

VTS	Vitosha	119.45	317			PKPdf	15 29 40.5	-0.6	
MORC	Moravsky Berou	119.68	326			PKPdf	15 29 40.8	-0.4	
MORC	Moravsky Berou	119.68	326	*e*PKP		PKiKP	15 29 41.2	-0.1	
KRLC	Kraliky	119.94	327	*e*PKPDF		PKPdf	15 29 41.5	-0.2	
DPC	Dobruska-Polom	120.03	327	*e*PKPDF		PKiKP	15 29 42.0	0.0	
JAVC	Velka Javorina	120.09	325	*e*PKP		PKiKP	15 29 43.0	+0.9	
VRAC	Vranov	120.45	326	*e*PKP		PKPdf	15 29 42.5	-0.1	
MODS	Modra-Piesok	120.56	325	*e*PKP		PKiKP	15 29 43.0	0.0	
KRUC	Moravsky	120.69	326	*e*PKP		PKPdf	15 29 43.1	0.0	
ZST	Bratislava	120.75	325	*e*PKP		PKiKP	15 29 43.8	+0.4	
VLDQ	Val d'Or	120.95	35			PKPdf	15 29 42.0	-1.6	
ACSO	Alum Creek Sta	120.97	45	P		PKiKP	15 29 44.0	-0.1	
	baz=293								
DIVS	Divibare	120.98	320			PKPdf	15 29 43.2	-0.7	
BRG	Berggiesshubel	120.99	329	*e*PKP		PKiKP	15 29 43.7	0.0	
BRG				Amp			15 29 44.4		
	comp=Z,11nm,0.8s								
PRU	Pruhonice	121.19	328	*e*PKPDF		PKPdf	15 29 43.6	-0.4	
CLL	Collm	121.21	330	⇑*i*PKPdf		PKPdf	15 29 43.8	-0.2	
	comp=Z,11nm,0.8s								
RONA	Rosalia, Austr	121.48	325	*e*P		PKPdf	15 29 44.6	-0.1	
	comp=Z,7.5nm,1.2s								
CONA	Conrad Observa	121.60	325	*e*P		PKPdf	15 29 44.5	-0.5	
	comp=Z,4.4nm,0.6s								
PLCA	Paso Flores	121.71	145	PKP		PKiKP	15 29 46.0	+0.4	
	comp=Z,11nm,0.7s,baz=246,slow=1.9,SNR=30								
PLCA				PKKPbc		PKKPbc	15 39 46.6	-1.5	
	comp=Z,1.5nm,0.8s,baz=16,slow=4.8,SNR=3.2								
PLCA	Paso Flores	121.71	145			PKiKP	15 29 45.8	+0.2	
PLCA	Paso Flores	121.71	145	*e*P		PKiKP	15 29 46.6	+0.9	
PLCA	Paso Flores	121.71	145	*e*P		PKiKP	15 29 46.2	+0.5	
P52A	Corning	121.81	46	P		PKPdf	15 29 45.2	-0.3	
	baz=293								
TZTN	Tazewell	121.89	49	P		PKPdf	15 29 45.4	-0.4	
	baz=290								
SCHQ	Schefferville	121.96	24	PKP		PKPdf	15 29 44.9	-0.5	
	comp=Z,4.3nm,0.7s,baz=33,slow=8.8,SNR=6.8								
SCHQ				PKKPbc		PKKPbc	15 39 45.6	-1.7	
	comp=Z,2.3nm,0.7s,baz=232,slow=1.2,SNR=6.5								
CKRC	Cesky Krumlov	121.97	327	*e*PKPDF		PKPdf	15 29 45.6	0.0	
M53A	WI Miller and	122.09	43	P		PKPdf	15 29 45.3	-0.7	
	baz=295								
ARSA	Arzberg	122.16	325	*e*P		PKPdf	15 29 45.4	-0.6	
	comp=Z,2.8nm,0.8s								
KHC	Kasperske Hory	122.19	327	*e*PKPDF		PKPdf	15 29 45.6	-0.4	
O53A	New Philadelph	122.21	45	P		PKPdf	15 29 45.8	-0.5	
	baz=294								
ERPA	Erie	122.26	42	P		PKiKP	15 29 46.5	0.0	
	baz=296								
GERES	GERESS Array B	122.29	327	PKP		PKPdf	15 29 45.3	-1.0	
	comp=Z,6.0nm,0.6s,baz=77,slow=2.9,SNR=60								
GERES				SKP			15 32 28.9		
	comp=Z,0.6nm,0.6s,baz=113,slow=2.0,SNR=3.7								
GERES				PKKPbc		PKKPbc	15 39 44.5	-1.5	
	comp=Z,0.6nm,0.5s,baz=149,slow=2.8,SNR=7.2								
MOA	Molln	122.54	326	*e*P		PKPdf	15 29 46.1	-0.6	
	comp=Z,4.7nm,0.9s								
V53A	Saluda	122.75	50			PKPdf	15 29 47.3	-0.2	
SOKA	Soboth	122.75	324	*i* P		PKPdf	15 29 46.5	-0.7	
	comp=Z,8.9nm,1.1s,SNR=6.5								
O54A	Avella	122.82	44			PKPdf	15 29 47.3	-0.1	
GOGA	Godfrey	122.97	53	P		PKPdf	15 29 47.8	-0.1	
	baz=288								
BIOA	Bad Ischl, Aus	122.98	326	*e*P		PKPdf	15 29 46.3	-1.3	
	comp=Z,3.1nm,0.6s								
OBKA	Obir	123.12	324	*e*P		PKPdf	15 29 47.3	-0.7	
	comp=Z,3.6nm,0.7s								
BOJS	Bojanci	123.25	323	*i* PKPdf		PKPdf	15 29 47.5	-0.5	
LJU	Ljubljana	123.39	324	*i* PKPdf		PKPdf	15 29 47.9	-0.4	
MCWV	Mont Chateau	123.41	45	P		PKPdf	15 29 48.6	0.0	
	baz=295								
KBA	Koelnbreinsper	123.50	326	*e*P		PKPdf	15 29 48.0	-0.7	
	comp=Z,4.1nm,0.7s								
MYKA	Terra Mystica	123.58	325	*e*P		PKPdf	15 29 48.2	-0.6	
	comp=Z,5.0nm,0.6s								
BLA	Blacksburg	123.98	48	P		PKPdf	15 29 49.4	-0.4	
	baz=293								
KMSC	Kings Mountain	124.06	50	P		PKPdf	15 29 50.0	0.0	
	baz=291								
CLUD	Cludinico	124.11	325	PKPdf		PKPdf	15 29 48.7	-1.1	
ABTA	Abfaltersbach	124.15	326	*i* P		PKPdf	15 29 49.1	-0.9	
	comp=Z,9.5nm,0.7s,SNR=6.6								
WATA	Walderalm	124.33	327	*e*P		PKPdf	15 29 49.9	-0.4	
	comp=Z,9.2nm,0.8s								
WTTA	Wattenberg	124.34	327	*i* P		PKPdf	15 29 50.1	-0.2	
	comp=Z,23nm,0.9s,SNR=6.9								
LONY	Lake Ozonia	124.48	37	P		PKiKP	15 29 50.7	-0.2	
	baz=303								
MOTA	Moosalm	124.58	327	*i* P		PKPdf	15 29 50.2	-0.6	
	comp=Z,15nm,0.7s,SNR=7.4								
SQTA	Sankt Quirin	124.60	327	*i* P		PKPdf	15 29 50.3	-0.5	
	comp=Z,13nm,0.7s,SNR=6.4								
RETA	Reutte	124.68	327	*e*P		PKPdf	15 29 50.4	-0.5	
	comp=Z,4.7nm,0.9s								
BINY	Binghamton	124.86	40	P		PKPdf	15 29 51.3	0.0	
	baz=300								
FETA	Feichten	124.98	327	*i* P		PKPdf	15 29 51.4	-0.2	
	comp=Z,12nm,0.8s,SNR=9.4								
BTNL	Ternell	124.99	332	*d*PKiKP		PKPdf	15 29 51.3	0.0	
MEM	Membach	125.03	333	*d*PKiKP		PKiKP	15 29 51.6	-0.1	
DAVA	Damuels	125.28	327	*e*P		PKPdf	15 29 51.8	-0.3	
	comp=Z,14nm,0.9s								
TIP	Timpagrande	125.35	316			PKPdf	15 29 52.1	-0.3	
BCLA	Clavier	125.48	333	*d*PKiKP		PKiKP	15 29 52.5	-0.1	
MT01	Popeta	125.57	138			PKPdf	15 29 52.9	0.0	
RCHB	Rochefort	125.70	333	*d*PKiKP		PKPdf	15 29 52.8	+0.2	
BMRD	Maredsous	125.81	333	*d*PKiKP		PKiKP	15 29 53.1	-0.2	
NRCA	Norcia	125.96	321			PKPdf	15 29 52.5	-1.0	
DOU	Dourbes	126.03	333	*d*PKiKP		PKiKP	15 29 53.5	-0.2	
PAL	Palisades	126.80	41	P		PKPdf	15 29 55.3	+0.2	
	baz=301								
L61B	Northampton	126.82	39	P		PKPdf	15 29 55.2	+0.1	
	baz=303								
BNI	Bardonecchia	128.41	327			PKPdf	15 29 57.8	-0.3	
BOSC	San Juan Bosco	131.23	98	PKPdf		PKiKP	15 30 05.2	-0.3	
OTAV	Otavalo	131.71	94	*e*P		PKPdf	15 30 05.5	-0.3	
KEST	Kesra	132.17	316	PKP		PKPdf	15 30 05.5	0.0	
	comp=Z,4.6nm,0.6s,baz=253,slow=5.2,SNR=7.7								
KEST				SKPbc		SKPbc	15 32 39.5	-0.3	
	comp=Z,10.0nm,1.0s,baz=293,slow=5.4,SNR=7.9								
LVC	Limon Verde	133.54	127	PKP		PKiKP	15 30 09.8	-0.4	
	comp=Z,5.4nm,0.7s,baz=324,slow=7.3,SNR=4.8								
LVC				SKPbc		SKPbc	15 32 46.4	+1.2	
	comp=Z,16nm,1.0s,baz=214,slow=5.1,SNR=6.7								
LVC	Limon Verde	133.54	127	*e*P		PKPdf	15 30 09.0	+0.2	
POPC	Popayan, Colom	133.68	91	*e*P		PKPdf	15 30 08.5	-0.6	
YOTC	Yotoco, Valle	134.09	89	*e*P		PKPdf	15 30 08.5	-1.2	
CBOC	Ciudad Bolivar	134.48	86	*e*P		PKPdf	15 30 04.0	-6.6	
GO01	Chusmiza	134.76	124			PKPdf	15 30 10.2	-1.1	
UREC	San Jos de Ur	134.95	84	*e*P		PKPdf	15 30 06.4	-4.8	
GUY2C	Guyana, Caldas	135.11	87	*e*P		PKPdf	15 30 06.0	-6.1	
PTLC	Puerto Leguiza	135.34	94	*e*P		PKPdf	15 30 11.7	-0.2	
PRAC	Prado	135.54	89	*e*P		PKPdf	15 30 06.4	-5.9	
NORC	Norcasia	135.61	87	*e*P		PKPdf	15 30 06.7	-5.8	
ZARC	Zaragoza, Cauc	135.63	84	*e*P		PKPdf	15 30 12.9	+0.4	
CZSB	Cruzeiro do Su	135.94	106	*e*P		PKPdf	15 30 12.5	-0.5	
PTBC	PUERTO BERRIO	136.03	85	*e*P		PKPdf	15 30 08.2	-5.0	
ROSC	El Rosal	136.14	88	PKP		PKPdf	15 30 14.1	+0.2	
	comp=Z,25nm,0.5s,baz=139,slow=20,SNR=4.9								
SPBC	San Pablo de B	136.41	87	*e*P		PKPdf	15 30 06.4	-7.6	
MACC	Macarena, Meta	136.47	92	*e*P		PKPdf	15 30 08.6	-5.5	
LPAZ	La Paz	137.19	120	PKhKP		PKPpre	15 30 08.3		
	comp=Z,2.8nm,0.5s,baz=279,slow=3.5,SNR=8.9								
LPAZ				PKP		PKPdf	15 30 16.0	0.0	
	comp=Z,5.3nm,0.5s,baz=255,slow=3.5,SNR=9.1								
LPAZ				SKPbc		SKPbc	15 32 58.3	+1.5	
	comp=Z,13nm,1.0s,baz=262,slow=0.6,SNR=12								
LPAZ	La Paz	137.19	120	*e*P		PKPdf	15 30 15.5	-0.5	
BARC	Barichara	137.30	85	*e*P		PKPdf	15 30 11.7	-4.1	
RUSC	La Rusia	137.40	86	*e*P		PKPdf	15 30 09.2	-7.1	
PLTB	Pedras Altas	137.52	150	*e*P		PKPdf	15 30 04.7	-11	
ESDC	Sonseca Array	137.79	329	PKP		PKPdf	15 30 15.1	-0.7	
	comp=Z,0.9nm,0.7s,baz=19,slow=3.9,SNR=5.4								
ESDC				SKPbc		SKPbc	15 32 56.3	-0.9	
	comp=Z,1.0nm,0.8s,baz=20,slow=2.2,SNR=5.0								
RODS	Rosario do Sul	137.81	147	*e*P		PKPdf	15 30 07.1	-9.0	
CPSB	Cacapava Do Su	138.69	149	*e*P		PKPdf	15 30 18.4	+0.8	
CPSB	Cacapava Do Su	138.69	149	*e*P		PKPdf	15 30 10.4	-7.3	
UNIS	Unistalda (Bra	138.88	146	*e*P		PKPdf	15 30 06.6	-12	
CPUP	Villa Florida	139.57	141	PKhKP		PKPpre	15 30 11.8		
	comp=Z,2.7nm,0.6s,baz=192,slow=2.6,SNR=6.2								
CPUP				PKP		PKPdf	15 30 19.6	+0.3	
	comp=Z,7.3nm,0.7s,baz=272,slow=1.3,SNR=11								
CPUP				SKPbc		SKPbc	15 33 02.3	-0.1	
	comp=Z,3.6nm,0.8s,baz=188,slow=5.4,SNR=4.8								
CPUP	Villa Florida	139.57	141	*e*P		PKPdf	15 30 19.6	+0.3	
SDV	Santo Domingo	139.75	82			PKPdf	15 30 19.9	-0.4	
SDV	Santo Domingo	139.75	82	*e*P		PKPdf	15 30 20.2	0.0	
SDV	Santo Domingo	139.75	82	*e*P		PKPdf	15 30 20.8	+0.6	
ALGR	Alto Alegre (B	140.19	148	*e*P		PKPdf	15 30 15.8	-4.7	
CRSM	Crissiumal (Br	140.66	146	*e*P		PKPdf	15 30 15.8	-5.5	
CNLB	Canela	140.88	151	*e*P		PKPdf	15 30 17.0	-4.7	
ETMB	Extrema	141.44	112	PKPpre		PKPpre	15 30 17.6		
ETMB	Extrema	141.44	112	*e*P		PKPdf	15 30 22.6	-0.5	
ITAB	Concordia	141.91	148	*e*P		PKPdf	15 30 23.8	+0.2	
TER01	Tubaro-SC	142.35	152	*e*P		PKPdf	15 30 24.9	+0.6	
TER01	Tubaro-SC	142.35	152	*e*P		PKPdf	15 30 23.5	-0.9	
FRBT	Francisco Belt	142.39	145	*e*P		PKPdf	15 30 21.3	-3.2	
HUMP	Col San Antoni	142.77	66			PKPdf	15 30 25.1	-0.2	
SIV	San Ignacio	143.29	125	PKP		PKPab	15 30 24.2	-0.2	
	comp=Z,18nm,0.6s,baz=231,slow=3.6,SNR=48								
SIV				SKPbc		SKiKP	15 33 13.5	+0.6	
	comp=Z,2.2nm,0.6s,baz=171,slow=5.9,SNR=3.8								
BIRV	Birongo	143.91	79			PKPbc	15 30 26.2	-0.5	
PTGB	Pitanga	143.93	145	*e*P		PKPab	15 30 26.9	+0.2	
PTGB	Pitanga	143.93	145	*e*P		PKPbc	15 30 26.6	0.0	
AVE	Averroes	144.41	326			PKPdf	15 30 27.9	+0.2	
SAML	Samuel	144.54	112			PKPdf	15 30 28.4	-0.1	
AQDB	Aquidauana	144.70	136			PKPdf	15 30 28.6	0.0	
AQDB	Aquidauana	144.70	136	*e*P		PKPbc	15 30 29.1	+0.1	
TRCB	Terra Rica	145.06	142	*e*P		PKPab	15 30 30.8	-0.2	
TIJ01	Guaruva-PR	145.09	150	*e*P		PKPdf	15 30 26.1	-3.2	
TIJ01	Guaruva-PR	145.09	150	*e*P		PKPdf	15 30 29.9	-0.4	
PTLB	Pontes e Lacer	145.15	126	PKPbc		PKPbc	15 30 30.6	+0.2	
PTLB	Pontes e Lacer	145.15	126	*e*P		PKPdf	15 30 29.7	+0.2	
VILB	Vilhena	145.53	121			PKPbc	15 30 31.1	-0.5	
VILB	Vilhena	145.53	121	*e*P		PKPdf	15 30 30.2	+0.1	
PCMB	Pacaembu	146.78	143	*e*P		PKPbc	15 30 34.4	-0.5	
PCMB	Pacaembu	146.78	143	*e*P		PKPbc	15 30 33.6	-1.3	
PET01	Itanhaem-SP	146.81	151	*e*P		PKPdf	15 30 31.4	-0.6	
PET01	Itanhaem-SP	146.81	151	*e*P		PKPbc	15 30 35.2	+0.4	
TORD	Torodi Ar. Bea	147.31	287	PKPbc		PKPbc	15 30 35.9	-0.5	
	baz=67,slow=3.1								
SALV	Santo Antonio	147.62	130	*e*P		PKPdf	15 30 33.2	-0.4	
VAO	Valinhos	148.05	150	*e*P		PKPdf	15 30 33.6	-0.7	
VAO	Valinhos	148.05	150	*e*P		PKPdf	15 30 35.7	+1.5	
RCLB	Rio Claro- Sao	148.25	149	*e*P		PKPbc	15 30 39.1	+0.4	
RCLB	Rio Claro- Sao	148.25	149	*e*P		PKiKP	15 30 39.9	-0.1	
PARB	Paraibuna	148.41	152	*e*P		PKPbc	15 30 39.4	+0.3	
MACA	Manaapuru-AM	148.67	104	*e*P		PKPdf	15 30 35.0	-0.3	
ITRB	Iturama	148.77	141	*e*P		PKPdf	15 30 35.0	-0.4	
ITRB	Iturama	148.77	141	*e*P		PKPdf	15 30 36.7	+1.3	
BB19B	Bebedouro	148.80	146	*e*P		PKPdf	15 30 34.9	-0.6	
BB19B	Bebedouro	148.80	146	*e*P		PKPdf	15 30 36.9	+1.4	
PDRB	Porto dos Gac	149.14	122	*e*P		PKPdf	15 30 35.8	-0.3	
MAN01	Angra dos Reis	149.56	155	*e*P		PKPdf	15 30 36.5	-0.1	
MAN01	Angra dos Reis	149.56	155	*e*P		PKiKP	15 30 43.2	+0.6	
BOAV	Boa Vista	149.76	93			PKPdf	15 30 36.9	-0.3	
BOAV	Boa Vista	149.76	93	*e*P		PKPdf	15 30 36.7	-0.4	
VAS01	Vassouras-RJ	150.30	155	*e*P		PKPdf	15 30 37.5	-0.2	
VAS01	Vassouras-RJ	150.30	155	*e*P		PKiKP	15 30 44.5	+0.4	
CLDB	Colider	150.30	121	*e*P		PKPdf	15 30 37.7	-0.2	
DUB01	Friburgo-RJ	150.91	156	*e*P		PKPdf	15 30 39.3	+0.6	
DUB01	Friburgo-RJ	150.91	156	*e*P		PKiKP	15 30 46.1	+0.7	
IPMB	Ipameri, GO	151.39	142	*e*P		PKPdf	15 30 39.2	-0.4	
IPMB	Ipameri, GO	151.39	142	*e*P		PKPdf	15 30 40.4	+0.8	
CAM01	Campos-RJ	151.42	158	*e*P		PKPdf	15 30 39.2	-0.2	
CAM01	Campos-RJ	151.42	158	*e*P		PKiKP	15 30 47.3	+0.9	
PMNB	Patos De Minas	151.99	146	*e*P		PKPdf	15 30 40.1	-0.4	
PMNB	Patos De Minas	151.99	146	*e*P		PKPdf	15 30 41.0	+0.5	
NPGB	Novo Progresso	152.43	115	*e*P		PKPdf	15 30 40.6	-0.5	
ALF01	Guarapari-ES	152.87	158	*e*P		PKiKP	15 30 50.5	+1.1	
BDFB	Brasilia	153.27	139	PKP		PKPdf	15 30 43.0	+0.6	
	comp=Z,9.2nm,0.9s,baz=152,slow=4.2,SNR=11								
BDFB				PKPbc		PKiKP	15 30 51.1	+0.6	
	comp=Z,16nm,0.5s,baz=217,slow=1.5,SNR=26								
BDFB	Brasilia	153.27	139	PKPbc		PKPbc	15 30 50.4	0.0	
BDFB	Brasilia	153.27	139	*e*P		PKPdf	15 30 43.5	+1.1	
SNDB	Serra Nova Dou	153.38	129	*e*P		PKPdf	15 30 43.0	+0.5	
DIAM	Diamantina, MG	153.65	150	*e*P		PKPdf	15 30 44.0	+1.1	
RIB01	Linhares ES	154.19	158	*e*P		PKiKP	15 30 52.8	+0.6	
SJMB	Sao Joao De Ma	154.43	156	*e*P		PKPdf	15 30 44.3	+0.5	
KIC	Kosan Boka	154.50	275	⇓*e*PKIKP		PKPdf	15 30 43.0	-1.1	
	comp=Z,15nm,0.8s								
DBIC	Dimbokro	154.60	276	PKP		PKPdf	15 30 42.8	-1.4	
	comp=Z,7.2nm,0.9s,baz=112,slow=1.7,SNR=6.2								
DBIC				PKPbc		PKiKP	15 30 53.1	-0.1	
	comp=Z,10nm,0.7s,baz=85,slow=3.6,SNR=20								
DBIC				PKPab		PKPab	15 31 10.9	+0.1	
	comp=Z,25nm,0.6s,baz=106,slow=5.0,SNR=18								
DBIC	Dimbokro	154.60	276	PKPdf		PKPdf	15 30 44.0	-0.2	
DBIC				PKPbc		PKiKP	15 30 52.6	-0.6	
DBIC				PKPab		PKPab	15 31 11.1	+0.2	
TIC	Toumodi	154.76	276	⇓*e*PKIKP		PKPdf	15 30 43.6	-0.8	
	comp=Z,16nm,0.8s								
LIC	Lamto	154.79	275	⇓*e*PKIKP		PKPdf	15 30 43.5	-0.9	
	comp=Z,28nm,0.8s								
MC01	Montes Claros	154.85	148	*e*P		PKPab	15 31 11.8	+0.1	
MALB	Monte Alegre	155.20	105	*e*P		PKPdf	15 30 44.3	-0.7	
NAN01	Guarapari, ES	155.63	157	*e*P		PKPdf	15 30 44.1	-1.3	
NAN01	Guarapari, ES	155.63	157	*e*P		PKPdf	15 30 46.5	+1.1	
JANB	Januaria	155.99	145	*e*P		PKPdf	15 30 45.9	-0.1	
JANB	Januaria	155.99	145	*e*P		PKPab	15 31 16.6	0.0	
GUA01	Guaratinga, BA	156.89	156	*e*P		PKPdf	15 30 46.5	-0.6	
GUA01	Guaratinga, BA	156.89	156	*e*P		PKPbc	15 30 48.1	+1.1	
SDBA	SAO DESIDERIO	157.68	140	*e*P		PKPdf	15 30 48.3	+0.1	
SDBA	SAO DESIDERIO	157.68	140	*e*P		PKPab	15 31 24.4	+0.4	
MCPB	Macapa, AP	157.71	102	*e*P		PKPdf	15 30 47.1	-1.1	
MCPB	Macapa, AP	157.71	102	*e*P		PKPdf	15 30 48.5	+0.3	
PRPB	Paraiupebas	157.75	119	*e*P		PKPdf	15 30 46.7	-1.6	
PRPB	Paraiupebas	157.75	119	*e*P		PKPdf	15 30 47.0	-1.3	
CMC01	Camacan, BA	158.11	156	*e*P		PKPdf	15 30 47.5	-1.0	
CMC01	Camacan, BA	158.11	156	*e*P		PKPdf	15 30 49.3	+0.7	
SMTB	Santa Maria do	158.15	128	*e*P		PKPdf	15 30 49.0	+0.3	
SMTB	Santa Maria do	158.15	128	*e*P		PKPdf	15 30 50.0	+1.2	
GDU01	Guandu, BA	159.55	153	*e*P		PKPdf	15 30 49.0	-1.3	
GDU01	Guandu, BA	159.55	153	*e*P		PKPdf	15 30 51.0	+0.7	
ROSB	Rosrio	164.28	118	*e*P		PKPdf	15 30 55.3	+0.2	

BJI **17** *15:13:09.8±0.0, 4°.28S×150°.00E, h560km, mb4.7/52, mB4.5/25*
IDC **17** *15:13:11.6±1.6, 4°.65S×149°.71E, h572km±21km, mb4.1/23, mbtmp5.1/26, Error ellipse: s-maj=11.3km s-min=7.8km az=95.0*
NEIC **17** *15:13:11.9±1.8, 4°.60S±0°.09×149°.65E±0°.10, h569km±8km, mb4.8/103, Error ellipse: s-maj=14.2km s-min=13.3km az=76.0*
ISC 17 15:13:10.6±0.5, 4°.58S±0°.05×149°.63E±0°.06, h554km±6km, h555km:pP-P,n353,σ0°.93/366,mb4.7/91,3C-6D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	3.39	318	P	P	15 14 30.8	+2.3
COEN	Coen	11.28	214	P	P	15 15 41.7	-0.2
PATS	Pohnpei	14.27	37	P	P	15 16 12.7	0.0
CTA	Charters Tower	15.76	192	P	P	15 16 27.9	+0.2
	95nm,0.6s,baz=3.0,slow=9.5,SNR=6.8						
CTAO	Charters Tower	15.76	192	P	P	15 16 28.3	+0.6
FAKI	Fak Fak	17.43	275	P	P	15 16 44.1	+0.9
GUMO	Guam	18.66	345	P	P	15 16 55.0	+0.6
	95nm,0.5s,baz=148,slow=8.1,SNR=5.1						
GUMO	Guam	18.66	345	P		15 16 55.5	+1.1
SIJI	Sorong	18.71	281	P	P	15 16 56.3	+1.3
	36nm,0.5s,baz=60,slow=9.6,SNR=4.3						
EIDS	Eidsvold	20.71	176	P	P	15 17 12.9	0.0
WRAB	Tennant Creek	21.32	223	P	P	15 17 18.6	+0.1
WB2	Warramunga Arr	21.32	223	P	P	15 17 18.9	+0.3
WRA	Warramunga Arr	21.33	223	P	P	15 17 19.2	+0.6
	42nm,0.6s,baz=48,slow=9.4,SNR=5.6						
WRA				S	S	15 20 37.4	-1.6
	37nm,0.7s,baz=44,slow=16,SNR=6.8						
	42nm,0.6s						
WRA	Warramunga Arr	21.33	223	P	P	15 17 18.9	+0.3
DZM	Mont Dzumac	23.82	138	P	P	15 17 40.1	-0.9
	20nm,0.5s,baz=269,slow=9.7,SNR=5.5						
	20nm,0.5s						
DZM	Mont Dzumac	23.82	138	P	P	15 17 40.8	-0.1
TARA	Tarawa	24.00	76	P	P	15 17 41.6	-1.0
ASAR	Alice Springs	24.29	217	P	P	15 17 44.9	-0.2
	12nm,0.3s,baz=52,slow=7.7,SNR=2.0						
ASAR				S	S	15 21 26.0	+0.4
	19nm,0.9s,baz=24,slow=18,SNR=5.9						
	12nm,0.3s						
OUENC	Ouen Island, N	24.33	138	P	P	15 17 45.1	-0.1
ARMA	Armidale	25.77	176	P	P	15 17 59.1	+1.1
BATI	Baumata	26.34	256	P	P	15 18 03.2	-0.1
	109nm,0.7s,baz=332,slow=23,SNR=3.9						
	109nm,0.7s						
FITZ	Fitzroy Crossi	27.04	238	P	P	15 18 08.8	-0.5
	36nm,0.5s,baz=52,slow=9.8,SNR=8.5						
	36nm,0.5s						
FITZ	Fitzroy Crossi	27.04	238	P	P	15 18 08.9	-0.4
MMRI	Maumere	27.50	260	P	P	15 18 12.6	-0.8
STKA	Stephens Creek	28.18	195	P	P	15 18 18.4	-0.7
	24nm,0.7s,baz=6.7,slow=10,SNR=4.0						
	24nm,0.7s						
LHI	Lord Howe Isla	28.22	163	P	P	15 18 19.9	+0.5
KAPI	Kappang	29.78	268	P	P	15 18 33.4	+0.2
	41nm,0.6s,baz=83,slow=4.7,SNR=13						
	41nm,0.6s						
KAPI	Kappang	29.78	268	P	P	15 18 33.9	+0.8
KAPI	Kappang	29.78	268	P	P	15 18 34.0	+0.8
KAPI				pP	pP	15 20 03.6	-0.6
CAN	Canberra	30.59	181	P	P	15 18 39.7	-0.2
CAN	Canberra	30.59	181	P	P	15 18 40.8	+0.9
CAN				pP	pP	15 20 12.7	+1.9
MSVF	Nonsavu	30.73	117	P	P	15 18 42.4	+1.0
MSVF				IAmb	IAmb	15 18 58.5	
	comp=Z,68nm,1.7s						
MSVF	Nonsavu	30.73	117	P	P	15 18 42.9	+1.5
TOO	Toolangi	33.05	186	P

XAN Xi'an 54.32 318 P P 15 21 45.6 0.0
CMAR Chiang Mai Arr 54.94 296 P P 15 21 51.5 +1.4
comp=Z,10nm,0.9s,baz=122,slow=5.5,SNR=14
comp=Z,10nm,0.9s
CMAR Chiang Mai Arr 54.94 296 P P 15 21 51.4 +1.2
CHTO Chiang Mai 55.06 297 P P 15 21 51.5 +0.6
CHTO Chiang Mai 55.06 297 P P 15 21 52.1 +1.1
PZH PanZhiHua 55.69 306 P P 15 21 55.1 -0.3
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,200nm,4.7s
CD2 Chengdu 56.23 312 P P 15 21 59.5 +0.6
CD2 pmax pmax
comp=Z,50nm,0.8s
XLT XiLinHaoTe 56.93 332 eP P 15 22 03.9 +0.4
XLT pmax pmax
comp=Z,15nm,1.3s
XLT pmax pmax
comp=Z,160nm,4.5s
HHC Hu-ho-hao-te 57.07 326 eP P 15 22 05.4 +0.8
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,140nm,4.8s
KIP Kipapa 57.42 61 P P 15 22 07.7 +0.5
PEA0B Petropavlovsk- 57.88 6 P P 15 22 10.3 +0.6
PETK Petropavlovsk- 57.88 6 P P 15 22 09.9 +0.2
comp=Z,11nm,0.5s,baz=160,slow=6.4,SNR=24
comp=Z,11nm,0.5s
PETK Petropavlovsk- 57.88 6 P 15 22 09.1 -0.6
PET Petropavlovsk 57.90 6 P 15 22 09.4 -0.3
PET Petropavlovsk 57.90 6 P P 15 22 09.6 -0.2
PET PP PP 15 24 25.2 -1.7
KHU Kahuku 58.83 64 P P 15 22 17.3 +0.2
LZH Lanzhou 58.90 317 eP P 15 22 18.5 +1.3
LZH pP pP 15 24 10.4 +5.2
LZH pmax pmax
comp=Z,70nm,1.1s
POHA Pohakuloa 59.06 64 P P 15 22 18.3 -0.3
POHA Pohakuloa 59.06 64 P P 15 22 18.8 +0.2
HIA Hailar 59.59 338 P P 15 22 21.4 +0.1
HIA IAmb IAmb 15 22 22.7
comp=Z,37nm,0.7s
HIA Hailar 59.59 338 P P 15 22 22.0 +0.7
DRV Dumont d'Urvil 62.33 184 P P 15 22 38.7 -0.2
GTA Gaotai 63.38 319 ||P P 15 22 47.3 +0.9
GTA pP pP 15 24 40.3 +3.4
GTA pmax pmax
comp=Z,17nm,1.0s
MA2 Magadan 63.97 1 P P 15 22 49.8 +0.3
ULN Ulaanbaatar 64.18 330 P P 15 22 52.4 +1.0
ULN Ulaanbaatar 64.18 330 P P 15 22 52.3 +1.0
SONM Songino Array 64.49 329 P P 15 22 54.2 +0.9
comp=Z,19nm,0.7s,baz=140,slow=5.5,SNR=30
comp=Z,19nm,0.7s
SONM Songino Array 64.49 329 P P 15 22 54.3 +1.1
GOMU GeErMu 65.30 313 P P 15 22 59.1 +0.2
GOMU PcP PcP 15 23 22.5 -3.2
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,37nm,5.1s
LSA Lhasa 65.53 305 P P 15 23 01.8 +1.2
LSA pmax pmax
comp=Z,29nm,0.9s
CASY Casey 67.32 196 P P 15 23 10.0 -0.4
YAK Yakutsk 68.18 350 P P 15 23 15.8 +0.3
YAK IAmb IAmb 15 23 16.7
comp=Z,33nm,1.2s
YAK Yakutsk 68.18 350 P P 15 23 15.7 +0.1
AKUT Akutan 69.30 26 P P 15 23 22.0 -0.5
VNDA Vanda 73.18 177 P P 15 23 44.2 -0.6
comp=Z,9.7nm,0.6s,baz=301,slow=3.5,SNR=3.7
comp=Z,9.7nm,0.6s
VNDA Vanda 73.18 177 P P 15 23 44.5 -0.4
HYBB Hyderabad (bro 73.44 290 eP P 15 23 47.1 -0.4
WMQ Urumqi 73.46 318 eP P 15 23 47.1 -0.1
WMQ PcP PcP 15 24 04.3 +4.5
WMQ pmax pmax
comp=Z,18nm,0.7s
CHIR Chirikof Islan 74.98 28 P P 15 23 55.2 -0.2
R17K Ugashik Creek 75.62 27 P P 15 23 58.7 -0.2
baz=236
O16K Kokwok River B 76.00 24 P P 15 24 01.1 +0.2
baz=234
O17K Koliganek Bris 76.52 25 P P 15 24 04.4 +0.6
baz=235
ANM Nome 76.53 18 P P 15 24 04.6 +0.8
baz=226
O18K Koktuh Hills 77.35 25 P P 15 24 09.0 +0.6
baz=237
KDAK Kodiak Island 77.43 28 P P 15 24 09.3 +0.5
baz=240
Q19K Cape Douglas, 77.54 26 P P 15 24 09.2 -0.2
baz=238
P19K Oil Pt 78.09 26 P P 15 24 12.3 -0.1
baz=239
MKAR Makanchi Array 78.10 320 P P 15 24 12.2 -0.6
comp=Z,11nm,0.9s,baz=108,slow=6.5,SNR=13
comp=Z,11nm,0.9s
MKAR Makanchi Array 78.10 320 P P 15 24 12.9 +0.1
N19K Bonanza Creek 78.18 24 P P 15 24 13.2 +0.3
baz=237
MAKZ Makanchi 78.31 320 P P 15 24 13.9 0.0
TTA Tatalina 78.74 22 P P 15 24 14.9 -1.0
TTA Tatalina 78.74 22 P P 15 24 16.4 +0.5
baz=236
L19K White Mountain 78.77 23 P P 15 24 16.1 +0.1
L19K White Mountain 78.77 23 P P 15 24 16.7 +0.8
baz=237,SNR=6.3
HOM Homer 78.79 26 P P 15 24 16.5 +0.5
baz=240
M19K Big River Lodg 78.81 24 P P 15 24 17.0 +0.9
M19K Big River Lodg 78.81 24 P P 15 24 16.8 +0.6
baz=237
CNPM China Poot 78.91 26 P P 15 24 16.8 +0.1
BRSE Bradley Lake S 79.23 26 P P 15 24 19.0 +0.5
baz=241
ZAA0 Zalesovo Array 79.24 327 P P 15 24 17.6 -1.0
ZALV Zalesovo Beam 79.24 327 P P 15 24 17.8 -0.7
comp=Z,6.4nm,0.6s,baz=110,slow=5.8,SNR=11
comp=Z,6.4nm,0.6s
ZALV Zalesovo Beam 79.24 327 P P 15 24 17.6 -0.9
M20K Styx River 79.30 24 P P 15 24 18.2 -0.6
M20K Styx River 79.30 24 P P 15 24 19.3 +0.5
baz=238
L20K Farewell, AK 79.32 23 P P 15 24 19.2 +0.3
baz=238,SNR=6.1
CAPN Captain Cook N 79.56 25 P P 15 24 20.6 +0.5
baz=240
K20K Telida 79.72 22 P P 15 24 21.5 +0.6
baz=237,SNR=5.0
SEW Seward 79.98 26 P P 15 24 22.2 -0.1
baz=242
O22K Cooper Landing 80.03 26 P P 15 24 22.8 +0.3
baz=242
SUA Susitna One 80.07 25 P P 15 24 22.1 -0.8
baz=241
J20K Nowinta River 80.13 22 P P 15 24 23.3 +0.2
baz=237
PPLA Purkeypile 80.20 23 P P 15 24 23.5 -0.1
PPLA Purkeypile 80.20 23 P P 15 24 22.9 -0.7
baz=239
RC01 Rabbit Creek A 80.32 25 P P 15 24 23.5 -0.5
RC01 Rabbit Creek A 80.32 25 P P 15 24 23.0 -1.0
baz=242
M22K Willow 80.47 25 P P 15 24 24.8 0.0
baz=241
CAST Castle Rocks 80.51 23 P P 15 24 24.5 -0.6
CAST Castle Rocks 80.51 23 P P 15 24 24.5 -0.6
baz=239,SNR=6.9
CHUM Lake Minchumin 80.66 22 P P 15 24 25.8 0.0
baz=239,SNR=8.2
CUT Chulitna 80.72 24 P P 15 24 25.8 -0.4
baz=241
PMR Palmer 80.81 25 P P 15 24 25.9 -0.6
baz=242
PWL Port Wells 80.82 26 P P 15 24 26.1 -0.6
baz=243,SNR=6.1
P23K Montague Islan 80.84 27 P P 15 24 26.5 -0.3
baz=244
KNK Knik Glacier 81.02 25 P P 15 24 27.3 -0.4
baz=243
TRF Thorofare Moun 81.22 23 P P 15 24 27.7 -1.2
TRF Thorofare Moun 81.22 23 P P 15 24 28.3 -0.6
baz=241
SML Sawmill 81.25 25 P P 15 24 28.3 -0.7
SML IAmb IAmb 15 24 29.6
comp=Z,26nm,0.7s
SML Sawmill 81.25 25 P P 15 24 28.6 -0.3
baz=243,SNR=7.3
IMAR Indian Mountai 81.25 20 P P 15 24 28.1 -0.7
NIL Nilore 81.26 305 P P 15 24 29.9 +0.3
NIL IAmb IAmb 15 24 30.7
comp=Z,31nm,0.7s
BPAW Bear Paw Mtn. 81.28 22 P P 15 24 28.1 -0.9
baz=240
GLI Glacier Island 81.37 26 P P 15 24 29.3 -0.2
baz=244
H21K Melozitna Rive 81.41 21 P P 15 24 29.6 -0.1
baz=238
I21K Tanana 81.45 21 P P 15 24 30.0 +0.1
I21K Tanana 81.45 21 P P 15 24 29.9 +0.1
baz=239
M23K Glacier View 81.50 25 P P 15 24 29.5 -0.7
baz=244
TKM2 Tokmak 2 81.52 314 P P 15 24 31.6 +0.6
SNR=5.3
G21K Allakaket 81.62 20 P P 15 24 30.4 -0.3
baz=238
WAT1 Susitna Watana 81.63 24 P P 15 24 30.1 -0.7
baz=243
KURK Kurchatov 81.67 323 P P 15 24 31.3 +0.1
KURK IAmb IAmb 15 24 32.2
comp=Z,20nm,1.0s
SCM Sheep Creek Mo 81.69 25 P P 15 24 30.9 -0.3
SCM Sheep Creek Mo 81.69 25 P P 15 24 31.2 -0.1
baz=244
KURBB Kurchatov Arra 81.69 322 P P 15 24 31.3 -0.1
comp=Z,9.4nm,0.8s,baz=113,slow=3.9,SNR=18
comp=Z,9.4nm,0.8s
RND Reindeer 81.77 24 P P 15 24 30.7 -0.9
MLY Manley 81.83 22 P P 15 24 31.3 -0.6
MLY Manley 81.83 22 P P 15 24 31.7 -0.2
baz=240,SNR=6.7
WAT6 Susitna Watana 81.85 25 P P 15 24 31.5 -0.6
baz=243
MCK McKinley 81.89 23 P P 15 24 31.4 -0.8
MCK McKinley 81.89 23 P P 15 24 31.3 -0.8
baz=242,SNR=8.1
F21K Alatna River 82.01 19 P P 15 24 33.1 +0.4
baz=237
H22K Ishtalitna Cre 82.03 21 P P 15 24 33.1 +0.3
baz=240
CHMS Chumysh 82.14 314 P P 15 24 34.8 +0.9
SNR=7.4
KLU Klutina 82.14 26 P P 15 24 33.7 +0.2
KLU Klutina 82.14 26 P P 15 24 33.3 -0.2
baz=245,SNR=6.8
KAIM Kayak Island 82.18 28 P P 15 24 33.8 +0.2
baz=247
DHY Denali Highway 82.22 24 P P 15 24 33.3 -0.7
DHY Denali Highway 82.22 24 P P 15 24 33.8 -0.2
baz=244,SNR=7.9
AAK Ala-Archa 82.24 314 P P 15 24 33.3 -1.2
NEA2 Nenana 82.25 22 P P 15 24 33.7 -0.2
baz=242
M24K Tolsona, Glenn 82.30 25 P P 15 24 35.2 +0.9
baz=245
USP Ospenovka 82.38 315 P P 15 24 35.9 +0.8
SNR=12
I23K Minto, Yukon-K 82.40 22 P P 15 24 34.0 -0.6
baz=242
BMRM Bremner River 82.51 27 P P 15 24 35.4 0.0
baz=246
G22K Bettles 82.51 20 P P 15 24 35.2 0.0
baz=239
WRH Wood River Hil 82.56 23 P P 15 24 34.4 -1.1
F22K John River 82.59 19 P P 15 24 35.9 +0.3
baz=239
H23K Yukon River 82.66 21 P P 15 24 35.2 -0.8
H23K Yukon River 82.66 21 P P 15 24 36.2 +0.2
baz=241
AML Almayashu 82.70 313 P P 15 24 38.4 +1.2
SNR=10
CCB Clear Creek Bu 82.75 23 P P 15 24 35.1 -1.4
EKS2 Erkin-Say 82.76 314 P P 15 24 38.7 +1.5
SNR=5.3
N25K Chitina, Valde 82.77 26 P P 15 24 36.7 0.0
baz=246
TCOL CIGO, UAF Yank 82.83 22 P P 15 24 35.5 -1.3
baz=243
COLA College 82.84 22 P P 15 24 35.7 -1.2
baz=243
HARP HAARP 82.85 25 P P 15 24 37.1 +0.1
baz=246
G23K Bananza Creek 82.92 20 P P 15 24 37.6 +0.3
baz=241,SNR=8.3
PAX Paxson 82.96 25 P P 15 24 37.4 -0.2
baz=245
HDA Harding Lake 82.98 23 P P 15 24 36.3 -1.3
HDA Harding Lake 82.98 23 P P 15 24 37.0 -0.6
baz=244
GLB Gilahina Butte 83.05 26 P P 15 24 37.4 -0.7
IL31 83.16 23 P P 15 24 37.0 -1.4
ILAR Eielson Array 83.16 23 P P 15 24 36.9 -1.6
comp=Z,8.2nm,0.6s,baz=252,slow=4.8,SNR=24
comp=Z,8.2nm,0.6s
ILAR Eielson Array 83.16 23 P P 15 24 36.4 -2.2
K24K Donnelly Dome 83.18 24 P P 15 24 39.1 +0.4
baz=245
H24K Noodor Dome 83.27 22 P P 15 24 39.2 +0.2
baz=243
MCARA McCarthy VSAT 83.38 27 P P 15 24 40.1 +0.4
baz=248
A21K Barrow 83.41 15 P P 15 24 40.5 +1.0
baz=234
MESA MESA 83.42 28 P P 15 24 40.7 +0.5
baz=249
RIDG Independent Ri 83.53 24 P P 15 24 39.6 -0.8
RIDG Independent Ri 83.53 24 P P 15 24 40.0 -0.4
baz=246
J25K Salcha River, 83.68 23 P P 15 24 40.5 -0.7
baz=245,SNR=7.8
M26K Nabesna, AK 83.78 26 P P 15 24 41.7 0.0
baz=248
G24K Hadweenzic Riv 83.81 21 P P 15 24 41.9 +0.2
baz=243
DOT Dot Lake 83.81 24 P P 15 24 41.1 -0.7
D23K Nanushuk River 83.82 18 P P 15 24 42.7 +1.0
baz=240,SNR=8.3
L26K Log Cabin Wild 83.87 25 P P 15 24 41.7 -0.4
L26K IAmb IAmb 15 24 43.0
comp=Z,8.7nm,0.6s
L26K Log Cabin Wild 83.87 25 P P 15 24 42.1 +0.1
baz=247
SCRK Sand Creek 83.98 24 P P 15 24 42.2 -0.5
SCRK Sand Creek 83.98 24 P P 15 24 42.6 -0.2
baz=247
CTG Chitna Glacier 83.98 27 P P 15 24 43.1 +0.3
baz=249,SNR=6.0
CTGM Chitina Glacie 83.99 27 P P 15 24 42.9 0.0
TOLK Toolik Lake Re 84.01 19 P P 15 24 42.8 +0.1
TOLK Toolik Lake Re 84.01 19 P P 15 24 43.2 +0.5
baz=241,SNR=5.7
F24K Squaw Lake 84.04 20 P P 15 24 43.4 +0.5
baz=243,SNR=8.9
E24K Your Creek 84.09 19 P P 15 24 43.5 +0.4
baz=242
H25K Birch Creek 84.21 22 P P 15 24 44.2 +0.6
baz=245
M27K Edge Creek, AK 84.25 26 P P 15 24 43.9 -0.2
M27K Edge Creek, AK 84.25 26 P P 15 24 44.6 +0.5
baz=249,SNR=12
C23K Itkillik River 84.28 18 P P 15 24 44.4 +0.5
baz=240
J26L Joseph Creek 84.35 24 P P 15 24 44.1 -0.4
J26L Joseph Creek 84.35 24 P P 15 24 44.5 0.0
baz=247,SNR=5.8
O28M Mount Upton 84.45 28 P P 15 24 45.6 +0.3
baz=250,SNR=5.8
PNL Peninsula 84.46 29 P P 15 24 45.5 +0.5
baz=251
D24K Happy Valley 84.50 18 P P 15 24 46.0 +1.0
baz=242
L27K Beaver Creek, 84.52 25 P P 15 24 45.1 -0.2
L27K Beaver Creek, 84.52 25 P P 15 24 45.7 +0.4
baz=249,SNR=7.4
BCAR Beaver Creek A 84.54 25 P P 15 24 45.4 0.0
YUK3 Moose Creek 84.67 27 P P 15 24 46.6 +0.4
baz=250,SNR=7.3
BVCY Beaver Creek 84.71 26 P P 15 24 46.8 +0.6
baz=250,SNR=8.5
NRIK Noril'sk 84.75 342 P P 15 24 45.9 -0.3
comp=Z,6.1nm,0.5s,baz=95,slow=3.2,SNR=7.0
comp=Z,6.1nm,0.5s
NRIK Noril'sk 84.75 342 P P 15 24 45.9 -0.3
K27K Chicken 84.77 24 P P 15 24 47.2 +0.8
baz=248
C24K Franklin Bluff 84.80 18 P P 15 24 47.2 +0.8
baz=242
I26K Coal Creek Min 84.83 23 P P 15 24 46.7 0.0
baz=247
F25K Christian Rive 84.84 20 P P 15 24 47.2 +0.3
baz=245
O29M Mount Kennedy 85.05 28 P P 15 24 48.7 +0.6
baz=252,SNR=6.6
E25K Arctic Village 85.09 20 P P 15 24 48.3 +0.4
baz=245
BMAR Burnt Mountain 85.15 21 P P 15 24 48.5 +0.3
KKAR Karatay Array 85.20 314 P P 15 24 48.9 -0.1
G26K Porcupine Rive 85.24 21 P P 15 24 49.5 +0.9
baz=247,SNR=7.5
P29M Windy Craggy 85.25 29 P P 15 24 49.0 +0.1
P29M IAmb IAmb 15 24 50.6
comp=Z,12nm,0.8s
P29M Windy Craggy 85.25 29 P P 15 24 49.4 +0.5
baz=253,SNR=5.5
YUK4 Talbot Arm 85.34 27 P P 15 24 50.4 +0.9
baz=252,SNR=9.9
YUK6 Outpost Mounta 85.35 28 P P 15 24 50.1 +0.5
baz=252
D25K Kavik River 85.35 19 P P 15 24 49.3 +0.1
baz=244
F26K Sheenjek River 85.41 21 P P 15 24 50.1 +0.6
baz=246
EGAK Eagle 85.42 24 P P 15 24 49.5 0.0
EGAK Eagle 85.42 24 P P 15 24 49.6 0.0
baz=249,SNR=7.3
I27K Kandik River 85.53 23 P P 15 24 50.4 +0.3
baz=249
HYT Haines Junctio 85.71 28 P P 15 24 51.2 0.0
HYT Haines Junctio 85.71 28 P P 15 24 52.2 +0.9
baz=253,SNR=21
P30M Million Dollar 85.77 29 P P 15 24 52.6 +1.2
baz=253
M29M Somme Creek 85.77 26 P P 15 24 52.0 +0.5
baz=252
H27K Steamboat Moun 85.80 22 P P 15 24 52.0 +0.6
baz=249
PLBC Pleasant Camp 85.87 29 P P 15 24 52.3 +0.5
baz=254,SNR=5.3
DAWY Dawson 85.89 25 P P 15 24 52.1 +0.2
DAWY IAmb IAmb 15 24 53.4
comp=Z,9.7nm,0.8s
DAWY Dawson 85.89 25 P P 15 24 52.5 +0.6
baz=251,SNR=7.1
G27K Doyon Strip 85.96 22 P P 15 24 52.6 +0.5
baz=249,SNR=5.0
N30M Aishikik Lake 86.09 27 P P 15 24 53.6 +0.7
baz=253,SNR=5.5
O30N Mendenhall 86.36 28 P P 15 24 54.9 +0.6
baz=254,SNR=11
SKAG Skagway 86.38 30 P P 15 24 53.0 -1.2
SKAG IAmb IAmb 15 24 56.0
comp=Z,13nm,1.0s
SKAG Skagway 86.38 30 P P 15 24 54.8 +0.6
baz=255
BESE Bessie Mountai 86.39 31 P P 15 24 53.7 -0.7
BESE IAmb IAmb 15 24 56.1
comp=Z,18nm,1.0s
E27K Coleen River 86.49 20 P P 15 24 55.3 +0.6
baz=249,SNR=6.5
N31M Braeburn, Yuko 86.70 28 P P 15 24 55.8 0.0
N31M Braeburn, Yuko 86.70 28 P P 15 24 56.4 +0.6
baz=254
I29M Ogilvie Camp, 86.75 24 P P 15 24 55.5 -0.5
I29M Ogilvie Camp, 86.75 24 P P 15 24 56.3 +0.3
baz=252
WHY Whitehorse 86.91 29 P P 15 24 56.0 -0.9
WHY Whitehorse 86.91 29 P P 15 24 57.0 +0.2
baz=255
WRAK Wrangell Islan 87.19 33 P P 15 24 57.9 -0.2
WRAK Wrangell Islan 87.19 33 P P 15 24 58.6 +0.5
baz=258
P32M Atlin 87.21 30 P P 15 24 58.6 +0.4
baz=256
M31M Drury Creek, Y 87.53 27 P P 15 25 00.3 +0.7
baz=255
EPYK Eagle Plains 87.68 23 P P 15 24 59.4 -0.9
EPYK Eagle Plains 87.68 23 P P 15 25 00.3 +0.1
baz=253
P33M Teslin, Yukon 87.79 29 P P 15 25 01.1 +0.1
baz=257
N32M Quiet Lake 87.88 28 P P 15 25 01.8 +0.5
baz=257
FARO Faro, Yukon 88.01 27 P P 15 25 01.8 -0.1
baz=256
R33M Jennings River 88.53 30 P P 15 25 05.1 +0.6
baz=258
DLBC Dease Lake 88.83 31 P P 15 25 06.1 +0.3
baz=259
MMPY Sheldon Lake, 89.04 27 P P 15 25 07.1 +0.3
baz=258
L04D Klamath Falls 91.61 48 P P 15 25 18.5 -0.6
baz=265
J05D Fort Rock, OR 92.47 47 P P 15 25 22.5 -0.7
baz=266
PKM Mcpherson Peak 93.04 55 P P 15 25 25.9 -0.1
baz=266
ABKAR Akbulak array 93.24 319 P P 15 25 23.9 -2.4
NVAR Mina Array Bea 94.43 52 P P 15 25 31.4 -0.9
comp=Z,0.8nm,0.8s,baz=240,slow=5.8,SNR=4.2
comp=Z,0.8nm,0.8s
CWC Cottonwood Cre 94.53 54 P P 15 25 32.5 -0.2
baz=268
EDW2 Edwards Air Fo 94.54 55 P P 15 25 32.6 -0.1
baz=268
BFSC Mount Baldy Ra 94.79 56 P P 15 25 33.7 -0.2
baz=268
LRMC Laurel Mtn Rad 94.82 55 P P 15 25 34.2 +0.2
baz=268
MPMC Manual Prospec 94.99 54 P P 15 25 34.7 -0.2
baz=268
NEW Newport 95.55 42 P P 15 25 36.5 -0.4
baz=269
IKP In-Ko-Pah, Jac 96.03 58 P P 15 25 39.0 -0.5
baz=268
R11A Troy Canyon, C 96.57 52 P P 15 25 41.7 -0.1
baz=269
HLID Hailey 97.45 47 P P 15 25 45.3 -0.4
baz=271
PDAR Pinedale Array 101.03 47 P Pdif 15 26 00.4 -1.3
comp=Z,0.9nm,0.7s,baz=229,slow=2.5,SNR=5.8
ARCES ARCESS Array B 105.72 342 Pdiff Pdif 15 26 21.6 0.0
comp=Z,1.8nm,0.9s,baz=90,slow=7.7,SNR=3.6
FINES FINESS Array B 109.53 335 Pdiff Pdif 15 26 38.4 -0.4
comp=Z,4.8nm,1.1s,baz=56,slow=5.2,SNR=3.9
CLL Collm 121.11 330 ePKPdf PKPdf 15 31 00.0 -0.7
GERES GERESS Array B 122.19 327 PKP PKiKP 15 31 02.5 -0.7
comp=Z,0.8nm,0.5s,baz=101,slow=1.4,SNR=4.5
BAUV El Baul 142.35 81 PKPdf 15 31 36.8 -4.8
STVI Saint Thomas 143.54 65 PKPab 15 31 41.2 -0.9
TORD Torodi Ar. Bea 147.23 287 PKPbc PKPbc 15 31 52.5 -0.6
comp=Z,7.5nm,0.7s,baz=58,slow=2.8,SNR=4.2

IDC 17 15:26:51.5±1.4,26°82N×140°38E,h378km±22km,mb3.1/5, mbtmp3.8/5,Error ellipse: s-maj=61.3km s-min=21.0km az=79.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.64	80	P	P	Pn	15 27 43.2	0.0
	63nm,0.9s,baz=321,slow=21,SNR=17							
JCJ				S	S	S	15 28 21.8	-3.2
	56nm,0.3s,baz=298,slow=24,SNR=18							
WRA	Warramunga Arr	46.85	188	P	P	P	15 34 45.3	-0.1
	0.2nm,0.3s,baz=5.7,slow=7.8,SNR=7.1							
	0.2nm,0.3s							
MKAR	Makanchi Array	49.41	310	P	P	P	15 35 04.3	-0.2
	0.2nm,0.5s,baz=86,slow=9.1,SNR=2.0							
	0.2nm,0.5s							
KURBB	Kurchatov Arra	52.08	315	P	P	P	15 35 24.1	0.0
	1.0nm,0.5s,baz=90,slow=7.7,SNR=8.8							
	1.0nm,0.5s							
ARCES	ARCESS Array B	73.27	341	P	P	P	15 37 42.5	+0.4
	1.8nm,0.9s,baz=62,slow=8.4,SNR=6.8							
	1.8nm,0.9s							
FINES	FINESS Array B	77.47	333	P	P	P	15 38 05.7	-0.3

1.8nm,0.4s,baz=69,slow=6.0,SNR=16
1.8nm,0.4s

*IDC **17** 15:29:42.3±17.0,36°.34N×70°.58E,h178km±159km, mb3.0/3,mbtmp3.5/6,ML3.2/3,MS3.4/1,Error ellipse: s-maj=104.6km s-min=53.5km az=22.0*
*NNC **17** 15:29:50.2±12.0,36°.93N×70°.73E,h163km±159km,mb2.7, mpv3.4,Error ellipse: s-maj=114.7km s-min=60.4km az=0.0*

ISC 17 15:29:45.2±1.4,**36°.6N**±0°.1×**71°.1E**±0°.1,**h188**km,**n11,** σ1§**88**/12,**3C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.53**	**356**	P		**Pn**	**15 31 21.0**	**+1.8**
	0.3nm,0.3s,baz=177,slow=14,SNR=11							
KK31				⇑S		**Sn**	**15 32 30.4**	**-3.1**
	3.0nm,0.4s,baz=182,slow=22,SNR=4.6							
TKM2	**Tokmak 2**	**7.23**	**27**	⇓P		**Pn**	**15 31 30.2**	**+1.7**
	6.2nm,0.7s							
TKM2				⇑S		**Sn**	**15 32 50.5**	**+0.2**
	2.0nm,0.7s							
MKAR	**Makanchi Array**	**13.19**	**36**	P		**P**	**15 32 48.1**	**-0.6**
	0.2nm,0.3s,baz=215,slow=12,SNR=8.6							
	0.9nm,0.8s							
KURBB	**Kurchatov Arra**	**15.03**	**19**	P		**P**	**15 33 10.3**	**+1.4**
	baz=201,slow=10.0,SNR=2.4							
	0.3nm,0.4s							
AB31	**Akbulak array**	**15.05**	**331**	P		**P**	**15 33 11.0**	**+1.9**
	0.6nm,0.7s,baz=138,slow=10.0,SNR=5.6							
AKTO	**Aktyubinsk**	**16.75**	**330**	P		**P**	**15 33 25.6**	**-2.3**
	0.2nm,0.3s,baz=144,slow=6.7,SNR=4.2							
	1.7nm,0.6s							
AKTO	**Aktyubinsk**	**16.75**	**330**	⇑P		**Pn**	**15 33 28.7**	**-0.1**
	1.5nm,0.6s							
ZALV	**Zalesovo Beam**	**19.82**	**24**	P		**Pn**	**15 34 03.1**	**-1.9**
	0.8nm,0.3s,baz=221,slow=11,SNR=5.0							
	0.8nm,0.3s							
ARCES	**ARCESS Array B**	**41.10**	**338**	LR		LR	15 55 28.6	
	comp=Z,52nm,18.8s,baz=210,slow=38							
WRA	**Warramunga Arr**	**81.98**	**122**	P		**P**	**15 41 43.5**	**-0.7**
	0.6nm,1.1s,baz=327,slow=4.8,SNR=1.4							
	0.6nm,1.1s							
ASAR	**Alice Springs**	**84.25**	**125**	P		**P**	**15 41 55.3**	**-0.4**
	0.2nm,0.7s,baz=316,slow=3.9,SNR=1.2							
	0.2nm,0.7s							

*NOU **17** 15:32:52.2,20°.29S×168°.25E,h0km,MLv4.5/14,Loyalty Islands*
*NEIC **17** 15:32:54.9±1.9,20°.45S±0°.05×168°.22E±0°.10,h10km±1km, mb4.4/16,Error ellipse: s-maj=15.9km s-min=7.6km az=75.0*
*IDC **17** 15:32:58.7±0.9,20°.54S×168°.13E,h35km±6km,mb3.8/8, mbtmp4.0/9,ML3.7/1,MS3.3/7,Error ellipse: s-maj=27.8km s-min=17.2km az=145.0*

ISC 17 15:32:56.2±0.6,**20°.36S**±0°.05×**168°.30E**±0°.08,**h26**km,**n46,** σ1§**39**/47,**mb4.3**/14,**MS3.3**/5,**Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.15**	**192**			**Pn**	**15 33 14.2**	**-2.4**
MARNC	**Mare, Loyalty**	**1.15**	**192**	P		**Pn**	**15 33 14.5**	**-2.1**
YATNC	**Mamie plateau,**	**2.14**	**217**	P		**Pn**	**15 33 27.9**	**-2.4**
PINNC	**Pines Island,**	**2.38**	**199**	Pn		**Pn**	**15 33 32.7**	**-0.9**
PINNC	**Pines Island,**	**2.38**	**199**	P		**Pn**	**15 33 33.2**	**-0.4**
DZM	**Mont Dzumac**	**2.43**	**225**	Pn		**Pn**	**15 33 32.9**	**-1.5**
	23nm,0.3s,baz=116,slow=12,SNR=839							
DZM				Sn		**Sn**	**15 34 00.4**	**-2.9**
	78nm,0.3s,baz=49,slow=19,SNR=8.0							
	89nm,0.3s							
DZM	**Mont Dzumac**	**2.43**	**225**	P		**Pn**	**15 33 32.9**	**-1.5**
OUENC	**Ouen Island, N**	**2.46**	**213**	Pn		**Pn**	**15 33 33.7**	**-1.0**
OUENC	**Ouen Island, N**	**2.46**	**213**	P		**Pn**	**15 33 34.4**	**-0.3**
NOUC	**Port Laguerre**	**2.54**	**227**	P		**Pn**	**15 33 35.4**	**-0.4**
RTV	**Rentapao**	**2.55**	**3**	P		**Pn**	**15 33 33.8**	**-2.2**
ONTNC	**Ouen Toro**	**2.59**	**221**	Pn		**Pn**	**15 33 35.4**	**-1.2**
ONTNC	**Ouen Toro**	**2.59**	**221**	P		**Pn**	**15 33 35.8**	**-0.7**
DVP	**Devils Point**	**2.62**	**358**	P		**Pn**	**15 33 34.2**	**-2.7**
KOUNC	**Koumac, New Ca**	**3.76**	**266**	Pn		**Pn**	**15 33 51.6**	**-1.1**
KOUNC	**Koumac, New Ca**	**3.76**	**266**	P		**Pn**	**15 33 52.3**	**-0.3**
MSVF	**Nonsavu**	**9.59**	**76**	LR		LR	15 38 19.3	
	comp=Z,205nm,19.1s,baz=241,slow=33							
HNR	**Honiara**	**13.52**	**322**	LR		LR	15 39 49.5	
	comp=Z,59nm,19.8s,baz=243,slow=30							
AFI	**Afiamalu**	**20.08**	**75**	LR		LR	15 44 10.7	
	comp=Z,58nm,18.6s,baz=40,slow=33							
CTA	**Charters Tower**	**20.68**	**267**	LR		LR	15 44 12.3	
	comp=Z,80nm,20.6s,baz=86,slow=33							
COEN	**Coen**	**24.81**	**281**	P		**P**	**15 38 17.2**	**+0.7**
STKA	**Stephens Creek**	**26.50**	**239**	P		**P**	**15 38 31.0**	**-0.7**
	3.7nm,0.6s,baz=86,slow=10,SNR=19							
STKA				LR		LR	15 47 55.8	
	comp=Z,84nm,18.9s,baz=29,slow=34							
	3.7nm,0.6s							
STKA	**Stephens Creek**	**26.50**	**239**	P		**P**	**15 38 32.5**	**+0.8**
WR0	**Warramunga Arr**	**31.66**	**265**	P		**P**	**15 39 16.0**	**-1.7**
WR0				IAmb		IAmb	15 39 56.1	
	comp=Z,5.4nm,1.1s							
WB0	**Warramunga Arr**	**31.82**	**265**	P		**P**	**15 39 17.7**	**-1.4**
WB2	**Warramunga Arr**	**31.84**	**265**	P		**P**	**15 39 17.7**	**-1.5**
WB2				IAmb		IAmb	15 39 21.9	
	comp=Z,4.5nm,1.1s							
WRAB	**Tennant Creek**	**31.84**	**265**	P		**P**	**15 39 17.8**	**-1.5**
WRAB				IAmb		IAmb	15 39 36.4	
	comp=Z,3.5nm,0.9s							
WRA	**Warramunga Arr**	**31.85**	**265**	P		**P**	**15 39 18.1**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=92,slow=8.4,SNR=30							
WRA				pP		**sP**	**15 39 28.4**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=92,slow=8.7,SNR=6.0							
WRA				LR		LR	15 51 05.8	
	comp=Z,62nm,18.1s,baz=55,slow=34							
	comp=Z,0.7nm,0.4s							
WRA	**Warramunga Arr**	**31.85**	**265**	P		**P**	**15 39 17.6**	**-1.8**
AS31	**Alice Springs**	**32.01**	**258**	P		**P**	**15 39 20.2**	**-0.6**
AS31				IAmb		IAmb	15 39 20.9	
	comp=Z,3.1nm,0.6s							
ASAR	**Alice Springs**	**32.01**	**258**	P		**P**	**15 39 20.2**	**-0.6**
	comp=Z,6.9nm,0.7s,baz=86,slow=9.0,SNR=129							
ASAR				pP		**sP**	**15 39 30.9**	**+1.5**
	comp=Z,6.1nm,0.7s,baz=86,slow=8.7,SNR=12							
ASAR				LR		LR	15 51 37.0	
	comp=Z,81nm,19.1s,baz=92,slow=35							
	comp=Z,6.9nm,0.7s							
ASAR	**Alice Springs**	**32.01**	**258**	P		**P**	**15 39 20.0**	**-0.8**
MTN	**Manton Dam**	**36.33**	**276**	P		**P**	**15 39 57.4**	**-0.8**
KNRA	**Kununurra**	**37.82**	**270**	P		**P**	**15 40 09.1**	**-1.8**
KNRA				IAmb		IAmb	15 40 21.2	
	comp=Z,11nm,1.1s							
FITZ	**Fitzroy Crossi**	**40.26**	**266**	P		**P**	**15 40 31.6**	**+0.3**
PSA00	**Pilbara Seismi**	**45.11**	**259**	P		**P**	**15 41 11.2**	**+0.4**
TOLI2	**Tolitoli**	**51.17**	**289**	P		**P**	**15 41 57.4**	**-0.3**
VNDA	**Vanda**	**57.29**	**182**	P		**P**	**15 42 41.5**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=334,slow=8.7,SNR=3.5							
	comp=Z,0.7nm,1.0s							
VNDA	**Vanda**	**57.29**	**182**	P		**P**	**15 42 41.7**	**+0.4**
VNDA				IAmb		IAmb	15 42 56.8	
	comp=Z,2.8nm,1.2s							
QSPA	**South Pole Qui**	**69.70**	**180**	P		**P**	**15 44 03.2**	**-0.4**
	comp=Z,2.0nm,1.0s,baz=40,slow=1.2,SNR=5.1							
	comp=Z,2.0nm,1.0s							
QSPA	**South Pole Qui**	**69.70**	**180**	P		**P**	**15 44 04.2**	**+0.5**
QSPA				IAmb		IAmb	15 44 18.4	
	comp=Z,4.1nm,1.2s							
CMAR	**Chiang Mai Arr**	**78.16**	**295**	P		**P**	**15 44 55.3**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=137,slow=4.0,SNR=7.9							
	comp=Z,1.3nm,0.8s							
BELA	**Belgrano 2**	**81.07**	**175**	P		**P**	**15 45 08.3**	**-0.2**
BELA				IAmb		IAmb	15 45 09.3	
	comp=Z,3.1nm,0.7s							
NVAR	**Mina Array Bea**	**90.20**	**49**	P		**P**	**15 45 56.4**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=234,slow=7.7,SNR=2.9							
NVAR				pP		**pwP**	**15 46 07.7**	**-2.1**
	comp=Z,0.7nm,0.8s,baz=222,slow=8.2,SNR=4.6							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**91.56**	**18**	P		**P**	**15 46 02.4**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=207,slow=7.9,SNR=2.5							
ILAR				pP		**pwP**	**15 46 14.3**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=219,slow=7.8,SNR=3.5							
	comp=Z,0.2nm,0.6s							
GERES	**GERESS Array B**	**145.03**	**330**	PKPbc		**PKPbc**	**15 52 31.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=20,slow=4.4,SNR=3.9							

IDC 17 15:45:11.3±3.6,**38°.33N×98°.54E,h0km,mb3.4/1, mbtmp3.3/3,ML3.0/2,MS3.3/1,Error ellipse: s-maj=48.1km s-min=40.1km az=31.0,Qinghai**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**11.09**	**29**	Pn		Pn	15 47 51.1	-0.2
	0.2nm,0.3s,baz=218,slow=16,SNR=5.3							
SONM				Lg		Lg	15 51 03.9	
	0.2nm,0.3s,baz=218,slow=35,SNR=6.7							
	0.9nm,0.5s							
MKAR	**Makanchi Array**	**14.64**	**310**	Pn		Pn	15 48 34.6	-5.0
	baz=126,slow=15,SNR=1.6							
	0.1nm,0.5s							
KSRS	**Korea Array**	**23.17**	**83**	P		P	15 50 19.1	-0.3
	0.9nm,0.7s,baz=278,slow=8.9,SNR=9.0							
	0.9nm,0.7s							
BRTR	**Keskin Array B**	**49.42**	**293**	LR		LR	16 18 28.0	
	comp=Z,32nm,20.2s,baz=78,slow=40							

*MOS **17** 15:50:30.6±1.0,50°.43N×142°.41E,h10km,mb4.6/31, MS3.3/11,Error ellipse: s-maj=8.6km s-min=5.0km az=85.3*
MOS Felt (II-III) at Onor, (II) at Aleksandrovsk-Sakhalinskiy.
*SKHL **17** 15:50:30.3±0.9,50°.40N×142°.50E,h9km±3km,mb5.2/9*
*IDC **17** 15:50:30.4±0.6,50°.38N×142°.38E,h0km,mb4.1/17, mbtmp4.1/22,ML2.9/5,MS3.4/14,Error ellipse: s-maj=17.1km s-min=11.9km az=152.0*
*BJI **17** 15:50:31.8±0.0,50°.67N×142°.91E,h40km,mb4.4/23, mB4.9/15,ML4.9/1,Ms4.3/13,Ms7 4.0/12*
*NEIC **17** 15:50:34.1±1.5,50°.33N±0°.08×142°.3E±0°.1,h24km±5km, mb4.6/66,Error ellipse: s-maj=11.7km s-min=9.9km az=148.0*

ISC 17 15:50:32.3±0.3,**50°.41N**±0°.02×**142°.39E**±0°.04,**h10**km,**n188,** σ1§**36**/209,**mb4.5**/73,**MS3.5**/15,**14C-9D,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.48**	**20**	*e*Pn		**Pg**	**15 50 41.0**	**-0.8**
TYV				*e*S		**Sg**	**15 50 47.8**	**-0.4**
TYV				pmax		pmax		
	comp=Z,973nm,0.5s							
TYV				pmax		pmax		
	comp=Z,2μm,2.3s							
TYV				smax		smax		
	comp=N,8μm,0.6s							
TYV				smax		smax		
	comp=E,11μm,0.6s							
TYV	**Tymovskoe**	**0.48**	**20**	*e*Pg		**Pg**	**15 50 41.0**	**-0.8**
TYV				AMB		AMB	15 50 43.6	
	comp=E,2μm,0.5s							
TYV				*e*Sg		**Sg**	**15 50 47.8**	**-0.4**
TYV				A		A	15 50 47.9	
	comp=E,8μm,0.6s							
TYV				A		A	15 50 47.9	
	comp=E,11μm,0.6s							
UGL	**Uglegorsk**	**1.35**	**189**	⇓*i*PN		**Pn**	**15 50 56.0**	**-1.1**
UGL				*e*S		**Sb**	**15 51 14.9**	**0.0**
UGL				pmax		pmax		
	comp=Z,1μm,0.5s							
UGL				smax		smax		
	comp=E,4μm,0.7s							
UGL				smax		smax		
	comp=N,3μm,0.7s							
UGL	**Uglegorsk**	**1.35**	**189**	*e*Pg		**Pn**	**15 50 56.1**	**-1.1**
UGL				AMB		AMB	15 50 59.4	
	comp=N,2μm,0.6s							
UGL				*e*Sg		**Sb**	**15 51 15.4**	**+0.5**
UGL				A		A	15 51 18.0	
	comp=N,3μm,0.7s							
UGL				A		A	15 51 18.0	
	comp=N,4μm,0.7s							
NKL	**Nikolayevsk**	**2.94**	**340**	*e*PN		**Pn**	**15 51 18.0**	**-1.1**
NKL				*e*S		**Sn**	**15 51 53.8**	**-0.6**
NKL				pmax		pmax		
	comp=E,47nm,0.2s							
NKL				pmax		pmax		
	comp=N,115nm,0.5s							
NKL				pmax		pmax		
	comp=Z,246nm,0.4s							
NKL				smax		smax		
	comp=N,242nm,0.3s							
NKL				smax		smax		
	comp=E,175nm,0.3s							
NKL	**Nikolayevsk**	**2.94**	**340**	*e*P		**Pn**	**15 51 18.0**	**-1.1**
NKL				AMB		AMB	15 51 18.1	
	comp=E,246nm,0.4s							
NKL				*e*S		**Sn**	**15 51 53.8**	**-0.6**
NKL				A		A	15 51 55.6	
	comp=E,242nm,0.3s							
NKL				A		A	15 51 55.6	
	comp=E,175nm,0.3s							
OKH	**Okha**	**3.16**	**6**	⇓*e*PN		**Pn**	**15 51 23.0**	**+0.9**
OKH				*e*S		**Sn**	**15 52 02.6**	**+2.8**
OKH				pmax		pmax		
	comp=Z,374nm,0.6s							
OKH				smax		smax		
	comp=N,454nm,0.9s							
OKH	**Okha**	**3.16**	**6**	*e*P		**Pn**	**15 51 22.5**	**+0.4**
OKH				AMB		AMB	15 51 25.2	
	comp=N,400nm,0.6s							
OKH				*e*S		**Sb**	**15 52 06.6**	**-0.5**
OKH				S		**Sb**	**15 52 07.6**	**+0.5**
	comp=N,600nm,0.6s							
OKH				S		**Sb**	**15 52 07.6**	**+0.5**
	comp=N,800nm,0.6s							
OKH				*e*Sg		**Sg**	**15 52 19.5**	**+5.7**
OKH				A		A	15 52 19.8	
	comp=N,800nm,0.8s							
OKH				A		A	15 52 19.8	
	comp=N,1μm,0.8s							
YSS	**Yuzh-Sakhalins**	**3.47**	**176**			**Pn**	**15 51 24.9**	**-1.4**
YSS	**Yuzh-Sakhalins**	**3.47**	**176**	*e*PN		**Pn**	**15 51 25.5**	**-0.8**
YSS				*e*			15 52 07.1	
YSS				pmax		pmax		
	comp=Z,50nm,0.4s							
YSS				pmax		pmax		
	comp=Z,320nm,0.6s							
YSS				smax		smax		
	comp=E,120nm,0.9s							
YSS				smax		smax		
	comp=E,190nm,1.0s							
YSS				MLR		MLR		
	comp=Z,900nm,9.0s							
YSS	**Yuzh-Sakhalins**	**3.47**	**176**	*e*P		**Pn**	**15 51 25.5**	**-0.8**
YSS				*e*P		**Pb**	**15 51 32.2**	**-1.5**
YSS				*e*Pg		**Pg**	**15 51 38.3**	**-0.4**
YSS				AMB		AMB	15 51 42.8	
	comp=Z,320nm,0.6s							
YSS				*e*Sg		**Sg**	**15 52 26.7**	**+3.1**
YSS				A		A	15 52 28.9	
	comp=Z,120nm,0.8s							
YSS				A		A	15 52 28.9	
	comp=Z,200nm,0.8s							
GRNR	**Gornyy**	**3.82**	**278**	*e*PN		**Pn**	**15 51 30.3**	**-0.8**
GRNR				*e*			15 52 16.4	
GRNR				pmax		pmax		
	comp=N,20nm,0.3s							
GRNR				pmax		pmax		
	comp=E,40nm,0.3s							
GRNR				pmax		pmax		
	comp=Z,30nm,0.3s							
GRNR				smax		smax		
	comp=E,190nm,0.3s							
GRNR				MLR		MLR		
	comp=E,660nm,17.0s							
GRNR				MLR		MLR		
	comp=N,980nm,15.0s							
GRNR				MLR		MLR		
	comp=Z,730nm,20.0s							
GRNR	**Gornyy**	**3.82**	**278**	*e*P		**Pn**	**15 51 30.3**	**-0.8**
GRNR				*e*Pg		**Pg**	**15 51 43.9**	**-1.5**
GRNR				AMB		AMB	15 51 44.7	
	comp=Z,30nm,0.3s							
GRNR				*e*S		**Sn**	**15 52 16.4**	**+0.3**
KUR	**Kuril'sk**	**6.36**	**142**	⇑*i*PN		**Pn**	**15 52 08.1**	**+2.1**
TEY	**Ternei**	**6.64**	**218**	*e*PN		**Pn**	**15 52 10.3**	**+0.4**
TEY				pmax		pmax		
	comp=N,10.0nm,0.6s							
TEY				pmax		pmax		
	comp=E,10.0nm,0.6s							
TEY				pmax		pmax		
	comp=Z,10.0nm,0.6s							
KLR	**Kul'dur**	**6.99**	**264**	Pn		**Pn**	**15 52 14.8**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=76,slow=17,SNR=7.3							
KLR				Lg		Lg	15 54 12.2	
	comp=Z,2.2nm,0.3s,baz=158,slow=23,SNR=5.5							
KLR				LR		LR	15 55 25.2	
	comp=Z,278nm,19.8s,baz=82,slow=42							
	comp=Z,2.2nm,0.3s							
KLR	**Kul'dur**	**6.99**	**264**	*c i*PN		**Pn**	**15 52 15.2**	**+0.6**
KLR				MLR		MLR		
	comp=Z,511nm,13.0s							
USRK	**Ussuriysk Ar.**	**9.40**	**233**	Pn		**Pn**	**15 52 48.3**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=41,slow=15,SNR=12							
USRK				Lg		Lg	15 55 27.5	
	comp=Z,1.0nm,0.3s,baz=49,slow=31,SNR=8.7							
USRK				LR		LR	15 55 53.6	
	comp=Z,170nm,21.1s,baz=272,slow=34							
	comp=Z,2.9nm,0.4s							
USRK	**Ussuriysk Ar.**	**9.40**	**233**	Pn		**Pn**	**15 52 44.5**	**-3.2**
PEA0B	**Petropavlovsk-**	**9.87**	**68**	Pn		**Pn**	**15 52 55.1**	**+1.0**
PEA0B	**Petropavlovsk-**	**9.87**	**68**	Pn		**Pn**	**15 52 55.1**	**+1.0**
PETK	**Petropavlovsk-**	**9.87**	**68**	Pn		**Pn**	**15 52 54.9**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=324,slow=5.2,SNR=26							
PETK				LR		LR	15 57 00.1	
	comp=Z,197nm,19.1s,baz=264,slow=39							
	comp=Z,2.3nm,0.9s							
PETK	**Petropavlovsk-**	**9.87**	**68**	Pn		**Pn**	**15 52 54.1**	**0.0**
ZEA	**Zeya**	**9.90**	**295**	*e*PN		Pn	15 53 06.8	+12
ZEA				*e*			15 54 54.6	
ZEA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
ZEA				MLR		MLR		
	comp=E,100nm,4.0s							
ZEA				MLR		MLR		
	comp=Z,200nm,5.0s							
MA2	**Magadan**	**10.36**	**24**	LR		LR	15 57 29.7	
	comp=Z,92nm,20.0s,baz=218,slow=40							
MA2	**Magadan**	**10.36**	**24**	Pn		**Pn**	**15 53 01.0**	**+0.2**
MA2	**Magadan**	**10.36**	**24**	PN		**Pn**	**15 53 01.0**	**+0.2**
MDJ	**Mudanjiang**	**10.41**	**241**	P		Pn	15 53 08.3	+6.7
MDJ				pmax		pmax		
	comp=Z,8.0nm,0.9s							
MDJ				pmax		pmax		
	comp=Z,220nm,5.3s							
YAK	**Yakutsk**	**13.59**	**334**	Pn		**Pn**	**15 53 45.0**	**+0.1**
YAK	**Yakutsk**	**13.59**	**334**	*e*P		**Pn**	**15 53 45.8**	**+1.0**
YAK				pmax		pmax		
	comp=Z,8.0nm,1.0s							
YAK				MLR		MLR		
	comp=Z,95nm,10.0s							
YAK				MLR		MLR		
	comp=E,52nm,11.0s							
YAK				MLR		MLR		
	comp=N,70nm,11.0s							
MAJO	**Matsushiro**	**14.19**	**194**	⇓*e*P		**Pn**	**15 53 54.3**	**+1.1**
MJAR	**Matsushiro Arr**	**14.19**	**194**	Pn		**Pn**	**15 53 53.2**	**0.0**
	baz=18,slow=13,SNR=6.7							
MJAR				LR		LR	15 58 42.1	
	comp=N,99nm,21.6s,baz=31,slow=35							
	comp=N,1.6nm,0.8s							
SNY	**Shenyang**	**15.58**	**244**	⇑P		**P**	**15 54 19.3**	**+3.2**
SNY				S		**Sn**	**15 57 11.5**	**+7.1**
SNY				pmax		pmax		
	comp=N,12nm,0.5s							
SNY				LR		LR		
	comp=N,470nm,4.7s							
SNY				LR		LR		
	comp=N,230nm,6.9s							
SNY				LR		LR		
	comp=N,500nm,17.1s							
SEHB	**SEOHWA**	**15.76**	**225**	P		**P**	**15 54 18.1**	**-0.2**
KSRS	**Korea Array**	**16.58**	**224**	Pn		**Pn**	**15 54 25.2**	**+0.5**
	comp=N,0.1nm,0.3s,baz=36,slow=11,SNR=14							
KSRS				PcP		**PcP**	**15 59 15.4**	**+0.5**
	comp=N,0.8nm,0.8s,baz=35,slow=1.2,SNR=4.6							
KSRS				LR		LR	16 00 35.1	
	comp=N,165nm,19.2s,baz=40,slow=36							
	comp=N,3.5nm,1.1s							
KSAR	**Wonju Array Be**	**16.61**	**224**			**Pn**	**15 54 25.8**	**+0.7**
KSAR	**Wonju Array Be**	**16.61**	**224**	P		**Pn**	**15 54 25.8**	**+0.7**
TJN	**Taejon**	**17.73**	**223**	⇑*e*P		**P**	**15 54 40.3**	**+0.4**
BOD	**Bodaibo**	**18.11**	**305**	*e*P		**P**	**15 54 45.2**	**+1.1**
BOD				pmax		pmax		
	comp=Z,4.0nm,1.5s							
SHEM	**Shemya Is, Ala**	**19.77**	**71**	LR		LR	16 02 24.5	
	comp=Z,86nm,20.2s,baz=354,slow=36							
BILL	**Bilibino**	**21.23**	**25**	P		**P**	**15 55 19.4**	**+1.5**
BILL				IAmb		IAmb	15 55 25.4	
	comp=Z,21nm,1.1s							
BILL	**Bilibino**	**21.23**	**25**	*c*eP		**P**	**15 55 19.6**	**+1.6**
BILL				*e*			15 55 22.4	
BILL				*e*			15 55 39.3	
BILL				*e*S		Sn	15 59 17.2	-3.4
BILL				*e*			15 59 23.8	
BILL				*e*SS		**SnSn**	**15 59 41.3**	**+6.0**
BILL				pmax		pmax		
	comp=Z,19nm,1.0s							
BILL				MLR		MLR		
	comp=Z,77nm,17.0s							
TIXI	**Tiksi**	**22.18**	**349**	P		**P**	**15 55 31.4**	**+3.2**
TIXI				IAmb		IAmb	15 55 36.6	
	comp=Z,9.7nm,0.7s							
TIXI	**Tiksi**	**22.18**	**349**	⇓*e*P		**P**	**15 55 27.2**	**-0.9**
TIXI				pmax		pmax		
	comp=Z,9.0nm,0.7s							
TIXI				MLR		MLR		
	comp=Z,63nm,15.0s							
ULN	**Ulaanbaatar**	**23.13**	**277**	P		**P**	**15 55 38.8**	**+0.2**
ULN	**Ulaanbaatar**	**23.13**	**277**	⇑*e*P		**P**	**15 55 39.6**	**+1.1**
ULN				pmax		pmax		
	comp=Z,6.0nm,1.5s							
HHC	**Hu-ho-hao-te**	**23.43**	**258**	*e*P		**P**	**15 55 42.6**	**+1.0**
SONM	**Songino Array**	**23.55**	**278**	P		**P**	**15 55 42.5**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=64,slow=9.2,SNR=11							
SONM				LR		LR	16 05 36.1	
	comp=Z,162nm,20.6s,baz=74,slow=38							
	comp=Z,2.5nm,1.0s							
SONM	**Songino Array**	**23.55**	**278**	P		**P**	**15 55 41.5**	**-1.3**
SONM	**Songino Array**	**23.55**	**278**	P		**P**	**15 55 41.5**	**-1.3**
SONM				pmax		pmax		
	comp=Z,4.0nm,1.2s							
IRK	**Irkutsk**	**23.71**	**289**	*e*P		**P**	**15 55 45.4**	**+1.3**
IRK				pmax		pmax		
	comp=Z,20nm,2.9s							
ZAK	**Zakamensk**	**24.74**	**285**	*e*P		**P**	**15 55 54.9**	**+1.1**
ZAK				pmax		pmax		
	comp=Z,5.0nm,1.3s							
NJ2	**Nanjing**	**25.31**	**232**	*e*P		**P**	**15 55 58.0**	**-0.9**
NJ2				pmax		pmax		

comp=Z,14nm,0.8s
WMQ LR LR
comp=Z,270nm,17.1s
WMQ LR LR
comp=Z,150nm,21.7s
WMQ LR LR
comp=Z,90nm,20.3s
MCK McKinley 37.65 43 P **P** **15 57 48.0 +0.9**
MCK lAmb lAmb 15 57 50.9
comp=Z,11nm,1.2s
MCK McKinley 37.65 43 P **P** **15 57 48.0 +0.9**
MCK pmax pmax
comp=Z,11nm,1.2s
WRH Wood River Hil 37.85 41 P **P** **15 57 48.7 0.0**
COLA College 37.87 41 *c iP* **P** **15 57 50.9 +2.1**
COLA pmax pmax
comp=Z,6.0nm,0.9s
CCB Clear Creek Bu 37.93 41 P **P** **15 57 48.9 -0.5**
IL31 38.29 41 P **P** **15 57 51.6 -0.8**
ILAR Eielson Array 38.29 41 P **P** **15 57 52.2 -0.2**
comp=Z,2.0nm,0.6s,baz=283,slow=8.0,SNR=14
comp=Z,2.0nm,0.6s
HDA Harding Lake 38.35 41 P **P** **15 57 53.9 +1.0**
HDA lAmb lAmb 15 57 56.1
comp=Z,13nm,1.3s
SML Sawmill 38.39 46 P **P** **15 57 55.1 +1.7**
BMAR Burnt Mountain 38.65 36 P **P** **15 57 55.5 +0.1**
PRP Porcupine Dome 38.68 39 P **P** **15 57 55.6 -0.3**
PRP lAmb lAmb 15 57 59.5
comp=Z,8.1nm,0.8s
MK31 Makanchi Array 38.96 289 P **P** **15 57 58.1 -0.3**
MK31 Makanchi Array 38.96 289 *c iP* **P** **15 57 58.7 +0.4**
MKAR Makanchi Array 38.96 289 P **P** **15 57 58.6 +0.3**
comp=Z,4.1nm,0.9s,baz=68,slow=8.4,SNR=26
MKAR LR LR 16 14 39.9
comp=Z,64nm,18.4s,baz=62,slow=37
comp=Z,4.1nm,0.9s
MKAR Makanchi Array 38.96 289 P **P** **15 57 57.8 -0.6**
PZH PanZhiHua 39.09 248 P **P** **15 57 59.0 -0.7**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,160nm,4.7s
MAKZ Makanchi 39.15 289 P **P** **15 57 59.6 -0.3**
MAKZ Makanchi 39.15 289 P **P** **15 57 59.6 -0.3**
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
KURK Kurchatov 39.38 296 P **P** **15 58 01.3 -0.4**
KURK Kurchatov 39.38 296 *c iP* **P** **15 58 01.6 -0.1**
KURK pmax pmax
comp=Z,7.0nm,0.8s
M26K Nabesna, AK 40.61 44 P **P** **15 58 12.2 +0.3**
M26K lAmb lAmb 15 58 15.8
comp=Z,11nm,1.4s
EGAK Eagle 40.66 40 P **P** **15 58 11.1 -1.1**
L27K Beaver Creek, 40.91 42 P **P** **15 58 14.3 -0.1**
BCAR Beaver Creek A 40.93 42 P **P** **15 58 15.0 +0.5**
INK Inuvik 42.44 33 LR LR 16 18 29.4
comp=Z,68nm,18.4s,baz=223,slow=40
BRVK Borovoye 43.00 303 *eP* **P** **15 58 31.7 +0.3**
BRVK pmax pmax
comp=Z,7.0nm,3.0s
AAK Ala-Archa 45.87 288 *eP* **P** **15 58 56.5 +1.8**
AAK pmax pmax
comp=Z,2.0nm,1.0s
CMAR Chiang Mai Arr 46.94 243 P **P** **15 59 02.3 -0.9**
comp=Z,0.6nm,0.3s,baz=25,slow=8.3,SNR=5.6
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 46.94 243 *ceP* **P** **15 59 04.3 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 47.37 311 *ceP* **P** **15 59 06.9 +0.8**
ARU pmax pmax
comp=Z,8.0nm,1.7s
ARU MLR MLR
comp=Z,28nm,14.0s
DLBC Dease Lake 48.10 45 LR LR 16 19 17.3
comp=Z,50nm,18.4s,baz=314,slow=36
ABKAR Akbulak array 50.53 303 P **P** **15 59 29.6 -0.9**
ARCES ARCESS Array B 51.85 336 P **P** **15 59 41.2 +1.1**
comp=Z,2.0nm,0.8s,baz=35,slow=6.6,SNR=3.7
comp=Z,2.0nm,0.8s
KLMR Klimovskoe 53.10 323 *eP* **P** **15 59 47.9 -1.5**
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 53.10 323 *eP* **P** **15 59 47.7 -1.7**
KLMR AMP 15 59 49.5
comp=Z,14nm,1.3s
KLMR Klimovskoe 53.10 323 *eP* **P** **15 59 48.0 -1.5**
KLMR AMP 15 59 49.5
comp=Z,14nm,1.3s
SUMG Summit 57.31 0 P **P** **16 00 21.2 +1.1**
SUMG lAmb lAmb 16 00 25.0
comp=Z,6.3nm,0.9s
SUMG Summit 57.31 0 P **P** **16 00 21.2 +1.1**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
FINES FINESS Array B 57.47 329 P **P** **16 00 20.6 -0.3**
comp=Z,3.8nm,0.7s,baz=44,slow=8.5,SNR=8.1
comp=Z,3.8nm,0.7s
OBN Obninsk 58.08 319 *d iP* **P** **16 00 24.4 -0.8**
OBN *e*PP **pP** **16 00 29.0 +0.4**
OBN *e*SP **sP** **16 00 31.1 +1.2**
OBN *e* 16 01 15.1
OBN *e* 16 02 33.7
OBN pmax pmax
comp=Z,10.0nm,0.5s
OBN MLR MLR
comp=Z,27nm,14.0s
B08A Colville Reser 59.26 50 P **P** **16 00 33.1 -0.5**
B08A lAmb lAmb 16 00 37.1
comp=Z,4.5nm,1.1s
HOOD Mount Hood Mea 60.15 54 P **P** **16 00 39.1 -0.9**
WALA Waterton Lakes 61.37 47 P **P** **16 00 48.4 +0.2**
WALA lAmb lAmb 16 00 51.2
comp=Z,6.3nm,1.1s
PINE Pine Mountain 61.56 55 P **P** **16 00 50.6 +0.9**
F10A Beach Ranch, E 61.94 51 P **P** **16 00 52.4 +0.3**
F10A lAmb lAmb 16 00 55.7
comp=Z,4.6nm,1.0s
MNK Minsk 62.00 323 *i* P **P** **16 00 49.4 -2.7**
MNK *i* 16 01 29.9
MNK *i* 16 03 05.7
MNK *i* S **S** **16 09 14.3 -1.9**
MNK *i* 16 10 41.3
MNK *i* SS **SS** **16 13 17.9 +0.2**
MNK *i* SSS SSS 16 16 08.6
MNK pmax pmax
comp=N,9.0nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.7s
MNK pmax pmax
comp=Z,11nm,0.6s
MNK MLR MLR
comp=E,96nm,22.0s
MNK MLR MLR
comp=Z,46nm,17.0s
MNK MLR MLR
comp=N,19nm,21.0s
MNK Minsk 62.00 323 *i* P **P** **16 00 49.5 -2.7**
comp=E,2.0nm,0.7s
MNK *i* P **P** **16 00 49.5 -2.7**
comp=N,9.0nm,0.9s
MNK *i* P **P** **16 00 49.5 -2.7**
comp=Z,11nm,0.6s,baz=222
MNK *i* PcP **PcP** **16 01 29.9 -2.7**
MNK *i* PP **PP** **16 03 05.7 -2.3**
MNK *i* PPP PPP 16 04 31.6
MNK *i* S **S** **16 09 14.3 -1.9**
MNK *i* SS **SS** **16 13 17.9 +0.2**
MNK *i* SSS SSS 16 16 08.6
MNK *i* LQ LQ 16 22 45.8
MNK *i* LR LR 16 28 00.5
MNK *i* LRM MLR 16 29 28.8
comp=E,96nm,21.6s
MNK *i* LRM MLR 16 29 51.1
comp=Z,46nm,17.1s
MNK *i* LRM MLR 16 30 04.9
comp=N,19nm,21.0s
I07A Izee 62.11 54 P **P** **16 00 54.3 +1.0**
I07A lAmb lAmb 16 00 56.5
comp=Z,7.5nm,1.3s
NB2 NORSAR Subarra 62.20 336 P **P** **16 00 53.4 -0.1**
comp=Z,1.1nm,0.7s,baz=32,slow=6.5
NOA NORSAR Array B 62.20 336 P **P** **16 00 53.4 -0.1**
comp=Z,1.8nm,0.7s,baz=33,slow=6.5,SNR=6.7
comp=Z,1.8nm,0.7s
BMO Blue Mountains 62.69 52 P **P** **16 00 56.3 -0.8**
BMO Blue Mountains 62.69 52 P **P** **16 00 56.3 -0.8**
BMO pmax pmax
comp=Z,3.0nm,1.2s
KIV Kislovodsk 63.02 307 P **P** **16 00 59.1 -0.2**
KIV Kislovodsk 63.02 307 *eP* **P** **16 01 01.1 +1.8**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,33nm,17.0s
KBZ Khabaz 63.07 307 *eP* **P** **16 01 01.2 +1.7**
KBZ pmax pmax
comp=Z,3.0nm,1.1s
WVOR Wild Horse Val 63.72 55 P **P** **16 01 03.8 -0.2**
WVOR lAmb lAmb 16 01 07.7
comp=Z,5.8nm,1.2s
WVOR Wild Horse Val 63.72 55 P **P** **16 01 03.8 -0.2**
WVOR pmax pmax
comp=Z,6.0nm,1.2s
HRY Holter Researc 64.03 47 P **P** **16 01 05.8 -0.1**
AKASG Malin Array Be 64.34 320 P **P** **16 01 06.7 -1.0**
comp=Z,1.9nm,0.6s,baz=38,slow=8.0,SNR=10
comp=Z,1.9nm,0.6s
AKASG Malin Array Be 64.34 320 *ceP* **P** **16 01 06.6 -1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 64.34 320 P **P** **16 01 06.9 -0.8**
AKBB lAmb lAmb 16 01 07.3
comp=Z,6.2nm,1.2s
AKBB Malin Array Si 64.34 320 *iP* **P** **16 01 07.1 -0.6**
AKBB pmax pmax
comp=Z,9.0nm,1.5s
LRM Limekiln Ridge 64.38 48 P **P** **16 01 09.1 +0.6**
BEKR Beckworth 64.63 58 P **P** **16 01 10.4 +0.3**
BEKR lAmb lAmb 16 01 13.9
comp=Z,4.0nm,1.0s
BOZ Bozeman (W) 64.94 48 P **P** **16 01 11.5 -0.5**
BOZ lAmb lAmb 16 01 15.4
comp=Z,4.5nm,1.1s
BOZ Bozeman (W) 64.94 48 P **P** **16 01 11.5 -0.5**
BOZ pmax pmax
comp=Z,5.0nm,1.1s
PAHR Pah Rah Range 65.27 57 P **P** **16 01 14.0 -0.2**
YERR Yerington 65.86 58 P **P** **16 01 18.7 +0.6**
RLMT Red Lodge 66.41 47 P **P** **16 01 20.9 -0.7**
RLMT lAmb lAmb 16 01 25.8
comp=Z,4.8nm,0.9s
KVN Kaiserville 66.43 57 P **P** **16 01 21.5 -0.3**
KVN Kaiserville 66.43 57 P **P** **16 01 21.5 -0.3**
KVN pmax pmax
comp=Z,9.0nm,1.2s
PALK Pallekele 66.56 252 LR LR 16 33 59.7
comp=Z,33nm,18.0s,baz=91,slow=39
ELK Elko 66.70 54 P **P** **16 01 24.2 +0.7**
ELK lAmb lAmb 16 01 27.4
comp=Z,4.2nm,1.2s
ELK Elko 66.70 54 P **P** **16 01 24.2 +0.7**
ELK pmax pmax
comp=Z,4.0nm,1.3s
NVAR Mina Array Bea 66.77 58 P **P** **16 01 24.5 +0.6**
comp=Z,3.6nm,1.0s,baz=294,slow=6.7,SNR=12
comp=Z,3.6nm,1.0s
NVAR Mina Array Bea 66.77 58 P **P** **16 01 24.1 +0.1**
LHV Little Huntoon 66.79 58 P **P** **16 01 24.3 +0.6**
NV11 Mina Array Sit 66.85 57 P **P** **16 01 24.4 0.0**
PDAR Pinedale Array 68.04 49 P **P** **16 01 32.2 +0.2**
comp=Z,3.0nm,1.0s,baz=337,slow=1.9,SNR=11
comp=Z,3.0nm,1.0s
PDAR Pinedale Array 68.04 49 P **P** **16 01 31.5 -0.5**
ULM Lac du Bonnet 68.09 36 P **P** **16 01 31.1 -0.7**
comp=Z,2.3nm,0.5s,baz=345,slow=6.4,SNR=4.6
comp=Z,2.3nm,0.5s
BURAR Bucovina Array 68.39 320 P **P** **16 01 33.0 -0.9**
BURAR Bucovina Array 68.39 320 P **P** **16 01 33.0 -0.9**
SPR3 Spring Creek 3 68.46 55 P **P** **16 01 35.2 +0.4**
SPR3 lAmb lAmb 16 01 39.0
comp=Z,9.4nm,1.4s
WSAR Wadi Sarin 68.56 281 LR LR 16 34 02.8
comp=Z,42nm,18.8s,baz=110,slow=38
TPNV Topopah Spring 68.96 57 P **P** **16 01 37.6 -0.1**
TPNV lAmb lAmb 16 01 43.6
comp=Z,6.1nm,1.2s
TPNV Topopah Spring 68.96 57 P **P** **16 01 37.6 -0.1**
TPNV pmax pmax
comp=Z,6.0nm,1.2s
QSM Queen of Sheba 69.35 58 P **P** **16 01 39.7 -0.2**
QSM lAmb lAmb 16 01 44.1
comp=Z,6.4nm,1.0s
RDMU Red Mountain 69.70 51 P **P** **16 01 42.2 -0.1**
TMUT Trail Mountain 69.84 52 P **P** **16 01 42.9 -0.4**
TMUT lAmb lAmb 16 01 46.7
comp=Z,6.4nm,1.3s
CLL Collm 69.92 329 P **P** **16 01 42.5 -0.6**
CLL lAmb lAmb 16 01 45.7
comp=Z,5.0nm,0.8s
CLL Collm 69.92 329 *i* P **P** **16 01 42.8 -0.3**
CLL *i* 16 01 44.9
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 69.92 329 *i* P **P** **16 01 42.8 -0.3**
comp=Z,4.0nm,0.8s
CLL *i* P(2) 16 01 44.9
comp=Z,6.0nm,0.9s
MVU Marysvale 69.93 54 P **P** **16 01 44.0 +0.2**
MSU Marysvale 69.94 54 P **P** **16 01 44.9 +1.0**
MSU Marysvale 69.94 54 P **P** **16 01 44.9 +1.0**
P18A Preston Nutter 70.08 52 P **P** **16 01 44.8 0.0**
P18A lAmb lAmb 16 01 48.8
comp=Z,5.7nm,1.0s
VYHS Vyhne 70.21 324 *eP* **P** **16 01 45.2 +0.2**
VYHS pmax pmax
comp=Z,3.0nm,1.0s
VYHS Vyhne 70.21 324 *eP* **P** **16 01 45.2 +0.2**
SRU San Rafael Swe 70.33 52 P **P** **16 01 45.6 -0.6**
SRU lAmb lAmb 16 01 50.9
comp=Z,3.0nm,0.8s
SRU San Rafael Swe 70.33 52 P **P** **16 01 45.6 -0.6**
SRU pmax pmax
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 70.40 188 P **P** **16 01 45.1 -1.2**
comp=Z,2.4nm,0.9s,baz=7.2,slow=6.8,SNR=12
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 70.69 309 P **P** **16 01 48.5 +0.1**
comp=Z,1.8nm,0.8s,baz=17,slow=1.3,SNR=5.2
comp=Z,1.8nm,0.8s
EYMN Ely 71.62 35 P **P** **16 01 52.5 -1.1**
EYMN lAmb lAmb 16 01 55.5
comp=Z,5.7nm,0.8s
WUAZ Wupatki 72.63 55 P **P** **16 02 00.3 +0.2**
WUAZ lAmb lAmb 16 02 04.7
comp=Z,6.9nm,1.1s
E38A The Farm, Brul 72.72 36 P **P** **16 01 59.2 -1.0**
VTS Vitosha 73.24 318 P **P** **16 02 02.9 -0.7**
VTS lAmb lAmb 16 02 07.1
comp=Z,4.8nm,0.9s
VTS Vitosha 73.24 318 P **P** **16 02 02.9 -0.7**
VTS pmax pmax
comp=Z,5.0nm,0.9s
ASAR Alice Springs 74.13 188 P **P** **16 02 08.3 -0.3**
comp=Z,1.4nm,0.8s,baz=10,slow=6.2,SNR=12
comp=Z,1.4nm,0.8s
VLDQ Val d'Or 76.04 26 P **P** **16 02 17.5 -2.0**
MNTX Cornudas Mount 78.72 54 P **P** **16 02 34.5 -0.4**
MNTX lAmb lAmb 16 02 38.5
comp=Z,6.7nm,1.2s
WMOK Wichita Mounta 79.52 47 P **P** **16 02 38.5 -0.6**
WMOK Wichita Mounta 79.52 47 P **P** **16 02 38.6 -0.6**
WMOK pmax pmax
comp=Z,2.0nm,0.9s
J57A Williamstown 80.75 27 P **P** **16 02 42.2 -3.3**
TX31 Lajitas Ar. Si 81.50 54 P **P** **16 02 49.4 -0.5**
TX32 Lajitas Array 81.50 54 P **P** **16 02 49.7 -0.3**
TX32 lAmb lAmb 16 02 53.7
comp=Z,9.0nm,1.4s
TXAR Lajitas Array 81.50 54 P **P** **16 02 49.9 -0.1**
comp=Z,2.7nm,1.0s,baz=306,slow=4.8,SNR=13
comp=Z,2.7nm,1.0s
TXAR Lajitas Array 81.50 54 P **P** **16 02 49.7 -0.3**
WHAR Wooly Hollow 81.99 42 P **P** **16 02 51.5 -0.9**
WHAR lAmb lAmb 16 02 52.6
comp=Z,5.5nm,0.9s
ESDC Sonseca Array 85.55 335 P **P** **16 03 10.1 -0.4**
comp=Z,1.4nm,0.8s,baz=11,slow=3.8,SNR=10
comp=Z,1.4nm,0.8s
CPUP Villa Florida 151.59 40 PKPbc **PKPbc** **16 10 24.7 -1.9**
comp=Z,1.7nm,0.7s,baz=106,slow=1.1,SNR=3.1
TROLL Troll, Antarti 151.94 205 PKPdf **PKPbc** **16 10 26.2 +0.1**
SNAA Sanae 153.55 204 PKPdf **PKPbc** **16 10 26.6 -3.0**
PLCA Paso Flores 155.18 80 PKPbc PKPbc 16 10 32.5
comp=Z,2.7nm,0.9s,baz=345,slow=3.7,SNR=3.8

IDC ***17*** *16:06:29.9± 1.2, 9.73N× 83.89W, h0km, mb3.6/4, mbtmp3.7/5, ML4.0/1, MS3.3/2, Error ellipse: s-maj=61.0km s-min=25.0km az=51.0*
INET ***17*** *16:06:33.1± 1.8, 9.67N× 84.06W, h5km± 7km, MW4.1*
NEIC ***17*** *16:06:33.0± 1.6, 9.63N± 0.03× 84.11W± 0.03, h20km± 3km, mb4.3/14, Mwr4.7(UCR), Error ellipse: s-maj=5.1km s-min=2.7km az=225.0*
UPA ***17*** *16:06:33.9± 2.6, 9.68N× 84.13W, h15km± 11km, MW4.4*
UCR ***17*** *16:06:33.5± 1.2, 9.66N× 84.10W, h19km± 1km, MW4.6, Fault plane solution: NP1:ϕ± 213.09000°, δ75.23000°, λ-79.65000°.*

ISC 17 16:06:32.9± 0.8, 9.63N± 0.03× 84.08W± 0.02, h24km± 5km, n165, σ0 0.91/185, mb4.1/9, 32C-10D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.13**	**34**	*eP*		**Pb**		**16 06 37.8**	**-0.2**
LCR2				*eS*		**Sb**		**16 06 41.0**	**-0.3**
RIMA	**Rio Macho**	**0.25**	**58**	Pg		**Pb**		**16 06 39.3**	**-0.1**
RIMA				Sg		**Sb**		**16 06 43.3**	**-0.3**
RIMA	**Rio Macho**	**0.25**	**58**	*eP*		**Pb**		**16 06 39.2**	**-0.1**
RIMA	**Rio Macho**	**0.25**	**58**	*eP*		**Pb**		**16 06 39.3**	**-0.1**
RIMA				*eS*		**Sb**		**16 06 43.7**	**0.0**
OCM	**Ochomogo**	**0.28**	**24**	*eP*		**Pb**		**16 06 39.5**	**-0.3**
SJS	**Escuela Geolog**	**0.30**	**4**	*eP*		**Pb**		**16 06 40.1**	**0.0**
CDM	**Cerro de Muert**	**0.32**	**104**	*eP*		**Pb**		**16 06 40.7**	**+0.2**
CDM	**Cerro de Muert**	**0.32**	**104**	*eP*		**Pb**		**16 06 40.8**	**+0.2**
HDC	**Heredia**	**0.37**	**354**	Pg		**Pb**		**16 06 40.8**	**-0.2**
HDC						**Sb**		**16 06 46.7**	**+0.2**
HDC	**Heredia**	**0.37**	**354**	*eP*		**Pb**		**16 06 40.8**	**-0.2**
HDC	**Heredia**	**0.37**	**354**	*iP*		**Pb**		**16 06 41.1**	**0.0**
HDC				*eS*		**Sb**		**16 06 46.5**	**0.0**
HDC3	**Heredia 3**	**0.37**	**355**	*eP*		**Pb**		**16 06 41.0**	**-0.1**
HDC3	**Heredia 3**	**0.37**	**355**	*eP*		**Pb**		**16 06 41.0**	**-0.1**
HDC3				*eS*		**Sb**		**16 06 46.3**	**-0.3**
RAFA	**San Farael, Vo**	**0.42**	**39**	*eP*		**Pb**		**16 06 42.3**	**+0.3**
EDDO	**Dominical**	**0.43**	**151**	*eP*		**Pn**		**16 06 42.5**	**-1.2**
VTRT	**Volcan Turrial**	**0.46**	**37**	*eP*		**Pb**		**16 06 42.8**	**+0.1**
PEZE	**Perez Zeledon,**	**0.47**	**122**	Pg		**Pn**		**16 06 43.0**	**-1.2**
PEZE				Sg		**Sn**		**16 06 50.3**	**-1.5**
PEZE	**Perez Zeledon,**	**0.47**	**122**	*eP*		**Pn**		**16 06 43.0**	**-1.2**
PEZE	**Perez Zeledon,**	**0.47**	**122**	*eP*		**Pn**		**16 06 43.0**	**-1.2**
PEZE				*eS*		**Sn**		**16 06 50.6**	**-1.2**
VTCV	**VTCV, Calle Va**	**0.49**	**45**	*eP*		**Pb**		**16 06 43.3**	**+0.2**
CVTR	**Volcan Turrial**	**0.50**	**39**	Pg		**Pb**		**16 06 43.3**	**0.0**
CVTR				Sg		**Sb**		**16 06 50.8**	**+0.4**
CVTR	**Volcan Turrial**	**0.50**	**39**	*eP*		**Pb**		**16 06 43.5**	**+0.1**
VTUN	**Crater Central**	**0.50**	**39**	*eP*		**Pb**		**16 06 43.5**	**+0.2**
CRPO	**Crater poas**	**0.58**	**345**	*eP*		**Pb**		**16 06 44.1**	**-0.2**
SRA1	**San Ramn**	**0.60**	**319**	*eP*		**Pb**		**16 06 44.2**	**-0.7**
MRVA	**Moravia de Chi**	**0.65**	**73**	*eP*		**Pb**		**16 06 45.7**	**-0.1**
RIFO	**Rio Frio, Sara**	**0.70**	**13**	*eP*		**Pb**		**16 06 46.3**	**-0.2**
SRBA	**San Rafael, Bu**	**0.81**	**119**			**Pn**		**16 06 48.4**	**-0.7**
SRBA				Sg		**Sn**		**16 06 59.4**	**-1.0**
SRBA	**San Rafael, Bu**	**0.81**	**119**	*eP*		**Pn**		**16 06 48.4**	**-0.7**
BATAN	**Batan**	**0.83**	**56**	Pg		**Pb**		**16 06 49.0**	**+0.3**
BATAN						**Sn**		**16 07 01.4**	**+0.7**
BATAN	**Batan**	**0.83**	**56**	*eP*		**Pb**		**16 06 49.1**	**+0.3**
BATAN				*eS*		**Sn**		**16 07 02.2**	**+1.5**
LAFE	**Finca La Fe, P**	**0.84**	**282**	*eP*		**Pb**		**16 06 48.7**	**-0.2**
LAFE	**Finca La Fe, P**	**0.84**	**282**	*eP*		**Pb**		**16 06 48.7**	**-0.2**
LAFE				*eS*		**Sn**		**16 07 02.0**	**+1.1**
DRK0	**Durika**	**0.90**	**114**			**Pn**		**16 06 50.6**	**+0.3**
DRK0	**Durika**	**0.90**	**114**	*eP*		**Pn**		**16 06 50.6**	**+0.3**
DRK0	**Durika**	**0.90**	**114**	*iP*		**Pn**		**16 06 50.8**	**+0.5**
DRK0				*i S*		**Sn**		**16 07 03.3**	**+0.7**
DRK0	**Durika**	**0.90**	**114**	*eP*		**Pn**		**16 06 50.7**	**+0.3**
EDPN	**Palmar Norte**	**0.91**	**137**	*eP*		**Pn**		**16 06 50.5**	**+0.2**
EDBA	**Buenos Aires**	**0.92**	**120**	*eP*		**Pb**		**16 06 49.9**	**-0.3**
FORC	**Fortuna**	**1.01**	**325**	*eP*		**Pn**		**16 06 51.4**	**-0.4**
ARE1	**Arenal 1**	**1.04**	**323**	*eP*		**Pn**		**16 06 51.8**	**-0.3**
CEDE	**Laguna Cedeo**	**1.05**	**324**	*eP*		**Pn**		**16 06 51.9**	**-0.3**
JTS	**Las Juntas de**	**1.08**	**307**			**Pn**		**16 06 51.7**	**-1.0**
JTS						**Sn**		**16 07 05.4**	**-1.5**
JTS	**Las Juntas de**	**1.08**	**307**	*eP*		**Pn**		**16 06 51.8**	**-0.9**
JTS	**Las Juntas de**	**1.08**	**307**	*iP*		**Pn**		**16 06 51.8**	**-0.9**
JTS				*i S*		**Sn**		**16 07 06.1**	**-0.9**
JTS	**Las Juntas de**	**1.08**	**307**	*eP*		**Pn**		**16 06 51.7**	**-1.0**
POTG	**Potrero Grande**	**1.11**	**121**	*eP*		**Pb**		**16 06 53.5**	**0.0**
COVE	**Coope Vega, Sa**	**1.13**	**344**			**Pn**		**16 06 53.0**	**-0.3**
COVE						**Sn**		**16 07 08.2**	**+0.2**
COVE	**Coope Vega, Sa**	**1.13**	**344**	*eP*		**Pn**		**16 06 52.9**	**-0.3**
PTJ1	**Puerto Jimnez**	**1.33**	**145**	*eP*		**Pb**		**16 06 58.1**	**+0.8**
EDSV	**San Vito**	**1.36**	**126**	*eP*		**Pb**		**16 06 58.1**	**+0.4**
ACAL	**Aguas Claras**	**1.37**	**317**	*eP*		**Pn**		**16 06 56.9**	**+0.2**
PTEN	**Parque Tenorio**	**1.40**	**320**	*iP*		**Pn**		**16 06 57.3**	**+0.2**
PTEN				*eS*		**Sb**		**16 07 16.4**	**+0.5**
INDI	**Punta indio, G**	**1.42**	**279**	*eP*		**Pn**		**16 06 57.1**	**-0.3**
NICO	**Nicoya**	**1.44**	**290**	*eP*		**Pn**		**16 06 57.7**	**+0.1**
VERA	**Finca Concepci**	**1.44**	**327**	*eP*		**Pn**		**16 06 57.3**	**-0.3**
DUNO	**Dulce Nombre,**	**1.46**	**288**			**Pn**		**16 06 57.8**	**-0.1**
DUNO	**Dulce Nombre,**	**1.46**	**288**	*eP*		**Pn**		**16 06 57.9**	**-0.1**
DUNO	**Dulce Nombre,**	**1.46**	**288**	*eP*		**Pn**		**16 06 57.8**	**-0.1**
DUNO				*eS*		**Sb**		**16 07 17.9**	**+0.2**
CUI	**Cuipilapa**	**1.48**	**314**	*eP*		**Pn**		**16 06 58.4**	**+0.3**
COLC	**Colonia**	**1.51**	**313**	*eP*		**Pn**		**16 06 58.9**	**+0.3**
HORNC	**Hornillas**	**1.52**	**315**	*eP*		**Pn**		**16 06 59.0**	**+0.2**
ORTG	**Ortega, Santa**	**1.54**	**298**	Pn		**Pn**		**16 06 58.6**	**-0.4**
ORTG	**Ortega, Santa**	**1.54**	**298**	*eP*		**Pn**		**16 06 58.9**	**-0.1**
ORTG	**Ortega, Santa**	**1.54**	**298**	*eP*		**Pn**		**16 06 58.7**	**-0.4**
ORTG				*eS*		**Sb**		**16 07 21.1**	**+1.1**
GUAI	**GUAI**	**1.55**	**294**	*eP*		**Pn**		**16 06 59.2**	**+0.1**
GUAB	**Guayabo de Bag**	**1.56**	**313**	*eP*		**Pn**		**16 06 59.9**	**+0.6**
VMAR	**Armenia, Volca**	**1.56**	**319**	*eP*		**Pn**		**16 06 59.8**	**+0.6**
GRZA	**Playa Garza**	**1.56**	**280**	*eP*		**Pn**		**16 06 59.2**	**0.0**
CDITO	**Canoas**	**1.59**	**131**	Pn		**Pn**		**16 06 59.8**	**+0.1**
CNI2	**El Empalme, Bo**	**1.60**	**97**	*iP*		**Pb**		**16 07 00.8**	**-1.0**
CNI2				*i S*		**Sb**		**16 07 21.8**	**+0.2**
BRU2	**Volcan**	**1.60**	**121**			**Pb**		**16 07 01.2**	**-0.8**
BRU2	**Volcan**	**1.60**	**121**	*eP*		**Pb**		**16 07 01.1**	**-0.8**
BRU2	**Volcan**	**1.60**	**121**	*iP*		**Pb**		**16 07 01.6**	**-0.4**
BRU2				*eS*		**Sb**		**16 07 23.1**	**+1.2**
CCOL	**Caracol de Cor**	**1.64**	**138**	*eP*		**Pb**		**16 07 02.4**	**-0.1**
SAJU	**San Juanillo,**	**1.67**	**285**	*eP*		**Pn**		**16 07 00.2**	**-0.4**
GPS2	**Hotel Rincn d**	**1.68**	**312**	*eP*		**Pn**		**16 07 01.6**	**+0.7**
VRLE	**La Escondida,**	**1.71**	**312**	*eP*		**Pn**		**16 07 01.6**	**+0.3**
LAPC	**Finca la Perla**	**1.75**	**310**	*eP*		**Pn**		**16 07 02.1**	**+0.3**
BUEV	**Buena Vista**	**1.75**	**312**	*eP*		**Pn**		**16 07 02.4**	**+0.5**
GB1A	**Borinquen Arri**	**1.75**	**312**	*eP*		**Pn**		**16 07 02.7**	**+0.7**
GBS3	**Finca Las Img**	**1.77**	**310**	*eP*		**Pn**		**16 07 02.5**	**+0.4**
BCO2	**Palmira**	**1.78**	**121**	*iP*		**Pb**		**16 07 03.9**	**-1.1**
BCO2				*i S*		**Sb**		**16 07 27.1**	**+0.1**
HZTE	**Horizontes, Gu**	**1.84**	**306**	Pn		**Pn**		**16 07 03.1**	**0.0**
HZTE	**Horizontes, Gu**	**1.84**	**306**	*eP*		**Pn**		**16 07 03.0**	**-0.1**
HZTE	**Horizontes, Gu**	**1.84**	**306**	*eP*		**Pn**		**16 07 04.0**	**+0.9**
DVD	**David**	**2.00**	**126**	*eP*		**Pb**		**16 07 08.4**	**-0.2**
DVD				*i S*		**Sb**		**16 07 37.1**	**+4.0**
ESPN	**Las Esperanzas**	**2.56**	**355**	Pn		**Pn**		**16 07 13.2**	**+0.3**
ESPN	**Las Esperanzas**	**2.56**	**355**	*eP*		**Pn**		**16 07 13.5**	**+0.5**
ESPN	**Las Esperanzas**	**2.56**	**355**	*eP*		**Pn**		**16 07 13.2**	**+0.3**
ACON	**Acoyapa**	**2.56**	**335**	Pn		**Pn**		**16 07 12.8**	**-0.2**
ACON	**Acoyapa**	**2.56**	**335**	*iP*		**Pn**		**16 07 13.4**	**+0.4**
ACON	**Acoyapa**	**2.56**	**335**	*eP*		**Pn**		**16 07 13.3**	**+0.4**
BOAB	**BOACO BROADBAN**	**2.20**	**331**	Pn		**Pn**		**16 07 22.0**	**+0.2**
BOAB	**BOACO BROADBAN**	**2.20**	**331**	*eP*		**Pn**		**16 07 22.2**	**+0.3**
COPN	**Copaltepe**	**3.54**	**316**	*eP*		**Pn**		**16 07 28.6**	**+2.2**
MATN	**Matagalpa**	**3.74**	**331**	Pn		**Pn**		**16 07 29.6**	**+0.2**
MATA	**Matagalpa**	**3.74**	**331**	*eP*		**Pn**		**16 07 29.9**	**+0.5**
CNGN	**Cerro Negro**	**3.84**	**318**	Pn		**Pn**		**16 07 32.5**	**+1.8**
PNME	**Penonome**	**3.88**	**107**	*eP*		**Pb**		**16 07 39.8**	**-0.9**
CACAO	**El Cacao, Vera**	**3.91**	**125**	*iP*		**Pb**		16 07 36.1	-5.2
CHIT3	**Chitre**	**3.98**	**114**	*eP*		**Pb**		**16 07 41.5

UPD2	**Meteti**	**6.08**	**100**	*e*P	Pb		16 08 12.9	-5.4
OTAV	**Otavalo**	**10.88**	**149**	Pn	**Pn**		**16 09 07.7**	**-0.1**
OTAV	**Otavalo**	**10.88**	**149**	*e*P	**Pn**		**16 09 07.7**	**-0.1**
CMIG	**Matias Romero**	**12.86**	**306**	Pn	**Pn**		**16 09 35.7**	**+1.3**
	0.8nm,0.3s,baz=126,slow=11,SNR=9.3							
	2.9nm,0.4s							
SDV	**Santo Domingo**	**13.29**	**92**	LR	LR		16 15 54.5	
	comp=Z,108nm,20.1s,baz=228,slow=43							
SDV	**Santo Domingo**	**13.29**	**92**	*e*P	**Pn**		**16 09 40.8**	**+0.3**
BAUV	**El Baul**	**15.84**	**91**	Pn	**Pn**		**16 10 14.2**	**-0.4**
BAUV				IAmb	IAmb		16 10 31.2	
	comp=Z,13nm,0.9s							
BIRV	**Birongo**	**17.56**	**86**		**P**		**16 10 36.7**	**-0.5**
BIRV				IAmb	IAmb		16 10 48.9	
	comp=Z,31nm,1.4s							
ATAH	**Atahualpa**	**17.59**	**161**	LR	LR		16 16 38.6	
	comp=Z,144nm,21.2s,baz=336,slow=34							
Z51A	**Franklin**	**23.59**	**358**	P	**P**		**16 11 40.6**	**-1.4**
GOGA	**Godfrey**	**23.67**	**1**	P	**P**		**16 11 39.4**	**-3.4**
GOGA				IAmb	IAmb		16 11 45.4	
	comp=Z,16nm,0.9s							
Y52A	**Lilburn**	**24.12**	**0**	P	**P**		**16 11 44.1**	**-2.9**
ETMB	**Extrema**	**26.26**	**137**	P	**P**		**16 12 07.0**	**+0.4**
ETMB				IAmb	IAmb		16 12 08.5	
	comp=Z,5.5nm,0.7s							
ETMB	**Extrema**	**26.26**	**137**	*e*P	**P**		**16 12 06.4**	**-0.2**
MIAR	**Mount Ida**	**26.28**	**342**	P	**P**		**16 12 07.6**	**+1.0**
MIAR				IAmb	IAmb		16 12 10.7	
	comp=Z,7.6nm,1.5s							
MACA	**Manacapuru-AM**	**26.55**	**117**	*e*P	**P**		**16 12 08.5**	**-0.8**
WHAR	**Wooly Hollow**	**26.62**	**345**	P	**P**		**16 12 10.1**	**+0.5**
TXAR	**Lajitas Array**	**26.85**	**320**	P	**P**		**16 12 12.6**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=138,slow=11,SNR=8.6							
	comp=Z,0.3nm,0.4s							
TXAR	**Lajitas Array**	**26.85**	**320**	P	**P**		**16 12 13.3**	**+1.4**
TX31	**Lajitas Ar. Si**	**26.85**	**320**	P	**P**		**16 12 12.1**	**+0.1**
TX31				IAmb	IAmb		16 12 31.3	
	comp=Z,6.3nm,0.9s							
TX32	**Lajitas Array**	**26.85**	**320**	P	**P**		**16 12 11.8**	**-0.2**
S39A	**Bolivar**	**29.15**	**345**	P	**P**		**16 12 31.6**	**-0.8**
S39A				IAmb	IAmb		16 12 32.0	
	comp=Z,4.0nm,0.6s							
LPAZ	**La Paz**	**30.21**	**148**	*e*P	**P**		**16 12 42.2**	**-0.3**
ITTB	**Itaituba**	**31.48**	**115**	*e*P	**P**		**16 12 53.7**	**+0.5**
NPGB	**Novo Progresso**	**33.06**	**119**	*e*P	**P**		**16 13 07.8**	**+0.7**
PDRB	**Porto dos Gac**	**34.42**	**127**	*e*P	**P**		**16 13 18.9**	**0.0**
CLDB	**Colider**	**34.73**	**125**	*e*P	**P**		**16 13 21.3**	**-0.3**
PTLB	**Pontes e Lacer**	**35.09**	**135**	*e*P	**P**		**16 13 24.5**	**-0.1**
LVC	**Limon Verde**	**35.32**	**155**	*e*P	**P**		**16 13 26.4**	**-0.5**
ISCO	**Idaho Springs**	**35.65**	**331**	P	**P**		**16 13 29.8**	**+0.3**
SALV	**Santo Antonio**	**37.86**	**132**	*e*P	**P**		**16 13 48.3**	**0.0**
SNDB	**Serra Nova Dou**	**39.02**	**123**	*e*P	**P**		**16 13 58.0**	**-0.1**
SMTB	**Santa Maria do**	**40.71**	**116**	*e*P	**P**		**16 14 12.6**	**+0.4**
AQDB	**Aquidauana**	**40.92**	**137**	*e*P	**P**		**16 14 13.4**	**-0.4**
NVAR	**Mina Array Bea**	**41.99**	**319**	P	**P**		**16 14 23.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=129,slow=7.2,SNR=4.1							
	comp=Z,0.3nm,0.5s							
SDBA	**SAO DESIDERIO**	**44.66**	**119**	*e*P	**P**		**16 14 44.3**	**0.0**
PCMB	**Pacaembu**	**44.74**	**134**	*e*P	**P**		**16 14 44.7**	**-0.1**
IPMB	**Ipameri, GO**	**44.80**	**128**	*e*P	**P**		**16 14 45.5**	**+0.1**
BB19B	**Bebedouro**	**46.38**	**131**	*e*P	**P**		**16 14 58.1**	**+0.3**
PMNB	**Patos De Minas**	**46.51**	**127**	*e*P	**P**		**16 14 59.0**	**+0.1**
DIAM	**Diamantina, MG**	**48.59**	**125**	*e*P	**P**		**16 15 14.9**	**-0.3**
VAO	**Valinhos**	**48.70**	**132**	*e*P	**P**		**16 15 15.6**	**-0.3**
CPSB	**Cacapava Do Su**	**49.51**	**145**	*e*P	**P**		**16 15 21.5**	**-0.4**
SJMB	**Sao Joao De Ma**	**50.82**	**124**	*e*P	**P**		**16 15 33.0**	**+1.0**
VAS01	**Vassouras-RJ**	**50.92**	**129**	*e*P	**P**		**16 15 31.9**	**-0.7**
DUB01	**Friburgo-RJ**	**51.63**	**128**	*e*P	**P**		**16 15 37.7**	**-0.4**
PLCA	**Paso Flores**	**51.65**	**167**	P	**P**		**16 15 38.9**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=332,slow=7.9,SNR=5.4							
	comp=Z,1.9nm,0.7s							
PLCA	**Paso Flores**	**51.65**	**167**	P	**P**		**16 15 39.1**	**+1.2**
RIB01	**Linhares ES**	**51.77**	**124**	*e*P	**P**		**16 15 38.9**	**-0.2**
CAM01	**Campos-RJ**	**52.05**	**127**	*e*P	**P**		**16 15 41.0**	**-0.2**
ALF01	**Guarapari-ES**	**52.16**	**125**	*e*P	**P**		**16 15 41.8**	**-0.2**
BCAR	**Beaver Creek A**	**67.17**	**335**	P	**P**		**16 17 23.7**	**-1.1**
TORD	**Torodi Ar. Bea**	**83.78**	**78**	P	**P**		**16 19 00.9**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=270,slow=2.2,SNR=1.5							
	comp=Z,0.3nm,0.7s							
PZH	**PanZhiHua**	**143.64**	**351**	PKP	**PKPdf**		**16 26 05.3**	**-1.6**
CMAR	**Chiang Mai Arr**	**151.93**	**354**	PKPbc	**PKiKP**		**16 26 27.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=323,slow=3.1,SNR=1.4							

*NOU **17** 16:14:09.7,31.°94S×179.°14W,h374km,mb4.3/19, Kermadec Islands Region*
*IDC **17** 16:14:14.8±3.0,31.°85S×179.°81E,h362km±28km,mb3.8/7, mbtmp4.5/9,Error ellipse: s-maj=24.4km s-min=16.3km az=55.0*
*NEIC **17** 16:14:15.4±1.6,32.°03S±0.°07×179.°8E±0.°1,h367km±6km, mb4.2/18,Error ellipse: s-maj=17.6km s-min=9.7km az=87.0*
*WEL **17** 16:14:16.5±0.6,33°S±7'×17°9W±1°7,h367km±7km, M4.4/24,mB4.9/24,ML5.3/15,MLv5.2/19,Mw(mB)4.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=112.2*
ISC 17 16:14:14.6±0.5,**32.°11S**±0.°06×**179.°93E**±0.°09,**h363**km, **n135**,σ1$**99**/157,**mb4.2**/16,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.39**	**34**	P	**Pn**	**16 15 19.5**	**+1.1**
GLKZ				S	**S**	**16 16 09.3**	**-0.7**
RAO	**Raoul Island**	**3.40**	**34**	Pn	**Pn**	**16 15 19.5**	**+0.9**
RIZ	**Raoul Island**	**3.40**	**33**	S	**S**	**16 16 11.0**	**+0.9**
GRZ	**Great Barrier**	**5.55**	**221**	P	Pn	16 15 45.6	+4.9
MXZ	**Matakaoa Point**	**5.60**	**193**	Pn	**Pn**	**16 15 43.5**	**+2.3**
MXZ	**Matakaoa Point**	**5.60**	**193**	P	**Pn**	**16 15 41.9**	**+0.7**
MXZ				S	**S**	**16 16 52.0**	**+0.4**
KUZ	**Kuaotunu**	**5.79**	**216**	P	**Pn**	**16 15 47.3**	**+4.0**
WMGZ	**Waiomatatini S**	**5.83**	**192**	P	**Pn**	**16 15 46.5**	**+2.7**
WMGZ				S	**S**	**16 16 58.6**	**+2.4**
HAZ	**Te Kaha**	**5.90**	**197**	P	**Pn**	**16 15 46.9**	**+2.3**
HAZ				S	**S**	**16 16 55.6**	**-2.1**
PKGZ	**Pakihiroa**	**5.96**	**194**	P	**Pn**	**16 15 46.7**	**+1.3**
PKGZ				S	**S**	**16 17 00.8**	**+1.7**
PUZ	**Puketiti**	**6.11**	**193**	P	**Pn**	**16 15 51.3**	**+4.4**
PUZ				S	**S**	**16 17 03.5**	**+1.5**
OUZ	**Omahuta**	**6.13**	**238**	P	**Pn**	**16 15 51.5**	**+4.4**
RUGZ	**Raukumara Rang**	**6.13**	**197**	P	**Pn**	**16 15 49.0**	**+1.8**
RUGZ				S	**S**	**16 16 59.1**	**-3.5**
WHRZ	**Whale Island**	**6.23**	**202**	P	Pn	16 15 54.2	+6.0
WHRZ				S	**S**	**16 17 10.9**	**+6.5**
TWGZ	**Tauwhareparae**	**6.26**	**194**	P	**Pn**	**16 15 51.8**	**+3.1**
MARZ	**Manawahe**	**6.44**	**204**	P	**Pn**	**16 15 54.3**	**+3.6**
MARZ				S	**S**	**16 17 14.0**	**+5.1**
CNGZ	**Carnagh Statio**	**6.51**	**192**	P	**P**	**16 15 53.7**	**+0.9**
URZ	**Urewera**	**6.56**	**200**	P	**P**	**16 15 53.2**	**0.0**
	56nm,0.4s,baz=332,slow=1.0,SNR=63						
URZ				S	**S**	**16 17 10.0**	**-1.3**
	93nm,0.3s,baz=110,slow=22,SNR=20						
URZ	**Urewera**	**6.56**	**200**	Pn	**Pn**	**16 15 52.5**	**+0.5**
URZ	**Urewera**	**6.56**	**200**	P	**Pn**	**16 15 52.1**	**+0.2**
URZ				S	**S**	**16 17 08.6**	**-2.7**
URZ	**Urewera**	**6.56**	**200**	P	**Pn**	**16 15 52.2**	**+0.2**
RAGZ	**Rawiri**	**6.70**	**197**	P	**Pn**	**16 15 54.2**	**+0.5**
RAGZ				S	**S**	**16 17 10.9**	**-3.5**
MUGZ	**Murupara**	**6.86**	**201**	P	**P**	**16 15 58.0**	**+1.3**
MUGZ				S	**S**	**16 17 16.5**	**-1.2**
BKZ	**Black Stump Fm**	**7.58**	**201**	Pn	**P**	**16 16 05.6**	**+0.6**
BKZ	**Black Stump Fm**	**7.58**	**201**	P	**P**	**16 16 05.8**	**+0.8**
HIZ	**Hauiti**	**7.62**	**212**	P	**P**	**16 16 08.7**	**+3.3**
HIZ	**Hauiti**	**7.62**	**212**	P	**P**	**16 16 06.8**	**+1.4**
KWHZ	**Kaweka Forest**	**7.84**	**200**	P	**P**	**16 16 09.1**	**+1.1**
KWHZ				S	**S**	**16 17 37.6**	**-1.0**
PKVZ	**Pokaka**	**8.08**	**206**	P	**P**	**16 16 11.2**	**-0.7**
PKVZ				S	**S**	**16 17 45.4**	**+1.6**
VRZ	**Vera Road**	**8.17**	**210**	P	**P**	**16 16 14.6**	**+1.7**
PNHZ	**Pukenui**	**8.35**	**200**	P	**Pn**	**16 16 12.3**	**-0.6**
PNHZ				S	**S**	**16 17 46.1**	**-3.7**
TSZ	**Takapari Road**	**8.56**	**201**	P	**Pn**	**16 16 14.9**	**-0.4**
TSZ				S	**S**	**16 17 49.7**	**-4.5**
PKE	**Pukeiti**	**8.56**	**213**	P	**P**	**16 16 21.1**	**+3.7**
NEZ	**North Egmont**	**8.58**	**212**	P	**P**	**16 16 20.8**	**+3.2**
LREZ	**Lake Rotokare**	**8.60**	**210**	P	**P**	**16 16 18.9**	**+1.2**
PREZ	**Palmer Road**	**8.61**	**211**	P	**P**	**16 16 20.6**	**+2.7**
WAZ	**Wanganui**	**8.62**	**206**	P	**P**	**16 16 17.3**	**-0.6**
KHEZ	**Kahui Hut**	**8.63**	**212**	P	**P**	**16 16 21.4**	**+3.3**
POWZ	**Post Office Ro**	**8.92**	**201**	P	**Pn**	**16 16 20.3**	**+0.7**
POWZ				S	**S**	**16 17 59.0**	**-3.0**
BFZ	**Birch Farm**	**9.06**	**198**	P	**Pn**	**16 16 20.9**	**-0.2**
BFZ				S	**S**	**16 18 01.4**	**-3.6**
BFZ	**Birch Farm**	**9.06**	**198**	P	**Pn**	**16 16 21.1**	**-0.1**
MRZ	**Mangatainoka R**	**9.23**	**201**	P	**Pn**	**16 16 22.3**	**-0.9**
MRZ				S	**S**	**16 18 02.5**	**-6.2**
HOWZ	**Holdsworth Sta**	**9.46**	**201**	P	**Pn**	**16 16 25.5**	**-0.5**
HOWZ				S	**S**	**16 18 07.4**	**-6.4**
OGWZ	**Otaki Gorge**	**9.50**	**202**	P	**Pn**	**16 16 25.5**	**-0.9**
OGWZ				S	**S**	**16 18 10.2**	**-4.3**
TMWZ	**Te Maipa**	**9.55**	**199**	P	**P**	**16 16 28.0**	**-0.2**
TMWZ				S	**S**	**16 18 11.0**	**-4.6**
KIW	**Kapiti Island**	**9.62**	**203**	P	**Pn**	**16 16 27.8**	**-0.1**
MTW	**Mount Morrison**	**9.71**	**200**	P	**Pn**	**16 16 29.3**	**+0.4**
CAW	**Cannon Point**	**9.79**	**202**	P	**Pn**	**16 16 28.9**	**-1.0**
TRWZ	**Traveller**	**9.88**	**199**	P	**P**	**16 16 31.9**	**0.0**
PAWZ	**Paruwai Farm**	**9.93**	**200**	P	**P**	**16 16 32.1**	**-0.4**
MSWZ	**Moikau Station**	**10.02**	**201**	P	**Pn**	**16 16 32.4**	**-0.2**
WEL	**Wellington**	**10.05**	**203**	P	**P**	**16 16 33.5**	**-0.3**
SNZO	**South Karori**	**10.09**	**203**	P	**Pn**	**16 16 32.9**	**-0.5**
TCW	**Tory Channel**	**10.15**	**205**	P	**Pn**	**16 16 33.8**	**-0.4**
PLWZ	**Palliser**	**10.16**	**200**	P	**Pn**	**16 16 34.4**	**+0.2**
NNZ	**Nelson**	**10.50**	**208**	Pn	**Pn**	**16 16 37.3**	**-1.0**
QRZ	**Quartz Range**	**10.54**	**212**	P	**P**	**16 16 39.1**	**-0.2**
CMWZ	**Cape Campbell**	**10.65**	**204**	P	**P**	**16 16 41.2**	**+0.7**
BSWZ	**Blackbirch Sta**	**10.74**	**205**	P	**Pn**	**16 16 41.2**	**+0.1**
OXZ	**Oxford**	**12.81**	**207**	P	**P**	**16 17 04.1**	**-0.3**
RPZ	**Rata Peaks**	**13.53**	**209**	P	**Pn**	**16 17 13.3**	**-0.6**
	5.8nm,0.7s,baz=301,slow=17,SNR=6.0						
RPZ				S	**S**	**16 19 33.6**	**-6.0**
	9.7nm,0.6s,baz=129,slow=23,SNR=13						
RPZ	**Rata Peaks**	**13.53**	**209**	P	**Pn**	**16 17 13.5**	**-0.4**
ODZ	**Otahua Downs**	**14.80**	**207**	P	**Pn**	**16 17 28.9**	**+0.4**
ODZ	**Otahua Downs**	**14.80**	**207**	P	**P**	**16 17 27.2**	**+1.0**
AFI	**Afiamalu**	**19.64**	**25**	P	**P**	**16 18 17.8**	**-0.5**
MGCD	**Mangrove Creek**	**24.26**	**260**	P	**P**	**16 19 02.4**	**+2.2**
EIDS	**Eidsvold**	**26.12**	**278**	P	**P**	**16 19 17.0**	**0.0**
EIDS				IAmb	IAmb	16 19 35.7	
	comp=Z,30nm,1.5s						
RMQ	**Roma**	**27.70**	**274**	P	**P**	**16 19 31.9**	**+1.0**
CMSA	**Cobar Meteorol**	**29.03**	**262**	P	**P**	**16 19 44.1**	**+1.5**
CTA	**Charters Tower**	**32.39**	**283**	P	**P**	**16 20 12.6**	**+0.6**
CTAO	**Charters Tower**	**32.39**	**283**	P	**P**	**16 20 12.5**	**+0.5**
STKA	**Stephens Creek**	**32.40**	**260**	P	**P**	**16 20 13.3**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=99,slow=11,SNR=7.5						
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**32.40**	**260**	P	**P**	**16 20 13.3**	**+1.4**
STKA	**Stephens Creek**	**32.40**	**260**	P	**P**	**16 20 13.1**	**+1.2**
INKA	**Innaminka**	**34.11**	**267**	P	**P**	**16 20 27.6**	**+1.0**
HTT	**Hallett**	**34.35**	**257**	P	**P**	**16 20 29.4**	**+0.7**
MTSU	**Mount Surprise**	**34.95**	**285**	P	**P**	**16 20 34.4**	**+0.6**
LCRK	**Leigh Creek**	**35.53**	**261**	P	**P**	**16 20 39.2**	**+0.6**
BBOO	**Buckleboo**	**36.83**	**257**	P	**P**	**16 20 48.4**	**-1.1**
BBOO	**Buckleboo**	**36.83**	**257**	P	**P**	**16 20 49.5**	**+0.1**
KRVT	**Keravat (AS076**	**38.06**	**311**	P	**P**	**16 20 57.6**	**-2.2**
	comp=Z,15nm,0.6s,baz=13,slow=3.1,SNR=5.5						
	comp=Z,15nm,0.6s						
AS31	**Alice Springs**	**41.29**	**270**	P	**P**	**16 21 24.9**	**-1.3**
ASAR	**Alice Springs**	**41.29**	**270**	P	**P**	**16 21 25.6**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=105,slow=7.2,SNR=46						
	comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**41.29**	**270**	P	**P**	**16 21 24.9**	**-1.3**
WR0	**Warramunga Arr**	**42.26**	**275**	P	**P**	**16 21 32.7**	**-1.2**
WR0				IAmb	IAmb	16 21 35.8	
	comp=Z,9.1nm,1.2s						
WB2	**Warramunga Arr**	**42.43**	**275**	P	**P**	**16 21 34.2**	**-1.1**
WB2				IAmb	IAmb	16 21 35.3	
	comp=Z,8.1nm,0.5s						
WRAB	**Tennant Creek**	**42.43**	**275**	P	**P**	**16 21 34.1**	**-1.2**
WRAB				IAmb	IAmb	16 21 35.3	
	comp=Z,5.9nm,0.4s						
WRA	**Warramunga Arr**	**42.44**	**275**	P	**P**	**16 21 34.4**	**-0.9**
	comp=Z,4.4nm,0.4s,baz=113,slow=7.7,SNR=189						
	comp=Z,4.4nm,0.4s						
WRA	**Warramunga Arr**	**42.44**	**275**	P	**P**	**16 21 33.3**	**-2.1**
WB0	**Warramunga Arr**	**42.47**	**275**	P	**P**	**16 21 34.6**	**-1.0**
WB0				IAmb	IAmb	16 21 35.6	
	comp=Z,8.4nm,0.4s						
MTN	**Manton Dam**	**48.55**	**282**	P	**P**	**16 22 21.4**	**-1.3**
MTN				IAmb	IAmb	16 22 33.0	
	comp=Z,23nm,1.4s						
KNRA	**Kununurra**	**49.11**	**277**	P	**P**	**16 22 26.5**	**-0.4**
KNRA				IAmb	IAmb	16 22 34.3	
	comp=Z,16nm,1.3s						
FITZ	**Fitzroy Crossi**	**50.62**	**272**	P	**P**	**16 22 37.9**	**-0.2**
QSPA	**South Pole Qui**	**58.01**	**180**	P	**P**	**16 23 33.2**	**+2.9**
	comp=Z,4.2nm,0.8s,baz=330,slow=0.9,SNR=19						
	comp=Z,4.2nm,0.8s						
QSPA	**South Pole Qui**	**58.01**	**180**	P	**P**	**16 23 32.8**	**+2.6**
QSPA				IAmb	IAmb	16 23 34.1	
	comp=Z,6.7nm,1.0s						
BELA	**Belgrano 2**	**68.33**	**173**	P	**P**	**16 24 38.4**	**+1.3**
BELA				IAmb	IAmb	16 24 39.1	
	comp=Z,1.7nm,0.7s						
TROLL	**Troll, Antarti**	**76.15**	**181**	P	**P**	**16 25 24.6**	**+1.4**
SNAA	**Sanae**	**76.49**	**179**	P	**P**	**16 25 26.2**	**+1.3**
SNAA	**Sanae**	**76.49**	**179**	P	**P**	**16 25 26.0**	**+1.1**
SNAA				IAmb	IAmb	16 25 27.0	
	comp=Z,4.7nm,1.2s						
VNA3	**Neumayer Olymp**	**76.71**	**177**	P	**P**	**16 25 27.5**	**+1.4**
VNA2	**Neumayer--Watz**	**77.12**	**178**	P	**P**	**16 25 30.0**	**+1.6**
	baz=175,slow=4.6						
VNA1	**Neumayer--Stat**	**77.37**	**177**	P	**P**	**16 25 31.3**	**+1.7**
ADK	**Adak**	**83.69**	**2**	P	**P**	**16 26 02.9**	**0.0**
PETK	**Petropavlovsk-**	**87.04**	**347**	P	**P**	**16 26 19.0**	**-0.3**
	comp=Z,4.7nm,0.7s,baz=109,slow=6.5,SNR=11						
	comp=Z,4.7nm,0.7s						
PETK	**Petropavlovsk-**	**87.04**	**347**	P	**P**	**16 26 18.7**	**-0.6**
NVAR	**Mina Array Bea**	**90.69**	**44**	P	**P**	**16 26 38.4**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=227,slow=8.1,SNR=5.2						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**117.51**	**310**	PKP	**PKPdf**	**16 32 15.6**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=226,slow=3.0,SNR=6.5						
ZALV	**Zalesovo Beam**	**118.12**	**318**	PKP	**PKPdf**	**16 32 16.6**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=66,slow=2.0,SNR=4.0						
KURK	**Kurchatov**	**120.94**	**313**	PKPdf	**PKPdf**	**16 32 22.7**	**-1.0**
SPA0	**Spitsbergen Ar**	**133.27**	**355**	*e*PKPdf	**PKiKP**	**16 32 47.5**	**-0.4**
ARCES	**ARCESS Array B**	**139.85**	**346**	PKhKP	PKPpre	16 32 51.1	
	comp=Z,0.7nm,0.5s,baz=46,slow=2.2,SNR=10						
KONS	**Konsvik**	**144.68**	**351**	*e*PKPbc	PKPbc	16 33 06.8	-0.5
MOR8	**Moi Rana**	**144.80**	**350**	*e*PKPbc	PKPbc	16 33 06.1	-1.6
FIA1	**FINESS Array S**	**146.09**	**338**	PKPdf	**PKPbc**	**16 33 10.9**	**-0.8**
FINES	**FINESS Array B**	**146.09**	**338**	PKPbc	**PKPbc**	**16 33 10.7**	**-1.0**
	comp=Z,16nm,0.4s,baz=44,slow=4.4,SNR=176						
NSS	**Namsos**	**146.70**	**351**	*e*PKPbc	**PKPbc**	**16 33 13.8**	**+0.5**
RAF	**Rauma**	**147.74**	**340**	*e*P	**PKPbc**	**16 33 15.0**	**-1.2**
VSU	**Vasula**	**148.01**	**333**	*e*P	**PKPbc**	**16 33 16.4**	**-0.6**
DOMB	**Dombas**	**149.48**	**352**	*e*PKPbc	**PKPbc**	**16 33 19.8**	**-0.8**
AKN	**Aaknes**	**149.57**	**353**	*e*PKPbc	**PKPbc**	**16 33 20.4**	**-0.4**
NB201	**NORSAR Array S**	**150.10**	**349**	*e*PKPbc	**PKPbc**	**16 33 21.1**	**-0.9**
NB201				*e*PKPab	**PKPab**	**16 33 28.8**	**-0.7**
NB2	**NORSAR Subarra**	**150.13**	**349**	PKP	**PKPbc**	**16 33 21.4**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.13**	**349**	PKPbc	**PKPbc**	**16 33 21.3**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=17,slow=4.1,SNR=16						
NOA				PKPab	**PKPab**	**16 33 28.6**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=25,slow=4.3,SNR=10						
FOO	**Floro**	**150.31**	**355**	*e*PKPbc	**PKPbc**	**16 33 21.5**	**-0.9**
NC602	**NORSAR Array S**	**150.36**	**348**	*e*PKPbc	**PKPbc**	**16 33 21.6**	**-1.0**
NC602				IAmb	IAmb	16 33 22.2	
	comp=Z,6.4nm,0.7s						
SKAR	**Skarslia**	**150.89**	**352**	*e*PKPbc	**PKiKP**	**16 33 24.1**	**-0.3**
PABE	**Paberze**	**151.16**	**331**	PKPbc	**PKPbc**	**16 33 23.0**	**-1.6**
PABE	**Paberze**	**151.16**	**331**	*e*P	**PKPbc**	**16 33 24.2**	**-0.5**
AKASG	**Malin Array Be**	**151.51**	**319**	PKPbc	**PKPbc**	**16 33 24.6**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=52,slow=2.9,SNR=13						
AKASG	**Malin Array Be**	**151.51**	**319**	PKPbc	**PKPbc**	**16 33 24.7**	**-0.9**
AKBB	**Malin Array Si**	**151.51**	**319**	PKPbc	**PKPbc**	**16 33 24.0**	**-1.6**
KONO	**Kongsberg**	**151.71**	**350**	*e*PKPbc	**PKPbc**	**16 33 25.3**	**-0.5**
BRTR	**Keskin Array B**	**151.79**	**295**	PKPbc	**PKPbc**	**16 33 25.4**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=172,slow=2.9,SNR=3.4						
ODD1	**Odda**	**151.83**	**353**	*e*PKPbc	**PKPbc**	**16 33 25.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**161.06**	**185**	PKP	**PKPdf**	**16 33 31.9**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=124,slow=0.5,SNR=3.8						
TORD				PKPab	**PKPab**	**16 34 17.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=188,slow=3.7,SNR=10						

*UPA **17** 16:22:01.5±1.9,7.°44N×82.°13W,h1km±9km,MW4.7*
*NEIC **17** 16:22:05.1±2.3,7.°79N±0.°07×82.°04W±0.°05,h10km±1km, mb4.7/46,Mwr4.8/39,Error ellipse: s-maj=12.5km s-min=6.8km az=205.0*
*NEIC **17** 16:22:06.2,7.°82N×82.°09W,h8km,Moment Tensor Solution. Moment tensor: Scale 10**16**Nm; Mrr=0.09; Mθθ=0.65; Mφφ=0.74; Mrθ=0.98; Mrφ=1.73; Mθφ=0.81; Fault plane solution: Mo2.25000×10**16** NP1:φ255.19000°, δ67.32000°, λ-17.38000°. NP2:φ352.07000°, δ74.00000°, λ-156.36000°. Principal axes: T 1.9174, Plg4.0000°, Azm123.0000°; N 0.5667, Plg62.0000°, Azm24.0000°; P -2.4840, Plg28.0000°, Azm215.0000°;*
*GCMT **17** 16:22:07.1±0.2,7.°70N±0.°01×82.°03W±0.°01,h15km±1km, MW4.9/115,Moment Tensor Solution. s34,c39; s115,c156; Duration: 0 Moment tensor: Scale 10**16**Nm; Mrr0.04±.07; Mθθ-0.59±.07; Mφφ0.55±.08; Mrθ0.29±.24; Mθφ2.67±.07; Mrφ-0.45±.23; Best double couple: Mo2.77900×10**16** NP1:φs354.00000°,δ86.00000°, λ-170.00000°. NP2:φs264.00000°,δ80.00000°, λ-5.00000°. Principal axes: T 2.7220, Plg4.0000°, Azm129.0000°; N 0.1140, Plg79.0000°, Azm19.0000°; P -2.8360, Plg10.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **17** 16:22:07.8±1.1,8.°62N×81.°66W,h0km,mb3.9/11, mbtmp4.0/14,ML3.3/3,MS4.0/44 Error ellipse: s-maj=40.8km s-min=16.2km az=35.0*
*UCR **17** 16:22:25.2±1.6,8.°64N×83.°14W,h12km±10km,MW4.6, mb4.8(NEIC)*
ISC 17 16:22:03.1±1.5,**7.°57N**±0.°05×**82.°16W**±0.°03,**h4**km±9km, **n223**,σ1$**55**/195,**mb4.7**/29,**MS4.1**/41,**7C-13D**,**South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.91**	**341**	*e*P	**Pg**	**16 22 19.2**	**-1.3**
DVD				*e*S	**Sn**	**16 22 35.6**	**-0.5**
BCO2	**Palmira**	**1.20**	**342**	*e*P	**Pg**	**16 22 26.0**	**-0.1**
CDITO	**Canoas**	**1.22**	**325**		**Pg**	**16 22 24.1**	**-2.5**
CDITO	**Canoas**	**1.22**	**325**	*e*P	**Pg**	**16 22 26.1**	**-0.5**
CDITO				*e*S	**Sn**	**16 22 45.5**	**+1.5**
CACAO	**El Cacao, Vera**	**1.30**	**100**	*e*P	**Pn**	**16 22 25.0**	**-3.0**
CACAO	**El Cacao, Vera**	**1.30**	**100**	*i*P	**Pn**	**16 22 25.0**	**-3.0**
CACAO				*i* S	**Sb**	**16 22 41.6**	**-3.6**
BRU2	**Volcan**	**1.33**	**336**		**Pn**	**16 22 25.9**	**-2.6**
BRU2	**Volcan**	**1.33**	**336**	*e*P	**Pn**	**16 22 28.1**	**-0.4**
EDSV	**San Vito**	**1.48**	**327**	*e*P	**Pb**	**16 22 31.2**	**0.0**
CHIT3	**Chitre**	**1.76**	**77**	*i*P	**Pn**	**16 22 31.2**	**-3.1**
CHIT3				*i* S	**Sn**	**16 22 55.2**	**-2.1**
CNI2	**El Empalme, Bo**	**1.87**	**350**	*e*P	**Pn**	**16 22 36.0**	**+0.2**
CNI2				*e*S	**Sb**	**16 23 01.1**	**0.0**
AZU	**Azuero**	**1.88**	**83**	*e*P	**Pn**	**16 22

BAUV El Baul 14.04 83 Pn Pn 16 25 18.8 -4.1
SDDR Presa de Saban 15.50 42 Pn **Pn** **16 25 40.6 -2.0**
CMIG Matias Romero 15.62 308 Pn **P** **16 25 47.6 -0.8**
0.3nm,0.3s,baz=110,slow=10,SNR=5.9
3.2nm,0.6s
BIRV Birongo 15.95 78 Pn **Pn** **16 25 47.6 -1.0**
DR12 Loma Pena Alta 16.69 47 **Pn** **16 25 56.8 -1.2**
CZSB Cruzeiro do Su 17.88 148 Pn **Pn** **16 26 13.8 +0.8**
CZSB IAmb IAmb 16 26 20.3
comp=Z,24nm,1.1s
CZSB Cruzeiro do Su 17.88 148 *eP* **Pn** **16 26 12.6 -0.3**
SJG San Juan 18.78 55 LR LR 16 33 09.4
comp=Z,334nm,21.6s,baz=224,slow=37
TLIG Tlapa 18.83 303 P **Pn** **16 26 25.7 +1.1**
TLIG IAmb IAmb 16 26 34.9
comp=Z,106nm,2.0s
GCPR Guaynabo City 18.93 54 P **P** **16 26 25.6 +0.5**
GCPR IAmb IAmb 16 26 29.5
comp=Z,38nm,0.8s
MOIG Morelia 22.04 305 P **P** **16 27 00.6 +1.4**
MOIG IAmb IAmb 16 27 10.7
comp=Z,23nm,0.8s
BOAV Boa Vista 22.15 102 P **P** **16 26 59.0 -1.1**
BOAV IAmb IAmb 16 27 06.6
comp=Z,9,6nm,0.8s
BOAV Boa Vista 22.15 102 *eP* **P** **16 27 00.8 +0.6**
ETMB Extrema 23.46 137 P **P** **16 27 12.9 -0.9**
ETMB IAmb IAmb 16 27 14.8
comp=Z,17nm,0.8s
ETMB Extrema 23.46 137 *eP* **P** **16 27 13.5 -0.4**
MACA Manacapuru-AM 23.93 116 *eP* **P** **16 27 18.9 +0.5**
SAML Samuel 25.04 131 P **P** **16 27 27.3 -1.3**
SAML IAmb IAmb 16 27 31.0
comp=Z,32nm,1.8s
435B Jarrell 27.24 330 P **P** **16 27 46.9 -1.5**
435B IAmb IAmb 16 28 12.9
comp=Z,19nm,1.1s
LPAZ La Paz 27.47 150 P P 16 28 03.0 +12
comp=Z,1.8nm,0.9s,baz=14,slow=3.8,SNR=3.6
LPAZ LR LR 16 40 00.3
comp=Z,490nm,18.2s,baz=325,slow=38
comp=Z,1.8nm,0.9s
LPAZ La Paz 27.47 150 *eP* **P** **16 27 50.2 -1.1**
TKL Tuckaleechee C 27.99 357 LR LR 16 39 32.0
comp=Z,691nm,18.0s,baz=180,slow=39
WHAR Wooly Hollow 29.11 343 P **P** **16 28 03.5 -1.6**
WHAR IAmb IAmb 16 28 15.6
comp=Z,45nm,2.0s
MALB Monte Alegre 29.36 108 *eP* **P** **16 28 07.9 +0.5**
MDP Montagnes des 29.43 93 LR LR 16 41 25.3
comp=Z,657nm,18.4s,baz=260,slow=40
LCAR Lake Charles 29.54 345 P **P** **16 28 06.3 -2.5**
LCAR IAmb IAmb 16 28 13.5
comp=Z,6.2nm,0.7s
TXAR Lajitas Array 29.64 320 P **P** **16 28 11.2 +1.3**
comp=Z,0.2nm,0.7s,baz=133,slow=6.6,SNR=2.0
TXAR LR LR 16 41 26.6
comp=Z,224nm,19.6s,baz=112,slow=40
comp=Z,0.2nm,0.7s
VILB Vilhena 29.86 133 *eP* **P** **16 28 11.9 0.0**
NPGB Novo Progresso 30.41 118 *eP* **P** **16 28 15.8 -1.1**
SIV San Ignacio 31.37 138 LR LR 16 41 18.2
comp=Z,441nm,19.1s,baz=310,slow=36
CCM Cathedral Cave 31.44 346 P **P** **16 28 25.2 -0.5**
LPIG La Paz 31.58 305 LR LR 16 42 37.2
comp=Z,143nm,20.3s,baz=113,slow=39
PDRB Porto dos Gac 31.67 127 *eP* **P** **16 28 27.4 -0.4**
CLDB Colider 32.00 125 *eP* **P** **16 28 28.9 -1.9**
PTLB Pontes e Lacer 32.30 135 P **P** **16 28 31.8 -1.6**
PTLB IAmb IAmb 16 28 33.3
comp=Z,4.4nm,0.9s
PTLB Pontes e Lacer 32.30 135 *eP* **P** **16 28 32.1 -1.3**
MNTX Cornudas Mount 32.33 321 P **P** **16 28 32.8 -0.8**
U32A Winter Ranch, 32.54 334 P **P** **16 28 34.6 -0.7**
LVC Limon Verde 32.68 157 LR LR 16 45 05.7
comp=Z,210nm,18.8s,baz=323,slow=41
R32A Long Quarter, 34.16 337 P **P** **16 28 47.5 -1.9**
R32A IAmb IAmb 16 29 05.1
comp=Z,21nm,1.2s
N38A Joes South For 34.53 345 P **P** **16 28 52.3 -0.2**
ANMO Albuquerque 35.23 324 P **P** **16 29 01.1 +2.2**
ANMO LR LR 16 46 15.0
comp=Z,1.3nm,0.6s,baz=140,slow=12,SNR=3.3
comp=Z,153nm,19.1s,baz=146,slow=42
comp=Z,1.3nm,0.6s
N33A J Bar K Exete 35.73 340 P **P** **16 29 01.7 -1.3**
SADO Sadowa 37.15 4 LR LR 16 44 16.0
comp=Z,159nm,21.4s,baz=187,slow=37
SMTB Santa Maria do 38.12 115 *eP* **P** **16 29 24.1 +0.5**
SPMN Marine on St. 38.63 348 P **P** **16 29 26.2 -1.3**
E46A Sault Ste Mari 38.70 358 P **P** **16 29 26.7 -1.3**
E46A IAmb IAmb 16 29 53.9
comp=Z,33nm,1.6s
PV13 Radium Mtn., P 38.84 326 P **P** **16 29 29.5 -0.1**
PV07 Paradox Valley 38.94 326 P **P** **16 29 28.4 -2.0**
SRU San Rafael Swe 40.45 325 P **P** **16 29 42.9 -0.2**
PFO Pinyon Flats O 40.93 314 LR LR 16 49 22.4
comp=Z,169nm,19.4s,baz=310,slow=40
BDFB Brasilia 40.93 124 LR LR 16 47 19.3
comp=Z,802nm,18.3s,baz=312,slow=37
V12A Nelson 40.98 318 P **P** **16 29 48.9 +1.5**
LMQ La Malbaie 41.09 12 P **P** **16 29 45.5 -2.5**
CPUP Villa Florida 41.43 145 LR LR 16 49 55.0
comp=Z,415nm,18.5s,baz=326,slow=40
GWY Greenwater Val 42.45 317 P **P** **16 29 59.6 +0.1**
GWY IAmb IAmb 16 30 32.3
comp=Z,34nm,2.0s
QSM Queen of Sheba 42.47 317 P **P** **16 30 00.7 +1.3**
QSM IAmb IAmb 16 30 12.9
comp=Z,13nm,1.2s
PDAR Pinedale Array 42.55 330 P **P** **16 30 01.5 +1.2**
comp=Z,0.9nm,1.1s,baz=128,slow=12,SNR=4.0
comp=Z,0.9nm,1.1s
RPN Rapa Nui 43.39 216 LR LR 16 43 27.6
comp=Z,412nm,21.6s,baz=54,slow=29
ULM Lac du Bonnet 44.06 347 P **P** **16 30 08.5 -3.5**
comp=Z,2.4nm,0.6s,baz=128,slow=5.1,SNR=3.9
comp=Z,2.4nm,0.6s
ULM Lac du Bonnet 44.06 347 P **P** **16 30 09.3 -2.7**
ULM IAmb IAmb 16 30 16.3
comp=Z,42nm,2.0s
ELK Elko 44.26 324 LR LR 16 50 57.3
comp=Z,114nm,20.5s,baz=132,slow=40
NV11 Mina Array Sit 44.69 319 P **P** **16 30 17.1 -0.4**
NV11 IAmb IAmb 16 30 34.5
comp=Z,16nm,1.4s
NVAR Mina Array Bea 44.78 319 P **P** **16 30 19.8 +1.5**
comp=Z,1.3nm,0.8s,baz=126,slow=7.9,SNR=11
comp=Z,1.3nm,0.8s
NVAR Mina Array Bea 44.78 319 P **P** **16 30 18.0 -0.3**
OMMB Old Mammoth Mi 44.80 317 P **P** **16 30 17.3 -1.3**
OMMB IAmb IAmb 16 30 33.7
comp=Z,11nm,1.2s
LHV Little Huntoon 44.82 319 P **P** **16 30 18.5 +0.2**
LHV IAmb IAmb 16 30 38.0
comp=Z,19nm,1.4s
KVN Kaiserville 45.00 320 P **P** **16 30 19.0 -1.1**
BMN Battle Mountai 45.26 322 P **P** **16 30 20.3 -1.6**
BMN IAmb IAmb 16 30 36.8
comp=Z,15nm,1.2s
WVOR Wild Horse Val 47.30 323 P **P** **16 30 38.4 +0.3**
RCBR Riachuelo 48.02 105 LR LR 16 51 39.4
comp=Z,508nm,20.9s,baz=84,slow=37
SCHQ Schefferville 48.70 12 LR LR 16 51 54.5
comp=Z,306nm,20.2s,baz=200,slow=38
NEW Newport 50.19 330 LR LR 16 54 54.6
comp=Z,120nm,20.5s,baz=132,slow=40
FRB Frobisher Bay 56.92 7 LR LR 16 56 57.5
comp=Z,412nm,18.7s,baz=199,slow=37
BBB Bella Bella 58.16 329 LR LR 17 01 15.0
comp=Z,99nm,18.2s,baz=127,slow=41
DLBC Dease Lake 62.54 334 LR LR 17 04 26.3
comp=Z,144nm,18.9s,baz=106,slow=41
SFJD Kangerlussuaq 63.10 13 LR LR 17 00 06.8
comp=Z,216nm,20.8s,baz=218,slow=37
BBTS Babate 64.60 77 LR LR 16 58 30.5
comp=Z,148nm,21.9s,baz=244,slow=34
RES Resolute Bay 67.47 356 LR LR 17 03 32.6
comp=Z,339nm,18.1s,baz=152,slow=37
I29M Ogilvie Camp, 69.49 338 P **P** **16 33 12.8 +0.3**
BCAR Beaver Creek A 69.83 335 P **P** **16 33 15.2 +0.5**
L27K Beaver Creek, 69.85 335 P **P** **16 33 14.7 -0.1**
L27K IAmb IAmb 16 33 35.1
comp=Z,7.9nm,1.1s
DOT Dot Lake 71.00 335 P **P** **16 33 22.4 +0.6**
DOT IAmb IAmb 16 33 35.2
comp=Z,6.9nm,1.1s
PPT Papeete 71.10 249 LR LR 16 58 43.7
comp=Z,94nm,18.3s,baz=47,slow=30
J26L Joseph Creek 71.13 336 P **P** **16 33 22.9 +0.2**
J25K Salcha River, 71.90 336 P **P** **16 33 28.5 +1.2**
ILAR Eielson Array 72.56 336 P **P** **16 33 31.0 -0.2**
comp=Z,0.8nm,0.8s,baz=113,slow=4.3,SNR=7.7
ILAR LR LR 17 10 24.9
comp=Z,112nm,18.2s,baz=102,slow=40
comp=Z,0.8nm,0.8s
ILAR Eielson Array 72.56 336 P **P** **16 33 31.3 +0.2**
I23K Minto, Yukon-K 73.68 336 P **P** **16 33 38.0 +0.3**
MDT Midelt 75.49 58 LR LR 17 04 15.4
comp=Z,61nm,19.2s,baz=345,slow=34
ESDC Sonseca Array 76.12 51 P **P** **16 33 52.3 -0.1**
comp=Z,1.1nm,0.6s,baz=278,slow=5.4,SNR=9.8
ESDC LR LR 17 02 01.9
comp=Z,56nm,20.1s,baz=294,slow=32
comp=Z,1.1nm,0.6s
ESDC Sonseca Array 76.12 51 P **P** **16 33 52.4 -0.1**
ESDC IAmb IAmb 16 34 02.6
comp=Z,8.7nm,1.8s
DBIC Dimbokro 76.61 85 P **P** **16 33 57.9 +2.2**
comp=Z,5.3nm,0.9s,baz=17,slow=3.5,SNR=5.1
DBIC LR LR 17 05 09.7
comp=Z,116nm,21.9s,baz=280,slow=34
comp=Z,5.3nm,0.9s
EKA Eskdalemuir Ar 77.55 35 LR LR 17 04 01.6
comp=Z,44nm,19.4s,baz=256,slow=33
JMIC Jan Mayen 77.58 19 LR LR 17 06 52.2
comp=Z,47nm,21.5s,baz=264,slow=35
RAR Rarotonga 81.30 247 LR LR 17 02 53.5
comp=Z,60nm,18.6s,baz=81,slow=30
TORD Torodi Ar. Bea 82.35 78 P **P** **16 34 27.6 +0.7**
comp=Z,1.0nm,0.7s,baz=288,slow=6.2,SNR=5.6
comp=Z,1.0nm,0.7s
SPITS Spitsbergen Ar 84.39 12 LR LR 17 13 14.1
comp=Z,210nm,20.4s,baz=251,slow=37
TAM Tamanrasset 84.98 68 P **P** **16 34 37.6 -2.9**
TAM IAmb IAmb 16 34 42.2
comp=Z,3.6nm,0.9s
DAVOX Davos/Dischmat 85.94 44 LR LR 17 08 48.5
comp=Z,48nm,19.6s,baz=263,slow=33
HFS Hagfors 86.40 30 LR LR 17 09 01.2
comp=Z,45nm,21.8s,baz=286,slow=33
CLL Collm 87.37 39 *eP* **P** **16 34 52.0 +0.5**
comp=Z,4.0nm,0.7s
GERES GERESS Array B 88.20 41 P **P** **16 34 57.2 +1.6**
comp=Z,0.6nm,0.7s,baz=266,slow=3.6,SNR=7.3
comp=Z,0.6nm,0.7s
VRAC Vranov 89.98 40 LR LR 17 09 01.6
comp=Z,113nm,21.3s,baz=280,slow=32
VAE Valguarnera 90.62 52 LR LR 17 13 18.8
comp=Z,41nm,19.0s,baz=189,slow=34
FINES FINESS Array B 91.96 27 LR LR 17 13 16.3
comp=Z,67nm,19.6s,baz=238,slow=34
SNAA Sanae 93.79 162 LR LR 17 16 52.3
comp=Z,53nm,22.0s,baz=26,slow=35
AKASG Malin Array Be 97.40 37 LR LR 17 18 45.0
comp=Z,54nm,19.5s,baz=318,slow=35
TIXI Tiksi 98.33 351 LR LR 17 23 31.7
comp=Z,92nm,18.8s,baz=0.0,slow=38
IDI Anoyia 99.35 52 LR LR 17 16 48.3
comp=Z,8.6nm,18.8s,baz=272,slow=33
ASAR Alice Springs 141.91 241 PKP **PKiKP** **16 41 44.4 +4.2**
comp=Z,0.5nm,0.6s,baz=138,slow=2.2,SNR=6.6
PZH PanZhiHua 145.92 354 PKPbc **PKPdf** **16 41 44.0 -0.3**
H01W1 Cape Leeuwin H 148.95 207 T T 19 28 57.7
baz=144,slow=75,SNR=21
H01W2 Cape Leeuwin H 148.95 207 T T 19 28 57.0
baz=144,slow=75,SNR=15
H01W3 Cape Leeuwin H 148.96 207 T T 19 28 58.1
baz=144,slow=75,SNR=14
CMAR Chiang Mai Arr 154.11 358 PKPbc **PKiKP** **16 42 06.8 +1.5**
comp=Z,0.3nm,0.4s,baz=329,slow=3.3,SNR=4.3

*IDC **17** 16:35:11.4±2.1,6˚.45S×130˚.03E,h142km±22km, mb3.6/2, mbtmp4.1/7, Error ellipse: s-maj=25.0km s-min=16.8km az=90.0*

ISC 17 16:35:09.7±0.9,**6˚.50S**±0˚.06×**130˚.2E**±0˚.1,**h146km,n7, σ3s92/12,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.69**	**11**	P	**Pn**	**16 36 33.5**	**+1.2**
	11nm,0.2s,baz=14,slow=21,SNR=34						
SIJI				S	**Sn**	**16 37 30.4**	**-6.5**
	39nm,0.2s,baz=242,slow=23,SNR=12						
BATI	**Baumata**	**7.44**	**240**	P	**Pn**	**16 36 57.6**	**+1.9**
	20nm,0.5s,baz=92,slow=5.0,SNR=9.3						
BATI				S	**Sn**	**16 38 16.7**	**-2.1**
	16nm,0.5s,baz=275,slow=20,SNR=2.9						
FITZ	**Fitzroy Crossi**	**12.36**	**201**	P	**Pn**	**16 38 01.9**	**+1.1**
	1.1nm,0.3s,baz=15,slow=8.3,SNR=17						
FITZ				S	**Sn**	**16 40 10.3**	**-7.0**
	3.9nm,0.3s,baz=265,slow=22,SNR=11						
WRA	**Warramunga Arr**	**13.96**	**164**	P	**Pn**	**16 38 22.9**	**+1.7**
	2.0nm,0.4s,baz=334,slow=13,SNR=37						
WRA				S	**Sn**	**16 40 52.4**	**-3.5**
	1.3nm,0.4s,baz=327,slow=25,SNR=6.8						
ASAR	**Alice Springs**	**17.44**	**169**	P	**Pn**	**16 39 07.0**	**+2.9**
	1.2nm,0.5s,baz=341,slow=10,SNR=30						
ASAR				S	**S**	**16 42 15.8**	**-1.6**
	1.0nm,0.6s,baz=358,slow=26,SNR=5.6						
STKA	**Stephens Creek**	**27.40**	**159**	P	**P**	**16 40 44.5**	**+3.0**
	0.6nm,0.3s,baz=339,slow=7.3,SNR=5.0						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**16 45 53.9**	**+1.3**
	1.2nm,0.5s,baz=122,slow=7.8,SNR=17						
	1.2nm,0.5s						

IDC 17 16:45:57.6±4.5,**27˚.61S**×**176˚.93W**,**h0km**,**mb3.7**/3, **mbtmp3.7**/3,**MS3.6**/3,**Error ellipse: s-maj=101.8km s-min=29.6km az=103.0**,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.85**	**208**	Pn	Pn	16 46 29.9	-0.8
	57nm,0.3s,baz=51,slow=20,SNR=1.7						
RAO				Sn	Sg	16 46 57.5	+0.3
	174nm,0.3s,baz=122,slow=23,SNR=3.7						
ASAR	**Alice Springs**	**44.27**	**264**	P	P	16 54 09.4	+0.1
	0.6nm,0.8s,baz=114,slow=9.2,SNR=4.5						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**45.01**	**269**	P	P	16 54 14.8	-0.5
	0.8nm,0.8s,baz=108,slow=7.6,SNR=15						
	0.8nm,0.8s						
VNDA	**Vanda**	**50.95**	**186**	LR	LR	17 13 43.7	
	comp=Z,60nm,19.4s,baz=118,slow=33						
KSRS	**Korea Array**	**82.86**	**319**	P	P	16 58 24.4	+0.4
	0.8nm,0.8s,baz=125,slow=5.8,SNR=5.4						
KSRS				LR	LR	17 31 19.8	
	comp=Z,13nm,21.9s,baz=60,slow=33						
	0.8nm,0.8s						
KLR	**Kul'dur**	**89.12**	**329**	LR	LR	17 36 27.1	
	comp=Z,52nm,18.2s,baz=23,slow=34						

*IDC **17** 17:00:07.4±1.5,21˚.5S×179˚.19W,h604km±15km, mb3.2/8, mbtmp4.2/10, Error ellipse: s-maj=25.3km s-min=19.4km az=122.0*
*NEIC **17** 17:00:10.1±1.2,21˚.5S±0˚.1×179˚.4W±0˚.2,h622km±14km, mb4.2/21, Error ellipse: s-maj=30.7km s-min=12.6km az=128.0*

ISC 17 17:00:08.0±1.0,**21˚.5S**±0˚.1×**179˚.3W**±0˚.2,**h604km,n40, σ0s83/41,mb4.2/18,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.49**	**326**	P	**P**	**17 01 37.9**	**+0.4**
	7.7nm,0.3s,baz=252,slow=23,SNR=27						
MSVF	**Nonsavu**	**4.49**	**326**	P	P	**17 01 39.0**	**+1.5**
RAO	**Raoul Island**	**7.83**	**171**	P	P	**17 02 06.4**	**+0.7**
	480nm,0.3s,baz=91,slow=23,SNR=8.2						
MARNC	**Mare, Loyalty**	**11.78**	**268**	P	**P**	**17 02 44.3**	**-0.3**
PINNC	**Pines Island,**	**12.32**	**262**	P	**P**	**17 02 50.3**	**+0.3**
URZ	**Urewera**	**16.99**	**190**	P	**P**	**17 03 32.0**	**-2.0**
	2.6nm,0.4s,baz=153,slow=12,SNR=1.2						
EIDS	**Eidsvold**	**27.40**	**256**	P	**P**	**17 05 06.7**	**-0.5**
CTA	**Charters Tower**	**32.18**	**266**	P	**P**	**17 05 48.5**	**+0.2**
	10nm,1.0s,baz=83,slow=10,SNR=12						
	10nm,1.0s						
CTAO	**Charters Tower**	**32.18**	**266**	P	**P**	**17 05 49.0**	**+0.7**
STKA	**Stephens Creek**	**36.25**	**245**	P	**P**	**17 06 22.2**	**+0.3**
	1.1nm,0.4s,baz=95,slow=9.6,SNR=7.8						
	1.1nm,0.4s						
STKA	**Stephens Creek**	**36.25**	**245**	P	**P**	**17 06 22.9**	**+0.9**
COEN	**Coen**	**36.43**	**276**	P	**P**	**17 06 24.5**	**+0.8**
BBOO	**Buckleboo**	**41.00**	**244**	P	**P**	**17 07 00.5**	**+0.2**
BBOO				IAmb	IAmb	17 07 28.2	
	comp=Z,18nm,1.2s						
WR0	**Warramunga Arr**	**43.06**	**263**	P	**P**	**17 07 16.1**	**-0.4**
WR0				IAmb	IAmb	17 07 28.4	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**43.10**	**258**	P	**P**	**17 07 17.1**	**+0.3**
ASAR	**Alice Springs**	**43.10**	**258**	P	**P**	**17 07 16.9**	**+0.1**
	comp=Z,3.9nm,0.5s,baz=92,slow=8.2,SNR=46						
ASAR				PcP	**PcP**	**17 08 52.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=109,slow=3.9,SNR=6.7						
ASAR				ScP	**ScP**	**17 11 47.9**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=98,slow=4.4,SNR=4.3						
	comp=Z,3.9nm,0.5s						
ASAR	**Alice Springs**	**43.10**	**258**	P	**P**	**17 07 16.7**	**-0.1**
WB0	**Warramunga Arr**	**43.23**	**264**	P	**P**	**17 07 17.7**	**-0.1**
WB0				IAmb	IAmb	17 07 18.2	
	comp=Z,3.6nm,0.6s						
WB2	**Warramunga Arr**	**43.24**	**263**	P	**P**	**17 07 17.6**	**-0.3**
WB2				IAmb	IAmb	17 07 18.5	
	comp=Z,5.0nm,0.8s						
WRAB	**Tennant Creek**	**43.24**	**263**	P	**P**	**17 07 17.1**	**-0.8**
WRAB				IAmb	IAmb	17 07 34.2	
	comp=Z,9.4nm,1.4s						
WRA	**Warramunga Arr**	**43.25**	**263**	P	**P**	**17 07 17.6**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=96,slow=7.8,SNR=203						
	comp=Z,1.3nm,0.3s						
WRA	**Warramunga Arr**	**43.25**	**263**	P	**P**	**17 07 16.7**	**-1.3**
FORT	**Forrest**	**47.77**	**247**	P	**P**	**17 07 51.8**	**-0.3**
MTN	**Manton Dam**	**47.95**	**272**	P	**P**	**17 07 53.3**	**-0.4**
MTN				IAmb	IAmb	17 07 53.8	
	comp=Z,8.6nm,0.7s						
KNRA	**Kununurra**	**49.37**	**267**	P	**P**	**17 08 04.4**	**+0.3**
KNRA				IAmb	IAmb	17 08 04.5	
	comp=Z,24nm,1.4s						
FITZ	**Fitzroy Crossi**	**51.68**	**263**	P	**P**	**17 08 21.3**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=103,slow=5.0,SNR=14						
	comp=Z,1.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**51.68**	**263**	P	**P**	**17 08 21.1**	**+0.3**
FITZ				IAmb	IAmb	17 08 51.8	
	comp=Z,14nm,1.5s						
PSA00	**Pilbara Seismi**	**56.25**	**258**	P	**P**	**17 08 52.2**	**-0.6**
PSA00	**Pilbara Seismi**	**56.25**	**258**	P	**P**	**17 08 51.4**	**-1.5**
PSA00				IAmb	IAmb	17 09 13.3	
	comp=Z,23nm,1.4s						
MBWA	**Marble Bar**	**56.44**	**258**	P	**P**	**17 08 53.9**	**-0.3**
MBWA				IAmb	IAmb	17 09 30.2	
	comp=Z,18nm,1.4s						
CASY	**Casey**	**62.54**	**205**	P	**P**	**17 09 34.3**	**+0.6**
KKM	**Kota Kinabalu**	**68.83**	**286**	P	**P**	**17 10 12.0**	**-1.9**
KKM				IAmb	IAmb	17 10 50.9	
	comp=Z,19nm,1.1s						
MJAR	**Matsushiro Arr**	**70.29**	**325**	P	**P**	**17 10 21.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=149,slow=5.7,SNR=2.4						
	comp=Z,0.8nm,0.7s						
SSLB	**Suanglung**	**73.50**	**304**	P	**P**	**17 10 40.0**	**-0.8**
PETK	**Petropavlovsk-**	**76.92**	**346**	P	**P**	**17 10 57.9**	**-1.2**
	comp=Z,3.9nm,0.9s,baz=229,slow=4.3,SNR=5.9						
	comp=Z,3.9nm,0.9s						
PETK	**Petropavlovsk-**	**76.92**	**346**	P	**P**	**17 10 59.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**89.29**	**290**	P	**P**	**17 12 03.4**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=136,slow=1.4,SNR=7.0						
	comp=Z,0.9nm,0.8s						
AKASG	**Malin Array Be**	**143.26**	**329**	PKP	PKPab	17 18 31.9	-0.7
	comp=Z,1.6nm,0.5s,baz=43,slow=4.6,SNR=14						
CLL	**Collm**	**148.73**	**345**	*i* PKPbc	**PKPbc**	**17 18 48.3**	**+0.2**
	comp=Z,6.0nm,1.2s						
GERES	**GERESS Array B**	**150.80**	**342**	PKPbc	**PKPbc**	**17 18 52.7**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=325,slow=1.2,SNR=5.1						

*DDA **17** 17:01:15.1±0.0,36˚.12N×28˚.47E,h6km±5km,ML2.1*
*ISK **17** 17:01:16.9,36˚.37N×28˚.52E,h64km±2km,ML2.4/13*
*NIC **17** 17:01:17.9±0.0,36˚.23N×28˚.63E,h52km±2km,Ml3.3/3*

ISC 17 17:01:17.5±1.3,**36˚.33N**±0˚.04×**28˚.55E**±0˚.03,**h62km**±9km, **n26,σ0s62/43,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.36**	**252**	PG	**Pn**	**17 01 28.5**	**+0.2**
ARG				SG	**Sn**	**17 01 36.6**	**+0.5**
ARG	**Arkhangelos**	**0.36**	**252**	P	**Pn**	**17 01 28.5**	**+0.2**
ARG				S	**Sn**	**17 01 36.4**	**+0.3**
DALY	**Dalyan (Mula)**	**0.49**	**10**	PG	**Pn**	**17 01 29.7**	**+0.2**
DALY				SG	**Sn**	**17 01 38.1**	**-0.2**
TURN	**Turunc**	**0.51**	**331**	PG	**Pn**	**17 01 29.5**	**-0.2**
TURN				SG	**Sn**	**17 01 38.5**	**-0.1**
TURN	**Turunc**	**0.51**	**331**	P	**Pn**	**17 01 29.8**	**+0.1**
TURN				S	**Sn**	**17 01 38.5**	**-0.1**
FETY	**Fethiye**	**0.53**	**55**	PG	**Pn**	**17 01 28.9**	**-1.0**
FETY	**Fethiye**	**0.53**	**55**	P	**Pn**	**17 01 30.0**	**0.0**
YER	**Yerkesik**	**0.83**	**345**	PG	**Pn**	**17 01 33.1**	**-0.4**
YER				SG	**Sn**	**17 01 45.1**	**-0.3**
AKAS	**Kas**	**0.86**	**96**	PG	**Pn**	**17 01 33.5**	**-0.4**
AKAS	**Kas**	**0.86**	**96**	P	**Pn**	**17 01 33.0**	**-0.9**
AKAS				*i* AML	AML	17 01 45.0	
	comp=E,49nm,1.3s						
AKAS				S	**Sn**	**17 01 45.5**	**-0.5**
AKAS				*i* AML	AML	17 01 50.0	
	comp=N,52nm,0.6s						
CAME	**Cameli-Denizli**	**0.86**	**44**	PG	**Pn**	**17 01 34.6**	**+0.6**
CAME				SG	**Sn**	**17 01 46.8**	**+0.6**
DAT	**Datca**	**0.88**	**297**	PG	**Pn**	**17 01 34.1**	**-0.1**
DAT				SG	**Sn**	**17 01 46.2**	**-0.2**
DAT	**Datca**	**0.88**	**297**	P	**Pn**	**17 01 33.9**	**-0.3**
DAT				S	**Sn**	**17 01 46.0**	**-0.4**
DAT				*i* AML	AML	17 01 47.0	
	comp=E,62nm,0.2s						
DAT				*i* AML	AML	17 01 47.0	
	comp=N,74nm,0.3s						
NIS1	**Nisyros Isl.**	**1.14**	**284**	PN	**Pn**	**17 01 37.6**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.17**	**14**	P	**Pn**	**17 01 38.2**	**+0.3**
TAVA				S	**Sn**	**17 01 52.6**	**-0.5**
TAVA				*i* AML	AML	17 01 53.0	
	comp=N,47nm,0.7s						
TAVA				*i* AML	AML	17 01 54.0	
	comp=E,35nm,0.3s						
ELL	**Elmali**	**1.17**	**69**	PN	**Pn**	**17 01 39.0**	**+1.0**
GOLH	**Golhisar**	**1.22**	**42**	P	**Pn**	**17 01 39.8**	**+1.2**
GOLH				S	**Sn**	**17 01 56.1**	**+1.8**
APMY	**Acipayam-Deniz**	**1.29**	**28**	PN	**Pn**	**17 01 39.8**	**+0.3**
APMY				SN	**Sn**	**17 01 55.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.70**	**342**	PN	**Pn**	**17 01 44.5**	**-0.5**
GCAM	**G?zelcaml?**	**1.73**	**323**	PN	**Pn**	**17 01 44.9**	**-0.4**
GCAM				SN	**Sn**	**17 02 05.4**	**-0.9**
ZKR	**Zakros**	**2.25**	**238**	S	**Sn**	**17 02 20.5**	**+1.5**
AKMS	**Akamas**	**3.35**	**112**	P	**Pn**	**17 02 07.3**	**-0.1**
AKMS				AML	AML	17 02 33.3	
	0.2nm,1.0s						
AKMS				AML	AML	17 02 33.3	
	0.2nm,1.0s						
AKMS				S	**Sn**	**17 02 45.5**	**-0.4**
AKMS				AML	AML	17 02 54.0	
	0.3nm,0.9s						
AKMS				AML	AML	17 02 54.0	
	0.3nm,0.9s						
ALFC	**Alefka**	**3.50**	**108**	S	**Sn**	**17 02 49.1**	**-0.5**
OSC1	**CSNet OBS 1**	**3.60**	**141**	S	**Sn**	**17 02 51.5**	**-0.7**
SZAC	**Souni**	**3.87**	**113**	P	**Pn**	**17 02 14.9**	**+0.4**
SZAC				S	**Sn**	**17 02 58.2**	**-0.4**
SZAC				AML	AML	17 02 59.4	
	0.1nm,0.3s						
SZAC				AML	AML	17 02 59.4	
	0.1nm,0.3s						
SZAC				AML	AML	17 03 01.0	
	0.1nm,0.8s						
SZAC				AML	AML	17 03 01.0	
	0.1nm,0.8s						
ASGA	**Asgata**	**4.13**	**111**	P	**Pn

Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.71**	**167**	⇑	*e*	**P**	Pn	17 18 17.2	-0.6
TBVI	**Tortola**	**0.71**	**167**		*e*	**S**	Sn	17 18 27.9	-0.3
TBVI	**Tortola**	**0.71**	**167**				Pn	17 18 17.2	-0.6
TBVI							Sn	17 18 27.9	-0.3
STVI	**Saint Thomas**	**0.77**	**192**	⇑	*e*	**P**	Pn	17 18 17.7	-0.9
STVI	**Saint Thomas**	**0.77**	**192**		*e*	**S**	Sn	17 18 28.8	-0.7
STVI	**Saint Thomas**	**0.77**	**192**				Pn	17 18 17.7	-0.9
STVI							Sn	17 18 28.8	-0.7
SJVI	**Gifft Hill Sch**	**0.77**	**179**	⇑	*e*	**P**	Pn	17 18 17.9	-0.7
SJVI	**Gifft Hill Sch**	**0.77**	**179**		*e*	**S**	Sn	17 18 28.9	-0.8
SJVI	**Gifft Hill Sch**	**0.77**	**179**				Pn	17 18 17.9	-0.7
SJVI							Sn	17 18 28.9	-0.8
CUPR	**Culebra, Puert**	**0.92**	**211**	⇑	*e*	**P**	Pn	17 18 19.4	-1.1
CUPR	**Culebra, Puert**	**0.92**	**211**		*e*	**S**	Sn	17 18 32.4	-0.7
CUPR	**Culebra, Puert**	**0.92**	**211**				Pn	17 18 19.4	-1.1
CUPR							Sn	17 18 32.4	-0.7
CUPR	**Culebra, Puert**	**0.92**	**211**		IAML			17 18 38.2	
	comp=N,123nm,0.5s								
CBYP	**Canovanas**	**1.31**	**231**	⇑	*e*	**P**	Pn	17 18 24.7	-1.0
CBYP	**Canovanas**	**1.31**	**231**		*e*	**S**	Sn	17 18 41.6	-0.7
CBYP	**Canovanas**	**1.31**	**231**				Pn	17 18 24.7	-1.0
CBYP							Sn	17 18 41.6	-0.7
CDVI	**St. Croix**	**1.35**	**179**		Pn		Pn	17 18 27.7	+1.6
CDVI					IAML			17 18 54.6	
	comp=E,327nm,0.5s								
HUMP	**Col San Antoni**	**1.39**	**227**	⇑	*e*	**P**	Pn	17 18 26.1	-0.6
HUMP	**Col San Antoni**	**1.39**	**227**		*e*	**S**	Sn	17 18 43.5	-0.6
HUMP	**Col San Antoni**	**1.39**	**227**				Pn	17 18 26.1	-0.6
HUMP							Sn	17 18 43.5	-0.6
HUMP	**Col San Antoni**	**1.39**	**227**		IAML			17 18 49.1	
	comp=N,113nm,0.2s								
GCPR	**Guaynabo City**	**1.46**	**237**		Pn		Pn	17 18 26.5	-1.2
PDPR	**Patillas Dam,**	**1.60**	**227**		Pn		Pn	17 18 29.0	-0.5
EMPR	**Esperanza - Ma**	**1.77**	**249**		Pn		Pn	17 18 30.6	-1.2
EMPR					IAML			17 18 45.0	
	comp=N,130nm,1.8s								
EMPR					IAML			17 19 04.1	
	comp=E,152nm,1.3s								
CELP	**Cerrillos**	**1.99**	**239**		Pn		Pn	17 18 34.1	-0.7
CELP					IAML			17 19 04.2	
	comp=N,37nm,0.4s								
AOPR	**Arecibo Observ**	**2.01**	**248**		Pn		Pn	17 18 33.8	-1.4
AOPR					IAML			17 19 10.4	
	comp=E,129nm,0.5s								
AOPR					IAML			17 19 15.1	
	comp=N,62nm,0.4s								
OBIP	**Obispado Ponce**	**2.02**	**239**		Pn		Pn	17 18 33.9	-1.4
MLPR	**Magueyes Islan**	**2.42**	**243**		Pn		Pn	17 18 39.9	-0.8
MLPR					IAML			17 19 50.6	
	comp=N,26nm,3.3s								
MLPR					IAML			17 19 51.9	
	comp=E,22nm,2.5s								
CRPR	**Cabo Rojo, PR**	**2.46**	**244**		Pn		Pn	17 18 41.4	+0.2
CRPR					IAML			17 20 11.3	
	comp=N,21nm,1.9s								

UPA 17 17:21:19.7±2.5,7°52N×82°16W,h14km±27km,MW4.1,
2C-3D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DVD	**David**	**0.96**	**343**		*i*	**P**	Pb	17 21 35.2	-2.9
BCO2	**Palmira**	**1.25**	**343**	⇓	*i*	**P**	Pn	17 21 41.9	-1.1
BCO2					*e*	**S**	Sb	17 21 58.9	-0.4
CACAO	**El Cacao, Vera**	**1.30**	**97**	⇑	*i*	**P**	Pn	17 21 41.6	-1.9
CACAO					*i*	**S**	Sb	17 21 58.7	-1.8
BRU2	**Volcan**	**1.37**	**338**	⇓	*i*	**P**	Pn	17 21 43.9	-0.8
CHIT3	**Chitre**	**1.78**	**76**		*i*	**P**	Pn	17 21 47.8	-2.3
CHIT3					*i*	**S**	Sn	17 22 11.4	-1.2
AZU	**Azuero**	**1.89**	**82**	⇓	*i*	**P**	Pn	17 21 50.0	-1.6
AZU					*i*	**S**	Sn	17 22 15.0	-0.3
CNI2	**El Empalme, Bo**	**1.92**	**351**		*i*	**P**	Pn	17 21 52.5	+0.5
CNI2					*e*	**S**	Sn	17 22 14.5	-1.5
DRK0	**Durika**	**2.04**	**328**		*e*	**P**	Pn	17 21 55.1	+1.3
PNME	**Penonome**	**2.06**	**62**		*e*	**P**	Pn	17 21 52.5	-1.4
PNME					*e*	**S**	Sn	17 22 19.3	-0.1
VTON	**El Valle, Cocl**	**2.30**	**62**		*e*	**P**	Pn	17 21 57.8	+0.5
VTON					*i*	**S**	Sn	17 22 25.8	+0.2
CHOR3	**La Chorrera**	**2.74**	**60**		*e*	**P**	Pn	17 22 03.7	+0.4
BCIP	**Isla Barro Col**	**2.82**	**54**				Pn	17 22 04.7	+0.2
BCIP	**Isla Barro Col**	**2.82**	**54**	⇑	*i*	**P**	Pn	17 22 04.9	+0.4
BATAN	**Batan**	**2.83**	**335**		*e*	**P**	Pb	17 22 07.7	-2.4
UPA	**Univ. de Panam**	**2.98**	**61**		*e*	**P**	Pn	17 22 05.0	-1.6
UPA					*e*	**S**	Sn	17 22 41.7	-0.5
HDC	**Heredia**	**3.13**	**322**		*e*	**P**	Pn	17 22 06.2	-2.7
CHPO	**Chepo, Panama**	**3.43**	**61**		*e*	**P**	Pn	17 22 15.9	+3.0
JTS	**Las Juntas de**	**3.90**	**315**		*e*	**P**	Pn	17 22 22.3	+3.0
UPD2	**Meteti**	**4.23**	**76**		*i*	**P**	Pn	17 22 23.7	-0.1
UREC	**San Jos de Ur**	**6.57**	**88**		*e*	**P**	Pn	17 22 58.4	+2.3

*IDC **17** 17:23:06.8±1.6,4°.58S×149°.58E,h558km±18km,mb3.1/4,*
mbtmp4.0/6,Error ellipse: s-maj=39.8km s-min=25.6km
az=135.0
*NEIC **17** 17:23:06.8±1.6,4°.6S±0°.2×149°.7E±0°.1,h566km±19km,*
mb4.2/14,Error ellipse: s-maj=27.4km s-min=11.2km
az=145.0
ISC 17 17:23:07.2±1.1,4°.8S±0°.1×149°.6E±0°.1,h550km,n36,
σ0s95/34,mb4.1/10,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.44**	**79**		P		**P**	**17 24 19.4**	**+0.4**
	32nm,0.4s,baz=221,slow=0.8,SNR=24								
RABL	**Rabaul**	**2.59**	**77**		P		**P**	**17 24 19.2**	**-0.7**
RABL	**Rabaul**	**2.59**	**77**		P		**P**	**17 24 19.9**	**0.0**
MANU	**Manus Island**	**3.52**	**320**		P		**P**	**17 24 25.9**	**+0.2**
COEN	**Coen**	**11.13**	**214**		P		**P**	**17 25 37.5**	**+0.7**
COEN	**Coen**	**11.13**	**214**		P		P	17 25 42.8	+6.0
MTSU	**Mount Surprise**	**14.27**	**201**		P		**P**	**17 26 11.6**	**+2.4**
CTA	**Charters Tower**	**15.58**	**192**		P		**P**	**17 26 23.5**	**+0.9**
	11nm,1.0s,baz=4.6,slow=11,SNR=10.0								
CTA	**Charters Tower**	**15.58**	**192**		P		**P**	**17 26 24.3**	**+1.7**
CTAO	**Charters Tower**	**15.58**	**192**		P		**P**	**17 26 23.9**	**+1.2**
CTAO	**Charters Tower**	**15.58**	**192**		P		**P**	**17 26 24.4**	**+1.8**
FAKI	**Fak Fak**	**17.43**	**275**		P		**P**	**17 26 39.5**	**-0.5**
QIS	**Mount Isa**	**18.48**	**211**		P		**P**	**17 26 50.5**	**+1.0**
KDU	**Kakadu**	**18.68**	**244**		P		**P**	**17 26 50.8**	**-0.6**
WB0	**Warramunga Arr**	**21.04**	**224**		P		**P**	**17 27 13.3**	**+0.5**
WB0					IAmb		IAmb	17 27 48.0	
	comp=Z,8.9nm,1.3s								
WR0	**Warramunga Arr**	**21.07**	**223**		P		**P**	**17 27 13.6**	**+0.6**
WR0					IAmb		IAmb	17 27 14.5	
	comp=Z,5.9nm,0.9s								
WRAB	**Tennant Creek**	**21.18**	**223**		P		**P**	**17 27 14.5**	**+0.5**
WRAB					IAmb		IAmb	17 27 38.5	
	comp=Z,2.0nm,0.8s								
WRAB	**Tennant Creek**	**21.18**	**223**		P		**P**	**17 27 14.2**	**+0.2**
WB2	**Warramunga Arr**	**21.19**	**223**		P		**P**	**17 27 14.6**	**+0.5**
WB2					IAmb		IAmb	17 27 33.5	
	comp=Z,4.8nm,1.1s								
WRA	**Warramunga Arr**	**21.20**	**223**		P		**P**	**17 27 14.6**	**+0.4**
	comp=Z,1.7nm,0.4s,baz=48,slow=9.3,SNR=52								
	comp=Z,1.7nm,0.4s								
WRA	**Warramunga Arr**	**21.20**	**223**		P		**P**	**17 27 13.6**	**-0.6**
AS31	**Alice Springs**	**24.15**	**217**		P		**P**	**17 27 40.8**	**+0.3**
ASAR	**Alice Springs**	**24.15**	**217**		P		**P**	**17 27 40.7**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=47,slow=8.2,SNR=92								
	comp=Z,2.4nm,0.3s								
ASAR	**Alice Springs**	**24.15**	**217**		P		**P**	**17 27 40.2**	**-0.2**
INKA	**Innaminka**	**24.37**	**199**		P		**P**	**17 27 42.6**	**+0.3**
PININC	**Pines Island,**	**24.74**	**137**		P		P	17 27 35.9	-10
ARMA	**Armidale**	**25.59**	**176**		P		**P**	**17 27 51.3**	**-1.9**
ARMA					IAmb		IAmb	17 28 32.6	
	comp=Z,14nm,1.4s								
OOD	**Oodnadatta**	**26.47**	**209**		P		**P**	**17 28 00.9**	**0.0**
FITZ	**Fitzroy Crossi**	**26.94**	**239**		P		**P**	**17 28 03.9**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=45,slow=7.8,SNR=1.2								
	comp=Z,0.6nm,0.4s								
FITZ	**Fitzroy Crossi**	**26.94**	**239**		P		**P**	**17 28 03.8**	**-1.3**
FITZ					IAmb		IAmb	17 28 10.1	
	comp=Z,9.2nm,1.4s								
BBOO	**Buckleboo**	**30.65**	**203**		P		**P**	**17 28 37.0**	**-0.2**
TOO	**Toolangi**	**32.87**	**186**		P		**P**	**17 28 55.8**	**-0.3**
TOO					IAmb		IAmb	17 28 58.2	
	comp=Z,14nm,1.2s								
FORT	**Forrest**	**32.90**	**216**		P		**P**	**17 28 55.9**	**-0.4**
VNDA	**Vanda**	**73.00**	**177**		P		**P**	**17 33 40.5**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=322,slow=7.9,SNR=6.6								
	comp=Z,0.7nm,0.5s								
VNDA	**Vanda**	**73.00**	**177**		P		**P**	**17 33 40.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**147.28**	**287**		PKPbc		**PKPdf**	**17 41 48.2**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=94,slow=2.8,SNR=7.4								

*IDC **17** 17:36:24.5±0.5,32°.37S×79°.92E,h0km,mb4.4/17,*
mbtmp4.4/17,MS3.8/26,Error ellipse: s-maj=17.2km
s-min=16.5km az=97.0
*NEIC **17** 17:36:26.9±2.3,32°.53S±0°.08×79°.9E±0°.1,h10km±1km,*
mb4.8/45,Error ellipse: s-maj=19.7km s-min=3.8km
az=133.0
ISC 17 17:36:26.8±0.4,32°.46S±0°.07×79°.86E±0°.09,h10km,n100,
σ1s05/77,mb4.7/36,MS3.9/26,Broken Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**25.62**	**343**		T		T	18 08 41.6	
	baz=166,slow=76,SNR=334								
H08S1	**Diego Garcia H**	**25.62**	**343**		T		T	18 08 34.8	
	baz=166,slow=76,SNR=81								
H08S3	**Diego Garcia H**	**25.64**	**343**		T		T	18 08 56.4	
	baz=166,slow=76,SNR=519								
H01W2	**Cape Leeuwin H**	**28.55**	**104**		T		T	18 11 59.6	
	baz=265,slow=74,SNR=32								
H01W3	**Cape Leeuwin H**	**28.55**	**104**		T		T	18 11 56.1	
	baz=265,slow=74,SNR=37								
H01W1	**Cape Leeuwin H**	**28.57**	**104**		T		T	18 12 01.7	
	baz=265,slow=74,SNR=32								
LEM	**Lembang**	**36.30**	**51**		LR		LR	17 55 42.1	
	comp=Z,197nm,19.2s,baz=240,slow=32								
KRJI	**Kerinci**	**36.40**	**38**		P		**P**	**17 43 34.2**	**+2.5**
	77nm,1.2s								
MAW	**Mawson**	**36.57**	**191**		P		**P**	**17 43 32.6**	**+0.2**
	5.8nm,0.8s,baz=16,slow=9.0,SNR=11								
MAW					LR		LR	17 55 32.7	
	comp=Z,184nm,19.8s,baz=20,slow=31								
	5.8nm,0.8s								
MAW	**Mawson**	**36.57**	**191**		P		**P**	**17 43 32.0**	**-0.5**
CASY	**Casey**	**38.50**	**161**		P		**P**	**17 43 48.6**	**-0.3**
PALK	**Pallekele**	**39.52**	**1**		LR		LR	17 57 40.0	
	comp=Z,159nm,19.0s,baz=257,slow=32								
FITZ	**Fitzroy Crossi**	**43.47**	**82**		LR		LR	18 00 15.0	
	comp=Z,197nm,19.4s,baz=254,slow=33								
SOE	**Somerset East**	**45.31**	**254**		P		**P**	**17 44 45.8**	**+0.7**
KAPI	**Kappang**	**46.17**	**62**		LR		LR	18 02 23.6	
	comp=Z,101nm,19.1s,baz=268,slow=34								
SBUM	**Sibu**	**46.31**	**48**		P		**P**	**17 44 53.9**	**+0.9**
SBUM					IAmb		IAmb	17 45 03.3	
	comp=Z,11nm,1.2s								
BOSA	**Boshof**	**46.76**	**260**		P		**P**	**17 44 56.1**	**-0.5**
	comp=Z,4.8nm,0.9s,baz=110,slow=7.3,SNR=6.0								
BOSA					LR		LR	18 01 09.4	
	comp=Z,125nm,18.5s,baz=118,slow=32								
	comp=Z,4.8nm,0.9s								
TTSI	**Tana Toraja**	**47.52**	**60**		P		**P**	**17 45 03.7**	**+1.2**
	comp=Z,11nm,2.6s								
LBTB	**Lobatse**	**47.73**	**264**		P		**P**	**17 45 04.0**	**-0.2**
	comp=Z,8.6nm,0.7s,baz=119,slow=7.0,SNR=12								
LBTB					LR		LR	18 01 41.5	
	comp=Z,105nm,18.1s,baz=113,slow=32								
	comp=Z,8.6nm,0.7s								
LBTB	**Lobatse**	**47.73**	**264**		P		**P**	**17 45 04.2**	**0.0**
ASAR	**Alice Springs**	**48.06**	**94**		P		**P**	**17 45 04.8**	**-2.0**
	comp=Z,5.2nm,1.0s,baz=244,slow=6.2,SNR=14								
	comp=Z,5.2nm,1.0s								
ASAR	**Alice Springs**	**48.06**	**94**		P		**P**	**17 45 08.8**	**+2.1**
AS31	**Alice Springs**	**48.07**	**94**		P		**P**	**17 45 08.3**	**+1.6**
SUR	**Sutherland**	**49.26**	**253**		LR		LR	18 01 42.6	
	comp=Z,137nm,19.3s,baz=132,slow=31								
HYBB	**Hyderaad (bro**	**49.61**	**358**		P		**P**	**17 45 18.7**	**+0.3**
LSZ	**Lusaka**	**49.77**	**277**		LR		LR	18 03 54.9	
	comp=Z,70nm,18.3s,baz=147,slow=33								
LSZ	**Lusaka**	**49.77**	**277**		P		**P**	**17 45 21.4**	**+1.4**
LSZ					IAmb		IAmb	17 45 22.2	
	comp=Z,9.3nm,1.1s								
WRA	**Warramunga Arr**	**49.97**	**90**		P		**P**	**17 45 21.2**	**-0.2**
	comp=Z,5.2nm,0.9s,baz=246,slow=7.6,SNR=13								
	comp=Z,5.2nm,0.9s								
WRAB	**Tennant Creek**	**49.99**	**90**		P		**P**	**17 45 19.8**	**-1.6**
WB0	**Warramunga Arr**	**50.09**	**89**		P		**P**	**17 45 22.9**	**+0.6**
WB0					IAmb		IAmb	17 45 30.9	
	comp=Z,11nm,0.9s								
WR0	**Warramunga Arr**	**50.13**	**90**		P		**P**	**17 45 23.1**	**+0.5**
WR0					IAmb		IAmb	17 45 31.2	
	comp=Z,9.4nm,0.8s								
KMBO	**Kilima Mbogo**	**50.76**	**299**		P		**P**	**17 45 28.3**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=87,slow=7.8,SNR=9.8								
	comp=Z,4.1nm,0.9s								
KMBO	**Kilima Mbogo**	**50.76**	**299**		P		**P**	**17 45 29.2**	**+1.6**
CM31	**Chiang Mai Arr**	**53.82**	**23**		P		**P**	**17 45 50.3**	**+0.4**
CM31					IAmb		IAmb	17 47 38.5	
	comp=Z,21nm,1.6s								
CMAR	**Chiang Mai Arr**	**53.82**	**23**		P		**P**	**17 45 49.8**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=208,slow=6.3,SNR=6.4								
CMAR					LR		LR	18 07 37.6	
	comp=Z,39nm,18.3s,baz=210,slow=35								
	comp=Z,1.2nm,0.4s								
CMAR	**Chiang Mai Arr**	**53.82**	**23**		P		**P**	**17 45 50.8**	**+0.9**
TROLL	**Troll, Antarti**	**55.58**	**202**		P		**P**	**17 46 03.4**	**+1.2**
CRAI	**Chiadarai**	**55.95**	**23**		P		**P**	**17 46 05.6**	**+0.3**
MBAR	**Mbarara**	**56.02**	**294**		LR		LR	18 05 57.2	
	comp=Z,67nm,18.7s,baz=96,slow=32								
VNDA	**Vanda**	**56.84**	**165**		P		**P**	**17 46 11.2**	**+0.1**
	comp=Z,2.3nm,1.0s,baz=269,slow=8.0,SNR=5.7								
VNDA					LR		LR	18 07 10.2	
	comp=Z,61nm,18.9s,baz=275,slow=32								
	comp=Z,2.3nm,1.0s								
VNDA	**Vanda**	**56.84**	**165**		P		**P**	**17 46 10.6**	**-0.4**
VNDA					IAmb		IAmb	17 46 17.7	
	comp=Z,20nm,1.9s								
TSUM	**Tsumeb**	**56.88**	**267**		LR		LR	18 07 38.2	
	comp=Z,199nm,18.2s,baz=125,slow=33								
TSUM	**Tsumeb**	**56.88**	**267**		P		**P**	**17 46 12.7**	**+0.3**
TSUM					IAmb		IAmb	17 46 13.9	
	comp=Z,9.6nm,0.9s								
SNAA	**Sanae**	**57.27**	**202**		P		**P**	**17 46 15.0**	**+0.8**
SNAA	**Sanae**	**57.27**	**202**		LR		LR	18 07 27.5	
	comp=Z,47nm,19.0s,baz=48,slow=32								
SNAA	**Sanae**	**57.27**	**202**		P		**P**	**17 46 15.2**	**+1.0**
QSPA	**South Pole Qui**	**57.69**	**180**		P		**P**	**17 46 17.1**	**-0.3**
	comp=Z,9.9nm,0.9s,baz=287,slow=2.7,SNR=29								
	comp=Z,9.9nm,0.9s								
QSPA	**South Pole Qui**	**57.69**	**180**		P		**P**	**17 46 17.0**	**-0.4**
QSPA					IAmb		IAmb	17 46 18.0	
	comp=Z,13nm,1.0s								
DAV	**Davao City (W)**	**58.63**	**56**		LR		LR	18 08 41.1	
	comp=Z,47nm,21.4s,baz=249,slow=33								
VNA2	**Neumayer--Watz**	**58.82**	**203**		P		**P**	**17 46 26.0**	**+1.0**
	baz=85,slow=5.5								
VNA1	**Neumayer--Stat**	**59.15**	**203**		P		**P**	**17 46 28.5**	**+1.2**
VNA3	**Neumayer Olymp**	**59.49**	**202**		P		**P**	**17 46 30.7**	**+1.0**
LSA	**Lhasa**	**62.74**	**11**		P		**P**	**17 46 53.1**	**+0.4**
BELA	**Belgrano 2**	**63.39**	**192**		P		**P**	**17 46 55.4**	**-0.5**
RAYN	**Ar Rayn**	**64.62**	**325**		P		**P**	**17 47 05.6**	**+0.9**
KBL	**Kabul**	**67.42**	**350**		P		**P**	**17 47 23.1**	**+0.4**
KBL					IAmb		IAmb	17 47 23.7	
	comp=Z,8.5nm,0.9s								
HRA	**Herat**	**68.52**	**344**		P		**P**	**17 47 29.0**	**-0.6**
HRA					IAmb		IAmb	17 47 44.6	
	comp=Z,5.2nm,0.7s								
CHGR	**Chuyangaron**	**71.45**	**351**		P		**P**	**17 47 47.7**	**+0.4**
CHGR					IAmb		IAmb	17 48 01.9	
	comp=Z,12nm,1.2s								
GAR	**Garm**	**71.65**	**352**		P		**P**	**17 47 47.0**	**-1.6**
GAR					IAmb		IAmb	17 47 48.2	
	comp=Z,9.8nm,0.9s								
KRVT	**Keravat (AS076**	**72.66**	**84**		LR		LR	18 19 18.4	
	comp=Z,76nm,18.8s,baz=318,slow=36								
GEYT	**Alibeck**	**72.90**	**342**		P		**P**	**17 47 56.3**	**+0.3**
GEYT					IAmb		IAmb	17 48 01.2	
	comp=Z,8.8nm,1.2s								
NRN	**Naryn**	**73.61**	**357**		P		**P**	**17 48 00.0**	**-0.4**
AAK	**Ala-Archa**	**74.89**	**356**		P		**P**	**17 48 07.7**	**0.0**
AAK					IAmb		IAmb	17 48 12.7	
	comp=Z,12nm,1.4s								
EIL	**Elat**	**75.04**	**321**		LR		LR	18 17 35.0	
	comp=Z,88nm,18.0s,baz=89,slow=33								
KK31	**Karatay Array**	**75.68**	**353**		P		**P**	**17 48 12.3**	**+0.3**
KK31					IAmb		IAmb	17 48 13.3	
	comp=Z,11nm,0.9s								
KKAR	**Karatay Array**	**75.68**	**353**		P		**P**	**17 48 12.3**	**+0.3**
KKAR					IAmb		IAmb	17 48 13.3	
	comp=Z,11nm,0.9s								
KKAR	**Karatay Array**	**75.68**	**353**		P		**P**	**17 48 12.5**	**+0.4**
HNR	**Honiara**	**76.67**	**93**		LR		LR	18 20 24.8	
	comp=Z,69nm,18.7s,baz=242,slow=34								
SMAI	**San Martin Ant**	**76.72**	**192**		P		**P**	**17 48 18.7**	**+0.9**
SMAI					IAmb		IAmb	17 48 19.6	
	comp=Z,11nm,0.9s								
ORCD	**Orcadas**	**76.74**	**205**		P		**P**	**17 48 17.9**	**-0.1**
MK31	**Makanchi Array**	**78.92**	**2**		P		**P**	**17 48 28.6**	**-1.6**
MKAR	**Makanchi Array**	**78.92**	**2**		P		**P**	**17 48 27.9**	**-2.2**
	comp=Z,2.2nm,0.9s,baz=156,slow=6.1,SNR=15								
MKAR					LR		LR	18 22 21.3	
	comp=Z,36nm,18.8s,baz=196,slow=35								
	comp=Z,2.2nm,0.9s								
MKAR	**Makanchi Array**	**78.92**	**2**		P		**P**	**17 48 28.3**	**-1.8**
MAKZ	**Makanchi**	**78.92**	**1**		P		**P**	**17 48 28.9**	**-1.3**
PMSA	**Palmer Station**	**79.06**	**195**		LR		LR	18 21 30.7	
	comp=Z,48nm,19.0s,baz=145,slow=34								
GNI	**Garni**	**79.22**	**333**		LR		LR	18 21 25.3	
	comp=Z,30nm,19.1s,baz=139,slow=34								
KSRS	**Korea Array**	**82.75**	**37**		P		**P**	**17 48 49.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=205,slow=5.4,SNR=2.4								
KSRS					LR		LR	18 25 36.9	
	comp=Z,23nm,18.8s,baz=235,slow=36								
	comp=Z,0.3nm,0.3s								
KBZ	**Khabaz**	**83.00**	**334**		P		**P**	**17 48 51.2**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=170,slow=5.7,SNR=4.1								
	comp=Z,2.3nm,0.8s								
ABKAR	**Akbulak array**	**83.26**	**347**		P		**P**	**17 48 52.7**	**-0.5**
ABKAR	**Akbulak array**	**83.26**	**347**		P		**P**	**17 48 52.1**	**-1.1**
SONM	**Songino Array**	**83.40**	**18**		P		**P**	**17 48 53.0**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=197,slow=4.3,SNR=8.6								
SONM					LR		LR	18 24 59.9	
	comp=Z,45nm,18.8s,baz=210,slow=35								
	comp=Z,1.5nm,0.8s								
BRTR	**Keskin Array B**	**83.62**	**326**		P		**P**	**17 48 54.1**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=148,slow=7.3,SNR=5.9								
	comp=Z,1.6nm,0.8s								
BRVK	**Borovoye**	**85.56**	**354**		P		**P**	**17 49 03.8**	**-0.9**
ZAA0	**Zalesovo Array**	**86.16**	**3**		P		**P**	**17 49 06.5**	**-1.1**
ZAA0					IAmb		IAmb	17 49 07.5	
	comp=Z,8.0nm,1.0s								
ZALV	**Zalesovo Beam**	**86.16**	**3**		P		**P**	**17 49 06.0**	**-1.7**
	comp=Z,4.8nm,0.9s,baz=204,slow=3.3,SNR=20								
ZALV					LR		LR	18 25 48.8	
	comp=Z,31nm,21.9s,baz=196,slow=34								
	comp=Z,4.8nm,0.9s								
ZALV	**Zalesovo Beam**	**86.16**	**3**		P		**P**	**17 49 06.5**	**-1.1**
TOA0	**Torodi Ar. Sit**	**87.24**	**287**		P		**P**	**17 49 13.8**	**0.0**
TOA0					IAmb		IAmb	17 49 14.9	
	comp=Z,6.6nm,1.0s								
TORD	**Torodi Ar. Bea**	**87.24**	**287**		P		**P**	**17 49 13.0**	**-0.9**
	comp=Z,5.6nm,0.9s,baz=113,slow=4.8,SNR=20								
	comp=Z,5.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**87.24**	**287**		P		**P**	**17 49 13.7**	**-0.2**
TORD					IAmb		IAmb	17 49 14.9	
	comp=Z,6.7nm,1.0s								
DBIC	**Dimbokro**	**89.10**	**278**		LR		LR	18 25 58.4	
	comp=Z,80nm,19.3s,baz=146,slow=33								
ARU	**Arti**	**90.37**	**348**		LR		LR	18 29 49

PDAR				LR	LR	18 06 38.8			
	comp=E,12nm,20.9s,baz=5.5,slow=39								
	comp=E,8.0nm,0.4s								
PDAR	**Pinedale Array**	**3.25**	**252**	Pn	**Pn**	**18 05 27.7**	**+0.5**		
GCMT	**Greycliff**	**3.65**	**304**		**Pn**	**18 05 34.0**	**+1.5**		
OGNE	**Ogallala**	**3.78**	**138**		**Pn**	**18 05 34.8**	**+0.6**		
LOHW	**Long Hollow**	**3.82**	**269**		**Pn**	**18 05 36.6**	**+1.6**		
FLWY	**Flagg Ranch**	**3.88**	**276**		**Pn**	**18 05 35.4**	**-0.3**		
FLWY				IAML		18 06 45.0			
	comp=E,107nm,1.4s								
FLWY				IAML		18 06 50.7			
	comp=E,94nm,1.0s								
MOOW	**Moose Ponds**	**3.91**	**271**		**Pn**	**18 05 37.2**	**+1.0**		
SNOW	**Snow King Moun**	**3.95**	**267**		**Pn**	**18 05 37.4**	**+0.6**		
SNOW				IAML		18 06 43.3			
	comp=E,95nm,0.7s								
SNOW				IAML		18 06 54.6			
	comp=E,78nm,0.9s								
YPP	**Pitchstone Pla**	**3.96**	**278**		**Pn**	**18 05 37.8**	**+0.8**		
ISCO	**Idaho Springs**	**4.03**	**183**	Pn	**Pn**	**18 05 38.2**	**+0.3**		
REDW	**Red Top Meadow**	**4.03**	**265**		**Pn**	**18 05 39.1**	**+1.3**		
REDW				IAML		18 06 55.0			
	comp=E,82nm,0.9s								
IMW	**Indian Meadow**	**4.05**	**273**		**Pn**	**18 05 40.5**	**+2.4**		
IMW				IAML		18 06 48.4			
	comp=E,57nm,1.1s								
IMW				IAML		18 06 50.1			
	comp=E,92nm,0.6s								
TPAW	**Teton Pass**	**4.08**	**267**		**Pn**	**18 05 39.4**	**+0.7**		
TPAW				IAML		18 06 56.4			
	comp=E,55nm,0.9s								
TPAW				IAML		18 07 04.0			
	comp=E,98nm,0.9s								
FXWY	**Fox Creek**	**4.12**	**269**		**Pn**	**18 05 40.7**	**+1.5**		
O20A	**White River Ci**	**4.27**	**211**		**Pn**	**18 05 41.4**	**+0.2**		
O20A				IAML		18 06 53.2			
	comp=N,74nm,1.1s								
O20A				IAML		18 06 55.4			
	comp=E,74nm,0.6s								
E28A	**Huff**	**4.28**	**48**		**Pn**	**18 05 42.8**	**+1.7**		
YHL	**Hebgen Lake**	**4.31**	**286**	Pn	**Pn**	**18 05 42.6**	**+0.7**		
YHL				IAML		18 06 59.2			
	comp=N,81nm,1.1s								
YHL				IAML		18 07 17.6			
	comp=E,71nm,1.0s								
AHID	**Auburn Hatcher**	**4.33**	**258**	Pn	**Pn**	**18 05 42.4**	**+0.4**		
AHID				IAML		18 06 54.5			
	comp=E,63nm,0.8s								
AHID				IAML		18 06 59.1			
	comp=E,51nm,0.7s								
ECR	**Eagle Creek**	**4.46**	**262**		**Pb**	**18 05 53.4**	**-0.6**		
RDMU	**Red Mountain**	**4.52**	**225**		**Pn**	**18 05 44.5**	**-0.1**		
RDMU				IAML		18 07 02.4			
	comp=N,68nm,1.0s								
RDMU				IAML		18 07 03.7			
	comp=E,64nm,1.2s								
DGMT	**Dagmar**	**4.71**	**9**		**Pn**	**18 05 49.3**	**+2.3**		
SMCO	**Snowmass**	**4.80**	**195**	Pn	**Pn**	**18 05 48.3**	**-0.3**		
SMCO				IAML		18 07 15.5			
	comp=E,47nm,1.2s								
SMCO				IAML		18 07 24.4			
	comp=E,42nm,1.1s								
BOZ	**Bozeman (W)**	**4.82**	**294**		**Pn**	**18 05 49.8**	**+1.2**		
BOZ				IAML		18 07 12.7			
	comp=E,34nm,0.9s								
BOZ				IAML		18 07 21.9			
	comp=E,33nm,0.9s								
Q24A	**Divide**	**4.86**	**178**		**Pn**	**18 05 49.1**	**-0.2**		
Q24A				IAML		18 07 13.7			
	comp=E,53nm,0.7s								
Q24A				IAML		18 07 15.0			
	comp=N,32nm,0.9s								
HWUT	**Hardware Ranch**	**5.09**	**246**	Pn	**Pn**	**18 05 53.1**	**+0.7**		
EGMT	**Eagleton**	**5.21**	**325**	Pn	**Pn**	**18 05 55.7**	**+1.9**		
KSCO	**Kaye Shedlock'**	**5.22**	**156**	Pn	**Pn**	**18 05 54.3**	**+0.1**		
P18A	**Preston Nutter**	**5.57**	**223**		**Pn**	**18 05 60.0**	**+0.9**		
MDND	**Maddock**	**5.68**	**43**		**Pg**	**18 06 20.6**	**-2.8**		
PV07	**Paradox Valley**	**5.93**	**206**		**Pn**	**18 06 05.2**	**+1.3**		
ECSD	**EROS Data Cent**	**6.32**	**88**	Pn	**Pn**	**18 06 09.9**	**+0.8**		
CBKS	**Cedar Bluff**	**6.54**	**138**		**Pg**	**18 06 37.4**	**-2.7**		
DUG	**Dugway, Tooele**	**6.64**	**239**	Pn	**Pn**	**18 06 14.4**	**+0.8**		
L34A	**Svendsen Farm,**	**6.84**	**103**		**Pb**	**18 06 38.4**	**+4.0**		
ELK	**Elko**	**7.96**	**251**	Pn	**Pn**	**18 06 32.3**	**+0.5**		
	comp=N,0.6nm,0.3s,baz=59,slow=12,SNR=11								
ELK				Lg	Lg	18 08 42.9			
	comp=N,0.1nm,0.3s,baz=174,slow=22,SNR=1.3								
	comp=N,1.3nm,0.3s								
AGMN	**Agassiz Nation**	**7.96**	**53**		**Pn**	**18 06 33.7**	**+2.1**		
ANMO	**Albuquerque**	**8.91**	**186**	Lg	Lg	18 09 14.9			
	comp=N,0.1nm,0.3s,baz=298,slow=22,SNR=1.8								
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn	**Pn**	**18 06 46.1**	**-1.2**		
	comp=N,1.7nm,0.3s,baz=232,slow=12,SNR=9.5								
ULM				Lg	Lg	18 09 16.9			
	comp=N,0.2nm,0.3s,baz=126,slow=22,SNR=1.5								
	comp=N,5.5nm,0.5s								
NEW	**Newport**	**9.32**	**303**	Pn	**Pn**	**18 06 49.0**	**-1.2**		
	comp=N,0.2nm,0.3s,baz=96,slow=15,SNR=2.4								
NEW				Lg	Lg	18 09 20.6			
	comp=N,0.3nm,0.3s,baz=88,slow=20,SNR=2.1								
NEW				LR	LR	18 10 52.3			
	comp=N,40nm,21.4s,baz=126,slow=41								
	comp=N,1.7nm,0.6s								
I56US	**NEWPORT INFRAS**	**9.32**	**303**	*i*		18 59 10.0			
	baz=117,slow=314,SNR=8.3								
KVN	**Kaiserville**	**10.70**	**248**		**Pn**	**18 07 11.8**	**+2.5**		
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**18 07 17.2**	**+1.6**		
	comp=N,0.2nm,0.3s,baz=50,slow=12,SNR=7.4								
	comp=N,1.1nm,0.7s								
GRAC	**Grapevine Rang**	**11.42**	**237**		**Pn**	**18 07 16.1**	**-3.0**		
YBH	**Yreka Blue Hor**	**12.93**	**267**	Pn	**Pn**	**18 07 44.1**	**+4.3**		
	comp=N,0.2nm,0.3s,baz=45,slow=8.6,SNR=2.9								
	comp=N,3.5nm,1.0s								
TXAR	**Lajitas Array**	**14.53**	**174**	Pn	**Pn**	**18 08 03.1**	**+1.6**		
	comp=N,0.1nm,0.5s,baz=6.2,slow=11,SNR=1.9								
TXAR				Lg	Lg	18 12 05.3			
	baz=359,slow=29,SNR=3.1								
TIXI	**Tiksi**	**58.64**	**342**	LR	LR	18 42 06.2			
	comp=N,38nm,18.2s,baz=186,slow=38								
ARCES	**ARCESS Array B**	**61.35**	**18**	P	**P**	**18 14 50.9**	**-0.8**		
	comp=N,1.1nm,0.6s,baz=336,slow=5.6,SNR=7.6								
	comp=N,1.1nm,0.6s								
ZALV	**Zalesovo Beam**	**82.21**	**354**	P	**P**	**18 16 56.9**	**-0.4**		
	comp=N,1.0nm,0.7s,baz=355,slow=3.9,SNR=4.2								
	comp=N,1.0nm,0.7s								
SONM	**Songino Array**	**84.54**	**339**	P	**P**	**18 17 08.3**	**-1.3**		
	comp=N,0.3nm,0.5s,baz=11,slow=2.9,SNR=1.7								
	comp=N,0.3nm,0.5s								
MKAR	**Makanchi Array**	**89.51**	**355**	P	**P**	**18 17 33.2**	**-0.4**		
	comp=N,0.7nm,0.6s,baz=12,slow=5.1,SNR=8.8								
	comp=N,0.7nm,0.6s								

*NEIC **17** 18:06:26.9±0.5,5°.53S±0°.06×147°.4E±0°.1,h206km±12km, mb4.3/15,Error ellipse: s-maj=17.4km s-min=4.5km az=115.0*

*IDC **17** 18:06:28.2±2.8,5°.49S×147°.34E,h221km±25km,mb3.5/9, mbtmp4.1/11,Error ellipse: s-maj=24.8km s-min=10.6km az=109.0*

ISC 17 18:06:25.7±0.6,5°.52S±0°.08×147°.39E±0°.10,h200km,n38, σ1°51/39,mb3.8/13,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.46**	**360**	Pn	**Pn**	**18 07 22.1**	**+1.3**
RABL	**Rabaul**	**4.94**	**75**		**Pn**	**18 07 39.7**	**+0.4**
COEN	**Coen**	**9.35**	**206**	Pn	**Pn**	**18 08 37.6**	**+1.0**
HNR	**Honiara**	**13.04**	**108**	P	**Pn**	**18 09 22.7**	**-1.1**
CTA	**Charters Tower**	**14.52**	**184**	P	**P**	**18 09 45.9**	**+2.6**
	8.0nm,0.6s,baz=7.8,slow=13,SNR=12						
CTAO	**Charters Tower**	**14.52**	**184**	P	**P**	**18 09 44.5**	**+1.2**
MTN	**Manton Dam**	**17.61**	**244**		**Pn**	**18 10 18.3**	**-0.9**
MTN				IAmb	IAmb	18 10 19.0	
	comp=Z,7.5nm,0.8s						
WB0	**Warramunga Arr**	**18.98**	**221**		**Pn**	**18 10 32.9**	**-2.5**
WB0				IAmb	IAmb	18 10 36.9	
	comp=Z,18nm,0.8s						
WR0	**Warramunga Arr**	**19.03**	**220**		**Pn**	**18 10 33.4**	**-2.5**
WRAB	**Tennant Creek**	**19.13**	**220**	P	**Pn**	**18 10 34.3**	**-2.8**
WRAB				IAmb	IAmb	18 10 38.6	
	comp=Z,18nm,0.7s						
WB2	**Warramunga Arr**	**19.14**	**220**		**Pn**	**18 10 34.4**	**-2.8**
WB2				IAmb	IAmb	18 10 38.7	
	comp=Z,23nm,0.9s						
WRA	**Warramunga Arr**	**19.15**	**220**	P	**Pn**	**18 10 34.6**	**-2.7**
	comp=Z,17nm,0.9s,baz=47,slow=12,SNR=219						
WRA				S	**S**	**18 13 59.2**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=46,slow=20,SNR=4.7						
WRA	**Warramunga Arr**	**19.15**	**220**	P	**P**	**18 10 33.3**	**-0.8**
KNRA	**Kununurra**	**20.88**	**240**	P	**P**	**18 10 52.5**	**-0.1**
KNRA				IAmb	IAmb	18 11 11.8	
	comp=Z,21nm,1.4s						
AS31	**Alice Springs**	**22.23**	**214**	P	**P**	**18 11 07.2**	**+1.0**
AS31				IAmb	IAmb	18 11 18.2	
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**22.23**	**214**	P	**P**	**18 11 07.0**	**+0.8**
	comp=Z,8.1nm,0.8s,baz=49,slow=8.9,SNR=155						
ASAR				S	**S**	**18 14 57.6**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=32,slow=20,SNR=2.9						
	comp=Z,8.1nm,0.8s						
ASAR	**Alice Springs**	**22.23**	**214**	P	**P**	**18 11 06.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**24.65**	**238**	P	**P**	**18 11 29.1**	**+1.0**
	comp=Z,5.8nm,0.5s,baz=56,slow=8.2,SNR=34						
	comp=Z,5.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.65**	**238**	P	**P**	**18 11 28.9**	**+0.8**
DZM	**Mont Dzumac**	**24.70**	**134**	eLR	LR	18 11 42.1	
	comp=Z,747nm,27.1s						
MNAI	**Manna**	**44.28**	**269**	P	**P**	**18 14 15.3**	**-0.7**
QIZ	**Qiongzhong**	**44.30**	**304**	P	**P**	**18 14 17.1**	**+1.0**
KSRS	**Korea Array**	**46.45**	**339**	P	**P**	**18 14 32.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=134,slow=6.9,SNR=2.6						
	comp=Z,0.4nm,0.6s						
ULN	**Ulaanbaatar**	**63.88**	**331**	P	**P**	**18 16 37.5**	**+0.3**
ULN				IAmb	IAmb	18 16 38.9	
	comp=Z,3.8nm,1.1s						
SONM	**Songino Array**	**64.18**	**331**	P	**P**	**18 16 40.1**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=145,slow=5.3,SNR=4.8						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**64.18**	**331**	P	**P**	**18 16 40.4**	**+1.3**
VNDA	**Vanda**	**72.36**	**177**	P	**P**	**18 17 29.9**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=337,slow=6.3,SNR=10						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**72.36**	**177**	P	**P**	**18 17 29.8**	**+0.6**
MK31	**Makanchi Array**	**77.38**	**320**	P	**P**	**18 17 59.0**	**+0.5**
MKAR	**Makanchi Array**	**77.38**	**320**	P	**P**	**18 17 58.7**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=109,slow=6.1,SNR=7.6						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**77.38**	**320**	P	**P**	**18 17 59.0**	**+0.5**
MAKZ	**Makanchi**	**77.58**	**320**	P	**P**	**18 17 59.9**	**+0.2**
MAKZ				IAmb	IAmb	18 18 00.2	
	comp=Z,1.6nm,0.8s						
ZAA0	**Zalesovo Array**	**78.82**	**328**	P	**P**	**18 18 05.7**	**-0.5**
ZAA0				IAmb	IAmb	18 18 06.5	
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**78.82**	**328**	P	**P**	**18 18 05.5**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=111,slow=5.4,SNR=5.9						
	comp=Z,0.9nm,0.3s						
QSPA	**South Pole Qui**	**84.44**	**180**	P	**P**	**18 18 35.5**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=10,slow=1.4,SNR=7.4						
	comp=Z,1.1nm,0.8s						
ILAR	**Eielson Array**	**84.89**	**23**	P	**P**	**18 18 37.0**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=253,slow=5.0,SNR=7.6						
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**121.73**	**326**	PKP	**PKiKP**	**18 24 55.4**	**-0.8**
	comp=Z,0.1nm,0.2s,baz=26,slow=2.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**145.34**	**285**	PKPbc	**PKiKP**	**18 25 40.5**	**-4.2**
	comp=Z,1.3nm,0.6s,baz=59,slow=3.6,SNR=8.0						

*IDC **17** 18:09:16.6±1.9,33°.09S×178°.28W,h0km,mb4.3/4, mbtmp4.3/6,ML4.0/2,Error ellipse: s-maj=48.5km s-min=28.9km az=126.0*

*NEIC **17** 18:09:18.2±1.7,33°.12S±0°.08×178°.3W±0°.2,h10km±2km, mb4.5/16,Error ellipse: s-maj=27.6km s-min=4.4km az=118.0*

*WEL **17** 18:09:19.7±1.0,33°S±12°×17°9W±3°3,h33km,M4.3/9, mB4.8/6,ML4.5/10,MLv4.5/9,Mw(mB)4.1/6,Error ellipse: s-maj=0.0km s-min=0.0km az=109.7*

ISC 17 18:09:19.6±0.8,33°.08S±0°.07×178°.1W±0°.1,h34km,n57, σ2°39/77,mb4.4/9,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.81**	**2**	P	**Pn**	**18 10 12.8**	**-3.0**
GLKZ				S	**Sn**	**18 10 53.8**	**-5.6**
MXZ	**Matakaoa Point**	**5.36**	**212**	Pn	**Pn**	**18 10 36.2**	**-0.9**
MXZ	**Matakaoa Point**	**5.36**	**212**	P	**Pn**	**18 10 39.7**	**+2.5**
MXZ				S	**Sn**	**18 11 39.3**	**+1.6**
WMGZ	**Waiomatatini S**	**5.53**	**210**	P	**Pn**	**18 10 41.2**	**+1.8**
WMGZ				S	**Sn**	**18 11 44.5**	**+2.7**
PKGZ	**Pakihiroa**	**5.73**	**212**	P	**Pn**	**18 10 42.2**	**-0.1**
PKGZ				S	**Sn**	**18 11 48.4**	**+1.4**
HAZ	**Te Kaha**	**5.76**	**215**	P	**Pn**	**18 10 43.4**	**+0.7**
HAZ				S	**Sn**	**18 11 48.7**	**+1.2**
PUZ	**Puketiti**	**5.81**	**210**	S	**Sn**	**18 11 49.8**	**+1.0**
RUGZ	**Raukumara Rang**	**5.98**	**214**	P	**Pn**	**18 10 46.4**	**+0.6**
RUGZ				S	**Sn**	**18 11 54.2**	**+1.1**
TWGZ	**Tauwhareparae**	**6.01**	**211**	P	**Pn**	**18 10 46.6**	**+0.4**
TWGZ				S	**Sn**	**18 11 55.0**	**+2.2**
CNGZ	**Carnagh Statio**	**6.18**	**208**	P	**Pn**	**18 10 48.8**	**+0.4**
CNGZ				S	**Sn**	**18 12 00.7**	**+2.9**
TKGZ	**Te Karaka**	**6.29**	**211**	P	**Pn**	**18 10 50.7**	**+0.8**
TKGZ				S	**Sn**	**18 12 00.1**	**-0.4**
URZ	**Urewera**	**6.48**	**216**	Pn	**Pn**	**18 10 52.6**	**+0.1**
URZ	4.7nm,0.3s,baz=254,slow=3.8,SNR=46			Sn	**Sn**	**18 12 06.9**	**+1.6**
	4.5nm,0.3s,baz=200,slow=15,SNR=9.7						
	10nm,0.3s						
URZ	**Urewera**	**6.48**	**216**		**Pn**	**18 10 51.0**	**-1.6**
URZ	**Urewera**	**6.48**	**216**	P	**Pn**	**18 10 52.7**	**+0.1**
URZ				S	**Sn**	**18 12 05.4**	**+0.1**
MARZ	**Manawahe**	**6.50**	**220**	P	**Pn**	**18 10 55.3**	**+2.5**
RIGZ	**Rimuhau**	**6.55**	**210**	P	**Pn**	**18 10 53.3**	**-0.3**
RIGZ				S	**Sn**	**18 12 08.0**	**+1.0**
OUZ	**Omahuta**	**7.22**	**250**	Pn	**Pn**	**18 11 06.5**	**+3.7**
BKZ	**Black Stump Fm**	**7.49**	**214**	Pn	**Pn**	**18 11 05.6**	**-0.9**
BKZ				Sn	**Sn**	**18 12 26.8**	**-3.5**
HIZ	**Hauiti**	**7.89**	**225**	Pn	**Pn**	**18 11 12.0**	**+0.1**
BFZ	**Birch Farm**	**8.84**	**209**	Pn	**Pn**	**18 11 23.3**	**-1.6**
BFZ				Sn	**Sn**	**18 13 02.0**	**-1.4**
MSWZ	**Moikau Station**	**9.87**	**211**	Pn	**Pn**	**18 11 34.7**	**-4.3**
MSWZ				Sn	**Sn**	**18 13 22.8**	**-5.8**
PLWZ	**Palliser**	**9.99**	**210**	Pn	**Pn**	**18 11 37.7**	**-3.1**
PLWZ				Sn	**Sn**	**18 13 25.5**	**-6.3**
SNZO	**South Karori**	**10.03**	**213**	Pn	**Pn**	**18 11 36.7**	**-4.4**
TUWZ	**Tuamarina**	**10.48**	**215**	Pn	**Pn**	**18 11 45.6**	**-1.7**
TUWZ				Sn	**Sn**	**18 13 35.9**	**-7.6**
THZ	**Tophouse**	**11.24**	**217**	Pn	**Pn**	**18 11 54.7**	**-3.1**
THZ				Sn	**Sn**	**18 13 56.3**	**-6.0**
KHZ	**Kahutara**	**11.43**	**213**	Pn	**Pn**	**18 11 58.3**	**-2.1**
LTZ	**Lake Taylor**	**12.31**	**215**	Pn	**Pn**	**18 12 10.4**	**-2.1**
OXZ	**Oxford**	**12.84**	**214**	Pn	**Pn**	**18 12 17.3**	**-2.3**
OXZ				Sn	18 14 30.9	-10	
MQZ	**McQueen's Vall**	**12.85**	**212**	Pn	**Pn**	**18 12 16.7**	**-3.0**
RPZ	**Rata Peaks**	**13.60**	**216**	Pn	**Pn**	**18 12 27.3**	**-2.7**
	0.6nm,0.3s,baz=37,slow=4.3,SNR=6.7						
RPZ				Sn	Sn	18 14 47.7	-12
	0.4nm,0.3s,baz=151,slow=23,SNR=7.3						
	5.7nm,0.8s						
ODZ	**Otahua Downs**	**14.79**	**213**	Pn	**Pn**	**18 12 45.1**	**-1.1**
WKZ	**Wanaka**	**15.41**	**217**	Pn	**Pn**	**18 12 53.4**	**-1.1**
WKZ				IAmb	IAmb	18 13 12.2	
	comp=Z,71nm,1.5s						
WHZ	**Wether Hill Ro**	**16.70**	**216**	Pn	**Pn**	**18 13 09.0**	**-1.9**
WHZ				IAmb	IAmb	18 13 33.8	
	comp=Z,26nm,1.3s						
CTA	**Charters Tower**	**34.25**	**283**	P	**P**	**18 16 04.2**	**+1.7**
	comp=Z,1.6nm,0.3s,baz=108,slow=9.6,SNR=1.7						
	comp=Z,1.6nm,0.3s						
CTAO	**Charters Tower**	**34.25**	**283**	P	**P**	**18 16 02.1**	**-0.3**
AS31	**Alice Springs**	**42.96**	**270**	P	**P**	**18 17 16.2**	**+0.5**
ASAR	**Alice Springs**	**42.96**	**270**	P	**P**	**18 17 16.4**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=105,slow=7.4,SNR=15						
ASAR				PcP	**PcP**	**18 19 07.0**	**+1.2**
	comp=Z,0.5nm,1.0s,baz=122,slow=4.8,SNR=1.5						
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**42.96**	**270**	P	**P**	**18 17 14.7**	**-0.9**
WR0	**Warramunga Arr**	**44.02**	**275**	P	**P**	**18 17 24.5**	**+0.4**
WR0				IAmb	IAmb	18 17 33.7	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	**44.18**	**275**	P	**P**	**18 17 26.2**	**+0.8**
WB2				IAmb	IAmb	18 17 26.2	
	comp=Z,14nm,1.3s						
WRAB	**Tennant Creek**	**44.19**	**275**	P	**P**	**18 17 25.9**	**+0.4**
WRAB				IAmb	IAmb	18 17 59.1	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**44.19**	**275**	P	**P**	**18 17 26.1**	**+0.6**
	comp=Z,2.4nm,0.4s,baz=115,slow=7.6,SNR=56						
	comp=Z,2.4nm,0.4s						
WRA	**Warramunga Arr**	**44.19**	**275**	P	**P**	**18 17 26.1**	**+0.6**
WB0	**Warramunga Arr**	**44.23**	**275**	P	**P**	**18 17 26.5**	**+0.6**
WB0				IAmb	IAmb	18 18 08.0	
	comp=Z,9.8nm,1.1s						
KNRA	**Kununurra**	**50.89**	**277**	P	**P**	**18 18 17.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.33**	**272**	P	**P**	**18 18 27.6**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=141,slow=7.5,SNR=2.6						
	comp=Z,2.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.33**	**272**	P	**P**	**18 18 28.0**	**-0.3**
FITZ				IAmb	IAmb	18 18 30.1	
	comp=Z,11nm,1.4s						
CASY	**Casey**	**52.76**	**209**	P	**P**	**18 18 31.9**	**+1.1**
SAUI	**Saumlaki**	**52.95**	**286**	P	**P**	**18 18 33.1**	**+0.2**
SNAA	**Sanae**	**75.49**	**178**	P	**PcP**	**18 21 12.9**	**0.0**
SNAA	**Sanae**	**75.49**	**178**	P	**P**	**18 21 02.1**	**+2.1**
SNAA				PcP	**PcP**	**18 21 13.2**	**+0.4**
SNAA				IAmb	IAmb	18 21 33.0	
	comp=Z,4.2nm,1.4s						
VNA3	**Neumayer Olymp**	**75.65**	**176**	P	**PcP**	**18 21 15.4**	**+1.9**
VNA1	**Neumayer--Stat**	**76.31**	**177**	P	**PcP**	**18 21 19.4**	**+3.1**
JHJ2	**Mitsune**	**76.85**	**325**	P	**P**	**18 21 07.9**	**-0.1**
FINES	**FINESS Array B**	**147.62**	**338**	PKPbc	**PKPab**	**18 29 01.7**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=37,slow=4.0,SNR=18						
NB2	**NORSAR Subarra**	**151.38**	**351**	PKP	**PKiKP**	**18 29 11.5**	**+2.0**
	comp=Z,3.5nm,1.2s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.38**	**351**	PKPbc	**PKiKP**	**18 29 11.2**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=15,slow=4.2,SNR=4.0						

*IDC **17** 19:16:14.4±0.6,55°.64S×26°.82W,h0km,mb4.4/10, mbtmp4.4/11,ML4.2/1,MS3.6/18,Error ellipse: s-maj=24.5km s-min=16.2km az=74.0*

*NEIC **17** 19:16:17.9±1.2,55°.70S±0°.05×26°.9W±0°.2,h22km±6km, mb4.6/27,Error ellipse: s-maj=14.7km s-min=4.6km az=115.0*

ISC 17 19:16:17.9±0.5,55°.66S±0°.07×26°.98W±0°.08,h25km,n70, σ0°93/53,mb4.6/20,MS3.5/18,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.65**	**280**		**Pn**	**19 17 40.2**	**+0.1**
ORCD	**Orcadas**	**10.65**	**234**	Pn	**Pn**	**19 18 49.5**	**+0.9**
ESPZ	**Base Esperanza**	**16.94**	**231**	Pn	**Pn**	**19 20 09.9**	**-2.9**
VNA1	**Neumayer--Stat**	**17.12**	**159**	P	**P**	**19 20 17.1**	**+0.6**
VNA3	**Neumayer Olymp**	**17.32**	**161**	P	**P**	**19 20 19.3**	**+0.4**
VNA2	**Neumayer--Watz**	**17.51**	**159**	P	**P**	**19 20 22.0**	**+1.1**
	baz=317,slow=12						
SNAA	**Sanae**	**19.05**	**157**	P	**P**	**19 20 37.6**	**-0.3**
SNAA	**Sanae**	**19.05**	**157**	P	**P**	**19 20 36.9**	**-1.0**
	0.7nm,0.3s,baz=300,slow=12,SNR=28						
	2.8nm,0.4s						
SNAA	**Sanae**	**19.05**	**157**	P	**P**	**19 20 36.6**	**-1.4**
PMSA	**Palmer Station**	**20.25**	**228**	LR	LR	19 27 27.7	
	comp=Z,172nm,19.6s,baz=52,slow=33						
PMSA	**Palmer Station**	**20.25**	**228**	P	**P**	**19 20 51.4**	**+0.5**
PMSA				IAmb	IAmb	19 20 59.6	
	comp=Z,15nm,0.7s						
TROLL	**Troll, Antarti**	**20.55**	**154**	P	**P**	**19 20 54.0**	**-0.2**
SMAI	**San Martin Ant**	**22.14**	**220**	P	**P**	**19 21 11.4**	**+0.1**
BELA	**Belgrano 2**	**22.48**	**184**	P	**P**	**19 21 13.4**	**-1.4**
BELA				IAmb	IAmb	19 21 18.4	
	comp=Z,9.1nm,0.7s						
PLCA	**Paso Flores**	**32.05**	**279**	LR	LR	19 35 02.1	
	comp=Z,33nm,18.8s,baz=120,slow=35						
QSPA	**South Pole Qui**	**34.59**	**180**	P	**P**	**19 23 04.5**	**+0.1**
	comp=Z,5.2nm,0.6s,baz=202,slow=1.8,SNR=72						
	comp=Z,5.2nm,0.6s						
QSPA	**South Pole Qui**	**34.59**	**180**	P	**P**	**19 23 04.5**	**+0.1**
QSPA				IAmb	IAmb	19 23

TORD					IAmb	IAmb	19 28 02.5		
	comp=Z,2.9nm,1.0s								
SDV	**Santo Domingo**	**73.82**	**315**		LR	LR	19 59 38.9		
	comp=Z,55nm,21.3s,baz=202,slow=35								
SJG	**San Juan**	**80.60**	**322**		LR	LR	20 03 48.1		
	comp=Z,22nm,21.7s,baz=140,slow=35								
STKA	**Stephens Creek**	**92.27**	**170**		P	**P**	**19 29 27.3**	**+1.8**	
	comp=Z,1.7nm,0.8s,baz=190,slow=6.1,SNR=2.9								
	comp=Z,1.7nm,0.8s								
ASAR	**Alice Springs**	**99.33**	**162**		P	**Pdif**	**19 29 56.6**	**-1.2**	
	comp=Z,0.5nm,0.7s,baz=189,slow=4.3,SNR=3.3								
	comp=Z,0.5nm,0.7s								
EIL	**Elat**	**100.00**	**51**		LR	LR	20 10 14.9		
	comp=Z,46nm,21.7s,baz=271,slow=32								
WRA	**Warramunga Arr**	**103.05**	**162**		Pdiff	**Pdif**	**19 30 14.0**	**-0.4**	
	comp=Z,0.4nm,0.8s,baz=199,slow=4.6,SNR=2.7								
FINES	**FINESS Array B**	**123.98**	**28**		PKP	**PKPdf**	**19 35 12.0**	**-0.3**	
	comp=Z,4.3nm,1.0s,baz=191,slow=1.4,SNR=4.8								
CMAR	**Chiang Mai Arr**	**125.09**	**110**		PKP	**PKiKP**	**19 35 15.6**	**-0.6**	
	comp=Z,0.6nm,0.4s,baz=225,slow=4.5,SNR=4.5								
AKTO	**Aktyubinsk**	**127.00**	**53**		PKP	**PKiKP**	**19 35 18.3**	**-0.6**	
	baz=221,slow=9.3								
ARCES	**ARCESS Array B**	**130.53**	**22**		PKP	**PKPdf**	**19 35 24.4**	**-0.2**	
	comp=Z,0.7nm,0.6s,baz=219,slow=1.2,SNR=7.8								
MKAR	**Makanchi Array**	**136.65**	**71**		PKP	**PKiKP**	**19 35 38.6**	**0.0**	
	comp=Z,0.5nm,0.6s,baz=232,slow=2.9,SNR=6.5								
ZALV	**Zalesovo Beam**	**142.09**	**63**		PKhKP	PKPpre	19 35 41.5		
	comp=Z,0.9nm,0.5s,baz=262,slow=3.4,SNR=5.2								
NRIK	**Noril'sk**	**148.62**	**38**		PKPbc	**PKiKP**	**19 36 01.9**	**-0.5**	
	comp=Z,4.2nm,0.7s,baz=199,slow=1.3,SNR=5.5								
ILAR	**Eielson Array**	**149.94**	**312**		PKPbc	**PKPbc**	**19 36 04.5**	**+0.1**	
	comp=Z,3.0nm,0.7s,baz=108,slow=2.8,SNR=26								
SONM	**Songino Array**	**150.58**	**86**		PKPbc	**PKiKP**	**19 36 06.6**	**-0.7**	
	comp=Z,4.0nm,0.7s,baz=222,slow=3.4,SNR=21								

*IDC **17** 20:01:03.0±1.9, 41.°40N×113.°05W, h0km, mbtmp1.8/1, ML2.9/1, Error ellipse: s-maj=83.6km s-min=12.2km az=149.0*
*NEIC **17** 20:01:03.0±0.7, 41.°13N±0.°01×112.°88W±0.°03, h0km±2km, ML1.8/36, Error ellipse: s-maj=4.1km s-min=3.0km az=251.0*
ISC 17 20:01:01.3±1.0, 41.°12N±0.°03×112.°72W±0.°04, h0km, n25, σ1§14, Utah

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.30**	**231**			**Pg**	**20 01 07.5**	**+0.4**
HVU	**Hansel Valley**	**0.66**	**356**			**Pb**	**20 01 15.6**	**-0.3**
CTU	**Camp Tracy**	**0.85**	**120**			**Pn**	**20 01 21.7**	**+1.0**
CTU				IAML			20 01 39.1	
	comp=N,27nm,0.5s							
CTU				IAML			20 01 43.7	
	comp=E,27nm,0.6s							
DUG	**Dugway, Tooele**	**0.93**	**185**			**Pb**	**20 01 21.0**	**+0.6**
DUG				IAML			20 01 40.0	
	comp=E,34nm,0.6s							
TCUT	**Toone Canyon**	**0.99**	**90**			**Pn**	**20 01 24.8**	**+2.1**
HWUT	**Hardware Ranch**	**0.99**	**60**			**Pn**	**20 01 23.9**	**+1.2**
HWUT				IAML			20 01 47.7	
	comp=E,24nm,0.4s							
JLU	**Jordanelle**	**1.09**	**118**			**Pn**	**20 01 25.0**	**+0.9**
JLU				IAML			20 01 45.8	
	comp=N,17nm,0.5s							
NLU	**North Lily Min**	**1.26**	**157**			**Pn**	**20 01 27.4**	**+1.0**
ELK	**Elko**	**1.95**	**260**			**Pn**	**20 01 35.8**	**0.0**
ELK				IAML			20 02 02.6	
	comp=N,11nm,0.3s							
AHID	**Auburn Hatcher**	**2.04**	**36**	Pn		**Pn**	**20 01 37.0**	**-0.1**
TMUT	**Trail Mountain**	**2.16**	**147**	Pn		**Pb**	**20 01 40.3**	**-1.1**
TMUT				IAML			20 02 22.3	
	comp=N,7.8nm,0.6s							
P18A	**Preston Nutter**	**2.41**	**127**	Pn		**Pn**	**20 01 42.4**	**+0.2**
P18A				IAML			20 02 55.0	
	comp=E,4.3nm,4.4s							
RDMU	**Red Mountain**	**2.45**	**102**	Pn		**Pn**	**20 01 42.0**	**-0.7**
RDMU				IAML			20 02 56.4	
	comp=N,4.2nm,4.8s							
SPR3	**Spring Creek 3**	**2.45**	**211**	Pn		**Pn**	**20 01 42.4**	**-0.5**
SPR3				IAML			20 02 26.9	
	comp=N,5.6nm,0.7s							
SPR3				IAML			20 02 33.4	
	comp=E,5.6nm,0.6s							
SRU	**San Rafael Swe**	**2.62**	**139**			**Pn**	**20 01 45.9**	**+0.9**
SRU				IAML			20 02 32.6	
	comp=E,5.1nm,0.6s							
SRU				IAML			20 02 57.2	
	comp=N,3.6nm,4.3s							
MSU	**Marysvale**	**2.64**	**171**	Pn		**Pn**	**20 01 43.3**	**-2.0**
PSUT	**Pine Spring**	**2.73**	**199**			**Pn**	**20 01 46.6**	**+0.1**
PSUT				IAML			20 02 45.7	
	comp=N,3.7nm,0.5s							
PSUT				IAML			20 02 54.2	
	comp=E,3.6nm,0.7s							
HLID	**Hailey**	**2.75**	**333**			**Pn**	**20 01 47.6**	**+0.8**
HLID				IAML			20 02 32.8	
	comp=E,3.6nm,0.9s							
HLID				IAML			20 02 39.5	
	comp=E,3.3nm,0.6s							
PD31	**Pinedale Array**	**2.88**	**54**			**Pn**	**20 01 49.8**	**+1.2**
PDAR	**Pinedale Array**	**2.88**	**54**	Pn		**Pb**	**20 01 52.0**	**-1.6**
	comp=E,0.2nm,0.3s,baz=231,slow=13,SNR=2.3							
PDAR				Lg		Lg	20 02 36.1	
	comp=E,0.8nm,0.3s,baz=234,slow=21,SNR=2.4							
	comp=E,0.3nm,0.4s							
PDAR	**Pinedale Array**	**2.88**	**54**	Pn		**Pb**	**20 01 52.3**	**-1.3**
LOHW	**Long Hollow**	**2.94**	**31**	Pn		**Pn**	**20 01 51.0**	**+1.5**
LOHW				IAML			20 03 13.6	
	comp=E,3.5nm,4.0s							
MCMT	**McKenzie Canyo**	**3.71**	**359**			**Pb**	**20 02 06.4**	**-1.5**
NVAR	**Mina Array Bea**	**5.07**	**240**	Pg		**Pb**	**20 02 31.3**	**+0.3**
	comp=E,0.1nm,0.3s,baz=56,slow=16,SNR=2.1							
I56US	**NEWPORT INFRAS**	**7.80**	**338**	*i*			20 45 20.0	
	comp=E,0.2nm,0.8s,baz=158,slow=314,SNR=18							

*CNRM **17** 20:16:23.4, 37.°92N×3.°31W, h15km, ml3.0*
*LDG **17** 20:16:23.0±0.1, 37.°86N×3.°28W, h2km, Ml2.9/4, Error ellipse: s-maj=2.2km s-min=1.7km az=131.0*
*INMG **17** 20:16:24.0±1.6, 37.°86N×3.°20W, h18km±2km, ML2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=169.0*
*SFS **17** 20:16:24.0, 37.°84N×3.°24W, ML3.1, LARVA(JAEN)*
MDD 17 20:16:24.0±0.2, 37.°84N×3.°25W, h12km±2km, mb_Lg3.1/27, Error ellipse: s-maj=2.6km s-min=1.6km az=163.0, Spain

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EQES	**Quesada**	**0.14**	**106**		Pg	Pg	20 16 26.2	-1.4
EQES					Sg	Sg	20 16 28.7	-1.4
EQES					*i* Vmb_Lg		20 16 29.2	
EQUE	**Quentar**	**0.66**	**194**		Pg	Pg	20 16 36.3	-0.5
EQUE					*i* Vmb_Lg		20 16 46.5	
EBER	**Berja**	**0.98**	**163**		Pg	Pg	20 16 41.9	-1.1
EBER					*i* Vmb_Lg		20 17 02.6	
EGOR	**Sierra Gorda,**	**1.00**	**224**		Pg	Pg	20 16 42.8	-0.5
EGOR					*i* Vmb_Lg		20 17 01.1	
ELGU	**Los Guajares,**	**1.02**	**197**		Pg	Pb	20 16 43.0	-0.6
ELGU					*i* Vmb_Lg		20 17 02.7	
EADA	**Adamuz**	**1.10**	**288**		Pg	Pb	20 16 43.7	-1.3
EADA					*i* Vmb_Lg		20 17 01.1	
ENIJ	**Nijar**	**1.20**	**136**		Pg	Pn	20 16 45.6	-1.0
ENIJ					*i* Vmb_Lg		20 17 04.0	
EZAR	**Zarzadilla de**	**1.23**	**88**		Pg	Pn	20 16 45.2	-1.8
EMAL	**Malaga-Limoner**	**1.43**	**222**		P	Pb	20 16 50.6	0.0
EMAL					S	Sg	20 17 12.0	+1.9
ETOB	**Tobarra**	**1.56**	**59**		Pg	Pn	20 16 50.3	-1.3
ETOB					*i* Vmb_Lg		20 17 14.9	
EMUR	**La Murta**	**1.59**	**89**		Pg	Pn	20 16 51.5	-0.4
EMUR					*i* Vmb_Lg		20 17 15.0	
ECAB	**El Cabril**	**1.73**	**278**		Pg	Pn	20 16 52.6	-1.4
ECAB					*i* Vmb_Lg		20 17 21.1	
EMIJ	**Mijas**	**1.77**	**224**		Pg	Pb	20 16 55.4	-0.9
EMIJ					*i* Vmb_Lg		20 17 26.8	
CART	**Cartagena**	**1.80**	**97**		P	Pn	20 16 54.5	-0.3
CART					S	Sn	20 17 17.1	-0.5
CART	**Cartagena**	**1.80**	**97**		P	Pn	20 16 54.5	-0.3
PAB	**San Pablo**	**1.91**	**333**		Pn	Pn	20 16 54.4	-2.0
PAB					Pg	Pb	20 16 58.1	-0.7
PAB					*i* Vmb_Lg		20 17 25.3	
PAB	**San Pablo**	**1.91**	**333**		P	Pn	20 16 55.5	-0.9
ESDC	**Sonseca Array**	**1.91**	**343**		Pg	Pn	20 16 57.6	+1.1
ESDC					*i* Vmb_Lg		20 17 24.0	
ESPR	**Espera**	**2.30**	**246**		Pg	Pb	20 17 04.6	-0.8
ESPR					*i* Vmb_Lg		20 17 42.4	
UCM	**Universidad Co**	**2.46**	**0**		P	Pb	20 17 08.8	+0.6
UCM					S	Sb	20 17 38.9	+0.3
ECHE	**Chera**	**2.49**	**45**		Pn	Pn	20 17 02.9	-1.5
ECHE					Pg	Pb	20 17 09.4	+0.6
ECHE					*i* Vmb_Lg		20 17 15.0	
ECHE					Sg	Sb	20 17 41.3	+1.8
EBEN2	**Beniarda presa**	**2.54**	**70**		Pn	Pn	20 17 04.1	-1.0
EBEN2					Sn	Sn	20 17 35.1	-0.9
EBEN2					*i* Vmb_Lg		20 17 44.7	
GOG	**Mont Gurugu**	**2.62**	**176**		P	Pn	20 17 07.0	+0.7
GOG					S	Sn	20 17 39.0	+0.9
GOG	**Mont Gurugu**	**2.62**	**176**		P	Pn	20 17 07.0	+0.7
GOG					S	Sn	20 17 39.0	+0.9
PALE	**Palemas**	**2.68**	**192**		P	Pn	20 17 08.0	+1.0
PALE					S	Sn	20 17 37.9	-1.4
EMIN	**Mina Concepcio**	**2.72**	**269**		Pn	Pn	20 17 05.5	-1.9
EMIN					Sn	Sn	20 17 38.2	-2.0
EMIN					Sg	Sb	20 17 46.8	+1.0
EMIN					*i* Vmb_Lg		20 17 50.0	
SMIR	**Smir Dam**	**2.75**	**219**		P	Pn	20 17 09.3	+1.3
SMIR					S	Sn	20 17 39.6	-1.5
GUD	**Guadarrama**	**2.88**	**346**		Pn	Pn	20 17 09.2	-0.7
GUD					Pg	Pb	20 17 16.1	+0.6
GUD					Sn	Sn	20 17 40.4	-4.2
GUD					Sg	Sb	20 17 51.5	+0.7
PBAR	**Barrancos**	**3.02**	**277**	*e*Pn		Pn	20 17 09.9	-1.7
PBAR				*e*Sn		Sn	20 17 44.3	-3.3
PBAR				*e*Sg		Sg	20 17 58.1	-2.8
PBAR				A		A	20 18 02.2	
	41nm,0.3s							
TAF	**Taforalt**	**3.10**	**167**	P		Pn	20 17 14.4	+1.6
TAF				S		Sn	20 17 52.3	+2.6
EBAD	**Badajoz**	**3.10**	**288**	Pn		Pn	20 17 10.7	-2.1
EBAD				Pg		Pb	20 17 19.3	+0.2
EBAD				Sn		Sn	20 17 48.6	-1.1
EBAD				Sg		Sb	20 17 59.0	+2.1
EBAD				*i* Vmb_Lg			20 18 02.5	
ETOR	**Torete**	**3.11**	**17**	Pn		Pn	20 17 11.0	-2.0
ETOR				Pg		Pb	20 17 20.6	+1.3
ETOR				Sg		Sb	20 17 59.3	+2.0
ETOR				*i* Vmb_Lg			20 18 03.5	
EMOS	**Mosqueruela**	**3.32**	**40**	Pn		Pn	20 17 14.8	-1.1
EMOS				Pg		Pg	20 17 25.4	-2.2
EMOS				Sn		Sn	20 17 52.9	-2.4
EMOS				Sg		Sb	20 18 04.4	+1.2
EMOS				*i* Vmb_Lg			20 18 10.6	
EGRO	**El Granado**	**3.38**	**266**	Pn		Pn	20 17 14.9	-1.6
EGRO				Sn		Sn	20 17 52.2	-4.3
EGRO				Sg		Sb	20 18 06.8	+2.1
EGRO				*i* Vmb_Lg			20 18 11.7	
JBK	**JBK**	**3.54**	**171**	P		Pn	20 17 20.0	+1.0
JBK				S		Sn	20 18 02.0	+1.1
JBK	**JBK**	**3.54**	**171**	P		Pn	20 17 20.2	+1.2
JBK				S		Sn	20 18 02.0	+1.1
PESTR	**Estremoz**	**3.57**	**288**	P		Pn	20 17 17.2	-1.9
PESTR	**Estremoz**	**3.57**	**288**	P		Pn	20 17 17.2	-1.9
PESTR				S		Sn	20 17 56.7	-4.5
PESTR	**Estremoz**	**3.57**	**288**	*e*Pn		Pn	20 17 17.4	-1.7
PESTR				*e*Sn		Sn	20 17 59.0	-2.2
PESTR				*e*Sg		Sg	20 18 14.9	-3.6
PESTR				A		A	20 18 18.5	
	32nm,0.3s							
PVAQ	**Vaqueiros**	**3.58**	**264**	P		Pn	20 17 17.5	-1.8
PVAQ	**Vaqueiros**	**3.58**	**264**	P		Pn	20 17 17.8	-1.4
PVAQ				S		Sn	20 17 57.4	-4.1
PVAQ	**Vaqueiros**	**3.58**	**264**	*e*Pn		Pn	20 17 17.6	-1.7
PVAQ				*e*Sn		Sn	20 17 59.2	-2.3
PVAQ				*e*Sg		Sg	20 18 14.9	-4.0
PVAQ				A		A	20 18 20.1	
	30nm,0.3s							
PMRV	**Marv??o**	**3.61**	**297**	*e*Pn		Pn	20 17 17.9	-1.9
PMRV	**Marv??o**	**3.61**	**297**	*e*Pg		Pb	20 17 30.0	+2.2
PMRV				*e*Sg		Sg	20 18 16.1	-3.9
PMRV				A		A	20 18 21.2	
	38nm,0.3s							
PBEJ	**Beja**	**3.66**	**274**	*e*Sn		Sn	20 18 01.8	-1.7
PBEJ				*e*Sg		Sg	20 18 17.7	-3.8
PBEJ				A		A	20 18 22.4	
	22nm,0.5s							
PBDV	**Barranco-do-Ve**	**3.77**	**262**	*e*Pn		Pn	20 17 20.8	-1.2
PBDV				*e*Sn		Sn	20 18 04.0	-2.3
PBDV				*e*Sg		Sg	20 18 21.1	-4.0
PBDV				A		A	20 18 29.3	
	24nm,0.5s							
EIBI	**Ibiza**	**3.79**	**70**	Pn		Pn	20 17 20.1	-2.2
EIBI				Sn		Sn	20 18 02.1	-4.7
EIBI				*i* Vmb_Lg			20 18 13.1	
PCVE	**Castro Verde**	**3.81**	**268**	*e*Pn		Pn	20 17 21.4	-1.0
PCVE				*e*Sn		Sn	20 18 04.5	-2.6
PCVE				*e*Sg		Sg	20 18 22.3	-3.9
PCVE				A		A	20 18 26.4	
	23nm,0.4s							
EVO	**Evora**	**3.82**	**282**	P		Pb	20 17 33.3	+2.0
EVO				S		Sn	20 18 03.9	-3.6
EVO	**Evora**	**3.82**	**282**	*e*Sg		Sg	20 18 22.7	-3.9
EVO				A		A	20 18 26.3	
	23nm,0.4s							
PCBR	**Castelo Branco**	**3.86**	**302**	*e*Pn		Pn	20 17 21.9	-1.3
PCBR				*e*Sn		Sn	20 18 05.3	-3.1
PCBR				A		A	20 18 29.5	
	22nm,0.6s							
MESJ	**Messejana**	**3.94**	**271**	*e*Pn		Pn	20 17 23.4	-0.8
MESJ				*e*Sn		Sn	20 18 07.6	-2.8
MESJ				*e*Sg		Sb	20 18 23.6	+2.7
MESJ				A		A	20 18 29.7	
	19nm,1.0s							
PMTG	**Montargil**	**4.10**	**289**	*e*Pn		Pn	20 17 24.4	-2.0
PMTG				*e*Sn		Sn	20 18 09.3	-5.0
PMTG				*e*Sg		Sg	20 18 32.0	-3.5
PMTG				A		A	20 18 32.7	
	11nm,0.8s							
PNCL	**Nicolau / Gran**	**4.18**	**275**	*e*Pn		Pn	20 17 26.7	-0.9
PNCL				*e*Sg		Sb	20 18 32.9	+4.9
PNCL				A		A	20 18 35.8	
	15nm,0.7s							
MTE	**Manteigas**	**4.21**	**309**	*e*Pg		Pb	20 17 38.4	+0.4
MTE				*e*Sg		Sb	20 18 33.3	+4.6
MTE				A		A	20 18 50.3	
	22nm,0.4s							
MORF	**Marmelete**	**4.33**	**265**	*e*Pn		Pn	20 17 28.7	-1.0
MORF				*e*Sn		Sn	20 18 17.4	-2.7
MORF				*e*Sg		Sg	20 18 39.2	-3.8
MORF				A		A	20 18 48.6	
	9.2nm,0.2s							
PTEO	**Sao Teotonio**	**4.36**	**268**	*e*Sn		Sn	20 18 18.2	-2.5
PTEO				*e*Sg		Sg	20 18 40.0	-3.9
PTEO				A		A	20 18 46.9	
	27nm,0.6s							
MVO	**Moncorvo**	**4.42**	**320**	*e*Pn		Pn	20 17 29.7	-1.3
MVO				*e*Sn		Sn	20 18 17.7	-4.8
MVO				*e*Sg		Sg	20 18 44.4	-1.6
MVO				A		A	20 18 46.4	
	22nm,0.6s							
PACT	**Alcochete**	**4.49**	**284**	*e*Sn		Sn	20 18 22.3	-1.7
PACT				*e*Sg		Sg	20 18 46.1	-2.1
PACT				A		A	20 19 02.1	
	39nm,0.7s							
PFVI	**Vila Bisbo**	**4.50**	**263**	*e*Sn		Sn	20 18 21.1	-3.0
PFVI				*e*Sg		Sg	20 18 43.5	-4.8
PFVI				A		A	20 19 01.8	
	10nm,1.0s							
PVIS	**Viseu**	**4.61**	**310**	*e*Sn		Sn	20 18 23.4	-3.6
PVIS				*e*Sg		Sg	20 18 46.5	-5.5
PVIS				A		A	20 18 54.8	
	9.4nm,0.4s							
PCAS	**Casmilo, Conde**	**4.65**	**300**	*e*Pn		Pn	20 17 32.7	-1.4
PCAS				*e*Sn		Sn	20 18 25.1	-2.9
PCAS				*e*Sg		Sg	20 18 49.8	-3.6
PCAS				A		A	20 18 56.5	
	29nm,0.5s							
PSBE	**So Bento**	**4.65**	**293**	*e*Pn		Pn	20 17 32.9	-1.2
PSBE				*e*Sn		Sn	20 18 25.0	-3.0
PSBE				*e*Sg		Sg	20 18 49.4	-4.0
PSBE				A		A	20 19 01.6	
	23nm,0.5s							
PBRG	**Braganca**	**4.79**	**327**	*e*Pn		Pn	20 17 34.4	-1.5
PBRG				*e*Sg		Sb	20 18 50.9	+5.5
PBRG				A		A	20 18 54.5	
	11nm,0.8s							
PVRL	**Vila Real**	**4.87**	**316**	*e*Sn		Sn	20 18 29.3	-4.0
PVRL				A		A	20 19 02.5	
	8.6nm,0.4s							
PMAFR	**Mafra**	**4.87**	**285**	*e*Sg		Sg	20 18 55.6	-4.8
PMAFR				A		A	20 19 03.6	
	31nm,0.6s							
POLO	**Lamas de Olo**	**4.98**	**317**	*e*Pn		Pn	20 17 37.2	-1.4
POLO				*e*Sn		Sn	20 18 31.2	-4.9
POLO				A		A	20 19 10.2	
	5.1nm,0.4s							
ETOS	**Mallorca**	**5.11**	**66**	Pn		Pn	20 17 39.2	-1.1
ETOS				Sn		Sn	20 18 35.2	-4.0
ETOS				*i* Vmb_Lg			20 19 08.1	
MD31	**MD31**	**5.12**	**194**	P		Pn	20 17 42.3	+1.8
MD31				S		Sn	20 18 37.5	-2.0
MDT	**Midelt**	**5.14**	**193**	P		Pn	20 17 41.8	+0.9
MDT				S		Sn	20 18 37.8	-2.3
PCAB	**Cabril**	**5.34**	**318**	*e*Pn		Pn	20 17 42.1	-1.4
PCAB				*e*Sn		Sn	20 18 41.1	-3.8
PCAB				A		A	20 19 18.8	
	14nm,0.5s							
ETSF	**Etsaut**	**5.45**	**21**	*e*Pn		Pn	20 17 44.0	-1.1
ETSF	**Etsaut**	**5.45**	**21**	*e*Pg		Pb	20 18 03.2	+4.0
ETSF				*e*Sn		Sn	20 18 42.7	-5.1
ETSF				*e*Sg		Sg	20 19 13.8	-5.2
	2.0nm,0.2s							
ELOB	**Lobios**	**5.47**	**319**	Pn		Pn	20 17 43.5	-1.8
ELOB				Sn		Sn	20 18 42.7	-5.5
ELOB				*i* Vmb_Lg			20 19 23.0	
SJPF	**Ste Jean**	**5.49**	**16**	*e*Pn		Pn	20 17 43.3	-2.2
SJPF	**Ste Jean**	**5.49**	**16**	*e*P		Pn	20 17 47.0	+1.5
SJPF	**Ste Jean**	**5.49**	**16**	*e*Pg		Pb	20 18 03.8	+4.1
SJPF				*e*Sn		Sn	20 18 43.3	-5.2
SJPF				*e*Sg		Sg	20 19 13.8	-6.3
	2.6nm,0.3s							
PGAV	**Gavieira, Arco**	**5.65**	**318**	*e*Pn		Pn	20 17 46.6	-1.2
PGAV				*e*Sn		Sn	20 18 47.9	-4.7
PGAV				A		A	20 19 35.7	
	8.5nm,0.8s							
EPF	**Esparros**	**5.86**	**27**	*e*Pn		Pn	20 17 49.5	-1.2
EPF	**Esparros**	**5.86**	**27**	*e*Pg		Pg	20 18 11.4	-4.8
EPF				*e*Sn		Sn	20 18 51.4	-6.4
EPF				*e*Sg		Sg	20 19 26.1	-5.9
	2.3nm,0.2s							
MTLF	**Montolieu**	**6.89**	**35**	*e*Pn		Pn	20 18 02.6	-2.1
MTLF	**Montolieu**	**6.89**	**35**	*e*Pg		Pg	20 18 30.5	-5.3
MTLF				*e*Sn		Sn	20 19 18.5	-4.5
MTLF				*e*Sg		Sg	20 19 56.9	-8.1
	1.3nm,0.3s							
VIVF	**Saint-Julien-l**	**9.19**	**38**	*e*Pn		Pn	20 18 36.5	+0.1
AVF	**Avril sur Loir**	**10.19**	**27**	*e*Pn		Pn	20 18 46.5	-3.4
HAU	**Haudompre**	**12.34**	**32**	*e*Pn		Pn	20 19 16.5	-3.0

*DJA **17** 20:35:20.7±0.2, 6.°S±2.°×13.°1E±.°, h155km±5km, M4.2/13, mb4.2/10, mB5.0/4, MLv4.2/13, Mw(mB)4.3/4*
*IDC **17** 20:35:20.4±2.3, 6.°22S×130.°39E, h118km±24km, mb3.3/4, mbtmp4.0/9, MS3.1/1, Error ellipse: s-maj=36.5km s-min=19.6km az=93.0*
ISC 17 20:35:19.6±0.7, 6.°21S±0.°04×130.°41E±0.°07, h124km, n20, σ3§45/26, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.75**	**343**		P	**Pn**	**20 35 52.0**	**+1.7**
BNDI					S	**Sn**	**20 36 18.9**	**+5.3**
SAUI	**Saumlaki**	**1.97**	**154**		P	**Pn**	**20 35 57.3**	**+4.3**
SAUI					S	**Sn**	**20 36 25.0**	**+6.5**
MSAI	**Masohi**	**3.20**	**332**		P	**Pn**	**20 36 10.5**	**+1.7**
MSAI					S	**Sn**	**20 36 48.6**	**+1.9**
AAI	**Ambon**	**3.34**	**318**		P	**Pn**	**20 36 11.6**	**+1.1**
FAKI	**Fak Fak**	**3.74**	**29**		P	**Pn**	**20 36 16.3**	**+0.4**
FAKI					S	**Sn**	**20 36 57.1**	**-2.3**
NLAI	**Namlea**	**4.43**	**312**		P	**Pn**	**20 36 25.1**	**+0.1**
SIJI	**Sorong**	**5.37**	**9**		P	**Pn**	**20 36 37.8**	**+0.1**
	13nm,0.2s,baz=190,slow=19,SNR=30							
SIJI					S	**Sn**	**20 37 33.5**	**-5.0**
	34nm,0.2s,baz=197,slow=19,SNR=18							
SANI	**Sanana**	**6.04**	**313**		P	**Pn**	**20 36 49.6**	**+2.9**
	0.1nm26nm,1.1s							
LBMI	**Labuha**	**6.25**	**332**		P	**Pn**	**20 36 51.4**	**+1.9**
	0.3nm81nm,0.8s							
BATI	**Baumata**	**7.77**	**239**		P	**Pn**	**20 37 11.2**	**+1.1**
	20nm,0.6s,baz=79,slow=16,SNR=7.6							
BATI					S	**Sn**	**20 38 34.0**	**-2.7**
	8.3nm,0.4s,baz=66,slow=20,SNR=4.1							
BATI	**Baumata**	**7.77**	**239**		P	**Pn**	**20 37 13.0**	**+2.9**
	0.1nm16nm,0.9s							
BBSI	**Bau Bau**	**7.84**	**275**		P	Pn	20 37 16.5	+5.6
	0.0nm387nm3.3nm,0.9s							
FITZ	**Fitzroy Crossi**	**12.71**	**

HMH					IAML			21 08 07.5	
	comp=E,1μm,0.4s								
POHA	**Pohakuloa**	**0.97**	**61**			Pn		21 07 48.3	+0.3
HTC	**Hot Caves**	**0.98**	**92**			Pn		21 07 48.0	+0.1
MLH	**Mauna Loa**	**1.01**	**78**			Pn		21 07 48.7	+0.1
MLH					IAML			21 08 06.1	
	comp=N,1μm,0.2s								
MLH					IAML			21 08 10.1	
	comp=E,830nm,0.2s								
HPAH	**Hawaii Prepara**	**1.02**	**43**			Pb		21 07 48.6	+0.1
MHA	**Mahukona**	**1.03**	**29**			Pb		21 07 49.2	+0.5
HLP	**Hilina Pali**	**1.06**	**89**			Pb		21 07 49.4	+0.1
HLP					IAML			21 08 03.1	
	comp=N,1μm,0.2s								
HLP					IAML			21 08 07.2	
	comp=E,1μm,0.3s								
WRMHI	**West Rim**	**1.07**	**83**			Pn		21 07 49.2	-0.1
WRMHI					IAML			21 08 12.4	
	comp=N,2μm,0.5s								
SDHHI	**Sand Hill**	**1.08**	**84**			Pn		21 07 49.2	-0.2
UWE	**Uwekahuna**	**1.08**	**82**			Pn		21 07 49.3	-0.2
UWE					IAML			21 08 10.6	
	comp=N,2μm,0.4s								
UWE	**Uwekahuna**	**1.08**	**82**			Sb		21 08 02.3	-1.2
OBL	**Observatory Le**	**1.09**	**83**			Pn		21 07 49.3	-0.2
OBL						Sb		21 08 02.0	-1.7
NPH	**North Pit**	**1.09**	**83**	Pn		Pn		21 07 49.4	-0.2
UWB	**Uwekahuna B**	**1.10**	**82**			Pn		21 07 49.4	-0.3
RIM	**Rim**	**1.10**	**84**	Pn		Pn		21 07 49.5	-0.2
RIM					IAML			21 08 02.5	
	comp=N,1μm,0.4s								
RIM					IAML			21 08 07.8	
	comp=E,1μm,0.3s								
RSD	**Rainshed**	**1.10**	**80**			Pn		21 07 49.6	-0.1
KKO	**Keanakako`i**	**1.11**	**84**			Pn		21 07 49.6	-0.1
KKO					IAML			21 08 06.4	
	comp=E,814nm,0.4s								
KKO					IAML			21 08 15.8	
	comp=N,1μm,0.6s								
SBLHI	**Steaming Bluff**	**1.11**	**82**			Pn		21 07 49.5	-0.3
SBLHI	**Steaming Bluff**	**1.11**	**82**		IAML			21 08 13.7	
	comp=E,668nm,0.4s								
SBLHI					IAML			21 08 21.6	
	comp=N,780nm,0.6s								
BYL	**Byron's Ledge**	**1.11**	**83**			Pn		21 07 49.6	-0.3
HATHI	**Halema'uma'u T**	**1.11**	**83**			Pn		21 07 49.6	-0.3
HATHI					IAML			21 08 16.7	
	comp=N,809nm,0.7s								
HATHI					IAML			21 08 19.9	
	comp=E,900nm,0.7s								
PUH	**Pauahi**	**1.15**	**85**			Pn		21 07 50.0	-0.4
KNHH	**Kane Nui o Ham**	**1.20**	**85**			Pb		21 07 51.8	+0.2
STCH	**Steam Cracks**	**1.24**	**85**			Pn		21 07 51.1	-0.4
NPOC	**North of Pu'u**	**1.25**	**85**			Pn		21 07 51.6	-0.2
NPOC	**North of Pu'u**	**1.25**	**85**	IAML				21 08 11.5	
	comp=N,945nm,0.6s								
NPOC					IAML			21 08 32.1	
	comp=E,723nm,0.7s								
JCUZ	**Jacuzzi**	**1.26**	**85**	Pn		Pn		21 07 51.4	-0.4
JCUZ					IAML			21 08 09.9	
	comp=N,606nm,0.9s								
JOKA	**Jonika Flow**	**1.35**	**83**			Pn		21 07 52.6	-0.5
PHO	**Puu Honuaula**	**1.47**	**82**			Pn		21 07 55.0	+0.3
HLK	**Haleakala**	**1.48**	**7**			Pn		21 07 55.2	+0.1
HLK					IAML			21 08 17.9	
	comp=E,816nm,0.3s								
HLK	**Haleakala**	**1.48**	**7**			Sn		21 08 11.2	-2.6
KHLH	**Kahului Airpor**	**1.61**	**0**			Pn		21 07 57.2	+0.7
KHLH	**Kahului Airpor**	**1.61**	**0**			Sn		21 08 14.5	-2.0
KHLH	**Kahului Airpor**	**1.61**	**0**	IAML				21 08 17.3	
	comp=N,856nm,0.3s								
KHLH					IAML			21 08 18.6	
	comp=E,795nm,0.2s								
WMR	**Waimanalo Ridg**	**2.34**	**330**			Pn		21 08 07.0	+0.3
WMR						Sn		21 08 32.0	-2.8
DHH	**Diamond Head**	**2.35**	**327**			Pn		21 08 07.0	+0.1
DHH						Sn		21 08 32.9	-2.2
HON	**Honolulu**	**2.51**	**324**			Pn		21 08 09.0	+0.1
KIP	**Kipapa**	**2.60**	**325**	Pn		Pn		21 08 10.0	-0.1
OPA	**Opana**	**2.81**	**329**	Pn		Pn		21 08 12.8	-0.4
KEKH	**Kekaha**	**4.08**	**312**	Pn		Pn		21 08 29.8	-0.8

IDC ***17*** *21:19:17.9±1.2, 71°.64N×0°.62W, h0km, mb3.4/7, mbtmp3.5/13, ML3.0/5, MS3.3/40, Error ellipse: s-maj=25.4km s-min=17.8km az=84.0*
NAO ***17*** *21:19:19.0±3.4, 71°.76N×0°.35W, ML3.6*
BER ***17*** *21:19:20.6±2.8, 71°.85N×0°.98W, h10km, ML3.6(NAO), Confirmed Earthquake*

ISC 17 21:19:19.1±0.9, 71°.76N±0°.08×0°.35W±0°.09, h10km, n81, σ1°40/50, mb3.5/7, MS3.3/34, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LOF	**Lofoten**	**6.00**	**121**	*eP*		**Pn**	**21 20 50.0**	**+2.3**
LOF				*eS*		**Sn**	**21 21 56.1**	**-0.2**
LOF				IAML			21 22 03.9	
	comp=E,3.2nm,0.9s							
BJO1	**Bjornoya**	**6.25**	**55**	Pn		**Pn**	**21 20 52.3**	**+1.1**
BJO1	**Bjornoya**	**6.25**	**55**	*eP*		**Pn**	**21 20 52.5**	**+1.4**
STEI	**Steigen**	**6.60**	**118**	*eP*		**Pn**	**21 20 57.9**	**+1.8**
STEI				IAML			21 22 17.8	
	comp=E,2.6nm,0.5s							
TRO	**Tromso**	**6.72**	**99**	*eP*		**Pn**	**21 20 59.2**	**+1.5**
TRO				IAML			21 22 16.4	
	comp=E,3.1nm,0.6s							
HSPB	**Hornsund (broa**	**6.76**	**32**	*eP*		**Pn**	**21 20 57.8**	**-0.4**
HSPB				IAML			21 22 10.8	
	comp=E,13nm,0.5s							
FAUS	**Fauske**	**7.00**	**121**	*eP*		**Pn**	**21 21 03.3**	**+1.8**
FAUS				IAML			21 22 29.1	
	comp=E,2.2nm,0.6s							
KONS	**Konsvik**	**7.13**	**131**	*eP*		**Pn**	**21 21 04.1**	**+0.9**
KONS				IAML			21 22 25.7	
	comp=E,3.4nm,0.4s							
JETT	**Jettan, Norway**	**7.22**	**98**	Pn		**Pn**	**21 21 06.0**	**+1.4**
KIF	**Kilpisjarvi**	**7.61**	**101**	Pn		**Pn**	**21 21 11.3**	**+1.5**
KIF	**Kilpisjarvi**	**7.61**	**101**	*eP*		**Pn**	**21 21 12.4**	**+2.6**
MOR8	**Moi Rana**	**7.71**	**129**	*eP*		**Pn**	**21 21 14.0**	**+2.8**
MOR8				IAML			21 22 43.0	
	comp=E,2.6nm,0.2s							
SPA0	**Spitsbergen Ar**	**7.73**	**26**	Pn		**Pn**	**21 21 11.3**	**-0.2**
	baz=215,slow=14							
SPA0	**Spitsbergen Ar**	**7.73**	**26**	Pn		**Pn**	**21 21 11.3**	**-0.2**
	baz=215,slow=14							
SPITS	**Spitsbergen Ar**	**7.73**	**26**	Pn		**Pn**	**21 21 11.3**	**-0.2**
	comp=Z,4.4nm,0.5s,baz=209,slow=15,SNR=54							
HAMF	**Hammerfest**	**7.82**	**87**	Pn		**Pn**	**21 21 12.6**	**-0.1**
HAMF	**Hammerfest**	**7.82**	**87**	Pn		**Pn**	**21 21 12.6**	**-0.1**
KBS	**Kingsbay**	**7.82**	**18**	Pn		**Pn**	**21 21 12.9**	**+0.1**
KBS	**Kingsbay**	**7.82**	**18**	*eP*		**Pn**	**21 21 10.0**	**-2.7**
HEF	**Hetta**	**8.81**	**101**	*eP*		**Pn**	**21 21 27.5**	**+1.2**
ARCES	**ARCESS Array B**	**8.83**	**92**	Pn		**Pn**	**21 21 27.8**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=296,slow=12,SNR=31							
ARCES					Sn	**Sn**	**21 23 03.0**	**-2.9**
	baz=286,slow=22							
	comp=Z,1.1nm,0.3s							
ARA0	**ARCESS Array S**	**8.83**	**92**	Pn		**Pn**	**21 21 27.6**	**+1.0**
	baz=297,slow=12							
ARA0	**ARCESS Array S**	**8.83**	**92**	Pn		**Pn**	**21 21 27.6**	**+1.0**
	baz=297,slow=12							
ARA0				*eP*		**Pn**	**21 21 28.6**	**+2.1**
KEV	**Kevo**	**9.21**	**89**	*eP*		**Pn**	**21 21 32.9**	**+1.2**
AKN	**Aaknes**	**10.03**	**160**	Pn		**Pn**	**21 21 44.2**	**+1.2**
AKN	**Aaknes**	**10.03**	**160**	Pn		**Pn**	**21 21 44.2**	**+1.2**
BORG	**Borgarnes**	**10.42**	**238**	LR		LR	21 24 41.9	
	comp=Z,79nm,19.3s,baz=2.1,slow=32							
SUMG	**Summit**	**11.57**	**292**	*i* P		Pn	21 21 58.0	-6.4
NB2	**NORSAR Subarra**	**11.68**	**151**	Pn		**Pn**	**21 22 07.1**	**+1.4**
NB2	**NORSAR Subarra**	**11.68**	**151**	Pn		**Pn**	**21 22 07.1**	**+1.4**
NOA	**NORSAR Array B**	**11.68**	**151**	Pn		**Pn**	**21 22 04.0**	**-1.7**
	baz=339,slow=13,SNR=3.5							
NOA				LR		LR	21 26 30.6	
	comp=Z,195nm,20.1s,baz=340,slow=37							
	comp=Z,0.3nm,0.5s							
NRA0	**NORESS Array S**	**12.02**	**151**	Pn		**Pn**	**21 22 10.3**	**+0.1**
	baz=330,slow=16							
NRA0	**NORESS Array S**	**12.02**	**151**	Pn		**Pn**	**21 22 10.3**	**+0.1**
	baz=330,slow=16							
HFS	**Hagfors**	**12.94**	**147**	Pn		**Pn**	**21 22 21.3**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=343,slow=9.5,SNR=9.0							
HFS				LR		LR	21 27 19.8	
	comp=Z,192nm,19.3s,baz=336,slow=37							
	comp=Z,2.9nm,0.6s							

HFS	**Hagfors**	**12.94**	**147**	Pn		**Pn**	**21 22 24.9**	**+2.1**
	baz=342,slow=14								
HFS	**Hagfors**	**12.94**	**147**	Pn		**Pn**	**21 22 24.9**	**+2.1**
	baz=342,slow=14								
FIA0	**FINESS Array S**	**14.56**	**122**	P		**Pn**	**21 22 46.2**	**+1.3**
	baz=319,slow=16								
FIA0	**FINESS Array S**	**14.56**	**122**	P		**Pn**	**21 22 46.2**	**+1.3**
	baz=319,slow=16								
FINES	**FINESS Array B**	**14.56**	**122**	Pn		**Pn**	**21 22 45.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=353,slow=14,SNR=7.8								
FINES					LR	LR	21 27 59.3		
	comp=Z,191nm,20.3s,baz=356,slow=36								
	comp=Z,3.7nm,0.8s								
EKA	**Eskdalemuir Ar**	**16.53**	**186**	Pn		**Pn**	**21 23 09.9**	**-0.8**
	baz=357,slow=10								
EKA					LR	LR	21 28 21.5		
	comp=Z,94nm,21.8s,baz=2.0,slow=33								
	comp=Z,0.8nm,0.7s								
SFJD	**Kangerlussuaq**	**17.85**	**280**	LR		LR	21 29 15.9		
	comp=Z,140nm,18.9s,baz=44,slow=34								
KLMR	**Klimovskoe**	**18.93**	**105**	*e*P		**P**	**21 23 39.2**	**-0.4**
	comp=Z,23nm,1.4s								
KLMR	**Klimovskoe**	**18.93**	**105**	*e*Pn		**P**	**21 23 39.3**	**-0.4**
KLMR					AMP		21 23 48.7		
	comp=Z,23nm,1.4s								
PRGR	**Permogore**	**20.21**	**96**	*e*P		Pn	21 23 57.0	+1.4
VRAC	**Vranov**	**23.83**	**152**	P		**P**	**21 24 31.6**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=27,slow=11,SNR=1.6								
VRAC					LR	LR	21 34 15.2		
	comp=Z,95nm,19.1s,baz=348,slow=38								
	comp=Z,0.6nm,0.4s								
GERES	**GERESS Array B**	**23.89**	**157**	P		**P**	**21 24 32.8**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=344,slow=16,SNR=2.7								
	comp=Z,0.2nm,0.5s								
RES	**Reshetnaya Bay**	**24.72**	**321**	LR		LR	21 33 44.8		
	comp=Z,149nm,20.5s,baz=38,slow=35								
AKASG	**Malin Array Be**	**24.95**	**132**	P		**P**	**21 24 43.0**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=336,slow=10,SNR=5.4								
AKASG					LR	LR	21 34 22.9		
	comp=Z,148nm,18.3s,baz=356,slow=36								
	comp=Z,0.5nm,0.5s								
DAVOX	**Davos/Dischmat**	**25.52**	**164**	LR		LR	21 35 18.4		
	comp=Z,57nm,18.6s,baz=81,slow=38								
FRB	**Frobisher Bay**	**25.56**	**287**	LR		LR	21 33 57.6		
	comp=Z,80nm,19.3s,baz=2.0,slow=34								
ARU	**Arti**	**28.41**	**91**	LR		LR	21 36 19.1		
	comp=Z,61nm,20.3s,baz=322,slow=36								
MLR	**Muntele Rosu**	**29.16**	**140**	LR		LR	21 37 27.4		
	comp=Z,185nm,19.1s,baz=26,slow=37								
SCHQ	**Schefferville**	**32.13**	**274**	LR		LR	21 37 26.6		
	comp=Z,58nm,19.6s,baz=46,slow=34								
ESDC	**Sonseca Array**	**32.21**	**185**	P		**P**	**21 25 46.3**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=357,slow=8.8,SNR=2.7								
ESDC					LR	LR	21 38 31.4		
	comp=Z,40nm,18.2s,baz=356,slow=36								
	comp=Z,0.4nm,0.8s								
AKTO	**Aktyubinsk**	**33.35**	**98**	LR		LR	21 39 36.1		
	comp=Z,46nm,20.6s,baz=340,slow=36								
KVAR	**Kislovodsk Arr**	**34.64**	**120**	LR		LR	21 41 12.7		
	comp=Z,38nm,18.5s,baz=84,slow=38								
KBZ	**Khabaz**	**34.91**	**120**	LR		LR	21 39 00.4		
	comp=Z,37nm,19.0s,baz=24,slow=34								
BRTR	**Keskin Array B**	**36.34**	**133**	LR		LR	21 41 28.8		
	comp=Z,43nm,20.4s,baz=352,slow=37								
INK	**Inuvik**	**36.78**	**333**	LR		LR	21 41 25.3		
	comp=Z,32nm,20.3s,baz=342,slow=36								
ZALV	**Zalesovo Beam**	**38.63**	**71**	LR		LR	21 45 51.9		
	comp=Z,13nm,20.9s,baz=326,slow=41								
YKA	**Yellowknife Ar**	**38.69**	**317**	LR		LR	21 41 50.6		
	comp=Z,67nm,19.2s,baz=142,slow=35								
GNI	**Garni**	**38.74**	**120**	LR		LR	21 44 02.9		
	comp=Z,41nm,18.3s,baz=336,slow=38								
IDI	**Anoyia**	**38.84**	**146**	LR		LR	21 44 18.4		
	comp=Z,39nm,18.7s,baz=287,slow=39								
ILAR	**Eielson Array**	**41.85**	**339**	P		**P**	**21 27 09.2**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=0.0,slow=5.0,SNR=5.2								
ILAR					LR	LR	21 46 21.6		
	comp=Z,22nm,18.0s,baz=113,slow=39								
	comp=Z,1.0nm,1.1s								
YAK	**Yakutsk**	**42.14**	**33**	LR		LR	21 48 11.5		
	comp=Z,17nm,18.2s,baz=89,slow=41								
MKAR	**Makanchi Array**	**44.16**	**78**	P		**P**	**21 27 28.7**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=348,slow=6.5,SNR=2.3								
	comp=Z,0.3nm,0.7s								
GEYT	**Alibeck**	**44.67**	**107**	LR		LR	21 48 15.6		
	comp=Z,64nm,18.1s,baz=94,slow=39								
DLBC	**Dease Lake**	**45.46**	**325**	LR		LR	21 46 45.7		
	comp=Z,92nm,18.1s,baz=324,slow=36								
SONM	**Songino Array**	**50.19**	**57**	LR		LR	21 51 14.1		
	comp=Z,17nm,19.1s,baz=330,slow=38								
BBB	**Bella Bella**	**51.01**	**321**	LR		LR	21 50 34.6		
	comp=Z,46nm,18.6s,baz=359,slow=37								
NEW	**Newport**	**52.31**	**311**	LR		LR	21 50 11.5		
	comp=Z,56nm,18.3s,baz=14,slow=35								
PETK	**Petropavlovsk-**	**54.47**	**16**	LR		LR	21 51 58.9		
	comp=Z,16nm,18.0s,baz=91,slow=36								
KLR	**Kul'dur**	**54.67**	**37**	LR		LR	21 53 07.8		
	comp=Z,26nm,19.3s,baz=104,slow=37								
PDAR	**Pinedale Array**	**55.54**	**303**	LR		LR	21 50 51.2		
	comp=Z,33nm,18.7s,baz=12,slow=34								
TORD	**Torodi Ar. Bea**	**58.59**	**178**	P		**P**	**21 29 15.4**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=1.6,slow=6.6,SNR=3.5								
	comp=Z,0.5nm,0.8s								
ELK	**Elko**	**58.91**	**306**	LR		LR	21 54 11.0		
	comp=Z,32nm,19.4s,baz=46,slow=36								
YBH	**Yreka Blue Hor**	**59.79**	**313**	LR		LR	21 55 13.9		
	comp=Z,64nm,18.4s,baz=353,slow=36								
ANMO	**Albuquerque**	**62.00**	**297**	LR		LR	21 56 21.4		
	comp=Z,51nm,18.0s,baz=31,slow=36								
KSRS	**Korea Array**	**65.20**	**43**	LR		LR	22 00 39.2		
	comp=Z,9.5nm,19.9s,baz=240,slow=38								
SJG	**San Juan**	**65.42**	**253**	LR		LR	21 53 16.9		
	comp=Z,9.3nm,21.8s,baz=14,slow=31								
TXAR	**Lajitas Array**	**66.47**	**292**	LR		LR	21 58 36.3		
	comp=Z,35nm,19.4s,baz=342,slow=36								

NEIC ***17*** *21:31:05.3±2.0, 33°.32S±0°.08×178°.3W±0°.2, h10km±2km, mb4.6/16, Error ellipse: s-maj=25.5km s-min=11.7km az=102.0*
WEL ***17*** *21:31:06.2±0.8, 33°.5±6°×17°.8W±1°.6, h33km, M4.4/37, mB5.0/24, ML5.1/38, MLv4.8/37, Mw(mB)4.3/24, Error ellipse: s-maj=0.0km s-min=0.0km az=108.8*
IDC ***17*** *21:31:06.3±0.7, 33°.39S×178°.62W, h0km, mb4.2/8, mbtmp4.3/10, ML6.0/1, MS3.5/9, Error ellipse: s-maj=26.7km s-min=20.9km az=79.0*

ISC 17 21:31:06.5±0.6, 33°.37S±0°.05×178°.4W±0°.1, h10km, n102, σ1°72/109, mb4.5/13, MS3.6/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.12**	**6**	P		**Pn**	**21 32 07.8**	**-1.7**
GLKZ				S		**Sn**	**21 32 53.2**	**-4.5**
RAO	**Raoul Island**	**4.13**	**6**	Pn		**Pn**	**21 32 07.3**	**-2.3**
RAO				Sn		**Sn**	**21 32 52.8**	**-5.2**
RIZ	**Raoul Island**	**4.14**	**6**	S		**Sn**	**21 32 51.8**	**-6.3**
MXZ	**Matakaoa Point**	**4.96**	**212**	Pn		**Pn**	**21 32 20.2**	**-0.7**
MXZ	**Matakaoa Point**	**4.96**	**212**	P		**Pn**	**21 32 20.5**	**-0.4**
MXZ				S		**Sn**	**21 33 16.5**	**-1.9**
WMGZ	**Waiomatatini S**	**5.13**	**209**	P		**Pn**	**21 32 21.0**	**-2.3**
WMGZ				S		**Sn**	**21 33 18.8**	**-3.8**
PKGZ	**Pakihiroa**	**5.33**	**211**	P		**Pn**	**21 32 25.4**	**-0.8**
PKGZ				S		**Sn**	**21 33 25.6**	**-2.1**
HAZ	**Te Kaha**	**5.36**	**214**	P		**Pn**	**21 32 26.2**	**-0.2**
HAZ				S		**Sn**	**21 33 29.8**	**+1.6**
PUZ	**Puketiti**	**5.41**	**209**	P		**Pn**	**21 32 27.2**	**0.0**
RUGZ	**Raukumara Rang**	**5.57**	**214**	P		**Pn**	**21 32 28.9**	**-0.7**
TWGZ	**Tauwhareparae**	**5.61**	**210**	P		**Pn**	**21 32 29.5**	**-0.5**
TWGZ				S		**Sn**	**21 33 34.0**	**-0.6**
CNGZ	**Carnagh Statio**	**5.79**	**207**	P		**Pn**	**21 32 30.4**	**-1.9**
CNGZ				S		**Sn**	**21 33 39.0**	**+0.2**
TKGZ	**Te Karaka**	**5.89**	**210**	P		**Pn**	**21 32 33.9**	**+0.1**
TKGZ				S		**Sn**	**21 33 38.4**	**-3.0**
MWZ	**Matawai**	**5.94**	**212**	P		**Pn**	**21 32 32.8**	**-1.7**
MWZ				S		**Sn**	**21 33 40.6**	**-2.1**
OPRZ	**Ohinepanea**	**6.05**	**221**	P		**Pn**	**21 32 38.0**	**+2.0**
OPRZ				S		**Sn**	**21 33 45.3**	**0.0**
URZ	**Urewera**	**6.08**	**215**	Pn		**Pn**	**21 32 35.8**	**-0.5**
	35nm,0.3s,baz=268,slow=3.2,SNR=44							
URZ					Sn	**Sn**	**21 33 42.8**	**-3.1**
	9.0nm,0.3s,baz=265,slow=5.6,SNR=7.0							
URZ	**Urewera**	**6.08**	**215**			**Pn**	**21 32 35.6**	**-0.7**
URZ	**Urewera**	**6.08**	**215**	P		**Pn**	**21 32 36.2**	**-0.1**
RAGZ	**Rawiri**	**6.12**	**212**	P		**Pn**	**21 32 35.6**	**-1.5**
RIGZ	**Rimuhau**	**6.15**	**209**	P		**Pn**	**21 32 37.2**	**-0.2**

TARZ	**Mount Tarawera**	**6.36**	**219**	P		**Pn**	**21 32 41.4**	**+1.0**
SNGZ	**Shannon Statio**	**6.39**	**211**	P		**Pn**	**21 32 40.6**	**-0.1**
MUGZ	**Murupara**	**6.41**	**216**	P		**Pn**	**21 32 41.2**	**+0.2**
KNZ	**Kokohu**	**6.46**	**208**	P		**Pn**	**21 32 40.8**	**-0.8**
MHGZ	**Mahia Peninsul**	**6.48**	**206**	P		**Pn**	**21 32 39.8**	**-2.2**
MHGZ				S		**Sn**	**21 33 52.3**	**-3.7**
TOZ	**Tahuroa Road**	**6.59**	**227**	P		**Pn**	**21 32 44.7**	**+1.3**
RAHZ	**Arahi**	**6.62**	**212**	P		**Pn**	**21 32 43.8**	**0.0**
MTHZ	**Maungataniwha**	**6.67**	**214**	P		**Pn**	**21 32 43.6**	**-1.0**
WHHZ	**Waihua**	**6.69**	**210**	P		**Pn**	**21 32 44.9**	**+0.2**
MRHZ	**Matea Rd**	**6.86**	**216**	P		**Pn**	**21 32 46.8**	**-0.4**
NMHZ	**Naumai**	**6.89**	**213**	P		**Pn**	**21 32 45.3**	**-2.3**
ARHZ	**Arapoaanui**	**6.94**	**211**	P		**Pn**	**21 32 48.0**	**-0.3**
BKZ	**Black Stump Fm**	**7.09**	**214**	P		**Pn**	**21 32 48.6**	**-1.7**
BKZ	**Black Stump Fm**	**7.09**	**214**	P		**Pn**	**21 32 49.3**	**-1.0**
RATZ	**Rangitukua**	**7.22**	**219**	P		**Pn**	**21 32 51.5**	**-0.6**
CKHZ	**Cape Kidnapper**	**7.24**	**209**	P		**Pn**	**21 32 49.1**	**-3.2**
KWHZ	**Kaweka Forest**	**7.33**	**213**	P		**Pn**	**21 32 51.9**	**-1.7**
TMVZ	**Te Maari**	**7.44**	**218**	P		**Pn**	**21 32 53.9**	**-1.2**
KAHZ	**Kahuranaki**	**7.44**	**209**	P		**Pn**	**21 32 53.4**	**-1.7**
NTVZ	**North Tongarir**	**7.44**	**218**	P		**Pn**	**21 32 54.0**	**-1.2**
ETVZ	**East Tongariro**	**7.45**	**218**	P		**Pn**	**21 32 54.1**	**-1.3**
HIZ	**Hauiti**	**7.48**	**225**	P		**Pn**	**21 32 55.3**	**-0.3**
OTVZ	**Oturere**	**7.49**	**218**	P		**Pn**	**21 32 54.7**	**-1.3**
NNVZ	**North Ngauruho**	**7.50**	**218**	P		**Pn**	**21 32 56.2**	**+0.2**
WTVZ	**West Tongariro**	**7.50**	**218**	P		**Pn**	**21 32 56.5**	**+0.5**
SNVZ	**South Ngauruho**	**7.52**	**218**	P		**Pn**	**21 32 55.4**	**-1.0**
KRHZ	**Kereru**	**7.53**	**212**	P		**Pn**	**21 32 54.2**	**-2.2**
NGZ	**Ngauruhoe**	**7.54**	**218**	P		**Pn**	**21 32 55.9**	**-0.6**
BHHZ	**Black Hill Sta**	**7.55**	**214**	P		**Pn**	**21 32 55.2**	**-1.4**
TUVZ	**Tukino**	**7.58**	**217**	P		**Pn**	**21 32 57.5**	**+0.4**
WHVZ	**Whangaehu Hut**	**7.62**	**218**	P		**Pn**	**21 32 58.9**	**+1.1**
MOVZ	**Moawhango**	**7.63**	**216**	P		**Pn**	**21 32 56.7**	**-1.1**
PXZ	**Pawanui**	**7.65**	**208**	P		Pn	21 32 53.0	-4.9
WNVZ	**Wahianoa**	**7.65**	**217**	P		**Pn**	**21 32 57.4**	**-0.7**
PNHZ	**Pukenui**	**7.83**	**212**	P		**Pn**	**21 32 57.9**	**-2.5**
PRHZ	**Porangahau**	**7.94**	**208**	P		**Pn**	**21 32 59.7**	**-2.2**
RPZ	**Rata Peaks**	**13.19**	**215**	Pn		**Pn**	**21 34 10.1**	**-3.8**
	0.8nm,0.3s,baz=110,slow=3.2,SNR=6.9							
RPZ					Sn	Sn	21 36 25.3	-15
	0.8nm,0.3s,baz=3.3,slow=18,SNR=3.9							
MSVF	**Nonsavu**	**15.89**	**348**	Pn		**Pn**	**21 34 51.8**	**+1.4**
	2.6nm,0.3s,baz=196,slow=3.5,SNR=12							
MSVF					LR	LR	21 39 54.3	
	comp=Z,68nm,18.7s,baz=219,slow=33							
	6.1nm,0.3s							
MSVF	**Nonsavu**	**15.89**	**348**	Pn		**Pn**	**21 34 48.4**	**-2.0**
ONTNC	**Ouen Toro**	**17.31**	**306**			**Pn**	**21 35 08.2**	**0.0**
ONTNC					IAmb	IAmb	21 35 16.6	
	comp=Z,57nm,1.0s							
DZM	**Mont Dzumac**	**17.47**	**306**	LR		LR	21 39 48.0	
	comp=Z,104nm,18.9s,baz=224,slow=30							
DZM	**Mont Dzumac**	**17.47**

MSVF	**Nonsavu**	**4.68**	**305**	P	**P**	**21**	**36**	**19.8 +2.3**
AFI	**Afiamalu**	**8.78**	**43**	P	**P**	**21**	**36**	**55.7 -0.8**
	19nm,0.4s,baz=335,slow=21,SNR=5.1							
AFI				S	**S**	**21**	**38**	**33.2 -6.1**
	38nm,0.5s,baz=215,slow=22,SNR=5.9							
MARNC	**Mare, Loyalty**	**13.16**	**263**	P	**P**	**21**	**37**	**41.7 -0.1**
PINNC	**Pines Island,**	**13.78**	**258**	P	**P**	**21**	**37**	**48.6 +0.4**
DZM	**Mont Dzumac**	**14.66**	**261**	P	**P**	**21**	**37**	**56.8 -0.7**
	5.1nm,0.6s,baz=114,slow=23,SNR=1.3							
DZM	**Mont Dzumac**	**14.66**	**261**	P	**P**	**21**	**37**	**57.4 -0.1**
URZ	**Urewera**	**18.24**	**193**	P	**P**	**21**	**38**	**30.7 -1.1**
	4.5nm,0.3s,baz=40,slow=12,SNR=2.4							
URZ	**Urewera**	**18.24**	**193**	P	**P**	**21**	**38**	**31.0 -0.8**
URZ				IAmb	IAmb	21	38	51.7
	comp=Z,21nm,0.9s							
EIDS	**Eidsvold**	**28.92**	**254**	P	**P**	**21**	**40**	**05.8 -1.5**
EIDS				IAmb	IAmb	21	40	38.3
	comp=Z,19nm,1.4s							
ARMA	**Armidale**	**29.14**	**244**	P	**P**	**21**	**40**	**08.6 -0.6**
ARMA				IAmb	IAmb	21	40	08.8
	comp=Z,12nm,1.2s							
CTA	**Charters Tower**	**33.56**	**264**	P	**P**	**21**	**40**	**47.3 +0.2**
	comp=Z,26nm,0.6s,baz=89,slow=10.0,SNR=33							
	comp=Z,26nm,0.6s							
CTAO	**Charters Tower**	**33.56**	**264**	P	**P**	**21**	**40**	**47.0 -0.1**
TOO	**Toolangi**	**35.97**	**234**	P	**P**	**21**	**41**	**06.3 -0.6**
TOO				IAmb	IAmb	21	41	13.8
	comp=Z,23nm,1.4s							
COEN	**Coen**	**37.65**	**274**	P	**P**	**21**	**41**	**20.8 -0.2**
COEN				IAmb	IAmb	21	41	22.4
	comp=Z,13nm,0.8s							
STKA	**Stephens Creek**	**37.86**	**244**	P	**P**	**21**	**41**	**22.6 0.0**
	comp=Z,2.3nm,0.5s,baz=92,slow=9.8,SNR=8.2							
	comp=Z,2.3nm,0.5s							
STKA	**Stephens Creek**	**37.86**	**244**	P	**P**	**21**	**41**	**22.4 -0.2**
BBOO	**Buckleboo**	**42.62**	**243**	P	**P**	**21**	**42**	**00.2 -0.4**
WR0	**Warramunga Arr**	**44.48**	**262**	P	**P**	**21**	**42**	**14.5 -0.8**
WR0				IAmb	IAmb	21	42	16.1
	comp=Z,10nm,1.1s							
AS31	**Alice Springs**	**44.59**	**257**	P	**P**	**21**	**42**	**15.8 -0.3**
AS31				IAmb	IAmb	21	42	16.6
	comp=Z,4.4nm,0.7s							
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**21**	**42**	**15.9 -0.2**
	comp=Z,14nm,0.6s,baz=97,slow=7.7,SNR=60							
ASAR				PcP	**PcP**	**21**	**43**	**47.5 -0.1**
	comp=Z,1.0nm,0.5s,baz=111,slow=3.4,SNR=4.6							
ASAR				S	**S**	**21**	**48**	**10.1 -3.3**
	comp=Z,0.8nm,0.9s,baz=97,slow=15,SNR=5.5							
	comp=Z,14nm,0.6s							
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**21**	**42**	**15.4 -0.7**
WB2	**Warramunga Arr**	**44.66**	**262**	P	**P**	**21**	**42**	**16.0 -0.7**
WB2				IAmb	IAmb	21	42	16.8
	comp=Z,16nm,0.9s							
WRA	**Warramunga Arr**	**44.67**	**262**	P	**P**	**21**	**42**	**16.0 -0.8**
	comp=Z,7.2nm,0.6s,baz=96,slow=7.7,SNR=95							
WRA				PcP	**PcP**	**21**	**43**	**47.4 -0.5**
	comp=Z,1.0nm,0.9s,baz=98,slow=4.3,SNR=2.5							
	comp=Z,7.2nm,0.6s							
WRA	**Warramunga Arr**	**44.67**	**262**	P	**P**	**21**	**42**	**15.7 -1.1**
MTN	**Manton Dam**	**49.23**	**270**	P	**P**	**21**	**42**	**50.5 -0.7**
MTN				IAmb	IAmb	21	42	51.1
	comp=Z,11nm,0.7s							
FORT	**Forrest**	**49.37**	**247**	P	**P**	**21**	**42**	**51.1 -0.9**
KNRA	**Kununurra**	**50.73**	**266**	P	**P**	**21**	**43**	**01.9 -0.2**
KNRA				IAmb	IAmb	21	43	02.6
	comp=Z,12nm,0.7s							
FAKI	**Fak Fak**	**51.56**	**283**	P	**P**	**21**	**43**	**07.8 -0.4**
FAKI				IAmb	IAmb	21	43	15.4
	comp=Z,46nm,1.4s							
FITZ	**Fitzroy Crossi**	**53.10**	**262**	P	**P**	**21**	**43**	**19.1 -0.1**
FITZ				IAmb	IAmb	21	43	36.4
	comp=Z,16nm,1.4s							
PSA00	**Pilbara Seismi**	**57.74**	**257**	P	**P**	**21**	**43**	**50.5 -1.0**
PSA00	**Pilbara Seismi**	**57.74**	**257**	P	**P**	**21**	**43**	**51.0 -0.5**
PSA00				IAmb	IAmb	21	44	26.9
	comp=Z,30nm,1.4s							
MBWA	**Marble Bar**	**57.93**	**257**	P	**P**	**21**	**43**	**52.1 -0.6**
MBWA				IAmb	IAmb	21	44	10.5
	comp=Z,15nm,1.1s							
NWAO	**Narrogin (SRO)**	**58.44**	**243**	P	**P**	**21**	**43**	**55.5 -0.5**
MORW	**Morawa**	**59.90**	**248**	P	**P**	**21**	**44**	**05.3 -0.6**
MORW				IAmb	IAmb	21	44	39.3
	comp=Z,28nm,1.2s							
CASY	**Casey**	**64.02**	**205**	P	**P**	**21**	**44**	**31.9 0.0**
QSPA	**South Pole Qui**	**69.59**	**180**	P	**P**	**21**	**45**	**07.5 +1.0**
	comp=Z,1.5nm,0.7s,baz=325,slow=0.7,SNR=6.0							
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**69.59**	**180**	P	**P**	**21**	**45**	**07.1 +0.6**
UGM	**Wanagama**	**70.03**	**269**	P	**P**	**21**	**45**	**09.5 -0.4**
MJAR	**Matsushiro Arr**	**70.23**	**324**	P	**P**	**21**	**45**	**10.3 -0.2**
	comp=Z,1.6nm,0.5s,baz=156,slow=6.4,SNR=6.8							
	comp=Z,1.6nm,0.5s							
TPUB	**Ta-pu**	**74.02**	**303**	P	**P**	**21**	**45**	**31.9 -1.0**
KSRS	**Korea Array**	**76.91**	**319**	P	**P**	**21**	**45**	**49.4 +0.8**
	comp=Z,1.0nm,0.6s,baz=121,slow=5.5,SNR=6.3							
	comp=Z,1.0nm,0.6s							
USRK	**Ussuriysk Ar.**	**78.98**	**326**	P	**P**	**21**	**46**	**01.1 +1.5**
	comp=Z,3.5nm,0.7s,baz=198,slow=2.8,SNR=7.4							
	comp=Z,3.5nm,0.7s							
USRK	**Ussuriysk Ar.**	**78.98**	**326**	P	**P**	**21**	**46**	**00.4 +0.8**
BELA	**Belgrano 2**	**79.58**	**173**	P	**P**	**21**	**46**	**01.8 -0.4**
NVAR	**Mina Array Bea**	**80.96**	**43**	P	**P**	**21**	**46**	**11.6 +1.2**
	comp=Z,0.8nm,0.8s,baz=227,slow=9.2,SNR=6.1							
	comp=Z,0.8nm,0.8s							
PINE	**Pine Mountain**	**82.52**	**38**	P	**P**	**21**	**46**	**19.7 +1.5**
KULM	**Kulim**	**83.84**	**278**	P	**P**	**21**	**46**	**25.8 +0.6**
KULM				IAmb	IAmb	21	47	09.5
	comp=Z,33nm,1.5s							
TXAR	**Lajitas Array**	**86.98**	**57**	P	**P**	**21**	**46**	**41.8 +1.7**
	comp=Z,0.8nm,0.8s,baz=218,slow=6.3,SNR=7.9							
	comp=Z,0.8nm,0.8s							
TXAR	**Lajitas Array**	**86.98**	**57**	P	**P**	**21**	**46**	**41.6 +1.5**
PDAR	**Pinedale Array**	**88.89**	**43**	P	**P**	**21**	**46**	**50.0 +1.1**
	comp=Z,0.7nm,0.7s,baz=224,slow=4.1,SNR=3.8							
	comp=Z,0.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**90.17**	**290**	P	**P**	**21**	**46**	**57.0 +2.0**
	comp=Z,1.3nm,0.5s,baz=114,slow=3.3,SNR=10							
	comp=Z,1.3nm,0.5s							
AKASG	**Malin Array Be**	**143.02**	**331**	PKhKP	PKPpre	21	53	20.8
	comp=Z,1.5nm,0.4s,baz=43,slow=4.4,SNR=13							
ASF	**Jabal al Asfar**	**146.83**	**298**	PKPbc	**PKPbc**	**21**	**53**	**34.5 +0.4**
	comp=Z,1.7nm,0.7s,baz=90,slow=6.1,SNR=2.5							
BRTR	**Keskin Array B**	**146.87**	**312**	PKPbc	**PKPdf**	**21**	**53**	**33.3 +2.2**
	comp=Z,1.1nm,0.7s,baz=123,slow=5.3,SNR=2.4							
MMAI	**Mount Meron Ar**	**147.86**	**300**	PKPbc	**PKPbc**	**21**	**53**	**37.3 +0.6**
	comp=Z,1.8nm,0.4s,baz=75,slow=6.3,SNR=9.6							
CLL	**Collm**	**148.05**	**347**	*i* PKPbc	**PKPbc**	**21**	**53**	**37.1 +0.6**
GERES	**GERESS Array B**	**150.19**	**344**	PKPbc	**PKPbc**	**21**	**53**	**42.3 +0.5**
	comp=Z,0.7nm,0.8s,baz=29,slow=3.0,SNR=5.0							

*KRNET **17** 21:42:01.1±0.1,39°.37N×73°.53E,mb3.1*
*SOME **17** 21:42:01.6,39°.25N×74°.23E,h5km*
*ISU **17** 21:42:03,39°.50N×73°.75E,h8km*

ISC 17 21:42:04.9±2.5,39°.33N±0°.08×73°.59E±0°.05,h12km±15km,
n18,σ1s98/35,8C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
OHH	**Osh**	**1.35**	**333**	⇑*i*P	**Pn**	**21**	**42**	**25.7**	**-4.0**
	baz=34								
OHH				⇑*i*S	**Sn**	**21**	**42**	**43.7**	**-3.8**
	baz=34								
TSTA	**Tashata**	**1.51**	**326**	S	**Sn**	**21**	**42**	**50.4**	**-1.2**
ANR	**Andizhan**	**1.71**	**327**	P	**Pn**	**21**	**42**	**35.3**	**+0.7**
ANR				S	**Sb**	**21**	**42**	**58.0**	**+0.2**
BTK	**Batken**	**2.26**	**290**	P	**Pn**	**21**	**42**	**44.5**	**+2.3**
BTK				S	**Sg**	**21**	**43**	**16.7**	**-0.8**
MINT	**Mingtut**	**2.31**	**300**	P	**Pb**	**21**	**42**	**45.3**	**-1.2**
MINT				S	**Sb**	**21**	**43**	**17.7**	**+2.7**
GAR	**Garm**	**2.56**	**264**	⇑*i*P	**Pn**	**21**	**42**	**45.5**	**-0.9**
	baz=63								
GAR				⇑*i*S	**Sn**	**21**	**43**	**18.0**	**+0.4**
	baz=63								
ARLS	**Aral**	**2.59**	**12**	⇓*i*P	**Pn**	**21**	**42**	**46.0**	**-0.9**
	baz=14								
ARLS				⇓*i*S	**Sn**	**21**	**43**	**18.8**	**+0.3**
	baz=14								
CHDK	**Chadak**	**2.72**	**308**	P	**Pn**	**21**	**42**	**49.3**	**+0.7**
CHDK				S	**Sb**	**21**	**43**	**27.0**	**-0.1**
TRKS	**Terek-Say**	**2.89**	**320**	⇑*i*P	**Pn**	**21**	**42**	**48.8**	**-2.1**
	baz=20								
TRKS				⇑*i*S	**Sn**	**21**	**43**	**23.6**	**-2.1**
	baz=20								
UCH	**Uchtor**	**2.98**	**13**	⇑*e*P	**Pn**	**21**	**42**	**51.6**	**-0.9**
	baz=14								
UCH				⇑*i*S	**Sn**	**21**	**43**	**28.6**	**+0.1**
	baz=14								
EKS2	**Erkin-Say**	**3.34**	**2**	⇓*e*P	**Pn**	**21**	**42**	**56.1**	**-1.0**
	baz=3.0								
EKS2				⇓*i*S	**Sn**	**21**	**43**	**36.4**	**-0.3**
	baz=3.0								
MRKS	**Merke**	**3.43**	**356**	*e*P	**Pb**	**21**	**43**	**08.2**	**+2.5**
	3.7nm,0.3s								
MRKS				*e*S	**Sg**	**21**	**43**	**55.1**	**+0.1**
	14nm,0.4s								
CHMG	**Chimgan**	**3.52**	**310**	S	**Sb**	**21**	**43**	**52.1**	**+2.1**
KST	**Kastek**	**4.12**	**25**	*e*P	**Pb**	**21**	**43**	**14.5**	**-3.0**
	5.7nm,2.2s								
KST				*e*S	**Sb**	**21**	**44**	**06.0**	**-1.4**
	12nm,2.0s								
DGS	**Degeres**	**4.25**	**22**	*e*P	**Pb**	**21**	**43**	**19.9**	**+0.3**
	1.7nm,0.5s								
DGS				*e*S	**Sb**	**21**	**44**	**15.1**	**+4.3**
	6.5nm,0.9s								
KK31	**Karatay Array**	**4.43**	**329**	Pn	**Pn**	**21**	**43**	**12.8**	**+0.8**
	0.2nm,0.2s,baz=134,slow=15,SNR=9.5								
KK31				Pg	**Pb**	**21**	**43**	**23.3**	**+0.6**
	0.9nm,0.4s,baz=143,slow=17,SNR=5.9								
KK31				⇓Sn	**Sn**	**21**	**44**	**03.6**	**+0.1**
	1.3nm,0.4s								
KK31				⇓Lg	Lg	21	44	18.9	
	1.5nm,0.4s,baz=135,slow=28								
KRBS	**Karabastau**	**4.64**	**19**	*e*P	**Pb**	**21**	**43**	**25.7**	**-0.6**
	1.5nm,0.4s								
KRBS				*e*S	**Sb**	**21**	**44**	**25.1**	**+3.0**
	3.2nm,0.7s								
KTBS	**Karatobe**	**4.96**	**27**	*e*P	**Pb**	**21**	**43**	**31.6**	**-0.2**
	1.0nm,0.6s								
KTBS				*e*S	**Sb**	**21**	**44**	**34.6**	**+3.3**
	2.0nm,0.3s								

*IDC **17** 21:46:39.0±1.9,44°.31N×81°.08E,h0km,mb3.5/2,*
mbtmp3.4/6,ML2.9/4,MS3.8/1,Error ellipse: s-maj=22.4km
s-min=18.2km az=117.0
*NNC **17** 21:46:41.1±0.7,44°.34N×81°.26E,h0km,mb4.0,mpv3.8,*
Error ellipse: s-maj=7.9km s-min=3.4km az=132.0
*SOME **17** 21:46:42.2,44°.33N×81°.23E,h15km*

ISC 17 21:46:39.1±1.7,44°.25N±0°.04×81°.38E±0°.05,h4km±11km,
n51,σ2s49/82,16C-6D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
DJR	**Jarkent**	**1.14**	**275**	⇓*e*P	**Pg**	**21**	**47**	**02.5**	**+1.5**
	85nm,0.3s								
DJR				*e*S	**Sb**	**21**	**47**	**17.4**	**+0.7**
	191nm,0.3s								
DJR	**Jarkent**	**1.14**	**275**	P	**Pg**	**21**	**47**	**02.5**	**+1.5**
	39nm,0.2s								
DJR				S	**Sb**	**21**	**47**	**17.7**	**+0.9**
	191nm,0.3s								
SHLS	**Shalkode**	**1.77**	**232**	⇓*e*P	**Pn**	**21**	**47**	**09.6**	**-1.0**
	172nm,0.2s								
SHLS				*e*S	**Sn**	**21**	**47**	**29.4**	**-4.2**
	481nm,0.2s								
SHLS	**Shalkode**	**1.77**	**232**	P	**Pn**	**21**	**47**	**09.6**	**-1.0**
	172nm,0.2s								
SHLS				S	**Sn**	**21**	**47**	**30.5**	**-3.2**
	481nm,0.2s								
UZB	**Uzynbulak**	**2.03**	**238**	*e*P	**Pn**	**21**	**47**	**17.5**	**+3.2**
	64nm,0.2s								
UZB				*e*S	**Sb**	**21**	**47**	**43.5**	**+1.0**
	242nm,0.2s								
UZB	**Uzynbulak**	**2.03**	**238**	Pg	**Pn**	**21**	**47**	**17.6**	**+3.2**
	64nm,0.2s								
UZB				Lg	Lg	21	47	44.0	
	242nm,0.2s								
KPKS	**Kokpek**	**2.10**	**249**	*e*P	**Pn**	**21**	**47**	**18.3**	**+3.1**
	111nm,0.2s								
KPKS				*e*S	**Sb**	**21**	**47**	**44.7**	**+0.4**
	801nm,0.3s								
KPKS	**Kokpek**	**2.10**	**249**	Pg	**Pn**	**21**	**47**	**18.3**	**+3.1**
	111nm,0.2s								
KPKS				Lg	Lg	21	47	44.9	
	801nm,0.3s								
TDK	**Taldyqorghan**	**2.25**	**291**	*e*P	**Pb**	**21**	**47**	**21.6**	**+1.2**
	166nm,0.4s								
TDK				*e*S	**Sg**	**21**	**47**	**50.2**	**-1.2**
	264nm,0.3s								
TDK	**Taldyqorghan**	**2.25**	**291**	Pg	**Pb**	**21**	**47**	**21.6**	**+1.2**
	166nm,0.4s								
TDK				Lg	Lg	21	47	50.2	
	264nm,0.3s								
ZHN	**Zhinishke**	**2.39**	**244**	*e*P	**Pb**	**21**	**47**	**24.5**	**+1.6**
	76nm,0.2s								
ZHN				*e*S	**Sb**	**21**	**47**	**55.0**	**+2.2**
	493nm,0.2s								
ZHN	**Zhinishke**	**2.39**	**244**	Pg	**Pb**	**21**	**47**	**24.2**	**+1.4**
	58nm,0.3s								
ZHN				Lg	Lg	21	47	54.9	
	493nm,0.2s								
KURS	**Kuram**	**2.44**	**253**	*e*P	**Pb**	**21**	**47**	**25.6**	**+2.0**
	5.7nm,0.2s								
KURS				*e*S	**Sb**	**21**	**47**	**57.0**	**+2.9**
	97nm,0.4s								
KURS	**Kuram**	**2.44**	**253**	Pg	**Pb**	**21**	**47**	**25.8**	**+2.2**
	5.7nm,0.2s								
KURS				Lg	Lg	21	47	57.3	
	97nm,0.4s								
SATY	**Saty**	**2.46**	**242**	*e*P	**Pb**	**21**	**47**	**25.6**	**+1.6**
	20nm,0.1s								
SATY				*e*S	**Sb**	**21**	**47**	**57.0**	**+2.2**
	460nm,0.3s								
SATY	**Saty**	**2.46**	**242**	Pg	**Pb**	**21**	**47**	**25.9**	**+1.8**
	20nm,0.1s								
SATY				Lg	Lg	21	47	56.9	
	460nm,0.3s								
ARXS	**Arharly**	**2.55**	**270**	*e*P	**Pb**	**21**	**47**	**26.8**	**+1.2**
	40nm,0.2s								
ARXS				*e*S	**Sb**	**21**	**47**	**59.3**	**+2.0**
	235nm,0.3s								
ARXS	**Arharly**	**2.55**	**270**	Pg	**Pb**	**21**	**47**	**27.4**	**+1.8**
	40nm,0.2s								
ARXS				Lg	Lg	21	47	59.7	
	235nm,0.3s								
MAKZ	**Makanchi**	**2.59**	**9**	⇑Pn	**Pn**	**21**	**47**	**23.2**	**+1.3**
	3.4nm,0.6s								
MAKZ				⇓Pg	**Pb**	**21**	**47**	**27.6**	**+1.4**
	13nm,0.5s								
MAKZ				⇑Lg	Lg	21	47	58.9	
	76nm,0.6s								
MK31	**Makanchi Array**	**2.62**	**14**	Pn	**Pn**	**21**	**47**	**23.7**	**+1.4**
	0.9nm,0.3s,baz=201,slow=13,SNR=1673								
MK31				⇑Pg	**Pb**	**21**	**47**	**29.0**	**+2.3**
	10nm,0.2s,baz=190,slow=16,SNR=34								
MK31				⇑Lg	Lg	21	47	59.9	
	14nm,0.2s,baz=202,slow=29,SNR=10								
MKAR	**Makanchi Array**	**2.62**	**14**	Pn	**Pn**	**21**	**47**	**23.9**	**+1.6**
	2.8nm,0.3s,baz=196,slow=14,SNR=179								
MKAR				Pg	**Pb**	**21**	**47**	**28.9**	**+2.2**
	28nm,0.3s,baz=197,slow=16,SNR=100								
MKAR				Sn	**Sn**	**21**	**47**	**54.2**	**-0.4**
	24nm,0.3s,baz=198,slow=27,SNR=6.6								
MKAR				Lg	Lg	21	47	59.8	
	27nm,0.3s,baz=196,slow=27,SNR=3.7								
	5.3nm,0.3s								
MDOK	**Medeo**	**3.32**	**252**	*e*P	**Pb**	**21**	**47**	**40.2**	**+1.6**
	38nm,0.4s								
MDOK				*e*S	**Sb**	**21**	**48**	**21.8**	**+2.3**
	83nm,0.6s								
MDOK	**Medeo**	**3.32**	**252**	⇑Pn	**Pn**	**21**	**47**	**34.1**	**+2.1**
	1.8nm,0.4s								
MDOK				Pg	**Pb**	**21**	**47**	**40.3**	**+1.6**
	38nm,0.4s								
MDOK				⇑Pg	**Pg**	**21**	**47**	**41.2**	**-1.5**
	27nm,0.5s								
MDOK				Lg	Lg	21	48	21.7	
	83nm,0.6s								
MDOK				⇑Lg	Lg	21	48	21.8	
	86nm,0.5s								
AAA	**Alma-Ata**	**3.40**	**254**	*e*P	**Pb**	**21**	**47**	**41.8**	**+1.9**
	22nm,0.3s								
AAA				*e*S	**Sb**	**21**	**48**	**24.8**	**+3.1**
	61nm,0.3s								
AAA	**Alma-Ata**	**3.40**	**254**	Pg	**Pb**	**21**	**47**	**42.0**	**+2.1**
	22nm,0.3s								
AAA				Lg	Lg	21	48	24.8	
	61nm,0.3s								
KTBS	**Karatobe**	**3.43**	**263**	*e*P	**Pb**	**21**	**47**	**42.1**	**+1.6**
	5.0nm,0.3s								
KTBS				*e*S	**Sb**	**21**	**48**	**25.3**	**+2.8**
	100nm,0.3s								
KTBS	**Karatobe**	**3.43**	**263**	Pg	**Pb**	**21**	**47**	**42.3**	**+1.8**
	5.0nm,0.3s								
KTBS				Lg	Lg	21	48	25.5	
	100nm,0.3s								
KUU	**Kurty**	**3.65**	**266**	*e*P	**Pb**	**21**	**47**	**45.6**	**+1.4**
	16nm,0.8s								
KUU				*e*S	**Sb**	**21**	**48**	**31.1**	**+2.3**
	55nm,0.6s								
KUU	**Kurty**	**3.65**	**266**	Pg	**Pb**	**21**	**47**	**45.6**	**+1.4**
KUU				Lg	Lg	21	48	31.1	
MTBS	**Maitube**	**3.76**	**254**	*e*P	**Pb**	**21**	**47**	**47.5**	**+1.4**
	8.3nm,0.3s								
MTBS				*e*S	**Sb**	**21**	**48**	**34.6**	**+2.6**
	82nm,0.3s								
MTBS	**Maitube**	**3.76**	**254**	Pg	**Pb**	**21**	**47**	**48.2**	**+2.1**
	8.3nm,0.3s								
MTBS				Lg	Lg	21	48	34.7	
	82nm,0.3s								
KST	**Kastek**	**4.11**	**255**	*e*P	**Pb**	**21**	**47**	**55.7**	**+3.5**
	15nm,0.3s								
KST				*e*S	**Sg**	**21**	**48**	**48.2**	**-2.9**
	59nm,0.5s								
KST	**Kastek**	**4.11**	**255**	Pg	**Pg**	**21**	**47**	**57.0**	**-0.8**
	15nm,0.3s								
KST				Lg	Lg	21	48	50.9	
	59nm,0.5s								
KRBS	**Karabastau**	**4.15**	**264**	*e*P	**Pb**	**21**	**47**	**54.3**	**+1.4**
	5.5nm,0.3s								
KRBS				*e*S	**Sb**	**21**	**48**	**46.4**	**+3.0**
	22nm,0.3s								
KRBS	**Karabastau**	**4.15**	**264**	Pg	**Pb**	**21**	**47**	**55.3**	**+2.5**
	5.5nm,0.3s								
KRBS				Lg	Lg	21	48	48.2	
	22nm,0.3s								
DGS	**Degeres**	**4.18**	**258**	*e*P	**Pb**	**21**	**47**	**55.3**	**+1.9**
	13nm,0.3s								
DGS				*e*S	**Sb**	**21**	**48**	**48.1**	**+3.8**
	63nm,0.4s								
TKM2	**Tokmak 2**	**4.41**	**254**	⇑Pg	**Pb**	**21**	**48**	**00.6**	**+3.4**
	16nm,0.6s								
TKM2				⇓Lg	Lg	21	48	57.5	
	59nm,0.7s								
SGDS	**Sogindy**	**4.95**	**263**	*e*P	**Pb**	**21**	**48**	**10.5**	**+4.2**
	2.4nm,0.3s								
SGDS				*e*S	**Sg**	**21**	**49**	**13.7**	**-4.2**
	14nm,0.3s								
SGDS	**Sogindy**	**4.95**	**263**	Pg	**Pb**	**21**	**48**	**10.8**	**+4.4**
	2.4nm,0.3s								
CHMS	**Chumysh**	**4.97**	**258**	⇓Pg	**Pb**	**21**	**48**	**09.3**	**+2.6**
	12nm,0.7s								
CHMS				⇑Lg	Lg	21	49	15.7	
	56nm,0.9s								
BTLS	**Baital**	**5.29**	**281**	*e*P	**Pb**	**21**	**48**	**15.5**	**+3.3**
BTLS				*e*S	**Sb**	**21**	**49**	**22.4**	**+6.4**
BTLS	**Baital**	**5.29**	**281**	Pg	**Pg**	**21**	**48**	**17.7**	**-2.7**
KURBB	**Kurchatov Arra**	**6.66**	**344**	Pn	**Pn**	**21**	**48**	**17.4**	**-0.4**
	0.1nm,0.3s,baz=170,slow=12,SNR=18								
KURBB				Sn	**Sn**	**21**	**49**	**31.0**	**-3.0**
	0.4nm,0.3s,baz=158,slow=25,SNR=6.3								
KURBB				Lg	Lg	21	50	05.3	
	0.4nm,0.3s,baz=164,slow=27,SNR=3.5								
	0.8nm,0.4s								
KURBB	**Kurchatov Arra**	**6.66**	**344**	⇑Pn	**Pn**	**21**	**48**	**17.8**	**+0.1**
	1.7nm,0.7s								
KURBB				⇑Pg	**Pg**	**21**	**48**	**43.4**	**-3.2**
	1.0nm,0.3s								
KURK	**Kurchatov**	**6.73**	**345**	⇑Pn	**Pn**	**21**	**48**	**19.1**	**+0.4**
	3.9nm,1.0s								
KURK				⇑Sn	**Sn**	**21**	**49**	**31.8**	**-4.0**
	4.8nm,0.6s								
KURK				⇑Lg	Lg	21	50	08.5	
	25nm,0.7s								
KK31	**Karatay Array**	**7.96**	**266**	⇑Pn	**Pn**	**21**	**48**	**36.2**	**+0.6**
	0.2nm,0.4s,baz=77,slow=14,SNR=6.1								
KK31				⇓Pg	**Pg**	**21**	**49**	**08.9**	**-2.7**
	0.6nm,0.5s,baz=74,slow=15,SNR=5.3								
KK31				⇑Lg	Lg	21	50	47.6	
	5.3nm,0.6s,baz=68,slow=31,SNR=7.7								
ZALV	**Zalesovo Beam**	**9.96**	**12**	Pn	**Pn**	**21**	**49**	**02.8**	**-0.2**
	0.3nm,0.3s,baz=191,slow=15,SNR=5.5								
ZALV				Sn	**Sn**	**21**	**50**	**49.9**	**-5.3**
	0.5nm,0.3s,baz=183,slow=19,SNR=3.9								
ZALV				Lg	Lg	21	51	51.9	

WRA	**Warramunga Arr**	**43.75**	**276**	P		**P**		**22 05 19.9**	**+0.7**
	5.5nm,0.8s,baz=118,slow=7.2,SNR=41								
	5.5nm,0.8s								
WRA	**Warramunga Arr**	**43.75**	**276**	P		**P**		**22 05 19.6**	**+0.4**
WB0	**Warramunga Arr**	**43.79**	**276**	P		**P**		**22 05 20.0**	**+0.6**
WB0				IAmb		IAmb		22 05 20.8	
	comp=Z,8.0nm,0.8s								
KNRA	**Kununurra**	**50.45**	**277**	P		**P**		**22 06 12.1**	**+0.6**
KNRA				IAmb		IAmb		22 06 12.7	
	comp=Z,7.8nm,1.1s								
FITZ	**Fitzroy Crossi**	**51.88**	**272**	P		**P**		**22 06 22.6**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=138,slow=7.0,SNR=2.2								
	comp=Z,1.9nm,0.8s								
FITZ	**Fitzroy Crossi**	**51.88**	**272**	P		**P**		**22 06 22.5**	**+0.3**
FITZ				IAmb		IAmb		22 06 32.2	
	comp=Z,4.4nm,1.0s								
CASY	**Casey**	**52.35**	**209**	P		**P**		**22 06 25.4**	**+0.4**
CASY				IAmb		IAmb		22 06 26.5	
	comp=Z,3.5nm,0.7s								
QSPA	**South Pole Qui**	**56.83**	**180**	P		**P**		**22 07 00.2**	**+2.4**
	comp=Z,1.9nm,0.9s,baz=38,slow=0.7,SNR=5.4								
	comp=Z,1.9nm,0.9s								
QSPA	**South Pole Qui**	**56.83**	**180**	P		**P**		**22 06 58.8**	**+1.1**
MKAR	**Makanchi Array**	**119.19**	**309**	PKP		**PKPdf**		**22 16 03.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=71,slow=4.9,SNR=2.5								
KBZ	**Khabaz**	**146.19**	**300**	PKPbc		**PKPdf**		**22 16 53.4**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=90,slow=4.0,SNR=4.0								
FINES	**FINESS Array B**	**147.64**	**339**	PKPbc		**PKPbc**		**22 16 57.3**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=48,slow=2.8,SNR=21								
ASF	**Jabal al Asfar**	**150.18**	**278**	PKPbc		**PKPbc**		**22 17 05.3**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=148,slow=4.2,SNR=4.0								
EIL	**Elat**	**151.20**	**272**	PKPbc		**PKPbc**		**22 17 06.5**	**-0.6**
	comp=Z,8.3nm,0.9s,baz=88,slow=5.8,SNR=4.6								
NB2	**NORSAR Subarra**	**151.51**	**350**	PKP		**PKiKP**		**22 17 09.2**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=18,slow=2.6								
NOA	**NORSAR Array B**	**151.51**	**350**	PKPbc		**PKiKP**		**22 17 08.8**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=14,slow=4.1,SNR=4.5								
MMAI	**Mount Meron Ar**	**151.57**	**279**	PKPbc		**PKiKP**		**22 17 09.2**	**+0.8**
	comp=Z,4.3nm,0.8s,baz=94,slow=2.8,SNR=8.1								
AKASG	**Malin Array Be**	**153.19**	**319**	PKPbc		**PKPbc**		**22 17 11.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=62,slow=3.7,SNR=4.1								
BRTR	**Keskin Array B**	**153.37**	**293**	PKPbc		**PKPbc**		**22 17 11.7**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=116,slow=3.4,SNR=3.9								
TORD	**Torodi Ar. Bea**	**159.94**	**181**	PKPab		**PKPab**		**22 17 54.2**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=189,slow=3.8,SNR=2.1								
CLL	**Collm**	**160.09**	**338**	*e*PKPab		**PKPab**		**22 17 50.0**	**-2.2**

ROM ***17*** *22:00:52.7±0.5, 40.95N±0.04×19.75E±0.04, h10km, ML2.6/3, Error ellipse: s-maj=3.9km s-min=3.1km az=11.0*
BEO ***17*** *22:00:54.9±0.4, 40.92N×19.60E, h14km±2km, ML2.1/7*
ATH ***17*** *22:00:54.9, 40.94N×19.62E, h10km±31km, ML2.3/2, Error ellipse: s-maj=31.6km s-min=2.5km az=0.0*
PDG ***17*** *22:00:54.2±0.1, 40.88N×19.65E, h15km, ML2.5/10, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
THE ***17*** *22:00:54.8, 40.91N×19.86E, h6km±1km, ML2.3/3, Error ellipse: s-maj=1.1km s-min=0.4km az=14.0*
SKO ***17*** *22:00:55.4, 40.87N×19.80E, h7km*
TIR ***17*** *22:00:55.1, 40.91N×19.81E, h19km, Md2.5, Ml2.5*

ISC 17 22:00:54.9±1.0, 40.90N±0.01×19.74E±0.02, h18km±3km, n68, σ1§08/105, 9C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.46**	**12**	P		**Pg**	**22 01 03.3**	**-1.0**
TIR				S		**Sg**	**22 01 09.4**	**-1.2**
TIR	**Tirane**	**0.46**	**12**	*e*Pg		**Pg**	**22 01 03.7**	**-0.6**
TIR				*e*Sg		**Sb**	**22 01 11.8**	**+0.8**
TIR	**Tirane**	**0.46**	**12**	*i* Pg		**Pg**	**22 01 04.1**	**-0.2**
TIR				*i* Sg		**Sb**	**22 01 11.8**	**+0.8**
TIR	**Tirane**	**0.46**	**12**	P		**Pg**	**22 01 03.9**	**-0.4**
	baz=5.0							
TIR				S		**Sb**	**22 01 11.9**	**+1.0**
	baz=5.0							
TIR				AMP				
	comp=E,0.4nm,0.2s,baz=5.0							
VLO	**Vlora**	**0.47**	**203**	P		**Pg**	**22 01 04.4**	**+0.1**
VLO				S		**Sb**	**22 01 12.5**	**+1.4**
	comp=E,1μm,0.3s							
VLO	**Vlora**	**0.47**	**203**	P		**Pg**	**22 01 04.5**	**+0.1**
	baz=209							
VLO				S		**Sn**	**22 01 13.9**	**-0.5**
	baz=209							
VLO				AMP				
	comp=N,5.9nm,0.3s,baz=209							
OHR	**Ohrid**	**0.83**	**75**	*i* Pg		**Pb**	**22 01 09.7**	**-1.2**
OHR				*i* Sg		**Sb**	**22 01 21.1**	**-0.6**
KBN	**Korca**	**0.85**	**109**	P		**Pb**	**22 01 09.0**	**-2.1**
KBN	**Korca**	**0.85**	**109**	P		**Pb**	**22 01 09.5**	**-1.6**
	baz=110							
KBN				S		**Sn**	**22 01 23.4**	**-0.5**
	baz=110							
KBN				AMP				
	comp=E,0.4nm,0.6s,baz=110							
PHP	**Peshkopia**	**0.95**	**34**	P		**Pb**	**22 01 11.1**	**-1.7**
PHP	**Peshkopia**	**0.95**	**34**	P		**Pb**	**22 01 11.3**	**-1.5**
	baz=31							
PHP				S		**Sn**	**22 01 26.3**	**-0.1**
	baz=31							
LSK	**Leskovik**	**1.00**	**138**	P		**Pb**	**22 01 12.4**	**-1.3**
LSK				S		**Sb**	**22 01 26.1**	**-0.4**
	comp=E,108nm,0.5s							
LSK	**Leskovik**	**1.00**	**138**	P		**Pb**	**22 01 13.0**	**-0.6**
	baz=141							
LSK				S		**Sn**	**22 01 27.7**	**+0.1**
	baz=141							
SRN	**Sarande**	**1.04**	**169**	P		**Pg**	**22 01 15.7**	**+0.7**
	baz=171							
SRN				S		**Sn**	**22 01 30.3**	**+1.8**
	baz=171							
NEST	**Nestorio**	**1.11**	**115**	P		**Pb**	**22 01 14.0**	**-1.6**
ULC	**Ulcinj**	**1.12**	**341**	*i* Pg		**Pg**	**22 01 16.4**	**-0.3**
ULC	**Ulcinj**	**1.12**	**341**	⇓*i* Pg		**Pn**	**22 01 15.3**	**-0.5**
ULC				*i* Sg		**Sg**	**22 01 33.4**	**+1.9**
KASA	**Kassiopi**	**1.16**	**172**	P		**Pg**	**22 01 17.9**	**+0.5**
KASA				S		**Sg**	**22 01 33.0**	**+0.4**
KEK	**Kerkira**	**1.19**	**178**	P		**Pb**	**22 01 17.2**	**+0.4**
KEK				S		**Sg**	**22 01 34.0**	**+0.6**
	comp=E,92nm,0.2s							
KEK	**Kerkira**	**1.19**	**178**	P		**Pg**	**22 01 17.5**	**-0.3**
KEK				S		**Sg**	**22 01 34.0**	**+0.6**
KEK				AML		AML	22 01 36.8	
	comp=N,164μm,0.2s							
KEK				AML		AML	22 01 36.9	
	comp=E,211μm,0.2s							
SCTE	**Santa Cesarea**	**1.27**	**230**	P		**Pn**	**22 01 17.5**	**-0.2**
SCTE				S		**Sb**	**22 01 34.0**	**-0.3**
DRME	**Dracevica, Mon**	**1.35**	**342**	⇑*i* Pg		**Pb**	**22 01 19.6**	**-0.1**
DRME				*i* Sg		**Sg**	**22 01 39.8**	**+1.2**
IGT	**Igoumenitsa**	**1.44**	**161**	P		**Pb**	**22 01 20.7**	**-0.5**
IGT	**Igoumenitsa**	**1.44**	**161**	*e*Pg		**Pg**	**22 01 22.0**	**-0.7**
IGT				*e*Sg		**Sg**	**22 01 41.8**	**+0.4**
IGT	**Igoumenitsa**	**1.44**	**161**	P		**Pg**	**22 01 22.5**	**-0.2**
	baz=163							
IGT				S		**Sg**	**22 01 42.2**	**+0.7**
	baz=163							
IGT	**Igoumenitsa**	**1.44**	**161**	P		**Pg**	**22 01 22.1**	**-0.6**
IGT				AML		AML	22 01 43.0	
	comp=E,161μm,0.4s							
IGT				AML		AML	22 01 43.2	
	comp=N,238μm,0.4s							
BCI	**Bajram Curri**	**1.49**	**10**	P		**Pg**	**22 01 23.0**	**-0.6**
	baz=7.0							
BCI				S		**Sg**	**22 01 45.5**	**+2.5**
	baz=7.0							
BCI				AMP				
	comp=E,0.5nm,0.5s,baz=7.0							
JAN	**Janina**	**1.51**	**145**	P		**Pb**	**22 01 22.8**	**+0.5**
BUM	**Brajici-Budva**	**1.54**	**336**	⇑*i* Pg		**Pn**	**22 01 22.0**	**+0.6**
BUM				*i* Sg		**Sg**	**22 01 43.9**	**-0.6**
PDG	**Podgorica**	**1.57**	**347**	*e*Pg		**Pb**	**22 01 23.0**	**-0.4**
PDG				*e*Sg		**Sb**	**22 01 43.3**	**+0.4**
TTG	**Podgorica**	**1.57**	**347**	⇑*i* Pn		**Pb**	**22 01 22.6**	**-0.8**
TTG				*i* Sn		**Sg**	**22 01 45.3**	**-0.3**
CEME	**Cevo**	**1.76**	**340**	⇑*i* Pn		**Pn**	**22 01 24.7**	**+0.2**
CEME				*i* Sn		**Sb**	**22 01 49.4**	**+1.1**
HCY	**Herceg Novi**	**1.81**	**329**	⇑*i* Pn		**Pn**	**22 01 25.6**	**+0.5**
HCY				*i* Sn		**Sb**	**22 01 50.5**	**+0.9**
NKME	**Niksic**	**1.96**	**343**	⇑*i* Pn		**Pn**	**22 01 28.0**	**+0.8**
NKME				*i* Sn		**Sb**	**22 01 54.2**	**+0.2**
KOME	**Kolasin**	**1.96**	**355**	⇑*i* Pn		**Pn**	**22 01 28.4**	**+1.2**
KOME				*i* Sn		**Sb**	**22 01 55.2**	**+1.1**
IVA	**Berane**	**1.97**	**3**	⇑*i* Pn		**Pn**	**22 01 28.7**	**+1.2**
IVA				*i* Sn		**Sb**	**22 01 55.6**	**+1.0**

GRG	**Griva**	**2.02**	**88**	P		**Pn**		**22 01 27.6**	**-0.5**
NOCI	**Noci**	**2.03**	**268**	P		**Pn**		**22 01 27.4**	**-0.8**
NOCI				AML		AML			
	comp=E,35μm,1.5s								
NOCI				AML		AML			
	comp=N,50μm,1.2s								
NOCI				AML		AML			
	comp=E,78μm,0.4s								
NOCI				AML		AML			
	comp=N,93μm,0.8s								
TREB	**Trebinje**	**2.09**	**331**	*e*Pn		**Pn**		**22 01 28.6**	**-0.4**
TREB				*e*Sn		**Sn**		**22 01 54.3**	**-0.2**
DBRK	**Dubrovnik**	**2.13**	**327**	*e*Pn		**Pn**		**22 01 28.1**	**-1.5**
DBRK				Sn		**Sn**		**22 01 54.4**	**-1.1**
BRY	**Bratogost**	**2.19**	**336**	⇓*i* Pn		**Pn**		**22 01 31.4**	**+0.9**
BRY				*i* Sn		**Sb**		**22 01 59.6**	**-1.3**
LTRZ	**Laterza**	**2.23**	**263**	P		**Pn**		**22 01 30.2**	**-0.8**
NYDR	**Nydri-Lefkada**	**2.31**	**161**	P		**Pn**		**22 01 32.4**	**+0.5**
SJES	**Sjenica**	**2.37**	**4**	*e*Pn		**Pn**		**22 01 34.4**	**+1.5**
SJES				*e*Sn		**Sn**		**22 02 01.0**	**-0.5**
PRVS	**Prvonek**	**2.38**	**47**	*e*Pn		**Pb**		**22 01 35.3**	**-1.9**
BARS	**Barje**	**2.47**	**38**	*e*Pn		**Pn**		**22 01 36.0**	**+1.8**
STON	**Ston**	**2.49**	**323**	*e*Pn		**Pn**		**22 01 32.7**	**-1.7**
STON	**Ston**	**2.49**	**323**	*e*Pn		**Pn**		**22 01 32.9**	**-1.5**
STON				*e*Sn		**Sn**		**22 02 03.0**	**-1.3**
SELS	**Selova**	**2.54**	**24**	*e*Pn		**Pn**		**22 01 36.6**	**+1.4**
BOSS	**Bosilegrad**	**2.60**	**51**	*e*Pn		**Pn**		**22 01 37.0**	**+1.0**
BOSS				*e*Sn		**Sn**		**22 02 08.8**	**+1.6**
IVAS	**Ivanjica**	**2.69**	**6**	*e*Pn		**Pn**		**22 01 37.0**	**-0.3**
AGG	**Agios Georgios**	**2.74**	**132**	P		**Pn**		**22 01 38.5**	**+0.6**
LSTV	**Lastovo**	**2.83**	**312**	*e*Pn		**Pn**		**22 01 38.8**	**-0.4**
SCHR	**S. Chirico Rap**	**2.87**	**257**	P		**Pn**		**22 01 39.6**	**-0.2**
SCHR				S		**Sn**		**22 02 13.6**	**-0.4**
PZUN	**Potenza**	**2.99**	**266**	P		**Pn**		**22 01 38.4**	**-3.0**
PZUN				AML		AML			
	comp=E,72μm,0.2s								
PZUN				AML		AML			
	comp=N,101μm,0.1s								
PZUN				AML		AML			
	comp=E,72μm,0.2s								
PZUN				AML		AML			
	comp=N,101μm,0.1s								
CUC	**Castrocucco**	**3.12**	**254**	P		**Pn**		**22 01 43.2**	**0.0**
CUC				AML		AML			
	comp=E,23μm,1.2s								
CUC				AML		AML			
	comp=N,13μm,1.5s								
SGRT	**San Giovanni R**	**3.12**	**287**	P		**Pn**		**22 01 42.9**	**-0.4**
SGRT				S		**Sn**		**22 02 18.8**	**-1.3**
MAKA	**Makarska**	**3.13**	**321**	*e*Pn		**Pn**		**22 01 43.0**	**-0.2**
ZAPS	**Zavoj**	**3.21**	**41**	*e*Pn		**Pn**		**22 01 46.2**	**+1.8**
ZAGS	**Zajecar**	**3.45**	**32**	*e*Pn		**Pn**		**22 01 49.0**	**+1.3**
KIJV	**Kijevo**	**3.96**	**323**	*e*Pn		**Pn**		**22 01 54.0**	**-0.7**
MORI	**Morici**	**4.21**	**316**	*e*Pn		**Pn**		**22 01 58.5**	**+0.5**
MORI				Sn		**Sn**		**22 02 46.0**	**-0.7**
LLI	**Lipari**	**4.43**	**238**	S		**Sn**		**22 02 53.0**	**+0.7**
DUGI	**Dugi Otok**	**4.64**	**313**	*e*Pn		**Pn**		**22 02 04.0**	**0.0**
SRES	**S.Oreste - Sor**	**5.58**	**286**	AML		AML			
	comp=E,34μm,0.3s								
SRES				AML		AML			
	comp=N,36μm,0.3s								
MMUR	**Monte Murano**	**5.61**	**299**	S		**Sn**		**22 03 20.0**	**-1.5**
BOSI	**Bolzano**	**8.27**	**315**	⇑P		**Pb**		**22 03 20.4**	**+2.9**
MGRO	**Montegrosso**	**9.36**	**294**	P		**Pn**		**22 03 11.1**	**+2.2**

IDC ***17*** *22:14:13.4±0.6, 15.94S×173.34E, h0km, mb4.2/17, mbtmp4.2/19, ML4.0/2, MS3.9/5, Error ellipse: s-maj=19.4km s-min=16.1km az=123.0*
MOS ***17*** *22:14:14.1±1.4, 15.99S×173.44E, h11km, mb5.0/10, Error ellipse: s-maj=11.4km s-min=10.2km az=171.9*
BJI ***17*** *22:14:14.3±0.0, 15.83S×174.13E, h18km, mb4.7/21, mB5.3/14, Ms5.1/4, Ms7 4.7/6*
NEIC ***17*** *22:14:15.9±1.3, 15.95S±0.08×173.49E±0.09, h10km±1km, mb5.0/60, Error ellipse: s-maj=15.3km s-min=11.9km az=130.0*
GCMT ***17*** *22:14:17.9±0.2, 15.94S±0.02×173.47E±0.01, h12km, MW5.0/124, Moment Tensor Solution. s55,c63; s124,c176; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-4.08±.09; Mθθ 1.37±.10; Mϕϕ 2.71±.09; Mrθ-1.34±.29; Mθϕ-1.90±.07; Mϕr 0.78±.28; Best double couple: Mo4.35100×10¹⁶ NP1:ϕs136.00000°, δ55.00000°, λ-100.00000°. NP2:ϕs333.00000°, δ36.00000°, λ-77.00000°. Principal axes: T 4.2950, Plg10.0000°, Azm233.0000°; N 0.1140, Plg8.0000°, Azm142.0000°; P -4.4080, Plg78.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 22:14:15.1±0.3, 15.99S±0.06×173.55E±0.06, h10km, n198, σ1§61/199, mb4.9/60, MS4.1/8, 3C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**113**	Pn		**Pn**	**22 15 27.8**	**+2.3**
	0.9nm,0.3s,baz=268,slow=4.5,SNR=9.0							
	29nm,1.0s							
MSVF	**Nonsavu**	**4.65**	**113**	Pn		**Pn**	**22 15 26.7**	**+1.2**
MSVF	**Nonsavu**	**4.65**	**113**	⇓*e*P		**Pn**	**22 15 28.1**	**+2.6**
PINNC	**Pines Island,**	**8.75**	**220**	Pn		**Pn**	**22 16 21.1**	**-0.6**
DZM	**Mont Dzumac**	**9.04**	**227**	Pn		**Pn**	**22 16 23.3**	**-2.5**
	0.2nm,0.3s,baz=102,slow=18,SNR=4.3							
DZM				LR		LR	22 19 29.7	
	comp=Z,4μm,21.8s,baz=54,slow=35							
	13nm,1.1s							
DZM	**Mont Dzumac**	**9.04**	**227**	*e*P		**Pn**	**22 16 29.2**	**+3.4**
	1μm,26.1s							
DZM				*e*LR		LR	22 18 27.0	
	comp=Z,6μm,26.6s							
DZM	**Mont Dzumac**	**9.04**	**227**	Pn		**Pn**	**22 16 24.1**	**-1.7**
FUNA	**Funafuti**	**9.24**	**37**	Pn		**Pn**	**22 16 26.2**	**-2.3**
AFI	**Afiamalu**	**14.33**	**84**	Pn		**Pn**	**22 17 38.0**	**-0.3**
AFI	**Afiamalu**	**14.33**	**84**	P		**Pn**	**22 17 38.0**	**-0.3**
HNR	**Honiara**	**14.77**	**295**	LR		LR	22 23 24.8	
	comp=Z,235nm,18.4s,baz=134,slow=38							
RAO	**Raoul Island**	**15.37**	**151**	LR		LR	22 22 47.7	
	comp=Z,164nm,20.1s,baz=8.5,slow=33							
TARA	**Tarawa**	**17.24**	**358**	Pn		**Pn**	**22 18 14.2**	**-1.9**
URZ	**Urewera**	**22.41**	**173**	P		**P**	**22 19 14.3**	**+0.5**
	9.6nm,0.8s,baz=353,slow=8.1,SNR=3.9							
URZ				LR		LR	22 26 06.4	
	comp=Z,284nm,21.3s,baz=336,slow=32							
	9.6nm,0.8s							
URZ	**Urewera**	**22.41**	**173**	P		**P**	**22 19 14.4**	**+0.5**
URZ				IAmb		IAmb	22 19 33.9	
	comp=Z,160nm,2.0s							
EIDS	**Eidsvold**	**22.97**	**242**	P		**P**	**22 19 19.8**	**-0.1**
KRVT	**Keravat (AS076**	**24.12**	**296**	LR		LR	22 28 56.3	
	comp=Z,243nm,20.7s,baz=264,slow=37							
ARMA	**Armidale**	**24.68**	**231**	P		**P**	**22 19 35.4**	**-1.0**
BFZ	**Birch Farm**	**24.72**	**175**	P		**P**	**22 19 34.8**	**-1.7**
RMQ	**Roma**	**25.31**	**242**	P		**P**	**22 19 43.9**	**+1.8**
	baz=26,SNR=4.0							
THZ	**Tophouse**	**25.69**	**181**	P		**P**	**22 19 45.3**	**-0.1**
THZ				IAmb		IAmb	22 19 46.6	
	comp=Z,30nm,0.9s							
CMSA	**Cobar Meteorol**	**29.71**	**234**	P		**P**	**22 20 21.9**	**+0.5**
	baz=30,SNR=6.8							
STKA	**Stephens Creek**	**33.05**	**236**	P		**P**	**22 20 51.2**	**+0.3**
	comp=Z,4.5nm,0.8s,baz=26,slow=8.2,SNR=4.7							
	comp=Z,4.5nm,0.8s							
STKA	**Stephens Creek**	**33.05**	**236**	P		**P**	**22 20 51.7**	**+0.7**
STKA	**Stephens Creek**	**33.05**	**236**	⇓*e*P		**P**	**22 20 51.8**	**+0.8**
PPT2	**Papeete2**	**35.31**	**98**	*e*S		**S**	**22 26 45.5**	**+0.4**
	comp=Z,164nm,26.8s							
PPT2				*e*LR		LR	22 30 36.2	
	comp=Z,738nm,28.0s							
TBI	**Tubuai**	**35.52**	**108**	*e*S		**S**	**22 26 48.4**	**+0.3**
	comp=Z,237nm,29.2s							
TBI				*e*LR		LR	22 30 41.0	
	comp=Z,536nm,31.0s							
WR0	**Warramunga Arr**	**37.26**	**258**	P		**P**	**22 21 26.5**	**-0.9**
WB0	**Warramunga Arr**	**37.40**	**258**	P		**P**	**22 21 27.2**	**-1.3**
WRAB	**Tennant Creek**	**37.44**	**258**	⇓*e*P		**P**	**22 21 28.2**	**-0.7**
WRAB				pmax		pmax		
	comp=Z,38nm,2.7s							
WRA	**Warramunga Arr**	**37.45**	**258**	P		**P**	**22 21 26.8**	**-2.2**
	comp=Z,2.9nm,1.0s,baz=87,slow=8.8,SNR=11							
WRA				PcP		**PcP**	**22 23 46.9**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=91,slow=4.4,SNR=4.9							
	comp=Z,2.9nm,1.0s							
WRA	**Warramunga Arr**	**37.45**	**258**	P		**P**	**22 21 28.4**	**-0.5**
AS31	**Alice Springs**	**37.97**	**252**	P		**P**	**22 21 33.8**	**+0.4**

ASAR	**Alice Springs**	**37.97**	**252**	P		**P**		**22 21 31.8**	**-1.6**
	comp=Z,5.9nm,0.9s,baz=87,slow=8.0,SNR=21								
ASAR				PcP		**PcP**		**22 23 47.4**	**-1.9**
	comp=Z,2.3nm,1.0s,baz=87,slow=3.9,SNR=6.8								
	comp=Z,5.9nm,0.9s								
ASAR	**Alice Springs**	**37.97**	**252**	P		**P**		**22 21 33.3**	**-0.1**
ASAR	**Alice Springs**	**37.97**	**252**	P		**P**		**22 21 33.3**	**-0.1**
KNRA	**Kununurra**	**43.02**	**264**	P		**P**		**22 22 13.9**	**-1.3**
	baz=43,SNR=3.9								
KNRA	**Kununurra**	**43.02**	**264**	P		**P**		**22 22 15.0**	**-0.2**
KNRA				IAmb		IAmb		22 22 26.4	
	comp=Z,35nm,1.1s								
WRKA	**Warakurna**	**43.16**	**250**	P		**P**		**22 22 16.3**	**0.0**
	baz=44,SNR=5.6								
TAOE	**Nuku Hiva Isla**	**45.70**	**87**	*e*S		**S**		**22 29 19.3**	**-1.0**
	comp=Z,166nm,25.2s								
TAOE				*e*LR		LR		22 35 24.9	
	comp=Z,1μm,25.6s								
FITZ	**Fitzroy Crossi**	**45.75**	**260**	P		**P**		**22 22 37.1**	**+0.1**
	baz=46,SNR=8.3								
FITZ	**Fitzroy Crossi**	**45.75**	**260**	P		**P**		**22 22 36.8**	**-0.2**
FITZ				IAmb		IAmb		22 22 45.6	
	comp=Z,17nm,0.9s								
MBWA	**Marble Bar**	**51.08**	**256**	P		**P**		**22 23 17.7**	**-0.4**
MBWA				IAmb		IAmb		22 23 25.3	
	comp=Z,18nm,0.9s								
VNDA	**Vanda**	**61.83**	**183**	P		**P**		**22 24 33.1**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=335,slow=8.4,SNR=4.9								
	comp=Z,1.4nm,1.0s								
SBA	**Scott Base**	**61.98**	**182**	P		**P**		**22 24 35.0**	**+0.2**
SBA	**Scott Base**	**61.98**	**182**	P		**P**		**22 24 35.1**	**+0.2**
SBA				pmax		pmax			
	comp=Z,22nm,1.2s								
MJAR	**Matsushiro Arr**	**61.99**	**328**	P		**P**		**22 24 34.3**	**-1.2**
	comp=Z,2.8nm,0.9s,baz=149,slow=7.5,SNR=7.0								
	comp=Z,2.8nm,0.9s								
MAJO	**Matsushiro**	**61.99**	**328**	⇓*e*P		**P**		**22 24 36.1**	**+0.6**
MAJO				pmax		pmax			
	comp=Z,29nm,3.5s								
CASY	**Casey**	**64.73**	**203**	P		**P**		**22 24 52.8**	**-0.5**
KSRS	**Korea Array**	**68.31**	**322**	P		**P**		**22 25 14.8**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=138,slow=7.2,SNR=5.6								
	comp=Z,0.5nm,0.3s								
KSAR	**Wonju Array Be**	**68.33**	**322**	P		**P**		**22 25 16.4**	**-0.2**
KSAR	**Wonju Array Be**	**68.33**	**322**	P		**P**		**22 25 16.4**	**-0.2**
PETK	**Petropavlovsk-**	**70.16**	**350**	P		**P**		**22 25 26.2**	**-1.4**
	comp=Z,6.6nm,1.0s,baz=131,slow=6.7,SNR=3.5								
	comp=Z,6.6nm,1.0s								
PETK	**Petropavlovsk-**	**70.16**	**350**	P		**P**		**22 25 27.8**	**+0.1**
PETK	**Petropavlovsk-**	**70.16**	**350**	P		**P**		**22 25 27.8**	**+0.1**
USRK	**Ussuriysk Ar.**	**70.88**	**330**	P		**P**		**22 25 31.0**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=108,slow=4.7,SNR=3.5								
	comp=Z,0.8nm,0.8s								
USRK	**Ussuriysk Ar.**	**70.88**	**330**	P		**P**		**22 25 31.0**	**-1.3**
CN2	**Changchun**	**73.96**	**326**	*e*P		**P**		**22 25 50.8**	**+0.2**
CN2				*e*PP		**PP**		**22 28 38.3**	**+2.3**
QSPA	**South Pole Qui**	**74.05**	**180**	P		**P**		**22 25 50.4**	**-0.7**
BNX	**BinXian**	**74.26**	**328**	⇓P		**P**		**22 25 52.3**	**0.0**
BNX				pmax		pmax			
	comp=Z,7.0nm,0.4s								
BNX				pmax		pmax			
	comp=Z,100nm,4.1s								
RPSI	**Rantau Prapat**	**76.00**	**277**	P		**P**		**22 26 02.1**	**-1.0**
PSI	**Prapat**	**76.03**	**277**	P		**P**		**22 26 02.1**	**-1.4**
	comp=Z,7.3nm,0.5s,baz=123,slow=6.7,SNR=4.6								
	comp=Z,7.3nm,0.5s								
LYN	**LuoYang**	**76.74**	**312**	*e*P		**P**		**22 26 10.3**	**+3.5

comp=Z,175nm,1.9s
PINE Pine Mountain 84.26 41 P **P** 22 26 48.5 +1.1
P29M Windy Craggy 85.03 23 P **P** 22 26 51.1 +0.6
P29M IAmb IAmb 22 26 59.3
comp=Z,18nm,1.1s
YAK Yakutsk 85.09 341 *c*e**P P** 22 26 52.3 +1.5
YAK pmax pmax
comp=Z,8.0nm,0.6s
WVOR Wild Horse Val 85.13 43 P **P** 22 26 51.8 +0.2
WVOR IAmb IAmb 22 27 00.9
comp=Z,18nm,1.4s
WVOR Wild Horse Val 85.13 43 P **P** 22 26 51.8 +0.2
WVOR pmax pmax
comp=Z,18nm,1.4s
I07A Izee 85.32 42 P **P** 22 26 53.2 +0.7
I07A IAmb IAmb 22 27 01.7
comp=Z,12nm,1.1s
IMAR Indian Mountai 85.32 13 P **P** 22 26 52.2 +0.3
BESE Bessie Mountai 85.42 24 P **P** 22 26 52.9 +0.3
BESE IAmb IAmb 22 27 01.6
comp=Z,13nm,1.0s
W13A Hualapai Mount 85.44 52 P **P** 22 26 53.1 -0.3
W13A IAmb IAmb 22 27 03.0
comp=Z,18nm,1.7s
SMAI San Martin Ant 85.58 161 P **P** 22 26 53.3 0.0
SMAI IAmb IAmb 22 26 58.0
comp=Z,13nm,1.2s
HDA Harding Lake 85.66 16 P **P** 22 26 54.0 +0.4
HDA IAmb IAmb 22 27 02.3
comp=Z,13nm,1.1s
HYT Haines Junctio 85.93 22 P **P** 22 26 55.8 +0.6
IL31 85.96 16 P **P** 22 26 55.0 0.0
IL31 IAmb IAmb 22 27 03.3
comp=Z,9.1nm,1.1s
ILAR Eielson Array 85.96 16 P **P** 22 26 54.0 -1.1
comp=Z,4.1nm,0.9s,baz=234,slow=5.4,SNR=21
comp=Z,4.1nm,0.9s
ILAR Eielson Array 85.96 16 P **P** 22 26 54.5 -0.6
ILAR Eielson Array 85.96 16 P **P** 22 26 54.5 -0.6
SCRK Sand Creek 86.14 17 P **P** 22 26 56.2 +0.1
ELK Elko 86.71 46 P **P** 22 27 00.5 +0.8
ELK Elko 86.71 46 P **P** 22 27 00.5 +0.8
ELK pmax pmax
comp=Z,10.0nm,1.4s
ULN Ulaanbaatar 86.79 322|| *e*P **P** 22 26 59.8 0.0
ULN pmax pmax
comp=Z,8.0nm,2.4s
BMO Blue Mountains 87.07 42 P **P** 22 27 01.7 +0.6
BMO Blue Mountains 87.07 42 P **P** 22 27 01.7 +0.6
BMO pmax pmax
comp=Z,5.0nm,1.2s
U15A North Rim 87.14 51 P **P** 22 27 02.6 +0.6
U15A IAmb IAmb 22 27 11.7
comp=Z,14nm,1.4s
SONM Songimo Array 87.17 322 P **P** 22 27 01.1 -0.5
comp=Z,0.3nm,0.5s,baz=143,slow=3.6,SNR=2.3
comp=Z,0.3nm,0.5s
GTA Gaotai 87.96 312 *e*P **P** 22 27 06.3 +0.7
GTA pP sP 22 27 09.8 +0.9
GTA sP pwP 22 27 13.0 +1.4
GTA PP **PP** 22 30 36.6 +4.5
GTA pmax pmax
comp=Z,2.0nm,1.4s
MSU Marysvale 88.01 49 P **P** 22 27 05.9 -0.1
MSU Marysvale 88.01 49 P **P** 22 27 05.9 -0.1
HLID Hailey 88.42 44 P **P** 22 27 08.8 +1.0
HLID IAmb IAmb 22 27 17.2
comp=Z,11nm,1.2s
HVU Hansel Valley 88.83 46 P **P** 22 27 10.2 +0.5
HVU IAmb IAmb 22 27 19.0
comp=Z,17nm,1.2s
HVU Hansel Valley 88.83 46 P **P** 22 27 10.2 +0.5
HVU pmax pmax
comp=Z,17nm,1.2s
TCUT Toone Canyon 89.53 47 P **P** 22 27 14.0 +0.9
MCMT McKenzie Canyo 89.95 43 P **P** 22 27 16.0 +1.0
ANMO Albuquerque 91.08 54 P **P** 22 27 21.0 +0.6
ANMO IAmb IAmb 22 27 29.4
comp=Z,7.1nm,1.2s
ANMO Albuquerque 91.08 54|| *e*P **P** 22 27 21.6 +1.2
ANMO pmax pmax
comp=Z,8.0nm,1.3s
PDAR Pinedale Array 91.41 46 P **P** 22 27 23.8 +1.9
comp=Z,0.1nm,0.3s,baz=232,slow=4.4,SNR=1.8
comp=Z,0.1nm,0.3s
TX31 Lajitas Ar. Si 91.60 60 P **P** 22 27 24.2 +1.3
TXAR Lajitas Array 91.60 60 P **P** 22 27 24.0 +1.2
comp=Z,0.8nm,0.7s,baz=223,slow=4.9,SNR=12
comp=Z,0.8nm,0.7s
TROLL Troll, Antarti 92.01 183 P **P** 22 27 23.1 -1.0
SNAA Sanae 92.53 181 P **P** 22 27 24.8 -1.5
SNAA Sanae 92.53 181 P **P** 22 27 26.1 -0.2
SNAA IAmb IAmb 22 27 32.0
comp=Z,15nm,1.5s
SNAA Sanae 92.53 181 P **P** 22 27 26.1 -0.2
SNAA pmax pmax
comp=Z,15nm,1.5s
VNA3 Neumayer Olymp 92.96 179 P **P** 22 27 26.8 -1.5
VNA2 Neumayer--Watz 93.31 180 P **P** 22 27 29.6 -0.2
baz=317,slow=10.0
VNA2 Neumayer--Watz 93.31 180 PP **PP** 22 31 14.4 +1.5
VNA1 Neumayer--Stat 93.58 179 P **P** 22 27 30.8 -0.3
KNGR Kungurtug, Tuv 93.61 322|| *e*P **P** 22 27 34.2 +2.6
KNGR pmax pmax
comp=Z,6.0nm,1.6s
WMQ Urumqi 97.96 313 *e*P Pdif 22 27 53.8 +2.2
WMQ LR LR
comp=Z,380nm,18.3s
WMQ LR LR
comp=Z,150nm,16.9s
WMQ LR LR
comp=Z,130nm,13.3s
KURBB Kurchatov Arra 105.34 319 PKiKP **PKiKP** 22 32 36.6 -1.5
comp=Z,0.5nm,0.9s,baz=92,slow=2.3,SNR=3.8
ARU Arti 116.95 326 *i* PKIKP **PKiKP** 22 33 01.4 +1.5
ARU 22 34 08.2
ARU 22 40 13.4
ARCES ARCESS Array B 122.90 347 PKP **PKPdf** 22 33 10.6 -0.4
comp=Z,1.6nm,0.8s,baz=25,slow=2.4,SNR=4.9
BELG Belogornoye 124.20 323|| *i*PKIKP **PKiKP** 22 33 15.6 +1.4
VALR Valaam 127.47 338 *d* iPKIKP **PKiKP** 22 33 21.1 +0.7
KIV Kislovodsk 130.07 314 *i* PKIKP **PKiKP** 22 33 28.8 +2.5
KIV pmax pmax
comp=Z,5.0nm,1.1s
VSU Vasula 130.99 338|| *e*PKIKP **PKPdf** 22 33 26.6 0.0
NOA NORSAR Array B 133.25 348 PKP **PKPdf** 22 33 30.6 -0.4
comp=Z,0.5nm,0.8s,baz=31,slow=2.3,SNR=2.4
MNK Minsk 133.28 333 *i* PKIKP **PKPdf** 22 33 25.8 -5.2
MNK *i* 22 40 38.4
MNK *i* PS **PS** 22 46 10.2 -6.1
MNK *i* SS SS 22 53 47.4 +6.0
MNK *i* SSS SSS 22 58 33.6
MNK pmax pmax
comp=Z,4.0nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=Z,32nm,16.0s
MNK MLR MLR
comp=N,18nm,19.0s
MNK MLR MLR
comp=E,7.0nm,20.0s
MNK Minsk 133.28 333 *i* PKP **PKPdf** 22 33 25.9 -5.2
comp=E,2.0nm,0.9s
MNK *i* PKP **PKPdf** 22 33 25.9 -5.2
comp=N,8.0nm,0.9s
MNK *i* PKP **PKPdf** 22 33 25.9 -5.2
comp=Z,4.0nm,0.8s,baz=48
MNK *i* PP **PP** 22 35 52.8 -5.0
MNK *i* PPP PPP 22 38 45.3
MNK *i* SKS **SKSdf** 22 40 38.4 -4.0
MNK *i* PS **PS** 22 46 10.2 -6.1
MNK *i* SS **SS** 22 53 47.4 +6.0
MNK *i* SSS SSS 22 58 33.6
MNK *i* LR LR 23 23 49.4
MNK *i* LRM MLR 23 31 17.9
comp=Z,32nm,16.0s
MNK *i* LRM MLR 23 31 24.5
comp=N,18nm,18.5s
MNK *i* LRM MLR 23 31 45.0
comp=E,7.0nm,20.4s
AKASG Malin Array Be 135.08 328 PKP **PKPdf** 22 33 35.2 +0.6
comp=E,0.4nm,0.4s,baz=62,slow=2.8,SNR=1.8

CLL Collm 141.47 340 *e*PKIKP **PKPdf** 22 33 47.0 +0.7
CLL Collm 141.47 340 *e*PKPdf **PKPdf** 22 33 47.0 +0.7
CLL Collm 141.47 340 *e*SSS SSS 23 00 48.0
CLL Collm 141.47 340 *e*PKPdf **PKPdf** 22 33 47.0 +0.7
CLL Collm 141.47 340 *e*PP PP 22 36 46.0 -2.7
VYHS Vyhne 141.52 333 *e*PKIKP **PKiKP** 22 33 50.2 +0.8
VYHS Vyhne 141.52 333 *e*PKP **PKiKP** 22 33 50.2 +0.8
CONA Conrad Observa 143.22 335 *e*P **PKiKP** 22 33 52.3 -0.7
comp=E,3.9nm,1.0s
RONA Rosalia, Austr 143.22 334 *e*P **PKPdf** 22 33 48.9 -0.7
comp=E,4.0nm,1.0s
GERES GERESS Array B 143.31 338 PKhKP PKPpre 22 33 46.0
comp=E,0.5nm,0.7s,baz=40,slow=5.4,SNR=2.8
GERES GERESS Array B 143.31 338 PKIKP PKPab 22 33 46.0 +0.3
MOA Molln 143.92 336 *e*P PKPbc 22 33 49.3 +0.7
comp=E,3.6nm,1.1s
DIVS Divibare 144.12 327 PKPbc 22 33 50.0 +0.6
BIOA Bad Ischl, Aus 144.29 337 *e*P **PKiKP** 22 33 59.2 +4.0
comp=E,2.9nm,1.2s
SOKA Soboth 144.56 334 *e*P **PKPab** 22 33 51.1 +0.6
comp=E,3.2nm,1.0s
OBKA Obir 144.89 335 *e*P **PKPab** 22 33 52.0 +0.3
comp=E,9.1nm,1.2s
KBA Koelnbreinsper 144.91 336 *e*P **PKPab** 22 33 52.3 +0.4
comp=E,4.7nm,0.9s
CRES Cresnjev 145.05 333 *e*PKPbc **PKPdf** 22 33 53.6 +0.7
MOZS Mozjanca 145.11 334 *e*PKPbc **PKPbc** 22 33 52.7 +0.3
MYKA Terra Mystica 145.16 336 *e*P **PKPbc** 22 33 52.4 -0.3
comp=E,13nm,1.0s
WATA Walderalm 145.36 338 *e*P **PKPbc** 22 33 53.5 +0.2
comp=E,9.7nm,0.9s
WTTA Wattenberg 145.40 338 *i* P **PKPbc** 22 33 53.4 -0.1
comp=E,18nm,1.0s,SNR=6.3
ABTA Abfaltersbach 145.51 337 *i* P **PKPbc** 22 33 53.4 -0.3
comp=E,15nm,0.8s,SNR=7.4
RETA Reutte 145.51 339 *i* P **PKPbc** 22 33 54.0 +0.3
comp=E,8.4nm,0.9s,SNR=7.3
MOTA Moosalm 145.51 339 *i* P **PKPbc** 22 33 53.9 +0.1
comp=E,18nm,1.0s,SNR=9.3
BFO Black Forest 145.53 342 **PKPbc** 22 33 53.4 -0.3
BFO Black Forest 145.53 342 PKIKP **PKPbc** 22 33 53.4 -0.3
SQTA Saint Quirin 145.58 339 *i* P **PKPdf** 22 33 54.5 +0.6
comp=E,14nm,0.9s,SNR=9.8
PDG Podgorica 145.65 325 **PKPdf** 22 33 53.8 -0.1
STAL STALIGIAL 145.84 336 **PKPdf** 22 33 52.7 -1.5
CIMO Cimolais 145.90 336 **PKPdf** 22 33 54.1 -0.3
FETA Feichten 145.92 339 *i* P **PKPbc** 22 33 55.7 +0.5
comp=E,15nm,0.9s,SNR=10
ECH Echery 145.96 344 **PKPdf** 22 33 54.1 -0.3
ECH Echery 145.96 344 PKP2 **PKPdf** 22 33 54.1 -0.3
DAVA Damuels 145.98 340 *i* P **PKPbc** 22 33 55.7 +0.4
comp=E,18nm,1.0s,SNR=7.0
DAVOX Davos/Dischmat 146.42 340 PKPbc **PKPbc** 22 33 57.0 +0.3
comp=E,14nm,0.8s,baz=352,slow=0.7,SNR=29
ESDC Sonseca Array 156.30 355 PKPab **PKPab** 22 34 37.8 -0.5
comp=E,0.7nm,1.0s,baz=351,slow=3.9,SNR=5.8
TORD Torodi Ar. Bea 171.62 251 PKP **PKPdf** 22 34 23.7 -1.2
comp=E,0.7nm,1.0s,baz=188,slow=2.2,SNR=3.1
TORD PKPab **PKPab** 22 35 45.9 -0.5
comp=E,1.7nm,1.1s,baz=120,slow=3.2,SNR=4.2

*IDC **17** 22:17:07.5±1.1, 10°.29N×126°.06E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=51.0km s-min=21.9km az=67.0*
*MAN **17** 22:17:16, 10°.19N×125°.87E, h26km, Ms2.5*
ISC 17 22:17:16.0±1.0, **10°.23N**±0°.05×**125°.96E**±0°.06, **h57**km±9km, **n24**, σ1$**73**/26, **mb3.5**/7, **6C-3D, Leyte**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**0.47**	**160**||	*e*P	**Pn**	**22 17 27.6**	**+0.1**
GLSP				*e*S	**Sn**	**22 17 35.8**	**0.0**
SCPH	**Surigao**	**0.65**	**226**↑	*i*P	**Pn**	**22 17 28.9**	**-0.5**
SCPH				*i* S	**Sn**	**22 17 38.4**	**-0.8**
MSLP	**Maasin**	**1.09**	**265**||	*e*P	**Pn**	**22 17 35.3**	**+0.2**
MSLP				*e*S	**Sn**	**22 17 49.3**	**0.0**
BUTP	**Butuan**	**1.30**	**195**↑	*e*P	**Pn**	**22 17 39.2**	**+1.3**
BUTP				*e*S	**Sn**	**22 17 57.6**	**+3.3**
LLP	**Lapu-Lapu**	**1.97**	**273**↑	*e*P	**Pn**	**22 17 47.6**	**+0.6**
LLP				*e*S	**Sn**	**22 18 10.5**	**0.0**
TBP	**Tagbilaran**	**2.14**	**256**	*e*P	**Pn**	**22 17 49.6**	**+0.3**
TBP				*i* S	**Sn**	**22 18 15.8**	**+1.0**
BUKP	**Musuan**	**2.50**	**201**||	*e*P	**Pn**	**22 17 56.8**	**+2.5**
BUKP				*e*S	**Sn**	**22 18 27.4**	**+3.7**
CNP	**Catarman**	**2.60**	**331**↑	*e*P	**Pn**	**22 17 57.4**	**+1.9**
CNP				*e*S	**Sn**	**22 18 29.5**	**+3.6**
SNPH	**Sibulan**	**2.83**	**252**	*e*P	**Pn**	**22 17 59.2**	**+0.4**
RCP	**Roxas**	**3.42**	**293**↑	*e*P	**Pn**	**22 18 08.3**	**+1.4**
PAGZ	**Pagadian**	**3.48**	**227**↑	*e*P	**Pn**	**22 18 09.0**	**+1.3**
CMAR	**Chiang Mai Arr**	**27.39**	**290**	P	**P**	**22 22 57.1**	**+0.7**
	0.7nm,0.6s,baz=103,slow=7.7,SNR=1.4						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**31.10**	**165**	P	**P**	**22 23 28.1**	**-1.1**
	0.8nm,1.0s,baz=339,slow=8.7,SNR=4.5						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**34.58**	**167**	P	**P**	**22 23 58.3**	**-1.2**
	0.3nm,0.5s,baz=352,slow=7.5,SNR=6.8						
	0.3nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**40.22**	**73**	T	T	23 07 50.3	
	baz=261,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.24**	**73**	T	T	23 07 47.0	
	baz=261						
H11S2	**WAKE ISLAND Hy**	**40.24**	**74**	T	T	23 07 49.8	
	baz=261,slow=74						
H11N1	**WAKE ISLAND Hy**	**40.55**	**72**	T	T	23 08 12.1	
	baz=265,slow=74,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	**40.56**	**72**	T	T	23 08 11.6	
	baz=265,slow=74,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**40.57**	**72**	T	T	23 08 15.0	
	baz=265,slow=74,SNR=6.8						
MKAR	**Manchi Array**	**51.87**	**323**	P	**P**	**22 26 17.7**	**-1.0**
	0.5nm,0.6s,baz=122,slow=7.8,SNR=6.5						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**79.61**	**26**	P	**P**	**22 29 17.5**	**+0.7**
	0.2nm,0.5s,baz=286,slow=6.5,SNR=2.0						
	0.2nm,0.5s						
ARCES	**ARCESS Array B**	**84.12**	**340**	P	**P**	**22 29 38.8**	**-1.7**
	1.3nm,0.9s,baz=73,slow=6.0,SNR=1.2						
	1.3nm,0.9s						
FINES	**FINESS Array B**	**85.78**	**332**	P	**P**	**22 29 47.0**	**-1.9**
	3.4nm,1.1s,baz=68,slow=3.7,SNR=3.7						
	3.4nm,1.1s						

*HEL **17** 22:20:52.2±0.5, 67°.38N×19°.71E, h0km, ML2.2, Explosion*
UPP 17 22:20:58.7±0.1, **67°.17N×20°.64E, h0**km, **ML1.8, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.80**	**352**	P	Pg	22 21 13.7	-0.3
KUA				S	Sg	22 21 25.1	+0.7
SALU	**Saltoluokta**	**0.86**	**285**	P	Pg	22 21 14.7	-0.4
PAJU	**Pajala**	**0.98**	**97**	P	Pg	22 21 17.0	-0.4
PAJU	**Pajala**	**0.98**	**97**	PG	Pg	22 21 16.9	-0.5
	baz=289						
HARU	**Harads**	**1.02**	**172**	P	Pg	22 21 17.7	-0.5
LANU	**Lannavaara**	**1.03**	**30**	P	Pg	22 21 17.5	-0.8
KOVU	**Salmi**	**1.08**	**350**	P	Pg	22 21 18.9	-0.4
KLF	**Kolari**	**1.30**	**85**	PN	Pg	22 21 22.4	-1.1
KLF				SN	Sn	22 21 44.6	+2.5
KALU	**Kalix**	**1.71**	**139**	P	Pn	22 21 30.1	+0.5
KALU	**Kalix**	**1.71**	**139**	PG	Pn	22 21 30.1	+0.5
SJUU	**Sjulsmark**	**1.71**	**166**	P	Pn	22 21 29.9	+0.2
TOF	**Tornio**	**1.83**	**125**	PG	Pn	22 21 32.0	+0.7
	baz=303						
TOF				MSG		22 21 58.8	
	comp=Z,12nm,0.2s						
TOF				SG	Sg	22 22 01.5	+4.0
RNF	**Rovaniemi**	**2.19**	**102**	PG	Pb	22 21 38.0	-1.2
RNF				SG	Sg	22 22 11.9	+2.8
SGF	**Sodankyl**	**2.30**	**80**	PG	Pb	22 21 40.9	-0.1
SGF				SG	Sg	22 22 14.9	+2.4
ARA0	**ARCESS Array S**	**2.98**	**35**	SB	Sn	22 22 19.8	-3.9
KEV	**Kevo**	**3.50**	**39**	SG	Sb	22 22 41.6	-2.8
VRF	**Varrio**	**3.50**	**76**	PG	Pb	22 21 58.1	-3.4
OLKF	**Oulanka, Finla**	**3.58**	**100**	PB	Pb	22 22 00.6	-2.2
KU6	**Riekki**	**3.87**	**103**	PG	Pb	22 22 08.0	+0.4
KU6				SG	Sg	22 23 04.6	+1.9
VAF	**Ylistaro**	**4.23**	**167**	PB	Pb	22 22 10.2	-3.6

*IDC **17** 22:21:01.3±0.9, 67°.29N×21°.02E, h0km, mbtmp3.0/4, ML2.0/4, Error ellipse: s-maj=17.9km s-min=6.5km az=114.0*
*UPP **17** 22:21:02.1±0.1, 67°.17N×20°.65E, h0km, ML2.1, Explosion*
*BER **17** 22:21:03.4±2.7, 67°.10N×21°.02E, h0km, ML1.6, Suspected explosion*
ISC 17 22:21:00.2±0.8, **67°.25N**±0°.03×**20°.53E**±0°.03, **h0**km, **n21,** σ1$**27**/31, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.71**	**354**	P	**Pn**	**22 21 17.0**	**-0.4**
KUA				S	**Sn**	**22 21 28.1**	**-1.0**
SALU	**Saltoluokta**	**0.79**	**280**	P	**Pn**	**22 21 18.1**	**-0.5**
SALU				S	**Sb**	**22 21 28.8**	**+0.6**
KOVU	**Salmi**	**0.98**	**352**	P	**Pn**	**22 21 22.5**	**+1.2**
PAJU	**Pajala**	**1.04**	**102**	P	**Pg**	**22 21 20.2**	**+0.2**
PAJU				S	**Sg**	**22 21 34.1**	**+0.8**
PAJU	**Pajala**	**1.04**	**102**	SG	**Sb**	**22 21 34.6**	**-0.5**
HARU	**Harads**	**1.11**	**171**	P	**Pg**	**22 21 21.4**	**0.0**
HEF	**Hetta**	**1.66**	**44**	*e*P	**Pn**	**22 21 30.0**	**-0.6**
HEF				*e*S	**Sg**	**22 21 54.2**	**+0.7**
KIF	**Kilpisjarvi**	**1.76**	**3**	*e*P	**Pb**	**22 21 33.2**	**-0.1**
KIF				*e*S	**Sg**	**22 21 58.9**	**+2.1**
KALU	**Kalix**	**1.80**	**140**	P	**Pb**	**22 21 33.5**	**-0.5**
FAUS	**Fauske**	**2.04**	**276**	*e*S	**Sg**	**22 22 06.7**	**+1.2**
FAUS				IAML		22 22 10.1	
	comp=Z,11nm,0.2s						
STEI	**Steigen**	**2.14**	**291**	*e*P	**Pg**	**22 21 42.1**	**+1.0**
STEI				IAML		22 22 13.3	
	comp=Z,4.1nm,0.6s						
JETT	**Jettan, Norway**	**2.31**	**359**	*e*P	**Pb**	**22 21 42.5**	**-0.3**
JETT				*e*S	**Sg**	**22 22 14.1**	**-0.4**
JETT				IAML		22 22 18.7	
	comp=Z,18nm,0.3s						
MOR8	**Moi Rana**	**2.65**	**249**	*e*P	**Pb**	**22 21 46.7**	**-1.8**
MOR8				*e*S	**Sn**	**22 22 15.6**	**-1.3**
MOR8				IAML		22 22 24.7	
	comp=Z,6.3nm,0.4s						
LOF	**Lofoten**	**2.81**	**292**	*e*P	**Pb**	**22 21 49.4**	**-1.7**
LOF				IAML		22 22 36.3	
	comp=Z,3.6nm,0.4s						
ARA0	**ARCESS Array S**	**2.94**	**36**	*e*P	**Pn**	**22 21 48.4**	**+0.3**
ARA0				IAML		22 22 29.7	
	comp=Z,1.8nm,0.3s						
ARCES	**ARCESS Array B**	**2.94**	**36**	Pn	**Pn**	**22 21 47.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=1.3						
ARCES				Pg	**Pb**	**22 21 50.5**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=213,slow=13,SNR=36						
ARCES				Lg	Lg	22 22 28.8	
	comp=Z,0.4nm,0.3s,baz=218,slow=23,SNR=6.7						
	comp=Z,0.5nm,0.3s						
KONS	**Konsvik**	**3.02**	**259**	*e*P	**Pb**	**22 21 53.5**	**-1.3**
KONS				IAML		22 22 45.4	
	comp=Z,3.4nm,0.4s						
KEV	**Kevo**	**3.46**	**41**	*e*P	**Pn**	**22 21 57.7**	**+2.4**
FINES	**FINESS Array B**	**6.31**	**155**	Pn	**Pn**	**22 22 36.1**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=343,slow=11,SNR=5.3						
FINES				Sn	**Sn**	**22 23 46.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=345,slow=22,SNR=3.3						
FINES				Lg	Lg	22 24 17.9	
	comp=Z,0.2nm,0.3s,baz=347,slow=25,SNR=2.1						
	comp=Z,4.0nm,1.1s						
NOA	**NORSAR Array B**	**7.44**	**217**	Pn	**Pn**	**22 22 51.9**	**+2.0**
	baz=25,slow=10,SNR=1.4						
	comp=Z,0.4nm,0.8s						
HFS	**Hagfors**	**7.76**	**206**	Pn	**Pn**	**22 22 54.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=36,slow=14,SNR=6.8						
HFS				Sn	**Sn**	**22 24 22.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=21,slow=26,SNR=1.4						
	comp=Z,3.4nm,0.9s						

*IDC **17** 22:26:17.0±0.5, 15°.98S×173°.42E, h0km, mb4.6/25, mbtmp4.5/27, ML4.4/2, MS4.1/41, Error ellipse: s-maj=17.3km s-min=12.6km az=142.0*
*NOU **17** 22:26:17.9, 15°.76S×173°.43E, h0km, mb5.1/30, Fiji Islands Region*
*MOS **17** 22:26:18.3±1.0, 16°.03S×173°.41E, h14km, mb5.2/16, Error ellipse: s-maj=10.3km s-min=9.1km az=70.9*
*BJI **17** 22:26:18.3±0.0, 15°.66S×173°.43E, h6km, mb4.9/35, mB5.3/16, Ms4.9/5, Ms7 4.4/5*
*NEIC **17** 22:26:19.7±1.3, 15°.98S±0°.07×173°.48E±0°.06, h10km±1km, mb5.2/115, Error ellipse: s-maj=13.6km s-min=9.3km az=149.0*
*GCMT **17** 22:26:21.7±0.1, 15°.89S±0°.01×173°.43E±0°.01, h15km, MW5.1/135, Moment Tension Solution. s53,c63; s135,c199; Duration: 0 Moment tensor: Scale 10**16**Nm; Mrr-5.83±.19; Mθθ2.11±.12; Mϕϕ3.72±.13; Mrθ-0.29±.26; Mθϕ-2.63±.08; Mϕr1.90±.28; Best double couple: Mo6.05700×10**16** NP1:ϕs152.00000°, δ54.00000°, λ-81.00000°. NP2:ϕs316.00000°, δ37.00000°, λ-103.00000°. Principal axes: T 5.9150, Plg8.0000°, Azm235.0000°; N 0.2850, Plg8.0000°, Azm326.0000°; P -6.2000, Plg79.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 22:26:22.5±0.3, **16°.01S**±0°.06×**173°.48E**±0°.05, **h35**km, **n612,** σ1$**31**/596, **mb5.1**/115, **MS4.2**/45, **14C-20D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.70**	**112**	Pn	**Pn**	**22 27 30.9**	**-0.2**
	1.7nm,0.3s,baz=298,slow=17,SNR=13						
MSVF				LR	LR	22 28 37.1	
	comp=Z,586nm,21.1s,baz=295,slow=29						
	18nm,0.7s						
MSVF	**Nonsavu**	**4.70**	**112**	Pn	**Pn**	**22 27 30.7**	**-0.4**
MSVF	**Nonsavu**	**4.70**	**112**||	*e*P	**Pn**	**22 27 31.3**	**+0.2**
MSVF	**Nonsavu**	**4.70**	**112**	P	**Pn**	**22 27 31.3**	**+0.2**
MARNC	**Mare, Loyalty**	**7.50**	**223**	Pn	**Pn**	**22 28 08.6**	**-3.3**
QUENC	**Quen Island, N**	**8.95**	**223**	Pn	**Pn**	**22 28 28.8**	**-0.5**
DZM	**Mont Dzumac**	**8.98**	**227**	Pn	**Pn**	**22 28 29.0**	**-0.9**
	0.5nm,0.3s,baz=84,slow=20,SNR=3.2						
DZM				LR	LR	22 31 33.2	
	comp=Z,4μm,21.7s,baz=50,slow=35						
	13nm,0.9s						
DZM	**Mont Dzumac**	**8.98**	**227**	*e*P	**Pn**	**22 28 32.5**	**+2.6**
	1μm,26.4s						
DZM				*e*LR	LR	22 30 31.4	
	comp=Z,8μm,26.6s						
DZM	**Mont Dzumac**	**8.98**	**227**	Pn	**Pn**	**22 28 29.6**	**-0.3**
FUNA	**Funafuti**	**9.30**	**38**	Pn	**Pn**	**22 28 30.0**	**-4.1**
FUNA	**Funafuti**	**9.30**	**38**	P	Pn	22 28 29.2	-4.9
KOUNC	**Koumac, New Ca**	**9.83**	**241**	Pn	**Pn**	**22 28 41.1**	**-0.4**
HNR	**Honiara**	**14.73**	**295**	LR	LR	22 35 29.1	
	comp=Z,260nm,18.1s,baz=138,slow=38						
RAO	**Raoul Island**	**15.38**	**150**	LR	LR	22 34 43.8	
	comp=Z,218nm,20.4s,baz=246,slow=33						
TARA	**Tarawa**	**17.26**	**358**	Pn	**Pn**	**22 30 16.9**	**-4.0**
URZ	**Urewera**	**22.40**	**172**	P	**P**	**22 31 17.9**	**0.0**
	9.8nm,0.7s,baz=133,slow=3.1,SNR=5.2						
URZ				LR	LR	22 38 20.3	
	comp=Z,234nm,19.3s,baz=21,slow=32						
	9.8nm,0.7s						
URZ	**Urewera**	**22.40**	**172**	P	**P**	**22 31 17.9**	**0.0**
URZ				IAmb	IAmb	22 31 28.0	
	comp=Z,175nm,1.9s						
EIDS	**Eidsvold**	**22.90**	**242**	P	**P**	**22 31 24.0**	**+0.6**
	baz=23,SNR=6.9						
EIDS	**Eidsvold**	**22.90**	**242**	P	**P**	**22 31 23.1**	**-0.3**
EIDS				IAmb	IAmb	22 31 26.2	
	comp=Z,71nm,1.2s						
EIDS	**Eidsvold**	**22.90**	**242**	P	**P**	**22 31 24.7**	**+1.3**
RABL	**Rabaul**	**24.01**	**297**	P	**P**	**22 31 32.7**	**-1.7**
KRVT	**Keravat (AS076**	**24.07**	**297**	LR	LR	22 41 00.1	
	comp=Z,226nm,19.8s,baz=264,slow=37						
ARMA	**Armidale**	**24.62**	**231**	P	**P**	**22 31 41.0**	**+1.2**
	baz=25,SNR=3.8						
ARMA	**Armidale**	**24.62**	**231**	P	**P**	**22 31 38.9**	**-0.9**
ARMA				IAmb	IAmb	22 31 54.2	
	comp=Z,104nm,1.8s						
ARMA	**Armidale**	**24.62**	**231**	P	**P**	**22 31 41.6**	**+1.8**
BFZ	**Birch Farm**	**24.70**	**175**	P	**P**	**22 31 38.2**	**-2.2**
BFZ	**Birch Farm**	**24.70**	**175**	P	**P**	**22 31 43.8**	**+3.4

comp=Z,72nm,1.3s
RAR Rarotonga 25.85 106 LR LR 22 40 30.3
comp=Z,112nm,20.2s,baz=254,slow=33
CTA Charters Tower 26.19 257 P **P** **22 31 54.4 +0.2**
comp=Z,14nm,1.1s,baz=71,slow=12,SNR=2.7
CTA LR LR 22 40 35.5
comp=Z,952nm,19.8s,baz=90,slow=33
comp=Z,14nm,1.1s
RPZ Rata Peaks 27.70 184 LR LR 22 41 57.7
comp=Z,1μm,18.3s,baz=3.0,slow=34
QLP Quilpie 29.14 244 P **P** **22 32 21.7 +1.2**
CMSA Cobar Meteorol 29.65 234 P **P** **22 32 25.6 +0.7**
baz=30,SNR=6.3
CMSA Cobar Meteorol 29.65 234 P **P** **22 32 25.2 +0.3**
TOO Toolangi 32.74 224 P **P** **22 32 52.2 +0.1**
TOO IAmb IAmb 22 33 16.6
comp=Z,40nm,1.6s
TOO Toolangi 32.74 224 P **P** **22 32 52.2 +0.1**
TOO pmax pmax
comp=Z,40nm,1.6s
STKA Stephens Creek 32.99 236 P **P** **22 32 54.0 -0.3**
comp=Z,7.4nm,0.7s,baz=69,slow=7.7,SNR=9.6
comp=Z,7.4nm,0.7s
STKA Stephens Creek 32.99 236 P **P** **22 32 55.2 +0.9**
baz=33,SNR=7.4
STKA Stephens Creek 32.99 236 P **P** **22 32 55.0 +0.6**
STKA Stephens Creek 32.99 236 *ce*P **P** **22 32 54.7 +0.4**
STKA Stephens Creek 32.99 236 P **P** **22 32 55.2 +0.9**
ARPS Mount Arapiles 34.84 228 P **P** **22 33 11.4 +1.1**
PPT2 Papeete2 35.37 98 *e*S **S** **22 38 49.6 +2.0**
comp=Z,207nm,26.0s
PPT2 *e*LR LR 22 42 40.5
comp=Z,1μm,31.8s
PPT Papeete 35.37 98 LR LR 22 44 07.9
comp=Z,151nm,19.5s,baz=250,slow=30
TBI Tubuai 35.58 108 *e*S **S** **22 38 53.3 +2.7**
comp=Z,144nm,25.5s
TBI *e*LR LR 22 42 47.8
comp=Z,752nm,32.5s
HTT Hallett 35.65 234 P **P** **22 33 18.2 +0.8**
OOD Oodnadatta 36.83 245 P **P** **22 33 27.8 +0.3**
SMPI Sarmi 36.97 289 P **P** **22 33 29.5 +0.7**
comp=Z,34nm,1.7s
WB0 Warramunga Arr 37.33 258 P **P** **22 33 30.7 -1.2**
WRAB Tennant Creek 37.37 258⇓ *e*P **P** **22 33 30.8 -1.4**
WRAB pmax pmax
comp=Z,30nm,2.0s
WRAB Tennant Creek 37.37 258 P **P** **22 33 31.0 -1.2**
WRA Warramunga Arr 37.38 258 P **P** **22 33 30.2 -2.0**
comp=Z,4.4nm,1.0s,baz=89,slow=8.3,SNR=33
WRA PP **PnPn** **22 34 59.2 +0.4**
comp=Z,4.8nm,1.2s,baz=88,slow=9.5,SNR=5.6
WRA PcP **PcP** **22 35 50.2 -0.7**
comp=Z,3.4nm,1.0s,baz=93,slow=3.7,SNR=7.4
WRA LR LR 22 47 25.7
comp=Z,409nm,20.1s,baz=84,slow=34
comp=Z,4.4nm,1.0s
WRA Warramunga Arr 37.38 258 P **P** **22 33 30.6 -1.7**
AS31 Alice Springs 37.90 252 P **P** **22 33 35.9 -0.8**
ASAR Alice Springs 37.91 252 P **P** **22 33 35.9 -0.9**
comp=Z,6.4nm,0.7s,baz=80,slow=8.8,SNR=50
ASAR PcP **PcP** **22 35 52.5 +0.1**
comp=Z,4.0nm,0.9s,baz=94,slow=3.1,SNR=13
ASAR LR LR 22 47 58.8
comp=Z,1μm,20.1s,baz=95,slow=34
comp=Z,6.4nm,0.7s
ASAR Alice Springs 37.91 252 P **P** **22 33 35.7 -1.0**
ASAR Alice Springs 37.91 252 P **P** **22 33 35.7 -1.0**
KDU Kakadu 39.82 269 P **P** **22 33 53.4 +0.6**
GUMO Guam 40.80 315 LR LR 22 49 04.5
comp=Z,95nm,21.4s,baz=116,slow=34
KNRA Kununurra 42.96 264 P **P** **22 34 18.9 +0.3**
baz=43,SNR=3.8
KNRA Kununurra 42.96 264 P **P** **22 34 18.0 -0.6**
KNRA Kununurra 42.96 264 P **P** **22 34 18.8 +0.3**
WRKA Warakurna 43.10 250 P **P** **22 34 19.3 -0.4**
baz=43,SNR=8.4
WRKA Warakurna 43.10 250 P **P** **22 34 19.6 0.0**
FITZ Fitzroy Crossi 45.69 260 LR LR 22 52 32.4
comp=Z,842nm,20.4s,baz=89,slow=34
FITZ Fitzroy Crossi 45.69 260 P **P** **22 34 40.9 +0.5**
baz=46,SNR=11
FITZ Fitzroy Crossi 45.69 260 P **P** **22 34 40.6 +0.3**
FITZ IAmb IAmb 22 34 49.4
comp=Z,41nm,1.1s
FITZ Fitzroy Crossi 45.69 260 P **P** **22 34 41.4 +1.0**
TAOE Nuku Hiva Isla 45.76 87 *e*S **S** **22 41 23.6 +0.9**
comp=Z,195nm,26.0s
TAOE *e*LR LR 22 47 30.5
comp=Z,2μm,25.8s
BATI Baumata 48.77 270 P **P** **22 35 02.0 -2.5**
comp=Z,17nm,0.6s,baz=166,slow=4.2,SNR=1.4
BATI LR LR 22 54 23.2
comp=Z,398nm,20.5s,baz=124,slow=35
comp=Z,17nm,0.6s
BATI Baumata 48.77 270 P **P** **22 35 05.4 +0.9**
comp=Z,24nm,0.8s
PSA00 Pilbara Seismi 50.88 255 P **P** **22 35 19.7 -0.7**
PSA00 Pilbara Seismi 50.88 255 P **P** **22 35 20.2 -0.3**
PSA00 IAmb IAmb 22 35 28.5
comp=Z,50nm,1.1s
PSA00 Pilbara Seismi 50.88 255 P **P** **22 35 21.1 +0.7**
MBWA Marble Bar 51.01 256 P **P** **22 35 21.3 -0.1**
MBWA Marble Bar 51.01 256 P **P** **22 35 21.9 +0.5**
MEEK Meekatharra 51.86 249 P **P** **22 35 28.4 +0.6**
LUWI Luwuk 52.13 281 P **P** **22 35 27.9 -2.0**
comp=Z,40nm,1.0s
DAV Davao City (W) 52.67 292 LR LR 22 57 44.4
comp=Z,49nm,18.5s,baz=106,slow=36
APSI Ampana 53.23 281 P **P** **22 35 39.1 +1.1**
comp=Z,27nm,1.0s
MUN Mundaring 54.11 242 P **P** **22 35 45.0 +0.8**
baz=54,SNR=3.0
MPSI Mapaga 55.30 282 P **P** **22 35 52.2 -0.9**
comp=Z,8.4nm,1.1s
JOW Kunigami 61.16 314 P **P** **22 36 34.0 +0.2**
JOW IAmb IAmb 22 36 35.7
comp=Z,19nm,1.0s
JOW Kunigami 61.16 314 P **P** **22 36 33.8 0.0**
VNDA Vanda 61.81 183 P **P** **22 36 36.7 -0.7**
comp=Z,2.6nm,1.1s,baz=3.7,slow=6.9,SNR=5.7
VNDA LR LR 22 58 45.4
comp=Z,349nm,21.6s,baz=18,slow=32
comp=Z,2.6nm,1.1s
VNDA Vanda 61.81 183 P **P** **22 36 37.4 0.0**
VNDA Vanda 61.81 183 P **P** **22 36 37.4 0.0**
VNDA pmax pmax
comp=Z,18nm,1.7s
SBA Scott Base 61.96 182 P **P** **22 36 38.4 0.0**
SBA Scott Base 61.96 182 P **P** **22 36 38.4 0.0**
SBA pmax pmax
comp=Z,36nm,1.4s
MJAR Matsushiro Arr 61.97 328 P **P** **22 36 37.3 -1.8**
comp=Z,6.1nm,0.8s,baz=154,slow=8.5,SNR=15
MJAR LR LR 23 00 14.6
comp=Z,50nm,20.9s,baz=140,slow=33
comp=Z,6.1nm,0.8s
MAJO Matsushiro 61.98 328 P **P** **22 36 38.7 -0.4**
MAJO IAmb IAmb 22 36 40.1
comp=Z,20nm,1.1s
MAJO Matsushiro 61.98 328⇓ *e*P **P** **22 36 38.7 -0.4**
MAJO pmax pmax
comp=Z,18nm,1.1s
MAJO Matsushiro 61.98 328 P **P** **22 36 39.2 +0.1**
JSU Suzuyama 62.74 319 P **P** **22 36 44.5 +0.1**
JSU IAmb IAmb 22 36 45.8
comp=Z,16nm,1.0s
STKI Sintang 63.18 278 P **P** **22 36 48.1 +0.4**
CASY Casey 64.69 203 P **P** **22 36 56.7 +0.1**
CASY IAmb IAmb 22 37 03.8
comp=Z,30nm,1.6s
KSM Kuching 64.73 279 P **P** **22 36 57.6 -0.2**
KSM IAmb IAmb 22 36 60.0
comp=Z,21nm,1.1s
TPUB Ta-pu 64.77 306 P **P** **22 36 57.3 -0.6**
TPUB Ta-pu 64.77 306 P **P** **22 36 57.5 -0.4**
YHNB Yeheng 64.93 308 P **P** **22 36 58.6 -0.4**
YHNB Yeheng 64.93 308 P **P** **22 36 58.9 -0.1**
LEM Lembang 64.98 270 LR LR 23 05 26.3
comp=Z,167nm,19.2s,baz=132,slow=36
KSRS Korea Array 68.29 322 P **P** **22 37 19.9 -0.1**
comp=Z,3.8nm,0.9s,baz=141,slow=6.4,SNR=19
KSRS LR LR 23 03 56.5
comp=Z,28nm,21.8s,baz=175,slow=33
comp=Z,3.8nm,0.9s
KSAR Wonju Array Be 68.30 322 P **P** **22 37 20.3 +0.2**
KSAR Wonju Array Be 68.30 322 P **P** **22 37 20.3 +0.2**
SHEM Shemya Is, Ala 68.45 0 LR LR 23 01 07.5
comp=Z,56nm,21.9s,baz=299,slow=31
DSRI Dabo 69.61 276 P **P** **22 37 29.5 +0.7**
comp=Z,21nm,1.2s
MSHR Mys Shultsa 70.10 328⇓ *e*P **P** **22 37 31.8 +0.7**
MSHR pmax pmax
comp=Z,11nm,1.0s
PEA0B Petropavlovsk- 70.16 350 P **P** **22 37 32.3 +0.9**
PEA0B Petropavlovsk- 70.16 350 *ce*P **P** **22 37 33.4 +2.1**
PETK Petropavlovsk- 70.16 350 P **P** **22 37 31.6 +0.2**
comp=Z,13nm,1.0s,baz=116,slow=6.8,SNR=12
PETK LR LR 23 03 23.6
comp=Z,152nm,20.4s,baz=149,slow=32
comp=Z,13nm,1.0s
NJ2 Nanjing 70.85 313 *e*P **P** **22 37 37.3 +1.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
USRK Ussuriysk Ar. 70.87 330 P **P** **22 37 36.2 +0.4**
comp=Z,3.5nm,1.0s,baz=157,slow=5.8,SNR=11
USRK LR LR 23 05 30.9
comp=Z,44nm,19.1s,baz=225,slow=33
comp=Z,3.5nm,1.0s
USRK Ussuriysk Ar. 70.87 330 P **P** **22 37 36.1 +0.3**
USRK Ussuriysk Ar. 70.87 330 P **P** **22 37 36.1 +0.3**
MDJ Mudanjiang 72.35 329 P **P** **22 37 45.9 +1.1**
MDJ pmax pmax
comp=Z,15nm,0.8s
MDJ pmax pmax
comp=Z,190nm,4.7s
CN2 Changchun 73.94 326 *e*P **P** **22 37 53.8 -0.4**
CN2 *e*PP **PP** **22 40 41.5 +1.8**
CN2 *e*S **S** **22 47 23.8 0.0**
CN2 *e*SS **SS** **22 52 11.6 +2.4**
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,120nm,15.0s
CN2 LR LR
comp=Z,150nm,15.0s
QSPA South Pole Qui 74.03 180 P **P** **22 37 53.9 -0.7**
KLR Kul'dur 74.72 333 LR LR 23 04 36.9
comp=Z,74nm,20.2s,baz=122,slow=31
KLR Kul'dur 74.72 333 *de*P **P** **22 37 59.6 +1.0**
KLR pmax pmax
comp=Z,9.0nm,1.5s
RPSI Rantau Prapat 75.94 277 P **P** **22 38 05.7 -0.7**
RPSI IAmb IAmb 22 38 07.9
comp=Z,27nm,1.1s
PSI Prapat 75.97 277 LR LR 23 11 40.2
comp=Z,134nm,19.7s,baz=128,slow=36
PSI Prapat 75.97 277 P **P** **22 38 05.7 -1.0**
PSI pmax pmax
comp=Z,27nm,1.1s
PSI Prapat 75.97 277 P **P** **22 38 06.8 +0.1**
HNS HongShan 76.62 316 ⇑P **P** **22 38 11.3 +1.6**
LYN LuoYang 76.70 312 *e*P **P** **22 38 10.3 0.0**
LYN pmax pmax
comp=Z,20nm,1.4s
LYN pmax pmax
comp=Z,330nm,7.0s
ENH Enshi 76.86 307 P **P** **22 38 11.0 -0.3**
ENH IAmb IAmb 22 38 13.7
comp=Z,31nm,1.3s
BJT Baijiatuan 77.09 318 P **P** **22 38 12.1 -0.2**
BJT IAmb IAmb 22 38 14.2
comp=Z,32nm,1.7s
BJT Baijiatuan 77.09 318 P **P** **22 38 12.1 -0.2**
BJT pmax pmax
comp=Z,32nm,1.7s
BJI Beijing 77.10 318 P **P** **22 38 13.5 +1.1**
BJI pmax pmax
comp=Z,9.0nm,1.4s
GYA Guiyang 77.41 302 ⇑P **P** **22 38 15.8 +1.2**
GYA pmax pmax
comp=Z,15nm,1.2s
MA2 Magadan 77.55 348 LR LR 23 07 44.9
comp=Z,110nm,20.7s,baz=140,slow=32
P16K Nushagak River 78.32 15 P **P** **22 38 18.4 -0.3**
baz=208
XAN Xi'an 79.03 310 P **P** **22 38 24.6 +1.3**
XAN pmax pmax
comp=Z,14nm,1.1s
N16K Nishlik Lake 79.42 14 P **P** **22 38 25.1 +0.3**
baz=207
ZEA Zeya 79.93 334 *e*P **P** **22 38 29.2 +1.5**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
KMI Kunming 80.11 300 ⇑P **P** **22 38 31.6 +2.0**
KMI pmax pmax
comp=Z,11nm,1.1s
CRAI Chiangrai 80.31 294 P **P** **22 38 31.7 +1.2**
GAMB Gambell 80.35 7 P **P** **22 38 30.3 +0.6**
baz=194
SEY Seymchan 80.40 350⇑ *e*P **P** **22 38 30.4 +0.4**
SEY pmax pmax
comp=Z,21nm,1.4s
HHC Hu-ho-hao-te 80.51 317 *e*P **P** **22 38 32.1 +0.9**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,170nm,6.5s
BRSE Bradley Lake S 80.86 17 P **P** **22 38 32.5 -0.1**
baz=215
CM31 Chiang Mai Arr 80.96 292 P **P** **22 38 35.2 +1.2**
CM31 IAmb IAmb 22 38 36.9
comp=Z,20nm,0.9s
CMAR Chiang Mai Arr 80.96 292 P **P** **22 38 35.2 +1.2**
comp=Z,14nm,0.9s,baz=116,slow=3.7,SNR=45
comp=Z,14nm,0.9s
CMAR Chiang Mai Arr 80.96 292 P **P** **22 38 35.4 +1.4**
CMAR Chiang Mai Arr 80.96 292 *ce*P **P** **22 38 36.0 +2.0**
CMAR pmax pmax
comp=Z,11nm,0.9s
PKM Mcpherson Peak 80.99 50 P **P** **22 38 33.8 -0.3**
baz=243
CHTO Chiang Mai 81.08 292 P **P** **22 38 35.3 +0.6**
CHTO Chiang Mai 81.08 292 P **P** **22 38 35.3 +0.6**
CHTO pmax pmax
comp=Z,15nm,1.0s
CHTO Chiang Mai 81.08 292 P **P** **22 38 35.3 +0.6**
SEW Seward 81.53 18 P **P** **22 38 35.9 -0.1**
baz=216
M19K Big River Lodg 81.71 15 P **P** **22 38 37.2 +0.2**
baz=211
ARVC Arvin 81.82 50 P **P** **22 38 38.1 -0.2**
baz=244
L02F Cave Junction 81.82 42 P **P** **22 38 38.0 0.0**
baz=240
L19K White Mountain 81.84 14 P **P** **22 38 38.4 +0.7**
L19K White Mountain 81.84 14 P **P** **22 38 38.7 +1.0**
baz=211,SNR=15
ORV Oroville 81.94 45 P **P** **22 38 39.3 +0.6**
ORV Oroville 81.94 45 P **P** **22 38 39.3 +0.6**
ORV pmax pmax
comp=Z,14nm,1.2s
CMB Columbia Colle 82.00 47 P **P** **22 38 39.9 +0.7**
CMB Columbia Colle 82.00 47 P **P** **22 38 39.9 +0.7**
CMB pmax pmax
comp=Z,11nm,1.2s
M20K Styx River 82.00 15 P **P** **22 38 40.0 +1.3**
baz=212
YBH Yreka Blue Hor 82.18 43 P **P** **22 38 40.7 +0.7**
comp=Z,9.7nm,1.0s,baz=345,slow=3.4,SNR=7.7
comp=Z,9.7nm,1.0s
YBH Yreka Blue Hor 82.18 43 P **P** **22 38 40.4 +0.3**
YBH IAmb IAmb 22 38 42.5
comp=Z,38nm,1.4s
YBH Yreka Blue Hor 82.18 43 P **P** **22 38 40.4 +0.3**
YBH pmax pmax
comp=Z,38nm,1.4s
TTA Tatalina 82.22 14 P **P** **22 38 40.7 +1.0**
baz=210,SNR=7.5
RC01 Rabbit Creek A 82.25 17 P **P** **22 38 40.4 +0.5**
RC01 Rabbit Creek A 82.25 17 P **P** **22 38 39.8 -0.1**
baz=216
SUA Susitna One 82.28 16 P **P** **22 38 39.8 -0.3**
baz=215
BFSC Mount Baldy Ra 82.31 51 P **P** **22 38 40.9 0.0**
baz=245
ISA Isabella, Lake 82.31 50 P **P** **22 38 41.5 +0.6**
ISA IAmb IAmb 22 38 43.2
comp=Z,24nm,1.4s
ISA Isabella, Lake 82.31 50 P **P** **22 38 41.5 +0.6**
ISA pmax pmax
comp=Z,24nm,1.5s
ISA Isabella, Lake 82.31 50 P **P** **22 38 41.0 +0.1**
baz=244,SNR=5.7
L20K Farewell, AK 82.33 15 P **P** **22 38 40.6 +0.4**
baz=212,SNR=11
EDW2 Edwards Air Fo 82.33 51 P **P** **22 38 41.4 +0.4**
baz=245,SNR=6.4
PWL Port Wells 82.47 18 P **P** **22 38 41.1 +0.1**
PWL Port Wells 82.47 18 P **P** **22 38 40.8 -0.2**
baz=217
MONP2 Monument Peak 82.68 53 P **P** **22 38 42.8 -0.3**
baz=246
L04D Klamath Falls 82.69 42 P **P** **22 38 42.9 +0.1**
baz=241
M22K Willow 82.69 17 P **P** **22 38 42.3 +0.2**
M22K Willow 82.69 17 P **P** **22 38 42.1 0.0**
baz=215
MDPB Devils Postpil 82.74 48 P **P** **22 38 44.0 +0.6**
MDPB IAmb IAmb 22 38 45.3
comp=Z,14nm,1.2s
OMMB Old Mammoth Mi 82.79 48 P **P** **22 38 44.2 +0.6**
OMMB IAmb IAmb 22 38 45.8
comp=Z,19nm,1.4s
IKP In-Ko-Pah, Jac 82.83 53 P **P** **22 38 44.1 +0.4**
baz=246
PMR Palmer 82.83 17 P **P** **22 38 42.7 -0.1**
PMR Palmer 82.83 17 P **P** **22 38 42.7 -0.1**
PMR pmax pmax
comp=Z,58nm,1.4s
PMR Palmer 82.83 17 P **P** **22 38 43.4 +0.5**
baz=216
GLI Glacier Island 82.85 18 P **P** **22 38 42.6 -0.5**
baz=218
BEKR Beckworth 82.86 45 P **P** **22 38 44.0 +0.2**
BEKR IAmb IAmb 22 38 45.8
comp=Z,17nm,1.4s
KNK Knik Glacier 82.88 17 P **P** **22 38 43.7 +0.6**
KNK Knik Glacier 82.88 17 P **P** **22 38 43.3 +0.1**
baz=217
MAW Mawson 82.91 201 P **P** **22 38 43.8 +0.4**
comp=Z,5.9nm,1.1s,baz=117,slow=4.1,SNR=6.6
MAW LR LR 23 11 22.3
comp=Z,157nm,19.2s,baz=118,slow=33
comp=Z,5.9nm,1.1s
MAW Mawson 82.91 201 P **P** **22 38 43.6 +0.3**
MAW Mawson 82.91 201 P **P** **22 38 43.6 +0.3**
MAW pmax pmax
comp=Z,3.0nm,1.4s
CWC Cottonwood Cre 82.94 49 P **P** **22 38 45.4 +1.1**
baz=244
PFO Pinyon Flats O 82.95 52 P **P** **22 38 45.4 +1.1**
comp=Z,0.7nm,0.4s,baz=253,slow=11,SNR=3.5
comp=Z,0.7nm,0.4s
PFO Pinyon Flats O 82.95 52 P **P** **22 38 44.4 +0.1**
baz=246
TPFO Pinon Flats 82.95 52 P **P** **22 38 44.5 +0.2**
baz=246
KAIM Kayak Island 82.95 20 P **P** **22 38 45.2 +1.7**
baz=220
YUH Yuha Desert 82.97 53 P **P** **22 38 44.2 0.0**
YUH IAmb IAmb 22 38 46.5
comp=Z,35nm,1.6s
K20K Telida 83.03 14 P **P** **22 38 44.8 +0.9**
K20K Telida 83.03 14 P **P** **22 38 44.3 +0.4**
baz=211,SNR=13
SWSC Sam W. Stewart 83.18 53 P **P** **22 38 46.3 +0.9**
baz=246
CUT Chulitna 83.19 16 P **P** **22 38 44.4 -0.3**
baz=215
MPMC Manual Prospec 83.20 50 P **P** **22 38 46.6 +1.0**
baz=245,SNR=9.1
SML Sawmill 83.23 17 P **P** **22 38 45.2 +0.2**
baz=217
J04D Umpqua Nationa 83.31 42 P **P** **22 38 46.2 +0.2**
baz=241
I04A Tendick Farm, 83.39 41 P **P** **22 38 46.5 +0.3**
baz=241
GSC Goldstone, Bar 83.39 51 P **P** **22 38 47.0 +0.5**
GSC IAmb IAmb 22 38 48.7
comp=Z,30nm,1.8s
GSC Goldstone, Bar 83.39 51 P **P** **22 38 47.0 +0.5**
GSC pmax pmax
comp=Z,30nm,1.8s
GSC Goldstone, Bar 83.39 51 P **P** **22 38 47.0 +0.5**
baz=245
M23K Glacier View 83.39 17 P **P** **22 38 46.5 +0.7**
baz=217
BELC Belle Mtn. Jos 83.46 52 P **P** **22 38 47.6 +0.6**
baz=246,SNR=9.0
PAHR Pah Rah Range 83.46 46 P **P** **22 38 47.5 +0.6**
PAHR IAmb IAmb 22 38 49.1
comp=Z,28nm,1.5s
SCM Sheep Creek Mo 83.54 18 P **P** **22 38 46.3 -0.3**
baz=218,SNR=6.2
H04D Lebanon 83.54 40 P **P** **22 38 47.7 +0.7**
baz=240
HEC Hector,Ludlow 83.55 51 P **P** **22 38 48.0 +0.7**
baz=246,SNR=6.4
CAST Castle Rocks 83.56 15 P **P** **22 38 45.7 -0.9**
baz=213,SNR=22
G03D McMinnville, O 83.56 39 P **P** **22 38 47.6 +0.6**
baz=240
LCH Last Change Ra 83.59 49 P **P** **22 38 48.1 +0.5**
LCH IAmb IAmb 22 38 49.7
comp=Z,26nm,1.8s
GCSA Galena City Sc 83.62 12 P **P** **22 38 47.9 +1.0**
baz=209,SNR=8.4
NVAR Mina Array Bea 83.64 47 P **P** **22 38 48.6 +0.7**
comp=Z,5.3nm,1.0s,baz=229,slow=7.7,SNR=24
comp=Z,5.3nm,1.0s
NVAR Mina Array Bea 83.64 47 P **P** **22 38 48.3 +0.4**
LZH Lanzhou 83.66 310 *e*P **P** **22 38 50.0 +2.0**
LZH pP pP 22 38 56.8 -1.4
LZH sP pwP 22 39 01.6 0.0
LZH pmax pmax
comp=Z,12nm,1.0s
KLU Klutina 83.69 18 P **P** **22 38 47.4 0.0**
baz=219
BMRM Bremner River 83.69 19 P **P** **22 38 47.4 0.0**
baz=220
J20K Nowinta River 83.72 14 P **P** **22 38 47.9 +0.6**
J20K Nowinta River 83.72 14 P **P** **22 38 47.6 +0.2**
baz=211,SNR=12
BC3 Big Chuckawall 83.73 53 P **P** **22 38 49.3 +1.0**
baz=246
NV11 Mina Array Sit 83.75 47 P **P** **22 38 48.9 +0.5**
FURC Furnace Creek, 83.84 49 P **P** **22 38 49.2 +0.6**
baz=245,SNR=5.6
MOD Modoc Plateau 83.84 43 P **P** **22 38 49.1 +0.3**
MOD IAmb IAmb 22 38 50.8
comp=Z,20nm,1.2s
J05D Fort Rock, OR 83.89 42 P **P** **22 38 49.6 +0.7**
baz=242,SNR=10
CHUM Lake Minchumin 83.90 14 P **P** **22 38 47.8 -0.5**
baz=213,SNR=9.0
MESA MESA 83.97 21 P **P** **22 38 49.0 0.0**
baz=223
BILL Bilibino 83.97 357 *e*P **P** **22 38 48.8 +0.2**
BILL *e* 22 42 02.9
BILL pmax pmax
comp=Z,17nm,1.2s
BILL MLR MLR
comp=Z,67nm,19.0s
GLA Glamis 83.97 53 P **P** **22 38 50.2 +0.7**
baz=247
WAT1 Susitna Watana 84.00 16 P **P** **22 38 48.7 -0.2**
baz=216
CRQE Cirque 84.01 20 P **P** **22 38 49.4 +0.2**
baz=222
WAT6 Susitna Watana 84.02 17 P **P** **22 38 49.2 0.0**
baz=217,SNR=9.9
GMRC Granite Mounta 84.03 51 P **P** **22 38 49.6 -0.3**
baz=246,SNR=6.1
TRF Thorofare Moun 84.04 15 P **P** **22 38 48.5 -0.8**
baz=215
M24K Tolsona, Glenn 84.09 18 P **P** **22 38 49.6 +0.1**
baz=219,SNR=5.6
TUQ Turquoise Moun 84.10 51 P **P** **22 38 50.6 +0.4**
baz=246
F04D Rainier, OR 84.15 39 P **P** **22 38 50.4 +0.4**
baz=240
IRM Iron Mountain 84.17 52 P **P** **22 38 50.8 +0.4**
baz=246,SNR=8.1
N25K Chitina, Valde 84.18 19 P **P** **22 38 49.9 0.0**
baz=220,SNR=8.0
CRAG Craig 84.19 27 P **P** **22 38 50.9 +1.0**

baz=231
TPH **Tonopah** 84.26 48 P P 22 38 51.3 +0.3
TPH **Tonopah** 84.26 48 P P 22 38 51.3 +0.3
TPH pmax pmax
comp=Z,98nm,1.4s
PINE **Pine Mountain** 84.32 42 P P 22 38 51.5 +0.3
I05D **Terrebonne, OR** 84.33 41 P P 22 38 51.4 +0.4
baz=241
LPIG **La Paz** 84.36 63 LR LR 23 07 28.6
comp=Z,442nm,21.4s,baz=244,slow=29
RND **Reindeer** 84.38 16 P P 22 38 50.8 -0.1
RND **Reindeer** 84.38 16 P P 22 38 50.8 -0.1
RND pmax pmax
comp=Z,47nm,1.2s
BPAW **Bear Paw Mtn.** 84.40 15 P P 22 38 50.9 0.0
baz=214,SNR=5.5
BLYC **Blythe** 84.48 53 P P 22 38 52.7 +0.7
BLYC IAmb IAmb 22 38 54.5
comp=Z,31nm,1.6s
TPNV **Topopah Spring** 84.48 49 P P 22 38 52.8 +0.6
TPNV IAmb IAmb 22 38 54.4
comp=Z,28nm,1.5s
TPNV **Topopah Spring** 84.48 49 P P 22 38 52.8 +0.6
TPNV pmax pmax
comp=Z,28nm,1.5s
TPNV **Topopah Spring** 84.48 49 P P 22 38 52.4 +0.2
baz=245
PNL **Peninsula** 84.49 22 P P 22 38 51.4 0.0
baz=225
PINM **Pinnacle** 84.49 21 P P 22 38 51.4 -0.1
baz=224
MCARA **McCarthy VSAT** 84.51 19 P P 22 38 51.4 -0.1
baz=222
DHY **Denali Highway** 84.52 17 P P 22 38 51.2 -0.4
baz=218,SNR=6.5
SLBS **Sierra La Lagu** 84.53 64 P P 22 38 53.9 +1.4
BBB **Bella Bella** 84.59 32 LR LR 23 09 20.1
comp=Z,133nm,19.4s,baz=194,slow=30
HARP **HAARP** 84.62 18 P P 22 38 51.9 -0.2
baz=220
MCK **McKinley** 84.62 16 P P 22 38 52.5 +0.5
MCK **McKinley** 84.62 16 P P 22 38 52.5 +0.5
MCK pmax pmax
comp=Z,41nm,1.5s
MCK **McKinley** 84.62 16 P P 22 38 51.6 -0.5
baz=216
113A **Mohawk Valley,** 84.68 54 P P 22 38 53.8 +0.8
CTG **Chitna Glacier** 84.75 20 P P 22 38 52.9 0.0
baz=223,SNR=5.8
G05D **Wamic, OR** 84.78 40 P P 22 38 53.8 +0.5
baz=241
NEE2 **Needles Airpor** 84.81 52 P P 22 38 54.4 +0.8
baz=247
BWN **Browne** 84.84 15 P P 22 38 53.2 +0.1
PAX **Paxson** 84.97 18 P P 22 38 53.2 -0.8
PAX IAmb IAmb 22 38 54.7
comp=Z,15nm,1.4s
PAX **Paxson** 84.97 18 P P 22 38 53.2 -0.8
PAX pmax pmax
comp=Z,15nm,1.4s
PAX **Paxson** 84.97 18 P P 22 38 53.1 -0.8
baz=219
PDMCI **Parker Dam,Lak** 84.99 52 P P 22 38 55.0 +0.4
baz=247,SNR=6.3
O28M **Mount Upton** 85.00 21 P P 22 38 54.3 0.0
baz=224,SNR=8.1
I21K **Tanana** 85.07 14 P P 22 38 54.1 -0.1
baz=213,SNR=6.7
P29M **Windy Craggy** 85.07 23 P P 22 38 54.7 +0.3
P29M **Windy Craggy** 85.07 23 P P 22 38 54.2 -0.2
baz=227,SNR=11
YAK **Yakutsk** 85.09 341 LR LR 23 10 48.6
comp=Z,92nm,21.8s,baz=89,slow=31
YAK **Yakutsk** 85.09 341 𝄆 *e*P P 22 38 54.8 +0.5
YAK pmax pmax
comp=Z,22nm,1.6s
214A **Organ Pipe Nat** 85.12 55 P P 22 38 55.9 +0.6
214A IAmb IAmb 22 38 58.0
comp=Z,31nm,1.7s
214A **Organ Pipe Nat** 85.12 55 P P 22 38 56.3 +1.0
baz=248
WRAK **Wrangell Islan** 85.12 27 P P 22 38 54.8 +0.2
baz=232
WVOR **Wild Horse Val** 85.19 43 P P 22 38 56.0 +0.5
WVOR IAmb IAmb 22 38 57.7
comp=Z,26nm,1.2s
WVOR **Wild Horse Val** 85.19 43 P P 22 38 56.0 +0.5
WVOR pmax pmax
comp=Z,26nm,1.3s
O29M **Mount Kennedy** 85.23 22 P P 22 38 55.1 -0.2
baz=226
MLY **Manley** 85.23 14 P P 22 38 55.0 -0.1
MLY **Manley** 85.23 14 P P 22 38 54.3 -0.9
baz=214,SNR=7.3
BMN **Battle Mountai** 85.27 46 P P 22 38 56.5 +0.5
BMN IAmb IAmb 22 38 58.2
comp=Z,27nm,1.3s
BMN **Battle Mountai** 85.27 46 P P 22 38 56.5 +0.5
BMN pmax pmax
comp=Z,27nm,1.3s
M26K **Nabesna, AK** 85.28 19 P P 22 38 55.5 +0.1
M26K **Nabesna, AK** 85.28 19 P P 22 38 54.4 -1.0
baz=222,SNR=14
H21K **Melozitna Rive** 85.28 13 P P 22 38 55.8 +0.5
H21K IAmb IAmb 22 38 57.3
comp=Z,15nm,1.2s
H21K **Melozitna Rive** 85.28 13 P P 22 38 54.7 -0.6
baz=212,SNR=7.7
NEA2 **Nenana** 85.29 15 P P 22 38 54.5 -0.8
baz=216
IMAR **Indian Mountai** 85.36 13 P P 22 38 56.1 +0.5
PLBC **Pleasant Camp** 85.46 23 P P 22 38 56.3 0.0
baz=228,SNR=8.3
BESE **Bessie Mountai** 85.46 24 P P 22 38 57.1 +0.7
W13A **Hualapai Mount** 85.50 52 P P 22 38 58.1 +0.8
W13A IAmb IAmb 22 38 59.8
comp=Z,27nm,1.8s
K24K **Donnelly Dome** 85.53 17 P P 22 38 56.7 0.0
baz=219
R11A **Troy Canyon, C** 85.54 48 P P 22 38 57.8 +0.3
baz=246
SMAI **San Martin Ant** 85.58 161 P P 22 38 57.0 +0.2
SMAI IAmb IAmb 22 38 58.8
comp=Z,30nm,1.3s
M27K **Edge Creek, AK** 85.60 19 P P 22 38 57.3 +0.2
M27K IAmb IAmb 22 38 58.8
comp=Z,27nm,1.4s
M27K **Edge Creek, AK** 85.60 19 P P 22 38 57.2 +0.1
baz=223,SNR=6.6
YUK3 **Moose Creek** 85.63 20 P P 22 38 57.6 +0.2
baz=224
I23K **Minto, Yukon-K** 85.67 15 P P 22 38 57.2 0.0
baz=216
HDA **Harding Lake** 85.69 16 P P 22 38 57.0 -0.3
baz=218,SNR=8.9
P30M **Million Dollar** 85.69 22 P P 22 38 57.9 +0.4
baz=227
RIDG **Independent Ri** 85.75 17 P P 22 38 57.6 -0.1
baz=220,SNR=10.0
YUK6 **Outpost Mounta** 85.75 21 P P 22 38 57.9 -0.1
baz=226
MDM **Murphy Dome** 85.80 15 P P 22 38 57.2 -0.6
MDM IAmb IAmb 22 38 58.4
comp=Z,19nm,1.2s
H22K **Ishtalitna Cre** 85.80 14 P P 22 38 58.5 +0.6
baz=214,SNR=7.5
TCOL **CIGO, UAF Yank** 85.82 16 P P 22 38 58.3 +0.4
baz=217
COLA **College** 85.82 16 *c i* P P 22 38 57.9 0.0
COLA pmax pmax
comp=Z,24nm,1.3s
COLA **College** 85.82 16 P P 22 38 58.3 +0.4
baz=217
SKAG **Skagway** 85.86 24 P P 22 38 58.6 +0.3
baz=229
G21K **Allakaket** 85.86 13 P P 22 38 59.8 +1.6
baz=212,SNR=6.0
DOT **Dot Lake** 85.90 18 P P 22 38 58.8 +0.4
DOT IAmb IAmb 22 39 00.3
comp=Z,18nm,1.2s
BVCY **Beaver Creek** 85.96 19 P P 22 38 59.0 +0.2
baz=224
HYT **Haines Junctio** 85.97 22 P P 22 38 59.3 +0.3
baz=227,SNR=5.9
IL31 85.99 16 P P 22 38 58.0 -0.7
IL31 IAmb IAmb 22 38 59.5
comp=Z,18nm,1.1s
ILAR **Eielson Array** 85.99 16 P P 22 38 57.8 -1.0
comp=Z,8.0nm,1.0s,baz=235,slow=5.6,SNR=40
ILAR LR LR 23 11 51.9
comp=Z,230nm,20.2s,baz=215,slow=32
comp=Z,8.0nm,1.0s
POKR **Poker Plat Res** 86.13 16 P P 22 38 59.1 -0.4
baz=217
L27K **Beaver Creek,** 86.13 19 P P 22 38 59.4 -0.2
baz=223
BCAR **Beaver Creek A** 86.15 19 P P 22 39 00.5 +0.8
H23K **Yukon River** 86.17 14 P P 22 38 59.4 -0.4
baz=215
SCRK **Sand Creek** 86.18 17 P P 22 38 59.6 -0.3
SCRK IAmb IAmb 22 39 01.4
comp=Z,15nm,1.2s
SCRK **Sand Creek** 86.18 17 P P 22 38 59.6 -0.3
baz=221,SNR=10
J25K **Salcha River,** 86.28 17 P P 22 39 00.4 +0.2
J25K **Salcha River,** 86.28 17 P P 22 39 00.5 +0.2
baz=219,SNR=9.5
T35M **Bob Quinn** 86.38 27 P P 22 39 01.1 +0.2
baz=233
HAWA **Hanford** 86.42 40 P P 22 39 01.8 +0.5
HAWA IAmb IAmb 22 39 03.4
comp=Z,28nm,1.4s
O30N **Mendenhall** 86.45 22 P P 22 39 01.0 -0.2
baz=228,SNR=5.2
F21K **Alatna River** 86.47 12 P P 22 39 01.2 0.0
baz=212
N30M **Aishikik Lake** 86.56 21 P P 22 39 01.8 0.0
baz=227
P32M **Atlin** 86.57 24 P P 22 39 02.2 +0.3
baz=230
H24K **Noodor Dome** 86.59 15 P P 22 39 02.2 +0.4
baz=217
G22K **Bettles** 86.64 13 P P 22 39 02.6 +0.7
baz=214
J26L **Joseph Creek** 86.69 17 P P 22 39 02.6 +0.2
baz=221,SNR=8.4
LCMT **Little Creek M** 86.72 50 P P 22 39 03.4 +0.2
M29M **Somme Creek** 86.77 20 P P 22 39 03.1 +0.3
baz=226
ULN **Ulaanbaatar** 86.77 322 P P 22 39 03.0 -0.2
ULN **Ulaanbaatar** 86.77 322 𝄆 *e*P P 22 39 03.8 +0.6
ULN pmax pmax
comp=Z,3.0nm,1.0s
ELK **Elko** 86.77 46 P P 22 39 03.5 0.0
comp=Z,3.9nm,0.9s,baz=228,slow=6.3,SNR=15
ELK LR LR 23 09 47.5
comp=Z,224nm,21.5s,baz=224,slow=30
comp=Z,3.9nm,0.9s
ELK **Elko** 86.77 46 P P 22 39 03.5 0.0
ELK **Elko** 86.77 46 P P 22 39 03.5 0.0
ELK pmax pmax
comp=Z,11nm,1.3s
K27K **Chicken** 86.77 18 P P 22 39 03.0 +0.3
baz=222
G23K **Bananza Creek** 86.79 14 P P 22 39 03.4 +0.6
baz=215
WHY **Whitehorse** 86.82 23 P P 22 39 04.1 +0.9
baz=229
TUC **Tucson** 86.85 55 P P 22 39 04.3 +0.4
TUC IAmb IAmb 22 39 06.7
comp=Z,24nm,1.8s
TUC **Tucson** 86.85 55 P P 22 39 04.3 +0.4
TUC pmax pmax
comp=Z,24nm,1.8s
TUC **Tucson** 86.85 55 P P 22 39 03.6 -0.4
baz=249
PRP **Porcupine Dome** 86.94 16 P P 22 39 04.7 +1.0
baz=219
F22K **John River** 86.98 13 P P 22 39 04.6 +0.9
baz=213
LLLB **Lillooet** 87.06 35 P P 22 39 04.8 +0.4
LLLB IAmb IAmb 22 39 06.1
comp=Z,15nm,1.2s
X16A **Lo Mia Camp, P** 87.10 53 P P 22 39 05.8 +0.6
BMO **Blue Mountains** 87.12 42 P P 22 39 05.1 +0.1
BMO IAmb IAmb 22 39 06.8
comp=Z,32nm,1.9s
BMO **Blue Mountains** 87.12 42 P P 22 39 05.1 +0.1
BMO pmax pmax
comp=Z,32nm,1.9s
SONM **Songino Array** 87.15 322 P P 22 39 04.4 -0.7
comp=Z,2.5nm,1.1s,baz=132,slow=4.2,SNR=8.4
comp=Z,2.5nm,1.1s
SONM **Songino Array** 87.15 322 P P 22 39 05.2 +0.1
SONM **Songino Array** 87.15 322 P P 22 39 05.2 +0.1
SONM pmax pmax
comp=Z,8.0nm,1.4s
U15A **North Rim** 87.20 51 P P 22 39 06.7 +0.9
U15A IAmb IAmb 22 39 08.5
comp=Z,23nm,1.5s
P33M **Teslin, Yukon** 87.31 24 P P 22 39 05.2 -0.3
baz=231
DLBC **Dease Lake** 87.35 26 P P 22 39 06.0 +0.3
comp=Z,6.7nm,1.1s,baz=220,slow=6.6,SNR=7.7
DLBC LR LR 23 09 31.8
comp=Z,169nm,21.9s,baz=276,slow=30
comp=Z,6.7nm,1.1s
DLBC **Dease Lake** 87.35 26 P P 22 39 05.9 +0.2
DLBC IAmb IAmb 22 39 07.5
comp=Z,15nm,1.2s
DLBC **Dease Lake** 87.35 26 P P 22 39 06.0 +0.3
baz=233,SNR=7.5
G24K **Hadweenzic Riv** 87.38 15 P P 22 39 06.6 +1.0
baz=217
I26K **Coal Creek Min** 87.42 17 P P 22 39 06.2 +0.4
baz=221
MFID **Camas Ranch** 87.47 44 P P 22 39 07.4 +0.7
MFID IAmb IAmb 22 39 08.7
comp=Z,18nm,1.2s
R33M **Jennings River** 87.54 25 P P 22 39 07.6 +1.0
baz=232,SNR=7.5
WUAZ **Wupatki** 87.56 52 P P 22 39 08.0 +0.6
WUAZ **Wupatki** 87.56 52 P P 22 39 07.4 +0.1
baz=248
EGAK **Eagle** 87.59 18 P P 22 39 06.3 -0.4
EGAK IAmb IAmb 22 39 08.3
comp=Z,13nm,1.1s
EGAK **Eagle** 87.59 18 P P 22 39 06.5 -0.2
baz=223,SNR=8.7
DAWY **Dawson** 87.61 19 P P 22 39 06.5 -0.3
DAWY **Dawson** 87.61 19 P P 22 39 06.3 -0.5
baz=225
GTA **Gaotai** 87.92 312 𝄆 P P 22 39 09.8 +0.8
GTA pP PcP 22 39 13.3 +2.5
GTA sP pP 22 39 15.8 -3.5
GTA PP PP 22 42 33.8 -1.9
GTA pmax pmax
comp=Z,8.0nm,1.5s
F24K **Squaw Lake** 87.94 14 P P 22 39 07.8 -0.4
baz=217
I27K **Kandik River** 88.07 17 P P 22 39 09.7 +0.7
baz=223
DUG **Dugway, Tooele** 88.25 47 P P 22 39 11.3 +0.7
DUG IAmb IAmb 22 39 12.7
comp=Z,16nm,1.4s
DUG **Dugway, Tooele** 88.25 47 P P 22 39 11.3 +0.7
DUG pmax pmax
comp=Z,17nm,1.4s
DUG **Dugway, Tooele** 88.25 47 P P 22 39 11.0 +0.4
baz=247,SNR=6.8
E24K **Your Creek** 88.25 13 P P 22 39 10.3 +0.6
baz=216
HLID **Hailey** 88.47 44 P P 22 39 12.1 +0.5
HLID IAmb IAmb 22 39 13.9
comp=Z,12nm,1.1s
HLID **Hailey** 88.47 44 P P 22 39 11.7 +0.2
baz=246,SNR=13
TOLK **Toolik Lake Re** 88.47 13 P P 22 39 10.9 +0.1
baz=215
G26K **Porcupine Rive** 88.49 16 P P 22 39 11.0 +0.2
baz=221
D23K **Nanushuk River** 88.51 12 P P 22 39 11.3 +0.4
baz=214
F25K **Christian Rive** 88.53 15 P P 22 39 11.7 +0.7
baz=219
H27K **Steamboat Moun** 88.56 17 P P 22 39 12.0 +0.7
baz=223
W18A **Petrified Fore** 88.66 53 P P 22 39 12.7 0.0
baz=250
NEW **Newport** 88.72 39 P P 22 39 12.1 -0.3
comp=Z,3.7nm,1.0s,baz=301,slow=1.4,SNR=7.5
comp=Z,3.7nm,1.0s
NEW **Newport** 88.72 39 P P 22 39 12.3 -0.1
NEW **Newport** 88.72 39 P P 22 39 12.3 -0.1
NEW pmax pmax
comp=Z,7.0nm,1.2s
NEW **Newport** 88.72 39 P P 22 39 12.8 +0.4
baz=244
I29M **Ogilvie Camp,** 88.86 18 P P 22 39 12.7 +0.1
baz=226,SNR=5.9
G27K **Doyon Strip** 88.95 16 P P 22 39 13.0 0.0
baz=223
E25K **Arctic Village** 88.96 14 P P 22 39 13.9 +0.8
baz=219
F26K **Sheenjek River** 88.97 15 P P 22 39 13.3 +0.1
baz=220
TMUT **Trail Mountain** 89.06 49 P P 22 39 15.3 +0.8
TMUT IAmb IAmb 22 39 17.2
comp=Z,20nm,1.5s
C23K **Itkillik River** 89.25 12 P P 22 39 15.2 +0.9
baz=214
121A **Cookes Peak, D** 89.31 56 P P 22 39 16.7 +1.0
121A IAmb IAmb 22 39 18.3
comp=Z,28nm,1.9s
121A **Cookes Peak, D** 89.31 56 P P 22 39 16.4 +0.6
baz=251
121A **Cookes Peak, D** 89.31 56 P P 22 39 15.3 -0.4
baz=251
MMPY **Sheldon Lake,** 89.40 22 P P 22 39 16.5 +1.2
baz=232,SNR=5.4
HWUT **Hardware Ranch** 89.66 46 P P 22 39 17.5 +0.3
HWUT IAmb IAmb 22 39 19.0
comp=Z,16nm,1.4s
E27K **Coleen River** 89.98 15 P P 22 39 19.2 +1.3
baz=223
MCMT **McKenzie Canyo** 90.01 43 P P 22 39 19.6 +0.8
MSO **Missoula** 90.09 41 P P 22 39 19.0 +0.1
baz=247
MVCO **Mesa Verde** 90.32 51 P P 22 39 19.5 -0.9
baz=250
Y22A **Socorro** 90.42 55 P P 22 39 22.1 +1.2
baz=251
C26K **Camden Bay** 90.50 13 P P 22 39 21.4 +1.2
baz=220
C27K **Jago River** 90.55 14 P P 22 39 21.5 +1.0
baz=221
IMW **Indian Meadow** 90.93 44 P P 22 39 24.4 +1.2
IMW IAmb IAmb 22 39 25.5
comp=Z,17nm,1.4s
MNTX **Cornudas Mount** 90.97 57 P P 22 39 23.9 +0.6
MNTX IAmb IAmb 22 39 25.4
comp=Z,14nm,1.6s
MNTX **Cornudas Mount** 90.97 57 P P 22 39 24.3 +1.0
baz=252
MNTX **Cornudas Mount** 90.97 57 P P 22 39 23.6 +0.3
baz=252
WALA **Waterton Lakes** 90.99 39 P P 22 39 23.8 +0.7
BOZ **Bozeman (W)** 91.09 43 P P 22 39 24.5 +0.7
BOZ IAmb IAmb 22 39 25.9
comp=Z,18nm,1.4s
BOZ **Bozeman (W)** 91.09 43 P P 22 39 24.5 +0.7
BOZ pmax pmax
comp=Z,18nm,1.4s
BOZ **Bozeman (W)** 91.09 43 P P 22 39 24.7 +1.0
baz=248,SNR=8.1
ANMO **Albuquerque** 91.14 54 P P 22 39 24.2 -0.1
comp=Z,3.6nm,0.9s,baz=249,slow=4.0,SNR=12
ANMO LR LR 23 12 15.9
comp=Z,153nm,21.6s,baz=236,slow=30
comp=Z,3.6nm,0.9s
ANMO **Albuquerque** 91.14 54 P P 22 39 24.3 +0.1
ANMO **Albuquerque** 91.14 54 *d i* P P 22 39 24.7 +0.4
ANMO pmax pmax
comp=Z,10.0nm,1.2s
ANMO **Albuquerque** 91.14 54 P P 22 39 25.1 +0.9
baz=251
ANMO **Albuquerque** 91.14 54 P P 22 39 24.6 +0.4
baz=251
HRY **Holter Researc** 91.38 42 P P 22 39 25.4 +0.4
PDAR **Pinedale Array** 91.47 46 P P 22 39 25.3 -0.3
comp=Z,0.3nm,0.5s,baz=232,slow=1.7,SNR=8.7
PDAR LR LR 23 13 13.1
comp=Z,117nm,21.9s,baz=250,slow=31
comp=Z,0.3nm,0.5s
PDAR **Pinedale Array** 91.47 46 P P 22 39 25.7 0.0
O20A **White River Ci** 91.50 49 P P 22 39 26.3 +0.5
baz=250
TX31 **Lajitas Ar. Si** 91.67 60 P P 22 39 27.0 +0.3
TX31 **Lajitas Ar. Si** 91.67 60 P P 22 39 27.7 +1.0
baz=253
TXAR **Lajitas Array** 91.67 60 P P 22 39 26.3 -0.4
comp=Z,1.7nm,0.9s,baz=225,slow=4.8,SNR=12
TXAR LR LR 23 11 37.6
comp=Z,244nm,22.0s,baz=248,slow=30
comp=Z,1.7nm,0.9s
TXAR **Lajitas Array** 91.67 60 P P 22 39 27.2 +0.5
TXAR **Lajitas Array** 91.67 60 P P 22 39 27.2 +0.5
S22A **4UR Ranch, Cre** 91.75 51 P P 22 39 27.8 +0.6
S22A **4UR Ranch, Cre** 91.75 51 P P 22 39 27.3 +0.1
baz=251
TROLL **Troll, Antarti** 91.99 183 P P 22 39 26.6 -0.9
INK **Inuvik** 92.24 17 LR LR 23 13 53.7
comp=Z,181nm,21.6s,baz=186,slow=31
TIXI **Tiksi** 92.47 347 LR LR 23 19 35.2
comp=Z,74nm,18.7s,baz=181,slow=35
RLMT **Red Lodge** 92.48 44 P P 22 39 30.8 +0.5
RLMT **Red Lodge** 92.48 44 P P 22 39 30.5 +0.3
baz=250
SNAA **Sanae** 92.50 181 P P 22 39 28.4 -1.3
SNAA **Sanae** 92.50 181 PKiKP PKiKP 22 44 16.4 -1.9
SNAA **Sanae** 92.50 181 LR LR 23 20 07.4
comp=Z,86nm,18.2s,baz=222,slow=35
SNAA **Sanae** 92.50 181 P P 22 39 28.3 -1.5
SNAA IAmb IAmb 22 39 29.6
comp=Z,14nm,1.2s
SNAA **Sanae** 92.50 181 P P 22 39 28.3 -1.5
SNAA pmax pmax
comp=Z,14nm,1.2s
SDCO **Great Sand Dun** 92.75 52 P P 22 39 32.0 +0.2
baz=252
VNA3 **Neumayer Olymp** 92.94 179 P P 22 39 30.2 -1.6
EGMT **Eagleton** 93.17 41 P P 22 39 33.8 +0.6
baz=250
VNA2 **Neumayer--Watz** 93.29 180 P P 22 39 32.3 -1.0
baz=155,slow=7.3
T25A **Trinidad** 93.39 52 P P 22 39 34.2 -0.4
baz=253
PALK **Pallekele** 94.63 276 LR LR 23 24 53.9
comp=Z,60nm,18.1s,baz=247,slow=37
833A **Chaparral WMA,** 94.98 62 P P 22 39 43.0 +1.1
baz=255
833A **Chaparral WMA,** 94.98 62 P P 22 39 41.5 -0.3
baz=255
RSSD **Black Hills** 95.71 46 P P 22 39 44.7 -0.4
RSSD **Black Hills** 95.71 46 P P 22 39 44.7 -0.4
RSSD pmax pmax
comp=Z,7.0nm,1.2s
RSSD **Black Hills** 95.71 46 P P 22 39 45.3 +0.2
baz=253
RSSD **Black Hills** 95.71 46 P P 22 39 44.9 -0.2
baz=253
ABTX **Abilene, Hawle** 95.90 58 P P 22 39 46.2 +0.2
baz=255
YKA **Yellowknife Ar** 95.97 26 P P 22 39 46.0 +0.5
comp=Z,3.2nm,0.9s,baz=261,slow=3.9,SNR=6.2
comp=Z,3.2nm,0.9s
CMIG **Matias Romero** 96.10 74 LR LR 23 13 35.4
comp=Z,161nm,20.1s,baz=236,slow=30
WMQ **Urumqi** 97.93 313 *e* P Pdif 22 39 55.8 +0.8
WMQ LR LR
comp=Z,140nm,18.9s
WMQ LR LR
comp=Z,250nm,18.9s
WMQ LR LR
comp=Z,140nm,21.7s
EFI **East Falkland** 99.09 150 *c e* P Pdif 22 40 01.4 +1.4
EFI pmax pmax
comp=Z,122nm,2.5s
MK31 **Makanchi Array** 102.29 315 𝄆 *e*P Pdif 22 40 15.3 +1.0
BRVK **Borovoye** 110.55 321 𝄆 *i* PKiKP PKiKP 22 44 49.4 -1.8
BINY **Binghamton** 115.72 51 P PKPdf 22 45 00.9 -0.5
baz=272
LONY **Lake Ozonia** 116.64 48 P PKPdf 22 45 02.5 -0.6
baz=274
ARU **Arti** 116.93 326 *i* PKiKP PKPdf 22 45 01.8 -1.5
ARU 22 52 13.9
PAL **Palisades** 117.32 52 P PKPdf 22 45 04.3 -0.1
baz=272
PKME **Peaks-Kenny Pk** 120.31 47 P PKPdf 22 45 10.0 -0.1
baz=278
KIRV **Kirov** 121.04 330 𝄆 *i* PKiKP PKiKP 22 45 11.2 0.0

ARCES **ARCESS Array B** 122.91 347 PKP **PKPdf** 22 45 13.7 -0.7
comp=Z,2.2nm,0.7s,baz=40,slow=4.7,SNR=4.7
BELG **Belogornoye** 124.18 323 *d i* PKIKP **PKPdf** 22 45 16.8 -0.5
KLMR **Klimovskoe** 124.45 335 *e* PKIKP **PKPdf** 22 45 15.7 -1.9
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR **Klimovskoe** 124.45 335 *e* PKPdf **PKPdf** 22 45 15.7 -1.9
KLMR AMP 22 45 18.7
comp=Z,14nm,1.3s
TRN **Trinidad (W)** 126.45 88 *e* **Pdif** 22 41 55.9 -6.5
GCMP **Grenada, Carri** 126.79 86 *e* **Pdif** 22 41 55.1 -8.8
ANBD **Bethesda, Anti** 127.18 81 *e* **Pdif** 22 42 16.6 +11
SLBI **Saint Lucia, B** 127.49 84 *e* **Pdif** 22 42 07.2 +0.3
MPOM **Morne Pois Mar** 127.67 84 *e* **Pdif** 22 42 22.9 +15
OBN **Obninsk** 128.89 330 *e* PKIKP **PKPdf** 22 45 26.6 +0.4
OBN *e* 22 47 38.1
OBN *e* PPP PPP 22 50 20.1
OBN pmax pmax
comp=Z,6.0nm,1.1s
OBN MLR MLR
comp=Z,34nm,13.0s
VORR **Voronezh** 129.23 325 *e* PKIKP **PKiKP** 22 45 28.1 +0.4
VORR pmax pmax
comp=Z,22nm,1.6s
RAYN **Ar Rayn** 130.69 287 PKPdf **PKPdf** 22 45 30.8 +0.1
RAYN **Ar Rayn** 130.69 287 PKIKP **PKPdf** 22 45 30.8 +0.1
NOA **NORSAR Array B** 133.25 348 PKP **PKPdf** 22 45 33.6 -0.8
comp=Z,0.9nm,0.9s,baz=34,slow=2.2,SNR=3.7
MNK **Minsk** 133.27 333 *i* PKIKP **PKPdf** 22 45 34.0 -0.5
MNK *i* 22 48 01.2
MNK *i* PPP PPP 22 50 53.8
MNK *i* 22 52 45.2
MNK *i* PS **PS** 22 58 18.8 -1.3
MNK *i* SS SS 23 05 46.6 +4.1
MNK *i* SSS SSS 23 10 37.9
MNK pmax pmax
comp=N,8.0nm,1.0s
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK MLR MLR
comp=N,15nm,17.0s
MNK MLR MLR
comp=E,5.0nm,17.0s
MNK MLR MLR
comp=Z,75nm,22.0s
MNK **Minsk** 133.27 333 *i* PKP **PKPdf** 22 45 34.0 -0.5
comp=E,1.0nm,0.9s
MNK *i* PKP **PKPdf** 22 45 34.0 -0.5
comp=N,8.0nm,1.0s
MNK *i* PKP **PKPdf** 22 45 34.0 -0.5
comp=Z,8.0nm,0.9s,baz=48
MNK *i* PP **PP** 22 48 01.3 -0.1
MNK *i* PPP PPP 22 50 53.9
MNK *i* SKS **SKSdf** 22 52 45.3 +2.2
MNK *i* PS **PS** 22 58 18.9 -1.3
MNK *i* SS **SS** 23 05 46.7 +4.2
MNK *i* SSS SSS 23 10 38.0
MNK *i* LR LR 23 42 09.3
MNK *i* LRM MLR 23 43 34.1
comp=E,5.0nm,16.6s
MNK *i* LRM MLR 23 43 34.1
comp=N,15nm,16.6s
MNK *i* LRM MLR 23 44 33.1
comp=Z,75nm,21.7s
AKASG **Malin Array Be** 135.06 328 PKP **PKPdf** 22 45 36.5 -1.5
comp=Z,0.6nm,0.6s,baz=37,slow=1.8,SNR=5.7
AKASG **Malin Array Be** 135.06 328 *c i* PKIKP **PKiKP** 22 45 39.5 0.0
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB **Malin Array Si** 135.06 328 ǁ *e* PKIKP **PKPdf** 22 45 37.2 -0.8
BNN **Bunyan** 136.56 310 **PKPdf** 22 45 40.9 -0.5
BRTR **Keskin Array B** 137.84 312 PKP **PKPdf** 22 45 43.8 0.0
comp=Z,0.9nm,0.8s,baz=116,slow=3.4,SNR=4.1
BRTR **Keskin Array B** 137.84 312 *i* PKIKP **PKPdf** 22 45 43.4 -0.4
BRTR pmax pmax
comp=Z,1.0nm,0.8s
KOLS **Kolonicke sedl** 139.62 331 *e* PKIKP **PKiKP** 22 45 48.2 -0.7
KOLS **Kolonicke sedl** 139.62 331 *e* PKP **PKiKP** 22 45 48.2 -0.7
MLR **Muntele Rosu** 139.96 324 **PKPdf** 22 45 47.2 -0.2
MLR **Muntele Rosu** 139.96 324 PKIKP **PKPdf** 22 45 47.2 -0.2
CRVS **Cervenica-Dubn** 140.02 331 *e* PKIKP **PKiKP** 22 45 48.8 -0.9
CRVS **Cervenica-Dubn** 140.02 331 *e* PKP **PKiKP** 22 45 48.8 -0.9
OSTC **Ostas** 140.97 337 *e* PKP **PKPdf** 22 45 49.7 +0.7
DPC **Dobruska-Polom** 141.10 337 *e* PKIKP **PKPdf** 22 45 49.7 +0.5
DPC **Dobruska-Polom** 141.10 337 *e* PKP **PKPdf** 22 45 49.7 +0.5
KRLC **Kraliky** 141.14 336 *e* PKIKP **PKPdf** 22 45 49.5 +0.2
KRLC **Kraliky** 141.14 336 *e* PKP **PKPdf** 22 45 49.5 +0.2
CLL **Collm** 141.47 340 ⇑ *i* PKIKP **PKPdf** 22 45 50.3 +0.5
CLL *i* 22 45 52.4
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL **Collm** 141.47 340 ⇑ *i* PKPdf **PKPdf** 22 45 50.3 +0.5
comp=Z,4.0nm,0.9s
CLL *i* x x 22 45 52.4
comp=Z,6.0nm,1.0s
CLL *e* PKSdf **PKSdf** 22 49 28.0 +2.5
CKRC **Cesky Krumlov** 143.10 337 *e* PKP PKPbc 22 45 49.8 +0.1
CKRC *ex* x 22 45 56.0
KHC **Kasperske Hory** 143.12 338 *e* PKIKP PKPbc 22 45 49.6 -0.2
KHC *e* 22 45 53.0
KHC **Kasperske Hory** 143.12 338 *e* PKP PKPbc 22 45 49.6 -0.2
KHC *ex* x 22 45 53.0
RONA **Rosalia, Austr** 143.21 334 *e* P PKPbc 22 45 51.3 +1.2
comp=Z,5.2nm,1.0s
RONA *e* P **PP** 22 49 07.3 +4.2
comp=Z,2.3nm,0.8s
CONA **Conrad Observa** 143.21 335 *e* P PKPbc 22 45 51.3 +1.2
comp=Z,8.8nm,1.5s
VTS **Vitosha** 143.24 322 PKPdf PKPbc 22 45 51.0 +0.5
VTS **Vitosha** 143.24 322 PKIKP PKPbc 22 45 51.0 +0.5
GERES **GERESS Array B** 143.31 338 PKhKP PKPpre 22 45 50.3
comp=Z,1.1nm,1.0s,baz=335,slow=4.4,SNR=7.1
GERES **GERESS Array B** 143.31 338 PKPbc 22 45 51.0 +0.7
GERES **GERESS Array B** 143.31 338 PKIKP PKPbc 22 45 51.0 +0.6
FRGS **Fruska Gora** 143.47 328 *e* P **PKiKP** 22 46 00.1 +3.2
SRS **Serrai** 143.91 320 P PKPab 22 45 51.1 -0.6
MOA **Molln** 143.92 336 *e* P PKPbc 22 45 52.6 +0.6
comp=Z,9.9nm,1.1s
MOA *e* P **PP** 22 49 10.6 +3.3
comp=Z,2.6nm,0.8s
DIVS **Divibare** 144.10 327 PKPdf PKPbc 22 45 53.0 +0.2
DIVS **Divibare** 144.10 327 ǁ *i* P PKPbc 22 45 52.8 -0.1
BIOA **Bad Ischl, Aus** 144.29 336 *e* P PKPbc 22 45 53.8 +0.6
comp=Z,5.9nm,1.2s
BIOA *e* P **PP** 22 49 14.7 +5.2
comp=Z,1.4nm,0.4s
KNT **Kendrikon** 144.31 321 P **PKPab** 22 45 53.1 -0.1
VAY **Valandovo** 144.41 321 *i* P **PKPab** 22 45 53.5 0.0
SOKA **Soboth** 144.55 334 *i* P PKPbc 22 45 54.8 +0.6
comp=Z,12nm,1.2s,SNR=5.6
SOKA *e* P **PP** 22 49 11.9 +0.7
comp=Z,2.4nm,1.0s
BMRD **Maredsous** 144.59 347 *d* PKPdf PKPbc 22 45 54.4 +0.4
RCHB **Rochefort** 144.63 347 *d* PKPdf PKPbc 22 45 54.8 +0.6
RUDO **Rudo** 144.76 327 *e* P **PKPab** 22 45 54.2 -0.5
DOU **Dourbes** 144.82 348 *d* PKPdf **PKPab** 22 45 54.0 -0.7
STU **Stuttgart** 144.88 342 PKPbc 22 45 55.3 +0.2
STU **Stuttgart** 144.88 342 PKIKP PKPbc 22 45 55.3 +0.3
WLF **Walferdange** 144.88 346 **PKPdf** 22 45 55.7 -0.2
WLF **Walferdange** 144.88 346 PKIKP **PKPdf** 22 45 55.7 -0.2
WLF **Walferdange** 144.88 346 *d* PKPdf **PKPdf** 22 45 56.2 +0.4
OBKA **Obir** 144.88 334 *e* P **PKPab** 22 45 53.7 -1.5
OBKA **Obir** 144.88 334 *e* P **PKPab** 22 45 54.5 -0.8
comp=Z,14nm,1.3s
KBA **Koelnbreinsper** 144.91 336 *i* P **PKPab** 22 45 55.2 -0.2
comp=Z,26nm,1.2s,SNR=11
KBA *e* P **PP** 22 49 16.8 +3.4
comp=Z,5.3nm,1.0s
A051A **Mrakovica** 144.99 331 ǁ *i* P **PKPbc** 22 45 55.5 -0.1
CRES **Cresnjev** 145.04 333 *e* P **PKPbc** 22 45 55.5 -0.1
CRES **Cresnjev** 145.04 333 *i* PKPbc **PKPbc** 22 45 55.6 -0.1
PDKS **Podkum** 145.05 334 *i* PKPbc **PKPbc** 22 45 55.7 0.0
BLY **Banja Luka** 145.06 330 ǁ *i* P **PKPbc** 22 45 55.4 -0.3
SANT **Santorini** 145.10 312 **PKPbc** 22 45 55.2 -1.0
MYKA **Terra Mystica** 145.16 335 *i* P **PKPbc** 22 45 56.0 -0.1
comp=Z,35nm,1.2s,SNR=11
LIT **Litokhoron** 145.18 319 P **PKPbc** 22 45 55.6 -0.7
LIT **Litokhoron** 145.18 319 **PKPbc** 22 45 55.4 -0.9
LIT **Litokhoron** 145.18 319 PKIKP **PKPbc** 22 45 55.4 -0.9
UPM **Unac-Piva** 145.29 327 *e* P **PKPbc** 22 45 56.5 -0.3
PRED **Cave del Predi** 145.34 335 **PKPbc** 22 45 55.7 -0.9
MGRS **Mrkonjic Grad** 145.35 330 *e* P **PKPab** 22 45 57.7 +0.8
WATA **Walderalm** 145.35 338 *i* P **PKPab** 22 45 57.1 +0.1
comp=Z,46nm,1.3s,SNR=20
WATA *e* P **PP** 22 49 13.4 -2.5
comp=Z,5.3nm,1.2s
BOJS **Bojanci** 145.38 333 *e* P **PKPab** 22 45 57.0 +0.1
WTTA **Wattenberg** 145.39 338 *i* P **PKPab** 22 45 57.3 +0.2
comp=Z,54nm,1.1s,SNR=18
WTTA *e* P **PP** 22 49 13.9 -2.3
comp=Z,2.9nm,0.7s
PHP **Peshkopia** 145.45 323 P **PKPdf** 22 45 57.1 -0.1
ABTA **Abfaltersbach** 145.50 337 *i* P **PKPdf** 22 45 56.9 -0.2
comp=Z,46nm,1.0s,SNR=21
ABTA *e* P **PP** 22 49 16.7 -0.1
comp=Z,7.0nm,1.3s
RETA **Reutte** 145.50 339 *i* P **PKPab** 22 45 57.7 +0.3
comp=Z,34nm,1.1s,SNR=22
RETA *e* P **PP** 22 49 11.0 -5.7
comp=Z,6.1nm,1.3s
MOTA **Moosalm** 145.51 339 *i* P **PKPab** 22 45 57.6 +0.1
comp=Z,72nm,1.1s,SNR=28
MOTA *e* P **PP** 22 49 11.8 -5.0
comp=Z,3.3nm,0.7s
BFO **Black Forest** 145.53 342 PKPdf **PKPdf** 22 45 57.2 +0.1
BFO **Black Forest** 145.53 342 PKIKP **PKPdf** 22 45 57.2 +0.1
SRKY **Kupres RS** 145.57 329 *e* P **PKPab** 22 45 57.9 +0.1
SQTA **Sankt Quirin** 145.58 338 *i* P **PKPbc** 22 45 57.6 +0.1
comp=Z,66nm,1.1s,SNR=29
SQTA *e* P PP 22 49 09.1 -8.2
comp=Z,7.9nm,1.0s
CLUD **Cludinico** 145.60 336 PKPdf **PKPdf** 22 45 56.9 -0.4
OHR **Ohrid** 145.60 322 *i* P **PKPab** 22 45 58.2 +0.2
PDG **Podgorica** 145.63 325 PKPdf **PKPdf** 22 45 56.8 -0.6
BRY **Bratogost** 145.69 326 *e* P **PKPdf** 22 45 57.6 -0.1
SABO **M.te Sabotino** 145.70 335 **PKPdf** 22 45 57.2 -0.2
STAL **STALIGIAL** 145.83 336 **PKPdf** 22 45 57.3 -0.3
DRME **Dracevica, Mon** 145.83 325 *e* P **PKPdf** 22 45 57.8 +0.1
SKDS **Skadanscina** 145.88 334 *e* P **PKPbc** 22 45 58.4 0.0
NEST **Nestorio** 145.88 321 P **PKPab** 22 45 59.2 +0.1
CIMO **Cimolais** 145.89 336 PKPdf **PKPdf** 22 45 57.8 0.0
AGG **Agios Georgios** 145.89 318 PKPdf **PKPdf** 22 45 57.5 -0.5
AGG **Agios Georgios** 145.89 318 PKP2 **PKPdf** 22 45 57.5 -0.5
KBN **Korca** 145.91 321 **PKPdf** 22 45 58.3 +0.3
KBN **Korca** 145.91 321 PKP2 **PKPdf** 22 45 58.3 +0.3
FETA **Feichten** 145.92 339 *i* P **PKPab** 22 45 59.5 +0.4
comp=Z,61nm,1.1s,SNR=38
FETA *e* P PP 22 49 11.2 -8.1
comp=Z,8.7nm,1.0s
ECH **Echery** 145.96 344 **PKPdf** 22 45 58.2 +0.4
ECH **Echery** 145.96 344 PKP2 **PKPdf** 22 45 58.2 +0.4
DAVA **Damuels** 145.98 340 *i* P **PKPbc** 22 45 59.1 +0.3
comp=Z,88nm,1.2s,SNR=27
DAVA *e* P **PP** 22 49 19.5 -0.2
comp=Z,5.2nm,1.0s
TIR **Tirane** 146.00 323 **PKPdf** 22 45 58.1 +0.1
TIR **Tirane** 146.00 323 PKP2 **PKPdf** 22 45 58.1 +0.1
HCY **Herceg Novi** 146.03 326 *e* P **PKPbc** 22 45 58.7 -0.2
STON **Ston** 146.16 327 ǁ *i* P **PKPdf** 22 45 57.3 -0.9
LSK **Leskovik** 146.31 321 P **PKPab** 22 46 00.8 +0.1
ANX **Ano Chora** 146.40 318 P **PKPab** 22 46 00.8 -0.3
FUORN **Ofenpass-Fuorn** 146.43 339 **PKPbc** 22 46 00.8 +0.5
IGT **Igoumenitsa** 146.85 320 P **PKPbc** 22 46 01.2 -0.2
TEOL **Teolo** 146.98 336 **PKPbc** 22 46 01.9 +0.3
KEK **Kerkira** 147.07 321 P **PKPbc** 22 46 02.1 +0.1
KEK **Kerkira** 147.07 321 PKPdf **PKPdf** 22 45 58.2 -1.7
NYDR **Nydri-Lefkada** 147.11 319 P **PKPbc** 22 46 02.5 +0.4
SENIN **Lac Senin/Sane** 147.61 342 **PKPbc** 22 46 03.9 +0.3
AQU **L'Aquila** 148.67 331 **PKPdf** 22 46 01.4 -1.1
AQU **L'Aquila** 148.67 331 PKIKP **PKPdf** 22 46 01.4 -1.1
PAOL **Paolisi** 149.10 328 **PKPbc** 22 46 06.4 -1.0
LATE **Laterza** 149.18 333 **PKPbc** 22 46 07.1 -0.5
TIP **Timpagrande** 149.21 323 PKPdf **PKPdf** 22 46 03.2 -0.4
CASP **Castiglione de** 149.44 334 **PKPbc** 22 46 07.1 -1.1
ESDC **Sonseca Array** 156.31 355 PKPab **PKPab** 22 46 41.5 -0.4
comp=Z,3.5nm,1.1s,baz=356,slow=3.4,SNR=12
ESDC **Sonseca Array** 156.31 355 PKPab **PKPab** 22 46 41.9 0.0
TOA0 **Torodi Ar. Sit** 171.56 251 **PKPdf** 22 46 26.3 -2.1
TORD **Torodi Ar. Bea** 171.56 251 PKP **PKPdf** 22 46 27.2 -1.1
comp=Z,3.8nm,1.1s,baz=353,slow=1.3,SNR=12
TORD PKPab **PKPab** 22 47 49.0 -0.7
comp=Z,2.6nm,1.0s,baz=101,slow=3.7,SNR=8.3
TORD **Torodi Ar. Bea** 171.56 251 PKPdf **PKPdf** 22 46 25.6 -2.8
TORD PKPab **PKPab** 22 47 48.7 -0.9

ROM 17 22:30:59.4±0.1, **42.°724N**±0.°005×**13.°161E**±0.°009,
h14km±1km, **ML0.9/2**, **Error ellipse: s-maj=0.7km**
s-min=0.3km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.12**	**342**	P	Pg	22 31 03.0	+0.2
NRCA				S	Sg	22 31 05.4	+0.3
NRCA				AML	AML		
	comp=N,93μm,0.2s						
NRCA				AML	AML		
	comp=E,129μm,0.2s						
LNSS	**Leonessa**	**0.15**	**216**	P	Pg	22 31 03.6	+0.3
LNSS				S	Sg	22 31 06.4	+0.5
LNSS				AML	AML		
	comp=E,38μm,0.4s						
LNSS				AML	AML		
	comp=N,38μm,0.3s						
SMA1	**SAN MARTINO**	**0.16**	**126**	P	Pb	22 31 03.9	-0.4
SMA1				S	Sb	22 31 06.8	-0.6
RM33	**Pellescritta (**	**0.22**	**170**	P	Pg	22 31 04.5	+0.2
RM33				S	Sb	22 31 08.4	-0.7
TERO	**Teramo**	**0.34**	**107**	P	Pb	22 31 07.0	-0.3
TERO				S	Sg	22 31 11.6	+0.4

*IDC **17** 22:37:05.2±0.5, 8.°54N×70.°66W, h0km, mb4.3/26,*
mbtmp4.3/29, ML4.3/3, MS4.0/15, Error ellipse:
s-maj=14.9km s-min=8.3km az=86.0
*NEIC **17** 22:37:07.6±1.5, 8.°62N±0.°04×70.°63W±0.°06, h10km±1km,*
mb4.8/98, Mwr4.2(CAR), Error ellipse: s-maj=10.8km
s-min=6.8km az=271.0
*CAR **17** 22:37:08.5±1.8, 8.°52N±0.°04×70.°68W±0.°06, h5km±4km,*
Error ellipse: s-maj=8.9km s-min=5.6km az=97.0
*FUNV **17** 22:37:08.3, 8.°55N×70.°70W, h5km, MW4.8*
*VAO **17** 22:37:18.1±0.9, 7.°68N×70.°14W, h10km, mb4.5*

ISC 17 22:37:06.2±1.0, **8.°60N**±0.°02×**70.°66W**±0.°03, **h3**km±6km,
n446, **σ1§31**/462, **mb4.7**/73, **MS4.0**/12, **8C-8D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	**0.28**	**5**	Pg	**Pg**	**22 37 11.8**	**+0.1**
	4μm,0.3s,baz=208,slow=20,SNR=3714						
SDV				LR	LR	22 37 37.6	
	comp=Z,50μm,21.2s,baz=170,slow=93						
SDV	**Santo Domingo**	**0.28**	**5**	Pg	**Pg**	**22 37 11.8**	**+0.1**
SDV				Sg	**Sg**	**22 37 16.3**	**+0.8**
SOCV	**Socops**	**0.37**	**212** ⇑	*eP*	**Pg**	**22 37 13.2**	**-0.2**
SOCV				*eS*	**Sg**	**22 37 17.8**	**-0.4**
SOCV	**Socops**	**0.37**	**212** ⇑	*iP*	**Pg**	**22 37 13.0**	**-0.4**
SOCV				*eS*	**Sg**	**22 37 17.9**	**-0.4**
CURV	**Curarigua**	**1.56**	**26** ⇑	*eP*	**Pg**	**22 37 38.8**	**+2.6**
CURV				*eS*	**Sg**	**22 37 59.0**	**+2.5**
CAPV	**Capacho**	**1.79**	**246** ǁ	*eP*	**Pn**	**22 37 38.5**	**+0.1**
CAPV				*eS*	**Sn**	**22 38 01.2**	**-0.5**
SIQV	**Siquisique**	**2.20**	**22** ⇑	*eP*	**Pb**	**22 37 46.6**	**-0.1**
SIQV				*eS*	**Sg**	**22 38 14.4**	**-2.6**
DABV	**Dabajuro**	**2.31**	**1**	*eP*	**Pb**	**22 37 46.8**	**-1.7**
DABV				*eS*	**Sb**	**22 38 16.6**	**-0.8**
DABV	**Dabajuro**	**2.31**	**1** ⇑	*eP*	**Pb**	**22 37 46.8**	**-1.7**
DABV				*eS*	**Sb**	**22 38 16.1**	**-1.4**
MCQV	**Machiques**	**2.35**	**308**	*eP*	**Pn**	**22 37 46.2**	**+0.5**
PAMC	**Pamplona, Colo**	**2.38**	**238**	*eP*	**Pn**	**22 37 47.9**	**+1.3**
PAMC				*eS*	**Sn**	**22 38 20.2**	**+3.7**
PAMC				*i*		22 38 24.5	
	comp=Z,3μm,0.3s						
TAMC	**Tame, Arauca**	**2.43**	**208**	*eP*	**Pn**	**22 37 48.3**	**+1.4**
TAMC				*eS*	**Sn**	**22 38 21.2**	**+4.1**
TAMC				*i*		22 38 31.1	
	comp=Z,4μm,0.4s						
MAPV	**Macapo**	**2.49**	**60** ǁ	*eP*	**Pn**	**22 37 49.7**	**+2.0**
BAUV	**El Baul**	**2.61**	**82**		**Pn**	**22 37 49.6**	**+0.3**
BAUV	**El Baul**	**2.61**	**82** ǁ	*eP*	**Pn**	**22 37 49.8**	**+0.5**
BAUV				*eS*	**Sn**	**22 38 22.2**	**+0.7**
LL6C	**La Loma 6 Bece**	**2.81**	**294**	*eP*	**Pn**	**22 37 52.3**	**+0.1**
LL6C				*eS*	**Sn**	**22 38 28.6**	**+1.9**
LL6C				*i*		22 38 35.2	
	comp=Z,2μm,0.5s						

JACV **Jacura** 3.06 36 ⇑ *eP* **Pn** 22 37 58.3 +2.8
JACV *eS* **Sn** 22 38 33.3 +0.6
BARC **Barichara** 3.20 232 *eP* **Pn** 22 37 59.5 +1.8
BARC *eS* **Sn** 22 38 38.3 +1.8
BARC *i* 22 38 59.3
comp=Z,2μm,0.6s
CRJC **Cerrejon, Guaj** 3.25 318 *eP* **Pn** 22 37 58.3 0.0
CRJC *eS* **Sn** 22 38 37.1 -0.5
CRJC *i* 22 39 00.5
comp=Z,2μm,0.4s
BENV **Beln** 3.31 66 ǁ *eP* **Pn** 22 38 00.4 +1.4
TURV **Turiamo** 3.33 56 *eP* **Pn** 22 38 01.1 +1.8
TURV *eS* **Sn** 22 38 40.2 +0.8
URIC **Uribia, Colomb** 3.35 337 *eP* **Pn** 22 37 58.8 -0.7
URIC *eS* **Sb** 22 38 45.8 -1.7
URIC *i* 22 38 53.2
comp=Z,1μm,0.8s
RUSC **La Rusia** 3.61 222 ⇑ *eP* **Pn** 22 38 04.6 +1.0
RUSC *eS* **Sn** 22 38 45.3 -1.7
RUSC *i* 22 39 04.6
comp=Z,784nm,0.6s
ARGC **Ariguani, Magd** 3.76 290 *eP* **Pn** 22 38 05.9 +0.8
ARGC *eS* **Sn** 22 38 49.5 -0.4
ARGC *i* 22 39 38.2
comp=Z,403nm,0.6s
HATO **Hato, Curacao** 3.93 25 **Pn** 22 38 06.8 -0.7
CARV **Caracas** 4.13 63 *eP* **Pn** 22 38 12.3 +1.9
CACV **CAICARA DEL OR** 4.21 104 ǁ *eP* **Pb** 22 38 19.5 -1.4
FUNV **FUNVISIS** 4.22 64 *eP* **Pn** 22 38 13.1 +1.4
PAYV **Puerto Ayacuch** 4.34 137 ⇑ *eP* **Pn** 22 38 12.6 -0.6
MERV **Las Mercedes** 4.36 81 ǁ *eP* **Pn** 22 38 14.3 +0.9
BIRV **Birongo** 4.71 66 **Pn** 22 38 19.3 +1.0
BIRV **Birongo** 4.71 66 ǁ *eP* **Pn** 22 38 19.4 +1.2
BIRV *eS* **Sn** 22 39 12.7 -0.8
ROSC **El Rosal** 5.21 224 Pn **Pn** 22 38 27.6 +2.1
comp=Z,38nm,0.3s,baz=55,slow=6.1,SNR=42
ROSC Sn **Sn** 22 39 26.6 +0.1
comp=Z,18nm,0.3s,baz=146,slow=22,SNR=4.1
ROSC **El Rosal** 5.21 224 **Pn** 22 38 27.2 +1.6
PRGV **PARIAGUAN** 5.95 88 *eP* **Pn** 22 38 35.4 +0.2
PRGV *eS* **Sn** 22 39 40.7 -3.2
PCRV **Puerto La Cruz** 6.14 75 ǁ *eP* **Pn** 22 38 39.2 +1.2
COAV **Cumanacoa** 6.92 77 *eP* **Pn** 22 38 49.3 +0.6
BCIP **Isla Barro Col** 9.09 274 Pn **Pn** 22 39 18.9 +0.4
GRGR **Grenville** 9.53 68 Pn **Pn** 22 39 24.2 -0.2
MLPR **Magueyes Islan** 9.95 20 Pn **Pn** 22 39 29.1 -1.2
CRPR **Cabo Rojo, PR** 9.96 20 Pn **Pn** 22 39 28.8 -1.6
ICMP **Isla Caja de M** 10.07 23 **Pn** 22 39 31.6 -0.2
PCDR **Punta Cana, DR** 10.10 12 Pn **Pn** 22 39 31.8 -0.5
OBIP **Obispado Ponce** 10.18 22 **Pn** 22 39 32.3 -1.0
CELP **Cerrillos** 10.22 22 **Pn** 22 39 33.4 -0.5
SVB **Belmont** 10.34 62 **Pn** 22 39 34.8 -0.7
SDDR **Presa de Saban** 10.34 357 **Pn** 22 39 36.9 +1.4
AOPR **Arecibo Observ** 10.40 21 **Pn** 22 39 36.1 -0.4
SJG **San Juan** 10.42 24 Pn **Pn** 22 39 36.1 -0.6
comp=Z,6.8nm,0.3s,baz=205,slow=14,SNR=20
SJG Sn **Sn** 22 41 26.9 -7.1
comp=Z,2.4nm,0.3s,baz=38,slow=19,SNR=2.1
SJG LR LR 22 44 00.6
comp=Z,374nm,18.9s,baz=200,slow=40
comp=Z,62nm,0.5s
SJG **San Juan** 10.42 24 **Pn** 22 39 36.7 0.0
HUMP **Col San Antoni** 10.57 26 **Pn** 22 39 38.2 -0.5
GCPR **Guaynabo City** 10.62 24 **Pn** 22 39 38.4 -0.6
CBYP **Canovanas** 10.69 25 **Pn** 22 39 40.2 -0.2
BIM **Bigot** 11.08 57 Pn **Pn** 22 39 44.0 -1.8
FDF **Fort de France** 11.12 56 **Pn** 22 39 45.1 -1.3
MPOM **Morne Pois Mar** 11.22 58 Pn **Pn** 22 39 45.8 -1.8
OTAV **Otavalo** 11.37 223 Pn **Pn** 22 39 50.2 0.0
OTAV **Otavalo** 11.37 223 *eP* Pn 22 39 57.4 +7.3
MTDJ **Mount Denham** 11.67 326 Pn **Pn** 22 39 52.9 -1.0
BOAV **Boa Vista** 11.82 121 Pn **Pn** 22 39 54.5 -1.4
BOAV **Boa Vista** 11.82 121 *eP* **Pn** 22 39 54.8 -1.1
GDSD **La Dsirade Is** 12.10 50 Pn **Pn** 22 39 57.5 -2.2
SRBA **San Rafael, Bu** 12.57 274 Pn **Pn** 22 40 06.5 +0.4
CHSH **Refugio Sur-Vo** 12.95 220 Pn **Pn** 22 40 12.3 +0.6
BOSC **San Juan Bosco** 14.05 214 **Pn** 22 40 25.0 -1.5
ORTG **Ortega, Santa** 14.71 278 Pn **Pn** 22 40 36.7 +1.3
BOAB **BOACO BROADBAN** 14.24 286 Pn **Pn** 22 40 43.5 +0.9
MACA **Manacapuru-AM** 15.34 139 Pn **Pn** 22 40 40.5 -3.5
MACA IAmb IAmb 22 40 50.3
comp=Z,8.7nm,0.8s
MACA **Manacapuru-AM** 15.34 139 *eP* **Pn** 22 40 41.2 -2.7
CZSB **Cruzeiro do Su** 16.35 187 Pn **Pn** 22 40 52.9 -4.1
CZSB IAmb IAmb 22 41 01.4
comp=Z,112nm,0.9s
ATAH **Atahualpa** 17.43 206 P **Pn** 22 41 08.5 -2.5
comp=Z,0.3nm,0.3s,baz=38,slow=15,SNR=2.5
ATAH Lg Lg 22 46 08.8
comp=Z,0.2nm,0.3s,baz=180,slow=21,SNR=2.6
ATAH LR LR 22 49 48.6
comp=Z,784nm,19.3s,baz=359,slow=44
comp=Z,5.6nm,0.7s
MDP **Montagnes des** 18.22 100 P **Pn** 22 41 18.6 -1.8
comp=Z,1.2nm,0.3s,baz=293,slow=13,SNR=14
MDP S **Sn** 22 44 37.8 -6.6
comp=Z,10nm,0.8s,baz=33,slow=18,SNR=3.2
MDP Lg Lg 22 46 34.9
comp=Z,0.8nm,0.3s,baz=183,slow=21,SNR=2.6
MDP LR LR 22 49 18.0
comp=Z,102nm,20.8s,baz=288,slow=40
comp=Z,2.4nm,0.3s
ETMB **Extrema** 18.82 166 P **P** 22 41 23.9 -3.4
ETMB IAmb IAmb 22 41 36.2
comp=Z,22nm,1.2s
ETMB **Extrema** 18.82 166 *eP* **P** 22 41 25.4 -1.9
SAML **Samuel** 18.96 157 P **P** 22 41 26.1 -2.6
MALB **Monte Alegre** 19.36 122 *eP* **P** 22 41 33.2 -0.1
ITTB **Itaituba** 19.68 130 *eP* **P** 22 41 37.9 +1.2
MCPB **Macapa, AP** 20.56 115 *eP* Pn 22 41 49.8 +1.2
NNA **Nana** 21.36 197 LR LR 22 51 14.0
comp=Z,525nm,18.9s,baz=4.5,slow=40
NPGB **Novo Progresso** 21.78 135 *eP* **P** **22 41 59.9 +0.4**
DWPF **Disney Wildern** 21.91 334 P **P** **22 42 02.0 +1.3**
baz=150
VILB **Vilhena** 23.80 154 P **P** **22 42 18.8 -1.7**
VILB IAmb IAmb 22 42 27.0
comp=Z,28nm,1.1s
VILB **Vilhena** 23.80 154 *eP* **P** **22 42 21.0 +0.5**
CLDB **Colider** 24.35 142 *eP* **P** **22 42 25.8 +0.1**
PDRB **Porto dos Gac** 24.39 145 *eP* **P** **22 42 26.1 0.0**
LPAZ **La Paz** 24.86 174 P **P** **22 42 30.1 -0.8**
comp=Z,7.3nm,0.8s,baz=359,slow=10,SNR=18
LPAZ Lg Lg 22 50 05.3
comp=Z,0.1nm,0.3s,baz=249,slow=17,SNR=3.7
LPAZ LR LR 22 53 00.2
comp=Z,444nm,20.7s,baz=330,slow=38
comp=Z,7.3nm,0.8s
LPAZ **La Paz** 24.86 174 P **P** **22 42 29.7 -1.2**
LPAZ IAmb IAmb 22 42 39.0
comp=Z,39nm,1.3s
LPAZ **La Paz** 24.86 174 *eP* **P** **22 42 31.4 +0.5**
TMAB **Tom-Au,PA,Br** 25.00 115 *eP* **P** **22 42 34.1 +2.5**
CMIG **Matias Romero** 25.06 292 P **P** **22 42 32.2 +0.2**
comp=Z,2.2nm,0.7s,baz=81,slow=9.1,SNR=4.6
comp=Z,2.2nm,0.7s
PRPB **Parauapebas** 25.44 125 *eP* **P** **22 42 38.1 +2.5**
TIGA **Tifton** 25.72 334 P **P** **22 42 36.9 -1.0**
TIGA IAmb IAmb 22 42 43.2
comp=Z,22nm,0.8s
TIGA **Tifton** 25.72 334 P **P** **22 42 39.3 +1.4**
baz=149
NHSC **New Hope** 25.93 341 P **P** **22 42 41.0 +1.3**
baz=158
SIV **San Ignacio** 26.21 159 P **P** **22 42 41.6 -1.0**
comp=Z,6.1nm,1.0s,baz=3.9,slow=10,SNR=13
SIV LR LR 22 53 40.7
comp=Z,398nm,19.5s,baz=340,slow=38
comp=Z,6.1nm,1.0s
PTLB **Pontes e Lacer** 26.48 154 P **P** **22 42 43.6 -1.3**
PTLB IAmb IAmb 22 43 18.5
comp=Z,5.3nm,0.9s
PTLB **Pontes e Lacer** 26.48 154 *eP* **P** **22 42 47.4 +2.4**
PB16 **IPOC Station P** 26.79 178 P **P** **22 42 46.4 -2.0**
JSC **Jenkinsville** 27.36 341 P **P** **22 42 53.0 +0.4**
GOGA **Godfrey** 27.38 336 P

	comp=Z,13nm,0.9s						
KMSC	**Kings Mountain**	**28.17**	**341**	P		**P**	**22 43 00.9 +0.9**
	baz=157						
SALV	**Santo Antonio**	**28.50**	**149**	*e*P		**P**	**22 43 04.5 +1.4**
LRAL	**Lakeview Retre**	**28.63**	**330**	P		**P**	**22 43 04.4 +0.3**
LRAL	**Lakeview Retre**	**28.63**	**330**	P		**P**	**22 43 05.2 +1.1**
	baz=145						
SMTB	**Santa Maria do**	**28.79**	**126**	*e*P		**P**	**22 43 08.0 +2.2**
ROSB	**Rosrio**	**28.82**	**112**	*e*P		**P**	**22 43 10.1 +4.1**
TKL	**Tuckaleechee C**	**29.48**	**338**	P		**P**	**22 43 12.2 +0.6**
	comp=Z,3.9nm,0.7s,baz=143,slow=11,SNR=6.6						
TKL				LR		LR	22 56 39.3
	comp=Z,117nm,18.0s,baz=152,slow=40						
	comp=Z,3.9nm,0.7s						
W50A	**Signal Mountai**	**29.68**	**335**	P		**P**	**22 43 11.8 -1.7**
W50A				IAmb		IAmb	22 43 18.6
	comp=Z,14nm,1.1s						
PB02	**IPOC Station P**	**29.74**	**179**	P		**P**	**22 43 12.4 -1.8**
PB02				IAmb		IAmb	22 44 16.6
	comp=Z,29nm,1.2s						
BLA	**Blacksburg**	**29.83**	**344**	P		**P**	**22 43 13.4 -1.3**
BLA				IAmb		IAmb	22 43 17.7
	comp=Z,13nm,0.8s						
BLA	**Blacksburg**	**29.83**	**344**	P		**P**	**22 43 16.0 +1.3**
	baz=160						
TZTN	**Tazewell**	**30.19**	**339**	P		**P**	**22 43 18.9 +1.0**
	baz=154						
PLAL	**Pickwick Lake**	**30.73**	**331**	P		**P**	**22 43 20.9 -1.8**
PLAL				IAmb		IAmb	22 43 29.4
	comp=Z,9.3nm,0.8s						
OXF	**Oxford**	**31.01**	**329**	P		**P**	**22 43 25.8 +0.7**
	baz=142						
LVC	**Limon Verde**	**31.07**	**177**	P		**P**	**22 43 25.5 -0.7**
	comp=Z,3.4nm,0.7s,baz=278,slow=6.4,SNR=2.9						
LVC				LR		LR	22 56 51.5
	comp=Z,242nm,18.9s,baz=336,slow=38						
	comp=Z,3.4nm,0.7s						
LVC	**Limon Verde**	**31.07**	**177**	P		**P**	**22 43 25.3 -0.8**
LVC				IAmb		IAmb	22 44 26.1
	comp=Z,33nm,1.9s						
WVT	**Waverly**	**31.56**	**333**	P		**P**	**22 43 29.3 -0.7**
WVT				IAmb		IAmb	22 43 32.9
	comp=Z,11nm,0.9s						
WVT	**Waverly**	**31.56**	**333**	P		**P**	**22 43 30.6 +0.6**
	baz=146						
Q54A	**Coxs Mills**	**31.60**	**345**	P		**P**	**22 43 30.1 -0.2**
Q54A				IAmb		IAmb	22 43 33.6
	comp=Z,14nm,0.8s						
MCWV	**Mont Chateau**	**32.00**	**347**	P		**P**	**22 43 34.4 +0.6**
	baz=163						
NATX	**Nacogdoches**	**32.07**	**319**	P		**P**	**22 43 33.5 -1.0**
NATX				IAmb		IAmb	22 43 38.1
	comp=Z,15nm,0.9s						
P53A	**Whipple**	**32.22**	**344**	P		**P**	**22 43 34.7 -1.1**
AQDB	**Aquidauana**	**32.42**	**153**	*e*P		**P**	**22 43 38.4 +0.7**
P52A	**Corning**	**32.56**	**343**	P		**P**	**22 43 38.4 -0.4**
P52A	**Corning**	**32.56**	**343**	P		**P**	**22 43 39.3 +0.5**
	baz=159						
O53A	**New Philadelph**	**32.89**	**345**	P		**P**	**22 43 42.5 +0.8**
	baz=160,SNR=5.8						
BDFB	**Brasilia**	**32.91**	**137**	P		**P**	**22 43 41.7 -0.5**
	comp=Z,1.7nm,0.5s,baz=297,slow=17,SNR=3.4						
	comp=Z,1.7nm,0.5s						
LCAR	**Lake Charles**	**33.12**	**329**	P		**P**	**22 43 42.6 -1.1**
KSPA	**Keystone Colle**	**33.13**	**353**	P		**P**	**22 43 44.0 +0.2**
KSPA				IAmb		IAmb	22 43 46.9
	comp=Z,12nm,0.8s						
P49A	**Miami Univ. Ec**	**33.27**	**340**	P		**P**	**22 43 46.6 +1.6**
	baz=154						
MIAR	**Mount Ida**	**33.31**	**324**	P		**P**	**22 43 46.4 +1.0**
	baz=136,SNR=9.5						
CGM3	**Cape Girardeau**	**33.35**	**332**	P		**P**	**22 43 44.8 -0.9**
CGM3				IAmb		IAmb	22 43 49.8
	comp=Z,10nm,0.9s						
ACSO	**Alum Creek Sta**	**33.36**	**343**	P		**P**	**22 43 47.0 +1.3**
	baz=157,SNR=10						
833A	**Chaparral WMA,**	**33.43**	**310**	P		**P**	**22 43 46.9 +0.4**
	baz=120						
SIUC	**Southern Illin**	**33.49**	**333**	P		**P**	**22 43 46.0 -0.9**
ZAIG	**Zacatecas**	**33.70**	**298**	P		**P**	**22 43 48.5 -0.7**
ZAIG				IAmb		IAmb	22 43 55.3
	comp=Z,22nm,1.7s						
BINY	**Binghamton**	**33.79**	**353**	P		**P**	**22 43 50.6 +1.1**
	baz=170						
M53A	**WI Miller and**	**33.89**	**346**	P		**P**	**22 43 52.0 +1.7**
	baz=162						
ALLY	**Alegheny Colle**	**33.97**	**347**	P		**P**	**22 43 51.1 +0.1**
WHTX	**Lake Whitney,**	**34.07**	**317**	P		**P**	**22 43 53.0 +1.0**
	baz=127						
O48B	**Farmland**	**34.07**	**340**	P		**P**	**22 43 52.7 +0.7**
	baz=154						
FVM	**French Village**	**34.27**	**332**	P		**P**	**22 43 53.1 -0.6**
WVNY	**West Valley, N**	**34.39**	**350**	P		**P**	**22 43 54.4 -0.3**
CCM	**Cathedral Cave**	**34.71**	**331**	P		**P**	**22 43 56.4 -1.2**
CCM				IAmb		IAmb	22 44 00.2
	comp=Z,8.4nm,0.9s						
CCM	**Cathedral Cave**	**34.71**	**331**	P		**P**	**22 43 58.5 +1.0**
	baz=142						
HHAR	**Hobbs**	**34.76**	**326**	P		**P**	**22 43 57.2 -0.8**
JCT	**Junction City**	**34.85**	**313**	P		**P**	**22 43 59.4 +0.5**
	baz=123						
SFIN	**Lafayette**	**34.87**	**338**	P		**P**	**22 43 60.0 +1.1**
	baz=151						
J57A	**Williamstown**	**34.99**	**353**	P		**P**	**22 43 59.4 -0.4**
P43A	**Skaggs, Pawnee**	**35.22**	**334**	P		**P**	**22 44 01.0 -0.8**
AC02	**Maricunga**	**35.26**	**178**	P		**P**	**22 44 01.1 -1.7**
RLO	**Rose Lookout**	**35.29**	**325**	P		**P**	**22 44 02.1 -0.4**
RLO				IAmb		IAmb	22 44 04.7
	comp=Z,15nm,0.7s						
TUL1	**Leonard**	**35.56**	**324**	P		**P**	**22 44 04.3 -0.5**
TUL1				IAmb		IAmb	22 44 10.2
	comp=Z,8.8nm,0.7s						
TUL1	**Leonard**	**35.56**	**324**	P		**P**	**22 44 06.0 +1.1**
	baz=134						
ABTX	**Abilene, Hawle**	**35.93**	**316**	P		**P**	**22 44 07.0 -1.2**
ABTX				IAmb		IAmb	22 44 11.2
	comp=Z,17nm,0.7s						
ABTX	**Abilene, Hawle**	**35.93**	**316**	P		**P**	**22 44 08.8 +0.6**
	baz=125,SNR=7.0						
LONY	**Lake Ozonia**	**36.04**	**355**	P		**P**	**22 44 10.2 +1.3**
	baz=173						
OK034	**N. Norfolk Rd.**	**36.17**	**323**			**P**	**22 44 09.0 -1.1**
WMOK	**Wichita Mounta**	**36.63**	**319**	P		**P**	**22 44 14.0 0.0**
	baz=129,SNR=8.2						
SADO	**Sadowa**	**36.78**	**350**	P		**P**	**22 44 14.8 -0.3**
	comp=Z,11nm,0.6s,baz=195,slow=2.8,SNR=12						
	comp=Z,11nm,0.6s						
SADO	**Sadowa**	**36.78**	**350**	P		**P**	**22 44 14.9 -0.3**
SADO				IAmb		IAmb	22 44 19.1
	comp=Z,14nm,0.7s						
CPUP	**Villa Florida**	**37.06**	**160**	LR		LR	22 59 47.0
	comp=Z,195nm,20.2s,baz=344,slow=37						
TX32	**Lajitas Array**	**37.20**	**308**	P		**P**	**22 44 18.7 -0.5**
TXAR	**Lajitas Array**	**37.20**	**308**	P		**P**	**22 44 18.2 -0.9**
	comp=Z,1.3nm,0.6s,baz=128,slow=9.1,SNR=19						
TXAR				PcP		**PcP**	**22 46 40.0 +0.8**
	comp=Z,0.5nm,0.5s,baz=134,slow=5.1,SNR=5.0						
	comp=Z,1.3nm,0.6s						
TXAR	**Lajitas Array**	**37.20**	**308**	P		**P**	**22 44 18.1 -1.1**
AC05	**El Transito**	**37.22**	**179**	P		**P**	**22 44 17.9 -1.3**
RCBR	**Riachuelo**	**37.50**	**111**	LR		LR	23 00 26.4
	comp=Z,555nm,18.3s,baz=100,slow=37						
GDU01	**Guandu, BA**	**38.00**	**125**	*e*P		**P**	**22 44 26.9 +1.1**
NBLA	**Lagarto - SE**	**38.06**	**120**	*e*P		**P**	**22 44 29.3 +2.9**
JFWS	**Jewell Farm**	**38.26**	**337**	P		**P**	**22 44 26.9 -0.8**
JFWS	**Jewell Farm**	**38.26**	**337**	P		**P**	**22 44 28.2 +0.5**
	baz=148						
KSU1	**Kansas State U**	**38.26**	**327**	P		**P**	**22 44 28.2 +0.4**
	baz=136						
SCIA	**State Center**	**38.69**	**333**	P		**P**	**22 44 30.9 -0.5**
SCIA				IAmb		IAmb	22 44 33.8
	comp=Z,22nm,0.8s						
MSTX	**Muleshoe**	**38.86**	**315**	P		**P**	**22 44 33.0 -0.1**
	baz=123						
CMC01	**Camacan, BA**	**38.97**	**128**	*e*P		**P**	**22 44 35.8 +1.8**
VAO	**Valinhos**	**39.04**	**144**	*e*P		**P**	**22 44 37.4 +2.8**
CO03	**El Pedregal**	**39.22**	**180**	P		**P**	**22 44 34.8 -1.2**
GUA01	**Guaratinga, BA**	**39.47**	**129**	*e*P		**P**	**22 44 39.0 +0.8**
MNTX	**Cornudas Mount**	**39.60**	**310**	P		**P**	**22 44 39.1 -0.1**
MNTX	**Cornudas Mount**	**39.60**	**310**	P		**P**	**22 44 39.8 +0.6**
	baz=118						
VLDQ	**Val d'Or**	**39.80**	**353**	P		**P**	**22 44 41.0 +0.5**
CBKS	**Cedar Bluff**	**39.83**	**324**	P		**P**	**22 44 41.5 +0.4**
	baz=131						
PET01	**Itanhaem-SP**	**39.87**	**146**	*e*P		**P**	**22 44 44.4 +2.9**
ZON	**Zonda**	**39.96**	**177**	P		**P**	**22 44 41.8 -0.4**
ZON				IAmb		IAmb	22 44 47.2
	comp=Z,40nm,1.4s						
PARB	**Paraibuna**	**40.09**	**143**	*e*P		**P**	**22 44 45.3 +1.9**
ITQB	**Itaqui**	**40.38**	**161**	*e*P		**P**	**22 44 48.9 +3.3**
ECSD	**EROS Data Cent**	**41.68**	**332**	P		**P**	**22 44 57.4 +1.2**
	baz=139						
T25A	**Trinidad**	**41.72**	**318**	P		**P**	**22 44 56.2 -0.7**
T25A	**Trinidad**	**41.72**	**318**	P		**P**	**22 44 57.4 +0.5**
	baz=124						
121A	**Cos Peak, D**	**41.80**	**310**	P		**P**	**22 44 57.7 +0.1**
	baz=116,SNR=5.9						
ANMO	**Albuquerque**	**41.96**	**314**	P		**P**	**22 44 58.3 -0.6**
	comp=Z,0.9nm,0.5s,baz=114,slow=12,SNR=3.7						
	comp=Z,0.9nm,0.5s						
ANMO	**Albuquerque**	**41.96**	**314**	P		**P**	**22 44 59.4 +0.5**
	baz=120						
CPSB	**Cacapava Do Su**	**42.16**	**158**	*e*P		**P**	**22 45 01.6 +1.4**
OGNE	**Ogallala**	**42.56**	**324**	P		**P**	**22 45 03.9 +0.3**
	baz=130						
SDCO	**Great Sand Dun**	**42.78**	**318**	P		**P**	**22 45 06.3 +0.7**
	baz=124,SNR=32						
EYMN	**Ely**	**43.00**	**339**	P		**P**	**22 45 06.1 -0.8**
EYMN				IAmb		IAmb	22 45 08.5
	comp=Z,12nm,0.7s						
EYMN	**Ely**	**43.00**	**339**	P		**P**	**22 45 07.9 +1.0**
	baz=149						
SUSD	**Miller**	**43.33**	**330**	P		**P**	**22 45 09.5 -0.1**
	baz=137						
S22A	**4UR Ranch, Cre**	**43.66**	**317**	P		**P**	**22 45 13.5 +0.7**
	baz=122,SNR=8.8						
TUC	**Tucson**	**44.00**	**308**	P		**P**	**22 45 16.4 +1.0**
	baz=114						
ISCO	**Idaho Springs**	**44.02**	**321**	P		**P**	**22 45 15.8 +0.2**
ISCO	**Idaho Springs**	**44.02**	**321**	P		**P**	**22 45 16.6 +1.0**
	baz=125,SNR=6.3						
X18A	**Snowflake**	**44.30**	**312**	P		**P**	**22 45 17.1 -0.7**
W18A	**Petrified Fore**	**44.41**	**312**	P		**P**	**22 45 18.7 +0.1**
	baz=117						
MVCO	**Mea Verde**	**44.52**	**316**	P		**P**	**22 45 19.9 +0.3**
	baz=120						
N23A	**Red Feather La**	**44.86**	**322**	P		**P**	**22 45 22.9 +0.6**
	baz=126						
AGMN	**Agassiz Nation**	**44.92**	**336**	P		**P**	**22 45 21.7 -0.6**
AGMN				IAmb		IAmb	22 45 25.0
	comp=Z,13nm,0.8s						
AGMN	**Agassiz Nation**	**44.92**	**336**	P		**P**	**22 45 23.1 +0.8**
	baz=143,SNR=10						
X16A	**Lo Mia Camp, P**	**45.36**	**311**	P		**P**	**22 45 25.9 -0.3**
214A	**Organ Pipe Nat**	**45.46**	**307**	P		**P**	**22 45 27.2 +0.3**
214A	**Organ Pipe Nat**	**45.46**	**307**	P		**P**	**22 45 27.4 +0.5**
	baz=111						
RSSD	**Black Hills**	**45.75**	**326**	P		**P**	**22 45 28.8 -0.5**
RSSD	**Black Hills**	**45.75**	**326**	P		**P**	**22 45 29.7 +0.5**
	baz=131						
WUAZ	**Wupatki**	**45.78**	**312**	P		**P**	**22 45 29.7 +0.1**
	baz=116						
O20A	**White River Ci**	**45.88**	**319**	P		**P**	**22 45 31.8 +1.5**
	baz=123,SNR=5.9						
SCHQ	**Schefferville**	**46.21**	**3**	P		**P**	**22 45 32.0 -0.4**
	comp=Z,8.2nm,0.8s,baz=190,slow=7.2,SNR=11						
	comp=Z,8.2nm,0.8s						
SCHQ	**Schefferville**	**46.21**	**3**	P		**P**	**22 45 31.7 -0.7**
K22A	**Casper**	**46.25**	**323**	P		**P**	**22 45 34.1 +1.0**
	baz=127						
ULM	**Lac du Bonnet**	**46.51**	**338**	P		**P**	**22 45 33.6 -1.2**
	comp=Z,14nm,0.8s,baz=142,slow=7.5,SNR=18						
	comp=Z,14nm,0.8s						
ULM	**Lac du Bonnet**	**46.51**	**338**	P		**P**	**22 45 33.6 -1.2**
P17A	**Butcher Ranch,**	**47.18**	**317**	P		**P**	**22 45 40.3 -0.2**
PD31	**Pinedale Array**	**48.15**	**322**	P		**P**	**22 45 47.2 -0.8**
PD31				IAmb		IAmb	22 45 52.8
	comp=Z,7.3nm,0.8s						
PDAR	**Pinedale Array**	**48.15**	**322**	P		**P**	**22 45 48.2 +0.2**
	comp=Z,4.2nm,0.5s,baz=119,slow=8.6,SNR=38						
PDAR				PcP		**PcP**	**22 47 15.1 -0.5**
	comp=Z,1.0nm,0.7s,baz=138,slow=5.6,SNR=2.1						
	comp=Z,4.2nm,0.5s						
V12A	**Nelson**	**48.45**	**311**	P		**P**	**22 45 49.8 -0.5**
V12A				IAmb		IAmb	22 45 53.6
	comp=Z,7.3nm,0.7s						
CTU	**Camp Tracy**	**48.46**	**318**	P		**P**	**22 45 49.8 -0.6**
CTU				IAmb		IAmb	22 45 53.7
	comp=Z,6.4nm,0.7s						
LAO	**LASA Array**	**48.58**	**328**	P		**P**	**22 45 52.3 +1.2**
	baz=130						
BELC	**Belle Mtn. Jos**	**48.69**	**308**	P		**P**	**22 45 53.0 +0.8**
	baz=111						
GMRC	**Granite Mounta**	**48.71**	**309**	P		**P**	**22 45 53.2 +0.8**
	baz=112						
DGMT	**Dagmar**	**48.74**	**331**	P		**P**	**22 45 53.4 +1.1**
	baz=133						
HWUT	**Hardware Ranch**	**48.79**	**319**	P		**P**	**22 45 52.6 -0.4**
HWUT				IAmb		IAmb	22 45 58.8
	comp=Z,6.1nm,0.9s						
TPFO	**Pinon Flats**	**48.91**	**307**	P		**P**	**22 45 55.3 +1.4**
	baz=110						
PFO	**Pinyon Flats O**	**48.91**	**307**	P		**P**	**22 45 52.8 -1.1**
	comp=Z,0.8nm,0.3s,baz=141,slow=6.5,SNR=1.6						
	comp=Z,0.8nm,0.3s						
DUG	**Dugway, Tooele**	**48.92**	**317**	P		**P**	**22 45 55.6 +1.7**
	baz=118,SNR=7.0						
PLCA	**Paso Flores**	**49.09**	**180**	P		**P**	**22 45 53.1 -1.9**
	comp=Z,2.8nm,0.8s,baz=346,slow=8.3,SNR=3.0						
	comp=Z,2.8nm,0.8s						
PLCA	**Paso Flores**	**49.09**	**180**	P		**P**	**22 45 53.3 -1.7**
TUQ	**Turquoise Moun**	**49.15**	**310**	P		**P**	**22 45 56.3 +0.6**
	baz=112						
HEC	**Hector,Ludlow**	**49.24**	**309**	P		**P**	**22 45 56.9 +0.5**
	baz=111						
RLMT	**Red Lodge**	**49.31**	**324**	P		**P**	**22 45 57.6 +0.7**
	baz=126,SNR=8.4						
TPAW	**Teton Pass**	**49.39**	**322**	P		**P**	**22 45 56.9 -0.8**
TPAW				IAmb		IAmb	22 45 59.8
	comp=Z,7.0nm,0.8s						
GSC	**Goldstone, Bar**	**49.77**	**309**	P		**P**	**22 46 01.2 +0.8**
	baz=111						
GCMT	**Greycliff**	**49.92**	**325**	P		**P**	**22 46 01.7 +0.2**
TPNV	**Topopah Spring**	**49.96**	**312**	P		**P**	**22 46 02.9 +0.9**
	baz=113						
R11A	**Troy Canyon, C**	**50.04**	**314**	P		**P**	**22 46 03.2 +0.7**
	baz=114,SNR=5.9						
FURC	**Furnace Creek,**	**50.24**	**311**	P		**P**	**22 46 04.4 +0.6**
	baz=112						
QLMT	**Earthquake Lak**	**50.41**	**323**	P		**P**	**22 46 05.8 +0.5**
EDW2	**Edwards Air Fo**	**50.54**	**308**	P		**P**	**22 46 06.9 +0.6**
	baz=110						
BOZ	**Bozeman (W)**	**50.95**	**324**	P		**P**	**22 46 09.5 +0.3**
BOZ	**Bozeman (W)**	**50.95**	**324**	P		**P**	**22 46 10.6 +1.3**
	baz=123						
MCMT	**McKenzie Canyo**	**51.26**	**322**	P		**P**	**22 46 12.3 +0.6**
EGMT	**Eagleton**	**51.29**	**327**	P		**P**	**22 46 13.3 +1.6**
	baz=127						
DSP	**Deep Springs**	**51.39**	**311**	P		**P**	**22 46 12.5 0.0**
DSP				IAmb		IAmb	22 46 16.6
	comp=Z,19nm,1.9s						
HLID	**Hailey**	**51.59**	**320**	P		**P**	**22 46 16.0 +1.8**
	baz=119,SNR=6.3						
NVAR	**Mina Array Bea**	**52.03**	**313**	P		**P**	**22 46 18.0 +0.4**
	comp=Z,1.8nm,0.5s,baz=125,slow=6.9,SNR=13						
NVAR				PcP		**PcP**	**22 47 30.3 +0.4**
	comp=Z,1.4nm,0.8s,baz=134,slow=5.2,SNR=4.5						
	comp=Z,1.8nm,0.5s						
MSO	**Missoula**	**52.96**	**324**	P		**P**	**22 46 25.2 +1.0**
	baz=122						
PNTR	**Pine Nut**	**53.22**	**313**	P		**P**	**22 46 26.4 +0.1**
PNTR				IAmb		IAmb	22 46 30.7
	comp=Z,9.7nm,0.7s						
FRB	**Frobisher Bay**	**55.07**	**1**	P		**P**	**22 46 38.1 -1.0**
	comp=Z,7.2nm,0.9s,baz=215,slow=7.2,SNR=3.0						
	comp=Z,7.2nm,0.9s						
I07A	**Izee**	**55.11**	**319**	P		**P**	**22 46 40.0 0.0**
I07A				IAmb		IAmb	22 46 43.1
	comp=Z,5.2nm,0.8s						
NEW	**Newport**	**55.55**	**324**	P		**P**	**22 46 43.9 +0.9**
	baz=120,SNR=8.4						
J05D	**Fort Rock, OR**	**55.94**	**317**	P		**P**	**22 46 46.7 +0.8**
	baz=113,SNR=5.7						
DY2G	**Dye2**	**60.16**	**11**	*i* P		**P**	**22 47 13.8 -1.5**
DY2G				IAmb		IAmb	22 47 18.6
	comp=Z,10nm,0.8s						
YKA	**Yellowknife Ar**	**62.47**	**339**	P		**P**	**22 47 29.8 -0.9**
	comp=Z,2.6nm,0.7s,baz=127,slow=7.0,SNR=5.5						
	comp=Z,2.6nm,0.7s						
ICESG	**Greenland Ices**	**63.71**	**12**	*i* P		**P**	**22 47 37.5 -1.8**
ICESG				IAmb		IAmb	22 47 40.5
	comp=Z,23nm,1.1s						
KOWA	**Kowa**	**65.37**	**78**	P		**P**	**22 47 50.2 -0.5**
KOWA				IAmb		IAmb	22 48 15.9
	comp=Z,11nm,1.2s						
T35M	**Bob Quinn**	**66.52**	**329**	P		**P**	**22 47 58.5 +1.2**
	baz=112						
ESDC	**Sonseca Array**	**66.64**	**51**	P		**P**	**22 47 57.4 -1.2**
	comp=Z,0.7nm,0.7s,baz=267,slow=6.9,SNR=4.4						
	comp=Z,0.7nm,0.7s						
ESDC	**Sonseca Array**	**66.64**	**51**	P		**P**	**22 47 57.9 -0.6**
ESDC				IAmb		IAmb	22 48 50.4
	comp=Z,9.8nm,2.0s						
SUMG	**Summit**	**66.81**	**10**	P		**P**	**22 47 59.1 -0.2**
SUMG	**Summit**	**66.81**	**10**	*i* P		**P**	**22 47 58.1 -1.2**
SUMG				IAmb		IAmb	22 48 01.8
	comp=Z,33nm,1.3s						
DLBC	**Dease Lake**	**66.96**	**331**	P		**P**	**22 48 01.5 +1.3**
	baz=112,SNR=6.3						
TGTN	**Hyland Airport**	**67.40**	**334**	P		**P**	**22 48 04.3 +1.4**
	baz=115						
R33M	**Jennings River**	**67.77**	**331**	P		**P**	**22 48 06.6 +1.2**
	baz=112						
P33M	**Teslin, Yukon**	**68.94**	**332**	P		**P**	**22 48 13.1 +0.5**
P33M	**Teslin, Yukon**	**68.94**	**332**	P		**P**	**22 48 14.0 +1.4**
	baz=110,SNR=5.5						
P32M	**Atlin**	**69.15**	**331**	P		**P**	**22 48 15.2 +1.3**
	baz=109						
SIT	**Sitka**	**69.17**	**328**	P		**P**	**22 48 15.5 +1.6**
	baz=107						
NEEM	**North Greenlan**	**69.59**	**4**	*i* P		**P**	**22 48 16.0 -0.6**
NEEM				IAmb		IAmb	22 48 20.0
	comp=Z,25nm,0.7s						
FARO	**Faro, Yukon**	**69.89**	**334**	P		**P**	**22 48 19.8 +1.4**
	baz=111						
SKAG	**Skagway**	**69.89**	**331**	P		**P**	**22 48 20.1 +1.7**
	baz=108						
WHY	**Whitehorse**	**70.06**	**332**	P		**P**	**22 48 20.7 +1.2**
	baz=109						
ESK	**Eskdalemuir**	**70.20**	**34**	P		**P**	**22 48 21.5 +1.1**
M31M	**Drury Creek, Y**	**70.34**	**333**	P		**P**	**22 48 22.6 +1.5**
	baz=110						
PLBC	**Pleasant Camp**	**70.40**	**330**	P		**P**	**22 48 22.7 +1.2**
	baz=107						
O30N	**Mendenhall**	**70.66**	**332**	P		**P**	**22 48 24.4 +1.2**
	baz=108,SNR=20						
N31M	**Braeburn, Yuko**	**70.73**	**333**	P		**P**	**22 48 25.1 +1.6**
	baz=108,SNR=10						
P30M	**Million Dollar**	**70.88**	**331**	P		**P**	**22 48 25.8 +1.3**
	baz=107						
TOA0	**Torodi Ar. Sit**	**71.00**	**79**			**P**	**22 48 25.5 -0.5**
TOA0				IAmb		IAmb	22 49 34.4
	comp=Z,14nm,1.8s						
TORD	**Torodi Ar. Bea**	**71.00**	**79**	P		**P**	**22 48 25.1 -0.9**
	comp=Z,1.0nm,0.7s,baz=290,slow=6.0,SNR=13						
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.00**	**79**	P		**P**	**22 48 25.4 -0.6**
TORD				IAmb		IAmb	22 49 11.7
	comp=Z,8.5nm,1.6s						
P29M	**Windy Craggy**	**71.12**	**330**	P		**P**	**22 48 27.4 +1.4**
	baz=106						
N30M	**Aishikik Lake**	**71.32**	**332**	P		**P**	**22 48 28.6 +1.4**
	baz=107,SNR=10						
HYT	**Haines Junctio**	**71.33**	**332**	P		**P**	**22 48 29.0 +1.7**
	baz=106						
O29M	**Mount Kennedy**	**71.70**	**331**	P		**P**	**22 48 30.2 +0.6**
	baz=105						
YUK6	**Outpost Mounta**	**71.77**	**332**	P		**P**	**22 48 30.9 +0.7**
	baz=106						
PNL	**Peninsula**	**71.94**	**330**	P		**P**	**22 48 32.0 +1.1**
	baz=104						
YUK4	**Talbot Arm**	**72.01**	**332**	P		**P**	**22 48 32.1 +0.6**
	baz=106						
INK	**Inuvik**	**72.21**	**340**	P		**P**	**22 48 32.5 +0.3**
	comp=Z,1.7nm,0.3s,baz=85,slow=6.7,SNR=4.6						
	comp=Z,1.7nm,0.3s						
INK	**Inuvik**	**72.21**	**340**	P		**P**	**22 48 34.1 +1.8**
	baz=112						
M29M	**Somme Creek**	**72.22**	**333**	P		**P**	**22 48 34.2 +1.5**
	baz=106						
PINM	**Pinnacle**	**72.46**	**330**	P		**P**	**22 48 35.3 +1.2**
	baz=104						
O28M	**Mount Upton**	**72.59**	**331**	P		**P**	**22 48 36.1 +1.0**
	baz=104						
EPYK	**Eagle Plains**	**72.68**	**337**	P		**P**	**22 48 36.5 +1.3**
	baz=109						
YUK3	**Moose Creek**	**72.96**	**332**	P		**P**	**22 48 38.4 +1.2**
	baz=104						
I29M	**Ogilvie Camp,**	**72.99**	**336**	P		**P**	**22 48 38.9 +1.8**
	baz=107						
CTG	**Chitna Glacier**	**73.19**	**331**	P		**P**	**22 48 39.5 +1.1**
	baz=103						
BVCY	**Beaver Creek**	**73.30**	**333**	P		**P**	**22 48 40.6 +1.7**
	baz=104						
PMSA	**Palmer Station**	**73.34**	**177**	LR		LR	23 22 33.4
	comp=Z,115nm,18.4s,baz=295,slow=37						
DAG	**Danmarks Havn**	**73.45**	**11**	*i* P		**P**	**22 48 38.4 -1.2**
DAG				IAmb		IAmb	22 48 41.5
	comp=Z,17nm,1.4s						
M27K	**Edge Creek, AK**	**73.75**	**333**	P		**P**	**22 48 43.4 +1.7**
	baz=103,SNR=9.1						
BCAR	**Beaver Creek A**	**73.86**	**333**	P		**P**	**22 48 43.3 +1.0**
L27K	**Beaver Creek,**	**73.88**	**333**	P		**P**	**22 48 43.4 +1.0**
L27K				IAmb		IAmb	22 48 45.7
	comp=Z,7.1nm,1.1s						
L27K	**Beaver Creek,**	**73.88**	**333**	P		**P**	**22 48 44.3 +1.9**
	baz=103,SNR=6.8						
EGAK	**Eagle**	**74.00**	**335**	P		**P**	**22 48 43.8 +0.8**
EGAK	**Eagle**	**74.00**	**335**	P		**P**	**22 48 43.7 +0.7**
	baz=104						
MCARA	**McCarthy VSAT**	**74.07**	**332**	P		**P**	**22 48 44.3 +0.8**
	baz=102						
M26

M23K	Glacier View	76.36	332	P		P		22 48 57.9	+1.2
	baz=97								
DHY	Denali Highway	76.37	333	P		P		22 48 57.8	+1.0
	baz=98								
HDA	Harding Lake	76.37	334	P		P		22 48 58.2	+1.5
	baz=99								
F25K	Christian Rive	76.38	338	P		P		22 48 58.1	+1.4
	baz=101,SNR=5.1								
IL31		76.40	335	P		P		22 48 57.1	+0.4
IL31				IAmb		IAmb		22 48 59.6	
	comp=Z,3.6nm,0.6s								
ILAR	Eielson Array	76.40	335	P		P		22 48 56.7	-0.1
	comp=Z,1.6nm,0.6s,baz=106,slow=4.6,SNR=11								
ILAR				PP		PP		22 51 48.0	-0.2
	comp=Z,0.3nm,0.5s,baz=104,slow=7.5,SNR=3.4								
	comp=Z,1.6nm,0.6s								
ILAR	Eielson Array	76.40	335	P		P		22 48 57.1	+0.2
E25K	Arctic Village	76.45	338	P		P		22 48 57.9	+0.7
	baz=101								
WAT6	Susitna Watana	76.47	332	P		P		22 48 58.0	+0.6
	baz=98								
C26K	Camden Bay	76.58	340	P		P		22 48 58.7	+1.0
	baz=102								
SML	Sawmill	76.64	332	P		P		22 48 58.8	+0.5
	baz=97								
KNK	Knik Glacier	76.66	331	P		P		22 48 59.1	+0.7
	baz=97								
POKR	Poker Plat Res	76.68	335	P		P		22 48 59.3	+0.8
	baz=98								
WAT1	Susitna Watana	76.87	333	P		P		22 49 00.8	+1.2
	baz=97								
KEST	Kesra	76.94	55	P		P		22 49 01.1	+0.6
	comp=Z,3.4nm,0.9s,baz=256,slow=8.3,SNR=2.6								
	comp=Z,3.4nm,0.9s								
G24K	Hadweenzic Riv	76.94	337	P		P		22 49 01.0	+1.2
	baz=99								
D25K	Kavik River	76.97	339	P		P		22 49 00.9	+0.9
	baz=100,SNR=8.2								
H24K	Noodor Dome	76.97	336	P		P		22 49 01.2	+1.1
	baz=98								
SEW	Seward	77.01	330	P		P		22 49 01.0	+0.7
	baz=95								
RND	Reindeer	77.07	333	P		P		22 49 01.1	+0.3
MCK	McKinley	77.15	333	P		P		22 49 01.8	+0.7
	baz=97								
F24K	Squaw Lake	77.22	337	P		P		22 49 02.6	+1.2
	baz=98,SNR=6.2								
RC01	Rabbit Creek A	77.24	331	P		P		22 49 02.4	+0.8
	baz=95								
NEA2	Nenana	77.31	334	P		P		22 49 03.1	+1.2
	baz=97								
I23K	Minto, Yukon-K	77.50	335	P		P		22 49 03.7	+0.8
I23K				IAmb		IAmb		22 49 08.5	
	comp=Z,12nm,1.4s								
I23K	Minto, Yukon-K	77.50	335	P		P		22 49 04.3	+1.3
	baz=97								
E24K	Your Creek	77.53	338	P		P		22 49 04.5	+1.4
	baz=98								
CUT	Chulitna	77.61	332	P		P		22 49 04.7	+1.0
	baz=95								
BRSE	Bradley Lake S	77.62	329	P		P		22 49 05.0	+1.2
	baz=94								
H23K	Yukon River	77.65	336	P		P		22 49 05.4	+1.5
	baz=97								
SUA	Susitna One	77.76	331	P		P		22 49 05.6	+1.0
	baz=94								
C24K	Franklin Bluff	77.84	340	P		P		22 49 05.8	+1.1
	baz=98								
G23K	Bananza Creek	77.94	336	P		P		22 49 06.1	+0.6
	baz=96,SNR=5.6								
TOLK	Toolik Lake Re	78.00	338	P		P		22 49 06.3	+0.5
	baz=97								
MLY	Manley	78.06	335	P		P		22 49 06.5	+0.3
MLY				IAmb		IAmb		22 49 09.0	
	comp=Z,13nm,1.4s								
MLY	Manley	78.06	335	P		P		22 49 06.6	+0.4
	baz=95,SNR=5.5								
HOM	Homer	78.07	329	P		P		22 49 07.3	+1.0
	baz=93								
BPAW	Bear Paw Mtn.	78.09	334	P		P		22 49 06.3	-0.1
BPAW	Bear Paw Mtn.	78.09	334	P		P		22 49 07.1	+0.8
	baz=95,SNR=18								
Q20K	Shuyak Island	78.41	328	P		P		22 49 09.3	+1.2
	baz=92								
H22K	Ishtalitna Cre	78.41	336	P		P		22 49 09.1	+1.1
	baz=95								
D23K	Nanushuk River	78.44	339	P		P		22 49 09.1	+0.9
	baz=96								
C23K	Itkillik River	78.51	340	P		P		22 49 09.4	+0.8
	baz=96								
CAST	Castle Rocks	78.52	333	P		P		22 49 09.2	+0.4
	baz=94,SNR=9.2								
PPLA	Purkeypile	78.53	332	P		P		22 49 09.1	+0.1
	baz=94								
NB2	NORSAR Subarra	78.59	29	P		P		22 49 10.9	+1.7
	comp=Z,4.0nm,1.1s,baz=270,slow=5.9								
NOA	NORSAR Array B	78.59	29	P		P		22 49 10.3	+1.2
	comp=Z,1.3nm,0.7s,baz=266,slow=5.7,SNR=6.8								
	comp=Z,1.3nm,0.7s								
I21K	Tanana	78.60	335	P		P		22 49 10.1	+1.0
	baz=94,SNR=12								
CHUM	Lake Minchumin	78.65	333	P		P		22 49 10.6	+1.2
	baz=94,SNR=14								
M20K	Styx River	78.92	331	P		P		22 49 11.9	+0.8
	baz=92,SNR=5.2								
H21K	Melozitna Rive	78.98	335	P		P		22 49 11.9	+0.7
	baz=94,SNR=7.8								
Q19K	Cape Douglas,	79.07	328	P		P		22 49 12.2	+0.3
	baz=92								
L20K	Farewell, AK	79.29	332	P		P		22 49 13.8	+0.8
	baz=92								
G21K	Allakaket	79.31	336	P		P		22 49 13.8	+0.8
	baz=93,SNR=6.2								
F21K	Alatna River	79.34	337	P		P		22 49 14.5	+1.3
	baz=93								
IMAR	Indian Mountai	79.38	336	P		P		22 49 14.1	+0.7
CLL	Collm	79.39	39	*eP*		P		22 49 14.0	+0.3
	comp=Z,3.0nm,1.2s								
CLL				*ex*		x		22 49 27.0	
CLL				*e*PP		PP		22 52 16.0	+2.5
K20K	Telida	79.41	333	P		P		22 49 14.6	+0.9
	baz=92								
J20K	Nowinta River	79.47	334	P		P		22 49 14.3	+0.4
J20K				IAmb		IAmb		22 49 16.4	
	comp=Z,11nm,0.8s								
J20K	Nowinta River	79.47	334	P		P		22 49 14.5	+0.6
	baz=92,SNR=11								
M19K	Big River Lodg	79.52	331	P		P		22 49 14.6	+0.4
	baz=91								
N19K	Bonanza Creek	79.53	330	P		P		22 49 14.3	-0.2
	baz=91								
L19K	White Mountain	79.74	332	P		P		22 49 15.5	+0.1
L19K	White Mountain	79.74	332	P		P		22 49 16.0	+0.6
	baz=91								
KHC	Kasperske Hory	79.79	42	*eP*		P		22 49 20.4	+4.4
PRED	Cave del Predi	79.85	44	P		P		22 49 16.2	-0.2
GERES	GERESS Array B	79.88	42	P		P		22 49 17.0	+0.5
	comp=Z,1.4nm,0.8s,baz=316,slow=3.7,SNR=12								
	comp=Z,1.4nm,0.8s								
GERES	GERESS Array B	79.88	42	P		P		22 49 17.1	+0.5
CHIR	Chirikof Islan	80.12	325	P		P		22 49 17.9	+0.4
	baz=89								
N18K	Kilae Creek	80.22	330	P		P		22 49 18.5	+0.4
	baz=90								
TTA	Tatalina	80.28	332	P		P		22 49 18.4	-0.1
	baz=90								
R17K	Ugashik Creek	80.51	327	P		P		22 49 19.9	+0.2
	baz=89								
R16K	Pilot Point	81.15	327	P		P		22 49 23.6	+0.5
	baz=88								
O16K	Kokwok River B	81.35	329	P		P		22 49 24.7	+0.6
	baz=88								
DPC	Dobruska-Polom	81.52	40	*eP*		P		22 49 29.3	+4.0
KRLC	Kraliky	81.83	41	*eP*		P		22 49 28.7	+1.8
PPT	Papeete	82.14	251	LR		LR		23 19 18.5	
	comp=Z,28nm,21.8s,baz=11,slow=31								
MODS	Modra-Piesok	82.27	42	*eP*		P		22 49 32.8	+3.6
VYHS	Vyhne	83.30	42	*eP*		P		22 49 39.3	+4.7
ARCES	ARCESS Array B	84.16	21	P		P		22 49 37.9	-0.7
	comp=Z,1.2nm,0.6s,baz=289,slow=3.7,SNR=8.6								
	comp=Z,1.2nm,0.6s								
ARCES	ARCESS Array B	84.16	21	P		P		22 49 38.3	-0.3
TNA	Tin City	85.23	336	P		P		22 49 44.6	+0.6
	baz=80								
FINES	FINESS Array B	85.72	29	P		P		22 49 46.1	-0.4
	comp=Z,2.6nm,0.9s,baz=265,slow=9.6,SNR=1.9								
	comp=Z,2.6nm,0.9s								
FINES	FINESS Array B	85.72	29	P		P		22 49 47.0	+0.5

NIKH	Nikolski High	88.11	323	P		P		22 49 57.9	-0.4
	baz=78								
BELA	Belgrano 2	88.63	173	P		P		22 50 00.4	+0.2
BELA				IAmb		IAmb		22 50 05.8	
	comp=Z,3.1nm,0.9s								
VNA3	Neumayer Olymp	89.17	164	P		P		22 50 03.0	+0.1
SNAA	Sanae	91.31	163	P		P		22 50 13.0	+0.1
RAR	Rarotonga	92.25	249	LR		LR		23 25 18.9	
	comp=Z,56nm,18.2s,baz=212,slow=31								
TROLL	Troll, Antarti	93.00	163	P		P		22 50 21.0	+0.2
TROLL	Troll, Antarti	93.00	163	pP		pP		22 50 23.9	+1.8
TROLL	Troll, Antarti	93.00	163	sP		sP		22 50 25.7	+3.2
LBTB	Lobatse	99.22	114	LR		LR		23 32 03.8	
	comp=Z,106nm,21.0s,baz=198,slow=33								
BOSA	Boshof	99.23	118	LR		LR		23 33 14.1	
	comp=Z,89nm,19.9s,baz=164,slow=34								
SONM	Songino Array	123.75	2	PKP		PKPdf		22 56 04.9	-1.0
	comp=Z,0.2nm,0.3s,baz=348,slow=1.5,SNR=2.0								
KSRS	Korea Array	130.99	340	PKP		PKPdf		22 56 20.6	+0.7
	comp=Z,0.5nm,0.3s,baz=5.7,slow=2.4,SNR=1.6								
KSRS				SKPbc		SKPbc		22 59 43.0	-2.3
	comp=Z,0.4nm,0.3s,baz=40,slow=6.6,SNR=4.2								
PZH	PanZhiHua	144.33	12	PKP		PKPbc		22 56 44.0	+0.9
CMAR	Chiang Mai Arr	151.22	21	PKPbc		PKPbc		22 57 01.6	-0.5
	comp=Z,1.4nm,0.8s,baz=317,slow=3.1,SNR=7.9								
ASAR	Alice Springs	152.12	235	PKPbc		PKPbc		22 57 02.4	-1.7
	comp=Z,2.8nm,0.6s,baz=115,slow=3.1,SNR=24								
WRA	Warramunga Arr	153.32	242	PKPbc		PKPbc		22 57 05.3	-1.6
	comp=Z,1.8nm,0.4s,baz=105,slow=2.8,SNR=36								

IDC ***17*** *22:58:18.5±0.6, 30.˚60N×66.˚39E, h0km, mb4.1/27, mbtmp4.1/29, MLM3.6/2, MS3.6/17, Error ellipse: s-maj=14.2km s-min=12.9km az=164.0*

MOS ***17*** *22:58:19.8±1.2, 30.˚75N×66.˚46E, h16km, mb4.5/20, Error ellipse: s-maj=7.1km s-min=4.0km az=77.3*

NEIC ***17*** *22:58:20.3±1.8, 30.˚56N±0.˚08×66.˚39E±0.˚08, h10km±1km, mb4.4/38, Error ellipse: s-maj=13.8km s-min=11.1km az=145.0*

ISC 17 22:58:20.3±0.3, 30.˚54N±0.˚04×66.˚42E±0.˚04, h12km, n240, σ1s80/264, mb4.4/59, MS3.5/20, 11C-10D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	Kabul	4.57	28	Pn		Pn	22 59 29.3	-0.1
KBL	Kabul	4.57	28	P		Pn	22 59 29.3	-0.1
KBL	Kabul	4.57	28	P		Pn	22 59 30.4	+1.1
	SNR=32							
KBL				S		Sn	23 00 25.0	+2.6
THW	Thamme Wali	5.06	62	⇑P		Pn	22 59 36.3	+0.2
HRA	Herat	5.22	318	Pn		Pn	22 59 39.3	+1.0
JASL	Jaisalmer	5.33	131	*eP*		Pn	22 59 43.0	+3.3
JASL				*eS*		Sn	23 00 44.7	+3.6
CEP	Cherat	5.69	53	⇑P		Pn	22 59 46.4	+1.6
NIL	Nilore	6.57	60	Pn		Pn	22 59 58.3	+1.5
NIL	Nilore	6.57	60	P		Pn	22 59 58.3	+1.5
NIL	Nilore	6.57	60	P		Pn	22 59 58.3	+1.5
CHCP	Chirah Chowk	6.59	60	⇑P		Pn	22 59 58.3	+1.3
NGCH	Negor - Chabah	6.96	223	P		Pn	23 00 04.6	+2.5
NGCH				S		Sn	23 01 23.4	+2.3
JMU	Jammu	7.55	71	*eP*		Pn	23 00 13.0	+2.9
JMU				*eS*		Sn	23 01 33.3	-2.4
THN	Thein Dam	8.16	74	*eP*		Pn	23 00 19.4	+0.9
THN				*eS*		Sn	23 01 49.9	-0.8
AJM	Ajmer	8.28	117	*eP*		Pn	23 00 23.5	+3.2
CHGR	Chuyangaron	8.41	15	Pn		Pn	23 00 21.9	-0.1
CHGR	Chuyangaron	8.41	15	P		Pn	23 00 21.9	-0.1
BHK	Bhakra	8.63	82	*eP*		Pn	23 00 25.5	+0.5
BHK				*eS*		Sn	23 01 58.2	-4.1
GAR	Garm	9.03	20			Pn	23 00 30.1	-0.5
DDI	Dehra Dun	10.05	88	*eS*		Sn	23 02 33.7	-3.5
WSAR	Wadi Sarin	10.05	226	Pn		Pn	23 00 44.8	+0.2
	1.1nm,0.3s,baz=86,slow=8.8,SNR=12							
WSAR				Sn		Sn	23 02 30.1	-7.3
	0.2nm,0.3s,baz=266,slow=18,SNR=1.5							
	10nm,0.7s							
GEYT	Alibeck	10.08	319	Pn		Pn	23 00 45.0	+0.1
	0.2nm,0.3s,baz=119,slow=12,SNR=1.4							
GEYT				Lg		Lg	23 03 33.9	
	0.2nm,0.3s,baz=109,slow=38,SNR=2.9							
GEYT				LR		LR	23 05 02.0	
	comp=Z,179nm,20.4s,baz=159,slow=40							
	2.1nm,0.7s							
GEYT	Alibeck	10.08	319			Pn	23 00 44.9	0.0
GYA0	ALIBECK ARRAY	10.08	319	P		Pn	23 00 46.3	+1.4
GYA0B	ALIBECK ARRAY	10.08	319	Pn		Pn	23 00 45.2	+0.3
SHME	Shamm	10.10	246	P		Pn	23 00 46.5	+1.3
SHME				P		Pn	23 00 46.5	+1.3
SHME	Shamm	10.10	246	Pn		Pn	23 00 46.7	+1.5
BIDO	Bidbid	10.17	229	P		Pn	23 00 49.4	+3.2
WBK	Wadi Bani Khal	10.33	222	P		Pn	23 00 50.0	+1.6
	SNR=9.4							
MASF	Masafi	10.43	243	P		Pn	23 00 50.2	+0.5
MASF				P		Pn	23 00 50.2	+0.5
MSFE	Esma-Masafi	10.43	243	Pn		Pn	23 00 51.5	+1.7
SMDO	Samad	10.55	227	P		Pn	23 00 53.2	+1.7
	SNR=7.6							
SMDO				P		Pn	23 00 53.2	+1.7
	SNR=7.6							
UOSS	Minazif	10.62	241	Pn		Pn	23 00 51.5	-0.9
UOSS	Minazif	10.62	241	P		Pn	23 00 50.6	-1.8
UOSS				P		Pn	23 00 50.6	-1.8
UOSS	Minazif	10.62	241	Pn		Pn	23 00 50.4	-2.0
HOQ	Hoqain	10.67	232	P		Pn	23 00 53.1	+0.2
HOQ				P		Pn	23 00 53.1	+0.2
HATD	Hatta, Dubai	10.74	241	Pn		Pn	23 00 55.3	+1.3
ASHO	Ashiyiah	10.88	240	P		Pn	23 00 58.6	+2.7
	SNR=7.8							
TAS	Tashkent	11.01	11	Pn		Pn	23 00 57.4	-0.2
TAS	Tashkent	11.01	11	P		Pn	23 00 57.4	-0.2
JMDO	Jabal Madar	11.03	224	P		Pn	23 00 59.7	+1.8
	SNR=8.8							
JMDO				P		Pn	23 00 59.7	+1.8
	SNR=8.8							
FAQ	Al Faqa, Dubai	11.20	242	Pn		Pn	23 01 00.4	+0.2
BSY	Bisya	11.32	229	P		Pn	23 01 04.6	+2.7
	SNR=19							
ARQ	Araqi	11.37	233	P		Pn	23 01 05.1	+2.5
ASUD	Al Ashush, Dub	11.46	242	P		Pn	23 01 06.3	+2.5
ASUD	Al Ashush, Dub	11.46	242	Pn		Pn	23 01 06.3	+2.5
ALNE	Al Ain	11.47	238	Pn		Pn	23 01 05.4	+1.5
JHNI	Jhansi	11.84	112	*ex*		Pn	23 01 08.2	-0.8
JHNI				*eS*		Sn	23 03 17.5	-3.6
IUG	Iuzhnay	11.95	13	*de*P		Pn	23 01 09.3	-1.1
IUG	Iuzhnay	11.95	13	‖*e*P		Pn	23 01 09.4	-1.1
	baz=12							
MHTO	MHTO	12.18	221	P		Pn	23 01 13.6	0.0
BHPL	Bhopal	12.21	124	*eP*		Pn	23 01 19.2	+5.1
BHPL				*eS*		Sn	23 03 26.7	-3.5
DZA	Taraz	12.94	16	*eP*		Pn	23 01 21.7	-2.3
DZA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
DZA	Taraz	12.94	16	*eP*		Pn	23 01 21.8	-2.3
	comp=Z,5.1nm,1.0s,baz=16							
KK31	Karatay Array	12.96	13	Pn		Pn	23 01 22.3	-2.0
KK31	Karatay Array	12.96	13	P		Pn	23 01 22.3	-2.0
KKAR	Karatay Array	12.96	13	Pn		Pn	23 01 22.3	-2.0
KKAR	Karatay Array	12.96	13			Pn	23 01 22.3	-2.0
KKAR	Karatay Array	12.96	13	P		Pn	23 01 22.3	-2.0
NRN	Naryn	13.35	33			Pn	23 01 26.9	-2.9
NRN	Naryn	13.35	33	P		Pn	23 01 26.9	-2.9
AAK	Ala-Archa	13.70	26	Pn		Pn	23 01 32.5	-2.0
AAK	Ala-Archa	13.70	26	*c*P		Pn	23 01 33.1	-1.4
AAK				pmax		pmax		
	comp=Z,27nm,1.7s							
AAK	Ala-Archa	13.70	26	P		Pn	23 01 34.2	-0.2
MZR	Muzera	13.77	240	P		Pn	23 01 37.6	+2.1
MZR	Muzera	13.77	240	Pn		Pn	23 01 35.7	+0.3
JBP	Jabalpur	14.15	118	*ex*		Pn	23 01 37.2	-3.4
JBP				IAmb		IAmb	23 01 41.4	
	comp=Z,19nm,1.1s							
JBP				*eS*		Sn	23 04 09.3	-8.2
SGDS	Sogindy	14.45	25	*eP*		Pn	23 01 42.0	-2.7
SGDS	Sogindy	14.45	25	*eP*		Pn	23 01 42.0	-2.7
	baz=24							
SMRA	Abu-Samra	14.97	251	P		Pn	23 01 51.2	-0.6
AAA	Alma-Ata	15.16	31	*eP*		Pn	23 01 51.4	-2.9
AAA	Alma-Ata	15.16	31	*eP*		Pn	23 01 51.5	-2.9
	baz=30							
MDOK	Medeo	15.19	31	*eP*		Pn	23 01 52.0	-2.7
MDOK	Medeo	15.19	31	*eP*		Pn	23 01 52.1	-2.7
	baz=31							
DANN	Dangsing	15.26	94	*eP*		Pn	23 01 54.1	-1.8

	comp=Z,152nm,0.7s								
KUU	Kurty	15.48	28	*e*P		Pn		23 01 56.4	-2.0
KUU	Kurty	15.48	28	*e*P		Pn		23 01 56.4	-2.0
	baz=28								
BTLS	Baital	15.67	20	*e*P		Pn		23 01 58.6	-2.3
BTLS	Baital	15.67	20	*e*P		Pn		23 01 58.6	-2.3
	baz=20								
SATY	Saty	15.74	34	*e*P		Pn		23 01 59.7	-2.1
SATY	Saty	15.74	34	*e*P		Pn		23 01 59.8	-2.1
	baz=34								
ZHN	Zhinishke	15.83	34	*e*P		Pn		23 02 00.5	-2.6
ZHN	Zhinishke	15.83	34	*e*P		Pn		23 02 00.5	-2.6
	baz=34								
GKN	Gorkha	16.10	94	*e*P		Pn		23 02 04.4	-2.2
	comp=Z,30nm,0.5s								
UZB	Uzynbulak	16.11	35	*e*P		Pn		23 02 03.7	-2.9
UZB	Uzynbulak	16.11	35	*e*P		Pn		23 02 03.8	-2.9
	baz=35								
KPKS	Kokpek	16.18	34	*e*P		Pn		23 02 04.9	-2.6
KPKS	Kokpek	16.18	34	*e*P		Pn		23 02 05.0	-2.6
	baz=34								
SHLS	Shalkode	16.33	36	*e*P		Pn		23 02 08.9	-0.6
SHLS	Shalkode	16.33	36	*e*P		Pn		23 02 09.0	-0.6
	baz=37								
KKN	Kakani	16.70	95	*e*P		Pn		23 02 12.9	-1.5
PKIN	Phulchoki	16.85	95	*e*P		Pn		23 02 14.8	-1.6
	comp=Z,21nm,0.4s								
PKI	Pulchoki	16.86	95	*e*P		Pn		23 02 15.0	-1.6
	comp=Z,14nm,0.4s								
WHFO	Wadi Hawf	17.04	225	P		Pn		23 02 16.7	-1.8
HYBB	Hyderabad (bro	17.11	137	*e*P		P		23 02 21.4	+0.3
GUN	Gumba	17.19	94	*e*P		Pn		23 02 18.3	-2.3
	comp=Z,54nm,0.6s								
TDK	Taldyqorghan	17.24	30	*e*P		Pn		23 02 19.5	-1.4
TDK	Taldyqorghan	17.24	30	*e*P		Pn		23 02 19.5	-1.4
	baz=30								
JIRN	Jiri	17.51	94	*e*P		Pn		23 02 23.4	-1.3
	comp=Z,41nm,0.7s								
RAMN	Ramite	18.05	96	*e*P		Pn		23 02 30.6	-0.7
	comp=Z,26nm,0.5s								
TAPN	Taplejung	18.90	94	*e*P		P		23 02 41.0	-0.1
ABKAR	Akbulak array	19.33	347	P		P		23 02 44.5	-0.8
ABKAR	Akbulak array	19.33	347	P		P		23 02 44.5	-0.8
ABKAR				IAmb		IAmb		23 02 50.0	
	comp=Z,9.7nm,0.8s								
MAK	Makhachkala	19.53	315	*e*P		P		23 02 45.3	-2.2
MAK				*e*S		Sn		23 06 25.6	-2.3
MAK				pmax		pmax			
	comp=Z,130nm,1.0s								
MAK				MLR		MLR			
	comp=Z,40nm,14.0s								
RAYN	Ar Rayn	19.89	254	P		P		23 02 50.8	-0.8
RAYN	Ar Rayn	19.89	254	P		P		23 02 50.8	-0.8
RAYN				pmax		pmax			
	comp=Z,7.0nm,0.8s								
RAYN	Ar Rayn	19.89	254	P		P		23 02 51.6	0.0
RAYN	Ar Rayn	19.89	254	P		P		23 02 51.6	0.0
BRZS	Berezniki	19.99	12	*e*P		P		23 02 51.5	-1.0
BRZS	Berezniki	19.99	12	*e*P		P		23 02 51.5	-1.0
	baz=12								
GNI	Garni	20.08	304	P		P		23 02 52.4	-1.4
	comp=Z,5.3nm,0.8s,baz=5.2,slow=19,SNR=1.2								
GNI				LR		LR		23 11 11.8	
	comp=Z,101nm,19.1s,baz=112,slow=39								
	comp=Z,5.3nm,0.8s								
MAKZ	Makanchi	20.22	32	P		P		23 02 53.5	-1.6
MAKZ				IAmb		IAmb		23 02 59.2	
	comp=Z,39nm,1.5s								
MAKZ	Makanchi	20.22	32	P		P		23 02 53.5	-1.6
MAKZ				pmax		pmax			
	comp=Z,39nm,1.5s								
MK31	Makanchi Array	20.36	33	P		P		23 02 54.9	-1.7
MK31	Makanchi Array	20.36	33	‖*e*P		P		23 02 55.3	-1.3
MKAR	Makanchi Array	20.36	33	P		P		23 02 55.4	-1.2
	comp=Z,7.7nm,0.7s,baz=209,slow=11,SNR=43								
MKAR				LR		LR		23 11 20.5	
	comp=Z,176nm,18.0s,baz=233,slow=38								
	comp=Z,7.7nm,0.7s								
AKTO	Aktyubinsk	20.85	345	P		P		23 03 01.2	-0.7
	comp=Z,4.0nm,0.9s,baz=158,slow=10,SNR=14								
AKTO				LR		LR		23 12 17.8	
	comp=Z,126nm,18.2s,baz=157,slow=40								
	comp=Z,4.0nm,0.9s								
LSA	Lhasa	21.40	86	P		P		23 03 09.5	+1.0
LSA				IAmb		IAmb		23 03 11.5	
	comp=Z,18nm,1.2s								
LSA	Lhasa	21.40	86	P		P		23 03 10.9	+2.4
LSA				pmax		pmax			
	comp=Z,15nm,1.1s								
LSA	Lhasa	21.40	86	P		P		23 03 09.5	+1.0
LSA				pmax		pmax			
	comp=Z,18nm,1.2s						

BELG	**Belogornoye**	**25.84**	**333**	*de*	P		**P**	**23 03 52.7**	**+1.4**
BELG					pmax		pmax		
	comp=Z,5.0nm,1.3s								
ARU	**Arti**	**26.47**	**350**		P		**P**	**23 03 57.9**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=169,slow=12,SNR=7.5								
ARU					LR		LR	23 15 21.1	
	comp=Z,105nm,18.6s,baz=85,slow=39								
	comp=Z,2.6nm,0.6s								
ARU	**Arti**	**26.47**	**350**		P		**P**	**23 03 57.5**	**+0.4**
ARU					IAmb		IAmb	23 04 02.2	
	comp=Z,11nm,1.2s								
ARU	**Arti**	**26.47**	**350**	*c*	*i*P		**P**	**23 03 58.7**	**+1.6**
ARU								23 04 38.0	
ARU					S		**S**	**23 08 33.8**	**+3.3**
ARU					SS		**SnSn**	**23 09 33.6**	**+1.8**
ARU					pmax		pmax		
	comp=Z,14nm,1.4s								
ANN	**Anapa**	**26.83**	**310**		*e*P		**P**	**23 04 01.1**	**+0.6**
ANN					*e**PP		**pP**	**23 04 03.9**	**-0.8**
ANN					*e*			23 04 43.2	
ANN					*e*			23 07 21.8	
ANN					*e*S		**S**	**23 08 38.5**	**+2.0**
ANN					pmax		pmax		
	comp=Z,20nm,1.4s								
ZAA0	**Zalesovo Array**	**26.91**	**24**		P		**P**	**23 04 00.1**	**-1.0**
ZAA0					IAmb		IAmb	23 04 30.6	
	comp=Z,11nm,1.5s								
ZALV	**Zalesovo Beam**	**26.91**	**24**		P		**P**	**23 03 60.0**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=233,slow=9.4,SNR=8.1								
ZALV					LR		LR	23 15 43.1	
	comp=Z,139nm,20.9s,baz=156,slow=39								
	comp=Z,1.7nm,0.6s								
ZALV	**Zalesovo Beam**	**26.91**	**24**		P		**P**	**23 04 00.1**	**-0.9**
ZALV	**Zalesovo Beam**	**26.91**	**24**		P		**P**	**23 04 00.1**	**-0.9**
EIL	**Elat**	**27.20**	**276**		LR		LR	23 16 45.1	
	comp=Z,158nm,18.0s,baz=68,slow=41								
BRTR	**Keskin Array B**	**28.21**	**298**		P		**P**	**23 04 13.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=97,slow=9.8,SNR=2.2								
	comp=Z,0.7nm,0.5s								
BRTR	**Keskin Array B**	**28.21**	**298**		P		**P**	**23 04 13.0**	**-0.1**
GTA	**Gaotai**	**28.63**	**63**	*e*	P		**P**	**23 04 20.0**	**+3.2**
GTA					pmax		pmax		
	comp=Z,7.0nm,1.5s								
GTA					pmax		pmax		
	comp=Z,65nm,4.7s								
GTA					LR		LR		
	comp=N,69nm,11.6s								
GTA					LR		LR		
	comp=E,110nm,13.8s								
GTA					LR		LR		
	comp=Z,130nm,13.5s								
KIRV	**Kirov**	**30.37**	**342**⇑	*e*	P		**P**	**23 04 32.9**	**+1.2**
KNGR	**Kungurtug, Tuv**	**30.64**	**40**⇓	*e*	P		**P**	**23 04 34.9**	**+0.5**
KNGR					pmax		pmax		
	comp=Z,9.0nm,0.8s								
ELL	**Elmali**	**30.89**	**291**		P		**P**	**23 04 37.0**	**+0.2**
ELL	**Elmali**	**30.89**	**291**		P		**P**	**23 04 37.0**	**+0.2**
ELL					pmax		pmax		
	comp=Z,27nm,0.6s								
PZH	**PanZhiHua**	**31.21**	**89**		P		**P**	**23 04 41.0**	**+1.2**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.7s								
PZH					pmax		pmax		
	comp=Z,100nm,5.0s								
CMAR	**Chiang Mai Arr**	**31.83**	**105**		P		**P**	**23 04 46.5**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=300,slow=11,SNR=4.7								
CMAR					LR		LR	23 21 54.2	
	comp=Z,48nm,18.9s,baz=145,slow=44								
	comp=Z,2.1nm,0.3s								
MOS	**Moscow**	**32.38**	**329**	*e*	P		**P**	**23 04 48.3**	**-1.2**
OBN	**Obninsk**	**32.47**	**328**		LR		LR	23 19 23.2	
	comp=Z,24nm,20.3s,baz=182,slow=39								
OBN	**Obninsk**	**32.47**	**328**	*e*	P		**P**	**23 04 50.5**	**+0.2**
OBN				*e*				23 05 59.1	
OBN				*e*	PPP		PPP	23 06 07.6	
OBN				*e*				23 07 37.3	
OBN					pmax		pmax		
	comp=Z,4.0nm,0.4s								
OBN					MLR		MLR		
	comp=Z,65nm,19.0s								
ZAK	**Zakamensk**	**33.87**	**44**	*e*	P		**P**	**23 05 02.9**	**+0.1**
ZAK					pmax		pmax		
	comp=Z,3.0nm,1.0s								
PRGR	**Permogore**	**33.97**	**342**	*e*	P		**P**	**23 05 01.9**	**-1.4**
AKASG	**Malin Array Be**	**34.19**	**317**		P		**P**	**23 05 04.8**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=107,slow=7.0,SNR=13								
	comp=Z,2.0nm,0.9s								
AKBB	**Malin Array Si**	**34.19**	**317**		P		**P**	**23 05 04.9**	**-0.5**
AKBB					IAmb		IAmb	23 05 09.0	
	comp=Z,8.8nm,1.1s								
AKBB	**Malin Array Si**	**34.19**	**317**⇑	*i*	P		**P**	**23 05 05.8**	**+0.4**
MLR	**Muntele Rosu**	**34.82**	**307**		P		**P**	**23 05 11.8**	**+0.7**
MLR					IAmb		IAmb	23 05 30.3	
	comp=Z,7.5nm,1.2s								
MLR	**Muntele Rosu**	**34.82**	**307**		P		**P**	**23 05 11.8**	**+0.7**
MLR					pmax		pmax		
	comp=Z,7.0nm,1.2s								
SONM	**Songino Array**	**35.01**	**49**		P		**P**	**23 05 13.9**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=251,slow=8.1,SNR=5.4								
SONM					LR		LR	23 21 49.5	
	comp=Z,141nm,19.0s,baz=165,slow=40								
	comp=Z,0.6nm,0.6s								
KLMR	**Klimovskoe**	**35.17**	**337**	*e*	P		**P**	**23 05 13.7**	**0.0**
KLMR					pmax		pmax		
	comp=Z,14nm,1.5s								
KLMR	**Klimovskoe**	**35.17**	**337**	*e*	P		**P**	**23 05 13.7**	**0.0**
KLMR					AMP			23 05 15.9	
	comp=Z,14nm,1.5s								
ULN	**Ulaanbaatar**	**35.45**	**49**⇑	*e*	P		**P**	**23 05 18.0**	**+1.5**
BURAR	**Bucovina Array**	**35.76**	**310**		P		**P**	**23 05 18.8**	**-0.3**
BURAR	**Bucovina Array**	**35.76**	**310**		P		**P**	**23 05 18.5**	**-0.6**
VTS	**Vitosha**	**36.35**	**302**		P		**P**	**23 05 23.9**	**-0.4**
VTS	**Vitosha**	**36.35**	**302**		P		**P**	**23 05 23.9**	**-0.4**
VTS					pmax		pmax		
	comp=Z,3.0nm,1.0s								
MNK	**Minsk**	**36.46**	**322**	*i*	P		**P**	**23 05 21.9**	**-3.0**
MNK				*i*				23 06 44.3	
MNK				*i*				23 07 45.7	
MNK				*i*	S		**S**	**23 11 04.4**	**-1.9**
MNK				*i*	SS		**SnSn**	**23 13 33.8**	**-0.7**
MNK				*i*	SSS		SSS	23 13 50.3	
MNK				*i*				23 15 38.6	
MNK					pmax		pmax		
	comp=Z,6.0nm,0.8s								
MNK					pmax		pmax		
	comp=E,1.0nm,0.7s								
MNK					pmax		pmax		
	comp=N,8.0nm,0.9s								
MNK					MLR		MLR		
	comp=Z,47nm,16.0s								
MNK					MLR		MLR		
	comp=E,3.0nm,13.0s								
MNK					MLR		MLR		
	comp=N,16nm,15.0s								
MNK	**Minsk**	**36.46**	**322**	*i*	P		**P**	**23 05 21.9**	**-3.0**
	comp=E,1.0nm,0.7s								
MNK				*i*	P		**P**	**23 05 21.9**	**-3.0**
	comp=N,8.0nm,0.9s								
MNK				*i*	P		**P**	**23 05 21.9**	**-3.0**
	comp=Z,6.0nm,0.8s,baz=115								
MNK				*i*	PP		**PnPn**	**23 06 44.3**	**-3.0**
MNK				*i*	PPP		PPP	23 06 58.8	
MNK				*i*	PcP		**PcP**	**23 07 45.7**	**-2.9**
MNK				*i*	S		**S**	**23 11 04.5**	**-1.9**
MNK				*i*	SS		**SnSn**	**23 13 33.9**	**-0.7**
MNK				*i*	SSS		SSS	23 13 50.4	
MNK				*i*	LQ		LQ	23 17 34.8	
MNK				*i*	LR		LR	23 20 10.6	
MNK				*i*	LRM		MLR	23 21 46.0	
	comp=E,3.0nm,12.9s								
MNK				*i*	LRM		MLR	23 21 46.0	
	comp=Z,47nm,16.1s								
MNK				*i*	LRM		MLR	23 22 03.4	
	comp=N,16nm,15.4s								
ITM	**Ithomi**	**37.27**	**292**		P		**P**	**23 05 31.8**	**-0.3**
LODK	**Lodwar**	**39.85**	**233**		P		**P**	**23 05 57.4**	**+3.4**
FINES	**FINESS Array B**	**40.59**	**331**		P		**P**	**23 05 58.1**	**-1.4**
	comp=N,5.3nm,1.1s,baz=108,slow=8.9,SNR=3.8								
	comp=N,5.3nm,1.1s								
FINES	**FINESS Array B**	**40.59**	**331**	*ce*	P		**P**	**23 06 01.9**	**+2.4**
FINES					pmax		pmax		
	comp=Z,4.0nm,1.1s								
NRIK	**Noril'sk**	**40.69**	**11**		P		**P**	**23 06 00.1**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=212,slow=9.5,SNR=2.2								
	comp=Z,1.6nm,0.6s								
NRIK	**Noril'sk**	**40.69**	**11**⇓	*e*	P		**P**	**23 05 59.9**	**-0.3**
NRIK					pmax		pmax		
	comp=Z,4.0nm,0.9s								
LVZ	**Lovozero**	**41.79**	**343**		P		**P**	**23 06 08.8**	**-0.6**
LVZ	**Lovozero**	**41.79**	**343**		P		**P**	**23 06 08.8**	**-0.6**
LVZ					pmax		pmax		
	comp=Z,34nm,1.4s								
CUC	**Castrocucco**	**41.90**	**297**		P		**P**	**23 06 10.5**	**-0.2**
CUC					IAmb		IAmb	23 06 28.3	
	comp=Z,6.4nm,0.9s								
KMBO	**Kilima Mbogo**	**41.98**	**227**		P		**P**	**23 06 13.7**	**+1.9**
	comp=Z,4.0nm,0.8s,baz=43,slow=12,SNR=9.6								
	comp=Z,4.0nm,0.8s								
KMBO	**Kilima Mbogo**	**41.98**	**227**		P		**P**	**23 06 11.1**	**-0.7**
KMBO					IAmb		IAmb	23 06 15.5	
	comp=Z,6.4nm,1.0s								
KMBO	**Kilima Mbogo**	**41.98**	**227**		P		**P**	**23 06 14.5**	**+2.7**
GERES	**GERESS Array B**	**43.55**	**310**		P		**P**	**23 06 24.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=116,slow=6.1,SNR=4.6								
GERES					PcP		**PcP**	**23 08 11.3**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=246,slow=4.2,SNR=4.5								
	comp=Z,0.3nm,0.6s								
BRG	**Berggiesshubel**	**43.61**	**313**	*e*	P		**P**	**23 06 25.3**	**+1.0**
BRG					Amp			23 06 27.9	
	comp=Z,11nm,1.5s								
BRG	**Berggiesshubel**	**43.61**	**313**	*e*	P		**P**	**23 06 25.3**	**+1.0**
BRG					pmax		pmax		
	comp=Z,11nm,1.5s								
ARCES	**ARCESS Array B**	**45.37**	**341**		P		**P**	**23 06 37.6**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=140,slow=5.1,SNR=19								
	comp=Z,4.1nm,0.7s								
ARCES	**ARCESS Array B**	**45.37**	**341**		P		**P**	**23 06 37.7**	**-0.4**
ARCES					IAmb		IAmb	23 06 40.2	
	comp=Z,3.7nm,0.7s								
ARCES	**ARCESS Array B**	**45.37**	**341**		P		**P**	**23 06 37.7**	**-0.4**
ARCES					pmax		pmax		
	comp=Z,4.0nm,0.7s								
NB2	**NORSAR Subarra**	**47.06**	**327**		P		**P**	**23 06 50.5**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=107,slow=7.9								
NOA	**NORSAR Array B**	**47.06**	**327**		P		**P**	**23 06 49.6**	**-1.9**
	comp=Z,0.8nm,0.8s,baz=107,slow=7.5,SNR=4.6								
NOA					LR		LR	23 29 29.8	
	comp=Z,73nm,19.1s,baz=35,slow=40								
	comp=Z,0.8nm,0.8s								
KEST	**Kesra**	**47.51**	**292**		P		**P**	**23 06 54.9**	**-0.6**
	comp=Z,4.1nm,0.7s,baz=141,slow=1.9,SNR=5.6								
	comp=Z,4.1nm,0.7s								
KEST	**Kesra**	**47.51**	**292**		P		**P**	**23 06 55.7**	**+0.2**
KSRS	**Korea Array**	**50.67**	**65**		P		**P**	**23 07 18.2**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=282,slow=8.9,SNR=2.4								
	comp=Z,0.6nm,0.3s								
LEM	**Lembang**	**54.20**	**126**		LR		LR	23 32 35.5	
	comp=Z,51nm,18.2s,baz=222,slow=38								
VOI	**Vohitsoka**	**55.45**	**202**		P		**P**	**23 07 55.8**	**+0.8**
ESDC	**Sonseca Array**	**56.97**	**300**		P		**P**	**23 08 03.9**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=70,slow=8.2,SNR=5.0								
	comp=Z,0.6nm,0.8s								
SEY	**Seymchan**	**61.49**	**31**⇓	*e*	P		**P**	**23 08 38.7**	**+2.2**
SEY					pmax		pmax		
	comp=Z,4.0nm,1.0s								
TOA0	**Torodi Ar. Sit**	**61.77**	**269**		P		**P**	**23 08 37.3**	**-1.9**
TORD	**Torodi Ar. Bea**	**61.77**	**269**		P		**P**	**23 08 37.4**	**-1.7**
	comp=Z,3.3nm,0.9s,baz=58,slow=6.7,SNR=18								
TORD					PcP		**PcP**	**23 09 19.2**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=61,slow=6.3,SNR=3.7								
	comp=Z,3.3nm,0.9s								
TORD	**Torodi Ar. Bea**	**61.77**	**269**		P		**P**	**23 08 37.4**	**-1.7**
TORD					IAmb		IAmb	23 08 39.1	
	comp=Z,4.5nm,1.1s								
BORG	**Borgarnes**	**61.89**	**331**		LR		LR	23 36 50.4	
	comp=Z,134nm,20.6s,baz=23,slow=37								
KAPI	**Kappang**	**62.00**	**115**		LR		LR	23 39 02.1	
	comp=Z,23nm,18.1s,baz=316,slow=39								
BILL	**Bilibino**	**65.61**	**24**	*e*	P		**P**	**23 09 07.0**	**+3.3**
BILL				*e*				23 09 39.0	
BILL				*e*				23 11 29.2	
BILL				*e*	PPP		PPP	23 13 01.5	
BILL					pmax		pmax		
	comp=Z,4.0nm,1.0s								
KOWA	**Kowa**	**66.07**	**273**		P		**P**	**23 09 06.5**	**-1.1**
LBTB	**Lobatse**	**67.68**	**220**		P		**P**	**23 09 18.5**	**+0.9**
LBTB	**Lobatse**	**67.68**	**220**		P		**P**	**23 09 18.5**	**+0.9**
LBTB					pmax		pmax		
	comp=Z,5.0nm,0.8s								
BOSA	**Boshof**	**70.72**	**218**		P		**P**	**23 09 36.6**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=34,slow=6.5,SNR=7.6								
	comp=Z,4.3nm,0.8s								
BOSA	**Boshof**	**70.72**	**218**		P		**P**	**23 09 36.2**	**-0.2**
IMAR	**Indian Mountai**	**78.96**	**16**		P		**P**	**23 10 23.2**	**-0.3**
H21K	**Melozitna Rive**	**79.45**	**15**		P		**P**	**23 10 25.9**	**-0.3**
H21K					IAmb		IAmb	23 10 28.6	
	comp=Z,4.6nm,1.3s								
BMAR	**Burnt Mountain**	**79.58**	**12**		P		**P**	**23 10 27.6**	**+0.7**
MLY	**Manley**	**80.45**	**15**		P		**P**	**23 10 31.2**	**-0.4**
CAST	**Castle Rocks**	**81.50**	**16**		P		**P**	**23 10 36.9**	**-0.4**
CAST					IAmb		IAmb	23 10 39.7	
	comp=Z,3.8nm,0.8s								
ILAR	**Eielson Array**	**81.50**	**14**		P		**P**	**23 10 37.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=326,slow=4.7,SNR=6.8								
ILAR					LR		LR	23 51 28.1	
	comp=Z,38nm,19.2s,baz=28,slow=39								
	comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**82.31**	**118**		P		**P**	**23 10 42.7**	**+0.5**
	comp=Z,2.7nm,1.1s,baz=320,slow=4.8,SNR=6.2								
	comp=Z,2.7nm,1.1s								
WRA	**Warramunga Arr**	**82.31**	**118**		P		**P**	**23 10 42.7**	**+0.5**
WRAB	**Tennant Creek**	**82.32**	**118**⇓	*e*	P		**P**	**23 10 42.8**	**+0.6**
WRAB					pmax		pmax		
	comp=Z,29nm,2.7s								
J26L	**Joseph Creek**	**82.40**	**13**		P		**P**	**23 10 42.8**	**+0.8**
J26L					IAmb		IAmb	23 10 44.1	
	comp=Z,2.9nm,0.9s								
SCRK	**Sand Creek**	**82.79**	**13**		P		**P**	**23 10 44.1**	**0.0**
SCRK					IAmb		IAmb	23 10 46.4	
	comp=Z,2.7nm,0.8s								
BCAR	**Beaver Creek A**	**84.04**	**12**		P		**P**	**23 10 51.1**	**+0.6**
ASAR	**Alice Springs**	**84.19**	**122**		P		**P**	**23 10 52.0**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=309,slow=5.3,SNR=11								
	comp=Z,1.8nm,0.7s								
ASAR	**Alice Springs**	**84.19**	**122**		P		**P**	**23 10 52.4**	**+0.5**
HYT	**Haines Junctio**	**86.89**	**11**		P		**P**	**23 11 06.0**	**+1.2**
HYT					IAmb		IAmb	23 11 33.9	
	comp=Z,2.9nm,1.0s								
YKA	**Yellowknife Ar**	**87.29**	**0**		P		**P**	**23 11 06.0**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=341,slow=6.5,SNR=4.2								
	comp=Z,1.7nm,0.6s								
YKA	**Yellowknife Ar**	**87.29**	**0**		P		**P**	**23 11 06.0**	**-0.6**
VNA1	**Neumayer--Stat**	**113.62**	**201**		PKPdf		**PKiKP**	**23 16 57.8**	**+0.3**
VNA3	**Neumayer Olymp**	**114.28**	**200**		PKPdf		**PKiKP**	**23 16 59.4**	**+0.6**

*DDA **17** 23:00:53.0±0.0, 35.09N×25.81E, h46km, ML2.9*
*ISK **17** 23:00:53.6, 35.51N×25.78E, h9km, ML3.1/13*
*THE **17** 23:00:54.6, 35.48N×25.77E, h13km±2km, ML2.7/7, Error ellipse: s-maj=2.3km s-min=0.5km az=182.0*
*ATH **17** 23:00:54.5, 35.51N×25.78E, h12km±5km, ML2.8/7, Error ellipse: s-maj=5.2km s-min=0.9km az=189.0*

ISC 17 23:00:54.3±1.0, 35.51N±0.03×25.77E±0.02, h13km±9km, n48, σ1§03/69, Crete

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
STIA	**Sitia Lasithi**	**0.40**	**139**	P		**Pg**	**23 01 02.4**	**+0.1**
STIA				S		**Sg**	**23 01 08.4**	**+0.7**
STIA	**Sitia Lasithi**	**0.40**	**139**	P		**Pg**	**23 01 02.5**	**+0.1**
STIA				S		**Sg**	**23 01 07.7**	**0.0**
STIA				AML		AML	23 01 09.7	
	comp=E,1458μm,0.5s							
STIA				AML		AML	23 01 11.1	
	comp=N,1600μm,0.3s							
FRMA	**Ierapetra Chan**	**0.49**	**183**	P		**Pg**	**23 01 04.0**	**+0.1**
FRMA				S		**Sg**	**23 01 11.0**	**+0.6**
	comp=N,435nm,0.2s							
FRMA	**Ierapetra Chan**	**0.49**	**183**	P		**Pg**	**23 01 04.1**	**+0.1**
FRMA				S		**Sg**	**23 01 11.1**	**+0.6**
FRMA				AML		AML	23 01 11.4	
	comp=E,3293μm,0.3s							
FRMA				AML		AML	23 01 15.9	
	comp=N,2470μm,0.4s							
ZKR	**Zakros**	**0.54**	**137**	P		**Pg**	**23 01 04.8**	**0.0**
ZKR				S		**Sg**	**23 01 12.5**	**+0.6**
	comp=N,598nm,0.4s							
ZKR	**Zakros**	**0.54**	**137**	PG		**Pg**	**23 01 04.7**	**0.0**
ZKR				SG		**Sg**	**23 01 12.2**	**+0.3**
ZKR	**Zakros**	**0.54**	**137**	P		**Pg**	**23 01 04.8**	**0.0**
ZKR				S		**Sg**	**23 01 12.1**	**+0.1**
ZKR				AML		AML	23 01 12.8	
	comp=E,1861μm,0.6s							
ZKR				AML		AML	23 01 13.7	
	comp=N,521μm,0.3s							
HRKL	**Herakleio**	**0.58**	**251**	P		**Pg**	**23 01 05.6**	**0.0**
HRKL				S		**Sb**	**23 01 14.5**	**+0.1**
	comp=N,2μm,0.5s							
HRKL	**Herakleio**	**0.58**	**251**	PG		**Pg**	**23 01 05.5**	**0.0**
HRKL				SG		**Sg**	**23 01 14.1**	**+0.9**
HRKL	**Herakleio**	**0.58**	**251**	P		**Pg**	**23 01 05.5**	**0.0**
HRKL				S		**Sb**	**23 01 14.4**	**+0.1**
HRKL				AML		AML	23 01 15.9	
	comp=N,9520μm,0.6s							
HRKL				AML		AML	23 01 17.3	
	comp=E,13068μm,0.4s							
IACM	**Heraklion**	**0.60**	**251**	P		**Pg**	**23 01 06.0**	**-0.1**
IACM				S		**Sb**	**23 01 15.3**	**+0.3**
	comp=E,5μm,0.3s							
IACM	**Heraklion**	**0.60**	**251**	P		**Pg**	**23 01 05.9**	**-0.1**
IACM				S		**Sb**	**23 01 15.3**	**+0.3**
KSTL	**Kastelli Herak**	**0.60**	**251**	P		**Pg**	**23 01 03.2**	**-2.8**
KSTL				S		**Sg**	**23 01 10.5**	**-3.6**
KSTL				AML		AML	23 01 11.0	
	comp=N,5010μm,0.5s							
KSTL				AML		AML	23 01 11.6	
	comp=E,3657μm,0.4s							
IDI	**Anoyia**	**0.75**	**253**	P		**Pg**	**23 01 08.7**	**-0.1**
IDI				S		**Sg**	**23 01 18.8**	**+0.1**
	comp=E,815nm,0.3s							
IDI	**Anoyia**	**0.75**	**253**	PG		**Pg**	**23 01 08.6**	**-0.2**
IDI				SG		**Sg**	**23 01 18.8**	**+0.1**
IDI	**Anoyia**	**0.75**	**253**	P		**Pg**	**23 01 08.1**	**-0.7**
IDI				AML		AML	23 01 19.6	
	comp=E,1408μm,0.3s							
IDI				AML		AML	23 01 19.8	
	comp=N,2026μm,0.4s							
SANT	**Santorini**	**0.90**	**344**	P		**Pg**	**23 01 11.9**	**+0.2**
SANT				S		**Sb**	**23 01 24.3**	**+0.6**
	comp=N,1μm,0.3s							
SANT	**Santorini**	**0.90**	**344**	PG		**Pg**	**23 01 11.4**	**-0.3**
SANT	**Santorini**	**0.90**	**344**	P		**Pg**	**23 01 11.1**	**-0.6**
SANT				AML		AML	23 01 24.8	
	comp=E,3330μm,0.6s							
SANT				AML		AML	23 01 25.5	
	comp=N,924μm,0.2s							
THR6	**Thira Island,**	**0.90**	**341**	P		**Pg**	**23 01 11.2**	**-0.5**
THR9	**Santorini-Faro**	**0.91**	**339**	P		**Pg**	**23 01 12.3**	**+0.4**
THR5	**Thira Island,**	**0.97**	**340**	P		**Pb**	**23 01 12.4**	**-0.6**
SAP3	**Santorini-Thir**	**0.99**	**340**	P		**Pg**	**23 01 13.7**	**+0.3**
CMBO	**Columbo, Santo**	**1.01**	**343**	P		**Pg**	**23 01 14.0**	**+0.3**
PRNS	**Prines Rethymn**	**1.04**	**263**	P		**Pn**	**23 01 15.1**	**+0.5**
PRNS				S		**Sn**	**23 01 29.6**	**+0.6**
	comp=N,225nm,0.3s							
IMMV	**Iera Moni Meta**	**1.46**	**269**	PN		**Pb**	**23 01 21.6**	**+0.3**
GVD	**Gavdhos**	**1.53**	**245**	PN		**Pn**	**23 01 22.1**	**+0.8**
APE	**Apeiranthos**	**1.57**	**353**	PN		**Pn**	**23 01 22.5**	**+0.6**
NIS1	**Nisyros Isl.**	**1.58**	**46**	PN		**Pn**	**23 01 22.8**	**+0.7**
KOSK	**Kos Island**	**1.58**	**38**	PN		**Pb**	**23 01 22.8**	**-0.6**
DAT	**Datca**	**1.91**	**50**	PN		**Pn**	**23 01 27.3**	**+0.7**
DAT	**Datca**	**1.91**	**50**	P		**Pn**	**23 01 26.4**	**-0.2**
BODT	**Bodrum**	**1.99**	**38**	PN		**Pn**	**23 01 28.4**	**+0.7**
ARG	**Arkhangelos**	**2.04**	**69**	P		**Pn**	**23 01 28.0**	**-0.4**
ARG				S		**Sn**	**23 01 52.6**	**-1.1**
ARG	**Arkhangelos**	**2.04**	**69**	PN		**Pn**	**23 01 27.9**	**-0.4**
TURN	**Turunc**	**2.37**	**57**	PN		**Pn**	**23 01 33.5**	**+0.6**
TURN	**Turunc**	**2.37**	**57**	P		**Pn**	**23 01 32.7**	**-0.2**
TURN				S		**Sn**	**23 01 58.7**	**-3.1**
TURN				*i* AML		AML	23 02 11.0	
	comp=N,18nm,0.6s							
YER	**Yerkesik**	**2.60**	**51**	PN		**Pn**	**23 01 37.3**	**+1.2**
DALY	**Dalyan (Mula)**	**2.68**	**60**	PN		**Pn**	**23 01 38.4**	**+1.3**
AYDN	**Tasoluk**	**2.74**	**38**	P		**Pn**	**23 01 40.5**	**+2.5**
FETY	**Fethiye**	**2.91**	**66**	PN		**Pn**	**23 01 39.9**	**-0.5**
FETY	**Fethiye**	**2.91**	**66**	P		**Pn**	**23 01 38.8**	**-1.5**
CAME	**Cameli-Denizli**	**3.20**	**62**	PN		**Pn**	**23 01 45.5**	**+1.1**
AKAS	**Kas**	**3.20**	**76**	PN		**Pn**	**23 01 43.9**	**-0.5**
AKAS	**Kas**	**3.20**	**76**	P		**Pn**	**23 01 41.5**	**-2.9**
TAVA	**DENIZLI_Tavas**	**3.20**	**51**	P		**Pn**	**23 01 45.3**	**+0.9**
TAVA				S		**Sn**	**23 02 23.3**	**+0.9**
CAEL	**Denizli, Camel**	**3.29**	**60**	P		**Pn**	**23 01 44.7**	**-1.0**
CAEL				*i* AML		AML	23 02 18.0	
	comp=N,66nm,1.9s							
CAEL				S		**Sn**	**23 02 26.3**	**+1.5**
CAEL				*i* AML

CHIC				*e*S	**Sn**	**23 09 57.2**	**-2.2**
NORC	**Norcasia**	**5.13**	**235**	*e*P	**Pn**	**23 09 05.5**	**+2.2**
NORC				*e*S	**Sn**	**23 10 02.4**	**-0.8**
GUY2C	**Guyana, Caldas**	**5.73**	**235**	*e*P	**Pn**	**23 09 13.7**	**+1.7**
GUY2C				*e*S	**Sn**	**23 10 18.9**	**+0.3**
PRAC	**Prado**	**6.40**	**221**	*e*P	**Pn**	**23 09 23.1**	**+2.4**
PRAC				*e*S	**Sn**	**23 10 34.9**	**+0.6**

KRNET ***17*** *23:08:41.8±0.1, 39°.02N×74°.11E, mb2.8*
ISC 17 23:08:35.7±4.5, 39°.0N±0°.2×74°.1E±0°.2, h10km, n4, σ1§39/7, 5C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**2.85**	**3**	⇑*i*P	**Pb**	**23 09 27.7**	**+1.0**
	baz=3.0						
ARLS				⇑*i*S	**Sb**	**23 10 01.2**	**-0.5**
	baz=3.0						
GAR	**Garm**	**2.97**	**271**	⇑*i*P	**Pb**	**23 09 29.2**	**+0.4**
	baz=71						
GAR				⇑*i*S	**Sb**	**23 10 04.1**	**-1.2**
	baz=71						
UCH	**Uchtor**	**3.23**	**5**	⇓*e*P	**Pb**	**23 09 33.4**	**+0.1**
	baz=5.0						
UCH				⇓*i*S	**Sb**	**23 10 11.1**	**-1.7**
	baz=5.0						
KK31	**Karatay Array**	**4.92**	**327**	⇑Pg	**Pb**	**23 10 03.3**	**+1.4**
	0.1nm,0.2s,baz=152,slow=15						
KK31				⇓Lg	Lg	23 10 56.0	
	0.2nm,0.3s,baz=152,slow=27						

MOS ***17*** *23:12:37.0±0.0, 41°.84N×46°.73E, h23km, MPVA3.0*
DRS ***17*** *23:12:38.6±0.0, 41°.80N×46°.65E, h16km*
ISC 17 23:12:37.9±1.1, 41°.83N±0°.03×46°.67E±0°.02, h19km±3km, n20, σ1§37/39, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGD	**Lagodekhi**	**0.32**	**271**	P	**Pg**	**23 12 44.6**	**-0.2**
LGD				S	**Sg**	**23 12 49.4**	**-0.3**
KMKR	**Kumukh**	**0.44**	**46**	*e*Pg	**Pg**	**23 12 46.9**	**-0.1**
KMKR				*e*Sg	**Sb**	**23 12 53.5**	**0.0**
DDFL	**Dedoflistskaro**	**0.57**	**227**	P	**Pn**	**23 12 52.3**	**+1.4**
DDFL				S	**Sn**	**23 13 05.2**	**+5.5**
XNZR	**Khunzakh**	**0.71**	**2**	*e*Pg	**Pb**	**23 12 52.0**	**+0.3**
XNZR				*e*Sg	**Sg**	**23 13 02.2**	**+0.7**
URKR	**Urkarakh**	**0.79**	**65**	*e*Pg	**Pg**	**23 12 53.2**	**-0.2**
URKR				*e*Sg	**Sn**	**23 13 04.8**	**-0.6**
ARKR	**Arakani**	**0.81**	**17**	*e*Pg	**Pb**	**23 12 53.6**	**+0.3**
ARKR				*e*Sg	**Sg**	**23 13 05.2**	**+0.7**
AKT	**Akhty**	**0.87**	**113**	*e*Pg	**Pb**	**23 12 54.0**	**-0.3**
AKT				*e*Sg	**Sg**	**23 13 05.8**	**-0.6**
SGKR	**Sergokala**	**0.97**	**49**	*e*Pg	**Pg**	**23 12 56.5**	**-0.2**
SGKR				*e*Sg	**Sn**	**23 13 10.1**	**+0.5**
KRNR	**Karanay**	**1.01**	**10**	*e*Pg	**Pb**	**23 12 57.0**	**+0.2**
KRNR				*e*Sg	**Sg**	**23 13 11.2**	**+0.2**
BUJR	**Buynaksk**	**1.04**	**18**	*e*Pg	**Pn**	**23 12 57.8**	**+0.3**
BUJR				*e*Sg	**Sg**	**23 13 13.1**	**+1.1**
DGRG	**David-gareji**	**1.04**	**249**	P	**Pb**	**23 12 57.4**	**+0.1**
DGRG				S	**Sg**	**23 13 12.5**	**+0.6**
KSMR	**Kasumkent**	**1.11**	**101**	*e*Pg	**Pn**	**23 12 58.1**	**-0.3**
KSMR				*e*Sg	**Sg**	**23 13 13.5**	**-0.6**
DBC	**Dubki**	**1.20**	**6**	*e*Pg	**Pb**	**23 13 00.2**	**+0.3**
DBC				*e*Sg	**Sg**	**23 13 16.7**	**0.0**
DVE	**Vedeno**	**1.20**	**340**	*e*Pg	**Pg**	**23 13 00.8**	**-0.2**
DVE				*e*Sg	**Sg**	**23 13 16.7**	**-0.1**
DLMR	**Dylym**	**1.24**	**359**	*e*Pg	**Pb**	**23 13 01.3**	**+0.7**
DLMR				*e*Sg	**Sg**	**23 13 19.0**	**+0.9**
SEAG	**Tbilisi Sea**	**1.40**	**268**	P	**Pn**	**23 12 59.8**	**-2.5**
SEAG				S	**Sg**	**23 13 23.1**	**0.0**
BTNK	**Botanikuri**	**1.41**	**265**	P	Pn	23 12 56.3	-6.2
BTNK				S	**Sn**	**23 13 16.2**	**-4.3**
KANR	**Karaman**	**1.49**	**24**	*e*Pg	**Pb**	**23 13 04.9**	**0.0**
KANR				*e*Sg	**Sg**	**23 13 25.6**	**-0.5**
DMNI	**Dmanisi**	**1.93**	**256**	P	**Pn**	**23 13 11.0**	**+1.3**
DMNI				S	**Sb**	**23 13 35.2**	**-0.9**
TRLG	**Trialeti**	**1.95**	**262**	P	**Pb**	**23 13 12.3**	**-0.4**
TRLG				S	**Sb**	**23 13 36.8**	**0.0**

IDC ***17*** *23:36:43.7±1.3, 37°.71N×141°.87E, h0km, mb3.5/6, mbtmp3.5/7, ML2.6/1, MS2.2/1, Error ellipse: s-maj=29.3km s-min=24.6km az=91.0*
JMA ***17*** *23:36:45.8±0.1, 37°.8N±0°.2×141°.9E±0°.6, h25km±1km, MD4.1/40, MV4.1/40, E OFF FUKUSHIMA PREF*
ISC 17 23:36:45.1±2.0, 37.75N±0°.04×141.86E±0°.07, h11km±11km, n29, σ0§52/32, mb3.6/6, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibobu**	**0.64**	**331**	P	**Pb**	**23 36 58.3**	**+0.1**
JIKH				S	**Sb**	**23 37 07.0**	**-0.1**
JMST	**Minamisoumatoc**	**0.77**	**268**	P	**Pb**	**23 37 00.4**	**-0.1**
JIO	**Ouri**	**0.81**	**330**	P	**Pb**	**23 37 01.1**	**-0.1**
JIO				S	**Sg**	**23 37 11.6**	**+0.4**
JMM	**Marumori**	**0.85**	**278**	P	**Pb**	**23 37 01.7**	**-0.2**
JMM				S	**Sb**	**23 37 13.0**	**-0.3**
JFK	**Kawauchi**	**0.87**	**244**	*i* P	**Pb**	**23 37 02.0**	**-0.2**
JFK				S	**Sb**	**23 37 13.9**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.07**	**233**	*i* P	**Pb**	**23 37 04.7**	**-0.8**
JKMT	**Kesennumamotoy**	**1.10**	**344**	⇓*i*P	**Pb**	**23 37 05.4**	**-0.7**
JKMT				⇓S	**Sb**	**23 37 19.1**	**-1.3**
JOU	**Okura**	**1.12**	**303**	*i* P	**Pg**	**23 37 06.8**	**+0.1**
JOU				S	**Sg**	**23 37 21.8**	**+0.5**
JOU	**Okura**	**1.12**	**303**	A	A	23 37 06.8	
	comp=E,8.0nm,0.6s,comp=E,5.0nm,0.7s						
JFT	**Otama**	**1.23**	**260**	*i* P	**Pb**	**23 37 08.2**	**-0.2**
JMK	**Ichinoseki**	**1.30**	**337**	*i* P	**Pn**	**23 37 08.8**	**-0.4**
JMK				S	**Sb**	**23 37 25.6**	**-0.6**
JYAR	**Yonezawaarcadi**	**1.37**	**277**	A	A	23 37 09.9	
	comp=E,8.0nm,1.3s,comp=E,8.0nm,1.3s						
JYS	**Shirataka**	**1.49**	**289**	*i* P	**Pb**	**23 37 12.2**	**-0.6**
JYS				*e*S	**Sn**	**23 37 31.2**	**-0.2**
JYK	**Kaneyama**	**1.66**	**315**	*i* P	**Pn**	**23 37 14.3**	**+0.2**
JYK				*e*S	**Sn**	**23 37 35.0**	**-0.3**
JFY	**Yanaizu**	**1.75**	**259**	P	**Pb**	**23 37 16.3**	**-0.8**
JOM	**Ohasama**	**1.77**	**346**	P	**Pn**	**23 37 15.6**	**-0.1**
JOM				S	**Sn**	**23 37 38.5**	**+0.2**
MJAR	**Matsushiro Arr**	**3.16**	**249**	Pn	**Pn**	**23 37 34.6**	**-0.2**
	0.6nm,0.3s,baz=76,slow=14,SNR=33						
MJAR				Sn	**Sn**	**23 38 12.6**	**+0.2**
	baz=71,slow=18						
MJAR				LR	LR	23 38 49.1	
	comp=Z,39nm,18.3s,baz=108,slow=40 13nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.22**	**123**	T	T	00 12 15.7	
	baz=315,slow=75,SNR=40						
H11N1	**WAKE ISLAND Hy**	**28.23**	**123**	T	T	00 12 09.4	
	baz=315,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**28.24**	**123**	T	T	00 12 10.2	
	baz=315,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**28.96**	**125**	T	T	00 13 04.2	
	baz=317,slow=76,SNR=74						
H11S3	**WAKE ISLAND Hy**	**28.96**	**125**	T	T	00 13 04.3	
	baz=317,slow=76,SNR=72						
H11S2	**WAKE ISLAND Hy**	**28.98**	**125**	T	T	00 13 05.4	
	baz=317,slow=76,SNR=46						
ZALV	**Zalesovo Beam**	**41.70**	**312**	P	**P**	**23 44 33.2**	**-0.3**
	0.5nm,0.4s,baz=81,slow=8.9,SNR=2.2 0.5nm,0.4s						
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**23 44 53.0**	**+0.3**
	0.2nm,0.6s,baz=90,slow=8.6,SNR=2.1 0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**45.84**	**307**	P	**P**	**23 45 08.3**	**+1.3**
	0.5nm,0.4s,baz=81,slow=8.0,SNR=4.1 0.5nm,0.4s						
ILAR	**Eielson Array**	**48.70**	**33**	P	**P**	**23 45 29.5**	**+0.5**
	0.3nm,0.8s,baz=263,slow=7.8,SNR=2.5 0.3nm,0.8s						
WRA	**Warramunga Arr**	**57.82**	**188**	P	**P**	**23 46 36.5**	**-0.1**
	0.4nm,0.5s,baz=3.6,slow=7.3,SNR=7.3 0.4nm,0.5s						
ASAR	**Alice Springs**	**61.55**	**188**	P	**P**	**23 47 02.4**	**+0.1**
	0.4nm,0.8s,baz=16,slow=8.3,SNR=2.4 0.4nm,0.8s						

IDC ***17*** *23:36:60.0±26.0, 22°.93S×173°.07W, h0km, mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=483.7km s-min=149.3km az=77.0*

NEIC ***17*** *23:38:51.8±2.9, 25°.30S±0°.08×179°.3E±0°.2, h618km±17km, mb4.3/13, Error ellipse: s-maj=28.8km s-min=6.9km az=68.0*
ISC 17 23:38:51.2±1.3, 25°.3S±0°.1×179°.3E±0°.2, h600km, n20, σ1§28/20, mb4.2/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.64**	**351**	P	**P**	**23 40 48.1**	**+0.7**
MARNC	**Mare, Loyalty**	**10.99**	**288**	P	**P**	**23 41 20.7**	**+0.8**
URZ	**Urewera**	**13.02**	**188**	P	**P**	**23 41 40.3**	**+0.4**
BFZ	**Birch Farm**	**15.51**	**189**	P	**P**	**23 42 04.2**	**+0.3**
BFZ				IAmb	IAmb	23 42 20.8	
	comp=Z,25nm,1.3s						
EIDS	**Eidsvold**	**25.44**	**264**	P	**P**	**23 43 32.9**	**-0.5**
EIDS				IAmb	IAmb	23 43 42.7	
	comp=Z,17nm,1.4s						
CTA	**Charters Tower**	**30.83**	**273**	P	**P**	**23 44 18.9**	**-1.4**
	comp=Z,5.3nm,0.4s,baz=93,slow=11,SNR=14 comp=Z,5.3nm,0.4s						
CTAO	**Charters Tower**	**30.83**	**273**	P	**P**	**23 44 18.8**	**-1.4**
STKA	**Stephens Creek**	**33.58**	**250**	P	**P**	**23 44 44.7**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=115,slow=6.2,SNR=4.0 comp=Z,1.4nm,0.6s						
STKA	**Stephens Creek**	**33.58**	**250**	P	**P**	**23 44 44.8**	**+1.5**
BBOO	**Buckleboo**	**38.27**	**249**	P	**P**	**23 45 22.6**	**+0.7**
ASAR	**Alice Springs**	**41.15**	**262**	P	**P**	**23 45 44.8**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=97,slow=7.3,SNR=13 comp=Z,1.3nm,0.5s						
WR0	**Warramunga Arr**	**41.47**	**268**	P	**P**	**23 45 45.5**	**-2.0**
WR0				IAmb	IAmb	23 45 59.9	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**41.65**	**268**	P	**P**	**23 45 47.2**	**-1.7**
	comp=Z,3.5nm,0.6s,baz=104,slow=8.0,SNR=62 comp=Z,3.5nm,0.6s						
WRA	**Warramunga Arr**	**41.65**	**268**	P	**P**	**23 45 47.2**	**-1.7**
FORT	**Forrest**	**45.19**	**251**	P	**P**	**23 46 16.4**	**+0.3**
KNRA	**Kununurra**	**48.02**	**271**	P	**P**	**23 46 36.1**	**-1.4**
KNRA				IAmb	IAmb	23 46 54.5	
	comp=Z,22nm,1.4s						
FITZ	**Fitzroy Crossi**	**50.06**	**267**	P	**P**	**23 46 51.9**	**-0.6**
FITZ				IAmb	IAmb	23 47 21.2	
	comp=Z,9.5nm,1.4s						
MORW	**Morawa**	**55.76**	**251**	P	**P**	**23 47 33.1**	**+0.4**
MORW				IAmb	IAmb	23 47 54.3	
	comp=Z,36nm,1.4s						
QSPA	**South Pole Qui**	**64.76**	**180**	P	**P**	**23 48 32.6**	**+1.1**
BELA	**Belgrano 2**	**75.10**	**173**	P	**P**	**23 49 30.4**	**-1.9**
BELA				IAmb	IAmb	23 49 31.4	
	comp=Z,1.5nm,0.6s						

NEIC ***17*** *23:44:42.2±1.2, 19°.5S±0°.1×176°.9W±0°.1, h343km±11km, mb4.3/10, Error ellipse: s-maj=21.0km s-min=3.3km az=138.0*
IDC ***17*** *23:44:53.7±7.1, 18°.26S×178°.06W, h409km±35km, mb3.3/4, mbtmp4.0/5, Error ellipse: s-maj=172.6km s-min=30.0km az=141.0*
ISC 17 23:44:43.2±1.0, 19°.5S±0°.1×177°.0W±0°.1, h350km, n20, σ0§57/20, mb4.1/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.00**	**290**	P	**Pn**	**23 46 03.9**	**+1.0**
	10nm,0.6s,baz=88,slow=16,SNR=8.3						
MSVF	**Nonsavu**	**5.00**	**290**	Pn	**Pn**	**23 46 03.0**	**+0.1**
PINNC	**Pines Island,**	**14.82**	**255**	P	**Pn**	**23 47 57.6**	**-0.4**
BFZ	**Birch Farm**	**21.86**	**194**	P	**P**	**23 49 17.2**	**-0.9**
BFZ				IAmb	IAmb	23 49 28.6	
	comp=Z,57nm,1.4s						
CTA	**Charters Tower**	**34.51**	**263**	P	**P**	**23 51 00.3**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=90,slow=11,SNR=1.3 comp=Z,4.1nm,0.9s						
CTAO	**Charters Tower**	**34.51**	**263**	P	**P**	**23 50 59.6**	**-0.2**
CTAO				IAmb	IAmb	23 51 22.0	
	comp=Z,28nm,1.4s						
MCQ	**Macquarie Isla**	**39.43**	**202**	P	**P**	**23 51 41.4**	**+1.1**
WB0	**Warramunga Arr**	**45.63**	**261**	P	**P**	**23 52 29.6**	**-0.6**
ASAR	**Alice Springs**	**45.64**	**256**	P	**P**	**23 52 30.4**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=97,slow=8.2,SNR=22 comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**45.64**	**256**	P	**P**	**23 52 29.6**	**-0.7**
WRA	**Warramunga Arr**	**45.65**	**261**	P	**P**	**23 52 29.9**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=95,slow=7.9,SNR=32 comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**45.65**	**261**	P	**P**	**23 52 30.0**	**-0.5**
QSPA	**South Pole Qui**	**70.54**	**180**	P	**P**	**23 55 20.8**	**0.0**
QSPA				IAmb	IAmb	23 55 21.5	
	comp=Z,2.0nm,0.8s						
ADK	**Adak**	**71.10**	**0**	P	**P**	**23 55 23.7**	**-0.2**
M19K	**Big River Lodg**	**83.14**	**11**	P	**P**	**23 56 29.8**	**-0.4**
M19K				IAmb	IAmb	23 56 44.5	
	comp=Z,7.7nm,1.2s						
K20K	**Telida**	**84.55**	**10**	P	**P**	**23 56 37.5**	**+0.3**
K20K				IAmb	IAmb	23 56 38.5	
	comp=Z,3.2nm,1.0s						
J20K	**Nowinta River**	**85.30**	**10**	P	**P**	**23 56 41.4**	**+0.5**
J20K				IAmb	IAmb	23 56 42.9	
	comp=Z,6.9nm,1.4s						
IMAR	**Indian Mountai**	**87.05**	**9**	P	**P**	**23 56 49.1**	**-0.2**
ILAR	**Eielson Array**	**87.17**	**12**	P	**P**	**23 56 49.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=222,slow=5.4,SNR=6.2 comp=Z,0.3nm,0.4s						
BMAR	**Burnt Mountain**	**89.95**	**12**	P	**P**	**23 57 03.3**	**+0.3**

KRNET ***17*** *23:46:27.6±0.1, 39°.34N×73°.66E, mb3.4*
SOME ***17*** *23:46:28.5, 39°.38N×73°.58E, h10km*
NNC ***17*** *23:46:32.9±2.2, 39°.49N×73°.75E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=17.1km s-min=12.2km az=164.0*
ISC 17 23:46:31.4±1.3, 39°.35N±0°.06×73°.48E±0°.04, h10km, n43, σ2§39/65, 14C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.29**	**336**	⇑*i*P	**Pn**	**23 46 53.4**	**-2.2**
	baz=31						
OHH				⇑*i*S	**Sn**	**23 47 12.3**	**-0.6**
	baz=31						
DRK	**Karamyk**	**1.31**	**276**	⇑*i*P	**Pn**	**23 46 55.0**	**-1.1**
	baz=76						
DRK				⇑*i*S	**Sn**	**23 47 15.1**	**+1.3**
	baz=76						
GAR	**Garm**	**2.49**	**263**	⇑*e*P	**Pn**	**23 47 13.3**	**+1.2**
	baz=64						
GAR				⇑*i*S	**Sb**	**23 47 46.5**	**-0.5**
	baz=64						
ARLS	**Aral**	**2.59**	**14**	⇑*i*P	**Pn**	**23 47 12.5**	**-1.0**
	baz=11						
ARLS				⇑*i*S	**Sn**	**23 47 45.3**	**+0.2**
	baz=11						
AML	**Almayashu**	**2.78**	**3**	P	**Pn**	**23 47 17.1**	**+0.7**
	SNR=49						
TRKS	**Terek-Say**	**2.82**	**321**	⇑*i*P	**Pn**	**23 47 16.5**	**-0.2**
	baz=19						
TRKS				⇑*i*S	**Sn**	**23 47 52.2**	**+1.5**
	baz=19						
UCH	**Uchtor**	**2.98**	**15**	P	**Pn**	**23 47 20.1**	**+1.0**
	SNR=21						
UCH	**Uchtor**	**2.98**	**15**	⇑*i*P	**Pn**	**23 47 18.2**	**-0.9**
	baz=12						
UCH				⇑*i*S	**Sn**	**23 47 55.1**	**0.0**
	baz=12						
EKS2	**Erkin-Say**	**3.31**	**4**	P	**Pn**	**23 47 24.8**	**+1.4**
	SNR=22						
AAK	**Ala-Archa**	**3.37**	**13**	P	**Pn**	**23 47 25.2**	**+0.9**
	SNR=7.4						
MRKS	**Merke**	**3.40**	**357**	*e*P	**Pg**	**23 47 35.3**	**-1.1**
	3.1nm,0.2s						
MRKS				*e*S	**Sg**	**23 48 23.3**	**+2.9**
	33nm,0.6s						
MRKS	**Merke**	**3.40**	**357**	Pg	**Pg**	**23 47 35.3**	**-1.1**
	3.1nm,0.2s						
MRKS				Lg	Lg	23 48 23.3	
	33nm,0.6s						
CHMS	**Chumysh**	**3.77**	**14**	P	**Pn**	**23 47 31.8**	**+2.2**
	SNR=6.9						
TKM2	**Tokmak 2**	**3.91**	**23**	P	**Pn**	**23 47 32.7**	**+1.1**
	SNR=6.1						
TKM2	**Tokmak 2**	**3.91**	**23**	⇓Pn	**Pn**	**23 47 32.9**	**+1.2**
	1.5nm,0.4s						
TKM2				⇑Pg	**Pg**	**23 47 43.6**	**-2.6**
	5.0nm,0.5s						
TKM2				⇑Lg	Lg	23 48 28.1	
	6.0nm,0.6s						
KST	**Kastek**	**4.13**	**26**	*e*P	**Pb**	**23 47 43.2**	**-1.2**
	2.3nm,0.5s						
KST				*e*S	**Sb**	**23 48 36.7**	**+2.3**
	12nm,0.5s						
KST	**Kastek**	**4.13**	**26**	Pg	**Pb**	**23 47 43.2**	**-1.2**
	2.3nm,0.5s						
KST				Lg	Lg	23 48 36.7	
	12nm,0.5s						
SGDS	**Sogindy**	**4.19**	**12**	*e*P	**Pb**	**23 47 45.4**	**+0.2**
	4.5nm,0.3s						
SGDS				*e*S	**Sg**	**23 48 40.6**	**-5.2**
	6.9nm,0.2s						
SGDS	**Sogindy**	**4.19**	**12**	Pg	**Pb**	**23 47 45.2**	**0.0**
SGDS				Lg	Lg	23 48 40.7	
DGS	**Degeres**	**4.25**	**23**	*e*P	**Pb**	**23 47 44.9**	**-1.4**
	2.1nm,0.6s						
DGS				*e*S	**Sb**	**23 48 39.7**	**+2.0**
	5.3nm,0.5s						
DGS	**Degeres**	**4.25**	**23**	Pg	**Pb**	**23 47 45.6**	**-0.7**
	2.1nm,0.6s						
DGS				Lg	Lg	23 48 40.3	
	5.3nm,0.5s						
KK31	**Karatay Array**	**4.37**	**330**	Pn	**Pn**	**23 47 39.6**	**+1.8**
	0.5nm,0.2s,baz=135,slow=12,SNR=38						
KK31				⇓Pg	**Pb**	**23 47 49.7**	**+1.5**
	2.4nm,0.5s,baz=145,slow=15,SNR=8.8						
KK31				⇓Lg	Lg	23 48 47.8	
	3.3nm,0.4s,baz=148,slow=32,SNR=4.2						
MTBS	**Maitube**	**4.38**	**30**	*e*P	**Pb**	**23 47 47.3**	**-1.1**
	1.5nm,0.1s						
MTBS				*e*S	**Sb**	**23 48 43.7**	**+2.3**
	5.2nm,0.3s						
MTBS	**Maitube**	**4.38**	**30**	Pg	**Pb**	**23 47 47.3**	**-1.1**
MTBS				Lg	Lg	23 48 43.7	
KRBS	**Karabastau**	**4.64**	**20**	*e*P	**Pb**	**23 47 52.8**	**-0.2**
	2.3nm,0.3s						
KRBS				*e*S	**Sb**	**23 48 52.5**	**+3.6**
	6.0nm,0.8s						
KRBS	**Karabastau**	**4.64**	**20**	Pg	**Pb**	**23 47 52.8**	**-0.2**
	2.3nm,0.3s						
KRBS				Lg	Lg	23 48 52.5	
	6.0nm,0.8s						
MDOK	**Medeo**	**4.66**	**34**	*e*P	**Pb**	**23 47 52.8**	**-0.5**
	1.9nm,0.7s						
MDOK				*e*S	**Sb**	**23 48 53.3**	**+3.8**
	6.2nm,0.7s						
MDOK	**Medeo**	**4.66**	**34**	Pg	**Pb**	**23 47 52.5**	**-0.8**
	1.5nm,0.3s						
MDOK				Lg	Lg	23 48 53.6	
	6.2nm,0.7s						
KTBS	**Karatobe**	**4.97**	**28**	*e*P	**Pb**	**23 47 58.2**	**-0.4**
	1.9nm,0.8s						
KTBS				*e*S	**Sb**	**23 49 02.0**	**+3.6**
	7.9nm,0.5s						
KUU	**Kurty**	**5.02**	**24**	*e*P	**Pb**	**23 47 58.6**	**-0.7**
	1.9nm,0.5s						
KUU				*e*S	**Sb**	**23 49 03.0**	**+3.4**
	6.9nm,0.7s						
KUU	**Kurty**	**5.02**	**24**	Pg	**Pb**	**23 47 58.1**	**-1.2**
	1.3nm,0.5s						
KUU				Lg	Lg	23 49 03.0	
	6.9nm,0.7s						
SATY	**Saty**	**5.24**	**43**	*e*P	**Pb**	**23 48 04.9**	**+1.7**
	1.0nm,0.2s						
SATY				*e*S	**Sg**	**23 49 13.8**	**-6.0**
	6.5nm,0.6s						
SATY	**Saty**	**5.24**	**43**	Pg	**Pb**	**23 48 04.9**	**+1.7**
	1.0nm,0.2s						
SATY				Lg	Lg	23 49 13.8	
	6.5nm,0.6s						
KURS	**Kuram**	**5.43**	**39**	*e*P	**Pb**	**23 48 08.5**	**+2.1**
	3.3nm,0.9s						
KURS				*e*S	**Sg**	**23 49 19.8**	**-5.9**
	5.3nm,1.4s						
KURS	**Kuram**	**5.43**	**39**	Pg	**Pb**	**23 48 08.8**	**+2.5**
KURS				Lg	Lg	23 49 20.6	
UZB	**Uzynbulak**	**5.64**	**46**	*e*P	**Pb**	**23 48 10.2**	**+0.2**
	0.8nm,0.3s						
UZB				*e*S	**Sb**	**23 49 22.6**	**+4.9**
	2.1nm,0.8s						
UZB	**Uzynbulak**	**5.64**	**46**	Pg	**Pb**	**23 48 10.2**	**+0.2**
UZB				Lg	Lg	23 49 22.6	
KPKS	**Kokpek**	**5.67**	**42**	*e*P	**Pb**	**23 48 11.4**	**+0.9**
	1.1nm,0.2s						
KPKS				*e*S	**Sb**	**23 49 24.5**	**+5.9**
	8.3nm,0.8s						
KPKS	**Kokpek**	**5.67**	**42**	Pg	**Pb**	**23 48 11.4**	**+0.9**
	1.0nm,0.1s						
KPKS				Lg	Lg	23 49 24.5	
	8.3nm,0.8s						
BTLS	**Baital**	**5.70**	**4**	*e*P	**Pb**	**23 48 13.5**	**+2.6**
	1.6nm,1.1s						
BTLS				*e*S	**Sg**	**23 49 28.8**	**-5.5**
	4.6nm,0.7s						
BTLS	**Baital**	**5.70**	**4**	Pg	**Pb**	**23 48 13.5**	**+2.6**
BTLS				Lg	Lg	23 49 28.2	
SHLS	**Shalkode**	**5.89**	**48**	Pg	**Pg**	**23 48 23.0**	**-1.3**
	1.0nm,0.2s						
SHLS				Lg	Lg	23 49 44.6	
	6.0nm,0.9s						
DJR	**Jarkent**	**6.85**	**41**	Pg	**Pb**	**23 48 33.3**	**+2.8**
DJR				Lg	Lg	23 50 02.2	

IDC ***18*** *00:11:13.6±1.4, 27°.16S×70°.76W, h0km, mb3.7/1, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=53.5km s-min=25.4km az=114.0*
SJA ***18*** *00:11:20.0±0.8, 27°.47S×70°.74W, h57km±3km, ML4.0, MW3.9*
NEIC ***18*** *00:11:21.4±2.0, 27°.50S±0°.04×70°.82W±0°.06, h49km±4km, Error ellipse: s-maj=9.5km s-min=4.6km az=124.0*
GUC ***18*** *00:11:22.0±0.7, 27°.53S×70°.72W, h55km±2km, ML4.0*
ISC 18 00:11:20.9±0.9, 27°.48S±0°.02×70°.83W±0°.04, h47km±7km, n87, σ1§73/118, mb4.3/3, 6C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC06	**Mina Casimiro**	**0.44**	**74**		**Pn**	**00 11 31.9**	**+0.6**
AC06				Sn	**Sn**	**00 11 38.9**	**+0.1**
**A

AC02					Sn		**Sn**	**00 12 09.1 +1.1**
AC02	**Maricunga**	**1.65**	**67**	*i*	P		**Pn**	**00 11 49.2 +1.4**
AC02				*i*	S		**Sn**	**00 12 09.3 +1.2**
AC02					IAML			00 12 10.8
	comp=E,5μm,0.2s							
AC02	**Maricunga**	**1.65**	**67**	*e*	P		**Pn**	**00 11 49.0 +1.2**
AC02				*e*	S		**Sn**	**00 12 09.6 +1.5**
AC02					IAML			00 12 10.3
	comp=Z,2μm,0.4s							
CO05	**La Serena**	**2.46**	**188**				**Pn**	**00 11 58.7 +0.2**
CO05	**La Serena**	**2.46**	**188**	*e*	P		**Pn**	**00 11 58.7 +0.2**
CO05					IAML			00 12 42.1
	comp=E,1μm,0.5s							
GO02	**Mina Guanaco**	**2.56**	**26**		Pn		**Pn**	**00 12 01.7 +1.5**
GO02	**Mina Guanaco**	**2.56**	**26**	*e*	P		**Pn**	**00 12 01.0 +0.8**
GO02				*e*	S		**Sn**	**00 12 32.7 +2.3**
CO01	**Juntas del Tor**	**2.57**	**166**				**Pn**	**00 12 01.4 +1.1**
CO01	**Juntas del Tor**	**2.57**	**166**	*e*	P		**Pn**	**00 12 01.5 +1.2**
CO01	**Juntas del Tor**	**2.57**	**166**	*e*	P		**Pn**	**00 12 01.0 +0.7**
CO01				*e*	P		**Pn**	**00 12 01.4 +1.1**
CO01				*e*	S		**Sn**	**00 12 35.9 +5.5**
CO01				*e*	S		**Sn**	**00 12 36.0 +5.5**
CO01					IAML			00 12 50.4
	comp=Z,300nm,0.3s							
VCA	**Vinchina**	**2.64**	**119**	*e*	P		**Pn**	**00 12 04.0 +2.9**
VCA				*e*	S		**Sn**	**00 12 32.2 +0.2**
VCA					IAML			00 12 42.7
	comp=Z,319nm,0.3s							
GO04	**Tololo Observa**	**2.68**	**179**				**Pn**	**00 12 02.6 +0.7**
GO04	**Tololo Observa**	**2.68**	**179**	⇑ *i*	P		**Pn**	**00 12 02.4 +0.5**
GO04				*i*	S		**Sn**	**00 12 34.1 +0.9**
GO04	**Tololo Observa**	**2.68**	**179**	*e*	P		**Pn**	**00 12 02.7 +0.9**
GO04				*e*	S		**Sn**	**00 12 33.2 -0.1**
PB14	**IPOC Station P**	**2.87**	**8**		Pn		**Pn**	**00 12 04.9 +0.5**
PB14	**IPOC Station P**	**2.87**	**8**	*e*	P		**Pn**	**00 12 05.0 +0.5**
PB14				*e*	S		**Sn**	**00 12 38.2 +0.3**
PB14					IAML			00 12 55.7
	comp=Z,350nm,0.5s							
AROD	**Rodeo**	**2.93**	**156**	*e*	P		**Pn**	**00 12 08.0 +2.7**
AROD				*e*	S		Sn	00 12 26.1 -13
CO06	**Fray Jorge**	**3.26**	**192**				**Pn**	**00 12 08.6 -0.9**
CO06	**Fray Jorge**	**3.26**	**192**	⇓ *i*	P		**Pn**	**00 12 08.6 -0.9**
CO06					IAML			00 13 08.4
	comp=E,281nm,0.2s							
CO03	**El Pedregal**	**3.35**	**178**				**Pn**	**00 12 11.2 +0.3**
CO03	**El Pedregal**	**3.35**	**178**	⇑ *i*	P		**Pn**	**00 12 11.3 +0.5**
CO03				*e*	S		**Sn**	**00 12 49.8 +0.3**
CO03					IAML			00 13 14.1
	comp=E,538nm,0.4s							
CO03	**El Pedregal**	**3.35**	**178**	*e*	P		**Pn**	**00 12 11.3 +0.5**
CO03				*e*	S		**Sn**	**00 12 47.7 -1.8**
CO03					IAML			00 13 15.3
	comp=Z,287nm,0.4s							
ACCO	**Cerro Coronel**	**3.46**	**154**	*e*	P		**Pn**	**00 12 15.0 +2.4**
CO02	**Combarbal**	**3.71**	**182**				**Pn**	**00 12 15.6 -0.2**
CO02	**Combarbal**	**3.71**	**182**	⇑ *i*	P		**Pn**	**00 12 15.6 -0.2**
CO02				*i*	S		**Sn**	**00 12 58.6 +0.2**
CO02	**Combarbal**	**3.71**	**182**	*e*	P		**Pn**	**00 12 15.0 -0.9**
CO02				*e*	P		**Pn**	**00 12 15.7 -0.2**
CO02				*e*	S		**Sn**	**00 13 05.7 +7.2**
CO02					IAML			00 13 22.8
	comp=Z,364nm,0.4s							
ACLC	**CERRO LA CRUZ**	**3.93**	**120**	*e*	P		**Pn**	**00 12 20.1 +1.3**
ACLC				*e*	S		**Sn**	**00 13 09.5 +5.7**
ACLC					IAML			00 13 10.1
	comp=Z,97nm,0.5s							
AVFE	**Valle Fertil**	**4.33**	**138**	*e*	P		**Pn**	**00 12 25.5 +1.2**
AVFE				*e*	S		**Sn**	**00 13 17.3 +3.7**
AVFE					IAML			00 13 20.4
	comp=Z,87nm,0.5s							
PB15	**IPOC Station P**	**4.43**	**16**				**Pn**	**00 12 27.0 +1.2**
PB15	**IPOC Station P**	**4.43**	**16**	*e*	P		**Pn**	**00 12 27.0 +1.2**
PB15				*e*	S		Sn	00 13 31.7 +16
PB15				*e*	S		Sn	00 13 32.2 +16
PB15					IAML			00 13 40.9
	comp=Z,634nm,0.3s							
ZON	**Zonda**	**4.47**	**156**				**Pn**	**00 12 27.9 +1.8**
RTLS	**Leoncito**	**4.51**	**163**	*e*	P		**Pn**	**00 12 29.0 +2.1**
RTLS					IAML			00 13 31.7
	comp=Z,110nm,0.4s							
APLL	**PUNTA DE LOS L**	**4.76**	**129**	*e*	P		**Pn**	**00 12 31.0 +0.8**
APLL				*e*	S		**Sn**	**00 13 23.5 -0.6**
PB06	**IPOC Station P**	**4.89**	**14**		Pn		**Pn**	**00 12 31.1 -1.0**
PB06	**IPOC Station P**	**4.89**	**14**	*e*	P		**Pn**	**00 12 31.0 -1.0**
PB06				*e*	S		Sn	00 13 38.2 +11
PB06					IAML			00 13 58.9
	comp=Z,154nm,0.5s							
VA06	**Catapilco**	**5.08**	**184**				**Pn**	**00 12 33.1 -1.4**
LVC	**Limon Verde**	**5.15**	**20**		Pn		**Pn**	**00 12 26.3 -9.5**
	comp=Z,0.3nm,0.3s,baz=118,slow=6.4,SNR=15							
LVC			Lg			Lg		00 13 46.0
	comp=Z,6.0nm,0.3s,baz=324,slow=17,SNR=6.9							
	comp=Z,1.2nm,0.2s							
LVC	**Limon Verde**	**5.15**	**20**				**Pn**	**00 12 36.0 +0.2**
PB04	**IPOC Station P**	**5.16**	**7**		Pn		**Pn**	**00 12 36.0 +0.2**
PB04	**IPOC Station P**	**5.16**	**7**	*e*	P		**Pn**	**00 12 35.9 +0.1**
PB04				*e*	P		**Pn**	**00 12 38.2 +2.4**
PB04				*e*	S		**Sn**	**00 13 33.7 -0.5**
PB04					IAML			00 14 10.3
	comp=Z,152nm,0.6s							
ACHE	**Chepes**	**5.17**	**136**	*e*	P		**Pn**	**00 12 38.0 +2.2**
ACHE				*e*	S		**Sn**	**00 13 28.7 -5.6**
VA03	**San Esteban**	**5.27**	**177**				**Pn**	**00 12 37.4 +0.2**
VA03	**San Esteban**	**5.27**	**177**	*e*	P		**Pn**	**00 12 37.0 -0.2**
VA03					IAML			00 14 12.2
	comp=Z,102nm,0.4s							
ROC1	**El Roble**	**5.48**	**182**				**Pn**	**00 12 38.8 -1.4**
PEL	**Peldehue**	**5.65**	**179**		Pn		**Pn**	**00 12 41.9 -0.5**
MT02	**Curacav**	**5.77**	**183**				**Pn**	**00 12 42.3 -1.6**
PB09	**IPOC Station P**	**5.84**	**15**		Pn		**Pn**	**00 12 46.3 +1.2**
PB02	**IPOC Station P**	**6.19**	**8**		Pn		**Pn**	**00 12 49.8 -0.1**
MT09	**Talagante**	**6.28**	**181**				**Pn**	**00 12 49.6 -1.4**
LMEL	**Las Melosas**	**6.37**	**175**				**Pn**	**00 12 52.9 +0.5**
MT01	**Popeta**	**6.38**	**183**				**Pn**	**00 12 50.4 -1.8**
PB01	**IPOC Station P**	**6.52**	**11**				**Pn**	**00 12 54.2 -0.2**
BO02	**Sierra Bellavi**	**7.29**	**180**				**Pn**	**00 13 03.0 -1.8**
H03N1	**Juan Fernandez**	**9.16**	**228**	T		T		00 23 04.6
	baz=52,slow=72,SNR=552							
H03N2	**Juan Fernandez**	**9.17**	**228**	T		T		00 23 10.0
	baz=52,slow=72,SNR=453							
H03N3	**Juan Fernandez**	**9.18**	**228**	T		T		00 23 06.7
	baz=52,slow=72,SNR=391							
CPUP	**Villa Florida**	**12.11**	**88**		Pn		Pn	00 14 05.0 -5.7
	comp=Z,0.2nm,0.3s,baz=268,slow=17,SNR=1.3							
	comp=Z,2.8nm,1.1s							
SIV	**San Ignacio**	**14.58**	**40**		Pn		Pn	00 14 38.7 -5.8
	baz=214,slow=7.3,SNR=2.5							
	comp=Z,0.5nm,0.3s							
VNA2	**Neumayer--Watz**	**55.66**	**159**	P		P		**00 20 51.6 -0.2**
	baz=111,slow=8.4							
VNA2	**Neumayer--Watz**	**55.66**	**159**	PcP		**PcP**		**00 21 49.3 -1.5**
SNAA	**Sanae**	**57.27**	**160**	P		**P**		**00 21 03.0 -0.3**
SNAA	**Sanae**	**57.27**	**160**	P		**P**		**00 21 02.5 -0.7**
SNAA					IAmb		IAmb	00 21 25.1
	comp=Z,3.2nm,1.0s							
TROLL	**Troll, Antarti**	**58.98**	**160**	P		**P**		**00 21 15.2 -0.2**
QSPA	**South Pole Qui**	**62.74**	**180**	P		**P**		**00 21 41.1 +0.1**
TOA0	**Torodi Ar. Sit**	**81.02**	**70**	P		**P**		**00 23 30.4 -0.7**
TOA0					IAmb		IAmb	00 23 41.1
	comp=Z,6.1nm,1.4s							
TORD	**Torodi Ar. Bea**	**81.02**	**70**	P		**P**		**00 23 30.1 -1.0**
	comp=Z,0.5nm,0.8s,baz=256,slow=5.0,SNR=6.5							
	comp=Z,0.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**81.02**	**70**	P		**P**		**00 23 30.5 -0.6**
TORD					IAmb		IAmb	00 23 46.4
	comp=Z,1.5nm,0.8s							
WRA	**Warramunga Arr**	**126.93**	**210**	PKP		**PKPdf**		**00 30 18.4 -1.9**
	comp=Z,0.5nm,0.7s,baz=169,slow=1.7,SNR=5.2							
ZALV	**Zalesovo Beam**	**148.07**	**27**	PKPbc		**PKPbc**		**00 31 01.0 +0.1**
	comp=Z,1.3nm,0.6s,baz=289,slow=3.1,SNR=6.1							
MKAR	**Makanchi Array**	**151.40**	**40**	PKPbc		**PKPbc**		**00 31 09.0 -0.3**
	comp=Z,0.6nm,0.7s,baz=313,slow=3.0,SNR=4.6							

*IDC **18** 00:34:11.9±2.2,7.47S×128.06E,h162km±20km,mb3.7/10, mbtmp4.2/11,MS2.0/1,Error ellipse: s-maj=22.2km s-min=12.2km az=61.0*

*NEIC **18** 00:34:11.7±2.4,7.45S±0.08×128.16E±0.07,h155km±7km, mb4.4/31,Error ellipse: s-maj=11.9km s-min=10.2km az=178.0*

*DJA **18** 00:34:11.9±0.2,8°S±2°×12°8E±°,h143km±3km,M4.6/31, mb4.4/31,mB5.4/6,MLv4.6/16,Mw(mB)4.8/6,MwMwp6.4/1,*

Mwp6.3/1

ISC 18 00:34:11.0±0.4,7.47S±0.05×128.14E±0.04,h150km,n118, σ1944/122,mb4.3/22,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**3.17**	**100**	Pn		**Pn**	**00 35 02.0**	**+1.5**
SAUI				Sn		**Sn**	**00 35 38.5**	**-0.3**
SAUI	**Saumlaki**	**3.17**	**100**	P		**Pn**	**00 35 02.4**	**+1.9**
SAUI				S		**Sn**	**00 35 38.7**	**-0.2**
AAI	**Ambon**	**3.75**	**1**	P		**Pn**	**00 35 11.0**	**+2.9**
MSAI	**Masohi**	**4.17**	**11**	P		**Pn**	**00 35 16.7**	**+3.2**
NLAI	**Namlea**	**4.33**	**346**	P		**Pn**	**00 35 19.8**	**+4.2**
SOEI	**Soe**	**4.46**	**239**	Pn		**Pn**	**00 35 18.8**	**+1.4**
SOEI	**Soe**	**4.46**	**239**	P		**Pn**	**00 35 19.2**	**+1.8**
SOEI				S		**Sn**	**00 36 09.3**	**+0.2**
SOEI	**Soe**	**4.46**	**239**	P		**Pn**	**00 35 18.4**	**+1.0**
BATI	**Baumata**	**5.20**	**238**	P		**Pn**	**00 35 29.1**	**+2.0**
	86nm,0.5s,baz=80,slow=4.3,SNR=17							
BATI				S		**Sn**	**00 36 24.6**	**-1.9**
	184nm,0.4s,baz=118,slow=14,SNR=6.0							
BATI	**Baumata**	**5.20**	**238**	P		**Pn**	**00 35 29.7**	**+2.6**
	0.7nm2μm67nm,0.6s							
BATI				S		**Sn**	**00 36 26.7**	**+0.2**
	0.7nm2μm67nm,0.6s							
SANI	**Sanana**	**5.79**	**338**	P		**Pn**	**00 35 32.0**	**-3.0**
MMRI	**Maumere**	**5.96**	**258**	P		**Pn**	**00 35 39.4**	**+2.1**
	0.4nm7μm64nm,0.8s							
FAKI	**Fak Fak**	**6.09**	**42**	Pn		**Pn**	**00 35 38.3**	**-0.7**
FAKI	**Fak Fak**	**6.09**	**42**	P		**Pn**	**00 35 37.8**	**-1.2**
	0.2nm31nm,1.2s							
FAKI	**Fak Fak**	**6.09**	**42**	P		**Pn**	**00 35 38.8**	**-0.2**
MTN	**Manton Dam**	**6.10**	**151**	Pn		**Pn**	**00 35 38.7**	**-0.4**
MTN	**Manton Dam**	**6.10**	**151**	P		**Pn**	**00 35 38.8**	**-0.3**
EDFI	**Ende, Flores**	**6.52**	**258**	P		**Pn**	**00 35 46.7**	**+2.0**
	0.1nm14nm,0.6s							
KDU	**Kakadu**	**6.71**	**141**	P		**Pn**	**00 35 47.1**	**-0.2**
LBMI	**Labuha**	**6.81**	**355**	P		**Pn**	**00 35 52.9**	**+4.3**
	0.2nm48nm,0.7s							
BASI	**Baing, Sumba**	**7.96**	**249**	P		**Pn**	**00 36 06.0**	**+2.1**
	0.5nm106nm,1.1s							
KNRA	**Kununurra**	**8.18**	**176**	Pn		**Pn**	**00 36 05.9**	**-1.0**
KNRA	**Kununurra**	**8.18**	**176**	P		**Pn**	**00 36 06.3**	**-0.6**
KAPI	**Kappang**	**8.69**	**286**	P		**Pn**	**00 36 12.9**	**-0.8**
WBSI	**Waikabubak, Su**	**8.92**	**255**	P		**Pn**	**00 36 16.1**	**-0.7**
	64nm,0.7s							
GTOI	**Gorontalo**	**9.54**	**327**	P		Pn	00 36 30.4	+5.4
	5.3nm,1.2s							
PLAI	**Plampang**	**10.35**	**262**	P		**Pn**	**00 36 34.8**	**-1.0**
	43nm,1.1s							
PLAI	**Plampang**	**10.35**	**262**	P		**Pn**	**00 36 35.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**10.85**	**193**	P		**Pn**	**00 36 39.2**	**-3.0**
	22nm,0.5s,baz=29,slow=11,SNR=76							
FITZ				S		Sn	00 38 33.2	-9.0
	26nm,0.4s,baz=323,slow=23,SNR=8.5							
FITZ				LR		LR	00 41 38.1	
	comp=Z,9.2nm,21.1s,baz=60,slow=41							
TWSI	**Taliwang, Sumb**	**11.22**	**263**	P		**Pn**	**00 36 46.0**	**-1.2**
	10.0nm,0.9s							
WB0	**Warramunga Arr**	**13.65**	**154**			**Pn**	**00 37 15.0**	**-3.5**
WRA	**Warramunga Arr**	**13.78**	**155**	P		Pn	00 37 16.1	-4.1
	23nm,0.5s,baz=321,slow=14,SNR=192							
WRA				S		Sn	00 39 39.6	-13
	54nm,0.7s,baz=326,slow=24,SNR=22							
BBKI	**Banjar Baru**	**13.82**	**286**	P		**P**	**00 37 26.1**	**+1.8**
	30nm,0.6s							
WR0	**Warramunga Arr**	**13.88**	**154**			**Pn**	**00 37 18.2**	**-3.3**
JAGI	**Jajag, Banyuwa**	**13.89**	**265**	Pn		**Pn**	**00 37 22.7**	**+1.0**
JAGI	**Jajag, Banyuwa**	**13.89**	**265**	P		**Pn**	**00 37 21.9**	**+0.2**
	39nm,1.8s							
JAGI	**Jajag, Banyuwa**	**13.89**	**265**	P		**Pn**	**00 37 23.1**	**+1.4**
BLJI	**Banyuglugur**	**14.42**	**268**	P		**P**	**00 37 31.2**	**+0.3**
	29nm,0.7s							
GMJI	**Gumukmas**	**14.58**	**266**	P		**P**	**00 37 32.8**	**+0.1**
	112μm22nm,1.2s							
MTKI	**Muara Teweh, K**	**14.71**	**296**	P		**P**	**00 37 36.1**	**+2.0**
MBWA	**Marble Bar**	**15.86**	**210**			**Pn**	**00 37 46.2**	**+0.1**
MBWA					IAmb		IAmb	00 37 59.5
	comp=Z,56nm,1.5s							
MBWA	**Marble Bar**	**15.86**	**210**	P		**Pn**	**00 37 46.9**	**+0.8**
COEN	**Coen**	**16.11**	**115**	P		**Pn**	**00 37 48.9**	**-0.3**
COEN					IAmb		IAmb	00 37 50.2
	comp=Z,19nm,1.1s							
COEN	**Coen**	**16.11**	**115**	P		**P**	**00 37 50.3**	**+0.7**
PSA00	**Pilbara Seismi**	**16.15**	**209**			**Pn**	**00 37 48.9**	**-0.8**
PSA00					IAmb		IAmb	00 37 53.7
	comp=Z,42nm,1.5s							
PSA00	**Pilbara Seismi**	**16.15**	**209**			**Pn**	**00 37 49.0**	**-0.7**
PSA00					IAmb		IAmb	00 38 08.7
	comp=Z,4.8nm,0.9s							
PSA00	**Pilbara Seismi**	**16.15**	**209**	P		**P**	**00 37 50.9**	**+0.9**
PCJI	**Pacitan**	**16.82**	**266**	P		**P**	**00 37 55.9**	**-1.6**
	comp=Z,53nm,1.3s							
AS31	**Alice Springs**	**17.03**	**162**			**P**	**00 38 00.3**	**+0.6**
AS31					IAmb		IAmb	00 38 01.6
	comp=Z,29nm,0.7s							
ASAR	**Alice Springs**	**17.03**	**162**	P		**P**	**00 38 00.7**	**+0.9**
	comp=Z,61nm,0.5s,baz=337,slow=11,SNR=528							
ASAR				S		S		00 40 58.4 -11
	comp=Z,7.2nm,0.6s,baz=316,slow=20,SNR=5.9							
ASAR				ScP		**ScP**		**00 45 54.6 -3.4**
	comp=Z,0.9nm,0.6s,baz=9.5,slow=1.4,SNR=2.4							
ASAR	**Alice Springs**	**17.03**	**162**			**P**	**00 38 00.1**	**+0.3**
QIS	**Mount Isa**	**17.10**	**141**	P		**P**	**00 38 00.6**	**+0.1**
UGM	**Wanagama**	**17.47**	**267**	P		**P**	**00 38 04.8**	**+0.2**
WRKA	**Warakurna**	**17.47**	**180**	P		**P**	**00 38 05.5**	**+0.9**
SBUM	**Sibu**	**18.70**	**301**	P		**Pn**	**00 38 20.2**	**+0.1**
SBUM					IAmb		IAmb	00 38 21.8
	comp=Z,52nm,1.4s							
MTSU	**Mount Surprise**	**18.98**	**125**	P		**P**	**00 38 22.2**	**+1.0**
KSM	**Kuching**	**19.89**	**296**	P		**P**	**00 38 32.0**	**+1.1**
MEEK	**Meekatharra**	**21.11**	**204**	P		**P**	**00 38 44.0**	**+0.1**
OOD	**Oodnadatta**	**21.44**	**161**	P		**P**	**00 38 47.9**	**+0.4**
CTA	**Charters Tower**	**21.57**	**127**	P		**P**	**00 38 49.2**	**+0.2**
	comp=Z,5.3nm,0.4s,baz=303,slow=12,SNR=10							
	comp=Z,5.3nm,0.4s							
CTAO	**Charters Tower**	**21.57**	**127**	P		**P**	**00 38 49.1**	**+0.2**
CTAO					IAmb		IAmb	00 38 54.8
	comp=Z,24nm,1.3s							
CTAO	**Charters Tower**	**21.57**	**127**	P		**P**	**00 38 49.5**	**+0.5**
FORT	**Forrest**	**23.19**	**180**	P		**P**	**00 39 04.3**	**-0.3**
FORT	**Forrest**	**23.19**	**180**	P		**P**	**00 39 05.5**	**+1.0**
MULG	**Mulgathing**	**23.37**	**167**	P		**P**	**00 39 07.6**	**+1.5**
MORW	**Morawa**	**24.33**	**206**	P		**P**	**00 39 15.4**	**+0.4**
MORW	**Morawa**	**24.33**	**206**	P		**P**	**00 39 16.7**	**+1.8**
QLP	**Quilpie**	**24.40**	**143**	P		**P**	**00 39 16.5**	**+0.9**
LCRK	**Leigh Creek**	**24.74**	**159**	P		**P**	**00 39 19.5**	**+0.9**
BLDU	**Ballidu**	**25.40**	**203**	P		**P**	**00 39 26.1**	**+1.5**
BBOO	**Buckleboo**	**26.27**	**165**	P		**P**	**00 39 32.5**	**+0.1**
BBOO					IAmb		IAmb	00 39 41.8
	comp=Z,26nm,1.2s							
BBOO	**Buckleboo**	**26.27**	**165**	P		**P**	**00 39 32.6**	**+0.2**
STKA	**Stephens Creek**	**27.33**	**154**	P		**P**	**00 39 41.4**	**-0.6**
	comp=Z,3.7nm,0.5s,baz=335,slow=8.9,SNR=14							
	comp=Z,3.7nm,0.5s							
STKA	**Stephens Creek**	**27.33**	**154**	P		**P**	**00 39 42.0**	**+0.1**
STKA	**Stephens Creek**	**27.33**	**154**	P		**P**	**00 39 43.0**	**+1.0**
HTT	**Hallett**	**27.70**	**160**	P		**P**	**00 39 46.2**	**+1.0**
CMSA	**Cobar Meteorol**	**29.01**	**148**	P		**P**	**00 39 57.3**	**+0.4**
KULM	**Kulim**	**30.22**	**294**	P		**P**	**00 40 06.3**	**-1.4**
ARMA	**Armidale**	**31.71**	**139**	P		**P**	**00 40 20.9**	**+0.1**
ARMA					IAmb		IAmb	00 40 25.3
	comp=Z,9.0nm,1.4s							
ARPS	**Mount Arapiles**	**31.73**	**159**	P		**P**	**00 40 21.9**	**+1.2**
KCSI	**Kotacane, Aceh**	**32.21**	**289**	P		**P**	**00 40 29.6**	**+4.3**
CAN	**Canberra**	**33.69**	**148**	P		**P**	**00 40 38.8**	**+0.9**
CAN					IAmb		IAmb	00 40 40.5
	comp=Z,6.4nm,0.7s							
TOO	**Toolangi**	**33.85**	**155**	P		**P**	**00 40 39.8**	**+0.5**
TOO					IAmb		IAmb	00 40 52.1
	comp=Z,9.8nm,1.1s							
CMAR	**Chiang Mai Arr**	**38.65**	**312**	P		**P**	**00 41 20.3**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=139,slow=7.0,SNR=6.8							
	comp=Z,1.6nm,0.6s							
YATNC	**Mamie plateau,**	**40.03**	**115**	P		**P**	**00 41 32.5**	**+0.8**
JMN	**Monobe**	**41.33**	**7**	P		**P**	**00 41 43.1**	**+1.0**
JMN					IAmb		IAmb	00 41 43.8
	comp=Z,11nm,1.2s							
HHC	**Hu-ho-hao-te**	**50.44**	**344**	*e*	P		**P**	**00 42 53.3**	**-0.2**
HHC					pmax		pmax	
	comp=Z,23nm,0.9s							
HHC					pmax		pmax	
	comp=Z,110nm,4.1s							
USRK	**Ussuriysk Ar.**	**51.54**	**4**	P		**P**	**00 43 00.8**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=199,slow=4.9,SNR=2.7							
	comp=Z,1.5nm,0.6s							
RPZ	**Rata Peaks**	**52.01**	**141**	P		**P**	**00 43 05.6**	**+0.6**
RPZ	**Rata Peaks**	**52.01**	**141**	P		**P**	**00 43 06.7**	**+1.6**
LTZ	**Lake Taylor**	**52.31**	**140**	P		**P**	**00 43 07.5**	**+0.1**
LTZ					IAmb		IAmb	00 43 31.5
	comp=Z,16nm,1.4s							
URZ	**Urewera**	**53.69**	**133**	P		**P**	**00 43 19.0**	**+1.5**
BFZ	**Birch Farm**	**54.02**	**136**	P		**P**	**00 43 20.0**	**+0.1**
SONM	**Songino Array**	**58.32**	**343**	P		**P**	**00 43 50.3**	**0.0**
	comp=Z,1.7nm,0.6s,baz=164,slow=6.6,SNR=8.4							
	comp=Z,1.7nm,0.6s							
SONM	**Songino Array**	**58.32**	**343**	P		**P**	**00 43 51.0**	**+0.7**
SONM					IAmb		IAmb	00 43 51.3
	comp=Z,4.6nm,1.4s							
WMQ	**Urumqi**	**62.80**	**328**	*e*	P		**P**	**00 44 18.9**	**-1.8**
WMQ					pmax		pmax	
	comp=Z,14nm,0.7s							
MK31	**Makanchi Array**	**67.62**	**328**	P		**P**	**00 44 51.0**	**-0.6**
MKAR	**Makanchi Array**	**67.62**	**328**	P		**P**	**00 44 50.5**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=124,slow=7.4,SNR=17							
	comp=Z,1.1nm,0.4s							
MKAR	**Makanchi Array**	**67.62**	**328**	P		**P**	**00 44 50.7**	**-1.0**
ZALV	**Zalesovo Beam**	**71.20**	**335**	P		**P**	**00 45 12.2**	**-1.2**
	comp=Z,2.1nm,0.6s,baz=116,slow=6.0,SNR=9.8							
	comp=Z,2.1nm,0.6s							
ZALV	**Zalesovo Beam**	**71.20**	**335**	P		**P**	**00 45 11.9**	**-1.5**
KURK	**Kurchatov**	**71.97**	**329**	P		**P**	**00 45 17.1**	**-1.0**
KURK					IAmb		IAmb	00 45 18.2
	comp=Z,5.1nm,0.9s							
VNDA	**Vanda**	**72.22**	**173**	P		**P**	**00 45 18.6**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=304,slow=8.7,SNR=1.9							
	comp=Z,0.2nm,0.4s							
VNDA	**Vanda**	**72.22**	**173**	P		**P**	**00 45 18.9**	**-0.3**
KK31	**Karatay Array**	**72.49**	**320**	P		**P**	**00 45 21.1**	**-0.3**
KKAR	**Karatay Array**	**72.49**	**320**	P		**P**	**00 45 20.5**	**-0.9**
MAW	**Mawson**	**73.85**	**201**	P		**P**	**00 45 30.0**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=90,slow=4.0,SNR=2.3							
	comp=Z,0.7nm,0.4s							
MAW	**Mawson**	**73.85**	**201**	P		**P**	**00 45 29.5**	**+0.6**
BRVK	**Borovoye**	**77.56**	**328**	P		**P**	**00 45 49.2**	**-1.0**
BRVK					IAmb		IAmb	00 45 50.0
	comp=Z,3.8nm,1.1s							
VOI	**Vohitsoka**	**79.26**	**249**	P		**P**	**00 45 59.6**	**-0.8**
NRIK	**Noril'sk**	**81.57**	**347**	P		**P**	**00 46 10.4**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=100,slow=4.3,SNR=4.1							
	comp=Z,1.6nm,0.5s							
NRIK	**Noril'sk**	**81.57**	**347**	P		**P**	**00 46 10.8**	**-0.8**
ABKAR	**Akbulak array**	**81.73**	**322**	P		**P**	**00 46 11.2**	**-1.6**
ABKAR	**Akbulak array**	**81.73**	**322**	P		**P**	**00 46 11.3**	**-1.6**
ABKAR					IAmb		IAmb	00 46 14.0
	comp=Z,3.5nm,1.1s							
ARU	**Arti**	**85.13**	**328**	P		**P**	**00 46 28.4**	**-1.7**
ARU					IAmb		IAmb	00 46 29.3
	comp=Z,2.7nm,0.5s							
TORD	**Torodi Ar. Bea**	**127.09**	**281**	PKP		**PKPdf**		**00 52 56.8 -1.7**
	comp=

BKZ	**Black Stump Fm**	**9.31**	**199**	P		**Pn**	**00 59 49.2**	**-1.0**
KRVZ	**Karewarewa**	**9.51**	**203**	P		**Pn**	**00 59 53.8**	**+1.3**
KWHZ	**Kaweka Forest**	**9.57**	**199**	P		**P**	**00 59 52.1**	**-0.9**
KWHZ				S		**S**	**01 01 37.1**	**-5.2**
SNVZ	**South Ngauruho**	**9.59**	**203**	P		**Pn**	**00 59 53.4**	**-0.1**
SNVZ				S		**S**	**01 01 41.0**	**-1.9**
CKHZ	**Cape Kidnapper**	**9.62**	**196**	P		**P**	**00 59 52.3**	**-1.2**
CKHZ				S		**S**	**01 01 39.8**	**-3.4**
BHHZ	**Black Hill Sta**	**9.73**	**200**	P		**P**	**00 59 52.1**	**-2.7**
BHHZ				S		**S**	**01 01 39.6**	**-6.0**
MOVZ	**Moawhango**	**9.76**	**202**	P		**P**	**00 59 52.4**	**-2.6**
KAHZ	**Kahuranaki**	**9.80**	**196**	P		**P**	**00 59 54.4**	**-1.1**
KAHZ				S		**S**	**01 01 43.2**	**-3.7**
PXZ	**Pawanui**	**10.03**	**196**	P		**P**	**00 59 55.7**	**-2.2**
PNHZ	**Pukenui**	**10.09**	**199**	P		**P**	**00 59 56.2**	**-2.4**
WPHZ	**Waipukurau**	**10.16**	**198**	P		**P**	**00 59 56.7**	**-2.8**
TSZ	**Takapari Road**	**10.29**	**199**	P		**P**	**00 59 59.1**	**-1.8**
PRHZ	**Porangahau**	**10.30**	**196**	P		**P**	**00 59 59.8**	**-1.2**
DVHZ	**Dannevirke**	**10.46**	**198**	P		**P**	**01 00 01.8**	**-0.9**
ANWZ	**Angora Road**	**10.53**	**197**	P		**Pn**	**01 00 05.3**	**+1.1**
POWZ	**Post Office Ro**	**10.65**	**200**	P		**Pn**	**01 00 04.6**	**-1.1**
PRWZ	**Pori Road**	**10.75**	**198**	P		**Pn**	**01 00 05.6**	**-1.1**
BFZ	**Birch Farm**	**10.79**	**197**	P		**P**	**01 00 05.2**	**-1.3**
BFZ	**Birch Farm**	**10.79**	**197**	P		**P**	**01 00 04.1**	**-2.3**
MRZ	**Mangatainoka R**	**10.96**	**200**	P		**P**	**01 00 07.3**	**-0.9**
TIWZ	**Tintock**	**10.98**	**198**	P		**P**	**01 00 07.4**	**-1.1**
SNZO	**South Karori**	**11.82**	**201**	P		**Pn**	**01 00 17.4**	**-1.7**
QRZ	**Quartz Range**	**12.20**	**209**	P		**Pn**	**01 00 22.5**	**-1.1**
MSVF	**Nonsavu**	**12.80**	**350**	P		**P**	**01 00 27.5**	**-1.5**
	9.2nm,0.5s,baz=163,slow=11,SNR=12							
MSVF	**Nonsavu**	**12.80**	**350**	P		**P**	**01 00 27.6**	**-1.3**
MSVF	**Nonsavu**	**12.80**	**350**	P		**P**	**01 00 28.7**	**-0.3**
KHZ	**Kahutara**	**13.19**	**203**	P		**P**	**01 00 32.0**	**-0.8**
TAVE	**Taveuni**	**13.64**	**359**	P		**P**	**01 00 38.3**	**+0.2**
PINNC	**Pines Island,**	**13.96**	**301**	P		**P**	**01 00 39.7**	**-1.7**
OUENC	**Ouen Island, N**	**14.52**	**300**	P		P	01 00 54.4	+6.8
YATNC	**Mamie plateau,**	**14.70**	**301**	P		P	01 00 56.3	+6.8
DZM	**Mont Dzumac**	**15.02**	**300**	P		**P**	**01 00 53.0**	**-0.1**
	4.5nm,0.9s,baz=142,slow=18,SNR=2.0							
DZM	**Mont Dzumac**	**15.02**	**300**	P		P	01 00 59.8	+6.7
NOUC	**Port Laguerre**	**15.11**	**300**	P		P	01 01 00.6	+6.6
RPZ	**Rata Peaks**	**15.22**	**207**	P		**P**	**01 00 56.6**	**+1.6**
	4.5nm,0.6s,baz=37,slow=10,SNR=7.2							
RPZ	**Rata Peaks**	**15.22**	**207**	P		**P**	**01 00 54.6**	**-0.3**
ODZ	**Otahua Downs**	**16.51**	**205**	P		**P**	**01 01 08.5**	**-0.2**
AFI	**Afiamalu**	**17.93**	**25**	P		**P**	**01 01 19.2**	**-5.1**
EIDS	**Eidsvold**	**26.36**	**274**	P		**P**	**01 02 43.5**	**+1.4**
CTA	**Charters Tower**	**32.45**	**280**	P		**P**	**01 03 36.6**	**+1.3**
	7.9nm,0.4s,baz=106,slow=10,SNR=13							
	7.9nm,0.4s							
CTAO	**Charters Tower**	**32.45**	**280**	P		**P**	**01 03 36.8**	**+1.5**
CTAO				IAmb		IAmb	01 03 37.7	
	comp=Z,11nm,0.7s							
STKA	**Stephens Creek**	**33.14**	**257**	P		**P**	**01 03 42.0**	**+0.9**
	comp=Z,4.8nm,0.8s,baz=113,slow=11,SNR=5.2							
	comp=Z,4.8nm,0.8s							
STKA	**Stephens Creek**	**33.14**	**257**	P		**P**	**01 03 42.2**	**+1.1**
BBOO	**Buckleboo**	**37.64**	**255**	P		**P**	**01 04 19.5**	**+0.5**
ASAR	**Alice Springs**	**41.74**	**268**	P		**P**	**01 04 52.1**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=105,slow=7.3,SNR=16							
ASAR				ScP		**ScP**	**01 09 54.2**	**+2.7**
	comp=Z,0.7nm,0.6s,baz=136,slow=4.9,SNR=6.0							
	comp=Z,1.5nm,0.5s							
WR0	**Warramunga Arr**	**42.55**	**273**	P		**P**	**01 04 58.5**	**-0.4**
WR0				IAmb		IAmb	01 05 00.4	
	comp=Z,6.6nm,0.8s							
WRA	**Warramunga Arr**	**42.73**	**273**	P		**P**	**01 05 00.2**	**-0.1**
	comp=Z,9.1nm,0.7s,baz=113,slow=7.3,SNR=102							
WRA				ScP		**ScP**	**01 09 58.1**	**+2.6**
	comp=Z,0.7nm,1.0s,baz=109,slow=3.6,SNR=2.5							
WRA				S		**S**	**01 10 49.9**	**-3.8**
	comp=Z,1.1nm,0.8s,baz=109,slow=14,SNR=6.6							
	comp=Z,9.1nm,0.7s							
WRA	**Warramunga Arr**	**42.73**	**273**	P		**P**	**01 04 59.9**	**-0.4**
WB0	**Warramunga Arr**	**42.75**	**273**	P		**P**	**01 05 00.5**	**0.0**
WB0				IAmb		IAmb	01 05 01.4	
	comp=Z,11nm,0.7s							
MTN	**Manton Dam**	**48.63**	**280**	P		**P**	**01 05 45.4**	**-0.5**
MTN				IAmb		IAmb	01 06 05.5	
	comp=Z,11nm,1.1s							
KNRA	**Kununurra**	**49.34**	**275**	P		**P**	**01 05 51.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**50.99**	**271**	P		**P**	**01 06 03.2**	**-0.1**
FITZ				IAmb		IAmb	01 06 04.6	
	comp=Z,7.0nm,0.9s							
CASY	**Casey**	**54.49**	**208**	P		**P**	**01 06 26.3**	**-1.5**
MORW	**Monawa**	**55.21**	**254**	P		**P**	**01 06 33.5**	**-0.1**
QSPA	**South Pole Qui**	**59.70**	**180**	P		**P**	**01 07 08.2**	**+4.1**
SMAI	**San Martin Ant**	**69.93**	**158**	P		**P**	**01 08 12.4**	**+3.4**
SMAI				IAmb		IAmb	01 08 16.1	
	comp=Z,6.3nm,1.1s							
TROLL	**Troll, Antarti**	**77.85**	**181**	P		**P**	**01 08 57.5**	**+3.0**
SNAA	**Sanae**	**78.18**	**179**	P		**P**	**01 08 58.9**	**+2.7**
SNAA	**Sanae**	**78.18**	**179**	P		**P**	**01 08 58.7**	**+2.5**
VNA3	**Neumayer Olymp**	**78.38**	**177**	P		**P**	**01 08 60.0**	**+2.7**
VNA2	**Neumayer--Watz**	**78.80**	**177**	P		**P**	**01 09 02.5**	**+3.0**
	baz=180,slow=3.9							
VNA1	**Neumayer--Stat**	**79.04**	**177**	P		**P**	**01 09 03.8**	**+3.1**
ORCD	**Orcadas**	**81.99**	**159**	P		**P**	**01 09 18.1**	**+1.7**
ORCD				IAmb		IAmb	01 09 32.6	
	comp=Z,4.7nm,1.3s							
KSRS	**Korea Array**	**83.47**	**321**	P		**P**	**01 09 25.4**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=141,slow=6.1,SNR=4.6							
	comp=Z,0.5nm,0.3s							
PETK	**Petropavlovsk-**	**85.49**	**346**	P		**P**	**01 09 35.1**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=151,slow=9.2,SNR=2.9							
	comp=Z,1.9nm,0.7s							
USRK	**Ussuriysk Ar.**	**86.42**	**327**	P		**P**	**01 09 39.0**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=100,slow=5.1,SNR=2.0							
	comp=Z,1.7nm,0.7s							
KK31	**Karatay Array**	**123.94**	**304**			**PKiKP**	**01 15 52.4**	**+0.6**
KKAR	**Karatay Array**	**123.94**	**304**			**PKiKP**	**01 15 52.4**	**+0.6**
ARCES	**ARCESS Array B**	**138.30**	**347**	PKhKP		PKPpre	01 16 11.9	
	comp=Z,1.0nm,0.8s,baz=3.6,slow=2.9,SNR=3.6							
FINES	**FINESS Array B**	**144.67**	**339**	PKP		**PKPab**	**01 16 29.4**	**-0.1**
	comp=Z,7.1nm,0.6s,baz=57,slow=3.5,SNR=47							
NB2	**NORSAR Subarra**	**148.54**	**350**	PKP		**PKiKP**	**01 16 40.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=17,slow=2.7							
NOA	**NORSAR Array B**	**148.54**	**350**	PKPbc		**PKPbc**	**01 16 40.1**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=14,slow=4.3,SNR=8.8							
AKASG	**Malin Array Be**	**150.47**	**322**	PKPbc		**PKiKP**	**01 16 45.1**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=49,slow=2.8,SNR=6.6							
TORD	**Torodi Ar. Bea**	**162.78**	**184**	PKPab		**PKPab**	**01 17 48.4**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=192,slow=4.0,SNR=4.3							

SOME ***18*** *01:26:52.2, 39.37N×73.75E, h15km*
KRNET ***18*** *01:26:52.6±0.1, 39.37N×73.74E, mb3.8*
NNC ***18*** *01:26:56.5±2.9, 39.21N×72.72E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=22.3km s-min=12.1km az=173.0*

ISC 18 01:26:53.5±1.3, 39.40N±0.06×73.73E±0.04, h10km, n25, σ2s44/50, 13C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.34**	**328**	⇑	*iP*	**Pb**	**01 27 18.4**	**-0.4**
	baz=28							
OHH				⇑	*iS*	**Sg**	**01 27 37.2**	**+0.6**
	baz=28							
DRK	**Karamyk**	**1.49**	**274**	⇑	*iP*	**Pb**	**01 27 20.9**	**-0.7**
	baz=75							
DRK				⇑	*iS*	**Sg**	**01 27 41.8**	**+0.2**
	baz=75							
ARLS	**Aral**	**2.50**	**10**	⇓	*iP*	**Pb**	**01 27 37.0**	**-1.7**
	baz=10.0							
ARLS				⇓	*iS*	**Sb**	**01 28 09.2**	**-0.4**
	baz=10.0							
GAR	**Garm**	**2.68**	**263**	⇓	*eP*	**Pb**	**01 27 39.2**	**-2.4**
	baz=63							
GAR				⇓	*iS*	**Sb**	**01 28 13.1**	**-1.5**
	baz=63							
UCH	**Uchtor**	**2.89**	**12**	⇓	*iP*	**Pb**	**01 27 42.7**	**-2.7**
	baz=11							
UCH				⇓	*iS*	**Sb**	**01 28 19.0**	**-2.0**
	baz=11							
KBK	**Karagaybulak**	**3.38**	**15**	⇑	*iP*	**Pn**	**01 27 49.2**	**+2.6**
	baz=15							
KBK				⇑	*iS*	**Sn**	**01 28 30.5**	**+3.6**
	baz=15							
BOOM	**Boomskoye usch**	**3.52**	**28**	⇑	*eP*	**Pn**	**01 27 51.0**	**+2.6**
	baz=28							
BOOM				⇑	*iS*	**Sn**	**01 28 33.6**	**+3.5**
	baz=28							
CHMS	**Chumysh**	**3.68**	**12**	⇑	Pn	**Pb**	**01 28 00.4**	**+1.7**
	6.9nm,0.6s							
CHMS					Sn	**Sg**	**01 28 50.1**	**-1.6**
	22nm,0.6s							
TKM2	**Tokmak 2**	**3.79**	**21**	⇓	Pn	**Pb**	**01 28 01.9**	**+1.2**
	9.3nm,0.8s							
TKM2				⇑	Sn	**Sg**	**01 28 54.2**	**-1.1**
	17nm,0.6s							
TKM2				⇓	Lg	Lg	01 29 12.5	
	16nm,0.7s							
IUG	**Iuzhnay**	**3.93**	**316**		*eP*	**Pg**	**01 28 08.1**	**-0.7**
	527nm,0.6s							
IUG					*eS*	**Sg**	**01 29 02.8**	**+3.2**
	92nm,0.8s							
KST	**Kastek**	**4.01**	**24**		*eP*	**Pg**	**01 28 07.6**	**-2.8**
	6.0nm,0.8s							
KST					*eS*	**Sg**	**01 29 01.9**	**-0.5**
	30nm,0.6s							
SGDS	**Sogindy**	**4.11**	**9**		*eP*	**Pg**	**01 28 09.4**	**-2.8**
	6.8nm,0.3s							
SGDS					*eS*	**Sg**	**01 29 05.5**	**+0.1**
	25nm,0.7s							
DGS	**Degeres**	**4.14**	**21**		*eP*	**Pg**	**01 28 09.6**	**-3.2**
	13nm,0.7s							
DGS					*eS*	**Sg**	**01 29 05.7**	**-0.7**
	29nm,0.7s							
MTBS	**Maitube**	**4.25**	**28**		*eP*	**Pg**	**01 28 12.3**	**-2.6**
	9.7nm,0.8s							
MTBS					*eS*	**Sg**	**01 29 10.3**	**+0.4**
	21nm,0.5s							
KK31	**Karatay Array**	**4.42**	**328**	⇓	Pn	**Pn**	**01 28 03.9**	**+3.2**
	0.5nm,0.3s,baz=128,slow=12,SNR=21							
KK31				⇑	Pg	**Pg**	**01 28 15.0**	**-3.3**
	2.4nm,0.3s,baz=138,slow=13,SNR=7.5							
KK31				⇑	Sn	**Sn**	**01 28 52.7**	**+0.4**
	3.3nm,0.4s,baz=156,slow=37,SNR=4.7							
KK31				⇓	Lg	Lg	01 29 11.9	
	7.7nm,0.4s,baz=159,slow=30,SNR=4.7							
MDOK	**Medeo**	**4.52**	**33**		*eP*	**Pg**	**01 28 16.8**	**-3.3**
	4.8nm,0.8s							
MDOK					*eS*	**Sg**	**01 29 17.5**	**-1.1**
	18nm,0.9s							
MDOK	**Medeo**	**4.52**	**33**	⇑	Pn	**Pb**	**01 28 14.5**	**+1.5**
	7.1nm,0.6s							
MDOK					Sn	**Sg**	**01 29 16.4**	**-2.1**
	17nm,0.6s							
KRBS	**Karabastau**	**4.54**	**18**		*eP*	**Pg**	**01 28 16.6**	**-3.8**
	5.4nm,0.9s							
KRBS					*eS*	**Sg**	**01 29 17.9**	**-1.3**
	26nm,0.9s							
KTBS	**Karatobe**	**4.85**	**26**		*eP*	**Pg**	**01 28 22.9**	**-3.4**
	5.5nm,0.7s							
KTBS					*eS*	**Sg**	**01 29 28.4**	**-0.8**
	20nm,0.4s							
KUU	**Kurty**	**4.90**	**23**		*eP*	**Pg**	**01 28 23.5**	**-3.9**
	3.7nm,1.2s							
KUU					*eS*	**Sg**	**01 29 28.9**	**-1.9**
	26nm,0.8s							
SATY	**Saty**	**5.08**	**42**		*eP*	**Pg**	**01 28 28.4**	**-2.4**
	8.7nm,0.8s							
SATY					*eS*	**Sg**	**01 29 37.0**	**+0.4**
	14nm,0.8s							
UZB	**Uzynbulak**	**5.47**	**45**		*eP*	**Pg**	**01 28 34.8**	**-3.5**
	1.3nm,0.5s							
UZB					*eS*	**Sg**	**01 29 48.1**	**-1.1**
	11nm,1.3s							
BTLS	**Baital**	**5.64**	**2**		*eP*	**Pb**	**01 28 35.9**	**+3.8**
	1.4nm,0.6s							
BTLS					*eS*	**Sg**	**01 29 50.9**	**-3.8**
	5.4nm,0.7s							
ARXS	**Arharly**	**5.70**	**31**		*eP*	**Pg**	**01 28 38.4**	**-4.3**
	4.8nm,0.7s							
ARXS					*eS*	**Sg**	**01 29 54.2**	**-2.4**
	15nm,0.6s							
SHLS	**Shalkode**	**5.72**	**47**		*eP*	**Pg**	**01 28 45.4**	**+2.3**
	6.6nm,0.3s							
SHLS					*eS*	Sg	01 30 06.3	+9.0
	7.0nm,1.9s							

KRNET ***18*** *01:33:44.9±0.1, 42.21N×76.37E, h23km, mb3.5*
SOME ***18*** *01:33:44.8, 42.25N×76.40E, h10km*
NNC ***18*** *01:33:45.0±0.5, 42.25N×76.39E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=3.4km s-min=1.6km az=1.0*
KNET ***18*** *01:33:46.8±0.5, 42.26N×76.21E, h11km±4km, ml2.4, Error ellipse: s-maj=5.5km s-min=3.1km az=83.0*

ISC 18 01:33:45.6±0.8, 42.26N±0.03×76.36E±0.02, h14km±4km, n72, σ0.94/131, 28C-30D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ULHL	**Ulahol**	**0.09**	**261**	⇓	P	**Pb**	**01 33 48.7**	**-0.2**
	898nm,0.1s							
ULHL				⇓	S	**Sg**	**01 33 51.5**	**+0.4**
	3µm,0.2s							
ULHL	**Ulahol**	**0.09**	**261**	⇑	*iP*	**Pb**	**01 33 48.7**	**-0.2**
	baz=90							
ULHL				⇑	*iS*	**Sg**	**01 33 51.3**	**+0.2**
	baz=90							
BOOM	**Boomskoye usch**	**0.39**	**307**	⇑	*iP*	**Pg**	**01 33 53.4**	**-0.1**
	baz=12							
BOOM				⇑	*iS*	**Sg**	**01 33 59.6**	**+0.7**
	baz=12							
KST	**Kastek**	**0.84**	**340**	⇓	*eP*	**Pb**	**01 34 01.7**	**-0.3**
	110nm,0.3s							
KST					*eS*	**Sb**	**01 34 13.9**	**+0.7**
	221nm,0.4s							
KST	**Kastek**	**0.84**	**340**		P	**Pb**	**01 34 01.7**	**-0.3**
	110nm,0.3s							
KST					S	**Sb**	**01 34 13.9**	**+0.7**
	221nm,0.4s							
KST	**Kastek**	**0.84**	**340**	⇓	*eP*	**Pb**	**01 34 01.7**	**-0.3**
	baz=40							
KST				⇓	*eS*	**Sb**	**01 34 13.9**	**+0.7**
	baz=40							
TKM2	**Tokmak 2**	**0.87**	**320**	⇓	P	**Pg**	**01 34 02.2**	**-0.3**
	73nm,0.3s,SNR=202							
TKM2				⇓	S	**Sb**	**01 34 14.7**	**+0.4**
	154nm,0.1s							
TKM2	**Tokmak 2**	**0.87**	**320**	⇑	P	**Pg**	**01 34 02.2**	**-0.3**
	18nm,0.3s							
TKM2				⇑	S	**Sb**	**01 34 14.7**	**+0.4**
	16nm,0.2s							
TKM2	**Tokmak 2**	**0.87**	**320**	⇑	*iP*	**Pg**	**01 34 02.0**	**-0.5**
	baz=21							
TKM2				⇑	*iS*	**Sb**	**01 34 14.4**	**+0.1**
	baz=21							
MTBS	**Maitube**	**0.87**	**3**	⇓	*eP*	**Pg**	**01 34 02.1**	**-0.4**
	75nm,0.3s							
MTBS					*eS*	**Sb**	**01 34 14.5**	**+0.3**
	204nm,0.2s							
MTBS	**Maitube**	**0.87**	**3**		P	**Pg**	**01 34 02.1**	**-0.4**
	75nm,0.3s							
MTBS					S	**Sb**	**01 34 14.5**	**+0.3**
	204nm,0.2s							
MTBS	**Maitube**	**0.87**	**3**	⇓	*eP*	**Pg**	**01 34 02.1**	**-0.4**
	baz=3.0							
MTBS				⇓	*eS*	**Sb**	**01 34 14.5**	**+0.3**
	baz=3.0							
AAA	**Alma-Ata**	**1.03**	**23**		*eP*	**Pn**	**01 34 05.3**	**-0.5**
	56nm,0.2s							
AAA					*eS*	**Sn**	**01 34 20.0**	**-0.2**
	312nm,0.1s							
AAA	**Alma-Ata**	**1.03**	**23**		P	**Pn**	**01 34 05.3**	**-0.5**
	56nm,0.2s							
AAA					S	**Sn**	**01 34 20.0**	**-0.2**
	312nm,0.1s							
AAA	**Alma-Ata**	**1.03**	**23**		*eP*	**Pn**	**01 34 05.3**	**-0.5**
	baz=22							
AAA					*eS*	**Sn**	**01 34 19.9**	**-0.2**
	baz=22							
MDOK	**Medeo**	**1.03**	**29**		*eP*	**Pg**	**01 34 04.8**	**-0.9**
	14nm,0.3s							
MDOK					*eS*	**Sb**	**01 34 18.9**	**0.0**
	82nm,0.3s							
MDOK	**Medeo**	**1.03**	**29**	⇑	P	**Pg**	**01 34 04.7**	**-0.9**
	6.4nm,0.4s							
MDOK					Pg	**Pg**	**01 34 04.8**	**-0.9**
	14nm,0.3s							
MDOK				⇓	S	**Sb**	**01 34 18.7**	**-0.3**
	30nm,0.2s							
MDOK					Lg	Lg	01 34 18.9	
	82nm,0.3s							
MDOK	**Medeo**	**1.03**	**29**		*eP*	**Pg**	**01 34 04.8**	**-0.9**
	baz=28							
MDOK					*eS*	**Sb**	**01 34 19.0**	**0.0**
	baz=28							
DGS	**Degeres**	**1.07**	**336**		*eP*	**Pg**	**01 34 06.0**	**-0.4**
	55nm,0.2s							
DGS					*eS*	**Sn**	**01 34 21.2**	**0.0**
	168nm,0.3s							
DGS	**Degeres**	**1.07**	**336**		*eP*	**Pg**	**01 34 06.0**	**-0.4**
	baz=37							
DGS					*eS*	**Sn**	**01 34 21.2**	**0.0**
	baz=37							
ANVS	**Anan'yevo**	**1.10**	**61**	⇑	*iP*	**Pg**	**01 34 05.7**	**-1.1**
	baz=59							
ANVS				⇑	*iS*	**Sb**	**01 34 20.6**	**-0.2**
	baz=59							
KBK	**Karagaybulak**	**1.12**	**291**	⇑	P	**Pb**	**01 34 06.6**	**-0.3**
	21nm,0.1s,SNR=7.3							
KBK				⇓	S	**Sg**	**01 34 22.1**	**+0.2**
	173nm,0.2s							
KBK	**Karagaybulak**	**1.12**	**291**	⇑	*iP*	**Pb**	**01 34 06.0**	**-0.9**
	baz=93							
KBK				⇑	*iS*	**Sb**	**01 34 21.7**	**+0.3**
	baz=93							
UCH	**Uchtor**	**1.37**	**269**	⇑	P	**Pn**	**01 34 10.7**	**-0.1**
	7.7nm,0.2s,SNR=32							
UCH				⇓	S	**Sn**	**01 34 29.5**	**+0.5**
	53nm,0.4s							
UCH	**Uchtor**	**1.37**	**269**	⇓	*iP*	**Pn**	**01 34 10.4**	**-0.4**
	baz=71							
UCH				⇓	*iS*	**Sb**	**01 34 29.2**	**+0.2**
	baz=71							
CHMS	**Chumysh**	**1.40**	**302**	⇓	P	**Pb**	**01 34 11.2**	**-0.4**
	8.2nm,0.1s,SNR=24							
CHMS				⇑	S	**Sg**	**01 34 30.6**	**-0.2**
	57nm,0.2s							
CHMS	**Chumysh**	**1.40**	**302**	⇑	P	**Pn**	**01 34 11.0**	**+0.2**
	12nm,0.6s							
CHMS				⇓	S	**Sb**	**01 34 30.2**	**+0.8**
	9.6nm,0.2s							
CHMS	**Chumysh**	**1.40**	**302**	⇓	*iP*	**Pn**	**01 34 11.0**	**+0.2**
	baz=4.0							
CHMS				⇓	*iS*	**Sb**	**01 34 30.0**	**+0.7**
	baz=4.0							
AAK	**Ala-Archa**	**1.43**	**286**	⇑	P	**Pb**	**01 34 12.0**	**-0.2**
	11nm,0.2s,SNR=6.7							
AAK				⇓	S	**Sg**	**01 34 31.5**	**-0.4**
	52nm,0.2s							
AAK	**Ala-Archa**	**1.43**	**286**	⇓	*iP*	**Pn**	**01 34 11.5**	**+0.1**
	baz=88							
AAK				⇓	*iS*	**Sb**	**01 34 30.9**	**+0.5**
	baz=88							
KTBS	**Karatobe**	**1.47**	**9**		*eP*	**Pg**	**01 34 12.9**	**-1.0**
	21nm,0.2s							
KTBS					*eS*	**Sg**	**01 34 33.0**	**-0.1**
	1µm,0.3s							
KTBS	**Karatobe**	**1.47**	**9**		P	**Pg**	**01 34 12.9**	**-1.0**
	21nm,0.2s							
KTBS					S	**Sg**	**01 34 33.0**	**-0.1**
	1µm,0.3s							
KTBS	**Karatobe**	**1.47**	**9**		*eP*	**Pg**	**01 34 12.9**	**-1.0**
	baz=9.0							
KTBS					*eS*	**Sg**	**01 34 33.0**	**-0.1**
	baz=9.0							
KRBS	**Karabastau**	**1.52**	**341**		*eP*	**Pb**	**01 34 13.8**	**+0.1**
	11nm,0.1s							
KRBS					*eS*	**Sg**	**01 34 34.5**	**-0.2**
	64nm,0.2s							
KRBS	**Karabastau**	**1.52**	**341**		P	**Pb**	**01 34 13.8**	**+0.1**
	11nm,0.1s							
KRBS					S	**Sg**	**01 34 34.4**	**-0.2**
	64nm,0.2s							
KRBS	**Karabastau**	**1.52**	**341**		*eP*	**Pb**	**01 34 13.8**	**+0.1**
	baz=41							
KRBS					*eS*	**Sg**	**01 34 34.5**	**-0.2**
	baz=41							
ARLS	**Aral**	**1.57**	**256**	⇓	*iP*	**Pn**	**01 34 13.4**	**+0.2**
	baz=58							
ARLS				⇓	*iS*	**Sb**	**01 34 34.4**	**+0.1**
	baz=58							
KUU	**Kurty**	**1.63**	**359**		*eP*	**Pb**	**01 34 15.8**	**+0.2**
	40nm,0.3s							
KUU					*eS*	**Sg**	**01 34 37.7**	**-0.5**
	145nm,0.3s							
KUU	**Kurty**	**1.63**	**359**		P	**Pb**	**01 34 15.8**	**+0.2**
	40nm,0.3s							
KUU					S	**Sg**	**01 34 37.7**	**-0.5**
	145nm,0.3s							
KUU	**Kurty**	**1.63**	**359**		*eP*	**Pb**	**01 34 15.8**	**+0.2**
	baz=59							
KUU					*eS*	**Sg**	**01 34 37.8**	**-0.5**
	baz=59							
USP	**Ospenovka**	**1.70**	**307**	⇓	P	**Pb**	**01 34 16.5**	**-0.3**
	19nm,0.1s,SNR=20							
USP				⇓	S	**Sg**	**01 34 40.0**	**-0.4**
	44nm,0.2s							
USP	**Ospenovka**	**1.70**	**307**	⇑	*iP*	**Pb**	**01 34 16.0**	**-0.7**
	baz=8.0							
USP				⇑	*iS*	**Sb**	**01 34 38.7**	**+0.7**
	baz=8.0							
SATY	**Saty**	**1.71**	**61**		*eP*	**Pb**	**01 34 16.3**

TDK	**Taldyqorghan**	**3.12**	**28**	*e*P		**Pb**	**01 34 41.4**	**+0.6**
	13nm,0.3s							
TDK				*e*S		**Sg**	**01 35 22.0**	**-3.7**
	49nm,0.3s							
TDK	**Taldyqorghan**	**3.12**	**28**	Pg		**Pb**	**01 34 41.4**	**+0.6**
	13nm,0.3s							
TDK				Lg		Lg	01 35 22.0	
	49nm,0.3s							
BTLS	**Baital**	**3.25**	**330**	*e*P		**Pb**	**01 34 43.9**	**+0.8**
	7.3nm,0.4s							
BTLS				*e*S		**Sb**	**01 35 26.1**	**+3.7**
	4.5nm,0.4s							
BTLS	**Baital**	**3.25**	**330**	Lg		Lg	01 35 26.1	
	4.5nm,0.4s							
DJR	**Jarkent**	**3.25**	**49**	*e*P		**Pb**	**01 34 43.1**	**0.0**
	5.4nm,0.7s							
DJR				*e*S		**Sb**	**01 35 24.7**	**+2.1**
	31nm,0.6s							
DJR	**Jarkent**	**3.25**	**49**	Lg		Lg	01 35 24.7	
	31nm,0.6s							
KK31	**Karatay Array**	**4.39**	**283**	⇑Pg		**Pg**	**01 35 06.4**	**-3.4**
	1.3nm,0.5s,baz=91,slow=15,SNR=22							
KK31				⇑Lg		Lg	01 36 04.7	
	3.2nm,0.5s,baz=105,slow=27,SNR=15							
KKAR	**Karatay Array**	**4.39**	**283**	⇑*i*P		**Pn**	**01 34 53.2**	**+1.2**
	baz=84							
KKAR				⇑*i*S		**Sn**	**01 35 43.2**	**+0.3**
	baz=84							
MAKZ	**Makanchi**	**6.06**	**40**	⇑Pn		**Pn**	**01 35 16.2**	**+1.3**
	1.4nm,0.8s							
MAKZ				⇑Lg		Lg	01 36 56.7	
	1.8nm,0.8s							
MK31	**Makanchi Array**	**6.20**	**41**	⇑Pn		**Pn**	**01 35 18.0**	**+1.2**
	0.1nm,0.3s,baz=221,slow=15,SNR=4.2							
MK31				⇓Lg		Lg	01 37 01.3	
	2.2nm,0.7s,baz=226,slow=30,SNR=4.1							

*IDC **18** 01:39:36.6±4.2,7°.43N×94°.19E,h92km±34km,mb3.7/10, mbtmp4.0/12,Error ellipse: s-maj=61.7km s-min=14.9km az=61.0*
*NEIC **18** 01:39:38.8±1.0,7°.5N±0°.1×94°.3E±0°.1,h112km±9km, mb4.3/8,Error ellipse: s-maj=24.7km s-min=14.7km az=46.0*
ISC 18 01:39:38.2±0.7,7°.6N±0°.1×94°.44E±0°.10,h100km,n34, σ1ş42/34,mb4.1/12,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.39**	**133**	Pn	**Pn**	**01 40 31.6**	**+2.5**
PSI	**Prapat**	**6.49**	**136**	P	**Pn**	**01 41 12.8**	**+1.5**
	9.9nm,0.3s,baz=315,slow=11,SNR=17						
RPSI	**Rantau Prapat**	**6.57**	**137**		**Pn**	**01 41 12.5**	**+0.3**
RPSI	**Rantau Prapat**	**6.57**	**137**		**Pn**	**01 41 12.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**11.70**	**22**	P	**Pn**	**01 42 23.3**	**+1.5**
	1.1nm,0.3s,baz=214,slow=14,SNR=1.7						
PALK	**Pallekele**	**13.63**	**270**	Pn	**Pn**	**01 42 46.0**	**-1.5**
BWNR	**Bhubaneshwar**	**15.19**	**327**	*e*P	**Pn**	**01 43 06.2**	**-1.1**
RAGD	**RAYAGADA**	**15.78**	**319**	*e*P	**P**	**01 43 16.9**	**+0.2**
HYBB	**Hyderabad (bro**	**18.34**	**304**	*e*P	**Pn**	**01 43 49.3**	**+3.1**
HYBB				*e*S	**Sn**	**01 47 16.0**	**+4.7**
H08S3	**Diego Garcia H**	**26.58**	**236**	T	T	02 11 48.5	
	baz=54,slow=76,SNR=112						
H08S2	**Diego Garcia H**	**26.59**	**236**	T	T	02 11 54.8	
	baz=54,slow=76,SNR=112						
H08S1	**Diego Garcia H**	**26.60**	**236**	T	T	02 11 49.8	
	baz=54,slow=76,SNR=94						
MK31	**Makanchi Array**	**40.47**	**347**	P	**P**	**01 47 06.2**	**-0.8**
MKAR	**Makanchi Array**	**40.47**	**347**	P	**P**	**01 47 06.2**	**-0.8**
	1.2nm,0.6s,baz=167,slow=7.4,SNR=13						
	1.2nm,0.6s						
SONM	**Songino Array**	**41.42**	**12**	P	**P**	**01 47 15.1**	**+0.2**
	0.3nm,0.4s,baz=194,slow=8.8,SNR=2.5						
SONM				PcP	**PcP**	**01 49 11.4**	**+0.3**
	0.6nm,0.6s,baz=193,slow=4.4,SNR=3.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**44.94**	**346**	P	**P**	**01 47 43.0**	**0.0**
	1.1nm,0.4s,baz=170,slow=7.1,SNR=12						
	1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**46.92**	**352**	P	**P**	**01 47 58.3**	**-0.2**
	2.0nm,0.3s,baz=176,slow=7.9,SNR=10						
	2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**46.92**	**352**	P	**P**	**01 47 57.9**	**-0.6**
WRA	**Warramunga Arr**	**47.83**	**125**	P	**P**	**01 48 05.3**	**-0.8**
	0.1nm,0.3s,baz=301,slow=9.8,SNR=18						
WRA				PcP	**PcP**	**01 49 34.4**	**+0.9**
	0.2nm,0.5s,baz=320,slow=2.7,SNR=4.8						
	0.1nm,0.3s						
WB2	**Warramunga Arr**	**47.84**	**125**	P	**P**	**01 48 05.5**	**-0.7**
WB2				IAmb	IAmb	01 48 47.7	
	comp=Z,12nm,1.3s						
WR0	**Warramunga Arr**	**48.00**	**125**	P	**P**	**01 48 06.7**	**-0.7**
ASAR	**Alice Springs**	**49.48**	**130**	P	**P**	**01 48 18.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=304,slow=8.0,SNR=2.8						
	comp=Z,0.4nm,0.3s						
ABKAR	**Akbulak array**	**50.66**	**331**	P	**P**	**01 48 25.5**	**-1.7**
ABKAR	**Akbulak array**	**50.66**	**331**	P	**P**	**01 48 26.8**	**-0.4**
ABKAR				IAmb	IAmb	01 48 27.5	
	comp=Z,3.4nm,1.4s						
ARU	**Arti**	**56.31**	**337**	P	**P**	**01 49 08.0**	**-0.4**
NRIK	**Noril'sk**	**61.88**	**357**	P	**P**	**01 49 46.2**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=180,slow=6.1,SNR=2.2						
	comp=Z,2.0nm,0.4s						
NRIK	**Noril'sk**	**61.88**	**357**	P	**P**	**01 49 46.0**	**-0.6**
NRIK				IAmb	IAmb	01 49 46.5	
	comp=Z,2.7nm,0.6s						
TIXI	**Tiksi**	**67.49**	**11**	P	**P**	**01 50 22.5**	**-0.5**
FINES	**FINESS Array B**	**73.14**	**332**	P	**P**	**01 50 56.5**	**-1.1**
	comp=Z,3.6nm,1.0s,baz=116,slow=6.3,SNR=6.5						
	comp=Z,3.6nm,1.0s						
FINES	**FINESS Array B**	**73.14**	**332**	P	**P**	**01 50 56.2**	**-1.4**
ARCES	**ARCESS Array B**	**75.67**	**340**	P	**P**	**01 51 12.0**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=89,slow=5.3,SNR=8.6						
	comp=Z,2.7nm,1.0s						
ARCES	**ARCESS Array B**	**75.67**	**340**	P	**P**	**01 51 11.3**	**-0.9**
ARCES				IAmb	IAmb	01 51 18.1	
	comp=Z,4.2nm,1.1s						
NOA	**NORSAR Array B**	**80.16**	**331**	P	**P**	**01 51 35.3**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=147,slow=7.5,SNR=2.0						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**125.04**	**31**	PKP	**PKPdf**	**01 58 28.1**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=345,slow=2.8,SNR=4.2						

*SOME **18** 02:03:22.6,39°.53N×73°.60E,h0km*
*KRNET **18** 02:03:22.4±0.1,39°.48N×73°.74E,mb3.8*
*NNC **18** 02:03:28.1±1.6,39°.64N×73°.72E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=12.3km s-min=7.0km az=175.0*
ISC 18 02:03:23.0±1.3,39°.49N±0°.06×73°.73E±0°.04,h10km,n36, σ2ş42/55,14C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.26**	**325**	⇑*i*P	**Pb**	**02 03 46.6**	**-0.4**
	baz=25						
OHH				⇑*i*S	**Sn**	**02 04 04.5**	**+0.6**
	baz=25						
ARLS	**Aral**	**2.41**	**11**	⇑*e*P	**Pb**	**02 04 05.2**	**-1.4**
	baz=11						
ARLS				⇑*i*S	**Sb**	**02 04 36.6**	**+0.1**
	baz=11						
GAR	**Garm**	**2.69**	**261**	⇓*i*P	**Pb**	**02 04 09.1**	**-2.3**
	baz=61						
GAR				⇓*i*S	**Sb**	**02 04 43.3**	**-1.2**
	baz=61						
UCH	**Uchtor**	**2.80**	**12**	⇓*e*P	**Pb**	**02 04 10.8**	**-2.6**
	baz=12						
UCH				⇓*i*S	**Sb**	**02 04 46.2**	**-1.7**
	baz=12						
KBK	**Karagaybulak**	**3.30**	**16**	⇑*i*P	**Pn**	**02 04 17.7**	**+2.8**
	baz=16						
KBK				⇑*i*S	**Sn**	**02 04 57.5**	**+3.3**
	baz=16						
CHMS	**Chumysh**	**3.59**	**12**	⇑Pn	**Pb**	**02 04 25.2**	**-1.5**
	5.4nm,0.6s						
CHMS				⇓Lg	Lg	02 05 17.1	
	28nm,0.6s						
TKM2	**Tokmak 2**	**3.71**	**22**	⇑Pn	**Pb**	**02 04 26.6**	**-2.1**
	3.6nm,0.5s						
TKM2				⇑Lg	Lg	02 05 33.9	
	14nm,0.7s						
KST	**Kastek**	**3.93**	**25**	*e*P	**Pg**	**02 04 36.4**	**-2.0**
	5.8nm,0.5s						
KST				*e*S	**Sg**	**02 05 29.9**	**+0.6**
	34nm,0.9s						
KST	**Kastek**	**3.93**	**25**	Pg	**Pg**	**02 04 36.3**	**-2.0**
	5.8nm,0.5s						
KST				Lg	Lg	02 05 29.9	
	34nm,0.9s						
SGDS	**Sogindy**	**4.02**	**9**	*e*P	**Pg**	**02 04 38.6**	**-1.4**
	5.4nm,0.4s						
SGDS				*e*S	**Sg**	**02 05 33.2**	**+1.2**
	8.7nm,0.6s						
SGDS	**Sogindy**	**4.02**	**9**	Pg	**Pg**	**02 04 38.6**	**-1.4**
	5.4nm,0.4s						
SGDS				Lg	Lg	02 05 33.2	
	8.7nm,0.6s						
DGS	**Degeres**	**4.05**	**22**	*e*P	**Pg**	**02 04 39.0**	**-1.6**
	10nm,0.7s						
DGS				*e*S	**Sg**	**02 05 34.6**	**+1.5**
	29nm,1.0s						
DGS	**Degeres**	**4.05**	**22**	Pg	**Pg**	**02 04 39.0**	**-1.6**
	10nm,0.7s						
DGS				Lg	Lg	02 05 34.7	
	29nm,1.0s						
MTBS	**Maitube**	**4.17**	**28**	*e*P	**Pg**	**02 04 41.1**	**-1.8**
	5.7nm,0.5s						
MTBS				*e*S	**Sg**	**02 05 37.9**	**+1.1**
	31nm,0.4s						
MTBS	**Maitube**	**4.17**	**28**	Pg	**Pg**	**02 04 41.1**	**-1.8**
	5.7nm,0.5s						
MTBS				Lg	Lg	02 05 37.9	
	31nm,0.4s						
KK31	**Karatay Array**	**4.35**	**327**	⇑Pn	**Pn**	**02 04 33.3**	**+4.2**
	0.6nm,0.3s,baz=122,slow=12,SNR=20						
KK31				⇑Pg	**Pg**	**02 04 43.6**	**-2.7**
	2.7nm,0.5s,baz=144,slow=14,SNR=8.5						
KK31				⇑Sn	**Sn**	**02 05 25.5**	**+5.6**
	4.7nm,0.5s,baz=144,slow=29,SNR=6.1						
KK31				⇑Lg	Lg	02 05 38.5	
	14nm,0.6s,baz=178,slow=31,SNR=4.0						
MDOK	**Medeo**	**4.44**	**33**	*e*P	**Pg**	**02 04 46.0**	**-2.0**
	7.0nm,0.8s						
MDOK				*e*S	**Sg**	**02 05 46.7**	**+1.1**
	23nm,0.9s						
MDOK	**Medeo**	**4.44**	**33**	Pn	**Pb**	**02 04 39.8**	**-1.3**
	5.8nm,0.5s						
MDOK				Pg	**Pg**	**02 04 46.0**	**-2.0**
	7.0nm,0.8s						
MDOK				Lg	Lg	02 05 46.7	
	23nm,0.9s						
MDOK				⇑Lg	Lg	02 05 47.5	
	31nm,0.8s						
KRBS	**Karabastau**	**4.45**	**19**	*e*P	**Pg**	**02 04 45.5**	**-2.7**
	5.8nm,0.7s						
KRBS				*e*S	**Sg**	**02 05 45.5**	**-0.3**
	21nm,0.9s						
KRBS	**Karabastau**	**4.45**	**19**	Pg	**Pg**	**02 04 45.5**	**-2.7**
	5.8nm,0.7s						
KRBS				Lg	Lg	02 05 45.5	
	21nm,0.9s						
KTBS	**Karatobe**	**4.76**	**27**	*e*P	**Pg**	**02 04 51.5**	**-2.8**
	2.7nm,0.7s						
KTBS				*e*S	**Sg**	**02 05 56.0**	**0.0**
	24nm,0.6s						
KTBS	**Karatobe**	**4.76**	**27**	Pg	**Pg**	**02 04 51.5**	**-2.8**
	2.7nm,0.7s						
KTBS				Lg	Lg	02 05 56.0	
	24nm,0.6s						
KUU	**Kurty**	**4.81**	**23**	*e*P	**Pg**	**02 04 52.1**	**-3.1**
	4.3nm,0.7s						
KUU				*e*S	**Sg**	**02 05 56.6**	**-1.0**
	17nm,0.8s						
KUU	**Kurty**	**4.81**	**23**	Pg	**Pg**	**02 04 52.1**	**-3.1**
	4.3nm,0.7s						
KUU				Lg	Lg	02 05 56.6	
	17nm,0.8s						
SATY	**Saty**	**5.01**	**43**	*e*P	**Pg**	**02 04 56.8**	**-2.2**
	3.6nm,0.4s						
SATY				*e*S	**Sg**	**02 06 04.4**	**+0.4**
	12nm,1.3s						
SATY	**Saty**	**5.01**	**43**	Pg	**Pg**	**02 04 56.8**	**-2.2**
	3.6nm,0.4s						
SATY				Lg	Lg	02 06 04.4	
	12nm,1.3s						
UZB	**Uzynbulak**	**5.41**	**46**	*e*P	**Pg**	**02 05 03.3**	**-3.3**
	1.4nm,0.7s						
UZB				*e*S	**Sg**	**02 06 15.7**	**-0.9**
	5.4nm,0.5s						
UZB	**Uzynbulak**	**5.41**	**46**	Pg	**Pg**	**02 05 03.3**	**-3.3**
	1.4nm,0.7s						
UZB				Lg	Lg	02 06 15.6	
	5.4nm,0.5s						
KPKS	**Kokpek**	**5.44**	**42**	*e*P	**Pg**	**02 05 04.2**	**-3.0**
	5.2nm,0.8s						
KPKS				*e*S	**Sg**	**02 06 17.5**	**-0.2**
	12nm,0.7s						
KPKS	**Kokpek**	**5.44**	**42**	Pg	**Pg**	**02 05 04.2**	**-3.0**
	5.2nm,0.8s						
KPKS				Lg	Lg	02 06 17.5	
	12nm,0.7s						
BTLS	**Baital**	**5.55**	**2**	*e*P	Pg	02 05 04.3	-5.0
	2.4nm,0.7s						
BTLS				*e*S	**Sg**	**02 06 17.7**	**-3.5**
	3.0nm,1.4s						
BTLS	**Baital**	**5.55**	**2**	Pg	Pg	02 05 04.3	-5.0
	2.4nm,0.7s						
BTLS				Lg	Lg	02 06 17.7	
	3.0nm,1.4s						
ARXS	**Arharly**	**5.62**	**32**	*e*P	**Pg**	**02 05 06.7**	**-4.0**
	3.9nm,0.8s						
ARXS				*e*S	**Sg**	**02 06 21.9**	**-1.6**
	19nm,0.8s						
ARXS	**Arharly**	**5.62**	**32**	Pg	**Pg**	**02 05 06.7**	**-4.0**
	3.9nm,0.8s						
ARXS				Lg	Lg	02 06 21.9	
	19nm,0.8s						
SHLS	**Shalkode**	**5.66**	**48**	*e*P	**Pg**	**02 05 14.0**	**+2.6**
	4.3nm,0.4s						
SHLS				*e*S	Sg	02 06 34.3	+10
	6.9nm,0.9s						
SHLS	**Shalkode**	**5.66**	**48**	Pg	**Pg**	**02 05 14.0**	**+2.6**
	4.3nm,0.4s						
SHLS				Lg	Lg	02 06 34.3	
	6.9nm,0.9s						

NNC 18 02:04:25.2±5.2,43°.55N×86°.30E,h0km,mb2.9,mpv2.5, 10C-6D,Error ellipse: s-maj=225.8km s-min=35.7km az=50.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.31**	**320**	⇓Lg	Lg	02 06 43.6	
	3.6nm,0.7s,baz=122,slow=26,SNR=4.7						
MK31	**Makanchi Array**	**4.31**	**320**	⇓Pn	Pn	02 05 31.7	-0.3
	0.2nm,0.3s,baz=128,slow=14,SNR=10						
MK31				⇑Pg	Pg	02 05 47.4	-0.3
	0.3nm,0.3s,baz=198,slow=15,SNR=4.4						
MK31				⇓Sn	Sn	02 06 24.6	+1.6
	3.6nm,0.8s,baz=119,slow=12,SNR=4.1						
MK31				⇓Lg	Lg	02 06 43.6	
	3.6nm,0.7s,baz=122,slow=26,SNR=4.7						
MK31	**Makanchi Array**	**4.31**	**320**	⇓Pn	Pn	02 05 31.7	-0.3
	0.2nm,0.3s,baz=128,slow=14,SNR=10						
MK31	**Makanchi Array**	**4.31**	**320**	⇑Pg	Pg	02 05 47.4	-0.3
	0.3nm,0.3s,baz=198,slow=15,SNR=4.4						
MK31	**Makanchi Array**	**4.31**	**320**	⇓Sn	Sn	02 06 24.6	+1.6
	3.6nm,0.8s,baz=119,slow=12,SNR=4.1						
MAKZ	**Makanchi**	**4.47**	**318**	⇑Lg	Lg	02 06 47.8	
	4.8nm,0.8s						
MAKZ	**Makanchi**	**4.47**	**318**	⇑Pn	Pn	02 05 33.4	-0.7
	0.6nm,0.3s						
MAKZ				⇑Sn	Sn	02 06 26.2	-0.6
	1.4nm,0.7s						
MAKZ				⇑Lg	Lg	02 06 47.8	
	4.8nm,0.8s						
MAKZ	**Makanchi**	**4.47**	**318**	⇑Pn	Pn	02 05 33.4	-0.7
	0.6nm,0.3s						
MAKZ	**Makanchi**	**4.47**	**318**	⇑Sn	Sn	02 06 26.2	-0.6
	1.4nm,0.7s						
KURBB	**Kurchatov Arra**	**8.84**	**326**	⇑Lg	Lg	02 09 06.9	
	5.9nm,0.7s						
KURK	**Kurchatov**	**8.87**	**327**	⇑Lg	Lg	02 09 07.4	
	9.7nm,1.2s						

*IDC **18** 02:19:28.5±2.2,6°.86S×131°.94E,h0km,mb4.0/2, mbtmp3.9/5,ML3.6/3,Error ellipse: s-maj=102.4km s-min=26.6km az=82.0*
ISC 18 02:19:34.2±1.4,7°.01S±0°.10×131°.9E±0°.1,h35km,n10, σ2ş49/13,Tanimbar Islands region

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

KDU	**Kakadu**	**5.67**	**174**	P		**Pn**	**02 20 59.7**	**+3.6**
MTN	**Manton Dam**	**5.84**	**187**	P		**Pn**	**02 21 02.4**	**+4.0**
KNRA	**Kununurra**	**9.13**	**199**	P		**Pn**	**02 21 46.4**	**+2.8**
FITZ	**Fitzroy Crossi**	**12.58**	**208**	Pn		**Pn**	**02 22 30.9**	**+0.1**
	0.2nm,0.3s,baz=30,slow=12,SNR=20							
FITZ				Sn		**Sn**	**02 24 47.2**	**-2.5**
	0.5nm,0.3s,baz=82,slow=19,SNR=8.0							
	3.9nm,1.0s							
FITZ	**Fitzroy Crossi**	**12.58**	**208**	P		**Pn**	**02 22 33.1**	**+2.3**
WRA	**Warramunga Arr**	**13.08**	**170**	Pn		**Pn**	**02 22 36.8**	**-0.9**
	0.4nm,0.3s,baz=350,slow=13,SNR=22							
WRA				Sn		**Sn**	**02 24 60.0**	**-2.1**
	0.4nm,0.3s,baz=352,slow=24,SNR=5.9							
	1.5nm,0.6s							
QIS	**Mount Isa**	**15.42**	**152**	P		**Pn**	**02 23 08.9**	**-0.4**
ASAR	**Alice Springs**	**16.68**	**173**	Pn		**P**	**02 23 26.3**	**-1.1**
	0.3nm,0.3s,baz=348,slow=9.6,SNR=13							
ASAR				Sn		**Sn**	**02 26 27.5**	**-2.2**
	0.1nm,0.3s,baz=356,slow=28,SNR=2.8							
	0.9nm,0.5s							
MKAR	**Makanchi Array**	**69.25**	**326**	P		**P**	**02 30 37.3**	**-0.5**
	0.7nm,0.4s,baz=112,slow=8.1,SNR=13							
	0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**72.42**	**333**	P		**P**	**02 30 55.4**	**-1.4**
	0.5nm,0.3s,baz=120,slow=5.2,SNR=1.6							
	0.5nm,0.3s							

*IGIL **18** 02:22:16.9,37°.44N×13°.70W,h1km,ML2.9*
*MDD **18** 02:22:16.2±0.8,37°.44N×13°.70W,h0km,Mb4.2/17, M_mb3.6/18,Error ellipse: s-maj=6.3km s-min=5.1km az=46.0*
*INMG **18** 02:22:17.1±2.1,37°.22N×14°.13W,h21km,ML2.7,Error ellipse: s-maj=5.1km s-min=2.6km az=125.0*
*CNRM **18** 02:22:17.9,36°.64N×13°.69W,h21km,ml3.0*
ISC 18 02:22:12.0±1.3,37°.18N±0°.05×13°.98W±0°.07,h35km,n65, σ2ş89/125,17C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMST	**Lisbon--Monsan**	**4.10**	**66**	*e*S	**Sn**	**02 23 58.1**	**-0.7**
PMST				A	A	02 24 04.3	
	16nm,0.4s						
PMAFR	**Mafra**	**4.11**	**63**	*e*P	**Pn**	**02 23 15.6**	**+3.3**
PMAFR				S	**Sn**	**02 23 58.8**	**-0.3**
PMAFR				A	A	02 24 05.5	
	22nm,0.2s						
PFVI	**Vila Bisbo**	**4.12**	**89**	*e*P	**Pn**	**02 23 16.3**	**+3.9**
PFVI				S	**Sn**	**02 23 59.2**	**-0.2**
PFVI				A	A	02 24 01.4	
	14nm,0.1s						
PTEO	**Sao Teotonio**	**4.21**	**83**	*e*P	**Pn**	**02 23 17.2**	**+3.6**
PTEO				S	**Sn**	**02 24 01.0**	**-0.5**
PTEO				A	A	02 24 03.6	
	14nm,0.2s						
MORF	**Marmelete**	**4.26**	**87**	*e*P	**Pn**	**02 23 17.8**	**+3.5**
MORF				*e*S	**Sn**	**02 24 02.3**	**-0.6**
MORF				IAML		02 24 06.0	
	comp=N,35nm,0.1s						
MORF	**Marmelete**	**4.26**	**87**	*e*P	**Pn**	**02 23 18.0**	**+3.6**
MORF				S	**Sn**	**02 24 02.9**	**+0.1**
MORF				A	A	02 24 03.1	
	comp=N,20nm,0.1s						
PACT	**Alcochete**	**4.37**	**67**	*e*P	**Pn**	**02 23 19.5**	**+3.7**
PACT				S	**Sn**	**02 24 07.1**	**+1.7**
PNCL	**Nicolau / Gran**	**4.43**	**76**	*e*P	**Pn**	**02 23 19.8**	**+3.2**
PNCL				S	**Sn**	**02 24 06.3**	**-0.6**
PNCL				A	A	02 24 12.6	
	comp=N,13nm,0.1s						
PMPST	**Porto Santo, M**	**4.53**	**206**	*e*P	**Pn**	**02 23 19.5**	**+1.5**
PMPST				S	**Sn**	**02 24 04.3**	**-5.1**
MESJ	**Messejana**	**4.63**	**80**	*e*P	**Pn**	**02 23 22.5**	**+3.1**
MESJ				*e*S	**Sn**	**02 24 10.4**	**-1.5**
MESJ				IAML		02 24 13.7	
	comp=N,18nm,0.1s						
MESJ	**Messejana**	**4.63**	**80**	*e*P	**Pn**	**02 23 22.6**	**+3.1**
MESJ				S	**Sn**	**02 24 11.8**	**-0.1**
MESJ				A	A	02 24 17.9	
	comp=N,8.8nm,0.2s						
PSBE	**So Bento**	**4.70**	**59**	*e*P	**Pn**	**02 23 23.5**	**+3.1**
PSBE				S	**Sn**	**02 24 11.2**	**-2.4**
PSBE				A	A	02 24 19.5	
	comp=N,6.1nm,0.4s						
PCVE	**Castro Verde**	**4.75**	**83**	*e*P	**Pn**	**02 23 24.4**	**+3.3**
PCVE				*e*S	**Sn**	**02 24 14.5**	**-0.5**
PCVE				A	A	02 24 21.0	
	comp=N,7.7nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.83**	**87**	*e*P	**Pn**	**02 23 26.1**	**+3.9**
PBDV				S	**Sn**	**02 24 16.8**	**-0.2**
PBDV				A	A	02 24 23.1	
	comp=N,11nm,0.6s						
EVO	**Evora**	**4.91**	**72**	P	**Pn**	**02 23 24.5**	**+1.1**
EVO				S	**Sn**	**02 24 16.7**	**-2.2**
EVO	**Evora**	**4.91**	**72**	*e*P	**Pn**	**02 23 24.7**	**+1.4**
EVO				S	**Sn**	**02 24 18.1**	**-0.8**
EVO				A	A	02 24 21.0	
	comp=N,17nm,0.1s						
PMTG	**Montargil**	**4.91**	**66**	*e*P	**Pn**	**02 23 26.1**	**+2.8**
PMTG				S	**Sn**	**02 24 18.2**	**-0.8**
PMTG				A	A	02 24 23.7	
	comp=N,6.5nm,0.4s						
PBEJ	**Beja**	**4.93**	**78**	*e*P	**Pn**	**02 23 27.0**	**+3.4**
PBEJ				S	**Sn**	**02 24 18.8**	**-0.6**
PBEJ				A	A	02 24 23.1	
	comp=N,7.6nm,0.1s						
PVAQ	**Vaqueiros**	**5.00**	**86**	P	**Pn**	**02 23 28.3**	**+3.8**
PVAQ				S	**Sn**	**02 24 24.3**	**+3.2**
PVAQ	**Vaqueiros**	**5.00**	**86**	*e*P	**Pn**	**02 23 27.9**	**+3.4**
PVAQ				S	**Sn**	**02 24 20.8**	**-0.3**
PVAQ				A	A	02 24 26.9	
	comp=N,12nm,0.1s						
PMAR	**Madeira**	**5.06**	**209**	P	**Pn**	**02 23 27.1**	**+1.6**
PMAR				S	**Sn**	**02 24 24.1**	**+1.3**
PMAR	**Madeira**	**5.06**	**209**	*e*P	**Pn**	**02 23 26.4**	**+0.9**
PMAR				S	**Sn**	**02 24 19.2**	**-3.6**
PMAR				A	A	02 24 24.2	
	comp=N,14nm,0.2s						
PMOZ	**Porto Moniz, M**	**5.09**	**212**	*e*P	**Pn**	**02 23 26.3**	**+0.5**
PMOZ				S	**Sn**	**02 24 19.3**	**-4.1**
FUL	**Funchal**	**5.12**	**209**	S	**Sn**	**02 24 19

MTE					S		Sn	02 24 43.4	-1.6
MTE					A		A	02 24 46.2	
	comp=N,3.1nm,0.4s								
PVRL	**Vila Real**	**6.35**	**48**	*eP*			**Pn**	**02 23 45.8**	**+2.7**
PVRL					S		**Sn**	**02 24 51.7**	**-2.8**
POLO	**Lamas de Olo**	**6.37**	**47**	*eP*			**Pn**	**02 23 45.9**	**+2.5**
POLO					S		**Sn**	**02 24 52.4**	**-2.5**
POLO					A		A	02 24 54.9	
	comp=N,0.9nm,0.5s								
PCAB	**Cabril**	**6.46**	**44**	*eP*			**Pn**	**02 23 47.1**	**+2.6**
PCAB					S		**Sn**	**02 24 54.2**	**-2.8**
PCAB					A		A	02 24 56.5	
	comp=N,2.8nm,0.4s								
PGAV	**Gavieira, Arco**	**6.50**	**41**	*eP*			**Pn**	**02 23 47.6**	**+2.4**
PGAV					S		**Sn**	**02 24 55.1**	**-3.1**
PGAV					A		A	02 25 03.8	
	comp=N,3.1nm,0.4s								
ESPR	**Espera**	**6.51**	**90**		P		**Pn**	**02 23 48.3**	**+3.0**
ESPR					⇑*i*Vmb_V			02 23 50.7	
	comp=N,167nm,SNR=1.7								
ESPR					S		**Sn**	**02 24 58.1**	**-0.1**
ELOB	**Lobios**	**6.54**	**43**		P		**Pn**	**02 23 47.5**	**+1.7**
ELOB					⇑*i*Vmb_V			02 23 50.3	
	comp=N,133nm,SNR=1.0								
ELOB					S		**Sn**	**02 24 55.5**	**-3.7**
MVO	**Moncorvo**	**6.71**	**52**	*eP*			**Pn**	**02 23 50.7**	**+2.7**
MVO					S		**Sn**	**02 25 00.3**	**-2.9**
MVO					A		A	02 25 05.4	
	comp=N,2.4nm,0.5s								
ECAB	**El Cabril**	**6.86**	**80**		P		**Pn**	**02 23 53.7**	**+3.6**
ECAB					⇑*i*Vmb_V			02 23 54.6	
	comp=N,143nm,SNR=4.0								
ECAB					S		**Sn**	**02 25 03.7**	**-3.1**
SRHM	**Skhour des Reh**	**6.87**	**131**		P		**Pn**	**02 23 49.7**	**-0.6**
SRHM					S		**Sn**	**02 25 04.8**	**-2.3**
EMAZ	**Mazaricos**	**6.92**	**32**		P		**Pn**	**02 23 52.7**	**+1.9**
EMAZ					⇑*i*Vmb_V			02 23 54.6	
	comp=N,378nm,SNR=2.2								
EMAZ					S		**Sn**	**02 25 02.9**	**-5.5**
ZHG	**ZHG**	**7.06**	**120**		P		**Pn**	**02 23 52.5**	**-0.5**
ZHG					S		**Sn**	**02 25 09.8**	**-2.3**
EAGO	**Agolada(Pontev**	**7.21**	**37**		P		**Pn**	**02 23 56.5**	**+1.7**
EAGO					⇑*i*Vmb_V			02 23 58.3	
	comp=N,151nm,SNR=1.3								
EAGO					S		**Sn**	**02 25 09.9**	**-5.5**
PBRG	**Braganca**	**7.25**	**48**	*eP*			**Pn**	**02 23 58.2**	**+2.7**
PBRG					S		**Sn**	**02 25 13.2**	**-3.5**
PBRG					A		A	02 25 18.6	
	comp=N,1.0nm,0.3s								
ECAL	**Calabor**	**7.34**	**47**		P		**Pn**	**02 23 59.1**	**+2.4**
ECAL					⇑*i*Vmb_V			02 24 00.8	
	comp=N,100nm,SNR=0.9								
ECAL					S		**Sn**	**02 25 14.5**	**-4.3**
EADA	**Adamuz**	**7.52**	**80**		P		**Pn**	**02 24 02.3**	**+3.1**
EADA					⇑*i*Vmb_V			02 24 03.3	
	comp=N,128nm,SNR=2.7								
EADA					S		**Sn**	**02 25 20.0**	**-3.3**
EGOR	**Sierra Gorda,**	**7.89**	**88**		P		**Pn**	**02 24 08.4**	**+4.1**
EGOR					⇑*i*Vmb_V			02 24 11.4	
	comp=N,42nm,SNR=1.0								
EGOR					S		**Sn**	**02 25 29.0**	**-3.4**
PAB	**San Pablo**	**7.93**	**70**		P		**Pn**	**02 24 07.1**	**+2.3**
PAB					⇑*i*Vmb_V			02 24 09.3	
	comp=N,49nm,SNR=1.1								
PAB					S		**Sn**	**02 25 29.0**	**-4.2**
EPON	**Pontenova**	**8.06**	**38**		P		**Pn**	**02 24 08.0**	**+1.5**
EPON					⇑*i*Vmb_V			02 24 11.8	
	comp=N,142nm,SNR=0.9								
EPON					S		**Sn**	**02 25 30.7**	**-5.6**
TTIG	**Tnine Tigouga,**	**8.06**	**144**		P		**Pn**	**02 24 07.3**	**+0.6**
TTIG					S		**Sn**	**02 25 30.5**	**-6.2**
LCRM	**LCR**	**8.22**	**112**		P		**Pn**	**02 24 10.9**	**+1.9**
LCRM					S		**Sn**	**02 25 38.4**	**-2.3**
ESDC	**Sonseca Array**	**8.25**	**69**		P		**Pn**	**02 24 11.8**	**+2.7**
ESDC					S		**Sn**	**02 25 37.0**	**-4.1**
GUD	**Guadarrama**	**8.40**	**63**		P		**Pn**	**02 24 13.9**	**+2.5**
GUD					⇑*i*Vmb_V			02 24 16.2	
	comp=N,29nm,SNR=1.0								
GUD					S		**Sn**	**02 25 40.9**	**-4.1**
CZD	**Col de Zad**	**8.41**	**117**		P		**Pn**	**02 24 11.9**	**+0.2**
CZD					S		**Sn**	**02 25 42.7**	**-2.9**
EQES	**Quesada**	**8.70**	**83**		P		**Pn**	**02 24 18.2**	**+2.8**
EQES					⇑*i*Vmb_V			02 24 20.6	
	comp=N,30nm,SNR=0.7								
EQES					S		**Sn**	**02 25 49.0**	**-3.3**
MD31	**MD31**	**8.70**	**117**		P		**Pn**	**02 24 18.4**	**+2.9**
MD31					S		**Sn**	**02 25 50.2**	**-2.2**
MDT	**Midelt**	**8.84**	**117**		P		**Pn**	**02 24 20.5**	**+3.1**
MDT					S		**Sn**	**02 25 53.7**	**-2.1**
EARI	**Arriondas**	**9.07**	**45**		P		**Pn**	**02 24 23.3**	**+2.9**
EARI					⇑*i*Vmb_V			02 24 25.2	
	comp=N,89nm,SNR=0.5								
ETOB	**Tobarra**	**9.94**	**78**		P		**Pn**	**02 24 34.6**	**+2.2**
ETOB					⇑*i*Vmb_V			02 24 35.6	
	comp=N,69nm,SNR=1.1								
ETOB					S		**Sn**	**02 26 17.3**	**-5.3**
ETOR	**Torete**	**9.97**	**65**		P		**Pn**	**02 24 35.6**	**+2.8**
ETOR					S		**Sn**	**02 26 17.2**	**-6.2**

*IDC **18** 02:27:37.1±0.9,6°.75S×132°.04E, h0km, mb4.2/5, mbtmp4.3/11, ML4.2/6, MS3.4/4, Error ellipse: s-maj=39.9km s-min=16.7km az=74.0*
*NEIC **18** 02:27:40.9±1.4,6°.79S±0°.04×132°.1E±0°.1, h43km±11km, mb4.7/10, Error ellipse: s-maj=14.8km s-min=5.1km az=95.0*
*DJA **18** 02:27:41.7±0.2,7°.5±2°×13°2E±°, h120km±6km, M4.4/13, mb4.4/13, MLv4.4/12*

ISC 18 02:27:40.5±0.6, 6°.73S±0°.04×132°.01E±0°.07, h35km, n55, σ2s42/62, mb4.3/11, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.43**	**209**		Pn	**Pn**	**02 28 04.7**	**+0.8**
SAUI					Sn	**Sn**	**02 28 22.4**	**+0.9**
SAUI	**Saumlaki**	**1.43**	**209**		P	**Pn**	**02 28 08.0**	**+4.1**
SAUI					S	**Sn**	**02 28 29.6**	**+8.1**
SAUI	**Saumlaki**	**1.43**	**209**		P	Pn	02 28 08.7	+4.8
BNDI	**Bandanaira**	**3.03**	**316**		P	**Pn**	**02 28 29.7**	**+3.7**
FAKI	**Fak Fak**	**3.79**	**4**			**Pn**	**02 28 37.9**	**+1.4**
FAKI					Sn	**Sn**	**02 29 21.3**	**+1.3**
FAKI	**Fak Fak**	**3.79**	**4**		P	**Pn**	**02 28 38.3**	**+1.8**
FAKI					S	**Sn**	**02 29 22.3**	**+2.3**
FAKI	**Fak Fak**	**3.79**	**4**		S	**Pn**	**02 28 39.1**	**+2.6**
MSAI	**Masohi**	**4.55**	**317**		P	**Pn**	**02 28 45.2**	**-1.7**
SIJI	**Sorong**	**5.87**	**353**		Pn	**Pn**	**02 29 07.1**	**+2.0**
	6.1nm,0.3s,baz=334,slow=23,SNR=5.4							
SIJI					Sn	**Sn**	**02 30 09.7**	**-1.5**
	4.6nm,0.3s,baz=215,slow=23,SNR=1.9 19nm,0.4s							
SWI	**Sorong**	**5.88**	**353**		P	**Pn**	**02 29 06.5**	**+1.4**
	0.3nm52nm,0.7s							
KDU	**Kakadu**	**5.94**	**176**		P	**Pn**	**02 29 07.7**	**+1.8**
NLAI	**Namlea**	**6.00**	**305**		P	**Pn**	**02 29 07.8**	**+1.0**
	0.1nm31nm,0.8s							
MTN	**Manton Dam**	**6.13**	**188**			**Pn**	**02 29 07.9**	**-0.8**
MTN					Sn	**Sn**	**02 30 18.3**	**+0.7**
MTN	**Manton Dam**	**6.13**	**188**		P	**Pn**	**02 29 10.2**	**+1.5**
LBMI	**Labuha**	**7.54**	**323**		P	**Pn**	**02 29 26.4**	**-1.6**
	0.2nm62nm,0.8s							
SANI	**Sanana**	**7.59**	**308**		P	**Pn**	**02 29 29.3**	**+0.6**
	0.1nm35nm,0.8s							
SOEI	**Soe**	**8.23**	**248**			**Pn**	**02 29 38.2**	**+0.6**
SOEI	**Soe**	**8.23**	**248**		P	**Pn**	**02 29 39.4**	**+1.8**
BATI	**Baumata**	**8.95**	**247**		Pn	**Pn**	**02 29 48.2**	**+0.9**
	4.8nm,0.3s,baz=108,slow=16,SNR=2.2							
BATI					Sn	**Sn**	**02 31 23.6**	**-3.4**
	5.6nm,0.3s,baz=61,slow=19,SNR=1.8 17nm,0.4s							
KNRA	**Kununurra**	**9.44**	**199**			**Pn**	**02 29 54.1**	**+0.1**
KNRA	**Kununurra**	**9.44**	**199**		P	**Pn**	**02 29 54.2**	**+0.1**
LUWI	**Luwuk**	**10.81**	**301**		P	**Pn**	**02 30 13.0**	**+0.2**
	64nm,1.0s							
FITZ	**Fitzroy Crossi**	**12.89**	**208**		Pn	**Pn**	**02 30 40.2**	**-1.1**
	1.1nm,0.3s,baz=28,slow=11,SNR=72							
FITZ					Sn	Sn	02 32 52.7	-11
	2.0nm,0.3s,baz=204,slow=19,SNR=14							
FITZ					LR	LR	02 37 08.8	
	comp=Z,182nm,19.0s,baz=32,slow=44 2.7nm,0.3s							
FITZ	**Fitzroy Crossi**	**12.89**	**208**			**Pn**	**02 30 40.5**	**-0.8**
COEN	**Coen**	**13.12**	**124**		Pn	**Pn**	**02 30 42.9**	**-1.5**
WB0	**Warramunga Arr**	**13.16**	**170**			**Pn**	**02 30 43.2**	**-1.8**
WRAB	**Tennant Creek**	**13.32**	**170**			**Pn**	**02 30 45.2**	**-1.9**
WRAB	**Tennant Creek**	**13.32**	**170**		P	**Pn**	**02 30 45.8**	**-1.3**
WRA	**Warramunga Arr**	**13.33**	**170**		Pn	**Pn**	**02 30 45.3**	**-2.0**
	1.4nm,0.3s,baz=350,slow=13,SNR=58							
WRA					Sn	**Sn**	**02 33 09.0**	**-5.3**
	2.0nm,0.3s,baz=352,slow=23,SNR=8.0 6.2nm,0.6s							
WRA	**Warramunga Arr**	**13.33**	**170**			**Pn**	**02 30 43.9**	**-3.3**
WB2	**Warramunga Arr**	**13.33**	**170**			**Pn**	**02 30 45.4**	**-1.8**
WR0	**Warramunga Arr**	**13.38**	**170**			**Pn**	**02 30 46.5**	**-1.4**
QIS	**Mount Isa**	**15.59**	**153**	P		**Pn**	**02 31 16.7**	**-1.1**
AS31	**Alice Springs**	**16.93**	**174**	P		**Pn**	**02 31 34.6**	**-0.3**
ASAR	**Alice Springs**	**16.94**	**174**	Pn		**Pn**	**02 31 33.5**	**-1.4**
	1.1nm,0.3s,baz=357,slow=14,SNR=38							
ASAR					Sn	**Sn**	**02 34 33.5**	**-8.6**
	0.1nm,0.3s,baz=354,slow=27,SNR=1.2 2.8nm,0.6s							
ASAR	**Alice Springs**	**16.94**	**174**			**Pn**	**02 31 34.1**	**-0.7**
PSA00	**Pilbara Seismi**	**18.87**	**217**	P		**P**	**02 31 57.1**	**-0.7**
CTA	**Charters Tower**	**19.17**	**135**	P		**P**	**02 32 00.2**	**-0.9**
	0.1nm,0.3s,baz=299,slow=13,SNR=1.4							
CTA					LR	LR	02 40 22.0	
	comp=Z,169nm,19.0s,baz=326,slow=40 3.9nm,0.9s							
KKM	**Kota Kinabalu**	**20.24**	**309**	P		**P**	**02 32 12.3**	**-0.6**
KKM					IAmb	IAmb	02 32 15.2	
	comp=Z,16nm,0.6s							
FORT	**Forrest**	**24.21**	**188**	P		**P**	**02 32 52.7**	**-1.2**
FORT					IAmb	IAmb	02 33 20.0	
	comp=Z,45nm,0.9s							
BBOO	**Buckleboo**	**26.22**	**172**	P		**P**	**02 33 12.8**	**+0.7**
BBOO					IAmb	IAmb	02 33 44.4	
	comp=Z,83nm,1.5s							
STKA	**Stephens Creek**	**26.57**	**162**	P		**P**	**02 33 18.1**	**+2.7**
	comp=Z,2.7nm,0.7s,baz=348,slow=9.0,SNR=4.8							
STKA					LR	LR	02 44 57.1	
	comp=Z,187nm,19.4s,baz=3.7,slow=39 comp=Z,2.7nm,0.7s							
JNU	**Nakatsue**	**39.65**	**359**	P		**P**	**02 35 07.0**	**-2.1**
KSRS	**Korea Array**	**44.12**	**355**	LR		LR	02 57 04.3	
	comp=Z,15nm,18.1s,baz=165,slow=40							
GTA	**Gaotai**	**54.73**	**330**	*eP*		**P**	**02 37 09.1**	**+2.5**
GTA				pP		pP	02 37 13.8	-3.2
GTA				sP		sP	02 37 17.3	-3.7
GTA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
SONM	**Songino Array**	**58.85**	**340**	P		**P**	**02 37 37.7**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=166,slow=6.7,SNR=2.1 comp=Z,0.4nm,0.3s							
MK31	**Makanchi Array**	**69.11**	**326**	P		**P**	**02 38 43.3**	**+0.2**
MK31					IAmb	IAmb	02 38 47.7	
	comp=Z,2.6nm,0.7s							
MKAR	**Makanchi Array**	**69.11**	**326**	P		**P**	**02 38 45.5**	**+2.4**
	comp=Z,2.6nm,0.4s,baz=113,slow=8.2,SNR=47 comp=Z,2.6nm,0.4s							
MKAR	**Makanchi Array**	**69.11**	**326**	P		**P**	**02 38 42.9**	**-0.2**
MAKZ	**Makanchi**	**69.29**	**326**	P		**P**	**02 38 45.9**	**+1.7**
MAKZ					IAmb	IAmb	02 38 46.9	
	comp=Z,4.6nm,0.5s							
ZAA0	**Zalesovo Array**	**72.24**	**333**	P		**P**	**02 39 02.2**	**+0.2**
ZAA0					IAmb	IAmb	02 39 05.2	
	comp=Z,2.9nm,0.8s							
ZALV	**Zalesovo Beam**	**72.24**	**333**	P		**P**	**02 39 03.4**	**+1.5**
	comp=Z,2.5nm,0.6s,baz=121,slow=4.9,SNR=10.0 comp=Z,2.5nm,0.6s							
ZALV	**Zalesovo Beam**	**72.24**	**333**	P		**P**	**02 39 02.0**	**+0.1**
QSPA	**South Pole Qui**	**83.24**	**180**	P		**P**	**02 40 06.7**	**+3.5**
	comp=Z,0.9nm,0.6s,baz=292,slow=1.0,SNR=10 comp=Z,0.9nm,0.6s							
KOPT	**Kop Dagi**	**95.44**	**310**	P		**P**	**02 41 00.7**	**-1.4**

*IDC **18** 02:32:27.8±0.9,62°.28S×155°.92W, h0km, mb3.8/6, mbtmp3.8/6, MS3.8/30, Error ellipse: s-maj=54.5km s-min=23.8km az=17.0*

ISC 18 02:32:29.6±0.9, 62°.3S±0°.3×155°.8W±0°.2, h10km, n43, σ1s14/11, mb3.8/6, MS3.8/30, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**20.27**	**205**		LR	LR	02 42 56.8	
	comp=Z,144nm,21.0s,baz=72,slow=31							
RPZ	**Rata Peaks**	**26.82**	**298**		LR	LR	02 47 06.2	
	comp=Z,350nm,18.4s,baz=122,slow=33							
QSPA	**South Pole Qui**	**27.82**	**180**		LR	LR	02 47 46.0	
	comp=Z,134nm,19.7s,baz=58,slow=33							
URZ	**Urewera**	**29.24**	**313**		LR	LR	02 47 40.6	
	comp=Z,197nm,20.5s,baz=211,slow=31							
RAO	**Raoul Island**	**36.10**	**326**		LR	LR	02 50 54.3	
	comp=Z,148nm,21.5s,baz=100,slow=31							
PMSA	**Palmer Station**	**37.55**	**135**		LR	LR	02 52 24.9	
	comp=Z,195nm,19.7s,baz=236,slow=32							
RAR	**Rarotonga**	**41.16**	**354**		LR	LR	02 53 40.0	
	comp=Z,88nm,18.1s,baz=230,slow=31							
PPT	**Papeete**	**44.90**	**8**		LR	LR	02 54 33.5	
	comp=Z,75nm,20.2s,baz=181,slow=30							
SNAA	**Sanae**	**45.00**	**168**	P		**P**	**02 40 44.7**	**+0.1**
	0.6nm,0.8s,baz=187,slow=8.1,SNR=1.9							
SNAA					LR	LR	02 59 45.4	
	comp=Z,74nm,18.1s,baz=242,slow=36 0.6nm,0.8s							
RPN	**Rapa Nui**	**46.54**	**63**		LR	LR	02 55 35.2	
	comp=Z,62nm,19.9s,baz=38,slow=30							
MAW	**Mawson**	**47.40**	**199**		LR	LR	02 58 41.9	
	comp=Z,85nm,19.1s,baz=148,slow=33							
DZM	**Mont Dzumac**	**47.71**	**310**		LR	LR	02 57 53.7	
	comp=Z,235nm,19.2s,baz=212,slow=32							
MSVF	**Nonsavu**	**48.14**	**326**		LR	LR	02 59 32.2	
	comp=Z,119nm,18.1s,baz=192,slow=34							
STKA	**Stephens Creek**	**49.65**	**278**		LR	LR	02 59 30.0	
	comp=Z,104nm,18.4s,baz=186,slow=33							
PLCA	**Paso Flores**	**52.83**	**108**	P		**P**	**02 41 44.9**	**0.0**
	2.5nm,0.8s,baz=224,slow=5.7,SNR=4.6							
PLCA					LR	LR	02 59 48.0	
	comp=Z,56nm,18.6s,baz=188,slow=31 2.5nm,0.8s							
H03S2	**Juan Fernandez**	**54.66**	**96**	T		T	03 41 01.8	
	baz=212,SNR=51							
H03S1	**Juan Fernandez**	**54.66**	**96**	T		T	03 41 03.4	
	baz=212,SNR=48							
H03S3	**Juan Fernandez**	**54.67**	**96**	T		T	03 41 02.8	
	baz=212,SNR=50							
H03N3	**Juan Fernandez**	**54.97**	**96**	T		T	03 41 17.3	
	baz=209,slow=74							
H03N2	**Juan Fernandez**	**54.98**	**96**	T		T	03 41 22.7	
	baz=209,slow=74							
H03N1	**Juan Fernandez**	**54.99**	**96**	T		T	03 41 23.0	
	baz=209,slow=74							
CTA	**Charters Tower**	**57.67**	**289**	LR		LR	03 04 04.3	
	comp=Z,97nm,19.7s,baz=86,slow=33							
H01W1	**Cape Leeuwin H**	**59.80**	**252**	T		T	03 48 12.6	
	baz=147							
H01W2	**Cape Leeuwin H**	**59.80**	**252**	T		T	03 48 14.8	
	baz=147							
H01W3	**Cape Leeuwin H**	**59.81**	**252**	T		T	03 48 20.1	
	baz=147							
ASAR	**Alice Springs**	**60.18**	**276**	P		**P**	**02 42 38.5**	**+1.0**
	0.4nm,0.8s,baz=133,slow=7.7,SNR=1.3							
ASAR					LR	LR	03 06 29.8	
	comp=Z,69nm,18.1s,baz=156,slow=34 0.4nm,0.8s							
HNR	**Honiara**	**61.70**	**309**	LR		LR	03 07 23.4	
	comp=Z,69nm,18.5s,baz=146,slow=34							
WRA	**Warramunga Arr**	**63.19**	**278**	P		**P**	**02 42 55.2**	**-2.6**
	0.3nm,0.8s,baz=151,slow=5.1,SNR=1.1							
WRA					LR	LR	03 08 52.0	
	comp=Z,72nm,18.4s,baz=128,slow=35 0.3nm,0.8s							
LVC	**Limon Verde**	**68.81**	**98**	LR		LR	03 05 38.3	
	comp=Z,55nm,21.5s,baz=202,slow=29							
CPUP	**Villa Florida**	**70.83**	**110**	P		**P**	**02 43 45.4**	**-0.8**
	2.5nm,1.0s,baz=180,slow=9.1,SNR=3.0							
CPUP					LR	LR	03 12 17.1	
	comp=Z,50nm,18.0s,baz=220,slow=34 2.5nm,1.0s							
NNA	**Nana**	**74.33**	**86**	LR		LR	03 08 54.8	
	comp=Z,66nm,18.1s,baz=180,slow=29							
LPAZ	**La Paz**	**74.64**	**96**	P		**P**	**02 44 10.0**	**+0.2**
	1.1nm,0.7s,baz=200,slow=7.4,SNR=3.6							
LPAZ					LR	LR	03 09 04.6	
	comp=Z,34nm,19.3s,baz=208,slow=29 1.1nm,0.7s							
ATAH	**Atahualpa**	**77.86**	**82**	LR		LR	03 11 45.7	
	comp=Z,52nm,18.0s,baz=249,slow=30							
SIV	**San Ignacio**	**78.16**	**102**	LR		LR	03 12 42.2	
	comp=Z,44nm,20.6s,baz=115,slow=31							
SUR	**Sutherland**	**85.61**	**177**	LR		LR	03 18 24.2	
	comp=Z,62nm,21.3s,baz=170,slow=32							
BOSA	**Boshof**	**89.40**	**181**	LR		LR	03 23 06.2	
	comp=Z,20nm,18.0s,baz=188,slow=34							
LBTB	**Lobatse**	**92.98**	**181**	LR		LR	03 22 51.4	
	comp=Z,47nm,22.0s,baz=182,slow=32							
RCBR	**Riachuelo**	**98.19**	**119**	LR		LR	03 31 14.9	
	comp=Z,35nm,18.1s,baz=318,slow=36							
TSUM	**Tsumeb**	**98.60**	**174**	LR		LR	03 28 01.0	
	comp=Z,79nm,18.8s,baz=148,slow=34							
ILAR	**Eielson Array**	**126.94**	**5**	PKP		**PKPdf**	**02 51 32.7**	**+0.8**
	0.4nm,0.7s,baz=202,slow=4.6,SNR=5.5							
MKAR	**Makanchi Array**	**144.31**	**272**	PKP		**PKPab**	**02 52 03.8**	**+1.0**
	0.9nm,0.8s,baz=118,slow=4.7,SNR=5.6							
ZALV	**Zalesovo Beam**	**148.07**	**283**	PKPbc		**PKPdf**	**02 52 11.3**	**+0.5**
	0.3nm,0.3s,baz=125,slow=7.6,SNR=1.0							
ESDC	**Sonseca Array**	**151.65**	**130**	PKPbc		**PKiKP**	**02 52 24.0**	**+0.3**
	1.3nm,0.8s,baz=217,slow=2.3,SNR=12							
ESDC				PKPab		**PKPab**	**02 52 31.9**	**-0.1**
	0.6nm,0.9s,baz=212,slow=3.1,SNR=4.7							

*TAP **18** 02:58:29.1,24°.10N×122°.45E, h36km, ML3.2, D*
*JMA **18** 02:58:29.1±0.2,24°.1N±1°×122°.4E±0°.4, h17km±3km, MV2.8/10, NW OFF ISHIGAKIJIMA IS*

ISC 18 02:58:29.0±1.1, 24°.06N±0°.02×122°.42E±0°.02, h24km±13km, n81, σ0s82/145, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.61**	**51**		P	**Pb**	**02 58 41.1**	**0.0**
JYNG					S	**Sb**	**02 58 49.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.67**	**53**		P	**Pb**	**02 58 41.9**	**-0.1**
	baz=63							
YOJ					S	**Sb**	**02 58 50.9**	**0.0**
	baz=63							
YOJ	**Yonaguni jima**	**0.67**	**53**		P	**Pb**	**02 58 42.1**	**+0.1**
YOJ					S	**Sb**	**02 58 50.9**	**0.0**
EWUT	**Wuta**	**0.70**	**303**		P	**Pb**	**02 58 41.6**	**-1.0**
	baz=299							
EWUT					S	**Sb**	**02 58 51.7**	**-0.2**
	baz=299							
ENA	**Nanau**	**0.72**	**301**	*i* P		**Pb**	**02 58 43.2**	**+0.2**
	baz=297							
ENA				*i* S		**Sn**	**02 58 53.7**	**-0.4**
	baz=297							
ETL	**Fush Village**	**0.74**	**278**	S		**Sn**	**02 58 54.5**	**0.0**
	baz=261							
TWD	**Chiawan**	**0.76**	**272**	P		**Pb**	**02 58 43.5**	**-0.1**
	baz=268							
TWD				*i* S		**Sb**	**02 58 54.0**	**+0.6**
	baz=268							
TWC	**Suao**	**0.76**	**316**	*i* P		**Pb**	**02 58 43.0**	**-0.6**
	baz=305							
TWC				*i* S		**Sb**	**02 58 52.4**	**-1.1**
	baz=305							
NACB	**Ninganchiao**	**0.77**	**279**	P		**Pb**	**02 58 43.5**	**-0.1**
	baz=263							
NACB					S	**Sn**	**02 58 54.8**	**-0.4**
	baz=263							
ETM	**Tongmen**	**0.86**	**264**	P		**Pb**	**02 58 45.2**	**0.0**
	baz=261							
ETM					S	**Sb**	**02 58 56.9**	**+0.6**
	baz=261							
NDS	**Dongshan**	**0.86**	**312**	P		**Pb**	**02 58 44.4**	**-0.9**
	baz=308							
NDS					S	**Sb**	**02 58 55.6**	**-0.9**
	baz=308							
ETLH	**Xiulin Townshi**	**0.87**	**280**	P		**Pb**	**02 58 45.2**	**-0.4**
	baz=276							
ETLH				*i* S		**Sb**	**02 58 56.9**	**+0.1**
	baz=276							
EGS		**0.90**	**330**	*i* P		**Pn**	**02 58 45.7**	**-0.5**
	baz=317							
EGS				*i* S		**Sn**	**02 58 57.9**	**-0.6**
	baz=317							
ILA	**Ilan**	**0.94**	**319**	*e*S		**Sn**	**02 59 01.0**	**+1.7**
	baz=316							
LATG	**Datong**	**0.95**	**300**	P		**Pn**	**02 58 46.8**	**-0.2**
	baz=297							
LATG					S	**Sn**	**02 59 00.7**	**+0.9**
	baz=297							
TWE	**Neicheng**	**0.95**	**314**	*i* P		**Pb**	**02 58 47.0**	**+0.1**
	baz=311							
TWE					S	**Sn**	**02 58 60.0**	**+0.2**
	baz=311							
NTC	**Toucheng**	**0.96**	**326**	*i* P		**Pb**	**02 58 47.1**	**+0.1**
	baz=323							
NTC				*i* S		**Sn**	**02 58 59.4**	**-0.5**
	baz=323							
ENTT	**Nioudou**	**0.97**	**307**	*i* P		**Pn**	**02 58 46.5**	**-0.7**
	baz=303							
ENTT				*i* S		**Sb**	**02 58 59.6**	**0.0**
	baz=303							
NDT	**Datong Townshi**	**0.99**	**303**	*i* P		**Pb**	**02 58 47.7**	**+0.2**
	baz=289							
NDT				*i* S		**Sn**	**02 59 01.6**	**+0.8**
	baz=289							
NNSB	**Dat

VWDT	**VWDT**	**1.21 256**	*e*S		**Sn**	**02 59 05.8**	**-0.3**
	baz=253						
NHDH	**Xindian Distri**	**1.22 318**	S		**Sb**	**02 59 07.9**	**+1.3**
	baz=330						
IRIF	**Iriomote-Funau**	**1.22 77**	P		**Pb**	**02 58 51.1**	**-0.3**
IRIF			S		**Sb**	**02 59 07.0**	**+0.2**
YULB	**Yu-li**	**1.23 238**	P		**Pn**	**02 58 50.0**	**-0.7**
	baz=250						
YULB			S		**Sn**	**02 59 05.7**	**-0.9**
	baz=250						
EYUL	**Yuli**	**1.24 235**	P		**Pn**	**02 58 50.6**	**-0.2**
	baz=233						
EYUL			*i* S		**Sn**	**02 59 06.6**	**-0.1**
	baz=233						
HATJ	**Hateruma jima**	**1.26 90**	P		**Pb**	**02 58 52.7**	**+0.6**
HATJ			S		**Sb**	**02 59 08.4**	**+0.5**
NFF	**Wufeng Townshi**	**1.32 296**	P		**Pn**	**02 58 52.4**	**+0.3**
	baz=293						
NFF			S		**Sb**	**02 59 09.5**	**-0.2**
	baz=293						
YM01	**YM01**	**1.33 324**	P		**Pb**	**02 58 53.0**	**-0.4**
	baz=322						
YM01			S		**Sn**	**02 59 09.2**	**-0.1**
	baz=322						
FULB	**Fuli**	**1.34 231**	P		**Pb**	**02 58 53.6**	**0.0**
	baz=228						
FULB			S		**Sn**	**02 59 10.2**	**+0.7**
	baz=228						
WHP	**Taichung City**	**1.37 279**	*i* P		**Pb**	**02 58 55.1**	**+1.1**
	baz=267						
WHP			S		**Sb**	**02 59 11.5**	**+0.4**
	baz=267						
SSLB	**Suanglung**	**1.37 259**	P		**Pn**	**02 58 53.0**	**+0.3**
	baz=256						
SSLB			*e*S		**Sn**	**02 59 10.4**	**+0.2**
	baz=256						
WCS	**Beigang Elemen**	**1.38 270**	P		**Pb**	**02 58 54.2**	**0.0**
	baz=267						
SMLT	**Sun Moon Lake**	**1.41 263**	*i* P		**Pn**	**02 58 53.8**	**+0.6**
	baz=252						
SMLT			S		**Sn**	**02 59 11.4**	**+0.3**
	baz=252						
LIOB	**Emei**	**1.41 295**	*i* P		**Pb**	**02 58 54.8**	**+0.1**
	baz=292						
LIOB			*i* S		**Sb**	**02 59 13.2**	**+0.9**
	baz=292						
NSTT	**Nanjuang**	**1.42 294**	*i* P		**Pb**	**02 58 54.2**	**-0.6**
	baz=291						
NSTT			S		**Sb**	**02 59 13.1**	**+0.7**
	baz=291						
JKRS	**Kuro-shima**	**1.46 83**	P		**Pb**	**02 58 55.3**	**-0.1**
JKRS			*e*S		**Sb**	**02 59 14.3**	**+0.7**
EDH	**Donghe**	**1.49 224**	*i* P		**Pn**	**02 58 53.3**	**-1.1**
	baz=214						
EDH			*i* S		**Sn**	**02 59 10.8**	**-2.2**
	baz=214						
TWQ1	**Liyutan**	**1.54 281**	S		**Sb**	**02 59 16.1**	**+0.2**
	baz=278						
ELDTW	**Lidau**	**1.55 236**	P		**Pn**	**02 58 54.6**	**-0.7**
	baz=234						
ELDTW			S		**Sn**	**02 59 13.6**	**-1.1**
	baz=234						
NSY	**Sanyi**	**1.56 284**	S		**Sb**	**02 59 17.1**	**+0.6**
	baz=280						
NMLH	**Miaoli**	**1.56 288**	*e*S		**Sb**	**02 59 17.6**	**+1.0**
	baz=285						
ALS	**Alishan**	**1.58 250**	*i* P		**Pn**	**02 58 56.3**	**+0.4**
	baz=247						
ALS			*e*S		**Sb**	**02 59 17.3**	**-0.1**
	baz=247						
PCYT	**Pengchaiyu**	**1.60 348**	*i* P		**Pn**	**02 58 55.4**	**-0.4**
	baz=348						
JIJ	**Ishigaki jima**	**1.60 79**	P		**Pn**	**02 58 56.2**	**+0.4**
JIJ			S		**Sn**	**02 59 16.0**	**+0.3**
WNT	**Mingjian**	**1.60 264**	S		**Sb**	**02 59 17.6**	**-0.1**
	baz=261						
LDUT	**Ludao**	**1.64 213**	*i* P		**Pn**	**02 58 55.3**	**-1.0**
	baz=211						
LDUT			*i* S		**Sn**	**02 59 13.7**	**-2.9**
	baz=211						
LONT	**Longtian**	**1.65 226**	P		**Pn**	**02 58 56.7**	**+0.2**
	baz=236						
LONT			S		**Sn**	**02 59 16.8**	**-0.2**
	baz=236						
CHN5	**Tsauling**	**1.66 254**	P		**Pb**	**02 58 58.5**	**-0.5**
	baz=252						
CHN5			*i* S		**Sb**	**02 59 20.6**	**+1.0**
	baz=252						
STYH	**Taoyuan**	**1.75 240**	P		**Pn**	**02 58 57.6**	**-0.3**
	baz=229						
STYH			S		**Sn**	**02 59 20.6**	**+1.1**
	baz=229						
WDLH	**Douliu**	**1.77 258**	*e*S		**Sb**	**02 59 23.1**	**+0.7**
	baz=256						
TPUB	**Ta-pu**	**1.81 246**	P		**Pn**	**02 59 00.3**	**+1.5**
	baz=244						
TPUB			S		**Sb**	**02 59 24.1**	**+0.3**
	baz=244						
WTP	**Ta-pu**	**1.85 244**	*i* P		**Pb**	**02 59 01.0**	**-1.1**
	baz=242						
WTP			S		**Sb**	**02 59 24.6**	**-0.2**
	baz=242						
WRL	**Guolierlin Hig**	**1.88 266**	S		**Sb**	**02 59 24.5**	**-1.2**
	baz=275						
TWK	**Hsinying**	**1.94 246**	*i* P		**Pn**	**02 59 02.4**	**+1.8**
	baz=244						
TWK			*i* S		**Sb**	**02 59 27.2**	**-0.4**
	baz=244						
CHN1	**Nanshi**	**1.94 244**	*i* P		**Pn**	**02 59 02.2**	**+1.6**
	baz=242						
CHN1			*i* S		**Sb**	**02 59 28.0**	**+0.4**
	baz=242						
SGST	**Jiashian**	**1.95 240**	*e*S		**Sb**	**02 59 26.7**	**-1.0**
	baz=227						
SSD	**Sandimen**	**2.10 232**	P		**Pn**	**02 59 04.1**	**+1.4**
	baz=225						
SSD			S		**Sn**	**02 59 29.5**	**+1.3**
	baz=225						
TSMG	**Majia**	**2.12 231**	P		**Pn**	**02 59 04.6**	**+1.6**
	baz=224						
TSMG			*e*S		**Sn**	**02 59 29.9**	**+1.3**
	baz=224						
JTJ	**Tarama**	**2.16 74**	P		**Pn**	**02 59 04.9**	**+1.5**
JTJ			*e*S		**Sb**	**02 59 31.5**	**-2.1**
MASBT	**Mashibuluo**	**2.19 229**	P		**Pn**	**02 59 04.8**	**+0.9**
	baz=223						
MASBT			*e*S		**Sn**	**02 59 31.3**	**+1.0**
	baz=223						
EAST	**Anshuo**	**2.21 221**	*i* P		**Pn**	**02 59 04.4**	**+0.1**
	baz=219						
EAST			*e*S		**Sn**	**02 59 30.9**	**0.0**
	baz=219						
SLIU	**Shizi**	**2.37 220**	P		**Pn**	**02 59 06.7**	**+0.3**
	baz=225						
MATB	**Ma-tsu**	**3.06 313**	S		**Sn**	**02 59 50.8**	**-1.1**
	baz=299						

*NEIC **18** 03:01:51.9±1.3, 6.9S±0.1°×128.1E±0.1°, h269km±17km, mb4.0/7, Error ellipse: s-maj=19.1km s-min=16.5km az=221.0*

*IDC **18** 03:01:52.7±3.7, 6.97S×127.86E, h286km±44km, mb3.2/4, mbtmp4.0/7, Error ellipse: s-maj=49.4km s-min=14.4km az=65.0*

ISC 18 03:01:49.8±0.7, 6.87S±0.07°×128.09E±0.10, h250km, n25, σ1§40/29, mb3.7/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**4.75**	**233**		**Pn**	**03 03 05.3**	**+2.6**
BATI	**Baumata**	**5.49**	**233**	P	**Pn**	**03 03 14.1**	**+2.4**
	217nm,0.4s,baz=115,slow=19,SNR=21						
BATI				S	**S**	**03 04 16.5**	**-0.5**
	101nm,0.5s,baz=68,slow=19,SNR=18						
MTN	**Manton Dam**	**6.65**	**153**	Pn	**Pn**	**03 03 28.3**	**+2.2**
KNRA	**Kununurra**	**8.78**	**176**	Pn	**Pn**	**03 03 54.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**11.41**	**192**	P	**Pn**	**03 04 25.8**	**-0.3**
	0.8nm,0.3s,baz=28,slow=11,SNR=1.9						
FITZ				S	**S**	**03 06 30.5**	**-3.3**
	1.5nm,0.3s,baz=336,slow=20,SNR=5.6						
FITZ	**Fitzroy Crossi**	**11.41**	**192**		**P**	**03 04 31.2**	**+1.3**
WB0	**Warramunga Arr**	**14.21**	**155**	P	**Pn**	**03 05 01.2**	**+0.6**
WRAB	**Tennant Creek**	**14.34**	**156**	P	**Pn**	**03 05 02.4**	**+0.3**
WRA	**Warramunga Arr**	**14.34**	**156**	P	**Pn**	**03 05 02.3**	**+0.1**
	4.7nm,0.7s,baz=334,slow=12,SNR=73						
WRA				S	**S**	**03 07 38.8**	**-2.2**
	1.1nm,0.9s,baz=332,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**14.34**	**156**	P	**Pn**	**03 05 00.1**	**-2.0**
WB2	**Warramunga Arr**	**14.35**	**156**	P	**Pn**	**03 05 02.4**	**+0.2**
WR0	**Warramunga Arr**	**14.44**	**155**	P	**Pn**	**03 05 04.0**	**+0.6**
MBWA	**Marble Bar**	**16.35**	**209**	P	**P**	**03 05 24.4**	**0.0**
MBWA				IAmb	IAmb	03 05 30.3	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**16.65**	**208**	P	**P**	**03 05 27.7**	**0.0**
PSA00				IAmb	IAmb	03 05 34.8	
	comp=Z,4.8nm,0.8s						
AS31	**Alice Springs**	**17.61**	**162**	P	**P**	**03 05 40.1**	**+1.8**
AS31				IAmb	IAmb	03 05 45.3	
	comp=Z,3.2nm,0.8s						
ASAR	**Alice Springs**	**17.61**	**162**	P	**P**	**03 05 39.9**	**+1.5**
	comp=Z,8.7nm,0.7s,baz=337,slow=11,SNR=72						
ASAR				S	**S**	**03 08 47.5**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=340,slow=21,SNR=4.1						
ASAR	**Alice Springs**	**17.61**	**162**	P	**P**	**03 05 39.2**	**+0.9**
BBOO	**Buckleboo**	**26.85**	**165**	P	**P**	**03 07 07.7**	**+0.1**
BBOO				IAmb	IAmb	03 07 20.9	
	comp=Z,4.4nm,1.1s						
STKA	**Stephens Creek**	**27.89**	**155**	P	**P**	**03 07 16.6**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=318,slow=14,SNR=1.6						
	comp=Z,1.0nm,0.3s						
STKA	**Stephens Creek**	**27.89**	**155**	P	**P**	**03 07 17.1**	**+0.2**
RPSI	**Rantau Prapat**	**30.62**	**287**	P	**P**	**03 07 41.3**	**+0.1**
RPSI				IAmb	IAmb	03 07 46.0	
	comp=Z,5.9nm,1.0s						
TPUB	**Ta-pu**	**30.86**	**347**	P	**P**	**03 07 42.5**	**-0.6**
KSRS	**Korea Array**	**44.09**	**360**	P	**P**	**03 09 32.7**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=177,slow=9.7,SNR=2.5						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**57.74**	**343**	P	**P**	**03 11 14.9**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=145,slow=5.3,SNR=3.7						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**67.09**	**328**	P	**P**	**03 12 15.7**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=134,slow=6.2,SNR=2.1						
	comp=Z,0.2nm,0.5s						

IDC 18 03:08:20.4±1.1, 29.15S×61.23E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=46.0km s-min=30.5km az=36.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**23.87**	**29**	T	T	03 38 19.6	
	baz=203						
H08S2	**Diego Garcia H**	**23.87**	**29**	T	T	03 38 22.6	
	baz=203						
H08S3	**Diego Garcia H**	**23.89**	**29**	T	T	03 38 24.1	
	baz=203						
H01W2	**Cape Leeuwin H**	**44.79**	**111**	T	T	04 04 37.5	
	baz=262,slow=74						
H01W3	**Cape Leeuwin H**	**44.80**	**111**	T	T	04 04 36.5	
	baz=262						
H01W1	**Cape Leeuwin H**	**44.81**	**111**	T	T	04 04 41.0	
	baz=262,slow=74						
VNDA	**Vanda**	**64.03**	**166**	P	P	03 18 56.0	+0.6
	1.1nm,1.1s,baz=243,slow=4.5,SNR=2.6						
	1.1nm,1.1s						
ASAR	**Alice Springs**	**64.39**	**104**	P	P	03 18 57.8	-0.8
	0.5nm,0.8s,baz=230,slow=6.8,SNR=2.5						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.19**	**297**	P	P	03 19 41.1	-0.3
	1.2nm,0.8s,baz=118,slow=5.9,SNR=6.3						
	1.2nm,0.8s						
DBIC	**Dimbokro**	**72.77**	**288**	P	P	03 19 51.0	+0.1
	4.2nm,1.0s,baz=97,slow=8.1,SNR=2.8						
	4.2nm,1.0s						
MKAR	**Makanchi Array**	**77.95**	**15**	P	P	03 20 20.7	+0.6
	0.5nm,0.7s,baz=197,slow=7.5,SNR=5.4						
	0.5nm,0.7s						

*IDC **18** 03:13:04.3±3.2, 18.58S×169.20E, h240km±42km, mb3.2/4, mbtmp3.8/6, Error ellipse: s-maj=91.8km s-min=18.9km az=158.0*

*NOU **18** 03:13:13.0, 19.02S×169.10E, h122km, MLv3.9/11, Vanuatu Islands*

ISC 18 03:13:04.6±0.8, 18.79S±0.10×169.2E±0.1, h250km, n15, σ1§82/17, mb3.5/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.41**	**318**	P	**Pn**	**03 13 41.8**	**-0.5**
MARNC	**Mare, Loyalty**	**2.89**	**202**	P	**Pn**	**03 13 54.3**	**-1.6**
YATNC	**Mamie plateau,**	**3.90**	**213**	P	**Pn**	**03 14 08.1**	**+0.9**
PINNC	**Pines Island,**	**4.14**	**203**	P	**Pn**	**03 14 12.1**	**+2.1**
DZM	**Mont Dzumac**	**4.15**	**218**	P	**Pn**	**03 14 10.6**	**+0.3**
	5.9nm,0.4s,baz=73,slow=20,SNR=2.8						
DZM				S	**S**	**03 14 57.9**	**-4.6**
	5.6nm,0.4s,baz=264,slow=22,SNR=1.7						
DZM	**Mont Dzumac**	**4.15**	**218**	P	**Pn**	**03 14 12.9**	**+2.6**
OUENC	**Ouen Island, N**	**4.22**	**211**	P	**Pn**	**03 14 12.4**	**+1.4**
NOUC	**Port Laguerre**	**4.26**	**219**	P	**Pn**	**03 14 13.3**	**+1.8**
ONTNC	**Ouen Toro**	**4.33**	**216**	P	**Pn**	**03 14 12.2**	**-0.1**
MSVF	**Nonsavu**	**8.50**	**84**	P	**Pn**	**03 15 04.5**	**+0.1**
	11nm,0.8s,baz=261,slow=13,SNR=9.2						
WRA	**Warramunga Arr**	**32.85**	**262**	P	**P**	**03 19 16.1**	**+0.8**
	0.4nm,0.9s,baz=83,slow=6.8,SNR=6.4						
WRA				PcP	**PcP**	**03 21 54.7**	**+0.7**
	0.3nm,0.8s,baz=86,slow=3.1,SNR=1.7						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**33.18**	**255**	P	**P**	**03 19 19.7**	**+1.5**
	1.2nm,0.4s,baz=82,slow=8.7,SNR=18						
	1.2nm,0.4s						
SONM	**Songino Array**	**86.82**	**323**	P	**P**	**03 25 21.7**	**+0.7**
	0.5nm,0.5s,baz=137,slow=5.9,SNR=2.6						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**89.82**	**17**	P	**P**	**03 25 33.6**	**-0.9**
	0.4nm,0.6s,baz=233,slow=5.2,SNR=5.0						
	0.4nm,0.6s						
ARCES	**ARCESS Array B**	**124.62**	**345**	PKP	**PKiKP**	**03 31 33.4**	**-0.6**
	1.6nm,0.9s,baz=46,slow=2.6,SNR=5.9						

*IDC **18** 03:29:45.9±0.6, 22.66S×172.57E, h0km, mb4.4/17, mbtmp4.3/19, ML4.5/2, MS4.3/35, Error ellipse: s-maj=20.1km s-min=15.9km az=137.0*

*NEIC **18** 03:29:49.2±1.2, 22.48S±0.09×172.4E±0.1, h10km±1km, mb5.0/42, Error ellipse: s-maj=17.8km s-min=15.7km az=85.0*

*GCMT **18** 03:29:50.2±0.2, 22.28S±0.01×172.77E±0.01, h19km, MW5.1/132, Moment Tensor Solution. s73,c96; s132,c203; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.75±.15; Mθθ 1.05±.13; Mϕϕ 0.70±.12; Mrθ-0.07±.27; Mrϕ 5.78±.10; Mθϕ 1.13±.26; Best double couple: M0 5.92600×10^16 NP1:ϕ=182.00000°, δ83.00000°, λ-166.00000°. NP2:ϕ=90.00000°, δ76.00000°, λ-7.00000°. Principal axes: T 6.7230, Plg5.0000°, Azm315.0000°; N -1.5920, Plg75.0000°, Azm207.0000°; P -5.1290, Plg14.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **18** 03:29:52.2±0.6, 22.57S×172.22E, h33km, mb5.1/9 Error ellipse: s-maj=14.2km s-min=11.5km az=99.3*

ISC 18 03:29:52.2±0.4, 22.63S±0.06×172.52E±0.07, h35km, n234, σ1§47/205, mb4.9/52, MS4.3/35, 18C-18D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONTNC	**Ouen Toro**	**5.62**	**272**	Pn	**Pn**	**03 31 11.3**	**-2.0**
DZM	**Mont Dzumac**	**5.65**	**274**	Pn	**Pn**	**03 31 13.8**	**0.0**
	12nm,0.3s,baz=90,slow=18,SNR=49						
DZM				Sn	**Sn**	**03 32 18.7**	**+1.0**
	7.2nm,0.3s,baz=119,slow=19,SNR=3.9						
	29nm,0.3s						
DZM	**Mont Dzumac**	**5.65**	**274**	Pn	**Pn**	**03 31 11.7**	**-2.2**
MSVF	**Nonsavu**	**7.12**	**48**	Pn	**Pn**	**03 31 30.2**	**-3.7**
	0.3nm,0.3s,baz=218,slow=16,SNR=9.0						
MSVF				LR	LR	03 33 40.8	
	comp=Z,6μm,19.3s,baz=234,slow=33						
	24nm,1.0s						
RAO	**Raoul Island**	**10.84**	**129**	LR	LR	03 35 44.8	
	comp=Z,3μm,19.5s,baz=334,slow=33						
URZ	**Urewera**	**16.07**	**167**	LR	LR	03 37 29.8	
	comp=Z,992nm,20.1s,baz=0.5,slow=29						
URZ	**Urewera**	**16.07**	**167**	Pn	**Pn**	**03 33 37.5**	**+2.1**
URZ				IAmb	IAmb	03 33 43.6	
	comp=Z,85nm,1.0s						
AFI	**Afiamalu**	**17.23**	**62**	LR	LR	03 38 52.5	
	comp=Z,744nm,19.2s,baz=240,slow=32						
HNR	**Honiara**	**17.82**	**315**	LR	LR	03 39 52.6	
	comp=Z,1μm,19.6s,baz=147,slow=34						
BFZ	**Birch Farm**	**18.27**	**171**	P	**P**	**03 34 03.3**	**+0.5**
NNZ	**Nelson**	**18.55**	**178**	P	**P**	**03 34 07.3**	**+1.5**
NNZ				IAmb	IAmb	03 34 17.2	
	comp=Z,167nm,1.7s						
TUWZ	**Tuamarina**	**18.79**	**177**	P	**P**	**03 34 09.2**	**+0.8**
MSWZ	**Moikau Station**	**18.88**	**174**	P	**P**	**03 34 10.0**	**+0.6**
BSWZ	**Blackbirch Sta**	**19.07**	**177**	P	**P**	**03 34 12.6**	**+1.1**
THZ	**Tophouse**	**19.09**	**179**	P	**P**	**03 34 13.3**	**+1.5**
KHZ	**Kahutara**	**19.75**	**178**	P	**P**	**03 34 20.1**	**+1.1**
KHZ				IAmb	IAmb	03 34 30.1	
	comp=Z,88nm,1.4s						
EIDS	**Eidsvold**	**19.78**	**258**		**P**	**03 34 16.5**	**-2.9**
LTZ	**Lake Taylor**	**20.10**	**181**	P	**P**	**03 34 24.9**	**+2.1**
LTZ				IAmb	IAmb	03 34 34.8	
	comp=Z,111nm,1.1s						
ARMA	**Armidale**	**20.22**	**243**	P	**P**	**03 34 23.5**	**-0.9**
ARMA				IAmb	IAmb	03 34 32.8	
	comp=Z,93nm,1.5s						
OXZ	**Oxford**	**20.65**	**181**	P	**P**	**03 34 29.6**	**+0.8**
OXZ				IAmb	IAmb	03 34 36.7	
	comp=Z,47nm,0.8s						
FOZ	**Fox Glacier**	**20.97**	**186**	P	**P**	**03 34 33.7**	**+1.5**
FOZ				IAmb	IAmb	03 34 40.2	
	comp=Z,91nm,1.2s						
RPZ	**Rata Peaks**	**21.07**	**183**	P	**P**	**03 34 35.1**	**+1.9**
	comp=Z,18nm,0.9s,baz=12,slow=8.1,SNR=6.7						
RPZ				LR	LR	03 41 22.2	
	comp=Z,274nm,20.1s,baz=14,slow=33						
RPZ	**Rata Peaks**	**21.07**	**183**	P	**P**	**03 34 34.3**	**+1.0**
RPZ				IAmb	IAmb	03 34 49.7	
	comp=Z,65nm,1.2s						
LBZ	**Lake Benmore**	**21.79**	**185**	P	**P**	**03 34 42.6**	**+1.6**
LBZ				IAmb	IAmb	03 35 03.2	
	comp=Z,55nm,1.2s						
CAN	**Canberra**	**24.09**	**233**	P	**P**	**03 35 05.2**	**+0.7**
CAN	**Canberra**	**24.09**	**233**	P	**P**	**03 35 05.2**	**+0.7**
CAN				pmax	pmax		
	comp=Z,36nm,1.2s						
CTA	**Charters Tower**	**24.59**	**271**	P	**P**	**03 35 08.2**	**-1.0**
	comp=Z,6.2nm,1.0s,baz=120,slow=8.1,SNR=2.4						
CTA				LR	LR	03 43 56.7	
	comp=Z,596nm,19.0s,baz=92,slow=34						
	comp=Z,6.2nm,1.0s						
RAR	**Rarotonga**	**25.73**	**92**	LR	LR	03 43 01.1	
	comp=Z,615nm,21.8s,baz=260,slow=31						
STKA	**Stephens Creek**	**28.92**	**245**	P	**P**	**03 35 47.2**	**-0.9**
	comp=Z,4.9nm,0.9s,baz=94,slow=15,SNR=4.5						
STKA				LR	LR	03 46 26.9	
	comp=Z,818nm,21.0s,baz=71,slow=35						
	comp=Z,4.9nm,0.9s						
STKA	**Stephens Creek**	**28.92**	**245**	*e*P	**P**	**03 35 50.2**	**+2.2**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AS31	**Alice Springs**	**35.45**	**261**	P	**P**	**03 36 42.5**	**-2.9**
ASAR	**Alice Springs**	**35.45**	**261**	P	**P**	**03 36 44.6**	**-0.9**
	comp=Z,6.3nm,1.1s,baz=84,slow=9.1,SNR=21						
ASAR				LR	LR	03 49 55.2	
	comp=Z,644nm,22.0s,baz=100,slow=34						
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**35.62**	**267**	P	**P**	**03 36 44.8**	**-2.1**
	comp=Z,1.0nm,0.5s,baz=96,slow=8.3,SNR=22						
WRA				LR	LR	03 51 27.6	
	comp=Z,334nm,18.3s,baz=95,slow=36						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**35.62**	**267**	P	**P**	**03 36 45.1**	**-1.7**
WRA	**Warramunga Arr**	**35.62**	**267**	*e*P	**P**	**03 36 45.3**	**-1.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PPT	**Papeete**	**35.88**	**89**	LR	LR	03 47 28.9	
	comp=Z,490nm,20.9s,baz=254,slow=30						
GENI	**Genyem**	**37.16**	**298**	P	**P**	**03 36 59.3**	**-0.8**
	comp=Z,26nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**41.26**	**352**	T	T	04 21 06.8	
	baz=171,slow=76,SNR=112						
H11S3	**WAKE ISLAND Hy**	**41.27**	**352**	T	T	04 21 06.2	
	baz=171,slow=76,SNR=106						
H11S1	**WAKE ISLAND Hy**	**41.28**	**352**	T	T	04 21 07.1	
	baz=171,slow=76,SNR=93						
H11N1	**WAKE ISLAND Hy**	**42.44**	**352**	T	T	04 22 38.9	
	baz=172,slow=76,SNR=93						
H11N3	**WAKE ISLAND Hy**	**42.44**	**352**	T	T	04 22 40.9	
	baz=172,slow=76,SNR=38						
H11N2	**WAKE ISLAND Hy**	**42.46**	**352**	T	T	04 22 40.1	
	baz=172,slow=76,SNR=66						
FITZ	**Fitzroy Crossi**	**44.05**	**267**	LR	LR	03 55 02.2	
	comp=Z,644nm,21.6s,baz=104,slow=34						
FITZ	**Fitzroy Crossi**	**44.05**	**267**	P	**P**	**03 37 55.5**	**-1.4**
GUMO	**Guam**	**45.05**	**320**	LR	LR	03 54 44.4	
	comp=Z,501nm,21.6s,baz=127,slow=33						
SIJI	**Sorong**	**45.55**	**293**	LR	LR	03 56 37.3	
	comp=Z,597nm,21.6s,baz=306,slow=35						
SWI	**Sorong**	**45.56**	**293**	P	**P**	**03 38 06.7**	**-2.3**
	comp=Z,968nmcomp=Z,54nm,1.0s						
BATI	**Baumata**	**48.26**	**277**	LR	LR	03 59 10.7	
	comp=Z,819nm,18.0s,baz=140,slow=36						
KAPI	**Kappang**	**53.84**	**281**	LR	LR	04 02 48.0	
	comp=Z,171nm,19.6s,baz=120,slow=37						
DAV	**Davao City (W)**	**54.60**	**297**	LR	LR	04 02 03.6	
	comp=Z,147nm,20.6s,baz=168,slow=36						
VNDA	**Vanda**	**55.19**	**183**	P	**P**	**03 39 20.7**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=12,slow=9.6,SNR=2.2						
VNDA				LR	LR	04 01 10.8	
	comp=Z,180nm,18.0s,baz=19,slow=34						
	comp=Z,0.4nm,0.8s						
VNDA	**Vanda**	**55.19**	**183**	P	**P**	**03 39 23.1**	**+2.2**
SBA	**Scott Base**	**55.35**	**181**	P	**P**	**03 39 23.8**	**+1.7**
SBA	**Scott Base**	**55.35**	**181**	P	**P**	**03 39 23.8**	**+1.7**
SBA				pmax	pmax		
	comp=Z,28nm,1.1s						
TOLI2	**Tolitoli**	**55.62**	**288**	P	**P**	**03 39 23.4**	**-1.5**
TOLI2				IAmb	IAmb	03 39 32.2	
	comp=Z,14nm,0.8s						
JCJ	**Chichijima**	**57.48**	**328**	LR	LR	04 02 38.5	
	comp=Z,167nm,21.3s,baz=100,slow=34						
CASY	**Casey**	**58.31**	**205**	P	**P**	**03 39 43.8**	**+0.6**
CASY				IAmb	IAmb	03 41 03.8	
	comp=Z,9.7nm,0.6s						
LEM	**Lembang**	**64.26**	**273**	LR	LR	04 09 00.6	
	comp=Z,311nm,18.6s,baz=130,slow=37						
MJA0	**Matsu Arr-Jizo**	**67.16**	**331**	*e*P	**P**	**03 40 45.1**	**+2.5**
MJ

CN2					LR	LR			
	comp=Z,100nm,14.0s								
CN2					LR	LR			
	comp=Z,100nm,14.0s								
CN2					LR	LR			
	comp=Z,100nm,14.0s								
KLR	**Kul'dur**	**80.22**	**334**		LR	LR	04 15 14.2		
	comp=Z,124nm,19.6s,baz=168,slow=34								
KLR	**Kul'dur**	**80.22**	**334**	⇓	*e*P	**P**	**03 41 57.6**	**-1.3**	
KLR					pmax	pmax			
	comp=Z,13nm,1.8s								
LYN	**LuoYang**	**80.52**	**314**	⇑	P	**P**	**03 42 03.8**	**+3.0**	
LYN					pmax	pmax			
	comp=Z,10.0nm,0.9s								
LYN					pmax	pmax			
	comp=Z,180nm,5.1s								
XAN	**Xi'an**	**82.65**	**311**		P	**P**	**03 42 10.9**	**-1.3**	
XAN					pP	pP	03 42 22.3	-0.1	
XAN					sP	sP	03 42 27.8	+1.7	
XAN					pmax	pmax			
	comp=Z,7.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**82.67**	**293**		P	**P**	**03 42 13.2**	**+0.6**	
	comp=Z,3.1nm,0.3s,baz=123,slow=3.3,SNR=2.4								
	comp=Z,3.1nm,0.3s								
CMAR	**Chiang Mai Arr**	**82.67**	**293**		P	**P**	**03 42 11.0**	**-1.6**	
MA2	**Magadan**	**83.83**	**349**		LR	LR	04 13 00.5		
	comp=Z,149nm,21.5s,baz=148,slow=31								
XLT	**XiLinHaoTe**	**83.98**	**323**		*e*P	**P**	**03 42 20.4**	**+1.5**	
XLT					pP	PcP	03 42 24.8	+2.0	
XLT					sP	pwP	03 42 29.9	-2.5	
XLT					S	**S**	**03 52 43.8**	**+3.3**	
XLT					sS	ScS	03 52 51.0	-1.8	
XLT					SS	**SS**	**03 58 15.4**	**+5.6**	
XLT					pmax	pmax			
	comp=Z,4.0nm,1.1s								
XLT					pmax	pmax			
	comp=Z,70nm,5.0s								
XLT					LR	LR			
	comp=Z,11nm,12.8s								
XLT					LR	LR			
	comp=Z,110nm,12.3s								
XLT					LR	LR			
	comp=Z,120nm,13.9s								
PZH	**PanZhiHua**	**84.10**	**302**		P	**P**	**03 42 22.1**	**+2.2**	
PZH					pmax	pmax			
	comp=Z,10.0nm,0.5s								
PZH					pmax	pmax			
	comp=Z,320nm,4.6s								
HHC	**Hu-ho-hao-te**	**84.78**	**318**	*e*	P	**P**	**03 42 25.8**	**+2.8**	
HHC					pmax	pmax			
	comp=Z,20nm,1.0s								
HHC					pmax	pmax			
	comp=Z,280nm,6.3s								
HHC					LR	LR			
	comp=Z,300nm,13.1s								
HHC					LR	LR			
	comp=Z,320nm,15.7s								
HHC					LR	LR			
	comp=Z,490nm,20.9s								
TROLL	**Troll, Antarti**	**85.36**	**183**		P	**P**	**03 42 24.5**	**-1.1**	
ZEA	**Zeya**	**85.49**	**335**	*e*	P	**P**	**03 42 27.8**	**+1.7**	
ZEA				*e*			03 52 51.2		
ZEA					pmax	pmax			
	comp=Z,10.0nm,1.3s								
SNAA	**Sanae**	**85.90**	**181**		P	**P**	**03 42 26.7**	**-1.5**	
SNAA	**Sanae**	**85.90**	**181**		LR	LR	04 17 00.5		
	comp=Z,161nm,22.0s,baz=201,slow=33								
SNAA	**Sanae**	**85.90**	**181**		P	**P**	**03 42 29.5**	**+1.3**	
SNAA	**Sanae**	**85.90**	**181**		P	**P**	**03 42 29.5**	**+1.3**	
SNAA					pmax	pmax			
	comp=Z,10.0nm,1.4s								
VNA3	**Neumayer Olymp**	**86.37**	**179**		P	**P**	**03 42 28.8**	**-1.7**	
VNA2	**Neumayer--Watz**	**86.70**	**180**		P	**P**	**03 42 30.7**	**-1.4**	
	baz=178,slow=4.7								
SEY	**Seymchan**	**86.75**	**351**		P	**P**	**03 42 33.2**	**+1.1**	
	comp=Z,14nm,0.9s,baz=156,slow=6.4,SNR=16								
	comp=Z,14nm,0.9s								
SEY	**Seymchan**	**86.75**	**351**	⇑	*i*P	**P**	**03 42 33.7**	**+1.6**	
SEY					pmax	pmax			
	comp=Z,24nm,1.0s								
LZH	**Lanzhou**	**87.26**	**311**		*e*P	**P**	**03 42 39.1**	**+3.6**	
LZH					pP	pP	03 42 44.8	-1.0	
LZH					pmax	pmax			
	comp=Z,16nm,1.0s								
HUMO	**Hull Mountain**	**87.97**	**42**		P	**P**	**03 42 40.0**	**+1.5**	
NVAR	**Mina Array Bea**	**88.78**	**47**		P	**P**	**03 42 40.9**	**-1.8**	
	comp=Z,1.1nm,0.4s,baz=232,slow=5.6,SNR=0.6								
	comp=Z,1.1nm,0.4s								
BILL	**Bilibino**	**90.51**	**358**	⇑	*e*P	**P**	**03 42 50.8**	**+1.0**	
BILL					pmax	pmax			
	comp=Z,9.0nm,0.4s								
WVOR	**Wild Horse Val**	**90.59**	**44**		P	**P**	**03 42 52.8**	**+1.8**	
BBB	**Bella Bella**	**90.66**	**32**		LR	LR	04 14 46.0		
	comp=Z,117nm,21.3s,baz=223,slow=30								
N25K	**Chitina, Valde**	**90.71**	**19**		P	**P**	**03 42 53.0**	**+2.0**	
GLB	**Gilahina Butte**	**90.82**	**19**		P	**P**	**03 42 52.0**	**+0.5**	
YAK	**Yakutsk**	**91.03**	**341**		LR	LR	04 21 46.1		
	comp=Z,79nm,18.5s,baz=90,slow=34								
YAK	**Yakutsk**	**91.03**	**341**	⇓	*e*P	**P**	**03 42 52.9**	**+0.6**	
YAK					pmax	pmax			
	comp=Z,20nm,0.7s								
CTGM	**Chitina Glacie**	**91.24**	**21**		P	**P**	**03 42 54.9**	**+1.3**	
CTGM					lAmb	lAmb	03 42 58.5		
	comp=Z,9.3nm,1.0s								
TUC	**Tucson**	**91.34**	**56**		P	**P**	**03 42 56.4**	**+1.7**	
ULN	**Ulaanbaatar**	**91.40**	**322**	⇓	*e*P	**P**	**03 42 54.7**	**0.0**	
ULN					pmax	pmax			
	comp=Z,7.0nm,1.7s								
P29M	**Windy Craggy**	**91.49**	**23**		P	**P**	**03 42 56.6**	**+2.0**	
GTA	**Gaotai**	**91.67**	**312**		*e*P	**P**	**03 42 58.6**	**+2.5**	
GTA					pP	pP	03 43 02.8	-3.6	
GTA					sP	sP	03 43 05.6	-4.5	
GTA					pmax	pmax			
	comp=Z,4.0nm,1.2s								
GTA					pmax	pmax			
	comp=Z,72nm,5.5s								
GTA					LR	LR			
	comp=Z,81nm,20.0s								
GTA					LR	LR			
	comp=Z,170nm,21.1s								
GTA					LR	LR			
	comp=Z,130nm,21.4s								
I21K	**Tanana**	**91.68**	**14**		P	**P**	**03 42 55.4**	**+0.1**	
I21K					lAmb	lAmb	03 43 02.5		
	comp=Z,7.0nm,1.1s								
SONM	**Songino Array**	**91.76**	**322**		P	**P**	**03 42 54.5**	**-1.7**	
	comp=Z,0.7nm,0.8s,baz=302,slow=22,SNR=3.6								
SONM					LR	LR	04 21 35.7		
	comp=Z,109nm,21.8s,baz=130,slow=34								
	comp=Z,0.7nm,0.8s								
M26K	**Nabesna, AK**	**91.80**	**19**		P	**P**	**03 42 55.8**	**-0.2**	
M26K					lAmb	lAmb	03 43 10.2		
	comp=Z,14nm,1.4s								
BESE	**Bessie Mountai**	**91.83**	**25**		P	**P**	**03 42 56.7**	**+0.5**	
H03S2	**Juan Fernandez**	**91.87**	**128**		T	T	05 24 48.9		
	baz=242								
H03S1	**Juan Fernandez**	**91.88**	**128**		T	T	05 24 49.8		
	baz=242								
H03S3	**Juan Fernandez**	**91.89**	**128**		T	T	05 24 49.0		
	baz=242								
WRH	**Wood River Hil**	**92.02**	**16**		P	**P**	**03 42 57.7**	**+0.8**	
H03N3	**Juan Fernandez**	**92.06**	**128**		T	T	05 25 01.8		
	baz=244,slow=72								
H03N2	**Juan Fernandez**	**92.06**	**128**		T	T	05 24 58.5		
	baz=244,slow=72								
H03N1	**Juan Fernandez**	**92.07**	**128**		T	T	05 24 58.1		
	baz=244,slow=72								
M27K	**Edge Creek, AK**	**92.11**	**19**		P	**P**	**03 42 57.8**	**+0.2**	
M27K					lAmb	lAmb	03 43 03.9		
	comp=Z,11nm,1.1s								
CCB	**Clear Creek Bu**	**92.24**	**16**		P	**P**	**03 42 58.0**	**+0.1**	
CCB					lAmb	lAmb	03 43 02.3		
	comp=Z,7.7nm,1.1s								
RIDG	**Independent Ri**	**92.30**	**18**		P	**P**	**03 42 58.8**	**+0.5**	
MDM	**Murphy Dome**	**92.38**	**16**		P	**P**	**03 42 58.0**	**-0.6**	
MDM					lAmb	lAmb	03 43 04.2		
	comp=Z,12nm,1.2s								
COLA	**College**	**92.41**	**16**	⇓	*e*P	**P**	**03 42 58.1**	**-0.6**	
COLA					pmax	pmax			
	comp=Z,11nm,1.0s								
DOT	**Dot Lake**	**92.45**	**18**		P	**P**	**03 42 58.7**	**-0.3**	
IL31		**92.57**	**16**		P	**P**	**03 42 59.1**	**-0.3**	
IL31					lAmb	lAmb	03 43 04.4		
	comp=Z,12nm,1.2s								
ILAR	**Eielson Array**	**92.57**	**16**		P	**P**	**03 42 57.8**	**-1.7**	
	comp=Z,3.6nm,1.1s,baz=230,slow=5.1,SNR=11								
ILAR					LR	LR	04 18 22.8		
	comp=Z,136nm,20.6s,baz=224,slow=32								
	comp=Z,3.6nm,1.1s								
ILAR	**Eielson Array**	**92.57**	**16**	*e*	P	**P**	**03 42 59.0**	**-0.5**	
ILAR					pmax	pmax			
	comp=Z,5.0nm,1.0s								
L27K	**Beaver Creek,**	**92.66**	**19**		P	**P**	**03 43 00.2**	**+0.2**	
L27K					lAmb	lAmb	03 43 05.9		
	comp=Z,6.4nm,1.2s								
BCAR	**Beaver Creek A**	**92.67**	**19**		P	**P**	**03 43 00.7**	**+0.6**	
SCRK	**Sand Creek**	**92.73**	**18**		P	**P**	**03 42 59.9**	**-0.4**	
SCRK					lAmb	lAmb	03 43 04.0		
	comp=Z,7.5nm,1.1s								
J25K	**Salcha River,**	**92.85**	**17**		P	**P**	**03 43 00.4**	**-0.4**	
J25K					lAmb	lAmb	03 43 06.4		
	comp=Z,12nm,1.4s								
EGAK	**Eagle**	**94.14**	**18**		P	**P**	**03 43 06.4**	**-0.3**	
EGAK					lAmb	lAmb	03 43 12.0		
	comp=Z,9.8nm,1.0s								
NEW	**Newport**	**94.42**	**39**		LR	LR	04 20 14.0		
	comp=Z,94nm,18.9s,baz=219,slow=32								
JLU	**Jordanelle**	**94.48**	**48**		P	**P**	**03 43 09.5**	**+0.3**	
TXAR	**Lajitas Array**	**95.71**	**61**		P	**P**	**03 43 13.0**	**-1.8**	
	comp=Z,0.4nm,1.0s,baz=231,slow=7.9,SNR=4.4								
	comp=Z,0.4nm,1.0s								
PDAR	**Pinedale Array**	**96.68**	**46**		P	**P**	**03 43 20.1**	**+1.0**	
	comp=Z,0.8nm,1.0s,baz=222,slow=3.8,SNR=4.9								
PDAR					LR	LR	04 21 04.8		
	comp=Z,126nm,18.8s,baz=249,slow=32								
	comp=Z,0.8nm,1.0s								
WMQ	**Urumqi**	**101.75**	**313**		*e*P	**Pdif**	**03 43 42.6**	**+1.0**	
WMQ					LR	LR			
	comp=Z,260nm,22.9s								
WMQ					LR	LR			
	comp=Z,130nm,21.7s								
ARCES	**ARCESS Array B**	**129.10**	**346**		PKP	**PKPdf**	**03 48 54.8**	**-1.0**	
	comp=Z,2.8nm,1.0s,baz=26,slow=4.4,SNR=2.4								
BIZ	**Bicaz**	**143.71**	**320**	⇑	P	**PKPdf**	**03 49 23.8**	**+0.4**	
BURAR	**Bucovina Array**	**143.88**	**322**	⇑	P	PKPab	03 49 20.4	-0.6	
PLOR	**Plostina**	**143.91**	**318**	⇑	P	**PKiKP**	**03 49 26.8**	**-0.5**	
MLR	**Muntele Rosu**	**144.52**	**318**	⇑	P	**PKiKP**	**03 49 29.3**	**+0.5**	
DOPR	**Dopca**	**144.63**	**319**	⇑	P	PKPbc	03 49 23.8	-0.1	
KOLS	**Kolonicke sedl**	**144.74**	**325**	*e*	PKIKP	**PKiKP**	**03 49 27.9**	**-1.0**	
KOLS	**Kolonicke sedl**	**144.74**	**325**	*e*	PKP	**PKiKP**	**03 49 27.9**	**-1.0**	
UZH	**Uzhgorod**	**144.91**	**325**	*e*	PKHKP	PKPpre	03 49 21.4		
UZH				*i*			03 49 25.1		
UZH				*e*			03 49 32.6		
UZH				*e*			03 49 41.2		
MCD	**Coleburn Disti**	**144.95**	**356**	*e*	P	**PKPdf**	**03 49 25.0**	**-0.3**	
VOIR		**145.10**	**319**	⇑	P	**PKPdf**	**03 49 26.6**	**+0.6**	
KAC	**Achnashellach**	**145.13**	**358**	*e*	P	**PKPdf**	**03 49 26.1**	**+0.5**	
CRVS	**Cervenica-Dubn**	**145.18**	**326**	*e*	PKIKP	**PKiKP**	**03 49 27.4**	**-2.4**	
CRVS	**Cervenica-Dubn**	**145.18**	**326**	*e*	PKP	**PKiKP**	**03 49 27.4**	**-2.4**	
KPL	**Plockton**	**145.30**	**358**	*e*	P	**PKPdf**	**03 49 26.4**	**+0.6**	
ARR	**Arges**	**145.39**	**319**	⇑	P	**PKPdf**	**03 49 27.8**	**+1.3**	
DRGR		**145.76**	**322**	⇓	P	**PKPdf**	**03 49 22.4**	**-4.7**	
LANS	**Liptovska Anna**	**146.03**	**328**	*e*	PKP2	**PKiKP**	**03 49 31.2**	**-0.4**	
LANS	**Liptovska Anna**	**146.03**	**328**	*e*	PKP	**PKiKP**	**03 49 31.2**	**-0.4**	
INVG	**Invergeldie, C**	**146.15**	**357**	*e*	P	**PKPab**	**03 49 29.1**	**+0.1**	
LAWE	**Loch Awe, Argy**	**146.37**	**358**	*e*	P	**PKPbc**	**03 49 28.0**	**-1.0**	
EAB	**Aberfoyle**	**146.40**	**357**	*e*	P	**PKPab**	**03 49 29.6**	**-0.3**	
GZR	**Gura Zlata**	**146.49**	**320**	⇑	P	**PKPdf**	**03 49 28.4**	**0.0**	
MORC	**Moravsky Berou**	**146.51**	**330**	⇑	P	**PKiKP**	**03 49 31.8**	**-0.8**	
MORC	**Moravsky Berou**	**146.51**	**330**	*e*	PKP	**PKiKP**	**03 49 31.8**	**-0.8**	
OSTC	**Ostas**	**146.54**	**332**	*e*	PKP	**PKiKP**	**03 49 31.3**	**-1.3**	
ESY	**Stoneypath**	**146.56**	**355**	*e*	P	**PKPab**	**03 49 30.4**	**-0.2**	
EDI	**Edinburgh**	**146.59**	**356**	*e*	P	**PKPab**	**03 49 30.2**	**-0.5**	
KRLC	**Kraliky**	**146.65**	**331**	*e*	PKP2	**PKPab**	**03 49 30.9**	**-0.3**	
KRLC	**Kraliky**	**146.65**	**331**	*e*	PKP	**PKPab**	**03 49 30.9**	**-0.3**	
DPC	**Dobruska-Polom**	**146.65**	**332**	*e*	PKP2	**PKPab**	**03 49 31.3**	**+0.1**	
DPC	**Dobruska-Polom**	**146.65**	**332**	*e*	PKP	**PKPab**	**03 49 31.3**	**+0.1**	
DPC				*ex*		x	03 49 39.6		
SIRR	**Siria**	**146.65**	**322**	⇓	P	**PKPdf**	**03 49 26.5**	**-2.0**	
UPC	**Upice**	**146.66**	**332**	*e*	PKP2	**PKiKP**	**03 49 32.3**	**-0.5**	
UPC	**Upice**	**146.66**	**332**	*e*	PKP	**PKiKP**	**03 49 32.3**	**-0.5**	
EBL	**Broad Law**	**146.73**	**355**	*e*	P	**PKPab**	**03 49 30.2**	**-1.0**	
VYHS	**Vyhne**	**146.78**	**327**	*e*	PKP2	**PKiKP**	**03 49 32.6**	**-0.5**	
VYHS	**Vyhne**	**146.78**	**327**	*e*	PKP	**PKiKP**	**03 49 32.6**	**-0.5**	
HERR	**Herculane**	**146.98**	**319**	⇑	P	**PKPbc**	**03 49 30.8**	**-0.3**	
BZS	**Buzias**	**147.05**	**321**	⇑	P	**PKPdf**	**03 49 24.9**	**-4.2**	
JAVC	**Velka Javorina**	**147.10**	**329**	*e*	PKP	**PKiKP**	**03 49 34.6**	**+0.8**	
ESK	**Eskdalemuir**	**147.20**	**355**	*e*	P	**PKPab**	**03 49 32.1**	**-1.0**	
BRG	**Berggiesshubel**	**147.24**	**335**	*e*	PKP	**PKPab**	**03 49 32.5**	**-1.0**	
BRG					Amp		03 49 36.3		
	comp=Z,9.5nm,0.8s								
BRG	**Berggiesshubel**	**147.24**	**335**	*e*	PKP2	**PKPab**	**03 49 32.4**	**-1.0**	
BRG					pmax	pmax			
	comp=Z,10.0nm,0.8s								
PVCC	**Panska Ves**	**147.25**	**334**	*e*	PKP2	**PKiKP**	**03 49 33.4**	**-0.6**	
PVCC	**Panska Ves**	**147.25**	**334**	*e*	PKP	**PKiKP**	**03 49 33.4**	**-0.6**	
CLL	**Collm**	**147.25**	**336**	⇑	*i*PKP2	**PKiKP**	**03 49 33.1**	**-0.9**	
CLL					pmax	pmax			
	comp=Z,10.0nm,0.9s								
CLL	**Collm**	**147.25**	**336**	*e*	PKPdf	**PKPbc**	**03 49 31.0**	**-0.7**	
CLL				⇑	*i*PKPbc	**PKiKP**	**03 49 33.1**	**-0.9**	
	comp=Z,10.0nm,0.9s								
CLL					*i* (PKPab)	**PKPab**	**03 49 34.8**	**+1.4**	
	comp=Z,9.0nm,0.8s								
VRAC	**Vranov**	**147.28**	**330**	⇑	P	**PKiKP**	**03 49 34.9**	**+0.7**	
VRAC	**Vranov**	**147.28**	**330**	*e*	PKP	**PKiKP**	**03 49 33.9**	**-0.2**	
NEWG	**New Galloway**	**147.46**	**357**	*e*	P	**PKPab**	**03 49 32.7**	**-1.4**	
KRUC	**Moravsky**	**147.55**	**330**	*e*	PKP	**PKiKP**	**03 49 34.5**	**-0.2**	
EDMD	**Edmundbyers**	**147.57**	**354**	*e*	P	**PKPbc**	**03 49 32.6**	**+0.2**	
MODS	**Modra-Piesok**	**147.62**	**329**	*e*	PKP2	**PKiKP**	**03 49 35.4**	**+0.5**	
MODS	**Modra-Piesok**	**147.62**	**329**	*e*	PKP	**PKiKP**	**03 49 35.4**	**+0.5**	
PRU	**Pruhonice**	**147.68**	**333**	*e*	PKP2	**PKPab**	**03 49 34.9**	**-0.3**	
PRU	**Pruhonice**	**147.68**	**333**	*e*	PKP	**PKPab**	**03 49 34.9**	**-0.3**	
GAL1	**Galloway**	**147.74**	**357**	*e*	P	**PKiKP**	**03 49 33.4**	**-1.4**	
TREC	**Trest**	**147.79**	**331**	*e*	PKP2	**PKPab**	**03 49 36.0**	**+0.3**	
TREC	**Trest**	**147.79**	**331**	*e*	PKP	**PKPab**	**03 49 36.0**	**+0.3**	
MORH	**Mrgy, Hungar**	**148.35**	**324**	⇑	P	**PKPbc**	**03 49 33.3**	**-1.5**	
RONA	**Rosalia, Austr**	**148.56**	**329**	*e*	P	**PKiKP**	**03 49 37.0**	**+0.1**	
	comp=Z,3.0nm,0.7s								
CONA	**Conrad Observa**	**148.61**	**329**	*e*	P	**PKiKP**	**03 49 37.3**	**+0.3**	
	comp=Z,6.3nm,1.0s								
CKRC	**Cesky Krumlov**	**148.66**	**332**	*e*	PKP	**PKiKP**	**03 49 36.3**	**-0.7**	
CKRC				*ex*		x	03 49 43.1		
KHC	**Kasperske Hory**	**148.74**	**333**			**PKPbc**	**03 49 34.0**	**-1.7**	
KHC	**Kasperske Hory**	**148.74**	**333**	*e*	PKP2	**PKiKP**	**03 49 37.2**	**0.0**	
KHC	**Kasperske Hory**	**148.74**	**333**	*e*	PKP	**PKiKP**	**03 49 37.2**	**0.0**	
KHC				*ex*		x	03 49 44.3		
GERES	**GERESS Array B**	**148.90**	**332**		PKPbc	**PKPbc**	**03 49 34.8**	**-1.5**	
	comp=Z,3.1nm,0.8s,baz=48,slow=2.0,SNR=20								
ARSA	**Arzberg**	**149.25**	**329**	*e*	P	**PKPab**	**03 49 39.6**	**-2.0**	
	comp=Z,4.1nm,1.2s								
MOA	**Molln**	**149.41**	**331**	*e*	P	**PKPab**	**03 49 40.1**	**-2.1**	
	comp=Z,2.9nm,0.9s								
BIOA	**Bad Ischl, Aus**	**149.81**	**331**	*e*	P	**PKiKP**	**03 49 40.7**	**+1.3**	
	comp=Z,2.8nm,0.8s								
SOKA	**Soboth**	**149.90**	**328**	*e*	P	**PKiKP**	**03 49 41.1**	**+1.4**	
	comp=Z,4.5nm,0.9s								
BTNL	**Ternell**	**150.13**	**342**	*d*	PKiKP	**PKiKP**	**03 49 41.1**	**+1.1**	
BTNL				*d*	PKP	**sPKPdf**	**03 49 46.2**	**-1.8**	
MEM	**Membach**	**150.15**	**343**	*d*	PKP	**PKPab**	**03 49 45.8**	**+0.7**	
BHOU	**Houvegnez**	**150.38**	**342**	*d*	PKP	**PKPab**	**03 49 48.3**	**+2.1**	
KBA	**Koelnbreinsper**	**150.40**	**331**	*e*	P	**PKiKP**	**03 49 42.0**	**+1.1**	
	comp=Z,4.0nm,0.8s								
BCLA	**Clavier**	**150.51**	**343**	*d*	PKP	**PKPab**	**03 49 47.7**	**+1.1**	
MYKA	**Terra Mystica**	**150.59**	**330**	*e*	P	**PKiKP**	**03 49 41.2**	**+0.1**	
	comp=Z,2.1nm,0.5s								
BMRD	**Maredsous**	**150.75**	**344**	*d*	PKiKP	**PKiKP**	**03 49 41.8**	**+0.6**	
RCHB	**Rochefort**	**150.77**	**343**	*d*	PKiKP	**PKiKP**	**03 49 41.5**	**+0.2**	
RCHB				*d*	PKP	**sPKPdf**	**03 49 49.0**	**+0.1**	
WLF	**Walferdange**	**150.95**	**342**	*d*	PKP	**PKPab**	**03 49 49.9**	**+1.4**	
WATA	**Walderalm**	**150.97**	**333**	*e*	P	**PKiKP**	**03 49 43.3**	**+1.3**	
	comp=Z,1.6nm,0.5s								
DOU	**Dourbes**	**150.99**	**344**	*d*	PKiKP	**PKiKP**	**03 49 42.5**	**+0.7**	
WTTA	**Wattenberg**	**151.01**	**333**	*e*	P	**PKiKP**	**03 49 42.8**	**+0.7**	
	comp=Z,6.8nm,0.8s								
ABTA	**Abtersbach**	**151.02**	**331**	*e*	P	**PKiKP**	**03 49 41.8**	**-0.3**	
	comp=Z,0.2nm,0.4s								
MOTA	**Moosalm**	**151.17**	**333**	*e*	P	**PKiKP**	**03 49 43.5**	**+1.1**	
	comp=Z,3.7nm,0.7s								
RETA	**Reutte**	**151.19**	**334**	*e*	P	**PKiKP**	**03 49 42.9**	**+0.6**	
	comp=Z,6.6nm,1.0s								
SQTA	**Sankt Quirin**	**151.22**	**333**	*e*	P	**PKiKP**	**03 49 43.1**	**+0.6**	
	comp=Z,1.5nm,0.4s								
FETA	**Feichten**	**151.58**	**333**	*e*	P	**PKiKP**	**03 49 43.8**	**+0.5**	
	comp=Z,7.4nm,0.8s								
DAVA	**Damuels**	**151.71**	**335**	*e*	P	**PKiKP**	**03 49 43.9**	**+0.4**	
	comp=Z,9.1nm,0.9s								
ESDC	**Sonseca Array**	**162.74**	**351**		PKPab	**PKPab**	**03 50 39.3**	**-0.1**	
	comp=Z,4.1nm,1.1s,baz=14,slow=3.6,SNR=16								
TORD	**Torodi Ar. Bea**	**167.16**	**224**		PKPab	**PKPab**	**03 50 57.3**	**-2.2**	
	comp=Z,0.7nm,1.1s,baz=132,slow=3.5,SNR=2.8								

IDC 18 03:31:35.6±3.2, 31.54S×177.90W, h0km, mb3.7/2, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=75.6km s-min=48.0km az=121.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.86**	**210**	Pn	Pn	03 33 31.4	+0.2
	0.3nm,0.3s,baz=0.0,slow=6.1,SNR=2.6						
URZ				Sn	Sn	03 34 57.6	-3.3
	0.6nm,0.3s,baz=192,slow=21,SNR=0.9						
	7.8nm,1.0s						
ASAR	**Alice Springs**	**43.15**	**268**	P	P	03 39 38.2	0.0
	0.8nm,0.5s,baz=107,slow=7.8,SNR=5.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.24**	**273**	P	P	03 39 46.7	-0.3
	0.5nm,0.4s,baz=115,slow=7.4,SNR=12						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**146.24**	**339**	PKPbc	PKPdf	03 51 16.5	+0.3
	2.0nm,0.8s,baz=50,slow=2.4,SNR=4.9						

IDC 18 03:37:55.9±3.1, 33.13S×178.57W, h0km, mb3.7/2, mbtmp3.7/3, ML3.4/1, 4, Error ellipse: s-maj=72.5km s-min=46.3km az=122.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.21**	**213**	Pn	Pn	03 39 27.8	-0.9
	0.8nm,0.3s,baz=28,slow=17,SNR=7.2						
URZ				Sn	Sn	03 40 36.8	-3.5
	2.5nm,0.3s,baz=62,slow=13,SNR=8.6						
	4.3nm,0.5s						
ASAR	**Alice Springs**	**42.55**	**270**	P	P	03 45 53.9	+0.3
	1.0nm,0.5s,baz=111,slow=7.9,SNR=9.7						
ASAR				LR	LR	04 02 24.9	
	comp=Z,294nm,18.6s,baz=144,slow=34						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**43.79**	**275**	P	P	03 46 03.3	-0.3
	0.4nm,0.5s,baz=115,slow=7.8,SNR=11						
	0.4nm,0.5s						
LVC	**Limon Verde**	**93.03**	**119**	LR	LR	04 21 40.3	
	comp=Z,103nm,21.9s,baz=290,slow=28						
LPAZ	**La Paz**	**97.46**	**115**	LR	LR	04 23 52.5	
	comp=Z,108nm,21.2s,baz=247,slow=28						
CPUP	**Villa Florida**	**98.66**	**129**	LR	LR	04 27 26.0	
	comp=Z,65nm,21.0s,baz=232,slow=30						
FINES	**FINESS Array B**	**147.51**	**338**	PKPbc	PKPbc	03 57 40.3	-0.8
	1.8nm,0.8s,baz=42,slow=4.3,SNR=5.1						

*PAS **18** 03:39:54.8±1.6, 36.399N±0.010×117.87W±0.01, h2km±5km, Mwr3.5/6, ML3.4/147(NEIC), Mwr3.5(REN), Error ellipse: s-maj=1.6km s-min=1.5km az=78.0*

*NCEDC **18** 03:39:54.7, 36.40N×117.88W, h8km*

*REN **18** 03:39:54.7±1.9, 36.405N±0.009×117.88W±0.01, h11km±2km, Error ellipse: s-maj=1.4km s-min=1.0km az=217.0*

*NEIC **18** 03:39:54.6±1.5, 36.410N±0.010×117.86W±0.01, h2km±5km, Error ellipse: s-maj=1.6km s-

comp=E,1µm,0.3s
LRMC Laurel Mtn Rad 0.93 170 Pb 03 40 12.5 -0.5
LRMC **Sb 03 40 25.0 -0.4**
LRMC Laurel Mtn Rad 0.93 170 P Pb 03 40 12.5 -0.5
baz=350,SNR=31
LRMC **S Sb 03 40 25.0 -0.4**
baz=350
CCCA Chr Cany lake 0.96 155 Pb 03 40 13.2 -0.4
CCCA **Sb 03 40 26.3 +0.1**
HELL Mitchell Peak, 0.97 287 Pb 03 40 12.7 -1.0
DSP Deep Springs 0.97 355 Pb 03 40 12.4 -1.2
DSP Deep Springs 0.97 355 IAML 03 40 26.4
comp=E,897nm,0.8s
DSP **IAML** 03 40 27.5
comp=N,780nm,0.4s
GWY Greenwater Val 0.99 102 Pb 03 40 13.5 -0.6
GWY Greenwater Val 0.99 102 IAML 03 40 29.6
comp=E,2µm,0.5s
GWY **IAML** 03 40 33.4
comp=N,1µm,0.4s
POCCA Poleta Canyon 1.02 341 Pb 03 40 13.9 -0.6
GMN Gold Mountain 1.02 28 Pb 03 40 14.0 -0.7
GMN Gold Mountain 1.02 28 IAML 03 40 29.0
comp=N,567nm,0.5s
GMN **IAML** 03 40 31.9
comp=E,519nm,0.6s
WCT Wildcat Mounta 1.08 68 Pb 03 40 14.7 -0.7
WCT Wildcat Mounta 1.08 68 IAML 03 40 30.3
comp=E,2µm,0.3s
MTUM Tungsten Hills 1.10 330 Pb 03 40 15.2 -0.8
DTP Desert Tortois 1.13 179 Pb 03 40 15.9 -0.5
VES Vestal, Richgr 1.13 241 Pb 03 40 16.2 -0.1
VES **Sg 03 40 31.4 +0.2**
VES Vestal, Richgr 1.13 241 P Pb 03 40 16.2 -0.1
baz=60,SNR=122
VES **S Sg 03 40 31.4 +0.2**
baz=60
SCHCA Scheelite 1.16 326 Pb 03 40 16.2 -0.8
VOG Valley Oaks Go 1.22 267 Sn 03 40 34.3 +0.1
VOG Valley Oaks Go 1.22 267 P Pn 03 40 17.7 -0.1
baz=86,SNR=24
VOG **S Sn 03 40 34.3 +0.1**
baz=86
CCAC Calif City Air 1.25 185 Pn 03 40 18.0 -0.2
CCAC **IAML** 03 40 38.6
comp=E,818nm,0.4s
CCAC Calif City Air 1.25 185 Sn 03 40 34.6 -0.4
MLNR Milner Canyon 1.25 343 Pn 03 40 17.8 -0.6
SDH Striped Hills 1.26 78 Pn 03 40 18.0 -0.4
RCCR Rock Creek Can 1.28 328 Pn 03 40 18.4 -0.5
AMDNV Amargosa 1.28 87 Sg 03 40 36.1 -0.1
AMDNV Amargosa 1.28 87 Pn 03 40 18.2 -0.4
TEJ El Tejon 1.34 210 Pn 03 40 19.4 -0.1
MZP Montezuma Peak 1.36 17 Pn 03 40 19.8 -0.1
SHOC Shoshone, Teco 1.38 111 Pb 03 40 20.6 0.0
SHOC Shoshone, Teco 1.38 111 P Pn 03 40 19.2 -0.8
baz=292,SNR=613
SHOC **S Sb 03 40 38.5 +0.2**
baz=292
ORC Owens River 1.39 333 Pn 03 40 20.3 +0.1
GSC Goldstone, Bar 1.40 141 Pn 03 40 20.0 -0.3
GSC **IAML** 03 40 44.6
comp=E,781nm,0.4s
GSC **IAML** 03 40 44.9
comp=N,668nm,0.4s
GSC Goldstone, Bar 1.40 141 Sg 03 40 39.7 0.0
GSC Goldstone, Bar 1.40 141 P Pn 03 40 19.9 -0.3
baz=322,SNR=647
GSC **S Sg 03 40 39.8 0.0**
baz=322
TPNV Topopah Spring 1.42 67 Pn 03 40 20.6 0.0
TPNV Topopah Spring 1.42 67 P Pn 03 40 20.6 0.0
baz=248,SNR=802
TPNV **S Sb 03 40 39.9 +0.5**
baz=248
BENR Benton 1.43 337 Pn 03 40 21.0 +0.1
BAKC Calstate 1.45 224 Pb 03 40 22.1 +0.3
MLAC Mammoth, Mammo 1.45 328 Sb 03 40 40.9 +0.4
MLAC Mammoth, Mammo 1.45 328 Pb 03 40 21.6 -0.4
MLAC Mammoth, Mammo 1.45 328 P Pb 03 40 21.6 -0.4
baz=148,SNR=65
MLAC **S Sb 03 40 41.0 +0.5**
baz=148
KCC Kaiser Creek 1.48 309 Pn 03 40 21.8 +0.4
ARVC Arvin 1.49 212 Pb 03 40 22.5 0.0
ARVC Arvin 1.49 212 P Pb 03 40 22.4 0.0
baz=31,SNR=170
ARVC **S Sb 03 40 41.9 +0.6**
baz=31
MCBM Casa Benchmark 1.49 327 Pb 03 40 22.3 -0.3
MCSM Casa Diablo Ho 1.50 327 Pb 03 40 22.5 -0.3
OMMB Old Mammoth Mi 1.51 324 Pn 03 40 22.3 +0.2
OMMB Old Mammoth Mi 1.51 324 IAML 03 40 45.5
comp=N,439nm,0.4s
OMMB **IAML** 03 40 47.5
comp=E,460nm,0.9s
EDW2 Edwards Air Fo 1.52 184 Pn 03 40 22.1 +0.2
EDW2 **Sb 03 40 42.5 +0.3**
EDW2 Edwards Air Fo 1.52 184 P Pn 03 40 22.0 +0.2
baz=3.6,SNR=180
EDW2 **S Sb 03 40 42.3 +0.1**
baz=3.6
TPO Tropico Hills 1.54 191 Pb 03 40 23.2 -0.2
TPO **Sg 03 40 44.0 -0.4**
HYS Haystack Butte 1.55 171 Pn 03 40 22.6 +0.2
CPY CP-1 1.55 69 Pn 03 40 22.4 -0.1
MDYM Dry Creek 1.55 324 Pb 03 40 23.4 -0.3
MDPB Devils Postpil 1.57 322 Pb 03 40 23.3 -0.6
MDPB Devils Postpil 1.57 322 Sb 03 40 44.6 +0.8
THC Tehachapi Micr 1.62 204 Pb 03 40 24.4 -0.4
RRX Edison Barstow 1.68 155 Pg 03 40 26.8 -0.2
RRX Edison Barstow 1.68 155 P Pn 03 40 24.0 -0.1
baz=335,SNR=18
RRX **Sg Sg 03 40 49.6 +0.9**
baz=335
SBB Saddle Back Bu 1.71 179 Pb 03 40 26.7 +0.5
SBB **Sg 03 40 49.7 0.0**
TPH Tonopah 1.75 17 Pn 03 40 25.5 +0.2
LEOC Leona Valley 1.80 191 Pb 03 40 28.2 +0.4
BTPC Burnt Peak 1.81 199 Pb 03 40 28.9 +0.9
PKEM Kettleman Hill 1.84 260 Pb 03 40 28.7 +0.3
TUQ Turquoise Moun 1.85 121 Pn 03 40 26.1 -0.4
TUQ Turquoise Moun 1.85 121 P Pn 03 40 26.1 -0.4
baz=302,SNR=135
LRRC Littlerock Res 1.87 184 Pb 03 40 29.9 +0.9
PWMM Westland Maint 1.89 272 Pb 03 40 29.0 -0.2
CRGC Crocker Grade 1.90 233 Pb 03 40 29.5 0.0
DSCC Desert Studies 1.91 131 Pb 03 40 30.1 +0.5
LHV Little Huntoon 1.92 345 Pn 03 40 28.2 +0.9
LHV Little Huntoon 1.92 345 IAML 03 40 58.9
comp=E,357nm,1.1s
LHV **IAML** 03 40 59.4
comp=N,296nm,0.7s
BCW Bitter Crk WRg 1.92 221 Pb 03 40 29.3 -0.6
HOLC Holcomb Ridge 1.94 179 Pb 03 40 30.9 +0.8
JNH Juniper Hills 1.95 182 Pb 03 40 30.8 +0.4
PARM Anticline Ridg 2.00 266 Pb 03 40 30.8 -0.4
HEC Hector,Ludlow 2.00 141 Pn 03 40 28.4 -0.3
HEC Hector,Ludlow 2.00 141 P Pn 03 40 28.3 -0.3
baz=322,SNR=127
THIS South End of C 2.02 251 Pb 03 40 31.2 -0.4
NV08 Mina Array Sit 2.03 350 Pn 03 40 29.4 +0.3
SMMC Simmler 2.04 239 Pb 03 40 31.2 -0.6
SMMC Simmler 2.04 239 Sb Sb 03 40 58.0 +0.9
baz=57
PAGB Antelope Grade 2.04 252 Pb 03 40 30.7 -1.2
PAGB **IAML** 03 41 06.6
comp=E,485nm,0.7s
NV11 Mina Array Sit 2.04 354 Pn 03 40 29.6 +0.3
NVAR Mina Array Bea 2.06 350 Pn 03 40 29.5 0.0
CHFC Chilao Flat St 2.06 184 Pn 03 40 30.6 +1.0
NV09 Mina Array Sit 2.07 350 Pn 03 40 29.9 +0.4
TRAM Private Proper 2.07 250 Pb 03 40 31.9 -0.5
MTPC Mountain Pass 2.09 115 Pn 03 40 29.5 -0.4
XTL Crystal Lake, 2.10 180 Pg 03 40 34.3 -0.7
S11A Rachel 2.11 53 Pn 03 40 30.4 +0.4
BFSC Mount Baldy Ra 2.16 175 Pb 03 40 35.1 +1.1
BFSC Mount Baldy Ra 2.16 175 Sb Sb 03 41 02.7 +1.8
baz=355
BCH Branch Mountai 2.17 237 Pb 03 40 33.0 -1.1
SHPR Sheep Range 2.19 86 Pn 03 40 31.8 +0.5
SHPR Sheep Range 2.19 86 IAML 03 41 16.9
comp=E,137nm,0.8s
PJUM Juniper Ridge 2.21 266 Pb 03 40 33.4 -1.3
PKD Bear Valley Ra 2.21 259 Pb 03 40 33.1 -1.6
SIL Silver Peak 2.22 157 Pg 03 40 36.4 -0.9
PSMM Smith Mountain 2.23 262 Pb 03 40 33.9 -1.2
PASC Pasadena Art C 2.24 187 Pn 03 40 33.0 +1.2
PASC **IAML** 03 41 09.7
comp=E,146nm,0.9s
BLCC Black Canyon 2.25 197 Pg 03 40 37.0 -0.9
RYN Ryan 2.29 347 Pn 03 40 33.1 +0.5
WTNK Soaring Height 2.32 94 Pn 03 40 33.6 +0.7
WTNK Soaring Height 2.32 94 IAML 03 41 15.6
comp=E,26nm,0.8s
WTNK **IAML** 03 41 20.3
comp=N,21nm,1.3s
BMSM Mercy Hot Spri 2.37 277 Pb 03 40 35.7 -1.7
PMPB Monarch Peak 2.37 266 Pn 03 40 35.3 +1.6
PMPB **IAML** 03 41 22.1
comp=N,398nm,0.8s
GMRC Granite Mounta 2.42 131 Pn 03 40 33.5 -0.9
GMRC Granite Mounta 2.42 131 P Pn 03 40 33.5 -0.9
baz=312,SNR=37
GTM Goat Mountain 2.44 149 Pb 03 40 39.9 +1.2
SBC Santa Barbara 2.46 218 Sb Sg 03 41 12.9 -1.1
baz=37
PRN Pahroc Range 2.48 65 Pn 03 40 35.1 0.0
Q09A Carvers 2.49 12 Pn Pn 03 40 36.3 +0.9
Q09A **IAML** 03 41 17.1
comp=N,358nm,0.6s
Q09A **IAML** 03 41 27.6
comp=E,245nm,0.7s
V12A Nelson 2.54 104 Pn 03 40 35.8 -0.1
BBGB Big Mountain B 2.56 275 Pn 03 40 37.4 +1.1
CMB Columbia Colle 2.59 310 Pb 03 40 39.5 -1.7
SME Santa Rosa Min 2.60 170 Pn 03 40 37.5 +0.7
BLDC Black Mountain 2.61 252 Pb 03 40 39.2 -2.3
BLAC Blackrock camp 2.62 152 Pn 03 40 37.6 +0.5
KVN Kaiserville 2.65 356 Pn 03 40 38.2 +0.5
R11A Troy Canyon, C 2.67 42 Pn 03 40 38.0 +0.2
R11A Troy Canyon, C 2.67 42 IAML 03 41 22.3
comp=E,238nm,0.6s
R11A **IAML** 03 41 22.4
comp=N,176nm,0.6s
R11A Troy Canyon, C 2.67 42 P Pn 03 40 37.9 +0.1
baz=224
R11A **Sb Sg 03 41 18.9 -1.5**
baz=224
TPC Twentynine Pal 2.73 146 Pn 03 40 38.6 0.0
ELS Elsinore Mount 2.77 172 Pn 03 40 39.6 +0.5
ELS **IAML** 03 41 29.6
comp=E,78nm,0.5s
HMTC Hemet 2.78 165 Pn 03 40 39.8 +0.6
YERR Yerington 2.80 338 Pn 03 40 40.5 +0.8
YERR Yerington 2.80 338 IAML 03 41 25.6
comp=E,95nm,0.5s
YERR **IAML** 03 41 27.5
comp=N,72nm,1.2s
POB Polly Butte 2.81 164 Pn 03 40 40.4 +0.7
BELC Belle Mtn. Jos 2.84 147 Pn 03 40 40.2 0.0
BELC Belle Mtn. Jos 2.84 147 P Pn 03 40 40.1 0.0
baz=328,SNR=28
BELC **Sb Sg 03 41 24.3 -1.8**
baz=328
MURC Murrieta 2.85 169 P Pn 03 40 40.9 +0.7
baz=349,SNR=11
MURC **Sb Sg 03 41 24.3 -1.9**
baz=349
SAO San Andreas Ge 2.90 278 Pn 03 40 43.2 +2.4
HAST Hastings Reser 2.97 271 Pn 03 40 43.5 +1.7
PMD Palm Desert 3.00 156 Pn 03 40 42.0 -0.3
PMD **IAML** 03 41 34.3
comp=N,52nm,0.5s
PMD **IAML** 03 41 38.4
comp=E,58nm,1.6s
PFO Pinyon Flats O 3.01 157 Pn Pn 03 40 42.6 +0.1
PFO **IAML** 03 41 34.7
comp=E,88nm,1.0s
PFO **IAML** 03 41 37.9
comp=E,64nm,1.8s
PFO Pinyon Flats O 3.01 157 Pn 03 40 42.6 +0.1
PFO Pinyon Flats O 3.01 157 P Pn 03 40 42.6 +0.1
baz=338,SNR=17
PFO **Sb Sg 03 41 29.6 -1.9**
baz=338
PNTR Pine Nut 3.02 333 Pn 03 40 43.9 +1.3
PNTR Pine Nut 3.02 333 IAML 03 41 40.4
comp=E,100nm,0.8s
PNTR **IAML** 03 41 46.2
comp=N,85nm,0.8s
CIS Catalina Island 3.02 189 Sb Sg 03 41 29.5 -2.4
baz=8.3
SBI Santa Barbara 3.06 198 Pb 03 40 49.4 +0.2
EMB Emerald Bay 3.12 326 Pn Pn 03 40 44.8 +0.7
PLM Palomar 3.15 164 Pn 03 40 45.2 +0.8
IRM Iron Mountain 3.16 134 P Pn 03 40 43.7 -0.8
baz=316,SNR=9.7
VCNR Virginia City 3.22 335 Pn Pn 03 40 46.5 +1.1
VCNR **IAML** 03 41 42.3
comp=E,100nm,0.6s
VCNR **IAML** 03 41 43.5
comp=N,61nm,1.0s
MPK Martis Peak 3.36 330 Pn Pn 03 40 48.3 +0.9
W13A Hualapai Mount 3.49 111 Pn Pn 03 40 50.3 +1.1
PAHR Pah Rah Range 3.51 341 Pn Pn 03 40 50.5 +1.1
109C Camp Elliot, M 3.56 170 P Pn 03 40 50.0 +0.1
baz=350
MONP2 Monument Peak 3.70 161 P Pn 03 40 52.5 +0.5
baz=342
LCMT Little Creek M 3.77 79 Pn 03 40 53.7 +0.8
CCUT Cedar City 3.79 71 Pn Pn 03 40 54.5 +1.3
CCUT **IAML** 03 42 02.4
comp=N,57nm,1.2s
BLYC Blythe 3.81 133 Pn Pn 03 40 52.6 -0.7
BLYC **IAML** 03 42 02.9
comp=N,45nm,0.8s
BLYC **IAML** 03 42 09.1
comp=E,32nm,0.9s
SPR3 Spring Creek 3 3.82 46 Pn 03 40 54.8 +0.9
SPR3 **IAML** 03 41 56.6
comp=E,102nm,0.8s
SPR3 **IAML** 03 41 56.6
comp=N,74nm,0.6s
BAR Barrett 3.84 165 Pn Pn 03 40 54.2 +0.4
BAR **IAML** 03 41 57.0
comp=E,47nm,0.4s
BAR **IAML** 03 41 57.6
comp=N,33nm,0.6s
PSUT Pine Spring 3.84 55 Pn Pn 03 40 55.6 +1.6
PSUT **IAML** 03 41 59.0
comp=E,115nm,0.8s
BEKR Beckworth 3.98 331 Pn Pn 03 40 57.0 +1.2
BEKR **IAML** 03 42 16.0
comp=N,64nm,0.7s
BMN Battle Mountai 4.06 7 Pn 03 40 57.7 +0.8
YUH Yuha Desert 4.07 156 Pn Pn 03 40 57.0 0.0
GLA Glamis 4.17 142 Pn Pn 03 40 57.6 -0.8
GLA **IAML** 03 42 19.6
comp=N,60nm,0.7s
GLA Glamis 4.17 142 P Pn 03 40 57.8 -0.6
baz=324
CBX Cerro Bola 4.20 166 Pn Pn 03 40 59.2 +0.4
CBX **IAML** 03 42 07.7
comp=E,60nm,0.7s
CBX **IAML** 03 42 18.8
comp=N,36nm,0.7s
U15A North Rim 4.50 88 Pn 03 41 03.9 +0.7
U15A **IAML** 03 42 26.2
comp=E,26nm,0.9s
U15A **IAML** 03 42 29.8
comp=N,22nm,1.6s
PKCU Pink Cliffs 4.58 75 Pn Pn 03 41 04.8 +0.6
PKCU **IAML** 03 42 26.4
comp=E,48nm,0.9s
PKCU **IAML** 03 42 35.5
comp=N,41nm,1.0s
Y14A Wickenburg 4.68 120 Pn Pn 03 41 05.9 +0.5
Y14A **IAML** 03 42 33.2
comp=E,23nm,0.8s
Y14A **IAML** 03 42 45.8
comp=N,26nm,1.0s
ELK Elko 4.80 25 Pn 03 41 08.4 +1.2
ELK Elko 4.80 25 IAML 03 42 28.8
comp=N,17nm,0.6s
MTPU Mount Pierson 4.83 68 Pn Pn 03 41 08.8 +1.2
MTPU **IAML** 03 42 31.8
comp=N,19nm,0.6s
MTPU **IAML** 03 42 33.5
comp=E,17nm,2.2s
TCRU Three Creeks R 4.84 61 Pn Pn 03 41 08.4 +0.5
TCRU **IAML** 03 42 33.4
comp=E,48nm,0.9s
TCRU **IAML** 03 42 34.9
comp=N,45nm,1.4s
113A Mohawk Valley, 4.96 136 Pn Pn 03 41 10.0 +0.9
MVU Marysvale 4.97 63 Pn Pn 03 41 12.2 +2.7
MSU Marysvale 5.00 63 Pn Pn 03 41 13.1 +3.2
WUAZ Wupatki 5.34 98 Pn Pn 03 41 15.5 +0.9
WUAZ **IAML** 03 42 48.4
comp=N,20nm,1.7s
WUAZ **IAML** 03 42 51.6
comp=N,18nm,1.0s
DUG Dugway, Tooele 5.49 45 Pn Pn 03 41 18.3 +1.7
NLU North Lily Min 5.78 50 Pn Pn 03 41 21.6 +0.9
MOD Modoc Plateau 5.81 342 Pn Pn 03 41 21.6 +0.5
BGU Big Grassy Mou 5.90 38 Pn Pn 03 41 23.1 +1.0
214A Organ Pipe Nat 6.10 135 Pn Pn 03 41 25.5 +0.6

IDC 18 03:49:57.0±1.3, 15°.60S×173°.36E, h0km, mb3.6/4, mbtmp3.6/5, ML4.2/1, MS3.2/2, Error ellipse: s-maj=53.6km s-min=26.5km az=167.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.97**	**116**	Pn	Pn	03 51 11.4	-1.6
	0.3nm,0.3s,baz=298,slow=12,SNR=4.5 6.2nm,0.8s						
AFI	**Afiamalu**	**14.47**	**85**	LR	LR	03 57 11.4	
	comp=Z,59nm,21.4s,baz=288,slow=30						
RPZ	**Rata Peaks**	**28.09**	**184**	LR	LR	04 05 32.3	
	comp=Z,89nm,18.1s,baz=338,slow=33						
WRA	**Warramunga Arr**	**37.35**	**257**	P	P	03 57 11.1	-0.5
	0.4nm,0.7s,baz=84,slow=8.0,SNR=2.5 0.4nm,0.7s						
ASAR	**Alice Springs**	**37.92**	**251**	P	P	03 57 16.4	-0.1
	1.0nm,0.6s,baz=81,slow=9.0,SNR=9.4 1.0nm,0.6s						
ILAR	**Eielson Array**	**85.64**	**16**	P	P	04 02 36.6	-0.5
	0.7nm,0.9s,baz=216,slow=4.5,SNR=4.8 0.7nm,0.9s						
TXAR	**Lajitas Array**	**91.57**	**60**	P	P	04 03 07.8	+1.5
	0.2nm,0.8s,baz=218,slow=5.7,SNR=2.1 0.2nm,0.8s						

*IDC **18** 04:07:47.5±0.8, 11°.12S×162°.37E, h0km, mb4.2/12, mbtmp4.2/15, ML4.1/3, MS3.8/5, Error ellipse: s-maj=26.2km s-min=16.8km az=92.0*
*NEIC **18** 04:07:50.7±1.2, 11°.2S±0°.1×162°.4E±0°.1, h10km±1km, mb4.8/21, Error ellipse: s-maj=24.1km s-min=12.8km az=51.0*
*GCMT **18** 04:07:50.7±0.4, 11°.23S±0°.03×162°.09E±0°.04, h18km±1km, MW4.9/64, Moment Tensor Solution. s23,c29; s64,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.33±.26; $M_{\theta\theta}$-2.81±.17; $M_{\phi\phi}$0.48±.16; $M_{r\theta}$1.75±.36; $M_{\theta\phi}$0.65±.11; $M_{\phi r}$-0.58±.49; Best double couple: $M_0$3.21600×10^{16} NP1:ϕ_s106.00000°, δ63.00000°, λ96.00000°. NP2: ϕ_s274.00000°, δ28.00000°, λ79.00000°. Principal axes: T 2.9240, Plg72.0000°, Azm29.0000°; N 0.5860, Plg5.0000°, Azm283.0000°; P -3.5080, Plg17.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 04:07:49.7±0.5, 11°.19S±0°.08×162°.43E±0°.09, h10km, n54, σ1s34/50, mb4.6/22, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.00**	**305**	Pn	Pn	04 08 37.1	-0.3
	25nm,0.3s,baz=169,slow=5.1,SNR=2.1						
HNR				Sn	Sn	04 09 17.0	+3.5
	196nm,0.3s,baz=216,slow=7.0,SNR=12 97nm,0.3s						
HNR	**Honiara**	**3.00**	**305**		Pn	04 08 39.1	+1.8
HNR				Sn	Sn	04 09 14.4	+0.9
DZM	**Mont Dzumac**	**11.48**	**161**	Pn	Pn	04 10 34.9	+1.0
	0.5nm,0.3s,baz=33,slow=10,SNR=13						
DZM				LR	LR	04 14 08.1	
	comp=Z,714nm,21.2s,baz=25,slow=33 4.8nm,0.6s						
DZM	**Mont Dzumac**	**11.48**	**161**	Pn	Pn	04 10 36.9	+3.0
MSVF	**Nonsavu**	**16.46**	**115**	LR	LR	04 16 28.0	
	comp=Z,132nm,19.2s,baz=159,slow=32						
EIDS	**Eidsvold**	**17.73**	**216**		Pn	04 11 57.4	+0.5
CTA	**Charters Tower**	**17.90**	**238**	P	Pn	04 11 59.3	+0.3
	1.1nm,0.3s,baz=72,slow=9.6,SNR=11						
CTA				LR	LR	04 18 11.5	
	comp=Z,327nm,20.1s,baz=67,slow=35 6.4nm,0.5s						
CTAO	**Charters Tower**	**17.90**	**238**		P	04 11 59.7	0.0
ARMA	**Armidale**	**21.61**	**206**	P	P	04 12 38.0	-2.1
AFI	**Afiamalu**	**25.32**	**99**	LR	LR	04 21 13.1	
	comp=Z,166nm,18.4s,baz=266,slow=32						
STKA	**Stephens Creek**	**28.17**	**220**	P	P	04 13 41.6	-0.8
	2.9nm,0.7s,baz=72,slow=13,SNR=4.4 2.9nm,0.7s						
WR0	**Warramunga Arr**	**28.21**	**249**	P	P	04 13 41.8	-1.2
WR0				IAmb	IAmb	04 13 56.7	
	comp=Z,24nm,1.5s						
WB0	**Warramunga Arr**	**28.30**	**249**	P	P	04 13 42.8	-0.9
WB0				IAmb	IAmb	04 13 57.1	
	comp=Z,11nm,0.9s						
WB2	**Warramunga Arr**	**28.38**	**249**	P	P	04 13 43.9	-0.6
WB2				IAmb	IAmb	04 14 18.6	
	comp=Z,23nm,1.4s						
WRA	**Warramunga Arr**	**28.39**	**249**	P	P	04 13 42.8	-1.7
	comp=Z,1.3nm,0.8s,baz=78,slow=9.2,SNR=14						
WRA				PcP	PcP	04 16 56.9	-0.2
	comp=Z,2.6nm,1.2s,baz=82,slow=3.1,SNR=6.2						
WRA				LR	LR	04 24 02.6	
	comp=Z,316nm,20.3s,baz=88,slow=34 comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**28.39**	**249**	P	P	04 13 44.0	-0.6
H11S2	**WAKE ISLAND Hy**	**29.79**	**8**	T	T	04 44 54.5	
	baz=188,slow=76,SNR=110						
H11S3	**WAKE ISLAND Hy**	**29.79**	**8**	T	T	04 44 52.1	
	baz=188,slow=76,SNR=79						
H11S1	**WAKE ISLAND Hy**	**29.81**	**8**	T	T	04 44 56.4	
	baz=188,slow=76,SNR=91						
ASAR	**Alice Springs**	**29.84**	**242**	P	P	04 13 55.0	-2.4
	comp=Z,1.6nm,0.6s,baz=65,slow=9.6,SNR=17 comp=Z,1.6nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**31.02**	**8**	T	T	04 46 27.5	
	baz=188,slow=76,SNR=58						
H11N3	**WAKE ISLAND Hy**	**31.03**	**8**	T	T	04 46 27.4	
	baz=188,slow=76,SNR=79						
H11N2	**WAKE ISLAND Hy**	**31.04**	**8**	T	T	04 46 28.8	
	baz=188,slow=76,SNR=59						
BBOO	**Buckleboo**	**32.41**	**224**	P	P	04 14 18.7	-1.2
FITZ	**Fitzroy Crossi**	**36.20**	**255**	P	P	04 14 52.7	-0.3
	comp=Z,3.5nm,0.9s,baz=98,slow=8.2,SNR=7.4 comp=Z,3.5nm,0.9s						
MJAR	**Matsushiro Arr**	**52.67**	**335**	P	P	04 17 02.0	-2.3
	comp=Z,0.5nm,0.3s,baz=149,slow=10,SNR=4.8 comp=Z,0.5nm,0.3s						
KSRS	**Korea Array**	**58.22**	**328**	P	P	04 17 43.7	-0.5
	comp=Z,1.0nm,0.8s,baz=139,slow=6.6,SNR=5.5 comp=Z,1.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**61.67**	**336**	P	P	04 18 06.1	-1.8
	comp=Z,4.0nm,0.8s,baz=80,slow=12,SNR=8.0 comp=Z,4.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**61.67**	**336**	P	P	04 18 08.7	+0.8
VNDA	**Vanda**	**66.32**	**180**	P	P	04 18 38.1	+0.1
	comp=Z,1.6nm,0.7s,baz=348,slow=5.9,SNR=11 comp=Z,1.6nm,0.7s						
VNDA	**Vanda**	**66.32**	**180**	P	P	04 18 39.2	+1.2
VNDA				IAmb	IAmb	04 18 52.9	
	comp=Z,12nm,1.6s						
ULN	**Ulaanbaatar**	**76.53**	**325**	P	P	04 19 40.7	+0.4
ULN				IAmb	IAmb	04 19 43.2	
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	**76.89**	**325**	P	P	04 19 42.0	-0.3
	comp=Z,2.3nm,0.7s,baz=139,slow=6.3,SNR=9.6 comp=Z,2.3nm,0.7s						
MAW	**Mawson**	**83.36**	**202**	P	P	04 20 17.4	+0.7
	comp=Z,2.6nm,1.0s,baz=66,slow=4.4,SNR=2.7 comp=Z,2.6nm,1.0s						
M27K	**Edge Creek, AK**	**84.98**	**23**	P	P	04 20 26.6	+1.4
M27K				IAmb	IAmb	04 20 29.5	
	comp=Z,19nm,1.4s						

BCAR	**Beaver Creek A**	**85.43**	**22**	P		**P**	**04 20 28.7**	**+1.4**
EGAK	**Eagle**	**86.65**	**21**	P		**P**	**04 20 34.6**	**+1.4**
EGAK				IAmb		IAmb	04 20 36.3	
	comp=Z,5.2nm,0.8s							
DAWY	**Dawson**	**86.88**	**22**	P		**P**	**04 20 35.0**	**+0.6**
DAWY				IAmb		IAmb	04 20 38.8	
	comp=Z,6.3nm,1.3s							
BMAR	**Burnt Mountain**	**87.12**	**18**	P		**P**	**04 20 37.1**	**+1.6**
HYBB	**Hyderabad (bro**	**87.56**	**288**	*e*P		**P**	**04 20 38.7**	**-0.1**
HYBB				*e*sP		**sP**	**04 20 43.3**	**+2.6**
PNTR	**Pine Nut**	**87.81**	**50**	P		**P**	**04 20 39.9**	**+0.2**
PNTR				IAmb		IAmb	04 21 17.2	
	comp=Z,6.5nm,0.7s							
LHV	**Little Huntoon**	**88.41**	**51**	P		**P**	**04 20 42.9**	**+0.6**
RYN	**Ryan**	**88.50**	**50**	P		**P**	**04 20 43.1**	**+0.2**
NVAR	**Mina Array Bea**	**88.61**	**51**	P		**P**	**04 20 43.5**	**-0.1**
NV11	**Mina Array Sit**	**88.72**	**51**	P		**P**	**04 20 44.3**	**+0.3**
WVOR	**Wild Horse Val**	**89.44**	**47**	P		**P**	**04 20 48.5**	**+1.4**
WVOR				IAmb		IAmb	04 21 04.6	
	comp=Z,7.5nm,1.4s							
BELA	**Belgrano 2**	**90.57**	**176**	P		**P**	**04 20 52.3**	**+0.6**
PRN	**Pahroc Range**	**90.85**	**52**	P		**P**	**04 20 54.7**	**+0.8**
PRN				IAmb		IAmb	04 22 37.7	
	comp=Z,14nm,1.9s							
MKAR	**Makanchi Array**	**91.41**	**317**	P		**P**	**04 20 55.1**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=90,slow=6.0,SNR=10							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**91.78**	**325**	P		**P**	**04 20 56.0**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=131,slow=4.0,SNR=2.2							
	comp=Z,0.6nm,0.3s							
ARCES	**ARCESS Array B**	**115.63**	**345**	PKP		**PKiKP**	**04 26 30.5**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=64,slow=2.8,SNR=11							
MDP	**Montagnes des**	**144.78**	**97**	PKP		**PKPab**	**04 27 25.5**	**-1.4**
	comp=Z,5.0nm,0.6s,baz=210,slow=3.5,SNR=8.5							
KEST	**Kesra**	**145.48**	**319**	PKPbc		**PKPbc**	**04 27 27.4**	**-1.3**
	comp=Z,3.2nm,0.6s,baz=145,slow=3.4,SNR=6.0							
ESDC	**Sonseca Array**	**149.16**	**339**	PKPbc		**PKPbc**	**04 27 38.0**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=9.1,slow=5.2,SNR=4.8							

*INET **18** 04:11:05.7±0.5, 12°.89N×86°.64W, h13km±3km, MW2.6*
*SNET **18** 04:11:10.4±1.2, 13°.02N×86°.86W, h14km±6km, ML3.3*

ISC 18 04:11:04.5±1.3**, 12°.93N**±0°.05**×86°.73W**±0°.04**, h5**km±13km**, n12**, σ0°.63/19**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TELN	**Telica**	**0.34**	**197**	*e*P	**Pb**	**04 11 13.1**	**+0.1**
MOMN	**Momotombo**	**0.55**	**160**	*e*P	**Pg**	**04 11 15.4**	**+0.4**
COPN	**Copaltepe**	**0.75**	**170**	*e*P	**Pg**	**04 11 19.1**	**+0.1**
MATN	**Matagalpa**	**0.78**	**90**	*e*P	**Pg**	**04 11 19.2**	**-0.3**
HUEN		**0.80**	**137**	*e*P	**Pg**	**04 11 19.6**	**-0.3**
HUEN				*e*S	**Sg**	**04 11 30.0**	**-0.2**
CSQN	**Cosiguina Volc**	**0.81**	**274**	*e*P	**Pn**	**04 11 22.4**	**-0.2**
CNCH	**Conchagua**	**1.13**	**288**	*e*P	**Pn**	**04 11 27.6**	**+0.5**
CNCH				IAML		04 11 29.7	
	comp=Z,2μm,0.3s						
CNCH				*e*S	**Sn**	**04 11 43.0**	**-0.1**
LCND	**La Caada**	**1.19**	**289**	*e*P	**Pn**	**04 11 28.4**	**+0.6**
LCND				IAML		04 11 29.9	
	comp=Z,380nm,0.3s						
LCND				*e*S	**Sn**	**04 11 43.8**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.24**	**335**	*e*P	**Pn**	**04 11 30.1**	**+1.4**
TGUH				*e*S	**Sn**	**04 11 45.3**	**-0.5**
PACA	**Pacayal**	**1.64**	**289**	*e*P	**Pg**	**04 11 36.9**	**+0.8**
PACA				*e*S	**Sg**	**04 11 57.3**	**-0.1**
SCLA	**Alcaldia de Sa**	**2.09**	**292**	*e*P	**Pg**	**04 11 43.9**	**-0.8**
SCLA				*e*S	**Sb**	**04 12 08.5**	**-0.8**
P5ID	**Presa 5 de nov**	**2.24**	**298**	*e*P	**Pb**	**04 11 45.2**	**-0.3**
P5NO				*e*S	**Sn**	**04 12 10.8**	**+0.5**

*IDC **18** 04:30:07.0±0.3, 19°.70S×148°.69E, h0km, mb5.4/27, mbtmp5.4/34, ML5.2/7, MS5.2/45, Error ellipse: s-maj=11.7km s-min=9.1km az=23.0*
*BJI **18** 04:30:06.8±0.0, 19°.65S×149°.15E, h16km, mb5.2/81, mB5.5/54, Ms5.4/81, Ms7 5.2/77*
*AUST **18** 04:30:06.9±0.3, 19°.77S×148°.86E, h0km, Error ellipse: s-maj=6.0km s-min=2.8km az=41.0*
*NEIC **18** 04:30:08, 19°.85S×148°.73E, h4km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr=0.32; Mθθ=0.74; Mφφ=0.42; Mrθ=-0.75; Mθφ=3.44; Mφr=2.42; Fault plane solution: M₀=4.32000×10¹⁷ NP1:φs=83.75000°, δ=54.53000°, λ=-0.25000°. NP2:φs=173.89000°, δ=89.80000°, λ=-144.53000°. Principal axes: T 3.9388, Plg=24.0000°, Azm=303.0000°; N 0.6764, Plg=55.0000°, Azm=174.0000°; P -4.6151, Plg=24.0000°, Azm=45.0000°;*
*MOS **18** 04:30:08.9±1.3, 19°.79S×148°.59E, h18km, mb5.7/52, MS5.2/17 Error ellipse: s-maj=7.1km s-min=5.8km az=116.4*
*NEIC **18** 04:30:08.8±1.7, 19°.84S±0°.07×148°.72E±0°.01, h10km±1km, mb5.7/137, Ms_20 5.5/340, Mwb5.7/25, Mww5.7, Error ellipse: s-maj=11.5km s-min=10.1km az=208.0*
*NOU **18** 04:30:09.9, 19°.95S×148°.62E, h0km, ML5.6/73, Queensland, Australia*
*GCMT **18** 04:30:10.8±0.1, 19°.76S±0°.01×148°.79E±0°.01, h12km, MW5.7/163, Moment Tensor Solution. s134,c261; s163,c334; Duration: 1s7 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.19±.04; Mθθ=0.45±.04; Mφφ=0.64±.04; Mrθ=0.94±.09; Mθφ=4.34±.03; Mφr=0.28±.09; Best double couple: M₀=4.48000×10¹⁷ NP1:φs=87.00000°, δ=88.00000°, λ=12.00000°. NP2:φs=356.00000°, δ=78.00000°, λ=178.00000°. Principal axes: T 4.6140, Plg=10.0000°, Azm=312.0000°; N -0.2660, Plg=78.0000°, Azm=95.0000°; P -4.3470, Plg=7.0000°, Azm=221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **18** 04:30:13, 19°.76S×148°.83E, h14km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.49; Mθθ=0.01; Mφφ=0.49; Mrθ=1.07; Mθφ=4.16; Mφr=2.90; Fault plane solution: M₀=5.21000×10¹⁷ NP1:φs=91.00000°, δ=56.00000°, λ=2.00000°. NP2:φs=360.00000°, δ=88.00000°, λ=146.00000°. Principal axes: T 5.7437, Plg=25.0000°, Azm=310.0000°; N -1.3323, Plg=56.0000°, Azm=177.0000°; P -4.4113, Plg=22.0000°, Azm=51.0000°;*

ISC 18 04:30:08.7±0.2**, 19°.81S**±0°.03×**148°.66E**±0°.03**, h10**km**, n1036**, σ1s67/940**, mb5.6**/181**, MS5.4**/253**, 81C-24D, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.28**	**263**	Pn	**Pn**	**04 30 47.2**	**+0.8**
	783nm,0.3s,baz=77,slow=15,SNR=1754						
CTA				Sn	**Sn**	**04 31 14.1**	**-0.5**
	2μm,0.3s,baz=324,slow=23,SNR=9.1						
CTA				Lg	Lg	04 31 21.1	
	3μm,0.3s,baz=291,slow=12,SNR=4.2						
CTA				LR	LR	04 31 45.8	
	comp=Z,47μm,20.3s,baz=350,slow=42						
	4μm,0.3s						
CTA	**Charters Tower**	**2.28**	**263**	P	**Pn**	**04 30 47.7**	**+1.2**
	baz=2.5						
CTA				S	**Sg**	**04 31 21.8**	**-0.3**
	baz=2.5						
CTA	**Charters Tower**	**2.28**	**263**	P	**Pb**	**04 30 48.9**	**-1.0**
CTAO	**Charters Tower**	**2.28**	**263**		**Pn**	**04 30 47.7**	**+1.2**
CTAO	**Charters Tower**	**2.28**	**263**	P	**Pn**	**04 30 47.7**	**+1.2**
CTAO	**Charters Tower**	**2.28**	**263**	P	**Pb**	**04 30 49.0**	**-1.0**
AUNRC	**North Rockhamp**	**3.93**	**154**	P	**Pn**	**04 31 08.1**	**-1.1**
	baz=3.9						
AUNRC				S	**Sb**	**04 32 04.8**	**-1.0**
	baz=3.9						
RK1H	**Rockhampton Ha**	**3.95**	**155**	P	**Pn**	**04 31 09.1**	**-0.4**
AUCSH	**Cairns State H**	**3.97**	**316**	P	**Pn**	**04 31 10.0**	**+0.3**
	baz=4.1						
MTSU	**Mount Surprise**	**4.43**	**291**	P	**Pn**	**04 31 17.7**	**+1.6**
	baz=4.6,SNR=1000						
MTSU				S	**Sg**	**04 32 28.1**	**-3.1**
	baz=4.6,SNR=11						
MTSU	**Mount Surprise**	**4.43**	**291**	P	**Pn**	**04 31 19.0**	**+2.9**
AUMOU	**Moura State Hi**	**4.91**	**166**	P	**Pn**	**04 31 22.1**	**-0.5**
	baz=4.9						
AUMOU				S	**Sb**	**04 32 31.1**	**-2.8**
	baz=4.9						
EIDS	**Eidsvold**	**5.97**	**158**	P	**Pn**	**04 31 36.4**	**-0.8**
	baz=6.0,SNR=1000						
EIDS				S	**Sb**	**04 33 04.8**	**+0.2**
	baz=6.0						
EIDS	**Eidsvold**	**5.97**	**158**	Pn	**Pn**	**04 31 36.5**	**-0.7**
EIDS	**Eidsvold**	**5.97**	**158**	P	**Pn**	**04 31 37.2**	**0.0**
	4μm,0.9s						
RMQ	**Roma**	**6.65**	**179**	P	**Pn**	**04 31 46.3**	**-0.3**
	baz=6.7,SNR=60						
RMQ				S	**Sb**	**04 33 31.7**	**+7.6**
	baz=6.7						
RMQ	**Roma**	**6.65**	**179**	P	**Pn**	**04 31 46.9**	**+0.3**
	4μm,0.8s						
COEN	**Coen**	**7.83**	**317**	P	**Pn**	**04 32 04.9**	**+2.1**
	baz=8.0,SNR=194						
COEN				S	**Sn**	**04 33 30.8**	**-0.8**
	baz=8.0						
COEN	**Coen**	**7.83**	**317**	Pn	**Pn**	**04 32 04.7**	**+1.8**
COEN	**Coen**	**7.83**	**317**	P	**Pn**	**04 32 05.1**	**+2.3**
	2μm,0.9s						
QLP	**Quilpie**	**7.88**	**210**	P	**Pn**	**04 32 04.6**	**+1.2**
	baz=8.0,SNR=107						
QLP	**Quilpie**	**7.88**	**210**	P	**Pn**	**04 32 05.0**	**+1.6**
	3μm,0.8s						
AUBSH	**Beerwah State**	**8.05**	**151**	P	**Pn**	**04 32 05.2**	**-0.6**
	baz=8.0						
AUTOO	**Toowoomba Stat**	**8.28**	**159**	P	**Pn**	**04 32 09.0**	**0.0**
	baz=8.3						
QIS	**Mount Isa**	**8.54**	**263**	P	**Pn**	**04 32 14.4**	**+1.9**
	baz=8.7,SNR=239						
QIS	**Mount Isa**	**8.54**	**263**	P	**Pn**	**04 32 14.8**	**+2.3**
	368nm,0.8s						
INKA	**Innaminka**	**10.71**	**221**	P	**Pn**	**04 32 42.5**	**+0.2**
	baz=11,SNR=9.6						
INKA	**Innaminka**	**10.71**	**221**	P	**Pn**	**04 32 42.8**	**+0.5**
	1μm,0.8s						
ARMA	**Armidale**	**10.90**	**166**	P	**Pn**	**04 32 44.6**	**-0.4**
	baz=11,SNR=22						
ARMA	**Armidale**	**10.90**	**166**	Pn	**Pn**	**04 32 44.8**	**-0.2**
ARMA	**Armidale**	**10.90**	**166**	P	**Pn**	**04 32 44.6**	**-0.4**
	112nm,0.6s						
CMSA	**Cobar Meteorol**	**11.98**	**192**	P	**Pn**	**04 32 59.4**	**-0.3**
	baz=12						
CMSA	**Cobar Meteorol**	**11.98**	**192**	P	**Pn**	**04 32 59.7**	**0.0**
	150nm,1.2s						
AUDCS	**Dubbo College**	**12.37**	**180**	P	**Pn**	**04 33 05.8**	**+0.8**
	baz=12						
WR0	**Warramunga Arr**	**13.28**	**267**	Pn	**Pn**	**04 33 17.5**	**0.0**
WB0	**Warramunga Arr**	**13.43**	**268**	Pn	**Pn**	**04 33 19.8**	**+0.3**
WB2	**Warramunga Arr**	**13.46**	**267**	Pn	**Pn**	**04 33 19.9**	**0.0**
WRAB	**Tennant Creek**	**13.46**	**267**		**Pn**	**04 33 19.8**	**-0.2**
WRAB	**Tennant Creek**	**13.46**	**267**	P	**Pn**	**04 33 19.8**	**-0.2**
WRA	**Warramunga Arr**	**13.47**	**267**	Pn	**Pn**	**04 33 18.8**	**-1.4**
	3.5nm,0.3s,baz=89,slow=12,SNR=156						
WRA				Sn	**Sn**	**04 35 42.2**	**-7.8**
	10nm,0.3s,baz=79,slow=18,SNR=5.4						
WRA				Lg	Lg	04 37 08.8	
	51nm,0.3s,baz=87,slow=26,SNR=16						
WRA				LR	LR	04 38 36.1	
	comp=Z,22μm,19.0s,baz=89,slow=38						
	54nm,0.8s						
WRA	**Warramunga Arr**	**13.47**	**267**		**Pn**	**04 33 19.5**	**-0.6**
WRA	**Warramunga Arr**	**13.47**	**267**	P	**Pn**	**04 33 19.5**	**-0.6**
I07AU	**WARRAMUNGA INF**	**13.48**	**267**	Lg	Lg	04 37 10.0	
	baz=95,slow=27						
I07AU				*i*		05 59 00.0	
	baz=93,slow=319,SNR=0.6						
MGCD	**Mangrove Creek**	**13.53**	**171**	P	**Pn**	**04 33 22.1**	**+1.4**
	baz=14,SNR=8.3						
MGCD	**Mangrove Creek**	**13.53**	**171**	P	**Pn**	**04 33 22.7**	**+1.9**
	204nm,0.9s						
STKA	**Stephens Creek**	**13.59**	**206**	Pn	**Pn**	**04 33 21.8**	**+0.1**
	6.9nm,0.3s,baz=11,slow=13,SNR=70						
STKA				Lg	Lg	04 37 21.6	
	15nm,0.3s,baz=286,slow=12,SNR=4.0						
STKA				LR	LR	04 38 54.7	
	comp=Z,23μm,21.3s,baz=23,slow=38						
	155nm,0.7s						
STKA	**Stephens Creek**	**13.59**	**206**	P	**Pn**	**04 33 20.5**	**-1.1**
	baz=14,SNR=69						
STKA	**Stephens Creek**	**13.59**	**206**	Pn	**Pn**	**04 33 20.6**	**-1.1**
STKA	**Stephens Creek**	**13.59**	**206**	P	**Pn**	**04 33 21.4**	**-0.3**
	123nm,0.8s						
LCRK	**Leigh Creek**	**14.19**	**220**	P	**Pn**	**04 33 28.1**	**-1.7**
	baz=14,SNR=15						
LCRK	**Leigh Creek**	**14.19**	**220**	P	**Pn**	**04 33 28.8**	**-1.1**
	2μm,0.7s						
AS31	**Alice Springs**	**14.23**	**252**	Pn	**Pn**	**04 33 29.1**	**-1.4**
ASAR	**Alice Springs**	**14.24**	**252**	Pn	**Pn**	**04 33 29.4**	**-1.2**
	7.3nm,0.3s,baz=81,slow=13,SNR=116						
ASAR				Sn	**Sn**	**04 36 06.5**	**-2.1**
	8.4nm,0.3s,baz=76,slow=27,SNR=4.7						
ASAR				Lg	Lg	04 37 33.7	
	44nm,0.3s,baz=57,slow=24,SNR=6.1						
ASAR				LR	LR	04 38 20.3	
	comp=Z,7μm,18.9s,baz=82,slow=34						
	33nm,0.7s						
ASAR	**Alice Springs**	**14.24**	**252**	Pn	**Pn**	**04 33 29.2**	**-1.3**
OOD	**Oodnadatta**	**14.28**	**234**	P	**Pn**	**04 33 29.3**	**-1.8**
	baz=14,SNR=109						
OOD	**Oodnadatta**	**14.28**	**234**	P	**Pn**	**04 33 30.5**	**-0.6**
	1μm,0.9s						
KOUNC	**Koumac, New Ca**	**14.69**	**96**		**Pn**	**04 33 34.5**	**-2.3**
KOUNC	**Koumac, New Ca**	**14.69**	**96**	P	**Pn**	**04 33 38.9**	**+2.1**
	182nm,0.9s						
LHI	**Lord Howe Isla**	**14.96**	**143**	P	**Pn**	**04 33 39.6**	**-0.6**
	baz=15,SNR=7.4						
LHI	**Lord Howe Isla**	**14.96**	**143**	Pn	**Pn**	**04 33 37.2**	**-3.1**
HNR	**Honiara**	**15.01**	**48**	Pn	**Pn**	**04 33 39.2**	**-1.9**
	12nm,0.3s,baz=215,slow=11,SNR=2.1						
HNR				LR	LR	04 39 00.5	
	comp=Z,26μm,18.1s,baz=220,slow=36						
	463nm,1.1s						
HNR	**Honiara**	**15.01**	**48**		**Pn**	**04 33 39.1**	**-2.0**
AUMTS	**Mt Stromlo**	**15.46**	**179**	P	**P**	**04 33 51.3**	**-0.2**
	baz=16						
CAN	**Canberra**	**15.46**	**179**	Pn	**Pn**	**04 33 45.2**	**-1.8**
CAN	**Canberra**	**15.46**	**179**	P	**Pn**	**04 33 45.2**	**-1.8**
CAN				pmax	pmax		
	comp=Z,190nm,1.3s						
CAN	**Canberra**	**15.46**	**179**	P	**Pn**	**04 33 47.5**	**+0.5**
	comp=Z,277nm,1.0s						
CNB	**Canberra Magne**	**15.46**	**178**	P	**P**	**04 33 50.7**	**-0.9**
	baz=16,SNR=4.5						
CNB	**Canberra Magne**	**15.46**	**178**	P	**Pn**	**04 33 47.3**	**+0.3**
	comp=Z,218nm,1.4s						
KRVT	**Keravat (AS076**	**15.75**	**12**	Pn	**Pn**	**04 33 48.5**	**-2.3**
	comp=Z,7.2nm,0.3s,baz=160,slow=1.3,SNR=23						
KRVT				LR	LR	04 39 23.6	
	comp=Z,10μm,19.7s,baz=321,slow=36						
	comp=Z,265nm,1.1s						
RABL	**Rabaul**	**15.89**	**13**		**Pn**	**04 33 52.4**	**-0.2**
RABL				IAmb	IAmb	04 34 00.6	
	comp=Z,1μm,1.6s						
HTT	**Hallett**	**16.11**	**211**	P	**Pn**	**04 33 55.2**	**-0.2**
	baz=16,SNR=28						
HTT	**Hallett**	**16.11**	**211**	P	**Pn**	**04 33 55.5**	**+0.1**
	comp=Z,1μm,1.2s						
WHYH	**Whyalla**	**16.48**	**215**	P	**Pn**	**04 33 58.4**	**-1.6**
NOUC	**Port Laguerre**	**16.64**	**101**	P	**P**	**04 34 04.5**	**-0.1**
	comp=Z,178nm,1.4s						
DZM	**Mont Dzumac**	**16.77**	**101**	Pn	**Pn**	**04 34 04.2**	**+0.3**
	comp=Z,31nm,0.3s,baz=274,slow=12,SNR=50						
DZM				LR	LR	04 39 22.2	
	comp=Z,5μm,18.1s,baz=287,slow=33						
	comp=Z,96nm,0.4s						
DZM	**Mont Dzumac**	**16.77**	**101**	*e*P	**Pn**	**04 34 02.8**	**-1.1**
	comp=Z,648nm,1.5s						
DZM				*e*LR	LR	04 37 51.8	
	comp=Z,9μm,30.9s						
DZM	**Mont Dzumac**	**16.77**	**101**		**Pn**	**04 34 02.8**	**-1.1**
DZM	**Mont Dzumac**	**16.77**	**101**	P	**P**	**04 34 05.7**	**-0.4**
	comp=Z,300nm,1.8s						
ONTNC	**Ouen Toro**	**16.80**	**102**		**Pn**	**04 34 03.3**	**-0.9**
ONTNC				IAmb	IAmb	04 34 10.0	
	comp=Z,1μm,1.7s						
ONTNC	**Ouen Toro**	**16.80**	**102**	P	**P**	**04 34 06.2**	**-0.2**
	comp=Z,328nm,1.6s						
MULG	**Mulgathing**	**16.83**	**229**	P	**Pn**	**04 34 03.3**	**-1.3**
	baz=17,SNR=22						
MULG	**Mulgathing**	**16.83**	**229**	P	**Pn**	**04 34 04.9**	**+0.4**
	comp=Z,674nm,1.3s						
KDU	**Kakadu**	**17.07**	**292**	P	**Pn**	**04 34 02.1**	**-5.5**
	baz=17,SNR=3.9						
KDU	**Kakadu**	**17.07**	**292**	P	**P**	**04 34 09.3**	**-0.1**
	comp=Z,501nm,1.6s						
BBOO	**Buckleboo**	**17.16**	**218**	P	**Pn**	**04 34 06.3**	**-2.5**
	baz=17,SNR=24						
BBOO	**Buckleboo**	**17.16**	**218**		**Pn**	**04 34 05.9**	**-2.8**
BBOO	**Buckleboo**	**17.16**	**218**	P	**Pn**	**04 34 08.2**	**-0.5**
	comp=Z,738nm,1.4s						
OUENC	**Ouen Island, N**	**17.16**	**102**		**Pn**	**04 34 07.2**	**-1.6**
OUENC	**Ouen Island, N**	**17.16**	**102**	P	**P**	**04 34 10.7**	**+0.3**
	comp=Z,152nm,1.5s						
YATNC	**Mamie plateau,**	**17.18**	**101**	P	**Pn**	**04 34 11.5**	**+0.9**
	comp=Z,180nm,1.4s						
TWOA	**Tennyson Woods**	**17.59**	**208**	P	**P**	**04 34 14.6**	**-0.5**
MANU	**Manus Island**	**17.70**	**356**	P	**P**	**04 34 16.9**	**+0.5**
MANU				IAmb	IAmb	04 34 23.5	
	comp=Z,1μm,2.0s						
PINNC	**Pines Island,**	**17.74**	**102**	P	**Pn**	**04 34 16.0**	**+0.1**
PINNC				IAmb	IAmb	04 34 25.3	
	comp=Z,728nm,1.7s						
TOO	**Toolangi**	**17.92**	**188**	P	**P**	**04 34 22.0**	**+3.3**
	baz=18,SNR=12						
TOO	**Toolangi**	**17.92**	**188**	P	**Pn**	**04 34 17.6**	**-0.5**
TOO	**Toolangi**	**17.92**	**188**	P	**Pn**	**04 34 17.6**	**-0.5**
TOO				pmax	pmax		
	comp=Z,137nm,1.1s						
TOO	**Toolangi**	**17.92**	**188**	P	**P**	**04 34 20.8**	**+2.1**
	comp=Z,164nm,0.9s						
ARPS	**Mount Arapiles**	**17.93**	**198**	P	**P**	**04 34 20.0**	**+1.2**
	baz=18,SNR=20						
ARPS	**Mount Arapiles**	**17.93**	**198**	P	**P**	**04 34 18.7**	**-0.1**
	comp=Z,231nm,0.8s						
MTN	**Manton Dam**	**18.18**	**290**	P	**P**	**04 34 21.5**	**-0.1**
	baz=18,SNR=17						
MTN	**Manton Dam**	**18.18**	**290**	P	**Pn**	**04 34 21.0**	**-0.4**
MTN				IAmb	IAmb	04 34 25.3	
	comp=Z,1μm,1.6s						
MARNC	**Mare, Loyalty**	**18.21**	**99**	P	**Pn**	**04 34 20.9**	**-0.8**
MARNC	**Mare, Loyalty**	**18.21**	**99**	P	**P**	**04 34 25.8**	**+3.8**
	comp=Z,5.8nm,1.1s						
JAY	**Jayapura**	**18.86**	**335**	P	**P**	**04 34 25.5**	**-3.7**
	baz=19,SNR=9.9						
GENI	**Genyem**	**19.01**	**333**	P	**P**	**04 34 30.8**	**0.0**
	comp=Z,8μmcomp=Z,13μmcomp=Z,485nm,1.1s						
KNRA	**Kununurra**	**19.39**	**279**	P	**P**	**04 34 35.0**	**0.0**
	baz=20,SNR=57						
KNRA	**Kununurra**	**19.39**	**279**	P	**P**	**04 34 35.0**	**0.0**
KNRA				IAmb	IAmb	04 34 50.0	
	comp=Z,295nm,0.9s						
KNRA	**Kununurra**	**19.39**	**279**	P	**Pn**	**04 34 38.0**	**+1.9**
	comp=Z,602nm,0.9s						
WRKA	**Warakurna**	**19.52**	**251**	P	**Pn**	**04 34 37.6**	**-0.1**
	baz=20,SNR=37						
WRKA	**Warakurna**	**19.52**	**251**	P	**Pn**	**04 34 38.9**	**+1.2**
	comp=Z,514nm,0.8s						
SMPI	**Sarmi**	**20.20**	**330**	P	Pn	04 34 44.9	-0.9
	comp=Z,6μmcomp=Z,400nm,1.2s						
SAUI	**Saumlaki**	**20.52**	**303**	P	**P**	**04 34 47.9**	**+0.6**
SAUI	**Saumlaki**	**20.52**	**303**	P	Pn	04 34 49.7	+0.2
	comp=Z,24μmcomp=Z,37μmcomp=Z,2μm,0.9s						
GLAD	**Gladstone**	**21.12**	**181**	P	**P**	**04 34 55.2**	**+1.6**
FORT	**Forrest**	**21.56**	**236**	P	**P**	**04 35 00.4**	**+2.0**
	baz=22,SNR=100						
FORT	**Forrest**	**21.56**	**236**	P	**P**	**04 34 59.2**	**+0.8**
FORT	**Forrest**	**21.56**	**236**	P	**P**	**04 35 00.2**	**+1.8**
SRPI	**Serui, Papua**	**21.57**	**324**	P	**P**	**04 35 00.7**	**+2.1**
	comp=Z,265nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.84**	**271**	P	**P**	**04 35 01.8**	**+0.3**
	comp=Z,43nm,0.8s,baz=106,slow=10,SNR=43						
FITZ				S	**S**	**04 39 01.5**	**-1.6**
	comp=Z,54nm,0.7s,baz=330,slow=12,SNR=1.3						
FITZ				LR	LR	04 43 46.7	
	comp=Z,13μm,18.2s,baz=100,slow=38						
	comp=Z,43nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.84**	**271**	P	**P**	**04 35 01.9**	**+0.3**
	baz=22,SNR=35						
FITZ	**Fitzroy Crossi**	**21.84**	**271**	P	**P**	**04 35 01.9**	**+0.3**
FITZ				IAmb	IAmb	04 35 19.1	
	comp=Z,252nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.84**	**271**	P	**P**	**04 35 02.6**	**+1.1**
BAKI	**Biak**	**22.21**	**325**	P	**P**	**04 35 06.3**	**+0.8**
	comp=Z,10μmcomp=Z,616nm,1.1s						
MOO	**Moorlands**	**22.60**	**183**	P	**P**	**04 35 11.7**	**+2.2**
	baz=23,SNR=6.9						
MOO	**Moorlands**	**22.60**	**183**	P	**P**	**04 35 11.5**	**+2.0**
TAU	**Tasmania Unive**	**23.06**	**183**	P	**P**	**04 35 14.1**	**-0.2**
TAU	**Tasmania Unive**	**23.06**	**183**	P	**P**	**04 35 14.1**	**-0.2**
TAU				pmax	pmax		
	comp=Z,523nm,1.4s						
TAU	**Tasmania Unive**	**23.06**	**183**	P	**P**	**04 35 16.3**	**+2.0**
FAKI	**Fak Fak**	**23.20**	**314**	P	**P**	**04 35 13.3**	**-2.8**
	baz=23,SNR=4.7						
FAKI	**Fak Fak**	**23.20**	**314**	P	**P**	**04 35 14.9**	**-1.1**
FAKI				IAMs_20	IAMs_20	04 44 40.1	
	comp=Z,16μm,20.0s						
FAKI	**Fak Fak**	**23.20**	**314**	P	**P**	**04 35 14.7**	**-1.3**
	comp=Z,8μmcomp=Z,9μmcomp=Z,528nm,1.2s						
FAKI	**Fak Fak**	**23.20**	**314**	P	**P**	**04 35 21.0**	**+5.0**
	comp=Z,530nm,1.3s						
BNDI	**Bandanaira**	**23.76**	**307**	P	**P**	**04 35 21.3**	**-0.2**
	comp=Z,9μmcomp=Z,27μmcom

THZ IAMs_20 IAMs_20 04 46 50.2
comp=Z,9µm,20.0s
KLBR Kellerberrin 30.11 241 P **P** **04 36 20.2 +1.5**
baz=30,SNR=7.0
KLBR Kellerberrin 30.11 241 P **P** **04 36 21.4 +2.7**
MLZ Mavora Lakes 30.15 152 IAMs_20 IAMs_20 04 45 57.3
comp=Z,11µm,19.0s
NNVZ North Ngauruho 30.18 135 P **P** **04 36 22.2 +2.8**
SNVZ South Ngauruho 30.22 136 P **P** **04 36 21.9 +2.1**
OTVZ Oturere 30.23 135 P **P** **04 36 21.8 +2.0**
ETVZ East Tongariro 30.24 135 P **P** **04 36 21.9 +2.0**
TUVZ Tukino 30.28 136 P **P** 04 36 28.3 +8.0
RPZ Rata Peaks 30.32 147 P **P** **04 36 20.9 +0.5**
comp=Z,98nm,1.1s,baz=310,slow=3.9,SNR=17
RPZ LR LR 04 47 00.1
comp=Z,10µm,19.9s,baz=302,slow=33
comp=Z,98nm,1.1s
RPZ Rata Peaks 30.32 147 P **P** **04 36 19.6 -0.8**
RPZ IAMs_20 IAMs_20 04 46 39.0
comp=Z,10µm,20.0s
LTZ Lake Taylor 30.33 144 IAMs_20 IAMs_20 04 46 54.2
comp=Z,9µm,19.0s
WHZ Wether Hill Ro 30.49 153 IAMs_20 IAMs_20 04 46 07.3
comp=Z,8µm,21.0s
OXZ Oxford 30.57 145 IAMs_20 IAMs_20 04 46 58.6
comp=Z,9µm,20.0s
BLDU Ballidu 30.75 243 P **P** **04 36 24.8 +0.4**
baz=31,SNR=70
BLDU Ballidu 30.75 243 P **P** **04 36 24.7 +0.4**
URZ Urewera 30.75 133 P **P** **04 36 24.5 +0.2**
comp=Z,8.4nm,0.8s,baz=31,slow=7.3,SNR=5.1
URZ LR LR 04 48 26.8
comp=Z,4µm,18.2s,baz=2.5,slow=36
comp=Z,8.4nm,0.8s
URZ Urewera 30.75 133 P **P** **04 36 23.6 -0.6**
URZ IAmb IAmb 04 37 32.6
comp=Z,78nm,1.2s
URZ Urewera 30.75 133 P **P** **04 36 25.8 +1.6**
BKZ Black Stump Fm 30.78 135 P **P** **04 36 24.3 -0.3**
KHZ Kahutara 30.81 143 IAMs_20 IAMs_20 04 47 03.8
comp=Z,11µm,20.0s
KHZ Kahutara 30.81 143 P **P** **04 36 27.1 +2.4**
comp=Z,82nm,1.2s
OGWZ Otaki Gorge 30.82 139 P **P** **04 36 26.0 +1.2**
SNZO South Karori 30.82 140 P **P** **04 36 27.4 +2.6**
comp=Z,259nm,1.1s
KWHZ Kaweka Forest 30.87 135 P **P** **04 36 27.2 +1.9**
NWAO Narrogin (SRO) 30.91 239 P **P** **04 36 25.9 +0.1**
NWAO IAmb IAmb 04 36 30.3
comp=Z,110nm,0.9s
NWAO Narrogin (SRO) 30.91 239 P **P** **04 36 25.9 +0.1**
NWAO pmax pmax
comp=Z,110nm,0.9s
NWAO MLR MLR
comp=Z,15µm,20.0s
NWAO Narrogin (SRO) 30.91 239 P **P** **04 36 27.2 +1.4**
MORW Morawa 31.01 246 P **P** **04 36 27.9 +1.2**
baz=31,SNR=31
MORW Morawa 31.01 246 P **P** **04 36 27.3 +0.6**
MORW Morawa 31.01 246 P **P** **04 36 27.8 +1.2**
comp=Z,193nm,0.8s
ODZ Otahua Downs 31.07 149 P **P** **04 36 26.0 -1.0**
ODZ Otahua Downs 31.07 149 P **P** **04 36 29.5 +2.5**
HOWZ Holdsworth Sta 31.08 138 P **P** **04 36 28.6 +1.5**
MQZ McQueen's Vall 31.16 145 P **P** **04 36 26.0 -1.8**
MSWZ Moikau Station 31.21 139 P **P** **04 36 27.2 -1.1**
MTW Mount Morrison 31.22 139 P **P** **04 36 28.1 -0.3**
MXZ Matakaoa Point 31.27 131 IAMs_20 IAMs_20 04 47 10.1
comp=Z,9µm,21.0s
BKSI Bulukumba 31.27 294 P **P** **04 36 29.7 +0.6**
BFZ Birch Farm 31.42 138 P **P** **04 36 30.3 +0.2**
BFZ IAmb IAmb 04 36 33.5
comp=Z,166nm,1.1s
BFZ Birch Farm 31.42 138 P **P** **04 36 30.2 +0.1**
BFZ Birch Farm 31.42 138 P **P** **04 36 30.3 +0.2**
TMWZ Te Maipa 31.43 138 P **P** **04 36 30.5 +0.2**
LUWI Luwuk 31.46 303 P **P** **04 36 31.1 +0.5**
LUWI Luwuk 31.46 303 P **P** **04 36 31.3 +0.6**
comp=Z,6µmcomp=Z,297nm,1.3s
MUN Mundaring 31.49 241 P **P** **04 36 32.1 +1.2**
baz=32,SNR=6.6
MUN Mundaring 31.49 241 P **P** **04 36 32.6 +1.8**
KMSI Cibinong 31.55 307 P **P** **04 36 32.1 +0.6**
comp=Z,566nm,1.0s
RKGY Rocky Gully 31.64 236 P **P** **04 36 33.8 +1.7**
baz=32,SNR=9.7
RAO Raoul Island 31.74 114 P **P** **04 36 33.5 +0.5**
comp=Z,242nm,0.3s,baz=268,slow=5.6,SNR=4.5
RAO LR LR 04 46 31.4
comp=Z,4µm,21.3s,baz=264,slow=31
KAPI Kappang 31.75 294 P **P** **04 36 32.0 -1.2**
comp=Z,38nm,1.1s,baz=102,slow=5.3,SNR=11
KAPI LR LR 04 50 02.0
comp=Z,8µm,18.1s,baz=128,slow=38
comp=Z,38nm,1.1s
KAPI Kappang 31.75 294 P **P** **04 36 32.9 -0.3**
KAPI IAmb IAmb 04 36 40.2
comp=Z,191nm,1.4s
KAPI Kappang 31.75 294 IAMs_20 IAMs_20 04 49 51.4
comp=Z,8µm,18.0s
KAPI Kappang 31.75 294*c i*P **P** **04 36 33.8 +0.6**
KAPI pmax pmax
comp=Z,151nm,1.4s
TARA Tarawa 31.76 51 P **P** **04 36 32.0 -1.3**
TARA IAmb IAmb 04 37 01.1
comp=Z,145nm,0.9s
PLAI Plampang 31.79 286 P **P** **04 36 34.2 +0.5**
comp=Z,2µmcomp=Z,114nm,0.8s
PLAI Plampang 31.79 286 P **P** **04 36 36.6 +2.9**
GIRL Giralia 32.17 259 P **P** **04 36 39.5 +2.6**
SPSI Sidrap Palu 32.27 295 P **P** **04 36 38.1 +0.3**
comp=Z,1µmcomp=Z,68nm,0.9s
APSI Ampana 32.43 302 P **P** **04 36 39.8 +0.6**
comp=Z,3µmcomp=Z,2µmcomp=Z,81nm,1.3s
SGSI Sangihe 32.58 313 P **P** **04 36 41.2 +0.6**
comp=Z,273nm,0.9s
TWSI Taliwang, Sumb 32.64 285 P **P** **04 36 41.6 +0.5**
comp=Z,52nm,0.8s
TTSI Tana Toraja 32.71 297 P **P** **04 36 42.3 +0.6**
comp=Z,1µmcomp=Z,56nm,1.0s
MRSI Marisa 33.05 304 P **P** **04 36 44.5 -0.1**
comp=Z,2µmcomp=Z,122nm,1.2s
GUMO Guam 33.39 353 LR LR 04 49 43.8
comp=Z,3µm,18.9s,baz=168,slow=35
H01W1 Cape Leeuwin H 33.94 237 P **P** **04 36 53.8 +1.8**
baz=94,slow=6.7,SNR=6.6
H01W3 Cape Leeuwin H 33.95 237 P **P** **04 36 54.4 +2.3**
baz=94,slow=6.7,SNR=6.9
H01W2 Cape Leeuwin H 33.96 237 P **P** **04 36 53.6 +1.5**
baz=94,slow=6.7,SNR=4.6
DDMP Don Marcelino, 34.25 316⇓*e*P **P** **04 36 54.9 -0.2**
TOLI2 Tolitoli 34.34 304 P **P** **04 36 55.1 -0.9**
TOLI2 IAmb IAmb 04 37 01.1
comp=Z,84nm,1.2s
MPSI Mapaga 34.57 302 P **P** **04 36 58.4 +0.5**
comp=Z,2µmcomp=Z,64nm,1.4s
GSPH General Santos 34.73 315⇑*i*P **P** **04 37 00.5 +1.0**
DAV Davao City (W) 35.06 317 P **P** **04 37 01.4 -0.7**
comp=Z,266nm,0.4s,baz=158,slow=0.7,SNR=12
DAV LR LR 04 53 11.3
comp=Z,4µm,18.4s,baz=142,slow=40
DAV Davao City (W) 35.06 317 P **P** **04 37 00.5 -1.7**
JAGI Jajag, Banyuwa 35.23 284 P **P** **04 37 03.5 -0.2**
baz=35,SNR=5.3
JAGI Jajag, Banyuwa 35.23 284 P **P** **04 37 03.1 -0.6**
JAGI IAmb IAmb 04 38 02.2
comp=Z,163nm,1.1s
JAGI Jajag, Banyuwa 35.23 284 P **P** **04 37 04.1 +0.5**
comp=Z,3µmcomp=Z,164nm,1.3s
SKMP Bagumbayan, Su 35.32 315⇓*e*P **P** **04 37 04.2 -0.2**
KCP Kidapawan 35.33 317⇑*i*P **P** **04 37 05.7 +1.2**
ABJI Asem Bagus 35.41 285 P **P** **04 37 05.7 +0.5**
comp=Z,131nm,1.0s
BIPH Bislig 35.43 320⇑*e*P **P** **04 37 03.8 -1.5**
GMJI Gumukmas 35.95 284 P **P** **04 37 10.3 +0.5**
BUKP Musuan 36.01 318⇓*i*P **P** **04 37 11.7 +1.4**
BBKI Banjar Baru 36.77 292 P **P** **04 37 17.3 +0.5**
comp=Z,177nm,1.3s
PWJI Pagerwojo 37.55 283 P **P** **04 37 23.9 +0.4**
comp=Z,77nm,0.9s
PCJI Pacitan 38.06 282 P **P** **04 37 28.2 +0.4**
comp=Z,5µmcomp=Z,190nm,1.1s
AFI Afiamalu 38.25 87 P **P** **04 37 28.9 -0.6**
comp=Z,237nm,0.9s,baz=344,slow=4.4,SNR=21
AFI LR LR 04 50 26.1
comp=Z,2µm,18.8s,baz=248,slow=32
comp=Z,237nm,0.9s
AFI Afiamalu 38.25 87 P **P** **04 37 27.4 -2.1**
AFI Afiamalu 38.25 87 P **P** **04 37 32.2 +2.7**
MYLDM Lahad Datu 38.68 307 P **P** **04 37 33.6 +0.7**
UGM Wanagama 38.77 282 IAMs_20 IAMs_20 04 52 00.3
comp=Z,6µm,20.0s
SMRI Semarang 39.17 284 P **P** **04 37 36.5 -0.7**
SMRI IAmb IAmb 04 38 21.7
comp=Z,323nm,1.6s
SMRI IAMs_20 IAMs_20 04 53 29.9
comp=Z,5µm,18.0s
KKM Kota Kinabalu 40.97 306 P **P** **04 37 52.8 +0.6**
KKM IAmb IAmb 04 38 04.6
comp=Z,247nm,1.2s
PVCP Virac 41.03 322⇓*e*P **P** **04 37 52.3 -0.1**
STKI Sintang 41.43 294 P **P** **04 37 56.2 +0.4**
comp=Z,13µmcomp=Z,68nm,0.9s
PPR Puerto Princes 41.63 312⇓*i*P **P** **04 37 58.8 +1.4**
LEM Lembang 41.84 282 P **P** **04 38 00.6 +1.2**
comp=Z,53nm,0.6s,baz=15,slow=20
LEM LR LR 04 56 21.2
comp=Z,6µm,19.7s,baz=128,slow=38
comp=Z,53nm,0.6s
SBUM Sibu 42.05 298 P **P** **04 38 01.3 +0.4**
SBUM IAmb IAmb 04 38 07.9
comp=Z,110nm,1.1s
DBJI Dramaga 42.74 282 P **P** **04 38 06.9 +0.3**
comp=Z,59nm,0.5s
LQP Lukban 42.99 320⇓*e*P **P** **04 38 08.5 -0.2**
KSM Kuching 43.15 295 P **P** **04 38 09.7 -0.1**
KSM IAmb IAmb 04 38 18.1
comp=Z,66nm,0.7s
TGY Tagaytay City 43.35 319 LR LR 04 59 45.8
comp=Z,1µm,18.2s,baz=14,slow=41
TPI Tanjungpandan 43.46 288 P **P** **04 38 14.1 +1.7**
PPBI Pangkal Pinang 45.08 287 P **P** **04 38 28.5 +3.1**
SMPP San Manuel, Pa 45.09 320⇑*e*P **P** **04 38 24.5 -0.8**
KASI Kota Agung 45.20 282 P **P** **04 38 28.6 +2.2**
LWLI Liwa 45.80 283 P **P** **04 38 31.4 +0.2**
comp=Z,108nm,1.0s
PMBI Palembang 45.99 286 IAMs_20 IAMs_20 04 55 38.7
comp=Z,5µm,22.0s
JCJ Chichijima 47.04 352 P **P** **04 38 39.5 -1.1**
comp=Z,197nm,0.8s,baz=284,slow=23,SNR=5.2
comp=Z,197nm,0.8s
JCJ Chichijima 47.04 352 P **P** **04 38 40.6 0.0**
JCJ Chichijima 47.04 352 P **P** **04 38 44.3 +3.7**
KSI Kapahiang 47.68 284 P **P** **04 38 46.1 +0.2**
RAR Rarotonga 48.15 101 P **P** **04 38 47.9 -1.5**
comp=Z,23nm,0.9s,baz=174,slow=10.0,SNR=3.6
RAR LR LR 04 55 16.3
comp=Z,1µm,21.3s,baz=256,slow=31
comp=Z,23nm,0.9s
MYKOM Kota Tinggi 48.91 291 P **P** **04 38 54.4 -0.9**
MYKOM IAmb IAmb 04 38 59.1
comp=Z,70nm,1.3s
MYKOM IAMs_20 IAMs_20 04 59 40.9
comp=Z,5µm,20.0s
TWG Pinlang 50.20 326 P **P** **04 39 05.2 +0.2**
COCO West Island 50.23 270 IAMs_20 IAMs_20 04 58 33.3
comp=Z,5µm,22.0s
JOW Kunigami 50.40 336 P **P** **04 39 06.7 +0.3**
YULB Yu-li 50.55 327 P **P** **04 39 05.7 -1.9**
BKNI Bangkinang 50.75 287 P **P** **04 39 08.7 -0.6**
BKNI Bangkinang 50.75 287 P **P** **04 39 11.4 +2.1**
TPUB Ta-pu 50.83 326 IAMs_20 IAMs_20 04 57 05.5
comp=Z,4µm,22.0s
TPUB Ta-pu 50.83 326 P **P** **04 39 12.5 +2.8**
PPI Padang Panjang 50.99 286 P **P** **04 39 13.1 +2.0**
NACB Ninganchiao 51.05 328 P **P** **04 39 10.6 -0.7**
NACB IAmb IAmb 04 39 17.8
comp=Z,59nm,0.8s
SSLB Suanglung 51.06 327 P **P** **04 39 10.7 -0.8**
SSLB IAmb IAmb 04 39 18.5
comp=Z,53nm,0.8s
SSLB Suanglung 51.06 327 P **P** **04 39 14.8 +3.3**
TATO Taipei 51.77 328 P **P** **04 39 15.7 -1.1**
TATO IAmb IAmb 04 39 58.1
comp=Z,222nm,1.7s
CASY Casey 52.58 198 P **P** **04 39 22.0 -0.2**
IPM Ipoh 52.67 292 P **P** **04 39 21.6 -2.0**
IPM IAMs_20 IAMs_20 05 02 56.3
comp=Z,4µm,19.0s
QZH Quanzhou 53.24 325 P **P** **04 39 25.9 -1.7**
QZH S **S** **04 46 59.3 +0.4**
QZH LR LR
comp=Z,1µm,18.5s
QZH LR LR
comp=Z,2µm,29.8s
KULM Kulim 53.38 293 P **P** **04 39 28.4 -0.6**
KULM IAmb IAmb 04 39 33.0
comp=Z,121nm,1.1s
KULM IAMs_20 IAMs_20 05 01 47.4
comp=Z,4µm,21.0s
RPSI Rantau Prapat 53.69 289 P **P** **04 39 30.4 -0.8**
RPSI IAmb IAmb 04 39 34.2
comp=Z,71nm,1.3s
PSI Prapat 53.74 289 P **P** **04 39 30.1 -1.6**
comp=Z,21nm,1.0s,baz=164,slow=5.9,SNR=10
PSI LR LR 05 03 30.8
comp=Z,4µm,18.4s,baz=132,slow=37
comp=Z,21nm,1.0s
PSI Prapat 53.74 289 P **P** **04 39 30.4 -1.3**
PSI pmax pmax
comp=Z,71nm,1.3s
PSI MLR MLR
comp=Z,20.0s
JSU Suzuyama 53.93 341 P **P** **04 39 32.3 -0.3**
JSU IAmb IAmb 04 39 45.2
comp=Z,89nm,1.3s
QIZ Qiongzhong 54.20 313 P **P** **04 39 38.3 +3.5**
QIZ S **S** **04 47 17.9 +5.6**
QIZ pmax pmax
comp=Z,54nm,1.4s
QIZ LR LR
comp=Z,2µm,21.4s
QIZ LR LR
comp=Z,1µm,23.3s
QIZ LR LR
comp=Z,2µm,25.5s
GSI Gunungsitoli 54.29 287 P **P** **04 39 35.5 0.0**
GSI Gunungsitoli 54.29 287 P **P** **04 39 35.9 +0.3**
comp=Z,45µmcomp=Z,48nm,1.3s
TSI Tuntungan 54.37 290 P **P** **04 39 36.5 +0.3**
JMN Monobe 55.07 345 P **P** **04 39 41.2 +0.3**
JMN IAmb IAmb 04 40 01.7
comp=Z,86nm,1.1s
KCSI Kotacane, Aceh 55.09 289 P **P** **04 39 40.6 -0.8**
comp=Z,93nm,1.4s
SRIT Nakonsritamara 55.93 296 P **P** **04 39 47.4 -0.1**
SRIT IAmb IAmb 04 39 51.1
comp=Z,143nm,1.4s
INU Inuyama 55.95 349 P **P** **04 39 46.6 -0.5**
INU IAmb IAmb 04 39 50.8
comp=Z,128nm,1.4s
JYT Yasato 56.30 352 P **P** **04 39 47.9 -1.7**
JHS Saijyo 56.47 345 P **P** **04 39 49.9 -0.9**
JHS IAmb IAmb 04 40 31.2
comp=Z,92nm,1.5s
MJAR Matsushiro Arr 56.91 350 P **P** **04 39 51.4 -2.5**
comp=Z,22nm,0.9s,baz=163,slow=10.0,SNR=25
comp=Z,22nm,0.9s
MAJO Matsushiro 56.91 350 P **P** **04 39 52.9 -1.0**
MAJO IAmb IAmb 04 39 56.6
comp=Z,189nm,1.6s
MAJO Matsushiro 56.91 350*c i*P **P** **04 39 52.6 -1.4**
MAJO pmax pmax
comp=Z,96nm,1.5s
MAJO Matsushiro 56.91 350 P **P** **04 39 55.5 +1.5**
SSE Sheshan 57.08 332 P **P** **04 39 58.3 +3.1**
SSE S **S** **04 47 55.6 +5.4**
SSE pmax pmax
comp=Z,29nm,0.9s
SSE pmax pmax
comp=Z,190nm,4.0s
SSE LR LR
comp=Z,370nm,22.4s
SSE LR LR
comp=Z,630nm,23.1s
TBI Tubuai 57.28 106 *e*LQ LQ 04 54 13.7
comp=Z,8µm,30.0s
TBI *e*LR LR 04 56 38.5
comp=Z,2µm,27.2s
KSBUS Busan 57.81 341 P **P** **04 40 00.5 +0.1**
KSBUS IAmb IAmb 04 40 21.3
comp=Z,172nm,1.5s
JMM Marumori 57.84 353 P **P** **04 39 59.2 -1.3**
JMM IAmb IAmb 04 40 03.3
comp=Z,87nm,1.0s
MIDW Midway 57.95 36 P **P** **04 40 00.6 -0.8**
MIDW IAmb IAmb 04 40 05.4
comp=Z,102nm,1.1s
MIDW IAMs_20 IAMs_20 05 02 53.3
comp=Z,3µm,19.0s
VNDA Vanda 58.12 177 P **P** **04 40 02.5 +0.5**
comp=Z,7.7nm,0.9s,baz=337,slow=7.7,SNR=28
VNDA LR LR 05 00 36.1
comp=Z,4µm,21.4s,baz=355,slow=31
comp=Z,7.7nm,0.9s
VNDA Vanda 58.12 177 P **P** **04 40 01.0 -1.0**
PPT2 Papeete2 58.26 99 *e*P **P** **04 40 04.8 +0.8**
comp=Z,117nm,42.5s
PPT2 *e*S **S** **04 48 05.1 -1.5**
comp=Z,711nm,31.2s
PPT2 *e*LQ LQ 04 54 37.6
comp=Z,7µm,28.0s
PPT2 *e*LR LR 04 57 06.0
comp=Z,3µm,29.0s
PPT Papeete 58.27 99 P **P** **04 40 04.4 +0.4**
comp=Z,31nm,0.8s,baz=46,slow=8.4,SNR=3.9
PPT LR LR 04 59 58.6
comp=Z,1µm,21.4s,baz=254,slow=31
comp=Z,31nm,0.8s
GULI GuiLin 58.27 319⇓P **P** **04 40 05.0 +1.2**
JSD Sado 58.36 350 P **P** **04 40 03.5 -0.7**
TIAR Tiarei 58.48 99 *e*P **P** **04 40 06.3 +0.8**
comp=Z,29nm,1.1s
NAWB Namwon 58.51 340 P **P** **04 40 05.0 -0.2**
SBA Scott Base 58.75 176 P **P** **04 40 07.4 +1.0**
SBA Scott Base 58.75 176 P **P** **04 40 07.4 +1.0**
SBA pmax pmax
comp=Z,39nm,1.2s
CNSH ChangSha 58.90 323⇑P **P** **04 40 11.3 +3.2**
CNSH pmax pmax
comp=Z,67nm,1.1s
CNSH LR LR
comp=Z,980nm,18.2s
CNSH LR LR
comp=Z,1µm,22.4s
CNSH LR LR
comp=Z,2µm,29.2s
NJ2 Nanjing 58.94 330 *e*P **P** **04 40 09.3 +1.0**
NJ2 pP **sP** **04 40 13.3 +0.6**
NJ2 S **S** **04 48 17.0 +2.4**
NJ2 SS **SS** **04 52 05.3 -3.5**
NJ2 pmax pmax
comp=Z,24nm,0.9s
NJ2 pmax pmax
comp=Z,380nm,5.5s
NJ2 LR LR
comp=Z,1µm,18.5s
NJ2 LR LR
comp=Z,1µm,16.1s
NJ2 LR LR
comp=Z,1µm,18.0s
TJN Taejon 59.40 340 P **P** **04 40 10.4 -1.0**
TJN Taejon 59.40 340*c i*P **P** **04 40 10.7 -0.7**
KSCHJ Chungju 59.66 341 P **P** **04 40 12.7 -0.5**
KSCHJ IAmb IAmb 04 40 24.4
comp=Z,93nm,1.2s
WHN Wuhan 59.95 326⇑P **P** **04 40 15.9 +0.6**
WHN pP **pP** **04 40 18.8 +0.2**
WHN pmax pmax
comp=Z,620nm,1.8s
KSRS Korea Array 60.21 341 P **P** **04 40 16.2 -0.7**
comp=Z,22nm,0.9s,baz=157,slow=7.4,SNR=37
KSRS LR LR 05 03 58.3
comp=Z,2µm,20.7s,baz=150,slow=34
comp=Z,22nm,0.9s
KSAR Wonju Array Be 60.21 341 P **P** **04 40 16.9 -0.1**
KSAR Wonju Array Be 60.21 341 P **P** **04 40 16.9 -0.1**
KS19 Wonju Array Si 60.27 341 P **P** **04 40 16.6 -0.8**
KS19 IAmb IAmb 04 40 38.0
comp=Z,61nm,1.1s
INCN Inchon 60.64 340 P **P** **04 40 19.5 -0.4**
INCN IAmb IAmb 04 40 40.8
comp=Z,67nm,1.1s
INCN Inchon 60.64 340 P **P** **04 40 19.5 -0.4**
INCN pmax pmax
comp=Z,67nm,1.2s
INCN MLR MLR
comp=Z,1µm,20.0s
JTM Tenmabayashi 60.69 353 P **P** **04 40 19.8 -0.4**
SEHB SEOHWA 60.86 342 P **P** **04 40 21.4 0.0**
GYA Guiyang 61.44 317⇑*i*P **P** **04 40 28.6 +2.9**
GYA S **S** **04 48 52.3 +5.1**
GYA SS **SS** **04 52 52.3 +3.8**
GYA pmax pmax
comp=Z,60nm,1.4s
GYA LR LR
comp=Z,2µm,26.8s
GYA LR LR
comp=Z,2µm,26.7s
GYA LR LR
comp=Z,3µm,26.8s
CM31 Chiang Mai Arr 61.84 305 P **P** **04 40 29.0 +0.6**
CMAR Chiang Mai Arr 61.84 305 P **P** **04 40 29.4 +0.9**
comp=Z,49nm,0.7s,baz=136,slow=5.2,SNR=50
CMAR LR LR 05 08 48.4
comp=Z,1µm,21.8s,baz=125,slow=38
CMAR PKP2bc **P'P'bc** **05 09 46.4 +1.1**
comp=Z,1.4nm,0.5s,baz=300,slow=4.5,SNR=4.4
comp=Z,49nm,0.7s
CMAR Chiang Mai Arr 61.84 305 P **P** **04 40 28.7 +0.2**
CMAR Chiang Mai Arr 61.84 305*ce*P **P** **04 40 29.3 +0.9**
CMAR pmax pmax
comp=Z,54nm,0.7s
CHTO Chiang Mai 62.05 305 P **P** **04 40 29.8 0.0**
CHTO Chiang Mai 62.05 305 P **P** **04 40 29.8 0.0**
CHTO pmax pmax
comp=Z,147nm,1.4s
CHTO MLR MLR
comp=Z,2µm,21.0s
ENH Enshi 62.45 322 P **P** **04 40 31.8 -0.6**
KMI Kunming 63.16 313⇑P **P** **04 40 38.4 +1.0**
KMI pP pP 04 40 41.1 +0.5
KMI PcP **PcP** **04 41 15.0 +0.1**
KMI PP **PP** **04 42 59.0 +2.5**
KMI S **S** **04 49 12.3 +3.2**
KMI SS **SS** **04 53 13.3 -2.3**
KMI pmax pmax
comp=Z,26nm,1.1s
KMI pmax pmax
comp=Z,180nm,3.5s
KMI LR LR
comp=Z,850nm,19.7s
KMI LR LR
comp=Z,2µm,18.1s
KMI LR LR
comp=Z,2µm,20.8s
TIA Tai'an 63.20 332⇑P **P** **04 40 36.5 -0.7**
TIA pP **sP** **04 40 45.3 +3.7**
TIA sP pP 04 40 50.3 +10
TIA S **S** **04 49 07.8 -1.0**
TIA sS **sS** **04 49 15.0 +0.9**
TIA pmax pmax
comp=Z,32nm,1.0s
TIA pmax pmax
comp=Z,280nm,3.5s
TIA LR LR
comp=Z,440nm,18.8s
TIA LR LR
comp=Z,1µm,20.2s
TIA LR LR
comp=Z,2µm,31.9s
DL2 Dalian 63.66 337 P **P** **04 40 39.5 -0.6**
DL2 S **S** **04 49 14.3 0.0**
DL2 ScS **SKSac** **04 50 24.5 -9.2**
DL2 pmax pmax
comp=Z,31nm,1.0s
DL2 LR LR
comp=Z,940nm,19.4s
DL2 LR LR
comp=Z,1µm,14.7s
DL2 LR LR
comp=Z,1µm,18.7s
LYN LuoYang 64.08 327⇑*i*P **P** **04 40 42.3 -0.7**
LYN S **S** **04 49 19.8 0.0**
LYN sS sS 04 49 26.8 +1.7
LYN SS **SS** **04 53 27.3 -2.0**
LYN pmax pmax
comp=Z,50nm,1.3s

LYN				pmax	pmax			
	comp=Z,240nm,4.8s							
LYN				LR	LR			
	comp=Z,1μm,18.2s							
LYN				LR	LR			
	comp=Z,2μm,23.9s							
MSHR	**Mys Shultsa**	**64.14**	**346**⇑	*e*P	**P**	**04**	**40**	**44.6 +1.4**
MSHR				pmax	pmax			
	comp=Z,25nm,1.4s							
VLA	**Vladivostok**	**64.49**	**346**⇑	*e*P	**P**	**04**	**40**	**46.1 +0.6**
VLA				pmax	pmax			
	comp=Z,67nm,1.6s							
KUR	**Kuril'sk**	**64.73**	**359**⇑	*e*P	**P**	**04**	**40**	**48.7 +1.7**
PZH	**PanZhiHua**	**64.73**	**314**	P	**P**	**04**	**40**	**47.5 -0.1**
PZH				S	**S**	**04**	**49**	**23.8 -4.6**
PZH				pmax	pmax			
	comp=Z,20nm,1.2s							
PZH				pmax	pmax			
	comp=Z,200nm,3.5s							
PZH				LR	LR			
	comp=Z,3μm,20.2s							
PZH				LR	LR			
	comp=Z,4μm,21.2s							
PZH				LR	LR			
	comp=Z,4μm,18.6s							
HNS	**HongShan**	**65.27**	**331**	⇑P	**P**	**04**	**40**	**50.4 -0.3**
HNS				PP	**PP**	**04**	**43**	**13.3 -1.3**
HNS				S	**S**	**04**	**49**	**33.8 -0.5**
HNS				pmax	pmax			
	comp=Z,16nm,1.2s							
HNS				LR	LR			
	comp=Z,1μm,21.1s							
HNS				LR	LR			
	comp=Z,1μm,21.2s							
TEY	**Ternei**	**65.46**	**351**	*e*P	**P**	**04**	**40**	**47.9 -3.8**
TEY				*e*		04	49	32.9
USRK	**Ussuriysk Ar.**	**65.50**	**347**	P	**P**	**04**	**40**	**51.4 -0.6**
	comp=Z,12nm,0.6s,baz=174,slow=6.1,SNR=26							
USRK				LR	LR	05	09	32.3
	comp=Z,601nm,19.4s,baz=235,slow=36							
	comp=Z,12nm,0.6s							
USRK	**Ussuriysk Ar.**	**65.50**	**347**	P	**P**	**04**	**40**	**51.0 -1.0**
XAN	**Xi'an**	**65.57**	**324**	⇑P	**P**	**04**	**40**	**52.6 -0.2**
XAN				sP	sP	04	40	58.5 +1.2
XAN				S	**S**	**04**	**49**	**40.1 +1.8**
XAN				sS	sS	04	49	49.5 +5.9
XAN				ScS	**SKSac**	**04**	**50**	**44.6 -4.0**
XAN				pmax	pmax			
	comp=Z,42nm,1.2s							
XAN				pmax	pmax			
	comp=Z,320nm,4.8s							
XAN				LR	LR			
	comp=Z,960nm,17.3s							
XAN				LR	LR			
	comp=Z,2μm,16.5s							
XAN				LR	LR			
	comp=Z,2μm,19.2s							
SNY	**Shenyang**	**65.57**	**340**	⇓P	**P**	**04**	**40**	**52.0 -0.5**
SNY				S	**S**	**04**	**49**	**37.8 0.0**
SNY				ScS	**SKSac**	**04**	**50**	**42.8 -5.2**
SNY				SS	**SS**	**04**	**53**	**54.9 +2.7**
SNY				pmax	pmax			
	comp=Z,16nm,1.2s							
SNY				pmax	pmax			
	comp=Z,240nm,3.5s							
SNY				LR	LR			
	comp=Z,1μm,26.7s							
SNY				LR	LR			
	comp=Z,2μm,22.4s							
SNY				LR	LR			
	comp=Z,2μm,20.4s							
KIP	**Kipapa**	**66.32**	**55**⇓	*e*P	**P**	**04**	**40**	**59.8 +2.0**
KIP				pmax	pmax			
	comp=Z,59nm,1.0s							
CD2	**Chengdu**	**66.36**	**319**	P	**P**	**04**	**40**	**58.0 +0.1**
CD2				S	**S**	**04**	**49**	**48.0 0.0**
CD2				SS	**SS**	**04**	**54**	**07.3 +2.4**
CD2				pmax	pmax			
	comp=Z,130nm,1.0s							
CD2				LR	LR			
	comp=Z,1μm,17.7s							
CD2				LR	LR			
	comp=Z,2μm,18.1s							
CD2				LR	LR			
	comp=Z,2μm,17.7s							
MDJ	**Mudanjiang**	**66.43**	**345**	P	**P**	**04**	**40**	**57.4 -0.7**
MDJ	**Mudanjiang**	**66.43**	**345**	P	**P**	**04**	**41**	**00.5 +2.4**
MDJ				pP	sP	04	41	03.1 +0.6
MDJ				sP	pP	04	41	04.1 +2.8
MDJ				S	**S**	**04**	**49**	**53.4 +5.1**
MDJ				sS	sS	04	49	58.9 +5.3
MDJ				pmax	pmax			
	comp=Z,31nm,1.3s							
MDJ				pmax	pmax			
	comp=Z,140nm,5.8s							
MDJ				LR	LR			
	comp=Z,500nm,20.5s							
MDJ				LR	LR			
	comp=Z,2μm,22.5s							
MDJ				LR	LR			
	comp=Z,880nm,20.3s							
OPA	**Opana**	**66.47**	**54**	P	**P**	**04**	**40**	**58.9 +0.1**
OPA	**Opana**	**66.47**	**54**	P	**P**	**04**	**40**	**58.9 +0.1**
OPA				pmax	pmax			
	comp=Z,140nm,0.9s							
TIY	**Taiyuan**	**66.59**	**329**	⇑P	**P**	**04**	**41**	**02.3 +2.9**
TIY				S	**S**	**04**	**49**	**57.6 +6.9**
TIY				pmax	pmax			
	comp=Z,24nm,0.7s							
TIY				LR	LR			
	comp=Z,790nm,13.7s							
TIY				LR	LR			
	comp=Z,730nm,18.1s							
TIY				LR	LR			
	comp=Z,1μm,18.2s							
YSS	**Yuzh-Sakhalins**	**66.66**	**356**	*e*P	**P**	**04**	**40**	**59.0 -0.4**
YSS				*e*		04	41	28.2
YSS				*e*S	**S**	**04**	**49**	**49.2 -1.7**
YSS				*e*SS	**SS**	**04**	**54**	**07.4 -1.5**
YSS				pmax	pmax			
	comp=Z,30nm,0.7s							
YSS				pmax	pmax			
	comp=Z,400nm,3.6s							
YSS				MLR	MLR			
	comp=Z,900nm,17.0s							
YSS				MLR	MLR			
	comp=N,700nm,14.0s							
CN2	**Changchun**	**66.78**	**342**	*e*P	**P**	**04**	**40**	**59.8 -0.5**
CN2				PP	**PP**	**04**	**43**	**23.8 -3.9**
CN2				*e*S	**S**	**04**	**49**	**53.8 +1.3**
CN2				pmax	pmax			
	comp=N,10.0nm,1.2s							
CN2				pmax	pmax			
	comp=N,200nm,7.0s							
CN2				LR	LR			
	comp=N,900nm,17.0s							
CN2				LR	LR			
	comp=N,600nm,17.0s							
CN2				LR	LR			
	comp=N,900nm,21.0s							
BJT	**Baijiatuau**	**66.78**	**333**	P	**P**	**04**	**41**	**00.1 -0.3**
BJT	**Baijiatuau**	**66.78**	**333**	IAMs_20	IAMs_20	05	10	56.9
	comp=Z,2μm,19.0s							
BJT	**Baijiatuau**	**66.78**	**333**	P	**P**	**04**	**41**	**00.1 -0.3**
BJT				pmax	pmax			
	comp=Z,25nm,0.8s							
BJT				MLR	MLR			
	comp=Z,2μm,19.0s							
BJI	**Beijing**	**66.80**	**333**	P	**P**	**04**	**41**	**00.3 -0.2**
BJI				S	**S**	**04**	**49**	**53.4 +0.5**
BJI				ScS	**SKSac**	**04**	**50**	**56.8 -0.7**
BJI				pmax	pmax			
	comp=Z,31nm,1.3s							
BJI				LR	LR			
	comp=Z,310nm,18.0s							
BJI				LR	LR			
	comp=Z,1μm,18.4s							
BJI				LR	LR			
	comp=Z,2μm,17.9s							
BNX	**BinXian**	**68.03**	**344**	⇑P	**P**	**04**	**41**	**07.0 -1.2**
BNX				pP	**pP**	**04**	**41**	**11.8 +0.4**
BNX				sP	**sP**	**04**	**41**	**14.5 +1.9**
BNX				PP	**PP**	**04**	**43**	**38.4 -0.2**
BNX				S	**S**	**04**	**50**	**09.6 +2.2**
BNX				sS	**sS**	**04**	**50**	**12.4 -0.4**
BNX				pmax	pmax			
	comp=Z,7.0nm,1.0s							
BNX				pmax	pmax			
	comp=Z,180nm,4.2s							
BNX				LR	LR			
	comp=Z,880nm,21.0s							
BNX				LR	LR			
	comp=Z,810nm,20.0s							
BNX				LR	LR			
	comp=Z,2μm,22.2s							
TAOE	**Nuku Hiva Isla**	**69.42**	**92**	*e*P	**P**	**04**	**41**	**18.4 +0.7**
TAOE				*e*S	**S**	**04**	**50**	**22.7 -2.8**
	comp=Z,269nm,1.1s							
TAOE				*e*SS	**SS**	**04**	**54**	**52.5 -0.4**
	comp=Z,173nm,23.5s							
TAOE				*e*LR	LR	05	02	16.1
	comp=Z,232nm,26.2s							
	comp=Z,2μm,28.5s							
HHC	**Hu-ho-hao-te**	**69.50**	**331**	*e*P	**P**	**04**	**41**	**16.9 -0.7**
HHC				sP	sP	04	41	23.4 +1.4
HHC				S	**S**	**04**	**50**	**28.6 +3.3**
HHC				pmax	pmax			
	comp=Z,67nm,1.2s							
HHC				pmax	pmax			
	comp=Z,280nm,4.8s							
HHC				LR	LR			
	comp=Z,790nm,17.6s							
HHC				LR	LR			
	comp=Z,1μm,17.7s							
HHC				LR	LR			
	comp=Z,2μm,18.7s							
KOHI	**KOHIMA**	**69.68**	**308**	*e*P	**P**	**04**	**41**	**18.7 -0.4**
MOKO	**MOKOCHONG**	**69.73**	**309**	*e*P	**P**	**04**	**41**	**19.6 +0.3**
LZH	**Lanzhou**	**69.91**	**323**⇑	*i*P	**P**	**04**	**41**	**21.8 +1.5**
LZH				sP	sP	04	41	29.3 +4.5
LZH				S	**S**	**04**	**50**	**29.8 -0.7**
LZH				sS	sS	04	50	39.0 +3.1
LZH				SS	**SS**	**04**	**55**	**00.6 +0.6**
LZH				pmax	pmax			
	comp=Z,69nm,1.1s							
LZH				pmax	pmax			
	comp=Z,710nm,4.6s							
LZH				LR	LR			
	comp=Z,1μm,17.7s							
LZH				LR	LR			
	comp=Z,1μm,16.3s							
LZH				LR	LR			
	comp=Z,2μm,17.7s							
BTO	**Baotou**	**70.03**	**330**	*e*P	**P**	**04**	**41**	**21.0 +0.2**
XLT	**XiLinHaoTe**	**70.07**	**336**⇑	*i*P	**P**	**04**	**41**	**21.1 +0.1**
XLT				pP	sP	04	41	26.1 +0.6
XLT				sP	pP	04	41	29.4 +5.1
XLT				PcP	**PcP**	**04**	**41**	**41.1 -2.0**
XLT				S	**S**	**04**	**50**	**30.3 -1.6**
XLT				pmax	pmax			
	comp=Z,20nm,0.9s							
XLT				pmax	pmax			
	comp=Z,220nm,4.1s							
XLT				LR	LR			
	comp=Z,150nm,18.8s							
XLT				LR	LR			
	comp=Z,1μm,19.4s							
XLT				LR	LR			
	comp=Z,2μm,20.3s							
QSPA	**South Pole Qui**	**70.24**	**180**	P	**P**	**04**	**41**	**22.3 +0.3**
	comp=Z,138nm,1.0s,baz=336,slow=1.3,SNR=148							
QSPA				LR	LR	05	09	15.1
	comp=Z,2μm,18.0s,baz=14,slow=33							
	comp=Z,138nm,1.0s							
QSPA	**South Pole Qui**	**70.24**	**180**	P	**P**	**04**	**41**	**21.9 -0.1**
QSPA	**South Pole Qui**	**70.24**	**180**	IAMs_20	IAMs_20	05	09	53.0
	comp=Z,3μm,18.0s							
MAW	**Mawson**	**70.27**	**204**	P	**P**	**04**	**41**	**22.7 +0.8**
	comp=Z,41nm,0.7s,baz=95,slow=6.5,SNR=33							
MAW				LR	LR	05	11	29.6
	comp=Z,2μm,18.0s,baz=84,slow=35							
	comp=Z,41nm,0.7s							
KLR	**Kul'dur**	**70.36**	**348**	LR	LR	05	11	44.5
	comp=Z,1μm,20.3s,baz=159,slow=36							
KLR	**Kul'dur**	**70.36**	**348**	*c i*P	**P**	**04**	**41**	**22.4 -0.1**
KLR				pmax	pmax			
	comp=Z,107nm,2.5s							
SKR	**Severo-Kuril's**	**70.49**	**5**⇓	*e*P	**P**	**04**	**41**	**25.5 +2.3**
ZIRO	**ZIRO**	**70.91**	**310**	*e*P	**P**	**04**	**41**	**31.1 +4.4**
GRNR	**Gornyy**	**71.09**	**352**⇓	*i*P	**P**	**04**	**41**	**25.8 -1.2**
GRNR				pmax	pmax			
	comp=Z,4.0nm,1.3s							
TEZP	**TEZPUR**	**71.16**	**308**	*e*P	**P**	**04**	**41**	**28.2 +0.3**
SHL	**Shillong**	**71.25**	**307**	*e*P	**P**	**04**	**41**	**29.0 +0.3**
SHL				IAmb	IAmb	04	41	31.8
	comp=Z,79nm,1.0s							
GUWA	**GUWAHATI**	**71.74**	**308**	*e*P	**P**	**04**	**41**	**32.0 +0.5**
PALK	**Pallekele**	**72.05**	**285**	LR	LR	05	14	14.6
	comp=Z,2μm,20.9s,baz=233,slow=37							
PALK	**Pallekele**	**72.05**	**285**	P	**P**	**04**	**41**	**34.0 +0.4**
PALK				IAmb	IAmb	04	41	37.9
	comp=Z,108nm,1.2s							
PALK	**Pallekele**	**72.05**	**285**	P	**P**	**04**	**41**	**34.0 +0.4**
PALK				pmax	pmax			
	comp=Z,108nm,1.3s							
PEA0B	**Petropavlovsk-**	**73.03**	**6**	P	**P**	**04**	**41**	**39.1 +0.5**
PEA0B	**Petropavlovsk-**	**73.03**	**6**	*c i*P	**P**	**04**	**41**	**38.6 +0.1**
PETK	**Petropavlovsk-**	**73.03**	**6**	P	**P**	**04**	**41**	**38.6 0.0**
	comp=Z,90nm,0.9s,baz=179,slow=7.0,SNR=25							
PETK				LR	LR	05	09	06.7
	comp=Z,1μm,21.7s,baz=180,slow=32							
	comp=Z,90nm,0.9s							
PET	**Petropavlovsk**	**73.04**	**6**	P	**P**	**04**	**41**	**39.1 +0.5**
PET				IAmb	IAmb	04	41	42.4
	comp=Z,66nm,0.9s							
PET	**Petropavlovsk**	**73.04**	**6**	*e*P	**P**	**04**	**41**	**41.5 +2.9**
PET				*e*S	**S**	**04**	**51**	**07.0 +1.4**
PET				pmax	pmax			
	comp=Z,113nm,0.9s							
PET				pmax	pmax			
	comp=Z,400nm,13.2s							
PET				pmax	pmax			
	comp=Z,200nm,16.7s							
BWNR	**Bhubaneshwar**	**73.31**	**299**	*e*P	**P**	**04**	**41**	**40.4 -0.5**
LSA	**Lhasa**	**74.10**	**310**	P	**P**	**04**	**41**	**46.8 +0.8**
LSA				S	**S**	**04**	**51**	**21.8 +2.3**
LSA				pmax	pmax			
	comp=Z,13nm,1.1s							
LSA				LR	LR			
	comp=Z,660nm,18.5s							
LSA				LR	LR			
	comp=Z,480nm,19.9s							
LSA				LR	LR			
	comp=Z,630nm,18.5s							
GTA	**Gaotai**	**74.51**	**323**	⇑P	**P**	**04**	**41**	**48.8 +1.1**
GTA				pP	sP	04	41	51.8 -0.4
GTA				sP	pP	04	41	55.0 +4.0
GTA				S	**S**	**04**	**51**	**25.9 +2.8**
GTA				SKS	**SKSac**	**04**	**51**	**51.6 -4.5**
GTA				SS	**SS**	**04**	**56**	**10.3 0.0**
GTA				pmax	pmax			
	comp=Z,29nm,1.7s							
GTA				pmax	pmax			
	comp=Z,470nm,6.0s							
GTA				LR	LR			
	comp=Z,370nm,19.6s							
GTA				LR	LR			
	comp=Z,1μm,21.1s							
GTA				LR	LR			
	comp=Z,690nm,18.2s							
RAGD	**RAYAGADA**	**74.77**	**297**	*e*P	**P**	**04**	**41**	**49.8 +0.3**
ODAN	**Odare**	**75.35**	**306**	*e*P	**P**	**04**	**41**	**53.6 +0.6**
	comp=Z,119nm,1.4s							
TAPN	**Taplejung**	**75.36**	**307**	*e*P	**P**	**04**	**41**	**53.5 +0.4**
	comp=Z,101nm,0.6s							
GOMU	**GeErMu**	**75.45**	**318**	P	**P**	**04**	**41**	**54.5 +1.0**
GOMU				PcP	**PcP**	**04**	**42**	**05.3 -1.3**
GOMU				S	**S**	**04**	**51**	**40.3 +6.1**
GOMU				SS	**SS**	**04**	**56**	**28.1 +2.9**
GOMU				pmax	pmax			
	comp=Z,15nm,1.1s							
GOMU				pmax	pmax			
	comp=Z,140nm,4.1s							
GOMU				LR	LR			
	comp=Z,500nm,21.8s							
GOMU				LR	LR			
	comp=Z,590nm,23.4s							
GOMU				LR	LR			
	comp=Z,730nm,21.4s							
ZEA	**Zeya**	**75.53**	**347**	*e*P	**P**	**04**	**41**	**53.8 +0.7**
ZEA				*e*S	**S**	**04**	**51**	**35.2 +1.6**
ZEA				pmax	pmax			
	comp=N,30nm,1.0s							
ZEA				pmax	pmax			
	comp=Z,40nm,1.5s							
ZEA				pmax	pmax			
	comp=N,100nm,3.1s							
ZEA				pmax	pmax			
	comp=Z,100nm,3.0s							
ZEA				smax	smax			
	comp=N,300nm,15.0s							
ZEA				smax	smax			
	comp=E,400nm,16.8s							
SHEM	**Shemya Is, Ala**	**75.54**	**16**	LR	LR	05	12	02.0
	comp=E,1μm,20.1s,baz=192,slow=33							
AMKA	**Amchitka**	**75.80**	**19**	P	**P**	**04**	**41**	**55.1 +0.4**
VJD	**Vijayawada**	**75.93**	**294**	*e*P	**P**	**04**	**41**	**56.9 +0.7**
RAMN	**Ramite**	**76.00**	**306**	*e*P	**P**	**04**	**41**	**57.3 +0.6**
	comp=E,220nm,1.2s							
SALM	**Salem**	**76.06**	**288**	*e*P	**P**	**04**	**41**	**58.2 +1.3**
KOD	**Kodaikanal**	**76.15**	**286**	*e*P	**P**	**04**	**41**	**59.0 +1.0**
JIRN	**Jiri**	**76.67**	**306**	*e*P	**P**	**04**	**42**	**00.8 +0.1**
	comp=E,101nm,0.8s							
ULN	**Ulaanbaatar**	**76.99**	**333**	P	**P**	**04**	**42**	**02.2 +0.4**
ULN				IAmb	IAmb	04	42	06.4
	comp=Z,64nm,1.1s							
ULN	**Ulaanbaatar**	**76.99**	**333**	*c i*P	**P**	**04**	**42**	**02.5 +0.7**
ULN				pmax	pmax			
	comp=Z,87nm,1.3s							
GUN	**Gumba**	**77.04**	**306**	*e*P	**P**	**04**	**42**	**03.3 +0.6**
	comp=Z,293nm,1.1s							
BLSP	**Bilaspur**	**77.20**	**299**	*e*P	**P**	**04**	**42**	**03.2 -0.1**
PKI	**Pulchoki**	**77.22**	**306**	*e*P	**P**	**04**	**42**	**03.9 +0.1**
	comp=Z,395nm,1.4s							
PKIN	**Phulchoki**	**77.24**	**306**	*e*P	**P**	**04**	**42**	**03.8 0.0**
	comp=Z,255nm,1.3s							
SONM	**Songino Array**	**77.26**	**332**	P	**P**	**04**	**42**	**03.7 +0.4**
	comp=Z,30nm,0.9s,baz=153,slow=5.7,SNR=47							
SONM				LR	LR	05	15	16.8
	comp=Z,1μm,21.9s,baz=140,slow=35							
	comp=Z,30nm,0.9s							
SONM	**Songino Array**	**77.26**	**332**	P	**P**	**04**	**42**	**04.1 +0.8**
SONM				IAmb	IAmb	04	42	07.6
	comp=Z,63nm,1.1s							
PCHI	**Peechi**	**77.28**	**286**	*e*P	**P**	**04**	**42**	**05.3 +1.3**
PCHI				*e*S	**S**	**04**	**51**	**54.8 +0.5**
KIWB	**Kanaga Island**	**77.36**	**21**	P	**P**	**04**	**42**	**04.2 +0.7**
KKN	**Kakani**	**77.43**	**306**	*e*P	**P**	**04**	**42**	**05.5 +0.7**
	comp=Z,148nm,1.4s							
DMN	**Daman**	**77.47**	**306**	*e*P	**P**	**04**	**42**	**05.2 +0.1**
	comp=Z,359nm,1.3s							
ADK	**Adak**	**77.54**	**21**	P	**P**	**04**	**42**	**08.5 +4.0**
CIT	**Chita**	**77.81**	**339**	*e*P	**P**	**04**	**42**	**06.6 +0.5**
CIT				*e*		04	42	15.4
CIT				pmax	pmax			
	comp=Z,110nm,1.5s							
GKN	**Gorkha**	**78.03**	**306**	*e*P	**P**	**04**	**42**	**08.2 +0.1**
	comp=Z,117nm,0.8s							
DANN	**Dangsing**	**78.88**	**306**	*e*P	**P**	**04**	**42**	**12.8 -0.1**
	comp=Z,331nm,0.8s							
MA2	**Magadan**	**79.11**	**1**	LR	LR	05	12	34.9
	comp=Z,1μm,21.7s,baz=188,slow=32							
MA2	**Magadan**	**79.11**	**1**	P	**P**	**04**	**42**	**14.1 +1.0**
MA2	**Magadan**	**79.11**	**1**⇓	*e*P	**P**	**04**	**42**	**15.3 +2.3**
MA2				pmax	pmax			
	comp=Z,38nm,1.3s							
NGP	**Nagpur**	**79.31**	**297**	*e*P	**P**	**04**	**42**	**14.8 -0.3**
ZAK	**Zakamensk**	**80.52**	**332**	*e*P	**P**	**04**	**42**	**21.2 +0.1**
ZAK				pmax	pmax			
	comp=Z,42nm,1.1s							
AKL	**Akola**	**80.84**	**296**	*e*P	**P**	**04**	**42**	**23.3 0.0**
IRK	**Irkutsk**	**81.48**	**334**	*e*P	**P**	**04**	**42**	**25.9 -0.1**
IRK				*e*S	**S**	**04**	**52**	**41.3 +3.8**
IRK				pmax	pmax			
	comp=Z,112nm,2.2s							
JHNI	**Jhansi**	**81.64**	**301**	*e*P	**P**	**04**	**42**	**26.1 -1.4**
KAD	**Karad**	**81.89**	**292**	*e*P	**P**	**04**	**42**	**28.2 -0.8**
LGTI	**Lohaghat**	**82.10**	**305**	*e*P	**P**	**04**	**42**	**28.8 -1.0**
PTH	**Pithoragarh**	**82.17**	**305**	*e*P	**P**	**04**	**42**	**30.4 -0.1**
MOY	**Mondy**	**82.45**	**332**	*e*P	**P**	**04**	**42**	**31.6 +0.3**
MOY				pmax	pmax			
	comp=Z,94nm,2.0s							
BELA	**Belgrano 2**	**82.50**	**179**	P	**P**	**04**	**42**	**30.6 -0.6**
BELA				IAmb	IAmb	04	42	34.6
	comp=Z,62nm,0.9s							
SEY	**Seymchan**	**82.51**	**2**⇓	*e*P	**P**	**04**	**42**	**32.0 +0.8**
SEY				pmax	pmax			
	comp=Z,47nm,1.3s							
BOD	**Bodaibo**	**82.53**	**342**	*e*P	**P**	**04**	**42**	**30.1 -1.3**
BOD				pmax	pmax			
	comp=Z,48nm,1.2s							
POO	**Poona**	**82.66**	**293**	*e*P	**P**	**04**	**42**	**33.2 +0.2**
POO				IAmb	IAmb	04	42	37.7
	comp=Z,40nm,1.0s							
UNV	**Unalaska Valle**	**82.86**	**25**	P	**P**	**04**	**42**	**35.7 +2.6**
	baz=222							
YAK	**Yakutsk**	**82.95**	**351**	LR	LR	05	19	48.8
	comp=Z,611nm,20.3s,baz=174,slow=36							
YAK	**Yakutsk**	**82.95**	**351**	P	**P**	**04**	**42**	**32.9 -0.5**
YAK	**Yakutsk**	**82.95**	**351**	*e*P	**P**	**04**	**42**	**32.6 -0.8**
YAK				*e*		04	42	37.7
YAK				*e**PP	**PcP**	**04**	**42**	**44.1 +6.0**
YAK				*e*		04	45	43.2
YAK				*e*PPP	PPP	04	47	33.5
YAK				*e*S	**S**	**04**	**52**	**49.3 -2.8**
YAK				*e*SS	**SS**	**04**	**58**	**14.6 -1.4**
YAK				*e*SSS	SSS	05	01	42.2
YAK				pmax	pmax			
	comp=Z,92nm,1.3s							
YAK				pmax	pmax			
	comp=N,18nm,1.1s							
YAK				pmax	pmax			
	comp=E,10.0nm,1.0s							
YAK				pmax	pmax			
	comp=Z,24nm,1.0s							
YAK				pmax	pmax			
	comp=E,8.0nm,0.9s							
YAK				pmax	pmax			
	comp=N,15nm,1.0s							
YAK				smax	smax			
	comp=N,91nm,2.3s							
YAK				smax	smax			
	comp=E,73nm,2.3s							
KNGR	**Kungurtug, Tuv**	**83.29**	**330**⇓	*e*P	**P**	**04**	**42**	**36.8 +1.1**
KNGR				pmax	pmax			
	comp=Z,55nm,1.2s							
DDI	**Dehra Dun**	**84.19**	**305**	*e*P	**P**	**04**	**42**	**40.7 0.0**
DDI				IAmb	IAmb	04	42	44.7
	comp=Z,129nm,0.8s							
WMQ	**Urumqi**	**84.35**	**321**	*e*P	**P**	**04**	**42**	**42.3 +1.1**
WMQ				S	**S**	**04**	**53**	**05.4 -1.8**
WMQ				pmax	pmax			
	comp=Z,73nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,420nm,4.3s							
WMQ				LR	LR			
	comp=Z,780nm,19.7s							
WMQ				LR	LR			
	comp=Z,750nm,22.7s							
WMQ				LR	LR			
	comp=Z,950nm,19.7s							
NVL	**N'lazarevskaya**	**84.82**	**193**	*e*P	**P**	**04**	**42**	**42.8 -0.3**
NVL				pmax	pmax			
	comp=Z,60nm,1.2s							
NVL				MLR	MLR			
	comp=Z,4μm,17.0s							
SMLA	**Simla**	**85.24**	**305**	*e*P	**P**	**04**	**42**	**45.9 +0.1**
SMLA				IAmb	IAmb	04	42	50.5
	comp=Z,86nm,1.0s							
TROLL	**Troll, Antarti**	**85.57**	**190**	P	**P**	**04**	**42**	**47.1 0.0**
SNAA	**Sanae**	**86.69**	**189**	P	**P**	**04**	**42**	**52.3 -0.2**
SNAA	**Sanae**	**86.69**	**189**	LR	LR	05	20	40.3
	comp=Z,6μm,18.1s,baz=158,slow=35							
SNAA	**Sanae**	**86.69**	**189**	P	**P**	**04**	**42**	**52.3 -0.2**
SNAA	**Sanae**	**86.69**	**189**	P	**P**	**04**	**42**	**52.3 -0.2**
SNAA				pmax	pmax			
	comp=Z,149nm,1.4s							
THN	**Thein Dam**	**86.92**	**306**	*e*P	**P**	**04**	**42**	**54.1 0.0**
VNA3	**Neumayer Olymp**	**87.96**	**187**	P	**P**	**04**	**42**	**58.2 -0.4**
VNA2	**Neumayer--Watz**	**87.98**	**188**	P	**P**	**04**	**42**	**59.2 +0.5**
	baz=164,slow=5.4							
ZSN	**Zais

VNA1 **Neumayer--Stat** 88.35 188 P P 04 43 01.2 +0.8
SMAI **San Martin Ant** 88.51 167 IAmb IAmb 04 43 56.8
comp=Z,44nm,1.4s
BILL **Bilibino** 88.54 7⇓*e*P P 04 43 02.7 +1.6
BILL *e* 04 46 32.9
BILL *e*PPP PPP 04 48 26.8
BILL *e*S S 04 53 44.6 -2.2
BILL *e*SSS SSS 05 03 18.4
BILL pmax pmax
comp=Z,45nm,1.2s
BILL MLR MLR
comp=Z,587nm,19.0s
GAMB **Gambell** 88.83 16 IAMs_20 IAMs_20 05 16 13.7
comp=Z,2µm,22.0s
SHLS **Shalkode** 89.13 317 *e*P P 04 43 02.7 -1.9
SHLS pmax pmax
comp=Z,20nm,1.0s
SHLS **Shalkode** 89.13 317 *e*P P 04 43 02.8 -1.9
comp=Z,20nm,1.0s,baz=317
MK31 **Makanchi Array** 89.16 321 IAmb IAmb 04 43 07.9
comp=Z,28nm,0.9s
MK31 **Makanchi Array** 89.16 321*c i*P P 04 43 04.4 -0.2
MKAR **Makanchi Array** 89.16 321 P P 04 43 04.3 -0.2
comp=Z,29nm,0.8s,baz=116,slow=5.5,SNR=77
MKAR PKKPbc **PKKPbc** 05 00 45.5 +2.0
comp=Z,0.8nm,0.7s,baz=345,slow=2.0,SNR=4.9
MKAR LR LR 05 24 52.1
comp=Z,385nm,21.7s,baz=136,slow=37
comp=Z,29nm,0.8s
NIL **Nilore** 89.31 306 P P 04 43 04.8 -0.7
NIL IAmb IAmb 04 43 08.9
comp=Z,65nm,1.1s
NIL **Nilore** 89.31 306 P P 04 43 04.8 -0.7
NIL pmax pmax
comp=Z,65nm,1.2s
MAKZ **Makanchi** 89.36 321 P P 04 43 05.1 -0.4
MAKZ IAmb IAmb 04 43 08.7
comp=Z,34nm,0.9s
MAKZ **Makanchi** 89.36 321 P P 04 43 05.1 -0.4
MAKZ pmax pmax
comp=Z,34nm,0.9s
MAKZ MLR MLR
comp=Z,500nm,22.0s
UZB **Uzynbulak** 89.41 317 *e*P P 04 43 05.1 -0.8
UZB **Uzynbulak** 89.41 317 *e*P P 04 43 05.2 -0.8
baz=317
R17K **Ugashik Creek** 89.61 26 P P 04 43 09.0 +2.7
baz=230
KPKS **Kokpek** 89.78 317*c i*P P 04 43 06.4 -1.2
KPKS pmax pmax
comp=Z,14nm,0.8s
KPKS **Kokpek** 89.78 317⇑*i*P P 04 43 06.5 -1.2
comp=Z,14nm,0.8s,baz=317
KSH **Kashi** 89.81 312 P P 04 43 08.6 +0.7
KSH SKS **SKSac** 04 53 38.3 -0.6
KSH S S 04 53 57.5 -2.7
KSH pmax pmax
comp=Z,56nm,0.9s
KSH LR LR
comp=Z,570nm,22.0s
KSH LR LR
comp=Z,460nm,21.3s
KSH LR LR
comp=Z,970nm,21.6s
N16K **Nishlik Lake** 90.52 23 P P 04 43 11.5 +0.9
baz=228
TDK **Taldyqorghan** 90.67 318 *e*P P 04 43 11.1 -0.5
TDK **Taldyqorghan** 90.67 318 *e*P P 04 43 11.2 -0.5
baz=318
ARXS **Arharly** 90.67 317 *e*P P 04 43 09.7 -2.1
O17K **Koliganek Bris** 90.70 24 P P 04 43 13.0 +1.7
baz=230
MDOK **Medeo** 90.70 316 *e*P P 04 43 11.1 -0.9
MDOK *e* 04 46 45.1
MDOK **Medeo** 90.70 316 *e*P P 04 43 11.1 -0.9
baz=316
MDOK *e*PP PP 04 46 45.2 -2.5
baz=316
AAA **Alma-Ata** 90.81 316 *e*P P 04 43 11.4 -1.0
AAA **Alma-Ata** 90.81 316 *e*P P 04 43 11.4 -1.0
baz=316
ANM **Nome** 91.21 18 IAMs_20 IAMs_20 05 19 33.7
comp=Z,2µm,21.0s
ANM **Nome** 91.21 18 P P 04 43 15.9 +2.3
baz=222
RPN **Rapa Nui** 91.25 119 LR LR 05 20 54.1
comp=Z,931nm,18.1s,baz=248,slow=33
ZALV **Zalesovo Beam** 91.51 328 P P 04 43 14.5 -0.7
comp=Z,13nm,1.0s,baz=106,slow=4.8,SNR=15
ZALV LR LR 05 27 08.3
comp=Z,484nm,18.8s,baz=123,slow=37
comp=Z,13nm,1.0s
N18K **Kilae Creek** 91.74 24 IAmb IAmb 04 43 36.2
comp=Z,46nm,1.3s
N18K **Kilae Creek** 91.74 24 P P 04 43 18.3 +2.1
baz=231
PMSA **Palmer Station** 92.02 167 LR LR 05 17 34.4
comp=Z,1µm,21.7s,baz=205,slow=31
PMSA **Palmer Station** 92.02 167 IAMs_20 IAMs_20 05 23 45.9
comp=Z,2µm,18.0s
PMSA **Palmer Station** 92.02 167 *e*P P 04 43 18.7 +1.1
SEM **Semipalatinsk** 92.13 323 *e*P P 04 43 17.1 -1.4
SEM **Semipalatinsk** 92.13 323 *e*P P 04 43 17.1 -1.4
baz=324
AAK **Ala-Archa** 92.16 315 P P 04 43 18.4 -0.4
AAK **Ala-Archa** 92.16 315*ce*P P 04 43 18.7 -0.1
AAK pmax pmax
comp=Z,24nm,1.3s
TIXI **Tiksi** 92.23 354 P P 04 43 17.6 -0.6
comp=Z,14nm,0.9s,baz=269,slow=23,SNR=4.5
comp=Z,14nm,0.9s
TIXI **Tiksi** 92.23 354 P P 04 43 17.8 -0.4
TIXI IAmb IAmb 04 43 35.0
comp=Z,28nm,1.3s
TIXI **Tiksi** 92.23 354⇓*e*P P 04 43 19.0 +0.8
TIXI pmax pmax
comp=Z,14nm,1.0s
SGDS **Sogindy** 92.42 316 *e*P P 04 43 18.1 -1.7
SGDS **Sogindy** 92.42 316 *e*P P 04 43 18.1 -1.7
baz=316
HOM **Homer** 92.81 26 IAMs_20 IAMs_20 05 20 24.7
comp=Z,2µm,20.0s
L19K **White Mountain** 93.07 23 P P 04 43 22.7 +0.4
L19K IAmb IAmb 04 44 10.5
comp=Z,31nm,1.1s
L19K **White Mountain** 93.07 23 P P 04 43 23.3 +0.9
baz=232
M19K **Big River Lodg** 93.07 23 IAmb IAmb 04 44 05.7
comp=Z,28nm,1.1s
M19K **Big River Lodg** 93.07 23 P P 04 43 22.9 +0.5
baz=232
TTA **Tatalina** 93.12 22 P P 04 43 24.0 +1.3
baz=231
KURK **Kurchatov** 93.19 323 P P 04 43 22.4 -0.8
KURK **Kurchatov** 93.19 323*ce*P P 04 43 23.0 -0.1
KURK pmax pmax
comp=Z,12nm,1.1s
KURBB **Kurchatov Arra** 93.20 323 P P 04 43 22.1 -1.0
comp=Z,1.7nm,0.2s,baz=111,slow=3.5,SNR=13
KURBB PP PP 04 47 05.0 -1.9
comp=Z,5.3nm,1.0s,baz=125,slow=4.1,SNR=4.0
KURBB LR LR 05 26 36.0
comp=Z,647nm,21.4s,baz=118,slow=36
comp=Z,1.7nm,0.2s
BTLS **Baital** 93.46 317*c i*P P 04 43 23.9 -0.6
BTLS pmax pmax
comp=Z,10.0nm,1.2s
BTLS **Baital** 93.46 317⇑*i*P P 04 43 23.9 -0.6
comp=Z,10nm,1.2s,baz=317
M20K **Styx River** 93.53 24 P P 04 43 25.4 +0.8
baz=233
L20K **Farewell, AK** 93.61 23 P P 04 43 25.1 +0.3
baz=233
SEW **Seward** 93.97 26 P P 04 43 26.7 +0.3
baz=236
GCSA **Galena City Sc** 93.98 20 P P 04 43 28.1 +1.7
baz=230
K20K **Telida** 94.08 22 IAmb IAmb 04 43 47.9
comp=Z,49nm,1.6s
K20K **Telida** 94.08 22 P P 04 43 27.9 +0.9
baz=232
FIS **Fire Island** 94.24 25 IAMs_20 IAMs_20 05 18 30.7
comp=Z,2µm,22.0s
DZA **Taraz** 94.39 314 *e*P P 04 43 28.0 -0.9
DZA **Taraz** 94.39 314 *e*P P 04 43 28.1 -0.9
baz=314
RC01 **Rabbit Creek A** 94.40 25 IAMs_20 IAMs_20 05 20 50.0
comp=Z,1µm,21.0s
RDOG **Red Dog Mine** 94.43 16 IAMs_20 IAMs_20 05 26 32.8
comp=Z,2µm,22.0s
PPLA **Purkeypile** 94.49 23 P P 04 43 30.2 +1.2
baz=234
J20K **Nowinta River** 94.55 22 P P 04 43 31.3 +2.3
baz=232
M22K **Willow** 94.62 25 IAMs_20 IAMs_20 05 20 55.8
comp=Z,2µm,22.0s
CAST **Castle Rocks** 94.83 23 IAMs_20 IAMs_20 05 20 36.4
comp=Z,2µm,21.0s
CAST **Castle Rocks** 94.83 23 P P 04 43 30.5 0.0
baz=234
PWL **Port Wells** 94.85 26 P P 04 43 29.0 -1.6
baz=237
PMR **Palmer** 94.93 25 P P 04 43 31.5 +0.7
baz=237
CHUM **Lake Minchumin** 95.02 22 P P 04 43 32.6 +1.4
baz=234
GHO **Glory Hole Cre** 95.11 25 IAMs_20 IAMs_20 05 21 33.6
comp=Z,2µm,21.0s
SML **Sawmill** 95.36 25 IAMs_20 IAMs_20 05 21 32.4
comp=Z,2µm,21.0s
HIN **Hinchinbrook I** 95.37 27 IAMs_20 IAMs_20 05 22 56.6
comp=Z,1µm,20.0s
GLI **Glacier Island** 95.37 26 IAMs_20 IAMs_20 05 21 13.7
comp=Z,2µm,21.0s
FID **Port Fidalgo** 95.56 27 IAMs_20 IAMs_20 05 22 22.1
comp=Z,1µm,20.0s
BPAW **Bear Paw Mtn.** 95.63 23 P P 04 43 34.0 -0.1
BPAW IAmb IAmb 04 44 14.4
comp=Z,43nm,2.0s
BPAW IAMs_20 IAMs_20 05 24 34.3
comp=Z,2µm,20.0s
BPAW **Bear Paw Mtn.** 95.63 23 P P 04 43 35.5 +1.5
baz=235
SCM **Sheep Creek Mo** 95.78 25 P P 04 43 35.8 +0.9
baz=238
I21K **Tanana** 95.90 21 P P 04 43 35.9 +0.7
baz=234
KAIM **Kayak Island** 96.03 28 IAMs_20 IAMs_20 05 22 56.1
comp=Z,2µm,20.0s
RAGM **Ragged Mountai** 96.15 27 IAMs_20 IAMs_20 05 21 07.2
comp=Z,2µm,22.0s
MCK **McKinley** 96.18 23 P P 04 43 36.6 0.0
MCK IAmb IAmb 04 44 08.1
comp=Z,51nm,1.5s
MCK **McKinley** 96.18 23 P P 04 43 36.6 0.0
MCK pmax pmax
comp=Z,51nm,1.5s
MCK **McKinley** 96.18 23 P P 04 43 37.3 +0.8
baz=237
KLU **Klutina** 96.18 26 IAMs_20 IAMs_20 05 21 29.9
comp=Z,2µm,21.0s
G21K **Talakakket** 96.18 20 P P 04 43 37.9 +1.4
baz=233
BWN **Browne** 96.22 23 IAMs_20 IAMs_20 05 20 58.7
comp=Z,2µm,22.0s
MLY **Manley** 96.25 22 IAmb IAmb 04 44 46.4
comp=Z,29nm,1.6s
MLY IAMs_20 IAMs_20 05 22 35.6
comp=Z,2µm,20.0s
MLY **Manley** 96.25 22 P P 04 43 37.5 +0.6
baz=236
HMT **Hamilton** 96.30 27 IAMs_20 IAMs_20 05 20 16.2
comp=Z,2µm,21.0s
BRZS **Berezniki** 96.31 321 *e*P P 04 43 35.7 -1.8
BRZS **Berezniki** 96.31 321 *e*P P 04 43 35.8 -1.8
baz=321
SUCK **Suckling Hills** 96.39 28 IAMs_20 IAMs_20 05 20 16.4
comp=Z,2µm,21.0s
DHY **Denali Highway** 96.42 24 IAMs_20 IAMs_20 05 20 50.2
comp=Z,2µm,22.0s
DHY **Denali Highway** 96.42 24 P P 04 43 38.4 +0.6
baz=238
BMRM **Bremner River** 96.47 27 P P 04 43 38.8 +0.9
baz=240
H22K **Ishtalitna Cre** 96.52 21 P P 04 43 39.1 +1.1
baz=235
BERG **Berg Lake** 96.57 28 IAMs_20 IAMs_20 05 23 35.4
comp=Z,2µm,20.0s
NEA2 **Nenana** 96.60 23 IAMs_20 IAMs_20 05 22 03.0
comp=Z,1µm,20.0s
NEA2 **Nenana** 96.60 23 P P 04 43 38.8 +0.4
baz=237
F21K **Alatna River** 96.61 19 P P 04 43 39.4 +0.9
baz=233
N25K **Chitina, Valde** 96.78 26 P P 04 43 38.8 -0.7
baz=240
I23K **Minto, Yukon-K** 96.80 22 IAMs_20 IAMs_20 05 22 08.2
comp=Z,2µm,21.0s
I23K **Minto, Yukon-K** 96.80 22 P P 04 43 41.4 +2.2
baz=237
SNH **Sunshine Point** 96.85 28 IAMs_20 IAMs_20 05 22 51.7
comp=Z,1µm,20.0s
WRH **Wood River Hil** 96.89 23 IAmb IAmb 04 44 48.5
comp=Z,39nm,1.7s
WRH IAMs_20 IAMs_20 05 23 44.7
comp=Z,2µm,20.0s
WAX **Waxell Ridge** 96.97 28 IAMs_20 IAMs_20 05 23 16.9
comp=Z,2µm,20.0s
GLB **Gilahina Butte** 97.03 27 IAmb IAmb 04 44 14.9
comp=Z,15nm,1.1s
GLB IAMs_20 IAMs_20 05 22 10.6
comp=Z,1µm,20.0s
G22K **Bettles** 97.07 20 P Pdif 04 43 42.7 +2.1
baz=235
VRDI **Verde Repeater** 97.08 27 IAMs_20 IAMs_20 05 22 11.0
comp=Z,2µm,21.0s
CCB **Clear Creek Bu** 97.08 23 IAmb IAmb 04 43 54.9
comp=Z,16nm,1.3s
CCB IAMs_20 IAMs_20 05 20 48.9
comp=Z,2µm,22.0s
MDM **Murphy Dome** 97.10 22 IAMs_20 IAMs_20 05 26 19.2
comp=Z,1µm,20.0s
H23K **Yukon River** 97.11 21 IAmb IAmb 04 47 19.6
comp=Z,27nm,1.6s
H23K **Yukon River** 97.11 21 P Pdif 04 43 42.2 +1.4
baz=237
TGL **Tana Glacier** 97.13 27 IAMs_20 IAMs_20 05 20 54.0
comp=Z,1µm,21.0s
COLA **College** 97.19 23 IAMs_20 IAMs_20 05 26 22.5
comp=Z,1µm,20.0s
COLA **College** 97.19 23⇓*e*P P 04 43 40.1 -0.9
COLA pmax pmax
comp=Z,11nm,1.1s
F22K **John River** 97.19 19 P Pdif 04 43 44.5 +3.3
baz=234
MESA **MESA** 97.24 28 IAMs_20 IAMs_20 05 26 13.1
comp=Z,1µm,19.0s
ISLE **Juniper Island** 97.27 28 IAMs_20 IAMs_20 05 23 34.8
comp=Z,1µm,20.0s
HDA **Harding Lake** 97.28 23 P Pdif 04 43 42.9 +1.3
baz=239
MCARA **McCarthy VSAT** 97.34 27 IAMs_20 IAMs_20 05 22 19.6
comp=Z,1µm,21.0s
YAH **Yahtse** 97.42 28 IAMs_20 IAMs_20 05 23 30.6
comp=Z,1µm,20.0s
G23K **Bananza Creek** 97.43 21 P Pdif 04 43 43.4 +1.1
baz=236
ILAR **Eielson Array** 97.49 23 P P 04 43 41.5 -0.9
comp=Z,2.1nm,1.0s,baz=262,slow=4.2,SNR=12
ILAR LR LR 05 22 31.1
comp=Z,2µm,21.8s,baz=230,slow=32
comp=Z,2.1nm,1.0s
WSAR **Wadi Sarin** 97.62 292 LR LR 05 28 06.6
comp=Z,1µm,20.8s,baz=132,slow=36
H24K **Noodor Dome** 97.69 22 P Pdif 04 43 46.0 +2.6
baz=238
TABL **Table Mountain** 97.72 28 IAMs_20 IAMs_20 05 23 39.7
comp=Z,1µm,21.0s
RIDG **Independent Ri** 97.74 24 IAMs_20 IAMs_20 05 21 44.1
comp=Z,2µm,22.0s
RIDG **Independent Ri** 97.74 24 P Pdif 04 43 44.5 +0.8
baz=240
CTG **Chitna Glacier** 97.87 28 P P 04 43 43.8 -0.6
baz=243
J25K **Salcha River,** 97.97 23 IAmb IAmb 04 44 33.6
comp=Z,17nm,1.2s
J25K **Salcha River,** 97.97 23 P Pdif 04 43 45.8 +1.0
baz=240
L26K **Log Cabin Wild** 97.98 25 IAmb IAmb 04 47 43.0
comp=Z,14nm,1.2s
L26K **Log Cabin Wild** 97.98 25 P Pdif 04 43 46.5 +1.7
baz=242
PNL **Peninsula** 98.17 29 P Pdif 04 43 47.6 +2.0
baz=245
SCRK **Sand Creek** 98.19 24 IAMs_20 IAMs_20 05 23 54.9
comp=Z,1µm,20.0s
SCRK **Sand Creek** 98.19 24 P Pdif 04 43 45.8 +0.1
baz=241
A21K **Barrow** 98.26 15 IAMs_20 IAMs_20 05 22 13.9
comp=Z,2µm,22.0s
M27K **Edge Creek, AK** 98.27 26 IAMs_20 IAMs_20 05 22 43.3
comp=Z,1µm,20.0s
M27K **Edge Creek, AK** 98.27 26 P Pdif 04 43 47.5 +1.3
baz=243
G24K **Hadweenzic Riv** 98.28 21 P Pdif 04 43 46.5 +0.5
baz=239
O28M **Mount Upton** 98.29 28 P Pdif 04 43 47.6 +1.0
baz=244
PRP **Porcupine Dome** 98.36 23 IAMs_20 IAMs_20 05 23 50.7
comp=Z,1µm,20.0s
D23K **Nanushuk River** 98.48 19 P Pdif 04 43 48.3 +1.4
baz=236
F24K **Squaw Lake** 98.57 20 P Pdif 04 43 49.1 +1.8
baz=238
J26L **Joseph Creek** 98.60 24 P Pdif 04 43 49.4 +1.8
baz=242
L27K **Beaver Creek,** 98.61 26 P Pdif 04 43 49.2 +1.6
baz=243
TOLK **Toolik Lake Re** 98.64 19 P Pdif 04 43 48.8 +1.2
baz=237
NRIK **Noril'sk** 98.83 342 P P 04 43 47.8 -0.5
comp=Z,12nm,0.6s,baz=121,slow=3.1,SNR=13
NRIK LR LR 05 28 53.2
comp=Z,656nm,21.2s,baz=130,slow=36
comp=Z,12nm,0.6s
NRIK **Noril'sk** 98.83 342 IAmb IAmb 04 43 53.6
comp=Z,18nm,0.9s
NRIK **Noril'sk** 98.83 342*de*P Pdif 04 43 48.9 +0.6
NRIK pmax pmax
comp=Z,23nm,1.0s
BRVK **Borovoye** 98.86 323⇑*e*P Pdif 04 43 50.3 +1.4
BRVK pmax pmax
comp=Z,13nm,1.3s
P29M **Windy Craggy** 98.92 30 P Pdif 04 43 50.1 +1.1
baz=246
K27K **Chicken** 98.95 25 P Pdif 04 43 49.5 +0.4
baz=243
FYU **Fort Yukon** 98.99 22 IAMs_20 IAMs_20 05 27 57.1
comp=Z,1µm,20.0s
C23K **Itkillik River** 98.99 18 P Pdif 04 43 50.1 +1.1
baz=236
ORCD **Orcadas** 99.01 173 **Pdif** **04 43 47.4 -2.1**
D24K **Happy Valley** 99.15 19 P **Pdif** **04 43 51.0 +1.2**
baz=238
USHA **Ushuaia** 99.20 159 LR LR 05 19 57.6
comp=Z,2µm,20.9s,baz=199,slow=30
P30M **Million Dollar** 99.48 29 P **Pdif** **04 43 51.9 +0.4**
baz=247
G26K **Porcupine Rive** 99.67 22 P **Pdif** **04 43 54.4 +2.2**
baz=242
M29M **Somme Creek** 99.75 27 P **Pdif** **04 43 55.7 +3.0**
baz=246
I27K **Kandik River** 99.84 23 P **Pdif** **04 43 58.5 +5.5**
baz=244
F26K **Sheenjek River** 99.91 21 P **Pdif** **04 43 54.8 +1.5**
baz=242
D25K **Kavik River** 99.98 19 P **Pdif** **04 43 54.7 +1.1**
baz=240
JIS **Juneau Island** 100.00 32 IAMs_20 IAMs_20 05 23 20.1
comp=Z,1µm,20.0s
DAWY **Dawson** 100.03 25 P **Pdif** **04 43 55.5 +1.6**
baz=245
O30N **Mendenhall** 100.13 29 P **Pdif** **04 43 55.9 +1.5**
baz=248
H27K **Steamboat Moun** 100.15 23 P **Pdif** **04 43 54.3 -0.1**
baz=244
L29M **L29M** 100.16 26 P **Pdif** **04 43 55.4 +0.9**
baz=246
WRAK **Wrangell Islan** 100.38 34 IAMs_20 IAMs_20 05 21 39.1
comp=Z,2µm,21.0s
N31M **Braeburn, Yuko** 100.54 28 P **Pdif** **04 43 57.3 +1.1**
baz=248
MCCM **Marconi Confer** 100.79 53 IAMs_20 IAMs_20 05 27 38.5
comp=Z,1µm,20.0s
E27K **Coleen River** 100.99 21 P **Pdif** **04 43 58.7 +0.6**
baz=244
J01E **Myrtle Point** 101.45 48 IAMs_20 IAMs_20 05 22 54.7
comp=Z,2µm,20.0s
YBH **Yreka Blue Hor** 101.92 50 IAMs_20 IAMs_20 05 27 42.3
comp=Z,1µm,20.0s
EPYK **Eagle Plains** 101.98 23 IAMs_20 IAMs_20 05 27 22.3
comp=Z,2µm,21.0s
HUMO **Hull Mountain** 101.98 49 IAMs_20 IAMs_20 05 22 52.9
comp=Z,1µm,21.0s
L04D **Klamath Falls** 102.34 49 IAMs_20 IAMs_20 05 22 03.4
comp=Z,1µm,21.0s
NLWA **Neilton Lookou** 102.65 44 IAMs_20 IAMs_20 05 25 51.3
comp=Z,2µm,20.0s
INK **Inuvik** 103.81 22 PP **PKiKP** **04 48 29.2 +0.9**
comp=Z,2.5nm,1.0s,baz=285,slow=8.0,SNR=4.3
109C **Camp Elliot, M** 103.92 60 IAMs_20 IAMs_20 05 27 55.4
comp=Z,2µm,19.0s
NVAR **Mina Array Bea** 104.34 54 Pdiff **Pdif** **04 44 15.8 +1.9**
comp=Z,0.8nm,0.8s,baz=263,slow=4.8,SNR=6.4
NVAR PP **PP** **04 48 34.0 +1.3**
comp=Z,0.9nm,0.8s,baz=227,slow=6.0,SNR=3.5
AKTO **Aktyubinsk** 105.41 318 Pdiff **Pdif** **04 44 21.1 +3.0**
comp=Z,0.7nm,0.5s,baz=69,slow=4.4,SNR=3.7
TPNV **Topopah Spring** 105.58 56 IAMs_20 IAMs_20 05 25 12.2
comp=Z,2µm,21.0s
BMO **Blue Mountains** 106.49 48 IAMs_20 IAMs_20 05 24 27.2
comp=Z,1µm,22.0s
ELK **Elko** 107.16 52 Pdiff **Pdif** **04 44 31.8 +5.4**
comp=Z,0.7nm,0.7s,baz=21,slow=11,SNR=4.2
ELK **Elko** 107.16 52 IAMs_20 IAMs_20 05 35 35.0
comp=Z,896nm,18.0s
MFID **Camas Ranch** 107.25 49 IAMs_20 IAMs_20 05 26 55.4
comp=Z,1µm,21.0s
C36M **Paulatuk** 107.40 22 IAMs_20 IAMs_20 05 30 22.4
comp=Z,1µm,20.0s
A36M **Sachs Harbour** 107.47 19 IAMs_20 IAMs_20 05 30 23.2
comp=Z,1µm,21.0s
SLBS **Sierra La Lagu** 107.77 71 IAMs_20 IAMs_20 05 28 59.4
comp=Z,1µm,19.0s
HLID **Hailey** 108.29 49 IAMs_20 IAMs_20 05 27 48.9
comp=Z,2µm,21.0s
TUC **Tucson** 108.98 62 IAMs_20 IAMs_20 05 24 24.5
comp=Z,1µm,21.0s
WUAZ **Wupatki** 109.13 58 IAMs_20 IAMs_20 05 26 53.4
comp=Z,1µm,21.0s
MSO **Missoula** 109.16 46 IAMs_20 IAMs_20 05 27 38.7
comp=Z,1µm,20.0s
HWUT **Hardware Ranch** 110.04 52 IAMs_20 IAMs_20 05 37 25.3
comp=Z,937nm,19.0s
AHID **Auburn Hatcher** 110.56 51 IAMs_20 IAMs_20 05 29 09.9
comp=Z,1µm,21.0s
BOZ **Bozeman (W)** 110.57 48 IAMs_20 IAMs_20 05 28 11.1
comp=Z,1µm,20.0s
TPAW **Teton Pass** 110.77 50 IAMs_20 IAMs_20 05 31 03.3
comp=Z,991nm,20.0s
REDW **Red Top Meadow** 110.82 50 IAMs_20 IAMs_20 05 31 06.9
comp=Z,1µm,20.0s
IMW **Indian Meadow** 110.83 50 IAMs_20 IAMs_20 05 29 31.0
comp=Z,1µm,20.0s
SNOW **Snow King Moun** 110.91 50 IAMs_20 IAMs_20 05 31 19.1
comp=Z,1µm,19.0s
MOOW **Moose Ponds** 110.95 50 IAMs_20 IAMs_20 05 29 13.3
comp=Z,1µm,20.0s
FLWY **Flagg Ranch** 111.03 49 IAMs_20 IAMs_20 05 29 46.3
comp=Z,1µm,20.0s
LOHW **Long Hollow** 111.03 50 IAMs_20 IAMs_20 05 31 50.5
comp=Z,964nm,20.0s
MAK **Makhachkala** 111.25 309 *e*P **Pdif** **04 44 44.1 -0.1**
MAK *e*PS **PS** **04 58 46.1 -8.4**
MAK *e*SS SS 05 04 50.3 -5.8
MAK *e*SSS SSS 05 08 58.6
MAK pmax pmax
comp=Z,228nm,1.3s
BW06 **Boulder Array** 111.68 51 IAMs_20 IAMs_20 05 29 56.7
comp=Z,1µm,20.0s
PDAR **Pinedale Array** 111.68 51 Pdiff **Pdif** **04 44 52.0 +5.6**
comp=Z,0.4nm,0.8s,baz=52,slow=5.8,SNR=2.7
PDAR PKiKP **PKiKP** **04 48 43.8 -0.3**
comp=Z,0.6nm,0.7s,baz=153,slow=1.3,SNR=3.8
FURI **Furi** 111.69 272 IAMs_20 IAMs_20 05 34 12.3
comp=Z,1µm,20.0s
MVCO **Mesa Verde** 111.71 57 IAMs_20 IAMs_20 05 30 04.7
comp=Z,1µm,19.0s
EGMT **Eagleton** 112.12 45 IAMs_20 IAMs_20 05 30 00.1
comp=Z,997nm,20.0s
RLMT **Red Lodge** 112.17 48 IAMs_20 IAMs_20 05 29 47.4
comp=Z,1µm,21.0s
EPT **El Paso** 112.45 63 IAMs_20 IAMs_20 05 25 50.3

comp=Z,1µm,22.0s
Y22D IRIS PASSCAL I 112.49 60 IAMs_20 IAMs_20 05 31 07.3
comp=Z,1µm,19.0s
ANMO Albuquerque 113.00 60 IAMs_20 IAMs_20 05 33 21.9
comp=Z,1µm,18.0s
MNTX Cornudas Mount 113.38 63 IAMs_20 IAMs_20 05 26 18.9
comp=Z,1µm,21.0s
ISCO Idaho Springs 114.29 54 IAMs_20 IAMs_20 05 30 08.9
comp=Z,1µm,20.0s
LAO LASA Array 114.42 47 IAMs_20 IAMs_20 05 30 59.8
comp=Z,1µm,21.0s
TXAR Lajitas Array 114.44 66 PKP PKPdf 04 48 49.5 -0.1
comp=Z,0.7nm,0.7s,baz=270,slow=1.2,SNR=10
TXAR PKKPbc **PKKPab 04 59 35.8 +1.6**
comp=Z,0.9nm,1.0s,baz=91,slow=6.3,SNR=4.8
PHWY Pilot Hill 114.56 53 IAMs_20 IAMs_20 05 30 27.9
comp=Z,1µm,22.0s
KBZ Khabaz 114.67 310⇑ *i* PKIKP **PKiKP 04 48 50.5 +1.1**
KIV Kislovodsk 114.84 310 *i* PKIKP **PKiKP 04 48 51.4 +1.5**
KIV *e* 04 49 49.3
KIV *e*PS **PS 04 59 27.5 -0.2**
KIV *e*SS SS 05 05 43.8 -0.1
KIV *e*SSS SSS 05 10 00.4
KIV pmax pmax
comp=Z,6.0nm,1.0s
VRH Novokhopyorsk 115.75 318 *e*PKIKP **PKPdf 04 48 50.2 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.5s
KLMR Klimovskoe 116.41 329 *e*PKIKP **PKPdf 04 48 50.4 -1.8**
KLMR pmax pmax
comp=Z,9.0nm,0.7s
KLMR Klimovskoe 116.41 329 *e*PKPdf **PKPdf 04 48 50.4 -1.8**
KLMR AMP 04 48 54.8
comp=Z,9.0nm,0.7s
KLMR *e*PP **PP 04 49 55.3 -3.5**
KLMR *e*PKKPbc **PKKPbc 04 59 20.2 -2.4**
KLMR LQ LQ 05 27 40.4
KLMR LQ LQ 05 27 40.4
KLMR LR LR 05 34 00.3
KLMR AMP 05 46 37.7
comp=Z,708nm,17.9s
AMTX Amarillo 116.89 60 IAMs_20 IAMs_20 05 35 00.7
comp=Z,1µm,19.0s
SOC Sochi 116.97 310 *i* PKIKP **PKPdf 04 48 52.2 -1.7**
SOC *e* 04 50 01.1
SOC *e*PS **PKKPdf 04 59 43.7 -3.9**
SOC *e*SSS SSS 05 10 28.4
SOC MLR MLR
comp=Z,309nm,16.0s
OGNE Ogallala 117.11 53 IAMs_20 IAMs_20 05 32 54.5
comp=Z,1µm,20.0s
VORR Voronezh 117.31 319 *e*PKIKP **PKPdf 04 48 53.4 -0.8**
VORR *e* 04 50 07.7
VORR pmax pmax
comp=Z,90nm,0.4s
VSR Storozhevoye 117.35 318 *e*PKIKP **PKPdf 04 48 53.0 -1.4**
VSR pmax pmax
comp=Z,8.0nm,0.6s
LPSR Galich'ya Gora 117.44 320 *e*PKIKP **PKPdf 04 48 54.1 -0.4**
LPSR pmax pmax
comp=Z,5.0nm,0.6s
APA Apatity 117.72 337⇓ *i* PKIKP PKPdf 04 48 45.3 -9.3
APA pmax pmax
comp=Z,5.0nm,0.9s
JCT Junction City 117.93 65 IAMs_20 IAMs_20 05 32 22.6
comp=Z,1µm,20.0s
MOS Moscow 117.96 323 *i* PKIKP **PKiKP 04 48 56.3 +0.9**
MOS *e* 04 50 10.4
OBN Obninsk 118.63 323⇑ *i* PKIKP **PKPdf 04 48 56.3 -0.3**
OBN *e* 04 50 14.9
OBN *e*SS SS 05 06 42.6 +10
OBN pmax pmax
comp=Z,7.0nm,0.5s
ANN Anapa 118.63 311 *i* PKIKP **PKPdf 04 48 54.9 -2.1**
ANN *e* 04 55 47.1
ANN pmax pmax
comp=Z,29nm,0.9s
CBKS Cedar Bluff 118.76 56 IAMs_20 IAMs_20 05 33 37.1
comp=Z,979nm,20.0s
KEV Kevo 119.19 340 IAMs_20 IAMs_20 05 45 50.1
comp=Z,851nm,19.0s
WMOK Wichita Mounta 119.25 61 IAMs_20 IAMs_20 05 36 45.2
comp=Z,1µm,19.0s
OK038 West end E0370 119.41 59 IAMs_20 IAMs_20 05 36 09.4
comp=Z,1µm,19.0s
ARA0 ARCESS Array S 119.76 340 IAmb IAmb 04 49 08.4
comp=Z,20nm,1.2s
ARCES ARCESS Array B 119.76 340 PKP **PKPdf 04 48 58.1 -0.4**
comp=Z,4.4nm,0.6s,baz=96,slow=2.4,SNR=18
ARCES ARCESS Array B 119.76 340 PKPdf **PKiKP 04 48 58.8 +0.3**
OK032 Salt Plains WL 119.85 58 IAMs_20 IAMs_20 05 31 43.2
comp=Z,1µm,22.0s
435B Jarrell 119.87 65 IAMs_20 IAMs_20 05 35 34.8
comp=Z,908nm,20.0s
OK029 Liberty Lake 120.40 60 IAMs_20 IAMs_20 05 31 38.9
comp=Z,1µm,22.0s
OK025 Westminster Rd 120.49 60 IAMs_20 IAMs_20 05 31 25.0
comp=Z,1µm,22.0s
OK031 S. Brethren Rd 120.91 59 IAMs_20 IAMs_20 05 35 09.3
comp=Z,1µm,20.0s
OK030 Cody Creek RV 120.96 59 IAMs_20 IAMs_20 05 34 55.5
comp=Z,1µm,20.0s
OK034 N. Norfolk Rd. 121.02 59 IAMs_20 IAMs_20 05 34 56.1
comp=Z,1µm,20.0s
ECSD EROS Data Cent 121.17 50 IAMs_20 IAMs_20 05 36 53.6
comp=Z,1µm,20.0s
KSU1 Kansas State U 121.20 56 IAMs_20 IAMs_20 05 36 09.9
comp=Z,904nm,20.0s
ULM Lac du Bonnet 121.21 43 PKP **PKPdf 04 49 00.3 -1.5**
comp=Z,9.0nm,0.7s,baz=266,slow=1.5,SNR=9.6
HKT Hockley 121.28 66 IAMs_20 IAMs_20 05 33 26.2
comp=Z,1µm,21.0s
JETT Jettan, Norway 121.34 341 *e*P **PKiKP 04 49 01.9 +0.2**
BRTR Keskin Array B 121.43 305 PKP **PKPdf 04 49 01.6 -1.2**
comp=Z,3.0nm,0.8s,baz=151,slow=2.8,SNR=7.6
BRTR Keskin Array B 121.43 305 **PKiKP 04 49 03.6 +0.7**
NEEM North Greenlan 121.50 5 *i* P **PKPdf 04 49 01.2 -0.9**
NEEM IAMs_20 IAMs_20 05 35 19.3
comp=Z,1µm,24.5s
NATX Nacogdoches 122.45 64 IAMs_20 IAMs_20 05 33 18.2
comp=Z,878nm,20.0s
FINES FINESS Array B 122.62 331 PKP **PKPdf 04 49 03.4 -0.7**
comp=Z,7.9nm,0.6s,baz=70,slow=3.7,SNR=18
DAG Danmarks Havn 122.64 357 *i* P **PKPdf 04 49 01.8 -2.1**
DAG IAMs_20 IAMs_20 05 38 00.3
comp=Z,530nm,23.0s
AKASG Malin Array Be 123.66 318 PKP **PKPdf 04 49 05.8 -0.6**
comp=Z,2.8nm,0.6s,baz=62,slow=2.7,SNR=10
AKASG PP **PP 04 50 50.2 +1.3**
comp=Z,4.7nm,1.0s,baz=67,slow=6.4,SNR=7.6
AKBB Malin Array Si 123.66 318⇑ *i* PKIKP **PKPdf 04 49 06.1 -0.4**
MNK Minsk 123.68 323 *i* PKIKP PKPdf 04 48 53.6 -13
MNK *i* 04 56 05.6
MNK *i* SS SS 05 07 34.1 -2.8
MNK pmax pmax
comp=Z,9.0nm,0.6s
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.6s
MNK MLR MLR
comp=N,13nm,24.0s
MNK MLR MLR
comp=Z,415nm,23.0s
MNK MLR MLR
comp=E,62nm,20.0s
MNK Minsk 123.68 323 *i* PKP PKPpre 04 48 53.7
comp=E,2.0nm,0.7s
MNK *i* PKP PKPpre 04 48 53.7
comp=N,7.0nm,0.8s
MNK *i* PKP PKPpre 04 48 53.7
comp=Z,9.0nm,0.7s,baz=256
MNK *i* PP PP 04 50 35.7 -13
MNK *i* PPP PPP 04 53 13.4
MNK *i* SKS SKSdf 04 56 05.6 -13
MNK *i* PS **PS 05 00 33.0 -14**
MNK *i* SS **SS 05 07 34.1 -2.8**
MNK *i* SSS SSS 05 11 58.6
MNK *i* LQ LQ 05 35 22.9
MNK *i* LR LR 05 41 00.8
MNK *i* LRM MLR 05 42 00.9
comp=N,13nm,23.9s
MNK *i* LRM MLR 05 42 15.6
comp=Z,415nm,23.1s
MNK *i* LRM MLR 05 42 21.3
comp=E,62nm,20.3s

SCIA State Center 123.74 52 IAMs_20 IAMs_20 05 35 48.9
comp=Z,1µm,20.0s
STEI Steigen 123.81 341 *e*P **PKiKP 04 49 06.5 0.0**
STEI IAmb IAmb 04 49 09.1
comp=Z,12nm,0.7s
FAUS Fauske 124.10 340 *e*P **PKiKP 04 49 07.7 +0.6**
FAUS IAmb IAmb 04 49 08.6
comp=Z,16nm,1.2s
LVC Limon Verde 124.12 137 *e*P **PKPdf 04 49 08.6 -0.3**
NACGM Nanoch 124.20 324 *e*PKP **PKPdf 04 49 07.3 -0.1**
comp=Z,47nm,1.3s,baz=76
LOF Lofoten 124.21 341 *e*P **PKPdf 04 49 06.9 -0.1**
LOF IAmb IAmb 04 49 09.7
comp=Z,24nm,0.9s
EYMN Ely 124.36 45 IAMs_20 IAMs_20 05 43 19.8
comp=Z,1µm,19.0s
PLTB Pedras Altas 124.46 157 *e*P **PKPdf 04 49 07.9 -0.9**
SORM Soroca 124.64 315⇑P **PKPdf 04 49 08.5 +0.1**
SORM Soroca 124.64 315⇑PKIKP **PKPdf 04 49 08.5 +0.1**
TLCR 124.72 312⇑P **PKiKP 04 49 09.9 +0.9**
TLCR 124.72 312⇑PKIKP **PKiKP 04 49 09.9 +0.9**
TPGR Topolog 125.03 311⇑P **PKPdf 04 49 09.4 0.0**
MOR8 Moi Rana 125.07 339 *e*P **PKiKP 04 49 10.7 +1.5**
TIRR Tirgusor 125.08 311⇑P **PKiKP 04 49 10.1 +0.3**
TIRR Tirgusor 125.08 311⇑PKIKP **PKiKP 04 49 10.1 +0.3**
RODS Rosario do Sul 125.11 155 *e*P **PKPdf 04 49 08.7 -1.3**
CFR Carcaliu 125.19 312⇑P **PKiKP 04 49 10.2 +0.3**
CFR Carcaliu 125.19 312⇑PKIKP **PKiKP 04 49 10.2 +0.3**
HARR Harsova 125.40 311⇑P **PKiKP 04 49 10.8 +0.4**
HARR Harsova 125.40 311⇑PKIKP **PKiKP 04 49 10.8 +0.4**
CCM Cathedral Cave 125.42 57 PKPdf **PKPdf 04 49 09.1 -1.2**
CCM Cathedral Cave 125.42 57 PKIKP **PKPdf 04 49 09.1 -1.2**
CCM MLR MLR
comp=Z,1µm,19.0s
CPSB Cacapava Do Su 125.74 156 *e*P **PKiKP 04 49 11.9 +0.3**
JFWS Jewell Farm 125.86 51 IAMs_20 IAMs_20 05 40 20.7
comp=Z,985nm,19.0s
VBMS Vicksburg 125.99 64 IAMs_20 IAMs_20 05 37 20.0
comp=Z,858nm,21.0s
VRI Vrincioaia 126.08 313⇑P **PKiKP 04 49 11.7 -0.1**
VRI Vrincioaia 126.08 313⇑PKIKP **PKiKP 04 49 11.7 -0.1**
PLOR Plostina 126.14 313⇑P **PKPdf 04 49 11.6 +0.1**
PLOR Plostina 126.14 313⇑PKIKP **PKPdf 04 49 11.6 +0.1**
COWI Conover 126.23 47 IAMs_20 IAMs_20 05 47 17.5
comp=Z,694nm,19.0s
BIZ Bicaz 126.33 314⇑P **PKiKP 04 49 12.9 +0.7**
COVR Voineasa-Covas 126.44 313⇑P **PKiKP 04 49 12.9 +0.4**
MLR Muntele Rosu 126.68 312⇑P **PKiKP 04 49 13.2 0.0**
MLR Muntele Rosu 126.68 312 PKP **PKPdf 04 49 12.5 -0.1**
comp=Z,10nm,0.8s,baz=251,slow=2.4,SNR=11
MLR Muntele Rosu 126.68 312⇑PKIKP **PKiKP 04 49 13.2 0.0**
BURAR Bucovina Array 126.81 315⇑P **PKiKP 04 49 13.5 +0.2**
BURAR Bucovina Array 126.81 315⇑PKIKP **PKiKP 04 49 13.5 +0.2**
NSS Namsos 126.87 338 *e*P **PKPdf 04 49 12.3 0.0**
OXF Oxford 126.96 61 IAMs_20 IAMs_20 05 41 28.6
comp=Z,1µm,19.0s
JMIC Jan Mayen 127.06 351 PKP **PKPdf 04 49 11.4 -1.0**
comp=Z,314nm,1.3s,baz=352,slow=22,SNR=3.3
SUMG Summit 127.06 3 PKPdf **PKPdf 04 49 12.6 -0.3**
SUMG Summit 127.06 3 PKIKP **PKPdf 04 49 12.6 -0.3**
SUMG Summit 127.06 3 *i* P **PKPdf 04 49 13.0 +0.1**
LVV L'vov 127.10 318 *e*PKIKP **PKiKP 04 49 15.8 +2.2**
LVV *e* 04 51 11.3
VOIR 127.31 313⇑P **PKPdf 04 49 13.9 +0.1**
VOIR 127.31 313⇑PKIKP **PKPdf 04 49 13.9 +0.1**
ALGR Alto Alegre (B 127.34 156 *e*P **PKiKP 04 49 15.2 +0.2**
CPUP Villa Florida 127.66 150 PKP **PKPdf 04 49 14.8 -0.2**
comp=Z,6.3nm,0.7s,baz=286,slow=0.5,SNR=16
CPUP Villa Florida 127.66 150 *e*P **PKPdf 04 49 15.0 -0.1**
HQIL Hanson Quary C 127.74 52 IAMs_20 IAMs_20 05 38 43.0
comp=Z,2µm,20.0s
PLAL Pickwick Lake 128.05 61 IAMs_20 IAMs_20 05 40 49.3
comp=Z,1µm,20.0s
WVT 128.21 59 IAMs_20 IAMs_20 05 43 19.5
comp=Z,921nm,20.0s
KOLS Kolonicke sedl 128.43 317 *e*PKIKP **PKiKP 04 49 17.7 +1.3**
KOLS Kolonicke sedl 128.43 317 *e*PKP **PKiKP 04 49 17.6 +1.2**
IDI Anoyia 128.45 300⇑P **PKiKP 04 49 17.5 +0.6**
UZH Uzhgorod 128.49 317 *e*PKHKP PKPpre 04 49 00.8
UZH *i* 04 49 16.8
UZH *i* 04 49 23.0
DRGR 128.65 315⇑P **PKiKP 04 49 16.8 -0.2**
DRGR 128.65 315⇑PKIKP **PKiKP 04 49 16.8 -0.2**
HFS Hagfors 128.65 333 PKP **PKPdf 04 49 15.6 -0.1**
comp=Z,2.1nm,0.6s,baz=155,slow=7.4,SNR=4.3
GZR Gura Zlata 128.89 313⇑P **PKiKP 04 49 17.3 -0.1**
GZR Gura Zlata 128.89 313⇑PKIKP **PKiKP 04 49 17.3 -0.1**
VTS Vitosha 129.06 309⇑P **PKiKP 04 49 18.3 +0.3**
VTS Vitosha 129.06 309⇑PKIKP **PKiKP 04 49 18.3 +0.3**
LPAZ La Paz 129.07 132 PKP **PKPdf 04 49 18.4 -0.3**
comp=Z,4.5nm,0.8s,baz=69,slow=0.7,SNR=12
LPAZ La Paz 129.07 132 *e*P **PKPdf 04 49 18.9 +0.2**
ITAB Concordia 129.08 156 *e*P **PKiKP 04 49 18.7 +0.3**
NB2 NORSAR Subarra 129.18 335 PKPdf **PKiKP 04 49 18.1 +0.6**
comp=Z,1.9nm,0.7s,baz=44,slow=1.9
NOA NORSAR Array B 129.18 335 PKP **PKPdf 04 49 16.0 -0.8**
comp=Z,1.8nm,0.6s,baz=54,slow=1.9,SNR=7.7
HERR Herculane 129.24 312⇓P **PKiKP 04 49 18.3 +0.2**
DOMB Dombas 129.42 317 *e*P **PKPdf 04 49 16.5 -0.8**
SIRR Siria 129.47 314⇑P **PKiKP 04 49 18.3 -0.2**
GLMI Grayling 129.59 48 IAMs_20 IAMs_20 05 42 49.4
comp=Z,882nm,20.0s
BZS Buzias 129.64 313⇑P **PKiKP 04 49 19.4 +0.5**
BZS Buzias 129.64 313⇑PKIKP **PKiKP 04 49 19.4 +0.5**
FRBT Francisco Belt 129.84 154 *e*P **PKPdf 04 49 19.6 +0.3**
OTAV Otavalo 129.96 107⇑PKIKP **PKiKP 04 49 22.3 +1.2**
OTAV Otavalo 129.96 107 *e*P **PKiKP 04 49 22.2 +1.2**
OTAV Otavalo 129.96 107 *e*P **PKiKP 04 49 20.7 -0.3**
BOVS Bovan 129.98 311⇑P **PKPdf 04 49 18.8 0.0**
P49A Miami Univ. Ec 130.39 55 IAMs_20 IAMs_20 05 41 42.9
comp=Z,748nm,19.0s
KONO Kongsberg 130.64 334 IAMs_20 IAMs_20 05 47 03.3
comp=Z,996nm,22.0s
OKC Ostrava-Krasne 130.75 319 *e*PKIKP **PKiKP 04 49 24.1 +3.1**
OKC MLR MLR
comp=Z,300nm,21.3s
OKC Ostrava-Krasne 130.75 319 *e*PKPDF **PKiKP 04 49 24.1 +3.1**
OKC AMS AMS 05 40 20.0
comp=Z,300nm,21.3s
MCR1 Marechal Candi 130.76 152 *e*P **PKiKP 04 49 22.9 +1.0**
CZSB Cruzeiro do Su 130.94 120 *e*P **PKPdf 04 49 21.5 -0.1**
FRGS Fruska Gora 130.99 313⇓P **PKPdf 04 49 21.0 +0.3**
MORC Moravsky Berou 131.14 320⇑P **PKiKP 04 49 21.8 0.0**
MORC Moravsky Berou 131.14 320⇑PKIKP **PKiKP 04 49 21.8 0.0**
MORC Moravsky Berou 131.14 320 *e*PKP **PKiKP 04 49 22.0 +0.2**
JAVC Velka Javorina 131.36 318 *e*PKP **PKiKP 04 49 22.9 +0.6**
PTGB Pitanga 131.37 155 *e*P **PKiKP 04 49 23.1 -0.1**
KRLC Kraliky 131.50 320 *e*PKIKP **PKiKP 04 49 22.7 +0.2**
KRLC Kraliky 131.50 320 *e*PKPDF **PKiKP 04 49 22.7 +0.2**
KRLC AMS AMS 05 40 10.0
comp=Z,500nm,29.8s
MORH Mrgy, Hungar 131.51 315 PKP **PKiKP 04 49 23.1 +0.6**
TKL Tuckaleechee C 131.53 60 PKP **PKPdf 04 49 21.7 -0.3**
comp=Z,3.5nm,0.6s,baz=166,slow=9.7,SNR=10
RGN Rugen 131.60 327 IAMs_20 IAMs_20 05 46 27.7
comp=Z,939nm,22.0s
ACSO Alum Creek Sta 131.61 53 IAMs_20 IAMs_20 05 40 24.1
comp=Z,1µm,21.0s
OSTC Ostas 131.66 321 *e*PKPDF **PKiKP 04 49 23.1 +0.3**
OSTC AMS AMS 05 41 40.0
comp=Z,900nm,25.2s
DPC Dobruska-Polom 131.67 321 *e*PKIKP **PKiKP 04 49 23.3 +0.4**
DPC MLR MLR
comp=Z,700nm,28.3s
DPC Dobruska-Polom 131.67 321 *e*PKPDF **PKiKP 04 49 23.3 +0.4**
DPC AMS AMS 05 42 20.0
comp=Z,700nm,28.3s
MODS Modra-Piesok 131.76 318 *e*PKIKP **PKPdf 04 49 21.0 -1.1**
MODS Modra-Piesok 131.76 318 *e*PKP **PKPdf 04 49 20.9 -1.1**
UPC Upice 131.80 321 AMS AMS 05 41 40.0
comp=Z,900nm,26.3s
KOVH Kovagotottos 131.91 315 PKP **PKiKP 04 49 23.9 +0.5**
GOGA Godfrey 131.92 63 IAMs_20 IAMs_20 05 44 22.9
comp=Z,989nm,20.0s
ANTJ Antonio Joao (131.96 149 *e*P **PKiKP 04 49 24.1 -0.3**
TIJ01 Guaruva-PR 131.97 158 *e*P **PKiKP 04 49 24.4 0.0**
MPLH Magyarpolny 131.97 316 PKP **PKiKP 04 49 26.6 +3.1**
PDG Podgorica 131.98 310⇑P **PKPdf 04 49 23.1 +0.5**
KRUC Moravsky 132.08 319 *e*PKP **PKiKP 04 49 23.7 0.0**
P52A Corning 132.35 54 IAMs_20 IAMs_20 05 42 51.0
comp=Z,858nm,20.0s
DY2G Dye2 132.35 8 *i* P **PKiKP 04 49 24.2 +0.2**
DY2G IAMs_20 IAMs_20 05 36 28.4

comp=Z,846nm,24.7s
POPC Popayan, Colom 132.54 105 *e*P **PKiKP 04 49 27.0 +1.0**
TREC Trest 132.56 320 AMS AMS 05 40 40.0
comp=Z,700nm,25.9s
RONA Rosalia, Austr 132.60 317 *e*P **PKiKP 04 49 24.4 -0.4**
RONA comp=Z,2.1nm,0.6s *e*P **PP 04 51 48.2 +0.4**
RONA comp=Z,3.7nm,1.3s *e*S **SKPab 04 52 55.4 +3.1**
comp=Z,7.5nm,1.3s
CONA Conrad Observa 132.80 318 *e*P **PKiKP 04 49 27.6 +2.3**
CONA comp=Z,2.8nm,0.7s *e*P **PP 04 51 49.3 +0.2**
CONA comp=Z,9.8nm,1.9s *e*S **SKPab 04 52 57.2 +4.0**
comp=Z,12nm,1.6s
TRCB Terra Rica 132.83 153 *e*P **PKiKP 04 49 25.7 -0.4**
BRG Berggiesshubel 132.87 322 *e*PKP **PKiKP 04 49 25.5 +0.3**
BRG Amp 04 49 28.8
comp=Z,8.1nm,1.0s
BRG PP **PP 04 51 55.2 +6.0**
BRG Amp 04 51 57.0
comp=Z,9.7nm,1.1s
BRG SKP 04 52 58.5
BRG Amp 04 53 03.9
comp=Z,20nm,1.5s
BRG Berggiesshubel 132.87 322 *e*PKIKP **PKiKP 04 49 25.5 +0.3**
BRG 04 51 55.1
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG pmax pmax
comp=Z,20nm,1.5s
BRG pmax pmax
comp=Z,823nm,17.6s
PRU Pruhonice 132.87 321 *e*PKIKP **PKiKP 04 49 25.6 +0.4**
PRU MLR MLR
comp=Z,600nm,23.4s
PRU Pruhonice 132.87 321 *e*PKPDF **PKiKP 04 49 25.6 +0.4**
PRU AMS AMS 05 43 10.0
comp=Z,600nm,23.4s
O53A New Philadelph 132.94 53 IAMs_20 IAMs_20 05 47 34.4
comp=Z,843nm,20.0s
FLOC Florencia 133.06 107 *e*P **PKiKP 04 49 28.5 +1.7**
CLL Collm 133.22 323 *i* PKIKP **PKPdf 04 49 25.3 +0.6**
CLL pmax pmax
comp=Z,8.0nm,0.7s
CLL MLR MLR
comp=Z,800nm,19.4s
CLL Collm 133.22 323 *i* PKPdf **PKPdf 04 49 25.3 +0.6**
comp=Z,8.0nm,0.7s
CLL *e*PP **PP 04 51 53.0 +1.5**
comp=Z,13nm,1.3s
CLL *i* (SKPbc) 04 52 56.1
comp=Z,11nm,1.2s
CLL *e*SKKPdf SKKPdf 05 02 46.0 -6.3
CLL *e*SS **SS 05 09 36.0 +0.9**
CLL *e*SSS SSS 05 14 42.0
CLL *e*SSSS 05 18 00.0
CLL LmH 05 40 00.0
comp=N,500nm,21.2s
CLL LmH 05 40 00.0
comp=E,700nm,21.5s
CLL LmV 05 53 00.0
comp=N,400nm,20.9s
CLL LmV 05 53 00.0
comp=E,400nm,19.2s
CLL LmV 05 53 00.0
comp=Z,800nm,19.4s
ARSA Arzberg 133.25 317 *e*P **PKiKP 04 49 27.9 +1.8**
comp=Z,2.3nm,0.5s
ARSA *e*P **PP 04 51 53.3 +1.5**
ARSA *e*S **SKiKP 04 53 00.3 -2.1**
comp=Z,8.7nm,1.8s
SADO Sadowa 133.39 47 PKP **PKPdf 04 49 24.4 -0.8**
comp=Z,5.8nm,0.7s,baz=282,slow=7.3,SNR=6.2
YOTC Yotoco, Valle 133.43 104 *e*P **PKPdf 04 49 24.6 -1.8**
CKRC Cesky Krumlov 133.45 319 *e*PKPDF **PKiKP 04 49 27.1 +0.6**
GARC Garzon, Huila 133.46 106 *e*P **PKiKP 04 49 29.6 +1.7**
SOKA Soboth 133.75 316 *e*P **PKiKP 04 49 29.7 +2.4**
comp=Z,5.0nm,1.0s
SOKA *e*P **PP 04 51 56.0 +0.7**
comp=Z,5.9nm,1.1s
SOKA *e*S **SKPab 04 52 57.1 -0.3**
comp=Z,8.6nm,1.7s
KHC Kasperske Hory 133.78 320 *e*PKIKP **PKiKP 04 49 26.9 -0.3**
KHC MLR MLR
comp=Z,900nm,28.7s
KHC Kasperske Hory 133.78 320 *e*PKPDF **PKiKP 04 49 26.9 -0.3**
KHC AMS AMS 05 41 30.0
comp=Z,900nm,28.7s
GERES GERESS Array B 133.82 320 PKP **PKPdf 04 49 25.7 -0.3**
comp=Z,3.3nm,0.6s,baz=119,slow=1.7,SNR=16
GERES PP **PP 04 51 55.9 +0.4**
comp=Z,3.0nm,1.1s,baz=56,slow=5.0,SNR=5.1
GERES SKPbc **SKPab 04 52 57.6 0.0**
comp=Z,3.6nm,1.0s,baz=56,slow=2.5,SNR=5.4
MOA Molln 133.84 318 *e*P **PKiKP 04 49 28.2 +0.9**
comp=Z,3.2nm,0.5s
MOA *e*P **PP 04 51 59.0 +3.4**
comp=Z,22nm,1.5s
BLA Blacksburg 134.04 57 IAMs_20 IAMs_20 05 40 14.8
comp=Z,1µm,21.0s
MATE Matera 134.23 308⇑P **PKPdf 04 49 27.2 +0.3**
BIOA Bad Ischl, Aus 134.29 318 *e*P **PKiKP 04 49 29.0 +0.7**
comp=Z,2.0nm,0.6s
BIOA *e*P **PP 04 52 01.4 +2.9**
comp=Z,10nm,1.3s
LJU Ljubljana 134.29 316 *e*PKPdf **PKiKP 04 49 28.4 +0.2**
LJU *e*PP **PP 04 52 00.1 +1.5**
LJU *e* 04 53 03.2
CBOC Ciudad Bolivar 134.45 102 *e*P **PKiKP 04 49 30.3 +0.5**
PCMB Pacaembu 134.46 154 *e*P **PKiKP 04 49 28.8 -0.6**
TIP Timpagrande 134.48 306⇑P **PKiKP 04 49 28.6 -0.4**
PRAC Prado 134.65 105 *e*P **PKPdf 04 49 26.5 -2.1**
MYKA Terra Mystica 134.67 317 *e*P **PKiKP 04 49 29.8 +0.6**
comp=Z,0.2nm,0.2s
MYKA *e*P **PP 04 52 01.2 +0.2**
comp=Z,0.6nm,0.3s
MYKA *e*S **SKPab 04 53 02.3 +0.9**
comp=Z,9.1nm,1.3s
KBA Koelnbreinsper 134.70 317 *e*P **PKiKP 04 49 31.0 +1.7**
comp=Z,4.6nm,0.9s
KBA *e*P **PP 04 52 03.4 +2.1**
comp=Z,3.9nm,0.9s
KBA *e*S **SKPab 04 53 01.1 -0.5**
comp=Z,2.9nm,0.9s
ETMB Extrema 134.77 127 *e*P **PKPdf 04 49 29.3 +0.6**
VAO Valinhos 134.80 160 *e*P **PKPdf 04 49 29.2 +0.5**
GUY2C Guyana, Caldas 134.81 103 *e*P **PKPdf 04 49 29.3 -0.2**
GRA1 Grafenberg Arr 134.95 322 IAMs_20 IAMs_20 05 54 48.9
comp=Z,761nm,20.0s
GRFO Grafenberg 134.95 322 IAMs_20 IAMs_20 05 54 47.9
comp=Z,777nm,20.0s
ABTA Abfaltersbach 135.35 317 *e*P **PKiKP 04 49 30.1 -0.4**
comp=Z,12nm,1.1s
ABTA *e*P **PP 04 52 03.3 -2.0**
comp=Z,7.1nm,1.1s
ABTA *e*S **SKPab 04 53 02.6 -1.8**
comp=Z,12nm,1.3s
PTLB Pontes e Lacer 135.57 140 PKPdf **PKPdf 04 49 30.4 +0.2**
PTLB Pontes e Lacer 135.57 140 *e*P **PKiKP 04 49 31.0 -0.8**
UREC San Jos de Ur 135.57 99 *e*P **PKPdf 04 49 30.5 +0.2**
ROSC El Rosal 135.62 104 PKP **PKiKP 04 49 32.0 -0.4**
comp=Z,12nm,0.8s,baz=82,slow=11,SNR=6.3
WTTA Wattenberg 135.71 318 *e*P **PKiKP 04 49 32.4 +1.0**
comp=Z,14nm,0.6s
WTTA *e*P **PP 04 52 05.8 -1.9**
comp=Z,14nm,1.5s
WTTA *e*S **SKPab 04 53 03.7 -2.3**
comp=Z,20nm,1.4s
WATA Walderalm 135.72 318 *e*P **PKiKP 04 49 32.7 +1.4**
comp=Z,8.9nm,0.8s
WATA *e*S **SKPab 04 53 05.0 -1.0**
comp=Z,6.2nm,0.7s
MAN01 Angra dos Reis 135.84 163 *e*P **PKiKP 04 49 31.6 -0.7**
SCHQ Schefferville 135.91 29 PKP **PKPdf 04 49 29.8 +0.2**
comp=Z,2.4nm,0.7s,baz=290,slow=11,SNR=3.1
SQTA Sankt Quirin 135.99 318 *e*P **PKiKP 04 49 32.1 +0.3**
comp=Z,8.8nm,0.9s
SQTA *e*P **PP 04 52 10.0 +0.7**
comp=Z,5.2nm,1.0s
SQTA *e*S **SKPab 04 53 06.0 -1.2**
comp=Z,23nm,1.5s
MOTA Moosalm 136.01 319 *e*P **PKiKP 04 49 31.3 -0.7**

	comp=Z,9.4nm,0.6s							
MOTA				*e*P		**PP**	**04 52 05.4**	**-4.1**
	comp=Z,12nm,1.2s							
MOTA				*e*S		**SKiKP**	**04 53 08.0**	**-0.3**
	comp=Z,10nm,1.1s							
BB19B	**Bebedouro**	**136.04**	**157**	*e*P		**PKiKP**	**04 49 32.1**	**-0.6**
ZARC	**Zaragoza, Cauc**	**136.11**	**100**	*e*P		**PKPdf**	**04 49 30.0**	**-1.3**
PTBC	**PUERTO BERRIO**	**136.14**	**101**	*e*P		**PKPdf**	**04 49 24.5**	**-6.8**
SPBC	**San Pablo de B**	**136.16**	**103**	*e*P		**PKPdf**	**04 49 30.1**	**-1.3**
RETA	**Reutte**	**136.16**	**319**	*e*P		**PKiKP**	**04 49 32.6**	**+0.5**
	comp=Z,5.3nm,0.6s							
RETA				*e*P		**PP**	**04 52 13.4**	**+3.0**
	comp=Z,8.7nm,1.5s							
PP1B	**Ponte de Pedra**	**136.23**	**147**	*e*P		**PKiKP**	**04 49 32.9**	**-0.2**
CBN	**Corbin Frederi**	**136.26**	**55**	IAMs_20		**IAMs_20**	05 52 51.5	
	comp=Z,911nm,18.0s							
CNNC	**Cliffs of the**	**136.35**	**59**	IAMs_20		**IAMs_20**	05 47 17.2	
	comp=Z,1µm,20.0s							
FETA	**Feichten**	**136.37**	**318**	*e*P		**PKiKP**	**04 49 33.6**	**+1.0**
	comp=Z,11nm,1.2s							
FETA				*e*P		**PP**	**04 52 13.9**	**+2.1**
	comp=Z,11nm,2.1s							
FETA				*e*S		**SKPbc**	**04 53 05.7**	**+2.3**
	comp=Z,15nm,1.3s							
LONY	**Lake Ozonia**	**136.52**	**45**	IAMs_20		**IAMs_20**	05 47 42.8	
	comp=Z,860nm,20.0s							
ITRB	**Iturama**	**136.54**	**153**	*e*P		**PKiKP**	**04 49 33.3**	**-0.3**
DAVA	**Damuels**	**136.79**	**319**	*e*P		**PKiKP**	**04 49 34.8**	**+1.2**
	comp=Z,6.7nm,0.6s							
DAVA				*e*P		**PP**	**04 52 20.3**	**+6.0**
	comp=Z,8.4nm,1.2s							
DAVA				*e*S		**SKPbc**	**04 53 03.1**	**-1.5**
	comp=Z,5.1nm,0.8s							
VILB	**Vilhena**	**136.79**	**137**	*e*P		**PKiKP**	**04 49 33.7**	**-0.6**
DUB01	**Friburgo-RJ**	**137.00**	**165**	*e*P		**PKiKP**	**04 49 34.1**	**-0.5**
DAVOX	**Davos/Dischmat**	**137.00**	**318**	PKP		**PKPdf**	**04 49 31.0**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=58,slow=5.4,SNR=4.9							
DAVOX	**Davos/Dischmat**	**137.00**	**318**	PKIKP		**PKPdf**	**04 49 31.0**	**-1.2**
RUSC	**La Rusia**	**137.16**	**103**	*e*P		**PKPdf**	**04 49 29.8**	**-4.0**
SALV	**Santo Antonio**	**137.20**	**144**	*e*P		**PKPdf**	**04 49 33.9**	**+0.7**
BFO	**Black Forest**	**137.26**	**321**	IAMs_20		**IAMs_20**	05 55 50.1	
	comp=Z,706nm,20.0s							
MEM	**Membach**	**137.44**	**325**	*d*sPKiKP		**PKiKP**	**04 49 37.6**	**+3.2**
VLC	**Villacollemand**	**137.70**	**315**	IAMs_20		**IAMs_20**	05 56 29.3	
	comp=Z,948nm,20.0s							
TRY	**Troy**	**137.79**	**48**	IAMs_20		**IAMs_20**	05 47 12.5	
	comp=Z,998nm,20.0s							
WLF	**Walferdange**	**137.85**	**324**	IAMs_20		**IAMs_20**	05 50 43.5	
	comp=Z,978nm,22.0s							
ECH	**Echery**	**138.01**	**322**	IAMs_20		**IAMs_20**	05 58 50.8	
	comp=Z,710nm,22.0s							
BMRD	**Maredsous**	**138.27**	**325**	*d*PKiKP		**PKiKP**	**04 49 36.9**	**+0.7**
HNH	**Hanover**	**138.39**	**46**	IAMs_20		**IAMs_20**	05 53 22.3	
	comp=Z,928nm,19.0s							
EKA	**Eskdalemuir Ar**	**138.65**	**336**	PKhKP		PKPpre	04 49 23.6	
	comp=Z,0.7nm,0.6s,baz=46,slow=3.6,SNR=4.5							
EKA				PKP		**PKPdf**	**04 49 33.9**	**-0.8**
	comp=Z,3.8nm,0.9s,baz=66,slow=2.8,SNR=8.1							
ESK	**Eskdalemuir**	**138.68**	**336**	IAMs_20		**IAMs_20**	05 56 29.9	
	comp=Z,646nm,20.0s							
SENIN	**Lac Senin/Sane**	**138.79**	**319**	IAMs_20		**IAMs_20**	05 57 00.7	
	comp=Z,755nm,20.0s							
IPMB	**Ipameri, GO**	**138.96**	**155**	*e*P		**PKPdf**	**04 49 36.9**	**+0.4**
HRV	**Ádam Dziewonsk**	**139.32**	**47**	IAMs_20		**IAMs_20**	05 50 13.1	
	comp=Z,917nm,20.0s							
WES	**Weston**	**139.53**	**47**	IAMs_20		**IAMs_20**	05 50 19.6	
	comp=Z,994nm,20.0s							
BNI	**Bardonecchia**	**139.76**	**317**	IAMs_20		**IAMs_20**	05 57 47.7	
	comp=Z,988nm,20.0s							
PDRB	**Porto dos Gac**	**140.00**	**139**	*e*P		**PKiKP**	**04 49 39.8**	**-1.1**
DIAM	**Diamantina, MG**	**140.25**	**162**	*e*P		**PKPdf**	**04 49 38.9**	**-0.1**
SDV	**Santo Domingo**	**140.51**	**100**	*e*P		**PKPdf**	**04 49 40.4**	**+0.8**
SJMB	**Sao Joao De Ma**	**140.53**	**165**	*e*P		**PKPdf**	**04 49 39.9**	**+0.7**
CLF	**Chambon-Foret**	**140.90**	**324**	IAMs_20		**IAMs_20**	05 54 28.1	
	comp=Z,942nm,20.0s							
KEST	**Kesra**	**140.96**	**303**	PKhKP		PKPpre	04 49 34.4	
	comp=Z,7.4nm,0.9s,baz=245,slow=6.3,SNR=6.7							
BDFB	**Brasilia**	**141.15**	**154**	PKP		**PKPdf**	**04 49 40.7**	**+0.1**
	comp=Z,8.7nm,0.8s,baz=182,slow=2.2,SNR=12							
BDFB	**Brasilia**	**141.15**	**154**	*e*P		**PKPdf**	**04 49 40.5**	**-0.1**
NAN01	**Guarapari, ES**	**141.60**	**166**	*e*P		**PKPdf**	**04 49 41.5**	**+0.3**
MC01	**Montes Claros**	**141.66**	**160**	*e*P		**PKPdf**	**04 49 41.9**	**+0.4**
GUA01	**Guaratinga, BA**	**142.89**	**166**	*e*P		**PKPdf**	**04 49 44.3**	**+0.8**
JANB	**Januaria**	**143.08**	**159**	*e*P		**PKPdf**	**04 49 44.8**	**+0.8**
NPGB	**Novo Progresso**	**144.35**	**136**	*e*P		PKPbc	04 49 44.4	-0.1
SDBA	**SAO DESIDERIO**	**145.32**	**156**	*e*P		**PKPbc**	**04 49 46.9**	**-0.7**
TAM	**Tamanrasset**	**145.58**	**282**	IAMs_20		**IAMs_20**	05 55 58.6	
	comp=Z,844nm,19.0s							
GDU01	**Guandu, BA**	**145.71**	**166**	*e*P		**PKPdf**	**04 49 48.5**	**0.0**
ITTB	**Itaituba**	**146.06**	**132**	*e*P		**PKPbc**	**04 49 49.5**	**-0.4**
BOAV	**Boa Vista**	**146.65**	**118**	*e*P		**PKPdf**	**04 49 49.5**	**-0.6**
SJG	**San Juan**	**147.07**	**87**			**PKPdf**	**04 49 49.8**	**-0.8**
SJG	**San Juan**	**147.07**	**87**	PKIKP		**PKPdf**	**04 49 49.8**	**-0.8**
SMTB	**Santa Maria do**	**147.33**	**149**	*e*P		**PKPdf**	**04 49 52.1**	**+0.8**
BBSR	**BB Station**	**147.67**	**60**	IAMs_20		**IAMs_20**	05 56 25.1	
	comp=Z,710nm,19.0s							
TORD	**Torodi Ar. Bea**	**147.68**	**263**	PKPbc		**PKPbc**	**04 49 53.3**	**-1.2**
	comp=Z,39nm,0.8s,baz=108,slow=2.3,SNR=146							
CUPR	**Culebra, Puert**	**147.91**	**87**			**PKPdf**	**04 49 53.5**	**+1.5**
PRPB	**Parauapebas**	**148.43**	**143**	*e*P		**PKPdf**	**04 49 53.8**	**+0.7**
MALB	**Monte Alegre**	**148.87**	**131**	*e*P		**PKPdf**	**04 49 54.7**	**+0.9**
ESDC	**Sonseca Array**	**149.26**	**316**	PKPbc		**PKPbc**	**04 49 56.7**	**-1.3**
	comp=Z,7.5nm,1.0s,baz=28,slow=2.9,SNR=32							
TPP	**Pointe-a-Pierr**	**149.48**	**104**	*e*		**PKPbc**	**04 49 59.7**	**+0.5**
PAB	**San Pablo**	**149.58**	**316**	IAMs_20		**IAMs_20**	06 05 30.6	
	comp=Z,657nm,21.0s							
TRN	**Trinidad (W)**	**149.64**	**103**	*e*		**PKPdf**	**04 49 55.9**	**+1.0**
GRGR	**Grenville**	**149.91**	**100**	*e*		**PKiKP**	**04 50 01.3**	**+0.1**
MVO	**Moncorvo**	**150.31**	**321**	*e*PKPbc		**PKiKP**	**04 50 01.7**	**+0.4**
MVO	**Moncorvo**	**150.31**	**321**	*e*LQ		LQ	05 31 47.7	
MVO				*e*LR		LR	05 40 24.1	
	comp=Z,571nm,20.0s							
NBAN	**Anadia - AL**	**150.31**	**170**	*e*P		**PKPdf**	**04 49 58.4**	**+2.3**
TAF	**Taforalt**	**150.40**	**306**	P		**PKiKP**	**04 50 04.0**	**+2.2**
FIGM	**Figuig**	**150.41**	**301**	P		**PKiKP**	**04 50 03.0**	**+1.1**
PGAV	**Gavieira, Arco**	**150.51**	**324**	*e*PKPbc		**PKPbc**	**04 50 01.3**	**+0.3**
PGAV	**Gavieira, Arco**	**150.51**	**324**	*e*LQ		LQ	05 33 04.9	
PGAV				*e*LR		LR	05 41 09.6	
	comp=Z,592nm,20.0s							
PCAB	**Cabril**	**150.54**	**323**	*e*PKPbc		**PKiKP**	**04 50 01.6**	**-0.2**
PCAB	**Cabril**	**150.54**	**323**	*e*PP		PP	04 53 33.7	-3.0
POLO	**Lamas de Olo**	**150.62**	**322**	*e*PKPbc		**PKiKP**	**04 50 02.0**	**0.0**
SVB	**Belmont**	**150.63**	**98**	*e*		**PKPdf**	**04 49 56.0**	**-0.5**
PVRL	**Vila Real**	**150.64**	**322**	*e*PKPbc		**PKiKP**	**04 50 02.3**	**+0.3**
TOSP	**Speyside**	**150.67**	**102**	*e*		**PKiKP**	**04 50 04.1**	**+1.4**
GOG	**Mont Gurugu**	**150.68**	**307**	P		**PKPab**	**04 50 06.0**	**-2.5**
TBG	**Guadaloupe-3**	**150.91**	**93**	*e*		**PKPab**	**04 50 08.2**	**-1.7**
KIC	**Kosan Boka**	**150.91**	**246**	ǁ*e*PKP2		**PKPbc**	**04 50 02.4**	**-0.3**
	comp=Z,10nm,0.4s							
TDBA	**Terre de Bas,**	**150.91**	**93**	*e*		**PKPab**	**04 50 08.4**	**-1.5**
CBE	**Ff, Capester**	**150.99**	**92**	*e*		**PKiKP**	**04 50 04.0**	**+0.6**
ANBD	**Bethesda, Anti**	**151.03**	**90**	*e*		**PKiKP**	**04 50 04.5**	**+1.1**
DSLB	**Salisbury**	**151.03**	**94**	*e*		**PKPbc**	**04 50 02.0**	**-0.9**
SLCP	**Castries, St.**	**151.08**	**97**	*e*		**PKiKP**	**04 50 04.8**	**+1.3**
LIC	**Lamto**	**151.09**	**246**	ǁ*e*PKP2		**PKPbc**	**04 50 01.3**	**-1.8**
	comp=Z,66nm,0.6s							
MTE	**Manteigas**	**151.09**	**320**			**PKPbc**	**04 50 02.3**	**-0.2**
MTE				IAMs_20		**IAMs_20**	06 08 00.0	
	comp=Z,916nm,21.0s							
MTE	**Manteigas**	**151.09**	**320**	*e*PKPbc		**PKiKP**	**04 50 03.1**	**+0.1**
MTE	**Manteigas**	**151.09**	**320**	*e*LQ		LQ	05 33 53.5	
MTE				*e*LR		LR	05 40 06.4	
	comp=Z,624nm,20.0s							
SLBI	**Saint Lucia, B**	**151.10**	**97**	*e*		**PKPbc**	**04 50 00.6**	**-2.4**
PVIS	**Viseu**	**151.10**	**321**	*e*PKPbc		**PKiKP**	**04 50 03.3**	**+0.3**
ANWB	**Willy Bob**	**151.11**	**89**	*e*		**PKiKP**	**04 50 04.4**	**+0.9**
FDF	**Fort de France**	**151.12**	**95**	IAMs_20		**IAMs_20**	06 00 38.9	
	comp=Z,524nm,19.0s							
FDF	**Fort de France**	**151.12**	**95**	*e*		**PKiKP**	**04 50 04.8**	**+1.1**
SLW	**Petit Monier**	**151.13**	**97**	*e*		**PKiKP**	**04 50 06.0**	**+2.3**
BIM	**Bigot**	**151.14**	**96**	*e*		**PKiKP**	**04 50 04.0**	**+0.3**
DBIC	**Dimbokro**	**151.16**	**247**	PKPbc		**PKPbc**	**04 50 03.2**	**-0.1**
	comp=Z,31nm,0.9s,baz=125,slow=2.5,SNR=16							
DLPL	**La Plaine**	**151.17**	**94**	*e*		**PKiKP**	**04 50 03.6**	**-0.1**
ABD	**La Joyeuse, An**	**151.18**	**92**	*e*		**PKPbc**	**04 50 01.4**	**-1.7**
TIC	**Toumodi**	**151.29**	**246**	ǁ*e*PKP2		**PKPbc**	**04 50 03.0**	**-0.6**
	comp=Z,25nm,0.4s							
MPOM	**Morne Pois Mar**	**151.32**	**96**	*e*		**PKiKP**	**04 50 03.8**	**-0.2**
PALE	**Palemas**	**151.38**	**308**	P		**PKiKP**	**04 50 06.0**	**+2.3**
ILAM	**Ilet Lapin Mar**	**151.38**	**95**	*e*		**PKiKP**	**04 50 05.7**	**+1.5**
PCBR	**Castelo Branco**	**151.39**	**319**	*e*PKPbc		**PKiKP**	**04 50 03.9**	**+0.4**
MCPB	**Macapa, AP**	**151.47**	**132**	*e*P		**PKPdf**	**04 49 58.8**	**+0.9**
PMRV	**Marv??o**	**151.59**	**319**	*e*PKPbc		**PKiKP**	**04 50 04.0**	**0.0**
PMRV	**Marv??o**	**151.59**	**319**	*e*LQ		LQ	05 32 50.4	
PMRV				*e*LR		LR	05 40 38.3	
	comp=Z,778nm,18.0s							
COI	**Coimbra**	**151.73**	**321**	*e*PKPbc		**PKiKP**	**04 50 04.7**	**+0.5**
PCAS	**Casmilo, Conde**	**151.88**	**321**	*e*PKPbc		**PKiKP**	**04 50 04.7**	**+0.2**
PESTR	**Estremoz**	**152.04**	**318**			**PKPbc**	**04 50 02.1**	**-2.5**
PESTR	**Estremoz**	**152.04**	**318**	*e*PKPbc		**PKiKP**	**04 50 05.5**	**+0.6**
PBAR	**Barrancos**	**152.08**	**316**	*e*PKPbc		**PKiKP**	**04 50 05.6**	**+0.6**
PMTG	**Montargil**	**152.32**	**319**	*e*PKPbc		**PKiKP**	**04 50 06.0**	**+0.5**
PSBE	**So Bento**	**152.39**	**320**	*e*PKPbc		**PKiKP**	**04 50 06.4**	**+0.8**
CHEFC	**Chefchaouen**	**152.46**	**309**	P		**PKiKP**	**04 50 09.0**	**+3.0**
EVO	**Evora**	**152.50**	**318**	*e*PKPbc		**PKiKP**	**04 50 06.7**	**+0.8**
LCRM	**LCR**	**152.70**	**306**	P		**PKiKP**	**04 50 08.0**	**+1.3**
PBEJ	**Beja**	**152.71**	**317**	*e*PKPbc		**PKiKP**	**04 50 07.2**	**+0.9**
MDT	**Midelt**	**152.85**	**304**	P		**PKiKP**	**04 50 07.5**	**+0.6**
PVAQ	**Vaqueiros**	**152.96**	**315**	*e*LR		LR	05 39 58.2	
	comp=Z,657nm,20.0s							
MESJ	**Messejana**	**153.04**	**317**	*e*PKPbc		**PKiKP**	**04 50 07.7**	**+0.7**
PCVE	**Castro Verde**	**153.04**	**316**	*e*PKPbc		**PKiKP**	**04 50 07.7**	**+0.7**
PNCL	**Nicolau / Gran**	**153.08**	**318**	*e*PKPbc		**PKiKP**	**04 50 07.4**	**+0.4**
KOWA	**Kowa**	**153.38**	**263**			**PKPbc**	**04 50 06.6**	**-1.6**
KOWA	**Kowa**	**153.38**	**263**	P		**PKiKP**	**04 50 08.8**	**+0.5**
RCBR	**Riachuelo**	**154.14**	**170**	*e*P		**PKPdf**	**04 50 03.3**	**+1.4**
PMOZ	**Porto Moniz, M**	**161.89**	**319**	*e*LQ		LQ	05 36 43.5	
PMOZ				A		A	06 07 01.4	
	comp=Z,765nm,22.0s							

NEIC ***18*** *04:58:14.1±1.4, 33˚.47S×0˚.09×65˚.33W×0˚.09, h9km±7km, mb3.7/1, Md3.9(SJA), Error ellipse: s-maj=12.5km s-min=10.9km az=177.0*
IDC ***18*** *04:58:20.2±2.2, 33˚.23S×65˚.88W, h0km, mb3.8/1, mbtmp3.8/4, ML3.5/3, Error ellipse: s-maj=65.8km s-min=21.0km az=123.0*

ISC 18 04:58:14.1±1.2, 33˚.47S±0˚.10×65˚.37W±0˚.08, h10km, n33, σ1s07/31, San Luis Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**3.39**	**304**	Pn	**Pn**	**04 59 07.6**	**+0.4**
ZON				Sn	**Sn**	**04 59 45.9**	**-1.6**
LMEL	**Las Melosas**	**4.05**	**263**	Pn	**Pn**	**04 59 16.8**	**+0.4**
MT03	**Universidad Ad**	**4.30**	**268**	Pn	**Pn**	**04 59 20.2**	**+0.4**
VA03	**San Esteban**	**4.41**	**278**	Pn	**Pn**	**04 59 21.7**	**+0.5**
PEL	**Peldehue**	**4.46**	**273**	Pn	**Pn**	**04 59 22.5**	**+0.5**
MT05	**Renca**	**4.49**	**270**	Pn	**Pn**	**04 59 22.4**	**+0.1**
MT09	**Talagante**	**4.70**	**265**	Pn	**Pn**	**04 59 26.4**	**+1.2**
ROC1	**El Roble**	**4.76**	**274**	Pn	**Pn**	**04 59 26.3**	**+0.1**
MT02	**Curacav**	**4.83**	**271**	Pn	**Pn**	**04 59 27.9**	**+0.9**
MT01	**Popeta**	**4.92**	**264**	Pn	**Pn**	**04 59 27.6**	**-0.6**
VA06	**Catapilco**	**5.06**	**279**	Pn	**Pn**	**04 59 29.9**	**-0.2**
CO03	**El Pedregal**	**5.22**	**299**	Pn	**Pn**	**04 59 33.6**	**+1.2**
CO02	**Combarbal**	**5.28**	**294**	Pn	**Pn**	**04 59 33.5**	**+0.3**
CO01	**Juntas del Tor**	**5.32**	**310**	Pn	**Pn**	**04 59 35.2**	**+1.3**
GO04	**Tololo Observa**	**5.67**	**304**	Pn	**Pn**	**04 59 39.1**	**+0.4**
CO06	**Fray Jorge**	**6.01**	**296**	Pn	**Pn**	**04 59 42.0**	**-1.1**
CO05	**La Serena**	**6.13**	**304**	Pn	**Pn**	**04 59 44.3**	**-0.5**
AC05	**El Transito**	**6.25**	**316**	Pn	**Pn**	**04 59 47.9**	**+1.4**
LCO	**Las Campanas**	**6.37**	**313**	Pn	**Pn**	**04 59 48.6**	**+0.3**
AC04	**Llanos de Chal**	**7.18**	**315**	Pn	**Pn**	**05 00 00.2**	**+0.9**
AC02	**Maricunga**	**7.37**	**333**	Pn	**Pn**	**05 00 00.7**	**-1.6**
AC06	**Mina Casimiro**	**7.46**	**323**	Pn	**Pn**	**05 00 01.7**	**-1.4**
PLCA	**Paso Flores**	**8.35**	**208**	Pn	Pn	05 00 23.9	+8.7
	baz=36,slow=8.7,SNR=1.5						
PLCA				Lg	Lg	05 02 45.1	
	0.8nm,0.3s,baz=121,slow=11,SNR=4.9 3.7nm,1.2s						
PLCA	**Paso Flores**	**8.35**	**208**	Pn	**Pn**	**05 00 14.9**	**-0.3**
ITQB	**Itaqui**	**8.36**	**65**	Pn	**Pn**	**05 00 14.4**	**-1.0**
GO02	**Mina Guanaco**	**9.06**	**335**	Pn	**Pn**	**05 00 23.7**	**-1.6**
CPUP	**Villa Florida**	**9.96**	**47**	Pn	Pn	05 00 45.9	+8.5
	0.4nm,0.3s,baz=231,slow=11,SNR=4.9						
CPUP				Lg	Lg	05 03 43.8	
	0.8nm,0.3s,baz=129,slow=19,SNR=3.9 0.7nm,0.3s						
CPUP	**Villa Florida**	**9.96**	**47**	Pn	**Pn**	**05 00 36.7**	**-0.7**
PLTB	**Pedras Altas**	**10.07**	**83**	Pn	**Pn**	**05 00 38.4**	**-0.4**
GO01	**Chusmiza**	**14.16**	**345**	Pn	**Pn**	**05 01 37.4**	**+2.1**
PB16	**IPOC Station P**	**15.52**	**345**	Pn	**Pn**	**05 01 53.6**	**-0.1**
PB16				IAmb	IAmb	05 02 34.7	
	comp=Z,5.6nm,1.2s						
LPAZ	**La Paz**	**17.29**	**351**	Pn	**P**	**05 02 20.1**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=174,slow=6.2,SNR=10 comp=Z,2.5nm,0.6s						
BDFB	**Brasilia**	**23.69**	**46**	P	P	05 03 35.0	+8.7
	comp=Z,2.1nm,0.7s,baz=214,slow=11,SNR=3.2 comp=Z,2.1nm,0.7s						

IDC ***18*** *05:12:14.9±1.1, 15˚.81S×173˚.39E, h0km, mb3.9/7, mbtmp3.9/8, ML4.5/1, MS4.0/2, Error ellipse: s-maj=50.3km s-min=21.4km az=164.0*

ISC 18 05:12:20.3±0.7, 15˚.9S±0˚.2×173˚.4E±0˚.1, h35km, n22, σ0s79/20, mb4.0/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.78**	**113**	Pn	**Pn**	**05 13 30.0**	**+0.1**
	0.7nm,0.3s,baz=255,slow=12,SNR=4.7 8.2nm,0.8s						
DZM	**Mont Dzumac**	**9.03**	**226**	LR	LR	05 17 06.7	
	comp=Z,766nm,19.7s,baz=248,slow=32						
WRA	**Warramunga Arr**	**37.37**	**258**	P	**P**	**05 19 27.7**	**-2.2**
	1.1nm,0.9s,baz=88,slow=9.0,SNR=5.6 1.1nm,0.9s						
ASAR	**Alice Springs**	**37.90**	**252**	P	**P**	**05 19 34.0**	**-0.5**
	1.6nm,0.8s,baz=80,slow=8.6,SNR=7.9 1.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**45.67**	**260**	P	**P**	**05 20 38.0**	**0.0**
	3.8nm,1.0s,baz=85,slow=7.0,SNR=4.5 3.8nm,1.0s						
RPN	**Rapa Nui**	**71.76**	**114**	LR	LR	05 48 07.3	
	comp=Z,145nm,20.0s,baz=22,slow=30						
CMAR	**Chiang Mai Arr**	**80.88**	**292**	P	**P**	**05 24 32.6**	**+1.3**
	0.8nm,0.4s,baz=116,slow=4.8,SNR=5.2 0.8nm,0.4s						
NVAR	**Mina Array Bea**	**83.60**	**47**	P	**P**	**05 24 45.9**	**+0.5**
	0.4nm,0.8s,baz=241,slow=10,SNR=3.8 0.4nm,0.8s						
ILAR	**Eielson Array**	**85.89**	**16**	P	**P**	**05 24 55.1**	**-1.0**
	1.2nm,0.9s,baz=224,slow=5.3,SNR=8.8 1.2nm,0.9s						
TXAR	**Lajitas Array**	**91.64**	**60**	P	**P**	**05 25 23.9**	**-0.4**
	0.3nm,0.8s,baz=217,slow=6.1,SNR=4.2 0.3nm,0.8s						
CONA	**Conrad Observa**	**143.09**	**335**	*e*P	**PKPdf**	**05 31 51.3**	**+0.6**
	4.5nm,1.3s						
SOKA	**Soboth**	**144.43**	**334**	*e*P	**PKPdf**	**05 31 53.3**	**+0.3**
KBA	**Koelnbreinsper**	**144.79**	**336**	*e*P	**PKPdf**	**05 31 54.3**	**+0.5**
	5.0nm,1.4s						
MYKA	**Terra Mystica**	**145.04**	**335**	*e*P	**PKPdf**	**05 31 54.6**	**+0.5**
	4.6nm,1.0s						
WATA	**Walderalm**	**145.23**	**338**	*e*P	**PKPbc**	**05 31 53.9**	**-0.3**
	2.8nm,0.5s						
WTTA	**Wattenberg**	**145.27**	**338**	*e*P	**PKPab**	**05 31 54.5**	**0.0**
	5.3nm,0.8s						
ABTA	**Abfaltersbach**	**145.38**	**337**	*e*P	**PKPab**	**05 31 54.9**	**+0.1**
	4.3nm,1.0s						
RETA	**Reutte**	**145.38**	**339**	*e*P	**PKPab**	**05 31 55.2**	**+0.4**
	4.0nm,1.2s						
MOTA	**Moosalm**	**145.39**	**339**	*e*P	**PKPab**	**05 31 55.4**	**+0.5**
	7.5nm,1.2s						
SQTA	**Sankt Quirin**	**145.46**	**338**	*e*P	**PKPdf**	**05 31 54.7**	**-0.2**
	4.7nm,0.9s						
FETA	**Feichten**	**145.80**	**339**	*e*P	**PKPdf**	**05 31 54.7**	**-0.8**
	3.6nm,0.7s						
DAVA	**Damuels**	**145.85**	**340**	*e*P	**PKPdf**	**05 31 55.5**	**-0.1**
	3.5nm,0.4s						

AUST ***18*** *05:23:52.9±2.3, 19˚.70S×148˚.90E, h0km, Error ellipse: s-maj=33.0km s-min=16.2km az=24.0*
IDC ***18*** *05:23:54.5±2.9, 18˚.63S×148˚.16E, h0km, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=64.5km s-min=23.4km az=142.0*

ISC 18 05:23:51.8±2.3, 19˚.5S±0˚.2×148˚.9E±0˚.1, h10km, n6, σ1s77/8, Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.53**	**256**	Pn	**Pn**	**05 24 34.2**	**+1.2**
	12nm,0.3s,baz=71,slow=16,SNR=36						
CTA				Lg	Lg	05 25 07.5	
	129nm,0.3s,baz=342,slow=18,SNR=24 29nm,0.3s						
CTA	**Charters Tower**	**2.53**	**256**	P	**Pn**	**05 24 34.2**	**+1.2**
	baz=2.5						
CTA				S	**Sb**	**05 25 08.1**	**-0.5**
	baz=2.5						
EIDS	**Eidsvold**	**6.19**	**161**	P	**Pn**	**05 25 22.6**	**-0.7**
	baz=6.0						
EIDS				S	**Sb**	**05 26 54.8**	**+0.8**
	baz=6.0						
WRA	**Warramunga Arr**	**13.69**	**266**	Pn	**Pn**	**05 27 03.4**	**-2.8**
	0.1nm,0.3s,baz=86,slow=13,SNR=5.1						
WRA				Lg	Lg	05 30 53.0	
	0.3nm,0.3s,baz=83,slow=27,SNR=7.1 0.3nm,0.8s						
ASAR	**Alice Springs**	**14.52**	**251**	Pn	**Pn**	**05 27 17.4**	**-0.2**
	0.1nm,0.3s,baz=74,slow=14,SNR=1.5						
ASAR				Lg	Lg	05 31 25.0	
	0.3nm,0.3s,baz=74,slow=30,SNR=4.3 0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**147.91**	**264**	PKPbc	**PKPbc**	**05 43 40.1**	**+1.9**
	0.4nm,0.8s,baz=132,slow=2.1,SNR=1.5						

AUST ***18*** *05:30:34.3±1.9, 19˚.73S×148˚.92E, h0km, Error ellipse: s-maj=27.0km s-min=13.0km az=31.0*
NEIC ***18*** *05:30:34.4±1.2, 19˚.51S±0˚.09×148˚.98E±0˚.09, h14km±6km, Error ellipse: s-maj=13.6km s-min=11.7km az=174.0*
IDC ***18*** *05:30:37.6±2.8, 18˚.99S×148˚.18E, h0km, mbtmp3.8/2, ML3.1/2, Error ellipse: s-maj=109.1km s-min=35.4km az=165.0*

ISC 18 05:30:34.0±1.4, 19˚.57S±0˚.10×148˚.89E±0˚.09, h10km, n19, σ0s95/22, Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.53**	**258**	P	**Pn**	**05 31 15.9**	**+0.6**
	baz=2.5						
CTA				S	**Sb**	**05 31 50.0**	**-0.8**
	baz=2.5						
CTAO	**Charters Tower**	**2.53**	**258**		**Pn**	**05 31 16.0**	**+0.6**
CTAO				Sn	**Sb**	**05 31 50.1**	**-0.8**
MTSU	**Mount Surprise**	**4.56**	**287**	P	**Pn**	**05 31 45.6**	**+2.5**
	baz=4.6,SNR=15						
EIDS	**Eidsvold**	**6.12**	**161**	P	**Pn**	**05 32 04.5**	**-0.1**

MULA	**Mugla, Merkez-**	**1.50**	**58**	P	**Pn**	**05 39 31.1**	**+1.9**
AYDN	**Tasoluk**	**1.51**	**37**	P	**Pn**	**05 39 29.5**	**+0.2**
DALY	**Dalyan (Mula)**	**1.59**	**76**	PN	**Pn**	**05 39 31.4**	**+1.4**
DGB	**zmir**	**1.59**	**4**	P	**Pn**	**05 39 29.6**	**-0.5**
DGB				S	**Sn**	**05 39 51.7**	**-0.7**
FRMA	**Ierapetra Chan**	**1.66**	**210**	P	**Pn**	**05 39 32.2**	**+1.3**
FRMA				S	**Sn**	**05 39 53.0**	**-0.6**
	comp=N,180nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.75**	**32**	PN	**Pn**	**05 39 32.5**	**+0.4**
HRKL	**Herakleio**	**1.75**	**230**	P	**Pn**	**05 39 32.6**	**+0.6**
HRKL				S	**Sn**	**05 39 55.7**	**+0.1**
	comp=N,428nm,0.3s						
HRKL	**Herakleio**	**1.75**	**230**	PN	**Pn**	**05 39 32.6**	**+0.6**
IACM	**Heraklion**	**1.77**	**230**	P	**Pn**	**05 39 32.9**	**+0.7**
IACM				S	**Sn**	**05 39 55.4**	**-0.6**
	comp=N,935nm,0.2s						
IACM	**Heraklion**	**1.77**	**230**	P	**Pn**	**05 39 32.8**	**+0.6**
IDI	**Anoyia**	**1.90**	**232**	P	**Pn**	**05 39 34.0**	**+0.1**
IDI	**Anoyia**	**1.90**	**232**	PN	**Pn**	**05 39 33.9**	**+0.1**
IDI	**Anoyia**	**1.90**	**232**	P	**Pn**	**05 39 33.9**	**+0.1**
IDI				AML	AML	05 39 59.2	
	comp=N,509µm,0.3s						
IDI				AML	AML	05 40 01.5	
	comp=E,351µm,0.2s						
URLA	**Izmir**	**1.90**	**357**	PN	**Pn**	**05 39 32.7**	**-1.1**
FETY	**Fethiye**	**1.90**	**84**	PN	**Pn**	**05 39 34.9**	**+1.1**
FETY	**Fethiye**	**1.90**	**84**	P	**Pn**	**05 39 37.5**	**+3.7**
FETY				S	**Sn**	**05 40 01.6**	**+2.7**
CHOS	**Chios island**	**2.00**	**345**	P	**Pn**	**05 39 34.8**	**-0.2**
CHOS	**Chios island**	**2.00**	**345**	PN	**Pn**	**05 39 34.9**	**-0.1**
CHOS	**Chios island**	**2.00**	**345**	P	**Pn**	**05 39 34.7**	**-0.2**
TAVA	**DENIZLI_Tavas**	**2.02**	**60**	P	**Pn**	**05 39 36.1**	**+0.9**
TAVA				S	**Sn**	**05 40 02.3**	**+0.9**
TAVA				*i* AML	AML	05 40 04.0	
	comp=E,45nm,0.4s						
CAME	**Cameli-Denizli**	**2.12**	**76**	PN	**Pn**	**05 39 38.1**	**+1.5**
SIVA	**Sivas**	**2.12**	**228**	P	**Pn**	**05 39 37.7**	**+1.3**
APMY	**Acipayam-Deniz**	**2.29**	**63**	PN	**Pn**	**05 39 40.3**	**+1.6**
AKAS	**Kas**	**2.33**	**95**	PN	**Pn**	**05 39 40.4**	**+1.2**
GOLH	**Golhisar**	**2.40**	**70**	P	**Pn**	**05 39 42.0**	**+2.0**
GOLH				S	**Sn**	**05 40 11.4**	**+1.4**
GOLH				*i* AML	AML	05 40 14.0	
	comp=E,87nm,0.3s						
GOLH				*i* AML	AML	05 40 15.0	
	comp=E,103nm,0.4s						
IMMV	**Iera Moni Meta**	**2.44**	**247**	P	**Pn**	**05 39 41.0**	**+0.5**
IMMV	**Iera Moni Meta**	**2.44**	**247**	PN	**Pn**	**05 39 40.6**	**+0.1**
IMMV	**Iera Moni Meta**	**2.44**	**247**	P	**Pn**	**05 39 41.0**	**+0.5**
IMMV				AML	AML	05 40 13.5	
	comp=N,645µm,0.4s						
IMMV				AML	AML	05 40 14.7	
	comp=E,605µm,0.3s						
KULA	**Kula-Manisa**	**2.56**	**36**	PN	**Pn**	**05 39 42.7**	**+0.7**
DEMR	**Demre-Antalya**	**2.57**	**94**	PN	**Pn**	**05 39 43.3**	**+1.2**
ELL	**Elmali**	**2.57**	**83**	PN	**Pn**	**05 39 43.6**	**+1.4**
GVD	**Gavdhos**	**2.69**	**234**	PN	**Pn**	**05 39 44.6**	**+1.0**
GVD	**Gavdhos**	**2.69**	**234**	P	**Pn**	**05 39 44.6**	**+1.0**
GVD				AML	AML	05 40 22.2	
	comp=E,358µm,0.3s						
GVD				AML	AML	05 40 23.6	
	comp=N,404µm,0.4s						
ANKY	**Antikythira Is**	**2.84**	**259**	P	**Pn**	**05 39 45.3**	**-0.2**
ANKY	**Antikythira Is**	**2.84**	**259**	P	**Pn**	**05 39 45.2**	**-0.3**
KORT	**Korkueli**	**2.96**	**78**	PN	**Pn**	**05 39 48.7**	**+1.5**
KTHA	**Kythira Island**	**2.97**	**267**	P	**Pn**	**05 39 47.2**	**0.0**
KTHA	**Kythira Island**	**2.97**	**267**	P	**Pn**	**05 39 47.1**	**-0.1**
KTHA				AML	AML	05 40 23.9	
	comp=N,380µm,0.5s						
KTHA				AML	AML	05 40 24.0	
	comp=E,363µm,0.3s						
KTHR	**Kythira**	**3.01**	**267**	P	**Pn**	**05 39 48.5**	**+0.7**
VLI	**Veliai**	**3.06**	**276**	P	**Pn**	**05 39 48.3**	**-0.1**
VLI	**Veliai**	**3.06**	**276**	P	**Pn**	**05 39 48.3**	**-0.1**
SLUM	**Salum**	**5.11**	**195**	⇓P	**Pn**	**05 40 15.9**	**+0.3**
	baz=203						
SLUM				S	Sn	05 41 03.6	-10
	baz=203						
CSS	**Mathiatis**	**5.58**	**104**	Pn	**Pn**	**05 40 21.7**	**-0.1**
CSS				Sn	**Sn**	**05 41 24.0**	**-0.8**
BRTR	**Keskin Array B**	**6.35**	**57**	Pn	**Pn**	**05 40 34.6**	**+2.3**
	comp=E,0.1nm,0.3s,baz=241,slow=15,SNR=4.6						
	comp=E,1.0nm,0.8s						
SWA2		**7.28**	**189**	P	**Pn**	**05 40 44.2**	**-0.5**
	baz=194						
MMA0	**Mount Meron ar**	**7.92**	**113**	Pn	**Pn**	**05 40 52.8**	**-0.7**
GLL	**Jalalah**	**8.04**	**147**	P	**Pn**	**05 40 55.1**	**+0.1**
	baz=145						
KSHT	**Keshet**	**8.24**	**112**	Pn	**Pn**	**05 40 56.2**	**-1.6**
SUZ	**Suez**	**8.35**	**141**	⇑P	**Pn**	**05 40 59.2**	**0.0**
	baz=138						
HMDT	**Nahal Hemdat**	**8.39**	**117**	Pn	**Pn**	**05 40 58.2**	**-1.6**
KZIT	**Kziot**	**8.45**	**129**	Pn	**Pn**	**05 40 59.3**	**-1.3**
KZIT				Sn	**Sn**	**05 42 31.7**	**-2.7**
DSI	**Dead Sea**	**8.68**	**122**	Pn	**Pn**	**05 41 01.5**	**-2.1**
DSI				Sn	**Sn**	**05 42 38.1**	**-1.7**
MSBI	**Mazada**	**8.82**	**123**	Pn	**Pn**	**05 41 02.8**	**-2.6**
KRMI	**Paran Flat**	**9.21**	**131**	Pn	**Pn**	**05 41 09.8**	**-0.9**
PRNI	**Paran**	**9.21**	**129**	Pn	**Pn**	**05 41 10.0**	**-0.8**
PRNI				Sn	**Sn**	**05 42 50.3**	**-2.5**
EIL	**Elat**	**9.66**	**132**	Pn	**Pn**	**05 41 15.2**	**-1.6**
TR2	**Tor 2**	**9.98**	**142**	P	**Pn**	**05 41 20.7**	**-0.5**
	baz=140						
TORD	**Torodi Ar. Bea**	**32.30**	**230**	P	**P**	**05 45 18.1**	**+0.4**
	comp=E,0.2nm,0.3s,baz=36,slow=8.5,SNR=7.9						
	comp=E,0.2nm,0.3s						
MKAR	**Makanchi Array**	**42.00**	**58**	P	**P**	**05 46 39.6**	**+0.3**
	comp=E,0.4nm,0.7s,baz=270,slow=7.7,SNR=2.0						
	comp=E,0.4nm,0.7s						

*IDC **18** 05:48:37.8±2.0, 33˚.47S×178˚.70W, h0km, mb4.0/3, mbtmp4.1/4, ML4.0/1, Error ellipse: s-maj=43.0km s-min=33.3km az=87.0*
*WEL **18** 05:48:39.8±0.8, 33˚.S±10˚×17˚.9W±2˚.3, h33km, M4.0/17, mB4.6/12, ML4.7/20, MLv4.4/17, Mw(mB)3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1*
*NEIC **18** 05:48:41.0±0.6, 33˚.7S±0˚.1×178˚.8W±0˚.1, h10km±2km, mb4.3/6, Error ellipse: s-maj=22.4km s-min=18.9km az=11.0*

ISC 18 05:48:40.7±1.2, 33˚.36S±0˚.09×178˚.5W±0˚.2, h35km, n45, σ1s71/63, mb4.2/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.12**	**7**	S	**Sn**	**05 50 25.3**	**-2.8**
MXZ	**Matakaoa Point**	**4.92**	**211**	Pn	**Pn**	**05 49 47.8**	**-4.3**
MXZ	**Matakaoa Point**	**4.92**	**211**	P	**Pn**	**05 49 50.4**	**-1.7**
MXZ				S	**Sn**	**05 50 47.7**	**-0.1**
WMGZ	**Waiomatatini S**	**5.09**	**208**	P	**Pn**	**05 49 54.3**	**-0.2**
WMGZ				S	**Sn**	**05 50 54.4**	**+2.3**
PKGZ	**Pakihiroa**	**5.29**	**210**	P	**Pn**	**05 49 56.3**	**-1.0**
PKGZ				S	**Sn**	**05 50 56.6**	**-0.4**
HAZ	**Te Kaha**	**5.31**	**213**	P	**Pn**	**05 49 56.6**	**-0.8**
HAZ				S	**Sn**	**05 51 00.8**	**+3.4**
PUZ	**Puketiti**	**5.37**	**208**	P	**Pn**	**05 49 56.0**	**-2.4**
PUZ				S	**Sn**	**05 50 58.0**	**-1.0**
RUGZ	**Raukumara Rang**	**5.53**	**213**	P	**Pn**	**05 49 59.2**	**-1.4**
RUGZ				S	**Sn**	**05 51 02.8**	**-0.3**
TWGZ	**Tauwhareparae**	**5.58**	**210**	P	**Pn**	**05 50 00.8**	**-0.3**
TWGZ				S	**Sn**	**05 51 05.1**	**+1.0**
CNGZ	**Carnagh Statio**	**5.75**	**206**	P	**Pn**	**05 50 01.6**	**-1.9**
TKGZ	**Te Karaka**	**5.85**	**209**	S	**Sn**	**05 51 10.2**	**-0.5**
MWZ	**Matawai**	**5.90**	**212**	P	**Pn**	**05 50 04.2**	**-1.4**
MWZ				S	**Sn**	**05 51 11.1**	**-1.0**
URZ	**Urewera**	**6.03**	**215**	Pn	**Pn**	**05 50 05.0**	**-2.3**
	3.8nm,0.3s,baz=249,slow=2.9,SNR=30						
URZ				Sn	**Sn**	**05 51 13.4**	**-1.7**
	3.4nm,0.3s,baz=252,slow=23,SNR=9.8						
	9.8nm,0.3s						
URZ	**Urewera**	**6.03**	**215**		**Pn**	**05 50 07.2**	**-0.1**
URZ	**Urewera**	**6.03**	**215**	P	**Pn**	**05 50 05.6**	**-1.7**
URZ				S	**Sn**	**05 51 11.8**	**-3.4**
RAGZ	**Rawiri**	**6.08**	**212**	P	**Pn**	**05 50 08.8**	**+0.7**
RAGZ				S	**Sn**	**05 51 16.1**	**-0.5**
RIGZ	**Rimuhau**	**6.12**	**208**	P	**Pn**	**05 50 05.8**	**-2.8**
RIGZ				S	**Sn**	**05 51 17.2**	**-0.2**
SNGZ	**Shannon Statio**	**6.36**	**211**	P	**Pn**	**05 50 11.7**	**-0.1**
SNGZ				S	**Sn**	**05 51 21.8**	**-1.4**
MHGZ	**Mahia Peninsul**	**6.45**	**205**	P	**Pn**	**05 50 14.5**	**+1.4**
MHGZ				S	**Sn**	**05 51 23.3**	**-2.2**
RAHZ	**Arahi**	**6.58**	**211**	P	**Pn**	**05 50 14.9**	**0.0**
RAHZ				S	**Sn**	**05 51 28.9**	**+0.3**
MTHZ	**Maungataniwha**	**6.63**	**213**	P	**Pn**	**05 50 15.1**	**-0.6**
MTHZ				S	**Sn**	**05 51 28.4**	**-1.6**
NMHZ	**Naumai**	**6.85**	**212**	P	**Pn**	**05 50 18.7**	**+0.1**
NMHZ				S	**Sn**	**05 51 35.1**	**-0.3**
BKZ	**Black Stump Fm**	**7.05**	**213**		**Pn**	**05 50 19.0**	**-2.4**
BKZ	**Black Stump Fm**	**7.05**	**213**	P	**Pn**	**05 50 20.7**	**-0.7**
KWHZ	**Kaweka Forest**	**7.29**	**212**	P	**Pn**	**05 50 23.5**	**-1.2**
KWHZ				S	**Sn**	**05 51 43.1**	**-3.1**
TMVZ	**Te Maari**	**7.39**	**217**	P	**Pn**	**05 50 26.3**	**+0.2**
NTVZ	**North Tongariro**	**7.39**	**218**	P	**Pn**	**05 50 26.7**	**+0.5**
ETVZ	**East Tongariro**	**7.40**	**217**	P	**Pn**	**05 50 26.4**	**+0.1**
KAHZ	**Kahuranaki**	**7.40**	**209**	P	**Pn**	**05 50 24.0**	**-2.2**
SNVZ	**South Ngauruho**	**7.47**	**217**	P	**Pn**	**05 50 27.6**	**+0.2**
BHHZ	**Black Hill Sta**	**7.50**	**214**	P	**Pn**	**05 50 27.9**	**+0.3**
WNVZ	**Wahianoa**	**7.60**	**217**	P	**Pn**	**05 50 29.1**	**0.0**
BFZ	**Birch Farm**	**8.41**	**208**	Pn	**Pn**	**05 50 36.3**	**-3.7**
BSWZ	**Blackbirch Sta**	**10.28**	**214**	Pn	**Pn**	**05 51 03.2**	**-2.4**
KHZ	**Kahutara**	**10.99**	**212**	Pn	**Pn**	**05 51 12.6**	**-2.6**
ASAR	**Alice Springs**	**42.59**	**270**	P	**P**	**05 56 34.8**	**+1.3**
	1.8nm,0.7s,baz=110,slow=7.4,SNR=13						
	1.8nm,0.7s						
WB2	**Warramunga Arr**	**43.83**	**276**	P	**P**	**05 56 44.7**	**+1.2**
WB2				IAmb	IAmb	05 57 04.3	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**43.84**	**276**	P	**P**	**05 56 44.9**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=116,slow=7.7,SNR=30						
	comp=Z,1.8nm,0.6s						
WRA	**Warramunga Arr**	**43.84**	**276**	P	**P**	**05 56 45.1**	**+1.4**
WB0	**Warramunga Arr**	**43.88**	**276**	P	**P**	**05 56 44.8**	**+0.9**
WB0				IAmb	IAmb	05 56 49.9	
	comp=Z,4.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**51.97**	**272**	P	**P**	**05 57 48.1**	**+1.5**
CASY	**Casey**	**52.32**	**209**	P	**P**	**05 57 49.4**	**+0.9**
CASY				IAmb	IAmb	05 58 16.2	
	comp=Z,4.7nm,1.1s						
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**05 58 22.9**	**+2.1**
	comp=Z,1.3nm,0.9s,baz=73,slow=1.9,SNR=2.3						
	comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**05 58 22.6**	**+1.7**
QSPA				IAmb	IAmb	05 58 36.5	
	comp=Z,2.4nm,0.8s						
FINES	**FINESS Array B**	**147.74**	**338**	PKPbc	**PKPab**	**06 08 22.5**	**-0.8**
	comp=Z,3.3nm,0.9s,baz=31,slow=3.2,SNR=5.0						

IDC 18 05:56:24.8±4.0, 30˚.43S×177˚.62W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=86.2km s-min=35.8km az=115.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.21**	**348**	Pn	**Pn**	**05 56 49.0**	**0.0**
	88nm,0.3s,baz=145,slow=20,SNR=2.2						
RAO				Sn	Sg	05 57 00.5	-3.1
	1µm,0.3s,baz=143,slow=21,SNR=20						
ASAR	**Alice Springs**	**43.43**	**267**	P	P	06 04 29.1	-0.6
	0.2nm,0.3s,baz=96,slow=7.5,SNR=2.5						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.42**	**272**	P	P	06 04 37.8	+0.1
	0.6nm,0.5s,baz=111,slow=8.0,SNR=14						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**145.29**	**340**	PKPbc	PKPbc	06 16 02.8	-0.8
	1.7nm,0.9s,baz=64,slow=3.2,SNR=3.3						

*IDC **18** 06:01:49.4±1.8, 18˚.65N×145˚.68E, h190km±18km, mb3.5/11, mbtmp4.1/14, Error ellipse: s-maj=22.8km s-min=11.7km az=88.0*
*NEIC **18** 06:01:49.7±1.3, 18˚.7N±0˚.1×145˚.5E±0˚.2, h193km±10km, mb4.3/34, Error ellipse: s-maj=23.3km s-min=14.3km az=101.0*

ISC 18 06:01:50.3±0.5, 18˚.64N±0˚.06×145˚.5E±0˚.1, h200km, n57, σ0s97/57, mb4.2/30, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.06**	**187**	P	**Pn**	**06 03 05.3**	**-0.2**
	35nm,0.3s,baz=238,slow=23,SNR=1.7						
GUMO				S	**Sn**	**06 04 04.3**	**-0.5**
	68nm,0.5s,baz=204,slow=23,SNR=2.1						
GUMO	**Guam**	**5.06**	**187**	Pn	**Pn**	**06 03 09.5**	**+4.0**
JCJ	**Chichijima**	**8.96**	**341**	P	**Pn**	**06 03 56.5**	**+0.5**
	21nm,0.5s,baz=284,slow=21,SNR=6.1						
MJAR	**Matsushiro Arr**	**18.96**	**342**	P	**P**	**06 05 56.4**	**0.0**
	0.9nm,0.3s,baz=165,slow=11,SNR=2.2						
COEN	**Coen**	**32.47**	**184**	P	**P**	**06 08 01.7**	**-0.4**
KLR	**Kul'dur**	**32.47**	**343**	P	**P**	**06 08 02.3**	**+0.5**
	1.1nm,0.3s,baz=141,slow=13,SNR=3.8						
	1.1nm,0.3s						
BJT	**Baijiatuau**	**33.04**	**316**	P	**P**	**06 08 05.8**	**-1.0**
QIZ	**Qiongzhong**	**33.72**	**277**	P	**P**	**06 08 12.6**	**-0.4**
MTN	**Manton Dam**	**34.34**	**205**	P	**P**	**06 08 17.7**	**-0.6**
MTN				IAmb	IAmb	06 08 48.4	
	comp=Z,12nm,1.2s						
MMRI	**Maumere**	**35.51**	**222**	P	**P**	**06 08 27.3**	**-1.0**
PETK	**Petropavlovsk-**	**35.69**	**13**	P	**P**	**06 08 28.7**	**-0.7**
KNRA	**Kununurra**	**37.87**	**207**	P	**P**	**06 08 47.2**	**-0.9**
KNRA				IAmb	IAmb	06 09 15.8	
	comp=Z,20nm,1.4s						
WB0	**Warramunga Arr**	**39.69**	**197**	P	**P**	**06 09 03.3**	**0.0**
WB0				IAmb	IAmb	06 09 04.4	
	comp=Z,8.6nm,1.2s						
WR0	**Warramunga Arr**	**39.84**	**196**	P	**P**	**06 09 04.5**	**+0.1**
WR0				IAmb	IAmb	06 09 38.9	
	comp=Z,11nm,1.5s						
WB2	**Warramunga Arr**	**39.87**	**196**	P	**P**	**06 09 04.3**	**-0.4**
WB2				IAmb	IAmb	06 09 32.2	
	comp=Z,9.7nm,1.3s						
WRA	**Warramunga Arr**	**39.87**	**197**	P	**P**	**06 09 05.2**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=14,slow=8.4,SNR=60						
	comp=Z,1.1nm,0.3s						
WRA	**Warramunga Arr**	**39.87**	**197**	P	**P**	**06 09 04.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**41.40**	**209**	P	**P**	**06 09 17.4**	**+0.2**
FITZ				IAmb	IAmb	06 09 36.2	
	comp=Z,12nm,1.4s						
AMKA	**Amchitka**	**42.15**	**31**	P	**P**	**06 09 23.9**	**+1.0**
SONM	**Songino Array**	**43.07**	**322**	P	**P**	**06 09 31.2**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=140,slow=8.6,SNR=3.7						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**43.54**	**196**	P	**P**	**06 09 34.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=18,slow=6.2,SNR=5.0						
	comp=Z,0.4nm,0.4s						
AKUT	**Akutan**	**51.33**	**35**	P	**P**	**06 10 34.3**	**+0.3**
SDPT	**Sand Point**	**54.63**	**35**	P	**P**	**06 10 56.9**	**-1.2**
CNBA	**Chernabura Isl**	**54.94**	**35**	P	**P**	**06 10 60.0**	**-0.3**
MKAR	**Makanchi Array**	**58.37**	**314**	P	**P**	**06 11 25.7**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=89,slow=8.7,SNR=7.9						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**58.37**	**314**	P	**P**	**06 11 24.8**	**+0.1**
MAKZ	**Makanchi**	**58.58**	**314**	P	**P**	**06 11 25.2**	**-1.0**
MAKZ				IAmb	IAmb	06 11 31.9	
	comp=Z,4.4nm,0.6s						
K20K	**Telida**	**60.36**	**27**	P	**P**	**06 11 38.9**	**+0.9**
K20K				IAmb	IAmb	06 11 57.7	
	comp=Z,8.6nm,1.5s						
CAST	**Castle Rocks**	**61.23**	**27**	P	**P**	**06 11 44.0**	**+0.1**
IMAR	**Indian Mountai**	**61.35**	**24**	P	**P**	**06 11 45.6**	**+1.0**
NRIK	**Noril'sk**	**61.60**	**340**	P	**P**	**06 11 46.6**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=116,slow=12,SNR=2.5						
	comp=Z,2.0nm,0.6s						
H21K	**Melozitna Rive**	**61.61**	**25**	P	**P**	**06 11 46.3**	**-0.1**
BPAW	**Bear Paw Mtn.**	**61.89**	**26**	P	**P**	**06 11 48.5**	**+0.1**
BPAW				IAmb	IAmb	06 12 15.9	
	comp=Z,8.2nm,1.4s						
MLY	**Manley**	**62.25**	**25**	P	**P**	**06 11 50.5**	**-0.2**
MLY				IAmb	IAmb	06 11 52.1	
	comp=Z,2.9nm,0.7s						
I23K	**Minto, Yukon-K**	**62.85**	**26**	P	**P**	**06 11 54.8**	**+0.2**
I23K				IAmb	IAmb	06 12 22.0	
	comp=Z,2.8nm,0.8s						
FID	**Port Fidalgo**	**63.19**	**31**	P	**P**	**06 11 57.0**	**0.0**
MDM	**Murphy Dome**	**63.27**	**26**	P	**P**	**06 11 57.7**	**+0.3**
MDM				IAmb	IAmb	06 11 59.2	
	comp=Z,2.4nm,0.6s						
M24K	**Tolsona, Glenn**	**63.57**	**29**	P	**P**	**06 11 57.5**	**-2.0**
H24K	**Noodor Dome**	**63.62**	**25**	P	**P**	**06 11 59.8**	**+0.1**
TOLK	**Toolik Lake Re**	**63.72**	**22**	P	**P**	**06 12 01.2**	**+0.9**
TOLK				IAmb	IAmb	06 12 44.4	
	comp=Z,7.3nm,1.4s						
ILAR	**Eielson Array**	**63.78**	**26**	P	**P**	**06 11 59.8**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=253,slow=5.6,SNR=13						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**63.78**	**26**	P	**P**	**06 11 59.3**	**-1.5**
PAX	**Paxson**	**64.05**	**28**	P	**P**	**06 12 02.1**	**-0.5**
PAX				IAmb	IAmb	06 12 03.5	
	comp=Z,2.4nm,0.6s						
J25K	**Salcha River,**	**64.39**	**27**	P	**P**	**06 12 04.0**	**-0.8**
RIDG	**Independent Ri**	**64.46**	**28**	P	**P**	**06 12 04.2**	**-1.0**
RIDG				IAmb	IAmb	06 12 07.9	
	comp=Z,7.6nm,1.3s						
DOT	**Dot Lake**	**64.79**	**28**	P	**P**	**06 12 07.1**	**-0.3**
DOT				IAmb	IAmb	06 12 13.9	
	comp=Z,5.2nm,1.2s						
FYU	**Fort Yukon**	**64.83**	**24**	P	P	06 12 02.2	-5.2
FYU				IAmb	IAmb	06 12 05.9	
	comp=Z,7.6nm,1.2s						
SCRK	**Sand Creek**	**64.87**	**27**	P	**P**	**06 12 07.7**	**-0.2**
J26L	**Joseph Creek**	**65.14**	**27**	P	**P**	**06 12 08.9**	**-0.7**
J26L				IAmb	IAmb	06 12 10.3	
	comp=Z,6.7nm,1.4s						
BMAR	**Burnt Mountain**	**65.25**	**24**	P	**P**	**06 12 11.1**	**+0.8**
INK	**Inuvik**	**69.50**	**23**	P	**P**	**06 12 36.0**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=292,slow=7.7,SNR=8.3						
	comp=Z,1.4nm,0.7s						
ABKAR	**Akbulak array**	**73.25**	**317**	P	**P**	**06 12 59.1**	**-0.5**
KIRV	**Kirov**	**77.41**	**328**	P	**P**	**06 13 25.5**	**+2.4**
	comp=Z,12nm,0.4s,baz=85,slow=6.4,SNR=3.6						
NVAR	**Mina Array Bea**	**83.33**	**52**	P	**P**	**06 13 55.6**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=264,slow=6.0,SNR=17						
	comp=Z,1.8nm,0.7s						
FINES	**FINESS Array B**	**86.86**	**335**	P	**P**	**06 14 10.8**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=58,slow=4.7,SNR=4.9						
	comp=Z,1.8nm,0.8s						
PDAR	**Pinedale Array**	**88.00**	**45**	P	**P**	**06 14 17.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=154,slow=1.2,SNR=5.4						
	comp=Z,0.2nm,0.3s						
LPAZ	**La Paz**	**147.86**	**91**	PKPbc	**PKiKP**	**06 21 13.7**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=323,slow=0.9,SNR=3.7						

IDC 18 06:02:42.5±2.8, 53˚.38N×87˚.23E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=25.7km s-min=15.7km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.54**	**293**	Pg	Pn	06 03 10.4	-0.8
	0.8nm,0.3s,baz=108,slow=15,SNR=7.7						
ZALV				Lg	Lg	06 03 30.5	
	0.6nm,0.3s,baz=115,slow=28,SNR=6.0						
I46RU	**ZALESOVO INFRA**	**1.54**	**293**	*i*		06 12 29.3	
	baz=108,slow=314,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.04**	**246**	Pn	Pn	06 04 14.9	+1.9
	0.1nm,0.3s,baz=61,slow=13,SNR=2.5						
KURBB				Lg	Lg	06 05 54.1	
	baz=63,slow=33						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.31**	**208**	Pn	Pn	06 04 31.2	+0.6
	0.1nm,0.3s,baz=26,slow=15,SNR=5.2						
	0.1nm,0.3s						

*NEIC **18** 06:22:48.7±0.8, 53˚.95N±0˚.06×162˚.99W±0˚.07, h17km±11km, Error ellipse: s-maj=8.6km s-min=5.7km az=158.0*
*AEIC **18** 06:22:49.9±1.4, 53˚.97N±0˚.05×163˚.03W±0˚.05, h33km±7km, ML3.3/24, Error ellipse: s-maj=8.0km s-min=4.4km az=192.0*
*IDC **18** 06:22:50.7±20.0, 53˚.75N×162˚.25W, h0km, mb3.3/2, mbtmp3.2/3, ML2.8/1, Error ellipse: s-maj=369.7km s-min=39.2km az=83.0*

ISC 18 06:22:48.7±0.9, 53˚.90N±0˚.06×163˚.03W±0˚.04, h25km, n36, σ1s46/31, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**0.86**	**331**		**Pn**	**06 23 04.5**	**-0.7**
ISLZ	**Isanotski Laza**	**0.92**	**335**		**Pn**	**06 23 05.5**	**-0.6**
ISLZ					**Sn**	**06 23 16.8**	**-1.8**
SSLS	**Shishaldin Sou**	**1.00**	**326**		**Pb**	**06 23 07.1**	**-0.2**
ISNN	**Isanotski Nort**	**1.04**	**335**		**Pb**	**06 23 08.0**	**+0.1**
ISNN					**Sn**	**06 23 21.3**	**0.0**
SSLN	**Shishaldin

ZALV **Zalesovo Beam** 1.97 280 Pn **Pb** 07 04 34.4 -0.3
2.8nm,0.3s,baz=103,slow=16,SNR=22
ZALV Lg Lg 07 04 59.0
6.8nm,0.3s,baz=93,slow=27,SNR=17
KURBB **Kurchatov Arra** 6.63 247 Pn **Pn** 07 05 38.3 +1.8
baz=62,slow=14
MK31 **Makanchi Array** 7.81 211 Pn **Pn** 07 05 53.5 +0.7
0.7nm,0.8s,baz=29,slow=11,SNR=8.8
MK31 ⇑Sn **Sn** 07 07 22.3 +0.4
2.4nm,1.0s,baz=31,slow=23,SNR=4.5
MK31 ⇑Lg Lg 07 08 04.8
1.0nm,0.7s
MKAR **Makanchi Array** 7.81 211 Pn Pn 07 05 56.3 +3.5
0.2nm,0.3s,baz=28,slow=13,SNR=8.6
MKAR Sn **Sn** 07 07 19.9 -1.9
0.2nm,0.3s,baz=32,slow=25,SNR=7.1
MKAR Lg Lg 07 08 04.6
0.1nm,0.3s,baz=26,slow=26,SNR=5.7
0.6nm,0.3s
MAKZ **Makanchi** 7.89 212 ⇑Sn **Sn** 07 07 22.7 -1.2
1.4nm,0.9s
MAKZ ⇓Lg Lg 07 08 05.0
3.3nm,0.9s

IDC 18 07:06:22.0±1.7, 3.72S×152.05E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=45.5km s-min=11.8km az=90.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.59**	**182**	Pg	Pg	07 06 33.1	-0.2
	165nm,0.3s,baz=321,slow=14,SNR=39						
KRVT				Lg	Lg	07 06 41.4	
	362nm,0.3s,baz=239,slow=19,SNR=12						
WRA	**Warramunga Arr**	**23.63**	**226**	P	P	07 11 36.0	+0.9
	1.1nm,1.0s,baz=48,slow=10,SNR=7.3						
	1.1nm,1.0s						
ASAR	**Alice Springs**	**26.47**	**220**	P	P	07 12 01.9	+0.8
	0.6nm,0.7s,baz=52,slow=8.8,SNR=8.2						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**81.44**	**22**	P	P	07 18 39.6	-1.1
	0.2nm,0.6s,baz=231,slow=5.7,SNR=1.8						
	0.2nm,0.6s						

IDC 18 07:09:43.4±5.3, 6.38S×133.67E, h0km, mb3.4/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=301.6km s-min=34.1km az=78.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.50**	**177**	Pn	Pn	07 12 56.4	+0.1
	0.1nm,0.3s,baz=356,slow=13,SNR=7.2						
WRA				Sn	Sn	07 15 19.2	-7.9
	0.1nm,0.3s,baz=350,slow=24,SNR=1.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**17.19**	**179**	P	Pn	07 13 45.0	-0.1
	0.1nm,0.3s,baz=1.1,slow=13,SNR=4.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**69.76**	**325**	P	P	07 20 55.5	0.0
	0.1nm,0.4s,baz=117,slow=7.3,SNR=4.1						
	0.1nm,0.4s						

*NAO **18** 07:32:31.7±1.3, 73.22N×6.28E, ML4.0*
*NEIC **18** 07:32:34.9±1.7, 73.26N±0.06×6.4E±0.2, h10km±1km, mb4.5/41, Error ellipse: s-maj=12.9km s-min=5.0km az=34.0*
*GCMT **18** 07:32:34.9±0.3, 73.31N±0.03×6.6E±0.1, h14km±1km, MW4.7/82, Moment Tensor Solution. s15,c15; s82,c109; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.56±.13; Mθθ0.62±.07; Mφφ0.93±.08; Mθφ0.24±.20; Mφθ0.64±.04; Mθr-0.50±.22; Best double couple: Mo1.58900×10^16 NP1:ϕs232.00000°, δ52.00000°, λ-109.00000°. NP2: ϕs23.00000°, δ42.00000°, λ-67.00000°. Principal axes: T 1.4630, Plg5.0000°, Azm126.0000°; N 0.2500, Plg15.0000°, Azm35.0000°; P -1.7150, Plg74.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **18** 07:32:34.0±1.2, 73.30N×6.85E, h10km, mb4.5/30 Error ellipse: s-maj=23.1km s-min=4.8km az=95.8*
*IDC **18** 07:32:34.1±0.5, 73.17N×6.73E, h0km, mb4.1/19, mbtmp4.1/26, ML3.7/6, MS3.8/51, Error ellipse: s-maj=14.0km s-min=10.4km az=56.0*
*BER **18** 07:32:35.4±2.2, 73.24N×6.62E, h10km, ML4.0(NAO), Confirmed Earthquake*
*IEPN **18** 07:32:37.0, 73.46N×7.58E, h10km*

ISC 18 07:32:34.9±0.3, 73.19N±0.03×6.85E±0.04, h12km, n293, σ26/66/290, mb4.4/66, MS3.8/62, 8C-6D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.64**	**63**	Pn	**Pn**	**07 33 30.1**	**-0.8**
BJO1				Sn	**Sn**	**07 34 11.3**	**-2.4**
BJO1	**Bjornoya**	**3.64**	**63**	*e*P	**Pn**	**07 33 30.1**	**-0.8**
BJO1				*e*S	**Sn**	**07 34 10.5**	**-3.2**
BJO1				IAML		07 34 14.3	
	comp=Z,18nm,0.7s						
BJO1	**Bjornoya**	**3.64**	**63**	*e*P	**Pn**	**07 33 29.7**	**-1.2**
BJO1				*e*S	**Sn**	**07 34 09.2**	**-4.5**
HSPB	**Hornsund (broa**	**4.44**	**26**	Pn	**Pn**	**07 33 39.9**	**-1.9**
HSPB	**Hornsund (broa**	**4.44**	**26**	*e*P	**Pn**	**07 33 40.1**	**-1.7**
HSPB				*e*S	**Sn**	**07 34 27.4**	**-5.9**
JMIC	**Jan Mayen**	**5.22**	**252**	Pn	**Pn**	**07 33 50.9**	**-1.8**
	comp=Z,14nm,0.3s,baz=351,slow=14,SNR=2.3						
JMIC				LR	LR	07 35 18.2	
	comp=Z,365nm,21.9s,baz=70,slow=32						
	comp=Z,72nm,0.5s						
JMIC	**Jan Mayen**	**5.22**	**252**	Pn	**Pn**	**07 33 51.0**	**-1.6**
JMIC	**Jan Mayen**	**5.22**	**252**	*e*P	**Pn**	**07 33 51.1**	**-1.6**
TRO	**Tromso**	**5.25**	**127**	*e*P	**Pn**	**07 33 53.8**	**+0.8**
TRO				*e*S	**Sn**	**07 34 50.7**	**-2.7**
TRO				IAML		07 34 54.3	
	comp=Z,24nm,0.7s						
BRBB	**Barentsburg B**	**5.26**	**17**	*e*P	**Pn**	**07 33 51.3**	**-1.7**
SPB2	**Spitsbergen Ar**	**5.53**	**21**		**Pn**	**07 33 55.5**	**-1.4**
SPA0	**Spitsbergen Ar**	**5.54**	**21**	Pn	**Pn**	**07 33 55.5**	**-1.4**
	baz=205,slow=16						
SPA0				Sn	**Sn**	**07 34 54.8**	**-5.5**
	baz=200,slow=28						
SPA0	**Spitsbergen Ar**	**5.54**	**21**	Pn	**Pn**	**07 33 55.5**	**-1.4**
	baz=205,slow=16						
SPA0				Sn	**Sn**	**07 34 54.8**	**-5.5**
	baz=200,slow=28						
SPA0	**Spitsbergen Ar**	**5.54**	**21**	⇑*i*P	**Pn**	**07 33 55.4**	**-1.4**
SPA0				*e*S	**Sn**	**07 34 54.5**	**-5.8**
SPITS	**Spitsbergen Ar**	**5.54**	**21**	Pn	**Pn**	**07 33 55.7**	**-1.2**
	comp=Z,14nm,0.3s,baz=198,slow=16,SNR=166						
LOF	**Lofoten**	**5.54**	**153**	*e*P	**Pn**	**07 33 57.6**	**+0.6**
LOF				*e*S	**Sn**	**07 34 55.1**	**-5.4**
LOF				IAML		07 35 00.8	
	comp=Z,24nm,0.5s						
JETT	**Jettan, Norway**	**5.66**	**123**	Pn	**Pn**	**07 33 59.5**	**+0.8**
JETT				Sn	**Sn**	**07 34 59.7**	**-3.8**
HOPEN	**Hopen**	**5.79**	**46**	Pn	**Pn**	**07 33 59.3**	**-1.0**
HOPEN				Sn	**Sn**	**07 35 02.0**	**-4.6**
HOPEN	**Hopen**	**5.79**	**46**	*e*P	**Pn**	**07 33 59.6**	**-0.8**
HOPEN				*e*S	**Sn**	**07 35 01.3**	**-5.3**
HOPEN				IAML		07 35 06.2	
	comp=Z,24nm,0.7s						
HOPEN	**Hopen**	**5.79**	**46**	*e*P	**Pn**	**07 33 59.4**	**-1.0**
HOPEN				*e*S	**Sn**	**07 34 58.9**	**-7.7**
HAMF	**Hammerfest**	**5.82**	**108**	Pn	**Pn**	**07 34 00.4**	**-0.4**
HAMF	**Hammerfest**	**5.82**	**108**	*e*P	**Pn**	**07 34 00.5**	**-0.3**
HAMF				*e*S	**Sn**	**07 35 02.4**	**-4.9**
KBS	**Kingsbay**	**5.90**	**10**	Pn	**Pn**	**07 33 59.5**	**-2.3**
KBS	**Kingsbay**	**5.90**	**10**		**Pn**	**07 33 59.4**	**-2.5**
KBS	**Kingsbay**	**5.90**	**10**	*i* P	**Pn**	**07 33 59.6**	**-2.3**
KBS	**Kingsbay**	**5.90**	**10**	*i* P	**Pn**	**07 33 59.2**	**-2.7**
KBS	**Kingsbay**	**5.90**	**10**	*e*P	**Pn**	**07 33 59.8**	**-2.0**
KBS				*e*S	**Sn**	**07 35 02.6**	**-6.7**
KBS				IAML		07 35 09.0	
	comp=Z,5.6nm,0.7s						
KBS	**Kingsbay**	**5.90**	**10**	*e*P	**Pn**	**07 33 59.5**	**-2.3**
KBS				*e*S	**Sn**	**07 35 01.6**	**-7.6**
STEI	**Steigen**	**5.97**	**148**	*e*P	**Pn**	**07 34 03.3**	**+0.4**
STEI				*e*S	**Sn**	**07 35 06.3**	**-4.7**
STEI				IAML		07 35 10.0	
	comp=Z,10nm,0.8s						
KIF	**Kilpisjarvi**	**6.17**	**126**	Pn	**Pn**	**07 34 06.5**	**+1.0**
KIF				Sn	**Sn**	**07 35 10.8**	**-5.0**
KIF	**Kilpisjarvi**	**6.17**	**126**	*e*P	**Pn**	**07 34 06.5**	**+1.0**
KIF				*e*S	**Sn**	**07 35 11.3**	**-4.5**
FAUS	**Fauske**	**6.49**	**150**	*e*P	**Pn**	**07 34 10.3**	**+0.3**
FAUS				*e*S	**Sn**	**07 35 17.5**	**-6.2**
ARA0	**ARCESS Array S**	**6.99**	**112**	Pn	**Pn**	**07 34 16.9**	**0.0**
	baz=312,slow=12						
ARA0				Sn	**Sn**	**07 35 32.2**	**-3.9**
	baz=316,slow=22						
ARA0	**ARCESS Array S**	**6.99**	**112**	Pn	**Pn**	**07 34 16.9**	**0.0**
	baz=312,slow=12						
ARA0				*e*P	**Pn**	**07 34 17.4**	**+0.5**
ARA0				Sn	**Sn**	**07 35 32.2**	**-3.9**
	baz=316,slow=22						
ARA0				IAML		07 35 38.7	
	comp=Z,8.1nm,0.6s						
ARCES	**ARCESS Array B**	**6.99**	**112**	Pn	**Pn**	**07 34 17.0**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=319,slow=12,SNR=132						
ARCES				Sn	**Sn**	**07 35 32.2**	**-3.9**
	comp=Z,1.2nm,0.3s,baz=316,slow=22,SNR=5.3						
	comp=Z,7.2nm,0.4s						
ARCES	**ARCESS Array B**	**6.99**	**112**	Pn	**Pn**	**07 34 18.0**	**+1.1**
ARCES	**ARCESS Array B**	**6.99**	**112**	P	**Pn**	**07 34 18.0**	**+1.1**
SALU	**Saltoluokta**	**7.02**	**140**	*e*P	**Pn**	**07 34 18.1**	**+0.7**
KONS	**Konsvik**	**7.05**	**159**	*e*P	**Pn**	**07 34 19.3**	**+1.5**
KONS				*e*S	**Sn**	**07 35 31.5**	**-6.2**
KONS				IAML		07 35 36.6	
	comp=Z,30nm,0.3s						
STOK	**Stokkvaagen**	**7.21**	**160**	*e*P	**Pn**	**07 34 18.5**	**-1.3**
STOK				*e*P	**Pn**	**07 34 21.1**	**+1.3**
STOK				*e*S	**Sn**	**07 35 34.6**	**-6.8**
KEV	**Kevo**	**7.26**	**108**	Pn	**Pn**	**07 34 21.2**	**+0.7**
KEV	**Kevo**	**7.26**	**108**	P	**Pn**	**07 34 21.2**	**+0.7**
KEV	**Kevo**	**7.26**	**108**	*e*P	**Pn**	**07 34 20.1**	**-0.4**
HEF	**Hetta**	**7.30**	**123**	*e*P	**Pn**	**07 34 22.2**	**+1.1**
DAG	**Danmarks Havn**	**7.48**	**310**	*i* P	Pn	07 34 18.0	-5.5
DAG				*i* S	Sn	07 35 33.0	-15
DAG				IAML		07 35 36.0	
	comp=Z,9.9nm,0.6s						
MOR8	**Moi Rana**	**7.52**	**156**	*e*P	**Pn**	**07 34 24.9**	**+0.8**
MOR8				*e*S	**Sn**	**07 35 43.4**	**-5.8**
MOR8				IAML		07 35 46.5	
	comp=Z,23nm,0.3s						
MOR8				*e*		07 39 33.8	
DBG	**Daneborg**	**7.64**	**291**	Pn	Pn	07 34 19.8	-6.0
DBG				Sn	Sn	07 35 38.9	-13
DBG	**Daneborg**	**7.64**	**291**	*i* P	Pn	07 34 18.5	-7.2
DBG	**Daneborg**	**7.64**	**291**	Pn	Pn	07 34 19.8	-6.0
DBG				Sn	Sn	07 35 38.9	-13
NSS	**Namsos**	**8.89**	**166**	*e*P	**Pn**	**07 34 44.9**	**+2.0**
SCO	**Scoresbysund**	**9.33**	**267**		**Pn**	**07 34 45.6**	**-3.3**
SCO	**Scoresbysund**	**9.33**	**267**	P	**Pn**	**07 34 45.6**	**-3.3**
SCO	**Scoresbysund**	**9.33**	**267**	*i* P	Pn	07 34 43.4	-5.5
NOR	**Nord**	**9.75**	**340**	*i* P	Pn	07 34 49.3	-5.3
NOR				*i* S	Sn	07 36 31.4	-12
APA	**Apatity**	**10.46**	**109**	⇑*i*P	**Pn**	**07 34 59.8**	**-4.6**
APA				pmax	pmax		
	comp=Z,17nm,0.9s						
APA				MLR	MLR		
	comp=Z,700nm,18.0s						
LVZ	**Lovozero**	**10.58**	**106**	*de*P	**Pn**	**07 35 04.9**	**-1.2**
LVZ				pmax	pmax		
	comp=Z,100nm,0.9s						
MOL	**Molde**	**10.67**	**178**	*e*P	**Pn**	**07 35 06.1**	**-1.1**
MOL				*e*S	Sn	07 36 57.3	-9.1
AKN	**Aaknes**	**11.06**	**180**	Pn	**Pn**	**07 35 13.0**	**+0.3**
AKN				Sn	Sn	07 37 04.6	-11
AKN	**Aaknes**	**11.06**	**180**	Pn	**Pn**	**07 35 13.0**	**+0.3**
AKN				*e*S	Sn	07 37 04.3	-12
AKN				IAML		07 37 12.7	
	comp=Z,7.2nm,0.9s						
DOMB	**Dombas**	**11.23**	**175**	*e*P	**Pn**	**07 35 14.8**	**-0.1**
DOMB				IAML		07 37 19.1	
	comp=Z,6.2nm,0.6s						
ZFI	**Zemlya Franca-**	**11.57**	**32**	*e*P	**Pn**	**07 35 16.7**	**-2.7**
ZFI2	**Zemlya Franca-**	**11.57**	**32**	*e*P	**Pn**	**07 35 16.7**	**-2.7**
FOO	**Floro**	**11.66**	**184**	*e*	Pn	07 35 10.9	-10
NC204	**NORSAR Array S**	**12.06**	**171**		**Pn**	**07 35 26.9**	**+0.6**
HYA	**Hoyanger**	**12.08**	**182**	*e*P	**Pn**	**07 35 26.3**	**-0.2**
HYA				IAML		07 37 43.0	
	comp=Z,6.0nm,0.5s						
NC303	**NORSAR Array S**	**12.14**	**170**		**Pn**	**07 35 28.3**	**+1.0**
SUE	**Sulen**	**12.21**	**185**	*e*P	**Pn**	**07 35 28.1**	**-0.2**
SUE				IAML		07 37 51.8	
	comp=Z,2.8nm,0.5s						
NB2	**NORSAR Subarra**	**12.31**	**170**	Pn	**Pn**	**07 35 30.2**	**+0.4**
	baz=351,slow=16						
NB2				Sn	**Sn**	**07 37 39.9**	**-6.8**
	baz=342,slow=22						
NB2	**NORSAR Subarra**	**12.31**	**170**	Pn	**Pn**	**07 35 30.2**	**+0.4**
	baz=351,slow=16						
NB2				Sn	**Sn**	**07 37 39.9**	**-6.8**
	baz=342,slow=22						
NOA	**NORSAR Array B**	**12.31**	**170**	Pn	**Pn**	**07 35 30.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=353,slow=12,SNR=12						
NOA				Sn	**Sn**	**07 37 38.4**	**-8.4**
	comp=Z,0.1nm,0.3s,baz=311,slow=18,SNR=3.3						
NOA				LR	LR	07 39 58.7	
	comp=Z,322nm,19.9s,baz=350,slow=36						
	comp=Z,0.7nm,0.4s						
SKAR	**Skarslia**	**12.58**	**177**	*e*P	**Pn**	**07 35 31.9**	**-1.4**
SKAR				IAML		07 38 03.4	
	comp=Z,2.5nm,1.1s						
NRA0	**NORESS Array S**	**12.63**	**169**	Pn	**Pn**	**07 35 34.2**	**+0.1**
	baz=6.3,slow=18						
NRA0				Sn	**Sn**	**07 37 46.6**	**-7.9**
	baz=347,slow=22						
NRA0	**NORESS Array S**	**12.63**	**169**	Pn	**Pn**	**07 35 34.2**	**+0.1**
	baz=6.3,slow=18						
NRA0				Sn	**Sn**	**07 37 46.6**	**-7.9**
	baz=347,slow=22						
BORG	**Borgarnes**	**13.03**	**244**	LR	LR	07 39 14.7	
	comp=Z,204nm,20.9s,baz=15,slow=31						
SUMG	**Summit**	**13.11**	**289**	Pn	**Pn**	**07 35 37.9**	**-3.0**
SUMG	**Summit**	**13.11**	**289**	P	**Pn**	**07 35 37.9**	**-3.0**
HFS	**Hagfors**	**13.37**	**165**	Pn	**Pn**	**07 35 44.3**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=354,slow=12,SNR=16						
HFS				Sn	Sn	07 38 04.0	-8.5
	comp=Z,0.7nm,0.3s,baz=357,slow=26,SNR=6.7						
HFS				LR	LR	07 40 32.0	
	comp=Z,616nm,19.4s,baz=346,slow=36						
	comp=Z,2.1nm,0.3s						
HFS	**Hagfors**	**13.37**	**165**	Pn	**Pn**	**07 35 44.5**	**+0.4**
	baz=349,slow=12						
HFS	**Hagfors**	**13.37**	**165**	Pn	**Pn**	**07 35 44.5**	**+0.4**
	baz=349,slow=12						
KONO	**Kongsberg**	**13.64**	**174**	Pn	**Pn**	**07 35 47.5**	**-0.3**
KONO	**Kongsberg**	**13.64**	**174**	*i* P	**Pn**	**07 35 47.1**	**-0.7**
FIA0	**FINESS Array S**	**13.81**	**138**	P	**Pn**	**07 35 49.9**	**-0.2**
	baz=330,slow=11						
FIA0	**FINESS Array S**	**13.81**	**138**	P	**Pn**	**07 35 49.9**	**-0.2**
	baz=330,slow=11						
FIA1	**FINESS Array S**	**13.81**	**138**	Pn	**Pn**	**07 35 49.7**	**-0.4**
FINES	**FINESS Array B**	**13.81**	**138**	Pn	**Pn**	**07 35 49.0**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=345,slow=14,SNR=11						
FINES				LR	LR	07 40 51.7	
	comp=Z,563nm,20.5s,baz=356,slow=36						
	comp=Z,3.5nm,0.6s						
FINES	**FINESS Array B**	**13.81**	**138**	Pn	**Pn**	**07 35 49.7**	**-0.4**
FINES	**FINESS Array B**	**13.81**	**138**	P	**Pn**	**07 35 49.7**	**-0.4**
ADZR	**Andozero**	**14.54**	**113**	*e*P	**P**	**07 36 08.3**	**+1.7**
	comp=Z,12nm,0.6s						
VALR	**Valaam**	**14.89**	**130**	*i* P	**P**	**07 36 09.1**	**-1.4**
VALR				pmax	pmax		
	comp=Z,27nm,0.9s						
LSH	**Leshukonskoye**	**15.87**	**102**	*e*P	**Pn**	**07 36 11.5**	**-6.1**
	comp=Z,91nm,2.9s						
PUL	**Pulkovo**	**16.20**	**134**	*i* P	**Pn**	**07 36 22.6**	**+0.7**
PUL				pmax	pmax		
	comp=Z,129nm,0.4s						
VSU	**Vasula**	**16.71**	**142**	*i* P	**Pn**	**07 36 28.1**	**-0.4**
VSU				pmax	pmax		
	comp=Z,44nm,0.9s						
KLMR	**Klimovskoe**	**17.41**	**118**	*e*P	**Pn**	**07 36 35.0**	**-2.2**
KLMR	**Klimovskoe**	**17.41**	**118**	*e*P	**Pn**	**07 36 35.0**	**-2.2**
	comp=Z,83nm,1.4s						
KLMR	**Klimovskoe**	**17.41**	**118**	*e*Pn	**Pn**	**07 36 35.1**	**-2.2**
PRGR	**Permogore**	**18.39**	**109**	*e*P	**Pn**	**07 36 47.2**	**-2.0**
PRGR	**Permogore**	**18.39**	**109**	*e*P	**Pn**	**07 36 47.2**	**-2.0**
EKA	**Eskdalemuir Ar**	**18.39**	**198**	P	**Pn**	**07 36 50.5**	**+1.2**
	baz=4.8,slow=11						
EKA				LR	LR	07 42 36.4	
	comp=Z,150nm,19.2s,baz=359,slow=33						
	comp=Z,1.4nm,0.6s						
PABE	**Paberze**	**19.09**	**149**	P	**Pn**	**07 36 57.7**	**0.0**
PABE				IAmb	IAmb	07 37 03.7	
	comp=Z,22nm,0.9s						
KLNR	**Kaliningrad**	**19.46**	**156**	*i* P	**Pn**	**07 37 03.3**	**+1.1**
KLNR				pmax	pmax		
	comp=Z,90nm,1.0s						
SFJD	**Kangerlussuaq**	**19.74**	**281**	LR	LR	07 43 43.2	
	comp=Z,412nm,19.9s,baz=45,slow=34						
EUNU	**Eureka**	**20.07**	**330**		**P**	**07 37 05.9**	**-1.7**
NACGM	**Naroch**	**20.11**	**145**	*e*P	Pn	07 37 09.6	-0.3
	baz=344						
MNK	**Minsk**	**20.68**	**144**	*i* P	P	07 37 06.2	-8.1
MNK				*i* PPP	PPP	07 37 32.2	
MNK				*i* S	**S**	**07 40 59.1**	**-5.6**
MNK				*i* SS	**SnSn**	**07 41 20.3**	**-3.4**
MNK				*i* SSS	SSS	07 41 33.4	
MNK				pmax	pmax		
	comp=E,2.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,25nm,0.6s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,12nm,17.0s						
MNK				MLR	MLR		
	comp=E,18nm,15.0s						
MNK				MLR	MLR		
	comp=Z,72nm,17.0s						
MNK	**Minsk**	**20.68**	**144**	*i* P	P	07 37 06.3	-8.0
	comp=E,2.0nm,0.6s						
MNK				*i* P	P	07 37 06.3	-8.0
	comp=N,8.0nm,0.9s						
MNK				*i* P	P	07 37 06.3	-8.0
	comp=Z,25nm,0.6s,baz=163						
MNK				*i* PP	pwP	07 37 24.4	+4.3
MNK				*i* PPP	PPP	07 37 32.2	
MNK				*i* S	**S**	**07 40 59.1**	**-5.6**
MNK				*i* SS	**SnSn**	**07 41 20.3**	**-3.4**
MNK				*i* SSS	SSS	07 41 33.5	
MNK				*i* LQ	LQ	07 43 03.9	
MNK				*i* LR	LR	07 44 55.0	
MNK				*i* LRM	MLR	07 47 05.9	
	comp=N,12nm,17.1s						
MNK				*i* LRM	MLR	07 47 12.2	
	comp=E,18nm,15.2s						
MNK				*i* LRM	MLR	07 47 15.6	
	comp=Z,72nm,17.1s						
MOS	**Moscow**	**21.50**	**128**	*e*P	**P**	**07 37 23.9**	**+0.9**
MOS				*e*		07 41 11.1	
MOS				pmax	pmax		
	comp=Z,200nm,1.5s						
MOS				pmax	pmax		
	comp=Z,114nm,1.1s						
OBN	**Obninsk**	**21.83**	**130**	P	**P**	**07 37 28.3**	**+1.7**
OBN	**Obninsk**	**21.83**	**130**	*ce*P	**P**	**07 37 29.7**	**+3.1**
OBN				*e*		07 37 51.1	
OBN				*e*S	**S**	**07 41 19.4**	**-8.0**
OBN				pmax	pmax		
	comp=Z,160nm,1.7s						
OBN				MLR	MLR		
	comp=Z,455nm,22.0s						
KIRV	**Kirov**	**21.99**	**109**	LR	LR	07 45 56.7	
	comp=Z,353nm,21.8s,baz=337,slow=36						
KIRV	**Kirov**	**21.99**	**109**	*ce*P	**P**	**07 37 29.9**	**+1.6**
CLL	**Collm**	**22.12**	**170**	P	**P**	**07 37 31.4**	**+1.7**
CLL				IAmb	IAmb	07 37 37.8	
	comp=Z,19nm,1.3s						
CLL	**Collm**	**22.12**	**170**	*i* P	**P**	**07 37 31.5**	**+1.7**
CLL				*i*		07 37 34.8	
CLL				*e*S	**S**	**07 41 35.0**	**+2.0**
CLL				pmax	pmax		
	comp=Z,43nm,1.5s						
CLL	**Collm**	**22.12**	**170**	*i* P	**P**	**07 37 31.5**	**+1.7**
	comp=Z,13nm,1.5s						
CLL				*i* pP	**sP**	**07 37 34.8**	**+1.0**
CLL				*i* sP	**pwP**	**07 37 37.0**	**+1.4**
	comp=Z,43nm,1.5s						
CLL				*e*PPP	PPP	07 38 01.0	
CLL				*i* sPPP		07 38 05.4	
CLL				*e*S	**S**	**07 41 35.0**	**+2.0**
	comp=E,200nm,26.2s						
BRG	**Berggiesshubel**	**22.61**	**168**	*e*P	**P**	**07 37 37.0**	**+2.1**
BRG				Amp		07 37 40.6	
	comp=Z,9.9nm,1.3s						
BRG				Amp		07 46 36.0	
	comp=N,0.2nm,16.0s						
BRG				Amp		07 46 40.0	
	comp=Z,0.3nm,17.1s						
BRG				Amp		07 46 45.0	
	comp=E,0.1nm,23.5s						
BRG	**Berggiesshubel**	**22.61**	**168**	*e*P	**P**	**07 37 37.0**	**+2.1**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,205nm,16.0s						
BRG				MLR	MLR		
	comp=Z,303nm,17.1s						
BRG				MLR	MLR		
	comp=E,79nm,23.5s						
MEM	**Membach**	**22.66**	**181**	*d*P	**P**	**07 37 38.1**	**+2.6**
BTNL	**Ternell**	**22.68**	**181**	*d*P	**P**	**07 37 37.7**	**+1.9**
BTNL				*dx*	x	07 37 45.7	
BCLA	**Clavier**	**22.86**	**183**	*d*P	**P**	**07 37 39.1**	**+1.5**
PVCC	**Panska Ves**	**22.99**	**167**	AMS	AMS	07 46 20.0	
	comp=E,300nm,15.8s						
OSTC	**Ostas**	**23.08**	**165**	AMS	AMS	07 46 50.0	
	comp=E,300nm,15.9s						
UPC	**Upice**	**23.11**	**165**	AMS	AMS	07 46 20.0	
	comp=E,300nm,17.6s						
DPC	**Dobruska-Polom**	**23.29**	**165**	*e*P	**P**	**07 37 44.3**	**+2.2**
DPC				MLR	MLR		
	comp=Z,300nm,15.6s						
DPC	**Dobruska-Polom**	**23.29**	**165**	*e*P	**P**	**07 37 44.3**	**+2.2**
DPC				AMS	AMS	07 46 40.0	
	comp=Z,300nm,15.6s						
PRU	**Pruhonice**	**23.52**	**168**	*e*P	**P**	**07 37 47.1**	**+2.7**
PRU				MLR	MLR		
	comp=Z,300nm,16.8s						
PRU	**Pruhonice**	**23.52**	**168**	*e*P	**P**	**07 37 47.1**	**+2.7**
PRU				AMS	AMS	07 46 50.0	
	comp=Z,300nm,16.8s						
KRLC	**Kraliky**	**23.60**	**164**	AMS	AMS	07 47 00.0	
	comp=Z,300nm,17.5s						
WLF	**Walferdange**	**23.61**	**181**	P	**P**

AKBB **Malin Array Si** 24.56 144 *i* P P 07 37 55.0 +0.9
KRUC **Moravsky** 24.58 165 *e*P P 07 37 56.3 +2.0
GEC2 **GERESS Array S** 24.61 169 P P 07 37 56.1 +1.3
GEC2 IAmb IAmb 07 37 59.7
comp=Z,9.5nm,1.0s
GERES **GERESS Array B** 24.61 169 P P 07 37 56.8 +2.1
comp=Z,5.4nm,1.0s,baz=354,slow=7.0,SNR=25
comp=Z,5.4nm,1.0s
GERES **GERESS Array B** 24.61 169 P P 07 37 56.5 +1.8
GERES **GERESS Array B** 24.61 169 P P 07 37 56.5 +1.8
LVV **L'vov** 24.63 153 *e*P P 07 37 55.6 +0.8
LVV *e* 07 41 41.0
LVV *e*S S 07 42 14.7 -0.8
LVV pmax pmax
comp=Z,50nm,1.8s
LVV MLR MLR
comp=N,300nm,15.0s
LVV MLR MLR
comp=E,200nm,15.0s
LVV MLR MLR
comp=Z,400nm,15.0s
AK05 **Malin Array Si** 24.64 144 P P 07 37 55.6 +0.8
AK05 IAmb IAmb 07 38 08.3
comp=Z,16nm,1.1s
KWP **Kalwaria Pacla** 24.65 155 P P 07 37 56.6 +1.7
KWP **Kalwaria Pacla** 24.65 155 P P 07 37 56.6 +1.7
KWP pmax pmax
comp=Z,335nm,1.3s
CKRC **Cesky Krumlov** 24.68 168 *e*P P 07 37 57.6 +2.4
LPSR **Galich'ya Gora** 24.69 129 *e*P P 07 37 57.1 +1.9
LPSR pmax pmax
comp=Z,20nm,1.1s
LANS **Liptovska Anna** 24.76 160 *e*P P 07 37 58.6 +2.6
LANS pmax pmax
comp=Z,6.0nm,1.2s
LANS **Liptovska Anna** 24.76 160 *e*P P 07 37 58.6 +2.6
JAVC **Velka Javorina** 24.88 163 *e*P P 07 38 01.3 +4.2
BFO **Black Forest** 24.95 178 P P 07 37 58.6 +1.0
BFO IAmb IAmb 07 38 02.4
comp=Z,13nm,1.2s
BFO **Black Forest** 24.95 178 P P 07 37 58.6 +1.0
BFO pmax pmax
comp=Z,13nm,1.2s
RES **Resolute Bay** 24.97 322 LR LR 07 47 47.5
comp=Z,263nm,18.6s,baz=23,slow=37
ECH **Echery** 25.06 180 P P 07 38 00.2 +1.6
ECH IAmb IAmb 07 38 03.2
comp=Z,15nm,1.1s
ECH **Echery** 25.06 180 P P 07 38 00.2 +1.6
ECH pmax pmax
comp=Z,15nm,1.1s
SMOL **Smolenice** 25.20 163 *e*P P 07 38 03.0 +3.1
CRVS **Cervenica-Dubn** 25.22 157 *e*P P 07 38 04.4 +4.3
CRVS pmax pmax
comp=Z,37nm,1.3s
CRVS **Cervenica-Dubn** 25.22 157 *e*P P 07 38 04.4 +4.3
KOLS **Kolonicke sedl** 25.28 156 *e*P P 07 38 03.1 +2.5
KOLS pmax pmax
comp=Z,17nm,0.9s
KOLS **Kolonicke sedl** 25.28 156 *e*P P 07 38 03.1 +2.5
MODS **Modra-Piesok** 25.33 164 *e*P P 07 38 04.8 +3.7
MODS pmax pmax
comp=Z,44nm,1.3s
MODS **Modra-Piesok** 25.33 164 *e*P P 07 38 04.8 +3.7
VYHS **Vyhne** 25.35 161 *e*P P 07 38 03.5 +2.3
VYHS pmax pmax
comp=Z,13nm,1.5s
VYHS **Vyhne** 25.35 161 *e*P P 07 38 03.5 +2.3
ZST **Bratislava** 25.49 164 *e*P P 07 38 07.7 +5.2
ZST pmax pmax
comp=Z,108nm,1.8s
ZST **Bratislava** 25.49 164 *e*P P 07 38 07.7 +5.2
UZH **Uzhgorod** 25.58 156 *e*P P 07 38 03.3 0.0
UZH *e* 07 38 38.4
VORR **Voronezh** 25.62 130 *e*P P 07 38 07.0 +3.3
VORR pmax pmax
comp=Z,60nm,0.4s
VSR **Storozhevoye** 26.04 130 *e*P P 07 38 08.6 +1.1
VSR pmax pmax
comp=Z,10.0nm,1.3s
DAVOX **Davos/Dischmat** 26.53 175 P P 07 38 14.5 +2.4
comp=Z,0.7nm,0.4s,baz=342,slow=9.7,SNR=3.4
DAVOX LR LR 07 48 50.5
comp=Z,114nm,19.3s,baz=352,slow=37
comp=Z,0.7nm,0.4s
TIH **Tihany** 26.84 163 P P 07 38 17.9 +3.1
BUR08 **Bucovina Ar. S** 26.92 152 P P 07 38 17.1 +1.5
BURAR **Bucovina Array** 26.95 152 P P 07 38 17.5 +1.6
BURAR **Bucovina Array** 26.95 152 P P 07 38 17.5 +1.6
BELG **Belogornoye** 26.99 118 P P 07 38 16.9 +1.0
comp=Z,21nm,1.0s,baz=348,slow=4.2,SNR=4.2
BELG LR LR 07 48 50.7
comp=Z,236nm,20.3s,baz=342,slow=36
comp=Z,21nm,1.0s
BELG **Belogornoye** 26.99 118 P P 07 38 17.0 +1.0
FRB **Frobisher Bay** 27.19 290 LR LR 07 48 10.0
comp=Z,120nm,18.5s,baz=8.0,slow=34
BNI **Bardonecchia** 28.22 180 P P 07 38 29.2 +1.9
BNI IAmb IAmb 07 38 30.1
comp=Z,10nm,1.5s
BNI **Bardonecchia** 28.22 180 P P 07 38 29.2 +1.9
BNI pmax pmax
comp=Z,10.0nm,1.5s
MLR **Muntele Rosu** 29.14 152 LR LR 07 50 29.4
comp=Z,510nm,18.7s,baz=9.0,slow=37
TIXI **Tiksi** 30.84 32 LR LR 07 51 18.4
comp=Z,56nm,19.1s,baz=356,slow=36
TIXI **Tiksi** 30.84 32 *i* P P 07 38 51.7 +1.6
TIXI pmax pmax
comp=Z,8.0nm,1.0s
AKTO **Aktyubinsk** 31.55 108 LR LR 07 52 00.6
comp=Z,250nm,21.3s,baz=343,slow=37
VTS **Vitosha** 31.62 157 P P 07 38 57.6 +0.2
VTS **Vitosha** 31.62 157 P P 07 38 57.6 +0.2
VTS pmax pmax
comp=Z,4.0nm,1.0s
BRVK **Borovoye** 32.72 93 *i* P P 07 39 08.9 +2.2
BRVK pmax pmax
comp=Z,2.0nm,0.9s
ABKAR **Akbulak array** 33.15 107 P P 07 39 11.4 +0.9
ABKAR **Akbulak array** 33.15 107 P P 07 39 11.8 +1.3
ABKAR IAmb IAmb 07 39 13.2
comp=Z,3.8nm,0.8s
RDO **Rodhopi** 33.35 154 P P 07 39 14.2 +1.9
SOC **Sochi** 33.40 134 *e*P P 07 39 12.2 -0.5
SOC *e* 07 40 23.1
SOC *e*S S 07 44 34.2 +1.0
SOC *e*SS SnSn 07 46 40.4 +6.2
SOC *e*SSS SSS 07 47 03.3
SOC MLR MLR
comp=Z,233nm,20.0s
KIV **Kislovodsk** 33.68 130 *e*P P 07 39 17.5 +2.2
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,124nm,15.0s
KVAR **Kislovodsk Arr** 33.68 130 LR LR 07 53 30.1
comp=Z,261nm,19.2s,baz=248,slow=37
KBZ **Khabaz** 33.94 130 P P 07 39 19.6 +2.1
comp=Z,2.6nm,0.9s,baz=272,slow=5.0,SNR=4.3
KBZ LR LR 07 53 14.7
comp=Z,302nm,21.9s,baz=360,slow=36
comp=Z,2.6nm,0.9s
SCHQ **Schefferville** 34.14 278 LR LR 07 51 34.9
comp=Z,182nm,21.5s,baz=43,slow=33
NCK **Nalchik** 34.32 129 *i* P P 07 39 21.8 +1.0
NCK pmax pmax
comp=Z,9.0nm,1.1s
MAK **Makhachkala** 35.73 125 *e*P P 07 39 29.6 -3.3
MAK *e*S S 07 45 05.4 -3.8
MAK pmax pmax
comp=Z,215nm,1.7s
MAK MLR MLR
comp=Z,173nm,14.0s
BRTR **Keskin Array B** 35.97 144 P P 07 39 36.1 +1.0
comp=Z,1.6nm,1.0s,baz=354,slow=4.3,SNR=4.5
BRTR LR LR 07 55 28.3
comp=Z,163nm,20.9s,baz=360,slow=38
comp=Z,1.6nm,1.0s
BRTR **Keskin Array B** 35.97 144 *i* P P 07 39 38.0 +2.9
BRTR pmax pmax
comp=Z,1.0nm,0.8s
VAE **Valguarnera** 35.98 170 LR LR 07 55 55.3
comp=Z,156nm,19.4s,baz=136,slow=39
ZALV **Zalesovo Beam** 36.14 79 P P 07 39 37.8 +1.4
comp=Z,1.2nm,0.6s,baz=323,slow=9.3,SNR=4.7
ZALV LR LR 07 57 18.4
comp=Z,90nm,20.8s,baz=291,slow=41
comp=Z,1.2nm,0.6s
ZALV **Zalesovo Beam** 36.14 79 *i* P P 07 39 39.2 +2.9
ZALV pmax pmax
comp=Z,2.0nm,0.8s
INK **Inuvik** 36.41 336 LR LR 07 55 46.4
comp=Z,106nm,19.4s,baz=358,slow=38
KURK **Kurchatov** 37.21 87 *ce*P P 07 39 46.5 +1.0
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURBB **Kurchatov Arra** 37.27 87 P P 07 39 47.7 +1.8
comp=Z,2.0nm,0.3s,baz=336,slow=6.8,SNR=6.7
KURBB LR LR 07 57 38.6
comp=Z,112nm,19.9s,baz=228,slow=40
comp=Z,2.0nm,0.3s
KEST **Kesra** 37.55 177 LR LR 07 55 14.2
comp=Z,92nm,20.4s,baz=310,slow=36
GNI **Garni** 37.77 130 LR LR 07 55 57.0
comp=Z,169nm,21.5s,baz=354,slow=37
BILL **Bilibino** 38.37 12 *e*P P 07 39 56.3 +1.2
BILL *e* 07 41 27.2
BILL *e*S S 07 45 49.1 +0.1
BILL pmax pmax
comp=Z,5.0nm,0.9s
BILL MLR MLR
comp=Z,63nm,16.0s
YKA **Yellowknife Ar** 39.03 321 LR LR 07 56 01.2
comp=Z,286nm,18.9s,baz=354,slow=36
I29M **Ogilvie Camp,** 39.78 338 P P 07 40 05.8 -1.1
H23K **Yukon River** 40.36 345 P P 07 40 12.3 +0.6
IMAR **Indian Mountai** 40.49 348 P P 07 40 13.1 +0.3
MDT **Midelt** 40.87 195 LR LR 07 57 34.8
comp=Z,60nm,18.1s,baz=70,slow=37
ILAR **Eielson Array** 41.19 343 P P 07 40 19.2 +0.7
comp=Z,2.1nm,1.0s,baz=1.5,slow=6.9,SNR=17
comp=Z,2.1nm,1.0s
KK31 **Karatay Array** 41.76 100 P P 07 40 25.2 +1.7
KK31 **Karatay Array** 41.76 100 P P 07 40 25.2 +1.7
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR **Karatay Array** 41.76 100 P P 07 40 25.1 +1.7
KKAR **Karatay Array** 41.76 100 P P 07 40 25.2 +1.7
MK31 **Makanchi Array** 41.80 86 P P 07 40 25.7 +1.9
MK31 **Makanchi Array** 41.80 86 P P 07 40 25.7 +1.9
MK31 pmax pmax
comp=Z,3.0nm,1.2s
MKAR **Makanchi Array** 41.80 86 P P 07 40 25.8 +2.0
comp=Z,1.0nm,0.8s,baz=352,slow=7.4,SNR=9.8
MKAR LR LR 08 00 35.1
comp=Z,83nm,20.8s,baz=340,slow=40
comp=Z,1.0nm,0.8s
MKAR **Makanchi Array** 41.80 86 P P 07 40 25.6 +1.7
MKAR **Makanchi Array** 41.80 86 *i* P P 07 40 25.7 +1.9
MKAR pmax pmax
comp=Z,1.0nm,0.8s
BCAR **Beaver Creek A** 42.39 339 P P 07 40 28.2 -0.2
MMAI **Mount Meron Ar** 42.81 144 LR LR 08 00 07.9
comp=Z,106nm,20.3s,baz=128,slow=39
GEYT **Alibeck** 43.15 116 P P 07 40 37.0 +2.2
comp=Z,5.2nm,0.7s,baz=37,slow=17,SNR=7.8
GEYT LR LR 08 00 37.7
comp=Z,281nm,19.8s,baz=350,slow=39
comp=Z,5.2nm,0.7s
GEYT **Alibeck** 43.15 116 P P 07 40 36.8 +1.9
GEYT IAmb IAmb 07 40 38.4
comp=Z,6.5nm,0.8s
BOOM **Boomskoye usch** 43.89 95 P P 07 40 42.9 +2.0
BOOM **Boomskoye usch** 43.89 95 P P 07 40 42.9 +2.0
DLBC **Dease Lake** 45.42 330 LR LR 08 00 21.2
comp=Z,137nm,22.0s,baz=31,slow=37
EIL **Elat** 46.00 145 LR LR 08 02 41.9
comp=Z,66nm,18.5s,baz=270,slow=39
WMQ **Urumqi** 46.08 83 *e*P P 07 41 01.9 +3.7
WMQ LR LR
comp=E,280nm,22.9s
WMQ LR LR
comp=Z,130nm,16.5s
ULM **Lac du Bonnet** 46.18 300 LR LR 08 00 09.5
comp=Z,195nm,18.9s,baz=42,slow=36
SADO **Sadowa** 46.69 282 LR LR 07 59 26.3
comp=Z,92nm,20.5s,baz=19,slow=35
SONM **Songino Array** 47.59 64 P P 07 41 11.1 +1.0
comp=Z,1.6nm,0.9s,baz=320,slow=5.6,SNR=7.9
comp=Z,1.6nm,0.9s
ULN **Ulaanbaatar** 47.73 64 P P 07 41 12.6 +1.4
ULN IAmb IAmb 07 41 14.2
comp=Z,4.2nm,1.1s
ULN **Ulaanbaatar** 47.73 64 *ce*P P 07 41 11.3 +0.1
ULN pmax pmax
comp=Z,7.0nm,1.7s
F33A **5 Mile Ranch,** 50.37 298 P P 07 41 29.9 -1.3
F33A IAmb IAmb 07 41 32.3
comp=Z,4.9nm,1.1s
BBB **Bella Bella** 51.15 326 LR LR 08 04 22.9
comp=Z,138nm,18.5s,baz=9.5,slow=37
I37A **Lemond, Waseca** 51.31 295 P P 07 41 38.0 -0.3
LLLB **Lillooet** 51.59 321 P P 07 41 40.9 +0.5
LLLB IAmb IAmb 07 41 47.5
comp=Z,10.0nm,1.3s
KLR **Kul'dur** 52.17 43 *i* P P 07 41 45.7 +1.0
KLR pmax pmax
comp=Z,3.0nm,1.2s
ECSD **EROS Data Cent** 52.41 297 P P 07 41 45.9 -0.7
ECSD IAmb IAmb 07 41 47.2
comp=Z,6.0nm,1.2s
NEW **Newport** 52.91 316 LR LR 08 04 41.5
comp=Z,242nm,18.2s,baz=8.0,slow=36
GTA **Gaotai** 53.61 74 *e*P P 07 41 57.8 +2.2
GTA pP pwP 07 42 01.4 -0.6
GTA sP sP 07 42 04.3 +4.7
GTA pmax pmax
comp=Z,3.0nm,1.5s
MSO **Missoula** 53.61 313 P P 07 41 55.0 -0.5
MSO IAmb IAmb 07 41 56.3
comp=Z,12nm,1.4s
RAYN **Ar Rayn** 53.96 135 P P 07 41 60.0 +1.8
RAYN IAmb IAmb 07 42 01.2
comp=Z,4.9nm,1.0s
RAYN **Ar Rayn** 53.96 135 P P 07 42 00.0 +1.8
RAYN pmax pmax
comp=Z,5.0nm,1.0s
R50A **Paris** 54.16 284 P P 07 41 58.6 -0.8
R50A IAmb IAmb 07 42 00.0
comp=Z,7.3nm,1.2s
P43A **Skaggs, Pawnee** 54.34 289 P P 07 42 00.5 -0.2
GOMU **GeErMu** 55.19 80 P P 07 42 07.4 0.0
GOMU pP pP 07 42 09.3 -1.0
GOMU PcP PcP 07 43 10.8 +2.5
GOMU pmax pmax
comp=Z,4.0nm,0.8s
HHC **Hu-ho-hao-te** 55.44 63 *e*P P 07 42 09.1 +0.3
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,190nm,4.4s
IMW **Indian Meadow** 55.74 309 P P 07 42 11.1 -0.1
K22A **Casper** 55.90 305 P P 07 42 10.6 -1.6
TKL **Tuckaleechee C** 56.45 282 LR LR 08 05 19.0
comp=Z,100nm,20.6s,baz=14,slow=35
PD31 **Pinedale Array** 56.50 308 P P 07 42 15.6 -1.0
PD31 IAmb IAmb 07 42 25.3
comp=Z,4.7nm,1.3s
PDAR **Pinedale Array** 56.50 308 P P 07 42 16.2 -0.3
comp=Z,1.2nm,1.0s,baz=46,slow=6.4,SNR=7.9
PDAR LR LR 08 06 24.6
comp=Z,84nm,18.7s,baz=18,slow=36
comp=Z,1.2nm,1.0s
PDAR **Pinedale Array** 56.50 308 P P 07 42 15.8 -0.8
ISCO **Idaho Springs** 58.38 303 P P 07 42 28.6 -1.3
ISCO **Idaho Springs** 58.38 303 P P 07 42 28.6 -1.3
ISCO pmax pmax
comp=Z,4.0nm,1.1s
Q24A **Divide** 59.06 303 P P 07 42 34.5 -0.2
Q24A IAmb IAmb 07 42 41.0
comp=Z,3.5nm,1.1s
ELK **Elko** 59.70 312 LR LR 08 09 01.2
comp=Z,155nm,18.0s,baz=356,slow=37
BBTS **Babate** 60.05 206 LR LR 08 05 47.3
comp=Z,36nm,19.7s,baz=37,slow=33
TOA0 **Torodi Ar. Sit** 60.09 186 P P 07 42 42.4 +0.8
TORD **Torodi Ar. Bea** 60.09 186 P P 07 42 42.4 +0.7
comp=Z,3.4nm,0.9s,baz=4.1,slow=6.6,SNR=17
comp=Z,3.4nm,0.9s
TORD **Torodi Ar. Bea** 60.09 186 P P 07 42 42.0 +0.4
TORD IAmb IAmb 07 42 43.4
comp=Z,5.7nm,1.1s
YBH **Yreka Blue Hor** 60.28 318 LR LR 08 09 28.9
comp=Z,201nm,18.4s,baz=12,slow=37
WMOK **Wichita Mounta** 61.44 295 P P 07 42 51.1 +0.4
WMOK IAmb IAmb 07 42 51.8
comp=Z,6.8nm,1.4s
WMOK **Wichita Mounta** 61.44 295 P P 07 42 51.1 +0.4
WMOK pmax pmax
comp=Z,7.0nm,1.4s
NVAR **Mina Array Bea** 62.58 314 P P 07 43 00.2 +1.7
comp=Z,0.7nm,0.9s,baz=13,slow=4.5,SNR=5.7
NVAR LR LR 08 10 56.7
comp=Z,58nm,18.8s,baz=0.5,slow=37
comp=Z,0.7nm,0.9s
ANMO **Albuquerque** 63.20 302 P P 07 43 05.2 +2.5
comp=Z,1.1nm,0.8s,baz=24,slow=18,SNR=3.2
ANMO LR LR 08 10 41.9
comp=Z,140nm,18.4s,baz=17,slow=36
comp=Z,1.1nm,0.8s
PZH **PanZhiHua** 66.27 77 P P 07 43 23.9 +1.2
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,230nm,5.1s
PFO **Pinyon Flats O** 66.81 311 LR LR 08 13 08.6
comp=Z,98nm,19.9s,baz=10,slow=36
TXAR **Lajitas Array** 67.84 298 P P 07 43 33.6 +1.0
comp=Z,0.2nm,0.6s,baz=46,slow=3.6,SNR=4.2
TXAR LR LR 08 13 17.8
comp=Z,128nm,18.5s,baz=354,slow=36
comp=Z,0.2nm,0.6s
SJG **San Juan** 67.88 259 LR LR 08 08 46.7
comp=Z,17nm,20.8s,baz=40,slow=32
CMAR **Chiang Mai Arr** 73.08 83 P P 07 44 06.2 +1.6
comp=Z,1.4nm,0.6s,baz=324,slow=6.1,SNR=4.3
comp=Z,1.4nm,0.6s
HKPS **Hong Kong Po S** 73.71 67 P P 07 44 08.7 +0.5
KMBO **Kilima Mbogo** 76.57 149 LR LR 08 23 25.4
comp=Z,25nm,18.4s,baz=76,slow=40
CMIG **Matias Romero** 77.12 286 LR LR 08 22 05.2
comp=Z,32nm,18.2s,baz=46,slow=38
ASAR **Alice Springs** 122.86 61 PKP PKPdf 07 51 29.6 -0.6
comp=Z,0.9nm,0.7s,baz=349,slow=1.2,SNR=10
VNA1 **Neumayer--Stat** 143.94 188 PKPdf PKPbc 07 52 06.5 +0.7
baz=73,slow=6.4
VNA2 **Neumayer--Watz** 144.17 188 PKPdf PKPbc 07 52 06.9 +0.3
baz=45,slow=0.4
VNA3 **Neumayer Olymp** 144.59 189 PKPdf PKPbc 07 52 08.3 +0.4
baz=73,slow=6.4
SNAA **Sanae** 144.77 185 PKPdf PKPdf 07 52 09.2 -0.2
baz=73,slow=6.4
TROLL **Troll, Antarti** 145.00 182 PKPdf PKPdf 07 52 10.2 +0.3
baz=73,slow=6.4
MAW **Mawson** 145.22 146 PKPbc PKPdf 07 52 11.9 +1.8
comp=Z,3.1nm,0.9s,baz=353,slow=5.6,SNR=5.8

*IDC **18** 07:41:41.9±2.5, 15°.22N×91°.58W, h178km±27km, mb3.5/8, mbtmp4.0/9, Error ellipse: s-maj=32.2km s-min=13.6km az=64.0*
*GCG **18** 07:41:42.0±1.1, 15°.21N×91°.69W, h198km±13km, MD3.7*
*NEIC **18** 07:41:43.2±2.0, 15°.23N±0°.04×91°.8W±0°.1, h184km±7km, mb4.3/23, Error ellipse: s-maj=17.0km s-min=5.4km az=102.0*

ISC 18 07:41:43.0±0.6, **15°.19N**±0°.07×**91°.76W**±0°.07, **h200**km, **n58**, σ1§**52**/62, **mb4.1**/17, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
					Op	ISC	h	m	s	ISC
HUEH	**Huehuetenango**	**0.28**	**63**			**Pn**	**07**	**42**	**08.0**	**-1.8**
STG3	**Santiaguito 3,**	**0.51**	**158**	*eP*		**Pn**	**07**	**42**	**09.2**	**-1.3**
STG3				*eS*		**Sn**	**07**	**42**	**31.8**	**+0.1**
RTAL	**Retalhuleu**	**0.66**	**174**			**Pn**	**07**	**42**	**09.1**	**-1.8**
FUG	**Fuego 3**	**1.16**	**129**	*eP*		**Pn**	**07**	**42**	**13.4**	**-0.8**
FUG				*eS*		**Sn**	**07**	**42**	**38.2**	**0.0**
PCG	**Pacaya**	**1.37**	**125**	*eP*		**Pn**	**07**	**42**	**15.3**	**-0.6**
PCG				*eS*		**Sn**	**07**	**42**	**40.7**	**-0.7**
NBG	**Las Nubes**	**1.50**	**113**	*eP*		**Pn**	**07**	**42**	**16.9**	**-0.2**
NBG				*eS*		**Sn**	**07**	**42**	**39.7**	**-3.6**
MRL	**Marmol**	**2.01**	**93**	*eP*		**Pn**	**07**	**42**	**21.1**	**-0.9**
ESQI	**Esquipulas**	**2.42**	**105**			**Pn**	**07**	**42**	**25.4**	**-0.8**
PETF	**Flores**	**2.51**	**46**			**Pn**	**07**	**42**	**25.4**	**-1.6**
CMIG	**Matias Romero**	**3.55**	**303**	P		**Pn**	**07**	**42**	**38.6**	**-0.6**
	55nm,0.4s,baz=129,slow=10.0,SNR=116									
CMIG				S		**Sn**	**07**	**43**	**18.3**	**-5.0**
	202nm,0.5s,baz=351,slow=23,SNR=24									
TGUH	**Tegucigalpa,Un**	**4.49**	**104**			**Pn**	**07**	**42**	**50.6**	**-0.5**
TEIG	**Tepich**	**6.01**	**33**			**Pn**	**07**	**43**	**08.3**	**-2.2**
ACON	**Acoyapa**	**7.16**	**116**	Pn		**Pn**	**07**	**43**	**24.8**	**-0.7**
HZTE	**Horizontes, Gu**	**7.48**	**126**	Pn		**Pn**	**07**	**43**	**28.7**	**-0.8**
ORTG	**Ortega, Santa**	**7.80**	**127**	Pn		**Pn**	**07**	**43**	**32.5**	**-1.3**
DUNO	**Dulce Nombre,**	**7.95**	**129**	Pn		**Pn**	**07**	**43**	**35.5**	**-0.2**
JTS	**Las Juntas de**	**8.24**	**125**	Pn		**Pn**	**07**	**43**	**39.1**	**-0.3**
RIMA	**Rio Macho**	**9.41**	**124**			**Pn**	**07**	**43**	**55.2**	**+0.3**
PEZE	**Perez Zeledon,**	**9.78**	**125**	Pn		**Pn**	**07**	**43**	**59.7**	**0.0**
SRBA	**San Rafael, Bu**	**10.12**	**125**	Pn		**Pn**	**07**	**44**	**03.4**	**-0.7**
SOR	**Soroa**	**11.21**	**46**	Pn		**Pn**	**07**	**44**	**18.5**	**+0.6**
061Z	**Ochoppi**	**14.70**	**42**	P		**P**	**07**	**45**	**04.1**	**+1.5**
352A	**Blakely**	**17.38**	**20**	P		**Pn**	**07**	**45**	**34.6**	**+0.9**
352A				IAmb		IAmb	07	45	35.5	
	comp=Z,13nm,0.6s									
LRAL	**Lakeview Retre**	**18.29**	**13**	P		**Pn**	**07**	**45**	**44.4**	**0.0**
GUY2C	**Guyana, Caldas**	**18.92**	**120**	*eP*		**Pn**	**07**	**45**	**49.5**	**-3.0**
MIAR	**Mount Ida**	**19.34**	**355**	P		**Pn**	**07**	**45**	**54.6**	**-2.3**
POPC	**Popayan, Colom**	**19.48**	**129**	*eP*		**Pn**	**07**	**45**	**56.4**	**-2.5**
GOGA	**Godfrey**	**19.64**	**21**			**Pn**	**07**	**45**	**58.3**	**-2.1**
GOGA				IAmb		IAmb	07	45	59.2	
	comp=Z,7.3nm,0.7s									
SDDR	**Presa de Saban**	**19.93**	**76**	P		**Pn**	**07**	**46**	**02.3**	**-1.9**
SDDR				IAmb		IAmb	07	46	11.1	
	comp=Z,12nm,0.9s									
PRAC	**Prado**	**20.16**	**123**	*eP*		**P**	**07**	**46**	**02.4**	**+0.1**
PAMC	**Pamplona, Colo**	**20.25**	**111**	*eP*		**P**	**07**	**46**	**01.9**	**-1.8**
SWET	**Sewanee**	**20.62**	**14**	P		Pn	07	46	08.7	-3.8
WVT	**Waverly**	**21.15**	**9**	P		**P**	**07**	**46**	**13.0**	**+0.4**
WVT				IAmb		IAmb	07	46	14.7	
	comp=Z,5.4nm,0.6s									
CPCT	**Cooper Cave**	**21.20**	**17**	P		**P**	**07**	**46**	**14.2**	**+1.1**
CLTN	**Cedars of Leba**	**21.38**	**12**	P		**P**	**07**	**46**	**16.0**	**+1.1**
CLTN				IAmb		IAmb	07	46	17.2	
	comp=Z,7.6nm,0.8s									
PARMO	**Parma**	**21.46**	**4**	P		**P**	**07**	**46**	**16.0**	**+0.2**
PBMO	**Poplar Bluff**	**21.54**	**3**	P		**P**	**07**	**46**	**16.0**	**-0.5**
TKL	**Tuckaleechee C**	**21.61**	**18**	P		**P**	**07**	**46**	**17.6**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=194,slow=12,SNR=8.3									
	comp=Z,4.3nm,0.7s									
DR12	**Loma Pena Alta**	**21.70**	**77**	P		**P**	**07**	**46**	**19.6**	**+1.1**
U49A	**Red Boiling Sp**	**21.90**	**13**	P		**P**	**07**	**46**	**20.9**	**+0.7**
U49A				IAmb		IAmb	07	46	22.1	
	comp=Z,5.7nm,0.7s									
CGM3	**Cape Girardeau**	**22.10**	**4**	P		**P**	**07**	**46**	**22.8**	**+0.7**
CGM3				IAmb		IAmb	07	46	24.0	
	comp=Z,11nm,0.7s									
T47A	**Sharon Grove**	**22.10**	**10**	P		**P**	**07**	**46**	**22.5**	**+0.3**
TZTN	**Tazewell**	**22.50**	**18**	P		**P**	**07**	**46**	**26.6**	**+0.7**
TZTN				IAmb		IAmb	07	46	27.9	
	comp=Z,6.4nm,0.7s									
T50A	**Nancy**	**22.60**	**15**	P		**P**	**07**	**46**	**28.1**	**+1.3**
T50A				IAmb		IAmb	07	46	28.3	
	comp=Z,3.8nm,0.7s									
V55A	**Taylorsville**	**22.64**	**23**	P		**P**	**07**	**46**	**28.0**	**+0.8**
V55A				IAmb		IAmb	07	46	29.5	
	comp=Z,6.3nm,0.7s									
CCM	**Cathedral Cave**	**22.78**	**1**	P		**P**	**07**	**46**	**29.3**	**+0.9**
CCM				IAmb		IAmb	07	46	30.7	
	comp=Z,19nm,1.4s									
SLM	**Saint Louis**	**23.40**	**3**	P		**P**	**07**	**46**	**34.3**	**+0.5**
OLIL	**Olney**	**23.68**	**7**	P		**P**	**07**	**46**	**37.5**	**+1.1**
ANMO	**Albuquerque**	**23.70**	**329**	P		**P**	**07**	**46**	**36.6**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=218,slow=22,SNR=11									
	comp=Z,2.0nm,0.6s									
ANMO	**Albuquerque**	**23.70**	**329**	P		**P**	**07**	**46**	**36.5**	**-0.4**
BAUV	**El Baul**	**24.00**	**102**	P		**P**	**07**	**46**	**43.4**	**+3.7**
BAUV				IAmb		IAmb	07	47	24.4	
	comp=Z,20nm,1.3s									
NVAR	**Mina Array Bea**	**32.91**	**320**	P		**P**	**07**	**48**	**02.0**	**+3.3**
	comp=Z,1.0nm,0.6s,baz=133,slow=8.1,SNR=14									
	comp=Z,1.0nm,0.6s									
LPAZ	**La Paz**	**39.02**	**142**	P		**P**	**07**	**48**	**52.3**	**+1.1**
	comp=Z,2.2nm,0.5s,baz=343,slow=5.1,SNR=12									
	comp=Z,2.2nm,0.5s									
LPAZ	**La Paz**	**39.02**	**142**	P		**P**	**07**	**48**	**52.0**	**+0.8**
LPAZ				IAmb		IAmb	07	48	52.9	
	comp=Z,2.7nm,0.6s									

SCHQ Schefferville 44.03 21 P P 07 49 30.9 +0.1
comp=Z,1.5nm,0.7s,baz=209,slow=15,SNR=1.7
comp=Z,1.5nm,0.7s
CPUP Villa Florida 53.15 141 P P 07 50 39.4 -1.1
comp=Z,1.9nm,0.8s,baz=340,slow=9.7,SNR=4.6
comp=Z,1.9nm,0.8s
PLCA Paso Flores 59.02 161 P P 07 51 22.8 +0.9
comp=Z,4.2nm,1.1s,baz=330,slow=9.8,SNR=3.9
comp=Z,4.2nm,1.1s
ILAR Eielson Array 61.85 336 P P 07 51 41.8 +1.1
comp=Z,0.4nm,0.7s,baz=110,slow=5.0,SNR=4.2
comp=Z,0.4nm,0.7s

NEIC 18 07:44:14.3±1.8,31.22N±0.02×103.25W±0.06,h4km±6km, mb_Lg2.0/8,ML2.4/16,Error ellipse: s-maj=7.8km s-min=2.9km az=74.0,Western Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLN7	**Carlsbad 7**	**1.28**	**339**		Pn	07 44 39.2	+0.2
HTMS	**Hat Mesa**	**1.29**	**346**		Pn	07 44 39.2	0.0
GDL2	**Guadalupe Moun**	**1.36**	**316**		Pn	07 44 39.8	-0.4
GDL2				Sn	Sn	07 44 59.4	+0.6
CPRX	**Cap Rock**	**1.88**	**344**	Pn	Pn	07 44 47.4	0.0
MNTX	**Cornudas Mount**	**1.88**	**285**		Pn	07 44 47.5	+0.2
TX31	**Lajitas Ar. Si**	**1.91**	**191**		Pn	07 44 47.6	-0.1
TX31				Sn	Sn	07 45 11.5	-0.8
TX32	**Lajitas Array**	**1.91**	**191**		Pn	07 44 47.3	-0.4
TXAR	**Lajitas Array**	**1.91**	**191**		Pn	07 44 47.5	-0.3
MSTX	**Muleshoe**	**2.77**	**8**		Pn	07 45 00.5	+0.9
MSTX				IAmb_Lg		07 45 48.5	
	comp=Z,4.9nm,1.0s						
JCT	**Junction City**	**3.06**	**103**	Pn	Pn	07 45 04.1	+0.7
ABTX	**Abilene, Hawle**	**3.38**	**65**	Pn	Pn	07 45 06.0	-1.7
ABTX				IAmb_Lg		07 46 03.2	
	comp=Z,5.2nm,0.7s						
AMTX	**Amarillo**	**3.89**	**19**	Pn	Pn	07 45 13.4	-1.5
121A	**Cookes Peak, D**	**4.07**	**290**	Pn	Pn	07 45 14.9	-2.6
121A				IAML		07 46 32.9	
	comp=N,5.7nm,1.9s						
121A				IAML		07 46 35.0	
	comp=E,.5.4nm,1.6s						
ANMO	**Albuquerque**	**4.59**	**325**	Pn	Pn	07 45 22.4	-2.2
ANMO				IAML		07 46 45.8	
	comp=E,2.9nm,2.2s						
ANMO				IAML		07 46 53.4	
	comp=E,2.7nm,3.3s						
WHTX	**Lake Whitney,**	**5.01**	**80**	Pn	Pn	07 45 27.9	-2.3

KLM ***18*** *07:53:55,6.01S×150.45E,h10km,mb5.2*
MOS ***18*** *07:54:01.61.1,6.07S×149.74E,h48km,mb5.3/27, MS5.0/11,Error ellipse: s-maj=10.8km s-min=6.5km az=99.2*
BJI ***18*** *07:54:02.20.0,6.34S×150.65E,h96km,mb4.9/61, mB5.2/39*
DJA ***18*** *07:54:02.60.4,6°S.2'×15°0E±°,h53km±4km,M5.3/49, mb5.4/49,mB5.7/17,MLv5.7/2,Mw(mB)5.2/17, MwMwp4.9/3,Mwp5.2/3*
IDC ***18*** *07:54:03.00.3,6.09S×149.93E,h54km±11km,mb4.8/25, mbtmp5.0/26,MS4.6/41,Error ellipse: s-maj=12.2km s-min=9.9km az=79.0*
NEIC ***18*** *07:54:04.20.2,1,6.24S±0.07×149.99E±0.08,h64km±6km, mb5.1/82,Error ellipse: s-maj=11.0km s-min=10.4km az=112.0*
GCMT ***18*** *07:54:05.20.0,1,6.50S±0.01×149.91E±0.01,h36km, MW5.3/125,Moment Tensor Solution. s125,c208; s105,c180; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr1.00±.02; Mθθ-1.12±.01; Mϕϕ0.12±.02; Mrθ0.45±.02; Mθϕ-0.03±.01; Mϕr-0.05±.02; Best double couple: Mo1.15300×10^17 NP1:ϕs92.00000°,δ57.00000°, λ94.00000°. NP2:ϕs265.00000°,δ34.00000°,λ84.00000°. Principal axes: T 1.0940, Plg78.0000°, Azm15.0000°; N 0.1180, Plg3.0000°, Azm270.0000°; P -1.2130, Plg12.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 07:54:03.50.3,6.22S±0.04×149.97E±0.04,h58km±2km, h58km:pP-P,n951,σ1s27/1033,mb5.1/119,MS4.7/75, 51C-34D,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.79**	**47**	P	**Pn**	**07 54 44.4**	**-1.4**
	7μm,0.6s,baz=234,slow=0.6,SNR=306						
KRVT				S	**Sn**	**07 55 15.3**	**-3.0**
	2μm,0.6s,baz=96,slow=24,SNR=6.6						
RABL	**Rabaul**	**2.97**	**47**		**Pn**	**07 54 47.5**	**-0.7**
RABL	**Rabaul**	**2.97**	**47**	P	**Pn**	**07 54 47.8**	**-0.5**
MANU	**Manus Island**	**4.90**	**328**		**Pn**	**07 55 16.4**	**+1.7**
COEN	**Coen**	**10.19**	**221**	P	**Pn**	**07 56 26.1**	**-1.1**
	baz=10,SNR=24						
COEN	**Coen**	**10.19**	**221**	Pn	**Pn**	**07 56 26.3**	**-0.9**
COEN	**Coen**	**10.19**	**221**	P	**Pn**	**07 56 25.4**	**-1.8**
HNR	**Honiara**	**10.38**	**109**	LR	LR	08 00 35.5	
	comp=Z,1μm,19.3s,baz=286,slow=38						
GENI	**Genyem**	**10.42**	**290**	P	**Pn**	**07 56 28.1**	**-2.2**
	3μm4μm153nm,0.7s						
SMPI	**Sarmi**	**11.99**	**290**	P	**Pn**	**07 56 48.4**	**-3.4**
	2μm1μm86nm,1.5s						
MTSU	**Mount Surprise**	**13.06**	**204**	P	**Pn**	**07 57 06.5**	**0.0**
	baz=13,SNR=20						
MTSU	**Mount Surprise**	**13.06**	**204**	P	**Pn**	**07 57 06.3**	**-0.2**
CTA	**Charters Tower**	**14.25**	**194**	P	**Pn**	**07 57 22.9**	**+0.5**
	14nm,1.0s,baz=22,slow=13,SNR=6.4						
CTA				LR	LR	08 02 52.5	
	comp=Z,2μm,18.5s,baz=8.0,slow=37						
CTA	**Charters Tower**	**14.25**	**194**	P	**Pn**	**07 57 23.1**	**+0.7**
CTAO	**Charters Tower**	**14.25**	**194**	Pn	**Pn**	**07 57 22.2**	**-0.2**
CTAO	**Charters Tower**	**14.25**	**194**	P	**Pn**	**07 57 22.2**	**-0.2**
CTAO	**Charters Tower**	**14.25**	**194**	P	**Pn**	**07 57 23.4**	**+1.0**
PATS	**Pohnpei**	**15.41**	**33**	Pn	**Pn**	**07 57 38.1**	**+0.6**
PATS	**Pohnpei**	**15.41**	**33**	P	**Pn**	**07 57 38.4**	**+0.9**
RK1H	**Rockhampton Ha**	**17.08**	**178**	P	**P**	**07 57 59.8**	**+0.4**
QIS	**Mount Isa**	**17.45**	**214**	P	**Pn**	**07 58 02.0**	**-1.0**
	baz=18,SNR=60						
QIS	**Mount Isa**	**17.45**	**214**	P	**Pn**	**07 58 02.4**	**-0.6**
FAKI	**Fak Fak**	**17.97**	**280**	P	**Pn**	**07 58 10.5**	**+1.1**
KDU	**Kakadu**	**18.41**	**248**	P	**P**	**07 58 13.2**	**-1.0**
	baz=18,SNR=27						
KDU	**Kakadu**	**18.41**	**248**	P	**P**	**07 58 13.8**	**-0.4**
EIDS	**Eidsvold**	**19.07**	**177**	P	**Pn**	**07 58 22.5**	**-0.2**
	baz=19,SNR=20						
EIDS	**Eidsvold**	**19.07**	**177**	P	**P**	**07 58 21.5**	**+0.2**
EIDS				IAmb	IAmb	07 58 23.9	
	comp=Z,104nm,0.9s						
EIDS	**Eidsvold**	**19.07**	**177**	P	**Pn**	**07 58 22.8**	**+0.2**
SWI	**Sorong**	**19.41**	**285**	P	**P**	**07 58 24.2**	**-1.0**
	comp=Z,56nm,0.6s						
MTN	**Manton Dam**	**19.70**	**249**	P	**P**	**07 58 27.6**	**-0.7**
	baz=20,SNR=41						
MTN	**Manton Dam**	**19.70**	**249**	P	**P**	**07 58 27.3**	**-1.0**
MTN				IAmb	IAmb	07 58 29.0	
	comp=Z,152nm,1.0s						
MTN	**Manton Dam**	**19.70**	**249**	P	**P**	**07 58 28.2**	**-0.1**
RMQ	**Roma**	**20.19**	**183**	P	**P**	**07 58 34.7**	**+1.2**
	baz=20,SNR=130						
RMQ	**Roma**	**20.19**	**183**	P	Pn	07 58 35.1	-0.7
GUMO	**Guam**	**20.32**	**346**	P	**P**	**07 58 33.7**	**-1.3**
	comp=Z,148nm,0.7s,baz=203,slow=6.0,SNR=3.8						
GUMO				LR	LR	08 05 45.8	
	comp=Z,1μm,20.1s,baz=148,slow=35						
	comp=Z,148nm,0.7s						
GUMO	**Guam**	**20.32**	**346**	P	**P**	**07 58 35.8**	**+0.8**
GUMO	**Guam**	**20.32**	**346**	P	**P**	**07 58 35.8**	**+0.8**
GUMO				pmax	pmax		
	comp=Z,799nm,1.3s						
WB2	**Warramunga Arr**	**20.41**	**227**	P	**P**	**07 58 35.6**	**-0.3**
WB2				IAmb	IAmb	07 58 53.4	
	comp=Z,125nm,1.1s						
WRA	**Warramunga Arr**	**20.42**	**227**	P	**P**	**07 58 35.5**	**-0.6**
	comp=Z,62nm,0.7s,baz=51,slow=11,SNR=269						
WRA				S	**S**	**08 02 21.1**	**-0.6**
	comp=Z,21nm,1.1s,baz=52,slow=21,SNR=9.9						
WRA				PcP	**PcP**	**08 02 47.4**	**+0.6**
	comp=Z,9.6nm,0.7s,baz=48,slow=2.3,SNR=5.6						
WRA				ScP	**ScP**	**08 06 20.0**	**+1.4**
	comp=Z,7.0nm,1.0s,baz=43,slow=2.4,SNR=5.4						
WRA				LR	LR	08 07 36.2	
	comp=Z,2μm,18.5s,baz=42,slow=40						
WRA				PKiKP	**PKiKP**	**08 10 33.3**	**-2.0**
	comp=Z,0.7nm,0.9s,baz=319,slow=1.1,SNR=5.6						
	comp=Z,62nm,0.7s						
WRA	**Warramunga Arr**	**20.42**	**227**	P	**P**	**07 58 34.9**	**-1.2**
QLP	**Quilpie**	**20.98**	**194**	P	**P**	**07 58 43.0**	**+1.0**
	baz=21,SNR=28						
QLP	**Quilpie**	**20.98**	**194**	P	Pn	07 58 43.8	-1.4
DZM	**Mont Dzumac**	**22.40**	**136**	P	**P**	**07 58 57.6**	**+0.2**
	comp=Z,17nm,0.6s,baz=336,slow=22,SNR=3.5						
	comp=Z,17nm,0.6s						
DZM	**Mont Dzumac**	**22.40**	**136**	*e*P	**P**	**07 58 58.0**	**+0.6**
	comp=Z,110nm,1.0s						
DZM				*e*S	**S**	**08 02 54.7**	**-5.2**
	comp=Z,2μm,24.0s						
DZM				*e*LR	LR	08 04 25.3	
	comp=Z,5μm,22.4s						
DZM	**Mont Dzumac**	**22.40**	**136**	P	**P**	**07 59 01.2**	**+3.8**
YATNC	**Mamie plateau,**	**22.70**	**136**	P	**P**	**07 59 02.1**	**+1.6**
KNRA	**Kununurra**	**22.82**	**244**	P	**P**	**07 59 00.5**	**-1.4**
	baz=23,SNR=62						
KNRA	**Kununurra**	**22.82**	**244**	P	**P**	**07 59 00.1**	**-1.8**
KNRA				IAmb	IAmb	07 59 04.3	
	comp=Z,117nm,0.7s						
KNRA	**Kununurra**	**22.82**	**244**	P	**P**	**07 59 01.4**	**-0.5**
INKA	**Innaminka**	**23.13**	**201**	P	**P**	**07 59 06.5**	**+1.7**
MARNC	**Mare, Loyalty**	**23.14**	**133**	P	**P**	**07 59 05.2**	**+0.2**
AS31	**Alice Springs**	**23.23**	**220**	P	**P**	**07 59 04.6**	**-1.3**
ASAR	**Alice Springs**	**23.23**	**220**	P	**P**	**07 59 05.5**	**-0.5**
	comp=Z,14nm,0.8s,baz=56,slow=8.6,SNR=58						
ASAR				PcP	**PcP**	**08 02 53.0**	**+0.7**
	comp=Z,7.4nm,0.8s,baz=52,slow=3.3,SNR=5.5						
ASAR				S	**S**	**08 03 15.0**	**+1.2**
	comp=Z,10nm,1.0s,baz=30,slow=23,SNR=6.2						
ASAR				ScP	**ScP**	**08 06 27.6**	**+2.0**
	comp=Z,4.8nm,0.9s,baz=63,slow=2.7,SNR=7.4						
ASAR				LR	LR	08 08 22.7	
	comp=Z,2μm,20.9s,baz=40,slow=37						
	comp=Z,14nm,0.8s						
ASAR	**Alice Springs**	**23.23**	**220**	P	**P**	**07 59 05.2**	**-0.8**
PINNC	**Pines Island,**	**23.45**	**136**	P	**P**	**07 59 07.6**	**-0.3**
PINNC				IAmb	IAmb	07 59 18.6	
	comp=Z,64nm,0.9s						
TNTI	**Ternate**	**23.61**	**286**	P	**P**	**07 59 11.4**	**+1.8**
TNTI				IAmb	IAmb	07 59 30.7	
	comp=Z,64nm,1.2s						
TARA	**Tarawa**	**24.12**	**73**	P	**P**	**07 59 13.4**	**-0.7**
ARMA	**Armidale**	**24.12**	**176**	P	**P**	**07 59 14.5**	**+0.4**
	baz=24,SNR=23						
ARMA	**Armidale**	**24.12**	**176**	P	**P**	**07 59 13.9**	**-0.3**
ARMA				IAmb	IAmb	07 59 24.6	
	comp=Z,103nm,1.4s						
ARMA	**Armidale**	**24.12**	**176**	P	**P**	**07 59 14.8**	**+0.7**
OOD	**Oodnadatta**	**25.38**	**211**	P	**P**	**07 59 26.6**	**+1.1**
CMSA	**Cobar Meteorol**	**25.50**	**189**	P	**P**	**07 59 26.5**	**0.0**
	baz=26,SNR=16						
CMSA	**Cobar Meteorol**	**25.50**	**189**	P	**P**	**07 59 26.7**	**+0.1**
SOEI	**Soe**	**25.69**	**260**	P	**P**	**07 59 28.3**	**-0.3**
SOEI	**Soe**	**25.69**	**260**	P	**P**	**07 59 29.7**	**+1.1**
	comp=Z,3μmcomp=Z,264nm,1.0s						
SOEI	**Soe**	**25.69**	**260**	P	**P**	**07 59 28.6**	**0.0**
BATI	**Baumata**	**26.33**	**260**	P	**P**	**07 59 33.8**	**-0.6**
	comp=Z,201nm,0.7s,baz=146,slow=0.9,SNR=19						
BATI	**Baumata**	**26.33**	**260**	P	**P**	**07 59 33.8**	**-0.6**
BATI	**Baumata**	**26.33**	**260**	P	**P**	**07 59 35.0**	**+0.7**
	comp=Z,2μmcomp=Z,157nm,0.7s						
FITZ	**Fitzroy Crossi**	**26.51**	**241**	P	**P**	**07 59 35.4**	**-0.5**
	comp=Z,51nm,0.6s,baz=61,slow=7.5,SNR=207						
FITZ				LR	LR	08 11 19.7	
	comp=Z,1μm,18.9s,baz=56,slow=39						
	comp=Z,51nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.51**	**241**	P	**P**	**07 59 35.4**	**-0.5**
	baz=26,SNR=90						
FITZ	**Fitzroy Crossi**	**26.51**	**241**	P	**P**	**07 59 34.5**	**-1.3**
FITZ				IAmb	IAmb	07 59 53.7	
	comp=Z,134nm,1.1s						
FITZ	**Fitzroy Crossi**	**26.51**	**241**	P	**P**	**07 59 35.8**	**0.0**
LCRK	**Leigh Creek**	**26.52**	**203**	P	**P**	**07 59 37.8**	**+2.1**
LHI	**Lord Howe Isla**	**26.57**	**162**	P	**P**	**07 59 36.1**	**0.0**
	baz=27,SNR=3.1						
STKA	**Stephens Creek**	**26.70**	**196**	P	**P**	**07 59 38.4**	**+1.0**
	comp=Z,63nm,1.1s,baz=8.4,slow=9.9,SNR=27						
STKA				PcP	**PcP**	**08 03 01.3**	**+1.4**
	comp=Z,8.8nm,0.7s,baz=20,slow=2.3,SNR=3.9						
STKA				LR	LR	08 10 57.2	
	comp=Z,2μm,19.1s,baz=37,slow=38						
	comp=Z,63nm,1.1s						
STKA	**Stephens Creek**	**26.70**	**196**	P	**P**	**07 59 39.0**	**+1.6**
	baz=27,SNR=16						
STKA	**Stephens Creek**	**26.70**	**196**	P	**P**	**07 59 39.0**	**+1.6**
STKA	**Stephens Creek**	**26.70**	**196**	*i* P	**P**	**07 59 38.6**	**+1.2**
STKA	**Stephens Creek**	**26.70**	**196**	P	**P**	**07 59 39.0**	**+1.6**
SYDY	**Sydney Hard Ro**	**27.41**	**179**	P	**P**	**07 59 45.7**	**+2.0**
MMRI	**Maumere**	**27.60**	**263**	P	**P**	**07 59 43.7**	**-2.0**
	comp=Z,342nm,0.9s						
MMRI	**Maumere**	**27.60**	**263**	P	**P**	**07 59 44.0**	**-1.7**
DAV	**Davao City (W)**	**27.69**	**298**	LR	LR	08 10 37.1	
	comp=Z,371nm,18.5s,baz=154,slow=36						
GTOI	**Gorontalo**	**27.76**	**283**	P	**P**	**07 59 46.2**	**-0.9**
	baz=28,SNR=34						
WRKA	**Warakurna**	**27.95**	**226**	P	**P**	**07 59 48.3**	**-0.4**
	comp=Z,228nmcomp=Z,11nm,0.8s						
WRKA	**Warakurna**	**27.95**	**226**	P	**P**	**07 59 48.6**	**-0.1**
EDFI	**Ende, Flores**	**28.15**	**263**	P	**P**	**07 59 47.7**	**-3.0**
	comp=Z,1μmcomp=Z,145nm,0.9s						
MULG	**Mulgathing**	**28.23**	**210**	P	**P**	**07 59 53.5**	**+2.4**
HTT	**Hallett**	**28.96**	**199**	P	**P**	**07 59 58.9**	**+1.4**
	baz=29,SNR=4.8						
HTT	**Hallett**	**28.96**	**199**	P	**P**	**07 59 59.1**	**+1.5**
CNB	**Canberra Magne**	**28.96**	**181**	P	**P**	**07 59 58.5**	**+0.9**
CAN	**Canberra**	**28.98**	**182**	P	**P**	**07 59 58.4**	**+0.7**
BSSI	**Bau Bau, Buton**	**29.31**	**269**	P	**P**	**07 59 57.0**	**-3.9**
	comp=Z,1μmcomp=Z,78nm,1.4s						
BASI	**Baing, Sumba**	**29.36**	**260**	P	**P**	**08 00 01.7**	**+0.4**
	comp=Z,3μmcomp=Z,209nm,0.8s						
BBOO	**Buckleboo**	**29.46**	**204**	P	**P**	**08 00 02.5**	**+0.5**
	baz=30,SNR=5.0						
MSVF	**Nonsavu**	**29.70**	**115**	P	**P**	**08 00 05.3**	**+0.9**
	comp=Z,13nm,0.8s,baz=121,slow=17,SNR=2.5						
	comp=Z,13nm,0.8s						
MSVF	**Nonsavu**	**29.70**	**115**	*i* P	**P**	**08 00 03.9**	**-0.5**
MSVF				pmax	pmax		
	comp=Z,42nm,0.8s						
MSVF	**Nonsavu**	**29.70**	**115**	P	**P**	**08 00 07.8**	**+3.4**
MSVF	**Nonsavu**	**29.70**	**115**	P	P	08 00 10.3	+5.9
MSVF				pP	pP	08 00 25.4	+7.1
MSVF				sP	sP	08 00 32.9	+7.9
KAPI	**Kappang**	**30.10**	**271**	PcP	**PcP**	**08 03 08.7**	**+0.1**
	comp=Z,7.4nm,0.6s,baz=183,slow=6.5,SNR=5.0						
KAPI				LR	LR	08 15 08.2	
	comp=Z,443nm,20.9s,baz=84,slow=42						
KAPI	**Kappang**	**30.10**	**271**	P	**P**	**08 00 07.4**	**-0.5**
KAPI				IAmb	IAmb	08 00 26.3	
	comp=Z,31nm,0.9s						
KAPI	**Kappang**	**30.10**	**271**	P	**P**	**08 00 07.4**	**-0.5**
KAPI				pmax	pmax		
	comp=Z,31nm,1.0s						
KAPI	**Kappang**	**30.10**	**271**	P	**P**	**08 00 09.2**	**+1.3**
KAPI	**Kappang**	**30.10**	**271**	P	**P**	**08 00 07.7**	**-0.2**
KAPI				pP	**pP**	**08 00 21.3**	**-1.1**
WBSI	**Waikabubak, Su**	**30.47**	**262**	P	**P**	**08 00 08.3**	**-2.9**
	comp=Z,127nm,1.2s						
TAVE	**Taveuni**	**31.26**	**112**	P	**P**	**08 00 21.2**	**+3.1**
ARPS	**Mount Arapiles**	**31.30**	**193**	P	**P**	**08 00 18.8**	**+0.6**
	baz=31,SNR=6.3						
ARPS	**Mount Arapiles**	**31.30**	**193**	P	**P**	**08 00 18.8**	**+0.6**
TOO	**Toolangi**	**31.47**	**187**	P	**P**	**08 00 21.9**	**+2.1**
	baz=32,SNR=3.9						
TOO	**Toolangi**	**31.47**	**187**	P	**P**	**08 00 20.5**	**+0.7**
TOO				IAmb	IAmb	08 00 31.9	
	comp=Z,27nm,1.1s						
TOO	**Toolangi**	**31.47**	**187**	P	**P**	**08 00 20.5**	**+0.7**
TOO				pmax	pmax		
	comp=Z,27nm,1.1s						
TOO	**Toolangi**	**31.47**	**187**	P	**P**	**08 00 20.8**	**+1.0**
PLAI	**Plampang**	**32.02**	**263**	P	**P**	**08 00 22.9**	**-1.9**
	comp=Z,120nm,0.8s						
PLAI	**Plampang**	**32.02**	**263**	P	**P**	**08 00 22.4**	**-2.4**
LKBA	**Tubou, Lakemba**	**32.69**	**114**	P	**P**	**08 00 33.6**	**+3.0**
MBWA	**Marble Bar**	**32.83**	**240**	P	**P**	**08 00 31.3**	**-0.6**
MBWA	**Marble Bar**	**32.83**	**240**	P	**P**	**08 00 31.5**	**-0.3**
MBWA	**Marble Bar**	**32.83**	**240**	P	**P**	**08 00 31.3**	**-0.6**
MBWA				pP	**pP**	**08 00 45.4**	**-0.7**
MBWA				sP	**sP**	**08 00 51.8**	**-0.9**
PSA00	**Pilbara Seismi**	**32.89**	**239**	P	**P**	**08 00 31.6**	**-0.7**
PSA00				IAmb	IAmb	08 00 32.8	
	comp=Z,75nm,1.9s						
PSA00	**Pilbara Seismi**	**32.89**	**239**	P	**P**	**08 00 32.2**	**-0.2**
MYLDM	**Lahad Datu**	**33.40**	**289**	P	**P**	**08 00 38.7**	**+1.9**
MYLDM				IAmb	IAmb	08 01 19.3	
	comp=Z,28nm,1.0s						
JCJ	**Chichijima**	**33.97**	**348**	LR	LR	08 13 48.5	
	comp=Z,582nm,19.7s,baz=146,slow=35						
BBKI	**Banjar Baru**	**35.11**	**273**	P	**P**	**08 00 50.5**	**-1.2**
	comp=Z,24nm,0.8s						
JAGI	**Jajag, Banyuwa**	**35.59**	**264**	P	**P**	**08 00 51.7**	**-4.1**
	comp=Z,2μmcomp=Z,245nm,0.9s						
JAGI	**Jajag, Banyuwa**	**35.59**	**264**	P	**P**	**08 00 55.7**	**-0.1**
MEEK	**Meekatharra**	**36.11**	**232**	P	**P**	**08 00 59.9**	**-0.3**
	baz=36,SNR=10						
MEEK	**Meekatharra**	**36.11**	**232**	P	**P**	**08 01 00.3**	**+0.1**
MOO	**Moorlands**	**36.16**	**183**	P	**P**	**08 01 01.8**	**+1.5**
PWJI	**Pagerwojo**	**37.91**	**265**	P	**P**	**08 01 13.4**	**-2.2**
	comp=Z,133nm,1.0s						
GIRL	**Giralia**	**38.12**	**241**	P	**P**	**08 01 16.6**	**-0.7**
	baz=38,SNR=6.3						
GIRL	**Giralia**	**38.12**	**241**	P	**P**	**08 01 18.1**	**+0.9**
NGJI	**Ngawi**	**38.25**	**266**	P	**P**	**08 01 16.7**	**-1.8**
	comp=Z,64nm,0.9s						
AFI	**Afiamalu**	**38.38**	**104**	P	**P**	**08 01 21.3**	**+1.7**
	comp=Z,50nm,0.8s,baz=83,slow=16,SNR=7.9						
AFI				LR	LR	08 14 28.2	
	comp=Z,723nm,20.1s,baz=275,slow=32						
	comp=Z,50nm,0.8s						
AFI	**Afiamalu**	**38.38**	**104**	P	**P**	**08 01 19.5**	**-0.1**
AFI	**Afiamalu**	**38.38**	**104**	P	**P**	**08 01 22.9**	**+3.3**
AFI	**Afiamalu**	**38.38**	**104**	P	**P**	**08 01 20.6**	**+1.0**
PCJI	**Pacitan**	**38.53**	**265**	P	**P**	**08 01 19.5**	**-1.3**
	comp=Z,325nm,0.9s						
SBUM	**Sibu**	**38.67**	**282**	P	**P**	**08 01 22.4**	**+0.4**
SBUM	**Sibu**	**38.67**	**282**	P	**P**	**08 01 23.0**	**+1.0**
UGM	**Wanagama**	**39.18**	**265**	P	**P**	**08 01 25.5**	**-0.8**
SMRI	**Semarang**	**39.27**	**266**	P	**P**	**08 01 25.7**	**-1.4**
SMRI	**Semarang**	**39.27**	**266**	P	**P**	**08 01 23.7**	**-3.3**
	comp=Z,109nm,0.7s						
SMRI	**Semarang**	**39.27**	**266**	P	**P**	**08 01 26.7**	**-0.3**
MORW	**Morawa**	**39.27**	**231**	P	**P**	**08 01 26.5**	**-0.3**
	baz=39,SNR=3.4						
MORW	**Morawa**	**39.27**	**231**	P	**P**	**08 01 26.0**	**-0.8**
KLBR	**Kellerberrin**	**39.30**	**226**	P	**P**	**08 01 26.0**	**-1.0**
	baz=39,SNR=5.8						
KLBR	**Kellerberrin**	**39.30**	**226**	P	**P**	**08 01 26.9**	**-0.1**
YOJ	**Yonaguni jima**	**40.25**	**320**	P	**P**	**08 01 36.0**	**+1.0**
YOJ				IAmb	IAmb	08 01 56.5	
	comp=Z,58nm,0.9s						
YOJ	**Yonaguni jima**	**40.25**	**320**	P	**P**	**08 01 36.0**	**+1.0**
YOJ				pmax	pmax		
	comp=Z,58nm,0.9s						
URZ	**Urewera**	**40.28**	**146**	PcP	**PcP**	**08 03 36.5**	**-1.4**
	comp=Z,23nm,0.8s,baz=331,slow=5.0,SNR=7.9						
URZ				LR	LR	08 16 44.8	
	comp=Z,1μm,18.9s,baz=358,slow=34						
NWAO	**Narrogin (SRO)**	**40.40**	**225**	P	**P**	**08 01 34.9**	**-1.2**
NWAO	**Narrogin (SRO)**	**40.40**	**225**	P	**P**	**08 01 34.9**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,249nm,1.9s						
MUN	**Mundaring**	**40.61**	**227**	P	**P**	**08 01 37.9**	**0.0**
	baz=41,SNR=3.3						
YULB	**Yu-li**	**40.63**	**317**	P	**P**	**08 01 39.1**	**+0.9**
YULB				IAmb	IAmb	08 01 51.6	
	comp=Z,21nm,0.6s						
NACB	**Ninganchiao**	**40.97**	**319**	P	**P**	**08 01 42.0**	**+1.1**
NACB				IAmb	IAmb	08 02 00.0	
	comp=Z,37nm,0.9s						
TPUB	**Ta-pu**	**41.02**	**317**	P	**P**	**08 01 41.9**	**+0.5**
TPUB				IAmb	IAmb	08 01 58.3	
	comp=Z,43nm,0.9s						
TPUB	**Ta-pu**	**41.02**	**317**	P	**P**	**08 01 41.4**	**0.0**
TUWZ	**Tuamarina**	**41.05**	**152**	P	**P**	**08 01 41.8**	**+0.4**
SSLB	**Suanglung**	**41.13**	**318**	P	**P**	**08 01 42.1**	**-0.2**
SSLB				IAmb	IAmb	08 01 53.1	
	comp=Z,20nm,0.7s						
SSLB	**Suanglung**	**41.13**	**318**	P	**P**	**08 01 42.0**	**-0.2**
YHNB	**Yeheng**	**41.45**	**319**	P	**P**	**08 01 45.6**	**+0.6**
YHNB	**Yeheng**	**41.45**	**319**	P	**P**	**08 01 45.6**	**+0.6**
TATO	**Taipei**	**41.59**	**319**	P	**P**	**08 01 45.2**	**-0.8**
TATO				IAmb	IAmb	08 02 07.4	
	comp=Z,47nm,0.8s						
RPZ	**Rata Peaks**	**41.69**	**157**	P	**P**	**08 01 47.7**	**+1.1**
	comp=Z,17nm,0.9s,baz=274,slow=3.8,SNR=11						
	comp=Z,17nm,0.9s						
RPZ	**Rata Peaks**	**41.69**	**157**	P	**P**	**08 01 47.2**	**+0.7**
RPZ				IAmb	IAmb	08 01 52.9	

NJ2 LR LR
comp=Z,2μm,21.8s
JRMM Jerantut 48.48 281 P **P** **08 02 43.0 +2.1**
SEHB SEOHWA 48.65 337 P **P** **08 02 41.4 -0.4**
SEHB IAmb IAmb 08 02 44.2
comp=Z,19nm,0.9s
BKNI Bangkinang 49.27 276 P **P** **08 02 46.8 -0.1**
JEW Eniwo 49.44 352 P **P** **08 02 47.6 -0.1**
PPI Padang Panjang 49.80 275 P **P** **08 02 50.2 -0.8**
comp=Z,84nm,0.9s
RAR Rarotonga 50.81 112 LR LR 08 20 18.3
comp=Z,123nm,21.7s,baz=284,slow=31
TIA Tai'an 52.25 326 ⇑P **P** **08 03 08.5 -0.5**
TIA pmax pmax
comp=Z,8.0nm,1.0s
TIA pmax pmax
comp=Z,130nm,3.7s
TIA LR LR
comp=Z,610nm,21.1s
TIA LR LR
comp=Z,730nm,18.1s
TIA LR LR
comp=Z,1μm,18.9s
TEY Ternei 52.42 348 *e*P **P** **08 03 09.0 -1.0**
USRK Ussuriysk Ar. 52.75 344 P **P** **08 03 11.2 -1.3**
comp=Z,18nm,0.9s,baz=177,slow=8.3,SNR=24
USRK LR LR 08 23 20.0
comp=Z,433nm,21.9s,baz=222,slow=33
comp=Z,18nm,0.9s
USRK Ussuriysk Ar. 52.75 344 P **P** **08 03 12.0 -0.5**
USRK Ussuriysk Ar. 52.75 344 P **P** **08 03 12.0 -0.5**
XMAS Kiritimati 53.14 83 P **P** **08 03 16.6 +0.7**
XMAS Kiritimati 53.14 83 P **P** **08 03 18.0 +2.0**
XMAS Kiritimati 53.14 83 P **P** **08 03 17.1 +1.1**
XMAS pP **pP** **08 03 32.5 +1.2**
XMAS sP **sP** **08 03 39.8 +1.9**
YSS Yuzh-Sakhalins 53.33 354 *e*P **P** **08 03 17.1 +0.4**
YSS *e**SP **pP** **08 03 33.1 +0.8**
YSS *e* 08 05 14.9
YSS *e*S **S** **08 10 46.0 +1.9**
YSS *e*SS **SKiKP** **08 14 27.8 -0.6**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS pmax pmax
comp=Z,300nm,3.1s
YSS MLR MLR
comp=Z,600nm,13.0s
YSS Yuzh-Sakhalins 53.33 354 P **P** **08 03 18.2 +1.5**
MDJ Mudanjiang 53.83 342 P **P** **08 03 19.9 -0.5**
MDJ IAmb IAmb 08 03 22.4
comp=Z,36nm,0.9s
MDJ Mudanjiang 53.83 342 P **P** **08 03 21.3 +0.9**
MDJ pmax pmax
comp=Z,41nm,0.9s
MDJ pmax pmax
comp=Z,130nm,3.8s
MDJ LR LR
comp=Z,320nm,22.8s
MDJ LR LR
comp=Z,320nm,20.2s
MDJ LR LR
comp=Z,560nm,21.2s
MDJ Mudanjiang 53.83 342 P **P** **08 03 21.3 +0.9**
LYN LuoYang 53.83 321 *e*P **P** **08 03 24.8 +4.2**
LYN pmax pmax
comp=Z,180nm,4.0s
LYN LR LR
comp=Z,1μm,22.6s
LYN LR LR
comp=Z,1μm,22.9s
HNS HongShan 54.45 326 ⇓P **P** **08 03 25.5 +0.4**
HNS S **S** **08 11 06.3 +6.6**
HNS pmax pmax
comp=Z,16nm,1.0s
HNS LR LR
comp=Z,790nm,17.5s
HNS LR LR
comp=Z,530nm,18.2s
HNS LR LR
comp=Z,1μm,20.6s
CN2 Changchun 54.50 338 *e*P **P** **08 03 25.8 +0.4**
CN2 *e*S **S** **08 10 58.8 -1.4**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,300nm,18.0s
CN2 LR LR
comp=Z,300nm,18.0s
BNX BinXian 55.52 341 ⇓P **P** **08 03 32.0 -0.7**
BNX pmax pmax
comp=Z,25nm,0.9s
BNX pmax pmax
comp=Z,210nm,4.4s
BJT Baijiatuan 55.56 329 P **P** **08 03 33.6 +0.5**
BJT pP **pP** **08 03 46.9 -1.9**
BJI Beijing 55.58 329 P **P** **08 03 33.8 +0.6**
BJI pmax pmax
comp=Z,6.0nm,0.8s
BJI LR LR
comp=Z,100nm,20.1s
BJI LR LR
comp=Z,450nm,17.8s
BJI LR LR
comp=Z,640nm,26.8s
XAN Xi'an 55.76 319 ⇑P **P** **08 03 34.6 -0.1**
XAN S **S** **08 11 18.3 +0.8**
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,150nm,5.0s
XAN LR LR
comp=Z,570nm,18.0s
XAN LR LR
comp=Z,360nm,19.4s
XAN LR LR
comp=Z,980nm,20.4s
CMAR Chiang Mai Arr 55.97 297 P **P** **08 03 34.5 -1.9**
comp=Z,2.5nm,0.4s,baz=116,slow=5.6,SNR=12
CMAR PcP **PcP** **08 04 34.2 -0.2**
comp=Z,2.7nm,0.3s,baz=121,slow=2.8,SNR=5.8
CMAR ScP **ScP** **08 08 30.2 +1.4**
comp=Z,1.0nm,0.3s,baz=114,slow=2.4,SNR=5.4
CMAR LR LR 08 29 41.7
comp=Z,76nm,18.8s,baz=110,slow=38
CMAR PKPPKP **P'P'bc** **08 33 47.5 -2.7**
comp=Z,2.3nm,0.4s,baz=296,slow=4.1,SNR=6.6
comp=Z,2.5nm,0.4s
CMAR Chiang Mai Arr 55.97 297 *i* P **P** **08 03 36.0 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
SKR Severo-Kuril's 56.92 5 *e*P P 08 03 29.1 -13
PZH PanZhiHua 56.93 307 P **P** **08 03 46.0 +2.7**
PZH S **S** **08 11 34.4 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,280nm,5.1s
PZH LR LR
comp=Z,730nm,19.2s
PZH LR LR
comp=Z,870nm,20.6s
PZH LR LR
comp=Z,920nm,19.5s
KLR Kul'dur 57.47 346 LR LR 08 27 28.1
comp=Z,369nm,19.1s,baz=168,slow=35
KLR Kul'dur 57.47 346*ce*P **P** **08 03 45.1 -1.4**
KLR pmax pmax
comp=Z,28nm,1.3s
CD2 Chengdu 57.57 313 P **P** **08 03 47.0 -0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,540nm,14.9s
XLT XiLinHaoTe 58.52 332 *e*P **P** **08 03 55.8 +1.7**
XLT pP pP 08 04 12.8 +2.9
XLT PcP **PcP** **08 04 42.8 -1.2**
XLT ScS **ScS** **08 13 35.8 -3.1**
XLT SS **SS** **08 15 51.3 +4.2**
XLT pmax pmax
comp=Z,22nm,0.9s
XLT pmax pmax
comp=Z,190nm,6.8s
XLT LR LR
comp=Z,550nm,21.4s
XLT LR LR
comp=Z,640nm,22.5s
HHC Hu-ho-hao-te 58.61 326 *e*P **P** **08 03 56.1 +1.3**
HHC S **S** **08 11 57.3 +2.4**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,310nm,4.7s
HHC LR LR
comp=Z,1μm,18.6s
HHC LR LR
comp=Z,1μm,18.0s
HHC LR LR
comp=Z,2μm,19.1s
PETK Petropavlovsk- 59.46 5 P **P** **08 03 58.9 -1.4**
comp=Z,12nm,0.8s,baz=189,slow=9.7,SNR=21
PETK LR LR 08 25 27.6
comp=Z,586nm,20.8s,baz=197,slow=32
comp=Z,12nm,0.8s
PETK Petropavlovsk- 59.46 5 P **P** **08 03 59.8 -0.5**
PETK Petropavlovsk- 59.46 5 P **P** **08 03 59.8 -0.5**
PET Petropavlovsk 59.48 6 *e*P P 08 04 12.8 +12
PET *e*S S 08 12 24.3 +19
PET pmax pmax
comp=Z,200nm,14.1s
PPT Papeete 60.00 107 P **P** **08 04 06.2 +1.5**
comp=Z,34nm,0.8s,baz=63,slow=20,SNR=3.2
comp=Z,34nm,0.8s
PPT2 Papeete2 60.00 107 *e*P **P** **08 04 06.0 +1.2**
comp=Z,106nm,25.5s
PPT2 *e*S **S** **08 12 13.0 -0.5**
comp=Z,132nm,28.5s
PPT2 *e*LQ LQ 08 19 19.3
comp=Z,1μm,34.8s
PPT2 *e*LR LR 08 21 51.6
comp=Z,180nm,22.0s
TIAR Tiarei 60.22 107 *e*P **P** **08 04 08.0 +1.8**
comp=Z,9.0nm,0.8s
LZH Lanzhou 60.33 318 *e*P **P** **08 04 06.8 0.0**
LZH pmax pmax
comp=Z,16nm,1.1s
LZH LR LR
comp=Z,490nm,15.6s
LZH LR LR
comp=Z,750nm,16.3s
LZH LR LR
comp=Z,910nm,17.9s
TBI Tubuai 60.56 113 *e*P **P** **08 04 10.2 +1.8**
comp=Z,119nm,27.0s
TBI *e*S **S** **08 12 19.5 -0.9**
comp=Z,119nm,28.5s
TBI *e*LQ LQ 08 19 32.4
comp=Z,797nm,38.2s
TBI *e*LR LR 08 22 06.9
comp=Z,294nm,32.0s
DRV Dumont d'Urvil 60.74 185 P **P** **08 04 09.4 +0.6**
DRV pP **pwP** **08 04 26.1 -1.3**
DRV sP **sP** **08 04 32.1 +2.4**
MEH Mehetia 61.45 107 *e*P **P** **08 04 15.9 +1.3**
comp=Z,24nm,0.9s
PMOR Pomariorio Ree 61.52 104 *e*P **P** **08 04 16.4 +1.3**
comp=Z,108nm,0.9s
SHEM Shemya Is, Ala 62.20 16 LR LR 08 27 44.9
comp=Z,768nm,20.9s,baz=176,slow=33
SMY Shemya 62.20 16 P **P** **08 04 19.9 +1.0**
SMY Shemya 62.20 16 P **P** **08 04 19.9 +1.0**
SMY pmax pmax
comp=Z,47nm,1.0s
ZEA Zeya 62.73 345 *e*P **P** **08 04 21.5 -0.9**
ZEA *e* 08 04 32.9
ZEA *e* 08 12 56.9
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,50nm,0.8s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
ADK Adak 64.51 22 P **P** **08 04 35.2 +1.1**
ADK IAmb IAmb 08 04 59.6
comp=Z,45nm,1.2s
ADK Adak 64.51 22 P **P** **08 04 35.2 +1.1**
ADK pmax pmax
comp=Z,45nm,1.2s
GTA Gaotai 64.83 319 *e*P **P** **08 04 35.8 -0.9**
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,150nm,4.9s
GTA LR LR
comp=Z,270nm,20.0s
GTA LR LR
comp=Z,190nm,20.0s
GTA LR LR
comp=Z,320nm,23.3s
MA2 Magadan 65.59 0 LR LR 08 32 60.0
comp=Z,317nm,19.2s,baz=146,slow=36
ULN Ulaanbaatar 65.75 330 P **P** **08 04 42.6 0.0**
ULN Ulaanbaatar 65.75 330*ce*P **P** **08 04 41.5 -1.0**
ULN pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 65.75 330 P **P** **08 04 43.1 +0.6**
ULN sP **sP** **08 05 06.3 +1.2**
CASY Casey 65.86 196 P **P** **08 04 42.6 -0.1**
CASY Casey 65.86 196 P **P** **08 04 42.5 -0.2**
SONM Songino Array 66.06 329 P **P** **08 04 45.1 +0.6**
comp=Z,13nm,0.9s,baz=139,slow=5.8,SNR=42
SONM LR LR 08 33 08.6
comp=Z,416nm,20.7s,baz=144,slow=36
SONM PKPPKP **P'P'df** **08 33 24.2 +5.4**
comp=Z,1.6nm,0.8s,baz=279,slow=3.9,SNR=5.7
comp=Z,13nm,0.9s
SONM Songino Array 66.06 329 P **P** **08 04 44.3 -0.2**
SONM IAmb IAmb 08 04 46.9
comp=Z,21nm,1.1s
GOMU GeErMu 66.66 314 P **P** **08 04 49.9 +1.0**
GOMU PcP **PcP** **08 05 19.8 +2.1**
GOMU S **S** **08 13 42.3 +5.7**
GOMU pmax pmax
comp=Z,3.0nm,0.7s
GOMU pmax pmax
comp=Z,100nm,4.5s
GOMU LR LR
comp=Z,170nm,20.8s
GOMU LR LR
comp=Z,510nm,20.6s
GOMU LR LR
comp=Z,570nm,22.4s
TAPN Taplejung 68.75 302 *e*P **P** **08 05 01.3 -0.8**
ODAN Odare 68.86 302 *e*P **P** **08 05 01.8 -1.0**
SEY Seymchan 68.98 1 *i* P **P** **08 05 03.0 +0.6**
SEY pmax pmax
comp=Z,11nm,1.3s
ZAK Zakamensk 69.28 330 *e*P **P** **08 05 02.7 -1.9**
ZAK *e* 08 05 31.1
ZAK pmax pmax
comp=Z,14nm,1.0s
ZAK pmax pmax
comp=Z,12nm,1.1s
RAMN Ramite 69.56 302 *e*P **P** **08 05 06.5 -0.6**
comp=Z,41nm,0.5s
YAK Yakutsk 69.84 350 LR LR 08 34 42.7
comp=Z,185nm,21.6s,baz=90,slow=35
YAK Yakutsk 69.84 350 *i* P **P** **08 05 07.6 -0.1**
YAK pmax pmax
comp=Z,12nm,0.9s
UNV Unalaska Valle 70.09 26 P **P** **08 05 08.9 -0.5**
JIRN Jiri 70.13 302 *e*P **P** **08 05 09.7 -1.0**
comp=Z,25nm,0.7s
BOD Bodaibo 70.14 340 *e*P **P** **08 05 07.0 -2.7**
BOD pmax pmax
comp=Z,14nm,1.7s
GUN Gumba 70.47 302 *e*P **P** **08 05 11.9 -0.9**
comp=Z,30nm,0.4s
CCD Concordia, Ant 70.50 187 P **P** **08 05 12.7 +0.5**
PKI Pulchoki 70.76 302 *e*P **P** **08 05 13.3 -1.2**
comp=Z,21nm,0.9s
PKIN Phulchoki 70.77 302 *e*P **P** **08 05 13.1 -1.4**
comp=Z,8.2nm,0.5s
KKN Kakani 70.94 302 *e*P **P** **08 05 14.8 -0.7**
DMN Daman 71.03 302 *e*P **P** **08 05 15.2 -0.9**
comp=Z,32nm,0.5s
VNDA Vanda 71.54 177 P **P** **08 05 18.8 +0.9**
comp=Z,9.2nm,0.8s,baz=326,slow=6.3,SNR=66
VNDA LR LR 08 32 45.0
comp=Z,261nm,20.0s,baz=15,slow=32
comp=Z,9.2nm,0.8s
VNDA Vanda 71.54 177 P **P** **08 05 18.5 +0.6**
VNDA Vanda 71.54 177 P **P** **08 05 18.7 +0.9**
VNDA pP **PcP** **08 05 35.9 -1.1**
VNDA sP **sP** **08 05 42.6 +3.8**
GKN Gorkha 71.55 302 *e*P **P** **08 05 17.8 -1.3**
SBA Scott Base 72.13 176 P **P** **08 05 23.9 +2.5**
SBA IAmb IAmb 08 06 29.5
comp=Z,51nm,1.8s
SBA Scott Base 72.13 176 P **P** **08 05 23.9 +2.5**
SBA pmax pmax
comp=Z,51nm,1.8s
KNGR Kungurtug, Tuv 72.36 328 *i* P **P** **08 05 23.6 +0.2**
KNGR pmax pmax
comp=Z,7.0nm,0.7s
DANN Dangsing 72.39 302 *e*P **P** **08 05 22.7 -1.6**
comp=Z,22nm,0.6s
HYBB Hyderabad (bro 74.31 290 *e*P **P** **08 05 36.0 +0.5**
WMQ Urumqi 74.90 318 *e*P **P** **08 05 39.8 +1.4**
WMQ LR LR
comp=Z,270nm,20.7s
WMQ LR LR
comp=Z,210nm,20.7s
WMQ LR LR
comp=Z,350nm,23.3s
BILL Bilibino 74.98 6*ce*P **P** **08 05 38.5 +0.3**
BILL *e* 08 08 28.5
BILL *e*PPP PPP 08 10 12.2
BILL *e*S SKSac 08 15 54.7 +13
BILL pmax pmax
comp=Z,7.0nm,0.4s
BILL MLR MLR
comp=Z,328nm,19.0s
N16K Nishlik Lake 77.60 23 P **P** **08 05 51.2 -2.1**
baz=232
ANM Nome 77.97 18 P **P** **08 05 56.3 +1.0**
ANM Nome 77.97 18 P **P** **08 05 56.3 +1.0**
ANM pmax pmax
comp=Z,14nm,1.1s
O18K Koktuh Hills 78.69 25 P **P** **08 06 01.1 +1.8**
baz=236
TIXI Tiksi 78.95 353 LR LR 08 42 49.0
comp=Z,104nm,18.9s,baz=180,slow=37
SVW2 Sparrevohn 79.23 24 P **P** **08 06 02.3 0.0**
SVW2 IAmb IAmb 08 08 27.4
comp=Z,37nm,1.6s
MK31 Makanchi Array 79.56 320 P **P** **08 06 03.8 -0.6**
MK31 Makanchi Array 79.56 320 P **P** **08 06 03.8 -0.6**
MK31 pmax pmax
comp=Z,4.0nm,1.0s
MKAR Makanchi Array 79.56 320 P **P** **08 06 03.7 -0.7**
comp=Z,5.3nm,0.7s,baz=102,slow=7.0,SNR=22
MKAR PKPPKP **P'P'df** **08 33 01.2 +5.4**
comp=Z,0.3nm,0.7s,baz=258,slow=4.7,SNR=3.6
MKAR LR LR 08 40 44.0
comp=Z,388nm,19.2s,baz=84,slow=35
comp=Z,5.3nm,0.7s
MKAR Makanchi Array 79.56 320 P **P** **08 06 03.5 -0.9**
MAKZ Makanchi 79.77 320 P **P** **08 06 05.1 -0.4**
MAKZ Makanchi 79.77 320 P **P** **08 06 05.1 -0.4**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
L19K White Mountain 80.14 23 P **P** **08 06 05.2 -2.0**
baz=236
M19K Big River Lodg 80.16 23 P **P** **08 06 06.1 -1.2**
baz=236
M20K Styx River 80.65 24 P **P** **08 06 08.1 -1.9**
baz=238
ZALV Zalesovo Beam 80.79 327 P **P** **08 06 09.1 -1.6**
comp=Z,4.2nm,0.5s,baz=113,slow=5.5,SNR=9.9
ZALV LR LR 08 42 21.3
comp=Z,355nm,19.3s,baz=110,slow=36
comp=Z,4.2nm,0.5s
ZALV Zalesovo Beam 80.79 327 P **P** **08 06 09.5 -1.3**
K20K Telida 81.09 22 P **P** **08 06 10.5 -1.8**
K20K Telida 81.09 22 P **P** **08 06 10.6 -1.6**
baz=236
J20K Nowinta River 81.52 22 P **P** **08 06 13.2 -1.3**
J20K Nowinta River 81.52 22 P **P** **08 06 12.8 -1.6**
baz=236
PPLA Purkeypile 81.56 23 P **P** **08 06 12.2 -2.7**
baz=238
KSH Kashi 81.73 311 P **P** **08 06 17.0 +0.7**
KSH pmax pmax
comp=Z,8.0nm,0.9s
KSH LR LR
comp=Z,380nm,22.7s
CAST Castle Rocks 81.88 23 P **P** **08 06 14.2 -2.2**
baz=238
CHUM Lake Minchumin 82.04 22 P **P** **08 06 15.6 -1.6**
baz=238
PWL Port Wells 82.13 26 P **P** **08 06 16.0 -1.7**
baz=242
PMR Palmer 82.14 25 P **P** **08 06 15.9 -1.9**
baz=241
SML Sawmill 82.58 25 P **P** **08 06 17.7 -2.5**
baz=242
TRF Thorofare Moun 82.59 23 P **P** **08 06 18.7 -1.6**
baz=240
BPAW Bear Paw Mtn. 82.65 22 P **P** **08 06 18.7 -1.7**
baz=239
GLI Glacier Island 82.68 26 P **P** **08 06 19.0 -1.7**
baz=243
H21K Melozitna Rive 82.81 21 P **P** **08 06 20.0 -1.2**
baz=237
M23K Glacier View 82.83 25 P **P** **08 06 20.8 -0.5**
baz=242
I21K Tanana 82.85 21 P **P** **08 06 19.9 -1.5**
baz=238
WAT1 Susitna Watana 82.97 24 P **P** **08 06 19.6 -2.6**
baz=242
G21K Allakaket 83.04 20 P **P** **08 06 20.2 -2.1**
baz=237
RND Reindeer 83.13 23 P **P** **08 06 19.9 -3.1**
RND Reindeer 83.13 23 P **P** **08 06 19.9 -3.1**
RND pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 83.17 323*ce*P **P** **08 06 21.2 -2.1**
KURK pmax pmax
comp=Z,10.0nm,1.3s
MAW Mawson 83.19 203 P **P** **08 06 23.5 +0.3**
comp=Z,9.7nm,0.8s,baz=89,slow=6.3,SNR=26
MAW LR LR 08 41 38.1
comp=Z,484nm,20.4s,baz=82,slow=34
comp=Z,9.7nm,0.8s
MAW Mawson 83.19 203 P **P** **08 06 23.4 +0.3**
baz=83,SNR=15
MAW Mawson 83.19 203 P **P** **08 06 23.7 +0.6**
MAW Mawson 83.19 203 P **P** **08 06 23.7 +0.6**
MAW pmax pmax
comp=Z,4.0nm,1.2s
WAT6 Susitna Watana 83.19 24 P **P** **08 06 21.1 -2.3**
baz=242
KURBB Kurchatov Arra 83.19 323 PKPPKP **P'P'df** **08 32 51.7 +2.8**
comp=Z,0.7nm,0.2s,baz=276,slow=2.8,SNR=5.9
KURBB LR LR 08 42 54.2
comp=Z,462nm,20.6s,baz=82,slow=35
MLY Manley 83.22 22 P **P** **08 06 20.6 -2.8**
MLY Manley 83.22 22 P **P** **08 06 20.8 -2.6**
baz=239
MCK McKinley 83.25 23 P **P** **08 06 20.4 -3.2**
baz=241
H22K Ishtalitna Cre 83.44 21 P **P** **08 06 22.4 -2.0**
baz=239
F21K Alatna River 83.44 19 P **P** **08 06 22.6 -1.9**
baz=237
KLU Klutina 83.46 26 P **P** **08 06 22.8 -1.9**
baz=244
UCH Uchtor 83.49 314 P **P** **08 06 28.6 +2.8**
SNR=18
DHY Denali Highway 83.56 24 P **P** **08 06 23.2 -2.1**
baz=243
AAK Ala-Archa 83.61 314 P **P** **08 06 28.0 +2.0**
SNR=7.2
AAK Ala-Archa 83.61 314*ce*P **P** **08 06 26.2 +0.2**
AAK pmax pmax
comp=Z,10.0nm,0.7s
NEA2 Nenana 83.62 22 P **P** **08 06 23.4 -2.0**
baz=241
M24K Tolsona, Glenn 83.62 25 P **P** **08 06 23.6 -1.9**
baz=244
QSPA South Pole Qui 83.75 180 P **P** **08 06 26.6 +0.4**
comp=Z,25nm,0.8s,baz=343,slow=1.3,SNR=110
QSPA LR LR 08 43 43.5

comp=Z,403nm,18.4s,baz=18,slow=36
comp=Z,25nm,0.8s
QSPA South Pole Qui 83.75 180 P P 08 06 26.4 +0.1
QSPA IAmb IAmb 08 06 27.8
comp=Z,29nm,0.8s
USP Ospenovka 83.76 315 P P 08 06 29.1 +2.4
SNR=8.0
I23K Minto, Yukon-K 83.78 22 P P 08 06 24.2 -1.9
baz=241
G22K Bettles 83.93 20 P P 08 06 25.2 -1.7
baz=238
F22K John River 84.02 19 P P 08 06 26.4 -0.9
baz=238
H23K Yukon River 84.05 21 P P 08 06 26.1 -1.5
baz=240
AML Almayashu 84.06 313 P P 08 06 28.7 0.0
SNR=20
N25K Chitina, Valde 84.08 26 P P 08 06 28.3 +0.4
N25K IAmb IAmb 08 08 03.8
comp=Z,35nm,1.8s
EKS2 Erkin-Say 84.13 314 P P 08 06 28.8 +0.2
SNR=23
PAX Paxson 84.30 24 P P 08 06 28.3 -0.7
baz=244
G23K Bananza Creek 84.33 20 P P 08 06 27.3 -1.7
baz=240
HDA Harding Lake 84.34 23 P P 08 06 27.0 -2.1
baz=243
ILAR Eielson Array 84.53 23 P P 08 06 26.5 -3.5
comp=Z,5.1nm,0.8s,baz=252,slow=5.2,SNR=22
ILAR LR LR 08 40 10.4
comp=Z,245nm,21.1s,baz=252,slow=33
H24K Noodor Dome 84.66 21 P P 08 06 28.7 -2.0
baz=242
RIDG Independent Ri 84.88 24 P P 08 06 29.5 -2.4
baz=245
J25K Salcha River, 85.05 23 P P 08 06 30.3 -2.4
baz=244
M26K Nabesna, AK 85.10 25 P P 08 06 31.2 -1.8
baz=247
L26K Log Cabin Wild 85.20 25 P P 08 06 32.8 -0.7
baz=246
G24K Hadweenzic Riv 85.21 21 P P 08 06 32.6 -0.8
baz=242
D23K Nanushuk River 85.26 18 P P 08 06 31.9 -1.7
baz=239
CTG Chitna Glacier 85.28 27 P P 08 06 32.4 -1.6
baz=248
CTGM Chitina Glacie 85.28 27 P P 08 06 33.9 -0.2
CTGM IAmb IAmb 08 07 39.7
comp=Z,14nm,1.2s
SCRK Sand Creek 85.33 24 P P 08 06 32.5 -1.6
baz=246
PRP Porcupine Dome 85.38 22 P P 08 06 32.8 -1.6
baz=244
TOLK Toolik Lake Re 85.44 19 P P 08 06 32.9 -1.6
baz=240
F24K Squaw Lake 85.45 20 P P 08 06 33.2 -1.4
baz=242
E24K Your Creek 85.52 19 P P 08 06 33.5 -1.5
baz=241
M27K Edge Creek, AK 85.56 26 P P 08 06 34.0 -1.4
M27K IAmb IAmb 08 07 22.9
comp=Z,10nm,0.9s
M27K Edge Creek, AK 85.56 26 P P 08 06 33.5 -1.9
baz=248,SNR=5.7
H25K Birch Creek 85.60 21 P P 08 06 34.2 -1.1
baz=244
J26L Joseph Creek 85.71 23 P P 08 06 34.8 -1.2
baz=246
C23K Itkillik River 85.73 17 P P 08 06 35.0 -0.9
baz=239
O28M Mount Upton 85.73 28 P P 08 06 34.8 -1.6
baz=249
L27K Beaver Creek, 85.85 25 P P 08 06 35.8 -0.9
baz=248
BCAR Beaver Creek A 85.87 25 P P 08 06 35.6 -1.3
D24K Happy Valley 85.93 18 P P 08 06 36.1 -0.8
baz=241
YUK3 Moose Creek 85.97 27 P P 08 06 37.0 -0.5
baz=249
BVCY Beaver Creek 86.02 26 P P 08 06 36.8 -0.7
baz=249,SNR=6.9
K27K Chicken 86.12 24 P P 08 06 37.9 0.0
baz=247
I26K Coal Creek Min 86.19 23 P P 08 06 37.2 -1.1
baz=246
C24K Franklin Bluff 86.25 18 P P 08 06 36.9 -1.5
baz=241
F25K Christian Rive 86.25 20 P P 08 06 38.0 -0.6
baz=244
O29M Mount Kennedy 86.32 28 P P 08 06 38.0 -1.2
baz=251
NRIK Noril'sk 86.40 342 P P 08 06 36.8 -2.4
comp=Z,4.9nm,0.6s,baz=108,slow=5.6,SNR=7.2
comp=Z,4.9nm,0.6s
NRIK Noril'sk 86.40 342 *ce* **P P 08 06 37.8 -1.4**
NRIK pmax pmax
comp=Z,6.0nm,0.9s
P29M Windy Craggy 86.50 29 P P 08 06 38.7 -1.3
baz=252
E25K Arctic Village 86.51 20 P P 08 06 38.6 -1.2
baz=244
G26K Porcupine Rive 86.63 21 P P 08 06 39.3 -1.0
baz=246
YUK6 Outpost Mounta 86.63 28 P P 08 06 40.1 -0.7
baz=251
YUK4 Talbot Arm 86.63 27 P P 08 06 40.5 -0.3
baz=251
EGAK Eagle 86.77 24 P P 08 06 40.2 -0.9
baz=248
D25K Kavik River 86.78 19 P P 08 06 40.6 -0.6
baz=243
F26K Sheenjek River 86.81 20 P P 08 06 40.5 -0.8
baz=245
I27K Kandik River 86.90 23 P P 08 06 41.4 -0.4
baz=248
HYT Haines Junctio 86.99 28 P P 08 06 42.4 0.0
baz=252
M29M Somme Creek 87.08 26 P P 08 06 42.9 0.0
baz=251
H27K Steamboat Moun 87.17 22 P P 08 06 42.5 -0.7
baz=248
DAWY Dawson 87.23 25 P P 08 06 42.1 -1.4
DAWY IAmb IAmb 08 07 30.9
comp=Z,14nm,1.1s
DAWY Dawson 87.23 25 P P 08 06 44.4 +0.9
baz=250,SNR=10
G27K Doyon Strip 87.35 22 P P 08 06 42.0 -1.9
baz=248
N30M Aishikik Lake 87.38 27 P P 08 06 44.6 +0.4
baz=252
C26K Camden Bay 87.51 18 P P 08 06 44.3 -0.2
baz=244
SKAG Skagway 87.62 30 P P 08 06 45.0 -0.3
baz=254
O30N Mendenhall 87.64 28 P P 08 06 44.9 -0.6
baz=253
C27K Jago River 87.76 19 P P 08 06 45.2 -0.6
baz=246
E27K Coleen River 87.89 20 P P 08 06 45.5 -1.0
baz=248
N31M Braeburn, Yuko 87.99 28 P P 08 06 46.1 -1.0
baz=253
I29M Ogilvie Camp, 88.11 23 P P 08 06 46.4 -1.2
baz=251,SNR=7.3
P32M Atlin 88.45 30 P P 08 06 48.4 -0.9
baz=255
BRVK Borovoye 88.76 324 *ce* **P P 08 06 48.9 -2.0**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
M31M Drury Creek, Y 88.82 27 P P 08 06 50.5 -0.5
baz=254
EPYK Eagle Plains 89.05 23 P P 08 06 51.5 -0.5
baz=252,SNR=6.3
N32M Quiet Lake 89.15 28 P P 08 06 51.7 -0.9
baz=256
FARO Faro, Yukon 89.30 27 P P 08 06 52.2 -1.0
baz=255
BBB Bella Bella 89.93 38 LR LR 08 42 12.5
comp=Z,403nm,19.2s,baz=272,slow=32
DLBC Dease Lake 90.04 31 LR LR 08 40 12.1
comp=Z,548nm,21.8s,baz=278,slow=31
DLBC Dease Lake 90.04 31 P P 08 06 56.1 -0.7
baz=258
MMPY Sheldon Lake, 90.34 27 P P 08 06 57.6 -0.5
baz=257
INK Inuvik 90.78 21 Pdiff P 08 06 59.7 -0.2
comp=Z,4.9nm,0.9s,baz=216,slow=8.9,SNR=11
INK LR LR 08 44 58.4
comp=Z,456nm,20.5s,baz=260,slow=34
INK Inuvik 90.78 21 P P 08 07 00.4 +0.4
baz=255,SNR=7.3
HRA Herat 91.60 304 P P 08 07 02.8 -2.0
HRA IAmb IAmb 08 07 05.0
comp=Z,6.4nm,0.8s
YBH Yreka Blue Hor 92.09 48 LR LR 08 43 18.9
comp=Z,583nm,19.6s,baz=265,slow=32
J04D Umpqua Nationa 92.70 47 P P 08 07 08.0 -1.7
baz=264
J05D Fort Rock, OR 93.34 47 P P 08 07 12.1 -0.5
baz=265
CMB Columbia Colle 93.50 52 P P 08 07 12.2 -1.2
CMB Columbia Colle 93.50 52 P P 08 07 12.2 -1.2
CMB pmax pmax
comp=Z,7.0nm,1.5s
PNTR Pine Nut 94.21 51 P P 08 07 16.0 -0.8
PNTR IAmb IAmb 08 07 23.7
comp=Z,5.0nm,0.8s
PAHR Pah Rah Range 94.42 51 P P 08 07 18.1 +0.4
MDPB Devils Postpil 94.50 53 P P 08 07 17.8 -0.5
PNT Penticton 94.94 41 P P 08 07 16.0 -3.6
PNT pmax pmax
comp=Z,5.0nm,0.8s
LHV Little Huntoon 95.00 52 P P 08 07 18.7 -1.4
LHV IAmb IAmb 08 07 28.1
comp=Z,5.7nm,1.0s
NVAR Mina Array Bea 95.17 52 P P 08 07 20.6 -0.7
comp=Z,1.8nm,0.7s,baz=250,slow=5.9,SNR=16
NVAR PKiKP **PKiKP 08 12 03.4 +1.1**
comp=Z,0.8nm,0.8s,baz=255,slow=2.5,SNR=6.3
NVAR LR LR 08 42 58.1
comp=Z,409nm,21.7s,baz=274,slow=31
comp=Z,1.8nm,0.7s
NVAR Mina Array Bea 95.17 52 P P 08 07 20.1 -1.1
CWC Cottonwood Cre 95.21 54 P P 08 07 20.5 -0.9
baz=266
GEYT Alibeck 95.24 307 P P 08 07 19.4 -2.0
comp=Z,2.9nm,0.6s,baz=61,slow=12,SNR=4.4
GEYT LR LR 08 52 12.1
comp=Z,370nm,21.1s,baz=103,slow=37
comp=Z,2.9nm,0.6s
GEYT Alibeck 95.24 307 P P 08 07 19.3 -2.0
GEYT IAmb IAmb 08 07 21.9
comp=Z,5.3nm,0.9s
NV11 Mina Array Sit 95.28 52 P P 08 07 20.1 -1.6
MPMC Manual Prospec 95.67 54 P P 08 07 23.0 -0.5
baz=266
BELA Belgrano 2 95.99 179 P P 08 07 23.4 -0.5
AKTO Aktyubinsk 96.00 320 LR LR 08 50 48.6
comp=Z,419nm,19.7s,baz=90,slow=36
TPH Tonopah 96.00 52 P P 08 07 23.2 -1.8
TPH Tonopah 96.00 52 P P 08 07 23.2 -1.8
TPH pmax pmax
comp=Z,49nm,1.7s
FURC Furnace Creek, 96.19 54 P P 08 07 25.0 -0.6
baz=267
PFO Pinyon Flats O 96.37 57 LR LR 08 43 58.9
comp=Z,758nm,20.1s,baz=278,slow=31
NEW Newport 96.53 42 LR LR 08 44 03.9
comp=Z,306nm,21.9s,baz=270,slow=31
SHOC Shoshone, Teco 96.64 55 P P 08 07 27.4 -0.4
baz=267
TPNV Topopah Spring 96.71 54 P P 08 07 27.7 -0.5
baz=267
BELC Belle Mtn. Jos 96.77 57 P P 08 07 28.5 0.0
baz=267
GMRC Granite Mounta 97.09 56 P P 08 07 29.7 -0.2
baz=267
R11A Troy Canyon, C 97.30 52 P P 08 07 29.8 -1.0
baz=268
ELK Elko 97.64 50 LR LR 08 46 37.8
comp=Z,406nm,20.0s,baz=284,slow=32
HLID Hailey 98.31 47 P P 08 07 34.8 -0.5
baz=269
TROLL Troll, Antarti 99.10 190 Pdiff Pdif 08 07 37.6 -0.6
SNAA Sanae 100.23 188 Pdiff Pdif 08 07 41.8 -1.3
BOZ Bozeman (W) 100.29 45 P Pdif 08 07 41.7 -2.3
baz=272
VNA3 Neumayer Olymp 101.52 187 PKiKP PKiKP 08 12 11.7 -0.7
VNA3 Neumayer Olymp 101.52 187 Pdiff Pdif 08 07 46.9 -1.9
VNA2 Neumayer--Watz 101.54 187 PKiKP PKiKP 08 12 12.6 +0.2
VNA2 Neumayer--Watz 101.54 187 Pdiff Pdif 08 07 48.6 -0.3
BW06 Boulder Array 101.88 48 P Pdif 08 07 50.1 -1.1
baz=272
PDAR Pinedale Array 101.88 48 P Pdif 08 07 50.5 -0.8
comp=Z,0.7nm,0.8s,baz=222,slow=2.0,SNR=6.9
PDAR PKiKP **PKiKP 08 12 14.3 +0.3**
comp=Z,0.8nm,0.7s,baz=192,slow=1.6,SNR=9.6
VNA1 Neumayer--Stat 101.91 187 Pdiff Pdif 08 07 49.8 -0.7
ISCO Idaho Springs 105.03 51 P PKiKP 08 12 19.6 -0.4
baz=274
SDCO Great Sand Dun 105.26 53 P PKiKP 08 12 20.6 +0.1
baz=274
MNTX Cornudas Mount 105.70 59 P PKiKP 08 12 20.6 -0.5
baz=272
RSSD Black Hills 105.78 46 P PKiKP 08 12 20.8 -0.4
baz=277
TXAR Lajitas Array 107.28 61 Pdiff Pdif 08 08 20.5 +5.1
comp=Z,0.2nm,0.8s,baz=236,slow=6.6,SNR=3.6
TXAR PKiKP **PKiKP 08 12 24.6 +0.5**
comp=Z,0.8nm,0.8s,baz=349,slow=1.3,SNR=9.4
TXAR PKKP **PKKPab 08 23 56.3 +1.4**
comp=Z,0.6nm,0.8s,baz=113,slow=6.8,SNR=5.7
ARCES ARCESS Array B 107.38 342 Pdiff Pdif 08 08 11.9 -2.9
comp=Z,2.1nm,0.8s,baz=46,slow=5.2,SNR=3.7
ARCES PKiKP **PKiKP 08 12 22.1 -1.0**
comp=Z,3.6nm,0.9s,baz=62,slow=2.9,SNR=8.2
ARCES PKKPbc **PKKPbc 08 23 38.2 -3.4**
comp=Z,1.6nm,0.6s,baz=270,slow=1.2,SNR=10
ULM Lac du Bonnet 110.10 39 PKiKP PKiKP 08 12 26.3 -2.4
comp=Z,5.4nm,0.8s,baz=337,slow=5.7,SNR=6.3
ABTX Abilene, Hawle 110.48 58 P PKiKP 08 12 29.5 -0.5
baz=276
R32A Long Quarter, 110.52 51 P PKiKP 08 12 30.2 +0.2
baz=279
JCT Junction City 110.55 60 P PKiKP 08 12 30.3 0.0
baz=275
JCT Junction City 110.55 60 P PKiKP 08 12 29.8 -0.5
baz=275
AGMN Agassiz Nation 110.60 41 P PKiKP 08 12 28.8 -0.9
baz=284
F33A 5 Mile Ranch, 110.90 43 P PKiKP 08 12 29.7 -0.7
baz=283
WMOK White Mounta 110.96 55 P PKiKP 08 12 30.1 -0.8
baz=277
WMOK Wichita Mounta 110.96 55 P PKiKP 08 12 30.2 -0.6
baz=277,SNR=5.3
ECSD EROS Data Cent 111.13 45 P PKiKP 08 12 29.6 -1.3
baz=282
ECSD EROS Data Cent 111.13 45 P PKiKP 08 12 30.2 -0.7
baz=282
KSU1 Kansas State U 112.03 50 P PKiKP 08 12 32.6 -0.1
baz=280
KSU1 Kansas State U 112.03 50 P PKiKP 08 12 32.4 -0.3
baz=280
KMBO Kilima Mbogo 112.45 266 PKiKP PKiKP 08 12 34.5 -0.1
comp=Z,2.9nm,0.7s,baz=70,slow=7.9,SNR=5.3
T35B Sooner Cattle 112.47 53 P PKiKP 08 12 33.6 -0.1
baz=279
F36A Milaca 112.77 43 P PKiKP 08 12 33.1 -0.8
baz=285
TUL1 Leonard 113.21 54 P PKiKP 08 12 35.0 -0.1
baz=280
TUL1 Leonard 113.21 54 P PKiKP 08 12 34.0 -1.1
baz=280
MNK Minsk 113.30 327 *i* PKiKP **PKiKP 08 12 35.1 +0.5**
MNK *i* 08 13 28.0
MNK *i* PPP PPP 08 15 51.6
MNK *i* 08 19 43.9
MNK *i* PS **PS 08 23 04.6 +2.5**
MNK *i* SS SS 08 29 10.3 +3.8
MNK *i* SSS SSS 08 33 23.4
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=E,3.0nm,0.8s
MNK pmax pmax
comp=Z,13nm,0.8s
MNK MLR MLR
comp=E,74nm,22.0s
MNK MLR MLR
comp=Z,513nm,21.0s
MNK MLR MLR
comp=N,17nm,22.0s
MNK Minsk 113.30 327 *i* PKP **PKiKP 08 12 35.2 +0.5**
comp=E,3.0nm,0.8s
MNK *i* PKP **PKiKP 08 12 35.2 +0.5**
comp=N,8.0nm,0.9s
MNK *i* PKP **PKiKP 08 12 35.2 +0.5**
comp=Z,13nm,0.8s,baz=66
MNK *i* PP **PP 08 13 28.1 +2.6**
MNK *i* PPP PPP 08 15 51.6
MNK *i* SKS **SKSdf 08 19 44.0 +2.2**
MNK *i* PS **PS 08 23 04.7 +2.5**
MNK *i* SS **SS 08 29 10.4 +3.9**
MNK *i* SSS SSS 08 33 23.5
MNK *i* LR LR 08 55 01.6
MNK *i* LRM MLR 09 00 47.4
comp=E,74nm,21.7s
MNK *i* LRM MLR 09 00 47.4
comp=Z,513nm,21.0s
MNK *i* LRM MLR 09 01 20.1
comp=N,17nm,21.7s
I37B Waseca 113.33 45 P PKiKP 08 12 34.6 -0.4
baz=285
SPMN Marine on St. 113.42 43 P PKiKP 08 12 33.9 -1.3
baz=286
EYMN Ely 113.51 40 P PKiKP 08 12 34.4 -0.9
baz=288
EYMN Ely 113.51 40 P PKiKP 08 12 34.0 -1.3
baz=288
NACGM Naroch 113.72 328 PP PP 08 13 18.0 -10
baz=66
X37A Clayton 113.77 55 P PKiKP 08 12 36.3 +0.1
baz=279
E38A The Farm, Brul 113.87 42 P PKiKP 08 12 34.9 -1.1
baz=287
AKASG Malin Array Be 113.97 323 PKiKP PKiKP 08 12 35.0 -1.0
comp=N,4.4nm,0.7s,baz=62,slow=2.6,SNR=10
AKASG PKKPbc **PKKPbc 08 23 17.7 -1.8**
comp=N,2.4nm,0.7s,baz=266,slow=3.5,SNR=9.8
AKBB Malin Array Si 113.97 323 *c* *i* PKiKP **PKiKP 08 12 35.3 -0.7**
SCIA State Center 113.98 47 P PKiKP 08 12 35.6 -0.8
baz=284
BRTR Keskin Array B 114.12 311 PKP PKPdf 08 12 36.0 -0.9
comp=N,2.2nm,0.8s,baz=132,slow=1.8,SNR=7.7
U38A Gravette 114.24 53 P PKPdf 08 12 36.2 -0.8
baz=281
P38A Dawn 114.26 49 P PKPdf 08 12 36.3 -0.6
baz=283
HHAR Hobbs 114.62 53 P PKPdf 08 12 37.0 -0.8
baz=281
S39A Bolivar 114.83 51 P PKiKP 08 12 37.4 -0.7
baz=282
G40A Rib Lake 115.17 43 P PKiKP 08 12 37.8 -0.7
baz=288
MIAR Mount Ida 115.23 55 P PKiKP 08 12 38.3 -0.7
baz=280
MIAR Mount Ida 115.23 55 P PKiKP 08 12 38.3 -0.7
baz=280
I40A Norwalk 115.30 44 P PKiKP 08 12 37.6 -1.2
baz=287
L40A Anamosa 115.38 46 P PKiKP 08 12 37.9 -1.1
baz=285
P40A Paris 115.40 49 P PKiKP 08 12 38.6 -0.5
baz=284
SORM Soroca 115.41 321 ⇑P PKiKP 08 12 37.2 -1.7
SORM Soroca 115.41 321 ⇑PKiKP PKiKP 08 12 37.2 -1.7
R40A Maddies Statio 115.52 50 P PKiKP 08 12 38.4 -1.0
baz=283
COWI Conover 115.62 41 P PKiKP 08 12 38.7 -0.7
baz=289
D41A Chassel 115.68 40 P PKiKP 08 12 39.0 -0.4
baz=290
JFWS Jewell Farm 115.83 45 P PKiKP 08 12 38.6 -1.3
baz=287
JFWS Jewell Farm 115.83 45 P PKiKP 08 12 38.5 -1.4
baz=287
CCM Cathedral Cave 116.36 51 P PKPdf 08 12 40.2 -0.9
baz=284
CCM Cathedral Cave 116.36 51 P PKPdf 08 12 39.7 -1.3
baz=284
TPGR Topolog 116.47 317 ⇓P PKPdf 08 12 40.5 -0.6
I42A Draeger Farm, 116.47 44 P PKPdf 08 12 39.9 -1.2
baz=288
L42A Oliver, Polo 116.50 46 P PKPdf 08 12 40.3 -0.9
baz=287
BOSA Boshof 116.52 234 PKP PKPdf 08 12 40.6 -1.2
comp=N,3.2nm,0.8s,baz=90,slow=3.5,SNR=4.8
CFR Carcaliu 116.55 318 P PKPdf 08 12 40.4 -0.8
CFR Carcaliu 116.55 318 PKiKP PKPdf 08 12 40.4 -0.8
TIRR Tirgusor 116.60 317 ⇑P PKPdf 08 12 40.4 -0.9
TIRR Tirgusor 116.60 317 ⇑PKiKP PKPdf 08 12 40.4 -0.9
MFTR Murfatlar 116.68 317 ⇓P PKPdf 08 12 37.5 -4.0
HARR Harsova 116.85 317 ⇓P PKPdf 08 12 41.3 -0.5
HARR Harsova 116.85 317 ⇓PKiKP PKPdf 08 12 41.3 -0.5
E43A Lone Tree Farm 116.93 41 P PKPdf 08 12 40.8 -1.1
baz=291
FVM French Village 117.00 50 P PKPdf 08 12 41.9 -0.4
baz=284
H43A Windswept, Lux 117.07 43 P PKPdf 08 12 40.9 -1.4
baz=289
HDIL Hopedale 117.18 47 P PKPdf 08 12 42.3 -0.3
baz=286
HDIL Hopedale 117.18 47 P PKPdf 08 12 41.5 -1.0
baz=286
VRI Vrincioaia 117.25 319 P PKPdf 08 12 41.6 -1.0
VRI Vrincioaia 117.25 319 PKiKP PKPdf 08 12 41.6 -1.0
NB2 NORSAR Subarra 117.25 339 PKPdf PKPdf 08 12 40.5 -1.6
comp=Z,7.8nm,2.0s,baz=44,slow=1.9
NOA NORSAR Array B 117.25 339 PKP PKPdf 08 12 41.6 -0.6
comp=Z,1.1nm,0.8s,baz=53,slow=1.9,SNR=6.0
BIZ Bicaz 117.26 320 ⇑P PKPdf 08 12 42.4 -0.1
P43A Skaggs, Pawnee 117.26 48 P PKPdf 08 12 42.5 -0.2
baz=286
PBMO Poplar Bluff 117.28 52 P PKPdf 08 12 41.6 -1.2
baz=283
BURAR Bucovina Array 117.56 321 ⇑P PKiKP 08 12 43.6 +0.4
BURAR Bucovina Array 117.56 321 ⇑PKiKP PKiKP 08 12 43.6 +0.4
NEHR Nehoiu 117.69 319 ⇓P PKPdf 08 12 42.9 -0.6
L44A Lake County Fo 117.70 45 P PKPdf 08 12 42.4 -1.1
baz=288
Q44A Meyer Farm, Va 117.84 49 P PKPdf 08 12 43.2 -0.7
baz=286
M44A Midewin, Midew 117.85 46 P PKPdf 08 12 43.3 -0.5
baz=288
MLR Muntele Rosu 117.89 319 ⇓P PKPdf 08 12 43.2 -0.8
MLR Muntele Rosu 117.89 319 ⇓PKiKP PKPdf 08 12 43.2 -0.8
O44A Mansfield 117.90 48 P PKPdf 08 12 43.5 -0.5
baz=287
DOPR Dopca 118.08 319 ⇑P PKPdf 08 12 43.0 -1.2
344A Westbrook Farm 118.14 58 P PKiKP 08 12 45.0 +0.3
baz=280,SNR=6.5
G45A Suttons Bay 118.28 42 P PKPdf 08 12 44.0 -0.5
baz=291
G45A P PKPdf 08 12 44.0 -0.5
baz=291
VOIR 118.50 319 ⇓P PKPdf 08 12 44.2 -0.9
VOIR 118.50 319 ⇓PKiKP PKPdf 08 12 44.2 -0.9
OLIL Olney 118.57 49 P PKPdf 08 12 45.0 -0.2
baz=286
OXF Oxford 118.61 54 P PKPdf 08 12 44.2 -1.3
baz=283
W45A Hickory Valley 118.64 53 P PKPdf 08 12 44.6 -0.9
baz=284
Y45A Yeager Farm, C 118.64 55 P PKPdf 08 12 44.7 -0.9
baz=282
E46A Sault Ste Mari 118.66 40 P PKPdf 08 12 44.6 -0.6
baz=293
ARR Arges 118.80 319 ⇓P PKiKP 08 12 46.8 +1.1
SFIN Lafayette 118.84 47 P PKPdf 08 12 45.0 -0.7
baz=288
SFIN Lafayette 118.84 47 P PKPdf 08 12 45.1 -0.7
baz=288,SNR=7.1
HUMR Humele 118.88 318 ⇑P PKPdf 08 12 44.9 -0.8
MBAR Mbarara 118.97 266 *c* *i* PKiKP **PKiKP 08 12 49.3 +2.2**
MBAR pmax pmax
comp=Z,9.0nm,1.3s
P46A Rosedale 118.98 48 P PKPdf 08 12 45.8 -0.2
baz=287
GLMI Grayling 119.05 42 P PKPdf 08 12 45.8 -0.3
baz=292
GLMI Grayling 119.05 42 P PKPdf 08 12 45.2 -0.9
baz=292
CRVS Cervenica-Dubn 119.30 324 *e* PKiKP **PKPdf 08 12 46.4 0.0**
CRVS Cervenica-Dubn 119.30 324 *e* PKP **PKPdf 08 12 46.4 0.0**
LOT Lotru 119.33 319 ⇑P PKPdf 08 12 45.5 -1.2
DRGR 119.46 321 ⇓P PKPdf 08 12 46.0 -0.8
DRGR 119.46 321 ⇓PKiKP PKPdf 08 12 46.0 -0.8
WVT Waverly 119.47 52 P PKPdf 08 12 45.7 -1.4

baz=285
WVT Waverly 119.47 52 P PKPdf 08 12 45.7 -1.4
baz=285
J47A Sunmer 119.49 43 P PKPdf 08 12 46.4 -0.5
baz=291
J47A P PKPdf 08 12 46.4 -0.5
baz=291
N47A Urbana 119.69 46 P PKPdf 08 12 46.8 -0.6
baz=289
N47A P PKPdf 08 12 46.8 -0.6
baz=289
T47A Sharon Grove 119.81 51 P PKPdf 08 12 46.7 -1.0
baz=286
Z47A Carrollton 119.99 55 P PKPdf 08 12 47.1 -1.1
baz=283,SNR=5.8
GZR Gura Zlata 119.99 320 ⇓P PKPdf 08 12 47.0 -0.9
GZR Gura Zlata 119.99 320 ⇓PKIKP PKPdf 08 12 47.0 -0.9
L48A N Adams 120.22 45 P PKPdf 08 12 47.6 -0.8
baz=291
L48A P PKPdf 08 12 47.6 -0.8
baz=291
O48B Farmland 120.28 47 P PKPdf 08 12 48.0 -0.6
baz=289
O48B Farmland 120.28 47 P PKPdf 08 12 47.4 -1.2
baz=289,SNR=16
PLCA Paso Flores 120.29 145 PKP PKiKP 08 12 49.4 +0.6
comp=Z,4.0nm,0.7s,baz=226,slow=1.8,SNR=14
PLCA Paso Flores 120.29 145 *e*P PKiKP 08 12 49.2 +0.4
SIRR Siria 120.34 321 ⇑P PKPdf 08 12 47.9 -0.6
LANS Liptovska Anna 120.34 325 *e*PKIKP PKiKP 08 12 49.1 +0.5
LANS Liptovska Anna 120.34 325 *e*PKP PKiKP 08 12 49.0 +0.5
P48A Milroy 120.34 48 P PKPdf 08 12 47.5 -1.1
baz=289
P48A P PKPdf 08 12 47.5 -1.1
baz=289
V48A Smith Brothers 120.36 52 P PKPdf 08 12 46.9 -1.9
baz=285
HERR Herculane 120.43 319 ⇓P PKPdf 08 12 47.8 -0.8
X48A Hartselle 120.52 54 P PKPdf 08 12 47.8 -1.3
baz=284,SNR=6.7
I49A Point Hope 120.58 42 P PKPdf 08 12 48.3 -0.6
baz=293
I49A P PKPdf 08 12 48.3 -0.6
baz=293
AAM Ann Arbor 120.63 44 P PKPdf 08 12 48.5 -0.6
baz=292
AAM Ann Arbor 120.63 44 P PKPdf 08 12 48.0 -1.1
baz=292
BZS Buzias 120.64 320 ⇓P PKPdf 08 12 48.3 -0.7
BZS Buzias 120.64 320 ⇓PKIKP PKPdf 08 12 48.3 -0.7
PSZ Piszkesteto 120.68 323 ⇑P PKPdf 08 12 48.9 -0.3
PSZ Piszkesteto 120.68 323 ⇑PKIKP PKPdf 08 12 48.9 -0.3
OKC Ostrava-Krasne 120.75 326 AMS AMS 09 04 30.0
comp=Z,500nm,21.3s
N49A Columbus Grove 120.76 46 P PKPdf 08 12 48.7 -0.7
baz=290
N49A P PKPdf 08 12 48.7 -0.7
baz=290
BLKB Belogradchik 120.76 318 ⇓P PKPdf 08 12 48.7 -0.7
VTS Vitosha 120.77 316 ⇑P PKPdf 08 12 48.1 -1.5
VTS Vitosha 120.77 316 ⇑PKIKP PKPdf 08 12 48.1 -1.5
P49A Miami Univ. Ec 120.84 47 P PKPdf 08 12 48.9 -0.7
baz=289
P49A Miami Univ. Ec 120.84 47 P PKPdf 08 12 48.6 -1.0
baz=289,SNR=17
O49A Covington 120.90 46 P PKPdf 08 12 49.1 -0.6
baz=290
O49A P PKPdf 08 12 49.1 -0.6
baz=290
R49A Shelbyville 120.90 49 P PKPdf 08 12 48.7 -1.1
baz=288
R49A P PKPdf 08 12 48.7 -1.1
baz=288
LRAL Lakeview Retre 120.90 55 P PKPdf 08 12 49.0 -0.9
baz=284,SNR=17
LRAL Lakeview Retre 120.90 55 P PKPdf 08 12 48.8 -1.1
baz=284
MDVR Moldovita 120.93 319 ⇓P PKPdf 08 12 48.9 -0.8
U49A Red Boiling Sp 120.96 51 P PKPdf 08 12 49.0 -0.9
baz=287
VYHS Vyhne 121.03 324 *e*PKIKP PKPdf 08 12 48.9 -0.8
VYHS Vyhne 121.03 324 *e*PKP PKPdf 08 12 48.9 -0.8
MORC Moravsky Berou 121.12 326 ⇑P PKPdf 08 12 49.8 -0.1
MORC Moravsky Berou 121.12 326 ⇑PKIKP PKPdf 08 12 49.8 -0.1
MORC Moravsky Berou 121.12 326 *e*PKP PKPdf 08 12 49.6 -0.3
K50A Casco 121.16 43 P PKPdf 08 12 49.2 -0.9
baz=293
K50A P PKPdf 08 12 49.2 -0.9
baz=293
Y49A Blount Mountai 121.18 54 P PKPdf 08 12 49.4 -1.1
baz=285,SNR=11
BRAL Brewton 121.28 57 P PKPdf 08 12 49.9 -0.8
baz=283
KRLC Kraliky 121.38 327 *e*PKIKP PKPdf 08 12 50.4 0.0
KRLC MLR MLR
comp=Z,400nm,19.3s
KRLC Kraliky 121.38 327 *e*PKPDF PKPdf 08 12 50.4 0.0
KRLC AMS AMS 09 05 40.0
comp=Z,400nm,19.3s
M50A Fremont 121.39 45 P PKPdf 08 12 50.2 -0.4
baz=292
M50A P PKPdf 08 12 50.2 -0.4
baz=292
BOVS Bovan 121.40 318 ⇓P PKPdf 08 12 49.3 -1.3
OSTC Ostas 121.43 327 *e*PKPDF PKPdf 08 12 50.3 -0.2
OSTC AMS AMS 09 06 40.0
comp=Z,500nm,21.4s
DPC Dobruska-Polom 121.49 327 *e*PKIKP PKPdf 08 12 50.3 -0.3
DPC MLR MLR
comp=Z,500nm,21.9s
DPC Dobruska-Polom 121.49 327 *e*PKPDF PKPdf 08 12 50.3 -0.3
DPC AMS AMS 09 06 30.0
comp=Z,500nm,21.9s
JAVC Velka Javorina 121.52 325 *e*PKP PKiKP 08 12 51.0 +0.1
R50A Paris 121.53 49 P PKPdf 08 12 50.0 -1.0
baz=289
R50A P PKPdf 08 12 50.0 -1.0
baz=289
T50A Nancy 121.54 50 P PKPdf 08 12 49.8 -1.3
baz=288
T50A P PKPdf 08 12 49.8 -1.3
baz=288
UPC Upice 121.57 327 *e*PKIKP PKiKP 08 12 51.5 +0.6
UPC MLR MLR
comp=Z,500nm,21.2s
UPC Upice 121.57 327 *e*PKPDF PKiKP 08 12 51.5 +0.6
UPC AMS AMS 09 07 00.0
comp=Z,500nm,21.2s
W50A Signal Mountai 121.70 52 P PKPdf 08 12 50.5 -1.0
baz=286,SNR=27
250A Grady 121.75 56 P PKPdf 08 12 50.3 -1.3
baz=284,SNR=6.5
ACSO Alum Creek Sta 121.86 46 P PKPdf 08 12 50.5 -1.1
baz=291,SNR=14
VRAC Vranov 121.89 326 ⇑P PKPdf 08 12 51.2 -0.2
VRAC Vranov 121.89 326 PKP PKPdf 08 12 50.8 -0.6
comp=Z,3.7nm,0.4s,baz=70,slow=3.0,SNR=5.0
VRAC Vranov 121.89 326 ⇑PKIKP PKPdf 08 12 51.2 -0.2
VRAC Vranov 121.89 326 *e*PKP PKPdf 08 12 51.0 -0.4
IDI Anoyia 121.96 308 ⇓P PKPdf 08 12 51.5 -0.5
MODS Modra-Piesok 121.99 325 *e*PKIKP PKiKP 08 12 51.7 -0.1
MODS Modra-Piesok 121.99 325 *e*PKP PKPdf 08 12 51.6 0.0
FRGS Fruska Gora 121.99 320 ⇓P PKPdf 08 12 51.2 -0.5
FRGS Fruska Gora 121.99 320 ⇑P PKPdf 08 12 50.6 -1.1
Q51A Peebles 122.01 47 P PKPdf 08 12 50.9 -1.0
baz=290
Q51A P PKPdf 08 12 50.9 -1.0
baz=290
N51A Ashland 122.04 45 P PKPdf 08 12 51.3 -0.6
baz=292
N51A P PKPdf 08 12 51.3 -0.6
baz=292
P51A Williamsport 122.06 47 P PKPdf 08 12 50.9 -1.1
baz=290
P51A P PKPdf 08 12 50.9 -1.1
baz=290
KRUC Moravsky 122.13 326 *e*PKP PKPdf 08 12 51.2 -0.6
MORH Mrgy, Hungar 122.23 322 ⇑P PKPdf 08 12 51.4 -0.7
MORH Mrgy, Hungar 122.23 322 PKP PKPdf 08 12 51.2 -0.9
V51A Loudon 122.28 51 P PKPdf 08 12 51.8 -0.7
baz=287,SNR=11
S51A Beattyville 122.29 49 P PKPdf 08 12 51.6 -0.9
baz=289,SNR=35
S51A P PKPdf 08 12 51.6 -0.9
baz=289,SNR=35
Z51A Franklin 122.31 54 P PKPdf 08 12 51.9 -0.8
baz=285,SNR=17
PVCC Panska Ves 122.32 328 AMS AMS 09 06 10.0
comp=Z,300nm,17.9s
DIVS Divibare 122.34 319 ⇑*i*P PKPdf 08 12 51.6 -0.9
MPLH Magyarpolny 122.44 323 PKP PKPdf 08 12 52.3 -0.2
BRG Berggiesshubel 122.45 329 *i*PKP PKPdf 08 12 52.2 -0.2
BRG Amp 08 12 53.8
comp=Z,17nm,0.9s
BRG Berggiesshubel 122.45 329 *i*PKIKP PKPdf 08 12 52.1 -0.2
BRG pmax pmax
comp=Z,17nm,0.9s
BRG MLR MLR
comp=N,182nm,21.3s
BRG MLR MLR
comp=E,308nm,21.2s
BRG MLR MLR
comp=Z,427nm,20.9s
M52A Chesterland 122.51 44 P PKPdf 08 12 52.7 -0.1
baz=293
M52A P PKPdf 08 12 52.7 -0.1
baz=293
TREC Trest 122.51 326 AMS AMS 09 05 20.0
comp=Z,500nm,19.7s
PRU Pruhonice 122.64 327 *e*PKIKP PKPdf 08 12 52.2 -0.6
PRU MLR MLR
comp=Z,300nm,17.4s
PRU Pruhonice 122.64 327 *e*PKPDF PKPdf 08 12 52.2 -0.6
PRU AMS AMS 09 06 30.0
comp=Z,300nm,17.4s
TZTN Tazewell 122.67 50 P PKPdf 08 12 53.1 -0.2
baz=288,SNR=6.8
TZTN Tazewell 122.67 50 P PKPdf 08 12 52.6 -0.7
baz=288
P52A Corning 122.68 46 P PKPdf 08 12 51.9 -1.3
baz=291,SNR=17
CLL Collm 122.68 329 *i*PKIKP PKPdf 08 12 52.3 -0.5
CLL pmax pmax
comp=Z,14nm,0.8s
CLL MLR MLR
comp=Z,500nm,21.5s
CLL Collm 122.68 329 *i*PKPdf PKPdf 08 12 52.3 -0.5
comp=Z,14nm,0.8s
CLL *e*PP PP 08 14 30.0 -0.4
CLL *e*PPP PPP 08 17 06.0
CLL *e*SKSac SKSac 08 19 48.0 -0.7
CLL *e*SKKSac SKKSac 08 21 12.0 -13
CLL *e*PS PS 08 24 22.0 -4.8
CLL *e*PPS PPS 08 25 50.0
CLL *e*sSS 08 31 48.0
CLL *e*SSS SSS 08 35 42.0
CLL *ex* x 08 36 54.0
CLL *ex* x 08 40 54.0
CLL *ex* x 08 45 18.0
CLL Lm MLR 09 07 00.0
comp=Z,500nm,21.5s
O52A Adamsville 122.72 46 P PKPdf 08 12 52.6 -0.6
baz=292
O52A P PKPdf 08 12 52.6 -0.6
baz=292
TKL Tuckaleechee C 122.77 51 P PKPdf 08 12 53.3 -0.2
baz=288,SNR=19
W52A Murphy 122.81 52 P PKPdf 08 12 53.5 -0.1
baz=287,SNR=18
Q52A Bidwell 122.82 47 P PKPdf 08 12 52.6 -0.8
baz=291
Q52A P PKPdf 08 12 52.6 -0.8
baz=291
V52A Sevierville 122.85 51 P PKPdf 08 12 53.6 -0.1
baz=288,SNR=20
152A Waverly Hall 122.85 55 P PKPdf 08 12 53.3 -0.4
baz=285,SNR=22
RONA Rosalia, Austr 122.90 324 *i*P PKPdf 08 12 53.0 -0.4
comp=Z,11nm,0.9s,SNR=5.5
RUDO Rudo 122.95 319 ⇑*i*P PKPdf 08 12 52.0 -1.6
352A Blakely 122.98 56 P PKiKP 08 12 54.1 -0.1
baz=284,SNR=8.4
M53A WI Miller and 123.02 44 P PKPdf 08 12 52.7 -1.1
baz=294,SNR=8.7
CONA Conrad Observa 123.03 325 *i*P PKPdf 08 12 52.9 -0.8
comp=Z,8.9nm,0.8s,SNR=6.5
Y52A Lilburn 123.06 53 P PKPdf 08 12 54.1 0.0
baz=286,SNR=18
Y52A P PKPdf 08 12 54.1 0.0
baz=286,SNR=18
O53A New Philadelph 123.11 45 P PKPdf 08 12 53.1 -0.9
baz=292,SNR=13
N53A Lisbon 123.16 45 P PKPdf 08 12 53.8 -0.2
baz=293
N53A P PKPdf 08 12 53.8 -0.2
baz=293
ERPA Erie 123.21 43 P PKPdf 08 12 53.7 -0.4
baz=295
TGUH Tegucigalpa,Un 123.23 77 *e*P PKiKP 08 12 55.6 +0.4
SCHQ Schefferville 123.25 24 PKP PKPdf 08 12 53.0 -0.8
comp=Z,5.0nm,0.8s,baz=24,slow=3.6,SNR=6.3
P53A Whipple 123.27 46 P PKPdf 08 12 53.9 -0.5
baz=292,SNR=20
P53A P PKPdf 08 12 53.9 -0.5
baz=292,SNR=20
R53A Hurricane 123.28 48 P PKPdf 08 12 53.9 -0.5
baz=291,SNR=12
R53A P PKPdf 08 12 53.9 -0.5
baz=291,SNR=12
CKRC Cesky Krumlov 123.42 326 *e*PKPDF PKPdf 08 12 54.2 -0.1
UPM Unac-Piva 123.44 319 ⇑*i*P PKPdf 08 12 53.6 -1.2
V53A Saluda 123.51 51 P PKPdf 08 12 54.5 -0.4
baz=288,SNR=15
V53A P PKPdf 08 12 54.5 -0.4
baz=288,SNR=15
PDG Podgorica 123.54 318 ⇑P PKPdf 08 12 53.9 -0.8
ARSA Arzberg 123.58 324 *e*P PKPdf 08 12 54.1 -0.6
comp=Z,5.9nm,1.0s
CASEE Lake Jocassee 123.62 52 P PKiKP 08 12 55.4 0.0
baz=288,SNR=16
KHC Kasperske Hory 123.64 327 *e*PKIKP PKPdf 08 12 54.0 -0.8
KHC MLR MLR
comp=Z,400nm,20.6s
KHC Kasperske Hory 123.64 327 *e*PKPDF PKPdf 08 12 54.0 -0.8
KHC AMS AMS 09 06 30.0
comp=Z,400nm,20.6s
GOGA Godfrey 123.66 54 P PKPdf 08 12 54.7 -0.6
baz=286,SNR=12
GOGA Godfrey 123.66 54 P PKPdf 08 12 54.6 -0.6
baz=286
DRME Dracevica, Mon 123.69 317 ⇑*i*P PKPdf 08 12 53.6 -1.4
O54A Avella 123.72 45 P PKPdf 08 12 54.6 -0.6
baz=293,SNR=20
O54A P PKPdf 08 12 54.6 -0.6
baz=293,SNR=20
GERES GERESS Array B 123.74 327 PKP PKPdf 08 12 54.1 -0.9
comp=Z,8.6nm,0.7s,baz=230,slow=3.3,SNR=58
BRY Bratogost 123.81 318 ⇑*i*P PKPdf 08 12 54.5 -0.9
BLY Banja Luka 123.83 321 *e*P PKPdf 08 12 54.3 -0.9
Q54A Coxs Mills 123.86 47 P PKPdf 08 12 55.0 -0.4
baz=292,SNR=25
Q54A P PKPdf 08 12 55.0 -0.4
baz=292,SNR=25
UPAO U. Pittsburgh 123.86 45 P PKPdf 08 12 55.0 -0.4
baz=294
A051A Mrakovica 123.88 321 ⇑*i*P PKPdf 08 12 54.2 -1.2
S54A Dingess, Beckl 123.94 48 P PKPdf 08 12 55.0 -0.7
baz=291,SNR=21
S54A P PKPdf 08 12 55.0 -0.7
baz=291,SNR=21
MOA Molln 123.98 325 *e*P PKPdf 08 12 54.9 -0.5
comp=Z,5.9nm,0.8s
U54A Nelsons Funny 123.99 50 P PKPdf 08 12 55.4 -0.5
baz=290,SNR=5.5
U54A P PKPdf 08 12 55.4 -0.5
baz=290,SNR=5.5
WVNY West Valley, N 124.02 42 P PKPdf 08 12 55.2 -0.5
baz=296,SNR=6.4
HCY Herceg Novi 124.04 318 ⇑*i*P PKPdf 08 12 54.7 -1.0
TIGA Tifton 124.10 56 P PKPdf 08 12 56.2 +0.1
baz=285,SNR=8.9
TIGA Tifton 124.10 56 P PKPdf 08 12 55.6 -0.5
baz=285
PERS Pernice 124.14 324 *i*PKPdf PKPdf 08 12 54.6 -1.2
J55A Hilton 124.15 41 P PKPdf 08 12 55.0 -0.8
baz=297
J55A P PKPdf 08 12 55.0 -0.8
baz=297
SOKA Soboth 124.17 324 *i*P PKPdf 08 12 55.1 -0.8
comp=Z,14nm,0.9s,SNR=8.9
MCWV Mont Chateau 124.31 46 P PKPdf 08 12 55.8 -0.5
baz=293,SNR=9.0
MCWV Mont Chateau 124.31 46 P PKPdf 08 12 55.5 -0.8
baz=293,SNR=9.0
M55A Ridgway 124.31 43 P PKPdf 08 12 55.8 -0.5
baz=295,SNR=8.7
M55A P PKPdf 08 12 55.8 -0.5
baz=295,SNR=8.7
CRES Cresnjev 124.36 323 ⇑*i*P PKPdf 08 12 55.1 -1.1
CRES Cresnjev 124.36 323 *i*PKPdf PKPdf 08 12 55.3 -0.9
STON Ston 124.38 319 ⇑*i*P PKPdf 08 12 54.2 -2.1
HODGE Hodges 124.39 53 P PKPdf 08 12 56.3 -0.3
baz=288,SNR=28
BIOA Bad Ischl, Aus 124.42 326 *e*P PKPdf 08 12 55.2 -1.1
comp=Z,7.5nm,1.0s
PSDB Penn State Uni 124.47 44 P PKPdf 08 12 56.1 -0.5
baz=295
OBKA Obir 124.54 324 ⇑*i*P PKPdf 08 12 55.1 -1.6
OBKA Obir 124.54 324 *e*P PKPdf 08 12 55.3 -1.3
comp=Z,5.5nm,1.1s
PAULI Pauline 124.55 52 P PKPdf 08 12 56.5 -0.4
baz=288
R55A Marlinton 124.64 47 P PKPdf 08 12 56.1 -0.9
baz=292,SNR=27
R55A P PKPdf 08 12 56.1 -0.9
baz=292,SNR=27
BOJS Bojanci 124.64 323 ⇑*i*P PKPdf 08 12 56.1 -0.7
BOJS Bojanci 124.64 323 *i*PKPdf PKPdf 08 12 56.2 -0.6
V55A Taylorsville 124.68 50 P PKPdf 08 12 56.4 -0.7
baz=290,SNR=14
V55A P PKPdf 08 12 56.4 -0.7
baz=290,SNR=14
J56A Wolcott 124.77 40 P PKPdf 08 12 56.2 -0.9
baz=298
J56A P PKPdf 08 12 56.2 -0.9
baz=298
BLA Blacksburg 124.81 49 P PKPdf 08 12 56.6 -0.8
baz=291,SNR=19
BLA Blacksburg 124.81 49 P PKPdf 08 12 56.6 -0.8
baz=291
KMSC Kings Mountain 124.82 51 P PKPdf 08 12 57.3 -0.1
baz=289,SNR=18
KMSC Kings Mountain 124.82 51 P PKPdf 08 12 56.9 -0.5
baz=289
L56A Greenwood 124.83 42 P PKPdf 08 12 56.8 -0.5
baz=297,SNR=12
L56A P PKPdf 08 12 56.8 -0.5
baz=297,SNR=12
255A Hazlehurst 124.88 55 P PKPdf 08 12 57.5 -0.1
baz=286,SNR=5.6
KBA Koelnbreinsper 124.92 325 *i*P PKPdf 08 12 56.3 -1.2
comp=Z,8.0nm,0.8s,SNR=5.3
MYKA Terra Mystica 125.00 324 *e*P PKPdf 08 12 56.6 -0.9
comp=Z,10nm,0.9s
Q56A Snyder Ridge, 125.02 46 P PKPdf 08 12 57.2 -0.5
baz=293,SNR=6.7
Q56A P PKPdf 08 12 57.2 -0.5
baz=293,SNR=6.7
U56A King 125.14 49 P PKPdf 08 12 57.6 -0.4
baz=291,SNR=5.2
U56A P PKPdf 08 12 57.6 -0.4
baz=291,SNR=5.2
JSC Jenkinsville 125.16 52 P PKPdf 08 12 58.2 +0.1
baz=289,SNR=19
HAW Hawthorne Fire 125.16 53 P PKPdf 08 12 58.2 +0.1
baz=288,SNR=8.4
WCNY West Carthage 125.20 39 P PKPdf 08 12 57.1 -0.7
baz=300
K57A Scipio Center 125.25 41 P PKPdf 08 12 57.2 -0.9
baz=298,SNR=5.7
J57A Williamstown 125.26 40 P PKPdf 08 12 57.0 -1.0
baz=299,SNR=5.3
J57A P PKPdf 08 12 57.0 -1.0
baz=299,SNR=5.3
SKDS Skadanscina 125.37 323 ⇑*i*P PKPdf 08 12 56.6 -1.6
BMNY Brushton-Moira 125.47 38 P PKPdf 08 12 57.6 -0.7
baz=301,SNR=8.9
M57A Sunshine Farm, 125.48 43 P PKPdf 08 12 57.9 -0.6
baz=297,SNR=13
M57A P PKPdf 08 12 57.9 -0.6
baz=297,SNR=13
LONY Lake Ozonia 125.54 38 P PKPdf 08 12 58.0 -0.5
baz=301,SNR=7.9
JTS Las Juntas de 125.54 82 *e*P PKPdf 08 12 58.7 -0.7
ABTA Abfaltersbach 125.58 325 *i*P PKPdf 08 12 57.2 -1.4
comp=Z,18nm,0.8s,SNR=8.9
BIRD Birdtown, Kers 125.66 51 P PKPdf 08 12 58.9 -0.1
baz=289,SNR=9.0
P57A Homestead Farm 125.67 45 P PKPdf 08 12 58.5 -0.4
baz=295,SNR=7.6
P57A P PKPdf 08 12 58.5 -0.4
baz=295,SNR=7.6
S57A Dark Hollow, R 125.69 47 P PKPdf 08 12 58.2 -0.8
baz=293,SNR=6.0
S57A P PKPdf 08 12 58.2 -0.8
baz=293,SNR=6.0
J58A Remsen 125.73 40 P PKPdf 08 12 58.6 -0.4
baz=300,SNR=8.5
J58A P PKPdf 08 12 58.6 -0.4
baz=300,SNR=8.5
T57A Hurt 125.75 48 P PKPdf 08 12 58.8 -0.4
baz=292,SNR=9.7
T57A P PKPdf 08 12 58.8 -0.4
baz=292,SNR=9.7
WATA Walderalm 125.77 326 *e*P PKPdf 08 12 58.2 -0.8
comp=Z,17nm,1.0s
WTTA Wattenberg 125.78 326 *i*P PKPdf 08 12 58.6 -0.5
comp=Z,32nm,0.9s,SNR=9.1
BINY Binghamton 125.84 41 P PKPdf 08 12 58.7 -0.5
baz=298,SNR=6.3
BINY Binghamton 125.84 41 P PKPdf 08 12 58.7 -0.5
baz=298,SNR=6.3
W57A Gilead 125.85 51 P PKPdf 08 12 59.2 -0.2
baz=290,SNR=13
W57A P PKPdf 08 12 59.2 -0.2
baz=290,SNR=13
Y57A Sumter 125.92 52 P PKiKP 08 12 59.8 -0.1
baz=289,SNR=6.1
Y57A P PKiKP 08 12 59.8 -0.1
baz=289,SNR=6.1
N58A Sunbury 125.98 43 P PKPdf 08 12 59.0 -0.5
baz=297,SNR=12
N58A P PKPdf 08 12 59.0 -0.5
baz=297,SNR=12
MOTA Moosalm 126.03 326 *i*P PKPdf 08 12 58.8 -0.8
comp=Z,22nm,0.8s,SNR=10
SQTA Sankt Quirin 126.04 326 *i*P PKPdf 08 12 58.8 -0.7
comp=Z,24nm,0.9s,SNR=6.9
NCB Newcomb 126.09 39 P PKPdf 08 12 59.3 -0.3
baz=301,SNR=6.4
RETA Reutte 126.13 327 *e*P PKPdf 08 12 59.2 -0.4
comp=Z,9.6nm,1.1s
J59A Piesco 126.18 39 P PKPdf 08 12 59.4 -0.4
baz=300,SNR=9.0
J59A P PKPdf 08 12 59.4 -0.4
baz=300,SNR=9.0
PSWB Penn State Wil 126.24 42 P PKPdf 08 12 59.6 -0.4
baz=298
KSPA Keystone Colle 126.29 42 P PKPdf 08 12 59.6 -0.5
baz=298
V58A Windy Hill, Pi 126.30 50 P PKPdf 08 12 59.8 -0.4
baz=291,SNR=5.1
V58A P PKPdf 08 12 59.8 -0.4
baz=291,SNR=5.1
NHSC New Hope 126.38 53 P PKPdf 08 13 00.2 -0.2
baz=289
R58B Mineral 126.39 47 P PKPdf 08 12 59.9 -0.4
baz=294,SNR=8.6
R58B P PKPdf 08 12 59.9 -0.4
baz=294,SNR=8.6
FETA Feichten 126.42 326 *i*P PKPdf 08 12 59.5 -0.8
comp=Z,19nm,0.9s,SNR=16
L59A Walton 126.46 41 P PKPdf 08 13 00.2 -0.3
baz=299
L59A P PKPdf 08 13 00.2 -0.3
baz=299
BTNL Ternell 126.49 332 *d*PKP PKPdf 08 13 00.4 +0.2
EKA Eskdalemuir Ar 126.52 341 SKP SKPdf 08 16 32.8 +2.1
comp=Z,0.8nm,0.6s,baz=24,slow=2.9,SNR=4.5
MEM Membach 126.53 332 *d*PKP PKPdf 08 13 00.3 +0.1
Y58A Scranton 126.53 52 P PKPdf 08 13 00.9 +0.2
baz=290,SNR=9.3
Y58A P PKPdf 08 13 00.9 +0.2
baz=290,SNR=9.3
X58A Rowland 126.56 51 P PKiKP 08 13 01.0 -0.2
baz=290
X58A P PKiKP 08 13 01.0 -0.2
baz=290
HCNY Howe Caverns 126.63 40 P PKPdf 08 13 00.7 +0.1
baz=300
TIP Timpagrande 126.64 315 ⇑P PKPdf 08 13 00.7 -0.1

CBN	Corbin Frederi	126.65	46	P		PKPdf	08 13 00.3	-0.5	
	baz=294								
BHOU	Houvegnez	126.70	332	*d*	PKP	PKPdf	08 13 00.4	-0.2	
DAVA	Damuels	126.73	327	*i*	P	PKPdf	08 13 00.5	-0.5	
	comp=Z,17nm,0.8s,SNR=9.1								
ACCN	Adirondack Com	126.74	39		P	PKPdf	08 13 00.4	-0.4	
	baz=301								
DWPF	Disney Wildern	126.75	60		P	PKPdf	08 13 00.9	-0.4	
	baz=284								
BCLA	Clavier	126.98	332	*d*	PKP	PKPdf	08 13 01.2	+0.1	
T59A	Double "B" Far	127.02	48		P	PKPdf	08 13 00.8	-0.8	
	baz=293,SNR=12								
T59A					P	PKPdf	08 13 00.8	-0.8	
	baz=293,SNR=12								
DAVOX	Davos/Dischmat	127.03	326		PKP	PKPdf	08 13 01.0	-0.6	
	comp=Z,13nm,0.7s,baz=88,slow=1.5,SNR=24								
DAVOX	Davos/Dischmat	127.03	326		PKIKP	PKPdf	08 13 01.0	-0.6	
U59A	Littleton	127.08	49		P	PKPdf	08 13 01.1	-0.6	
	baz=293								
U59A					P	PKPdf	08 13 01.1	-0.6	
	baz=293								
WLF	Walferdange	127.10	331	*d*	PKP	PKPdf	08 13 01.6	+0.2	
Y59A	Loris	127.12	52		P	PKPdf	08 13 01.5	-0.3	
	baz=290								
Y59A					P	PKPdf	08 13 01.5	-0.3	
	baz=290								
GEDE	Greenville	127.18	44		P	PKPdf	08 13 01.5	-0.3	
	baz=297,SNR=5.5								
RCHB	Rochefort	127.20	332	*d*	PKP	PKPdf	08 13 01.7	+0.2	
PSUB	Penn St. - Bra	127.25	43		P	PKPdf	08 13 01.9	0.0	
	baz=297								
ODNJ	Ogdensburg	127.28	42		P	PKPdf	08 13 01.1	-0.9	
	baz=299,SNR=6.8								
BMRD	Maredsous	127.31	333	*d*	PKP	PKiKP	08 13 02.1	-0.2	
LBNH	Lisbon	127.35	37		P	PKPdf	08 13 02.3	+0.3	
	baz=303								
CNNC	Cliffs of the	127.43	50		P	PKPdf	08 13 02.4	0.0	
	baz=292,SNR=5.3								
CNNC	Cliffs of the	127.43	50		P	PKiKP	08 13 02.7	-0.2	
	baz=292								
J61A	Chester	127.45	38		P	PKiKP	08 13 02.5	-0.2	
	baz=302,SNR=5.3								
J61A					P	PKiKP	08 13 02.5	-0.2	
	baz=302,SNR=5.3								
BRNJ	Basking Ridge	127.50	42		P	PKPdf	08 13 02.6	+0.3	
	baz=298								
DOU	Dourbes	127.53	333	*d*	PKP	PKPdf	08 13 02.2	+0.1	
T60A	Surry	127.55	47		P	PKPdf	08 13 02.6	0.0	
	baz=294,SNR=7.0								
T60A					P	PKPdf	08 13 02.6	0.0	
	baz=294,SNR=7.0								
PANJ	Princeton	127.56	43		P	PKPdf	08 13 02.4	-0.1	
	baz=298								
G62A	West of Eustis	127.62	35		P	PKPdf	08 13 02.4	-0.1	
	baz=305								
G62A					P	PKPdf	08 13 02.4	-0.1	
	baz=305								
PAL	Palisades	127.78	42		P	PKPdf	08 13 02.8	-0.1	
	baz=299								
PAL	Palisades	127.78	42		P	PKiKP	08 13 03.2	-0.2	
	baz=299								
L61B	Northampton	127.85	39		P	PKPdf	08 13 02.9	-0.1	
	baz=302,SNR=5.4								
L61B	Northampton	127.85	39		P	PKPdf	08 13 03.2	+0.3	
	baz=302,SNR=5.4								
PKME	Peaks-Kenny Pk	128.30	35		P	PKPdf	08 13 03.8	+0.1	
	baz=307								
PKME	Peaks-Kenny Pk	128.30	35		P	PKPdf	08 13 03.6	-0.2	
	baz=307								
HRV	Adam Dziewonsk	128.52	39		PKIKP	PKPdf	08 13 04.5	+0.3	
HRV	Adam Dziewonsk	128.52	39		P	PKiKP	08 13 04.7	-0.2	
	baz=303								
NNA	Nana	130.05	111	*c i*	PKIKP	PKiKP	08 13 10.1	+1.3	
NNA					pmax	pmax			
	comp=Z,93nm,2.5s								
NNA	Nana	130.05	111	*eP*		PKiKP	08 13 08.8	0.0	
OTAV	Otavalo	131.31	95	*i*	PKIKP	PKiKP	08 13 12.2	+0.3	
OTAV	Otavalo	131.31	95	*eP*		PKiKP	08 13 12.3	+0.4	
OTAV	Otavalo	131.31	95	*eP*		PKiKP	08 13 12.5	+0.6	
GCUF	Volcan Galeras	132.54	94	*eP*		PKiKP	08 13 14.5	+0.1	
BBAC	Balboa, Cauca	132.73	93	*eP*		PKPdf	08 13 11.8	-1.5	
POPC	Popayan, Colom	133.36	92	*eP*		PKPdf	08 13 13.6	-0.9	
KEST	Kesra	133.46	315		PKP	PKPdf	08 13 14.1	+0.1	
	comp=Z,9.0nm,0.8s,baz=277,slow=5.2,SNR=8.5								
YOTC	Yotoco, Valle	133.82	90	*eP*		PKPdf	08 13 15.2	0.0	
PLMC	San Jos del P	133.95	89	*eP*		PKPdf	08 13 15.6	+0.2	
CBOC	Ciudad Bolivar	134.28	88	*eP*		PKPdf	08 13 16.5	+0.3	
GARC	Garzon, Huila	134.49	93	*eP*		PKPdf	08 13 16.1	-0.6	
HELC	Santa Helena	134.78	87	*eP*		PKPpre	08 13 07.3		
GUY2C	Guyana, Caldas	134.89	89	*eP*		PKPpre	08 13 04.5		
PRAC	Prado	135.25	91	*eP*		PKPdf	08 13 17.9	+0.1	
ZARC	Zaragoza, Cauc	135.49	86	*eP*		PKPpre	08 13 11.6		
ROSC	El Rosal	135.90	89		PKP	PKiKP	08 13 20.6	-0.6	
	comp=Z,23nm,0.7s,baz=99,slow=11,SNR=15								
ROSC	El Rosal	135.90	89	*eP*		PKiKP	08 13 20.4	-0.7	
ITQB	Itaqui	136.11	146	*eP*		PKPdf	08 13 17.1	-1.8	
LPAZ	La Paz	136.16	121		PKhKP	PKPpre	08 13 08.8		
LPAZ					PKP	PKPdf	08 13 19.7	-0.5	
	comp=Z,2.8nm,0.7s,baz=256,slow=1.5,SNR=9.2								
SPBC	San Pablo de B	136.20	88	*eP*		PKPpre	08 13 08.5		
RODS	Rosario do Sul	136.36	148	*eP*		PKPdf	08 13 20.3	+0.8	
BRRC	Barranca, Sant	136.61	86	*eP*		PKPdf	08 13 16.1	-4.2	
OCAC	Ocana	137.02	85	*eP*		PKPdf	08 13 16.4	-4.9	
LL6C	La Loma 6 Bece	137.05	82	*eP*		PKPdf	08 13 18.4	-2.7	
RUSC	La Rusia	137.19	88	*eP*		PKPpre	08 13 11.4		
CRJC	Cerrejon, Guaj	137.39	81	*eP*		PKPdf	08 13 19.6	-2.2	
PAMC	Pamplona, Colo	137.62	86	*eP*		PKPdf	08 13 18.9	-3.9	
PTGC	Puerto Gaitan,	138.03	91	*eP*		PKPdf	08 13 19.4	-3.5	
CPUP	Villa Florida	138.19	142		PKhKP	PKPpre	08 13 13.6		
	comp=Z,2.1nm,0.8s,baz=285,slow=3.3,SNR=5.1								
CPUP					PKP	PKPdf	08 13 23.4	+0.5	
	comp=Z,5.2nm,1.0s,baz=230,slow=5.5,SNR=5.7								
ESDC	Sonseca Array	139.26	329		PKP	PKPdf	08 13 24.4	-0.2	
	comp=Z,0.9nm,0.7s,baz=9.5,slow=2.4,SNR=5.5								
ESDC					SKPbc	SKPbc	08 16 55.7	+0.6	
	comp=Z,0.8nm,0.8s,baz=18,slow=3.3,SNR=4.3								
SOCV	Socops	139.46	85	*eP*		PKPpre	08 13 17.7		
PGAV	Gavieira, Arco	139.49	335	*e*	PKPdf	PKPdf	08 13 25.1	+0.1	
PGAV	Gavieira, Arco	139.49	335	*e*	LR	LR	08 59 01.6		
	comp=Z,346nm,20.0s								
PAB	San Pablo	139.56	329	‖	PKIKP	PKPdf	08 13 25.2	+0.1	
DABV	Dabajuro	139.60	81	*eP*		PKPdf	08 13 24.6	-1.2	
MVO	Moncorvo	139.60	333	*e*	PKPdf	PKPdf	08 13 26.3	+1.2	
MVO	Moncorvo	139.60	333		A	A	09 17 13.4		
	comp=Z,248nm,22.0s								
POLO	Lamas de Olo	139.77	334	*e*	PKPdf	PKPdf	08 13 25.9	+0.4	
MTE	Manteigas	140.45	333	*e*	LQ	LQ	08 53 16.2		
MTE					A	A	09 17 46.7		
	comp=Z,197nm,20.0s								
TER01	Tubaro-SC	140.85	153	*eP*		PKiKP	08 13 29.1	-1.3	
PMRV	Marv??o	141.15	332	*e*	PKPdf	PKPdf	08 13 28.3	+0.4	
PMRV	Marv??o	141.15	332	*e*	LQ	LQ	08 51 03.3		
PMRV					A	A	09 16 41.5		
	comp=Z,165nm,22.0s								
MCR1	Marechal Candi	141.56	143	*eP*		PKPdf	08 13 28.7	-0.5	
PBAR	Barrancos	141.96	330	*e*	PKPdf	PKPdf	08 13 27.5	-1.9	
ANTJ	Antonio Joao (	142.12	139	*eP*		PKPdf	08 13 29.0	-1.2	
PTGB	Pitanga	142.50	146	*eP*		PKPdf	08 13 30.9	0.0	
PNCL	Nicolau / Gran	142.73	331	*e*	PKiKP	PKiKP	08 13 33.7	-0.2	
MESJ	Messejana	142.80	331	*e*	PKiKP	PKiKP	08 13 34.3	+0.2	
PCVE	Castro Verde	142.88	330	*e*	PKiKP	PKiKP	08 13 34.6	+0.4	
PVAQ	Vaqueiros	142.90	330	*e*	PKiKP	PKiKP	08 13 35.0	+0.7	
PVAQ	Vaqueiros	142.90	330	*e*	LR	LR	08 59 13.3		
	comp=Z,235nm,20.0s								
TIJ01	Guaruva-PR	143.62	150	*eP*		PKPbc	08 13 31.4	+1.1	
PTLB	Pontes e Lacer	144.01	127	*eP*		PKPab	08 13 31.3	+0.3	
VILB	Vilhena	144.48	122	*eP*		PKPdf	08 13 33.8	-0.7	
PET01	Itanhaem-SP	145.32	152	*eP*		PKPdf	08 13 36.0	+0.3	
PCMB	Pacaembu	145.38	144	*eP*		PKPab	08 13 36.2	+0.2	
SMRT	St. Maarten	145.69	67	*e*		PKPdf	08 13 36.1	-0.4	
SALV	Santo Antonio	146.40	131	*eP*		PKPbc	08 13 38.6	-0.5	
C2SB	Chapadao do Su	146.50	138	*eP*		PKPdf	08 13 37.5	-0.3	
VAO	Valinhos	146.56	151	*eP*		PKPdf	08 13 38.2	+0.3	
RCLB	Rio Claro- Sao	146.78	149	*eP*		PKPbc	08 13 39.3	-0.7	
MBFL	Flemmings, Mon	146.82	69	*e*		PKPbc	08 13 40.3	0.0	
MLYT	Lee's Yard	146.85	69	*e*		PKPbc	08 13 39.7	-0.6	
PARB	Paraibuna	146.91	153	*eP*		PKPdf	08 13 37.1	-1.4	
ANWB	Willy Bob	146.97	67	*eP*		PKPdf	08 13 38.9	+0.3	
ANWB	Willy Bob	146.97	67	*e*		PKPdf	08 13 39.2	+0.6	
ANDO	Antigua, Disas	147.08	68	*e*		PKPbc	08 13 40.8	-0.2	
ANBD	Bethesda, Anti	147.16	68	*e*		PKPbc	08 13 40.1	-1.1	
BB19B	Bebedouro	147.36	147	*eP*		PKPdf	08 13 38.2	-1.1	
ITRB	Iturama	147.38	143	*eP*		PKPdf	08 13 39.1	-0.2	

CBE	Ff, Capester	147.55	70	*e*		PKPbc	08 13 42.3	0.0	
TBG	Guadaloupe-3	147.57	70	*e*		PKPbc	08 13 42.7	+0.4	
TDBA	Terre de Bas,	147.58	70	*e*		PKPbc	08 13 42.0	-0.4	
MDVC	Dominica, Viel	147.85	71	*e*		PKPbc	08 13 43.1	+0.1	
DSLB	Salisbury	147.87	71	*e*		PKPdf	08 13 41.1	+0.9	
MAGL	Barre de l'ile	147.88	70	*e*		PKPdf	08 13 39.6	-0.6	
MACA	Manacapuru-AM	148.00	106	*eP*		PKPdf	08 13 40.1	-0.3	
TORD	Torodi Ar. Bea	148.01	285		PKP	PKPdf	08 13 39.1	-1.3	
	comp=Z,90nm,1.0s,baz=70,slow=1.4,SNR=127								
TORD					PKPbc	PKPbc	08 13 42.5	-1.0	
	comp=Z,93nm,1.0s,baz=44,slow=3.0,SNR=93								
MAN01	Angra dos Reis	148.04	155	*eP*		PKPdf	08 13 39.3	-1.1	
PDRB	Porto dos Gac	148.07	124	*eP*		PKPdf	08 13 41.5	+0.9	
GRFF	Grenada Fort F	148.18	77	*e*		PKPdf	08 13 41.7	+1.0	
GRGR	Grenville	148.25	77	*e*		PKPdf	08 13 41.8	+1.0	
FDF	Fort de France	148.28	72	*e*		PKPbc	08 13 44.1	-0.2	
BIM	Bigot	148.40	72	*e*		PKPbc	08 13 44.4	-0.3	
GCMP	Grenada, Carri	148.42	76	*e*		PKPbc	08 13 43.4	-1.3	
SVB	Belmont	148.46	75	*e*		PKPbc	08 13 43.5	-1.2	
ILAM	Ilet Lapin Mar	148.53	72	*e*		PKPbc	08 13 44.8	-0.1	
SLB	Belfond	148.57	74	*e*		PKPbc	08 13 44.3	-0.8	
SLBI	Saint Lucia, B	148.59	73	*e*		PKPbc	08 13 44.3	-0.7	
MPOM	Morne Pois Mar	148.62	72	*e*		PKPbc	08 13 44.3	-0.8	
TPP	Pointe-a-Pierr	148.65	80	*e*		PKiKP	08 13 46.0	-0.7	
TRN	Trinidad (W)	148.66	80	*e*		PKPbc	08 13 44.9	-0.4	
MCLT	Moule a Chique	148.68	74	*e*		PKPbc	08 13 44.9	-0.5	
VAS01	Vassouras-RJ	148.78	156	*eP*		PKPdf	08 13 40.0	-1.5	
CLDB	Colider	149.24	123	*eP*		PKPdf	08 13 42.6	+0.1	
BOAV	Boa Vista	149.36	96	*eP*		PKPdf	08 13 43.3	+0.6	
DUB01	Friburgo-RJ	149.38	157	*eP*		PKPdf	08 13 42.2	-0.3	
TOSP	Speyside	149.44	78	*e*		PKPbc	08 13 47.0	-0.2	
CAM01	Campos-RJ	149.89	158	*eP*		PKPdf	08 13 43.0	-0.3	
IPMB	Ipameri, GO	149.99	144	*eP*		PKPdf	08 13 44.2	+0.6	
PMNB	Patos De Minas	150.55	147	*eP*		PKPdf	08 13 45.7	+1.1	
PMOZ	Porto Moniz, M	150.96	337		A	A	09 41 31.4		
	comp=Z,175nm,20.0s								
ALF01	Guarapari-ES	151.33	159	*eP*		PKPdf	08 13 44.8	-0.8	
NPGB	Novo Progresso	151.50	117	*eP*		PKPdf	08 13 47.1	+1.0	
BDFB	Brasilia	151.91	141		PKP	PKPdf	08 13 47.9	+1.2	
	comp=Z,12nm,1.0s,baz=162,slow=0.5,SNR=14								
BDFB					PKPbc	PKPbc	08 13 53.4	+0.2	
	comp=Z,19nm,0.7s,baz=190,slow=4.0,SNR=19								
BDFB	Brasilia	151.91	141	*eP*		PKPdf	08 13 47.5	+0.8	
DIAM	Diamantina, MG	152.17	151	*eP*		PKPdf	08 13 48.4	+1.3	
SNDB	Serra Nova Dou	152.18	130	*eP*		PKPdf	08 13 47.5	+0.5	
ITTB	Itaituba	152.26	112	*eP*		PKPdf	08 13 48.1	+0.9	
RIB01	Linhares ES	152.65	158	*eP*		PKPdf	08 13 47.7	+0.1	
MC01	Montes Claros	153.38	149	*eP*		PKPdf	08 13 48.5	-0.3	
NAN01	Guarapari, ES	154.09	158	*eP*		PKPdf	08 13 49.5	-0.1	
MALB	Monte Alegre	154.50	108	*eP*		PKPdf	08 13 50.3	-0.1	
JANB	Januaria	154.56	146	*eP*		PKPdf	08 13 50.9	+0.4	
KIC	Kosan Boka	154.87	272	‖	*e*PKP1	PKPdf	08 13 49.4	-1.5	
	comp=Z,12nm,0.8s								
DBIC	Dimbokro	154.99	272		PKP	PKPdf	08 13 50.3	-0.7	
	comp=Z,16nm,1.0s,baz=112,slow=1.1,SNR=8.6								
DBIC					PKPbc	PKPbc	08 13 57.6	-2.2	
	comp=Z,30nm,0.8s,baz=114,slow=2.8,SNR=20								
TIC	Toumodi	155.15	272	‖	*e*PKP1	PKPdf	08 13 50.0	-1.3	
	comp=Z,17nm,0.9s								
LIC	Lamto	155.15	271	‖	*e*PKP1	PKPdf	08 13 50.3	-1.0	
	comp=Z,36nm,0.9s								
SDBA	SAO DESIDERIO	156.31	141	*eP*		PKPdf	08 13 53.6	+0.7	
CMC01	Camacan, BA	156.59	156	*eP*		PKPdf	08 13 53.2	+0.1	
PRPB	Parauapebas	156.73	122	*eP*		PKPdf	08 13 54.2	+0.8	
SMTB	Santa Maria do	156.96	130	*eP*		PKPdf	08 13 53.9	+0.3	
MCPB	Macapa, AP	157.06	106	*eP*		PKPdf	08 13 54.2	+0.4	
GDU01	Guanda, BA	158.04	154	*eP*		PKPdf	08 13 54.7	-0.3	
TMAB	Tom-Au,PA,Br	160.04	115	*eP*		PKPdf	08 13 58.4	+1.1	
NBLA	Lagarto - SE	161.24	156	*eP*		PKPdf	08 13 58.3	-0.3	
NBAN	Anadia - AL	163.03	158	*eP*		PKPdf	08 14 00.1	-0.3	
ROSB	Rosrio	163.26	122	*eP*		PKPdf	08 14 01.2	+0.5	

*IDC **18** 08:11:41.7±1.0,22.˚55S×172.˚89E,h0km,mb3.9/6, mbtmp3.8/8,ML4.5/2,MS3.7/4,Error ellipse: s-maj=32.8km s-min=23.1km az=160.0*
*NEIC **18** 08:11:43.8±2.6,22.˚5S±0.˚1×173.˚09E±0.˚09,h10km±1km, mb4.4/11,Error ellipse: s-maj=19.4km s-min=13.5km az=349.0*

ISC 18 08:11:43.3±0.7,22.˚6S±0.˚1×173.˚07E±0.˚09,h10km,n35, σ1s50/32,mb4.1/8,MS3.8/3,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARNC	Mare, Loyalty	4.81	283	Pn		Pn	08 12 56.9	+1.1
PINNC	Pines Island,	5.20	269	Pn		Pn	08 13 02.1	+1.0
OUENC	Ouen Island, N	5.76	271	Pn		Pn	08 13 09.7	+0.8
ONTNC	Ouen Toro	6.13	272	Pn		Pn	08 13 15.7	+1.7
DZM	Mont Dzumac	6.16	274	Pn		Pn	08 13 13.5	-1.0
	1.4nm,0.3s,baz=128,slow=13,SNR=54							
DZM				LR		LR	08 14 56.0	
	comp=Z,146nm,18.2s,baz=42,slow=32 8.4nm,0.7s							
MSVF	Nonsavu	6.74	45	Pn		Pn	08 13 24.1	+1.6
	1.2nm,0.3s,baz=212,slow=9.6,SNR=11 3.2nm,0.5s							
MSVF	Nonsavu	6.74	45	Pn		Pn	08 13 23.8	+1.4
URZ	Urewera	15.98	168	Pn		Pn	08 15 29.7	+1.5
URZ				IAmb		IAmb	08 15 32.9	
	comp=Z,33nm,1.4s							
BFZ	Birch Farm	18.21	172	P		Pn	08 15 56.5	+0.2
BFZ				IAmb		IAmb	08 16 03.7	
	comp=Z,37nm,1.2s							
CMWZ	Cape Campbell	19.11	177	P		P	08 16 06.2	-0.1
LTZ	Lake Taylor	20.12	182	P		P	08 16 19.2	+1.7
LTZ				IAmb		IAmb	08 16 20.3	
	comp=Z,22nm,0.9s							
RAR	Rarotonga	25.22	92	P		P	08 17 05.5	-4.1
AS31	Alice Springs	35.95	260	P		P	08 18 44.6	+0.2
ASAR	Alice Springs	35.96	260	P		P	08 18 42.7	-1.8
	comp=Z,1.0nm,0.7s,baz=83,slow=9.2,SNR=10 comp=Z,1.0nm,0.7s							
ASAR	Alice Springs	35.96	260	P		P	08 18 43.8	-0.7
WB0	Warramunga Arr	36.11	267	P		P	08 18 44.0	-1.8
WB0				IAmb		IAmb	08 18 58.7	
	comp=Z,6.3nm,1.1s							
WRA	Warramunga Arr	36.12	267	P		P	08 18 43.9	-2.0
	comp=Z,0.9nm,0.8s,baz=97,slow=8.4,SNR=10.0 comp=Z,0.9nm,0.8s							
WRA	Warramunga Arr	36.12	267	P		P	08 18 45.1	-0.8
FITZ	Fitzroy Crossi	44.55	267	P		P	08 19 54.1	-1.6
	comp=Z,2.4nm,0.8s,baz=110,slow=12,SNR=2.4 comp=Z,2.4nm,0.8s							
FITZ	Fitzroy Crossi	44.55	267	P		P	08 19 55.0	-0.7
FITZ				IAmb		IAmb	08 20 07.2	
	comp=Z,3.7nm,0.8s							
GUMO	Guam	45.37	320	LR		LR	08 36 18.5	
	comp=Z,122nm,21.8s,baz=148,slow=33							
BATI	Baumata	48.76	276	LR		LR	08 41 15.9	
	comp=Z,203nm,19.0s,baz=165,slow=36							
VNDA	Vanda	55.23	183	P		P	08 21 16.0	-0.1
	comp=Z,0.8nm,0.8s,baz=3.0,slow=8.7,SNR=7.0 comp=Z,0.8nm,0.8s							
VNDA	Vanda	55.23	183	P		P	08 21 16.9	+0.9
VNDA				IAmb		IAmb	08 21 30.2	
	comp=Z,3.4nm,1.1s							
SBA	Scott Base	55.38	182	P		P	08 21 19.8	+2.7
SBA				IAmb		IAmb	08 21 19.9	
	comp=Z,17nm,1.0s							
QSPA	South Pole Qui	67.46	180	P		P	08 22 39.1	-0.1
MAW	Mawson	76.65	202	P		P	08 23 34.2	+0.1
	comp=Z,2.4nm,1.0s,baz=101,slow=5.2,SNR=4.3 comp=Z,2.4nm,1.0s							
MA2	Magadan	83.91	349	LR		LR	08 55 35.9	
	comp=Z,44nm,19.8s,baz=132,slow=31							
TROLL	Troll, Antarti	85.41	183	P		P	08 24 19.6	-1.2
VNA3	Nemayer Olymp	86.38	179	P		P	08 24 23.8	-1.7
VNA2	Neumayer--Watz	86.72	180	P		P	08 24 25.7	-1.5
	baz=180,slow=2.1							
VNA1	Neumayer--Stat	86.99	180	P		P	08 24 26.9	-1.5
NVAR	Mina Array Bea	88.40	47	P		P	08 24 36.9	+0.9
	comp=Z,0.3nm,0.8s,baz=235,slow=3.2,SNR=2.4 comp=Z,0.3nm,0.8s							
EKA	Eskdalemuir Ar	147.20	356	PKPbc		PKPdf	08 31 23.9	-0.4
	comp=Z,1.0nm,0.6s,baz=343,slow=3.1,SNR=4.1							
TORD	Torodi Ar. Bea	167.52	223	PKPab		PKPab	08 32 56.7	+0.6
	comp=Z,0.6nm,1.0s,baz=141,slow=3.0,SNR=2.6							

*IDC **18** 08:50:37.2±4.3,13.˚67N×92.˚37W,h0km,mb3.4/3, mbtmp3.3/5,ML3.1/2,Error ellipse: s-maj=166.7km s-min=58.6km az=49.0*
*GCG **18** 08:50:43.2±0.9,14.˚19N×92.˚28W,h61km±24km,MD3.7*

ISC 18 08:50:44.1±1.8,14.˚0N±0.˚2×92.˚23W±0.˚06,h35km,n10, σ2s02/14,mb3.5/3,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STG3	Santiaguito 3,	0.97	41	*eP*		Pn	08 51 00.1	-1.3
STG3				*eS*		Sn	08 51 13.3	-0.8
FUG	Fuego 3	1.43	71	*eP*		Pn	08 51 05.5	-2.2
FUG				*eS*		Sn	08 51 26.8	+1.5
PCG	Pacaya	1.63	75	*eP*		Pn	08 51 10.1	-0.5
PCG				*eS*		Sn	08 51 31.8	+1.4
NBG	Las Nubes	1.93	71	*eP*		Pn	08 51 14.9	+0.2
MRL	Marmol	2.70	66	*eP*		Pn	08 51 26.3	+1.0
CMIG	Matias Romero	4.01	321	Pn		Pn	08 51 40.7	-2.4
	0.4nm,0.3s,baz=146,slow=14,SNR=14							
CMIG				Sn		Sn	08 52 34.0	+5.0
	3.7nm,0.3s,baz=80,slow=16,SNR=6.5 5.2nm,0.7s							
TXAR	Lajitas Array	18.59	327	P		P	08 54 57.9	-0.6
	baz=157,slow=12,SNR=6.3 0.9nm,1.0s							
ANMO	Albuquerque	24.51	331	P		P	08 56 00.9	+0.4
	0.3nm,0.4s,baz=148,slow=9.5,SNR=2.0 0.3nm,0.4s							
NVAR	Mina Array Bea	33.55	321	P		P	08 57 21.2	+0.2
	0.4nm,0.7s,baz=138,slow=8.6,SNR=5.4 0.4nm,0.7s							
ILAR	Eielson Array	62.77	337	P		P	09 01 05.0	-0.6
	0.4nm,0.9s,baz=134,slow=7.7,SNR=4.0 0.4nm,0.9s							

*AUST **18** 08:56:46.4±1.4,19.˚85S×148.˚89E,h0km,Error ellipse: s-maj=19.0km s-min=11.0km az=19.0*
*IDC **18** 08:56:47.7±3.1,19.˚62S×148.˚57E,h0km,mbtmp3.3/2, ML3.1/2,Error ellipse: s-maj=110.9km s-min=36.7km az=168.0*

ISC 18 08:56:47.1±1.9,19.˚8S±0.˚2×148.˚9E±0.˚1,h10km,n11, σ1s68/13,Queensland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	Charters Tower	2.54	263	P		Pn	08 57 28.3	-0.1
	baz=2.5							
CTA				S		Sn	08 58 01.2	+1.7
	baz=2.5							
AUNRC	North Rockhamp	3.85	158	P		Pn	08 57 45.7	-0.7
	baz=3.8							
MTSU	Mount Surprise	4.67	290	P		Pn	08 57 58.4	+0.7
	baz=4.6,SNR=22							
MTSU				S		Sn	08 58 54.1	+2.1
	baz=4.6							
EIDS	Eidsvold	5.90	161	P		Pn	08 58 17.1	+2.4
	baz=5.9,SNR=12							
RMQ	Roma	6.67	181	P		Pn	08 58 23.9	-1.4
	baz=6.6							
QLP	Quilp

WRA	**Warramunga Arr**	**46.10**	**264**	P	**P**	**09 20 20.9**	**-0.3**
	0.5nm,0.5s,baz=95,slow=8.0,SNR=5.4						
	0.5nm,0.5s						
MAW	**Mawson**	**79.43**	**199**	P	P	09 24 08.0	+5.7
	1.4nm,0.6s,baz=142,slow=11,SNR=3.9						
	1.4nm,0.6s						
NVAR	**Mina Array Bea**	**81.92**	**42**	P	P	09 24 22.2	+5.8
	0.3nm,0.6s,baz=209,slow=7.2,SNR=3.7						
	0.3nm,0.6s						
H03S2	**Juan Fernandez**	**82.81**	**124**	T	T	10 55 57.9	
	baz=244,SNR=613						
H03S1	**Juan Fernandez**	**82.82**	**124**	T	T	10 56 02.5	
	baz=244,SNR=644						
H03S3	**Juan Fernandez**	**82.83**	**124**	T	T	10 56 01.2	
	baz=244,SNR=866						
H03N2	**Juan Fernandez**	**82.96**	**123**	T	T	10 56 04.9	
	baz=250,slow=72,SNR=173						
H03N3	**Juan Fernandez**	**82.96**	**123**	T	T	10 56 06.2	
	baz=250,slow=72,SNR=192						
H03N1	**Juan Fernandez**	**82.98**	**123**	T	T	10 55 55.0	
	baz=250,slow=72,SNR=271						
TXAR	**Lajitas Array**	**87.10**	**56**	P	**P**	**09 24 46.1**	**+3.5**
	0.3nm,0.7s,baz=210,slow=5.2,SNR=3.9						
	0.3nm,0.7s						
AKASG	**Malin Array Be**	**146.48**	**331**	PKPbc	**PKiKP**	**09 31 41.1**	**+0.8**
	0.3nm,0.3s,baz=38,slow=4.3,SNR=3.6						

AUST 18 09:23:32.4±2.1, 19°.85S×148°.83E, h0km, Error ellipse: s-maj=29.3km s-min=13.1km az=13.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.43**	**264**	P	Pn	09 24 12.3	-1.2
	baz=2.7						
CTA				S	Sb	09 24 46.4	-1.2
	baz=2.7						
CTA	**Charters Tower**	**2.43**	**264**	P	Pn	09 24 12.3	-1.2
	baz=2.4						
CTA				S	Sb	09 24 46.4	-1.2
	baz=2.4						
AUNRC	**North Rockhamp**	**3.83**	**156**	P	Pn	09 24 33.3	+0.8
	baz=3.8						
MTSU	**Mount Surprise**	**4.60**	**291**	P	Pn	09 24 43.2	0.0
	baz=4.6						
MTSU				S	Sb	09 25 50.0	0.0
	baz=4.6						
EIDS	**Eidsvold**	**5.87**	**160**	P	Pn	09 25 01.0	+0.3
	baz=5.9						

*IDC **18** 09:30:54.9±1.7, 4°.41S×101°.96E, h0km, mb4.2/11, mbtmp4.2/11, MS2.9/3, Error ellipse: s-maj=63.0km s-min=15.6km az=57.0*
*DJA **18** 09:31:01.7±0.7, 4°.5±3°×10°.2E±°, h29km±5km, M4.6/13, mb4.8/3, mB5.4/1, MLv4.5/13, Mw(mB)4.9/1*
*NEIC **18** 09:31:03.8±1.6, 4°.1S±0°.2×102°.3E±0°.1, h51km±10km, mb4.7/16, Error ellipse: s-maj=27.6km s-min=9.6km az=220.0*

ISC 18 09:31:02.2±1.1, 4°.36S±0°.07×102°.08E±0°.06, h51km±11km, n57, σ0s91/56, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.87**	**36**	P	**Pn**	**09 31 17.8**	**-0.5**
KSI				S	**Sn**	**09 31 30.5**	**+0.4**
MNAI	**Manna**	**0.87**	**90**		**Pn**	**09 31 17.8**	**-0.5**
MNAI	**Manna**	**0.87**	**90**	P	**Pn**	09 31 17.9	-0.4
MNAI				S	**Sn**	09 31 29.7	-0.4
LWLI	**Liwa**	**2.08**	**108**	P	**Pn**	**09 31 34.6**	**-0.1**
LWLI				S	**Sn**	09 31 59.9	+0.4
KRJI	**Kerinci**	**2.34**	**345**	P	**Pn**	**09 31 38.6**	**+0.3**
KRJI				S	**Sn**	**09 32 06.7**	**+0.8**
PPSI	**Pulau Pagai**	**2.61**	**307**	P	**Pn**	**09 31 42.8**	**+0.9**
PPSI				S	**Sn**	**09 32 13.5**	**+1.1**
KASI	**Kota Agung**	**2.67**	**116**	P	**Pn**	**09 31 42.9**	**+0.1**
KASI				S	**Sn**	**09 32 14.5**	**+0.6**
KLI	**Kotabumi**	**2.81**	**100**	P	**Pn**	**09 31 45.4**	**+0.7**
JMBI	**JAMBI**	**3.12**	**30**	P	**Pn**	**09 31 49.4**	**+0.4**
BLSI	**Bandar Lampung**	**3.31**	**108**	P	**Pn**	09 31 50.9	-0.6
SISI	**Saibi**	**4.24**	**315**	P	**Pn**	**09 32 02.7**	**-1.7**
SISI				S	**Sn**	**09 32 53.9**	**+1.2**
DSRI	**Dabo**	**4.59**	**33**	P	**Pn**	**09 32 10.6**	**+1.4**
PPBI	**Pangkal Pinang**	**4.60**	**62**	P	**Pn**	09 32 09.2	-0.1
CNJI	**Cibinong**	**5.81**	**120**	P	**Pn**	**09 32 27.0**	**+1.1**
	0.5nm3µm106nm,1.2s						
LEM	**Lembang**	**6.03**	**114**	LR	LR	09 34 44.2	
	comp=Z,82nm,21.4s,baz=180,slow=38						
GSI	**Gunungsitoli**	**7.21**	**321**	Pn	**Pn**	**09 32 45.5**	**+0.5**
GSI	**Gunungsitoli**	**7.21**	**321**	P	**Pn**	**09 32 45.5**	**+0.5**
UGM	**Wanagama**	**9.10**	**113**	Pn	**Pn**	**09 33 11.8**	**+0.7**
JAGI	**Jajag, Banyuwa**	**12.67**	**109**	Pn	**Pn**	**09 33 58.7**	**-1.1**
KAPI	**Kappang**	**17.62**	**93**	LR	LR	09 42 27.4	
	comp=Z,58nm,20.0s,baz=278,slow=39						
UBPT	**Khong Chiam**	**19.80**	**10**		**P**	**09 35 28.8**	**+0.2**
UBPT				IAmb	IAmb	09 35 29.4	
	comp=Z,26nm,0.6s						
CMAR	**Chiang Mai Arr**	**22.88**	**352**	P	**P**	**09 36 00.1**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=184,slow=8.3,SNR=5.3						
CMAR				LR	LR	09 44 24.0	
	comp=Z,25nm,18.4s,baz=190,slow=35						
	comp=Z,1.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**26.79**	**122**	P	**P**	**09 36 36.6**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=345,slow=10,SNR=6.4						
	comp=Z,2.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.79**	**122**	P	**P**	**09 36 38.1**	**+0.5**
FITZ				IAmb	IAmb	09 36 53.9	
	comp=Z,12nm,1.2s						
KNRA	**Kununurra**	**28.54**	**115**	P	**P**	**09 36 52.5**	**-0.9**
KNRA				IAmb	IAmb	09 36 58.2	
	comp=Z,20nm,1.5s						
H08S2	**Diego Garcia H**	**29.60**	**262**	T	T	10 07 18.4	
	baz=85,slow=75,SNR=34						
H08S3	**Diego Garcia H**	**29.61**	**262**	T	T	10 07 27.9	
	baz=85,slow=75,SNR=36						
H08S1	**Diego Carcia H**	**29.62**	**262**	T	T	10 07 06.5	
	baz=85,slow=75,SNR=32						
MTN	**Manton Dam**	**29.91**	**108**	P	**P**	**09 37 05.1**	**-0.4**
MTN				IAmb	IAmb	09 37 20.2	
	comp=Z,21nm,1.4s						
H01W3	**Cape Leeuwin H**	**32.36**	**161**	T	T	10 11 25.2	
	baz=338,slow=76,SNR=43						
H01W2	**Cape Leeuwin H**	**32.38**	**161**	T	T	10 11 27.5	
	baz=338,slow=76,SNR=53						
H01W1	**Cape Leeuwin H**	**32.38**	**161**	T	T	10 11 26.5	
	baz=338,slow=76,SNR=45						
WB0	**Warramunga Arr**	**35.01**	**119**	P	**P**	**09 37 52.3**	**+2.1**
WRA	**Warramunga Arr**	**35.02**	**119**	P	**P**	**09 37 50.1**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=311,slow=9.0,SNR=11						
	comp=Z,1.1nm,0.5s						
WRA	**Warramunga Arr**	**35.02**	**119**	P	**P**	**09 37 51.7**	**+1.4**
WRAB	**Tennant Creek**	**35.03**	**119**	P	**P**	**09 37 49.6**	**-0.7**
WB2	**Warramunga Arr**	**35.04**	**119**	P	**P**	**09 37 51.4**	**+1.0**
WB2				IAmb	IAmb	09 38 07.6	
	comp=Z,13nm,0.8s						
WR0	**Warramunga Arr**	**35.21**	**119**	P	**P**	**09 37 49.8**	**-2.0**
WR0				IAmb	IAmb	09 38 10.0	
	comp=Z,22nm,1.2s						
ASAR	**Alice Springs**	**36.20**	**125**	P	**P**	**09 38 00.8**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=301,slow=8.2,SNR=7.5						
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**36.20**	**125**	P	**P**	**09 38 03.0**	**+2.6**
AS31	**Alice Springs**	**36.20**	**125**	P	**P**	**09 38 01.2**	**+0.8**
BBOO	**Buckleboo**	**42.52**	**136**	P	**P**	**09 38 53.8**	**+0.9**
CTAO	**Charters Tower**	**45.73**	**114**	P	**P**	**09 39 19.1**	**+0.2**
STKA	**Stephens Creek**	**46.04**	**131**	P	**P**	**09 39 21.1**	**0.0**
	comp=Z,1.8nm,0.5s,baz=313,slow=5.2,SNR=4.2						
	comp=Z,1.8nm,0.5s						
STKA	**Stephens Creek**	**46.04**	**131**	P	**P**	**09 39 21.9**	**+0.8**
KSRS	**Korea Array**	**48.05**	**28**	P	**P**	**09 39 36.6**	**0.0**
	comp=Z,0.7nm,0.6s,baz=215,slow=8.0,SNR=4.3						
	comp=Z,0.7nm,0.6s						
SONM	**Songino Array**	**52.11**	**4**	P	**P**	**09 40 08.0**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=186,slow=9.6,SNR=9.1						
	comp=Z,2.3nm,0.6s						
MK31	**Makanchi Array**	**53.86**	**343**	P	**P**	**09 40 20.0**	**-0.2**
MKAR	**Makanchi Array**	**53.86**	**343**	P	**P**	**09 40 20.2**	**0.0**
	comp=Z,3.7nm,0.7s,baz=148,slow=8.4,SNR=37						
	comp=Z,3.7nm,0.7s						
MKAR	**Makanchi Array**	**53.86**	**343**	P	**P**	**09 40 19.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**55.30**	**26**	P	**P**	**09 40 30.6**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=205,slow=3.3,SNR=4.2						
	comp=Z,2.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**55.30**	**26**	P	**P**	**09 40 30.4**	**-0.1**
ZAA0	**Zalesovo Array**	**59.87**	**348**	P	**P**	**09 41 02.1**	**-0.4**
ZAA0				IAmb	IAmb	09 41 02.9	
	comp=Z,5.7nm,0.5s						
ZALV	**Zalesovo Beam**	**59.87**	**348**	P	**P**	**09 41 02.2**	**-0.3**
	comp=Z,5.5nm,0.4s,baz=160,slow=6.2,SNR=22						
	comp=Z,5.5nm,0.4s						
ABKAR	**Akbulak array**	**64.70**	**331**	P	**P**	**09 41 34.3**	**-0.6**
ABKAR				IAmb	IAmb	09 41 35.5	
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**89.39**	**340**	P	**P**	**09 43 52.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=76,slow=4.7,SNR=7.1						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**145.19**	**42**	PKPbc	**PKPdf**	**09 50 35.3**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=308,slow=0.6,SNR=86						

*IDC **18** 09:39:20.9±2.4, 6°.87S×127°.11E, h424km±35km, mb3.3/6, mbtmp4.0/11, Error ellipse: s-maj=47.1km s-min=16.1km az=59.0*

ISC 18 09:39:19.8±0.8, 6°.86S±0°.09×127°.1E±0°.1, h407km, n11, σ1s16/12, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.77**	**226**	P	**P**	**09 40 41.4**	**+1.7**
	74nm,0.4s,baz=113,slow=3.0,SNR=8.4						
BATI				S	**S**	**09 41 42.6**	**-2.3**
	163nm,0.7s,baz=41,slow=6.1,SNR=4.8						
KAPI	**Kappang**	**7.56**	**284**	P	**P**	**09 41 11.8**	**+1.5**
	6.3nm,0.5s,baz=96,slow=4.0,SNR=5.9						
FITZ	**Fitzroy Crossi**	**11.27**	**187**	P	**P**	**09 41 51.5**	**+0.3**
	1.7nm,0.5s,baz=29,slow=11,SNR=5.2						
WRA	**Warramunga Arr**	**14.78**	**152**	P	**P**	**09 42 29.4**	**-0.3**
	0.6nm,0.5s,baz=326,slow=12,SNR=9.2						
ASAR	**Alice Springs**	**17.94**	**159**	P	**P**	**09 43 03.6**	**+0.1**
	0.5nm,0.5s,baz=340,slow=13,SNR=6.2						
STKA	**Stephens Creek**	**28.32**	**153**	P	**P**	**09 44 38.9**	**+0.5**
	4.9nm,1.1s,baz=323,slow=16,SNR=2.9						
	4.9nm,1.1s						
KSRS	**Korea Array**	**44.09**	**1**	P	**P**	**09 46 49.2**	**-0.4**
	0.6nm,0.4s,baz=179,slow=10,SNR=4.6						
	0.6nm,0.4s						
SONM	**Songino Array**	**57.45**	**344**	P	**P**	**09 48 27.7**	**-0.3**
	1.0nm,0.7s,baz=171,slow=7.7,SNR=4.6						
	1.0nm,0.7s						
PETK	**Petropavlovsk-**	**65.12**	**20**	P	**P**	**09 49 18.7**	**+0.2**
	1.8nm,0.6s,baz=197,slow=4.5,SNR=1.4						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**66.57**	**328**	P	**P**	**09 49 27.7**	**-0.2**
	0.8nm,0.4s,baz=120,slow=7.9,SNR=13						
	0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**70.22**	**335**	P	**P**	**09 49 49.1**	**-0.8**
	1.7nm,0.4s,baz=111,slow=4.2,SNR=6.8						
	1.7nm,0.4s						

*IDC **18** 09:39:52.5±1.3, 5°.15S×147°.69E, h0km, mb4.0/4, mbtmp4.1/5, ML4.3/1, Error ellipse: s-maj=66.3km s-min=25.9km az=124.0*
*NEIC **18** 09:40:13.8±1.1, 5°.24S±0°.08×147°.1E±0°.2, h168km±16km, mb4.2/12, Error ellipse: s-maj=30.9km s-min=11.2km az=96.0*

ISC 18 09:40:11.6±0.8, 5°.28S±0°.09×147°.2E±0°.2, h150km, n20, σ0s91/20, mb3.9/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.22**	**3**	Pn	**Pn**	**09 41 04.0**	**+2.2**
COEN	**Coen**	**9.48**	**204**	Pn	**Pn**	**09 42 25.9**	**+1.1**
GUMO	**Guam**	**18.88**	**353**	P	**P**	**09 44 20.8**	**+0.2**
WB0	**Warramunga Arr**	**19.03**	**220**	P	**P**	**09 44 22.2**	**0.0**
WB0				IAmb	IAmb	09 44 37.6	
	comp=Z,11nm,1.3s						
WR0	**Warramunga Arr**	**19.08**	**219**	P	**P**	**09 44 23.1**	**+0.4**
WR0				IAmb	IAmb	09 44 28.3	
	comp=Z,8.2nm,0.7s						
WRAB	**Tennant Creek**	**19.18**	**219**	P	**P**	**09 44 23.7**	**-0.1**
WRAB				IAmb	IAmb	09 44 29.0	
	comp=Z,9.1nm,0.7s						
WB2	**Warramunga Arr**	**19.19**	**219**	P	**P**	**09 44 23.6**	**-0.3**
WRA	**Warramunga Arr**	**19.20**	**219**	P	**P**	**09 44 24.1**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=41,slow=11,SNR=20						
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**19.20**	**219**	P	**P**	**09 44 22.9**	**-1.1**
KNRA	**Kununurra**	**20.82**	**239**	P	**P**	**09 44 41.7**	**+0.2**
KNRA				IAmb	IAmb	09 44 46.7	
	comp=Z,10.0nm,1.1s						
AS31	**Alice Springs**	**22.31**	**214**	P	**P**	**09 44 57.3**	**+0.3**
ASAR	**Alice Springs**	**22.31**	**214**	P	**P**	**09 44 57.0**	**-0.1**
	comp=Z,3.8nm,0.6s,baz=42,slow=7.7,SNR=32						
	comp=Z,3.8nm,0.6s						
ASAR	**Alice Springs**	**22.31**	**214**	P	**P**	**09 44 57.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**24.60**	**237**	P	**P**	**09 45 18.1**	**+0.1**
	comp=Z,2.6nm,0.4s,baz=53,slow=14,SNR=2.9						
	comp=Z,2.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.60**	**237**	P	**P**	**09 45 18.5**	**+0.4**
FITZ				IAmb	IAmb	09 45 19.4	
	comp=Z,8.6nm,1.2s						
STKA	**Stephens Creek**	**26.97**	**191**	P	**P**	**09 45 39.2**	**-0.1**
STKA				IAmb	IAmb	09 45 46.3	
	comp=Z,5.1nm,1.5s						
JNU	**Nakatsue**	**41.20**	**339**	P	**P**	**09 47 40.0**	**-1.6**
BFZ	**Birch Farm**	**43.84**	**148**	P	**P**	**09 48 03.6**	**+0.7**
VNDA	**Vanda**	**72.62**	**177**	P	**P**	**09 51 21.0**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=336,slow=5.3,SNR=5.0						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**84.75**	**23**	P	**P**	**09 52 27.2**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=249,slow=4.6,SNR=13						
	comp=Z,0.8nm,0.6s						

*IDC **18** 09:54:03.6±1.3, 20°.54S×169°.57E, h112km±9km, mb3.7/7, mbtmp4.1/8, MS3.0/1, Error ellipse: s-maj=64.2km s-min=15.8km az=148.0*
*NEIC **18** 09:54:04.8±2.4, 20°.8S±0°.1×169°.57E±0°.08, h117km±8km, mb4.7/17, Error ellipse: s-maj=18.4km s-min=6.4km az=150.0*
*NOU **18** 09:54:04.0, 20°.58S×169°.65E, h90km, MLv5.0/17, Vanuatu Islands*

ISC 18 09:54:01.8±0.7, 20°.61S±0°.08×169°.77E±0°.08, h100km, n53, σ1s36/57, mb4.6/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.84**	**242**		**Pn**	**09 54 32.4**	**+0.1**
MARNC				Sn	**Sn**	**09 54 54.4**	**-1.2**
MARNC	**Mare, Loyalty**	**1.84**	**242**	P	**Pn**	**09 54 32.5**	**+0.1**
PINNC	**Pines Island,**	**2.94**	**227**		**Pn**	**09 54 47.3**	**+0.6**
PINNC	**Pines Island,**	**2.94**	**227**	P	**Pn**	**09 54 47.7**	**+0.9**
YATNC	**Mamie plateau,**	**3.04**	**241**	P	**Pn**	**09 54 47.7**	**-0.5**
RTV	**Rentapao**	**3.08**	**335**	P	**Pn**	**09 54 50.1**	**+1.5**
DVP	**Devils Point**	**3.24**	**332**	P	**Pn**	**09 54 51.5**	**+0.7**
OUENC	**Ouen Island, N**	**3.26**	**236**		**Pn**	**09 54 51.9**	**+0.8**
OUENC	**Ouen Island, N**	**3.26**	**236**	P	**Pn**	**09 54 52.4**	**+1.3**
DZM	**Mont Dzumac**	**3.42**	**244**	P	**Pn**	**09 54 53.9**	**+0.6**
	298nm,0.5s,baz=129,slow=17,SNR=1221						
DZM				S	**Sn**	**09 55 32.8**	**-0.3**
	406nm,0.5s,baz=105,slow=24,SNR=13						
DZM	**Mont Dzumac**	**3.42**	**244**		**Pn**	**09 54 53.7**	**+0.4**
DZM	**Mont Dzumac**	**3.42**	**244**	P	**Pn**	**09 54 54.2**	**+0.9**
ONTNC	**Ouen Toro**	**3.52**	**241**		**Pn**	**09 54 55.2**	**+0.7**
ONTNC	**Ouen Toro**	**3.52**	**241**	P	**Pn**	**09 54 55.6**	**+1.1**
NOUC	**Port Laguerre**	**3.55**	**245**	P	**Pn**	**09 54 56.4**	**+1.4**
KOUNC	**Koumac, New Ca**	**5.14**	**270**		**Pn**	**09 55 17.8**	**+1.4**
KOUNC	**Koumac, New Ca**	**5.14**	**270**	P	**Pn**	**09 55 18.2**	**+1.8**
NFK	**Norfolk Island**	**8.56**	**191**	P	**Pn**	**09 56 05.5**	**+2.6**
URZ	**Urewera**	**18.70**	**162**	P	**P**	**09 58 10.6**	**-1.7**
ARMA	**Armidale**	**19.04**	**236**	P	**P**	**09 58 13.7**	**-2.6**
BFZ	**Birch Farm**	**20.76**	**166**	P	**P**	**09 58 34.5**	**-0.1**
THZ	**Tophouse**	**21.25**	**174**	P	**P**	**09 58 42.4**	**+2.4**
RPZ	**Rata Peaks**	**23.06**	**178**	P	**P**	**09 59 00.8**	**+2.2**
	5.6nm,0.6s,baz=315,slow=4.3,SNR=4.6						
	5.6nm,0.6s						
DCZ	**Deep Cove**	**24.88**	**184**	P	**P**	**09 59 15.2**	**+0.1**
STKA	**Stephens Creek**	**27.57**	**240**	P	**P**	**09 59 39.5**	**-0.1**
	2.9nm,0.7s,baz=94,slow=13,SNR=5.1						
	2.9nm,0.7s						
STKA	**Stephens Creek**	**27.57**	**240**	P	**P**	**09 59 39.6**	**+0.1**
RAR	**Rarotonga**	**28.44**	**97**	LR	LR	10 11 36.2	
	comp=Z,28nm,18.8s,baz=118,slow=37						
WR0	**Warramunga Arr**	**33.01**	**265**	P	**P**	**10 00 25.9**	**-1.8**
WR0				IAmb	IAmb	10 01 03.7	
	comp=Z,36nm,2.0s						
WB0	**Warramunga Arr**	**33.17**	**265**	P	**P**	**10 00 27.7**	**-1.4**
WB2	**Warramunga Arr**	**33.19**	**265**	P	**P**	**10 00 26.0**	**-3.3**
WB2				IAmb	IAmb	10 01 23.5	
	comp=Z,23nm,1.8s						
WRAB	**Tennant Creek**	**33.19**	**265**	P	**P**	**10 00 27.7**	**-1.6**
WRAB				IAmb	IAmb	10 00 59.3	
	comp=Z,42nm,1.9s						
WRA	**Warramunga Arr**	**33.20**	**265**	P	**P**	**10 00 27.7**	**-1.7**
	comp=Z,0.6nm,0.8s,baz=91,slow=8.3,SNR=21						
WRA				pP	**pP**	**10 00 51.9**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=90,slow=8.4,SNR=5.0						
	comp=Z,0.6nm,0.8s						
WRA	**Warramunga Arr**	**33.20**	**265**	P	**P**	**10 00 27.7**	**-1.7**
AS31	**Alice Springs**	**33.30**	**258**	P	**P**	**10 00 29.7**	**-0.6**
ASAR	**Alice Springs**	**33.30**	**258**	P	**P**	**10 00 29.6**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=89,slow=9.3,SNR=49						
ASAR				pP	**pP**	**10 00 54.4**	**+2.7**
	comp=Z,1.7nm,0.7s,baz=84,slow=9.0,SNR=4.4						
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**33.30**	**258**	P	**P**	**10 00 29.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**41.62**	**266**	P	**P**	**10 01 39.3**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=113,slow=7.7,SNR=2.4						
FITZ				pP	**pP**	**10 02 06.0**	**+3.2**
	comp=Z,4.3nm,0.8s,baz=131,slow=8.3,SNR=4.8						
	comp=Z,1.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.62**	**266**	P	**P**	**10 01 40.0**	**-0.4**
FITZ				IAmb	IAmb	10 02 38.4	
	comp=Z,30nm,1.9s						
VNDA	**Vanda**	**57.08**	**182**	P	**P**	**10 03 37.2**	**0.0**
	comp=Z,1.0nm,0.7s,baz=353,slow=7.5,SNR=8.3						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**57.08**	**182**	P	**P**	**10 03 37.5**	**+0.3**
SBA	**Scott Base**	**57.30**	**181**	P	**P**	**10 03 40.3**	**+1.6**
CASY	**Casey**	**59.08**	**204**	P	**P**	**10 03 50.1**	**-1.2**
CASY				IAmb	IAmb	10 03 52.2	
	comp=Z,8.8nm,1.4s						
QSPA	**South Pole Qui**	**69.45**	**180**	P	**P**	**10 04 59.3**	**+0.1**
QSPA				IAmb	IAmb	10 05 00.2	
	comp=Z,12nm,0.8s						
BELA	**Belgrano 2**	**80.69**	**175**	P	**P**	**10 06 02.7**	**-0.7**
SMAI	**San Martin Ant**	**82.38**	**162**	P	**P**	**10 06 12.7**	**+0.3**
SMAI				IAmb	IAmb	10 06 14.0	
	comp=Z,13nm,0.8s						
TROLL	**Troll, Antarti**	**87.21**	**184**	P	**P**	**10 06 36.1**	**-0.7**
SNAA	**Sanae**	**87.82**	**182**	P	**P**	**10 06 38.6**	**-1.0**
SNAA	**Sanae**	**87.82**	**182**	P	**P**	**10 06 38.8**	**-0.8**
VNA3	**Neumayer Olymp**	**88.39**	**180**	P	**P**	**10 06 41.2**	**-1.1**
VNA2	**Neumayer--Watz**	**88.69**	**181**	P	**P**	**10 06 43.0**	**-0.7**
	baz=178,slow=4.9						
VNA1	**Neumayer--Stat**	**88.98**	**181**	P	**P**	**10 06 44.3**	**-0.7**
NVAR	**Mina Array Bea**	**89.33**	**48**	P	**P**	**10 06 48.1**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=225,slow=7.8,SNR=11						
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**145.93**	**331**	PKPbc	**PKPdf**	**10 13 29.3**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=29,slow=3.0,SNR=9.6						

*HEL **18** 09:59:59.9±0.1, 64°.75N×30°.65E, h0km, ML2.2, Explosion*
*IDC **18** 10:00:03.1±1.8, 64°.74N×30°.21E, h0km, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=26.8km s-min=8.1km az=105.0*

ISC 18 09:59:59.7±1.1, 64°.81N±0°.03×30°.83E±0°.06, h0km, n30, σ1s58/46, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.71**	**214**	PG	**Pg**	**10 00 12.8**	**-0.4**
	baz=27						
KU6	**Riekki**	**1.28**	**343**	PG	**Pg**	**10 00 23.7**	**-0.6**
	baz=162						
KU6				MSG		10 00 39.8	
	comp=Z,15nm,0.2s						
KU6				SG	**Sg**	**10 00 40.8**	**-0.2**
MSF	**Maaselka**	**1.34**	**327**	PG	**Pg**	**10 00 24.5**	**-0.8**
MSF				SG	**Sg**	**10 00 42.2**	**-0.5**
OLKF	**Oulanka, Finla**	**1.63**	**339**	PG	**Pn**	**10 00 29.9**	**+0.2**
OLKF				SN	**Sn**	**10 00 51.4**	**+0.1**
JOF	**Joensuu**	**1.91**	**173**	PG	**Pn**	**10 00 33.7**	**+0.2**
	baz=350						
OUL	**Oulu**	**2.12**	**280**	PG	**Pn**	**10 00 37.2**	**+0.9**
	baz=98						
OUL				SG	**Sn**	**10 01 03.5**	**+0.2**
OBF4	**Vikkela, Lumij**	**2.45**	**273**	PG	**Pn**	**10 00 42.1**	**+1.2**
	baz=94						
OUF	**Merijarvi**	**2.67**	**263**	PB	**Pn**	**10 00 44.8**	**+0.9**
	baz=74						
OUF				MSG		10 01 16.1	
	comp=Z,15nm,0.2s						
OUF				SG	**Sb**	**10 01 19.7**	**-1.8**
RNF	**Rovaniemi**	**2.69**	**314**	PN	**Pn**	**10 00 45.0**	**+0.8**
RNF				SG	**Sb**	**10 01 20.9**	**-1.2**
OBF0	**Syolatti, Pyha**	**2.85**

JAVC	**Velka Javorina**	**0.89**	**33**	*e*PG	**Pg**	**10 03 56.8**	**+1.8**
JAVC				*e*SG	**Sg**	**10 04 09.4**	**+2.8**
KRUC	**Moravsky**	**1.02**	**339**	*e*PG	**Pg**	**10 03 56.3**	**-1.1**
KRUC				*e*SG	**Sg**	**10 04 08.7**	**-1.9**
VRAC	**Vranov**	**1.22**	**349**	*e*SG	**Sg**	**10 04 16.4**	**-0.6**
VRAC	**Vranov**	**1.22**	**349**	*e*PG	**Pg**	**10 04 02.7**	**+1.4**
ARSA	**Arzberg** 3.0nm,0.5s	**1.29**	**228**	*e*Pg	**Pg**	**10 04 02.9**	**+0.3**
ARSA	3.3nm,0.5s			*e*Sg	**Sn**	**10 04 20.7**	**-0.4**
VYHS	**Vyhne**	**1.32**	**73**	*e*SG	**Sg**	**10 04 19.0**	**-1.4**
VYHS	**Vyhne**	**1.32**	**73**	*e*PG	**Pg**	**10 04 03.7**	**+0.4**

MAN ***18*** *10:16:52,5˚.38N×126˚.11E,h60km,Ms3.5*
IDC ***18*** *10:16:53.2±1.1,5˚.41N×125˚.86E,h101km±10km,mb3.7/13, mbtmp4.0/14,Error ellipse: s-maj=37.2km s-min=10.2km az=75.0*
NEIC ***18*** *10:16:53.6±2.1,5˚.47N±0˚.07×126˚.0E±0˚.1,h97km±8km, mb4.2/23,Error ellipse: s-maj=16.7km s-min=8.9km az=75.0*
DJA ***18*** *10:16:53.5±0.3,5˚N±2˚×12˚6E±˚,h95km±5km,M4.5/15, mB5.0/7,mb4.6/15,MLv4.7/12,Mw(mB)4.2/7*
ISC 18 10:16:53.4±0.7,5˚.45N±0˚.03×126˚.05E±0˚.07,h98km±7km, n71,σ1º54/84,mb4.1/23,2C-4D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.27**	**300⇑**	*e*P			**Pn**	**10 17 14.6**	**-2.2**
GSPH				*i* S			**Sn**	**10 17 31.8**	**-2.7**
DAV	**Davao City (W)** 296nm,0.3s,baz=205,slow=3.4,SNR=6.5	**1.68**	**344**	P			**Pn**	**10 17 20.9**	**-0.8**
DAV	874nm,0.4s,baz=100,slow=21,SNR=12			S			**Sn**	**10 17 43.7**	**+0.4**
DAV	comp=Z,157nm,19.8s,baz=352,slow=42			LR		LR		10 18 04.1	
DAV	**Davao City (W)**	**1.68**	**344**	Pn			**Pn**	**10 17 21.4**	**-0.3**
KCP	**Kidapawan**	**1.82**	**328⇑**	*i* P			**Pn**	**10 17 23.6**	**0.0**
KCP				*i* S			**Sn**	**10 17 47.8**	**+1.1**
SGSI	**Sangihe**	**1.83**	**197**	P			**Pn**	**10 17 24.6**	**+0.9**
SGSI				S			**Sn**	**10 17 49.2**	**+2.5**
CTBH	**Cotabato--PC H**	**2.51**	**315⇓**	*i* P			**Pn**	**10 17 31.8**	**-0.8**
CTBH				*i* S			**Sn**	**10 18 01.3**	**-1.4**
BUKP	**Musuan**	**2.61**	**338⇓**	*i* P			**Pn**	**10 17 34.5**	**+0.6**
BUKP				*i* S			**Sn**	**10 18 05.5**	**+0.5**
BIPH	**Bislig**	**2.73**	**6⇓**	*e*P			**Pn**	**10 17 36.4**	**+0.9**
BIPH				*e*S			**Sn**	**10 18 12.4**	**+4.4**
CGP	**Cagayan de Oro**	**3.27**	**336⇓**	*e*P			**Pn**	**10 17 44.5**	**+1.8**
CGP				*e*S			**Sn**	**10 18 22.7**	**+1.8**
TBP	**Tagbilaran**	**4.74**	**333**	*e*P			**Pn**	**10 18 02.9**	**+0.3**
TNTI	**Ternate**	**4.83**	**164**	Pn			**Pn**	**10 18 04.1**	**+0.3**
TNTI	**Ternate**	**4.83**	**164**	P			**Pn**	**10 18 03.3**	**-0.5**
TNTI				S			**Sn**	**10 18 58.2**	**-0.3**
LLP	**Lapu-Lapu**	**5.26**	**337**	*e*P			**Pn**	**10 18 10.3**	**+0.7**
LLP				*e*S			**Sn**	**10 19 13.9**	**+4.9**
KMSI	**Cibinong** 0.7nm3µm151nm,0.5s	**5.26**	**203**	P			**Pn**	**10 18 12.2**	**+2.5**
GTOI	**Gorontalo** 0.2nm606nm46nm,0.6s	**5.66**	**212**	P			**Pn**	**10 18 15.7**	**+0.6**
LBMI	**Labuha** 0.3nm66nm,0.9s	**6.22**	**166**	P			**Pn**	**10 18 22.1**	**-0.6**
LBMI	0.3nm66nm,0.9s			S			**Sn**	**10 19 30.3**	**-2.1**
MRSI	**Marisa** 0.4nm1µm103nm,0.6s	**6.42**	**220**	P			**Pn**	**10 18 28.2**	**+2.8**
TOLI2	**Tolitoli**	**6.80**	**231**	Pn			**Pn**	**10 18 30.0**	**-0.5**
LUWI	**Luwuk** 0.7nm7µm125nm,1.1s	**7.23**	**207**	P			**Pn**	**10 18 40.2**	**+3.8**
SANI	**Sanana** 0.4nm3µm54nm,0.6s	**7.45**	**180**	P			**Pn**	**10 18 37.4**	**-2.0**
MYLDM	**Lahad Datu**	**7.52**	**268**	Pn			**Pn**	**10 18 38.9**	**-1.5**
APSI	**Ampana** 0.2nm29nm,1.0s	**7.70**	**215**	P			**Pn**	**10 18 45.4**	**+2.6**
APSI	0.2nm29nm,1.0s			S			**Sn**	**10 20 12.9**	**+4.5**
MPSI	**Mapaga** 7.0nm,1.2s	**7.97**	**231**	P			**Pn**	**10 18 48.0**	**+1.5**
SIJI	**Sorong** 6.4nm,0.3s,baz=197,slow=19,SNR=1.8	**8.16**	**140**	P			**Pn**	**10 18 48.9**	**-0.2**
NLAI	**Namlea** 39nm,0.4s	**8.69**	**173**	P			**Pn**	**10 18 55.1**	**-1.3**
AAI	**Ambon** 49nm,0.7s	**9.32**	**167**	P			**Pn**	**10 19 06.5**	**+1.5**
FAKI	**Fak Fak**	**10.37**	**143**	Pn			**Pn**	**10 19 19.0**	**-0.2**
SBUM	**Sibu**	**14.11**	**258**	Pn			**Pn**	**10 20 08.7**	**-0.2**
EDFI	**Ende, Flores** 5.9nm,1.8s	**14.76**	**197**	P			**P**	**10 20 20.6**	**-0.2**
MTN	**Manton Dam**	**18.86**	**164**	P			**P**	**10 21 06.9**	**+0.9**
KNRA	**Kununurra**	**21.16**	**173**	P			**P**	**10 21 32.0**	**+1.2**
KNRA	comp=Z,14nm,0.6s			IAmb		IAmb		10 21 36.0	
FITZ	**Fitzroy Crossi** comp=Z,3.8nm,0.4s,baz=9.8,slow=7.4,SNR=39 comp=Z,3.8nm,0.4s	**23.40**	**181**	P			**P**	**10 21 53.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**23.40**	**181**	P			**P**	**10 21 54.4**	**+0.7**
COEN	**Coen**	**25.70**	**139**	P			**P**	**10 22 13.4**	**-1.3**
WB0	**Warramunga Arr**	**26.37**	**162**	P			**P**	**10 22 21.7**	**+1.1**
WB0	comp=Z,17nm,1.5s			IAmb		IAmb		10 22 31.7	
WRAB	**Tennant Creek**	**26.51**	**162**	P			**P**	**10 22 20.9**	**-1.0**
WRAB	comp=Z,12nm,1.3s			IAmb		IAmb		10 22 32.8	
WRA	**Warramunga Arr** comp=Z,0.3nm,0.3s,baz=336,slow=10,SNR=23 comp=Z,0.3nm,0.3s	**26.52**	**162**	P			**P**	**10 22 21.9**	**-0.1**
WRA	**Warramunga Arr**	**26.52**	**162**	P			**P**	**10 22 21.2**	**-0.8**
WB2	**Warramunga Arr**	**26.52**	**162**	P			**P**	**10 22 22.2**	**+0.2**
WB2	comp=Z,10nm,1.3s			IAmb		IAmb		10 23 03.9	
WR0	**Warramunga Arr**	**26.59**	**162**	P			**P**	**10 22 22.8**	**+0.2**
WR0	comp=Z,6.2nm,1.1s			IAmb		IAmb		10 22 56.5	
PSA00	**Pilbara Seismi**	**27.53**	**193**	P			**P**	**10 22 29.9**	**-1.1**
PSA00	comp=Z,8.7nm,0.9s			IAmb		IAmb		10 22 50.2	
AS31	**Alice Springs**	**29.93**	**165**	P			**P**	**10 22 50.8**	**-1.6**
ASAR	**Alice Springs** comp=Z,0.7nm,0.6s,baz=342,slow=6.8,SNR=17 comp=Z,0.7nm,0.6s	**29.94**	**165**	P			**P**	**10 22 50.8**	**-1.6**
ASAR	**Alice Springs**	**29.94**	**165**	P			**P**	**10 22 52.1**	**-0.3**
KSRS	**Korea Array** comp=Z,0.3nm,0.3s,baz=185,slow=9.6,SNR=2.2 comp=Z,0.3nm,0.3s	**31.90**	**3**	P			**P**	**10 23 09.4**	**-0.1**
XAN	**Xi'an**	**32.59**	**333**	P			**P**	**10 23 18.3**	**+2.7**
XAN	comp=Z,3.0nm,0.7s			pmax		pmax			
JMM	**Marumori**	**34.95**	**21**	P			**P**	**10 23 36.8**	**+0.8**
MORW	**Morawa**	**35.64**	**195**	P			**P**	**10 23 41.7**	**-0.3**
FORT	**Forrest**	**36.07**	**177**	P			**P**	**10 23 46.3**	**+0.6**
USRK	**Ussuriysk Ar.** comp=Z,0.4nm,0.3s,baz=191,slow=9.4,SNR=4.0 comp=Z,0.4nm,0.3s	**38.95**	**7**	P			**P**	**10 24 10.1**	**+0.3**
NWAO	**Narrogin (SRO)**	**39.07**	**192**	P			**P**	**10 24 11.4**	**+0.4**
BBOO	**Buckleboo**	**39.22**	**167**	P			**P**	**10 24 13.1**	**+0.9**
STKA	**Stephens Creek** comp=Z,2.1nm,0.8s,baz=341,slow=9.9,SNR=3.8 comp=Z,2.1nm,0.8s	**39.97**	**159**	P			**P**	**10 24 18.6**	**+0.2**
STKA	**Stephens Creek**	**39.97**	**159**	P			**P**	**10 24 19.3**	**+0.9**
STKA	comp=Z,5.2nm,1.5s			IAmb		IAmb		10 24 44.6	
PETK	**Petropavlovsk-** comp=Z,5.3nm,1.0s,baz=329,slow=1.7,SNR=1.6 comp=Z,5.3nm,1.0s	**54.11**	**23**	P			**P**	**10 26 08.7**	**+0.6**
MK31	**Makanchi Array**	**55.77**	**325**	P			**P**	**10 26 19.2**	**-1.0**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.3s,baz=118,slow=7.8,SNR=18 comp=Z,1.0nm,0.3s	**55.77**	**325**	P			**P**	**10 26 19.0**	**-1.1**
MKAR	**Makanchi Array**	**55.77**	**325**	P			**P**	**10 26 19.2**	**-1.0**
MAKZ	**Makanchi**	**55.95**	**325**	P			**P**	**10 26 21.1**	**-0.4**
MAKZ	comp=Z,2.4nm,1.3s			IAmb		IAmb		10 26 24.4	
KURBB	**Kurchatov Arra** comp=Z,0.6nm,0.4s,baz=125,slow=7.4,SNR=6.5 comp=Z,0.6nm,0.4s	**59.94**	**327**	P			**P**	**10 26 47.2**	**-2.0**
KURK	**Kurchatov**	**59.94**	**327**	P			**P**	**10 26 48.5**	**-0.7**
KURK	comp=Z,2.0nm,0.7s			IAmb		IAmb		10 26 49.5	
AMKA	**Amchitka**	**63.46**	**34**	P			**P**	**10 27 13.3**	**+0.5**
KHZ	**Kahutara**	**64.23**	**143**	P			**P**	**10 27 17.5**	**-0.5**
ABKAR	**Akbulak array**	**70.40**	**321**	P			**P**	**10 27 56.0**	**-0.9**
CASY	**Casey**	**72.43**	**187**	P			**P**	**10 28 08.6**	**-0.1**
CASY	comp=Z,2.6nm,1.0s			IAmb		IAmb		10 28 14.7	
O18K	**Koktuh Hills**	**79.66**	**30**	P			**P**	**10 28 50.9**	**+0.9**

ILAR	**Eielson Array** comp=Z,0.4nm,0.7s,baz=247,slow=5.8,SNR=3.9	**83.85**	**25**	P		**P**	**10 29 11.4**	**-0.5**
ILAR	comp=Z,0.4nm,0.9s,baz=257,slow=7.9,SNR=4.2 comp=Z,0.4nm,0.7s			pP		**pwP**	**10 29 38.1**	**-1.6**
VNDA	**Vanda** comp=Z,0.6nm,0.5s,baz=321,slow=6.8,SNR=12 comp=Z,0.6nm,0.5s	**85.21**	**173**	P		**P**	**10 29 18.8**	**+0.4**
ARCES	**ARCESS Array B** comp=Z,0.8nm,0.7s,baz=89,slow=6.4,SNR=1.3 comp=Z,0.8nm,0.7s	**88.61**	**340**	P		**P**	**10 29 34.8**	**-0.3**
FINES	**FINESS Array B** comp=Z,2.7nm,0.8s,baz=56,slow=10,SNR=2.2 comp=Z,2.7nm,0.8s	**90.01**	**332**	P		**P**	**10 29 40.2**	**-1.6**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.6s,baz=84,slow=1.8,SNR=4.0	**121.73**	**289**	PKP		**PKPdf**	**10 35 36.4**	**-0.6**

TAP ***18*** *10:38:15.1,24˚.75N×122˚.92E,h134km±1km,ML3.1,D*
JMA ***18*** *10:38:16.5±0.2,25˚N±2˚×123˚.0E±0˚.7,h123km±2km, MV3.0/13,NW OFF ISHIGAKIJIMA IS*
ISC 18 10:38:15.8±1.6,24.72N±0˚.05×122.89E±0˚.03,h129km±9km, n59,σ0º75/109,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.27**	**170**	P			**Pn**	**10 38 34.2**	**+0.5**
JYNG				S			**Sn**	**10 38 47.9**	**+0.7**
YOJ	**Yonaguni jima** baz=164	**0.28**	**157**	*e*P			**Pn**	**10 38 33.1**	**-0.7**
YOJ	baz=164			S			**Sn**	**10 38 47.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.28**	**157**	P			**Pn**	**10 38 34.2**	**+0.4**
YOJ				*e*S			**Sn**	**10 38 47.9**	**+0.5**
IRIF	**Iriomote-Funau**	**0.85**	**117**	P			**Pn**	**10 38 37.5**	**+0.1**
IRIF				S			**Sn**	**10 38 53.7**	**+0.1**
TWB1	**Santiao Chiao** baz=287	**0.87**	**289**	P			**Pn**	**10 38 36.8**	**-0.6**
TWB1	baz=287			S			**Sn**	**10 38 53.5**	**-0.3**
EGS	baz=276	**0.88**	**278**	*e*S			**Sn**	**10 38 53.9**	**0.0**
TWC	**Suao** baz=261	**0.96**	**264**	P			**Pn**	**10 38 38.0**	**-0.2**
TWC	baz=261			S			**Sn**	**10 38 54.9**	**-0.3**
SXI1	**Grass Mountain** baz=290	**0.99**	**292**	*e*P			**Pn**	**10 38 38.5**	**-0.2**
SXI1	baz=290			*e*S			**Sn**	**10 38 57.5**	**+1.5**
TIPB	**Shuangxi** baz=282	**1.00**	**285**	P			**Pn**	**10 38 38.4**	**-0.3**
TIPB	baz=282			S			**Sn**	**10 38 55.2**	**-0.8**
EWUT	**Wuta** baz=253	**1.05**	**255**	*e*P			**Pn**	**10 38 38.6**	**-0.5**
EWUT	baz=253			*e*S			**Sn**	**10 38 55.6**	**-1.2**
HATJ	**Hateruma jima**	**1.06**	**128**	S			**Sn**	**10 38 57.6**	**+0.6**
NDS	**Dongshan** baz=264	**1.07**	**266**	*e*P			**Pn**	**10 38 38.6**	**-0.8**
NDS	baz=264			*e*S			**Sn**	**10 38 56.0**	**-1.2**
ENA	**Nanau** baz=253	**1.09**	**255**	S			**Sn**	**10 38 57.7**	**+0.3**
TWE	**Neicheng** baz=268	**1.11**	**270**	P			**Pn**	**10 38 39.6**	**-0.1**
TWE	baz=268			S			**Sn**	**10 38 57.9**	**+0.1**
JKRS	**Kuro-shima**	**1.13**	**115**	P			**Pn**	**10 38 40.5**	**+0.7**
JKRS				S			**Sn**	**10 38 58.4**	**+0.3**
PCYT	**Pengchaiyu** baz=319	**1.17**	**321**	*i* P			**Pn**	**10 38 40.9**	**+0.6**
PCYT	baz=319			S			**Sn**	**10 38 59.9**	**+0.9**
FUSB	**Fushanzhiwuyua** baz=270	**1.19**	**272**	P			**Pn**	**10 38 40.6**	**+0.1**
FUSB	baz=270			S			**Sn**	**10 38 58.0**	**-1.3**
JIJ	**Ishigaki jima**	**1.19**	**107**	P			**Pn**	**10 38 40.6**	**+0.1**
JIJ				S			**Sn**	**10 38 58.3**	**-1.0**
ENTT	**Nioudou** baz=265	**1.21**	**266**	*i* P			**Pn**	**10 38 40.0**	**-0.8**
ENTT	baz=265			S			**Sn**	**10 38 59.9**	**+0.3**
LATG	**Datong** baz=260	**1.26**	**262**	P			**Pn**	**10 38 41.5**	**+0.2**
LATG	baz=260			S			**Sn**	**10 39 01.3**	**+0.7**
NDT	**Datong Townshi** baz=263	**1.26**	**265**	P			**Pn**	**10 38 42.6**	**+1.3**
NDT	baz=263			S			**Sn**	**10 39 01.5**	**+1.0**
YM01	**YM01** baz=288	**1.27**	**290**	P			**Pn**	**10 38 41.3**	**-0.1**
YM01	baz=288			S			**Sn**	**10 39 01.1**	**+0.3**
JISG	**Ishigakijimahi**	**1.30**	**96**	P			**Pn**	**10 38 41.4**	**-0.2**
JISG				S			**Sn**	**10 39 00.2**	**-1.0**
NACB	**Ninganchiao** baz=244	**1.30**	**246**	P			**Pn**	**10 38 41.7**	**+0.1**
NACB	baz=244			S			**Sn**	**10 39 00.9**	**-0.4**
TWD	**Chiawan** baz=241	**1.34**	**242**	P			**Pn**	**10 38 41.7**	**-0.4**
TWD	baz=241			*i* S			**Sn**	**10 39 01.7**	**-0.3**
YHNB	**Yeheng** baz=266	**1.38**	**268**	P			**Pn**	**10 38 42.9**	**+0.3**
YHNB	baz=266			S			**Sn**	**10 39 02.9**	**-0.1**
ETLH	**Xiulin Townshi** baz=247	**1.38**	**249**	*e*P			**Pn**	**10 38 42.0**	**-0.6**
ETLH	baz=247			S			**Sn**	**10 39 03.2**	**+0.1**
NNSB	**Datong** baz=257	**1.41**	**258**	P			**Pn**	**10 38 43.3**	**+0.3**
NNSB	baz=257			S			**Sn**	**10 39 03.9**	**+0.4**
NNS	**Nan Shan** baz=257	**1.41**	**259**	*e*P			**Pn**	**10 38 42.6**	**-0.4**
NNS	baz=257			S			**Sn**	**10 39 02.7**	**-1.0**
FUSS	**Fushou** baz=252	**1.57**	**253**	P			**Pn**	**10 38 44.9**	**0.0**
FUSS	baz=252			S			**Sn**	**10 39 07.4**	**+0.3**
WHF	**Hehuan Shan** baz=248	**1.59**	**249**	*i* P			**Pn**	**10 38 45.3**	**0.0**
WHF	baz=248			*i* S			**Sn**	**10 39 07.5**	**-0.3**
ESL	**Shilin** baz=235	**1.61**	**236**	*e*S			**Sn**	**10 39 05.9**	**-1.5**
NFF	**Wufeng Townshi** baz=266	**1.62**	**267**	*e*P			**Pn**	**10 38 44.5**	**-0.7**
NFF	baz=266			*e*S			**Sn**	**10 39 06.2**	**-1.4**
TWT	**Tachien** baz=252	**1.63**	**254**	*i* P			**Pn**	**10 38 46.6**	**+1.0**
TWT	baz=252			*i* S			**Sn**	**10 39 08.8**	**+0.6**
TDCB	**Techi** baz=252	**1.65**	**254**	*e*P			**Pn**	**10 38 46.8**	**+1.1**
TDCB	baz=252			*e*S			**Sn**	**10 39 08.6**	**+0.2**
JTJ	**Tarama**	**1.65**	**92**	P			**Pn**	**10 38 45.5**	**-0.1**
JTJ				S			**Sn**	**10 39 07.4**	**-0.8**
CHGB	**Renai** baz=246	**1.70**	**248**	*e*P			**Pn**	**10 38 48.0**	**+1.6**
CHGB	baz=246			S			**Sn**	**10 39 09.9**	**+0.3**
LIOB	**Emei** baz=266	**1.71**	**268**	*i* P			**Pn**	**10 38 45.8**	**-0.4**
LIOB	baz=266			*i* S			**Sn**	**10 39 08.8**	**-0.7**
NSTT	**Nanjuang** baz=266	**1.72**	**267**	P			**Pn**	**10 38 46.0**	**-0.4**
NSTT	baz=266			*i* S			**Sn**	**10 39 09.1**	**-0.7**
OWD	**Renai** baz=243	**1.74**	**244**	*e*P			**Pn**	**10 38 47.2**	**+0.4**
OWD	baz=243			S			**Sn**	**10 39 10.1**	**-0.4**
WUSB	**Renai** baz=245	**1.77**	**246**	P			**Pn**	**10 38 47.8**	**+0.6**
WUSB	baz=245			S			**Sn**	**10 39 10.9**	**-0.2**

HGSD	**Ruisui** baz=227	**1.82**	**228**	*e*P			**Pn**	**10 38 47.5**	**-0.1**
HGSD	baz=227			*e*S			**Sn**	**10 39 11.6**	**-0.2**
WHP	**Taichung City** baz=255	**1.83**	**256**	S			**Sn**	**10 39 12.5**	**+0.4**
VWDT	**VWDT** baz=238	**1.87**	**239**	P			**Pn**	**10 38 49.0**	**+0.9**
VWDT	baz=238			S			**Sn**	**10 39 12.8**	**0.0**
WCS	**Beigang Elemen** baz=249	**1.92**	**250**	*e*P			**Pn**	**10 38 49.0**	**+0.2**
WCS	baz=249			*e*S			**Sn**	**10 39 13.0**	**-1.0**
YULB	**Yu-li** baz=227	**1.97**	**228**	P			**Pn**	**10 38 49.1**	**-0.3**
YULB	baz=227			*e*S			**Sn**	**10 39 14.6**	**-0.5**
EYUL	**Yuli** baz=226	**1.98**	**227**	*e*P			**Pn**	**10 38 51.5**	**+1.9**
EYUL	baz=226			*e*S			**Sn**	**10 39 16.0**	**+0.6**
SSLB	**Suanglung** baz=242	**2.00**	**243**	P			**Pn**	**10 38 50.8**	**+1.0**
SSLB	baz=242			*e*S			**Sn**	**10 39 16.6**	**+0.9**
SMLT	**Sun Moon Lake** baz=244	**2.00**	**246**	P			**Pn**	**10 38 51.2**	**+1.3**
SMLT	baz=244			*e*S			**Sn**	**10 39 14.2**	**-1.7**
JIRB	**Irabujima**	**2.08**	**87**	*e*P			**Pn**	**10 38 50.5**	**-0.1**
FULB	**Fuli** baz=224	**2.11**	**224**	*e*P			**Pn**	**10 38 51.4**	**+0.3**
FULB	baz=224			*e*S			**Sn**	**10 39 18.8**	**+0.7**
WHYT	**Xinyi Township** baz=241	**2.12**	**242**	*e*S			**Sn**	**10 39 19.7**	**+1.2**
YUS	**Yu-Shan** baz=235	**2.16**	**236**	P			**Pn**	**10 38 53.3**	**+1.2**
YUS	baz=235			*e*S			**Sn**	**10 39 18.6**	**-1.4**
JMJ2	**Miyako jima3**	**2.21**	**89**	P			**Pn**	**10 38 52.8**	**+0.4**
JMJ2				*e*S			**Sn**	**10 39 20.0**	**-0.4**
ALS	**Alishan** baz=237	**2.26**	**238**	*e*P			**Pn**	**10 38 53.7**	**+0.5**
ALS	baz=237			*e*S			**Sn**	**10 39 20.9**	**-0.9**
EDH	**Donghe** baz=219	**2.27**	**220**	*e*P			**Pn**	**10 38 52.5**	**-0.6**
EDH	baz=219			*e*S			**Sn**	**10 39 21.0**	**-0.6**
JOGS	**Gusukube**	**2.29**	**89**	P			**Pn**	**10 38 53.7**	**+0.5**
ELDTW	**Lidau** baz=228	**2.29**	**229**	*e*S			**Sn**	**10 39 20.2**	**-2.2**
CHN4	**Tsaushan** baz=236	**2.51**	**237**	*e*P			**Pn**	**10 38 56.6**	**+0.5**
CHN4	baz=236			*e*S			**Sn**	**10 39 27.4**	**+0.4**

IDC ***18*** *10:49:12.8±0.7,0˚.95S×21˚.94W,h0km,mb4.0/12, mbtmp4.1/14,ML4.2/2,MS4.1/56,Error ellipse: s-maj=28.3km s-min=16.3km az=148.0*
GCMT ***18*** *10:49:18.7±0.1,0˚.69S±0˚.01×21˚.80W±0˚.01,h25km, MW5.3/140,Moment Tensor Solution. s104,c161; s140,c244; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr-0.02±.02; Mθθ0.28±.02; Mϕϕ-0.25±.02; Mrθ0.26±.03; Mθϕ-0.99±.01; Mϕr0.08±.03; Best double couple: M0 1.05800×10^17 NP1:ϕs263.00000°,δ88.00000°, λ-165.00000°. NP2:ϕs172.00000°,δ75.00000°, λ-2.00000°. Principal axes: T 1.0560, Plg9.0000°, Azm37.0000°; N 0.0050, Plg75.0000°, Azm272.0000°; P -1.0610, Plg12.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***18*** *10:49:19.7±1.4,0˚.8S±0˚.1×21˚.3W±0˚.1,h10km±1km, mb4.6/25 Error ellipse: s-maj=22.3km s-min=17.1km az=210.0*
ISC 18 10:49:15.2±0.4,0˚.96S±0˚.08×21˚.98W±0˚.07,h10km,n136, σ1º50/84,mb4.4/21,MS4.1/53,3C,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR10.11 133** baz=314,slow=74,SNR=447			T		T	T	11 01 59.7	
H10N2	**ASCENSION HYDR10.11 133** baz=314,slow=74,SNR=540			T		T	T	11 01 57.9	
H10N1	**ASCENSION HYDR10.13 133** baz=314,slow=74,SNR=748			T		T	T	11 01 57.2	
ASCN	**Ascension**	**10.27**	**133**	Pn			**Pn**	**10 51 42.1**	**-0.7**
H10S3	**ASCENSION HYDR10.77 138** baz=319,slow=74,SNR=609			T		T	T	11 02 52.3	
H10S2	**ASCENSION HYDR10.79 138** baz=261,slow=74,SNR=237			T		T	T	11 02 55.1	
RCBR	**Riachuelo** 1.2nm,0.3s,baz=222,slow=9.8,SNR=6.0	**14.71**	**251**	Pn			**Pn**	**10 52 41.6**	**-2.0**
RCBR	1.5nm,0.3s,baz=306,slow=23,SNR=6.3			Sn			Sn	10 55 16.5	-10
RCBR	comp=Z,794nm,19.4s,baz=170,slow=32 7.7nm,0.8s			LR		LR	LR	10 57 04.8	
RCBR	**Riachuelo**	**14.71**	**251**	*e*P			**Pn**	**10 52 43.8**	**+0.3**
BBTS	**Babate** comp=Z,1µm,18.6s,baz=217,slow=32	**16.43**	**19**	LR		LR	LR	10 57 58.4	
NBAN	**Anadia - AL**	**16.64**	**238**	*e*P			**P**	**10 53 11.7**	**+0.5**
LIC	**Lamto** 24nm,0.8s	**18.37**	**67⇑**	*e*P			**Pn**	**10 53 29.3**	**-1.0**
TIC	**Toumodi** 14nm,0.7s	**18.54**	**66⇑**	*e*P			**P**	**10 53 31.0**	**-1.2**
NBLA	**Lagarto - SE**	**18.60**	**237**	*e*P			**Pn**	**10 53 33.1**	**+0.1**
KIC	**Kosan Boka** 11nm,0.5s	**18.68**	**67⇑**	*e*P			**P**	**10 53 31.6**	**-2.2**
DBIC	**Dimbokro** 0.7nm,0.3s,baz=264,slow=12,SNR=6.8	**18.70**	**66**	P			**P**	**10 53 31.7**	**-2.2**
DBIC	14nm,0.6s,baz=344,slow=18,SNR=7.1			S			Sn	10 56 45.0	-19
DBIC	comp=Z,413nm,18.4s,baz=252,slow=32 16nm,1.2s			LR		LR	LR	10 59 07.2	
DBIC	**Dimbokro**	**18.70**	**66**				**P**	**10 53 30.4**	**-3.5**
GDU01	**Guandu, BA**	**21.54**	**233**	*e*P			**P**	**10 54 03.2**	**-1.6**
ROSB	**Rosrio**	**22.22**	**265**	*e*P			**P**	**10 54 11.1**	**-1.0**
CMC01	**Camacan, BA**	**22.46**	**230**	*e*P			**P**	**10 54 15.2**	**+0.4**
GUA01	**Guaratinga, BA**	**23.44**	**228**	*e*P			**P**	**10 54 25.2**	**+0.4**
KOWA	**Kowa**	**23.50**	**49**	P			**P**	**10 54 22.7**	**-2.8**
NAN01	**Guarapari, ES**	**24.48**	**226**	*e*P			**P**	**10 54 35.2**	**+0.4**
SDBA	**SAO DESIDERIO**	**25.41**	**242**	*e*P			**P**	**10 54 43.2**	**-0.1**
RIB01	**Linhares ES**	**25.66**	**224**	*e*P			**P**	**10 54 45.7**	**+0.3**
JANB	**Januaria**	**26.13**	**236**	*e*P			**P**	**10 54 50.0**	**+0.3**
TMAB	**Tom-Au,PA,Br**	**26.14**	**267**	*e*P			**P**	**10 54 49.3**	**-0.6**
SMTB	**Santa Maria do**	**26.68**	**252**	*e*P			**P**	**10 54 55.0**	**+0.3**
TOA0	**Torodi Ar. Sit**	**27.35**	**58**	P			**P**	**10 54 59.0**	**-1.8**
TOA0	comp=Z,19nm,1.1s			IAmb		IAmb	IAmb	10 55 06.3	
TORD	**Torodi Ar. Bea** comp=Z,3.7nm,0.7s,baz=239,slow=10,SNR=12	**27.35**	**58**	P			**P**	**10 54 58.8**	**-1.9**
TORD	comp=Z,539nm,19.4s,baz=198,slow=33 comp=Z,3.7nm,0.7s			LR		LR	LR	11 04 05.5	
TORD	**Torodi Ar. Bea**	**27.35**	**58**	P			**P**	**

MACA	**Manacapuru-AM**	**38.74**	**266**	*eP*		**P**		**10 56 39.5**	**-0.6**
ITAB	**Concordia**	**38.98**	**225**	*eP*		**P**		**10 56 41.7**	**-0.2**
PTLB	**Pontes e Lacer**	**39.39**	**247**	*eP*		**P**		**10 56 45.5**	**+0.1**
CNLB	**Canela**	**39.39**	**222**	*eP*		**P**		**10 56 45.4**	**0.0**
SIV	**San Ignacio**	**41.33**	**247**	*eP*		**P**		**10 57 00.1**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=88,slow=11,SNR=7.8								
SIV				LR		LR		11 13 36.0	
	comp=Z,353nm,18.8s,baz=98,slow=35								
	comp=Z,1.8nm,0.8s								
CPUP	**Villa Florida**	**42.33**	**230**	LR		LR		11 14 07.3	
	comp=Z,427nm,19.1s,baz=56,slow=35								
TSUM	**Tsumeb**	**42.78**	**118**	LR		LR		11 12 21.7	
	comp=Z,152nm,18.4s,baz=326,slow=32								
ITQB	**Itaqui**	**43.60**	**226**	*eP*		**P**		**10 57 19.6**	**-0.3**
ESDC	**Sonseca Array**	**43.68**	**20**	P		**P**		**10 57 19.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=201,slow=7.9,SNR=5.6								
ESDC				LR		LR		11 14 27.5	
	comp=Z,122nm,18.1s,baz=218,slow=35								
	comp=Z,1.2nm,0.7s								
ESDC	**Sonseca Array**	**43.68**	**20**	P		**P**		**10 57 20.6**	**+0.2**
ESBB	**Sonseca Array**	**43.68**	**20**	P		**P**		**10 57 21.1**	**+0.7**
SKI	**Saint Kitts**	**44.08**	**296**	P		P		10 57 31.2	+7.4
ETMB	**Extrema**	**44.86**	**257**	*eP*		**P**		**10 57 30.2**	**0.0**
KEST	**Kesra**	**46.75**	**36**	LR		LR		11 18 11.9	
	comp=Z,722nm,19.2s,baz=184,slow=37								
KEST	**Kesra**	**46.75**	**36**	P		**P**		**10 57 44.3**	**-0.6**
KEST				IAmb		IAmb		10 58 09.3	
	comp=Z,11nm,1.1s								
SJG	**San Juan**	**47.40**	**296**	LR		LR		11 14 24.1	
	comp=Z,165nm,20.8s,baz=101,slow=32								
LPAZ	**La Paz**	**47.94**	**249**	P		**P**		**10 57 54.5**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=81,slow=6.1,SNR=10								
LPAZ				LR		LR		11 16 44.7	
	comp=Z,272nm,21.5s,baz=88,slow=34								
	comp=Z,2.6nm,0.9s								
LPAZ	**La Paz**	**47.94**	**249**	*eP*		**P**		**10 57 54.4**	**-0.8**
SDV	**Santo Domingo**	**49.45**	**282**	LR		LR		11 16 54.5	
	comp=Z,143nm,19.6s,baz=82,slow=34								
LVC	**Limon Verde**	**50.41**	**241**	LR		LR		11 20 06.7	
	comp=Z,255nm,18.7s,baz=68,slow=37								
LVC	**Limon Verde**	**50.41**	**241**	*eP*		**P**		**10 58 13.1**	**-0.6**
VAE	**Valguarnera**	**50.94**	**37**	LR		LR		11 20 20.1	
	comp=Z,328nm,18.3s,baz=177,slow=37								
SUR	**Sutherland**	**50.97**	**132**	LR		LR		11 15 55.3	
	comp=Z,280nm,19.2s,baz=264,slow=32								
CZSB	**Cruzeiro do Su**	**50.99**	**261**	*eP*		**P**		**10 58 17.6**	**-0.1**
LBTB	**Lobatse**	**51.76**	**121**	LR		LR		11 17 20.7	
	comp=Z,248nm,20.6s,baz=229,slow=33								
LBTB	**Lobatse**	**51.76**	**121**	P		**P**		**10 58 22.9**	**-0.6**
LBTB				IAmb		IAmb		10 58 34.1	
	comp=Z,9.6nm,1.0s								
ROSC	**El Rosal**	**52.60**	**277**	LR		LR		11 19 32.2	
	comp=Z,274nm,19.4s,baz=206,slow=35								
ROSC	**El Rosal**	**52.60**	**277**	P		P		10 58 38.8	+8.5
BOSA	**Boshof**	**52.78**	**126**	P		**P**		**10 58 29.5**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=299,slow=7.4,SNR=6.6								
	comp=Z,1.4nm,0.5s								
BOSA	**Boshof**	**52.78**	**126**	P		**P**		**10 58 31.7**	**+0.6**
BOSA				IAmb		IAmb		10 58 51.1	
	comp=Z,11nm,1.2s								
VLC	**Villacollemand**	**53.40**	**29**	P		**P**		**10 58 37.6**	**+2.4**
SENIN	**Lac Senin/Sane**	**53.71**	**25**	P		**P**		**10 58 37.5**	**-0.2**
DAVOX	**Davos/Dischmat**	**55.15**	**26**	LR		LR		11 20 25.6	
	comp=Z,123nm,21.8s,baz=260,slow=34								
NNA	**Nana**	**55.49**	**256**	LR		LR		11 21 42.3	
	comp=Z,223nm,18.5s,baz=68,slow=35								
CLUD	**Cludinico**	**56.28**	**28**	P		**P**		**10 58 56.7**	**+0.7**
CLUD				IAmb		IAmb		10 59 22.6	
	comp=Z,7.1nm,0.9s								
OTAV	**Otavalo**	**56.48**	**271**	*eP*		**P**		**10 58 57.9**	**-0.7**
ATAH	**Atahualpa**	**56.57**	**262**	LR		LR		11 22 34.6	
	comp=Z,247nm,18.7s,baz=90,slow=35								
PRED	**Cave del Predi**	**56.60**	**29**	P		**P**		**10 58 58.4**	**0.0**
PRED				IAmb		IAmb		10 59 24.3	
	comp=Z,8.5nm,1.4s								
IDI	**Anoyia**	**56.66**	**46**	LR		LR		11 23 18.4	
	comp=Z,66nm,20.5s,baz=268,slow=36								
EKA	**Eskdalemuir Ar**	**58.19**	**13**	LR		LR		11 20 26.7	
	comp=Z,178nm,20.3s,baz=198,slow=32								
DIVS	**Divibare**	**58.40**	**34**	P		**P**		**10 59 11.7**	**+0.5**
DIVS				IAmb		IAmb		10 59 23.6	
	comp=Z,6.0nm,1.1s								
GEC2	**GERESS Array S**	**58.40**	**27**	P		**P**		**10 59 11.9**	**+0.9**
GEC2				IAmb		IAmb		10 59 18.8	
	comp=Z,6.8nm,1.1s								
GERES	**GERESS Array B**	**58.40**	**27**	P		**P**		**10 59 09.9**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=216,slow=6.3,SNR=4.6								
GERES				LR		LR		11 23 40.2	
	comp=Z,133nm,20.5s,baz=239,slow=35								
	comp=Z,0.3nm,0.5s								
GERES	**GERESS Array B**	**58.40**	**27**	P		**P**		**10 59 11.8**	**+0.8**
PLCA	**Paso Flores**	**59.09**	**222**	LR		LR		11 22 55.5	
	comp=Z,128nm,21.1s,baz=59,slow=34								
PLCA	**Paso Flores**	**59.09**	**222**	*eP*		**P**		**10 59 15.8**	**-0.3**
CLL	**Collm**	**59.92**	**25**	*eP*		**P**		**10 59 22.0**	**+0.6**
CLL				*e*PP		PP		11 01 42.0	+8.3
CLL				*e*PPP		PPP		11 02 56.0	
CLL				*e*S		**S**		**11 07 37.0**	**+3.6**
	comp=N,300nm,26.5s								
CLL				*e*S		**S**		**11 07 37.0**	**+3.6**
	comp=E,300nm,24.7s								
CLL				*e*S		**S**		**11 07 37.0**	**+3.6**
	comp=Z,100nm,21.1s								
CLL				*e*SS		**SS**		**11 11 30.0**	**0.0**
CLL				*e*SSS		SSS		11 14 12.0	
BRG	**Berggiesshubel**	**59.99**	**25**	S		**S**		**11 07 39.0**	**+4.6**
BRG				Amp				11 19 53.0	
	comp=Z,0.4nm,31.3s								
BRG				Amp				11 20 00.0	
	comp=E,0.3nm,30.2s								
BRG				Amp				11 20 07.0	
	comp=N,0.2nm,19.3s								
VRAC	**Vranov**	**60.07**	**28**	LR		LR		11 23 24.1	
	comp=N,106nm,21.9s,baz=236,slow=34								
VYHS	**Vyhne**	**60.60**	**30**	*eP*		**P**		**10 59 26.4**	**+0.2**
VYHS				*e*				10 59 32.7	
EIL	**Elat**	**62.19**	**56**	LR		LR		11 28 16.7	
	comp=N,323nm,18.3s,baz=257,slow=38								
MMAI	**Mount Meron Ar**	**63.66**	**52**	LR		LR		11 28 56.8	
	comp=N,196nm,18.3s,baz=53,slow=38								
SOR	**Soroa**	**63.87**	**296**	P		P		10 59 56.4	+7.9
BR131	**Keskin Array S**	**64.86**	**45**	P		**P**		**10 59 54.1**	**-0.9**
BRTR	**Keskin Array B**	**64.86**	**45**	P		**P**		**10 59 53.5**	**-1.5**
	comp=N,1.2nm,0.8s,baz=226,slow=6.6,SNR=6.0								
BRTR				LR		LR		11 28 53.3	
	comp=N,142nm,21.2s,baz=218,slow=37								
	comp=N,1.2nm,0.8s								
BORG	**Borgarnes**	**65.56**	**0**	LR		LR		11 21 57.0	
	comp=N,126nm,20.9s,baz=172,slow=30								
SCHQ	**Schefferville**	**66.64**	**334**	LR		LR		11 26 40.2	
	comp=N,167nm,18.0s,baz=143,slow=34								
NOA	**NORSAR Array B**	**66.88**	**17**	LR		LR		11 29 50.4	
	comp=N,88nm,18.9s,baz=210,slow=36								
HFS	**Hagfors**	**66.92**	**18**	LR		LR		11 29 31.2	
	comp=N,110nm,19.5s,baz=222,slow=36								
AKASG	**Malin Array Be**	**67.33**	**32**	P		**P**		**11 00 08.3**	**-2.0**
	comp=N,0.4nm,0.3s,baz=236,slow=6.2,SNR=9.9								
AKASG				LR		LR		11 30 23.4	
	comp=N,121nm,19.9s,baz=236,slow=37								
	comp=N,0.4nm,0.3s								
AKBB	**Malin Array Si**	**67.33**	**32**	P		**P**		**11 00 09.7**	**-0.6**
TKL	**Tuckaleechee C**	**67.97**	**309**	LR		LR		11 23 18.0	
	comp=N,62nm,21.9s,baz=108,slow=30								
SADO	**Sadowa**	**68.01**	**320**	LR		LR		11 25 25.8	
	comp=N,118nm,20.4s,baz=182,slow=32								
VNA1	**Neumayer--Stat**	**70.15**	**175**	P		**P**		**11 00 30.0**	**+2.5**
VNA2	**Neumayer--Watz**	**70.49**	**175**	P		**P**		**11 00 32.7**	**+3.0**
	baz=341,slow=5.7								
PMSA	**Palmer Station**	**70.54**	**198**	LR		LR		11 24 43.9	
	comp=N,85nm,21.5s,baz=72,slow=30								
VNA3	**Neumayer Olymp**	**70.62**	**176**	P		P		11 00 41.6	+11
SFJD	**Kangerlussuaq**	**70.76**	**348**	LR		LR		11 23 03.0	
	comp=N,131nm,21.2s,baz=164,slow=29								
SNAA	**Sanae**	**71.66**	**174**	P		**P**		**11 00 39.4**	**+2.6**
FINES	**FINESS Array B**	**72.15**	**22**	P		**P**		**11 00 39.6**	**-0.2**
	comp=N,3.8nm,0.8s,baz=253,slow=4.2,SNR=2.1								
	comp=N,3.8nm,0.8s								
TROLL	**Troll, Antarti**	**72.63**	**172**	P		**P**		**11 00 45.8**	**+3.1**
KBZ	**Khabaz**	**72.77**	**43**	P		**P**		**11 00 43.9**	**0.0**
	comp=N,2.5nm,1.1s,baz=241,slow=13,SNR=2.5								
KBZ				LR		LR		11 33 56.4	
	comp=N,134nm,21.9s,baz=258,slow=37								
	comp=N,2.5nm,1.1s								
GNI	**Garni**	**73.01**	**47**	LR		LR		11 35 14.7	
	comp=N,48nm,18.2s,baz=275,slow=38								
OBN	**Obninsk**	**73.38**	**31**	LR		LR		11 33 26.0	
	comp=N,22nm,20.7s,baz=211,slow=36								
CMIG	**Matias Romero**	**73.97**	**288**	LR		LR		11 33 41.8	
	comp=N,27nm,20.5s,baz=87,slow=36								
ARCES	**ARCESS Array B**	**77.17**	**15**	LR		LR		11 35 53.5	
	comp=N,73nm,18.7s,baz=230,slow=36								
BELG	**Belogornoye**	**78.44**	**36**	LR		LR		11 37 00.1	
	comp=N,86nm,20.1s,baz=305,slow=37								
KIRV	**Kirov**	**81.21**	**30**	LR		LR		11 38 07.8	
	comp=N,100nm,21.8s,baz=245,slow=36								
TXAR	**Lajitas Array**	**83.22**	**300**	P		**P**		**11 01 41.6**	**-0.8**
	comp=N,0.4nm,0.9s,baz=86,slow=1.6,SNR=3.7								
TXAR				LR		LR		11 41 39.2	
	comp=N,20nm,18.8s,baz=76,slow=38								
	comp=N,0.4nm,0.9s								
AKTO	**Aktyubinsk**	**84.36**	**39**	LR		LR		11 44 19.0	
	comp=N,44nm,18.1s,baz=261,slow=39								
ABKAR	**Akbulak array**	**85.44**	**41**	P		**P**		**11 01 56.1**	**+2.9**
ABKAR				IAmb		IAmb		11 02 18.1	
	comp=Z,3.7nm,1.0s								
ANMO	**Albuquerque**	**86.02**	**305**	LR		LR		11 34 19.7	
	comp=Z,120nm,21.8s,baz=98,slow=32								
RES	**Resolute Bay**	**86.45**	**345**	LR		LR		11 32 35.6	
	comp=Z,63nm,20.7s,baz=138,slow=30								
PV13	**Radium Mtn., P**	**88.10**	**308**	P		P		11 02 13.6	+6.8
PV13				IAmb		IAmb		11 02 28.5	
	comp=Z,5.9nm,1.0s								
QSPA	**South Pole Qui**	**89.11**	**180**	P		**P**		**11 02 13.2**	**+2.5**
YKA	**Yellowknife Ar**	**92.07**	**332**	P		**P**		**11 02 24.9**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=104,slow=4.2,SNR=3.7								
YKA				LR		LR		11 40 56.3	
	comp=Z,134nm,19.2s,baz=85,slow=34								
	comp=Z,1.7nm,0.8s								
ELK	**Elko**	**93.10**	**311**	LR		LR		11 40 25.1	
	comp=Z,54nm,21.8s,baz=99,slow=33								
NEW	**Newport**	**94.15**	**318**	LR		LR		11 39 03.3	
	comp=Z,100nm,21.9s,baz=81,slow=32								
NVAR	**Mina Array Bea**	**95.56**	**308**	LR		LR		11 42 03.4	
	comp=Z,37nm,19.7s,baz=102,slow=33								
YBH	**Yreka Blue Hor**	**98.65**	**312**	LR		LR		11 43 16.4	
	comp=Z,60nm,20.5s,baz=77,slow=33								
ASAR	**Alice Springs**	**146.10**	**138**	PKPbc		**PKPbc**		**11 08 56.6**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=225,slow=2.2,SNR=12								
WRA	**Warramunga Arr**	**148.84**	**133**	PKPbc		**PKPbc**		**11 09 03.2**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=231,slow=1.5,SNR=2.0								

NIED ***18*** *10:53:37.9, 39.64N×143.72E, h26km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.36; $M_{\theta\theta}$0.58; $M_{\phi\phi}$ -1.93; $M_{r\theta}$1.11; $M_{\theta\phi}$-0.96; $M_{r\phi}$0.53; Fault plane solution: $M_0$2.31000×10^{14} NP1: ϕ_s167.00000°, δ43.00000°, λ37.00000°. NP2:ϕ_s48.00000°, δ66.00000°, λ126.00000°.*

JMA 18 10:53:37.9±0.2, 39.6N±0.7×14.4E±, h26km, MV3.7/32, FAR E OFF SANRIKU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JTH	**Tanohata**	**1.46**	**282**	P		Pn	10 54 02.8	+0.3
JTH				*e*S		Sb	10 54 21.6	-0.8
MIYJ	**Miyakonagasawa**	**1.47**	**268**	*i* P		Pn	10 54 03.2	+0.6
MIYJ				*e*S		Sn	10 54 21.8	+0.8
JKEN	**Kujiedanarisaw**	**1.64**	**291**	P		Pn	10 54 05.4	+0.4
OFUJ	**Ofunato**	**1.68**	**251**	P		Pn	10 54 06.3	+0.7
JANG	**Nango**	**1.84**	**294**	P		Pn	10 54 08.2	+0.5
JOM	**Ohasama**	**1.88**	**266**	P		Pn	10 54 09.7	+1.4
JMK	**Ichinoseki**	**2.06**	**251**	P		Pn	10 54 11.9	+1.2
JMK				*e*S		Sn	10 54 36.8	+1.3
JIO	**Ouri**	**2.19**	**238**	P		Pn	10 54 13.2	+0.6
JTM	**Tenmabayashi**	**2.33**	**300**	P		Pn	10 54 16.0	+1.6
JYK	**Kaneyama**	**2.70**	**255**	P		Pn	10 54 21.6	+2.0
JNBK	**Urakawa-nobuka**	**2.73**	**345**	P		Pn	10 54 22.9	+2.9
JCH	**Churui**	**2.98**	**355**	P		Pn	10 54 25.2	+1.8
JCH				*e*S		Sn	10 54 59.6	+1.3
JFT	**Otama**	**3.39**	**232**	P		Pn	10 54 30.5	+1.3
JFT				*e*S		Sn	10 55 09.0	+0.5
JAK	**Akkeshi**	**3.43**	**12**	*e*P		Pn	10 54 30.7	+1.1
JAK				*e*S		Sn	10 55 09.7	+0.3

IDC 18 10:56:57.5±21.0, 41.26S×104.14W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=705.2km s-min=328.4km az=135.0, Southern Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
H03S2	**Juan Fernandez**	**21.27**	**78**	T		T	11 24 21.4	
	baz=240,SNR=6.1							
H03S1	**Juan Fernandez**	**21.28**	**78**	T		T	11 24 20.8	
	baz=240,SNR=7.7							
H03S3	**Juan Fernandez**	**21.29**	**78**	T		T	11 24 20.0	
	baz=240,SNR=7.5							
TXAR	**Lajitas Array**	**70.23**	**0**	P		P	11 08 12.2	0.0
	0.3nm,0.8s,baz=178,slow=8.5,SNR=4.4							
	0.3nm,0.8s							
NVAR	**Mina Array Bea**	**80.36**	**349**	P		P	11 09 10.6	+0.1
	0.7nm,0.9s,baz=182,slow=6.3,SNR=4.4							
	0.7nm,0.9s							
PDAR	**Pinedale Array**	**83.78**	**356**	P		P	11 09 28.4	0.0
	1.0nm,0.9s,baz=165,slow=6.2,SNR=7.7							
	1.0nm,0.9s							

IDC ***18*** *11:05:12.4±0.7, 42.64S×42.00E, h0km, mb4.0/11, mbtmp4.1/13, ML4.1/2, MS3.8/11, Error ellipse: s-maj=27.0km s-min=16.3km az=48.0*
PRE ***18*** *11:05:14.2±2.1, 42.24S×42.20E, h10km, mb4.4*
NEIC ***18*** *11:05:15.1±1.6, 42.87S±0.09×41.9E±0.2, h10km±1km, mb4.5/15, Error ellipse: s-maj=21.8km s-min=11.5km az=302.0*

ISC 18 11:05:14.0±0.6, 42.69S±0.09×41.8E±0.1, h10km, n67, σ1s32/53, mb4.3/19, MS3.9/11, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KSTD	**Kokstad**	**15.67**	**316**	*eP*		**Pn**	**11 08 53.3**	**-1.7**
ROSN	**Rosenhof**	**16.02**	**297**	*eP*		**Pn**	**11 08 55.7**	**-3.6**
GRAF	**Camdeboo Natio**	**17.22**	**301**	*eP*		**Pn**	**11 09 14.1**	**-0.5**
POGA	**Pongola**	**17.39**	**328**	Pn		P	**11 09 18.0**	**0.0**
POGA	**Pongola**	**17.39**	**328**	*eP*		**P**	**11 09 18.4**	**+0.4**
ROOI	**Rooidraai Farm**	**17.67**	**299**	*eP*		**Pn**	**11 09 21.4**	**+1.2**
HVD	**Gariep Dam**	**17.78**	**307**	*eP*		**Pn**	**11 09 21.4**	**-0.2**
NWCL	**Newcastle**	**17.80**	**323**	*eP*		**P**	**11 09 23.5**	**+0.8**
BFON	**Badsfontein, M**	**18.04**	**301**	*eP*		**P**	**11 09 27.0**	**+1.7**
SNKL	**Senekal, Frees**	**18.35**	**317**	*eP*		**P**	**11 09 30.2**	**+1.4**
BRAK	**Brakfontein**	**18.56**	**300**	*eP*		**Pn**	**11 09 32.6**	**+1.5**
GRAN	**Grantham**	**18.69**	**297**	*eP*		**Pn**	**11 09 34.4**	**+1.6**
BOSA	**Boshof**	**19.41**	**311**	P		**P**	**11 09 40.8**	**+0.4**
	0.4nm,0.3s,baz=146,slow=10,SNR=6.6							
	1.8nm,0.3s							
BOSA	**Boshof**	**19.41**	**311**	P		**Pn**	**11 09 42.2**	**+0.7**
BOSA	**Boshof**	**19.41**	**311**	*eP*		**Pn**	**11 09 43.1**	**+1.6**
SUR	**Sutherland**	**19.54**	**295**	P		**P**	**11 09 43.3**	**+1.4**
	0.5nm,0.3s,baz=125,slow=17,SNR=13							
	8.5nm,0.9s							
SUR	**Sutherland**	**19.54**	**295**	P		**Pn**	**11 09 44.3**	**+1.1**
SUR				IAmb		IAmb	11 09 44.5	
	comp=Z,41nm,1.4s							
PRYS	**Parys**	**19.67**	**318**	*eP*		**P**	**11 09 43.9**	**+0.7**
CER	**Ceres**	**20.00**	**290**	*eP*		**P**	**11 09 43.0**	**-3.7**
SLR	**Silverton**	**20.25**	**322**	*eP*		**P**	**11 09 50.9**	**+1.4**
SWZ	**Schweizer**	**20.50**	**314**	*eP*		Pn	11 09 55.6	+1.2
SWZ				IAmb		IAmb	11 09 57.8	
	comp=Z,13nm,1.1s							
CVNA	**Calvinia**	**20.80**	**295**	*eP*		**P**	**11 09 55.8**	**+0.3**
CVNA				IAmb		IAmb	11 09 57.5	
	comp=Z,50nm,1.2s							
VOI	**Vohitsoka**	**21.14**	**13**	P		**P**	**11 10 00.0**	**+0.9**
VOI				IAmb		IAmb	11 10 05.0	
	comp=Z,16nm,1.1s							
LEPH	**Lephalale, Lim**	**22.09**	**324**	*eP*		**P**	**11 10 07.9**	**-1.5**
LEPH				IAmb		IAmb	11 10 20.8	
	comp=Z,19nm,1.1s							
LBTB	**Lobatse**	**22.13**	**318**	P		**P**	**11 10 09.9**	**+0.1**
	comp=Z,4.9nm,0.9s,baz=156,slow=8.2,SNR=5.5							
	comp=Z,4.9nm,0.9s							
LBTB	**Lobatse**	**22.13**	**318**	P		**P**	**11 10 13.2**	**+3.4**
LBTB				IAmb		IAmb	11 10 15.4	
	comp=Z,18nm,1.4s							
LBTB	**Lobatse**	**22.13**	**318**	*eP*		**P**	**11 10 09.3**	**-0.5**
LBTB				IAmb		IAmb	11 10 10.6	
	comp=Z,9.6nm,1.1s							
AUGR	**Augrabies**	**22.34**	**302**	*eP*		**P**	**11 10 12.0**	**0.0**
AUGR				IAmb		IAmb	11 10 14.5	
	comp=Z,7.1nm,0.7s							

MUSN	**Musina, Limpop**	**22.67**	**330**	*eP*		**P**		**11 10 17.3**	**+1.8**
MUSN				IAmb		IAmb		11 10 31.7	
	comp=Z,12nm,1.0s								
MATP	**Matopo**	**24.88**	**329**	P		**P**		**11 10 36.5**	**-0.5**
	comp=Z,4.2nm,0.8s,baz=157,slow=7.4,SNR=7.9								
	comp=Z,4.2nm,0.8s								
MATP	**Matopo**	**24.88**	**329**	*eP*		**P**		**11 10 36.9**	**-0.1**
MATP				IAmb		IAmb		11 10 41.1	
	comp=Z,14nm,1.0s								
BLWY	**Bulawayo**	**25.09**	**330**	*eP*		**P**		**11 10 39.2**	**+0.3**
BLWY				IAmb		IAmb		11 10 42.8	
	comp=Z,16nm,0.8s								
MAW	**Mawson**	**27.41**	**163**	LR		LR		11 19 03.7	
	comp=Z,94nm,21.3s,baz=295,slow=30								
LSZ	**Lusaka**	**29.73**	**333**	LR		LR		11 22 12.7	
	comp=Z,125nm,18.9s,baz=156,slow=34								
TSUM	**Tsumeb**	**31.11**	**311**	LR		LR		11 23 14.0	
	comp=Z,143nm,18.5s,baz=152,slow=35								
SNAA	**Sanae**	**36.22**	**202**	P		**P**		**11 12 17.5**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=130,slow=6.1,SNR=5.5								
	comp=Z,1.2nm,0.9s								
SNAA	**Sanae**	**36.22**	**202**	P		**P**		**11 12 16.9**	**+0.3**
SNAA	**Sanae**	**36.22**	**202**	*eP*		**P**		**11 12 17.6**	**+0.9**
KMBO	**Kilima Mbogo**	**41.59**	**353**	LR		LR		11 28 27.7	
	comp=Z,142nm,19.1s,baz=104,slow=34								
MBAR	**Mbarara**	**43.07**	**344**	LR		LR		11 30 19.3	
	comp=Z,111nm,18.5s,baz=122,slow=35								
QSPA	**South Pole Qui**	**47.52**	**180**	P		**P**		**11 13 48.4**	**-0.6**
	comp=Z,4.1nm,1.0s,baz=238,slow=3.3,SNR=6.7								
	comp=Z,4.1nm,1.0s								
QSPA	**South Pole Qui**	**47.52**	**180**	P		**P**		**11 13 48.7**	**-0.4**
H01W2	**Cape Leeuwin H**	**55.32**	**108**	T		T		12 14 51.1	
	baz=240,slow=75,SNR=1031								
H01W3	**Cape Leeuwin H**	**55.33**	**108**	T		T		12 14 51.7	
	baz=240,slow=75,SNR=859								
H01W1	**Cape Leeuwin H**	**55.34**	**108**	T		T		12 14 52.0	
	baz=240,slow=75,SNR=762								
SMAI	**San Martin Ant**	**57.54**	**205**			**S**		**11 23 00.6**	**+0.4**
DBIC	**Dimbokro**	**64.89**	**307**	LR		LR		11 40 40.0	
	comp=Z,61nm,20.6s,baz=150,slow=33								
TOA0	**Torodi Ar. Sit**	**66.65**	**317**	P		**P**		**11 16 06.3**	**+1.5**
TOA0				IAmb		IAmb		11 16 16.6	
	comp=Z,3.9nm,0.9s								
TORD	**Torodi Ar. Bea**	**66.65**	**317**	P		**P**		**11 16 05.7**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=156,slow=7.0,SNR=8.3								
	comp=Z,2.1nm,0.9s								
TORD	**Torodi Ar. Bea**	**66.65**	**317**	P		**P**		**11 16 06.3**	**+1.5**
TORD				IAmb		IAmb		11 16 09.7	
	comp=Z,4.8nm,1.1s								
STKA	**Stephens Creek**	**75.60**	**120**	P		**P**		**11 16 58.9**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=149,slow=12,SNR=2.0								
	comp=Z,2.1nm,0.7s								
ASAR	**Alice Springs**	**75.80**	**109**	P		**P**		**11 17 00.1**	**-0.3**
	comp=Z,1.2nm,1.1s,baz=222,slow=4.9,SNR=4.7								
	comp=Z,1.2nm,1.1s								
BBTS	**Babate**	**78.21**	**303**	LR		LR		11 48 17.4	
	comp=Z,62nm,20.4s,baz=120,slow=33								
WRA	**Warramunga Arr**	**78.54**	**106**	P		**P**		**11 17 15.0**	**-0.8**
	comp=Z,2.1nm,1.1s,baz=221,slow=4.5,SNR=8.3								
	comp=Z,2.1nm,1.1s								
WRA	**Warram

UGLR	Uglovaya	3.58 229	PN	Pn	11 19 32.2	+1.2			
UGLR	Uglovaya	3.58 229	*e*P	Pn	11 19 32.2	+1.2			
KOK	Koryaka	3.60 231	PN	Pn	11 19 33.0	+1.7			
KOK	Koryaka	3.60 231	*e*P	Pn	11 19 33.0	+1.7			
GNL	Ganaly	3.67 240	PN	Pn	11 19 33.9	+1.6			
GNL	Ganaly	3.67 240	*e*P	Pn	11 19 33.9	+1.6			
DALK	Dalny	3.73 227	PN	Pn	11 19 33.8	+0.8			
DALK	Dalny	3.73 227	*e*P	Pn	11 19 33.8	+0.8			
PET	Petropavlovsk	3.78 228	*e*PN	Pn	11 19 34.8	+1.1			
PET	comp=Z,65nm,0.5s		pmax	pmax					
PET	Petropavlovsk	3.78 228	*e*P	Pn	11 19 34.7	+1.1			
PET			*e*S	Sn	11 20 17.0	-1.7			
KRMR	Karymshinskiy	4.14 229	PN	Pn	11 19 41.3	+2.7			
KRMR			S	Sn	11 20 28.6	+1.0			
KRMR	Karymshinskiy	4.14 229	*e*P	Pn	11 19 41.3	+2.7			
KRMR			*e*S	Sn	11 20 28.6	+1.0			
PETK	Petropavlovsk-	4.14 234	Pn	Pn	11 19 39.6	+0.9			
	comp=Z,1.6nm,0.3s,baz=231,slow=27,SNR=43								
PETK			Sn	Sn	11 20 30.8	+3.1			
	comp=Z,1.3nm,0.3s,baz=106,slow=16,SNR=1.7								
PETK			LR	LR	11 21 29.4				
	comp=Z,135nm,21.2s,baz=70,slow=43								
	comp=Z,3.1nm,0.4s								
RUS	Russkaya	4.28 223	PN	Pn	11 19 41.4	+0.9			
RUS	Russkaya	4.28 223	*e*P	Pn	11 19 41.4	+0.9			
GRL	Gorelyy	4.37 227	PN	Pn	11 19 44.2	+2.3			
GRL	Gorelyy	4.37 227	*e*P	Pn	11 19 44.2	+2.3			
MTVR	Mutnovka	4.37 225	PN	Pn	11 19 44.1	+2.1			
MTVR	Mutnovka	4.37 225	*e*P	Pn	11 19 44.1	+2.1			
MTVR			*e*S	Sn	11 20 33.1	-0.5			
APC	Apacha	4.51 235	PN	Pn	11 19 46.7	+3.0			
APC	Apacha	4.51 235	*e*P	Pn	11 19 46.7	+3.0			
SHEM	Shemya Is, Ala	6.99 110	LR	LR	11 22 45.3				
	comp=Z,70nm,19.9s,baz=307,slow=35								
MA2	Magadan	7.78 305	LR	LR	11 23 54.1				
	comp=Z,127nm,20.0s,baz=119,slow=42								
MJAR	Matsushiro Arr	25.60 232	P	P	11 24 04.0	-0.9			
	comp=Z,1.2nm,0.6s,baz=40,slow=7.9,SNR=4.9								
	comp=Z,1.2nm,0.6s								
ILAR	Eielson Array	25.70 49	P	P	11 24 05.5	-0.1			
	comp=Z,0.5nm,0.7s,baz=273,slow=10.0,SNR=7.9								
	comp=Z,0.5nm,0.7s								
INK	Inuvik	30.70 41	P	P	11 24 50.4	+0.2			
	comp=Z,0.6nm,0.7s,baz=284,slow=10,SNR=1.5								
	comp=Z,0.6nm,0.7s								
H11N2	WAKE ISLAND Hy 35.97 174		T	T	12 04 36.2				
	baz=357,slow=76,SNR=180								
H11N3	WAKE ISLAND Hy 35.99 174		T	T	12 04 37.3				
	baz=357,slow=76,SNR=104								
H11N1	WAKE ISLAND Hy 35.99 174		T	T	12 04 40.8				
	baz=357,slow=76,SNR=97								
BBB	Bella Bella	39.06 65	LR	LR	11 41 43.9				
	comp=Z,53nm,18.3s,baz=72,slow=36								
MKAR	Makanchi Array	48.73 295	P	P	11 27 17.6	-2.5			
	comp=Z,0.3nm,0.5s,baz=38,slow=6.3,SNR=2.3								
	comp=Z,0.3nm,0.5s								
NVAR	Mina Array Bea	53.18 74	P	P	11 27 55.3	+1.3			
	comp=Z,0.7nm,0.9s,baz=311,slow=7.2,SNR=5.6								
	comp=Z,0.7nm,0.9s								
PDAR	Pinedale Array	54.69 64	P	P	11 28 06.0	+1.0			
	comp=Z,0.5nm,0.6s,baz=346,slow=3.7,SNR=6.2								
	comp=Z,0.5nm,0.6s								
FINES	FINESS Array B	58.48 337	P	P	11 28 32.7	+1.3			
	comp=Z,1.3nm,0.8s,baz=38,slow=7.8,SNR=1.7								
	comp=Z,1.3nm,0.8s								
TXAR	Lajitas Array	67.96 70	P	P	11 29 36.2	+1.3			
	comp=Z,1.5nm,0.5s,baz=299,slow=5.3,SNR=30								
	comp=Z,1.5nm,0.5s								
WRA	Warramunga Arr	79.21 208	LR	LR	12 05 39.2				
	comp=Z,41nm,19.8s,baz=213,slow=36								
FITZ	Fitzroy Crossi	80.07 216	LR	LR	12 02 28.7				
	comp=Z,29nm,21.1s,baz=246,slow=33								

BJI ***18*** *11:19:12.6±0.0, 7.°89S×128.°73E, h180km, mb5.2/76, mB5.2/45*

MOS ***18*** *11:19:13.3±1.0, 7.°33S×128.°24E, h140km, mb5.3/51, Error ellipse: s-maj=9.6km s-min=4.8km az=112.2*

NEIC ***18*** *11:19:15.4±2.2, 7.°38S±0.°06×128.°20E±0.°06, h137km±4km, mb5.4/186, Mwb5.4/6, Mww5.3, Error ellipse: s-maj=9.3km s-min=9.0km az=116.0*

NEIC ***18*** *11:19:15.8, 7.°39S×128.°24E, h148km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.26; Mθθ-1.38; Mφφ0.12; Mrθ0.12; Mrφ0.86; Mθφ0.18; Fault plane solution: M0 1.60000×10^17 NP1:φs100.16000°, δ47.61000°, λ69.59000°. NP2:φs309.05000°, δ46.20000°, λ110.91000°. Principal axes: T 1.3161, Plg75.0000°, Azm297.0000°; N 0.4591, Plg15.0000°, Azm114.0000°; P -1.7753, Plg1.0000°, Azm204.0000°;*

DJA ***18*** *11:19:16.7±0.1, 8.°5S±1.°1×12.°8E±.°, h168km±3km, M5.0/54, mB5.5/44, mb5.2/54, MLv5.6/19, Mw(mB)5.0/44, MwMwp4.9/18, Mwp5.2/18*

IDC ***18*** *11:19:17.0±1.1, 7.°39S×128.°30E, h160km±9km, mb4.8/28, mbtmp5.3/32, MS3.9/23, Error ellipse: s-maj=10.8km s-min=7.7km az=74.0*

NEIC ***18*** *11:19:18, 7.°73S×128.°34E, h160km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17Nm; Mrr0.95; Mθθ-0.89; Mφφ-0.05; Mrθ0.21; Mθφ0.16; Mrφ0.42; Fault plane solution: M0 1.05000×10^17 NP1: φs299.00000°, δ44.00000°, λ121.00000°. NP2: φs79.00000°, δ53.00000°, λ63.00000°. Principal axes: T 1.1337, Plg68.0000°, Azm290.0000°; N -0.2018, Plg21.0000°, Azm96.0000°; P -0.9318, Plg5.0000°, Azm188.0000°;*

GCMT ***18*** *11:19:18.4±0.1, 7.°58S±0.°01×128.°26E±0.°01, h164km±1km, MW5.3/141, Moment Tensor Solution. s101,c132; s141,c249; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.88±.02; Mθθ-0.92±.02; Mφφ0.04±.02; Mrθ0.40±.01; Mθφ0.34±.02; Mrφ0.46±.02; Best double couple: M0 1.12700×10^17 NP1:φs81.00000°, δ59.00000°, λ58.00000°. NP2:φs312.00000°, δ44.00000°, λ131.00000°. Principal axes: T 1.1940, Plg62.0000°, Azm299.0000°; N -0.1350, Plg27.0000°, Azm100.0000°; P -1.0600, Plg8.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 11:19:16.5±0.3, 7.°47S±0.°03×128.°27E±0.°03, h161km±2km, h162km:pP-P, n995, σ1.°42/989, mb5.3/185, 59C-5D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.05	100			Pn	11 20 05.6	+0.7
SAUI	Saumlaki	3.05	100	P		Pn	11 20 05.6	+0.7
SAUI				S		Sn	11 20 41.4	-1.1
SAUI	Saumlaki	3.05	100	P		Pn	11 20 07.3	+2.3
BNDI	Bandanaira	3.35	29	P		Pn	11 20 11.4	+2.7
BNDI	Bandanaira	3.35	29	P		Pn	11 20 11.6	+2.9
AAI	Ambon	3.75	359	P		Pn	11 20 17.3	+3.4
MSAI	Masohi	4.14	9	P		Pn	11 20 22.2	+3.2
NLAI	Namlea	4.36	344	P		Pn	11 20 26.2	+4.5
BATI	Baumata	5.30	239	P		Pn	11 20 35.8	+1.6
	2μm,0.5s,baz=93,slow=2.4,SNR=211							
BATI				S		Sn	11 21 32.3	-2.6
	2μm,0.5s,baz=43,slow=1.3,SNR=4.2							
BATI	Baumata	5.30	239	P		Pn	11 20 35.7	+1.6
	15nm3μm26μm2μm,0.5s							
BATI				S		Sn	11 21 33.0	-1.9
	15nm3μm26μm2μm,0.5s							
SANI	Sanana	5.84	337	P		Pn	11 20 45.4	+4.2
	1.3nm5μm7μm481nm,1.5s							
SANI	Sanana	5.84	337	P		Pn	11 20 45.6	+4.4
BBSI	Bau Bau	5.99	289	P		Pn	11 20 44.9	+1.7
	0.1nm299nm21nm,0.7s							
FAKI	Fak Fak	6.01	41	Pn		Pn	11 20 42.2	-1.3
FAKI	Fak Fak	6.01	41	P		Pn	11 20 42.4	-1.1
	5.8nm7μm12μm456nm,0.8s							
FAKI	Fak Fak	6.01	41	P		Pn	11 20 43.5	0.0
MTN	Manton Dam	6.04	152	P		Pn	11 20 42.4	-1.5
	baz=6.0,SNR=1000							
MTN	Manton Dam	6.04	152	Pn		Pn	11 20 43.6	-0.3
MTN	Manton Dam	6.04	152	P		Pn	11 20 43.4	-0.5
MMRI	Maumere	6.08	259			Pn	11 20 45.8	+1.3
MMRI	Maumere	6.08	259	P		Pn	11 20 46.4	+1.9
	2.9nm6μm6μm310nm,0.6s							
MMRI	Maumere	6.08	259	P		Pn	11 20 46.7	+2.2
EDFI	Ende, Flores	6.64	258	P		Pn	11 20 53.3	+1.4
	0.9nm4μm2μm85nm,0.6s							
EDFI				S		Sn	11 22 05.5	-1.3
	0.9nm4μm2μm85nm,0.6s							
KDU	Kakadu	6.64	142	P		Pn	11 20 50.8	-1.0
	baz=6.6,SNR=1000							
KDU	Kakadu	6.64	142	P		Pn	11 20 51.1	-0.7
LBMI	Labuha	6.82	354	P		Pn	11 20 58.2	+3.9
	3.3nm5μm9μm833nm,1.1s							
SIJI	Sorong	7.20	25	P		Pn	11 20 59.1	-0.3
	237nm,0.2s,baz=81,slow=23,SNR=118							
SIJI				S		Sn	11 22 16.6	-3.7
	208nm,0.3s,baz=243,slow=23,SNR=11							
SIJI				LR		LR	11 24 16.6	
	comp=Z,1μm,18.2s,baz=238,slow=42							
SWI	Sorong	7.21	25	P		Pn	11 20 59.9	+0.5
	3.6nm9μm11μm916nm,1.1s							
BSSI	Bau Bau, Buton	7.83	279	P		Pn	11 21 09.9	+2.2
	0.3nm1μm55nm,0.8s							
BASI	Baing, Sumba	8.08	250	P		Pn	11 21 11.1	+0.2
	3μm6μm299nm,0.5s							
KNRA	Kununurra	8.18	177	P		Pn	11 21 10.5	-1.7
	baz=8.2,SNR=1000							
KNRA	Kununurra	8.18	177	Pn		Pn	11 21 10.8	-1.4
KNRA	Kununurra	8.18	177	P		Pn	11 21 10.9	-1.4
TNTI	Ternate	8.23	354	Pn		Pn	11 21 15.4	+2.4
TNTI	Ternate	8.23	354	P		Pn	11 21 16.4	+3.4
	2μm5μm436nm,1.2s							
TNTI	Ternate	8.23	354	P		Pn	11 21 17.1	+4.1
BKSI	Bulukumba	8.37	284	P		Pn	11 21 16.8	+2.0
	1μm59nm,0.7s							
LUWI	Luwuk	8.41	319	Pn		Pn	11 21 15.2	-0.2
LUWI	Luwuk	8.41	319	P		Pn	11 21 19.5	+4.1
	4μm272nm,0.9s							
KAPI	Kappang	8.81	286	P		Pn	11 21 23.2	+2.5
	15nm,0.5s,baz=88,slow=7.1,SNR=5.6							
KAPI	Kappang	8.81	286	Pn		Pn	11 21 22.2	+1.6
KAPI	Kappang	8.81	286	*i* P		Pn	11 21 22.0	+1.4
KAPI	Kappang	8.81	286	P		Pn	11 21 24.9	+4.3
WBSI	Waikabubak, Su	9.04	256	P		Pn	11 21 24.6	+0.8
	4μm354nm,0.6s							
KMSI	Cibinong	9.06	332	P		Pn	11 21 28.7	+4.7
	3μm166nm,1.1s							
SPSI	Sidrap Palu	9.14	292	P		Pn	11 21 27.5	+2.4
	2μm82nm,0.9s							
APSI	Ampana	9.27	314	P		Pn	11 21 28.0	+1.2
	1μm109nm,1.5s							
TTSI	Tana Toraja	9.49	297	P		Pn	11 21 31.5	+1.8
	132nm,1.1s							
GTOI	Gorontalo	9.60	327	P		Pn	11 21 36.5	+5.3
	663nm67nm,0.9s							
SRPI	Serui, Papua	9.70	55	P		Pn	11 21 32.2	-0.2
	2μm134nm,0.7s							
BAKI	Biak	9.99	52	P		Pn	11 21 35.7	-0.7
	5μm635nm,0.9s							
MRSI	Marisa	10.10	321	P		Pn	11 21 41.1	+3.3
	2μm60nm,0.5s							
PLAI	Plampang	10.47	262	P		Pn	11 21 43.3	+0.7
	3μm186nm,0.7s							
PLAI	Plampang	10.47	262	P		Pn	11 21 42.6	0.0
FITZ	Fitzroy Crossi	10.88	193	P		Pn	11 21 44.7	-3.1
	492nm,0.8s,baz=25,slow=10.0,SNR=356							
FITZ				S		Sn	11 23 39.8	-8.6
	140nm,0.3s,baz=272,slow=22,SNR=12							
FITZ				LR		LR	11 27 13.3	
	comp=Z,2μm,18.1s,baz=1.0,slow=44							
FITZ	Fitzroy Crossi	10.88	193	P		Pn	11 21 44.8	-3.1
	baz=11,SNR=1000							
FITZ	Fitzroy Crossi	10.88	193			Pn	11 21 45.0	-2.8
FITZ	Fitzroy Crossi	10.88	193	P		Pn	11 21 46.8	-1.1
WAMI	Wamena	10.98	72	P		Pn	11 21 52.2	+2.9
	6μm458nm,0.7s							
TOLI2	Tolitoli	11.33	318	Pn		Pn	11 21 56.3	+2.4
TOLI2	Tolitoli	11.33	318	P		Pn	11 21 57.3	+3.5
TWSI	Taliwang, Sumb	11.34	263	P		Pn	11 21 53.8	-0.2
	1μm40nm,0.5s							
MPSI	Mapaga	11.39	313	P		Pn	11 21 57.8	+3.2
	2μm1μm62nm,1.0s							
SGSI	Sangihe	11.41	346	P		Pn	11 21 57.4	+2.5
	7μm864nm,0.9s							
SMPI	Sarmi	11.74	63	P		Pn	11 21 58.3	-0.9
	65nm,1.1s							
GENI	Genyem	12.80	68	P		Pn	11 22 12.8	-0.1
	3μm134nm,0.8s							
GENI	Genyem	12.80	68	P		P	11 22 16.0	-1.6
BKB	Balikpapan	12.90	298	Pn		Pn	11 22 11.8	-2.3
BKB	Balikpapan	12.90	298	P		P	11 22 25.3	+6.6
BKB	Balikpapan	12.90	298	P		P	11 22 17.6	-1.1
SRBI	Singaraja	12.95	266	P		Pn	11 22 14.2	-0.6
	56nm,0.8s							
SMKI	Samarinda	13.04	302	P		P	11 22 26.3	+6.0
IGBI	Denpasar	13.06	263	P		Pn	11 22 16.7	+0.5
	3μm150nm,0.6s							
WB0	Warramunga Arr	13.60	155			Pn	11 22 18.9	-4.0
I07AU	WARRAMUNGA INI	13.72	155	S		Sn	11 24 44.5	-12
	baz=329,slow=23,SNR=1.1							
WRAB	Tennant Creek	13.73	155	Pn		Pn	11 22 20.8	-3.8
WRAB	Tennant Creek	13.73	155	P		Pn	11 22 20.8	-3.8
WRA	Warramunga Arr	13.73	155	P		Pn	11 22 20.3	-4.4
	381nm,0.8s,baz=326,slow=14,SNR=236							
WRA				S		Sn	11 24 46.2	-11
	1μm,1.0s,baz=325,slow=24,SNR=26							
WRA				LR		LR	11 28 22.1	
	comp=Z,549nm,20.2s,baz=332,slow=40							
WRA	Warramunga Arr	13.73	155			Pn	11 22 22.6	-2.1
WRA	Warramunga Arr	13.73	155	P		Pn	11 22 22.6	-2.1
WB2	Warramunga Arr	13.74	155			Pn	11 22 22.0	-2.7
WR0	Warramunga Arr	13.83	155			Pn	11 22 22.6	-3.3
BBKI	Banjar Baru	13.94	286	P		P	11 22 31.3	+1.0
	9μm623nm,1.3s							
JAGI	Jajag, Banyuwa	14.02	265	Pn		Pn	11 22 26.1	-2.2
JAGI	Jajag, Banyuwa	14.02	265	P		Pn	11 22 27.4	-0.9
	5μm255nm,0.7s							
JAGI	Jajag, Banyuwa	14.02	265	P		P	11 22 29.8	-1.3
KMMI	Kalianget	14.19	271	P		Pn	11 22 30.8	+0.3
	140nm,1.3s							
BLJI	Banyuglugur	14.55	268	P		P	11 22 37.7	+0.7
DAV	Davao City (W)	14.69	349	P		P	11 22 38.3	-0.3
	181nm,0.4s,baz=321,slow=21,SNR=8.1							
DAV	Davao City (W)	14.69	349			Pn	11 22 37.3	+0.7
DAV	Davao City (W)	14.69	349	P		P	11 22 40.3	+1.8
MTKI	Muara Teweh, K	14.82	295	P		P	11 22 41.3	+1.2
	1μm8μm287nm,0.8s							
MYLDM	Lahad Datu	15.90	322	P		P	11 22 55.3	+3.3
MBWA	Marble Bar	15.92	210			Pn	11 22 50.6	-1.1
MBWA	Marble Bar	15.92	210	P		Pn	11 22 51.0	-0.8
COEN	Coen	16.00	115	P		Pn	11 22 52.2	-0.7
	baz=16,SNR=57							
COEN	Coen	16.00	115	P		Pn	11 22 52.0	-0.8
COEN	Coen	16.00	115	P		P	11 22 53.8	+0.7
PSA00	Pilbara Seismi	16.21	209	P		Pn	11 22 54.7	-0.6
PSA00	Pilbara Seismi	16.21	209			Pn	11 22 53.6	-1.7
PSA00	Pilbara Seismi	16.21	209	P		Pn	11 22 55.0	-0.3
AS31	Alice Springs	16.99	162	P		Pn	11 23 05.5	+0.7
ASAR	Alice Springs	16.99	162	P		P	11 23 03.0	-1.0
	389nm,0.7s,baz=339,slow=7.6,SNR=1183							
ASAR				S		S	11 26 03.4	-10
	116nm,0.8s,baz=333,slow=18,SNR=9.3							
ASAR	Alice Springs	16.99	162	P		Pn	11 23 05.2	+0.4
ASAR	Alice Springs	16.99	162	P		Pn	11 23 05.2	+0.4
QIS	Mount Isa	17.03	141	P		P	11 23 04.6	+0.2
	baz=17,SNR=148							
QIS	Mount Isa	17.03	141	P		Pn	11 23 05.0	-0.2
PBKI	Pangkalan Bun	17.19	285	P		Pn	11 23 07.6	+0.4
	8μm975nm,1.3s							
WRKA	Warakurna	17.48	180	P		P	11 23 09.3	0.0
	baz=18,SNR=437							
WRKA	Warakurna	17.48	180	P		P	11 23 09.5	+0.2
KKM	Kota Kinabalu	18.02	318	P		Pn	11 23 18.9	+1.8
KKM	Kota Kinabalu	18.02	318	P		Pn	11 23 18.8	+1.7
STKI	Sintang	18.34	293	P		P	11 23 18.0	-0.8
	323nm,1.1s							
SBUM	Sibu	18.80	301	P		Pn	11 23 27.5	+1.3
MTSU	Mount Surprise	18.89	126	P		P	11 23 26.0	+1.2
	baz=19,SNR=49							
MTSU	Mount Surprise	18.89	126	P		Pn	11 23 26.5	-0.7
KSM	Kuching	20.00	296	P		P	11 23 38.4	+1.6
KSM	Kuching	20.00	296	P		Pn	11 23 38.8	-1.5
GIRL	Giralia	20.25	220	P		Pn	11 23 42.0	-1.3
	baz=20,SNR=23							
GIRL	Giralia	20.25	220	P		Pn	11 23 42.3	-1.0
GIRL	Giralia	20.25	220	P		Pn	11 23 42.1	-1.2
LEM	Lembang	20.50	270	P		P	11 23 42.4	+0.1
	40nm,0.5s,baz=98,slow=13,SNR=7.7							
	40nm,0.5s							
LEM	Lembang	20.50	270	P		P	11 23 40.7	-1.6
	56nm,1.2s							
CNJI	Cibinong	20.96	269	P		P	11 23 42.7	-4.4
	3μm298nm,1.3s							
TPI	Tanjungpandan	21.05	282	P		P	11 23 48.9	+0.8
	1μm94nm,1.2s							
MEEK	Meekatharra	21.16	205	P		P	11 23 49.6	+0.5
	baz=21,SNR=59							
MEEK	Meekatharra	21.16	205	P		P	11 23 50.0	+0.9
CBJI	Citeko	21.29	271	P		P	11 23 49.1	-1.4
DBJI	Dramaga	21.38	271	P		P	11 23 50.9	-0.6
OOD	Oodnadatta	21.41	162	P		P	11 23 52.1	+0.4
CTA	Charters Tower	21.48	128	P		P	11 23 53.0	+0.4
	18nm,0.7s,baz=300,slow=11,SNR=18							
CTA				LR		LR	11 33 26.8	
	comp=Z,710nm,18.4s,baz=274,slow=40							
	18nm,0.7s							
CTA	Charters Tower	21.48	128	P		P	11 23 54.0	+1.4
CTAO	Charters Tower	21.48	128	P		P	11 23 54.0	+1.4
CTAO	Charters Tower	21.48	128	P		P	11 23 54.0	+1.4
CTAO	Charters Tower	21.48	128	P		P	11 23 54.1	+1.5
FORT	Forrest	23.20	180	P		P	11 24 10.6	+1.6
	baz=23,SNR=29							
FORT	Forrest	23.20	180	P		P	11 24 10.6	+1.6
FORT	Forrest	23.20	180	P		P	11 24 10.2	+1.2
MULG	Mulgathing	23.34	167	P		P	11 24 11.8	+1.4
INKA	Innaminka	23.38	151	P		P	11 24 12.4	+1.7
KRVT	Keravat (AS076	23.84	84	LR		LR	11 33 54.1	
	comp=Z,227nm,20.6s,baz=40,slow=37							
QLP	Quilpie	24.33	143	P		P	11 24 20.5	+1.1
	baz=24,SNR=27							
QLP	Quilpie	24.33	143	P		P	11 24 21.4	+2.0
MORW	Morawa	24.39	207	P		P	11 24 22.1	+2.3
	baz=24,SNR=44							
MORW	Morawa	24.39	207	P		P	11 24 22.2	+2.3
MORW				lAmb		lAmb	11 24 23.2	
	comp=Z,86nm,0.8s							
MORW	Morawa	24.39	207	P		P	11 24 22.2	+2.3
LCRK	Leigh Creek	24.69	159	P		P	11 24 24.4	+1.7
BLDU	Ballidu	25.45	204	P		P	11 24 30.8	+1.3
	baz=26,SNR=41							
BLDU	Ballidu	25.45	204	P		P	11 24 30.7	+1.2
KLBR	Kellerberrin	25.93	201	P		P	11 24 34.4	+0.6
	baz=26,SNR=13							
KLBR	Kellerberrin	25.93	201	P		P	11 24 35.0	+1.1
MYKOM	Kota Tinggi	26.04	290	lAmb		lAmb	11 24 42.5	
	comp=Z,171nm,1.4s							
BBOO	Buckleboo	26.24	165	P		P	11 24 37.4	+0.8
	baz=26,SNR=21							
BBOO	Buckleboo	26.24	165	P		P	11 24 37.8	+1.1
BBOO				lAmb		lAmb	11 25 20.8	
	comp=Z,126nm,0.8s							
BBOO	Buckleboo	26.24	165	P		P	11 24 37.7	+1.1
RK1H	Rockhampton Ha	26.57	129	P		P	11 24 40.5	+0.8
MUN	Mundaring	26.86	203	P		P	11 24 43.2	+1.0
	baz=27,SNR=12							
WHYH	Whyalla	26.87	163	P		P	11 24 43.9	+1.7
RMQ	Roma	27.16	137	P		P	11 24 45.4	+0.4
	baz=27,SNR=4.4							
RMQ	Roma	27.16	137	P		P	11 24 47.1	+2.2
STKA	Stephens Creek	27.28	155	P		P	11 24 47.3	+1.4
	comp=Z,20nm,0.6s,baz=330,slow=11,SNR=21							
	comp=Z,20nm,0.6s							
STKA	Stephens Creek	27.28	155	P		P	11 24 47.0	+1.1
	baz=27,SNR=20							
STKA	Stephens Creek	27.28	155	P		P	11 24 47.4	+1.4
STKA	Stephens Creek	27.28	155	*i* P		P	11 24 46.7	+0.7
STKA	Stephens Creek	27.28	155	P		P	11 24 47.2	+1.2
NWAO	Narrogin (SRO)	27.33	201	P		P	11 24 46.9	+0.5
NWAO				lAmb		lAmb	11 25 34.4	
	comp=Z,92nm,0.9s							
NWAO	Narrogin (SRO)	27.33	201	P		P	11 24 46.9	+0.5
NWAO				pmax		pmax		
	comp=Z,93nm,1.0s							
HTT	Hallett	27.66	161	P		P	11 24 51.2	+1.9
	baz=28,SNR=14							
HTT	Hallett	27.66	161	P		P	11 24 51.3	+2.0
BKNI	Bangkinang	28.23	285	P		P	11 24 56.2	+1.6
CMSA	Cobar Meteorol	28.95	148	P		P	11 25 02.2	+1.4
	baz=29,SNR=42							
CMSA	Cobar Meteorol	28.95	148	P		P	11 25 02.0	+1.2
TWOA	Tennyson Woods	29.03	162	P		P	11 25 02.9	+1.5
IPM	Ipoh	29.66	293	P		P	11 25 08.8	+1.5
KULM	Kulim	30.33	294	P		P	11 25 13.7	+0.6
RPSI	Rantau Prapat	30.97	288	lAmb		lAmb	11 25 21.1	
	comp=Z,69nm,0.9s							
PSI	Prapat	31.00	288	P		P	11 25 19.2	0.0
	comp=Z,52nm,0.9s,baz=141,slow=5.2,SNR=21							
	comp=Z,52nm,0.9s							
PSI	Prapat	31.00	288	P		P	11 25 19.6	+0.4
YULB	Yu-li	31.42	348	P		P	11 25 21.2	-1.4
YULB				lAmb		lAmb	11 25 27.8	
	comp=Z,124nm,2.

comp=Z,107nm,1.2s
CHTO Chiang Mai 38.96 312 P P 11 26 29.1 +1.9
CHTO Chiang Mai 38.96 312 P P 11 26 28.2 +1.1
CHTO sP **sP 11 27 15.8 -2.7**
DZM Mont Dzumac 39.53 116 P P 11 26 32.6 +0.6
comp=Z,18nm,0.7s,baz=275,slow=10,SNR=12
comp=Z,18nm,0.7s
DZM Mont Dzumac 39.53 116 *e*S **S 11 32 24.4 +1.8**
comp=Z,166nm,28.1s
DZM *e*LR LR 11 37 37.0
comp=Z,287nm,27.1s
DZM Mont Dzumac 39.53 116 P P 11 26 33.3 +1.3
DZM Mont Dzumac 39.53 116 P P 11 26 33.0 +1.0
DZM pP **pP 11 27 06.8 +0.3**
GYA Guiyang 39.71 329⇑*i*P **P 11 26 34.3 +0.9**
GYA pmax pmax
comp=Z,46nm,1.2s
YATNC Mamie plateau, 39.93 116 P P 11 26 37.5 +2.3
WHN Wuhan 40.08 341⇑*i*P **P 11 26 37.5 +1.3**
WHN pmax pmax
comp=Z,490nm,1.1s
NJ2 Nanjing 40.31 348⇑P **P 11 26 39.1 +1.0**
NJ2 pmax pmax
comp=Z,120nm,1.1s
PZH PanZhiHua 42.46 324 P P 11 26 56.6 +0.7
PZH pmax pmax
comp=Z,40nm,0.9s
PZH pmax pmax
comp=Z,420nm,3.5s
JHS Saijyo 42.48 6 P P 11 26 55.9 +0.2
JHS IAmb IAmb 11 26 58.2
comp=Z,87nm,1.0s
NAWB Namwon 42.66 359 IAmb IAmb 11 26 59.7
comp=Z,149nm,1.1s
INU Inuyama 43.38 10 P P 11 27 02.4 -0.6
INU Inuyama 43.38 10 P P 11 27 02.9 0.0
TJN Taejon 43.62 359*ce*P **P 11 27 05.2 +0.4**
TJN Taejon 43.62 359 P P 11 27 05.8 +1.0
KSCHJ Chungju 44.10 360 IAmb IAmb 11 27 10.5
comp=Z,92nm,1.4s
LYN LuoYang 44.38 341⇑*i*P **P 11 27 10.8 -0.2**
LYN pP pwP 11 27 52.0 +0.4
LYN S **S 11 33 32.9 -0.4**
LYN sS sS 11 34 42.3 +8.2
LYN pmax pmax
comp=Z,50nm,1.5s
KSAR Wonju Array Be 44.67 360 P P 11 27 13.9 +0.7
KSAR Wonju Array Be 44.67 360 P P 11 27 13.9 +0.7
KSRS Korea Array 44.69 360 P P 11 27 14.0 +0.7
comp=Z,10nm,0.5s,baz=179,slow=10,SNR=74
KSRS PcP **PcP 11 28 53.9 +0.9**
comp=Z,13nm,1.0s,baz=185,slow=4.5,SNR=10
comp=Z,10nm,0.5s
TIA Tai'an 44.69 347⇑P **P 11 27 13.3 -0.1**
TIA pmax pmax
comp=Z,63nm,1.0s
KS19 Wonju Array Si 44.73 360 P P 11 27 14.0 +0.3
KS19 IAmb IAmb 11 27 15.5
comp=Z,104nm,1.5s
INCN Inchon 44.74 358 P P 11 27 13.9 +0.1
INCN Inchon 44.74 358 P P 11 27 13.9 +0.1
INCN pmax pmax
comp=Z,70nm,1.4s
INCN Inchon 44.74 358 P P 11 27 15.8 +2.0
MJAR Matsushiro Arr 44.76 11 P P 11 27 12.3 -1.6
comp=Z,27nm,1.0s,baz=184,slow=8.8,SNR=36
MJAR PcP **PcP 11 28 53.9 +0.6**
comp=Z,10nm,1.0s,baz=171,slow=3.3,SNR=7.0
MJAR ScP **ScP 11 32 30.5 0.0**
comp=Z,4.3nm,1.1s,baz=193,slow=4.5,SNR=4.9
comp=Z,27nm,1.0s
MAJO Matsushiro 44.76 11 P P 11 27 12.5 -1.4
MAJO Matsushiro 44.76 11*c i*P **P 11 27 12.3 -1.6**
MAJO pmax pmax
comp=Z,60nm,1.0s
MAJO Matsushiro 44.76 11 P P 11 27 13.1 -0.8
MAJO Matsushiro 44.76 11 P P 11 27 12.7 -1.3
MAJO sP **pwP 11 28 00.2 +5.4**
CD2 Chengdu 44.80 330⇑P **P 11 27 14.6 +0.2**
CD2 pmax pmax
comp=Z,50nm,1.0s
JYT Yasato 44.88 14 IAmb IAmb 11 27 15.9
comp=Z,81nm,1.2s
XAN Xi'an 45.17 337⇑P **P 11 27 17.1 -0.2**
XAN pP pwP 11 27 57.3 -0.7
XAN sP sP 11 28 19.0 +10
XAN S **S 11 33 38.6 -6.2**
XAN pmax pmax
comp=Z,110nm,1.0s
XAN pmax pmax
comp=Z,500nm,6.0s
XAN Xi'an 45.17 337 P P 11 27 17.0 -0.2
XAN ScP **ScP 11 32 31.8 -0.5**
SEHB SEOHWA 45.50 360 IAmb IAmb 11 27 22.3
comp=Z,93nm,1.3s
HNS HongShan 46.40 345⇑P **P 11 27 26.9 +0.2**
HNS pP **pwP 11 28 10.1 +2.3**
HNS S **S 11 34 04.5 +2.4**
HNS pmax pmax
comp=Z,180nm,1.2s
HNS LR LR
comp=Z,280nm,13.2s
HNS LR LR
comp=Z,240nm,13.5s
DL2 Dalian 46.54 353 P P 11 27 28.1 +0.2
DL2 pmax pmax
comp=Z,69nm,1.0s
JMM Marumori 46.59 14 IAmb IAmb 11 27 29.7
comp=Z,68nm,0.7s
TIY Taiyuan 47.31 343⇑*i*P **P 11 27 34.4 +0.4**
TIY pmax pmax
comp=Z,28nm,0.5s
BJT Baijiatuan 48.55 348 IAmb IAmb 11 27 44.9
comp=Z,112nm,1.0s
BJT Baijiatuan 48.55 348 P P 11 27 43.8 +0.4
BJT ScP **ScP 11 32 46.9 +0.5**
BJI Beijing 48.57 348 P P 11 27 43.5 0.0
BJI PcP **PcP 11 29 08.0 +1.3**
BJI pmax pmax
comp=Z,110nm,1.1s
LZH Lanzhou 49.03 334 *e*P **P 11 27 48.6 +1.3**
LZH pmax pmax
comp=Z,120nm,1.0s
LZH LR LR
comp=Z,660nm,12.7s
LZH LR LR
comp=Z,810nm,13.2s
LZH LR LR
comp=Z,450nm,16.8s
SNY Shenyang 49.24 355⇑P **P 11 27 48.1 -0.4**
SNY S **S 11 34 39.0 -3.0**
SNY pmax pmax
comp=Z,53nm,1.3s
SNY pmax pmax
comp=Z,300nm,3.5s
SNY LR LR
comp=Z,130nm,5.7s
SNY LR LR
comp=Z,200nm,8.5s
SNY LR LR
comp=Z,200nm,9.6s
JTM Tenmabayashi 49.44 13 IAmb IAmb 11 27 51.3
comp=Z,82nm,0.8s
MSVF Nonsavu 49.51 107 LR LR 11 46 58.3
comp=Z,361nm,19.5s,baz=251,slow=34
MSVF Nonsavu 49.51 107 P P 11 27 52.7 +1.5
PALK Pallekele 49.64 286 P P 11 27 52.3 +0.2
comp=Z,33nm,1.1s,baz=190,slow=4.2,SNR=3.8
comp=Z,33nm,1.1s
PALK Pallekele 49.64 286 P P 11 27 52.4 +0.2
PALK Pallekele 49.64 286 P P 11 27 52.4 +0.2
PALK pmax pmax
comp=Z,49nm,1.2s
MSHR Mys Shultsa 49.87 3*ce*P **P 11 27 53.8 +0.5**
MSHR pmax pmax
comp=Z,24nm,0.7s
VLA Vladivostok 50.45 3*c i*P **P 11 27 55.9 -1.7**
VLA pmax pmax
comp=Z,58nm,0.9s
HHC Hu-ho-hao-te 50.47 344 *e*P **P 11 27 58.9 +0.9**
HHC S **S 11 34 56.8 -2.7**
HHC pmax pmax
comp=Z,100nm,1.1s
HHC pmax pmax
comp=Z,260nm,4.4s

BTO Baotou 50.70 342 *e*P **P 11 28 00.8 +1.1**
CN2 Changchun 51.09 357 *e*P **P 11 28 01.6 -0.8**
CN2 S **S 11 35 06.4 -1.2**
CN2 SS **SS 11 38 37.9 -7.3**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=Z,100nm,14.0s
CN2 LR LR
comp=Z,100nm,14.0s
CN2 LR LR
comp=Z,100nm,13.0s
ERM Erimo 51.09 14 P **P 11 28 03.7 +1.3**
ERM IAmb IAmb 11 28 08.0
comp=Z,147nm,1.8s
ERM Erimo 51.09 14 P **P 11 28 03.7 +1.3**
ERM pmax pmax
comp=Z,147nm,1.8s
ERM Erimo 51.09 14 P **P 11 28 02.3 -0.1**
WHZ Wether Hill Ro 51.29 145 IAmb IAmb 11 28 05.9
comp=Z,54nm,0.9s
LSA Lhasa 51.36 318 IAmb IAmb 11 28 07.9
comp=Z,34nm,0.6s
LSA Lhasa 51.36 318 P **P 11 28 06.6 +1.3**
LSA Lhasa 51.36 318 P **P 11 28 06.6 +1.3**
USRK Ussuriysk Ar. 51.53 3 P **P 11 28 06.0 +0.3**
comp=Z,22nm,0.7s,baz=185,slow=6.6,SNR=42
comp=Z,22nm,0.7s
USRK Ussuriysk Ar. 51.53 3 P **P 11 28 06.1 +0.4**
USRK Ussuriysk Ar. 51.53 3 P **P 11 28 06.1 +0.4**
MDJ Mudanjiang 51.85 1 P **P 11 28 09.0 +1.0**
MDJ S **S 11 35 20.9 +2.9**
MDJ pmax pmax
comp=Z,45nm,1.6s
MDJ pmax pmax
comp=Z,120nm,5.9s
MDJ Mudanjiang 51.85 1 P **P 11 28 09.1 +1.0**
MDJ Mudanjiang 51.85 1 P **P 11 28 08.8 +0.7**
RPZ Rata Peaks 51.93 141 P **P 11 28 10.3 +1.5**
THZ Tophouse 52.16 138 IAmb IAmb 11 29 26.4
comp=Z,115nm,1.8s
ODAN Odare 52.28 312 *e*P **P 11 28 12.4 +0.5**
XLT XiLinHaoTe 52.30 349⇑*i*P **P 11 28 12.1 +0.5**
XLT S **S 11 35 20.3 -4.1**
XLT pmax pmax
comp=Z,87nm,1.2s
XLT pmax pmax
comp=Z,230nm,4.7s
XLT LR LR
comp=Z,100nm,9.6s
XLT LR LR
comp=Z,140nm,13.4s
TAPN Taplejung 52.33 313 *e*P **P 11 28 12.6 +0.3**
comp=Z,75nm,0.5s
TEY Ternei 52.80 7⇑*e*P **P 11 28 15.2 +0.2**
TEY pmax pmax
comp=N,10.0nm,1.5s
TEY pmax pmax
comp=Z,10.0nm,1.5s
KHZ Kahutara 52.88 139 P **P 11 28 15.7 -0.1**
KHZ IAmb IAmb 11 28 18.1
comp=Z,55nm,0.8s
KHZ Kahutara 52.88 139 P **P 11 28 16.9 +1.1**
RAMN Ramite 52.91 312 *e*P **P 11 28 17.1 +0.5**
comp=Z,121nm,0.6s
BNX BinXian 52.97 359⇓P **P 11 28 16.0 -0.3**
BNX pmax pmax
comp=Z,12nm,0.8s
BNX pmax pmax
comp=Z,130nm,5.9s
BKZ Black Stump Fm 53.51 134 P **P 11 28 21.1 +0.6**
BKZ Black Stump Fm 53.51 134 P **P 11 28 21.4 +0.9**
GTA Gaotai 53.57 333⇑P **P 11 28 21.9 +0.9**
GTA pP pP 11 28 59.5 +3.0
GTA PcP **PcP 11 29 26.0 +0.5**
GTA ScP **ScP 11 33 05.9 -2.4**
GTA ScS **ScS 11 37 52.3 -2.0**
GTA SS **SS 11 39 27.4 +2.6**
GTA pmax pmax
comp=Z,59nm,1.1s
GTA pmax pmax
comp=Z,280nm,5.2s
GTA LR LR
comp=Z,380nm,18.9s
GTA LR LR
comp=Z,370nm,18.9s
GTA LR LR
comp=Z,130nm,18.2s
GOMU GeErMu 53.61 326 P **P 11 28 22.3 +0.7**
GOMU pP pwP 11 29 02.8 -0.1
GOMU S **S 11 35 40.3 -2.6**
GOMU pmax pmax
comp=Z,13nm,1.2s
GOMU pmax pmax
comp=Z,160nm,5.5s
JIRN Jiri 53.61 312 *e*P **P 11 28 22.1 +0.3**
comp=Z,128nm,0.9s
GUN Gumba 53.98 312 *e*P **P 11 28 24.9 +0.4**
comp=Z,261nm,0.8s
PKI Pulchoki 54.14 312 *e*P **P 11 28 25.5 -0.1**
comp=Z,55nm,0.5s
PKIN Phulchoki 54.15 312 *e*P **P 11 28 25.5 -0.1**
comp=Z,56nm,0.5s
KKN Kakani 54.35 312 *e*P **P 11 28 27.4 +0.4**
DMN Daman 54.38 312 *e*P **P 11 28 27.5 +0.2**
comp=Z,160nm,0.9s
PCHI Peechi 54.69 288 *e*P **P 11 28 29.2 -0.2**
GKN Gorkha 54.94 312 *e*P **P 11 28 31.3 +0.1**
comp=Z,108nm,0.5s
HYBB Hyderabad (bro 54.99 297 *e*P **P 11 28 30.5 -1.0**
HYBB *ep*P **pP 11 29 03.8 -3.4**
HYBB *e*PP **PP 11 30 35.9 -0.6**
HYBB *e*S **S 11 36 02.5 +1.1**
YSS Yuzh-Sakhalins 55.69 12 P **P 11 28 36.1 +0.2**
YSS Yuzh-Sakhalins 55.69 12 *e*P **P 11 28 35.7 -0.2**
YSS *e**SP **PcP 11 29 35.8 +2.5**
YSS *e*S **S 11 36 06.0 -3.6**
YSS pmax pmax
comp=Z,30nm,0.7s
YSS pmax pmax
comp=Z,500nm,4.3s
YSS smax smax
comp=N,400nm,3.9s
YSS smax smax
comp=E,200nm,2.9s
YSS Yuzh-Sakhalins 55.69 12 P **P 11 28 36.1 +0.2**
YSS Yuzh-Sakhalins 55.69 12 P **P 11 28 36.9 +1.0**
DANN Dangsing 55.78 312 *e*P **P 11 28 37.5 +0.2**
comp=E,141nm,0.8s
KLR Kul'dur 56.54 3 P **P 11 28 42.1 +0.2**
comp=E,7.7nm,0.7s,baz=228,slow=4.0,SNR=17
comp=E,7.7nm,0.7s
KLR Kul'dur 56.54 3*ce*P **P 11 28 40.3 -1.6**
KLR pmax pmax
comp=Z,25nm,1.3s
ULN Ulaanbaatar 58.19 343 P **P 11 28 54.8 +1.0**
ULN Ulaanbaatar 58.19 343*ce*P **P 11 28 54.5 +0.8**
ULN pmax pmax
comp=Z,125nm,1.3s
ULN Ulaanbaatar 58.19 343 P **P 11 28 55.0 +1.3**
ULN sP **PcP 11 29 43.0 -0.4**
ULN ScP **ScP 11 33 28.3 -0.2**
SONM Songino Array 58.35 343 P **P 11 28 55.9 +1.1**
comp=Z,44nm,0.9s,baz=163,slow=7.6,SNR=153
SONM ScP **ScP 11 33 28.5 -0.6**
comp=Z,0.8nm,0.4s,baz=157,slow=3.4,SNR=3.7
SONM PKPPKP **P'P'df 11 58 27.2 -4.1**
comp=Z,1.1nm,0.9s,baz=219,slow=1.9,SNR=4.8
SONM LR LR 11 58 29.2
comp=Z,102nm,19.2s,baz=314,slow=40
comp=Z,44nm,0.9s
SONM Songino Array 58.35 343 P **P 11 28 55.7 +0.9**
SONM IAmb IAmb 11 28 57.3
comp=Z,78nm,1.0s
AFI Afiamalu 59.14 102 P **P 11 29 01.3 +0.5**
AFI Afiamalu 59.14 102 P **P 11 29 01.3 +0.5**
AFI pmax pmax
comp=Z,102nm,1.2s
AFI Afiamalu 59.14 102 P **P 11 29 03.2 +2.4**
DRV Dumont d'Urvil 59.66 175 P **P 11 29 04.5 +1.1**
CASY Casey 59.99 188 P **P 11 29 06.2 +0.5**
CASY Casey 59.99 188 P **P 11 29 06.7 +1.1**
CASY sP **PcP 11 29 55.7 +5.6**

ZEA Zeya 60.98 359 *e*P **P 11 29 12.8 +0.4**
ZEA pmax pmax
comp=N,30nm,0.8s
ZEA pmax pmax
comp=Z,50nm,0.8s
ZEA pmax pmax
comp=Z,100nm,5.6s
ZAK Zakamensk 61.56 342 *e*P **P 11 29 16.1 -0.5**
ZAK pmax pmax
comp=Z,36nm,1.3s
SKR Severo-Kuril's 62.73 20 *e*P P 11 29 31.0 +6.8
WMQ Urumqi 62.86 328⇓P **P 11 29 26.8 +1.4**
WMQ PcP **pP 11 30 03.9 +1.8**
WMQ S **S 11 37 39.3 -2.8**
WMQ pmax pmax
comp=Z,120nm,1.1s
WMQ pmax pmax
comp=Z,350nm,4.3s
WMQ LR LR
comp=Z,490nm,21.7s
WMQ LR LR
comp=Z,320nm,22.9s
WMQ LR LR
comp=Z,170nm,24.1s
IRK Irkutsk 62.92 344 *e*P **P 11 29 25.8 +0.3**
IRK pmax pmax
comp=Z,161nm,2.3s
MOY Mondy 63.39 341 *e*P **P 11 29 30.2 +1.5**
MOY pmax pmax
comp=Z,156nm,1.5s
PEA0B Petropavlovsk- 65.31 19*ce*P **P 11 29 41.4 +0.4**
PETK Petropavlovsk- 65.31 19 P **P 11 29 41.2 +0.1**
comp=Z,71nm,0.9s,baz=202,slow=7.7,SNR=40
PETK LR LR 11 53 49.7
comp=Z,60nm,21.6s,baz=242,slow=32
comp=Z,71nm,0.9s
PET Petropavlovsk 65.55 20 P **P 11 29 42.4 -0.1**
PET IAmb IAmb 11 29 44.3
comp=Z,92nm,1.1s
PET Petropavlovsk 65.55 20 *e*P **P 11 29 42.2 -0.3**
PET *e*S **S 11 38 11.8 -2.8**
PET *e*SPP SPP 11 38 37.4
PET *e**SS **SKSac 11 39 21.3 -0.9**
PET pmax pmax
comp=Z,111nm,1.0s
PET MLR MLR
comp=Z,100nm,15.0s
PET Petropavlovsk 65.55 20 P **P 11 29 43.4 +0.9**
PET Petropavlovsk 65.55 20 P **P 11 29 42.9 +0.4**
BOD Bodaibo 66.09 352 *e*P **P 11 29 46.3 +0.4**
BOD pmax pmax
comp=Z,61nm,1.1s
NIL Nilore 66.23 312 P **P 11 29 47.1 -0.3**
NIL IAmb IAmb 11 29 48.4
comp=Z,46nm,0.8s
NIL Nilore 66.23 312 P **P 11 29 47.1 -0.3**
NIL pmax pmax
comp=Z,46nm,0.8s
NIL Nilore 66.23 312 P **P 11 29 47.5 +0.1**
ZSN Zaisan 66.78 330*c i*P **P 11 29 51.1 +0.5**
ZSN pmax pmax
comp=Z,67nm,3.1s
ZSN Zaisan 66.78 330⇑*i*P **P 11 29 51.2 +0.5**
comp=Z,67nm,3.1s,baz=329
SHLS Shalkode 67.05 323*c i*P **P 11 29 51.9 -0.6**
SHLS pmax pmax
comp=Z,50nm,1.5s
SHLS Shalkode 67.05 323⇑*i*P **P 11 29 51.9 -0.6**
comp=Z,50nm,1.5s,baz=323
KSH Kashi 67.21 318 P **P 11 29 54.3 +0.7**
KSH pmax pmax
comp=Z,41nm,0.8s
SATY Saty 67.62 323*c i*P **P 11 29 57.1 +1.0**
SATY pmax pmax
comp=Z,31nm,0.9s
SATY Saty 67.62 323⇑*i*P **P 11 29 57.1 +1.0**
comp=Z,31nm,0.9s,baz=323
CCD Concordia, Ant 67.66 181 P **P 11 29 57.5 +1.3**
CCD pP **pP 11 30 34.6 -0.1**
CCD sP **sP 11 30 48.6 -3.5**
ZHN Zhinishke 67.67 323 *e*P **P 11 29 56.6 +0.2**
ZHN Zhinishke 67.67 323 *e*P **P 11 29 56.6 +0.2**
baz=323
MK31 Makanchi Array 67.68 328 IAmb IAmb 11 29 58.4
comp=Z,107nm,1.2s
MK31 Makanchi Array 67.68 328*c i*P **P 11 29 56.5 +0.2**
MKAR Makanchi Array 67.68 328 P **P 11 29 57.0 +0.7**
comp=Z,21nm,0.5s,baz=120,slow=8.2,SNR=241
MKAR PKPPKP **P'P'df 11 58 10.8 -5.9**
comp=Z,0.7nm,0.9s,baz=308,slow=4.1,SNR=4.8
comp=Z,21nm,0.5s
MKAR Makanchi Array 67.68 328 P **P 11 29 56.9 +0.7**
KPKS Kokpek 67.69 323*c i*P **P 11 29 57.1 +0.7**
KPKS pmax pmax
comp=Z,50nm,1.3s
KPKS Kokpek 67.69 323⇑*i*P **P 11 29 57.2 +0.7**
comp=Z,50nm,1.3s,baz=323
MAKZ Makanchi 67.86 328 P **P 11 29 57.8 +0.4**
MAKZ IAmb IAmb 11 29 59.4
comp=Z,122nm,1.3s
MAKZ Makanchi 67.86 328 P **P 11 29 57.8 +0.4**
MAKZ pmax pmax
comp=Z,122nm,1.3s
MAKZ Makanchi 67.86 328 P **P 11 29 57.9 +0.4**
MDOK Medeo 68.50 322 *i* P **P 11 30 02.5 +0.9**
MDOK Medeo 68.50 322 *i* P **P 11 30 02.6 +0.9**
baz=322
AAA Alma-Ata 68.61 322*c i*P **P 11 30 03.2 +1.0**
AAA Alma-Ata 68.61 322⇑*i*P **P 11 30 03.3 +1.0**
baz=322
TDK Taldyqorghan 68.74 324 *e*P **P 11 30 03.6 +0.7**
TDK pmax pmax
comp=Z,68nm,1.2s
TDK Taldyqorghan 68.74 324 *e*P **P 11 30 03.7 +0.7**
comp=Z,68nm,1.2s,baz=324
MA2 Magadan 69.20 12 P **P 11 30 04.9 -0.5**
MA2 sP **sP 11 30 54.7 -5.1**
TKM2 Tokmak 2 69.26 321 P **P 11 30 07.3 +1.0**
SNR=29
YAK Yakutsk 69.30 1 P **P 11 30 06.0 +0.2**
comp=Z,134nm,0.8s,baz=3.1,slow=1.5,SNR=58
YAK LR LR 12 01 21.7
comp=Z,66nm,20.2s,baz=269,slow=36
comp=Z,134nm,0.8s
YAK Yakutsk 69.30 1 P **P 11 30 05.5 -0.3**
YAK Yakutsk 69.30 1*c i*P **P 11 30 05.9 0.0**
YAK *e* 11 30 26.8
YAK *e**PP **pP 11 30 43.8 +0.6**
YAK *e* 11 32 41.6
YAK *e*PPP PPP 11 34 24.5
YAK *e*S **S 11 38 56.7 -2.3**
YAK *e* 11 39 45.3
YAK *e*SS **SS 11 43 28.9 -0.5**
YAK pmax pmax
comp=Z,248nm,0.9s
YAK pmax pmax
comp=N,31nm,0.9s
YAK pmax pmax
comp=E,7.0nm,0.8s
YAK pmax pmax
comp=Z,34nm,1.5s
YAK pmax pmax
comp=N,49nm,1.6s
YAK pmax pmax
comp=E,21nm,1.6s
YAK smax smax
comp=N,48nm,1.3s
YAK smax smax
comp=E,119nm,1.4s
YAK Yakutsk 69.30 1 P **P 11 30 05.9 0.0**
KUU Kurty 69.33 323*c i*P **P 11 30 07.3 +0.7**
KUU pmax pmax
comp=Z,80nm,1.0s
KUU Kurty 69.33 323⇑*i*P **P 11 30 07.3 +0.7**
comp=Z,80nm,1.0s,baz=322
KBK Karagaybulak 69.52 321 P **P 11 30 09.3 +1.3**
SNR=8.0
UCH Uchtor 69.57 320 P **P 11 30 09.8 +1.2**
SNR=25
KBL Kabul 69.76 311 P **P 11 30 09.2 -0.4**
KBL Kabul 69.76 311 P **P 11 30 09.2 -0.4**
KBL pmax pmax
comp=Z,22nm,0.8s
AAK Ala-Archa 69.80 321 P **P 11 30 10.9 +1.2**
SNR=13
AAK Ala-Archa 69.80 321 P **P 11 30 10.4 +0.8**

AAK IAmb IAmb 11 30 12.2
comp=Z,120nm,1.6s
AAK Ala-Archa 69.80 321 *ce*P **P 11 30 10.6 +1.0**
AAK pmax pmax
comp=Z,78nm,1.7s
AAK Ala-Archa 69.80 321 *i* P **P 11 30 10.6 +1.0**
SNR=12
AAK Ala-Archa 69.80 321 P **P 11 30 11.0 +1.4**
AML Almayashu 70.04 320 P **P 11 30 12.7 +1.2**
SNR=17
USP Ospenovka 70.12 321 P **P 11 30 12.4 +0.9**
SNR=54
SGDS Sogindy 70.14 321 *c i*P **P 11 30 12.1 +0.5**
SGDS pmax pmax
comp=Z,23nm,1.1s
SGDS Sogindy 70.14 321⇑ *i*P **P 11 30 12.2 +0.5**
comp=Z,23nm,1.1s,baz=321
EKS2 Erkin-Say 70.26 320 P **P 11 30 13.9 +1.4**
SNR=23
RAR Rarotonga 70.55 110 LR LR 11 57 29.8
comp=Z,77nm,21.5s,baz=170,slow=32
GAR Garm 70.78 316 IAmb IAmb 11 30 17.1
comp=Z,51nm,0.9s
SEM Semipalatinsk 71.02 330 *e*P **P 11 30 17.0 0.0**
SEM pmax pmax
comp=Z,95nm,1.2s
SEM Semipalatinsk 71.02 330 *e*P **P 11 30 17.0 0.0**
comp=Z,95nm,1.2s,baz=330
ZALV Zalesovo Beam 71.25 335 P **P 11 30 17.9 0.0**
comp=Z,87nm,0.8s,baz=108,slow=4.8,SNR=216
comp=Z,87nm,0.8s
BTLS Baital 71.33 323 *c i*P **P 11 30 18.6 0.0**
BTLS pmax pmax
comp=Z,33nm,1.3s
BTLS Baital 71.33 323⇑ *i*P **P 11 30 18.7 0.0**
comp=Z,33nm,1.3s,baz=322
CHGR Chuyangaron 71.44 315 IAmb IAmb 11 30 21.0
comp=Z,72nm,0.9s
SHEM Shemya Is, Ala 71.47 27 LR LR 11 56 08.6
comp=Z,58nm,21.0s,baz=168,slow=31
DZA Taraz 71.94 320 *c i*P **P 11 30 22.8 +0.4**
DZA Taraz 71.94 320⇑ *i*P **P 11 30 22.9 +0.4**
baz=320
KURK Kurchatov 72.03 329 P **P 11 30 23.3 +0.6**
KURK Kurchatov 72.03 329 P **P 11 30 23.3 +0.6**
KURK pmax pmax
comp=Z,274nm,1.0s
KURK Kurchatov 72.03 329 P **P 11 30 23.4 +0.7**
VNDA Vanda 72.20 173 P **P 11 30 24.1 +0.8**
comp=Z,12nm,0.8s,baz=324,slow=6.5,SNR=60
VNDA LR LR 12 03 13.1
comp=Z,180nm,18.1s,baz=17,slow=36
comp=Z,12nm,0.8s
VNDA Vanda 72.20 173 P **P 11 30 24.1 +0.8**
IUG luzhnay 72.43 318 *c i*P **P 11 30 26.3 +0.9**
IUG luzhnay 72.43 318⇑ *i*P **P 11 30 26.4 +0.9**
baz=318
KK31 Karatay Array 72.56 320 P **P 11 30 26.9 +0.8**
KK31 IAmb IAmb 11 30 28.0
comp=Z,68nm,1.3s
KK31 Karatay Array 72.56 320 P **P 11 30 26.9 +0.8**
KK31 pmax pmax
comp=Z,68nm,1.3s
KKAR Karatay Array 72.56 320 P **P 11 30 26.6 +0.5**
KKAR Karatay Array 72.56 320 IAmb IAmb 11 30 28.0
comp=Z,68nm,1.3s
KKAR Karatay Array 72.56 320 P **P 11 30 26.6 +0.5**
SEY Seymchan 72.58 11 P **P 11 30 26.2 +0.5**
SEY Seymchan 72.58 11 *ce*P **P 11 30 26.0 +0.3**
SEY pmax pmax
comp=Z,77nm,1.0s
SBA Scott Base 73.11 172 P **P 11 30 30.6 +1.9**
SBA Scott Base 73.11 172 P **P 11 30 30.6 +1.9**
SBA pmax pmax
comp=Z,24nm,1.1s
MAW Mawson 73.89 201 P **P 11 30 34.7 +1.3**
comp=Z,22nm,1.0s,baz=66,slow=6.3,SNR=29
MAW LR LR 12 00 21.6
comp=Z,126nm,19.8s,baz=36,slow=33
comp=Z,22nm,1.0s
MAW Mawson 73.89 201 P **P 11 30 35.3 +1.9**
baz=74,SNR=17
MAW Mawson 73.89 201 P **P 11 30 35.2 +1.9**
MAW Mawson 73.89 201 P **P 11 30 35.2 +1.9**
BRZS Berezniki 74.74 326 *c i*P **P 11 30 39.4 +0.8**
BRZS pmax pmax
comp=Z,84nm,1.0s
BRZS Berezniki 74.74 326⇑ *i*P **P 11 30 39.5 +0.8**
comp=Z,84nm,1.0s,baz=326
KIWB Kanaga Island 75.21 32 P **P 11 30 42.4 +1.2**
ADK Adak 75.47 32 P **P 11 30 42.9 +0.2**
ADK IAmb IAmb 11 30 44.4
comp=Z,78nm,1.1s
ADK Adak 75.47 32 P **P 11 30 42.9 +0.2**
ADK pmax pmax
comp=Z,78nm,1.2s
ADK Adak 75.47 32 P **P 11 30 44.3 +1.6**
SOHO SOHO 76.61 297 *i*P **P 11 30 50.6 +0.9**
SNR=8.6
ATKA Atka Island 76.95 32 P **P 11 30 51.6 +0.6**
UOSS Minazif 77.11 298 P **P 11 30 53.2 +0.7**
UOSS Minazif 77.11 298 P **P 11 30 53.3 +0.7**
HATD Hatta, Dubai 77.14 297 P **P 11 30 54.1 +1.4**
ASHO Ashiyiah 77.17 297 *i*P **P 11 30 54.2 +1.2**
SNR=9.7
MSFE Esma-Masafi 77.25 298 *i*P **P 11 30 54.2 +0.8**
SNR=9.0
SHME Shamm 77.44 299 *i*P **P 11 30 54.7 +0.3**
SNR=11
NAZ Nazwa, Dubai 77.60 298 P **P 11 30 56.2 +0.9**
FAQ Al Faqa, Dubai 77.60 297 *i*P **P 11 30 55.0 -0.2**
SNR=8.4
BRVK Borovoye 77.62 328 P **P 11 30 55.5 +0.7**
BRVK Borovoye 77.62 328 *ce*P **P 11 30 55.2 +0.4**
BRVK pmax pmax
comp=Z,186nm,1.3s
ASUD Al Ashush, Dub 77.80 297 P **P 11 30 58.0 +1.6**
TIXI Tiksi 78.95 0 P **P 11 31 00.9 -0.8**
comp=Z,38nm,0.7s,baz=88,slow=20,SNR=26
comp=Z,38nm,0.7s
TIXI Tiksi 78.95 0 P **P 11 31 01.0 -0.6**
TIXI IAmb IAmb 11 31 03.9
comp=Z,44nm,0.8s
TIXI Tiksi 78.95 0 *ce*P **P 11 31 00.4 -1.3**
TIXI pmax pmax
comp=Z,56nm,1.0s
FOMA Nahampoana Res 79.02 246 P **P 11 31 02.7 -0.4**
FOMA IAmb IAmb 11 31 06.0
comp=Z,89nm,1.2s
MZR Muzera 79.07 295 P **P 11 31 04.2 +0.8**
GEYT Alibeck 79.21 311 P **P 11 31 04.2 +0.3**
comp=Z,7.3nm,0.7s,baz=141,slow=7.3,SNR=12
GEYT LR LR 12 11 43.2
comp=Z,45nm,20.0s,baz=128,slow=40
comp=Z,7.3nm,0.7s
GEYT Alibeck 79.21 311 P **P 11 31 04.3 +0.4**
GYA0B ALIBECK ARRAY 79.21 311 IAmb IAmb 11 31 05.9
comp=Z,94nm,1.8s
VOI Vohitsoka 79.37 249 P **P 11 31 05.1 -0.2**
VOI IAmb IAmb 11 31 07.5
comp=Z,76nm,1.3s
VOI Vohitsoka 79.37 249 P **P 11 31 06.8 +1.5**
MHA Mahukona 79.41 68 P **P 11 31 07.0 +1.7**
MHA Mahukona 79.41 68 P **P 11 31 07.0 +1.7**
CLES Cleveland East 79.55 33 IAmb IAmb 11 31 06.9
comp=Z,533nm,1.0s
BILL Bilibino 79.96 14⇑ *e*P **P 11 31 09.4 +2.2**
BILL *e* 11 34 09.9
BILL *e*PPP PPP 11 35 57.8
BILL pmax pmax
comp=Z,5.0nm,1.1s
PPT2 Papeete2 80.34 107 *e*S **S 11 41 03.0 -0.3**
comp=Z,56nm,22.8s
PPT2 Papeete2 80.34 107 *e*LR LR 11 56 32.0
comp=Z,156nm,30.5s
PPT Papeete 80.34 107 P **P 11 31 11.3 +0.9**
comp=Z,48nm,0.9s,baz=312,slow=9.8,SNR=3.9
comp=Z,48nm,0.9s
SPIA Saint Paul Isl 81.40 29 P **P 11 31 16.0 +0.9**
baz=242
NRIK Noril'sk 81.60 346 P **P 11 31 15.8 -0.1**
comp=Z,42nm,0.9s,baz=130,slow=5.6,SNR=33
comp=Z,42nm,0.9s
NRIK Noril'sk 81.60 346 IAmb IAmb 11 31 17.8
comp=Z,72nm,1.1s
NRIK Noril'sk 81.60 346 *ce*P **P 11 31 16.5 +0.6**
NRIK pmax pmax
comp=Z,78nm,1.0s
ABKAR Akbulak array 81.81 322 **P 11 31 17.4 0.0**
ABKAR Akbulak array 81.81 322 IAmb IAmb 11 31 20.4
comp=Z,63nm,1.1s
UNV Unalaska Valle 81.82 33 P **P 11 31 17.5 +0.1**
baz=245
QSPA South Pole Qui 82.52 180 LR LR 12 08 58.0
comp=Z,152nm,18.0s,baz=346,slow=36
QSPA South Pole Qui 82.52 180 P **P 11 31 21.1 +0.1**
QSPA IAmb IAmb 11 31 22.5
comp=Z,40nm,0.8s
GAMB Gambell 84.00 23 IAmb IAmb 11 31 30.4
comp=Z,81nm,1.0s
GAMB Gambell 84.00 23 P **P 11 31 28.9 +0.5**
baz=240
ARU Arti 85.19 328 LR LR 12 12 38.7
comp=Z,38nm,19.6s,baz=117,slow=38
ARU Arti 85.19 328 P **P 11 31 33.7 -0.9**
ARU Arti 85.19 328 *ce*P **P 11 31 34.2 -0.3**
ARU pmax pmax
comp=Z,189nm,1.3s
SDPT Sand Point 85.64 33 P **P 11 31 36.1 -0.6**
baz=250
CHNA Chernabura Isl 85.95 34 P **P 11 31 38.2 0.0**
baz=251
TNA Tin City 86.29 22 P **P 11 31 40.0 +0.3**
baz=243
RAYN Ar Rayn 86.36 294 P **P 11 31 40.8 -0.3**
RAYN Ar Rayn 86.36 294 P **P 11 31 40.8 -0.3**
RAYN pmax pmax
comp=Z,22nm,1.2s
RAYN Ar Rayn 86.36 294 *i* P **P 11 31 41.1 0.0**
SNR=13
S14K Fog Glacier 86.44 32 P **P 11 31 41.1 +0.3**
baz=251
ANM Nome 86.83 23 P **P 11 31 42.4 0.0**
baz=246
CHGN Chignik 87.05 32 P **P 11 31 44.0 +0.4**
baz=252
P16K Nushagak River 88.10 30 P **P 11 31 48.8 +0.3**
baz=252
N16K Nishlik Lake 88.18 28 P **P 11 31 49.7 +0.7**
baz=252,SNR=17
O16K Kokwok River B 88.23 29 P **P 11 31 49.5 +0.4**
baz=252,SNR=11
R17K Ugashik Creek 88.50 31 P **P 11 31 50.0 -0.4**
baz=254
O17K Koliganek Bris 88.76 29 P **P 11 31 51.8 +0.2**
baz=253,SNR=6.8
P17K Kvichak River 88.92 30 P **P 11 31 52.6 +0.3**
baz=254
SII Sitkinak Islan 89.38 33 P **P 11 31 54.0 -0.7**
baz=256
N18K Kilae Creek 89.60 29 P **P 11 31 55.7 +0.1**
baz=254
O18K Kokuh Hills 89.70 29 P **P 11 31 55.9 -0.1**
baz=255
OHAK Old Harbor 90.02 32 P **P 11 31 57.5 0.0**
baz=256
TTA Tatalina 90.16 26 IAmb IAmb 11 32 00.9
comp=Z,33nm,1.1s
TTA Tatalina 90.16 26 P **P 11 31 58.2 -0.1**
baz=254,SNR=8.5
BELG Belogornoye 90.18 323 *i* P **P 11 31 57.1 -1.3**
BELG pmax pmax
comp=Z,8.0nm,0.9s
N19K Bonanza Creek 90.30 29 IAmb IAmb 11 32 00.9
comp=Z,36nm,0.9s
N19K Bonanza Creek 90.30 29 P **P 11 31 58.3 -0.7**
baz=255,SNR=9.4
GCSA Galena City Sc 90.31 24 P **P 11 31 58.2 -0.5**
baz=253,SNR=21
TAOE Nuku Hiva Isla 90.42 99 *e*LR LR 12 01 11.8
comp=Z,80nm,26.8s
L19K White Mountain 90.48 27 IAmb IAmb 11 32 02.5
comp=Z,46nm,1.2s
L19K White Mountain 90.48 27 P **P 11 31 59.5 -0.1**
baz=255,SNR=17
KDAK Kodiak Island 90.51 32 P **P 11 32 01.0 +1.1**
baz=257
KIRV Kirov 90.55 329 *ce*P **P 11 31 58.7 -1.3**
M19K Big River Lodg 90.62 28 IAmb IAmb 11 32 03.8
comp=Z,27nm,1.1s
M19K Big River Lodg 90.62 28 P **P 11 32 00.8 +0.4**
baz=255
P19K Oil Pt 90.62 30 P **P 11 32 01.1 +0.7**
baz=256
KMBO Kilima Mbogo 90.86 269 P **P 11 32 03.2 +0.4**
comp=Z,3.5nm,0.9s,baz=98,slow=4.5,SNR=5.2
KMBO LR LR 12 09 28.7
comp=Z,38nm,19.4s,baz=92,slow=33
comp=Z,3.5nm,0.9s
KMBO Kilima Mbogo 90.86 269 P **P 11 32 02.7 -0.1**
KMBO Kilima Mbogo 90.86 269 *i* P **P 11 32 03.4 +0.6**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 90.86 269 P **P 11 32 03.9 +1.1**
ZEI Tsey 90.90 313 *e*P **P 11 32 02.4 +0.1**
ZEI pmax pmax
comp=Z,29nm,1.3s
L20K Farewell, AK 91.00 27 P **P 11 32 02.3 +0.2**
baz=256,SNR=16
K20K Telida 91.13 26 IAmb IAmb 11 32 05.7
comp=Z,35nm,1.1s
K20K Telida 91.13 26 P **P 11 32 02.9 +0.2**
baz=256,SNR=15
M20K Styx River 91.19 28 IAmb IAmb 11 32 04.3
comp=Z,38nm,1.1s
M20K Styx River 91.19 28 P **P 11 32 03.3 +0.2**
baz=256,SNR=18
ONI Oni 91.19 313 IAmb IAmb 11 32 05.7
comp=Z,37nm,1.7s
NCK Nalchik 91.23 314 *i* P **P 11 32 03.7 +0.1**
NCK pmax pmax
comp=Z,19nm,1.0s
J20K Nowinta River 91.30 25 IAmb IAmb 11 32 04.9
comp=Z,33nm,1.1s
J20K Nowinta River 91.30 25 P **P 11 32 03.3 -0.1**
baz=256,SNR=15
NVL N'lazarevskaya 91.41 197 *e*P **P 11 32 03.4 -0.4**
NVL pmax pmax
comp=Z,43nm,1.0s
HOM Homer 91.41 30 P **P 11 32 02.8 -1.2**
baz=258
N20K Mount Spurr 91.47 28 P **P 11 32 03.6 -0.7**
baz=257
SPCR Spurr Chakacha 91.47 28 P **P 11 32 03.5 -0.8**
baz=257
GURO Guroymak-BITLI 91.66 308 IAmb IAmb 11 32 07.8
comp=Z,31nm,1.2s
KBZ Khabaz 91.77 314 P **P 11 32 06.4 +0.4**
comp=Z,5.7nm,0.8s,baz=159,slow=3.0,SNR=8.9
KBZ LR LR 12 19 35.2
comp=Z,26nm,21.2s,baz=54,slow=39
comp=Z,5.7nm,0.8s
KBZ Khabaz 91.77 314 *ce*P **P 11 32 05.8 -0.2**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
PPLA Purkeypile 91.85 27 IAmb IAmb 11 32 07.4
comp=Z,45nm,1.2s
PPLA Purkeypile 91.85 27 P **P 11 32 05.2 -1.0**
baz=257,SNR=6.5
GOF Gofitskoye 91.86 315⇑ *e*P **P 11 32 06.9 +0.5**
IMAR Indian Mountai 91.91 24 P **P 11 32 06.0 -0.1**
SHA1 Shidzhatmaz 91.94 314 *i* P **P 11 32 06.9 -0.2**
SKT Skwentna 91.95 28 IAmb IAmb 11 32 06.6
comp=Z,31nm,1.0s
SKT Skwentna 91.95 28 P **P 11 32 05.4 -1.1**
baz=258
KIV Kislovodsk 91.95 314 *e*P **P 11 32 06.7 -0.3**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,58nm,20.0s
CAST Castle Rocks 92.01 26 P **P 11 32 05.7 -1.1**
baz=258,SNR=8.8
CHUM Lake Minchumin 92.01 26 P **P 11 32 06.7 0.0**
baz=257,SNR=15
H21K Melozitna Rive 92.21 24 P **P 11 32 07.2 -0.3**
baz=257,SNR=9.9
F21K Alatna River 92.31 22 P **P 11 32 07.2 -0.8**
baz=256
I21K Tanana 92.44 25 P **P 11 32 08.2 -0.4**
baz=258,SNR=7.9
KTH Kantishna Hill 92.55 26 IAmb IAmb 11 32 10.1
comp=Z,46nm,1.1s
M22K Willow 92.56 28 P **P 11 32 07.9 -1.4**
baz=259,SNR=12
SEW Seward 92.58 30 P **P 11 32 09.4 +0.1**
baz=260
CUT Chulitna 92.62 27 P **P 11 32 08.1 -1.4**
baz=259
RC01 Rabbit Creek A 92.62 29 IAmb IAmb 11 32 10.4
comp=Z,33nm,1.0s
RC01 Rabbit Creek A 92.62 29 P **P 11 32 08.0 -1.6**
baz=259
BPAW Bear Paw Mtn. 92.63 26 P **P 11 32 08.4 -1.2**
baz=258
TRF Thorofare Moun 92.81 26 P **P 11 32 09.2 -1.4**
baz=259,SNR=7.5
H22K Ishtalitna Cre 92.83 24 P **P 11 32 10.3 -0.1**
baz=258,SNR=10
F22K John River 92.86 22 P **P 11 32 10.6 0.0**
baz=258,SNR=13
MLY Manley 92.92 25 P **P 11 32 10.2 -0.8**
baz=259,SNR=16
G22K Bettles 92.99 23 P **P 11 32 10.4 -0.8**
baz=258
PMR Palmer 93.00 28 IAmb IAmb 11 32 11.5
comp=Z,35nm,1.1s
PMR Palmer 93.00 28 P **P 11 32 10.0 -1.3**
baz=260,SNR=8.2
PRGR Permogore 93.02 332 ‖ *i*P **P 11 32 09.9 -1.5**
KOPT Kop Dagi 93.04 310 IAmb IAmb 11 32 14.7
comp=Z,51nm,1.4s
GHO Glory Hole Cre 93.12 28 IAmb IAmb 11 32 16.9
comp=Z,24nm,1.2s
PWL Port Wells 93.25 29 P **P 11 32 12.1 -0.4**
baz=261
KNK Knik Glacier 93.28 29 P **P 11 32 12.1 -0.6**
baz=261,SNR=12
TROLL Troll, Antarti 93.29 195 P **P 11 32 14.5 +1.8**
SML Sawmill 93.41 28 P **P 11 32 12.7 -0.5**
baz=261,SNR=18
MCK McKinley 93.45 26 P **P 11 32 12.3 -1.1**
baz=260,SNR=12
WAT1 Susitna Watana 93.47 27 P **P 11 32 12.4 -1.2**
baz=261
I23K Minto, Yukon-K 93.52 25 P **P 11 32 13.1 -0.5**
baz=260,SNR=44
G23K Bananza Creek 93.53 23 P **P 11 32 13.5 -0.2**
baz=260,SNR=24
NEA2 Nenana 93.54 25 P **P 11 32 12.7 -1.1**
baz=260,SNR=8.3
H23K Yukon River 93.56 24 IAmb IAmb 11 32 15.0
comp=Z,27nm,1.1s
H23K Yukon River 93.56 24 P **P 11 32 13.7 -0.2**
baz=260,SNR=20
VRH Novokhopyorsk 93.60 321 *e*P **P 11 32 12.7 -1.5**
VRH pmax pmax
comp=Z,40nm,1.0s
M23K Glacier View 93.69 28 P **P 11 32 13.6 -0.9**
baz=261,SNR=9.9
D23K Nanushuk River 93.71 21 P **P 11 32 14.4 0.0**
baz=259,SNR=12
WAT6 Susitna Watana 93.81 27 P **P 11 32 14.5 -0.7**
baz=261,SNR=15
GLI Glacier Island 93.86 29 P **P 11 32 14.4 -0.8**
baz=262
SCM Sheep Creek Mo 93.88 28 P **P 11 32 14.9 -0.6**
baz=262,SNR=15
C23K Itkillik River 93.90 20 P **P 11 32 14.7 -0.5**
baz=259,SNR=10.0
WRH Wood River Hil 93.94 26 IAmb IAmb 11 32 15.5
comp=Z,38nm,1.0s
SOC Sochi 94.04 313 *e*P P 11 32 10.6 -5.9
SOC *e* 11 36 03.9
SOC *e*PPP PPP 11 38 03.9
SOC *e*S **SKSac 11 42 29.0 -7.2**
SOC *e*SS **SS 11 49 38.1 +0.9**
DHY Denali Highway 94.04 27 P **P 11 32 15.4 -0.9**
baz=262,SNR=31
TOLK Toolik Lake Re 94.05 21 IAmb IAmb 11 32 17.2
comp=Z,29nm,1.2s
TOLK Toolik Lake Re 94.05 21 P **P 11 32 15.6 -0.4**
baz=260,SNR=6.5
TCOL CIGO, UAF Yank 94.10 25 P **P 11 32 15.3 -1.0**
baz=261
COLA College 94.11 25 P **P 11 32 13.9 -2.3**
COLA College 94.11 25 P **P 11 32 14.0 -2.3**
COLA pmax pmax
comp=Z,13nm,1.0s
COLA College 94.11 25 P **P 11 32 15.2 -1.1**
baz=261
H24K Noodor Dome 94.24 24 P **P 11 32 16.8 -0.2**
baz=261,SNR=29
BELA Belgrano 2 94.26 184 IAmb IAmb 11 32 17.8
comp=Z,19nm,0.7s
POKR Poker Plat Res 94.32 25 P **P 11 32 17.0 -0.3**
baz=262
E24K Your Creek 94.35 22 P **P 11 32 17.0 -0.5**
baz=261
D24K Happy Valley 94.40 21 P **P 11 32 17.2 -0.4**
baz=261
HDA Harding Lake 94.42 26 IAmb IAmb 11 32 17.2
comp=Z,23nm,1.0s
HDA Harding Lake 94.42 26 P **P 11 32 15.9 -1.9**
baz=262,SNR=13
M24K Tolsona, Glenn 94.46 28 P **P 11 32 18.0 -0.1**
baz=263,SNR=14
EYAK Cordova Ski Ar 94.47 30 P **P 11 32 17.3 -0.7**
baz=263
F24K Squaw Lake 94.49 23 P **P 11 32 18.3 +0.2**
baz=262,SNR=15
ILAR Eielson Array 94.50 25 P **P 11 32 16.4 -1.8**
comp=Z,8.6nm,1.0s,baz=266,slow=4.1,SNR=56
ILAR PP **PP 11 36 01.1 -6.8**
comp=Z,2.7nm,1.0s,baz=262,slow=6.3,SNR=6.6
ILAR PKKPbc **PKKPdf 11 49 17.2 -1.1**
comp=Z,2.5nm,0.8s,baz=50,slow=1.3,SNR=21
ILAR LR LR 12 10 40.0
comp=Z,32nm,20.1s,baz=265,slow=33
comp=Z,8.6nm,1.0s
KLU Klutina 94.50 29 IAmb IAmb 11 32 19.3
comp=Z,18nm,1.0s
KLU Klutina 94.50 29 P **P 11 32 18.0 -0.3**
baz=263,SNR=5.4
G24K Hadweenzic Riv 94.53 23 P **P 11 32 18.2 -0.1**
baz=262,SNR=20
C24K Franklin Bluff 94.53 20 P **P 11 32 17.9 -0.2**
baz=261,SNR=8.3
SNAA Sanae 94.81 194 P **P 11 32 21.0 +1.4**
SNAA Sanae 94.81 194 LR LR 12 15 07.7
comp=Z,131nm,19.3s,baz=139,slow=35
K24K Donnelly Dome 94.85 26 P **P 11 32 18.8 -1.0**
baz=263,SNR=10
PAX Paxson 94.89 27 P **P 11 32 19.8 -0.3**
baz=263,SNR=21
HARP HAARP 94.97 28 P **P 11 32 20.2 -0.2**
baz=264
BMRM Bremner River 95.07 29 P **P 11 32 20.4 -0.5**
baz=264,SNR=5.9
J25K Salcha River, 95.12 26 IAmb IAmb 11 32 20.9
comp=Z,18nm,1.3s
J25K Salcha River, 95.12 26 P **P 11 32 19.5 -1.6**
baz=264,SNR=9.8
H25K Birch Creek 95.13 24 P **P 11 32 20.9 -0.1**
baz=263
N25K Chitina, Valde 95.14 29 IAmb IAmb 11 32 22.4
comp=Z,24nm,1.1s
N25K Chitina, Valde 95.14 29 P **P 11 32 20.9 -0.3**
baz=264,SNR=6.2
VSR Storozhevoye 95.19 321 *e*P **P 11 32 20.7 -0.9**
VSR pmax pmax
comp=Z,40nm,1.0s
VORR Voronezh 95.21 321 *e*P **P 11 32 21.2 -0.4**
VORR pmax pmax
comp=Z,39nm,1.2s
RIDG Independent Ri 95.26 26 P **P 11 32 20.3 -1.4**
baz=264,SNR=16
D25K Kavik River 95.29 21 P **P 11 32 21.1 -0.6**
baz=263
F25K Christian River 95.35 23 P **P 11 32 21.9 -0.2**
baz=264,SNR=7.9
E25K Arctic Village 95.44 22 P **P 11 32 22.5 +0.1**
baz=264,SNR=9.8
LPSR Galich'ya Gora 95.47 322 *e*P **P 11 32 21.5 -1.3**
LPSR pmax pmax
comp=Z,40nm,0.8s
GLB Gilahina Butte 95.50 29 IAmb IAmb 11 32 24.4
comp=Z,33nm,1.2s
DOT Dot Lake 95.60 27 IAmb IAmb 11 32 23.8
comp=Z,23nm,1.0s
SCRK Sand Creek 95.66 26 IAmb IAmb 11 32 24.3

comp=Z,14nm,1.2s
SCRK Sand Creek 95.66 26 P **P** **11 32 22.8 -0.8**
baz=265,SNR=8.8
BMAR Burnt Mountain 95.74 23 P **P** **11 32 24.3 +0.5**
KLMR Klimovskoe 95.85 331 *e*P **P** **11 32 21.7 -2.6**
KLMR *e* 11 36 18.4
KLMR pmax pmax
comp=Z,44nm,1.2s
KLMR Klimovskoe 95.85 331 *e*P **P** **11 32 21.8 -2.6**
KLMR AMP 11 32 23.6
comp=Z,44nm,1.2s
KLMR *e*PP **PP** **11 36 18.5 0.0**
L26K Log Cabin Wild 95.86 27 IAmb IAmb 11 32 25.5
comp=Z,18nm,1.1s
L26K Log Cabin Wild 95.86 27 P **P** **11 32 23.7 -0.7**
baz=265,SNR=14
MCARA McCarthy VSAT 95.88 29 P **P** **11 32 23.7 -0.8**
baz=265
J26L Joseph Creek 95.89 26 IAmb IAmb 11 32 25.4
comp=Z,24nm,1.1s
J26L Joseph Creek 95.89 26 P **P** **11 32 23.6 -1.0**
baz=265,SNR=26
F26K Sheenjek River 95.93 23 P **P** **11 32 24.8 +0.2**
baz=265,SNR=8.6
M26K Nabesna, AK 95.97 28 IAmb IAmb 11 32 26.0
comp=Z,13nm,1.1s
M26K Nabesna, AK 95.97 28 P **P** **11 32 24.1 -0.9**
baz=265
G26K Porcupine Rive 96.01 23 P **P** **11 32 25.4 +0.5**
baz=265,SNR=23
I26K Coal Creek Min 96.13 25 IAmb IAmb 11 32 26.8
comp=Z,20nm,1.2s
I26K Coal Creek Min 96.13 25 P **P** **11 32 24.7 -0.9**
baz=266
ISLE Juniper Island 96.15 30 IAmb IAmb 11 32 29.5
comp=Z,26nm,1.1s
C27K Jago River 96.25 21 P **P** **11 32 25.8 -0.2**
baz=266,SNR=7.5
VNA2 Neumayer--Watz 96.39 193 P **P** **11 32 27.8 +1.0**
baz=137,slow=407
MMAI Mount Meron Ar 96.41 302 LR LR 12 22 08.9
comp=Z,28nm,19.2s,baz=236,slow=39
GRNC Granite Creek 96.44 30 IAmb IAmb 11 32 28.7
comp=Z,24nm,1.1s
MOS Moscow 96.47 325 *e*P **P** **11 32 24.5 -2.8**
MOS pmax pmax
comp=Z,100nm,1.4s
MOS pmax pmax
comp=Z,45nm,1.2s
M27K Edge Creek, AK 96.49 28 IAmb IAmb 11 32 28.8
comp=Z,17nm,1.1s
M27K Edge Creek, AK 96.49 28 P **P** **11 32 27.1 -0.3**
baz=266,SNR=8.9
K27K Chicken 96.50 26 P **P** **11 32 27.0 -0.2**
baz=266
L27K Beaver Creek, 96.56 27 P **P** **11 32 27.3 -0.3**
baz=267,SNR=24
BCAR Beaver Creek A 96.57 27 P **P** **11 32 27.8 +0.1**
CTG Chitna Glacier 96.66 29 P **P** **11 32 28.6 +0.4**
baz=267
CTGM Chitina Glacie 96.66 29 IAmb IAmb 11 32 31.3
comp=Z,19nm,1.0s
VNA3 Neumayer Olymp 96.66 193 P **P** **11 32 28.9 +0.9**
VNA1 Neumayer--Stat 96.79 193 P **P** **11 32 29.6 +1.1**
I27K Kandik River 96.79 25 P **P** **11 32 28.8 +0.1**
baz=267
G27K Doyon Strip 96.84 24 P **P** **11 32 28.7 0.0**
baz=267
H27K Steamboat Moun 96.86 24 P **P** **11 32 28.8 -0.1**
baz=267
E27K Coleen River 96.93 22 P **P** **11 32 28.5 -0.7**
baz=267,SNR=14
EGAK Eagle 96.94 26 IAmb IAmb 11 32 30.1
comp=Z,16nm,1.1s
EGAK Eagle 96.94 26 P **P** **11 32 28.9 -0.3**
baz=267,SNR=9.8
BVCY Beaver Creek 96.96 28 P **P** **11 32 29.5 +0.1**
baz=267,SNR=7.5
OBN Obninsk 97.04 325 *ce*P **P** **11 32 28.6 -1.2**
OBN *e**PP **pP** **11 33 09.5 +0.6**
OBN *e* 11 36 24.0
OBN *e*PPP PPP 11 38 34.2
OBN pmax pmax
comp=Z,84nm,1.7s
YUK3 Moose Creek 97.12 29 P **P** **11 32 30.4 0.0**
baz=268,SNR=6.7
O28M Mount Upton 97.21 30 P **P** **11 32 31.0 +0.1**
baz=268
MBAR Mbarara 97.39 268 *ce*P Pdif 11 32 34.5 +1.8
MBAR pmax pmax
comp=Z,13nm,2.5s
LSZ Lusaka 97.68 254 P **P** **11 32 33.4 -0.4**
LSZ IAmb IAmb 11 32 34.6
comp=Z,9.4nm,0.8s
LSZ Lusaka 97.68 254 P **P** **11 32 33.4 -0.4**
LSZ pmax pmax
comp=Z,9.0nm,0.9s
DAWY Dawson 97.69 26 IAmb IAmb 11 32 33.9
comp=Z,26nm,1.2s
DAWY Dawson 97.69 26 P **P** **11 32 32.3 -0.4**
baz=269,SNR=17
BOSA Boshof 97.75 240 P **P** **11 32 33.8 -0.1**
comp=Z,7.9nm,1.0s,baz=113,slow=6.1,SNR=6.3
comp=Z,7.9nm,1.0s
BOSA Boshof 97.75 240 P **P** **11 32 33.5 -0.4**
BOSA IAmb IAmb 11 32 35.7
comp=Z,28nm,1.4s
YUK4 Talbot Arm 97.98 29 P Pdif 11 32 34.5 +0.2
baz=269
O29M Mount Kennedy 98.00 30 P **P** **11 32 34.2 0.0**
baz=269
M29M Somme Creek 98.08 28 P Pdif 11 32 34.7 +0.1
baz=270
I29M Ogilvie Camp, 98.17 25 IAmb IAmb 11 32 35.7
comp=Z,19nm,1.1s
I29M Ogilvie Camp, 98.17 25 P **P** **11 32 34.2 -0.6**
baz=270
LBTB Lobatse 98.22 243 LR LR 12 13 48.5
comp=Z,30nm,18.8s,baz=96,slow=33
LBTB Lobatse 98.22 243 P Pdif 11 32 36.4 +0.3
LBTB IAmb IAmb 11 32 37.9
comp=Z,20nm,1.1s
LBTB Lobatse 98.22 243 P Pdif 11 32 36.4 +0.3
LBTB pmax pmax
comp=Z,20nm,1.2s
LVZ Lovozero 98.23 338 *ce*P **P** **11 32 34.4 -0.6**
LVZ pmax pmax
comp=Z,27nm,2.5s
BRTR Keskin Array B 98.27 309 P **P** **11 32 34.5 -1.5**
comp=Z,1.0nm,0.6s,baz=77,slow=2.7,SNR=6.6
BRTR PP **PP** **11 36 40.0 +2.1**
comp=Z,1.1nm,0.8s,baz=153,slow=8.3,SNR=3.9
BRTR PKKPbc **PKKPbc** **11 49 08.1 -0.2**
comp=Z,0.8nm,0.8s,baz=222,slow=1.7,SNR=4.4
BRTR LR LR 12 27 41.9
comp=Z,18nm,18.1s,baz=107,slow=42
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 98.27 309 P **P** **11 32 34.3 -1.7**
P29M Windy Craggy 98.41 31 P **P** **11 32 35.0 -0.9**
baz=270
HYT Haines Junctio 98.53 30 P **P** **11 32 36.6 0.0**
baz=270
N30M Aishikik Lake 98.73 29 P Pdif 11 32 37.9 +0.5
baz=270
EPYK Eagle Plains 98.80 24 IAmb IAmb 11 32 38.4
comp=Z,25nm,1.4s
EPYK Eagle Plains 98.80 24 P **P** **11 32 36.8 -0.8**
baz=272
O30N Mendenhall 99.22 30 P **Pdif** **11 32 39.3 -0.3**
baz=271
MAYO Mayo, Yukon 99.24 27 IAmb IAmb 11 32 41.0
comp=Z,13nm,0.9s
MAYO Mayo, Yukon 99.24 27 P **Pdif** **11 32 39.3 -0.3**
baz=272
N31M Braeburn, Yuko 99.36 29 P **Pdif** **11 32 40.2 +0.1**
baz=272
SKAG Skagway 99.64 31 P **Pdif** **11 32 41.3 -0.1**
baz=272
WHY Whitehorse 99.82 30 P **Pdif** **11 32 42.3 -0.1**
baz=272
INK Inuvik 99.93 22 PKKPbc PKKPbc 11 49 02.0 -2.4
comp=Z,3.4nm,0.9s,baz=324,slow=1.7,SNR=18
INK Inuvik 99.93 22 P **Pdif** **11 32 41.5 -1.0**
baz=275
M31M Drury Creek, Y 99.99 28 P **Pdif** **11 32 42.2 -0.7**
baz=273
VALR Valaam 100.05 331 *i* P **Pdif** **11 32 42.6 -0.5**
VALR pmax pmax
comp=Z,40nm,0.9s
P32M Atlin 100.46 31 P **Pdif** **11 32 44.6 -0.5**
baz=273
FARO Faro, Yukon 100.47 28 P **Pdif** **11 32 45.2 0.0**
baz=274
N32M Quiet Lake 100.67 29 P **Pdif** **11 32 46.1 0.0**
baz=274
P33M Teslin, Yukon 100.87 30 P **Pdif** **11 32 46.8 -0.2**
baz=274
CRAG Craig 100.99 35 P **Pdif** **11 32 47.8 +0.4**
baz=273
WRAK Wrangell Islan 101.37 34 P **Pdif** **11 32 49.3 +0.1**
baz=274
MMPY Sheldon Lake, 101.41 28 P **Pdif** **11 32 49.5 +0.2**
baz=276
ARCES ARCESS Array B 101.41 340 P **Pdif** **11 32 47.6 -1.5**
comp=Z,11nm,1.1s,baz=64,slow=2.8,SNR=10
ARCES PKiKP **PKiKP** **11 37 11.2 -1.2**
comp=Z,1.1nm,0.8s,baz=105,slow=2.8,SNR=4.0
ARCES PKKPbc **PKKPbc** **11 48 57.3 -3.0**
comp=Z,1.0nm,0.7s,baz=253,slow=3.7,SNR=5.7
AKASG Malin Array Be 101.46 320 P **Pdif** **11 32 48.1 -1.6**
comp=Z,1.7nm,0.6s,baz=69,slow=4.5,SNR=14
AKASG Malin Array Be 101.46 320 *i* P **Pdif** **11 32 49.0 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
R33M Jennings River 101.87 31 P **Pdif** **11 32 51.6 +0.1**
baz=276
MNK Minsk 102.07 324 *i* P **Pdif** **11 32 50.7 -1.6**
MNK *i* 11 37 04.7
MNK *i* PPP PPP 11 39 15.2
MNK *i* S **SKSac** **11 43 14.6 -1.7**
MNK *i* SP **SP** **11 45 54.4 -0.1**
MNK *i* PS **PS** **11 46 15.9 +0.9**
MNK *i* SSS SSS 11 55 22.5
MNK pmax pmax
comp=Z,23nm,0.7s
MNK pmax pmax
comp=E,24nm,20.3s
MNK MLR MLR
comp=Z,72nm,19.0s
MNK MLR MLR
comp=E,21nm,18.0s
MNK Minsk 102.07 324 *i* P **Pdif** **11 32 50.8 -1.6**
comp=E,24nm,20.3s
MNK *i* P **Pdif** **11 32 50.8 -1.6**
MNK *i* P **Pdif** **11 32 50.8 -1.6**
comp=Z,23nm,0.7s,baz=86
MNK *i* pP **pPdif** **11 33 31.2 -0.1**
MNK *i* sP **sPdif** **11 33 48.4 +0.8**
MNK *i* PP **PP** **11 37 04.8 -1.1**
MNK *i* PPP PPP 11 39 15.2
MNK *i* SKS 11 42 12.0
MNK *i* S **SKSac** **11 43 14.6 -1.7**
MNK *i* SP **SP** **11 45 54.5 -0.1**
MNK *i* PS **PS** **11 46 16.0 +0.9**
MNK *i* SS SS 11 51 54.3 +25
MNK *i* SSS SSS 11 55 22.6
MNK *i* LR LR 12 15 29.3
MNK *i* LRM MLR 12 21 30.0
comp=Z,72nm,18.8s
MNK *i* LRM MLR 12 21 39.2
comp=E,21nm,17.7s
DLBC Dease Lake 102.45 32 P **Pdif** **11 32 54.0 0.0**
baz=276
T35M Bob Quinn 102.48 33 P **Pdif** **11 32 54.5 +0.4**
baz=276
NACGM Naroch 102.67 325 *i* P **Pdif** **11 32 55.2 +0.2**
baz=86
CRVS Cervenica-Dubn 106.63 319 *e*P **Pdif** **11 33 14.7 +1.9**
CRVS Cervenica-Dubn 106.63 319 *e*PDIFF **Pdif** **11 33 14.7 +1.9**
YKA Yellowknife Ar 108.92 26 PKiKP **PKiKP** **11 37 26.1 -0.2**
comp=E,4.8nm,0.7s,baz=290,slow=1.6,SNR=8.1
YKA PKKPbc **PKKPbc** **11 48 34.6 -2.6**
comp=E,3.2nm,0.7s,baz=109,slow=3.4,SNR=6.2
I04A Tendick Farm, 109.06 46 P **PKiKP** **11 37 28.0 +0.7**
baz=278
L04D Klamath Falls 109.36 48 P **PKiKP** **11 37 28.5 +0.5**
baz=278
J04D Umpqua Nationa 109.36 47 P **PKiKP** **11 37 28.4 +0.4**
baz=278
NB2 NORSAR Subarra 109.41 333 PKPdf **PKiKP** **11 37 26.3 -1.1**
comp=Z,2.1nm,1.2s,baz=68,slow=1.9
NOA NORSAR Array B 109.41 333 PKiKP **PKiKP** **11 37 26.8 -0.6**
comp=Z,2.0nm,0.8s,baz=263,slow=3.1,SNR=5.6
NOA PKKPbc **PKKPbc** **11 48 33.4 -2.3**
comp=Z,1.0nm,0.9s,baz=67,slow=3.2,SNR=3.4
I05D Terrebonne, OR 109.75 46 P **PKiKP** **11 37 29.4 +0.8**
baz=279
J05D Fort Rock, OR 109.98 47 P **PKiKP** **11 37 29.7 +0.5**
baz=279,SNR=5.6
GROS Grobnik 111.01 317 *i* PKiKP **PKiKP** **11 37 30.7 -0.3**
GROS *i* PP **PP** **11 38 15.4 +3.6**
SOKA Soboth 111.28 317 *e*P **PKiKP** **11 37 31.5 +0.1**
comp=Z,4.9nm,1.1s
BOJS Bojanci 111.37 316 *i* PKiKP **PKiKP** **11 37 31.8 +0.3**
CLL Collm 111.48 322 *i* PKiKP **PKiKP** **11 37 31.6 +0.1**
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 111.48 322 *i* PKiKP **PKiKP** **11 37 31.6 +0.1**
comp=Z,6.0nm,1.1s
CLL *e*PP **PP** **11 38 16.0 +1.2**
MOA Molln 111.53 319 *e*P **PKiKP** **11 37 31.6 -0.2**
comp=Z,2.4nm,0.7s
GERES GERESS Array B 111.67 320 PKiKP **PKiKP** **11 37 31.7 -0.4**
comp=Z,2.9nm,0.6s,baz=100,slow=1.5,SNR=20
GERES PKKPbc **PKKPbc** **11 48 26.8 -1.2**
comp=Z,0.2nm,0.2s,baz=235,slow=4.7,SNR=3.9
NEW Newport 111.84 41 P **PKiKP** **11 37 32.7 +0.3**
baz=284
SMMC Simmler 112.00 55 P **PKiKP** **11 37 34.4 +1.3**
baz=277
PKM Mcpherson Peak 112.20 55 P **PKiKP** **11 37 35.0 +1.3**
baz=277
NVAR Mina Array Bea 112.93 51 PKiKP **PKiKP** **11 37 35.9 +0.9**
comp=Z,3.7nm,0.9s,baz=257,slow=2.5,SNR=23
NVAR PKKPbc **PKKPbc** **11 48 24.6 +1.0**
comp=Z,1.3nm,0.9s,baz=140,slow=3.7,SNR=7.8
ABTA Abfaltersbach 112.95 318 *e*P **PKiKP** **11 37 34.4 -0.2**
comp=Z,6.7nm,0.8s
ISA Isabella, Lake 113.19 54 P **PKiKP** **11 37 36.4 +1.0**
baz=278
CWC Cottonwood Cre 113.40 54 P **PKiKP** **11 37 36.8 +0.9**
baz=278
WTTA Wattenberg 113.41 318 *e*P **PKiKP** **11 37 35.7 +0.1**
comp=Z,16nm,0.6s
WATA Walderalm 113.43 319 *e*P **PKiKP** **11 37 35.4 -0.2**
comp=Z,2.3nm,0.7s
EDW2 Edwards Air Fo 113.68 55 P **PKiKP** **11 37 37.9 +1.5**
baz=278,SNR=9.7
SQTA Sankt Quirin 113.70 318 *e*P **PKiKP** **11 37 36.2 +0.2**
comp=Z,3.8nm,0.6s
MOTA Moosalm 113.73 319 *e*P **PKiKP** **11 37 35.8 -0.4**
comp=Z,11nm,1.0s
LRMC Laurel Mtn Rad 113.86 55 P **PKiKP** **11 37 37.7 +0.9**
baz=278
GRAC Grapevine Rang 113.88 53 P **PKiKP** **11 37 37.7 +1.1**
baz=279
RETA Reutte 113.92 319 *e*P **PKiKP** **11 37 36.5 0.0**
comp=Z,2.8nm,0.6s
MPMC Manual Prospec 113.93 54 P **PKiKP** **11 37 38.5 +1.5**
baz=278,SNR=10
BFSC Mount Baldy Ra 114.04 56 P **PKiKP** **11 37 38.0 +0.9**
baz=278
FETA Feichten 114.07 318 *e*P PKPdf 11 37 36.7 -0.2
comp=Z,5.5nm,0.9s
MSO Missoula 114.29 42 P **PKiKP** **11 37 37.9 +0.7**
baz=286
FURC Furnace Creek, 114.36 53 P **PKiKP** **11 37 38.8 +1.3**
baz=279,SNR=5.4
MURC Murrieta 114.51 57 P **PKiKP** **11 37 38.9 +1.0**
baz=278
DAVA Damuels 114.55 319 *e*P **PKiKP** **11 37 37.8 0.0**
comp=Z,13nm,0.9s
GSC Goldstone, Bar 114.59 55 P **PKiKP** **11 37 39.4 +1.3**
baz=279,SNR=9.3
BBRC Big Bear Solar 114.64 56 P **PKiKP** **11 37 39.5 +1.1**
baz=278
109C Camp Elliot, M 114.67 57 P **PKiKP** **11 37 39.0 +0.8**
baz=277
TPNV Topopah Spring 114.77 53 P **PKiKP** **11 37 39.5 +1.0**
baz=280,SNR=6.3
HLID Hailey 114.80 45 P PKPdf 11 37 39.7 +1.3
baz=284,SNR=33
SHOC Shoshone, Teco 114.92 54 P PKPdf 11 37 40.2 +1.5
baz=279
HEC Hector,Ludlow 115.04 55 P **PKPdf** **11 37 40.4 +1.4**
baz=279
R11A Troy Canyon, C 115.05 51 P **PKPdf** **11 37 40.3 +1.2**
baz=281
PFO Pinyon Flats O 115.11 56 P **PKPdf** **11 37 40.6 +1.4**
baz=278,SNR=8.5
TPFO Pinon Flats 115.12 56 P **PKPdf** **11 37 40.5 +1.3**
baz=278,SNR=8.3
MONP2 Monument Peak 115.24 57 P **PKPdf** **11 37 41.2 +1.6**
baz=278,SNR=6.2
TUQ Turquoise Moun 115.28 54 P **PKPdf** **11 37 40.8 +1.3**
baz=279,SNR=6.0
BELC Belle Mtn. Jos 115.44 56 P **PKiKP** **11 37 41.4 +1.5**
baz=278,SNR=15
IKP In-Ko-Pah, Jac 115.54 57 P **PKiKP** **11 37 41.5 +1.4**
baz=278
GMRC Granite Mounta 115.60 55 P **PKiKP** **11 37 41.9 +1.8**
baz=279,SNR=9.9
SHPR Sheep Range 115.71 53 **PKiKP** **11 37 40.8 +0.5**
SWSC Sam W. Stewart 115.75 57 P **PKiKP** **11 37 41.5 +1.2**
baz=278
BC3 Big Chuckawall 115.94 56 P **PKiKP** **11 37 42.2 +1.4**
baz=279,SNR=11
IRM Iron Mountain 116.11 56 P **PKiKP** **11 37 42.1 +1.1**
baz=279
BOZ Bozeman (W) 116.17 43 P **PKiKP** **11 37 41.2 +0.3**
baz=287,SNR=8.4
EGMT Eagleton 116.63 40 PKPdf **PKPdf** **11 37 41.3 -0.4**
EGMT Eagleton 116.63 40 P **PKiKP** **11 37 42.0 +0.3**
baz=290
DUG Dugway, Tooele 116.76 49 P **PKiKP** **11 37 43.3 +1.1**
baz=284
PDMCI Parker Dam,Lak 116.91 55 P **PKiKP** **11 37 44.0 +1.5**
baz=280
H17A Grant Village 117.24 44 P **PKiKP** **11 37 44.4 +1.2**
baz=288,SNR=7.0
KEST Kesra 117.72 306 PKP **PKiKP** **11 37 44.8 +0.7**
comp=Z,8.0nm,0.8s,baz=171,slow=1.5,SNR=8.2
KEST Kesra 117.72 306 PKPdf **PKiKP** **11 37 44.7 +0.6**
RLMT Red Lodge 117.91 43 P **PKiKP** **11 37 45.3 +0.9**
baz=289,SNR=5.3
214A Organ Pipe Nat 118.40 58 P **PKiKP** **11 37 46.0 +0.5**
baz=279
BW06 Boulder Array 118.44 45 P **PKiKP** **11 37 45.8 +0.3**
baz=288
PDAR Pinedale Array 118.44 45 PKP **PKiKP** **11 37 45.9 +0.4**
comp=Z,5.9nm,0.7s,baz=239,slow=1.3,SNR=54
PDAR PKKPbc **PKKPab** **11 48 06.5 +0.2**
comp=Z,3.7nm,0.8s,baz=107,slow=5.0,SNR=16
PDAR Pinedale Array 118.44 45 PKPdf **PKiKP** **11 37 45.6 0.0**
WUAZ Wupatki 118.92 54 P **PKiKP** **11 37 47.4 +0.8**
baz=282,SNR=27
CLF Chambon-Foret 119.14 322 PKPdf **PKPdf** **11 37 45.9 -0.5**
LAO LASA Array 119.35 40 P **PKiKP** **11 37 48.5 +1.6**
baz=292,SNR=8.9
LAO LASA Array 119.35 40 P **PKiKP** **11 37 48.1 +1.1**
baz=292,SNR=8.9
DGMT Dagmar 119.89 37 **PKiKP** **11 37 48.1 +0.2**
DGMT Dagmar 119.89 37 P **PKiKP** **11 37 48.2 +0.3**
baz=295
TUC Tucson 120.03 57 PKPdf **PKiKP** **11 37 49.6 +0.9**
TUC Tucson 120.03 57 PKiKP **PKiKP** **11 37 49.6 +0.9**
TUC Tucson 120.03 57 P **PKiKP** **11 37 49.8 +1.1**
baz=281
O20A White River Ci 120.16 48 P **PKiKP** **11 37 50.1 +1.2**
baz=287,SNR=46
W18A Petrified Fore 120.31 54 P **PKiKP** **11 37 50.3 +1.0**
baz=283,SNR=14
K22A Casper 120.59 44 P **PKiKP** **11 37 50.1 +0.4**
baz=290
K22A Casper 120.59 44 P **PKPdf** **11 37 49.6 0.0**
baz=290,SNR=18
MVCO Mesa Verde 120.77 51 P **PKiKP** **11 37 51.4 +1.2**
baz=285,SNR=21
N23A Red Feather La 121.59 46 P **PKiKP** **11 37 52.3 +0.5**
baz=289,SNR=8.3
RSSD Black Hills 121.75 42 PKPdf **PKPdf** **11 37 51.5 -0.3**
RSSD Black Hills 121.75 42 PKiKP **PKPdf** **11 37 51.5 -0.3**
RSSD Black Hills 121.75 42 P **PKiKP** **11 37 52.0 0.0**
baz=293
RSSD Black Hills 121.75 42 P **PKPdf** **11 37 51.7 -0.2**
baz=293
S22A 4UR Ranch, Cre 121.90 50 P **PKiKP** **11 37 53.7 +1.1**
baz=287,SNR=35
SLBS Sierra La Lagu 122.04 67 PKPdf **PKPdf** **11 37 52.4 -0.3**
ISCO Idaho Springs 122.18 47 P **PKiKP** **11 37 54.0 +0.9**
baz=289,SNR=15
ISCO Idaho Springs 122.18 47 P **PKiKP** **11 37 53.6 +0.6**
baz=289,SNR=15
121A Cookes Peak, D 122.47 56 P **PKiKP** **11 37 55.0 +1.3**
baz=283,SNR=18
121A Cookes Peak, D 122.47 56 P **PKiKP** **11 37 54.6 +0.9**
baz=283
Q24A Divide 122.79 48 P **PKiKP** **11 37 55.0 +0.7**
baz=289
Y22A Socorro 122.81 54 P **PKiKP** **11 37 55.3 +1.0**
baz=284
Y22D IRIS PASSCAL I 122.81 54 P **PKiKP** **11 37 55.6 +1.3**
baz=284
SDCO Great Sand Dun 122.91 50 P **PKiKP** **11 37 55.4 +0.9**
baz=288
SDCO Great Sand Dun 122.91 50 P **PKiKP** **11 37 55.6 +1.1**
baz=288,SNR=44
MDND Maddock 122.92 37 P **PKPdf** **11 37 53.5 -0.2**
baz=299
ANMO Albuquerque 122.96 53 PKPdf **PKiKP** **11 37 55.1 +0.5**
ANMO Albuquerque 122.96 53 PKiKP **PKiKP** **11 37 55.1 +0.5**
ANMO Albuquerque 122.96 53 P **PKiKP** **11 37 55.7 +1.0**
baz=285
ANMO Albuquerque 122.96 53 P **PKiKP** **11 37 55.6 +1.0**
baz=285
ULM Lac du Bonnet 123.77 33 PKP **PKPdf** **11 37 54.0 -1.2**
comp=Z,15nm,0.8s,baz=299,slow=4.0,SNR=13
ULM Lac du Bonnet 123.77 33 PKiKP **PKPdf** **11 37 54.0 -1.2**
T25A Trinidad 123.92 50 P **PKiKP** **11 37 56.7 +0.3**
baz=288,SNR=13
OGNE Ogallala 124.34 45 P **PKiKP** **11 37 57.7 +0.7**
baz=293
KSCO Kaye Shedlock' 124.63 47 P **PKiKP** **11 37 58.4 +0.7**
baz=291,SNR=5.6
KSCO Kaye Shedlock' 124.63 47 P **PKiKP** **11 37 58.5 +0.8**
baz=291,SNR=5.6
MNTX Cornudas Mount 124.65 57 P **PKiKP** **11 37 58.7 +0.9**
baz=284,SNR=57
MNTX Cornudas Mount 124.65 57 P **PKiKP** **11 37 58.7 +0.9**
baz=284
AGMN Agassiz Nation 124.84 35 **PKPdf** **11 37 56.5 -0.8**
F33A 5 Mile Ranch, 125.89 37 P **PKiKP** **11 38 00.2 +0.4**
baz=301
B35A Bob, Littlefor 125.99 33 P **PKPdf** **11 37 59.1 -0.4**
baz=305,SNR=7.7
MSTX Muleshoe 126.16 53 P **PKiKP** **11 38 01.6 +0.8**
baz=287
MSTX Muleshoe 126.16 53 P **PKiKP** **11 38 01.2 +0.4**
baz=287
LL02 Futaleuf 126.37 162 PKPdf **PKPdf** **11 38 00.2 -0.3**
ESDC Sonseca Array 126.62 315 PKP **PKiKP** **11 38 01.9 +0.4**
comp=Z,8.6nm,1.1s,baz=20,slow=2.7,SNR=29
ESDC Sonseca Array 126.62 315 PKPdf **PKPdf** **11 38 01.2 +0.2**
TX31 Lajitas Ar. Si 126.64 59 P **PKiKP** **11 38 02.6 +0.7**
baz=284
TXAR Lajitas Array 126.64 59 PKP **PKPdf** **11 38 01.6 +0.2**
comp=Z,7.4nm,1.0s,baz=266,slow=1.5,SNR=43
TXAR SKPbc SKiKP 11 41 05.3 -18
comp=Z,1.4nm,0.8s,baz=259,slow=3.0,SNR=6.3
TXAR PKKPbc **PKKPbc** **11 47 35.4 +2.3**
comp=Z,0.5nm,0.8s,baz=113,slow=6.0,SNR=6.0
TXAR Lajitas Array 126.64 59 PKPdf **PKiKP** **11 38 02.2 +0.3**
TXAR Lajitas Array 126.64 59 PKiKP **PKiKP** **11 38 02.2 +0.3**
AMTX Amarillo 126.73 52 P **PKiKP** **11 38 02.1 +0.1**
baz=289
ECSD EROS Data Cent 126.74 40 P **PKiKP** **11 38 01.6 0.0**
baz=299,SNR=20
CBKS Cedar Bluff 126.79 46 P **PKiKP** **11 38 02.5 +0.5**
baz=293,SNR=6.1
CBKS Cedar Bluff 126.79 46 P **PKiKP** **11 38 01.8 -0.1**
baz=293,SNR=6.1
BGNE Belgrade 126.82 43 P **PKPdf** **11 38 01.6 +0.3**
baz=296
PAB San Pablo 126.94 315 **PKiKP** **11 38 02.0 -0.2**
PAB San Pablo 126.94 315 PKiKP **PKiKP** **11 38 02.0 -0.2**
TORD Torodi Ar. Bea 127.21 281 PKP **PKPdf** **11 38 02.6 -0.1**
comp=Z,16nm,1.0s,baz=62,slow=1.8,SNR=59
EYMN Ely 127.45 33 P **PKiKP** **11 38 02.7 -0.2**
baz=307,SNR=9.1
EYMN Ely 127.45 33 P **PKiKP** **11 38 02.6 -0.2**
baz=307,SNR=9.1

R32A	Long Quarter, baz=294,SNR=12	127.68	47	P		PKiKP	11 38 04.8	+1.1
MVO	Moncorvo	128.08	318	*e*PKPdf		PKiKP	11 38 05.5	+1.1
E38A	The Farm, Brul baz=306,SNR=6.8	128.21	34	P		PKiKP	11 38 04.7	+0.2
SPMN	Marine on St. baz=304	128.29	36	P		PKPdf	11 38 03.8	-0.2
PGAV	Gavieira, Arco	128.52	319	*e*PKPdf		PKiKP	11 38 06.0	+0.7
MTE	Manteigas	128.78	317	*e*PKPdf		PKiKP	11 38 06.5	+0.6
KSU1	Kansas State U baz=296	128.89	45	P		PKPdf	11 38 05.3	0.0
PLCA	Paso Flores	129.01	162	PKP		PKiKP	11 38 06.4	0.0
	comp=Z,13nm,0.9s,baz=190,slow=4.1,SNR=16							
PLCA				SKPbc		SKiKP	11 41 10.7	-17
	comp=Z,2.4nm,0.9s,baz=189,slow=5.9,SNR=3.1							
PLCA	Paso Flores	129.01	162	PKPdf		PKPdf	11 38 05.6	-0.1
PLCA	Paso Flores	129.01	162	PKIKP		PKPdf	11 38 05.6	-0.1
PLCA	Paso Flores	129.01	162	*e*P		PKiKP	11 38 06.2	-0.1
WMOK	Wichita Mounta baz=291	129.03	51	P		PKPdf	11 38 05.4	-0.4
ABTX	Abilene, Hawle baz=289,SNR=6.0	129.06	54	P		PKiKP	11 38 07.6	+0.9
ABTX	Abilene, Hawle baz=289	129.06	54	P		PKPdf	11 38 06.0	+0.1
PMRV	Marv??o	129.12	316	*e*PKPdf		PKiKP	11 38 07.2	+0.7
PBAR	Barrancos	129.42	314	*e*PKPdf		PKiKP	11 38 08.2	+1.1
JCT	Junction City baz=287	129.58	56	P		PKPdf	11 38 07.0	+0.1
G40A	Rib Lake baz=307,SNR=8.5	129.77	35	P		PKiKP	11 38 08.3	+0.6
T35B	Sooner Cattle baz=295,SNR=12	129.89	47	P		PKiKP	11 38 08.2	0.0
PNCL	Nicolau / Gran	130.50	315	*e*PKPdf		PKiKP	11 38 09.2	-0.1
833A	Chaparral WMA, baz=286	130.52	59	P		PKiKP	11 38 09.8	+0.2
TUL1	Leonard baz=294	130.83	48	P		PKiKP	11 38 09.7	-0.4
WHTX	Lake Whitney, baz=290	131.02	54	P		PKPdf	11 38 10.1	+0.5
JFWS	Jewell Farm baz=305,SNR=6.1	131.12	37	P		PKiKP	11 38 10.3	0.0
JFWS	Jewell Farm baz=305,SNR=6.1	131.12	37	P		PKPdf	11 38 09.9	+0.5
SCHQ	Schefferville	131.24	12	PKP		PKPdf	11 38 09.6	+0.2
	comp=Z,9.8nm,0.8s,baz=69,slow=1.7,SNR=11							
SCHQ				SKPbc		SKPbc	11 41 18.4	-0.9
	comp=Z,20nm,0.9s,baz=358,slow=3.6,SNR=17							
U38A	Gravette baz=296,SNR=16	131.64	47	P		PKPdf	11 38 10.9	+0.3
X37A	Clayton baz=294,SNR=10.0	131.68	50	P		PKiKP	11 38 11.4	-0.4
S39A	Bolivar baz=298,SNR=20	131.83	45	P		PKPdf	11 38 11.2	+0.2
L42A	Oliver, Polo baz=305,SNR=6.1	131.99	38	P		PKPdf	11 38 11.6	+0.5
KOWA	Kowa	132.71	283	PKPdf		PKPdf	11 38 12.9	-0.3
HKT	Hockley	133.01	56	PKPdf		PKiKP	11 38 14.1	-0.4
HKT	Hockley	133.01	56	PKIKP		PKiKP	11 38 14.1	-0.4
HDIL	Hopedale baz=304	133.04	39	P		PKPdf	11 38 13.1	-0.1
MIAR	Mount Ida baz=295,SNR=16	133.05	49	P		PKiKP	11 38 14.8	+0.3
MIAR	Mount Ida baz=295	133.05	49	P		PKPdf	11 38 13.9	+0.6
CCM	Cathedral Cave	133.09	43	PKPdf		PKPdf	11 38 12.5	-0.8
CCM	Cathedral Cave	133.09	43	PKIKP		PKPdf	11 38 12.5	-0.8
CCM	Cathedral Cave baz=300,SNR=12	133.09	43	P		PKPdf	11 38 13.4	+0.1
CCM	Cathedral Cave baz=300	133.09	43	P		PKPdf	11 38 13.5	+0.2
NATX	Nacogdoches baz=292	133.32	53	P		PKPdf	11 38 14.4	+0.4
KIC	Kosan Boka comp=Z,13nm,0.7s	133.35	272	⇓*i*PKIKP		PKiKP	11 38 15.8	+0.1
DBIC	Dimbokro	133.49	272	PKP		PKPdf	11 38 15.2	+0.5
	comp=Z,15nm,0.9s,baz=72,slow=2.7,SNR=9.9							
DBIC				SKPbc		SKPbc	11 41 27.4	-1.0
	comp=Z,3.9nm,0.7s,baz=77,slow=2.1,SNR=4.0							
DBIC	Dimbokro	133.49	272	PKPdf		PKPdf	11 38 14.2	-0.5
LIC	Lamto	133.63	271	⇑*e*PKIKP		PKPdf	11 38 15.6	+0.6
	comp=Z,7.7nm,0.4s							
TIC	Toumodi	133.65	272	⇑*e*PKIKP		PKPdf	11 38 15.6	+0.5
	comp=Z,24nm,0.9s							
FVM	French Village baz=301,SNR=10	133.68	43	P		PKPdf	11 38 14.5	+0.1
BO01	Tunca	134.52	157	PKPdf		PKPdf	11 38 16.3	+0.1
MT02	Curacav	135.50	157			PKPdf	11 38 18.7	+0.6
O48B	Farmland baz=309	135.76	37	P		PKPdf	11 38 18.0	-0.3
SADO	Sadowa	135.86	28	SKPbc		SKPbc	11 41 33.7	-1.3
	comp=Z,20nm,0.8s,baz=348,slow=1.3,SNR=15							
OXF	Oxford baz=299	136.13	47	P		PKPdf	11 38 18.9	-0.1
VBMS	Vicksburg baz=296	136.36	50	P		PKPdf	11 38 20.1	+0.5
WVT	Waverly baz=302,SNR=9.1	136.42	44	P		PKiKP	11 38 21.2	-0.1
WVT	Waverly baz=302	136.42	44	P		PKPdf	11 38 20.1	+0.5
P49A	Miami Univ. Ec baz=309	136.48	38	P		PKPdf	11 38 19.4	-0.2
ACSO	Alum Creek Sta baz=311	137.06	36	P		PKPdf	11 38 21.5	+0.8
V48A	Smith Brothers baz=303,SNR=6.4	137.32	44	P		PKiKP	11 38 22.7	-0.5
M53A	WI Miller and baz=315	137.52	33	P		PKPdf	11 38 21.4	-0.1
P52A	Corning baz=312	137.94	36	P		PKPdf	11 38 22.5	+0.2
LONY	Lake Ozonia baz=325	137.98	24	P		PKPdf	11 38 22.2	-0.1
O53A	New Philadelph baz=313	138.05	34	P		PKPdf	11 38 22.4	-0.1
LRAL	Lakeview Retre baz=300,SNR=8.6	138.60	47	P		PKPdf	11 38 23.7	0.0
TZTN	Tazewell baz=307	139.03	40	P		PKPdf	11 38 24.8	+0.3
MCWV	Mont Chateau baz=314	139.22	34	P		PKPdf	11 38 25.6	+1.0
BINY	Binghamton baz=322	139.30	28	P		PKPdf	11 38 24.9	+0.2
LBNH	Lisbon baz=328	139.35	22	P		PKPdf	11 38 25.9	+1.2
PKME	Peaks-Kenny Pk baz=333	139.38	19	P		PKPdf	11 38 24.9	+0.2
TKL	Tuckaleechee C	139.41	42	SKPbc		SKPbc	11 41 44.9	-0.8
	comp=Z,7.4nm,0.7s,baz=176,slow=2.8,SNR=7.9							
TKL	Tuckaleechee C baz=306,SNR=10	139.41	42	P		PKPdf	11 38 25.7	+0.5
V52A	Sevierville baz=307,SNR=5.1	139.42	41	P		PKiKP	11 38 26.4	-1.1
BRAL	Brewton baz=298	139.47	50	P		PKPdf	11 38 26.4	+1.1
BLA	Blacksburg baz=312	140.55	37	P		PKPdf	11 38 27.2	0.0
GOGA	Godfrey baz=304	140.91	44	P		PKPdf	11 38 28.5	+0.6
PLTB	Pedras Altas	140.95	177	*e*P		PKPdf	11 38 27.9	-0.2
HRV	Adam Dziewonsk baz=328	140.96	23	P		PKPdf	11 38 28.1	+0.4
KMSC	Kings Mountain baz=309	141.31	40	P		PKPdf	11 38 28.7	+0.1
M65A	Busby, Falmout baz=329	142.12	23	P		PKPdf	11 38 30.2	+0.4
ITQB	Itaqui	142.78	173	PKPdf		PKPdf	11 38 28.4	-3.0
ITQB	Itaqui	142.78	173	*e*P		PKPdf	11 38 31.4	0.0
NHSC	New Hope baz=308	143.32	42	P		PKPdf	11 38 32.9	+0.8
CNLB	Canela	143.43	181	*e*P		PKPdf	11 38 32.0	-0.7
CRIN	San Cristobal	144.87	79	*e*P		PKPdf	11 38 35.4	0.0
DWPF	Disney Wildern	145.22	50			PKPab	11 38 36.6	+0.7
DWPF	Disney Wildern baz=301	145.22	50	P		PKPab	11 38 35.8	0.0
LVC	Limon Verde	145.70	151	PKPbc		PKPab	11 38 39.5	+1.3
	comp=Z,51nm,0.8s,baz=248,slow=2.8,SNR=37							
LVC	Limon Verde	145.70	151	PKPdf		PKPab	11 38 39.3	+1.1
LVC	Limon Verde	145.70	151	*e*P		PKPdf	11 38 36.4	-0.7
CPUP	Villa Florida	145.97	171	PKPbc		PKPbc	11 38 38.2	+0.3
	comp=Z,55nm,0.9s,baz=193,slow=2.2,SNR=74							
VMAR	Armenia, Volca	146.88	82	*e*P		PKPdf	11 38 38.6	-0.3
JTS	Las Juntas de	147.07	83			PKPdf	11 38 40.1	+1.0
JTS	Las Juntas de	147.07	83	PKIKP		PKPdf	11 38 40.1	+1.0
JTS	Las Juntas de	147.07	83	*e*P		PKPdf	11 38 39.6	+0.4
HDC	Heredia	147.90	83	*e*P		PKiKP	11 38 45.6	0.0
OCM	Ochomogo	148.06	83	*e*P		PKPdf	11 38 40.7	-0.3
RIMA	Rio Macho	148.16	84	*e*P		PKiKP	11 38 46.0	-0.3
CVTR	Volcan Turrial	148.25	83	*e*P		PKiKP	11 38 46.6	-0.2
NNA	Nana	148.43	128	PKPbc		PKPbc	11 38 45.3	+0.2
	comp=Z,82nm,0.9s,baz=256,slow=6.4,SNR=21							
MRVA	Moravia de Chi	148.57	83	*e*P		PKiKP	11 38 48.2	+1.2
POTG	Potrero Grande	148.91	85	*e*P		PKPbc	11 38 46.1	-0.3
ATAH	Atahualpa	149.71	118	PKP		PKPdf	11 38 45.3	+1.3
	comp=Z,90nm,0.9s,baz=235,slow=0.8,SNR=18							
ATAH				PKPbc		PKiKP	11 38 51.2	+1.4
	comp=Z,90nm,0.9s,baz=210,slow=1.6,SNR=37							
LPAZ	La Paz	151.36	146	PKP		PKPdf	11 38 47.7	+1.0
	comp=Z,11nm,1.1s,baz=9.4,slow=1.2,SNR=22							
LPAZ				PKPbc		PKiKP	11 38 54.1	+0.8
	comp=Z,50nm,0.8s,baz=61,slow=0.8,SNR=61							
LPAZ	La Paz	151.36	146	*e*P		PKPdf	11 38 44.9	-1.8
AZU	Azuero	151.71	87	*e*P		PKPbc	11 38 51.2	-1.8
BCIP	Isla Barro Col	152.14	85	*e*P		PKPbc	11 38 51.9	-2.1
OTAV	Otavalo	152.41	104	*e*P		PKPdf	11 38 45.9	-2.3
BBSR	BB Station	152.44	24			PKPdf	11 38 48.2	+1.1
RVDE	Rio Verde (Bra	153.49	173	*e*P		PKPdf	11 38 48.7	-0.4
GCUF	Volcan Galeras	153.73	102	*e*P		PKPdf	11 38 48.9	-1.3
SIV	San Ignacio	154.93	158	PKP		PKPdf	11 38 52.0	+0.9
	comp=Z,9.0nm,0.9s,baz=201,slow=1.2,SNR=20							
SIV				PKPbc		PKPbc	11 38 59.9	-0.1
	comp=Z,9.1nm,0.8s,baz=226,slow=2.6,SNR=12							
SIV				PKPab		PKPab	11 39 16.8	+1.1
	comp=Z,15nm,0.7s,baz=204,slow=4.5,SNR=16							
FLOC	Florencia	155.46	103	*e*P		PKPdf	11 39 01.8	+10
DBBC	Dabeiba	155.72	89	*e*P		PKPdf	11 38 57.3	+5.0
GARC	Garzon, Huila	155.76	101	*e*P		PKPdf	11 39 05.6	+13
UREC	San Jos de Ur	156.41	88	*e*P		PKPdf	11 38 59.6	+6.5
GUY2C	Guyana, Caldas	156.41	94	*e*P		PKPdf	11 38 54.1	+0.4
BDFB	Brasilia	156.75	189	PKP		PKPdf	11 38 53.9	+0.2
	comp=Z,7.7nm,0.9s,baz=184,slow=3.3,SNR=8.5							
BDFB				PKPab		PKPab	11 39 24.3	+0.7
	comp=Z,6.5nm,0.8s,baz=42,slow=3.7,SNR=4.5							
BDFB	Brasilia	156.75	189	*e*P		PKPdf	11 38 52.4	-1.2
NBRF	Rio Formoso -	156.95	226	*e*P		PKPdf	11 38 53.7	-0.2
NBLA	Lagarto - SE	157.00	217	*e*P		PKPdf	11 38 53.4	-0.5
NBAN	Anadia - AL	157.05	222	*e*P		PKPdf	11 38 53.1	-0.9
ZARC	Zaragoza, Cauc	157.07	88	*e*P		PKPdf	11 38 53.5	-0.5
PTBC	PUERTO BERRIO	157.43	91	*e*P		PKPdf	11 38 54.1	-0.3
ETMB	Extrema	157.58	140	*e*P		PKPdf	11 38 55.1	+0.5
SPBC	San Pablo de B	157.74	93	*e*P		PKPdf	11 38 54.6	-0.3
VILB	Vilhena	158.04	157	PKPdf		PKPdf	11 38 55.7	+0.5
VILB				PKPab		PKPab	11 39 29.9	+0.7
VILB	Vilhena	158.04	157	*e*P		PKPdf	11 38 55.1	-0.1
RUSC	La Rusia	158.74	93	*e*P		PKPdf	11 38 56.4	-0.2
SDBA	SAO DESIDERIO	159.12	199	*e*P		PKPdf	11 38 56.3	-0.2
RCBR	Riachuelo	159.41	231	*e*P		PKPdf	11 38 56.0	-0.9
SAML	Samuel	160.10	145			PKPdf	11 38 58.0	+0.4
SAML						PKPab	11 39 38.3	+0.2
SAML	Samuel	160.10	145	PKIKP		PKPdf	11 38 58.0	+0.4
SAML							11 39 38.3	
PDRB	Porto dos Gac	160.41	165	*e*P		PKPdf	11 38 57.8	-0.2
SNDB	Serra Nova Dou	160.68	181	*e*P		PKPdf	11 38 56.9	-1.3
SDV	Santo Domingo	161.24	84	PKP		PKPdf	11 38 59.5	+0.4
	comp=Z,14nm,0.6s,baz=325,slow=0.3,SNR=16							
SDV	Santo Domingo	161.24	84	PKPdf		PKPdf	11 38 59.1	0.0
SDV	Santo Domingo	161.24	84	*e*P		PKPdf	11 38 59.0	0.0
CLDB	Colider	161.34	167	*e*P		PKPdf	11 38 58.9	0.0
HUMP	Col San Antoni	162.63	51			PKPdf	11 38 59.9	-0.2
SMTB	Santa Maria do	163.26	194	*e*P		PKPdf	11 39 01.3	+0.4
NPGB	Novo Progresso	165.14	166	*e*P		PKPdf	11 39 02.8	+0.2
MACA	Manacapuru-AM	166.17	139	*e*P		PKPdf	11 39 03.4	0.0
PRPB	Parauapebas	166.32	188	*e*P		PKPdf	11 39 03.7	+0.1
ROSB	Rosario	167.21	217	*e*P		PKPdf	11 39 04.4	+0.2
ITTB	Itaituba	167.59	161	*e*P		PKPdf	11 39 04.8	+0.4
TMAB	Tom-Au,PA,Br	169.58	201	*e*P		PKPdf	11 39 06.3	+0.5
BOAV	Boa Vista	169.90	119	*e*P		PKPdf	11 39 06.0	+0.1
MALB	Monte Alegre	170.41	165	*e*P		PKPdf	11 39 06.2	-0.1
MCPB	Macapa, AP	172.22	178	*e*P		PKPdf	11 39 07.6	+0.5
MDP	Montagnes des	177.49	159	PKP		PKPdf	11 39 08.2	-0.5
	comp=Z,15nm,1.0s,baz=308,slow=3.1,SNR=4.6							

*LDG **18** 12:00:22.6±0.3,39°.29N×10°.44W,h90km,Ml3.0/3,Error ellipse: s-maj=6.5km s-min=2.9km az=79.0*
*MDD **18** 12:00:22.2±0.6,39°.25N×10°.73W,h30km,mb_Lg3.4/18, Error ellipse: s-maj=5.2km s-min=2.8km az=77.0*
*IGIL **18** 12:00:22.7,39°.24N×10°.70W,h78km,ML3.4*
*INMG **18** 12:00:23.3±1.5,39°.25N×10°.71W,h56km±17km,ML2.9, Error ellipse: s-maj=5.4km s-min=3.0km az=83.0*
*CNRM **18** 12:00:26.6,38°.90N×10°.32W,h93km,ml2.5*

ISC 18 12:00:19.9±1.6,39°23N±0'.04×10°.77W±0'.09,h35km,n79,
σ1s92/131,5C,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	1.19	103	⇑*i*P		Pn		12 00 42.2	+2.2
PMAFR				*e*S		Sn		12 00 57.0	+2.1
PMAFR				A		A		12 00 58.0	
	335nm,0.5s								
PMST	Lisbon--Monsan	1.33	111	*e*P		Pn		12 00 44.6	+2.7
PMST				*e*S		Sn		12 01 00.6	+2.2
PMST				A		A		12 01 01.6	
	324nm,0.2s								
LIS	Lisbon	1.36	111	*e*P		Pn		12 00 44.6	+2.3
LIS				*e*S		Sn		12 01 00.7	+1.5
LIS				IAML				12 01 03.4	
	comp=N,920nm,0.4s								
LIS	Lisbon	1.36	111	*e*S		Sn		12 01 01.4	+2.2
LIS				A		A		12 01 02.6	
	comp=N,520nm,0.3s								
PSBE	So Bento	1.56	79	⇑*i*P		Pn		12 00 47.1	+2.0
PSBE				A		A		12 01 18.7	
	comp=N,33nm,0.3s								
PACT	Alcochete	1.58	106	⇑*i*P		Pn		12 00 47.7	+2.4
PACT				*e*S		Sn		12 01 06.4	+1.9
PACT				A		A		12 01 11.2	
	comp=N,94nm,0.4s								
PCAS	Casmilo, Conde	1.94	64	⇑*i*P		Pn		12 00 52.2	+1.9
PCAS				*e*S		Sn		12 01 14.2	+0.8
PCAS				A		A		12 01 29.0	
	comp=N,16nm,0.3s								
PMTG	Montargil	1.98	94	*e*P		Pn		12 00 52.7	+1.8
PMTG				*e*S		Sn		12 01 15.0	+0.5
PMTG				A		A		12 01 17.9	
	comp=N,35nm,0.1s								
COI	Coimbra	2.06	61	*e*P		Pn		12 00 54.1	+2.1
COI				*e*S		Sn		12 01 16.6	+0.1
PNCL	Nicolau / Gran	2.08	122	*e*P		Pn		12 00 54.0	+1.8
PNCL				*e*S		Sn		12 01 16.3	-0.5
PNCL				A		A		12 01 18.9	
	comp=N,41nm,0.1s								
EVO	Evora	2.26	107	P		Pn		12 00 56.1	+1.4
EVO				S		Sn		12 01 21.6	+0.3
EVO	Evora	2.26	107	*e*P		Pn		12 00 56.6	+1.9
EVO				*e*S		Sn		12 01 21.6	+0.3
EVO				A		A		12 01 25.1	
	comp=N,46nm,0.1s								
MESJ	Messejana	2.43	124	*e*P		Pn		12 00 58.7	+1.6
MESJ				*e*S		Sn		12 01 24.8	-0.8
MESJ				IAML				12 01 27.2	
	comp=N,58nm,0.2s								
MESJ	Messejana	2.43	124	*e*P		Pn		12 00 59.0	+1.9
MESJ				*e*S		Sn		12 01 25.2	-0.4
MESJ				A		A		12 01 27.3	
	comp=N,47nm,0.2s								
PESTR	Estremoz	2.50	97	P		Pn		12 00 59.4	+1.4
PESTR				S		Sn		12 01 26.5	-0.8
PESTR	Estremoz	2.50	97	*e*P		Pn		12 00 59.8	+1.7
PESTR				*e*S		Sn		12 01 27.2	-0.1
PESTR				A		A		12 01 30.7	
	comp=N,19nm,0.4s								
PTO	Porto	2.53	40	*e*P		Pn		12 01 00.2	+1.8
PTO				*e*S		Sn		12 01 27.7	-0.3
MORF	Marmelete	2.54	138	*e*P		Pn		12 01 00.2	+1.6
MORF				*e*S		Sn		12 01 27.8	-0.6
MORF				IAML				12 01 29.3	
	comp=E,288nm,0.1s								
MORF	Marmelete	2.54	138	*e*P		Pn		12 01 00.2	+1.6
MORF				*e*S		Sn		12 01 28.7	+0.3
MORF				A		A		12 01 29.3	
	comp=E,131nm,0.1s								
PBEJ	Beja	2.57	117	*e*P		Pn		12 01 01.5	+2.5
PBEJ				*e*S		Sn		12 01 29.0	0.0
PBEJ				A		A		12 01 32.8	
	comp=E,25nm,0.2s								
PFVI	Vila Bisbo	2.59	143	P		Pn		12 01 00.3	+1.0
PFVI				S		Sn		12 01 26.9	-2.6
PFVI	Vila Bisbo	2.59	143	*e*P		Pn		12 01 00.8	+1.5
PFVI				*e*S		Sn		12 01 28.2	-1.3
PFVI				A		A		12 01 31.7	
	comp=E,25nm,0.1s								
PCBR	Castelo Branco	2.62	75	*e*P		Pn		12 01 01.4	+1.8
PCBR				*e*S		Sn		12 01 29.7	-0.5
PCBR				A		A		12 01 34.5	
	comp=E,9.6nm,0.3s								
PMRV	Marv??o	2.63	85	*e*P		Pn		12 01 01.4	+1.6
PMRV				*e*S		Sn		12 01 30.1	-0.4
PMRV				A		A		12 01 33.6	
	comp=E,25nm,0.2s								
PVIS	Viseu	2.66	55	*e*P		Pn		12 01 02.2	+1.9
PVIS				*e*S		Sn		12 01 30.6	-0.8
PVIS				A		A		12 01 33.8	
	comp=E,21nm,0.1s								
PCVE	Castro Verde	2.67	126	*e*P		Pn		12 01 02.5	+2.1
PCVE				*e*S		Sn		12 01 31.3	-0.2
PCVE				A		A		12 01 34.9	
	comp=E,20nm,0.2s								
MTE	Manteigas	2.75	64	*e*S		Sn		12 01 33.4	-0.1
EBAD	Badajoz	2.96	98	P		Pn		12 01 05.8	+1.4
EBAD				S		Sn		12 01 37.9	-0.8
EBAD				*i* Vmb_Lg				12 01 39.6	
PBDV	Barranco-do-Ve	2.98	131	⇑*e*P		Pn		12 01 07.2	+2.5
PBDV				*e*S		Sn		12 01 39.2	-0.1
PBDV				A		A		12 01 42.0	
	comp=E,33nm,0.4s								
PVAQ	Vaqueiros	3.01	126	P		Pn		12 01 06.5	+1.4
PVAQ				S		Sn		12 01 38.0	-1.9
PVAQ	Vaqueiros	3.01	126	*e*P		Pn		12 01 06.9	+1.8
PVAQ				*e*S		Sn		12 01 39.0	-0.9
PVAQ				A		A		12 01 42.7	
	comp=E,35nm,0.2s								
EGRO	El Granado	3.08	122	P		Pn		12 01 08.0	+1.9
EGRO				S		Sn		12 01 40.7	-1.0
EGRO				*i* Vmb_Lg				12 01 43.8	
PBAR	Barrancos	3.10	109	*e*P		Pn		12 01 08.5	+2.2
PBAR				*e*S		Sn		12 01 41.6	-0.5
PBAR				A		A		12 01 42.8	
	comp=E,21nm,0.5s								
PVRL	Vila Real	3.10	48	*e*S		Sn		12 01 40.7	-1.6
PVRL				A		A		12 01 43.5	
	comp=E,30nm,0.1s								
POLO	Lamas de Olo	3.13	46	*e*P		Pn		12 01 08.4	+1.7
POLO				*e*S		Sn		12 01 41.7	-1.2
POLO				A		A		12 01 44.3	
	comp=E,8.0nm,0.1s								
PCAB	Cabril	3.24	39	*e*S		Sn		12 01 44.7	-1.0
PCAB				A		A		12 01 46.5	
	comp=E,30nm,0.1s								
EZAM	Zamans	3.32	28	P		Pn		12 01 10.7	+1.4
EZAM				S		Sn		12 01 44.9	-2.5
EZAM				*i* Vmb_Lg				12 01 48.7	
PGAV	Gavieira, Arco	3.33	34	*e*P		Pn		12 01 11.4	+1.8
PGAV				*e*S		Sn		12 01 46.8	-1.2
PGAV				A		A		12 01 47.9	
	comp=E,16nm,0.2s								
ELOB	Lobios	3.35	37	P		Pn		12 01 11.5	+1.7
ELOB				S		Sn		12 01 46.1	-2.2
ELOB				*i* Vmb_Lg				12 01 49.4	
MVO	Moncorvo	3.46	55	*e*P		Pn		12 01 12.6	+1.3
MVO				*e*S		Sn		12 01 49.2	-1.8
EMIN	Mina Concepcio	3.53	113	P		Pn		12 01 14.2	+2.0
EMIN				S		Sn		12 01 50.9	-1.8
EMIN				*i* Vmb_Lg				12 01 53.8	
EMAZ	Mazaricos	3.96	19	P		Pn		12 01 13.2	+0.6
EMAZ				S		Sn		12 01 59.5	-3.8
EMAZ				*i* Vmb_Lg				12 02 00.7	
PBRG	Braganca	4.01	49	*e*P		Pn		12 01 20.9	+2.1
PBRG				*e*S		Sn		12 02 02.9	-1.6
PBRG				A		A		12 02 03.9	
	comp=E,14nm,0.3s								
ECAL	Calabor	4.09	47	P		Pn		12 01 21.8	+1.7
ECAL				S		Sn		12 02 04.5	-2.2
ECAL				*i* Vmb_Lg				12 02 06.6	
EAGO	Agolada(Pontev	4.11	29	P		Pn		12 01 21.2	+1.0
EAGO				S		Sn		12 02 03.4	-3.5
EAGO				*i* Vmb_Lg				12 02 06.9	
ECAB	El Cabril	4.34	104	P		Pn		12 01 25.3	+1.9
ECAB				S		Sn		12 02 11.0	-1.8
ECAB				*i* Vmb_Lg				12 02 13.2	
ESPR	Espera	4.54	120	P		Pn		12 01 28.7	+2.7
ESPR				S		Sn		12 02 16.9	-0.6
ESPR				*i* Vmb_Lg				12 02 18.6	
EPON	Pontenova	4.92	32	S		Sn		12 02 23.2	-3.8
EPON				*i* Vmb_Lg				12 02 26.6	
EADA	Adamuz	4.96	100	P		Pn		12 01 33.5	+1.6
EADA				S		Sn		12 02 25.8	-2.2
EADA				*i* Vmb_Lg				12 02 28.9	
PAB	San Pablo	4.98	84	P		Pn		12 01 33.9	+1.6
PAB				S		Sn		12 02 25.3	-3.4
PAB	

5.2nm,1.0s,baz=127,slow=1.8,SNR=10.0
5.2nm,1.0s
VNDA Vanda 52.30 196 P **P** **12 45 21.1 +0.1**
1.0nm,0.9s,baz=84,slow=5.0,SNR=3.8
1.0nm,0.9s
VNA1 Neumayer--Stat 55.23 156 P **P** **12 45 43.1 +0.6**
VNA2 Neumayer--Watz 55.39 157 P **P** **12 45 44.2 +0.5**
baz=246,slow=4.2
SNAA Sanae 56.44 158 P **P** **12 45 51.3 -0.1**
SNAA Sanae 56.44 158 LR LR 13 06 14.6
comp=Z,22nm,19.4s,baz=94,slow=32
TROLL Troll, Antarti 57.78 159 P **P** **12 46 01.2 +0.4**
TXAR Lajitas Array 68.70 1 P **P** **12 47 13.2 -0.4**
0.3nm,0.7s,baz=182,slow=6.9,SNR=3.6
0.3nm,0.7s
MAW Mawson 72.61 175 P **P** **12 47 36.4 -0.5**
1.2nm,0.7s,baz=246,slow=11,SNR=4.2
1.2nm,0.7s
NVAR Mina Array Bea 78.73 349 P **P** **12 48 13.2 +0.7**
1.4nm,0.9s,baz=177,slow=6.7,SNR=10.0
1.4nm,0.9s
PDAR Pinedale Array 82.21 357 P **P** **12 48 31.6 +0.6**
3.2nm,1.0s,baz=164,slow=5.9,SNR=14
3.2nm,1.0s
AKASG Malin Array Be 146.35 56 PKPbc **PKPbc** **12 55 49.5 -0.8**
1.5nm,0.7s,baz=282,slow=3.0,SNR=6.9
BRTR Keskin Array B 148.29 76 PKPbc **PKPbc** **12 55 56.4 +0.1**
1.0nm,0.8s,baz=228,slow=3.1,SNR=5.9
CMAR Chiang Mai Arr 150.47 231 PKPbc **PKiKP** **12 56 02.4 -0.5**
1.0nm,0.4s,baz=199,slow=1.7,SNR=11

IDC 18 12:53:15.2±768.0, 43°37'N×73°33'E, h0km, Error ellipse: s-maj=308.0km s-min=200.8km az=166.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**12.59**	**309**	*i*		14 10 50.0	
	baz=115,slow=310,SNR=1.9						
I46RU	**ZALESOVO INFRA**	**13.01**	**32**	*i*		14 16 50.0	
	baz=219,slow=316,SNR=1.9						
I43RU	**DUBNA INFRASON**	**16.41**	**313**	*i*		15 34 40.0	
	baz=110,slow=317,SNR=0.6						

*IDC **18** 13:02:03.0±0.6,22°82'S×173°31'E,h0km,mb4.4/13, mbtmp4.3/15,ML4.1/2,MS3.7/38,Error ellipse: s-maj=20.1km s-min=18.1km az=110.0*
*NEIC **18** 13:02:04.8±1.5,23°1'S±0°2'×173°4'E±0°1,h10km±1km, mb4.6/12, Error ellipse: s-maj=26.2km s-min=15.2km az=344.0*

ISC 18 13:02:08.4±0.5,22°90'S±0°10'×173°24'E±0°07,h35km,n106, σ1°24/79,mb4.5/14,MS3.7/38,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.03**	**285**	Pn	**Pn**	**13 03 21.9**	**+0.6**
PINNC	**Pines Island,**	**5.35**	**272**	Pn	**Pn**	**13 03 27.1**	**+1.4**
OUENC	**Ouen Island, N**	**5.93**	**273**	Pn	**Pn**	**13 03 36.4**	**+2.8**
ONTNC	**Ouen Toro**	**6.29**	**274**	Pn	**Pn**	**13 03 41.0**	**+2.2**
DZM	**Mont Dzumac**	**6.33**	**276**	Pn	**Pn**	**13 03 39.3**	**-0.1**
	0.8nm,0.3s,baz=120,slow=10,SNR=24						
DZM				Sn	**Sn**	**13 04 49.3**	**-1.3**
	4.8nm,0.3s,baz=96,slow=18,SNR=7.7						
	6.3nm,0.4s						
DZM	**Mont Dzumac**	**6.33**	**276**	*e*Pn	**Pn**	**13 03 39.8**	**+0.4**
	40nm,1.1s						
DZM				*e*Sn	**Sn**	**13 04 47.0**	**-3.6**
	98nm,0.8s						
DZM				*e*LR	LR	13 05 03.2	
	comp=Z,1μm,25.3s						
DZM	**Mont Dzumac**	**6.33**	**276**		**Pn**	**13 03 39.8**	**+0.4**
MSVF	**Nonsavu**	**6.84**	**42**	Pn	**Pn**	**13 03 44.8**	**-1.5**
	0.4nm,0.3s,baz=189,slow=19,SNR=2.4						
	8.1nm,0.7s						
MSVF	**Nonsavu**	**6.84**	**42**	Pn	**Pn**	**13 03 46.3**	**0.0**
KOUNC	**Koumac, New Ca**	**8.64**	**284**	Pn	**Pn**	**13 04 14.7**	**+3.7**
RAO	**Raoul Island**	**10.16**	**130**	LR	LR	13 07 26.0	
	comp=Z,1μm,21.1s,baz=129,slow=32						
URZ	**Urewera**	**15.66**	**169**	LR	LR	13 10 18.9	
	comp=Z,758nm,20.4s,baz=32,slow=32						
HNR	**Honiara**	**18.48**	**314**	LR	LR	13 12 37.3	
	comp=Z,309nm,19.9s,baz=190,slow=34						
EIDS	**Eidsvold**	**20.36**	**259**	P	**P**	**13 06 41.1**	**-0.9**
EIDS				IAmb	IAmb	13 06 48.7	
	comp=Z,28nm,1.0s						
RPZ	**Rata Peaks**	**20.84**	**184**	P	Pn	13 06 48.1	-1.5
	comp=Z,9.8nm,0.9s,baz=192,slow=2.6,SNR=3.5						
RPZ				LR	LR	13 14 15.4	
	comp=Z,571nm,18.9s,baz=2.5,slow=35						
	comp=Z,9.8nm,0.9s						
RAR	**Rarotonga**	**25.06**	**91**	LR	LR	13 17 11.8	
	comp=Z,61nm,18.1s,baz=277,slow=36						
CTA	**Charters Tower**	**25.25**	**271**	P	**P**	**13 07 32.7**	**+1.3**
	comp=Z,11nm,1.0s,baz=138,slow=14,SNR=4.3						
CTA				LR	LR	13 17 30.9	
	comp=Z,101nm,18.3s,baz=86,slow=37						
	comp=Z,11nm,1.0s						
CTAO	**Charters Tower**	**25.25**	**271**	P	**P**	**13 07 27.7**	**-3.7**
CTAO				IAmb	IAmb	13 07 35.3	
	comp=Z,9.7nm,0.8s						
STKA	**Stephens Creek**	**29.40**	**245**	P	**P**	**13 08 09.7**	**+1.2**
	comp=Z,7.2nm,1.0s,baz=81,slow=5.6,SNR=4.6						
STKA				PcP	**PcP**	**13 11 14.6**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=81,slow=5.1,SNR=4.1						
	comp=Z,7.2nm,1.0s						
TBI	**Tubuai**	**34.25**	**98**	*e*LR	LR	13 18 05.6	
	comp=Z,248nm,28.2s						
PPT2	**Papeete2**	**35.22**	**88**	*e*LR	LR	13 18 31.8	
	comp=Z,193nm,26.8s						
PPT	**Papeete**	**35.23**	**88**	LR	LR	13 19 52.8	
	comp=Z,76nm,19.1s,baz=278,slow=30						
AS31	**Alice Springs**	**36.06**	**261**	P	**P**	**13 09 07.0**	**+0.1**
ASAR	**Alice Springs**	**36.06**	**261**	P	**P**	**13 09 07.0**	**+0.2**
	comp=Z,11nm,0.9s,baz=85,slow=8.6,SNR=66						
ASAR				PcP	**PcP**	**13 11 33.6**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=116,slow=2.9,SNR=4.6						
ASAR				LR	LR	13 23 06.0	
	comp=Z,60nm,21.1s,baz=99,slow=35						
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**36.06**	**261**	P	**P**	**13 09 06.0**	**-0.8**
WB0	**Warramunga Arr**	**36.25**	**267**	P	**P**	**13 09 07.7**	**-0.7**
WB2	**Warramunga Arr**	**36.25**	**267**	P	**P**	**13 09 07.2**	**-1.3**
WB2				IAmb	IAmb	13 09 30.0	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**36.26**	**267**	P	**P**	**13 09 07.8**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=97,slow=8.2,SNR=16						
WRA				LR	LR	13 23 56.7	
	comp=Z,68nm,18.9s,baz=80,slow=36						
	comp=Z,1.7nm,0.7s						
WRA	**Warramunga Arr**	**36.26**	**267**	P	**P**	**13 09 06.3**	**-2.2**
H11S2	**WAKE ISLAND Hy**	**41.63**	**351**	T	T	13 54 29.1	
	baz=171,slow=76,SNR=10.0						
H11S3	**WAKE ISLAND Hy**	**41.64**	**351**	T	T	13 54 25.1	
	baz=171,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**41.65**	**351**	T	T	13 54 26.2	
	baz=171,slow=76,SNR=13						
GUMO	**Guam**	**45.68**	**320**	LR	LR	13 27 17.8	
	comp=Z,184nm,21.3s,baz=119,slow=33						
SIJI	**Sorong**	**46.26**	**292**	LR	LR	13 29 41.4	
	comp=Z,147nm,20.9s,baz=176,slow=36						
TAOE	**Nuku Hiva Isla**	**46.76**	**80**	*e*S	S	13 17 30.8	+8.1
	comp=Z,42nm,25.6s						
TAOE				*e*LR	LR	13 23 49.6	
	comp=Z,114nm,25.9s						
BATI	**Baumata**	**48.95**	**276**	LR	LR	13 31 38.4	
	comp=Z,250nm,19.1s,baz=123,slow=36						
KAPI	**Kappang**	**54.53**	**281**	LR	LR	13 34 03.8	
	comp=Z,49nm,21.1s,baz=96,slow=35						
VNDA	**Vanda**	**54.95**	**183**	P	**P**	**13 11 36.2**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=358,slow=6.2,SNR=9.0						
VNDA				LR	LR	13 30 53.7	
	comp=Z,139nm,21.9s,baz=12,slow=31						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**54.95**	**183**	P	**P**	**13 11 34.2**	**-1.1**
VNDA				IAmb	IAmb	13 11 47.3	
	comp=Z,6.8nm,1.4s						
SBA	**Scott Base**	**55.09**	**182**	P	**P**	**13 11 35.5**	**-0.9**
JCJ	**Chichijima**	**58.07**	**327**	LR	LR	13 32 42.7	
	comp=Z,34nm,21.7s,baz=91,slow=32						
LEM	**Lembang**	**64.93**	**273**	LR	LR	13 41 05.6	
	comp=Z,28nm,18.6s,baz=122,slow=36						
QSPA	**South Pole Qui**	**67.17**	**180**	P	**P**	**13 12 59.1**	**+0.5**
	comp=Z,9.1nm,1.0s,baz=9.4,slow=3.9,SNR=19						
QSPA				LR	LR	13 38 30.7	
	comp=Z,93nm,19.6s,baz=40,slow=32						
	comp=Z,9.1nm,1.0s						
QSPA	**South Pole Qui**	**67.17**	**180**	P	**P**	**13 12 58.2**	**-0.5**
KSRS	**Korea Array**	**73.64**	**324**	P	**P**	**13 13 38.7**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=137,slow=5.4,SNR=3.8						
KSRS				LR	LR	13 42 23.4	
	comp=Z,29nm,21.4s,baz=135,slow=33						
	comp=Z,0.6nm,0.7s						
SHEM	**Shemya Is, Ala**	**75.31**	**1**	LR	LR	13 40 59.9	
	comp=Z,20nm,20.9s,baz=228,slow=31						
MAW	**Mawson**	**76.44**	**202**	P	**P**	**13 13 55.1**	**+1.1**
	comp=Z,6.0nm,0.9s,baz=102,slow=6.0,SNR=10						
MAW				LR	LR	13 44 47.2	
	comp=Z,55nm,18.0s,baz=97,slow=34						
	comp=Z,6.0nm,0.9s						
RPSI	**Rantau Prapat**	**76.64**	**279**	P	**P**	**13 13 56.4**	**+0.3**
PSI	**Prapat**	**76.69**	**279**	LR	LR	13 49 24.1	
	comp=Z,63nm,18.1s,baz=100,slow=37						
PETK	**Petropavlovsk-**	**76.89**	**350**	LR	LR	13 41 04.6	
	comp=Z,80nm,20.4s,baz=142,slow=30						
BELA	**Belgrano 2**	**78.12**	**174**	P	**P**	**13 14 02.9**	**-0.5**
BELA				IAmb	IAmb	13 14 03.3	
	comp=Z,7.5nm,0.9s						
KLR	**Kul'dur**		**80.76 334**	LR	LR	13 43 32.6	
	comp=Z,29nm,21.7s,baz=153,slow=31						
PMSA	**Palmer Statio**	**82.18**	**159**	LR	LR	13 43 41.0	
	comp=Z,51nm,21.7s,baz=258,slow=30						
CMAR	**Chiang Mai Arr**	**83.39**	**293**	LR	LR	13 51 28.7	
	comp=Z,16nm,20.5s,baz=155,slow=36						
MA2	**Magadan**	**84.23**	**349**	LR	LR	13 46 35.2	
	comp=Z,40nm,20.0s,baz=130,slow=32						
TROLL	**Troll, Antarti**	**85.12**	**183**	P	**P**	**13 14 40.1**	**-0.5**
SNAA	**Sanae**	**85.64**	**181**	P	**P**	**13 14 42.3**	**-0.7**
SNAA	**Sanae**	**85.64**	**181**	P	**P**	**13 14 42.4**	**-0.7**
	comp=Z,5.2nm,0.8s,baz=196,slow=6.3,SNR=28						
SNAA				LR	LR	13 49 05.1	
	comp=Z,72nm,21.9s,baz=114,slow=33						
	comp=Z,5.2nm,0.8s						
SNAA	**Sanae**	**85.64**	**181**	P	**P**	**13 14 42.4**	**-0.7**
SNAA				IAmb	IAmb	13 14 43.4	
	comp=Z,8.2nm,1.0s						
VNA3	**Neumayer Olymp**	**86.09**	**179**	P	**P**	**13 14 44.4**	**-0.9**
VNA2	**Neumayer--Watz**	**86.43**	**180**	P	**P**	**13 14 46.3**	**-0.6**
	baz=179,slow=5.0						
VNA1	**Neumayer--Stat**	**86.70**	**180**	P	**P**	**13 14 47.6**	**-0.6**
YBH	**Yreka Blue Hor**	**87.40**	**42**	LR	LR	13 52 06.9	
	comp=Z,139nm,18.3s,baz=223,slow=34						
NVAR	**Mina Array Bea**	**88.49**	**47**	P	**P**	**13 14 58.2**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=243,slow=5.8,SNR=6.8						
	comp=Z,1.0nm,0.9s						
BBB	**Bella Bella**	**90.55**	**32**	LR	LR	13 48 25.5	
	comp=Z,44nm,20.1s,baz=220,slow=31						
YAK	**Yakutsk**	**91.50**	**341**	LR	LR	13 52 12.1	
	comp=Z,30nm,18.8s,baz=90,slow=33						
SONM	**Songino Array**	**92.38**	**322**	P	**P**	**13 15 14.8**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=134,slow=5.9,SNR=4.3						
SONM				LR	LR	13 55 04.4	
	comp=Z,18nm,21.8s,baz=92,slow=34						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**92.66**	**16**	P	**P**	**13 15 14.9**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=235,slow=5.7,SNR=18						
ILAR				LR	LR	13 49 41.0	
	comp=Z,46nm,21.2s,baz=265,slow=31						
	comp=Z,1.7nm,0.7s						
PLCA	**Paso Flores**	**93.33**	**137**	LR	LR	13 53 05.3	
	comp=Z,39nm,18.1s,baz=260,slow=33						
NEW	**Newport**	**94.22**	**39**	LR	LR	13 53 29.6	
	comp=Z,22nm,18.5s,baz=191,slow=33						
PALK	**Pallekele**	**95.11**	**276**	LR	LR	14 04 57.9	
	comp=Z,25nm,18.1s,baz=221,slow=40						
ANMO	**Albuquerque**	**95.34**	**54**	LR	LR	13 55 40.3	
	comp=Z,22nm,18.1s,baz=196,slow=34						
CMIG	**Matias Romero**	**98.16**	**75**	LR	LR	13 53 22.1	
	comp=Z,29nm,18.0s,baz=196,slow=31						
INK	**Inuvik**	**98.86**	**18**	LR	LR	13 52 55.4	
	comp=Z,36nm,21.9s,baz=174,slow=31						
ARCES	**ARCESS Array B**	**129.53**	**346**	PKP	**PKPdf**	**13 21 11.8**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=119,slow=1.5,SNR=13						
MCD	**Coleburn Disti**	**145.26**	**357**	*e*P	**PKPbc**	**13 21 41.0**	**-0.6**
KOLS	**Kolonicke sedl**	**145.34**	**326**	*e*PKP	**PKPab**	**13 21 43.3**	**+0.9**
KAC	**Achnashellach**	**145.42**	**359**	*e*P	**PKPdf**	**13 21 41.8**	**-0.4**
KPL	**Plockton**	**145.59**	**359**	*e*P	**PKPbc**	**13 21 42.3**	**-0.4**
CRVS	**Cervenica-Dubn**	**145.78**	**326**	*e*PKP	**PKPab**	**13 21 44.0**	**0.0**
INVG	**Invergeldie, C**	**146.46**	**357**	*e*P	**PKPbc**	**13 21 44.9**	**-0.5**
LANS	**Liptovska Anna**	**146.61**	**328**	*e*PKP	**PKPab**	**13 21 47.1**	**-0.1**
LAWE	**Loch Awe, Argy**	**146.67**	**359**	*e*P	**PKPbc**	**13 21 45.5**	**-0.5**
EAB	**Aberfoyle**	**146.71**	**358**	*e*P	**PKPbc**	**13 21 45.7**	**-0.4**
ESY	**Stoneypath**	**146.88**	**356**	*e*P	**PKPbc**	**13 21 46.0**	**-0.6**
EBL	**Broad Law**	**147.05**	**356**	*e*P	**PKPbc**	**13 21 46.7**	**-0.4**
DPC	**Dobruska-Polom**	**147.20**	**332**	*e*PKP	**PKPbc**	**13 21 48.0**	**+0.2**
KRLC	**Kraliky**	**147.20**	**332**	*e*PKP	**PKPbc**	**13 21 47.5**	**-0.3**
VYHS	**Vyhne**	**147.36**	**328**	*e*PKP	**PKPbc**	**13 21 48.3**	**0.0**
ESK	**Eskdalemuir**	**147.52**	**356**	*e*P	**PKPbc**	**13 21 47.7**	**-0.8**
BRG	**Berggiesshubel**	**147.76**	**335**	*e*PKP	**PKPbc**	**13 21 49.3**	**+0.1**
BRG				Amp		13 21 53.0	
	comp=Z,8.1nm,0.9s						
CLL	**Collm**	**147.77**	**337**	*i* PKPbc	**PKPbc**	**13 21 48.9**	**-0.3**
	comp=Z,10.0nm,0.9s						
CLL				*e*(PKPab)	**PKPab**	**13 21 53.0**	**+1.4**
CLL				*e*PP	**PP**	**13 25 20.0**	**+4.1**
NEWG	**New Galloway**	**147.77**	**357**	*e*P	**PKPbc**	**13 21 48.2**	**-0.9**
EDMD	**Edmundbyers**	**147.91**	**355**	*e*P	**PKPbc**	**13 21 49.0**	**-0.5**
GAL1	**Galloway**	**148.04**	**358**	*e*P	**PKPbc**	**13 21 48.8**	**-1.0**
MODS	**Modra-Piesok**	**148.20**	**329**	*e*PKP	**PKPbc**	**13 21 50.8**	**+0.3**
PRU	**Pruhonice**	**148.22**	**334**	*e*PKP	**PKPbc**	**13 21 50.1**	**-0.4**
IOMK	**Kirk Michael**	**148.64**	**358**	*e*P	**PKPbc**	**13 21 50.8**	**-0.7**
CKRC	**Cesky Krumlov**	**149.21**	**332**	*e*PKP	**PKPbc**	**13 21 52.7**	**-0.4**
KHC	**Kasperske Hory**	**149.28**	**333**	*e*PKP	**PKPbc**	**13 21 51.5**	**-1.8**
GERES	**GERESS Array B**	**149.45**	**333**	PKPbc	**PKPbc**	**13 21 53.6**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=48,slow=2.0,SNR=12						
WLF1	**Llynfaes**	**149.61**	**357**	*e*P	**PKPbc**	**13 21 53.2**	**-0.6**
FOEL	**Foel Wylfa**	**149.94**	**356**	*e*P	**PKPbc**	**13 21 53.4**	**-1.3**
HLM1	**Long Mynd**	**150.28**	**355**	*e*P	**PKPbc**	**13 21 54.7**	**-0.9**
MCH1	**Michelchurch**	**150.81**	**355**	*e*P	**PKPbc**	**13 21 56.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**167.40**	**221**	PKP	**PKPdf**	**13 22 11.6**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=316,slow=1.4,SNR=9.8						
TORD				PKPab	**PKPab**	**13 23 17.7**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=116,slow=3.7,SNR=7.0						

*JMA **18** 13:07:06.8±0.2,43°7'N±1°0×14°6'E±°,h142km±1km, MV2.5/30,NEAR KUNASHIRI ISLAND*
*SKHL **18** 13:07:07.0±0.2,43°70'N×145°50'E,h138km±3km, mb3.9/2, msha4.8/2*

ISC 18 13:07:06.4±3.4,43°72'N±0°09'×145°5'E±0°1,h143km±19km, n15,σ0°43/26,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMR	**Nemuro--Hokkai**	**0.38**	**159**	*e*P	**Pn**	**13 07 26.5**	**+0.1**
NMR				AMB	AMB	13 07 26.7	
	20nm,0.2s						
NMR				*e*S	**Sn**	**13 07 41.0**	**-0.5**
NMR				A	A	13 07 41.3	
	310nm,0.3s						
NMR				A	A	13 07 41.3	
	200nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.39**	**36**	*e*P	**Pn**	**13 07 26.3**	**-0.1**
YUK				AMB	AMB	13 07 27.5	
	160nm,0.6s						
YUK				*e*S	**Sn**	**13 07 42.0**	**+0.3**
YUK				A	A	13 07 42.9	
	90nm,0.4s						
YUK				A	A	13 07 42.9	
	160nm,0.4s						
NEM2	**Nemuro 2**	**0.39**	**158**	*e*P	**Pn**	**13 07 26.5**	**+0.1**
NEM2				*e*S	**Sn**	**13 07 41.2**	**-0.4**
JNSB	**Nemuroshibetsu**	**0.39**	**278**	*e*P	**Pn**	**13 07 26.8**	**+0.3**
JNSB				*e*S	**Sn**	**13 07 42.0**	**+0.3**
JNK	**Nakash**	**0.61**	**257**	*e*P	**Pn**	**13 07 27.8**	**+0.2**
JNK				*e*S	**Sn**	**13 07 43.4**	**-0.3**
JKHN	**Kushirohamanak**	**0.70**	**204**	*e*P	**Pn**	**13 07 28.7**	**+0.5**
JKHN				*e*S	**Sn**	**13 07 44.6**	**0.0**
AKK	**Akkeshi**	**0.87**	**216**	*e*P	**Pn**	**13 07 29.6**	**+0.1**
AKK				*e*S	**Sn**	**13 07 46.2**	**-0.7**
JAK	**Akkeshi**	**0.95**	**221**	*e*P	**Pn**	**13 07 30.5**	**+0.4**
JAK				*e*S	**Sn**	**13 07 48.1**	**0.0**
JTKR	**Abashiri--Toko**	**1.21**	**282**	*e*P	**Pn**	**13 07 32.3**	**-0.1**
JAR	**Ashorobuto**	**1.36**	**252**	*e*P	**Pn**	**13 07 34.5**	**+0.5**
JAR				*e*S	**Sn**	**13 07 55.3**	**+0.3**
JOB	**Onbets**	**1.49**	**237**	*e*P	**Pn**	**13 07 35.9**	**+0.6**
JOB				*e*S	**Sn**	**13 07 57.0**	**-0.4**
JMP	**Maruseppu**	**1.60**	**281**	*e*P	**Pn**	**13 07 36.4**	**-0.2**
JCH	**Churui**	**1.94**	**236**	*e*P	**Pn**	**13 07 40.7**	**+0.2**
JCH				*e*S	**Sn**	**13 08 05.5**	**-1.0**
JKK2	**Kamakawa 2**	**2.03**	**275**	*e*P	**Pn**	**13 07 41.6**	**+0.1**
ASAJ	**Asahikawa**	**2.17**	**281**	*e*P	**Pn**	**13 07 43.4**	**+0.3**

*IDC **18** 13:12:20.3±1.6,21°30'N×92°47E,h0km,mb3.6/6, mbtmp3.6/7,ML4.1/1,MS3.3/2,Error ellipse: s-maj=51.9km s-min=18.3km az=56.0*

ISC 18 13:12:25.8±2.1,21°3'N±0°3×92°7'E±0°3,h35km,n8,σ1°25/7, mb3.5/6,Myanmar-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.57**	**115**	Pn	**Pn**	**13 13 59.3**	**-0.7**
	0.9nm,0.3s,baz=295,slow=13,SNR=15						
CMAR				Lg	Lg	13 15 53.9	
	baz=299,slow=31						
	2.8nm,0.4s						
MKAR	**Makanchi Array**	**26.77**	**344**	P	**P**	**13 18 01.9**	**-0.4**
	0.6nm,0.8s,baz=148,slow=9.7,SNR=4.2						
MKAR				LR	LR	13 29 05.5	
	comp=Z,14nm,21.6s,baz=151,slow=38						
	0.6nm,0.8s						
SONM	**Songino Array**	**28.67**	**19**	P	**P**	**13 18 21.1**	**+1.6**
	0.3nm,0.3s,baz=184,slow=9.5,SNR=1.6						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**33.11**	**352**	P	**P**	**13 18 57.5**	**-0.9**
	0.8nm,0.5s,baz=142,slow=7.2,SNR=2.4						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**57.83**	**132**	P	**P**	**13 22 14.4**	**+0.2**
	0.3nm,0.5s,baz=320,slow=7.5,SNR=23						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**60.10**	**136**	P	**P**	**13 22 31.1**	**+1.2**
	0.5nm,0.6s,baz=313,slow=6.5,SNR=8.4						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**82.87**	**22**	P	**P**	**13 24 45.5**	**-1.0**
	0.2nm,0.7s,baz=292,slow=5.7,SNR=2.0						
	0.2nm,0.7s						
SFJD	**Kangerlussuaq**	**87.78**	**346**	LR	LR	14 08 50.5	
	comp=Z,64nm,21.2s,baz=344,slow=39						

*NNC **18** 13:28:57.2±0.8,50°.06N×78°.92E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=25.5km s-min=4.0km az=65.0, Suspected Mining explosion.*
*IDC **18** 13:28:58.2±1.0,50°.06N×78°.75E,h0km,mbtmp3.3/2, ML3.0/2,Error ellipse: s-maj=13.4km s-min=6.4km az=66.0*

ISC 18 13:28:57.1±2.0,50°.03N±0°.08×78°.6E±0°.3,h0km,n9, σ0°.78/12,5C-4D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.60**	**356**	Pg	**Pg**	**13 29 08.8**	**+0.2**
	7.6nm,0.3s,baz=166,slow=17,SNR=143						
KURBB				Lg	Lg	13 29 18.6	
	7.6nm,0.3s,baz=163,slow=41,SNR=14						
KURBB	**Kurchatov Arra**	**0.60**	**356**	⇑P	**Pg**	**13 29 09.0**	**+0.4**
	36nm,0.3s						
KURBB				⇑S	**Sb**	**13 29 18.1**	**-1.4**
	49nm,0.3s						
KURK	**Kurchatov**	**0.69**	**1**	⇑P	**Pg**	**13 29 10.3**	**0.0**
	15nm,0.3s						
KURK				⇑S	**Sg**	**13 29 20.2**	**+0.8**
	42nm,0.5s						
MAKZ	**Makanchi**	**3.93**	**144**	⇓Pn	**Pn**	**13 29 59.3**	**+0.6**
	0.4nm,0.3s						
MAKZ				⇑Pg	**Pb**	**13 30 06.2**	**-1.0**
	5.0nm,1.0s						
MAKZ				⇓Lg	Lg	13 30 58.9	
	16nm,0.7s						
MK31	**Makanchi Array**	**4.06**	**141**	⇓Pn	**Pn**	**13 30 01.1**	**+0.5**
	0.1nm,0.1s,baz=124,slow=15,SNR=31						
MK31				⇓Pg	**Pb**	**13 30 09.0**	**-0.5**
	1.9nm,0.4s,baz=322,slow=13,SNR=14						
MK31				Lg	Lg	13 31 01.2	
	15nm,0.5s,baz=341,slow=26,SNR=28						
MKAR	**Makanchi Array**	**4.06**	**141**	Pn	**Pn**	**13 30 01.2**	**+0.7**
	0.9nm,0.3s,baz=320,slow=10,SNR=27						
MKAR				Pg	**Pb**	**13 30 09.4**	**-0.1**
	1.5nm,0.3s,baz=330,slow=15,SNR=19						
MKAR				Lg	Lg	13 31 04.9	
	5.0nm,0.3s,baz=330,slow=27,SNR=7.9						
	0.8nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.50**	**42**	*i*		14 08 20.0	
	baz=227,slow=312,SNR=6.5						
ZALV	**Zalesovo Beam**	**5.50**	**42**	Pn	**Pn**	**13 30 20.5**	**+0.4**
	2.2nm,0.3s,baz=232,slow=14,SNR=10						
ZALV				Lg	Lg	13 31 51.6	
	0.7nm,0.3s,baz=220,slow=25,SNR=3.8						
	4.0nm,0.3s						
I31KZ	**AKTYUBINSK INF**	**13.17**	**280**	*i*		14 46 10.0	
	baz=85,slow=311,SNR=1.4						

**OMAN 18 14:01:15.7±0.4,14°30N×58°61E,h10km,mb4.5/12,

	baz=5.0								
TAS					⇓*i*	S	**Sb**	**14 04 19.3**	**+2.4**
	baz=5.0								
IUG	**Iuzhnay**	**2.14**	**332**		*e*	P	**Pb**	**14 03 59.2**	**+2.0**
	4µm,0.2s								
IUG					*e*	S	**Sb**	**14 04 24.6**	**+0.7**
	180nm,0.5s								
IUG	**Iuzhnay**	**2.14**	**332**			P	**Pb**	**14 03 59.2**	**+2.0**
	4µm,0.2s								
IUG						S	**Sb**	**14 04 24.6**	**+0.7**
	180nm,0.5s								
CHGR	**Chuyangaron**	**2.34**	**228**	⇓	*e*	P	**Pb**	**14 03 59.7**	**-1.0**
	baz=29								
CHGR					⇓*i*	S	**Sb**	**14 04 29.2**	**-0.6**
	baz=29								
ARLS	**Aral**	**2.75**	**53**	⇑	*i*	P	**Pn**	**14 04 04.4**	**+1.7**
	baz=53								
ARLS				⇑	*i*	S	**Sn**	**14 04 37.5**	**+1.5**
	baz=53								
KK31	**Karatay Array**	**2.91**	**348**	⇓		Pn	**Pb**	**14 04 12.0**	**+1.5**
	5.7nm,0.3s,baz=136,slow=11,SNR=96								
KK31				⇓		Pg	Pg	14 04 21.6	+7.4
	4.6nm,0.3s,baz=158,slow=15,SNR=6.8								
KK31				⇓		Sn	**Sg**	**14 04 51.4**	**-0.5**
	3.0nm,0.2s,baz=141,slow=26,SNR=4.7								
KK31				⇑		Lg	Lg	14 04 58.4	
	8.3nm,0.3s,baz=154,slow=28,SNR=8.4								
KKAR	**Karatay Array**	**2.91**	**348**	⇑	*i*	P	**Pn**	**14 04 07.6**	**+2.8**
	baz=47								
KKAR				⇑	*i*	S	**Sn**	**14 04 42.8**	**+2.9**
	baz=47								
UCH	**Uchtor**	**3.08**	**49**	⇑	*i*	P	**Pn**	**14 04 09.2**	**+1.7**
	baz=48								
UCH				⇑	*i*	S	**Sn**	**14 04 45.8**	**+1.2**
	baz=48								
AAK	**Ala-Archa**	**3.34**	**44**	⇑	*e*	P	**Pn**	**14 04 12.5**	**+1.7**
	baz=43								
AAK				⇑	*i*	S	**Sn**	**14 04 51.7**	**+1.1**
	baz=43								
CHMS	**Chumysh**	**3.73**	**42**	⇓		Pn	**Pn**	**14 04 17.6**	**+1.6**
	3.1nm,0.5s								
CHMS				⇓		Lg	Lg	14 05 14.1	
	7.9nm,0.5s								
USP	**Ospenovka**	**3.81**	**37**	⇓	*e*	P	**Pn**	**14 04 18.7**	**+1.6**
	baz=36								
USP				⇓	*i*	S	**Sn**	**14 05 03.2**	**+1.2**
	baz=36								
SGDS	**Sogindy**	**4.01**	**36**		*e*	P	**Pg**	**14 04 32.7**	**-2.5**
	5.3nm,0.3s								
SGDS					*e*	S	**Sb**	**14 05 21.1**	**+3.3**
	14nm,0.5s								
SGDS	**Sogindy**	**4.01**	**36**			Pg	**Pg**	**14 04 32.7**	**-2.5**
	5.3nm,0.3s								
SGDS						Lg	Lg	14 05 21.1	
	14nm,0.5s								
TKM2	**Tokmak 2**	**4.14**	**49**	⇑		Pn	**Pn**	**14 04 23.4**	**+1.6**
	4.4nm,0.5s								
TKM2				⇓		Sn	**Sn**	**14 05 12.5**	**+2.1**
	6.9nm,0.6s								
TKM2				⇑		Lg	Lg	14 05 28.3	
	7.6nm,0.5s								
KST	**Kastek**	**4.42**	**50**		*e*	P	**Pg**	**14 04 42.0**	**-1.1**
	2.7nm,0.3s								
KST					*e*	S	**Sg**	**14 05 37.0**	**-3.5**
	8.1nm,0.7s								
KST	**Kastek**	**4.42**	**50**			Pg	**Pg**	**14 04 42.0**	**-1.1**
	2.7nm,0.3s								
KST						Lg	Lg	14 05 37.0	
	8.1nm,0.7s								
DGS	**Degeres**	**4.44**	**46**		*e*	P	**Pg**	**14 04 42.0**	**-1.5**
	4.0nm,0.6s								
DGS					*e*	S	**Sg**	**14 05 37.4**	**-3.5**
	12nm,0.5s								
DGS	**Degeres**	**4.44**	**46**			Pg	**Pg**	**14 04 42.0**	**-1.5**
	4.0nm,0.6s								
DGS						Lg	Lg	14 05 37.4	
	12nm,0.5s								
KRBS	**Karabastau**	**4.70**	**42**		*e*	P	**Pg**	**14 04 45.2**	**-3.2**
	2.2nm,0.3s								
KRBS					*e*	S	**Sb**	**14 05 42.7**	**+5.1**
	6.6nm,0.7s								
KRBS	**Karabastau**	**4.70**	**42**			Pg	**Pg**	**14 04 45.2**	**-3.2**
	2.2nm,0.3s								
KRBS						Lg	Lg	14 05 42.7	
	6.6nm,0.7s								
MDOK	**Medeo**	**5.15**	**54**		*e*	P	**Pg**	**14 04 55.5**	**-1.4**
	1.6nm,0.4s								
MDOK					*e*	S	**Sg**	**14 05 59.5**	**-4.0**
	4.0nm,0.5s								
MDOK	**Medeo**	**5.15**	**54**			Pn	**Pn**	**14 04 37.0**	**+1.3**
	2.4nm,0.6s								
MDOK						Pg	**Pg**	**14 04 55.5**	**-1.4**
	1.6nm,0.4s								
MDOK						Lg	Lg	14 05 59.6	
	4.0nm,0.5s								
MDOK						Lg	Lg	14 05 59.7	
	4.4nm,0.7s								
BTLS	**Baital**	**5.17**	**22**		*e*	P	**Pg**	**14 04 54.9**	**-2.5**
	8.0nm,0.5s								
BTLS					*e*	S	**Sg**	**14 05 58.7**	**-5.6**
	5.2nm,0.6s								
BTLS	**Baital**	**5.17**	**22**			Pg	**Pg**	**14 04 54.9**	**-2.5**
	8.0nm,0.5s								
BTLS						Lg	Lg	14 05 58.7	
	5.2nm,0.6s								
KUU	**Kurty**	**5.18**	**44**		*e*	P	**Pg**	**14 04 55.5**	**-2.1**
	1.1nm,0.3s								
KUU					*e*	S	**Sg**	**14 05 60.0**	**-4.7**
	9.4nm,0.5s								
KUU	**Kurty**	**5.18**	**44**			Pg	**Pg**	**14 04 55.5**	**-2.1**
	1.1nm,0.3s								
KUU						Lg	Lg	14 05 60.0	
	9.4nm,0.5s								
KOTS	**Kotyrbulak**	**5.22**	**53**		*e*	P	**Pg**	**14 04 57.2**	**-1.2**
	0.3nm,0.5s								
KOTS					*e*	S	**Sg**	**14 06 03.6**	**-2.5**
	12nm,0.7s								
KOTS	**Kotyrbulak**	**5.22**	**53**			Pg	**Pg**	**14 04 57.2**	**-1.2**
	0.3nm,0.5s								
KOTS						Lg	Lg	14 06 03.6	
	12nm,0.7s								
KTBS	**Karatobe**	**5.25**	**47**		*e*	P	**Pg**	**14 04 56.9**	**-2.0**
	1.5nm,0.4s								
KTBS					*e*	S	**Sg**	**14 06 02.5**	**-4.4**
	9.3nm,0.4s								
KTBS	**Karatobe**	**5.25**	**47**			Pg	**Pg**	**14 04 56.9**	**-2.0**
	1.5nm,0.4s								
KTBS						Lg	Lg	14 06 02.5	
	9.3nm,0.4s								

*MEX **18** 14:03:48.4±0.6,14°.51N×92°.91W,h26km±22km,MD4.0*
*GCG **18** 14:03:48.9±0.7,14°.94N×92°.77W,h48km±36km,MD3.7*
ISC 18 14:03:40.0±1.7,**14°.39N**±0°.07×**93°.02W**±0°.04,**h7**km±12km,
n15,σ1s55/30,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
THIG		**0.90**	**55**	*e*	P	**Pn**	**14 04 00.9**	**+1.9**
THIG				*e*	S	**Sn**	**14 04 10.0**	**-2.2**
PATR	**El Naranjo**	**1.05**	**47**	*e*	P	**Pn**	**14 04 02.5**	**+1.2**
PATR				*e*	S	**Sb**	**14 04 13.5**	**-1.2**
CHUJ	**Union Juarez**	**1.13**	**52**	*e*	P	**Pn**	**14 04 03.8**	**+1.3**
CHUJ				*e*	S	**Sb**	**14 04 16.1**	**-0.8**
PAVE	**Pavencul**	**1.14**	**46**	*e*	P	**Pn**	**14 04 03.9**	**+1.2**
PAVE				*e*	S	**Sb**	**14 04 16.7**	**-0.7**
PCIG		**1.32**	**352**	*e*	P	**Pg**	**14 04 07.2**	**+1.9**
PCIG				*e*	S	**Sb**	**14 04 21.4**	**-0.8**
STG3	**Santiaguito 3,**	**1.44**	**77**	*e*	P	**Pg**	**14 04 09.8**	**+2.0**
STG3				*e*	S	**Sn**	**14 04 26.0**	**0.0**
CARR	**Arriaga**	**2.03**	**335**	*e*	P	**Pg**	**14 04 18.3**	**-0.8**
CARR				*e*	S	**Sb**	**14 04 41.9**	**-0.9**
CCIG	**Comitan**	**2.06**	**24**	*e*	P	**Pg**	**14 04 19.7**	**+0.1**
CCIG				*e*	S	**Sb**	**14 04 41.6**	**-2.3**
FUG	**Fuego 3**	**2.12**	**88**	*e*	P	**Pg**	**14 04 19.7**	**-0.9**
FUG				*e*	S	**Sb**	**14 04 44.4**	**-0.9**
PCG	**Pacaya**	**2.34**	**90**	*e*	P	**Pg**	**14 04 23.7**	**-1.3**
PCG				*e*	S	**Sn**	**14 04 48.8**	**+0.4**
TGIG		**2.37**	**358**	*e*	P	**Pb**	**14 04 22.7**	**-0.4**
TGIG				*i*	S	**Sn**	**14 04 48.4**	**-0.5**
NBG	**Las Nubes**	**2.60**	**85**	*e*	P	**Pb**	**14 04 27.1**	**0.0**
NBG				*e*	S	**Sn**	**14 04 55.5**	**+0.7**
CMIG	**Matias Romero**	**3.23**	**327**	*e*	P	**Pb**	**14 04 35.1**	**-2.5**
CMIG				*e*	S	**Sn**	**14 05 10.4**	**+0.6**
HUIG	**Huatulco**	**3.28**	**295**	*e*	P	**Pb**	**14 04 36.5**	**-2.1**
HUIG				*e*	S	**Sn**	**14 05 10.1**	**-1.0**
NEUV	**Arroyo Zacate**	**4.25**	**321**	*e*	P	**Pn**	**14 04 48.9**	**+3.8**
NEUV				*e*	S	**Sn**	**14 05 36.0**	**+1.1**

*IDC **18** 14:05:25.0±1.0,21°.92N×121°.50E,h0km,mb3.8/10,*
mbtmp3.8/11,ML2.9/1,MS2.5/1,Error ellipse:
s-maj=27.9km s-min=18.5km az=75.0
*JMA **18** 14:05:36.7±0.4,22°.N±1°×12°.2E±°,h53km,MV3.8/11,*
TAIWAN REGION
*NIED **18** 14:05:36.7,22°.05N×121°.51E,h53km,MW3.9,Moment*
Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm;
M_{rr}=5.70; $M_{\theta\theta}$3.48; $M_{\phi\phi}$2.23; $M_{r\theta}$4.59; $M_{\theta\phi}$2.82; $M_{\phi r}$-3.41;
Fault plane solution: $M_0$7.62000×10^{14} NP1:ϕ_s31.00000°,
δ42.00000°,λ-136.00000°. NP2:ϕ_s265.00000°,
δ63.00000°,λ-57.00000°.
*TAP **18** 14:05:36.0,22°.07N×121°.38E,h87km,ML4.2,C*
ISC 18 14:05:35.8±0.7,**22°.05N**±0°.03×**121°.40E**±0°.03,**h89**km±5km,
n132,σ1s02/220,mb3.6/9,10C-13D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.14**	**96**	⇓	*i*	P	**Pn**	**14 05 48.5**	**0.0**
	baz=102								
LAY					*i*	S	**Sn**	**14 05 57.9**	**-0.1**
	baz=102								
LYUB	**Lan-yu**	**0.17**	**107**	⇓	*i*	P	**Pn**	**14 05 48.3**	**-0.3**
	baz=110								
LYUB					*i*	S	**Sn**	**14 05 57.0**	**-1.1**
	baz=110								
TSEB	**Hengchuen, Pin**	**0.49**	**252**	⇑	*i*	P	**Pn**	**14 05 51.6**	**+1.2**
	baz=254								
TSEB					*i*	S	**Sn**	**14 06 02.6**	**+1.4**
	baz=254								
SMST	**Manzhou Townsh**	**0.53**	**267**			P	**Pn**	**14 05 51.2**	**+0.6**
	baz=264								
SMST						S	**Sn**	**14 06 02.4**	**+0.7**
	baz=264								
TAWH	**Dawu Township**	**0.56**	**301**			P	**Pn**	**14 05 50.0**	**-0.9**
	baz=305								
TAWH						S	**Sn**	**14 06 00.6**	**-1.5**
	baz=305								
TAW	**Tawu**	**0.56**	**303**			P	**Pn**	**14 05 50.9**	**0.0**
	baz=308								
TAW					*i*	S	**Sn**	**14 06 02.0**	**-0.2**
	baz=308								
TWKBT	**Hengchun**	**0.56**	**259**	⇑	*i*	P	**Pn**	**14 05 51.7**	**+0.8**
	baz=256								
TWKBT					*i*	S	**Sn**	**14 06 02.6**	**+0.4**
	baz=256								
TWK1	**Hengchun**	**0.57**	**259**	⇑	*i*	P	**Pn**	**14 05 51.7**	**+0.8**
	baz=256								
TWK1					*i*	S	**Sn**	**14 06 03.1**	**+0.8**
	baz=256								
SLIU	**Shizi**	**0.58**	**286**	⇑		P	**Pn**	**14 05 51.5**	**+0.4**
	baz=290								
SLIU						S	**Sn**	**14 06 02.3**	**-0.3**
	baz=290								
EAST	**Anshuo**	**0.61**	**303**	⇑	*i*	P	**Pn**	**14 05 51.5**	**+0.1**
	baz=305								
EAST					*i*	S	**Sn**	**14 06 02.9**	**-0.2**
	baz=305								
SNW	**Nanwan**	**0.61**	**261**		*e*	P	**Pn**	**14 05 52.4**	**+1.0**
	baz=270								
SNW					*e*	S	**Sn**	**14 06 04.5**	**+1.5**
	baz=270								
HEN	**Hengchun**	**0.62**	**266**	⇑	*i*	P	**Pn**	**14 05 52.2**	**+0.8**
	baz=274								
HEN					*i*	S	**Sn**	**14 06 03.6**	**+0.4**
	baz=274								
LDUT	**Ludao**	**0.62**	**6**			P	**Pn**	**14 05 51.9**	**+0.4**
	baz=14								
LDUT						S	**Sn**	**14 06 03.6**	**+0.5**
	baz=14								
ECL	**Taimali**	**0.68**	**323**	⇓	*i*	P	**Pn**	**14 05 51.7**	**-0.3**
	baz=321								
ECL						S	**Sn**	**14 06 02.8**	**-1.4**
	baz=321								
TTN	**Taitung**	**0.74**	**341**			P	**Pn**	**14 05 53.6**	**+1.0**
	baz=336								
TTN						S	**Sn**	**14 06 07.0**	**+1.9**
	baz=336								
SCZT	**Fangliau**	**0.79**	**294**	⇑	*i*	P	**Pn**	**14 05 53.5**	**+0.3**
	baz=293								
SCZT						S	**Sn**	**14 06 05.3**	**-0.8**
	baz=293								
TWGBT	**Beinan**	**0.82**	**339**	⇓	*i*	P	**Pn**	**14 05 53.2**	**-0.2**
	baz=339								
TWGBT						S	**Sn**	**14 06 05.4**	**-1.2**
	baz=339								
SSPT	**Xinbi**	**0.88**	**299**	⇑		P	**Pn**	**14 05 54.9**	**+0.7**
	baz=300								
SSPT						S	**Sn**	**14 06 08.8**	**+0.9**
	baz=300								
LONT	**Longtian**	**0.89**	**343**	⇓	*i*	P	**Pn**	**14 05 54.2**	**0.0**
	baz=338								
LONT						S	**Sn**	**14 06 07.4**	**-0.6**
	baz=338								
MASBT	**Mashibuluo**	**0.91**	**308**	⇑	*i*	P	**Pn**	**14 05 54.8**	**+0.4**
	baz=308								
MASBT						S	**Sn**	**14 06 07.5**	**-0.8**
	baz=308								
EDH	**Donghe**	**0.92**	**354**	⇓		P	**Pn**	**14 05 54.8**	**+0.3**
	baz=348								
EDH						S	**Sn**	**14 06 08.7**	**+0.1**
	baz=348								
TSMG	**Majia**	**0.96**	**313**			P	**Pn**	**14 05 55.3**	**+0.3**
	baz=305								
TSMG						S	**Sn**	**14 06 08.6**	**-0.7**
	baz=305								
SSD	**Sandimen**	**0.99**	**314**	⇑	*i*	P	**Pn**	**14 05 55.8**	**+0.4**
	baz=306								
SSD						S	**Sn**	**14 06 09.4**	**-0.6**
	baz=306								
WLCH	**Liuqiu**	**0.99**	**288**			P	**Pn**	**14 05 57.1**	**+1.8**
	baz=286								
WLCH						S	**Sn**	**14 06 13.1**	**+3.0**
	baz=286								
ECS	**Chishang**	**1.05**	**351**		*e*	P	**Pn**	**14 05 56.4**	**+0.3**
	baz=345								
ECS					*e*	S	**Sn**	**14 06 11.5**	**+0.2**
	baz=345								
SGLT	**Jiouru**	**1.08**	**309**		*e*	P	**Pn**	**14 05 58.0**	**+1.7**
	baz=314								
SGLT					*e*	S	**Sn**	**14 06 14.4**	**+2.7**
	baz=314								
KAU	**Kaohsiung**	**1.14**	**297**		*e*	P	**Pn**	**14 05 58.5**	**+1.5**
	baz=296								
KAU					*e*	S	**Sn**	**14 06 14.8**	**+1.9**
	baz=296								
FULB	**Fuli**	**1.14**	**355**		*e*	P	**Pn**	**14 05 57.9**	**+0.7**
	baz=348								
FULB						S	**Sn**	**14 06 13.9**	**+0.7**
	baz=348								
SCST	**Cishan**	**1.18**	**315**		*e*	P	**Pn**	**14 05 58.6**	**+1.1**
	baz=315								
SCST					*e*	S	**Sn**	**14 06 14.7**	**+0.8**
	baz=315								
ELDTW	**Lidau**	**1.19**	**343**	⇓	*i*	P	**Pn**	**14 05 57.8**	**+0.1**
	baz=343								
ELDTW						S	**Sn**	**14 06 14.3**	**0.0**
	baz=343								
TWM1	**Shoushan**	**1.19**	**310**		*e*	P	**Pn**	**14 05 59.5**	**+1.9**
	baz=311								
WSSB	**Gushan**	**1.21**	**299**		*e*	P	**Pn**	**14 05 58.5**	**+0.5**
	baz=299								
WSSB					*e*	S	**Sn**	**14 06 15.5**	**+1.0**
	baz=299								
STYH	**Taoyuan**	**1.25**	**333**		*e*	P	**Pn**	**14 05 57.4**	**-1.0**
	baz=324								
STYT	**Tauyuan**	**1.26**	**332**		*e*	P	**Pn**	**14 05 58.9**	**+0.3**
	baz=332								
STYT						S	**Sn**	**14 06 16.3**	**+0.7**
	baz=332								
SGST	**Jiashian**	**1.27**	**324**	⇓		P	**Pn**	**14 05 58.4**	**-0.3**
	baz=324								
SGST					*e*	S	**Sn**	**14 06 15.1**	**-0.9**
	baz=324								
EYUL	**Yuli**	**1.29**	**357**			P	**Pn**	**14 06 00.5**	**+1.6**
	baz=349								
EYUL					*e*	S	**Sn**	**14 06 16.4**	**+0.1**
	baz=349								
TWF1	**Yuli**	**1.30**	**356**			P	**Pn**	**14 05 58.8**	**-0.2**
	baz=352								
YULB	**Yu-li**	**1.34**	**356**		*e*	P	**Pn**	**14 05 59.3**	**-0.2**
	baz=350								
YULB					*e*	S	**Sn**	**14 06 16.3**	**-1.0**
	baz=350								
SHHT	**Tainan City**	**1.37**	**315**		*e*	P	**Pn**	**14 06 00.6**	**+0.7**
	baz=315								
SHHT					*e*	S	**Sn**	**14 06 18.5**	**+0.4**
	baz=315								
CHN1	**Nanshi**	**1.39**	**324**	⇓	*i*	P	**Pn**	**14 06 00.6**	**+0.5**
	baz=325								
CHN1						S	**Sn**	**14 06 18.1**	**-0.4**
	baz=325								
WTP	**Ta-pu**	**1.39**	**329**	⇓		P	**Pn**	**14 06 00.7**	**+0.5**
	baz=329								
WTP						S	**Sn**	**14 06 18.8**	**+0.1**
	baz=329								
CHN3	**Shinhua**	**1.40**	**317**		*e*	P	**Pn**	**14 06 01.2**	**+0.9**
	baz=317								
SNST	**Tainan City**	**1.43**	**324**		*e*	P	**Pn**	**14 06 01.3**	**+0.7**
	baz=325								
HGSD	**Ruisui**	**1.43**	**1**		*e*	P	**Pn**	**14 06 01.1**	**+0.4**
	baz=7.0								
HGSD					*e*	S	**Sn**	**14 06 20.9**	**+1.5**
	baz=7.0								
TPUB	**Ta-pu**	**1.43**	**330**			P	**Pn**	**14 06 01.1**	**+0.4**
	baz=330								
TPUB						S	**Sn**	**14 06 18.9**	**-0.6**
	baz=330								
EHY	**Hungye**	**1.45**	**357**		*e*	P	**Pn**	**14 06 00.5**	**-0.4**
	baz=351								
EHY					*e*	S	**Sn**	**14 06 18.2**	**-1.6**
	baz=351								
TAI1	**Yung-k'ang**	**1.47**	**312**		*e*	S	**Sn**	**14 06 21.0**	**+0.9**
	baz=321								
TWK	**Hsinying**	**1.47**	**325**	⇓		P	**Pn**	**14 06 01.5**	**+0.2**
	baz=326								
TWK						S	**Sn**	**14 06 20.3**	**-0.2**
	baz=326								
YUS	**Yu-Shan**	**1.49**	**344**		*e*	P	**Pn**	**14 06 02.5**	**+0.6**
	baz=344								
YUS					*e*	S	**Sn**	**14 06 22.2**	**+0.8**
	baz=344								
SSHA	**Shanhua**	**1.49**	**316**		*e*	S	**Sn**	**14 06 21.4**	**+0.7**
	baz=316								
ALS	**Alishan**	**1.55**	**339**	⇓		P	**Pn**	**14 06 03.0**	**+0.5**
	baz=330								
ALS						S	**Sn**	**14 06 22.6**	**0.0**
	baz=330								
SCLT	**Jiali**	**1.58**	**315**		*e*	P	**Pn**	**14 06 03.1**	**+0.6**
	baz=324								
SCLT						S	**Sn**	**14 06 22.9**	**+0.2**
	baz=324								
EGFH	**Guangfu**	**1.61**	**1**		*e*	P	**Pn**	**14 06 03.2**	**+0.3**
	baz=354								
EGFH					*e*	S	**Sn**	**14 06 23.8**	**+0.4**
	baz=354								
ICHU	**Yijhu**	**1.67**	**322**		*e*	P	**Pn**	**14 06 03.6**	**+0.1**
	baz=322								
ICHU					*e*	S	**Sn**	**14 06 23.6**	**-1.1**
	baz=322								
CHN5	**Tsauling**	**1.68**	**337**		*e*	P	**Pn**	**14 06 03.1**	**-0.8**
	baz=328								
CHN5					*e*	S	**Sn**	**14 06 23.7**	**-1.4**
	baz=328								
CHN8	**Yiju**	**1.69**	**320**		*e*	P	**Pn**	**14 06 04.4**	**+0.4**
	baz=320								
CHN8					*e*	S	**Sn**	**14 06 24.6**	**-0.8**
	baz=320								
CHY	**Chiayi**	**1.70**	**328**		*e*	P	**Pn**	**14 06 04.2**	**+0.2**
	baz=328								
CHY					*e*	S	**Sn**	**14 06 24.9**	**-0.6**
	baz=328								
VWDT	**VWDT**	**1.71**	**352**		*e*	P	**Pn**	**14 06 05.6**	**+1.4**
	baz=352								
VWDT					*e*	S	**Sn**	**14 06 25.8**	**+0.1**
	baz=352								
WHYT	**Xinyi Township**	**1.71**	**343**		*e*	P	**Pn**	**14 06 04.5**	**+0.3**
	baz=333								
WHYT					*e*	S	**Sn**	**14 06 25.9**	**0.0**
	baz=333								
ESL	**Shilin**	**1.75**	**1**		*e*	P	**Pn**	**14 06 04.6**	**-0.1**
	baz=356								
ESL					*e*	S	**Sn**	**14 06 25.0**	**-1.8**
	baz=356								
SSLB	**Suanglung**	**1.77**	**347**		*e*	P	**Pn**	**14 06 05.8**	**+0.7**
	baz=336								
SSLB					*e*	S	**Sn**	**14 06 27.3**	**0.0**
	baz=336								
WDLH	**Douliu**	**1.81**	**334**		*e*	P	**Pn**	**14 06 05.8**	**+0.3**
	baz=334								
WDLH					*e*	S	**Sn**	**14 06 27.1**	**-1.0**
	baz=334								
WSL	**Shuilin Townsh**	**1.82**	**324**		*e*	P	**Pn**	**14 06 05.9**	**+0.3**
	baz=324								
WSL					*e*	S	**Sn**	**14 06 27.2**	**-1.1**
	baz=324								
WTK	**Tuku**	**1.88**	**330**		*e*	P	**Pn**	**14 06 06.0**	**-0.3**
	baz=330								
WTK						S	**Sn**	**14 06 28.8**	**-0.8**
	baz=330								
SMLT	**Sun Moon Lake**	**1.88**	**346**		*e*	P	**Pn**	**14 06 07.2**	**+0.7**
	baz=337								
SMLT					*e*	S	**Sn**	**14 06 30.6**	**+0.8**
	baz=337								
OWD	**Renai**	**1.90**	**354**		*e*	P	**Pn**	**14 06 08.0**	**+1.2**
	baz=342								
OWD					*e*	S	**Sn**	**14 06 31.0**	**+0.5**
	baz=342								
WSF	**Szhu**	**1.92**	**326**		*e*	P	**Pn**	**14 06 06.7**	**-0.2**
	baz=326								
WSF					*e*	S	**Sn**	**14 06 29.7**	**-0.8**
	baz=326								
HWA	**Hwalien**	**1.92**	**6**		*e*	P	Pn	14 06 10.8	+3.9
	baz=13								
HWA					*e*	S	**Sn**	**14 06 31.9**	**+1.2**
	baz=13								
WNT	**Mingjian**	**1.93**	**340**			P	**Pn**	**14 06 07.7**	**+0.6**
	baz=331								
WNT						S	**Sn**	**14 06 31.0**	**0.0**
	baz=331								
WUSB	**Renai**	**1.95**	**352**			P	**Pn**	**14 06 08.3**	**+0.9**
	baz=342								
WUSB					*e*	S	**Sn**	**14 06 32.4**	**+0.9**
	baz=342								
CHGB	**Renai**	**2.01**	**354**		*e*	P	**Pn**	**14 06 09.4**	**+1.1**
	baz=343								
CHGB					*e*	S	**Sn**	**14 06 33.1**	**0.0**
	baz=343								
WDGT	**Dungji**	**2.01**	**307**		*e*	P	**Pn**	**14 06 07.9**	**-0.2**
	baz=313								
WDGT					*e*	S	**Sn**	**14 06 30.5**	**-2.2**
	baz=313								
TWD	**Chiawan**	**2.02**	**5**		*e*	P	**Pn**	**14 06 08.7**	**+0.4**
	baz=352								
TWD					*e*	S	**Sn**	**14 06 33.2**	**+0.2**
	baz=352								
WCS	**Beigang Elemen**	**2.04**	**347**		*e*	P	**Pn**	**14 06 08.6**	**+0.1**
	baz=338								
WCS					*e*	S	**

WHP	**Taichung City**	**2.25**	**349**	*e*P	**Pn**	**14 06 12.5**	**+1.1**
	baz=340						
WHP				*e*S	**Sn**	**14 06 39.5**	**+0.8**
	baz=340						
PNG	**Penghu**	**2.28**	**312**	*e*P	**Pn**	**14 06 11.1**	**-0.5**
	baz=312						
PNG				*e*S	**Sn**	**14 06 36.3**	**-2.7**
	baz=312						
NNSB	**Datong**	**2.36**	**360**	*e*P	**Pn**	**14 06 14.5**	**+1.6**
	baz=6.0						
NNSB				*e*S	**Sn**	**14 06 41.4**	**+0.1**
	baz=6.0						
NNS	**Nan Shan**	**2.38**	**359**	*e*P	**Pn**	**14 06 15.0**	**+1.9**
	baz=6.0						
NNS				*e*S	**Sn**	**14 06 41.1**	**-0.5**
	baz=6.0						
ENA	**Nanau**	**2.38**	**7**	*e*P	**Pn**	**14 06 14.0**	**+1.0**
	baz=360						
EWUT	**Wuta**	**2.41**	**8**	*e*P	**Pn**	**14 06 14.6**	**+1.3**
	baz=14						
NSY	**Sanyi**	**2.42**	**346**	*e*P	**Pn**	**14 06 15.1**	**+1.4**
	baz=338						
NSY				*e*S	**Sn**	**14 06 44.0**	**+1.4**
	baz=338						
LATG	**Datong**	**2.47**	**3**	*e*P	**Pn**	**14 06 15.5**	**+1.2**
	baz=7.0						
LATG				*e*S	**Sn**	**14 06 42.8**	**-1.1**
	baz=7.0						
NDT	**Datong Townshi**	**2.54**	**2**	*e*P	**Pn**	**14 06 16.9**	**+1.8**
	baz=6.0						
NDT				*e*S	**Sn**	**14 06 45.9**	**+0.6**
	baz=6.0						
TWC	**Suao**	**2.58**	**9**	*e*P	**Pn**	**14 06 16.8**	**+1.2**
	baz=354						
TWC				*e*S	**Sn**	**14 06 46.7**	**+0.5**
	baz=354						
ENTT	**Nioudou**	**2.58**	**3**	*e*P	**Pn**	**14 06 16.0**	**+0.3**
	baz=3.0						
ENTT				*e*S	**Sn**	**14 06 44.8**	**-1.5**
	baz=3.0						
NFF	**Wufeng Townshi**	**2.58**	**354**	*e*P	**Pn**	**14 06 18.0**	**+2.2**
	baz=342						
NFF				*e*S	**Sn**	**14 06 46.4**	**0.0**
	baz=342						
NDS	**Dongshan**	**2.58**	**6**	*e*P	**Pn**	**14 06 17.0**	**+1.2**
	baz=356						
NDS				*e*S	**Sn**	**14 06 47.4**	**+1.0**
	baz=356						
NSTT	**Nanjuang**	**2.59**	**352**	*e*P	**Pn**	**14 06 17.2**	**+1.3**
	baz=352						
LIOB	**Emei**	**2.60**	**352**	*e*P	**Pn**	**14 06 16.9**	**+0.8**
	baz=352						
YHNB	**Yeheng**	**2.60**	**359**	*e*P	**Pn**	**14 06 18.3**	**+2.2**
	baz=6.0						
YHNB				*e*S	**Sn**	**14 06 46.7**	**-0.3**
	baz=6.0						
TWE	**Neicheng**	**2.67**	**5**	*e*P	**Pn**	**14 06 18.3**	**+1.4**
	baz=6.0						
FUSB	**Fushanzhiwuyua**	**2.70**	**4**	*e*P	**Pn**	**14 06 18.6**	**+1.3**
	baz=3.0						
FUSB				*e*S	**Sn**	**14 06 49.3**	**0.0**
	baz=3.0						
JYNG	**Yonaguni jima**	**2.78**	**30**	*e*P	**Pn**	**14 06 19.7**	**+1.4**
JYNG				S	**Sn**	**14 06 51.2**	**+0.2**
YOJ	**Yonaguni jima**	**2.82**	**31**	*e*P	**Pn**	**14 06 20.1**	**+1.3**
	baz=32						
YOJ	**Yonaguni jima**	**2.82**	**31**	P	**Pn**	**14 06 20.1**	**+1.3**
YOJ				*e*S	**Sn**	**14 06 53.0**	**+1.1**
TIPB	**Shuangxi**	**2.93**	**8**	*e*P	**Pn**	**14 06 22.3**	**+1.9**
	baz=356						
HATJ	**Hateruma jima**	**2.98**	**48**	P	**Pn**	**14 06 21.8**	**+0.8**
HATJ				*e*S	**Sn**	**14 06 55.9**	**+0.1**
NWF	**Wu-fen Shan**	**3.02**	**7**	*e*P	**Pn**	**14 06 23.7**	**+2.0**
	baz=355						
SXI1	**Grass Mountain**	**3.06**	**8**	*e*P	**Pn**	**14 06 23.7**	**+1.6**
	baz=354						
IRIF	**Iriomote-Funau**	**3.12**	**43**	P	**Pn**	**14 06 23.7**	**+0.8**
IRIF				*e*S	**Sn**	**14 06 59.5**	**+0.2**
JKRS	**Kuro-shima**	**3.24**	**47**	P	**Pn**	**14 06 25.5**	**+1.0**
JKRS				S	**Sn**	**14 07 02.0**	**-0.1**
JIJ	**Ishigaki jima**	**3.41**	**47**	P	**Pn**	**14 06 27.3**	**+0.5**
JIJ				S	**Sn**	**14 07 05.6**	**-0.7**
JTJ	**Tarama**	**3.98**	**49**	P	**Pn**	**14 06 35.3**	**+0.8**
JTJ				S	**Sn**	**14 07 19.8**	**-0.2**
APYP	**Conner**	**4.17**	**182**	⇓*i*P	**Pn**	**14 06 38.0**	**+0.8**
APYP				*i*S	**Sn**	**14 07 23.5**	**-1.3**
MATB	**Ma-tsu**	**4.29**	**342**	*e*P	**Pn**	**14 06 37.8**	**-1.0**
	baz=349						
JMJ2	**Miyako jima3**	**4.49**	**53**	S	**Sn**	**14 07 33.1**	**+0.6**
KSRS	**Korea Array**	**16.35**	**19**	Pn	**Pn**	**14 09 17.4**	**-2.5**
	baz=198,slow=11,SNR=3.8						
	1.0nm,0.9s						
MJAR	**Matsushiro Arr**	**20.53**	**42**	P	**P**	**14 10 06.5**	**-0.4**
	2.4nm,0.8s,baz=229,slow=8.2,SNR=8.6						
	2.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.37**	**264**	P	**P**	**14 10 16.2**	**+0.1**
	0.6nm,0.3s,baz=64,slow=12,SNR=2.3						
	0.6nm,0.3s						
USRK	**Ussuriysk Ar.**	**23.76**	**19**	P	**P**	**14 10 40.5**	**+0.5**
	2.0nm,0.7s,baz=206,slow=5.7,SNR=4.2						
	2.0nm,0.7s						
KLR	**Kul'dur**	**28.34**	**14**	LR	LR	14 24 31.8	
	comp=Z,9.5nm,19.1s,baz=145,slow=40						
SONM	**Songino Array**	**28.41**	**338**	P	**P**	**14 11 22.2**	**+0.3**
	1.5nm,0.6s,baz=155,slow=9.7,SNR=7.3						
	1.5nm,0.6s						
MKAR	**Makanchi Array**	**40.02**	**318**	P	**P**	**14 13 03.5**	**+1.6**
	0.7nm,0.6s,baz=112,slow=11,SNR=7.2						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**42.15**	**328**	P	**P**	**14 13 20.0**	**+0.8**
	1.8nm,0.4s,baz=116,slow=8.2,SNR=8.3						
	1.8nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**42.45**	**85**	T	T	14 58 54.5	
	baz=281						
H11N2	**WAKE ISLAND Hy**	**42.45**	**84**	T	T	14 58 56.3	
	baz=281,slow=74,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**42.46**	**85**	T	T	14 58 51.5	
	baz=281,slow=74,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**42.51**	**86**	T	T	14 58 57.6	
	baz=283,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**42.52**	**86**	T	T	14 58 56.4	
	baz=283,slow=75,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**42.53**	**86**	T	T	14 58 59.3	
	baz=283,slow=75,SNR=7.9						
WRA	**Warramunga Arr**	**43.61**	**162**	P	**P**	**14 13 29.1**	**-2.4**
	0.6nm,0.8s,baz=342,slow=8.8,SNR=2.0						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**43.88**	**321**	P	**P**	**14 13 34.3**	**+1.1**
	0.4nm,0.5s,baz=114,slow=9.1,SNR=6.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**47.04**	**164**	P	**P**	**14 13 57.6**	**-0.9**
	0.3nm,0.3s,baz=341,slow=7.0,SNR=9.4						
	0.3nm,0.3s						
ARCES	**ARCESS Array B**	**71.58**	**338**	P	**P**	**14 16 47.8**	**+0.7**
	1.3nm,0.9s,baz=59,slow=9.5,SNR=4.0						
	1.3nm,0.9s						

TAP ***18*** *14:10:16.9,24˚.31N×122˚.80E,h59km±1km,ML3.1,C*
JMA ***18*** *14:10:16.6±0.2,24˚.N±3˚×122˚.8E±0˚.8,h69km±1km,*
MV2.5/11,NW OFF ISHIGAKIJIMA IS

ISC 18 14:10:17.3±1.3,24˚.30N±0˚.03×122˚.84E±0˚.02,h61km±8km,
n90,σ0s59/176,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.18**	**34**	P	**Pn**	**14 10 26.9**	**+0.1**
JYNG				S	**Sn**	**14 10 34.0**	**+0.4**
YOJ	**Yonaguni jima**	**0.23**	**45**	P	**Pn**	**14 10 26.9**	**0.0**
	baz=48						
YOJ				S	**Sn**	**14 10 34.2**	**+0.2**
	baz=48						
YOJ	**Yonaguni jima**	**0.23**	**45**	P	**Pn**	**14 10 27.0**	**0.0**
YOJ				S	**Sn**	**14 10 34.1**	**+0.1**
IRIF	**Iriomote-Funau**	**0.82**	**87**	P	**Pn**	**14 10 32.7**	**-0.3**
IRIF				S	**Sn**	**14 10 44.5**	**-0.1**
HATJ	**Hateruma jima**	**0.92**	**105**	P	**Pn**	**14 10 34.9**	**+0.7**
HATJ				S	**Sn**	**14 10 48.3**	**+1.5**
TWC	**Suao**	**0.95**	**289**	P	**Pn**	**14 10 34.4**	**-0.3**
	baz=289						
TWC				S	**Sn**	**14 10 46.5**	**-1.1**
	baz=289						
EWUT	**Wuta**	**0.97**	**279**	*e*P	**Pn**	**14 10 34.4**	**-0.7**
	baz=278						
EWUT				*e*S	**Sn**	**14 10 47.4**	**-0.7**
	baz=278						
ENA	**Nanau**	**1.01**	**277**	P	**Pn**	**14 10 35.2**	**-0.2**
	baz=277						
ENA				S	**Sn**	**14 10 49.4**	**+0.6**
	baz=277						
TWB1	**Santiao Chiao**	**1.04**	**313**	*e*P	**Pn**	**14 10 35.6**	**-0.3**
	baz=313						
TWB1				*e*S	**Sn**	**14 10 49.5**	**-0.2**
	baz=313						
NTC	**Toucheng**	**1.07**	**301**	P	**Pn**	**14 10 36.2**	**0.0**
	baz=301						
NTC				S	**Sn**	**14 10 49.3**	**-1.0**
	baz=301						
NDS	**Dongshan**	**1.07**	**288**	P	**Pn**	**14 10 35.4**	**-0.9**
	baz=288						
NDS				S	**Sn**	**14 10 49.4**	**-1.0**
	baz=288						
JKRS	**Kuro-shima**	**1.07**	**93**	P	**Pn**	**14 10 36.5**	**+0.2**
JKRS				*e*S	**Sn**	**14 10 51.0**	**+0.6**
ILA	**Ilan**	**1.09**	**295**	*e*S	**Sn**	**14 10 51.0**	**+0.1**
	baz=295						
ETL	**Fush Village**	**1.12**	**263**	*e*P	**Pn**	**14 10 37.0**	**+0.1**
	baz=262						
ETL				*e*S	**Sn**	**14 10 51.8**	**+0.3**
	baz=262						
TIPB	**Shuangxi**	**1.14**	**306**	P	**Pn**	**14 10 36.6**	**-0.6**
	baz=306						
TIPB				S	**Sn**	**14 10 50.5**	**-1.4**
	baz=306						
NACB	**Ninganchiao**	**1.14**	**264**	*e*P	**Pn**	**14 10 36.7**	**-0.4**
	baz=263						
NACB				*e*S	**Sn**	**14 10 51.9**	**-0.1**
	baz=263						
TWE	**Neicheng**	**1.14**	**292**	*e*P	**Pn**	**14 10 37.3**	**+0.1**
	baz=291						
TWE				S	**Sn**	**14 10 51.8**	**-0.2**
	baz=291						
TWD	**Chiawan**	**1.15**	**259**	*e*P	**Pn**	**14 10 37.1**	**-0.2**
	baz=258						
TWD				*e*S	**Sn**	**14 10 52.1**	**-0.2**
	baz=258						
HWA	**Hwalien**	**1.17**	**254**	*e*P	**Pn**	**14 10 37.9**	**+0.3**
	baz=253						
HWA				*e*S	**Sn**	**14 10 53.8**	**+1.1**
	baz=253						
SXI1	**Grass Mountain**	**1.18**	**312**	*e*P	**Pn**	**14 10 37.7**	**-0.1**
	baz=312						
SXI1				*e*S	**Sn**	**14 10 53.0**	**0.0**
	baz=312						
JIJ	**Ishigaki jima**	**1.19**	**87**	P	**Pn**	**14 10 37.4**	**-0.5**
JIJ				S	**Sn**	**14 10 52.0**	**-1.3**
ENTT	**Nioudou**	**1.21**	**287**	P	**Pn**	**14 10 37.8**	**-0.3**
	baz=286						
ENTT				S	**Sn**	**14 10 53.0**	**-0.6**
	baz=286						
LATG	**Datong**	**1.22**	**281**	P	**Pn**	**14 10 38.5**	**+0.2**
	baz=281						
LATG				S	**Sn**	**14 10 54.8**	**+0.9**
	baz=281						
FUSB	**Fushanzhiwuyua**	**1.23**	**292**	P	**Pn**	**14 10 38.1**	**-0.3**
	baz=292						
FUSB				S	**Sn**	**14 10 53.9**	**-0.2**
	baz=292						
NWF	**Wu-fen Shan**	**1.23**	**309**	*e*P	**Pn**	**14 10 38.5**	**+0.1**
	baz=309						
NWF				*e*S	**Sn**	**14 10 53.5**	**-0.7**
	baz=309						
ETLH	**Xiulin Townshi**	**1.24**	**266**	P	**Pn**	**14 10 38.3**	**-0.3**
	baz=265						
ETLH				S	**Sn**	**14 10 54.3**	**-0.2**
	baz=265						
NDT	**Datong Townshi**	**1.24**	**284**	P	**Pn**	**14 10 39.1**	**+0.6**
	baz=284						
NDT				S	**Sn**	**14 10 55.2**	**+0.8**
	baz=284						
TWA	**Mucha**	**1.32**	**301**	*e*P	**Pn**	**14 10 39.6**	**0.0**
	baz=301						
TWA				*e*S	**Sn**	**14 10 56.3**	**-0.1**
	baz=301						
NNSB	**Datong**	**1.33**	**276**	P	**Pn**	**14 10 39.8**	**-0.1**
	baz=275						
NNSB				S	**Sn**	**14 10 56.3**	**-0.4**
	baz=275						
NNS	**Nan Shan**	**1.34**	**276**	P	**Pn**	**14 10 39.0**	**-0.9**
	baz=275						
NNS				S	**Sn**	**14 10 55.8**	**-1.2**
	baz=275						
NHDH	**Xindian Distri**	**1.36**	**299**	*e*P	**Pn**	**14 10 40.4**	**+0.3**
	baz=299						
NHDH				*e*S	**Sn**	**14 10 58.0**	**+0.8**
	baz=299						
ESL	**Shilin**	**1.37**	**250**	*e*P	**Pn**	**14 10 39.6**	**-0.7**
	baz=248						
ESL				*e*S	**Sn**	**14 10 57.2**	**-0.3**
	baz=248						
JISG	**Ishigakijimahi**	**1.37**	**78**	P	**Pn**	**14 10 39.6**	**-0.6**
YHNB	**Yeheng**	**1.38**	**286**	P	**Pn**	**14 10 40.8**	**+0.4**
	baz=285						
YHNB				S	**Sn**	**14 10 58.0**	**+0.2**
	baz=285						
YM01	**YM01**	**1.43**	**306**	*e*P	**Pn**	**14 10 41.1**	**0.0**
	baz=306						
YM01				*e*S	**Sn**	**14 10 58.9**	**0.0**
	baz=306						
EGFH	**Guangfu**	**1.43**	**244**	*e*P	**Pn**	**14 10 40.2**	**-0.8**
	baz=243						
EGFH				*e*S	**Sn**	**14 10 58.8**	**-0.2**
	baz=243						
WHF	**Hehuan Shan**	**1.44**	**264**	P	**Pn**	**14 10 41.4**	**-0.2**
	baz=263						
WHF				S	**Sn**	**14 10 59.2**	**-0.6**
	baz=263						
FUSS	**Fushou**	**1.45**	**268**	P	**Pn**	**14 10 41.6**	**0.0**
	baz=267						
FUSS				*e*S	**Sn**	**14 10 59.7**	**-0.1**
	baz=267						
TWY	**Chenhua**	**1.48**	**311**	*e*P	**Pn**	**14 10 41.9**	**+0.1**
	baz=311						
TWY				*e*S	**Sn**	**14 11 00.1**	**0.0**
	baz=311						
PCYT	**Pengchaiyu**	**1.49**	**332**	*e*P	**Pn**	**14 10 42.1**	**+0.2**
	baz=333						
TWT	**Tachien**	**1.52**	**269**	*e*P	**Pn**	**14 10 42.9**	**+0.6**
	baz=267						
TWT				*e*S	**Sn**	**14 11 01.5**	**+0.3**
	baz=267						
HGSD	**Ruisui**	**1.52**	**238**	*e*P	**Pn**	**14 10 41.4**	**-0.9**
	baz=237						
HGSD				*e*S	**Sn**	**14 11 00.5**	**-0.6**
	baz=237						
TDCB	**Techi**	**1.53**	**269**	P	**Pn**	**14 10 43.0**	**+0.5**
	baz=267						
TDCB				S	**Sn**	**14 11 01.5**	**-0.1**
	baz=267						
CHGB	**Renai**	**1.54**	**261**	P	**Pn**	**14 10 42.6**	**-0.1**
	baz=260						
CHGB				S	**Sn**	**14 11 01.5**	**-0.3**
	baz=260						
OWD	**Renai**	**1.56**	**258**	P	**Pn**	**14 10 42.7**	**-0.1**
	baz=256						
OWD				*e*S	**Sn**	**14 11 01.7**	**-0.4**
	baz=256						
EHY	**Hungye**	**1.59**	**241**	P	**Pn**	**14 10 42.7**	**-0.5**
	baz=239						
EHY				*e*S	**Sn**	**14 11 02.0**	**-0.9**
	baz=239						
WUSB	**Renai**	**1.60**	**259**	P	**Pn**	**14 10 43.7**	**+0.3**
	baz=258						
WUSB				S	**Sn**	**14 11 03.2**	**0.0**
	baz=258						
NFF	**Wufeng Townshi**	**1.60**	**282**	*e*P	**Pn**	**14 10 43.2**	**-0.1**
	baz=281						
NFF				*e*S	**Sn**	**14 11 02.6**	**-0.5**
	baz=281						
VWDT	**VWDT**	**1.64**	**251**	P	**Pn**	**14 10 44.2**	**+0.3**
	baz=250						
VWDT				S	**Sn**	**14 11 04.2**	**+0.2**
	baz=250						
YULB	**Yu-li**	**1.67**	**238**	P	**Pn**	**14 10 44.0**	**-0.4**
	baz=236						
YULB				*e*S	**Sn**	**14 11 03.9**	**-1.0**
	baz=236						
EYUL	**Yuli**	**1.68**	**236**	*e*P	**Pn**	**14 10 44.3**	**-0.1**
	baz=234						
EYUL				*e*S	**Sn**	**14 11 04.7**	**-0.3**
	baz=234						
LIOB	**Emei**	**1.69**	**282**	*e*P	**Pn**	**14 10 45.2**	**+0.6**
	baz=281						
LIOB				*e*S	**Sn**	**14 11 06.2**	**+0.9**
	baz=281						
NSTT	**Nanjuang**	**1.70**	**281**	*e*P	**Pn**	**14 10 45.6**	**+0.8**
	baz=281						
NSTT				*e*S	**Sn**	**14 11 06.0**	**+0.5**
	baz=281						
WHP	**Taichung City**	**1.72**	**270**	*e*P	**Pn**	**14 10 46.3**	**+1.2**
	baz=269						
WHP				*e*S	**Sn**	**14 11 06.6**	**+0.5**
	baz=269						
JTJ	**Tarama**	**1.73**	**78**	P	**Pn**	**14 10 44.8**	**-0.3**
JTJ				S	**Sn**	**14 11 05.9**	**-0.3**
WCS	**Beigang Elemen**	**1.77**	**263**	*e*P	**Pn**	**14 10 45.4**	**-0.3**
	baz=261						
WCS				*e*S	**Sn**	**14 11 07.2**	**0.0**
	baz=261						
FULB	**Fuli**	**1.79**	**232**	*e*P	**Pn**	**14 10 45.4**	**-0.5**
	baz=231						
FULB				*e*S	**Sn**	**14 11 07.4**	**-0.2**
	baz=231						
SSLB	**Suanglung**	**1.79**	**254**	*e*P	**Pn**	**14 10 46.0**	**+0.1**
	baz=252						
SSLB				*e*S	**Sn**	**14 11 07.8**	**0.0**
	baz=252						
SMLT	**Sun Moon Lake**	**1.82**	**257**	*e*P	**Pn**	**14 10 46.8**	**+0.4**
	baz=256						
SMLT				*e*S	**Sn**	**14 11 08.2**	**-0.2**
	baz=256						
NMLH	**Miaoli**	**1.88**	**278**	*e*P	**Pn**	**14 10 47.7**	**+0.6**
	baz=277						
NMLH				*e*S	**Sn**	**14 11 10.1**	**+0.3**
	baz=277						
TWQ1	**Liyutan**	**1.88**	**272**	*e*P	**Pn**	**14 10 47.7**	**+0.6**
	baz=271						
TWQ1				*e*S	**Sn**	**14 11 10.3**	**+0.4**
	baz=271						
YUS	**Yu-Shan**	**1.90**	**245**	*e*P	**Pn**	**14 10 47.6**	**-0.3**
	baz=244						
YUS				*e*S	**Sn**	**14 11 10.2**	**-0.9**
	baz=244						
WHYT	**Xinyi Township**	**1.91**	**252**	*e*P	**Pn**	**14 10 48.0**	**+0.4**
	baz=251						
WHYT				*e*S	**Sn**	**14 11 11.0**	**+0.4**
	baz=251						
EDH	**Donghe**	**1.93**	**227**	*e*P	**Pn**	**14 10 47.8**	**0.0**
	baz=225						
EDH				*e*S	**Sn**	**14 11 09.3**	**-1.7**
	baz=225						
ELDTW	**Lidau**	**2.00**	**237**	*e*P	**Pn**	**14 10 48.4**	**-0.5**
	baz=235						
ELDTW				*e*S	**Sn**	**14 11 11.5**	**-1.4**
	baz=235						
WNT	**Mingjian**	**2.01**	**258**	*e*P	**Pn**	**14 10 50.4**	**+1.5**
	baz=257						
WNT				*e*S	**Sn**	**14 11 12.8**	**-0.2**
	baz=257						
ALS	**Alishan**	**2.02**	**247**	*e*P	**Pn**	**14 10 50.2**	**+0.9**
	baz=246						
ALS				*e*S	**Sn**	**14 11 14.2**	**+0.6**
	baz=246						
LDUT	**Ludao**	**2.05**	**218**	*e*P	**Pn**	**14 10 49.7**	**+0.3**
	baz=216						
LDUT				*e*S	**Sn**	**14 11 13.3**	**-0.6**
	baz=216						
LONT	**Longtian**	**2.09**	**229**	*e*P	**Pn**	**14 10 50.5**	**+0.5**
	baz=227						
LONT				*e*S	**Sn**	**14 11 14.5**	**-0.4**
	baz=227						
CHN5	**Tsauling**	**2.10**	**251**	*e*P	**Pn**	**14 10 50.6**	**+0.5**
	baz=250						
CHN5				*e*S	**Sn**	**14 11 15.3**	**+0.1**
	baz=250						
TWGBT	**Beinan**	**2.19**	**228**	*e*P	**Pn**	**14 10 51.2**	**-0.1**
	baz=226						
TWGBT				*e*S	**Sn**	**14 11 16.3**	**-1.0**
	baz=226						
WDLH	**Douliu**	**2.19**	**254**	*e*P	**Pn**	**14 10 51.9**	**+0.6**
	baz=253						
WDLH				*e*S	**Sn**	**14 11 17.9**	**+0.7**
	baz=253						
STYH	**Taoyuan**	**2.20**	**240**	*e*P	**Pn**	**14 10 51.3**	**-0.1**
	baz=238						
STYH				*e*S	**Sn**	**14 11 17.0**	**-0.5**
	baz=238						
TPUB	**Ta-pu**	**2.25**	**244**	*e*P	**Pn**	**14 10 52.7**	**+0.5**
	baz=243						
TPUB				*e*S	**Sn**	**14 11 19.6**	**+0.7**
	baz=243						
WTP	**Ta-pu**	**2.29**	**243**	*e*P	**Pn**	**14 10 54.4**	**+1.7**
	baz=242						
WTP				*e*S	**Sn**	**14 11 19.6**	**-0.3**
	baz=242						
WTK	**Tuku**	**2.32**	**255**	*e*P	**Pn**	**14 10 53.9**	**+0.8**
	baz=254						
WTK				*e*S	**Sn**	**14 11 20.9**	**+0.4**
	baz=254						
TWK	**Hsinying**	**2.38**	**245**	*e*P	**Pn**	**14 10 54.3**	**+0.2**
	baz=243						
TWK				*e*S	**Sn**	**14 11 21.7**	**-0.4**
	baz=243						
CHN1	**Nanshi**	**2.39**	**243**	*e*P	**Pn**	**14 10 54.9**	**+0.8**
	baz=241						
CHN1				*e*S	**Sn**	**14 11 22.5**	**+0.2**
	baz=241						
SGST	**Jiashian**	**2.40**	**240**	*e*P	**Pn**	**14 10 54.3**	**+0.1**
	baz=238						
SGST				*e*S	**Sn**	**14 11 22.8**	**+0.5**
	baz=238						
SNST	**Tainan City**	**2.40**	**244**	*e*P	**Pn**	**14 10 55.4**	**+1.2**
	baz=242						
SNST				*e*S	**Sn**	**14 11 22.4**	**0.0**
	baz=242						
ECL	**Taimali**	**2.42**	**226**	*e*P	**Pn**	**14 10 54.8**	**+0.3**
	baz=224						
ECL				*e*S	**Sn**	**14 11 21.9**	**-1.1**
	baz=224						
WSL	**Shuilin Townsh**	**2.51**	**253**	*e*P	**Pn**	**14 10 56.1**	**+0.4**
	baz=251						
WSL				*e*S	**Sn**	**14 11 25.1**	**0.0**
	baz=251						
SSD	**Sandimen**	**2.55**	**233**	*e*P	**Pn**	**14 10 56.9**	**+0.7**
	baz=231						
SSD				*e*S	**Sn**	**14 11 25.7**	**-0.4**
	baz=231						
TSMG	**Majia**	**2.56**	**232**	*e*P	**Pn**	**14 10 56.9**	**+0.5**
	baz=231						
TSMG				*e*S	**Sn**	**14 11 26.2**	**-0.3**
	baz=231						
SCST	**Cishan**	**2.57**	**237**	*e*P	**Pn**	**14 10 57.5**	**+1.0**
	baz=236						
SCST				*e*S	**Sn**	**14 11 26.2**	**-0.4**
	baz=236						
MASBT	**Mashibuluo**	**2.63**	**231**	*e*P	**Pn**	**14 10 57.7**	**+0.3**
	baz=229						
MASBT				*e*S	**Sn**	**14 11 28.0**	**-0.1**
	baz=229						
EAST	**Anshuo**	**2.64**	**224**	*e*P	**Pn**	**14 10 57.8**	**+0.2**
	baz=223						
EAST				*e*S	**Sn**	**14 11 28.2**	**-0.3**
	baz=223						
TAWH	**Dawu Township**	**2.65**	**223**	*e*P	**Pn**	**14 10 58.2**	**+0.6**
	baz=221						
TAWH				*e*S	**Sn**	**14 11 28.0**	**-0.6**
	baz=221						
SLIU	**Shizi**	**2.79**	**222**	*e*P	**Pn**	**14 11 00.2**	**+0.6**
	baz=221						
SLIU				*e*S	**Sn**	**14 11 32.5**	**+0.3**
	baz=221						
MATB	**Ma-tsu**	**3.20**	**306**	*e*S	**Sn**	**14 11 41.2**	**-0.9**
	baz=305						

ISU ***18*** *14:18:32,40˚.29N×71˚.38E,h19km*
KRNET ***18*** *14:18:33.3±0.1,40˚.22N×71˚.39E,h18km,mb2.6*
SOME ***18*** *14:18:34.4,40˚.38N×71˚.48E,h0km*
NNC ***18*** *14:18:37.5±4.3,40˚.22N×71˚.91E,h0km,mb3.8,mpv3.2,*
Error ellipse: s-maj=32.6km s-min=17.6km az=12.0

ISC 18 14:18:32.9±1.0,40˚.22N±0˚.03×71˚.41E±0˚.03,h13km±9km,
n18,σ2s56/30,9C-5D,Tajikistan

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

	baz=56							
ANR	**Andizhan**	**0.90**	**53**	S		**Sn**	**14 19 06.0**	**+1.8**
OHH	**Osh**	**1.09**	**73**	⇓*i*P		**Pb**	**14 18 53.9**	**+0.2**
	baz=74							
OHH				⇓*i*S		**Sn**	**14 19 08.8**	**-0.3**
	baz=74							
TRKS	**Terek-Say**	**1.33**	**351**	⇑*i*P		**Pn**	**14 18 56.4**	**-1.0**
	baz=52							
TRKS				⇑*i*S		**Sn**	**14 19 13.3**	**-1.7**
	baz=52							
GAR	**Garm**	**1.48**	**215**	⇑*i*P		**Pb**	**14 19 00.4**	**0.0**
	baz=15							
GAR				⇑*i*S		**Sg**	**14 19 19.9**	**-0.7**
	baz=15							
CHMG	**Chimgan**	**1.71**	**322**	S		**Sg**	**14 19 29.3**	**+1.5**
IUG	**luzhnay**	**2.19**	**332**	*e*P		**Pb**	**14 19 13.6**	**+1.1**
	571nm,0.3s							
IUG				*e*S		**Sg**	**14 19 42.4**	**-1.0**
	44nm,0.5s							
IUG	**luzhnay**	**2.19**	**332**	Pg		**Pb**	**14 19 13.6**	**+1.1**
	571nm,0.3s							
IUG				Lg		Lg	14 19 42.4	
	44nm,0.5s							
ARLS	**Aral**	**2.75**	**52**	⇑*e*P		**Pn**	**14 19 19.3**	**+2.5**
	baz=53							
ARLS				⇑*i*S		**Sb**	**14 19 52.9**	**-2.7**
	baz=53							
KK31	**Karatay Array**	**2.96**	**347**	⇓Pn		**Pb**	**14 19 26.0**	**+0.4**
	0.8nm,0.2s,baz=169,slow=18,SNR=34							
KK31				⇑Pg		Pg	14 19 36.2	+6.5
	0.6nm,0.2s,baz=164,slow=15,SNR=5.1							
KK31				⇑Sn		**Sg**	**14 20 05.8**	**-2.3**
	1.2nm,0.3s,baz=141,slow=27,SNR=4.0							
KK31				⇑Lg		Lg	14 20 12.7	
	3.9nm,0.5s							
SGDS	**Sogindy**	**4.03**	**36**	*e*P		**Pb**	**14 19 46.2**	**+2.4**
	1.1nm,0.3s							
SGDS				*e*S		**Sg**	**14 20 38.0**	**-4.2**
	2.9nm,0.4s							
SGDS	**Sogindy**	**4.03**	**36**	Pg		**Pb**	**14 19 46.2**	**+2.4**
	1.1nm,0.3s							
SGDS				Lg		Lg	14 20 38.0	
	2.9nm,0.4s							
KRBS	**Karabastau**	**4.71**	**41**	*e*P		**Pb**	**14 19 59.4**	**+4.0**
	0.5nm,0.4s							
KRBS				*e*S		**Sg**	**14 21 00.5**	**-3.6**
	1.3nm,0.6s							
KRBS	**Karabastau**	**4.71**	**41**	Pg		**Pb**	**14 19 59.4**	**+4.0**
	0.5nm,0.4s							
KRBS				Lg		Lg	14 21 00.5	
	1.3nm,0.6s							
KTBS	**Karatobe**	**5.26**	**47**	*e*P		**Pb**	**14 20 08.9**	**+4.3**
	1.0nm,0.4s							
KTBS				*e*S		**Sg**	**14 21 16.4**	**-5.1**
	2.9nm,0.3s							
KTBS	**Karatobe**	**5.26**	**47**	Pg		**Pb**	**14 20 08.9**	**+4.3**
	1.0nm,0.4s							
KTBS				Lg		Lg	14 21 16.4	
	2.9nm,0.3s							

IDC 18 14:19:33.0±3.0, 4°.59S×133°.31E, h0km, mb3.6/1, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=126.9km s-min=25.2km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.22**	**331**	Pn	Pn	14 20 39.7	+1.0
	0.7nm,0.3s,baz=45,slow=24,SNR=2.1						
SIJI				Sn	Sn	14 21 26.2	-2.6
	1.6nm,0.3s,baz=210,slow=22,SNR=1.5 11nm,0.7s						
WRA	**Warramunga Arr**	**15.29**	**176**	Pn	Pn	14 23 10.8	+0.4
	0.2nm,0.3s,baz=354,slow=12,SNR=8.1						
WRA				Sn	Sn	14 25 54.6	-6.0
	0.1nm,0.3s,baz=6.9,slow=29,SNR=1.9 0.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.38**	**209**	Pn	Pn	14 23 11.2	-0.4
	0.2nm,0.3s,baz=30,slow=10,SNR=7.1						
FITZ				Sn	Sn	14 25 56.9	-5.8
	0.1nm,0.3s,baz=87,slow=18,SNR=1.5 1.1nm,0.8s						
ASAR	**Alice Springs**	**18.97**	**178**	P	P	14 23 56.4	+0.2
	0.2nm,0.3s,baz=3.5,slow=10,SNR=22 1.1nm,0.6s						
MKAR	**Makanchi Array**	**68.10**	**325**	P	P	14 30 34.5	-0.3
	0.5nm,0.7s,baz=111,slow=6.8,SNR=5.8 0.5nm,0.7s						

*NEIC **18** 14:21:55.1±2.1, 18°.92N±0°.10×145°.1E±0°.2, h128km±9km, mb4.1/15, Error ellipse: s-maj=20.7km s-min=14.0km az=83.0*
*IDC **18** 14:21:59.1±3.1, 18°.72N×145°.56E, h172km±29km, mb3.1/5, mbtmp3.6/6, Error ellipse: s-maj=52.7km s-min=21.0km az=102.0*
ISC 18 14:21:57.2±0.7, 18°.92N±0°.08×145°.0E±0°.2, h150km, n26, σ1§68/27, mb3.9/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.31**	**181**	P	**Pn**	**14 23 16.2**	**+1.5**
	47nm,0.5s,baz=201,slow=21,SNR=1.6						
GUMO				S	**Sn**	**14 24 13.7**	**-1.5**
	34nm,0.5s,baz=148,slow=19,SNR=1.3						
GUMO	**Guam**	**5.31**	**181**	Pn	**Pn**	**14 23 13.6**	**-1.1**
PATS	**Pohnpei**	**17.67**	**131**	Pn	**Pn**	**14 25 55.3**	**+1.2**
PATS				IAmb	IAmb	14 26 05.9	
	comp=Z,20nm,0.9s						
JSD	**Sado**	**19.93**	**344**	P	**P**	**14 26 11.8**	**-5.5**
KNRA	**Kununurra**	**37.91**	**206**	P	**P**	**14 29 01.3**	**+1.2**
WB0	**Warramunga Arr**	**39.83**	**196**	P	**P**	**14 29 15.4**	**-0.6**
WB0				IAmb	IAmb	14 29 27.6	
	comp=Z,3.6nm,1.1s						
WR0	**Warramunga Arr**	**39.98**	**195**	P	**P**	**14 29 15.8**	**-1.5**
WRAB	**Tennant Creek**	**40.00**	**196**	P	**P**	**14 29 16.8**	**-0.6**
WRAB				IAmb	IAmb	14 29 17.2	
	comp=Z,3.8nm,0.9s						
WB2	**Warramunga Arr**	**40.01**	**196**	P	**P**	**14 29 16.6**	**-0.9**
WB2				IAmb	IAmb	14 29 32.8	
	comp=Z,1.9nm,0.9s						
WRA	**Warramunga Arr**	**40.02**	**196**	P	**P**	**14 29 17.1**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=15,slow=8.6,SNR=11 comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**40.02**	**196**	P	**P**	**14 29 17.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**41.42**	**208**	P	**P**	**14 29 29.0**	**0.0**
	comp=Z,0.9nm,0.7s,baz=20,slow=6.1,SNR=6.6 comp=Z,0.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.42**	**208**	P	**P**	**14 29 30.4**	**+1.3**
FITZ				IAmb	IAmb	14 29 40.7	
	comp=Z,3.2nm,1.1s						
CM31	**Chiang Mai Arr**	**43.53**	**277**	P	**P**	**14 29 45.4**	**-0.9**
CM31				IAmb	IAmb	14 29 57.7	
	comp=Z,7.2nm,1.3s						
AS31	**Alice Springs**	**43.69**	**195**	P	**P**	**14 29 46.8**	**-0.6**
ASAR	**Alice Springs**	**43.69**	**195**	P	**P**	**14 29 46.7**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=18,slow=6.9,SNR=5.5 comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**57.83**	**314**	P	**P**	**14 31 36.7**	**+3.7**
	comp=Z,0.3nm,0.6s,baz=89,slow=6.3,SNR=3.0 comp=Z,0.3nm,0.6s						
J20K	**Nowinta River**	**60.55**	**26**	P	**P**	**14 31 52.0**	**+0.7**
H24K	**Noodor Dome**	**63.56**	**25**	P	**P**	**14 32 11.6**	**+0.1**
ILAR	**Eielson Array**	**63.74**	**26**	P	**P**	**14 32 11.4**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=251,slow=5.6,SNR=4.1 comp=Z,0.4nm,0.7s						
J25K	**Salcha River,**	**64.35**	**27**	P	**P**	**14 32 16.0**	**-0.7**
J25K				IAmb	IAmb	14 32 26.8	
	comp=Z,2.4nm,1.4s						
RIDG	**Independent Ri**	**64.43**	**28**	P	**P**	**14 32 15.9**	**-1.3**
RIDG				IAmb	IAmb	14 32 26.0	
	comp=Z,5.0nm,1.2s						
BMAR	**Burnt Mountain**	**65.18**	**24**	P	**P**	**14 32 23.0**	**+1.0**
BCAR	**Beaver Creek A**	**65.70**	**29**	P	**P**	**14 32 25.0**	**-0.4**
ABKAR	**Akbulak array**	**72.72**	**317**	P	**P**	**14 33 10.4**	**+1.6**
C36M	**Paulatuk**	**72.79**	**22**	P	**P**	**14 33 08.6**	**-0.2**
C36M				IAmb	IAmb	14 33 09.5	
	comp=Z,4.3nm,1.1s						

*FUNV **18** 14:33:54.3, 8°.54N×70°.70W, h5km, MW3.8*
ISC 18 14:33:52.8±1.5, 8°.53N±0°.04×70°.65W±0°.03, h3km±12km, n31, σ1§25/40, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.32**	**220**	⇑*e*P	**Pg**	**14 33 58.8**	**-0.2**
SOCV	**Socops**	**0.32**	**220**	⇑*i*P	**Pg**	**14 33 58.8**	**-0.2**
SOCV				*e*S	**Sg**	**14 34 03.6**	**+0.5**
CAPV	**Capacho**	**1.78**	**248**	*e*P	**Pn**	**14 34 24.6**	**-0.1**
CAPV				*e*S	**Sn**	**14 34 47.4**	**-0.5**
SIQV	**Siquisique**	**2.26**	**21**	*e*P	**Pn**	**14 34 32.2**	**+1.0**
SIQV				*e*S	**Sn**	**14 35 00.3**	**+0.6**
PAMC	**Pamplona, Colo**	**2.35**	**240**	*e*P	**Pb**	**14 34 36.2**	**0.0**
TAMC	**Tame, Arauca**	**2.37**	**209**	*e*P	**Pn**	**14 34 34.0**	**+1.3**
DABV	**Dabajuro**	**2.38**	**0**	*e*P	**Pn**	**14 34 32.5**	**-0.3**
DABV	**Dabajuro**	**2.38**	**0**	*e*P	**Pn**	**14 34 32.5**	**-0.3**
DABV				*e*S	**Sn**	**14 35 01.8**	**-0.7**
MAPV	**Macapo**	**2.52**	**59**	*e*P	**Pn**	**14 34 35.6**	**+0.9**
MAPV				*e*S	**Sn**	**14 35 06.6**	**+0.6**
BAUV	**El Baul**	**2.61**	**81**	*e*P	**Pn**	**14 34 35.7**	**-0.3**
BAUV				*e*S	**Sn**	**14 35 08.1**	**0.0**
OCAC	**Ocana**	**2.66**	**264**	*e*P	**Pb**	**14 34 39.6**	**-1.7**
LL6C	**La Loma 6 Bece**	**2.85**	**295**	*e*P	**Pn**	**14 34 38.3**	**-1.0**
JACV	**Jacura**	**3.11**	**35**	*e*P	**Pn**	**14 34 43.8**	**+0.9**
BARC	**Barichara**	**3.17**	**233**	*e*P	**Pn**	**14 34 45.3**	**+1.5**
CRJC	**Cerrejon, Guaj**	**3.31**	**319**	*e*P	**Pn**	**14 34 44.2**	**-1.5**
BENV	**Beln**	**3.33**	**64**	*e*P	**Pn**	**14 34 46.1**	**+0.2**
BENV				*e*S	**Sn**	**14 35 25.5**	**-0.5**
BRRC	**Barranca, Sant**	**3.35**	**245**	*e*P	**Pb**	**14 34 54.3**	**+1.4**
URIC	**Uribia, Colomb**	**3.42**	**337**	*e*P	**Pn**	**14 34 51.1**	**+4.0**
RUSC	**La Rusia**	**3.56**	**223**	*e*P	**Pn**	**14 34 50.2**	**+0.7**
ARGC	**Ariguani, Magd**	**3.79**	**291**	*e*P	**Pn**	**14 34 51.1**	**-1.1**
CACV	**CAICARA DEL OR**	**4.18**	**103**	*e*P	**Pb**	**14 35 05.2**	**-1.8**
CACV				*e*S	**Sb**	**14 35 59.4**	**+1.4**
PTBC	**PUERTO BERRIO,**	**4.26**	**243**	*e*P	**Pn**	**14 34 59.4**	**+0.7**
PAYV	**Puerto Ayacuch**	**4.28**	**136**	*e*P	**Pn**	**14 34 59.2**	**+0.2**
PAYV				*e*S	**Sn**	**14 35 47.4**	**-2.1**
ZARC	**Zaragoza, Cauc**	**4.30**	**256**	*e*P	**Pn**	**14 34 58.6**	**-0.5**
SPBC	**San Pablo de B**	**4.44**	**230**	*e*P	**Pn**	**14 35 01.9**	**+0.7**
SJCC	**San Jacinto, C**	**4.68**	**287**	*e*P	**Pn**	**14 35 04.6**	**+0.2**
UREC	**San Jos de Ur**	**4.90**	**261**	*e*P	**Pn**	**14 35 06.1**	**-1.4**
NORC	**Norcasia**	**5.12**	**235**	*e*P	**Pn**	**14 35 10.3**	**-0.3**
GUY2C	**Guyana, Caldas**	**5.72**	**235**	*e*P	**Pn**	**14 35 20.7**	**+1.6**
CBOC	**Ciudad Bolivar**	**5.95**	**244**	*e*P	**Pn**	**14 35 24.4**	**+2.4**
PRAC	**Prado**	**6.38**	**222**	*e*P	**Pn**	**14 35 27.5**	**-0.3**

*SOME **18** 15:02:59.8, 39°.47N×73°.33E, h5km*
*KRNET **18** 15:03:02.1±0.1, 39°.39N×73°.63E, mb3.2*
*NNC **18** 15:03:12.3±3.4, 39°.79N×73°.70E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=27.6km s-min=16.5km az=175.0*
ISC 18 15:03:03.4±1.5, 39°.46N±0°.07×73°.55E±0°.04, h10km, n23, σ2§44/37, 15C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.21**	**331**	⇑*e*P	**Pb**	**15 03 26.8**	**+0.3**
	baz=30						
OHH				⇑*i*S	**Sg**	**15 03 45.0**	**+2.5**
	baz=30						
ARLS	**Aral**	**2.47**	**13**	⇑*i*P	**Pb**	**15 03 46.2**	**-1.7**
	baz=12						
ARLS				⇑*i*S	**Sb**	**15 04 18.5**	**+0.1**
	baz=12						
GAR	**Garm**	**2.56**	**261**	⇑*i*P	**Pb**	**15 03 47.6**	**-1.8**
	baz=62						
GAR				⇑*i*S	**Sb**	**15 04 20.7**	**-0.2**
	baz=62						
TRKS	**Terek-Say**	**2.77**	**319**	⇑*i*P	**Pn**	**15 03 50.1**	**+2.2**
	baz=19						
TRKS				⇑*i*S	**Sn**	**15 04 25.1**	**+3.6**
	baz=19						
UCH	**Uchtor**	**2.86**	**14**	⇓*i*P	**Pb**	**15 03 51.8**	**-2.9**
	baz=13						
UCH				⇓*i*S	**Sb**	**15 04 28.0**	**-1.9**
	baz=13						
BOOM	**Boomskoye usch**	**3.52**	**30**	⇓*i*P	**Pn**	**15 04 00.7**	**+2.4**
	baz=29						
BOOM				⇓*i*S	**Sn**	**15 04 43.4**	**+3.3**
	baz=29						
CHMS	**Chumysh**	**3.65**	**14**	⇑Pn	**Pb**	**15 04 08.2**	**+0.2**
	1.9nm,0.4s						
CHMS				⇑Lg	Lg	15 04 57.6	
	7.9nm,0.8s						
TKM2	**Tokmak 2**	**3.78**	**23**	⇑Pn	**Pb**	**15 04 08.6**	**-1.7**
	1.2nm,0.3s						
TKM2				⇓Lg	Lg	15 05 03.1	
	3.5nm,0.4s						
IUG	**luzhnay**	**3.79**	**316**	*e*P	**Pb**	**15 04 07.7**	**-2.6**
	248nm,0.4s						
IUG				*e*S	**Sb**	**15 04 56.2**	**-0.1**
	24nm,0.5s						
IUG	**luzhnay**	**3.79**	**316**	Pg	**Pb**	**15 04 07.7**	**-2.6**
	248nm,0.4s						
IUG				Lg	Lg	15 04 56.3	
	24nm,0.5s						
KST	**Kastek**	**4.01**	**26**	*e*P	**Pb**	**15 04 15.3**	**+1.1**
	3.2nm,0.4s						
KST				*e*S	**Sg**	**15 05 08.9**	**-3.3**
	8.8nm,1.1s						
KST	**Kastek**	**4.01**	**26**	Pg	**Pb**	**15 04 15.4**	**+1.1**
	3.2nm,0.4s						
KST				Lg	Lg	15 05 08.9	
	8.8nm,1.1s						
SGDS	**Sogindy**	**4.07**	**11**	*e*P	**Pb**	**15 04 17.2**	**+2.1**
	4.3nm,0.7s						
SGDS				*e*S	**Sg**	**15 05 12.2**	**-1.7**
	4.7nm,0.6s						
SGDS	**Sogindy**	**4.07**	**11**	Pg	**Pb**	**15 04 17.2**	**+2.1**
	4.3nm,0.7s						
SGDS				Lg	Lg	15 05 12.2	
	4.7nm,0.6s						
DGS	**Degeres**	**4.13**	**23**	*e*P	**Pg**	**15 04 18.9**	**-3.6**
	5.7nm,0.3s						
DGS				*e*S	**Sg**	**15 05 15.1**	**-0.8**
	6.6nm,0.3s						
KK31	**Karatay Array**	**4.30**	**329**	⇑Pn	Pn	15 04 14.1	+5.2
	0.3nm,0.2s,baz=139,slow=11,SNR=17						
KK31				⇑Pg	**Pg**	**15 04 26.2**	**+0.5**
	1.1nm,0.3s,baz=142,slow=16,SNR=5.2						
KK31				⇑Sn	**Sb**	**15 05 06.6**	**-4.4**
	2.3nm,0.5s,baz=161,slow=27,SNR=3.6						
KK31				⇑Lg	Lg	15 05 22.1	
	4.5nm,0.6s						
KRBS	**Karabastau**	**4.52**	**20**	*e*P	**Pb**	**15 04 25.1**	**+2.3**
	2.7nm,0.4s						
KRBS				*e*S	**Sg**	**15 05 25.8**	**-2.7**
	8.1nm,0.8s						
KRBS	**Karabastau**	**4.52**	**20**	Pg	**Pb**	**15 04 25.1**	**+2.3**
	2.7nm,0.4s						
KRBS				Lg	Lg	15 05 25.8	
	8.1nm,0.8s						
MDOK	**Medeo**	**4.54**	**34**	Pn	**Pb**	**15 04 20.2**	**-3.0**
	2.0nm,0.6s						
MDOK				Lg	Lg	15 05 28.1	
	6.0nm,0.8s						
KOTS	**Kotyrbulak**	**4.62**	**34**	*e*P	**Pb**	**15 04 27.0**	**+2.4**
	0.5nm,0.5s						
KOTS				*e*S	**Sg**	**15 05 28.9**	**-2.8**
	20nm,0.6s						
KOTS	**Kotyrbulak**	**4.62**	**34**	Pg	**Pb**	**15 04 27.0**	**+2.4**
	0.5nm,0.5s						
KOTS				Lg	Lg	15 05 28.9	
	20nm,0.6s						
KTBS	**Karatobe**	**4.85**	**28**	*e*P	**Pb**	**15 04 31.5**	**+3.1**
	2.7nm,0.5s						
KTBS				*e*S	**Sg**	**15 05 37.0**	**-2.0**
	6.6nm,0.4s						
KTBS	**Karatobe**	**4.85**	**28**	Pg	**Pb**	**15 04 31.5**	**+3.1**
	2.7nm,0.5s						
KTBS				Lg	Lg	15 05 37.0	
	6.6nm,0.4s						

*NOU **18** 15:25:09.6, 28°.27S×175°.29W, h34km, mb5.0/19, Kermadec Islands Region*
*BJI **18** 15:25:10.8±0.0, 28°.48S×176°.53W, h11km, mb5.2/23, mB5.8/9, Ms4.9/5, Ms7 4.6/8*
*IDC **18** 15:25:11.3±0.5, 27°.85S×176°.52W, h0km, mb4.4/14, mbtmp4.4/14, MS4.7/47, Error ellipse: s-maj=21.0km s-min=16.5km az=133.0*
*NEIC **18** 15:25:12.2±1.8, 28°.1S±0°.1×176°.3W±0°.1, h11km±3km, mb5.1/56, Error ellipse: s-maj=19.6km s-min=13.6km az=132.0*
*MOS **18** 15:25:14.4±1.1, 28°.06S×176°.28W, h34km, mb5.0/19, MS4.7/4, Error ellipse: s-maj=16.1km s-min=13.3km az=135.9*
*GCMT **18** 15:25:16.2±0.2, 27°.95S±0°.02×175°.95W±0°.01, h18km, MW5.1/106, Moment Tensor Solution. s65,c93; s106,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.77±.19; $M_{\theta\theta}$-0.41±.12; $M_{\phi\phi}$-4.36±.13; $M_{r\theta}$1.02±.32; $M_{\theta\phi}$-0.26±.09; $M_{\phi r}$4.06±.29; Best double couple: M_o6.19700×10^{16} NP1:φ_s10.00000°, δ66.00000°, λ95.00000°. NP2:φ_s178.00000°, δ24.00000°, λ79.00000°. Principal axes: T 6.4240, Plg68.0000°, Azm290.0000°; N -0.4530, Plg5.0000°, Azm188.0000°; P -5.9700, Plg21.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 15:25:14.9±0.3, 28°.36S±0°.05×176°.08W±0°.06, h36km, n297, σ1§86/258, mb5.0/53, MS4.8/53, 11C-6D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.84**	**241**	Pn	**Pn**	**15 25 46.5**	**+2.6**
	286nm,0.3s,baz=325,slow=6.9,SNR=8.4						
RAO				Sn	**Sn**	**15 26 11.0**	**+5.0**
	563nm,0.3s,baz=111,slow=20,SNR=4.2						
RAO	**Raoul Island**	**1.84**	**241**		**Pn**	**15 25 45.6**	**+1.7**
RAO	**Raoul Island**	**1.84**	**241**	P	**Pn**	**15 25 45.6**	**+1.7**
RAO	**Raoul Island**	**1.84**	**241**	P	**Pn**	**15 25 46.9**	**+3.0**
GLKZ	**Green Lake**	**1.85**	**241**	P	**Pn**	**15 25 46.3**	**+2.3**
GLKZ				S	**Sn**	**15 26 11.7**	**+5.5**
MXZ	**Matakaoa Point**	**10.31**	**206**	S	**Sn**	**15 29 35.1**	**+0.6**
WMGZ	**Waiomatatini S**	**10.50**	**205**	P	**Pn**	**15 27 39.3**	**-3.5**
WMGZ				S	**Sn**	**15 29 39.4**	**+0.3**
PKGZ	**Pakihiroa**	**10.69**	**206**	P	**Pn**	**15 27 45.9**	**+0.5**
PKGZ				S	**Sn**	**15 29 41.6**	**-2.1**
HAZ	**Te Kaha**	**10.69**	**207**	P	**Pn**	**15 27 42.6**	**-2.7**
HAZ				S	**Sn**	**15 29 44.8**	**+1.1**
PUZ	**Puketiti**	**10.78**	**205**	S	**Sn**	**15 29 47.1**	**+1.1**
NIUE	**Niue**	**10.82**	**33**	P	Pn	15 27 35.6	-12
	baz=10						
NIUE	**Niue**	**10.82**	**33**		Pn	15 27 35.8	-11
RUGZ	**Raukumara Rang**	**10.91**	**207**	P	**Pn**	**15 27 47.8**	**-0.7**
RUGZ				S	**Sn**	**15 29 47.9**	**-1.5**
TWGZ	**Tauwhareparae**	**10.98**	**205**	P	**Pn**	**15 27 46.0**	**-3.3**
TWGZ				S	**Sn**	**15 29 50.9**	**+0.1**
CNGZ	**Carnagh Statio**	**11.16**	**204**	P	**Pn**	**15 27 48.4**	**-3.4**
MWZ	**Matawai**	**11.29**	**207**	P	**Pn**	**15 27 49.4**	**-4.2**
MWZ				S	**Sn**	**15 29 55.5**	**-3.0**
OPRZ	**Ohinepanea**	**11.29**	**211**	P	**Pn**	**15 27 53.4**	**-0.2**
OPRZ				S	**Sn**	**15 30 01.3**	**+2.9**
URZ	**Urewera**	**11.39**	**208**	Pn	**Pn**	**15 27 53.7**	**-1.3**
	1.2nm,0.3s,baz=238,slow=20,SNR=1.9						
URZ				Sn	**Sn**	**15 30 00.0**	**-0.9**
	3.4nm,0.3s,baz=198,slow=23,SNR=1.0						
URZ				LR	LR	15 32 20.3	
	comp=Z,4μm,18.8s,baz=26,slow=37						
URZ	**Urewera**	**11.39**	**208**	Pn	**Pn**	**15 27 50.6**	**-4.4**
URZ					**Sn**	**15 29 59.6**	**-1.3**
URZ	**Urewera**	**11.39**	**208**	P	**Pn**	**15 27 50.7**	**-4.4**
URZ				S	**Sn**	**15 29 59.8**	**-1.2**
SNGZ	**Shannon Statio**	**11.75**	**206**	P	**Pn**	**15 27 59.1**	**-0.8**
SNGZ				S	**Sn**	**15 30 08.6**	**-1.2**
BKZ	**Black Stump Fm**	**12.42**	**208**	Pn	**Pn**	**15 28 06.3**	**-2.8**
BKZ					**Sn**	**15 30 23.1**	**-3.0**
HIZ	**Hauiti**	**12.63**	**214**	Pn	Pn	15 28 04.8	-7.2
HIZ					Sn	15 30 22.4	-9.0
KWHZ	**Kaweka Forest**	**12.66**	**207**	P	**Pn**	**15 28 12.5**	**+0.1**
KWHZ				S	**Sn**	**15 30 28.1**	**-4.1**
OTVZ	**Oturere**	**12.77**	**210**	P	**Pn**	**15 28 12.5**	**-1.5**
WNVZ	**Wahianoa**	**12.93**	**210**	P	**Pn**	**15 28 15.1**	**-1.1**
WNVZ				S	**Sn**	**15 30 38.4**	**-0.5**
WPHZ	**Waipukurau**	**13.21**	**206**	P	**Pn**	**15 28 19.9**	**+0.1**
WPHZ				S	**Sn**	**15 30 41.0**	**-4.3**
BFZ	**Birch Farm**	**13.81**	**205**		Pn	15 28 16.4	-12
BFZ					**Sn**	**15 30 55.4**	**-4.8**
NFK	**Norfolk Island**	**14.05**	**263**	P	**Pn**	**15 28 29.2**	**-2.2**
	baz=14						
MSWZ	**Moikau Station**	**14.83**	**206**	P	Pn	15 28 30.9	-11
AFI	**Afiamalu**	**14.93**	**16**	Pn	Pn	15 28 32.1	-11
	2.0nm,0.3s,baz=342,slow=3.1,SNR=4.9						
AFI				Sn	Sn	15 31 08.4	-19
	1.7nm,0.3s,baz=23,slow=22,SNR=4.5						
AFI	**Afiamalu**	**14.93**	**16**	Pn	Pn	15 28 33.5	-10
AFI	**Afiamalu**	**14.93**	**16**	P	Pn	15 28 33.5	-10
AFI	**Afiamalu**	**14.93**	**16**	P	Pn	15 28 34.7	-8.7
PLWZ	**Palliser**	**14.96**	**206**	P	Pn	15 28 32.0	-12
SNZO	**South Karori**	**14.96**	**208**	Pn	**Pn**	**15 28 39.3**	**-4.2**
SNZO				IAmb	IAmb	15 28 45.3	
	comp=Z,88nm,1.5s						
TUWZ	**Tuamarina**	**15.38**	**209**	P	Pn	15 28 40.7	-8.4
QRZ	**Quartz Range**	**15.56**	**214**	P	**P**	**15 28 53.7**	**-1.6**
MARNC	**Mare, Loyalty**	**15.95**	**292**		Pn	15 28 43.5	-13
MARNC	**Mare, Loyalty**	**15.95**	**292**	P	**P**	**15 29 00.8**	**+1.0**
THZ	**Tophouse**	**16.11**	**211**		Pn	15 28 49.1	-9.5
KHZ	**Kahutara**	**16.36**	**208**		Pn	15 28 52.4	-9.3
KHZ	**Kahutara**	**16.36**	**208**	P	**Pn**	**15 29 01.4**	**-0.3**
RAR	**Rarotonga**	**16.42**	**68**	Pn	**Pn**	**15 28 57.6**	**-4.9**
	comp=Z,1.7nm,0.3s,baz=243,slow=8.1,SNR=5.1						
RAR				LR	LR	15 34 21.7	
	comp=Z,2μm,19.0s,baz=262,slow=33						
RAR	**Rarotonga**	**16.42**	**68**	Pn	Pn	15 28 54.6	-7.9
RAR	**Rarotonga**	**16.42**	**68**	P	Pn	15 28 54.6	-8.0
RAR				pmax	pmax		
	comp=Z,44nm,1.1s						
YATNC	**Mamie plateau,**	**16.63**	**288**	P	**P**	**15 29 09.5**	**+2.1**
DZM	**Mont

comp=Z,1µm,18.1s,baz=97,slow=36
comp=Z,7.5nm,1.0s
STKA Stephens Creek 36.61 254 P **P** **15 32 16.5 -1.3**
STKA Stephens Creek 36.61 254 *i* P **P** **15 32 18.2 +0.4**
INKA Innaminka 37.96 260 P **P** **15 32 29.9 +0.7**
HTT Hallett 38.72 251 P **P** **15 32 37.7 +2.1**
baz=39,SNR=3.8
TAOE Nuku Hiva Isla 38.97 67 *e*S **S** **15 38 37.4 +2.9**
comp=Z,225nm,23.7s
TAOE *e*LR LR 15 43 13.6
comp=Z,928nm,21.2s
COEN Coen 40.41 282 P **P** **15 32 46.6 -3.2**
COEN IAmb IAmb 15 33 10.4
comp=Z,44nm,1.4s
BBOO Buckleboo 41.17 252 P **P** **15 32 53.9 -2.0**
AS31 Alice Springs 44.94 264 P **P** **15 33 24.1 -2.5**
ASAR Alice Springs 44.94 264 P **P** **15 33 25.2 -1.3**
comp=Z,9.3nm,1.0s,baz=100,slow=6.6,SNR=43
ASAR LR LR 15 52 10.8
comp=Z,1µm,18.3s,baz=102,slow=36
comp=Z,9.3nm,1.0s
ASAR Alice Springs 44.94 264 P **P** **15 33 23.8 -2.8**
ASAR Alice Springs 44.94 264 P **P** **15 33 23.8 -2.8**
WB2 Warramunga Arr 45.74 269 P **P** **15 33 30.7 -2.2**
WB2 IAmb IAmb 15 33 32.4
comp=Z,22nm,1.2s
WRAB Tennant Creek 45.75 269 P **P** **15 33 30.8 -2.2**
WRAB IAmb IAmb 15 33 47.2
comp=Z,44nm,1.7s
WRAB Tennant Creek 45.75 269 P **P** **15 33 30.8 -2.2**
WRAB pmax pmax
comp=Z,44nm,1.7s
WRA Warramunga Arr 45.75 269 P **P** **15 33 30.1 -2.9**
comp=Z,7.7nm,0.9s,baz=106,slow=7.0,SNR=60
WRA LR LR 15 51 44.1
comp=Z,634nm,18.9s,baz=116,slow=35
comp=Z,7.7nm,0.9s
WRA Warramunga Arr 45.75 269 P **P** **15 33 29.6 -3.4**
WRA Warramunga Arr 45.75 269 P **P** **15 33 29.6 -3.4**
WRA pmax pmax
comp=Z,2.0nm,1.3s
WB0 Warramunga Arr 45.77 269 P **P** **15 33 30.7 -2.4**
WB0 IAmb IAmb 15 33 34.3
comp=Z,23nm,1.1s
FORT Forrest 48.22 253 P **P** **15 33 51.0 -1.2**
WRKA Warakurna 49.44 260 P **P** **15 34 00.4 -1.3**
baz=49,SNR=13
KDU Kakadu 50.27 277 P **P** **15 34 05.8 -2.2**
baz=50,SNR=5.3
VNDA Vanda 50.29 186 P P 15 34 13.2 +6.0
comp=Z,1.3nm,0.9s,baz=13,slow=8.3,SNR=6.7
VNDA LR LR 15 51 44.0
comp=Z,487nm,21.0s,baz=22,slow=31
comp=Z,1.3nm,0.9s
MTN Manton Dam 51.38 276 P **P** **15 34 19.6 +3.3**
baz=51,SNR=3.6
KNRA Kununurra 52.27 272 P **P** **15 34 19.9 -3.1**
FITZ Fitzroy Crossi 54.08 267 LR LR 15 56 53.9
comp=Z,962nm,18.3s,baz=108,slow=35
FITZ Fitzroy Crossi 54.08 267 P **P** **15 34 35.3 -1.0**
baz=54,SNR=3.3
GUMO Guam 56.28 313 LR LR 15 57 14.1
comp=Z,300nm,18.9s,baz=127,slow=35
SIJI Sorong 57.20 289 LR LR 15 59 14.7
comp=Z,475nm,19.6s,baz=102,slow=36
CASY Casey 57.72 207 P **P** **15 35 03.4 +1.8**
BATI Baumata 59.10 275 LR LR 16 01 31.5
comp=Z,2µm,18.6s,baz=142,slow=37
QSPA South Pole Qui 61.74 180 LR LR 15 59 11.9
comp=Z,615nm,19.6s,baz=41,slow=33
QSPA South Pole Qui 61.74 180 P P 15 35 34.5 +5.0
KAPI Kappang 64.94 278 LR LR 16 05 36.3
comp=Z,410nm,18.6s,baz=114,slow=38
DAV Davao City (W) 66.34 293 LR LR 16 03 58.0
comp=Z,210nm,19.1s,baz=119,slow=35
JCJ Chichijima 68.15 320 LR LR 16 04 16.7
comp=Z,115nm,18.3s,baz=122,slow=35
SMAI San Martin Ant 70.68 158 P **P** **15 36 28.3 +1.8**
SMAI IAmb IAmb 15 36 35.4
comp=Z,26nm,1.4s
BELA Belgrano 2 71.57 172 P **P** **15 36 34.6 +2.8**
BELA IAmb IAmb 15 36 38.9
comp=Z,19nm,1.4s
PMSA Palmer Station 73.42 156 LR LR 16 03 42.0
comp=Z,544nm,18.6s,baz=251,slow=31
LEM Lembang 74.75 270 LR LR 16 10 55.2
comp=Z,600nm,18.8s,baz=166,slow=37
MAW Mawson 74.79 200 P **P** **15 36 54.6 +3.7**
comp=Z,5.3nm,1.0s,baz=106,slow=7.5,SNR=7.7
MAW LR LR 16 10 30.6
comp=Z,862nm,18.1s,baz=117,slow=36
comp=Z,5.3nm,1.0s
MAW Mawson 74.79 200 P P 15 36 55.6 +4.7
baz=75,SNR=7.4
MAW Mawson 74.79 200 P **P** **15 36 52.3 +1.4**
MAW Mawson 74.79 200 P **P** **15 36 52.3 +1.4**
MAW pmax pmax
comp=Z,7.0nm,1.6s
SBUM Sibu 75.14 281 P **P** **15 36 52.6 -1.3**
KSM Kuching 76.32 279 P **P** **15 36 58.8 -1.8**
KSM IAmb IAmb 15 37 01.8
comp=Z,31nm,1.4s
ESPZ Base Esperanza 76.75 156 P **P** **15 37 04.7 +2.5**
ESPZ IAmb IAmb 15 39 17.5
comp=Z,111nm,0.7s
INU Inuyama 77.29 322 P **P** **15 37 04.4 -1.1**
INU IAmb IAmb 15 37 06.1
comp=Z,32nm,1.4s
MJAR Matsushiro Arr 77.56 324 P **P** **15 37 05.3 -1.8**
comp=Z,5.4nm,1.0s,baz=154,slow=6.6,SNR=15
MJAR LR LR 16 06 25.4
comp=Z,68nm,21.3s,baz=139,slow=32
comp=Z,5.4nm,1.0s
MAJO Matsushiro 77.56 324 P **P** **15 37 06.0 -1.0**
MAJO IAmb IAmb 15 37 07.4
comp=Z,28nm,1.2s
MAJO Matsushiro 77.56 324 P **P** **15 37 06.0 -1.0**
MAJO pmax pmax
comp=Z,28nm,1.2s
JSU Suzuyama 78.33 316 P **P** **15 37 09.8 -1.6**
TROLL Troll, Antarti 79.90 180 P **P** **15 37 23.3 +3.7**
SNAA Sanae 80.13 178 P **P** **15 37 24.1 +3.2**
SNAA Sanae 80.13 178 LR LR 16 11 25.3
comp=Z,589nm,18.7s,baz=232,slow=34
SNAA Sanae 80.13 178 P **P** **15 37 23.1 +2.3**
SNAA IAmb IAmb 15 37 28.7
comp=Z,14nm,1.1s
SNAA Sanae 80.13 178 P **P** **15 37 23.1 +2.3**
SNAA pmax pmax
comp=Z,14nm,1.1s
VNA3 Neumayer Olymp 80.21 176 P **P** **15 37 24.2 +3.0**
VNA2 Neumayer--Watz 80.67 176 P **P** **15 37 27.1 +3.5**
baz=184,slow=4.4
VNA1 Neumayer--Stat 80.89 176 P **P** **15 37 28.4 +3.6**
SHEM Shemya Is, Ala 81.20 354 LR LR 16 06 43.8
comp=Z,480nm,21.8s,baz=140,slow=31
LPIG La Paz 82.03 57 LR LR 16 07 40.9
comp=Z,443nm,18.8s,baz=222,slow=31
PLCA Paso Flores 82.65 132 P P 15 37 39.1 +4.4
comp=Z,3.7nm,0.9s,baz=219,slow=10,SNR=3.6
PLCA LR LR 16 07 15.6
comp=Z,441nm,19.0s,baz=236,slow=30
comp=Z,3.7nm,0.9s
NAWB Namwon 82.86 317 P **P** **15 37 35.1 -0.5**
TJN Taejon 83.52 317 P **P** **15 37 38.2 -0.8**
TJN Taejon 83.52 317 *ce*P **P** **15 37 38.2 -0.8**
PFO Pinyon Flats O 83.59 46 LR LR 16 10 19.9
comp=Z,946nm,18.2s,baz=222,slow=32
PFO Pinyon Flats O 83.59 46 *i* P **P** **15 37 38.7 -0.9**
PFO pmax pmax
comp=Z,3.0nm,1.0s
YSS Yuzh-Sakhalins 83.67 333 *e*P **P** **15 37 39.0 -0.5**
YSS *e**SP **PcP** **15 37 45.6 +2.0**
YSS *e*S **S** **15 48 00.0 +0.8**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS smax smax
comp=N,500nm,12.0s
YSS MLR MLR
comp=Z,400nm,16.0s
KSRS Korea Array 83.91 318 P **P** **15 37 39.9 -1.0**
comp=Z,4.5nm,0.9s,baz=140,slow=5.5,SNR=17
KSRS LR LR 16 08 51.3
comp=Z,143nm,21.8s,baz=135,slow=32
comp=Z,4.5nm,0.9s
KSAR Wonju Array Be 83.93 318 P **P** **15 37 40.2 -0.9**
KSAR Wonju Array Be 83.93 318 P **P** **15 37 40.2 -0.9**
PET Petropavlovsk 83.98 345 *e*P P 15 37 35.1 -5.8
PET *e*S **S** **15 47 59.2 -2.8**
PET *e*PS **PnS** **15 48 55.7 -3.2**
PET *e*PPS PPS 15 49 14.2
PET *e*SS **SS** **15 53 35.4 +3.8**
PETK Petropavlovsk- 84.28 344 LR LR 16 09 59.5
comp=Z,238nm,21.3s,baz=150,slow=32
QSM Queen of Sheba 84.86 44 P **P** **15 37 46.7 +0.8**
DSP Deep Springs 85.10 43 P **P** **15 37 48.0 +1.0**
DSP IAmb IAmb 15 38 08.7
comp=Z,17nm,1.8s
LHV Little Huntoon 85.37 42 P **P** **15 37 49.2 +0.9**
LHV IAmb IAmb 15 38 16.4
comp=Z,22nm,1.8s
YBH Yreka Blue Hor 85.40 37 LR LR 16 08 32.7
comp=Z,483nm,21.9s,baz=227,slow=30
GMN Gold Mountain 85.48 43 P **P** **15 37 49.8 +0.6**
NVAR Mina Array Bea 85.61 42 P **P** **15 37 51.7 +1.9**
comp=Z,2.2nm,0.9s,baz=222,slow=8.5,SNR=13
NVAR LR LR 16 12 07.9
comp=Z,1µm,18.3s,baz=254,slow=33
comp=Z,2.2nm,0.9s
NVAR Mina Array Bea 85.61 42 P **P** **15 37 50.5 +0.7**
MSHR Mys Shultsa 85.68 324 *i* P **P** **15 37 49.6 -0.1**
MSHR pmax pmax
comp=Z,15nm,1.3s
TPNV Topopah Spring 85.87 44 P **P** **15 37 52.2 +1.1**
TPNV IAmb IAmb 15 38 38.0
comp=Z,20nm,1.8s
TPNV Topopah Spring 85.87 44 P **P** **15 37 52.2 +1.1**
TPNV pmax pmax
comp=Z,19nm,1.8s
TPH Tonopah 86.01 43 P **P** **15 37 52.5 +0.7**
TPH Tonopah 86.01 43 P **P** **15 37 52.5 +0.7**
TPH pmax pmax
comp=Z,86nm,1.7s
KVN Kaiserville 86.14 41 P **P** **15 37 52.1 -0.3**
KVN Kaiserville 86.14 41 P **P** **15 37 52.1 -0.3**
KVN pmax pmax
comp=Z,10.0nm,1.6s
NJ2 Nanjing 86.22 309 ⇓P **P** **15 37 54.0 +1.3**
NJ2 pmax pmax
comp=Z,15nm,0.5s
USRK Ussuriysk Ar. 86.42 325 P **P** **15 37 53.4 +0.1**
USRK Ussuriysk Ar. 86.42 325 P **P** **15 37 53.4 +0.1**
TUC Tucson 86.53 50 P **P** **15 37 54.8 +0.5**
TUC IAmb IAmb 15 38 06.6
comp=Z,15nm,1.6s
TUC Tucson 86.53 50 P **P** **15 37 54.8 +0.5**
TUC pmax pmax
comp=Z,15nm,1.6s
PRN Pahroc Range 86.90 44 P **P** **15 37 56.8 +0.7**
PRN IAmb IAmb 15 38 08.8
comp=Z,10nm,1.3s
PSI Prapat 86.92 275 LR LR 16 18 31.3
comp=Z,316nm,18.8s,baz=124,slow=37
X16A Lo Mia Camp, P 87.35 48 P **P** **15 37 58.6 +0.2**
X16A IAmb IAmb 15 38 30.7
comp=Z,16nm,1.7s
U15A North Rim 88.02 46 P **P** **15 38 02.4 +0.7**
U15A IAmb IAmb 15 38 36.4
comp=Z,16nm,1.6s
ELK Elko 88.91 42 LR LR 16 14 20.7
comp=Z,1µm,18.2s,baz=216,slow=33
MTPU Mount Pierson 89.07 45 P **P** **15 38 07.9 +1.2**
MTPU IAmb IAmb 15 38 53.0
comp=Z,20nm,1.9s
CN2 Changchun 89.56 322 *e*P **P** **15 38 08.8 +0.5**
CN2 S **S** **15 48 50.9 -5.6**
CN2 pmax pmax
comp=Z,10.0nm,1.5s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=Z,100nm,14.0s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,13.0s
G08A Pilot Rock 89.83 36 P **P** **15 38 10.6 +0.8**
G08A IAmb IAmb 15 38 40.2
comp=Z,14nm,1.4s
TIA Tai'an 89.84 312 ⇓P **P** **15 38 11.0 +1.1**
TIA pmax pmax
comp=Z,23nm,1.3s
TXAR Lajitas Array 89.87 56 P **P** **15 38 12.0 +1.7**
comp=Z,0.7nm,0.9s,baz=176,slow=3.8,SNR=5.7
TXAR LR LR 16 13 06.0
comp=Z,351nm,18.1s,baz=244,slow=32
comp=Z,0.7nm,0.9s
TXAR Lajitas Array 89.87 56 P **P** **15 38 10.7 +0.3**
TXAR Lajitas Array 89.87 56 P **P** **15 38 10.7 +0.3**
KLR Kul'dur 90.15 329 LR LR 16 17 37.1
comp=Z,265nm,18.3s,baz=143,slow=35
KLR Kul'dur 90.15 329 *ce*P **P** **15 38 09.5 -1.5**
KLR pmax pmax
comp=Z,3.0nm,1.0s
TMUT Trail Mountain 90.44 45 P **P** **15 38 12.6 -0.4**
TMUT IAmb IAmb 15 38 41.4
comp=Z,26nm,2.0s
CMIG Matias Romero 90.52 71 LR LR 16 10 49.2
comp=Z,305nm,19.8s,baz=214,slow=30
BBB Bella Bella 90.52 27 LR LR 16 11 48.9
comp=Z,526nm,20.1s,baz=222,slow=31
ANMO Albuquerque 90.99 50 LR LR 16 11 48.8
comp=Z,526nm,21.0s,baz=244,slow=31
ANMO Albuquerque 90.99 50 *i* P **P** **15 38 15.7 +0.2**
ANMO pmax pmax
comp=Z,6.0nm,1.6s
ENH Enshi 91.86 304 P **P** **15 38 19.9 +0.5**
HNS HongShan 92.11 312 ⇓P **P** **15 38 21.8 +1.5**
HNS pmax pmax
comp=Z,18nm,1.2s
NNA Nana 92.34 105 LR LR 16 11 32.4
comp=Z,137nm,18.8s,baz=221,slow=30
BJI Beijing 92.67 315 P **P** **15 38 23.8 +0.9**
BJI SKS **SKSac** **15 48 55.1 +1.4**
BJI S **ScS** **15 49 30.8 +3.8**
BJI pmax pmax
comp=Z,9.0nm,2.1s
NEW Newport 92.75 35 LR LR 16 17 06.4
comp=Z,922nm,18.1s,baz=224,slow=34
ATAH Atahualpa 93.36 100 LR LR 16 13 25.6
comp=Z,698nm,18.1s,baz=246,slow=31
LVC Limon Verde 93.42 118 LR LR 16 12 17.4
comp=Z,299nm,20.4s,baz=238,slow=30
PDAR Pinedale Array 93.50 43 P **P** **15 38 28.5 +1.5**
comp=Z,0.7nm,0.8s,baz=192,slow=2.7,SNR=6.7
PDAR LR LR 16 17 39.4
comp=Z,703nm,18.0s,baz=248,slow=34
comp=Z,0.7nm,0.8s
RND Reindeer 93.97 12 P **P** **15 38 28.4 -0.1**
RND Reindeer 93.97 12 P P **15 38 28.4 -0.1**
RND pmax pmax
comp=Z,33nm,1.8s
CRAI Chiangrai 93.98 291 P **P** **15 38 29.1 -0.4**
BOZ Bozeman (W) 93.99 39 P **P** **15 38 28.8 -0.3**
BOZ IAmb IAmb 15 38 47.1
comp=Z,8.1nm,1.6s
BOZ Bozeman (W) 93.99 39 P **P** **15 38 28.8 -0.3**
BOZ pmax pmax
comp=Z,8.0nm,1.6s
CMAR Chiang Mai Arr 94.33 289 P **P** **15 38 32.7 +1.6**
comp=Z,1.3nm,0.8s,baz=140,slow=1.8,SNR=9.6
CMAR LR LR 16 20 22.3
comp=Z,81nm,20.9s,baz=155,slow=35
comp=Z,1.3nm,0.8s
CMAR Chiang Mai Arr 94.33 289 *i* P **P** **15 38 33.4 +2.3**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
CHTO Chiang Mai 94.50 289 P **P** **15 38 30.3 -1.5**
CHTO IAmb IAmb 15 38 33.8
comp=Z,14nm,1.5s
CHTO Chiang Mai 94.50 289 P **P** **15 38 30.3 -1.5**
CHTO pmax pmax
comp=Z,14nm,1.5s
DLBC Dease Lake 94.60 22 LR LR 16 18 13.1
comp=Z,97nm,18.7s,baz=228,slow=34
ZEA Zeya 95.31 330 *e*P P 15 38 45.4 +11
ZEA *e* 15 51 16.1
ILAR Eielson Array 95.58 12 P **P** **15 38 36.0 +0.3**
comp=Z,0.8nm,0.8s,baz=221,slow=6.2,SNR=6.9
comp=Z,0.8nm,0.8s
PZH PanZhiHua 95.87 297 P **P** **15 38 38.1 0.0**
PZH pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 96.04 313 *e*P **P** **15 38 38.5 0.0**
HHC pmax pmax
comp=Z,15nm,0.9s
BILL Bilibino 97.01 353⇑ *e*P Pdif 15 38 43.0 +0.8
BILL *e* 15 42 35.5
BILL *e*PPP PPP 15 44 45.1
BILL *e*SS SS 15 56 43.9 +4.6
BILL *e*SSS SSS 16 00 25.9
BILL pmax pmax
comp=Z,3.0nm,1.1s
BILL MLR MLR
comp=Z,229nm,18.0s
LPAZ La Paz 97.42 113 LR LR 16 17 33.2
comp=Z,173nm,18.0s,baz=244,slow=32
KAN01 Argonia South 98.14 52 P **P** **15 38 45.9 -2.1**
YAK Yakutsk 100.02 337 LR LR 16 24 25.4
comp=Z,93nm,18.2s,baz=89,slow=36
GTA Gaotai 103.22 308 *e*P **Pdif** **15 39 11.8 +1.1**
GTA SKS 15 49 54.0
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA pmax pmax
comp=Z,53nm,5.0s
GTA LR LR
comp=Z,86nm,19.3s
GTA LR LR
comp=Z,170nm,21.4s
GTA LR LR
comp=Z,190nm,21.1s
WMQ Urumqi 113.28 308 *e*PKP **PKiKP** **15 43 49.3 +0.6**
WMQ LR LR
comp=Z,120nm,21.9s
ZALV Zalesovo Beam 117.62 319 PKP **PKiKP** **15 43 56.7 +0.1**
comp=Z,1.8nm,0.8s,baz=90,slow=0.4,SNR=5.9
MK31 Makanchi Array 117.74 311 **PKPdf** **15 43 55.8 -1.3**
MK31 Makanchi Array 117.74 311 PKiKP **PKPdf** **15 43 55.8 -1.3**
MKAR Makanchi Array 117.74 311 PKP **PKiKP** **15 43 57.1 0.0**
comp=Z,2.0nm,0.9s,baz=79,slow=2.5,SNR=12
MKAR Makanchi Array 117.74 311 **PKPdf** **15 43 56.5 -0.6**
MKAR Makanchi Array 117.74 311 PKiKP **PKPdf** **15 43 56.5 -0.6**
MAKZ Makanchi 117.95 310 **PKPdf** **15 43 57.0 -0.5**
MAKZ Makanchi 117.95 310 PKiKP **PKPdf** **15 43 57.0 -0.5**
KURK Kurchatov 120.84 314 **PKPdf** **15 44 02.1 -0.7**
KURK Kurchatov 120.84 314 *c i* PKiKP **PKiKP** **15 44 03.6 +0.7**
KURK pmax pmax
comp=Z,11nm,2.5s
KURBB Kurchatov Arra 120.88 314 PKP **PKiKP** **15 44 03.0 -0.1**
comp=Z,2.2nm,0.8s,baz=101,slow=1.9,SNR=19
AAK Ala-Archa 122.36 305 *c i* PKiKP **PKiKP** **15 44 06.1 -0.4**
AAK pmax pmax
comp=Z,1.0nm,0.6s
KK31 Karatay Array 125.33 305 **PKiKP** **15 44 12.0 -0.1**
KK31 PP PP 15 45 53.8 -9.0
KK31 Karatay Array 125.33 305 PKiKP **PKiKP** **15 44 12.0 -0.1**
KKAR Karatay Array 125.33 305 **PKiKP** **15 44 11.8 -0.3**
KKAR Karatay Array 125.33 305 **PKiKP** **15 44 11.7 -0.4**
KKAR PP PP 15 45 54.0 -8.7
KKAR Karatay Array 125.33 305 PKiKP **PKiKP** **15 44 11.7 -0.4**
BRVK Borovoye 126.16 317 **PKPdf** **15 44 12.8 -0.2**
BRVK Borovoye 126.16 317 *c i* PKiKP **PKiKP** **15 44 14.1 +0.7**
BRVK pmax pmax
comp=Z,14nm,2.5s
ARU Arti 132.55 322 **PKPdf** **15 44 24.8 -0.2**
ARU Arti 132.55 322 *i* PKiKP **PKiKP** **15 44 26.1 0.0**
ARU 15 46 49.5
ARU SS SS 16 04 22.5 -4.1
AKTO Aktyubinsk 133.93 314 PKP **PKiKP** **15 44 29.7 +0.5**
comp=Z,0.8nm,0.4s,baz=129,slow=1.8,SNR=6.1
GEYT Alibeck 134.19 297 PKP **PKiKP** **15 44 31.4 +1.3**
comp=Z,1.5nm,0.6s,baz=1.4,slow=6.2,SNR=4.2
KIRV Kirov 136.56 327 *c i* PKiKP **PKiKP** **15 44 34.7 +0.5**
KLMR Klimovskoe 139.72 334 *e*PKiKP **PKPdf** **15 44 37.3 -0.9**
KLMR pmax pmax
comp=Z,14nm,1.2s
KLMR Klimovskoe 139.72 334 *e*PKPdf **PKPdf** **15 44 37.3 -0.9**
KLMR AMP 15 44 42.0
comp=Z,14nm,1.2s
FINES FINESS Array B 143.77 342 PKhKP PKPpre 15 44 42.8
comp=Z,3.9nm,1.0s,baz=73,slow=4.7,SNR=4.6
OBN Obninsk 144.40 328 PKP **PKPdf** **15 44 46.2 -0.5**
comp=Z,3.7nm,0.4s,baz=276,slow=0.3,SNR=5.2
OBN Obninsk 144.40 328⇓ *i* PKiKP **PKiKP** **15 44 48.6 -1.7**
OBN *e* 15 47 57.3
OBN *e*SS SS 16 06 46.8 +0.8
OBN pmax pmax
comp=Z,9.0nm,1.1s
OBN MLR MLR
comp=Z,164nm,19.0s
ZEI Tsey 144.78 305 *i* PKiKP PKPbc 15 44 47.1 -0.1
ZEI pmax pmax
comp=Z,24nm,1.8s
VORR Voronezh 144.86 321 *e*PKiKP **PKPdf** **15 44 47.7 +0.1**
VORR pmax pmax
comp=Z,70nm,0.4s
GOF Gofitskoye 144.88 309⇑ *e*PKiKP **PKiKP** **15 44 57.5 +5.8**
ONI Oni 145.15 305 PKPdf **PKPdf** **15 44 48.5 0.0**
ONI Oni 145.15 305 PKiKP **PKPdf** **15 44 48.5 0.0**
MEF Metsahovi 145.25 342 *e*P **PKPab** **15 44 47.5 -0.4**
KBZ Khabaz 145.30 307 PKP **PKPab** **15 44 49.4 +0.7**
comp=Z,7.4nm,0.9s,baz=287,slow=3.5,SNR=6.6
KBZ Khabaz 145.30 307 *i* PKiKP **PKPab** **15 44 48.3 -0.3**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KIV Kislovodsk 145.40 307 *i* PKiKP **PKPdf** **15 44 48.5 -0.5**
KIV pmax pmax
comp=Z,17nm,1.1s
SHA1 Shidzhatmaz 145.47 307 *i* PKiKP **PKPdf** **15 44 48.6 -0.7**
VSU Vasula 146.00 339 *i* PKP2 **PKPbc** **15 44 49.4 -0.8**
VSU pmax pmax
comp=Z,63nm,0.7s
VSU Vasula 146.00 339 *e*P **PKPab** **15 44 50.1 -0.6**
MTSE Matsula 146.68 341 *e*P **PKPdf** **15 44 49.7 -0.8**
NC303 NORSAR Array S 146.76 353 **PKPbc** **15 44 51.8 -0.6**
NB201 NORSAR Array S 146.94 353 **PKPbc** **15 44 52.5 -0.4**
NB2 NORSAR Subarra 146.96 353 PKP **PKPbc** **15 44 53.0 0.0**
comp=Z,23nm,1.1s,baz=9.8,slow=2.9
NOA NORSAR Array B 146.96 353 PKPbc **PKPab** **15 44 53.5 -0.9**
comp=Z,7.7nm,0.9s,baz=14,slow=4.5,SNR=21
NBO00 NORSAR Array S 147.01 354 **PKPbc** **15 44 52.3 -0.8**
NAO01 NORSAR Array S 147.18 354 **PKPbc** **15 44 52.7 -0.9**
HFS Hagfors 147.54 351 PKPbc **PKPbc** **15 44 54.9 +0.3**
comp=Z,11nm,0.8s,baz=27,slow=3.6,SNR=13
SOC Sochi 147.57 308 *i* PKP2 **PKiKP** **15 44 56.8 -0.5**
SOC *e* 15 48 18.7
SOC *e*PPP PPP 15 51 35.1
SOC *e*SS SS 16 07 26.1 +2.7
SOC *e*SSS SSS 16 12 57.0
SOC pmax pmax
comp=Z,23nm,1.1s
KONO Kongsberg 148.48 354 **PKiKP** **15 44 57.6 -1.0**
KONO Kongsberg 148.48 354 *c i* PKiKP **PKPdf** **15 44 53.6 +0.1**
KONO pmax pmax
comp=Z,30nm,2.5s
NACGM Naroch 148.74 334⇑ *e*PKP **PKiKP** **15 44 59.5 +0.2**
comp=Z,39nm,1.1s,baz=41
ANN Anapa 148.76 311 *i* PKP2 **PKiKP** **15 44 58.6 -1.1**
ANN *e* 15 48 24.1
ANN *e* 15 52 02.1
ANN pmax pmax
comp=Z,53nm,1.2s
ANN MLR MLR
comp=Z,190nm,20.0s
PABE Paberze 149.28 338 **PKPbc** **15 44 58.9 -0.3**
PABE Paberze 149.28 338 *e*P **PKPbc** **15 44 57.7 -1.5**
AKASG Malin Array Be 150.62 326 PKPbc **PKiKP** **15 45 03.2 -0.1**
comp=Z,14nm,0.9s,baz=45,slow=3.4,SNR=44
AKBB Malin Array Si 150.62 326 *c i* PKiKP **PKPbc** **15 45 02.3 -0.3**
ASF Jabal al Asfar 151.33 286 PKPbc **PKiKP** **15 45 06.3 +0.7**
comp=Z,8.2nm,0.9s,baz=339,slow=2.1,SNR=10.0
EKA Eskdalemuir Ar 152.57 9 PKPbc **PKiKP** **15 45 07.9 +0.7**
comp=Z,0.5nm,0.6s,baz=1.1,slow=3.5,SNR=1.7
EKA PKPab **PKPab** **15 45 17.8 +0.3**
comp=Z,3.4nm,1.0s,baz=354,slow=1.7,SNR=5.9
MMAI Mount Meron Ar 152.59 288 PKPbc **PKiKP** **15 45 09.2 +1.1**
comp=Z,6.2nm,0.7s,baz=61,slow=4.2,SNR=8.0
EIL Elat 152.87 280 PKPbc **PKiKP** **15 45 09.7 +1.0**
comp=Z,8.2nm,0.9s,baz=327,slow=3.7,SNR=5.3
BRTR Keskin Array B 153.01 303 PKPbc **PKiKP** **15 45 09.3 +0.5**
comp=Z,2.4nm,0.9s,baz=116,slow=2.9,SNR=13
BRTR PKPab **pPKPbc** **15 45 18.3 -0.1**
comp=Z,2.3nm,0.8s,baz=166,slow=2.0,SNR=7.2
BRTR Keskin Array B 153.01 303 PKPdf **PKPdf** **15 44 59.0 -2.4**
BRTR **PKiKP** **15 45 08.8 0.0**

BRTR	**Keskin Array B**	**153.01**	**303**	PKIKP	**PKPdf**	15 44 59.0	**-2.4**
BRTR						15 45 08.8	
MLR	**Muntele Rosu**	**155.58**	**320**	PKPab	**PKPab**	15 45 30.6	**-0.3**
	comp=Z,2.0nm,0.7s,baz=88,slow=7.2,SNR=4.0						
PRD	**Provadia**	**155.99**	**314**	P	**PKPab**	15 45 33.0	**+0.6**
CLL	**Collm**	**156.08**	**346**	*i* PKIKP	PKPdf	15 45 16.5	+11
CLL				*i*		15 45 32.4	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL				pmax	pmax		
	comp=Z,11nm,1.4s						
CLL	**Collm**	**156.08**	**346**	*i* PKPdif	PKPdf	15 45 16.5	+11
	comp=Z,4.0nm,0.9s						
CLL				*i* PKPab	**PKPab**	15 45 32.4	**-0.1**
	comp=Z,11nm,1.4s						
CLL				*ex*	x	15 45 40.0	
CLL				*ex*	x	15 45 57.0	
CLL				*e*PP	PP	15 49 18.0	+8.6
CLL				*e*SS	SS	16 08 48.0	-7.1
CLL				*e*SSS	SSS	16 14 42.0	
CLL				LmV		17 17 00.0	
	comp=Z,200nm,18.6s						
DPC	**Dobruska-Polom**	**156.10**	**340**	*e*PKP2	**PKPab**	15 45 34.0	**+1.3**
DPC	**Dobruska-Polom**	**156.10**	**340**	*e*PKPAB	**PKPab**	15 45 34.0	**+1.3**
KRLC	**Kraliky**	**156.20**	**339**	*e*PKP2	PKPab	15 45 41.0	+7.8
KRLC	**Kraliky**	**156.20**	**339**	*e*PKPAB	PKPab	15 45 41.0	+7.8
VRAC	**Vranov**	**156.93**	**339**	PKPab	**PKPab**	15 45 36.4	**+0.1**
	comp=Z,1.3nm,0.4s,baz=84,slow=4.4,SNR=5.5						
KHC	**Kasperske Hory**	**157.97**	**343**	*e*PKP2	**PKPab**	15 45 41.9	**+1.1**
KHC	**Kasperske Hory**	**157.97**	**343**	*e*PKPAB	**PKPab**	15 45 41.9	**+1.1**
BMRD	**Maredsous**	**158.08**	**359**	*d*PKPdf	**PKPdf**	15 45 06.5	**-1.1**
GERES	**GERESS Array B**	**158.20**	**342**	PKPab	**PKPab**	15 45 39.9	**-2.0**
	comp=Z,0.3nm,0.6s,baz=69,slow=5.2,SNR=4.7						
WLF	**Walferdange**	**158.66**	**356**	*d*PKPdf	**PKPdf**	15 45 06.8	**-1.6**
VTS	**Vitosha**	**158.86**	**317**	P	**PKPab**	15 45 44.5	**-0.6**
TORD	**Torodi Ar. Bea**	**164.72**	**172**	PKPab	**PKPab**	15 46 14.8	**+3.8**
	comp=Z,5.9nm,0.8s,baz=186,slow=3.9,SNR=16						
ESDC	**Sonseca Array**	**166.97**	**28**	PKP	**PKPdf**	15 45 19.3	**+2.5**
	comp=Z,0.3nm,0.6s,baz=352,slow=3.4,SNR=4.6						

*IDC **18** 15:35:30.6±2.6, 22.2°S×173.1°E, h0km, mb3.7/3, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=111.1km s-min=29.1km az=161.0*

ISC 18 15:35:33.6±1.9, 22.6°S±0.5°×173.3°E±0.2°, h35km, n9, σ0s26/8, mb4.0/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.38**	**273**	Pn	Pn	15 37 05.7	+0.4
	0.8nm,0.3s,baz=103,slow=18,SNR=12						
DZM				Sn	**Sn**	**15 38 16.8**	**-0.1**
	0.8nm,0.3s,baz=103,slow=16,SNR=2.3						
	1.9nm,0.3s						
ASAR	**Alice Springs**	**36.18**	**260**	P	**P**	**15 42 33.5**	**+0.4**
	1.9nm,0.8s,baz=90,slow=9.6,SNR=19						
	1.9nm,0.8s						
WRA	**Warramunga Arr**	**36.35**	**267**	P	**P**	**15 42 34.5**	**-0.1**
	0.2nm,0.5s,baz=97,slow=8.3,SNR=6.2						
	0.2nm,0.5s						
TROLL	**Troll, Antarti**	**85.44**	**183**	P	**P**	**15 48 07.6**	**+0.2**
SNAA	**Sanae**	**85.96**	**181**	P	**P**	**15 48 09.7**	**-0.2**
VNA3	**Neumayer Olymp**	**86.40**	**179**	P	**P**	**15 48 11.8**	**-0.3**
VNA2	**Neumayer--Watz**	**86.74**	**180**	P	**P**	**15 48 13.7**	**0.0**
	baz=177,slow=4.0						
ILAR	**Eielson Array**	**92.33**	**16**	P	P	15 48 42.0	+2.2
	0.3nm,0.5s,baz=207,slow=7.8,SNR=4.4						
	0.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**147.19**	**356**	PKPbc	**PKiKP**	**15 55 15.2**	**0.0**
	1.2nm,0.6s,baz=356,slow=2.5,SNR=5.9						

*NEIC **18** 15:54:29.3±2.2, 20.2°S±0.0°×176.0°W±0.0°, h196km±6km, mb4.7/65, Error ellipse: s-maj=13.1km s-min=12.1km az=116.0*

*IDC **18** 15:54:30.8±3.0, 20.3°S×176.3°W, h197km±27km, mb3.9/13, mbtmp4.4/15, Error ellipse: s-maj=17.0km s-min=14.4km az=127.0*

*NOU **18** 15:54:32.4, 20.6°S×175.9°W, h194km, mb4.7/11, Tonga Islands*

ISC 18 15:54:29.6±0.3, 20.2°S±0.0°×176.0°W±0.0°, h200km, n130, σ1s173/136, mb4.6/43, 3C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**3.32**	**308**	P	Pn	15 55 29.3	+6.3
TAVE	**Taveuni**	**5.11**	**314**	P	Pn	15 55 51.3	+5.9
NIUE	**Niue**	**5.92**	**79**	Pn	**Pn**	**15 55 56.0**	**+0.2**
NIUE				Sn	**Sn**	**15 57 00.3**	**-3.7**
NIUE	**Niue**	**5.92**	**79**	P	**Pn**	**15 55 58.3**	**+2.5**
AFI	**Afiamalu**	**7.58**	**33**	S	**Sn**	**15 57 38.7**	**-4.7**
	36nm,0.4s,baz=58,slow=18,SNR=7.0						
AFI	**Afiamalu**	**7.58**	**33**	Pn	**Pn**	**15 56 15.2**	**-2.3**
FUNA	**Funafuti**	**12.58**	**338**	P	**P**	**15 57 24.5**	**-1.2**
MARNC	**Mare, Loyalty**	**14.90**	**263**	P	**P**	**15 57 51.2**	**-0.2**
MARNC	**Mare, Loyalty**	**14.90**	**263**	P	**P**	**15 57 56.2**	**+4.8**
RAR	**Rarotonga**	**15.27**	**96**	P	**P**	**15 57 57.0**	**+1.5**
RAR				IAmb	IAmb	15 58 27.4	
	comp=Z,24nm,1.0s						
PINNC	**Pines Island,**	**15.51**	**259**	P	**P**	**15 58 01.3**	**+3.1**
YATNC	**Mamie plateau,**	**15.98**	**261**	P	**Pn**	**15 58 07.6**	**+3.8**
OUENC	**Ouen Island, N**	**16.05**	**259**	P	**Pn**	**15 58 05.5**	**+0.8**
OUENC				IAmb	IAmb	15 58 09.6	
	comp=Z,40nm,0.9s						
DZM	**Mont Dzumac**	**16.40**	**261**	P	**P**	**15 58 07.7**	**-0.4**
	comp=Z,25nm,0.8s,baz=91,slow=17,SNR=48						
DZM	**Mont Dzumac**	**16.40**	**261**	P	**Pn**	**15 58 08.9**	**0.0**
DZM	**Mont Dzumac**	**16.40**	**261**	P	**Pn**	**15 58 12.5**	**+3.6**
ONTNC	**Ouen Toro**	**16.40**	**260**	P	**Pn**	**15 58 10.3**	**+1.5**
MXZ	**Matakaoa Point**	**17.87**	**195**	P	**Pn**	**15 58 26.0**	**+0.1**
KOUNC	**Koumac, New Ca**	**18.41**	**266**	P	**P**	**15 58 29.7**	**-0.3**
URZ	**Urewera**	**18.83**	**197**	P	**P**	**15 58 33.4**	**-0.9**
	comp=Z,5.0nm,0.3s,baz=264,slow=4.4,SNR=25						
URZ				S	**S**	**16 01 48.0**	**-10**
	comp=Z,10nm,0.7s,baz=250,slow=23,SNR=11						
URZ	**Urewera**	**18.83**	**197**	P	**P**	**15 58 33.1**	**-1.2**
URZ				IAmb	IAmb	15 58 53.7	
	comp=Z,47nm,1.4s						
URZ	**Urewera**	**18.83**	**197**	P	**P**	**15 58 34.5**	**+0.2**
HIZ	**Hauiti**	**19.76**	**201**	P	**P**	**15 58 44.1**	**-0.2**
QRZ	**Quartz Range**	**22.64**	**203**	P	**P**	**15 59 14.2**	**+0.6**
TUWZ	**Tuamarina**	**22.69**	**200**	P	**P**	**15 59 10.8**	**-3.3**
KHZ	**Kahutara**	**23.71**	**199**	P	**P**	**15 59 23.8**	**+0.6**
LTZ	**Lake Taylor**	**24.45**	**201**	P	**P**	**15 59 28.8**	**-1.3**
LTZ				IAmb	IAmb	15 59 33.7	
	comp=Z,14nm,0.6s						
OXZ	**Oxford**	**25.01**	**201**	P	**P**	**15 59 33.3**	**-1.8**
OXZ				IAmb	IAmb	15 59 40.1	
	comp=Z,14nm,0.7s						
RPZ	**Rata Peaks**	**25.69**	**202**	P	**P**	**15 59 41.3**	**+0.1**
	comp=Z,5.7nm,0.3s,baz=348,slow=4.3,SNR=10						
	comp=Z,5.7nm,0.3s						
FOZ	**Fox Glacier**	**25.99**	**204**	P	**P**	**15 59 42.7**	**-1.1**
FOZ				IAmb	IAmb	15 59 55.9	
	comp=Z,33nm,1.2s						
WHZ	**Wether Hill Ro**	**28.69**	**204**	P	**P**	**16 00 06.8**	**-1.1**
WHZ				IAmb	IAmb	16 00 12.0	
	comp=Z,27nm,1.3s						
EIDS	**Eidsvold**	**30.64**	**254**	P	**P**	**16 00 24.8**	**-0.6**
EIDS				IAmb	IAmb	16 00 28.0	
	comp=Z,12nm,1.1s						
ARMA	**Armidale**	**30.77**	**244**	P	**P**	**16 00 25.9**	**-0.7**
ARMA				IAmb	IAmb	16 01 08.0	
	comp=Z,16nm,1.4s						
CAN	**Canberra**	**34.11**	**237**	P	**P**	**16 00 54.2**	**-1.4**
CAN				IAmb	IAmb	16 01 29.5	
	comp=Z,21nm,1.5s						
CTA	**Charters Tower**	**35.31**	**264**	P	**P**	**16 01 04.8**	**-1.1**
	comp=Z,19nm,0.5s,baz=92,slow=9.9,SNR=73						
	comp=Z,19nm,0.5s						
CTAO	**Charters Tower**	**35.31**	**264**	P	**P**	**16 01 05.2**	**-0.6**
PATS	**Pohnpei**	**36.91**	**314**	P	**P**	**16 01 19.1**	**-0.3**
TOO	**Toolangi**	**37.47**	**234**	P	**P**	**16 01 22.2**	**-1.8**
COEN	**Coen**	**39.38**	**273**		**P**	**16 01 40.5**	**+0.4**
STKA	**Stephens Creek**	**39.49**	**244**	P	**P**	**16 01 39.0**	**-1.8**
	comp=Z,2.8nm,0.6s,baz=80,slow=11,SNR=8.5						
	comp=Z,2.8nm,0.6s						
STKA	**Stephens Creek**	**39.49**	**244**	P	**P**	**16 01 40.1**	**-0.8**
BBOO	**Buckleboo**	**44.25**	**244**	P	**P**	**16 02 17.6**	**-1.7**
BBOO				IAmb	IAmb	16 02 33.3	
	comp=Z,50nm,1.5s						
AS31	**Alice Springs**	**46.32**	**256**	P	**P**	**16 02 35.2**	**-0.6**
AS31				PcP	**PcP**	**16 04 06.9**	**-0.8**
ASAR	**Alice Springs**	**46.32**	**256**	P	**P**	**16 02 34.9**	**-0.9**
	comp=Z,11nm,0.7s,baz=95,slow=8.4,SNR=141						
ASAR				PcP	**PcP**	**16 04 06.6**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=104,slow=4.2,SNR=4.9						
ASAR				ScP	**ScP**	**16 07 41.4**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=99,slow=4.4,SNR=11						
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**46.32**	**256**	P	**P**	**16 02 34.4**	**-1.4**
ASAR				PcP	**PcP**	**16 04 07.0**	**-0.6**
WB0	**Warramunga Arr**	**46.39**	**262**	P	**P**	**16 02 35.4**	**-1.0**
WB0				IAmb	IAmb	16 02 36.1	
	comp=Z,12nm,0.6s						
WB2	**Warramunga Arr**	**46.40**	**261**	P	**P**	**16 02 35.0**	**-1.5**
WRAB	**Tennant Creek**	**46.41**	**261**	P	**P**	**16 02 35.2**	**-1.3**
WRA	**Warramunga Arr**	**46.41**	**261**	P	**P**	**16 02 35.4**	**-1.1**
	comp=Z,6.3nm,0.7s,baz=96,slow=7.6,SNR=119						
WRA				pP	**pwP**	**16 03 24.1**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=97,slow=7.5,SNR=4.9						
	comp=Z,6.3nm,0.7s						
WRA	**Warramunga Arr**	**46.41**	**261**	P	**P**	**16 02 35.2**	**-1.4**
MTN	**Manton Dam**	**50.97**	**270**	P	**P**	**16 03 10.6**	**-0.6**
MTN				IAmb	IAmb	16 03 11.6	
	comp=Z,23nm,1.1s						
FORT	**Forrest**	**51.02**	**246**	P	**P**	**16 03 11.1**	**-0.3**
FORT				IAmb	IAmb	16 03 27.1	
	comp=Z,49nm,1.2s						
KNRA	**Kununurra**	**52.47**	**266**	P	**P**	**16 03 21.8**	**-0.6**
FAKI	**Fak Fak**	**53.22**	**282**	P	**P**	**16 03 27.3**	**-0.6**
FAKI				IAmb	IAmb	16 03 31.3	
	comp=Z,28nm,1.2s						
FITZ	**Fitzroy Crossi**	**54.84**	**262**	P	**P**	**16 03 40.0**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=76,slow=11,SNR=14						
	comp=Z,2.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**54.84**	**262**	P	**P**	**16 03 39.0**	**-0.6**
FITZ				IAmb	IAmb	16 03 46.4	
	comp=Z,15nm,1.5s						
SBA	**Scott Base**	**58.18**	**184**	P	**P**	**16 04 04.4**	**+2.3**
VNDA	**Vanda**	**58.26**	**186**	P	**P**	**16 04 04.6**	**+2.0**
	comp=Z,2.0nm,0.7s,baz=1.3,slow=6.7,SNR=15						
	comp=Z,2.0nm,0.7s						
VNDA	**Vanda**	**58.26**	**186**	P	**P**	**16 04 03.9**	**+1.2**
MBWA	**Marble Bar**	**59.66**	**257**	P	**P**	**16 04 11.9**	**-1.3**
MBWA				IAmb	IAmb	16 04 25.8	
	comp=Z,36nm,1.4s						
CASY	**Casey**	**64.90**	**205**	P	**P**	**16 04 45.7**	**-1.4**
TOLI2	**Tolitoli**	**65.34**	**281**	P	**P**	**16 04 50.3**	**-0.6**
TOLI2				IAmb	IAmb	16 05 00.8	
	comp=Z,4.9nm,0.7s						
JHJ2	**Mitsune**	**67.80**	**321**	P	**P**	**16 05 05.0**	**-1.0**
JAGI	**Jajag, Banyuwa**	**68.19**	**269**	P	**P**	**16 05 07.1**	**-1.8**
QSPA	**South Pole Qui**	**69.75**	**180**	P	**P**	**16 05 19.2**	**+1.4**
QSPA				IAmb	IAmb	16 05 20.1	
	comp=Z,7.0nm,0.8s						
MJAR	**Matsushiro Arr**	**71.15**	**322**	P	**P**	**16 05 26.3**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=155,slow=6.6,SNR=9.8						
	comp=Z,2.1nm,0.7s						
JOW	**Kunigami**	**71.45**	**309**	P	**P**	**16 05 28.2**	**-0.3**
JOW				IAmb	IAmb	16 05 49.4	
	comp=Z,14nm,1.2s						
KKM	**Kota Kinabalu**	**71.47**	**284**	P	**P**	**16 05 30.1**	**+1.1**
KKM				IAmb	IAmb	16 06 10.3	
	comp=Z,40nm,1.5s						
AMKA	**Amchitka**	**71.50**	**357**	P	**P**	**16 05 29.3**	**+1.1**
UGM	**Wanagama**	**71.78**	**268**	P	**P**	**16 05 29.7**	**-1.1**
ADK	**Adak**	**71.89**	**360**	P	**P**	**16 05 31.8**	**+1.3**
ADK				IAmb	IAmb	16 05 40.8	
	comp=Z,21nm,1.2s						
TWG	**Pinlang**	**74.81**	**302**	P	**P**	**16 05 48.2**	**-0.1**
TWG				IAmb	IAmb	16 06 28.5	
	comp=Z,18nm,1.1s						
YULB	**Yu-li**	**74.92**	**302**	P	**P**	**16 05 48.0**	**-0.9**
YULB				IAmb	IAmb	16 06 15.7	
	comp=Z,23nm,1.3s						
SSLB	**Suanglung**	**75.39**	**303**	P	**P**	**16 05 50.5**	**-1.1**
SSLB				IAmb	IAmb	16 05 57.0	
	comp=Z,19nm,1.3s						
TPUB	**Ta-pu**	**75.41**	**302**	P	**P**	**16 05 49.3**	**-2.4**
PET	**Petropavlovsk**	**76.26**	**345**	P	**P**	**16 05 57.0**	**+1.2**
PET				IAmb	IAmb	16 06 34.9	
	comp=Z,25nm,1.4s						
PEA0B	**Petropavlovsk-**	**76.57**	**344**	P	**P**	**16 05 58.0**	**+0.4**
PETK	**Petropavlovsk-**	**76.57**	**344**	P	**P**	**16 05 58.5**	**+1.0**
	comp=Z,3.9nm,0.8s,baz=124,slow=8.3,SNR=7.2						
	comp=Z,3.9nm,0.8s						
CHIR	**Chirikof Islan**	**77.80**	**12**	P	**P**	**16 06 04.8**	**+0.5**
SMAI	**San Martin Ant**	**78.13**	**159**	P	**P**	**16 06 07.8**	**+1.8**
SMAI				IAmb	IAmb	16 06 51.3	
	comp=Z,13nm,0.9s						
QSM	**Queen of Sheba**	**79.17**	**45**	P	**P**	**16 06 09.1**	**-3.3**
BELA	**Belgrano 2**	**79.50**	**172**	P	**P**	**16 06 13.3**	**-0.2**
OHAK	**Old Harbor**	**79.57**	**12**	P	**P**	**16 06 14.2**	**+0.3**
OHAK				IAmb	IAmb	16 06 51.0	
	comp=Z,26nm,1.3s						
NVAR	**Mina Array Bea**	**79.66**	**42**	P	**P**	**16 06 18.6**	**+3.4**
	comp=Z,0.5nm,0.6s,baz=219,slow=8.1,SNR=6.2						
	comp=Z,0.5nm,0.6s						
X16A	**Lo Mia Camp, P**	**82.06**	**49**	P	**P**	**16 06 28.1**	**+0.2**
MAW	**Mawson**	**82.34**	**199**	P	**P**	**16 06 28.3**	**-0.3**
U15A	**North Rim**	**82.51**	**47**	P	**P**	**16 06 30.9**	**+0.6**
GLI	**Glacier Island**	**84.23**	**14**	P	**P**	**16 06 39.5**	**+1.4**
GLI				IAmb	IAmb	16 06 45.4	
	comp=Z,17nm,1.1s						
H03S2	**Juan Fernandez**	**84.60**	**124**	T	T	17 39 25.9	
	baz=246,SNR=17						
H03S1	**Juan Fernandez**	**84.61**	**124**	T	T	17 39 22.0	
	baz=246,SNR=18						
H03S3	**Juan Fernandez**	**84.62**	**124**	T	T	17 39 12.4	
	baz=246,SNR=14						
TX31	**Lajitas Ar. Si**	**85.44**	**57**	P	**P**	**16 06 43.6**	**-1.4**
TX31				IAmb	IAmb	16 07 03.5	
	comp=Z,9.3nm,0.8s						
TX32	**Lajitas Array**	**85.44**	**57**	P	**P**	**16 06 44.0**	**-1.1**
TXAR	**Lajitas Array**	**85.44**	**57**	P	**P**	**16 06 47.7**	**+2.6**
	comp=Z,1.2nm,0.9s,baz=243,slow=4.1,SNR=9.1						
	comp=Z,1.2nm,0.9s						
TRF	**Thorofare Moun**	**85.91**	**11**	P	**P**	**16 06 46.3**	**-0.3**
TRF				IAmb	IAmb	16 06 54.7	
	comp=Z,14nm,1.3s						
ILAR	**Eielson Array**	**87.75**	**12**	P	**P**	**16 06 56.2**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=283,slow=3.1,SNR=4.4						
	comp=Z,0.5nm,0.7s						
TROLL	**Troll, Antarti**	**87.91**	**180**	P	**P**	**16 06 56.8**	**+0.5**
SNAA	**Sanae**	**88.13**	**178**	P	**P**	**16 06 57.5**	**+0.2**
VNA3	**Neumayer Olymp**	**88.19**	**176**	P	**P**	**16 06 58.0**	**+0.4**
VNA2	**Neumayer--Watz**	**88.66**	**176**	P	**P**	**16 07 00.4**	**+0.7**
	baz=186,slow=3.8						
VNA1	**Neumayer Stat**	**88.87**	**176**	P	**P**	**16 07 01.6**	**+0.9**
HHC	**Hu-ho-hao-te**	**90.53**	**314**	*e*P	**P**	**16 07 10.9**	**+1.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,5.0s						
WMOK	**Wichita Mounta**	**91.48**	**53**	P	P	16 07 08.4	-5.1
WMOK				IAmb	IAmb	16 07 21.9	
	comp=Z,7.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**91.76**	**289**	P	**P**	**16 07 15.6**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=120,slow=1.7,SNR=7.9						
	comp=Z,1.3nm,0.8s						
PZH	**PanZhiHua**	**92.23**	**297**	P	**P**	**16 07 18.5**	**+1.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,150nm,4.3s						
MKAR	**Makanchi Array**	**112.39**	**313**	PKiKP	**PKiKP**	**16 12 41.9**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=140,slow=0.7,SNR=4.9						
ARCES	**ARCESS Array B**	**129.06**	**350**	PKP	**PKiKP**	**16 13 13.7**	**0.0**
	comp=Z,0.4nm,0.5s,baz=14,slow=0.5,SNR=8.0						
FINES	**FINESS Array B**	**136.09**	**345**	PKP	**PKPdf**	**16 13 25.6**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=90,slow=5.7,SNR=4.3						
AKASG	**Malin Array Be**	**143.71**	**333**	PKhKP	PKPpre	16 13 38.4	
	comp=Z,0.5nm,0.3s,baz=42,slow=4.6,SNR=9.0						
BRTR	**Keskin Array B**	**148.04**	**314**	PKPbc	**PKiKP**	**16 13 52.5**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=126,slow=4.5,SNR=12						
CRVS	**Cervenica-Dubn**	**148.20**	**338**	*e*PKP	**PKPbc**	**16 13 52.2**	**+0.4**
CLL	**Collm**	**148.26**	**349**	*e*PKPdf	**PKPbc**	**16 13 50.0**	**-1.8**
CLL				*i* PKPbc	**PKiKP**	**16 13 53.2**	**-0.2**
	comp=Z,6.0nm,1.1s						
CLL				*i* PKPab	**PKPab**	**16 13 56.6**	**+1.2**
	comp=Z,6.0nm,0.9s						
DPC	**Dobruska-Polom**	**148.46**	**345**	*e*PKP	**PKiKP**	**16 13 54.8**	**+0.9**
DPC				*e*PKPAB	**PKPab**	**16 13 58.4**	**+2.1**
KRLC	**Kraliky**	**148.60**	**344**	*e*PKPAB	**PKPab**	**16 13 57.9**	**+1.0**
MORC	**Moravsky Berou**	**148.67**	**343**	*e*PKP	**PKiKP**	**16 13 54.9**	**+0.6**
VRAC	**Vranov**	**149.35**	**344**	*e*PKP	**PKiKP**	**16 13 56.6**	**+0.9**
VYHS	**Vyhne**	**149.43**	**340**	*e*PKP	**PKiKP**	**16 13 56.7**	**+0.8**
VYHS				*e*		16 14 02.4	
JAVC	**Velka Javorina**	**149.46**	**342**	*e*PKP	**PKiKP**	**16 13 57.6**	**+1.6**
KRUC	**Moravsky**	**149.63**	**344**	*e*PKP	**PKiKP**	**16 13 57.1**	**+0.8**
MODS	**Modra-Piesok**	**150.01**	**342**	*e*PKP	**PKiKP**	**16 13 58.7**	**+1.6**
KHC	**Kasperske Hory**	**150.23**	**347**	*e*PKP	**PKiKP**	**16 13 58.0**	**+0.4**
KHC				*e*PKPAB	**PKPab**	**16 14 04.7**	**+1.1**
CKRC	**Cesky Krumlov**	**150.36**	**346**	*e*PKP	**PKiKP**	**16 13 58.2**	**+0.4**
GERES	**GERESS Array B**	**150.47**	**347**	PKPbc	**PKiKP**	**16 13 59.2**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=45,slow=2.1,SNR=10						
CONA	**Conrad Observa**	**150.81**	**343**	*e*P	**PKiKP**	**16 13 60.0**	**+1.1**
	comp=Z,3.6nm,0.9s						
CONA				*i* P	**PKPab**	**16 14 08.5**	**+2.4**
	comp=Z,3.2nm,0.7s						
RONA	**Rosalia, Austr**	**150.90**	**343**	*i* P	**PKiKP**	**16 14 00.3**	**+1.3**
	comp=Z,5.1nm,1.1s						
RONA				*e*P	**PKPab**	**16 14 08.9**	**+2.5**
	comp=Z,3.9nm,0.6s						
BIOA	**Bad Ischl, Aus**	**151.58**	**346**	*e*P	**PKPab**	**16 14 11.4**	**+2.2**
	comp=Z,3.9nm,0.6s						
SOKA	**Soboth**	**152.18**	**343**	*e*P	**PKPab**	**16 14 13.5**	**+1.6**
	comp=Z,2.7nm,0.9s						
KBA	**Koelnbreinsper**	**152.22**	**346**	*e*P	**PKPab**	**16 14 14.4**	**+2.3**
	comp=Z,2.7nm,0.7s						
OBKA	**Obir**	**152.47**	**344**	*e*P	**PKPab**	**16 14 14.4**	**+1.3**
	comp=Z,2.7nm,0.9s						
FETA	**Feichten**	**152.79**	**350**	*e*P	**PKPab**	**16 14 16.2**	**+1.7**
	comp=Z,1.8nm,0.8s						

*NEIC **18** 16:08:57.3±2.0, 22.6°S±0.2°×173.4°E±0.1°, h10km±2km, mb4.3/8, Error ellipse: s-maj=30.0km s-min=22.7km az=14.0*

*IDC **18** 16:08:59.2±2.7, 22.2°S×172.96°E, h0km, mb4.1/3, mbtmp4.1/4, ML3.0/1, MS3.6/6, Error ellipse: s-maj=128.4km s-min=40.6km az=168.0*

ISC 18 16:09:00.5±1.6, 22.6°S±0.3°×173.3°E±0.1°, h35km, n31, σ0s85/20, mb4.3/6, MS3.5/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.04**	**282**	Pn	**Pn**	**16 10 14.7**	**+1.1**
PINNC	**Pines Island,**	**5.43**	**269**	Pn	**Pn**	**16 10 20.2**	**+1.3**
OUENC	**Ouen Island, N**	**5.99**	**271**	Pn	**Pn**	**16 10 26.4**	**-0.3**
ONTNC	**Ouen Toro**	**6.36**	**272**	Pn	**Pn**	**16 10 33.0**	**+1.2**
DZM	**Mont Dzumac**	**6.39**	**274**	Pn	**Pn**	**16 10 31.7**	**-0.5**
	0.4nm,0.3s,baz=111,slow=16,SNR=26						
DZM				Sn	**Sn**	**16 11 42.8**	**-1.3**
	0.3nm,0.3s,baz=144,slow=18,SNR=1.5						
	16nm,1.1s						
DZM	**Mont Dzumac**	**6.39**	**274**	*e*LR	LR	16 11 57.5	
	comp=Z,528nm,26.0s						
DZM	**Mont Dzumac**	**6.39**	**274**	Pn	**Pn**	**16 10 32.5**	**+0.3**
URZ	**Urewera**	**15.91**	**169**	LR	LR	16 17 21.7	
	comp=Z,461nm,19.0s,baz=31,slow=31						
AFI	**Afiamalu**	**16.59**	**61**	LR	LR	16 19 11.8	
	comp=Z,95nm,18.6s,baz=215,slow=36						
HNR	**Honiara**	**18.35**	**314**	LR	LR	16 19 19.0	
	comp=Z,260nm,19.0s,baz=146,slow=34						
LTZ	**Lake Taylor**	**20.11**	**182**	P	Pn	16 13 31.4	-1.8
LTZ				IAmb	IAmb	16 13 48.2	
	comp=Z,31nm,1.3s						
RPZ	**Rata Peaks**	**21.11**	**185**	LR	LR	16 20 28.3	
	comp=Z,619nm,19.6s,baz=1.0,slow=32						
RAR	**Rarotonga**	**24.99**	**92**	LR	LR	16 22 20.7	
	comp=Z,49nm,21.9s,baz=269,slow=32						
CTA	**Charters Tower**	**25.32**	**271**	LR	LR	16 22 49.1	
	comp=Z,115nm,18.5s,baz=26,slow=33						
TBI	**Tubuai**	**34.21**	**99**	*e*LR	LR	16 24 40.7	
	comp=Z,124nm,29.0s		

ONTNC	**Ouen Toro**	**6.22 274**			**Pn**		**16 26 14.1**	**-0.2**	
DZM	**Mont Dzumac**	**6.26 277**	Pn		**Pn**		**16 26 15.3**	**+0.4**	
	1.1nm,0.3s,baz=134,slow=15,SNR=12								
	7.8nm,0.7s								
DZM	**Mont Dzumac**	**6.26 277**	*e*Pn		**Pg**		**16 26 40.2**	**-2.1**	
	139nm,0.9s								
DZM				*e*LR	LR		16 27 38.3		
	comp=Z,5μm,27.1s								
DZM	**Mont Dzumac**	**6.26 277**			**Pn**		**16 26 14.8**	**-0.1**	
KOUNC	**Koumac, New Ca**	**8.58 284**			**Pn**		**16 26 49.0**	**+2.4**	
HIZ	**Hauiti**	**15.59 175**	P		**P**		**16 28 27.4**	**+1.0**	
NIUE	**Niue**	**16.26 79**	P		**Pn**		**16 28 32.2**	**+1.3**	
QRZ	**Quartz Range**	**17.84 182**	P		**Pn**		**16 28 50.7**	**0.0**	
QRZ			IAmb		IAmb		16 29 05.6		
	comp=Z,73nm,1.4s								
BFZ	**Birch Farm**	**17.88 172**	P		**P**		**16 28 52.1**	**+0.3**	
NNZ	**Nelson**	**18.23 179**	P		**P**		**16 28 56.2**	**+0.6**	
NNZ			IAmb		IAmb		16 28 59.1		
	comp=Z,70nm,1.4s								
SNZO	**South Karori**	**18.37 176**	P		**P**		**16 28 58.5**	**+1.4**	
SNZO			IAmb		IAmb		16 29 07.1		
	comp=Z,52nm,1.1s								
TUWZ	**Tuamarina**	**18.45 178**	P		**P**		**16 28 57.3**	**-0.7**	
MSWZ	**Moikau Station**	**18.51 175**	P		**P**		**16 28 58.4**	**-0.3**	
KHZ	**Kahutara**	**19.43 179**	P		**P**		**16 29 08.8**	**+0.1**	
KHZ			IAmb		IAmb		16 29 21.0		
	comp=Z,34nm,1.4s								
LTZ	**Lake Taylor**	**19.80 182**	P		**P**		**16 29 13.9**	**+1.0**	
LTZ			IAmb		IAmb		16 29 24.9		
	comp=Z,51nm,1.4s								
EIDS	**Eidsvold**	**20.29 259**	P		**P**		**16 29 19.0**	**+0.7**	
EIDS			IAmb		IAmb		16 29 25.8		
	comp=Z,27nm,1.1s								
OXZ	**Oxford**	**20.36 182**	P		**P**		**16 29 19.9**	**+1.0**	
OXZ			IAmb		IAmb		16 29 36.4		
	comp=Z,34nm,1.4s								
ARMA	**Armidale**	**20.61 244**	P		**P**		**16 29 21.4**	**-0.4**	
FOZ	**Fox Glacier**	**20.73 187**	P		**P**		**16 29 21.4**	**-1.5**	
RPZ	**Rata Peaks**	**20.80 184**	P		**P**		**16 29 21.9**	**-1.8**	
RPZ			IAmb		IAmb		16 29 38.8		
	comp=Z,31nm,1.3s								
LBZ	**Lake Benmore**	**21.53 186**	P		**P**		**16 29 29.4**	**-2.2**	
MLZ	**Mavora Lakes**	**22.75 189**	P		**P**		**16 29 43.8**	**-0.9**	
WHZ	**Wether Hill Ro**	**23.29 189**	P		**P**		**16 29 50.8**	**+0.7**	
WHZ			IAmb		IAmb		16 30 07.0		
	comp=Z,36nm,1.5s								
CAN	**Canberra**	**24.37 234**	P		**P**		**16 30 02.5**	**+1.7**	
CAN			IAmb		IAmb		16 30 04.8		
	comp=Z,11nm,1.1s								
CTAO	**Charters Tower**	**25.18 271**	P		**P**		**16 30 09.2**	**+1.1**	
CTAO			IAmb		IAmb		16 30 17.3		
	comp=Z,12nm,1.1s								
STKA	**Stephens Creek**	**29.31 245**	P		**P**		**16 30 45.6**	**+0.5**	
	comp=Z,2.3nm,0.9s,baz=88,slow=14,SNR=3.2								
	comp=Z,3nm,0.8s								
STKA	**Stephens Creek**	**29.31 245**	P		**P**		**16 30 46.0**	**+0.8**	
MCQ	**Macquarie Isla**	**33.27 195**	P		**P**		**16 31 21.2**	**+1.5**	
TBI	**Tubuai**	**34.32 98**	*e*S		**S**		**16 36 56.0**	**-0.7**	
	comp=Z,290nm,25.8s								
TBI				*e*LR	LR		16 40 34.2		
	comp=Z,1μm,29.5s								
PPT2	**Papeete2**	**35.30 88**	*e*S		**S**		**16 37 11.3**	**-0.8**	
	comp=Z,243nm,25.0s								
PPT2				*e*LR	LR		16 41 01.9		
	comp=Z,1μm,27.0s								
AS31	**Alice Springs**	**35.98 261**	P		**P**		**16 31 42.7**	**-0.9**	
ASAR	**Alice Springs**	**35.98 261**	P		**P**		**16 31 43.9**	**+0.2**	
	comp=Z,6.0nm,0.9s,baz=84,slow=8.7,SNR=23								
ASAR				LR	LR		16 46 28.4		
	comp=Z,288nm,19.1s,baz=100,slow=36								
	comp=Z,6.0nm,0.9s								
ASAR	**Alice Springs**	**35.98 261**	P		**P**		**16 31 43.0**	**-0.7**	
WB0	**Warramunga Arr**	**36.17 268**	P		**P**		**16 31 44.8**	**-0.5**	
WB2	**Warramunga Arr**	**36.17 267**	P		**P**		**16 31 44.1**	**-1.1**	
WB2			IAmb		IAmb		16 32 02.1		
	comp=Z,8.1nm,1.2s								
WRA	**Warramunga Arr**	**36.18 267**	P		**P**		**16 31 44.5**	**-0.9**	
	comp=Z,1.0nm,0.7s,baz=97,slow=8.3,SNR=4.3								
	comp=Z,1.0nm,0.7s								
WRA	**Warramunga Arr**	**36.18 267**	P		**P**		**16 31 44.2**	**-1.2**	
FORT	**Forrest**	**40.76 249**	P		**P**		**16 32 23.8**	**0.0**	
MTN	**Manton Dam**	**41.10 277**	P		**P**		**16 32 27.4**	**+0.7**	
MTN			IAmb		IAmb		16 32 34.4		
	comp=Z,17nm,1.4s								
KNRA	**Kununurra**	**42.39 272**	P		**P**		**16 32 36.2**	**-1.0**	
FITZ	**Fitzroy Crossi**	**44.61 267**			**P**		**16 32 54.7**	**-0.5**	
FITZ			IAmb		IAmb		16 32 57.0		
	comp=Z,13nm,1.1s								
TAOE	**Nuku Hiva Isla**	**46.84 80**	*e*S		**S**		**16 40 02.7**	**-1.1**	
	comp=Z,198nm,25.1s								
TAOE				*e*LR	LR		16 46 21.9		
	comp=Z,616nm,26.0s								
MBWA	**Marble Bar**	**49.32 261**	P		**P**		**16 33 32.0**	**+0.1**	
VNDA	**Vanda**	**54.91 183**	P		**P**		**16 34 13.1**	**+0.3**	
	comp=Z,0.7nm,1.0s,baz=310,slow=6.7,SNR=3.1								
	comp=Z,0.7nm,1.0s								
VNDA	**Vanda**	**54.91 183**	P		**P**		**16 34 13.0**	**+0.3**	
SBA	**Scott Base**	**55.06 182**	P		**P**		**16 34 15.1**	**+1.3**	
QSPA	**South Pole Qui**	**67.14 180**	P		**P**		**16 35 36.0**	**-0.2**	
	comp=Z,5.9nm,1.0s,baz=360,slow=4.1,SNR=9.2								
	comp=Z,5.9nm,1.0s								
AMKA	**Amchitka**	**74.19 4**	P		**P**		**16 36 18.0**	**-0.9**	
ADK	**Adak**	**75.03 6**	P		**P**		**16 36 26.3**	**+2.6**	
MAW	**Mawson**	**76.38 202**	P		**P**		**16 36 31.8**	**+0.4**	
	comp=Z,3.8nm,1.0s,baz=113,slow=4.4,SNR=4.9								
	comp=Z,3.8nm,1.0s								
BELA	**Belgrano 2**	**78.09 174**	P		**P**		**16 36 39.6**	**-1.4**	
BELA			IAmb		IAmb		16 36 40.8		
	comp=Z,6.1nm,1.1s								
SMAI	**San Martin Ant**	**79.17 161**	P		**P**		**16 36 46.8**	**-0.2**	
SMAI			IAmb		IAmb		16 36 48.7		
	comp=Z,6.5nm,1.0s								
CMAR	**Chiang Mai Arr**	**83.33 293**	P		**P**		**16 37 11.1**	**+1.1**	
	comp=Z,0.8nm,0.3s,baz=122,slow=3.3,SNR=4.1								
	comp=Z,0.8nm,0.3s								
PZH	**PanZhiHua**	**84.76 301**	P		**P**		**16 37 17.5**	**+0.2**	
PZH			pmax		pmax				
	comp=Z,10.0nm,0.6s								
PZH			pmax		pmax				
	comp=Z,300nm,4.6s								
TROLL	**Troll, Antarti**	**85.08 183**	P		**P**		**16 37 17.0**	**-1.2**	
TROLL			S		S		16 47 26.4	-21	
HHC	**Hu-ho-hao-te**	**85.40 318**	*e*P		**P**		**16 37 20.9**	**+0.8**	
HHC			pmax		pmax				
	comp=Z,24nm,0.8s								
HHC			pmax		pmax				
	comp=Z,160nm,4.8s								
SNAA	**Sanae**	**85.60 181**	P		**P**		**16 37 19.0**	**-1.7**	
SNAA	**Sanae**	**85.60 181**	P		**P**		**16 37 19.4**	**-1.3**	
SNAA			IAmb		IAmb		16 37 20.2		
	comp=Z,3.0nm,0.9s								
VNA3	**Neumayer Olymp**	**86.05 179**	P		**P**		**16 37 21.4**	**-1.4**	
VNA2	**Neumayer--Watz**	**86.39 180**	P		**P**		**16 37 22.8**	**-1.7**	
	baz=183,slow=3.0								
VNA1	**Neumayer--Stat**	**86.67 180**	P		**P**		**16 37 25.2**	**-0.7**	
NVAR	**Mina Array Bea**	**88.57 47**	P		**P**		**16 37 36.1**	**+0.4**	
	comp=Z,0.6nm,0.9s,baz=217,slow=9.3,SNR=3.7								
	comp=Z,0.6nm,0.9s								
ILAR	**Eielson Array**	**92.71 16**	P		**P**		**16 37 52.0**	**-2.0**	
	comp=Z,0.6nm,0.8s,baz=227,slow=5.9,SNR=5.9								
	comp=Z,0.6nm,0.8s								
CLL	**Collm**	**147.77 336**	*e*PKPbc		**PKPbc**		**16 44 28.0**	**+0.8**	
	comp=Z,9.0nm,1.5s								
GERES	**GERESS Array B**	**149.45 333**	PKPbc		**PKPbc**		**16 44 30.6**	**-1.2**	
	comp=Z,0.7nm,0.8s,baz=57,slow=4.9,SNR=7.0								

IDC ***18*** *16:25:05.8±0.5,22.80S×173.26E, h0km, mb4.6/20, mbtmp4.7/23, ML4.2/3, Error ellipse: s-maj=17.8km s-min=14.1km az=84.0*

BJI ***18*** *16:25:06.0±0.0,22.90S×173.30E, h10km, mb4.7/18, mB5.4/17, Ms4.8/5, Ms7 4.6/6*

NEIC ***18*** *16:25:07.7±2.0,22.91S±0.08×173.3E±0.1, h10km±1km, mb5.2/138, Error ellipse: s-maj=17.5km s-min=12.2km az=57.0*

MOS ***18*** *16:25:10.9±1.9,22.94S×173.08E, h33km, mb5.1/17, MS4.8/10, Error ellipse: s-maj=11.2km s-min=10.5km az=172.9*

GCMT ***18*** *16:25:11.7±0.2,23.02S±0.01×173.22E±0.01, h12km, MW5.1/135, Moment Tensor Solution. s83,c129; s135,c215; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-5.59±.15; Mθθ4.17±.12; Mθφ1.42±.11; Mrθ0.85±.29; Mθφ2.64±.08; Mφr0.18±.32; Best double couple:*

Mo5.74800×1016 NP1φs242.00000°,δ49.00000°, λ-86.00000°. NP2φs56.00000°,δ41.00000°,λ-95.00000°. Principal axes: T 5.8310, Plg4.0000°, Azm329.0000°; N -0.1670, Plg3.0000°, Azm59.0000°; P -5.6650, Plg85.0000°, Azm185.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NOU ***18*** *16:25:13.8,23.33S×172.83E, h10km, mb5.2/27, Southeast of Loyalty Islands*

ISC 18 16:25:07.0±0.3,22.89S±0.06×173.31E±0.06, h10km, n408, σ1s15/367, mb5.2/93, MS4.8/16, 28C-34D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MARNC	**Mare, Loyalty**	**5.09**	**285**			**Pn**	**16 26 23.9**		**+0.5**
MARNC	**Mare, Loyalty**	**5.09**	**285**	P		**Pn**	**16 26 24.8**		**+1.5**
PINNC	**Pines Island,**	**5.42**	**272**			**Pn**	**16 26 28.6**		**+0.7**
PINNC	**Pines Island,**	**5.42**	**272**	P		**Pn**	**16 26 30.2**		**+2.3**
OUENC	**Ouen Island, N**	**5.99**	**273**	Pn		**Pn**	**16 26 36.1**		**+0.4**
OUENC	**Ouen Island, N**	**5.99**	**273**	P		**Pn**	**16 26 37.7**		**+1.9**
YATNC	**Mamie plateau,**	**5.99**	**277**	P		**Pn**	**16 26 37.6**		**+1.8**
ONTNC	**Ouen Toro**	**6.36**	**274**	Pn		**Pn**	**16 26 41.4**		**+0.6**
ONTNC	**Ouen Toro**	**6.36**	**274**	P		**Pn**	**16 26 42.9**		**+2.1**
DZM	**Mont Dzumac**	**6.40**	**276**	Pn		**Pn**	**16 26 40.8**		**-0.6**
	4.4nm,0.3s,baz=69,slow=21,SNR=3.9								
DZM				Sn		**Sn**	**16 27 51.1**		**-3.6**
	9.9nm,0.3s,baz=122,slow=16,SNR=6.4								
	16nm,0.3s								
DZM	**Mont Dzumac**	**6.40**	**276**	Pn		**Pn**	**16 26 41.9**		**+0.5**
DZM	**Mont Dzumac**	**6.40**	**276**	P		**Pn**	**16 26 42.6**		**+1.1**
NOUC	**Port Laguerre**	**6.52**	**276**	P		**Pn**	**16 26 45.9**		**+2.8**
RTV	**Rentapao**	**6.83**	**317**	P		**Pn**	**16 26 56.2**		**+8.9**
NFK	**Norfolk Island**	**7.81**	**217**	P		**Pn**	**16 27 00.7**		**0.0**
	baz=8.1,SNR=3.7								
NFK	**Norfolk Island**	**7.81**	**217**	P		**Pn**	**16 26 59.3**		**-1.4**
KOUNC	**Koumac, New Ca**	**8.70**	**284**	Pn		**Pn**	**16 27 13.3**		**+0.3**
KOUNC	**Koumac, New Ca**	**8.70**	**284**	P		**Pn**	**16 27 15.4**		**+2.4**
OUZ	**Omahuta**	**12.29**	**179**			**Pn**	**16 28 01.4**		**-0.7**
OUZ	**Omahuta**	**12.29**	**179**	P		**Pn**	**16 28 04.2**		**+2.1**
LHI	**Lord Howe Isla**	**15.30**	**233**			**Pn**	**16 28 45.7**		**+2.5**
HIZ	**Hauiti**	**15.63**	**175**	P		**P**	**16 28 50.3**		**-1.3**
HIZ				IAmb		IAmb	16 28 56.1		
	comp=Z,219nm,1.2s								
URZ	**Urewera**	**15.67**	**169**	Pn		**Pn**	**16 28 50.0**		**+2.1**
	comp=Z,0.5nm,0.3s,baz=359,slow=6.4,SNR=9.6								
	comp=Z,69nm,1.1s								
URZ	**Urewera**	**15.67**	**169**	Pn		**Pn**	**16 28 49.7**		**+1.8**
BKZ	**Black Stump Fm**	**16.46**	**171**	Pn		**Pn**	**16 28 59.0**		**+0.9**
QRZ	**Quartz Range**	**17.90**	**182**	P		**P**	**16 29 18.4**		**+1.7**
QRZ				IAmb		IAmb	16 29 22.7		
	comp=Z,333nm,1.7s								
BFZ	**Birch Farm**	**17.92**	**173**	P		**Pn**	**16 29 15.3**		**-1.0**
BFZ				IAmb		IAmb	16 29 20.4		
	comp=Z,163nm,1.2s								
BFZ	**Birch Farm**	**17.92**	**173**	P		**P**	**16 29 17.4**		**+0.5**
NNZ	**Nelson**	**18.28**	**180**	P		**Pn**	**16 29 20.5**		**-0.2**
SNZO	**South Karori**	**18.41**	**177**	P		**Pn**	**16 29 21.1**		**-1.2**
SNZO				IAmb		IAmb	16 29 28.9		
	comp=Z,173nm,1.2s								
SNZO	**South Karori**	**18.41**	**177**	P		**P**	**16 29 23.7**		**+1.4**
TUWZ	**Tuamarina**	**18.50**	**178**	P		**P**	**16 29 22.6**		**-0.6**
HNR	**Honiara**	**18.52**	**314**	P		**P**	**16 29 24.3**		**+0.7**
	comp=Z,2.4nm,0.3s,baz=349,slow=20,SNR=1.7								
	comp=Z,31nm,0.6s								
HNR	**Honiara**	**18.52**	**314**	P		**P**	**16 29 23.2**		**-0.4**
HNR				IAmb		IAmb	16 29 35.2		
	comp=Z,162nm,1.0s								
HNR	**Honiara**	**18.52**	**314**	P		**P**	**16 29 23.2**		**-0.4**
HNR				pmax		pmax			
	comp=Z,162nm,1.0s								
MSWZ	**Moikau Station**	**18.55**	**175**	P		**P**	**16 29 23.3**		**-0.6**
PLWZ	**Palliser**	**18.70**	**175**	P		**P**	**16 29 24.6**		**-1.0**
THZ	**Tophouse**	**18.83**	**181**	P		**P**	**16 29 27.5**		**+0.5**
THZ				IAmb		IAmb	16 29 33.5		
	comp=Z,225nm,1.9s								
KHZ	**Kahutara**	**19.48**	**179**	P		**P**	**16 29 34.4**		**+0.4**
KHZ	**Kahutara**	**19.48**	**179**	P		**Pn**	**16 29 36.9**		**+1.7**
LTZ	**Lake Taylor**	**19.86**	**182**	P		**P**	**16 29 39.4**		**+1.1**
OXZ	**Oxford**	**20.41**	**183**	P		**P**	**16 29 44.7**		**+0.5**
OXZ				IAmb		IAmb	16 29 50.6		
	comp=Z,128nm,1.1s								
EIDS	**Eidsvold**	**20.43**	**259**	P		Pn	16 29 46.4		-0.3
	baz=21,SNR=7.3								
EIDS	**Eidsvold**	**20.43**	**259**	P		**P**	**16 29 45.8**		**+1.2**
EIDS				IAmb		IAmb	16 29 51.0		
	comp=Z,108nm,1.1s								
EIDS	**Eidsvold**	**20.43**	**259**	P		Pn	16 29 46.9		+0.2
ARMA	**Armidale**	**20.76**	**244**	P		Pn	16 29 50.1		-0.5
	baz=21,SNR=6.8								
ARMA	**Armidale**	**20.76**	**244**	P		**P**	**16 29 49.4**		**+1.2**
MQZ	**Mcquarie's Vall**	**20.77**	**181**	P		**P**	**16 29 49.0**		**+0.9**
FOZ	**Fox Glacier**	**20.80**	**187**	P		Pn	16 29 50.0		-0.8
FOZ				IAmb		IAmb	16 29 55.0		
	comp=Z,210nm,1.2s								
RPZ	**Rata Peaks**	**20.86**	**185**	P		Pn	16 29 51.2		-0.3
	comp=Z,75nm,1.1s,baz=287,slow=4.9,SNR=11								
	comp=Z,75nm,1.1s								
RPZ	**Rata Peaks**	**20.86**	**185**	P		**P**	**16 29 50.1**		**+1.1**
RPZ				IAmb		IAmb	16 30 04.4		
	comp=Z,217nm,1.4s								
RPZ	**Rata Peaks**	**20.86**	**185**	P		Pn	16 29 52.2		+0.7
LBZ	**Lake Benmore**	**21.60**	**186**	P		**P**	**16 29 58.0**		**+1.0**
WKZ	**Wanaka**	**22.17**	**188**	P		**P**	**16 30 04.0**		**+0.9**
ODZ	**Otahua Downs**	**22.21**	**185**	P		**P**	**16 30 05.1**		**+1.5**
RMQ	**Roma**	**22.58**	**256**	P		**P**	**16 30 10.6**		**+2.8**
	baz=23,SNR=11								
RMQ	**Roma**	**22.58**	**256**	P		**P**	**16 30 10.0**		**+2.2**
MLZ	**Mavora Lakes**	**22.82**	**189**	P		**P**	**16 30 11.7**		**+1.6**
DCZ	**Deep Cove**	**23.08**	**191**	P		**P**	**16 30 14.5**		**+1.8**
WHZ	**Wether Hill Ro**	**23.36**	**189**	P		**P**	**16 30 16.4**		**+0.8**
WHZ				IAmb		IAmb	16 30 33.1		
	comp=Z,162nm,1.5s								
CNB	**Canberra Magne**	**24.24**	**234**	P		**P**	**16 30 25.9**		**+1.5**
	baz=24,SNR=16								
CNB	**Canberra Magne**	**24.24**	**234**	P		**P**	**16 30 25.8**		**+1.5**
CAN	**Canberra**	**24.52**	**234**	P		**P**	**16 30 26.3**		**-0.5**
CAN				IAmb		IAmb	16 30 30.6		
	comp=Z,132nm,1.5s								
CAN	**Canberra**	**24.52**	**234**	P		**P**	**16 30 26.3**		**-0.5**
CAN				pmax		pmax			
	comp=Z,132nm,1.5s								
CTA	**Charters Tower**	**25.31**	**271**	P		**P**	**16 30 34.5**		**+0.4**
	comp=Z,14nm,0.8s,baz=109,slow=10,SNR=7.6								
	comp=Z,14nm,0.8s								
CTAO	**Charters Tower**	**25.31**	**271**	P		**P**	**16 30 34.0**		**-0.1**
CTAO				IAmb		IAmb	16 30 55.0		
	comp=Z,106nm,1.9s								
CTAO	**Charters Tower**	**25.31**	**271**	P		**P**	**16 30 34.0**		**-0.1**
CTAO				pmax		pmax			
	comp=Z,106nm,1.9s								
CMSA	**Cobar Meteorol**	**25.97**	**245**	P		**P**	**16 30 41.0**		**+1.0**
	baz=26,SNR=7.8								
CMSA	**Cobar Meteorol**	**25.97**	**245**	P		**P**	**16 30 40.4**		**+0.4**
QLP	**Quilpie**	**26.64**	**256**	P		**P**	**16 30 46.3**		**+0.3**
	baz=27,SNR=8.4								
QLP	**Quilpie**	**26.64**	**256**	P		**P**	**16 30 46.6**		**+0.6**
MTSU	**Mount Surprise**	**27.54**	**275**	P		**P**	**16 30 55.0**		**+0.8**
	baz=28,SNR=4.6								
TOO	**Toolangi**	**28.01**	**232**	P		**P**	**16 30 59.8**		**+1.5**
	baz=28,SNR=4.0								
TOO	**Toolangi**	**28.01**	**232**	P		**P**	**16 30 58.2**		**-0.1**
TOO	**Toolangi**	**28.01**	**232**	P		**P**	**16 30 58.2**		**-0.1**
TOO				pmax		pmax			
	comp=Z,32nm,1.1s								
STKA	**Stephens Creek**	**29.46**	**245**	P		**P**	**16 31 11.9**		**+0.6**
	comp=Z,9.2nm,0.9s,baz=80,slow=8.8,SNR=13								
STKA				PcP		**PcP**	**16 34 17.3**		**+0.5**
	comp=Z,4.6nm,0.8s,baz=56,slow=3.4,SNR=3.0								
	comp=Z,9.2nm,0.9s								
STKA	**Stephens Creek**	**29.46**	**245**	P		**P**	**16 31 11.9**		**+0.6**
	baz=30,SNR=7.4								
STKA	**Stephens Creek**	**29.46**	**245**	P		**P**	**16 31 10.5**		**-0.8**
STKA	**Stephens Creek**	**29.46**	**245**	*i* P		**P**	**16 31 12.0**		**+0.8**
STKA	**Stephens Creek**	**29.46**	**245**	P		**P**	**16 31 11.8**		**+0.6**
INKA	**Innaminka**	**29.78**	**254**	P		**P**	**16 31 15.0**		**+1.0**
QIS	**Mount Isa**	**31.36**	**268**	P		**P**	**16 31 29.2**		**+1.1**
	baz=32,SNR=4.6								
LCRK	**Leigh Creek**	**32.16**	**249**	P		**P**	**16 31 35.0**		**0.0**
BBOO	**Buckleboo**	**34.24**	**245**	P		**P**	**16 31 52.9**		**-0.3**
OOD	**Oodnadatta**	**34.26**	**254**	P		**P**	**16 31 54.8**		**+1.4**
MULG	**Mulgathing**	**35.73**	**250**	P		**P**	**16 32 06.0**		**-0.1**
AS31	**Alice Springs**	**36.13**	**261**	P		**P**	**16 32 08.8**		**-0.8**
ASAR	**Alice Springs**	**36.13**	**261**	P		**P**	**16 32 09.2**		**-0.4**
	comp=Z,36nm,1.0s,baz=84,slow=8.5,SNR=38								
	comp=Z,36nm,1.0s								
ASAR	**Alice Springs**	**36.13**	**261**	P		**P**	**16 32 09.0**		**-0.6**
ASAR	**Alice Springs**	**36.13**	**261**	P		**P**	**16 32 09.0**		**-0.6**
WB0	**Warramunga Arr**	**36.31**	**267**	P		**P**	**16 32 10.0**		**-1.2**
WB0				IAmb		IAmb	16 32 11.1		
	comp=Z,40nm,1.4s								
WB2	**Warramunga Arr**	**36.32**	**267**	P		**P**	**16 32 09.8**		**-1.5**
WB2				IAmb		IAmb	16 32 11.3		
	comp=Z,64nm,1.6s								
WRAB	**Tennant Creek**	**36.32**	**267**	P		**P**	**16 32 10.0**		**-1.3**
WRAB				IAmb		IAmb	16 32 11.3		
	comp=Z,67nm,1.7s								
WRAB	**Tennant Creek**	**36.32**	**267**	P		**P**	**16 32 10.0**		**-1.3**
WRAB				pmax		pmax			
	comp=Z,67nm,1.7s								
WRA	**Warramunga Arr**	**36.33**	**267**	P		**P**	**16 32 10.0**		**-1.3**
	comp=Z,5.6nm,0.9s,baz=97,slow=8.3,SNR=22								
	comp=Z,5.6nm,0.9s								
WRA	**Warramunga Arr**	**36.33**	**267**	P		**P**	**16 32 09.6**		**-1.7**
WRA	**Warramunga Arr**	**36.33**	**267**	P		**P**	**16 32 09.6**		**-1.7**
WRA				pmax		pmax			
	comp=Z,4.0nm,1.6s								
FORT	**Forrest**	**40.91**	**249**	P		**P**	**16 32 48.1**		**-1.6**
FORT				IAmb		IAmb	16 32 57.5		
	comp=Z,54nm,0.8s								
WRKA	**Warakurna**	**41.05**	**258**	P		**P**	**16 32 51.2**		**+0.2**
	baz=41,SNR=15								
MTN	**Manton Dam**	**41.24**	**277**	P		**P**	**16 32 51.8**		**-0.7**
	baz=41,SNR=4.7								
MTN	**Manton Dam**	**41.24**	**277**	P		**P**	**16 32 50.4**		**-2.1**
H11S2	**WAKE ISLAND Hy**	**41.62**	**351**	T		T	17 17 33.2		
	baz=171,slow=76,SNR=40								
H11S3	**WAKE ISLAND Hy**	**41.63**	**351**	T		T	17 17 33.8		
	baz=171,slow=76,SNR=31								
H11S1	**WAKE ISLAND Hy**	**41.64**	**351**	T		T	17 17 34.2		
	baz=171,slow=76,SNR=36								
KNRA	**Kununurra**	**42.53**	**272**	P		**P**	**16 33 03.5**		**+0.4**
	baz=43,SNR=5.5								
KNRA	**Kununurra**	**42.53**	**272**	P		**P**	**16 33 01.6**		**-1.4**
H11N1	**WAKE ISLAND Hy**	**42.80**	**351**	T		T	17 19 01.4		
	baz=172,slow=74,SNR=17								
H11N3	**WAKE ISLAND Hy**	**42.80**	**351**	T		T	17 19 06.1		
	baz=172,SNR=3.3								
H11N2	**WAKE ISLAND Hy**	**42.82**	**351**	T		T	17 19 01.9		
	baz=172,slow=74,SNR=11								
FITZ	**Fitzroy Crossi**	**44.76**	**267**	P		**P**	**16 33 21.8**		**+0.8**
	baz=45,SNR=7.2								
FITZ	**Fitzroy Crossi**	**44.76**	**267**	P		**P**	**16 33 20.3**		**-0.8**
FITZ				IAmb		IAmb	16 33 22.7		
	comp=Z,52nm,1.1s								
PSA00	**Pilbara Seismi**	**49.28**	**261**	P		**P**	**16 33 55.4**		**-1.0**
MBWA	**Marble Bar**	**49.47**	**261**	P		**P**	**16 33 57.0**		**-0.8**
MEEK	**Meekatharra**	**49.50**	**254**	P		**P**	**16 33 57.8**		**-0.2**
	baz=50,SNR=6.1								
NWAO	**Narrogin (SRO)**	**50.05**	**246**	P		**P**	**16 34 01.3**		**-0.9**
NWAO	**Narrogin (SRO)**	**50.05**	**246**	P		**P**	**16 34 01.3**		**-0.9**
NWAO				pmax		pmax			
	comp=Z,158nm,1.8s								
MUN	**Mundaring**	**50.99**	**247**	P		**P**	**16 34 09.8**		**+0.6**
	baz=51,SNR=4.4								
MORW	**Morawa**	**51.43**	**250**	P		**P**	**16 34 12.3**		**-0.3**
	baz=52,SNR=3.6								
MORW	**Morawa**	**51.43**	**250**	P		**P

PMPB	**Monarch Peak**	**85.57**	**48**	P		**P**		**16 37 47.1**	**+1.4**	
SNAA	**Sanae**	**85.66**	**181**	P		**P**		**16 37 44.9**	**-0.8**	
SNAA	**Sanae**	**85.66**	**181**			**P**		**16 37 44.2**	**-1.5**	
SNAA	**Sanae**	**85.66**	**181**	P		**P**		**16 37 44.2**	**-1.5**	
SNAA				pmax	pmax					
	comp=Z,33nm,1.2s									
NVL	**N'lazarevskaya**	**85.70**	**186**	*e*P		**P**		**16 37 42.0**	**-3.8**	
NVL				pmax	pmax					
	comp=Z,13nm,1.1s									
BCW	**Bitter Crk WRg**	**85.86**	**49**	P		**P**		**16 37 48.7**	**+1.4**	
BCW				IAmb	IAmb			16 37 52.6		
	comp=Z,28nm,1.2s									
ZEA	**Zeya**	**86.04**	**335**	*e*P		**P**		**16 37 49.0**	**+1.5**	
ZEA				pmax	pmax					
	comp=E,10.0nm,1.1s									
ZEA				pmax	pmax					
	comp=Z,10.0nm,1.4s									
VNA3	**Neumayer Olymp**	**86.10**	**179**	P		**P**		**16 37 46.9**	**-0.9**	
MG05	**Puerto Natales**	**86.14**	**145**	P		**P**		**16 37 48.6**	**+0.3**	
VNA2	**Neumayer--Watz**	**86.44**	**180**	P		**P**		**16 37 48.9**	**-0.6**	
	baz=182,slow=5.0									
VNA1	**Neumayer--Stat**	**86.72**	**179**	P		**P**		**16 37 50.3**	**-0.5**	
CMB	**Columbia Colle**	**86.83**	**46**	P		**P**		**16 37 52.0**	**+0.2**	
CMB	**Columbia Colle**	**86.83**	**46**	P		**P**		**16 37 52.0**	**+0.2**	
CMB				pmax	pmax					
	comp=Z,10.0nm,1.3s									
ISA	**Isabella, Lake**	**86.89**	**49**	IAmb	IAmb			16 37 57.0		
	comp=Z,31nm,1.6s									
RMX	**La Rumorosa**	**87.08**	**53**	P		**P**		**16 37 53.7**	**+0.3**	
YUH	**Yuha Desert**	**87.21**	**53**	IAmb	IAmb			16 37 58.6		
	comp=Z,14nm,1.4s									
PFO	**Pinyon Flats O**	**87.29**	**52**	*ce*P		**P**		**16 37 57.6**	**+3.3**	
MDPB	**Devils Postpil**	**87.49**	**47**	P		**P**		**16 37 55.3**	**-0.1**	
MDPB				IAmb	IAmb			16 38 01.0		
	comp=Z,26nm,1.5s									
OMMB	**Old Mammoth Mi**	**87.54**	**47**	P		**P**		**16 37 56.7**	**+1.1**	
OMMB				IAmb	IAmb			16 38 00.6		
	comp=Z,21nm,1.7s									
HUMO	**Hull Mountain**	**87.68**	**41**	IAmb	IAmb			16 38 10.1		
	comp=Z,17nm,1.4s									
BEKR	**Beckworth**	**87.82**	**45**	IAmb	IAmb			16 37 59.4		
	comp=Z,22nm,1.7s									
GSC	**Goldstone, Bar**	**87.88**	**50**	IAmb	IAmb			16 38 01.8		
	comp=Z,28nm,1.9s									
PNTR	**Pine Nut**	**87.91**	**46**	P		**P**		**16 37 58.8**	**+1.5**	
DSP	**Deep Springs**	**88.11**	**48**	P		**P**		**16 37 58.7**	**+0.7**	
DSP				IAmb	IAmb			16 38 03.8		
	comp=Z,22nm,1.4s									
LHV	**Little Huntoon**	**88.20**	**47**	IAmb	IAmb			16 38 03.7		
	comp=Z,30nm,1.5s									
PAHR	**Pah Rah Range**	**88.37**	**45**	P		**P**		**16 38 00.6**	**+1.2**	
PAHR				IAmb	IAmb			16 38 04.1		
	comp=Z,27nm,1.5s									
RYN	**Ryan**	**88.38**	**47**	P		**P**		**16 38 00.4**	**+0.9**	
RYN				IAmb	IAmb			16 38 04.4		
	comp=Z,27nm,1.7s									
GWY	**Greenwater Val**	**88.42**	**50**	IAmb	IAmb			16 38 05.0		
	comp=Z,22nm,1.9s									
NVAR	**Mina Array Bea**	**88.43**	**47**	P		**P**		**16 38 00.4**	**+0.6**	
	comp=Z,6.2nm,1.2s,baz=223,slow=6.7,SNR=14									
	comp=Z,6.2nm,1.2s									
NV11	**Mina Array Sit**	**88.53**	**47**	IAmb	IAmb			16 38 05.0		
	comp=Z,16nm,1.4s									
WCT	**Wildcat Mounta**	**88.75**	**49**	P		**P**		**16 38 01.1**	**0.0**	
KVN	**Kaiserville**	**88.88**	**46**	P		**P**		**16 38 02.5**	**+0.6**	
KVN				IAmb	IAmb			16 38 06.5		
	comp=Z,21nm,1.5s									
KVN	**Kaiserville**	**88.88**	**46**	P		**P**		**16 38 02.5**	**+0.6**	
KVN				pmax	pmax					
	comp=Z,21nm,1.5s									
TPH	**Tonopah**	**88.98**	**48**	P		**P**		**16 38 02.8**	**+0.4**	
TPH	**Tonopah**	**88.98**	**48**	P		**P**		**16 38 02.8**	**+0.4**	
TPH				pmax	pmax					
	comp=Z,125nm,1.5s									
H04A	**Detroit Lake**	**89.30**	**40**	IAmb	IAmb			16 38 06.4		
	comp=Z,36nm,1.6s									
V12A	**Nelson**	**89.48**	**51**	P		**P**		**16 38 05.6**	**+0.9**	
V12A				IAmb	IAmb			16 38 09.5		
	comp=Z,25nm,1.7s									
PINE	**Pine Mountain**	**89.56**	**41**	IAmb	IAmb			16 38 10.1		
	comp=Z,29nm,1.4s									
SHPR	**Sheep Range**	**89.64**	**50**	P		**P**		**16 38 06.3**	**+0.9**	
W13A	**Hualapai Mount**	**89.87**	**52**	IAmb	IAmb			16 38 11.6		
	comp=Z,18nm,1.5s									
Y14A	**Wickenburg**	**89.97**	**53**	IAmb	IAmb			16 39 26.5		
	comp=Z,14nm,1.1s									
PRN	**Pahroc Range**	**90.15**	**49**	IAmb	IAmb			16 38 12.9		
	comp=Z,24nm,1.5s									
BMN	**Battle Mountai**	**90.17**	**46**	IAmb	IAmb			16 38 10.5		
	comp=Z,29nm,1.4s									
WVOR	**Wild Horse Val**	**90.28**	**43**	IAmb	IAmb			16 38 11.1		
	comp=Z,20nm,1.4s									
I07A	**Izee**	**90.59**	**42**	P		**P**		**16 38 10.5**	**+0.8**	
I07A				IAmb	IAmb			16 38 12.3		
	comp=Z,14nm,1.3s									
BILL	**Bilibino**	**90.80**	**357**	⇓*e*P		**P**		**16 38 10.3**	**+0.4**	
BILL				*e*PPP		PPP		16 43 46.0		
BILL				pmax	pmax					
	comp=Z,8.0nm,1.2s									
BILL				MLR	MLR					
	comp=Z,98nm,19.0s									
J08A	**Circle Bar Ran**	**90.86**	**43**	IAmb	IAmb			16 38 14.2		
	comp=Z,23nm,1.5s									
TUC	**Tucson**	**90.89**	**55**	P		**P**		**16 38 12.7**	**+1.4**	
TUC	**Tucson**	**90.89**	**55**	P		**P**		**16 38 12.7**	**+1.4**	
TUC				pmax	pmax					
	comp=Z,10.0nm,1.3s									
LL02	**Futaleuf**	**91.13**	**138**	P		**P**		**16 38 12.2**	**0.0**	
ORCD	**Orcadas**	**91.15**	**162**			**P**		**16 38 11.1**	**-0.8**	
CCUT	**Cedar City**	**91.40**	**50**	IAmb	IAmb			16 38 19.5		
	comp=Z,24nm,1.6s									
SPR3	**Spring Creek 3**	**91.41**	**48**	IAmb	IAmb			16 38 18.1		
	comp=Z,14nm,1.3s									
YAK	**Yakutsk**	**91.51**	**341**	P		**P**		**16 38 13.1**	**-0.2**	
	comp=Z,1.5nm,0.3s,baz=12,slow=12,SNR=4.5									
	comp=Z,1.5nm,0.3s									
YAK	**Yakutsk**	**91.51**	**341**	*e*P		**P**		**16 38 12.5**	**-0.7**	
YAK				pmax	pmax					
	comp=Z,14nm,1.4s									
YAK				pmax	pmax					
	comp=N,9.0nm,1.5s									
YAK				pmax	pmax					
	comp=E,6.0nm,1.5s									
SZCU	**Shurtz Canyon**	**91.61**	**50**	IAmb	IAmb			16 38 20.4		
	comp=Z,20nm,1.4s									
ELK	**Elko**	**91.64**	**46**	IAmb	IAmb			16 38 19.3		
	comp=Z,20nm,1.8s									
HAWA	**Hanford**	**91.80**	**40**	P		**P**		**16 38 15.4**	**+0.4**	
HAWA				IAmb	IAmb			16 38 18.2		
	comp=Z,27nm,1.7s									
WUAZ	**Wupatki**	**91.89**	**52**	IAmb	IAmb			16 38 21.4		
	comp=Z,19nm,1.4s									
ULN	**Ulaanbaatar**	**92.05**	**322**	P		**P**		**16 38 15.8**	**-0.6**	
ULN	**Ulaanbaatar**	**92.05**	**322**	*i* P		**P**		**16 38 16.3**	**-0.1**	
ULN				pmax	pmax					
	comp=Z,4.0nm,1.1s									
PKCU	**Pink Cliffs**	**92.09**	**50**	P		**P**		**16 38 18.4**	**+1.3**	
M27K	**Edge Creek, AK**	**92.11**	**19**	P		**P**		**16 38 15.8**	**-0.5**	
M27K				IAmb	IAmb			16 38 20.4		
	comp=Z,16nm,1.4s									
HDA	**Harding Lake**	**92.31**	**16**	P		**P**		**16 38 15.9**	**-1.1**	
HDA				IAmb	IAmb			16 38 33.5		
	comp=Z,10nm,1.2s									
RIDG	**Independent Ri**	**92.33**	**17**	P		**P**		**16 38 15.9**	**-1.3**	
RIDG				IAmb	IAmb			16 38 17.9		
	comp=Z,22nm,1.4s									
BMO	**Blue Mountains**	**92.34**	**42**	P		**P**		**16 38 16.7**	**-1.0**	
BMO				IAmb	IAmb			16 38 19.8		
	comp=Z,16nm,1.8s									
BMO	**Blue Mountains**	**92.34**	**42**	P		**P**		**16 38 16.7**	**-1.0**	
BMO				pmax	pmax					
	comp=Z,16nm,1.8s									
GTA	**Gaotai**	**92.38**	**312**	*e*P		**P**		**16 38 19.0**	**+0.9**	
GTA				pP	pwP			16 38 29.5	+2.3	
GTA				sP	sP			16 38 32.8	+13	
GTA				SS	SS			16 55 36.3	+3.0	
GTA				pmax	pmax					
	comp=Z,5.0nm,1.2s									
GTA				pmax	pmax					
	comp=Z,100nm,7.4s									
GTA				LR	LR					
	comp=Z,140nm,21.4s									
GTA				LR	LR					
	comp=Z,160nm,19.3s									
GTA				LR	LR					
	comp=Z,220nm,22.5s									

SONM	**Songino Array**	**92.41**	**322**	P		**P**		**16 38 17.4**	**-0.6**	
	comp=Z,1.9nm,1.0s,baz=144,slow=4.4,SNR=9.3									
	comp=Z,1.9nm,1.0s									
MDM	**Murphy Dome**	**92.44**	**15**	P		**P**		**16 38 16.7**	**-0.9**	
MTPU	**Mount Pierson**	**92.45**	**50**	P		**P**		**16 38 19.9**	**+1.2**	
MTPU				IAmb	IAmb			16 38 24.3		
	comp=Z,17nm,1.3s									
COLA	**College**	**92.46**	**16**	*i* P		**P**		**16 38 18.6**	**+1.0**	
COLA				pmax	pmax					
	comp=Z,15nm,1.7s									
ILAR	**Eielson Array**	**92.62**	**16**	P		**P**		**16 38 17.6**	**-0.8**	
	comp=Z,1.7nm,0.7s,baz=229,slow=5.1,SNR=14									
	comp=Z,1.7nm,0.7s									
MVU	**Marysvale**	**92.64**	**49**	P		**P**		**16 38 21.2**	**+1.7**	
MSU	**Marysvale**	**92.67**	**49**	P		**P**		**16 38 20.3**	**+0.7**	
MSU	**Marysvale**	**92.67**	**49**	P		**P**		**16 38 20.3**	**+0.7**	
J25K	**Salcha River,**	**92.89**	**17**	P		**P**		**16 38 19.2**	**-0.5**	
J25K				IAmb	IAmb			16 39 12.7		
	comp=Z,14nm,1.6s									
W18A	**Petrified Fore**	**92.91**	**53**	P		**P**		**16 38 21.4**	**+0.7**	
W18A				IAmb	IAmb			16 38 25.8		
	comp=Z,11nm,1.2s									
J26L	**Joseph Creek**	**93.28**	**17**	P		**P**		**16 38 21.4**	**-0.2**	
PLCA	**Paso Flores**	**93.29**	**137**	P		**P**		**16 38 23.1**	**+0.7**	
	comp=Z,9.4nm,1.1s,baz=207,slow=6.9,SNR=6.1									
	comp=Z,9.4nm,1.1s									
PLCA	**Paso Flores**	**93.29**	**137**			**P**		**16 38 22.8**	**+0.4**	
PLCA	**Paso Flores**	**93.29**	**137**	P		**P**		**16 38 22.8**	**+0.4**	
PLCA				pmax	pmax					
	comp=Z,61nm,1.8s									
Q16A	**Castle Valley**	**93.56**	**49**	P		**P**		**16 38 24.2**	**+0.6**	
Q16A				IAmb	IAmb			16 38 29.6		
	comp=Z,18nm,1.4s									
HVU	**Hansel Valley**	**93.76**	**46**	P		**P**		**16 38 23.7**	**-0.7**	
HVU	**Hansel Valley**	**93.76**	**46**	P		**P**		**16 38 23.7**	**-0.7**	
HVU				pmax	pmax					
	comp=Z,6.0nm,1.5s									
I26K	**Coal Creek Min**	**94.02**	**17**	IAmb	IAmb			16 38 40.5		
	comp=Z,10nm,1.2s									
SRU	**San Rafael Swe**	**94.09**	**49**	P		**P**		**16 38 25.2**	**-0.9**	
SRU	**San Rafael Swe**	**94.09**	**49**	P		**P**		**16 38 25.2**	**-0.9**	
SRU				pmax	pmax					
	comp=Z,15nm,0.7s									
TCUT	**Toone Canyon**	**94.38**	**47**	IAmb	IAmb			16 38 35.9		
	comp=Z,25nm,1.7s									
TX31	**Lajitas Ar. Si**	**95.20**	**60**	P		**P**		**16 38 31.0**	**-0.3**	
TX31				IAmb	IAmb			16 40 03.8		
	comp=Z,16nm,1.5s									
TXAR	**Lajitas Array**	**95.20**	**60**	P		**P**		**16 38 31.9**	**+0.6**	
	comp=Z,1.1nm,1.0s,baz=223,slow=5.1,SNR=8.6									
TXAR				PKKPbc		**PKKPdf**		**16 55 26.8**	**+0.7**	
	comp=Z,0.9nm,0.7s,baz=96,slow=3.8,SNR=12									
	comp=Z,1.1nm,1.0s									
ANMO	**Albuquerque**	**95.28**	**54**	*i* P		**P**		**16 38 32.8**	**+1.2**	
ANMO				pmax	pmax					
	comp=Z,4.0nm,1.3s									
CLN7	**Carlsbad 7**	**96.30**	**58**	P		**P**		**16 38 35.4**	**-0.8**	
TIXI	**Tiksi**	**99.10**	**347**	*i* P		**Pdif**		**16 38 49.9**	**+2.2**	
TIXI				pmax	pmax					
	comp=Z,3.0nm,0.9s									
WMQ	**Urumqi**	**102.46**	**312**	*e*P		**Pdif**		**16 39 05.4**	**+2.0**	
WMQ				LR	LR					
	comp=Z,250nm,20.7s									
MKAR	**Makanchi Array**	**106.99**	**314**	PKKPbc		PKKPbc		16 54 50.7	-1.0	
	comp=Z,1.0nm,0.9s,baz=318,slow=1.6,SNR=6.8									
BRVK	**Borovoye**	**115.70**	**319**	*i* PKIKP		**PKiKP**		**16 43 50.5**	**+1.2**	
BRVK				pmax	pmax					
	comp=Z,1.0nm,0.9s									
BOSA	**Boshof**	**120.25**	**213**	PKP		**PKiKP**		**16 44 00.2**	**+0.9**	
	comp=Z,8.5nm,1.1s,baz=229,slow=3.5,SNR=5.6									
ARU	**Arti**	**122.41**	**323**	*i* PKIKP		**PKPdf**		**16 44 02.1**	**0.0**	
ARU								16 45 40.0		
ARU								16 51 13.8		
ARU				SS	SS			17 02 11.0	-8.1	
LBTB	**Lobatse**	**123.01**	**215**	PKPdf		**PKPdf**		**16 44 03.1**	**-1.4**	
LBTB	**Lobatse**	**123.01**	**215**	PKIKP		**PKPdf**		**16 44 03.1**	**-1.4**	
BDFB	**Brasilia**	**124.31**	**130**	PKPdf		**PKPdf**		**16 44 06.1**	**-1.1**	
BDFB	**Brasilia**	**124.31**	**130**	PKIKP		**PKPdf**		**16 44 06.1**	**-1.1**	
HUMP	**Col San Antoni**	**124.70**	**83**			**PKPdf**		**16 44 05.9**	**-1.8**	
E62A	**Clayton Lake**	**124.78**	**48**	PKPdf		**PKPdf**		**16 44 06.2**	**-0.9**	
ARCES	**ARCESS Array B**	**129.53**	**346**	PKP		**PKPdf**		**16 44 14.4**	**-1.0**	
	comp=Z,1.4nm,0.6s,baz=162,slow=0.4,SNR=7.5									
KLMR	**Klimovskoe**	**130.51**	**332**	*e*PKIKP		**PKPdf**		**16 44 15.8**	**-1.7**	
KLMR				pmax	pmax					
	comp=Z,10.0nm,1.4s									
KLMR	**Klimovskoe**	**130.51**	**332**	*e*PKPdf		**PKPdf**		**16 44 15.9**	**-1.6**	
KLMR				AMP				16 44 19.4		
	comp=Z,10.0nm,1.4s									
KMBO	**Kilima Mbogo**	**131.02**	**247**	PKP		**PKPdf**		**16 44 20.9**	**+0.6**	
	comp=Z,2.1nm,0.6s,baz=293,slow=3.0,SNR=4.0									
TSUM	**Tsumeb**	**131.92**	**211**			**PKPdf**		**16 44 19.3**	**-2.4**	
KIV	**Kislovodsk**	**134.51**	**310**	*e*PKIKP		**PKPdf**		**16 44 26.8**	**+1.1**	
KIV				pmax	pmax					
	comp=Z,3.0nm,1.1s									
OBN	**Obninsk**	**134.62**	**326**	⇓*e*PKIKP		**PKPdf**		**16 44 26.4**	**+1.0**	
OBN				*e*				16 46 58.6		
OBN				*e*PPP		PPP		16 49 55.6		
OBN				pmax	pmax					
	comp=Z,6.0nm,0.5s									
FINES	**FINESS Array B**	**135.37**	**338**	PKP		**PKPdf**		**16 44 26.8**	**+0.1**	
	comp=Z,3.0nm,1.0s,baz=126,slow=3.3,SNR=3.9									
ANN	**Anapa**	**137.97**	**312**	*e*PKIKP		**PKPdf**		**16 44 30.7**	**-1.2**	
ANN				pmax	pmax					
	comp=Z,31nm,1.4s									
ANN				pmax	pmax					
	comp=Z,25nm,0.8s									
ANN				MLR	MLR					
	comp=Z,309nm,24.0s									
AKASG	**Malin Array Be**	**140.66**	**324**	PKP		**PKPdf**		**16 44 37.1**	**+0.4**	
	comp=Z,0.2nm,0.3s,baz=54,slow=2.3,SNR=5.5									
AKASG	**Malin Array Be**	**140.66**	**324**	*i* PKIKP		**PKPdf**		**16 44 38.5**	**+1.8**	
BRTR	**Keskin Array B**	**142.03**	**306**	PKP		**PKPdf**		**16 44 38.8**	**-0.9**	
	comp=Z,0.3nm,0.5s,baz=23,slow=4.7,SNR=2.3									
TPGR	**Topolog**	**143.94**	**316**	⇑P		PKPab		16 44 40.6	+0.7	
CFR	**Carcaliu**	**143.98**	**317**	⇓P		PKPbc		16 44 41.3	+0.8	
CFR	**Carcaliu**	**143.98**	**317**	⇓PKIKP		PKPbc		16 44 41.3	+0.7	
TESR	**Tescani**	**144.26**	**319**	⇑P		PKPbc		16 44 42.5	+1.0	
BIZ	**Bicaz**	**144.37**	**320**	⇓P		PKPbc		16 44 42.9	+1.1	
BURAR	**Bucovina Array**	**144.53**	**322**	⇓P		**PKPdf**		**16 44 44.2**	**+0.4**	
BURAR	**Bucovina Array**	**144.53**	**322**	PKPdf		**PKPab**		**16 44 42.1**	**-0.1**	
BURAR	**Bucovina Array**	**144.53**	**322**	⇓PKIKP		**PKPdf**		**16 44 44.2**	**+0.4**	
VRI	**Vrincioaia**	**144.53**	**318**	⇓P		**PKPab**		**16 44 42.4**	**+0.2**	
VRI	**Vrincioaia**	**144.53**	**318**	⇓PKIKP		**PKPab**		**16 44 42.4**	**+0.2**	
PLOR	**Plostina**	**144.59**	**318**	⇑P		**PKPab**		**16 44 42.5**	**+0.1**	
PLOR	**Plostina**	**144.59**	**318**	⇑PKIKP		**PKPab**		**16 44 42.5**	**+0.1**	
COVR	**Voineasa-Covas**	**144.86**	**319**	⇓P		**PKPab**		**16 44 43.2**	**-0.2**	
OZUR		**144.99**	**319**	⇑P		**PKPab**		**16 44 44.2**	**+0.3**	
ISR	**Istrita**	**145.00**	**317**	⇑P		PKPbc		16 44 43.9	-0.1	
ISR	**Istrita**	**145.00**	**317**	⇑PKIKP		PKPbc		16 44 43.9	-0.1	
MLR	**Muntele Rosu**	**145.20**	**318**	⇓P		**PKPbc**		**16 44 44.1**	**-0.6**	
MLR	**Muntele Rosu**	**145.20**	**318**			**PKPbc**		**16 44 43.7**	**-1.0**	
MLR	**Muntele Rosu**	**145.20**	**318**	⇓PKP2		**PKPbc**		**16 44 44.1**	**-0.6**	
DOPR	**Dopca**	**145.29**	**319**	⇑P		**PKPbc**		**16 44 45.2**	**+0.4**	
ARCR	**ARCALIA**	**145.31**	**322**	⇑P		**PKPdf**		**16 44 46.5**	**+1.5**	
KOLS	**Kolonicke sedl**	**145.36**	**326**	*e*PKIKP		**PKPbc**		**16 44 45.1**	**+0.2**	
KOLS	**Kolonicke sedl**	**145.36**	**326**	*e*PKP		**PKPbc**		**16 44 45.1**	**+0.2**	
BMR	**Baia Mare**	**145.46**	**323**	⇑P		**PKiKP**		**16 44 48.2**	**-1.0**	
BMR	**Baia Mare**	**145.46**	**323**	⇑PKIKP		**PKiKP**		**16 44 48.2**	**-1.0**	
UZH	**Uzhgorod**	**145.54**	**325**	⇓*i*PKP2		**PKPdf**		**16 44 45.0**	**-0.3**	
UZH				*e*				16 44 48.2		
UZH				*i*				16 44 57.0		
UZH				*e*				16 45 03.9		
VOIR		**145.77**	**319**	⇓P		**PKPab**		**16 44 48.0**	**+1.2**	
VOIR		**145.77**	**319**	⇓PKP2		**PKPab**		**16 44 48.0**	**+1.2**	
CRVS	**Cervenica-Dubn**	**145.80**	**326**	*e*PKP2		**PKPdf**		**16 44 46.5**	**+0.7**	
CRVS	**Cervenica-Dubn**	**145.80**	**326**	*e*PKP		**PKPdf**		**16 44 46.5**	**+0.7**	
ARR	**Arges**	**146.06**	**319**	⇑P		**PKPbc**		**16 44 48.0**	**+0.7**	
DRGR		**146.41**	**322**	⇓P		**PKPdf**		**16 44 47.6**	**+0.6**	
DRGR		**146.41**	**322**	⇓PKIKP		**PKPdf**		**16 44 47.6**	**+0.6**	
LANS	**Liptovska Anna**	**146.63**	**328**	*e*PKP2		**PKPbc**		**16 44 49.5**	**+0.6**	
LANS	**Liptovska Anna**	**146.63**	**328**	*e*PKP		**PKPbc**		**16 44 49.5**	**+0.6**	
OKC	**Ostrava-Krasne**	**146.78**	**330**	AMS		AMS		17 47 10.0		
	comp=Z,200nm,24.6s									
MORC	**Moravsky Berou**	**147.10**	**331**	⇓P		**PKPdf**		**16 44 49.7**	**+1.6**	
MORC	**Moravsky Berou**	**147.10**	**331**	⇓PKP2		**PKPdf**		**16 44 49.7**	**+1.6**	
MORC	**Moravsky Berou**	**147.10**	**331**	*e*PKP		**PKPdf**		**16 44 49.1**	**+1.0**	
OSTC	**Ostas**	**147.10**	**333**	*e*PKP		**PKPdf**		**16 44 49.0**	**+1.0**	
OSTC				AMS		AMS		17 48 00.0		
	comp=Z,200nm,21.4s									
GZR	**Gura Zlata**	**147.15**	**320**	⇑P		**PKPdf**		**16 44 49.8**	**+1.5**	
GZR	**Gura Zlata**	**147.15**	**320**	⇑PKIKP		**PKPdf**		**16 44 49.8**	**+1.5**	
DPC	**Dobruska-Polom**	**147.21**	**332**	*e*PKP		**PKPbc**		**16 44 50.1**	**-0.4**	
DPC				MLR	MLR					
	comp=Z,200nm,22.9s									

DPC	**Dobruska-Polom**	**147.21**	**332**	*e*PKP		**PKPbc**		**16 44 50.1**	**-0.4**	
DPC				AMS	AMS			17 45 20.0		
	comp=Z,200nm,22.9s									
KRLC	**Kraliky**	**147.22**	**332**	*e*PKIKP		**PKPdf**		**16 44 49.9**	**+1.7**	
KRLC				MLR	MLR					
	comp=Z,200nm,19.9s									
KRLC	**Kraliky**	**147.22**	**332**	*e*PKP		**PKPdf**		**16 44 49.9**	**+1.7**	
KRLC				AMS	AMS			17 50 20.0		
	comp=Z,200nm,19.9s									
UPC	**Upice**	**147.22**	**333**	*e*PKP2		**PKPbc**		**16 44 50.5**	**+0.1**	
UPC				MLR	MLR					
	comp=Z,200nm,22.6s									
UPC	**Upice**	**147.22**	**333**	*e*PKP		**PKPbc**		**16 44 50.5**	**+0.1**	
UPC				AMS	AMS			17 47 50.0		
	comp=Z,200nm,22.6s									
PSZ	**Piszkesteto**	**147.23**	**326**	⇑P		**PKPdf**		**16 44 50.2**	**+1.8**	
PSZ	**Piszkesteto**	**147.23**	**326**	PKPdf		**PKPdf**		**16 44 48.3**	**0.0**	
PSZ	**Piszkesteto**	**147.23**	**326**	⇑PKP2		**PKPdf**		**16 44 50.2**	**+1.8**	
PSZ	**Piszkesteto**	**147.23**	**326**	PKP		**PKPbc**		**16 44 51.1**	**+0.5**	
SIRR	**Siria**	**147.30**	**322**	⇑P		**PKPbc**		**16 44 50.6**	**-0.3**	
VYHS	**Vyhne**	**147.38**	**328**	*e*PKP2		**PKPbc**		**16 44 50.7**	**-0.3**	
VYHS	**Vyhne**	**147.38**	**328**	*e*PKP		**PKPbc**		**16 44 50.7**	**-0.3**	
ESK	**Eskdalemuir**	**147.51**	**356**			**PKPdf**		**16 44 49.9**	**+1.4**	
ESK	**Eskdalemuir**	**147.51**	**356**	PKIKP		**PKPdf**		**16 44 49.9**	**+1.4**	
HERR	**Herculane**	**147.65**	**320**	⇑P		**PKPdf**		**16 44 50.9**	**+1.8**	
JAVC	**Velka Javorina**	**147.69**	**329**	*e*PKP		**PKPbc**		**16 44 52.1**	**+0.3**	
BZS	**Buzias**	**147.70**	**321**	⇑P		**PKPbc**		**16 44 52.5**	**+0.6**	
BZS	**Buzias**	**147.70**	**321**	⇑PKP2		**PKPbc**		**16 44 52.5**	**+0.6**	
BRG	**Berggiesshubel**	**147.78**	**335**	*i* PKP		**PKPbc**		**16 44 51.9**	**-0.1**	
BRG				Amp				16 44 54.2		
	comp=Z,17nm,1.2s									
BRG				Amp				17 03 01.0		
	comp=E,0.1nm,18.4s									
BRG				Amp				17 03 07.0		
	comp=Z,0.2nm,17.7s									
BRG				Amp				17 03 10.0		
	comp=N,0.1nm,21.1s									
BRG				Amp				17 44 20.0		
	comp=Z,0.3nm,28.8s									
BRG				Amp

ESDC Sonseca Array 163.10 353 PKPab **PKPab 16 45 58.1 -1.6**
comp=Z,0.9nm,0.9s,baz=333,slow=4.3,SNR=3.5
ESDC Sonseca Array 163.10 353 PKPdf **PKPdf 16 45 09.3 -0.7**
ESDC PKPab **PKPab 16 45 59.3 -0.4**
DBIC Dimbokro 163.78 187 PKP **PKPdf 16 45 11.1 -0.2**
comp=Z,8.9nm,1.1s,baz=200,slow=3.2,SNR=3.2
DBIC PKPab **PKPab 16 46 03.1 -0.1**
comp=Z,9.7nm,1.1s,baz=143,slow=4.6,SNR=3.9
KOWA Kowa 171.28 197 PKPdf **PKPdf 16 45 15.8 -0.8**
KOWA PKPab **PKPab 16 46 35.9 -0.4**

NEIC ***18*** *16:32:26.3±1.7,22.1°S±0.2°×173.5°E±0.1°,h10km±2km, mb4.5/18, Error ellipse: s-maj=28.1km s-min=17.1km az=27.0*

IDC ***18*** *16:32:29.6±2.2,22.64°S×173.26°E,h0km,mb3.9/3, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=58.9km s-min=38.0km az=24.0*

ISC 18 16:32:27.9±1.2,22.4S±0.2°×173.5E±0.1°,h10km,n35, σ1s74/36,mb4.5/9,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.13**	**279**	Pn	**Pn**	**16 33 46.1**	**+1.3**
PINNC	**Pines Island,**	**5.57**	**267**	Pn	**Pn**	**16 33 53.0**	**+2.1**
OUENC	**Ouen Island, N**	**6.13**	**268**	Pn	**Pn**	**16 34 01.9**	**+3.3**
ONTNC	**Ouen Toro**	**6.49**	**269**	Pn	**Pn**	**16 34 05.8**	**+2.2**
DZM	**Mont Dzumac**	**6.51**	**271**	Pn	**Pn**	**16 34 05.1**	**+1.2**
	0.7nm,0.3s,baz=112,slow=15,SNR=9.4						
DZM				Sn	**Sn**	**16 35 13.9**	**-4.5**
	1.0nm,0.3s,baz=129,slow=9.8,SNR=2.3						
	10nm,1.1s						
DZM	**Mont Dzumac**	**6.51**	**271**	Pn	**Pn**	**16 34 05.8**	**+1.8**
KOUNC	**Koumac, New Ca**	**8.74**	**280**	Pn	**Pn**	**16 34 35.9**	**+1.4**
BFZ	**Birch Farm**	**18.39**	**173**	P	**P**	**16 36 42.1**	**-0.9**
BFZ				IAmb	IAmb	16 37 14.8	
	comp=Z,49nm,1.2s						
THZ	**Tophouse**	**19.32**	**181**	P	**P**	**16 36 47.9**	**-5.5**
THZ				IAmb	IAmb	16 37 12.3	
	comp=Z,27nm,1.1s						
LTZ	**Lake Taylor**	**20.36**	**183**	P	**P**	**16 37 04.7**	**0.0**
LTZ				IAmb	IAmb	16 37 06.7	
	comp=Z,27nm,1.1s						
EIDS	**Eidsvold**	**20.68**	**257**	P	**P**	**16 37 09.2**	**+1.0**
OXZ	**Oxford**	**20.91**	**183**	P	**P**	**16 37 12.0**	**+1.4**
OXZ				IAmb	IAmb	16 37 19.5	
	comp=Z,21nm,0.8s						
RPZ	**Rata Peaks**	**21.36**	**185**	P	**P**	**16 37 15.4**	**-0.1**
RPZ				IAmb	IAmb	16 37 33.1	
	comp=Z,41nm,1.3s						
CTAO	**Charters Tower**	**25.45**	**270**	P	**P**	**16 37 56.9**	**+0.6**
AS31	**Alice Springs**	**36.35**	**260**	P	**P**	**16 39 34.0**	**+1.5**
ASAR	**Alice Springs**	**36.35**	**260**	P	**P**	**16 39 33.8**	**+1.3**
	comp=Z,4.3nm,0.9s,baz=88,slow=8.5,SNR=17						
	comp=Z,4.3nm,0.9s						
ASAR	**Alice Springs**	**36.35**	**260**	P	**P**	**16 39 33.2**	**+0.8**
WB0	**Warramunga Arr**	**36.48**	**267**	P	**P**	**16 39 34.4**	**+0.9**
WB0				IAmb	IAmb	16 40 10.4	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**36.50**	**266**	P	**P**	**16 39 34.3**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=97,slow=8.3,SNR=5.9						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**36.50**	**266**	P	**P**	**16 39 34.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**44.93**	**266**	P	**P**	**16 40 45.1**	**+1.7**
VNDA	**Vanda**	**55.47**	**183**	P	**P**	**16 42 03.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=1.8,slow=6.3,SNR=2.1						
	comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**55.47**	**183**	P	**P**	**16 42 02.9**	**+0.5**
SBA	**Scott Base**	**55.61**	**182**	P	**P**	**16 42 04.4**	**+1.0**
QSPA	**South Pole Qui**	**67.68**	**180**	P	**P**	**16 43 25.4**	**+0.1**
QSPA				IAmb	IAmb	16 43 27.1	
	comp=Z,5.8nm,1.0s						
SRIT	**Nakonsritamara**	**78.57**	**284**	P	**P**	**16 44 28.5**	**-1.8**
BELA	**Belgrano 2**	**78.61**	**174**	P	**P**	**16 44 28.5**	**-1.0**
BELA				IAmb	IAmb	16 44 30.7	
	comp=Z,3.5nm,1.0s						
SMAI	**San Martin Ant**	**79.59**	**161**	P	**P**	**16 44 34.4**	**-0.5**
SMAI				IAmb	IAmb	16 44 39.1	
	comp=Z,8.9nm,1.3s						
TROLL	**Troll, Antarti**	**85.65**	**183**	P	**P**	**16 45 07.2**	**+0.5**
SNAA	**Sanae**	**86.16**	**181**	P	**P**	**16 45 09.3**	**+0.3**
SNAA	**Sanae**	**86.16**	**181**	P	**P**	**16 45 09.1**	**0.0**
SNAA				IAmb	IAmb	16 45 10.1	
	comp=Z,3.7nm,1.0s						
VNA3	**Neumayer Olymp**	**86.60**	**179**	P	**P**	**16 45 11.4**	**+0.2**
VNA2	**Neumayer--Watz**	**86.94**	**180**	P	**P**	**16 45 13.1**	**+0.3**
	baz=179,slow=4.5						
VNA1	**Neumayer--Stat**	**87.21**	**179**	P	**P**	**16 45 14.1**	**0.0**
GERES	**GERESS Array B**	**149.09**	**334**	PKPbc	**PKPab**	**16 52 20.1**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=35,slow=3.6,SNR=4.0						

IDC ***18*** *16:42:48.3±1.6,33.20°S×178.40°W,h0km,mb4.3/4, mbtmp4.4/5, ML4.1/1, Error ellipse: s-maj=40.2km s-min=31.7km az=54.0*

WEL ***18*** *16:42:50.4±0.9,33.5°S±8.7°×17.8°W±2.2,h33km,M4.3/16, mB4.8/11, ML4.8/25, MLv4.6/16, Mw(mB)4.1/11, Error ellipse: s-maj=0.0km s-min=0.0km az=110.0*

NEIC ***18*** *16:42:50.2±1.9,33.7°S±0.1°×178.4°W±0.1°,h10km±2km, mb4.6/14, Error ellipse: s-maj=20.6km s-min=19.1km az=58.0*

ISC 18 16:42:48.8±0.8,33.41S±0.06°×178.2W±0.1°,h10km,n70, σ1s64/74,mb4.5/11,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.14**	**3**	P	**Pn**	**16 43 50.7**	**-1.5**
GLKZ				S	**Sn**	**16 44 37.0**	**-3.6**
MXZ	**Matakaoa Point**	**5.03**	**214**	Pn	**Pn**	**16 44 02.8**	**-1.5**
MXZ	**Matakaoa Point**	**5.03**	**214**	P	**Pn**	**16 44 03.4**	**-0.9**
MXZ				S	**Sn**	**16 45 00.8**	**-1.6**
WMGZ	**Waiomatatini S**	**5.19**	**211**	P	**Pn**	**16 44 05.9**	**-0.7**
WMGZ				S	**Sn**	**16 45 06.7**	**+0.3**
PKGZ	**Pakihiroa**	**5.40**	**213**	P	**Pn**	**16 44 10.1**	**+0.6**
PKGZ				S	**Sn**	**16 45 10.0**	**-1.7**
HAZ	**Te Kaha**	**5.43**	**216**	P	**Pn**	**16 44 09.6**	**-0.3**
HAZ				S	**Sn**	**16 45 11.9**	**-0.5**
PUZ	**Puketiti**	**5.47**	**211**	P	**Pn**	**16 44 09.7**	**-0.7**
PUZ				S	**Sn**	**16 45 11.8**	**-1.6**
RUGZ	**Raukumara Rang**	**5.65**	**215**	P	**Pn**	**16 44 12.0**	**-0.9**
TWGZ	**Tauwhareparae**	**5.68**	**212**	P	**Pn**	**16 44 12.7**	**-0.6**
TWGZ				S	**Sn**	**16 45 18.3**	**-0.3**
CNGZ	**Carnagh Statio**	**5.84**	**209**	P	**Pn**	**16 44 14.4**	**-1.0**
TKGZ	**Te Karaka**	**5.96**	**212**	P	**Pn**	**16 44 16.9**	**-0.1**
TKGZ				S	**Sn**	**16 45 22.3**	**-3.0**
MWZ	**Matawai**	**6.01**	**214**	P	**Pn**	**16 44 16.1**	**-1.7**
MWZ				S	**Sn**	**16 45 24.1**	**-2.7**
OPRZ	**Ohinepanea**	**6.15**	**223**	P	**Pn**	**16 44 20.1**	**+0.4**
URZ	**Urewera**	**6.16**	**217**	Pn	**Pn**	**16 44 19.7**	**-0.1**
	4.7nm,0.3s,baz=270,slow=3.7,SNR=41						
URZ				Sn	**Sn**	**16 45 27.1**	**-3.2**
	5.2nm,0.3s,baz=260,slow=3.9,SNR=8.2						
	15nm,0.3s						
URZ	**Urewera**	**6.16**	**217**		**Pn**	**16 44 17.3**	**-2.5**
URZ	**Urewera**	**6.16**	**217**	P	**Pn**	**16 44 18.9**	**-0.9**
RIGZ	**Rimuhau**	**6.21**	**211**	P	**Pn**	**16 44 20.7**	**+0.1**
PRGZ	**Paritu Road**	**6.35**	**209**	P	**Pn**	**16 44 22.8**	**+0.4**
SNGZ	**Shannon Statio**	**6.46**	**213**	P	**Pn**	**16 44 23.9**	**-0.1**
MUGZ	**Murupara**	**6.50**	**218**	P	**Pn**	**16 44 22.9**	**-1.5**
MHGZ	**Mahia Peninsul**	**6.54**	**208**	P	**Pn**	**16 44 23.8**	**-1.2**
RAHZ	**Arahi**	**6.69**	**213**	P	**Pn**	**16 44 27.3**	**+0.2**
TOZ	**Tahuroa Road**	**6.70**	**228**	P	**Pn**	**16 44 27.9**	**+0.6**
MTHZ	**Maungataniwha**	**6.75**	**215**	P	**Pn**	**16 44 28.0**	**0.0**
ALRZ	**Allen Road**	**6.78**	**219**	P	**Pn**	**16 44 29.3**	**+0.9**
NMHZ	**Naumai**	**6.96**	**214**	P	**Pn**	**16 44 30.9**	**0.0**
OUZ	**Omahuta**	**7.03**	**253**	Pn	**Pn**	**16 44 33.5**	**+1.8**
BKZ	**Black Stump Fm**	**7.17**	**215**	Pn	**Pn**	**16 44 30.6**	**-3.1**
BKZ	**Black Stump Fm**	**7.17**	**215**	P	**Pn**	**16 44 33.7**	**0.0**
KWHZ	**Kaweka Forest**	**7.40**	**214**	P	**Pn**	**16 44 35.8**	**-1.1**
KAHZ	**Kahuranaki**	**7.50**	**210**	P	**Pn**	**16 44 35.3**	**-3.0**
TMVZ	**Te Maari**	**7.53**	**219**	P	**Pn**	**16 44 37.5**	**-1.2**
NTVZ	**North Tongariro**	**7.53**	**219**	P	**Pn**	**16 44 37.6**	**-1.2**
ETVZ	**East Tongariro**	**7.54**	**219**	P	**Pn**	**16 44 39.1**	**+0.2**
OTVZ	**Oturere**	**7.58**	**219**	P	**Pn**	**16 44 39.3**	**-0.2**
HIZ	**Hauiti**	**7.59**	**226**	Pn	**Pn**	**16 44 38.1**	**-1.4**
BHHZ	**Black Hill Sta**	**7.63**	**216**	P	**Pn**	**16 44 39.6**	**-0.4**
BFZ	**Birch Farm**	**8.51**	**210**	Pn	**Pn**	**16 44 48.5**	**-3.6**
MSWZ	**Moikau Station**	**9.54**	**211**	Pn	**Pn**	**16 45 02.7**	**-3.5**
PLWZ	**Palliser**	**9.66**	**211**	Pn	**Pn**	**16 45 05.0**	**-2.9**
SNZO	**South Karori**	**9.70**	**214**	Pn	**Pn**	**16 45 05.4**	**-2.9**
THZ	**Tophouse**	**10.92**	**218**	Pn	Pn	16 45 20.1	-5.1
KHZ	**Kahutara**	**11.10**	**214**	Pn	**Pn**	**16 45 23.7**	**-3.8**
RPZ	**Rata Peaks**	**13.28**	**216**	Pn	Pn	16 45 52.0	-5.3
EIDS	**Eidsvold**	**27.87**	**279**	P	**P**	**16 48 39.6**	**+0.8**
EIDS				IAmb	IAmb	16 48 50.3	
	comp=Z,20nm,1.5s						
CTA	**Charters Tower**	**34.23**	**284**	P	**P**	**16 49 35.4**	**+0.5**
	comp=Z,3.8nm,0.5s,baz=123,slow=9.8,SNR=9.2						
	comp=Z,3.8nm,0.5s						
CTAO	**Charters Tower**	**34.23**	**284**	P	**P**	**16 49 35.5**	**+0.5**
AS31	**Alice Springs**	**42.87**	**270**	P	**P**	**16 50 46.8**	**-0.8**
ASAR	**Alice Springs**	**42.87**	**270**	P	**P**	**16 50 46.9**	**-0.6**
	comp=Z,4.4nm,0.7s,baz=110,slow=7.3,SNR=75						
ASAR				PcP	**PcP**	**16 52 38.8**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=114,slow=4.0,SNR=5.0						
	comp=Z,4.4nm,0.7s						
ASAR	**Alice Springs**	**42.87**	**270**	P	**P**	**16 50 46.6**	**-0.9**
WR0	**Warramunga Arr**	**43.95**	**275**	P	**P**	**16 50 55.5**	**-0.7**
WR0				IAmb	IAmb	16 51 36.0	
	comp=Z,16nm,1.4s						
WB2	**Warramunga Arr**	**44.12**	**275**	P	**P**	**16 50 57.0**	**-0.6**
WB2				IAmb	IAmb	16 50 57.6	
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	**44.13**	**275**	P	**P**	**16 50 56.8**	**-0.9**
	comp=Z,4.0nm,0.6s,baz=117,slow=7.8,SNR=80						
	comp=Z,4.0nm,0.6s						
WB0	**Warramunga Arr**	**44.17**	**276**	P	**P**	**16 50 57.1**	**-0.9**
WB0				IAmb	IAmb	16 50 59.2	
	comp=Z,6.8nm,0.8s						
MTN	**Manton Dam**	**50.35**	**282**	P	**P**	**16 51 46.1**	**-0.1**
MTN				IAmb	IAmb	16 52 24.6	
	comp=Z,9.9nm,1.1s						
KNRA	**Kununurra**	**50.84**	**277**	P	**P**	**16 51 49.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**52.25**	**272**	P	**P**	**16 51 59.9**	**-0.6**
FITZ				IAmb	IAmb	16 52 33.8	
	comp=Z,9.2nm,1.4s						
CASY	**Casey**	**52.42**	**209**	P	**P**	**16 52 02.0**	**+1.0**
CASY				IAmb	IAmb	16 52 04.0	
	comp=Z,7.8nm,1.2s						
QSPA	**South Pole Qui**	**56.70**	**180**	P	**P**	**16 52 35.8**	**+3.4**
	comp=Z,1.7nm,1.0s,baz=359,slow=1.5,SNR=5.1						
	comp=Z,1.7nm,1.0s						
QSPA	**South Pole Qui**	**56.70**	**180**	P	**P**	**16 52 35.7**	**+3.3**
KKM	**Kota Kinabalu**	**73.36**	**289**	P	**P**	**16 54 22.1**	**+0.8**
GO09	**Cerro Castillo**	**73.57**	**141**	P	**P**	**16 54 23.0**	**+1.1**
TROLL	**Troll, Antarti**	**74.87**	**180**	P	Pn	16 54 40.7	+11
SNAA	**Sanae**	**75.16**	**178**	P	Pn	16 54 43.5	+13
SNAA	**Sanae**	**75.16**	**178**	P	**P**	**16 54 32.2**	**+1.3**
VNA3	**Neumayer Olymp**	**75.32**	**176**	P	Pn	16 54 45.0	+13
VNA2	**Neumayer--Watz**	**75.75**	**177**	P	Pn	16 54 47.7	+13
	baz=168,slow=5.1						
VNA1	**Neumayer--Stat**	**75.98**	**177**	P	Pn	16 54 49.1	+14
FINES	**FINESS Array B**	**147.89**	**338**	PKPbc	**PKPbc**	**17 02 32.9**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=32,slow=2.8,SNR=16						
BRTR	**Keskin Array B**	**153.76**	**293**	PKPbc	**PKPbc**	**17 02 48.0**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=48,slow=2.1,SNR=2.8						

NOU ***18*** *16:54:05.7,28.35S×175.40W,h0km,mb4.8/16, Kermadec Islands Region*

NEIC ***18*** *16:54:09.8±3.0,27.79S±0.05°×176.20W±0.09°,h10km±1km, mb4.9/38, Error ellipse: s-maj=13.8km s-min=8.7km az=74.0*

IDC ***18*** *16:54:10.9±0.6,27.64S×176.73W,h0km,mb4.2/13, mbtmp4.2/14, ML4.6/1, MS4.3/36, Error ellipse: s-maj=23.6km s-min=17.5km az=117.0*

GCMT ***18*** *16:54:14.8±0.3,27.87S±0.03×176.06W±0.02,h21km, MW5.0/96, Moment Tensor Solution. s48,c56; s96,c127; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.91±.21; Mθθ-0.64±.14; Mϕϕ-3.27±.13; Mrθ-0.11±.30; Mϕθ-0.74±.09; Mϕr1.57±.20; Best double couple: M0 4.00500×10^16 NP1:ϕs200.00000°, δs56.00000°, λs83.00000°. NP2: ϕs200.00000°, δs34.00000°, λs100.00000°. Principal axes: T 4.2530, Plg78.0000°, Azm255.0000°; N -0.4910, Plg6.0000°, Azm12.0000°; P -3.7580, Plg11.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 16:54:13.3±0.4,28.02S±0.06°×176.20W±0.06°,h37km, n152,σ2s27/107,mb4.9/35,MS4.3/36,1C,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.95**	**231**	Pn	**Pn**	**16 54 43.9**	**+0.1**
	326nm,0.3s,baz=67,slow=9.8,SNR=11						
RAO				Sn	**Sn**	**16 55 11.2**	**+4.2**
	967nm,0.3s,baz=93,slow=23,SNR=15						
RAO	**Raoul Island**	**1.95**	**231**	Pn	**Pn**	**16 54 44.2**	**+0.5**
RAO	**Raoul Island**	**1.95**	**231**	P	**Pn**	**16 54 45.1**	**+1.4**
RIZ	**Raoul Island**	**1.95**	**231**	P	**Pn**	**16 54 44.5**	**+0.7**
RIZ				S	**Sn**	**16 55 10.6**	**+3.6**
GLKZ	**Green Lake**	**1.96**	**230**	P	**Pn**	**16 54 45.1**	**+1.3**
GLKZ				S	**Sn**	**16 55 09.6**	**+2.4**
NIUE	**Niue**	**10.60**	**34**	Pn	Pn	16 56 37.1	-5.5
NIUE	**Niue**	**10.60**	**34**	P	**Pn**	**16 56 39.1**	**-3.5**
OUZ	**Omahuta**	**11.27**	**228**	P	Pn	16 56 56.3	+4.6
OUZ	**Omahuta**	**11.27**	**228**	P	**Pn**	**16 56 51.2**	**-0.5**
URZ	**Urewera**	**11.64**	**207**	Pn	Pn	16 56 50.5	-6.3
	0.6nm,0.3s,baz=276,slow=2.6,SNR=9.9						
URZ				Sn	**Sn**	**16 58 58.4**	**-7.0**
	4.2nm,0.3s,baz=181,slow=23,SNR=8.2						
URZ	**Urewera**	**11.64**	**207**	Pn	Pn	16 56 49.6	-7.2
URZ	**Urewera**	**11.64**	**207**	P	**Pn**	**16 56 52.6**	**-4.2**
HIZ	**Hauiti**	**12.86**	**213**	P	**Pn**	**16 57 13.4**	**0.0**
PRHZ	**Porangahau**	**13.57**	**204**	P	Pn	16 57 17.7	-5.5
BFZ	**Birch Farm**	**14.08**	**204**	Pn	Pn	16 57 24.4	-5.7
BFZ	**Birch Farm**	**14.08**	**204**	P	Pn	16 57 24.1	-6.0
BFZ				S	Sn	16 59 52.5	-12
BFZ	**Birch Farm**	**14.08**	**204**	P	Pn	16 57 23.7	-6.3
MRZ	**Mangatainoka R**	**14.31**	**206**	P	Pn	16 57 20.7	-13
MRZ				S	Sn	16 59 57.7	-13
HOWZ	**Holdsworth Sta**	**14.54**	**206**	P	Pn	16 57 29.4	-6.9
HOWZ				S	Sn	17 00 01.3	-15
TMWZ	**Te Maipa**	**14.58**	**204**	P	**Pn**	**16 57 33.2**	**-3.7**
TMWZ				S	Sn	17 00 03.3	-14
OGWZ	**Otaki Gorge**	**14.61**	**207**	P	**Pn**	**16 57 32.5**	**-4.7**
OGWZ				S	Sn	17 00 03.5	-14
AFI	**Afiamalu**	**14.63**	**17**	Pn	Pn	16 57 31.7	-6.0
	2.7nm,0.3s,baz=350,slow=2.5,SNR=5.3						
AFI				Sn	Sn	17 00 04.9	-14
	6.0nm,0.3s,baz=112,slow=23,SNR=6.5						
AFI	**Afiamalu**	**14.63**	**17**	P	**Pn**	**16 57 34.1**	**-3.7**
KIW	**Kapiti Island**	**14.75**	**207**	P	Pn	16 57 31.7	-7.4
KIW				S	Sn	17 00 05.7	-16
TRWZ	**Traveller**	**14.91**	**204**	P	**Pn**	**16 57 37.7**	**-3.5**
TRWZ				S	Sn	17 00 12.6	-13
MSWZ	**Moikau Station**	**15.09**	**205**	P	**Pn**	**16 57 41.1**	**-2.5**
MSWZ				S	Sn	17 00 13.8	-16
SNZO	**South Karori**	**15.21**	**207**	Pn	Pn	16 57 36.6	-8.6
SNZO				IAmb	IAmb	16 57 54.2	
	comp=Z,56nm,1.2s						
TUWZ	**Tuamarina**	**15.62**	**209**	P	**Pn**	**16 57 46.5**	**-4.1**
TUWZ				S	Sn	17 00 27.3	-15
QRZ	**Quartz Range**	**15.78**	**213**	P	**P**	**16 57 53.9**	**-2.2**
RAR	**Rarotonga**	**16.39**	**69**	LR	LR	17 03 50.8	
	comp=Z,655nm,20.3s,baz=272,slow=35						
KHZ	**Kahutara**	**16.61**	**207**	P	Pn	16 57 54.3	-8.8
KHZ	**Kahutara**	**16.61**	**207**	P	**Pn**	**16 58 00.3**	**-2.9**
DZM	**Mont Dzumac**	**16.80**	**287**	LR	LR	17 03 11.3	
	comp=Z,1μm,18.5s,baz=120,slow=33						
DZM	**Mont Dzumac**	**16.80**	**287**	*e*Pn	**P**	**16 58 07.0**	**-0.7**
	comp=Z,126nm,1.6s						
DZM				*e*LR	LR	17 01 53.3	
	comp=Z,2μm,25.7s						
DZM	**Mont Dzumac**	**16.80**	**287**		**Pn**	**16 58 03.1**	**-2.8**
DZM	**Mont Dzumac**	**16.80**	**287**	P	**P**	**16 58 13.8**	**+6.1**
NOUC	**Port Laguerre**	**16.91**	**287**	P	**P**	**16 58 13.8**	**+5.0**
OXZ	**Oxford**	**17.99**	**209**	P	**Pn**	**16 58 15.4**	**-4.9**
OXZ				IAmb	IAmb	16 58 18.6	
	comp=Z,118nm,2.0s						
RPZ	**Rata Peaks**	**18.72**	**210**	P	**Pn**	**16 58 30.6**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=160,slow=3.5,SNR=7.5						
RPZ				LR	LR	17 04 36.1	
	comp=Z,638nm,18.4s,baz=28,slow=33						
	comp=Z,6.6nm,0.4s						
RPZ	**Rata Peaks**	**18.72**	**210**	P	**P**	**16 58 27.2**	**-1.4**
	comp=Z,101nm,0.7s						
KOUNC	**Koumac, New Ca**	**19.27**	**288**		**Pn**	**16 58 36.3**	**+0.3**
KOUNC				IAmb	IAmb	16 58 41.4	
	comp=Z,71nm,1.0s						
KOUNC	**Koumac, New Ca**	**19.27**	**288**	P	**Pn**	**16 58 40.8**	**+4.8**
	comp=Z,92nm,1.2s						
TBI	**Tubuai**	**24.52**	**85**	*e*P	**P**	**16 59 29.5**	**+0.2**
	comp=Z,66nm,43.8s						
TBI				*e*LR	LR	17 05 31.0	
	comp=Z,606nm,28.5s						
TBI	**Tubuai**	**24.52**	**85**	*e*T	T	17 24 45.1	
	comp=Z,5.6nm,0.3s						
PAE	**Paea**	**26.55**	**73**	*e*T	T	17 27 15.3	
	comp=Z,9.3nm,0.3s						
PPT2	**Papeete2**	**26.59**	**73**	*e*LR	LR	17 06 27.2	
	comp=Z,379nm,22.2s						
PPT2	**Papeete2**	**26.59**	**73**	*e*T	T	17 27 18.9	
	comp=Z,5.5nm,0.2s						
PPT	**Papeete**	**26.60**	**73**	LR	LR	17 09 45.0	
	comp=Z,602nm,18.4s,baz=247,slow=35						
ARMA	**Armidale**	**28.13**	**257**	P	**P**	**17 00 03.0**	**+1.0**
HNR	**Honiara**	**29.09**	**305**	LR	LR	17 10 45.8	
	comp=Z,782nm,18.6s,baz=156,slow=35						
EIDS	**Eidsvold**	**29.31**	**268**	P	**P**	**17 00 11.7**	**-0.7**
EIDS				IAmb	IAmb	17 00 47.8	
	comp=Z,30nm,1.4s						
VAH	**Vaihoa**	**29.36**	**70**	*e*T	T	17 30 44.8	
	comp=Z,18nm,0.2s						
CAN	**Canberra**	**30.39**	**247**	P	**P**	**17 00 21.9**	**-0.1**
CAN				IAmb	IAmb	17 00 39.2	
	comp=Z,28nm,1.5s						
TAU	**Tasmania Unive**	**32.94**	**233**	P	**P**	**17 00 46.5**	**+2.4**
CTA	**Charters Tower**	**35.08**	**275**	LR	LR	17 14 22.8	
	comp=Z,1μm,18.4s,baz=106,slow=35						
CTAO	**Charters Tower**	**35.08**	**275**	P	**P**	**17 01 02.8**	**-0.2**
CTAO				IAmb	IAmb	17 01 36.1	
	comp=Z,50nm,1.6s						
STKA	**Stephens Creek**	**36.61**	**253**	P	**P**	**17 01 16.6**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=88,slow=7.4,SNR=5.9						
STKA				LR	LR	17 15 22.2	
	comp=Z,572nm,18.5s,baz=73,slow=35						
	comp=Z,2.9nm,0.7s						
TAOE	**Nuku Hiva Isla**	**38.94**	**68**	*e*S	**S**	**17 07 33.0**	**+0.8**
	comp=Z,101nm,23.7s						
TAOE				*e*LR	LR	17 12 09.3	
	comp=Z,270nm,21.5s						
COEN	**Coen**	**40.23**	**282**	P	**P**	**17 01 46.0**	**-0.6**
COEN				IAmb	IAmb	17 01 50.3	
	comp=Z,52nm,1.6s						
BBOO	**Buckleboo**	**41.18**	**251**	P	**P**	**17 01 52.6**	**-1.7**
AS31	**Alice Springs**	**44.87**	**264**	P	**P**	**17 02 23.4**	**-0.9**
ASAR	**Alice Springs**	**44.87**	**264**	P	**P**	**17 02 23.8**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=102,slow=6.7,SNR=61						
ASAR				LR	LR	17 20 50.8	
	comp=Z,667nm,18.0s,baz=102,slow=36						
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**44.87**	**264**	P	**P**	**17 02 22.8**	**-1.6**
WB2	**Warramunga Arr**	**45.64**	**269**	P	**P**	**17 02 28.6**	**-1.8**
WRA	**Warramunga Arr**	**45.65**	**269**	P	**P**	**17 02 29.1**	**-1.4**
	comp=Z,3.1nm,0.6s,baz=109,slow=6.3,SNR=57						
WRA				LR	LR	17 20 42.0	
	comp=Z,309nm,18.6s,baz=110,slow=35						
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**45.65**	**269**	P	**P**	**17 02 29.4**	**-1.2**
WB0	**Warramunga Arr**	**45.67**	**269**	P	**P**	**17 02 29.4**	**-1.2**
WB0				IAmb	IAmb	17 02 55.6	
	comp=Z,37nm,1.7s						
FORT	**Forrest**	**48.22**	**253**	P	**P**	**17 02 48.4**	**-2.0**
SBA	**Scott Base**	**50.52**	**185**	P	P	17 03 13.1	+5.8
SBA				IAmb	IAmb	17 03 23.3	
	comp=Z,27nm,1.6s						
VNDA	**Vanda**	**50.62**	**186**	P	P	17 03 15.0	+7.0
	comp=Z,0.7nm,0.8s,baz=7.4,slow=6.6,SNR=6.6						
VNDA				LR	LR	17 20 54.4	
	comp=Z,183nm,20.7s,baz=10.0,slow=32						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**50.62**	**186**	P	P	17 03 12.2	+4.2
KNRA	**Kununurra**	**52.16**	**271**	P	**P**	**17 03 18.2**	**-2.2**
KNRA				IAmb	IAmb	17 03 38.2	
	comp=Z,51nm,2.0s						
FITZ	**Fitzroy Crossi**	**53.99**

NJ2				pmax	pmax			
	comp=Z,8.0nm,0.6s							
USRK	**Ussuriysk Ar.**	**86.08**	**325**	P	**P**	**17 06 52.5**	**+2.5**	
	comp=Z,1.9nm,0.7s,baz=64,slow=4.4,SNR=6.4							
USRK	**Ussuriysk Ar.**	**86.08**	**325**	P	**P**	**17 06 50.1**	**+0.2**	
PSI	**Prapat**	**86.78**	**275**	LR	LR	17 49 23.1		
	comp=Z,160nm,18.6s,baz=130,slow=38							
ELK	**Elko**	**88.73**	**42**	LR	LR	17 43 48.2		
	comp=Z,367nm,18.1s,baz=231,slow=34							
CN2	**Changchun**	**89.23**	**322**	*e*P	**P**	**17 07 07.3**	**+2.2**	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.7s							
TIA	**Tai'an**	**89.53**	**312**	*e*P	**P**	**17 07 09.4**	**+2.7**	
TIA				pmax	pmax			
	comp=Z,9.0nm,0.9s							
TXAR	**Lajitas Array**	**89.77**	**56**	P	**P**	**17 07 11.9**	**+3.8**	
	comp=Z,0.5nm,0.9s,baz=253,slow=3.8,SNR=4.2							
	comp=Z,0.5nm,0.9s							
KLR	**Kul'dur**	**89.80**	**329**	LR	LR	17 45 46.9		
	comp=Z,111nm,18.1s,baz=120,slow=35							
CMIG	**Matias Romero**	**90.50**	**71**	LR	LR	17 40 06.5		
	comp=Z,84nm,19.1s,baz=231,slow=30							
ANMO	**Albuquerque**	**90.86**	**50**	LR	LR	17 40 37.1		
	comp=Z,150nm,20.9s,baz=217,slow=31							
ENH	**Enshi**	**91.59**	**304**	P	**P**	**17 07 17.0**	**+0.5**	
NEW	**Newport**	**92.53**	**35**	LR	LR	17 46 33.2		
	comp=Z,261nm,18.1s,baz=194,slow=34							
PDAR	**Pinedale Array**	**93.33**	**43**	LR	LR	17 46 21.5		
	comp=Z,172nm,18.2s,baz=248,slow=34							
CMAR	**Chiang Mai Arr**	**94.12**	**289**	P	**P**	**17 07 28.8**	**+0.4**	
	comp=Z,0.3nm,0.3s,baz=154,slow=4.2,SNR=4.4							
CMAR				LR	LR	17 49 21.0		
	comp=Z,25nm,20.5s,baz=125,slow=35							
	comp=Z,0.3nm,0.3s							
ILAR	**Eielson Array**	**95.27**	**12**	P	**P**	**17 07 34.4**	**+1.8**	
	comp=Z,0.3nm,0.5s,baz=215,slow=6.9,SNR=4.1							
	comp=Z,0.3nm,0.5s							
PZH	**PanZhiHua**	**95.62**	**297**	P	**P**	**17 07 36.9**	**+1.6**	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.6s							
PZH				pmax	pmax			
	comp=Z,100nm,4.4s							
HHC	**Hu-ho-hao-te**	**95.73**	**313**	*e*P	**P**	**17 07 33.8**	**-1.6**	
HHC				pmax	pmax			
	comp=Z,31nm,0.9s							
HHC				pmax	pmax			
	comp=Z,290nm,5.4s							
YAK	**Yakutsk**	**99.67**	**337**	LR	LR	17 53 13.3		
	comp=Z,60nm,18.7s,baz=268,slow=36							
WMQ	**Urumqi**	**112.99**	**309**	*e*P	**PKiKP**	**17 12 47.1**	**+0.7**	
ZALV	**Zalesovo Beam**	**117.30**	**319**	PKP	**PKiKP**	**17 12 54.3**	**+0.1**	
	comp=Z,1.4nm,0.6s,baz=329,slow=1.7,SNR=6.1							
MK31	**Makanchi Array**	**117.44**	**311**	PKPdf	**PKPdf**	**17 12 53.6**	**-1.2**	
MKAR	**Makanchi Array**	**117.44**	**311**	PKP	**PKiKP**	**17 12 55.2**	**+0.5**	
	comp=Z,0.9nm,0.8s,baz=64,slow=1.9,SNR=9.7							
MAKZ	**Makanchi**	**117.65**	**311**		**PKPdf**	**17 12 54.8**	**-0.4**	
KK31	**Karatay Array**	**125.05**	**305**	PKPdf	**PKPdf**	**17 13 08.7**	**-0.8**	
KKAR	**Karatay Array**	**125.05**	**305**	PKPdf	**PKPdf**	**17 13 08.8**	**-0.7**	
KKAR	**Karatay Array**	**125.05**	**305**		**PKPdf**	**17 13 07.1**	**-2.4**	
ARCES	**ARCESS Array B**	**136.58**	**349**	PKP	**PKPdf**	**17 13 30.6**	**+0.1**	
	comp=Z,1.1nm,0.6s,baz=70,slow=1.4,SNR=9.0							
FINES	**FINESS Array B**	**143.41**	**342**	PKhKP	PKPpre	17 13 41.5		
	comp=Z,0.7nm,0.6s,baz=19,slow=6.5,SNR=5.3							
FINES				PKP	**PKiKP**	**17 13 46.7**	**+0.3**	
	comp=Z,1.3nm,0.5s,baz=76,slow=2.2,SNR=8.8							
ONI	**Oni**	**144.87**	**305**	PKPdf	**PKPdf**	**17 13 45.9**	**-0.4**	
KBZ	**Khabaz**	**145.02**	**307**	PKP	**PKiKP**	**17 13 50.2**	**0.0**	
	comp=Z,2.5nm,0.9s,baz=233,slow=3.8,SNR=3.9							
NC303	**NORSAR Array S**	**146.41**	**353**		**PKPbc**	**17 13 49.8**	**+0.1**	
NB2	**NORSAR Subarra**	**146.61**	**353**	PKP	**PKiKP**	**17 13 52.2**	**-0.9**	
	comp=Z,3.0nm,1.0s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**146.61**	**353**	PKPbc	**PKPab**	**17 13 51.8**	**+0.4**	
	comp=Z,2.3nm,0.8s,baz=13,slow=4.5,SNR=13							
NACGM	**Naroch**	**148.39**	**335**	*e*PKP	**PKPab**	**17 13 58.1**	**-0.4**	
	baz=41							
AKASG	**Malin Array Be**	**150.28**	**327**	PKPbc	**PKiKP**	**17 14 00.3**	**-0.6**	
	comp=Z,4.0nm,0.8s,baz=46,slow=3.5,SNR=18							
AKBB	**Malin Array Si**	**150.28**	**327**		**PKPbc**	**17 13 58.3**	**-1.8**	
BRTR	**Keskin Array B**	**152.74**	**303**	PKPbc	**PKiKP**	**17 14 08.0**	**+1.4**	
	comp=Z,0.5nm,0.6s,baz=90,slow=1.7,SNR=3.7							
BRTR	**Keskin Array B**	**152.74**	**303**		**PKPdf**	**17 14 02.3**	**+3.0**	
CLL	**Collm**	**155.73**	**346**	*e*PKPdf	**PKPdf**	**17 14 04.0**	**+1.2**	
CLL				*e*PKPab	**PKPab**	**17 14 28.0**	**-1.3**	
	comp=Z,4.0nm,1.1s							

*JMA **18** 16:58:37.7±0.1,25°N×2°×122°.3E×1°.0,h66km±1km, MV1.8/9, TAIWAN REGION*
*TAP **18** 16:58:37.4,24°.49N×122°.23E,h57km±1km,ML2.8,B*
ISC 18 16:58:38.1±1.3**,24°.47N**±0°.03×**122°.25E**±0°.02**,h54**km±9km**, n80,σ9°57**/146**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.39**	**290**	P	**Pn**	**16 58 48.5**	**0.0**
TWC	baz=289			S	**Sn**	**16 58 56.5**	**+0.6**
	baz=289						
EWUT	**Wuta**	**0.43**	**267**	*e*S	**Sn**	**16 58 56.7**	**+0.1**
	baz=264						
ENA	**Nanau**	**0.47**	**265**	*e*P	**Pn**	**16 58 49.5**	**+0.2**
ENA	baz=262			*e*S	**Sn**	**16 58 57.9**	**+0.5**
	baz=262						
EGS		**0.47**	**322**	*e*P	**Pn**	**16 58 49.5**	**+0.1**
EGS	baz=323			*e*S	**Sn**	**16 58 57.3**	**-0.1**
	baz=323						
NDS	**Dongshan**	**0.52**	**288**	P	**Pn**	**16 58 49.1**	**-0.7**
	baz=287						
NDS				S	**Sn**	**16 58 58.0**	**-0.3**
	baz=287						
NTC	**Toucheng**	**0.54**	**315**	*e*P	**Pn**	**16 58 50.1**	**0.0**
NTC	baz=315			*e*S	**Sn**	**16 58 58.8**	**0.0**
	baz=315						
ILA	**Ilan**	**0.55**	**302**	*e*P	**Pn**	**16 58 50.1**	**0.0**
	baz=302						
ILA				*e*S	**Sn**	**16 58 58.8**	**0.0**
	baz=302						
TWB1	**Santiao Chiao**	**0.59**	**336**	*e*P	**Pn**	**16 58 50.4**	**-0.2**
	baz=337						
TWB1				*e*S	**Sn**	**16 58 59.6**	**-0.1**
	baz=337						
TWE	**Neicheng**	**0.59**	**295**	P	**Pn**	**16 58 50.9**	**+0.2**
	baz=294						
TWE				S	**Sn**	**16 59 00.2**	**+0.5**
	baz=294						
JYNG	**Yonagunijimaku**	**0.63**	**92**	P	**Pn**	**16 58 51.3**	**+0.1**
JYNG				*e*S	**Sn**	**16 59 01.2**	**+0.6**
TIPB	**Shuangxi**	**0.63**	**322**	P	**Pn**	**16 58 51.1**	**-0.1**
	baz=322						
TIPB				S	**Sn**	**16 59 00.6**	**-0.1**
	baz=322						
ENTT	**Nioudou**	**0.65**	**285**	*i* P	**Pn**	**16 58 50.7**	**-0.7**
	baz=284						
ENTT				*i* S	**Sn**	**16 59 00.9**	**-0.1**
	baz=284						
ETL	**Fush Village**	**0.66**	**242**	*e*P	**Pn**	**16 58 51.1**	**-0.4**
	baz=239						
ETL				*e*S	**Sn**	**16 59 01.3**	**0.0**
	baz=239						
LATG	**Datong**	**0.67**	**276**	P	**Pn**	**16 58 51.8**	**+0.1**
	baz=274						
LATG				S	**Sn**	**16 59 01.9**	**+0.3**
	baz=274						
FUSB	**Fushanzhiwuyua**	**0.67**	**295**	P	**Pn**	**16 58 51.9**	**+0.1**
	baz=295						
FUSB				S	**Sn**	**16 59 01.5**	**-0.1**
	baz=295						
NACB	**Ninganchiao**	**0.67**	**244**	*e*P	**Pn**	**16 58 50.8**	**-0.9**
	baz=241						
NACB				*e*S	**Sn**	**16 59 02.4**	**+0.9**
	baz=241						
NDT	**Datong Townshi**	**0.69**	**281**	*e*P	**Pn**	**16 58 52.0**	**+0.2**
	baz=280						
NDT				*e*S	**Sn**	**16 59 02.3**	**+0.4**
	baz=280						
YOJ	**Yonaguni jima**	**0.69**	**91**	*e*P	**Pn**	**16 58 51.8**	**-0.1**
	baz=91						
YOJ				*e*S	**Sn**	**16 59 03.0**	**+1.1**
	baz=91						
YOJ	**Yonaguni jima**	**0.69**	**91**	P	**Pn**	**16 58 51.9**	**0.0**
SXI1	**Grass Mountain**	**0.71**	**331**	P	**Pn**	**16 58 52.0**	**-0.2**
	baz=332						
SXI1				S	**Sn**	**16 59 02.1**	**-0.3**
	baz=332						
TWD	**Chiawan**	**0.72**	**237**	*e*P	**Pn**	**16 58 51.6**	**-0.7**
	baz=234						
TWD				*e*S	**Sn**	**16 59 02.8**	**+0.3**
	baz=234						
NWF	**Wu-fen Shan**	**0.73**	**324**	*e*P	**Pn**	**16 58 52.5**	**-0.1**
	baz=325						
NWF				*e*S	**Sn**	**16 59 03.0**	**-0.1**
	baz=325						
ETLH	**Xiulin Townshi**	**0.75**	**250**	*e*P	**Pn**	**16 58 52.0**	**-0.8**
	baz=247						
ETLH				*e*S	**Sn**	**16 59 02.9**	**-0.6**
	baz=247						
HWA	**Hwalien**	**0.77**	**230**	*e*P	**Pn**	**16 58 53.2**	**+0.3**
	baz=227						
HWA				*e*S	**Sn**	**16 59 04.2**	**+0.4**
	baz=227						
TWA	**Mucha**	**0.79**	**310**	*e*P	**Pn**	**16 58 53.0**	**-0.2**
	baz=310						
TWA				*e*S	**Sn**	**16 59 03.8**	**-0.5**
	baz=310						
NNSB	**Datong**	**0.80**	**267**	*e*P	**Pn**	**16 58 52.8**	**-0.6**
	baz=265						
NNSB				*e*S	**Sn**	**16 59 04.2**	**-0.3**
	baz=265						
NNS	**Nan Shan**	**0.80**	**268**	*e*P	**Pn**	**16 58 53.0**	**-0.5**
	baz=266						
NNS				*e*S	**Sn**	**16 59 04.5**	**-0.3**
	baz=266						
NHDH	**Xindian Distri**	**0.82**	**307**	*e*P	**Pn**	**16 58 53.4**	**-0.2**
	baz=306						
NHDH				*e*S	**Sn**	**16 59 04.6**	**-0.4**
	baz=306						
YHNB	**Yeheng**	**0.82**	**284**	P	**Pn**	**16 58 53.9**	**+0.2**
	baz=283						
YHNB				S	**Sn**	**16 59 05.2**	**+0.1**
	baz=283						
YM01	**YM01**	**0.92**	**317**	*e*P	**Pn**	**16 58 54.7**	**-0.2**
	baz=317						
YM01				*e*S	**Sn**	**16 59 06.6**	**-0.6**
	baz=317						
FUSS	**Fushou**	**0.95**	**257**	*e*P	**Pn**	**16 58 55.5**	**0.0**
	baz=255						
FUSS				*e*S	**Sn**	**16 59 08.1**	**-0.2**
	baz=255						
WHF	**Hehuan Shan**	**0.96**	**250**	P	**Pn**	**16 58 55.2**	**-0.7**
	baz=248						
WHF				*e*S	**Sn**	**16 59 08.1**	**-0.7**
	baz=248						
TWS1	**Kuangyinshan**	**0.98**	**310**	*e*P	**Pn**	**16 58 55.3**	**-0.4**
	baz=309						
TWS1				*e*S	**Sn**	**16 59 08.7**	**-0.1**
	baz=309						
ESL	**Shilin**	**1.00**	**229**	*e*P	**Pn**	**16 58 54.7**	**-1.2**
	baz=226						
ESL				*e*S	**Sn**	**16 59 07.7**	**-1.3**
	baz=226						
TWY	**Chenhua**	**1.00**	**324**	*e*P	**Pn**	**16 58 55.8**	**-0.1**
	baz=324						
TWY				*e*S	**Sn**	**16 59 08.5**	**-0.5**
	baz=324						
TWT	**Tachien**	**1.01**	**258**	*e*P	**Pn**	**16 58 56.4**	**+0.2**
	baz=256						
TWT				*e*S	**Sn**	**16 59 09.9**	**+0.4**
	baz=256						
TDCB	**Techi**	**1.02**	**258**	*e*S	**Sn**	**16 59 09.6**	**-0.2**
	baz=256						
NFF	**Wufeng Townshi**	**1.05**	**279**	*e*P	**Pn**	**16 58 56.2**	**-0.4**
	baz=278						
NFF				*e*S	**Sn**	**16 59 10.0**	**-0.3**
	baz=278						
CHGB	**Renai**	**1.07**	**248**	*e*P	**Pn**	**16 58 56.7**	**-0.3**
	baz=246						
CHGB				*e*S	**Sn**	**16 59 10.9**	**-0.1**
	baz=246						
EGFH	**Guangfu**	**1.10**	**224**	*e*P	**Pn**	**16 58 56.2**	**-1.1**
	baz=221						
EGFH				*e*S	**Sn**	**16 59 10.6**	**-0.9**
	baz=221						
OWD	**Renai**	**1.11**	**243**	*e*P	**Pn**	**16 58 56.8**	**-0.8**
	baz=241						
OWD				*e*S	**Sn**	**16 59 10.6**	**-1.4**
	baz=241						
LIOB	**Emei**	**1.14**	**279**	*e*P	**Pn**	**16 58 58.0**	**+0.1**
	baz=278						
LIOB				*e*S	**Sn**	**16 59 12.8**	**+0.2**
	baz=278						
WUSB	**Renai**	**1.14**	**245**	*e*P	**Pn**	**16 58 57.5**	**-0.5**
	baz=244						
WUSB				*e*S	**Sn**	**16 59 12.0**	**-0.7**
	baz=244						
NSTT	**Nanjuang**	**1.15**	**278**	*e*P	**Pn**	**16 58 58.3**	**+0.3**
	baz=277						
NSTT				*e*S	**Sn**	**16 59 13.3**	**+0.5**
	baz=277						
PCYT	**Pengchaiyu**	**1.16**	**352**	*e*P	**Pn**	**16 58 58.3**	**+0.1**
	baz=353						
WHP	**Taichung City**	**1.21**	**261**	*e*P	**Pn**	**16 58 59.1**	**+0.3**
	baz=259						
WHP				*e*S	**Sn**	**16 59 14.2**	**0.0**
	baz=259						
HGSD	**Ruisui**	**1.24**	**218**	*e*P	**Pn**	**16 58 57.4**	**-1.7**
	baz=216						
HGSD				*e*S	**Sn**	**16 59 15.6**	**+0.8**
	baz=216						
VWDT	**VWDT**	**1.24**	**235**	*e*P	**Pn**	**16 58 58.4**	**-0.8**
	baz=233						
VWDT				*e*S	**Sn**	**16 59 13.8**	**-1.2**
	baz=233						
EHY	**Hungye**	**1.28**	**222**	*e*P	**Pn**	**16 58 59.8**	**0.0**
	baz=220						
EHY				*e*S	**Sn**	**16 59 16.0**	**0.0**
	baz=220						
WCS	**Beigang Elemen**	**1.29**	**252**	*e*P	**Pn**	**16 58 59.9**	**0.0**
	baz=250						
WCS				*e*S	**Sn**	**16 59 15.9**	**-0.3**
	baz=250						
IRIF	**Iriomote-Funau**	**1.35**	**96**	P	**Pn**	**16 59 00.3**	**-0.4**
IRIF				*e*S	**Sn**	**16 59 17.1**	**-0.4**
TWQ1	**Liyutan**	**1.36**	**265**	*e*P	**Pn**	**16 59 01.1**	**+0.4**
	baz=264						
TWQ1				*e*S	**Sn**	**16 59 18.0**	**+0.3**
	baz=264						
SMLT	**Sun Moon Lake**	**1.37**	**245**	*e*P	**Pn**	**16 59 01.3**	**+0.3**
	baz=243						
SMLT				*e*S	**Sn**	**16 59 18.5**	**+0.4**
	baz=243						
SSLB	**Suanglung**	**1.37**	**240**	*e*P	**Pn**	**16 59 00.5**	**-0.5**
	baz=239						
SSLB				*e*S	**Sn**	**16 59 17.8**	**-0.3**
	baz=239						
YULB	**Yu-li**	**1.39**	**219**	*e*P	**Pn**	**16 58 59.6**	**-1.6**
	baz=218						
YULB				*e*S	**Sn**	**16 59 18.5**	**+0.1**
	baz=218						
EYUL	**Yuli**	**1.41**	**218**	*e*P	**Pn**	**16 59 01.7**	**+0.2**
	baz=216						
EYUL				*e*S	**Sn**	**16 59 20.6**	**+1.6**
	baz=216						
WHYT	**Xinyi Township**	**1.50**	**239**	*e*P	**Pn**	**16 59 03.5**	**+0.8**
	baz=237						
WHYT				*e*S	**Sn**	**16 59 21.9**	**+0.8**
	baz=237						
YUS	**Yu-Shan**	**1.54**	**231**	*e*P	**Pn**	**16 59 03.6**	**-0.1**
	baz=229						
YUS				*e*S	**Sn**	**16 59 22.9**	**0.0**
	baz=229						
FULB	**Fuli**	**1.54**	**215**	*e*P	**Pn**	**16 59 02.9**	**-0.4**
	baz=213						
FULB				*e*S	**Sn**	**16 59 22.6**	**+0.4**
	baz=213						
WNT	**Mingjian**	**1.55**	**248**	*e*P	**Pn**	**16 59 03.4**	**0.0**
	baz=246						
WNT				*e*S	**Sn**	**16 59 23.0**	**+0.6**
	baz=246						
JKRS	**Kuro-shima**	**1.62**	**98**	P	**Pn**	**16 59 04.5**	**+0.2**
JKRS				*e*S	**Sn**	**16 59 24.2**	**+0.2**
ALS	**Alishan**	**1.64**	**234**	*e*P	**Pn**	**16 59 05.1**	**+0.3**
	baz=233						
ALS				*e*S	**Sn**	**16 59 25.0**	**+0.1**
	baz=233						
CHN5	**Tsauling**	**1.68**	**239**	*e*P	**Pn**	**16 59 06.0**	**+0.7**
	baz=238						
CHN5				*e*S	**Sn**	**16 59 26.7**	**+0.9**
	baz=238						
ELDTW	**Lidau**	**1.71**	**222**	*e*P	**Pn**	**16 59 04.5**	**-1.1**
	baz=220						
ELDTW				*e*S	**Sn**	**16 59 25.0**	**-1.5**
	baz=220						
JIJ	**Ishigaki jima**	**1.73**	**93**	*e*P	**Pn**	**16 59 05.3**	**-0.4**
JIJ				*e*S	**Sn**	**16 59 26.0**	**-0.6**
EDH	**Donghe**	**1.73**	**210**	*e*S	**Sn**	**16 59 27.2**	**+0.5**
	baz=209						
WDLH	**Douliu**	**1.75**	**244**	*e*S	**Sn**	**16 59 27.7**	**+0.4**
	baz=242						
WRL	**Guolierlin Hig**	**1.81**	**252**	*e*S	**Sn**	**16 59 29.1**	**+0.5**
	baz=251						
LONT	**Longtian**	**1.87**	**214**	*e*S	**Sn**	**16 59 30.5**	**+0.3**
	baz=212						
STYH	**Taoyuan**	**1.87**	**227**	*e*S	**Sn**	**16 59 30.6**	**+0.3**
	baz=225						
JISG	**Ishigakijimahi**	**1.88**	**86**	*e*S	**Sn**	**16 59 30.0**	**-0.3**
WTK	**Tuku**	**1.88**	**246**	*e*S	**Sn**	**16 59 30.7**	**+0.4**
	baz=244						
CHN4	**Tsaushan**	**1.89**	**234**	*e*P	**Pn**	**16 59 08.7**	**+0.8**
	baz=232						
CHN4				*e*S	**Sn**	**16 59 31.3**	**+0.7**
	baz=232						
TPUB	**Ta-pu**	**1.89**	**232**	*e*P	**Pn**	**16 59 08.6**	**+0.5**
	baz=231						
TPUB				*e*S	**Sn**	**16 59 31.5**	**+0.7**
	baz=231						
WTP	**Ta-pu**	**1.94**	**231**	*e*P	**Pn**	**16 59 09.9**	**+1.2**
	baz=229						
WTP				*e*S	**Sn**	**16 59 32.5**	**+0.7**
	baz=229						
TWK	**Hsinying**	**2.01**	**234**	*e*P	**Pn**	**16 59 10.6**	**+0.9**
	baz=232						
TWK				*e*S	**Sn**	**16 59 34.1**	**+0.3**
	baz=232						
CHN1	**Nanshi**	**2.04**	**231**	*e*P	**Pn**	**16 59 10.5**	**+0.5**
	baz=230						
CHN1				*e*S	**Sn**	**16 59 34.4**	**+0.1**
	baz=230						
SNST	**Tainan City**	**2.04**	**233**	*e*S	**Sn**	**16 59 35.0**	**+0.7**
	baz=231						
WSF	**Szhu**	**2.04**	**246**	*e*S	**Sn**	**16 59 34.0**	**-0.2**
	baz=245						
SGST	**Jiashian**	**2.06**	**228**	*e*S	**Sn**	**16 59 35.5**	**+0.5**
	baz=226						

*NEIC **18** 17:08:52.3±2.2,54°.71N±0°.06×161°.55W±0°.05, h21km±12km, Error ellipse: s-maj=8.9km s-min=3.4km az=163.0*
AEIC 18 17:08:52.4±2.1**,54°.60N**±0°.06×**161°.51W**±0°.08**,h29**km±8km**, ML3.4**/27**,ML3.7**/10(NEIC)**, Error ellipse: s-maj=10.1km s-min=4.6km az=149.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DT1	**Dutton Round H**	**0.67**	**319**		Pb	17 09 05.0	-0.6
HAG	**Hague Volcano**	**0.75**	**342**		Pb	17 09 06.6	-0.3
PS4A	**Pavlof South-4**	**0.77**	**345**		Pb	17 09 06.7	-0.5
PVV	**Pavlof Volcano**	**0.79**	**348**		Pn	17 09 07.0	-0.5
SDPT	**Sand Point**	**0.95**	**38**		Pn	17 09 09.7	0.0
SDPT					Sn	17 09 22.3	0.0
SDPT	**Sand Point**	**0.95**	**38**	IAML		17 09 23.1	
	comp=E,1μm,0.6s						
SDPT				IAML		17 09 23.6	
	comp=N,2μm,0.4s						
CNBA	**Chernabura Isl**	**1.13**	**78**		Pn	17 09 11.5	-0.7
ISLZ	**Isanotski Laza**	**1.29**	**276**		Pn	17 09 14.1	-0.2
ISLZ					Sn	17 09 30.6	0.0
BRPK	**Brown Peak**	**1.30**	**273**		Pn	17 09 14.4	-0.1
SSLS	**Shishaldin Sou**	**1.45**	**275**		Pn	17 09 17.0	+0.3
SSLS					Sb	17 09 36.0	-0.8
SSLN	**Shishaldin Nor**	**1.46**	**279**		Pn	17 09 17.4	+0.7
SSBA	**Shishaldin**	**1.53**	**277**		Pn	17 09 17.9	+0.2
SSBA					Sn	17 09 37.7	+1.1
WESN	**West Dahl Nort**	**1.79**	**270**		Pn	17 09 22.3	+1.0
WECS	**Westdahl Cape**	**1.91**	**269**		Pn	17 09 23.6	+0.7
WECS					Sn	17 09 47.6	+1.7
VNFG	**Fog Glacier, M**	**2.02**	**33**		Pn	17 09 25.4	+1.0
VNHG	**Veniaminof 1**	**2.10**	**39**		Pn	17 09 26.6	+1.0
CHGN	**Chignik**	**2.45**	**45**		Pn	17 09 31.1	+0.9
CHGN	**Chignik**	**2.45**	**45**	IAML		17 10 08.3	
	comp=N,226nm,0.5s						
CHGN				IAML		17 10 08.9	
	comp=E,289nm,0.2s						
UNV	**Unalaska Valle**	**3.03**	**258**		Pn	17 09 38.5	+0.3
MTBL	**Makushin Table**	**3.10**	**260**		Pn	17 09 40.3	+1.0
MGOD	**Makushin Gods**	**3.25**	**258**		Pn	17 09 41.8	+0.4
SII	**Sitkinak Islan**	**4.59**	**62**	Pn	Pn	17 09 58.2	-1.6
OHAK	**Old Harbor**	**5.32**	**57**	Pn	Pn	17 10 08.2	-1.4
OHAK				IAML		17 11 07.2	
	comp=N,59nm,3.1s						
OHAK				IAML		17 12 12.9	
	comp=E,48nm,2.8s						
SPIA	**Saint Paul Isl**	**5.55**	**301**	Pn	Pn	17 10 10.4	-2.4
KDAK	**Kodiak Island**	**5.91**	**54**	Pn	Pn	17 10 16.7	-1.1
Q19K	**Cape Douglas,**	**6.12**	**42**	Pn	Pn	17 10 20.5	-0.2
O18K	**Koktuh Hills**	**6.28**	**30**		Pn	17 10 23.8	+1.0
N18K	**Kilae Creek**	**6.79**	**24**	Pn	Pn	17 10 29.7	-0.2
ILSW	**Iliamna Southw**	**7.04**	**37**	Pn	Pn	17 10 34.0	+0.5
SVW2	**Sparrevohn**	**7.24**	**23**	Pn	Pn	17 10 36.9	+0.9
N19K	**Bonanza Creek**	**7.27**	**28**	Pn	Pn	17 10 37.0	+0.5
CNPM	**China Poot**	**7.46**	**44**	Pn	Pn	17 10 39.4	+0.3
M19K	**Big River Lodg**	**8.22**	**24**	Pn	Pn	17 10 49.7	+0.2
L19K	**White Mountain**	**8.36**	**22**	Pn	Pn	17 10 51.4	0.0
M20K	**Styx River**	**8.52**	**28**		Pn	17 10 54.8	+1.1
SEW	**Seward**	**8.53**	**45**	Pn	Pn	17 10 53.4	-0.2
SUA	**Susitna One**	**8.93**	**35**	Pn	Pn	17 10 59.2	-0.1
RC01	**Rabbit Creek A**	**9.03**	**39**	Pn	Pn	17 11 00.5	0.0
PWL	**Port Wells**	**9.42**	**43**	Pn	Pn	17 11 05.0	-1.0
K20K	**Telida**	**9.57**	**21**	Pn	Pn	17 11 08.1	+0.1
PPLA	**Purkeypile**	**9.61**	**26**	Pn	Pn	17 11 08.7	+0.1
HIN	**Hinchinbrook I**	**9.93**	**48**	Pn	Pn	17 11 11.5	-1.5
FID	**Port Fidalgo**	**10.12**	**46**	Pn	Pn	17 11 12.9	-2.6
J20K	**Nowinta River**	**10.30**	**18**	Pn	Pn	17 11 17.3	-0.6
SCM	**Sheep Creek Mo**	**10.39**	**40**	Pn	Pn	17 11 17.6	-1.7
RAGM	**Ragged Mountai**	**10.73**	**51**	Pn	Pn	17 11 22.3	-1.6
KLU	**Klutina**	**10.74**	**44**	Pn	Pn	17 11 22.7	-1.4
HMT	**Hamilton**	**10.90**	**51**	Pn	Pn	17 11 25.2	-0.9
M24K	**Tolsona, Glenn**	**10.99**	**41**	Pn	Pn	17 11 27.1	-0.4
BERG	**Berg Lake**	**11.18**	**52**	Pn	Pn	17 11

MSF				SG	**Sb**	**17 15 44.0**	**-1.3**
SGF	**Sodankyl**	**2.95**	**268**	PG	**Pb**	**17 15 14.0**	**-1.3**
SGF				SB	**Sn**	**17 15 47.0**	**+1.0**
KEV	**Kevo**	**3.33**	**311**	*e*P	**Pn**	**17 15 16.9**	**+1.9**
KEV	**Kevo**	**3.33**	**311**	PN	**Pn**	**17 15 16.2**	**+1.1**
	baz=126						
KEV				SN	**Sn**	**17 15 56.0**	**+0.7**
RNF	**Rovaniemi**	**3.38**	**255**	PN	**Pn**	**17 15 15.4**	**-0.3**
	baz=69						
RNF				SG	**Sb**	**17 16 04.1**	**+0.1**
ARA0	**ARCESS Array S**	**3.67**	**304**	*e*P	**Pn**	**17 15 19.9**	**+0.1**
ARA0				IAML		17 16 26.0	
	comp=Z,5.6nm,0.3s						
ARA0	**ARCESS Array S**	**3.67**	**304**	PN	**Pn**	**17 15 19.6**	**-0.2**
ARA0				SN	**Sn**	**17 16 03.4**	**-0.3**
ARCES	**ARCESS Array B**	**3.67**	**304**	P	**Pn**	**17 15 19.8**	**-0.1**
ARCES				S	**Sn**	**17 16 00.5**	**-3.3**
RMF	**Romuvaara**	**3.92**	**208**	PN	**Pn**	**17 15 22.0**	**-1.2**
	baz=25						
KLF	**Kolari**	**3.96**	**268**	PG	**Pb**	**17 15 33.8**	**+1.2**
	baz=83						
HEF	**Hetta**	**4.01**	**285**	*e*P	**Pn**	**17 15 25.2**	**+0.7**
HEF	**Hetta**	**4.01**	**285**	PN	**Pn**	**17 15 24.4**	**-0.1**
	baz=96						
HEF				SG	**Sg**	**17 16 26.0**	**-4.6**
TOF	**Tornio**	**4.22**	**252**	PG	**Pb**	**17 15 38.6**	**+1.8**
TOF				SG	**Sb**	**17 16 28.7**	**+0.5**
OUL	**Oulu**	**4.25**	**236**	PG	**Pb**	**17 15 38.2**	**+0.8**
OUL				SG	**Sb**	**17 16 33.1**	**+4.0**
PAJU	**Pajala**	**4.34**	**266**	PN	**Pn**	**17 15 29.7**	**+0.8**
PAJU				SN	**Sn**	**17 16 19.2**	**-0.9**
LANU	**Lannavaara**	**4.63**	**280**	PN	**Pn**	**17 15 32.9**	**0.0**
LANU				SG	**Sb**	**17 16 43.5**	**+3.5**
KALU	**Kalix**	**4.67**	**252**	SG	**Sb**	**17 16 45.5**	**+4.2**
HAMF	**Hammerfest**	**4.76**	**313**	*e*P	**Pn**	**17 15 36.9**	**+2.1**
KIF	**Kilpisjarvi**	**5.12**	**291**	*e*P	**Pn**	**17 15 39.1**	**-0.6**
STEI	**Steigen**	**7.17**	**281**	*e*P	**Pn**	**17 16 09.6**	**+1.8**

*IDC **18** 17:52:33.4±1.5,25.°56N×109.°82W,h0km, mbtmp3.1/4, ML3.0/4, Error ellipse: s-maj=27.5km s-min=12.0km az=111.0*
*MEX **18** 17:52:33.7±0.5,25.°59N×110.°24W,h2km±20km, MD3.8*
*ECX **18** 17:52:33.2±0.3,25.°76N×110.°22W,h0km±14km, ML3.1*

ISC 18 17:52:33.1±1.0,25.°67N±0.°05×110.°09W±0.°05,h10km,n15, σ1§04/18,3C,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSIG	**Topolobambo**	**0.95**	**94**	*e*P	**Pb**	**17 52 51.5**	**-0.2**
TSIG				*e*S	**Sn**	**17 53 06.4**	**+0.3**
TSIG	**Topolobambo**	**0.95**	**94**	⇑*e*P	**Pn**	**17 52 52.1**	**-0.3**
TSIG				*e*S	**Sn**	**17 53 07.0**	**+0.9**
LPIG	**La Paz**	**1.57**	**187**	Pg	**Pn**	**17 53 00.4**	**-0.6**
	9.7nm,0.3s,baz=35,slow=21,SNR=6.3						
LPIG				Lg	Lg	17 53 22.7	
	36nm,0.3s,baz=209,slow=11,SNR=5.6						
LPIG	**La Paz**	**1.57**	**187**	*e*P	**Pn**	**17 53 01.9**	**+0.9**
CSIG	**Choix**	**1.93**	**53**	*e*P	**Pn**	**17 53 06.4**	**+0.4**
CSIG				*e*S	**Sb**	**17 53 31.3**	**-1.2**
SLBS	**Sierra La Lagu**	**1.98**	**176**	*e*P	**Pb**	**17 53 08.9**	**-0.3**
SRIG	**Santa Rosalía**	**2.54**	**311**	*e*P	**Pn**	**17 53 13.4**	**-0.9**
SRIG				*e*		17 53 48.0	
SRIG				IAML		17 53 48.0	
	comp=N,106nm,0.7s						
SRIG				⇑*e*		17 53 59.6	
SRIG				IAML		17 53 59.6	
	comp=E,105nm,0.5s						
NE79	**San Jose del V**	**2.56**	**173**	*e*P	**Pb**	**17 53 17.9**	**-1.2**
HSIG		**3.43**	**347**	*e*P	**Pn**	**17 53 26.6**	**0.0**
HSIG				*e*S	**Sn**	**17 54 06.1**	**-1.2**
HSIG		**3.43**	**347**	*e*P	**Pn**	**17 53 27.6**	**+1.0**
HSIG				IAML		17 54 24.5	
	comp=E,55nm,0.5s						
HSIG				*e*		17 54 24.5	
HSIG				IAML		17 54 31.0	
	comp=N,49nm,0.6s						
HSIG				⇑*e*		17 54 31.0	
TXAR	**Lajitas Array**	**6.77**	**56**	Pn	**Pn**	**17 54 11.3**	**-1.4**
	comp=N,0.1nm,0.3s,baz=229,slow=14,SNR=5.1						
TXAR				Lg	Lg	17 56 04.8	
	comp=N,1.7nm,0.3s,baz=229,slow=32,SNR=13						
	comp=N,0.1nm,0.3s						
ANMO	**Albuquerque**	**9.77**	**18**	Lg	Lg	17 57 40.7	
	comp=N,0.1nm,0.3s,baz=304,slow=20,SNR=5.5						
NVAR	**Mina Array Bea**	**14.50**	**333**	Pn	**P**	**17 56 06.5**	**+1.2**
	comp=N,0.1nm,0.3s,baz=164,slow=13,SNR=5.7						
	comp=N,0.6nm,0.8s						
ELK	**Elko**	**15.64**	**345**	Pn	**P**	**17 56 19.4**	**+1.4**
	comp=N,0.1nm,0.3s,baz=176,slow=4.7,SNR=3.1						
	comp=N,0.3nm,0.3s						
PDAR	**Pinedale Array**	**17.06**	**1**	P	**P**	**17 56 35.3**	**+1.5**
	baz=169,slow=12,SNR=4.1						
	comp=N,0.2nm,0.4s						

*SOME **18** 18:00:22.2,39.°48N×73.°67E,h0km*
*KRNET **18** 18:00:25.1±0.1,39.°52N×73.°60E,mb3.5*
*NNC **18** 18:00:30.4±2.3,39.°77N×73.°57E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=20.2km s-min=11.6km az=169.0*
*IDC **18** 18:00:35.7±9.3,39.°45N×73.°81E,h110km±85km,mb3.3/5, mbtmp3.7/6,ML2.5/2, Error ellipse: s-maj=68.2km s-min=28.1km az=36.0*

ISC 18 18:00:23.2±1.5,39.°56N±0.°05×73.°65E±0.°03,h2km±11km, n46,σ1§95/65,mb3.6/5,7C-12D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.17**	**326**	⇓*e*P	**Pg**	**18 00 47.6**	**+2.0**
	baz=28						
OHH				⇓*i*S	**Sg**	**18 01 04.2**	**+3.4**
	baz=28						
DRK	**Karamyk**	**1.43**	**267**	⇓*i*P	**Pg**	**18 00 51.4**	**+0.8**
	baz=69						
DRK				⇓*i*S	**Sg**	**18 01 10.5**	**+1.3**
	baz=69						
ARLS	**Aral**	**2.36**	**12**	⇑*e*P	**Pg**	**18 01 07.5**	**-0.9**
	baz=13						
ARLS				⇑*i*S	**Sg**	**18 01 38.8**	**-0.1**
	baz=13						
AML	**Almayashu**	**2.57**	**1**	P	**Pg**	**18 01 13.0**	**+0.5**
	SNR=18						
GAR	**Garm**	**2.65**	**259**	⇓*i*P	**Pb**	**18 01 10.4**	**-1.0**
	baz=60						
GAR				⇓*i*S	**Sb**	**18 01 43.4**	**-0.9**
	baz=60						
TRKS	**Terek-Say**	**2.75**	**317**	⇓*e*P	**Pb**	**18 01 11.4**	**-1.7**
	baz=17						
TRKS				⇓*i*S	**Sb**	**18 01 45.4**	**-1.8**
	baz=17						
UCH	**Uchtor**	**2.75**	**14**	P	**Pg**	**18 01 15.5**	**-0.4**
	SNR=36						
UCH	**Uchtor**	**2.75**	**14**	⇑*e*P	**Pb**	**18 01 13.2**	**-0.1**
	baz=14						
UCH				⇑*e*S	**Sb**	**18 01 48.2**	**+0.6**
	baz=14						
EKS2	**Erkin-Say**	**3.10**	**2**	P	**Pb**	**18 01 20.1**	**+1.0**
	SNR=8.0						
ULHL	**Ulahol**	**3.33**	**35**	P	**Pg**	**18 01 28.0**	**+1.1**
	SNR=5.8						
CHMS	**Chumysh**	**3.54**	**13**	P	**Pb**	**18 01 26.3**	**-0.2**
	SNR=5.5						
CHMS	**Chumysh**	**3.54**	**13**	⇑Pn	**Pb**	**18 01 25.7**	**-0.8**
	3.8nm,0.4s						
CHMS				⇓Lg	Lg	18 02 20.2	
	23nm,0.7s						
TKM2	**Tokmak 2**	**3.67**	**23**	⇑Pn	**Pb**	**18 01 27.6**	**-1.2**
	2.7nm,0.5s						
TKM2				⇓Lg	Lg	18 02 21.0	
	7.9nm,0.5s						
IUG	**Iuzhnay**	**3.77**	**314**	*e*P	**Pg**	**18 01 33.6**	**-1.8**
	305nm,1.3s						
IUG				*e*S	**Sg**	**18 02 24.9**	**+0.7**
	52nm,0.7s						
IUG	**Iuzhnay**	**3.77**	**314**	Pg	**Pg**	**18 01 33.6**	**-1.8**
	305nm,1.3s						
IUG				Lg	Lg	18 02 24.9	
	52nm,0.7s						
KST	**Kastek**	**3.89**	**26**	*e*P	**Pg**	**18 01 35.2**	**-2.6**
	3.5nm,0.6s						
KST				*e*S	**Sg**	**18 02 28.1**	**-0.2**
	37nm,0.6s						
KST	**Kastek**	**3.89**	**26**	Pg	**Pg**	**18 01 35.2**	**-2.6**
	3.5nm,0.6s						
KST				Lg	Lg	18 02 28.1	
	37nm,0.6s						
SGDS	**Sogindy**	**3.96**	**10**	*e*P	**Pg**	**18 01 37.6**	**-1.5**
	4.9nm,0.5s						
SGDS				*e*S	**Sg**	**18 02 31.9**	**+1.5**
	16nm,1.0s						
SGDS	**Sogindy**	**3.96**	**10**	Pg	**Pg**	**18 01 37.6**	**-1.5**
	4.9nm,0.5s						
SGDS				Lg	Lg	18 02 31.9	
	16nm,1.0s						
MTBS	**Maitube**	**4.14**	**29**	*e*P	**Pg**	**18 01 41.5**	**-1.0**
	2.5nm,0.1s						
MTBS				*e*S	**Sg**	**18 02 38.3**	**+2.2**
	5.9nm,0.3s						
MTBS	**Maitube**	**4.14**	**29**	Pg	**Pg**	**18 01 41.5**	**-1.0**
	2.5nm,0.1s						
MTBS				Lg	Lg	18 02 38.3	
	5.9nm,0.3s						
KK31	**Karatay Array**	**4.26**	**327**	Pn	**Pb**	**18 01 34.1**	**-4.6**
	0.8nm,0.3s,baz=137,slow=12,SNR=54						
KK31				⇑Pg	**Pg**	**18 01 42.8**	**-1.9**
	3.3nm,0.5s,baz=142,slow=16,SNR=7.8						
KK31				⇓Lg	Lg	18 02 39.4	
	6.0nm,0.5s,baz=140,slow=25,SNR=3.6						
MDOK	**Medeo**	**4.42**	**34**	*e*P	**Pg**	**18 01 46.5**	**-1.3**
	3.0nm,0.5s						
MDOK				*e*S	**Sg**	**18 02 47.4**	**+2.3**
	15nm,0.7s						
MDOK	**Medeo**	**4.42**	**34**	⇓Pn	**Pb**	**18 01 40.3**	**-1.3**
	4.4nm,0.5s						
MDOK				Pg	**Pg**	**18 01 46.5**	**-1.3**
	3.0nm,0.5s						
MDOK				Lg	Lg	18 02 47.4	
	15nm,0.7s						
MDOK				Lg	Lg	18 02 47.4	
	23nm,0.9s						
KUU	**Kurty**	**4.78**	**24**	*e*P	**Pg**	**18 01 52.0**	**-2.7**
	3.1nm,0.8s						
KUU				*e*S	**Sg**	**18 02 57.0**	**+0.4**
	16nm,1.6s						
KUU	**Kurty**	**4.78**	**24**	Pg	**Pg**	**18 01 52.0**	**-2.7**
	3.1nm,0.8s						
KUU				Lg	Lg	18 02 57.0	
	16nm,1.6s						
SATY	**Saty**	**5.01**	**44**	*e*P	**Pg**	**18 01 58.2**	**-0.9**
	2.8nm,0.8s						
SATY				*e*S	**Sg**	**18 03 07.5**	**+3.5**
	12nm,2.2s						
SATY	**Saty**	**5.01**	**44**	Pg	**Pg**	**18 01 58.2**	**-0.9**
	2.8nm,0.8s						
KURS	**Kuram**	**5.19**	**39**	*e*P	**Pg**	**18 02 01.5**	**-1.1**
	3.1nm,0.8s						
KURS				*e*S	**Sg**	**18 03 13.5**	**+3.6**
	7.6nm,1.4s						
KURS	**Kuram**	**5.19**	**39**	Pg	**Pg**	**18 02 01.5**	**-1.1**
	3.1nm,0.8s						
KPKS	**Kokpek**	**5.43**	**42**	*e*P	**Pg**	**18 02 05.5**	**-1.8**
	3.9nm,0.7s						
KPKS				*e*S	**Sg**	**18 03 20.0**	**+2.3**
	7.0nm,0.7s						
KPKS	**Kokpek**	**5.43**	**42**	Pg	**Pg**	**18 02 05.5**	**-1.8**
	3.9nm,0.7s						
BTLS	**Baital**	**5.49**	**3**	*e*P	**Pg**	**18 02 06.8**	**-1.5**
	2.4nm,0.3s						
BTLS				*e*S	**Sg**	**18 03 21.9**	**+2.6**
	7.4nm,0.7s						
BTLS	**Baital**	**5.49**	**3**	Pg	**Pg**	**18 02 06.8**	**-1.5**
	2.4nm,0.3s						
BTLS				Lg	Lg	18 03 21.9	
	7.4nm,0.7s						
ARXS	**Arharly**	**5.60**	**32**	*e*P	**Pg**	**18 02 07.2**	**-3.2**
	5.4nm,0.9s						
ARXS				*e*S	**Sg**	**18 03 22.9**	**-0.1**
	7.2nm,0.8s						
ARXS	**Arharly**	**5.60**	**32**	Pg	**Pg**	**18 02 07.2**	**-3.2**
	5.4nm,0.9s						
ARXS				Lg	Lg	18 03 22.9	
	7.2nm,0.8s						
BLB	**Baldybastay**	**5.79**	**37**	*e*P	**Pg**	**18 02 10.7**	**-3.5**
	6.0nm,0.9s						
BLB				*e*S	**Sg**	**18 03 29.0**	**-0.3**
	4.2nm,1.0s						
BLB	**Baldybastay**	**5.79**	**37**	Pg	**Pg**	**18 02 10.7**	**-3.5**
	6.0nm,0.9s						
BLB				Lg	Lg	18 03 29.0	
	4.2nm,1.0s						
MKAR	**Makanchi Array**	**9.59**	**38**	P	Pn	18 02 50.8	+8.5
	baz=225,slow=15,SNR=1.9						
ZALV	**Zalesovo Beam**	**16.27**	**24**	P	**P**	**18 04 18.4**	**+2.6**
	0.1nm,0.3s,baz=219,slow=11,SNR=4.1						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**36.20**	**323**	P	**P**	**18 07 28.9**	**+1.9**
	1.1nm,0.5s,baz=116,slow=11,SNR=9.4						
	1.1nm,0.5s						
ARCES	**ARCESS Array B**	**39.17**	**336**	P	**P**	**18 07 53.6**	**+1.5**
	0.8nm,0.8s,baz=130,slow=9.5,SNR=1.6						
	0.8nm,0.8s						
NB2	**NORSAR Subarra**	**43.26**	**321**	P	**P**	**18 08 26.9**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**43.26**	**321**	P	**P**	**18 08 26.8**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=93,slow=7.8,SNR=4.6						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.87**	**269**	P	**P**	**18 11 23.4**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=36,slow=2.7,SNR=1.8						
	comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**81.90**	**124**	P	**P**	**18 12 42.3**	**-2.0**
	comp=Z,1.0nm,1.1s,baz=327,slow=5.0,SNR=3.4						
	comp=Z,1.0nm,1.1s						

*MOS **18** 18:09:42.8±1.3,55.°93S×123.°17W,h10km,mb5.2/14, MS5.8/31, Error ellipse: s-maj=19.1km s-min=10.6km az=74.4*
*IDC **18** 18:09:42.2±0.4,55.°81S×123.°30W,h0km,mb4.8/23, mbtmp4.8/23,MS5.8/49,Error ellipse: s-maj=15.9km s-min=12.6km az=161.0*
*NEIC **18** 18:09:43.9±1.9,55.°90S±0.°06×123.°2W±0.°2,h10km±1km, mb5.6/176,Ms_20 6.0/384,Mwb5.9/23,Mww6.0,Error ellipse: s-maj=16.8km s-min=8.3km az=109.0*
*NEIC **18** 18:09:43.7,55.°97S×123.°05W,h6km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.04; Mθθ=0.48; Mφφ=0.45; Mrθ=-0.02; Mrφ=0.88; Mθφ=-0.20; Fault plane solution: M0=1.02000×10¹⁸ NP1:φs283.72000°, δ78.48000°,λ-2.35000°. NP2:φs14.19000°,δ87.69000°, λ-168.47000°. Principal axes: T 1.0262, Plg6.0000°, Azm148.0000°; N -0.0207, Plg78.0000°, Azm25.0000°; P -1.0055, Plg10.0000°, Azm240.0000°;*
*GCMT **18** 18:09:47.9±0.1,55.°97S×123.°63W,h13km,MW6.0/166, Moment Tensor Solution. s166,c363; s160,c589; Duration: 2s5 Moment tensor: Scale 10¹⁸Nm; Mrr=0.04±.01; Mθθ=0.73±.01; Mφφ=0.69±.01; Mrθ=0.23±.02; Mrφ=1.16±.01; Mθφ=0.18±.02; Best double couple: M0=1.38900×10¹⁸ NP1:φs195.00000°,δ84.00000°, λ171.00000°. NP2:φs286.00000°,δ81.00000°,λ6.00000°. Principal axes: T 1.4340, Plg11.0000°, Azm151.0000°; N -0.0890, Plg79.0000°, Azm343.0000°; P -1.3440, Plg2.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **18** 18:09:50,55.°91S×123.°72W,h12km,Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10¹⁸Nm; Mrr=0.15; Mθθ=0.47; Mφφ=0.61; Mrθ=-0.47; Mrφ=1.03; Mθφ=-0.14; Fault plane solution: M0=1.27000×10¹⁸ NP1: φs192.00000°,δ70.00000°,λ167.00000°. NP2: φs286.00000°,δ78.00000°,λ20.00000°. Principal axes: T 1.2920, Plg23.0000°, Azm150.0000°; N -0.0422, Plg66.0000°, Azm315.0000°; P -1.2498, Plg5.0000°, Azm58.0000°;*

ISC 18 18:09:44.4±0.2,55.°93S±0.°06×123.°11W±0.°04,h12km, n840,σ1§78/667,mb5.5/112,MS6.0/270,10C-10D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMAI	**San Martin Ant**	**27.84**	**138**	P	**P**	**18 15 33.7**	**+0.6**
SMAI				IAmb	IAmb	18 15 39.1	
	comp=Z,120nm,1.7s						
PMSA	**Palmer Station**	**29.44**	**132**	P	**P**	**18 15 47.7**	**+0.3**
	comp=Z,14nm,0.9s,baz=259,slow=8.0,SNR=26						
PMSA				LR	LR	18 24 17.8	
	comp=Z,24µm,22.0s,baz=264,slow=30						
MG04	**Isla Riesco**	**29.60**	**106**	P	**P**	**18 15 49.4**	**+0.5**
MG04				IAmb	IAmb	18 15 58.5	
	comp=Z,179nm,1.5s						
MG05	**Puerto Natales**	**29.64**	**103**	P	**P**	**18 15 49.6**	**+0.3**
GO10	**Punta Arenas**	**29.74**	**107**	P	**P**	**18 15 50.6**	**+0.3**
GO10				IAmb	IAmb	18 15 57.3	
	comp=Z,67nm,0.8s						
GO09	**Cerro Castillo**	**29.92**	**103**	P	**P**	**18 15 52.8**	**+1.0**
USHA	**Ushuaia**	**30.41**	**111**	P	**P**	**18 15 57.9**	**+1.8**
	comp=Z,24nm,1.0s,baz=226,slow=4.7,SNR=2.8						
USHA				LR	LR	18 24 57.7	
	comp=Z,24µm,21.3s,baz=236,slow=30						
	comp=Z,24nm,1.0s						
RPN	**Rapa Nui**	**30.45**	**25**	LR	LR	18 24 01.6	
	comp=Z,3µm,21.5s,baz=199,slow=28						
PTCN	**Pitcairn Islan**	**31.25**	**348**	IAMs_20	IAMs_20	18 24 49.9	
	comp=Z,33µm,21.0s						
SBA	**Scott Base**	**31.97**	**202**	P	**P**	**18 16 09.5**	**-0.1**
SBA				IAmb	IAmb	18 16 30.6	
	comp=Z,127nm,1.6s						
SBA	**Scott Base**	**31.97**	**202**	P	**P**	**18 16 09.5**	**-0.1**
SBA				pmax	pmax		
	comp=Z,127nm,1.7s						
SBA				MLR	MLR		
	comp=Z,6µm,21.0s						
VNDA	**Vanda**	**33.03**	**203**	P	**P**	**18 16 20.0**	**+1.1**
	comp=Z,8.5nm,1.1s,baz=92,slow=8.8,SNR=21						
VNDA				LR	LR	18 27 50.4	
	comp=Z,8µm,18.1s,baz=90,slow=33						
	comp=Z,8.5nm,1.1s						
VNDA	**Vanda**	**33.03**	**203**	P	**P**	**18 16 19.9**	**+1.1**
VNDA				IAmb	IAmb	18 16 38.9	
	comp=Z,159nm,2.0s						
VNDA	**Vanda**	**33.03**	**203**	P	**P**	**18 16 19.9**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,159nm,2.0s						
QSPA	**South Pole Qui**	**34.25**	**180**	P	**P**	**18 16 31.6**	**+1.8**
	comp=Z,15nm,0.8s,baz=101,slow=4.5,SNR=24						
QSPA				LR	LR	18 28 27.4	
	comp=Z,12µm,20.2s,baz=88,slow=33						
	comp=Z,15nm,0.8s						
QSPA	**South Pole Qui**	**34.25**	**180**	P	**P**	**18 16 31.8**	**+1.9**
QSPA				IAmb	IAmb	18 16 33.2	
	comp=Z,101nm,1.5s						
LL02	**Futaleuf**	**34.79**	**91**	P	**P**	**18 16 33.3**	**-1.3**
LL02				IAmb	IAmb	18 16 58.0	
	comp=Z,114nm,2.0s						
BELA	**Belgrano 2**	**35.80**	**159**	P	**P**	**18 16 42.5**	**-0.4**
BELA				IAmb	IAmb	18 16 46.5	
	comp=Z,166nm,1.8s						
PLCA	**Paso Flores**	**37.13**	**88**	P	**P**	**18 16 55.6**	**+0.9**
	comp=Z,17nm,1.2s,baz=225,slow=11,SNR=6.4						
PLCA				LR	LR	18 28 26.3	
	comp=Z,10µm,20.6s,baz=230,slow=30						
	comp=Z,17nm,1.2s						
PLCA	**Paso Flores**	**37.13**	**88**	P	**P**	**18 16 55.5**	**+0.8**
EFI	**East Falkland**	**37.38**	**112**	P	**P**	**18 16 57.3**	**+0.7**
EFI				IAmb	IAmb	18 17 05.3	
	comp=Z,153nm,1.5s						
EFI	**East Falkland**	**37.38**	**112**	*c* P	**P**	**18 16 57.2**	**+0.6**
EFI				pmax	pmax		
	comp=Z,22nm,1.3s						
H03S2	**Juan Fernandez**	**37.44**	**73**	T	T	18 56 59.5	
	baz=218						
H03S1	**Juan Fernandez**	**37.44**	**73**	T	T	18 56 52.8	
	baz=218						
H03S3	**Juan Fernandez**	**37.45**	**73**	T	T	18 56 59.8	
	baz=218						
H03N3	**Juan Fernandez**	**37.73**	**72**	T	T	18 57 17.0	
	baz=221,slow=72						
H03N2	**Juan Fernandez**	**37.73**	**72**	T	T	18 57 21.1	
	baz=221,slow=72						
H03N1	**Juan Fernandez**	**37.74**	**72**	T	T	18 57 21.3	
	baz=221,slow=72						
TBI	**Tubuai**	**37.88**	**318**	*e*P	**P**	**18 17 03.0**	**+1.9**
	comp=Z,591nm,45.5s						
TBI				*e*S	**S**	**18 22 53.8**	**+1.7**
	comp=Z,2µm,39.8s						
TBI				*e*LR	LR	18 27 16.4	
	comp=Z,627µm,23.8s						
TBI				*e*LR	LR	18 27 16.4	
	comp=Z,30µm,22.5s						
TBI	**Tubuai**	**37.88**	**318**	*e*T	T	18 56 35.7	
	comp=Z,131nm,0.3s						
ORCD	**Orcadas**	**39.13**	**130**	P	**P**	**18 17 11.0**	**-0.2**
ORCD				IAmb	IAmb	18 17 17.3	
	comp=Z,276nm,1.9s						
ML02	**Panimavida**	**40.12**	**82**	P	**P**	**18 17 21.0**	**+1.2**
BO02	**Sierra Bellavi**	**41.19**	**82**	P	**P**	**18 17 28.9**	**+0.2**
BO01	**Tunca**	**41.31**	**81**	P	**P**	**18 17 30.0**	**+0.4**
PLWZ	**Palliser**	**41.66**	**263**	P	**P**	**18 17 30.7**	**-1.8**
BFZ	**Birch Farm**	**41.70**	**265**	P	**P**	**18 17 31.6**	**-1.1**
BFZ				IAMs_20	IAMs_20	18 30 13.0	
	comp=Z,15µm,22.0s						
MQZ	**McQueen's Vall**	**41.71**	**259**	P	**P**	**18 17 33.0**	**+0.3**
MQZ				IAmb	IAmb	18 17 40.9	
	comp=Z,230nm,1.6s						
MQZ				IAMs_20	IAMs_20	18 30 10.6	
	comp=Z,17µm,22.0s						
MSWZ	**Moikau Station**	**41.77**	**263**	P	**P**	**18 17 30.0**	**-3.3**
MT09	**Talagante**	**41.82**	**80**	P	**P**	**18 17 34.0**	**0.0**
ODZ	**Otahua Downs**	**41.95**	**256**	IAMs_20	IAMs_20	18 30 40.1	
	comp=Z,25µm,20.0s						
KHZ	**Kahutara**	**42.06**	**261**	P	**P**	**18 17 36.3**	**+0.7**
KHZ				IAmb	IAmb	18 17 56.0	
	comp=Z,128nm,1.6s						
KHZ				IAMs_20	IAMs_20	18 31 54.9	
	comp=Z,12µm,18.0s						
SNZO	**South Karori**	**42.14**	**263**	IAMs_20	IAMs_20	18 30 22.7	
	comp=Z,14µm,22.0s						
LMEL	**Las Melosas**	**42.21**	**81**	P	**P**	**18 17 37.4**	**+0.3**
MT05	**Renca**	**42.25**	**80**	P	**P**	**18 17 36.4**	**-1.0**
MT05				IAmb	IAmb	18 17 41.6	
	comp=Z,152nm,1.4s						
OXZ	**Oxford**	**42.29**	**259**	P	**P**	**18 17 35.5**	**-2.1**
OXZ				IAmb	IAmb	18 17 46.0	
	comp=Z,126nm,1.5s						
OXZ				IAMs_20	IAMs_20	18 30 28.1	
	comp=Z,17µm,22.0s						
BSWZ	**Blackbirch Sta**	**42.34**	**262**	P	**P**	**18 17 35.7**	**-2.2**
MEH	**Mehetia**	**42.43**	**323**	*e*T	T	19 02 25.2	
	comp=Z,15nm,0.2s						
PEL	**Peldehue**	**42.46**	**80**	P	**P**	**18 17 40.8**	**+1.7**
PEL				IAmb	IAmb	18 17 42.7	
	comp=Z,176nm,1.7s						
PEL	**Peldehue**	**42.46**	**80**	P	**P**	**18 17 40.8**	**+1.7**
PEL				pmax	pmax		
	comp=Z,176nm,1.7s						
TUWZ	**Tuamarina**	**42.49**	**262**	P	**P**	**18 17 39.0**	**-0.1**
LTZ	**Lake Taylor**	**42.52**	**260**	P	**P**	**18 17 40.2**	**+0.8**
LTZ				IAmb	IAmb	18 17 48.0	
	comp=Z,152nm,1.6s		

comp=Z,13nm,0.9s
URZ Urewera 42.88 268 IAMs_20 IAMs_20 18 30 58.2
comp=Z,17µm,20.0s
NNZ Nelson 42.95 262 P **P** **18 17 40.5 -2.4**
NNZ IAmb IAmb 18 17 51.2
comp=Z,253nm,1.4s
WKZ Wanaka 42.98 255 P **P** **18 17 42.9 -0.2**
WKZ IAmb IAmb 18 18 00.8
comp=Z,210nm,1.6s
WKZ IAMs_20 IAMs_20 18 31 03.3
comp=Z,23µm,20.0s
MLZ Mavora Lakes 43.12 254 P **P** **18 17 43.8 -0.5**
MLZ IAMs_20 IAMs_20 18 30 35.0
comp=Z,16µm,21.0s
PPTF Pamatai, Papee 43.21 322 IAMs_20 IAMs_20 18 30 46.4
comp=Z,20µm,19.0s
PPT2 Papeete2 43.21 322 *e*P **P** **18 17 46.9 +1.6**
comp=Z,301nm,21.8s
PPT2 *e*S **S** **18 24 12.5 +0.7**
comp=Z,4µm,25.8s
PPT2 *e*SS **SS** **18 27 27.1 +2.3**
comp=Z,37µm,26.5s
PPT2 *e*LR LR 18 29 45.0
comp=Z,30µm,24.2s
PPT2 *e*LR LR 18 29 45.0
comp=Z,33µm,23.0s
PPT Papeete 43.23 322 LR LR 18 31 35.1
comp=Z,16µm,18.8s,baz=152,slow=30
FOZ Fox Glacier 43.38 257 P **P** **18 17 44.4 -1.9**
FOZ IAmb IAmb 18 17 55.3
comp=Z,183nm,1.4s
DCZ Deep Cove 43.58 253 P **P** **18 17 46.7 -1.2**
QRZ Quartz Range 43.69 262 P **P** **18 17 48.2 -0.6**
CO02 Combarbal 43.76 78 P **P** **18 17 50.9 +1.2**
CO02 IAmb IAmb 18 17 54.2
comp=Z,111nm,1.3s
HIZ Hauiti 43.97 266 IAMs_20 IAMs_20 18 31 47.1
comp=Z,16µm,20.0s
RAR Rarotonga 44.06 307 LR LR 18 30 49.6
comp=Z,6µm,21.8s,baz=150,slow=29
CO03 El Pedregal 44.21 78 P **P** **18 17 54.8 +1.5**
GO04 Tololo Observa 44.66 77 P **P** **18 17 58.0 +1.0**
GO04 IAmb IAmb 18 18 00.8
comp=Z,88nm,1.1s
VAH Vaihoa 44.75 325 *e*T T 19 05 14.5
comp=Z,195nm,0.3s
ZON Zonda 44.78 80 P **P** **18 17 58.0 +0.2**
ZON IAmb IAmb 18 18 02.0
comp=Z,136nm,1.8s
ZON Zonda 44.78 80 P **P** **18 17 58.0 +0.2**
ZON pmax pmax
comp=Z,136nm,1.8s
VNA3 Neumayer Olymp 44.79 155 P **P** **18 17 58.3 +0.9**
VNA1 Neumayer--Stat 45.53 155 P **P** **18 18 04.4 +1.3**
VNA2 Neumayer--Watz 45.55 155 P **P** **18 18 04.6 +1.2**
baz=220,slow=9.4
AC05 El Transito 45.98 76 P **P** **18 18 08.7 +1.2**
AC05 IAmb IAmb 18 18 11.4
comp=Z,98nm,1.4s
SNAA Sanae 46.02 158 P **P** **18 18 07.9 +0.7**
SNAA Sanae 46.02 158 P **P** **18 18 07.5 +0.4**
comp=Z,9.6nm,0.9s,baz=228,slow=6.9,SNR=20
SNAA LR LR 18 37 33.5
comp=Z,15µm,18.3s,baz=238,slow=36
comp=Z,9.6nm,0.9s
SNAA Sanae 46.02 158 P **P** **18 18 08.1 +0.9**
SNAA Sanae 46.02 158 P **P** **18 18 08.1 +0.9**
SNAA pmax pmax
comp=Z,45nm,1.2s
RAO Raoul Island 46.74 281 LR LR 18 35 39.2
comp=Z,2µm,18.6s,baz=146,slow=33
TROLL Troll, Antarti 46.86 160 P **P** **18 18 15.4 +1.6**
OUZ Omahuta 47.02 269 P **P** **18 18 14.8 -0.6**
AC02 Maricunga 48.18 76 P **P** **18 18 25.4 +0.4**
LPA La Plata 48.31 93 *e*P **P** **18 18 28.2 +2.8**
LPA sP **pwP** **18 18 34.5 +1.8**
LPA PCP **PcP** **18 19 52.7 +0.7**
LPA PP **PP** **18 20 18.6 +1.0**
LPA PPP PPP 18 21 12.6
LPA S **S** **18 25 23.8 -1.1**
LPA PS 18 25 30.6
LPA PPS PPS 18 25 49.1
LPA PKIKP PKiKP 18 26 53.2 +11
LPA SCS **ScS** **18 28 17.2 -0.7**
LPA SS SnSn 18 29 40.6 -2.5
LPA SSS SSS 18 30 04.5
LPA SKIKP 18 30 16.8
LPA PKIKS 18 30 23.1
LPA SKIKS 18 33 46.9
TAOE Nuku Hiva Isla 48.84 337 *e*P **P** **18 18 31.9 +2.2**
comp=Z,272nm,23.1s
TAOE *e*S **S** **18 25 34.0 +1.2**
comp=Z,5µm,24.6s
TAOE *e*LR LR 18 32 21.0
comp=Z,35µm,24.6s
PB14 IPOC Station P 49.24 73 P **P** **18 18 33.9 +0.9**
PB14 IAmb IAmb 18 18 36.4
comp=Z,52nm,1.0s
GO02 Mina Guanaco 49.25 74 P **P** **18 18 34.2 +1.2**
NVL N'lazarevskaya 49.60 162 *e*P **P** **18 18 32.9 -1.9**
NVL *e*S **S** **18 25 43.4 +1.3**
NVL pmax pmax
comp=Z,39nm,1.1s
NVL MLR MLR
comp=Z,9µm,15.0s
PB15 IPOC Station P 50.89 73 P **P** **18 18 45.8 +0.4**
PB15 IAmb IAmb 18 18 49.2
comp=Z,68nm,1.1s
PB06 IPOC Station P 51.24 72 P **P** **18 18 47.3 -0.7**
PB06 IAmb IAmb 18 18 51.4
comp=Z,44nm,0.8s
CASY Casey 51.61 205 P **P** **18 18 49.6 -0.4**
CASY IAmb IAmb 18 19 04.0
comp=Z,60nm,1.2s
LVC Limon Verde 51.67 73 LR LR 18 34 57.3
comp=Z,9µm,21.8s,baz=223,slow=29
LVC Limon Verde 51.67 73 P **P** **18 18 51.9 +0.5**
LVC Limon Verde 51.67 73 *e*P **P** **18 18 51.9 +0.5**
LVC Limon Verde 51.67 73 *e*P **P** **18 18 52.2 +0.7**
PB07 IPOC Station P 51.87 71 P **P** **18 18 53.1 +0.4**
PB09 IPOC Station P 52.16 72 P **P** **18 18 55.9 +1.0**
PB01 IPOC Station P 52.64 71 P **P** **18 18 58.5 +0.2**
TA01 Diego Aracena 52.66 70 P **P** **18 18 57.5 -0.8**
ITQB Itaqui 52.95 89 P **P** **18 19 00.0 -0.4**
ITQB IAmb IAmb 18 19 04.4
comp=Z,111nm,1.1s
ITQB Itaqui 52.95 89 *e*P **P** **18 19 01.2 +0.8**
PLTB Pedras Altas 53.07 93 P **P** **18 19 00.1 -1.2**
PLTB Pedras Altas 53.07 93 *e*P **P** **18 19 01.2 -0.1**
GO01 Chusmiza 53.92 70 P **P** **18 19 08.0 -0.2**
CPSB Cacapava Do Su 54.19 92 *e*P **P** **18 19 10.3 +0.8**
PB16 IPOC Station P 54.86 69 P **P** **18 19 15.5 +0.4**
PB16 IAmb IAmb 18 19 19.5
comp=Z,55nm,1.1s
CPUP Villa Florida 55.12 86 P **P** **18 19 15.9 -0.5**
comp=Z,30nm,1.2s,baz=232,slow=7.5,SNR=14
CPUP LR LR 18 39 54.3
comp=Z,10µm,18.9s,baz=228,slow=33
comp=Z,30nm,1.2s
CPUP Villa Florida 55.12 86 P **P** **18 19 15.8 -0.5**
CPUP Villa Florida 55.12 86 *e*P **P** **18 19 16.3 0.0**
TAU Tasmania Unive 55.67 243 IAMs_20 IAMs_20 18 36 37.4
comp=Z,16µm,22.0s
AFI Afiamalu 56.05 298 LR LR 18 39 18.1
comp=Z,2µm,18.5s,baz=152,slow=32
CNLB Canela 56.47 94 *e*P **P** **18 19 27.2 +1.1**
NNA Nana 56.55 58 LR LR 18 37 23.3
comp=Z,8µm,20.7s,baz=201,slow=29
NNA Nana 56.55 58 *i* P **P** **18 19 26.8 +0.1**
NNA pmax pmax
comp=Z,31nm,1.1s
MAW Mawson 56.70 183 P **P** **18 19 27.8 +0.8**
comp=Z,16nm,1.1s,baz=178,slow=9.4,SNR=19
MAW LR LR 18 42 26.6
comp=Z,17µm,20.3s,baz=164,slow=35
comp=Z,16nm,1.1s
MAW Mawson 56.70 183 P **P** **18 19 27.2 +0.2**
LPAZ La Paz 57.28 69 P **P** **18 19 33.1 +0.6**
comp=Z,49nm,1.2s,baz=197,slow=4.2,SNR=45
LPAZ LR LR 18 38 27.8
comp=Z,7µm,19.2s,baz=198,slow=30
comp=Z,49nm,1.2s
LPAZ La Paz 57.28 69 P **P** **18 19 32.4 -0.2**
LPAZ IAmb IAmb 18 19 36.8
comp=Z,82nm,1.2s
LPAZ La Paz 57.28 69 *e*P **P** **18 19 32.4 -0.2**
LPAZ La Paz 57.28 69 *e*P **P** **18 19 33.8 +1.3**
ITAB Concordia 57.35 91 *e*P **P** **18 19 33.2 +1.0**
LHI Lord Howe Isla 57.90 260 P **P** **18 19 35.5 -0.5**
TER01 Tubaro-SC 58.03 95 *e*P **P** **18 19 38.9 +1.9**
PTGB Pitanga 59.34 89 *e*P **P** **18 19 47.1 +0.8**
ATAH Atahualpa 60.08 54 LR LR 18 39 44.6
comp=Z,14µm,20.4s,baz=220,slow=30
CAN Canberra 60.48 250 P **P** **18 19 53.7 -0.2**
CAN IAmb IAmb 18 20 07.1
comp=Z,78nm,1.5s
CAN IAMs_20 IAMs_20 18 39 52.9
comp=Z,11µm,20.0s
CAN Canberra 60.48 250 P **P** **18 19 53.7 -0.2**
CAN pmax pmax
comp=Z,78nm,1.5s
CAN MLR MLR
comp=Z,11µm,20.0s
TRCB Terra Rica 60.53 87 *e*P **P** **18 19 56.1 +1.7**
TIJ01 Guaruva-PR 60.59 92 *e*P **P** **18 19 52.9 -2.0**
TOO Toolangi 60.59 246 P **P** **18 19 53.4 -1.3**
TOO Toolangi 60.59 246 P **P** **18 19 53.4 -1.3**
TOO pmax pmax
comp=Z,119nm,1.4s
ONTNC Ouen Toro 60.89 273 P **P** **18 19 56.6 -0.2**
DZM Mont Dzumac 61.08 273 LR LR 18 40 59.3
comp=Z,12µm,20.6s,baz=142,slow=31
DZM Mont Dzumac 61.08 273 *e*S **S** **18 28 17.9 +0.9**
comp=Z,2µm,23.2s
DZM *e*LQ LQ 18 35 26.7
comp=Z,13µm,30.9s
DZM *e*LR LR 18 38 00.7
comp=Z,21µm,25.4s
DZM Mont Dzumac 61.08 273 P **P** **18 19 57.5 -0.8**
PAYG Puerto Ayora 61.15 38 IAMs_20 IAMs_20 18 39 38.9
comp=Z,14µm,22.0s
SIV San Ignacio 61.31 76 LR LR 18 42 23.3
comp=Z,3µm,19.8s,baz=236,slow=32
CZSB Cruzeiro do Su 62.23 60 P **P** **18 20 05.4 -0.5**
CZSB IAmb IAmb 18 20 09.5
comp=Z,64nm,1.0s
CZSB Cruzeiro do Su 62.23 60 *e*P **P** **18 20 06.5 +0.6**
PCMB Pacaembu 62.24 88 *e*P **P** **18 20 05.9 -0.1**
PET01 Itanhaem-SP 62.37 93 *e*P **P** **18 20 08.6 +1.8**
ARNL Arenillas 62.53 50 P **P** **18 20 07.4 -0.5**
PTLB Pontes e Lacer 62.81 77 P **P** **18 20 09.2 -0.6**
PTLB IAmb IAmb 18 20 13.0
comp=Z,24nm,1.1s
PTLB Pontes e Lacer 62.81 77 *e*P **P** **18 20 10.1 +0.3**
ARMA Armidale 62.83 255 P **P** **18 20 10.1 +0.2**
PP1B Ponte de Pedra 63.42 82 *e*P **P** **18 20 14.3 +0.5**
KOUNC Koumac, New Ca 63.50 272 P **P** **18 20 15.1 +0.7**
VAO Valinhos 63.56 92 *e*P **P** **18 20 16.4 +1.7**
BOSC San Juan Bosco 63.57 52 P **P** **18 20 14.3 -0.7**
BOSC IAmb IAmb 18 20 18.1
comp=Z,41nm,0.9s
C2SB Chapadao do Su 63.62 85 *e*P **P** **18 20 16.5 +1.4**
RCLB Rio Claro- Sao 63.70 91 *e*P **P** **18 20 18.2 +2.5**
ETMB Extrema 63.71 67 P **P** **18 20 15.2 -0.6**
ETMB IAmb IAmb 18 20 18.8
comp=Z,42nm,1.1s
ETMB Extrema 63.71 67 *e*P **P** **18 20 15.6 -0.2**
PARB Paraibuna 64.05 94 *e*P **P** **18 20 19.5 +1.5**
BB19B Bebedouro 64.21 90 *e*P **P** **18 20 19.7 +0.6**
ITRB Iturama 64.26 87 *e*P **P** **18 20 20.3 +0.9**
VILB Vilhena 64.28 74 P **P** **18 20 19.9 +0.3**
VILB IAmb IAmb 18 20 43.1
comp=Z,154nm,1.7s
VILB Vilhena 64.28 74 *e*P **P** **18 20 20.0 +0.4**
SALV Santo Antonio 64.34 80 *e*P **P** **18 20 20.6 +0.7**
PORT Chimborazo Vol 64.95 50 P **P** **18 20 25.7 +1.2**
SLOR San Lorenzo - 65.73 50 P **P** **18 20 28.9 -0.6**
SAML Samuel 66.03 69 P **P** **18 20 29.8 -1.0**
SAML IAmb IAmb 18 20 33.7
comp=Z,29nm,1.1s
SAML IAMs_20 IAMs_20 18 43 18.2
comp=Z,7µm,21.0s
SAML Samuel 66.03 69 P **P** **18 20 29.8 -1.0**
SAML pmax pmax
comp=Z,29nm,1.1s
SAML MLR MLR
comp=Z,7µm,21.0s
VAS01 Vassouras-RJ 66.11 95 *e*P **P** **18 20 33.3 +1.9**
PULU Pululahua 66.40 50 P **P** **18 20 34.4 +0.7**
OTAV Otavalo 66.62 50 P **P** **18 20 36.2 +1.1**
OTAV IAmb IAmb 18 20 39.0
comp=Z,54nm,1.2s
OTAV Otavalo 66.62 50 P **P** **18 20 36.2 +1.1**
OTAV pmax pmax
comp=Z,54nm,1.3s
OTAV MLR MLR
comp=Z,5µm,22.0s
OTAV Otavalo 66.62 50 *e*P **P** **18 20 35.2 +0.1**
IPMB Ipameri, GO 66.85 88 *e*P **P** **18 20 36.4 +0.2**
DUB01 Fribugo-RJ 66.86 95 *e*P **P** **18 20 37.4 +1.2**
STKA Stephens Creek 67.03 247 P **P** **18 20 36.6 -0.5**
comp=Z,19nm,1.2s,baz=177,slow=8.9,SNR=6.1
STKA LR LR 18 45 03.5
comp=Z,10µm,18.3s,baz=130,slow=32
comp=Z,19nm,1.2s
STKA Stephens Creek 67.03 247 P **P** **18 20 37.4 +0.3**
STKA Stephens Creek 67.03 247 *i* P **P** **18 20 36.9 -0.2**
EIDS Eidsvold 67.08 258 P **P** **18 20 37.8 +0.3**
EIDS IAmb IAmb 18 20 47.3
comp=Z,67nm,1.4s
PDRB Porto dos Gac 67.28 77 *e*P **P** **18 20 39.1 +0.2**
PMNB Patos De Minas 67.40 90 *e*P **P** **18 20 40.9 +1.2**
GCUF Volcan Galeras 67.98 51 *e*P **P** **18 20 46.0 +2.2**
PTLC Puerto Leguiza 68.17 54 *e*P **P** **18 20 41.6 -2.8**
CLDB Colider 68.40 77 *e*P **P** **18 20 45.7 -0.2**
BBAC Balboa, Cauca 68.73 50 *e*P **P** **18 20 49.1 +0.9**
BDFB Brasilia 68.84 87 P **P** **18 20 48.8 0.0**
comp=Z,4.7nm,0.8s,baz=226,slow=3.8,SNR=4.7
BDFB LR LR 18 48 09.8
comp=Z,13µm,20.4s,baz=214,slow=34
comp=Z,4.7nm,0.8s
BDFB Brasilia 68.84 87 *e*P **P** **18 20 49.6 +0.8**
FLOC Florencia 69.04 52 *e*P **P** **18 20 52.0 +2.1**
BBOO Buckleboo 69.10 242 P **P** **18 20 50.1 0.0**
DIAM Diamantina, MG 69.15 92 *e*P **P** **18 20 53.0 +2.2**
POPC Popayan, Colom 69.45 51 *e*P **P** **18 20 52.4 -0.2**
GARC Garzon, Huila 69.65 52 *e*P **P** **18 20 55.4 +1.4**
SNDB Serra Nova Dou 69.99 82 *e*P **P** **18 20 56.3 +0.5**
BETC Betania 70.11 52 *e*P **P** **18 21 00.2 +3.7**
RIB01 Linhares ES 70.18 95 *e*P **P** **18 20 58.1 +1.2**
SJMB Sao Joao De Ma 70.22 94 *e*P **P** **18 20 57.2 0.0**
MACC Macarena, Meta 70.35 54 *e*P **P** **18 20 59.0 +1.0**
YOTC Yotoco, Valle 70.88 50 *e*P **P** **18 21 00.9 -0.4**
PRAC Prado 71.28 52 *e*P **P** **18 21 04.6 +1.0**
JANB Januaria 71.40 89 *e*P **P** **18 21 04.9 +0.5**
NAN01 Guarapari, ES 71.51 95 *e*P **P** **18 21 05.0 0.0**
PLMC San Jos del P 71.73 50 *e*P **P** **18 21 04.2 -2.1**
ANIL Santa Ana 71.75 51 *e*P **P** **18 21 08.0 +1.2**
NPGB Novo Progresso 71.81 75 *e*P **P** **18 21 06.2 -0.6**
MACA Manacapuru-AM 72.22 68 P **P** **18 21 07.8 -1.5**
MACA IAmb IAmb 18 21 11.4
comp=Z,57nm,1.0s
MACA Manacapuru-AM 72.22 68 *e*P **P** **18 21 08.5 -0.8**
GUY2C Guyana, Caldas 72.42 51 *e*P **P** **18 21 12.2 +1.2**
ROSC El Rosal 72.53 52 P **P** **18 21 12.6 +1.0**
comp=Z,17nm,0.6s,baz=193,slow=2.9,SNR=4.1
ROSC LR LR 18 47 53.0
comp=Z,7µm,19.2s,baz=218,slow=32
comp=Z,17nm,0.6s
ROSC El Rosal 72.53 52 *e*P **P** **18 21 11.6 +0.1**
ROSC El Rosal 72.53 52 P **P** **18 21 11.6 +0.1**
ROSC pmax pmax
comp=Z,333nm,1.8s
ROSC El Rosal 72.53 52 *e*P **P** **18 21 13.3 +1.8**
CHIC Chingaza 72.61 52 *e*P **P** **18 21 11.2 -0.8**
GUA01 Guaratinga, BA 72.70 94 *e*P **P** **18 21 12.6 +0.4**
NORC Norcasia 72.94 51 *e*P **P** **18 21 13.7 +0.1**
PTGC Puerto Gaitan, 72.95 54 *e*P **P** **18 21 13.0 -0.5**
HELC Santa Helena 73.21 50 *e*P **P** **18 21 17.7 +2.1**
SDBA SAO DESIDERIO 73.21 87 *e*P **P** **18 21 15.7 +0.5**
JTS Las Juntas de 73.22 39 *i* P **P** **18 21 15.4 +0.3**
JTS pmax pmax
comp=Z,38nm,2.1s
HDC Heredia 73.25 40 P **P** **18 21 15.0 -0.5**
HDC IAMs_20 IAMs_20 18 45 40.8
comp=Z,10µm,20.0s
DBBC Dabeiba 73.66 49 *e*P **P** **18 21 19.0 +1.2**
ITTB Itaituba 73.84 73 *e*P **P** **18 21 18.2 -0.7**
CMC01 Camacan, BA 73.85 94 *e*P **P** **18 21 19.5 +0.6**
CTA Charters Tower 73.95 258 LR LR 18 49 50.6
comp=Z,6µm,18.8s,baz=132,slow=33
CTAO Charters Tower 73.95 258 P **P** **18 21 18.8 -0.8**
CTAO IAmb IAmb 18 21 26.5
comp=Z,86nm,1.1s
CTAO Charters Tower 73.95 258 IAMs_20 IAMs_20 18 49 01.0
comp=Z,7µm,20.0s
CTAO Charters Tower 73.95 258 P **P** **18 21 18.8 -0.8**
CTAO pmax pmax
comp=Z,86nm,1.2s
CTAO MLR MLR
comp=Z,7µm,20.0s
PTBC PUERTO BERRIO, 73.99 51 *e*P **P** **18 21 18.4 -1.3**
RUSC La Rusia 74.02 52 *e*P **P** **18 21 20.8 +0.3**
BCIP Isla Barro Col 74.11 45 IAMs_20 IAMs_20 18 45 49.5
comp=Z,6µm,20.0s
SMTB Santa Maria do 74.60 83 *e*P **P** **18 21 23.9 +0.5**
UREC San Jos de Ur 74.61 49 *e*P **P** **18 21 24.0 +0.7**
ZARC Zaragoza, Cauc 74.66 50 *e*P **P** **18 21 23.5 -0.1**
BRRC Barranca, Sant 74.82 51 *e*P **P** **18 21 24.8 +0.3**
HNR Honiara 74.93 276 LR LR 18 47 37.2
comp=Z,1µm,21.6s,baz=151,slow=30
GDU01 Guandu, BA 75.15 93 *e*P **P** **18 21 26.6 +0.1**
ESPN Las Esperanzas 75.21 39 P **P** **18 21 26.2 -0.5**
MATN Matagalpa 75.32 38 P **P** **18 21 28.7 +1.3**
PRPB Parauapebas 75.58 80 *e*P **P** **18 21 30.4 +1.4**
ESQI Esquipulas 75.73 34 P **P** **18 21 28.7 -1.0**
CMIG Matias Romero 76.54 28 P **P** **18 21 33.0 -1.2**
comp=Z,1.7nm,0.7s,baz=252,slow=5.7,SNR=2.2
CMIG LR LR 18 48 38.9
comp=Z,2µm,20.4s,baz=194,slow=31
comp=Z,1.7nm,0.7s
SJCC San Jacinto, C 76.68 49 *e*P **P** **18 21 34.3 -0.9**
MALB Monte Alegre 76.73 73 *e*P **P** **18 21 34.8 -0.7**
BOAV Boa Vista 77.02 66 P **P** **18 21 36.6 -0.5**
BOAV IAmb IAmb 18 21 40.1
comp=Z,50nm,1.3s
BOAV Boa Vista 77.02 66 *e*P **P** **18 21 37.0 -0.1**
H01W1 Cape Leeuwin H 77.26 225 T T 19 47 07.1
baz=150,slow=76,SNR=1213
H01W2 Cape Leeuwin H 77.26 225 T T 19 47 13.5
baz=150,slow=76,SNR=1736
H01W3 Cape Leeuwin H 77.27 225 T T 19 47 08.3
baz=150,slow=76,SNR=1161
ASAR Alice Springs 77.64 246 P **P** **18 21 39.0 -1.7**
comp=Z,25nm,1.2s,baz=142,slow=4.8,SNR=33
ASAR LR LR 18 51 50.3
comp=Z,13µm,18.5s,baz=148,slow=33
comp=Z,25nm,1.2s
ASAR Alice Springs 77.64 246 P **P** **18 21 38.9 -1.7**
AS31 Alice Springs 77.64 246 P **P** **18 21 40.1 -0.6**
UNM Universidad Na 77.66 23 IAMs_20 IAMs_20 18 48 32.9
comp=Z,2µm,22.0s
SDV Santo Domingo 77.77 53 LR LR 18 52 08.8
comp=Z,4µm,18.6s,baz=188,slow=33
SDV Santo Domingo 77.77 53 P **P** **18 21 39.4 -2.0**
SDV IAmb IAmb 18 21 52.0
comp=Z,52nm,1.4s
SDV Santo Domingo 77.77 53 *e*P **P** **18 21 40.0 -1.4**
CRZF Crozet Islands 77.92 176 IAMs_20 IAMs_20 18 55 29.7
comp=Z,6µm,19.0s
NBLA Lagarto - SE 78.37 92 *e*P **P** **18 21 44.0 -0.7**
CRJC Cerrejon, Guaj 78.67 50 *e*P **P** **18 21 45.4 -0.9**
BAUV El Baul 79.01 56 P **P** **18 21 46.8 -1.3**
MCPB Macapa, AP 79.17 74 *e*P **P** **18 21 48.9 -0.1**
TMAB Tom-Au,PA,Br 79.67 79 *e*P **P** **18 21 52.7 +0.9**
SLBS Sierra La Lagu 80.08 12 IAMs_20 IAMs_20 18 50 07.3
comp=Z,7µm,18.0s
NBAN Anadia - AL 80.30 93 *e*P **P** **18 21 55.4 +0.2**
LPIG La Paz 80.45 12 LR LR 18 49 45.8
comp=Z,5µm,18.1s,baz=188,slow=30
WB2 Warramunga Arr 80.48 249 P **P** **18 21 54.5 -1.7**
WB2 IAmb IAmb 18 22 02.3
comp=Z,95nm,1.1s
WRA Warramunga Arr 80.49 249 P **P** **18 21 54.3 -1.9**
comp=Z,57nm,1.2s,baz=143,slow=5.0,SNR=52
WRA LR LR 18 52 48.5
comp=Z,12µm,20.2s,baz=146,slow=32
comp=Z,57nm,1.2s
WRA Warramunga Arr 80.49 249 P **P** **18 21 54.3 -1.9**
WB0 Warramunga Arr 80.61 249 P **P** **18 21 55.6 -1.3**
WB0 IAmb IAmb 18 22 03.0
comp=Z,107nm,1.2s
BIRV Birongo 81.17 56 P **P** **18 21 59.4 -0.4**
BIRV IAmb IAmb 18 22 23.5
comp=Z,104nm,1.5s
TEIG Tepich 81.39 33 IAMs_20 IAMs_20 18 51 28.1
comp=Z,4µm,18.0s
ROSB Rosrio 81.44 82 *e*P **P** **18 22 03.0 +1.7**
MORW Morawa 81.55 229 P **P** **18 22 00.1 -1.7**
MORW IAmb IAmb 18 22 08.5
comp=Z,66nm,1.2s
JOHN Johnston Islan 82.23 316 IAMs_20 IAMs_20 18 48 48.4
comp=Z,6µm,22.0s
MDP Montagnes des 83.43 71 LR LR 18 54 11.0
comp=Z,4µm,21.2s,baz=186,slow=32
KRVT Keravat (AS076 83.57 272 LR LR 18 54 18.3
comp=Z,1µm,18.9s,baz=287,slow=32
RABL Rabaul 83.59 272 P **P** **18 22 12.2 -0.3**
RCBR Riachuelo 83.65 91 LR LR 18 56 11.0
comp=Z,6µm,21.0s,baz=360,slow=33
RCBR Riachuelo 83.65 91 IAMs_20 IAMs_20 18 55 37.9
comp=Z,5µm,21.0s
833A Chaparral WMA, 86.32 21 P **P** **18 22 24.6 -1.1**
833A IAmb IAmb 18 22 38.1
comp=Z,50nm,1.4s
PSA00 Pilbara Seismi 86.33 236 P **P** **18 22 26.3 +0.1**
PSA00 Pilbara Seismi 86.33 236 P **P** **18 22 25.4 -0.9**
PSA00 IAmb IAmb 18 22 32.4
comp=Z,78nm,1.1s
FITZ Fitzroy Crossi 86.49 243 LR LR 18 55 21.3
comp=Z,7µm,21.7s,baz=136,slow=32
FITZ Fitzroy Crossi 86.49 243 P **P** **18 22 26.4 -0.7**
TX31 Lajitas Ar. Si 86.53 17 P **P** **18 22 26.3 -0.6**
TX31 IAmb IAmb 18 22 41.0
comp=Z,81nm,1.4s
TX32 Lajitas Array 86.53 17 P **P** **18 22 27.0 +0.1**
TXAR Lajitas Array 86.53 17 P **P** **18 22 26.6 -0.3**
comp=Z,3.9nm,0.9s,baz=185,slow=9.9,SNR=11
TXAR LR LR 18 53 01.8
comp=Z,2µm,20.9s,baz=190,slow=30
comp=Z,3.9nm,0.9s
TXAR Lajitas Array 86.53 17 P **P** **18 22 26.8 -0.1**
BBGH Gun Hill 86.71 61 IAMs_20 IAMs_20 18 57 31.6
comp=Z,5µm,22.0s
MBWA Marble Bar 86.74 236 P **P** **18 22 28.1 -0.2**
MBWA Marble Bar 86.74 236 IAMs_20 IAMs_20 18 56 13.1
comp=Z,8µm,18.0s
MBWA Marble Bar 86.74 236 P **P** **18 22 28.9 +0.6**
MBWA P **P** **18 22 28.9 +0.6**
SUR Sutherland 86.81 150 LR LR 18 54 45.1
comp=Z,5µm,21.7s,baz=196,slow=31
SUR Sutherland 86.81 150 P **P** **18 22 27.9 -0.8**
SUR IAmb IAmb 18 22 32.2
comp=Z,31nm,1.0s
SUR Sutherland 86.81 150 P **P** **18 22 28.5 -0.2**
KNRA Kununurra 86.94 246 P **P** **18 22 29.5 +0.3**
735A Kenedy 87.17 22 P **P** **18 22 30.9 +1.0**
FDF Fort de France 87.30 59 IAMs_20 IAMs_20 18 58 42.4
comp=Z,4µm,18.0s
319A Douglas 87.76 12 P **P** **18 22 32.0 -0.8**
SJG San Juan 87.91 53 LR LR 18 58 39.7
comp=Z,3µm,18.3s,baz=212,slow=33
214A Organ Pipe Nat 87.98 9 P **P** **18 22 33.8 0.0**
TDBA Terre de Bas, 88.03 58 IAMs_20 IAMs_20 18 57 00.8
comp=Z,5µm,22.0s
MTN Manton Dam 88.08 250 P **P** **18 22 31.7 -3.0**
MTN IAmb IAmb 18 22 39.8
comp=Z,43nm,1.1s
CBE Ff, Capester 88.24 58 IAMs_20 IAMs_20 18 57 06.0
comp=Z,5µm,21.0s
MAGL Barre de l'ile 88.29 58 IAMs_20 IAMs_20 18 57 19.5
comp=Z,5µm,21.0s
JCT Junction City 88.34 20 P **P** **18 22 34.4 -1.1**
JCT Junction City 88.34 20 P **P** **18 22 34.4 -1.1**
JCT pmax pmax
comp=Z,115nm,1.5s
JCT MLR MLR
comp=Z,2µm,18.0s
GDHS Morne Mazeau, 88.34 57 IAMs_20 IAMs_20 18 56 57.3
comp=Z,5µm,21.0s
BAR Barrett 88.43 5 P **P** **18 22 34.8 -1.1**
BAR IAmb IAmb 18 22 53.7
comp=Z,60nm,1.6s

YUH Yuha Desert 88.44 6 P **P** **18 22 36.2 +0.3**
YUH IAmb IAmb 18 22 48.0
comp=Z,42nm,1.6s
TUC Tucson 88.52 10 P **P** **18 22 36.6 +0.2**
TUC Tucson 88.52 10 IAMs_20 IAMs_20 18 54 23.5
comp=Z,6µm,18.0s
TUC Tucson 88.52 10 P **P** **18 22 36.6 +0.2**
TUC pmax pmax
comp=Z,76nm,1.6s
TUC MLR MLR
comp=Z,6µm,18.0s
MNTX Cornudas Mount 88.58 15 P **P** **18 22 37.1 +0.5**
MNTX IAmb IAmb 18 22 48.2
comp=Z,49nm,1.6s
MNTX IAMs_20 IAMs_20 18 54 19.5
comp=Z,5µm,20.0s
109C Camp Elliot, M 88.61 5 P **P** **18 22 36.8 +0.1**
109C IAMs_20 IAMs_20 18 53 26.9
comp=Z,6µm,19.0s
ABD La Joyeuse, An 88.64 58 IAMs_20 IAMs_20 18 57 06.9
comp=Z,5µm,22.0s
HKT Hockley 88.65 23 P **P** **18 22 37.8 +0.9**
HKT Hockley 88.65 23 *i* P **P** **18 22 38.8 +2.0**
HKT pmax pmax
comp=Z,55nm,1.6s
113A Mohawk Valley, 88.70 8 P **P** **18 22 37.2 +0.1**
113A IAmb IAmb 18 22 49.1
comp=Z,64nm,1.6s
GDSD La Dsirade Is 88.71 58 IAMs_20 IAMs_20 18 57 42.5
comp=Z,4µm,20.0s
GLA Glamis 88.91 7 P **P** **18 22 38.0 -0.2**
GLA IAmb IAmb 18 22 51.8
comp=Z,67nm,1.4s
GLA Glamis 88.91 7 P **P** **18 22 38.0 -0.2**
GLA pmax pmax
comp=Z,67nm,1.4s
435B Jarrell 89.08 22 P **P** **18 22 39.0 +0.1**
121A Cookes Peak, D 89.08 13 P **P** **18 22 37.8 -1.3**
121A IAmb IAmb 18 22 54.5
comp=Z,91nm,1.9s
GDL2 Guadalupe Moun 89.23 16 P **P** **18 22 38.5 -1.2**
ELS Elsinore Mount 89.35 5 P **P** **18 22 40.3 0.0**
ELS IAmb IAmb 18 22 55.3
comp=Z,81nm,2.0s
PFO Pinyon Flats O 89.37 6 P **P** **18 22 40.1 -0.3**
comp=Z,4.5nm,0.9s,baz=126,slow=8.7,SNR=3.2
PFO LR LR 18 54 04.6
comp=Z,6µm,18.4s,baz=192,slow=30
comp=Z,4.5nm,0.9s
PFO Pinyon Flats O 89.37 6 P **P** **18 22 39.9 -0.5**
PFO IAmb IAmb 18 23 22.0
comp=Z,55nm,1.9s
PFO Pinyon Flats O 89.37 6 *i* P **P** **18 22 40.8 +0.4**
PFO pmax pmax
comp=Z,9.0nm,1.0s
PMD Palm Desert 89.41 6 P **P** **18 22 40.3 -0.1**
PMD IAmb IAmb 18 22 58.3
comp=Z,38nm,1.4s
CLN7 Carlsbad 7 89.52 16 P **P** **18 22 41.1 0.0**
HTMS Hat Mesa 89.61 16 P **P** **18 22 40.6 -1.0**
BLYC Blythe 89.62 7 P **P** **18 22 41.5 +0.1**
BLYC IAmb IAmb 18 22 55.9
comp=Z,57nm,1.6s
PASC Pasadena Art C 89.84 4 IAMs_20 IAMs_20 18 53 34.4
comp=Z,7µm,20.0s
Y14A Wickenburg 89.93 8 P **P** **18 22 41.3 -1.6**
X16A Lo Mia Camp, P 90.54 10 P **P** **18 22 45.4 -0.6**
BCW Bitter Crk WRg 90.57 3 P **P** **18 22 43.6 -2.3**
X18A Snowflake 90.80 11 P **P** **18 22 45.2 -2.0**
X18A IAmb IAmb 18 23 01.3
comp=Z,75nm,1.6s
W13A Hualapai Mount 91.01 8 P **P** **18 22 46.6 -1.5**
W13A IAmb IAmb 18 23 02.3
comp=Z,46nm,1.8s
GSC Goldstone, Bar 91.03 5 P **P** **18 22 48.3 +0.2**
GSC IAmb IAmb 18 23 06.0
comp=Z,33nm,1.5s
GSC Goldstone, Bar 91.03 5 P **P** **18 22 48.3 +0.2**
GSC pmax pmax
comp=Z,33nm,1.5s
ISA Isabella, Lake 91.32 4 P **P** **18 22 47.3 -2.1**
ISA IAmb IAmb 18 23 07.2
comp=Z,30nm,1.4s
ISA Isabella, Lake 91.32 4 P **P** **18 22 47.3 -2.1**
ISA pmax pmax
comp=Z,30nm,1.5s
V12A Nelson 91.57 7 P **P** **18 22 48.5 -2.1**
V12A IAmb IAmb 18 23 05.5
comp=Z,36nm,1.7s
BOSA Boshof 91.58 153 P **P** **18 22 51.5 +0.3**
comp=Z,4.9nm,0.9s,baz=166,slow=3.6,SNR=5.9
BOSA LR LR 19 01 28.6
comp=Z,7µm,18.7s,baz=196,slow=34
comp=Z,4.9nm,0.9s
ANMO Albuquerque 91.63 14 P **P** **18 22 49.8 -1.1**
comp=Z,3.0nm,0.9s,baz=197,slow=6.9,SNR=5.4
ANMO LR LR 18 55 49.4
comp=Z,2µm,20.3s,baz=196,slow=30
comp=Z,3.0nm,0.9s
ANMO Albuquerque 91.63 14 P **P** **18 22 48.3 -2.7**
ANMO Albuquerque 91.63 14 *i* P **P** **18 22 51.4 +0.4**
ANMO pmax pmax
comp=Z,19nm,1.6s
WUAZ Wupatki 91.64 10 P **P** **18 22 50.7 -0.3**
WUAZ IAmb IAmb 18 23 09.4
comp=Z,42nm,1.4s
QSM Queen of Sheba 91.69 5 P **P** **18 22 50.7 -0.3**
QSM IAmb IAmb 18 23 05.0
comp=Z,37nm,1.6s
GWY Greenwater Val 91.92 5 P **P** **18 22 50.8 -1.4**
GWY IAmb IAmb 18 23 06.1
comp=Z,45nm,1.8s
SHPR Sheep Range 92.32 6 P **P** **18 22 52.2 -1.9**
SHPR IAmb IAmb 18 23 07.2
comp=Z,43nm,1.6s
SAO San Andreas Ge 92.34 1 IAMs_20 IAMs_20 18 54 54.4
comp=Z,8µm,19.0s
U15A North Rim 92.46 9 P **P** **18 22 54.9 0.0**
WCT Wildcat Mounta 92.53 5 P **P** **18 22 55.0 +0.1**
WCT IAmb IAmb 18 23 13.3
comp=Z,30nm,1.5s
WMOK Wichita Mounta 92.67 20 P **P** **18 22 54.1 -1.5**
WMOK Wichita Mounta 92.67 20 P **P** **18 22 54.1 -1.5**
WMOK pmax pmax
comp=Z,8.0nm,1.1s
WMOK MLR MLR
comp=Z,2µm,21.0s
TPNV Topopah Spring 92.70 6 P **P** **18 22 55.4 -0.5**
TPNV IAmb IAmb 18 23 13.4
comp=Z,54nm,1.7s
TPNV IAMs_20 IAMs_20 18 55 22.1
comp=Z,6µm,20.0s
TPNV Topopah Spring 92.70 6 P **P** **18 22 55.4 -0.5**
TPNV pmax pmax
comp=Z,54nm,1.7s
TPNV MLR MLR
comp=Z,6µm,20.0s
LCH Last Change Ra 92.92 4 P **P** **18 22 56.8 0.0**
LCH IAmb IAmb 18 23 14.5
comp=Z,23nm,1.4s
LCMT Little Creek M 92.96 8 P **P** **18 22 56.6 -0.5**
KNB Kanab 93.00 8 P **P** **18 22 55.1 -2.1**
KNB IAmb IAmb 18 23 34.7
comp=Z,52nm,1.9s
KNB Kanab 93.00 8 P **P** **18 22 55.1 -2.1**
KNB pmax pmax
comp=Z,52nm,1.9s
GMN Gold Mountain 93.00 5 P **P** **18 22 57.0 -0.4**
DSP Deep Springs 93.04 4 P **P** **18 22 56.9 -0.2**
DSP IAmb IAmb 18 23 15.2
comp=Z,22nm,1.3s
PRN Pahroc Range 93.23 6 P **P** **18 22 57.5 -0.7**
PRN IAmb IAmb 18 23 16.5
comp=Z,43nm,1.4s
MDPB Devils Postpil 93.26 3 P **P** **18 22 58.9 +0.3**
PKCU Pink Cliffs 93.47 9 P **P** **18 22 59.4 -0.2**
PKCU IAmb IAmb 18 23 15.8
comp=Z,73nm,2.0s
CCUT Cedar City 93.49 8 P **P** **18 22 57.4 -2.2**
CCUT IAmb IAmb 18 23 14.0
comp=Z,55nm,1.9s
SZCU Shurtz Canyon 93.55 8 P **P** **18 22 58.6 -1.2**
MVCO Mesa Verde 93.61 12 P **P** **18 22 59.5 -0.6**
MVCO IAmb IAmb 18 23 11.6
comp=Z,59nm,1.9s

MVCO IAMs_20 IAMs_20 18 57 38.1
comp=Z,5µm,19.0s
CMB Columbia Colle 93.63 2 IAMs_20 IAMs_20 18 55 21.5
comp=Z,6µm,20.0s
MCCM Marconi Confer 93.71 0 IAMs_20 IAMs_20 18 56 22.4
comp=Z,6µm,19.0s
TPH Tonopah 93.77 5 P **P** **18 23 00.3 -0.5**
TPH Tonopah 93.77 5 P **P** **18 23 00.3 -0.5**
TPH pmax pmax
comp=Z,95nm,1.4s
MTPU Mount Pierson 94.07 9 P **P** **18 23 02.1 -0.3**
MTPU IAmb IAmb 18 23 20.9
comp=Z,34nm,1.8s
T25A Trinidad 94.07 15 P **P** **18 23 00.3 -2.0**
T25A IAmb IAmb 18 23 20.8
comp=Z,45nm,1.9s
NVAR Mina Array Bea 94.08 4 P **P** **18 23 01.4 -0.8**
comp=Z,1.6nm,0.9s,baz=194,slow=6.5,SNR=4.9
NVAR PP **PP** **18 26 49.5 +0.2**
comp=Z,0.6nm,0.8s,baz=192,slow=12,SNR=4.1
NVAR PKKPbc **PKKPdf** **18 40 04.4 +0.9**
comp=Z,0.2nm,0.5s,baz=333,slow=5.5,SNR=2.3
NVAR LR LR 18 57 08.7
comp=Z,6µm,18.0s,baz=184,slow=30
comp=Z,1.6nm,0.9s
NVAR Mina Array Bea 94.08 4 P **P** **18 23 00.6 -1.7**
NV11 Mina Array Sit 94.09 4 P **P** **18 23 00.8 -1.4**
R11A Troy Canyon, C 94.13 6 P **P** **18 23 01.5 -1.0**
R11A IAmb IAmb 18 23 17.7
comp=Z,35nm,1.9s
BATI Baumata 94.18 245 LR LR 19 01 45.1
comp=Z,12µm,19.2s,baz=158,slow=33
BATI Baumata 94.18 245 P **P** **18 23 05.5 +2.3**
comp=Z,26nm,1.2s
RYN Ryan 94.27 4 P **P** **18 23 02.6 -0.5**
PSUT Pine Spring 94.43 7 P **P** **18 23 02.1 -1.7**
SDCO Great Sand Dun 94.51 14 P **P** **18 23 00.7 -3.7**
MVU Marysvale 94.53 9 P **P** **18 23 02.6 -1.7**
MSU Marysvale 94.54 9 P **P** **18 23 01.0 -3.4**
MSU Marysvale 94.54 9 P **P** **18 23 01.0 -3.4**
HOPS Hopland Field 94.56 0 IAMs_20 IAMs_20 18 55 34.8
comp=Z,6µm,20.0s
H11S2 WAKE ISLAND Hy 94.56 296 T T 20 07 37.4
baz=148,slow=76
H11S3 WAKE ISLAND Hy 94.57 296 T T 20 07 37.8
baz=148,slow=76
H11S1 WAKE ISLAND Hy 94.58 296 T T 20 07 37.7
baz=148,slow=76
KVN Kaiserville 94.71 4 P **P** **18 23 03.6 -1.4**
KVN Kaiserville 94.71 4 P **P** **18 23 03.7 -1.4**
KVN pmax pmax
comp=Z,16nm,1.3s
LBTB Lobatse 95.09 152 LR LR 19 00 23.3
comp=Z,5µm,20.5s,baz=197,slow=32
ORV Oroville 95.13 1 IAMs_20 IAMs_20 18 55 59.2
comp=Z,6µm,21.0s
TMUT Trail Mountain 95.40 9 P **P** **18 23 06.4 -2.0**
MIDW Midway 95.66 314 IAMs_20 IAMs_20 19 00 29.2
comp=Z,3µm,19.0s
SMCO Snowmass 95.73 13 IAMs_20 IAMs_20 18 59 24.6
comp=Z,6µm,18.0s
FAKI Fak Fak 95.75 256 IAMs_20 IAMs_20 19 05 13.6
comp=Z,6µm,19.0s
NLU North Lily Min 95.98 9 P **P** **18 23 09.9 -1.0**
NLU IAmb IAmb 18 23 28.6
comp=Z,23nm,1.4s
DUG Dugway, Tooele 96.16 8 IAMs_20 IAMs_20 18 57 24.7
comp=Z,4µm,21.0s
MMRI Maumere 96.25 245 IAMs_20 IAMs_20 19 01 16.4
comp=Z,6µm,21.0s
JCC Jacoby Creek, 96.38 359 IAMs_20 IAMs_20 18 55 56.1
comp=Z,5µm,22.0s
EDFI Ende, Flores 96.43 244 P **P** **18 23 13.5 -0.1**
comp=Z,12nm,1.4s
ISCO Idaho Springs 96.52 13 IAMs_20 IAMs_20 18 59 23.4
comp=Z,7µm,19.0s
ELK Elko 96.54 6 LR LR 18 59 00.2
comp=Z,4µm,18.3s,baz=194,slow=31
ELK Elko 96.54 6 IAMs_20 IAMs_20 18 59 41.7
comp=Z,4µm,18.0s
TKL Tuncakeechee C 97.20 31 LR LR 19 03 02.6
comp=Z,972nm,18.2s,baz=195,slow=33
YBH Yreka Blue Hor 97.29 0 LR LR 18 58 04.5
comp=Z,7µm,19.2s,baz=175,slow=30
YBH Yreka Blue Hor 97.29 0 IAMs_20 IAMs_20 18 57 34.2
comp=Z,7µm,20.0s
MOD Modoc Plateau 97.49 2 IAMs_20 IAMs_20 18 58 45.8
comp=Z,5µm,19.0s
HWUT Hardware Ranch 97.66 9 IAMs_20 IAMs_20 18 59 00.5
comp=Z,5µm,19.0s
PHWY Pilot Hill 98.02 13 IAMs_20 IAMs_20 19 00 10.1
comp=Z,7µm,20.0s
WVOR Wild Horse Val 98.07 3 IAMs_20 IAMs_20 18 57 59.1
comp=Z,5µm,21.0s
TSUM Tsumeb 98.12 143 LR LR 19 01 04.6
comp=Z,4µm,21.4s,baz=192,slow=31
TSUM Tsumeb 98.12 143 IAMs_20 IAMs_20 19 00 52.6
comp=Z,5µm,22.0s
OGNE Ogalala 98.15 16 IAMs_20 IAMs_20 19 00 15.5
comp=Z,5µm,21.0s
HUMO Hull Mountain 98.17 0 IAMs_20 IAMs_20 18 57 01.4
comp=Z,6µm,22.0s
NLAI Namlea 98.27 252 P Pdif 18 23 22.4 +0.6
J04D Umpqua Nationa 98.80 1 IAMs_20 IAMs_20 18 58 36.5
comp=Z,5µm,20.0s
AHID Auburn Hatcher 98.85 9 IAMs_20 IAMs_20 18 59 39.0
comp=Z,5µm,19.0s
BW06 Boulder Array 99.00 10 IAMs_20 IAMs_20 18 59 50.9
comp=Z,6µm,20.0s
PDAR Pinedale Array 99.00 10 P **Pdif** **18 23 24.6 +0.1**
comp=Z,0.2nm,0.3s,baz=156,slow=6.9,SNR=1.7
PDAR LR LR 19 00 12.3
comp=Z,5µm,19.5s,baz=198,slow=31
comp=Z,0.2nm,0.3s
MFID Camas Ranch 99.17 5 IAMs_20 IAMs_20 18 59 19.8
comp=Z,6µm,20.0s
REDW Red Top Meadow 99.46 9 IAMs_20 IAMs_20 18 59 49.3
comp=Z,5µm,20.0s
SNOW Snow King Moun 99.57 9 IAMs_20 IAMs_20 19 00 03.0
comp=Z,6µm,19.0s
TPAW Teton Pass 99.58 9 IAMs_20 IAMs_20 19 00 01.3
comp=Z,5µm,20.0s
I02E Swisshome, OR 99.67 359 IAMs_20 IAMs_20 18 58 07.1
comp=Z,8µm,21.0s
FXWY Fox Creek 99.72 9 IAMs_20 IAMs_20 19 00 07.1
comp=Z,4µm,20.0s
LOHW Long Hollow 99.73 9 IAMs_20 IAMs_20 18 59 59.4
comp=Z,6µm,20.0s
MOOW Moose Ponds 99.86 9 IAMs_20 IAMs_20 19 00 02.6
comp=Z,5µm,20.0s
IMW Indian Meadow 99.99 9 IAMs_20 IAMs_20 19 00 14.7
comp=Z,4µm,20.0s
H04D Lebanon 100.08 0 IAMs_20 IAMs_20 18 59 56.1
comp=Z,4µm,19.0s
COR Corvallis 100.14 360 IAMs_20 IAMs_20 18 59 22.7
comp=Z,5µm,20.0s
FLWY Flagg Ranch 100.19 9 IAMs_20 IAMs_20 19 00 22.5
comp=Z,4µm,20.0s
BMO Blue Mountains 100.53 4 IAMs_20 IAMs_20 18 59 55.3
comp=Z,4µm,21.0s
LKWY Lake 100.70 9 IAMs_20 IAMs_20 19 01 18.9
comp=Z,5µm,19.0s
G03D McMinnville, O 100.77 360 IAMs_20 IAMs_20 18 59 44.2
comp=Z,5µm,20.0s
RSSD Black Hills 100.98 14 IAMs_20 IAMs_20 19 02 30.4
comp=Z,4µm,19.0s
RLMT Red Lodge 101.36 10 IAMs_20 IAMs_20 19 01 06.3
comp=Z,6µm,20.0s
CBN Corbin Frederi 101.52 35 IAMs_20 IAMs_20 19 03 28.5
comp=Z,3µm,20.0s
BOZ Bozeman (W) 101.62 8 IAMs_20 IAMs_20 19 02 02.2
comp=Z,5µm,19.0s
HAWA Hanford 102.00 3 IAMs_20 IAMs_20 19 00 50.0
comp=Z,3µm,20.0s
LUWI Luwuk 102.41 249 IAMs_20 IAMs_20 19 08 05.0
comp=Z,3µm,19.0s
UGM Wanagama 102.56 235 IAMs_20 IAMs_20 19 05 39.3
comp=Z,3µm,18.0s
NLWA Neilton Lookou 102.95 359 IAMs_20 IAMs_20 19 02 14.0
comp=Z,4µm,18.0s
NEW Newport 103.94 4 IAMs_20 IAMs_20 19 01 34.6
comp=Z,3µm,21.0s
ROCAM Rodrigues Isla 104.42 186 IAMs_20 IAMs_20 19 04 27.0
comp=Z,5µm,21.0s
DGMT Dagmar 105.23 13 IAMs_20 IAMs_20 19 05 59.9
comp=Z,3µm,19.0s
BKB Balikpapan 105.26 244 IAMs_20 IAMs_20 19 06 51.6
comp=Z,5µm,21.0s

TOLI2 Tolitoli 105.28 249 IAMs_20 IAMs_20 19 10 23.9
comp=Z,3µm,20.0s
YLE Yale 105.79 37 IAMs_20 IAMs_20 19 05 38.9
comp=Z,4µm,21.0s
AGMN Agassiz Nation 106.33 19 IAMs_20 IAMs_20 19 05 47.0
comp=Z,4µm,19.0s
EYMN Ely 106.84 22 IAMs_20 IAMs_20 19 07 46.5
comp=Z,3µm,18.0s
WES Weston 107.29 38 IAMs_20 IAMs_20 19 05 37.4
comp=Z,3µm,21.0s
HRV Adam Dziewonsk 107.32 37 IAMs_20 IAMs_20 19 05 48.7
comp=Z,4µm,21.0s
HNH Hanover 108.14 36 IAMs_20 IAMs_20 19 07 00.5
comp=Z,3µm,20.0s
LONY Lake Ozonia 108.21 34 IAMs_20 IAMs_20 19 07 45.3
comp=Z,3µm,21.0s
VT1 Waterbury 108.54 36 IAMs_20 IAMs_20 19 06 20.9
comp=Z,4µm,22.0s
LBNH Lisbon 108.73 36 IAMs_20 IAMs_20 19 07 29.3
comp=Z,3µm,20.0s
PQI Presque Isle 112.19 38 IAMs_20 IAMs_20 19 11 47.9
comp=Z,2µm,18.0s
WRAK Wrangell Islan 112.24 354 IAMs_20 IAMs_20 19 05 43.4
comp=Z,4µm,20.0s
JIS Juneau Island 114.21 353 IAMs_20 IAMs_20 19 05 48.5
comp=Z,5µm,20.0s
P33M Teslin, Yukon 116.05 355 IAMs_20 IAMs_20 19 07 11.1
comp=Z,5µm,20.0s
ADK Adak 116.20 326 IAMs_20 IAMs_20 19 05 36.5
comp=Z,6µm,22.0s
Q23K Middleton Isla 116.50 347 IAMs_20 IAMs_20 19 09 05.6
comp=Z,5µm,18.0s
RPSI Rantau Prapat 117.14 229 IAMs_20 IAMs_20 19 13 36.2
comp=Z,3µm,20.0s
MCARA McCarthy VSAT 118.02 349 IAMs_20 IAMs_20 19 08 21.0
comp=Z,5µm,20.0s
GLB Gilahina Butte 118.16 349 IAMs_20 IAMs_20 19 08 32.7
comp=Z,5µm,20.0s
RC01 Rabbit Creek A 118.55 346 IAMs_20 IAMs_20 19 08 43.0
comp=Z,5µm,20.0s
FIS Fire Island 118.67 345 IAMs_20 IAMs_20 19 07 38.1
comp=Z,5µm,20.0s
KNK Knik Glacier 118.69 346 IAMs_20 IAMs_20 19 06 32.7
comp=Z,6µm,22.0s
SCM Sheep Creek Mo 118.95 347 IAMs_20 IAMs_20 19 08 06.6
comp=Z,5µm,21.0s
SML Sawmill 119.05 347 IAMs_20 IAMs_20 19 10 21.3
comp=Z,5µm,19.0s
GHO Glory Hole Cre 119.10 346 IAMs_20 IAMs_20 19 11 34.4
comp=Z,5µm,19.0s
M22K Willow 119.24 346 IAMs_20 IAMs_20 19 08 36.3
comp=Z,4µm,20.0s
MBAR Mbarara 119.77 149 IAMs_20 IAMs_20 19 13 57.8
comp=Z,5µm,21.0s
CUT Chulitna 119.89 346 IAMs_20 IAMs_20 19 07 21.3
comp=Z,5µm,22.0s
KIBK Kibwezi 119.91 158 IAMs_20 IAMs_20 19 16 13.5
comp=Z,5µm,20.0s
TORD Torodi Ar. Bea 119.98 113 PKP **PKPdf** **18 28 33.1 -1.7**
comp=Z,0.9nm,0.8s,baz=242,slow=1.5,SNR=4.5
TORD PKKPab **PKKPab** **18 38 44.1 -1.3**
comp=Z,2.9nm,1.2s,baz=28,slow=2.9,SNR=5.9
DHY Denali Highway 120.16 348 IAMs_20 IAMs_20 19 09 06.5
comp=Z,5µm,20.0s
LHMI Lhok Sumawe 120.25 228 IAMs_20 IAMs_20 19 11 38.7
comp=Z,2µm,19.0s
RND Reindeer 120.66 347 IAMs_20 IAMs_20 19 08 08.8
comp=Z,5µm,22.0s
MCK McKinley 120.99 347 IAMs_20 IAMs_20 19 08 19.4
comp=Z,5µm,22.0s
KTH Kantishna Hill 121.08 346 IAMs_20 IAMs_20 19 08 21.8
comp=Z,5µm,22.0s
EGAK Eagle 121.17 351 **PKiKP** **18 28 35.8 +0.2**
BWN Browne 121.48 347 IAMs_20 IAMs_20 19 12 50.8
comp=Z,5µm,19.0s
WRH Wood River Hil 121.59 348 **PKiKP** **18 28 37.1 +0.6**
BPAW Bear Paw Mtn. 121.61 346 IAMs_20 IAMs_20 19 13 01.8
comp=Z,4µm,19.0s
CCB Clear Creek Bu 121.73 348 **PKPdf** **18 28 36.2 -0.4**
IL31 121.74 348 **PKPdf** **18 28 35.2 -1.3**
ILAR Eielson Array 121.74 348 PKP **PKPdf** **18 28 35.5 -1.1**
comp=Z,2.3nm,0.8s,baz=193,slow=2.3,SNR=15
ILAR Eielson Array 121.74 348 **PKPdf** **18 28 35.2 -1.3**
ILAR Eielson Array 121.74 348 PKiKP **PKPdf** **18 28 35.3 -1.3**
NEA2 Nenana 121.83 347 IAMs_20 IAMs_20 19 09 06.7
comp=Z,4µm,22.0s
PRP Porcupine Dome 122.32 349 IAMs_20 IAMs_20 19 11 18.6
comp=Z,5µm,20.0s
I23K Minto, Yukon-K 122.40 347 IAMs_20 IAMs_20 19 10 06.8
comp=Z,5µm,20.0s
EPYK Eagle Plains 122.41 354 IAMs_20 IAMs_20 19 10 26.2
comp=Z,5µm,20.0s
MLY Manley 122.47 347 IAMs_20 IAMs_20 19 15 05.5
comp=Z,4µm,18.0s
I21K Tanana 122.77 346 IAMs_20 IAMs_20 19 10 26.6
comp=Z,4µm,20.0s
H21K Melozitna Rive 123.34 346 IAMs_20 IAMs_20 19 09 19.5
comp=Z,4µm,22.0s
IMAR Indian Mountai 123.78 345 **PKPdf** **18 28 40.6 +0.1**
MJAR Matsushiro Arr 123.95 286 PKP **PKPdf** **18 28 40.4 -1.4**
comp=Z,1.4nm,0.9s,baz=113,slow=3.7,SNR=2.9
BMAR Burnt Mountain 124.08 350 PKPdf **PKPdf** **18 28 40.4 -0.6**
LODK Lodwar 124.86 153 IAMs_20 IAMs_20 19 18 32.5
comp=Z,4µm,20.0s
QIZ Qiongzhong 126.06 249 PKP **PKiKP** **18 28 47.1 +0.4**
QIZ PP **PP** **18 30 40.5 +0.5**
QIZ LR LR
comp=Z,1µm,27.0s
QIZ LR LR
comp=Z,1µm,15.7s
QIZ LR LR
comp=Z,1µm,27.6s
PET Petropavlovsk 126.12 313 IAMs_20 IAMs_20 19 19 37.8
comp=Z,4µm,18.0s
PEA0B Petropavlovsk- 126.57 312 *i* PKiKP **PKPdf** **18 28 46.1 -0.1**
YSS Yuzh-Sakhalins 129.05 298 IAMs_20 IAMs_20 19 21 16.4
comp=Z,3µm,19.0s
YSS Yuzh-Sakhalins 129.05 298 *i* PKiKP **PKiKP** **18 28 51.6 -0.2**
YSS pmax pmax
comp=Z,7.0nm,1.2s
A21K Barrow 129.15 347 IAMs_20 IAMs_20 19 16 31.1
comp=Z,4µm,20.0s
SSE Sheshan 129.36 269 PKP **PKiKP** **18 28 53.8 +0.9**
SSE SS SS 18 48 26.1 +3.1
SSE AMB AMB
comp=Z,270nm,4.1s
SSE LR LR
comp=Z,480nm,22.8s
SSE LR LR
comp=Z,410nm,22.6s
TAM Tamanrasset 129.99 110 PKPpre 18 28 44.1
TAM IAMs_20 IAMs_20 19 18 49.1
comp=Z,3µm,19.0s
TAM Tamanrasset 129.99 110 PKiKP PKPpre 18 28 44.2
TAM MLR MLR
comp=Z,3µm,19.0s
KSRS Korea Array 130.25 280 PKP **PKPdf** **18 28 53.8 +0.1**
comp=Z,0.5nm,0.8s,baz=184,slow=1.9,SNR=1.5
AVE Averroes 131.00 89 IAMs_20 IAMs_20 19 18 20.4
comp=Z,2µm,22.0s
CMAR Chiang Mai Arr 131.05 237 PKP **PKPdf** **18 28 56.1 +0.2**
comp=Z,1.8nm,0.7s,baz=204,slow=2.0,SNR=3.5
CMAR Chiang Mai Arr 131.05 237 PKPdf **PKPdf** **18 28 54.9 -0.9**
CMAR Chiang Mai Arr 131.05 237 PKiKP **PKPdf** **18 28 54.9 -0.9**
CHTO Chiang Mai 131.36 238 IAMs_20 IAMs_20 19 22 00.5
comp=Z,3µm,21.0s
NJ2 Nanjing 131.39 268 *e*PKP **PKiKP** **18 28 59.3 +2.3**
NJ2 LR LR
comp=Z,1µm,19.9s
NJ2 LR LR
comp=Z,540nm,16.6s
NJ2 LR LR
comp=Z,2µm,21.8s
VLA Vladivostok 132.04 288 *i* PKiKP **PKPdf** **18 28 57.3 +0.4**
VLA pmax pmax
comp=Z,10.0nm,1.1s
MA2 Magadan 133.80 315 IAMs_20 IAMs_20 19 15 51.0
comp=Z,4µm,21.0s
SFJD Kangerlussuaq 133.91 31 IAMs_20 IAMs_20 19 22 56.8
comp=Z,2µm,19.0s
SFS San Fernando 133.98 87 IAMs_20 IAMs_20 19 21 24.4
comp=Z,2µm,21.0s
BILL Bilibino 134.08 330 IAMs_20 IAMs_20 19 18 19.3
comp=Z,3µm,20.0s
BILL Bilibino 134.08 330 *e*PKiKP **PKiKP** **18 29 01.5 +0.2**
BILL *e* 18 31 29.5
BILL *e*PPP PPP 18 34 25.5

BILL pmax pmax
comp=Z,3.0nm,1.0s
ATD Arta Tunnel 134.37 161 IAMs_20 IAMs_20 19 22 29.0
comp=Z,3μm,22.0s
DL2 Dalian 134.78 276 PKP **PKPdf** **18 29 01.6 -0.6**
DL2 SS SS 18 49 30.8 +1.7
DL2 AMB AMB
comp=Z,240nm,4.2s
DL2 LR LR
comp=Z,760nm,16.3s
DL2 LR LR
comp=Z,750nm,17.5s
DL2 LR LR
comp=Z,1μm,20.2s
ILULI Ilulissat 135.24 29 IAMs_20 IAMs_20 19 24 39.8
comp=Z,3μm,18.0s
ENH Enshi 135.26 258 **PKPdf** **18 28 57.7 -5.8**
SEY Seymchan 135.27 320 *i* PKIKP **PKiKP** **18 29 04.0 +0.2**
SEY pmax pmax
comp=Z,41nm,1.9s
COI Coimbra 135.37 82 IAMs_20 IAMs_20 19 24 57.1
comp=Z,2μm,19.0s
TIA Tai'an 135.41 270 PKP **PKiKP** **18 29 06.0 +1.0**
TIA SS SS 18 49 41.6 +4.9
TIA LR LR
comp=Z,640nm,21.1s
TIA LR LR
comp=Z,930nm,20.6s
TIA LR LR
comp=Z,1μm,23.1s
CN2 Changchun 135.98 284 *e*PKP **PKPdf** **18 29 02.8 -1.5**
CN2 SS SS 18 49 47.6 +4.2
CN2 AMB AMB
comp=Z,200nm,6.2s
CN2 LR LR
comp=Z,700nm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,500nm,17.2s
MTE Manteigas 135.98 82 IAMs_20 IAMs_20 19 21 44.4
comp=Z,3μm,21.0s
KLR Kul'dur 136.10 294 *i* PKIKP **PKPdf** **18 29 04.9 +0.6**
KLR pmax pmax
comp=Z,4.0nm,1.3s
SOCY Socotra 136.30 176 IAMs_20 IAMs_20 19 27 25.3
comp=Z,3μm,20.0s
PZH PanZhiHua 136.42 246 PKP **PKiKP** **18 29 07.5 -0.1**
PZH PP **PP** **18 31 50.8 +3.7**
PZH SKKS 18 38 45.1
PZH SS **SS** **18 49 49.5 +0.8**
PZH AMB AMB
comp=Z,410nm,4.5s
PZH LR LR
comp=Z,1μm,19.8s
PZH LR LR
comp=Z,820nm,18.0s
PZH LR LR
comp=Z,1μm,21.6s
LYN LuoYang 136.82 264 *e*PKP **PKPdf** **18 29 02.5 -3.7**
LYN PP **PP** **18 31 48.3 -1.3**
LYN SKKS 18 38 39.3
LYN SS **SS** **18 49 51.4 -2.1**
LYN AMB AMB
comp=Z,200nm,4.3s
LYN LR LR
comp=Z,920nm,20.9s
LYN LR LR
comp=Z,1μm,25.1s
ANGG Ammassalik, Gr 137.19 38 IAMs_20 IAMs_20 19 27 43.7
comp=Z,2μm,18.0s
PAB San Pablo 137.19 86 IAMs_20 IAMs_20 19 23 13.2
comp=Z,2μm,22.0s
ESDC Sonseca Array 137.49 86 PKP **PKPdf** **18 29 06.9 -0.5**
comp=Z,3.3nm,1.1s,baz=262,slow=1.0,SNR=11
HNS HongShan 137.61 269 ⇑PKP **PKiKP** **18 29 14.9 +5.5**
HNS PP **PP** **18 31 56.3 +1.8**
HNS SKKS 18 38 50.6
XAN Xi'an 138.42 261 PP PP 18 31 54.0 -5.6
XAN Xi'an 138.42 261 PKP **PKiKP** **18 29 16.6 +5.3**
XAN Xi'an 138.42 261 sPKP 18 29 28.0
BJI Beijing 138.62 273 PKP **PKiKP** **18 29 15.1 +3.7**
BJI SS SS 18 50 15.0 +0.2
BJI LR LR
comp=Z,200nm,19.1s
BJI LR LR
comp=Z,1μm,18.1s
BJI LR LR
comp=Z,1μm,19.3s
CD2 Chengdu 138.87 252 PKP **PKPdf** **18 29 10.8 +0.7**
CD2 PP **PP** **18 32 04.0 +1.7**
CD2 SS SS 18 50 21.4 +3.7
CD2 AMB AMB
comp=Z,490nm,5.4s
CD2 LR LR
comp=Z,2μm,18.4s
CD2 LR LR
comp=Z,1μm,22.1s
CD2 LR LR
comp=Z,2μm,21.6s
SUMG Summit 140.57 28 IAMs_20 IAMs_20 19 27 37.6
comp=Z,3μm,19.0s
ZEA Zeya 141.01 297 *i* PKIKP **PKPdf** **18 29 10.0 -3.2**
ZEA *e* 18 32 17.0
ZEA pmax pmax
comp=Z,10.0nm,1.5s
ZEA pmax pmax
comp=E,100nm,9.2s
ZEA pmax pmax
comp=Z,300nm,10.3s
XLT XiLinHaoTe 141.22 278 *e*PKP **PKiKP** **18 29 19.5 +2.7**
XLT SKKS 18 39 06.8
XLT SS **SS** **18 50 48.5 +3.0**
XLT AMB AMB
comp=Z,490nm,9.3s
XLT LR LR
comp=Z,1μm,21.1s
XLT LR LR
comp=Z,1μm,21.5s
HHC Hu-ho-hao-te 141.76 270 *e*PKP **PKPdf** **18 29 10.4 -4.7**
HHC SS SS 18 50 55.3 +3.4
HHC AMB AMB
comp=Z,550nm,8.3s
HHC LR LR
comp=Z,1μm,22.7s
HHC LR LR
comp=Z,1μm,21.6s
HHC LR LR
comp=Z,2μm,22.4s
HIA Hailar 142.44 287 IAMs_20 IAMs_20 19 35 17.0
comp=Z,2μm,19.0s
BTO Baotou 142.46 269 *e*P **PKiKP** **18 29 24.1 +4.7**
LZH Lanzhou 142.74 258 *e*PKP **PKPdf** **18 29 13.4 -3.7**
LZH pPKP pPKPdf 18 29 17.0 -3.0
LZH sPKP 18 29 21.6
LZH SS SS 18 51 05.8 +2.6
LZH AMB AMB
comp=Z,810nm,5.8s
LZH LR LR
comp=Z,700nm,16.7s
LZH LR LR
comp=Z,1μm,14.6s
LZH LR LR
comp=Z,2μm,16.5s
ODAN Odare 143.58 230 *e*P **PKPdf** **18 29 20.5 +1.5**
YAK Yakutsk 143.85 310 IAMs_20 IAMs_20 19 24 16.7
comp=Z,2μm,21.0s
YAK Yakutsk 143.85 310 *e*PKIKP **PKPdf** **18 29 16.9 -1.0**
YAK pmax pmax
comp=N,14nm,2.0s
YAK pmax pmax
comp=Z,21nm,1.6s
YAK pmax pmax
comp=E,11nm,1.7s
YAK MLR MLR
comp=Z,1μm,19.0s
YAK MLR MLR
comp=N,198nm,20.0s
YAK MLR MLR
comp=E,574nm,18.0s
LSA Lhasa 144.31 237 IAMs_20 IAMs_20 19 38 04.8
comp=Z,2μm,21.0s
LSA Lhasa 144.31 237 PKP PKPbc 18 29 18.8 0.0
LSA LR LR
comp=Z,730nm,17.1s
LSA LR LR
comp=Z,730nm,17.1s
LSA LR LR
comp=Z,770nm,18.5s
DSB Dublin 144.38 67 PKPdf **PKPdf** **18 29 18.7 -0.4**
RSBS Rosebush, Pemb 144.56 70 *e*P PKPbc 18 29 18.4 +0.1
SCO Scoresbysund 144.60 35 IAMs_20 IAMs_20 19 29 06.5
comp=Z,3μm,20.0s
JIRN Jiri 144.79 229 *e*P **PKPab** **18 29 19.9 -0.2**
comp=Z,472nm,1.2s
PKI Pulchoki 145.04 228 *e*P **PKPbc** **18 29 20.4 -0.6**
comp=Z,626nm,1.3s
PKIN Phulchoki 145.05 228 *e*P **PKPbc** **18 29 20.5 -0.4**
comp=Z,728nm,1.4s
GUN Gumba 145.14 229 *e*P **PKPbc** **18 29 21.1 -0.2**
comp=Z,648nm,1.1s
DMN Daman 145.20 227 *e*P **PKPbc** **18 29 21.2 -0.2**
comp=Z,857nm,1.1s
KKN Kakani 145.28 228 *e*P **PKPbc** **18 29 20.8 -0.8**
WLF1 Llynfaes 145.43 68 *e*P **PKPdf** **18 29 18.3 -2.6**
YLL Llanberis 145.47 68 *e*P **PKPdf** **18 29 20.5 -0.6**
MCH1 Michaelchurch 145.51 71 *e*P **PKPdf** **18 29 20.6 -0.6**
WME Myndd Eilian 145.53 68 *e*P **PKPdf** **18 29 20.5 -0.6**
MONM Monmouth 145.54 71 *e*P **PKPbc** **18 29 21.5 +0.2**
CLTB Caltabellotta 145.63 104 **PKPdf** **18 29 22.1 +0.1**
CLTB IAMs_20 IAMs_20 19 45 20.4
comp=Z,3μm,20.0s
JHNI Jhansi 145.72 216 *ex* **PKPdf** **18 29 20.8 -1.6**
GKN Gorkha 145.74 227 *e*P **PKPdf** **18 29 22.0 -0.6**
comp=Z,732nm,1.3s
IOMK Kirk Michael 145.81 67 *e*P **PKPdf** **18 29 21.7 +0.1**
HLM1 Long Mynd 145.84 70 *e*P **PKPdf** **18 29 22.1 +0.3**
FOEL Foel Wylfa 145.86 69 *e*P **PKPdf** **18 29 18.1 -3.7**
SSB Saint Sauveur 145.91 86 PKPdf **PKPdf** **18 29 21.1 -1.0**
SSB IAMs_20 IAMs_20 19 25 48.0
comp=Z,2μm,22.0s
SSB Saint Sauveur 145.91 86 PKIKP **PKPdf** **18 29 21.1 -1.0**
SSB MLR MLR
comp=Z,2μm,22.0s
CLF Chambon-Foret 146.24 80 **PKPdf** **18 29 21.2 -1.3**
LAWE Loch Awe, Argy 146.30 63 *e*P **PKPdf** **18 29 22.4 +0.1**
NEWG New Galloway 146.38 65 *e*P **PKPdf** **18 29 22.4 -0.1**
DANN Dangsing 146.40 226 *e*P **PKPdf** **18 29 24.4 +0.5**
comp=Z,1μm,1.6s
RAYN Ar Rayn 146.56 161 PKPdf **PKPdf** **18 29 23.4 -0.5**
RAYN Ar Rayn 146.56 161 IAMs_20 IAMs_20 19 33 45.0
comp=Z,3μm,19.0s
RAYN Ar Rayn 146.56 161 PKIKP **PKPdf** **18 29 23.4 -0.5**
RAYN MLR MLR
comp=Z,3μm,19.0s
RAYN Ar Rayn 146.56 161 P **PKPbc** **18 29 25.7 +0.3**
PGBU Glenifferbraes 146.57 64 *e*P **PKPbc** **18 29 23.7 -0.7**
KPL Plockton 146.64 61 *e*P **PKPdf** **18 29 23.6 +0.8**
WBK Wadi Bani Khal 146.69 184 P **PKPbc** **18 29 25.7 -0.1**
DAG Danmarks Havn 146.80 24 *i* P **PKPbc** **18 29 24.0 -0.5**
UMZA Um Al Zommool 146.80 177 P **PKPbc** **18 29 25.3 -0.8**
BSY Bisya 146.86 181 P **PKPdf** **18 29 24.6 +0.1**
BNI Bardonecchia 146.97 88 PKPdf **PKPdf** **18 29 25.0 +0.9**
BNI IAMs_20 IAMs_20 19 30 02.1
comp=Z,3μm,21.0s
BNI Bardonecchia 146.97 88 PKP2 **PKPdf** **18 29 25.0 +0.9**
BNI MLR MLR
comp=Z,3μm,21.0s
ESK Eskdalemuir 147.00 65 PKPdf **PKPdf** **18 29 23.5 -0.1**
ESK Eskdalemuir 147.00 65 PKIKP **PKPdf** **18 29 23.5 -0.1**
MZR Muzera 147.02 174 P **PKPab** **18 29 28.6 +0.4**
TIXI Tiksi 147.05 326 PKPdf **PKPbc** **18 29 24.9 -0.5**
TIXI IAMs_20 IAMs_20 19 31 33.1
comp=Z,3μm,19.0s
TIXI Tiksi 147.05 326*d* iPKP2 **PKPbc** **18 29 24.3 -1.0**
TIXI pmax pmax
comp=Z,39nm,1.1s
INVG Invergeldie, C 147.06 63 *e*P **PKPbc** **18 29 24.8 -1.0**
SMDO Samad 147.16 182 P **PKPbc** **18 29 27.8 +0.6**
HPK Haverah Park 147.20 68 *e*P **PKPbc** **18 29 26.8 +0.5**
CIT Chita 147.25 287 *e*PKP2 **PKPbc** **18 29 26.6 +0.1**
CIT *e* 18 32 50.2
CIT pmax pmax
comp=Z,300nm,1.9s
GTA Gaotai 147.34 258 *e*PKPbc **PKPbc** **18 29 27.1 -0.2**
GTA PP **PP** **18 33 00.5 +6.9**
GTA SS SS 18 52 01.3 +5.5
GTA AMB AMB
comp=Z,570nm,6.2s
GTA LR LR
comp=Z,1μm,20.7s
GTA LR LR
comp=Z,530nm,18.5s
GTA LR LR
comp=Z,1μm,21.8s
EDMD Edmundbyers 147.42 67 *e*P **PKPdf** **18 29 25.4 +1.1**
CEL Celeste 147.58 106 IAMs_20 IAMs_20 19 40 37.0
comp=Z,3μm,22.0s
BIDO Bidbid 147.62 182 P **PKPab** **18 29 30.6 +0.1**
SNR=6.5
GOMU GeErMu 147.68 248 PKPbc **PKiKP** **18 29 29.8 -0.9**
GOMU SKKS 18 39 46.3
GOMU SS **SS** **18 52 00.8 +0.8**
GOMU LR LR
comp=Z,610nm,21.1s
GOMU LR LR
comp=Z,450nm,21.8s
GOMU LR LR
comp=Z,980nm,21.0s
AJM Ajmer 147.88 211 *ex* **PKPdf** **18 29 28.3 +2.2**
CASP Castiglione de 147.91 94 **PKPdf** **18 29 24.3 -1.3**
LATE Laterza 148.32 96 **PKPbc** **18 29 28.7 -1.0**
VLC Villacollemand 148.50 92 IAMs_20 IAMs_20 19 28 56.7
comp=Z,2μm,22.0s
OSSC Osservatorio P 148.59 94 **PKPdf** **18 29 26.3 -0.3**
ULN Ulaanbaatar 148.63 277 **PKPbc** **18 29 29.4 -1.1**
ULN Ulaanbaatar 148.63 277 IAMs_20 IAMs_20 19 51 08.8
comp=Z,2μm,20.0s
ULN Ulaanbaatar 148.63 277 PKP2 **PKPbc** **18 29 29.4 -1.1**
ULN MLR MLR
comp=Z,2μm,20.0s
ULN Ulaanbaatar 148.63 277 P **PKPbc** **18 29 30.5 0.0**
DOU Dourbes 148.65 78 *d*PKP **PKPbc** **18 29 30.3 0.0**
ASUD Al Ashush, Dub 148.71 177 P **PKPdf** **18 29 27.8 +0.4**
TIP Timpagrande 148.71 105 PKPdf **PKPdf** **18 29 24.7 -2.4**
TIP IAMs_20 IAMs_20 19 38 22.9
comp=Z,2μm,20.0s
LGTI Lohaghat 148.76 222 *ex* **PKPdf** **18 29 30.6 +3.3**
CUC Castrocucco 148.77 103 **PKPdf** **18 29 25.9 -1.2**
SONA Sohna 148.78 216 *ex* **PKPdf** **18 29 30.0 +2.6**
ASHO Ashiyiah 148.78 179 P **PKPdf** **18 29 29.1 +1.5**
SNR=6.8
FAQ Al Faqa, Dubai 148.83 178 P **PKPbc** **18 29 30.9 -0.6**
BMRD Maredsous 148.85 78 *d*PKP **PKPbc** **18 29 30.6 -0.2**
PTH Pithoragarh 148.86 222 *ex* **PKPdf** **18 29 30.7 +2.9**
KUDL Kundal 148.88 215 *ex* **PKPdf** **18 29 30.6 +3.0**
JRN Qarnain Island 148.90 173 P **PKiKP** **18 29 32.4 -0.6**
HATD Hatta, Dubai 148.92 179 P **PKPbc** **18 29 30.7 -1.0**
SNR=8.6
ZCCA Zocca 148.96 92 **PKPbc** **18 29 30.6 -0.7**
SONM Songino Array 148.99 276 PKPbc **PKPbc** **18 29 30.6 -0.7**
comp=Z,18nm,1.0s,baz=152,slow=2.5,SNR=25
SONM Songino Array 148.99 276 PKPdf **PKPdf** **18 29 26.6 -0.7**
RCHB Rochefort 149.03 79 *d*PKP **PKPbc** **18 29 31.2 0.0**
AQU L'Aquila 149.04 97 **PKPbc** **18 29 30.1 -1.5**
AQU IAMs_20 IAMs_20 19 48 50.8
comp=Z,2μm,20.0s
AQU L'Aquila 149.04 97 PKP2 **PKPbc** **18 29 30.1 -1.5**
AQU MLR MLR
comp=Z,2μm,20.0s
UOSS Minazif 149.04 179 **PKPbc** **18 29 30.1 -2.0**
UOSS Minazif 149.04 179 IAMs_20 IAMs_20 19 29 02.2
comp=Z,3μm,21.0s
UOSS Minazif 149.04 179 P **PKPbc** **18 29 30.5 -1.6**
ECH Echery 149.07 83 **PKPbc** **18 29 30.8 -0.6**
ECH Echery 149.07 83 PKP2 **PKPbc** **18 29 30.8 -0.6**
ECH MLR MLR
comp=Z,2μm,20.0s
NAZ Nazwa, Dubai 149.08 178 P **PKPdf** **18 29 29.4 +1.4**
MURB Monte Urbino 149.14 95 **PKPdf** **18 29 25.8 -1.8**
NRCA Norcia 149.19 96 **PKPbc** **18 29 31.3 -0.7**
BCLA Clavier 149.21 78 *d*PKP **PKPbc** **18 29 31.3 -0.4**
WLF Walferdange 149.29 80 **PKPdf** **18 29 26.1 -1.5**
WLF IAMs_20 IAMs_20 19 34 07.4
comp=Z,2μm,21.0s
WLF Walferdange 149.29 80 PKHKP PKPpre 18 29 26.1
WLF MLR MLR
comp=Z,2μm,21.0s
WLF Walferdange 149.29 80 *d*PKP **PKPbc** **18 29 32.5 +0.6**
MASF Masafi 149.47 179 P **PKPbc** **18 29 31.4 -1.7**
SALO Salr 149.47 90 PKPdf **PKPdf** **18 29 28.2 +0.2**
BOD Bodaibo 149.52 298 *e*PKHKP PKPpre 18 29 27.9
BOD pmax pmax
comp=Z,91nm,1.5s
BHOU Houvegnez 149.56 79 *d*PKP **PKPbc** **18 29 32.3 -0.2**
MEM Membach 149.69 78 *d*PKP **PKPbc** **18 29 32.9 +0.1**
BTNL Ternell 149.75 79 *d*PKP **PKPbc** **18 29 33.0 0.0**
BFO Black Forest 149.79 84 PKPdf **PKPdf** **18 29 29.2 +0.8**
BFO IAMs_20 IAMs_20 19 35 54.7
comp=Z,1μm,19.0s
BFO Black Forest 149.79 84 PKHKP PKPpre 18 29 29.2
BFO MLR MLR
comp=Z,2μm,19.0s
LRW Lerwick 149.84 58 *e*P **PKPbc** **18 29 31.9 -0.9**
TEOL Teolo 149.96 91 PKPdf **PKPdf** **18 29 29.9 +1.2**
IDI Anoyia 149.98 120 PKPdf **PKPdf** **18 29 27.6 -1.6**
IDI IAMs_20 IAMs_20 19 36 49.9
comp=Z,2μm,21.0s
DAVA Damuels 150.08 87 *e*P **PKPbc** **18 29 34.0 -0.2**
comp=Z,27nm,1.2s,SNR=13
SHME Shamm 150.14 179 P **PKPbc** **18 29 33.0 -1.7**
SNR=5.1
FETA Feichten 150.41 88 *e*P **PKPbc** **18 29 34.1 -0.8**
comp=Z,36nm,1.1s,SNR=20
STU Stuttgart 150.51 84 IAMs_20 IAMs_20 19 50 31.9
comp=Z,2μm,20.0s
RETA Reutte 150.69 87 *e*P **PKPbc** **18 29 35.2 -0.2**
comp=Z,20nm,0.9s,SNR=12
SQTA Sankt Quirin 150.79 88 *e*P **PKPbc** **18 29 35.3 -0.5**
comp=Z,21nm,1.2s,SNR=18
MOTA Moosalm 150.80 88 *e*P **PKPbc** **18 29 35.3 -0.6**
comp=Z,26nm,1.1s,SNR=14
WTTA Wattenberg 151.06 88 *e*P **PKPbc** **18 29 36.2 -0.3**
comp=Z,35nm,1.3s,SNR=13
WATA Walderalm 151.06 88 *e*P **PKPbc** **18 29 35.8 -0.6**
comp=Z,13nm,1.3s,SNR=6.7
STAL STALIGIAL 151.08 91 **PKPdf** **18 29 31.2 +0.7**
GHAJ Ghor Haditha 151.18 140 IAMs_20 IAMs_20 19 37 14.7
comp=Z,4μm,19.0s
ABTA Abfaltersbach 151.25 90 *e*P **PKPbc** **18 29 36.1 -0.8**
comp=Z,18nm,1.1s,SNR=9.0
KARP Karpathos 151.28 123 IAMs_20 IAMs_20 19 43 10.2
comp=Z,2μm,20.0s
SMLA Simla 151.39 218 *ex* **PKPdf** **18 29 36.8 +5.4**
CADS Cadrg 151.64 92 *e*PKPbc **PKPbc** **18 29 37.0 -0.7**
CEY Cerknica 151.74 93 *e*PKPbc **PKPbc** **18 29 37.6 -0.3**
MYKA Terra Mystica 151.82 91 *e*P **PKPbc** **18 29 37.4 -0.7**
comp=Z,9.9nm,1.1s
KBA Koelnbreinsper 151.91 90 *e*P **PKPbc** **18 29 35.8 -2.6**
comp=Z,6.3nm,1.2s
TIR Tirane 151.92 106 IAMs_20 IAMs_20 19 39 25.9
comp=Z,3μm,22.0s
LJU Ljubljana 151.98 93 *i* PKPbc **PKPbc** **18 29 38.0 -0.4**
ZAK Zakamensk 152.07 278 *e*PKIKP **PKPbc** **18 29 35.9 -2.7**
ZAK *e* 18 33 23.5
ZAK pmax pmax
comp=Z,37nm,1.6s
ZAK pmax pmax
comp=Z,9.0nm,1.7s
GRFO Grafenberg 152.13 84 IAMs_20 IAMs_20 19 50 34.5
comp=Z,2μm,20.0s
GRA1 Grafenberg Arr 152.13 84 IAMs_20 IAMs_20 19 50 34.5
comp=Z,2μm,19.0s
OBKA Obir 152.26 92 *e*P **PKPbc** **18 29 36.1 -3.0**
comp=Z,11nm,1.0s,SNR=7.5
PDG Podgorica 152.33 103 PKPdf **PKPdf** **18 29 31.0 -1.5**
PDG IAMs_20 IAMs_20 19 53 31.8
comp=Z,2μm,21.0s
IRK Irkutsk 152.40 282 *e*PKIKP **PKPbc** **18 29 38.6 -0.5**
IRK pmax pmax
comp=Z,97nm,1.8s
BIOA Bad Ischl, Aus 152.42 89 *e*P **PKPbc** **18 29 38.2 -1.2**
comp=Z,10.0nm,1.2s
KBS Kingsbay 152.62 17 IAMs_20 IAMs_20 19 34 01.7
comp=Z,3μm,19.0s
SOKA Soboth 152.63 92 *e*P **PKPdf** **18 29 36.2 +3.3**
comp=Z,7.9nm,1.2s
MOA Molln 152.86 89 *e*P **PKPbc** **18 29 39.3 -1.0**
comp=Z,7.8nm,0.9s
GEC2 GERESS Array S 153.08 87 PKPdf **PKPdf** **18 29 30.0 -3.5**
GERES GERESS Array B 153.08 87 PKPbc **PKPbc** **18 29 40.4 -0.5**
comp=Z,3.2nm,0.9s,baz=232,slow=1.5,SNR=17
GERES GERESS Array B 153.08 87 **PKPdf** **18 29 31.1 -2.4**
GERES GERESS Array B 153.08 87 PKIKP **PKPdf** **18 29 31.1 -2.4**
THN Thein Dam 153.08 217 *i* x **PKPab** **18 29 56.1 +3.3**
THN Thein Dam 153.08 217 *ex* **PKPbc** **18 29 40.4 -0.9**
NKC Novy Kostel 153.09 83 *e*PKIKP **PKiKP** **18 29 44.2 +3.3**
NKC *e*SS SS 18 52 52.1 -7.4
NKC MLR MLR
comp=Z,2μm,18.5s
NKC Novy Kostel 153.09 83⇑ *e*PKP **PKiKP** **18 29 44.2 +3.3**
NKC *e*SS SS 18 52 52.1 -7.4
NKC AMS AMS 19 50 20.0
comp=Z,2μm,18.5s
KHC Kasperske Hory 153.16 86 *e*PKIKP **PKPdf** **18 29 34.9 +1.4**
KHC *e* 18 29 42.7
KHC *e*SS SS 18 53 01.3 +0.9
KHC MLR MLR
comp=Z,2μm,18.2s
KHC Kasperske Hory 153.16 86 *e*PKPDF **PKPdf** **18 29 34.9 +1.4**
KHC ⇑*e*PKP **pPKPbc** **18 29 42.7 -1.2**
KHC *e*PKPAB **pPKPab** **18 29 54.8 -0.8**
KHC *e*SS SS 18 53 01.3 +0.9
KHC AMS AMS 19 48 40.0
comp=Z,2μm,18.2s
ARSA Arzberg 153.24 91 *e*P **PKiKP** **18 29 41.6 +0.3**
comp=Z,2.1nm,0.6s
CKRC Cesky Krumlov 153.41 87⇑ *e*PKP **PKPbc** **18 29 40.9 -0.6**
CKRC *ex* x 18 29 48.8
CKRC *e*SS SS 18 53 02.4 -0.6
CSS Mathiatis 153.54 133 IAMs_20 IAMs_20 19 34 09.6
comp=Z,2μm,21.0s
CONA Conrad Observa 153.80 90 *e*P **PKiKP** **18 29 43.8 +1.2**
comp=Z,8.3nm,1.6s
DIVS Divibare 153.83 101 IAMs_20 IAMs_20 19 38 47.6
comp=Z,2μm,20.0s
CLL Collm 153.91 82 IAMs_20 IAMs_20 19 49 51.6
comp=Z,2μm,19.0s
CLL Collm 153.91 82 *e*PKIKP **PKPdf** **18 29 37.0 +2.5**
CLL *i* 18 29 42.9
CLL *e* 18 29 54.0
CLL Collm 153.91 82 *e*PKPdf(2) 18 29 37.0
CLL *i* PKPbc **PKiKP** **18 29 42.9 +0.4**
CLL *e*PKPbc(2) 18 29 45.0
comp=Z,11nm,1.2s
CLL *e*PKPab **PKPab** **18 29 54.0 -1.8**
CLL *e*PKPab(2) 18 29 57.0
comp=Z,13nm,1.0s
CLL *i* x x 18 30 08.2
CLL *e*SKPdf **SKPdf** **18 33 00.0 -7.0**
CLL *e*PP **PP** **18 33 32.0 +0.8**
CLL *e*(PPP) 18 36 48.0
CLL *ex* x 18 37 24.0
CLL *e*SKKSac **SKKSac** **18 40 12.0 -7.8**
CLL *e*PSKS 18 43 54.0
CLL *e*SS **SS** **18 53 12.0 +3.6**
CLL *e*PSS PSS 18 53 59.0
CLL *e*SSS SSS 18 58 54.0
CLL *e*SSSS 19 03 07.0
CLL Lm MLR 19 32 00.0
comp=Z,2μm,21.0s
CLL L L 19 57 00.0
comp=Z,2μm,20.4s
RONA Rosalia, Austr 153.92 91 *e*P **PKPbc** **18 29 40.9 -1.8**
comp=Z,2.4nm,0.9s
MOY Mondy 153.95 279 *e*PKIKP **PKiKP** **18 29 46.4 +3.6**
MOY pmax pmax
comp=Z,71nm,2.9s
KKB Krupnik 154.02 108 P **PKiKP** **18 29 47.5 +4.4**
PRU Pruhonice 154.14 85 *e*PKP2 **PKPab** **18 29 56.5 -0.3**
PRU MLR MLR
comp=Z,2μm,19.8s
PRU Pruhonice 154.14 85 *e*PKPAB **PKPab** **18 29 56.5 -0.3**
PRU *e*SS SS 18 52 48.4 -22
PRU AMS AMS 19 49 10.0
comp=Z,2μm,19.8s
MMB Musomiste 154.16 110 P **PKiKP** **18 29 46.1 +2.7**
BRG Berggiesshubel 154.23 83 *e*PKP **PKPdf** **18 29 36.7 +1.8**
BRG Amp 18 29 47.1
comp=Z,5.6nm,1.0s
BRG *ex* x 18 29 52.8
BRG Amp 18 29 58.4
comp=Z,16nm,1.4s
BRG Berggiesshubel 154.23 83 PP PP 18 33 40.0 +7.0
BRG Berggiesshubel 154.23 83 *e*PKIKP **PKPdf** **18 29 36.7 +1.8**

BRG				*e*			18 29 52.8	
BRG							18 33 40.0	
BRG				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BRG				pmax	pmax			
	comp=Z,16nm,1.4s							
TREC	**Trest**	**154.32**	**87**	*e*PKIKP	**PKPdf**	**18 29 28.2**	**-7.0**	
TREC				MLR	MLR			
	comp=Z,2μm,18.3s							
TREC	**Trest**	**154.32**	**87**	AMS	AMS	19 49 50.0		
	comp=Z,2μm,18.3s							
PVCC	**Panska Ves**	**154.41**	**84**	*e*PKP2	**PKPab**	**18 30 03.5**	**+5.5**	
PVCC				MLR	MLR			
	comp=Z,1μm,22.1s							
PVCC	**Panska Ves**	**154.41**	**84**	*e*PKPAB	**PKPab**	**18 30 03.5**	**+5.5**	
PVCC				*e*SS	SS	18 52 55.0	-19	
PVCC				AMS	AMS	19 47 50.0		
	comp=Z,1μm,22.1s							
VTS	**Vitosha**	**154.62**	**107**	PKPdf	**PKPdf**	**18 29 35.4**	**-0.5**	
VTS	**Vitosha**	**154.62**	**107**	PKIKP	**PKPdf**	**18 29 35.4**	**-0.5**	
VTS	**Vitosha**	**154.62**	**107**	P	**PKPdf**	**18 29 35.5**	**-0.5**	
KRUC	**Moravsky**	**154.71**	**89**	*e*PKP	**PKPdf**	**18 29 35.8**	**+0.1**	
RDO	**Rodhopi**	**154.80**	**113**		**PKPdf**	**18 29 35.7**	**-0.4**	
MODS	**Modra-Piesok**	**154.84**	**91**	*e*PKIKP	**PKiKP**	**18 29 47.2**	**+2.6**	
MODS	**Modra-Piesok**	**154.84**	**91**	*e*PKP	**PKiKP**	**18 29 47.2**	**+2.6**	
VRAC	**Vranov**	**154.95**	**88**	*e*PKP	**PKPdf**	**18 29 36.3**	**+0.3**	
KONO	**Kongsberg**	**154.95**	**62**	IAMs_20	IAMs_20	19 35 02.5		
	comp=Z,2μm,20.0s							
NIL	**Nilore**	**155.00**	**214**	IAMs_20	IAMs_20	19 37 17.9		
	comp=Z,2μm,21.0s							
NIL	**Nilore**	**155.00**	**214**	P	**PKPdf**	**18 29 40.1**	**+3.4**	
KDZ	**Kurdzhali**	**155.10**	**112**	P	**PKPdf**	**18 29 31.5**	**-5.0**	
UPC	**Upice**	**155.21**	**85**	*e*PKIKP	PKPab	18 29 50.7	-11	
UPC				MLR	MLR			
	comp=Z,2μm,18.4s							
UPC	**Upice**	**155.21**	**85**↑	*e*PKP	PKPab	18 29 50.7	-11	
UPC				*e*SS	SS	18 53 02.0	-21	
UPC				AMS	AMS	19 52 50.0		
	comp=Z,2μm,18.4s							
DPC	**Dobruska-Polom**	**155.31**	**86**	*e*PKIKP	**PKPdf**	**18 29 36.9**	**+0.4**	
DPC				*e*SS	SS	18 53 18.2	-5.6	
DPC				MLR	MLR			
	comp=Z,2μm,22.5s							
DPC	**Dobruska-Polom**	**155.31**	**86**	*e*PKPDF	**PKPdf**	**18 29 36.9**	**+0.4**	
DPC				*e*PKPAB	**PKPab**	**18 30 03.0**	**+1.1**	
DPC				*e*SS	SS	18 53 18.2	-5.6	
DPC				AMS	AMS	19 53 40.0		
	comp=Z,2μm,22.5s							
JAVC	**Velka Javorina**	**155.32**	**90**	*e*PKP	**PKPdf**	**18 29 36.6**	**0.0**	
OSTC	**Ostas**	**155.35**	**85**↑	*e*PKP	PKPdf	18 29 47.3	+11	
OSTC				*ex*	x	18 29 54.6		
OSTC				*e*SS	SS	18 52 58.6	-26	
OSTC				AMS	AMS	19 52 50.0		
	comp=Z,2μm,20.1s							
RGN	**Rugen**	**155.42**	**75**	IAMs_20	IAMs_20	19 51 59.5		
	comp=Z,2μm,20.0s							
KRLC	**Kraliky**	**155.44**	**87**	*e*PKIKP	**PKPdf**	**18 29 34.4**	**-2.3**	
KRLC				*e*		18 29 44.3		
KRLC				*e*SS	SS	18 53 21.3	-3.8	
KRLC				MLR	MLR			
	comp=Z,2μm,18.6s							
KRLC	**Kraliky**	**155.44**	**87**	*e*PKPDF	**PKPdf**	**18 29 34.4**	**-2.3**	
KRLC				*ex*	x	18 29 44.3		
KRLC				*e*SS	SS	18 53 21.3	-3.8	
KRLC				AMS	AMS	19 56 40.0		
	comp=Z,2μm,18.6s							
MORC	**Moravsky Berou**	**155.72**	**88**	*e*PKP	**PKPdf**	**18 29 32.7**	**-4.4**	
VYHS	**Vyhne**	**155.78**	**92**	*e*PKIKP	**PKPdf**	**18 29 37.6**	**+0.4**	
VYHS	**Vyhne**	**155.78**	**92**	*e*PKP	**PKPdf**	**18 29 37.6**	**+0.4**	
VYHS				*e*		18 29 48.8		
NB2	**NORSAR Subarra**	**155.99**	**59**	PKPdf	**PKPdf**	**18 29 36.8**	**-0.3**	
	comp=Z,28nm,1.7s,baz=262,slow=1.4							
NB2	**NORSAR Subarra**	**155.99**	**59**	PKPdf	**PKPdf**	**18 29 36.8**	**-0.3**	
	baz=262,slow=1.4							
NOA	**NORSAR Array B**	**155.99**	**59**	PKP	**PKPdf**	**18 29 36.7**	**-0.3**	
	comp=Z,1.3nm,0.9s,baz=270,slow=1.4,SNR=4.0							
PSZ	**Piszkesteto**	**156.07**	**94**	IAMs_20	IAMs_20	19 52 55.7		
	comp=Z,2μm,22.0s							
OKC	**Ostrava-Krasne**	**156.09**	**88**	*e*PKIKP	PKPdf	18 29 47.4	+10	
OKC				*e*SS	SS	18 53 28.3	-3.7	
OKC				MLR	MLR			
	comp=Z,2μm,20.1s							
OKC	**Ostrava-Krasne**	**156.09**	**88**	*e*SS	SS	18 53 28.3	-3.7	
OKC				AMS	AMS	19 53 00.0		
	comp=Z,2μm,20.1s							
WMQ	**Urumqi**	**156.96**	**251**	*e*PKP	**PKPdf**	**18 29 36.9**	**-2.0**	
WMQ				PKPab	**sPKPab**	**18 30 14.5**	**+1.4**	
WMQ				PP	**PP**	**18 33 49.1**	**+0.9**	
WMQ				SS	SS	18 53 37.5	-3.9	
WMQ				AMB	AMB			
	comp=Z,700nm,5.3s							
WMQ				LR	LR			
	comp=Z,2μm,22.5s							
WMQ				LR	LR			
	comp=Z,1μm,20.3s							
WMQ				LR	LR			
	comp=Z,1μm,23.5s							
KBL	**Kabul**	**157.03**	**206**	P	**PKPdf**	**18 29 44.6**	**+5.1**	
ANTO	**Ankara**	**157.40**	**125**	IAMs_20	IAMs_20	19 45 43.1		
	comp=Z,2μm,21.0s							
CRVS	**Cervenica-Dubn**	**157.47**	**93**	*e*PKP2	**PKPab**	**18 30 12.4**	**+1.2**	
BRTR	**Keskin Array B**	**157.67**	**127**	PKP	**PKPdf**	**18 29 39.9**	**-0.2**	
	comp=Z,1.5nm,0.8s,baz=126,slow=2.1,SNR=6.2							
BRTR				PKPab	**PKPab**	**18 30 11.5**	**-0.9**	
	comp=Z,4.4nm,0.9s,baz=188,slow=7.5,SNR=6.3							
BRTR	**Keskin Array B**	**157.67**	**127**	PKPdf	**PKPdf**	**18 29 38.5**	**-1.6**	
BRTR	**Keskin Array B**	**157.67**	**127**	PKIKP	**PKPdf**	**18 29 38.5**	**-1.6**	
UZH	**Uzhgorod**	**157.80**	**95**	*i* PKIKP	**PKPdf**	**18 29 39.0**	**-0.7**	
UZH				*i*		18 29 46.4		
UZH				*e*		18 30 13.0		
UZH				MLR	MLR			
	comp=N,400nm,19.0s							
UZH				MLR	MLR			
	comp=E,270nm,19.0s							
UZH				MLR	MLR			
	comp=Z,160nm,19.0s							
PSN	**Preselentsi**	**157.97**	**112**	P	**PKPdf**	**18 29 32.8**	**-7.3**	
BURAR	**Bucovina Array**	**158.87**	**100**	PKPdf	**PKPdf**	**18 29 40.7**	**-0.5**	
KSH	**Kashi**	**159.27**	**226**	PKP	**PKPdf**	**18 29 44.8**	**+2.8**	
KSH				SS	SS	18 54 08.3	+2.8	
KSH				LR	LR			
	comp=Z,1μm,23.4s							
KSH				LR	LR			
	comp=Z,2μm,19.9s							
KSH				LR	LR			
	comp=Z,2μm,22.7s							
LVV	**L'vov**	**159.39**	**93**	*e*PKIKP	**PKPdf**	**18 29 34.0**	**-7.6**	
LVV				*e*		18 54 12.4		
GURO	**Guroymak-BITLI**	**159.98**	**144**		**PKPdf**	**18 29 42.2**	**-0.7**	
MILM	**Milestii Mici**	**160.43**	**106**	*e*PKP	**PKPdf**	**18 29 49.0**	**+6.2**	
	comp=Z,430nm,7.9s							
MILM	**Milestii Mici**	**160.43**	**106**	*e*PP	PP	18 34 04.0	-3.0	
MILM				LRM	MLR	18 47 50.0		
	comp=Z,1μm,21.0s							
MILM				*e*L	L	19 27 46.0		
MILM	**Milestii Mici**	**160.43**	**106**	*e*PKIKP	**PKPdf**	**18 29 49.0**	**+6.2**	
MILM				*i*		18 30 21.0		
MILM				*e*		18 34 04.0		
MILM				pmax	pmax			
	comp=Z,430nm,7.9s							
MILM				MLR	MLR			
	comp=Z,1μm,21.0s							
KIS	**Kishinev**	**160.48**	**105**	*i* PKP2	**PKPab**	**18 30 23.0**	**-1.3**	
KIS				pmax	pmax			
	comp=Z,230nm,7.7s							
SHLS	**Shalkode**	**160.67**	**238**	*e*PKP2	**PKPab**	**18 30 23.8**	**-1.6**	
SHLS	**Shalkode**	**160.67**	**238**	*e*PKPab	**PKPab**	**18 30 23.9**	**-1.6**	
	baz=239							
ZSN	**Zaisan**	**160.80**	**256**	*e*PKP2	**PKPab**	**18 30 24.2**	**-1.5**	
ZSN				*e*		18 34 07.2		
ZSN	**Zaisan**	**160.80**	**256**	*e*PKPab	**PKPab**	**18 30 24.2**	**-1.5**	
	baz=255							
ZSN				*e*PP	**PP**	**18 34 07.3**	**-1.9**	
	baz=255							
KEV	**Kevo**	**160.87**	**32**	*e*P	**PKPdf**	**18 29 43.3**	**+0.7**	
SATY	**Saty**	**161.10**	**236**	*e*PKP2	**PKPab**	**18 30 25.8**	**-1.4**	
SATY	**Saty**	**161.10**	**236**	*e*PKPab	**PKPab**	**18 30 25.9**	**-1.4**	
	baz=236							
ZHN	**Zhinishke**	**161.17**	**236**	*e*PKP2	**PKPab**	**18 30 26.7**	**-0.8**	
ZHN	**Zhinishke**	**161.17**	**236**	*e*PKPab	**PKPab**	**18 30 26.7**	**-0.8**	
	baz=236							
KPKS	**Kokpek**	**161.28**	**237**	*e*PKP2	**PKPab**	**18 30 26.2**	**-1.8**	
KPKS	**Kokpek**	**161.28**	**237**	*e*PKPab	**PKPab**	**18 30 26.2**	**-1.8**	
	baz=237							
MK31	**Makanchi Array**	**161.78**	**251**	PKPab	**PKPab**	**18 30 26.3**	**-3.8**	
MK31	**Makanchi Array**	**161.78**	**251**	PKP2	**PKPab**	**18 30 26.3**	**-3.8**	
MKAR	**Makanchi Array**	**161.78**	**251**	PKP	**PKPdf**	**18 29 44.1**	**-0.3**	
	comp=Z,1.3nm,1.1s,baz=85,slow=3.0,SNR=6.6							
MKAR				PKPab	**PKPab**	**18 30 29.1**	**-1.0**	
	comp=Z,12nm,1.1s,baz=132,slow=3.9,SNR=10.0							
MKAR				PP	**PP**	**18 34 13.0**	**-1.3**	
	comp=Z,9.8nm,1.1s,baz=122,slow=5.4,SNR=14							
MDOK	**Medeo**	**161.80**	**234**	*e*PKP2	**PKPab**	**18 30 28.4**	**-1.9**	
MDOK				*e*		18 34 13.4		
MDOK	**Medeo**	**161.80**	**234**	*e*PKPab	**PKPab**	**18 30 28.5**	**-1.9**	
	baz=234							
MDOK				*e*PP	**PP**	**18 34 13.5**	**-0.9**	
	baz=234							
SIM	**Simferopol'**	**161.90**	**118**	*i* PKIKP	**PKPdf**	**18 29 51.6**	**+7.1**	
SIM				*e*		18 29 58.7		
SIM				pmax	pmax			
	comp=Z,17nm,0.8s							
AAA	**Alma-Ata**	**161.90**	**234**	*e*PKP2	**PKPab**	**18 30 29.5**	**-1.2**	
AAA	**Alma-Ata**	**161.90**	**234**	*e*PKPab	**PKPab**	**18 30 29.6**	**-1.2**	
	baz=234							
MAKZ	**Makanchi**	**161.96**	**250**	PKPdf	**PKPdf**	**18 29 43.1**	**-1.5**	
MAKZ					**PKPab**	**18 30 27.4**	**-3.4**	
MAKZ	**Makanchi**	**161.96**	**250**	PKP2	**PKPab**	**18 30 27.4**	**-3.4**	
MAKZ						19 29 43.1		
GEYT	**Alibeck**	**161.97**	**183**	PKP	**PKPdf**	**18 29 44.8**	**-0.1**	
	comp=Z,0.8nm,0.6s,baz=256,slow=5.8,SNR=1.8							
TDK	**Taldyqorghan**	**162.55**	**240**	*e*PKP2	**PKPab**	**18 30 31.9**	**-1.5**	
TDK				*i*		18 34 17.9		
TDK	**Taldyqorghan**	**162.55**	**240**	*e*PKPab	**PKPab**	**18 30 32.0**	**-1.5**	
	baz=240							
TDK				*i* PP	**PP**	**18 34 17.9**	**-0.4**	
	baz=240							
KUU	**Kurty**	**162.70**	**234**	*e*PKP2	**PKPab**	**18 30 32.6**	**-1.5**	
KUU	**Kurty**	**162.70**	**234**	*e*PKPab	**PKPab**	**18 30 32.7**	**-1.5**	
	baz=234							
AKASG	**Malin Array Be**	**162.73**	**96**	PKP	**PKPdf**	**18 29 43.4**	**-1.7**	
	comp=Z,4.0nm,1.0s,baz=279,slow=1.3,SNR=17							
AKASG				PKPab	**PKPab**	**18 30 34.7**	**+0.7**	
	comp=Z,5.4nm,1.1s,baz=246,slow=3.8,SNR=4.9							
AKBB	**Malin Array Si**	**162.73**	**96**		**PKPdf**	**18 29 43.9**	**-1.2**	
AKBB	**Malin Array Si**	**162.73**	**96**	PKIKP	**PKPdf**	**18 29 43.9**	**-1.2**	
NACGM	**Naroch**	**162.94**	**81**↑	*e*PKP	PKPdf	18 29 55.6	+10	
	comp=Z,13nm,1.0s,baz=253							
SGDS	**Sogindy**	**163.10**	**230**	*e*PKP2	**PKPab**	**18 30 33.3**	**-2.6**	
SGDS	**Sogindy**	**163.10**	**230**	*e*PKPab	**PKPab**	**18 30 33.4**	**-2.6**	
	baz=230							
ANN	**Anapa**	**163.39**	**124**	*e*PKIKP	**PKPdf**	**18 29 43.1**	**-2.8**	
ANN				*e*		18 34 18.0		
ANN				*e*		18 36 50.5		
ANN				*e*SS	SS	18 54 54.3	+5.8	
ANN				*e*SSS	SSS	19 01 13.4		
ANN				pmax	pmax			
	comp=Z,37nm,1.2s							
MNK	**Minsk**	**163.44**	**83**	*i* PKIKP	**PKPdf**	**18 29 43.8**	**-1.8**	
MNK				*i*		18 34 20.2		
MNK				*i* PPP	PPP	18 38 12.4		
MNK				pmax	pmax			
	comp=Z,7.0nm,0.8s							
MNK				pmax	pmax			
	comp=E,1.0nm,0.8s							
MNK	**Minsk**	**163.44**	**83**	*i* PKP	**PKPdf**	**18 29 43.8**	**-1.8**	
	comp=E,1.0nm,0.8s							
MNK				*i* PKP	**PKPdf**	**18 29 43.8**	**-1.8**	
MNK				*i* PKP	**PKPdf**	**18 29 43.8**	**-1.8**	
	comp=Z,7.0nm,0.8s,baz=253							
MNK				*i* PP	**PP**	**18 34 20.2**	**-2.9**	
MNK				*i* PPP	PPP	18 38 12.4		
MNK				*i* SS	SS	18 55 33.4	+44	
MNK				*i* SSS	SSS	19 01 19.6		
MNK				*i* LQ	LQ	19 33 43.5		
MNK				*i* LR	LR	19 39 10.1		
MNK				*i* LRM	MLR	19 46 04.0		
	comp=E,190nm,15.7s							
MNK				*i* LRM	MLR	19 46 06.6		
	comp=Z,2μm,15.7s							
IUG	**luzhnay**	**163.78**	**217**	*e*PKP2	**PKPab**	**18 30 36.5**	**-2.4**	
IUG	**luzhnay**	**163.78**	**217**	*e*PKPab	**PKPab**	**18 30 36.6**	**-2.4**	
	baz=217							
ZAA0	**Zalesovo Array**	**163.87**	**275**	PKPdf	**PKPdf**	**18 29 43.3**	**-2.8**	
ZAA0				PKPab	**PKPab**	**18 30 37.9**	**-1.1**	
ZALV	**Zalesovo Beam**	**163.87**	**275**	PKP	**PKPdf**	**18 29 46.3**	**+0.2**	
	comp=Z,0.3nm,0.4s,baz=101,slow=1.5,SNR=4.1							
ZALV				PKPab	**PKPab**	**18 30 38.8**	**-0.2**	
	comp=Z,16nm,1.1s,baz=108,slow=4.8,SNR=13							
ZALV				PP	**PP**	**18 34 24.2**	**-1.2**	
	comp=Z,0.3nm,0.4s,baz=77,slow=6.4,SNR=1.6							
ZALV	**Zalesovo Beam**	**163.87**	**275**		**PKPdf**	**18 29 45.4**	**-0.7**	
ZALV				PKPab	**PKPab**	**18 30 37.1**	**-1.8**	
DZA	**Taraz**	**163.97**	**222**	*e*PKP2	**PKPab**	**18 30 37.7**	**-1.9**	
DZA	**Taraz**	**163.97**	**222**	*e*PKPab	**PKPab**	**18 30 37.8**	**-1.9**	
	baz=221							
APA	**Apatity**	**164.03**	**34**↓	*i* PKIKP	PKPdf	18 29 56.2	+10	
APA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
APA				MLR	MLR			
	comp=Z,4μm,22.0s							
ZEI	**Tsey**	**164.40**	**142**	*e*PKIKP	**PKPdf**	**18 29 54.3**	**+7.0**	
ZEI				pmax	pmax			
	comp=Z,17nm,1.3s							
KK31	**Karatay Array**	**164.45**	**220**	PKPdf	**PKPdf**	**18 29 45.7**	**-1.3**	
KK31	**Karatay Array**	**164.45**	**220**	PKIKP	**PKPdf**	**18 29 45.7**	**-1.3**	
KKAR	**Karatay Array**	**164.45**	**220**	PKPdf	**PKPdf**	**18 29 45.2**	**-1.8**	
KKAR	**Karatay Array**	**164.45**	**220**	PKIKP	**PKPdf**	**18 29 45.3**	**-1.8**	
KBZ	**Khabaz**	**164.85**	**138**	PKP	**PKPdf**	**18 29 47.9**	**+0.6**	
	comp=Z,2.3nm,1.0s,baz=280,slow=6.2,SNR=2.2							
KBZ				PKPab	**PKPab**	**18 30 44.7**	**+1.2**	
	comp=Z,4.9nm,1.0s,baz=339,slow=2.4,SNR=4.2							
KIV	**Kislovodsk**	**164.97**	**137**	*e*PKIKP	**PKPdf**	**18 29 45.7**	**-1.9**	
KIV				*e*		18 34 30.1		
KIV				*e*SS	SS	18 55 05.2	+0.5	
KIV				*e*SSS	SSS	19 01 23.1		
KIV				pmax	pmax			
	comp=Z,7.0nm,1.0s							
MAK	**Makhachkala**	**165.68**	**151**	*e*PKIKP	**PKPdf**	**18 29 43.0**	**-5.0**	
MAK				*e*		18 36 44.5		
MAK				*e*SSS	SSS	19 01 34.3		
MAK				pmax	pmax			
	comp=Z,239nm,1.8s							
KURK	**Kurchatov**	**166.03**	**257**	P	**PKPdf**	**18 29 55.3**	**+7.3**	
OBN	**Obninsk**	**168.46**	**86**↑	*e*PKIKP	**PKPdf**	**18 29 48.0**	**-1.6**	
OBN				*e*		18 34 50.2		
OBN				*e*SSS	SSS	19 02 19.3		
OBN				pmax	pmax			
	comp=Z,60nm,1.5s							
VSR	**Storozhevoye**	**168.47**	**107**	*e*PKIKP	**PKPdf**	**18 29 47.2**	**-2.6**	
VSR				pmax	pmax			
	comp=Z,10.0nm,1.4s							
VORR	**Voronezh**	**168.72**	**105**	*e*PKIKP	**PKPdf**	**18 29 49.7**	**-0.2**	
VORR				pmax	pmax			
	comp=Z,30nm,0.4s							
BRZS	**Berezniki**	**168.78**	**245**	*e*PKP2	**PKPab**	**18 30 59.6**	**-1.1**	
BRZS				*e*		18 34 49.7		
BRZS	**Berezniki**	**168.78**	**245**	*e*PKPab	**PKPab**	**18 30 59.7**	**-1.1**	
	baz=244							
BRZS				*e*PP	**PP**	**18 34 49.8**	**-0.9**	
	baz=244							
LPSR	**Galich'ya Gora**	**168.99**	**100**	*e*PKIKP	**PKPdf**	**18 29 50.1**	**0.0**	
LPSR				pmax	pmax			
	comp=Z,6.0nm,0.9s							
MOS	**Moscow**	**169.17**	**83**	*e*PKIKP	**PKPdf**	**18 29 47.2**	**-2.9**	
MOS				*e*		18 29 54.7		
KLMR	**Klimovskoe**	**169.65**	**54**	*e*PKIKP	**PKPdf**	**18 29 47.6**	**-2.6**	
KLMR				pmax	pmax			
	comp=Z,19nm,1.4s							
KLMR	**Klimovskoe**	**169.65**	**54**	*e*PKPdf	**PKPdf**	**18 29 47.7**	**-2.5**	
KLMR				AMP		18 29 55.8		
	comp=Z,19nm,1.4s							
KLMR				*e*SS	SS	18 55 37.9	-14	
KLMR				*e*SS	SS	18 55 37.9	-14	
KLMR				LQ	LQ	19 35 55.4		
KLMR				LQ	LQ	19 35 55.4		
KLMR				LR	LR	19 39 39.9		
KLMR				AMP		19 45 05.7		
	comp=Z,4μm,20.4s							
VRH	**Novokhopyorsk**	**169.82**	**111**	*e*PKIKP	**PKPdf**	**18 29 50.0**	**-0.6**	
VRH				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BRVK	**Borovoye**	**171.69**	**255**	P	**PKPdf**	**18 29 50.7**	**-0.9**	
ABKAR	**Akbulak array**	**173.06**	**197**		**PKPdf**	**18 29 49.2**	**-3.1**	
ABKAR				PKPab	**PKPab**	**18 31 17.3**	**-2.3**	
ARU	**Arti**	**178.94**	**299**	PKIKP	**PKPdf**	**18 29 57.0**	**+3.6**	
ARU				*i*		18 31 45.5		

IDC ***18*** *18:23:39.8±1.7, 11°.30N×92°.66E, h0km, mb4.0/5, mbtmp3.9/6, ML4.1/1, Error ellipse: s-maj=61.1km s-min=22.8km az=62.0*

NEIC ***18*** *18:23:56.3±0.6, 11°.9N±0°.1×93°.59E±0°.10, h108km±4km, mb4.6/11, Error ellipse: s-maj=14.5km s-min=13.9km az=183.0*

NDI ***18*** *18:23:58.8±3.1, 12°.01N×93°.79E, h97km±30km, ML3.6, mb4.6(NEIC)*

ISC 18 18:23:55.2±0.6**, 11°.92N**±0°.07×**93°.86E**±0°.06**, h100**km**, n33,** σ1°**91**/35**, mb4.3**/10**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.13**	**256**	*e*P	**Pn**	**18 24 19.0**	**+2.0**
PBA				*i* x	x	18 24 36.3	
PBA				*e*S	**Sn**	**18 24 36.4**	**+2.9**
PBA	**Port Blair**	**1.13**	**256**	*e*P	**Pn**	**18 24 19.0**	**+2.0**
PBA				*e*S	**Sn**	**18 24 36.3**	**+2.9**
PBA				IAML		18 24 38.0	
	comp=E,2μm,0.4s						
PBA				IAML		18 24 38.9	
	comp=N,2μm,0.4s						
DGPR	**DIGLIPUR**	**1.54**	**324**	*e*P	**Pn**	**18 24 23.8**	**+1.8**
DGPR				*i* x	x	18 24 42.4	
DGPR	**DIGLIPUR**	**1.54**	**324**	*e*P	**Pn**	**18 24 23.6**	**+1.7**
DGPR				*i* x	x	18 24 24.8	
DGPR				*e*S	**Sn**	**18 24 42.5**	**+0.2**
DGPR				IAML		18 24 46.1	
	comp=E,408nm,0.5s						
DGPR				IAML		18 24 48.5	
	comp=N,430nm,0.5s						
CMAR	**Chiang Mai Arr**	**8.14**	**36**	Pn	Pn	18 25 56.6	+6.0
	comp=N,0.6nm,0.3s,baz=232,slow=15,SNR=15						
	comp=N,1.7nm,0.6s						
CHTO	**Chiang Mai**	**8.42**	**35**	Pn	**Pn**	**18 25 55.2**	**+0.7**
CRAI	**Chiangrai**	**10.36**	**36**	Pn	**Pn**	**18 26 19.6**	**-1.3**
SHL	**Shillong**	**13.70**	**352**	*ex*	x	18 29 20.5	
KOHI	**KOHIMA**	**13.73**	**1**	*e*P	**Pn**	**18 27 08.7**	**+2.9**
PALK	**Pallekele**	**13.77**	**252**	Pn	**Pn**	**18 27 01.8**	**-4.5**
MYKOM	**Kota Tinggi**	**14.12**	**135**	Pn	**Pn**	**18 27 12.2**	**+1.4**
MOKO	**MOKOCHONG**	**14.34**	**2**	*e*P	**Pn**	**18 27 16.7**	**+3.1**
ZIRO	**ZIRO**	**15.52**	**360**	*ex*	x	18 30 04.6	
HYBB	**Hyderabad (bro**	**15.78**	**292**	*e*P	**P**	**18 27 31.6**	**-2.1**
HYBB				*e*pP	**pP**	**18 27 50.4**	**-1.9**
HYBB				*e*S	**Sn**	**18 30 28.8**	**+2.2**
MNAI	**Manna**	**18.53**	**150**		**P**	**18 28 05.5**	**+1.4**
ENH	**Enshi**	**23.31**	**36**	P	**P**	**18 28 55.9**	**+1.4**
ENH				IAmb	IAmb	18 29 11.6	
	comp=Z,27nm,1.1s						
JMU	**Jammu**	**27.04**	**323**	*e*P	**P**	**18 29 31.6**	**+3.5**
BJT	**Baijiatuan**	**34.23**	**31**	P	**P**	**18 30 30.4**	**-1.0**
BJT				IAmb	IAmb	18 30 34.6	
	comp=Z,13nm,1.3s						
MK31	**Makanchi Array**	**36.11**	**346**	P	**P**	**18 30 46.9**	**-0.6**
MAKZ	**Makanchi**	**36.19**	**346**	P	**P**	**18 30 47.8**	**-0.4**
MAKZ				IAmb	IAmb	18 30 47.9	
	comp=Z,12nm,1.2s						
ZALV	**Zalesovo Beam**	**42.53**	**352**	P	**P**	**18 31 39.7**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=161,slow=9.2,SNR=0.9						
	comp=Z,0.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**43.29**	**133**	P	**P**	**18 31 47.8**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=335,slow=9.3,SNR=10						
	comp=Z,1.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**43.29**	**133**	P	**P**	**18 31 48.2**	**+0.9**
KNRA	**Kununurra**	**44.11**	**128**	P	**P**	**18 31 54.6**	**+0.7**
ABKAR	**Akbulak array**	**46.59**	**330**	P	**P**	**18 32 12.1**	**-1.0**
WRA	**Warramunga Arr**	**50.90**	**128**	P	**P**	**18 32 46.3**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=302,slow=9.0,SNR=5.9						
	comp=Z,1.0nm,0.6s						
WB2	**Warramunga Arr**	**50.90**	**128**	P	**P**	**18 32 47.2**	**+0.7**
ASAR	**Alice Springs**	**52.77**	**132**	P	**P**	**18 33 00.6**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=315,slow=6.9,SNR=5.0						
	comp=Z,0.8nm,0.4s						
YAK	**Yakutsk**	**56.28**	**19**	P	**P**	**18 33 26.1**	**+1.0**
YAK				IAmb	IAmb	18 33 36.9	
	comp=Z,5.2nm,0.7s						
FOMA	**Nahampoana Res**	**58.60**	**231**	P	**P**	**18 33 40.9**	**-1.1**
BR131	**Keskin Array S**	**59.63**	**309**	P	**P**	**18 33 46.6**	**-2.5**
BR131				IAmb	IAmb	18 33 57.8	
	comp=Z,5.5nm,1.2s					

DZM IAmb IAmb 18 31 28.7
comp=Z,36nm,1.3s
BBOO Buckleboo 17.42 219 Pn **Pn 18 31 37.1 -1.5**
BBOO IAmb IAmb 18 31 43.0
comp=Z,70nm,1.5s
MTN Manton Dam 18.33 289 **Pn 18 31 48.5 -1.4**
KNRA Kununurra 19.57 278 P **P 18 32 03.5 -0.2**
KNRA IAmb IAmb 18 32 16.9
comp=Z,21nm,1.5s
FORT Forrest 21.82 235 P **P 18 32 27.7 -0.3**
FITZ Fitzroy Crossi 22.05 270 P **P 18 32 29.7 -0.8**
comp=Z,1.5nm,0.8s,baz=115,slow=10,SNR=1.4
FITZ LR LR 18 40 00.1
comp=Z,882nm,21.0s,baz=327,slow=34
comp=Z,1.5nm,0.8s
FITZ Fitzroy Crossi 22.05 270 P **P 18 32 30.8 +0.3**
FITZ IAmb IAmb 18 32 34.9
comp=Z,8.6nm,1.2s
BATI Baumata 26.08 287 LR LR 18 44 09.1
comp=Z,569nm,19.5s,baz=324,slow=38

IDC 18 18:34:25.0±2.1, 8°21S×130°00E, h0km, mb3.5/1, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=72.5km s-min=29.9km az=78.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.71**	**203**	Pn	Pn	18 37 01.1	+1.4
	0.1nm,0.3s,baz=25,slow=13,SNR=1.3						
FITZ				Sn	Sn	18 38 58.3	-2.1
	0.2nm,0.3s,baz=172,slow=15,SNR=1.5						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**12.40**	**161**	Pn	Pn	18 37 21.3	-1.7
	0.6nm,0.7s,baz=338,slow=14,SNR=1.0						
WRA				Sn	Sn	18 39 33.3	-8.7
	0.2nm,0.3s,baz=312,slow=14,SNR=4.7						
ASAR	**Alice Springs**	**15.82**	**167**	Pn	Pn	18 38 09.9	+0.5
	0.8nm,0.7s,baz=346,slow=12,SNR=1.6						
MKAR	**Makanchi Array**	**69.23**	**327**	P	P	18 45 33.8	0.0
	0.3nm,0.6s,baz=127,slow=7.2,SNR=5.1						
	0.3nm,0.6s						

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*ISU **18** 18:37:41.40°16N×72°58E, h15km*
*KRNET **18** 18:37:41.4±0.1, 40°15N×72°53E, h17km, mb2.5*
ISC 18 18:37:40.1±1.9, 40°15N±0°05×72°57E±0°05, h9km±16km, n9, σ1°17/17, 3C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.41**	**23**	⇑*i*P	**Pb**	**18 37 49.8**	**+0.2**
	baz=27						
OHH				⇑*i*S	**Sb**	**18 37 55.9**	**0.0**
	baz=27						
OHH	**Osh**	**0.41**	**23**	P	**Pb**	**18 37 49.7**	**+0.2**
OHH				S	**Sb**	**18 37 55.8**	**-0.1**
TSTA	**Tashata**	**0.43**	**350**	P	**Pb**	**18 37 50.2**	**+0.2**
TSTA				S	**Sb**	**18 37 56.8**	**+0.2**
DRK	**Karamyk**	**0.90**	**222**	⇓*i*P	**Pb**	**18 37 57.8**	**-0.2**
	baz=21						
DRK				⇓*i*S	**Sb**	**18 38 09.7**	**-0.4**
	baz=21						
MINT	**Mingtut**	**1.26**	**285**	S	**Sg**	**18 38 23.4**	**+2.7**
TRKS	**Terek-Say**	**1.76**	**322**	⇓*e*P	**Pb**	**18 38 12.1**	**-0.5**
	baz=22						
TRKS				⇓*i*S	**Sn**	**18 38 34.4**	**+1.0**
	baz=22						
ARLS	**Aral**	**2.16**	**37**	⇓*e*P	**Pb**	**18 38 19.7**	**+0.2**
	baz=38						
ARLS				⇓*i*S	**Sb**	**18 38 47.8**	**+1.3**
	baz=38						
UCH	**Uchtor**	**2.54**	**35**	⇓*i*P	**Pb**	**18 38 25.2**	**-0.9**
	baz=35						
UCH				⇓*i*S	**Sb**	**18 38 57.0**	**-0.6**
	baz=35						
KK31	**Karatay Array**	**3.33**	**333**	Pn	**Pg**	**18 38 42.7**	**-1.3**
	0.4nm,0.2s,baz=145,slow=17,SNR=23						
KK31				⇑Sn	**Sb**	**18 39 17.9**	**-2.1**
	0.6nm,0.3s,baz=152,slow=23,SNR=4.0						

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*IDC **18** 18:40:57.0±0.9, 30°04S×28°68E, h0km, mb3.9/5, mbtmp4.1/11, ML4.1/5, Error ellipse: s-maj=24.2km s-min=14.4km az=53.0*
*PRE **18** 18:40:58.0±3.8, 30°16S×28°65E, h5km, ML4.1, Fault plane solution: NP1:φs191.97000°, δ54.00000°, λ-90.00000°.*
*NEIC **18** 18:40:59.2±2.2, 30°11S±0°06×28°58E±0°09, h10km±1km, mb4.5/7, Error ellipse: s-maj=16.4km s-min=4.0km az=124.0*
*BUL **18** 18:41:08.0±6.7, 29°43S×28°60E, h0km±218km, MD4.4*
*EAF **18** 18:41:09.8±10.0, 27°88S×21°89E, h10km±344km, MD4.0*
ISC 18 18:40:57.5±0.5, 30°04S±0°03×28°61E±0°03, h8km, n83, α2°29/130, mb4.1/7, 11C-10D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSTD	**Kokstad**	**0.84**	**134**	ASPG		18 41 12.3	
	comp=Z,247nm,0.3s						
KSTD				⇑*i*P	**Pg**	**18 41 12.7**	**-1.0**
KSTD				ATPG		18 41 13.4	
	comp=Z,852nm,0.3s						
KSTD				ASSG		18 41 21.7	
	comp=Z,12μm,0.3s						
KSTD				*e*S	**Sg**	**18 41 22.1**	**-2.6**
KSTD				ATSG		18 41 22.7	
	comp=Z,46μm,0.3s						
KSTD				IAML		18 41 30.8	
	comp=Z,2μm,0.4s						
SNKL	**Senekal, Frees**	**1.90**	**337**	ASPG		18 41 33.7	
	comp=Z,407nm,0.2s						
SNKL				⇑*i*P	**Pg**	**18 41 34.1**	**+0.1**
SNKL				ATPG		18 41 35.9	
	comp=Z,1μm,0.2s						
SNKL				ASSG		18 41 59.0	
	comp=Z,21μm,0.3s						
SNKL				*e*S	**Sg**	**18 41 59.4**	**+0.8**
SNKL				ATSG		18 41 59.9	
	comp=Z,57μm,0.3s						
SNKL				IAML		18 42 03.4	
	comp=Z,2μm,0.6s						
NWCL	**Newcastle**	**2.55**	**26**	ASPG		18 41 43.0	
	comp=Z,278nm,0.3s						
NWCL				⇓*i*P	**Pb**	**18 41 43.4**	**-0.2**
NWCL				ATPG		18 41 45.4	
	comp=Z,1μm,0.3s						
NWCL				ASSG		18 42 15.1	
	comp=Z,841nm,0.3s						
NWCL				*e*S	**Sb**	**18 42 15.5**	**+0.2**
NWCL				ATSG		18 42 16.6	
	comp=Z,3μm,0.3s						
NWCL				IAML		18 42 24.9	
	comp=Z,2μm,0.6s						
HVD	**Gariep Dam**	**2.75**	**257**	ASPG		18 41 44.1	
	comp=Z,47nm,0.3s						
HVD				⇓*i*P	**Pn**	**18 41 44.5**	**+2.4**
HVD				ATPG		18 41 45.7	
	comp=Z,128nm,0.4s						
HVD				ASSG		18 42 16.9	
	comp=Z,1μm,0.3s						
HVD				*e*S	**Sn**	**18 42 17.2**	**+1.7**
HVD				ATSG		18 42 17.3	
	comp=Z,5μm,0.3s						
HVD				IAML		18 42 32.5	
	comp=Z,1μm,0.6s						
BOSA	**Boshof**	**3.25**	**295**	Pn	**Pn**	**18 41 51.1**	**+2.1**
	comp=Z,4.4nm,0.3s,baz=120,slow=11,SNR=169						
BOSA				Sn	**Sn**	**18 42 31.3**	**+3.4**
	comp=Z,62nm,0.3s,baz=86,slow=10,SNR=6.7						
BOSA				Lg	Lg	18 42 42.8	
	comp=Z,102nm,0.3s,baz=211,slow=20,SNR=14						
	comp=Z,13nm,0.2s						
BOSA	**Boshof**	**3.25**	**295**	Pn	**Pn**	**18 41 50.8**	**+1.8**
BOSA	**Boshof**	**3.25**	**295**	ASPG		18 41 50.7	
	comp=Z,322nm,0.2s						
BOSA				⇓*i*P	**Pn**	**18 41 51.1**	**+2.1**
BOSA				ATPG		18 41 53.0	
	comp=Z,534nm,0.2s						
BOSA				ASSG		18 42 31.0	
	comp=Z,5μm,0.3s						
BOSA				*e*S	**Sn**	**18 42 31.4**	**+3.4**
BOSA				ATSG		18 42 32.3	
	comp=Z,13μm,0.3s						
BOSA				IAML		18 42 48.3	
	comp=Z,422nm,0.3s						
BOSA	**Boshof**	**3.25**	**295**	*i*P	**Pb**	**18 41 56.4**	**+0.8**
BOSA				*i*S	**Sb**	**18 42 33.6**	**-1.8**
BOSA	**Boshof**	**3.25**	**295**	*i*P	**Pb**	**18 41 56.4**	**+0.8**
BOSA				*i*S	**Sb**	**18 42 33.6**	**-1.8**
PRYS	**Parys**	**3.29**	**340**	ASPG		18 41 52.4	
	comp=Z,36nm,0.3s						
PRYS				⇓*i*P	**Pn**	**18 41 52.8**	**+3.3**
PRYS				ATPG		18 41 54.5	
	comp=Z,176nm,0.3s						
PRYS				ASSG		18 42 33.6	
	comp=Z,689nm,0.3s						
PRYS				*e*S	**Sb**	**18 42 34.0**	**-2.4**
PRYS				ATSG		18 42 34.6	
	comp=Z,2μm,0.3s						
PRYS				IAML		18 42 50.8	
	comp=Z,708nm,0.4s						
SOE	**Somerset East**	**3.73**	**224**	Pn	**Pn**	**18 41 56.5**	**+1.0**
SOE	**Somerset East**	**3.73**	**224**	ASPG		18 41 56.6	
	comp=Z,115nm,0.3s						
SOE				*e*P	**Pn**	**18 41 57.0**	**+1.5**
SOE				ATPG		18 41 57.9	
	comp=Z,291nm,0.3s						
SOE				ASSG		18 42 38.4	
	comp=Z,794nm,0.3s						
SOE				*e*S	**Sn**	**18 42 38.8**	**-0.8**
SOE				ATSG		18 42 40.3	
	comp=Z,2μm,0.3s						
SOE				IAML		18 43 01.5	
	comp=Z,1μm,0.7s						
WDLM	**Western Deep L**	**3.75**	**343**	ASPG		18 41 59.9	
	comp=Z,116nm,0.3s						
WDLM				*e*P	**Pb**	**18 42 00.3**	**-3.8**
WDLM				ATPG		18 42 01.5	
	comp=Z,374nm,0.3s						
WDLM				ASSG		18 42 42.2	
	comp=Z,2μm,0.3s						
WDLM				*e*S	**Sn**	**18 42 42.6**	**+2.4**
WDLM				ATSG		18 42 44.5	
	comp=Z,4μm,0.3s						
WDLM				IAML		18 43 05.7	
	comp=Z,668nm,0.3s						
POGA	**Pongola**	**3.82**	**46**	Pn	**Pn**	**18 41 58.6**	**+2.0**
POGA				Sn	**Sn**	**18 42 43.0**	**+1.2**
POGA	**Pongola**	**3.82**	**46**	ASPG		18 41 59.2	
	comp=Z,51nm,0.3s						
POGA				*e*P	**Pn**	**18 41 59.6**	**+2.9**
POGA				ATPG		18 42 01.4	
	comp=Z,208nm,0.3s						
POGA				ASSG		18 42 43.8	
	comp=Z,2μm,0.3s						
POGA				*e*S	**Sn**	**18 42 44.2**	**+2.4**
POGA				ATSG		18 42 45.6	
	comp=Z,6μm,0.3s						
POGA				IAML		18 43 03.7	
	comp=Z,826nm,0.4s						
SWZ	**Schweizer**	**4.05**	**314**	ASPG		18 42 02.6	
	comp=Z,198nm,0.3s						
SWZ				*e*P	**Pn**	**18 42 03.0**	**+3.0**
SWZ				ATPG		18 42 03.7	
	comp=Z,607nm,0.3s						
SWZ				ASSG		18 42 48.9	
	comp=Z,954nm,0.3s						
SWZ				*e*S	**Sn**	**18 42 49.3**	**+1.7**
SWZ				ATSG		18 42 50.3	
	comp=Z,3μm,0.4s						
SWZ				IAML		18 43 18.0	
	comp=Z,492nm,0.5s						
GRAF	**Camdeboo Natio**	**4.18**	**237**	ASPG		18 42 02.6	
	comp=Z,20nm,0.3s						
GRAF				⇑*i*P	**Pn**	**18 42 03.0**	**+1.4**
GRAF				ATPG		18 42 04.8	
	comp=Z,56nm,0.3s						
GRAF				ASSG		18 42 49.8	
	comp=Z,359nm,0.3s						
GRAF				*e*S	**Sn**	**18 42 50.2**	**-0.5**
GRAF				ATSG		18 42 50.3	
	comp=Z,918nm,0.3s						
GRAF				IAML		18 43 15.0	
	comp=Z,1μm,0.5s						
HRAO	**HartRAO**	**4.21**	**349**	ASPG		18 42 05.3	
	comp=Z,27nm,0.3s						
HRAO				⇓*i*P	**Pn**	**18 42 05.7**	**+3.5**
HRAO				ATPG		18 42 07.1	
	comp=Z,77nm,0.4s						
HRAO				ASSG		18 42 55.1	
	comp=Z,569nm,0.3s						
HRAO				ATSG		18 42 55.2	
	comp=Z,1μm,0.3s						
HRAO				*e*S	**Sn**	**18 42 55.5**	**+3.9**
CRLN	**Carolina, Mapu**	**4.21**	**18**	ASPG		18 42 05.7	
	comp=Z,37nm,0.3s						
CRLN				*e*P	**Pn**	**18 42 06.0**	**+3.8**
CRLN				ATPG		18 42 07.9	
	comp=Z,99nm,0.3s						
CRLN				ASSG		18 42 54.1	
	comp=Z,719nm,0.3s						
CRLN				*e*S	**Sn**	**18 42 54.5**	**+2.7**
CRLN				ATSG		18 42 55.4	
	comp=Z,1μm,0.4s						
CRLN				IAML		18 43 10.2	
	comp=Z,251nm,0.4s						
SLR	**Silverton**	**4.29**	**356**	ASPG		18 42 06.7	
	comp=Z,108nm,0.3s						
SLR				⇑*i*P	**Pn**	**18 42 07.0**	**+3.7**
SLR				ATPG		18 42 08.9	
	comp=Z,279nm,0.3s						
SLR				ASSG		18 42 56.1	
	comp=Z,1μm,0.3s						
SLR				*e*S	**Sn**	**18 42 56.5**	**+2.8**
SLR				ATSG		18 42 58.0	
	comp=Z,4μm,0.4s						
SLR				IAML		18 43 18.0	
	comp=Z,417nm,0.5s						
HAGI	**HAGI**	**4.52**	**31**	ASPG		18 42 11.4	
	comp=Z,39nm,0.3s						
HAGI				*e*P	Pn	18 42 11.8	+5.4
HAGI				ATPG		18 42 12.1	
	comp=Z,156nm,0.3s						
HAGI				ASSG		18 43 02.4	
	comp=Z,62nm,0.3s						
HAGI				*e*S	**Sn**	**18 43 02.8**	**+3.5**
HAGI				ATSG		18 43 03.4	
	comp=Z,158nm,0.3s						
HAGI				IAML		18 43 26.1	
	comp=Z,545nm,0.7s						
BFON	**Badsfontein, M**	**4.58**	**246**	ASPG		18 42 08.0	
	comp=Z,20nm,0.3s						
BFON				⇓*i*P	**Pn**	**18 42 08.4**	**+1.2**
BFON				ATPG		18 42 10.2	
	comp=Z,49nm,0.3s						
BFON				ASSG		18 42 59.2	
	comp=Z,292nm,0.3s						
BFON				*e*S	**Sn**	**18 42 59.6**	**-1.1**
BFON				ATSG		18 43 00.9	
	comp=Z,844nm,0.4s						
BFON				IAML		18 43 27.1	
	comp=Z,734nm,0.4s						
ROOI	**Rooidraai Farm**	**4.97**	**239**	ASPG		18 42 13.2	
	comp=Z,34nm,0.3s						
ROOI				⇑*i*P	**Pn**	**18 42 13.7**	**+1.0**
ROOI				ATPG		18 42 14.7	
	comp=Z,91nm,0.3s						
ROOI				ASSG		18 43 08.8	
	comp=Z,428nm,0.3s						
ROOI				*e*S	**Sn**	**18 43 09.2**	**-1.2**
ROOI				ATSG		18 43 10.4	
	comp=Z,1μm,0.3s						
ROOI				IAML		18 43 36.2	
	comp=Z,531nm,1.0s						
PKA	**Prieska**	**5.10**	**273**	ASPG		18 42 14.6	
	comp=Z,7.0nm,0.2s						
PKA				⇓*i*P	**Pn**	**18 42 15.0**	**+0.7**
PKA				ATPG		18 42 16.7	
	comp=Z,21nm,0.3s						
PKA				ASSG		18 43 10.9	
	comp=Z,203nm,0.3s						
PKA				ATSG		18 43 11.2	
	comp=Z,641nm,0.3s						
PKA				*e*S	**Sn**	**18 43 11.3**	**-2.1**
PKA				IAML		18 43 54.7	
	comp=Z,260nm,0.6s						
BRAK	**Brakfontein**	**5.21**	**249**	ASPG		18 42 16.9	
	comp=Z,15nm,0.3s						
BRAK				⇑*i*P	**Pn**	**18 42 17.2**	**+1.4**
BRAK				ATPG		18 42 18.9	
	comp=Z,52nm,0.3s						
BRAK				ASSG		18 43 14.3	
	comp=Z,15nm,0.3s						
BRAK				*e*S	**Sn**	**18 43 14.7**	**-1.5**
BRAK				IAML		18 43 46.5	
	comp=Z,515nm,0.5s						
ROSN	**Rosenhof**	**5.33**	**219**	ASPG		18 42 16.7	
	comp=Z,252nm,0.3s						
ROSN				*e*P	**Pn**	**18 42 17.1**	**-0.2**
ROSN				ATPG		18 42 18.9	
	comp=Z,803nm,0.3s						
ROSN				ASSG		18 43 17.2	
	comp=Z,2μm,0.3s						
ROSN				*e*S	**Sn**	**18 43 17.6**	**-1.3**
ROSN				ATSG		18 43 17.7	
	comp=Z,5μm,0.3s						
ROSN				IAML		18 43 44.8	
	comp=Z,621nm,0.4s						
LBTB	**Lobatse**	**5.67**	**331**	Pn	**Pn**	**18 42 25.1**	**+2.9**
	comp=Z,13nm,0.3s,baz=147,slow=10,SNR=142						
LBTB				Sn	**Sn**	**18 43 26.9**	**-0.7**
	comp=Z,107nm,0.3s,baz=323,slow=14,SNR=16						
LBTB				Lg	Lg	18 43 56.4	
	comp=Z,50nm,0.3s,baz=58,slow=20,SNR=19						
	comp=Z,33nm,0.4s						
LBTB	**Lobatse**	**5.67**	**331**	Pn	**Pn**	**18 42 25.0**	**+2.8**
LBTB				Sn	**Sn**	**18 43 26.7**	**-0.9**
LBTB	**Lobatse**	**5.67**	**331**	ASPG		18 42 24.6	
	comp=Z,1μm,0.3s						
LBTB				⇓*i*P	**Pn**	**18 42 25.0**	**+2.8**
LBTB				ATPG		18 42 26.9	
	comp=Z,4μm,0.3s						
LBTB				ASSG		18 43 27.5	
	comp=Z,8μm,0.3s						
LBTB				*e*S	**Sn**	**18 43 27.9**	**+0.3**
LBTB				ATSG		18 43 28.4	
	comp=Z,22μm,0.3s						
LBTB				IAML		18 44 05.9	
	comp=Z,302nm,0.5s						
LBTB	**Lobatse**	**5.67**	**331**	*i*P	**Pn**	**18 42 25.1**	**+2.9**
LBTB	**Lobatse**	**5.67**	**331**	*i*P	**Pn**	**18 42 25.1**	**+2.9**
GRAN	**Grantham**	**5.96**	**246**	ASPG		18 42 26.4	
	comp=Z,21nm,0.3s						
GRAN				⇑*i*P	**Pn**	**18 42 26.8**	**+0.7**
GRAN				ATPG		18 42 27.8	
	comp=Z,54nm,0.3s						
GRAN				ASSG		18 43 33.6	
	comp=Z,148nm,0.3s						
GRAN				*e*S	**Sn**	**18 43 34.0**	**-0.7**
GRAN				ATSG		18 43 34.6	
	comp=Z,438nm,0.3s						
GRAN				IAML		18 44 09.3	
	comp=Z,414nm,0.4s						
FRAZ	**Fraserburg**	**6.46**	**251**	ASPG		18 42 34.0	
	comp=Z,14nm,0.3s						
FRAZ				⇑*i*P	**Pn**	**18 42 34.4**	**+1.3**
FRAZ				ATPG		18 42 36.1	
	comp=Z,46nm,0.3s						
FRAZ				ASSG		18 43 46.0	
	comp=Z,14nm,0.3s						
FRAZ				*e*S	**Sn**	**18 43 46.4**	**-0.8**
FRAZ				IAML		18 44 24.2	
	comp=Z,239nm,0.6s						
MERW	**Merweville**	**6.61**	**245**	ASPG		18 42 35.2	
	comp=Z,21nm,0.3s						
MERW				*e*P	**Pn**	**18 42 35.6**	**+0.6**
MERW				ATPG		18 42 37.5	
	comp=Z,66nm,0.3s						
MERW				ASSG		18 43 49.6	
	comp=Z,292nm,0.3s						
MERW				*e*S	**Sn**	**18 43 50.0**	**-0.6**
MERW				ATSG		18 43 50.7	
	comp=Z,810nm,0.3s						
MERW				IAML		18 44 24.4	
	comp=Z,305nm,0.5s						
UPI	**Upington**	**6.64**	**283**	ASPG		18 42 37.1	
	comp=Z,130nm,0.2s						
UPI				⇑*i*P	**Pn**	**18 42 37.5**	**+2.0**
UPI				ATPG		18 42 38.5	
	comp=Z,459nm,0.3s						
UPI				ASSG		18 43 48.7	
	comp=Z,2μm,0.3s						
UPI				*e*S	**Sn**	**18 43 49.1**	**-2.4**
UPI				ATSG		18 43 49.3	
	comp=Z,3μm,0.3s						
UPI				IAML		18 44 34.6	
	comp=Z,90nm,0.6s						
KEIM	**Keimoes**	**6.80**	**279**	ASPG		18 42 38.0	
	comp=Z,5.0nm,0.2s						
KEIM				*e*P	**Pn**	**18 42 38.4**	**+0.8**
KEIM				ATPG		18 42 39.9	
	comp=Z,15nm,0.3s						
KEIM				ASSG		18 43 53.4	
	comp=Z,152nm,0.3s						
KEIM				*e*S	**Sn**	**18 43 53.8**	**-1.5**
KEIM				ATSG		18 43 54.2	
	comp=Z,467nm,0.3s						
KEIM				IAML		18 44 48.6	
	comp=Z,183nm,0.6s						
MOPA	**Mopani**	**6.95**	**22**	ASPG		18 42 40.3	
	comp=Z,7.3nm,0.3s						
MOPA				⇑*i*P	**Pn**	**18 42 40.7**	**+0.9**
MOPA				ATPG		18 42 42.5	
	comp=Z,24nm,0.4s						
MOPA				ASSG		18 43 56.2	
	comp=Z,81nm,0.3s						
MOPA				*e*S	**Sn**	**18 43 56.6**	**-2.5**
MOPA				ATSG		18 43 57.1	
	comp=Z,229nm,0.4s						
MOPA				IAML		18 44 54.5	
	comp=Z,133nm,0.5s						
SUR	**Sutherland**	**7.08**	**249**	Pn	**Pn**	**18 42 42.3**	**+0.7**
	comp=Z,4.3nm,0.3s,baz=109,slow=17,SNR=57						
SUR				Sn	**Sn**	**18 44 00.4**	**-1.9**
	comp=Z,25nm,0.3s,baz=132,slow=23,SNR=8.1						
SUR				Lg	Lg	18 44 33.8	
	comp=Z,36nm,0.3s,baz=9.1,slow=16,SNR=9.4						
	comp=Z,14nm,0.3s						
SUR	**Sutherland**	**7.08**	**249**	Sn	**Sn**	**18 44 00.6**	**-1.7**
SUR	**Sutherland**	**7.08**	**249**	ASPG		18 42 42.3	
	comp=Z,181nm,0.3s						
SUR				⇑*i*P	**Pn**	**18 42 42.7**	**+1.2**
SUR				ATPG		18 42 43.9	
	comp=Z,348nm,0.4s						
SUR				ASSG		18 44 01.3	
	comp=Z,2μm,0.3s						
SUR				*e*S	**Sn**	**18 44 01.7**	**-0.6**
SUR				ATSG		18 44 03.4	
	comp=Z,5μm,0.3s						
SUR				IAML		18 44 54.5	
	comp=Z,235nm,0.7s						
AUGR	**Augrabies**	**7.36**	**279**	*e*P	**Pn**	**18 42 48.1**	**+2.7**
AUGR				*e*S	**Sn**	**18 44 08.8**	**-0.3**
AUGR				IAML		18 45 01.5	
	comp=Z,239nm,0.5s						
MATJ	**Matjiesfontein**	**7.56**	**243**	*e*P	**Pn**	**18 42 48.6**	**+0.4**
MATJ				*e*S	**Sn**	**18 44 13.0**	**-1.2**
MATJ				IAML		18 45 06.3	
	comp=Z,410nm,0.7s						
CVNA	**Calvinia**	**7.75**	**257**	⇓*i*P	**Pn**	**18 42 51.5**	**+0.7**
CVNA				*e*S	**Sn**	**18 44 16.6**	**-2.1**
CVNA				IAML		18 45 20.6	
	comp=Z,216nm,0.6s						
MUSN	**Musina, Limpop**	**7.80**	**9**	*e*P	**Pn**	**18 42 54.5**	**+3.1**
MUSN				*e*S	**Sn**	**18 44 21.7**	**+1.8**
MUSN				IAML		18 45 09.2	
	comp=Z,186nm,0.6s						
MUSN	**Musina, Limpop**	**7.80**	**9**	*i*P	**Pn**	**18 42 52.8**	**+1.4**
MUSN				*i*S	**Sn**	**18 44 13.4**	**-6.5**
MUSN	**Musina, Limpop**	**7.80**	**9**	*i*P	**Pn**	**18 42 52.8**	**+1.4**
MUSN				*i*S	**Sn**	**18 44 13.4**	**-6.5**
ELIM	**Elim**	**8.77**	**236**	*e*P	**Pn**	**18 43 04.2**	**-0.5**
ELIM				*e*S	**Sn**	**18 44 39.8**	**-3.9**
ELIM				IAML		18 45 48.4	
	comp=Z,92nm,0.8s						
MATP	**Matopo**	**9.57**	**359**	Pn	**Pn**	**18 43 17.8**	**+2.0**
	comp=Z,1.9nm,0.3s,baz=180,slow=12,SNR=31						
MATP				Sn	**Sn**	**18 44 59.9**	**-3.8**
	comp=Z,6.2nm,0.3s,baz=244,slow=9.5,SNR=5.7						
MATP				Lg	Lg	18 45 54.4	
	comp=Z,8.2nm,0.3s,baz=267,slow=22,SNR=6.4						
	comp=Z,19nm,0.3s						
MATP	**Matopo**	**9.57**	**359**	⇓*i*P	**Pn**	**18 43 18.0**	**+2.3**
MATP				*e*S	**Sn**	**18 45 03.3**	**-0.4**
MATP				IAML		18 46 07.8	
	comp=Z,187nm,0.6s						
MATP	**Matopo**	**9.57**	**359**	*i*P	**Pn**	**18 43 17.9**	**+2.2**

MATP				*i* S		**Sn**	**18 44 58.1**	**-5.5**
MATP	**Matopo**	**9.57**	**359**	*i* P		**Pn**	**18 43 17.9**	**+2.2**
MATP				*i* S		**Sn**	**18 44 58.1**	**-5.5**
KOMG	**Komaggas**	**9.66**	**269**	*e*P		Pn	18 43 23.8	+6.9
KOMG				*e*S		**Sn**	**18 45 07.0**	**+1.4**
KOMG				IAML			18 46 05.5	
	comp=Z,58nm,0.4s							
BLWY	**Bulawayo**	**9.85**	**0**	*e*P		**Pn**	**18 43 21.2**	**+1.5**
BLWY				*e*S		**Sn**	**18 45 11.0**	**+0.4**
BLWY				IAML			18 46 14.9	
	comp=Z,388nm,0.7s							
BLWY	**Bulawayo**	**9.85**	**0**	*i* P		**Pn**	**18 43 21.7**	**+2.0**
BLWY	**Bulawayo**	**9.85**	**0**	*i* P		**Pn**	**18 43 21.7**	**+2.0**
LSZ	**Lusaka**	**14.70**	**358**	Pn		**Pn**	**18 44 25.1**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=180,slow=12,SNR=7.8							
LSZ				Sn		Sn	18 46 59.9	-9.2
	comp=Z,1.0nm,0.3s,baz=259,slow=4.8,SNR=5.5							
LSZ				Lg		Lg	18 48 35.7	
	comp=Z,0.3nm,0.3s,baz=73,slow=20,SNR=6.7							
	comp=Z,1.9nm,0.4s							
LSZ	**Lusaka**	**14.70**	**358**	Pn		**Pn**	**18 44 24.8**	**-1.1**
LSZ	**Lusaka**	**14.70**	**358**	*i* P		**Pn**	**18 44 28.1**	**+2.2**
LSZ				*i* S		**Sn**	**18 47 02.7**	**-6.4**
LSZ	**Lusaka**	**14.70**	**358**	*i* P		**Pn**	**18 44 28.1**	**+2.2**
LSZ				*i* S		**Sn**	**18 47 02.7**	**-6.4**
TSUM	**Tsumeb**	**14.71**	**315**	Pn		**Pn**	**18 44 25.6**	**-0.5**
	comp=Z,4.1nm,0.6s,baz=141,slow=15,SNR=7.9							
TSUM				Sn		Sn	18 46 58.5	-11
	comp=Z,0.7nm,0.3s,baz=72,slow=20,SNR=1.7							
TSUM				Lg		Lg	18 48 41.1	
	comp=Z,0.6nm,0.3s,baz=59,slow=23,SNR=4.0							
TSUM	**Tsumeb**	**14.71**	**315**	Pn		**Pn**	**18 44 25.9**	**-0.3**
TSUM	**Tsumeb**	**14.71**	**315**	*e*P		**P**	**18 44 30.5**	**-1.9**
TSUM				*e*S		**Sn**	**18 47 12.6**	**+3.1**
TSUM				IAML			18 49 02.8	
	comp=Z,16nm,0.8s							
TROLL	**Troll, Antarti**	**44.32**	**191**	P		P	18 49 14.5	+6.7
SNAA	**Sanae**	**45.05**	**193**	P		**P**	**18 49 15.3**	**+1.8**
SNAA	**Sanae**	**45.05**	**193**	P		**P**	**18 49 13.4**	**-0.1**
	comp=Z,1.4nm,1.0s,baz=50,slow=7.6,SNR=5.2							
	comp=Z,1.4nm,1.0s							
SNAA	**Sanae**	**45.05**	**193**	P		**P**	**18 49 14.1**	**+0.6**
SNAA				IAmb		IAmb	18 49 20.9	
	comp=Z,3.8nm,1.1s							
SNAA	**Sanae**	**45.05**	**193**	*e*P		**P**	**18 49 14.9**	**+1.5**
DBIC	**Dimbokro**	**48.62**	**313**	P		**P**	**18 49 41.5**	**-0.4**
DBIC				IAmb		IAmb	18 50 19.0	
	comp=Z,11nm,1.2s							
TOA0	**Torodi Ar. Sit**	**50.16**	**325**	P		**P**	**18 49 54.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**50.16**	**325**	P		**P**	**18 49 54.5**	**+0.8**
	comp=Z,2.2nm,0.5s,baz=151,slow=7.1,SNR=34							
	comp=Z,2.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**50.16**	**325**	P		**P**	**18 49 54.0**	**+0.3**
TORD				IAmb		IAmb	18 50 01.5	
	comp=Z,13nm,1.4s							
QSPA	**South Pole Qui**	**60.16**	**180**	P		**P**	**18 51 07.3**	**+1.8**
	comp=Z,0.9nm,1.1s,baz=210,slow=8.1,SNR=1.6							
	comp=Z,0.9nm,1.1s							
QSPA	**South Pole Qui**	**60.16**	**180**	P		**P**	**18 51 05.4**	**-0.2**
QSPA				IAmb		IAmb	18 51 17.7	
	comp=Z,3.5nm,1.4s							
SMAI	**San Martin Ant**	**64.57**	**204**	P		**P**	**18 51 36.2**	**+1.4**
SMAI				IAmb		IAmb	18 51 42.5	
	comp=Z,1.8nm,0.7s							
ESDC	**Sonseca Array**	**75.68**	**335**	P		**P**	**18 52 43.4**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=160,slow=5.5,SNR=5.9							
	comp=Z,0.8nm,0.9s							
BURAR	**Bucovina Array**	**77.35**	**358**	P		**P**	**18 52 54.4**	**+1.8**
ASAR	**Alice Springs**	**90.63**	**118**	P		**P**	**18 54 01.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=238,slow=4.4,SNR=7.9							
	comp=Z,0.5nm,0.7s							
R40A	**Maddies Statio**	**131.11**	**296**			**PKiKP**	**19 00 11.4**	**+0.5**
PDAR	**Pinedale Array**	**144.36**	**303**	PKP	PKPbc		19 00 33.2	+0.3
	comp=Z,0.3nm,0.3s,baz=88,slow=4.1,SNR=5.2							
MLY	**Manley**	**144.98**	**360**			**PKPdf**	**19 00 35.3**	**+0.6**
ILAR	**Eielson Array**	**145.13**	**357**	PKPbc		**PKPbc**	**19 00 34.5**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=337,slow=4.1,SNR=12							
ILAR	**Eielson Array**	**145.13**	**357**			**PKPdf**	**19 00 34.8**	**-0.1**
NVAR	**Mina Array Bea**	**151.51**	**296**	PKPbc		**PKiKP**	**19 00 54.1**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=65,slow=4.3,SNR=2.7							

IPEC ***18*** *18:44:35.9±0.2,50°.06N×18°.54E, h1km±2km, ML2.4/4, Error ellipse: s-maj=2.0km s-min=1.1km az=164.0*
PRU ***18*** *18:44:36.4±0.0,50°.03N×18°.49E, h0km*
IDC ***18*** *18:44:36.6±1.9,49°.94N×18°.47E, h0km, mbtmp3.2/3, ML2.4/3, Error ellipse: s-maj=36.5km s-min=11.5km az=136.0*
ISC 18 18:44:35.5±0.7,**50°.08N**±0°.03×**18°.51E**±0°.02,**h0km**,**n34**, σ0**s86**/59,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.21**	**270**	*e*PG		**Pg**	**18 44 41.6**	**+2.2**
RAC				*e*SG		**Sg**	**18 44 45.4**	**+3.3**
OKC	**Ostrava-Krasne**	**0.34**	**224**	*e*PG		**Pg**	**18 44 42.3**	**+0.3**
OKC				*e*SG		**Sg**	**18 44 46.4**	**0.0**
	comp=Z,219nm,1.1s							
MORC	**Moravsky Berou**	**0.70**	**244**	*e*Pg		**Pg**	**18 44 49.2**	**+0.4**
	baz=66							
MORC				*e*Sg		**Sg**	**18 44 58.0**	**+0.1**
	96nm,0.6s,baz=66							
MORC	**Moravsky Berou**	**0.70**	**244**	*e*PG		**Pg**	**18 44 49.3**	**+0.4**
MORC				*e*SG		**Sg**	**18 44 58.0**	**+0.1**
OJC	**Ojcow**	**0.84**	**80**	*e*Pg		**Pg**	**18 44 51.6**	**+0.1**
OJC				*e*Sg		**Sg**	**18 45 03.2**	**+0.8**
KRLC	**Kraliky**	**1.12**	**270**	*e*PG		**Pg**	**18 44 56.7**	**-0.2**
KRLC				*e*SG		**Sg**	**18 45 11.5**	**+0.2**
	comp=Z,43nm,0.6s							
LANS	**Liptovska Anna**	**1.12**	**146**	*e*PG		**Pg**	**18 44 57.3**	**+0.4**
LANS				*e*SG		**Sb**	**18 45 13.3**	**+0.4**
LANS				*e*LG		Lg	18 45 16.1	
NIE	**Niedzica**	**1.33**	**119**	*e*Pg		**Pn**	**18 45 01.6**	**+0.2**
NIE				*e*Sg		**Sn**	**18 45 20.4**	**+0.4**
JAVC	**Velka Javorina**	**1.34**	**205**	*e*Pg		**Pg**	**18 45 01.1**	**-0.1**
	baz=25							
JAVC	**Velka Javorina**	**1.34**	**205**	*e*PG		**Pg**	**18 45 01.1**	**-0.1**
DPC	**Dobruska-Polom**	**1.43**	**282**	*e*PG		**Pb**	**18 45 02.9**	**-0.2**
DPC				*e*SG		**Sb**	**18 45 21.8**	**-0.1**
	comp=Z,27nm,0.4s							
VRAC	**Vranov**	**1.47**	**239**	Pg		**Pn**	**18 45 02.9**	**-0.3**
	3.0nm,0.3s,baz=61,slow=16,SNR=38							
VRAC				Lg		Lg	18 45 21.7	
	8.0nm,0.3s,baz=143,slow=14,SNR=26							
VRAC	**Vranov**	**1.47**	**239**	*e*Pg		**Pn**	**18 45 02.9**	**-0.3**
	baz=59							
VRAC				*e*Sg		**Sg**	**18 45 21.9**	**-0.7**
	39nm,0.4s,baz=59							
VRAC	**Vranov**	**1.47**	**239**	*e*PG		**Pn**	**18 45 03.0**	**-0.3**
VRAC				*e*SG		**Sg**	**18 45 21.9**	**-0.7**
OSTC	**Ostas**	**1.55**	**289**	*e*PG		**Pn**	**18 45 04.2**	**-0.1**
OSTC				*e*SG		**Sn**	**18 45 26.1**	**+1.0**
	comp=Z,51nm,1.1s							
VYHS	**Vyhne**	**1.60**	**172**	*e*PG		**Pn**	**18 45 04.7**	**-0.4**
VYHS				*e*SG		**Sn**	**18 45 26.3**	**-0.2**
VYHS				*e*LG		Lg	18 45 35.7	
KSP	**Ksiaz**	**1.61**	**299**	*e*Pg		**Pn**	**18 45 05.2**	**0.0**
KSP				*e*Sg		**Sg**	**18 45 27.8**	**+0.5**
CHVC	**Chvalec**	**1.66**	**289**	*e*SG		**Sg**	**18 45 29.8**	**+1.2**
UPC	**Upice**	**1.66**	**286**	*e*PG		**Pg**	**18 45 07.0**	**-0.3**
UPC				*e*SG		**Sg**	**18 45 28.7**	**-0.1**
	comp=Z,20nm,0.5s							
KRUC	**Moravsky**	**1.72**	**234**	*e*Pn		**Pn**	**18 45 06.9**	**+0.3**
	baz=54							
KRUC				*e*Sg		**Sn**	**18 45 29.3**	**+0.1**
	25nm,0.5s,baz=54							
KRUC	**Moravsky**	**1.72**	**234**	*e*PN		**Pn**	**18 45 06.9**	**+0.3**
KRUC				*e*SG		**Sn**	**18 45 29.3**	**+0.1**
MODS	**Modra-Piesok**	**1.89**	**206**	*e*PG		**Pn**	**18 45 09.2**	**+0.1**
MODS				*e*SG		**Sn**	**18 45 34.1**	**+0.5**
TREC	**Trest**	**2.12**	**249**	*e*SG		**Sb**	**18 45 41.8**	**+0.2**
	comp=Z,9.6nm,0.3s							
CRVS	**Cervenica-Dubn**	**2.26**	**120**	*e*PN		**Pb**	**18 45 18.0**	**+0.9**
PRU	**Pruhonice**	**2.56**	**269**	*e*PG		**Pg**	**18 45 23.9**	**-0.7**
PRU				*e*SG		**Sg**	**18 45 56.8**	**-1.0**
	comp=Z,6.5nm,0.4s							
PVCC	**Panska Ves**	**2.57**	**282**	*e*PG		**Pb**	**18 45 23.3**	**+0.9**
PVCC				*e*SG		**Sg**	**18 45 57.2**	**-0.8**
	comp=Z,16nm,0.5s							
KOLS	**Kolonicke sedl**	**2.71**	**114**	*e*PG		**Pg**	**18 45 27.3**	**0.0**
CKRC	**Cesky Krumlov**	**3.02**	**247**	*e*PG		**Pb**	**18 45 30.7**	**+0.6**
CKRC				*e*SG		**Sg**	**18 46 11.3**	**-1.2**
BRG	**Berggiesshubel**	**3.02**	**287**	Pg		**Pg**	**18 45 32.6**	**-0.9**
BRG				Sg		**Sg**	**18 46 11.8**	**-0.9**
BRG				Amp			18 46 14.9	
	comp=Z,9.4nm,0.5s							
KHC	**Kasperske Hory**	**3.35**	**255**	*e*PN		**Pn**	**18 45 28.5**	**-0.6**
KHC				*e*PG		**Pb**	**18 45 37.5**	**+1.8**
KHC				*e*SG		**Sg**	**18 46 21.8**	**-1.2**
	comp=Z,8.5nm,0.5s							
GERES	**GERESS Array B**	**3.37**	**250**	Pn		**Pn**	**18 45 29.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=64,slow=14,SNR=3.1							
GERES				Lg		Lg	18 46 20.9	
	comp=Z,1.6nm,0.3s,baz=68,slow=29,SNR=8.9							
	comp=Z,0.6nm,0.8s							
CLL	**Collm**	**3.71**	**291**	*e*Pg		**Pg**	**18 45 46.0**	**-0.6**
CLL				*e*Sg		**Sg**	**18 46 36.0**	**+1.3**
	comp=Z,8.0nm,0.7s							
FINES	**FINESS Array B**	**12.15**	**17**	Pn		**Pn**	**18 47 27.3**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=203,slow=10,SNR=6.6							
	comp=Z,1.8nm,0.9s							
ARCES	**ARCESS Array B**	**19.80**	**7**	P		**Pn**	**18 49 08.5**	**-0.1**
	baz=196,slow=12,SNR=1.8							
	comp=Z,0.9nm,0.9s							

IDC ***18*** *18:49:40.9±0.4,55°.74S×123°.41W, h0km, mb4.6/15, mbtmp4.6/15, MS5.1/48, Error ellipse: s-maj=19.5km s-min=14.0km az=149.0*
NEIC ***18*** *18:49:44.0±1.4,55°.7S±0°.1×123°.3W±0°.2, h10km±1km, mb5.1/52, Ms_20 5.4/41, Mwc5.5(GCMT), Error ellipse: s-maj=19.8km s-min=17.2km az=324.0*
GCMT ***18*** *18:49:45.0±0.1,55°.95S±0°.01×123°.48W±0°.01, h12km, MW5.5/145, Moment Tensor Solution. s73,c115; s145,c253; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr=0.03±.04; Mθθ 1.12±.03; Mφφ -1.09±.03; Mrθ -0.42±.09; Mrφ 1.68±.03; Mθφ -0.26±.09; Best double couple: Mo2.06700×10^17 NP1:φ=196.00000°, δ82.00000°, λ170.00000°. NP2:φ=287.00000°, δ80.00000°, λ9.00000°. Principal axes: T 2.1380, Plg13.0000°, Azm152.0000°; N -0.1420, Plg77.0000°, Azm335.0000°; P -1.9960, Plg1.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 18:49:43.1±0.3,**55°.79S**±0°.09×**123°.36W**±0°.08,**h10km**, **n238**,σ1**s18**/167,**mb5.0**/36,**MS5.3**/70,**4D**,**Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.64**	**132**	P		**P**	**18 55 48.2**	**0.0**
	2.8nm,0.7s,baz=242,slow=10,SNR=5.4							
PMSA				LR		LR	19 04 22.4	
	comp=Z,4μm,19.3s,baz=268,slow=30							
	2.8nm,0.7s							
PMSA	**Palmer Station**	**29.64**	**132**	P		**P**	**18 55 48.0**	**-0.2**
GO09	**Cerro Castillo**	**30.09**	**103**	P		**P**	**18 55 52.1**	**-0.2**
RPN	**Rapa Nui**	**30.38**	**25**	LR		LR	19 03 35.8	
	comp=Z,551nm,20.9s,baz=27,slow=28							
USHA	**Ushuaia**	**30.59**	**111**	LR		LR	19 05 02.0	
	comp=Z,5μm,19.7s,baz=238,slow=30							
VNDA	**Vanda**	**33.10**	**203**	P		**P**	**18 56 18.9**	**+0.4**
	2.5nm,1.0s,baz=92,slow=7.4,SNR=8.8							
VNDA				LR		LR	19 07 57.5	
	comp=Z,2μm,18.2s,baz=90,slow=33							
	2.5nm,1.0s							
VNDA	**Vanda**	**33.10**	**203**	P		**P**	**18 56 19.6**	**+1.1**
QSPA	**South Pole Qui**	**34.40**	**180**	P		**P**	**18 56 30.3**	**+0.2**
	6.6nm,0.9s,baz=108,slow=2.6,SNR=17							
QSPA				LR		LR	19 08 23.8	
	comp=Z,2μm,19.8s,baz=85,slow=33							
	6.6nm,0.9s							
QSPA	**South Pole Qui**	**34.40**	**180**	P		**P**	**18 56 30.2**	**+0.2**
QSPA				IAmb		IAmb	18 56 55.3	
	comp=Z,54nm,1.6s							
LR03	**Panguipulli**	**37.00**	**86**	P		**P**	**18 56 53.5**	**+1.1**
PLCA	**Paso Flores**	**37.27**	**89**	LR		LR	19 08 20.9	
	comp=Z,2μm,20.8s,baz=231,slow=30							
H03S2	**Juan Fernandez**	**37.53**	**73**	T		T	19 36 48.4	
	baz=218							
H03S1	**Juan Fernandez**	**37.53**	**73**	T		T	19 36 54.9	
	baz=218							
H03S3	**Juan Fernandez**	**37.54**	**73**	T		T	19 36 46.8	
	baz=218							
TBI	**Tubui**	**37.68**	**319**	*e*LR		LR	19 07 16.9	
	comp=Z,4μm,22.5s							
TBI				*e*LR		LR	19 07 17.3	
	comp=Z,87μm,23.5s							
TBI	**Tubuai**	**37.68**	**319**	*e*T		T	19 36 41.3	
	comp=Z,33nm,0.3s							
H03N3	**Juan Fernandez**	**37.82**	**73**	T		T	19 37 01.7	
	baz=220,slow=72,SNR=521							
H03N2	**Juan Fernandez**	**37.83**	**73**	T		T	19 37 00.7	
	baz=220,slow=72,SNR=743							
H03N1	**Juan Fernandez**	**37.84**	**73**	T		T	19 37 01.2	
	baz=220,slow=72,SNR=292							
ODZ	**Otahua Downs**	**41.85**	**256**	IAMs_20		IAMs_20	19 10 19.7	
	comp=Z,5μm,21.0s							
SNZO	**South Karori**	**42.02**	**263**	IAMs_20		IAMs_20	19 10 45.5	
	comp=Z,3μm,18.0s							
RPZ	**Rata Peaks**	**42.48**	**258**	LR		LR	19 11 55.5	
	comp=Z,4μm,18.4s,baz=134,slow=31							
RPZ	**Rata Peaks**	**42.48**	**258**	IAMs_20		IAMs_20	19 11 54.4	
	comp=Z,5μm,18.0s							
LBZ	**Lake Benmore**	**42.52**	**257**	IAMs_20		IAMs_20	19 11 00.6	
	comp=Z,6μm,20.0s							
VA06	**Catapilco**	**42.67**	**79**	P		**P**	**18 57 39.9**	**+0.2**
VA06				IAmb		IAmb	18 58 52.3	
	comp=Z,75nm,1.6s							
URZ	**Urewera**	**42.75**	**268**	LR		LR	19 11 47.8	
	comp=Z,2μm,18.4s,baz=139,slow=31							
NNZ	**Nelson**	**42.83**	**262**	IAMs_20		IAMs_20	19 10 57.8	
	comp=Z,3μm,19.0s							
WKZ	**Wanaka**	**42.88**	**255**	IAMs_20		IAMs_20	19 11 22.9	
	comp=Z,5μm,20.0s							
PPT2	**Papeete2**	**43.01**	**322**	*e*LR		LR	19 09 45.8	
	comp=Z,4μm,24.5s							
PPT2				*e*LR		LR	19 09 47.2	
	comp=Z,5μm,22.8s							
PPT	**Papeete**	**43.03**	**322**	LR		LR	19 11 35.4	
	comp=Z,3μm,18.0s,baz=160,slow=31							
FOZ	**Fox Glacier**	**43.28**	**257**	IAMs_20		IAMs_20	19 12 13.6	
	comp=Z,6μm,19.0s							
RAR	**Rarotonga**	**43.86**	**307**	LR		LR	19 10 39.0	
	comp=Z,1μm,20.3s,baz=145,slow=29							
VAH	**Vaihoa**	**44.55**	**326**	*e*T		T	19 45 19.4	
	comp=Z,71nm,0.3s							
PMOR	**Pomariorio Ree**	**44.86**	**325**	*e*T		T	19 45 55.7	
	comp=Z,15nm,0.3s							
VNA3	**Neumayer Olymp**	**44.98**	**155**	P		**P**	**18 57 55.2**	**-2.7**
VNA1	**Neumayer--Stat**	**45.72**	**155**	P		**P**	**18 58 04.0**	**+0.3**
VNA2	**Neumayer--Watz**	**45.73**	**156**	P		**P**	**18 58 03.1**	**-0.7**
	baz=231,slow=5.9							
SNAA	**Sanae**	**46.21**	**158**	P		**P**	**18 58 07.4**	**-0.2**
SNAA	**Sanae**	**46.21**	**158**	LR		LR	19 17 38.0	
	comp=Z,3μm,18.1s,baz=242,slow=36							
SNAA	**Sanae**	**46.21**	**158**	P		**P**	**18 58 07.9**	**+0.3**
SNAA				IAmb		IAmb	18 58 26.1	
	comp=Z,56nm,1.9s							
SNAA				IAMs_20		IAMs_20	19 18 11.1	
	comp=Z,4μm,18.0s							
RAO	**Raoul Island**	**46.57**	**281**	LR		LR	19 14 54.8	
	comp=Z,434nm,18.2s,baz=136,slow=32							
TROLL	**Troll, Antarti**	**47.05**	**160**	P		**P**	**18 58 14.0**	**-0.3**
AC02	**Maricunga**	**48.28**	**76**	P		**P**	**18 58 25.2**	**+0.4**
TAOE	**Nuku Hiva Isla**	**48.65**	**338**	*e*LR		LR	19 12 20.8	
	comp=Z,5μm,24.7s							
TAOE	**Nuku Hiva Isla**	**48.65**	**338**	P		**P**	**18 58 25.6**	**-1.6**
PB06	**IPOC Station P**	**51.33**	**73**	P		**P**	**18 58 48.1**	**+0.5**
PB06				IAmb		IAmb	18 58 59.9	
	comp=Z,30nm,1.1s							
CASY	**Casey**	**51.68**	**205**	P		**P**	**18 58 50.6**	**+1.1**
LVC	**Limon Verde**	**51.77**	**73**	P		**P**	**18 58 51.2**	**+0.1**
	comp=Z,4.7nm,0.6s,baz=3.3,slow=2.7,SNR=4.8							
LVC				LR		LR	19 14 52.6	
	comp=Z,2μm,21.5s,baz=224,slow=29							
	comp=Z,4.7nm,0.6s							
ITQB	**Itaqui**	**53.09**	**90**	P		**P**	**18 59 00.2**	**-0.2**
ITQB				IAmb		IAmb	18 59 18.3	
	comp=Z,48nm,1.3s							
PLTB	**Pedras Altas**	**53.22**	**94**	P		**P**	**18 58 59.9**	**-1.5**
PLTB				IAmb		IAmb	18 59 15.4	
	comp=Z,33nm,1.5s							
PB16	**IPOC Station P**	**54.94**	**70**	P		**P**	**18 59 14.1**	**-0.7**
PB16				IAmb		IAmb	18 59 28.1	
	comp=Z,38nm,1.4s							
CPUP	**Villa Florida**	**55.25**	**86**	P		**P**	**18 59 14.8**	**-1.4**
	comp=Z,1.1nm,0.3s,baz=201,slow=8.7,SNR=3.6							
CPUP				LR		LR	19 19 58.1	
	comp=Z,3μm,18.0s,baz=227,slow=33							
	comp=Z,1.1nm,0.3s							
CPUP	**Villa Florida**	**55.25**	**86**	P		**P**	**18 59 15.9**	**-0.3**
CPUP				IAmb		IAmb	18 59 17.4	
	comp=Z,35nm,1.6s							
AFI	**Afiamalu**	**55.86**	**299**	P		**P**	**18 59 20.1**	**-0.7**
	comp=Z,21nm,0.8s,baz=13,slow=7.6,SNR=3.8							
AFI				LR		LR	19 19 36.1	
	comp=Z,415nm,18.1s,baz=128,slow=32							
	comp=Z,21nm,0.8s							
NNA	**Nana**	**56.59**	**58**	LR		LR	19 17 19.0	
	comp=Z,2μm,21.3s,baz=194,slow=29							
MAW	**Mawson**	**56.84**	**183**	P		**P**	**18 59 26.2**	**-0.8**
	comp=Z,5.6nm,1.0s,baz=179,slow=6.8,SNR=12							
MAW				LR		LR	19 22 23.4	
	comp=Z,3μm,20.1s,baz=164,slow=34							
	comp=Z,5.6nm,1.0s							
MAW	**Mawson**	**56.84**	**183**	P		**P**	**18 59 26.3**	**-0.7**
LPAZ	**La Paz**	**57.36**	**70**	P		**P**	**18 59 31.9**	**-0.2**
	comp=Z,9.7nm,1.1s,baz=165,slow=4.0,SNR=18							
LPAZ				LR		LR	19 18 22.6	
	comp=Z,1μm,18.6s,baz=212,slow=30							
	comp=Z,9.7nm,1.1s							
LPAZ	**La Paz**	**57.36**	**70**	P		**P**	**18 59 31.5**	**-0.6**
LPAZ				IAmb		IAmb	18 59 46.7	
	comp=Z,32nm,1.3s							
ATAH	**Atahualpa**	**60.10**	**54**	LR		LR	19 19 40.5	
	comp=Z,3μm,20.4s,baz=240,slow=30							
DZM	**Mont Dzumac**	**60.93**	**273**	LR		LR	19 20 59.6	
	comp=Z,2μm,20.5s,baz=146,slow=31							
DZM	**Mont Dzumac**	**60.93**	**273**	*e*LR		LR	19 18 01.0	
	comp=Z,3μm,25.4s							
SIV	**San Ignacio**	**61.41**	**76**	P		**P**	**18 59 58.0**	**-1.4**
	comp=Z,5.5nm,0.9s,baz=213,slow=4.9,SNR=15							
SIV				LR		LR	19 22 08.6	
	comp=Z,1μm,21.5s,baz=241,slow=32							
	comp=Z,5.5nm,0.9s							
PTLB	**Pontes e Lacer**	**62.92**	**77**	P		**P**	**19 00 09.5**	**0.0**
PTLB				IAmb		IAmb	19 00 22.5	
	comp=Z,8.3nm,1.0s							
BOSC	**San Juan Bosco**	**63.59**	**52**	P		**P**	**19 00 14.1**	**-0.1**
BOSC				IAmb		IAmb	19 00 17.3	
	comp=Z,12nm,0.8s							
ETMB	**Extrema**	**63.78**	**67**	P		**P**	**19 00 14.4**	**-0.8**
ETMB				IAmb		IAmb	19 00 17.3	
	comp=Z,17nm,1.4s							
VILB	**Vilhena**	**64.38**	**75**	P		**P**	**19 00 18.7**	**-0.5**
VILB				IAmb		IAmb	19 00 54.7	
	comp=Z,55nm,1.7s							
PORT	**Chimborazo Vol**	**64.97**	**51**	P		**P**	**19 00 24.6**	**+0.9**
PORT				IAmb		IAmb	19 00 53.9	
	comp=Z,26nm,1.3s							
SAML	**Samuel**	**66.11**	**70**	P		**P**	**19 00 29.4**	**-0.9**
SAML				IAmb		IAmb	19 00 51.9	
	comp=Z,26nm,1.6s							
PULU	**Pululahua**	**66.42**	**50**	P		**P**	**19 00 33.7**	**+0.9**
OTAV	**Otavalo**	**66.63**	**50**	P		**P**	**19 00 34.6**	**+0.4**
OTAV				IAmb		IAmb	19 00 56.1	
	comp=Z,26nm,1.4s							
STKA	**Stephens Creek**	**66.96**	**247**	LR		LR	19 24 46.3	
	comp=Z,2μm,18.3s,baz=147,slow=31							
BDFB	**Brasilia**	**68.98**	**87**	LR		LR	19 28 04.5	
	comp=Z,3μm,20.1s,baz=213,slow=33							
MACA	**Manacapuru-AM**	**72.30**	**69**	P		**P**	**19 01 09.1**	**+0.3**
MACA				IAmb		IAmb	19 03 44.4	
	comp=Z,27nm,0.4s							
ROSC	**El Rosal**	**72.55**	**52**	P		**P**	**19 01 10.3**	**-0.4**
	comp=Z,12nm,0.5s,baz=131,slow=18,SNR=2.1							
ROSC				LR		LR	19 27 58.1	
	comp=Z,2μm,18.2s,baz=232,slow=32							
	comp=Z,12nm,0.5s							
ROSC	**El Rosal**	**72.55**	**52**	P		**P**	**19 01 11.0**	**+0.4**
HDC	**Heredia**	**73.23**	**41**	IAMs_20		IAMs_20	19 25 36.7	
	comp=Z,2μm,19.0s							
CTA	**Charters Tower**	**73.85**	**258**	LR		LR	19 29 02.2	
	comp=Z,800nm,19.2s,baz=134,slow=32							
CTAO	**Charters Tower**	**73.85**	**258**	P	

	comp=Z,36nm,1.9s						
BELC	**Belle Mtn. Jos**	**89.65**	**6**	P	**P**	**19 02 42.5**	**+1.8**
	baz=184						
BFSC	**Mount Baldy Ra**	**89.80**	**5**	P	**P**	**19 02 43.5**	**+2.0**
	baz=183						
IRM	**Iron Mountain**	**89.86**	**7**	P	**P**	**19 02 44.0**	**+2.4**
	baz=185						
PDMCI	**Parker Dam,Lak**	**90.08**	**8**	P	**P**	**19 02 45.5**	**+3.0**
	baz=185						
ABTX	**Abilene, Hawle**	**90.36**	**20**	P	**P**	**19 02 46.2**	**+2.3**
	baz=193						
PKM	**Mcpherson Peak**	**90.37**	**3**	P	**P**	**19 02 45.7**	**+1.6**
	baz=182						
X16A	**Lo Mia Camp, P**	**90.42**	**10**	P	**P**	**19 02 46.4**	**+2.0**
X16A				IAmb	IAmb	19 02 58.4	
	comp=Z,12nm,1.5s						
EDW2	**Edwards Air Fo**	**90.42**	**4**	P	**P**	**19 02 46.1**	**+1.9**
	baz=183						
GMRC	**Granite Mounta**	**90.45**	**6**	P	**P**	**19 02 46.8**	**+2.3**
	baz=184						
HEC	**Hector,Ludlow**	**90.46**	**6**	P	**P**	**19 02 47.5**	**+3.1**
	baz=184						
X18A	**Snowflake**	**90.69**	**11**	P	**P**	**19 02 46.1**	**+0.5**
CCAC	**Calif City Air**	**90.69**	**4**	P	**P**	**19 02 47.4**	**+1.9**
GSC	**Goldstone, Bar**	**90.90**	**5**	P	**P**	**19 02 48.9**	**+2.4**
	baz=184						
TUQ	**Turquoise Moun**	**91.08**	**6**	P	**P**	**19 02 50.4**	**+3.0**
	baz=184						
ISA	**Isabella, Lake**	**91.18**	**4**	P	**P**	**19 02 49.0**	**+1.3**
ISA	**Isabella, Lake**	**91.18**	**4**	P	**P**	**19 02 50.3**	**+2.6**
	baz=183						
WUAZ	**Wupatki**	**91.52**	**10**	P	**P**	**19 02 51.2**	**+1.8**
WUAZ				IAmb	IAmb	19 03 11.2	
	comp=Z,18nm,1.7s						
ANMO	**Albuquerque**	**91.52**	**14**	LR	LR	19 36 00.0	
	comp=Z,428nm,18.3s,baz=220,slow=30						
ANMO	**Albuquerque**	**91.52**	**14**	P	**P**	**19 02 50.1**	**+0.6**
MPMC	**Manual Prospec**	**91.62**	**5**	P	**P**	**19 02 52.7**	**+2.8**
	baz=183						
BOSA	**Boshof**	**91.77**	**153**	LR	LR	19 41 33.6	
	comp=Z,1µm,18.6s,baz=194,slow=34						
FURC	**Furnace Creek,**	**92.06**	**5**	P	**P**	**19 02 53.5**	**+1.9**
	baz=184						
WCT	**Wildcat Mounta**	**92.39**	**5**	P	**P**	**19 02 54.7**	**+1.3**
WCT				IAmb	IAmb	19 03 06.1	
	comp=Z,8.2nm,1.4s						
NVAR	**Mina Array Bea**	**93.95**	**4**	P	**P**	**19 03 01.2**	**+0.5**
	comp=Z,1.6nm,1.1s,baz=166,slow=6.9,SNR=4.8						
NVAR				LR	LR	19 35 41.2	
	comp=Z,1µm,19.9s,baz=186,slow=29						
	comp=Z,1.6nm,1.1s						
R11A	**Troy Canyon, C**	**94.00**	**6**	P	**P**	**19 03 01.1**	**+0.2**
	baz=184						
BATI	**Baumata**	**94.11**	**245**	LR	LR	19 41 44.9	
	comp=Z,2µm,19.2s,baz=172,slow=33						
H11S2	**WAKE ISLAND Hy**	**94.37**	**297**	T	T	20 47 43.0	
	baz=148,slow=76						
H11S3	**WAKE ISLAND Hy**	**94.38**	**297**	T	T	20 47 48.7	
	baz=148,slow=76						
H11S1	**WAKE ISLAND Hy**	**94.39**	**297**	T	T	20 47 47.3	
	baz=148,slow=76						
LBTB	**Lobatse**	**95.28**	**152**	LR	LR	19 39 57.7	
	comp=Z,844nm,20.0s,baz=202,slow=32						
H11N3	**WAKE ISLAND Hy**	**95.30**	**297**	T	T	20 48 51.6	
	baz=147,slow=76						
H11N1	**WAKE ISLAND Hy**	**95.31**	**297**	T	T	20 48 56.3	
	baz=147,slow=76						
H11N2	**WAKE ISLAND Hy**	**95.32**	**297**	T	T	20 48 44.4	
	baz=147,slow=76						
NLU	**North Lily Min**	**95.86**	**9**	P	**P**	**19 03 11.0**	**+1.7**
ELK	**Elko**	**96.41**	**6**	LR	LR	19 39 06.7	
	comp=Z,670nm,18.4s,baz=195,slow=31						
TKL	**Tuckaleechee C**	**97.15**	**32**	LR	LR	19 39 55.4	
	comp=Z,506nm,20.4s,baz=188,slow=31						
YBH	**Yreka Blue Hor**	**97.15**	**0**	LR	LR	19 38 31.9	
	comp=Z,1µm,18.0s,baz=190,slow=30						
TSUM	**Tsumeb**	**98.32**	**143**	LR	LR	19 40 37.7	
	comp=Z,736nm,21.9s,baz=186,slow=31						
PDAR	**Pinedale Array**	**98.88**	**10**	LR	LR	19 40 01.7	
	comp=Z,991nm,18.8s,baz=213,slow=31						
KAPI	**Kappang**	**100.53**	**245**	IAMs_20	IAMs_20	19 44 12.5	
	comp=Z,1µm,20.0s						
CBN	**Corbin Frederi**	**101.48**	**35**	IAMs_20	IAMs_20	19 54 35.7	
	comp=Z,940nm,18.0s						
BRYW	**Bryant College**	**106.78**	**38**	IAMs_20	IAMs_20	19 45 09.2	
	comp=Z,1µm,20.0s						
TRY	**Troy**	**106.78**	**36**	IAMs_20	IAMs_20	19 44 18.0	
	comp=Z,1µm,20.0s						
WES	**Weston**	**107.27**	**38**	IAMs_20	IAMs_20	19 43 32.1	
	comp=Z,1µm,20.0s						
HNH	**Hanover**	**108.11**	**36**	IAMs_20	IAMs_20	19 42 17.1	
	comp=Z,956nm,19.0s						
HIN	**Hinchinbrook I**	**117.28**	**347**	IAMs_20	IAMs_20	19 45 09.4	
	comp=Z,2µm,20.0s						
GHO	**Glory Hole Cre**	**118.92**	**346**	IAMs_20	IAMs_20	19 47 09.8	
	comp=Z,1µm,22.0s						
TORD	**Torodi Ar. Bea**	**120.17**	**113**	PKP	**PKPdf**	**19 08 32.9**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=243,slow=6.3,SNR=3.2						
RND	**Reindeer**	**120.49**	**347**	IAMs_20	IAMs_20	19 53 42.2	
	comp=Z,1µm,18.0s						
KMBO	**Kilima Mbogo**	**121.11**	**157**	IAMs_20	IAMs_20	19 58 42.6	
	comp=Z,1µm,19.0s						
ILAR	**Eielson Array**	**121.57**	**348**	PKP	**PKPdf**	**19 08 34.1**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=195,slow=2.2,SNR=15						
ILAR	**Eielson Array**	**121.57**	**348**		**PKiKP**	**19 08 35.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**131.01**	**238**	PKP	**PKPdf**	**19 08 55.6**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=222,slow=1.2,SNR=4.7						
ESDC	**Sonseca Array**	**137.62**	**86**	PKP	**PKPdf**	**19 09 07.2**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=256,slow=1.2,SNR=6.4						
LSA	**Lhasa**	**144.27**	**238**	PKPdf	**PKPdf**	**19 09 21.1**	**+1.6**
JIRN	**Jiri**	**144.78**	**229**	*eP*	PKPbc	19 09 19.7	+0.5
	comp=Z,61nm,1.1s						
PKI	**Pulchoki**	**145.03**	**228**	*eP*	**PKPbc**	**19 09 20.2**	**+0.2**
	comp=Z,45nm,1.0s						
PKIN	**Phulchoki**	**145.04**	**228**	*eP*	**PKPbc**	**19 09 20.1**	**+0.2**
	comp=Z,40nm,1.1s						
GUN	**Gumba**	**145.13**	**229**	*eP*	**PKPab**	**19 09 20.9**	**+0.5**
	comp=Z,78nm,0.9s						
DMN	**Daman**	**145.19**	**228**	*eP*	**PKPbc**	**19 09 20.3**	**-0.1**
	comp=Z,135nm,1.0s						
GKN	**Gorkha**	**145.73**	**227**	*eP*	**PKPdf**	**19 09 21.8**	**+0.2**
	comp=Z,54nm,1.0s						
CLTB	**Caltabellotta**	**145.80**	**104**	PKPdf	**PKPab**	**19 09 23.1**	**+0.8**
SSB	**Saint Sauveur**	**146.04**	**86**	PKPdf	**PKPbc**	**19 09 22.6**	**+0.3**
DANN	**Dangsing**	**146.40**	**227**	*eP*	**PKPbc**	**19 09 24.1**	**-0.1**
	comp=Z,27nm,0.8s						
DAG	**Danmarks Havn**	**146.72**	**24**	*i* P	**PKPdf**	**19 09 22.0**	**+0.5**
RAYN	**Ar Rayn**	**146.74**	**161**	PKPbc	**PKPbc**	**19 09 25.8**	**+0.8**
TIXI	**Tiksi**	**146.86**	**327**		**PKPbc**	**19 09 24.2**	**+0.5**
BNI	**Bardonecchia**	**147.10**	**88**	PKPbc	**PKPbc**	**19 09 26.5**	**+1.0**
GTA	**Gaotai**	**147.24**	**258**	*e*PKPbc	**PKPbc**	**19 09 26.1**	**+0.1**
GTA				PP	PP	19 13 01.0	+9.1
CEL	**Celeste**	**147.75**	**106**	PKPbc	**PKPbc**	**19 09 28.1**	**+0.7**
ULN	**Ulaanbaatar**	**148.48**	**277**		**PKPbc**	**19 09 29.2**	**0.0**
DOU	**Dourbes**	**148.76**	**78**	*d*PKP	**PKPbc**	**19 09 30.3**	**+0.8**
SONM	**Songino Array**	**148.83**	**276**	PKPbc	**PKPbc**	**19 09 29.7**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=142,slow=2.2,SNR=15						
SONM	**Songino Array**	**148.83**	**276**		**PKPbc**	**19 09 30.1**	**+0.1**
TIP	**Timpagrande**	**148.88**	**105**		**PKPbc**	**19 09 29.9**	**-0.4**
BMRD	**Maredsous**	**148.96**	**78**	*d*PKP	**PKPbc**	**19 09 30.7**	**+0.7**
ECH	**Echery**	**149.20**	**83**		**PKPbc**	**19 09 30.6**	**-0.1**
NRCA	**Norcia**	**149.35**	**96**		**PKPab**	**19 09 35.7**	**-0.5**
MEM	**Membach**	**149.80**	**78**	*d*PKP	**PKiKP**	**19 09 33.8**	**+0.7**
BTNL	**Ternell**	**149.86**	**78**	*d*PKP	**PKiKP**	**19 09 34.3**	**+1.1**
TEOL	**Teolo**	**150.11**	**91**		**PKPbc**	**19 09 33.1**	**+0.1**
IDI	**Anoyia**	**150.17**	**120**		**PKPdf**	**19 09 28.5**	**-0.1**
DAVA	**Damuels**	**150.21**	**87**	*eP*	**PKiKP**	**19 09 34.3**	**+0.1**
	comp=Z,10nm,1.0s						
FETA	**Feichten**	**150.54**	**88**	*eP*	**PKPbc**	**19 09 34.2**	**0.0**
	comp=Z,10nm,0.9s,SNR=11						
RETA	**Reutte**	**150.82**	**87**	*eP*	**PKPbc**	**19 09 34.5**	**-0.2**
	comp=Z,8.0nm,1.1s						
SQTA	**Sankt Quirin**	**150.93**	**88**	*eP*	**PKiKP**	**19 09 35.8**	**+0.1**
	comp=Z,8.7nm,1.0s						
MOTA	**Moosalm**	**150.94**	**88**	*eP*	**PKPbc**	**19 09 35.7**	**+0.5**
	comp=Z,8.0nm,0.8s,SNR=5.3						
CIMO	**Cimolais**	**151.10**	**90**		**PKPbc**	**19 09 34.8**	**-0.6**
WTTA	**Wattenberg**	**151.19**	**88**	*eP*	**PKiKP**	**19 09 36.6**	**+0.3**
	comp=Z,12nm,1.1s						
WATA	**Walderalm**	**151.20**	**88**	*eP*	**PKiKP**	**19 09 36.4**	**+0.2**
	comp=Z,4.6nm,0.8s						
STAL	**STALIGIAL**	**151.23**	**91**		**PKPbc**	**19 09 34.7**	**-1.0**
ABTA	**Abfaltersbach**	**151.40**	**90**	*eP*	**PKPbc**	**19 09 36.5**	**+0.3**
	comp=Z,4.8nm,1.0s						
CLUD	**Cludinico**	**151.44**	**90**	PKPdf	**PKPdf**	**19 09 30.8**	**+0.8**
PRED	**Cave del Predi**	**151.81**	**91**		**PKPbc**	**19 09 36.6**	**-0.5**
KBA	**Koelnbreinsper**	**152.05**	**90**	*eP*	**PKiKP**	**19 09 41.1**	**+3.0**
	comp=Z,4.8nm,1.2s						
OBKA	**Obir**	**152.41**	**92**	*eP*	**PKPbc**	**19 09 38.9**	**+0.4**
	comp=Z,4.9nm,0.8s,SNR=6.1						
BIOA	**Bad Ischl, Aus**	**152.56**	**89**	*eP*	**PKiKP**	**19 09 39.4**	**+0.5**
	comp=Z,6.2nm,0.9s						
LIT	**Litokhoron**	**152.62**	**111**	PKPab	**PKPab**	**19 09 49.5**	**-0.2**
SOKA	**Soboth**	**152.78**	**92**	*eP*	**PKiKP**	**19 09 40.6**	**+1.1**
	comp=Z,8.5nm,1.6s						
MOA	**Mollin**	**153.00**	**89**	P	**PKiKP**	**19 09 40.2**	**+0.4**
	comp=Z,3.0nm,1.0s						
GERES	**GERESS Array B**	**153.21**	**87**	PKPbc	**PKPbc**	**19 09 38.8**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=222,slow=2.6,SNR=11						
GERES	**GERESS Array B**	**153.21**	**87**		**PKPdf**	**19 09 32.5**	**-0.2**
KHC	**Kasperske Hory**	**153.29**	**86**	*e*PKP	**PKPbc**	**19 09 40.6**	**+0.3**
KHC				*ex*	**PKPab**	**19 09 52.6**	**+0.2**
ARSA	**Arzberg**	**153.38**	**91**	*eP*	**PKiKP**	**19 09 42.4**	**+1.8**
	comp=Z,2.9nm,1.1s						
CKRC	**Cesky Krumlov**	**153.54**	**87**	*e*PKP	**PKPbc**	**19 09 41.2**	**+0.4**
CONA	**Conrad Observa**	**153.94**	**90**	*eP*	**PKPbc**	**19 09 40.3**	**-1.5**
	comp=Z,2.0nm,1.1s						
CLL	**Collm**	**154.03**	**81**	*e*PKPbc	**PKiKP**	**19 09 44.0**	**+2.2**
CLL				*ex*	**PKPab**	**19 09 53.0**	**-2.3**
VTS	**Vitosha**	**154.79**	**107**		**PKPbc**	**19 09 43.2**	**-0.7**
NIL	**Nilore**	**155.04**	**214**	PKPab	**PKPab**	**19 10 00.2**	**0.0**
DPC	**Dobruska-Polom**	**155.44**	**86**	*e*PKP	PKPab	19 09 49.0	-12
DPC				*ex*	**PKPab**	**19 10 01.4**	**-0.1**
KRLC	**Kraliky**	**155.57**	**87**	*e*PKP	PKPdf	19 09 44.5	+8.6
NOA	**NORSAR Array B**	**156.04**	**59**	PKPab	**PKPab**	**19 10 03.2**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=257,slow=4.3,SNR=3.6						
BRTR	**Keskin Array B**	**157.86**	**127**	PKP	**PKPdf**	**19 09 38.8**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=193,slow=5.9,SNR=2.2						
BRTR				PKPab	**PKPab**	**19 10 11.2**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=177,slow=8.4,SNR=4.2						
ARCES	**ARCESS Array B**	**160.48**	**33**	PKPab	**PKPab**	**19 10 20.5**	**-2.2**
	comp=Z,5.7nm,1.2s,baz=10,slow=5.6,SNR=3.2						
NRIK	**Noril'sk**	**160.64**	**327**	PKPab	**PKPab**	**19 10 21.8**	**-1.6**
	comp=Z,2.8nm,0.6s,baz=135,slow=2.9,SNR=2.0						
GAR	**Garm**	**160.88**	**214**		**PKPab**	**19 10 25.4**	**0.0**
MK31	**Makanchi Array**	**161.70**	**251**		**PKPab**	**19 10 28.1**	**-0.5**
MKAR	**Makanchi Array**	**161.70**	**251**	PKP	**PKPdf**	**19 09 43.4**	**+0.1**
	comp=Z,0.7nm,1.1s,baz=297,slow=0.6,SNR=2.4						
MKAR				PKPab	**PKPab**	**19 10 26.6**	**-2.0**
	comp=Z,2.0nm,0.9s,baz=132,slow=5.1,SNR=10						
MKAR				PP	**PP**	**19 14 12.0**	**-0.9**
	comp=Z,1.9nm,1.0s,baz=131,slow=7.9,SNR=7.5						
AKASG	**Malin Array Be**	**162.88**	**96**	PKP	**PKPdf**	**19 09 44.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=6.0,slow=0.6,SNR=5.3						
ZALV	**Zalesovo Beam**	**163.72**	**275**	PKPab	**PKPab**	**19 10 35.5**	**-1.8**
	comp=Z,2.2nm,0.9s,baz=122,slow=5.4,SNR=6.8						
ZALV	**Zalesovo Beam**	**163.72**	**275**		**PKPab**	**19 10 37.6**	**+0.3**

*IDC **18** 19:01:55.6±0.9, 33.°66S×178.°34W, h0km, mb4.5/6, mbtmp4.5/9, ML4.4/3, Error ellipse: s-maj=27.2km s-min=21.3km az=110.0*
*NEIC **18** 19:01:56.4±2.4, 34.°12S±0.°08×178.°16W±0.°05, h10km±2km, mb4.6/14, Error ellipse: s-maj=13.9km s-min=8.1km az=177.0*
*WEL **18** 19:01:59.2±0.6, 33.°5S±6.°×17.°9W±1.°4, h33km, M4.2/24, mB4.8/16, ML5.0/27, MLv4.7/24, Mw(mB)4.0/16, Error ellipse: s-maj=0.0km s-min=0.0km az=113.3*

ISC 18 19:01:56.3±0.7, 33.°56S±0.°05×178.°24W±0.°10, h10km, n99, σ2s22/121, mb4.6/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.29**	**4**	P	**Pn**	**19 02 58.3**	**-3.3**
GLKZ				S	**Sn**	**19 03 47.0**	**-4.8**
RAO	**Raoul Island**	**4.30**	**4**	Pn	**Pn**	**19 03 02.6**	**+0.8**
	38nm,0.3s,baz=107,slow=20,SNR=1.7						
RAO				Sn	**Sn**	**19 03 50.0**	**-2.0**
	78nm,0.3s,baz=90,slow=20,SNR=1.9						
	238nm,0.6s						
RAO	**Raoul Island**	**4.30**	**4**	Pn	**Pb**	**19 03 09.9**	**-2.1**
MXZ	**Matakaoa Point**	**4.89**	**214**	Pn	Pn	19 03 03.1	-6.7
MXZ	**Matakaoa Point**	**4.89**	**214**	P	**Pn**	**19 03 09.6**	**-0.2**
MXZ				S	**Sn**	**19 04 07.0**	**+0.6**
WMGZ	**Waiomatatini S**	**5.05**	**212**	P	**Pn**	**19 03 11.6**	**-0.4**
WMGZ				S	**Sn**	**19 04 11.0**	**+0.6**
PKGZ	**Pakihiroa**	**5.26**	**214**	P	**Pn**	**19 03 15.1**	**+0.1**
PKGZ				S	**Sn**	**19 04 16.4**	**+0.8**
HAZ	**Te Kaha**	**5.29**	**217**	P	**Pn**	**19 03 16.4**	**+1.0**
HAZ				S	**Sn**	**19 04 19.3**	**+2.8**
PUZ	**Puketiti**	**5.33**	**211**	P	**Pn**	**19 03 17.0**	**+1.1**
PUZ				S	**Sn**	**19 04 17.5**	**+0.2**
RUGZ	**Raukumara Rang**	**5.51**	**216**	P	**Pn**	**19 03 18.9**	**+0.4**
RUGZ				S	**Sn**	**19 04 23.3**	**+1.4**
TWGZ	**Tauwhareparae**	**5.54**	**213**	P	**Pn**	**19 03 20.6**	**+1.8**
TWGZ				S	**Sn**	**19 04 24.1**	**+1.6**
CNGZ	**Carnagh Statio**	**5.70**	**209**	P	**Pn**	**19 03 21.3**	**+0.3**
TKGZ	**Te Karaka**	**5.81**	**212**	P	**Pn**	**19 03 25.4**	**+3.0**
TKGZ				S	**Sn**	**19 04 29.5**	**+0.3**
MWZ	**Matawai**	**5.87**	**215**	P	**Pn**	**19 03 23.0**	**-0.4**
MWZ				S	**Sn**	**19 04 31.2**	**+0.4**
KUZ	**Kuaotunu**	**5.88**	**236**	P	**Pn**	**19 03 20.1**	**-3.4**
OPRZ	**Ohinepanea**	**6.02**	**223**	P	**Pn**	**19 03 28.4**	**+3.1**
OPRZ				S	**Sn**	**19 04 34.0**	**-0.3**
URZ	**Urewera**	**6.02**	**217**	Pn	**Pn**	**19 03 23.7**	**-1.6**
	6.4nm,0.3s,baz=68,slow=3.6,SNR=31						
URZ				Sn	**Sn**	**19 04 32.6**	**-1.7**
	12nm,0.3s,baz=150,slow=20,SNR=3.8						
	29nm,0.4s						
URZ	**Urewera**	**6.02**	**217**		**Pn**	**19 03 23.1**	**-2.3**
URZ	**Urewera**	**6.02**	**217**	P	**Pn**	**19 03 25.4**	**0.0**
URZ				S	**Sn**	**19 04 33.4**	**-0.9**
RIGZ	**Rimuhau**	**6.07**	**211**	P	**Pn**	**19 03 26.9**	**+0.8**
RIGZ				S	**Sn**	**19 04 35.8**	**+0.1**
PRGZ	**Paritu Road**	**6.20**	**209**	P	**Pn**	**19 03 28.0**	**+0.1**
MUGZ	**Murupara**	**6.36**	**218**	P	**Pn**	**19 03 30.2**	**+0.1**
MUGZ				S	**Sn**	**19 04 40.6**	**-2.1**
KNZ	**Kokohu**	**6.37**	**210**	P	**Pn**	**19 03 31.1**	**+0.9**
KNZ				S	**Sn**	**19 04 41.3**	**-1.7**
MHGZ	**Mahia Peninsul**	**6.39**	**208**	P	**Pn**	**19 03 32.1**	**+1.7**
MKAZ	**Moumakai**	**6.45**	**235**	P	**Pn**	**19 03 31.4**	**+0.1**
RAHZ	**Arahi**	**6.54**	**214**	P	**Pn**	**19 03 34.6**	**+2.0**
RAHZ				S	**Sn**	**19 04 47.3**	**0.0**
MTHZ	**Maungataniwha**	**6.61**	**216**	P	**Pn**	**19 03 34.1**	**+0.6**
MTHZ				S	**Sn**	**19 04 47.9**	**-1.1**
NMHZ	**Naumai**	**6.82**	**214**	P	**Pn**	**19 03 38.5**	**+2.0**
NMHZ				S	**Sn**	**19 04 54.3**	**+0.1**
ARHZ	**Aropaoanui**	**6.87**	**213**	P	**Pn**	**19 03 37.9**	**+0.9**
ARHZ				S	**Sn**	**19 04 55.5**	**+0.3**
OUZ	**Omahuta**	**6.95**	**254**	Pn	**Pn**	**19 03 42.0**	**+3.8**
BKZ	**Black Stump Fm**	**7.03**	**216**		**Pn**	**19 03 36.8**	**-2.4**
BKZ	**Black Stump Fm**	**7.03**	**216**	P	**Pn**	**19 03 40.5**	**+1.2**
BKZ				S	**Sn**	**19 04 57.2**	**-2.0**
KWHZ	**Kaweka Forest**	**7.26**	**215**	P	**Pn**	**19 03 40.6**	**-1.9**
KWHZ				S	**Sn**	**19 05 03.5**	**-1.5**
KAHZ	**Kahuranaki**	**7.36**	**211**	P	**Pn**	**19 03 40.6**	**-3.2**
KAHZ				S	**Sn**	**19 05 04.4**	**-2.9**
TMVZ	**Te Maari**	**7.39**	**220**	P	**Pn**	**19 03 45.5**	**+1.2**
TMVZ				S	**Sn**	**19 05 05.5**	**-2.7**
NTVZ	**North Tongarir**	**7.39**	**220**	P	**Pn**	**19 03 45.4**	**+1.0**
NTVZ				S	**Sn**	**19 05 07.2**	**-1.2**
OTVZ	**Oturere**	**7.45**	**220**	P	**Pn**	**19 03 46.3**	**+1.2**
NNVZ	**North Ngauruho**	**7.45**	**220**	P	**Pn**	**19 03 47.3**	**+2.1**
KRHZ	**Kereru**	**7.46**	**214**	P	**Pn**	**19 03 45.2**	**0.0**
KRHZ				S	**Sn**	**19 05 05.6**	**-4.2**
HIZ	**Hauiti**	**7.46**	**227**	Pn	**Pn**	**19 03 41.7**	**-3.5**
SNVZ	**South Ngauruho**	**7.47**	**220**	P	**Pn**	**19 03 47.4**	**+1.9**
BHHZ	**Black Hill Sta**	**7.49**	**216**	P	**Pn**	**19 03 47.3**	**+1.7**
MOVZ	**Moawhango**	**7.58**	**218**	P	**Pn**	**19 03 48.0**	**+1.2**
WNVZ	**Wahianoa**	**7.60**	**219**	P	**Pn**	**19 03 48.8**	**+1.6**
BFZ	**Birch Farm**	**8.36**	**210**	Pn	**Pn**	**19 03 56.8**	**-0.8**
BFZ	**Birch Farm**	**8.36**	**210**	P	**Pn**	**19 03 55.9**	**-1.6**
PLWZ	**Palliser**	**9.52**	**211**	Sn	**Sn**	**19 05 52.2**	**-8.1**
SNZO	**South Karori**	**9.55**	**214**	Sn	**Sn**	**19 05 53.7**	**-7.5**
TUWZ	**Tuamarina**	**10.01**	**216**	Sn	Sn	19 06 01.1	-11
THZ	**Tophouse**	**10.78**	**218**	Pn	**Pn**	**19 04 27.2**	**-3.5**
THZ					**Sn**	**19 06 24.1**	**-7.4**
KHZ	**Kahutara**	**10.96**	**214**	Pn	Pn	19 04 27.9	-5.2
OXZ	**Oxford**	**12.37**	**215**	Pn	Sn	19 04 44.9	-7.5
OXZ					Sn	19 06 56.3	-14
MQZ	**McQueen's Vall**	**12.37**	**212**	Pn	**Pn**	**19 04 49.2**	**-3.2**
RPZ	**Rata Peaks**	**13.13**	**216**	Pn	**Pn**	**19 04 59.8**	**-3.0**
	1.4nm,0.3s,baz=47,slow=3.1,SNR=6.0						
RPZ				Sn	Sn	19 07 15.3	-14
	0.7nm,0.3s,baz=5.2,slow=20,SNR=5.7						
	3.9nm,0.4s						
RPZ	**Rata Peaks**	**13.13**	**216**	Pn	**Pn**	**19 04 58.6**	**-4.2**
LBZ	**Lake Benmore**	**14.05**	**216**	Pn	**Pn**	**19 05 12.1**	**-3.3**
ODZ	**Otahua Downs**	**14.32**	**214**	Pn	Pn	19 05 14.4	-4.6
WKZ	**Wanaka**	**14.95**	**217**	Pn	**Pn**	**19 05 24.9**	**-2.8**
MLZ	**Mavora Lakes**	**15.79**	**218**	Pn	**Pn**	**19 05 35.4**	**-3.3**
MLZ				IAmb	IAmb	19 05 53.9	
	comp=Z,36nm,1.4s						
WHZ	**Wether Hill Ro**	**16.24**	**217**		**Pn**	**19 05 40.8**	**-3.6**
DZM	**Mont Dzumac**	**17.71**	**306**	Pn	**P**	**19 06 06.2**	**+2.1**
DZM				IAmb	IAmb	19 06 11.2	
	comp=Z,30nm,1.0s						
EIDS	**Eidsvold**	**27.85**	**279**	P	**P**	**19 07 48.9**	**+2.8**
EIDS				IAmb	IAmb	19 08 16.8	
	comp=Z,14nm,1.1s						
CTA	**Charters Tower**	**34.23**	**284**	P	**P**	**19 08 43.5**	**+1.0**
	comp=Z,4.8nm,0.6s,baz=107,slow=9.4,SNR=5.9						
	comp=Z,4.8nm,0.6s						
CTAO	**Charters Tower**	**34.23**	**284**	P	**P**	**19 08 43.4**	**+1.0**
KRVT	**Keravat (AS076**	**40.17**	**310**	P	**P**	**19 09 34.5**	**+1.7**
	comp=Z,16nm,0.5s,baz=45,slow=1.4,SNR=2.0						
	comp=Z,16nm,0.5s						
AS31	**Alice Springs**	**42.83**	**270**	P	**P**	**19 09 54.4**	**-0.3**
ASAR	**Alice Springs**	**42.83**	**270**	P	**P**	**19 09 55.0**	**+0.4**
	comp=Z,6.1nm,0.8s,baz=111,slow=7.1,SNR=57						
ASAR				PcP	**PcP**	**19 11 46.3**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=123,slow=3.6,SNR=4.3						
	comp=Z,6.1nm,0.8s						
ASAR	**Alice Springs**	**42.83**	**270**	P	**P**	**19 09 54.0**	**-0.7**
WR0	**Warramunga Arr**	**43.93**	**276**	P	**P**	**19 10 03.7**	**+0.2**
WR0				IAmb	IAmb	19 10 45.3	
	comp=Z,12nm,1.2s						
WB2	**Warramunga Arr**	**44.09**	**276**	P	**P**	**19 10 04.9**	**0.0**
WB2				IAmb	IAmb	19 10 05.7	
	comp=Z,8.4nm,0.8s						
WRAB	**Tennant Creek**	**44.10**	**276**	P	**P**	**19 10 05.0**	**+0.1**
WRAB				IAmb	IAmb	19 10 05.6	
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	**44.10**	**276**	P	**P**	**19 10 05.1**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=116,slow=7.6,SNR=76						
WRA				PcP	**PP**	**19 11 49.1**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=111,slow=3.1,SNR=3.3						
	comp=Z,5.5nm,0.6s						
WRA	**Warramunga Arr**	**44.10**	**276**	P	**P**	**19 10 05.0**	**0.0**
WB0	**Warramunga Arr**	**44.14**	**276**	P	**P**	**19 10 05.7**	**+0.5**
WB0				IA

H03N1	**Juan Fernandez**	**38.18**	**73**	T	T		20 14 48.4	
	baz=221,slow=72							
KHZ	**Kahutara**	**41.59**	**262**	P	**P**		**19 34 52.9**	**+1.1**
KHZ				IAmb	IAmb		19 35 26.7	
	comp=Z,24nm,1.1s							
VNA3	**Neumayer Olymp**	**45.14**	**155**	P	**P**		**19 35 20.8**	**+0.7**
VNA1	**Neumayer--Stat**	**45.88**	**155**	P	**P**		**19 35 27.2**	**+1.3**
VNA2	**Neumayer--Watz**	**45.89**	**156**	P	**P**		**19 35 27.2**	**+1.1**
	baz=217,slow=9.6							
SNAA	**Sanae**	**46.35**	**158**	P	**P**		**19 35 30.0**	**+0.2**
SNAA	**Sanae**	**46.35**	**158**	P	**P**		**19 35 29.3**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=265,slow=7.0,SNR=7.1							
	comp=Z,1.2nm,0.8s							
SNAA	**Sanae**	**46.35**	**158**	P	**P**		**19 35 29.4**	**-0.3**
TROLL	**Troll, Antarti**	**47.18**	**160**	P	**P**		**19 35 37.1**	**+0.8**
LPAZ	**La Paz**	**57.70**	**70**	P	**P**		**19 36 55.0**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=131,slow=3.7,SNR=5.8							
	comp=Z,2.2nm,0.9s							
LPAZ	**La Paz**	**57.70**	**70**	P	**P**		**19 36 54.0**	**-1.4**
LPAZ				IAmb	IAmb		19 37 04.4	
	comp=Z,9.4nm,1.2s							
PTLB	**Pontes e Lacer**	**63.27**	**78**	P	**P**		**19 37 32.1**	**-0.7**
PTLB				IAmb	IAmb		19 37 40.8	
	comp=Z,5.8nm,1.3s							
BOSC	**San Juan Bosco**	**63.87**	**52**	P	**P**		**19 37 36.3**	**-0.7**
BOSC				IAmb	IAmb		19 37 45.6	
	comp=Z,8.5nm,1.2s							
ETMB	**Extrema**	**64.11**	**68**	P	**P**		**19 37 37.0**	**-1.4**
ETMB				IAmb	IAmb		19 37 46.9	
	comp=Z,2.6nm,0.9s							
SAML	**Samuel**	**66.44**	**70**	P	**P**		**19 37 51.7**	**-1.8**
SAML				IAmb	IAmb		19 38 01.8	
	comp=Z,3.2nm,0.9s							
EIDS	**Eidsvold**	**66.62**	**259**	P	**P**		**19 37 54.4**	**-0.2**
STKA	**Stephens Creek**	**66.63**	**248**	P	**P**		**19 37 53.7**	**-0.8**
BDFB	**Brasilia**	**69.34**	**87**	P	**P**		**19 38 13.4**	**+1.5**
ROSC	**El Rosal**	**72.83**	**53**	P	**P**		**19 38 33.6**	**+0.2**
H01W1	**Cape Leeuwin H**	**77.01**	**226**	T	T		21 04 37.6	
	baz=150,slow=76							
H01W2	**Cape Leeuwin H**	**77.01**	**226**	T	T		21 04 28.6	
	baz=150,slow=76							
H01W3	**Cape Leeuwin H**	**77.03**	**226**	T	T		21 04 38.8	
	baz=150,slow=76							
ASAR	**Alice Springs**	**77.25**	**247**	P	**P**		**19 38 58.8**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=154,slow=6.8,SNR=9.8							
	comp=Z,1.4nm,0.9s							
ASAR	**Alice Springs**	**77.25**	**247**	P	**P**		**19 38 59.3**	**+0.8**
WRA	**Warramunga Arr**	**80.08**	**249**	P	**P**		**19 39 14.4**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=142,slow=5.0,SNR=20							
	comp=Z,2.6nm,0.8s							
TXAR	**Lajitas Array**	**86.53**	**18**	P	**P**		**19 39 47.9**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=197,slow=8.5,SNR=3.9							
	comp=Z,0.7nm,0.9s							
H11S2	**WAKE ISLAND Hy**	**94.04**	**297**	T	T		21 24 46.3	
	baz=148,slow=76							
H11S3	**WAKE ISLAND Hy**	**94.06**	**297**	T	T		21 24 51.1	
	baz=148,slow=76							
H11S1	**WAKE ISLAND Hy**	**94.06**	**297**	T	T		21 24 53.2	
	baz=148,slow=76							
H11N3	**WAKE ISLAND Hy**	**94.98**	**298**	T	T		21 26 05.2	
	baz=155,slow=80							
H11N1	**WAKE ISLAND Hy**	**94.98**	**298**	T	T		21 26 01.3	
	baz=155,slow=80							
H11N2	**WAKE ISLAND Hy**	**94.99**	**298**	T	T		21 26 10.4	
	baz=155,slow=80							
ILAR	**Eielson Array**	**121.49**	**349**	PKP	**PKPdf**		**19 45 55.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=193,slow=3.0,SNR=9.1							
EKA	**Eskdalemuir Ar**	**147.42**	**66**	PKPbc	**PKPbc**		**19 46 46.1**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=254,slow=2.5,SNR=9.3							
SONM	**Songino Array**	**148.47**	**277**	PKPbc	**PKPbc**		**19 46 50.1**	**0.0**
	comp=Z,1.2nm,0.9s,baz=132,slow=2.2,SNR=7.6							
GERES	**GERESS Array B**	**153.57**	**87**	PKPbc	**PKPbc**		**19 47 01.4**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=220,slow=2.6,SNR=5.6							
CLL	**Collm**	**154.38**	**82**	*e*PKPbc	**PKiKP**		**19 47 04.0**	**+0.5**
MKAR	**Makanchi Array**	**161.36**	**252**	PKPab	**PKPab**		**19 47 48.2**	**0.0**
	comp=Z,0.6nm,0.8s,baz=146,slow=5.9,SNR=5.2							
ZALV	**Zalesovo Beam**	**163.36**	**276**	PKPab	**PKPab**		**19 47 57.2**	**+0.4**
	comp=Z,0.2nm,0.2s,baz=108,slow=4.7,SNR=3.5							

*IDC **18** 19:33:49.1±3.1,9˚.41S×112˚.98E,h0km,mb3.6/5, mbtmp3.6/6,ML3.2/1,Error ellipse: s-maj=154.4km s-min=20.3km az=50.0*

*DJA **18** 19:33:52.2±0.4,10˚S±4˚×11˚3E±˚,h10km,M3.8/13, mb3.9/4,MLv3.7/13*

ISC 18 19:33:53.1±1.1,9.8S±0.1×112.86E±0.10,h35km,n21, σ2s39/22,mb3.8/5,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.59**	**21**	P	**Pn**	**19 34 18.3**	**-0.6**
JAGI	**Jajag, Banyuwa**	**1.81**	**45**	P	**Pn**	**19 34 22.2**	**+0.3**
PWJI	**Pagerwojo**	**2.02**	**329**	P	**Pn**	**19 34 25.5**	**+0.8**
BLJI	**Banyuglugur**	**2.14**	**20**	P	**Pn**	**19 34 27.7**	**+1.4**
PCJI	**Pacitan**	**2.28**	**313**	P	**Pn**	**19 34 28.4**	**+0.1**
ABJI	**Asem Bagus**	**2.38**	**35**	P	**Pn**	**19 34 31.9**	**+2.1**
DNP	**Denpasar**	**2.56**	**65**	P	**Pn**	**19 34 34.3**	**+2.1**
NGJI	**Ngawi**	**2.75**	**330**	P	**Pn**	**19 34 35.5**	**+0.7**
SRBI	**Singaraja**	**2.87**	**55**	P	**Pn**	**19 34 38.1**	**+1.7**
KMMI	**Kalianget**	**2.91**	**22**	P	**Pn**	**19 34 38.1**	**+1.1**
UGM	**Wanagama**	**2.95**	**308**	P	**Pn**	**19 34 39.1**	**+1.5**
TWSI	**Taliwang, Sumb**	**4.10**	**76**	P	**Pn**	**19 34 55.6**	**+2.2**
PLAI	**Plampang**	**4.95**	**80**	P	**Pn**	**19 35 07.5**	**+2.5**
WBSI	**Waikabubak, Su**	**6.45**	**89**	P	**Pn**	**19 35 28.3**	**+2.6**
	0.2nm39nm,1.2s						
EDFI	**Ende, Flores**	**8.78**	**84**	P	**Pn**	**19 35 58.2**	**+0.4**
	4.5nm,2.2s						
FITZ	**Fitzroy Crossi**	**14.91**	**125**	Pn	**Pn**	**19 37 22.9**	**+1.3**
	0.1nm,0.3s,baz=181,slow=13,SNR=2.2						
FITZ				Sn	**Sn**	**19 39 57.8**	**-7.9**
	0.1nm,0.3s,baz=261,slow=17,SNR=1.5						
	2.7nm,1.1s						
WRA	**Warramunga Arr**	**23.07**	**118**	P	**P**	**19 38 57.3**	**+1.4**
	0.3nm,0.5s,baz=301,slow=11,SNR=9.0						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**24.39**	**127**	P	**P**	**19 39 10.6**	**+2.1**
	0.6nm,0.5s,baz=306,slow=8.9,SNR=12						
	0.6nm,0.5s						
SONM	**Songino Array**	**57.63**	**355**	P	**P**	**19 43 39.4**	**-0.5**
	0.6nm,0.6s,baz=180,slow=8.8,SNR=5.3						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**62.57**	**337**	P	**P**	**19 44 12.9**	**-0.7**
	0.5nm,0.5s,baz=150,slow=7.4,SNR=8.3						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**67.77**	**343**	P	**P**	**19 44 46.1**	**-1.0**
	0.6nm,0.4s,baz=160,slow=4.6,SNR=2.9						
	0.6nm,0.4s						

*IDC **18** 19:46:07.7±0.7,55˚.70S×123˚.48W,h0km,mb4.0/8, mbtmp4.0/8,Error ellipse: s-maj=28.4km s-min=20.9km az=142.0*

*NEIC **18** 19:46:09.7±1.6,55˚.9S±0˚.2×123˚.3W±0˚.2,h10km±1km, mb4.5/13,Error ellipse: s-maj=26.2km s-min=17.8km az=352.0*

ISC 18 19:46:09.3±0.7,55.8S±0.1×123.4W±0.1,h10km,n54, σ1s46/42,mb4.3/12,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMAI	**San Martin Ant**	**28.03**	**138**	P	**P**	**19 51 59.3**	**-0.7**
SMAI				IAmb	IAmb	19 52 36.5	
	comp=Z,11nm,1.5s						
VNDA	**Vanda**	**33.11**	**203**	P	**P**	**19 52 46.2**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=95,slow=6.0,SNR=5.2						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**33.11**	**203**	P	**P**	**19 52 42.2**	**-2.5**
QSPA	**South Pole Qui**	**34.39**	**180**	P	**P**	**19 52 58.2**	**+1.9**
	comp=Z,2.1nm,0.8s,baz=106,slow=3.9,SNR=10						
	comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**34.39**	**180**	P	**P**	**19 52 56.7**	**+0.4**
QSPA				IAmb	IAmb	19 53 26.4	
	comp=Z,11nm,1.5s						
BELA	**Belgrano 2**	**35.98**	**159**	P	**P**	**19 53 08.5**	**-1.2**
H03S2	**Juan Fernandez**	**37.52**	**73**	T	T	20 33 02.8	
	baz=221						
H03S1	**Juan Fernandez**	**37.53**	**73**	T	T	20 33 03.9	
	baz=221						
H03S3	**Juan Fernandez**	**37.54**	**73**	T	T	20 33 02.4	
	baz=221						
H03N3	**Juan Fernandez**	**37.81**	**73**	T	T	20 33 24.5	
	baz=220,slow=72						
H03N2	**Juan Fernandez**	**37.82**	**73**	T	T	20 33 22.1	
	baz=220,slow=72						
H03N1	**Juan Fernandez**	**37.83**	**73**	T	T	20 33 28.5	
	baz=220,slow=72						
ORCD	**Orcadas**	**39.33**	**131**	P	**P**	**19 53 38.0**	**-0.1**
ORCD				IAmb	IAmb	19 53 49.7	
	comp=Z,18nm,1.4s						
VNA3	**Neumayer Olymp**	**44.97**	**155**	P	**P**	**19 54 24.7**	**+0.7**
VNA1	**Neumayer--Stat**	**45.72**	**155**	P	**P**	**19 54 31.2**	**+1.4**
VNA2	**Neumayer--Watz**	**45.73**	**156**	P	**P**	**19 54 30.5**	**+0.5**
	baz=215,slow=8.2						
SNAA	**Sanae**	**46.20**	**158**	P	**P**	**19 54 34.6**	**+0.8**
SNAA	**Sanae**	**46.20**	**158**	P	**P**	**19 54 33.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=235,slow=8.1,SNR=5.7						
	comp=Z,0.5nm,0.6s						
SNAA	**Sanae**	**46.20**	**158**	P	**P**	**19 54 32.3**	**-1.5**
SNAA				IAmb	IAmb	19 54 51.8	
	comp=Z,4.1nm,1.2s						
TROLL	**Troll, Antarti**	**47.04**	**160**	P	**P**	**19 54 41.8**	**+1.3**
PB16	**IPOC Station P**	**54.93**	**70**	P	**P**	**19 55 42.4**	**+1.5**
CPUP	**Villa Florida**	**55.24**	**86**	P	**P**	**19 55 41.8**	**-0.6**
	comp=Z,3.8nm,1.2s,baz=224,slow=11,SNR=3.1						
	comp=Z,3.8nm,1.2s						
MAW	**Mawson**	**56.84**	**183**	P	**P**	**19 55 52.6**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=196,slow=7.9,SNR=6.6						
	comp=Z,1.8nm,0.8s						
MAW	**Mawson**	**56.84**	**183**	P	**P**	**19 55 54.6**	**+1.4**
LPAZ	**La Paz**	**57.35**	**70**	P	**P**	**19 55 59.2**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=194,slow=4.6,SNR=6.4						
	comp=Z,2.1nm,0.9s						
LPAZ	**La Paz**	**57.35**	**70**	P	**P**	**19 55 58.3**	**0.0**
ETMB	**Extrema**	**63.78**	**67**	P	**P**	**19 56 40.1**	**-1.3**
ETMB				IAmb	IAmb	19 56 47.2	
	comp=Z,4.5nm,1.0s						
SAML	**Samuel**	**66.10**	**70**	P	**P**	**19 56 56.4**	**-0.2**
SAML				IAmb	IAmb	19 57 02.1	
	comp=Z,3.4nm,0.9s						
H01W1	**Cape Leeuwin H**	**77.26**	**225**	T	T	21 23 49.2	
	baz=151,slow=76						
H01W2	**Cape Leeuwin H**	**77.27**	**225**	T	T	21 23 46.0	
	baz=151,slow=76						
H01W3	**Cape Leeuwin H**	**77.28**	**225**	T	T	21 23 59.4	
	baz=151,slow=76						
ASAR	**Alice Springs**	**77.58**	**246**	P	**P**	**19 58 05.2**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=160,slow=5.2,SNR=10.0						
	comp=Z,1.9nm,0.9s						
ASAR	**Alice Springs**	**77.58**	**246**	P	**P**	**19 58 05.6**	**+0.1**
BAUV	**El Baul**	**79.04**	**56**	P	**P**	**19 58 13.5**	**0.0**
WRA	**Warramunga Arr**	**80.42**	**249**	P	**P**	**19 58 20.7**	**-0.4**
	comp=Z,3.3nm,0.9s,baz=145,slow=4.8,SNR=25						
	comp=Z,3.3nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**94.38**	**297**	T	T	21 44 27.9	
	baz=148,slow=75						
H11S3	**WAKE ISLAND Hy**	**94.39**	**297**	T	T	21 44 15.0	
	baz=148,slow=75						
H11S1	**WAKE ISLAND Hy**	**94.39**	**297**	T	T	21 44 25.1	
	baz=148,slow=75						
ILAR	**Eielson Array**	**121.58**	**348**	PKP	**PKiKP**	**20 05 01.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=193,slow=4.1,SNR=4.6						
CMAR	**Chiang Mai Arr**	**131.02**	**238**	PKP	**PKiKP**	**20 05 21.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=186,slow=1.8,SNR=1.0						
EKA	**Eskdalemuir Ar**	**147.09**	**65**	PKPbc	**PKPbc**	**20 05 51.5**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=256,slow=2.9,SNR=7.4						
SONM	**Songino Array**	**148.84**	**276**	PKPbc	**PKPbc**	**20 05 55.3**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=105,slow=7.3,SNR=3.6						
DAVOX	**Davos/Dischmat**	**149.92**	**87**	PKPbc	**PKiKP**	**20 05 59.6**	**-0.3**
	comp=Z,4.6nm,1.1s,baz=222,slow=13,SNR=2.2						
DAVA	**Damuels**	**150.21**	**87**	*e*P	**PKPab**	**20 06 05.9**	**+0.1**
	comp=Z,4.4nm,0.8s						
FETA	**Feichten**	**150.54**	**88**	*e*P	**PKPab**	**20 06 06.5**	**-0.7**
	comp=Z,8.8nm,1.0s						
RETA	**Reutte**	**150.81**	**87**	*e*P	**PKPab**	**20 06 05.0**	**-3.3**
	comp=Z,1.4nm,0.6s						
SQTA	**Sankt Quirin**	**150.92**	**88**	*e*P	**PKiKP**	**20 06 03.6**	**+1.7**
	comp=Z,4.4nm,1.0s						
MOTA	**Moosalm**	**150.93**	**88**	*e*P	**PKiKP**	**20 06 03.9**	**+2.0**
	comp=Z,6.9nm,0.9s						
WTTA	**Wattenberg**	**151.18**	**88**	*e*P	**PKiKP**	**20 06 06.1**	**+3.5**
	comp=Z,14nm,1.6s						
ABTA	**Abfaltersbach**	**151.39**	**90**	*e*P	**PKPab**	**20 06 08.0**	**-2.7**
	comp=Z,2.9nm,0.8s						
KBA	**Koelnbreinsper**	**152.04**	**90**	*e*P	**PKiKP**	**20 06 06.3**	**+2.0**
	comp=Z,3.5nm,1.3s						
GERES	**GERESS Array B**	**153.21**	**87**	PKPbc	**PKPbc**	**20 06 05.4**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=208,slow=1.9,SNR=9.8						
CONA	**Conrad Observa**	**153.94**	**90**	P	**PKPdf**	**20 06 03.0**	**+3.0**
	comp=Z,2.3nm,1.2s						
MKAR	**Makanchi Array**	**161.71**	**251**	PKPab	**PKPab**	**20 06 54.0**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=113,slow=3.3,SNR=4.2						

*IDC **18** 19:48:52.4±0.6,55˚.56S×123˚.96W,h0km,mb4.2/9, mbtmp4.2/9,MS4.8/30,Error ellipse: s-maj=26.8km s-min=19.5km az=134.0*

*NEIC **18** 19:48:53.8±1.3,55˚.8S±0˚.2×123˚.4W±0˚.3,h10km±5km, mb4.8/24,Error ellipse: s-maj=24.1km s-min=18.4km az=136.0*

*GCMT **18** 19:48:57.8±0.2,56˚.01S±0˚.01×123˚.39W±0˚.02,h12km, MW5.3/133,Moment Tensor Solution. s42,c58; s133,c212; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.14±.03; Mθθ0.43±.03; Mφφ-0.56±.02; Mrθ-0.21±.07; Mrφ0.87±.02; Mθφ-0.13±.07; Best double couple: M○1.03800×10^17 NP1:φs194.00000°,δ79.00000°, λ168.00000°. NP2:φs286.00000°,δ78.00000°,λ11.00000°. Principal axes: T 1.0060, Plg16.0000°, Azm150.0000°; N 0.0640, Plg74.0000°, Azm331.0000°; P -1.0700, Plg0.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 19:48:54.0±0.6,55.8S±0.1×123.3W±0.1,h10km,n104, σ1s78/59,mb4.7/18,MS4.9/33,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMAI	**San Martin Ant**	**28.02**	**139**	P	**P**	**19 54 43.8**	**-0.8**
PMSA	**Palmer Station**	**29.62**	**132**	LR	LR	20 03 43.0	
	comp=Z,2µm,20.1s,baz=259,slow=30						
PMSA	**Palmer Station**	**29.62**	**132**	P	**P**	**19 54 59.3**	**+0.5**
PMSA				IAmb	IAmb	19 55 06.8	
	comp=Z,23nm,1.3s						
MG05	**Puerto Natales**	**29.76**	**104**	P	**P**	**19 55 00.6**	**+0.3**
USHA	**Ushuaia**	**30.55**	**111**	LR	LR	20 04 11.6	
	comp=Z,2µm,19.2s,baz=240,slow=30						
VNDA	**Vanda**	**33.14**	**203**	P	**P**	**19 55 30.1**	**+0.3**
	comp=Z,2.7nm,1.0s,baz=90,slow=4.0,SNR=3.5						
VNDA				LR	LR	20 06 16.4	
	comp=Z,866nm,19.1s,baz=88,slow=32						
	comp=Z,2.7nm,1.0s						
VNDA	**Vanda**	**33.14**	**203**	P	**P**	**19 55 29.3**	**-0.4**
QSPA	**South Pole Qui**	**34.41**	**180**	P	**P**	**19 55 42.4**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=100,slow=1.1,SNR=12						
QSPA				LR	LR	20 07 44.8	
	comp=Z,1µm,19.1s,baz=92,slow=33						
	comp=Z,2.7nm,0.7s						
QSPA	**South Pole Qui**	**34.41**	**180**	P	**P**	**19 55 42.0**	**+0.8**
QSPA				IAmb	IAmb	19 56 09.9	
	comp=Z,25nm,1.4s						
BELA	**Belgrano 2**	**35.98**	**159**	P	**P**	**19 55 54.5**	**+0.2**
BELA				IAmb	IAmb	19 56 07.4	
	comp=Z,16nm,1.4s						
PLCA	**Paso Flores**	**37.22**	**89**	LR	LR	20 07 31.1	
	comp=Z,1µm,19.6s,baz=227,slow=30						
H03S2	**Juan Fernandez**	**37.47**	**73**	T	T	20 35 50.8	
	baz=221						
H03S1	**Juan Fernandez**	**37.48**	**73**	T	T	20 35 54.8	
	baz=221						
H03S3	**Juan Fernandez**	**37.49**	**73**	T	T	20 35 53.1	
	baz=221						
TBI	**Tubuai**	**37.70**	**318**	*e*LR	LR	20 06 29.0	
	comp=Z,2µm,22.8s						
TBI	**Tubuai**	**37.70**	**318**	*e*T	T	20 35 51.4	
	comp=Z,43nm,0.3s						
H03N3	**Juan Fernandez**	**37.77**	**73**	T	T	20 36 12.8	
	baz=220,slow=72,SNR=42						
H03N2	**Juan Fernandez**	**37.77**	**73**	T	T	20 36 08.6	
	baz=220,slow=72,SNR=69						
H03N1	**Juan Fernandez**	**37.78**	**73**	T	T	20 36 11.9	
	baz=220,slow=72,SNR=40						
ORCD	**Orcadas**	**39.31**	**131**	P	**P**	**19 56 21.0**	**-1.6**
ORCD				IAmb	IAmb	19 56 29.0	
	comp=Z,31nm,1.2s						
RPZ	**Rata Peaks**	**42.53**	**258**	LR	LR	20 11 17.0	
	comp=Z,2µm,18.2s,baz=130,slow=32						
URZ	**Urewera**	**42.80**	**268**	LR	LR	20 10 11.2	
	comp=Z,2µm,19.7s,baz=194,slow=30						
PPT2	**Papeete2**	**43.03**	**322**	*e*LR	LR	20 08 59.2	
	comp=Z,2µm,23.0s						
PPT	**Papeete**	**43.05**	**322**	LR	LR	20 09 58.6	
	comp=Z,1µm,19.4s,baz=160,slow=30						
RAR	**Rarotonga**	**43.89**	**307**	LR	LR	20 10 02.7	
	comp=Z,480nm,21.8s,baz=146,slow=29						
VAH	**Vaihoa**	**44.57**	**325**	*e*T	T	20 44 29.8	
	comp=Z,90nm,0.3s						
PMOR	**Pomariorio Ree**	**44.88**	**325**	*e*T	T	20 45 06.6	
	comp=Z,6.2nm,0.2s						
VNA3	**Neumayer Olymp**	**44.97**	**155**	P	**P**	**19 57 09.6**	**+1.0**
VNA1	**Neumayer--Stat**	**45.72**	**155**	P	**P**	**19 57 16.0**	**+1.5**
VNA2	**Neumayer--Watz**	**45.73**	**156**	P	**P**	**19 57 14.8**	**+0.1**
	baz=218,slow=11						
SNAA	**Sanae**	**46.20**	**158**	P	**P**	**19 57 18.2**	**-0.3**
SNAA	**Sanae**	**46.20**	**158**	P	**P**	**19 57 22.2**	**+3.7**
	comp=Z,3.2nm,1.0s,baz=247,slow=6.5,SNR=7.3						
SNAA				LR	LR	20 15 31.6	
	comp=Z,2µm,18.7s,baz=242,slow=34						
	comp=Z,3.2nm,1.0s						
RAO	**Raoul Island**	**46.62**	**281**	LR	LR	20 14 33.4	
	comp=Z,494nm,18.4s,baz=139,slow=33						
TROLL	**Troll, Antarti**	**47.04**	**160**	P	**P**	**19 57 26.6**	**+1.5**
TAOE	**Nuku Hiva Isla**	**48.66**	**338**	*e*LR	LR	20 11 32.0	
	comp=Z,2µm,24.6s						
LVC	**Limon Verde**	**51.71**	**73**	LR	LR	20 14 01.9	
	comp=Z,891nm,21.0s,baz=220,slow=29						
ITQB	**Itaqui**	**53.04**	**90**	P	**P**	**19 58 11.0**	**+0.1**
PLTB	**Pedras Altas**	**53.17**	**94**	P	**P**	**19 58 11.7**	**-0.3**
PB16	**IPOC Station P**	**54.88**	**69**	P	**P**	**19 58 23.7**	**-1.5**
PB16				IAmb	IAmb	19 58 32.8	
	comp=Z,12nm,1.0s						
CPUP	**Villa Florida**	**55.20**	**86**	P	**P**	**19 58 30.4**	**+3.7**
	comp=Z,4.8nm,0.8s,baz=242,slow=6.8,SNR=7.1						
CPUP				LR	LR	20 18 49.3	
	comp=Z,1µm,18.7s,baz=228,slow=32						
	comp=Z,4.8nm,0.8s						
CPUP	**Villa Florida**	**55.20**	**86**	P	**P**	**19 58 26.8**	**0.0**
CPUP				IAmb	IAmb	19 58 33.7	
	comp=Z,16nm,1.3s						
AFI	**Afiamalu**	**55.90**	**299**	LR	LR	20 15 49.5	
	comp=Z,243nm,20.2s,baz=133,slow=29						
NNA	**Nana**	**56.54**	**58**	LR	LR	20 16 28.9	
	comp=Z,772nm,19.7s,baz=203,slow=29						
MAW	**Mawson**	**56.85**	**183**	P	**P**	**19 58 39.4**	**+1.4**
	comp=Z,5.4nm,1.1s,baz=192,slow=7.2,SNR=7.1						
MAW				LR	LR	20 21 43.7	
	comp=Z,1µm,18.9s,baz=168,slow=35						
	comp=Z,5.4nm,1.1s						
MAW	**Mawson**	**56.85**	**183**	P	**P**	**19 58 37.1**	**-0.9**
LPAZ	**La Paz**	**57.31**	**69**	P	**P**	**19 58 43.5**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=195,slow=5.0,SNR=6.2						
LPAZ				LR	LR	20 17 43.1	
	comp=Z,856nm,19.7s,baz=191,slow=30						
	comp=Z,2.0nm,0.8s						
LPAZ	**La Paz**	**57.31**	**69**	P	**P**	**19 58 43.4**	**+0.7**
ATAH	**Atahualpa**	**60.05**	**54**	LR	LR	20 19 00.4	
	comp=Z,1µm,18.9s,baz=229,slow=30						
DZM	**Mont Dzumac**	**60.98**	**273**	LR	LR	20 19 41.0	
	comp=Z,1µm,19.7s,baz=154,slow=30						
DZM	**Mont Dzumac**	**60.98**	**273**	*e*LR	LR	20 17 13.4	
	comp=Z,1µm,21.9s						
SIV	**San Ignacio**	**61.36**	**76**	LR	LR	20 22 41.1	
	comp=Z,454nm,18.0s,baz=270,slow=33						
PTLB	**Pontes e Lacer**	**62.86**	**77**	P	**P**	**19 59 19.5**	**-0.5**
PTLB				IAmb	IAmb	19 59 31.1	
	comp=Z,8.4nm,1.1s						
BOSC	**San Juan Bosco**	**63.54**	**52**	P	**P**	**19 59 23.2**	**-1.5**
BOSC				IAmb	IAmb	19 59 35.9	
	comp=Z,7.2nm,0.8s						
ETMB	**Extrema**	**63.73**	**67**	P	**P**	**19 59 25.6**	**-0.2**
ETMB				IAmb	IAmb	19 59 47.4	
	comp=Z,6.4nm,1.1s						
SAML	**Samuel**	**66.05**	**70**	P	**P**	**19 59 40.7**	**-0.2**
SAML				IAmb	IAmb	19 59 51.9	
	comp=Z,6.2nm,1.0s						
STKA	**Stephens Creek**	**67.01**	**247**	LR	LR	20 23 09.1	
	comp=Z,807nm,19.8s,baz=144,slow=31						
BDFB	**Brasilia**	**68.92**	**87**	LR	LR	20 27 04.5	
	comp=Z,991nm,21.3s,baz=224,slow=33						
CTA	**Charters Tower**	**73.90**	**258**	LR	LR	20 29 04.0	
	comp=Z,470nm,18.3s,baz=110,slow=33						
BOAV	**Boa Vista**	**77.04**	**66**	P	**P**	**20 00 45.9**	**-1.2**
BOAV				IAmb	IAmb	20 00 53.6

comp=Z,0.4nm,0.7s,baz=267,slow=2.9,SNR=2.1
MKAR Makanchi Array 161.75 251 PKP **PKPdf 20 08 53.0 -1.3**
comp=Z,0.6nm,1.0s,baz=112,slow=1.6,SNR=3.1

*IDC **18** 19:57:15.4±23.0,20°.29S×177°.74W,h520km±245km, mb2.9/4,mbtmp3.8/4, Error ellipse: s-maj=117.2km s-min=35.1km az=68.0*
ISC 18 19:57:13.1±1.5,**20°.2S**±0°.3×**177°.6W**±0°.3,**h500km,n6,** σ1=**32**/6,**mb3.4**/4,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.93**	**256**	P	**P**	**20 04 43.0**	**-0.1**
	0.5nm,0.5s,baz=93,slow=7.8,SNR=8.0						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**45.00**	**262**	P	**P**	**20 04 43.2**	**-0.3**
	0.6nm,0.4s,baz=97,slow=7.8,SNR=50						
	0.6nm,0.4s						
QSPA	**South Pole Qui**	**69.83**	**180**	P	**P**	**20 07 33.2**	**+0.4**
	0.4nm,0.6s,baz=93,slow=15,SNR=1.7						
	0.4nm,0.6s						
MJAR	**Matsushiro Arr**	**70.21**	**323**	P	**P**	**20 07 36.0**	**+0.8**
	0.7nm,0.5s,baz=127,slow=8.1,SNR=2.5						
	0.7nm,0.5s						
AKASG	**Malin Array Be**	**142.95**	**332**	PKP	**PKPdf**	**20 15 47.2**	**-2.0**
	0.8nm,0.5s,baz=44,slow=2.6,SNR=4.4						
GERES	**GERESS Array B**	**150.04**	**345**	PKPbc	**PKPbc**	**20 16 07.3**	**+0.5**
	0.3nm,0.6s,baz=15,slow=4.1,SNR=3.5						

*IDC **18** 19:57:36.5±2.6,43°.96N×147°.15E,h0km,mb3.7/6, mbtmp3.7/8,ML2.6/2, Error ellipse: s-maj=63.5km s-min=27.9km az=147.0*
*MOS **18** 19:57:38.4±1.1,43°.55N×147°.62E,h51km,mb4.5/1, Error ellipse: s-maj=17.4km s-min=14.2km az=80.4*
*JMA **18** 19:57:39.1±0.5,44°.N±1°×14°.7E±°,h4km±3km,MV4.1/35,E OFF HOKKAIDO*
*SKHL **18** 19:57:40.8±0.5,43°.60N×147°.50E,h65km±4km,mb4.8/2*
ISC 18 19:57:40.5±1.6,**43°.64N**±0°.09×**147°.57E**±0°.08,**h43**km±15km, **n31,**σ0=**92**/37,**mb3.8**/6,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.30**	**288**	*e*PN	**Pn**	**19 58 01.4**	**-0.7**
YUK				*e*S	**Sn**	**19 58 16.8**	**-1.5**
YUK				pmax	pmax		
	comp=Z,715nm,0.2s						
YUK				pmax	pmax		
	comp=E,456nm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.30**	**288**	*e*P	**Pn**	**19 58 01.6**	**-0.5**
YUK				AMB	AMB	19 58 04.2	
	comp=E,260nm,0.2s						
YUK				*e*S	**Sn**	**19 58 16.8**	**-1.5**
YUK				A	A	19 58 18.8	
	comp=E,2μm,0.5s						
YUK				A	A	19 58 18.8	
	comp=E,2μm,0.5s						
NEM2	**Nemuro 2**	**1.36**	**259**	*e*P	**Pn**	**19 58 01.8**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.37**	**259**	*e*PN	**Pn**	**19 58 02.2**	**-0.8**
NMR				*e*S	**Sn**	**19 58 20.7**	**+0.8**
NMR	**Nemuro--Hokkai**	**1.37**	**259**	*e*P	**Pn**	**19 58 02.5**	**-0.5**
NMR				*e*S	**Sn**	**19 58 18.9**	**-1.0**
KUR	**Kuril'sk**	**1.61**	**7**	*e*PN	**Pn**	**19 58 06.8**	**+0.4**
KUR				*i* S	**Sn**	**19 58 26.3**	**+0.4**
KUR				pmax	pmax		
	comp=N,52nm,0.2s						
KUR				pmax	pmax		
	comp=Z,148nm,0.2s						
KUR				smax	smax		
	comp=N,517nm,0.2s						
KUR	**Kuril'sk**	**1.61**	**7**	*e*P	**Pn**	**19 58 06.8**	**+0.4**
KUR				AMB	AMB	19 58 08.4	
	comp=N,50nm,0.2s						
KUR				AMB	AMB	19 58 08.4	
	comp=N,150nm,0.2s						
KUR				*i* S	**Sn**	**19 58 25.3**	**-0.6**
KUR				A	A	19 58 28.4	
	comp=N,470nm,0.2s						
KUR				A	A	19 58 28.4	
	comp=N,300nm,0.2s						
RUSJ	**Misakicho**	**1.74**	**286**	*e*PN	**Pn**	**19 58 09.3**	**+1.1**
RUSJ				*e*S	**Sn**	**19 58 30.2**	**+1.0**
JRA	**Rausu**	**1.80**	**280**	*e*P	**Pn**	**19 58 09.0**	**0.0**
JRA				*e*S	**Sn**	**19 58 31.2**	**+0.7**
JKHN	**Kushirohamanak**	**1.84**	**253**	*e*P	**Pn**	**19 58 09.4**	**-0.1**
JNSB	**Nemuroshibetsu**	**1.86**	**275**	*e*P	**Pn**	**19 58 10.0**	**+0.1**
JNK	**Nakash**	**2.07**	**270**	*e*P	**Pn**	**19 58 12.5**	**-0.2**
AKK	**Akkeshi**	**2.08**	**254**	*e*P	**Pn**	**19 58 12.5**	**-0.4**
AKK				*e*S	**Sn**	**19 58 38.1**	**+0.5**
JAK	**Akkeshi**	**2.19**	**254**	*e*P	**Pn**	**19 58 14.4**	**0.0**
JTKR	**Abashiri--Toko**	**2.67**	**278**	*e*P	**Pn**	**19 58 22.2**	**+1.2**
JTKR				*e*S	**Sn**	**19 58 54.4**	**+2.3**
JAR	**Ashorobuto**	**2.79**	**264**	*e*P	**Pn**	**19 58 23.3**	**+0.8**
JAR				*e*S	**Sn**	**19 58 56.3**	**+1.4**
JOB	**Onbets**	**2.83**	**256**	*e*P	**Pn**	**19 58 24.0**	**+1.0**
JOB				*e*S	**Sn**	**19 58 56.9**	**+1.1**
MJAR	**Matsushiro Arr**	**10.08**	**228**	Pn	**Pn**	**20 00 02.5**	**-0.1**
	comp=N,0.1nm,0.3s,baz=32,slow=15,SNR=2.7						
	comp=N,0.6nm,0.5s						
PETK	**Petropavlovsk-**	**11.61**	**32**	Pn	**Pn**	**20 00 23.4**	**-0.1**
	comp=N,0.1nm,0.3s,baz=213,slow=15,SNR=1.3						
	comp=N,1.2nm,0.6s						
SONM	**Songino Array**	**28.80**	**293**	P	**P**	**20 03 33.5**	**-0.8**
	comp=N,0.2nm,0.4s,baz=99,slow=9.3,SNR=2.1						
	comp=N,0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.82**	**140**	T	T	20 34 15.9	
	baz=330,slow=76,SNR=130						
H11N1	**WAKE ISLAND Hy**	**28.83**	**140**	T	T	20 34 19.0	
	baz=330,slow=76,SNR=107						
H11N3	**WAKE ISLAND Hy**	**28.84**	**140**	T	T	20 34 13.6	
	baz=330,slow=76,SNR=92						
H11S1	**WAKE ISLAND Hy**	**29.79**	**141**	T	T	20 35 25.2	
	baz=331,slow=76,SNR=290						
H11S3	**WAKE ISLAND Hy**	**29.79**	**141**	T	T	20 35 27.3	
	baz=331,slow=76,SNR=185						
H11S2	**WAKE ISLAND Hy**	**29.81**	**141**	T	T	20 35 26.5	
	baz=331,slow=76,SNR=146						
ILAR	**Eielson Array**	**41.40**	**36**	P	**P**	**20 05 23.4**	**+1.3**
	comp=N,1.0nm,0.6s,baz=271,slow=8.2,SNR=10						
	comp=N,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**59.46**	**340**	P	**P**	**20 07 37.6**	**-0.7**
	comp=N,1.0nm,0.9s,baz=50,slow=8.4,SNR=3.7						
	comp=N,1.0nm,0.9s						
FINES	**FINESS Array B**	**65.11**	**333**	P	**P**	**20 08 15.6**	**-0.7**
	comp=N,0.9nm,0.5s,baz=34,slow=10,SNR=12						
	comp=N,0.9nm,0.5s						
NOA	**NORSAR Array B**	**69.82**	**339**	P	**P**	**20 08 45.8**	**-0.2**
	comp=N,0.2nm,0.5s,baz=29,slow=6.6,SNR=4.4						
	comp=N,0.2nm,0.5s						
HFS	**Hagfors**	**69.91**	**337**	P	**P**	**20 08 46.1**	**-0.5**
	comp=N,0.7nm,0.4s,baz=56,slow=8.8,SNR=8.1						
	comp=N,0.7nm,0.4s						

*IDC **18** 20:05:29.6±2.5,29°.19N×81°.70E,h0km,mb3.8/8, mbtmp3.8/9,ML3.3/1, Error ellipse: s-maj=51.4km s-min=36.7km az=140.0*
*NDI **18** 20:05:53.2±1.8,30°.96N×78°.14E,h10km±5km,ML3.5*
ISC 18 20:05:54.8±1.3,**30°.86N**±0°.05×**78°.12E**±0°.05,**h28**km±11km, **n18,**σ2=**29**/27,**mb3.9**/6,**1D,Northern India**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**0.54**	**186**	*e*Pg	**Pb**	**20 06 05.6**	**-0.3**
DDI				*i* Sg	**Sn**	**20 06 14.7**	**-0.2**
DDI				IAML		20 06 15.0	
	comp=E,15μm,0.3s						
DDI				IAML		20 06 15.8	
	comp=N,8μm,0.2s						
SMLA	**Simla**	**0.86**	**288**	*e*Pg	**Pn**	**20 06 10.1**	**-0.9**
SMLA				*i* Sg	**Sb**	**20 06 21.5**	**-0.7**
SMLA				IAML		20 06 23.4	
	comp=N,726nm,0.5s						
SMLA				IAML		20 06 23.5	
	comp=E,522nm,0.3s						
BHK	**Bhakra**	**1.56**	**291**	*e*PN	**Pn**	**20 06 21.2**	**+0.5**
BHK				*e*SN	**Sb**	**20 06 44.4**	**+2.0**
PTH	**Pithoragarh**	**2.24**	**125**	*e*P	**Pn**	**20 06 31.6**	**+1.4**
PTH				*e*S	**Sn**	**20 06 58.7**	**+1.7**
NDI	**New Delhi**	**2.31**	**200**	*e*P	**Pb**	**20 06 36.0**	**+0.2**
NDI				*e*S	**Sb**	**20 07 03.0**	**-0.9**
LGTI	**Lohaghat**	**2.32**	**127**	*e*P	**Pn**	**20 06 31.8**	**+0.7**
LGTI				*i* x	**Pb**	**20 06 36.0**	**+0.1**
LGTI				*e*S	**Sn**	**20 06 59.8**	**+1.1**
KUDL	**Kundal**	**3.06**	**208**	*e*P	**Pn**	**20 06 43.5**	**+2.2**
KUDL				*e*S	**Sn**	**20 07 20.4**	**+3.4**
BHPL	**Bhopal**	**7.62**	**185**	*e*S	**Sn**	**20 09 05.6**	**-3.8**
BHPL				IAML		20 09 13.9	
	comp=N,17nm,0.2s						
BHPL				IAML		20 09 14.4	
	comp=E,21nm,0.1s						
JBP	**Jabalpur**	**7.84**	**167**	*e*P	**Pn**	**20 07 47.2**	**+0.1**
JBP				||*e*S	**Sn**	**20 09 11.4**	**-3.6**
MKAR	**Makanchi Array**	**16.23**	**10**	P	**Pn**	**20 09 38.0**	**-2.8**
	comp=E,0.1nm,0.3s,baz=195,slow=12,SNR=4.1						
	comp=E,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**19.74**	**1**	P	**P**	**20 10 20.2**	**-2.1**
	comp=E,0.3nm,0.4s,baz=170,slow=10,SNR=6.5						
	comp=E,0.3nm,0.4s						
AKTO	**Aktyubinsk**	**24.66**	**328**	P	**P**	**20 11 18.1**	**+5.1**
	comp=E,1.0nm,0.5s,baz=156,slow=5.7,SNR=3.9						
	comp=E,1.0nm,0.5s						
FINES	**FINESS Array B**	**45.43**	**328**	P	**P**	**20 14 14.3**	**+3.5**
	comp=E,1.3nm,0.8s,baz=120,slow=8.5,SNR=3.7						
	comp=E,1.3nm,0.8s						
ARCES	**ARCESS Array B**	**48.59**	**338**	P	**P**	**20 14 34.8**	**-0.7**
	comp=E,1.2nm,0.9s,baz=101,slow=8.4,SNR=5.7						
	comp=E,1.2nm,0.9s						
HFS	**Hagfors**	**51.12**	**325**	P	**P**	**20 14 56.7**	**+1.9**
	comp=E,1.5nm,0.6s,baz=90,slow=4.9,SNR=5.2						
	comp=E,1.5nm,0.6s						
NB2	**NORSAR Subarra**	**52.40**	**326**	P	**P**	**20 15 03.2**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=94,slow=7.4						
NOA	**NORSAR Array B**	**52.40**	**326**	P	**P**	**20 15 06.8**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=95,slow=7.2,SNR=4.2						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**71.82**	**275**	P	**P**	**20 17 14.1**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=46,slow=5.4,SNR=6.8						
	comp=Z,0.8nm,0.6s						

*BJI **18** 20:10:10.0±0.0,5°.56N×127°.11E,h102km,mb4.6/40, mB5.2/11*
*MAN **18** 20:10:12,5°.95N×127°.16E,h74km,Ms4.1*
*IDC **18** 20:10:15.0±1.4,6°.03N×127°.14E,h108km±12km,mb4.0/27, mbtmp4.4/30,Error ellipse: s-maj=17.1km s-min=8.7km az=76.0*
*NEIC **18** 20:10:15.8±1.4,6°.00N±0°.08×127°.07E±0°.10,h109km±3km, mb4.6/41,Error ellipse: s-maj=14.9km s-min=9.7km az=59.0*
*DJA **18** 20:10:15.0±0.5,6°.N±4°×12°.7E±°,h105km±3km,M4.5/33, mB5.0/7,mb4.7/33,MLv4.7/13,Mw(mB)4.3/7*
ISC 18 20:10:14.5±0.8,**6°.00N**±0°.04×**127°.11E**±0°.06,**h104**km±6km, **n159,**σ1=**37**/179,**mb4.5**/54,**9C-10D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.27**	**318**	||*e*P	**Pn**	**20 10 37.6**	**-0.7**
MATI				*e*S	**Sn**	**20 10 54.4**	**-1.8**
DDMP	**Don Marcelino,**	**1.40**	**274**	||*e*P	**Pn**	**20 10 38.1**	**-1.6**
DDMP				*e*S	**Sn**	**20 10 58.3**	**-0.6**
DAV	**Davao City (W)**	**1.86**	**305**	P	**Pn**	**20 10 46.4**	**+0.9**
	904nm,0.3s,baz=204,slow=10.0,SNR=39						
DAV				S	**Sn**	**20 11 11.6**	**+2.5**
	1μm,0.5s,baz=105,slow=23,SNR=13						
DAV	**Davao City (W)**	**1.86**	**305**	Pn	**Pn**	**20 10 46.1**	**+0.6**
GSPH	**General Santos**	**2.15**	**272**	||*i*P	**Pn**	**20 10 46.1**	**-3.2**
GSPH				*i* S	**Sn**	**20 11 11.6**	**-4.4**
KCP	**Kidapawan**	**2.25**	**297**	||*i*P	**Pn**	**20 10 50.2**	**-0.3**
KCP				*e*S	**Sn**	**20 11 17.4**	**-0.7**
BIPH	**Bislig**	**2.30**	**341**	||*i*P	**Pn**	**20 10 50.9**	**-0.2**
BIPH				*i* S	**Sn**	**20 11 16.8**	**-2.4**
SKMP	**Bagumbayan, Su**	**2.60**	**282**	||*e*P	**Pn**	**20 10 54.3**	**-0.9**
SKMP				*e*S	**Sn**	**20 11 26.2**	**-0.2**
BUKP	**Musuan**	**2.76**	**313**	⇑*e*P	**Pn**	**20 10 57.8**	**+0.5**
BUKP				*e*S	**Sn**	**20 11 30.8**	**+0.5**
SGSI	**Sangihe**	**2.79**	**215**	P	**Pn**	**20 10 57.5**	**-0.1**
CTBH	**Cotabato--PC H**	**3.10**	**293**	*e*P	**Pn**	**20 11 01.0**	**-0.6**
CTBH				*i* S	**Sn**	**20 11 38.3**	**+0.3**
BUTP	**Butuan**	**3.30**	**334**	⇑*e*P	**Pn**	**20 11 06.4**	**+1.9**
BUTP				*e*S	**Sn**	**20 11 47.2**	**+4.3**
CGP	**Cagayan de Oro**	**3.42**	**316**	⇑*i*P	**Pn**	**20 11 06.9**	**+0.9**
CGP				*i* S	**Sn**	**20 11 45.4**	**-0.4**
GLSP	**General Luna,**	**3.89**	**346**	||*e*P	**Pn**	**20 11 12.2**	**-0.1**
GLSP				*e*S	**Sn**	**20 11 55.5**	**-1.5**
PAGZ	**Pagadian**	**4.13**	**297**	⇑*e*P	**Pn**	**20 11 16.1**	**+0.5**
MSLP	**Maasin**	**4.68**	**332**	⇑*e*P	**Pn**	**20 11 23.8**	**+0.8**
MSLP				*i* S	**Sn**	**20 12 14.3**	**-1.8**
SNPH	**Sibulan**	**5.08**	**311**	⇑*e*P	**Pn**	**20 11 28.3**	**-0.2**
SNPH				*e*S	Sn	20 12 14.2	-12
ZCP	**Zamboanga City**	**5.09**	**281**	||*i*P	**Pn**	**20 11 27.9**	**-0.7**
ZCP				*i* S	**Sn**	**20 12 25.7**	**-0.5**
TNTI	**Ternate**	**5.20**	**177**	P	**Pn**	**20 11 29.7**	**-0.3**
TNTI	**Ternate**	**5.20**	**177**	P	**Pn**	**20 11 30.1**	**+0.1**
	0.4nm63nm,0.6s						
TNTI	**Ternate**	**5.20**	**177**	P	**Pn**	**20 11 31.1**	**+1.1**
LLP	**Lapu-Lapu**	**5.30**	**324**	*e*P	**Pn**	**20 11 32.7**	**+1.2**
LLP				*e*S	**Sn**	**20 12 33.2**	**+1.9**
BESP	**Borongan**	**5.81**	**344**	||*e*P	**Pn**	**20 11 36.9**	**-1.4**
BESP				*e*S	**Sn**	**20 12 39.8**	**-3.8**
CNOP	**Candoni, Negro**	**5.84**	**311**	||*e*P	**Pn**	**20 11 40.1**	**+1.4**
KMSI	**Cibinong**	**6.23**	**210**	P	**Pn**	**20 11 43.5**	**-0.5**
	0.5nm103nm,0.7s						
LBMI	**Labuha**	**6.60**	**177**	P	**Pn**	**20 11 49.2**	**+0.1**
GTOI	**Gorontalo**	**6.72**	**218**	P	**Pn**	**20 11 49.6**	**-1.0**
	0.1nm349nm32nm,0.7s						
CNP	**Catarman**	**6.91**	**340**	⇑*e*P	Pn	20 11 58.4	+5.2
CNP				*e*S	**Sn**	**20 13 04.7**	**-5.6**
RCP	**Roxas**	**7.01**	**322**	⇑*e*P	**Pn**	**20 11 56.1**	**+1.4**
MRSI	**Marisa**	**7.53**	**223**	P	**Pn**	**20 12 01.7**	**0.0**
	0.4nm1μm102nm,0.6s						
TOLI2	**Tolitoli**	**7.96**	**233**	Pn	**Pn**	**20 12 06.3**	**-1.3**
SWI	**Sorong**	**7.97**	**149**	P	**Pn**	**20 12 08.5**	**+0.8**
	2μm95nm,0.6s						
SIJI	**Sorong**	**7.98**	**149**	P	**Pn**	**20 12 09.0**	**+1.1**
	46nm,0.3s,baz=355,slow=15,SNR=14						
SIJI				S	**Sn**	**20 13 32.0**	**-4.6**
	16nm,0.3s,baz=0.0,slow=20,SNR=2.4						
SANI	**Sanana**	**8.07**	**188**	P	**Pn**	**20 12 07.7**	**-1.4**
	882nm29nm,1.2s						
SANI	**Sanana**	**8.07**	**188**	P	**Pn**	**20 12 11.1**	**+2.0**
LUWI	**Luwuk**	**8.23**	**212**	Pn	**Pn**	**20 12 10.4**	**-0.8**
LUWI	**Luwuk**	**8.23**	**212**	P	**Pn**	**20 12 12.4**	**+1.2**
	1μm66nm,0.7s						
LUWI	**Luwuk**	**8.23**	**212**	P	**Pn**	**20 12 13.3**	**+2.1**
MYLDM	**Lahad Datu**	**8.61**	**265**	Pn	**Pn**	**20 12 18.4**	**+2.1**
APSI	**Ampana**	**8.77**	**219**	P	**Pn**	**20 12 19.0**	**+0.5**
	57nm,0.8s						
MPSI	**Mapaga**	**9.13**	**232**	P	**Pn**	**20 12 23.7**	**+0.2**
	13nm,0.7s						
NLAI	**Namlea**	**9.18**	**180**	P	**Pn**	**20 12 22.2**	**-1.9**
	2μm18nm,0.6s						
FAKI	**Fak Fak**	**10.24**	**150**	Pn	**Pn**	**20 12 40.8**	**+2.3**
FAKI	**Fak Fak**	**10.24**	**150**	P	**Pn**	**20 12 39.5**	**+1.0**
	40nm,0.7s						
FAKI	**Fak Fak**	**10.24**	**150**	P	**Pn**	**20 12 39.9**	**+1.4**
KAPI	**Kappang**	**13.18**	**214**	P	**Pn**	**20 13 18.7**	**+1.0**
	5.0nm,0.7s,baz=68,slow=4.9,SNR=4.9						
SBUM	**Sibu**	**15.26**	**257**	P	**P**	**20 13 47.5**	**+0.5**
EDFI	**Ende, Flores**	**15.61**	**200**	P	**P**	**20 13 51.0**	**0.0**
	10.0nm,0.8s						
BATI	**Baumata**	**16.46**	**192**	P	**P**	**20 14 00.7**	**+0.4**
	22nm,0.8s,baz=313,slow=3.1,SNR=8.8						
KSM	**Kuching**	**17.36**	**256**		**P**	**20 14 10.2**	**0.0**
KSM	**Kuching**	**17.36**	**256**	P	**Pn**	**20 14 12.1**	**+1.7**
	20nm,0.9s						
PLAI	**Plampang**	**17.42**	**212**	P	**Pn**	**20 14 13.6**	**+2.4**
MTN	**Manton Dam**	**19.14**	**168**	P	**P**	**20 14 30.4**	**+0.7**
MTN				IAmb	IAmb	20 14 49.3	
	comp=Z,30nm,1.4s						
KDU	**Kakadu**	**19.31**	**164**	P	**Pn**	**20 14 33.4**	**-0.3**
JAGI	**Jajag, Banyuwa**	**19.33**	**222**	P	**P**	**20 14 31.3**	**-0.5**
JAGI				IAmb	IAmb	20 14 37.7	
	comp=Z,27nm,0.8s						
JAGI	**Jajag, Banyuwa**	**19.33**	**222**	P	**P**	**20 14 32.6**	**+0.8**
	comp=Z,50nm,0.8s						
JAGI	**Jajag, Banyuwa**	**19.33**	**222**	P	**Pn**	**20 14 33.6**	**-0.3**
GMJI	**Gumukmas**	**19.66**	**224**	P	**P**	**20 14 36.1**	**+0.7**
	comp=Z,46nm,1.1s						
JOW	**Kunigami**	**20.75**	**3**	P	**P**	**20 14 47.9**	**+0.9**
JOW				IAmb	IAmb	20 15 11.9	
	comp=Z,17nm,0.5s						
KNRA	**Kununurra**	**21.60**	**176**	P	**P**	**20 14 57.0**	**+0.9**
KNRA				IAmb	IAmb	20 15 28.2	
	comp=Z,18nm,0.9s						
KNRA	**Kununurra**	**21.60**	**176**	P	**P**	**20 14 57.3**	**+1.1**
LEM	**Lembang**	**23.25**	**237**	P	**P**	**20 15 14.0**	**+0.8**
	comp=Z,16nm,0.9s,baz=11,slow=14,SNR=1.9						
	comp=Z,16nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.99**	**183**	P	**P**	**20 15 19.6**	**0.0**
	comp=Z,5.1nm,0.6s,baz=6.1,slow=7.5,SNR=25						
	comp=Z,5.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.99**	**183**		**P**	**20 15 19.6**	**0.0**
JCJ	**Chichijima**	**25.42**	**33**	P	**P**	**20 15 31.9**	**-0.7**
	comp=Z,168nm,0.4s,baz=170,slow=1.1,SNR=34						
JCJ	**Chichijima**	**25.42**	**33**	P	**P**	**20 15 32.3**	**-0.3**
WB0	**Warramunga Arr**	**26.59**	**165**	P	**P**	**20 15 43.3**	**+0.1**
WRA	**Warramunga Arr**	**26.74**	**165**	P	**P**	**20 15 44.4**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=336,slow=10,SNR=26						
WRA				PcP	**PcP**	**20 19 05.8**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=332,slow=2.7,SNR=1.9						
WRA				ScP	**ScP**	**20 22 36.4**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=338,slow=3.0,SNR=12						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**26.74**	**165**	P	**P**	**20 15 44.8**	**+0.3**
WB2	**Warramunga Arr**	**26.74**	**165**	P	**P**	**20 15 44.7**	**+0.1**
NJ2	**Nanjing**	**27.05**	**344**	*e*P	**P**	**20 15 45.4**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
SISI	**Saibi**	**28.91**	**256**	P	**P**	**20 16 02.0**	**-2.0**
	comp=Z,66nm,0.6s						
ENH	**Enshi**	**29.30**	**328**	P	**P**	**20 16 07.4**	**+0.1**
ENH				IAmb	IAmb	20 16 08.7	
	comp=Z,9.8nm,0.8s						
CRAI	**Chiangrai**	**29.56**	**301**	P	**P**	**20 16 09.8**	**+0.1**
CRAI				IAmb	IAmb	20 16 11.1	
	comp=Z,8.3nm,0.9s						
GSI	**Gunungsitoli**	**29.83**	**262**	P	**P**	**20 16 09.4**	**-2.8**
	comp=Z,41nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.13**	**297**	P	**P**	**20 16 15.1**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=103,slow=7.7,SNR=7.9						
	comp=Z,1.0nm,0.7s						
AS31	**Alice Springs**	**30.22**	**168**	P	**P**	**20 16 16.0**	**+0.5**
ASAR	**Alice Springs**	**30.22**	**168**	P	**P**	**20 16 15.7**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=345,slow=7.2,SNR=34						
ASAR				PcP	**PcP**	**20 19 14.4**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=342,slow=2.0,SNR=6.6						
ASAR				ScP	**ScP**	**20 22 47.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=342,slow=2.8,SNR=7.3						
	comp=Z,1.3nm,0.4s						
KSRS	**Korea Array**	**31.32**	**1**	P	**P**	**20 16 24.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=178,slow=10,SNR=4.0						
	comp=Z,0.5nm,0.5s						
PZH	**PanZhiHua**	**31.64**	**313**	P	**P**	**20 16 29.8**	**+1.7**
XAN	**Xi'an**	**32.60**	**331**	P	**P**	**20 16 36.1**	**-0.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJI	**Beijing**	**35.29**	**345**	P	**P**	**20 17 03.5**	**+4.0**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LZH	**Lanzhou**	**36.78**	**328**	*e*P	**P**	**20 17 13.3**	**+0.9**
LZH				pP	pwP	20 17 39.3	+0.1
LZH				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC	**Hu-ho-hao-te**	**37.39**	**340**	*e*P	**P**	**20 17 20.0**	**+2.5**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
USRK	**Ussuriysk Ar.**	**38.29**	**6**	P	**P**	**20 17 25.2**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=184,slow=8.2,SNR=8.6						
	comp=Z,2.0nm,0.4s						
STKA	**Stephens Creek**	**40.12**	**161**	P	**P**	**20 17 40.7**	**+0.5**
	comp=Z,4.9nm,0.5s,baz=340,slow=6.6,SNR=9.6						
	comp=Z,4.9nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**40.98**	**67**	T	T	21 02 53.3	
	baz=254						
H11N2	**WAKE ISLAND Hy**	**40.99**	**67**	T	T	21 02 49.1	
	baz=254						
H11N3	**WAKE ISLAND Hy**	**41.00**	**67**	T	T	21 03 04.1	
	baz=254						
LSA	**Lhasa**	**41.27**	**309**	P	**P**	**20 17 49.3**	**-1.0**
LSA				IAmb	IAmb	20 17 52.2	
	comp=Z,13nm,1.5s						
GTA	**Gaotai**	**41.38**	**327**	⇑P	**P**	**20 17 51.4**	**+0.7**
GTA				pP	pP	20 18 16.0	+2.6
GTA				sP	sP	20 18 31.9	+7.2
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GOMU	**GeErMu**	**42.18**	**320**	P	**P**	**20 17 53.8**	**-3.7**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.8s	

ABKAR	**Akbulak array**	**70.65**	**320**	P	**P**	**20 21 18.5**	**-0.5**
ABKAR	**Akbulak array**	**70.65**	**320**	P	**P**	**20 21 18.6**	**-0.3**
ABKAR				IAmb	IAmb	20 21 19.3	
	comp=Z,5.0nm,0.7s						
AKTO	**Aktyubinsk**	**72.14**	**321**	P	**P**	**20 21 28.1**	**+0.2**
	comp=Z,5.3nm,0.7s,baz=98,slow=8.1,SNR=24						
	comp=Z,5.3nm,0.7s						
ARU	**Arti**	**73.24**	**327**	P	**P**	**20 21 34.0**	**-0.3**
	comp=Z,5.4nm,0.5s,baz=118,slow=4.0,SNR=14						
	comp=Z,5.4nm,0.5s						
ARU	**Arti**	**73.24**	**327**	P	**P**	**20 21 33.3**	**-1.0**
ARU				IAmb	IAmb	20 21 34.5	
	comp=Z,6.7nm,0.6s						
BELG	**Belogornoye**	**78.86**	**322**	P	**P**	**20 22 05.8**	**-0.3**
	comp=Z,19nm,0.9s,baz=111,slow=10,SNR=12						
	comp=Z,19nm,0.9s						
RAYN	**Ar Rayn**	**79.95**	**293**	P	**P**	**20 22 11.9**	**-0.9**
RAYN				IAmb	IAmb	20 22 13.1	
	comp=Z,9.2nm,0.6s						
KARS	**Kars**	**81.60**	**310**	P	**P**	**20 22 22.3**	**+0.9**
KBZ	**Khabaz**	**81.71**	**313**	P	**P**	**20 22 22.0**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=168,slow=4.8,SNR=3.9						
	comp=Z,1.5nm,0.6s						
GURO	**Guroymak-BITLI**	**82.45**	**308**	P	**P**	**20 22 26.5**	**+0.6**
GURO				IAmb	IAmb	20 22 27.9	
	comp=Z,11nm,0.9s						
ILAR	**Eielson Array**	**82.91**	**26**	P	**P**	**20 22 27.1**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=245,slow=5.2,SNR=11						
	comp=Z,0.8nm,0.5s						
VOI	**Vohitsoka**	**83.29**	**247**	P	**P**	**20 22 31.0**	**+0.5**
VOI				IAmb	IAmb	20 22 31.2	
	comp=Z,10nm,0.7s						
MARD	**Mardin**	**83.49**	**307**	P	**P**	**20 22 31.7**	**+0.4**
MARD				IAmb	IAmb	20 22 32.8	
	comp=Z,8.8nm,1.0s						
BMAR	**Burnt Mountain**	**83.85**	**23**	P	**P**	**20 22 33.3**	**+0.9**
VNDA	**Vanda**	**85.61**	**173**	P	**P**	**20 22 41.2**	**+0.3**
	comp=Z,1.0nm,1.0s,baz=316,slow=7.4,SNR=4.0						
	comp=Z,1.0nm,1.0s						
MAW	**Mawson**	**86.00**	**200**	P	**P**	**20 22 43.5**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=75,slow=4.0,SNR=2.8						
	comp=Z,1.2nm,0.6s						
BNN	**Bunyan**	**87.27**	**309**	P	**P**	**20 22 50.0**	**0.0**
ARA0	**ARCESS Array S**	**88.47**	**340**	*e*P	**P**	**20 22 54.5**	**-0.4**
ARCES	**ARCESS Array B**	**88.47**	**340**	P	**P**	**20 22 53.3**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=83,slow=6.1,SNR=19						
	comp=Z,0.8nm,0.4s						
HAMF	**Hammerfest**	**88.81**	**341**	*e*P	**P**	**20 22 58.8**	**+2.4**
KBS	**Kingsbay**	**88.85**	**350**	*e*P	**P**	**20 22 56.8**	**+0.2**
BRTR	**Keskin Array B**	**88.88**	**310**	P	**P**	**20 22 56.6**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=106,slow=3.8,SNR=7.3						
	comp=Z,1.1nm,0.7s						
BRTR	**Keskin Array B**	**88.88**	**310**	P	**P**	**20 22 56.3**	**-1.3**
FINES	**FINESS Array B**	**90.03**	**332**	P	**P**	**20 23 00.9**	**-1.4**
	comp=Z,1.9nm,0.5s,baz=72,slow=6.2,SNR=16						
	comp=Z,1.9nm,0.5s						
AKASG	**Malin Array Be**	**90.38**	**321**	P	**P**	**20 23 03.1**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=65,slow=5.1,SNR=2.5						
	comp=Z,0.7nm,0.5s						
TRO	**Tromso**	**90.66**	**341**	*e*P	**P**	**20 23 07.8**	**+2.7**
STEI	**Steigen**	**92.52**	**339**	*e*P	**P**	**20 23 14.6**	**+0.9**
NB2	**NORSAR Subarra**	**96.94**	**334**	P	**P**	**20 23 35.7**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=65,slow=4.6						
NB2	**NORSAR Subarra**	**96.94**	**334**	P	**P**	**20 23 35.7**	**+1.5**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**96.94**	**334**	P	**P**	**20 23 35.2**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=67,slow=4.5,SNR=3.8						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**122.55**	**290**	PKP	**PKPdf**	**20 28 58.2**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=60,slow=2.0,SNR=19						

DJA 18 21:03:36.2±0.3, 9°S±5′×11°6E±°, h10km, M3.8/13, mb4.2/4, MLv3.6/13, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.69**	**274**	P	Pg	21 03 49.9	+0.3
SRBI	**Singaraja**	**0.94**	**313**	P	Pb	21 03 54.5	-0.1
TWSI	**Taliwang, Sumb**	**0.96**	**91**	P	Pg	21 03 54.1	-0.6
JAGI	**Jajag, Banyuwa**	**1.76**	**278**	P	Pn	21 04 06.7	0.0
PLAI	**Plampang**	**1.85**	**93**	P	Pb	21 04 09.3	-0.8
ABJI	**Asem Bagus**	**1.90**	**299**	P	Pn	21 04 09.2	+0.5
GMJI	**Gumukmas**	**2.48**	**280**	P	Pn	21 04 17.0	+0.3
BLJI	**Banyuglugur**	**2.49**	**293**	P	Pn	21 04 16.7	-0.1
WBSI	**Waikabubak, Su**	**3.55**	**105**	P	Pn	21 04 31.1	-0.4
PWJI	**Pagerwojo**	**4.12**	**280**	P	Pn	21 04 39.0	-0.3
PCJI	**Pacitan**	**4.71**	**276**	P	Pn	21 04 47.0	-0.4
BSSI	**Bau Bau, Buton**	**5.22**	**61**	P	Pn	21 04 54.3	-0.1
	0.1nm14nm,0.5s						
BKSI	**Bulukumba**	**5.38**	**51**	P	Pn	21 04 56.4	-0.2
	0.1nm16nm,0.6s						
UGM	**Wanagama**	**5.39**	**278**	P	Pn	21 04 57.4	+0.6
	1.0nm177nm,1.6s						

*SOME **18** 21:40:37.1,41.2°20N×83.2°10E, h0km*
*NNC **18** 21:40:38.4±1.5,41.2°16N×83.2°11E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=11.1km s-min=7.3km az=142.0*
ISC 18 21:40:40.7±2.4, 41°3N±0.1′×83°01E±0.08, h10km, n26, σ2s89/39, 7C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.24**	**307**	*e*P	**Pb**	**21 41 36.4**	**-2.0**
	12nm,0.7s						
SHLS				*e*S	**Sb**	**21 42 19.0**	**+1.0**
	31nm,0.6s						
SHLS	**Shalkode**	**3.24**	**307**	Pg	**Pb**	**21 41 36.4**	**-2.0**
	12nm,0.7s						
SHLS				Lg	Lg	21 42 19.0	
	31nm,0.6s						
SATY	**Saty**	**3.86**	**299**	*e*P	**Pg**	**21 41 53.0**	**-1.7**
	8.8nm,0.4s						
SATY				*e*S	**Sg**	**21 42 47.3**	**+2.6**
	20nm,0.7s						
SATY	**Saty**	**3.86**	**299**	Pg	**Pg**	**21 41 53.0**	**-1.7**
	8.8nm,0.4s						
DJR	**Jarkent**	**3.88**	**323**	*e*P	**Pb**	**21 41 51.7**	**+2.5**
	2.7nm,0.3s						
DJR				*e*S	**Sg**	**21 42 44.9**	**-0.2**
	6.7nm,0.4s						
DJR	**Jarkent**	**3.88**	**323**	Pg	**Pb**	**21 41 51.7**	**+2.5**
	2.7nm,0.3s						
DJR				Lg	Lg	21 42 44.9	
	6.7nm,0.4s						
KPKS	**Kokpek**	**3.89**	**306**	*e*P	**Pg**	**21 41 52.3**	**-2.8**
KURS	**Kuram**	**4.22**	**303**	*e*P	**Pg**	**21 41 58.5**	**-3.0**
	3.9nm,1.1s						
KURS				*e*S	**Sg**	**21 42 57.0**	**+0.9**
	18nm,1.0s						
KURS	**Kuram**	**4.22**	**303**	Pg	**Pg**	**21 41 58.5**	**-3.0**
	3.9nm,1.1s						
KURS				Lg	Lg	21 42 57.0	
	18nm,1.0s						
BLB	**Baldybastay**	**4.38**	**312**	*e*P	**Pg**	**21 42 01.6**	**-2.9**
	6.1nm,0.5s						
BLB				*e*S	**Sg**	**21 43 02.7**	**+1.4**
	13nm,0.5s						
BLB	**Baldybastay**	**4.38**	**312**	Pg	**Pg**	**21 42 01.6**	**-2.9**
	6.1nm,0.5s						
BLB				Lg	Lg	21 43 02.7	
	13nm,0.5s						
MDOK	**Medeo**	**4.82**	**295**	Pn	**Pn**	**21 41 53.5**	**+0.1**
	1.7nm,0.4s						
MDOK				Pg	**Pb**	**21 42 07.5**	**+2.2**
	3.3nm,0.6s						
MDOK				Lg	Lg	21 43 11.6	
	13nm,0.9s						
ARXS	**Arharly**	**4.82**	**309**	*e*P	**Pg**	**21 42 09.9**	**-3.1**
	4.0nm,0.5s						
ARXS				*e*S	**Sg**	**21 43 16.6**	**+1.2**
	6.7nm,0.8s						
ARXS	**Arharly**	**4.82**	**309**	Pg	**Pg**	**21 42 09.9**	**-3.1**
	4.0nm,0.5s						
ARXS				Lg	Lg	21 43 16.6	
	6.7nm,0.8s						
KTBS	**Karatobe**	**5.28**	**300**	*e*P	**Pg**	**21 42 17.5**	**-4.3**
	1.7nm,0.5s						
KTBS				*e*S	**Sg**	**21 43 29.0**	**-1.1**
	6.0nm,0.4s						
KTBS	**Karatobe**	**5.28**	**300**	Pg	**Pg**	**21 42 17.5**	**-4.3**
	1.7nm,0.5s						
KTBS				Lg	Lg	21 43 29.0	
	6.0nm,0.4s						
KST	**Kastek**	**5.53**	**291**	*e*P	**Pb**	**21 42 21.2**	**+3.8**
	1.8nm,0.3s						
KST				*e*S	**Sg**	**21 43 35.4**	**-2.8**
	11nm,0.7s						
KST	**Kastek**	**5.53**	**291**	Pg	**Pb**	**21 42 21.2**	**+3.8**
	1.8nm,0.3s						
KST				Lg	Lg	21 43 35.4	
	11nm,0.7s						
MK31	**Makanchi Array**	**5.55**	**355**	⇑Pn	**Pn**	**21 42 03.6**	**+0.2**
	0.1nm,0.2s,baz=46,slow=25,SNR=11						
MK31				⇓Pg	**Pg**	**21 42 22.5**	**-4.5**
	0.3nm,0.3s,baz=180,slow=12,SNR=4.0						
MK31				Sn	**Sn**	**21 43 11.7**	**+4.4**
	1.1nm,0.5s,baz=154,slow=24,SNR=5.0						
MK31				⇓Lg	Lg	21 43 39.1	
	4.0nm,0.7s,baz=174,slow=28,SNR=4.2						
MAKZ	**Makanchi**	**5.59**	**353**	⇓Pn	**Pn**	**21 42 03.4**	**-0.6**
	0.6nm,0.7s						
MAKZ				⇓Sn	**Sn**	**21 43 09.7**	**+1.5**
	2.1nm,1.1s						
MAKZ				⇑Lg	Lg	21 43 43.1	
	4.7nm,1.1s						
DGS	**Degeres**	**5.72**	**293**	*e*P	**Pb**	**21 42 23.6**	**+2.9**
	1.2nm,0.2s						
DGS				*e*S	**Sg**	**21 43 39.9**	**-4.4**
	9.3nm,0.3s						
TKM2	**Tokmak 2**	**5.76**	**289**	⇑Pn	**Pn**	**21 42 06.8**	**+0.4**
	1.1nm,0.5s						
TKM2				⇑Pg	**Pb**	**21 42 23.8**	**+2.4**
	3.4nm,0.8s						
TKM2				⇑Lg	Lg	21 43 42.6	
	5.1nm,0.7s						
KRBS	**Karabastau**	**5.94**	**297**	*e*P	**Pb**	**21 42 28.6**	**+4.3**
	0.8nm,0.4s						
KRBS				*e*S	**Sg**	**21 43 48.6**	**-2.7**
	2.9nm,0.5s						
KRBS	**Karabastau**	**5.94**	**297**	Pg	**Pb**	**21 42 28.6**	**+4.3**
	0.8nm,0.4s						
KRBS				Lg	Lg	21 43 48.6	
	2.9nm,0.5s						
KURBB	**Kurchatov Arra**	**9.87**	**343**	⇑Lg	Lg	21 45 55.2	
	3.3nm,0.8s						
KURK	**Kurchatov**	**9.93**	**344**	⇑Lg	Lg	21 45 57.2	
	2.4nm,0.9s						

DJA 18 22:09:42.4±0.9, 10°S±9′×11°3E±°, h10km, M3.9/12, mb4.2/1, MLv3.8/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.57**	**27**	P	Pn	22 10 09.0	-1.4
JAGI	**Jajag, Banyuwa**	**1.86**	**50**	P	Pn	22 10 14.0	-0.4
PWJI	**Pagerwojo**	**1.88**	**331**	P	Pn	22 10 14.2	-0.3
BLJI	**Banyuglugur**	**2.11**	**25**	P	Pn	22 10 17.8	0.0
PCJI	**Pacitan**	**2.12**	**314**	P	Pn	22 10 17.4	-0.4
ABJI	**Asem Bagus**	**2.40**	**39**	P	Pn	22 10 22.9	+1.1
NGJI	**Ngawi**	**2.61**	**332**	P	Pn	22 10 24.6	0.0
DNP	**Denpasar**	**2.66**	**68**	P	Pn	22 10 26.9	+1.5
UGM	**Wanagama**	**2.79**	**309**	P	Pn	22 10 28.0	+0.9
KMMI	**Kalianget**	**2.89**	**26**	P	Pn	22 10 27.8	-0.8
SRBI	**Singaraja**	**2.94**	**58**	P	Pn	22 10 30.0	+0.8
TWSI	**Taliwang, Sumb**	**4.22**	**78**	P	Pn	22 10 46.4	-0.5
PLAI	**Plampang**	**5.07**	**81**	P	Pn	22 10 57.0	-1.6

*IDC **18** 22:16:46.4±2.9, 24.2°24S×178.2°63W, h319km±25km, mb3.5/4, mbtmp4.4/6, Error ellipse: s-maj=37.2km s-min=21.7km az=144.0*
*NEIC **18** 22:16:51.9±2.2, 24.3°3S×178.4°4W±0.1, h392km±11km, mb4.6/35, Error ellipse: s-maj=19.9km s-min=13.5km az=119.0*
*NOU **18** 22:18:13.8, 18.9°98S×173.2°82W, h119km, MLv4.5/8, Tonga Islands*
ISC 18 22:16:49.0±0.5, 24°24S±0.06×178°54W±0.08, h350km, n80, σ1s76/85, mb4.6/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.02**	**174**	S	**S**	**22 19 21.0**	**+7.8**
GLKZ	**Green Lake**	**5.04**	**174**	S	**S**	**22 19 16.2**	**+2.7**
NIUE	**Niue**	**9.51**	**59**		**P**	**22 19 04.8**	**+1.8**
NIUE					**S**	**22 20 51.7**	**+2.2**
NIUE	**Niue**	**9.51**	**59**	P	P	22 19 09.2	+6.1
AFI	**Afiamalu**	**12.10**	**33**	P	**P**	**22 19 31.3**	**-0.6**
	23nm,0.4s,baz=147,slow=2.2,SNR=10						
AFI				S	S	22 21 36.4	-10
	7.7nm,0.2s,baz=348,slow=23,SNR=1.6						
AFI	**Afiamalu**	**12.10**	**33**	P	**P**	**22 19 32.3**	**+0.4**
AFI	**Afiamalu**	**12.10**	**33**	S	**S**	**22 19 32.1**	**+0.2**
MARNC	**Mare, Loyalty**	**12.68**	**280**	P	**Pn**	**22 19 40.7**	**+1.8**
PINNC	**Pines Island,**	**12.97**	**274**	P	**Pn**	**22 19 44.5**	**+2.3**
KUZ	**Kuaotunu**	**13.41**	**200**	P	**Pn**	**22 19 49.0**	**+1.8**
MXZ	**Matakaoa Point**	**13.55**	**191**	P	**Pn**	**22 19 48.8**	**-0.1**
MXZ	**Matakaoa Point**	**13.55**	**191**	P	**Pn**	**22 19 49.7**	**+0.7**
HAZ	**Te Kaha**	**13.84**	**192**	P	**P**	**22 19 50.7**	**-0.1**
HAZ				S	**S**	**22 22 17.6**	**-3.8**
PKGZ	**Pakihiroa**	**13.91**	**191**	P	**P**	**22 19 51.9**	**+0.3**
MKAZ	**Moumakai**	**13.92**	**201**	P	**Pn**	**22 19 55.0**	**+1.9**
DZM	**Mont Dzumac**	**13.98**	**276**	P	**Pn**	**22 19 55.3**	**+1.0**
	5.6nm,0.7s,baz=79,slow=19,SNR=1.5						
DZM	**Mont Dzumac**	**13.98**	**276**	P	**Pn**	**22 19 57.7**	**+3.5**
RUGZ	**Raukumara Rang**	**14.06**	**192**	P	**Pn**	**22 19 54.6**	**-0.3**
RUGZ				S	**S**	**22 22 20.3**	**-5.9**
TWGZ	**Tauwhareparae**	**14.21**	**191**	P	**Pn**	**22 19 56.3**	**-0.4**
TOZ	**Tahuroa Road**	**14.38**	**199**	P	**Pn**	**22 19 60.0**	**+1.4**
URZ	**Urewera**	**14.46**	**194**	P	**P**	**22 19 56.5**	**-1.1**
	10nm,0.3s,baz=281,slow=2.8,SNR=30						
URZ				S	**S**	**22 22 30.5**	**-3.5**
	9.4nm,0.5s,baz=63,slow=22,SNR=12						
URZ	**Urewera**	**14.46**	**194**	P	**P**	**22 19 58.0**	**+0.4**
URZ	**Urewera**	**14.46**	**194**	P	**P**	**22 19 57.2**	**-0.4**
MUGZ	**Murupara**	**14.75**	**195**	P	**Pn**	**22 20 02.2**	**-0.6**
SNGZ	**Shannon Statio**	**14.92**	**193**	P	**Pn**	**22 20 04.3**	**-0.5**
HIZ	**Hauiti**	**15.30**	**200**	P	**Pn**	**22 20 09.2**	**0.0**
BKZ	**Black Stump Fm**	**15.47**	**195**	P	**P**	**22 20 08.9**	**+0.3**
BFZ	**Birch Farm**	**16.97**	**194**	P	**P**	**22 20 24.3**	**-0.5**
BFZ				IAmb	IAmb	22 20 42.7	
	comp=Z,67nm,1.4s						
MSWZ	**Moikau Station**	**17.90**	**195**	P	**P**	**22 20 33.5**	**-1.3**
SNZO	**South Karori**	**17.94**	**197**	P	**P**	**22 20 35.3**	**+0.2**
SNZO				IAmb	IAmb	22 21 06.9	
	comp=Z,31nm,1.0s						
PLWZ	**Palliser**	**18.04**	**195**	P	**P**	**22 20 35.0**	**-1.3**
QRZ	**Quartz Range**	**18.16**	**202**	P	**P**	**22 20 37.8**	**+0.3**
NNZ	**Nelson**	**18.23**	**200**	P	**P**	**22 20 37.1**	**-1.2**
TUWZ	**Tuamarina**	**18.26**	**198**	P	**P**	**22 20 36.2**	**-2.4**
CMWZ	**Cape Campbell**	**18.48**	**197**	P	**P**	**22 20 42.0**	**+1.2**
BSWZ	**Blackbirch Sta**	**18.54**	**198**	P	**P**	**22 20 40.1**	**-1.5**
THZ	**Tophouse**	**18.87**	**200**	P	**P**	**22 20 44.4**	**-0.7**
THZ				IAmb	IAmb	22 21 15.1	
	comp=Z,22nm,1.2s						
KHZ	**Kahutara**	**19.28**	**198**	P	**P**	**22 20 49.1**	**-0.3**
KHZ				IAmb	IAmb	22 21 06.7	
	comp=Z,31nm,1.4s						
LTZ	**Lake Taylor**	**20.00**	**200**	P	**P**	**22 20 56.2**	**-0.6**
LTZ				IAmb	IAmb	22 21 03.2	
	comp=Z,20nm,1.1s						
OXZ	**Oxford**	**20.56**	**200**	P	**P**	**22 21 02.3**	**+0.3**
OXZ				IAmb	IAmb	22 21 09.0	
	comp=Z,25nm,1.3s						
MQZ	**McQueen's Vall**	**20.72**	**198**	P	**P**	**22 21 04.3**	**+0.9**
LHI	**Lord Howe Isla**	**21.06**	**245**	P	**P**	**22 21 07.6**	**+0.9**
RPZ	**Rata Peaks**	**21.23**	**201**	P	**P**	**22 21 08.2**	**+0.2**
RPZ				IAmb	IAmb	22 21 33.9	
	comp=Z,25nm,1.2s						
FOZ	**Fox Glacier**	**21.50**	**204**	P	**P**	**22 21 11.0**	**+0.6**
FOZ				IAmb	IAmb	22 21 39.3	
	comp=Z,45nm,1.2s						
MLZ	**Mavora Lakes**	**23.70**	**204**	P	**P**	**22 21 32.0**	**+1.6**
MLZ				IAmb	IAmb	22 21 48.4	
	comp=Z,47nm,1.5s						
WHZ	**Wether Hill Ro**	**24.21**	**203**	P	**P**	**22 21 33.8**	**-1.2**
WHZ				IAmb	IAmb	22 21 47.0	
	comp=Z,44nm,1.4s						
ARMA	**Armidale**	**27.16**	**250**	P	**P**	**22 22 03.2**	**+1.5**
ARMA				IAmb	IAmb	22 22 29.5	
	comp=Z,12nm,1.2s						
CTAO	**Charters Tower**	**32.81**	**270**	P	**P**	**22 22 51.6**	**+0.5**
CTAO				IAmb	IAmb	22 23 28.9	
	comp=Z,27nm,1.4s						
STKA	**Stephens Creek**	**35.84**	**249**	P	**P**	**22 23 15.8**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=60,slow=8.1,SNR=5.7						
	comp=Z,1.5nm,0.4s						
STKA	**Stephens Creek**	**35.84**	**249**	P	**P**	**22 23 17.2**	**+0.4**
BBOO	**Buckleboo**	**40.54**	**247**	P	**P**	**22 23 55.3**	**-0.2**
BBOO				IAmb	IAmb	22 24 32.5	
	comp=Z,61nm,1.4s						
AS31	**Alice Springs**	**43.30**	**261**	P	**P**	**22 24 18.1**	**+0.3**
ASAR	**Alice Springs**	**43.30**	**261**	P	**P**	**22 24 17.3**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=92,slow=6.3,SNR=23						
ASAR				PcP	**PcP**	**22 25 59.7**	**0.0**
	comp=Z,0.5nm,0.7s,baz=107,slow=4.1,SNR=2.6						
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**43.30**	**261**	P	**P**	**22 24 17.8**	**0.0**
WR0	**Warramunga Arr**	**43.53**	**266**	P	**P**	**22 24 18.9**	**-0.7**
WB2	**Warramunga Arr**	**43.70**	**266**	P	**P**	**22 24 20.3**	**-0.7**
WRAB	**Tennant Creek**	**43.71**	**266**	P	**P**	**22 24 20.2**	**-0.8**
WB0	**Warramunga Arr**	**43.71**	**266**	P	**P**	**22 24 20.4**	**-0.7**
WRA	**Warramunga Arr**	**43.72**	**266**	P	**P**	**22 24 20.2**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=102,slow=7.9,SNR=86						
WRA				PcP	**PcP**	**22 26 01.7**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=97,slow=6.4,SNR=2.5						
WRA				ScP	**ScP**	**22 29 22.8**	**+4.1**
	comp=Z,0.4nm,0.7s,baz=91,slow=4.1,SNR=2.3						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**43.72**	**266**	P	**P**	**22 24 20.1**	**-0.9**
FORT	**Forrest**	**47.45**	**250**	P	**P**	**22 24 48.1**	**-1.7**
FORT				IAmb	IAmb	22 24 48.6	
	comp=Z,40nm,1.0s						
KNRA	**Kununurra**	**50.02**	**269**	P	**P**	**22 25 09.7**	**+0.3**
KNRA				IAmb	IAmb	22 25 10.6	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.13**	**265**	P	**P**	**22 25 25.1**	**+0.1**
PSA00	**Pilbara Seismi**	**56.41**	**259**	P	**P**	**22 25 54.0**	**-1.5**
PSA00				IAmb	IAmb	22 26 26.0	
	comp=Z,54nm,1.4s						
MBWA	**Marble Bar**	**56.63**	**260**	P	**P**	**22 25 56.4**	**-0.6**
MBWA				IAmb	IAmb	22 25 58.2	
	comp=Z,43nm,1.4s						
MORW	**Morawa**	**58.01**	**250**	P	**P**	**22 26 06.0**	**-0.6**
MORW				IAmb	IAmb	22 26 24.3	
	comp=Z,32nm,1.4s						
SMY	**Shemya**	**76.91**	**355**	P	**P**	**22 28 03.7**	**+0.7**
TKX	**Tecate**	**81.72**	**49**	P	**P**	**22 28 28.4**	**-0.9**
CHIR	**Chirikof Islan**	**82.09**	**13**	P	**P**	**22 28 28.0**	**-2.6**
CMAR	**Chiang Mai Arr**	**90.89**	**290**	P	**P**	**22 29 14.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=140,slow=4.7,SNR=1.5						
	comp=Z,0.2nm,0.3s						
YNR	**Norris Junctio**	**92.35**	**41**	P	**P**	**22 29 17.6**	**-2.9**
YNR				IAmb	IAmb	22 29 18.2	
	comp=Z,7.3nm,0.8s						
ARCES	**ARCESS Array B**	**132.48**	**349**	PKP	**PKPdf**	**22 35 22.0**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=45,slow=1.7,SNR=8.9						
FINES	**FINESS Array B**	**139.18**	**342**	PKhKP	PKPpre	22 35 26.6	
	comp=Z,5.9nm,1.2s,baz=16,slow=2.0,SNR=2.5						
FINES				PKP	**PKPdf**	**22 35 34.4**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=23,slow=1.8,SNR=1.1						
NB2	**NORSAR Subarra**	**142.61**	**352**	PKP	**PKPdf**	**22 35 37.1**	**-3.1**
	comp=Z,0.2nm,0.5s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**142.61**	**352**	PKhKP	PKPpre	22 35 36.7	
	comp=Z,0.5nm,0.6s,baz=8.6,slow=2.3,SNR=4.7						
AKASG	**Malin Array Be**	**145.97**	**328**	PKPbc	**PKPbc**	**22 35 47.9**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=44,slow=4.3,SNR=10						
BRTR	**Keskin Array B**	**148.84**	**307**	PKPbc	**PKPbc**	**22 35 55.1**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=145,slow=4.5,SNR=5.7						
CLL	**Collm**	**151.55**	**345**	*i* PKPbc	**PKiKP**	**22 36 03.4**	**+1.3**
CLL	comp=Z,3.0nm,0.7s			*i* PKPbc(2)		22 36 06.0	
	comp=Z,3.0nm,0.6s						
GERES	**GERESS Array B**	**153.61**	**342**	PKPbc	**PKiKP**	**22 36 07.5**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=48,slow=1.5,SNR=2.1						
TORD	**Torodi Ar. Bea**	**168.97**	**181**	PKPab	**PKPab**	**22 37 28.5**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=179,slow=3.7,SNR=1.4						

*NNC **18** 22:40:15.1±0.6, 44.6°56N×79.6°34E, h0km, mb2.6, mpv2.6, Error ellipse: s-maj=5.7km s-min=4.2km az=164.0*
*SOME **18** 22:40:16.6, 44.8°48N×79.7°40E, h15km*
ISC 18 22:40:16.9±1.0, 44°50N±0.05×79°37E±0.03, h15km±7km, n22, σ0s66/39, 2C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNOS	**Konyrlen**	**0.20**	**223**	*e*P	**Pg**	**22 40 21.9**	**+0.2**
	27nm,0.1s						
KNOS				*e*S	**Sg**	**22 40 25.6**	**+0.8**
	118nm,0.2s						
DJR	**Jarkent**	**0.35**	**119**	*e*P	**Pg**	**22 40 23.6**	**-0.5**
	38nm,0.1s						
DJR				*e*S	**Sg**	**22 40 28.4**	**-0.7**
	126nm,0.1s						
DJR	**Jarkent**	**0.35**	**119**	P	**Pg**	**22 40 23.6**	**-0.5**
	38nm,0.1s						
DJR				S	**Sg**	**22 40 28.3**	**-0.7**
	63nm,0.1s						
BLB	**Baldybastay**	**0.76**	**238**	*e*P	**Pb**	**22 40 31.4**	**-0.5**
	9.7nm,0.1s						
BLB				*e*S	**Sb**	**22 40 41.9**	**-0.2**
	31nm,0.2s						
ARXS	**Arharly**	**1.14**	**256**	*e*P	**Pn**	**22 40 38.0**	**-0.4**
	2.5nm,0.1s						
ARXS				*e*S	**Sn**	**22 40 53.5**	**-0.4**
	44nm,0.2s						
ARXS	**Arharly**	**1.14**	**256

0.1nm,0.2s,baz=223,slow=30,SNR=3.7

IDC 18 22:43:26.0±5.8,4°73'×153°30E,h64km±43km, mb3.3/3, mbtmp3.6/3, Error ellipse: s-maj=52.1km s-min=46.5km az=74.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.34**	**288**	P	Pn	22 43 48.0	-0.6
	143nm,0.4s,baz=299,slow=0.9,SNR=10						
KRVT				S	Sn	22 44 05.6	-0.1
	180nm,0.4s,baz=154,slow=20,SNR=10						
WRA	**Warramunga Arr**	**23.86**	**229**	P	P	22 48 34.5	+0.7
	0.8nm,0.6s,baz=65,slow=8.2,SNR=21						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**26.54**	**223**	P	P	22 48 58.5	+0.5
	0.3nm,0.6s,baz=50,slow=8.7,SNR=1.9						
	0.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**30.13**	**242**	P	P	22 49 29.7	-0.4
	0.7nm,0.3s,baz=79,slow=10,SNR=8.0						
	0.7nm,0.3s						
TORD	**Torodi Ar. Bea**	**150.76**	**289**	PKPbc	PKPbc	23 03 11.7	-0.5
	0.3nm,0.7s,baz=64,slow=3.9,SNR=2.2						

*IDC **18** 22:44:08.3±2.2, 18°.66N×145°.53E, h210km±20km, mb3.6/21, mbtmp4.1/24, MS3.5/1, Error ellipse: s-maj=17.2km s-min=8.9km az=84.0*
*NEIC **18** 22:44:08.2±2.1, 18°.63N±0°.08×145°.8E±0°.1, h204km±7km, mb4.4/43, Error ellipse: s-maj=15.7km s-min=11.1km az=78.0*

ISC 18 22:44:07.2±0.4, 18°.66N±0°.05×145°.75E±0°.09, h200km, n95, σ1$26/96, mb4.2/46, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.11**	**190**	P	**Pn**	**22 45 24.0**	**+0.9**
	45nm,0.4s,baz=180,slow=19,SNR=2.1						
GUMO				S	**Sn**	**22 46 20.9**	**-2.1**
	81nm,0.3s,baz=189,slow=23,SNR=2.5						
GUMO	**Guam**	**5.11**	**190**	Pn	**Pn**	**22 45 23.8**	**+0.7**
GUMO				Sn	**Sn**	**22 46 23.8**	**+0.8**
JCJ	**Chichijima**	**9.02**	**339**	P	**Pn**	**22 46 13.2**	**-0.4**
	51nm,0.8s,baz=308,slow=22,SNR=1.6						
JCJ				S	**Sn**	**22 47 51.2**	**-3.5**
	30nm,0.5s,baz=270,slow=22,SNR=1.2						
JMZ	**Minamidaito 2**	**15.21**	**301**	P	**Pn**	**22 47 33.1**	**+1.1**
MJAR	**Matsushiro Arr**	**19.01**	**341**	P	**P**	**22 48 13.4**	**-0.5**
	0.7nm,0.5s,baz=159,slow=10,SNR=1.7						
JMM	**Marumori**	**19.62**	**348**	P	**P**	**22 48 21.6**	**+1.1**
H11S3	**WAKE ISLAND Hy**	**19.85**	**87**	T	T	23 09 30.5	
	baz=275,slow=74,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**19.86**	**87**	T	T	23 09 31.0	
	baz=275,slow=74,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**19.87**	**87**	T	T	23 09 31.4	
	baz=275,slow=74,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**20.00**	**84**	T	T	23 10 13.9	
	baz=269,slow=74						
H11N2	**WAKE ISLAND Hy**	**20.00**	**83**	T	T	23 09 54.1	
	baz=269						
H11N3	**WAKE ISLAND Hy**	**20.01**	**84**	T	T	23 09 56.2	
	baz=269,slow=74						
YULB	**Yu-li**	**23.29**	**286**	P	**P**	**22 48 57.0**	**-0.4**
YULB				IAmb	IAmb	22 49 02.8	
	comp=Z,11nm,1.1s						
YHNB	**Yeheng**	**23.41**	**289**	P	**P**	**22 48 57.6**	**-0.9**
YHNB				IAmb	IAmb	22 49 12.4	
	comp=Z,13nm,1.1s						
TWG	**Pinlang**	**23.44**	**284**	P	**P**	**22 49 02.5**	**+3.9**
KSRS	**Korea Array**	**24.38**	**324**	P	**P**	**22 49 06.1**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=149,slow=8.8,SNR=2.1						
KSRS				pP	**pP**	**22 49 46.7**	**+2.2**
	comp=Z,0.7nm,0.5s,baz=144,slow=8.6,SNR=2.0						
	comp=Z,0.7nm,0.5s						
FAKI	**Fak Fak**	**25.23**	**213**	P	**P**	**22 49 15.4**	**+0.5**
MYLDM	**Lahad Datu**	**29.77**	**247**	P	**P**	**22 49 57.1**	**+1.7**
KKM	**Kota Kinabalu**	**31.39**	**250**	P	**P**	**22 50 10.5**	**+0.8**
KKM				IAmb	IAmb	22 50 48.6	
	comp=Z,14nm,1.0s						
COEN	**Coen**	**32.51**	**185**	P	**P**	**22 50 19.0**	**-0.3**
COEN				IAmb	IAmb	22 50 58.2	
	comp=Z,18nm,1.1s						
KLR	**Kul'dur**	**32.52**	**343**	P	**P**	**22 50 19.0**	**0.0**
	comp=Z,2.2nm,0.5s,baz=162,slow=6.7,SNR=6.0						
	comp=Z,2.2nm,0.5s						
SBUM	**Sibu**	**36.57**	**248**	P	**P**	**22 50 55.1**	**+0.9**
KNRA	**Kununurra**	**38.00**	**207**	P	**P**	**22 51 06.3**	**+0.2**
KNRA				IAmb	IAmb	22 51 07.3	
	comp=Z,20nm,1.4s						
WB0	**Warramunga Arr**	**39.78**	**197**	P	**P**	**22 51 21.2**	**+0.3**
WB0				IAmb	IAmb	22 51 21.7	
	comp=Z,8.0nm,0.5s						
WR0	**Warramunga Arr**	**39.92**	**197**	P	**P**	**22 51 21.7**	**-0.4**
WR0				IAmb	IAmb	22 51 24.0	
	comp=Z,16nm,1.4s						
WB2	**Warramunga Arr**	**39.96**	**197**	P	**P**	**22 51 22.4**	**+0.1**
WB2				IAmb	IAmb	22 51 26.5	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**39.96**	**197**	P	**P**	**22 51 22.2**	**-0.2**
	comp=Z,3.7nm,0.3s,baz=15,slow=8.9,SNR=87						
WRA				PcP	**PcP**	**22 53 22.8**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=15,slow=3.4,SNR=6.5						
WRA				LR	LR	23 07 47.8	
	comp=Z,62nm,18.1s,baz=240,slow=36						
	comp=Z,3.7nm,0.3s						
WRA	**Warramunga Arr**	**39.96**	**197**	P	**P**	**22 51 21.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**41.53**	**210**	P	**P**	**22 51 34.9**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=33,slow=7.1,SNR=33						
	comp=Z,2.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**41.53**	**210**	P	**P**	**22 51 35.1**	**-0.1**
SONM	**Songino Array**	**43.20**	**321**	P	**P**	**22 51 48.6**	**0.0**
	comp=Z,0.8nm,0.7s,baz=126,slow=5.9,SNR=4.6						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**43.63**	**196**	P	**P**	**22 51 51.7**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=12,slow=6.3,SNR=12						
ASAR				PcP	**PcP**	**22 53 35.3**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=27,slow=5.1,SNR=4.2						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**44.27**	**278**	P	**P**	**22 51 55.5**	**-1.8**
	comp=Z,1.1nm,0.4s,baz=70,slow=7.9,SNR=2.1						
	comp=Z,1.1nm,0.4s						
DZM	**Mont Dzumac**	**45.26**	**153**	P	**P**	**22 52 05.3**	**+0.2**
	comp=Z,7.9nm,0.5s,baz=192,slow=4.1,SNR=8.0						
	comp=Z,7.9nm,0.5s						
STKA	**Stephens Creek**	**50.41**	**185**	P	**P**	**22 52 42.5**	**-1.7**
	comp=Z,0.9nm,0.2s,baz=333,slow=4.9,SNR=2.9						
	comp=Z,0.9nm,0.2s						
ZALV	**Zalesovo Beam**	**58.08**	**323**	P	**P**	**22 53 38.5**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=110,slow=8.0,SNR=3.8						
	comp=Z,0.9nm,0.5s						
MK31	**Makanchi Array**	**58.52**	**314**	P	**P**	**22 53 43.0**	**+0.4**
MKAR	**Makanchi Array**	**58.52**	**314**	P	**P**	**22 53 42.5**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=91,slow=7.9,SNR=24						
MKAR				PcP	**pP**	**22 54 29.8**	**+2.7**
	comp=Z,0.4nm,0.5s,baz=74,slow=4.0,SNR=5.3						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**58.52**	**314**	P	**P**	**22 53 43.1**	**+0.4**
MAKZ	**Makanchi**	**58.74**	**314**	P	**P**	**22 53 44.6**	**+0.5**
MAKZ				IAmb	IAmb	22 53 45.3	
	comp=Z,2.2nm,0.5s						
Q19K	**Cape Douglas,**	**59.12**	**32**	P	**P**	**22 53 45.0**	**-1.5**
CNPM	**China Poot**	**60.47**	**31**	P	**P**	**22 53 55.5**	**-0.2**
J20K	**Nowinta River**	**60.47**	**26**	P	**P**	**22 53 58.4**	**+2.8**
SKT	**Skwentna**	**60.95**	**29**	P	**P**	**22 53 59.2**	**+0.3**
SKT				IAmb	IAmb	22 54 21.9	
	comp=Z,7.9nm,1.4s						
CAST	**Castle Rocks**	**61.11**	**27**	P	**P**	**22 53 60.0**	**+0.1**
CAST				IAmb	IAmb	22 54 02.3	
	comp=Z,6.2nm,1.4s						
IMAR	**Indian Mountai**	**61.23**	**24**	P	**P**	**22 53 59.8**	**-0.9**
KURK	**Kurchatov**	**61.33**	**318**	P	**P**	**22 54 01.5**	**-0.1**
NRIK	**Noril'sk**	**61.66**	**340**	P	**P**	**22 54 03.4**	**-0.1**
	comp=Z,3.6nm,0.4s,baz=115,slow=8.1,SNR=5.3						
	comp=Z,3.6nm,0.4s						
NRIK	**Noril'sk**	**61.66**	**340**	P	**P**	**22 54 03.9**	**+0.4**
NRIK				IAmb	IAmb	22 54 04.0	
	comp=Z,4.2nm,0.5s						
I21K	**Tanana**	**61.67**	**25**	P	**P**	**22 54 05.1**	**+1.5**
I21K				IAmb	IAmb	22 54 15.1	
	comp=Z,3.2nm,1.2s						
BPAW	**Bear Paw Mtn.**	**61.77**	**26**	P	**P**	**22 54 06.2**	**+1.9**
BPAW				IAmb	IAmb	22 54 24.6	
	comp=Z,3.6nm,1.0s						
MLY	**Manley**	**62.13**	**25**	P	**P**	**22 54 08.4**	**+1.6**
PWL	**Port Wells**	**62.18**	**30**	P	**P**	**22 54 09.0**	**+1.9**
PWL				IAmb	IAmb	22 54 20.4	
	comp=Z,13nm,1.4s						
I23K	**Minto, Yukon-K**	**62.73**	**26**	P	**P**	**22 54 12.7**	**+2.1**
I23K				IAmb	IAmb	22 54 27.0	
	comp=Z,8.3nm,1.5s						
ILAR	**Eielson Array**	**63.66**	**26**	P	**P**	**22 54 17.0**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=258,slow=5.0,SNR=6.8						
	comp=Z,0.9nm,0.8s						
BKZ	**Black Stump Fm**	**64.31**	**154**	P	**P**	**22 54 21.0**	**-0.4**
RIDG	**Independent Ri**	**64.33**	**28**	P	**P**	**22 54 22.1**	**+0.9**
RIDG				IAmb	IAmb	22 54 42.1	
	comp=Z,8.0nm,1.5s						
J26L	**Joseph Creek**	**65.01**	**27**	P	**P**	**22 54 26.9**	**+1.2**
BMAR	**Burnt Mountain**	**65.13**	**24**	P	**P**	**22 54 28.8**	**+2.4**
BCAR	**Beaver Creek A**	**65.59**	**28**	P	**P**	**22 54 30.8**	**+1.5**
LTZ	**Lake Taylor**	**65.84**	**159**	P	**P**	**22 54 29.9**	**-1.2**
LTZ				IAmb	IAmb	22 55 09.5	
	comp=Z,16nm,1.2s						
PLWZ	**Palliser**	**65.86**	**156**	P	**P**	**22 54 30.4**	**-0.9**
PCA	**Pinnacle**	**66.03**	**32**	P	**P**	**22 54 33.8**	**+1.5**
LBZ	**Lake Benmore**	**66.60**	**161**	P	**P**	**22 54 34.4**	**-1.4**
BRVK	**Borovoye**	**66.60**	**320**	P	**P**	**22 54 36.0**	**+0.1**
BRVK				IAmb	IAmb	22 54 36.9	
	comp=Z,2.9nm,0.7s						
KK31	**Karatay Array**	**66.83**	**310**	P	**P**	**22 54 38.1**	**+0.5**
KKAR	**Karatay Array**	**66.83**	**310**	P	**P**	**22 54 38.1**	**+0.5**
KKAR	**Karatay Array**	**66.83**	**310**	P	**P**	**22 54 37.8**	**+0.2**
ARU	**Arti**	**73.13**	**325**	P	**P**	**22 55 15.6**	**0.0**
ARU				IAmb	IAmb	22 55 15.9	
	comp=Z,1.8nm,0.5s						
ABKAR	**Akbulak array**	**73.40**	**317**	P	**P**	**22 55 16.6**	**-0.8**
MCQ	**Macquarie Isla**	**73.73**	**172**	P	**P**	**22 55 19.6**	**+0.7**
EUNU	**Eureka**	**77.76**	**8**	P	**P**	**22 55 42.6**	**+1.0**
EUNU				IAmb	IAmb	22 56 26.0	
	comp=Z,22nm,1.4s						
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**22 55 43.6**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=295,slow=6.1,SNR=3.8						
	comp=Z,0.7nm,0.7s						
SPA0	**Spitsbergen Ar**	**79.21**	**351**	eP	P	22 56 00.8	+11
SPA0				IAmb	IAmb	22 56 04.0	
	comp=Z,14nm,0.8s						
KEV	**Kevo**	**81.99**	**342**	P	**P**	**22 56 03.9**	**-0.4**
KEV				IAmb	IAmb	22 56 11.2	
	comp=Z,12nm,1.3s						
KEV	**Kevo**	**81.99**	**342**	eP	**P**	**22 56 03.6**	**-0.7**
ARA0	**ARCESS Array S**	**82.55**	**342**	eP	**P**	**22 56 07.0**	**-0.3**
ARA0				IAmb	IAmb	22 56 09.8	
	comp=Z,15nm,1.4s						
ARCES	**ARCESS Array B**	**82.55**	**342**	P	**P**	**22 56 06.4**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=80,slow=7.5,SNR=13						
	comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**	**82.55**	**342**	P	**P**	**22 56 07.3**	**0.0**
ARCES				IAmb	IAmb	22 56 27.4	
	comp=Z,8.5nm,1.4s						
NVAR	**Mina Array Bea**	**83.12**	**52**	P	**P**	**22 56 12.8**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=262,slow=6.1,SNR=13						
NVAR				pP	**pwP**	**22 57 02.1**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=278,slow=6.2,SNR=2.3						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**83.12**	**52**	P	**P**	**22 56 12.9**	**+1.8**
HEF	**Hetta**	**83.74**	**342**	eP	**P**	**22 56 13.2**	**-0.2**
LCH	**Last Change Ra**	**84.00**	**53**	P	**P**	**22 56 13.3**	**-2.2**
KIF	**Kilpisjarvi**	**84.21**	**343**	eP	**P**	**22 56 16.3**	**+0.6**
TRO	**Tromso**	**84.32**	**344**	eP	**P**	**22 56 15.5**	**-0.8**
TRO				IAmb	IAmb	22 56 18.3	
	comp=Z,5.9nm,1.3s						
ELK	**Elko**	**84.61**	**49**	P	**P**	**22 56 20.5**	**+1.9**
	comp=Z,1.0nm,0.8s,baz=310,slow=3.7,SNR=5.4						
	comp=Z,1.0nm,0.8s						
SALU	**Saltoluokta**	**85.91**	**342**	eP	**P**	**22 56 22.9**	**-1.3**
STEI	**Steigen**	**86.46**	**343**	eP	**P**	**22 56 26.0**	**-0.9**
STEI				IAmb	IAmb	22 56 27.4	
	comp=Z,7.1nm,1.1s						
FINES	**FINESS Array B**	**86.94**	**335**	P	**P**	**22 56 27.1**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=63,slow=4.9,SNR=33						
	comp=Z,0.9nm,0.3s						
PDAR	**Pinedale Array**	**87.82**	**45**	P	**P**	**22 56 34.6**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=11,slow=0.9,SNR=2.3						
	comp=Z,0.4nm,0.4s						
NOA	**NORSAR Array B**	**92.63**	**340**	P	**P**	**22 56 54.5**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=33,slow=3.1,SNR=1.8						
	comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**94.17**	**314**	P	**P**	**22 57 01.6**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=68,slow=4.2,SNR=2.8						
	comp=Z,0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**132.52**	**309**	PKP	**PKPdf**	**23 02 58.0**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=76,slow=1.4,SNR=1.7						
LVC	**Limon Verde**	**147.37**	**103**	PKPbc	**PKPbc**	**23 03 29.0**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=218,slow=5.1,SNR=4.0						
LPAZ	**La Paz**	**147.62**	**91**	PKPbc	**PKPbc**	**23 03 30.2**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=266,slow=3.4,SNR=9.5						

OMAN 18 22:44:50.1±0.5, 18°.52N×60°.26E, h40km±70km, ml3.6/7, Error ellipse: s-maj=12.6km s-min=9.6km az=302.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQM	**DQM**	**2.93**	**299**	P	Pn	22 45 34.2	0.0
DQM				S	Sn	22 46 08.2	0.0
	SNR=9.7						
MHTO	**MHTO**	**3.27**	**319**	P	Pn	22 45 40.2	+1.3
MHTO				S	Sn	22 46 16.6	+0.1
WBK	**Wadi Bani Khal**	**4.25**	**344**	P	Pn	22 45 52.2	-0.1
	SNR=19						
WBK				S	Sn	22 46 42.3	+1.6
JMDO	**Jabal Madar**	**4.33**	**333**	P	Pn	22 45 53.7	+0.2
	SNR=16						
JMDO				S	Sn	22 46 44.0	+1.2
	SNR=7.4						
SMDO	**Samad**	**4.97**	**336**	P	Pn	22 46 02.2	0.0
	SNR=12						
SMDO				S	Sn	22 46 59.7	+1.2
BSY	**Bisya**	**5.09**	**326**	P	Pn	22 46 04.1	+0.2
	SNR=11						
BSY				S	Sn	22 47 00.7	-0.7
DMTO	**DMTO**	**5.12**	**262**	P	Pn	22 46 04.0	-0.2
	SNR=16						
BIDO	**Bidbid**	**5.36**	**339**	P	Pn	22 46 07.6	0.0
ARQ	**Araqi**	**5.93**	**325**	P	Pn	22 46 15.8	+0.3
ARQ				S	Sn	22 47 21.5	-0.7
UMZA	**Um Al Zommool**	**6.34**	**312**	P	Pn	22 46 21.5	+0.5
UMZA				S	Sn	22 47 29.6	-2.7

*IDC **18** 22:49:19.2±3.5, 6°.73N×82°.01W, h0km, mb3.6/4, mbtmp3.7/5, ML2.9/1, MS3.2/4, Error ellipse: s-maj=120.9km s-min=41.9km az=14.0*
*UPA **18** 22:49:20.9±2.1, 7°.48N×82°.14W, h2km±11km, MW4.3*
*UCR **18** 22:49:42.9±1.9, 8°.68N×83°.11W, h5km, MW4.4*

ISC 18 22:49:21.9±0.9, 7°.47N±0°.06×82°.16W±0°.05, h10km, n51, σ1$87/60, mb3.7/4, 5C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCO2	**Palmira**	**1.29**	**344**	eP	**Pn**	**22 49 44.7**	**-1.4**
BCO2				eS	**Sn**	**22 50 04.8**	**+1.2**
CACAO	**El Cacao, Vera**	**1.29**	**96**	eP	**Pn**	**22 49 44.1**	**-1.9**
CACAO				eS	**Sg**	**22 50 02.3**	**-1.3**
CACAO	**El Cacao, Vera**	**1.29**	**96**[1]	eP	**Pn**	**22 49 44.3**	**-1.7**
CACAO				eS	**Sg**	**22 50 02.5**	**-1.1**
LNBQ3	**Los Naranjos,**	**1.34**	**348**	eP	**Pn**	**22 49 43.6**	**-3.1**
LNBQ3				eS	**Sb**	**22 50 02.7**	**-1.8**
BC3P	**Paso Ancho**	**1.41**	**342**	eP	**Pg**	**22 49 51.5**	**+2.6**
BC3P				eS	**Sg**	**22 50 10.6**	**+3.4**
BRU2	**Volcan**	**1.41**	**338**	eP	**Pn**	**22 49 46.9**	**-0.9**
BRU2				eS	**Sn**	**22 50 03.7**	**-2.9**
BRU2	**Volcan**	**1.41**	**338**[1]	eP	**Pn**	**22 49 46.8**	**-1.0**
BRU2				eS	**Sg**	**22 50 06.4**	**-1.0**
CHGR2	**Aguacate**	**1.46**	**1**	eP	**Pn**	**22 49 47.1**	**-1.1**
CHGR2				eS	**Sn**	**22 50 01.9**	**-5.5**
CHIT3	**Chitre**	**1.79**	**74**	eP	**Pn**	**22 49 52.1**	**-0.8**
CHIT3				eS	**Sb**	**22 50 15.9**	**-1.5**
AZU	**Azuero**	**1.90**	**80**	eP	**Pn**	**22 49 53.0**	**-1.2**
AZU				eS	**Sn**	**22 50 16.4**	**-1.9**
AZU	**Azuero**	**1.90**	**80**[1]	eP	**Pn**	**22 49 53.1**	**-1.2**
AZU				eS	**Sn**	**22 50 17.6**	**-0.7**
CNJ2	**El Empalme, Bo**	**1.96**	**351**	eP	**Pb**	**22 49 55.6**	**-2.1**
CNJ2				eS	**Sb**	**22 50 20.9**	**-1.3**
DRK0	**Durika**	**2.08**	**329**	eS	**Sb**	**22 50 25.1**	**-0.6**
PNME	**Penonome**	**2.08**	**61**[1]	eP	**Pn**	**22 49 53.5**	**-3.3**
SRBA	**San Rafael, Bu**	**2.11**	**326**	eP	**Pn**	**22 49 56.7**	**-0.7**
CDM	**Cerro de Muert**	**2.61**	**323**	eP	**Pn**	**22 50 03.9**	**-0.6**
CHOR3	**La Chorrera**	**2.76**	**59**	eP	**Pn**	**22 50 06.6**	**+0.4**
CHOR3				eS	**Sn**	**22 50 40.4**	**+0.7**
RIMA	**Rio Macho**	**2.83**	**324**	eP	**Pn**	**22 50 07.8**	**+0.4**
BCIP	**Isla Barro Col**	**2.85**	**54**	eP	**Pn**	**22 50 06.6**	**-0.8**
BCIP				eS	**Sn**	**22 50 43.3**	**+1.5**
BATAN	**Batan**	**2.87**	**335**	eP	**Pn**	**22 50 08.2**	**+0.4**
BATAN				eS	**Sn**	**22 50 42.6**	**+0.3**
LCR2	**La Lucha 2**	**2.90**	**321**	eP	**Pn**	**22 50 07.5**	**-0.8**
UPA	**Univ. de Panam**	**3.00**	**60**	eP	**Pn**	**22 50 09.3**	**-0.2**
UPA				eS	**Sn**	**22 50 47.4**	**+1.8**
HDC	**Heredia**	**3.17**	**323**	eP	**Pn**	**22 50 12.5**	**+0.5**
HDC	**Heredia**	**3.17**	**323**[1]	eP	**Pn**	**22 50 12.5**	**+0.5**
HDC				eS	**Sn**	**22 50 50.6**	**+0.7**
LAFE	**Finca La Fe, P**	**3.57**	**311**	eP	**Pn**	**22 50 16.7**	**-0.7**
ARE1	**Arenal 1**	**3.90**	**320**	eP	**Pb**	**22 50 28.1**	**-2.7**
JTS	**Las Juntas de**	**3.93**	**316**	eP	**Pn**	**22 50 23.2**	**+0.9**
JTS	**Las Juntas de**	**3.93**	**316**	eP	**Pn**	**22 50 23.0**	**+0.7**
CBOC	**Ciudad Bolivar**	**6.31**	**104**	eP	**Pn**	**22 50 53.0**	**-2.2**
PLMC	**San Jos del P**	**6.38**	**113**	eP	**Pn**	**22 50 54.9**	**-1.2**
UREC	**San Jos de Ur**	**6.58**	**87**	eP	Pn	22 51 03.2	+4.5
YOTC	**Yotoco, Valle**	**6.75**	**121**	eP	**Pn**	**22 50 59.5**	**-1.6**
GUY2C	**Guyana, Caldas**	**7.11**	**108**	eP	**Pn**	**22 51 07.9**	**+1.4**
SJCC	**San Jacinto, C**	**7.31**	**70**	eP	**Pn**	**22 51 09.7**	**+0.9**
POPC	**Popayan, Colom**	**7.34**	**132**	eP	**Pn**	**22 51 12.5**	**+3.1**
NORC	**Norcasia**	**7.49**	**104**	eP	**Pn**	**22 51 13.5**	**+2.2**
PTBC	**PUERTO BERRIO,**	**7.70**	**96**	eP	**Pn**	**22 51 16.2**	**+2.0**
PRAC	**Prado**	**8.14**	**117**	eP	Pn	22 51 25.6	+5.2
ROSC	**El Rosal**	**8.22**	**108**	LR	LR	22 53 53.3	
	comp=Z,68nm,18.1s,baz=242,slow=35						
GARC	**Garzon, Huila**	**8.47**	**128**	eP	**Pn**	**22 51 28.4**	**+3.4**
SDV	**Santo Domingo**	**11.50**	**82**	Pn	**Pn**	**22 52 05.2**	**-1.2**
	0.7nm,0.3s,baz=270,slow=10,SNR=1.3						
SDV				LR	LR	22 56 43.0	
	comp=Z,145nm,21.9s,baz=268,slow=39						
	4.4nm,0.6s						
MDP	**Montagnes des**	**29.43**	**93**	LR	LR	23 06 21.3	
	comp=Z,47nm,21.4s,baz=255,slow=35						
SADO	**Sadowa**	**37.25**	**4**	LR	LR	23 12 57.7	
	comp=Z,70nm,18.8s,baz=201,slow=37						
ILAR	**Eielson Array**	**72.65**	**336**	P	**P**	**23 00 53.2**	**+3.7**
	0.5nm,0.6s,baz=125,slow=4.4,SNR=4.3						
	0.5nm,0.6s						
ESDC	**Sonseca Array**	**76.19**	**51**	P	**P**	**23 01 11.2**	**+0.4**
	0.8nm,0.9s,baz=270,slow=6.1,SNR=6.6						
	0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.38**	**78**	P	**P**	**23 01 44.4**	**-0.5**
	0.3nm,0.8s,baz=288,slow=5.6,SNR=1.4						
	0.3nm,0.8s						
GERES	**GERESS Array B**	**88.28**	**41**	P	**P**	**23 02 15.2**	**+1.3**
	0.2nm,0.7s,baz=276,slow=3.8,SNR=1.6						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**142.53**	**247**	PKP	**PKPdf**	**23 08 53.5**	**-2.6**
	0.6nm,1.0s,baz=98,slow=2.8,SNR=2.4						
H01W1	**Cape Leeuwin H**	**148.86**	**207**	T	T	01 56 16.4	
	baz=144,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**148.86**	**206**	T	T	01 56 17.6	
	baz=144,slow=76,SNR=9.7						
H01W3	**Cape Leeuwin H**	**148.87**	**207**	T	T	01 56 18.7	
	baz=144,slow=76,SNR=9.6						

*IDC **18** 22:51:30.6±0.9, 16°.21N×98°.21W, h0km, mb4.2/15, mbtmp4.1/17, ML3.5/2, MS3.6/28, Error ellipse: s-maj=19.8km s-min=13.4km az=17.0*
*NEIC **18** 22:51:34.5±2.0, 16°.28N±0°.05×98°.23W±0°.02, h21km±5km, mb4.6/361, Md4.5/84(MEX), Error ellipse: s-maj=7.2km s-min=2.1km az=186.0*
*MEX **18** 22:51:36.3±1.4, 16°.36N×98°.21W, h18km±13km, MD4.5*

ISC 18 22:51:32.4±0.7, 16°.32N±0°.03×98°.29W±0°.02, h13km±4km, n610, σ1$36/598, mb4.7/141, MS3.5/26, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**64**		**Pg**	**22 51 38.6**	**+2.3**
PNIG					**Sg**	**22 51 41.4**	**+2.4**
PNIG	**Pinotepa**	**0.17**	**64**	eP	**Pg**	**22 51 38.6**	**+2.3**
PNIG				*i* S	**Sg**	**22 51 41.4**	**+2.4**
YOIG	**Yosondua**	**0.89**	**53**	e

XCVM **Xochimilco** 3.02 345 *eP* Pn 22 52 22.4 +2.1
XCVM *eS* Sn 22 52 54.7 -1.8
THVM **De Xico** 3.05 348 *eP* Pn 22 52 22.3 +1.7
THVM *eS* Sn 22 52 56.1 -1.0
AOVM **Tlapan** 3.09 342 *eP* Pn 22 52 23.1 +1.7
AOVM *eS* Sn 22 52 55.0 -3.6
UNM **Universidad Na** 3.11 344 Pn 22 52 23.8 +2.2
COVM **Coyoacan** 3.13 345 *eP* Pb 22 52 26.9 -1.1
COVM *i S* Sn 22 52 55.3 -3.9
TEJU **Tejupilco** 3.13 325 *eP* Pb 22 52 26.4 -1.7
TEJU *eS* Sb 22 53 07.0 +0.8
INVM **La Marquesa** 3.13 341 *eP* Pn 22 52 16.0 -6.0
INVM *eS* Sn 22 52 54.4 -5.1
BJVM **Benito Juarez** 3.15 345 *eP* Pb 22 52 29.7 +1.2
BJVM *eS* Sn 22 52 53.4 -6.4
CJVM **Cuajimalpa** 3.17 343 *eP* Pb 22 52 27.1 -1.8
CJVM *eS* Sn 22 53 00.7 +0.4
GMVM **Gustavo A Made** 3.25 346 *eP* Pb 22 52 27.9 -2.3
GMVM *eS* Sn 22 53 00.3 -1.9
APVM **Azcapotzalco** 3.27 345 *eP* Pb 22 52 31.6 +1.1
APVM *eS* Sn 22 53 05.0 +2.3
ZIIG **Zihuatanejo** 3.30 293 Pn 22 52 26.7 +2.8
ZIIG Sb 22 53 07.9 -3.1
ZIIG **Zihuatanejo** 3.30 293 *eP* Pn 22 52 26.7 +2.8
ZIIG *eS* Sb 22 53 07.9 -3.1
CMIG **Matias Romero** 3.35 76 Pn Pn 22 52 23.4 -1.2
5.8nm,0.3s,baz=267,slow=11,SNR=32
CMIG Pg Pb 22 52 32.2 +0.5
24nm,0.3s,baz=253,slow=18,SNR=52
CMIG Sn Sn 22 53 01.3 -2.9
31nm,0.3s,baz=350,slow=17,SNR=2.4
CMIG Lg Lg 22 53 13.7
102nm,0.3s,baz=191,slow=22,SNR=20
13nm,0.3s
ACIG **Acambay** 3.94 338 *eP* Pb 22 52 40.8 -1.2
ACIG *eS* Sn 22 53 16.0 -3.1
RTAL **Retalhuleu** 6.60 105 Pn Pn 22 53 09.8 +0.6
PETF **Flores** 8.09 85 Pn Pn 22 53 30.3 +0.5
TEIG **Tepich** 10.27 66 Pn Pn 22 54 00.3 +0.7
TGUH **Tegucigalpa,Un** 10.87 100 Pn Pn 22 54 06.2 -1.7
KVTX **Kingsville** 11.18 2 Pn Pn 22 54 11.5 -0.5
833A **Chaparral WMA,** 11.99 355 Pn Pn 22 54 25.2 +2.0
833A **Chaparral WMA,** 11.99 355 P Pn 22 54 24.8 +1.7
baz=174,SNR=7.5
H06E1 **SOCORRO T-PHAS** 12.30 283 T T 23 06 45.7
SNR=18
MATN **Matagalpa** 12.43 104 Pn Pn 22 54 28.8 -0.5
735A **Kenedy** 12.48 2 Pn Pn 22 54 30.1 +0.2
ACON **Acoyapa** 13.43 107 Pn Pn 22 54 40.7 -2.2
HZTE **Horizontes, Gu** 13.54 113 Pn Pn 22 54 44.2 -0.1
LPIG **La Paz** 13.68 306 LR LR 22 59 52.0
comp=Z,306nm,18.3s,baz=102,slow=36
HKT **Hockley** 13.75 9 Pn Pn 22 54 48.6 +1.5
ORTG **Ortega, Santa** 13.81 114 Pn 22 54 48.4 +0.2
TX31 **Lajitas Ar. Si** 13.87 340 Pn 22 54 48.1 -0.8
TX32 **Lajitas Array** 13.87 340 Pn Pn 22 54 50.2 +1.4
TXAR **Lajitas Array** 13.87 340 Pn Pn 22 54 51.6 +2.8
baz=168,slow=14,SNR=5.9
TXAR Lg Lg 22 58 47.9
baz=159,slow=20,SNR=2.5
TXAR LR LR 23 00 41.4
comp=Z,695nm,18.7s,baz=146,slow=39
0.8nm,0.8s
TXAR **Lajitas Array** 13.87 340 Pn Pn 22 54 48.6 -0.3
DUNO **Dulce Nombre,** 13.91 115 Pn 22 54 48.1 -1.3
ESPN **Las Esperanzas** 14.16 105 Sn 22 57 32.4 +2.4
JCT **Junction City** 14.16 355 Pn 22 54 54.1 +1.3
JCT **Junction City** 14.16 355 P Pn 22 54 55.7 +2.8
baz=173
JTS **Las Juntas de** 14.29 113 P 22 55 01.6 -0.2
435B **Jarrell** 14.41 2 Pn 22 54 57.3 +1.1
435B **Jarrell** 14.41 2 P Pn 22 54 57.6 +1.4
baz=182
441A **DeRidder** 15.10 17 Pn Pn 22 55 06.8 +1.3
441A IAmb IAmb 22 55 17.1
comp=Z,47nm,1.2s
RIMA **Rio Macho** 15.48 113 P P 22 55 14.0 -1.3
RIMA IAmb IAmb 22 55 19.6
comp=Z,35nm,1.1s
WHTX **Lake Whitney,** 15.62 3 P P 22 55 17.2 +0.7
WHTX IAmb IAmb 22 55 26.5
comp=Z,52nm,0.9s
WHTX **Lake Whitney,** 15.62 3 P P 22 55 15.1 -1.5
baz=182,SNR=9.8
NATX **Nacogdoches** 15.72 11 Pn 22 55 14.1 +0.4
NATX IAmb IAmb 22 55 27.6
comp=Z,72nm,1.1s
SOR **Soroa** 15.77 63 Pn Pn 22 55 14.4 0.0
237A **Washetta, Mont** 15.77 8 P P 22 55 18.2 0.0
342A **Flagon Creek P** 15.94 19 Pn 22 55 16.7 +0.2
342A IAmb IAmb 22 55 33.8
comp=Z,33nm,0.9s
DRK0 **Durika** 16.25 114 Pn 22 55 19.0 -1.8
ABTX **Abilene, Hawle** 16.28 356 P P 22 55 24.4 +0.5
ABTX **Abilene, Hawle** 16.28 356 P P 22 55 22.9 -1.1
baz=175,SNR=15
344A **Westbrook Farm** 16.56 23 P P 22 55 26.8 -0.2
344A IAmb IAmb 22 55 37.8
comp=Z,49nm,1.2s
MNTX **Cornudas Mount** 16.62 338 Pn Pn 22 55 25.6 +0.4
MNTX **Cornudas Mount** 16.62 338 P P 22 55 27.4 -0.2
baz=155
GDL2 **Guadalupe Moun** 16.75 342 P 22 55 29.2 0.0
CLN7 **Carlsbad 7** 16.79 344 P P 22 55 29.3 -0.3
HTMS **Hat Mesa** 16.80 344 P 22 55 29.2 -0.6
Z35A **Perchaven, San** 16.96 3 P 22 55 30.5 -1.0
Z35A IAmb IAmb 22 55 41.0
comp=Z,50nm,0.9s
346A **Big Creek Wild** 17.02 27 P 22 55 31.3 -0.7
Z38A **Mt. Pleasant** 17.13 9 P P 22 55 33.4 +0.1
VBMS **Vicksburg** 17.33 23 P 22 55 35.6 +0.1
VBMS IAmb IAmb 22 55 45.3
comp=Z,84nm,1.2s
CPRX **Cap Rock** 17.39 344 P P 22 55 37.0 +0.7
143A **Socs Landing,** 17.46 20 P P 22 55 37.3 +0.3
143A IAmb IAmb 22 55 47.2
comp=Z,52nm,0.9s
LOOK **Love County** 17.63 3 P P 22 55 39.0 +0.2
LOOK IAmb IAmb 22 56 03.9
comp=Z,36nm,1.0s
WLAR **White Oak Lake** 17.91 14 P 22 55 41.9 0.0
BRAL **Brewton** 17.99 33 Pn 22 55 41.7 -0.6
BRAL IAmb IAmb 22 56 18.3
comp=Z,91nm,1.5s
319A **Douglas** 18.03 328 P 22 55 44.9 +1.5
MSTX **Muleshoe** 18.03 348 P 22 55 43.9 +0.5
X34A **Smith Ranch, M** 18.21 1 P 22 55 45.5 +0.3
146A **Union** 18.27 26 P Pn 22 55 45.5 -0.3
146A IAmb IAmb 22 55 56.9
comp=Z,29nm,0.9s
121A **Cookes Peak, D** 18.30 334 P 22 55 48.1 +1.7
121A **Cookes Peak, D** 18.30 334 P P 22 55 48.7 +2.3
baz=149
WMOK **Wichita Mounta** 18.35 359 P Pn 22 55 45.8 -1.0
baz=178
X37A **Clayton** 18.38 8 P 22 55 48.5 +1.4
X37A IAmb IAmb 22 55 58.1
comp=Z,52nm,0.9s
CCAR **Cane Creek** 18.48 17 P Pn 22 55 48.8 +0.5
CCAR IAmb IAmb 22 55 59.1
comp=Z,30nm,0.6s
MIAR **Mount Ida** 18.64 12 IAmb IAmb 22 56 00.1
comp=Z,68nm,1.5s
MIAR **Mount Ida** 18.64 12 P P 22 55 49.3 -0.6
baz=194
AMTX **Amarillo** 18.74 351 P 22 55 51.0 -0.1
AMTX **Amarillo** 18.74 351 P P 22 55 50.9 -0.3
baz=169
FNO **Franklin** 18.88 2 P P 22 55 52.8 +0.2
FNO IAmb IAmb 22 56 02.0
comp=Z,40nm,1.1s
250A **Grady** 19.03 33 P Pn 22 55 54.8 -0.3
Y45A **Yeager Farm, C** 19.16 23 P Pn 22 55 56.9 +0.3
Y45A IAmb IAmb 22 56 07.1
comp=Z,74nm,1.2s
Z47A **Carrollton** 19.17 27 P Pn 22 55 56.2 -0.5
Z47A IAmb IAmb 22 56 05.3
comp=Z,21nm,0.8s
CSTR **Hydro, Custer** 19.25 359 P Pn 22 55 57.2 -0.5
CSTR IAmb IAmb 22 56 06.8
comp=Z,4.6nm,1.1s
BCOK **Bluff Creek, N** 19.27 2 P 22 55 57.0 +0.2
BCOK IAmb IAmb 22 56 08.4
comp=Z,58nm,1.0s

OK029 **Liberty Lake** 19.41 2 P 22 55 58.6 +0.2
OK029 IAmb IAmb 22 56 11.2
comp=Z,22nm,0.8s
656A **Willston** 19.45 45 P Pn 22 55 59.5 -0.6
656A IAmb IAmb 22 56 08.4
comp=Z,22nm,0.9s
DWPF **Disney Wildern** 19.49 50 P P 22 55 56.2 -3.2
baz=236
DEOK **Depew** 19.51 4 IAmb IAmb 22 56 09.2
comp=Z,42nm,0.9s
LRAL **Lakeview Retre** 19.52 29 P P 22 55 58.2 -1.4
baz=214
TUC **Tucson** 19.55 327 P Pn 22 56 01.2 -0.1
TUC **Tucson** 19.55 327 P Pn 22 56 01.9 +0.6
baz=141
OK030 **Cody Creek RV** 19.57 4 IAmb IAmb 22 56 09.6
comp=Z,48nm,1.1s
OK031 **S. Brethren Rd** 19.60 3 P P 22 56 00.0 -0.4
OK031 IAmb IAmb 22 56 09.9
comp=Z,45nm,0.9s
TUL1 **Leonard** 19.64 6 P P 22 55 59.6 -1.3
baz=187
ELIS **Ellis County** 19.69 357 P P 22 56 01.6 +0.1
ELIS IAmb IAmb 22 56 18.4
comp=Z,21nm,0.9s
OXF **Oxford** 19.79 22 P 22 56 01.0 -1.5
OXF IAmb IAmb 22 56 18.6
comp=Z,28nm,1.0s
QUOK **Quay** 19.82 4 IAmb IAmb 22 56 12.2
comp=Z,59nm,1.4s
ANMO **Albuquerque** 19.94 340 P Pn 22 56 06.5 +0.4
comp=Z,7.4nm,0.9s,baz=153,slow=12,SNR=20
ANMO Lg Lg 23 02 01.4
comp=Z,0.1nm,0.3s,baz=49,slow=16,SNR=1.5
ANMO LR LR 23 04 25.5
comp=Z,546nm,18.1s,baz=156,slow=39
comp=Z,7.4nm,0.9s
ANMO **Albuquerque** 19.94 340 P Pn 22 56 06.3 +0.2
ANMO **Albuquerque** 19.94 340 P Pn 22 56 06.3 +0.2
baz=156
RLO **Rose Lookout** 19.98 8 Pn 22 56 05.6 -0.7
RLO IAmb IAmb 22 56 15.7
comp=Z,20nm,0.9s
U32A **Winter Ranch,** 19.99 358 P 22 56 05.1 +0.4
OK038 **West end E0370** 20.08 359 P P 22 56 06.0 +0.2
OK038 IAmb IAmb 22 56 18.6
comp=Z,41nm,1.0s
CROK **Carrier** 20.11 1 P 22 56 05.5 -0.5
CROK IAmb IAmb 22 56 16.6
comp=Z,53nm,1.0s
TIGA **Tifton** 20.14 39 P P 22 56 06.7 +0.3
TIGA IAmb IAmb 22 56 21.5
comp=Z,29nm,0.8s
TIGA **Tifton** 20.14 39 P P 22 56 06.2 -0.2
baz=225
NOKA **Waynoka** 20.24 358 P 22 56 07.1 -0.4
NOKA IAmb IAmb 22 56 20.6
comp=Z,38nm,0.9s
HBAR **Harrisburg** 20.33 18 P P 22 56 07.7 -0.7
HBAR IAmb IAmb 22 56 18.6
comp=Z,41nm,1.0s
U38A **Gravette** 20.34 9 P Pn 22 56 09.8 -0.8
BLOK **Blackwell** 20.38 2 IAmb IAmb 22 56 20.0
comp=Z,77nm,1.1s
OK032 **Salt Plains WL** 20.40 0 Pn 22 56 10.8 -0.6
214A **Organ Pipe Nat** 20.41 322 P P 22 56 09.5 +0.2
214A **Organ Pipe Nat** 20.41 322 P Pn 22 56 10.8 -0.7
baz=136
W45A **Hickory Valley** 20.45 22 P Pn 22 56 10.9 -1.0
W45A IAmb IAmb 22 56 39.7
comp=Z,22nm,0.6s
GC02 **Grant County #** 20.45 1 P P 22 56 10.6 +0.8
KAN14 **Manchester OK** 20.56 1 P P 22 56 11.7 +0.8
T35A **Sooner Cattle** 20.57 4 IAmb IAmb 22 56 23.6
comp=Z,34nm,0.8s
KAN13 **South Haven SW** 20.62 2 P P 22 56 11.2 -0.4
KAN17 **Caldwell West** 20.65 1 P 22 56 12.7 +0.8
KAN17 IAmb IAmb 22 56 23.7
comp=Z,44nm,1.1s
456A **Hilliard** 20.65 43 P P 22 56 09.5 -2.4
456A IAmb IAmb 22 56 19.9
comp=Z,27nm,0.9s
LCAR **Lake Charles** 20.67 17 P P 22 56 12.6 +0.5
X48A **Hartselle** 20.68 27 P P 22 56 11.6 -0.7
KAN05 **Bluff City Nor** 20.71 1 PcP 23 00 24.7 +2.4
PLAL **Pickwick Lake** 20.71 24 IAmb IAmb 22 56 17.3
comp=Z,14nm,0.8s
KAN10 **Anthony SW Sta** 20.72 0 P P 22 56 13.3 +0.6
KAN10 IAmb IAmb 22 56 47.0
comp=Z,12nm,0.6s
KAN01 **Argonia South** 20.76 1 Pn 22 56 14.9 -0.6
KAN01 IAmb IAmb 22 56 24.1
comp=Z,33nm,1.1s
KAN16 **Harper SW Stat** 20.82 0 P Pn 22 56 16.1 -0.2
KAN16 IAmb IAmb 22 56 26.3
comp=Z,28nm,1.2s
KAN08 **Anthony NE Sta** 20.83 1 P P 22 56 14.9 +1.1
KAN08 IAmb IAmb 22 56 22.5
comp=Z,12nm,0.5s
KS20 **Mayfield South** 20.84 2 P P 22 56 14.9 +0.9
KS20 IAmb IAmb 22 56 22.4
comp=Z,51nm,1.2s
KAN06 **Argonia West S** 20.85 1 P Pn 22 56 15.7 -0.8
KAN06 IAmb IAmb 22 56 27.0
comp=Z,27nm,0.9s
GNAR **Gosnell** 20.91 19 P Pn 22 56 16.1 -1.1
X18A **Snowflake** 20.94 332 P P 22 56 16.1 +0.9
X18A sP 22 56 17.5 -3.1
X18A IAmb IAmb 22 56 28.8
comp=Z,26nm,1.2s
LNXT **Lenox** 21.20 20 P P 22 56 19.6 +1.7
154A **Montrose** 21.26 38 P P 22 56 18.6 0.0
W18A **Petrified Fore** 21.34 333 P P 22 56 20.6 +1.0
W18A **Petrified Fore** 21.34 333 P P 22 56 20.8 +1.2
baz=148
MGMO **Mountain Grove** 21.43 13 P P 22 56 20.5 +0.2
MGMO IAmb IAmb 22 56 32.3
comp=Z,37nm,1.0s
T25A **Trinidad** 21.43 347 P P 22 56 22.4 +1.7
T25A IAmb IAmb 22 56 27.3
comp=Z,36nm,1.1s
T25A **Trinidad** 21.43 347 P P 22 56 21.4 +0.8
baz=163,SNR=22
X16A **Lo Mia Camp, P** 21.55 329 P P 22 56 23.6 +1.8
X16A IAmb IAmb 22 56 38.1
comp=Z,19nm,0.9s
113A **Mohawk Valley,** 21.55 322 P P 22 56 23.3 +1.6
UTMT **University of** 21.63 21 P P 22 56 23.7 +1.2
PARMO **Parma** 21.63 19 P P 22 56 20.9 -1.6
GOGA **Godfrey** 21.64 35 P P 22 56 21.0 -1.7
GOGA IAmb IAmb 22 56 30.4
comp=Z,23nm,0.8s
GOGA **Godfrey** 21.64 35 P P 22 56 20.5 -2.1
baz=222,SNR=15
Y52A **Lilburn** 21.66 34 P P 22 56 21.0 -1.8
Y52A IAmb IAmb 22 56 31.2
comp=Z,27nm,0.8s
HICK **Hickman** 21.69 20 P P 22 56 22.4 -0.6
X51A **Calhoun** 21.80 31 IAmb IAmb 22 56 48.9
comp=Z,19nm,1.1s
WVT **Waverly** 21.82 23 P P 22 56 22.5 -1.9
WVT IAmb IAmb 22 56 26.5
comp=Z,24nm,0.8s
WVT **Waverly** 21.82 23 P P 22 56 22.7 -1.7
baz=208
V48A **Smith Brothers** 21.88 26 IAmb IAmb 22 56 33.2
comp=Z,20nm,1.0s
Y14A **Wickenburg** 21.98 326 P P 22 56 27.3 +0.9
R32A **Long Quarter,** 22.02 359 IAmb IAmb 22 56 39.6
comp=Z,44nm,1.1s
CGM3 **Cape Girardeau** 22.25 18 P P 22 56 29.0 0.0
CGM3 IAmb IAmb 22 56 40.5
comp=Z,43nm,1.5s
SDCO **Great Sand Dun** 22.27 345 P P 22 56 31.2 +1.5
SDCO **Great Sand Dun** 22.27 345 P P 22 56 30.5 +0.8
baz=161,SNR=12
T45A **Paducah** 22.32 21 P P 22 56 30.2 +0.3
CLTN **Cedars of Leba** 22.38 26 IAmb IAmb 22 56 38.7
comp=Z,25nm,1.3s
GLA **Glamis** 22.39 321 P P 22 56 32.6 +1.9
GLA IAmb IAmb 22 56 44.6
comp=Z,15nm,1.1s
GLA **Glamis** 22.39 321 P P 22 56 32.1 +1.4
baz=134
WUAZ **Wupatki** 22.41 331 P P 22 56 32.6 +1.6

WUAZ IAmb IAmb 22 56 45.1
comp=Z,16nm,1.0s
WUAZ **Wupatki** 22.41 331 P P 22 56 31.1 0.0
baz=145,SNR=6.8
CBKS **Cedar Bluff** 22.45 357 P P 22 56 31.8 +0.5
CBKS **Cedar Bluff** 22.45 357 P P 22 56 30.4 -0.8
baz=176
R40A **Maddies Statio** 22.52 12 IAmb IAmb 22 56 45.1
comp=Z,24nm,0.7s
CCM **Cathedral Cave** 22.52 15 P P 22 56 32.4 +0.3
CCM IAmb IAmb 22 56 45.2
comp=Z,28nm,0.9s
CCM **Cathedral Cave** 22.52 15 P P 22 56 32.8 +0.7
baz=198
S22A **4UR Ranch, Cre** 22.64 342 P P 22 56 34.7 +1.1
S22A **4UR Ranch, Cre** 22.64 342 P P 22 56 34.5 +0.9
baz=158,SNR=14
FVM **French Village** 22.66 16 P P 22 56 33.2 -0.4
FVM IAmb IAmb 22 56 46.7
comp=Z,15nm,1.0s
CPCT **Cooper Cave** 22.67 30 IAmb IAmb 22 56 41.7
comp=Z,26nm,0.9s
W52A **Murphy** 22.68 32 P P 22 56 32.2 -1.6
MVCO **Mesa Verde** 22.69 338 P P 22 56 34.6 +0.5
MVCO IAmb IAmb 22 56 47.0
comp=Z,21nm,0.8s
MVCO **Mesa Verde** 22.69 338 P P 22 56 34.9 +0.8
baz=153,SNR=7.1
BLYC **Blythe** 22.70 323 P P 22 56 35.0 +1.1
S44A **Carbondale** 22.73 19 IAmb IAmb 22 56 47.3
comp=Z,35nm,1.2s
KSU1 **Kansas State U** 22.74 3 P P 22 56 34.0 -0.4
KSU1 IAmb IAmb 22 56 43.9
comp=Z,31nm,1.1s
KSU1 **Kansas State U** 22.74 3 P P 22 56 34.4 +0.1
baz=184
SIUC **Southern Illin** 22.77 19 P P 22 56 34.8 +0.2
SIUC IAmb IAmb 22 56 47.6
comp=Z,20nm,0.9s
T47A **Sharon Grove** 22.85 24 IAmb IAmb 22 56 36.4
comp=Z,26nm,0.9s
PDMCI **Parker Dam,Lak** 22.88 324 P P 22 56 35.7 -0.2
baz=137
SWSC **Sam W. Stewart** 22.91 319 P P 22 56 37.7 +1.6
baz=132
IKP **In-Ko-Pah, Jac** 22.91 318 P P 22 56 37.8 +1.6
baz=130
KSCO **Kaye Shedlock'** 22.93 351 P P 22 56 36.7 +0.3
U49A **Red Boiling Sp** 22.98 27 IAmb IAmb 22 56 46.5
comp=Z,16nm,0.9s
V51A **Loudon** 23.04 30 IAmb IAmb 22 56 47.5
comp=Z,24nm,0.9s
BG3 **Lake Jocassee** 23.12 34 IAmb IAmb 22 56 48.5
comp=Z,15nm,0.7s
BC3 **Big Chuckawall** 23.18 321 P P 22 56 41.9 +2.8
baz=134,SNR=5.4
TKL **Tuckaleechee C** 23.21 31 P P 22 56 38.6 -0.6
comp=Z,12nm,0.9s,baz=199,slow=10,SNR=14
TKL S S 23 00 55.6 +4.7
comp=Z,0.8nm,0.4s,baz=352,slow=22,SNR=1.6
comp=Z,12nm,0.9s
TKL **Tuckaleechee C** 23.21 31 P P 22 56 38.7 -0.6
TKL IAmb IAmb 22 56 48.0
comp=Z,11nm,0.8s
MONP2 **Monument Peak** 23.27 318 P P 22 56 43.0 +3.0
baz=130
BAR **Barrett** 23.29 318 P P 22 56 41.7 +1.5
W13A **Hualapai Mount** 23.34 326 P P 22 56 42.5 +1.7
Q24A **Divide** 23.35 346 P P 22 56 41.9 +0.9
Q24A IAmb IAmb 22 56 52.9
comp=Z,12nm,0.9s
Q24A **Divide** 23.35 346 P P 22 56 42.1 +1.2
baz=163,SNR=7.5
IRM **Iron Mountain** 23.35 323 P P 22 56 43.5 +2.8
baz=135
NHSC **New Hope** 23.39 41 P P 22 56 40.9 -0.2
USIN **University of** 23.50 21 P P 22 56 41.5 -0.6
JSC **Jenkinsville** 23.53 37 IAmb IAmb 22 56 51.8
comp=Z,15nm,0.9s
U15A **North Rim** 23.58 331 P P 22 56 44.5 +1.3
U15A IAmb IAmb 22 56 57.1
comp=Z,23nm,1.1s
P38A **Dawn** 23.59 9 P P 22 56 42.5 -0.4
P38A IAmb IAmb 22 56 43.8
comp=Z,12nm,0.8s
PAULI **Pauline** 23.61 36 P P 22 56 41.8 -1.4
PAULI IAmb IAmb 22 56 43.5
comp=Z,17nm,0.8s
PV13 **Radium Mtn., P** 23.65 339 P P 22 56 44.8 +1.0
PV13 IAmb IAmb 22 56 55.9
comp=Z,16nm,0.8s
PV15 **Paradox Valley** 23.70 340 P P 22 56 45.1 +0.8
PV15 IAmb IAmb 22 56 56.9
comp=Z,12nm,0.9s
V53A **Saluda** 23.70 33 P P 22 56 43.8 -0.4
BELC **Belle Mtn. Jos** 23.75 321 P P 22 56 46.6 +1.9
baz=133
P40A **Paris** 23.76 12 P P 22 56 43.8 -0.8
P40A IAmb IAmb 22 56 45.0
comp=Z,22nm,0.8s
PFO **Pinyon Flats O** 23.77 320 P P 22 56 47.0 +2.2
comp=Z,1.9nm,0.8s,baz=138,slow=14,SNR=2.5
PFO LR LR 23 06 45.7
comp=Z,95nm,18.9s,baz=136,slow=38
comp=Z,1.9nm,0.8s
PFO **Pinyon Flats O** 23.77 320 P P 22 56 46.1 +1.2
PFO **Pinyon Flats O** 23.77 320 P P 22 56 47.1 +2.2
baz=132
PV11 **David Mesa, Pa** 23.79 339 P P 22 56 45.4 +0.2
PV11 IAmb IAmb 22 56 57.9
comp=Z,16nm,1.0s
T50A **Nancy** 23.81 27 IAmb IAmb 22 56 53.7
comp=Z,17nm,1.1s
PV07 **Paradox Valley** 23.84 340 P P 22 56 46.9 +1.2
Y57A **Sumter** 23.87 39 P P 22 56 44.3 -1.4
Y57A IAmb IAmb 22 56 46.0
comp=Z,25nm,0.8s
PV10 **Paradox Valley** 23.92 339 P P 22 56 46.7 +0.2
PV10 IAmb IAmb 22 57 07.9
comp=Z,14nm,1.0s
Q44A **Meyer Farm, Va** 23.92 18 P P 22 56 46.6 +0.4
PV23 **Carpenter Ridg** 23.98 339 P P 22 56 47.0 -0.1
SMCO **Snowmass** 24.01 343 P P 22 56 48.7 +1.2
SMCO IAmb IAmb 22 57 02.2
comp=Z,14nm,1.0s
TZTN **Tazewell** 24.02 30 IAmb IAmb 22 56 56.3
comp=Z,17nm,0.9s
TZTN **Tazewell** 24.02 30 P P 22 56 46.0 -1.2
baz=217,SNR=7.9
OLIL **Olney** 24.05 20 P P 22 56 47.0 -0.4
OLIL IAmb IAmb 22 56 57.5
comp=Z,26nm,1.1s
GMRC **Granite Mounta** 24.09 323 P P 22 56 49.8 +1.8
baz=135
KMSC **Kings Mountain** 24.11 36 P P 22 56 48.2 +0.2
KMSC IAmb IAmb 22 56 58.0
comp=Z,21nm,0.8s
KMSC **Kings Mountain** 24.11 36 P P 22 56 47.0 -1.0
baz=223
Y58A **Scranton** 24.24 40 P P 22 56 48.3 -0.8
ISCO **Idaho Springs** 24.25 346 P P 22 56 50.0 +0.3
ISCO IAmb IAmb 22 56 52.3
comp=Z,19nm,0.8s
ISCO **Idaho Springs** 24.25 346 P P 22 56 50.5 +0.9
baz=162,SNR=23
BIRD **Birdtown, Kers** 24.26 38 IAmb IAmb 22 56 58.6
comp=Z,20nm,1.0s
KNB **Kanab** 24.31 331 P P 22 56 51.5 +1.4
KNB IAmb IAmb 22 57 03.8
comp=Z,14nm,1.1s
V12A **Nelson** 24.33 326 P P 22 56 51.0 +0.9
N33A **J Bar K, Exete** 24.34 2 P P 22 56 50.1 0.0
ELS **Elsinore Mount** 24.40 319 P P 22 56 52.6 +1.8
PKCU **Pink Cliffs** 24.42 332 P P 22 56 52.0 +0.8
PKCU IAmb IAmb 22 57 04.7
comp=Z,26nm,1.0s
P43A **Skaggs, Pawnee** 24.46 17 P P 22 56 51.0 -0.1
P43A IAmb IAmb 22 57 08.6
comp=Z,16nm,1.1s
LCMT **Little Creek M** 24.50 330 P P 22 56 53.0 +1.2
N35A **Tabor** 24.56 5 IAmb IAmb 22 57 09.7
comp=Z,20nm,0.8s
V55A **Taylorsville** 24.69 35 IAmb IAmb 22 57 03.1
comp=Z,15nm,0.8s
R49A **Shelbyville** 24.74 25 IAmb IAmb 22 56 53.5
comp=Z,20nm,1.1s

OGNE Ogallala 24.75 353 P P 22 56 54.5 +0.6
OGNE IAmb IAmb 22 57 04.9
comp=Z,25nm,1.1s

OGNE Ogallala 24.75 353 P P 22 56 54.5 +0.6
baz=171

N38A Joes South For 24.78 9 P P 22 56 53.7 -0.3
Y59A Loris 24.79 41 P P 22 56 54.0 -0.1
MTPU Mount Pierson 24.86 333 P P 22 56 57.0 +1.8
X58A Rowland 24.87 40 P P 22 56 54.8 -0.1
S51A Beattyville 24.88 29 IAmb IAmb 22 56 55.6
comp=Z,22nm,0.9s

SZCU Shurtz Canyon 24.90 331 P P 22 56 57.7 +2.3
BLO Bloomington 24.99 22 P P 22 56 55.0 -0.9
CCUT Cedar City 24.99 331 P P 22 56 56.6 +0.3
SHPR Sheep Range 25.08 327 P P 22 56 57.8 +0.8
SRU San Rafael Swe 25.11 337 P P 22 56 59.0 +1.7
SRU IAmb IAmb 22 57 10.2
comp=Z,14nm,0.9s

GSC Goldstone, Bar 25.12 322 P P 22 56 57.9 +0.6
GSC Goldstone, Bar 25.12 322 P P 22 56 58.3 +0.9
baz=134

N41A Harden Midland 25.14 13 IAmb IAmb 22 57 11.5
comp=Z,18nm,1.1s

P46A Rosedale 25.15 20 IAmb IAmb 22 57 07.7
comp=Z,22nm,1.0s

Q16A Castle Valley 25.19 336 P P 22 56 59.4 +1.4
Q16A IAmb IAmb 22 57 10.1
comp=Z,12nm,0.9s

O44A Mansfield 25.24 18 P P 22 56 57.7 -0.5
MSU Marysvale 25.25 334 P P 22 57 00.6 +2.0
MVU Marysvale 25.26 334 P P 22 57 00.2 +1.5
O20A White River Ci 25.26 342 P P 22 57 00.8 +2.1
O20A White River Ci 25.26 342 P P 22 57 00.0 +1.4
baz=157,SNR=14

PULU Pululahua 25.36 128 P P 22 57 00.8 +0.8
N23A Red Feather La 25.37 346 P P 22 57 00.4 +0.7
N23A IAmb IAmb 22 57 03.3
comp=Z,16nm,0.9s

N23A Red Feather La 25.37 346 P P 22 56 59.4 -0.3
baz=162,SNR=7.8

HDIL Hopedale 25.38 16 P P 22 56 59.4 0.0
HDIL IAmb IAmb 22 57 00.8
comp=Z,16nm,0.8s

HDIL Hopedale 25.38 16 P P 22 56 59.2 -0.2
baz=200

P18A Preston Nutter 25.46 338 P P 22 57 01.9 +1.4
P18A IAmb IAmb 22 57 15.5
comp=Z,21nm,1.0s

TULM Tulcn-Chalpat 25.47 125 P P 22 57 00.1 -0.9
TULM IAmb IAmb 22 57 24.8
comp=Z,12nm,0.8s

P17A Butcher Ranch, 25.50 337 P P 22 57 00.9 +0.1
P17A IAmb IAmb 22 57 13.8
comp=Z,9.6nm,0.9s

U56A King 25.52 35 P P 22 57 01.0 +0.2
U56A IAmb IAmb 22 57 01.8
comp=Z,19nm,1.1s

TMUT Trail Mountain 25.53 336 P P 22 57 01.9 +0.7
EDW2 Edwards Air Fo 25.56 320 P P 22 57 04.0 +2.8
baz=131

L34A Svendsen Farm, 25.61 3 P P 22 57 01.3 -0.2
QSM Queen of Sheba 25.62 323 P P 22 57 03.3 +1.5
P48A Milroy 25.65 23 IAmb IAmb 22 57 01.6
comp=Z,11nm,0.8s

PHWY Pilot Hill 25.65 347 P P 22 57 03.4 +1.1
PHWY IAmb IAmb 22 57 14.1
comp=Z,9.6nm,0.9s

GWY Greenwater Val 25.67 324 P P 22 57 03.2 +0.9
PRN Pahroc Range 25.70 328 P P 22 57 03.6 +1.0
PRN IAmb IAmb 22 57 17.7
comp=Z,13nm,1.2s

CCAC Calif City Air 25.75 320 P P 22 57 04.5 +1.5
CCAC IAmb IAmb 22 57 31.0
comp=Z,15nm,1.2s

V58A Windy Hill, Pi 25.85 38 P P 22 57 03.8 +0.1
V58A IAmb IAmb 22 57 05.4
comp=Z,19nm,0.8s

SDDR Presa de Saban 25.85 80 P P 22 57 03.9 -0.2
SDDR IAmb IAmb 22 57 16.3
comp=Z,14nm,0.8s

SCIA State Center 25.87 9 P P 22 57 03.5 -0.4
SCIA State Center 25.87 9 P P 22 57 03.1 -0.8
baz=191,SNR=5.1

P49A Miami Univ. Ec 25.99 24 P P 22 57 03.7 -1.3
baz=211,SNR=23

TPNV Topopah Spring 25.99 326 P P 22 57 06.7 +1.4
TPNV Topopah Spring 25.99 326 P P 22 57 07.7 +2.5
baz=137

PSUT Pine Spring 26.01 331 P P 22 57 06.4 +0.9
PSUT IAmb IAmb 22 57 20.8
comp=Z,8.1nm,0.8s

MPMC Manual Prospec 26.05 323 P P 22 57 07.8 +2.0
baz=134

RDMU Red Mountain 26.07 340 P P 22 57 07.0 +0.9
RDMU IAmb IAmb 22 57 17.9
comp=Z,11nm,0.9s

WCT Wildcat Mounta 26.08 325 P P 22 57 06.5 +0.5
CHSH Refugio Sur-Vo 26.09 131 P P 22 57 06.0 -0.9
CHSH IAmb IAmb 22 57 08.3
comp=Z,17nm,0.9s

S54A Dingess, Beckl 26.11 32 P P 22 57 05.7 -0.5
S54A IAmb IAmb 22 57 47.6
comp=Z,8.3nm,0.7s

BLA Blacksburg 26.13 34 P P 22 57 06.0 -0.4
BLA Blacksburg 26.13 34 P P 22 57 04.3 -2.1
baz=222

CNNC Cliffs of the 26.21 40 P P 22 57 06.4 -0.6
K31A O'Neill 26.22 359 P P 22 57 08.1 +1.0
S11A Rachel 26.24 327 P P 22 57 09.4 +1.8
S11A IAmb IAmb 22 57 22.7
comp=Z,14nm,1.2s

MPU Maple Canyon 26.32 336 P P 22 57 08.6 +0.4
L40A Anamosa 26.36 12 P P 22 57 07.5 -0.8
L40A IAmb IAmb 22 57 09.3
comp=Z,18nm,0.9s

ISA Isabella, Lake 26.37 321 P P 22 57 10.4 +1.8
RWWY Rawlins 26.43 345 P P 22 57 10.7 +1.4
RWWY IAmb IAmb 22 57 32.1
comp=Z,32nm,1.4s

NLU North Lily Min 26.43 336 P P 22 57 10.7 +1.4
NLU IAmb IAmb 22 57 21.6
comp=Z,8.8nm,0.9s

O48B Farmland 26.44 23 P P 22 57 07.3 -1.8
baz=209,SNR=13

M44A Midewin, Midew 26.50 17 P P 22 57 09.0 -0.6
Q52A Bidwell 26.57 29 P P 22 57 09.5 -0.7
SPR3 Spring Creek 3 26.61 331 P P 22 57 10.8 -0.2
SPR3 IAmb IAmb 22 57 23.7
comp=Z,7.4nm,1.1s

T57A Hurt 26.61 36 P P 22 57 11.2 +0.6
P51A Williamsport 26.63 27 P P 22 57 09.8 -1.0
L42A Oliver, Polo 26.65 14 P P 22 57 10.1 -0.8
CWC Cottonwood Cre 26.66 323 P P 22 57 13.2 +1.8
baz=133

K38A Parkersburg 26.66 9 P P 22 57 09.7 -1.3
Q49A Covington 26.70 24 P P 22 57 10.3 -1.1
Q49A IAmb IAmb 22 57 11.2
comp=Z,19nm,0.8s

R11A Troy Canyon, C 26.70 329 P P 22 57 12.9 +1.2
R11A Troy Canyon, C 26.70 329 P P 22 57 13.9 +2.3
baz=140

PKM Mcpherson Peak 26.71 318 P P 22 57 14.4 +2.5
baz=128

JLU Jordanelle 26.75 337 P P 22 57 13.1 +0.9
GMN Gold Mountain 26.80 325 P P 22 57 14.1 +1.4
HQIL Hanson Quary C 26.93 17 P P 22 57 13.2 -0.3
HQIL IAmb IAmb 22 57 14.7
comp=Z,88nm,1.3s

DUG Dugway, Tooele 26.94 335 P P 22 57 15.6 +1.8
DUG Dugway, Tooele 26.94 335 P P 22 57 15.1 +1.4
baz=148,SNR=6.8

CTU Camp Tracy 26.95 337 P P 22 57 14.4 +0.5
U59A Littleton 27.01 38 P P 22 57 14.3 0.0
U59A IAmb IAmb 22 57 23.4
comp=Z,26nm,1.4s

R55A Marlinton 27.09 33 IAmb IAmb 22 57 27.6
comp=Z,17nm,0.9s

MZP Montezuma Peak 27.16 325 P P 22 57 14.7 -1.2
P52A Corning 27.17 28 IAmb IAmb 22 57 27.6
comp=Z,12nm,0.8s

P52A Corning 27.17 28 P P 22 57 14.7 -1.0
baz=216

K22A Casper 27.18 347 P P 22 57 17.0 +1.0
K22A IAmb IAmb 22 57 27.4
comp=Z,22nm,1.0s

K22A Casper 27.18 347 P P 22 57 16.9 +1.0
baz=162

TCUT Toone Canyon 27.19 338 P P 22 57 16.9 +0.7
TCUT IAmb IAmb 22 57 44.9
comp=Z,9.2nm,0.8s

DSP Deep Springs 27.24 324 P P 22 57 18.6 +2.3
L44A Lake County Fo 27.27 17 P P 22 57 15.7 -0.8
L44A Lake County Fo 27.27 17 P P 22 57 16.8 +0.3
baz=202

ACSO Alum Creek Sta 27.29 26 IAmb IAmb 22 57 29.9
comp=Z,20nm,0.9s

ACSO Alum Creek Sta 27.29 26 P P 22 57 15.2 -1.5
baz=213

S57A Dark Hollow, R 27.32 35 IAmb IAmb 22 57 27.1
comp=Z,11nm,0.8s

TPH Tonopah 27.34 326 P P 22 57 18.9 +1.4
TPH IAmb IAmb 22 57 37.2
comp=Z,17nm,1.2s

ECSD EROS Data Cent 27.36 3 IAmb IAmb 22 57 31.6
comp=Z,10nm,0.9s

ECSD EROS Data Cent 27.36 3 P P 22 57 16.6 -0.8
baz=183

JFWS Jewell Farm 27.38 13 IAmb IAmb 22 57 42.9
comp=Z,11nm,0.7s

JFWS Jewell Farm 27.38 13 P P 22 57 17.3 -0.3
baz=197

P53A Whipple 27.39 29 P P 22 57 18.0 +0.3
P53A IAmb IAmb 22 57 30.2
comp=Z,9.7nm,0.7s

BOSC San Juan Bosco 27.51 133 P P 22 57 18.9 -0.3
T59A Double "B" Far 27.57 38 P P 22 57 19.5 +0.2
T59A IAmb IAmb 22 57 28.7
comp=Z,18nm,1.1s

L46A Eue Claire 27.60 20 P P 22 57 18.2 -1.3
BGU Big Grassy Mou 27.64 335 P P 22 57 21.6 +1.5
K43A Burlington 27.64 16 P P 22 57 19.8 0.0
HWUT Hardware Ranch 27.68 338 P P 22 57 21.0 +0.5
O52A Adamsville 27.69 28 IAmb IAmb 22 57 32.9
comp=Z,8.9nm,0.7s

I37A Lemond, Waseca 27.92 8 P P 22 57 21.3 -1.1
I37A IAmb IAmb 22 57 31.0
comp=Z,20nm,1.2s

SDV Santo Domingo 27.95 102 P P 22 57 24.1 +0.9
comp=Z,15nm,0.7s,baz=341,slow=3.4,SNR=8.6
comp=Z,15nm,0.7s

SDV Santo Domingo 27.95 102 P P 22 57 22.9 -0.2
OMMB Old Mammoth Mi 28.00 323 P P 22 57 25.3 +1.8
SUSD Miller 28.04 359 P P 22 57 24.1 +0.7
MDPB Devils Postpil 28.06 323 P P 22 57 25.3 +1.3
MDPB IAmb IAmb 22 57 52.4
comp=Z,11nm,0.8s

BW06 Boulder Array 28.07 342 P P 22 57 25.0 +1.0
BW06 IAmb IAmb 22 57 36.4
comp=Z,9.6nm,1.1s

BW06 Boulder Array 28.07 342 P P 22 57 24.5 +0.5
baz=156

PD31 Pinedale Array 28.07 342 P P 22 57 24.7 +0.8
PD31 IAmb IAmb 22 57 36.4
comp=Z,8.8nm,1.1s

PDAR Pinedale Array 28.07 342 P P 22 57 25.5 +1.5
comp=Z,2.5nm,0.8s,baz=138,slow=10,SNR=12
PDAR PcP PcP 23 00 38.4 0.0
comp=Z,0.5nm,0.4s,baz=126,slow=2.3,SNR=3.0
PDAR LR LR 23 09 47.3
comp=Z,135nm,20.9s,baz=168,slow=39
comp=Z,2.5nm,0.8s

PDAR Pinedale Array 28.07 342 P P 22 57 24.6 +0.6
O53A New Philadelph 28.08 29 P P 22 57 24.4 +0.5
O53A IAmb IAmb 22 58 04.5
comp=Z,5.7nm,0.7s

NV11 Mina Array Sit 28.10 325 P P 22 57 24.8 +0.5
N51A Ashland 28.11 26 P P 22 57 23.1 -1.0
N51A IAmb IAmb 22 57 51.6
comp=Z,9.2nm,0.9s

RSSD Black Hills 28.14 351 P P 22 57 25.3 +0.8
Q56A Snyder Ridge, 28.14 33 IAmb IAmb 22 57 35.7
comp=Z,8.4nm,0.9s

LHV Little Huntoon 28.17 325 P P 22 57 27.3 +2.7
L48A N Adams 28.18 22 IAmb IAmb 22 57 24.2
comp=Z,13nm,0.8s

NVAR Mina Array Bea 28.18 325 P P 22 57 26.9 +1.9
comp=Z,2.7nm,0.8s,baz=151,slow=9.8,SNR=19
NVAR PcP PcP 23 00 39.7 +0.8
comp=Z,0.4nm,0.6s,baz=125,slow=5.6,SNR=3.1
NVAR LR LR 23 09 07.0
comp=Z,94nm,21.1s,baz=144,slow=37
comp=Z,2.7nm,0.8s

NVAR Mina Array Bea 28.18 325 P P 22 57 26.7 +1.6
MCWV Mont Chateau 28.27 31 P P 22 57 26.4 +0.9
MCWV Mont Chateau 28.27 31 P P 22 57 25.3 -0.3
baz=220

HVU Hansel Valley 28.27 337 P P 22 57 26.9 +1.1
ELK Elko 28.43 332 P P 22 57 29.3 +2.1
comp=Z,1.4nm,0.7s,baz=159,slow=6.1,SNR=6.1
ELK LR LR 23 08 38.9
comp=Z,161nm,18.9s,baz=150,slow=36
comp=Z,1.4nm,0.7s

ELK Elko 28.43 332 P P 22 57 28.7 +1.5
KVN Kaiserville 28.52 326 P P 22 57 29.3 +1.3
AHID Auburn Hatcher 28.55 340 P P 22 57 30.4 +2.2
REDW Red Top Meadow 29.00 341 P P 22 57 32.9 +0.6
REDW IAmb IAmb 22 57 44.3
comp=Z,17nm,1.4s

M52A Chesterland 29.06 27 P P 22 57 31.0 -1.6
M52A IAmb IAmb 22 57 50.1
comp=Z,13nm,0.8s

SNOW Snow King Moun 29.06 341 P P 22 57 34.3 +1.4
SNOW IAmb IAmb 22 57 45.0
comp=Z,23nm,1.3s

CMB Columbia Colle 29.09 322 P P 22 57 34.2 +1.2
BMN Battle Mountai 29.11 329 P P 22 57 34.9 +1.7
LOHW Long Hollow 29.15 341 P P 22 57 34.4 +0.7
J47A Sunmer 29.18 20 P P 22 57 33.5 -0.1
J47A IAmb IAmb 22 57 42.7
comp=Z,21nm,1.3s

SPMN Marine on St. 29.18 8 P P 22 57 32.8 -0.8
SPMN IAmb IAmb 22 57 34.0
comp=Z,12nm,0.8s

SPMN Marine on St. 29.18 8 P P 22 57 33.6 +0.1
baz=190

M53A WI Miller and 29.28 28 P P 22 57 34.9 +0.4
M53A IAmb IAmb 22 57 54.2
comp=Z,13nm,1.1s

M53A WI Miller and 29.28 28 P P 22 57 34.2 -0.3
baz=216

FXWY Fox Creek 29.31 341 P P 22 57 36.0 +1.0
MOOW Moose Ponds 29.32 341 P P 22 57 35.8 +0.7
IMW Indian Meadow 29.51 341 P P 22 57 38.4 +1.5
VCNR Virginia City 29.54 325 P P 22 57 38.6 +1.5
G40A Rib Lake 29.65 12 P P 22 57 36.9 -0.8
G40A IAmb IAmb 22 57 37.9
comp=Z,8.5nm,0.9s

F36A Milaca 29.72 7 IAmb IAmb 22 57 38.3
comp=Z,5.7nm,0.8s

RLMT Red Lodge 30.16 344 P P 22 57 43.9 +1.3
RLMT Red Lodge 30.16 344 P P 22 57 43.1 +0.5
baz=158,SNR=5.4

M55A Ridgway 30.19 30 P P 22 57 41.8 -0.8
M55A IAmb IAmb 22 57 42.9
comp=Z,9.2nm,0.8s

OBIP Obispado Ponce 30.30 82 P P 22 57 42.6 -1.1
HLID Hailey 30.42 336 P P 22 57 46.5 +1.7
HLID Hailey 30.42 336 P P 22 57 45.3 +0.5
baz=148

ATAH Atahualpa 30.51 138 LR LR 23 07 27.6
comp=Z,84nm,20.2s,baz=351,slow=32

F42A Maple Grove Fa 30.56 14 P P 22 57 44.1 -1.6
GLMI Grayling 30.66 19 P P 22 57 46.2 -0.5
GLMI Grayling 30.66 19 P P 22 57 46.3 -0.5
baz=206

E38A The Farm, Brul 30.71 9 IAmb IAmb 22 57 57.1
comp=Z,8.3nm,0.8s

SJG San Juan 30.73 82 LR LR 23 11 43.2
comp=Z,73nm,19.6s,baz=260,slow=40

MFID Camas Ranch 30.86 335 P P 22 57 49.9 +1.3
GCMT Greycliff 30.89 344 P P 22 57 50.5 +1.6
MCMT McKenzie Canyo 30.96 340 P P 22 57 51.6 +2.0
WVNY West Valley, N 30.99 29 P P 22 57 49.8 +0.2
WVNY IAmb IAmb 22 57 58.7
comp=Z,14nm,1.1s

LAO LASA Array 30.99 349 P P 22 57 50.4 +0.7
LAO IAmb IAmb 22 58 00.5
comp=Z,13nm,1.4s

LAO LASA Array 30.99 349 P P 22 57 49.4 -0.3
baz=165

BOZ Bozeman (W) 31.26 342 P P 22 57 53.2 +1.1
BOZ Bozeman (W) 31.26 342 P P 22 57 53.4 +1.3
baz=154

L56A Greenwood 31.28 30 P P 22 57 52.5 +0.3
L56A IAmb IAmb 22 58 14.3
comp=Z,17nm,1.3s

WVOR Wild Horse Val 31.33 330 P P 22 57 54.3 +1.6
WVOR IAmb IAmb 22 57 56.2
comp=Z,8.2nm,1.1s

E43A Lone Tree Farm 31.41 15 IAmb IAmb 22 57 54.0
comp=Z,12nm,0.9s

MDND Maddock 31.46 358 P P 22 57 53.7 0.0
MDND Maddock 31.46 358 P P 22 57 53.9 +0.3
baz=177

D41A Chassel 31.70 13 P P 22 57 55.1 -0.7
LRM Limekiln Ridge 31.71 341 P P 22 57 57.8 +1.5
MOD Modoc Plateau 31.75 328 P P 22 57 57.8 +1.3
BRNJ Basking Ridge 31.80 35 P P 22 57 57.1 +0.3
AGMN Agassiz Nation 31.95 3 P P 22 57 57.7 -0.3
AGMN Agassiz Nation 31.95 3 P P 22 57 57.2 -0.8
baz=184,SNR=12

EYMN Ely 32.03 9 P P 22 57 57.6 -1.1
baz=192

B35A Bob, Littlefor 32.17 6 P P 22 57 59.0 -0.9
B35A IAmb IAmb 22 58 00.2
comp=Z,9.2nm,0.9s

PLID Pearl Lake 32.32 336 P P 22 58 03.0 +1.4
PLID IAmb IAmb 22 58 04.5
comp=Z,11nm,1.4s

DGMT Dagmar 32.43 353 P P 22 58 03.2 +1.0
baz=169

BMO Blue Mountains 32.65 335 P P 22 58 05.2 +0.9
YBH Yreka Blue Hor 32.91 325 LR LR 23 12 47.6
comp=Z,51nm,18.6s,baz=162,slow=39

J57A Williamstown 32.99 30 P P 22 58 06.8 -0.4
EGMT Eagleton 33.00 346 P P 22 58 07.9 +0.6
EGMT IAmb IAmb 22 58 18.9
comp=Z,13nm,1.1s

MSO Missoula 33.08 340 P P 22 58 09.1 +1.0
baz=151

M63A Gales Ferry 33.70 37 P P 22 58 13.7 +0.3
UCCT U. Connecticut 33.86 36 P P 22 58 14.0 -0.8
ULM Lac du Bonnet 33.90 3 P P 22 58 13.9 -1.0
comp=Z,4.5nm,0.8s,baz=209,slow=9.1,SNR=3.9
comp=Z,4.5nm,0.8s

ULM Lac du Bonnet 33.90 3 P P 22 58 14.6 -0.4
ULM IAmb IAmb 22 58 23.8
comp=Z,7.3nm,0.9s

HRV Adam Dziewonsk 34.70 36 P P 22 58 21.9 -0.1
L64A Middleborough 34.74 37 P P 22 58 23.0 +0.7
WALA Waterton Lakes 35.05 342 P P 22 58 26.1 +0.9
WALA IAmb IAmb 22 58 27.6
comp=Z,7.7nm,0.8s

NNA Nana 35.23 142 LR LR 23 10 09.8
comp=Z,61nm,19.1s,baz=331,slow=32

NEW Newport 35.41 338 P P 22 58 29.5 +1.3
baz=147

ETMB Extrema 41.01 127 P P 22 59 14.9 -0.7
ETMB IAmb IAmb 22 59 16.8
comp=Z,7.1nm,1.1s

BBB Bella Bella 42.87 333 LR LR 23 20 02.9
comp=Z,36nm,20.1s,baz=124,slow=40

LPAZ La Paz 43.98 136 LR LR 23 17 36.1
comp=Z,46nm,18.2s,baz=290,slow=36

T35M Bob Quinn 47.18 337 P P 23 00 05.8 +1.1
baz=136

YKA Yellowknife Ar 47.53 350 P P 23 00 07.3 0.0
comp=Z,2.5nm,0.9s,baz=160,slow=7.4,SNR=4.7
YKA LR LR 23 21 30.7
comp=Z,66nm,18.2s,baz=279,slow=38
comp=Z,2.5nm,0.9s

DLBC Dease Lake 48.16 338 LR LR 23 22 17.6
comp=Z,183nm,18.3s,baz=92,slow=38

DLBC Dease Lake 48.16 338 P P 23 00 13.4 +1.0
baz=137

TAOE Nuku Hiva Isla 48.40 242 *e*T T 23 51 48.8
comp=Z,20nm,0.2s

R33M Jennings River 49.20 339 P P 23 00 21.3 +0.9
baz=136

WRGLY Wrigley 50.02 345 P P 23 00 28.2 +1.8
baz=148

MMPY Sheldon Lake, 51.68 341 P P 23 00 40.4 +1.4
baz=138

FARO Faro, Yukon 52.06 340 P P 23 00 43.1 +1.3
baz=135

H03N2 Juan Fernandez 52.82 160 T T 23 57 47.7
baz=337,slow=77,SNR=357

H03N1 Juan Fernandez 52.83 160 T T 23 57 48.9
baz=337,slow=77,SNR=514

H03N3 Juan Fernandez 52.84 160 T T 23 57 47.9
baz=337,slow=77,SNR=523

M29M Somme Creek 53.95 338 P P 23 00 57.1 +1.2
baz=130

L27K Beaver Creek, 55.55 338 P P 23 01 08.4 +1.1
baz=126

M26K Nabesna, AK 55.60 337 P P 23 01 08.7 +1.0
baz=125

N25K Chitina, Valde 55.78 335 P P 23 01 10.3 +1.2
baz=123

I29M Ogilvie Camp, 55.82 341 P P 23 01 10.6 +1.3
baz=132

L26K Log Cabin Wild 56.09 337 P P 23 01 12.8 +1.5
baz=125

K27K Chicken 56.23 338 P P 23 01 13.8 +1.7
K27K IAmb IAmb 23 01 15.7
comp=Z,5.4nm,0.9s

K27K Chicken 56.23 338 P P 23 01 14.1 +2.0
baz=127

KLU Klutina 56.26 335 P P 23 01 13.7 +1.2
baz=121

EGAK Eagle 56.37 340 P P 23 01 14.1 +1.0
baz=128

INK Inuvik 56.58 345 P P 23 01 15.4 +0.9
comp=Z,2.9nm,0.4s,baz=112,slow=6.8,SNR=6.9
comp=Z,2.9nm,0.4s

INK Inuvik 56.58 345 P P 23 01 15.4 +0.9
baz=138

PAX Paxson 56.87 336 P P 23 01 18.0 +1.1
baz=122

SCRK Sand Creek 56.88 338 P P 23 01 18.5 +1.6
SCRK IAmb IAmb 23 01 44.7
comp=Z,4.5nm,1.1s

SCRK Sand Creek 56.88 338 P P 23 01 17.5 +0.6
baz=125

PWL Port Wells 56.95 333 P P 23 01 18.9 +1.6
baz=118

J26L Joseph Creek 57.03 338 P P 23 01 19.9 +1.9
J26L IAmb IAmb 23 01 21.3
comp=Z,5.1nm,0.9s

J26L Joseph Creek 57.03 338 P P 23 01 19.8 +1.9
baz=125,SNR=7.5

I27K Kandik River 57.03 340 P P 23 01 18.9 +1.0
baz=128

RIDG Independent Ri 57.06 337 P P 23 01 19.7 +1.6
baz=124

SML Sawmill 57.41 334 P P 23 01 21.9 +1.3
baz=119

K24K Donnelly Dome 57.44 337 P P 23 01 22.5 +1.7
baz=123

BRSE Bradley Lake S 57.51 332 P P 23 01 22.8 +1.5
baz=115

WAT6 Susitna Watana 57.55 335 P P 23 01 22.9 +1.2
baz=120

J25K Salcha River, 57.73 338 P P 23 01 24.1 +1.2
baz=124

G27K Doyon Strip 57.80 341 P P 23 01 24.8 +1.5
baz=129

CAPN Captain Cook N 58.14 333 P P 23 01 27.5 +1.8
baz=116

HDA Harding Lake 58.20 337 P P 23 01 26.5 +0.5
baz=122

SUA Susitna One 58.27 333 P P 23 01 28.5 +1.7
SUA Susitna One 58.27 333 P P 23 01 28.5 +1.7
baz=116

PRP Porcupine Dome 58.30 339 P P 23 01 28.1 +1.2
baz=124

IL31 58.37 338 P P 23 01 27.6 +0.5
IL31 IAmb IAmb 23 01 29.6
comp=Z,4.2nm,0.9s

ILAR Eielson Array 58.37 338 P P 23 01 28.6 +1.3
comp=Z,1.6nm,0.9s,baz=145,slow=5.2,SNR=10
ILAR LR LR 23 29 18.8
comp=Z,38nm,18.5s,baz=84,slow=39
comp=Z,1.6nm,0.9s

ILAR Eielson Array 58.37 338 P P 23 01 28.3 +1.1
RND Reindeer 58.41 336 P P 23 01 29.9 +2.2
CUT Chulitna 58.50 335 P P 23 01 29.6 +1.4

Q19K	**Cape Douglas,** baz=112	**58.54**	**330**	P	**P**	**23 01 29.4**	**+0.8**
G26K	**Porcupine Rive** baz=126	**58.55**	**341**	P	**P**	**23 01 30.1**	**+1.7**
MCK	**McKinley** baz=119	**58.60**	**336**	P	**P**	**23 01 30.7**	**+1.8**
P19K	**Oil Pt** baz=113	**58.63**	**331**	P	**P**	**23 01 30.5**	**+1.4**
E27K	**Coleen River** baz=129	**58.66**	**343**	P	**P**	**23 01 29.7**	**+0.5**
RSO	**Redoubt South**	**58.73**	**332**	P	**P**	**23 01 31.6**	**+1.5**
SKT	**Skwentna**	**58.84**	**334**	P	**P**	**23 01 32.2**	**+1.7**
SKT	comp=Z,7.1nm,1.0s			IAmb	IAmb	23 01 36.4	
SKT	**Skwentna** baz=116	**58.84**	**334**	P	**P**	**23 01 31.6**	**+1.1**
BDFB	**Brasilia** comp=Z,4.3nm,0.7s,baz=296,slow=10.0,SNR=7.2 comp=Z,4.3nm,0.7s	**58.90**	**120**	P	**P**	**23 01 31.2**	**-0.6**
TRF	**Thorofare Moun**	**58.99**	**336**	P	**P**	**23 01 33.4**	**+1.6**
TRF	**Thorofare Moun** baz=118,SNR=11	**58.99**	**336**	P	**P**	**23 01 32.9**	**+1.0**
BMAR	**Burnt Mountain**	**59.09**	**341**	P	**P**	**23 01 33.4**	**+1.1**
H24K	**Noodor Dome**	**59.29**	**339**	P	**P**	**23 01 34.7**	**+1.0**
H24K	comp=Z,5.9nm,1.0s			IAmb	IAmb	23 01 35.6	
H24K	**Noodor Dome** baz=122,SNR=5.3	**59.29**	**339**	P	**P**	**23 01 34.8**	**+1.2**
KTH	**Kantishna Hill**	**59.29**	**336**	P	**P**	**23 01 34.8**	**+1.0**
KTH	comp=Z,5.7nm,0.9s			IAmb	IAmb	23 01 37.1	
I23K	**Minto, Yukon-K**	**59.47**	**338**	P	**P**	**23 01 36.2**	**+1.4**
I23K	**Minto, Yukon-K** baz=120	**59.47**	**338**	P	**P**	**23 01 35.3**	**+0.5**
M20K	**Styx River**	**59.48**	**333**	P	**P**	**23 01 35.6**	**+0.4**
M20K	comp=Z,4.8nm,0.8s			IAmb	IAmb	23 01 37.7	
M20K	**Styx River** baz=114	**59.48**	**333**	P	**P**	**23 01 35.7**	**+0.6**
BPAW	**Bear Paw Mtn.** baz=117	**59.57**	**336**	P	**P**	**23 01 36.5**	**+0.8**
G24K	**Hadweenzic Riv** baz=122	**59.61**	**340**	P	**P**	**23 01 36.7**	**+0.8**
N19K	**Bonanza Creek** baz=112	**59.65**	**332**	P	**P**	**23 01 37.3**	**+0.9**
CAST	**Castle Rocks** baz=116,SNR=6.7	**59.70**	**335**	P	**P**	**23 01 37.5**	**+0.9**
MLY	**Manley**	**59.92**	**337**	P	**P**	**23 01 39.6**	**+1.6**
MLY	comp=Z,5.6nm,1.0s			IAmb	IAmb	23 01 40.0	
MLY	**Manley** baz=118	**59.92**	**337**	P	**P**	**23 01 39.1**	**+1.1**
Q16K	**King Salmon** baz=109	**59.92**	**329**	P	**P**	**23 01 39.5**	**+1.4**
M19K	**Big River Lodg**	**60.03**	**333**	P	**P**	**23 01 40.1**	**+1.2**
M19K	comp=Z,6.4nm,0.8s			IAmb	IAmb	23 01 41.0	
M19K	**Big River Lodg** baz=113	**60.03**	**333**	P	**P**	**23 01 39.5**	**+0.6**
L20K	**Farewell, AK** baz=114	**60.04**	**334**	P	**P**	**23 01 40.1**	**+1.1**
C27K	**Jago River** baz=128	**60.16**	**343**	P	**P**	**23 01 40.8**	**+1.3**
N18K	**Kilae Creek**	**60.24**	**331**	P	**P**	**23 01 41.9**	**+1.5**
N18K	comp=Z,6.2nm,0.9s			IAmb	IAmb	23 01 42.1	
N18K	**Kilae Creek** baz=111	**60.24**	**331**	P	**P**	**23 01 41.3**	**+1.0**
L19K	**White Mountain** baz=112	**60.34**	**333**	P	**P**	**23 01 42.4**	**+1.4**
I21K	**Tanana** baz=117	**60.45**	**337**	P	**P**	**23 01 43.1**	**+1.5**
K20K	**Telida**	**60.48**	**335**	P	**P**	**23 01 43.2**	**+1.3**
K20K	**Telida** baz=114	**60.48**	**335**	P	**P**	**23 01 43.1**	**+1.2**
G23K	**Bananza Creek** baz=120	**60.48**	**339**	P	**P**	**23 01 42.8**	**+0.9**
O17K	**Koliganek Bris** baz=109	**60.50**	**330**	P	**P**	**23 01 43.5**	**+1.5**
H22K	**Ishtalitna Cre** baz=118	**60.56**	**338**	P	**P**	**23 01 42.9**	**+0.5**
PPT	**Papeete** comp=Z,35nm,21.7s,baz=357,slow=29	**60.72**	**239**	LR	LR	23 21 10.9	
PPT2	**Papeete2** comp=Z,66nm,24.2s	**60.73**	**239**	*e*LR	LR	23 19 48.1	
J20K	**Nowinta River**	**60.85**	**335**	P	**P**	**23 01 45.3**	**+0.9**
J20K	comp=Z,4.2nm,1.1s			IAmb	IAmb	23 01 53.7	
J20K	**Nowinta River** baz=114,SNR=5.3	**60.85**	**335**	P	**P**	**23 01 45.7**	**+1.4**
O16K	**Kokwok River B** baz=108	**60.92**	**330**	P	**P**	**23 01 46.1**	**+1.2**
TTA	**Tatalina** baz=112	**61.13**	**334**	P	**P**	**23 01 47.1**	**+0.7**
TOLK	**Toolik Lake Re** baz=121	**61.33**	**341**	P	**P**	**23 01 48.3**	**+0.7**
N16K	**Nishlik Lake** baz=108	**61.52**	**331**	P	**P**	**23 01 50.3**	**+1.3**
F22K	**John River** baz=118	**61.61**	**339**	P	**P**	**23 01 51.0**	**+1.5**
E22K	**Anaktuvuk Pass** baz=119	**61.79**	**340**	P	**P**	**23 01 51.9**	**+1.1**
F21K	**Alatna River** baz=116	**61.93**	**339**	P	**P**	**23 01 53.0**	**+1.4**
C23K	**Itkillik River** baz=121	**62.26**	**342**	P	**P**	**23 01 54.6**	**+0.8**
PLCA	**Paso Flores** comp=Z,56nm,18.0s,baz=342,slow=32	**62.33**	**156**	LR	LR	23 24 13.2	
TBI	**Tubuai** comp=Z,9.5nm,0.2s	**63.69**	**233**	*e*T	T	00 11 03.0	
UNV	**Unalaska Valle** baz=98	**64.15**	**322**	P	**P**	**23 02 07.4**	**+0.9**
A21K	**Barrow** baz=115	**64.74**	**342**	P	**P**	**23 02 11.3**	**+1.2**
NIKH	**Nikolski High** baz=95	**65.44**	**321**	P	**P**	**23 02 16.5**	**+1.5**
ANM	**Nome** baz=104	**65.59**	**334**	P	**P**	**23 02 16.7**	**+0.9**
SPIA	**Saint Paul Isl** baz=96	**66.66**	**326**	P	**P**	**23 02 23.9**	**+1.1**
JMIC	**Jan Mayen** comp=Z,21nm,20.4s,baz=224,slow=37	**74.63**	**20**	LR	LR	23 37 23.4	
BBTS	**Babate** comp=Z,31nm,18.2s,baz=304,slow=36	**78.25**	**78**	LR	LR	23 37 43.7	
EKA	**Eskdalemuir Ar** comp=Z,32nm,18.4s,baz=228,slow=37	**79.62**	**35**	LR	LR	23 40 18.9	
ESDC	**Sonseca Array** comp=Z,0.3nm,0.7s,baz=290,slow=6.2,SNR=2.5 comp=Z,0.3nm,0.7s	**83.01**	**51**	P	**P**	**23 03 57.5**	**-0.3**
MDT	**Midelt** comp=Z,22nm,19.0s,baz=301,slow=32	**84.33**	**58**	LR	LR	23 37 08.0	
NOA	**NORSAR Array B** comp=Z,0.7nm,1.0s,baz=303,slow=5.0,SNR=2.5	**84.95**	**27**	P	**P**	**23 04 08.5**	**+1.1**
NOA	comp=Z,9.1nm,18.8s,baz=280,slow=38 comp=Z,0.7nm,1.0s			LR	LR	23 44 39.0	
ARCES	**ARCESS Array B** comp=Z,1.6nm,0.8s,baz=298,slow=5.8,SNR=2.7	**85.78**	**17**	P	**P**	**23 04 11.0**	**-0.2**
ARCES	comp=Z,24nm,18.0s,baz=28,slow=38 comp=Z,1.6nm,0.8s			LR	LR	23 45 12.8	
HFS	**Hagfors** comp=Z,22nm,20.5s,baz=304,slow=36	**86.45**	**28**	LR	LR	23 43 46.5	
DAVOX	**Davos/Dischmat** comp=Z,25nm,18.7s,baz=262,slow=37	**90.16**	**41**	LR	LR	23 47 21.8	
FINES	**FINESS Array B** comp=Z,35nm,18.3s,baz=300,slow=37	**90.89**	**23**	LR	LR	23 47 36.3	
AKASG	**Malin Array Be** comp=Z,14nm,19.4s,baz=336,slow=37	**98.99**	**31**	LR	LR	23 52 23.0	
MKAR	**Makanchi Array** comp=Z,0.7nm,0.9s,baz=5.9,slow=0.7,SNR=3.9	**117.18**	**360**	PKP	**PKPdf**	**23 10 16.4**	**-1.3**
GEYT	**Alibeck** comp=Z,1.0nm,0.5s,baz=344,slow=9.8,SNR=3.0	**121.66**	**22**	PKP	**PKPdf**	**23 10 26.7**	**+0.1**
WRA	**Warramunga Arr** comp=Z,0.7nm,0.9s,baz=91,slow=2.6,SNR=2.9	**130.02**	**257**	PKP	**PKPdf**	**23 10 42.0**	**-0.9**
PZH	**PanZhiHua**	**133.19**	**335**	PKP	**PKPdf**	**23 10 48.8**	**-0.2**

TRN 18 22:51:37.2, 15°.55N×61°.39W, h158km, MD3.6, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDCT	**Cottage Hill,**	**0.10**	**314**	*e*P	Pn	22 51 59.6	+1.4
DSLB	**Salisbury**	**0.11**	**196**	*e*P	Pn	22 51 59.5	+1.1
DSLB				*e*S	Sn	22 52 15.3	+0.8
MDN	**Morne-Daniel**	**0.23**	**181**	*e*P	Pn	22 51 59.7	+1.2
DLPL	**La Plaine**	**0.25**	**148**	*e*P	Pn	22 52 00.2	+1.6
DLPL				*e*S	Sn	22 52 16.4	+1.5
TDBA	**Terre de Bas,**	**0.38**	**321**	*e*P	Pn	22 52 00.6	+1.7
TBG	**Guadaloupe-3**	**0.39**	**321**	*e*P	Pn	22 52 00.4	+1.4
MAGL	**Barre de l'Ile**	**0.41**	**14**	*e*P	Pn	22 52 00.8	+1.8
MAGL				*e*S	Sn	22 52 16.7	+0.9
CBE	**Ff, Capester**	**0.56**	**338**	*e*P	Pn	22 52 01.1	+1.3
CBE				*e*S	Sn	22 52 17.8	+0.7
SVN	**Savane Anatole**	**0.73**	**163**	*e*P	Pn	22 52 01.9	+1.1
PCM	**Pelee Case Pet**	**0.75**	**167**	*e*P	Pn	22 52 01.5	+0.6
CXM	**Morne La Croix**	**0.76**	**164**	*e*P	Pn	22 52 02.9	+1.7
BAMF	**Morne Balai**	**0.76**	**162**	*e*P	Pn	22 52 02.2	+1.1
GBMF	**Grand Be**	**0.78**	**164**	*e*P	Pn	22 52 02.4	+1.3
PML	**Morne Lenard**	**0.79**	**165**	*e*P	Pn	22 52 01.9	+0.8
FDF	**Fort de France**	**0.84**	**164**	*e*P	Pn	22 52 02.9	+1.4
FDF				*e*S	Sn	22 52 21.0	+0.7
ILAM	**Ilet Lapin Mar**	**0.92**	**147**	*e*P	Pn	22 52 03.1	+1.1
ILAM				*e*S	Sn	22 52 21.4	+0.4
ABD	**La Joyeuse, An**	**0.93**	**354**	*e*P	Pn	22 52 03.5	+1.4
ABD				*e*S	Sn	22 52 22.0	+0.8
ZAM	**Aeronautique**	**1.03**	**160**	*e*P	Pn	22 52 04.0	+1.0
LPMF	**Morne Lapointe**	**1.05**	**157**	*e*P	Pn	22 52 03.9	+0.7
TRMF	**Trois Ilets**	**1.06**	**162**	*e*P	Pn	22 52 04.1	+0.9
BIM	**Bigot**	**1.07**	**163**	*e*P	Pn	22 52 04.4	+1.1
BIM				*e*S	Sn	22 52 23.7	+0.3
MVM	**Montagne Vaucl**	**1.10**	**154**	*e*P	Pn	22 52 04.6	+1.0
MPOM	**Morne Pois Mar**	**1.21**	**155**	*e*P	Pn	22 52 05.7	+1.1
MPOM				*e*S	Sn	22 52 26.0	+0.5
MLYT	**Lee's Yard**	**1.40**	**327**	*e*P	Pn	22 52 07.6	+1.3
MLYT				*e*S	Sn	22 52 28.9	+0.1
MBFL	**Flemmings, Mon**	**1.43**	**327**	*e*P	Pn	22 52 07.8	+1.2
MBFL				*e*S	Sn	22 52 29.5	+0.1
ANBD	**Bethesda, Anti**	**1.54**	**346**	⇑*i*P	Pn	22 52 08.5	+1.2
ANBD				*e*S	Sn	22 52 30.6	-0.7
SLBI	**Saint Lucia, B**	**1.57**	**165**	*e*P	Pn	22 52 08.7	+0.7
SLBI				*e*S	Sn	22 52 31.5	-0.3
SLB	**Belfond**	**1.74**	**169**	*e*S	Sn	22 52 35.6	+0.3
MCLT	**Moule a Chique**	**1.88**	**167**	*e*P	Pn	22 52 12.5	+1.0
ANWB	**Willy Bob**	**2.14**	**350**	*e*P	Pn	22 52 15.3	+0.9
ANWB				*e*S	Sn	22 52 43.1	-0.2
SKI	**Saint Kitts**	**2.20**	**324**	*e*P	Pn	22 52 16.6	+1.4
SVB	**Belmont**	**2.27**	**177**	*e*P	Pn	22 52 16.7	+0.8
SVB				*e*S	Sn	22 52 46.6	+0.8
SMRT	**St. Maarten**	**2.97**	**327**	*e*P	Pn	22 52 24.6	+0.1
BBGH	**Gun Hill**	**2.98**	**143**	*e*P	Pn	22 52 25.8	+1.2
BBGH				*e*S	Sn	22 53 01.2	-0.1
BBSP	**Saint Philip**	**3.07**	**142**	*e*P	Pn	22 52 27.0	+1.3
BBSP				*e*S	Sn	22 53 02.6	-0.7

*SKO **18** 22:55:15.7, 41°.83N×22°.16E, h22km*
*THE **18** 22:55:16.9, 41°.81N×22°.10E, h5km±2km, ML2.5/6, Error ellipse: s-maj=3.9km s-min=1.4km az=195.0*
*BEO **18** 22:55:16.0±0.5, 41°.84N×22°.06E, h2km±2km, ML2.3/9*

ISC 18 22:55:16.3±0.9, 41°.86N±0°.02×22°.10E±0°.03, h11km±7km, n35, σ0°78/57, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIP	**Stip**	**0.18**	**159**	*i* Pg	**Pg**	**22 55 20.6**	**+0.4**
STIP				*i* Sg	**Sg**	**22 55 24.4**	**+1.5**
SKO	**Skopje**	**0.51**	**283**	*i* Pg	**Pb**	**22 55 27.4**	**+0.1**
VAY	**Valandovo**	**0.64**	**147**	*i* Pg	**Pg**	**22 55 28.1**	**-0.6**
VAY				*i* Sg	**Sg**	**22 55 36.6**	**-0.6**
VAY	comp=N,379nm,0.3s			*e*Lg	Lg	22 55 37.2	
PRVS	**Prvonek**	**0.65**	**358**	*e*Pg	**Pg**	**22 55 27.9**	**-1.0**
PRVS				*e*Sg	**Sg**	**22 55 37.0**	**-0.5**
BOSS	**Bosilegrad**	**0.70**	**24**	*e*Pg	**Pg**	**22 55 28.9**	**-0.9**
BOSS				*e*Sg	**Sg**	**22 55 38.7**	**-0.3**
KNT	**Kendrikon**	**0.92**	**139**	P	**Pg**	**22 55 33.0**	**-1.0**
KNT	comp=N,520nm,0.3s			S	**Sg**	**22 55 45.4**	**-0.6**
KNT	**Kendrikon**	**0.92**	**139**	*i* Pg	**Pg**	**22 55 32.8**	**-1.2**
KNT				*i* Sg	**Sg**	**22 55 45.4**	**-0.6**
BARS	**Barje**	**0.98**	**348**	*e*Pg	**Pg**	**22 55 34.0**	**-1.3**
BARS				*e*Sg	**Sg**	**22 55 47.8**	**-0.2**
BARS	**Barje**	**0.98**	**348**	*i* Pg	**Pg**	**22 55 33.9**	**-1.3**
BARS				*i* Sg	**Sg**	**22 55 48.0**	**0.0**
VTS	**Vitosha**	**1.13**	**48**	*i* Pg	**Pg**	**22 55 37.0**	**-1.1**
OHR	**Ohrid**	**1.23**	**233**	*i* Pg	**Pb**	**22 55 39.4**	**-0.3**
OHR				*i* Sg	**Sn**	**22 55 56.5**	**+0.3**
OHR	comp=N,65nm,0.5s			*e*Lg	Lg	22 55 56.6	
PHP	**Peshkopia**	**1.25**	**263**	P	**Pg**	**22 55 39.9**	**-0.5**
PHP				S	**Sn**	**22 55 57.0**	**+0.2**
SRS	**Serrai**	**1.34**	**123**	P	**Pn**	**22 55 41.1**	**0.0**
SRS	comp=N,102nm,0.5s			S	**Sn**	**22 55 59.3**	**+0.3**
SRS	**Serrai**	**1.34**	**123**	*e*Pg	**Pn**	**22 55 41.0**	**0.0**
SRS				*e*Sg	**Sn**	**22 55 59.2**	**+0.3**
SOH	**Sokhos**	**1.40**	**137**	P	**Pg**	**22 55 42.5**	**-0.8**
SOH	comp=N,152nm,0.4s			S	**Sn**	**22 56 00.6**	**+0.2**
SOH	**Sokhos**	**1.40**	**137**	*i* Pg	**Pn**	**22 55 41.8**	**-0.1**
SOH				*i* Sg	**Sb**	**22 56 00.2**	**-0.2**
NVR	**Nevrokopi**	**1.42**	**110**	P	**Pn**	**22 55 42.4**	**+0.3**
NVR	comp=N,148nm,0.3s			S	**Sn**	**22 56 01.8**	**+1.0**
HORT	**Hortiatis**	**1.47**	**149**	P	**Pg**	**22 55 43.6**	**-0.9**
HORT	comp=N,42nm,0.4s			S	**Sg**	**22 56 03.3**	**-0.3**
ZAPS	**Zavoj**	**1.47**	**15**	*e*Pg	**Pn**	**22 55 43.2**	**+0.4**
ZAPS				*e*Sg	**Sb**	**22 56 03.6**	**+1.2**
SELS	**Selova**	**1.54**	**332**	*e*Pg	**Pn**	**22 55 43.6**	**-0.2**
KZN	**Kozani**	**1.57**	**189**	P	**Pn**	**22 55 44.5**	**+0.2**
NEST	**Nestorio**	**1.65**	**209**	P	**Pb**	**22 55 46.4**	**-0.4**
KOKK	**Kokkinochori,**	**1.77**	**125**	P	**Pn**	**22 55 47.3**	**+0.4**
KOKK	comp=N,130nm,0.7s			S	**Sb**	**22 56 10.5**	**-0.5**
BOVS	**Bovan**	**1.80**	**351**	*e*Pn	**Pn**	**22 55 47.1**	**-0.2**
ZAGS	**Zajecar**	**1.96**	**3**	*e*Pn	**Pn**	**22 55 50.1**	**+0.6**
ZAGS				*e*Sn	**Sn**	**22 56 15.9**	**+1.9**
PLD	**Plovdiv**	**1.96**	**82**	*e*Pn	**Pn**	**22 55 50.9**	**+1.4**
PLD				*e*Sn	**Sn**	**22 56 15.7**	**+1.7**
KAVA	**Kavala**	**2.01**	**115**	P	**Pn**	**22 55 51.1**	**+0.9**
KAVA				S	**Sb**	**22 56 17.7**	**-0.2**
SJES	**Sjenica**	**2.10**	**312**	*e*Pn	**Pn**	**22 55 52.8**	**+1.2**
IVAS	**Ivanjica**	**2.24**	**321**	*e*Pn	**Pn**	**22 55 53.6**	**+0.2**
GRUS	**Gruza**	**2.27**	**334**	*e*Pn	**Pn**	**22 55 54.1**	**+0.3**
KUBS	**Kucevo**	**2.57**	**353**	*e*Pn	**Pn**	**22 55 57.6**	**-0.4**
TRUS	**Trudelj**	**2.67**	**333**	*e*Pn	**Pn**	**22 55 59.5**	**+0.2**
TRUS				*e*Sn	**Sn**	**22 56 32.7**	**+1.0**
DIVS	**Divibare**	**2.72**	**326**	*e*Pn	**Pn**	**22 56 00.7**	**+0.6**
BZS	**Buzias**	**3.77**	**355**	*e*Pn	**Pn**	**22 56 14.3**	**-0.2**
MORH	**Mrgy, Hungar**	**5.02**	**331**	*e*Pn	**Pn**	**22 56 32.0**	**+0.5**

*NEIC **18** 23:03:18.7±1.2, 33°.04N±0°.02×109°.40W±0°.03, h0km±1km, ML2.9/39, Error ellipse: s-maj=4.3km s-min=4.2km az=202.0*
*IDC **18** 23:03:22.6±3.4, 33°.03N×109°.00W, h0km, mbtmp2.4/1, ML2.7/1, Error ellipse: s-maj=31.2km s-min=18.5km az=90.0*

ISC 18 23:03:17.1±0.8, 33°.04N±0°.04×109°.42W±0°.04, h0km, n23, σ1s63/21, Eastern Arizona

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUC	**Tucson**	**1.36**	**238**	Pn	**Pb**	**23 03 45.1**	**+1.5**
TUC					**Sn**	**23 04 04.2**	**+1.9**
121A	**Cookes Peak, D**	**1.47**	**110**	Pn	**Pn**	**23 03 45.3**	**+0.2**
121A				Sg	**Sn**	**23 04 07.4**	**+2.3**
121A	comp=E,216nm,0.9s			IAML		23 04 08.2	
121A	comp=N,128nm,0.8s			IAML		23 04 12.4	
X18A	**Snowflake**	**1.55**	**344**	Pn	**Pb**	**23 03 47.2**	**+0.4**
X18A					**Sn**	**23 04 08.1**	**+1.0**
X18A	comp=N,104nm,0.9s			IAML		23 04 13.9	
319A	**Douglas**	**1.67**	**176**	Pn	**Pb**	**23 03 49.7**	**+1.0**
319A	comp=N,234nm,0.7s			IAML		23 04 16.4	
319A	comp=E,194nm,1.4s			IAML		23 04 19.9	
W18A	**Petrified Fore**	**2.09**	**353**	Pn	**Pn**	**23 03 54.6**	**+1.0**
W18A	comp=E,56nm,1.1s			IAML		23 04 26.2	
W18A	comp=N,80nm,1.1s			IAML		23 04 30.6	
X16A	**Lo Mia Camp, P**	**2.17**	**310**	Pn	**Pn**	**23 03 55.5**	**+0.7**
Y22D	**IRIS PASSCAL I**	**2.33**	**63**	Pg	**Pg**	**23 04 01.3**	**-0.5**
WUAZ	**Wupatki**	**2.95**	**327**	Pn	**Pn**	**23 04 07.1**	**+1.6**
WUAZ	comp=N,55nm,0.9s			IAML		23 04 50.9	
WUAZ	comp=N,57nm,1.1s			IAML		23 04 51.6	
214A	**Organ Pipe Nat**	**3.06**	**250**	Pn	**Pn**	**23 04 08.3**	**+1.5**
214A	comp=N,23nm,1.4s			IAML		23 05 07.6	
ANMO	**Albuquerque** comp=N,0.6nm,0.3s,baz=233,slow=18,SNR=17	**3.11**	**52**	Pg	**Pb**	**23 04 14.5**	**+1.0**
ANMO	comp=N,0.5nm,0.3s,baz=346,slow=20,SNR=6.2			Lg	Lg	23 04 54.0	
ANMO	**Albuquerque**	**3.11**	**52**	Pg	**Pg**	**23 04 15.8**	**-0.9**
Y14A	**Wickenburg**	**3.12**	**288**	Pn	**Pg**	**23 04 16.9**	**-0.2**
Y14A	comp=E,38nm,0.7s			IAML		23 05 02.5	
Y14A	comp=N,36nm,1.1s			IAML		23 05 04.0	
MNTX	**Cornudas Mount**	**3.67**	**110**		**Pn**	**23 04 14.5**	**-0.7**
MVCO	**Mesa Verde**	**4.23**	**10**		**Pg**	**23 04 17.8**	**-0.4**
MVCO	comp=N,26nm,1.3s			IAML		23 05 34.0	
KNB	**Kanab** comp=N,14nm,0.9s	**4.85**	**326**	IAML		23 05 57.3	
LCMT	**Little Creek M** comp=E,8.7nm,1.3s	**5.05**	**323**	IAML		23 06 01.9	
LCMT	comp=N,7.8nm,4.0s			IAML		23 06 55.5	
S22A	**4UR Ranch, Cre** comp=N,5.8nm,2.0s	**5.15**	**24**	IAML		23 05 29.3	
S22A	comp=E,6.5nm,1.1s			IAML		23 06 21.1	
V12A	**Nelson** comp=N,6.7nm,3.8s	**5.23**	**302**	IAML		23 06 35.5	
V12A	comp=E,6.1nm,4.8s			IAML		23 07 40.0	
I57US	**PINON FLAT INF** baz=56,slow=314,SNR=7.3	**5.91**	**277**	*i*		23 39 15.0	
TXAR	**Lajitas Array** baz=306,slow=11,SNR=4.1	**6.16**	**125**	Pn	**Pn**	**23 04 51.1**	**+1.6**
TXAR	baz=301,slow=18,SNR=2.8			Pg	**Pg**	**23 05 14.1**	**-1.1**
TXAR	comp=E,0.1nm,0.3s,baz=312,slow=26,SNR=4.4 comp=E,0.3nm,0.6s			Lg	Lg	23 06 28.0	
ELK	**Elko** comp=E,0.1nm,0.3s,baz=168,slow=19,SNR=2.3	**8.99**	**330**	Pg	**Pg**	**23 06 06.4**	**-2.9**
ELK	comp=E,0.1nm,0.3s,baz=13,slow=18,SNR=1.7			Lg	Lg	23 08 07.9	
NVAR	**Mina Array Bea** comp=E,0.1nm,0.3s,baz=124,slow=16,SNR=2.4	**9.00**	**309**	Pg	**Pg**	**23 06 05.9**	**-3.6**
PDAR	**Pinedale Array** baz=173,slow=16,SNR=4.8	**9.71**	**359**	Pg	Pn	23 06 21.7	+43
PDAR	comp=E,0.1nm,0.3s,baz=178,slow=28,SNR=1.4			Lg	Lg	23 08 19.7	

IDC 18 23:20:49.9±4.0, 5°.54S×151°.96E, h0km, mb3.1/2, mbtmp3.2/2, Error ellipse: s-maj=150.2km s-min=56.2km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=55,slow=10,SNR=2.0 0.2nm,0.4s	**22.33**	**229**	P	P	23 25 49.3	-0.1
ASAR	**Alice Springs** 0.5nm,0.6s,baz=54,slow=8.8,SNR=3.9 0.5nm,0.6s	**25.04**	**222**	P	P	23 26 16.0	0.0
TORD	**Torodi Ar. Bea** 0.2nm,0.6s,baz=87,slow=2.3,SNR=1.5	**149.73**	**287**	PKPbc	PKPbc	23 40 42.4	-0.4

*VAO **18** 23:36:08.5±0.5, 23°.67S×67°.10W, h206km, mb4.0*
*IDC **18** 23:36:10.5±1.0, 23°.82S×66°.65W, h198km±9km, mb3.3/7, mbtmp4.0/13, MS3.7/1, Error ellipse: s-maj=15.1km s-min=13.1km az=173.0*
*NEIC **18** 23:36:10.7±2.2, 23°.94S±0°.06×66°.85W±0°.09, h209km±9km, mb4.4/9, Error ellipse: s-maj=11.8km s-min=9.2km az=92.0*
*GUC **18** 23:36:11.6±0.6, 23°.93S×67°.14W, h242km±5km, ML4.4*

ISC 18 23:36:10.8±0.6, 23°.88S±0°.04×66°.81W±0°.05, h208km±6km, n117, σ1s30/139, mb3.9/11, 11C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.56**	**306**		**Pn**	**23 36 47.7**	**+1.6**
AF01	**San Pedro de A**	**1.56**	**306**	⇑*e*P	**Pn**	**23 36 47.8**	**+1.6**
AF01				*i* S	**S**	**23 37 15.9**	**+2.8**
AF01	comp=E,781nm,0.4s			IAML		23 37 20.1	
LVC	**Limon Verde** comp=E,70nm,0.4s,baz=135,slow=6.2,SNR=310	**2.31**	**303**	P	**Pn**	**23 36 54.3**	**+0.7**
LVC	comp=E,191nm,0.4s,baz=256,slow=21,SNR=43			S	**S**	**23 37 26.9**	**+0.6**
LVC	**Limon Verde**	**2.31**	**303**		**Pn**	**23 36 54.5**	**+1.0**
LVC				Sn	**S**	**23 37 26.6**	**+0.3**
LVC	**Limon Verde**	**2.31**	**303**	⇑*i*P	**Pn**	**23 36 54.5**	**+1.0**
LVC				*e*S	**S**	**23 37 26.0**	**-0.3**
PB15	**IPOC Station P**	**2.53**	**285**		**Pn**	**23 36 56.5**	**+0.7**
PB15				Sn	**S**	**23 37 30.3**	**-0.1**
PB15	**IPOC Station P**	**2.53**	**285**	⇑*i*P	**Pn**	**23 36 56.5**	**+0.7**
PB15				*e*S	**S**	**23 37 29.8**	**-0.5**
PB06	**IPOC Station P**	**2.80**	**294**		**Pn**	**23 36 59.4**	**+0.7**
PB06				Sn	**S**	**23 37 35.2**	**-0.4**
PB06	**IPOC Station P**	**2.80**	**294**	⇑*i*P	**Pn**	**23 36 59.4**	**+0.7**
PB06				*i* S	**S**	**23 37 35.1**	**-0.5**
PB06	comp=E,1μm,0.2s			IAML		23 37 36.9	
GO02	**Mina Guanaco**	**2.84**	**243**		**Pn**	**23 36 59.4**	**+0.1**
GO02				Sn	**S**	**23 37 36.4**	**-0.3**
GO02	**Mina Guanaco**	**2.84**	**243**	⇑*i*P	**Pn**	**23 36 59.4**	**+0.1**
GO02				*i* S	**S**	**23 37 36.2**	**-0.5**
PB09	**IPOC Station P**	**3.06**	**312**		**Pn**	**23 37 02.8**	**+1.1**
PB09				Sn	**S**	**23 37 41.7**	**+0.6**
PB09	**IPOC Station P**	**3.06**	**312**	⇑*i*P	**Pn**	**23 37 02.8**	**+1.1**
PB09				*e*S	**S**	**23 37 41.3**	**+0.3**
PB14	**IPOC Station P**	**3.37**	**257**	Pn	**Pn**	**23 37 05.1**	**-0.4**
PB14				Sn	**S**	**23 37 45.9**	**-1.9**
PB14	**IPOC Station P**	**3.37**	**257**	⇑*e*P	**Pn**	**23 37 05.2**	**-0.3**
PB14				*e*S	**S**	**23 37 45.4**	**-2.4**
PB04	**IPOC Station P**	**3.44**	**296**	

	comp=E,6.4nm,0.7s,baz=289,slow=12,SNR=12							
CPUP	**Villa Florida**	**8.93**	**108**	Pn		**Pn**	**23 38 14.8**	**-1.3**
VA03	**San Esteban**	**9.45**	**200**	Pn		**Pn**	**23 38 21.5**	**-1.3**
SIV	**San Ignacio**	**9.52**	**36**	P		**Pn**	**23 38 22.2**	**-1.7**
	comp=E,7.7nm,0.6s,baz=214,slow=12,SNR=39							
SIV				S		**S**	**23 40 06.1**	**-4.7**
	comp=E,1.2nm,0.5s,baz=212,slow=10,SNR=3.5							
ROC1	**El Roble**	**9.79**	**201**	Pn		**Pn**	**23 38 25.6**	**-1.8**
MT02	**Curacav**	**10.09**	**201**	Pn		**Pn**	**23 38 27.1**	**-3.9**
LMEL	**Las Melosas**	**10.37**	**196**	Pn		**Pn**	**23 38 34.6**	**-0.2**
MT09	**Talagante**	**10.52**	**199**	Pn		**Pn**	**23 38 33.9**	**-2.8**
ITQB	**Itaqui**	**10.77**	**125**	Pn		**Pn**	**23 38 42.7**	**+2.9**
ITQB	**Itaqui**	**10.77**	**125**	*eP*		**Pn**	**23 38 41.9**	**+2.0**
PTLB	**Pontes e Lacer**	**11.07**	**42**			**Pn**	**23 38 43.1**	**-0.6**
PTLB	**Pontes e Lacer**	**11.07**	**42**	*eP*		**Pn**	**23 38 42.7**	**-1.0**
RVDE	**Rio Verde (Bra**	**12.06**	**69**	*eP*		**Pn**	**23 38 56.8**	**+0.4**
CRSM	**Crissiumal (Br**	**12.06**	**110**	*eP*		**Pn**	**23 38 57.6**	**+1.3**
RODS	**Rosario do Sul**	**12.18**	**124**	*eP*		**Pn**	**23 38 59.2**	**+1.4**
VILB	**Vilhena**	**12.54**	**31**			**Pn**	**23 39 02.6**	**+0.2**
PP1B	**Ponte de Pedra**	**12.79**	**63**	*eP*		**Pn**	**23 39 03.9**	**-1.6**
TRCB	**Terra Rica**	**13.07**	**88**	P		**P**	**23 39 12.2**	**+0.3**
SALV	**Santo Antonio**	**13.12**	**55**	*eP*		**Pn**	**23 39 08.6**	**-1.0**
ALGR	**Alto Alegre (B**	**13.29**	**115**	*eP*		**Pn**	**23 39 13.0**	**+1.2**
PTGB	**Pitanga**	**13.47**	**97**	*eP*		**P**	**23 39 17.6**	**+1.1**
CPSB	**Cacapava Do Su**	**13.56**	**122**	*eP*		**P**	**23 39 16.7**	**-0.5**
PLTB	**Pedras Altas**	**14.07**	**127**			**Pn**	**23 39 20.9**	**-0.4**
PCMB	**Pacaembu**	**14.52**	**84**	*eP*		**P**	**23 39 28.2**	**+0.2**
ITRB	**Iturama**	**15.83**	**78**	*eP*		**Pn**	**23 39 44.2**	**+1.3**
TIJ01	**Guaruva-PR**	**16.26**	**99**	*eP*		**Pn**	**23 39 48.4**	**+0.3**
TER01	**Tubaro-SC**	**16.53**	**110**	*eP*		**P**	**23 39 49.8**	**-0.3**
PLCA	**Paso Flores**	**17.10**	**190**	P		**Pn**	**23 39 57.9**	**0.0**
	comp=E,4.5nm,1.1s,baz=10.0,slow=16,SNR=4.3							
PLCA	**Paso Flores**	**17.10**	**190**	*eP*		**Pn**	**23 39 57.5**	**-0.4**
BB19B	**Bebedouro**	**17.13**	**84**	*eP*		**P**	**23 39 57.2**	**+0.4**
RCLB	**Rio Claro- Sao**	**17.79**	**89**	*eP*		**Pn**	**23 40 05.7**	**-0.4**
VAO	**Valinhos**	**18.23**	**91**	*eP*		**P**	**23 40 08.3**	**-0.5**
IPMB	**Ipameri, GO**	**18.33**	**75**	*eP*		**P**	**23 40 09.7**	**-0.2**
SNDB	**Serra Nova Dou**	**18.90**	**54**	*eP*		**P**	**23 40 15.5**	**-0.5**
BDFB	**Brasilia**	**19.48**	**69**	P		**P**	**23 40 21.7**	**-0.6**
	comp=E,16nm,0.7s,baz=241,slow=12,SNR=23							
BDFB	**Brasilia**	**19.48**	**69**	P		**P**	**23 40 22.5**	**+0.1**
BDFB	**Brasilia**	**19.48**	**69**	*eP*		**P**	**23 40 22.8**	**+0.5**
LL02	**Futaleuf**	**19.71**	**191**	P		**P**	**23 40 25.9**	**+1.5**
LL02				IAmb		IAmb	23 40 27.2	
	comp=Z,9.9nm,0.8s							
PMNB	**Patos De Minas**	**19.71**	**78**	*eP*		**P**	**23 40 23.7**	**-1.1**
ITTB	**Itaituba**	**22.14**	**31**	*eP*		**P**	**23 40 48.2**	**-1.8**
MC01	**Montes Claros**	**22.58**	**76**	*eP*		**P**	**23 40 53.1**	**-1.0**
JANB	**Januaria**	**22.93**	**72**	*eP*		**P**	**23 40 56.0**	**-1.1**
BOSC	**San Juan Bosco**	**23.50**	**330**	P		**P**	**23 41 02.5**	**+0.1**
BOSC				IAmb		IAmb	23 41 05.7	
	comp=Z,7.1nm,0.4s							
SMTB	**Santa Maria do**	**23.68**	**54**	*eP*		**P**	**23 41 02.4**	**-1.5**
SDBA	**SAO DESIDERIO**	**23.70**	**65**	*eP*		**P**	**23 41 03.2**	**-0.9**
PRPB	**Paparapebas**	**24.02**	**46**	*eP*		**P**	**23 41 04.8**	**-2.2**
RIB01	**Linhares ES**	**24.96**	**85**	*eP*		**P**	**23 41 15.1**	**-0.4**
NAN01	**Guarapari, ES**	**25.62**	**82**	*eP*		**P**	**23 41 20.5**	**-1.0**
GUA01	**Guaratinga, BA**	**26.32**	**79**	*eP*		**P**	**23 41 26.9**	**-0.8**
GDU01	**Guandu, BA**	**27.64**	**73**	*eP*		**P**	**23 41 38.1**	**-1.3**
NBLA	**Lagarto - SE**	**30.43**	**70**	*eP*		**P**	**23 42 02.6**	**-1.5**
ORCD	**Orcadas**	**39.88**	**163**	P		**P**	**23 43 23.0**	**-1.0**
CMIG	**Matias Romero**	**49.09**	**323**	LR		LR	00 02 27.6	
	comp=Z,78nm,21.5s,baz=208,slow=32							
VNA3	**Neumayer Olymp**	**57.21**	**161**	P		**P**	**23 45 37.0**	**+1.0**
VNA2	**Neumayer--Watz**	**57.77**	**160**	P		**P**	**23 45 40.9**	**+1.1**
SNAA	**Sanae**	**59.41**	**161**	P		**P**	**23 45 52.1**	**+0.9**
Y52A	**Lilburn**	**59.73**	**343**	P		**P**	**23 45 54.5**	**+0.8**
833A	**Chaparral WMA,**	**60.66**	**327**	P		**P**	**23 46 01.1**	**+1.0**
833A				IAmb		IAmb	23 46 02.5	
	comp=Z,6.3nm,0.7s							
TROLL	**Troll, Antarti**	**61.12**	**161**	P		**P**	**23 46 04.1**	**+1.2**
WVT	**Waverly**	**62.91**	**341**	P		**P**	**23 46 15.1**	**+0.2**
WVT				IAmb		IAmb	23 46 15.6	
	comp=Z,5.1nm,0.8s							
TXAR	**Lajitas Array**	**63.68**	**324**	P		**P**	**23 46 21.6**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=155,slow=9.1,SNR=6.5							
	comp=Z,0.2nm,0.4s							
CCM	**Cathedral Cave**	**65.75**	**339**	P		**P**	**23 46 34.0**	**+0.6**
CCM				IAmb		IAmb	23 46 34.5	
	comp=Z,4.5nm,0.6s							
VNDA	**Vanda**	**74.85**	**190**	P		**P**	**23 47 29.4**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=284,slow=2.6,SNR=2.3							
	comp=Z,0.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**76.36**	**69**	P		**P**	**23 47 37.0**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=262,slow=6.2,SNR=16							
	comp=Z,1.2nm,0.6s							
PDAR	**Pinedale Array**	**77.13**	**329**	P		**P**	**23 47 43.0**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=114,slow=7.2,SNR=4.4							
	comp=Z,0.4nm,0.6s							
SCHQ	**Schefferville**	**78.39**	**360**	P		**P**	**23 47 48.0**	**0.0**
	comp=Z,1.3nm,0.6s,baz=248,slow=4.5,SNR=3.6							
	comp=Z,1.3nm,0.6s							
MAW	**Mawson**	**81.50**	**163**	P		**P**	**23 48 05.5**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=220,slow=9.5,SNR=4.6							
	comp=Z,0.9nm,0.4s							
ESDC	**Sonseca Array**	**86.19**	**43**	P		**P**	**23 48 28.7**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=261,slow=5.1,SNR=2.6							
	comp=Z,0.3nm,0.8s							
ASAR	**Alice Springs**	**128.64**	**205**	PKP		**PKPdf**	**23 54 54.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=132,slow=1.7,SNR=7.0							
WRA	**Warramunga Arr**	**131.81**	**207**	PKP		**PKPdf**	**23 55 00.6**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=164,slow=1.7,SNR=19							
ZALV	**Zalesovo Beam**	**143.21**	**28**	PKP		PKPbc	23 55 18.5	+1.1
	comp=Z,0.9nm,0.4s,baz=310,slow=4.8,SNR=5.2							
MKAR	**Makanchi Array**	**146.32**	**40**	PKPbc		**PKPdf**	**23 55 26.9**	**+1.4**
	comp=Z,2.2nm,0.6s,baz=306,slow=3.2,SNR=24							
PZH	**PanZhiHua**	**169.31**	**73**	PKP		**PKPdf**	**23 55 53.0**	**-0.8**

*UPA **18** 23:36:49.3±2.7,7.68N×82.06W, h0km±8km, MW3.8*
*UCR **18** 23:36:55.1±0.3,7.59N×82.52W, h83km±247km, MW3.9*
ISC 18 23:36:50.1±1.5,**7.76N**±0.06×**81.98W**±0.04,**h0**km±11km,
n25,σ1§**58**/43,**2C,Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REME3	**Remedios, Chir**	**0.48**	**17**	*eP*	**Pb**	**23 37 01.4**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.72**	**331**	*eP*	**Pg**	**23 37 04.0**	**+0.1**
CHIR3				*eS*	**Sn**	**23 37 16.5**	**-2.8**
DVD	**David**	**0.82**	**325**	*eP*	**Pg**	**23 37 06.5**	**+0.7**
DVD				*eS*	**Sb**	**23 37 18.8**	**0.0**
RSUS3	**Rio de Jesus,**	**0.84**	**75**	*eP*	**Pg**	**23 37 06.6**	**+0.4**
RSUS3				*eS*	**Sn**	**23 37 21.5**	**-0.7**
MARI3	**Mariato, Verag**	**0.99**	**97**	*eP*	**Pg**	**23 37 10.8**	**+1.8**
MARI3				*eS*	**Sn**	**23 37 25.7**	**-0.2**
STIA3	**Santiago, Vera**	**1.05**	**71**	*eP*	**Pg**	**23 37 10.5**	**+0.2**
STIA3				*eS*	**Sn**	**23 37 28.6**	**+1.1**
PTAR3	**Potrerillos Ar**	**1.06**	**331**	*eP*	**Pb**	**23 37 11.6**	**+0.2**
PTAR3				*eS*	**Sn**	**23 37 27.0**	**-0.8**
BCO2	**Palmira**	**1.09**	**330**	*eP*	**Pn**	**23 37 12.5**	**-0.4**
BCO2				*eS*	**Sn**	**23 37 28.7**	**-0.1**
LNBQ3	**Los Naranjos,**	**1.12**	**336**	*eP*	**Pg**	**23 37 10.7**	**-0.9**
LNBQ3				*eS*	**Sb**	**23 37 27.2**	**-0.5**
CHGR2	**Aguacate**	**1.18**	**352**	*eP*	**Pg**	**23 37 11.9**	**-0.9**
CHGR2				*eS*	**Sn**	**23 37 30.0**	**-0.7**
CACAO	**El Cacao, Vera**	**1.18**	**110⇑**	*eP*	**Pg**	**23 37 11.6**	**-1.2**
CACAO				*eS*	**Sg**	**23 37 29.4**	**+1.2**
CDITO	**Canoas**	**1.20**	**312**	*eP*	**Pg**	**23 37 12.0**	**-1.1**
CDITO				*eS*	**Sb**	**23 37 29.7**	**0.0**
BC3P	**Paso Ancho**	**1.22**	**329**	*eP*	**Pn**	**23 37 19.0**	**+4.3**
BC3P				*eS*	**Sn**	**23 37 38.2**	**+6.3**
BRU2	**Volcan**	**1.24**	**325**	*eP*	**Pg**	**23 37 14.1**	**+0.1**
BRU2				*eS*	**Sn**	**23 37 33.0**	**+0.5**
CHIT3	**Chitre**	**1.56**	**83**	*eP*	**Pn**	**23 37 19.2**	**+0.1**
CHIT3				*eS*	**Sg**	**23 37 42.0**	**+1.7**
AZU	**Azuero**	**1.69**	**89**	*eP*	**Pn**	**23 37 20.2**	**-0.7**
AZU				*eS*	**Sb**	**23 37 44.3**	**+0.4**
CNI2	**El Empalme, Bo**	**1.72**	**344**	*eP*	**Pg**	**23 37 23.1**	**0.0**
CNI2				*eS*	**Sg**	**23 37 46.3**	**+0.8**
PEZE	**Perez Zeledon,**	**2.33**	**314**	*eP*	**Pn**	**23 37 29.0**	**-0.8**
CHOR3	**La Chorrera**	**2.46**	**63**	*eP*	**Pn**	**23 37 33.3**	**+1.7**
CHOR3				*eS*	**Sg**	**23 38 07.5**	**-1.9**
CDM	**Cerro de Muert**	**2.51**	**315**	*eP*	**Pn**	**23 37 31.8**	**-0.8**
MRVA	**Moravia de Chi**	**2.51**	**325**	*eP*	**Pn**	**23 37 32.9**	**+0.6**
BCIP	**Isla Barro Col**	**2.54**	**56⇑**	*eP*	**Pb**	**23 37 34.9**	**-1.7**
BCIP				*eS*	**Sb**	**23 38 06.8**	**-1.5**
RIMA	**Rio Macho**	**2.73**	**317**	*eP*	**Pn**	**23 37 35.0**	**-0.4**
LCR2	**La Lucha 2**	**2.81**	**315**	*eP*	**Pn**	**23 37 35.7**	**-0.8**
JTS	**Las Juntas de**	**3.87**	**311**	*eP*	**Pn**	**23 37 50.4**	**-0.5**

*UCR **18** 23:44:43.4±1.4,8.45N×83.77W, h10km±9km, MW4.0*

*UPA **18** 23:44:44.1±1.0,8.52N×83.64W, h0km±4km, MW4.2*
ISC 18 23:44:42.7±1.9,**8.46N**±0.07×**83.74W**±0.06,**h1**km±11km,
n27,σ1§**08**/38,**1C-1D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPN	**Palmar Norte**	**0.57**	**29**	*eP*	**Pg**	**23 44 54.9**	**+1.2**
EDPN				*eS*	**Sb**	**23 45 03.5**	**-0.6**
CCOL	**Caracol de Cor**	**0.76**	**94**	*eP*	**Pb**	**23 44 58.8**	**+0.1**
EDBA	**Buenos Aires**	**0.83**	**33**	*eP*	**Pb**	**23 44 59.8**	**-0.2**
POTG	**Potrero Grande**	**0.85**	**46**	*eP*	**Pb**	**23 44 59.9**	**-0.3**
CDITO	**Canoas**	**0.86**	**83**	*eP*	**Pg**	**23 44 59.6**	**+0.4**
CDM	**Cerro de Muert**	**1.08**	**359**	*eP*	**Pg**	**23 45 03.8**	**+0.2**
BRU2	**Volcan**	**1.09**	**72**	*eP*	**Pg**	**23 45 03.5**	**0.0**
BRU2	**Volcan**	**1.09**	**72**	*eP*	**Pg**	**23 45 03.6**	**0.0**
BRU2				*eS*	**Sb**	**23 45 18.8**	**-0.4**
BC3P	**Paso Ancho**	**1.17**	**72**	*eP*	**Pn**	**23 45 10.1**	**+3.7**
BC3P				*eS*	**Sn**	**23 45 26.2**	**+3.2**
BCO2	**Palmira**	**1.22**	**78**	*eP*	**Pg**	**23 45 06.0**	**-0.2**
BCO2				*eS*	**Sg**	**23 45 22.3**	**+0.2**
PTAR3	**Potrerillos Ar**	**1.25**	**79**	*eP*	**Pg**	**23 45 06.4**	**-0.4**
PTAR3				*eS*	**Sb**	**23 45 23.7**	**-0.1**
DVD	**David**	**1.27**	**91⇑**	*eP*	**Pg**	**23 45 06.7**	**-0.4**
DVD				*eS*	**Sb**	**23 45 24.3**	**-0.1**
LCR2	**La Lucha 2**	**1.30**	**348**	*eP*	**Pg**	**23 45 06.8**	**-0.8**
RIMA	**Rio Macho**	**1.30**	**355**	*eP*	**Pg**	**23 45 07.0**	**-0.8**
LNBQ3	**Los Naranjos,**	**1.32**	**76**	*eP*	**Pg**	**23 45 07.5**	**-0.6**
MRVA	**Moravia de Chi**	**1.39**	**12**	*eP*	**Pn**	**23 45 08.2**	**-1.1**
CHIR3	**Chiriqui UPA,**	**1.40**	**93**	*i/eP*	**Pn**	**23 45 08.4**	**-0.9**
CHIR3				*eS*	**Sb**	**23 45 27.5**	**-0.4**
RAFA	**San Farael, Vo**	**1.49**	**357**	*eP*	**Pn**	**23 45 10.5**	**-0.4**
CVTR	**Volcan Turrial**	**1.55**	**359**	*eP*	**Pn**	**23 45 11.6**	**-0.2**
HDC	**Heredia**	**1.57**	**346**	*eP*	**Pn**	**23 45 12.5**	**+0.6**
HDC				*eS*	**Sb**	**23 45 33.5**	**+0.4**
CNI2	**El Empalme, Bo**	**1.58**	**53**	*eS*	**Sn**	**23 45 30.9**	**-1.9**
CHGR2	**Aguacate**	**1.65**	**73**	*eP*	**Pn**	**23 45 12.2**	**-0.6**
CHGR2				*eS*	**Sn**	**23 45 33.4**	**-1.2**
BATAN	**Batan**	**1.66**	**12**	*eP*	**Pn**	**23 45 13.5**	**+0.5**
BATAN				*eS*	**Sn**	**23 45 34.7**	**-0.3**
REME3	**Remedios, Chir**	**1.90**	**97**	*eP*	**Pn**	**23 45 16.0**	**-0.3**
JTS	**Las Juntas de**	**2.18**	**327**	*eP*	**Pn**	**23 45 21.7**	**+1.6**
CACAO	**El Cacao, Vera**	**3.06**	**111**	*eP*	**Pn**	**23 45 31.7**	**-0.5**
CACAO				*eS*	**Sn**	**23 46 09.8**	**+0.4**
AZU	**Azuero**	**3.49**	**101**	*eP*	**Pn**	**23 45 38.6**	**+0.4**

*VAO **19** 00:10:59.2±0.4,24.27S×68.31W, h286km, mb3.9*
*NEIC **19** 00:11:01.8±2.0,24.15S±0.06×67.06W±0.09, h170km±10km, mb4.6/4, Error ellipse: s-maj=12.1km s-min=9.2km az=78.0*
*IDC **19** 00:11:02.8±2.6,24.05S×67.06W, h174km±27km, mb3.8/1, mbtmp4.0/5, Error ellipse: s-maj=45.4km s-min=23.8km az=166.0*
*GUC **19** 00:11:04.2±0.8,24.10S×67.43W, h204km±14km, ML4.0*
ISC 19 00:11:01.8±0.7,**24.11S**±0.04×**67.09W**±0.07,**h175**km±9km,
n70,σ1§**27**/87,**3C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.53**	**319**	Pn	**Pn**	**00 11 33.1**	**-0.9**
AF01				Sn	**Sn**	**00 12 01.2**	**+2.4**
LVC	**Limon Verde**	**2.25**	**311**	P	**Pn**	**00 11 43.2**	**+1.6**
	15nm,0.3s,baz=129,slow=6.5,SNR=75						
LVC				S	**Sn**	**00 12 12.9**	**+0.3**
	87nm,0.2s,baz=198,slow=20,SNR=54						
LVC	**Limon Verde**	**2.25**	**311**	Pn	**Pn**	**00 11 42.3**	**+0.6**
LVC				Sn	**Sn**	**00 12 12.8**	**+0.1**
LVC	**Limon Verde**	**2.25**	**311**	*eP*	**Pn**	**00 11 43.2**	**+1.6**
LVC				*eS*	**Sn**	**00 12 12.7**	**+0.1**
LVC	**Limon Verde**	**2.25**	**311**	*eP*	**Pn**	**00 11 43.3**	**+1.6**
PB15	**IPOC Station P**	**2.36**	**292**	Pn	**Pn**	**00 11 43.9**	**+1.0**
PB15				Sn	**Sn**	**00 12 14.2**	**-0.5**
PB15	**IPOC Station P**	**2.36**	**292⇑**	*i/P*	**Pn**	**00 11 44.1**	**+1.2**
PB15				*eS*	**Sn**	**00 12 14.7**	**0.0**
GO02	**Mina Guanaco**	**2.51**	**245**	Pn	**Pn**	**00 11 45.5**	**+0.9**
GO02				Sn	**Sn**	**00 12 18.2**	**+0.4**
GO02	**Mina Guanaco**	**2.51**	**245⇑**	*i/P*	**Pn**	**00 11 45.7**	**+1.1**
GO02				*eS*	**Sn**	**00 12 18.0**	**+0.1**
GO02				IAML		00 12 19.7	
	comp=N,706nm,0.3s						
PB06	**IPOC Station P**	**2.68**	**301**	Pn	**Pn**	**00 11 47.0**	**+0.4**
PB06				Sn	**Sn**	**00 12 19.7**	**-1.5**
PB06	**IPOC Station P**	**2.68**	**301**	*i* P	**Pn**	**00 11 47.6**	**+1.1**
PB06				*eS*	**Sn**	**00 12 20.4**	**-0.9**
PB06				IAML		00 12 23.2	
	comp=N,515nm,0.1s						
PB09	**IPOC Station P**	**3.04**	**319**	Pn	**Pn**	**00 11 51.1**	**+0.1**
PB09				Sn	**Sn**	**00 12 29.7**	**+0.5**
PB09	**IPOC Station P**	**3.04**	**319⇑**	*i/P*	**Pn**	**00 11 52.1**	**+1.8**
PB09				*eS*	**Sn**	**00 12 29.3**	**+0.1**
PB09				IAML		00 12 31.8	
	comp=N,254nm,0.4s						
PB14	**IPOC Station P**	**3.07**	**260**	Pn	**Pn**	**00 11 52.2**	**+0.8**
PB14				Sn	**Sn**	**00 12 27.9**	**-2.0**
PB14	**IPOC Station P**	**3.07**	**260**	*eP*	**Pn**	**00 11 52.0**	**+0.6**
PB14				*eS*	**Sn**	**00 12 27.6**	**-2.3**
PB10	**IPOC Station P**	**3.23**	**280**		**Pn**	**00 11 53.5**	**+0.4**
PB10				Sn	**Sn**	**00 12 31.1**	**-1.9**
PB10	**IPOC Station P**	**3.23**	**280**	*eP*	**Pn**	**00 11 53.8**	**+0.7**
PB10				*eS*	**Sn**	**00 12 31.2**	**-1.9**
PB10				IAML		00 12 36.8	
	comp=E,150nm,0.3s						
AC02	**Maricunga**	**3.28**	**214**	Pn	**Pn**	**00 11 53.1**	**-1.0**
AC02	**Maricunga**	**3.28**	**214**	*eP*	**Pn**	**00 11 55.7**	**+1.6**
PB04	**IPOC Station P**	**3.33**	**302**		**Pn**	**00 11 55.2**	**+0.8**
PB04				Sn	**Sn**	**00 12 33.2**	**-2.3**
PB04	**IPOC Station P**	**3.33**	**302**	*eP*	**Pn**	**00 11 55.3**	**+0.8**
PB07	**IPOC Station P**	**3.51**	**312**	Pn	**Pn**	**00 11 56.8**	**+0.1**
PB07	**IPOC Station P**	**3.51**	**312**	*i* P	**Pn**	**00 11 57.2**	**+0.5**
PB07				*eS*	**Sn**	**00 12 37.0**	**-2.6**
AC01	**Pan de Azucar**	**3.77**	**237**	Pn	**Pn**	**00 11 59.5**	**-0.3**
AC01	**Pan de Azucar**	**3.77**	**237**	*eP*	**Pn**	**00 11 59.5**	**-0.3**
PB01	**IPOC Station P**	**3.78**	**324**	Pn	**Pn**	**00 12 00.3**	**+0.2**
PB02	**IPOC Station P**	**3.80**	**316**	Pn	**Pn**	**00 12 00.4**	**+0.1**
PB02	**IPOC Station P**	**3.80**	**316**	*eP*	**Pn**	**00 12 00.5**	**+0.1**
AC06	**Mina Casimiro**	**4.37**	**222**	Pn	**Pn**	**00 12 06.5**	**-1.0**
GO03	**Copiap**	**4.48**	**219**	Pn	**Pn**	**00 12 08.6**	**-0.4**
TA01	**Diego Aracena**	**4.55**	**320**	Pn	**Pn**	**00 12 10.2**	**+0.4**
TA02	**Huaiquique**	**4.75**	**323**	Pn	**Pn**	**00 12 11.4**	**-1.1**
GO01	**Chusmiza**	**4.84**	**336**	Pn	**Pn**	**00 12 13.5**	**-0.6**
AC04	**Ianos de Chal**	**5.42**	**220**	Pn	**Pn**	**00 12 21.8**	**+1.3**
PB16	**IPOC Station P**	**6.18**	**338**	Pn	**Pn**	**00 12 33.8**	**+0.1**
PB12	**IPOC Station P**	**6.25**	**330**	Pn	**Pn**	**00 12 30.8**	**-1.4**
LPAZ	**La Paz**	**7.85**	**353**	P	**Pn**	**00 12 54.7**	**+0.9**
	comp=E,4.6nm,0.4s,baz=168,slow=6.7,SNR=38						
SIV	**San Ignacio**	**9.86**	**36**	P	**Pn**	**00 13 18.8**	**-0.9**
	comp=E,0.9nm,0.4s,baz=240,slow=14,SNR=2.8						
PTLB	**Pontes e Lacer**	**11.41**	**42**	*eP*	**P**	**00 13 45.0**	**-1.5**
RODS	**Rosario do Sul**	**12.26**	**123**	*eP*	**P**	**00 13 56.5**	**+0.7**
FRBT	**Francisco Belt**	**12.85**	**101**	*eP*	**P**	**00 14 04.3**	**+1.8**
VILB	**Vilhena**	**12.88**	**32**	*eP*	**P**	**00 14 02.7**	**-0.1**
TRCB	**Terra Rica**	**13.33**	**87**	P	**P**	**00 14 08.5**	**+0.6**
TRCB	**Terra Rica**	**13.33**	**87**	*eP*	**P**	**00 14 09.8**	**+1.9**
ALGR	**Alto Alegre (B**	**13.43**	**113**	*eP*	**P**	**00 14 10.5**	**+1.6**
CPSB	**Cacapava Do Su**	**13.65**	**120**	*eP*	**P**	**00 14 12.5**	**+1.1**
PTGB	**Pitanga**	**13.70**	**96**	*eP*	**P**	**00 14 14.1**	**+2.1**
ITAB	**Concordia**	**13.84**	**106**	Pn	**Pn**	**00 14 08.9**	**-1.8**
PLTB	**Pedras Altas**	**14.14**	**126**	Pn	**Pn**	**00 14 12.5**	**-1.9**
PLTB	**Pedras Altas**	**14.14**	**126**	*eP*	**P**	**00 14 17.0**	**+0.3**
TRQA	**Tornquist**	**14.57**	**164**		**Pn**	**00 14 19.2**	**-0.5**
CLDB	**Colider**	**17.00**	**41**	*eP*	**P**	**00 14 48.7**	**+0.3**
VAO	**Valinhos**	**18.48**	**91**	*eP*	**Pn**	**00 15 06.9**	**-0.1**
IPMB	**Ipameri, GO**	**18.64**	**74**	*eP*	**P**	**00 15 07.7**	**+1.4**
SNDB	**Serra Nova Dou**	**19.24**	**54**	*eP*	**P**	**00 15 13.4**	**+0.5**
BDFB	**Brasilia**	**19.80**	**68**	P	**P**	**00 15 20.0**	**+0.9**
	comp=E,9.5nm,0.6s,baz=241,slow=11,SNR=16						
BDFB	**Brasilia**	**19.80**	**68**	P	**P**	**00 15 19.6**	**+0.6**
BDFB				IAmb	IAmb	00 15 20.8	
	comp=Z,10nm,0.7s						
BDFB	**Brasilia**	**19.80**	**68**	*eP*	**P**	**00 15 20.3**	**+1.2**
PMNB	**Patos De Minas**	**20.01**	**78**	*eP*	**P**	**00 15 22.3**	**+1.0**
JANB	**Januaria**	**23.24**	**71**	*eP*	**P**	**00 15 52.7**	**-1.0**
SMTB	**Santa Maria do**	**24.02**	**54**	*eP*	**P**	**00 15 57.7**	**-3.1**
SDBA	**SAO DESIDERIO**	**24.03**	**65**	*eP*	**P**	**00 15 58.5**	**-2.4**
NAN01	**Guarapari, ES**	**25.91**	**81**	*eP*	**P**	**00 16 16.9**	**-1.0**
BOAV	**Boa Vista**	**27.11**	**15**	P	**P**	**00 16 28.9**	**+0.3**
BOAV				IAmb	IAmb	00 16 35.7	
	comp=Z,4.0nm,1.2s						
BRU2	**Volcan**	**36.08**	**333**	P	**P**	**00 17 46.5**	**-0.5**
BRU2				IAmb	IAmb	00 18 17.8	
	comp=Z,20nm,0.9s						

WHTX	**Lake Whitney,**	**62.89**	**331**	P		**P**	**00 21 11.9**	**+2.6**
BOSA	**Boshof**	**80.75**	**117**	P		**P**	**00 22 57.0**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=244,slow=4.1,SNR=7.0							
	comp=Z,0.9nm,0.4s							
WRA	**Warramunga Arr**	**131.49**	**207**	PKP		**PKPdf**	**00 29 55.6**	**+1.3**
	comp=Z,1.2nm,1.2s,baz=163,slow=1.7,SNR=7.4							
ZALV	**Zalesovo Beam**	**143.53**	**28**	PKP		PKPab	00 30 14.6	+2.6
	comp=Z,0.5nm,0.5s,baz=306,slow=3.4,SNR=2.6							
MKAR	**Makanchi Array**	**146.66**	**40**	PKPbc		**PKPdf**	**00 30 23.0**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=295,slow=3.7,SNR=8.3							

*IDC **19** 00:23:33.5±1.1,67.84N×20.59E, h0km, mbtmp2.8/4, ML1.9/4, Error ellipse: s-maj=18.4km s-min=6.6km az=121.0*
*HEL **19** 00:23:33.1±0.2,67.84N×20.16E, h0km, ML2.0, Explosion*
ISC 19 00:23:32.1±0.9,**67.80N**±0.03×**20.28E**±0.04,**h0**km,**n23,**
σ1§**45**/41,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.69**	**68**	PG	**Pb**	**00 23 46.4**	**-0.7**
LANU				SG	**Sg**	**00 23 55.1**	**+0.9**
KIF	**Kilpisjarvi**	**1.22**	**9**	*eP*	**Pg**	**00 23 55.7**	**+0.2**
KIF	**Kil

H11N1	**WAKE ISLAND Hy**	**28.32**	**124**	T	T	01 20 44.5	
	baz=316,slow=76,SNR=49						
H11N3	**WAKE ISLAND Hy**	**28.33**	**124**	T	T	01 20 44.0	
	baz=316,slow=76,SNR=38						
H11S1	**WAKE ISLAND Hy**	**29.07**	**126**	T	T	01 21 40.8	
	baz=318,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**29.08**	**126**	T	T	01 21 40.9	
	baz=318,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**29.09**	**126**	T	T	01 21 42.1	
	baz=318,slow=76,SNR=45						
ZALV	**Zalesovo Beam**	**41.52**	**311**	P	**P**	**00 52 13.5**	**-0.2**
	0.7nm,0.4s,baz=85,slow=9.0,SNR=3.6						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**43.97**	**301**	P	**P**	**00 52 34.5**	**+0.7**
	0.5nm,0.7s,baz=92,slow=9.9,SNR=3.8						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**58.38**	**189**	P	**P**	**00 54 23.0**	**+1.0**
	0.3nm,0.4s,baz=2.4,slow=6.8,SNR=5.0						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**67.99**	**332**	P	**P**	**00 55 25.1**	**-0.2**
	2.5nm,0.9s,baz=23,slow=12,SNR=4.3						
	2.5nm,0.9s						
NOA	**NORSAR Array B**	**73.26**	**337**	P	**P**	**00 55 56.2**	**-1.4**
	0.3nm,0.8s,baz=46,slow=9.0,SNR=1.2						
	0.3nm,0.8s						

*IDC **19**00:46:58.4±1.5, 10°.70N×126°.79E, h0km, mb3.7/6, mbtmp3.7/6, MS3.2/3, Error ellipse: s-maj=158.9km s-min=23.4km az=69.0*

ISC 19 00:47:04.7±1.0, **10°.6N**±0°.1×**126°.8E**±0°.1, **h44**km, **n10**, σ0**s54**/9, **mb3.6**/6, **MS2.8**/3, **1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.50**	**235**	**i**P	**Pn**	**00 47 28.9**	**-0.3**
SCPH				*i* S	**Sn**	**00 47 48.0**	**+0.3**
KSRS	**Korea Array**	**26.72**	**2**	LR	LR	01 04 49.3	
	comp=Z,10.0nm,18.2s,baz=135,slow=40						
PSI	**Prapat**	**28.68**	**256**	LR	LR	01 07 11.7	
	comp=Z,22nm,19.6s,baz=182,slow=42						
WRA	**Warramunga Arr**	**31.30**	**166**	P	**P**	**00 53 20.8**	**-0.1**
	0.3nm,0.6s,baz=345,slow=9.4,SNR=1.9						
WRA				PcP	**PcP**	**00 56 15.1**	**+0.6**
	0.4nm,0.8s,baz=350,slow=3.1,SNR=2.0						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**34.81**	**168**	P	**P**	**00 53 51.5**	**0.0**
	0.3nm,0.5s,baz=349,slow=7.3,SNR=2.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**52.02**	**322**	P	**P**	**00 56 10.5**	**+0.7**
	0.5nm,0.7s,baz=125,slow=9.1,SNR=5.5						
	0.5nm,0.7s						
ARCES	**ARCESS Array B**	**84.01**	**340**	P	**P**	**00 59 30.1**	**-0.1**
	0.8nm,0.7s,baz=75,slow=5.5,SNR=6.8						
	0.8nm,0.7s						
ASF	**Jabal al Asfar**	**84.29**	**302**	LR	LR	01 42 19.6	
	comp=Z,118nm,20.7s,baz=289,slow=39						
BRTR	**Keskin Array B**	**85.66**	**309**	P	**P**	**00 59 38.4**	**-0.8**
	0.2nm,0.6s,baz=164,slow=4.6,SNR=2.2						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**85.79**	**332**	P	**P**	**00 59 39.2**	**0.0**
	2.1nm,0.9s,baz=76,slow=5.2,SNR=9.1						
	2.1nm,0.9s						

*IDC **19**01:03:58.7±1.3, 32°.40N×137°.28E, h391km±13km, mb3.3/15, mbtmp4.0/17, Error ellipse: s-maj=17.8km s-min=11.3km az=83.0*
*JMA **19**01:04:00.3±0.4, 33°.N±1°.1×13°.7E±°, h413km±3km, MV3.2/31, FAR S OFF TOKAI DISTRICT*

ISC 19 01:03:59.5±0.7, **32°.45N**±0°.09×**137°.44E**±0°.07, **h394**km, **n37**, σ1**s83**/47, **mb3.6**/15, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**1.29**	**335**	P	**Pn**	**01 04 53.9**	**+3.2**
TTO2	**TONANKAI O.B.S**	**1.33**	**345**	P	**Pn**	**01 04 54.2**	**+3.4**
TTO3	**TONANKAI O.B.S**	**1.41**	**359**	P	**Pn**	**01 04 54.7**	**+3.3**
TK02	**Tokai 2**	**1.52**	**10**	P	**Pn**	**01 04 55.1**	**+3.3**
JIE	**Ise**	**2.03**	**343**	P	**Pn**	**01 04 57.3**	**+2.3**
JIE				*e*S	**S**	**01 05 42.8**	**+2.9**
JTNC	**Tanabenakahech**	**2.06**	**312**	*e*P	**Pn**	**01 04 57.1**	**+1.9**
JTNC				*e*S	**S**	**01 05 42.0**	**+1.8**
JHJ2	**Mitsune**	**2.11**	**71**	P	**Pn**	**01 04 59.0**	**+3.5**
JAI	**Aioi**	**2.84**	**299**	P	**Pn**	**01 05 02.8**	**+1.9**
JAI				*e*S	**S**	**01 05 51.7**	**+1.1**
JFNN	**Fujinakano**	**2.93**	**20**	P	**Pn**	**01 05 03.9**	**+2.4**
JOD2	**Odawara 2**	**3.12**	**26**	P	**Pn**	**01 05 05.0**	**+1.7**
JOD2				*e*S	**S**	**01 05 57.3**	**+2.5**
JYN	**Shimob**	**3.18**	**16**	P	**Pn**	**01 05 05.8**	**+2.1**
JYTA	**Yamagatataniai**	**3.19**	**350**	P	**Pn**	**01 05 05.9**	**+2.1**
JMN	**Monobe**	**3.25**	**294**	P	**Pn**	**01 05 06.4**	**+2.1**
JWT	**Wachi**	**3.30**	**330**	P	**Pn**	**01 05 06.6**	**+2.0**
JWT				*e*S	**S**	**01 05 58.1**	**+0.6**
BSO1	**Boso 1**	**3.68**	**52**	P	**Pn**	**01 05 07.3**	**-0.2**
BSO1				*e*S	**S**	**01 06 02.0**	**-0.8**
JRY	**Ryogami san**	**3.76**	**18**	P	**Pn**	**01 05 10.6**	**+1.7**
JRY				*e*S	**S**	**01 06 07.2**	**+2.1**
JKG	**Kaga**	**3.93**	**347**	*e*P	**Pn**	**01 05 12.1**	**+1.7**
JTO	**Tosashimizu**	**3.93**	**277**	P	**Pn**	**01 05 12.1**	**+1.6**
MJAR	**Matsushiro Arr**	**4.13**	**9**	P	**Pn**	**01 05 11.2**	**-1.2**
	35nm,0.6s,baz=176,slow=9.8,SNR=76						
MJAR				S	**S**	**01 06 12.6**	**+1.0**
	6.3nm,0.9s,baz=179,slow=16,SNR=1.9						
MAT	**Matsushiro**	**4.13**	**9**	P	**Pn**	**01 05 13.6**	**+1.2**
MAT				*e*S	**S**	**01 06 12.9**	**+1.3**
KLR	**Kul'dur**	**17.30**	**347**	P	**P**	**01 07 35.9**	**-0.8**
	1.5nm,0.6s,baz=166,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**42.77**	**316**	P	**P**	**01 11 18.8**	**-1.0**
	0.7nm,0.3s,baz=80,slow=9.7,SNR=3.5						
ZALV				PcP	**PcP**	**01 13 01.5**	**-1.3**
	0.8nm,0.6s,baz=103,slow=6.4,SNR=3.1						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**43.95**	**306**	P	**P**	**01 11 28.5**	**-0.8**
	0.7nm,0.4s,baz=88,slow=9.8,SNR=10						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**46.39**	**311**	P	**P**	**01 11 47.0**	**-1.1**
	0.8nm,0.4s,baz=91,slow=9.0,SNR=9.7						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**52.18**	**184**	P	**P**	**01 12 30.5**	**-1.2**
	1.1nm,0.3s,baz=357,slow=7.7,SNR=37						
	1.1nm,0.3s						
ILAR	**Eielson Array**	**55.10**	**30**	P	**P**	**01 12 51.6**	**-0.4**
	0.6nm,0.5s,baz=259,slow=5.5,SNR=9.1						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**55.90**	**184**	P	**P**	**01 12 57.2**	**-1.0**
	0.8nm,0.5s,baz=14,slow=13,SNR=17						
	0.8nm,0.5s						
INK	**Inuvik**	**59.93**	**25**	P	**P**	**01 13 25.9**	**+0.6**
	1.7nm,0.3s,baz=303,slow=5.8,SNR=3.5						
	1.7nm,0.3s						
ARCES	**ARCESS Array B**	**67.12**	**339**	P	**P**	**01 14 11.4**	**-0.3**
	1.0nm,0.5s,baz=64,slow=8.9,SNR=17						
	1.0nm,0.5s						
FINES	**FINESS Array B**	**71.32**	**332**	P	**P**	**01 14 36.4**	**-0.9**
	2.2nm,0.4s,baz=66,slow=5.8,SNR=43						
	2.2nm,0.4s						
KBZ	**Khabaz**	**71.38**	**310**	P	**P**	**01 14 37.9**	**0.0**
	1.5nm,0.8s,baz=95,slow=6.7,SNR=3.9						
	1.5nm,0.8s						
AKASG	**Malin Array Be**	**75.88**	**321**	P	**P**	**01 15 02.4**	**-1.2**
	0.6nm,0.4s,baz=52,slow=5.4,SNR=2.5						
	0.6nm,0.4s						
NB2	**NORSAR Subarra**	**77.10**	**336**	P	**P**	**01 15 09.0**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=46,slow=5.3						
NOA	**NORSAR Array B**	**77.10**	**336**	P	**P**	**01 15 09.2**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=45,slow=5.5,SNR=8.4						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**80.39**	**51**	P	**P**	**01 15 29.4**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=292,slow=5.0,SNR=6.1						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**83.22**	**43**	P	**P**	**01 15 43.8**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=272,slow=2.5,SNR=4.9						
	comp=Z,1.6nm,0.3s						
TXAR	**Lajitas Array**	**95.53**	**50**	P	**P**	**01 16 42.0**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=287,slow=2.5,SNR=4.4						
	comp=Z,0.2nm,0.5s						

*IDC **19**01:07:33.7±0.7, 52°.91S×140°.39E, h0km, mb4.2/5, mbtmp4.2/5, MS3.6/16, Error ellipse: s-maj=62.4km s-min=19.0km az=79.0*
*NEIC **19**01:07:35.5±1.3, 52°.9S±0°.1×140°.3E±0°.5, h10km±1km, mb4.4/8, Error ellipse: s-maj=47.1km s-min=20.8km az=75.0*

ISC 19 01:07:35.0±0.6, **52°.9S**±0°.1×**140°.3E**±0°.2, **h10**km, **n59**, σ0**s84**/42, **mb4.2**/7, **MS3.5**/16, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**21.07**	**3**	P	**P**	**01 12 22.0**	**+2.8**
	3.7nm,0.8s,baz=164,slow=10.0,SNR=4.8						
STKA				LR	LR	01 19 20.6	
	comp=Z,153nm,18.9s,baz=204,slow=34						
STKA	**Stephens Creek**	**21.07**	**3**	P	**P**	**01 12 19.8**	**+0.6**
RPZ	**Rata Peaks**	**22.27**	**78**	LR	LR	01 19 06.2	
	comp=Z,150nm,19.0s,baz=238,slow=31						
FORT	**Forrest**	**23.88**	**333**	P	**P**	**01 12 49.4**	**+0.8**
H01W1	**Cape Leeuwin H**	**25.86**	**304**	T	T	01 39 59.2	
	baz=142,slow=75,SNR=54						
H01W2	**Cape Leeuwin H**	**25.86**	**304**	T	T	01 39 59.9	
	baz=142,slow=75,SNR=44						
H01W3	**Cape Leeuwin H**	**25.87**	**304**	T	T	01 40 00.5	
	baz=142,slow=75,SNR=37						
VNDA	**Vanda**	**25.92**	**169**	P	**P**	**01 13 07.1**	**+0.3**
	2.7nm,1.1s,baz=332,slow=10,SNR=6.1						
VNDA				LR	LR	01 22 39.2	
	comp=Z,104nm,18.7s,baz=338,slow=35						
	2.7nm,1.1s						
VNDA	**Vanda**	**25.92**	**169**	P	**P**	**01 13 07.5**	**+0.7**
VNDA				IAmb	IAmb	01 13 23.9	
	comp=Z,5.4nm,1.1s						
SBA	**Scott Base**	**26.78**	**168**	P	**P**	**01 13 15.4**	**+0.9**
SBA				IAmb	IAmb	01 13 20.2	
	comp=Z,11nm,1.4s						
ASAR	**Alice Springs**	**29.63**	**348**	P	**P**	**01 13 40.4**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=168,slow=10,SNR=13						
ASAR				LR	LR	01 24 12.4	
	comp=Z,72nm,21.4s,baz=160,slow=34						
	comp=Z,1.9nm,0.7s						
CTA	**Charters Tower**	**33.11**	**10**	LR	LR	01 27 30.9	
	comp=Z,124nm,18.2s,baz=238,slow=36						
WB2	**Warramunga Arr**	**33.25**	**350**	P	**P**	**01 14 11.7**	**-0.7**
WRA	**Warramunga Arr**	**33.26**	**350**	P	**P**	**01 14 12.4**	**0.0**
	comp=Z,2.7nm,0.8s,baz=171,slow=7.2,SNR=15						
WRA				PcP	**PcP**	**01 16 54.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=164,slow=2.6,SNR=5.6						
WRA				LR	LR	01 25 41.1	
	comp=Z,121nm,21.2s,baz=161,slow=33						
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**33.26**	**350**	P	**P**	**01 14 12.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**36.61**	**336**	LR	LR	01 28 24.6	
	comp=Z,96nm,21.1s,baz=161,slow=34						
QSPA	**South Pole Qui**	**37.18**	**180**	P	**P**	**01 14 46.5**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=354,slow=2.0,SNR=8.0						
QSPA				LR	LR	01 29 13.7	
	comp=Z,158nm,21.4s,baz=357,slow=35						
	comp=Z,2.2nm,0.9s						
QSPA	**South Pole Qui**	**37.18**	**180**	P	**P**	**01 14 47.0**	**+1.1**
QSPA				IAmb	IAmb	01 14 59.6	
	comp=Z,9.0nm,1.2s						
MAW	**Mawson**	**38.22**	**217**	LR	LR	01 28 44.4	
	comp=Z,79nm,20.6s,baz=75,slow=33						
BATI	**Baumata**	**44.69**	**336**	LR	LR	01 33 46.0	
	comp=Z,169nm,20.3s,baz=176,slow=35						
SNAA	**Sane**	**52.99**	**194**	LR	LR	01 38 54.5	
	comp=Z,170nm,19.4s,baz=126,slow=36						
DAV	**Davao City (W)**	**61.08**	**343**	LR	LR	01 45 12.3	
	comp=Z,20nm,20.6s,baz=168,slow=37						
PMSA	**Palmer Station**	**61.12**	**168**	LR	LR	01 42 02.2	
	comp=Z,23nm,18.5s,baz=196,slow=34						
H08S2	**Diego Garcia H**	**70.63**	**283**	T	T	02 35 55.0	
	baz=156,slow=75,SNR=3.6						
H08S1	**Diego Garcia H**	**70.64**	**283**	T	T	02 35 55.3	
H08S3	**Diego Garcia H**	**70.64**	**283**	T	T	02 36 01.1	
	baz=148,slow=75,SNR=5.0						
CMAR	**Chiang Mai Arr**	**79.59**	**320**	P	**P**	**01 19 43.7**	**+1.6**
	comp=Z,1.6nm,0.4s,baz=155,slow=4.9,SNR=5.2						
	comp=Z,1.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**79.59**	**320**	P	**P**	**01 19 39.8**	**-2.3**
BOSA	**Boshof**	**81.15**	**234**	LR	LR	01 49 17.1	
	comp=Z,21nm,19.5s,baz=189,slow=31						
LBTB	**Lobatse**	**83.96**	**236**	LR	LR	01 50 30.3	
	comp=Z,20nm,18.5s,baz=163,slow=31						
TSUM	**Tsumeb**	**92.81**	**233**	LR	LR	01 58 43.5	
	comp=Z,24nm,18.3s,baz=134,slow=33						
NVAR	**Mina Array Bea**	**125.92**	**72**	PKP	**PKiKP**	**01 26 37.4**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=228,slow=3.8,SNR=7.4						
TXAR	**Lajitas Array**	**128.31**	**91**	PKP	**PKPdf**	**01 26 41.4**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=181,slow=6.3,SNR=4.6						
ILAR	**Eielson Array**	**129.98**	**32**	PKP	**PKPdf**	**01 26 43.1**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=263,slow=3.4,SNR=4.7						
OLIL	**Olney**	**144.12**	**94**	PKPdf	**PKPab**	**01 27 08.0**	**+0.1**
L40A	**Anamosa**	**144.26**	**87**	PKPdf	**PKPab**	**01 27 08.5**	**+0.2**
TKL	**Tuckaleechee C**	**144.69**	**101**	PKPdf	**PKPab**	**01 27 09.5**	**-0.7**
BG3	**Lake Jocassee**	**144.73**	**103**	PKPdf	**PKPab**	**01 27 10.1**	**-0.2**
FINES	**FINESS Array B**	**144.83**	**310**	PKP	PKPbc	01 27 10.2	+0.3
	comp=Z,2.1nm,0.7s,baz=134,slow=8.2,SNR=6.6						
V52A	**Sevierville**	**144.92**	**101**	PKPdf	**PKPab**	**01 27 10.3**	**-0.7**
L42A	**Oliver, Polo**	**145.17**	**88**	PKPbc	**PKPbc**	**01 27 10.8**	**-0.8**
JSC	**Jenkinsville**	**145.21**	**106**	PKPbc	**PKPbc**	**01 27 12.0**	**0.0**
V53A	**Saluda**	**145.27**	**102**	PKPbc	**PKPbc**	**01 27 11.4**	**-0.8**
JFWS	**Jewell Farm**	**145.34**	**86**	PKPbc	**PKPbc**	**01 27 11.6**	**-0.5**
I40A	**Norwalk**	**145.67**	**84**		**PKPdf**	**01 27 12.2**	**-0.6**
CLUD	**Cludinico**	**146.04**	**281**	PKPbc	**PKPab**	**01 27 15.1**	**+0.2**
R50A	**Paris**	**146.11**	**97**	PKPbc	**PKPbc**	**01 27 14.3**	**-0.3**
TEOL	**Teolo**	**146.20**	**278**	PKPbc	**PKPbc**	**01 27 14.3**	**-0.5**
ARCES	**ARCESS Array B**	**146.56**	**325**	PKPbc	**PKPbc**	**01 27 15.1**	**0.0**
	comp=Z,1.8nm,0.6s,baz=105,slow=4.3,SNR=14						
G40A	**Rib Lake**	**146.66**	**83**	PKPbc	**PKPbc**	**01 27 16.3**	**+0.2**
GERES	**GERESS Array B**	**146.72**	**285**	PKPbc	**PKPbc**	**01 27 15.7**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=163,slow=5.2,SNR=14						
GERES	**GERESS Array B**	**146.72**	**285**	PKPbc	**PKPbc**	**01 27 16.0**	**-0.3**
Q51A	**Peebles**	**147.17**	**97**	PKPbc	**PKPbc**	**01 27 16.9**	**-0.8**
COWI	**Conover**	**147.73**	**82**	PKPbc	**PKPbc**	**01 27 18.4**	**-0.7**
P52A	**Corning**	**148.28**	**98**	PKPbc	**PKPbc**	**01 27 19.8**	**-0.9**
O52A	**Adamsville**	**148.76**	**97**	PKPbc	**PKPbc**	**01 27 21.7**	**-0.3**
JSRW	**J. Sargeant Re**	**149.55**	**105**	PKPbc	**PKPbc**	**01 27 23.5**	**-0.5**
NOA	**NORSAR Array B**	**151.78**	**307**	PKPbc	**PKPbc**	**01 27 27.8**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=133,slow=1.3,SNR=2.4						
ESDC	**Sonsee Array**	**152.30**	**256**	PKPbc	**PKPbc**	**01 27 30.3**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=101,slow=1.5,SNR=6.8						

*UCR **19**01:19:41.9±1.1, 9°.83N×84°.18W, h59km±2km, MW4.3*
*INET **19**01:19:41.2±1.6, 9°.85N×84°.06W, h64km±8km, MW3.4*
*UPA **19**01:19:43.3±1.5, 9°.61N×84°.08W, h10km±148km, MW3.9*

ISC 19 01:19:43.0±1.2, **9°.88N**±0°.04×**84°.18W**±0°.03, **h58**km±6km, **n63**, σ1**s49**/77, **7C-17D**, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC	**Heredia**	**0.13**	**27**	**i**eP	**Pn**	**01 19 51.5**	**-0.7**
HDC	**Heredia**	**0.13**	**27**	**i**/*i*P	**Pn**	**01 19 51.3**	**-0.9**
HDC				*e*S	**Sn**	**01 19 59.2**	**+0.5**
SJS	**Escuela Geolog**	**0.13**	**65**	**i**eP	**Pn**	**01 19 51.4**	**-0.8**
HDC3	**Heredia 3**	**0.13**	**28**	**i**eP	**Pn**	**01 19 51.5**	**-0.7**
HDC3	**Heredia 3**	**0.13**	**28**	*e*P	**Pn**	**01 19 51.4**	**-0.7**
HDC3				*e*S	**Sn**	**01 19 59.2**	**+0.4**
OCM	**Ochomogo**	**0.21**	**87**	**i**eP	**Pn**	**01 19 51.5**	**-1.1**
LCR2	**La Lucha 2**	**0.22**	**130**	**i**eP	**Pn**	**01 19 51.2**	**-1.5**
CRPO	**Crater poas**	**0.32**	**351**	**i**eP	**Pn**	**01 19 52.8**	**-0.7**
RIMA	**Rio Macho**	**0.33**	**111**	**i**eP	**Pn**	**01 19 52.1**	**-1.4**
SRA1	**San Ramn**	**0.36**	**304**	**i**eP	**Pn**	**01 19 52.8**	**-0.8**
RAFA	**San Farael, Vo**	**0.37**	**78**	*e*P	**Pn**	**01 19 53.0**	**-0.8**
VTRT	**Volcan Turrial**	**0.40**	**72**	*e*P	**Pn**	**01 19 53.6**	**-0.6**
VTUN	**Crater Central**	**0.43**	**71**	**i**eP	**Pn**	**01 19 53.9**	**-0.7**
CVTR	**Volcan Turrial**	**0.43**	**71**	**i**eP	**Pn**	**01 19 53.9**	**-0.7**
VTCV	**VTCV, Calle Va**	**0.45**	**77**	*e*P	**Pn**	**01 19 53.8**	**-0.8**
RIFO	**Rio Frio, Sara**	**0.50**	**30**	**i**eP	**Pn**	**01 19 54.1**	**-0.8**
CDM	**Cerro de Muert**	**0.52**	**129**	*e*P	**Pn**	**01 19 53.7**	**-1.9**
CDM	**Cerro de Muert**	**0.52**	**129**	*e*P	**Pn**	**01 19 53.7**	**-1.9**
EDDO	**Dominical**	**0.70**	**154**	*e*P	**Pn**	**01 19 55.7**	**-1.4**
PEZE	**Perez Zeledon,**	**0.70**	**135**	**i**eP	**Pn**	**01 19 55.6**	**-1.6**
MRVA	**Moravia de Chi**	**0.72**	**95**	*e*P	**Pn**	**01 19 56.5**	**-1.1**
LAFE	**Finca La Fe, P**	**0.73**	**264**	*e*P	**Pn**	**01 19 57.7**	**+0.2**
LAFE	**Finca La Fe, P**	**0.73**	**264**	*e*P	**Pn**	**01 19 57.7**	**+0.2**
LAFE				*e*S	**Sn**	**01 20 10.9**	**+2.7**
FORC	**Fortuna**	**0.76**	**320**	*e*P	**Pn**	**01 19 57.6**	**-0.3**
CEDE	**Laguna Cedeo**	**0.80**	**319**	**i**eP	**Pn**	**01 19 58.2**	**-0.3**
BATAN	**Batan**	**0.81**	**75**	*i* P	**Pn**	**01 19 57.9**	**-0.7**
BATAN				*e*S	**Sn**	**01 20 12.0**	**+1.9**
COVE	**Coope Vega, Sa**	**0.86**	**345**	**i**eP	**Pn**	**01 19 58.1**	**-1.1**
JTS	**Las Juntas de**	**0.87**	**298**	**i**eP	**Pn**	**01 19 58.5**	**-0.8**
JTS	**Las Juntas de**	**0.87**	**298**	*e*P	**Pn**	**01 19 58.5**	**-0.8**
SRBA	**San Rafael, Bu**	**1.03**	**129**	*e*P	**Pn**	**01 19 59.8**	**-1.8**
ACAL	**Aguas Claras**	**1.13**	**311**	*e*P	**Pn**	**01 20 02.4**	**-0.4**
EDBA	**Buenos Aires**	**1.14**	**129**	**i**eP	**Pn**	**01 20 01.2**	**-1.6**
EDPN	**Palmar Norte**	**1.16**	**142**	*e*P	**Pn**	**01 20 02.1**	**-1.0**
EDPN				*e*S	**Sn**	**01 20 17.9**	**-0.1**
VERA	**Finca Concepci**	**1.18**	**325**	*e*P	**Pn**	**01 20 02.6**	**-0.8**
CUI	**Cuipilapa**	**1.24**	**308**	*e*P	**Pn**	**01 20 04.0**	**-0.3**
COLC	**Colonia**	**1.28**	**308**	*e*P	**Pn**	**01 20 04.3**	**-0.4**
NICO	**Nicoya**	**1.28**	**281**	*e*P	**Pn**	**01 20 03.8**	**-0.9**
HORNC	**Hornillas**	**1.29**	**310**	**i**eP	**Pn**	**01 20 04.4**	**-0.5**
INDI	**Punta indio, G**	**1.31**	**269**	*e*P	**Pn**	**01 20 03.3**	**-1.8**
VMAR	**Armenia, Volca**	**1.31**	**315**	*e*P	**Pn**	**01 20 04.7**	**-0.5**
DUNO	**Dulce Nombre,**	**1.31**	**279**	*e*P	**Pn**	**01 20 02.2**	**-2.9**
DUNO				*e*S	**Sn**	**01 20 22.4**	**+0.6**
POTG	**Potrero Grande**	**1.33**	**128**	*e*P	**Pn**	**01 20 04.2**	**-1.3**
ORTG	**Ortega, Santa**	**1.35**	**291**	*e*P	**Pn**	**01 20 05.1**	**-0.7**
GUAI	**GUAI**	**1.37**	**286**	*e*P	**Pn**	**01 20 05.0**	**-0.9**
GRZA	**Playa Garza**	**1.44**	**271**	*e*P	**Pn**	**01 20 05.0**	**-1.9**
GPS2	**Hotel Rincn d**	**1.45**	**307**	*e*P	**Pn**	**01 20 06.5**	**-0.5**
BUEV	**Buena Vista**	**1.52**	**307**	*e*P	**Pn**	**01 20 07.7**	**-0.3**
SAJU	**San Juanillo,**	**1.52**	**277**	*e*P	**Pn**	**01 20 06.3**	**-1.7**
EDSV	**San Vito**	**1.59**	**132**	*e*P	**Pn**	**01 20 08.7**	**-0.3**
HZTE	**Horizontes, Gu**	**1.62**	**301**	*e*P	**Pn**	**01 20 08.9**	**-0.5**
HZTE	**Horizontes, Gu**	**1.62**	**301**	*e*P	**Pn**	**01 20 09.1**	**-0.3**
HZTE				*e*S	**Sn**	**01 20 30.4**	**+1.1**
BRU2	**Volcan**	**1.82**	**126**	**i**eP	**Pn**	**01 20 11.0**	**-1.2**
BRU2	**Volcan**	**1.82**	**126**	**i**/*i*P	**Pn**	**01 20 11.0**	**-1.2**
BRU2				*e*S	**Sn**	**01 20 33.5**	**-0.8**
BC3P	**Paso Ancho**	**1.87**	**124**	**i**/*i*P	Pn	01 20 17.0	+4.1
BC3P				*e*S	**Sn**	**01 20 41.4**	**+5.8**
BCO2	**Palmira**	**1.99**	**125**	**i**eP	**Pn**	**01 20 13.4**	**-1.2**
BCO2				*e*S	**Sn**	**01 20 37.5**	**-1.0**
PTAR3	**Potrerillos Ar**	**2.04**	**125**	*e*P	**Pn**	**01 20 14.2**	**-0.9**
PTAR3				*e*S	**Sn**	**01 20 37.7**	**-1.7**
DVD	**David**	**2.23**	**130**	*e*P	**Pn**	**01 20 16.4**	**-1.2**
DVD				*e*S	**Sn**	**01 20 43.5**	**-0.5**
ACON	**Acoyapa**	**2.29**	**335**	**i**eP	**Pn**	**01 20 17.7**	**-0.8**
ACON	**Acoyapa**	**2.29**	**335**	*e*P	**Pn**	**01 20 17.6**	**-0.8**
ACON				*e*S	**Sn**	**01 20 45.0**	**-0.6**
ESPN	**Las Esperanzas**	**2.30**	**357**	**i**eP	**Pn**	**01 20 17.7**	**-0.9**
ESPN	**Las Esperanzas**	**2.30**	**357**	*e*P	**Pn**	**01 20 17.6**	**-1.0**
ESPN				*e*S	**Sn**	**01 20 44.7**	**-1.1**
BOAB	**BOACO BROADBAN**	**2.94**	**330**	*e*P	**Pn**	**01 20 26.3**	**-1.1**
CACAO	**El Cacao, Vera**	**4.13**	**127**	*e*P	**Pn**	**01 20 44.0**	**+0.4**
CACAO				*e*S	**Sn**	**01 21 36.9**	**+6.2**

*IDC **19**01:19:51.9±0.8, 50°.37N×142°.51E, h0km, mb3.8/11, mbtmp3.8/13, ML3.2/2, MS2.9/5, Error ellipse: s-maj=26.4km s-min=14.5km az=150.0*
*SKHL

USRK Lg Lg 01 24 52.7
comp=Z,0.4nm,0.3s,baz=29,slow=33,SNR=8.3
comp=Z,3.2nm,0.4s
USRK Ussuriysk Ar. 9.38 233 Pn **Pn 01 22 10.4 +2.0**
PETK Petropavlovsk- 9.89 68 LR LR 01 26 27.2
comp=Z,86nm,18.6s,baz=256,slow=40
MDJ Mudanjiang 10.39 241 Pn **Pn 01 22 25.5 +3.2**
MA2 Magadan 10.40 24 LR LR 01 26 57.2
comp=Z,55nm,21.5s,baz=248,slow=41
PET Petropavlovsk 10.44 69 *i* PN **Pn 01 22 25.3 +2.3**
PET pmax pmax
comp=Z,8.0nm,0.3s
MAJO Matsushiro 14.15 194 Pn **Pn 01 23 16.0 +2.3**
MAJO Matsushiro 14.15 194 P **Pn 01 23 16.0 +2.3**
KSRS Korea Array 16.55 224 LR LR 01 29 45.5
comp=Z,39nm,19.4s,baz=30,slow=36
TIXI Tiksi 22.22 349 *i* P **P 01 24 51.3 +1.7**
TIXI pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 23.13 278 *i* P **P 01 24 59.8 +0.2**
ULN pmax pmax
comp=Z,6.0nm,1.8s
SONM Songino Array 23.55 278 P **P 01 25 03.9 0.0**
SONM Songino Array 23.55 278 P **P 01 25 03.9 0.0**
SONM pmax pmax
comp=Z,1.0nm,0.7s
ZAA0 Zalesovo Array 34.66 299 P **P 01 26 41.7 -1.0**
ZAA0 IAmb IAmb 01 26 58.1
comp=Z,1.7nm,0.9s
ZALV Zalesovo Beam 34.66 299 LR LR 01 41 52.0
comp=Z,20nm,20.5s,baz=84,slow=38
ZALV Zalesovo Beam 34.66 299 P **P 01 26 42.5 -0.2**
ZALV Zalesovo Beam 34.66 299 P **P 01 26 42.5 -0.2**
IL31 38.32 41 P **P 01 27 11.9 -1.8**
IL31 IAmb IAmb 01 27 22.6
comp=Z,3.8nm,1.4s
ILAR Eielson Array 38.32 41 P **P 01 27 13.2 -0.7**
comp=Z,1.1nm,0.7s,baz=277,slow=8.3,SNR=13
comp=Z,1.1nm,0.7s
PRP Porcupine Dome 38.72 39 P **P 01 27 16.3 -1.0**
PRP IAmb IAmb 01 27 18.5
comp=Z,4.1nm,0.9s
MK31 Makanchi Array 38.97 289 P **P 01 27 20.0 +0.4**
MK31 Makanchi Array 38.97 289 *i* P **P 01 27 19.4 -0.1**
MKAR Makanchi Array 38.97 289 P **P 01 27 20.2 +0.7**
comp=Z,1.3nm,0.8s,baz=65,slow=7.6,SNR=10
comp=Z,1.3nm,0.8s
MKAR Makanchi Array 38.97 289 *e*P **P 01 27 21.3 +1.8**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 39.39 296 P **P 01 27 23.8 +0.9**
KURK IAmb IAmb 01 27 26.0
comp=Z,2.1nm,0.8s
KURK Kurchatov 39.39 296 *i* P **P 01 27 22.9 0.0**
KURK pmax pmax
comp=Z,2.0nm,0.9s
EGAK Eagle 40.69 40 P **P 01 27 32.2 -1.3**
EGAK IAmb IAmb 01 27 36.1
comp=Z,6.8nm,1.2s
INK Inuvik 42.48 33 P **P 01 27 48.3 +0.1**
comp=Z,2.1nm,0.8s,baz=330,slow=7.0,SNR=4.7
comp=Z,2.1nm,0.8s
CMAR Chiang Mai Arr 46.92 243 LR LR 01 50 21.7
comp=Z,21nm,19.1s,baz=185,slow=39
ARU Arti 47.40 311 *c i*P **P 01 28 27.7 +0.3**
ARU 01 30 06.4
ARU S **S 01 35 24.2 +3.0**
ARU SS **SS 01 38 45.0 -3.2**
ARU pmax pmax
comp=Z,8.0nm,3.3s
ABKAR Akbulak array 50.55 303 P **P 01 28 52.1 +0.5**
PUL Pulkovo 57.26 326 *i* P **P 01 29 41.0 +0.5**
PUL pmax pmax
comp=Z,94nm,0.5s
NOA NORSAR Array B 62.24 336 P **P 01 30 14.6 -0.3**
comp=Z,0.6nm,0.9s,baz=34,slow=6.7,SNR=3.3
comp=Z,0.6nm,0.9s
NVAR Mina Array Bea 66.80 57 P **P 01 30 45.0 -0.2**
comp=Z,0.8nm,0.7s,baz=308,slow=6.7,SNR=7.3
comp=Z,0.8nm,0.7s
NVAR Mina Array Bea 66.80 57 P **P 01 30 44.8 -0.5**
PD31 Pinedale Array 68.07 49 P **P 01 30 52.8 -0.4**
PD31 IAmb IAmb 01 30 53.8
comp=Z,1.1nm,0.7s
PDAR Pinedale Array 68.07 49 P **P 01 30 52.5 -0.7**
comp=Z,0.6nm,0.5s,baz=329,slow=1.7,SNR=5.7
comp=Z,0.6nm,0.5s
PDAR Pinedale Array 68.07 49 P **P 01 30 52.3 -1.0**
ULM Lac du Bonnet 68.12 36 P **P 01 30 52.6 -0.5**
comp=Z,2.3nm,0.7s,baz=329,slow=11,SNR=3.3
comp=Z,2.3nm,0.7s
ULM Lac du Bonnet 68.12 36 *e*P **P 01 30 53.5 +0.3**
ULM pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 70.36 188 P **P 01 31 07.0 -0.3**
comp=Z,0.5nm,0.8s,baz=1.5,slow=6.4,SNR=2.1
comp=Z,0.5nm,0.8s
WRA Warramunga Arr 70.36 188 P **P 01 31 07.0 -0.3**
O20A White River Ci 70.72 50 P **P 01 31 08.8 -0.8**
O20A IAmb IAmb 01 31 12.5
comp=Z,4.7nm,1.0s
ASAR Alice Springs 74.09 188 P **P 01 31 29.8 +0.3**
comp=Z,0.4nm,0.5s,baz=7.3,slow=5.5,SNR=4.6
comp=Z,0.4nm,0.5s
QUOK Quay 79.33 45 P **P 01 31 57.0 -2.1**
QUOK IAmb IAmb 01 31 58.8
comp=Z,17nm,0.8s
TXAR Lajitas Array 81.53 54 P **P 01 32 11.4 +0.2**
comp=Z,0.7nm,0.8s,baz=300,slow=6.9,SNR=8.5
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 81.53 54 P **P 01 32 10.7 -0.5**
TXAR Lajitas Array 81.53 54 P **P 01 32 10.7 -0.5**
ESDC Sonseca Array 85.58 335 P **P 01 32 32.1 +0.3**
comp=Z,0.5nm,0.8s,baz=7.8,slow=4.0,SNR=4.7
comp=Z,0.5nm,0.8s

*NEIC **19** 01:54:34.1±1.4,51˚.47N±0˚.04×173˚.95W±0˚.07,h10km±2km, mb3.4/4,ML2.8/20(AEIC),Error ellipse: s-maj=7.4km s-min=6.7km az=121.0*

AEIC 19 01:54:37.7±3.8,51˚.53N±0˚.05×173˚.81W±0˚.08,h8km±6km, Error ellipse: s-maj=8.2km s-min=6.0km az=55.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.71**	**341**		Pg	01 54 48.7	-2.7
ATKA					Sg	01 54 58.4	-2.3
KOFP	**Korovin Flat P**	**0.76**	**347**		Pg	01 54 49.8	-2.6
KOKL	**Mount Kliuchef**	**0.83**	**343**		Pg	01 54 51.1	-2.5
KOKL					Sg	01 55 02.6	-1.8
KONE	**Korovin Northe**	**0.88**	**348**		Pg	01 54 52.2	-2.4
GSMY	**Great Sitkin M**	**1.48**	**291**		Pn	01 55 00.3	-4.4
GSTR	**Great Sitkin T**	**1.50**	**293**		Pn	01 55 00.2	-4.8
GSCK	**Great Sitkin C**	**1.54**	**289**		Pn	01 55 00.3	-5.1
GSTD	**Great Sitkin T**	**1.54**	**291**		Pn	01 55 00.3	-5.3
GSTD					Sn	01 55 17.7	-8.1
ETKA	**Kagalaska Isla**	**1.65**	**283**		Pn	01 55 01.7	-5.2
ADK	**Adak**	**1.82**	**282**		Pn	01 55 04.1	-5.2
ADK					Sn	01 55 25.3	-7.3
KIWB	**Kanaga Island**	**2.10**	**280**		Pn	01 55 08.6	-4.6
KIKV	**Kanaga Island**	**2.12**	**281**		Pn	01 55 08.8	-4.6
KICM	**Kanaga Island**	**2.14**	**282**		Pn	01 55 09.9	-3.8
KIMD	**Kanaga Island**	**2.15**	**277**		Pn	01 55 09.9	-3.9
TAPA	**Tanaga Point A**	**2.51**	**278**		Pn	01 55 15.3	-3.5
TAFP	**Tanaga Falls P**	**2.62**	**280**		Pn	01 55 16.2	-4.1
TASE	**Tanaga Southea**	**2.65**	**278**		Pn	01 55 16.7	-4.0
NIKH	**Nikolski High**	**3.37**	**63**	Pn	Pn	01 55 28.2	-2.4
AMKA	**Amchitka**	**4.31**	**271**	Pn	Pn	01 55 37.4	-6.2
UNV	**Unalaska Valle**	**5.01**	**60**	Pn	Pn	01 55 51.0	-2.1
CCB	**Clear Creek Bu**	**18.82**	**36**	P	P	01 58 52.4	-5.1
IL31		**19.22**	**36**	P	P	01 58 55.7	-6.1
IL31					IAmb	01 59 22.2	
	comp=Z,2.7nm,1.4s						
ILAR	**Eielson Array**	**19.22**	**36**	P	P	01 58 54.9	-7.0
J25K	**Salcha River,**	**19.71**	**37**	P	P	01 59 01.1	-6.2
J25K					IAmb	01 59 14.2	
	comp=Z,1.9nm,0.9s						
J26L	**Joseph Creek**	**20.36**	**39**	P	P	01 59 07.6	-6.8

*IDC **19** 01:55:19.7±9.9,37˚.47N×76˚.49E,h174km±115km, mb3.3/2, mbtmp3.5/5,Error ellipse: s-maj=114.7km s-min=65.6km az=101.0*

ISC 19 01:55:17.1±1.2,37˚.70N±0˚.08×75˚.6E±0˚.1,h100km,n10, σ1§82/12,3C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**4.47**	**206**	P	**Pn**	**01 56 23.8**	**+1.1**
CEP	**Cherat**	**4.91**	**219**	P	**Pn**	**01 56 30.6**	**+1.9**
CEP				S	**Sn**	**01 57 23.0**	**-1.4**
TKM2	**Tokmak 2**	**5.21**	**360**	⇑Pn	**Pn**	**01 56 34.8**	**+2.0**
	3.9nm,1.1s						
TKM2				⇑Pg		01 56 48.6	
	1.6nm,0.5s						
TKM2				⇓Lg	Lg	01 57 49.1	
	5.6nm,0.6s						
THW	**Thamme Wali**	**5.83**	**214**	P	**Pn**	**01 56 41.3**	**+0.1**
KK31	**Karatay Array**	**6.66**	**326**	⇑Pn	**Pn**	**01 56 53.4**	**+1.1**
	1.0nm,0.5s,baz=139,slow=14,SNR=12						
KK31				⇓Sn	**Sn**	**01 58 04.7**	**-1.8**
	2.1nm,0.5s,baz=147,slow=24,SNR=7.8						
MKAR	**Makanchi Array**	**10.34**	**26**	P	**Pn**	**01 57 42.2**	**-0.1**
	0.3nm,0.5s,baz=205,slow=14,SNR=2.6						
KURBB	**Kurchatov Arra**	**13.08**	**8**	P	**Pn**	**01 58 21.5**	**+2.6**
	0.1nm,0.2s,baz=198,slow=9.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**17.44**	**18**	P	**P**	**01 59 11.1**	**-2.5**
	0.5nm,0.3s,baz=204,slow=14,SNR=2.6						
FINES	**FINESS Array B**	**38.61**	**324**	P	**P**	**02 02 30.2**	**+0.1**
	0.6nm,0.4s,baz=116,slow=8.9,SNR=5.2						
	0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**69.42**	**271**	P	**P**	**02 06 13.5**	**-1.1**
	0.2nm,0.3s,baz=50,slow=6.2,SNR=9.7						
	0.2nm,0.3s						

*IDC **19** 02:05:16.6±0.9,32˚.89N×130˚.98E,h0km,mb3.8/10, mbtmp3.8/13,ML2.9/3,MS3.7/49,Error ellipse: s-maj=21.7km s-min=15.7km az=68.0*

*NIED **19** 02:05:17.2,33˚.02N×131˚.10E,h9km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.93; Mθθ3.63; Mφφ-2.70; Mrθ-1.78; Mθφ3.17; Mφr2.09; Fault plane solution: M₀5.30000×10¹⁵ NP1: φs207.00000°,δ62.00000°,λ-164.00000°. NP2: φs109.00000°,δ76.00000°,λ-29.00000°.*

*JMA **19** 02:05:17.2±0.0,33˚.0N±0˚.1×131˚.1E±0˚.1,h9km,MD4.4/20, MW4.4/20,NE KUMAMOTO PREF*

JMA Felt IV J1 at NE KUMAMOTO PREF .

*NEIC **19** 02:05:18.7±1.9,32˚.98N±0˚.05×130˚.95E±0˚.04,h10km±1km, mb4.2/11,Error ellipse: s-maj=8.4km s-min=5.6km az=191.0*

ISC 19 02:05:18.1±1.1,33˚.01N±0˚.04×131˚.00E±0˚.04,h10km±6km, n127,σ1§34/50,mb4.1/14,MS3.8/44,4D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**0.15**	**316**	⇓*i*P	**Pg**	**02 05 21.7**	**+0.2**
JNU				⇓S	**Sg**	**02 05 24.9**	**+1.0**
JNU	**Nakatsue**	**0.15**	**316**	A	A	02 05 21.7	
	comp=E,126nm,4.1s,comp=E,115nm,2.8s						
JTA	**Tamana**	**0.40**	**263**	⇓*i*P	**Pb**	**02 05 26.6**	**-0.7**
JTA	**Tamana**	**0.40**	**263**	A	A	02 05 26.6	
	comp=E,32nm,2.1s,comp=E,57nm,3.1s						
JBEP	**Beppuamama**	**0.47**	**46**	A	A	02 05 25.3	
	comp=E,118nm,1.9s,comp=E,98nm,4.3s						
JIU3	**Izumi3**	**0.49**	**199**	*i* P	**Pg**	**02 05 27.5**	**-0.2**
JIU3	**Izumi3**	**0.49**	**199**	A	A	02 05 27.5	
	comp=E,48nm,5.4s,comp=E,31nm,6.1s						
JKIT	**Kitakata**	**0.54**	**136**	A	A	02 05 26.8	
	comp=E,41nm,4.8s,comp=E,34nm,5.0s						
JUS	**Usuki**	**0.63**	**85**	⇓*i*P	**Pg**	**02 05 27.5**	**-2.8**
JUS	**Usuki**	**0.63**	**85**	A	A	02 05 27.5	
	comp=E,23nm,4.1s,comp=E,45nm,4.9s						
JFI	**Itaya**	**0.66**	**309**	A	A	02 05 31.1	
	comp=E,14nm,4.4s,comp=E,40nm,4.7s						
JFA	**Akaike**	**0.72**	**346**	A	A	02 05 31.4	
	comp=E,14nm,3.6s,comp=E,23nm,4.1s						
JKI	**Kunimi**	**0.78**	**37**	A	A	02 05 31.2	
	comp=E,25nm,4.3s,comp=E,20nm,3.6s						
JHHC	**Hyugahichiya**	**0.78**	**137**	A	A	02 05 31.2	
	comp=E,27nm,5.0s,comp=E,22nm,3.6s						
JSKE	**Saikikamae**	**0.78**	**106**	A	A	02 05 30.8	
	comp=E,22nm,4.9s,comp=E,30nm,5.3s						
JTSN	**Tsuno**	**0.87**	**151**	A	A	02 05 33.2	
	comp=E,27nm,4.4s,comp=E,21nm,4.0s						
JUR	**Ureshino**	**0.89**	**275**	A	A	02 05 35.5	
	comp=E,11nm,2.1s,comp=E,21nm,8.7s						
JHD	**Hondo**	**0.91**	**233**	A	A	02 05 35.7	
	comp=E,10.0nm,3.0s,comp=E,17nm,6.3s						
JZO	**Okuchi**	**0.94**	**202**	A	A	02 05 35.5	
	comp=E,40nm,4.7s,comp=E,18nm,6.4s						
NGSJ	**Nagasakinomoza**	**1.08**	**250**	A	A	02 05 38.8	
	comp=E,7.0nm,4.3s,comp=E,8.0nm,2.5s						
JTZ	**Takazaki**	**1.11**	**176**	A	A	02 05 38.0	
	comp=E,17nm,3.9s,comp=E,14nm,2.8s						
JTY	**Toyota**	**1.25**	**2**	A	A	02 05 40.3	
	comp=E,11nm,1.4s,comp=E,7.0nm,4.6s						
JII	**Iki**	**1.32**	**307**	A	A	02 05 42.5	
	comp=E,30nm,4.6s,comp=E,41nm,2.7s						
JNA	**Nagahama**	**1.35**	**66**	A	A	02 05 40.8	
	comp=E,6.0nm,5.0s,comp=E,9.0nm,1.5s						
UWA2	**Uwa jima 2**	**1.37**	**81**	A	A	02 05 41.1	
	comp=E,11nm,3.7s,comp=E,15nm,4.7s						
JNKG	**Nishinankitago**	**1.38**	**167**	A	A	02 05 42.3	
	comp=E,13nm,3.2s,comp=E,11nm,2.5s						
JNAR	**Kushima--Naru**	**1.50**	**171**	A	A	02 05 44.2	
	comp=E,9.0nm,4.1s,comp=E,9.0nm,4.4s						
JTO	**Tosashimizu**	**1.52**	**95**	A	A	02 05 43.4	
	comp=E,17nm,0.9s,comp=E,26nm,4.4s						
JSU	**Suzuyama**	**1.57**	**197**	Pn	**Pn**	**02 05 45.8**	**-0.3**
JSU	**Suzuyama**	**1.57**	**197**	A	A	02 05 45.8	
	comp=E,10.0nm,5.2s,comp=E,6.0nm,6.8s						
JHM	**Kurahashi**	**1.70**	**48**	A	A	02 05 46.4	
	comp=E,8.0nm,5.1s,comp=E,10.0nm,7.8s						
JHIK	**Hikimi**	**1.70**	**27**	A	A	02 05 46.8	
	comp=E,12nm,4.9s,comp=E,12nm,4.9s						
JSJ	**Shimokoshiki**	**1.72**	**220**	A	A	02 05 48.4	
	comp=E,6.0nm,5.0s,comp=E,8.0nm,6.3s						
JKU	**Kubokawa**	**1.75**	**80**	A	A	02 05 46.9	
	comp=E,15nm,5.3s,comp=E,16nm,4.3s						
JHGM	**Hagimishima**	**1.77**	**4**	A	A	02 05 48.3	
	comp=E,11nm,7.7s,comp=E,13nm,2.4s						
JET	**Tanbara**	**1.87**	**65**	A	A	02 05 48.8	
	comp=E,5.0nm,0.3s,comp=E,6.0nm,6.3s						
JTSM	**Tsushimamitsus**	**1.89**	**315**	A	A	02 05 51.0	
	comp=E,7.0nm,6.5s,comp=E,7.0nm,2.4s						
JFU	**Fukue jima 2**	**1.93**	**260**	A	A	02 05 51.9	
	comp=E,5.0nm,3.4s,comp=E,7.0nm,7.2s						
JTU	**Tsushima**	**2.02**	**319**	Pn	**Pn**	**02 05 51.9**	**-0.3**
JHT	**Toyohira**	**2.02**	**35**	A	A	02 05 51.5	
	comp=E,7.0nm,5.6s,comp=E,5.0nm,3.6s						
JKHR	**Kochiharumo**	**2.15**	**76**	A	A	02 05 52.8	
	comp=E,6.0nm,6.0s,comp=E,21nm,4.2s						
JTN	**Tanegashima 3**	**2.35**	**181**	A	A	02 05 56.9	
	comp=E,5.0nm,7.4s,comp=E,5.0nm,8.4s						
JMN	**Monobe**	**2.51**	**73**	Pn	**Pn**	**02 05 59.9**	**+0.8**
JMN	**Monobe**	**2.51**	**73**	A	A	02 05 58.0	
	comp=E,8.0nm,6.2s,comp=E,15nm,4.7s						
JHS	**Saijyo**	**2.65**	**41**	Pn	**Pn**	**02 06 02.3**	**+1.4**
JHS	**Saijyo**	**2.65**	**41**	A	A	02 06 00.3	
	comp=E,7.0nm,5.7s,comp=E,5.0nm,5.8s						
KSBUS	**Busan**	**2.73**	**325**	Pn	**Pn**	**02 06 02.1**	**+0.1**
JISK	**Izumosakaura**	**2.91**	**31**	A	A	02 06 04.3	
	comp=E,9.0nm,5.1s,comp=E,6.0nm,8.3s						
JAI	**Aioi**	**2.99**	**74**	A	A	02 06 04.9	
	comp=E,4.0nm,7.7s,comp=E,8.0nm,4.9s						
JKR	**Kurayoshi**	**3.32**	**44**	A	A	02 06 09.9	
	comp=E,4.0nm,7.6s,comp=E,5.0nm,6.9s						
NAWB	**Namwon**	**3.83**	**310**	Pn	**Pn**	**02 06 18.5**	**+1.3**
TJN	**Taejon**	**4.50**	**319**	Pn	**Pn**	**02 06 26.5**	**+0.2**
KSCHJ	**Chungju**	**4.58**	**328**	Pn	**Pn**	**02 06 28.5**	**+1.0**
KSRS	**Korea Array**	**5.10**	**331**	Pn	**Pn**	**02 06 34.9**	**+0.3**
	1.6nm,0.3s,baz=153,slow=15,SNR=12						
KSRS				Pg	**Pg**	**02 06 51.7**	**-4.0**
	2.7nm,0.3s,baz=144,slow=16,SNR=13						
KSRS				Lg	Lg	02 07 58.9	
	7.0nm,0.3s,baz=161,slow=30,SNR=7.3						
KSRS				LR	LR	02 08 51.1	
	comp=Z,866nm,18.1s,baz=150,slow=41						
	3.3nm,0.3s						
KSAR	**Wonju Array Be**	**5.10**	**331**	Pn	**Pn**	**02 06 36.0**	**+1.3**
INU	**Inuyama**	**5.50**	**63**	Pn	**Pn**	**02 06 41.4**	**+1.3**
SEHB	**SEOHWA**	**5.70**	**338**		**Pn**	**02 06 44.1**	**+1.2**
JGF	**Kuroka**	**5.86**	**62**	Pn	**Pn**	**02 06 47.7**	**+2.7**
MAJO	**Matsushiro**	**6.89**	**57**	Pn	**Pn**	**02 06 60.0**	**+0.7**
MJAR	**Matsushiro Arr**	**6.89**	**57**	Pn	**Pn**	**02 07 00.6**	**+1.4**
	0.4nm,0.3s,baz=239,slow=12,SNR=25						
MJAR				Lg	Lg	02 08 57.3	
	0.1nm,0.3s,baz=230,slow=29,SNR=3.2						
MJAR				LR	LR	02 10 00.2	
	comp=Z,691nm,18.4s,baz=228,slow=41						
	9.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**11.20**	**4**	Pn	**Pn**	**02 08 01.5**	**+3.3**
	0.1nm,0.3s,baz=219,slow=18,SNR=2.8						
USRK				LR	LR	02 11 46.8	
	comp=Z,324nm,18.5s,baz=230,slow=34						
	0.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**11.20**	**4**	Pn	**Pn**	**02 07 58.9**	**+0.7**
JCJ	**Chichijima**	**11.34**	**118**	LR	LR	02 11 42.3	
	comp=Z,94nm,20.5s,baz=214,slow=34						
KLR	**Kul'dur**	**16.21**	**2**	LR	LR	02 14 57.7	
	comp=Z,145nm,20.1s,baz=180,slow=36						
YSS	**Yuzh-Sakhalins**	**16.55**	**29**	Pn	**Pn**	**02 09 10.0**	**-0.2**
HIA	**Hailar**	**18.29**	**336**		**Pn**	**02 09 31.4**	**-0.5**
HIA				IAmb	IAmb	02 09 42.4	
	comp=Z,20nm,1.3s						
ULN	**Ulaanbaatar**	**23.37**	**316**	P	**P**	**02 10 25.6**	**-1.4**
ULN				IAmb	IAmb	02 10 35.0	
	comp=Z,6.9nm,0.9s						
SONM	**Songino Array**	**23.74**	**316**	P	**P**	**02 10 31.9**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=126,slow=10,SNR=9.3						
SONM				LR	LR	02 20 39.5	
	comp=Z,280nm,18.2s,baz=121,slow=39						
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**23.74**	**316**	P	**P**	**02 10 31.6**	**+1.1**
SONM				IAmb	IAmb	02 10 35.1	
	comp=Z,8.3nm,1.4s						
DAV	**Davao City (W)**	**26.30**	**192**	LR	LR	02 23 22.5	
	comp=Z,138nm,18.0s,baz=339,slow=42						
PETK	**Petropavlovsk-**	**27.73**	**36**	LR	LR	02 22 47.8	
	comp=Z,102nm,18.2s,baz=213,slow=38						
YAK	**Yakutsk**	**29.05**	**359**	LR	LR	02 22 41.2	
	comp=Z,130nm,18.2s,baz=268,slow=36						
MA2	**Magadan**	**29.63**	**20**	LR	LR	02 22 50.7	
	comp=Z,57nm,18.2s,baz=170,slow=35						
CMAR	**Chiang Mai Arr**	**32.16**	**251**	LR	LR	02 25 20.8	
	comp=Z,82nm,18.0s,baz=85,slow=38						
ZALV	**Zalesovo Beam**	**38.63**	**317**	LR	LR	02 29 32.4	
	comp=Z,128nm,18.1s,baz=96,slow=38						
TIXI	**Tiksi**	**38.71**	**359**	LR	LR	02 29 05.1	
	comp=Z,139nm,18.3s,baz=180,slow=37						
MK31	**Makanchi Array**	**39.20**	**305**	P	**P**	**02 12 45.9**	**-0.5**
MKAR	**Makanchi Array**	**39.20**	**305**	P	**P**	**02 12 47.8**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=70,slow=8.3,SNR=2.5						
MKAR				LR	LR	02 29 06.0	
	comp=Z,72nm,19.6s,baz=102,slow=36						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**39.20**	**305**	P	**P**	**02 12 45.6**	**-0.8**
KAPI	**Kappang**	**39.30**	**198**	LR	LR	02 28 10.7	
	comp=Z,38nm,21.7s,baz=20,slow=35						
KURBB	**Kurchatov Arra**	**41.92**	**311**	P	**P**	**02 13 08.6**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=98,slow=8.8,SNR=8.3						
KURBB				LR	LR	02 31 38.3	
	comp=Z,152nm,18.2s,baz=75,slow=38						
	comp=Z,1.1nm,0.8s						
PSI	**Prapat**	**42.49**	**232**	LR	LR	02 33 00.7	
	comp=Z,54nm,19.3s,baz=34,slow=39						
NRIK	**Noril'sk**	**43.66**	**339**	LR	LR	02 33 02.0	
	comp=Z,193nm,18.2s,baz=141,slow=38						
KK31	**Karatay Array**	**47.76**	**301**	P	**P**	**02 13 56.2**	**+0.8**
KK31				IAmb	IAmb	02 13 58.6	
	comp=Z,3.9nm,1.0s						
KKAR	**Karatay Array**	**47.76**	**301**	P	**P**	**02 13 56.4**	**+1.0**
WRA	**Warramunga Arr**	**52.75**	**176**	P	**P**	**02 14 31.6**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=356,slow=8.3,SNR=6.2						
WRA				LR	LR	02 36 07.8	
	comp=Z,26nm,21.2s,baz=154,slow=35						
	comp=Z,0.8nm,0.8s						
PALK	**Pallekele**	**53.09**	**253**	LR	LR	02 39 05.8	
	comp=Z,64nm,18.2s,baz=140,slow=38						
ARU	**Arti**	**53.72**	**319**	LR	LR	02 40 51.9	
	comp=Z,83nm,19.1s,baz=89,slow=40						
ABKAR	**Akbulak array**	**53.96**	**310**	P	**P**	**02 14 43.1**	**+1.1**
CTA	**Charters Tower**	**54.78**	**162**	LR	LR	02 34 58.1	
	comp=Z,62nm,21.3s,baz=81,slow=33						
AKTO	**Aktyubinsk**	**54.96**	**312**	LR	LR	02 37 52.8	
	comp=Z,62nm,18.5s,baz=89,slow=36						
HRA	**Herat**	**56.18**	**292**	P	**P**	**02 14 58.5**	**-0.1**
ASAR	**Alice Springs**	**56.43**	**177**	P	**P**	**02 14 59.3**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=8.9,slow=13,SNR=6.8						
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**56.43**	**177**	P	**P**	**02 14 59.9**	**-0.1**
ILAR	**Eielson Array**	**57.36**	**30**	P	**P**	**02 15 07.6**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=275,slow=4.3,SNR=4.6						
	comp=Z,0.3nm,0.8s						
GEYT	**Alibeck**	**58.17**	**297**	LR	LR	02 44 54.3	
	comp=Z,49nm,18.3s,baz=337,slow=41						
BELG	**Belogornoye**	**60.80**	**316**	LR	LR	02 43 41.8	
	comp=Z,69nm,18.4s,baz=154,slow=38						
SPITS	**Spitsbergen Ar**	**62.72**	**348**	LR	LR	02 44 46.5	
	comp=Z,61nm,19.9s,baz=5.0,slow=38						
ARCES	**ARCESS Array B**	**64.62**	**338**	LR	LR	02 50 10.4	
	comp=Z,62nm,18.1s,baz=67,slow=42						
KBZ	**Khabaz**	**66.82**	**308**	P	**P**	**02 16 11.5**	**+1.5**
	comp=Z,2.6nm,0.9s,baz=73,slow=8.9,SNR=7.0						
KBZ				LR	LR	02 46 03.8	
	comp=Z,60nm,20.8s,baz=88,slow=37						
	comp=Z,2.6nm,0.9s						
GNI	**Garni**	**67.03**	**304**	LR	LR	02 48 45.5	
	comp=Z,50nm,18.5s,baz=76,slow=39						
FINES	**FINESS Array B**	**68.19**	**330**	P	**P**	**02 16 17.8**	**-0.6**
	comp=Z,1.7nm,0.9s,baz=60,slow=5.3,SNR=5.5						
FINES				LR	LR	02 48 33.6	
	comp=Z,87nm,19.1s,baz=52,slow=38						
	comp=Z,1.7nm,0.9s						
RES	**Resolute Bay**	**68.45**	**12**	LR	LR	02 47 24.2	
	comp=Z,25nm,20.3s,baz=239,slow=37						
BBB	**Bella Bella**	**70.75**	**40**	LR	LR	02 48 45.7	
	comp=Z,18nm,18.5s,baz=91,slow=37						
YKA	**Yellowknife Ar**	**71.39**	**

s-min=29.0km az=128.0

ISC 19 02:18:00.4±1.4, **13°.9S**×0°.2×**167°.1E**±0°.3, **h35**km, **n6, σ0.66/6, mb3.8/4, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.16**	**184**	Pn	**Pn**	**02 19 56.8**	**+0.2**
	0.9nm,0.3s,baz=35,slow=16,SNR=9.3						
DZM				Sn	Sn	02 21 16.9	-11
	0.8nm,0.3s,baz=47,slow=20,SNR=1.2						
	3.3nm,0.4s						
STKA	**Stephens Creek**	**29.42**	**228**	P	**P**	**02 24 00.1**	**-0.7**
	2.1nm,0.4s,baz=42,slow=10,SNR=6.4						
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**31.89**	**255**	P	**P**	**02 24 23.4**	**+0.7**
	0.8nm,0.9s,baz=83,slow=8.0,SNR=8.6						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**32.83**	**248**	P	**P**	**02 24 31.0**	**0.0**
	0.9nm,0.4s,baz=74,slow=9.0,SNR=9.3						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**85.78**	**18**	P	**P**	**02 30 35.5**	**-0.3**
	0.3nm,0.7s,baz=236,slow=6.4,SNR=3.3						
	0.3nm,0.7s						
ARCES	**ARCESS Array B**	**119.41**	**345**	PKP	**PKiKP**	**02 36 46.2**	**+0.5**
	0.7nm,0.6s,baz=86,slow=1.6,SNR=6.5						

*NIED **19** 02:28:39.7, 31°.71N×131°.86E, h24km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr0.45; Mθθ-1.09; Mφφ0.65; Mrθ0.36; Mθφ-1.04; Mφr1.82; Fault plane solution: M0.2.32000×10^14^ NP1: φs283.00000°, δ37.00000°, λ168.00000°. NP2: φs22.00000°, δ83.00000°, λ53.00000°.*

JMA 19 02:28:39.7±0.1, **31°.7N**×0°.3×**131°.9E**±0°.7, **h24**km±1km, **MV3.5/37, HYUGANADA REGION, Kyushu**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JNKG	**Nichinankitago**	**0.42**	**264**	*i* P	Pb	02 28 47.9	-0.6
JNKG				*e*S	Sb	02 28 54.1	-0.3
JNAR	**Kushima--Naru**	**0.54**	**251**	*e*P	Pb	02 28 50.4	-0.1
JNAR				*e*S	Sb	02 28 58.2	+0.4
JTSN	**Tsuno**	**0.62**	**330**	*e*P	Pb	02 28 51.5	-0.3
JTSN				*e*S	Sb	02 28 59.9	-0.2
JTZ	**Takazaki**	**0.69**	**287**	*e*P	Pb	02 28 52.9	-0.2
JTZ				*e*S	Sb	02 29 02.1	-0.1
JZO	**Okuchi**	**1.16**	**292**	*e*P	Pn	02 28 59.9	-0.6
JZO				*e*S	Sb	02 29 15.8	+0.1
JIU3	**Izumi3**	**1.23**	**314**	*e*P	Pn	02 29 01.5	+0.1
JTN	**Tanegashima 3**	**1.29**	**216**	P	Pn	02 29 02.0	-0.3
JTO	**Tosashimizu**	**1.40**	**34**	P	Pn	02 29 02.3	-1.4

*IDC **19** 02:32:23.8±6.1, 10°.73S×165°.84E, h147km±56km, mb3.9/9, mbtmp4.3/10, Error ellipse: s-maj=28.3km s-min=20.2km az=11.0*

*NEIC **19** 02:32:25.9±0.8, 10°.8S±0°.1×166°.0E±0°.1, h172km±8km, mb4.2/10, Error ellipse: s-maj=19.3km s-min=12.8km az=55.0*

*NOU **19** 02:32:54.7, 13°.26S×166°.56E, h0km, mb4.5/7, Vanuatu Islands*

ISC 19 02:32:23.9±0.6, **10°.76S**±0°.08×**165°.94E**±0°.09, **h150**km, **n40, σ1.952/41, mb4.2/15, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.05**	**282**	Pn	**Pn**	**02 33 53.6**	**+2.3**
KOUNC	**Koumac, New Ca**	**9.86**	**189**		**Pn**	**02 34 42.6**	**+0.5**
KOUNC	**Koumac, New Ca**	**9.86**	**189**	P	**Pn**	**02 34 46.3**	**+4.2**
DZM	**Mont Dzumac**	**11.26**	**178**	P	**Pn**	**02 35 01.3**	**+0.7**
	9.4nm,0.3s,baz=4.8,slow=5.5,SNR=57						
DZM				S	**Sn**	**02 37 01.6**	**-3.6**
	9.9nm,0.6s,baz=134,slow=23,SNR=2.7						
DZM	**Mont Dzumac**	**11.26**	**178**	Pn	**Pn**	**02 35 01.5**	**+0.9**
DZM	**Mont Dzumac**	**11.26**	**178**	P	**Pn**	**02 35 02.2**	**+1.6**
YATNC	**Mamie plateau,**	**11.27**	**175**	P	**Pn**	**02 35 01.8**	**+1.1**
NOUC	**Port Laguerre**	**11.28**	**178**	P	**Pn**	**02 35 03.3**	**+2.5**
ONTNC	**Ouen Toro**	**11.49**	**178**	P	**Pn**	**02 35 06.5**	**+2.9**
OUENC	**Ouen Island, N**	**11.63**	**176**	Pn	**Pn**	**02 35 04.9**	**-0.4**
OUENC	**Ouen Island, N**	**11.63**	**176**	P	**Pn**	**02 35 08.1**	**+2.8**
MSVF	**Nonsavu**	**13.63**	**122**	P	**P**	**02 35 36.7**	**+1.7**
	12nm,0.8s,baz=266,slow=7.9,SNR=9.3						
MSVF	**Nonsavu**	**13.63**	**122**	P	**P**	**02 35 35.6**	**+0.6**
CTA	**Charters Tower**	**21.10**	**242**	P	**P**	**02 36 57.1**	**+0.2**
	11nm,0.7s,baz=77,slow=13,SNR=8.7						
	11nm,0.7s						
URZ	**Urewera**	**29.16**	**162**	P	**P**	**02 38 11.2**	**+0.3**
	12nm,0.4s,baz=289,slow=1.9,SNR=12						
	12nm,0.4s						
TUWZ	**Tuamarina**	**31.35**	**168**	P	**P**	**02 38 30.6**	**+0.4**
WB0	**Warramunga Arr**	**31.68**	**250**	P	**P**	**02 38 32.4**	**-1.1**
WRAB	**Tennant Creek**	**31.75**	**249**	P	**P**	**02 38 33.0**	**-1.1**
WRAB				IAmb	IAmb	02 38 35.0	
	comp=Z,6.9nm,1.1s						
WRA	**Warramunga Arr**	**31.76**	**249**	P	**P**	**02 38 33.2**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=82,slow=8.7,SNR=51						
	comp=Z,3.9nm,0.7s						
AS31	**Alice Springs**	**33.09**	**243**	P	**P**	**02 38 43.6**	**-2.1**
ASAR	**Alice Springs**	**33.09**	**243**	P	**P**	**02 38 44.5**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=75,slow=9.8,SNR=19						
	comp=Z,2.7nm,0.8s						
KNRA	**Kununurra**	**36.49**	**258**	P	**P**	**02 39 14.2**	**-0.8**
KNRA				IAmb	IAmb	02 39 15.2	
	comp=Z,13nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.64**	**255**	P	**P**	**02 39 40.2**	**-1.1**
PSA00	**Pilbara Seismi**	**45.41**	**250**	P	**P**	**02 40 27.6**	**-0.3**
USRK	**Ussuriysk Ar.**	**62.78**	**333**	P	**P**	**02 42 33.3**	**0.0**
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**02 43 00.0**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=14,slow=5.3,SNR=4.3						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**02 42 57.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**72.17**	**293**	P	**P**	**02 43 33.3**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=119,slow=3.7,SNR=4.0						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**72.17**	**293**	P	**P**	**02 43 31.8**	**-1.1**
HDA	**Harding Lake**	**82.91**	**19**	P	**P**	**02 44 31.0**	**-0.5**
HDA				IAmb	IAmb	02 44 32.4	
	comp=Z,5.9nm,1.0s						
ILAR	**Eielson Array**	**83.18**	**18**	P	**P**	**02 44 33.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=239,slow=5.1,SNR=12						
	comp=Z,0.8nm,0.6s						
LHV	**Little Huntoon**	**85.49**	**50**	P	**P**	**02 44 44.2**	**-0.9**
LHV				IAmb	IAmb	02 44 46.6	
	comp=Z,7.7nm,1.4s						
NVAR	**Mina Array Bea**	**85.69**	**50**	P	**P**	**02 44 47.1**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=240,slow=8.7,SNR=6.5						
	comp=Z,0.3nm,0.2s						
NVAR	**Mina Array Bea**	**85.69**	**50**	P	**P**	**02 44 45.2**	**-1.2**
LCH	**Last Change Ra**	**85.84**	**51**	P	**P**	**02 44 47.3**	**+0.2**
LCH				IAmb	IAmb	02 44 47.8	
	comp=Z,1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**93.44**	**324**	P	**P**	**02 45 21.1**	**-1.0**
MK31	**Makanchi Array**	**93.45**	**317**	P	**P**	**02 45 21.6**	**-0.8**
MK31				IAmb	IAmb	02 45 22.8	
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**93.45**	**317**	P	**P**	**02 45 22.2**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=95,slow=5.9,SNR=7.8						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**93.45**	**317**	P	**P**	**02 45 21.1**	**-1.3**
ARCES	**ARCESS Array B**	**116.11**	**346**	PKP	**PKPdf**	**02 50 48.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=46,slow=5.2,SNR=4.0						

*SJA **19** 02:43:44.2±0.5, 20°.95S×66°.53W, h276km±4km, ML4.8, MW4.4*

*NEIC **19** 02:43:47.0±1.6, 20°.96S±0°.06×66°.61W±0°.09, h230km±8km, mb4.4/22, Error ellipse: s-maj=12.2km s-min=8.4km az=73.0*

*VAO **19** 02:43:47.7±0.4, 20°.83S×66°.67W, h258km±4km, mb4.4*

*SCB **19** 02:43:48.2±0.8, 21°.03S×66°.65W, h243km±6km, ML3.5/4, MW4.0, Error ellipse: s-maj=3.2km s-min=2.8km az=1.0*

*IDC **19** 02:43:49.0±1.5, 20°.84S×66°.40W, h249km±14km, mb3.8/12, mbtmp4.4/15, Error ellipse: s-maj=14.0km s-min=11.6km az=97.0*

ISC 19 02:43:47.1±0.5, **20°.94S**±0°.04×**66°.58W**±0°.04, **h236**km±5km, **n154, σ1.907/162, mb4.2/21, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MOCB	**Mochara**	**0.93**	**110**	P	**Pn**	**02 44 21.9**	**+1.1**
MOCB				S	**S**	**02 44 46.3**	**-0.9**
MOCB				IAML		02 44 48.0	
	3μm,0.8s						
YJA	**Yavi**		**1.58**	**141**	*e*P	**Pn**	**02 44 26.2**	**+1.0**
YJA					*e*S	**S**	**02 44 57.7**	**+2.6**
YJA	**Yavi**		**1.58**	**141**	P	**Pn**	**02 44 26.0**	**+0.7**
AOVT	**TarijaAcel**		**1.85**	**109**	P	**Pn**	**02 44 27.7**	**+0.4**
AF01	**San Pedro de A**		**2.49**	**216**		**Pn**	**02 44 35.0**	**+1.3**
HJA	**Humahuaca**		**2.50**	**155**	*e*P	**Pn**	**02 44 34.5**	**+0.7**
HJA					*e*S	**S**	**02 45 11.5**	**+0.9**
PB09	**IPOC Station P**		**2.62**	**251**		**Pn**	**02 44 34.6**	**-0.2**
PB09	**IPOC Station P**		**2.62**	**251**	*e*P	**Pn**	**02 44 35.2**	**+0.4**
PB09					*e*S	**S**	**02 45 13.5**	**+1.2**
PB01	**IPOC Station P**		**2.72**	**267**		**Pn**	**02 44 35.4**	**-0.4**
LVC	**Limon Verde**		**2.73**	**232**	P	**Pn**	**02 44 36.2**	**0.0**
	113nm,0.4s,baz=38,slow=7.3,SNR=107							
LVC					S	**S**	**02 45 13.1**	**-1.6**
	77nm,0.3s,baz=211,slow=19,SNR=18							
LVC	**Limon Verde**		**2.73**	**232**	Pn	**Pn**	**02 44 35.7**	**-0.5**
LVC	**Limon Verde**		**2.73**	**232**	*e*P	**Pn**	**02 44 36.4**	**+0.2**
LVC					*e*S	**S**	**02 45 15.3**	**+0.5**
LVC	**Limon Verde**		**2.73**	**232**	P	**Pn**	**02 44 36.0**	**-0.2**
LVC					IAML		02 45 20.1	
	80nm,0.4s							
LVC	**Limon Verde**		**2.73**	**232**	*e*P	**Pn**	**02 44 36.2**	**0.0**
GO01	**Chusmiza**		**2.76**	**297**	Pn	**Pn**	**02 44 36.9**	**+0.2**
GO01	**Chusmiza**		**2.76**	**297**	P	**Pn**	**02 44 37.2**	**+0.5**
PB02	**IPOC Station P**		**3.12**	**262**		**Pn**	**02 44 39.1**	**-1.1**
PB02	**IPOC Station P**		**3.12**	**262**	P	**Pn**	**02 44 40.0**	**-0.2**
PB02					S	**S**	**02 45 17.7**	**-4.2**
PB07	**IPOC Station P**		**3.18**	**255**		**Pn**	**02 44 40.4**	**-0.6**
PB06	**IPOC Station P**		**3.29**	**237**		**Pn**	**02 44 41.9**	**-0.2**
PB06	**IPOC Station P**		**3.29**	**237**	*e*P	**Pn**	**02 44 42.2**	**0.0**
PB06					*e*S	**S**	**02 45 24.3**	**-1.3**
PB06					*e*S	S	02 45 29.0	+3.4
PB06	**IPOC Station P**		**3.29**	**237**	P	**Pn**	**02 44 41.7**	**-0.4**
TA01	**Diego Aracena**		**3.39**	**276**	Pn	**Pn**	**02 44 42.4**	**-0.8**
TA01	**Diego Aracena**		**3.39**	**276**	P	**Pn**	**02 44 42.4**	**-0.8**
TA02	**Huaiquique**		**3.39**	**281**		**Pn**	**02 44 42.0**	**-1.2**
TA02	**Huaiquique**		**3.39**	**281**	P	**Pn**	**02 44 42.9**	**-0.3**
PB15	**IPOC Station P**		**3.50**	**229**		**Pn**	**02 44 44.2**	**-0.5**
PB15	**IPOC Station P**		**3.50**	**229**	*e*P	**Pn**	**02 44 44.7**	**0.0**
PB15					*e*S	**S**	**02 45 29.0**	**-1.1**
PB15					IAML		02 45 36.4	
	comp=Z,968nm,0.2s							
PB15	**IPOC Station P**		**3.50**	**229**	P	**Pn**	**02 44 44.2**	**-0.5**
ASTB	**Santa Barbara**		**3.58**	**147**	*e*P	**Pn**	**02 44 44.8**	**-0.7**
ASTB					*e*S	**S**	**02 45 29.6**	**-2.1**
PB04	**IPOC Station P**		**3.60**	**247**		**Pn**	**02 44 45.1**	**-0.7**
PB04	**IPOC Station P**		**3.60**	**247**	P	**Pn**	**02 44 45.2**	**-0.5**
PB16	**IPOC Station P**		**3.79**	**313**		**Pn**	**02 44 49.2**	**+0.8**
PB12	**IPOC Station P**		**4.22**	**303**	Pn	**Pn**	**02 44 51.9**	**-1.2**
PB18	**Visviri**		**4.31**	**320**		**Pn**	**02 44 55.1**	**+0.4**
BBOE	**La Paz, Chanca**		**4.32**	**342**	P	**Pn**	**02 44 56.4**	**+1.7**
BBOE					IAML		02 45 53.3	
	comp=Z,14nm,0.7s							
BBOD	**La Paz, Gloria**		**4.69**	**336**	P	**Pn**	**02 45 00.7**	**+1.5**
BBOD					IAML		02 46 05.6	
	comp=Z,7.0nm,3.4s							
LPAZ	**La Paz**		**4.86**	**342**	P	**Pn**	**02 45 03.0**	**+1.6**
	comp=Z,1.8nm,0.3s,baz=113,slow=4.4,SNR=33							
LPAZ	**La Paz**		**4.86**	**342**	Pn	**Pn**	**02 45 02.2**	**+0.8**
LPAZ	**La Paz**		**4.86**	**342**	P	**Pn**	**02 45 02.9**	**+1.6**
LPAZ	**La Paz**		**4.86**	**342**	*e*P	**Pn**	**02 45 02.4**	**+1.0**
GO02	**Mina Guanaco**		**5.03**	**213**	Pn	**Pn**	**02 45 02.1**	**-1.1**
GO02	**Mina Guanaco**		**5.03**	**213**	*e*P	**Pn**	**02 45 02.5**	**-0.7**
GO02					*e*S	**S**	**02 46 00.1**	**-3.4**
GO02	**Mina Guanaco**		**5.03**	**213**	P	**Pn**	**02 45 02.4**	**-0.7**
PB14	**IPOC Station P**		**5.09**	**223**	Pn	**Pn**	**02 45 02.5**	**-1.3**
AC02	**Maricunga**		**6.32**	**201**	Pn	**Pn**	**02 45 18.3**	**-1.1**
AC01	**Pan de Azucar**		**6.36**	**215**	Pn	**Pn**	**02 45 17.4**	**-2.1**
SIV	**San Ignacio**		**7.18**	**48**	P	**Pn**	**02 45 29.5**	**-0.5**
	comp=Z,77nm,0.8s,baz=233,slow=10,SNR=239							
SIV					S	**S**	**02 46 51.0**	**-1.4**
	comp=Z,5.0nm,0.7s,baz=280,slow=11,SNR=5.3							
LCO	**Las Campanas**		**8.86**	**204**		**Pn**	**02 45 49.8**	**-1.8**
PTLB	**Pontes e Lacer**		**8.94**	**54**	Pn	**Pn**	**02 45 51.9**	**-0.4**
PTLB	**Pontes e Lacer**		**8.94**	**54**	*e*P	**Pn**	**02 45 51.7**	**-0.6**
VILB	**Vilhena**		**10.02**	**39**	Pn	**Pn**	**02 46 05.8**	**-0.4**
VILB	**Vilhena**		**10.02**	**39**	*e*P	**Pn**	**02 46 06.3**	**+0.2**
CPUP	**Villa Florida**		**10.03**	**124**	P	**P**	**02 46 10.9**	**-1.7**
	comp=Z,2.6nm,0.3s,baz=302,slow=12,SNR=11							
CPUP	**Villa Florida**		**10.03**	**124**	Pn	**Pn**	**02 46 06.3**	**+0.1**
AQDB	**Aquidauana**		**10.20**	**89**	Pn	**Pn**	**02 46 08.1**	**-0.3**
RVDE	**Rio Verde (Bra**		**11.11**	**82**	*e*P	**Pn**	**02 46 19.4**	**-0.6**
SALV	**Santo Antonio**		**11.48**	**66**	*e*P	**Pn**	**02 46 24.5**	**-0.1**
VA03	**San Esteban**		**12.30**	**196**		**Pn**	**02 46 33.5**	**-1.2**
TRCB	**Terra Rica**		**13.08**	**101**		**Pn**	**02 46 44.0**	**-0.5**
TRCB	**Terra Rica**		**13.08**	**101**	*e*P	**P**	**02 46 45.3**	**-1.3**
CRSM	**Crissiumal (Br**		**13.16**	**122**	*e*P	**P**	**02 46 47.4**	**-0.1**
UNIS	**Unistalda (Bra**		**13.20**	**130**	*e*P	**P**	**02 46 47.8**	**0.0**
PDRB	**Porto dos Gac**		**13.24**	**47**	*e*P	**Pn**	**02 46 45.1**	**-1.4**
NNA	**Nana**		**13.26**	**311**	P	**P**	**02 46 49.2**	**+0.5**
	comp=Z,11nm,0.6s,baz=177,slow=12,SNR=4.2							
FRBT	**Francisco Belt**		**13.38**	**115**	*e*P	**P**	**02 46 50.9**	**+1.1**
RODS	**Rosario do Sul**		**13.89**	**135**	*e*P	**P**	**02 46 56.6**	**+1.1**
PTGB	**Pitanga**		**13.90**	**108**	*e*P	**P**	**02 46 57.5**	**+1.8**
BO01	**Tunca**		**13.98**	**196**		**Pn**	**02 46 54.9**	**-0.5**
PCMB	**Pacaembu**		**14.30**	**95**	*e*P	**Pn**	**02 46 59.1**	**-0.4**
CLDB	**Colider**		**14.40**	**48**	*e*P	**P**	**02 47 01.0**	**-0.3**
ALGR	**Alto Alegre (B**		**14.57**	**125**	*e*P	**P**	**02 47 04.4**	**+1.4**
ITAB	**Concordia**		**14.60**	**118**		**P**	**02 47 02.9**	**-0.4**
ITAB	**Concordia**		**14.60**	**118**	*e*P	**P**	**02 47 05.0**	**+1.7**
CPSB	**Cacapava Do Su**		**15.13**	**131**	*e*P	**Pn**	**02 47 09.9**	**+0.6**
ITRB	**Ituirana**		**15.27**	**88**	*e*P	**Pn**	**02 47 11.5**	**+0.3**
PLTB	**Pedras Altas**		**15.84**	**136**	*e*P	**Pn**	**02 47 17.0**	**-0.9**
CNLB	**Canela**		**16.49**	**123**	*e*P	**Pn**	**02 47 24.9**	**-0.8**
BB19B	**Bebedouro**		**16.86**	**94**	*e*P	**Pn**	**02 47 28.9**	**-1.1**
SNDB	**Serra Nova Dou**		**17.15**	**61**	*e*P	**P**	**02 47 31.2**	**-0.2**
TER01	**Tubaro-SC**		**17.55**	**119**	*e*P	**P**	**02 47 35.2**	**-0.6**
IPMB	**Ipameri, GO**		**17.57**	**84**	*e*P	**P**	**02 47 36.7**	**+0.6**
NPGB	**Novo Progresso**		**17.57**	**40**	*e*P	**P**	**02 47 35.8**	**-0.3**
RCLB	**Rio Claro- Sac**		**17.77**	**98**	*e*P	**P**	**02 47 38.3**	**+0.1**
PET01	**Itanhaem-SP**		**18.13**	**104**	*e*P	**P**	**02 47 42.6**	**+0.5**
VAO	**Valinhos**		**18.31**	**100**	*e*P	**P**	**02 47 43.5**	**-0.5**
BDFB	**Brasilia**		**18.39**	**76**	P	**P**	**02 47 45.7**	**+0.6**
	comp=Z,17nm,0.5s,baz=259,slow=6.5,SNR=25							
BDFB	**Brasilia**		**18.39**	**76**	*e*P	**P**	**02 47 46.0**	**+0.9**
MACA	**Manacapuru-AM**		**18.58**	**19**	*e*P	**P**	**02 47 46.4**	**-0.6**
GO06	**Curremehue**		**19.05**	**192**	IAmb	IAmb	02 47 56.3	
	comp=Z,14nm,0.8s							
PMNB	**Patos De Minas**		**19.11**	**86**	*e*P	**P**	**02 47 52.6**	**-0.1**
ITTB	**Itaituba**		**19.56**	**34**	*e*P	**P**	**02 47 56.5**	**-0.9**
PARB	**Paraibuna**		**19.56**	**101**	*e*P	**P**	**02 47 56.7**	**-0.8**
PLCA	**Paso Flores**		**20.02**	**189**	P	Pn	02 48 04.5	-2.6
	comp=Z,6.7nm,0.7s,baz=8.6,slow=12,SNR=22							
	comp=Z,6.7nm,0.7s							
PLCA	**Paso Flores**		**20.02**	**189**	P	**P**	**02 48 02.3**	**+0.1**
PLCA					IAmb	IAmb	02 48 04.9	
	comp=Z,7.9nm,0.8s							
PLCA	**Paso Flores**		**20.02**	**189**	*e*P	**P**	**02 48 02.6**	**+0.5**
BOSC	**San Juan Bosco**		**21.15**	**325**	P	**P**	**02 48 13.9**	**-0.6**
BOSC					IAmb	IAmb	02 48 20.6	
	comp=Z,8.8nm,0.7s							
VAS01	**Vassouras-RJ**		**21.55**	**98**	*e*P	**P**	**02 48 17.6**	**-0.6**
DIAM	**Diamantina, MG**		**21.74**	**87**	*e*P	**P**	**02 48 19.6**	**-0.5**
MC01	**Montes Claros**		**21.83**	**83**	*e*P	**P**	**02 48 19.4**	**-1.5**
PRPB	**Paraupebas**		**21.90**	**50**	*e*P	**P**	**02 48 19.9**	**-1.6**
SMTB	**Santa Maria do**		**21.90**	**60**	*e*P	**P**	**02 48 20.7**	**-0.8**
JANB	**Januaria**		**21.96**	**78**	*e*P	**P**	**02 48 20.8**	**-1.3**
COHC	**Cochancay**		**22.13**	**324**	P	**P**	**02 48 25.1**	**+1.5**
SDBA	**SAO DESIDERIO**		**22.41**	**71**	*e*P	**P**	**02 48 25.2**	**-1.0**
MALB	**Monte Alegre**		**22.45**	**34**	*e*P	**P**	**02 48 25.6**	**-1.0**
DUB01	**Friburgo-RJ**		**22.55**	**97**	*e*P	**P**	**02 48 27.0**	**-0.4**
BOAV	**Boa Vista**		**23.94**	**15**	*e*P	**P**	**02 48 37.9**	**-2.1**
SJMB	**Sao Joao De Ma**		**23.99**	**89**	*e*P	**P**	**02 48 39.6**	**-0.9**
ALF01	**Guarapari-ES**		**24.17**	**94**	*e*P	**P**	**02 48 41.6**	**-0.5**
RIB01	**Linhares ES**		**24.63**	**91**	*e*P	**P**	**02 48 45.3**	**-1.0**
MCPB	**Macapa, AP**		**24.89**	**37**	*e*P	**P**	**02 48 46.3**	**-2.4**
NAN01	**Guarapari, ES**		**25.13**	**88**	*e*P	**P**	**02 48 50.0**	**-0.9**
GUA01	**Guaratinga, BA**		**25.71**	**85**	*e*P	**P**	**02 48 55.5**	**-0.5**
GDU01	**Guandu, BA**		**26.73**	**79**	*e*P	**P**	**02 49 03.6**	**-1.6**
MDP	**Montagnes des**		**29.27**	**29**	P	**P**	**02 49 26.6**	**-1.0**
	comp=Z,7.2nm,0.7s,baz=207,slow=7.6,SNR=5.1							
	comp=Z,7.2nm,0.7s							
NBLA	**Lagarto - SE**		**29.35**	**75**	*e*P	**P**	**02 49 26.4**	**-1.9**
NBAN	**Anadia - AL**		**31.24**	**74**	*e*P	**P**	**02 49 44.0**	**-1.0**
PMSA	**Palmer Station**		**43.85**	**178**	P	**P**	**02 51 31.3**	**+1.7**
	comp=Z,2.8nm,0.4s,baz=5.5,slow=19,SNR=8.9							
	comp=Z,2.8nm,0.4s							
PETF	**Flores**		**44.01**	**327**	P	**P**	**02 51 32.1**	**+0.5**
PETF					IAmb	IAmb	02 51 33.7	
	comp=Z,8.6nm,0.6s							
VNA3	**Neumayer Olymp**		**59.91**	**162**	P	**P**	**02 53 28.1**	**+0.1**
WLAR	**White Oak Lake**		**59.92**	**335**	P	**P**	**02 53 28.4**	**-0.1**
WLAR					IAmb	IAmb	02 53 30.4	
	comp=Z,8.3nm,0.8s							
WVT	**Waverly**		**60.22**	**340**	P	**P**	**02 53 29.0**	**-1.3**
WVT					IAmb	IAmb	02 53 30.4	
	comp=Z,5.0nm,0.8s							
JCT	**Junction City**		**60.28**	**327**	P	**P**	**02 53 30.7**	**-0.2**
JCT					IAmb	IAmb	02 53 32.3	
	comp=Z,4.2nm,0.8s							
VNA2	**Neumayer--Watz**		**60.46**	**161**	P	**P**	**02 53 31.9**	**+0.3**
	baz=282,slow=7.0							
TXAR	**Lajitas Array**		**61.45**	**323**	P	**P**	**02 53 39.3**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=152,slow=8.8,SNR=11							
	comp=Z,0.8nm,0.7s							
TXAR	**Lajitas Array**		**61.45**	**323**	P	**P**	**02 53 38.8**	**-0.1**
SNAA	**Sanae**		**62.10**	**161**	P	**P**	**02 53 43.1**	**+0.4**
CCM	**Cathedral Cave**		**63.10**	**338**	P	**P**	**02 53 49.4**	**-0.1**
CCM					IAmb	IAmb	02 53 49.9	
	comp=Z,5.7nm,0.8s							
S39A	**Bolivar**		**63.52**	**336**	IAmb	IAmb	02 53 53.0	
	comp=Z,7.1nm,0.7s							
R40A	**Maddies Statio**		**63.67**	**338**	IAmb	IAmb	02 53 53.6	
	comp=Z,3.8nm,0.8s							
TROLL	**Troll, Antarti**		**63.81**	**161**	P	**P**	**02 53 54.9**	**+0.9**
319A	**Douglas**		**66.20**	**321**	IAmb	IAmb	02 54 12.2	
	comp=Z,8.4nm,0.7s							
DBIC	**Dimbokro**		**66.49**	**73**	P	**P**	**02 54 10.9**	**-1.0**
	comp=Z,7.7nm,0.7s,baz=284,slow=6.4,SNR=6.4							
	comp=Z,7.7nm,0.7s							
ANMO	**Albuquerque**		**67.25**	**325**	P	**P**	**02 54 17.5**	**+0.9**
QSPA	**South Pole Qui**		**69.25**	**180**	P	**P**	**02 54 29.6**	**+1.2**
QSPA					IAmb	IAmb	02 54 30.4	
	comp=Z,3.6nm,0.8s							
GWY	**Greenwater Val**		**73.96**	**320**	P	**P**	**02 54 57.9**	**+1.0**
PDAR	**Pinedale Array**		**74.74**	**329**	P	**P**	**02 55 02.1**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=123,slow=7.8,SNR=4.8							
	comp=Z,0.4nm,0.5s							
PDAR	**Pinedale Array**		**74.74**	**329**	P	**P**	**02 55 02.6**	**+1.3**
TORD	**Torodi Ar. Sit**		**75.12**	**69**	P	**P**	**02 55 02.9**	**-0.9**
TORD	**Torodi Ar. Bea**		**75.12**	**69**	P	**P**	**02 55 02.8**	**-1.0**
	comp=Z,9.1nm,0.5s,baz=255,slow=5.3,SNR=210							
TORD					pP	**pP**	**02 56 01.1**	**+0.8**
	comp=Z,2.8nm,0.7s,baz=253,slow=5.9,SNR=5.2							
	comp=Z,9.1nm,0.5s							
TORD	**Torodi Ar. Bea**		**75.

	baz=86								
DGS					*e*S		**Sg**	**02 54 40.2**	**-0.1**
	baz=86								
KRBS	**Karabastau**	**1.15**	**63**	*e*P			**Pb**	**02 54 26.1**	**+0.3**
	1.2nm,0.2s								
KRBS					*e*S		**Sb**	**02 54 40.9**	**+0.4**
	11nm,0.3s								
KRBS	**Karabastau**	**1.15**	**63**	P			**Pb**	**02 54 26.0**	**+0.2**
	0.9nm,0.1s								
KRBS					S		**Sb**	**02 54 40.9**	**+0.4**
	9.8nm,0.2s								
KRBS	**Karabastau**	**1.15**	**63**	*e*P			**Pb**	**02 54 26.1**	**+0.3**
	baz=63								
KRBS					*e*S		**Sb**	**02 54 40.9**	**+0.4**
	baz=63								
KST	**Kastek**	**1.26**	**96**	*e*P			**Pb**	**02 54 28.0**	**+0.4**
	1.6nm,0.1s								
KST					*e*S		**Sg**	**02 54 44.9**	**-0.2**
	11nm,0.3s								
KST	**Kastek**	**1.26**	**96**	P			**Pb**	**02 54 27.8**	**+0.2**
	1.6nm,0.1s								
KST					S		**Sn**	**02 54 44.6**	**+0.8**
	11nm,0.3s								
KST	**Kastek**	**1.26**	**96**	*e*P			**Pb**	**02 54 28.0**	**+0.4**
	baz=95								
KST					*e*S		**Sg**	**02 54 44.8**	**-0.2**
	baz=95								
BOOM	**Boomskoye usch**	**1.42**	**119**⇑	*e*P			**Pb**	**02 54 30.2**	**-0.2**
	baz=18								
BOOM				⇑*i*	S		**Sb**	**02 54 49.0**	**+0.8**
	baz=18								
KUU	**Kurty**	**1.67**	**64**	*e*P			**Pb**	**02 54 35.4**	**+0.8**
	2.4nm,0.1s								
KUU					*e*S		**Sg**	**02 54 57.2**	**-1.0**
	8.5nm,0.1s								
KUU	**Kurty**	**1.67**	**64**	P			**Pb**	**02 54 35.4**	**+0.8**
	2.4nm,0.1s								
KUU					S		**Sg**	**02 54 57.2**	**-1.0**
	8.5nm,0.1s								
KUU	**Kurty**	**1.67**	**64**	*e*P			**Pb**	**02 54 35.4**	**+0.8**
	baz=64								
KUU					*e*S		**Sg**	**02 54 57.2**	**-1.0**
	baz=64								
KTBS	**Karatobe**	**1.84**	**73**	*e*P			**Pg**	**02 54 38.9**	**-0.8**
	0.9nm,0.1s								
KTBS					*e*S		**Sg**	**02 55 03.2**	**-0.5**
	16nm,0.3s								
KTBS	**Karatobe**	**1.84**	**73**	P			**Pg**	**02 54 38.9**	**-0.8**
	0.9nm,0.1s								
KTBS					S		**Sg**	**02 55 03.2**	**-0.5**
	16nm,0.3s								
KTBS	**Karatobe**	**1.84**	**73**	*e*P			**Pg**	**02 54 38.9**	**-0.8**
	baz=72								
KTBS					*e*S		**Sg**	**02 55 03.2**	**-0.5**
	baz=72								
BTLS	**Baital**	**1.86**	**355**	*e*P			**Pb**	**02 54 38.3**	**+0.5**
	1.4nm,0.2s								
BTLS					*e*S		**Sb**	**02 55 01.8**	**+1.0**
	4.9nm,0.3s								
BTLS	**Baital**	**1.86**	**355**	P			**Pb**	**02 54 37.5**	**-0.3**
	1.2nm,0.2s								
BTLS					S		**Sb**	**02 55 00.8**	**0.0**
	6.3nm,0.2s								
MDOK	**Medeo**	**2.04**	**90**	*e*P			**Pg**	**02 54 42.6**	**-0.9**
	1.8nm,0.2s								
MDOK					*e*S		**Sg**	**02 55 09.4**	**-0.6**
	7.3nm,0.5s								
MDOK	**Medeo**	**2.04**	**90**	Pg			**Pg**	**02 54 42.6**	**-0.9**
	1.8nm,0.2s								
MDOK					Lg		Lg	02 55 09.4	
	7.3nm,0.5s								
ARXS	**Arharly**	**2.79**	**67**	*e*P			**Pb**	**02 54 55.5**	**+1.8**
	1.1nm,0.5s								
ARXS					*e*S		**Sg**	**02 55 31.2**	**-2.6**
	4.1nm,0.6s								
ARXS	**Arharly**	**2.79**	**67**	Pg			**Pb**	**02 54 54.7**	**+1.1**
	0.9nm,0.3s								
ARXS					Lg		Lg	02 55 30.3	
	4.1nm,0.6s								
BLB	**Baldybastay**	**3.20**	**72**	*e*P			**Pg**	**02 55 03.4**	**-2.2**
	0.4nm,0.1s								
BLB					*e*S		**Sg**	**02 55 45.1**	**-1.9**
	2.7nm,0.6s								
KPKS	**Kokpek**	**3.24**	**84**	*e*P			**Pb**	**02 55 03.5**	**+2.0**
	1.2nm,0.1s								
KPKS					*e*S		**Sg**	**02 55 45.3**	**-3.2**
	3.8nm,0.3s								
KPKS	**Kokpek**	**3.24**	**84**	Pg			**Pb**	**02 55 03.5**	**+2.0**
	1.2nm,0.1s								
KPKS					Lg		Lg	02 55 45.3	
	3.8nm,0.3s								

IDC ***19*** *03:35:20.6±0.8,30°.66S×71°.61W,h0km,mb3.9/5, mbtmp3.8/8,ML3.4/3,MS3.2/9,Error ellipse: s-maj=28.4km s-min=20.1km az=129.0*

SJA ***19*** *03:35:23.8±2.5,30°.58S×71°.85W,h47km±39km,ML4.0, MW3.9*

GUC ***19*** *03:35:24.7±0.8,30°.66S×71°.60W,h32km±2km,ML4.2*

NEIC ***19*** *03:35:26.0±1.6,30°.62S±0°.04×71°.56W±0°.08,h27km±8km, mb4.1/3,ML4.1(GUC),Error ellipse: s-maj=10.6km s-min=6.3km az=94.0*

ISC 19 03:35:25.4±0.7,30°.63S±0°.02×71°.69W±0°.04,h33km±5km, n119,σ1°53/128,mb3.9/8,MS3.4/4,6C-8D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO06	**Fray Jorge**	**0.07**	**134**			**Pb**	**03 35 30.8**	**-0.2**
CO06	**Fray Jorge**	**0.07**	**134**⇑	*i* P		**Pb**	**03 35 30.7**	**-0.2**
CO06				*i* S		**Sb**	**03 35 34.4**	**-0.4**
CO06				IAML			03 35 35.0	
	comp=N,63μm,0.6s							
CO05	**La Serena**	**0.81**	**29**			**Pb**	**03 35 40.2**	**-0.8**
CO05	**La Serena**	**0.81**	**29**⇓	*i* P		**Pb**	**03 35 40.2**	**-0.8**
CO05				*i* S		**Sn**	**03 35 51.8**	**+0.6**
CO05				IAML			03 35 55.6	
	comp=E,10μm,0.2s							
CO02	**Combarbal**	**0.83**	**134**			**Pb**	**03 35 40.1**	**-1.4**
CO02	**Combarbal**	**0.83**	**134**⇑	*i* P		**Pb**	**03 35 40.1**	**-1.4**
CO02				*i* S		**Sb**	**03 35 51.3**	**-1.0**
CO02				IAML			03 35 52.3	
	comp=N,16μm,0.7s							
CO02	**Combarbal**	**0.83**	**134**	*i* P		**Pb**	**03 35 40.0**	**-1.4**
CO02				*e*S		**Sb**	**03 35 51.3**	**-1.0**
CO02				IAML			03 35 51.4	
	comp=Z,4μm,0.5s							
CO03	**El Pedregal**	**0.89**	**104**			**Pn**	**03 35 41.1**	**-0.5**
CO03	**El Pedregal**	**0.89**	**104**⇑	*i* P		**Pn**	**03 35 41.0**	**-0.7**
CO03				*i* S		**Sn**	**03 35 52.6**	**-0.8**
CO03				IAML			03 35 53.9	
	comp=N,10μm,0.5s							
CO03	**El Pedregal**	**0.89**	**104**	*i* P		**Pn**	**03 35 41.0**	**-0.7**
CO03				*e*S		**Sn**	**03 35 52.7**	**-0.8**
CO03				IAML			03 35 53.1	
	comp=Z,4μm,0.5s							
GO04	**Tololo Observa**	**0.89**	**60**			**Pn**	**03 35 41.8**	**-0.1**
GO04	**Tololo Observa**	**0.89**	**60**⇓	*i* P		**Pn**	**03 35 41.8**	**-0.1**
GO04				*i* S		**Sn**	**03 35 54.2**	**+0.4**
GO04	**Tololo Observa**	**0.89**	**60**	*i* P		**Pn**	**03 35 41.0**	**-0.9**
CO01	**Juntas del Tor**	**1.53**	**65**			**Pb**	**03 35 51.5**	**-1.7**
CO01	**Juntas del Tor**	**1.53**	**65**⇓	*i* P		**Pb**	**03 35 51.6**	**-1.6**
CO01				*i* S		**Sb**	**03 36 12.0**	**-0.3**
CO01	**Juntas del Tor**	**1.53**	**65**	*i* P		**Pn**	**03 35 51.0**	**+0.4**
CO01				*e*S		**Sb**	**03 36 11.4**	**-0.9**
CO01				IAML			03 36 13.4	
	comp=Z,2μm,0.5s							
LCO	**Las Campanas**	**1.83**	**28**	Pn		**Pn**	**03 35 55.6**	**+1.0**
LCO						**Pb**	**03 35 55.8**	**-2.5**
LCO	**Las Campanas**	**1.83**	**28**⇑	*i* P		**Pn**	**03 35 55.7**	**+1.0**
LCO				*i* S		**Sb**	**03 36 19.1**	**-1.8**
LCO	**Las Campanas**	**1.83**	**28**	*i* P		**Pn**	**03 35 55.0**	**+0.3**
LCO				IAML			03 36 26.6	
	comp=Z,6μm,0.3s							
VA06	**Catapilco**	**1.96**	**170**	Pn		**Pn**	**03 35 56.8**	**+0.6**
VA06	**Catapilco**	**1.96**	**170**⇓	*i* P		**Pn**	**03 35 56.7**	**+0.4**
VA06				*i* S		**Sn**	**03 36 22.6**	**+2.9**
VA06				IAML			03 36 30.1	
	comp=N,3μm,0.5s							
AROD	**Rodeo**	**1.97**	**77**	*i* P		**Pb**	**03 36 00.0**	**-0.8**
AC05	**El Transito**	**2.17**	**35**			**Pn**	**03 36 00.8**	**+1.5**
AC05	**El Transito**	**2.17**	**35**⇓	*i* P		**Pn**	**03 36 01.6**	**+2.2**
AC05	**El Transito**	**2.17**	**35**	*i* P		**Pn**	**03 36 01.0**	**+1.7**
AC05				IAML			03 36 40.0	
	comp=Z,1μm,0.6s							
ACCO	**Cerro Coronel**	**2.27**	**90**	*i* P		**Pb**	**03 36 04.0**	**-1.8**
ACCO				IAML			03 36 37.8	
	comp=Z,854nm,0.4s							
ACDV	**Cuesta del Vie**	**2.27**	**79**	*i* P		**Pb**	**03 36 05.0**	**-0.8**
ACDV				IAML			03 36 37.0	
	comp=Z,639nm,0.5s							
VA03	**San Esteban**	**2.34**	**156**			**Pn**	**03 36 03.4**	**+1.7**
VA03	**San Esteban**	**2.34**	**156**⇑	*i* P		**Pn**	**03 36 03.4**	**+1.7**
VA03				*i* S		**Sb**	**03 36 33.3**	**-2.2**
VA03				IAML			03 36 43.8	
	comp=N,2μm,0.1s							
VA03	**San Esteban**	**2.34**	**156**	*i* P		**Pn**	**03 36 03.0**	**+1.3**
VA03				IAML			03 36 45.3	
	comp=Z,760nm,0.5s							
RTLS	**Leoncito**	**2.36**	**120**	*i* P		**Pb**	**03 36 06.0**	**-1.4**
RTLS				IAML			03 36 47.2	
	comp=Z,208nm,0.8s							
VA01	**Torpederas**	**2.39**	**179**			**Pn**	**03 36 03.4**	**+1.2**
VA01	**Torpederas**	**2.39**	**179**	*i* P		**Pn**	**03 36 02.2**	**0.0**
VA01				IAML			03 36 44.0	
	comp=Z,405nm,0.8s							
ROCH	**El Roble**	**2.41**	**166**⇓	*i* P		**Pn**	**03 36 03.5**	**+0.8**
ROCH				⇓*i* P		**Pn**	**03 36 03.5**	**+0.8**
ROCH				*i* S		**Sb**	**03 36 35.8**	**-1.8**
ROCH				IAML			03 36 43.2	
	comp=N,2μm,0.5s							
ROCH				IAML			03 36 48.5	
	comp=N,1μm,0.5s							
ROC1	**El Roble**	**2.41**	**166**			**Pn**	**03 36 02.7**	**0.0**
ROC1	**El Roble**	**2.41**	**166**	*i* P		**Pn**	**03 36 03.0**	**+0.2**
AC04	**Llanos de Chal**	**2.47**	**13**			**Pn**	**03 36 03.4**	**0.0**
AC04	**Llanos de Chal**	**2.47**	**13**⇑	*i* P		**Pn**	**03 36 03.7**	**+0.3**
AC04	**Llanos de Chal**	**2.47**	**13**	*i* P		**Pn**	**03 36 03.0**	**-0.4**
AC04				IAML			03 36 45.2	
	comp=Z,543nm,0.8s							
PEL	**Peldehue**	**2.65**	**161**	Pn		**Pn**	**03 36 06.3**	**+0.4**
PEL	**Peldehue**	**2.65**	**161**	*i* P		**Pn**	**03 36 07.2**	**+1.3**
PEL				*i* S		**Sn**	**03 36 40.2**	**+3.3**
PEL				IAML			03 36 49.0	
	comp=E,931nm,0.4s							
PEL	**Peldehue**	**2.65**	**161**	*i* P		**Pn**	**03 36 07.0**	**+1.1**
MT02	**Curacav**	**2.67**	**170**			**Pn**	**03 36 07.6**	**+1.6**
MT02	**Curacav**	**2.67**	**170**	*e*P		**Pn**	**03 36 06.2**	**+0.1**
MT02	**Curacav**	**2.67**	**170**	*i* P		**Pn**	**03 36 06.0**	**0.0**
MT02				IAML			03 36 53.9	
	comp=Z,330nm,0.7s							
ZON	**Zonda**	**2.74**	**110**			**Pn**	**03 36 08.1**	**+0.9**
ZON	**Zonda**	**2.74**	**110**	*i* P		**Pb**	**03 36 11.0**	**-2.8**
ZON				IAML			03 36 59.1	
	comp=Z,236nm,0.9s							
RTLL	**Cerro Villicun**	**2.85**	**105**	*i* P		**Pn**	**03 36 11.0**	**+2.4**
MT05	**Renca**	**2.87**	**164**	Pn		**Pn**	**03 36 10.3**	**+1.3**
MT05	**Renca**	**2.87**	**164**	*e*P		**Pn**	**03 36 10.2**	**+1.2**
MT05				*i* S		**Sn**	**03 36 46.4**	**+4.0**
MT05				IAML			03 36 56.4	
	comp=E,1μm,0.3s							
MT05	**Renca**	**2.87**	**164**	*i* P		**Pn**	**03 36 10.0**	**+1.1**
MT05				IAML			03 36 54.1	
	comp=Z,773nm,0.8s							
FCH	**Farellones**	**2.94**	**157**	*e*P		**Pn**	**03 36 12.1**	**+1.9**
FCH				IAML			03 37 03.1	
	comp=E,388nm,0.5s							
VA05	**Santo Domingo**	**3.02**	**179**			**Pn**	**03 36 11.0**	**+0.1**
VA05	**Santo Domingo**	**3.02**	**179**	*e*P		**Pn**	**03 36 11.1**	**+0.1**
VA05				*e*S		**Sb**	**03 36 53.5**	**-1.4**
VA05				IAML			03 37 09.6	
	comp=E,745nm,0.4s							
MT03	**Universidad Ad**	**3.03**	**161**			**Pn**	**03 36 12.6**	**+1.5**
MT03	**Universidad Ad**	**3.03**	**161**	*i* P		**Pn**	**03 36 12.7**	**+1.5**
MT03				*i* S		**Sn**	**03 36 48.8**	**+2.5**
MT03				IAML			03 37 04.5	
	comp=N,1μm,0.5s							
MT03	**Universidad Ad**	**3.03**	**161**	*i* P		**Pn**	**03 36 13.0**	**+1.9**
MT03				IAML			03 37 01.0	
	comp=Z,663nm,0.5s							
ASAL	**Salagasta**	**3.13**	**130**	*i* P		**Pn**	**03 36 16.0**	**+3.6**
ASAL				IAML			03 37 12.8	
	comp=Z,242nm,1.0s							
MT09	**Talagante**	**3.20**	**169**			**Pn**	**03 36 14.7**	**+1.2**
MT09	**Talagante**	**3.20**	**169**⇓	*i* P		**Pn**	**03 36 14.4**	**+1.0**
MT09				*i* S		**Sn**	**03 36 51.8**	**+1.3**
ARCO	**CERRO ARCO**	**3.23**	**134**	*i* P		**Pb**	**03 36 19.0**	**-3.0**
ARCO				IAML			03 37 11.4	
	comp=Z,302nm,0.3s							
MT01	**Popeta**	**3.25**	**174**			**Pn**	**03 36 14.5**	**+0.5**
MT01	**Popeta**	**3.25**	**174**	*i* P		**Pn**	**03 36 14.2**	**+0.2**
MT01	**Popeta**	**3.25**	**174**	*i* P		**Pn**	**03 36 14.0**	**0.0**
MT01				IAML			03 37 06.7	
	comp=Z,382nm,0.6s							
GO03	**Copiap**	**3.28**	**23**			**Pn**	**03 36 14.9**	**+0.4**
GO03	**Copiap**	**3.28**	**23**	*e*P		**Pn**	**03 36 15.5**	**+1.0**
GO03				IAML			03 37 13.4	
	comp=N,730nm,0.3s							
GO03	**Copiap**	**3.28**	**23**	*i* P		**Pn**	**03 36 16.0**	**+1.5**
LMEL	**Las Melosas**	**3.45**	**159**			**Pn**	**03 36 17.7**	**+0.8**
LMEL	**Las Melosas**	**3.45**	**159**	*i* P		**Pn**	**03 36 19.1**	**+2.2**
LMEL				*e*S		**Sn**	**03 37 00.1**	**+3.4**
LMEL				IAML			03 37 11.4	
	comp=N,616nm,0.3s							
AAGR	**Agrelo**	**3.46**	**136**	*i* P		**Pn**	**03 36 21.0**	**+4.0**
AAGR				IAML			03 37 24.2	
	comp=Z,319nm,1.4s							
AC06	**Mina Casimiro**	**3.46**	**20**			**Pn**	**03 36 17.6**	**+0.6**
AC06	**Mina Casimiro**	**3.46**	**20**	*i* P		**Pn**	**03 36 17.6**	**+0.6**
VCA	**Vinchina**	**3.57**	**59**	*i* P		Pb	03 36 23.0	-4.9
VCA				IAML			03 37 19.5	
	comp=Z,1μm,0.5s							
AVFE	**Valle Fertil**	**3.65**	**92**	*i* P		**Pn**	**03 36 22.0**	**+2.4**
AVFE				IAML			03 37 22.3	
	comp=Z,236nm,1.0s							
BO01	**Tunca**	**3.79**	**172**	Pn		**Pn**	**03 36 21.8**	**+0.3**
BO01	**Tunca**	**3.79**	**172**	*i* P		**Pn**	**03 36 22.0**	**+0.5**
BO01				IAML			03 37 23.9	
	comp=Z,168nm,1.2s							
BO02	**Sierra Bellavi**	**4.22**	**170**	Pn		**Pn**	**03 36 28.2**	**+0.7**
BO02	**Sierra Bellavi**	**4.22**	**170**	*i* P		**Pn**	**03 36 30.0**	**+2.5**
BO02				IAML			03 37 44.4	
	comp=Z,188nm,1.0s							
ACLC	**CERRO LA CRUZ**	**4.28**	**75**	*i* P		**Pn**	**03 36 31.0**	**+2.6**
ACLC				IAML			03 37 32.6	
	comp=Z,355nm,0.4s							
ACHE	**Chepes**	**4.36**	**98**	*i* P		**Pn**	**03 36 31.0**	**+1.6**
AC02	**Maricunga**	**4.40**	**31**	*e*P		**Pn**	**03 36 31.7**	**+1.5**
AC02	**Maricunga**	**4.40**	**31**	*i* P		**Pn**	**03 36 31.0**	**+0.7**
AC02				IAML			03 37 52.5	
	comp=Z,315nm,0.7s							
APLL	**PUNTA DE LOS L**	**4.46**	**88**	*i* P		**Pn**	**03 36 33.0**	**+2.2**
APLL				IAML			03 37 35.3	
	comp=Z,184nm,1.3s							
AC01	**Pan de Azucar**	**4.56**	**12**	*i* P		**Pn**	**03 36 31.0**	**-1.2**
AC01				IAML			03 37 47.3	
	comp=Z,167nm,0.6s							
RFA	**San Rafael**	**4.95**	**148**	*i* P		**Pn**	**03 36 40.0**	**+2.6**
RFA				IAML			03 38 06.1	
	comp=Z,62nm,1.4s							
H03N1	**Juan Fernandez**	**6.74**	**244**	Pn		**Pn**	**03 37 00.9**	**-0.8**
	baz=20,slow=24							
H03N1					T	T	03 43 56.5	
	baz=71,slow=72,SNR=2549							
H03N3	**Juan Fernandez**	**6.76**	**243**	Pn		**Pn**	**03 37 00.7**	**-1.3**
	baz=20,slow=24							
H03N3					T	T	03 43 55.8	
	baz=71,slow=72,SNR=2933							
H03N2	**Juan Fernandez**	**6.76**	**244**	Pn		**Pn**	**03 37 01.0**	**-1.0**
	baz=20,slow=24							
H03N2					T	T	03 43 57.1	
	baz=71,slow=72,SNR=3362							
H03S3	**Juan Fernandez**	**6.90**	**241**	Pn		**Pn**	**03 37 02.0**	**-1.9**
H03S3					T	T	03 44 15.6	
	SNR=3.4							
H03S1	**Juan Fernandez**	**6.90**	**240**	Pn		**Pn**	**03 37 01.9**	**-2.1**
H03S1					T	T	03 44 04.7	
	SNR=4.7							
H03S2	**Juan Fernandez**	**6.91**	**241**	Pn		**Pn**	**03 37 02.3**	**-1.9**
H03S2					T	T	03 44 11.4	
	SNR=4.3							
LVC	**Limon Verde**	**8.36**	**18**	Pn		**Pn**	**03 37 22.8**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=176,slow=6.0,SNR=1.6							
LVC				LR		LR	03 40 30.6	
	comp=Z,142nm,20.6s,baz=208,slow=37							
	comp=Z,1.3nm,0.4s							
PLCA	**Paso Flores**	**10.13**	**175**	Pn		**Pn**	**03 37 49.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=336,slow=11,SNR=4.8							
PLCA				LR		LR	03 41 46.7	
	comp=Z,136nm,18.4s,baz=346,slow=38							
	comp=Z,0.9nm,0.4s							
TRQA	**Tornquist**	**10.92**	**135**	Pn		**Pn**	**03 37 59.5**	**+0.1**
CPUP	**Villa Florida**	**13.34**	**75**	LR		LR	03 44 15.8	
	comp=Z,119nm,18.1s,baz=244,slow=40							
LPAZ	**La Paz**	**14.64**	**14**	Pn		**Pn**	**03 38 52.8**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=192,slow=4.4,SNR=6.0							
SIV	**San Ignacio**	**17.51**	**36**	P		**Pn**	**03 39 28.0**	**+0.9**
	baz=223,slow=13,SNR=7.6							
SIV				LR		LR	03 47 27.9	
	comp=Z,92nm,21.0s,baz=226,slow=42							
	comp=Z,1.3nm,0.6s							
NNA	**Nana**	**19.15**	**344**	LR		LR	03 45 42.8	
	comp=Z,22nm,20.3s,baz=151,slow=32							
ETMB	**Extrema**	**21.33**	**15**	P		**P**	**03 40 10.2**	**+0.6**
ETMB				IAmb		IAmb	03 40 26.1	
	comp=Z,3.9nm,0.9s							
CZSB	**Cruzeiro do Su**	**22.80**	**357**	P		**P**	**03 40 26.9**	**+1.5**
CZSB				IAmb		IAmb	03 40 52.2	
	comp=Z,8.1nm,0.9s							
BDFB	**Brasilia**	**26.31**	**61**	P		**P**	**03 40 57.4**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=247,slow=9.4,SNR=5.0							
	comp=Z,2.9nm,0.7s							
OTAV	**Otavalo**	**31.36**	**347**	P		**P**	**03 41 43.9**	**+0.3**
OTAV				IAmb		IAmb	03 41 49.1	
	comp=Z,4.7nm,1.3s							
PMSA	**Palmer Station**	**34.50**	**174**	LR		LR	03 55 36.9	
	comp=Z,69nm,18.7s,baz=342,slow=35							
MDP	**Montagnes des**	**39.93**	**30**	LR		LR	03 59 19.7	
	comp=Z,29nm,18.4s,baz=230,slow=36							
VNA3	**Neumayer Olymp**	**52.38**	**159**	P		P	03 44 26.9	-7.0
VNA2	**Neumayer--Watz**	**53.01**	**158**	P		**P**	**03 44 35.4**	**-3.2**
	baz=276,slow=6.0							
TXAR	**Lajitas Array**	**66.96**	**330**	P		**P**	**03 46 16.4**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=148,slow=7.4,SNR=5.5							
	comp=Z,0.4nm,0.7s							
MAW	**Mawson**	**76.32**	**164**	P		**P**	**03 47 11.5**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=231,slow=11,SNR=3.8							
MAW				LR		LR	04 21 18.0	
	comp=Z,23nm,19.7s,baz=162,slow=36							
	comp=Z,1.3nm,0.6s							
PDAR	**Pinedale Array**	**80.90**	**333**	P		**P**	**03 47 37.4**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=114,slow=6.3,SNR=2.5							
	comp=Z,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**82.79**	**70**	P		**P**	**03 47 46.3**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=273,slow=5.2,SNR=11							
	comp=Z,0.5nm,0.5s							
ESDC	**Sonseca Array**	**94.03**	**46**	LR		LR	04 29 49.9	
	comp=Z,12nm,18.1s,baz=162,slow=35							
WRA	**Warramunga Arr**	**123.83**	**210**	PKP		**PKPdf**	**03 54 19.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=149,slow=1.7,SNR=7.0							
H11S2	**WAKE ISLAND Hyl**	**26.05**	**271**	T		T	06 13 12.0	
	baz=116,slow=75,SNR=58							
H11S1	**WAKE ISLAND Hyl**	**26.06**	**271**	T		T	06 13 09.3	
	baz=116,slow=75,SNR=51							
H11S3	**WAKE ISLAND Hyl**	**26.07**	**271**	T		T	06 13 12.3	
	baz=116,slow=75,SNR=53							
H11N3	**WAKE ISLAND Hyl**	**26.38**	**273**	T		T	06 13 30.3	
	baz=117,slow=76,SNR=10.0							
H11N1	**WAKE ISLAND Hyl**	**26.39**	**273**	T		T	06 13 38.3	
	baz=117,slow=76,SNR=3.5							
H11N2	**WAKE ISLAND Hyl**	**26.39**	**273**	T		T	06 13 31.2	
	baz=117,slow=76,SNR=18							
ZALV	**Zalesovo Beam**	**151.19**	**29**	PKPbc		**PKPbc**	**03 55 15.1**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=298,slow=3.2,SNR=7.9							
ZALV				pPKPbc		**pPKPbc**	**03 55 25.0**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=307,slow=2.6,SNR=5.9							

VIE ***19*** *03:47:48.3±0.3,50°.08N×18°.52E,h0km,mb2.5/6,ml2.8/5, Error ellipse: s-maj=2.6km s-min=2.0km az=26.0 34 km NE of Ostrava Suspected Mining induced.*

BGR ***19*** *03:47:49.2±0.5,50°.07N×18°.50E,h1km,ML3.2/11,Error ellipse: s-maj=10.0km s-min=5.6km az=0.0*

PRU ***19*** *03:47:49.8±0.0,50°.06N×18°.42E,h0km*

IDC ***19*** *03:47:50.6±2.6,50°.10N×18°.37E,h0km,mbtmp3.4/3, ML2.5/2,Error ellipse: s-maj=48.0km s-min=12.4km az=136.0*

ISC 19 03:47:47.8±0.7,50°.08N±0°.03×18°.46E±0°.02,h0km,n60, σ1°37/107,12C-4D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAC	**Raciborz**	**0.17**	**272**	*e*PG		**Pg**	**03 47 54.0**	**+2.9**
RAC				*e*SG		**Sg**	**03 47 57.3**	**+3.9**
OKC	**Ostrava-Krasne**	**0.31**	**220**	*e*PG		**Pb**	**03 47 55.8**	**-0.5**
OKC				*e*SG		**Sg**	**03 47 59.5**	**+1.6**
	comp=Z,530nm,0.8s							
OKC	**Ostrava-Krasne**	**0.31**	**220**	*e*Pg		**Pb**	**03 47 56.0**	**-0.3**
MORC	**Moravsky Berou**	**0.67**	**244**	⇑P		**Pb**	**03 48 02.2**	**-0.1**
MORC				⇑S		**Sb**	**03 48 11.4**	**-0.8**
MORC	**Moravsky Berou**

BRG	**Berggiesshubel**	**3.00**	**287**	*e*Pg		**Pg**	**03 48 45.7**	**+0.5**
BRG				*e*Sg		**Sg**	**03 49 24.1**	**+0.1**
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PN		**Pn**	**03 48 41.9**	**+0.9**
KHC				*e*PG		**Pb**	**03 48 49.7**	**+2.2**
KHC				*e*SN		**Sn**	**03 49 19.0**	**-2.1**
KHC				*e*SG		**Sg**	**03 49 34.9**	**+0.6**
	comp=Z,27nm,0.4s							
GEC2	**GERESS Array S**	**3.34**	**250**	*e*Pg		**Pg**	**03 48 51.6**	**-0.2**
GERES	**GERESS Array B**	**3.34**	**250**	Pn		**Pn**	**03 48 42.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=62,slow=15,SNR=7.6							
GERES				Pg		**Pg**	**03 48 51.4**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=68,slow=16,SNR=12							
GERES				Lg		Lg	03 49 33.2	
	comp=Z,5.1nm,0.3s,baz=68,slow=28,SNR=6.8							
	comp=Z,0.6nm,0.3s							
FBE	**Freiberg**	**3.37**	**286**	*e*Pg		**Pg**	**03 48 51.7**	**-0.6**
ARSA	**Arzberg**	**3.43**	**216**	*e*Pn		**Pn**	**03 48 43.7**	**+1.1**
	comp=Z,0.7nm,0.2s							
ARSA				*e*Pg		**Pg**	**03 48 56.2**	**+2.6**
	comp=Z,4.1nm,0.3s							
MOA	**Mollη**	**3.55**	**233**	*e*Pn		**Pn**	**03 48 44.6**	**+0.4**
	comp=Z,0.4nm,0.2s							
MOA				Pg		**Pg**	**03 48 56.0**	**+0.1**
	comp=Z,4.0nm,0.4s							
CLL	**Collm**	**3.68**	**292**	*e*Pn		**Pb**	**03 48 51.0**	**-2.7**
CLL				*e*Pg		**Pg**	**03 49 00.0**	**+1.6**
CLL				*e*Sg		**Sg**	**03 49 45.0**	**-1.1**
	comp=Z,19nm,0.5s							
WET	**Wettzell**	**3.75**	**258**	*e*Pn		**Pn**	**03 48 47.4**	**+0.5**
WET				*e*Sg		**Sg**	**03 49 47.6**	**-0.7**
TANN	**Tannenbergstha**	**3.87**	**277**	*e*Pn		**Pn**	**03 48 49.3**	**+0.8**
TANN				*e*Sg		**Sg**	**03 49 50.5**	**-1.5**
MORH	**Mrgy, Hungar**	**3.87**	**178**	⇓P		**Pn**	**03 48 49.0**	**+0.5**
MORH				⇑S		**Sn**	**03 49 31.3**	**-3.3**
MORH	**Mrgy, Hungar**	**3.87**	**178**	P		**Pn**	**03 48 48.9**	**+0.5**
MORH				S		**Sn**	**03 49 31.0**	**-3.6**
NKC	**Novy Kostel**	**3.87**	**275**	*e*PG		**Pg**	**03 49 00.6**	**-1.4**
NKC				*e*SG		**Sg**	**03 49 52.3**	**+0.2**
	comp=Z,22nm,0.6s							
WERD	**Werda**	**3.97**	**278**	*e*Pg		**Pg**	**03 49 02.7**	**-1.1**
WERD				*e*Sg		**Sg**	**03 49 55.7**	**+0.5**
BIOA	**Bad Ischl, Aus**	**3.98**	**235**	*e*Pn		**Pn**	**03 48 52.1**	**+2.0**
	comp=Z,1.1nm,0.2s							
DRGR		**4.34**	**138**	⇑P		**Pn**	**03 48 56.1**	**+1.1**
DRGR				⇓S		**Sn**	**03 49 44.7**	**-1.6**
MOX	**Moxa**	**4.42**	**280**	*e*Sg		**Sg**	**03 50 10.4**	**+0.6**
BZS	**Buzias**	**4.94**	**153**	⇓P		**Pn**	**03 49 03.8**	**+0.5**
BZS				⇑S		**Sn**	**03 49 58.8**	**-2.3**
BURAR	**Bucovina Array**	**5.09**	**116**	⇑P		**Pn**	**03 49 06.9**	**+1.4**
BURAR				⇑S		**Sn**	**03 50 05.3**	**+0.3**
GZR	**Gura Zlata**	**5.51**	**147**	⇑P		**Pn**	**03 49 12.3**	**+1.1**
GZR				⇑S		**Sn**	**03 50 12.9**	**-2.4**
FINES	**FINESS Array B**	**12.16**	**18**	Pn		**Pn**	**03 50 39.6**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=202,slow=10,SNR=5.5							
	comp=Z,1.3nm,0.7s							
ARCES	**ARCESS Array B**	**19.81**	**7**	Pn		**P**	**03 52 17.2**	**-2.4**
	comp=Z,2.4nm,1.1s,baz=196,slow=13,SNR=2.0							

RSPR ***19*** *03:54:50.2, 19°.62N×68°.83W, h30km±7km, MD3.4/11*
OSPL ***19*** *03:54:50.2±1.9, 19°.48N×68°.90W, h12km±16km, ML2.5*
NEIC ***19*** *03:54:51.7±1.5, 19°.4N±0°.1×68°.9W±0°.1, h38km±88km,*
Error ellipse: s-maj=22.1km s-min=13.0km az=196.0
ISC 19 03:54:50.2±2.1, 19°.5N±0°.1×68°.88W±0°.05, h31km±15km, n39, σ0°87/45, 5C-6D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.84**	**215**	⇓*i*	P	**Pb**	**03 55 06.2**	**-0.1**
DR12				*e*	S	**Sn**	**03 55 18.6**	**+1.4**
DR12	**Loma Pena Alta**	**0.84**	**215**			**Pb**	**03 55 06.2**	**-0.1**
PCDR	**Punta Cana, DR**	**1.07**	**154**	⇓*i*	P	**Pn**	**03 55 08.3**	**-0.9**
PCDR	**Punta Cana, DR**	**1.07**	**154**			**Pn**	**03 55 08.3**	**-0.9**
PCDR						**Sb**	**03 55 23.8**	**0.0**
PCDR	**Punta Cana, DR**	**1.07**	**154**	IAML			03 55 26.8	
	comp=N,133nm,0.6s							
PCDR				IAML			03 55 34.4	
	comp=E,78nm,2.1s							
PCDR	**Punta Cana, DR**	**1.07**	**154**	*i*	P	**Pn**	**03 55 08.2**	**-0.9**
PCDR				*e*	S	**Sn**	**03 55 23.2**	**+0.2**
PCDR				IAML			03 55 25.5	
	comp=Z,93nm,0.5s							
IDE	**Isla Desecheo**	**1.72**	**129**	⇓*e*	P	**Pn**	**03 55 17.7**	**-0.3**
IDE	**Isla Desecheo**	**1.72**	**129**	*e*	S	**Sn**	**03 55 38.0**	**-1.0**
AGPR	**Aguadilla, PR**	**1.95**	**121**	⇓*e*	P	**Pn**	**03 55 22.1**	**+0.8**
AGPR	**Aguadilla, PR**	**1.95**	**121**			**Pn**	**03 55 22.1**	**+0.8**
AGPR						**Sn**	**03 55 43.6**	**-1.2**
AGPR	**Aguadilla, PR**	**1.95**	**121**	*i*	P	**Pn**	**03 55 22.3**	**+1.1**
AGPR				*e*	S	**Sn**	**03 55 43.6**	**-1.2**
AGPR				IAML			03 55 45.8	
	comp=Z,48nm,1.1s							
LSP	**Las Mesas**	**2.14**	**127**	⇑*e*	P	**Pn**	**03 55 24.5**	**+0.6**
LSP	**Las Mesas**	**2.14**	**127**	*e*	S	**Sn**	**03 55 51.0**	**+1.7**
CRPR	**Cabo Rojo, PR**	**2.23**	**131**	⇑*e*	P	**Pn**	**03 55 25.1**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.23**	**131**	*e*	S	**Sn**	**03 55 51.7**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.23**	**131**			**Pn**	**03 55 25.1**	**+0.1**
CRPR						**Sn**	**03 55 51.7**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.23**	**131**	*i*	P	**Pn**	**03 55 25.8**	**+0.8**
CRPR				*e*	S	**Sn**	**03 55 52.4**	**+0.8**
CRPR				IAML			03 55 59.9	
	comp=Z,36nm,1.3s							
MLPR	**Magueyes Islan**	**2.30**	**131**	⇑*e*	P	**Pn**	**03 55 26.7**	**+0.7**
MLPR	**Magueyes Islan**	**2.30**	**131**	*e*	S	**Sn**	**03 55 54.0**	**+0.7**
MLPR	**Magueyes Islan**	**2.30**	**131**			**Pn**	**03 55 26.7**	**+0.7**
MLPR						**Sn**	**03 55 54.0**	**+0.7**
MLPR	**Magueyes Islan**	**2.30**	**131**	IAML			03 55 55.2	
	comp=N,22nm,1.7s							
MLPR				IAML			03 56 37.9	
	comp=E,22nm,2.5s							
AOPR	**Arecibo Observ**	**2.31**	**119**	⇓*e*	P	**Pn**	**03 55 26.9**	**+0.8**
AOPR	**Arecibo Observ**	**2.31**	**119**	*e*	S	**Sn**	**03 55 53.5**	**0.0**
AOPR	**Arecibo Observ**	**2.31**	**119**			**Pn**	**03 55 26.9**	**+0.8**
AOPR						**Sn**	**03 55 53.5**	**0.0**
AOPR	**Arecibo Observ**	**2.31**	**119**	IAML			03 56 03.0	
	comp=N,24nm,0.2s							
SDDR	**Presa de Saban**	**2.33**	**258**	*e*	S	**Sn**	**03 55 53.3**	**-0.8**
SDDR				IAML			03 56 10.4	
	comp=Z,12nm,1.6s							
OBIP	**Obispado Ponce**	**2.59**	**123**	⇓*e*	P	**Pn**	**03 55 31.1**	**+1.1**
OBIP	**Obispado Ponce**	**2.59**	**123**	*e*	S	**Sn**	**03 55 59.6**	**-0.8**
OBIP	**Obispado Ponce**	**2.59**	**123**			**Pn**	**03 55 31.1**	**+1.1**
OBIP						**Sn**	**03 55 59.6**	**-0.8**
OBIP	**Obispado Ponce**	**2.59**	**123**	IAML			03 56 05.3	
	comp=N,21nm,1.8s							
CELP	**Cerrillos**	**2.59**	**122**	⇑*e*	P	**Pn**	**03 55 31.5**	**+1.5**
CELP	**Cerrillos**	**2.59**	**122**	*e*	S	**Sn**	**03 56 00.1**	**-0.4**
CELP	**Cerrillos**	**2.59**	**122**			**Pn**	**03 55 31.5**	**+1.5**
CELP						**Sn**	**03 56 00.1**	**-0.4**
CELP	**Cerrillos**	**2.59**	**122**	IAML			03 56 09.5	
	comp=N,19nm,0.5s							
HUMP	**Col San Antoni**	**3.16**	**114**	*e*	S	**Sn**	**03 56 13.6**	**-1.1**
HUMP	**Col San Antoni**	**3.16**	**114**			**Sn**	**03 56 13.6**	**-1.1**
HUMP	**Col San Antoni**	**3.16**	**114**	Pn		**Pn**	**03 55 36.9**	**-1.0**
HUMP				IAML			03 56 24.0	
	comp=N,17nm,1.4s							
SJVI	**Gifft Hill Sch**	**4.05**	**106**	⇑*e*	P	**Pn**	**03 55 50.7**	**+0.5**
SJVI	**Gifft Hill Sch**	**4.05**	**106**			**Pn**	**03 55 50.7**	**+0.5**

IDC ***19*** *03:58:54.5±1.3, 33°.96N×139°.34E, h0km, mb3.7/6,*
mbtmp3.7/7, ML3.0/1, MS2.5/2, Error ellipse: s-maj=40.6km
s-min=25.7km az=82.0
NIED ***19*** *03:58:57.4, 34°.17N×139°.32E, h14km, MW3.8, Moment*
Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm;
Mrr-3.79; Mθθ1.10; Mϕϕ2.68; Mrθ-1.53; Mθϕ-1.29; Mϕr3.53;
Fault plane solution: M₀5.27000×10¹⁴ NP1:
ϕs328.00000°, δ22.00000°, λ-97.00000°. NP2:
ϕs155.00000°, δ69.00000°, λ-87.00000°.
JMA ***19*** *03:58:57.4±0.1, 34°.2N±0°.2×139°.3E±0°.3, h14km, MV3.4/40,*
NEAR MIYAKEJIMA ISLAND
JMA Felt II J1 at NEAR MIYAKEJIMA ISLAND .
ISC 19 03:58:56.4±1.2, 34°.12N±0°.04×139°.38E±0°.05, h10km±7km, n21, σ0°87/27, mb3.7/6, 6D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKO	**Kozu shima**	**0.21**	**288**	P		**Pg**	**03 59 01.2**	**+0.4**
JKO				S		**Sg**	**03 59 04.2**	**+0.3**
JNIO	**Niijimaoohara**	**0.25**	**339**	P		**Pg**	**03 59 01.8**	**+0.2**
JNIO				S		**Sg**	**03 59 05.1**	**0.0**
JSKK	**Shikinejimakit**	**0.26**	**327**	⇓P		**Pg**	**03 59 01.6**	**0.0**
JSKK				⇓S		**Sg**	**03 59 04.6**	**-0.6**
JMKN	**Mikurajimanish**	**0.29**	**142**	P		**Pn**	**03 59 05.0**	**-1.6**
JMKN				S		**Sb**	**03 59 10.4**	**+2.0**
JTHY	**Toshimahigashi**	**0.41**	**349**	P		**Pg**	**03 59 05.0**	**+0.4**
JTHY				S		**Sg**	**03 59 10.3**	**+0.3**
JIM2	**Oshima 3**	**0.60**	**4**	P		**Pg**	**03 59 08.2**	**+0.1**
JIM2				S		**Sg**	**03 59 15.8**	**-0.1**
JIZS	**Izushimoda**	**0.73**	**325**	⇓P		**Pg**	**03 59 09.8**	**-0.6**
JIZS				⇓S		**Sg**	**03 59 19.0**	**-1.0**
KTJ3	**Kamata3**	**0.85**	**343**	⇓P		**Pg**	**03 59 11.9**	**-1.0**
KTJ3				⇓*e*S		**Sg**	**03 59 22.7**	**-1.3**
JSG	**Sagara**	**1.13**	**300**	P		**Pn**	**03 59 18.1**	**-0.2**
JSG				S		**Sn**	**03 59 34.3**	**+0.4**
MJAR	**Matsushiro Arr**	**2.60**	**339**	Pn		**Pn**	**03 59 39.0**	**+0.5**
	2.8nm,0.3s,baz=159,slow=16,SNR=78							
MJAR				Sn		**Sb**	**04 00 14.4**	**-0.7**
	0.8nm,0.3s,baz=153,slow=30,SNR=5.2							
MJAR				LR		LR	04 01 02.9	
	comp=Z,55nm,19.4s,baz=152,slow=47							
	40nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**28.30**	**113**	T		T	04 34 41.2	
	baz=308,slow=75,SNR=43							
H11N1	**WAKE ISLAND Hy**	**28.31**	**113**	T		T	04 34 41.4	
	baz=308,slow=75,SNR=4.8							
H11N3	**WAKE ISLAND Hy**	**28.32**	**113**	T		T	04 34 40.4	
	baz=308,slow=75,SNR=37							
CMAR	**Chiang Mai Arr**	**39.19**	**257**	LR		LR	04 22 33.2	
	comp=Z,9.9nm,18.7s,baz=200,slow=36							
MKAR	**Makanchi Array**	**44.33**	**304**	P		**P**	**04 07 07.3**	**+0.7**
	0.4nm,0.6s,baz=92,slow=10,SNR=2.8							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**52.84**	**31**	P		**P**	**04 08 12.5**	**+0.7**
	0.3nm,0.7s,baz=278,slow=6.1,SNR=4.5							
	0.3nm,0.7s							
WRA	**Warramunga Arr**	**53.98**	**186**	P		**P**	**04 08 19.0**	**-1.5**
	0.2nm,0.4s,baz=360,slow=7.4,SNR=1.9							
	0.2nm,0.4s							
INK	**Inuvik**	**57.73**	**26**	P		**P**	**04 08 48.1**	**+1.2**
	1.0nm,0.7s,baz=292,slow=8.7,SNR=3.7							
	1.0nm,0.7s							
FINES	**FINESS Array B**	**70.61**	**332**	P		**P**	**04 10 11.7**	**+0.1**
	2.4nm,0.9s,baz=81,slow=8.6,SNR=6.1							
	2.4nm,0.9s							
NB2	**NORSAR Subarra**	**76.22**	**337**	P		**P**	**04 10 44.4**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=44,slow=5.9							
NOA	**NORSAR Array B**	**76.22**	**337**	P		**P**	**04 10 44.9**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=42,slow=5.7,SNR=5.2							
	comp=Z,0.7nm,0.7s							

NEIC ***19*** *04:05:18.9±1.1, 23°.2S±0°.2×173°.12E±0°.08, h10km±1km,*
mb4.6/8, Error ellipse: s-maj=28.0km s-min=8.0km
az=338.0
IDC ***19*** *04:05:22.3±4.1, 22°.98S×173°.10E, h39km±37km, mb3.8/6,*
mbtmp4.0/8, ML5.0/1, MS3.2/6, Error ellipse: s-maj=38.7km
s-min=21.4km az=164.0
ISC 19 04:05:23.0±0.7, 22°.9S±0°.1×173°.06E±0°.08, h49km, n35, σ0°68/28, mb4.3/9, MS3.5/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.88**	**286**	P		**Pn**	**Pn**	**04 06 33.7**	**-0.2**
PINNC	**Pines Island,**	**5.19**	**272**	P		**Pn**	**Pn**	**04 06 37.8**	**-0.3**
DZM	**Mont Dzumac**	**6.18**	**277**	P		**Pn**	**Pn**	**04 06 51.3**	**-0.5**
	6.7nm,0.8s,baz=129,slow=15,SNR=21								
DZM				Sn			**Sn**	**04 08 00.7**	**-0.5**
	baz=118,slow=22								
DZM	**Mont Dzumac**	**6.18**	**277**	Pn		**Pn**	**04 06 51.5**	**-0.3**
MSVF	**Nonsavu**	**6.98**	**43**	Pn		**Pn**	**04 07 02.7**	**0.0**
	0.9nm,0.3s,baz=259,slow=18,SNR=5.1								
MSVF				LR		LR	04 08 50.4		
	comp=Z,22nm,20.1s,baz=194,slow=30								
	2.1nm,0.4s								
MSVF	**Nonsavu**	**6.98**	**43**	Pn		**Pn**	**04 07 03.0**	**+0.3**
HNR	**Honiara**	**18.39**	**315**	LR		LR	04 15 47.5		
	comp=Z,93nm,18.4s,baz=191,slow=34								
CTA	**Charters Tower**	**25.09**	**271**	LR		LR	04 20 22.1		
	comp=Z,107nm,18.1s,baz=256,slow=36								
STKA	**Stephens Creek**	**29.24**	**245**	P		**P**	**04 11 21.6**	**+1.2**
	1.4nm,0.7s,baz=84,slow=15,SNR=3.4								
	1.4nm,0.7s								
AS31	**Alice Springs**	**35.90**	**261**	P		**P**	**04 12 19.2**	**+0.6**
ASAR	**Alice Springs**	**35.90**	**261**	P		**P**	**04 12 19.3**	**+0.6**
	4.0nm,0.9s,baz=83,slow=8.9,SNR=23								
	4.0nm,0.9s								
ASAR	**Alice Springs**	**35.90**	**261**	P		**P**	**04 12 17.7**	**-1.0**
WB2	**Warramunga Arr**	**36.09**	**267**	P		**P**	**04 12 20.4**	**0.0**
WB2				IAmb		IAmb	04 12 27.1		
	comp=Z,20nm,1.5s								
WRA	**Warramunga Arr**	**36.10**	**267**	P		**P**	**04 12 20.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=97,slow=8.3,SNR=12								
	comp=Z,0.7nm,0.6s								
WRA	**Warramunga Arr**	**36.10**	**267**	P		**P**	**04 12 20.2**	**-0.3**
H11S2	**WAKE ISLAND Hy**	**41.64**	**351**	T		T	04 57 41.9		
	baz=171,slow=76,SNR=4.8								
H11S3	**WAKE ISLAND Hy**	**41.65**	**351**	T		T	04 57 42.5		
	baz=171,slow=76,SNR=4.1								
H11S1	**WAKE ISLAND Hy**	**41.66**	**351**	T		T	04 57 43.3		
	baz=171,slow=76,SNR=5.9								
FITZ	**Fitzroy Crossi**	**44.53**	**267**	P		**P**	**04 13 31.6**	**+1.4**
	comp=Z,6.0nm,0.9s,baz=131,slow=8.7,SNR=5.8								
	comp=Z,6.0nm,0.9s								
FITZ	**Fitzroy Crossi**	**44.53**	**267**	P		**P**	**04 13 30.2**	**+0.1**
FITZ				IAmb		IAmb	04 13 32.4		
	comp=Z,8.7nm,1.0s								
MBWA	**Marble Bar**	**49.24**	**261**	P		**P**	**04 14 07.3**	**+0.4**
SBA	**Scott Base**	**55.06**	**182**	P		**P**	**04 14 49.9**	**+0.6**
SBA				IAmb		IAmb	04 14 52.1		
	comp=Z,8.9nm,1.1s								
QSPA	**South Pole Qui**	**67.14**	**180**	P		**P**	**04 16 11.1**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=352,slow=3.6,SNR=7.5								
	comp=Z,3.2nm,0.9s								
QSPA	**South Pole Qui**	**67.14**	**180**	P		**P**	**04 16 11.3**	**-0.2**
PETK	**Petropavlovsk-**	**76.89**	**351**	LR		LR	04 48 19.7		
	comp=Z,22nm,18.6s,baz=72,slow=34								
MA2	**Magadan**	**84.23**	**349**	LR		LR	04 47 34.4		
	comp=Z,15nm,21.9s,baz=193,slow=30								
TROLL	**Troll, Antarti**	**85.08**	**183**	P		**P**	**04 17 52.9**	**-0.4**
SNAA	**Sanae**	**85.61**	**181**	P		**P**	**04 17 55.1**	**-0.8**
SNAA	**Sanae**	**85.61**	**181**	LR		LR	04 56 56.9		
	comp=Z,21nm,18.1s,baz=32,slow=36								
SNAA	**Sanae**	**85.61**	**181**	P		**P**	**04 17 54.4**	**-1.5**
SNAA				IAmb		IAmb	04 17 55.8		
	comp=Z,1.6nm,0.8s								
VNA3	**Neumayer Olymp**	**86.06**	**179**	P		**P**	**04 17 57.1**	**-1.0**
VNA2	**Neumayer--Watz**	**86.40**	**180**	P		**P**	**04 17 59.0**	**-0.7**
	baz=180,slow=5.0								
NVAR	**Mina Array Bea**	**88.63**	**47**	P		**P**	**04 18 11.3**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=226,slow=6.1,SNR=2.6								
	comp=Z,0.2nm,0.6s								
NVAR	**Mina Array Bea**	**88.63**	**47**	P		**P**	**04 18 11.1**	**0.0**
GERES	**GERESS Array B**	**149.41**	**333**	PKPbc		**PKiKP**	**04 25 07.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=44,slow=7.4,SNR=2.4								

SOME ***19*** *04:05:53.4, 39°.47N×73°.63E, h5km*
KRNET ***19*** *04:05:54.0±0.1, 39°.42N×73°.55E, mb4.0*
NNC ***19*** *04:05:58.6±1.3, 39°.61N×73°.73E, h0km, mb4.0, mpv3.6,*
Error ellipse: s-maj=9.9km s-min=5.1km az=174.0
IDC ***19*** *04:06:15.9±9.6, 39°.14N×75°.17E, h253km±149km, mb3.1/2,*
mbtmp3.5/4, MS3.2/1, Error ellipse: s-maj=175.6km
s-min=58.7km az=107.0
ISC 19 04:05:56.3±0.9, 39°.52N±0°.05×73°.64E±0°.03, h10km, n64, σ2°78/97, 22C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.20**	**327**	⇓*i*	P	**Pb**	**04 06 17.6**	**-1.6**
	baz=32								
OHH				⇓*i*	S	**Sb**	**04 06 35.2**	**+0.4**
	baz=32								
DRK	**Karamyk**	**1.42**	**269**	⇑*i*	P	Pn	04 06 19.8	-2.7	
	baz=73								
DRK				⇑*e*	S	**Sn**	**04 06 38.6**	**-2.8**
	baz=73								
ARLS	**Aral**	**2.40**	**12**	⇓*i*	P	**Pn**	**04 06 38.0**	**+2.2**
	baz=13								
ARLS				⇓*i*	S	**Sb**	**04 07 10.3**	**+0.9**
	baz=13								
AML	**Almayashu**	**2.61**	**1**	P		**Pn**	**04 06 41.3**	**+2.4**
	SNR=81								
GAR	**Garm**	**2.63**	**260**	⇑*e*	P	**Pn**	**04 06 38.6**	**-0.3**
	baz=61								
GAR				⇑*i*	S	**Sn**	**04 07 11.1**	**+0.1**
	baz=61								
TRKS	**Terek-Say**	**2.77**	**317**	⇑*e*	P	**Pn**	**04 06 41.0**	**+0.1**
	baz=19								
TRKS				⇑*i*	S	**Sn**	**04 07 15.6**	**+1.1**
	baz=19								
UCH	**Uchtor**	**2.79**	**13**	P		**Pn**	**04 06 44.2**	**+2.8**
	SNR=55								
UCH	**Uchtor**	**2.79**	**13**	⇓*e*	P	**Pn**	**04 06 43.8**	**+2.4**
	baz=14								
UCH				⇓*e*	S	**Sb**	**04 07 20.0**	**-0.9**
	baz=14								
EKS2	**Erkin-Say**	**3.15**	**2**	P		**Pn**	**04 06 50.1**	**+4.1**
	SNR=14								
EKS2	**Erkin-Say**	**3.15**	**2**	⇑*e*	P	**Pn**	**04 06 48.2**	**+2.2**
	baz=3.0								
EKS2				⇑*i*	S	**Sb**	**04 07 27.9**	**-2.9**
	baz=3.0								
AAK	**Ala-Archa**	**3.19**	**11**	P		**Pb**	**04 06 51.0**	**-2.0**
	SNR=13								
AAK	**Ala-Archa**	**3.19**	**11**	⇑*e*	P	**Pn**	**04 06 49.1**	**+2.5**
	baz=12								
AAK				⇑*i*	S	**Sb**	**04 07 29.0**	**-3.0**
	baz=12								
MRKS	**Merke**	**3.24**	**355**	*e*	P	**Pb**	**04 06 56.0**	**+2.0**
	14nm,0.6s								
MRKS				*e*	S	**Sg**	**04 07 41.4**	**+1.0**
	71nm,0.7s								
KBK	**Karagaybulak**	**3.29**	**17**	P		**Pb**	**04 06 56.2**	**+1.3**
	SNR=17								
KBK	**Karagaybulak**	**3.29**	**17**	⇑*e*	P	**Pn**	**04 06 50.3**	**+2.2**
	baz=18								
KBK				⇑*e*	S	**Sb**	**04 07 31.6**	**-3.4**
	baz=18								
ULHL	**Ulahol**	**3.37**	**35**	P		**Pb**	**04 06 57.1**	**+0.9**
	SNR=10								
ULHL	**Ulahol**	**3.37**	**35**	⇑*e*	P	**Pn**	**04 06 51.7**	**+2.6**
	baz=35								
ULHL				⇑*e*	S	**Sb**	**04 07 33.7**	**-3.6**
	baz=35								
BOOM	**Boomskoye usch**	**3.44**	**30**	⇑*e*	P	**Pn**	**04 06 52.5**	**+2.3**
	baz=30								
BOOM				⇑*i*	S	**Sb**	**04 07 35.4**	**-4.1**
	baz=30								
CHMS	**Chumysh**	**3.58**	**13**	⇓Pn		**Pn**	**04 06 55.4**	**+3.5**
	9.3nm,0.5s								
CHMS				⇓Lg		Lg	04 07 50.1		
	52nm,0.8s								
CHGR	**Chuyangaron**	**3.59**	**258**	⇑*i*	P	**Pn**	**04 06 52.0**	**-0.1**
	baz=59								
CHGR				⇑*e*	S	**Sn**	**04 07 34.2**	**-0.4**
	baz=59								
TKM2	**Tokmak 2**	**3.71**	**23**	⇓Pg		**Pb**	**04 07 02.0**	**0.0**
	7.9nm,0.5s								
TKM2				⇓Lg		Lg	04 07 53.2		
	19nm,0.6s								
IUG	**Iuzhnay**	**3.79**	**315**	*e*	P	**Pb**	**04 07 06.9**	**+3.5**
	319nm,0.6s								
IUG				*e*	S	**Sg**	**04 08 00.1**	**+2.0**
	96nm,1.2s								
USP	**Ospenovka**	**3.80**	**10**	P		**Pb**	**04 07 04.8**	**+1.3**
	SNR=6.7								
KST	**Kastek**	**3.94**	**26**	*e*	P	**Pb**	**04 07 07.9**	**+2.0**
	11nm,0.6s								
KST				*e*	S	**Sg**	**04 08 01.5**	**-1.2**
	52nm,0.7s								
KST	**Kastek**	**3.94**	**26**	Pg		**Pg**	**04 07 09.1**	**-2.6**
	11nm,0.8s								
KST				Lg		Lg	04 08 01.5		
	52nm,0.9s								
SGDS	**Sogindy**	**4.00**	**10**	*e*	P	**Pb**	**04 07 08.3**	**+1.3**
	6.0nm,0.6s								
SGDS				*e*	S	**Sg**	**04 08 01.9**	**-2.9**
	30nm,0.8s								
DGS	**Degeres**	**4.05**	**23**	*e*	P	**Pb**	**04 07 10.4**	**+2.5**
	14nm,0.5s								
DGS				*e*	S	**Sg**	**04 08 05.4**	**-1

UZB	**Uzynbulak**	**5.44**	**46**	*eP*		**Pb**	**04 07 35.3**	**+3.8**
	3.7nm,0.5s							
UZB				*eS*		**Sg**	**04 08 48.9**	**-2.0**
	9.0nm,0.6s							
UZB	**Uzynbulak**	**5.44**	**46**	Pg		**Pg**	**04 07 36.3**	**-4.2**
	3.7nm,0.5s							
UZB				Lg		Lg	04 08 47.9	
	9.0nm,0.6s							
KPKS	**Kokpek**	**5.47**	**42**	*eP*		**Pb**	**04 07 34.9**	**+3.0**
	7.2nm,1.0s							
KPKS				*eS*		**Sg**	**04 08 48.1**	**-3.8**
	19nm,0.7s							
KPKS	**Kokpek**	**5.47**	**42**	Pg		**Pb**	**04 07 36.3**	**+4.3**
	7.2nm,1.0s							
KPKS				Lg		Lg	04 08 48.1	
	19nm,0.7s							
BTLS	**Baital**	**5.53**	**3**	*eP*		**Pb**	**04 07 35.8**	**+2.9**
	5.8nm,0.6s							
BTLS				*eS*		**Sg**	**04 08 49.6**	**-4.2**
	6.8nm,0.6s							
ARXS	**Arharly**	**5.64**	**32**	*eP*		**Pb**	**04 07 37.9**	**+3.1**
	13nm,0.7s							
ARXS				*eS*		**Sg**	**04 08 53.2**	**-4.1**
	23nm,0.9s							
ARXS	**Arharly**	**5.64**	**32**	Pg		**Pb**	**04 07 39.2**	**+4.4**
	13nm,0.7s							
ARXS				Lg		Lg	04 08 53.2	
	23nm,0.9s							
SHLS	**Shalkode**	**5.70**	**48**	*eP*		**Pg**	**04 07 44.8**	**-0.6**
	6.3nm,0.8s							
SHLS				*eS*		**Sg**	**04 09 04.4**	**+5.2**
	15nm,1.0s							
SHLS	**Shalkode**	**5.70**	**48**	Pg		**Pg**	**04 07 45.8**	**+0.5**
	6.3nm,0.8s							
SHLS				Lg		Lg	04 09 04.4	
	15nm,1.0s							
BLB	**Baldybastay**	**5.83**	**37**	*eP*		**Pb**	**04 07 41.8**	**+3.6**
	10nm,0.7s							
BLB				*eS*		**Sg**	**04 08 59.6**	**-3.9**
	15nm,1.3s							
BLB	**Baldybastay**	**5.83**	**37**	Pg		**Pb**	**04 07 41.8**	**+3.6**
BLB				Lg		Lg	04 08 58.8	
MKAR	**Makanchi Array**	**9.63**	**38**	P		Pn	04 08 25.0	+10
	0.1nm,0.5s,baz=217,slow=14,SNR=1.9							
ZALV	**Zalesovo Beam**	**16.31**	**24**	P		**P**	**04 09 48.1**	**-0.2**
	0.7nm,0.4s,baz=228,slow=13,SNR=4.4							
MMAI	**Mount Meron Ar**	**31.33**	**270**	LR		LR	04 27 57.8	
	comp=Z,44nm,21.1s,baz=241,slow=40							
ARCES	**ARCESS Array B**	**39.21**	**336**	P		**P**	**04 13 26.1**	**+1.9**
	1.7nm,0.9s,baz=102,slow=8.4,SNR=5.3							
	1.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**67.86**	**269**	P		**P**	**04 16 54.7**	**-0.4**
	0.5nm,1.0s,baz=57,slow=5.0,SNR=2.2							
	0.5nm,1.0s							

WEL 19 04:15:34.4±0.9, 34°S±15", 17°9E±2°, h321km±16km, M3.8/5, mB4.3/2, ML4.1/9, MLv3.8/5, Mw(mB)3.4/2, Error ellipse: s-maj=0.0km s-min=0.0km az=119.2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.01**	**190**	P	Pn	04 16 42.3	+0.5
WMGZ				S		04 17 37.0	+1.1
HAZ	**Te Kaha**	**4.08**	**197**	P	Pn	04 16 39.7	-2.7
HAZ				S	S	04 17 36.5	-0.6
PKGZ	**Pakihiroa**	**4.14**	**194**	P	Pn	04 16 42.5	-0.7
PKGZ				S	S	04 17 39.3	+0.9
PUZ	**Puketiti**	**4.28**	**191**	P	Pn	04 16 45.3	+0.6
PUZ				S	S	04 17 40.6	-0.6
RUGZ	**Raukumara Rang**	**4.30**	**198**	P	Pn	04 16 44.6	-0.4
RUGZ				S	S	04 17 40.4	-1.3
TWGZ	**Tauwhareparae**	**4.44**	**194**	S	S	04 17 46.4	+2.1
MWZ	**Matawai**	**4.69**	**198**	P	Pn	04 16 50.0	+0.9
MWZ				S	S	04 17 47.3	-2.1
CNGZ	**Carnagh Statio**	**4.70**	**191**	P	Pn	04 16 50.9	+1.7
TKGZ	**Te Karaka**	**4.72**	**194**	P	Pn	04 16 50.4	+1.0
TKGZ				S	S	04 17 50.8	+0.9
URZ	**Urewera**	**4.74**	**202**	P	Pn	04 16 49.4	-0.2
URZ				S	S	04 17 51.0	+0.8
KWHZ	**Kaweka Forest**	**6.02**	**202**	P	Pn	04 17 05.0	+0.6
KWHZ				S	S	04 18 17.0	-0.2
OTVZ	**Oturere**	**6.05**	**208**	P	Pn	04 17 05.8	+0.9
OTVZ				S	S	04 18 21.4	+3.3
SNVZ	**South Ngauruho**	**6.08**	**208**	P	Pn	04 17 06.2	+0.9
BHHZ	**Black Hill Sta**	**6.19**	**204**	P	Pn	04 17 06.5	0.0
BHHZ				S	S	04 18 21.4	+0.5
KAHZ	**Kahuranaki**	**6.23**	**198**	P	Pn	04 17 07.0	+0.1
KAHZ				S	S	04 18 25.1	+3.4
KRHZ	**Kereru**	**6.23**	**202**	P	Pn	04 17 06.4	-0.5
KRHZ				S	S	04 18 21.8	0.0
PNHZ	**Pukenui**	**6.53**	**202**	P	Pn	04 17 10.1	-0.4
PNHZ				S	S	04 18 29.3	+1.0
PRHZ	**Porangahau**	**6.74**	**198**	P	Pn	04 17 12.7	-0.2
PRHZ				S	S	04 18 34.8	+2.2
BFZ	**Birch Farm**	**7.23**	**199**	P	Pn	04 17 18.7	-0.1
BFZ				S	S	04 18 42.3	-1.1
TIWZ	**Tintock**	**7.42**	**201**	P	Pn	04 17 20.8	-0.2
TIWZ				S	S	04 18 46.6	-1.0
KIW	**Kapiti Island**	**7.81**	**205**	P	Pn	04 17 24.3	-1.4
KIW				S	S	04 18 55.6	-0.7

DJA 19 04:33:11.7±0.3, 1°N±3°, 12°1E±°, h10km, M4.3/13, mb4.4/6, mB5.2/1, MLv4.3/13, Mw(mB)4.6/1
NEIC 19 04:33:13.0±1.4, 0.90N±0.08×120.9E±0.1, h10km±2km, mb4.0/7, Error ellipse: s-maj=26.7km s-min=4.5km az=241.0
IDC 19 04:33:12.1±1.1, 0.82N×121.49E, h0km, mb3.7/5, mbtmp3.8/7, ML3.8/2, MS2.6/3, Error ellipse: s-maj=56.3km s-min=18.2km az=77.0

ISC 19 04:33:13.8±0.7, 0.87N±0.05×120.85E±0.05, h29km, n31, σ1ᵍ94/32, mb3.9/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**0.25**	**343**		**Pb**	**04 33 17.8**	**-2.8**
TOLI2				Sg	**Sb**	**04 33 20.5**	**-4.6**
MPSI	**Mapaga**	**1.09**	**241**	P	**Pn**	**04 33 30.8**	**-2.4**
MPSI				S	**Sn**	**04 33 44.2**	**-3.2**
MRSI	**Marisa**	**1.16**	**110**	P	**Pn**	**04 33 31.1**	**-3.0**
APSI	**Ampana**	**1.94**	**156**	P	**Pn**	**04 33 43.2**	**-1.7**
APSI				S	**Sb**	**04 34 10.6**	**-1.8**
LUWI	**Luwuk**	**2.70**	**135**		**Pn**	**04 33 56.6**	**+1.3**
LUWI	**Luwuk**	**2.70**	**135**	P	**Pn**	**04 33 56.5**	**+1.1**
LUWI				S	**Sb**	**04 34 31.7**	**-2.6**
SMKI	**Samarinda**	**3.87**	**250**	P	**Pb**	**04 34 19.7**	**-1.8**
TTSI	**Tana Toraja**	**4.03**	**195**	P	**Pn**	**04 34 14.7**	**+1.1**
MYLDM	**Lahad Datu**	**4.88**	**331**		**Pn**	**04 34 27.6**	**+2.2**
SPSI	**Sidrap Palu**	**4.93**	**193**	P	**Pn**	**04 34 26.1**	**+0.1**
SANI	**Sanana**	**5.90**	**119**	P	**Pn**	**04 34 37.6**	**-1.7**
	0.1nm28nm,1.5s						
KAPI	**Kappang**	**5.95**	**191**	Pn	**Pn**	**04 34 41.1**	**+1.0**
	4.8nm,0.3s,baz=79,slow=3.6,SNR=7.0						
KAPI				LR	LR	04 37 30.4	
	comp=Z,64nm,21.3s,baz=293,slow=43						
	17nm,0.5s						
KAPI	**Kappang**	**5.95**	**191**		**Pn**	**04 34 41.2**	**+1.2**
BKSI	**Bulukumba**	**6.20**	**187**	P	**Pn**	**04 34 43.6**	**+0.2**
	0.1nm32nm,0.7s						
NLAI	**Namlea**	**7.46**	**123**	P	**Pn**	**04 35 00.6**	**-0.2**
DAV	**Davao City (W)**	**7.75**	**37**	LR	LR	04 38 12.9	
	comp=Z,68nm,19.8s,baz=141,slow=40						
MTN	**Manton Dam**	**17.02**	**144**	Pn	**Pn**	**04 37 09.1**	**-0.8**
MTN				IAmb	IAmb	04 37 13.6	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.43**	**166**	P	**Pn**	**04 37 39.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=341,slow=4.9,SNR=5.5						
	comp=Z,6.4nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.43**	**166**	P	**Pn**	**04 37 39.2**	**-0.2**
FITZ				IAmb	IAmb	04 38 09.9	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**24.55**	**148**	P	**P**	**04 38 29.8**	**-1.5**
	comp=Z,3.0nm,0.8s,baz=326,slow=10,SNR=21						
	comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**24.55**	**148**	P	**P**	**04 38 31.5**	**+0.2**
WB2	**Warramunga Arr**	**24.56**	**148**	P	**P**	**04 38 31.6**	**+0.2**
WB2				IAmb	IAmb	04 38 44.3	
	comp=Z,5.2nm,1.1s						
WR0	**Warramunga Arr**	**24.67**	**148**	P	**P**	**04 38 32.9**	**+0.5**
WR0				IAmb	IAmb	04 38 37.8	
	comp=Z,7.7nm,1.1s						
ASAR	**Alice Springs**	**27.49**	**153**	P	**P**	**04 38 57.7**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=343,slow=15,SNR=4.7						
	comp=Z,0.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.71**	**310**	LR	LR	04 52 37.3	
	comp=Z,8.0nm,20.9s,baz=160,slow=41						
BJT	**Baijiatuao**	**39.19**	**354**	P	**P**	**04 40 40.6**	**+1.2**
USRK	**Ussuriysk Ar.**	**44.26**	**11**	P	**P**	**04 41 22.9**	**+2.1**
	comp=Z,1.9nm,0.7s,baz=194,slow=6.8,SNR=5.1						
	comp=Z,1.9nm,0.7s						
SONM	**Songino Array**	**48.43**	**347**	P	**P**	**04 41 56.4**	**+2.8**
	comp=Z,0.6nm,0.6s,baz=163,slow=10,SNR=3.6						
	comp=Z,0.6nm,0.6s						
MK31	**Makanchi Array**	**56.76**	**329**	P	**P**	**04 42 57.7**	**+2.5**
MK31				IAmb	IAmb	04 43 30.9	
	comp=Z,1.6nm,1.3s						
MKAR	**Makanchi Array**	**56.76**	**329**	P	P	04 43 01.6	+6.4
	comp=Z,0.1nm,0.3s,baz=129,slow=9.5,SNR=2.2						
	comp=Z,0.1nm,0.3s						
MKAR	**Makanchi Array**	**56.76**	**329**	P	**P**	**04 42 56.9**	**+1.7**

WEL 19 04:54:59.4±0.7, 34°S±6", 17°8W±1°2, h33km, M4.8/57, mB5.3/51, ML5.7/58, MLv5.4/57, Mw(mB)4.7/51, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1
BJI 19 04:55:00.3±0.0, 33.52S×178.33W, h10km, mb4.9/7
IDC 19 04:55:00.1±0.6, 33.21S×178.74W, h0km, mb4.6/8, mbtmp4.5/8, MS4.3/39, Error ellipse: s-maj=26.5km s-min=20.9km az=90.0
NOU 19 04:55:01.1, 33.92S×178.10W, h13km, mb5.0/24, South of Kermadec Islands
NEIC 19 04:55:01.9±1.9, 33.61S±0.07×178.6W±0.1, h10km±1km, mb5.0/41, Error ellipse: s-maj=19.1km s-min=11.1km az=104.0
GCMT 19 04:55:03.9±0.3, 33.62S±0.03×178.15W±0.02, h22km, MW5.0/93, Moment Tensor Solution. s50,c64; s93,c119; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.96±.20; Mθθ-0.94±.12; Mϕϕ-3.03±. 13; Mrθ0.29±.21; Mrϕ-0.88±.08; Mθϕ1.96±.19; Best double couple: M₀4.15500×10¹⁶ NP1:ϑ₈15.00000°, δ59.00000°, λ86.00000°. NP2: ϕ₂204.00000°, δ31.00000°, λ97.00000°. Principal axes: T 4.4730, Plg75.0000°, Azm273.0000°; N -0.6430, Plg4.0000°, Azm17.0000°; P -3.8360, Plg14.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
MOS 19 04:55:05.3±1.2, 33.36S×178.77W, h38km, mb5.2/18 Error ellipse: s-maj=14.9km s-min=10.3km az=84.3

ISC 19 04:55:01.2±0.3, 33.56S±0.05×178.47W±0.07, h10km, n320, σ1ᵍ76/302, mb5.0/36, MS4.5/41, 13C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.31**	**6**	P	Pn	04 56 02.6	-4.2
GLKZ				S	**Sn**	**04 56 50.7**	**-6.5**
RAO	**Raoul Island**	**4.32**	**6**	Pn	**Pn**	**04 56 08.7**	**+1.8**
RAO	**Raoul Island**	**4.32**	**6**	P	**Pn**	**04 56 08.7**	**+1.8**
MXZ	**Matakaoa Point**	**4.78**	**212**		**Pn**	**04 56 12.1**	**-1.1**
MXZ	**Matakaoa Point**	**4.78**	**212**	P	**Pn**	**04 56 11.8**	**-1.4**
MXZ				S	**Sn**	**04 57 08.7**	**+0.1**
WMGZ	**Waiomatatini S**	**4.95**	**210**	P	**Pn**	**04 56 15.8**	**+0.2**
WMGZ				S	**Sn**	**04 57 14.1**	**+1.4**
PKGZ	**Pakihiroa**	**5.15**	**212**	P	**Pn**	**04 56 17.4**	**-1.0**
PKGZ				S	**Sn**	**04 57 17.6**	**-0.3**
HAZ	**Te Kaha**	**5.18**	**215**	P	**Pn**	**04 56 18.0**	**-0.7**
HAZ				S	**Sn**	**04 57 20.6**	**+2.1**
PUZ	**Puketiti**	**5.23**	**210**	P	**Pn**	**04 56 17.6**	**-1.7**
PUZ				S	**Sn**	**04 57 22.0**	**+2.2**
RUGZ	**Raukumara Rang**	**5.39**	**214**	P	**Pn**	**04 56 20.9**	**-0.9**
RUGZ				S	**Sn**	**04 57 23.8**	**-0.2**
TWGZ	**Tauwhareparae**	**5.43**	**211**	P	**Pn**	**04 56 21.6**	**-0.6**
TWGZ				S	**Sn**	**04 57 24.2**	**-0.6**
CNGZ	**Carnagh Statio**	**5.60**	**208**	P	**Pn**	**04 56 23.5**	**-1.0**
CNGZ				S	**Sn**	**04 57 29.5**	**+0.6**
TKGZ	**Te Karaka**	**5.71**	**210**	P	**Pn**	**04 56 26.6**	**+0.7**
TKGZ				S	**Sn**	**04 57 30.3**	**-1.3**
MWZ	**Matawai**	**5.76**	**213**	P	**Pn**	**04 56 25.0**	**-1.8**
MWZ				S	**Sn**	**04 57 32.0**	**-0.9**
URZ	**Urewera**	**5.90**	**216**	Pn	**Pn**	**04 56 27.9**	**-0.7**
	42nm,0.3s,baz=40,slow=2.8,SNR=185						
URZ				Sn	**Sn**	**04 57 34.3**	**-2.0**
	30nm,0.3s,baz=14,slow=20,SNR=7.9						
URZ	**Urewera**	**5.90**	**216**	P	**Pn**	**04 56 27.7**	**-0.9**
RAGZ	**Rawiri**	**5.94**	**213**	P	**Pn**	**04 56 29.9**	**+0.6**
RAGZ				S	**Sn**	**04 57 35.4**	**-2.1**
RIGZ	**Rimuhau**	**5.97**	**210**	P	**Pn**	**04 56 29.8**	**+0.2**
RIGZ				S	**Sn**	**04 57 35.7**	**-1.7**
EDRZ	**Edgecumbe**	**5.97**	**219**	P	**Pn**	**04 56 31.2**	**+1.5**
MKRZ	**Makatiti**	**6.14**	**221**	P	**Pn**	**04 56 32.8**	**+0.7**
OMRZ	**Omania**	**6.17**	**221**	P	**Pn**	**04 56 34.9**	**+2.5**
KARZ	**Kaharoa**	**6.18**	**222**	P	**Pn**	**04 56 35.6**	**+3.1**
TARZ	**Mount Tarawera**	**6.19**	**220**	P	**Pn**	**04 56 34.3**	**+1.6**
SNGZ	**Shannon Statio**	**6.21**	**212**	P	**Pn**	**04 56 32.9**	**0.0**
MUGZ	**Murupara**	**6.24**	**217**	P	**Pn**	**04 56 32.4**	**-0.9**
RRRZ	**Republican Roa**	**6.26**	**219**	P	**Pn**	**04 56 34.7**	**+1.0**
KNZ	**Kokohu**	**6.27**	**209**	P	**Pn**	**04 56 33.1**	**-0.7**
KNZ				S	**Sn**	**04 57 43.2**	**-2.2**
MHGZ	**Mahia Peninsul**	**6.30**	**207**	P	**Pn**	**04 56 31.9**	**-2.2**
TOZ	**Tahuroa Road**	**6.43**	**228**	P	**Pn**	**04 56 39.1**	**+3.2**
RAHZ	**Arahi**	**6.44**	**213**	P	**Pn**	**04 56 36.1**	**+0.1**
PRRZ	**Plateau Road**	**6.45**	**219**	P	**Pn**	**04 56 36.8**	**+0.6**
MTHZ	**Maungataniwha**	**6.50**	**214**	P	**Pn**	**04 56 36.7**	**-0.2**
WHHZ	**Waihua**	**6.50**	**211**	P	**Pn**	**04 56 37.6**	**+0.7**
WHHZ				S	**Sn**	**04 57 50.0**	**-1.2**
ALRZ	**Allen Road**	**6.52**	**219**	P	**Pn**	**04 56 37.8**	**+0.6**
MRHZ	**Matea Rd**	**6.69**	**217**	P	**Pn**	**04 56 39.7**	**+0.2**
NMHZ	**Naumai**	**6.71**	**213**	P	**Pn**	**04 56 39.8**	**0.0**
ARHZ	**Aropaoanui**	**6.76**	**211**	P	**Pn**	**04 56 40.4**	**0.0**
WHTZ	**Whakaora**	**6.80**	**220**	P	**Pn**	**04 56 41.8**	**+0.7**
BKZ	**Black Stump Fm**	**6.91**	**215**	P	**Pn**	**04 56 41.4**	**-1.2**
BKZ	**Black Stump Fm**	**6.91**	**215**	P	**Pn**	**04 56 41.3**	**-1.2**
RATZ	**Rangitukua**	**7.05**	**220**	P	**Pn**	**04 56 45.2**	**+0.8**
CKHZ	**Cape Kidnapper**	**7.06**	**209**	P	**Pn**	**04 56 44.4**	**-0.2**
RITZ	**Rihia Road**	**7.08**	**219**	P	**Pn**	**04 56 44.5**	**-0.4**
KWHZ	**Kaweka Forest**	**7.15**	**214**	P	**Pn**	**04 56 44.6**	**-1.2**
KATZ	**Kakaramea**	**7.17**	**219**	P	**Pn**	**04 56 47.1**	**+1.0**
KAHZ	**Kahuranaki**	**7.25**	**210**	P	**Pn**	**04 56 43.7**	**-3.6**
TMVZ	**Te Maari**	**7.26**	**219**	P	**Pn**	**04 56 46.1**	**-1.4**
NTVZ	**North Tongarir**	**7.27**	**219**	P	**Pn**	**04 56 46.3**	**-1.2**
ETVZ	**East Tongariro**	**7.28**	**218**	P	**Pn**	**04 56 46.7**	**-0.9**
OTVZ	**Oturere**	**7.32**	**219**	P	**Pn**	**04 56 47.3**	**-1.0**
HZZ	**Hauiti**	**7.32**	**226**	P	**Pn**	**04 56 49.3**	**+1.2**
NNVZ	**North Ngauruho**	**7.32**	**219**	P	**Pn**	**04 56 48.6**	**+0.3**
WTVZ	**West Tongariro**	**7.32**	**219**	P	**Pn**	**04 56 49.6**	**+1.3**
KRHZ	**Kereru**	**7.35**	**213**	P	**Pn**	**04 56 46.9**	**-1.7**
SNVZ	**South Ngauruho**	**7.35**	**219**	P	**Pn**	**04 56 48.2**	**-0.5**
NGZ	**Ngauruhoe**	**7.36**	**219**	P	**Pn**	**04 56 49.3**	**+0.4**
BHHZ	**Black Hill Sta**	**7.37**	**215**	P	**Pn**	**04 56 48.1**	**-0.7**
TWVZ	**Taurewa**	**7.37**	**220**	P	**Pn**	**04 56 49.4**	**+0.4**
TUVZ	**Tukino**	**7.40**	**218**	P	**Pn**	**04 56 49.3**	**-0.2**
FWVZ	**Far West T-bar**	**7.45**	**219**	P	**Pn**	**04 56 50.3**	**+0.2**
WHVZ	**Whangaehu Hut**	**7.45**	**218**	P	**Pn**	**04 56 50.9**	**+0.8**
MOVZ	**Moawhango**	**7.46**	**217**	P	**Pn**	**04 56 48.7**	**-1.4**
WNVZ	**Wahianoa**	**7.48**	**218**	P	**Pn**	**04 56 49.1**	**-1.4**
PKVZ	**Pokaka**	**7.58**	**219**	P	**Pn**	**04 56 53.3**	**+1.6**
PNHZ	**Pukenui**	**7.64**	**212**	P	**Pn**	**04 56 50.8**	**-1.9**
WPHZ	**Waipukurau**	**7.66**	**211**	P	**Pn**	**04 56 51.1**	**-1.7**
PRHZ	**Porangahau**	**7.75**	**209**	P	**Pn**	**04 56 51.9**	**-2.2**
VRZ	**Vera Road**	**7.79**	**223**	P	**Pn**	**04 56 54.8**	**+0.3**
DVRZ	**Dannevirke**	**7.98**	**211**	P	**Pn**	**04 56 55.5**	**-1.6**
ANWZ	**Angora Road**	**7.98**	**209**	P	**Pn**	**04 56 57.3**	**+0.1**
WAZ	**Wanganui**	**8.11**	**218**	P	**Pn**	**04 56 58.1**	**-0.9**
BFZ	**Birch Farm**	**8.26**	**209**		**Pn**	**04 56 57.9**	**-3.1**
BFZ	**Birch Farm**	**8.26**	**209**	P	**Pn**	**04 56 57.2**	**-3.9**
NEZ	**North Egmont**	**8.26**	**224**	P	**Pn**	**04 57 04.5**	**+3.3**
PRWZ	**Pori Road**	**8.27**	**211**	P	**Pn**	**04 56 59.7**	**-1.5**
PKE	**Pukeiti**	**8.28**	**225**	P	Pn	04 57 06.5	+5.1
KHEZ	**Kahui Hut**	**8.33**	**224**	P	**Pn**	**04 57 06.1**	**+4.0**
TIWZ	**Tintock**	**8.49**	**210**	P	**Pn**	**04 57 02.6**	**-1.6**
MRZ	**Mangatainoka R**	**8.53**	**212**	P	**Pn**	**04 57 00.9**	**-3.8**
HOWZ	**Holdsworth Sta**	**8.75**	**211**	P	**Pn**	**04 57 04.9**	**-2.9**
TMWZ	**Te Maipa**	**8.77**	**209**	P	**Pn**	**04 57 04.9**	**-3.1**
OGWZ	**Otaki Gorge**	**8.84**	**213**	P	**Pn**	**04 57 06.1**	**-2.8**
MTW	**Mount Morrison**	**8.97**	**211**	P	**Pn**	**04 57 08.0**	**-2.7**
TRWZ	**Traveller**	**9.09**	**209**	P	**Pn**	**04 57 08.8**	**-3.7**
PAWZ	**Paruwai Farm**	**9.19**	**210**	P	**Pn**	**04 57 10.4**	**-3.3**
MSWZ	**Moikau Station**	**9.29**	**211**	P	**Pn**	**04 57 11.9**	**-3.3**
DUWZ	**D'Urville Isla**	**9.43**	**218**	P	**Pn**	**04 57 13.9**	**-3.2**
NNZ	**Nelson**	**10.02**	**218**	P	**Pn**	**04 57 22.3**	**-2.8**
BSWZ	**Blackbirch Sta**	**10.15**	**214**	P	**Pn**	**04 57 25.2**	**-1.7**
KHZ	**Kahutara**	**10.85**	**213**	P	**Pn**	**04 57 33.7**	**-2.8**
LTZ	**Lake Taylor**	**11.73**	**216**	P	**Pn**	**04 57 45.6**	**-3.0**
WVZ	**Waitaha Valley**	**12.72**	**219**	P	**Pn**	**04 58 00.6**	**-1.4**
RPZ	**Rata Peaks**	**13.02**	**216**	Pn	**Pn**	**04 58 01.4**	**-4.8**
	2.7nm,0.3s,baz=55,slow=2.9,SNR=9.8						
RPZ				Sn	Sn	05 00 15.7	-15
	3.0nm,0.3s,baz=327,slow=20,SNR=8.2						
RPZ	**Rata Peaks**	**13.02**	**216**	P	**Pn**	**04 58 02.4**	**-3.8**
GCSZ	**Gaunt Creek Bo**	**13.10**	**219**	P	**Pn**	**04 58 06.2**	**-1.0**
ARCZ	**Arundel**	**13.13**	**215**	P	**Pn**	**04 58 04.9**	**-2.8**
LBZ	**Lake Benmore**	**13.94**	**216**	P	**Pn**	**04 58 14.9**	**-3.8**
MLZ	**Mavora Lakes**	**15.66**	**217**	P	**Pn**	**04 58 39.0**	**-3.0**
SYZ	**Scrubby Hill**	**16.03**	**212**	P	**Pn**	**04 58 43.5**	**-3.2**
MSVF	**Nonsavu**	**16.07**	**348**	LR	LR	05 03 07.9	
	comp=Z,421nm,18.9s,baz=174,slow=31						
MSVF	**Nonsavu**	**16.07**	**348**	Pn	**Pn**	**04 58 46.5**	**-0.8**
MSVF	**Nonsavu**	**16.07**	**348**	*i* P	**Pn**	**04 58 45.3**	**-2.0**
MSVF				pmax	pmax		
	comp=Z,22nm,1.0s						
MSVF	**Nonsavu**	**16.07**	**348**	P	**P**	**04 58 51.2**	**+0.5**
WHZ	**Wether Hill Ro**	**16.12**	**216**	Pn	**Pn**	**04 58 45.5**	**-2.3**
APZ	**The Paps**	**16.78**	**214**	P	**P**	**04 58 57.7**	**-0.7**
OUENC	**Ouen Island, N**	**17.05**	**307**	Pn	**Pn**	**04 58 58.3**	**-1.4**
OUENC				IAmb	IAmb	04 59 06.3	
	comp=Z,76nm,0.9s						
OUENC	**Ouen Island, N**	**17.05**	**307**	P	**P**	**04 59 05.4**	**+3.9**
ONTNC	**Ouen Toro**	**17.39**	**306**		**Pn**	**04 59 04.1**	**+0.2**
ONTNC				IAmb	IAmb	04 59 10.6	
	comp=Z,120nm,1.1s						
ONTNC	**Ouen Toro**	**17.39**	**306**	P	**P**	**04 59 09.3**	**+4.1**
DZM	**Mont Dzumac**	**17.55**	**307**	LR	LR	05 04 45.9	
	comp=Z,2μm,18.5s,baz=150,slow=34						
DZM	**Mont Dzumac**	**17.55**	**307**	*e*Pn	**P**	**04 59 07.6**	**+0.4**
	comp=Z,128nm,1.1s						
DZM				*e*LR	LR	05 03 11.5	
	comp=Z,2μm,24.6s						
DZM	**Mont Dzumac**	**17.55**	**307**	Pn	**Pn**	**04 59 05.2**	**-0.9**
DZM	**Mont Dzumac**	**17.55**	**307**	P	**P**	**04 59 10.3**	**+3.1**
KOUNC	**Koumac, New Ca**	**20.05**	**306**	P	**P**	**04 59 34.5**	**-0.1**
KOUNC				IAmb	IAmb	04 59 38.4	
	comp=Z,84nm,1.0s						
KOUNC	**Koumac, New Ca**	**20.05**	**306**	P	Pn	04 59 39.3	+3.0
AFI	**Afiamalu**	**20.49**	**19**	P	**P**	**04 59 39.2**	**-0.1**
AFI				IAmb	IAmb	04 59 41.4	
	comp=Z,52nm,1.1s						
AFI	**Afiamalu**	**20.49**	**19**	P	**P**	**04 59 39.3**	**-0.1**
AFI				pmax	pmax		
	comp=Z,52nm,1.1s						
AFI	**Afiamalu**	**20.49**	**19**	P	**P**	**04 59 40.3**	**+0.9**
RAR	**Rarotonga**	**20.62**	**58**	LR	LR	05 07 23.1	
	comp=Z,610nm,18.9s,baz=243,slow=36						
ARMA	**Armidale**	**25.51**	**269**	P	**P**	**05 00 29.9**	**-0.1**
ARMA	**Armidale**	**25.51**	**269**	P	**P**	**05 00 33.3**	**+3.3**
CNB	**Canberra Magne**	**26.52**	**257**	P	**P**	**05 00 41.6**	**+2.5**
TBI	**Tubuai**	**27.38**	**76**	*e*LR	LR	05 07 44.0	
	comp=Z,551nm,21.0s						
EIDS	**Eidsvold**	**27.66**	**279**	P	**P**	**05 00 49.3**	**0.0**
EIDS				IAmb	IAmb	05 00 54.3	
	comp=Z,20nm,0.9s						
EIDS	**Eidsvold**	**27.66**	**279**	P	**P**	**05 00 52.0**	**+2.7**
RMQ	**Roma**	**29.15**	**275**	P	**P**	**05 01 05.9**	**+3.3**
TOO	**Toolangi**	**29.47**

	comp=Z,12nm,1.2s								
KAPI	**Kappang**	**63.82**	**282**		LR	LR	05 34 09.3		
	comp=Z,280nm,18.5s,baz=96,slow=37								
DAV	**Davao City (W)**	**66.62**	**296**		LR	LR	05 35 55.0		
	comp=Z,56nm,18.1s,baz=162,slow=37								
SMAI	**San Martin Ant**	**66.66**	**158**		P	**P**	**05 05 51.9**	**+0.3**	
SMAI					IAmb	IAmb	05 07 29.5		
	comp=Z,7.4nm,1.0s								
BELA	**Belgrano 2**	**66.72**	**172**		P	**P**	**05 05 51.0**	**-0.9**	
BELA					IAmb	IAmb	05 06 06.1		
	comp=Z,41nm,2.0s								
MAW	**Mawson**	**69.22**	**201**		P	**P**	**05 06 09.6**	**+1.9**	
	comp=Z,14nm,1.2s,baz=90,slow=6.3,SNR=11								
MAW					LR	LR	05 35 16.0		
	comp=Z,430nm,19.7s,baz=116,slow=35								
	comp=Z,14nm,1.2s								
MAW	**Mawson**	**69.22**	**201**		P	**P**	**05 06 08.1**	**+0.5**	
PMSA	**Palmer Station**	**69.56**	**155**		LR	LR	05 33 45.7		
	comp=Z,289nm,18.3s,baz=230,slow=33								
JCJ	**Chichijima**	**70.95**	**323**		LR	LR	05 35 28.9		
	comp=Z,72nm,18.8s,baz=62,slow=34								
LEM	**Lembang**	**72.86**	**273**		LR	LR	05 40 04.1		
	comp=Z,248nm,18.9s,baz=154,slow=37								
TROLL	**Troll, Antarti**	**74.72**	**180**		P	**P**	**05 06 40.5**	**-0.3**	
SNAA	**Sanae**	**75.02**	**179**		P	**P**	**05 06 43.4**	**+0.9**	
SNAA	**Sanae**	**75.02**	**179**		LR	LR	05 38 45.5		
	comp=Z,196nm,18.1s,baz=130,slow=35								
SNAA	**Sanae**	**75.02**	**179**		P	**P**	**05 06 43.0**	**+0.5**	
SNAA					IAmb	IAmb	05 06 54.6		
	comp=Z,24nm,1.1s								
SNAA	**Sanae**	**75.02**	**179**		P	**P**	**05 06 43.0**	**+0.5**	
SNAA					pmax	pmax			
	comp=Z,24nm,1.1s								
VNA3	**Neumayer Olymp**	**75.19**	**176**		P	**P**	**05 06 43.9**	**+0.5**	
VNA2	**Neumayer--Watz**	**75.61**	**177**		P	**P**	**05 06 45.8**	**0.0**	
	baz=174,slow=6.0								
NVL	**N'lazarevskaya**	**75.71**	**184**	*eP*		P	05 07 07.0	+21	
NVL					pmax	pmax			
	comp=Z,15nm,1.0s								
VNA1	**Neumayer--Stat**	**75.85**	**177**		P	**P**	**05 06 47.4**	**+0.3**	
ORCD	**Orcadas**	**78.72**	**159**		P	**P**	**05 07 03.2**	**-0.1**	
PLCA	**Paso Flores**	**80.65**	**133**		LR	LR	05 37 55.8		
	comp=Z,137nm,18.1s,baz=226,slow=32								
PSI	**Prapat**	**85.37**	**276**		LR	LR	05 47 57.6		
	comp=Z,180nm,19.0s,baz=91,slow=37								
SHEM	**Shemya Is, Ala**	**86.17**	**355**		LR	LR	05 39 48.3		
	comp=Z,107nm,21.3s,baz=141,slow=31								
LPIG	**La Paz**	**86.54**	**58**		LR	LR	05 40 38.6		
	comp=Z,364nm,18.4s,baz=218,slow=32								
YSS	**Yuzh-Sakhalins**	**87.42**	**335**		P	**P**	**05 07 48.3**	**0.0**	
YSS	**Yuzh-Sakhalins**	**87.42**	**335**	⇑*eP*		**P**	**05 07 48.8**	**+0.5**	
YSS					pmax	pmax			
	comp=Z,20nm,1.0s								
YSS					MLR	MLR			
	comp=Z,400nm,15.0s								
NJ2	**Nanjing**	**88.00**	**311**	*eP*		**P**	**05 07 51.3**	**-0.2**	
NJ2					pmax	pmax			
	comp=Z,11nm,0.5s								
PFO	**Pinyon Flats O**	**88.64**	**47**		LR	LR	05 44 11.4		
	comp=Z,296nm,18.1s,baz=230,slow=33								
PEA0B	**Petropavlovsk-**	**88.77**	**346**		P	**P**	**05 07 56.1**	**+1.5**	
PEA0B	**Petropavlovsk-**	**88.77**	**346**	*ceP*		**P**	**05 07 54.6**	**0.0**	
PETK	**Petropavlovsk-**	**88.77**	**346**		P	**P**	**05 07 54.3**	**-0.3**	
	comp=Z,9.2nm,0.8s,baz=180,slow=7.4,SNR=8.0								
PETK					LR	LR	05 40 48.8		
	comp=Z,144nm,21.8s,baz=158,slow=31								
	comp=Z,9.2nm,0.8s								
PETK	**Petropavlovsk-**	**88.77**	**346**		P	**P**	**05 07 54.6**	**0.0**	
ISA	**Isabella, Lake**	**88.82**	**45**		P	**P**	**05 07 56.1**	**+0.7**	
ISA					IAmb	IAmb	05 08 18.8		
	comp=Z,7.5nm,1.1s								
ISA	**Isabella, Lake**	**88.82**	**45**		P	**P**	**05 07 56.1**	**+0.7**	
ISA					pmax	pmax			
	comp=Z,8.0nm,1.2s								
GSC	**Goldstone, Bar**	**89.57**	**46**		P	**P**	**05 08 00.2**	**+1.2**	
GSC					IAmb	IAmb	05 08 37.4		
	comp=Z,12nm,1.5s								
GSC	**Goldstone, Bar**	**89.57**	**46**		P	**P**	**05 08 00.2**	**+1.2**	
GSC					pmax	pmax			
	comp=Z,12nm,1.5s								
113A	**Mohawk Valley,**	**89.76**	**50**		P	**P**	**05 08 00.0**	**+0.2**	
113A					IAmb	IAmb	05 08 18.4		
	comp=Z,19nm,1.8s								
YBH	**Yreka Blue Hor**	**90.76**	**38**		LR	LR	05 43 30.4		
	comp=Z,188nm,18.8s,baz=208,slow=32								
NVAR	**Mina Array Bea**	**90.82**	**43**		P	**P**	**05 08 05.0**	**+0.1**	
	comp=Z,0.7nm,0.8s,baz=223,slow=8.1,SNR=6.4								
NVAR					LR	LR	05 45 02.3		
	comp=Z,127nm,18.3s,baz=240,slow=33								
	comp=Z,0.7nm,0.8s								
NVAR	**Mina Array Bea**	**90.82**	**43**		P	**P**	**05 08 05.2**	**+0.3**	
KVN	**Kaiserville**	**91.37**	**43**		P	**P**	**05 08 09.1**	**+1.7**	
KVN	**Kaiserville**	**91.37**	**43**		P	**P**	**05 08 09.1**	**+1.7**	
KVN					pmax	pmax			
	comp=Z,4.0nm,1.3s								
TUC	**Tucson**	**91.39**	**52**		P	**P**	**05 08 08.7**	**+1.2**	
TUC					IAmb	IAmb	05 08 13.2		
	comp=Z,12nm,1.6s								
TUC	**Tucson**	**91.39**	**52**		P	**P**	**05 08 08.7**	**+1.2**	
TUC					pmax	pmax			
	comp=Z,12nm,1.7s								
X16A	**Lo Mia Camp, P**	**92.31**	**50**		P	**P**	**05 08 13.3**	**+1.5**	
X16A					IAmb	IAmb	05 08 35.6		
	comp=Z,5.8nm,1.3s								
NNA	**Nana**	**92.93**	**106**		LR	LR	05 42 52.6		
	comp=Z,287nm,18.1s,baz=222,slow=31								
KLR	**Kul'dur**	**93.56**	**330**		LR	LR	05 47 35.0		
	comp=Z,154nm,19.4s,baz=118,slow=34								
KLR	**Kul'dur**	**93.56**	**330**	*ceP*		**P**	**05 08 17.3**	**+0.3**	
KLR					pmax	pmax			
	comp=Z,7.0nm,1.6s								
CMAR	**Chiang Mai Arr**	**94.06**	**289**		PP	**PP**	**05 12 05.7**	**-1.0**	
	comp=Z,1.0nm,0.3s,baz=146,slow=7.2,SNR=5.0								
CMAR					LR	LR	05 53 26.4		
	comp=Z,45nm,19.6s,baz=160,slow=37								
CMIG	**Matias Romero**	**94.10**	**72**		LR	LR	05 44 44.2		
	comp=Z,116nm,18.3s,baz=223,slow=32								
ELK	**Elko**	**94.13**	**43**		LR	LR	05 46 47.3		
	comp=Z,158nm,18.6s,baz=232,slow=33								
MTPU	**Mount Pierson**	**94.16**	**46**		P	**P**	**05 08 22.0**	**+1.5**	
MTPU					IAmb	IAmb	05 08 26.2		
	comp=Z,17nm,2.0s								
TXAR	**Lajitas Array**	**94.42**	**58**		P	**P**	**05 08 23.1**	**+1.5**	
	comp=Z,0.7nm,1.0s,baz=206,slow=7.9,SNR=5.6								
TXAR					LR	LR	05 45 35.7		
	comp=Z,243nm,18.3s,baz=228,slow=32								
	comp=Z,0.7nm,1.0s								
KMI	**Kunming**	**94.88**	**297**	⇑	P	**P**	**05 08 25.1**	**+1.1**	
KMI					pmax	pmax			
	comp=Z,12nm,2.0s								
ANMO	**Albuquerque**	**95.85**	**52**		LR	LR	05 47 49.2		
	comp=Z,168nm,18.2s,baz=240,slow=33								
ANMO	**Albuquerque**	**95.85**	**52**	*ceP*		**P**	**05 08 27.3**	**-0.8**	
ANMO					pmax	pmax			
	comp=Z,7.0nm,4.5s								
BBB	**Bella Bella**	**96.06**	**28**		LR	LR	05 46 13.1		
	comp=Z,92nm,19.0s,baz=224,slow=32								
MA2	**Magadan**	**96.23**	**345**		LR	LR	05 46 56.9		
	comp=Z,84nm,20.0s,baz=119,slow=32								
PZH	**PanZhiHua**	**96.40**	**297**		P	**P**	**05 08 32.8**	**+2.1**	
HHC	**Hu-ho-hao-te**	**98.13**	**314**	*eP*		Pdif	05 08 40.6	+2.4	
NEW	**Newport**	**98.16**	**36**		LR	LR	05 46 32.0		
	comp=Z,405nm,19.6s,baz=192,slow=32								
CPUP	**Villa Florida**	**98.33**	**129**		LR	LR	05 48 38.7		
	comp=Z,279nm,18.1s,baz=224,slow=33								
PDAR	**Pinedale Array**	**98.69**	**44**		LR	LR	05 49 47.0		
	comp=Z,164nm,18.2s,baz=251,slow=33								
SEY	**Seymchan**	**98.96**	**347**	*iP*		**P**	**05 08 40.0**	**-1.1**	
SEY					pmax	pmax			
	comp=Z,6.0nm,1.1s								
LZH	**Lanzhou**	**100.28**	**306**	*eP*		**Pdif**	**05 08 52.0**	**+4.0**	
LZH					pP	pwP	05 08 57.3	+0.3	
WMQ	**Urumqi**	**114.84**	**307**	*e*	PKP	**PKiKP**	**05 13 43.3**	**+1.4**	
MK31	**Makanchi Array**	**119.46**	**309**			**PKPdf**	**05 13 49.3**	**-1.4**	
MK31	**Makanchi Array**	**119.46**	**309**		PKIKP	**PKPdf**	**05 13 49.3**	**-1.4**	
MKAR	**Makanchi Array**	**119.46**	**309**		PKP	**PKPdf**	**05 13 49.3**	**-1.4**	
	comp=Z,1.9nm,0.9s,baz=60,slow=3.4,SNR=14								
MKAR	**Makanchi Array**	**119.46**	**309**			**PKPdf**	**05 13 49.5**	**-1.2**	
MKAR	**Makanchi Array**	**119.46**	**309**	*c*	*i*PKIKP	**PKPdf**	**05 13 49.5**	**-1.2**	
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
MAKZ	**Makanchi**	**119.67**	**309**			**PKPdf**	**05 13 50.4**	**-0.7**	
MAKZ	**Makanchi**	**119.67**	**309**		PKIKP	**PKPdf**	**05 13 50.4**	**-0.7**	
ZALV	**Zalesovo Beam**	**120.10**	**317**		PKP	**PKPdf**	**05 13 50.4**	**-1.2**	
	comp=Z,1.1nm,0.4s,baz=225,slow=0.2,SNR=4.4								
KURK	**Kurchatov**	**122.91**	**312**			**PKPdf**	**05 13 56.2**	**-0.9**	
KURK	**Kurchatov**	**122.91**	**312**	*c*	*i*PKIKP	**PKPdf**	**05 13 56.7**	**-0.4**	
KURK					pmax	pmax			
	comp=Z,6.0nm,0.8s								
AAK	**Ala-Archa**	**123.49**	**302**	*i*	PKIKP	**PKPdf**	**05 13 57.7**	**-1.0**	
KK31	**Karatay Array**	**126.44**	**302**			**PKPdf**	**05 14 03.7**	**-0.5**	
KK31	**Karatay Array**	**126.44**	**302**		PKIKP	**PKPdf**	**05 14 03.7**	**-0.5**	
KKAR	**Karatay Array**	**126.44**	**302**			**PKPdf**	**05 14 03.8**	**-0.4**	
KKAR	**Karatay Array**	**126.44**	**302**		PKIKP	**PKPdf**	**05 14 03.8**	**-0.4**	
BRVK	**Borovoye**	**128.41**	**314**			**PKPdf**	**05 14 07.2**	**-0.4**	
BRVK	**Borovoye**	**128.41**	**314**	*c*	*i*PKIKP	**PKPdf**	**05 14 07.7**	**+0.1**	
BRVK					pmax	pmax			
	comp=Z,4.0nm,0.8s								
KMBO	**Kilima Mbogo**	**131.84**	**232**		SKPbc	**SKPab**	**05 17 43.0**	**+0.6**	
	comp=Z,3.1nm,0.8s,baz=99,slow=2.6,SNR=6.7								
GEYT	**Alibeck**	**134.46**	**292**		SKPbc	**SKPbc**	**05 17 49.3**	**-0.2**	
	comp=Z,5.8nm,0.8s,baz=204,slow=9.3,SNR=6.4								
ABKAR	**Akbulak array**	**134.60**	**308**			**PKPdf**	**05 14 18.7**	**-0.7**	
ARU	**Arti**	**135.23**	**319**		PKPdf	**PKPdf**	**05 14 20.9**	**+0.5**	
ARU	**Arti**	**135.23**	**319**	*i*	PKIKP	**PKPdf**	**05 14 20.3**	**0.0**	
BJO1	**Bjornoya**	**138.09**	**353**	*ep*	PKPdf	**PKPdf**	**05 14 25.0**	**-0.1**	
BJO1					*eP*	**pPKPdf**	**05 14 25.4**	**-1.2**	
NRS	**Narsarsuaq**	**139.26**	**33**			PKPpre	05 14 21.9		
NRS	**Narsarsuaq**	**139.26**	**33**		PKHKP	PKPpre	05 14 21.9		
ARA0	**ARCESS Array S**	**141.57**	**347**	*eP*		**PKPdf**	**05 14 27.4**	**-4.2**	
ARCES	**ARCESS Array B**	**141.57**	**347**		PKhKP	PKPpre	05 14 27.2		
	comp=Z,2.2nm,0.9s,baz=23,slow=4.1,SNR=7.1								
BELG	**Belogornoye**	**142.15**	**314**	*i*	PKIKP	**PKPdf**	**05 14 32.3**	**-0.8**	
KLMR	**Klimovskoe**	**143.32**	**330**	*e*	PKHKP	PKPpre	05 14 28.3		
KLMR					pmax	pmax			
	comp=Z,16nm,1.1s								
KLMR	**Klimovskoe**	**143.32**	**330**	*e*	PKPdf	PKPab	05 14 28.3	-2.6	
KLMR					AMP		05 14 41.6		
	comp=Z,16nm,1.1s								
STEI	**Steigen**	**144.69**	**351**	*e*	PKPbc	**PKPab**	**05 14 36.0**	**+0.1**	
STEI					IAmb	IAmb	05 14 42.4		
	comp=Z,12nm,1.0s								
GNI	**Garni**	**145.07**	**294**		PKPbc	**PKPbc**	**05 14 37.7**	**-0.7**	
GNI	**Garni**	**145.07**	**294**		PKIKP	**PKPbc**	**05 14 37.7**	**-0.7**	
FAUS	**Fauske**	**145.20**	**351**	*e*	PKPbc	**PKPbc**	**05 14 37.0**	**-0.6**	
FAUS					IAmb	IAmb	05 14 40.4		
	comp=Z,26nm,1.0s								
ZEI	**Tsey**	**145.74**	**298**	*i*	PKP2	**PKPdf**	**05 14 38.8**	**-1.2**	
ZEI					pmax	pmax			
	comp=Z,24nm,1.5s								
NCK	**Nalchik**	**145.94**	**299**	*i*	PKIKP	**PKPdf**	**05 14 38.4**	**-1.7**	
VRH	**Novokhopyorsk**	**145.99**	**313**	*e*	PKP2	**PKPdf**	**05 14 39.4**	**-0.5**	
VRH					pmax	pmax			
	comp=Z,80nm,0.8s								
ONI	**Oni**	**146.08**	**298**		PKPbc	**PKPdf**	**05 14 41.1**	**+0.7**	
ONI	**Oni**	**146.08**	**298**		PKP2	**PKPdf**	**05 14 41.1**	**+0.7**	
GOF	**Gofitskoye**	**146.23**	**302**	⇑*e*	PKP2	**PKPdf**	**05 14 41.3**	**+0.8**	
GOF					pmax	pmax			
	comp=Z,119nm,1.3s								
GEVA	**Gevas**	**146.25**	**290**		PKPbc	**PKPdf**	**05 14 41.4**	**+0.4**	
PYA1	**Pyatigorsk**	**146.27**	**301**	*i*	PKIKP	**PKPdf**	**05 14 39.4**	**-1.3**	
KONS	**Konsvik**	**146.31**	**352**	*e*	PKPdf	**PKPdf**	**05 14 39.4**	**-0.5**	
KARS	**Kars**	**146.36**	**294**		PKPbc	**PKPbc**	**05 14 42.4**	**0.0**	
KARS	**Kars**	**146.36**	**294**		PKP2	**PKPbc**	**05 14 42.4**	**0.0**	
VALR	**Valaam**	**146.39**	**335**	*i*	PKIKP	**PKPdf**	**05 14 39.6**	**-0.6**	
KBZ	**Khabaz**	**146.44**	**300**		PKPbc	**PKPdf**	**05 14 41.6**	**+0.7**	
	comp=Z,11nm,0.9s,baz=50,slow=0.5,SNR=24								
KBZ	**Khabaz**	**146.44**	**300**	*c*	*i*PKP2	**PKPdf**	**05 14 41.8**	**+0.9**	
KIV	**Kislovodsk**	**146.57**	**300**	*i*	PKP2	**PKPbc**	**05 14 42.8**	**0.0**	
KIV					pmax	pmax			
	comp=Z,12nm,1.1s								
MOS	**Moscow**	**146.65**	**323**	*i*	PKIKP	**PKPdf**	**05 14 39.2**	**-1.6**	
MOS					*e*		05 14 50.4		
MOS					pmax	pmax			
	comp=Z,200nm,1.7s								
MOS					pmax	pmax			
	comp=Z,116nm,1.2s								
GURO	**Guroymak-BITLI**	**147.07**	**290**		PKPbc	**PKPdf**	**05 14 43.8**	**+1.5**	
LPSR	**Galich'ya Gora**	**147.21**	**317**	*e*	PKP2	**PKPdf**	**05 14 43.2**	**+1.3**	
LPSR					pmax	pmax			
	comp=Z,50nm,1.1s								
VORR	**Voronezh**	**147.36**	**315**	*e*	PKP2	**PKPbc**	**05 14 44.6**	**0.0**	
VORR					pmax	pmax			
	comp=Z,58nm,1.4s								
OBN	**Obninsk**	**147.47**	**322**	⇑*i*	PKIKP	**PKPdf**	**05 14 43.2**	**+1.0**	
OBN					*i*		05 14 54.3		
OBN					pmax	pmax			
	comp=Z,29nm,1.2s								
VSR	**Storozhevoye**	**147.53**	**314**	*e*	PKP2	**PKPdf**	**05 14 44.2**	**+1.7**	
VSR					pmax	pmax			
	comp=Z,40nm,0.9s								
FINES	**FINESS Array B**	**147.94**	**338**		PKPbc	**PKPdf**	**05 14 45.1**	**+2.3**	
	comp=Z,13nm,0.8s,baz=64,slow=4.4,SNR=37								
MARD	**Mardin**	**147.96**	**288**		PKPbc	**PKPbc**	**05 14 46.1**	**-0.8**	
KOPT	**Kop Dagi**	**148.32**	**293**		PKPbc	**PKPbc**	**05 14 47.8**	**-0.2**	
NSS	**Namsos**	**148.34**	**351**	*e*		**PKPbc**	**05 14 46.3**	**-0.6**	
NSS					IAmb	IAmb	05 15 04.0		
	comp=Z,22nm,1.0s								
SOC	**Sochi**	**148.75**	**300**	*i*	PKIKP	**PKPdf**	**05 14 46.8**	**+2.1**	
SOC					*e*PPP	PPP	05 21 36.5		
SOC					*e*SS	SS	05 37 27.5	-2.1	
SOC					*e*SSS	SSS	05 42 56.4		
ANN	**Anapa**	**150.22**	**303**	*e*	PKHKP	PKPpre	05 14 51.3		
ANN					pmax	pmax			
	comp=Z,49nm,0.8s								
AKN	**Aaknes**	**151.15**	**355**	*e*	PKPbc	**PKPbc**	**05 14 54.5**	**+0.6**	
AKN					IAmb	IAmb	05 15 09.8		
	comp=Z,25nm,1.2s								
NB2	**NORSAR Subarra**	**151.80**	**350**		PKP	**PKPbc**	**05 14 54.7**	**-0.7**	
	comp=Z,7.1nm,0.8s,baz=16,slow=4.1								
NOA	**NORSAR Array B**	**151.80**	**350**		PKPbc	**PKPbc**	**05 14 54.4**	**-1.0**	
	comp=Z,0.9nm,0.7s,baz=21,slow=4.8,SNR=15								
FOO	**Floro**	**151.86**	**356**		IAmb	IAmb	05 15 07.5		
	comp=Z,15nm,1.0s								
MNK	**Minsk**	**152.05**	**326**	*i*	PKIKP	**PKPdf**	**05 14 47.5**	**-2.0**	
MNK					*i*		05 18 36.2		
MNK					*i*		05 21 52.3		
MNK					*i*	PPP	05 22 01.6		
MNK					*i*	SS	05 38 02.9	-1.9	
MNK					pmax	pmax			
	comp=Z,28nm,0.8s								
MNK					pmax	pmax			
	comp=E,3.0nm,0.8s								
MNK	**Minsk**	**152.05**	**326**	*i*	PKP	**PKPdf**	**05 14 47.5**	**-2.0**	
	comp=E,3.0nm,0.8s								
MNK					*i*	PKP	**PKPdf**	**05 14 47.5**	**-2.0**
MNK					*i*	PKP	**PKPdf**	**05 14 47.5**	**-2.0**
	comp=Z,28nm,0.8s,baz=54								
MNK					*i*	SKP		05 18 15.7	
MNK					*i*	PP	**PP**	**05 18 36.2**	**-1.2**
MNK					*i*	SKS	**SKSdf**	**05 21 52.3**	**-4.3**
MNK					*i*	PPP	PPP	05 22 01.6	
MNK					*i*	SS	**SS**	**05 38 02.9**	**-1.9**
MNK					*i*	SSS	SSS	05 43 12.6	
MNK					*i*	LQ	LQ	06 15 34.3	
MNK					*i*	LR	LR	06 27 09.0	
NACGM	**Naroch**	**152.29**	**328**	⇑*i*	PKP	**PKPbc**	**05 14 57.2**	**+0.6**	
	baz=50								
DBIC	**Dimbokro**	**152.59**	**166**		PKPbc	**PKiKP**	**05 15 01.4**	**+2.6**	
	comp=Z,11nm,1.1s,baz=185,slow=2.2,SNR=5.2								
ODD1	**Odda**	**153.43**	**354**	*e*		**PKiKP**	**05 15 03.0**	**+3.8**	
AKASG	**Malin Array Be**	**153.48**	**319**		PKPbc	**PKPbc**	**05 14 58.2**	**-1.2**	
	comp=Z,4.7nm,0.8s,baz=59,slow=3.0,SNR=13								
AKBB	**Malin Array Si**	**153.48**	**319**			**PKPbc**	**05 14 57.6**	**-1.8**	
AKBB	**Malin Array Si**	**153.48**	**319**		PKIKP	**PKPbc**	**05 14 57.6**	**-1.8**	
BRTR	**Keskin Array B**	**153.60**	**293**		PKPbc	**PKPbc**	**05 14 58.9**	**-1.3**	
	comp=Z,5.2nm,0.8s,baz=134,slow=3.6,SNR=29								
BLS5	**Blasjo**	**153.92**	**354**	*e*		PKPdf	05 14 44.1	-8.1	
TORD	**Torodi Ar. Bea**	**159.68**	**180**		PKP	**PKPdf**	**05 15 02.8**	**+1.9**	
	comp=Z,1.0nm,1.0s,baz=205,slow=3.0,SNR=2.7								
TORD					PKPab	**PKPab**	**05 15 39.4**	**+0.3**	
	comp=Z,2.1nm,0.8s,baz=170,slow=3.6,SNR=5.2								
DPC	**Dobruska-Polom**	**160.00**	**331**	*e*	PKP2	**PKPab**	**05 15 39.3**	**-0.5**	
DPC	**Dobruska-Polom**	**160.00**	**331**	*e*	PKPAB	**PKPab**	**05 15 39.3**	**-0.5**	
CLL	**Collm**	**160.39**	**338**	⇓*i*	PKP2	**PKPab**	**05 15 40.3**	**-1.1**	
CLL					pmax	pmax			
	comp=Z,13nm,1.3s								
CLL	**Collm**	**160.39**	**338**	⇓*i*	PKPab	**PKPab**	**05 15 40.3**	**-1.1**	
	comp=Z,13nm,1.3s								
CLL					*i*	pPKPab	**sPKPab**	**05 15 45.8**	**+2.4**
	comp=Z,9.0nm,1.0s								
CLL					*e*PSKS			05 29 47.0	
CLL					*ex*	x		05 42 18.0	
CLL					*e*SSS	SSS		05 45 48.0	
CLL					LmV			06 43 00.0	
	comp=Z,100nm,18.0s								
KHC	**Kasperske Hory**	**162.04**	**334**	*e*	PKP2	**PKPab**	**05 15 47.5**	**-1.3**	
KHC	**Kasperske Hory**	**162.04**	**334**	*e*	PKPAB	**PKPab**	**05 15 47.5**	**-1.3**	
GERES	**GERESS Array B**	**162.23**	**333**		PKPab	**PKPab**	**05 15 48.8**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=48,slow=4.4,SNR=3.7								

MOS 19 05:01:37.0±0.0, 44.69N×40.74E, h20km, MPVA3.5, 1C-1D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LABN	**Labinsk**	**0.05**	**194**	⇓*i*	PG	Pb	05 01 40.7	+0.1
LABN					*i* S	Sb	05 01 43.6	+0.6
LABN	**Labinsk**	**0.05**	**194**		*i* Pg	Pb	05 01 40.7	+0.1
LABN					*i* Sg	Sb	05 01 43.6	+0.5
AHMR	**Akhmetovskaya**	**0.57**	**158**		*i* PG	Pb	05 01 48.5	+0.1
AHMR					*i* S	Sb	05 01 57.2	+1.1
AHMR	**Akhmetovskaya**	**0.57**	**158**		*e*Pg	Pb	05 01 48.4	0.0
AHMR					*e*Sg	Sb	05 01 57.3	+1.1
NVNR	**Nevinnomyssk**	**0.88**	**94**		*e*PG	Pn	05 01 53.9	-0.3
NVNR					*e*S	Sb	05 02 04.9	+0.1
NVNR	**Nevinnomyssk**	**0.88**	**94**		*e*Pg	Pn	05 01 53.9	-0.3
NVNR					*e*Sg	Sb	05 02 04.9	+0.1
ERBR	**Yeremizino-Bor**	**1.04**	**350**		*e*PG	Pb	05 01 56.1	-0.3
ERBR					*e*S	Sn	05 02 10.7	+0.2
ERBR	**Yeremizino-Bor**	**1.04**	**350**		*e*Pg	Pb	05 01 56.1	-0.2
ERBR					*e*Sg	Sn	05 02 10.7	+0.2
GOYR	**Goytkh**	**1.07**	**246**		*e*PG	Pn	05 01 57.6	+0.7
GOYR					*e*S	Sn	05 02 11.9	+0.8
GOYR	**Goytkh**	**1.07**	**246**		*e*Pg	Pn	05 01 57.6	+0.7
GOYR					*e*Sg	Sn	05 02 11.9	+0.8
ARXR	**Arkhyz**	**1.19**	**161**		*e*PG	Pb	05 01 59.2	+0.2
ARXR					*i* S	Sb	05 02 14.1	+0.1
ARXR					pmax	pmax		
	comp=Z,97nm,0.4s							
ARXR					smax	smax		
	comp=Z,367nm,0.7s							
ARXR	**Arkhyz**	**1.19**	**161**		*i* Pg	Pn	05 01 58.8	+0.1
ARXR					*e*Sg	Sn	05 02 14.8	+0.5
LZRR	**Lazarevskoye**	**1.23**	**233**		*e*PG	Pb	05 02 00.2	+0.6
LZRR					*i* S	Sn	05 02 16.7	+1.6
LZRR	**Lazarevskoye**	**1.23**	**233**		*e*Pg	Pb	05 02 00.2	+0.6
LZRR					*i* Sg	Sn	05 02 16.7	+1.6
KGUR	**Krasnodar**	**1.26**	**286**		*e*PG	Pb	05 02 00.1	0.0
KGUR					*e*S	Sb	05 02 18.2	+2.4
KGUR	**Krasnodar**	**1.26**	**286**		*e*Pg	Pb	05 02 00.1	0.0
KGUR					*e*Sg	Sb	05 02 18.2	+2.3
SOC	**Sochi**	**1.33**	**214**		*e*PG	Pn	05 01 59.8	-0.6
SOC					*e*		05 02 18.8	
SOC					pmax	pmax		
	comp=Z,33nm,0.5s							
SOC					smax	smax		
	comp=N,16nm,0.2s							
SO

baz=13
ARLS ⇓*i*S **Sb 05 32 37.8 -0.1**
baz=13
GAR Garm 2.58 259 ⇑*e*P **Pn**
baz=61
GAR ⇑*e*S **Sb 05 32 41.0 -2.2**
baz=61
TRKS Terek-Say 2.71 318 ⇓*i*P **Pn**
baz=18
TRKS ⇓*i*S **Sn 05 32 44.1 +2.3**
baz=18
UCH Uchtor 2.78 15 ⇓*e*P **Pn**
baz=14
UCH ⇓*i*S **Sb 05 32 47.5 -1.9**
baz=14
EKS2 Erkin-Say 3.12 3 ⇑*i*P **Pn**
baz=2.0
EKS2 ⇑*e*S **Sn 05 32 55.4 +3.5**
baz=2.0
AAK Ala-Archa 3.17 13 ⇑*e*P **Pn**
baz=12
AAK ⇑*i*S **Sb 05 32 56.9 -3.5**
baz=12
MRKS Merke 3.21 356 *e*P **Pg 05 32 24.5 -2.1**
12nm,0.4s
MRKS *e*S **Sg 05 33 09.2 +1.0**
53nm,0.6s
KBK Karagaybulak 3.29 18 ⇑*i*P **Pn**
baz=17
KBK ⇑*i*S **Sn 05 32 59.5 +3.6**
baz=17
CHMS Chumysh 3.57 14 ⇑Pn **Pn 05 32 24.3 +3.8**
8.2nm,0.6s
CHMS ⇓Lg Lg 05 33 18.9
32nm,0.7s
TKM2 Tokmak 2 3.71 24 ⇓Pn **Pn 05 32 25.1 +2.5**
7.2nm,1.0s
TKM2 ⇓Lg Lg 05 33 21.9
12nm,0.5s
IUG Iuzhnay 3.74 315 *e*P **Pb 05 32 33.8 +2.6**
172nm,0.4s
IUG *e*S **Sg 05 33 25.0 0.0**
71nm,0.9s
KST Kastek 3.94 27 *e*P **Pb 05 32 35.8 +1.1**
7.9nm,0.6s
KST *e*S **Sg 05 33 29.0 -2.5**
29nm,0.5s
KST Kastek 3.94 27 Pg **Pb 05 32 36.8 +2.1**
7.9nm,0.6s
KST Lg Lg 05 33 29.8
29nm,0.5s
SGDS Sogindy 3.99 11 *e*P **Pb 05 32 36.7 +1.2**
6.2nm,0.5s
SGDS *e*S **Sg 05 33 30.6 -2.6**
15nm,0.9s
DGS Degeres 4.05 23 *e*P **Pb 05 32 38.5 +1.9**
16nm,0.5s
DGS *e*S **Sg 05 33 34.0 -1.2**
22nm,0.5s
DGS Degeres 4.05 23 Pg **Pg 05 32 39.5 -3.2**
16nm,0.5s
DGS Lg Lg 05 33 34.0
22nm,0.5s
MTBS Maitube 4.19 30 *e*P **Pb 05 32 39.8 +1.0**
12nm,0.5s
MTBS *e*S **Sg 05 33 35.9 -3.5**
18nm,0.6s
MTBS Maitube 4.19 30 Pg **Pb 05 32 40.1 +1.3**
12nm,0.5s
MTBS Lg Lg 05 33 34.7
18nm,0.6s
KK31 Karatay Array 4.24 328 ⇑Pn **Pn 05 32 32.1 +2.4**
0.7nm,0.3s,baz=137,slow=13,SNR=38
KK31 ⇑Pg **Pg 05 32 43.4 -2.7**
2.5nm,0.4s,baz=148,slow=15,SNR=7.6
KK31 ⇑Sn **Sn 05 33 23.8 +4.6**
7.7nm,0.5s
KK31 ⇓Lg Lg 05 33 37.8
19nm,0.6s,baz=130,slow=30,SNR=2.6
KRBS Karabastau 4.45 20 *e*P **Pb 05 32 45.3 +2.1**
8.7nm,0.5s
KRBS *e*S **Sg 05 33 45.1 -2.6**
18nm,0.6s
KRBS Karabastau 4.45 20 Pg **Pb 05 32 45.8 +2.6**
8.7nm,0.5s
KRBS Lg Lg 05 33 44.8
18nm,0.6s
MDOK Medeo 4.47 35 *e*P **Pb 05 32 45.5 +1.8**
8.6nm,0.5s
MDOK *e*S **Sg 05 33 45.6 -2.9**
14nm,0.5s
MDOK Medeo 4.47 35 ⇓Pg **Pb 05 32 45.4 +1.8**
7.3nm,0.6s
MDOK Pg Pg 05 32 45.5 -5.2
8.6nm,0.5s
MDOK Lg Lg 05 33 44.4
14nm,0.5s
MDOK Lg Lg 05 33 45.5
20nm,0.8s
KOTS Kotyrbulak 4.55 35 *e*P **Pb 05 32 47.5 +2.4**
1.2nm,0.6s
KOTS *e*S **Sg 05 33 49.5 -1.8**
58nm,0.8s
KOTS Kotyrbulak 4.55 35 Pg **Pg 05 32 48.6 -3.7**
1.2nm,0.6s
KOTS Lg Lg 05 33 49.5
58nm,0.8s
KTBS Karatobe 4.78 28 *e*P **Pb 05 32 51.1 +2.2**
6.0nm,0.7s
KTBS *e*S **Sg 05 33 54.2 -4.2**
16nm,0.4s
KTBS Karatobe 4.78 28 Pg **Pb 05 32 51.1 +2.2**
6.0nm,0.7s
KTBS Lg Lg 05 33 54.2
16nm,0.4s
KUU Kurty 4.82 25 *e*P **Pb 05 32 51.7 +2.1**
7.9nm,0.7s
KUU *e*S **Sg 05 33 56.0 -3.8**
25nm,0.9s
SATY Saty 5.07 44 *e*P **Pb 05 32 56.5 +2.7**
7.7nm,0.7s
SATY *e*S **Sg 05 34 03.5 -4.1**
15nm,0.8s
SATY Saty 5.07 44 Pg **Pb 05 32 56.5 +2.7**
7.7nm,0.7s
SATY Lg Lg 05 34 03.5
15nm,0.8s
KURS Kuram 5.25 40 *e*P **Pb 05 33 00.0 +3.2**
7.7nm,0.8s
KURS *e*S **Sg 05 34 10.2 -3.2**
16nm,1.0s
KURS Kuram 5.25 40 Pg **Pb 05 33 00.8 +4.0**
7.7nm,0.8s
KURS Lg Lg 05 34 10.3
16nm,1.0s
UZB Uzynbulak 5.46 47 *e*P **Pb 05 33 04.1 +3.5**
2.7nm,0.5s
UZB *e*S **Sg 05 34 17.4 -3.0**
5.5nm,0.7s
UZB Uzynbulak 5.46 47 Pg **Pg 05 33 05.0 -4.7**
2.7nm,0.5s
UZB Lg Lg 05 34 17.4
5.5nm,0.7s
KPKS Kokpek 5.49 43 *e*P **Pb 05 33 03.2 +2.2**
4.4nm,0.5s
KPKS *e*S **Sg 05 34 15.8 -5.6**
12nm,0.6s
KPKS Kokpek 5.49 43 Pg **Pb 05 33 04.6 +3.6**
4.4nm,0.5s
KPKS Lg Lg 05 34 17.0
12nm,0.6s
BTLS Baital 5.51 4 *e*P **Pb 05 33 05.1 +3.8**
4.2nm,0.6s
BTLS *e*S **Sg 05 34 19.1 -2.8**
8.5nm,0.5s
ARXS Arharly 5.65 33 *e*P **Pb 05 33 07.3 +3.6**
13nm,0.8s
ARXS *e*S **Sg 05 34 22.1 -4.3**
9.5nm,0.6s
ARXS Arharly 5.65 33 Pg **Pb 05 33 07.3 +3.6**
13nm,0.8s
ARXS Lg Lg 05 34 22.0
9.5nm,0.6s
SHLS Shalkode 5.72 49 *e*P **Pg 05 33 13.3 -1.3**
5.7nm,0.6s
SHLS *e*S **Sg 05 34 32.4 +3.7**
10nm,1.1s
SHLS Shalkode 5.72 49 Pg **Pg 05 33 13.3 -1.3**
5.7nm,0.6s
SHLS Lg Lg 05 34 32.4
10nm,1.1s
PDGK Podgornoye 5.85 48 Pg **Pb 05 33 09.4 +2.3**
1.5nm,0.7s
PDGK Lg Lg 05 34 24.8
4.1nm,0.8s
BLB Baldybastay 5.85 37 *e*P **Pb 05 33 10.9 +3.7**
9.0nm,0.7s
BLB *e*S **Sg 05 34 28.3 -4.5**
13nm,0.8s
BLB Baldybastay 5.85 37 Pg **Pb 05 33 10.9 +3.7**
9.0nm,0.7s
BLB Lg Lg 05 34 28.3
13nm,0.8s

KRSC 19 05:35:21.3±0.8, 48°22N×157°77E, h16km±30km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**3.60**	**3**	*e*S	Sn	05 37 02.6	+4.2
RUS	**Russkaya**	**4.24**	**6**	*e*P	Pn	05 36 28.7	+3.5
RUS				*e*S	Sn	05 37 18.9	+4.6
MTVR	**Mutnovka**	**4.28**	**3**	*e*P	Pn	05 36 29.4	+3.7
MTVR				*e*S	Sn	05 37 20.2	+4.9
GRL	**Gorelyy**	**4.34**	**2**	*e*P	Pn	05 36 30.6	+4.0
KOK	**Koryaka**	**5.11**	**6**	*e*P	Pn	05 36 42.1	+5.0
GNL	**Ganaly**	**5.48**	**1**	*e*P	Pn	05 36 46.8	+4.5
MKZ	**Mys Kozlova**	**6.81**	**20**	*e*P	Pn	05 37 05.7	+5.4

*BEO **19** 05:39:12.2±0.8, 45°.84N×27°.69E, h130km±4km, ML3.2/7*
*BUC **19** 05:39:20.0±0.3, 45°.69N×26°.55E, h145km±2km, ml3.8/50, Error ellipse: s-maj=1.9km s-min=1.5km az=165.0*
*SOF **19** 05:39:20.1, 45°.80N×26°.49E, h80km, MD3.1*

ISC 19 05:39:18.2±1.3, 45.72N±0.03×26.53E±0.02, h159km±6km, n145, σ1§05/225, 118C-92D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.16**	**33**	⇓P	**Pn**	**05 39 39.8**	**+0.2**
PLOR				⇑S	**Sn**	**05 39 54.8**	**-1.3**
PLOR	**Plostina**	**0.16**	**33**	⇓P	**Pn**	**05 39 39.8**	**+0.2**
PLOR				⇑S	**Sn**	**05 39 54.8**	**-1.3**
VRI	**Vrincioaia**	**0.21**	**43**	⇓P	**Pn**	**05 39 40.0**	**+0.3**
VRI				⇑S	**Sn**	**05 39 55.0**	**-1.0**
VRI	**Vrincioaia**	**0.21**	**43**	⇓P	**Pn**	**05 39 40.0**	**+0.3**
VRI				⇑S	**Sn**	**05 39 55.0**	**-1.0**
COVR	**Voineasa-Covas**	**0.26**	**300**	⇓P	**Pn**	**05 39 40.0**	**+0.2**
COVR				⇑S	**Sn**	**05 39 55.2**	**-1.1**
COVR	**Voineasa-Covas**	**0.26**	**300**	⇓P	**Pn**	**05 39 40.0**	**+0.2**
COVR				⇑S	**Sn**	**05 39 55.2**	**-1.1**
NEHR	**Nehoiu**	**0.33**	**209**	⇓P	**Pn**	**05 39 40.9**	**+0.9**
NEHR				⇑S	**Sn**	**05 39 56.3**	**-0.4**
NEHR	**Nehoiu**	**0.33**	**209**	⇓P	**Pn**	**05 39 40.9**	**+0.9**
NEHR				⇑S	**Sn**	**05 39 56.3**	**-0.4**
ODBI	**Odobesti**	**0.37**	**83**	⇓P	**Pn**	**05 39 41.4**	**+1.3**
ODBI	**Odobesti**	**0.37**	**83**	⇓P	**Pn**	**05 39 41.4**	**+1.3**
GRER		**0.46**	**137**	⇓P	**Pn**	**05 39 40.9**	**+0.5**
GRER				⇑S	**Sn**	**05 39 57.3**	**-0.1**
GRER		**0.46**	**137**	⇓P	**Pn**	**05 39 40.9**	**+0.5**
GRER				⇑S	**Sn**	**05 39 57.3**	**-0.1**
PANC	**Panciu**	**0.46**	**70**	⇓P	**Pn**	**05 39 41.2**	**+0.8**
PANC				⇑S	**Sn**	**05 39 57.2**	**-0.2**
PANC	**Panciu**	**0.46**	**70**	⇓P	**Pn**	**05 39 41.2**	**+0.8**
PANC				⇑S	**Sn**	**05 39 57.2**	**-0.2**
MLR	**Muntele Rosu**	**0.47**	**241**	⇑P	**Pn**	**05 39 41.2**	**+0.5**
MLR				⇑S	**Sn**	**05 39 57.5**	**-0.2**
MLR	**Muntele Rosu**	**0.47**	**241**	⇑P	**Pn**	**05 39 41.2**	**+0.5**
MLR				⇑S	**Sn**	**05 39 57.5**	**-0.2**
MLR	**Muntele Rosu**	**0.47**	**241**	*e*Pg	**Pn**	**05 39 41.1**	**+0.5**
MLR				*e*Sg	**Sn**	**05 39 52.9**	**-4.8**
ISR	**Istrita**	**0.60**	**179**	⇓P	**Pn**	**05 39 42.1**	**+0.9**
ISR				⇑S	**Sn**	**05 39 58.1**	**-0.6**
ISR	**Istrita**	**0.60**	**179**	⇓P	**Pn**	**05 39 42.1**	**+0.9**
ISR				⇑S	**Sn**	**05 39 58.1**	**-0.6**
OZUR		**0.64**	**307**	⇓P	**Pn**	**05 39 41.6**	**+0.2**
OZUR				⇑S	**Sn**	**05 39 58.2**	**-1.0**
OZUR		**0.64**	**307**	⇓P	**Pn**	**05 39 41.6**	**+0.2**
OZUR				⇑S	**Sn**	**05 39 58.2**	**-1.0**
GHRR		**0.71**	**60**	⇑P	**Pn**	**05 39 42.8**	**+1.1**
GHRR				⇑S	**Sn**	**05 39 59.4**	**-0.4**
GHRR		**0.71**	**60**	⇑P	**Pn**	**05 39 42.8**	**+1.1**
GHRR				⇑S	**Sn**	**05 39 59.4**	**-0.4**
SECR		**0.75**	**206**	⇓P	**Pn**	**05 39 43.2**	**+1.1**
SECR				⇓S	**Sn**	**05 40 00.4**	**+0.1**
SECR		**0.75**	**206**	⇓P	**Pn**	**05 39 43.2**	**+1.1**
SECR				⇓S	**Sn**	**05 40 00.4**	**+0.1**
TESR	**Tescani**	**0.80**	**6**	⇑P	**Pn**	**05 39 42.6**	**+0.3**
TESR				⇑S	**Sn**	**05 39 59.2**	**-1.8**
TESR	**Tescani**	**0.80**	**6**	⇑P	**Pn**	**05 39 42.6**	**+0.3**
TESR				⇑S	**Sn**	**05 39 59.2**	**-1.8**
TUDR		**0.81**	**98**	⇑P	**Pn**	**05 39 43.0**	**+0.6**
TUDR				⇑S	**Sn**	**05 40 00.3**	**-0.6**
TUDR		**0.81**	**98**	⇑P	**Pn**	**05 39 43.0**	**+0.6**
TUDR				⇑S	**Sn**	**05 40 00.3**	**-0.6**
DOPR	**Dopca**	**0.83**	**288**	⇑P	**Pn**	**05 39 43.3**	**+0.7**
DOPR	**Dopca**	**0.83**	**288**	⇑P	**Pn**	**05 39 43.3**	**+0.7**
PGOR	**Pogoanele**	**0.87**	**158**	⇓P	**Pn**	**05 39 44.0**	**+1.1**
PGOR				⇓S	**Sn**	**05 40 02.0**	**+0.3**
PGOR	**Pogoanele**	**0.87**	**158**	⇓P	**Pn**	**05 39 44.0**	**+1.1**
PGOR				⇓S	**Sn**	**05 40 02.0**	**+0.3**
PLAR	**PLOIESTI**	**0.88**	**204**	⇑P	**Pn**	**05 39 44.1**	**+1.2**
PLAR	**PLOIESTI**	**0.88**	**204**	⇑P	**Pn**	**05 39 44.1**	**+1.2**
SLCR	**Slobozia Conac**	**0.88**	**98**	⇑S	**Sn**	**05 40 00.9**	**-0.9**
SLCR	**Slobozia Conac**	**0.88**	**98**	⇑S	**Sn**	**05 40 00.9**	**-0.9**
IZVR	**Izvoarele**	**0.89**	**101**	⇓P	**Pn**	**05 39 43.4**	**+0.5**
IZVR				⇓S	**Sn**	**05 40 00.4**	**-1.5**
IZVR	**Izvoarele**	**0.89**	**101**	⇓P	**Pn**	**05 39 43.4**	**+0.5**
IZVR				⇓S	**Sn**	**05 40 00.4**	**-1.5**
SCHL	**Schela**	**0.94**	**103**	⇑S	**Sn**	**05 40 01.5**	**-1.1**
SCHL	**Schela**	**0.94**	**103**	⇑S	**Sn**	**05 40 01.5**	**-1.1**
VARL	**Varlezi**	**0.94**	**78**	⇓S	**Sn**	**05 40 01.7**	**-0.9**
VARL	**Varlezi**	**0.94**	**78**	⇓S	**Sn**	**05 40 01.7**	**-0.9**
BIR	**Birlad**	**0.94**	**54**	⇓S	**Sn**	**05 40 02.5**	**-0.2**
BIR	**Birlad**	**0.94**	**54**	⇓S	**Sn**	**05 40 02.5**	**-0.2**
SCTR	**Scanteiesti**	**1.03**	**92**	⇑S	**Sn**	**05 40 03.1**	**-0.8**
SCTR	**Scanteiesti**	**1.03**	**92**	⇑S	**Sn**	**05 40 03.1**	**-0.8**
SULR		**1.05**	**191**	⇓P	**Pn**	**05 39 45.3**	**+1.0**
SULR				⇓S	**Sn**	**05 40 04.8**	**+0.6**
SULR		**1.05**	**191**	⇓P	**Pn**	**05 39 45.3**	**+1.0**
SULR				⇓S	**Sn**	**05 40 04.8**	**+0.6**
VOIR		**1.07**	**255**	⇑P	**Pn**	**05 39 45.1**	**+0.6**
VOIR				⇑S	**Sn**	**05 40 04.5**	**-0.3**
VOIR		**1.07**	**255**	⇑P	**Pn**	**05 39 45.1**	**+0.6**
VOIR				⇑S	**Sn**	**05 40 04.5**	**-0.3**
TATR	**Tatarca**	**1.08**	**96**	⇑P	**Pn**	**05 39 45.1**	**+0.7**
TATR				⇑S	**Sn**	**05 40 03.4**	**-1.1**
TATR	**Tatarca**	**1.08**	**96**	⇑P	**Pn**	**05 39 45.1**	**+0.7**
TATR				⇑S	**Sn**	**05 40 03.4**	**-1.1**
VLDR	**Vladesti**	**1.10**	**83**	⇑P	**Pn**	**05 39 45.3**	**+0.7**
VLDR				⇓S	**Sn**	**05 40 03.8**	**-1.1**
VLDR	**Vladesti**	**1.10**	**83**	⇑P	**Pn**	**05 39 45.3**	**+0.7**
VLDR				⇓S	**Sn**	**05 40 03.8**	**-1.1**
GISR	**Galati**	**1.11**	**104**	⇑S	**Sn**	**05 40 04.2**	**-0.8**
GISR	**Galati**	**1.11**	**104**	⇑S	**Sn**	**05 40 04.2**	**-0.8**
MTUR	**Matau**	**1.14**	**245**	⇑P	**Pn**	**05 39 46.1**	**+1.0**
MTUR	**Matau**	**1.14**	**245**	⇑P	**Pn**	**05 39 46.1**	**+1.0**
GIUM	**Giurgiulesti**	**1.20**	**100**	⇓P	**Pn**	**05 39 46.5**	**+1.0**
GIUM				⇓S	**Sn**	**05 40 05.8**	**-0.7**
GIUM	**Giurgiulesti**	**1.20**	**100**	⇓P	**Pn**	**05 39 46.5**	**+1.0**
GIUM				⇓S	**Sn**	**05 40 05.8**	**-0.7**
AMRR	**Amara**	**1.25**	**152**	⇓P	**Pn**	**05 39 46.7**	**+0.8**
AMRR				⇓S	**Sn**	**05 40 06.6**	**-0.7**
AMRR	**Amara**	**1.25**	**152**	⇓P	**Pn**	**05 39 46.7**	**+0.8**
AMRR				⇓S	**Sn**	**05 40 06.6**	**-0.7**
CFR	**Carcaliu**	**1.25**	**115**	⇑P	**Pn**	**05 39 46.3**	**+0.3**
CFR				⇑S	**Sn**	**05 40 06.0**	**-1.3**
CFR	**Carcaliu**	**1.25**	**115**	⇑P	**Pn**	**05 39 46.3**	**+0.3**
CFR				⇑S	**Sn**	**05 40 06.0**	**-1.3**
BIZ	**Bicaz**	**1.26**	**347**	⇓P	**Pn**	**05 39 47.8**	**+1.7**
BIZ				⇓S	**Sn**	**05 40 07.5**	**-0.1**
BIZ	**Bicaz**	**1.26**	**347**	⇓P	**Pn**	**05 39 47.8**	**+1.7**
BIZ				⇓S	**Sn**	**05 40 07.5**	**-0.1**
LEHL	**Lehliu**	**1.26**	**170**	⇓P	**Pn**	**05 39 47.5**	**+1.3**
LEHL				⇓S	**Sn**	**05 40 07.2**	**-0.3**
LEHL	**Lehliu**	**1.26**	**170**	⇓P	**Pn**	**05 39 47.5**	**+1.3**
LEHL				⇓S	**Sn**	**05 40 07.2**	**-0.3**
VASR	**Vaslui**	**1.28**	**43**	⇓P	**Pn**	**05 39 47.2**	**+1.0**
VASR				⇑S	**Sn**	**05 40 07.2**	**-0.6**
VASR	**Vaslui**	**1.28**	**43**	⇓P	**Pn**	**05 39 47.2**	**+1.0**
VASR				⇑S	**Sn**	**05 40 07.2**	**-0.6**
INCR	**INCERC-Sediu C**	**1.30**	**192**	⇑S	**Sn**	**05 40 07.6**	**-0.6**
INCR	**INCERC-Sediu C**	**1.30**	**192**	⇑S	**Sn**	**05 40 07.6**	**-0.6**
ARR	**Arges**	**1.38**	**256**	⇓P	**Pn**	**05 39 48.6**	**+1.3**
ARR				⇓S	**Sn**	**05 40 10.1**	**+0.5**
ARR	**Arges**	**1.38**	**256**	⇓P	**Pn**	**05 39 48.6**	**+1.3**
ARR				⇓S	**Sn**	**05 40 10.1**	**+0.5**
STFAR	**Stefanesti-Arg**	**1.40**	**233**	⇑S	**Sn**	**05 40 10.5**	**+0.6**
STFAR	**Stefanesti-Arg**	**1.40**	**233**	⇑S	**Sn**	**05 40 10.5**	**+0.6**
BUC1	**Bucharest**	**1.41**	**195**	⇑P	**Pn**	**05 39 47.4**	**-0.2**
BUC1				⇑S	**Sn**	**05 40 09.3**	**-0.8**
BUC1	**Bucharest**	**1.41**	**195**	⇑P	**Pn**	**05 39 47.4**	**-0.2**
BUC1				⇑S	**Sn**	**05 40 09.3**	**-0.8**
LEOM	**Leova**	**1.42**	**57**	⇓P	**Pn**	**05 39 48.9**	**+1.3**
LEOM				⇓S	**Sn**	**05 40 09.7**	**-0.5**
LEOM	**Leova**	**1.42**	**57**	⇓P	**Pn**	**05 39 48.9**	**+1.3**
LEOM				⇓S	**Sn**	**05 40 09.7**	**-0.5**
HARR	**Harsova**	**1.43**	**135**	⇓P	**Pn**	**05 39 48.3**	**+0.6**
HARR	**Harsova**	**1.43**	**135**	⇓P	**Pn**	**05 39 48.3**	**+0.6**
SGRR	**Singureni**	**1.54**	**195**	⇓S	**Sn**	**05 40 12.2**	**-0.3**
SGRR	**Singureni**	**1.54**	**195**	⇓S	**Sn**	**05 40 12.2**	**-0.3**
RASA	**Rasa**	**1.57**	**163**	⇑P	**Pn**	**05 39 49.8**	**+0.6**
RASA	**Rasa**	**1.57**	**163**	⇑P	**Pn**	**05 39 49.8**	**+0.6**
TPGR	**Topolog**	**1.59**	**122**	⇑P	**Pn**	**05 39 49.8**	**+0.4**
TPGR				⇑S	**Sn**	**05 40 12.1**	**-1.2**
TPGR	**Topolog**	**1.59**	**122**	⇑P	**Pn**	**05 39 49.8**	**+0.4**
TPGR				⇑S	**Sn**	**05 40 12.1**	**-1.2**
TLBR	**Topalu**	**1.59**	**137**	⇓P	**Pn**	**05 39 50.1**	**+0.7**
TLBR	**Topalu**	**1.59**	**137**	⇓P	**Pn**	**05 39 50.1**	**+0.7**
HUMR	**Humele**	**1.61**	**223**	⇑P	**Pn**	**05 39 50.5**	**+0.8**
HUMR				⇑S	**Sn**	**05 40 13.3**	**-0.5**
HUMR	**Humele**	**1.61**	**223**	⇑P	**Pn**	**05 39 50.5**	**+0.8**
HUMR				⇑S	**Sn**	**05 40 13.3**	**-0.5**
TLCR		**1.70**	**107**	⇑P	**Pn**	**05 39 51.4**	**+0.9**
TLCR				⇓S	**Sn**	**05 40 14.7**	**-0.6**
TLCR		**1.70**	**107**	⇑P	**Pn**	**05 39 51.4**	**+0.9**
TLCR				⇓S	**Sn**	**05 40 14.7**	**-0.6**
CVDA	**Cernavoda**	**1.75**	**142**	⇓P	**Pn**	**05 39 51.9**	**+0.8**
CVDA	**Cernavoda**	**1.75**	**142**	⇓P	**Pn**	**05 39 51.9**	**+0.8**
COPA	**Copaceanca**	**1.83**	**211**	⇓P	**Pn**	**05 39 52.8**	**+0.8**
COPA				⇓S	**Sn**	**05 40 17.1**	**-0.9**
COPA	**Copaceanca**	**1.83**	**211**	⇓P	**Pn**	**05 39 52.8**	**+0.8**
COPA				⇓S	**Sn**	**05 40 17.1**	**-0.9**
TIRR	**Tirgusor**	**1.84**	**133**	⇑P	**Pn**	**05 39 52.6**	**+0.6**
TIRR				⇑S	**Sn**	**05 40 16.5**	**-1.5**
TIRR	**Tirgusor**	**1.84**	**133**	⇑P	**Pn**	**05 39 52.6**	**+0.6**
TIRR				⇑S	**Sn**	**05 40 16.5**	**-1.5**
ICOR	**Ion Corvin**	**1.84**	**150**	⇑P	**Pn**	**05 39 53.0**	**+1.0**
ICOR				⇑S	**Sn**	**05 40 18.2**	**+0.1**
ICOR	**Ion Corvin**	**1.84**	**150**	⇑P	**Pn**	**05 39 53.0**	**+1.0**
ICOR				⇑S	**Sn**	**05 40 18.2**	**+0.1**
LOT	**Lotru**	**1.95**	**263**	⇑P	**Pn**	**05 39 55.0**	**+1.6**
LOT				⇓S	**Sn**	**05 40 21.6**	**+1.0**
LOT	**Lotru**	**1.95**	**263**	⇑P	**Pn**	**05 39 55.0**	**+1.6**
LOT				⇓S	**Sn**	**05 40 21.6**	**+1.0**
MILM	**Milestii Mici**	**1.99**	**52**	⇑P	**Pn**	**05 39 54.9**	**+1.2**
MILM	**Milestii Mici**	**1.99**	**52**	⇑P	**Pn**	**05 39 54.9**	**+1.2**
MFTR	**Murfatlar**	**2.04**	**138**	⇑P	**Pn**	**05 39 54.6**	**+0.2**
MFTR	**Murfatlar**	**2.04**	**138**	⇑P	**Pn**	**05 39 54.6**	**+0.2**
RAZG	**Razgrad**	**2.15**	**180**	⇑P	**Pn**	**05 39 56.4**	**+0.7**
RAZG				⇑S	**Sn**	**05 40 23.0**	**-1.5**
RAZG	**Razgrad**	**2.15**	**180**	⇑P	**Pn**	**05 39 56.4**	**+0.7**
RAZG				⇑S	**Sn**	**05 40 23.0**	**-1.5**
ZIMR		**2.22**	**202**	⇑S	**Sn**	**05 40 24.7**	**-1.1**
ZIMR		**2.22**	**202**	⇑S	**Sn**	**05 40 24.7**	**-1.1**
VLAD	**Vladila**	**2.29**	**222**	⇓P	**Pn**	**05 39 58.1**	**+0.9**
VLAD	**Vladila**	**2.29**	**222**	⇓P	**Pn**	**05 39 58.1**	**+0.9**
TSSL	**Sulina**	**2.32**	**103**	⇓P	**Pn**	**05 39 58.8**	**+1.2**
TSSL				⇑S	**Sn**	**05 40 28.2**	**+0.2**
TSSL	**Sulina**	**2.32**	**103**	⇓P	**Pn**	**05 39 58.8**	**+1.2**
TSSL				⇑S	**Sn**	**05 40 28.2**	**+0.2**
PSN	**Preselentsi**	**2.35**	**149**	P	**Pn**	**05 39 59.1**	**+1.1**
MANR	**Mangalia**	**2.40**	**142**	⇑P	**Pn**	**05 39 59.3**	**+0.7**
MANR	**Mangalia**	**2.40**	**142**	⇑P	**Pn**	**05 39 59.3**	**+0.7**
SZH	**Strazhica**	**2.48**	**190**	P	**Pn**	**05 40 00.1**	**+0.5**
PRD	**Provadia**	**2.59**	**166**	P	**Pn**	**05 40 02.6**	**+1.7**
GZR	**Gura Zlata**	**2.65**	**264**	⇑P	**Pn**	**05 40 03.5**	**+1.8**
GZR				⇓S	**Sn**	**05 40 35.7**	**+0.4**
GZR	**Gura Zlata**	**2.65**	**264**	⇑P	**Pn**	**05 40 03.5**	**+1.8**
GZR				⇓S	**Sn**	**05 40 35.7**	**+0.4**
GZR	**Gura Zlata**	**2.65**	**264**	*e*Pn	**Pn**	**05 40 02.2**	**+0.5**
GZR				*e*Sn	**Sn**	**05 40 30.1**	**-5.2**
SORM	**Soroca**	**2.72**	**27**	⇓P	**Pn**	**05 40 02.5**	**+0.1**
SORM	**Soroca**	**2.72**	**27**	⇓P	**Pn**	**05 40 02.5**	**+0.1**
DRGR		**2.86**	**293**	⇓P	**Pn**	**05 40 04.9**	**+0.8**
DRGR		**2.86**	**293**	⇓P	**Pn**	**05 40 04.9**	**+0.8**
DRGR		**2.86**	**293**	*e*Pn	**Pn**	**05 40 02.7**	**-1.5**
HERR	**Herculane**	**3.02**	**255**	⇑P	**Pn**	**05 40 06.9**	**+0.8**
HERR	**Herculane**	**3.02**	**255**	⇑P	**Pn**	**05 40 06.9**	**+0.8**
BLKB	**Belogradchik**	**3.45**	**234**	⇑P	**Pn**	**05 40 11.9**	**+0.2**
BLKB	**Belogradchik**	**3.45**	**234**	⇑P	**Pn**	**05 40 11.9**	**+0.2**
MDVR	**Moldovita**	**3.52**	**256**	⇓P	**Pn**	**05 40 14.1**	**+1.5**
MDVR				⇑S	**Sn**	**05 40 55.6**	**+0.8**
MDVR	**Moldovita**	**3.52**	**256**	⇓P	**Pn**	**05 40 14.1**	**+1.5**
MDVR				⇑S	**Sn**	**05 40 55.6**	**+0.8**
ZAGS	**Zajecar**	**3.60**	**240**	*e*Pn	**Pn**	**05 40 13.3**	**-0.2**
ZAGS				*e*Sn	Sn	05 40 49.9	-6.6
KUBS	**Kucevo**	**3.68**	**251**	*e*Pn	**Pn**	**05 40 14.7**	**+0.2**
KUBS				*e*Sn	**Sn**	**05 40 52.9**	**-5.3**
ZAPS	**Zavoj**	**3.70**	**230**	*e*Pn	**Pn**	**05 40 15.5**	**+0.6**
ZAPS				*e*Sn	Sn	05 40 51.6	-7.3
BOVS	**Bovan**	**4.02**	**241**	⇑P	**Pn**	**05 40 19.3**	**+0.4**
BOVS	**Bovan**	**4.02**	**241**	⇑P	**Pn**	**05 40 19.3**	**+0.4**
BOVS	**Bovan**	**4.02**	**241**	*e*Pn	**Pn**	**05 40 19.3**	**+0.4**
BOVS				*e*Sn	Sn	05 41 00.1	-6.0
BOSS	**Bosilegrad**	**4.34**	**224**	*e*Pn	**Pn**	**05 40 22.3**	**-0.8**
BOSS				*e*Sn	Sn	05 41 06.1	-7.6
BBLS	**Lazići**	**5.39**	**252**	*e*Pn	**Pn**	**05 40 37.4**	**+0.4**
NACGM	**Naroch** baz=184	**9.20**	**1**	*i* P	Pn	05 41 20.5	-6.8

*NEIC **19** 05:45:37.4±1.6, 22°.6S±0°.1×173°.22E±0°.07, h10km±1km, mb4.5/11, Error ellipse: s-maj=22.4km s-min=3.2km az=332.0*
*IDC **19** 05:45:41.8±5.3, 22°.49S×172°.99E,

MCQ	**Macquarie Isla**	**33.69**	**195**	P	**P**	**05 52 18.2**	**+0.2**
WR0	**Warramunga Arr**	**36.00**	**267**	P	**P**	**05 52 37.9**	**-0.6**
WR0				IAmb	IAmb	05 52 58.6	
	comp=Z,8.2nm,1.3s						
ASAR	**Alice Springs**	**36.03**	**260**	P	**P**	**05 52 36.5**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=80,slow=8.8,SNR=12						
	comp=Z,1.2nm,0.7s						
WB2	**Warramunga Arr**	**36.18**	**267**	P	**P**	**05 52 39.3**	**-0.7**
WB2				IAmb	IAmb	05 53 01.6	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**36.19**	**267**	P	**P**	**05 52 37.1**	**-3.0**
	comp=Z,0.6nm,0.5s,baz=97,slow=8.5,SNR=19						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**36.19**	**267**	P	**P**	**05 52 39.1**	**-1.0**
KNRA	**Kununurra**	**42.36**	**271**	P	**P**	**05 53 31.5**	**-0.1**
KNRA				IAmb	IAmb	05 53 37.8	
	comp=Z,23nm,1.4s						
FITZ	**Fitzroy Crossi**	**44.62**	**267**	P	**P**	**05 53 49.3**	**-0.5**
FITZ				IAmb	IAmb	05 53 58.7	
	comp=Z,5.6nm,1.1s						
VNDA	**Vanda**	**55.34**	**183**	LR	LR	06 15 16.6	
	comp=Z,39nm,20.4s,baz=344,slow=32						
SBA	**Scott Base**	**55.49**	**182**	P	**P**	**05 55 12.7**	**+1.3**
SBA				IAmb	IAmb	05 55 13.9	
	comp=Z,7.5nm,1.2s						
QSPA	**South Pole Qui**	**67.57**	**180**	P	**P**	**05 56 34.3**	**+1.0**
QSPA				IAmb	IAmb	05 56 40.1	
	comp=Z,2.9nm,1.0s						
PMSA	**Palmer Station**	**82.58**	**159**	P	**P**	**05 57 59.6**	**0.0**
MA2	**Magadan**	**83.82**	**349**	LR	LR	06 36 29.4	
	comp=Z,12nm,18.5s,baz=264,slow=36						
TROLL	**Troll, Antarti**	**85.51**	**183**	P	**P**	**05 58 13.7**	**-1.0**
SNAA	**Sanae**	**86.03**	**181**	P	**P**	**05 58 15.8**	**-1.4**
VNA3	**Neumayer Olymp**	**86.48**	**179**	P	**P**	**05 58 18.0**	**-1.4**
VNA2	**Neumayer--Watz**	**86.82**	**180**	P	**P**	**05 58 20.0**	**-1.0**
	baz=179,slow=3.0						
ILAR	**Eielson Array**	**92.30**	**16**	P	**P**	**05 58 45.5**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=241,slow=5.0,SNR=4.5						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**129.12**	**346**	PKP	**PKPdf**	**06 04 43.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=90,slow=0.4,SNR=4.8						

UPA ***19*** *05:46:59.7±0.9,9.°43N×84.°12W, h20km±35km, MW3.4*
INET ***19*** *05:47:02.9±1.2,9.°56N×83.°86W, h26km±5km, MW2.7*
ISC 19 05:47:02.7±1.0,**9.°51N**±0.°05×**83.°97W**±0.°04,**h30**km±5km,
n17,σ1§44/33,1D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CDM	**Cerro de Muert**	**0.21**	**78**	*eP*		**Pb**	**05 47 09.2**	**-0.2**
CDM				*eP*		**Pb**	**05 47 09.2**	**-0.2**
CDM				*eS*		**Sb**	**05 47 13.7**	**-0.3**
CDM				*eS*		**Sn**	**05 47 14.9**	**+0.9**
RIMA	**Rio Macho**	**0.28**	**22**	*eP*		**Pb**	**05 47 09.7**	**-0.3**
RIMA				*eS*		**Sb**	**05 47 15.6**	**+0.7**
PEZE	**Perez Zeledon,**	**0.31**	**114**	*eP*		**Pb**	**05 47 09.9**	**-0.4**
PEZE				*eS*		**Sb**	**05 47 16.1**	**+0.6**
HDC3	**Heredia 3**	**0.51**	**344**	*eP*		**Pb**	**05 47 13.3**	**-0.1**
HDC3				*eS*		**Sn**	**05 47 21.9**	**0.0**
BATAN	**Batan**	**0.83**	**45**	*⇓iP*		**Pn**	**05 47 17.4**	**-0.9**
BATAN				*eS*		**Sb**	**05 47 30.4**	**+1.1**
LAFE	**Finca La Fe, P**	**0.97**	**288**	*eP*		**Pb**	**05 47 20.5**	**-0.5**
LAFE				*eS*		**Sn**	**05 47 35.9**	**+2.7**
JTS	**Las Juntas de**	**1.24**	**309**	*eP*		**Pb**	**05 47 24.9**	**-0.6**
CDITO	**Canoas**	**1.43**	**131**	*eP*		**Pn**	**05 47 24.4**	**-2.2**
CDITO				*eS*		**Sn**	**05 47 41.7**	**-2.7**
BRU2	**Volcan**	**1.45**	**119**	*eP*		**Pn**	**05 47 25.6**	**-1.3**
BRU2				*eS*		**Sn**	**05 47 45.8**	**+0.7**
CNI2	**El Empalme, Bo**	**1.48**	**93**	*eP*		**Pn**	**05 47 25.7**	**-1.6**
CNI2				*eS*		**Sn**	**05 47 44.6**	**-1.1**
BC3P	**Paso Ancho**	**1.51**	**117**	*eP*		**Pb**	**05 47 31.9**	**+1.7**
BC3P				*eS*		**Sb**	**05 47 53.3**	**+4.3**
DUNO	**Dulce Nombre,**	**1.61**	**291**	*eP*		**Pn**	**05 47 28.6**	**-0.4**
BCO2	**Palmira**	**1.62**	**119**	*eP*		**Pn**	**05 47 28.1**	**-1.4**
BCO2				*eS*		**Sn**	**05 47 50.1**	**+0.6**
LNBQ3	**Los Naranjos,**	**1.67**	**115**	*eP*		**Pn**	**05 47 29.0**	**-1.0**
LNBQ3				*eS*		**Sn**	**05 47 50.8**	**+0.3**
DVD	**David**	**1.84**	**125**	*eS*		**Sn**	**05 47 53.9**	**-0.7**
CHGR2	**Aguacate**	**1.89**	**107**	*eP*		**Pn**	**05 47 32.5**	**-0.4**
CHGR2				*eS*		**Sn**	**05 47 57.5**	**+1.7**
CHIR3	**Chiriqui UPA,**	**1.96**	**124**	*eP*		**Pn**	**05 47 32.7**	**-1.2**
CHIR3				*eS*		**Sb**	**05 48 01.8**	**0.0**

FUNV ***19*** *05:48:04.5,8.°53N×70.°71W, h5km, MW4.0*
ISC 19 05:48:03.0±1.2,**8.°56N**±0.°03×**70.°65W**±0.°03,**h5**km±10km,
n48,σ1§27/68,Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SOCV	**Socops**	**0.34**	**216**	*eP*		**Pg**	**05 48 09.1**	**-0.5**
SOCV				*eS*		**Sg**	**05 48 13.9**	**-0.2**
SOCV	**Socops**	**0.34**	**216**	*eP*		**Pg**	**05 48 09.2**	**-0.5**
SOCV				*eS*		**Sg**	**05 48 13.8**	**-0.3**
CURV	**Curarigua**	**1.60**	**25**	*eP*		**Pn**	**05 48 34.3**	**+1.3**
CURV				*eS*		**Sg**	**05 48 55.3**	**+0.9**
CAPV	**Capacho**	**1.78**	**247**	*eP*		**Pn**	**05 48 34.4**	**-0.3**
CAPV				*eS*		**Sn**	**05 48 57.9**	**0.0**
SIQV	**Siquisique**	**2.24**	**22**	*eP*		**Pn**	**05 48 42.4**	**+1.6**
SIQV				*eS*		**Sb**	**05 49 10.6**	**-1.4**
DABV	**Dabajuro**	**2.35**	**0**	*eP*		**Pn**	**05 48 42.9**	**+0.6**
DABV	**Dabajuro**	**2.35**	**0**	*eP*		**Pn**	**05 48 43.1**	**+0.8**
DABV				*eS*		**Sn**	**05 49 12.3**	**+0.8**
PAMC	**Pamplona, Colo**	**2.36**	**239**	*eP*		**Pn**	**05 48 45.0**	**+2.1**
MCQV	**Machiques**	**2.38**	**309**	*eP*		**Pn**	**05 48 42.5**	**-0.2**
MCQV				*eS*		**Sn**	**05 49 10.5**	**-1.7**
TAMC	**Tame, Arauca**	**2.39**	**208**	*eP*		**Pn**	**05 48 44.5**	**+1.6**
MAPV	**Macapo**	**2.51**	**60**	*eP*		**Pn**	**05 48 45.8**	**+1.4**
MAPV				*eS*		**Sn**	**05 49 16.5**	**+1.0**
BAUV	**El Baul**	**2.61**	**81**	*eP*		**Pn**	**05 48 46.3**	**+0.4**
BAUV				*eS*		**Sn**	**05 49 18.2**	**+0.3**
LLSC	**La Loma 6 Bece**	**2.84**	**295**	*eP*		**Pn**	**05 48 49.1**	**+0.1**
JACV	**Jacura**	**3.09**	**35**	*eP*		**Pn**	**05 48 53.7**	**+1.2**
JACV				*eS*		**Sn**	**05 49 30.6**	**+0.8**
BARC	**Barichara**	**3.18**	**232**	*eP*		**Pn**	**05 48 55.8**	**+1.9**
CRJC	**Cerrejon, Guaj**	**3.29**	**318**	*eP*		**Pn**	**05 48 54.8**	**-0.4**
BENV	**Beln**	**3.32**	**65**	*eP*		**Pn**	**05 48 56.5**	**+0.9**
BENV				*eS*		**Sn**	**05 49 35.8**	**+0.2**
TURV	**Turiamo**	**3.35**	**56**	*eP*		**Pn**	**05 48 57.2**	**+1.2**
TURV				*eS*		**Sn**	**05 49 37.2**	**+1.0**
BRRC	**Barranca, Sant**	**3.36**	**245**	*eP*		**Pn**	**05 48 57.7**	**+1.6**
URIC	**Uribia, Colomb**	**3.39**	**337**	*eP*		**Pn**	**05 48 56.1**	**-0.5**
RUSC	**La Rusia**	**3.58**	**222**	*eP*		**Pn**	**05 49 00.9**	**+1.2**
ARGC	**Ariguani, Magd**	**3.78**	**290**	*eP*		**Pn**	**05 49 03.0**	**+1.1**
CARV	**Caracas**	**4.15**	**62**	*eP*		**Pn**	**05 49 08.2**	**+1.0**
CARV				*eS*		**Sn**	**05 49 55.4**	**-0.7**
CACV	**CAICARA DEL OR**	**4.19**	**103**	*eP*		**Pb**	**05 49 16.1**	**-1.1**
CACV				*eS*		**Sb**	**05 50 09.2**	**+1.0**
FUNV	**FUNVISIS**	**4.24**	**63**	*eP*		**Pn**	**05 49 09.3**	**+1.0**
FUNV				*eS*		**Sn**	**05 49 56.7**	**-1.6**
PTBC	**PUERTO BERRIO,**	**4.27**	**242**	*eP*		**Pn**	**05 49 08.4**	**-0.4**
ZARC	**Zaragoza, Cauc**	**4.30**	**256**	*eP*		**Pn**	**05 49 09.2**	**+0.1**
MERV	**Las Mercedes**	**4.36**	**81**	*eP*		**Pn**	**05 49 10.4**	**+0.5**
MERV				*eS*		**Sn**	**05 49 59.0**	**-2.1**
SMRC	**Santa Marta, M**	**4.37**	**307**	*eP*		**Pn**	**05 49 08.9**	**-1.2**
SPBC	**San Pablo de B**	**4.46**	**230**	*eP*		**Pn**	**05 49 12.5**	**+1.2**
PTGC	**Puerto Gaitan,**	**4.58**	**199**	*eP*		**Pn**	**05 49 13.5**	**+0.6**
SJCC	**San Jacinto, C**	**4.66**	**287**	*eP*		**Pn**	**05 49 14.5**	**+0.3**
BIRV	**Birongo**	**4.72**	**66**	*eP*		**Pn**	**05 49 15.8**	**+0.9**
BIRV				*eS*		**Sn**	**05 50 08.6**	**-1.6**
UREC	**San Jos de Ur**	**4.90**	**261**	*eP*		**Pn**	**05 49 17.8**	**+0.4**
CHIC	**Chingaza**	**4.96**	**218**	*eP*		**Pn**	**05 49 19.2**	**+0.6**
CHIC				*eS*		**Sn**	**05 50 15.2**	**-1.3**
NORC	**Norcasia**	**5.14**	**235**	*eP*		**Pn**	**05 49 21.1**	**+0.4**
ROSC	**El Rosal**	**5.19**	**225**	*eP*		**Pn**	**05 49 25.2**	**+3.5**
VILC	**Villavicencio,**	**5.35**	**215**	*eP*		**Pn**	**05 49 24.0**	**+0.2**
HELC	**Santa Helena**	**5.38**	**244**	*eP*		**Pn**	**05 49 26.0**	**+1.8**
GUY2C	**Guyana, Caldas**	**5.73**	**235**	*eP*		**Pn**	**05 49 31.0**	**+1.8**
PRGV	**PARIAGUAN**	**5.94**	**88**	*eP*		**Pn**	**05 49 31.7**	**0.0**
PRGV				*eS*		**Sn**	**05 50 37.5**	**-2.8**
CBOC	**Ciudad Bolivar**	**5.95**	**244**	*eP*		**Pn**	**05 49 34.2**	**+2.2**
PCRV	**Puerto La Cruz**	**6.15**	**74**	*eP*		**Pn**	**05 49 35.4**	**+0.8**
PCRV				*eS*		**Sn**	**05 50 43.3**	**-2.1**
ANIL	**Santa Ana**	**6.21**	**230**	*eP*		**Pn**	**05 49 38.3**	**+2.6**
GUVC	**San Jose del G**	**6.29**	**198**	*eP*		**Pn**	**05 49 36.0**	**-0.5**
PRAC	**Prado**	**6.39**	**221**	*eP*		**Pn**	**05 49 39.0**	**+1.0**
PLMC	**San Jos del P**	**6.67**	**237**	*eP*		**Pn**	**05 49 42.8**	**+1.0**
YOTC	**Yotoco, Valle**	**7.26**	**232**	*eP*		**Pn**	**05 49 50.4**	**+0.4**

NEIC ***19*** *05:59:23.9±2.4,20.°60S±0.°04×68.°90W±0.°07, h110km±7km, mb4.7/27, Mwr4.7(GUC), Error ellipse: s-maj=10.0km s-min=3.9km az=111.0*
VAO ***19*** *05:59:23.7±0.3,20.°53S×68.°79W, h110km, mb5.0*
IDC ***19*** *05:59:24.6±0.5,20.°57S×68.°69W, h111km±4km, mb4.0/13, mbtmp4.4/16,MS3.2/3, Error ellipse: s-maj=13.6km s-min=7.6km az=97.0*
GUC ***19*** *05:59:24.7±0.7,20.°59S×68.°92W, h110km±4km, ML4.6*
ISC 19 05:59:23.5±0.4,**20.°57S**±0.°03×**68.°87W**±0.°05,**h109**km±4km,
n190,σ1§14/202,mb4.6/24,11C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB01	**IPOC Station P**	**0.75**	**231**			**Pn**	**05 59 42.6**	**+0.3**
PB01	**IPOC Station P**	**0.75**	**231**	*⇑iP*		**Pn**	**05 59 42.7**	**+0.3**
PB01				*eS*		**Sn**	**05 59 56.5**	**0.0**
PB01				IAML			05 59 58.1	
	comp=N,40μm,0.2s							
GO01	**Chusmiza**	**0.94**	**341**	Pn		**Pn**	**05 59 45.6**	**+0.9**
GO01	**Chusmiza**	**0.94**	**341**	*⇑iP*		**Pn**	**05 59 45.6**	**+0.9**
GO01				*i S*		**Sn**	**06 00 01.5**	**+1.1**
PB02	**IPOC Station P**	**1.22**	**232**			**Pn**	**05 59 47.0**	**-0.1**
PB02	**IPOC Station P**	**1.22**	**232**	*⇑iP*		**Pn**	**05 59 47.3**	**+0.2**
PB02				*eS*		**Sn**	**06 00 04.5**	**-0.5**
PB02				IAML			06 00 05.6	
	comp=N,21μm,0.3s							
TA02	**Huaiquique**	**1.22**	**284**			**Pn**	**05 59 47.0**	**0.0**
TA02	**Huaiquique**	**1.22**	**284**	*⇑iP*		**Pn**	**05 59 47.2**	**+0.2**
TA02				*eS*		**Sn**	**06 00 04.8**	**+0.1**
TA01	**Diego Aracena**	**1.23**	**270**	Pn		**Pn**	**05 59 47.0**	**-0.2**
TA01	**Diego Aracena**	**1.23**	**270**	*⇑iP*		**Pn**	**05 59 46.9**	**-0.2**
TA01				*eS*		**Sn**	**06 00 04.0**	**-0.9**
PB09	**IPOC Station P**	**1.27**	**196**			**Pn**	**05 59 49.0**	**+1.2**
PB09	**IPOC Station P**	**1.27**	**196**	*i P*		**Pn**	**05 59 48.7**	**+0.9**
PB09				*eS*		**Sn**	**06 00 06.9**	**+0.7**
PB09				IAML			06 00 10.1	
	comp=N,9μm,0.4s							
PB07	**IPOC Station P**	**1.50**	**219**			**Pn**	**05 59 50.4**	**0.0**
PB07	**IPOC Station P**	**1.50**	**219**	*⇑iP*		**Pn**	**05 59 50.5**	**+0.1**
PB07				*eS*		**Sn**	**06 00 10.0**	**-0.8**
PB07				IAML			06 00 12.5	
	comp=N,8μm,0.2s							
LVC	**Limon Verde**	**2.03**	**181**	P		**Pn**	**05 59 58.6**	**+1.3**
	comp=N,236nm,0.4s,baz=35,slow=11,SNR=246							
LVC				S		**Sn**	**06 00 24.4**	**+1.3**
	comp=N,508nm,0.4s,baz=338,slow=17,SNR=11							
LVC	**Limon Verde**	**2.03**	**181**	Pn		**Pn**	**05 59 58.1**	**+0.9**
LVC	**Limon Verde**	**2.03**	**181**	*i P*		**Pn**	**05 59 58.6**	**+1.3**
LVC				*eS*		**Sn**	**06 00 24.2**	**+1.2**
LVC	**Limon Verde**	**2.03**	**181**	*eP*		**Pn**	**05 59 57.5**	**+0.2**
PB04	**IPOC Station P**	**2.13**	**214**			**Pn**	**05 59 58.6**	**+0.4**
PB04	**IPOC Station P**	**2.13**	**214**	*eP*		**Pn**	**05 59 58.0**	**-0.2**
PB04				*eS*		**Sn**	**06 00 22.8**	**-2.0**
PB04				IAML			06 00 30.8	
	comp=E,3μm,0.3s							
PB06	**IPOC Station P**	**2.23**	**197**			**Pn**	**06 00 00.0**	**+0.4**
PB06	**IPOC Station P**	**2.23**	**197**	*eP*		**Pn**	**05 59 59.9**	**+0.3**
PB06				*eS*		**Sn**	**06 00 26.6**	**-0.5**
PB06				IAML			06 00 28.1	
	comp=E,3μm,0.5s							
PB16	**IPOC Station P**	**2.30**	**345**			**Pn**	**06 00 02.3**	**+1.4**
PB16	**IPOC Station P**	**2.30**	**345**	*⇑iP*		**Pn**	**06 00 02.5**	**+1.6**
PB16				*eS*		**Sn**	**06 00 31.1**	**+1.7**
PB12	**IPOC Station P**	**2.38**	**324**	Pn		**Pn**	**06 00 01.0**	**-0.5**
PB12	**IPOC Station P**	**2.38**	**324**	*⇑iP*		**Pn**	**06 00 01.0**	**-0.5**
PB12				*eS*		**Sn**	**06 00 30.7**	**+0.2**
PB12				IAML			06 00 37.0	
	comp=E,5μm,0.5s							
AF01	**San Pedro de A**	**2.46**	**165**			**Pn**	**06 00 04.7**	**+2.0**
AF01	**San Pedro de A**	**2.46**	**165**	*i P*		**Pn**	**06 00 04.8**	**+2.1**
AP01	**Chacalluta**	**2.59**	**327**			**Pn**	**06 00 03.6**	**-0.5**
AP01	**Chacalluta**	**2.59**	**327**	*eP*		**Pn**	**06 00 03.9**	**-0.2**
PB15	**IPOC Station P**	**2.69**	**192**			**Pn**	**06 00 06.0**	**+0.4**
PB15	**IPOC Station P**	**2.69**	**192**	*eP*		**Pn**	**06 00 05.8**	**+0.2**
PB18	**Visviri**	**3.02**	**349**			**Pn**	**06 00 12.8**	**+2.6**
PB14	**IPOC Station P**	**4.28**	**199**	Pn		**Pn**	**06 00 25.1**	**-1.9**
LPAZ	**La Paz**	**4.31**	**9**	P		**Pn**	**06 00 30.6**	**+2.9**
	comp=E,24nm,0.4s,baz=173,slow=5.7,SNR=245							
LPAZ	**La Paz**	**4.31**	**9**	Pn		**Pn**	**06 00 30.0**	**+2.3**
GO02	**Mina Guanaco**	**4.62**	**188**	Pn		**Pn**	**06 00 30.8**	**-0.8**
GO02	**Mina Guanaco**	**4.62**	**188**	*eP*		**Pn**	**06 00 30.7**	**-0.8**
AC01	**Pan de Azucar**	**5.78**	**196**	Pn		**Pn**	**06 00 43.7**	**-3.2**
AC02	**Maricunga**	**6.25**	**182**	Pn		**Pn**	**06 00 52.8**	**-0.9**
AC06	**Mina Casimiro**	**6.90**	**191**			**Pn**	**06 00 58.6**	**-3.4**
GO03	**Copiap**	**7.11**	**190**			**Pn**	**06 01 02.4**	**-2.6**
AC05	**El Transito**	**8.33**	**189**			**Pn**	**06 01 18.3**	**-3.4**
SIV	**San Ignacio**	**8.69**	**180**	P		**Pn**	**06 01 24.8**	**-1.7**
	comp=E,33nm,0.5s,baz=248,slow=11,SNR=96							
SIV				S		**Sn**	**06 02 59.8**	**-3.0**
	comp=E,8.2nm,0.7s,baz=320,slow=22,SNR=7.7							
PTLB	**Pontes e Lacer**	**10.56**	**63**			**Pn**	**06 01 50.3**	**-1.6**
PTLB	**Pontes e Lacer**	**10.56**	**63**	*eP*		**Pn**	**06 01 49.7**	**-2.1**
ETMB	**Extrema**	**10.99**	**14**			**Pn**	**06 01 55.6**	**-2.0**
ETMB	**Extrema**	**10.99**	**14**	*eP*		**Pn**	**06 01 55.7**	**-1.9**
VILB	**Vilhena**	**11.23**	**49**			**Pn**	**06 02 00.4**	**-0.5**
VILB	**Vilhena**	**11.23**	**49**	*eP*		**Pn**	**06 01 59.8**	**-1.1**
NNA	**Nana**	**11.46**	**317**	LR		LR	06 05 58.1	
	comp=E,55nm,18.4s,baz=182,slow=34							
CPUP	**Villa Florida**	**12.04**	**121**	P		**Pn**	**06 02 10.0**	**-1.6**
	comp=E,16nm,0.7s,baz=304,slow=12,SNR=44							
CPUP				LR		LR	06 06 48.5	
	comp=E,101nm,20.5s,baz=247,slow=37							
CPUP	**Villa Florida**	**12.04**	**121**			**Pn**	**06 02 10.1**	**-1.4**
CPUP	**Villa Florida**	**12.04**	**121**	*eP*		**Pn**	**06 02 10.3**	**-1.2**
ANTJ	**Antonio Joao (**	**12.08**	**99**	*eP*		**Pn**	**06 02 11.0**	**-1.2**
LMEL	**Las Melosas**	**13.28**	**185**			**Pn**	**06 02 28.2**	**+0.3**
CZSB	**Cruzeiro do Su**	**13.29**	**343**	*eP*		**Pn**	**06 02 28.2**	**+0.2**
MT09	**Talagante**	**13.29**	**188**	Pn		**Pn**	**06 02 26.6**	**-1.5**
SALV	**Santo Antonio**	**13.35**	**72**	*eP*		**Pn**	**06 02 26.9**	**-1.9**
MT01	**Popeta**	**13.41**	**189**	Pn		**Pn**	**06 02 28.4**	**-1.1**
BO01	**Tunca**	**13.91**	**188**			**Pn**	**06 02 35.6**	**-0.3**
MCR1	**Marechal Candi**	**14.24**	**109**	*eP*		**Pn**	**06 02 40.6**	**+0.4**
BO02	**Sierra Bellavi**	**14.27**	**186**			**Pn**	**06 02 39.6**	**-1.0**
ITQB	**Itaqui**	**14.31**	**132**	*eP*		**Pn**	**06 02 41.7**	**+0.6**
PDRB	**Porto dos Gac**	**14.66**	**54**	*eP*		**Pn**	**06 02 46.0**	**+0.2**
CRSM	**Crissiumal (Br**	**15.19**	**120**	*eP*		**Pn**	**06 02 52.5**	**+0.2**
C2SB	**Chapadao do Su**	**15.21**	**86**	*eP*		**Pn**	**06 02 52.0**	**-0.5**
TRCB	**Terra Rica**	**15.25**	**101**	*eP*		**Pn**	**06 02 52.4**	**-0.8**
ML02	**Panimavida**	**15.30**	**188**	P		**Pn**	**06 02 52.3**	**-1.4**
ML02				IAmb		IAmb	06 02 58.5	
	comp=Z,57nm,0.9s							
H03N1	**Juan Fernandez**	**15.62**	**213**	T		T	06 18 47.3	
	baz=33,slow=72,SNR=14							
H03N2	**Juan Fernandez**	**15.63**	**213**	T		T	06 18 47.2	
	baz=33,slow=72,SNR=13							
H03N3	**Juan Fernandez**	**15.64**	**213**	T		T	06 19 12.2	
	baz=33,slow=72,SNR=13							
RODS	**Rosario do Sul**	**15.71**	**131**	*eP*		**Pn**	**06 02 58.1**	**-0.7**
CLDB	**Colider**	**15.84**	**54**	*eP*		**P**	**06 03 01.9**	**-0.1**
PTGB	**Pitanga**	**16.05**	**108**	*eP*		**Pn**	**06 03 03.0**	**-0.2**
PCMB	**Pacaembu**	**16.47**	**97**	*eP*		**Pn**	**06 03 08.4**	**+0.2**
ALGR	**Alto Alegre (B**	**16.55**	**123**	*eP*		**Pn**	**06 03 09.5**	**+0.2**
ITAB	**Concordia**	**16.67**	**117**	P		**Pn**	**06 03 10.4**	**-0.3**
ITAB	**Concordia**	**16.67**	**117**	*eP*		**Pn**	**06 03 10.7**	**0.0**
CPSB	**Cacapava Do Su**	**17.01**	**128**	*eP*		**Pn**	**06 03 14.7**	**-0.1**
ITRB	**Iturama**	**17.40**	**90**	*eP*		**P**	**06 03 18.7**	**-0.7**
PLTB	**Pedras Altas**	**17.64**	**132**	P		**P**	**06 03 20.5**	**-1.4**
PLTB				IAmb		IAmb	06 03 23.0	
	comp=Z,21nm,0.9s							
PLTB	**Pedras Altas**	**17.64**	**132**	*eP*		**P**	**06 03 20.5**	**-1.4**
CNLB	**Canela**	**18.50**	**122**	*eP*		**P**	**06 03 30.9**	**-0.4**
NPGB	**Novo Progresso**	**18.76**	**46**	*eP*		**P**	**06 03 32.9**	**-1.4**
SNDB	**Serra Nova Dou**	**18.90**	**66**	*eP*		**P**	**06 03 35.2**	**-0.5**
BB19B	**Bebedouro**	**19.02**	**95**	*eP*		**P**	**06 03 36.3**	**-0.8**
MACA	**Manacapuru-AM**	**19.05**	**26**	P		**P**	**06 03 36.2**	**-1.1**
MACA				IAmb		IAmb	06 03 39.5	
	comp=Z,42nm,0.9s							
MACA	**Manacapuru-AM**	**19.05**	**26**	*eP*		**P**	**06 03 36.7**	**-0.7**
TER01	**Tubaro-SC**	**19.61**	**118**	*eP*		**P**	**06 03 41.7**	**-1.7**
IPMB	**Ipameri, GO**	**19.67**	**86**	*eP*		**P**	**06 03 43.5**	**-0.6**
RCLB	**Rio Claro- Sao**	**19.94**	**99**	*eP*		**P**	**06 03 46.5**	**-0.5**
PLCA	**Paso Flores**	**20.15**	**184**	P		**P**	**06 03 50.1**	**+0.9**
	comp=Z,16nm,0.9s,baz=8.0,slow=12,SNR=27							
	comp=Z,16nm,0.9s							
PLCA	**Paso Flores**	**20.15**	**184**	P		**P**	**06 03 50.5**	**+1.2**
PLCA				IAmb		IAmb	06 03 51.1	
	comp=Z,26nm,0.9s							
PLCA	**Paso Flores**	**20.15**	**184**	*eP*		**P**	**06 03 49.4**	**+0.2**
PET01	**Itanhaem-SP**	**20.30**	**105**	*eP*		**P**	**06 03 49.4**	**-1.4**
BDFB	**Brasilia**	**20.41**	**80**	P		**P**	**06 03 51.7**	**-0.5**
	comp=Z,14nm,0.4s,baz=254,slow=10,SNR=61							
	comp=Z,14nm,0.4s							
BDFB	**Brasilia**	**20.41**	**80**	*eP*		**P**	**06 03 51.7**	**-0.5**
BDFB				IAmb		IAmb	06 03 55.8	
	comp=Z,19nm,0.6s							
BDFB	**Brasilia**	**20.41**	**80**	*eP*		**P**	**06 03 51.9**	**-0.4**
VAO	**Valinhos**	**20.48**	**101**	*eP*		**P**	**06 03 51.9**	**-1.1**
ITTB	**Itaituba**	**20.56**	**40**	*eP*		**P**	**06 03 52.1**	**-1.5**
PMNB	**Patos De Minas**	**21.23**	**88**	*eP*		**P**	**06 03 59.9**	**-1.1**
PARB	**Paraibuna**	**21.73**	**102**	*eP*		**P**	**06 04 05.2**	**-1.1**
BSCB	**Bom Sucesso**	**22.53**	**95**	*eP*		**P**	**06 04 13.4**	**-1.2**
OTAV	**Otavalo**	**22.70**	**334**	*eP*		**P**	**06 04 17.3**	**+0.5**
FLOC	**Florencia**	**22.99**	**342**	*eP*		**P**	**06 04 19.9**	**+0.8**
GCUF	**Volcan Galeras**	**23.20**	**338**	*eP*		P	06 04 34.0	+12
MAN01	**Angra dos Reis**	**23.24**	**100**	*eP*		**P**	**06 04 20.6**	**-0.8**
PRPB	**Paraupebas**	**23.37**	**55**	*eP*		**P**	**06 04 20.8**	**-1.9**
MALB	**Monte Alegre**	**23.43**	**39**	*eP*		**P**	**06 04 21.3**	**-1.9**
SMTB	**Santa Maria do**	**23.61**	**64**	*eP*		**P**	**06 04 24.1**	**-0.8**
VAS01	**Vassouras-RJ**	**23.72**	**99**	*eP*		**P**	**06 04 24.9**	**-1.0**
DIAM	**Diamantina, MG**	**23.86**	**89**	*eP*		**P**	**06 04 26.5**	**-0.7**
MC01	**Montes Claros**	**23.92**	**85**	*eP*		**P**	**06 04 27.0**	**-0.6**
AY01	**Puyuhuapi**	**24.00**	**187**	P		**P**	**06 04 27.6**	**-0.3**
JANB	**Januaria**	**24.00**	**81**	*eP*		**P**	**06 04 27.0**	**-1.4**
POPC	**Popayan, Colom**	**24.21**	**341**	*eP*		**P**	**06 04 30.1**	**-0.4**
BOAV	**Boa Vista**	**24.24**	**21**	P		**P**	**06 04 31.0**

SONM	**Songino Array**	**152.53**	**7**	PKPbc	**PKiKP**	**06 19 09.0**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=45,slow=2.2,SNR=3.2						
LZH	**Lanzhou**	**163.27**	**21**	*e*PKP	**PKPdf**	**06 19 13.6**	**-0.2**
PZH	**PanZhiHua**	**169.56**	**54**	PKP	**PKPdf**	**06 19 17.3**	**-1.6**

*IDC **19** 06:41:38.6±3.2,53.82N×88.25E,h0km,mbtmp3.2/3, ML2.8/3,Error ellipse: s-maj=29.4km s-min=17.5km az=60.0*
*NNC **19** 06:41:39.0±3.8,53.77N×88.15E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=30.1km s-min=15.8km az=56.0, Suspected Mining explosion.*
ISC 19 06:41:40.7±4.2,53.8N±0.1×88.0E±0.2,h0km,n8,σ0.961/11, 6C-5D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.90**	**276**	*i*			06 54 23.8	
	0.3nm,1.0s,baz=91,slow=321,SNR=26							
ZAA0	**Zalesovo Array**	**1.90**	**276**	⇑Pg		**Pn**	**06 42 14.2**	**-0.1**
	1.5nm,0.6s							
ZAA0				⇓Lg		Lg	06 42 43.0	
	10nm,0.6s							
ZALV	**Zalesovo Beam**	**1.90**	**276**	Pn		**Pn**	**06 42 14.1**	**-0.2**
	4.6nm,0.3s,baz=93,slow=15,SNR=36							
ZALV				Lg		Lg	06 42 42.9	
	12nm,0.3s,baz=94,slow=26,SNR=33							
	10nm,0.4s							
KURBB	**Kurchatov Arra**	**6.64**	**245**	Pn		**Pn**	**06 43 19.8**	**+0.4**
	0.4nm,0.3s,baz=62,slow=14,SNR=5.3							
	1.6nm,0.4s							
KURBB	**Kurchatov Arra**	**6.64**	**245**	⇓Pn		**Pn**	**06 43 19.6**	**+0.3**
	1.8nm,0.3s							
KURBB				⇑Sn		**Sn**	**06 44 36.1**	**+0.5**
	9.4nm,0.6s							
KURBB				⇓Lg		Lg	06 45 10.1	
	8.3nm,0.7s							
MK31	**Makanchi Array**	**7.90**	**210**	⇑Pn		**Pn**	**06 43 36.9**	**+0.2**
	0.2nm,0.3s,baz=30,slow=13,SNR=14							
MK31				⇓Sn		**Sn**	**06 45 05.6**	**-1.3**
	0.4nm,0.5s,baz=31,slow=25							
MK31				⇑Lg		Lg	06 45 53.2	
	1.3nm,0.7s,baz=25,slow=34,SNR=4.7							
MKAR	**Makanchi Array**	**7.90**	**210**	Pn		**Pn**	**06 43 37.1**	**+0.3**
	0.3nm,0.3s,baz=32,slow=13,SNR=14							
MKAR				Sn		**Sn**	**06 45 06.9**	**+0.1**
	0.2nm,0.3s,baz=32,slow=27,SNR=6.0							
	0.5nm,0.4s							
MAKZ	**Makanchi**	**7.99**	**211**	⇑Pn		**Pn**	**06 43 38.4**	**+0.6**
	1.3nm,0.6s							
MAKZ				⇓Sn		**Sn**	**06 45 08.2**	**-0.6**
	1.7nm,0.6s							
MAKZ				⇓Lg		Lg	06 45 52.6	
	2.3nm,1.1s							

*ROM **19** 06:42:14.7±0.3,38.53N±0.03×12.25E±0.02,h16km±2km, ML3.3/23,Error ellipse: s-maj=3.0km s-min=1.4km az=199.0*
*LDG **19** 06:42:17.4±0.3,38.29N×12.25E,h17km,Ml3.5/11,Error ellipse: s-maj=14.0km s-min=3.7km az=39.0*
ISC 19 06:42:13.4±1.0,38.57N±0.03×12.25E±0.04,h5km±8km, n59,σ1.983/71,1C-3D,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
ERC	**Erice**	**0.59**	**154**	P		**Pg**	**06 42 24.9**	**+0.1**
ERC				S		**Sb**	**06 42 34.0**	**-0.9**
ERC				AML		AML		
	comp=E,18250μm,0.7s							
ERC				AML		AML		
	comp=N,27700μm,0.6s							
USI	**Ustica**	**0.74**	**79**	P		**Pn**	**06 42 29.7**	**-0.8**
USI				S		**Sn**	**06 42 41.3**	**-0.8**
MFNL	**Monte Finestre**	**0.94**	**146**	P		**Pg**	**06 42 31.3**	**-0.1**
MPG	**Monte Pellegri**	**0.96**	**115**	P		**Pg**	**06 42 32.2**	**+0.4**
MPG				S		**Sn**	**06 42 45.9**	**-1.7**
MPG				AML		AML		
	comp=E,1740μm,0.4s							
MPG				AML		AML		
	comp=N,1835μm,0.5s							
MPG				AML		AML		
	comp=E,1735μm,0.4s							
MPG				AML		AML		
	comp=N,1840μm,0.5s							
CORL	**Corleone**	**1.06**	**129**	P		**Pb**	**06 42 34.4**	**0.0**
CORL				AML		AML		
	comp=E,4730μm,0.7s							
CORL				AML		AML		
	comp=N,3595μm,1.2s							
MMGO	**Monte Magaggia**	**1.07**	**148**	P		**Pb**	**06 42 34.0**	**-0.4**
SOLUN	**Solunto**	**1.11**	**115**	P		**Pb**	**06 42 35.0**	**0.0**
SOLUN				S		**Sg**	**06 42 48.8**	**-0.3**
SOLUN				AML		AML		
	comp=E,875μm,1.5s							
SOLUN				AML		AML		
	comp=N,1086μm,0.8s							
CLTB	**Caltabellotta**	**1.25**	**142**	P		**Pn**	**06 42 37.3**	**-0.2**
CLTB				AML		AML		
	comp=N,14000μm,0.6s							
CLTB				AML		AML		
	comp=E,5900μm,0.5s							
ALJA	**Alia**	**1.44**	**124**	P		**Pb**	**06 42 40.9**	**+0.2**
ALJA				AML		AML		
	comp=N,2285μm,0.6s							
ALJA				AML		AML		
	comp=E,2010μm,0.7s							
GIB	**Gibilmanna**	**1.51**	**112**	P		**Pn**	**06 42 40.4**	**-0.8**
GIB				AML		AML		
	comp=E,1540μm,0.9s							
GIB				AML		AML		
	comp=N,1490μm,0.5s							
CSLB	**Castelbuono**	**1.55**	**113**	P		**Pn**	**06 42 41.0**	**-0.8**
CSLB				AML		AML		
	comp=E,468μm,0.6s							
CSLB				AML		AML		
	comp=N,502μm,0.5s							
PLLN	**Pollina**	**1.59**	**111**	P		**Pn**	**06 42 41.9**	**-0.4**
PETRA	**Petralia Sopra**	**1.64**	**116**	P		**Pn**	**06 42 43.0**	**+0.1**
PETRA				AML		AML		
	comp=E,994μm,0.5s							
PETRA				AML		AML		
	comp=N,1068μm,0.7s							
IACL	**Alicudi**	**1.65**	**91**	P		**Pn**	**06 42 42.3**	**-0.7**
RESU	**Resuttano**	**1.69**	**122**	P		**Pb**	**06 42 45.2**	**+0.2**
RESU				AML		AML		
	comp=E,1295μm,0.6s							
RESU				AML		AML		
	comp=N,1385μm,0.6s							
FAVR	**Favara**	**1.71**	**139**	P		**Pn**	**06 42 44.5**	**+0.6**
IFIL	**Filicudi I Eol**	**1.81**	**89**	P		**Pn**	**06 42 45.2**	**0.0**
MSFR	**San Fratello**	**1.91**	**105**	P		**Pn**	**06 42 45.8**	**-0.9**
MSFR				AML		AML		
	comp=N,190μm,1.0s							
MSFR				AML		AML		
	comp=E,184μm,0.6s							
CLTA	**Licata**	**1.95**	**136**	P		**Pn**	**06 42 47.9**	**+0.8**
CLTA				AML		AML		
	comp=E,453μm,1.4s							
CLTA				AML		AML		
	comp=N,607μm,1.4s							
GALF	**Gagliano Caste**	**2.01**	**114**	P		**Pb**	**06 42 49.4**	**-1.1**
LLI	**Lipari**	**2.12**	**92**	P		**Pn**	**06 42 49.6**	**+0.2**
RAFF	**Raffo Rosso**	**2.14**	**128**	P		**Pn**	**06 42 50.7**	**+0.9**
RAFF				S		**Sb**	**06 43 17.2**	**-2.3**
RAFF				AML		AML		
	comp=E,454μm,0.5s							
RAFF				AML		AML		
	comp=N,524μm,0.8s							
VPL	**Vulcano Piano**	**2.15**	**94**	P		**Pn**	**06 42 49.6**	**-0.3**
HLNI	**Lentini**	**2.40**	**120**	P		**Pn**	**06 42 54.1**	**+0.8**
HLNI				S		**Sn**	**06 43 23.1**	**0.0**
HLNI				AML		AML		
	comp=N,393μm,1.2s							
HLNI				AML		AML		
	comp=E,314μm,0.9s							
AIO	**Antillo**	**2.42**	**103**	P		**Pn**	**06 42 54.0**	**+0.4**
AIO				AML		AML		
	comp=E,263μm,0.3s							
AIO				AML		AML		
	comp=N,208μm,0.3s							
VSL	**Villasalto**	**2.42**	**293**	P		**Pn**	**06 42 55.4**	**+1.7**
VSL				S		**Sn**	**06 43 22.6**	**-1.1**
VSL				AML		AML		
VSL				AML		AML		

CGL	**Cagliari Serpe**	**2.44**	**290**	P		**Pn**	**06 42 55.5**	**+1.6**
CGL				S		**Sn**	**06 43 22.7**	**-1.5**
CGL				AML		AML		
	comp=N,326μm,1.3s							
CGL				AML		AML		
	comp=E,456μm,0.3s							
MEU	**Monte Lauro**	**2.58**	**124**	P		**Pn**	**06 42 55.7**	**-0.1**
MEU				AML		AML		
	comp=E,688μm,0.4s							
MEU				AML		AML		
	comp=N,706μm,0.4s							
MSRU	**Castanea**	**2.58**	**96**	P		**Pn**	**06 42 55.7**	**0.0**
MSRU				AML		AML		
	comp=N,194μm,0.4s							
MSRU				AML		AML		
	comp=E,188μm,0.3s							
HAGA	**Augusta**	**2.63**	**118**	P		**Pn**	**06 42 57.1**	**+0.7**
HAGA				AML		AML		
	comp=E,308μm,0.8s							
HAGA				AML		AML		
	comp=N,288μm,0.5s							
SSY	**Sortino**	**2.64**	**121**	P		**Pn**	**06 42 57.3**	**+0.7**
SSY				S		**Sn**	**06 43 29.4**	**+0.3**
SSY				AML		AML		
	comp=E,465μm,0.6s							
SSY				AML		AML		
	comp=N,850μm,0.3s							
DGI	**Dorgali Grotta**	**2.69**	**311**	P		**Pn**	**06 42 59.6**	**+2.3**
DGI				S		**Sn**	**06 43 29.7**	**-0.7**
CAR1	**CAROLEI**	**3.16**	**76**	P		**Pn**	**06 43 05.4**	**+1.6**
CAR1				AML		AML		
	comp=E,118μm,0.7s							
CAR1				AML		AML		
	comp=N,90μm,0.5s							
SAMA	**S.Maria delle**	**3.22**	**5**	⇑P		**Pb**	**06 43 09.1**	**-1.9**
PTRJ	**Pietraroja**	**3.29**	**31**	S		**Sn**	**06 43 48.0**	**+2.7**
TOLF	**Tolfa**	**3.50**	**357**	⇓P		**Pb**	**06 43 13.3**	**-2.5**
PTRP	**Pietrapertosa**	**3.53**	**55**	AML		AML		
	comp=E,40μm,0.4s							
PTRP				AML		AML		
	comp=N,44μm,0.5s							
LPEL	**Lama dei Pelig**	**3.77**	**22**	S		**Sg**	**06 44 13.0**	**-1.6**
FAGN	**Fagnano**	**3.83**	**15**	⇓P		**Pn**	**06 43 14.3**	**+1.2**
SMPL	**Sampolo**	**4.19**	**328**	⇓P		**Pn**	**06 43 22.2**	**+4.2**
SMPL				AML		AML		
	comp=E,27μm,1.2s							
SMPL				AML		AML		
	comp=N,30μm,1.6s							
PGF	**Pioggiola**	**4.69**	**329**	*e*Pn		Pn	06 43 29.3	+4.5
PGF				*e*Sn		**Sn**	**06 44 20.8**	**+1.2**
	comp=N,14nm,0.4s							
SSFR	**Montelago di S**	**4.88**	**5**	P		**Pg**	**06 43 47.1**	**+0.3**
GSCL	**Gusciola**	**5.91**	**348**	P		**Pn**	**06 43 44.6**	**+3.0**
SRN	**Sarande**	**6.16**	**75**	P		**Pn**	**06 43 48.3**	**+3.4**
BURY	**Giardini Botan**	**6.30**	**327**	P		**Pn**	**06 43 50.8**	**+3.9**
SBF	**Sospel**	**6.42**	**327**	*e*Pn		**Pn**	**06 43 51.6**	**+3.0**
SBF				*e*Sn		**Sn**	**06 45 01.7**	**-0.5**
	comp=N,58nm,0.7s							
SBF				*e*Sg		**Sg**	**06 45 35.6**	**-3.8**
	comp=N,36nm,0.3s							
BRJN	**Brijuni**	**6.43**	**10**	P		Pn	06 43 57.0	+8.4
LMR	**La Mourre**	**6.45**	**319**	*e*Pn		**Pn**	**06 43 51.1**	**+2.2**
LMR				*e*Sn		**Sn**	**06 45 00.1**	**-2.7**
	comp=N,8.9nm,0.4s							
EUCT	**Pavia**	**7.03**	**342**	P		Pn	06 44 03.8	+7.0
SMRF	**Simiane la Rot**	**7.38**	**319**	*e*Pn		**Pn**	**06 44 05.2**	**+3.4**
SMRF				*e*Sn		**Sn**	**06 45 25.3**	**-0.6**
	comp=N,7.4nm,0.6s							
SMRF				*e*Sg		**Sg**	**06 46 13.0**	**+2.7**
	comp=N,1.3nm,0.3s							
MBDF	**Montbardon**	**7.40**	**328**	*e*Pn		Pn	06 44 06.7	+4.6
MBDF				*e*Sn		**Sn**	**06 45 27.2**	**+0.8**
	comp=N,12nm,0.6s							
ORIF	**Oris-en-Rattie**	**7.93**	**325**	*e*Pn		Pn	06 44 14.2	+4.8
LPL	**La Plagne**	**8.07**	**331**	*e*Pn		Pn	06 44 16.0	+4.7
LASF	**Ste Croix**	**8.38**	**314**	*e*Pn		**Pn**	**06 44 17.8**	**+2.4**
LASF				*e*Sn		**Sn**	**06 45 47.2**	**-3.2**
	comp=N,0.9nm,0.3s							
VIVF	**Saint-Julien-l**	**8.46**	**320**	*e*Pn		**Pn**	**06 44 19.4**	**+2.8**
VIVF				*e*Sn		**Sn**	**06 45 51.2**	**-1.2**
	comp=N,1.6nm,0.3s							
MTLF	**Montolieu**	**8.96**	**305**	*e*Pn		**Pn**	**06 44 26.6**	**+3.1**
MTLF				*e*Sn		**Sn**	**06 46 01.5**	**-3.3**
	comp=N,4.8nm,0.5s							
CAF	**Calviac**	**9.91**	**313**	*e*Pn		**Pn**	**06 44 39.9**	**+3.4**
EPF	**Esparros**	**10.07**	**300**	*e*Pn		**Pn**	**06 44 38.6**	**-0.1**
EPF	**Esparros**	**10.07**	**300**	*e*Pg		Pn	06 45 21.0	+42

*SSNC **19** 06:50:12.6±5.1,19.90N×70.55W,h7km±44km,MD3.8, ML3.4*
*OSPL **19** 06:50:23.8±1.9,19.69N×71.14W,h0km±8km,ML3.1*
ISC 19 06:50:23.0±1.1,19.71N±0.03×71.24W±0.05,h17km±7km, n14,σ1.937/20,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
LOPP1	**Punta Rusia, P**	**0.14**	**13**	*i*	P	**Pg**	**06 50 26.8**	**-0.4**
LOPP1					*e*S	**Sg**	**06 50 30.4**	**+0.5**
LOPP1					IAML		06 50 35.8	
	comp=Z,5μm,1.0s							
LODA1	**ITESIL, Dajabo**	**0.47**	**249**	*i*	P	**Pg**	**06 50 32.9**	**+0.3**
LODA1					*e*S	**Sg**	**06 50 40.7**	**+1.7**
SDDR	**Presa de Saban**	**0.73**	**184**	*i*	P	**Pg**	**06 50 35.9**	**-1.5**
SDDR					*e*S	**Sg**	**06 50 45.8**	**-1.3**
SDDR	**Presa de Saban**	**0.73**	**184**	*i*	P	**Pg**	**06 50 35.9**	**-1.5**
SDDR					*e*S	**Sg**	**06 50 46.1**	**-0.9**
SDDR					IAML		06 50 47.3	
	comp=Z,612nm,0.5s							
PAPH	**Port-au-Prince**	**1.55**	**221**	*i*	P	**Pn**	**06 50 51.2**	**+1.3**
PAPH					*e*S	**Sb**	**06 51 13.0**	**+2.2**
LOPE2	**Hotel El Peder**	**1.74**	**196**	*i*	P	**Pn**	**06 50 54.2**	**+1.8**
GRTK	**Grand Turk**	**1.79**	**3**	*i*	P	**Pn**	**06 50 53.2**	**0.0**
GRTK					*e*S	**Sn**	**06 51 17.1**	**+1.6**
GRTK					IAML		06 51 20.9	
	comp=Z,194nm,0.8s							
JAKH	**Jacmel**	**1.91**	**220**	*i*	P	**Pn**	**06 50 56.2**	**+1.5**
MASC	**Masc**	**2.86**	**280**	*e*	P	**Pn**	**06 51 06.8**	**-1.0**
MASC					*e*S	**Sb**	**06 51 47.7**	**-0.5**
MASC					*e*Sg	Sg	06 51 51.3	-3.6
MASC					IAML		06 51 55.8	
	comp=E,66nm,0.4s							
MASC					IAML		06 51 57.1	
	comp=N,54nm,0.6s							
PCDR	**Punta Cana, DR**	**2.95**	**113**	*i*	P	Pn	06 51 09.0	0.0
MOAC	**Moa**	**3.62**	**286**	*e*	P	Pn	06 51 15.2	-3.2
MOAC					*e*S	**Sn**	**06 52 00.3**	**-0.5**
MOAC					IAML		06 52 18.0	
	comp=N,18nm,0.5s							
MOAC					IAML		06 52 20.4	
	comp=E,18nm,0.5s							
RCC	**Rio Carpintero**	**4.21**	**275**	*e*	P	**Pn**	**06 51 24.7**	**-1.7**
RCC					*e*S	**Sn**	**06 52 14.2**	**-1.0**
RCC					IAML		06 52 25.1	
	comp=E,10nm,0.6s							
RCC					IAML		06 52 26.2	
	comp=N,10nm,0.5s							
LMGC	**Las Mercedes**	**5.44**	**275**	*e*	P	Pn	06 51 39.1	-4.3
LMGC					*e*S	**Sn**	**06 52 45.0**	**-0.5**
LMGC					IAML		06 52 57.6	
	comp=E,8.0nm,0.5s							
LMGC					IAML		06 52 58.8	
	comp=N,6.3nm,0.8s							
CCCC	**Cccc**	**6.30**	**285**	*e*	P	Pn	06 51 47.0	-8.2
CCCC					*e*S	Sn	06 52 55.0	-12
CCCC					IAML		06 53 00.0	
	comp=N,1.4nm,0.2s							
CCCC					IAML		06 53 04.3	
	comp=E,1.4nm,0.3s							

IDC 19 06:58:10.3±2.8,53.65N×86.92E,h0km,mbtmp2.7/2, ML2.5/2,Error ellipse: s-maj=27.6km s-min=15.6km az=65.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**284**	*i*			07 06 30.0	
	baz=103,slow=322,SNR=4.1							
ZALV	**Zalesovo Beam**	**1.28**	**284**	Pg		Pg	06 58 33.7	-1.2
	0.9nm,0.3s,baz=105,slow=16,SNR=6.9							
ZALV				Lg		Lg	06 58 51.3	
	1.7nm,0.3s,baz=105,slow=26,SNR=11							
ZALV				Rg		Rg	06 59 00.8	
	1.9nm,0.4s,baz=101,slow=31,SNR=3.7							

KURBB	**Kurchatov Arra**	**5.99**	**243**	Pn		Pn	06 59 42.1	+2.0
	0.1nm,0.3s,baz=61,slow=14,SNR=2.1							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**7.47**	**205**	Pn		Pn	07 00 01.4	+0.9
	0.2nm,0.3s,baz=27,slow=14,SNR=6.6							
	0.2nm,0.3s							

*IDC **19** 06:59:03.5±3.3,15.20S×174.03W,h72km±41km,mb3.6/4, mbtmp4.0/5,ML3.9/1,Error ellipse: s-maj=177.9km s-min=25.5km az=149.0*
*NOU **19** 06:59:25.6,14.40S×172.50W,h68km,MLv3.3/5,Samoa Islands*
ISC 19 06:59:01.8±1.1,14.9S±0.7×174.2W±0.3,h50km,n8, σ1.965/7,mb4.0/4,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
AFI	**Afiamalu**	**2.56**	**67**	P		**Pn**	**06 59 42.5**	**+1.6**
	27nm,0.3s,baz=232,slow=1.8,SNR=27							
AFI				S		**Sn**	**07 00 08.7**	**-2.3**
	276nm,0.4s,baz=36,slow=21,SNR=18							
	65nm,0.3s							
AFI	**Afiamalu**	**2.56**	**67**	P		**Pn**	**06 59 42.7**	**+1.7**
H11S2	**WAKE ISLAND Hy**	**38.15**	**330**	T		T	07 47 22.7	
	baz=64,slow=74,SNR=3.8							
H11S3	**WAKE ISLAND Hy**	**38.16**	**330**	T		T	07 47 11.2	
	baz=145,slow=74,SNR=3.2							
STKA	**Stephens Creek**	**43.60**	**239**	P		**P**	**07 07 00.9**	**-0.5**
	2.3nm,0.7s,baz=84,slow=9.2,SNR=3.3							
	2.3nm,0.7s							
WRA	**Warramunga Arr**	**49.19**	**256**	P		**P**	**07 07 45.4**	**0.0**
	1.1nm,0.7s,baz=92,slow=6.6,SNR=27							
	1.1nm,0.7s							
ASAR	**Alice Springs**	**49.52**	**252**	P		**P**	**07 07 47.8**	**-0.1**
	4.4nm,0.7s,baz=88,slow=8.4,SNR=42							
	4.4nm,0.7s							
NVAR	**Mina Array Bea**	**74.50**	**42**	P		**P**	**07 10 35.2**	**-0.2**
	0.2nm,0.6s,baz=232,slow=11,SNR=3.6							
	0.2nm,0.6s							

*NEIC **19** 07:02:36.9±2.0,12.92N±0.08×88.63W±0.04,h10km±1km, mb4.3/3,Md4.0(SNET),Error ellipse: s-maj=14.2km s-min=4.8km az=205.0*
*INET **19** 07:02:38.1±1.1,12.76N×88.66W,h15km±8km,MW3.4*
*SNET **19** 07:02:38.2±1.2,12.82N×88.72W,h30km±3km,ML4.0*
*UCR **19** 07:02:39.1±1.4,12.86N×88.72W,h33km±4km,ML4.0, MW3.5*
*GCG **19** 07:02:48.0±2.8,12.53N×89.60W,h50km±256km,MD4.1*
ISC 19 07:02:38.6±1.2,12.82N±0.04×88.71W±0.03,h32km±11km, n75,σ1.921/99,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
COEB	**Comit de Eme**	**0.69**	**15**	*i*	P	**Pn**	**07 02 52.1**	**-0.2**
COEB					*e*S	**Sn**	**07 03 02.6**	**+0.6**
COEB					IAML		07 03 08.4	
	comp=Z,4μm,0.5s							
COEB	**Comit de Eme**	**0.69**	**15**	*i*	P	**Pn**	**07 02 52.1**	**-0.2**
COEB					*e*S	**Sn**	**07 03 02.6**	**+0.6**
COEB					IAML		07 03 08.4	
	comp=Z,4μm,0.5s							
LCY	**Lacayo**	**0.72**	**34**	*e*	P	**Pn**	**07 02 52.8**	**+0.1**
LCY	**Lacayo**	**0.72**	**34**	*e*	P	**Pn**	**07 02 52.8**	**+0.1**
PACA	**Pacayal**	**0.75**	**31**	*e*	P	**Pb**	**07 02 53.1**	**-0.2**
PACA					*e*S	**Sn**	**07 03 03.9**	**+0.6**
PACA					IAML		07 03 05.5	
	comp=Z,30μm,0.3s							
PACA	**Pacayal**	**0.75**	**31**	*e*	P	**Pb**	**07 02 53.1**	**-0.2**
PACA					*e*S	**Sn**	**07 03 03.9**	**+0.6**
PACA					IAML		07 03 05.5	
	comp=Z,30μm,0.3s							
COEG	**Centro de Oper**	**0.81**	**348**	*i*	P	**Pn**	**07 02 53.7**	**-0.2**
COEG					*e*S	**Sn**	**07 03 05.4**	**+0.6**
COEG					IAML		07 03 14.4	
	comp=Z,3μm,0.5s							
COEG	**Centro de Oper**	**0.81**	**348**	*i*	P	**Pn**	**07 02 53.7**	**-0.2**
COEG					*e*S	**Sn**	**07 03 05.4**	**+0.6**
COEG					IAML		07 03 14.4	
	comp=Z,3μm,0.5s							
LFRS	**El Faro**	**0.86**	**337**	*e*	P	**Pn**	**07 02 54.5**	**-0.2**
LFRS	**El Faro**	**0.86**	**337**	*e*	P	**Pn**	**07 02 54.5**	**-0.2**
PAVA	**Las Pavas**	**0.91**	**346**	*e*	P	**Pb**	**07 02 55.6**	**-0.5**
PAVA	**Las Pavas**	**0.91**	**346**	*e*	P	**Pb**	**07 02 55.6**	**-0.5**
LCND	**La Caada**	**0.94**	**59**	*e*	P	**Pn**	**07 02 54.9**	**-0.6**
LCND					*e*S	**Sn**	**07 03 07.9**	**0.0**
LCND					IAML		07 03 09.1	
	comp=Z,4μm,0.3s							
LCND	**La Caada**	**0.94**	**59**	*e*	P	**Pn**	**07 02 54.9**	**-0.6**
LCND					*e*S	**Sn**	**07 03 07.9**	**0.0**
LCND					IAML		07 03 09.1	
	comp=Z,4μm,0.3s							
CNCH	**Conchagua**	**0.97**	**62**	*e*	P	**Pn**	**07 02 55.5**	**-0.6**
CNCH					*e*S	**Sb**	**07 03 11.0**	**+1.4**
CNCH					IAML		07 03 17.6	
	comp=Z,6μm,0.3s							
CNCH	**Conchagua**	**0.97**	**62**	*e*	P	**Pn**	**07 02 55.5**	**-0.6**
CNCH					*e*S	**Sb**	**07 03 11.0**	**+1.4**
CNCH					IAML		07 03 17.6	
	comp=Z,6μm,0.3s							
SNET	**Serv Nac Est T**	**1.00**	**330**			**Pn**	**07 02 56.2**	**-0.3**
LFU	**La Fuente**	**1.00**	**337**	*e*	P	**Pb**	**07 02 57.0**	**-0.6**
LFU	**La Fuente**	**1.00**	**337**	*e*	P	**Pb**	**07 02 57.0**	**-0.6**
CAHU	**Cacacuatique**	**1.06**	**27**	*e*	P	**Pn**	**07 02 57.8**	**+0.3**
CAHU	**Cacacuatique**	**1.06**	**27**	*e*	P	**Pn**	**07 02 57.8**	**+0.3**
JAYA	**Jayaque - finc**	**1.09**	**319**	*e*	P	**Pn**	**07 02 57.4**	**-0.4**
JAYA					*e*S	**Sn**	**07 03 11.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.09**	**319**	*e*	P	**Pn**	**07 02 57.4**	**-0.4**
JAYA					*e*S	**Sn**	**07 03 11.7**	**-0.2**
CSGN	**Cosiguina Volc**	**1.14**	**82**	*e*	P	**Pn**	**07 02 57.4**	**-0.9**
CSGN					*e*S	**Sn**	**07 03 13.2**	**+0.3**
P5NO	**Presa 5 de nov**	**1.16**	**358**	*e*	P	**Pn**	**07 02 58.6**	**0.0**
P5NO					*e*S	**Sb**	**07 03 15.0**	**+0.1**
CEVE	**Cerro Verde**	**1.33**	**319**	*e*	P	**Pb**	**07 03 02.1**	**-1.2**
CEVE					*e*S	**Sb**	**07 03 20.0**	**-0.1**
CEVE					IAML		07 03 27.0	
	comp=Z,2μm,0.3s							
CEVE	**Cerro Verde**	**1.33**	**319**	*e*	P	**Pb**	**07 03 02.1**	**-1.2**
CEVE					*e*S	**Sb**	**07 03 20.0**	**-0.1**
CEVE					IAML		07 03 27.0	
	comp=Z,2μm,0.3s							
NUBE	**Las Nubes**	**1.49**	**316**	*e*	P	**Pn**	**07 03 03.3**	**-0.1**
NUBE					*e*S	**Sn**	**07 03 21.8**	**0.0**
NUBE	**Las Nubes**	**1.49**	**316**	*e*	P	**Pn**	**07 03 03.3**	**-0.1**
N

PETF	**Flores**	**4.22**	**345**		**Pn**		**07 03 40.9**	**+0.2**
ESPN	**Las Esperanzas**	**4.36**	**98**	Pn	**Pn**		**07 03 41.4**	**-1.2**
JTS	**Las Juntas de**	**4.46**	**124**	Pn	**Pn**		**07 03 44.4**	**+0.3**
JTS	**Las Juntas de**	**4.46**	**124**	*eP*	**Pn**		**07 03 48.0**	**+3.9**
LAFE	**Finca La Fe, P**	**4.79**	**128**	*eP*	**Pn**		**07 03 49.2**	**+0.7**
LCR2	**La Lucha 2**	**5.54**	**123**	*eP*	**Pn**		**07 04 01.2**	**+2.1**
RIMA	**Rio Macho**	**5.64**	**122**	*eP*	**Pn**		**07 04 03.1**	**+2.6**
CDM	**Cerro de Muert**	**5.84**	**123**	*eP*	**Pn**		**07 04 05.6**	**+2.2**
MRVA	**Moravia de Chi**	**5.97**	**119**	*eP*	**Pn**		**07 04 08.1**	**+3.2**
PEZE	**Perez Zeledon,**	**6.01**	**124**	Pn	**Pn**		**07 04 06.9**	**+1.5**
PEZE	**Perez Zeledon,**	**6.01**	**124**	*eP*	**Pn**		**07 04 07.7**	**+2.3**
SRBA	**San Rafael, Bu**	**6.35**	**124**	Pn	**Pn**		**07 04 11.6**	**+1.5**
SRBA	**San Rafael, Bu**	**6.35**	**124**	*eP*	**Pn**		**07 04 11.7**	**+1.6**
DRK0	**Durika**	**6.43**	**123**	Pn	**Pn**		**07 04 12.9**	**+1.6**
POTG	**Potrero Grande**	**6.65**	**124**	*eP*	**Pn**		**07 04 16.3**	**+2.1**
OTAV	**Otavalo**	**16.12**	**140**	Pn	**Pn**		**07 06 23.8**	**+0.4**
OTAV				IAmb	IAmb		07 07 00.2	
	comp=Z,6.4nm,1.4s							
JAKH	**Jacmel**	**16.50**	**69**	Pn	**Pn**		**07 06 26.6**	**-1.2**
JAKH				IAmb	IAmb		07 06 28.5	
	comp=Z,63nm,0.9s							

IDC ***19*** *07:05:18.3±1.7,3.02S×129.13E,h0km,mb3.7/2, mbtmp3.9/4,ML3.8/2,MS2.8/1,Error ellipse: s-maj=47.5km s-min=26.5km az=86.0*

DJA ***19*** *07:05:21.9±0.2,3.3S±2.2×12.9E±.,h10km,M3.5/11, MLv3.5/11*

ISC 19 07:05:19.1±1.4,**2.78S**±0.04×**129.58E**±0.05,**h7**km±11km, **n14**,σ1.9**16**/19,**Seram**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.86**	**229**	P		**Pg**	**07 05 35.4**	**-0.2**
MSAI				S		**Sg**	**07 05 46.6**	**-0.2**
AAI	**Ambon**	**1.65**	**237**	P		**Pn**	**07 05 49.6**	**+1.1**
AAI				S		**Sn**	**07 06 08.6**	**-1.3**
BNDI	**Bandanaira**	**1.76**	**169**	P		**Pn**	**07 05 50.8**	**+0.9**
BNDI				S		**Sg**	**07 06 17.1**	**+1.5**
NLAI	**Namlea**	**2.52**	**260**	P		**Pn**	**07 06 01.2**	**+0.8**
SIJI	**Sorong**	**2.54**	**42**	Pn		**Pb**	**07 06 06.2**	**+1.3**
	20nm,0.3s,baz=52,slow=24,SNR=26							
SIJI				Sn		**Sg**	**07 06 39.5**	**-1.1**
	25nm,0.3s,baz=228,slow=23,SNR=18 49nm,0.2s							
SWI	**Sorong**	**2.54**	**41**	P		**Pb**	**07 06 05.3**	**+0.4**
SWI				S		**Sb**	**07 06 37.7**	**+1.3**
FAKI	**Fak Fak**	**2.67**	**93**	P		**Pb**	**07 06 06.7**	**-0.4**
LBMI	**Labuha**	**2.98**	**316**	P		**Pn**	**07 06 07.3**	**+0.6**
LBMI				S		**Sn**	**07 06 43.9**	**+1.2**
SANI	**Sanana**	**3.67**	**281**	P		**Pn**	**07 06 16.1**	**-0.1**
TNTI	**Ternate**	**4.17**	**328**	P		**Pn**	**07 06 22.1**	**-1.0**
DAV	**Davao City (W)**	**10.57**	**338**	LR		LR	07 12 36.1	
	comp=Z,48nm,19.1s,baz=283,slow=41							
WRA	**Warramunga Arr**	**17.68**	**165**	P		**Pn**	**07 09 23.7**	**-2.2**
	0.2nm,0.3s,baz=340,slow=12,SNR=17 1.4nm,0.6s							
ASAR	**Alice Springs**	**21.18**	**169**	P		**P**	**07 10 04.4**	**-0.7**
	5.1nm,0.8s,baz=346,slow=10,SNR=27 5.1nm,0.8s							
MKAR	**Makanchi Array**	**64.50**	**326**	P		**P**	**07 15 57.1**	**+0.5**
	0.4nm,0.6s,baz=126,slow=7.4,SNR=3.2 0.4nm,0.6s							

TRN 19 07:21:35.7,16.02N×61.19W,h27km,MD4.2,4C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MAGL	**Barre de l'ile**	**0.11**	**234**	⇓*iP*		Pn	07 21 42.8	+1.1
MAGL				*eS*		Sb	07 21 46.3	+2.1
CBE	**Ff, Capester**	**0.41**	**278**	*eP*		Pn	07 21 47.0	+1.2
CBE				*eS*		Sn	07 21 53.7	+1.2
MDVC	**Dominica, Viel**	**0.45**	**208**	*eP*		Pn	07 21 47.6	+1.2
MDVC				*eS*		Sn	07 21 55.2	+1.6
TDBA	**Terre de Bas,**	**0.46**	**249**	*eP*		Pn	07 21 47.7	+1.1
TDBA				*eS*		Sn	07 21 54.6	+0.8
TBG	**Guadaloupe-3**	**0.47**	**250**	*eP*		Pn	07 21 47.8	+1.2
MDCT	**Cottage Hill,**	**0.47**	**214**	*eP*		Pn	07 21 48.0	+1.2
MDCT				*eS*		Sn	07 21 55.5	+1.3
ABD	**La Joyeuse, An**	**0.54**	**328**	⇑*iP*		Pn	07 21 48.3	+0.7
ABD				*eS*		Sn	07 21 56.0	+0.3
DSLB	**Salisbury**	**0.61**	**201**	⇑*iP*		Pn	07 21 50.1	+1.4
DSLB				*eS*		Sn	07 21 59.0	+1.3
DLPL	**La Plaine**	**0.68**	**185**	⇑*iP*		Pn	07 21 50.9	+1.3
DLPL				*eS*		Sn	07 22 00.8	+1.5
MDN	**Morne-Daniel**	**0.72**	**196**	*eP*		Pn	07 21 51.8	+1.7
MDN				*eS*		Sn	07 22 02.5	+2.3
ANBD	**Bethesda, Anti**	**1.17**	**332**	⇑*iP*		Pb	07 21 57.8	+0.6
ANBD				*eS*		Sb	07 22 13.3	+1.3
SVN	**Savane Anatole**	**1.17**	**179**	*eP*		Pb	07 21 57.8	+0.4
MLYT	**Lee's Yard**	**1.19**	**306**	*eP*		Pb	07 21 59.5	+1.8
MLYT				*eS*		Sb	07 22 16.2	+3.5
BAMF	**Morne Balai**	**1.19**	**178**	*eP*		Pb	07 21 58.3	+0.5
PCM	**Pelee Case Pet**	**1.19**	**181**	*eP*		Pb	07 21 58.1	+0.4
PCM	**Pelee Case Pet**	**1.19**	**181**	*eP*		Pb	07 21 58.9	+1.2
CXM	**Morne La Croix**	**1.20**	**179**	*eP*		Pb	07 21 58.7	+0.9
GBMF	**Grand Be**	**1.21**	**179**	*eP*		Pb	07 21 58.4	+0.3
MBFL	**Flemmings, Mon**	**1.22**	**307**	*eP*		Pb	07 21 59.5	+1.3
MBFL				*eS*		Sb	07 22 15.3	+1.7
PML	**Morne Lenard**	**1.23**	**180**	*eP*		Pb	07 21 58.6	+0.3
ILAM	**Ilet Lapin Mar**	**1.27**	**166**	*eP*		Pb	07 21 58.6	-0.4
ILAM				*eS*		Sb	07 22 15.6	+0.7
FDF	**Fort de France**	**1.27**	**178**	*eP*		Pb	07 21 59.1	0.0
FDF				*eS*		Sb	07 22 16.0	+0.9
ZAM	**Aeronautique**	**1.44**	**174**	*eP*		Pb	07 22 01.6	-0.3
LPMF	**Morne Lapointe**	**1.45**	**171**	*eP*		Pb	07 22 01.4	-0.7
TRMF	**Trois Ilets**	**1.48**	**175**	*eP*		Pb	07 22 02.3	-0.3
MVM	**Montagne Vaucl**	**1.48**	**169**	*eP*		Pb	07 22 02.3	-0.3
BIM	**Bigot**	**1.49**	**176**	*eP*		Pb	07 22 02.9	0.0
BIM				*eS*		Sb	07 22 21.4	0.0
MPOM	**Morne Pois Mar**	**1.59**	**168**	*eP*		Pb	07 22 03.9	-0.7
MPOM				*eS*		Sb	07 22 23.5	-0.8
ANWB	**Willy Bob**	**1.74**	**341**	*eP*		Pb	07 22 05.8	-1.3
ANWB				*eS*		Sb	07 22 27.4	-1.1
SLBI	**Saint Lucia, B**	**1.99**	**174**	*eP*		Pb	07 22 09.9	-1.4
SLBI				*eS*		Sn	07 22 33.5	+1.8
SLW	**Petit Monier**	**2.00**	**173**	*eP*		Pn	07 22 08.6	+0.8
SLW				*eS*		Sb	07 22 34.8	-1.1
SLCP	**Castries, St.**	**2.00**	**174**	*eS*		Sn	07 22 33.9	+1.9
SLB	**Belfond**	**2.18**	**176**	*eP*		Pb	07 22 13.7	-0.8
SLB				*eS*		Sb	07 22 38.8	-2.3
SLDE	**Delcer**	**2.20**	**177**	*eP*		Pn	07 22 10.8	+0.3
MCLT	**Moule a Chique**	**2.31**	**174**	*eP*		Pn	07 22 14.5	-2.2
MCLT				*eS*		Sn	07 22 41.3	+1.8
SMRT	**St. Maarten**	**2.71**	**319**	*eP*		Pn	07 22 20.2	+2.6
SMRT				*eS*		Sn	07 22 51.7	+2.2
SVB	**Belmont**	**2.73**	**181**	*eP*		Pn	07 22 20.3	+2.5
SVB				*eS*		Sn	07 22 51.7	+1.8
BBGH	**Gun Hill**	**3.26**	**151**	*eP*		Pn	07 22 27.2	+2.1
GCMP	**Grenada, Carri**	**3.52**	**184**	*eP*		Pn	07 22 30.8	+2.2
GRGR	**Grenville**	**3.89**	**187**	*eP*		Pn	07 22 36.8	+3.1
GRFF	**Grenada Fort F**	**3.98**	**188**	*eP*		Pn	07 22 37.5	+2.5
GRFF				*eS*		Sn	07 23 21.7	+1.0
TOSP	**Speyside**	**4.73**	**172**	*eP*		Pn	07 22 48.0	+2.7
TOSP	**Speyside**	**4.73**	**172**	*eS*		Sn	07 23 40.2	+0.9
TRN	**Trinidad (W)**	**5.34**	**182**	*eP*		Pn	07 22 55.5	+1.9
BAUV	**El Baul**	**9.70**	**224**	*eP*		Pn	07 23 55.2	+1.6
BAUV	**El Baul**	**9.70**	**224**	*eS*		Sn	07 25 38.6	-3.1

MOS ***19*** *07:32:21.6±1.1,55.32S×31.87W,h13km,mb6.8/33, MS7.5/31,Error ellipse: s-maj=13.9km s-min=8.2km az=106.3 Broadband fault plane solution: P waves. NP1:ϕs357.00000°,δ78.00000°,λ144.00000°. NP2: ϕs95.00000°,δ55.00000°,λ14.00000°. Principal axes: T Plg33.0000°, Azm310.0000°; N Plg53.0000°, Azm162.0000°; P Plg15.0000°, Azm51.0000°;*

NEIC ***19*** *07:32:22.7±1.6,55.29S±0.08×31.9W±0.1,h10km±1km, mb6.8/274,Ms_20 7.3/466,Mwc7.4/119,Www7.4 Error ellipse: s-maj=13.2km s-min=12.4km az=43.0*

BJI ***19*** *07:32:23.0±0.0,55.30S×31.90W,h10km,mB7.0/30, Ms7.8/59,Ms7 7.7/60*

IDC ***19*** *07:32:24.7±3.3,55.24S×31.66W,h26km±21km,mb5.8/23, mbtmp6.0/24,ML5.5/1,MS7.2/40,Error ellipse: s-maj=14.6km s-min=10.7km az=52.0*

NEIC ***19*** *07:32:36,55.14S×31.59W,h24km,Moment Tensor Solution. Duration: 28s0 Moment tensor: Scale 10^20Nm; Mrr1.19; Mθθ-0.83; Mϕϕ-0.36; Mrθ-0.75; Mϕϕ0.74; Mϕr0.39; Fault plane solution: Mo1.55000×10^20 NP1: ϕs133.00000°,δ29.00000°,λ100.00000°. NP2: ϕs301.00000°,δ62.00000°,λ84.00000°. Principal axes: T 1.4535, Plg73.0000°, Azm197.0000°; N 0.1694, Plg5.0000°, Azm304.0000°; P -1.6229, Plg17.0000°, Azm35.0000°;*

GCMT ***19*** *07:32:37.7±0.1,55.16S±0.01×31.41W±0.01,h22km, MW7.5/174,Moment Tensor Solution. s174,c436; s174,c869; Duration: 13s1 Moment tensor: Scale 10^20 Nm; Mrr1.31±.01; Mθθ-0.87±.00; Mϕϕ-0.43±.00; Mrθ-0.85±.03; Mθϕ0.80±.00; Mϕr1.04±.03; Best double couple: Mo1.93900×10^20 NP1:ϕs317.00000°,δ67.00000°, λ99.00000°. NP2:ϕs116.00000°,δ24.00000°,λ70.00000°. Principal axes: T 1.8750, Plg67.0000°, Azm243.0000°; N 0.1320, Plg8.0000°, Azm134.0000°; P -2.0030, Plg22.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

NEIC ***19*** *07:32:43.1,54.62S×31.58W,h25km,Moment Tensor Solution. Duration: 28s9 Moment tensor: Scale 10^20Nm; Mrr1.36; Mθθ-0.86; Mϕϕ-0.49; Mrθ-1.06; Mθϕ0.80; Mϕr-0.08; Fault plane solution: Mo1.78000×10^20 NP1: ϕs285.82000°,δ63.41000°,λ67.38000°. NP2: ϕs148.76000°,δ34.36000°,λ127.54000°. Principal axes: T 1.8450, Plg64.0000°, Azm157.0000°; N -0.1329, Plg20.0000°, Azm296.0000°; P -1.7121, Plg15.0000°, Azm32.0000°;*

ISC 19 07:32:23.6±0.4,**55.37S**±0.03×**31.99W**±0.03,**h15**km±2km, **h15**km:**pP-P,n2595,c2966**/2773,**mb6.7**/212,**MS7.4**/348, **184C-111D,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.82**	**291**	Pn		**Pn**	**07 33 08.3**	**+0.3**
HOPE	**Hope Point**	**2.82**	**291**	*eP*		**Pn**	**07 33 08.3**	**+0.3**
HOPE	**Hope Point**	**2.82**	**291**	*i* P		**Pn**	**07 33 10.2**	**+2.2**
HOPE				*i* S		**Sn**	**07 33 35.8**	**-5.8**
HOPE				IAML			07 34 10.7	
	comp=Z,275μm,1.2s							
HOPE	**Hope Point**	**2.82**	**291**	⇑P		**Pn**	**07 33 08.2**	**+0.2**
ORCD	**Orcadas**	**8.63**	**226**	Pn		**Pn**	**07 34 25.8**	**-2.0**
ORCD	**Orcadas**	**8.63**	**226**	*i* P		**Pn**	**07 34 25.9**	**-1.8**
ORCD				IAML			07 36 33.6	
	comp=Z,1μm,2.6s							
ESPZ	**Base Esperanza**	**14.98**	**227**			Pn	07 35 41.5	-13
ESPZ	**Base Esperanza**	**14.98**	**227**	*i* P		**Pn**	**07 35 51.2**	**-3.1**
JUBA	**Jubany**	**15.35**	**233**	*i* P		**Pn**	**07 35 54.8**	**-4.5**
EFI	**East Falkland**	**15.90**	**273**	Pn		**Pn**	**07 36 06.1**	**-0.4**
EFI				IAmb		IAmb	07 36 15.5	
	comp=Z,8μm,1.8s							
EFI	**East Falkland**	**15.90**	**273**	*c* i P		**Pn**	**07 36 07.1**	**+0.6**
EFI	**East Falkland**	**15.90**	**273**	*i* P		**Pn**	**07 36 02.8**	**-3.7**
EFI	**East Falkland**	**15.90**	**273**	⇑P		**Pn**	**07 36 05.7**	**-0.8**
PMSA	**Palmer Station**	**18.35**	**226**	P		**P**	**07 36 40.8**	**+3.7**
	comp=Z,14nm,0.3s,baz=68,slow=8.9,SNR=94							
PMSA				S		**S**	**07 40 12.5**	**+6.4**
	comp=Z,78nm,1.2s,baz=86,slow=14,SNR=1.0							
PMSA				LR		LR	07 43 27.2	
	comp=Z,596μm,18.0s,baz=74,slow=36 comp=Z,766nm,0.9s							
PMSA	**Palmer Station**	**18.35**	**226**	P		**P**	**07 36 39.6**	**+2.5**
PMSA	**Palmer Station**	**18.35**	**226**	⇑P		**P**	**07 36 40.8**	**+3.7**
VNA1	**Neumayer--Stat**	**18.51**	**155**	P		**Pn**	**07 36 40.5**	**+1.5**
I27DE	**GEORG VON NEUM**	**18.54**	**155**	P		Pn	07 36 48.7	+9.4
	baz=315,slow=15,SNR=1.3							
I27DE				*i*			09 36 30.0	
	baz=316,slow=326,SNR=0.5							
VNA3	**Neumayer Olymp**	**18.61**	**157**	P		**Pn**	**07 36 41.0**	**+0.7**
VNA2	**Neumayer--Watz**	**18.91**	**155**	P		**Pn**	**07 36 43.7**	**-0.2**
	baz=316,slow=12							
MG01	**Puerto William**	**20.24**	**256**	P		Pn	07 36 59.3	-0.5
SNAA	**Sanae**	**20.52**	**154**	P		**P**	**07 37 01.2**	**+0.4**
SNAA	**Sanae**	**20.52**	**154**	P		**P**	**07 37 01.0**	**+0.2**
	comp=Z,155nm,0.8s,baz=308,slow=8.6,SNR=252							
SNAA				S		**S**	**07 40 51.3**	**+1.7**
	comp=Z,71nm,0.7s,baz=279,slow=10,SNR=2.1 comp=Z,155nm,0.8s							
SNAA	**Sanae**	**20.52**	**154**	P		**P**	**07 37 00.0**	**-0.8**
SNAA	**Sanae**	**20.52**	**154**	*eP*		**P**	**07 37 00.0**	**-0.8**
SNAA	**Sanae**	**20.52**	**154**	⇑*iP*		**P**	**07 37 00.6**	**-0.2**
SMAI	**San Martin Ant**	**20.58**	**218**	P		Pn	07 37 04.3	+0.6
SMAI				IAmb		IAmb	07 37 14.8	
	comp=Z,14μm,2.3s							
USHA	**Ushuaia**	**20.71**	**256**	P		Pn	07 37 04.9	-0.4
	comp=Z,443nm,0.9s,baz=89,slow=9.3,SNR=44							
USHA				LR		LR	07 43 33.9	
	comp=Z,673μm,21.3s,baz=100,slow=32 comp=Z,443nm,0.9s							
MG02	**Cerro Sombrero**	**21.83**	**261**	P		**P**	**07 37 15.3**	**+0.3**
TROLL	**Troll, Antarti**	**22.10**	**152**	P		**P**	**07 37 17.4**	**-0.5**
BELA	**Belgrano 2**	**22.63**	**181**	P		**P**	**07 37 24.2**	**+0.8**
BELA				IAmb		IAmb	07 37 34.2	
	comp=Z,6μm,1.5s							
TRIS	**Tristan da Cun**	**22.67**	**44**	P		**P**	**07 37 22.0**	**-2.1**
TRIS				IAMs_20		IAMs_20	07 43 33.7	
	comp=Z,1749μm,22.0s							
GO10	**Punta Arenas**	**22.72**	**259**	P		**P**	**07 37 26.3**	**+1.7**
GO10				IAmb		IAmb	07 37 43.4	
	comp=Z,5μm,0.9s							
GO10	**Punta Arenas**	**22.72**	**259**	⇑P		**P**	**07 37 26.1**	**+1.5**
MG04	**Isla Riesco**	**23.12**	**260**	P		**P**	**07 37 30.1**	**+1.4**
MG05	**Puerto Natales**	**24.12**	**262**	P		**P**	**07 37 38.3**	**-0.1**
MG05				IAmb		IAmb	07 37 54.7	
	comp=Z,3μm,0.9s							
GO09	**Cerro Castillo**	**24.20**	**263**	P		**P**	**07 37 39.1**	**0.0**
GO09				IAmb		IAmb	07 37 60.0	
	comp=Z,3μm,1.2s							
NVL	**N'lazarevskaya**	**24.34**	**146**	*eP*		**P**	**07 37 39.0**	**-1.3**
NVL				*eS*		**S**	**07 41 52.7**	**-5.9**
NVL				pmax		pmax		
	comp=Z,579nm,1.0s							
NVL				MLR		MLR		
	comp=Z,324μm,20.0s							
COYC	**Coyhaique**	**26.98**	**274**	P		**P**	**07 38 05.5**	**+1.1**
COYC	**Coyhaique**	**26.98**	**274**	⇑P		**P**	**07 38 05.7**	**+1.3**
LPA	**La Plata**	**27.17**	**308**	*i* P		**P**	**07 37 59.9**	**-6.2**
LPA				pP		**sP**	**07 38 12.0**	**+0.6**
LPA				sP		**pwP**	**07 38 15.5**	**+1.8**
LPA				PP		**PnPn**	**07 38 48.1**	**-1.2**
LPA				PPP		PPP	07 39 06.7	
LPA				PCP		PcP	07 41 15.0	-11
LPA				S		**S**	**07 42 50.6**	**+6.6**
LPA				PPS		PPS	07 43 00.9	
LPA				SS		**SnSn**	**07 43 53.2**	**+1.8**
LPA				SSS		SSS	07 44 24.8	
LPA				SCS		**ScS**	**07 48 59.5**	**+2.6**
LPA				PKIKP		PKiKP	07 49 18.8	+15
LPA				SKIKP			07 52 33.1	
LPA				PKIKS			07 52 40.5	
LPA				SKIKS			07 56 02.6	
AY01	**Puyuhuapi**	**27.99**	**276**	P		**P**	**07 38 13.9**	**+0.5**
AY01				IAmb		IAmb	07 38 35.3	
	comp=Z,1μm,1.1s							
PLTB	**Pedras Altas**	**28.09**	**318**	P		**P**	**07 38 14.0**	**-0.5**
PLTB	**Pedras Altas**	**28.09**	**318**	*eP*		**P**	**07 38 14.0**	**-0.5**
LL02	**Futaleuf**	**28.30**	**279**	P		**P**	**07 38 16.3**	**0.0**
LL02				IAmb		IAmb	07 38 37.0	
	comp=Z,1μm,1.2s							
LL01	**San Ignacio de**	**29.14**	**279**	P		**P**	**07 38 23.0**	**-0.7**
PLCA	**Paso Flores**	**29.20**	**284**	P		**P**	**07 38 24.6**	**+0.3**
	comp=Z,297nm,1.0s,baz=138,slow=9.0,SNR=103							
PLCA				LR		LR	07 50 26.7	
	comp=Z,378μm,20.8s,baz=132,slow=37 comp=Z,297nm,1.0s							
PLCA	**Paso Flores**	**29.20**	**284**	P		**P**	**07 38 23.8**	**-0.5**
PLCA				IAmb		IAmb	07 38 35.4	
	comp=Z,3μm,1.7s							
PLCA	**Paso Flores**	**29.20**	**284**	⇑P		**P**	**07 38 24.2**	**-0.1**
PLCA	**Paso Flores**	**29.20**	**284**	*eP*		**P**	**07 38 24.5**	**+0.1**
CPSB	**Cacapava Do Su**	**29.25**	**320**	*eP*		**P**	**07 38 24.9**	**+0.2**
CNLB	**Canela**	**29.34**	**325**	*eP*		**P**	**07 38 25.9**	**+0.3**
GO07	**Milladeo Hill,**	**29.38**	**277**	P		**P**	**07 38 24.1**	**-1.7**
LL07	**Hotel Espejo d**	**29.45**	**278**	P		**P**	**07 38 24.3**	**-2.1**
TER01	**Tubaro-SC**	**29.52**	**328**	*eP*		**P**	**07 38 27.4**	**+0.2**
LL03	**Petrohue**	**29.96**	**281**	P		**P**	**07 38 30.1**	**-0.8**
LL03				IAmb		IAmb	07 39 01.1	
	comp=Z,709nm,0.8s							
RODS	**Rosario do Sul**	**29.96**	**317**	*eP*		**P**	**07 38 30.7**	**-0.4**
LL04	**Puerto Octay**	**30.11**	**282**	P		**P**	**07 38 31.9**	**-0.4**
LL05	**Los Muermos**	**30.38**	**280**	P		**P**	**07 38 33.9**	**-0.8**
GO06	**Curarrehue**	**30.50**	**285**	P		**P**	**07 38 34.6**	**-1.3**
ALGR	**Alto Alegre (B**	**30.55**	**322**	*eP*		**P**	**07 38 36.9**	**+0.5**
LR03	**Panguipulli**	**30.95**	**284**	P		**P**	**07 38 38.9**	**-0.9**
LR03				IAmb		IAmb	07 38 42.3	
	comp=Z,4μm,2.3s							
UNIS	**Unistalda (Bra**	**31.06**	**318**	*eP*		**P**	**07 38 41.0**	**+0.2**
ITQB	**Itaqui**	**31.13**	**315**	P		**P**	**07 38 40.5**	**-0.9**
ITQB				IAmb		IAmb	07 39 00.2	
	comp=Z,2μm,1.4s							
ITQB	**Itaqui**	**31.13**	**315**	*eP*		**P**	**07 38 41.2**	**-0.2**
LR04	**Corral**	**31.39**	**282**	P		**P**	**07 38 43.0**	**-0.6**
ITAB	**Concordia**	**31.68**	**324**	P		**P**	**07 38 46.2**	**-0.1**
ITAB				IAmb		IAmb	07 39 11.2	
	comp=Z,2μm,1.5s							
ITAB	**Concordia**	**31.68**	**324**	*eP*		**P**	**07 38 46.1**	**-0.1**
CRSM	**Crissiumal (Br**	**32.10**	**321**	*eP*		**P**	**07 38 49.6**	**-0.3**
PET01	**Itanhaem-SP**	**33.03**	**334**	*eP*		**P**	**07 38 57.9**	**-0.2**
ML02	**Panimavida**	**33.24**	**290**	P		**P**	**07 38 59.1**	**-0.8**
BI05	**Punta Hualpn**	**33.48**	**286**	P		**P**	**07 39 01.8**	**-0.1**
BI05				IAmb		IAmb	07 39 08.6	
	comp=Z,2μm,1.6s							
PARB	**Paraibuna**	**33.55**	**337**	*eP*		**P**	**07 39 02.8**	**+0.1**
BO02	**Sierra Bellavi**	**33.63**	**291**	P		**P**	**07 39 02.9**	**-0.5**
MAN01	**Angra dos Reis**	**33.66**	**340**	*eP*		**P**	**07 39 03.6**	**0.0**
PTGB	**Pitanga**	**34.00**	**326**	*eP*		**P**	**07 39 05.9**	**-0.7**
LMEL	**Las Melosas**	**34.05**	**293**	P		**P**	**07 39 06.7**	**-0.5**
GO05	**Huala**	**34.08**	**290**	P		**P**	**07 39 06.8**	**-0.4**
BO01	**Tunca**	**34.10**	**292**	P		**P**	**07 39 06.8**	**-0.5**
VAS01	**Vassouras-RJ**	**34.13**	**341**	*eP*		**P**	**07 39 08.0**	**+0.3**
DUB01	**Friburgo-RJ**	**34.13**	**343**	*eP*		**P**	**07 39 08.6**	**+0.8**
VAO	**Valinhos**	**34.19**	**335**	*eP*		**P**	**07 39 08.8**	**+0.5**
CAM01	**Campos-RJ**	**34.27**	**344**	*eP*		**P**	**07 39 09.2**	**+0.4**
CPUP	**Villa Florida**	**34.38**	**317**	P		**P**	**07 39 08.8**	**-1.1**
	comp=Z,621nm,1.1s,baz=154,slow=8.2,SNR=288							
CPUP				LR		LR	07 55 16.4	
	comp=Z,268μm,18.5s,baz=162,slow=40 comp=Z,621nm,1.1s							
CPUP	**Villa Florida**	**34.38**	**317**	P		**P**	**07 39 09.6**	**-0.2**
CPUP				IAmb		IAmb	07 39 24.5	
	comp=Z,948nm,1.1s							
CPUP	**Villa Florida**	**34.38**	**317**	P		**P**	**07 39 09.6**	**-0.2**
CPUP				pmax		pmax		
	comp=Z,948nm,1.1s							
CPUP	**Villa Florida**	**34.38**	**317**	⇑P		**P**	**07 39 09.0**	**-0.8**
CPUP	**Villa Florida**	**34.38**	**317**	*eP*		**P**	**07 39 09.8**	**0.0**
MT03	**Universidad Ad**	**34.49**	**293**	P		**P**	**07 39 10.6**	**-0.3**
MT03				IAmb		IAmb	07 39 44.6	
	comp=Z,992nm,1.0s							
MT09	**Talagante**	**34.52**	**292**	P		**P**	**07 39 10.6**	**-0.6**
MT09				IAmb		IAmb	07 39 28.8	
	comp=Z,1μm,1.1s							
MT01	**Popeta**	**34.59**	**292**	P		**P**	**07 39 10.8**	**-0.8**
MT01				IAmb		IAmb	07 39 29.2	
	comp=Z,1μm,1.0s							
MT05	**Renca**	**34.69**	**293**	P		**P**	**07 39 11.6**	**-0.9**
PEL	**Peldehue**	**34.85**	**293**	P		**P**	**07 39 14.2**	**+0.2**
PEL	**Peldehue**	**34.85**	**293**	P		**P**	**07 39 14.2**	**+0.2**
PEL				pmax		pmax		
	comp=Z,3μm,1.2s							
PEL				MLR		MLR		
	comp=Z,155μm,19.0s							
PEL	**Peldehue**	**34.85**	**293**	⇑P		**P**	**07 39 13.8**	**-0.2**
RCLB	**Rio Claro- Sao**	**34.89**	**334**	*eP*		**P**	**07 39 14.8**	**+0.5**
MCR1	**Marechal Candi**	**34.89**	**323**	*eP*		**P**	**07 39 13.6**	**-0.7**
QSPA	**South Pole Qui**	**34.89**	**180**	LR		LR	07 53 00.9	
	comp=Z,373μm,18.8s,baz=190,slow=35							
QSPA	**South Pole Qui**	**34.89**	**180**	P		**P**	**07 39 15.0**	**+1.0**
QSPA	**South Pole Qui**	**34.89**	**180**	IAMs_20		IAMs_20	07 56 11.0	
	comp=Z,669μm,18.0s				

AF01 San Pedro de A 42.01 306 P P 07 40 15.1 +0.7
MAW Mawson 42.29 145 P P 07 40 15.7 -0.2
comp=Z,200nm,0.8s,baz=223,slow=7.2,SNR=105
MAW LR LR 07 55 58.3
comp=Z,454µm,19.5s,baz=249,slow=33
comp=Z,200nm,0.8s
MAW Mawson 42.29 145 P P 07 40 15.5 -0.3
baz=42,SNR=389
MAW Mawson 42.29 145 P P 07 40 15.5 -0.3
MAW Mawson 42.29 145 ⇑P P 07 40 15.4 -0.5
MATJ Matjiesfontein 42.36 81 ⇓iP P 07 40 15.1 -1.9
MATJ IAmb IAmb 07 40 34.5
comp=Z,974nm,1.1s
PB15 IPOC Station P 42.39 304 P P 07 40 17.7 +0.2
LVC Limon Verde 42.64 305 P P 07 40 20.7 +1.1
comp=Z,135nm,0.7s,baz=148,slow=8.9,SNR=85
LVC LR LR 07 58 36.1
comp=Z,108µm,20.4s,baz=162,slow=37
comp=Z,135nm,0.7s
LVC Limon Verde 42.64 305 P P 07 40 19.7 0.0
LVC IAmb IAmb 07 40 46.2
comp=Z,1µm,1.1s
LVC Limon Verde 42.64 305 eP P 07 40 20.6 +0.9
PB06 IPOC Station P 42.87 304 P P 07 40 21.3 0.0
PB06 IAmb IAmb 07 40 41.6
comp=Z,5µm,2.2s
SUR Sutherland 43.14 80 LR LR 07 56 25.4
comp=Z,494µm,18.0s,baz=216,slow=34
SUR Sutherland 43.14 80 P P 07 40 22.1 -1.4
SUR Sutherland 43.14 80 IAms_20 IAms_20 07 56 25.4
comp=Z,546µm,18.0s
SUR Sutherland 43.14 80 P P 07 40 22.8 -0.7
SUR S S 07 46 49.1 -0.2
SUR Sutherland 43.14 80 ⇑P P 07 40 22.1 -1.4
CVNA Calvinia 43.23 78 ⇓iP P 07 40 20.1 -3.9
CVNA IAmb IAmb 07 40 36.3
comp=Z,1µm,1.2s
KOMG Komaggas 43.25 75 ⇑iP P 07 40 21.0 -3.1
KOMG IAmb IAmb 07 40 35.6
comp=Z,267nm,1.2s
MERW Merweville 43.33 81 ⇓iP P 07 40 22.8 -2.0
MERW IAmb IAmb 07 40 35.8
comp=Z,803nm,1.1s
SALV Santo Antonio 43.40 326 eP P 07 40 24.5 -0.9
PB04 IPOC Station P 43.46 304 P P 07 40 26.2 +0.1
PB09 IPOC Station P 43.49 305 P P 07 40 27.4 +1.0
PB09 IAmb IAmb 07 40 40.8
comp=Z,1µm,1.0s
FRAZ Fraserburg 43.82 80 ⇓iP P 07 40 28.3 -0.5
FRAZ IAmb IAmb 07 40 40.2
comp=Z,2µm,1.4s
PB07 IPOC Station P 43.86 304 P P 07 40 29.3 0.0
PB07 IAmb IAmb 07 40 47.5
comp=Z,1µm,1.1s
GRAN Grantham 43.97 81 eP P 07 40 28.5 -1.5
GRAN IAmb IAmb 07 40 47.4
comp=Z,478nm,0.9s
ROSN Rosenhof 43.99 85 eP P 07 40 29.8 -0.2
ROSN IAML 07 40 42.4
comp=Z,254nm,0.8s
KROM Kromhout 44.01 85 eP P 07 40 29.8 -0.3
KROM IAmb IAmb 07 40 42.0
comp=Z,2µm,1.0s
SDBA SAO DESIDERIO 44.03 342 eP P 07 40 30.1 -0.5
SHEL Horse Pasture 44.20 38 P P 07 40 30.2 -1.7
SHEL Horse Pasture 44.20 38 P P 07 40 30.2 -1.7
SHEL Horse Pasture 44.20 38 ⇓P P 07 40 30.5 -1.4
PB02 IPOC Station P 44.21 305 P P 07 40 32.3 +0.2
PB01 IPOC Station P 44.26 305 P P 07 40 32.9 +0.5
PB01 IAmb IAmb 07 40 48.4
comp=Z,927nm,0.8s
NBLA Lagarto - SE 44.50 352 eP P 07 40 34.0 -0.3
ROOI Rooidraai Farm 44.61 83 ⇓iP P 07 40 32.1 -3.0
ROOI IAmb IAmb 07 40 43.2
comp=Z,4µm,2.1s
BRAK Brakfontein 44.77 82 ⇓iP P 07 40 34.7 -1.7
BRAK IAmb IAmb 07 40 53.9
comp=Z,10µm,2.9s
PTLB Pontes e Lacer 44.99 322 P P 07 40 37.7 -0.4
PTLB IAmb IAmb 07 41 13.3
comp=Z,5µm,1.9s
PTLB Pontes e Lacer 44.99 322 eP P 07 40 37.5 -0.6
TA01 Diego Aracena 44.99 305 P P 07 40 38.5 +0.4
TA01 IAmb IAmb 07 40 56.4
comp=Z,1µm,1.2s
SIV San Ignacio 45.20 319 P P 07 40 38.7 -1.1
comp=Z,85nm,0.8s,baz=155,slow=7.6,SNR=174
SIV LR LR 08 02 05.4
comp=Z,95µm,18.5s,baz=170,slow=39
comp=Z,85nm,0.8s
BFON Badsfontein, M 45.20 82 ⇓iP P 07 40 38.3 -1.6
BFON IAmb IAmb 07 40 56.7
comp=Z,560nm,1.0s
TA02 Huaiquique 45.23 305 P P 07 40 40.5 +0.5
TA02 IAmb IAmb 07 40 55.5
comp=Z,645nm,0.9s
GRAF Camdeboo Natio 45.30 83 ⇓iP P 07 40 38.9 -1.7
GRAF IAmb IAmb 07 40 52.5
comp=Z,1µm,1.1s
GO01 Chusmiza 45.31 307 P P 07 40 40.6 -0.7
SOE Somerset East 45.59 85 P P 07 40 41.5 -1.4
SOE Somerset East 45.59 85 ⇑iP P 07 40 40.2 -2.7
SOE IAmb IAmb 07 40 52.9
comp=Z,5µm,2.0s
SOE Somerset East 45.59 85 ⇑P P 07 40 41.1 -1.7
NBAN Anadia - AL 45.71 354 eP P 07 40 42.4 -1.4
AUGR Augrabies 45.75 76 ⇑iP P 07 40 42.0 -2.3
AUGR IAmb IAmb 07 40 55.4
comp=Z,2µm,1.4s
SNDB Serra Nova Dou 45.85 333 eP P 07 40 44.7 -0.3
KEIM Keimoes 46.02 77 eP P 07 40 44.7 -1.6
KEIM IAmb IAmb 07 40 57.6
comp=Z,2µm,1.4s
PKA Prieska 46.28 80 eP P 07 40 48.4 0.0
PKA IAmb IAmb 07 41 09.3
comp=Z,734nm,2.0s
UPI Upington 46.44 77 ⇓iP P 07 40 46.2 -3.4
UPI IAmb IAmb 07 41 00.7
comp=Z,1µm,1.4s
SBA Scott Base 46.54 185 P P 07 40 50.8 +1.1
SBA IAmb IAmb 07 41 20.3
comp=Z,794nm,1.4s
SBA Scott Base 46.54 185 P P 07 40 50.8 +1.1
SBA pmax pmax
comp=Z,794nm,1.4s
SBA MLR MLR
comp=Z,144µm,20.0s
PB16 IPOC Station P 46.62 307 P P 07 40 52.0 +0.3
PB16 IAmb IAmb 07 41 15.5
comp=Z,3µm,2.0s
NBRF Rio Formoso - 46.63 356 eP P 07 40 49.6 -1.4
PB12 IPOC Station P 46.75 306 P P 07 40 52.1 -0.1
PB12 IAmb IAmb 07 41 29.4
comp=Z,952nm,1.2s
VNDA Vanda 47.10 184 P P 07 40 55.6 +1.5
comp=Z,37nm,0.7s,baz=178,slow=6.0,SNR=182
comp=Z,37nm,0.7s
VNDA Vanda 47.10 184 P P 07 40 55.3 +1.2
HVD Gariep Dam 47.12 83 ⇓iP P 07 40 53.3 -1.7
HVD IAmb IAmb 07 41 03.5
comp=Z,1µm,1.3s
PB18 Visviri 47.26 308 P P 07 40 57.4 +0.7
VILB Vilhena 47.67 321 P P 07 40 58.3 -1.0
VILB IAmb IAmb 07 41 13.3
comp=Z,1µm,1.0s
VILB Vilhena 47.67 321 eP P 07 40 58.1 -1.2
PDRB Porto dos Gac 47.76 326 eP P 07 40 58.7 -1.2
LPAZ La Paz 47.81 310 P P 07 41 01.6 +0.5
comp=Z,398nm,0.7s,baz=149,slow=6.4,SNR=462
LPAZ S S 07 47 57.6 0.0
comp=Z,14nm,0.9s,baz=212,slow=23,SNR=1.1
LPAZ LR LR 08 03 23.8
comp=Z,77µm,19.9s,baz=170,slow=39
comp=Z,398nm,0.7s
LPAZ La Paz 47.81 310 P P 07 41 00.7 -0.3
LPAZ La Paz 47.81 310 eP P 07 41 02.2 +1.2
LPAZ La Paz 47.81 310 ⇑P P 07 41 01.4 +0.5
LPAZ La Paz 47.81 310 eP P 07 41 01.6 +0.5
SMTB Santa Maria do 48.00 339 eP P 07 41 01.8 0.0
CLDB Colider 48.17 328 eP P 07 41 01.8 -1.3
H10S2 ASCENSION HYDR 48.28 23 T T 08 32 36.4
SNR=9.1
H10S3 ASCENSION HYDR 48.29 23 T T 08 33 09.3
SNR=69
BOSA Boshof 48.49 81 P P 07 41 03.3 -2.4
comp=Z,242nm,0.9s,baz=206,slow=7.2,SNR=91
BOSA S S 07 48 01.9 -4.3
comp=Z,9.2nm,0.9s,baz=45,slow=14,SNR=1.0
BOSA LR LR 07 57 05.4
comp=Z,553µm,21.2s,baz=229,slow=31
comp=Z,242nm,0.9s
BOSA Boshof 48.49 81 P P 07 41 03.1 -2.5
BOSA IAmb IAmb 07 41 23.1
comp=Z,1µm,1.1s
BOSA Boshof 48.49 81 ⇓iP P 07 41 02.5 -3.1
BOSA IAmb IAmb 07 41 22.8
comp=Z,1µm,1.2s
BOSA Boshof 48.49 81 *i* P P 07 41 04.7 -0.9
BOSA Boshof 48.49 81 *i* P P 07 41 04.7 -0.9
BOSA Boshof 48.49 81 ⇓P P 07 41 03.2 -2.4
KSTD Kokstad 49.27 86 ⇓iP P 07 41 10.3 -1.4
KSTD IAmb IAmb 07 41 22.7
comp=Z,10µm,2.2s
ASCN Ascension 49.34 23 P P 07 41 11.8 -0.3
ASCN IAmb IAmb 07 41 47.4
comp=Z,2µm,1.4s
H10N1 ASCENSION HYDR 49.40 23 P P 07 41 15.2 +3.0
baz=203,slow=10,SNR=11
H10N1 T T 08 34 28.8
baz=192,slow=75,SNR=90
H10N3 ASCENSION HYDR 49.40 23 P P 07 41 15.4 +3.2
baz=203,slow=10,SNR=8.8
H10N3 T T 08 34 34.0
baz=192,slow=75,SNR=144
H10N2 ASCENSION HYDR 49.41 23 P P 07 41 15.5 +3.2
baz=203,slow=10,SNR=11
H10N2 T T 08 34 27.9
baz=192,slow=75,SNR=117
RCBR Riachuelo 49.50 355 LR LR 08 00 25.3
comp=Z,280µm,18.0s,baz=322,slow=34
RCBR Riachuelo 49.50 355 P P 07 41 12.7 -0.6
RCBR Riachuelo 49.50 355 IAms_20 IAms_20 08 00 32.0
comp=Z,311µm,18.0s
RCBR Riachuelo 49.50 355 P P 07 41 12.7 -0.6
RCBR pmax pmax
comp=Z,141nm,1.2s
RCBR Riachuelo 49.50 355 ⇑P P 07 41 12.3 -1.0
RCBR Riachuelo 49.50 355 eP P 07 41 12.9 -0.4
SWZ Schweizer 49.63 80 ⇑iP P 07 41 11.9 -2.5
SWZ IAmb IAmb 07 41 31.4
comp=Z,1µm,1.1s
SNKL Senekal, Frees 50.17 83 ⇓iP P 07 41 16.4 -2.1
SNKL IAmb IAmb 07 41 29.6
comp=Z,3µm,1.2s
CRZF Crozet Islands 50.56 117 P P 07 41 20.8 -0.2
CRZF IAms_20 IAms_20 07 59 37.5
comp=Z,417µm,19.0s
CRZF Crozet Islands 50.56 117 ⇓P P 07 41 24.6 +3.5
PRYS Parys 50.98 81 ⇓iP P 07 41 22.6 -2.0
PRYS IAmb IAmb 07 41 41.7
comp=Z,1µm,1.0s
PRPB Parauapebas 51.09 337 eP P 07 41 25.1 -0.2
WDLM Western Deep L 51.40 81 ⇑iP P 07 41 26.4 -1.5
WDLM IAmb IAmb 07 41 45.0
comp=Z,581nm,1.0s
LBTB Lobatse 51.47 78 LR LR 07 59 18.9
comp=Z,257µm,21.6s,baz=214,slow=32
LBTB Lobatse 51.47 78 P P 07 41 25.8 -2.5
LBTB IAmb IAmb 07 41 40.1
comp=Z,1µm,1.0s
LBTB Lobatse 51.47 78 P P 07 41 25.8 -2.5
LBTB pmax pmax
comp=Z,1µm,1.0s
LBTB Lobatse 51.47 78 ⇓iP P 07 41 26.2 -2.1
LBTB IAmb IAmb 07 41 39.2
comp=Z,2µm,1.2s
LBTB Lobatse 51.47 78 *i* P P 07 41 26.3 -1.9
LBTB Lobatse 51.47 78 *i* P P 07 41 26.3 -1.9
LBTB Lobatse 51.47 78 ⇓P P 07 41 25.9 -2.5
KSR Koster 51.55 80 ⇓iP P 07 41 26.1 -2.9
KSR IAmb IAmb 07 41 46.1
comp=Z,2µm,1.0s
NPGB Novo Progresso 51.67 330 eP P 07 41 28.4 -1.3
NWCL Newcastle 51.79 84 ⇓iP P 07 41 27.3 -3.4
NWCL IAmb IAmb 07 41 39.5
comp=Z,6µm,2.0s
TSUM Tsumeb 51.81 66 LR LR 07 58 32.3
comp=Z,422µm,21.3s,baz=217,slow=30
TSUM Tsumeb 51.81 66 P P 07 41 28.8 -2.1
TSUM Tsumeb 51.81 66 IAms_20 IAms_20 07 58 20.7
comp=Z,434µm,21.0s
TSUM Tsumeb 51.81 66 ⇓iP P 07 41 28.3 -2.6
TSUM IAmb IAmb 07 41 36.5
comp=Z,467nm,1.0s
TSUM Tsumeb 51.81 66 *i* P P 07 41 28.5 -2.3
TSUM Tsumeb 51.81 66 *i* P P 07 41 28.5 -2.3
TSUM Tsumeb 51.81 66 ⇓P P 07 41 28.6 -2.3
HRAO HartRAO 51.96 81 ⇓iP P 07 41 28.5 -3.5
SLR Silverton 52.42 81 ⇓iP P 07 41 32.6 -2.8
SLR IAmb IAmb 07 41 44.6
comp=Z,6µm,2.2s
ETMB Extrema 52.82 316 P P 07 41 37.0 -1.3
ETMB IAmb IAmb 07 41 53.6
comp=Z,1µm,1.4s
ETMB Extrema 52.82 316 eP P 07 41 37.7 -0.6
POGA Pongola 53.12 86 P P 07 41 39.4 -1.0
POGA IAmb IAmb 07 41 50.1
comp=Z,902nm,1.0s
POGA Pongola 53.12 86 ⇓iP P 07 41 37.3 -3.1
POGA IAmb IAmb 07 41 50.2
comp=Z,8µm,2.3s
POGA Pongola 53.12 86 ⇓P P 07 41 38.4 -2.0
CRLN Carolina, Mapu 53.20 83 ⇓iP P 07 41 38.4 -2.8
CRLN IAmb IAmb 07 41 49.7
comp=Z,4µm,2.3s
ROSB Rosrio 53.22 345 eP P 07 41 40.8 -0.4
LEPH Lephalale, Lim 53.61 79 ⇓iP P 07 41 41.6 -2.5
LEPH IAmb IAmb 07 41 53.7
comp=Z,8µm,2.5s
ITTB Itaituba 54.32 330 eP P 07 41 48.6 -0.7
TMAB Tom-Au,PA,Br 54.42 340 eP P 07 41 50.5 +0.5
CASY Casey 55.42 163 P P 07 41 56.8 +0.2
CASY IAmb IAmb 07 42 22.6
comp=Z,697nm,1.1s
CASY Casey 55.42 163 ⇑P P 07 41 57.1 +0.5
NNA Nana 55.57 303 P P 07 41 58.4 +0.1
comp=Z,299nm,0.8s,baz=167,slow=6.4,SNR=46
NNA LR LR 08 08 54.9
comp=Z,57µm,18.0s,baz=146,slow=39
comp=Z,299nm,0.8s
NNA Nana 55.57 303 P P 07 41 58.3 -0.1
NNA Nana 55.57 303 *ce*P P 07 41 59.1 +0.8
NNA pmax pmax
comp=Z,4µm,1.4s
NNA MLR MLR
comp=Z,148µm,16.0s
NNA Nana 55.57 303 eP P 07 41 58.2 -0.1
NNA Nana 55.57 303 ⇑P P 07 41 58.7 +0.4
MOPA Mopani 55.91 82 eP P 07 41 58.2 -2.5
MOPA IAmb IAmb 07 42 09.9
comp=Z,866nm,1.2s
MOPA Mopani 55.91 82 *i* P P 07 41 59.9 -0.8
MOPA Mopani 55.91 82 *i* P P 07 41 59.9 -0.8
MUSN Musina, Limpop 56.01 80 ⇓iP P 07 41 58.9 -2.6
MUSN IAmb IAmb 07 42 09.6
comp=Z,848nm,0.9s
MUSN Musina, Limpop 56.01 80 *i* P P 07 42 00.9 -0.6
MUSN Musina, Limpop 56.01 80 *i* P P 07 42 00.9 -0.6
MALB Monte Alegre 56.33 333 eP P 07 42 03.0 -0.6
MATP Matopo 56.73 77 LR LR 08 03 00.2
comp=Z,342µm,21.6s,baz=215,slow=32
MATP Matopo 56.73 77 ⇓iP P 07 42 03.7 -3.0
MATP IAmb IAmb 07 42 16.2
comp=Z,2µm,1.1s
MATP Matopo 56.73 77 *i* P P 07 42 05.6 -1.1
MATP Matopo 56.73 77 *i* P P 07 42 05.6 -1.1
MACA Manacapuru-AM 56.97 325 P P 07 42 06.2 -2.0
MACA IAmb IAmb 07 42 20.1
comp=Z,3µm,1.6s
BLWY Bulawayo 57.02 77 ⇓iP P 07 42 05.2 -3.6
BLWY IAmb IAmb 07 42 23.9
comp=Z,5µm,1.1s
BLWY Bulawayo 57.02 77 *i* P P 07 42 07.3 -1.5
BLWY Bulawayo 57.02 77 *i* P P 07 42 07.3 -1.5
PAF Port-aux-Franc 57.17 130 IAms_20 IAms_20 08 02 23.4
comp=Z,371µm,20.0s
PAF Port-aux-Franc 57.17 130 ⇑P P 07 42 17.2 +7.9
MCPB Macapa, AP 57.22 336 eP P 07 42 10.1 0.0
CZSB Cruzeiro do Su 57.41 310 P P 07 42 10.1 -1.3
CZSB IAmb IAmb 07 42 27.7
comp=Z,5µm,2.0s
CZSB Cruzeiro do Su 57.41 310 *e*P P 07 42 10.2 -1.2
ATAH Atahualpa 60.53 304 LR LR 08 10 32.3
comp=Z,58µm,19.0s,baz=152,slow=38
ATAH PKPPKP 08 11 47.4
comp=Z,13nm,1.0s,baz=319,slow=5.2,SNR=4.6
LSZ Lusaka 60.73 74 LR LR 08 05 40.0
comp=Z,612µm,19.2s,baz=216,slow=33
LSZ Lusaka 60.73 74 P P 07 42 32.5 -2.0
LSZ IAmb IAmb 07 42 45.1
comp=Z,1µm,1.2s
LSZ Lusaka 60.73 74 P P 07 42 32.5 -2.0
LSZ pmax pmax
comp=Z,1µm,1.3s
LSZ Lusaka 60.73 74 *i* P P 07 42 33.7 -0.9
LSZ Lusaka 60.73 74 *i* P P 07 42 33.7 -0.9
RPN Rapa Nui 61.06 264 LR LR 08 03 50.6
comp=Z,126µm,20.0s,baz=134,slow=31
RPN Rapa Nui 61.06 264 P P 07 42 37.2 +0.6
RPN Rapa Nui 61.06 264 P P 07 42 37.2 +0.6
RPN pmax pmax
comp=Z,4µm,1.7s
RPN Rapa Nui 61.06 264 ⇑P P 07 42 38.9 +2.3
VA02 Isla de Pascua 61.10 263 P P 07 42 37.2 +0.5
BOAV Boa Vista 62.16 327 P P 07 42 42.3 -1.7
BOAV IAmb IAmb 07 42 56.8
comp=Z,690nm,1.0s
BOAV Boa Vista 62.16 327 eP P 07 42 42.8 -1.3
MDP Montagnes des 62.64 337 LR LR 08 09 50.8
comp=Z,115µm,20.0s,baz=149,slow=36
FOMA Nahampoana Res 63.65 96 P P 07 42 53.0 -0.9
FOMA Nahampoana Res 63.65 96 P P 07 42 53.9 0.0
SNR=20
BOSC San Juan Bosco 64.07 306 P P 07 42 56.7 -0.3
ARNL Arenillas 64.46 305 P P 07 43 00.0 +0.8
LIC Lamto 65.32 30 ⇓eP P 07 43 02.8 -2.1
comp=Z,3µm,1.5s
PTLC Puerto Leguiza 65.39 312 eP P 07 43 01.4 -4.0
KIC Kosan Boka 65.53 30 ⇑eP P 07 43 03.4 -2.8
comp=Z,582nm,1.0s
PORT Chimborazo Vol 65.69 307 P P 07 43 09.1 +1.0
CHSH Refugio Sur-Vo 65.71 307 P P 07 43 08.6 +0.5
CHSH IAmb IAmb 07 43 16.8
comp=Z,1µm,1.2s
TIC Toumodi 65.73 30 ⇑eP P 07 43 05.0 -2.5
comp=Z,3µm,1.5s
DBIC Dimbokro 65.80 30 P P 07 43 05.9 -2.0
comp=Z,210nm,0.9s,baz=201,slow=6.6,SNR=56
DBIC S S 07 51 49.6 -4.3
comp=Z,8.4nm,1.1s,baz=331,slow=20,SNR=1.0
DBIC LR LR 08 06 46.5
DBIC PKPPKP **P'P'df 08 11 40.4 +0.7**
comp=Z,10nm,1.1s,baz=329,slow=5.9,SNR=3.4
comp=Z,210nm,0.9s
DBIC Dimbokro 65.80 30 P P 07 43 05.9 -2.0
DBIC IAmb IAmb 07 43 18.6
comp=Z,2µm,1.8s
DBIC Dimbokro 65.80 30 ⇓iP P 07 43 05.4 -2.5
DBIC Dimbokro 65.80 30 ⇓P P 07 43 05.8 -2.0
VOI Vohitsoka 65.94 94 P P 07 43 07.9 -1.2
VOI IAmb IAmb 07 43 21.0
comp=Z,581nm,1.1s
VOI Vohitsoka 65.94 94 P P 07 43 09.6 +0.6
SNR=43
VOI Vohitsoka 65.94 94 P P 07 43 10.4 +1.3
SLOR San Lorenzo - 66.22 308 P P 07 43 12.1 +0.9
SLOR IAmb IAmb 07 43 20.4
comp=Z,764nm,1.3s
GUVC San Jose del G 66.63 315 eP P 07 43 10.9 -2.4
MACC Macarena, Meta 66.77 313 eP P 07 43 13.5 -0.8
PULU Pululahua 66.88 308 P P 07 43 16.8 +1.4
IMBA Imbabura, San 66.97 308 P P 07 43 18.0 +1.9
FLOC Florencia 67.02 311 eP P 07 43 15.5 -0.3
OTAV Otavalo 67.05 308 P P 07 43 17.9 +1.3
OTAV Otavalo 67.05 308 P P 07 43 17.9 +1.3
OTAV pmax pmax
comp=Z,2µm,1.3s
OTAV MLR MLR
comp=Z,83µm,20.0s
OTAV Otavalo 67.05 308 eP P 07 43 17.5 +0.9
OTAV Otavalo 67.05 308 ⇑P P 07 43 17.2 +0.6
OTAV Otavalo 67.05 308 eP P 07 43 17.1 +0.5
FLF1 Flavio Alfaro- 67.16 306 eP P 07 43 17.9 +1.1
PAC1 Pacto, Paraso 67.23 308 eP P 07 43 18.0 +0.7
CMBC Cumbal 67.40 309 eP P 07 43 20.9 +2.1
GARC Garzon, Huila 67.50 312 eP P 07 43 19.2 0.0
CRUC La Cruz 67.57 310 eP P 07 43 21.2 +1.4
BETC Betania 67.92 312 eP P 07 43 22.3 +0.7
PTGC Puerto Gaitan, 67.94 316 eP P 07 43 20.5 -1.1
BBAC Balboa, Cauca 68.11 310 eP P 07 43 23.0 +0.1
POPC Popayan, Colom 68.32 311 eP P 07 43 25.1 +0.8
EKNA AfricaArray - 68.44 45 ⇓iP P 07 43 25.1 +0.3
ABPO Ambohimpanom 68.47 92 P P 07 43 25.8 +0.6
ABPO IAmb IAmb 07 43 36.1
comp=Z,1µm,1.6s
ABPO Ambohimpanom 68.47 92 P P 07 43 25.8 +0.6
ABPO pmax pmax
comp=Z,1µm,1.7s
ABPO Ambohimpanom 68.47 92 ⇓P P 07 43 26.4 +1.2
VILC Villavicencio, 68.49 314 eP P 07 43 24.6 -0.6
TUMC Tumaco 68.58 309 eP P 07 43 25.6 -0.1
PRAC Prado 68.62 313 eP P 07 43 25.1 -0.8
OPO Ambohidratompo 68.80 92 LR LR 08 08 11.8
comp=Z,569µm,20.9s,baz=340,slow=31
CHIC Chingaza 68.97 315 eP P 07 43 27.8 -0.7
GR1C Gorgona, Isla 69.39 310 eP P 07 43 30.5 -0.1
ROSC El Rosal 69.40 314 P P 07 43 31.2 0.0
comp=Z,480nm,1.0s,baz=161,slow=3.9,SNR=37
ROSC S S 07 52 38.5 +0.5
comp=Z,5.0nm,0.5s,baz=234,slow=20,SNR=1.6
ROSC PKPPKP **P'P'df 08 11 37.5 +1.8**
comp=Z,3.7nm,0.4s,baz=96,slow=2.5,SNR=5.8
comp=Z,480nm,1.0s
ROSC El Rosal 69.40 314 P P 07 43 31.1 -0.1
ROSC El Rosal 69.40 314 eP P 07 43 31.1 0.0
YOTC Yotoco, Valle 69.48 312 eP P 07 43 27.4 -3.9
AIS Amsterdam Isla 69.53 127 P P 07 43 31.8 +0.5
AIS IAms_20 IAms_20 08 08 04.7
comp=Z,273µm,20.0s
AIS Amsterdam Isla 69.53 127 ⇓P P 07 43 33.2 +1.9
TAMC Tame, Arauca 69.85 317 eP P 07 43 30.2 -3.3
RUSC La Rusia 69.86 316 eP P 07 43 33.0 -1.1
MALC Bahia Malaga 69.93 311 eP P 07 43 34.2 +0.2
SPBC San Pablo de B 70.04 315 eP P 07 43 33.0 -1.7
MCQ Macquarie Isla 70.13 187 P P 07 43 35.7 +1.0
baz=70,SNR=4.5
MCQ Macquarie Isla 70.13 187 P P 07 43 34.7 0.0
MCQ IAmb IAmb 07 43 51.4
comp=Z,1µm,1.4s
MCQ Macquarie Isla 70.13 187 P P 07 43 34.7 0.0
MCQ pmax pmax
comp=Z,1µm,1.5s
MCQ Macquarie Isla 70.13 187 ⇑P P 07 43 36.0 +1.3
GUY2C Guyana, Caldas 70.18 313 eP P 07 43 35.2 -0.9
PLMC San Jos del P 70.28 312 eP P 07 43 34.2 -2.0
NORC Norcasia 70.28 314 eP P 07 43 33.7 -2.6
SACV Santiago Islan 70.42 9 P P 07 43 35.7 -1.1
BARC Barichara 70.54 316 eP P 07 43 36.4 -1.6
TOSP Speyside 70.60 330 eP P 07 43 33.9 -4.1
MBO M'Bour 70.64 15 P P 07 43 38.4 +0.2
MBO M'Bour 70.64 15 ⇓P P 07 43 38.9 +0.7
BAUV El Baul 70.78 322 P P 07 43 38.1 -1.0
BAUV El Baul 70.78 322 eP P 07 43 35.7 -3.4
PIZC Pizarro, Choco 70.79 311 eP P 07 43 39.2 0.0
BBTS Babate 70.97 16 LR LR 08 11 34.2
comp=Z,108µm,18.1s,baz=205,slow=33
PTBC PUERTO BERRIO, 71.00 315 eP P 07 43 37.7 -2.8
CBOC Ciudad Bolivar 71.03 313 eP P 07 43 38.5 -2.4
PAMC Pamplona, Colo 71.03 317 eP P 07 43 40.7 -0.5
HELC Santa Helena 71.12 314 eP P 07 43 39.7 -2.0
SOCV Socops 71.19 319 eP P 07 43 41.4 -0.3
BRRC Barranca, Sant 71.22 316 eP P 07 43 39.0 -2.8
BIRV Birongo 71.60 324 P P 07 43 43.6 -0.4
BIRV IAmb IAmb 07 43 58.3
comp=Z,1µm,1.3s
RER Riviere de l'E 71.60 101 P P 07 43 44.8 +0.5
RER IAms_20 IAms_20 08 09 12.9
comp=Z,238µm,20.0s
RER Riviere de l'E 71.60 101 P P 07 43 43.2 -1.0
SNR=21
RER Riviere de l'E 71.60 101 ⇓P P 07 43 45.4 +1.1
SDV Santo Domingo 71.66 319 P P 07 43 44.2 -0.5
comp=Z,364nm,1.0s,baz=174,slow=3.8,SNR=70

SDV S **S** 07 53 02.5 -1.4
comp=Z,3.9nm,0.3s,baz=274,slow=21,SNR=1.1
SDV PKPPKP **P'P'df** 08 11 29.7 -1.3
comp=Z,4.4nm,0.3s,baz=156,slow=2.8,SNR=3.8
SDV LR LR 08 19 35.0
comp=Z,263µm,18.0s,baz=149,slow=40
comp=Z,364nm,1.0s
SDV Santo Domingo 71.66 319 P **P** **07 43 43.8 -1.0**
SDV IAmb IAmb 07 43 53.9
comp=Z,636nm,1.0s
SDV Santo Domingo 71.66 319 *e*P **P** **07 43 44.5 -0.2**
GRFF Grenada Fort F 71.66 329 *e*P **P** **07 43 40.7 -3.7**
GRGR Grenville 71.72 329 P **P** **07 43 44.8 0.0**
GRGR Grenville 71.72 329 ⇑P **P** **07 43 44.1 -0.6**
MAPC Malpelo 71.82 307 *e*P **P** **07 43 45.3 -0.2**
SOLC Bahia Solano 71.94 312 *e*P **P** **07 43 45.1 -1.1**
PAYG Puerto Ayora 71.96 297 P **P** **07 43 47.2 +0.9**
PAYG IAmb IAmb 07 43 58.0
comp=Z,1µm,1.6s
PAYG Puerto Ayora 71.96 297 IAMs_20 IAMs_20 08 13 57.1
comp=Z,160µm,18.0s
PAYG Puerto Ayora 71.96 297 *e*P **P** **07 43 46.8 +0.4**
PAYG Puerto Ayora 71.96 297 ⇑P **P** **07 43 47.3 +0.9**
GCMP Grenada, Carri 71.99 330 *e*P **P** **07 43 43.7 -2.6**
ZARC Zaragoza, Cauc 72.03 315 *e*P **P** **07 43 42.3 -4.4**
BBGH Gun Hill 72.09 332 IAMs_20 IAMs_20 08 15 57.8
comp=Z,145µm,21.0s
BBGH Gun Hill 72.09 332 *e*P **P** **07 43 49.1 +2.1**
BBGH Gun Hill 72.09 332 *e*P **P** **07 43 46.0 -1.0**
OCAC Ocana 72.09 317 *e*P **P** **07 43 43.8 -3.5**
DBBC Dabeiba 72.15 313 *e*P **P** **07 43 46.5 -1.1**
UREC San Jos de Ur 72.54 314 *e*P **P** **07 43 46.0 -3.7**
SVB Belmont 72.68 330 P **P** **07 43 50.0 -0.6**
SVB Belmont 72.68 330 *e*P **P** **07 43 47.2 -3.3**
MCLT Moule a Chique 73.01 331 P **P** **07 43 51.9 -0.5**
MCLT IAmb IAmb 07 44 20.3
comp=Z,1µm,1.1s
MCLT Moule a Chique 73.01 331 *e*P **P** **07 43 50.8 -1.6**
SLBI Saint Lucia, B 73.32 331 *e*P **P** **07 43 52.6 -1.7**
LL1C La Loma 1 Cana 73.37 317 *e*P **P** **07 43 52.3 -2.3**
LL6C La Loma 6 Bece 73.44 317 *e*P **P** **07 43 52.3 -2.7**
KOWA Kowa 73.49 28 P **P** **07 43 54.2 -1.1**
KOWA IAmb IAmb 07 44 03.1
comp=Z,1µm,1.4s
KOWA Kowa 73.49 28 ⇓P **P** **07 43 54.1 -1.2**
DABV Dabajuro 73.54 320 *e*P **P** **07 43 53.6 -2.0**
LL5C La Loma 5 El P 73.63 317 *e*P **P** **07 43 53.4 -2.8**
MPOM Morne Pois Mar 73.69 331 P **P** **07 43 55.9 -0.5**
MPOM IAmb IAmb 07 44 21.8
comp=Z,1µm,1.6s
MPOM Morne Pois Mar 73.69 331 *e*P **P** **07 43 55.4 -1.1**
BIM Bigot 73.82 331 P **P** **07 43 56.2 -1.0**
BIM IAmb IAmb 07 44 13.9
comp=Z,1µm,1.0s
BIM Bigot 73.82 331 *e*P P 07 43 51.3 -5.9
LCBC Los crdobas, 73.88 314 *e*P **P** **07 43 57.9 +0.3**
TOA0 Torodi Ar. Sit 73.91 34 P **P** **07 43 56.6 -1.1**
TOA0 IAmb IAmb 07 44 14.0
comp=Z,2µm,1.4s
TORD Torodi Ar. Bea 73.91 34 P **P** **07 43 56.1 -1.6**
comp=Z,147nm,0.6s,baz=200,slow=5.2,SNR=193
TORD S **SKiKP** **07 53 22.9 -2.9**
comp=Z,4.3nm,1.0s,baz=206,slow=5.1,SNR=1.8
TORD LR LR 08 09 51.8
comp=Z,636µm,21.2s,baz=180,slow=30
comp=Z,147nm,0.6s
TORD Torodi Ar. Bea 73.91 34 P **P** **07 43 56.9 -0.8**
TORD IAmb IAmb 07 44 14.0
comp=Z,1µm,1.4s
ARGC Ariguani, Magd 73.93 316 *e*P **P** **07 43 58.1 +0.2**
ILAM Ilet Lapin Mar 74.01 331 *e*P **P** **07 43 56.3 -2.0**
FDF Fort de France 74.04 331 P **P** **07 43 57.7 -0.9**
FDF IAmb IAmb 07 44 28.7
comp=Z,2µm,1.4s
FDF Fort de France 74.04 331 P **P** **07 43 57.7 -0.9**
FDF pmax pmax
comp=Z,2µm,1.4s
FDF Fort de France 74.04 331 *e*P **P** **07 43 56.4 -2.2**
FDF Fort de France 74.04 331 ⇑P **P** **07 43 58.1 -0.4**
CAPC Capurgana 74.09 313 *e*P **P** **07 43 58.5 -0.4**
HATO Hato, Curacao 74.10 322 P **P** **07 43 58.5 -0.4**
HATO IAmb IAmb 07 44 16.8
comp=Z,632nm,1.0s
HATO IAMs_20 IAMs_20 08 17 43.7
comp=Z,191µm,19.0s
SVN Savane Anatole 74.15 331 P **P** **07 43 58.9 -0.4**
PTCN Pitcairn Islan 74.16 249 IAMs_20 IAMs_20 08 09 14.1
comp=Z,125µm,21.0s
UPD2 Meteti 74.28 312 *e*P **P** **07 43 59.1 -1.0**
MBAR Mbarara 74.33 67 LR LR 08 13 13.2
comp=Z,710µm,19.3s,baz=194,slow=33
MBAR Mbarara 74.33 67 P **P** **07 44 01.0 +0.5**
MBAR IAmb IAmb 07 44 20.5
comp=Z,898nm,1.4s
MBAR Mbarara 74.33 67 *d i*P **P** **07 44 00.9 +0.3**
MBAR Mbarara 74.33 67 *i*P **P** **07 44 01.9 +1.4**
MBAR Mbarara 74.33 67 P **P** **07 44 02.6 +2.0**
MBAR P **P** **07 44 02.6 +2.0**
MBAR S **S** **07 53 37.3 +3.0**
MBAR S **S** **07 53 37.3 +3.0**
MBAR Mbarara 74.33 67 *i*P **P** **07 44 01.9 +1.4**
MBAR Mbarara 74.33 67 *e*P **P** **07 44 01.0 +0.5**
MBAR *e*S **S** **07 53 33.3 -1.0**
MBAR Mbarara 74.33 67 *e*P **P** **07 44 02.0 +1.4**
MBAR *e*S S **07 53 38.0 +3.7**
MBAR Mbarara 74.33 67 *e*P **P** **07 44 01.7 +1.2**
MBAR *e*S S 07 53 44.1 +10
MBAR Mbarara 74.33 67 ⇑P **P** **07 44 01.4 +0.9**
SJCC San Jacinto, C 74.34 316 *e*P **P** **07 43 60.0 -0.4**
CACAO El Cacao, Vera 74.44 309 *e*P **P** **07 44 01.1 +0.2**
SBV Sambava 74.45 91 P **P** **07 44 03.0 +1.9**
SNR=34
CRJC Cerrejon, Guaj 74.47 318 *e*P **P** **07 43 59.1 -2.0**
AZU Azuero 74.58 310 *e*P **P** **07 44 01.8 0.0**
DLPL La Plaine 74.64 331 *e*P **P** **07 44 00.3 -1.8**
MDN Morne-Daniel 74.67 331 *e*P **P** **07 43 59.0 -3.1**
URIC Uribia, Colomb 74.76 319 *e*P **P** **07 43 60.0 -2.7**
DSLB Salisbury 74.79 331 *e*P **P** **07 43 59.4 -3.5**
SMRC Santa Marta, M 75.11 317 *e*P **P** **07 44 04.7 -0.1**
PNME Penonome 75.22 310 *e*P **P** **07 44 06.0 +0.5**
MAGL Barre de l'ile 75.24 331 P **P** **07 44 04.7 -0.7**
MAGL Barre de l'ile 75.24 331 *e*P P 07 44 00.5 -4.9
TDBA Terre de Bas, 75.24 331 P **P** **07 44 04.9 -0.5**
TDBA IAmb IAmb 07 44 26.0
comp=Z,2µm,1.3s
TDBA Terre de Bas, 75.24 331 *e*P **P** **07 44 05.1 -0.4**
TBG Guadaloupe-3 75.25 330 *e*P **P** **07 44 05.1 -0.4**
UPA Univ. de Panam 75.32 311 *e*P **P** **07 44 05.6 -0.4**
CBE Ff, Capester 75.44 331 P **P** **07 44 05.9 -0.7**
CBE IAmb IAmb 07 44 23.7
comp=Z,2µm,1.3s
CBE Ff, Capester 75.44 331 *e*P **P** **07 44 03.5 -3.2**
GDSD La Dsirade Is 75.53 331 P **P** **07 44 06.5 -0.6**
GDSD IAmb IAmb 07 44 27.2
comp=Z,1µm,1.3s
BCIP Isla Barro Col 75.62 311 P **P** **07 44 07.5 -0.2**
BCIP IAmb IAmb 07 44 30.8
comp=Z,2µm,1.6s
BCIP Isla Barro Col 75.62 311 P **P** **07 44 07.6 -0.2**
BCIP pmax pmax
comp=Z,2µm,1.6s
BCIP MLR MLR
comp=Z,63µm,18.0s
BCIP Isla Barro Col 75.62 311 *e*P **P** **07 44 07.4 -0.3**
BCIP Isla Barro Col 75.62 311 ⇑P **P** **07 44 07.5 -0.2**
GDHS Morne Mazeau, 75.68 331 P **P** **07 44 07.8 -0.2**
ABD La Joyeuse, An 75.80 331 P **P** **07 44 08.8 +0.2**
ABD La Joyeuse, An 75.80 331 *e*P **P** **07 44 07.2 -1.4**
MLYT Lee's Yard 76.23 330 *e*P **P** **07 44 10.3 -0.8**
MBFL Flemmings, Mon 76.26 330 *e*P **P** **07 44 10.5 -0.7**
ANBD Bethesda, Anti 76.42 331 *e*P **P** **07 44 10.1 -2.0**
CDITO Canoas 76.43 308 P **P** **07 44 13.2 +0.8**
BRU2 Volcan 76.54 308 P **P** **07 44 13.1 -0.1**
BRU2 Volcan 76.54 308 *e*P **P** **07 44 13.4 +0.2**
EDSV San Vito 76.69 308 *e*P **P** **07 44 15.7 +1.7**
KIBK Kibwezi 76.82 75 P **P** **07 44 18.1 +3.3**
SNR=98
ROCAM Rodrigues Isla 76.96 106 P **P** **07 44 15.8 +0.4**
ROCAM IAmb IAmb 07 44 26.4
comp=Z,1µm,1.2s
ANWB Willy Bob 77.01 331 P **P** **07 44 15.0 -0.5**
ANWB IAmb IAmb 07 44 38.8
comp=Z,1µm,1.2s
ANWB Willy Bob 77.01 331 *e*P **P** **07 44 14.4 -1.1**
ANWB Willy Bob 77.01 331 *e*P **P** **07 44 11.9 -3.6**
ANWB Willy Bob 77.01 331 ⇑P **P** **07 44 14.6 -0.9**
SRBA San Rafael, Bu 77.23 308 P **P** **07 44 16.9 -0.2**
SRBA IAmb IAmb 07 44 52.8
comp=Z,1µm,1.3s
SRBA San Rafael, Bu 77.23 308 *e*P **P** **07 44 17.9 +0.9**
KMBO Kilima Mbogo 77.39 73 P **P** **07 44 20.4 +2.2**
comp=Z,18nm,1.2s,baz=202,slow=6.2,SNR=37
KMBO PKPPKP P'P'df 08 11 15.7 -9.1
comp=Z,2.6nm,1.0s,baz=160,slow=1.8,SNR=3.9
KMBO LR LR 08 15 38.6
comp=Z,943µm,19.3s,baz=202,slow=34
KMBO Kilima Mbogo 77.39 73 P **P** **07 44 19.5 +1.3**
KMBO Kilima Mbogo 77.39 73 *de*P **P** **07 44 19.9 +1.8**
KMBO Kilima Mbogo 77.39 73 P **P** **07 44 20.5 +2.3**
KMBO P **P** **07 44 20.5 +2.3**
KMBO S **S** **07 54 16.0 +7.8**
KMBO S **S** **07 54 16.0 +7.8**
KMBO Kilima Mbogo 77.39 73 *e*P **P** **07 44 21.4 +3.2**
KMBO *e*S S 07 54 21.8 +14
KMBO Kilima Mbogo 77.39 73 *e*P **P** **07 44 21.7 +3.6**
KMBO *e*S S 07 54 22.2 +14
KMBO Kilima Mbogo 77.39 73 *e*P **P** **07 44 21.8 +3.6**
KMBO *e*S S 07 54 23.6 +15
PEZE Perez Zeledon, 77.51 308 P **P** **07 44 18.8 +0.3**
PEZE IAmb IAmb 07 44 31.6
comp=Z,1µm,1.3s
PEZE Perez Zeledon, 77.51 308 *e*P **P** **07 44 19.1 +0.5**
PYZ Puysegur Point 77.62 193 P **P** **07 44 18.6 -0.2**
PYZ IAMs_20 IAMs_20 08 17 15.0
comp=Z,155µm,19.0s
CDM Cerro de Muert 77.70 308 *e*P **P** **07 44 20.9 +0.9**
WHZ Wether Hill Ro 77.72 194 P **P** **07 44 18.8 -0.5**
WHZ IAmb IAmb 07 44 49.9
comp=Z,2µm,1.8s
WHZ IAMs_20 IAMs_20 08 19 17.6
comp=Z,184µm,18.0s
SMRT St. Maarten 77.74 330 P **P** **07 44 18.6 -1.0**
SMRT IAmb IAmb 07 44 34.4
comp=Z,2µm,1.6s
SMRT St. Maarten 77.74 330 *e*P **P** **07 44 15.9 -3.7**
RIMA Rio Macho 77.93 308 P **P** **07 44 21.2 +0.1**
RIMA Rio Macho 77.93 308 *e*P **P** **07 44 21.6 +0.6**
CDVI St. Croix 77.96 328 P **P** **07 44 19.8 -1.0**
CDVI IAmb IAmb 07 44 40.4
comp=Z,2µm,1.6s
LCR2 La Lucha 2 77.97 307 *e*P **P** **07 44 20.5 -0.8**
BATAN Batan 78.00 308 P **P** **07 44 21.2 0.0**
CVTR Volcan Turrial 78.11 308 P **P** **07 44 22.6 +0.3**
ODZ Otahua Downs 78.14 196 P **P** **07 44 21.9 +0.2**
ODZ IAmb IAmb 07 44 39.3
comp=Z,968nm,1.7s
ODZ IAMs_20 IAMs_20 08 22 41.0
comp=Z,199µm,19.0s
ODZ Otahua Downs 78.14 196 ⇑P **P** **07 44 22.1 +0.4**
MLZ Mavora Lakes 78.21 194 P **P** **07 44 22.5 +0.4**
DCZ Deep Cove 78.25 194 P **P** **07 44 23.0 +0.8**
DCZ IAMs_20 IAMs_20 08 19 37.6
comp=Z,206µm,18.0s
HDC Heredia 78.25 307 P **P** **07 44 22.7 0.0**
HDC Heredia 78.25 307 *e*P **P** **07 44 23.2 +0.5**
HDC Heredia 78.25 307 ⇑P **P** **07 44 23.4 +0.7**
LAFE Finca La Fe, P 78.44 307 *e*P **P** **07 44 24.3 +0.7**
SRA1 San Ramn 78.49 307 *e*P **P** **07 44 25.5 +1.4**
STVI Saint Thomas 78.58 328 P **P** **07 44 23.4 -0.8**
STVI IAmb IAmb 07 44 39.2
comp=Z,1µm,1.6s
WKZ Wanaka 78.61 195 P **P** **07 44 24.4 +0.1**
WKZ IAMs_20 IAMs_20 08 16 16.2
comp=Z,230µm,20.0s
ICMP Isla Caja de M 78.62 327 P **P** **07 44 22.8 -1.6**
CUPR Culebra, Puert 78.64 328 P **P** **07 44 23.0 -1.5**
HUMP Col San Antoni 78.65 327 P **P** **07 44 23.1 -1.5**
HUMP IAmb IAmb 07 44 47.4
comp=Z,1µm,1.2s
SJG San Juan 78.72 327 P **P** **07 44 22.7 -2.2**
comp=Z,140nm,0.9s,baz=171,slow=4.1,SNR=27
SJG LR LR 08 22 45.0
comp=Z,43µm,18.6s,baz=162,slow=38
comp=Z,140nm,0.9s
SJG San Juan 78.72 327 P **P** **07 44 23.8 -1.2**
SJG San Juan 78.72 327 P **P** **07 44 23.8 -1.2**
SJG pmax pmax
comp=Z,329nm,1.1s
SJG San Juan 78.72 327 ⇑P **P** **07 44 23.0 -2.0**
INDI Punta indio, G 78.77 306 *e*P **P** **07 44 26.9 +1.5**
CBYP Canovanas 78.78 327 P **P** **07 44 23.9 -1.5**
CBYP IAmb IAmb 07 44 41.2
comp=Z,744nm,1.1s
OBIP Obispado Ponce 78.80 327 P **P** **07 44 22.5 -2.9**
CELP Cerrillos 78.82 327 P **P** **07 44 24.2 -1.4**
LBZ Lake Benmore 78.86 196 P **P** **07 44 25.6 -0.1**
LBZ IAmb IAmb 07 44 43.1
comp=Z,763nm,1.3s
LBZ IAMs_20 IAMs_20 08 23 21.9
comp=Z,155µm,19.0s
MLPR Magueyes Islan 78.87 326 P **P** **07 44 24.0 -1.8**
MLPR IAmb IAmb 07 44 40.3
comp=Z,784nm,1.1s
GCPR Guaynabo City 78.88 327 P **P** **07 44 24.7 -1.2**
JTS Las Juntas de 78.89 307 P **P** **07 44 26.3 +0.3**
JTS IAmb IAmb 07 44 37.8
comp=Z,2µm,1.2s
JTS Las Juntas de 78.89 307 *c i*P **P** **07 44 26.4 +0.3**
JTS pmax pmax
comp=Z,2µm,1.3s
JTS MLR MLR
comp=Z,41µm,21.0s
JTS Las Juntas de 78.89 307 *e*P **P** **07 44 25.7 -0.4**
JTS Las Juntas de 78.89 307 *e*P **P** **07 44 26.6 +0.5**
JTS Las Juntas de 78.89 307 ⇑P **P** **07 44 26.5 +0.5**
CASO Castillo 78.92 307 ⇑*e*P **P** **07 44 26.6 +0.3**
FORC Fortuna 78.92 307 *e*P **P** **07 44 26.6 +0.4**
CRPR Cabo Rojo, PR 78.92 326 P **P** **07 44 25.0 -1.1**
CRPR IAmb IAmb 07 44 41.6
comp=Z,1µm,1.1s
ARE1 Arenal 1 78.93 307 *e*P **P** **07 44 27.8 +1.4**
CEDE Laguna Cedeo 78.95 307 *e*P **P** **07 44 27.8 +1.3**
DUNO Dulce Nombre, 78.95 306 P **P** **07 44 26.7 +0.3**
DUNO IAmb IAmb 07 44 38.7
comp=Z,2µm,1.3s
COVE Coope Vega, Sa 79.02 308 P **P** **07 44 26.6 -0.1**
COVE Coope Vega, Sa 79.02 308 *e*P **P** **07 44 27.8 +1.0**
SAJU San Juanillo, 79.04 306 *e*P **P** **07 44 27.8 +0.9**
MQZ McQueen's Vall 79.11 198 P **P** **07 44 27.2 +0.2**
MQZ IAmb IAmb 07 44 53.6
comp=Z,4µm,2.6s
MQZ IAMs_20 IAMs_20 08 18 21.4
comp=Z,185µm,19.0s
GUAI GUAI 79.13 306 *e*P **P** **07 44 27.6 +0.2**
AOPR Arecibo Observ 79.13 327 P **P** **07 44 26.4 -0.9**
PRSN Puerto Rico Se 79.13 326 P **P** **07 44 25.9 -1.4**
EMPR Esperanza - Ma 79.18 327 P **P** **07 44 25.0 -2.5**
ORTG Ortega, Santa 79.18 306 P **P** **07 44 27.8 0.0**
ORTG IAmb IAmb 07 44 39.9
comp=Z,2µm,1.4s
ACAL Aguas Claras 79.23 307 ⇑*e*P **P** **07 44 28.0 0.0**
CUI Cuipilapa 79.31 307 *e*P **P** **07 44 27.8 -0.6**
COLC Colonia 79.33 307 *e*P **P** **07 44 28.6 +0.1**
VERA Finca Concepci 79.35 307 *e*P **P** **07 44 29.1 +0.6**
AGPR Aguadilla, PR 79.35 326 P **P** **07 44 26.1 -2.3**
HORNC Hornillas 79.36 307 *e*P **P** **07 44 28.8 0.0**
RPZ Rata Peaks 79.37 197 P **P** **07 44 28.6 +0.1**
comp=Z,90nm,1.0s,baz=169,slow=8.7,SNR=1.1
RPZ LR LR 08 15 48.5
comp=Z,103µm,20.6s,baz=167,slow=33
comp=Z,90nm,1.0s
RPZ Rata Peaks 79.37 197 P **P** **07 44 28.6 +0.1**
RPZ IAmb IAmb 07 44 55.2
comp=Z,2µm,1.7s
RPZ IAMs_20 IAMs_20 08 18 54.4
comp=Z,142µm,20.0s
GUAB Guayabo de Bag 79.38 307 *e*P **P** **07 44 28.4 -0.4**
VMAR Armenia, Volca 79.42 307 *e*P **P** **07 44 28.9 -0.2**
BUEV Buena Vista 79.54 307 ⇑*e*P **P** **07 44 29.2 -0.5**
HZTE Horizontes, Gu 79.56 306 P **P** **07 44 29.7 0.0**
HZTE Horizontes, Gu 79.56 306 *e*P **P** **07 44 30.4 +0.7**
GB1A Borinquen Arri 79.56 307 *e*P **P** **07 44 29.4 -0.4**
OXZ Oxford 79.58 198 P **P** **07 44 29.7 0.0**
OXZ IAmb IAmb 07 44 56.1
comp=Z,1µm,1.7s
OXZ IAMs_20 IAMs_20 08 19 05.0
comp=Z,162µm,19.0s
FOZ Fox Glacier 79.75 196 P **P** **07 44 30.6 +0.1**
FOZ IAmb IAmb 07 44 56.8
comp=Z,2µm,2.0s
PCDR Punta Cana, DR 79.81 325 P **P** **07 44 29.3 -1.6**
PRVC Isla de Provid 80.03 311 *e*P **P** **07 44 31.2 -1.0**
LTZ Lake Taylor 80.07 198 P **P** **07 44 32.4 +0.1**
LTZ IAMs_20 IAMs_20 08 19 10.9
comp=Z,166µm,19.0s
LODK Lodwar 80.17 69 P **P** **07 44 34.5 +1.3**
LODK Lodwar 80.17 69 P **P** **07 44 36.4 +3.2**
SNR=57
LODK Lodwar 80.17 69 *e*P **P** **07 44 35.4 +2.2**
LODK *e*S **S** **07 54 36.4 -1.1**
LODK Lodwar 80.17 69 *e*P **P** **07 44 35.4 +2.2**
LODK *e*S **S** **07 54 36.4 -1.1**
LODK Lodwar 80.17 69 *e*P **P** **07 44 35.7 +2.5**
LODK *e*S S 07 54 52.4 +15
LODK Lodwar 80.17 69 *e*P **P** **07 44 36.5 +3.3**
LODK *e*S S 07 54 52.9 +15
KHZ Kahutara 80.20 199 P **P** **07 44 32.7 -0.2**
KHZ IAMs_20 IAMs_20 08 18 32.3
comp=Z,132µm,20.0s
KHZ Kahutara 80.20 199 ⇑P **P** **07 44 32.6 -0.3**
SDD Santo Domingo 80.26 324 P **P** **07 44 31.5 -1.9**
DR12 Loma Pena Alta 80.39 324 P **P** **07 44 32.6 -1.5**
ACON Acoyapa 80.47 307 P **P** **07 44 33.9 -0.7**
ACON Acoyapa 80.47 307 *e*P **P** **07 44 34.1 -0.5**
PLWZ Palliser 80.69 200 P **P** **07 44 36.2 +0.5**
CMWZ Cape Campbell 80.72 200 P **P** **07 44 36.5 +0.7**
BSWZ Blackbirch Sta 80.81 199 P **P** **07 44 35.7 -0.6**
MSWZ Moikau Station 80.84 200 P **P** **07 44 36.1 -0.3**
THZ Tophouse 80.95 199 P **P** **07 44 37.0 -0.1**
THZ IAmb IAmb 07 44 57.2
comp=Z,2µm,1.7s
THZ IAMs_20 IAMs_20 08 19 37.1
comp=Z,185µm,20.0s
SNZO South Karori 81.05 200 P **P** **07 44 37.7 +0.2**
SNZO IAmb IAmb 07 45 00.6
comp=Z,1µm,1.4s
SNZO South Karori 81.05 200 IAMs_20 IAMs_20 08 19 57.8
comp=Z,151µm,19.0s
TUWZ Tuamarina 81.08 199 P **P** **07 44 37.4 -0.3**
BOAB BOACO BROADBAND 81.11 307 P **P** **07 44 37.4 -0.6**
BOAB IAMs_20 IAMs_20 08 21 34.1
comp=Z,111µm,20.0s
SDDR Presa de Saban 81.22 323 P **P** **07 44 37.6 -1.0**
SDDR Presa de Saban 81.22 323 *e*P **P** **07 44 38.1 -0.4**
SDDR Presa de Saban 81.22 323 ⇑P **P** **07 44 37.6 -1.0**
HOWZ Holdsworth Sta 81.28 201 P **P** **07 44 40.1 +1.3**
TIWZ Tintock 81.32 201 P **P** **07 44 40.7 +1.7**
BFZ Birch Farm 81.34 201 P **P** **07 44 39.2 +0.1**
BFZ IAmb IAmb 07 45 06.0
comp=Z,2µm,1.8s
BFZ IAMs_20 IAMs_20 08 24 51.7
comp=Z,141µm,18.0s
BFZ Birch Farm 81.34 201 P **P** **07 44 40.6 +1.5**
NNZ Nelson 81.39 199 P **P** **07 44 38.9 -0.4**
NNZ IAmb IAmb 07 44 59.7
comp=Z,2µm,1.5s
NNZ IAMs_20 IAMs_20 08 23 43.8
comp=Z,116µm,18.0s
NNZ Nelson 81.39 199 P **P** **07 44 40.3 +1.0**
OGWZ Otaki Gorge 81.43 201 P **P** **07 44 40.0 +0.4**
SC01 Santiago de lo 81.44 323 P **P** **07 44 38.6 -1.1**
SC01 IAmb IAmb 07 45 21.1
comp=Z,983nm,1.1s
MRZ Mangatainoka R 81.50 201 P **P** **07 44 41.2 +1.3**
ANWZ Angora Road 81.51 202 P **P** **07 44 44.7 +4.8**
PRWZ Pori Road 81.52 201 P **P** **07 44 42.4 +2.4**
CNGN Cerro Negro 81.63 306 P **P** **07 44 39.7 -1.1**
CNGN Cerro Negro 81.63 306 *e*P **P** **07 44 39.8 -1.1**
MATN Matagalpa 81.65 307 P **P** **07 44 40.2 -0.8**
MATN IAmb IAmb 07 44 54.4
comp=Z,1µm,1.2s
PRHZ Porangahau 81.66 202 P **P** **07 44 40.3 -0.5**
POWZ Post Office Ro 81.72 201 P **P** **07 44 43.1 +2.0**
DVHZ Dannevirke 81.72 201 P **P** **07 44 42.7 +1.6**
WPHZ Waipukurau 81.89 202 P **P** **07 44 43.8 +1.8**
QRZ Quartz Range 81.92 199 P **P** **07 44 40.2 -2.0**
QRZ IAmb IAmb 07 45 00.2
comp=Z,1µm,1.7s
QRZ IAMs_20 IAMs_20 08 20 18.2
comp=Z,183µm,20.0s
CRIN San Cristobal 81.97 306 P **P** **07 44 41.3 -1.3**
CRIN IAmb IAmb 07 45 13.2
comp=Z,2µm,1.6s
CRIN San Cristobal 81.97 306 *e*P **P** **07 44 41.3 -1.3**
KAHZ Kahuranaki 82.06 202 P **P** **07 44 42.9 -0.1**
PNHZ Pukenui 82.09 202 P **P** **07 44 42.4 -0.7**
TAU Tasmania Unive 82.10 179 P **P** **07 44 42.3 -0.7**
TAU IAmb IAmb 07 44 58.8
comp=Z,2µm,1.3s
TAU Tasmania Unive 82.10 179 P **P** **07 44 42.3 -0.7**
TAU pmax pmax
comp=Z,2µm,1.3s
TAU MLR MLR
comp=Z,383µm,19.0s
TAU Tasmania Unive 82.10 179 P **P** **07 44 43.7 +0.7**
TAU Tasmania Unive 82.10 179 ⇑P **P** **07 44 42.3 -0.7**
KRHZ Kereru 82.31 202 P **P** **07 44 46.0 +1.7**
HOJ Hope 82.32 317 *i*P **P** **07 44 48.7 +4.3**
STH Stony Hill 82.41 317 *i*P **P** **07 44 46.8 +2.0**
WAZ Wanganui 82.49 201 P **P** **07 44 47.6 +2.4**
KWHZ Kaweka Forest 82.51 202 P **P** **07 44 47.3 +2.0**
BHHZ Black Hill Sta 82.53 202 P **P** **07 44 45.3 -0.1**
MOO Moorlands 82.56 179 P **P** **07 44 45.4 -0.1**
baz=82,SNR=41
MOO Moorlands 82.56 179 P **P** **07 44 46.1 +0.6**
MCJ Malvern 82.62 317 *i*P **P** **07 44 49.2 +3.2**
MOVZ Moawhango 82.67 201 P **P** **07 44 47.0 +0.8**
NMHZ Naumai 82.74 202 P **P** **07 44 48.8 +2.2**
BKZ Black Stump Fm 82.75 202 P **P** **07 44 46.5 -0.1**
BKZ Black Stump Fm 82.75 202 P **P** **07 44 48.6 +2.0**
MTVZ Mangateitei 82.75 201 P **P** **07 44 48.0 +1.4**
WNVZ Wahianoa 82.78 201 P **P** **07 44 48.2 +1.3**
TRVZ Turoa 82.81 201 P **P** **07 44 48.5 +1.4**
WHVZ Whangaehu Hut 82.82 201 P **P** **07 44 47.5 +0.3**
TUVZ Tukino 82.82 201 P **P** **07 44 48.1 +1.0**
MTDJ Mount Denham 82.83 317 P **P** **07 44 46.9 -0.2**
MTDJ IAmb IAmb 07 45 34.0
comp=Z,847nm,1.3s
MTDJ Mount Denham 82.83 317 ⇑P **P** **07 44 47.4 +0.3**
FWVZ Far West T-bar 82.86 201 P **P** **07 44 49.0 +1.7**
PKVZ Pokaka 82.87 201 P **P** **07 44 48.7 +1.4**
LREZ Lake Rotokare 82.89 200 P **P** **07 44 48.5 +1.3**
SNVZ South Ngauruho 82.90 201 P **P** **07 44 49.2 +1.6**
RIGZ Rimuhau 82.91 203 P **P** **07 44 49.8 +2.4**
OTVZ Oturere 82.92 201 P **P** **07 44 49.0 +1.4**
SNGZ Shannon Statio 82.93 203 P **P** **07 44 52.0 +4.5**
ETVZ East Tongariro 82.94 201 P **P** **07 44 49.0 +1.3**
TMVZ Te Maari 82.96 201 P **P** **07 44 48.2 +0.4**
NNVZ North Ngauruho 82.96 201 P **P** **07 44 51.4 +3.5**
MTHZ Maungataniwha 82.97 202 P **P** **07 44 50.0 +2.3**
NTVZ North Tongarir 82.98 201 P **P** **07 44 48.0 +0.1**
WTVZ West Tongariro 82.98 201 P **P** **07 44 48.2 +0.3**
NMEZ Namu Road 83.04 200 P **P** **07 44 48.9 +0.9**
TWVZ Taurewa 83.06 201 P **P** **07 44 49.8 +1.5**
KHEZ Kahui Hut 83.13 200 P **P** **07 44 49.1 +0.5**
NEZ North Egmont 83.14 200 P **P** **07 44 49.6 +1.0**
VRZ Vera Road 83.14 201 P **P** **07 44 49.5 +1.0**
PKE Pukeiti 83.23 200 P **P** **07 44 50.8 +1.7**
TGUH Tegucigalpa,Un 83.26 307 P **P** **07 44 48.8 -0.7**
TGUH Tegucigalpa,Un 83.26 307 *e*P **P** **07 44 46.5 -2.9**
TGUH Tegucigalpa,Un 83.26 307 ⇓P **P** **07 44 48.7 -0.7**
MHEZ Mangahewa 83.28 200 P **P** **07 44 53.4 +4.1**
MWZ Matawai 83.32 203 P **P** **07 44 51.4 +1.8**
MUGZ Murupara 83.35 202 P **P** **07 44 51.4 +1.8**
PRRZ Plateau Road 83.41 202 P **P** **07 44 51.8 +1.9**
URZ Urewera 83.48 203 P **P** **07 44 50.5 +0.2**
baz=145,slow=1.7
URZ LR LR 08 17 59.7
comp=Z,62µm,21.8s,baz=165,slow=33
URZ Urewera 83.48 203 P **P** **07 44 50.8 +0.5**
URZ IAmb IAmb 07 45 16.1
comp=Z,1µm,1.8s
URZ IAMs_20 IAMs_20 08 20 39.3
comp=Z,98µm,20.0s
URZ Urewera 83.48 203 P **P** **07 44 51.6 +1.4**
URZ Urewera 83.48 203 ⇑P **P** **07 44 50.6 +0.3**
GRTK Grand Turk 83.51 324 P **P** **07 44 50.9 +0.5**
GRTK IAmb IAmb 07 45 15.4

comp=Z,1µm,1.4s
GRTK Grand Turk 83.51 324 ⇑P **P** **07 44 50.4 0.0**
HRRZ Handcock Road 83.53 202 P **P** **07 44 53.8 +3.2**
RRRZ Republican Roa 83.53 202 P P 07 44 56.2 +5.5
CORO Coronation Par 83.55 179 P **P** **07 44 51.6 +1.0**
comp=Z,372nm,1.0s
HIZ Hauiti 83.71 201 IAMs_20 IAMs_20 08 26 50.4
comp=Z,92µm,19.0s
HIZ Hauiti 83.71 201 P **P** **07 44 50.7 -0.8**
OMRZ Omania 83.79 202 P P 07 44 57.3 +5.4
SNET Serv Nac Est T 83.84 305 P **P** **07 44 52.1 -0.3**
SNET IAmb IAmb 07 45 28.8
comp=Z,748nm,1.2s
MXZ Matakaoa Point 83.88 204 IAMs_20 IAMs_20 08 22 19.9
comp=Z,108µm,18.0s
GLAD Gladstone 84.02 180 P **P** **07 44 54.0 +1.0**
KMRZ Kaimai 84.13 202 P **P** **07 44 54.8 +1.1**
TAM Tamanrasset 84.16 34 P P 07 44 49.0 -5.0
TAM IAmb IAmb 07 44 56.7
comp=Z,668nm,1.3s
TAM Tamanrasset 84.16 34 P P 07 44 49.0 -5.0
TAM pmax pmax
comp=Z,668nm,1.3s
TAM Tamanrasset 84.16 34 ⇑P **P** **07 44 49.2 -4.8**
TGRZ Tauranga 84.17 202 P **P** **07 44 54.9 +1.0**
MACI Morro de la Ar 84.33 14 P **P** **07 44 53.8 -0.9**
TOZ Tahuroa Road 84.33 202 P **P** **07 44 55.2 +0.5**
ESQI Esquipulas 84.66 305 P **P** **07 44 56.5 -0.1**
MSEY Mahe Island 84.75 91 P **P** **07 44 57.8 +0.7**
MSEY IAmb IAmb 07 45 20.3
comp=Z,676nm,1.5s
MSEY Mahe Island 84.75 91 P **P** **07 44 57.8 +0.7**
MSEY pmax pmax
comp=Z,676nm,1.5s
MSEY Mahe Island 84.75 91 P **P** **07 44 57.3 +0.2**
MSEY P **P** **07 44 57.3 +0.2**
MSEY S **S** **07 55 20.2 -4.2**
MSEY S **S** **07 55 20.2 -4.2**
MSEY Mahe Island 84.75 91 ⇑P **P** **07 44 58.0 +0.9**
LCCY Blossom Villag 85.14 315 P **P** **07 44 58.6 -0.1**
TBI Tubuai 85.33 235 *e*P **P** **07 45 01.8 +1.9**
comp=Z,2µm,1.1s
TBI Tubuai 85.33 235 *e*PP **PP** **07 48 17.5 +0.3**
comp=Z,19µm,30.0s
TBI *e*S **S** **07 55 30.4 +0.5**
comp=Z,68µm,27.2s
TBI Tubuai 85.33 235 *e*LR LR 08 11 56.8
comp=Z,149µm,30.2s
TBI Tubuai 85.33 235 *e*T T 09 19 36.9
comp=Z,16nm,0.3s
RTAL Retalhuleu 85.74 303 P **P** **07 45 01.6 -0.2**
RTAL IAmb IAmb 07 45 14.9
comp=Z,1µm,1.4s
HUEH Huehuetenango 86.33 304 P **P** **07 45 04.4 -0.6**
RKGY Rocky Gully 86.52 155 P **P** **07 45 05.2 -0.5**
baz=86,SNR=5.9
FURI Furi 86.52 69 *e*P **P** **07 45 09.8 +3.6**
FURI *e*S **S** **07 55 37.5 -4.9**
FURI Furi 86.52 69 *e*P **P** **07 45 09.8 +3.6**
FURI *e*S **S** **07 55 37.5 -4.9**
FURI Furi 86.52 69 *e*P P 07 45 12.0 +5.8
FURI *e*S **S** **07 55 43.0 +0.6**
FURI Furi 86.52 69 *e*P P 07 45 11.0 +4.8
FURI *e*S **S** **07 55 44.1 +1.8**
AAE Adis Abeba 86.68 69 *e*P **P** **07 45 11.3 +4.4**
AAE *e*S **S** **07 55 40.9 -3.0**
AAE Adis Abeba 86.68 69 *e*P **P** **07 45 11.3 +4.4**
AAE *e*S **S** **07 55 40.9 -3.0**
AAE Adis Abeba 86.68 69 *e*P **P** **07 45 10.2 +3.2**
AAE *e*S **S** **07 55 48.9 +5.1**
AAE Adis Abeba 86.68 69 *e*P P 07 45 11.9 +5.0
AAE *e*S **S** **07 55 38.4 -5.4**
GEXS Deakin Univers 86.75 177 P **P** **07 45 08.0 +1.3**
comp=Z,223nm,0.9s
PETF Flores 86.95 306 P **P** **07 45 07.6 -0.2**
PETF IAmb IAmb 07 45 26.0
comp=Z,858nm,1.2s
OUZ Omahuta 87.15 201 P **P** **07 45 07.6 -1.1**
OUZ IAmb IAmb 07 45 34.8
comp=Z,880nm,1.5s
OUZ IAMs_20 IAMs_20 08 25 48.4
comp=Z,105µm,18.0s
OUZ Omahuta 87.15 201 ⇑P **P** **07 45 08.5 -0.2**
BRAT Ballarat 87.39 177 P **P** **07 45 11.2 +1.4**
TOO Toolangi 87.41 178 P **P** **07 45 10.2 +0.2**
baz=87,SNR=19
TOO Toolangi 87.41 178 P **P** **07 45 09.8 -0.2**
TOO IAmb IAmb 07 45 26.8
comp=Z,1µm,2.2s
TOO Toolangi 87.41 178 P **P** **07 45 09.8 -0.2**
TOO pmax pmax
comp=Z,1µm,2.2s
TOO Toolangi 87.41 178 P **P** **07 45 10.2 +0.2**
TOO Toolangi 87.41 178 ⇑P **P** **07 45 09.7 -0.3**
CCIG Comitan 87.47 304 P **P** **07 45 09.9 -0.6**
CCIG IAmb IAmb 07 45 28.5
comp=Z,340nm,1.0s
CCIG Comitan 87.47 304 ⇑P **P** **07 45 10.0 -0.6**
ANKE Ethiopia-Afar 87.67 70 *e*P **P** **07 45 15.7 +3.9**
ANKE *e*S S 07 55 43.9 -10
ANKE Ethiopia-Afar 87.67 70 *e*P **P** **07 45 15.8 +4.0**
ANKE *e*S **S** **07 55 51.1 -2.4**
ANKE Ethiopia-Afar 87.67 70 *e*P P 07 45 16.6 +4.8
ANKE *e*S **S** **07 55 53.7 +0.2**
CGR Cap Guir 87.72 19 P **P** **07 45 14.0 +2.8**
TTIG Tnine Tigouga, 87.92 20 P **P** **07 45 15.0 +2.7**
MILA Mila 87.94 181 P **P** **07 45 13.0 +0.4**
baz=88,SNR=16
MILA Mila 87.94 181 ⇑P **P** **07 45 12.2 -0.3**
ARPS Mount Arapiles 88.08 175 P **P** **07 45 12.9 -0.3**
baz=88,SNR=9.4
ARPS Mount Arapiles 88.08 175 P **P** **07 45 14.0 +0.9**
NWAO Narrogin (SRO) 88.19 154 P **P** **07 45 12.8 -1.0**
NWAO Narrogin (SRO) 88.19 154 IAMs_20 IAMs_20 08 19 47.5
comp=Z,124µm,20.0s
NWAO Narrogin (SRO) 88.19 154 P **P** **07 45 12.8 -1.0**
NWAO pmax pmax
comp=Z,281nm,1.5s
NWAO Narrogin (SRO) 88.19 154 P **P** **07 45 11.9 -1.8**
NWAO P **P** **07 45 11.9 -1.8**
NWAO S **SKSac** **07 55 44.6 +2.8**
NWAO S **SKSac** **07 55 44.6 +2.8**
NWAO Narrogin (SRO) 88.19 154 P **P** **07 45 14.5 +0.8**
FUL Funchal 88.61 13 *e*P **P** **07 45 15.6 +0.3**
comp=Z,598nm,2.1s
FUL Funchal 88.61 13 *e*T T 09 22 39.8
OUK Oukaimeden 88.67 21 P **P** **07 45 18.0 +1.9**
JAWL J.Aulia 88.68 61 *i*P **P** **07 45 18.9 +2.8**
JAWL *i* 07 45 19.4
baz=240,slow=6.9
JAWL AMP 07 45 29.9
comp=N,1µm,0.7s
JAWL *i* 07 45 54.6
baz=235,slow=8.6
JAWL *i*S **SKSac** **07 55 41.6 -3.1**
PMAR Madeira 88.68 13 *e*P **P** **07 45 16.7 +0.8**
comp=N,564nm,2.9s
PMAR Madeira 88.68 13 *e*PP PP 07 48 53.5 +8.3
PMAR Madeira 88.68 13 *e*T T 09 22 48.5
PMOZ Porto Moniz, M 88.75 12 P **P** **07 45 16.8 +0.7**
PMOZ Porto Moniz, M 88.75 12 P **P** **07 45 18.5 +2.4**
PMOZ Porto Moniz, M 88.75 12 ⇑P **P** **07 45 17.5 +1.4**
PMOZ Porto Moniz, M 88.75 12 *e*P **P** **07 45 17.1 +1.0**
comp=N,500nm,1.4s
PMOZ Porto Moniz, M 88.75 12 *e*S **S** **07 56 08.2 +5.9**
PMOZ Porto Moniz, M 88.75 12 *e*LR LR 08 19 02.0
comp=N,72µm,18.0s
PMOZ Porto Moniz, M 88.75 12 *e*T T 09 23 09.5
MUN Mundaring 88.83 153 P **P** **07 45 16.0 -0.8**
baz=89,SNR=12
MUN Mundaring 88.83 153 P **P** **07 45 17.4 +0.6**
PMPS Porto Santo 89.08 13 *e*P **P** **07 45 18.8 +1.3**
comp=N,1µm,1.6s
PMPST Porto Santo, M 89.11 13 *e*P **P** **07 45 18.6 +0.9**
comp=N,1µm,1.4s
TEIG Tepich 89.12 309 P **P** **07 45 17.9 -0.1**
TEIG Tepich 89.12 309 ⇑P **P** **07 45 17.6 -0.4**
SOR Soroa 89.13 314 P **P** **07 45 17.6 -0.3**
SOR IAmb IAmb 07 45 29.6
comp=Z,668nm,1.3s
SOR Soroa 89.13 314 P **P** **07 45 17.7 -0.3**
SOR pmax pmax
comp=Z,668nm,1.3s
MEH Mehetia 89.34 239 *e*T T 09 24 31.9
comp=Z,94nm,0.3s
CMIG Matias Romero 89.48 302 P **P** **07 45 19.8 0.0**
comp=Z,90nm,0.9s,baz=126,slow=3.9,SNR=51
CMIG LR LR 08 20 50.5
comp=Z,46µm,21.5s,baz=148,slow=32
comp=Z,90nm,0.9s
KLBR Kellerberrin 89.59 155 P **P** **07 45 19.6 -0.8**
baz=90,SNR=30
TWOA Tennyson Woods 89.60 172 P **P** **07 45 21.5 +1.2**
CAN Canberra 89.67 181 P **P** **07 45 20.3 -0.4**
CAN IAmb IAmb 07 45 39.4
comp=Z,950nm,1.4s
CAN Canberra 89.67 181 P **P** **07 45 20.3 -0.4**
CAN pmax pmax
comp=Z,950nm,1.4s
CAN MLR MLR
comp=Z,246µm,18.0s
CAN Canberra 89.67 181 P **P** **07 45 21.5 +0.8**
CAN Canberra 89.67 181 ⇑P **P** **07 45 19.4 -1.3**
CNB Canberra Magne 89.67 181 P **P** **07 45 21.6 +0.8**
baz=90,SNR=35
CNB Canberra Magne 89.67 181 P **P** **07 45 21.7 +0.9**
SRHM Skhour des Reh 89.89 20 P **P** **07 45 23.0 +1.5**
TVO Taravao 90.00 238 *e*P **P** **07 45 23.6 +1.1**
comp=Z,492nm,1.2s
TIAR Tiarei 90.24 238 *e*P **P** **07 45 24.6 +1.0**
comp=Z,86nm,1.2s
TIAR Tiarei 90.24 238 *e*T T 09 25 37.3
comp=Z,5.1nm,0.3s
BLDU Ballidu 90.26 153 P **P** **07 45 22.8 -0.7**
baz=90,SNR=14
BLDU Ballidu 90.26 153 P **P** **07 45 23.5 0.0**
PAE Paea 90.26 238 *e*P **P** **07 45 25.0 +1.4**
comp=Z,65nm,1.2s
PAE Paea 90.26 238 *e*T T 09 25 36.6
comp=Z,3.9nm,0.2s
PPTF Pamatai, Papee 90.32 238 P **P** **07 45 24.2 +0.2**
PPTF IAmb IAmb 07 45 38.2
comp=Z,563nm,1.5s
PPTF IAMs_20 IAMs_20 08 30 41.8
comp=Z,109µm,18.0s
PPTF Pamatai, Papee 90.32 238 ⇑P **P** **07 45 25.5 +1.5**
PPT2 Papeete2 90.32 238 *e*P **P** **07 45 24.7 +0.7**
comp=Z,305nm,1.3s
PPT2 Papeete2 90.32 238 *e*PP **PP** **07 48 57.7 +0.2**
comp=Z,27µm,27.5s
PPT2 *e*S **S** **07 56 17.9 0.0**
comp=Z,96µm,29.2s
PPT2 Papeete2 90.32 238 *e*LR LR 08 14 16.2
comp=Z,108µm,22.5s
PPT2 Papeete2 90.32 238 *e*T T 09 25 33.1
comp=Z,8.0nm,0.3s
PPT Papeete 90.34 238 P **P** **07 45 26.2 +2.1**
comp=Z,60nm,1.0s,baz=239,slow=5.1,SNR=5.3
PPT LR LR 08 17 46.4
comp=Z,76µm,20.9s,baz=172,slow=30
comp=Z,60nm,1.0s
AVE Averroes 90.79 20 P **P** **07 45 25.9 +0.3**
AVE S **SKSac** **07 55 55.1 -1.1**
AVE Averroes 90.79 20 P **P** **07 45 25.2 -0.4**
AVE IAmb IAmb 07 45 44.3
comp=Z,574nm,1.3s
AVE IAMs_20 IAMs_20 08 20 04.7
comp=Z,138µm,21.0s
AVE Averroes 90.79 20 P **P** **07 45 26.9 +1.4**
RAO Raoul Island 90.81 209 LR LR 08 21 43.9
comp=Z,23µm,19.7s,baz=174,slow=32
KSLA Kassala 90.81 64 *i*P **P** **07 45 28.1 +2.0**
KSLA *i* 07 45 33.5
baz=211,slow=6.5
KSLA *i*S SKSac 07 55 36.8 -20
MDT Midelt 90.91 23 LR LR 08 20 18.9
comp=Z,242µm,22.0s,baz=190,slow=32
MDT Midelt 90.91 23 P **P** **07 45 27.9 +1.7**
ATD Arta Tunnel 90.95 71 LR LR 08 22 41.4
comp=Z,678µm,21.6s,baz=200,slow=33
CZD Col de Zad 91.03 22 P **P** **07 45 29.0 +2.0**
FIGM Figuig 91.04 26 P **P** **07 45 29.0 +2.1**
061Z Ochoppi 91.04 317 P **P** **07 45 27.0 +0.1**
061Z Ochoppi 91.04 317 P **P** **07 45 27.8 +0.9**
baz=154,SNR=6.4
061Z S **S** **07 56 21.2 -2.4**
baz=154
ZHG ZHG 91.09 21 P **P** **07 45 28.0 +1.0**
SYDH Sydney Hard Ro 91.20 182 P **P** **07 45 28.7 +0.9**
HTT Hallett 91.22 172 P **P** **07 45 28.2 +0.3**
baz=91,SNR=11
HTT Hallett 91.22 172 P **P** **07 45 28.9 +0.9**
HTT Hallett 91.22 172 ⇑P **P** **07 45 27.6 -0.4**
VAH Vaihoa 91.38 241 *e*P **P** **07 45 29.2 +0.4**
comp=Z,226nm,1.3s
VAH Vaihoa 91.38 241 *e*T T 09 27 10.5
comp=Z,25nm,0.3s
IFR Ifrane 91.47 22 P **P** **07 45 28.5 -0.4**
IFR S **SKSac** **07 55 59.8 -0.7**
WHYH Whyalla 91.50 171 P **P** **07 45 30.1 +0.9**
MORW Morawa 91.56 152 P **P** **07 45 29.2 -0.3**
baz=92,SNR=5.4
MORW Morawa 91.56 152 P **P** **07 45 28.8 -0.8**
MORW Morawa 91.56 152 ⇓P **P** **07 45 29.3 -0.3**
BBOO Buckleboo 91.58 170 P **P** **07 45 29.4 -0.2**
baz=92,SNR=5.9
BBOO Buckleboo 91.58 170 P **P** **07 45 28.9 -0.8**
BBOO IAmb IAmb 07 45 33.7
comp=Z,633nm,1.9s
BBOO Buckleboo 91.58 170 P **P** **07 45 30.5 +0.9**
LCRM LCR 91.69 22 P **P** **07 45 32.0 +2.1**
TLIG Tlapa 91.70 299 P **P** **07 45 31.1 +0.8**
TLIG Tlapa 91.70 299 ⇑P **P** **07 45 31.0 +0.7**
PMOR Pomariorio Ree 91.71 240 *e*T T 09 27 39.6
comp=Z,10nm,0.2s
MGCD Mangrove Creek 91.74 183 P **P** **07 45 31.6 +1.3**
baz=92,SNR=8.8
MGCD Mangrove Creek 91.74 183 P **P** **07 45 31.4 +1.1**
BBSR BB Station 91.77 333 P **P** **07 45 29.3 -0.8**
BBSR BB Station 91.77 333 P **P** **07 45 29.7 -0.4**
baz=162
BBSR S **S** **07 56 26.2 -3.7**
baz=162
BBSR BB Station 91.77 333 ⇑P **P** **07 45 29.0 -1.1**
RAR Rarotonga 91.78 228 LR LR 08 19 49.5
comp=Z,33µm,20.8s,baz=194,slow=31
RAR Rarotonga 91.78 228 P **P** **07 45 29.8 -0.8**
RAR Rarotonga 91.78 228 IAMs_20 IAMs_20 08 28 39.6
comp=Z,73µm,18.0s
RAR Rarotonga 91.78 228 P **P** **07 45 29.8 -0.8**
RAR pmax pmax
comp=Z,2µm,2.1s
RAR MLR MLR
comp=Z,73µm,18.0s
RAR Rarotonga 91.78 228 P **P** **07 45 34.2 +3.6**
RAR Rarotonga 91.78 228 ⇓P **P** **07 45 31.9 +1.3**
H08S1 Diego Carcia H 91.88 106 T T 09 28 00.5
baz=218,slow=75,SNR=4.3
060A Indiantown 91.89 318 P **P** **07 45 32.0 +1.3**
060A IAmb IAmb 07 45 55.9
comp=Z,977nm,1.4s
060A Indiantown 91.89 318 P **P** **07 45 32.1 +1.3**
baz=155,SNR=8.4
060A S **S** **07 56 32.6 +1.4**
baz=155
H08S2 Diego Garcia H 91.89 106 T T 09 28 05.5
baz=218,slow=75,SNR=4.6
H08S3 Diego Garcia H 91.90 106 T T 09 27 56.3
baz=218,slow=75,SNR=3.9
DGAR Diego Garcia 92.06 106 ⇓*e*P **P** **07 45 29.5 -2.5**
DGAR pmax pmax
comp=Z,1µm,1.7s
DGAR Diego Garcia 92.06 106 P **P** **07 45 31.3 -0.7**
DGAR P **P** **07 45 31.3 -0.7**
DGAR S **SKSac** **07 56 02.1 -2.6**
DGAR S **SKSac** **07 56 02.1 -2.6**
PSMA Santa Maria 92.18 5 *e*P **P** **07 45 30.9 -1.0**
comp=Z,302nm,1.2s
PSMN Pico do Norte, 92.19 6 *e*P **P** **07 45 30.9 -1.0**
comp=Z,182nm,1.6s
FORT Forrest 92.51 163 P **P** **07 45 34.3 +0.3**
baz=92,SNR=18
FORT Forrest 92.51 163 P **P** **07 45 33.7 -0.2**
FORT IAmb IAmb 07 45 56.4
comp=Z,220nm,0.8s
FORT Forrest 92.51 163 P **P** **07 45 34.5 +0.6**
FORT Forrest 92.51 163 ⇓P **P** **07 45 34.1 +0.2**
JBK JBK 92.83 24 P **P** **07 45 37.0 +1.7**
TAOE Nuku Hiva Isla 92.88 250 *e*P **P** **07 45 36.4 +0.4**
comp=Z,432nm,1.2s
TAOE Nuku Hiva Isla 92.88 250 *e*PP **PP** **07 49 17.8 -0.2**
comp=Z,19µm,26.7s
TAOE Nuku Hiva Isla 92.88 250 *e*LR LR 08 15 26.3
comp=Z,122µm,28.9s
TAOE Nuku Hiva Isla 92.88 250 *e*T T 09 28 46.2
comp=Z,32nm,0.2s
TAOE Nuku Hiva Isla 92.88 250 P **P** **07 45 36.3 +0.4**
CMLA Cha da Macela 92.93 5 *e*P **P** **07 45 35.3 0.0**
comp=Z,93nm,0.7s
CMLA Cha da Macela 92.93 5 IAMs_20 IAMs_20 08 26 48.6
comp=Z,80µm,18.0s
CMLA Cha da Macela 92.93 5 ⇑P **P** **07 45 37.2 +1.9**
STKA Stephens Creek 92.94 175 P **P** **07 45 35.1 -0.8**
comp=Z,101nm,1.2s,baz=155,slow=6.6,SNR=14
STKA PP **PP** **07 49 18.9 +1.4**
comp=Z,4.2nm,0.9s,baz=182,slow=12,SNR=0.9
STKA LR LR 08 25 33.6
comp=Z,303µm,19.4s,baz=182,slow=34
comp=Z,101nm,1.2s
STKA Stephens Creek 92.94 175 P **P** **07 45 35.9 0.0**
baz=93,SNR=15
STKA Stephens Creek 92.94 175 P **P** **07 45 36.1 +0.2**
STKA Stephens Creek 92.94 175 *c i*P **P** **07 45 34.9 -1.0**
STKA Stephens Creek 92.94 175 P **P** **07 45 37.1 +1.2**
PGRON Lagoa das Cont 92.94 5 *e*P **P** **07 45 37.8 +2.4**
LHI Lord Howe Isla 92.95 189 P **P** **07 45 35.1 -0.8**
LHI IAmb IAmb 07 45 54.9
comp=Z,758nm,1.8s
BART Pico Bartolome 92.96 5 *e*P **P** **07 45 36.8 +1.2**
comp=Z,497nm,1.5s
CHEFC Chefchaouen 92.96 22 P **P** **07 45 38.0 +2.3**
PCALD Caldeiras da R 92.96 5 *e*P **P** **07 45 40.1 +4.6**
comp=Z,360nm,1.2s
PSET Sete Cidades 92.98 5 *e*P **P** **07 45 37.0 +1.4**
comp=Z,314nm,1.4s
PVLZ Peæn de 93.25 22 P **P** **07 45 36.0 -0.8**
PVLZ S **SKSac** **07 56 07.2 -2.7**
DWPF Disney Wildern 93.26 318 P **P** **07 45 37.7 +0.6**
DWPF IAmb IAmb 07 46 01.4
comp=Z,596nm,1.6s
DWPF Disney Wildern 93.26 318 IAMs_20 IAMs_20 08 33 02.5
comp=Z,92µm,18.0s
DWPF Disney Wildern 93.26 318 P **P** **07 45 37.4 +0.3**
baz=154,SNR=14
DWPF S **S** **07 56 38.6 -4.9**
baz=154
DWPF Disney Wildern 93.26 318 P **P** **07 45 37.2 +0.1**
baz=154
DWPF S **S** **07 56 50.1 +6.6**
baz=154
DWPF Disney Wildern 93.26 318 ⇑P **P** **07 45 37.2 +0.1**
TAF Taforalt 93.33 24 P **P** **07 45 39.0 +1.6**
CMSA Cobar Meteorol 93.43 178 P **P** **07 45 37.7 -0.5**
baz=93,SNR=26
CMSA Cobar Meteorol 93.43 178 P **P** **07 45 38.4 +0.3**
UNM Universidad Na 93.50 299 IAMs_20 IAMs_20 08 31 28.8
comp=Z,90µm,18.0s
SMIR Smir Dam 93.51 21 P **P** **07 45 40.0 +2.0**
PCAN Candelaria 93.51 3 *e*P **P** **07 45 39.9 +1.9**
comp=Z,171nm,1.4s
PPNO Prainha do Nor 93.52 3 *e*P **P** **07 45 40.4 +2.3**
comp=Z,111nm,1.2s
PICO Pico 93.55 3 *e*P **P** **07 45 40.6 +2.4**
comp=Z,390nm,1.3s
CALA Caldeira 93.62 3 *e*P **P** **07 45 38.8 +0.2**
comp=Z,352nm,1.6s
PCED Cedros 93.67 3 *e*P **P** **07 45 40.1 +1.4**
comp=Z,314nm,1.2s
CHAS Isla Isabel II 93.68 24 P **P** **07 45 38.2 -0.6**
CHAS S **SKSac** **07 56 13.0 +0.7**
WMELI Melilla 93.69 23 P **P** **07 45 38.4 -0.5**
WMELI S **SKSac** **07 56 12.3 0.0**
PMAN Manadas 93.69 3 *e*P **P** **07 45 37.3 -1.5**
comp=Z,326nm,0.9s
CEU Ceuta 93.72 21 P **P** **07 45 38.9 0.0**
CEU S **SKSac** **07 56 13.0 +0.6**
ROSA Rosais 93.77 3 *e*P **P** **07 45 38.1 -1.1**
comp=Z,192nm,1.6s
ROSA Rosais 93.77 3 P **P** **07 45 39.2 0.0**
ROSA IAmb IAmb 07 45 55.0
comp=Z,409nm,1.0s
ROSA Rosais 93.77 3 ⇓P **P** **07 45 43.6 +4.4**
PSCM Serra do Cume 93.79 4 *e*P **P** **07 45 38.3 -1.0**
comp=Z,79nm,0.6s
PAGU Agualva, Azore 93.85 4 *e*P **P** **07 45 38.6 -0.9**
comp=Z,143nm,1.1s
MULG Mulgathing 93.86 168 P **P** **07 45 39.9 -0.3**
PGRA Graciosa 94.09 3 *e*P **P** **07 45 40.6 0.0**
comp=Z,39nm,0.7s
SRBC Serra Branca 94.09 3 *e*P **P** **07 45 39.6 -1.1**
comp=Z,314nm,1.1s
LCRK Leigh Creek 94.12 172 P **P** **07 45 41.3 0.0**
PFVI Vila Bisbo 94.24 18 P **P** **07 45 41.6 +0.2**
PFVI IAmb IAmb 07 45 56.0
comp=Z,377nm,1.4s
PFVI Vila Bisbo 94.24 18 P **P** **07 45 43.2 +1.8**
PFVI Vila Bisbo 94.24 18 *e*P **P** **07 45 41.9 +0.5**
comp=Z,485nm,1.6s
PFVI Vila Bisbo 94.24 18 *e*PP **PP** **07 49 33.4 +4.5**
H07S1 FLORES T-PHASE 94.38 1 *e*P **P** **07 45 41.4 -0.6**
MORF Marmelete 94.44 18 *e*P **P** **07 45 42.3 -0.1**
MORF *e*PP **PP** **07 49 30.2 -0.3**
MORF *e*SKSac **SKSac** **07 56 18.1 +1.6**
MORF *e*SS **SS** **08 03 18.1 +1.1**
MORF IAMs_20 IAMs_20 08 17 00.0
comp=Z,296µm,42.4s
MORF Marmelete 94.44 18 *e*P **P** **07 45 42.2 -0.1**
MORF *e* 07 49 30.2
MORF *e* 07 56 18.0
MORF *e*SS SS 08 03 18.0 +1.1
MORF Marmelete 94.44 18 ⇑P **P** **07 45 42.7 +0.3**
MORF Marmelete 94.44 18 *e*P **P** **07 45 42.2 -0.1**
comp=Z,415nm,1.6s
MORF Marmelete 94.44 18 *e*PP **PP** **07 49 32.4 +1.9**
ARMA Armidale 94.51 183 P **P** **07 45 43.4 +0.2**
baz=94,SNR=17
ARMA Armidale 94.51 183 P **P** **07 45 42.2 -1.1**
ARMA Armidale 94.51 183 P **P** **07 45 44.1 +0.8**
ARMA Armidale 94.51 183 ⇑P **P** **07 45 42.6 -0.6**
PBDV Barranco-do-Ve 94.51 19 *e*P **P** **07 45 42.8 +0.1**
PBDV Barranco-do-Ve 94.51 19 *e*PP **PP** **07 49 36.0 +5.0**
MEEK Meekatharra 94.54 154 P **P** **07 45 42.7 -0.7**
baz=94,SNR=5.4
PTEO Sao Teotonio 94.66 18 *e*P **P** **07 45 44.0 +0.7**
comp=Z,443nm,1.6s
PVAQ Vaqueiros 94.71 19 P **P** **07 45 43.4 -0.1**
PVAQ Vaqueiros 94.71 19 P **P** **07 45 45.3 +1.8**
PVAQ Vaqueiros 94.71 19 ⇑P **P** **07 45 44.3 +0.8**
PVAQ Vaqueiros 94.71 19 *e*P **P** **07 45 44.0 +0.5**
comp=Z,463nm,1.7s
PVAQ Vaqueiros 94.71 19 *e*PP **PP** **07 49 36.1 +3.6**
PVAQ *e*SKSac **SKSac** **07 56 19.9 +2.1**
PVAQ Vaqueiros 94.71 19 *e*LR LR 08 26 21.7
comp=Z,94µm,18.0s
EMAL Malaga-Limoner 94.75 22 P **P** **07 45 43.5 -0.2**
EMAL S **SKSac** **07 56 15.8 -2.2**
MOIG Morelia 94.81 298 P **P** **07 45 43.9 -0.8**
656A Willston 94.81 317 P **P** **07 45 43.9 -0.2**
656A Willston 94.81 317 P **P** **07 45 44.3 +0.1**
baz=154,SNR=22
656A S **S** **07 56 54.7 -2.3**
baz=154
PCVE Castro Verde 94.87 19 *e*P **P** **07 45 44.5 +0.2**
comp=Z,333nm,1.6s
PCVE Castro Verde 94.87 19 *e*PP **PP** **07 49 37.8 +4.0**
MESJ Messejana 95.04 19 *e*P **P** **07 45 44.9 -0.1**
MESJ *e*PP **PP** **07 49 34.9 -0.2**
MESJ *e*SKSac **SKSac** **07 56 21.3 +1.7**
MESJ *e*SS **SS** **08 03 26.6 +1.3**
MESJ IAMs_20 IAMs_20 08 17 37.2
comp=Z,257µm,39.2s
MESJ Messejana 95.04 19 *e*P **P** **07 45 44.9 -0.1**
MESJ *e* 07 49 34.8
MESJ *e* 07 56 21.2
MESJ *e*SS SS 08 03 26.5 +1.2
MESJ Messejana 95.04 19 ⇑P **P** **07 45 45.9 +0.9**
MESJ Messejana 95.04 19 *e*P **P** **07 45 45.4 +0.4**
comp=Z,344nm,1.7s
MESJ Messejana 95.04 19 *e*PP **PP** **07 49 39.3 +4.2**
PNCL Nicolau / Gran 95.25 18 *e*P **P** **07 45 46.4 +0.5**
comp=Z,251nm,1.9s
PNCL Nicolau / Gran 95.25 18 *e*PP **PP** **07 49 41.0 +4.3**
PBEJ Beja 95.29 19 *e*P **P** **07 45 46.7 +0.6**
comp=Z,319nm,1.6s
PBAR Barrancos 95.59 20 *e*P **P** **07 45 48.3 +0.8**

PBAR Barrancos 95.59 20 *e*PP **PP** 07 49 43.5 +4.2
LIS Lisbon 95.73 18 *e*P **P** 07 45 48.1 -0.1
LIS *e*PP **PP** 07 49 40.2 -0.2
LIS *e*SKSac **SKSac** 07 56 24.8 +1.7
LIS *e*SS **SS** 08 03 36.4 +1.4
LIS IAMs_20 IAMs_20 08 17 13.4
comp=Z,225µm,33.7s
LIS Lisbon 95.73 18 *e*P **P** 07 45 48.0 -0.1
LIS *e* 07 49 40.1
LIS *e* 07 56 24.8
LIS *e*SS SS 08 03 36.4 +1.4
LIS Lisbon 95.73 18 *e*P **P** 07 45 49.0 +0.9
LIS Lisbon 95.73 18 *e*PP **PP** 07 49 44.3 +3.9
PMST Lisbon--Monsan 95.74 18 *e*P **P** 07 45 48.9 +0.7
comp=Z,265nm,1.6s
PMST Lisbon--Monsan 95.74 18 *e*PP **PP** 07 49 45.0 +4.5
EVO Evora 95.75 19 P **P** 07 45 48.4 +0.2
EVO S **SKSac** 07 56 22.5 -0.8
456A Hilliard 95.83 318 P **P** 07 45 49.0 +0.2
baz=154
456A S **S** 07 57 03.1 -2.7
baz=154
PACT Alcochete 95.83 18 *e*P **P** 07 45 49.5 +0.9
comp=Z,464nm,1.6s
PACT Alcochete 95.83 18 *e*PP **PP** 07 49 45.4 +4.2
PMAFR Mafra 95.94 18 *e*P **P** 07 45 49.0 -0.1
comp=Z,242nm,1.5s
PMAFR Mafra 95.94 18 *e*PP **PP** 07 49 47.1 +5.0
PESTR Estremoz 96.15 19 P **P** 07 45 50.4 +0.4
PESTR Estremoz 96.15 19 P **P** 07 45 51.6 +1.5
PESTR Estremoz 96.15 19 ⇑P **P** 07 45 50.3 +0.2
PESTR Estremoz 96.15 19 *e*P **P** 07 45 50.5 +0.4
comp=Z,380nm,1.7s
PESTR Estremoz 96.15 19 *e*PP **PP** 07 49 48.0 +4.2
PMTG Montargil 96.23 18 *e*P **P** 07 45 49.9 -0.5
comp=Z,314nm,1.6s
PMTG Montargil 96.23 18 *e*PP **PP** 07 49 48.3 +4.0
553A Crawfordville 96.28 316 P **P** 07 45 51.2 +0.3
553A IAmb IAmb 07 46 06.7
comp=Z,855nm,1.7s
553A Crawfordville 96.28 316 P **P** 07 45 51.2 +0.3
baz=153
553A S **S** 07 57 01.4 -8.4
baz=153
CART Cartagena 96.31 24 P **P** 07 45 50.4 -0.4
CART S **SKSac** 07 56 25.6 -0.6
CART Cartagena 96.31 24 IAMs_20 IAMs_20 08 28 20.3
comp=Z,135µm,18.0s
OOD Oodnadatta 96.51 169 P **P** 07 45 53.4 +1.1
PSBE So Bento 96.56 18 *e*P **P** 07 45 52.4 +0.4
comp=Z,259nm,1.4s
PSBE So Bento 96.56 18 *e*PP **PP** 07 49 51.2 +4.3
257A Skidaway Islan 96.58 320 P **P** 07 45 53.0 +0.9
baz=154
PMRV Marv??o 96.73 19 *e*P **P** 07 45 52.9 +0.2
comp=Z,201nm,1.6s
PMRV Marv??o 96.73 19 *e*PP **PP** 07 49 52.7 +4.5
PMRV *e*SKSac **SKSac** 07 56 31.5 +3.0
PMRV Marv??o 96.73 19 *e*LR LR 08 25 26.7
comp=Z,85µm,18.0s
CTEI Djebel Teioual 96.81 30 P **P** 07 45 54.4 +1.1
INKA Innaminka 97.00 174 P **P** 07 45 54.8 +0.3
TIGA Tifton 97.07 318 P Pdif 07 45 54.6 +0.1
TIGA IAmb IAmb 07 46 18.3
comp=Z,752nm,1.9s
TIGA Tifton 97.07 318 P Pdif 07 45 54.5 0.0
baz=153
TIGA S **S** 07 57 13.9 -2.5
baz=153
TIGA Tifton 97.07 318 P **P** 07 45 54.3 -0.1
baz=153
TIGA S **S** 07 57 17.3 +0.9
baz=153
255A Hazlehurst 97.08 319 P **P** 07 45 54.4 0.0
255A IAmb IAmb 07 46 18.5
comp=Z,366nm,1.6s
255A Hazlehurst 97.08 319 P **P** 07 45 54.4 0.0
baz=154
255A S **S** 07 57 14.3 -2.2
baz=154
DFRA Djebel Bou Aff 97.11 30 P Pdif 07 45 56.8 +2.1
PCBR Castelo Branco 97.12 19 *e*P Pdif 07 45 54.5 0.0
comp=Z,88nm,1.5s
PCAS Casmilo, Conde 97.14 18 *e*P Pdif 07 45 57.8 +3.2
comp=Z,233nm,1.5s
PCAS Casmilo, Conde 97.14 18 *e*PP **PP** 07 49 50.3 -1.0
451A Vernon 97.18 316 P Pdif 07 45 55.7 +0.7
451A Vernon 97.18 316 P Pdif 07 45 55.7 +0.7
baz=152,SNR=9.0
CKFL Kef-Lekhel 97.22 31 P Pdif 07 45 56.4 +1.2
NHSC New Hope 97.29 321 P Pdif 07 45 56.5 +1.0
NHSC IAmb IAmb 07 46 20.1
comp=Z,551nm,1.6s
NHSC New Hope 97.29 321 P Pdif 07 45 56.1 +0.7
baz=155,SNR=6.6
NHSC S **S** 07 57 17.9 -0.3
baz=155
NHSC New Hope 97.29 321 P Pdif 07 45 56.0 +0.5
baz=155
NHSC S **S** 07 57 22.6 +4.4
baz=155
KEST Kesra 97.39 33 P **P** 07 45 55.8 0.0
comp=Z,9.6nm,0.7s,baz=172,slow=1.1,SNR=12
KEST PP **PP** 07 49 51.0 -2.4
comp=Z,14nm,0.9s,baz=172,slow=11,SNR=4.3
KEST PKKP **PKKPdf** 08 02 34.8 -0.8
comp=Z,13nm,0.9s,baz=319,slow=2.8,SNR=6.2
KEST LR LR 08 25 50.1
comp=Z,642µm,19.8s,baz=135,slow=33
comp=Z,9.6nm,0.7s
KEST Kesra 97.39 33 P Pdif 07 45 56.0 0.0
Y60A Bolivia 97.41 323 P Pdif 07 45 56.4 +0.5
baz=155
Y60A P Pdif 07 45 56.4 +0.5
baz=155
Y60A S **S** 07 57 20.7 +1.5
baz=155
Y60A S **S** 07 57 20.7 +1.5
baz=155
PAB San Pablo 97.44 21 P Pdif 07 45 56.4 +0.3
PAB San Pablo 97.44 21 IAMs_20 IAMs_20 08 24 10.4
comp=Z,120µm,22.0s
PAB San Pablo 97.44 21 ⇑P Pdif 07 45 57.6 +1.5
PAB San Pablo 97.44 21 P Pdif 07 45 57.3 +1.2
PAB San Pablo 97.44 21 ⇑P Pdif 07 45 56.7 +0.6
352A Blakely 97.62 317 P **P** 07 45 56.8 -0.1
baz=153,SNR=14
Y59A Loris 97.62 322 P Pdif 07 45 57.4 +0.5
baz=155
Y59A P Pdif 07 45 57.4 +0.5
baz=155
Y59A S **S** 07 57 21.7 +0.6
baz=155
Y59A S **S** 07 57 21.7 +0.6
baz=155
CMAH Djebel Manchou 97.63 31 P **P** 07 45 56.8 -0.1
ESDC Sonseca Array 97.65 21 P **P** 07 45 56.1 -0.8
comp=Z,8.6nm,0.6s,baz=191,slow=4.6,SNR=53
ESDC PP **PP** 07 49 51.5 -3.8
comp=Z,6.8nm,1.0s,baz=196,slow=7.7,SNR=4.1
ESDC PKKP **PKKPbc** 08 02 33.6 +1.4
comp=Z,6.9nm,1.0s,baz=12,slow=2.7,SNR=8.6
ESDC LR LR 08 24 37.6
comp=Z,122µm,21.5s,baz=182,slow=32
comp=Z,8.6nm,0.6s
ESDC Sonseca Array 97.65 21 P **P** 07 45 55.8 -1.1
ESDC IAmb IAmb 07 46 05.6
comp=Z,395nm,2.2s
MTE Manteigas 97.65 19 IAMs_20 IAMs_20 08 30 19.4
comp=Z,113µm,18.0s
MTE Manteigas 97.65 19 *e*P **P** 07 45 56.1 -0.8
comp=Z,93nm,1.6s
MTE Manteigas 97.65 19 *e*PP **PP** 07 49 58.2 +2.9
MTE *e*SKSac **SKSac** 07 56 38.5 +5.3
MTE Manteigas 97.65 19 *e*LR LR 08 24 43.4
comp=Z,90µm,16.0s
ESBB Sonseca Array 97.65 21 P **P** 07 45 56.8 -0.2
Y58A Scranton 97.83 322 P Pdif 07 45 58.6 +0.8
Y58A IAmb IAmb 07 46 15.4
comp=Z,249nm,1.3s
Y58A Scranton 97.83 322 P Pdif 07 45 58.0 +0.2
baz=155
Y58A P Pdif 07 45 58.0 +0.2
baz=155
Y58A S **S** 07 57 23.3 +0.5
baz=155
Y58A S **S** 07 57 23.3 +0.5
baz=155
PVIS Viseu 97.89 18 *e*P Pdif 07 45 59.0 +1.0
comp=Z,81nm,1.6s
PVIS Viseu 97.89 18 *e*PP **PP** 07 49 57.8 +0.6
154A Montrose 97.93 318 P Pdif 07 45 58.6 +0.3
baz=153,SNR=9.1
HAW Hawthorne Fire 98.04 320 P Pdif 07 45 58.8 +0.1
baz=154
HAW S **S** 07 57 23.9 -0.8
baz=154
ZAIG Zacatecas 98.09 298 ⇑P Pdif 07 46 00.1 +0.4
WRKA Warakurna 98.16 162 P Pdif 07 45 59.9 0.0
baz=98,SNR=25
WRKA Warakurna 98.16 162 P Pdif 07 46 00.2 +0.3
WRKA Warakurna 98.16 162 ⇑P Pdif 07 45 59.9 0.0
BRAL Brewton 98.20 315 P Pdif 07 46 00.3 +0.8
baz=152,SNR=8.8
BRAL S S 07 57 36.1 +10
baz=152
BRAL Brewton 98.20 315 Pdiff Pdif 07 46 00.1 +0.6
baz=152
BRAL S **S** 07 57 31.6 +5.5
baz=152
X58A Rowland 98.30 322 P Pdif 07 46 00.6 +0.7
baz=155,SNR=5.6
X58A P Pdif 07 46 00.6 +0.7
baz=155,SNR=5.6
X58A S **S** 07 57 28.0 +1.3
baz=155
X58A S **S** 07 57 28.0 +1.3
baz=155
QLP Quilpie 98.32 177 P **P** 07 46 00.1 -0.3
baz=98,SNR=11
QLP Quilpie 98.32 177 P Pdif 07 46 00.5 0.0
comp=Z,193nm,1.5s
QLP Quilpie 98.32 177 ⇑P Pdif 07 46 00.5 0.0
UCM Universidad Co 98.41 22 P **P** 07 45 59.9 -0.4
UCM S **SKSac** 07 56 37.3 +0.3
CNNC Cliffs of the 98.42 324 P **P** 07 46 00.0 -0.3
baz=156
CNNC S **S** 07 57 28.2 +0.5
baz=156
CNNC Cliffs of the 98.42 324 Pdiff **P** 07 46 00.1 -0.3
baz=156
CNNC S **S** 07 57 33.0 +5.3
baz=156
PVRL Vila Real 98.47 18 *e*P Pdif 07 46 01.9 +1.3
comp=Z,102nm,1.6s
PVRL Vila Real 98.47 18 *e*PP **PP** 07 50 04.2 +2.6
V61A Roper 98.48 325 P Pdif 07 46 00.7 +0.1
baz=156
V61A P Pdif 07 46 00.7 +0.1
baz=156
V61A S **S** 07 57 24.7 -3.5
baz=156
V61A S **S** 07 57 24.7 -3.5
baz=156
RMQ Roma 98.48 181 P Pdif 07 46 01.9 +0.6
baz=98,SNR=32
RMQ Roma 98.48 181 P Pdif 07 46 02.1 +0.9
MVO Moncorvo 98.48 19 *e*P **P** 07 46 00.5 -0.1
MVO Moncorvo 98.48 19 *e*PP **PP** 07 50 03.0 +1.3
MVO *e*SKSac **SKSac** 07 56 40.5 +3.1
MVO Moncorvo 98.48 19 *e*LR LR 08 23 31.6
comp=Z,87µm,20.0s
POLO Lamas de Olo 98.55 18 *e*Pdif Pdif 07 46 01.0 0.0
POLO Lamas de Olo 98.55 18 *e*PP **PP** 07 50 06.8 +4.5
250A Grady 98.59 316 P **P** 07 46 01.3 0.0
baz=152,SNR=18
250A S **S** 07 57 32.3 +2.9
baz=152
152A Waverly Hall 98.59 317 P **P** 07 46 01.0 -0.2
baz=153,SNR=17
152A S **S** 07 57 25.9 -3.5
baz=153
545B Wilberts Farm, 98.64 312 P Pdif 07 46 03.2 +1.6
baz=150
545B S **S** 07 57 30.2 +0.3
baz=150
JSC Jenkinsville 98.73 321 P Pdif 07 46 02.3 +0.5
baz=154
JSC S **S** 07 57 28.8 -1.6
baz=154
BIRD Birdtown, Kers 98.77 321 P Pdif 07 46 02.1 +0.1
BIRD Birdtown, Kers 98.77 321 P **P** 07 46 02.0 0.0
baz=154
BIRD S **S** 07 57 28.3 -2.5
baz=154
GOGA Godfrey 98.77 319 **P** 07 46 00.7 -1.3
GOGA Godfrey 98.77 319 P **P** 07 46 00.7 -1.3
GOGA pmax pmax
comp=Z,94nm,1.4s
GOGA MLR MLR
comp=Z,43µm,19.0s
GOGA Godfrey 98.77 319 P **P** 07 46 01.7 -0.3
baz=153,SNR=8.7
GOGA S **S** 07 57 27.9 -3.0
baz=153
GOGA Godfrey 98.77 319 Pdiff **P** 07 46 01.5 -0.5
baz=153
GOGA S **S** 07 57 33.1 +2.3
baz=153
PCAB Cabril 98.83 18 *e*Pdif Pdif 07 46 03.4 +1.2
PCAB Cabril 98.83 18 *e*PP **PP** 07 50 05.5 +1.1
PGAV Gavieira, Arco 99.04 18 *e*Pdif **Pdif** 07 46 03.3 +0.2
PGAV Gavieira, Arco 99.04 18 *e*PP **PP** 07 50 11.0 +5.0
PGAV *e*SKSac **SKSac** 07 56 43.5 +3.2
PGAV Gavieira, Arco 99.04 18 *e*LR LR 08 24 22.9
comp=Z,162µm,18.0s
HODGE Hodges 99.05 320 P **Pdif** 07 46 02.8 -0.4
HODGE Hodges 99.05 320 P **Pdif** 07 46 03.5 +0.2
baz=154,SNR=6.0
W57A Gilead 99.06 322 **Pdif** 07 46 03.3 0.0
W57A Gilead 99.06 322 P **Pdif** 07 46 03.2 -0.1
baz=155,SNR=6.1
W57A P **Pdif** 07 46 03.2 -0.1
baz=155,SNR=6.1
PBRG Braganca 99.16 19 *e*P **Pdif** 07 46 03.9 +0.3
comp=Z,134nm,1.8s
PBRG Braganca 99.16 19 *e*PP **PP** 07 50 10.8 +4.0
V58A Windy Hill, Pi 99.34 323 P **Pdif** 07 46 03.8 -0.7
V58A Windy Hill, Pi 99.34 323 P **Pdif** 07 46 04.4 -0.1
baz=155
V58A P **Pdif** 07 46 04.4 -0.1
baz=155
Z51A Franklin 99.34 317 P **Pdif** 07 46 04.3 -0.3
Z51A IAmb IAmb 07 50 06.2
comp=Z,740nm,2.9s
Z51A Franklin 99.34 317 P **Pdif** 07 46 04.4 -0.3
baz=152
346A Big Creek Wild 99.38 313 P **Pdif** 07 46 04.0 -0.8
346A IAmb IAmb 07 46 08.2
comp=Z,1µm,2.6s
346A Big Creek Wild 99.38 313 P **Pdif** 07 46 05.1 +0.3
baz=151,SNR=6.8
U59A Littleton 99.39 324 P **Pdif** 07 46 05.0 +0.3
baz=156,SNR=10.0
U59A P **Pdif** 07 46 05.0 +0.3
baz=156,SNR=10.0
Y52A Lilburn 99.40 318 P **Pdif** 07 46 04.8 -0.1
baz=153,SNR=6.2
Y52A P **Pdif** 07 46 04.8 -0.1
baz=153,SNR=6.2
PAULI Pauline 99.42 320 P **Pdif** 07 46 04.4 -0.5
PAULI Pauline 99.42 320 P **Pdif** 07 46 04.8 0.0
baz=154
KMSC Kings Mountain 99.53 321 P **Pdif** 07 46 05.5 0.0
baz=154
KMSC Kings Mountain 99.53 321 Pdiff **Pdif** 07 46 05.4 0.0
baz=154
EIDS Eidsvold 99.55 183 P **Pdif** 07 46 03.2 -2.8
baz=100,SNR=7.2
EIDS Eidsvold 99.55 183 P **Pdif** 07 46 05.9 -0.1
comp=Z,134nm,1.1s
T60A Surry 99.76 325 P **Pdif** 07 46 06.5 +0.2
baz=156
T60A P **Pdif** 07 46 06.5 +0.2
baz=156
MAHO Mahon 99.81 27 P **Pdif** 07 46 06.0 -0.5
MAHO S **SKSac** 07 56 42.8 -1.0
LRAL Lakeview Retre 99.81 316 IAMs_20 IAMs_20 08 33 47.2
comp=Z,94µm,20.0s
LRAL Lakeview Retre 99.81 316 P **Pdif** 07 46 06.6 -0.1
baz=152,SNR=21
LRAL Lakeview Retre 99.81 316 Pdiff **Pdif** 07 46 06.3 -0.4
baz=152
KVTX Kingsville 99.83 305 P **Pdif** 07 46 08.2 +1.4
baz=148
T59A Double "B" Far 99.88 325 P **Pdif** 07 46 06.4 -0.4
baz=156
T59A P **Pdif** 07 46 06.4 -0.4
baz=156
S61A Accomac 99.91 326 P **Pdif** 07 46 07.6 +0.6
baz=156
S61A P **Pdif** 07 46 07.6 +0.6
baz=156
344A Westbrook Farm 99.97 312 P **Pdif** 07 46 08.2 +0.8
baz=150,SNR=22
CASEE Lake Jocassee 99.98 320 P **Pdif** 07 46 07.3 -0.1
baz=153
V55A Taylorsville 100.13 321 P **Pdif** 07 46 08.6 +0.6
baz=154
V55A P **Pdif** 07 46 08.6 +0.6
baz=154
U56A King 100.28 322 P **Pdif** 07 46 09.7 +1.0
baz=154
U56A P **Pdif** 07 46 09.7 +1.0
baz=154
146A Union 100.30 314 P **Pdif** 07 46 09.1 +0.2
baz=151,SNR=6.0
Y49A Blount Mountai 100.30 317 P **Pdif** 07 46 07.8 -1.1
baz=152
X51A Calhoun 100.33 318 P **Pdif** 07 46 08.6 -0.3
baz=152
X51A P **Pdif** 07 46 08.6 -0.3
baz=152
ASAR Alice Springs 100.37 167 P **Pdif** 07 46 07.7 -2.1
comp=Z,16nm,0.7s,baz=183,slow=3.9,SNR=124
ASAR PP **PP** 07 50 12.0 -3.0
comp=Z,29nm,1.1s,baz=188,slow=7.1,SNR=4.2
ASAR PKKP **PKKPdf** 08 02 26.4 -0.2
comp=Z,8.8nm,0.9s,baz=353,slow=3.3,SNR=11
ASAR PKPPKP P'P'df 08 10 28.7 -20
comp=Z,4.0nm,1.0s,baz=25,slow=2.8,SNR=6.4
Z47A Carrollton 100.39 315 P **Pdif** 07 46 08.9 -0.4
baz=151,SNR=16
R61A Willards 100.40 327 P **Pdif** 07 46 10.1 +1.0
baz=156
R61A P **Pdif** 07 46 10.1 +1.0
baz=156
441A DeRidder 100.42 310 P **Pdif** 07 46 10.4 +1.0
baz=149,SNR=11
W52A Murphy 100.44 319 P **Pdif** 07 46 09.4 -0.1
baz=153
T57A Hurt 100.47 323 P **Pdif** 07 46 09.3 -0.2
baz=155
T57A P **Pdif** 07 46 09.3 -0.2
baz=155
V53A Saluda 100.54 320 P **Pdif** 07 46 09.7 -0.2
baz=153
V53A P **Pdif** 07 46 09.7 -0.2
baz=153
VBMS Vicksburg 100.54 313 P **Pdif** 07 46 10.0 +0.1
baz=150
VBMS Vicksburg 100.54 313 Pdiff **Pdif** 07 46 10.0 +0.1
baz=150
342B Flagon Creek P 100.58 311 P **Pdif** 07 46 10.8 +0.7
baz=150,SNR=18
R58B Mineral 100.89 325 P **Pdif** 07 46 11.9 +0.6
baz=155
R58B P **Pdif** 07 46 11.9 +0.6
baz=155
TKL Tuckaleechee C 100.89 319 P **Pdif** 07 46 10.1 -1.4
comp=Z,3.7nm,0.9s,baz=168,slow=1.1,SNR=9.9
TKL Tuckaleechee C 100.89 319 P **Pdif** 07 46 10.6 -0.8
baz=153
735A Kenedy 100.90 305 P **Pdif** 07 46 12.3 +0.7
baz=148
MIDE Milford 100.90 327 P **Pdif** 07 46 12.0 +0.6
baz=156
HKT Hockley 100.92 307 *c i*P **Pdif** 07 46 12.2 +0.6
HKT pmax pmax
comp=Z,147nm,1.5s
HKT Hockley 100.92 307 P **Pdif** 07 46 12.2 +0.6
baz=149
HKT Hockley 100.92 307 ⇑P **Pdif** 07 46 11.9 +0.3
CBN Corbin Frederi 100.94 325 P **Pdif** 07 46 11.6 +0.1
baz=156
CBN Corbin Frederi 100.94 325 Pdiff **Pdif** 07 46 10.5 -1.0
baz=156
U54A Nelsons Funny 100.94 321 P **Pdif** 07 46 11.7 0.0
baz=154
U54A P **Pdif** 07 46 11.7 0.0
baz=154
V52A Sevierville 100.98 320 P **Pdif** 07 46 11.8 0.0
baz=153
S57A Dark Hollow, R 101.06 324 P **Pdif** 07 46 12.0 -0.1
baz=155
S57A P **Pdif** 07 46 12.0 -0.1
baz=155
W50A Signal Mountai 101.06 318 P **Pdif** 07 46 12.2 0.0
baz=152,SNR=6.0
BLA Blacksburg 101.07 323 P **Pdif** 07 46 12.2 0.0
baz=154
BLA Blacksburg 101.07 323 Pdiff **Pdif** 07 46 12.2 0.0
baz=154
X48A Hartselle 101.08 316 P **Pdif** 07 46 11.9 -0.3
baz=152,SNR=20
833A Chaparral WMA, 101.19 304 P **Pdif** 07 46 13.3 +0.4
baz=148,SNR=15
833A Chaparral WMA, 101.19 304 Pdiff **Pdif** 07 46 12.6 -0.4
baz=148
V51A Loudon 101.23 319 P **Pdif** 07 46 12.5 -0.4
baz=153
DZM Mont Dzumac 101.29 197 P **Pdif** 07 46 13.7 -0.2
comp=Z,13nm,1.0s,baz=149,slow=12,SNR=2.8
DZM Mont Dzumac 101.29 197 *e*P **Pdif** 07 46 13.7 -0.2
DZM Mont Dzumac 101.29 197 *e*PP **PP** 07 50 23.0 +1.0
comp=Z,21µm,29.4s
DZM Mont Dzumac 101.29 197 *e*LR LR 08 19 20.5
comp=Z,233µm,24.4s
143A Socs Landing, 101.33 312 P **Pdif** 07 46 13.8 +0.3
baz=150,SNR=6.3
ABTO Aybut 101.45 76 P **Pdif** 07 46 16.1 +1.7
ABTO P **pPdif** 07 46 17.4 -1.5
P61A Hammonton 101.46 328 P **Pdif** 07 46 14.0 +0.2
baz=157
P61A P **Pdif** 07 46 14.0 +0.2
baz=157
Y45A Yeager Farm, C 101.57 314 P **Pdif** 07 46 14.6 +0.1
baz=151,SNR=14
TZTN Tazewell 101.59 320 P **Pdif** 07 46 13.5 -1.0
baz=153
TZTN Tazewell 101.59 320 Pdiff **Pdif** 07 46 13.7 -0.8
baz=153
GVD Gavdhos 101.82 44 *e*P **PP** 07 50 28.9 +1.9
GEDE Greenville 101.85 327 P **Pdif** 07 46 15.4 -0.1
baz=156
SDMD Soldier's Deli 101.86 326 P **Pdif** 07 46 15.2 -0.4
baz=156
PSUB Penn St. - Bra 101.90 327 P **Pdif** 07 46 15.5 -0.2
baz=156
S54A Dingess, Beckl 101.91 322 P **Pdif** 07 46 15.4 -0.5
baz=154
S54A P **Pdif** 07 46 15.4 -0.5
baz=154
R55A Marlinton 101.93 323 P **Pdif** 07 46 16.1 +0.1
baz=154
R55A P **Pdif** 07 46 16.1 +0.1
baz=154
NATX Nacogdoches 101.93 309 P **Pdif** 07 46 16.7 +0.5
baz=149
NATX Nacogdoches 101.93 309 Pdiff **Pdif** 07 46 16.6 +0.5
baz=149
PLAL Pickwick Lake 101.95 316 IAMs_20 IAMs_20 08 34 58.6
comp=Z,93µm,20.0s
TUPA Temple Univers 102.04 328 P **Pdif** 07 46 16.0 -0.3
baz=156
OXF Oxford 102.07 315 P **Pdif** 07 46 15.4 -1.3
baz=150
OXF Oxford 102.07 315 Pdiff **Pdif** 07 46 15.6 -1.1
baz=150
PANJ Princeton 102.08 328 P **Pdif** 07 46 15.7 -0.8
baz=157
EIL Elat 102.11 55 *e*P **PP** 07 50 31.2 +2.0
V48A Smith Brothers 102.12 317 P **Pdif** 07 46 16.2 -0.7
baz=152,SNR=9.0
WHFO Wadi Hawf 102.17 76 P **Pdif** 07 46 20.3 +2.7
N62A Caumsett State 102.22 329 P **Pdif** 07 46 17.4 +0.2
baz=157
N62A P **Pdif** 07 46 17.4 +0.2
baz=157
M63A Gales Ferry 102.25 330 P **Pdif** 07 46 15.4 -1.9
baz=158

M63A P Pdif 07 46 15.4 -1.9
baz=158
RAYN Ar Rayn 102.26 66 P Pdif 07 46 20.7 +2.8
RAYN S SKSac 07 56 55.8 -0.9
FOR Fordham 102.28 329 P Pdif 07 46 17.1 -0.3
baz=157
Q56A Snyder Ridge, 102.29 324 P Pdif 07 46 17.8 +0.2
baz=155
Q56A P Pdif 07 46 17.8 +0.2
baz=155
P57A Homestead Farm 102.31 325 P Pdif 07 46 18.1 +0.5
baz=155
P57A P Pdif 07 46 18.1 +0.5
baz=155
IMMV Iera Moni Meta 102.32 44 P Pdif 07 46 22.6 +4.8
BRNJ Basking Ridge 102.32 328 P Pdif 07 46 17.4 -0.2
baz=157
U49A Red Boiling Sp 102.39 318 P Pdif 07 46 17.7 -0.4
baz=152
ANKY Antikythira Is 102.41 43 P Pdif 07 46 22.5 +4.4
L64A Middleborough 102.41 331 P Pdif 07 46 16.8 -1.1
baz=158
L64A P Pdif 07 46 16.8 -1.1
baz=158
435B Jarrell 102.42 307 P Pdif 07 46 18.6 +0.2
baz=148,SNR=8.3
435B Jarrell 102.42 307 Pdiff Pdif 07 46 18.7 +0.3
baz=148
PAL Palisades 102.42 329 P Pdif 07 46 17.5 -0.6
baz=157
PAL Palisades 102.42 329 Pdiff Pdif 07 46 17.9 -0.1
baz=157
T50A Nancy 102.49 319 P Pdif 07 46 18.0 -0.5
baz=152
T50A P Pdif 07 46 18.0 -0.5
baz=152
IDI Anoyia 102.53 45 ⇑P Pdif 07 46 23.8 +5.0
IDI Anoyia 102.53 45 ⇑P PP 07 50 27.7 -4.7
IDI Anoyia 102.53 45 PP PP 07 50 31.5 -1.0
comp=Z,17nm,1.0s,baz=203,slow=17,SNR=3.5
IDI Anoyia 102.53 45 eP PP 07 50 33.9 +1.4
IDI Anoyia 102.53 45 P Pdif 07 46 21.9 +3.1
IDI Anoyia 102.53 45 IAMs_20 IAMs_20 08 33 05.9
comp=Z,157µm,21.0s
IDI Anoyia 102.53 45 ⇓P Pdif 07 46 21.4 +2.6
CCAR Cane Creek 102.54 313 P Pdif 07 46 18.6 -0.1
baz=150
W45A Hickory Valley 102.54 315 P Pdif 07 46 17.7 -1.1
baz=151,SNR=15
S51A Beattyville 102.58 320 P Pdif 07 46 19.1 +0.3
baz=153
S51A P Pdif 07 46 19.1 +0.3
baz=153
BRYW Bryant College 102.58 331 IAMs_20 IAMs_20 08 33 39.5
comp=Z,90µm,19.0s
R53A Hurricane 102.61 322 P Pdif 07 46 18.8 -0.2
baz=153
R53A P Pdif 07 46 18.8 -0.2
baz=153
237A Washetta, Mont 102.65 309 P Pdif 07 46 19.6 +0.3
baz=148
ODNJ Ogdensburg 102.70 328 P Pdif 07 46 18.9 -0.5
baz=157
PYL PYLOS 102.71 41 P Pdif 07 46 30.8 +11
Q54A Coxs Mills 102.80 323 P Pdif 07 46 19.0 -0.8
baz=154
Q54A P Pdif 07 46 19.0 -0.8
baz=154
BRNY Black Rk. Fore 102.83 329 P Pdif 07 46 19.8 -0.1
baz=157
WVT Waverly 102.85 317 IAMs_20 IAMs_20 08 38 23.5
comp=Z,71µm,18.0s
WVT Waverly 102.85 317 P Pdif 07 46 19.2 -0.9
baz=151,SNR=21
WVT Waverly 102.85 317 Pdiff Pdif 07 46 19.0 -1.2
baz=151
WVT Waverly 102.85 317 ⇑P Pdif 07 46 18.8 -1.3
MSVF Nonsavu 102.86 209 IAMs_20 IAMs_20 08 37 33.8
comp=Z,111µm,18.0s
ZKR Zakros 102.92 46 eP PP 07 50 37.3 +2.0
TIP Timpagrande 102.94 37 ⇑P Pdif 07 46 22.7 +2.2
TIP Timpagrande 102.94 37 ⇑P Pdif 07 46 22.8 +2.2
WES Weston 102.96 331 IAMs_20 IAMs_20 08 33 10.4
comp=Z,72µm,19.0s
WES Weston 102.96 331 P Pdif 07 46 19.4 -1.0
baz=158
ITM Ithomi 103.03 41 eP PKiKP 07 50 39.0 -1.7
ITM Ithomi 103.03 41 P Pdif 07 46 24.8 +3.9
ITM Ithomi 103.03 41 ⇓P Pdif 07 46 24.2 +3.3
MCWV Mont Chateau 103.07 324 P Pdif 07 46 19.7 -1.3
baz=154
MCWV Mont Chateau 103.07 324 Pdiff Pdif 07 46 20.3 -0.7
baz=154
N58A Sunbury 103.12 327 P Pdif 07 46 20.1 -1.1
baz=156
N58A P Pdif 07 46 20.1 -1.1
baz=156
HRV Adam Dziewonsk 103.14 331 IAMs_20 IAMs_20 08 33 35.1
comp=Z,74µm,19.0s
HRV Adam Dziewonsk 103.14 331 P Pdif 07 46 21.8 +0.6
baz=158
HRV Adam Dziewonsk 103.14 331 Pdiff Pdif 07 46 21.4 +0.2
baz=158
AFI Afiamalu 103.14 220 IAMs_20 IAMs_20 08 32 27.7
comp=Z,90µm,18.0s
QUA2 Belchertown 103.15 330 IAMs_20 IAMs_20 08 33 59.5
comp=Z,90µm,19.0s
QUA2 Belchertown 103.15 330 P Pdif 07 46 20.1 -1.2
baz=158
NPNY Mohonk Preserv 103.18 329 P Pdif 07 46 21.2 -0.2
baz=157
JCT Junction City 103.19 305 P Pdif 07 46 21.6 -0.3
baz=147,SNR=30
JCT Junction City 103.19 305 Pdiff Pdif 07 46 21.6 -0.3
baz=147
JCT Junction City 103.19 305 ⇑P Pdif 07 46 21.4 -0.4
Q52A Bidwell 103.28 322 P Pdif 07 46 21.3 -0.7
baz=153
Q52A P Pdif 07 46 21.3 -0.7
baz=153
T47A Sharon Grove 103.32 318 P Pdif 07 46 20.9 -1.3
baz=151
PSWB Penn State Wil 103.33 327 P Pdif 07 46 21.7 -0.5
baz=156
Z38A Mt. Pleasant 103.35 310 P Pdif 07 46 22.9 +0.4
baz=148
WHTX Lake Whitney, 103.38 307 P Pdif 07 46 22.7 +0.1
baz=148,SNR=8.3
WHTX Lake Whitney, 103.38 307 Pdiff Pdif 07 46 22.4 -0.2
baz=148
R50A Paris 103.41 320 P Pdif 07 46 22.5 -0.1
baz=152
R50A P Pdif 07 46 22.5 -0.1
baz=152
P53A Whipple 103.44 323 P Pdif 07 46 21.7 -0.9
baz=154
P53A P Pdif 07 46 21.7 -0.9
baz=154
K62A Royalston 103.47 331 P Pdif 07 46 22.5 -0.2
baz=158
K62A P Pdif 07 46 22.5 -0.2
baz=158
HBAR Harrisburg 103.48 314 P Pdif 07 46 23.0 +0.1
baz=150
KSPA Keystone Colle 103.48 328 P Pdif 07 46 22.7 -0.1
baz=156
LNXT Lenox 103.49 315 P Pdif 07 46 21.9 -1.0
baz=150
UNH University of 103.49 332 P Pdif 07 46 22.3 -0.5
baz=158
DRO Drossia 103.63 41 P Pdif 07 46 28.4 +4.8
KARP Karpathos 103.68 46 eP PKiKP 07 50 46.2 +4.2
SANT Santorini 103.70 44 IAMs_20 IAMs_20 08 36 52.9
comp=Z,84µm,19.0s
M57A Sunshine Farm, 103.71 327 P Pdif 07 46 23.9 +0.1
baz=155
M57A P Pdif 07 46 23.9 +0.1
baz=155
Q51A Peebles 103.72 321 P Pdif 07 46 23.3 -0.6
baz=153
Q51A P Pdif 07 46 23.3 -0.6
baz=153
O54A Avella 103.72 324 P Pdif 07 46 23.2 -0.7
baz=154
O54A P Pdif 07 46 23.2 -0.7
baz=154
R49A Shelbyville 103.73 320 P Pdif 07 46 23.4 -0.6
baz=152
R49A P Pdif 07 46 23.4 -0.6
baz=152
P52A Corning 103.83 322 Pdiff Pdif 07 46 23.8 -0.6
baz=153
MIAR Mount Ida 103.84 312 P Pdif 07 46 24.0 -0.5
baz=149
MIAR Mount Ida 103.84 312 Pdiff Pdif 07 46 24.4 -0.2
baz=149
MIAR Mount Ida 103.84 312 ⇑P Pdif 07 46 24.1 -0.4
L59A Walton 103.84 328 P Pdif 07 46 24.2 -0.3
baz=156
L59A P Pdif 07 46 24.2 -0.3
baz=156
UPAO U. Pittsburgh 103.87 324 P Pdif 07 46 24.6 +0.1
baz=154
KLV Kalavryta, Ach 103.87 41 P Pdif 07 46 28.1 +3.4
TRY Troy 103.94 330 IAMs_20 IAMs_20 08 34 57.5
comp=Z,63µm,19.0s
TRY Troy 103.94 330 P Pdif 07 46 24.5 -0.3
baz=157
T45B Paducah 103.94 316 P Pdif 07 46 23.8 -1.1
baz=151
LKD2 Lefkada island 103.97 40 P Pdif 07 46 28.0 +2.9
LKD2 Lefkada island 103.97 40 i P Pdif 07 46 30.3 +5.2
LAKA Lakka 103.98 41 P Pdif 07 46 28.9 +3.8
P51A Williamsport 104.02 322 P Pdif 07 46 24.8 -0.4
baz=153
P51A P Pdif 07 46 24.8 -0.4
baz=153
FFD Franklin Falls 104.06 331 IAMs_20 IAMs_20 08 33 29.4
comp=Z,77µm,19.0s
FFD Franklin Falls 104.06 331 P Pdif 07 46 25.0 -0.2
baz=158
O53A New Philadelph 104.06 323 Pdiff Pdif 07 46 24.9 -0.5
baz=154
TXAR Lajitas Array 104.09 301 Pdiff Pdif 07 46 25.5 -0.4
comp=Z,2.2nm,0.9s,baz=143,slow=6.5,SNR=16
TXAR PP PKiKP 07 50 40.8 -2.2
comp=Z,10nm,0.9s,baz=137,slow=4.4,SNR=2.7
TX31 Lajitas Ar. Si 104.09 301 P Pdif 07 46 25.9 0.0
baz=146,SNR=9.1
WRA Warramunga Arr 104.09 167 Pdiff Pdif 07 46 23.8 -2.5
comp=Z,7.2nm,0.9s,baz=186,slow=4.2,SNR=30
WRA PP PP 07 50 39.2 -3.8
comp=Z,14nm,1.1s,baz=189,slow=7.6,SNR=5.2
WRA PKKP PKKPbc 08 02 15.7 +3.3
comp=Z,8.3nm,0.8s,baz=355,slow=2.9,SNR=16
WRA PKPPKP P'P'df 08 10 22.2 -19
comp=Z,1.8nm,1.0s,baz=56,slow=1.0,SNR=4.3
WRAB Tennant Creek 104.11 167 ⇑P Pdif 07 46 25.7 -0.6
HCNY Howe Caverns 104.12 329 P Pdif 07 46 25.7 +0.1
baz=157
EMMW East Machias 104.12 335 P Pdif 07 46 24.7 -0.8
baz=160
BINY Binghamton 104.14 328 P Pdif 07 46 25.0 -0.7
baz=156
BINY Binghamton 104.14 328 Pdiff Pdif 07 46 25.1 -0.6
baz=156
PVO Paravola 104.14 41 P Pdif 07 46 33.8 +8.0
O52A Adamsville 104.16 323 P Pdif 07 46 25.5 -0.3
baz=153
O52A P Pdif 07 46 25.5 -0.3
baz=153
J61A Chester 104.19 331 P Pdif 07 46 25.2 -0.6
baz=158
J61A P Pdif 07 46 25.2 -0.6
baz=158
MATE Matera 104.24 36 ⇓P Pdif 07 46 31.9 +5.8
UJAP Al Uja 104.26 54 eP PKiKP 07 50 36.6 -6.4
ANX Ano Chora 104.27 41 P Pdif 07 46 30.9 +4.4
I63A Otisfield 104.31 332 P Pdif 07 46 25.5 -0.9
baz=158
I63A P Pdif 07 46 25.5 -0.9
baz=158
SCTE Santa Cesarea 104.33 38 i P Pdif 07 46 30.3 +3.7
APE Apeiranthos 104.33 44 ⇑P Pdif 07 46 30.6 +3.8
APE Apeiranthos 104.33 44 ⇑P PKiKP 07 50 42.0 -1.1
APE Apeiranthos 104.33 44 eP PKiKP 07 50 43.7 +0.6
APE Apeiranthos 104.33 44 ⇑P Pdif 07 46 30.6 +3.8
I62A Tamworth 104.34 332 P Pdif 07 46 24.9 -1.6
baz=158
I62A P Pdif 07 46 24.9 -1.6
baz=158
M55A Ridgway 104.34 326 P Pdif 07 46 26.0 -0.6
baz=155
M55A P Pdif 07 46 26.0 -0.6
baz=155
FITZ Fitzroy Crossi 104.40 158 PP PKiKP 07 50 43.7 -0.2
comp=Z,7.3nm,1.0s,baz=158,slow=8.7,SNR=2.4
FITZ Fitzroy Crossi 104.40 158 ⇑P Pdif 07 46 30.5 +2.9
FITZ ⇑P pPdif 07 46 30.7 -1.4
ATH Athens Observa 104.41 42 P Pdif 07 46 31.5 +4.5
Z35A Perchaven, San 104.42 308 P Pdif 07 46 27.2 0.0
baz=148,SNR=7.2
ATHU Athens Univers 104.43 42 P Pdif 07 46 31.8 +4.7
N53A Lisbon 104.43 324 P Pdif 07 46 27.2 +0.1
baz=154
N53A P Pdif 07 46 27.2 +0.1
baz=154
HNH Hanover 104.45 331 IAMs_20 IAMs_20 08 34 03.8
comp=Z,74µm,20.0s
HNH Hanover 104.45 331 P Pdif 07 46 26.6 -0.4
baz=158
PBMO Poplar Bluff 104.45 315 P Pdif 07 46 26.3 -0.9
baz=150
KEK Kerkira 104.48 39 P Pdif 07 46 30.2 +2.9
NOCI Noci 104.49 36 i P Pdif 07 46 29.4 +2.1
IGT Igoumenitsa 104.51 39 P Pdif 07 46 32.0 +4.6
IGT Igoumenitsa 104.51 39 i P Pdif 07 46 32.5 +5.1
ACCN Adirondack Com 104.54 330 P Pdif 07 46 26.9 -0.5
baz=157
WVL Waterville 104.54 333 IAMs_20 IAMs_20 08 32 14.3
comp=Z,66µm,20.0s
WVL Waterville 104.54 333 P Pdif 07 46 27.1 -0.3
baz=159
L56A Greenwood 104.57 327 P Pdif 07 46 27.4 -0.3
baz=155
L56A P Pdif 07 46 27.4 -0.3
baz=155
DION Dionisos Attik 104.58 42 P Pdif 07 46 31.5 +3.7
G65A Princeton 104.61 335 P Pdif 07 46 27.7 +0.1
baz=160
G65A P Pdif 07 46 27.7 +0.1
baz=160
MMLI Mount Malkishu 104.64 54 eP PKiKP 07 50 41.1 -2.7
ARG Arkhangelos 104.65 46 eP PKiKP 07 50 37.9 -5.8
X37A Clayton 104.65 310 P Pdif 07 46 27.9 -0.3
baz=148
ACSO Alum Creek Sta 104.66 322 P Pdif 07 46 27.3 -0.8
baz=153
ACSO Alum Creek Sta 104.66 322 Pdiff Pdif 07 46 27.6 -0.4
baz=153
P49A Miami Univ. Ec 104.66 320 P Pdif 07 46 27.0 -1.1
baz=152
P49A Miami Univ. Ec 104.66 320 Pdiff Pdif 07 46 27.8 -0.3
baz=152
AXAR Agios Charalam 104.70 41 P Pdif 07 46 32.5 +4.2
SRN Sarande 104.70 39 i P Pdif 07 46 34.3 +6.1
MAKR Makrakomi, Fth 104.72 41 P Pdif 07 46 32.7 +4.3
ATAL Atalanti 104.77 42 P Pdif 07 46 32.0 +3.4
S44A Carbondale 104.77 316 P Pdif 07 46 27.7 -0.9
baz=150
K57A Scipio Center 104.78 328 P Pdif 07 46 27.6 -0.9
baz=156
AGG Agios Georgios 104.80 41 eP PKiKP 07 50 37.9 -6.0
AGG Agios Georgios 104.80 41 P Pdif 07 46 31.1 +2.3
AGG Agios Georgios 104.80 41 ⇓P Pdif 07 46 31.6 +2.9
MGAB Montegabbione 104.82 32 ⇓P Pdif 07 46 31.5 +2.7
CTA Charters Tower 104.84 178 Pdiff Pdif 07 46 28.9 -0.7
comp=Z,21nm,1.2s,baz=176,slow=4.6,SNR=6.5
CTA PP PP 07 50 49.8 +1.3
comp=Z,28nm,1.0s,baz=187,slow=8.2,SNR=6.9
CTAO Charters Tower 104.84 178 ⇑P Pdif 07 46 31.4 +1.8
LBNH Lisbon 104.84 331 IAMs_20 IAMs_20 08 33 53.3
comp=Z,77µm,19.0s
LBNH Lisbon 104.84 331 P Pdif 07 46 27.5 -1.3
baz=158
LBNH Lisbon 104.84 331 Pdiff Pdif 07 46 28.8 +0.1
baz=158
J59A Piesco 104.85 329 P Pdif 07 46 28.4 -0.5
baz=156
J59A P Pdif 07 46 28.4 -0.5
baz=156
P48A Milroy 104.86 320 P Pdif 07 46 28.1 -0.8
baz=152
P48A P Pdif 07 46 28.1 -0.8
baz=152
MCVT Middlebury Col 104.87 331 P Pdif 07 46 28.3 -0.6
baz=157
ABTX Abilene, Hawle 104.91 306 P Pdif 07 46 29.7 +0.3
baz=147
ABTX Abilene, Hawle 104.91 306 Pdiff Pdif 07 46 29.4 0.0
baz=147
SSB Saint Sauveur 104.92 26 IAMs_20 IAMs_20 08 30 54.3
comp=Z,143µm,20.0s
M53A WI Miller and 104.95 324 Pdiff Pdif 07 46 29.2 -0.1
baz=154
J58A Remsen 104.99 329 P Pdif 07 46 28.9 -0.6
baz=156
J58A P Pdif 07 46 28.9 -0.6
baz=156
BODT Bodrum 105.04 45 eP PKiKP 07 50 42.8 -1.6
BODT Bodrum 105.04 45 P Pdif 07 46 32.7 +2.8
N51A Ashland 105.06 323 P Pdif 07 46 30.0 +0.2
baz=153
N51A P Pdif 07 46 30.0 +0.2
baz=153
O49A Covington 105.10 321 P Pdif 07 46 29.6 -0.4
baz=152
O49A P Pdif 07 46 29.6 -0.4
baz=152
PKME Peaks-Kenny Pk 105.10 334 P Pdif 07 46 29.4 -0.5
baz=159
PKME Peaks-Kenny Pk 105.10 334 Pdiff Pdif 07 46 29.1 -0.7
baz=159
ASF Jabal al Asfar 105.11 55 PP PKiKP 07 50 47.6 +2.8
comp=Z,17nm,1.0s,baz=253,slow=1.4,SNR=4.9
ASF PKKPbc PKKPbc 08 02 14.4 +4.4
comp=Z,2.6nm,0.7s,baz=156,slow=2.2,SNR=3.6
WVNY West Valley, N 105.14 326 P Pdif 07 46 28.9 -1.3
baz=154
VT1 Waterbury 105.15 331 IAMs_20 IAMs_20 08 34 25.3
comp=Z,78µm,19.0s
VT1 Waterbury 105.15 331 P Pdif 07 46 30.3 +0.2
baz=157
LSK Leskovik 105.16 39 i P Pdif 07 46 36.0 +5.6
TURN Turunc 105.18 46 eP PKiKP 07 50 41.1 -3.5
OLIL Olney 105.22 318 P Pdif 07 46 29.8 -0.8
baz=151
NCB Newcomb 105.24 330 P Pdif 07 46 30.4 -0.2
baz=156
J57A Williamstown 105.24 328 P Pdif 07 46 27.7 -2.9
baz=156
J57A P Pdif 07 46 27.7 -2.9
baz=156
M52A Chesterland 105.27 324 P Pdif 07 46 30.2 -0.6
baz=153
M52A P Pdif 07 46 30.2 -0.6
baz=153
AKAS Kas 105.28 47 eP PKiKP 07 50 43.4 -1.6
ERPA Erie 105.33 325 P Pdif 07 46 29.5 -1.5
baz=154
ERPA Erie 105.33 325 Pdiff Pdif 07 46 30.2 -0.8
baz=154
G62A West of Eustis 105.38 333 P Pdif 07 46 29.9 -1.3
baz=158
G62A P Pdif 07 46 29.9 -1.3
baz=158
DALY Dalyan (Mula) 105.38 47 eP PKiKP 07 50 45.4 +0.4
NEO Neokhori 105.38 41 P Pdif 07 46 36.6 +5.3
J56A Wolcott 105.38 328 P Pdif 07 46 29.8 -1.4
baz=155
J56A P Pdif 07 46 29.8 -1.4
baz=155
FETY Fethiye 105.41 47 eP PP 07 50 59.2 +5.4
F64A Sherman 105.43 335 P Pdif 07 46 28.8 -2.5
baz=159
F64A P Pdif 07 46 28.8 -2.5
baz=159
O48B Farmland 105.46 321 P Pdif 07 46 30.8 -0.8
baz=152
O48B Farmland 105.46 321 Pdiff Pdif 07 46 31.3 -0.3
baz=152
F63A Nahmakanta, Br 105.46 334 P Pdif 07 46 31.2 -0.3
baz=159
F63A P Pdif 07 46 31.2 -0.3
baz=159
HHAR Hobbs 105.47 312 P Pdif 07 46 30.8 -1.0
baz=148
FVM French Village 105.49 316 P Pdif 07 46 31.1 -0.7
baz=150,SNR=7.4
YER Yerkesik 105.50 46 eP PKiKP 07 50 47.9 +2.6
AOS Alonnisos 105.51 42 eP PP 07 50 56.7 +2.1
NEST Nestorio 105.55 39 P Pdif 07 46 36.5 +4.4
GCAM G?zelcaml? 105.56 45 eP PKiKP 07 50 45.0 -0.3
KBN Korca 105.64 39 i P Pdif 07 46 37.7 +5.2
P46A Rosedale 105.66 319 P Pdif 07 46 31.8 -0.7
baz=151
WCNY West Carthage 105.66 329 P Pdif 07 46 31.4 -1.0
baz=156
J55A Hilton 105.67 327 P Pdif 07 46 31.6 -0.9
baz=155
J55A P Pdif 07 46 31.6 -0.9
baz=155
CHOS Chios island 105.68 44 eP PKiKP 07 50 49.3 +3.7
CHOS Chios island 105.68 44 P Pdif 07 46 37.1 +4.4
N49A Columbus Grove 105.69 322 P Pdif 07 46 32.0 -0.6
baz=152
N49A P Pdif 07 46 32.0 -0.6
baz=152
M50A Fremont 105.72 323 P Pdif 07 46 32.2 -0.6
baz=152
M50A P Pdif 07 46 32.2 -0.6
baz=152
Q44A Meyer Farm, Va 105.73 317 P Pdif 07 46 30.9 -1.9
baz=150
LEF Lefka 105.75 50 eP PP 07 50 53.8 -2.6
U38A Gravette 105.80 312 P Pdif 07 46 31.9 -1.3
baz=148
CSS Mathiatis 105.81 51 eP PKiKP 07 50 49.3 +3.4
ELL Elmali 105.85 47 eP PP 07 50 53.0 -4.2
URLA Izmir 105.87 44 eP PKiKP 07 50 41.0 -4.9
CCM Cathedral Cave 105.88 315 IAMs_20 IAMs_20 08 37 19.7
comp=Z,75µm,20.0s
CCM Cathedral Cave 105.88 315 P Pdif 07 46 32.7 -0.8
baz=149,SNR=11
CCM Cathedral Cave 105.88 315 Pdiff Pdif 07 46 32.8 -0.8
baz=149
CCM Cathedral Cave 105.88 315 ⇑P Pdif 07 46 33.2 -0.4
J54A Appleton 105.93 326 P Pdif 07 46 33.0 -0.6
baz=154
J54A P Pdif 07 46 33.0 -0.6
baz=154
LONY Lake Ozonia 105.94 330 IAMs_20 IAMs_20 08 35 43.3
comp=Z,67µm,19.0s
LONY Lake Ozonia 105.94 330 Pdiff Pdif 07 46 33.7 +0.1
baz=156
TIR Tirane 105.95 38 ⇑P Pdif 07 46 37.0 +3.2
TIR Tirane 105.95 38 IAMs_20 IAMs_20 08 31 58.4
comp=Z,136µm,22.0s
TIR Tirane 105.95 38 ⇑P Pdif 07 46 37.0 +3.2
TIR Tirane 105.95 38 i P Pdif 07 46 40.8 +7.1
TUL1 Leonard 105.95 311 P Pdif 07 46 33.5 -0.5
baz=148,SNR=6.1
TUL1 Leonard 105.95 311 Pdiff Pdif 07 46 33.7 -0.2
baz=148
E63A Oxbow 105.97 335 P Pdif 07 46 34.5 +0.8
baz=159
E63A P Pdif 07 46 34.5 +0.8
baz=159
SLM Saint Louis 105.97 316 P Pdif 07 46 33.5 -0.4
baz=150
AYDB Zeytinkoy-Aydi 106.04 45 eP PKiKP 07 50 50.3 +4.0
BLCB Balcova 106.07 45 eP PKiKP 07 50 46.1 -0.1
BMNY Brushton-Moira 106.11 330 P Pdif 07 46 32.7 -1.7
baz=156
LFK Lefkose 106.17 51 eP PP 07 51 02.9 +3.4
N47A Urbana 106.20 320 P Pdif 07 46 33.4 -1.4
baz=151
N47A P Pdif 07 46 33.4 -1.4
baz=151
APMY Acipayam-Deniz 106.21 47 eP PKiKP 07 50 54.4 +7.8
KORT Korkueli 106.25 48 eP PP 07 50 58.1 -2.1
SFIN Lafayette 106.28 319 P Pdif 07 46 34.9 -0.4
baz=151
SFIN Lafayette 106.28 319 Pdiff Pdif 07 46 34.9 -0.4
baz=151
WMOK Wichita Mounta 106.28 308 P Pdif 07 46 36.6 +1.1
baz=147,SNR=26
WMOK Wichita Mounta 106.28 308 Pdiff Pdif 07 46 35.5 +0.1
baz=147
WMOK Wichita Mounta 106.28 308 ⇑P Pdif 07 46 35.4 -0.1

ANTB	Antalya	106.29	48	*e*P		PP	07 51 02.9	+2.6		
SIGR	SIGRI	106.31	43	*e*P		PP	07 50 54.7	-5.7		
S39A	Bolivar	106.41	313	P		Pdif	07 46 38.4	+2.5		
	baz=148,SNR=7.1									
E62A	Clayton Lake	106.42	334	P		Pdif	07 46 34.8	-1.0		
	baz=159									
E62A				P		Pdif	07 46 34.8	-1.0		
	baz=159									
GAZI	Gazipasa	106.44	49	*e*P		PKiKP	07 50 52.7	+5.7		
PHP	Peshkopia	106.45	38	*i* P		Pdif	07 46 42.2	+6.2		
HORT	Hortiatis	106.46	41	*e*P		PP	07 50 58.1	-3.6		
MNTQ	Montreal, Queb	106.47	331	⇑P		Pdif	07 46 35.9	-0.1		
R40A	Maddies Statio	106.49	315	P		Pdif	07 46 36.0	-0.3		
	baz=149,SNR=7.6									
GRG	Griva	106.52	40	*e*P		PP	07 50 58.1	-3.9		
P43A	Skaggs, Pawnee	106.56	317	P		Pdif	07 46 36.7	+0.2		
	baz=150									
O44A	Mansfield	106.60	318	P		Pdif	07 46 36.2	-0.4		
	baz=150									
DKL	Dikili	106.61	44	*e*P		PKiKP	07 50 56.4	+9.2		
EREN	Erenkoy	106.66	51	*e*P		PKiKP	07 50 53.7	+6.3		
L48A	N Adams	106.68	322	P		Pdif	07 46 35.6	-1.4		
	baz=152									
L48A				P		Pdif	07 46 35.6	-1.4		
	baz=152									
PDG	Podgorica	106.69	37	⇑P		Pdif	07 46 43.2	+6.2		
PDG	Podgorica	106.69	37	IAMs_20	IAMs_20		08 31 45.2			
	comp=Z,120μm,21.0s									
TEKE	Tekeli-Mersin	106.71	50	*e*P		PKiKP	07 50 54.4	+6.9		
AAM	Ann Arbor	106.73	323	IAMs_20	IAMs_20		08 34 26.6			
	comp=Z,61μm,19.0s									
AAM	Ann Arbor	106.73	323	P		Pdif	07 46 36.1	-1.1		
	baz=152									
AAM	Ann Arbor	106.73	323	Pdiff		Pdif	07 46 36.9	-0.3		
	baz=152									
BCK	Bucak	106.74	48	*e*P		PKiKP	07 50 54.4	+6.8		
K50A	Casco	106.79	324	P		Pdif	07 46 36.5	-1.0		
	baz=152									
K50A				P		Pdif	07 46 36.5	-1.0		
	baz=152									
KULA	Kula-Manisa	106.83	46	*e*P		PP	07 51 01.5	-2.9		
MNTX	Cornudas Mount	106.87	301	P		Pdif	07 46 37.1	-1.1		
	baz=145									
MNTX	Cornudas Mount	106.87	301	Pdiff		Pdif	07 46 37.6	-0.5		
	baz=145									
AKKU	Akkuyu-Mersin	106.92	50	*e*P		PP	07 50 59.5	-5.4		
SUTC	Sutluce-Ispart	106.92	48	*e*P		PKiKP	07 50 54.7	+6.7		
BERE	Bereket-Mersin	106.93	50	*e*P		PP	07 50 58.5	-6.7		
BOZC	Bozcaada	106.93	43	*e*P		PP	07 51 05.3	+0.3		
EZN	Ezine	107.02	43	*e*P		PP	07 51 01.2	-4.5		
IKL	Isikli	107.04	50	*e*P		PP	07 50 58.8	-7.1		
TEVE	Tevekalti-Mers	107.10	50	*e*P		PP	07 50 59.2	-7.2		
T35B	Sooner Cattle	107.11	311	P		Pdif	07 46 42.0	+3.0		
	baz=147,SNR=7.6									
JSA	Saint Aubin	107.13	20	IAMs_20	IAMs_20		08 22 56.1			
	comp=Z,187μm,38.3s									
JSA	Saint Aubin	107.13	20	⇓P		Pdif	07 46 43.3	+4.5		
GADA	Gvkgeada	107.17	43	*e*P		PP	07 51 00.9	-5.9		
GAC	Glen Almond	107.18	330	⇑P		Pdif	07 46 38.4	-0.7		
KEBE	Keben-Mersin	107.23	50	*e*P		PP	07 51 02.2	-5.1		
SILI	Silifke-Mersin	107.25	50	*e*P		PP	07 50 59.2	-8.2		
HDIL	Hopedale	107.26	318	P		Pdif	07 46 39.8	+0.2		
	baz=150									
HDIL	Hopedale	107.26	318	Pdiff		Pdif	07 46 40.1	+0.5		
	baz=150									
L46A	Eue Claire	107.41	321	P		Pdif	07 46 39.8	-0.4		
	baz=151									
L46A				P		Pdif	07 46 39.8	-0.4		
	baz=151									
SADO	Sadowa	107.44	327	Pdiff		Pdif	07 46 39.4	-0.9		
	comp=Z,1.5nm,0.3s,baz=85,slow=12,SNR=3.5									
SADO				PP		PP	07 51 08.6	-0.1		
	comp=Z,26nm,1.0s,baz=137,slow=3.2,SNR=7.0									
KIZK	Mersin	107.45	51	*e*P		PP	07 51 02.6	-6.2		
P40A	Paris	107.46	315	P		Pdif	07 46 41.2	+0.7		
	baz=149,SNR=15									
EPT	El Paso	107.48	301	IAMs_20	IAMs_20		08 42 34.9			
	comp=Z,77μm,18.0s									
KIDD	KIDD Seismic O	107.48	301	P		Pdif	07 46 41.6	+0.6		
	baz=145									
MSTX	Muleshoe	107.48	305	P		Pdif	07 46 41.2	+0.3		
	baz=146									
MSTX	Muleshoe	107.48	305	Pdiff		Pdif	07 46 41.0	+0.1		
	baz=146									
M44A	Midewin, Midew	107.51	319	P		Pdif	07 46 40.0	-0.7		
	baz=150									
CCA1	Carnmenellis	107.53	18	IAMs_20	IAMs_20		08 34 02.0			
	comp=Z,113μm,19.4s									
MMB	Musomiste	107.56	41	P		Pdif	07 46 37.0	-4.0		
KKB	Krupnik	107.56	40	P		Pdif	07 46 42.0	+1.1		
GELI	Tayfur-Gelibol	107.57	43	*e*P		PP	07 51 01.6	-8.1		
GEDZ	Gediz	107.59	46	*e*P		PP	07 51 02.6	-7.4		
SHUT	Suhut-Afyon	107.65	47	*e*P		PP	07 50 59.5	-11		
DAVOX	Davos/Dischmat	107.71	29	PKKPbc	PKKPbc		08 02 05.3	+2.7		
	comp=Z,5.6nm,0.8s,baz=11,slow=3.4,SNR=4.5									
AMTX	Amarillo	107.73	306	P		Pdif	07 46 42.4	+0.5		
	baz=146									
AMTX	Amarillo	107.73	306	Pdiff		Pdif	07 46 41.8	-0.2		
	baz=146									
ENEZ	Enez	107.74	43	*e*P		PKiKP	07 50 52.7	+3.5		
U32A	Winter Ranch,	107.75	309	P		Pdif	07 46 42.5	+0.5		
	baz=146									
HQIL	Hanson Quary C	107.80	319	IAMs_20	IAMs_20		08 43 17.0			
	comp=Z,49μm,18.0s									
ALN	Alexandroupoli	107.84	42	*e*P		PP	07 51 04.3	-7.3		
ALN	Alexandroupoli	107.84	42	P		Pdif	07 46 45.6	+3.5		
RDO	Rodhopi	107.86	42	*e*P		PP	07 51 06.7	-5.1		
RDO	Rodhopi	107.86	42	⇓P		Pdif	07 46 44.9	+2.7		
I49A	Point Hope	107.89	324	P		Pdif	07 46 40.3	-2.0		
	baz=152									
I49A				P		Pdif	07 46 40.3	-2.0		
	baz=152									
KONT	Konya--Tatoy	107.90	48	*e*P		PP	07 51 02.6	-10		
MERS	Mersin	107.94	51	*e*P		PP	07 51 09.0	-3.5		
YAYL	Yayladag	107.95	52	*e*P		PP	07 51 02.2	-10		
TVSB	Tavsanli	107.96	46	*e*P		PKiKP	07 50 56.1	+6.3		
J47A	Sunmer	107.96	322	P		Pdif	07 46 41.4	-1.3		
	baz=151									
J47A				P		Pdif	07 46 41.4	-1.3		
	baz=151									
N41A	Harden Midland	108.00	317	P		Pdif	07 46 42.1	-0.8		
	baz=149									
DYA	Yadsworthy	108.00	18	IAMs_20	IAMs_20		08 22 53.6			
	comp=Z,152μm,41.0s									
EDC	Edincik	108.08	44	*e*P		PP	07 51 10.4	-3.0		
RKY	Sarkoy-Tekirda	108.10	43	*e*P		PP	07 51 07.4	-6.2		
LADK	Ladik-KONYA	108.11	48	*e*P		PP	07 51 06.3	-7.6		
BOJS	Bojanci	108.12	33	*i* Pdiff		Pdif	07 46 47.5	+4.1		
BOJS				*e*			07 49 11.7			
BOJS				*i* PP		PP	07 51 11.2	-2.5		
P38A	Dawn	108.14	314	P		Pdif	07 46 43.5	-0.1		
	baz=148,SNR=8.4									
L44A	Lake County Fo	108.14	320	IAMs_20	IAMs_20		08 42 51.4			
	comp=Z,62μm,18.0s									
L44A	Lake County Fo	108.14	320	P		Pdif	07 46 43.0	-0.5		
	baz=150									
L44A	Lake County Fo	108.14	320	Pdiff		Pdif	07 46 43.0	-0.5		
	baz=150									
FETA	Feichten	108.17	29	P		Pdif	07 46 47.7	+4.0		
	comp=Z,13nm,1.3s									
FETA				P		PP	07 51 19.8	+5.6		
	comp=Z,79nm,1.7s									
DAVA	Damuels	108.17	29	*e*P		Pdif	07 46 47.2	+3.5		
	comp=Z,9.9nm,0.9s									
DAVA				P		PP	07 51 19.4	+5.2		
	comp=Z,54nm,1.2s									
DAVA				*e*P		PKKPbc	08 02 03.1	+2.0		
	comp=Z,34nm,1.4s									
DAVA	Damuels	108.17	29	⇓P		Pdif	07 46 47.7	+4.0		
MRMT	Marmara Adasi	108.19	44	*e*P		PP	07 51 12.1	-2.2		
KDZ	Kurdzhali	108.25	42	*e*P		PP	07 51 09.4	-5.2		
KDZ	Kurdzhali	108.25	42	P		Pdif	07 46 46.0	+2.0		
TAHT	Tahtakopru-Hat	108.27	52	*e*P		PP	07 51 02.6	-12		
VTS	Vitosha	108.27	40	⇓P		Pdif	07 46 54.4	+10		
VTS	Vitosha	108.27	40	⇓P		PKiKP	07 50 56.6	+6.2		
VTS	Vitosha	108.27	40	⇓P		Pdif	07 46 54.4	+10		
VTS	Vitosha	108.27	40	P		Pdif	07 46 46.0	+1.7		
PLD	Plovdiv	108.37	41	*e*P		PP	07 51 07.4	-8.1		
LJU	Ljubljana	108.39	32	*e*Pdiff		Pdif	07 46 48.4	+3.9		
LJU				*e*PP		PP	07 51 13.5	-2.1		
LJU				*e*SP		SP	08 00 37.9	+0.5		
LJU				*e*			08 01 17.7			
LJU				*e*SS		SS	08 06 34.5	+4.2		
LJU				*e*			08 10 49.4			
DIVS	Divibare	108.42	37	IAMs_20	IAMs_20		08 37 11.8			
	comp=Z,100μm,19.0s									
DIVS	Divibare	108.42	37	⇓P		Pdif	07 46 48.4	+3.6		
ABTA	Abfaltersbach	108.42	31	*e*P		Pdif	07 46 49.0	+4.2		
	comp=Z,15nm,1.0s									
ABTA				P		PP	07 51 22.0	+6.0		
	comp=Z,88nm,2.2s									
ABTA				*e*P		PKKPab	08 02 05.6	-4.9		
	comp=Z,24nm,2.2s									
KIZT	Kizilcal	108.48	48	*e*P		PP	07 51 07.4	-9.1		
SQTA	Sankt Quirin	108.48	29	*e*P		Pdif	07 46 48.4	+3.4		
	comp=Z,22nm,1.5s									
SQTA				P		PP	07 51 22.3	+5.9		
	comp=Z,85nm,1.5s									
KARA	Karaisali	108.50	51	*e*P		PP	07 51 03.6	-13		
MDNY	Mudanya-Bursa	108.50	45	*e*P		PP	07 51 09.4	-7.1		
CIFT	Cifteler, Eski	108.54	47	*e*P		PP	07 51 12.7	-4.2		
MOTA	Moosalm	108.57	29	*e*P		Pdif	07 46 48.1	+2.7		
	comp=Z,9.6nm,1.0s									
MOTA				P		PP	07 51 22.3	+5.3		
	comp=Z,98nm,1.7s									
MOTA				*e*P		PKKPbc	08 02 01.6	+1.8		
	comp=Z,31nm,2.1s									
AUBOZ	BOZOYUK	108.58	46	*e*P		PP	07 51 09.8	-7.4		
CEYT	Ceyhan	108.60	51	*e*P		PP	07 51 09.8	-7.4		
RETA	Reutte	108.60	29	*e*P		Pdif	07 46 48.8	+3.3		
	comp=Z,20nm,1.2s									
RETA				*e*P		PP	07 51 22.3	+5.1		
	comp=Z,75nm,1.7s									
RETA				*e*P		PKKPbc	08 02 02.9	+3.2		
	comp=Z,16nm,1.3s									
SULT	Sultanhani-AKS	108.61	49	*e*P		PP	07 51 08.7	-8.7		
BOVS	Bovan	108.61	38	⇑P		Pdif	07 46 55.8	+10		
WTTA	Wattenberg	108.64	30	*e*P		Pdif	07 46 49.3	+3.5		
	comp=Z,29nm,1.0s									
WTTA				P		PP	07 51 23.4	+5.7		
	comp=Z,112nm,1.6s									
MYKA	Terra Mystica	108.65	31	*e*P		Pdif	07 46 50.0	+4.3		
	comp=Z,9.5nm,1.0s									
MYKA				P		PP	07 51 23.4	+5.8		
	comp=Z,57nm,1.3s									
MYKA				*e*P		PKKPbc	08 02 02.3	+2.9		
	comp=Z,25nm,1.6s									
L42A	Oliver, Polo	108.65	318	P		Pdif	07 46 46.1	+0.4		
	baz=149									
CHBY	Cihanbeyli	108.66	49	*e*P		PP	07 51 12.8	-5.0		
ARMT	Armutlu	108.66	45	*e*P		PP	07 51 11.5	-6.2		
GEMT	Gemlik	108.68	45	*e*P		PP	07 51 12.5	-5.3		
WATA	Walderalm	108.69	30	*e*P		Pdif	07 46 48.6	+2.7		
	comp=Z,47nm,1.7s									
WATA				P		PP	07 51 23.7	+5.7		
	comp=Z,116nm,1.3s									
WATA				*e*P		PKKPbc	08 02 02.8	+3.4		
	comp=Z,9.8nm,1.0s									
121A	Cookes Peak, D	108.73	300	P		Pdif	07 46 47.0	+0.4		
	baz=144									
121A	Cookes Peak, D	108.73	300	Pdiff		Pdif	07 46 47.2	+0.6		
	baz=144									
BORA	Eskisehir	108.73	46	*e*P		PP	07 51 11.8	-6.5		
CAVI	Cavuskoy	108.75	45	*e*P		PP	07 51 16.6	-1.8		
K43A	Burlington	108.76	320	P		Pdif	07 46 46.3	+0.1		
	baz=150									
PALK	Pallekele	108.77	105	PP		PP	07 51 19.3	+0.9		
	comp=Z,19nm,0.9s,baz=355,slow=6.5,SNR=2.2									
SVRH	Sivrihisar-ESK	108.81	47	*e*P		PP	07 51 12.8	-6.1		
AUSIV	SIVRIHISAR	108.81	47	*e*P		PKiKP	07 51 01.2	+10		
OBKA	Obir	108.81	32	*e*P		Pdif	07 46 50.0	+3.6		
	comp=Z,10nm,1.1s									
OBKA				P		PP	07 51 24.4	+5.6		
	comp=Z,65nm,1.4s									
OBKA				*e*P		PKKPbc	08 02 02.0	+3.1		
	comp=Z,14nm,1.2s									
YLV	Yalova	108.87	45	*e*P		PP	07 51 09.8	-9.5		
EDRB	Edirne	108.92	42	*e*P		PP	07 51 14.9	-4.6		
SRCK	Saricakaya, Es	108.94	46	*e*P		PP	07 51 10.1	-10		
BLKB	Belogradchik	108.94	39	⇑P		Pdif	07 46 56.8	+10		
BLKB	Belogradchik	108.94	39	⇑P		PKiKP	07 50 54.8	+3.3		
KBA	Koelnbreinsper	108.97	31	*e*P		Pdif	07 46 51.0	+3.7		
	comp=Z,8.0nm,0.9s									
KBA				P		PP	07 51 26.3	+6.3		
	comp=Z,65nm,1.6s									
KBA				*e*P		PKKPab	08 02 03.5	-4.7		
	comp=Z,20nm,1.3s									
KBA	Koelnbreinsper	108.97	31	⇓P		Pdif	07 46 50.7	+3.4		
SLVT	Silivri	108.97	44	*e*P		PKiKP	07 51 02.2	+11		
KSU1	Kansas State U	108.98	312	P		Pdif	07 46 47.0	-0.3		
	baz=147									
KSU1	Kansas State U	108.98	312	Pdiff		Pdif	07 46 47.1	-0.3		
	baz=147									
PCHI	Peechi	109.01	99	*ex*		x	07 50 39.2			
PCHI				*e*P		PKiKP	07 51 07.7	+15		
PCHI				*ex*		x	07 57 23.4			
N38A	Joes South For	109.01	315	P		Pdif	07 46 46.3	-1.1		
	baz=148									
KOZT	Kcan	109.02	51	*e*P		PP	07 51 11.1	-9.3		
PHSR	Pinarhisar	109.04	43	*e*P		PP	07 51 15.2	-5.2		
GULA	Gulagac	109.04	50	*e*P		PP	07 51 13.2	-7.4		
CTKS	Kestanelik-??a	109.09	44	*e*P		PP	07 51 12.5	-8.2		
KULU	Kulu	109.09	48	*e*P		PP	07 51 11.7	-9.3		
SOKA	Soboth	109.11	32	P		Pdif	07 46 51.3	+3.5		
	comp=Z,18nm,1.4s									
SOKA				*e*P		PP	07 51 27.3	+6.4		
	comp=Z,70nm,1.5s									
SOKA				*e*P		PKKPbc	08 02 01.2	+3.2		
	comp=Z,16nm,1.2s									
WSAR	Wadi Sarin	109.13	77	PKKPbc	PKKPbc		08 01 59.7	+2.6		
	comp=Z,14nm,0.9s,baz=157,slow=1.6,SNR=6.0									
UOSS	Minazif	109.15	74	⇓P		Pdif	07 46 51.8	+3.3		
I45A	Fountain	109.15	322	P		Pdif	07 46 47.5	-0.4		
	baz=151									
I45A				P		Pdif	07 46 47.5	-0.4		
	baz=151									
KAVV	Kandilli-Istan	109.16	44	*e*P		PP	07 51 09.8	-12		
ISK	Istanbul-Kandi	109.17	44	*e*P		PP	07 51 14.2	-7.1		
HRT	Hereke	109.20	45	*e*P		PP	07 51 14.9	-6.8		
CTYL	Yalikoy Yolu	109.21	44	*e*P		PP	07 51 11.5	-10		
GULT	Gulveren	109.22	46	*e*P		PP	07 51 14.5	-7.3		
SERE	Sereflikochisa	109.25	49	*e*P		PP	07 51 06.7	-15		
GLMI	Grayling	109.28	323	P		Pdif	07 46 47.6	-0.9		
	baz=151									
GLMI	Grayling	109.28	323	Pdiff		Pdif	07 46 47.8	-0.7		
	baz=151									
FRGS	Fruska Gora	109.29	36	⇓P		Pdif	07 46 59.5	+11		
L40A	Anamosa	109.30	317	P		Pdif	07 46 48.4	-0.2		
	baz=149									
KLYT	Kilyos	109.32	44	*e*P		PP	07 51 22.4	0.0		
R32A	Long Quarter,	109.32	310	P		Pdif	07 46 48.8	-0.1		
	baz=146									
YAYX	Yaylak	109.35	49	*e*P		PP	07 51 07.3	-16		
STU	Stuttgart	109.35	27	IAMs_20	IAMs_20		08 34 19.5			
	comp=Z,86μm,20.0s									
KOD	Kodaikanal	109.40	100	*e*P		PKiKP	07 50 53.0	-0.5		
SAUV	Serdivan-Sakar	109.40	46	*e*P		PP	07 51 28.1	+5.1		
Y22A	Socorro	109.46	302	P		Pdif	07 46 49.8	0.0		
	baz=144									
SILT	Sile	109.47	45	*e*P		PP	07 51 25.4	+1.9		
KMRS	Kahramanmaras	109.52	52	*e*P		PKiKP	07 50 59.2	+6.4		
MDUB	Mudurnu	109.53	46	*e*P		PP	07 51 17.6	-6.5		
Y22D	IRIS PASSCAL I	109.55	302	IAMs_20	IAMs_20		08 34 38.7			
	comp=Z,60μm,18.0s									
Y22D	IRIS PASSCAL I	109.55	302	P		Pdif	07 46 50.4	+0.2		
	baz=144									
Y22D	IRIS PASSCAL I	109.55	302	Pdiff		Pdif	07 46 50.3	+0.2		
	baz=144									
LEM	Lembang	109.56	137	PP		PP	07 51 23.5	-0.2		
	comp=Z,36nm,0.3s,baz=223,slow=6.6,SNR=5.7									
BIOA	Bad Ischl, Aus	109.61	31	*e*P		Pdif	07 46 52.9	+3.0		
	comp=Z,13nm,1.0s									
BIOA				*e*P		PP	07 51 28.4	+3.9		
	comp=Z,49nm,1.2s									
MDVR	Moldovita	109.61	38	⇑P		Pdif	07 46 59.5	+10		
JFWS	Jewell Farm	109.65	318	P		Pdif	07 46 49.8	-0.4		
	baz=149									
JFWS	Jewell Farm	109.65	318	Pdiff		Pdif	07 46 50.4	+0.2		
	baz=149									
ELSH	Elham, Standar	109.66	21	IAMs_20	IAMs_20		08 24 32.8			
	comp=Z,224μm,40.3s									
MCH1	Michaelchurch	109.67	19	⇑P		Pdif	07 47 03.4	+13		
KAMT	Kaman	109.67	49	*e*P		PP	07 51 23.6	-1.5		
ANTO	Ankara	109.69	48	*e*P		PP	07 51 18.9	-6.4		
ANTO	Ankara	109.69	48	P		Pdif	07 46 54.2	+3.7		
LOD	Lodumlu	109.70	48	*e*P		PP	07 51 17.9	-7.4		
ARSA	Arzberg	109.77	32	*e*P		Pdif	07 46 53.9	+3.3		
	comp=Z,10nm,1.4s									
ARSA				*e*P		PP	07 51 32.0	+6.3		
	comp=Z,39nm,1.1s									
ARSA				*e*P		PKKPbc	08 01 57.3	+1.5		
	comp=Z,12nm,1.4s									
G45A	Suttons Bay	109.83	323	P		Pdif	07 46 50.6	-0.3		
	baz=151									
G45A				P		Pdif	07 46 50.6	-0.3		
	baz=151									
MORH	Mrgy, Hungar	109.84	35	⇑P		Pdif	07 47 02.0	+11		
MORH	Mrgy, Hungar	109.84	35	P		Pdif	07 46 56.0	+5.1		
MNAI	Manna	109.89	131	IAMs_20	IAMs_20		08 28 21.7			
	comp=Z,114μm,21.0s									
BCLA	Clavier	109.91	24	*d*PKiKP		PKiKP	07 50 53.6	+0.6		
BRTR	Keskin Array B	109.93	48	Pdiff		Pdif	07 46 52.8	+1.1		
	comp=Z,2.4nm,1.0s,baz=189,slow=4.9,SNR=4.6									
BRTR				PP		PP	07 51 24.0	-3.1		
	comp=Z,23nm,1.0s,baz=145,slow=3.0,SNR=5.4									
BRTR				PKKPbc		PKKPbc	08 01 56.6	+1.4		
	comp=Z,18nm,0.9s,baz=104,slow=2.2,SNR=17									
BRTR				PKPPKP		P'P'df	08 10 24.3	+3.0		
	comp=Z,0.6nm,0.6s,baz=112,slow=0.7,SNR=3.8									
MOA	Molln	109.93	31	P		Pdif	07 46 53.7	+2.4		
	comp=Z,17nm,1.4s									
MOA				P		PP	07 51 31.6	+4.8		
	comp=Z,81nm,1.4s									
MOA				*e*P		PKKPbc	08 01 57.5	+2.3		
	comp=Z,31nm,1.3s									
HERR	Herculane	109.94	38	⇓P		Pdif	07 47 03.1	+12		
SCIA	State Center	109.95	316	IAMs_20	IAMs_20		08 42 43.4			
	comp=Z,67μm,18.0s									
SCIA	State Center	109.95	316	P		Pdif	07 46 50.3	-1.3		
	baz=148									
SCIA	State Center	109.95	316	Pdiff		Pdif	07 46 51.8	+0.3		
	baz=148									
I42A	Draeger Farm,	109.99	320	P		Pdif	07 46 51.1	-0.6		
	baz=149									
BHOU	Houvegnez	110.01	25	*d*PKiKP		PKiKP	07 50 52.2	-1.0		
BHOU				*d*PP		PP	07 51 27.2	-0.1		
ANMO	Albuquerque	110.03	303	Pdiff		Pdif	07 46 52.5	+0.1		
	comp=Z,3.6nm,1.0s,baz=137,slow=2.3,SNR=7.5									
ANMO				PP		PP	07 51 24.2	-3.7		
	comp=Z,49nm,1.3s,baz=164,slow=7.8,SNR=4.2									
ANMO	Albuquerque	110.03	303	*i* PKiKP		PKiKP	07 50 55.9	+1.9		
ANMO				MLR		MLR				
	comp=Z,64μm,17.0s									
ANMO	Albuquerque	110.03	303	P		Pdif	07 46 53.2	+0.8		
	baz=144									
ANMO	Albuquerque	110.03	303	Pdiff		Pdif	07 46 53.0	+0.6		
	baz=144									
ANMO	Albuquerque	110.03	303	⇑P		Pdif	07 46 53.0	+0.6		
TUC	Tucson	110.05	298	IAMs_20	IAMs_20		08 41 01.0			
	comp=Z,59μm,19.0s									
TUC	Tucson	110.05	298	Pdiff		Pdif	07 46 53.5	+1.1		
	baz=143									
N35A	Tabor	110.05	314	P		Pdif	07 46 51.6	-0.4		
	baz=147									
SARI	SarD1z-Kayseri	110.05	51	*e*P		PKiKP	07 50 59.2	+5.3		
H43A	Windswept, Lux	110.08	321	P		Pdif	07 46 52.1	0.0		
	baz=150									
CBKS	Cedar Bluff	110.10	310	IAMs_20	IAMs_20		08 43 56.7			
	comp=Z,55μm,18.0s									
CBKS	Cedar Bluff	110.10	310	P		Pdif	07 46 52.7	+0.4		
	baz=146									
CBKS	Cedar Bluff	110.10	310	Pdiff		Pdif	07 46 53.1	+0.8		
	baz=146	

BGNE	**Belgrade**	111.56	312		P	Pdif	07 46 59.0	+0.2
	baz=146								
BGNE	**Belgrade**	111.56	312		Pdiff	Pdif	07 46 59.1	+0.4
	baz=146								
NKC	**Novy Kostel**	111.56	29		*e*P	Pdif	07 46 58.6	+0.1
NKC					*e*		07 57 35.8		
NKC					MLR	MLR			
	comp=Z,184μm,23.0s								
NKC	**Novy Kostel**	111.56	29		*e*PDIFF	Pdif	07 46 58.6	+0.1
NKC					*e*PP	PP	07 51 27.7	-11
NKC					*e*SKS	SKSac	07 57 35.8	-0.4
NKC					*e*PKKP	PKKPbc	08 01 52.9	+2.9
NKC					AMS	AMS	08 31 50.0		
	comp=Z,184μm,23.0s								
TREC	**Trest**	111.59	31		*e*P	Pdif	07 46 59.3	+0.6
TREC					*e*		07 57 35.8		
TREC	**Trest**	111.59	31		*e*PDIFF	Pdif	07 46 59.3	+0.6
TREC					*e*PP	PP	07 51 30.2	-8.5
TREC					*e*SKS	SKSac	07 57 35.8	-0.5
TREC					AMS	AMS	08 29 50.0		
	comp=Z,244μm,27.4s								
G40A	**Rib Lake**	111.65	320		P	Pdif	07 46 59.7	+0.7
	baz=148								
KRUC	**Moravsky**	111.65	32		*e*PDIFF	Pdif	07 47 00.4	+1.5
KRUC					*e*PP	PP	07 51 33.1	-6.1
KRUC					*e*		07 57 35.4		
KRUC					*e*		08 01 06.7		
KRUC					*e*SS	SS	08 07 15.5	+1.5
TOKT	**Tokat**	111.68	50		*e*P	PP	07 51 32.9	-6.7
DRGR		111.70	37	⇑P		Pdif	07 47 09.3	+10
DRGR		111.70	37	⇑P		Pdif	07 47 09.3	+10
MLR	**Muntele Rosu**	111.74	40	⇑P		Pdif	07 47 05.9	+6.3
MLR	**Muntele Rosu**	111.74	40	⇓P		PKiKP	07 50 55.2	-1.6
MLR	**Muntele Rosu**	111.74	40	PP		PP	07 51 36.2	-3.8
	comp=Z,22nm,1.0s,baz=228,slow=5.5,SNR=6.3								
MLR				PKKPbc		PKKPbc	08 01 52.0	+2.6
	comp=Z,3.9nm,0.8s,baz=245,slow=5.3,SNR=3.0								
MLR	**Muntele Rosu**	111.74	40	⇓PKiKP		PKiKP	07 50 55.2	-1.6
PSZ	**Piszkesteto**	111.74	35	⇑P		Pdif	07 47 09.2	+10
PSZ	**Piszkesteto**	111.74	35	IAMs_20		IAMs_20	08 34 58.7		
	comp=Z,108μm,20.0s								
PSZ	**Piszkesteto**	111.74	35	⇑P		Pdif	07 47 09.2	+10
W18A	**Petrified Fore**	111.77	300	Pdiff		Pdif	07 47 00.7	+0.6
	baz=143								
PTK	**Pertek**	111.78	53	*e*P		PKiKP	07 51 06.3	+9.1
TIRR	**Tirgusor**	111.78	42	⇓P		Pdif	07 47 13.6	+14
TIRR	**Tirgusor**	111.78	42	⇓P		Pdif	07 47 13.6	+14
TIRR	**Tirgusor**	111.78	42	⇑P		PKiKP	07 50 58.1	+1.4
TIRR	**Tirgusor**	111.78	42	⇑PKiKP		PKiKP	07 50 58.1	+1.4
HPK	**Haverah Park**	111.79	19	*e*P		PP	07 51 25.3	-15
HPK				IAMs_20		IAMs_20	08 38 25.1		
	comp=Z,167μm,18.2s								
HARR	**Harsova**	111.80	42	⇑P		PKiKP	07 50 56.7	0.0
HARR	**Harsova**	111.80	42	⇑PKiKP		PKiKP	07 50 56.7	0.0
I37B	**Waseca**	111.80	317	P		Pdif	07 46 59.5	-0.3
	baz=147								
SDCO	**Great Sand Dun**	111.84	305	P		Pdif	07 47 01.2	+0.7
	baz=144								
SDCO	**Great Sand Dun**	111.84	305	Pdiff		Pdif	07 47 01.2	+0.7
	baz=144								
JAVC	**Velka Javorina**	111.86	33	*e*PDIFF		Pdif	07 47 01.0	+1.0
JAVC				*e*PP		PP	07 51 36.6	-4.2
JAVC				*e*			07 57 38.0		
JAVC				*e*			08 01 16.2		
JAVC				*e*SS		SS	08 07 21.5	+4.6
VYHS	**Vyhne**	111.91	34	*e*P		Pdif	07 47 07.7	+7.6
VYHS				*e*			07 51 40.4		
VYHS				*e*			07 57 35.5		
VYHS				*e*SS		SS	08 07 25.7	+8.3
VYHS	**Vyhne**	111.91	34	*e*PKP		PKiKP	07 50 58.3	+1.4
VYHS				*e*PP		PP	07 51 40.4	-0.6
PRU	**Pruhonice**	111.93	30	*e*P		Pdif	07 47 00.9	+0.8
PRU				*e*			07 57 33.6		
PRU				MLR		MLR			
	comp=Z,226μm,20.8s								
PRU	**Pruhonice**	111.93	30	*e*PDIFF		Pdif	07 47 00.9	+0.8
PRU				*e*PP		PP	07 51 32.4	-8.8
PRU				*e*SKS		SKSac	07 57 33.6	-4.0
PRU				*e*PKKP		PKKPab	08 01 52.2	-2.7
PRU				AMS		AMS	08 33 20.0		
	comp=Z,226μm,20.8s								
VRAC	**Vranov**	111.93	32	⇑P		PKiKP	07 51 00.5	+3.6
VRAC	**Vranov**	111.93	32	⇑PKiKP		PKiKP	07 51 00.5	+3.6
VRAC	**Vranov**	111.93	32	*e*PDIFF		Pdif	07 47 00.4	+0.2
VRAC				*e*PP		PP	07 51 32.0	-9.2
VRAC				*e*			07 57 35.4		
VRAC				*e*			08 01 08.9		
VRAC				*e*SS		SS	08 07 15.5	-2.2
BZK	**Bozkurt**	111.94	47	*e*P		PP	07 51 35.4	-5.9
DOPR	**Dopca**	111.94	39	⇑P		PKiKP	07 50 57.3	+0.2
COWI	**Conover**	111.97	321	P		Pdif	07 47 00.4	0.0
	baz=149								
SVAN	**Silvan-Diyarba**	112.02	54	*e*P		PP	07 51 34.3	-7.7
RSDY	**Resadiye-TOKAT**	112.08	50	*e*P		PP	07 51 37.2	-5.2
KVT	**Kavak**	112.09	49	*e*P		PP	07 51 28.9	-14
CLGH	**Cloghs, Cushen**	112.11	16	*e*P		PP	07 51 30.4	-12
CLGH				IAMs_20		IAMs_20	08 38 54.8		
	comp=Z,142μm,17.9s								
GAL1	**Galloway**	112.12	17	*e*P		PP	07 51 37.3	-5.1
GAL1				IAMs_20		IAMs_20	08 36 17.2		
	comp=Z,115μm,19.8s								
TPGR	**Topolog**	112.12	42	⇑P		PKiKP	07 50 59.6	+2.2
COVR	**Voineasa-Covas**	112.13	40	⇑P		PKiKP	07 50 55.4	-2.1
DIKM	**Dikmen**	112.22	48	⇑P		Pdif	07 47 14.5	+13
DIKM	**Dikmen**	112.22	48	*e*P		PP	07 51 38.1	-5.2
PPI	**Padang Panjang**	112.23	127	PKP		PKiKP	07 50 54.7	-3.9
PPI				PKP		PKiKP	07 50 57.8	-0.8
CFR	**Carcaliu**	112.29	42	⇑P		Pdif	07 47 13.2	+11
CFR	**Carcaliu**	112.29	42	⇑P		PKiKP	07 50 51.7	-5.9
CFR	**Carcaliu**	112.29	42	⇑PKiKP		PKiKP	07 50 51.7	-5.9
PLOR	**Plostina**	112.30	40	⇓P		PKiKP	07 50 53.4	-4.3
PLOR	**Plostina**	112.30	40	⇓PKiKP		PKiKP	07 50 53.4	-4.3
VRI	**Vrincioaia**	112.34	40	⇑P		Pdif	07 47 12.9	+11
VRI	**Vrincioaia**	112.34	40	⇑P		PKiKP	07 51 00.4	+2.6
VRI	**Vrincioaia**	112.34	40	*e*P		PP	07 51 34.9	-9.3
VRI	**Vrincioaia**	112.34	40	⇑PKiKP		PKiKP	07 51 00.4	+2.6
CUKT	**Cukurca**	112.42	57	*e*P		PP	07 51 41.8	-3.2
PVCC	**Panska Ves**	112.42	30	*e*P		Pdif	07 47 02.4	+0.1
PVCC				*e*			07 57 37.9		
PVCC				MLR		MLR			
	comp=Z,215μm,21.1s								
PVCC	**Panska Ves**	112.42	30	*e*PDIFF		Pdif	07 47 02.4	+0.1
PVCC				*e*PP		PP	07 51 35.3	-9.4
PVCC				*e*SKS		SKSac	07 57 37.9	-1.7
PVCC				AMS		AMS	08 33 30.0		
	comp=Z,215μm,21.1s								
EDFI	**Ende, Flores**	112.44	152	PKP		PKiKP	07 50 55.2	-4.0
EDFI				PKP		PKiKP	07 50 57.1	-2.1
BNGB	**Bingl**	112.45	54	*e*P		PP	07 51 41.5	-3.7
S22A	**4UR Ranch, Cre**	112.47	304	Pdiff		Pdif	07 47 03.6	+0.3
	baz=143								
BRG	**Berggiesshubel**	112.56	30	⇓Pdif		Pdif	07 47 10.2	+7.3
BRG				Amp			07 47 25.4		
	comp=Z,9.4nm,1.1s								
BRG				*ex*		x	07 50 42.7		
BRG				Amp			07 50 48.1		
	comp=Z,45nm,1.6s								
BRG				*i* PKiKP		PKiKP	07 51 05.5	+7.5
BRG				Amp			07 51 14.8		
	comp=Z,38nm,1.3s								
BRG				PP		PP	07 51 44.4	-1.2
BRG				Amp			07 51 47.0		
	comp=Z,72nm,1.4s								
BRG	**Berggiesshubel**	112.56	30	SP		SP	08 01 22.0	+5.0
BRG	**Berggiesshubel**	112.56	30	SS		SS	08 07 26.0	+0.1
BRG				PKPPKP			08 10 17.9		
BRG				Amp			08 10 29.2		
	comp=Z,5.0nm,1.1s								
BRG				Amp			08 35 34.0		
	comp=N,75nm,18.4s								
BRG				Amp			08 35 40.0		
	comp=Z,143nm,19.6s								
BRG				Amp			08 35 45.0		
	comp=E,86nm,19.6s								
BRG	**Berggiesshubel**	112.56	30	P		Pdif	07 47 10.2	+7.3
BRG							07 51 44.3		
BRG							07 57 43.0		
BRG				pmax		pmax			
	comp=Z,9.0nm,1.1s								
BRG				pmax		pmax			
	comp=Z,72nm,1.4s								
EDMD	**Edmundbyers**	112.56	18	*e*P		PP	07 51 43.2	-2.3
EDMD				IAMs_20		IAMs_20	08 34 54.2		
	comp=Z,117μm,20.5s								
SPMN	**Marine on St.**	112.59	318	P		Pdif	07 47 02.9	-0.3
	baz=147								
SPMN	**Marine on St.**	112.59	318	Pdiff		Pdif	07 47 03.0	-0.3
	baz=147								
D41A	**Chassel**	112.59	322	P		Pdif	07 47 03.4	+0.3
	baz=149								
MORC	**Moravsky Berou**	112.64	32	⇑P		Pdif	07 47 17.1	+14
MORC	**Moravsky Berou**	112.64	32	⇑P		Pdif	07 47 17.1	+14
MORC	**Moravsky Berou**	112.64	32	*e*PDIFF		Pdif	07 47 05.9	+2.6
MORC				*e*PP		PP	07 51 38.4	-7.9
MORC				*e*			07 57 36.5		
MORC				*e*			08 01 17.7		
MORC				*e*SS		SS	08 07 23.4	-3.7
Q24A	**Divide**	112.66	306	Pdiff		Pdif	07 47 05.0	+0.9
	baz=144								
KRLC	**Kraliky**	112.67	32	*e*P		Pdif	07 47 07.8	+4.3
KRLC				*e*			07 57 37.9		
KRLC	**Kraliky**	112.67	32	*e*PDIFF		Pdif	07 47 07.8	+4.3
KRLC				*e*PP		PP	07 51 40.5	-6.0
KRLC				*e*SKS		SKSac	07 57 37.9	-2.8
KRLC				*e*PKKP		PKKPbc	08 01 45.7	-0.6
KRLC				AMS		AMS	08 29 30.0		
	comp=Z,167μm,28.1s								
CLL	**Collm**	112.69	29	*e*P		Pdif	07 47 07.0	+3.6
CLL				*e*			07 57 39.0		
CLL				*e*PS		PS	08 01 21.0	+1.0
CLL				MLR		MLR			
	comp=Z,162μm,22.4s								
CLL	**Collm**	112.69	29	*e*Pdif		Pdif	07 47 07.0	+3.6
CLL				*ex*		x	07 47 18.0		
CLL				*ex*		x	07 50 35.0		
CLL				*e*PKiKP		PKiKP	07 51 01.0	+2.8
CLL				*i* x		x	07 51 07.1		
	comp=Z,24nm,0.9s								
CLL				*ex*		x	07 51 14.0		
CLL				*e*PP		PP	07 51 41.0	-5.5
CLL				*i* PPmax			07 51 53.6		
	comp=Z,266nm,2.0s								
CLL				*ex*		x	07 52 10.0		
CLL				*e*PPP		PPP	07 54 09.0		
CLL				*e*PPPmax			07 54 23.0		
CLL				*e*SKSac		SKSac	07 57 39.0	-1.6
CLL				*e*SKKSac		SKKSac	07 58 48.0	+1.3
CLL				*e*Sdif		Sdif	07 59 36.0	+10
CLL				*e*PS		PS	08 01 21.0	+1.0
CLL				*e*PSlp			08 01 26.0		
	comp=N,93μm,29.5s								
CLL				*e*PSlp			08 01 26.0		
	comp=E,43μm,29.0s								
CLL				*e*PSlp			08 01 26.0		
	comp=Z,66μm,31.0s								
CLL				*i* PSmax			08 01 34.3		
	comp=Z,3μm,4.2s								
CLL				*e*PKKPbc		PKKPbc	08 01 48.0	+1.8
CLL				*e*PKKPab		PKKPab	08 01 57.0	+5.5
CLL				*e*PKKPdf		PKKPdf	08 02 10.0	+2.9
	comp=Z,91nm,1.7s								
CLL				*e*PPS		PPS	08 02 28.0		
CLL				*e*SKKPdf		SKKPdf	08 05 42.0	0.0
CLL				*e*SS		SS	08 07 31.0	+3.4
CLL				*ex*		x	08 09 24.0		
CLL				*e*PKPPKPdf		PKP'df	08 10 25.0	+11
CLL				*e*SSS		SSS	08 11 30.0		
CLL				*e*Lmax			08 32 34.0		
CLL				R2			10 08 00.0		
	comp=Z,19μm,18.6s								
GLA	**Glamis**	112.70	295	Pdiff		Pdif	07 47 04.8	+0.8
	baz=142								
MMRI	**Maumere**	112.70	152	IAMs_20		IAMs_20	08 41 10.8		
	comp=Z,58μm,20.0s								
GURO	**Guroymak-BITLI**	112.72	55	*e*P		PKiKP	07 51 16.8	+18
DPC	**Dobruska-Polom**	112.78	31	*e*P		Pdif	07 47 05.5	+1.5
DPC	**Dobruska-Polom**	112.78	31	*e*PDIFF		Pdif	07 47 05.5	+1.5
DPC				*e*PP		PP	07 51 40.7	-6.5
DPC				*e*SKS		SKSac	07 57 29.4	-12
DPC				*e*PKKP		PKKPbc	08 01 47.8	+1.8
DPC				AMS		AMS	08 30 20.0		
	comp=Z,191μm,27.1s								
ESK	**Eskdalemuir**	112.81	17	IAMs_20		IAMs_20	08 36 19.9		
	comp=Z,118μm,19.0s								
K31A	**O'Neill**	112.81	313	P		Pdif	07 47 03.6	-0.7
	baz=145								
UPC	**Upice**	112.83	31	*e*P		Pdif	07 47 07.1	+3.0
UPC				*e*			07 57 35.8		
UPC	**Upice**	112.83	31	*e*PDIFF		Pdif	07 47 07.1	+3.0
UPC				*e*PP		PP	07 51 38.7	-8.8
UPC				*e*SKS		SKSac	07 57 35.8	-5.4
UPC				AMS		AMS	08 30 40.0		
	comp=Z,203μm,25.7s								
EKA	**Eskdalemuir Ar**	112.83	17	PKKPab		PKKPab	08 01 51.4	+0.8
	comp=Z,3.3nm,0.7s,baz=3.4,slow=2.8,SNR=5.1								
MVCO	**Mesa Verde**	112.83	303	IAMs_20		IAMs_20	08 46 06.2		
	comp=Z,61μm,18.0s								
MVCO	**Mesa Verde**	112.83	303	Pdiff		Pdif	07 47 05.1	+0.3
	baz=143								
ECSD	**EROS Data Cent**	112.84	315	IAMs_20		IAMs_20	08 41 38.1		
	comp=Z,73μm,20.0s								
ECSD	**EROS Data Cent**	112.84	315	P		Pdif	07 47 03.9	-0.5
	baz=146								
ECSD	**EROS Data Cent**	112.84	315	Pdiff		Pdif	07 47 04.5	+0.1
	baz=146								
OGNE	**Ogallala**	112.85	309	IAMs_20		IAMs_20	08 43 22.7		
	comp=Z,70μm,18.0s								
OGNE	**Ogallala**	112.85	309	P		Pdif	07 47 04.9	+0.3
	baz=144								
OGNE	**Ogallala**	112.85	309	Pdiff		Pdif	07 47 04.9	+0.3
	baz=144								
TESR	**Tescani**	112.86	40	⇑P		PKiKP	07 51 01.5	+2.8
OKC	**Ostrava-Krasne**	112.88	33	*e*P		Pdif	07 47 05.5	+1.2
OKC				*e*			07 57 40.0		
OKC				MLR		MLR			
	comp=Z,116μm,25.2s								
OKC	**Ostrava-Krasne**	112.88	33	*e*PDIFF		Pdif	07 47 05.5	+1.2
OKC				*e*PKP		PP	07 51 39.9	-8.0
OKC				*e*SKS		SKSac	07 57 40.0	-1.4
OKC				AMS		AMS	08 31 40.0		
	comp=Z,116μm,25.2s								
WUAZ	**Wupatki**	112.89	299	IAMs_20		IAMs_20	08 39 29.4		
	comp=Z,53μm,18.0s								
WUAZ	**Wupatki**	112.89	299	Pdiff		Pdif	07 47 05.8	+0.7
	baz=142								
OSTC	**Ostas**	112.93	31	*e*PDIFF		Pdif	07 47 05.5	+0.9
OSTC				*e*PP		PP	07 51 40.8	-7.5
OSTC				*e*SKS		SKSac	07 57 35.8	-5.9
OSTC				*e*PKKP		PKKPab	08 01 49.4	-1.2
OSTC				AMS		AMS	08 30 30.0		
	comp=Z,206μm,26.4s								
AKDM	**Akdamar-Van**	112.99	56	*e*P		PP	07 51 48.7	-0.4
BIZ	**Bicaz**	113.03	39	⇑P		Pdif	07 47 17.6	+12
BIZ	**Bicaz**	113.03	39	⇑P		PKiKP	07 50 54.7	-4.3
IKP	**In-Ko-Pah, Jac**	113.05	294	Pdiff		Pdif	07 47 06.0	+0.3
	baz=142								
RAC	**Raciborz**	113.11	33	*e*PDIFF		Pdif	07 47 09.7	+4.4
RAC				*e*PP		PP	07 51 47.7	-1.8
RAC	**Raciborz**	113.11	33	*e*P		Pdif	07 47 09.7	+4.4
RAC				*e*			07 51 47.7		
RAC				*e*			07 57 43.0		
CRVS	**Cervenica-Dubn**	113.11	35	*e*SP		SP	08 01 29.5	+7.3
CRVS				*e*SS		SS	08 07 32.3	-1.1
SWSC	**Sam W. Stewart**	113.12	295	Pdiff		Pdif	07 47 06.0	+0.2
	baz=142								
ESPY	**Espiye-Giresun**	113.13	51	*e*P		PP	07 51 27.5	-22
UZH	**Uzhgorod**	113.15	36	*e*P		Pdif	07 47 08.6	+3.0
UZH				*i*			07 51 47.0		
UZH				*i* PS		PS	08 01 24.0	-0.4
UZH				*i* SS		SS	08 07 32.6	-1.3
NIE	**Niedzica**	113.18	34	*e*Pdif		Pdif	07 47 09.4	+3.6
NIE				*e*PP		PP	07 51 41.8	-8.3
NIE				*e*SKSac		SKSac	07 57 48.8	+6.1
NIE				*e*PS		PS	08 01 24.4	-0.4
NIE				*e*SS		SS	08 07 51.0	+17
NIE				*e*L		L	08 35 07.1		
	comp=Z,167μm,20.6s								
KSP	**Ksiaz**	113.20	31	*e*Pdif		Pdif	07 47 09.7	+3.9
KSP				*e*PP		PP	07 51 46.0	-4.2
KSP				*e*SKSac		SKSac	07 57 42.2	-0.5
KSP				*e*PS		PKKPbc	08 01 39.6	-4.9
KSP				*e*SS		SS	08 07 51.5	+17
KSP				*e*L		L	08 31 10.8		
	comp=Z,219μm,26.3s								
PPBI	**Pangkal Pinang**	113.21	133	PKP		PKiKP	07 51 00.2	-0.3
BKNI	**Bangkinang**	113.22	127	IAMs_20		IAMs_20	08 30 08.0		
	comp=Z,133μm,21.0s								
BKNI	**Bangkinang**	113.22	127	PKP		PKiKP	07 50 58.6	-1.9
KAD	**Karad**	113.25	93	*e*P		PKiKP	07 50 59.2	-1.2
E38A	**The Farm, Brul**	113.28	320	P		Pdif	07 47 05.3	-1.0
	baz=148								
BURAR	**Bucovina Array**	113.29	38	⇓P		Pdif	07 47 20.1	+14
BURAR	**Bucovina Array**	113.29	38	⇓P		Pdif	07 47 20.1	+14
SBSI	**Sibolga**	113.30	125	PKP		PKiKP	07 50 56.2	-4.5
PDMCI	**Parker Dam,Lak**	113.33	297	Pdiff		Pdif	07 47 07.9	+1.1
	baz=142								
LAWE	**Loch Awe, Argy**	113.35	16	*e*P		PP	07 51 28.2	-23
LAWE				IAMs_20		IAMs_20	08 37 56.8		
	comp=Z,125μm,18.6s								
VANB	**Van**	113.40	56	*e*P		PP	07 51 42.6	-9.3
F36A	**Milaca**	113.40	318	P		Pdif	07 47 06.1	-0.7
	baz=147								
MONP2	**Monument Peak**	113.40	294	Pdiff		Pdif	07 47 08.3	+0.9
	baz=142								
SCHQ	**Schefferville**	113.49	339	PKiKP		PKiKP	07 50 59.0	-0.7
	comp=Z,24nm,0.8s,baz=159,slow=1.7,SNR=19								
SCHQ				PP		PP	07 51 49.9	-2.3
	comp=Z,28nm,1.0s,baz=166,slow=5.4,SNR=2.3								
SCHQ				PKKPab		PKKPab	08 01 48.1	+0.3
	comp=Z,3.8nm,0.6s,baz=33,slow=5.8,SNR=4.6								
BC3	**Big Chuckawall**	113.50	295	Pdiff		Pdif	07 47 08.7	+1.0
	baz=142								
ISCO	**Idaho Springs**	113.54	306	IAMs_20		IAMs_20	08 47 22.1		
	comp=Z,50μm,18.0s								
ISCO	**Idaho Springs**	113.54	306	P		Pdif	07 47 08.6	+0.6
	baz=143								
ISCO	**Idaho Springs**	113.54	306	Pdiff		Pdif	07 47 08.6	+0.6
	baz=143								
SMCO	**Snowmass**	113.68	305	⇑P		Pdif	07 47 09.7	+1.0
OJC	**Ojcow**	113.72	33	*e*Pdif		Pdif	07 47 10.7	+2.6
OJC				*e*PP		PP	07 51 58.8	+4.9
OJC				*e*SKSac		SKSac	07 57 42.7	-2.0
OJC				*e*PS		PS	08 01 27.5	-2.1
OJC				*e*SS		SS	08 07 57.9	+16
OJC				*e*L		L	08 27 44.6		
	comp=Z,381μm,41.1s								
INVG	**Invergeldie, C**	113.73	17	*e*P		PP	07 51 31.6	-22
INVG				IAMs_20		IAMs_20	08 37 23.7		
	comp=Z,111μm,19.7s								
IRM	**Iron Mountain**	113.73	296	Pdiff		Pdif	07 47 09.4	+0.8
	baz=142								
109C	**Camp Elliot, M**	113.75	294	Pdiff		Pdif	07 47 09.7	+1.0
	baz=142								
KOPR	**Koprukoy-ERZUR**	113.80	54	*e*P		PP	07 51 46.6	-8.2
NEE2	**Needles Airpor**	113.94	297	Pdiff		Pdif	07 47 09.5	0.0
	baz=142								
TPFO	**Pinon Flats**	113.97	295	Pdiff		Pdif	07 47 11.1	+1.2
	baz=142								
PFO	**Pinyon Flats O**	113.98	295	Pdiff		Pdif	07 47 10.5	+0.7
	comp=Z,1.0nm,0.6s,baz=247,slow=3.5,SNR=2.0								
PFO				PKP		PKiKP	07 51 01.4	-0.1
	comp=Z,31nm,1.0s,baz=166,slow=1.4,SNR=15								
PFO				PP		PP	07 51 56.6	+0.5
	comp=Z,16nm,1.0s,baz=143,slow=7.9,SNR=4.8								
PFO				PKKPab		PKKPab	08 01 48.9	+1.2
	comp=Z,5.6nm,0.9s,baz=294,slow=8.9,SNR=4.8								
PFO	**Pinyon Flats O**	113.98	295	⇑*i* PKiKP		PKiKP	07 51 01.7	+0.2
PFO				MLR		MLR			
	comp=Z,65μm,17.0s								
PFO	**Pinyon Flats O**	113.98	295	Pdiff		Pdif	07 47 11.2	+1.4
	baz=142								
AGRB	**Hanur-Agry**	113.99	55	*e*P		PP	07 51 54.5	-1.7
MILM	**Milestii Mici**	114.01	41	*e*P		Pdif	07 47 12.0	+2.6
MILM	**Milestii Mici**	114.01	41	*e*PKP		PKiKP	07 51 09.0	+8.1
MILM	**Milestii Mici**	114.01	41	*e*PP		PP	07 52 01.0	+5.0
MILM	**Milestii Mici**	114.01	41	*e*SKKS			07 58 47.0		
MILM	**Milestii Mici**	114.01	41	*e*P		Pdif	07 47 12.0	+2.6
MILM				*e*			07 52 01.0		
MILM				*e*PPP		PPP	07 54 24.0		
MILM				*e*			07 57 43.0		
MILM				*e*PS		PS	08 01 28.0	-4.2
MILM				*e*PPS		PPS	08 02 51.0		
MILM				MLR		MLR			
	comp=Z,63μm,20.0s								
MILM	**Milestii Mici**	114.01	41	*e*PPP		PPP	07 54 24.0		
MILM	**Milestii Mici**	114.01	41	*e*SKS		SKSac	07 57 43.0	-3.0
POO	**Poona**	114.03	92	*e*P		PKiKP	07 51 02.4	+0.5
BELC	**Belle Mtn. Jos**	114.05	295	Pdiff		Pdif	07 47 10.7	+0.5
	baz=142								
KIS	**Kishinev**	114.08	41	*e*P		Pdif	07 47 12.0	+2.3
KIS	**Kishinev**	114.08

baz=142
BFSC Mount Baldy Ra 115.09 294 Pdiff **Pdif** **07 47 15.2 +0.4**
baz=141
TUQ Turquoise Moun 115.13 296 Pdiff **Pdif** **07 47 15.6 +0.7**
baz=141
RRX Edison Barstow 115.24 295 Pdiff **Pdif** **07 47 14.9 -0.4**
baz=141
BKSI Bulukumba 115.27 149 PKP **PKiKP** **07 51 02.7 -1.7**
GNI Garni 115.27 56 Pdiff **Pdif** **07 47 20.1 +4.7**
comp=Z,3.6nm,0.4s,baz=181,slow=23,SNR=1.0
GNI PKP **PKPdf** **07 51 02.5 -1.3**
comp=Z,5.7nm,0.4s,baz=212,slow=9.5,SNR=5.8
GNI Garni 115.27 56 *eP* **PP** **07 52 02.1 -3.1**
GNI Garni 115.27 56 ⇑*i*PKIKP **PKiKP** **07 51 03.9 +0.1**
GNI pmax pmax
comp=Z,60nm,1.7s
GNI MLR MLR
comp=Z,212μm,20.0s
SNCC San Nicolas Is 115.31 292 Pdiff **Pdif** **07 47 16.8 +1.2**
baz=141
BBKI Banjar Baru 115.33 143 PKP **PKPdf** **07 51 05.6 +1.0**
BEL Belsk 115.44 33 *e*Pdif **Pdif** **07 47 18.5 +2.8**
BEL *e*PP **PP** **07 52 01.0 -5.0**
BEL *e*SKSac **SKSac** **07 57 49.3 -1.9**
BEL *e*PS **PS** **08 01 47.7 +2.5**
BEL *e*SS SS 08 08 16.9 +13
BEL *e*L L 08 29 00.1
comp=Z,350μm,37.2s
KAPI Kappang 115.45 149 PKP **PKPdf** **07 51 05.3 +0.5**
comp=Z,29nm,1.0s,baz=176,slow=5.1,SNR=6.6
KAPI Kappang 115.45 149 IAMs_20 IAMs_20 08 31 59.6
comp=Z,65μm,22.0s
KAPI Kappang 115.45 149 *i* PKIKP **PKiKP** **07 51 04.4 -0.4**
DECC Green Verdugo 115.46 294 Pdiff **Pdif** **07 47 17.1 +0.8**
baz=141
GSC Goldstone, Bar 115.48 296 Pdiff **Pdif** **07 47 17.5 +1.0**
baz=141
LATR Latur 115.48 94 *eP* **PKPdf** **07 51 03.1 -1.5**
B35A Bob, Littlefor 115.56 319 P **Pdif** **07 47 16.3 0.0**
baz=146
BHV Bhavnagar 115.60 88 *eP* **PKiKP** **07 51 04.9 +0.2**
GKP Gorka Klasztor 115.62 30 *e*Pdif **Pdif** **07 47 19.2 +2.8**
GKP *e*PP **PP** **07 52 04.9 -2.4**
GKP *e*SKSac **SKSac** **07 57 50.8 -1.1**
GKP *e*PS **PS** **08 01 48.6 +1.9**
GKP *e*SS **SS** **08 08 16.8 +11**
SHOC Shoshone, Teco 115.67 296 Pdiff **Pdif** **07 47 18.1 +1.0**
baz=141
AKH Akhalkalaki 115.68 54 *eP* PP 07 51 53.8 -14
RGN Rugen 115.68 27 IAMs_20 IAMs_20 08 39 42.9
comp=Z,96μm,20.0s
ANN Anapa 115.70 48 *eP* **Pdif** **07 47 20.4 +3.4**
ANN *i* 07 52 05.2
ANN *e* 07 54 38.2
ANN *e* 07 57 49.8
ANN *e*PS **PS** **08 01 52.2 +4.5**
ANN *e*SS SS 08 08 14.8 +7.3
ANN pmax pmax
comp=Z,10.0nm,0.5s
ANN pmax pmax
comp=E,11nm,0.9s
ANN pmax pmax
comp=N,36nm,1.3s
ANN MLR MLR
comp=Z,80μm,18.0s
ANN MLR MLR
comp=E,22μm,17.0s
SOC Sochi 115.71 50 *eP* **Pdif** **07 47 17.9 +0.8**
SOC *i* 07 51 03.7
SOC *e*PPP PPP 07 54 33.7
SOC *e* 07 57 54.2
SOC *e*PS **PS** **08 01 47.3 -0.5**
SOC *e*SS SS 08 08 07.5 -0.2
SOC *e*SSS SSS 08 12 20.9
SOC pmax pmax
comp=Z,48nm,1.1s
BIGH Upper Bighouse 115.73 16 *eP* PP 07 51 54.2 -14
BIGH IAMs_20 IAMs_20 08 41 09.6
comp=Z,105μm,18.1s
EDW2 Edwards Air Fo 115.77 294 Pdiff **Pdif** **07 47 17.1 -0.6**
baz=141
D32B Dogwood Acres, 115.81 317 P **Pdif** **07 47 17.9 +0.5**
baz=145
HYBB Hyderabad (bro 115.82 97 *e*Pdif **Pdif** **07 47 18.0 -0.3**
HYBB *e*PP **PP** **07 52 09.1 +0.2**
HYBB *e*SKSac **SKSac** **07 57 53.2 -1.2**
HYBB *e*SKKSac **SKKSac** **07 59 08.0 -1.5**
HYBB *e*PS **PS** **08 01 50.9 +1.6**
HYBB *e*PKKPdf **PKKPdf** **08 02 02.3 +2.7**
HYBB IVMs_BB IVMs_BB 08 29 34.5
comp=Z,35μm,22.1s
HYBB Hyderabad (bro 115.82 97 *e*PKiKP **PKSdf** **07 54 43.0 +0.7**
OSI Osito Audit: C 115.94 294 Pdiff **Pdif** **07 47 18.6 +0.2**
baz=141
SCZ2 Santa Cruz Isl 115.94 293 Pdiff **Pdif** **07 47 18.9 +0.5**
baz=141
LRMC Laurel Mtn Rad 116.07 295 Pdiff **Pdif** **07 47 19.5 +0.4**
baz=141
PRN Pahroc Range 116.21 298 ⇑P **Pdif** **07 47 21.7 +2.0**
K22A Casper 116.23 308 P **Pdif** **07 47 19.1 -0.6**
baz=142
K22A Casper 116.23 308 Pdiff **Pdif** **07 47 19.8 +0.2**
baz=142
VJD Vijayawada 116.28 99 *eP* **PKPdf** **07 51 05.7 -0.5**
RSSD Black Hills 116.28 310 IAMs_20 IAMs_20 08 41 46.4
comp=Z,65μm,21.0s
RSSD Black Hills 116.28 310 P **Pdif** **07 47 19.8 -0.2**
baz=143
RSSD Black Hills 116.28 310 Pdiff **Pdif** **07 47 20.3 +0.3**
baz=143
RSSD Black Hills 116.28 310 ⇑P **Pdif** **07 47 20.4 +0.5**
AGMN Agassiz Nation 116.31 318 IAMs_20 IAMs_20 08 47 42.6
comp=Z,69μm,18.0s
AGMN Agassiz Nation 116.31 318 P **Pdif** **07 47 20.3 +0.7**
baz=145
AGMN Agassiz Nation 116.31 318 Pdiff **Pdif** **07 47 20.6 +1.0**
baz=145
SBC Santa Barbara 116.33 293 Pdiff **Pdif** **07 47 20.3 +0.2**
baz=140
MUD Monsted U'grnd 116.37 24 *eP* **PKiKP** **07 51 07.2 +2.1**
ARVC Arvin 116.39 294 Pdiff **Pdif** **07 47 21.9 +1.5**
baz=140
FURC Furnace Creek, 116.41 296 Pdiff **Pdif** **07 47 21.1 +0.7**
baz=141
MPMC Manual Prospec 116.41 296 Pdiff **Pdif** **07 47 21.7 +1.0**
baz=141
SPSI Sidrap Palu 116.45 148 PKP **PKPdf** **07 51 05.4 -1.3**
TPNV Topopah Spring 116.46 297 Pdiff **Pdif** **07 47 21.5 +0.6**
baz=141
TPNV Topopah Spring 116.46 297 ⇑P **Pdif** **07 47 22.6 +1.8**
COP Copenhagen 116.47 26 *eP* **PKiKP** **07 51 07.0 +1.7**
ONI Oni 116.59 53 *eP* **PP** **07 52 09.9 -4.4**
ISA Isabella, Lake 116.62 295 Pdiff **Pdif** **07 47 22.4 +0.9**
baz=140
NRS Narsarsuaq 116.67 353 IAMs_20 IAMs_20 08 34 37.8
comp=Z,73μm,20.0s
NRS Narsarsuaq 116.67 353 *i* P **PKPdf** **07 51 03.8 -1.6**
PKM Mcpherson Peak 116.72 293 Pdiff **Pdif** **07 47 22.5 +0.4**
baz=140
E28A Huff 116.83 314 P **Pdif** **07 47 21.4 -0.6**
baz=143
IPM Ipoh 116.87 125 P **PKPdf** **07 51 07.0 -0.5**
GOET G??ttrup 116.91 24 *eP* **PKiKP** **07 51 08.6 +2.5**
IVI Ivigtut 116.93 351 *i* P **PKPdf** **07 51 04.7 -1.3**
IVI Ivigtut 116.93 351 ⇓P **Pdif** **07 47 26.6 +4.6**
ZEI Tsey 116.95 53 *i* PKIKP **PKPdf** **07 51 06.4 -0.6**
ZEI pmax pmax
comp=Z,39nm,1.4s
CWC Cottonwood Cre 117.01 295 Pdiff **Pdif** **07 47 23.4 +0.1**
baz=140
JRMM Jerantut 117.02 127 P **PKPdf** **07 51 06.0 -1.8**
GRAC Grapevine Rang 117.07 296 Pdiff **Pdif** **07 47 24.4 +1.0**
baz=140
VES Vestal, Richgr 117.07 294 Pdiff **Pdif** **07 47 24.4 +1.1**
baz=140
SMMC Simmler 117.14 293 Pdiff **Pdif** **07 47 23.7 -0.1**
baz=140
R11A Troy Canyon, C 117.21 299 Pdiff **Pdif** **07 47 24.7 +0.5**
baz=140
KBZ Khabaz 117.23 52 PKP **PKPdf** **07 51 04.7 -2.5**
comp=Z,2.2nm,0.7s,baz=260,slow=6.1,SNR=0.6
KBZ PP **PP** **07 52 17.3 -1.3**
comp=Z,17nm,1.0s,baz=188,slow=4.5,SNR=5.4
KBZ PKKPab **PKKPab** **08 01 32.7 +0.2**
comp=Z,5.3nm,0.9s,baz=19,slow=0.9,SNR=3.0
KBZ Khabaz 117.23 52 ⇓*i*PKIKP **PKiKP** **07 51 09.8 +2.6**
KBZ MLR MLR
comp=Z,191μm,20.0s
DUG Dugway, Tooele 117.26 302 IAMs_20 IAMs_20 08 46 07.8
comp=Z,61μm,18.0s
DUG Dugway, Tooele 117.26 302 Pdiff **Pdif** **07 47 24.2 -0.1**
baz=141
AKASG Malin Array Be 117.31 39 Pdiff **Pdif** **07 47 27.5 +3.5**
comp=Z,0.1nm,0.3s,baz=210,slow=1.4,SNR=1.6
AKASG PKP **PKPdf** **07 51 05.3 -1.8**
comp=Z,14nm,0.7s,baz=251,slow=1.3,SNR=15
AKASG PP **PP** **07 52 15.4 -3.7**
comp=Z,10nm,0.9s,baz=211,slow=1.9,SNR=7.4
AKASG PKKPab **PKKPab** **08 01 32.5 +0.9**
comp=Z,3.0nm,0.6s,baz=36,slow=5.1,SNR=9.7
AKASG PKPPKP **P'P'df** **08 10 08.5 +2.2**
comp=Z,0.2nm,0.3s,baz=31,slow=1.9,SNR=6.1
AKBB Malin Array Si 117.31 39 ⇓*i*PKIKP **PKPdf** **07 51 06.0 -1.1**
KIV Kislovodsk 117.31 52 ⇑P **PKiKP** **07 51 08.8 +1.3**
KIV Kislovodsk 117.31 52 *eP* **Pdif** **07 47 25.6 +1.2**
KIV *i* 07 51 08.5
KIV *e* 07 52 19.4
KIV *e* 07 57 59.0
KIV *e*PS **PS** **08 02 03.6 +0.9**
KIV *e*SS SS 08 08 30.9 +2.0
KIV pmax pmax
comp=Z,60nm,1.0s
KIV MLR MLR
comp=Z,82μm,22.0s
KVAR Kislovodsk Arr 117.32 52 PKP **PKiKP** **07 51 10.1 +2.5**
comp=Z,3.0nm,0.3s,baz=263,slow=23,SNR=2.2
KVAR PP **PP** **07 52 16.9 -2.6**
comp=Z,13nm,0.8s,baz=286,slow=23,SNR=3.1
TTSI Tana Toraja 117.33 148 PKP **PKiKP** **07 51 09.3 +0.9**
STKI Sintang 117.37 138 PKP **PKPdf** **07 51 08.2 -0.3**
KULM Kulim 117.41 124 P **PKPdf** **07 51 08.0 -0.5**
MDND Maddock 117.41 315 P **Pdif** **07 47 24.8 +0.2**
baz=144
MDND Maddock 117.41 315 Pdiff **Pdif** **07 47 24.2 -0.4**
baz=144
AKL Akola 117.56 93 *eP* **PKPdf** **07 51 08.0 -0.6**
TIN Tinemaha, Big 117.56 296 Pdiff **Pdif** **07 47 26.6 +0.9**
baz=140
VOG Valley Oaks Go 117.59 294 Pdiff **Pdif** **07 47 25.1 -0.5**
baz=140
SNART Snartemo 117.65 22 *e*Pdif **Pdif** **07 47 25.5 +0.1**
SNART *e*PKPdf **PKiKP** **07 51 08.3 +0.7**
SNART *e*PP **PP** **07 52 21.6 +0.2**
SNART IVmB_BB 07 52 30.6
comp=Z,18μm,7.7s
SNART *e*SKSac **SKSac** **07 58 01.9 +2.8**
SNART *e*SP **SP** **08 02 05.6 +2.4**
MTKI Muara Teweh, K 117.69 142 PKP **PKPdf** **07 51 08.5 -0.6**
PDAR Pinedale Array 117.71 306 Pdiff **Pdif** **07 47 26.6 +0.2**
comp=Z,1.0nm,1.0s,baz=116,slow=3.4,SNR=6.4
PDAR PKP **PKPdf** **07 51 07.2 -1.3**
comp=Z,26nm,0.9s,baz=134,slow=4.3,SNR=28
PDAR PP **PP** **07 52 21.1 -1.2**
comp=Z,10nm,0.9s,baz=212,slow=1.4,SNR=1.6
PDAR PKKPab **PKKPbc** **08 01 29.8 +1.0**
comp=Z,1.7nm,0.7s,baz=355,slow=2.2,SNR=3.3
PDAR PKPPKP **P'P'df** **08 10 07.0 -0.1**
comp=Z,1.0nm,0.9s,baz=5.7,slow=1.5,SNR=3.9
BW06 Boulder Array 117.71 306 IAMs_20 IAMs_20 08 47 39.4
comp=Z,63μm,19.0s
BW06 Boulder Array 117.71 306 Pdiff **Pdif** **07 47 25.7 -0.7**
baz=141
LRW Lerwick 117.73 17 IAMs_20 IAMs_20 08 38 04.6
comp=Z,111μm,21.6s
HWUT Hardware Ranch 117.75 304 IAMs_20 IAMs_20 08 44 23.7
comp=Z,51μm,18.0s
HOMB Homborsund 117.87 23 *e*Pdif **Pdif** **07 47 26.7 +0.4**
HOMB *e*PKPdf **PKPdf** **07 51 07.2 -0.7**
HOMB *e*PP **PP** **07 52 22.0 -0.8**
HOMB IVmB_BB 07 52 32.4
comp=Z,9μm,8.2s
HOMB *e*SKSac **SKSac** **07 57 59.3 -0.6**
HOMB *e*SP **SP** **08 02 07.1 +1.9**
HOMB *e*PS **PS** **08 02 12.0 +4.9**
HOMB *e*SS **SS** **08 08 39.0 +3.6**
ULM Lac du Bonnet 117.91 319 PKP **PKPdf** **07 51 06.6 -1.7**
comp=Z,49nm,0.9s,baz=118,slow=0.8,SNR=22
ULM PP **PP** **07 52 21.7 -1.6**
comp=Z,69nm,1.0s,baz=126,slow=6.3,SNR=7.3
ULM PKKPab **PKKPab** **08 01 28.6 -0.4**
comp=Z,7.4nm,0.8s,baz=328,slow=7.2,SNR=4.7
ULM Lac du Bonnet 117.91 319 ⇓*i*PKIKP **PKPdf** **07 51 07.3 -1.0**
KMY Karmoy 118.05 21 *e*PKPdf **PKiKP** **07 51 09.8 +1.5**
KMY *e*PP **PP** **07 52 20.7 -3.4**
KMY IVmB_BB 07 52 32.1
comp=Z,6μm,7.3s
KMY *e*SKSac **SKSac** **07 57 58.3 -2.2**
GROC Groznyy 118.14 54 *i* PKIKP **PKiKP** **07 51 10.2 +1.2**
GROC *e* 07 52 23.6
GROC *e* 07 58 03.7
GROC *e* 07 58 22.7
GROC pmax pmax
comp=Z,76nm,0.6s
KSM Kuching 118.20 136 IAMs_20 IAMs_20 08 37 49.5
comp=Z,84μm,20.0s
MLAC Mammoth, Mammo 118.31 296 PKPdf **PKPdf** **07 51 09.8 -0.1**
baz=140
AHID Auburn Hatcher 118.42 305 IAMs_20 IAMs_20 08 49 20.4
comp=Z,57μm,18.0s
BLS5 Blasjo 118.49 21 *e*Pdif **Pdif** **07 47 32.3 +3.2**
BLS5 *e*PKPdf **PKiKP** **07 51 09.2 +0.1**
BLS5 *e*PP **PP** **07 52 25.8 -1.4**
BLS5 IVmB_BB 07 52 36.5
comp=Z,7μm,7.2s
BLS5 *e*SKSac **SKSac** **07 58 02.1 -0.1**
BLS5 *e*PS **PS** **08 02 13.3 +0.6**
BLS5 *e*SS **SS** **08 08 45.9 +2.4**
NVAR Mina Array Bea 118.64 297 PKP **PKPdf** **07 51 09.2 -1.2**
comp=Z,61nm,1.0s,baz=156,slow=2.8,SNR=36
NVAR PP **PP** **07 52 29.3 +0.5**
comp=Z,8.2nm,0.9s,baz=170,slow=5.5,SNR=0.7
NVAR PKKPab **PKKPab** **08 01 27.7 +0.4**
comp=Z,5.7nm,0.8s,baz=289,slow=3.5,SNR=10
NVAR PKPPKP **P'P'df** **08 10 09.3 +3.1**
comp=Z,0.8nm,0.8s,baz=330,slow=1.5,SNR=3.0
MAK Makhachkala 118.75 55 *ce*P **Pdif** **07 47 26.1 -4.5**
MAK *i* 07 51 06.1
MAK *e*PPP PPP 07 55 01.4
MAK *e* 07 57 56.0
MAK *e*SS SS 08 08 52.4 +5.0
MAK *e*SSS SSS 08 13 10.5
MAK pmax pmax
comp=Z,5μm,7.8s
MAK pmax pmax
comp=Z,188nm,1.1s
MAK MLR MLR
comp=N,216μm,20.0s
MAK MLR MLR
comp=E,260μm,18.0s
VIS Vishakhapatnam 118.76 101 *eP* **PKPdf** **07 51 05.3 -5.6**
VIS IAmb IAmb 07 51 21.4
comp=Z,124nm,0.9s
REDW Red Top Meadow 118.77 305 IAMs_20 IAMs_20 08 50 13.5
comp=Z,47μm,18.0s
SNOW Snow King Moun 118.80 305 IAMs_20 IAMs_20 08 43 31.3
comp=Z,55μm,18.0s
LOHW Long Hollow 118.84 306 IAMs_20 IAMs_20 08 48 04.5
comp=Z,67μm,18.0s
ELK Elko 118.87 301 PKP **PKiKP** **07 51 11.4 +0.6**
comp=Z,67nm,1.0s,baz=126,slow=1.3,SNR=35
ELK PP **PP** **07 52 31.7 +1.3**
comp=Z,38nm,1.1s,baz=145,slow=4.7,SNR=4.6
ELK Elko 118.87 301 IAMs_20 IAMs_20 08 42 44.4
comp=Z,51μm,20.0s
AAI Ambon 118.92 157 PKP **PKPdf** **07 51 11.4 -0.1**
ODD1 Odda 118.97 21 *e*PKPdf **PKiKP** **07 51 11.6 +1.5**
ODD1 *e*PP **PP** **07 52 27.9 -2.7**
ODD1 IVmB_BB 07 52 39.9
comp=Z,7μm,7.8s
ODD1 *e*SKSac **SKSac** **07 58 05.8 +1.8**
MOOW Moose Ponds 119.02 306 IAMs_20 IAMs_20 08 43 48.0
comp=Z,68μm,18.0s
NGP Nagpur 119.07 95 *eP* **PKPdf** **07 51 10.4 -1.0**
BER Bergen 119.15 20 *e*Pdif **Pdif** **07 47 37.2 +5.3**
BER *e*PKPdf **PKiKP** **07 51 11.6 +1.2**
BER *e*PP **PP** **07 52 30.7 -0.9**
BER IVmB_BB 07 52 38.0
comp=Z,7μm,5.4s
BER *e*SKSac **SKSac** **07 58 04.8 +0.4**
BER *e*PS **PS** **08 02 25.0 +6.4**
BER *e*SS **SS** **08 08 57.6 +5.7**
BER IVMs_BB IVMs_BB 08 41 31.9
comp=Z,27μm,17.9s
ASK Askoy 119.21 20 *e* **Pdif** **07 47 28.8 -3.4**
ASK *e*PKPdf **PKiKP** **07 51 11.7 +1.3**
ASK *e*PP **PP** **07 52 30.4 -1.6**
ASK IVmB_BB 07 52 38.4
comp=Z,13μm,5.7s
ASK *e*SKSac **SKSac** **07 58 06.5 +1.9**
ASK *e*SP **SP** **08 02 19.4 +2.4**
ASK IVMs_BB IVMs_BB 08 43 21.8
comp=Z,53μm,17.8s
IMW Indian Meadow 119.22 306 IAMs_20 IAMs_20 08 44 01.4
comp=Z,64μm,19.0s
FLWY Flagg Ranch 119.25 306 IAMs_20 IAMs_20 08 47 14.2
comp=Z,76μm,18.0s
LAO LASA Array 119.25 311 PKPdf **PKPdf** **07 51 10.4 -0.7**
baz=141
KONO Kongsberg 119.37 23 ⇓PKIKP **PKPdf** **07 51 09.8 -1.0**
KONO Kongsberg 119.37 23 *e*Pdif **Pdif** **07 47 37.8 +4.9**
KONO *e*PKPdf **PKiKP** **07 51 12.1 +1.3**
KONO IVmBBB 07 51 17.4
comp=Z,1μm,4.4s
KONO *e*PP **PP** **07 52 32.2 -1.0**
KONO IVmB_BB 07 52 39.4
comp=Z,6μm,5.0s
KONO *e*SKSac **SKSac** **07 58 03.0 -2.2**
KONO *e*PS **PS** **08 02 22.6 +2.0**
KONO *e*SS **SS** **08 08 55.6 +0.9**
KONO Kongsberg 119.37 23 ⇓P **Pdif** **07 47 38.2 +5.2**
RLMT Red Lodge 119.39 308 IAMs_20 IAMs_20 08 49 07.9
comp=Z,61μm,18.0s
RLMT Red Lodge 119.39 308 PKPdf **PKPdf** **07 51 11.5 -0.2**
baz=140
H17A Grant Village 119.43 306 PKPdf **PKPdf** **07 51 11.7 0.0**
baz=140
LKWY Lake 119.48 306 IAMs_20 IAMs_20 08 47 21.0
comp=Z,113μm,20.0s
PABE Paberze 119.56 33 IAMs_20 IAMs_20 08 43 09.5
comp=Z,91μm,19.0s
PABE Paberze 119.56 33 *eP* **PKiKP** **07 51 11.8 +0.5**
SUE Sulen 119.66 20 *e*Pdif **Pdif** **07 47 37.7 +3.6**
SUE *e*PKPdf **PKiKP** **07 51 12.9 +1.6**
SUE *e*PP **PP** **07 52 35.5 +0.3**
SUE IVmB_BB 07 52 41.7
comp=Z,8μm,4.8s
SUE *e*SKSac **SKSac** **07 58 05.6 -0.5**
SUE *e*SP **SP** **08 02 20.7 -0.3**
SUE *e*SS **SS** **08 08 58.3 0.0**
DGMT Dagmar 119.78 313 P **Pdif** **07 47 35.7 +0.6**
baz=141
DGMT Dagmar 119.78 313 PKPdf **PKPdf** **07 51 11.0 -1.0**
baz=141
BHPL Bhopal 119.78 92 *eP* **PKPdf** **07 51 10.1 -2.7**
BHPL IAmb IAmb 07 51 19.4
comp=Z,91nm,0.4s
OSL Oslo 119.88 23 *e* **Pdif** **07 47 41.9 +6.7**
OSL *e*PKPdf **PKiKP** **07 51 13.5 +1.7**
OSL *e*PP **PP** **07 52 35.0 -1.6**
OSL IVmB_BB 07 52 45.0
comp=Z,8μm,8.3s
OSL *e*SKSac **SKSac** **07 58 02.7 -4.3**
OSL *e*SP **SP** **08 02 25.4 +2.3**
OSL *e*SS **SKKSdf** **08 09 05.7 +0.7**
APSI Ampana 119.90 149 PKP **PKiKP** **07 51 14.4 +1.0**
VSVD Vaisvydziai 119.95 32 *eP* **PKiKP** **07 51 12.4 +0.3**
NACGM Naroch 119.95 35 ⇓*i*PKP **PKPdf** **07 51 11.7 -0.3**
baz=214
MNK Minsk 119.98 36 *i* PKIKP **PKPdf** **07 51 10.8 -1.3**
MNK Minsk 119.98 36 *i* PKP **PKPdf** **07 51 10.9 -1.3**
comp=E,5.0nm,0.9s,baz=35
MNK *i* PKP **PKPdf** **07 51 10.9 -1.3**
MNK *i* PKP **PKPdf** **07 51 10.9 -1.3**
comp=Z,169nm,0.8s
MNK *i* PP **PP** **07 52 33.9 -3.7**
MNK *i* PPP PPP 07 55 07.3
MNK *i* SKS **SKSac** **07 58 03.7 -3.9**
MNK *i* SS **SS** **08 09 02.4 -0.5**
MNK *i* SSS SSS 08 13 35.2
MNK *i* LQ LQ 08 35 51.0
MNK *i* LR LR 08 40 08.6
MNK *i* LRM MLR 08 41 34.0
MNK *i* LRM MLR 08 41 34.3
comp=Z,88μm,17.6s
MNK *i* LRM MLR 08 41 34.6
comp=E,7μm,17.6s
SANI Sanana 119.98 154 PKP **PKiKP** **07 51 14.1 +0.5**
SKAR Skarslia 120.02 22 *eP* **Pdif** **07 47 42.4 +6.5**
SKAR *e*PKPdf **PKiKP** **07 51 13.5 +1.3**
SKAR *e*PP **PP** **07 52 33.8 -4.0**
SKAR *e*PS **PS** **08 02 28.9 +2.3**
HYA Hoyanger 120.03 20 *e*PKPdf **PKiKP** **07 51 13.6 +1.6**
HYA *e*PP **PP** **07 52 37.7 0.0**
HYA IVmB_BB 07 52 46.9
comp=Z,5μm,7.6s
HYA *e*SKSac **SKSac** **07 58 09.5 +2.1**
HYA *e* 08 02 31.2
HYA *e*SS **SKKSdf** **08 09 05.7 +1.0**
RAGD RAYAGADA 120.05 100 *eP* **PKPdf** **07 51 12.5 -0.9**
LUWI Luwuk 120.10 150 PKP **PKiKP** **07 51 15.0 +1.2**
IIGN Ignalina 120.14 34 *eP* **PKPdf** **07 51 12.0 -0.4**
NUUK Nuuk 120.18 350 *i* P **PKPdf** **07 51 10.8 -1.4**
FOO Floro 120.21 19 *e*Pdif **Pdif** **07 47 40.0 +3.4**
FOO *e*PKPdf **PKPdf** **07 51 11.9 -0.4**
FOO *e*PP **PP** **07 52 38.8 -0.2**
FOO IVmB_BB 07 52 47.9
comp=Z,8μm,7.8s
FOO *e*SKSac **SKSac** **07 58 06.1 -2.0**
FOO *e* 08 02 31.4
FOO *e*SS SS **08 08 07.0 +1.6**
GEYT Alibeck 120.22 66 PKP **PKPdf** **07 51 12.4 -0.8**
comp=Z,33nm,1.2s,baz=276,slow=2.8,SNR=9.7
GEYT PP **PP** **07 52 37.2 -2.3**
comp=Z,18nm,0.9s,baz=226,slow=10,SNR=1.7
GEYT PKKPab **PKKPab** **08 01 23.6 +3.2**
comp=Z,13nm,0.9s,baz=27,slow=7.0,SNR=5.9
DGPR DIGLIPUR 120.28 112 *eP* **PKPdf** **07 51 13.6 -0.4**
DGPR IAmb IAmb 07 51 29.5
comp=Z,152nm,0.9s
ISAL Salakas 120.29 34 *eP* **PKiKP** **07 51 12.8 +0.1**
FAKI Fak Fak 120.48 162 IAMs_20 IAMs_20 08 53 30.3
comp=Z,80μm,20.0s
HLID Hailey 120.60 303 PKPdf **PKPdf** **07 51 14.0 0.0**
baz=139
AJM Ajmer 120.70 87 *eP* **PKPdf** **07 51 11.7 -2.9**
AJM *eP* **PKiKP** **07 51 12.9 -1.7**
AJM *eP* **pPKPdf** **07 51 13.5 -5.5**
NAO01 NORSAR Array S 120.73 23 *eP* **PKiKP** **07 51 13.6 +0.1**
NAO01 IVmBBB 07 51 33.7
comp=Z,2μm,2.1s
ANGG Ammassalik, Gr 120.73 357 IAMs_20 IAMs_20 08 41 00.1
comp=Z,86μm,18.0s
ANGG Ammassalik, Gr 120.73 357 *i* P **PKiKP** **07 51 14.2 +0.9**
HFS Hagfors 120.74 25 PP **PP** **07 52 38.8 -3.8**
comp=Z,20nm,0.8s,baz=107,slow=5.1,SNR=1.3
HFS PKKPbc **PKKPbc** **08 01 17.5 -0.3**
comp=Z,3.0nm,0.8s,baz=60,slow=3.5,SNR=8.3
BOZ Bozeman (W) 120.83 306 IAMs_20 IAMs_20 08 51 32.0
comp=Z,51μm,19.0s
BOZ Bozeman (W) 120.83 306 PKPdf **PKiKP** **07 51 14.4 0.0**
baz=139
SLIT Slitere, Latvi 120.85 31 *eP* **PKiKP** **07 51 15.0 +1.3**
NB2 NORSAR Subarra 120.97 23 PKPdf **PKPdf** **07 51 13.1 -0.8**
comp=Z,398nm,2.0s,baz=202,slow=1.9
NB2 NORSAR Subarra 120.97 23 PKPdf **PKPdf** **07 51 13.1 -0.8**
baz=202,slow=1.9
NOA NORSAR Array B 120.97 23 PKP **PKPdf** **07 51 12.6 -1.3**
comp=Z,20nm,0.9s,baz=206,slow=1.8,SNR=49
NOA PKKPbc **PKKPbc** **08 01 17.5 +0.5**
comp=Z,3.6nm,0.9s,baz=26,slow=3.3,SNR=6.7
AKN Aaknes 121.12 20 *e*PKPdf **PKiKP** **07 51 15.3 +1.1**
AKN *e*PP **PP** **07 52 41.2 -4.0**
AKN IVmB_BB 07 53 15.7
comp=Z,9μm,9.8s
AKN *e*SKSac **SKSac** **07 58 08.9 -2.4**
AKN *e*PS **PS** **08 02 41.0 +4.7**
AKN *e*SS **SS** **08 09 19.0 +1.7**
AKN IVMs_BB IVMs_BB 08 40 25.1
comp=Z,34μm,18.7s
MFID Camas Ranch 121.17 302 IAMs_20 IAMs_20 08 43 56.3
comp=Z,50μm,19.0s
DOMB Dombas 121.41 21 *e*Pdif **Pdif** **07 47 47.5 +5.4**
DOMB *e*PKPdf **PKiKP** **07 51 15.9 +1.0**
DOMB IVmBBB 07 51 22.9

comp=Z,2µm,3.7s
DOMB *e*PP **PP** **07 52 46.4 -0.9**
DOMB *e*SKSac **SKSac** **07 58 10.6 -1.7**
DOMB *e*PS **PS** **08 02 49.3 +10**
DOMB *e*SS **SS** **08 09 22.7 +1.6**
VSR Storozhevoye 121.49 44 *e*P **Pdif** **07 47 52.4 +10**
VSR *i* 07 51 13.5
VSR *e* 07 58 10.3
VSR *e*PS **PS** **08 02 44.3 +4.5**
VSR pmax pmax
comp=Z,10.0nm,1.7s
VSR pmax pmax
comp=Z,60nm,0.9s
TOLI2 Tolitoli 121.56 148 IAMs_20 IAMs_20 08 38 21.6
comp=Z,73µm,21.0s
MOL Molde 121.58 20 *e* **Pdif** **07 47 49.6 +6.9**
MOL *e*PKPdf **PKiKP** **07 51 16.3 +1.3**
MOL IVmBBB 07 51 22.6
comp=Z,1µm,3.8s
MOL *e*PP **PP** **07 52 46.1 -2.2**
MOL *e*SKSac **SKSac** **07 58 10.6 -2.1**
MOL *e*PS **PS** **08 02 43.0 +2.6**
MOL *e*SS **SS** **08 09 25.6 +2.6**
BLSP Bilaspur 121.59 97 *e*P **PKPdf** **07 51 15.5 -0.8**
WVOR Wild Horse Val 121.82 300 ⇑P **Pdif** **07 47 46.3 +1.8**
EGMT Eagleton 121.82 309 IAMs_20 IAMs_20 08 45 28.0
comp=Z,51µm,18.0s
EGMT Eagleton 121.82 309 PKPdf **PKPdf** **07 51 15.5 -0.5**
baz=139
VORR Voronezh 121.86 44 *e*PKIKP **PKPdf** **07 51 15.3 -0.5**
VORR *e* 07 52 48.0
VORR *e*SP SP 08 02 43.9 +2.6
VORR pmax pmax
comp=Z,70nm,0.4s
DY2G Dye2 121.99 353 *i* P **PKPdf** **07 51 12.6 -3.4**
FRB Frobisher Bay 122.10 342 PKP **PKPdf** **07 51 15.2 -0.7**
comp=Z,100nm,0.8s,baz=133,slow=3.2,SNR=52
FRB PP **PP** **07 52 48.8 -2.9**
comp=Z,45nm,1.0s,baz=154,slow=8.7,SNR=1.1
JHNI Jhansi 122.14 91 *e*P **PKPdf** **07 51 15.0 -2.3**
MTSE Matsula 122.20 31 *e*P **PKiKP** **07 51 16.7 +0.3**
BWNR Bhubaneshwar 122.21 101 *e*P **PKPdf** **07 51 16.9 -0.6**
JHSG JHARSUGUGA 122.23 98 *e*P **PKiKP** **07 51 18.6 +0.9**
SIJI Sorong 122.30 160 PKP **PKPdf** **07 51 16.9 -1.1**
comp=Z,27nm,0.7s,baz=147,slow=6.1,SNR=4.7
LPSR Galich'ya Gora 122.46 43 *e*P **Pdif** **07 47 59.7 +13**
LPSR *i* 07 51 14.9
LPSR *e* 07 58 19.8
LPSR *e*PS **PS** **08 02 54.7 +6.3**
LPSR pmax pmax
comp=Z,5.0nm,0.6s
LPSR pmax pmax
comp=Z,80nm,1.0s
TARA Tarawa 122.48 210 IAMs_20 IAMs_20 08 49 13.1
comp=Z,50µm,20.0s
PLID Pearl Lake 122.50 303 IAMs_20 IAMs_20 08 49 31.3
comp=Z,75µm,18.0s
VRH Novokhopyorsk 122.51 46 *e*P **Pdif** **07 48 00.1 +13**
VRH *i* 07 51 15.9
VRH *e* 07 52 50.6
VRH *e* 07 58 14.1
VRH *e*PS **PS** **08 02 53.8 +4.9**
VRH pmax pmax
comp=Z,7.0nm,0.8s
VRH pmax pmax
comp=Z,120nm,0.8s
KHET Khetri 122.58 87 *e*P **PKPdf** **07 51 16.4 -1.6**
TBLU Trondheim 122.75 21 *e* **Pdif** **07 47 55.8 +7.9**
TBLU *e*PKPdf **PKiKP** **07 51 18.0 +0.6**
TBLU *e*PP **PP** **07 52 55.6 -0.6**
TBLU *e*SKSac **SKSac** **07 58 13.9 -2.7**
TBLU *e*SS **SS** **08 09 41.8 +3.9**
MSO Missoula 122.82 306 IAMs_20 IAMs_20 08 49 44.6
comp=Z,80µm,19.0s
MSO Missoula 122.82 306 PKPdf **PKPdf** **07 51 17.4 -0.6**
baz=138
SFJD Kangerlussuaq 122.84 351 *i* P **PKPdf** **07 51 15.2 -2.0**
VSU Vasula 122.86 32‖ *i* PKIKP **PKPdf** **07 51 17.4 -0.1**
VSU Vasula 122.86 32 *e*P **PKPdf** **07 51 16.4 -1.1**
BMO Blue Mountains 122.95 302 IAMs_20 IAMs_20 08 46 20.4
comp=Z,54µm,19.0s
KUDL Kundal 123.03 87 *e*P **PKPdf** **07 51 17.3 -1.5**
SOEG Soedalen 123.26 0 *i* P **PKPdf** **07 51 17.6 -0.4**
YBH Yreka Blue Hor 123.36 296 PP **PP** **07 52 56.7 -4.2**
comp=Z,11nm,0.8s,baz=104,slow=8.3,SNR=0.8
SONA Sohna 123.45 88 *e*P **PKPdf** **07 51 16.6 -3.0**
L04D Klamath Falls 123.50 297 PKPdf **PKPdf** **07 51 18.9 -0.6**
baz=137
OBN Obninsk 123.51 40 ⇑P **PKPdf** **07 51 18.9 0.0**
OBN Obninsk 123.51 40 PKP **PKPdf** **07 51 17.6 -1.3**
comp=Z,12nm,0.5s,baz=216,slow=0.9,SNR=9.6
OBN Obninsk 123.51 40 IAMs_20 IAMs_20 08 47 17.0
comp=Z,80µm,19.0s
OBN Obninsk 123.51 40*c* *i*PKIKP **PKPdf** **07 51 17.8 -1.0**
OBN *i* 07 52 59.5
OBN *i* SSS SSS 08 14 15.5
OBN pmax pmax
comp=Z,52nm,0.5s
OBN pmax pmax
comp=Z,292nm,1.3s
K04D Chiloquin, OR 123.52 298 PKPdf **PKPdf** **07 51 18.9 -0.6**
baz=137
RAF Rauma 123.55 28 *e*P **PKiKP** **07 51 19.3 +0.4**
MEF Metsahovi 123.61 30 *e*P **PKPdf** **07 51 18.2 -0.6**
J05D Fort Rock, OR 123.74 299 PKPdf **PKPdf** **07 51 19.7 -0.2**
baz=137
NDI New Delhi 123.85 88 *e*P PKPpre 07 51 04.5
L02F Cave Junction 124.08 296 PKPdf **PKPdf** **07 51 20.4 -0.1**
baz=136
J04D Umpqua Nationa 124.15 298 PKPdf **PKPdf** **07 51 20.5 -0.3**
baz=136
NSS Namsos 124.23 21 *e*Pdif **Pdif** **07 47 55.6 +1.2**
NSS *e*PKPdf **PKiKP** **07 51 21.6 +1.4**
NSS IVmBBB 07 51 26.5
comp=Z,2µm,2.1s
NSS *e*PP **PP** **07 53 05.2 -1.0**
NSS *e*SKSac **SKSac** **07 58 19.5 -1.9**
NSS *e*SS **SS** **08 09 54.1 -2.5**
ICESG Greenland Ices 124.27 357 *i* P **PKPdf** **07 51 19.2 -1.2**
MOS Moscow 124.38 40 *i* PKIKP **PKPdf** **07 51 17.8 -2.7**
MOS *e* 07 53 08.5
MOS *i* 07 58 15.4
MOS *e*SS SS 08 09 56.9 -1.9
MOS pmax pmax
comp=Z,196nm,1.0s
MOS pmax pmax
comp=Z,5µm,7.3s
K02D Willamette Mer 124.54 297 PKPdf **PKPdf** **07 51 21.3 -0.2**
baz=136
I05D Terrebonne, OR 124.55 299 PKPdf **PKiKP** **07 51 21.6 -0.1**
baz=136
I04A Tendick Farm, 124.70 298 PKPdf **PKPdf** **07 51 21.0 -0.7**
baz=136
POHA Pohakuloa 124.96 253 IAMs_20 IAMs_20 08 43 29.5
comp=Z,81µm,18.0s
J01E Myrtle Point 125.01 297 PKPdf **PKiKP** **07 51 22.7 +0.2**
baz=136
BOK Bokaro 125.02 99 *e*P **PKPdf** **07 51 21.4 -1.4**
PUL Pulkovo 125.03 33⇑ *i*PKIKP **PKiKP** **07 51 23.7 +1.8**
PUL pmax pmax
comp=Z,91nm,0.5s
PUL MLR MLR
comp=Z,111µm,19.0s
ILULI Ilulissat 125.05 352 *i* P **PKPdf** **07 51 19.6 -1.8**
FINES FINESS Array B 125.09 30 PKP **PKPdf** **07 51 20.6 -1.1**
comp=Z,72nm,0.8s,baz=126,slow=2.6,SNR=39
FINES PKKPbc **PKKPbc** **08 01 02.7 +2.0**
comp=Z,3.0nm,0.7s,baz=76,slow=5.9,SNR=1.3
I03D Drain, OR 125.10 298 PKPdf **PKPdf** **07 51 22.3 0.0**
baz=136
HAWA Hanford 125.14 302 IAMs_20 IAMs_20 08 56 24.4
comp=Z,68µm,18.0s
G05D Wamic, OR 125.19 300 PKPdf **PKiKP** **07 51 22.9 0.0**
baz=136
NEW Newport 125.34 305 PKP **PKPdf** **07 51 21.4 -1.3**
comp=Z,88nm,1.1s,baz=266,slow=3.7,SNR=34
NEW Newport 125.34 305 PKPdf **PKPdf** **07 51 22.1 -0.6**
baz=136
H04D Lebanon 125.38 299 IAMs_20 IAMs_20 08 55 51.0
comp=Z,43µm,18.0s
H04D Lebanon 125.38 299 PKPdf **PKPdf** **07 51 22.8 -0.1**
baz=136
BHK Bhakra 125.45 85 *e*P **PKiKP** **07 51 24.4 +0.5**
BHK *ex* x 07 51 28.7
BHK *e*P **sPKPdf** **07 51 29.4 0.0**
JMU Jammu 125.55 83 *e*P **PKiKP** **07 51 24.7 +0.8**
DDI Dehra Dun 125.56 87 *e*P **PKPdf** **07 51 23.0 -0.8**
DDI IAmb IAmb 07 51 32.9
comp=Z,390nm,0.9s
I02E Swisshome, OR 125.65 298 PKPdf **PKPdf** **07 51 23.2 -0.2**
baz=135
SMLA Simla 125.66 86 *e*P **PKPdf** **07 51 23.0 -0.8**
SMLA IAmb IAmb 07 51 40.1
comp=Z,811nm,1.6s
SCO Scoresbysund 125.75 4 *i* P **PKiKP** **07 51 23.0 -0.1**
THN Thein Dam 125.81 83 *e*P **PKPdf** **07 51 24.2 +0.2**
BELG Belogornoye 125.85 48 PKP **PKPdf** **07 51 21.7 -1.7**
comp=Z,116nm,0.8s,baz=324,slow=1.8,SNR=13
BELG PP **PP** **07 53 12.3 -5.0**
comp=Z,46nm,0.8s,baz=260,slow=12,SNR=0.9
BELG Belogornoye 125.85 48⇑ *e*PKIKP **PKPdf** **07 51 21.5 -1.9**
BELG MLR MLR
comp=Z,17µm,22.0s
G03D McMinnville, O 126.14 299 PKPdf **PKiKP** **07 51 24.5 -0.2**
baz=135
LGTI Lohaghat 126.16 89 *e*P **PKPdf** **07 51 24.4 -0.4**
LGTI Lohaghat 126.16 89 *e*P PKiKP 07 51 40.9 +16
MOR8 Moi Rana 126.18 21 *e*Pdif **Pdif** **07 48 07.6 +4.4**
MOR8 *e*PKPdf **PKiKP** **07 51 24.3 +0.2**
MOR8 IVmB_BB 07 51 30.4
comp=Z,5µm,5.1s
MOR8 *e*PP **PP** **07 53 18.5 -0.7**
MOR8 *e*SKSac **SKSac** **07 58 26.6 -0.9**
MOR8 *e*PS **PS** **08 03 23.4 +2.4**
MOR8 *e*SS **SS** **08 10 22.9 +1.7**
KONS Konsvik 126.19 21 *e*PKPdf **PKiKP** **07 51 25.6 +1.5**
KONS IVmBBB 07 51 30.4
comp=Z,5µm,4.2s
PTH Pithoragarh 126.22 89 *e*P **PKPdf** **07 51 24.8 -0.4**
VALR Valaam 126.44 32 *de*PKIKP **PKiKP** **07 51 25.0 +0.3**
F04D Rainier, OR 126.62 300 PKPdf **PKiKP** **07 51 25.4 -0.2**
baz=135
JMIC Jan Mayen 127.16 9 *e*Pdif **Pdif** **07 48 15.8 +8.4**
JMIC *e*PKPdf **PKiKP** **07 51 27.5 +1.6**
JMIC IVmBBB 07 51 39.8
comp=Z,7µm,4.2s
JMIC *e*PP **PP** **07 53 30.3 +4.8**
JMIC *e*SKSac **SKSac** **07 58 33.8 +3.6**
JMIC *e*SS **SS** **08 10 34.6 +1.5**
DANN Dangsing 127.33 93 *e*P **PKPdf** **07 51 25.9 -1.6**
comp=Z,1µm,1.0s
FAUS Fauske 127.39 21 *e*Pdif **Pdif** **07 48 12.1 +3.6**
FAUS *e*PKPdf **PKPdf** **07 51 25.2 -0.7**
FAUS IVmBBB 07 51 41.8
comp=Z,3µm,1.7s
FAUS *e*PP **PP** **07 53 25.4 -1.7**
FAUS *e*SKSac **SKSac** **07 58 30.5 -0.6**
FAUS *e*PS **PS** **08 03 32.6 +1.0**
FAUS *e*SS **SS** **08 10 35.2 -0.9**
NUUG Nuugaatsiaq 127.49 352 *i* P **PKPdf** **07 51 25.2 -0.8**
DMN Daman 127.53 95 *e*P **PKPdf** **07 51 26.4 -1.5**
comp=Z,829nm,1.1s
GKN Gorkha 127.57 94 *e*P **PKPdf** **07 51 26.1 -1.7**
comp=Z,903nm,1.1s
KIP Kipapa 127.66 252 IAMs_20 IAMs_20 08 38 40.8
comp=Z,67µm,19.0s
KIP Kipapa 127.66 252⇑ *e*PKIKP **PKiKP** **07 51 28.7 +0.2**
PKIN Phulchoki 127.67 95 *e*P **PKPdf** **07 51 26.4 -1.7**
PKI Pulchoki 127.68 95 *e*P **PKPdf** **07 51 26.0 -2.2**
LOF Lofoten 127.69 20 *e*Pdif **Pdif** **07 48 13.8 +4.1**
LOF *e*PKPdf **PKPdf** **07 51 26.1 -0.3**
LOF IVmBBB 07 51 32.9
comp=Z,5µm,4.0s
LOF *e*PP **PP** **07 53 30.3 +1.2**
LOF *e*SKSac **SKSac** **07 58 30.5 -1.4**
LOF *e*PS **PS** **08 03 36.7 +2.6**
LOF *e*SS **SS** **08 10 41.0 +1.1**
SUMG Summit 127.73 358 IAMs_20 IAMs_20 08 45 17.9
comp=Z,72µm,18.0s
SUMG Summit 127.73 358 *i* P **PKPdf** **07 51 25.7 -1.3**
BATP Bataraza 127.76 141‖ *e*P **PKPdf** **07 51 27.5 -0.9**
KKN Kakani 127.77 95 *e*P **PKPdf** **07 51 25.6 -2.7**
comp=Z,408nm,1.8s
CMAR Chiang Mai Arr 127.84 115 PKP **PKPdf** **07 51 27.0 -1.4**
comp=Z,62nm,0.8s,baz=228,slow=3.6,SNR=67
CMAR SKKPbc SKKPbc 08 04 34.1 -4.8
comp=Z,17nm,1.0s,baz=6.3,slow=5.6,SNR=6.4
CMAR Chiang Mai Arr 127.84 115 PKIKP **PKPdf** **07 51 27.0 -1.4**
STEI Steigen 127.85 21 *e* **Pdif** **07 48 17.8 +7.3**
STEI *e*PKPdf **PKPdf** **07 51 25.9 -0.9**
STEI IVmBBB 07 51 33.5
comp=Z,6µm,4.5s
STEI *e*PP **PP** **07 53 30.3 +0.2**
STEI *e* 07 55 01.0
STEI *e*SKSac **SKSac** **07 58 30.6 -1.8**
STEI *e*SP **SP** **08 03 35.7 +2.4**
STEI *e*SS **SS** **08 10 39.1 -2.8**
RAMN Ramite 127.88 97 *e*P **PKPdf** **07 51 27.1 -1.4**
NLWA Neilton Lookou 127.96 301 IAMs_20 IAMs_20 08 56 41.0
comp=Z,56µm,18.0s
AGT Agartala 128.10 103 *e*P **PKPdf** **07 51 28.3 -0.4**
JIRN Jiri 128.19 96 *e*P **PKPdf** **07 51 27.7 -1.6**
comp=Z,452nm,0.6s
GUN Gumba 128.21 95 *e*P **PKPdf** **07 51 28.2 -1.0**
ODAN Odare 128.26 98 *e*P **PKPdf** **07 51 25.7 -3.5**
comp=Z,623nm,1.7s
KCP Kidapawan 128.43 150‖ *e*P **PKPdf** **07 51 29.7 0.0**
PAGZ Pagadian 128.72 148 *e*P **PKPdf** **07 51 28.3 -1.9**
PAGZ Pagadian 128.72 148‖ *e*P **PP** **07 53 29.9 -5.8**
TAPN Taplejung 128.81 97 *e*P **PKPdf** **07 51 28.8 -1.6**
comp=Z,947nm,1.5s
KLMR Klimovskoe 128.85 37 *e*PKIKP **PKPdf** **07 51 27.4 -1.4**
KLMR *e* 07 53 41.5
KLMR *e* 07 58 36.0
KLMR *e*PS **PS** **08 03 36.2 -8.2**
KLMR pmax pmax
comp=Z,435nm,1.4s
KLMR Klimovskoe 128.85 37 *e*PKPdf **PKPdf** **07 51 27.5 -1.4**
KLMR AMP 07 51 46.3
comp=Z,435nm,1.4s
KLMR *e*PP **PP** **07 53 41.5 +4.6**
KLMR *e*SKSac **SKSac** **07 58 36.1 +0.5**
KLMR *e*SKSac **SKSac** **07 58 36.1 +0.5**
KLMR *e*SKKSac **SKKSac** **08 00 27.0 -4.8**
KLMR *e*SKKSac **SKKSac** **08 00 27.0 -4.8**
KLMR *e*PS **PS** **08 03 36.2 -8.2**
KLMR *e*PS **PS** **08 03 36.2 -8.2**
KLMR *e*SKKPbc **SKKPbc** **08 04 41.9 +2.5**
KLMR *e*SS SS 08 11 08.2 +14
KLMR *e*SS SS 08 11 08.2 +14
KLMR LQ LQ 08 38 25.0
KLMR LQ LQ 08 38 25.0
KLMR LR LR 08 42 03.7
KLMR AMP 08 44 03.9
comp=Z,139µm,21.0s
UPNV Upernavik 128.95 351 *i* P **PKPdf** **07 51 27.8 -1.0**
DHUB DHUBRI 129.07 101 *e*P **PKPdf** **07 51 29.6 -0.9**
DHUB IAmb IAmb 07 51 46.8
comp=Z,159nm,2.3s
AKTO Aktyubinsk 129.14 56 PKP **PKPdf** **07 51 28.6 -1.2**
comp=Z,126nm,1.1s,baz=185,slow=2.2,SNR=36
AB31 Akbulak array 129.26 58 *i* PKIKP **PKPdf** **07 51 27.0 -3.1**
GTK Tadong 129.29 98 *e*P **PKPdf** **07 51 29.7 -1.4**
CHM Chimkent 129.48 70 PKIKP **PKiKP** **07 51 35.2 +3.7**
IUG luzhnay 129.59 71 *e*PKIKP **PKPdf** **07 51 30.1 -1.0**
IUG luzhnay 129.59 71 *i* PKP **PKPdf** **07 51 30.1 -1.0**
baz=71
DBG Daneborg 129.63 4 *i* P **PKPdf** **07 51 30.2 +0.1**
JOHN Johnston Islan 129.68 237 IAMs_20 IAMs_20 08 42 28.5
comp=Z,65µm,19.0s
SHL Shillong 129.78 103 *e*P **PKPdf** **07 51 31.2 -0.9**
BIPH Bislig 129.90 152‖ *e*P **PKPdf** **07 51 31.4 -1.0**
TRO Tromso 130.02 21 *e* **Pdif** **07 48 25.8 +5.8**
TRO *e*PKPdf **PKPdf** **07 51 30.3 -0.6**
TRO IVmBBB 07 51 49.7
comp=Z,7µm,3.9s
TRO *e*PP **PP** **07 53 47.0 +2.7**
TRO *e*SKSac **SKSac** **07 58 37.8 -0.8**
TRO *e*PS **PS** **08 03 56.7 +2.3**
GUWA GUWAHATI 130.16 102 *e*P **PKPdf** **07 51 31.3 -1.2**
JETT Jettan, Norway 130.26 21 *e* **Pdif** **07 48 28.0 +6.7**
JETT *e*PKPdf **PKPdf** **07 51 30.5 -0.9**
JETT IVmBBB 07 51 38.1
comp=Z,6µm,2.3s
JETT *e*PP **PP** **07 53 48.2 +2.2**
JETT *e*SKPdf **SKPdf** **07 55 06.4 +0.7**
JETT *e*PS **PS** **08 04 02.0 +5.4**
IMP Imphal 130.34 105 *e*P **PKPdf** **07 51 32.2 -0.8**
IMP IAmb IAmb 07 51 49.8
comp=Z,399nm,1.5s
CNOP Candoni, Negro 130.36 146⇑ *i*P **PKPdf** **07 51 31.2 -2.1**
KK31 Karatay Array 130.50 70 *i* PKIKP **PKPdf** **07 51 29.4 -3.3**
TBP Tagbilaran 130.61 148⇑ *i*P **PKPdf** **07 51 30.3 -3.5**
DZA Taraz 130.80 71 *e*PKIKP **PKPdf** **07 51 32.2 -1.1**
DZA Taraz 130.80 71 *e*PKP **PKPdf** **07 51 31.7 -1.6**
baz=71
KIRV Kirov 130.90 43 PKP **PKPdf** **07 51 31.9 -0.9**
comp=Z,53nm,0.7s,baz=249,slow=3.6,SNR=22
KIRV SKPbc **SKPbc** **07 54 53.3 -2.9**
comp=Z,14nm,0.5s,baz=220,slow=7.7,SNR=3.6
KIRV Kirov 130.90 43*ce* PKIKP **PKPdf** **07 51 32.4 -0.4**
KWAJ Kwajalein Atol 131.03 206 IAMs_20 IAMs_20 08 49 55.4
comp=Z,45µm,20.0s
KSH Kashi 131.03 77 PKP **PKPdf** **07 51 33.3 -0.7**
KSH PKS PKSdf 07 55 01.4 -9.1
KSH SKKS 08 00 42.8
KSH Kashi 131.03 77 PKP **PKPdf** **07 51 33.2 -0.7**
KSH SKKS 08 00 42.7
KSH SS **SS** **08 11 16.9 -5.4**
KSH LR LR
comp=Z,106µm,21.8s
KSH LR LR
comp=Z,128µm,21.9s
KSH LR LR
comp=Z,220µm,21.5s
TEZP TEZPUR 131.11 103 *e*P **PKPdf** **07 51 32.8 -1.6**
TEZP IAmb IAmb 07 51 50.2
comp=Z,221nm,1.3s
KOHI KOHIMA 131.13 105 *e*P **PKPdf** **07 51 33.3 -1.3**
KOHI IAmb IAmb 07 51 51.6
comp=Z,636nm,1.5s
ARA0 ARCESS Array S 131.35 23 *e*PKPdf **PKPdf** **07 51 32.3 -1.1**
ARA0 IVmBBB 07 51 39.8
comp=Z,7µm,2.6s
ARA0 *e*PP **PP** **07 53 53.3 +0.3**
ARA0 *e*PP **PP** **07 53 53.7 +0.7**
ARA0 *e*SKPdf **SKPdf** **07 55 07.4 -0.3**
ARA0 *e*SS **SS** **08 11 25.6 +0.7**
ARA0 IVMs_BB IVMs_BB 08 38 58.0
comp=Z,36µm,32.9s
ARCES ARCESS Array B 131.35 23 PKHKP PKPpre 07 51 18.0
comp=Z,4.2nm,0.8s,baz=227,slow=2.7,SNR=8.9
ARCES PKP **PKPdf** **07 51 32.2 -1.2**
comp=Z,96nm,0.8s,baz=230,slow=2.2,SNR=37
GLSP General Luna, 131.36 151‖ *e*P **PKPdf** **07 51 32.5 -2.7**
PRGR Permogore 131.52 39⇑ *i*PKIKP **PKPdf** **07 51 33.8 -0.1**
PRGR *i* 07 53 59.3
PRGR *e* 07 58 37.4
AML Almayashu 131.57 73 P **PKPdf** **07 51 35.5 +0.3**
SNR=21
HAMF Hammerfest 131.81 22 *e*Pdif **Pdif** **07 48 31.3 +3.3**
HAMF *e*PKPdf **PKPdf** **07 51 33.2 -1.0**
HAMF IVmBBB 07 51 52.2
comp=Z,8µm,2.0s
HAMF *e*PP **PP** **07 53 57.4 +1.5**
HAMF *e*SKSac **SKSac** **07 58 43.0 -0.5**
HAMF *e*SP **SP** **08 04 05.8 -1.7**
HAMF *e*SS **SS** **08 11 28.7 -1.8**
APA Apatity 131.83 28‖ *i*PKIKP **PKPdf** **07 51 34.2 -0.2**
APA *i* 07 53 55.0
APA *i* PPP PPP 07 56 45.0
APA *i* 07 58 38.0
APA *i* PPS PPS 08 05 46.0
APA pmax pmax
comp=Z,127nm,1.1s
MOKO MOKOCHONG 131.83 104 *e*P **PKPdf** **07 51 36.0 +0.1**
MOKO IAmb IAmb 07 51 46.2
comp=Z,530nm,0.6s
KEV Kevo 131.86 24 IAMs_20 IAMs_20 08 46 00.5
comp=Z,104µm,22.0s
EKS2 Erkin-Say 131.97 73 P **PKPdf** **07 51 36.0 +0.3**
SNR=25
JORH JORHAT 132.01 104 *e*P **PKPdf** **07 51 35.4 -0.6**
ITAN ITANAGAR 132.03 103 *e*P **PKPdf** **07 51 36.0 -0.1**
UCH Uchtor 132.08 74 P **PKPdf** **07 51 36.1 -0.1**
SNR=24
DAG Danmarks Havn 132.14 4 *i* P **PKPdf** **07 51 33.6 -1.1**
AAK Ala-Archa 132.35 73 P **PKPdf** **07 51 36.3 -0.1**
SNR=18
AAK Ala-Archa 132.35 73*c* *i*PKIKP **PKPdf** **07 51 34.8 -1.6**
LVZ Lovozero 132.40 28*ce* PKIKP **PKPdf** **07 51 34.4 -1.1**
LVZ MLR MLR
comp=Z,140µm,19.0s
ZIRO ZIRO 132.40 103 *e*P **PKPdf** **07 51 35.3 -1.7**
LSA Lhasa 132.55 99 PKP **PKPdf** **07 51 36.9 -0.7**
LSA PP **PP** **07 54 07.0 +5.2**
LSA AMB AMB
comp=Z,3µm,5.3s
LSA LR LR
comp=Z,64µm,19.9s
LSA LR LR
comp=Z,54µm,18.5s
LSA LR LR
comp=Z,48µm,19.9s
KBK Karagaybulak 132.61 74 P **PKPdf** **07 51 37.2 +0.3**
SNR=10
CHMS Chumysh 132.73 73 P **PKPdf** **07 51 37.0 0.0**
SNR=8.1
USP Ospenovka 132.77 73 P **PKPdf** **07 51 37.0 -0.1**
SNR=9.0
SGDS Sogindy 132.97 72 *e*PKIKP **PKPdf** **07 51 36.2 -1.2**
SGDS *e* 07 54 02.4
SGDS Sogindy 132.97 72 *e*PKP **PKPdf** **07 51 35.8 -1.6**
baz=72
ULHL Ulahol 133.04 75 P **PKiKP** **07 51 39.2 +0.2**
SNR=6.9
TKM2 Tokmak 2 133.14 74 P **PKiKP** **07 51 40.6 +1.5**
SNR=13
BBB Bella Bella 133.19 303 PKP **PKPdf** **07 51 37.6 +0.2**
comp=Z,70nm,0.8s,baz=262,slow=1.7,SNR=14
LUBP Lubang 133.21 142‖ *e*P **PKPdf** **07 51 35.0 -3.6**
PGP Puerto Galera 133.24 143⇑ *e*P **PKPdf** **07 51 35.8 -2.9**
ARU Arti 133.29 50 PKhKP PKPpre 07 51 25.2
comp=Z,2.3nm,0.3s,baz=206,slow=5.6,SNR=8.7
ARU PKP **PKPdf** **07 51 36.8 -0.7**
comp=Z,36nm,0.6s,baz=210,slow=2.7,SNR=33
ARU Arti 133.29 50 P **Pdif** **07 48 46.2 +11**
ARU *i* 07 51 36.9
ARU 07 54 02.7
ARU MLR MLR
comp=Z,166µm,21.0s
LKP Lekhapani 133.35 105 *e*P **PKPdf** **07 51 38.0 -0.5**
QIZ Qiongzhong 133.69 126 PKP **PKPdf** **07 51 38.0 -1.4**
QIZ PP **PP** **07 54 09.9 +1.7**
QIZ Qiongzhong 133.69 126 SS SS 08 11 56.0 +2.4
QIZ AMB AMB
comp=Z,6µm,9.0s
QIZ LR LR
comp=N,95µm,19.9s
QIZ LR LR
comp=E,56µm,24.5s
QIZ LR LR
comp=Z,168µm,20.6s
QIZ Qiongzhong 133.69 126 PKP **PKPdf** **07 51 38.6 -0.8**
QIZ PP **PP** **07 54 07.8 -0.4**
QIZ SS SS 08 11 55.7 +2.1
QIZ AMB AMB
comp=Z,5µm,7.7s
QIZ LR LR
comp=Z,95µm,20.2s
QIZ LR LR
comp=Z,56µm,24.1s
QIZ LR LR
comp=Z,167µm,19.0s
BTLS Baital 133.69 70 *e*PKIKP **PKPdf** **07 51 37.9 -0.7**
BTLS Baital 133.69 70 *e*PKP **PKPdf** **07 51 36.6 -2.0**
baz=70
TULEG Thule 133.72 349 *i* P **PKPdf** **07 51 37.7 0.0**
MACP Maragondon, Ca 133.86 142‖ *e*P **PKPdf** **07 51 37.9 -2.0**
YKA Yellowknife Ar 133.87 320 PKhKP PKPpre 07 51 26.3
comp=Z,9.2nm,0.9s,baz=113,slow=4.6,SNR=9.2
YKA PKP **PKPdf** **07 51 37.8 -0.6**
comp=Z,52nm,0.6s,baz=130,slow=2.4,SNR=28
YKA PP **PP** **07 54 07.1 -2.2**
comp=Z,5.3nm,0.7s,baz=133,slow=6.3,SNR=1.7
YKA PKKP **PKKPdf** **08 01 25.4 -1.0**
comp=Z,4.0nm,1.0s,baz=332,slow=1.5,SNR=4.3
BJO1 Bjornoya 133.96 17 *e* **Pdif** **07 48 44.6 +7.1**
BJO1 *e*PKPdf **PKPdf** **07 51 37.2 -1.0**
BJO1 *e*PP **PP** **07 54 09.5 -0.1**
BJO1 *e*SKPdf **SKiKP** **07 55 13.7 -1.0**
BJO1 *e*SKSac **SKSac** **07 58 52.0 +2.9**
BJO1 *e* 08 04 15.3

BJO1 eSS SS 08 11 58.1 +1.7
BJO1 IVMs_BB IVMs_BB 08 40 21.6
comp=Z,18µm,31.5s
LQP Lukban 134.01 143↓ eP **PKPdf 07 51 40.7 +0.3**
AAA Alma-Ata 134.05 74 ePKIKP **PKPdf 07 51 38.8 -0.7**
AAA MLR MLR
comp=Z,120µm,21.0s
AAA Alma-Ata 134.05 74 ePKP **PKPdf 07 51 38.8 -0.7**
baz=74
AAA LR LR 08 48 06.4
comp=Z,122µm,21.4s,baz=74
MDOK Medeo 134.10 74 ePKIKP **PKPdf 07 51 38.4 -1.3**
MDOK e 07 54 10.4
MDOK Medeo 134.10 74 ePKP **PKPdf 07 51 38.0 -1.7**
baz=74
MDOK ePP **PP 07 54 10.4 -0.9**
baz=74
MDOK LR LR 08 54 13.7
comp=Z,45µm,16.8s,baz=74
KUU Kurty 134.19 73 ePKIKP **PKPdf 07 51 38.5 -1.1**
KUU i 07 54 09.3
KUU Kurty 134.19 73 ePKP **PKPdf 07 51 37.8 -1.9**
baz=73
KUU ePP **PP 07 54 12.3 +0.6**
baz=73
KUU LR LR 08 54 25.4
comp=Z,71µm,17.6s,baz=73
PVCP Virac 134.38 147↓ eP **PKPdf 07 51 38.6 -2.2**
JCNP Jose Panganiba 134.56 144↑ iP **PKPdf 07 51 40.0 -1.2**
SATY Saty 134.78 75 ePKIKP **PKPdf 07 51 40.0 -0.9**
SATY Saty 134.78 75 ePKP **PKPdf 07 51 39.1 -1.8**
baz=75
OTUK Ortayu 134.84 66 PKIKP **PKPdf 07 51 39.8 -0.9**
ZHN Zhinishke 134.87 75 ePKP **PKPdf 07 51 40.0 -1.1**
baz=75
UZB Uzynbulak 135.18 76 ePKIKP **PKPdf 07 51 41.0 -0.7**
UZB Uzynbulak 135.18 76 ePKP **PKPdf 07 51 41.7 0.0**
baz=76
KPKS Kokpek 135.20 75 ePKIKP **PKPdf 07 51 40.5 -1.1**
KPKS Kokpek 135.20 75 ePKP **PKPdf 07 51 40.2 -1.5**
baz=75
ARXS Arharly 135.21 74 ePKIKP **PKPdf 07 51 39.6 -2.0**
KMI Kunming 135.31 114↓ Pdif **Pdif 07 48 54.4 +9.3**
KMI PKP **PKPdf 07 51 36.3 -6.3**
KMI sPKP 07 51 44.4
KMI PP **PP 07 54 18.4 -0.5**
KMI PKS **PKSdf 07 55 14.3 -4.9**
KMI Kunming 135.31 114 SS SS 08 12 05.5 -8.4
KMI AMB AMB
comp=Z,4µm,6.7s
KMI LR LR
comp=N,105µm,23.4s
KMI LR LR
comp=E,87µm,29.5s
KMI LR LR
comp=Z,186µm,31.6s
KMI Kunming 135.31 114↑ P **PKiKP 07 51 44.4 +0.3**
KMI pmax pmax
comp=Z,53nm,0.8s
SHLS Shalkode 135.43 76 ePKIKP **PKPdf 07 51 41.9 -0.2**
SHLS Shalkode 135.43 76 ePKP **PKPdf 07 51 42.0 -0.1**
baz=76
HSPB Hornsund (broa 135.43 14 ePKiKP **PKPdf 07 51 37.4 -3.6**
HSPB ePP **PP 07 54 17.5 -1.4**
HSPB eSS SS 08 12 58.1 +44
SMPP San Manuel, Pa 135.59 141↓ eP **PKPdf 07 51 41.6 -1.5**
PZH PanZhiHua 135.90 112 PKP **PKPdf 07 51 39.3 -4.2**
PZH sPKP 07 51 45.3
PZH PP **PP 07 54 20.4 -2.1**
PZH PKS **PKSdf 07 55 22.3 +2.3**
PZH SKS **SKSdf 07 58 58.9 +5.0**
PZH SKKS **SKKSac 08 01 17.0 +0.2**
PZH PanZhiHua 135.90 112 PKP **PKPdf 07 51 41.7 -1.8**
PZH sPKP 07 51 45.3
PZH PKS **PKSdf 07 55 17.7 -2.3**
PZH SKKS 08 01 17.0
PZH SS **SS 08 12 19.6 -1.2**
PZH AMB AMB
comp=Z,8µm,6.7s
PZH LR LR
comp=Z,65µm,21.6s
PZH LR LR
comp=Z,50µm,22.4s
PZH LR LR
comp=Z,68µm,22.9s
H02S1 DAWSON INLET TI 135.92 302 PKP **PKiKP 07 51 43.7 -0.3**
SNR=205
FLDN Fort Liard 135.97 314 PKPdf **PKPdf 07 51 43.0 +0.7**
baz=125
TDK Taldyqorghan 136.03 73 ePKIKP **PKPdf 07 51 42.4 -0.6**
TDK MLR MLR
comp=Z,120µm,19.0s
TDK Taldyqorghan 136.03 73 ePKP **PKPdf 07 51 41.6 -1.4**
baz=73
TDK LR LR 08 51 34.9
comp=Z,132µm,20.0s,baz=73
BRZS Berezniki 136.08 64 ePKIKP **PKPdf 07 51 42.5 -0.4**
BRZS Berezniki 136.08 64 ePKP **PKPdf 07 51 41.8 -1.1**
baz=64
RES Resolute Bay 136.25 340 PKP **PKPdf 07 51 42.1 -0.4**
comp=Z,64nm,0.9s,baz=169,slow=2.2,SNR=2.5
HOPEN Hopen 136.47 17 ePdif **Pdif 07 48 50.9 +2.2**
HOPEN ePKPdf **PKPdf 07 51 42.0 -0.8**
HOPEN eSKSac **SKSac 07 58 59.7 +4.4**
HOPEN e 08 04 37.7
HOPEN eSS SS 08 12 41.3 +15
SPA0 Spitsbergen Ar 136.48 13 e **Pdif 07 49 05.3 +17**
SPA0 ePKPdf **PKPdf 07 51 43.7 +0.8**
SPA0 IVmBBB 07 51 49.5
comp=Z,8µm,4.9s
SPA0 ePP **PP 07 54 31.4 +5.9**
SPA0 e 07 55 13.9
SPA0 eSS SS 08 12 34.3 +7.7
SAMP Sagada Mountai 136.53 141↓ eP **PKPdf 07 51 43.7 -1.0**
KBS Kingsbay 136.55 11 IAMs_20 IAMs_20 08 56 34.5
comp=Z,67µm,21.0s
KBS Kingsbay 136.55 11↑ ePKIKP **PKiKP 07 51 44.9 +0.2**
KBS MLR MLR
comp=Z,64µm,17.0s
KBS Kingsbay 136.55 11 i P **PKPdf 07 51 42.6 -0.4**
KBS Kingsbay 136.55 11 ePdif **Pdif 07 48 51.7 +2.7**
KBS ePKPdf **PKPdf 07 51 42.6 -0.4**
KBS IVmBBB 07 51 50.6
comp=Z,7µm,3.3s
KBS ePSdf **SKPdf 07 55 20.5 +3.4**
BRVK Borovoye 136.70 59*c* iPKIKP **PKPdf 07 51 43.2 -0.8**
BRVK MLR MLR
comp=Z,266µm,22.0s
V35K Ketchikan 136.74 305 PKPdf **PKPdf 07 51 44.4 +0.5**
baz=125
NOR Nord 136.98 3 i P **PKPdf 07 51 42.9 -0.9**
T35M Bob Quinn 137.05 307 PKPdf **PKPdf 07 51 44.6 +0.1**
baz=124
CRAG Craig 137.53 304 PKPdf **PKPdf 07 51 45.5 +0.2**
baz=124
WRGLY Wrigley 137.61 318 PKPdf **PKPdf 07 51 45.1 -0.2**
baz=122
WRAK Wrangell Islan 137.70 306 IAMs_20 IAMs_20 08 54 35.2
comp=Z,46µm,20.0s
WRAK Wrangell Islan 137.70 306 PKPdf **PKPdf 07 51 46.0 +0.4**
baz=123
DLBC Dease Lake 137.75 309 PKhKP PKPpre 07 51 28.0
comp=Z,2.3nm,0.9s,baz=153,slow=2.3,SNR=2.5
DLBC Dease Lake 137.75 309 PKPdf **PKPdf 07 51 45.8 0.0**
baz=123
T33K Petersburg 138.19 306 PKPdf **PKPdf 07 51 46.9 +0.3**
baz=123
GUMO Guam 138.25 175 IAMs_20 IAMs_20 08 49 43.3
comp=Z,66µm,22.0s
GYA Guiyang 138.42 117↓ PKP **PKPdf 07 51 47.8 -0.4**
GYA PP **PP 07 54 40.4 +2.2**
GYA SKKS 08 01 31.1
GYA Guiyang 138.42 117↓ PKP **PKPdf 07 51 47.7 -0.4**
GYA PP **PP 07 54 40.4 +2.2**
GYA SKKS 08 01 31.1
GYA SS **SS 08 12 51.2 +0.5**
GYA AMB AMB
comp=Z,9µm,14.9s
GYA LR LR
comp=Z,45µm,18.0s
GYA LR LR
comp=Z,50µm,18.6s
GYA LR LR
comp=Z,93µm,18.5s
TGTN Hyland Airport 138.64 314 PKPdf **PKPdf 07 51 47.9 +0.5**
baz=121
R33M Jennings River 138.68 310 PKPdf **PKPdf 07 51 47.9 +0.3**
baz=121
GZH Guangzhou 138.81 127 PKP **PKPdf 07 51 48.8 0.0**
MK31 Makanchi Array 139.27 74 *i* PKHKP PKPpre 07 51 40.1
MKAR Makanchi Array 139.27 74 PKhKP PKPpre 07 51 39.9
comp=Z,8.6nm,0.8s,baz=218,slow=2.5,SNR=17
GOMU GeErMu 139.41 95 PKP **PKPdf 07 51 43.5 -6.5**
GOMU pPKP PKiKP 07 51 49.0 -3.3
GOMU sPKP 07 51 54.6
GOMU PP **PP 07 54 48.1 +3.3**
GOMU SKKS 08 01 39.8
SIT Sitka 139.43 305 PKPdf **PKPdf 07 51 49.4 +0.6**
baz=121
KURBB Kurchatov Arra 139.50 67 PKhKP PKPpre 07 51 40.6
comp=Z,7.5nm,0.9s,baz=241,slow=3.1,SNR=11
KURBB PP **PP 07 54 48.6 +3.8**
comp=Z,15nm,0.9s,baz=242,slow=6.1,SNR=3.7
KURBB Kurchatov Arra 139.50 67 PKHKP PKPpre 07 51 40.3
JIS Juneau Island 139.62 307 IAMs_20 IAMs_20 09 05 27.9
comp=Z,73µm,18.0s
P33M Teslin, Yukon 139.90 310 IAMs_20 IAMs_20 09 01 16.9
comp=Z,46µm,19.0s
P33M Teslin, Yukon 139.90 310 PKPdf **PKPdf 07 51 49.8 +0.1**
baz=119
P32M Atlin 139.98 309 PKPdf **PKPdf 07 51 49.9 +0.1**
baz=120
SEM Semipalatinsk 140.28 68 *e*PKIKP **PKPdf 07 51 50.8 -0.1**
SEM MLR MLR
comp=Z,55µm,19.0s
SEM Semipalatinsk 140.28 68 *e*PKP **PKPdf 07 51 50.5 -0.4**
baz=68
SEM LR LR 08 54 40.2
comp=Z,59µm,19.7s,baz=68
MMPY Sheldon Lake, 140.40 314 PKPdf **PKPdf 07 51 50.7 +0.1**
baz=118
WMQ Urumqi 140.46 81 PKP **PKPdf 07 51 47.0 -4.3**
WMQ PP **PP 07 54 58.5 +7.6**
WMQ PKS **PKSdf 07 55 27.6 +0.5**
WMQ SKKS 08 01 42.6
WMQ AMB AMB
comp=Z,12µm,6.9s
WMQ LR LR
comp=Z,74µm,22.1s
WMQ LR LR
comp=Z,68µm,22.1s
WMQ LR LR
comp=Z,75µm,22.1s
CD2 Chengdu 140.46 110 PKP **PKPdf 07 51 46.5 -5.2**
CD2 PP **PP 07 54 53.0 +2.3**
CD2 SS SS 08 13 11.2 -3.5
CD2 AMB AMB
comp=Z,8µm,6.9s
CD2 LR LR
comp=Z,106µm,21.1s
CD2 LR LR
comp=Z,69µm,20.1s
CD2 LR LR
comp=Z,116µm,20.6s
N32M Quiet Lake 140.47 312 PKPdf **PKPdf 07 51 50.6 -0.1**
baz=118
SKAG Skagway 140.64 308 PKPdf **PKPdf 07 51 51.0 +0.1**
baz=119
C36M Paulatuk 140.80 326 IAMs_20 IAMs_20 08 55 39.5
comp=Z,77µm,19.0s
C36M Paulatuk 140.80 326 PKPdf **PKPdf 07 51 50.1 -0.8**
baz=115
WHY Whitehorse 141.01 310 PKPdf **PKPdf 07 51 51.4 -0.4**
baz=118
ZSN Zaisan 141.08 75 *e*PKP **PKPdf 07 51 50.8 -1.4**
baz=74
FARO Faro, Yukon 141.08 313 PKPdf **PKPdf 07 51 51.1 -0.7**
baz=117
PLBC Pleasant Camp 141.10 308 PKPdf **PKPdf 07 51 51.5 -0.3**
baz=118
WAKE Wake Island 141.31 209 IAMs_20 IAMs_20 09 01 00.7
comp=Z,45µm,20.0s
M31M Drury Creek, Y 141.51 313 IAMs_20 IAMs_20 09 05 22.3
comp=Z,52µm,19.0s
M31M Drury Creek, Y 141.51 313 PKPdf **PKPdf 07 51 51.6 -0.9**
baz=116
O30N Mendenhall 141.59 310 PKPdf **PKPdf 07 51 52.9 +0.1**
baz=117
H11N3 WAKE ISLAND Hyl 141.65 209 PKP **PKPdf 07 51 52.2 -1.6**
baz=232,slow=4.0,SNR=6.7
H11N1 WAKE ISLAND Hyl 141.65 209 PKP **PKPdf 07 51 52.3 -1.5**
baz=232,slow=4.0,SNR=5.9
H11N2 WAKE ISLAND Hyl 141.66 209 PKP **PKPdf 07 51 52.3 -1.5**
baz=232,slow=4.0,SNR=3.4
P30M Million Dollar 141.68 309 PKPdf **PKPdf 07 51 53.3 +0.4**
baz=117
N31M Braeburn, Yuko 141.78 311 IAMs_20 IAMs_20 09 08 25.6
comp=Z,46µm,19.0s
N31M Braeburn, Yuko 141.78 311 PKPdf **PKPdf 07 51 53.1 +0.1**
baz=116
P29M Windy Craggy 141.80 308 IAMs_20 IAMs_20 09 01 14.5
comp=Z,40µm,21.0s
P29M Windy Craggy 141.80 308 PKPdf **PKPdf 07 51 53.3 +0.2**
baz=117
TWG Pinlang 141.83 137 IAMs_20 IAMs_20 08 54 31.8
comp=Z,83µm,22.0s
TPUB Ta-pu 142.09 137 IAMs_20 IAMs_20 08 47 59.7
comp=Z,88µm,22.0s
A36M Sachs Harbour 142.22 330 IAMs_20 IAMs_20 08 52 56.6
comp=Z,73µm,20.0s
A36M Sachs Harbour 142.22 330 PKPdf **PKPdf 07 51 53.6 +0.2**
baz=111
HYT Haines Junctio 142.23 310 PKiKP **PKiKP 07 51 58.2 +1.2**
baz=116
N30M Aishikik Lake 142.33 311 PKiKP **PKiKP 07 51 58.0 +0.9**
baz=115
YULB Yu-li 142.44 137 IAMs_20 IAMs_20 08 58 21.8
comp=Z,77µm,19.0s
O29M Mount Kennedy 142.48 308 PKiKP **PKiKP 07 51 58.2 +0.7**
baz=116
PNL Peninsula 142.57 307 PKiKP **PKiKP 07 51 58.4 +0.9**
baz=116
SSLB Suanglung 142.66 137 IAMs_20 IAMs_20 08 46 14.7
comp=Z,91µm,22.0s
YUK6 Outpost Mounta 142.66 309 PKiKP **PKiKP 07 51 59.0 +1.0**
baz=115
M30M Minto, Yukon 142.68 312 IAMs_20 IAMs_20 09 03 40.3
comp=Z,70µm,19.0s
MAYO Mayo, Yukon 142.72 314 PKiKP **PKiKP 07 51 58.9 +1.2**
baz=114
BCPM Bancas Point 142.80 308 IAMs_20 IAMs_20 09 01 03.0
comp=Z,52µm,19.0s
CNSH ChangSha 142.96 123↑ PKP **PKPdf 07 51 49.5 -6.6**
CNSH PP PP 07 54 54.1 -12
YUK4 Talbot Arm 142.96 310 PKiKP **PKiKP 07 51 59.7 +1.1**
baz=115
PINM Pinnacle 143.14 308 PKiKP **PKiKP 07 52 00.6 +1.8**
baz=115
MIDW Midway 143.20 237 IAMs_20 IAMs_20 08 58 05.2
comp=Z,55µm,18.0s
M29M Domme Creek 143.33 312 PKiKP **PKiKP 07 52 00.6 +1.5**
baz=113
O28M Mount Upton 143.40 309 PKiKP **PKiKP 07 52 00.9 +1.3**
baz=114
INK Inuvik 143.57 322 PKhKP PKPpre 07 51 49.6
comp=Z,347nm,1.0s,baz=99,slow=3.9,SNR=70
INK Inuvik 143.57 322 PKiKP **PKiKP 07 52 00.9 +1.7**
baz=110
TABL Table Mountain 143.69 308 IAMs_20 IAMs_20 09 07 23.5
DGZ Jazzator, Alta 143.75 73*ce* PKiKP PKPab 07 51 53.9 -0.1
LOGN Logan Glacier 143.79 308 IAMs_20 IAMs_20 09 07 26.0
comp=Z,54µm,18.0s
YUK3 Moose Creek 143.93 310 PKiKP **PKiKP 07 52 02.1 +1.6**
baz=113
YAH Yahtse 143.93 307 IAMs_20 IAMs_20 09 10 30.9
comp=Z,62µm,19.0s
TATO Taipei 143.94 136 IAMs_20 IAMs_20 08 48 22.5
comp=Z,68µm,21.0s
MESA MESA 143.95 307 IAMs_20 IAMs_20 09 00 59.2
comp=Z,43µm,19.0s
MESA MESA 143.95 307 PKiKP **PKiKP 07 52 02.7 +2.1**
baz=114
CTGM Chitina Glacie 143.99 308 IAMs_20 IAMs_20 09 01 36.4
comp=Z,40µm,20.0s
CTG Chitna Glacier 144.00 308 PKiKP **PKiKP 07 52 02.8 +2.1**
baz=114
J29M Klondike Camp 144.00 315 IAMs_20 IAMs_20 09 04 07.9
comp=Z,57µm,19.0s
J29M Klondike Camp 144.00 315 PKiKP **PKiKP 07 52 02.4 +2.0**
baz=111
YOJ Yonaguni jima 144.06 139 P **PKPab 07 51 53.9 -1.7**
EPYK Eagle Plains 144.08 318 PKiKP **PKiKP 07 52 02.6 +2.1**
baz=110
ISLE Juniper Island 144.30 308 IAMs_20 IAMs_20 09 06 11.6
comp=Z,46µm,20.0s
DAWY Dawson 144.34 314 PKiKP **PKiKP 07 52 03.5 +2.4**
baz=111
BVCY Beaver Creek 144.35 311 PKiKP **PKiKP 07 52 02.7 +1.5**
baz=112
I29M Ogilvie Camp, 144.35 316 IAMs_20 IAMs_20 09 10 12.0
comp=Z,47µm,19.0s
I29M Ogilvie Camp, 144.35 316 PKiKP **PKiKP 07 52 03.2 +2.1**
baz=110
SNH Sunshine Point 144.36 307 IAMs_20 IAMs_20 09 03 08.9
comp=Z,57µm,18.0s
LZH Lanzhou 144.41 104↑ PKP **PKPab 07 51 56.3 -0.6**
LZH pPKP sPKPdf 07 52 05.3 +0.6
LZH sPKP 07 52 09.4
LZH PP **PP 07 55 18.0 +3.1**
LZH PKS **PKSdf 07 55 37.5 +3.1**
LZH SKS **SKSdf 07 59 10.8 +3.4**
LZH Lanzhou 144.41 104↑ PKP **PKPab 07 51 56.2 -0.6**
LZH pPKP sPKPdf 07 52 05.3 +0.6
LZH sPKP 07 52 09.4
LZH PP **PP 07 55 18.0 +3.1**
LZH PKS **PKSdf 07 55 37.5 +3.1**
LZH SKS **SKSdf 07 59 10.8 +3.4**
LZH SKKS **SKKSac 08 02 10.2 +3.8**
LZH AMB AMB
comp=Z,28µm,14.1s
LZH LR LR
comp=Z,81µm,21.2s
LZH LR LR
comp=Z,69µm,21.8s
LZH LR LR
comp=Z,111µm,24.4s
WAX Waxell Ridge 144.47 307 IAMs_20 IAMs_20 09 08 06.1
comp=Z,63µm,20.0s
GTA Gaotai 144.49 96↑ PKP **PKPab 07 51 56.1 -0.9**
GTA PP **PP 07 55 16.4 +1.1**
ZALV Zalesovo Beam 144.53 65 PKP **PKPab 07 51 54.6 -1.9**
comp=Z,226nm,0.8s,baz=241,slow=3.5,SNR=162
BGLC Bering Glacier 144.54 306 PKiKP **PKiKP 07 52 03.1 +1.6**
baz=113
TGL Tana Glacier 144.58 308 IAMs_20 IAMs_20 09 03 46.0
comp=Z,51µm,19.0s
M27K Edge Creek, AK 144.77 311 IAMs_20 IAMs_20 09 06 36.7
comp=Z,76µm,18.0s
M27K Edge Creek, AK 144.77 311 PKiKP **PKiKP 07 52 03.4 +1.3**
baz=111
BERG Berg Lake 144.84 307 IAMs_20 IAMs_20 09 03 07.6
comp=Z,74µm,18.0s
MCARA McCarthy VSAT 144.91 309 PKiKP **PKiKP 07 52 04.2 +1.9**
baz=112
KAIM Kayak Island 144.98 306 **PKPdf 07 51 58.8 +0.1**
KAIM IAMs_20 IAMs_20 09 03 09.8
comp=Z,69µm,18.0s
KAIM Kayak Island 144.98 306 PKiKP **PKiKP 07 52 04.6 +2.1**
baz=113
L27K Beaver Creek, 145.00 312 IAMs_20 IAMs_20 09 02 16.7
comp=Z,52µm,18.0s
L27K Beaver Creek, 145.00 312 PKiKP **PKiKP 07 52 04.3 +1.8**
baz=110
HMT Hamilton 145.07 306 **PKPbc 07 51 58.1 -0.3**
HMT IAMs_20 IAMs_20 09 06 44.0
comp=Z,60µm,20.0s
M26K Nabesna, AK 145.27 310 **PKPbc 07 51 58.4 -0.6**
M26K IAMs_20 IAMs_20 09 02 31.0
comp=Z,58µm,18.0s
M26K Nabesna, AK 145.27 310 PKiKP **PKiKP 07 52 05.1 +2.0**
baz=110
RAGM Ragged Mountai 145.28 306 IAMs_20 IAMs_20 09 06 57.6
comp=Z,83µm,20.0s
GLB Gilahina Butte 145.28 308 IAMs_20 IAMs_20 09 05 57.5
comp=Z,51µm,20.0s
EGAK Eagle 145.30 315 **PKPbc 07 51 58.7 -0.2**
EGAK IAMs_20 IAMs_20 08 57 59.4
comp=Z,57µm,20.0s
EGAK Eagle 145.30 315 PKiKP **PKiKP 07 52 04.6 +1.6**
baz=108
K27K Chicken 145.43 313 IAMs_20 IAMs_20 09 02 54.0
comp=Z,59µm,19.0s
K27K Chicken 145.43 313 PKiKP **PKiKP 07 52 05.7 +2.4**
baz=109
BMRM Bremner River 145.47 307 **PKPab 07 51 59.8 -0.1**
BMRM Bremner River 145.47 307 PKiKP **PKiKP 07 52 05.9 +2.4**
baz=112
WHN Wuhan 145.60 122↑ PKPbc **PKPdf 07 51 58.8 -1.9**
WHN AMB AMB
comp=Z,45µm,13.2s
WHN LR LR
comp=Z,98µm,17.1s
WHN LR LR
comp=Z,141µm,17.5s
WHN LR LR
comp=Z,314µm,22.0s
XAN Xi'an 145.63 112↑ PKPbc **PKPdf 07 51 58.8 -1.9**
XAN sPKP 07 52 07.5
XAN PP PP 07 55 11.8 -10
XAN PKS **PKSdf 07 55 36.9 +0.7**
XAN SKS SKSdf 07 59 27.3 +18
L26K Log Cabin Wild 145.64 311 **PKPdf 07 51 59.6 -0.1**
L26K IAMs_20 IAMs_20 09 05 24.6
comp=Z,53µm,20.0s
L26K Log Cabin Wild 145.64 311 PKiKP **PKiKP 07 52 05.7 +1.9**
baz=109
Q23K Middleton Isla 145.69 304 IAMs_20 IAMs_20 09 02 36.5
comp=Z,54µm,18.0s
Q23K Middleton Isla 145.69 304 PKiKP **PKiKP 07 52 06.4 +2.5**
baz=112
N25K Chitina, Valde 145.69 308 PKiKP **PKiKP 07 52 06.4 +2.4**
baz=111
I27K Kandik River 145.74 316 PKiKP **PKiKP 07 52 06.5 +2.5**
baz=107
EYAK Cordova Ski Ar 145.84 306 PKiKP **PKiKP 07 52 06.9 +2.8**
baz=111
H27K Steamboat Moun 145.89 317 PKiKP **PKiKP 07 52 06.7 +2.4**
baz=106
G27K Doyon Strip 146.09 318 PKiKP **PKiKP 07 52 07.0 +2.4**
baz=105
HIN Hinchinbrook I 146.13 306 IAMs_20 IAMs_20 09 07 00.0
comp=Z,51µm,19.0s
J26L Joseph Creek 146.20 314 IAMs_20 IAMs_20 09 00 34.2
comp=Z,60µm,20.0s
J26L Joseph Creek 146.20 314 PKiKP **PKiKP 07 52 07.3 +2.3**
baz=107
HARP HAARP 146.22 310 PKiKP **PKiKP 07 52 07.6 +2.7**
baz=109
SCRK Sand Creek 146.22 313 IAMs_20 IAMs_20 09 01 01.8
comp=Z,68µm,19.0s
SCRK Sand Creek 146.22 313 PKiKP **PKiKP 07 52 07.5 +2.4**
baz=108
FID Port Fidalgo 146.24 306 IAMs_20 IAMs_20 09 04 30.3
comp=Z,65µm,19.0s
KLU Klutina 146.25 308 IAMs_20 IAMs_20 08 58 28.1
comp=Z,58µm,20.0s
KLU Klutina 146.25 308 PKiKP **PKiKP 07 52 07.5 +2.3**
baz=110
I26K Coal Creek Min 146.27 315 IAMs_20 IAMs_20 09 05 32.9
comp=Z,50µm,19.0s
I26K Coal Creek Min 146.27 315 PKiKP **PKiKP 07 52 07.1 +2.2**
baz=106
P23K Montague Islan 146.40 305 PKiKP **PKiKP 07 52 07.7 +2.3**
baz=111
E27K Coleen River 146.42 320 PKiKP **PKiKP 07 52 07.5 +2.2**
baz=103
RIDG Independent Ri 146.51 312 IAMs_20 IAMs_20 09 04 35.5
comp=Z,75µm,19.0s
RIDG Independent Ri 146.51 312 PKiKP **PKiKP 07 52 07.9 +2.4**
baz=107
PAX Paxson 146.54 311 PKiKP **PKiKP 07 52 07.5 +1.8**
baz=108
M24K Tolsona, Glenn 146.57 309 IAMs_20 IAMs_20 09 05 05.4
comp=Z,42µm,19.0s
M24K Tolsona, Glenn 146.57 309 PKiKP **PKiKP 07 52 07.8 +2.0**
baz=109
GLI Glacier Island 146.57 306 IAMs_20 IAMs_20 09 03 15.7
comp=Z,54µm,19.0s
GLI Glacier Island 146.57 306 PKiKP **PKiKP 07 52 08.0 +2.3**
baz=110
K24K Donnelly Dome 146.92 312 PKiKP **PKiKP 07 52 08.6 +2.2**
baz=107
G26K Porcupine Rive 146.94 318 PKiKP **PKiKP 07 52 08.4 +2.1**
baz=104
J25K Salcha River, 146.98 313 **PKPdf 07 51 59.8 -2.2**
J25K PKPbc **PKPbc 07 52 04.0 -0.1**
J25K Salcha River, 146.98 313 PKiKP **PKiKP 07 52 08.2 +1.6**
baz=106

SCM	**Sheep Creek Mo**	**147.00 308**	PKiKP	**PKiKP**	**07 52 08.5**	**+1.8**			
	baz=108								
PWL	**Port Wells**	**147.13 306**	IAMs_20	IAMs_20	09 04 16.6				
	comp=Z,61µm,19.0s								
PWL	**Port Wells**	**147.13 306**	PKiKP	**PKiKP**	**07 52 08.8**	**+1.8**			
	baz=109								
M23K	**Glacier View**	**147.16 308**	PKiKP	**PKiKP**	**07 52 08.8**	**+1.8**			
	baz=108								
F26K	**Sheenjek River**	**147.25 319**	PKiKP	**PKiKP**	**07 52 09.4**	**+2.4**			
	baz=102								
PRP	**Porcupine Dome**	**147.28 315**	IAMs_20	IAMs_20	09 06 14.7				
	comp=Z,78µm,20.0s								
PRP	**Porcupine Dome**	**147.28 315**	PKiKP	**PKiKP**	**07 52 09.1**	**+1.8**			
	baz=104								
KNK	**Knik Glacier**	**147.37 307**	PKiKP	**PKiKP**	**07 52 09.1**	**+1.7**			
	baz=108								
DHY	**Denali Highway**	**147.40 310**	IAMs_20	IAMs_20	09 03 53.2				
	comp=Z,53µm,19.0s								
DHY	**Denali Highway**	**147.40 310**	PKiKP	**PKiKP**	**07 52 09.6**	**+2.0**			
	baz=107								
SEW	**Seward**	**147.40 304**	PKiKP	**PKiKP**	**07 52 09.3**	**+1.9**			
	baz=110								
WAT6	**Susitna Watana**	**147.41 309**	PKiKP	**PKiKP**	**07 52 09.0**	**+1.4**			
	baz=107								
FYU	**Fort Yukon**	**147.41 317**	IAMs_20	IAMs_20	09 04 29.9				
	comp=Z,55µm,18.0s								
SML	**Sawmill**	**147.44 308**	IAMs_20	IAMs_20	09 10 19.6				
	comp=Z,52µm,19.0s								
SML	**Sawmill**	**147.44 308**	PKiKP	**PKiKP**	**07 52 09.4**	**+1.8**			
	baz=108								
C27K	**Jago River**	**147.46 323**	PKiKP	**PKiKP**	**07 52 09.2**	**+1.9**			
	baz=99								
H25K	**Birch Creek**	**147.58 316**	PKiKP	**PKPab**	**07 52 09.7**	**+1.9**			
	baz=103								
HDA	**Harding Lake**	**147.58 313**	IAMs_20	IAMs_20	09 08 55.9				
	comp=Z,59µm,19.0s								
HDA	**Harding Lake**	**147.58 313**	PKiKP	**PKPab**	**07 52 09.5**	**+1.6**			
	baz=105								
ILAR	**Eielson Array**	**147.65 313**	PKP	**PKPdf**	**07 51 59.4**	**-3.7**			
	comp=Z,45nm,1.0s,baz=78,slow=0.5,SNR=56								
ILAR			PKPbc	**PKPbc**	**07 52 05.2**	**-0.7**			
	comp=Z,2µm,1.1s,baz=122,slow=1.7,SNR=137								
O22K	**Cooper Landing**	**147.65 305**	IAMs_20	IAMs_20	09 03 41.5				
	comp=Z,74µm,20.0s								
O22K	**Cooper Landing**	**147.65 305**	PKiKP	**PKPab**	**07 52 10.1**	**+1.8**			
	baz=109								
GHO	**Glory Hole Cre**	**147.70 308**	IAMs_20	IAMs_20	09 10 33.4				
	comp=Z,58µm,19.0s								
PMR	**Palmer**	**147.74 307**	PKiKP	**PKPab**	**07 52 10.1**	**+1.6**			
	baz=108								
F25K	**Christian Rive**	**147.79 319**	PKiKP	**PKPab**	**07 52 10.7**	**+1.9**			
	baz=101								
WAT1	**Susitna Watana**	**147.84 310**	PKiKP	**PKPab**	**07 52 10.4**	**+1.3**			
	baz=106								
RC01	**Rabbit Creek A**	**147.86 306**	IAMs_20	IAMs_20	09 04 27.8				
	comp=Z,58µm,21.0s								
RC01	**Rabbit Creek A**	**147.86 306**	PKiKP	**PKPab**	**07 52 10.9**	**+1.8**			
	baz=108								
E25K	**Arctic Village**	**147.86 320**	PKiKP	**PKPab**	**07 52 10.6**	**+1.7**			
	baz=100								
LYN	**LuoYang**	**147.88 116**⇑	*i*PKPbc	**PKPdf**	**07 52 02.0**	**-2.4**			
LYN			SKKS		08 02 21.4				
LYN			AMB	AMB					
	comp=Z,20µm,12.0s								
LYN			LR	LR					
	comp=Z,128µm,22.0s								
LYN			LR	LR					
	comp=Z,69µm,22.2s								
LYN			LR	LR					
	comp=Z,155µm,24.3s								
BRSE	**Bradley Lake S**	**147.89 303**	PKiKP	**PKPab**	**07 52 10.7**	**+1.4**			
	baz=110								
C26K	**Camden Bay**	**147.92 323**	PKiKP	**PKPab**	**07 52 11.0**	**+2.0**			
	baz=98								
POKR	**Poker Plat Res**	**147.96 314**	PKiKP	**PKPab**	**07 52 10.1**	**+0.7**			
	baz=104								
BRLK	**Bradley Lake**	**147.97 303**	IAMs_20	IAMs_20	09 00 21.0				
	comp=Z,72µm,21.0s								
CCB	**Clear Creek Bu**	**148.00 313**	IAMs_20	IAMs_20	09 04 51.7				
	comp=Z,61µm,20.0s								
CNPM	**China Poot**	**148.05 303**	IAMs_20	IAMs_20	09 05 36.2				
	comp=Z,71µm,19.0s								
COLA	**College**	**148.07 313**	IAMs_20	IAMs_20	09 10 20.9				
	comp=Z,61µm,20.0s								
COLA	**College**	**148.07 313**	PKiKP	**PKPab**	**07 52 10.6**	**+0.8**			
	baz=104								
WRH	**Wood River Hil**	**148.08 313**	IAMs_20	IAMs_20	09 08 05.0				
	comp=Z,54µm,18.0s								
TCOL	**CIGO, UAF Yank**	**148.08 313**	IAMs_20	IAMs_20	09 10 20.9				
	comp=Z,65µm,20.0s								
TCOL	**CIGO, UAF Yank**	**148.08 313**	PKiKP	**PKPab**	**07 52 10.6**	**+0.7**			
	baz=104								
KDAK	**Kodiak Island**	**148.09 299**	IAMs_20	IAMs_20	09 00 56.6				
	comp=Z,56µm,21.0s								
KDAK	**Kodiak Island**	**148.09 299**	PKiKP	**PKPab**	**07 52 11.3**	**+1.2**			
	baz=111								
FIS	**Fire Island**	**148.10 306**	IAMs_20	IAMs_20	09 04 10.0				
	comp=Z,47µm,21.0s								
RND	**Reindeer**	**148.13 310**	IAMs_20	IAMs_20	09 06 33.7				
	comp=Z,69µm,19.0s								
M22K	**Willow**	**148.23 307**	IAMs_20	IAMs_20	09 11 40.6				
	comp=Z,48µm,20.0s								
M22K	**Willow**	**148.23 307**	PKiKP	**PKPab**	**07 52 11.6**	**+1.0**			
	baz=107								
OHAK	**Old Harbor**	**148.24 298**	PKiKP	**PKPab**	**07 52 11.9**	**+1.2**			
	baz=112								
MCK	**McKinley**	**148.25 311**	IAMs_20	IAMs_20	08 56 48.7				
	comp=Z,57µm,21.0s								
MCK	**McKinley**	**148.25 311**	PKiKP	**PKPab**	**07 52 11.5**	**+0.9**			
	baz=104								
HOM	**Homer**	**148.29 303**	IAMs_20	IAMs_20	09 05 50.6				
	comp=Z,63µm,18.0s								
HOM	**Homer**	**148.29 303**	PKiKP	**PKPab**	**07 52 12.0**	**+1.2**			
	baz=109								
Q20K	**Shuyak Island**	**148.30 301**	PKiKP	**PKPab**	**07 52 12.1**	**+1.2**			
	baz=110								
H24K	**Noodor Dome**	**148.30 315**	PKiKP	**PKPab**	**07 52 11.6**	**+0.8**			
	baz=102								
G24K	**Hadweenzic Riv**	**148.32 317**	PKiKP	**PKPab**	**07 52 12.0**	**+1.2**			
	baz=101								
D25K	**Kavik River**	**148.34 322**	PKPbc	**PKPbc**	**07 52 07.4**	**-0.2**			
	baz=98								
CAPN	**Captain Cook N**	**148.41 305**	PKPdf	**PKPdf**	**07 52 03.2**	**-1.2**			
CAPN			PKPbc	**pPKPdf**	**07 52 09.1**	**+0.3**			
CAPN			IAMs_20	IAMs_20	09 08 37.3				
	comp=Z,52µm,19.0s								
CAPN	**Captain Cook N**	**148.41 305**	PKPbc	**PKiKP**	**07 52 08.7**	**-0.7**			
	baz=108								
SII	**Sitkinak Islan**	**148.44 296**	IAMs_20	IAMs_20	09 12 20.0				
	comp=Z,61µm,20.0s								
SII	**Sitkinak Islan**	**148.44 296**	PKPbc	**PKPbc**	**07 52 08.4**	**+0.2**			
	baz=112								
CUT	**Chulitna**	**148.49 308**	IAMs_20	IAMs_20	09 06 39.1				
	comp=Z,49µm,20.0s								
CUT	**Chulitna**	**148.49 308**	PKPbc	**PKPbc**	**07 52 08.3**	**+0.2**			
	baz=106								
NEA2	**Nenana**	**148.52 313**	IAMs_20	IAMs_20	09 04 13.4				
	comp=Z,52µm,20.0s								
NEA2	**Nenana**	**148.52 313**	PKPbc	**PKPbc**	**07 52 08.0**	**-0.2**			
	baz=103								
BWN	**Browne**	**148.59 312**	IAMs_20	IAMs_20	09 04 22.6				
	comp=Z,60µm,20.0s								
F24K	**Squaw Lake**	**148.62 318**	PKPbc	**PKPbc**	**07 52 08.8**	**+0.4**			
	baz=99								
I23K	**Minto, Yukon-K**	**148.76 314**	PKPbc	**PKPbc**	**07 52 08.4**	**-0.3**			
	baz=102								
TRF	**Thorofare Moun**	**148.77 310**	IAMs_20	IAMs_20	09 07 23.4				
	comp=Z,68µm,20.0s								
TRF	**Thorofare Moun**	**148.77 310**	PKPbc	**PKPbc**	**07 52 09.0**	**0.0**			
	baz=104								
CHIR	**Chirikof Islan**	**148.90 295**	IAMs_20	IAMs_20	09 10 30.2				
	comp=Z,73µm,19.0s								
CHIR	**Chirikof Islan**	**148.90 295**	PKPbc	**PKPbc**	**07 52 09.4**	**+0.1**			
	baz=113								
O20K	**Slope Mountain**	**148.90 303**	PKPbc	**PKPbc**	**07 52 09.1**	**-0.2**			
	baz=108								
E24K	**Your Creek**	**148.93 319**	PKPbc	**PKPbc**	**07 52 09.4**	**+0.2**			
	baz=98								
SPU	**Mount Spurr**	**148.96 306**	PKPbc	**PKPbc**	**07 52 09.7**	**+0.3**			
H23K	**Yukon River**	**148.97 315**	IAMs_20	IAMs_20	09 01 44.4				
	comp=Z,64µm,19.0s								
H23K	**Yukon River**	**148.97 315**	PKPbc	**PKPbc**	**07 52 09.1**	**-0.2**			
	baz=101								
NJ2	**Nanjing**	**148.98 127**⇑	*i*PKPbc	**PKPdf**	**07 52 03.1**	**-3.1**			
NJ2			pPKP	**PKPab**	**07 52 13.8**	**-0.6**			
NJ2			sPKP		07 52 17.9				
NJ2			PP	**PP**	**07 55 42.5**	**+1.2**			
NJ2			SKS	**SKSdf**	**07 59 03.3**	**-10**			
Q19K	**Cape Douglas,**	**149.02 301**	IAMs_20	IAMs_20	09 10 18.9				
	comp=Z,58µm,19.0s								
Q19K	**Cape Douglas,**	**149.02 301**	PKPbc	**PKPbc**	**07 52 09.4**	**-0.2**			
	baz=109								
SPCR	**Spurr Chakacha**	**149.03 306**	PKPbc	**PKPbc**	**07 52 09.1**	**-0.6**			
	baz=106								
P19K	**Oil Pt**	**149.05 302**	IAMs_20	IAMs_20	09 00 50.4				
	comp=Z,44µm,20.0s								
P19K	**Oil Pt**	**149.05 302**	PKPbc	**PKPbc**	**07 52 09.2**	**-0.4**			
	baz=108								
KTH	**Kantishna Hill**	**149.07 310**	IAMs_20	IAMs_20	09 06 38.4				
	comp=Z,74µm,20.0s								
D24K	**Happy Valley**	**149.19 321**	PKPbc	**PKPbc**	**07 52 09.5**	**-0.2**			
	baz=96								
C24K	**Franklin Bluff**	**149.20 323**	PKPbc	**PKPbc**	**07 52 09.8**	**+0.1**			
	baz=95								
SSE	**Sheshan**	**149.20 131**	PKPbc	**PKPdf**	**07 52 04.5**	**-2.1**			
SSE			PP	**PP**	**07 55 47.4**	**+4.9**			
SSE			AMB	AMB					
	comp=Z,8µm,14.1s								
SSE			LR	LR					
	comp=Z,34µm,19.9s								
SSE			LR	LR					
	comp=Z,34µm,20.3s								
SSE			LR	LR					
	comp=Z,61µm,19.6s								
BPAW	**Bear Paw Mtn.**	**149.22 311**	IAMs_20	IAMs_20	09 06 11.3				
	comp=Z,51µm,20.0s								
BPAW	**Bear Paw Mtn.**	**149.22 311**	PKPbc	**PKPbc**	**07 52 09.7**	**-0.2**			
	baz=102								
MLY	**Manley**	**149.31 313**	PKPbc	**PKPbc**	**07 52 09.6**	**-0.6**			
	baz=101								
G23K	**Bananza Creek**	**149.32 317**	PKPbc	**PKPbc**	**07 52 10.4**	**+0.3**			
	baz=99								
TOLK	**Toolik Lake Re**	**149.40 320**	IAMs_20	IAMs_20	09 14 03.3				
	comp=Z,66µm,22.0s								
TOLK	**Toolik Lake Re**	**149.40 320**	PKPbc	**PKPbc**	**07 52 10.1**	**-0.2**			
	baz=96								
PPLA	**Purkeypile**	**149.47 309**	PKPbc	**PKPbc**	**07 52 10.8**	**+0.1**			
	baz=104								
CAST	**Castle Rocks**	**149.54 310**	IAMs_20	IAMs_20	09 11 26.0				
	comp=Z,55µm,20.0s								
CAST	**Castle Rocks**	**149.54 310**	PKPbc	**PKPbc**	**07 52 10.7**	**-0.1**			
	baz=103								
M20K	**Styx River**	**149.64 307**	IAMs_20	IAMs_20	09 10 29.9				
	comp=Z,53µm,19.0s								
M20K	**Styx River**	**149.64 307**	PKPbc	**PKPbc**	**07 52 11.1**	**0.0**			
	baz=105								
H22K	**Ishtalitna Cre**	**149.73 315**	PKPbc	**PKPbc**	**07 52 11.4**	**+0.3**			
	baz=99								
O19K	**Port Alsworth**	**149.74 303**	IAMs_20	IAMs_20	08 54 30.6				
	comp=Z,42µm,19.0s								
O19K	**Port Alsworth**	**149.74 303**	PKPbc	**PKPbc**	**07 52 10.8**	**-0.4**			
	baz=107								
CHUM	**Lake Minchumin**	**149.75 311**	PKPbc	**PKPbc**	**07 52 11.3**	**+0.1**			
	baz=102								
D23K	**Nanushuk River**	**149.84 321**	PKPbc	**PKPbc**	**07 52 11.6**	**+0.3**			
	baz=94								
I21K	**Tanana**	**149.85 313**	IAMs_20	IAMs_20	09 03 47.9				
	comp=Z,72µm,20.0s								
I21K	**Tanana**	**149.85 313**	PKPbc	**PKPbc**	**07 52 11.5**	**+0.1**			
	baz=100								
C23K	**Itkillik River**	**149.87 323**	PKPbc	**PKPbc**	**07 52 11.6**	**+0.3**			
	baz=93								
G22K	**Bettles**	**149.93 317**	PKPbc	**PKiKP**	**07 52 12.1**	**-0.4**			
	baz=97								
P18K	**Big Mountain,**	**149.94 301**	IAMs_20	IAMs_20	09 06 56.3				
	comp=Z,48µm,19.0s								
P18K	**Big Mountain,**	**149.94 301**	PKPbc	**PKPbc**	**07 52 11.4**	**-0.5**			
	baz=107								
R17K	**Ugashik Creek**	**149.95 298**	PKPbc	**PKPbc**	**07 52 11.8**	**-0.1**			
	baz=110								
N19K	**Bonanza Creek**	**149.99 304**	IAMs_20	IAMs_20	09 09 21.3				
	comp=Z,57µm,21.0s								
N19K	**Bonanza Creek**	**149.99 304**	PKPbc	**PKPbc**	**07 52 11.6**	**-0.4**			
	baz=106								
O18K	**Koktuh Hills**	**150.07 302**	IAMs_20	IAMs_20	09 09 01.5				
	comp=Z,46µm,20.0s								
O18K	**Koktuh Hills**	**150.07 302**	PKPbc	**PKPbc**	**07 52 11.9**	**-0.2**			
	baz=107								
L20K	**Farewell, AK**	**150.13 308**	PKPbc	**PKPbc**	**07 52 12.1**	**-0.2**			
	baz=103								
NRIK	**Noril'sk**	**150.16 38**	PKP	**PKPdf**	**07 52 03.8**	**-3.2**			
	comp=Z,5.8nm,0.6s,baz=226,slow=1.7,SNR=9.4								
NRIK			PKPbc	**pPKPdf**	**07 52 11.5**	**+0.1**			
	comp=Z,83nm,0.9s,baz=243,slow=1.1,SNR=21								
NRIK	**Noril'sk**	**150.16 38**⇓	*e*PKiKP	**PKPdf**	**07 52 06.2**	**-0.8**			
E22K	**Anaktuvuk Pass**	**150.18 319**	PKPbc	**PKPbc**	**07 52 12.3**	**+0.1**			
	baz=95								
M19K	**Big River Lodg**	**150.23 306**	IAMs_20	IAMs_20	09 15 17.4				
	comp=Z,62µm,18.0s								
M19K	**Big River Lodg**	**150.23 306**	PKPbc	**PKPbc**	**07 52 12.4**	**-0.1**			
	baz=104								
F22K	**John River**	**150.26 318**	PKPbc	**PKiKP**	**07 52 12.8**	**-0.4**			
	baz=96								
TIY	**Taiyuan**	**150.27 112**	*e*PKPbc	**PKPdf**	**07 52 06.5**	**-1.7**			
TIY			SS	SS	08 15 09.2	+2.6			
TIY			LR	LR					
	comp=Z,51µm,21.6s								
TIY			LR	LR					
	comp=Z,18µm,20.2s								
TIY			LR	LR					
	comp=Z,84µm,22.3s								
H21K	**Melozitna Rive**	**150.27 314**	IAMs_20	IAMs_20	09 07 19.6				
	comp=Z,54µm,19.0s								
H21K	**Melozitna Rive**	**150.27 314**	PKPbc	**PKiKP**	**07 52 12.9**	**-0.3**			
	baz=98								
K20K	**Telida**	**150.40 309**	PKPbc	**PKPbc**	**07 52 12.9**	**+0.1**			
	baz=101								
Q16K	**King Salmon**	**150.43 299**	PKPbc	**PKPbc**	**07 52 12.9**	**-0.1**			
	baz=108								
P17K	**Kvichak River**	**150.47 301**	PKPbc	**PKPbc**	**07 52 13.0**	**0.0**			
	baz=107								
L19K	**White Mountain**	**150.50 307**	IAMs_20	IAMs_20	09 13 56.7				
	comp=Z,76µm,21.0s								
L19K	**White Mountain**	**150.50 307**	PKPbc	**PKPbc**	**07 52 13.2**	**0.0**			
	baz=103								
CHGN	**Chignik**	**150.53 294**	PKPbc	**PKPbc**	**07 52 12.8**	**-0.5**			
	baz=111								
R16K	**Pilot Point**	**150.53 297**	PKPbc	**PKPbc**	**07 52 13.5**	**+0.3**			
	baz=109								
CNBA	**Chernabura Isl**	**150.59 291**	IAMs_20	IAMs_20	09 09 54.1				
	comp=Z,60µm,19.0s								
J20K	**Nowinta River**	**150.59 311**	IAMs_20	IAMs_20	09 04 36.6				
	comp=Z,78µm,20.0s								
J20K	**Nowinta River**	**150.59 311**	PKPbc	**PKPbc**	**07 52 13.4**	**+0.2**			
	baz=100								
CHNA	**Chernabura Isl**	**150.60 291**	PKPbc	**PKPbc**	**07 52 13.5**	**0.0**			
	baz=113								
N18K	**Kilae Creek**	**150.62 304**	IAMs_20	IAMs_20	09 12 48.8				
	comp=Z,46µm,21.0s								
N18K	**Kilae Creek**	**150.62 304**	PKPbc	**PKPbc**	**07 52 13.4**	**0.0**			
	baz=105								
G21K	**Allakaket**	**150.67 316**	PKPbc	**PKiKP**	**07 52 13.7**	**-0.3**			
	baz=96								
F21K	**Alatna River**	**150.73 317**	PKPbc	**PKiKP**	**07 52 14.0**	**-0.2**			
	baz=95								
O17K	**Koliganek Bris**	**150.96 301**	PKPbc	**PKPbc**	**07 52 14.4**	**+0.2**			
	baz=106								
BTO	**Baotou**	**151.03 105**	*e*PKPbc	**PKPdf**	**07 52 07.8**	**-1.6**			
BTO	**Baotou**	**151.03 105**	*e*PKPbc	**PKPdf**	**07 52 07.7**	**-1.6**			
BTO			LR	LR					
	comp=Z,176µm,20.2s								
BTO			LR	LR					
	comp=Z,223µm,19.8s								
S14K	**Fog Glacier**	**151.12 294**	PKPbc	**PKiKP**	**07 52 15.2**	**-0.2**			
	baz=110								
TTA	**Tatalina**	**151.19 308**	PKPbc	**PKiKP**	**07 52 15.3**	**+0.1**			
	baz=101								
P16K	**Nushagak River**	**151.19 300**	PKPac		07 52 14.4				
	baz=106								
HNS	**HongShan**	**151.23 115**	⇑PKPbc	**PKPdf**	**07 52 08.3**	**-1.3**			
HNS			PP	**PP**	**07 56 01.5**	**+7.1**			
HNS	**HongShan**	**151.23 115**	⇑PKPbc	**PKPdf**	**07 52 08.2**	**-1.3**			
HNS			PP	**PP**	**07 56 01.5**	**+7.1**			
HNS			SKKS		08 02 49.9				
HNS			SS	**SS**	**08 15 19.2**	**+2.2**			
HNS			LR	LR					
	comp=Z,91µm,23.9s								
HNS			LR	LR					
	comp=Z,34µm,24.5s								
HNS			LR	LR					
	comp=Z,128µm,23.7s								
SDPT	**Sand Point**	**151.26 292**	PKPac		07 52 14.9				
	baz=112								
O16K	**Kokwok River B**	**151.40 301**	PKPac		07 52 15.0				
	baz=105								
CBIJ	**Chichi jima**	**151.44 169**	P	**PKPbc**	**07 52 14.2**	**-2.2**			
JCJ	**Chichijima**	**151.44 169**	PKPbc	**PKPbc**	**07 52 14.2**	**-2.2**			
	comp=Z,416nm,0.7s,baz=292,slow=2.9,SNR=18								
TIA	**Tai'an**	**151.54 119**	PKPbc	**PKPdf**	**07 52 08.5**	**-1.7**			
GCSA	**Galena City Sc**	**151.85 312**	PKPac		07 52 16.9				
	baz=97								
A21K	**Barrow**	**151.85 326**	IAMs_20	IAMs_20	09 04 31.5				
	comp=Z,66µm,19.0s								
A21K	**Barrow**	**151.85 326**	PKPac		07 52 16.3				
	baz=85								
N16K	**Nishlik Lake**	**151.95 302**	PKPac		07 52 17.4				
	baz=103								
HHC	**Hu-ho-hao-te**	**152.05 106**	*e*PKPbc	**PKPdf**	**07 52 06.9**	**-4.0**			
HHC			PP	**PP**	**07 55 57.9**	**-1.5**			
MOY	**Mondy**	**152.22 78**	*e*PKiKP	**PKPdf**	**07 52 09.7**	**-1.1**			
MOY			pmax	pmax					
	comp=Z,2µm,1.5s								
ZAK	**Zakamensk**	**152.92 82**	*e*PKiKP	**PKPdf**	**07 52 10.7**	**-1.2**			
ZAK			pmax	pmax					
	comp=Z,800nm,1.5s								
SONM	**Songino Array**	**153.41 89**	PKP	**PKPdf**	**07 52 10.4**	**-2.3**			
	comp=Z,26nm,1.0s,baz=211,slow=2.1,SNR=77								
SONM			PKPbc	**sPKPdf**	**07 52 19.4**	**+0.6**			
	comp=Z,106nm,0.8s,baz=218,slow=2.8,SNR=40								
JFU	**Fukue jima 2**	**153.58 141**	P	**PKPdf**	**07 52 12.8**	**-0.5**			
ULN	**Ulaanbaatar**	**153.81 89**	P	**PKPdf**	**07 52 10.6**	**-2.7**			
BJI	**Beijing**	**153.96 113**	PKPbc	**PKPdf**	**07 52 12.3**	**-1.3**			
BJI	**Beijing**	**153.96 113**	PKPbc	**PKPdf**	**07 52 12.2**	**-1.3**			
BJI			SKKS		08 02 54.8				
BJI			SS	**SS**	**08 15 49.2**	**+2.2**			
BJI			LR	LR					
	comp=Z,11µm,16.0s								
BJI			LR	LR					
	comp=Z,35µm,19.9s								
BJI			LR	LR					
	comp=Z,121µm,20.3s								
UNV	**Unalaska Valle**	**153.97 286**	PKPac		07 52 21.2				
	baz=112								
IRK	**Irkutsk**	**154.30 79**	*e*PKiKP	**PKPdf**	**07 52 11.2**	**-2.5**			
IRK			*e*		07 56 20.1				
IRK			pmax	pmax					
	comp=Z,2µm,3.8s								
RDOG	**Red Dog Mine**	**154.34 319**	IAMs_20	IAMs_20	09 13 01.7				
	comp=Z,57µm,21.0s								
NIKH	**Nikolski High**	**154.93 283**	PKPab	**PKPab**	**07 52 37.3**	**-1.5**			
	baz=113								
ANM	**Nome**	**155.49 311**	PKPab	**PKPab**	**07 52 40.8**	**0.0**			
	baz=90								
DL2	**Dalian**	**155.87 122**	PKP	**PKPdf**	**07 52 14.1**	**-2.1**			
DL2			*e*PP	**PP**	**07 56 27.9**	**+7.4**			
DL2			AMB	AMB					
	comp=Z,7µm,7.5s								
DL2			LR	LR					
	comp=Z,84µm,21.0s								
DL2			LR	LR					
	comp=Z,41µm,21.0s								
DL2			LR	LR					
	comp=Z,95µm,20.9s								
TNA	**Tin City**	**156.53 313**	PKPab	**PKPab**	**07 52 44.7**	**-0.5**			
	baz=85								
XLT	**XiLinHaoTe**	**156.57 106**	*e*PKPbc	**PKPdf**	**07 52 15.3**	**-1.8**			
XLT			pPKP	sPKPdf	07 52 24.9	+1.7			
XLT			sPKP		07 52 30.3				
XLT			PKPab	**PKPab**	**07 52 47.1**	**+0.9**			
XLT			PKS	PKSdf	07 55 59.8	+8.9			
XLT			PP	**PP**	**07 56 31.3**	**+6.5**			
XLT			SKS	**SKSdf**	**07 59 16.8**	**-5.6**			
SPIA	**Saint Paul Isl**	**157.01 292**	PKPab	**PKPab**	**07 52 47.7**	**+0.2**			
	baz=103								
HJU	**Haeju**	**157.06 130**	PKPbc	**PKPdf**	**07 52 15.9**	**-1.9**			
HJU			PP	**PP**	**07 56 27.8**	**+0.7**			
HJU			AmB						
	comp=Z,716nm,2.5s								
HJU			AMS	AMS					
	comp=N,23µm,14.6s								
HJU			AMS	AMS					
	comp=E,31µm,19.7s								
HJU			AMS	AMS					
	comp=Z,18µm,11.7s								
JHS	**Saijyo**	**157.18 147**	P	**PKPdf**	**07 52 16.9**	**-1.2**			
KSRS	**Korea Array**	**157.50 134**	PKP	**PKPdf**	**07 52 16.1**	**-2.2**			
	comp=Z,33nm,1.1s,baz=209,slow=1.2,SNR=48								
KSRS			PP	**PP**	**07 56 30.1**	**+0.7**			
	comp=Z,3.7nm,1.0s,baz=204,slow=2.7,SNR=1.6								
PYAG	**Pyongyang**	**157.91 128**	PKPbc	**PKPdf**	**07 52 17.5**	**-1.3**			
PYAG			PP	**PP**	**07 56 33.7**	**+2.0**			
PYAG			AmB						
	comp=Z,77nm,0.7s								
PYAG			AMS	AMS					
	comp=N,20µm,15.3s								
PYAG			AMS	AMS					
	comp=E,18µm,14.5s								
PYAG			AMS	AMS					
	comp=Z,19µm,14.7s								
SUJ	**Sinuiju**	**158.17 125**	PKPbc	**PKPdf**	**07 52 17.2**	**-1.9**			
SUJ			PP	**PP**	**07 56 34.4**	**+1.1**			
SU

comp=Z,13μm,13.6s
MDJ LR LR
comp=Z,62μm,17.3s
MDJ LR LR
comp=Z,46μm,16.3s
MDJ LR LR
comp=Z,152μm,20.4s
SHEM Shemya Is, Ala 164.49 271 PKP **PKPdf 07 52 21.0 -4.3**
comp=Z,61nm,1.0s,baz=7.4,slow=4.7,SNR=6.4
SHEM PP **PP 07 57 06.3 -1.0**
comp=Z,54nm,1.1s,baz=238,slow=6.2,SNR=4.8
JTM Tenmabayashi 164.71 160 P **PKPdf 07 52 24.7 -1.3**
BILL Bilibino 164.72 333*d i* PKIKP **PKPdf 07 52 19.8 -5.3**
BILL pmax pmax
comp=Z,60μm,1.0s
BILL pmax pmax
comp=Z,527nm,1.5s
USRK Ussuriysk Ar. 164.81 131 PKP **PKPdf 07 52 22.1 -3.8**
comp=Z,30nm,1.2s,baz=229,slow=4.3,SNR=26
USRK PP **PP 07 57 05.6 -3.0**
comp=Z,4.1nm,0.7s,baz=147,slow=35,SNR=1.9
JEM Erimo 166.27 165 P **PKPdf 07 52 27.2 +0.1**
JEW Eniwo 166.76 158 P **PKPdf 07 52 27.6 +0.1**
TEY Ternei 167.36 140⇑*e* PKIKP **PKPdf 07 52 26.6 -1.3**
TEY *e* 08 18 07.2
TEY pmax pmax
comp=Z,1μm,7.0s
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=Z,50nm,1.8s
ZEA Zeya 167.84 89 *e* PKIKP **PKPdf 07 52 25.9 -2.0**
ZEA *e* 07 57 21.7
ZEA *e* 08 18 13.8
ZEA *e* 08 59 25.8
ZEA pmax pmax
comp=E,700nm,5.0s
ZEA pmax pmax
comp=N,1μm,5.9s
ZEA pmax pmax
comp=Z,10μm,9.8s
ZEA pmax pmax
comp=E,40nm,0.9s
ZEA pmax pmax
comp=N,50nm,1.2s
ZEA pmax pmax
comp=Z,100nm,1.2s
KLR Kul'dur 168.32 115 PKP **PKPdf 07 52 26.6 -1.8**
comp=Z,112nm,1.2s,baz=292,slow=2.2,SNR=43
KLR PKPab **PKPab 07 53 37.0 -0.3**
comp=Z,59nm,0.9s,baz=237,slow=3.9,SNR=6.1
KLR PP **PP 07 57 28.4 +1.5**
comp=Z,9.0nm,0.9s,baz=244,slow=10,SNR=2.2
YAK Yakutsk 168.39 47 PKP **PKPdf 07 52 24.6 -3.4**
comp=Z,12nm,0.4s,baz=186,slow=2.4,SNR=13
YAK Yakutsk 168.39 47*c i* PKIKP **PKPdf 07 52 24.7 -3.4**
YAK *e* 07 57 22.7
YAK *e*PPP PPP 08 01 32.6
YAK pmax pmax
comp=Z,122nm,1.1s
YAK pmax pmax
comp=N,20nm,1.3s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,6μm,5.6s
YAK pmax pmax
comp=N,975nm,4.3s
YAK pmax pmax
comp=E,1μm,4.3s
YUK Yuzh-Kuril'sk 168.57 172*c i* PKIKP **PKPdf 07 52 26.9 -1.8**
YUK *e* 07 57 27.7
YUK *e*PPP PPP 08 01 27.8
YUK *e*SSS SSS 08 24 58.3
YUK pmax pmax
comp=Z,476nm,1.4s
YUK pmax pmax
comp=E,222nm,1.1s
YUK pmax pmax
comp=N,178nm,1.2s
KUR Kuril'sk 169.86 179*c i* PKIKP **PKPdf 07 52 28.3 -1.2**
KUR pmax pmax
comp=Z,664nm,1.7s
KUR pmax pmax
comp=N,327nm,1.5s
KUR pmax pmax
comp=Z,26μm,21.5s
YSS Yuzh-Sakhalins 170.96 156α *i* PKIKP **PKPdf 07 52 29.1 -1.0**
YSS *e* 07 53 47.5
YSS pmax pmax
comp=Z,290nm,1.6s
YSS pmax pmax
comp=Z,27μm,9.6s
GRNR Gornyy 171.64 119 *e*PKIKP **PKPdf 07 52 29.8 -0.5**
SEY Seymchan 172.09 345 PKP **PKPdf 07 52 25.9 -4.1**
comp=Z,81nm,1.0s,baz=151,slow=1.6,SNR=33
SEY Seymchan 172.09 345 PKIKP **PKPdf 07 52 26.0 -4.1**
UGL Uglegorsk 172.72 147*c i* PKIKP **PKPdf 07 52 30.3 -0.5**
UGL pmax pmax
comp=Z,320nm,1.4s
UGL pmax pmax
comp=Z,3μm,9.3s
SKR Severo-Kuril's 173.23 230 *e*PKIKP **PKPdf 07 52 28.8 -2.1**
SKR *e* 07 57 45.7
PET Petropavlovsk 173.33 254 *i* PKIKP **PKPdf 07 52 28.3 -2.6**
PET *e* 07 57 51.2
PET *e*PPS PPS 08 11 52.2
PET *e*SS SS 08 19 00.0 -6.8
PET pmax pmax
comp=Z,220nm,1.5s
PET pmax pmax
comp=Z,70μm,21.5s
PET pmax pmax
comp=Z,56μm,21.4s
PETK Petropavlovsk- 173.89 252 PKP **PKPdf 07 52 27.7 -3.5**
comp=Z,78nm,1.0s,baz=103,slow=3.2,SNR=41
PETK PKPab **PKPab 07 54 02.2 +0.2**
comp=Z,27nm,1.0s,baz=126,slow=7.5,SNR=4.5
PETK PP **PP 07 57 55.6 +0.8**
comp=Z,28nm,1.1s,baz=68,slow=13,SNR=5.0
MA2 Magadan 175.52 342 PKP **PKPdf 07 52 27.8 -3.6**
comp=Z,18nm,0.8s,baz=51,slow=16,SNR=1.4
MA2 PKPab **PKPab 07 54 08.8 -0.1**
comp=Z,32nm,1.0s,baz=203,slow=21,SNR=1.9
MA2 PP **PP 07 58 00.8 -1.2**
comp=Z,28nm,1.1s,baz=40,slow=23,SNR=1.7

IDC ***19*** *07:36:00.1±1.5,54.°95S×30.°17W,h0km,mb5.4/1, mbtmp5.5/2,ML5.3/1,Error ellipse: s-maj=115.6km s-min=38.2km az=134.0*
NEIC ***19*** *07:36:01.6±2.1,55.°3S×0.°1×30.°8W±0.°1,h10km±1km, mb5.7/21,Error ellipse: s-maj=19.1km s-min=8.5km az=206.0*
ISC 19 07:36:01.4±0.7,55.°25S±0.°10×30.°65W±0.°10,h10km,n26, σ1ᵗ50/26,mb5.7/10,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.52**	**284**	Pn		**Pn**	**07 36 56.6**	**+0.6**
ORCD	**Orcadas**	**9.28**	**228**	Pn		**Pn**	**07 38 13.8**	**-1.1**
EFI	**East Falkland**	**16.66**	**271**	Pn		**Pn**	**07 39 53.5**	**-1.2**
EFI				IAmb		IAmb	07 40 07.9	
	comp=Z,375nm,1.0s							
PMSA	**Palmer Station**	**18.99**	**226**	P		**Pn**	**07 40 28.4**	**+5.1**
	comp=Z,8.1nm,0.3s,baz=58,slow=7.0,SNR=4.3							
	comp=Z,160nm,0.9s							
SNAA	**Sanae**	**20.29**	**155**	P		**P**	**07 40 35.8**	**-1.1**
MG01	**Puerto William**	**21.01**	**256**	P		**P**	**07 40 42.9**	**-1.9**
MG01				IAmb		IAmb	07 40 47.0	
	comp=Z,415nm,1.1s							
MG02	**Cerro Sombrero**	**22.61**	**260**	P		**P**	**07 41 01.1**	**-0.8**
GO10	**Punta Arenas**	**23.49**	**258**	P		**P**	**07 41 09.7**	**-1.3**
MG05	**Puerto Natales**	**24.89**	**261**	P		**P**	**07 41 21.9**	**-2.1**
MG05				IAmb		IAmb	07 41 24.1	
	comp=Z,242nm,0.9s							
GO09	**Cerro Castillo**	**24.97**	**262**	P		**P**	**07 41 23.6**	**-1.2**
GO09				IAmb		IAmb	07 41 33.7	
	comp=Z,159nm,1.0s							
ITAB	**Concordia**	**32.04**	**322**	P		**P**	**07 42 28.9**	**+0.9**
ITAB				IAmb		IAmb	07 42 38.9	
	comp=Z,157nm,1.2s							
ML02	**Panimavida**	**33.93**	**288**	P		**P**	**07 42 44.1**	**-0.3**
BO02	**Sierra Bellavi**	**34.31**	**290**	P		**P**	**07 42 48.3**	**+0.4**
BO02				IAmb		IAmb	07 42 50.6	
	comp=Z,129nm,1.1s							
LMEL	**Las Melosas**	**34.72**	**291**	P		**P**	**07 42 51.9**	**+0.4**
LMEL				IAmb		IAmb	07 42 52.4	
	comp=Z,75nm,0.9s							
BO01	**Tunca**	**34.78**	**290**	P		**P**	**07 42 50.4**	**-1.4**
QSPA	**South Pole Qui**	**35.01**	**180**	P		**P**	**07 42 53.9**	**+0.2**
MT02	**Curacav**	**35.67**	**291**	P		**P**	**07 42 58.5**	**-1.0**
VA03	**San Esteban**	**35.74**	**292**	P		**P**	**07 43 00.5**	**+0.3**
MAW	**Mawson**	**41.95**	**145**	P		**P**	**07 43 52.7**	**+1.1**
DBIC	**Dimbokro**	**65.32**	**28**	P		**P**	**07 46 43.3**	**-0.2**
DBIC				IAmb		IAmb	07 46 45.1	
	comp=Z,48nm,1.1s							
KOWA	**Kowa**	**73.03**	**27**	P		**P**	**07 47 31.5**	**+0.2**
KOWA				IAmb		IAmb	07 47 50.5	
	comp=Z,75nm,1.1s							
TOA0	**Torodi Ar. Sit**	**73.38**	**33**	P		**P**	**07 47 34.0**	**+0.7**
TOA0				IAmb		IAmb	07 47 43.3	
	comp=Z,80nm,1.1s							
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P		**P**	**07 47 32.6**	**-0.7**
	comp=Z,36nm,0.9s,baz=204,slow=6.5,SNR=3.0							
	comp=Z,36nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P		**P**	**07 47 34.3**	**+1.0**
TORD				IAmb		IAmb	07 47 46.7	
	comp=Z,45nm,0.9s							
ILAR	**Eielson Array**	**148.12**	**313**	PKPbc		**PKPbc**	**07 55 44.6**	**-1.2**
	comp=Z,24nm,0.6s,baz=112,slow=1.8,SNR=5.4							
SONM	**Songino Array**	**152.65**	**88**	PKPbc		**PKPbc**	**07 55 56.2**	**-1.1**
	comp=Z,22nm,0.9s,baz=220,slow=3.4,SNR=4.0							

NEIC ***19*** *07:38:50.1±2.1,55.°50S±0.°09×32.°2W±0.°2,h10km±1km, mb5.4/21,Error ellipse: s-maj=16.2km s-min=14.5km az=233.0*
IDC ***19*** *07:38:51.5±1.5,55.°60S×31.°96W,h0km,mb5.0/1, mbtmp5.2/2,ML4.7/1,Error ellipse: s-maj=60.0km s-min=44.4km az=102.0*
ISC 19 07:38:50.2±0.5,55.°50S±0.°08×32.°11W±0.°08,h10km,n30, σ1ᵗ62/29,mb5.5/10,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**2.80**	**294**	Pn		**Pn**	**07 39 35.4**	**+0.4**
ORCD	**Orcadas**	**8.49**	**227**	Pn		**Pn**	**07 40 54.2**	**+1.1**
PMSA	**Palmer Station**	**18.21**	**226**	P		**P**	**07 43 05.1**	**+2.2**
	2.5nm,0.3s,baz=57,slow=8.2,SNR=3.7							
	66nm,0.8s							
MG01	**Puerto William**	**20.14**	**257**	P		**P**	**07 43 24.2**	**+0.1**
MG01				IAmb		IAmb	07 43 37.6	
	comp=Z,155nm,1.0s							
SNAA	**Sanae**	**20.43**	**154**	P		**P**	**07 43 26.1**	**-1.2**
MG02	**Cerro Sombrero**	**21.74**	**262**	P		**P**	**07 43 38.5**	**-2.9**
GO10	**Punta Arenas**	**22.63**	**260**	P		**P**	**07 43 48.3**	**-2.6**
GO10				IAmb		IAmb	07 43 48.9	
	comp=Z,164nm,0.9s							
LL02	**Futaleuf**	**28.25**	**279**	P		**P**	**07 44 42.0**	**-1.2**
LL01	**San Ignacio de**	**29.10**	**280**	P		**P**	**07 44 50.3**	**-0.3**
ITAB	**Concordia**	**31.75**	**325**	P		**P**	**07 45 13.8**	**-0.4**
ML02	**Panimavida**	**33.22**	**290**	P		**P**	**07 45 27.3**	**+0.3**
ML02				IAmb		IAmb	07 45 55.5	
	comp=Z,60nm,1.1s							
BO02	**Sierra Bellavi**	**33.62**	**292**	P		**P**	**07 45 28.5**	**-2.1**
BO02				IAmb		IAmb	07 45 33.3	
	comp=Z,101nm,1.1s							
GO05	**Huala**	**34.06**	**290**	P		P	07 45 31.0	-3.4
GO05				IAmb		IAmb	07 45 47.1	
	comp=Z,36nm,1.1s							
QSPA	**South Pole Qui**	**34.76**	**180**	P		**P**	**07 45 39.1**	**-1.3**
QSPA				IAmb		IAmb	07 46 06.2	
	comp=Z,81nm,1.1s							
VA05	**Santo Domingo**	**34.93**	**292**	P		**P**	**07 45 41.4**	**-0.6**
VA05				IAmb		IAmb	07 45 47.1	
	comp=Z,44nm,0.7s							
BDFB	**Brasilia**	**41.62**	**337**	P		**P**	**07 46 42.2**	**+3.8**
	comp=Z,17nm,0.7s,baz=167,slow=7.3,SNR=3.8							
	comp=Z,17nm,0.7s							
PB15	**IPOC Station P**	**42.41**	**304**	P		**P**	**07 46 44.7**	**-0.3**
LVC	**Limon Verde**	**42.66**	**305**	P		**P**	**07 46 46.5**	**-0.7**
LVC				IAmb		IAmb	07 46 53.2	
	comp=Z,49nm,0.9s							
SHEL	**Horse Pasture**	**44.34**	**38**	P		**P**	**07 46 59.6**	**-0.9**
ASCN	**Ascension**	**49.49**	**23**	P		**P**	**07 47 39.5**	**-1.2**
CRZF	**Crozet Islands**	**50.57**	**117**	P		**P**	**07 47 47.2**	**-1.3**
LBTB	**Lobatse**	**51.57**	**78**	P		**P**	**07 47 57.8**	**+1.3**
LBTB				IAmb		IAmb	07 47 58.8	
	comp=Z,27nm,0.8s							
TSUM	**Tsumeb**	**51.92**	**66**	P		**P**	**07 47 59.1**	**0.0**
ETMB	**Extrema**	**52.87**	**316**	P		**P**	**07 48 05.9**	**-0.1**
ETMB				IAmb		IAmb	07 48 34.7	
	comp=Z,30nm,1.2s							
MACA	**Manacapuru-AM**	**57.04**	**325**	P		**P**	**07 48 35.4**	**-0.8**
MACA				IAmb		IAmb	07 48 38.4	
	comp=Z,108nm,1.1s							
MBO	**M'Bour**	**70.78**	**16**	P		**P**	**07 50 05.2**	**-1.2**
MBO				IAmb		IAmb	07 50 33.9	
	comp=Z,61nm,1.0s							
INK	**Inuvik**	**143.63**	**322**	PKP		**PKPdf**	**07 58 24.3**	**+0.8**
	comp=Z,9.7nm,0.9s,baz=168,slow=1.1,SNR=1.2							
ZALV	**Zalesovo Beam**	**144.65**	**66**	PKP		**PKPdf**	**07 58 27.6**	**+1.8**
	comp=Z,6.8nm,0.6s,baz=216,slow=3.0,SNR=2.6							
ILAR	**Eielson Array**	**147.69**	**313**	PKPbc		**PKiKP**	**07 58 36.6**	**+1.2**
	comp=Z,29nm,0.9s,baz=118,slow=1.5,SNR=4.4							
SONM	**Songino Array**	**153.49**	**89**	PKPbc		**PKiKP**	**07 58 51.1**	**+3.0**
	comp=Z,7.7nm,0.8s,baz=220,slow=2.9,SNR=4.8							

NIED ***19*** *07:38:57.3,23.°28N×120.°96E,h0km,MW3.5,Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}~0.57; $M_{\theta\theta}$1.67; $M_{\phi\phi}$-1.10; $M_{r\theta}$-0.59; $M_{\theta\phi}$-1.38; $M_{\phi r}$~0.10; Fault plane solution: $M_0$2.04000×10^{14} NP1: ϕ_s337.00000°,δ72.00000°,λ-4.00000°. NP2:ϕ_s69.00000°, δ86.00000°,λ-162.00000°.*
TAP ***19*** *07:38:57.0,23.°34N×120.°80E,h6km,ML3.8,C*
JMA ***19*** *07:38:57.3±0.5,23.°N±2.°×12.°1E±.°,h0km,MV3.5/9, TAIWAN REGION*
NEIC ***19*** *07:38:57.5±1.0,23.°34N±0.°03×120.°79E±0.°02,h12km±6km, mb4.2/2,ML4.3(TAP),Error ellipse: s-maj=4.5km s-min=3.1km az=160.0*
ISC 19 07:38:57.6±0.8,23.°35N±0.°01×120.°80E±0.°01,h10km±5km, n132,σ0ᵗ69/236,33C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ALS	**Alishan**	**0.16**	**3**	⇑*i* P		**Pg**	**07 39 01.4**	**+0.1**
ALS	baz=3.0			S		**Sg**	**07 39 04.3**	**+0.4**
TPUB	**Ta-pu**	**0.16**	**253**			**Pg**	**07 39 01.1**	**0.0**
TPUB					Sg	**Sg**	**07 39 03.9**	**+0.3**
TPUB	**Ta-pu**	**0.16**	**253**	⇑*i* P		**Pg**	**07 39 01.1**	**0.0**
TPUB	baz=256			S		**Sg**	**07 39 03.7**	**+0.1**
	baz=256							
CHN4	**Tsaushan**	**0.19**	**271**	⇓*e* P		**Pg**	**07 39 00.8**	**-0.7**
	baz=273							
STYT	**Tauyuan**	**0.19**	**191**	⇑ *i* P		**Pg**	**07 39 01.3**	**-0.3**
STYT	baz=191			*i* S		**Sg**	**07 39 04.1**	**-0.3**
	baz=191							
WTP	**Ta-pu**	**0.20**	**239**	⇑*i* P		**Pg**	**07 39 01.7**	**0.0**
WTP	baz=240			*i* S		**Sg**	**07 39 04.8**	**+0.2**
	baz=240							
YUS	**Yu-Shan**	**0.20**	**45**	⇑*i* P		**Pg**	**07 39 02.2**	**+0.2**
YUS	baz=45			*i* S		**Sg**	**07 39 05.5**	**+0.4**
	baz=45							
ELDTW	**Lidau**	**0.26**	**128**	⇓*i* P		**Pg**	**07 39 02.8**	**0.0**
ELDTW	baz=127			*e* S		**Sg**	**07 39 06.4**	**0.0**
	baz=127							
CHN5	**Tsauling**	**0.27**	**336**	⇓*e* P		**Pg**	**07 39 02.4**	**-0.7**
CHN5	baz=336			*e* S		**Sg**	**07 39 06.7**	**-0.2**
	baz=336							
TWK	**Hsinying**	**0.29**	**254**	⇑*i* P		**Pg**	**07 39 03.8**	**+0.3**
TWK	baz=255			S		**Sg**	**07 39 08.5**	**+1.0**
	baz=255							
SGST	**Jiashian**	**0.33**	**217**	⇑*e* P		**Pg**	**07 39 03.4**	**-0.7**
	baz=217							
CHN2	**Minshiung**	**0.35**	**302**	*e* P		**Pb**	**07 39 05.7**	**-0.2**
	baz=302							
WHYT	**Xinyi Township**	**0.35**	**8**	⇑P		**Pg**	**07 39 04.7**	**+0.1**
	baz=7.0							
WHYT				*e* S		**Sg**	**07 39 09.7**	**+0.5**
	baz=7.0							
CHY	**Chiayi**	**0.37**	**294**	⇓P		**Pg**	**07 39 05.7**	**+0.7**
	baz=294							
CHY				*e* S		**Sb**	**07 39 12.0**	**-0.2**
	baz=294							
SLGT	**Liugui**	**0.38**	**201**⇑	*e* P		**Pg**	**07 39 05.2**	**+0.1**
	baz=203							
SLGT				*e* S		**Sg**	**07 39 10.7**	**+0.6**
	baz=203							
WGK	**Gukeng**	**0.40**	**327**	*e* P		**Pb**	**07 39 06.6**	**-0.2**
	baz=328							
WGK				*e* S		**Sb**	**07 39 13.8**	**+0.9**
	baz=328							
WDLH	**Douliu**	**0.41**	**325**⇓	*e* P		**Pb**	**07 39 06.9**	**-0.1**
	baz=325							
WDLH				*e* S		**Sb**	**07 39 14.1**	**+0.7**
	baz=325							
SSLB	**Suanglung**	**0.46**	**18**	⇓P		**Pg**	**07 39 06.5**	**-0.1**
SSLB	**Suanglung**	**0.46**	**18**⇑	*i* P		**Pg**	**07 39 06.4**	**-0.2**
	baz=17							
SSLB				*e* S		**Sg**	**07 39 12.7**	**0.0**
	baz=17							
TWF1	**Yuli**	**0.46**	**89**	⇓*i* P		**Pg**	**07 39 06.7**	**+0.1**
	baz=89							
TWF1				S		**Sg**	**07 39 12.8**	**+0.1**
	baz=89							
YULB	**Yu-li**	**0.46**	**84**			**Pg**	**07 39 06.6**	**0.0**
YULB					Sg	**Sg**	**07 39 12.6**	**-0.2**
YULB	**Yu-li**	**0.46**	**84**	⇓P		**Pg**	**07 39 06.5**	**-0.1**
	baz=84							
YULB				*e* S		**Sg**	**07 39 12.5**	**-0.2**
	baz=84							
ECS	**Chishang**	**0.46**	**123**⇓	*e* P		**Pg**	**07 39 06.9**	**+0.3**
	baz=123							
ECS				*e* S		**Sg**	**07 39 13.7**	**+1.0**
	baz=123							
ICHU	**Yijhu**	**0.48**	**272**	P		**Pg**	**07 39 07.5**	**+0.7**
	baz=272							
ICHU				*e* S		**Sb**	**07 39 15.4**	**+0.2**
	baz=272							
WJS	**Zhushan**	**0.48**	**352**	*e* P		**Pb**	**07 39 08.1**	**0.0**
	baz=352							
WJS				*e* S		**Sb**	**07 39 15.9**	**+0.7**
	baz=352							
EYUL	**Yuli**	**0.48**	**90**⇓	*i* P		**Pg**	**07 39 06.9**	**0.0**
	baz=89							
EYUL				*e* S		**Sg**	**07 39 13.2**	**0.0**
	baz=89							
CHN3	**Shinhua**	**0.48**	**236**	*e* P		**Pb**	**07 39 08.5**	**+0.3**
	baz=237							
CHN3				*e* S		**Sb**	**07 39 17.0**	**+1.8**
	baz=237							
FULB	**Fuli**	**0.48**	**108**	⇓P		**Pg**	**07 39 07.6**	**+0.6**
	baz=107							
FULB				*e* S		**Sb**	**07 39 14.9**	**-0.4**
	baz=107							
WTK	**Tuku**	**0.51**	**312**	⇓P		**Pb**	**07 39 08.4**	**-0.2**
	baz=312							
WTK				*e* S		**Sb**	**07 39 16.7**	**+0.7**
	baz=312							
EHY	**Hungye**	**0.51**	**72**	*e* P		**Pg**	**07 39 07.7**	**+0.2**
	baz=72							
EHY				*e* S		**Sg**	**07 39 14.2**	**0.0**
	baz=72							
VWDT	**VWDT**	**0.51**	**38**⇑	*i* P		**Pg**	**07 39 07.7**	**+0.1**
	baz=37							
VWDT				*e* S		**Sb**	**07 39 16.1**	**-0.1**
	baz=37							
SSHA	**Shanhua**	**0.51**	**246**	*e* P		**Pb**	**07 39 09.1**	**+0.4**
	baz=247							
SSHA				*e* S		**Sn**	**07 39 18.4**	**-1.4**
	baz=247							
SHHT	**Tainan City**	**0.53**	**232**⇑	*e* P		**Pg**	**07 39 08.3**	**+0.5**
	baz=233							
SHHT				*e* S		**Sb**	**07 39 18.0**	**+1.4**
	baz=233							
LONT	**Longtian**	**0.54**	**145**⇓	*i* P		**Pg**	**07 39 07.8**	**-0.2**
	baz=145							
LONT				*e* S		**Sg**	**07 39 15.1**	**0.0**
	baz=145							
WNT	**Mingjian**	**0.54**	**349**	*e* P		**Pb**	**07 39 09.3**	**+0.2**
	baz=349							
WNT				*e* S		**Sb**	**07 39 17.9**	**+0.9**
	baz=349							
SCST	**Cishan**	**0.54**	**211**	⇑P		**Pb**	**07 39 08.7**	**-0.4**
	baz=212							
SCST				*e* S		**Sb**	**07 39 18.3**	**+1.4**
	baz=212							
SMLT	**Sun Moon Lake**	**0.54**	**10**	⇑P		**Pg**	**07 39 08.5**	**+0.4**
	baz=10.0							
SMLT				*e* S		**Sb**	**07 39 17.2**	**0.0**
	baz=10.0							
WSL	**Shuilin Townsh**	**0.55**	**288**	*e* P		**Pb**	**07 39 09.4**	**0.0**
	baz=289							
WSL				*e* S		**Sb**	**07 39 18.3**	**+1.0**
	baz=289							
WNT1	**Nantou City**	**0.57**	**349**	*e* P		**Pb**	**07 39 10.0**	**+0.4**
	baz=349							
WNT1				*e* S		**Sb**	**07 39 19.2**	**+1.4**
	baz=349							
CHKT	**Chengkung**	**0.58**	**115**	⇓P		**Pg**	**07 39 09.2**	**+0.4**
	baz=115							
CHKT				*e* S		**Sb**	**07 39 18.9**	**+0.8**
	baz=115							
SCLT	**Jiali**	**0.58**	**253**	*e* P		**Pb**	**07 39 09.8**	**0.0**
	baz=253							
SCLT				*e* S		**Sb**	**07 39 19.9**	**+1.8**
	baz=253							
TWG	**Pinlang**	**0.58**	**154**			**Pg**	**07 39 09.0**	**+0.1**
TWG					Sg	**Sg**	**07 39 16.5**	**0.0**
TWGBT	**Beinan**	**0.59**	**154**	⇓*i* P		**Pg**	**07 39 08.8**	**-0.2**
	baz=154							
TWGBT				*e* S		**Sg**	**07 39 16.4**	**-0.4**
	baz=154							
HGSD	**Ruisui**	**0.59**	**76**	*e* P		**Pg**	**07 39 09.7**	**+0.6**
	baz=75							
HGSD				*e* S		**Sb**	**07 39 18.3**	**-0.2**
	baz=75							
EDH	**Donghe**	**0.60**	**129**⇓	*i* P		**Pg**	**07 39 09.6**	**+0.4**
	baz=128							
EDH				*e* S		**Sb**	**07 39 18.6**	**-0.1**
	baz=128							
WSF	**Szhu**	**0.60**	**299**	*e* P		**Pg**	**07 39 09.9**	**-0.3**
	baz=299							
WSF				*e* S		**Sb**	**07 39 19.9**	**+1.1**
	baz=299							
TAI1	**Yung-k'ang**	**0.61**	**240**	*e* P		**Pb**	**07 39 11.0**	**+0.7**
	baz=240							
TAI1				*e* S		**Sn**	**07 39 21.7**	**-0.4**
	baz=240							
SSD	**Sandimen**	**0.62**	**194**⇑	*i* P		**Pg**	**07 39 09.4**	**-0.2**
	baz=194							
SSD				*e* S		**Sg**	**07 39 17.1**	**-0.6**
	baz=194							
TWM1	**Shoushan**	**0.63**	**213**	*e* P		**Pb**	**07 39 11.3**	**+0.7**
	baz=214							
TWM1				*e* S		**Sn**	**07 39 24.5**	**+1.8**
	baz=214							
WYL	**Yuanlin Townsh**	**0.64**	**342**	*e* P		**Pb**	**07 39 11.2**	**+0.3**
	baz=342							
WYL				*e* S		**Sb**	**07 39 21.6**	**+1.6**
	baz=342							
TAI	**Tainan**	**0.66**	**238**	*e* P		**Pn**	**07 39 12.2**	**-0.7**
	baz=238							
TSMG	**Majia**	**0.66**	**192**⇑	*i* P		**Pg**	**07 39 09.9**	**-0.3**
	baz=193							
TSMG				*e* S		**Sg**	**07 39 18.1**	**-0.8**
	baz=193							
EGFH	**Guangfu**	**0.66**	**61**	*e* P		**Pg**	**07 39 10.4**	**0.0**
	baz=60							
EGFH				*e* S		**Sg**	**07 39 18.7**	**-0.4**
	baz=60							
WRL	**Guolierlin Hig**	**0.67**	**325**	*e* P		**Pg**	**07 39 10.2**	**-0.3**
	baz=325							
WRL				*e* S		**Sg**	**07 39 20.2**	**+0.8**
	baz=325							
TTN	**Taitung**	**0.67**	**151**	*e* P		**Pb**	**07 39 11.5**	**+0.1**
	baz=151							
TTN				*e* S		**Sb**	**07 39 21.6**	**+0.8**
	baz=151							
WPL	**Puli Township**	**0.68**	**12**	*e* P		**Pg**	**07 39 11.0**	**+0.3**
	baz=11							
WPL				*e* S		**Sb**	**07 39 21.3**	**+0.4**
	baz=11							
SGLT	**Jiouru**	**0.68**	**204**	*e* P		**Pb**	**07 39 12.1**	**+0.5**
	baz=205							
DPDB	**Guoxing**	**0.69**	**10**⇑	*e* P		**Pg**	**07 39 11.3**	**+0.3**

baz=9.0
DPDB eS Sb 07 39 22.2 +0.8
baz=9.0
WMLT Mailiao 0.69 311 eP Pb 07 39 11.6 -0.2
baz=311
WMLT eS Sb 07 39 22.8 +1.3
baz=311
OWD Renai 0.70 30 ⇑P Pg 07 39 10.6 -0.5
baz=29
OWD eS Sb 07 39 22.8 +1.1
baz=29
WWF Wufeng 0.70 353 eP Pg 07 39 11.2 +0.1
baz=352
WWF eS Sb 07 39 22.1 +0.6
baz=352
WTCT Ta-ch'eng 0.70 317 eP Pb 07 39 12.1 +0.3
baz=318
WTCT eS Sb 07 39 22.5 +0.9
baz=318
WUSB Renai 0.70 25⇑ eP Pg 07 39 10.7 -0.5
baz=24
WUSB eS Sn 07 39 23.6 -1.2
baz=24
WCS Beigang Elemen 0.71 8⇑ eP Pg 07 39 10.7 -0.7
baz=8.0
WCS eS Sb 07 39 21.7 -0.3
baz=8.0
TSPT Pingtung City 0.72 203 eP Pb 07 39 13.0 +0.7
baz=204
ESL Shilin 0.74 51 eP Pg 07 39 11.9 -0.1
baz=51
ESL eS Sg 07 39 21.7 0.0
baz=51
MASBT Mashibuluo 0.75 192 ⇑P Pg 07 39 11.7 -0.4
baz=192
MASBT eS Sb 07 39 22.9 -0.1
baz=192
WCHH Zhanghua 0.76 343 eP Pb 07 39 13.0 +0.1
baz=343
WCHH eS Sb 07 39 24.3 +0.9
baz=343
ECL Taimali 0.76 169 eP Pg 07 39 11.9 -0.4
baz=169
ECL eS Sg 07 39 21.7 -0.5
baz=169
TEGC Jichi Village 0.77 62 eP Pb 07 39 13.6 +0.5
baz=62
CHGB Renai 0.79 26⇑ eP Pg 07 39 12.4 -0.4
baz=25
CHGB eS Sb 07 39 25.4 +1.0
baz=25
TCU Taichung 0.80 352 eP Pb 07 39 13.9 +0.2
baz=352
TCU eS Sb 07 39 26.0 +1.4
baz=352
WSSB Gushan 0.86 215 eP Pn 07 39 16.1 +0.3
baz=216
WSSB eS Sn 07 39 30.7 +2.3
baz=216
ETM Tongmen 0.89 46 eP Pg 07 39 14.2 -0.5
baz=46
ETM eS Sb 07 39 27.5 +0.5
baz=46
SSPT Xinbi 0.89 194 eP Pg 07 39 14.8 +0.2
baz=194
SSPT eS Sn 07 39 30.2 +1.2
baz=194
TEYL Yanliau Villag 0.90 55 eP Pb 07 39 15.7 +0.4
baz=53
TEYL eS Sb 07 39 28.4 +1.1
baz=53
WHF Hehuan Shan 0.90 28⇑ eP Pg 07 39 14.5 -0.5
baz=28
WHF eS Sn 07 39 29.3 -0.8
baz=28
LDUT Ludao 0.91 137 eP Pg 07 39 14.4 -0.7
baz=137
LDUT eS Sb 07 39 28.3 +0.6
baz=137
WHP Taichung City 0.94 8 eP Pg 07 39 15.8 +0.2
baz=8.0
TDCB Techi 0.96 20 eP Pg 07 39 15.6 -0.5
baz=20
TDCB eS Sb 07 39 29.9 +0.7
baz=20
EAST Anshuo 0.96 177 eP Pg 07 39 15.9 -0.2
baz=177
EAST eS Sb 07 39 29.5 +0.3
baz=177
TWT Tachien 0.96 21 eP Pg 07 39 15.5 -0.7
baz=20
HWA Hwalien 0.97 50 eP Pb 07 39 16.5 0.0
baz=50
HWA eS Sn 07 39 30.6 -0.5
baz=50
FUSS Fushou 0.98 24⇑ eP Pg 07 39 15.6 -1.0
baz=24
FUSS eS Sb 07 39 30.7 +0.6
baz=24
SCZT Fangliau 0.98 190⇑ eP Pg 07 39 16.1 -0.4
baz=189
SCZT eS Sn 07 39 32.4 +0.9
baz=189
TAW Tawu 0.99 175 eP Pg 07 39 16.7 0.0
baz=175
TWQ1 Liyutan 0.99 359 eP Pb 07 39 17.2 +0.3
baz=358
TWQ1 eS Sn 07 39 31.6 -0.3
baz=358
WDJ Dajia District 1.00 352 eP Pb 07 39 17.6 +0.5
baz=352
TAWH Dawu Township 1.01 175 eP Pg 07 39 15.6 -1.4
baz=175
TAWH eS Sb 07 39 31.1 +0.6
baz=175
TWD Chiawan 1.03 45 eP Pg 07 39 17.0 -0.4
baz=45
TWD eS Sg 07 39 30.1 -0.8
baz=45
WDGT Dungji 1.05 265 eP Pg 07 39 16.9 -0.8
baz=265
WDGT eS Sg 07 39 30.5 -0.9
baz=265
ETLH Xiulin Townshi 1.06 36⇑ eP Pg 07 39 17.1 -0.9
baz=36
ETLH eS Sb 07 39 32.9 +0.8
baz=36
NSY Sanyi 1.06 358⇑ eP Pn 07 39 18.7 +0.1
baz=358
NSY eS Sn 07 39 33.9 +0.4
baz=358
NACB Ninganchiao 1.10 41 Pb 07 39 18.0 -0.7
NACB Ninganchiao 1.10 41⇑ eP Pb 07 39 17.8 -1.0
baz=41
NACB eS Sn 07 39 34.1 -0.2
baz=41
SLIU Shizi 1.13 180 eP Pb 07 39 18.8 -0.4
baz=180
SLIU eS Sb 07 39 34.6 +0.7
baz=180
PHUB P'eng-hu 1.14 279 eP Pb 07 39 18.3 -1.0
baz=279
PHUB eS Sb 07 39 33.9 -0.3
baz=279
PNG Penghu 1.16 281 eP Pb 07 39 18.7 -1.1
baz=281
PNG eS Sb 07 39 34.5 -0.3
baz=281
NMLH Miaoli 1.18 360 eP Pn 07 39 20.4 +0.2
baz=359
NMLH eS Sn 07 39 37.2 +0.8
baz=359
NNSB Datong 1.20 26⇑ eP Pb 07 39 19.5 -1.0
baz=26
NNSB eS Sn 07 39 38.1 +1.1
baz=26
NNSH Datong 1.20 26⇑ eP Pb 07 39 19.5 -1.1
baz=26
NNSH eS Sn 07 39 38.0 +1.0
baz=26
NNS Nan Shan 1.21 26 eP Pb 07 39 18.8 -1.9
baz=26
NNS eS Sn 07 39 37.4 +0.2
baz=26
VCHM Qimei 1.27 264 eP Pn 07 39 19.9 -1.4
baz=264
NSTT Nanjuang 1.29 8 eP Pb 07 39 22.1 +0.1
baz=8.0
NSTT eS Sg 07 39 40.0 +0.9
baz=8.0
LIOB Emei 1.31 9 eP Pn 07 39 22.2 +0.3
baz=9.0
LIOB eS Sg 07 39 40.5 +0.8
baz=9.0
NFF Wufeng Townshi 1.31 13 eP Pn 07 39 21.4 -0.6
baz=13
NFF eS Sn 07 39 39.7 0.0
baz=13
LATG Datong 1.36 29⇑ eP Pn 07 39 22.2 -0.5
baz=29
LATG eS Sg 07 39 42.5 +1.2
baz=29
ENA Nanau 1.38 39 eP Pn 07 39 23.0 +0.1
baz=39
TWKBT Hengchun 1.40 179 eP Pg 07 39 25.1 +0.6
baz=180
TWKBT eS Sg 07 39 42.7 0.0
baz=180
NDT Datong Townshi 1.41 28⇑ eP Pn 07 39 23.3 -0.1
baz=27
NDT eS Sg 07 39 43.3 +0.3
baz=27
EWUT Wuta 1.41 39⇑ eP Pn 07 39 22.5 -0.9
baz=39
EWUT eS Sn 07 39 42.0 -0.1
baz=39
NSK Sanguang 1.42 21 eP Pn 07 39 22.6 -0.9
baz=21
YHNB Yeheng 1.42 22 Pn 07 39 23.9 +0.4
YHNB Yeheng 1.42 22 eP Pn 07 39 23.4 -0.1
baz=22
YHNB eS Sg 07 39 43.9 +0.6
baz=22
ENTT Nioudou 1.47 29 eP Pn 07 39 23.5 -0.7
baz=29
LAY Lan-yu 1.48 152 eP Pn 07 39 23.7 -0.6
baz=152
NDS Dongshan 1.53 33 eP Pn 07 39 24.7 -0.3
baz=33
NDS eS Sg 07 39 46.9 0.0
baz=33
FUSB Fushanzhiwuyua 1.58 27 eP Pb 07 39 26.8 -0.2
baz=27
TWE Neicheng 1.58 30 eP Pn 07 39 26.2 +0.5
baz=30
TWC Suao 1.58 37 eP Pb 07 39 26.8 -0.1
baz=37
TWC eS Sb 07 39 46.8 -0.2
baz=37
TATO Taipei 1.74 21 Pn 07 39 28.8 +0.9
JYNG Yonagunijimaku 2.25 60 P Pn 07 39 36.0 +1.1
JYNG eS Sn 07 40 03.7 +0.9
YOJ Yonaguni jima 2.31 61 Pn 07 39 36.7 +1.0
YOJ Yonaguni jima 2.31 61 P Pn 07 39 37.0 +1.2
YOJ eS Sn 07 40 05.9 +1.7
KNMB Chin-men Tao 2.47 297 Pn Pn 07 39 37.3 -0.6
HATJ Hateruma jima 2.85 75 eS Sn 07 40 17.3 -0.2
JKRS Kuro-shima 3.07 73 eP Pn 07 39 47.1 +0.9
JKRS eS Sn 07 40 23.1 +0.1
JIJ Ishigaki jima 3.23 71 eP Pn 07 39 49.1 +0.7
JIJ eS Sn 07 40 27.2 +0.4
JISG Ishigakijimahi 3.44 68 eP Pn 07 39 51.7 +0.4
JISG S Sn 07 40 32.3 +0.1
TJN Taejon 14.17 22 Pn Pn 07 42 18.3 -0.1
KSAR Wonju Array Be 15.31 22 Pn Pn 07 42 33.4 -0.4
MYLDM Lahad Datu 18.20 187 P Pn 07 43 08.9 -1.6
MYLDM IAmb IAmb 07 43 15.9
comp=Z,42nm,2.0s

RSNC 19 07:40:53.5±1.1, 6.81N×73.10W, h151km±4km, ML3.0, Mw3.5, 1C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
BARC	**Barichara**	**0.23**	**200**	⇓*i*P	Pn		07 41 13.9	-0.4
BARC				*e*S	Sn		07 41 29.3	-0.9
BARC				*i*	Sn		07 41 30.5	+0.3
comp=Z,284nm,0.5s								
PAMC	**Pamplona, Colo**	**0.67**	**37**	*e*P	Pn		07 41 16.8	+0.2
PAMC				*e*S	Sn		07 41 33.9	-0.1
PAMC				*i*	Sn		07 41 36.0	+2.0
comp=Z,132nm,0.5s								
BRRC	**Barranca, Sant**	**0.67**	**296**	⇑*i*P	Pn		07 41 15.8	-0.2
BRRC				*e*S	Sn		07 41 33.3	+0.2
BRRC				*i*	Sn		07 41 36.8	+3.7
comp=Z,149nm,0.1s								
RUSC	**La Rusia**	**0.91**	**179**	⇓*e*P	Pn		07 41 17.8	-0.4
RUSC				*e*S	Sn		07 41 36.5	-0.6
RUSC				*i*	Sn		07 41 39.6	+2.5
comp=Z,68nm,0.3s								
TAMC	**Tame, Arauca**	**1.35**	**106**	⇓*i*P	Pn		07 41 22.0	+0.3
TAMC				*e*S	Sn		07 41 42.4	-0.9
TAMC				*i*	Sn		07 41 42.9	-0.4
comp=Z,112nm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.37**	**259**	*e*P	Pn		07 41 20.4	-1.5
PTBC				*e*S	Sn		07 41 42.5	-1.0
PTBC				*i*	Sn		07 41 49.3	+5.8
comp=Z,241nm,0.5s								
SPBC	**San Pablo de B**	**1.50**	**220**	⇓*i*P	Pn		07 41 22.7	-0.5
SPBC				*e*S	Sn		07 41 45.2	-0.9
SPBC				*i*	Sn		07 41 52.1	+6.1
comp=Z,274nm,0.3s								
ZARC	**Zaragoza, Cauc**	**1.87**	**292**	*e*P	Pn		07 41 26.2	-1.0
ZARC				*e*S	Sn		07 41 53.0	-0.1
ZARC				*i*	Sn		07 41 58.5	+5.4
comp=Z,147nm,0.3s								
NORC	**Norcasia**	**2.15**	**235**	*e*P	Pn		07 41 29.7	-0.8
NORC				*i*	Sn		07 41 58.8	-0.1
NORC				*e*S	Sn		07 41 58.8	-0.1
NORC				*i*	Sn		07 42 01.7	+2.8
comp=Z,134nm,0.2s								
CHIC	**Chingaza**	**2.25**	**196**	*e*P	Pn		07 41 31.9	-0.2
CHIC				*e*S	Sn		07 42 01.5	-0.3
CHIC				*i*	Sn		07 42 06.5	+4.8
comp=Z,29nm,0.4s								
ROSC	**El Rosal**	**2.30**	**212**	*e*P	Pn		07 41 33.5	+0.8
ROSC				*e*S	Sn		07 42 05.6	+2.9
ROSC				*i*	Sn		07 42 11.8	+9.0
comp=Z,151nm,0.4s								
HELC	**Santa Helena**	**2.49**	**256**	*e*P	Pn		07 41 35.1	+0.2
HELC				*e*S	Sn		07 42 06.7	0.0
HELC				*i*	Sn		07 42 12.9	+6.2
comp=Z,117nm,0.4s								
UREC	**San Jos de Ur**	**2.59**	**291**	*e*P	Pn		07 41 33.8	-2.0
UREC				*e*S	Sn		07 42 06.2	-2.2
UREC				*i*	Sn		07 42 15.8	+7.5
comp=Z,68nm,0.1s								
SOCV	**Socops**	**2.67**	**56**	*e*P	Pn		07 41 36.3	-0.5
SOCV				*e*S	Sn		07 42 08.2	-2.1
VILC	**Villavicencio,**	**2.74**	**192**	*e*P	Pn		07 41 37.6	-0.2
VILC				*e*S	Sn		07 42 10.8	-1.2
VILC				*i*	Sn		07 42 16.0	+4.0
comp=Z,60nm,0.4s								
GUY2C	**Guyana, Caldas**	**2.74**	**235**	*e*P	Pn		07 41 38.4	+0.2
GUY2C				*e*S	Sn		07 42 12.4	-0.2
GUY2C				*i*	Sn		07 42 20.6	+8.0
comp=Z,89nm,0.4s								
LL1C	**La Loma 1 Cana**	**2.76**	**351**	*e*P	Pn		07 41 39.3	+1.5
LL1C				*e*S	Sn		07 42 14.9	+2.7
PTGC	**Puerto Gaitan,**	**2.76**	**159**	⇓*i*P	Pn		07 41 36.9	-1.1
PTGC				*e*S	Sn		07 42 10.2	-2.1
PTGC				*i*	Sn		07 42 11.4	-1.0
comp=Z,37nm,0.3s								
LL6C	**La Loma 6 Bece**	**2.92**	**357**	*e*P	Pn		07 41 38.8	-1.1
LL6C				*e*S	Sn		07 42 14.1	-1.7
LL6C				*i*	Sn		07 42 18.6	+2.7
comp=Z,24nm,0.3s								
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	Pn		07 41 41.5	-0.1
CBOC				*e*S	Sn		07 42 18.9	+0.1
CBOC				*i*	Sn		07 42 22.8	+4.1
comp=Z,24nm,0.5s								
DBBC	**Dabeiba**	**3.09**	**274**	*e*P	Pn		07 41 41.3	-0.8
DBBC				*e*S	Sn		07 42 19.6	-0.2
DBBC				*i*	Sn		07 42 25.6	+5.8
comp=Z,19nm,0.3s								
ARGC	**Ariguani, Magd**	**3.24**	**340**	*e*P	Pn		07 41 44.1	+0.1
ARGC				*e*S	Sn		07 42 22.4	-0.7
ARGC				*i*	Sn		07 42 30.1	+7.0
comp=Z,25nm,0.3s								
ANIL	**Santa Ana**	**3.24**	**225**	*e*P	Pn		07 41 45.0	+0.7
ANIL				*e*S	Sn		07 42 22.6	-1.0
PRAC	**Prado**	**3.55**	**210**	*e*P	Pn		07 41 47.2	-0.8
PRAC				*e*S	Sn		07 42 28.9	-1.4
PRAC				*i*	Sn		07 42 36.3	+6.0
comp=Z,41nm,0.4s								
PLMC	**San Jos del P**	**3.68**	**239**	*e*P	Pn		07 41 49.5	-0.3
PLMC				*e*S	Sn		07 42 32.4	-1.0
PLMC				*i*	Sn		07 42 38.6	+5.2
comp=Z,29nm,0.4s								
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	Pn		07 41 47.5	-2.4
SJCC				*e*S	Sn		07 42 29.3	-4.4
SJCC				*i*	Sn		07 42 33.6	-0.1
comp=Z,25nm,0.4s								
LCBC	**Los crdobas,**	**3.82**	**302**	*e*P	Pn		07 41 49.9	-1.6
LCBC				*e*S	Sn		07 42 33.3	-3.3
LCBC				*i*	Sn		07 42 39.3	+2.8
comp=Z,21nm,0.3s								
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	*e*P	Pn		07 41 53.8	-2.6
CRJC				*e*S	Sn		07 42 44.7	-0.7
CRJC				*i*	Sn		07 42 51.3	+5.8
comp=Z,29nm,0.2s								
GUVC	**San Jose del G**	**4.26**	**174**	*e*P	Pn		07 41 55.1	-2.1
GUVC				*e*S	Sn		07 42 45.1	-1.7
GUVC				*i*	Sn		07 42 48.8	+2.0
comp=Z,9.5nm,0.2s								
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P	Pn		07 41 56.6	-0.9
YOTC				*e*S	Sn		07 42 46.9	-0.4
SMRC	**Santa Marta, M**	**4.47**	**346**	*e*P	Pn		07 41 58.7	-1.3
SMRC				*e*S	Sn		07 42 46.4	-5.4
SMRC				*i*	Sn		07 42 47.6	-4.2
comp=Z,20nm,0.2s								
CAPC	**Capurgana**	**4.58**	**294**	*e*P	Pn		07 41 58.1	-3.3
CAPC				*e*S	Sn		07 42 46.7	-7.8
CAPC				*i*	Sn		07 43 00.6	+6.1
comp=Z,11nm,0.2s								
MACC	**Macarena, Meta**	**4.69**	**189**	*e*P	Pn		07 42 00.4	-2.5
GARC	**Garzon, Huila**	**5.17**	**208**	*e*P	Pn		07 42 07.7	-1.8
POPC	**Popayan, Colom**	**5.53**	**220**	*e*P	Pn		07 42 14.2	-0.1

NEIC ***19*** *07:41:47.6±1.5, 55.0S±0.1×30.5W±0.2, h10km±1km, mb4.8/30, Error ellipse: s-maj=17.7km s-min=14.7km az=11.0*
IDC ***19*** *07:41:48.4±1.4, 54.94S×30.22W, h0km, mb4.4/2, mbtmp4.4/3, ML4.4/1, Error ellipse: s-maj=55.8km s-min=38.2km az=145.0*

ISC 19 07:41:47.7±0.5, 54.99S±0.09×30.51W±0.07, h10km, n43, σ1s28/43, mb4.8/15, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
HOPE	**Hope Point**	**3.54**	**279**			**Pn**	**07 42 42.9**	**+0.3**
ESPZ	**Base Esperanza**	**15.86**	**227**		Pn	**Pn**	**07 45 29.2**	**-1.4**
EFI	**East Falkland**	**16.74**	**270**			**Pn**	**07 45 39.3**	**-2.6**
PMSA	**Palmer Station**	**19.22**	**226**	P		**Pn**	**07 46 16.8**	**+4.4**
	1.0nm,0.3s,baz=74,slow=6.9,SNR=1.9							
	9.5nm,0.6s							
SNAA	**Sanae**	**20.49**	**155**	P		**P**	**07 46 24.2**	**-1.2**
TRIS	**Tristan da Cun**	**21.81**	**42**	P		**P**	**07 46 38.6**	**-1.1**
MG02	**Cerro Sombrero**	**22.73**	**259**	P		**P**	**07 46 49.8**	**+0.4**
MG02						IAmb	IAmb	07 46 53.5
comp=Z,67nm,1.1s								
MG05	**Puerto Natales**	**25.02**	**260**	P		**P**	**07 47 10.7**	**-0.7**
MG05						IAmb	IAmb	07 47 23.2
comp=Z,33nm,1.1s								
GO09	**Cerro Castillo**	**25.09**	**261**	P		**P**	**07 47 10.9**	**-1.2**
ITQB	**Itaqui**	**31.47**	**313**	P		**P**	**07 48 08.7**	**-0.6**
MT03	**Universidad Ad**	**35.13**	**291**	P		**P**	**07 48 40.7**	**-0.6**
MT09	**Talagante**	**35.18**	**290**	P		**P**	**07 48 41.4**	**-0.3**
MT01	**Popeta**	**35.25**	**290**	P		**P**	**07 48 41.9**	**-0.3**
MT01						IAmb	IAmb	07 49 09.6
comp=Z,23nm,1.1s								
QSPA	**South Pole Qui**	**35.27**	**180**	P		**P**	**07 48 40.9**	**-1.3**
VA06	**Catapilco**	**36.27**	**291**	P		**P**	**07 48 51.5**	**+0.6**
CO02	**Combarbal**	**37.16**	**293**	P		**P**	**07 49 00.2**	**+1.5**
CO02						IAmb	IAmb	07 49 17.2
comp=Z,23nm,1.1s								
CO03	**El Pedregal**	**37.29**	**294**	P		**P**	**07 48 59.0**	**-0.7**
CO03						IAmb	IAmb	07 49 05.8
comp=Z,8.0nm,0.8s								
CO01	**Juntas del Tor**	**37.66**	**295**	P		**P**	**07 49 02.6**	**-0.5**
GO04	**Tololo Observa**	**37.87**	**294**	P		**P**	**07 49 04.4**	**-0.5**
GO04						IAmb	IAmb	07 49 32.5
comp=Z,22nm,1.1s								
AC05	**El Transito**	**38.66**	**296**	P		**P**	**07 49 11.1**	**-0.4**
AC05						IAmb	IAmb	07 49 22.2
comp=Z,28nm,1.1s								
VA04	**Juan Fernndez**	**39.61**	**282**	P		**P**	**07 49 19.5**	**+0.3**
GO02	**Mina Guanaco**	**41.32**	**300**	P		**P**	**07 49 33.6**	**-0.1**
GO02						IAmb	IAmb	07 50 01.5
comp=Z,36nm,1.1s								
SUR	**Sutherland**	**42.24**	**79**	P		**P**	**07 49 41.5**	**+0.4**
SUR						IAmb	IAmb	07 49 43.5
comp=Z,26nm,1.1s								
SHEL	**Horse Pasture**	**43.39**	**36**	P		**P**	**07 49 50.8**	**+0.6**
PB02	**IPOC Station P**	**44.70**	**303**	P		**P**	**07 50 01.0**	**+0.1**
PB02						IAmb	IAmb	07 50 21.5
comp=Z,12nm,0.9s								
PB01	**IPOC Station P**	**44.74**	**303**	P		**P**	**07 50 02.0**	**+0.8**
VNDA	**Vanda**	**47.53**	**184**	P		**P**	**07 50 22.5**	**+0.1**
VNDA						IAmb	IAmb	07 50 43.0
comp=Z,5.5nm,1.0s								
LPAZ	**La Paz**	**48.22**	**308**	P		**P**	**07 50 31.9**	**+2.7**
	comp=Z,4.0nm,0.6s,baz=162,slow=3.2,SNR=1.4							
	comp=Z,4.0nm,0.6s							
LPAZ	**La Paz**	**48.22**	**308**			**P**	**07 50 28.9**	**-0.3**
LPAZ						IAmb	IAmb	07 50 59.2
comp=Z,3.4nm,0.6s								
LBTB	**Lobatse**	**50.56**	**77**	P		**P**	**07 50 47.3**	**+0.9**
POGA	**Pongola**	**52.24**	**85**	P		**P**	**07 50 57.8**	**-1.0**
POGA						IAmb	IAmb	07 50 58.8
comp=Z,22nm,1.1s								
CASY	**Casey**	**55.53**	**162**	P		**P**	**07 51 23.4**	**+1.2**
IMBA	**Imbabura, San**	**67.41**	**307**	P		**P**	**07 52 44.4**	**+0.6**
OTAV	**Otavalo**	**67.50**	**307**	P		**P**	**07 52 44.2**	**-0.2**
AIS	**Amsterdam Isla**	**69.08**	**126**	P		**P**	**07 52 53.1**	**-0.4**
MCQ	**Macquarie Isla**	**70.60**	**186**	P		**P**	**07 53 03.1**	**+0.6**
TOA0	**Torodi Ar. Sit**	**73.12**	**33**	P		**P**	**07 53 17.7**	**-0.4**
TOA0						IAmb	IAmb	07 53 21.2
comp=Z,5.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**73.12**	**33**	P		**P**	**07 53 21.3**	**+3.2**
	comp=Z,2.6nm,0.8s,baz=206,slow=5.9,SNR=1.4							
	comp=Z,2.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**73.12**	**33**	P		**P**	**07 53 17.5**	**-0.6**
MBAR	**Mbarara**	**73.40**	**66**	P		**P**	**07 53 18.6**	**-1.4**
ARCES	**ARCESS Array B**	**130.67**	**23**	PKP		**PKiKP**	**08 00 58.5**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=76,slow=0.5,SNR=3.7							
ILAR	**Eielson Array**	**148.00**	**314**	PKPbc		**PKiKP**	**08 01 32.9**	**-0.6**
	comp=Z,5.5nm,1.0s,baz=120,slow=2.2,SNR=1.7							
SONM	**Songino Array**	**152.56**	**87**	PKPbc		**PKiKP**	**08 01 44.4**	**+0.8**
	comp=Z,24nm,1.2s,baz=237,slow=2.4,SNR=5.2							

NEIC ***19*** *07:42:04.3±1.2, 54.75S±0.10×30.2W±0.1, h10km±1km, mb5.0/36, Error ellipse: s-maj=16.4km s-min=14.2km az=183.0*
IDC ***19*** *07:42:07.8±1.2, 54.61S×30.55W, h0km, mb4.5/2, mbtmp4.6/3, ML4.8/1, Error ellipse: s-maj=51.2km s-min=35.5km az=144.0*

ISC 19 07:42:04.5±0.5, 54.71S±0.08×30.21W±0.07, h10km, n47, σ1s45/46, mb5.0/20, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
HOPE	**Hope Point**	**3.68**	**274**		Pn	**Pn**	**07 43 01.3**	**-0.1**
ESPZ	**Base Esperanza**	**16.17**	**227**		Pn	**Pn**	**07 45 50.7**	**-0.8**
EFI	**East Falkland**	**16.91**	**269**		Pn	**Pn**	**07 46 00.0**	**-1.0**
PMSA	**Palmer Station**	**19.54**	**226**	P		**Pn**	**07 46 36.7**	**+3.6**
	2.5nm,0.3s,baz=58,slow=7.3,SNR=9.2							
	25nm,0.9s							
SNAA	**Sanae**	**20.67**	**156**	P		**P**	**07 46 43.2**	**-1.0**
MG01	**Puerto William**	**21.40**	**254**	P		**P**	**07 46 51.3**	**-0.7**
MG01						IAmb	IAmb	07 46 58.4
comp=Z,86nm,1.1s								
TRIS	**Tristan da Cun**	**21.49**	**42**	P		**P**	**07 46 52.0**	**-1.2**
TRIS						IAmb	IAmb	07 47 21.7
comp=Z,145nm,1.1s								
SMAI	**San Martin Ant**	**21.73**	**217**	P		**P**	**07 46 54.2**	**-1.2**
MG02	**Cerro Sombrero**	**22.95**	**259**	P		**P**	**07 47 09.4**	**+0.8**
BELA	**Belgrano 2**	**23.32**	**182**	P		**P**	**07 47 11.2**	**-1.1**
MG04	**Isla Riesco**	**24.25**	**257**	P		**P**	**07 47 21.3**	**-0.1**
MG04						IAmb	IAmb	07 47 49.7
comp=Z,24nm,0.7s								
GO09	**Cerro Castillo**	**25.31**	**260**	P		**P**	**07 47 30.3**	**-0.7**
TRQA	**Tornquist**	**27.20**	**295**	P		**P**	**07 47 47.7**	**-0.5**

ITQB	Itaqui	31.41	312	P	P	07 48 25.4	-0.2	
LR04	Corral	32.27	279	P	P	07 48 33.6	+0.6	
CPUP	Villa Florida	34.63	314	P	P	07 48 53.3	-0.4	
CPUP				IAmb	IAmb	07 49 15.4		
	comp=Z,14nm,0.9s							
PEL	Peldehue	35.56	291	P	P	07 49 02.4	+0.7	
PEL				IAmb	IAmb	07 49 17.5		
	comp=Z,9.2nm,0.6s							
ZON	Zonda	35.72	295	P	P	07 49 01.3	-1.8	
ZON				IAmb	IAmb	07 49 14.5		
	comp=Z,18nm,1.2s							
VA03	San Esteban	35.77	291	P	P	07 49 02.2	-1.5	
VA03				IAmb	IAmb	07 49 22.5		
	comp=Z,30nm,0.9s							
AC05	El Transito	38.70	295	P	P	07 49 28.4	-0.1	
AC05				IAmb	IAmb	07 49 56.1		
	comp=Z,21nm,0.9s							
PB09	IPOC Station P	43.98	303	P	P	07 50 12.3	+0.3	
PB09				IAmb	IAmb	07 50 16.8		
	comp=Z,18nm,1.1s							
PB02	IPOC Station P	44.70	302	P	P	07 50 17.6	-0.1	
PB02				IAmb	IAmb	07 50 46.0		
	comp=Z,20nm,1.0s							
PB01	IPOC Station P	44.74	303	P	P	07 50 18.3	+0.3	
PB01				IAmb	IAmb	07 50 23.4		
	comp=Z,16nm,0.7s							
GO01	Chusmiza	45.77	304	P	P	07 50 26.9	+0.2	
GO01				IAmb	IAmb	07 50 41.7		
	comp=Z,22nm,0.9s							
VNDA	Vanda	47.82	184	P	P	07 50 41.8	+0.4	
LPAZ	La Paz	48.19	308	P	P	07 50 48.4	+2.7	
	comp=Z,6.5nm,0.5s,baz=189,slow=9.1,SNR=5.7							
	comp=Z,6.5nm,0.5s							
ASCN	Ascension	48.35	21	P	P	07 50 45.3	-0.9	
LBTB	Lobatse	50.33	77	P	P	07 51 00.6	-0.8	
LBTB				IAmb	IAmb	07 51 11.5		
	comp=Z,15nm,1.1s							
TSUM	Tsumeb	50.61	65	P	P	07 51 03.3	-0.3	
TSUM				IAmb	IAmb	07 51 17.9		
	comp=Z,17nm,1.1s							
ETMB	Extrema	53.08	314	P	P	07 51 20.9	-1.1	
ETMB				IAmb	IAmb	07 51 24.4		
	comp=Z,10nm,1.0s							
CASY	Casey	55.74	162	P	P	07 51 40.6	0.0	
MACA	Manacapuru-AM	57.04	323	P	P	07 51 50.3	-0.2	
MACA				IAmb	IAmb	07 52 17.3		
	comp=Z,68nm,1.2s							
SLOR	San Lorenzo -	66.64	306	P	P	07 52 54.7	-1.1	
SACV	Santiago Islan	69.63	7	P	P	07 53 14.6	+0.8	
SACV				IAmb	IAmb	07 53 36.1		
	comp=Z,30nm,1.1s							
ROSC	El Rosal	69.70	312	P	P	07 53 14.7	-0.1	
BIRV	Birongo	71.68	322	P	P	07 53 25.9	-0.5	
BIRV				IAmb	IAmb	07 53 32.4		
	comp=Z,12nm,1.1s							
TORD	Torodi Ar. Bea	72.80	33	P	P	07 53 39.3	+6.3	
	comp=Z,1.9nm,0.7s,baz=198,slow=7.0,SNR=1.6							
	comp=Z,1.9nm,0.7s							
PTCN	Pitcairn Islan	75.35	247	P	P	07 53 47.8	-0.2	
GDHS	Morne Mazeau,	75.63	329	P	P	07 53 49.4	-0.2	
PYZ	Puysegur Point	78.48	192	P	P	07 54 05.5	+0.2	
MLPR	Magueyes Islan	78.91	324	P	P	07 54 07.9	+0.1	
MLPR				IAmb	IAmb	07 54 08.6		
	comp=Z,20nm,0.9s							
LODK	Lodwar	78.97	68	P	P	07 54 07.8	-0.7	
DCZ	Deep Cove	79.11	192	P	P	07 54 07.5	-1.3	
DCZ				IAmb	IAmb	07 54 14.5		
	comp=Z,18nm,1.2s							
FINES	FINESS Array B	124.02	29	PKP	PKiKP	08 01 06.0	+4.2	
	comp=Z,3.4nm,0.8s,baz=110,slow=1.3,SNR=5.6							
ARCES	ARCESS Array B	130.35	22	PKP	PKiKP	08 01 18.2	+3.9	
	comp=Z,17nm,1.2s,baz=12,slow=2.9,SNR=4.7							
ILAR	Eielson Array	147.94	314	PKPbc	PKPab	08 01 52.1	+0.9	
	comp=Z,4.7nm,0.6s,baz=117,slow=1.8,SNR=9.7							
SONM	Songino Array	152.37	86	PKPbc	PKiKP	08 02 03.8	+3.7	
	comp=Z,5.7nm,0.8s,baz=215,slow=3.3,SNR=1.7							

*IDC **19** 07:46:12.6±2.4,55°.44S×31°.32W,h0km,mb4.2/2, mbtmp4.2/2,Error ellipse: s-maj=98.6km s-min=50.6km az=12.0*

*NEIC **19** 07:46:13.0±1.4,55°.5S±0°.1×31°.4W±0°.2,h10km±1km, mb4.6/15,Error ellipse: s-maj=19.7km s-min=15.6km az=187.0*

ISC 19 07:46:12.8±0.6,55°.5S±0°.1×31°.42W±0°.09,h10km,n27, σ0s64/27,mb4.5/9,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	3.18	291	Pn	Pn	07 47 02.6	-0.2
SNAA	Sanae	20.23	154	P	P	07 50 47.3	-0.4
MG01	Puerto William	20.52	257	P	P	07 50 50.7	-0.2
MG01				IAmb	IAmb	07 50 54.1	
	comp=Z,48nm,1.1s						
MG02	Cerro Sombrero	22.13	261	P	P	07 51 08.1	-0.1
BELA	Belgrano 2	22.48	182	P	P	07 51 11.1	-0.7
GO10	Punta Arenas	23.01	259	P	P	07 51 17.4	-0.3
GO10				IAmb	IAmb	07 51 21.6	
	comp=Z,21nm,0.9s						
MG05	Puerto Natales	24.42	262	P	P	07 51 30.5	-0.7
MG05				IAmb	IAmb	07 51 33.4	
	comp=Z,24nm,1.1s						
MT09	Talagante	34.89	292	P	P	07 53 04.4	0.0
MT09				IAmb	IAmb	07 53 16.1	
	comp=Z,8.5nm,1.1s						
MT01	Popeta	34.96	292	P	P	07 53 05.8	+1.0
MT01				IAmb	IAmb	07 53 20.2	
	comp=Z,8.2nm,1.1s						
VA06	Catapilco	35.99	293	P	P	07 53 14.0	+0.3
CO02	Combarbal	36.91	295	P	P	07 53 22.5	+0.8
CO03	El Pedregal	37.04	295	P	P	07 53 22.9	+0.1
CO03				IAmb	IAmb	07 53 26.0	
	comp=Z,5.5nm,0.7s						
GO02	Mina Guanaco	41.15	302	P	P	07 53 57.8	+0.3
GO02				IAmb	IAmb	07 54 00.9	
	comp=Z,6.3nm,0.7s						
SUR	Sutherland	42.85	80	P	P	07 54 10.8	-0.4
SUR				IAmb	IAmb	07 54 18.2	
	comp=Z,7.8nm,1.0s						
SHEL	Horse Pasture	44.13	37	P	P	07 54 21.1	-0.2
SOE	Somerset East	45.28	84	P	P	07 54 30.6	+0.1
VNDA	Vanda	46.96	184	P	P	07 54 44.0	+0.9
PB16	IPOC Station P	46.98	307	P	P	07 54 44.2	-0.4
LPAZ	La Paz	48.16	310	P	P	07 54 54.8	+1.0
	comp=Z,4.5nm,0.6s,baz=144,slow=5.1,SNR=4.0						
	comp=Z,4.5nm,0.6s						
LPAZ	La Paz	48.16	310	P	P	07 54 54.5	+0.7
LPAZ				IAmb	IAmb	07 55 03.8	
	comp=Z,5.8nm,0.9s						
LBTB	Lobatse	51.19	78	P	P	07 55 15.1	-1.1
ETMB	Extrema	53.16	315	P	P	07 55 30.3	-0.5
ETMB				IAmb	IAmb	07 55 40.4	
	comp=Z,1.8nm,0.8s						
TOA0	Torodi Ar. Sit	73.86	34	P	P	07 57 48.1	+0.5
TORD	Torodi Ar. Bea	73.86	34	P	P	07 57 48.4	+0.8
	comp=Z,0.9nm,0.7s,baz=204,slow=4.7,SNR=1.5						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	73.86	34	P	P	07 57 47.4	-0.2
ILAR	Eielson Array	148.00	313	PKPbc	PKPbc	08 05 57.7	+0.8
	comp=Z,2.0nm,0.8s,baz=117,slow=1.8,SNR=4.4						
SONM	Songino Array	153.09	89	PKPbc	PKiKP	08 06 10.9	+1.0
	comp=Z,1.8nm,0.8s,baz=184,slow=0.9,SNR=1.7						

*IDC **19** 07:46:37.7±0.6,55°.11S×31°.86W,h0km,mb4.7/9, mbtmp4.7/10,ML4.0/1,Error ellipse: s-maj=22.9km s-min=18.2km az=39.0*

*NEIC **19** 07:46:39.3±1.4,55°.20S±0°.09×31°.9W±0°.2,h10km±1km, mb5.2/49,Error ellipse: s-maj=16.1km s-min=13.8km az=39.0*

ISC 19 07:46:39.2±0.3,55°.12S±0°.07×31°.87W±0°.07,h10km,n203, σ0s79/193,mb5.1/30,1D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	2.81	286	Pn	Pn	07 47 24.6	+0.5
ORCD	Orcadas	8.85	225	Pn	Pn	07 48 45.7	-1.3
PMSA	Palmer Station	18.57	226	P	Pn	07 50 57.2	+1.2
	0.5nm,0.3s,baz=110,slow=23,SNR=4.6						
	20nm,1.0s						
VNA3	Neumayer Olymp	18.81	158	P	Pn	07 51 03.4	+4.5
SNAA	Sanae	20.70	154	P	P	07 51 18.7	-0.4
MG02	Cerro Sombrero	21.94	261	P	P	07 51 33.0	+0.6
TROLL	Troll, Antarti	22.28	152	P	P	07 51 35.4	-0.8
BELA	Belgrano 2	22.87	182	P	P	07 51 40.5	-1.7
MG04	Isla Riesco	23.24	259	P	P	07 51 47.0	+0.8
MG04				IAmb	IAmb	07 52 00.7	
	comp=Z,58nm,0.8s						
MG05	Puerto Natales	24.22	261	P	P	07 51 54.9	-0.9
MG05				IAmb	IAmb	07 52 20.9	
	comp=Z,37nm,1.1s						
TRQA	Tornquist	26.52	298	P	P	07 52 17.3	+0.6
PLTB	Pedras Altas	27.96	318	P	P	07 52 30.1	+0.5
AY01	Puyuhuapi	28.04	275	P	P	07 52 30.2	0.0
AY01				IAmb	IAmb	07 52 31.0	
	comp=Z,24nm,0.8s						
LL02	Futaleuf	28.34	278	P	P	07 52 32.6	-0.3
PLCA	Paso Flores	29.21	283	P	P	07 52 39.2	-1.7
	comp=Z,9.7nm,1.0s,baz=146,slow=6.6,SNR=4.8						
	comp=Z,9.7nm,1.0s						
PLCA	Paso Flores	29.21	283	P	P	07 52 41.2	+0.4
LMEL	Las Melosas	34.02	293	P	P	07 53 23.6	+0.4
LMEL				IAmb	IAmb	07 53 30.2	
	comp=Z,24nm,0.9s						
GO05	Huala	34.07	289	P	P	07 53 23.0	-0.5
GO05				IAmb	IAmb	07 53 23.8	
	comp=Z,35nm,0.8s						
BO01	Tunca	34.08	291	P	P	07 53 22.5	-1.0
BO01				IAmb	IAmb	07 53 34.2	
	comp=Z,29nm,1.1s						
CPUP	Villa Florida	34.26	317	P	P	07 53 24.6	-0.5
	comp=Z,25nm,0.9s,baz=159,slow=8.2,SNR=14						
	comp=Z,25nm,0.9s						
MT01	Popeta	34.57	291	P	P	07 53 27.2	-0.6
MT01				IAmb	IAmb	07 53 28.3	
	comp=Z,36nm,0.7s						
VA05	Santo Domingo	34.92	291	P	P	07 53 30.1	-0.7
MT02	Curacav	34.97	292	P	P	07 53 30.3	-1.0
ZON	Zonda	35.03	297	P	P	07 53 31.7	-0.2
ZON				IAmb	IAmb	07 53 32.2	
	comp=Z,25nm,0.7s						
VA03	San Esteban	35.05	294	P	P	07 53 31.5	-0.6
VA03				IAmb	IAmb	07 53 34.0	
	comp=Z,64nm,1.0s						
ROC1	El Roble	35.13	293	P	P	07 53 32.6	-0.3
VA06	Catapilco	35.60	293	P	P	07 53 35.8	-0.8
CO02	Combarbal	36.51	295	P	P	07 53 43.9	-0.7
CO02				IAmb	IAmb	07 53 49.1	
	comp=Z,55nm,0.9s						
CO03	El Pedregal	36.63	295	P	P	07 53 46.1	+0.4
GO02	Mina Guanaco	40.73	302	P	P	07 54 19.9	-0.4
GO02				IAmb	IAmb	07 54 21.7	
	comp=Z,59nm,0.8s						
AF01	San Pedro de A	41.92	305	P	P	07 54 30.8	+0.6
MAW	Mawson	42.45	146	P	P	07 54 33.6	+0.1
	comp=Z,4.9nm,0.7s,baz=243,slow=9.5,SNR=9.4						
	comp=Z,4.9nm,0.7s						
MAW	Mawson	42.45	146	P	P	07 54 33.2	-0.3
LVC	Limon Verde	42.56	305	P	P	07 54 35.7	+0.3
LVC				IAmb	IAmb	07 54 38.2	
	comp=Z,44nm,1.0s						
SUR	Sutherland	43.04	80	P	P	07 54 39.9	+0.9
PB07	IPOC Station P	43.78	304	P	P	07 54 45.7	+0.6
PB07				IAmb	IAmb	07 54 46.9	
	comp=Z,33nm,1.1s						
SHEL	Horse Pasture	43.97	38	P	P	07 54 46.1	-0.3
PB01	IPOC Station P	44.18	305	P	P	07 54 48.6	+0.4
PB01				IAmb	IAmb	07 54 49.8	
	comp=Z,42nm,0.7s						
GO01	Chusmiza	45.23	306	P	P	07 54 57.2	+0.3
GO01				IAmb	IAmb	07 54 58.9	
	comp=Z,40nm,0.8s						
SBA	Scott Base	46.79	185	P	P	07 55 08.4	+0.4
VNDA	Vanda	47.34	184	P	P	07 55 13.2	+0.8
	comp=Z,1.8nm,0.7s,baz=202,slow=8.6,SNR=3.6						
	comp=Z,1.8nm,0.7s						
VNDA	Vanda	47.34	184	P	P	07 55 12.5	+0.1
LPAZ	La Paz	47.70	310	P	P	07 55 17.9	+1.2
	comp=Z,29nm,0.8s,baz=148,slow=5.7,SNR=18						
	comp=Z,29nm,0.8s						
LPAZ	La Paz	47.70	310	P	P	07 55 15.8	-0.9
H10S2	ASCENSION HYDR	48.04	23	T	T	08 47 21.9	
	baz=193,slow=74,SNR=6.7						
H10S3	ASCENSION HYDR	48.04	23	T	T	08 47 25.4	
	baz=27,slow=74,SNR=5.1						
BOSA	Boshof	48.38	81	P	P	07 55 21.3	+0.1
	comp=Z,3.8nm,0.7s,baz=218,slow=6.1,SNR=6.6						
	comp=Z,3.8nm,0.7s						
BOSA	Boshof	48.38	81	P	P	07 55 21.1	-0.1
ASCN	Ascension	49.09	23	P	P	07 55 27.5	+0.9
H10N1	ASCENSION HYDR	49.15	23	T	T	08 48 44.6	
	baz=192,slow=75,SNR=8.1						
H10N3	ASCENSION HYDR	49.15	23	T	T	08 48 48.0	
	baz=192,slow=75,SNR=6.9						
H10N2	ASCENSION HYDR	49.17	23	T	T	08 48 51.6	
	baz=192,slow=75,SNR=6.4						
CRZF	Crozet Islands	50.61	117	P	P	07 55 38.0	+0.2
LBTB	Lobatse	51.35	78	P	P	07 55 43.3	-0.5
LBTB				IAmb	IAmb	07 55 58.1	
	comp=Z,19nm,1.1s						
TSUM	Tsumeb	51.65	66	P	P	07 55 46.1	+0.1
MACA	Manacapuru-AM	56.81	325	P	P	07 56 22.6	-0.9
MACA				IAmb	IAmb	07 56 25.6	
	comp=Z,20nm,0.7s						
DBIC	Dimbokro	65.55	30	P	P	07 57 23.7	+0.9
	comp=Z,5.1nm,0.9s,baz=235,slow=8.3,SNR=3.6						
	comp=Z,5.1nm,0.9s						
OTAV	Otavalo	66.96	308	P	P	07 57 31.7	-0.7
OTAV				IAmb	IAmb	07 57 35.9	
	comp=Z,17nm,0.9s						
SDV	Santo Domingo	71.52	319	P	P	07 58 00.5	+0.2
	comp=Z,10.0nm,0.5s,baz=255,slow=0.9,SNR=7.4						
	comp=Z,10.0nm,0.5s						
SDV	Santo Domingo	71.52	319	P	P	07 57 59.5	-0.8
SDV				IAmb	IAmb	07 58 00.9	
	comp=Z,15nm,0.8s						
TORD	Torodi Ar. Bea	73.67	34	P	P	07 58 12.9	+0.2
	comp=Z,5.7nm,0.6s,baz=198,slow=6.2,SNR=14						
	comp=Z,5.7nm,0.6s						
DRK0	Durika	77.11	308	P	P	07 58 32.3	-0.6
SRBA	San Rafael, Bu	77.14	308	P	P	07 58 32.5	-0.4
SRBA				IAmb	IAmb	07 58 36.1	
	comp=Z,16nm,1.2s						
JTS	Las Juntas de	78.80	307	P	P	07 58 42.2	+0.2
JTS				IAmb	IAmb	07 58 43.8	
	comp=Z,26nm,1.1s						
BOAB	BOACO BROADBAN	81.02	307	P	P	07 58 53.2	-0.8
MATN	Matagalpa	81.56	307	P	P	07 58 56.5	-0.5
MATN				IAmb	IAmb	07 58 57.6	
	comp=Z,16nm,1.0s						
TEIG	Tepich	89.02	309	P	P	07 59 34.8	+0.8
ASAR	Alice Springs	100.59	167	P	Pdif	08 00 25.9	-1.3
	comp=Z,0.8nm,0.7s,baz=183,slow=4.6,SNR=4.1						
O48B	Farmland	105.32	320	P	PKiKP	08 05 03.7	+2.4
	baz=152						
CLL	Collm	112.44	29	ePP	PP	08 06 00.0	-1.2
MONP2	Monument Peak	113.36	294	P	PKiKP	08 05 17.7	+0.8
	baz=142						
BC3	Big Chuckawall	113.45	295	P	PKiKP	08 05 17.9	+0.9
	baz=142						
ISCO	Idaho Springs	113.46	306	P	PKiKP	08 05 18.2	+1.2
	baz=143						
BFSC	Mount Baldy Ra	115.06	294	P	PKiKP	08 05 21.5	+1.5
	baz=141						
TUQ	Turquoise Moun	115.08	296	P	PKiKP	08 05 21.7	+1.7
	baz=141						
RSSD	Black Hills	116.18	310	P	PKiKP	08 05 24.1	+2.2
	baz=143						
MPMC	Manual Prospec	116.37	296	P	PKiKP	08 05 23.9	+1.3
	baz=140						
TPNV	Topopah Spring	116.42	297	P	PKiKP	08 05 23.9	+1.3
	baz=140						
ISA	Isabella, Lake	116.58	295	P	PKiKP	08 05 24.0	+1.1
	baz=140						
PKM	Mcpherson Peak	116.69	293	P	PKiKP	08 05 24.3	+1.1
	baz=140						
NVAR	Mina Array Bea	118.60	297	PKP	PKPdf	08 05 26.9	+0.1
	comp=Z,12nm,1.1s,baz=300,slow=1.5,SNR=4.1						
FINES	FINESS Array B	124.85	30	PKP	PKPdf	08 05 37.4	-0.3
	comp=Z,1.8nm,0.7s,baz=288,slow=1.8,SNR=1.2						
YKA	Yellowknife Ar	133.73	320	PKP	PKPdf	08 05 54.5	-0.1
	comp=Z,1.4nm,0.6s,baz=104,slow=6.1,SNR=5.0						
PZH	PanZhiHua	135.92	111	PKP	PKPdf	08 05 59.5	-0.5
WMQ	Urumqi	140.35	81	eP	PKiKP	08 06 09.6	-0.5
INK	Inuvik	143.42	322	PKhKP	PKPpre	08 06 08.9	
	comp=Z,2.5nm,0.5s,baz=54,slow=0.8,SNR=6.8						
ZALV	Zalesovo Beam	144.37	65	PKP	PKPab	08 06 12.2	-0.2
	comp=Z,4.1nm,0.6s,baz=218,slow=4.3,SNR=4.7						
LZH	Lanzhou	144.40	104	ePKP	PKPab	08 06 08.8	-4.5
LZH				pPKP	sPKPdf	08 06 17.8	+0.1
LZH				sPKP		08 06 24.4	
GTA	Gaotai	144.49	96	ePKPbc	PKPab	08 06 13.3	0.0
M27K	Edge Creek, AK	144.66	311	P	PKPbc	08 06 13.6	0.0
	baz=111,SNR=9.9						
MCARA	McCarthy VSAT	144.81	309	P	PKPbc	08 06 14.2	+0.2
	baz=112						
L27K	Beaver Creek,	144.89	312	P	PKPbc	08 06 14.4	+0.2
	baz=110,SNR=11						
KAIM	Kayak Island	144.90	306	P	PKPbc	08 06 14.4	+0.2
	baz=113						
M26K	Nabesna, AK	145.17	310	P	PKPbc	08 06 14.7	-0.4
	baz=110						
EGAK	Eagle	145.18	315	P	PKPbc	08 06 14.6	-0.4
	baz=108,SNR=5.3						
K27K	Chicken	145.32	313	P	PKPab	08 06 16.6	+0.9
	baz=109						
BMRM	Bremner River	145.37	308	PKPbc	PKPbc	08 06 15.4	-0.4
BMRM	Bremner River	145.37	308	P	PKPab	08 06 16.3	+0.3
	baz=111,SNR=7.0						
L26K	Log Cabin Wild	145.53	311	PKPdf	PKPdf	08 06 15.8	-0.2
L26K	Log Cabin Wild	145.53	311	P	PKPbc	08 06 16.3	0.0
	baz=109,SNR=7.2						
N25K	Chitina, Valde	145.60	309	P	PKPab	08 06 16.9	0.0
	baz=110						
I27K	Kandik River	145.61	316	P	PKPab	08 06 16.8	0.0
	baz=107						
XAN	Xi'an	145.66	111	P	PKPdf	08 06 16.4	-0.8
XAN				pmax	pmax		
	comp=Z,25nm,0.9s						
EYAK	Cordova Ski Ar	145.75	307	P	PKPab	08 06 17.3	0.0
	baz=111,SNR=6.0						
H27K	Steamboat Moun	145.76	317	P	PKPbc	08 06 17.1	+0.3
	baz=106						
G27K	Doyon Strip	145.96	318	P	PKPbc	08 06 17.7	+0.2
	baz=105,SNR=5.7						
J26L	Joseph Creek	146.08	314	P	PKPbc	08 06 18.4	+0.4
	baz=107,SNR=9.7						
SCRK	Sand Creek	146.10	313	P	PKPbc	08 06 18.4	+0.3
	baz=108,SNR=5.9						
I26K	Coal Creek Min	146.15	315		PKPdf	08 06 17.3	+0.3
I26K	Coal Creek Min	146.15	315	P	PKPbc	08 06 18.2	+0.2
	baz=106						
KLU	Klutina	146.16	308	P	PKPbc	08 06 18.4	+0.1
	baz=110,SNR=10						
E27K	Coleen River	146.28	321	P	PKPbc	08 06 18.7	+0.3
	baz=103,SNR=5.4						
P23K	Montague Islan	146.32	305	P	PKPbc	08 06 18.7	+0.1
	baz=111						
RIDG	Independent Ri	146.40	312	P	PKPab	08 06 19.5	-0.3
	baz=107,SNR=11						
PAX	Paxson	146.43	311	P	PKPbc	08 06 19.2	+0.1
	baz=108,SNR=10.0						
M24K	Tolsona, Glenn	146.47	309	P	PKPab	08 06 20.2	0.0
	baz=109,SNR=5.4						
GLI	Glacier Island	146.48	307	P	PKPbc	08 06 19.4	+0.3
	baz=110,SNR=8.5						
K24K	Donnelly Dome	146.81	312	P	PKPbc	08 06 20.6	+0.5
	baz=106						
G26K	Porcupine Rive	146.81	318	P	PKPbc	08 06 19.8	-0.1
	baz=103						
J25K	Salcha River,	146.86	314	P	PKPbc	08 06 20.6	+0.3
	baz=106						
SCM	Sheep Creek Mo	146.90	308	P	PKPbc	08 06 21.1	+0.6
	baz=108,SNR=8.3						
PWL	Port Wells	147.05	306	P	PKPbc	08 06 21.1	+0.3
	baz=105,SNR=6.2						
M23K	Glacier View	147.07	308	P	PKPbc	08 06 21.3	+0.5
	baz=108,SNR=6.9						
F26K	Sheenjek River	147.11	319	P	PKPbc	08 06 21.4	+0.6
	baz=102						
PRP	Porcupine Dome	147.16	315	P	PKPab	08 06 22.6	-0.2
	baz=104						
KNK	Knik Glacier	147.28	307	P	PKPbc	08 06 21.7	+0.3
	baz=108						
DHY	Denali Highway	147.29	311	P	PKPbc	08 06 22.4	+0.8
	baz=106						
C27K	Jago River	147.31	323	P	PKPbc	08 06 22.0	+0.7
	baz=99						
WAT6	Susitna Watana	147.31	310	P	PKPbc	08 06 22.1	+0.4
	baz=107,SNR=10						
SEW	Seward	147.32	305	P	PKPbc	08 06 21.7	+0.2
	baz=110,SNR=8.3						
SML	Sawmill	147.35	308	P	PKPbc	08 06 21.9	+0.3
	baz=108,SNR=6.2						
H25K	Birch Creek	147.45	317	P	PKPbc	08 06 22.4	+0.7
	baz=103						
HDA	Harding Lake	147.47	313	P	PKPbc	08 06 22.5	+0.6
	baz=105						
ILAR	Eielson Array	147.53	314	PKPbc	PKPbc	08 06 21.7	-0.3
	comp=Z,25nm,1.0s,baz=125,slow=1.9,SNR=22						
ILAR	Eielson Array	147.53	314		PKPbc	08 06 21.6	-0.4
PMR	Palmer	147.64	307	P	PKPbc	08 06 22.4	+0.1
	baz=108						
F25K	Christian Rive	147.65	319	P	PKPbc	08 06 22.5	+0.2
	baz=101						
E25K	Arctic Village	147.72	320	P	PKPbc	08 06 22.8	+0.3
	baz=100,SNR=5.8						
WAT1	Susitna Watana	147.74	310	P	PKPbc	08 06 22.8	+0.1
	baz=106						
RC01	Rabbit Creek A	147.77	306	P	PKPbc	08 06 22.9	+0.2
	baz=108						
BRSE	Bradley Lake S	147.81	304	P	PKPbc	08 06 23.3	+0.4
	baz=105,SNR=5.2						
POKR	Poker Flat Res	147.84	314	P	PKPbc	08 06 23.2	+0.3
	baz=103						
COLA	College	147.96	314	P	PKPbc	08 06 23.4	+0.3
	baz=103						
TCOL	CIGO, UAF Yank	147.96	314	P	PKPbc	08 06 23.3	+0.1
	baz=103						
KDAK	Kodiak Island	148.04	300	P	PKPbc	08 06 23.5	0.0
	baz=111						
M22K	Willow	148.14	307	P	PKPbc	08 06 24.0	+0.3
	baz=107,SNR=6.8						
MCK	McKinley	148.14	311	P	PKPbc	08 06 24.3	+0.7
	baz=104						

baz=93
I21K **Tanana** 149.74 314 P **PKiKP** 08 06 28.7 +0.1
baz=100
G22K **Bettles** 149.80 317 P **PKiKP** 08 06 28.3 -0.3
baz=97
P18K **Big Mountain,** 149.87 302 P **PKPbc** 08 06 27.7 -0.4
baz=107
R17K **Ugashik Creek** 149.90 298 P **PKPbc** 08 06 28.4 +0.1
baz=110
N19K **Bonanza Creek** 149.91 305 P **PKPbc** 08 06 28.7 -0.5
baz=105,SNR=7.4
O18K **Koktuh Hills** 150.00 303 **PKPbc** 08 06 28.1 -0.3
O18K **Koktuh Hills** 150.00 303 P **PKPbc** 08 06 28.2 -0.3
baz=106
L20K **Farewell, AK** 150.04 308 P **PKPbc** 08 06 27.9 -0.6
baz=103
E22K **Anaktuvuk Pass** 150.04 319 P **PKPbc** 08 06 28.8 +0.5
baz=95
F22K **John River** 150.12 318 P **PKPbc** 08 06 28.8 +0.3
baz=96
M19K **Big River Lodg** 150.14 307 P **PKPbc** 08 06 28.3 -0.4
baz=104
H21K **Melozitna Rive** 150.15 314 P **PKPbc** 08 06 28.7 0.0
baz=98,SNR=6.0
K20K **Telida** 150.31 310 P **PKPbc** 08 06 28.7 -0.4
baz=101,SNR=5.9
Q16K **King Salmon** 150.37 300 P **PKPbc** 08 06 29.2 -0.1
baz=108
P17K **Kvichak River** 150.41 301 P **PKPbc** 08 06 29.5 +0.1
baz=107
L19K **White Mountain** 150.41 307 P **PKPbc** 08 06 28.5 -0.9
baz=103
J20K **Nowinta River** 150.49 311 P **PKPbc** 08 06 29.3 -0.2
baz=100
G21K **Allakaket** 150.54 316 P **PKiKP** 08 06 30.1 -0.2
baz=96,SNR=6.3
N18K **Kilae Creek** 150.54 304 P **PKPbc** 08 06 29.4 -0.4
baz=105
F21K **Alatna River** 150.60 318 P **PKiKP** 08 06 30.5 +0.1
baz=95
O17K **Koliganek Bris** 150.89 302 P **PKPbc** 08 06 30.3 -0.2
baz=106,SNR=7.9
S14K **Fog Glacier** 151.08 294 P **PKPbc** 08 06 31.4 +0.2
baz=110
TTA **Tatalina** 151.09 308 P **PKiKP** 08 06 31.6 +0.1
baz=101,SNR=8.2
HNS **HongShan** 151.26 114 ||PKPbc **PKPbc** 08 06 31.8 -0.3
GCSA **Galena City Sc** 151.74 312 P **PKiKP** 08 06 33.1 +0.4
baz=97
N16K **Nishlik Lake** 151.88 303 P **PKiKP** 08 06 34.1 +0.9
baz=103
HHC **Hu-ho-hao-te** 152.04 105 *e*P **PKPdf** 08 06 25.3 -2.1
SONM **Songino Array** 153.34 88 PKPbc **PKPbc** 08 06 35.9 -0.7
comp=Z,4.5nm,0.8s,baz=219,slow=3.4,SNR=7.1
XLT **XiLinHaoTe** 156.57 105 *e*P **PKPdf** 08 06 32.0 -1.6
XLT pmax pmax
comp=Z,9.0nm,1.0s

BUC 19 07:50:14.8±0.2,46°04'N×22°34'E,h6km±2km,ml2.0/10, 29C-12D,Error ellipse: s-maj=1.8km s-min=1.5km az=93.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEV	**Deva**	**0.16**	**165**	↑P	Pg	07 50 17.7	-0.4
DEV				↑S	Sg	07 50 21.1	+0.8
DEV	**Deva**	**0.16**	**165**	||P	Pg	07 50 17.7	-0.4
DEV				||S	Sg	07 50 21.1	+0.8
GZR	**Gura Zlata**	**0.65**	**184**	↑P	Pg	07 50 26.9	-0.4
GZR				↑S	Sb	07 50 36.9	-1.0
GZR	**Gura Zlata**	**0.65**	**184**	||P	Pg	07 50 26.9	-0.4
GZR				||S	Sb	07 50 36.9	-1.0
DRGR		**0.76**	**353**	↑P	Pg	07 50 29.5	+0.1
DRGR				↑S	Sg	07 50 40.0	+0.8
DRGR		**0.76**	**353**	||P	Pg	07 50 29.5	+0.1
DRGR				||S	Sg	07 50 40.0	+0.8
CJR	**Cluj-Napoca**	**0.85**	**38**	||P	Pg	07 50 30.6	-0.6
CJR				||S	Sb	07 50 44.4	+0.5
CJR	**Cluj-Napoca**	**0.85**	**38**	||P	Pg	07 50 30.6	-0.6
CJR				||S	Sb	07 50 44.4	+0.5
SIRR	**Siria**	**0.85**	**286**	↑P	Pg	07 50 30.5	-0.7
SIRR				↑S	Sb	07 50 43.2	-0.6
SIRR	**Siria**	**0.85**	**286**	||P	Pg	07 50 30.5	-0.7
SIRR				||S	Sb	07 50 43.2	-0.6
LOT	**Lotru**	**0.88**	**132**	↑P	Pg	07 50 32.0	+0.3
LOT				↑S	Sg	07 50 43.8	+0.8
LOT	**Lotru**	**0.88**	**132**	||P	Pg	07 50 32.0	+0.3
LOT				||S	Sg	07 50 43.8	+0.8
BZS	**Buzias**	**0.96**	**244**	||P	Pg	07 50 33.2	+0.1
BZS				||S	Sb	07 50 46.3	-0.4
BZS	**Buzias**	**0.96**	**244**	||P	Pg	07 50 33.2	+0.1
BZS				||S	Sb	07 50 46.3	-0.4
HERR	**Herculane**	**1.20**	**195**	↑P	Pg	07 50 37.2	-0.5
HERR				↑S	Sn	07 50 54.4	-0.3
HERR	**Herculane**	**1.20**	**195**	||P	Pg	07 50 37.2	-0.5
HERR				||S	Sn	07 50 54.4	-0.3
ARR	**Arges**	**1.42**	**118**	||S	Sg	07 51 01.1	+0.5
MDVR	**Moldovita**	**1.49**	**213**	||P	Pn	07 50 41.4	-0.8
MDVR				||S	Sg	07 51 03.9	+1.2
MDVR	**Moldovita**	**1.49**	**213**	||P	Pn	07 50 41.4	-0.8
MDVR				||S	Sg	07 51 03.9	+1.2
VOIR		**1.66**	**111**	||P	Pn	07 50 44.8	+0.3
VOIR				||S	Sb	07 51 06.9	-0.1
VOIR		**1.66**	**111**	||P	Pn	07 50 44.8	+0.3
VOIR				||S	Sb	07 51 06.9	-0.1

*IDC **19** 07:50:46.5±2.1,54°.76S×30°.66W,h0km,mb3.9/2, mbtmp4.0/3,ML4.0/1,Error ellipse: s-maj=73.1km s-min=39.3km az=135.0*
*NEIC **19** 07:50:47.4±1.7,54°.75S±0°.1×30°.8W±0°.1,h10km±1km, mb4.4/9,Error ellipse: s-maj=20.5km s-min=11.2km az=16.0.*

ISC 19 07:50:47.1±0.7,54°.7S±0°.1×30°.83W±0°.09,h10km,n23, σ1s29/23,mb4.2/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.33**	**275**	Pn	**Pn**	**07 51 38.1**	**-1.1**
EFI	**East Falkland**	**16.56**	**269**	Pn	**Pn**	**07 54 38.6**	**-0.6**
EFI				IAmb	IAmb	07 54 55.6	
comp=Z,54nm,1.1s							
PMSA	**Palmer Station**	**19.28**	**225**	P	**Pn**	**07 55 13.7**	**+1.1**
comp=Z,0.5nm,0.3s,baz=64,slow=7.7,SNR=2.7							
comp=Z,6.6nm,0.8s							
SNAA	**Sanae**	**20.81**	**155**	P	**P**	**07 55 28.3**	**0.0**
BELA	**Belgrano 2**	**23.30**	**182**	P	**P**	**07 55 54.2**	**-0.4**
GO09	**Cerro Castillo**	**24.95**	**261**	P	**P**	**07 56 07.5**	**-2.8**
GO09				IAmb	IAmb	07 56 29.8	
comp=Z,5.1nm,0.8s							
COYC	**Coyhaique**	**27.61**	**272**	P	**P**	**07 56 34.5**	**+0.1**
GO07	**Milladeo Hill,**	**29.98**	**275**	P	**P**	**07 56 55.2**	**-0.3**
LL07	**Hotel Espejo d**	**30.05**	**275**	P	**P**	**07 56 56.2**	**+0.2**
BO02	**Sierra Bellavi**	**34.04**	**289**	P	**P**	**07 57 31.3**	**0.0**
BO02				IAmb	IAmb	07 57 36.4	
comp=Z,2.8nm,0.8s							
CPUP	**Villa Florida**	**34.38**	**315**	P	**P**	**07 57 34.7**	**+0.4**
MT02	**Curacav**	**35.38**	**291**	P	**P**	**07 57 42.4**	**-0.4**
GO03	**Copiap**	**39.36**	**297**	P	**P**	**07 58 17.1**	**+0.4**
GO03				IAmb	IAmb	07 58 34.4	
comp=Z,10.0nm,1.0s							
SUR	**Sutherland**	**42.38**	**80**	P	**P**	**07 58 39.9**	**-1.7**
MAW	**Mawson**	**42.44**	**145**	P	**P**	**07 58 42.8**	**+1.3**
PTLB	**Pontes e Lacer**	**44.91**	**320**	P	**P**	**07 59 03.2**	**+1.3**
VNDA	**Vanda**	**47.79**	**184**	P	**P**	**07 59 24.2**	**+0.3**
LPAZ	**La Paz**	**47.92**	**308**	P	**P**	**07 59 28.3**	**+2.0**
comp=Z,1.3nm,0.6s,baz=106,slow=3.8,SNR=1.9							
comp=Z,1.3nm,0.6s							
LPAZ	**La Paz**	**47.92**	**308**	P	**P**	**07 59 27.9**	**+1.6**
RCBR	**Riachuelo**	**48.92**	**353**	P	**P**	**07 59 33.7**	**+0.4**
RCBR				IAmb	IAmb	07 59 57.8	
comp=Z,8.8nm,1.0s							
TORD	**Torodi Ar. Bea**	**73.00**	**33**	P	**P**	**08 02 18.5**	**+1.6**
comp=Z,1.0nm,0.9s,baz=194,slow=6.0,SNR=2.0							
comp=Z,1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.00**	**33**	P	**P**	**08 02 14.7**	**-2.2**
ILAR	**Eielson Array**	**147.69**	**314**	PKPbc	**PKPbc**	**08 10 29.4**	**-1.0**
comp=Z,1.1nm,0.6s,baz=109,slow=1.8,SNR=4.9							

*IDC **19** 07:53:08.5±1.0,55°.13S×30°.73W,h0km,mb4.2/4, mbtmp4.2/5,ML3.0/1,Error ellipse: s-maj=33.9km s-min=26.5km az=83.0*
*NEIC **19** 07:53:09.7±2.4,55°.4S±0°.1×30°.9W±0°.2,h10km±1km, mb4.5/18,Error ellipse: s-maj=17.4km s-min=15.1km az=193.0*

ISC 19 07:53:09.7±0.6,55°.3S±0°.1×30°.90W±0°.08,h10km,n35, σ1s03/35,mb4.4/11,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.39**	**285**	Pn	**Pn**	**07 54 03.9**	**+1.4**
ORCD	**Orcadas**	**9.14**	**228**	Pn	**Pn**	**07 55 20.6**	**-0.8**
EFI	**East Falkland**	**16.52**	**271**	Pn	**Pn**	**07 57 00.3**	**-0.9**
EFI				IAmb	IAmb	07 57 13.0	
comp=Z,46nm,1.1s							
PMSA	**Palmer Station**	**18.86**	**226**	P	**Pn**	**07 57 32.1**	**+2.1**
comp=Z,0.1nm,0.3s,baz=263,slow=10.0,SNR=3.6							
comp=Z,4.4nm,0.8s							
MG02	**Cerro Sombrero**	**22.46**	**260**	P	**P**	**07 58 07.3**	**-1.3**
MG05	**Puerto Natales**	**24.75**	**261**	P	**P**	**07 58 31.2**	**+0.2**
MG05				IAmb	IAmb	07 58 51.9	
comp=Z,12nm,0.8s							
GO09	**Cerro Castillo**	**24.83**	**262**	P	**P**	**07 58 30.7**	**-1.1**
GO09				IAmb	IAmb	07 58 43.9	
comp=Z,11nm,1.1s							
PLTB	**Pedras Altas**	**28.45**	**316**	P	**P**	**07 59 05.4**	**+0.7**
PLTB				IAmb	IAmb	07 59 13.4	
comp=Z,10nm,1.0s							
PLCA	**Paso Flores**	**29.79**	**283**	P	**P**	**07 59 13.9**	**-2.5**
CPUP	**Villa Florida**	**34.76**	**316**	P	**P**	**08 00 00.4**	**+0.4**
comp=Z,4.0nm,0.7s,baz=147,slow=8.1,SNR=9.4							
comp=Z,4.0nm,0.7s							
CPUP	**Villa Florida**	**34.76**	**316**	P	**P**	**08 00 00.2**	**+0.2**
MT09	**Talagante**	**35.07**	**291**		**P**	**08 00 03.0**	**+0.1**
VA06	**Catapilco**	**36.17**	**292**	P	**P**	**08 00 13.0**	**+0.9**
CO02	**Combarbal**	**37.08**	**294**	P	**P**	**08 00 21.3**	**+1.2**
CO02				IAmb	IAmb	08 00 34.7	
comp=Z,3.7nm,0.7s							
AC05	**El Transito**	**38.60**	**297**	P	**P**	**08 00 33.5**	**+0.6**
AC05				IAmb	IAmb	08 01 01.4	
comp=Z,7.2nm,1.1s							
GO02	**Mina Guanaco**	**41.28**	**301**	P	**P**	**08 00 56.6**	**+1.2**
GO02				IAmb	IAmb	08 01 03.9	
comp=Z,15nm,1.1s							
LVC	**Limon Verde**	**43.11**	**304**	P	**P**	**08 01 08.9**	**-1.5**
PB01	**IPOC Station P**	**44.73**	**304**	P	**P**	**08 01 23.8**	**+0.7**
PTLB	**Pontes e Lacer**	**45.32**	**320**	P	**P**	**08 01 27.8**	**+0.1**
VNDA	**Vanda**	**47.22**	**184**	P	**P**	**08 01 43.8**	**+1.8**
comp=Z,1.3nm,0.7s,baz=161,slow=2.2,SNR=6.7							
comp=Z,1.3nm,0.7s							
VNDA	**Vanda**	**47.22**	**184**	P	**P**	**08 01 42.5**	**+0.5**
BOSA	**Boshof**	**47.87**	**80**	P	**P**	**08 01 46.4**	**-1.4**
LPAZ	**La Paz**	**48.24**	**309**	P	**P**	**08 01 50.5**	**-0.8**
comp=Z,3.2nm,0.6s,baz=132,slow=5.5,SNR=8.6							
comp=Z,3.2nm,0.6s							
LPAZ	**La Paz**	**48.24**	**309**	P	**P**	**08 01 51.0**	**-0.3**
LPAZ				IAmb	IAmb	08 01 53.4	
comp=Z,3.5nm,0.7s							
LBTB	**Lobatse**	**50.85**	**77**	P	**P**	**08 02 10.9**	**+0.4**
LBTB				IAmb	IAmb	08 02 28.9	
comp=Z,4.6nm,1.1s							
ETMB	**Extrema**	**53.20**	**315**	P	**P**	**08 02 28.4**	**+0.4**
CASY	**Casey**	**55.31**	**162**	P	**P**	**08 02 43.3**	**+0.6**
FOMA	**Nahampoana Res**	**63.04**	**95**	P	**P**	**08 03 37.8**	**+1.0**
VOI	**Vohitsoka**	**65.33**	**93**	P	**P**	**08 03 51.4**	**-0.6**
TOA0	**Torodi Ar. Sit**	**73.50**	**33**	P	**P**	**08 04 42.3**	**0.0**
TORD	**Torodi Ar. Bea**	**73.50**	**33**	P	**P**	**08 04 42.3**	**-0.1**
comp=Z,2.3nm,0.7s,baz=200,slow=6.9,SNR=5.7							
comp=Z,2.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.50**	**33**	P	**P**	**08 04 42.0**	**-0.3**
TORD				IAmb	IAmb	08 04 55.4	
comp=Z,3.6nm,1.0s							
ARCES	**ARCESS Array B**	**131.03**	**23**	PKP	**PKPdf**	**08 12 19.9**	**0.0**
comp=Z,1.5nm,0.8s,baz=236,slow=1.3,SNR=5.9							
ILAR	**Eielson Array**	**148.05**	**313**	PKPbc	**PKPbc**	**08 12 53.8**	**-0.2**
comp=Z,2.4nm,0.7s,baz=122,slow=1.6,SNR=11							
SONM	**Songino Array**	**152.79**	**88**	PKPbc	**PKPbc**	**08 13 05.0**	**-1.0**
comp=Z,1.3nm,0.6s,baz=209,slow=4.1,SNR=4.0							

*IDC **19** 07:54:38.5±2.2,55°.34S×31°.25W,h0km,mb4.3/2, mbtmp4.3/2,Error ellipse: s-maj=95.4km s-min=47.7km az=15.0.*
*NEIC **19** 07:54:39.3±2.0,55°.39S±0°.07×31°.1W±0°.1,h10km±1km, mb4.5/18,Error ellipse: s-maj=16.4km s-min=7.0km az=46.0*

ISC 19 07:54:39.3±0.6,55°.40S±0°.10×31°.05W±0°.10,h10km,n32, σ1s08/31,mb4.5/12,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.34**	**287**	Pn	**Pn**	**07 55 32.3**	**+0.8**
ORCD	**Orcadas**	**9.00**	**228**	Pn	**Pn**	**07 56 48.4**	**-0.7**
ESPZ	**Base Esperanza**	**15.35**	**228**	IAmb	IAmb	07 58 19.9	
comp=Z,123nm,1.3s							
ESPZ	**Base Esperanza**	**15.35**	**228**		**Pn**	**07 58 17.5**	**+1.8**
SMAI	**San Martin Ant**	**20.88**	**218**	P	**P**	**07 59 22.1**	**+0.9**
MG04	**Isla Riesco**	**23.64**	**259**	P	**P**	**07 59 51.7**	**+1.3**
MG05	**Puerto Natales**	**24.64**	**261**	P	**P**	**07 59 59.1**	**-0.6**
MG05				IAmb	IAmb	08 00 01.0	
comp=Z,9.4nm,1.1s							
GO09	**Cerro Castillo**	**24.73**	**262**	P	**P**	**08 00 00.9**	**+0.3**
AY01	**Puyuhuapi**	**28.53**	**275**	P	**P**	**08 00 33.9**	**-0.8**
GO06	**Curarrehue**	**31.03**	**284**	P	**P**	**08 00 57.8**	**+0.6**
LR04	**Corral**	**31.92**	**281**	P	**P**	**08 01 04.1**	**-0.6**
BI05	**Punta Hualpn**	**34.00**	**285**	P	**P**	**08 01 22.0**	**-1.0**
GO05	**Huala**	**34.60**	**289**	P	**P**	**08 01 26.9**	**-1.4**
MT09	**Talagante**	**35.04**	**291**	P	**P**	**08 01 29.9**	**-2.3**
MT09				IAmb	IAmb	08 01 36.9	
comp=Z,8.1nm,0.6s							
MT01	**Popeta**	**35.11**	**291**	P	**P**	**08 01 30.8**	**-1.8**
MT01				IAmb	IAmb	08 01 40.9	
comp=Z,1.7nm,0.5s							
VA06	**Catapilco**	**36.14**	**292**	P	**P**	**08 01 40.4**	**-1.1**
VA06				IAmb	IAmb	08 01 54.2	
comp=Z,30nm,0.8s							
AC05	**El Transito**	**38.58**	**297**	P	**P**	**08 02 01.3**	**-1.0**
AC05				IAmb	IAmb	08 02 12.6	
comp=Z,2.5nm,0.5s							
GO02	**Mina Guanaco**	**41.27**	**301**	P	**P**	**08 02 24.2**	**-0.8**
GO02				IAmb	IAmb	08 02 38.4	
comp=Z,22nm,0.8s							
LVC	**Limon Verde**	**43.10**	**304**	P	**P**	**08 02 38.2**	**-1.8**
SHEL	**Horse Pasture**	**43.91**	**36**	P	**P**	**08 02 46.4**	**+0.2**
VNDA	**Vanda**	**47.10**	**184**	P	**P**	**08 03 10.2**	**-0.5**
LPAZ	**La Paz**	**48.24**	**309**	P	**P**	**08 03 20.6**	**-0.4**
comp=Z,3.9nm,0.6s,baz=194,slow=5.5,SNR=5.3							
comp=Z,3.9nm,0.6s							
LPAZ	**La Paz**	**48.24**	**309**	P	**P**	**08 03 20.8**	**-0.2**
RCBR	**Riachuelo**	**49.59**	**354**	P	**P**	**08 03 30.8**	**+0.2**
RCBR				IAmb	IAmb	08 03 33.1	
comp=Z,6.7nm,0.8s							
LBTB	**Lobatse**	**50.95**	**77**	P	**P**	**08 03 41.5**	**+0.5**
LBTB				IAmb	IAmb	08 03 53.0	
comp=Z,3.4nm,1.0s							
CASY	**Casey**	**55.22**	**162**	P	**P**	**08 04 12.1**	**+0.3**
CASY				IAmb	IAmb	08 04 21.1	
comp=Z,4.7nm,1.1s							
TOA0	**Torodi Ar. Sit**	**73.64**	**33**	P	**P**	**08 06 11.9**	**-1.0**
TOA0				IAmb	IAmb	08 06 25.4	
comp=Z,5.8nm,1.0s							
TORD	**Torodi Ar. Bea**	**73.64**	**33**	P	**P**	**08 06 13.8**	**+1.0**
comp=Z,2.1nm,0.9s,baz=217,slow=7.3,SNR=2.1							
comp=Z,2.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.64**	**33**	P	**P**	**08 06 11.7**	**-1.1**
ZALV	**Zalesovo Beam**	**144.06**	**65**	PKP	**PKPdf**	**08 14 13.2**	**-0.7**
comp=Z,0.8nm,0.5s,baz=185,slow=3.6,SNR=1.9							
ILAR	**Eielson Array**	**148.07**	**313**	PKPbc	**PKPbc**	**08 14 23.7**	**+0.1**
comp=Z,1.3nm,0.8s,baz=122,slow=1.8,SNR=2.9							
SONM	**Songino Array**	**152.88**	**88**	PKPbc	**PKiKP**	**08 14 37.1**	**+1.1**
comp=Z,1.0nm,0.6s,baz=216,slow=4.0,SNR=3.4							

*IDC **19** 07:54:52.6±0.5,54°.95S×31°.06W,h0km,mb4.7/15, mbtmp4.8/16,ML4.3/1,Error ellipse: s-maj=17.5km s-min=14.0km az=40.0*
*MOS **19** 07:54:52.5±1.6,55°.01S×31°.32W,h10km,mb5.2/10,Error ellipse: s-maj=18.2km s-min=11.6km az=118.2*
*NEIC **19** 07:54:53.9±1.3,54°.97S±0°.09×31°.3W±0°.1,h10km±1km, mb5.1/43,Error ellipse: s-maj=16.9km s-min=10.0km az=37.0*

ISC 19 07:54:53.4±0.3,54°.98S±0°.06×31°.25W±0°.06,h10km,n308, σ0s97/298,mb5.0/31,14C-4D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.12**	**281**	Pn	**Pn**	**07 55 41.3**	**-1.4**
HOPE	**Hope Point**	**3.12**	**281**	P	**Pn**	**07 55 41.3**	**-1.4**
ORCD	**Orcadas**	**9.21**	**226**	Pn	**Pn**	**07 57 04.0**	**-2.1**
EFI	**East Falkland**	**16.32**	**271**	||*e*P	**Pn**	**07 58 41.1**	**-1.3**
VNA1	**Neumayer--Stat**	**18.69**	**156**	P	**P**	**07 59 10.7**	**-0.7**
VNA3	**Neumayer Olymp**	**18.81**	**158**	P	**P**	**07 59 12.5**	**-0.3**
VNA3	**Neumayer Olymp**	**18.81**	**158**	PKiKP	**PKiKP**	**08 11 23.4**	**-5.5**
PMSA	**Palmer Station**	**18.93**	**226**	P	**Pn**	**07 59 17.5**	**+2.9**
0.9nm,0.3s,baz=69,slow=8.9,SNR=16							
42nm,0.9s							
PMSA	**Palmer Station**	**18.93**	**226**	P	**Pn**	**07 59 15.1**	**+0.4**
PMSA	**Palmer Station**	**18.93**	**226**	*e*P	**P**	**07 59 13.2**	**-0.8**
VNA2	**Neumayer--Watz**	**19.09**	**156**	P	**P**	**07 59 13.7**	**-2.1**
baz=313,slow=10.0							
VNA2	**Neumayer--Watz**	**19.09**	**156**	PKiKP	**PKiKP**	**08 11 27.5**	**-1.6**
baz=319,slow=6.0							
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**07 59 30.7**	**-2.5**
SNAA	**Sanae**	**20.68**	**155**	PKiKP	**PKiKP**	**08 11 23.1**	**-6.8**
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**07 59 33.6**	**+0.4**
38nm,1.0s,baz=328,slow=9.8,SNR=6.7							
38nm,1.0s							
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**07 59 33.0**	**-0.1**
SNAA				IAmb	IAmb	07 59 50.1	
comp=Z,152nm,1.4s							
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**07 59 33.1**	**-0.1**
SNAA				pmax	pmax		
comp=Z,152nm,1.4s							
SMAI	**San Martin Ant**	**21.15**	**217**	P	**P**	**07 59 40.3**	**+2.2**
USHA	**Ushuaia**	**21.22**	**255**	P	**P**	**07 59 39.0**	**-0.1**
comp=Z,25nm,0.6s,baz=81,slow=5.8,SNR=4.8							
comp=Z,25nm,0.6s							
BELA	**Belgrano 2**	**23.03**	**182**	P	**P**	**07 59 58.6**	**+0.4**
BELA				IAmb	IAmb	08 00 25.1	
comp=Z,108nm,1.5s							
MG05	**Puerto Natales**	**24.60**	**261**	P	**P**	**08 00 12.9**	**-0.5**
MG05				IAmb	IAmb	08 00 14.3	
comp=Z,79nm,1.1s							
COYC	**Coyhaique**	**27.38**	**273**	P	**P**	**08 00 39.3**	**+0.7**
COYC				IAmb	IAmb	08 00 52.1	
comp=Z,42nm,1.2s							
PLTB	**Pedras Altas**	**28.09**	**317**	*e*P	**P**	**08 00 44.5**	**-0.6**
AY01	**Puyuhuapi**	**28.38**	**274**	P	**P**	**08 00 47.5**	**0.0**
LL02	**Futaleuf**	**28.67**	**277**	P	**P**	**08 00 50.2**	**0.0**
LL02				IAmb	IAmb	08 01 04.2	
comp=Z,34nm,1.1s							
PLCA	**Paso Flores**	**29.53**	**282**	P	**P**	**08 00 57.0**	**-0.9**
PLCA	**Paso Flores**	**29.53**	**282**	*e*P	**P**	**08 00 57.0**	**-0.9**
PLCA	**Paso Flores**	**29.53**	**282**	*e*P	**P**	**08 00 57.4**	**-0.5**
ALGR	**Alto Alegre (B**	**30.52**	**320**	*e*P	**P**	**08 01 06.7**	**0.0**
UNIS	**Unistalda (Bra**	**31.06**	**317**	*e*P	**P**	**08 01 12.8**	**+1.4**
ITQB	**Itaqui**	**31.16**	**314**	*e*P	**P**	**08 01 11.2**	**-1.1**
ITAB	**Concordia**	**31.62**	**323**	P	**P**	**08 01 16.1**	**-0.3**
ITAB				IAmb	IAmb	08 01 17.2	
comp=Z,36nm,1.4s							
ITAB	**Concordia**	**31.62**	**323**	*e*P	**P**	**08 01 16.1**	**-0.3**
CRSM	**Crissiumal (Br**	**32.08**	**320**	*e*P	**P**	**08 01 21.4**	**+1.0**
FRBT	**Francisco Belt**	**33.10**	**322**	*e*P	**P**	**08 01 30.3**	**+0.8**
MAN01	**Angra dos Reis**	**33.45**	**338**	*e*P	**P**	**08 01 31.9**	**-0.6**
DUB01	**Friburgo-RJ**	**33.90**	**341**	*e*P	**P**	**08 01 36.7**	**+0.4**
PTGB	**Pitanga**	**33.92**	**325**	*e*P	**P**	**08 01 37.4**	**+0.8**
CAM01	**Campos-RJ**	**34.02**	**343**	*e*P	**P**	**08 01 38.2**	**+0.8**
VAO	**Valinhos**	**34.02**	**334**	*e*P	**P**	**08 01 39.6**	**+2.1**
LMEL	**Las Melosas**	**34.30**	**292**	P	**P**	**08 01 40.4**	**+0.4**
CPUP	**Villa Florida**	**34.40**	**316**	P	**P**	**08 01 40.9**	**+0.3**
comp=Z,27nm,1.0s,baz=157,slow=9.3,SNR=18							
comp=Z,27nm,1.0s							
CPUP	**Villa Florida**	**34.40**	**316**	P	**P**	**08 01 40.5**	**-0.1**
CPUP				IAmb	IAmb	08 01 43.9	
comp=Z,34nm,1.1s							
CPUP	**Villa Florida**	**34.40**	**316**	P	**P**	**08 01 40.5**	**-0.1**
CPUP				pmax	pmax		
comp=Z,34nm,1.1s							
RCLB	**Rio Claro- Sao**	**34.73**	**333**	*e*P	**P**	**08 01 42.9**	**-0.7**
MT03	**Universidad Ad**	**34.73**	**292**	P	**P**	**08 01 44.8**	**+1.2**
MT09	**Talagante**	**34.78**	**291**	P	**P**	**08 01 43.9**	**-0.1**
MCR1	**Marechal Candi**	**34.84**	**322**	*e*P	**P**	**08 01 44.6**	**+0.1**
PEL	**Peldehue**	**35.10**	**292**	P	**P**	**08 01 47.1**	**+0.4**
PEL				IAmb	IAmb	08 01 56.9	
comp=Z,45nm,1.0s							
PEL	**Peldehue**	**35.10**	**292**	P	**P**	**08 01 47.1**	**+0.4**
PEL				pmax	pmax		
comp=Z,45nm,1.0s							
QSPA	**South Pole Qui**	**35.27**	**180**	P	**P**	**08 01 48.8**	**+0.8**
QSPA				IAmb	IAmb	08 01 52.7	
comp=Z,41nm,0.9s							
ZON	**Zonda**	**35.29**	**296**	P	**P**	**08 01 48.4**	**0.0**
ZON				IAmb	IAmb	08 02 00.7	
comp=Z,18nm,0.7s							
ZON	**Zonda**	**35.29**	**296**	P	**P**	**08 01 48.4**	**0.0**
ZON				pmax	pmax		
comp=Z,18nm,0.7s							
VA03	**San Esteban**	**35.32**	**293**	P	**P**	**08 01 48.6**	**0.0**
ROC1	**El Roble**	**35.40**	**292**	P	**P**	**08 01 48.5**	**-1.0**
VA06	**Catapilco**	**35.87**	**292**	P	**P**	**08 01 53.0**	**-0.2**
TRCB	**Terra Rica**	**35.89**	**325**	*e*P	**P**	**08 01 54.7**	**+1.1**
BB19B	**Bebedouro**	**36.28**	**332**	*e*P	**P**	**08 01 58.3**	**+1.3**
PCMB	**Pacaembu**	**36.56**	**328**	*e*P	**P**	**08 01 59.2**	**-0.1**
**C

VILB IAmb IAmb 08 03 33.9
comp=Z,36nm,1.0s
VILB Vilhena 47.64 320 *e*P **P** **08 03 30.4 +0.6**
PDRB Porto dos Gac 47.68 325 *e*P **P** **08 03 30.0 0.0**
H10S2 ASCENSION HYDR 47.76 22 T T 08 54 59.3
baz=193,slow=74,SNR=3.2
H10S3 ASCENSION HYDR 47.77 22 T T 08 55 00.3
baz=27,slow=74,SNR=5.5
SMTB Santa Maria do 47.80 338 *e*P **P** **08 03 31.2 +0.3**
LPAZ La Paz 47.89 309 P **P** **08 03 33.9 +1.5**
comp=Z,24nm,0.6s,baz=99,slow=3.0,SNR=17
comp=Z,24nm,0.6s
BOSA Boshof 48.01 81 P **P** **08 03 32.6 0.0**
comp=Z,9.8nm,1.0s,baz=222,slow=5.6,SNR=6.0
comp=Z,9.8nm,1.0s
BOSA Boshof 48.01 81 **P** **08 03 32.4 -0.2**
BOSA Boshof 48.01 81 P **P** **08 03 32.4 -0.2**
CLDB Colider 48.07 327 *e*P **P** **08 03 32.8 -0.2**
PRPB Parauapebas 50.90 336 *e*P **P** **08 03 55.1 +0.5**
LBTB Lobatse 50.98 78 P **P** **08 03 54.9 -0.3**
comp=Z,11nm,0.9s,baz=216,slow=9.4,SNR=5.3
comp=Z,11nm,0.9s
LBTB Lobatse 50.98 78 P **P** **08 03 55.1 -0.2**
LBTB IAmb IAmb 08 04 08.0
comp=Z,17nm,0.8s
LBTB Lobatse 50.98 78 P **P** **08 03 55.1 -0.2**
LBTB pmax pmax
comp=Z,17nm,0.9s
TSUM Tsumeb 51.26 66 P **P** **08 03 57.1 -0.4**
comp=Z,6.9nm,0.8s,baz=218,slow=9.3,SNR=5.9
comp=Z,6.9nm,0.8s
TSUM Tsumeb 51.26 66 **P** **08 03 57.3 -0.1**
NPGB Novo Progresso 51.55 329 *e*P **P** **08 03 58.8 -0.7**
ETMB Extrema 52.84 315 **P** **08 04 08.4 -0.7**
ETMB IAmb IAmb 08 04 13.7
comp=Z,32nm,1.4s
ETMB Extrema 52.84 315 *e*P **P** **08 04 08.5 -0.6**
TMAB Tom-Au,PA,Br 54.21 339 *e*P **P** **08 04 18.4 -0.7**
CASY Casey 55.66 162 P **P** **08 04 29.8 +0.7**
CASY IAmb IAmb 08 04 31.0
comp=Z,14nm,0.8s
NNA Nana 55.71 302⇑ *e*P **P** **08 04 31.3 +1.2**
NNA pmax pmax
comp=Z,33nm,1.1s
MALB Monte Alegre 56.18 332 *e*P **P** **08 04 33.5 +0.1**
MACA Manacapuru-AM 56.90 324 *e*P **P** **08 04 37.7 -0.8**
MCPB Macapa, AP 57.05 335 *e*P **P** **08 04 40.0 +0.5**
CZSB Cruzeiro do Su 57.50 309 P **P** **08 04 42.0 -0.7**
CZSB IAmb IAmb 08 04 54.0
comp=Z,18nm,0.7s
CZSB Cruzeiro do Su 57.50 309 *e*P **P** **08 04 41.8 -0.9**
LSZ Lusaka 60.21 73 P **P** **08 05 01.9 +0.2**
LSZ Lusaka 60.21 73 P **P** **08 05 01.9 +0.2**
BOAV Boa Vista 62.06 326 **P** **08 05 13.4 -0.6**
BOAV IAmb IAmb 08 05 25.1
comp=Z,34nm,1.1s
BOAV Boa Vista 62.06 326 *e*P **P** **08 05 14.2 +0.1**
ARNL Arenillas 64.59 304 P **P** **08 05 31.9 +1.0**
DBIC Dimbokro 65.25 29 P **P** **08 05 34.9 -0.1**
comp=Z,5.0nm,0.8s,baz=205,slow=7.7,SNR=5.4
comp=Z,5.0nm,0.8s
OTAV Otavalo 67.15 307 P **P** **08 05 51.8 +3.9**
OTAV Otavalo 67.15 307 *e*P **P** **08 05 48.3 +0.4**
SDV Santo Domingo 71.65 319 *e*P **P** **08 06 16.3 +1.0**
TORD Torodi Ar. Bea 73.35 34 P **P** **08 06 25.3 +0.1**
comp=Z,5.5nm,0.6s,baz=200,slow=6.3,SNR=11
comp=Z,5.5nm,0.6s
MBAR Mbarara 73.78 67⇑ *e*P **P** **08 06 29.6 +1.5**
KMBO Kilima Mbogo 76.87 73⇓ *e*P **P** **08 06 44.7 -1.3**
JTS Las Juntas de 79.00 306⇑ *e*P **P** **08 06 57.9 +0.5**
JTS pmax pmax
comp=Z,13nm,0.9s
MATN Matagalpa 81.76 307 P **P** **08 07 12.2 -0.1**
MATN IAmb IAmb 08 07 23.9
comp=Z,14nm,0.9s
DGAR Diego Garcia 91.76 105⇓ *e*P **P** **08 08 00.3 -1.1**
ESDC Sonseca Array 97.13 21 P Pdif 08 08 26.9 +1.5
comp=Z,0.8nm,0.9s,baz=190,slow=3.8,SNR=2.4
comp=Z,0.8nm,0.9s
ASAR Alice Springs 100.65 166 P **Pdif** **08 08 41.7 0.0**
comp=Z,1.6nm,0.9s,baz=181,slow=4.4,SNR=4.5
HKT Hockley 101.02 307⇑ *e*P **Pdif** **08 08 43.3 +0.5**
HKT pmax pmax
comp=Z,3.0nm,1.4s
MPMC Manual Prospec 116.63 295 P **PKiKP** **08 13 38.9 +1.6**
baz=140
TPNV Topopah Spring 116.67 297 P **PKiKP** **08 13 38.3 +1.0**
baz=140
KIV Kislovodsk 116.74 51 *e*PKIKP **PKiKP** **08 13 37.6 +0.4**
KIV pmax pmax
comp=Z,4.0nm,1.1s
CWC Cottonwood Cre 117.23 295 P **PKiKP** **08 13 40.1 +1.6**
baz=140
R11A Troy Canyon, C 117.40 298 P **PKiKP** **08 13 39.6 +0.9**
baz=140
NVAR Mina Array Bea 118.85 296 PKKPbc PKKPbc 08 23 58.7 +3.3
comp=Z,0.3nm,0.8s,baz=306,slow=1.7,SNR=4.2
NOA NORSAR Array B 120.45 22 PKP **PKiKP** **08 13 43.8 +0.1**
comp=Z,1.7nm,1.1s,baz=199,slow=1.8,SNR=4.8
EGMT Eagleton 121.91 309 P **PKiKP** **08 13 47.5 +0.4**
baz=138
MSO Missoula 122.94 306 P **PKiKP** **08 13 50.1 +0.9**
baz=137
FINES FINESS Array B 124.55 29 PKP **PKPdf** **08 13 50.6 -0.8**
comp=Z,2.0nm,0.6s,baz=135,slow=0.3,SNR=7.3
I05D Terrebonne, OR 124.73 299 P **PKiKP** **08 13 54.1 +1.3**
baz=136
I03D Drain, OR 125.30 297 P **PKiKP** **08 13 54.9 +1.1**
baz=135
G05D Wamic, OR 125.36 300 P **PKiKP** **08 13 55.5 +1.5**
baz=135
NEW Newport 125.47 305 P **PKiKP** **08 13 55.7 +1.6**
baz=135
CMAR Chiang Mai Arr 127.61 114 PKP **PKiKP** **08 13 59.2 0.0**
comp=Z,1.7nm,0.4s,baz=242,slow=4.0,SNR=9.4
KLMR Klimovskoe 128.28 36 *e*PKIKP **PKPdf** **08 13 58.4 -0.2**
KLMR pmax pmax
comp=Z,13nm,1.4s
KLMR Klimovskoe 128.28 36 *e*PKPdf **PKPdf** **08 13 58.4 -0.2**
KLMR AMP 08 14 01.8
comp=Z,13nm,1.4s
ARCES ARCESS Array B 130.83 23 PKP **PKiKP** **08 14 03.8 -0.3**
comp=Z,9.7nm,1.0s,baz=266,slow=1.9,SNR=13
PRGR Permogore 130.95 38 *e*PKIKP **PKPdf** **08 14 03.6 0.0**
AAK Ala-Archa 131.83 72⇑ *i*PKIKP **PKiKP** **08 14 08.5 +1.3**
LVZ Lovozero 131.86 28⇑ *i*PKIKP **PKPdf** **08 14 03.9 -1.4**
ARU Arti 132.72 49⇑ *i*PKIKP **PKPdf** **08 14 07.4 +0.3**
YKA Yellowknife Ar 133.85 320 PKP **PKiKP** **08 14 10.0 -0.4**
comp=Z,2.7nm,0.7s,baz=133,slow=2.2,SNR=6.5
YKA Yellowknife Ar 133.85 320 PKIKP **PKiKP** **08 14 10.0 -0.4**
PZH PanZhiHua 135.64 110 PKP **PKiKP** **08 14 16.0 +0.6**
BRVK Borovoye 136.14 59⇑ *i*PKIKP **PKiKP** **08 14 15.5 +0.2**
WRAK Wrangell Islan 137.82 306 P **PKiKP** **08 14 18.4 -0.2**
baz=123
DLBC Dease Lake 137.84 309 P **PKiKP** **08 14 18.1 -0.7**
baz=122
TGTN Hyland Airport 138.67 314 P **PKiKP** **08 14 19.7 -0.6**
baz=120
R33M Jennings River 138.75 310 P **PKiKP** **08 14 20.0 -0.7**
baz=120
MK31 Makanchi Array 138.75 73⇑ *i*PKIKP **PKiKP** **08 14 21.4 +0.5**
MKAR Makanchi Array 138.75 73 PKhKP PKPpre 08 14 13.9
comp=Z,0.5nm,0.6s,baz=246,slow=4.8,SNR=3.7
KURBB Kurchatov Arra 138.95 66 PKhKP PKPpre 08 14 15.4
comp=Z,1.0nm,0.7s,baz=239,slow=4.0,SNR=5.0
GOMU GeFeMu 139.02 94 PKP **PKiKP** **08 14 22.6 +0.3**
KURK Kurchatov 139.05 66⇑ *i*PKIKP **PKiKP** **08 14 21.0 -0.3**
P33M Teslin, Yukon 139.97 310 P **PKPdf** **08 14 21.8 +1.2**
baz=119
WMQ Urumqi 139.97 80 *e*P **PKiKP** **08 14 22.9 -0.7**
N30M Aishikik Lake 142.40 311 P **PKPdf** **08 14 24.7 -0.2**
baz=115
DGZ Jazzator, Alta 143.23 72⇑ *e*PKIKP PKPbc 08 14 24.8 +0.8
INK Inuvik 143.53 322 PKhKP PKPpre 08 14 23.6
comp=Z,5.9nm,1.1s,baz=308,slow=6.1,SNR=3.5
ZALV Zalesovo Beam 143.98 65 PKP PKPbc 08 14 26.3 +0.5
comp=Z,4.4nm,0.5s,baz=230,slow=4.1,SNR=8.5
YUK3 Moose Creek 144.00 310 P **PKPdf** **08 14 27.1 -0.9**
baz=112
MESA MESA 144.06 307 P **PKPdf** **08 14 28.2 +0.1**
baz=113
EPYK Eagle Plains 144.07 319 P **PKPdf** **08 14 28.0 +0.3**
baz=109
LZH Lanzhou 144.09 103 *e*PKP **PKPdf** **08 14 28.5 -0.4**
LZH pPKP PKiKP 08 14 37.5 +5.1
LZH sPKP 08 14 42.4

GTA Gaotai 144.10 95 *e*PKPbc PKPbc 08 14 26.8 0.0
GTA PP **PP** **08 17 46.4 +2.6**
M27K Edge Creek, AK 144.84 311 P PKPbc 08 14 28.6 +0.2
baz=110
MCARA McCarthy VSAT 145.00 309 P **PKPdf** **08 14 29.5 +0.1**
baz=111
L27K Beaver Creek, 145.06 312 P **PKPdf** **08 14 29.6 +0.1**
baz=110
EGAK Eagle 145.33 315 P **PKPbc** **08 14 29.7 -0.1**
baz=108,SNR=7.2
M26K Nabesna, AK 145.34 310 P **PKPbc** **08 14 29.7 -0.3**
baz=110
XAN Xi'an 145.38 111 PKPbc **PKPbc** **08 14 30.8 -0.1**
XAN sPKP 08 14 36.4
K27K Chicken 145.48 313 P **PKPab** **08 14 31.0 +0.5**
baz=108
BMRM Bremner River 145.57 308 P **PKPab** **08 14 31.0 -0.1**
baz=111
L26K Log Cabin Wild 145.70 311 P **PKPab** **08 14 31.3 -0.1**
baz=109,SNR=8.1
I27K Kandik River 145.75 316 P **PKPab** **08 14 31.4 -0.2**
baz=106
N25K Chitina, Valde 145.78 309 P **PKPab** **08 14 31.9 0.0**
baz=110
H27K Steamboat Moun 145.89 317 P **PKPab** **08 14 32.4 +0.4**
baz=105
EYAK Cordova Ski Ar 145.95 307 P **PKPab** **08 14 32.2 -0.2**
baz=110
G27K Doyon Strip 146.09 318 P **PKPab** **08 14 32.7 -0.2**
baz=104,SNR=9.6
J26L Joseph Creek 146.24 314 P **PKPbc** **08 14 32.8 0.0**
baz=106,SNR=5.6
SCRK Sand Creek 146.26 313 P **PKPab** **08 14 33.7 +0.1**
baz=107
I26K Coal Creek Min 146.29 315 P **PKPab** **08 14 33.3 -0.2**
baz=106
HARP HAARP 146.29 310 P **PKPab** **08 14 33.6 -0.1**
baz=108
KLU Klutina 146.35 308 P **PKPab** **08 14 34.1 +0.1**
baz=109
E27K Coleen River 146.39 321 P **PKPab** **08 14 33.5 -0.4**
baz=102,SNR=8.4
P23K Montague Islan 146.53 305 P **PKPab** **08 14 34.4 -0.2**
baz=110
RIDG Independent Ri 146.56 312 P **PKPbc** **08 14 34.0 +0.3**
baz=107,SNR=7.4
PAX Paxson 146.61 311 P **PKPbc** **08 14 34.4 +0.6**
baz=107
M24K Tolsona, Glenn 146.66 309 P **PKPab** **08 14 34.8 -0.3**
baz=108
GLI Glacier Island 146.68 307 P **PKPab** **08 14 34.8 -0.5**
baz=109
G26K Porcupine Rive 146.94 318 P **PKPbc** **08 14 35.1 +0.5**
baz=103
K24K Donnelly Dome 146.98 312 P **PKPbc** **08 14 35.5 +0.7**
baz=106
J25K Salcha River, 147.02 314 P **PKPbc** **08 14 35.4 +0.5**
baz=105
SCM Sheep Creek Mo 147.09 308 P **PKPbc** **08 14 35.7 +0.4**
baz=108
F26K Sheenjek River 147.23 319 P **PKPbc** **08 14 36.2 +0.8**
baz=101
PWL Port Wells 147.25 306 P **PKPbc** **08 14 36.3 +0.6**
baz=108
M23K Glacier View 147.26 308 P **PKPab** **08 14 36.6 -0.9**
baz=108
PRP Porcupine Dome 147.31 315 P **PKPbc** **08 14 36.7 +0.9**
baz=103
C27K Jago River 147.41 323 P **PKPab** **08 14 36.9 -1.0**
baz=98
DHY Denali Highway 147.47 311 P **PKPbc** **08 14 36.5 +0.2**
baz=106,SNR=7.7
KNK Knik Glacier 147.48 307 P **PKPab** **08 14 37.4 -0.9**
baz=108
WAT6 Susitna Watana 147.49 310 P **PKPbc** **08 14 37.3 +0.9**
baz=106
SEW Seward 147.53 305 P **PKPbc** **08 14 37.1 +0.7**
baz=109
SML Sawmill 147.54 308 P **PKiKP** **08 14 37.9 -0.7**
baz=107
H25K Birch Creek 147.59 317 P **PKiKP** **08 14 37.6 -0.8**
baz=102
HDA Harding Lake 147.63 313 P **PKiKP** **08 14 38.1 -0.4**
baz=104
LYN LuoYang 147.66 114⇑ PKPbc **PKPbc** **08 14 36.6 -0.9**
ILAR Eielson Array 147.69 314 PKPbc **PKPbc** **08 14 36.7 0.0**
comp=Z,17nm,0.9s,baz=124,slow=1.5,SNR=22
F25K Christian Rive 147.78 319 P **PKiKP** **08 14 38.3 -0.6**
baz=100
E25K Arctic Village 147.84 320 P **PKPbc** **08 14 37.7 +0.6**
baz=99,SNR=8.9
PMR Palmer 147.84 307 P **PKPbc** **08 14 37.9 +0.8**
baz=107
C26K Camden Bay 147.86 324 P **PKiKP** **08 14 38.0 -0.9**
baz=97
WAT1 Susitna Watana 147.92 310 P **PKiKP** **08 14 39.2 -0.1**
baz=105
RC01 Rabbit Creek A 147.97 306 P **PKiKP** **08 14 38.7 -0.7**
baz=107
POKR Poker Plat Res 148.00 314 P **PKiKP** **08 14 39.4 +0.1**
baz=103
BRSE Bradley Lake S 148.03 304 P **PKiKP** **08 14 39.0 -0.6**
baz=109
COLA College 148.12 314⇑ *e*PKP2 **PKPbc** **08 14 36.6 -1.2**
COLA College 148.12 314 P **PKiKP** **08 14 38.8 -0.7**
baz=103
TCOL CIGO, UAF Yank 148.12 314 P **PKPbc** **08 14 38.5 +0.7**
baz=103
KDAK Kodiak Island 148.28 300 P **PKPbc** **08 14 38.8 +0.4**
baz=111
D25K Kavik River 148.30 322 P **PKPbc** **08 14 39.0 +0.7**
baz=97,SNR=7.0
MCK McKinley 148.31 311 P **PKPbc** **08 14 38.9 +0.5**
baz=104,SNR=8.7
G24K Hadweenzic Riv 148.32 317 P **PKiKP** **08 14 39.6 -0.4**
baz=100
H24K Noodor Dome 148.32 316 P **PKiKP** **08 14 39.3 -0.8**
baz=101
M22K Willow 148.34 307 P **PKiKP** **08 14 39.6 -0.4**
baz=106
OHAK Old Harbor 148.43 298 P **PKPbc** **08 14 39.5 +0.7**
baz=111
Q20K Shuyak Island 148.46 301 P **PKiKP** **08 14 40.3 -0.2**
baz=109
NEA2 Nenana 148.57 313 P **PKPbc** **08 14 39.2 +0.2**
baz=102,SNR=10
CUT Chulitna 148.58 309 P **PKPbc** **08 14 39.7 +0.6**
baz=105
F24K Squaw Lake 148.61 319 P **PKiKP** **08 14 40.3 -0.3**
baz=98
I23K Minto, Yukon-K 148.80 314 P **PKPbc** **08 14 40.0 +0.5**
baz=101
TRF Thorofare Moun 148.84 311 P **PKiKP** **08 14 40.9 -0.4**
baz=103
E24K Your Creek 148.91 320 P **PKPbc** **08 14 40.3 +0.4**
baz=97,SNR=7.0
H23K Yukon River 149.00 315 P **PKiKP** **08 14 40.8 -0.6**
baz=100
O20K Slope Mountain 149.04 304 P **PKPbc** **08 14 41.0 +0.5**
baz=107
CHIR Chirikof Islan 149.12 295 P **PKPbc** **08 14 40.6 0.0**
baz=112
D24K Happy Valley 149.15 322 P **PKPbc** **08 14 40.8 +0.5**
baz=95,SNR=7.4
C24K Franklin Bluff 149.15 323 P **PKiKP** **08 14 41.3 -0.3**
baz=94
Q19K Cape Douglas, 149.18 301 P **PKiKP** **08 14 41.9 -0.1**
baz=108
BPAW Bear Paw Mtn. 149.28 312 P **PKiKP** **08 14 41.8 -0.2**
baz=102,SNR=10
G23K Bananza Creek 149.33 317 P **PKiKP** **08 14 41.7 -0.4**
baz=98,SNR=9.5
MLY Manley 149.35 314 P **PKPbc** **08 14 41.1 +0.1**
baz=100,SNR=7.6
TOLK Toolik Lake Re 149.37 321 P **PKiKP** **08 14 41.8 -0.3**
baz=95,SNR=10
PPLA Purkeypile 149.56 309 P **PKPbc** **08 14 42.2 +0.5**
baz=103
NRIK Noril'sk 149.60 38 PKPbc **PKiKP** **08 14 42.4 -0.1**
comp=Z,8.3nm,0.8s,baz=153,slow=1.4,SNR=5.0
NRIK Noril'sk 149.60 38‖ *e*PKIKP **PKPdf** **08 14 35.8 -1.0**
CAST Castle Rocks 149.62 310 P **PKiKP** **08 14 42.3 -0.4**
baz=102
M20K Styx River 149.75 307 P **PKiKP** **08 14 42.9 -0.3**
baz=104
H22K Ishtalitna Cre 149.75 315 P **PKiKP** **08 14 43.0 +0.1**
baz=98
D23K Nanushuk River 149.80 321 P **PKiKP** **08 14 43.0 0.0**
baz=94,SNR=6.5
CHUM Lake Minchumin 149.81 311 P **PKiKP** **08 14 42.8 -0.3**
baz=101,SNR=8.0
C23K Itkillik River 149.82 323 P **PKiKP** **08 14 43.0 +0.1**
baz=92
O19K Port Alsworth 149.88 303 P **PKiKP** **08 14 43.0 -0.3**
baz=106
I21K Tanana 149.90 314 P **PKiKP** **08 14 43.1 -0.1**
baz=99,SNR=6.7
G22K Bettles 149.94 317 P **PKiKP** **08 14 43.5 +0.3**
baz=96,SNR=12
P18K Big Mountain, 150.10 302 P **PKPbc** **08 14 43.4 +0.4**
baz=106
N19K Bonanza Creek 150.12 305 P **PKiKP** **08 14 43.8 -0.1**
baz=105
R17K Ugashik Creek 150.15 298 P **PKiKP** **08 14 43.9 0.0**
baz=109
E22K Anaktuvuk Pass 150.16 320 P **PKiKP** **08 14 44.3 +0.6**
baz=94
O18K Koktuh Hills 150.22 303 P **PKiKP** **08 14 44.3 +0.2**
baz=106
L20K Farewell, AK 150.23 308 P **PKiKP** **08 14 44.3 +0.3**
baz=102
F22K John River 150.25 318 P **PKiKP** **08 14 44.7 +0.8**
baz=95
H21K Melozitna Rive 150.30 315 P **PKiKP** **08 14 44.0 -0.1**
baz=98,SNR=10
M19K Big River Lodg 150.34 307 P **PKiKP** **08 14 44.7 +0.5**
baz=103
K20K Telida 150.49 310 P **PKiKP** **08 14 44.8 +0.3**
baz=100
Q16K King Salmon 150.60 300 P **PKiKP** **08 14 45.0 +0.2**
baz=107
L19K White Mountain 150.61 307 P **PKiKP** **08 14 44.8 0.0**
baz=102
P17K Kvichak River 150.64 301 P **PKiKP** **08 14 45.4 +0.5**
baz=106
J20K Nowinta River 150.66 311 P **PKiKP** **08 14 45.0 +0.2**
baz=99
G21K Allakaket 150.68 316 P **PKiKP** **08 14 45.5 +0.6**
baz=95
BTO Baotou 150.71 103 *e*PKPbc **PKPbc** **08 14 44.3 -0.9**
F21K Alatna River 150.73 318 P **PKiKP** **08 14 45.8 +0.8**
baz=94,SNR=12
N18K Kilae Creek 150.76 304 P **PKiKP** **08 14 45.8 +0.6**
baz=104
HNS HongShan 151.00 113⇑ PKPbc **PKPbc** **08 14 46.0 +0.2**
O17K Koliganek Bris 151.12 302 P **PKiKP** **08 14 46.7 +0.8**
baz=105
TTA Tatalina 151.28 309 P **PKiKP** **08 14 47.6 +1.4**
baz=100
TIA Tai'an 151.35 118 P **PKiKP** **08 14 47.4 +0.2**
TIA pmax pmax
comp=Z,14nm,0.8s
SDPT Sand Point 151.52 292 P **PKiKP** **08 14 47.5 +0.7**
baz=111
O16K Kokwok River B 151.56 301 P **PKiKP** **08 14 47.7 +0.9**
baz=104
MOY Mondy 151.72 77 *e*PKIKP **PKiKP** **08 14 47.9 +0.3**
HHC Hu-ho-hao-te 151.74 104 *e*P **PKPdf** **08 14 37.8 -3.4**
GCSA Galena City Sc 151.91 312 P **PKiKP** **08 14 48.9 +1.6**
baz=96
N16K Nishlik Lake 152.10 303 P **PKiKP** **08 14 49.5 +1.6**
baz=102
ZAK Zakamensk 152.44 81 *e*PKIKP **PKPbc** **08 14 47.0 -1.8**
ZAK pmax pmax
comp=Z,12nm,1.4s
SONM Songino Array 152.98 88 PKPbc **PKiKP** **08 14 50.9 +0.6**
comp=Z,5.5nm,0.8s,baz=226,slow=3.2,SNR=13
KSRS Korea Array 157.46 132 PKPab **PKPab** **08 15 21.3 +0.6**
comp=Z,1.3nm,0.7s,baz=209,slow=4.7,SNR=4.9
BILL Bilibino 164.56 335 *e*PKIKP **PKPdf** **08 14 57.7 +2.0**
BILL *i* 08 19 38.7
BILL pmax pmax
comp=Z,10.0nm,1.1s

*IDC **19** 07:58:10.0±1.9,55°.15S×31°.58W,h0km,mb4.3/2, mbtmp4.3/2,Error ellipse: s-maj=79.0km s-min=45.4km az=9.0*
*NEIC **19** 07:58:11.2±1.2,55°.3S±0°.1×31°.9W±0°.2,h10km±1km, mb4.8/18,Error ellipse: s-maj=18.1km s-min=15.0km az=193.0*
ISC 19 07:58:10.9±0.6,**55°.3S**±0°.1×**31°.93W**±0°.08,**h10**km,**n29,** σ**0**s**65**/**29**,**mb4.7**/10,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.82**	**289**	Pn	**Pn**	**07 58 55.6**	**-0.3**
ORCD	**Orcadas**	**8.72**	**226**	Pn	**Pn**	**08 00 16.3**	**-0.7**
EFI	**East Falkland**	**15.93**	**272**	Pn	**Pn**	**08 01 55.4**	**+0.5**
EFI				IAmb	IAmb	08 02 04.0	
	comp=Z,113nm,1.4s						
SMAI	**San Martin Ant**	**20.68**	**218**	P	**P**	**08 02 50.4**	**-0.2**
MG04	**Isla Riesco**	**23.17**	**259**	P	**P**	**08 03 17.5**	**+0.2**
MG04				IAmb	IAmb	08 03 29.5	
	comp=Z,63nm,0.9s						
MG05	**Puerto Natales**	**24.16**	**262**	P	**P**	**08 03 26.9**	**0.0**
MG05				IAmb	IAmb	08 03 29.5	
	comp=Z,9.6nm,0.8s						
PLTB	**Pedras Altas**	**28.04**	**318**	P	**P**	**08 04 02.4**	**+0.2**
PLTB				IAmb	IAmb	08 04 09.3	
	comp=Z,22nm,0.9s						
LL02	**Futaleuf**	**28.32**	**278**	P	**P**	**08 04 05.1**	**+0.5**
LL05	**Los Muermos**	**30.40**	**280**	P	**P**	**08 04 22.7**	**-0.3**
MT09	**Talagante**	**34.52**	**292**	P	**P**	**08 04 59.1**	**-0.2**
MT09				IAmb	IAmb	08 05 03.9	
	comp=Z,6.6nm,0.6s						
MT01	**Popeta**	**34.59**	**292**		**P**	**08 04 58.8**	**-1.0**
MT01				IAmb	IAmb	08 05 04.1	
	comp=Z,9.6nm,0.9s						
ZON	**Zonda**	**35.07**	**297**	P	**P**	**08 05 03.4**	**-0.5**
ZON				IAmb	IAmb	08 05 27.7	
	comp=Z,9.1nm,1.3s						
VA06	**Catapilco**	**35.62**	**293**	P	**P**	**08 05 09.3**	**+0.7**
AC04	**Llanos de Chal**	**38.99**	**298**	P	**P**	**08 05 37.8**	**+0.6**
AC04				IAmb	IAmb	08 06 04.8	
	comp=Z,48nm,1.2s						
AQDB	**Aquidauana**	**39.08**	**323**	P	**P**	**08 05 38.1**	**+0.1**
SUR	**Sutherland**	**43.10**	**80**	P	**P**	**08 06 10.4**	**-0.9**
SHEL	**Horse Pasture**	**44.10**	**38**	P	**P**	**08 06 18.7**	**-0.5**
PB16	**IPOC Station P**	**46.59**	**307**	P	**P**	**08 06 39.1**	**-0.5**
LPAZ	**La Paz**	**47.77**	**310**	P	**P**	**08 06 50.1**	**+1.2**
	comp=Z,4.1nm,0.9s,baz=142,slow=3.6,SNR=4.2						
	comp=Z,4.1nm,0.9s						
LPAZ	**La Paz**	**47.77**	**310**	P	**P**	**08 06 48.4**	**-0.5**
LPAZ				IAmb	IAmb	08 06 59.4	
	comp=Z,6.2nm,0.8s						
CRZF	**Crozet Islands**	**50.58**	**117**	P	**P**	**08 07 10.6**	**+1.3**
LBTB	**Lobatse**	**51.42**	**78**	P	**P**	**08 07 16.4**	**+0.3**
ARNL	**Arenillas**	**64.43**	**305**	P	**P**	**08 08 47.9**	**+0.5**
CHSH	**Refugio Sur-Vo**	**65.68**	**307**	P	**P**	**08 08 54.8**	**-1.3**
CHSH				IAmb	IAmb	08 09 02.1	
	comp=Z,19nm,1.3s						
TOA0	**Torodi Ar. Sit**	**73.81**	**34**		**P**	**08 09 45.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.81**	**34**	P	**P**	**08 09 44.9**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=201,slow=5.7,SNR=9.9						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**144.46**	**65**	PKP	**PKPdf**	**08 17 45.5**	**-0.7**
	comp=Z,3.2nm,0.6s,baz=232,slow=3.8,SNR=7.5						
ILAR	**Eielson Array**	**147.61**	**314**	PKPbc	**PKPbc**	**08 17 54.1**	**+0.2**
	comp=Z,8.3nm,0.9s,baz=120,slow=1.6,SNR=8.6						
SONM	**Songino Array**	**153.38**	**89**	PKPbc	**PKiKP**	**08 18 09.1**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=218,slow=3.4,SNR=6.1						

*IDC **19** 08:01:34.6±0.8,55°.07S×30°.74W,h0km,mb4.2/6, mbtmp4.3/7,ML4.5/1,Error ellipse: s-maj=27.8km s-min=22.5km az=0.0*
*NEIC **19** 08:01:34.2±2.5,55°.17S±0°.10×30°.9W±0°.2,h10km±1km, mb4.6/13,Error ellipse: s-maj=17.0km s-min=16.0km az=39.0*
ISC 19 08:01:34.8±0.6,**55°.12S**±0°.09×**30°.87W**±0°.09,**h10**km,**n31,** σ**1**s**38**/**31**,**mb4.5**/**9**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.37**	**282**	Pn	**Pn**	**08 02 26.8**	**-0.6**
ORCD	**Orcadas**	**9.27**	**227**	Pn	**Pn**	**08 03 46.2**	**-2.1**
EFI	**East Falkland**	**16.54**	**271**	P	**Pn**	**08 05 27.6**	**+1.1**
EFI				IAmb	IAmb	08 06 11.4	
	comp=Z,130nm,1.5s						
VNA3	**Neumayer Olymp**	**18.59**	**158**	P	**Pn**	**08 05 53.9**	**+1.9**
PMSA	**Palmer Station**	**18.98**	**226**	P	**Pn**	**08 05 59.2**	**+2.5**
	comp=Z,1.4nm,0.3s,baz=56,slow=7.3,SNR=13						

comp=Z,7.2nm,0.5s
SNAA Sanae 20.46 155 P P 08 06 10.7 -1.5
SMAI San Martin Ant 21.17 218 P P 08 06 18.7 -1.1
MG02 Cerro Sombrero 22.51 260 P P 08 06 33.9 -0.3
MG05 Puerto Natales 24.79 261 P P 08 06 55.8 -0.8
MG05 IAmb IAmb 08 06 57.6
comp=Z,27nm,1.0s
CPUP Villa Florida 34.66 315 P P 08 08 26.0 +1.8
comp=Z,2.5nm,0.5s,baz=180,slow=6.4,SNR=6.3
comp=Z,2.5nm,0.5s
CPUP Villa Florida 34.66 315 P P 08 08 22.9 -1.3
CPUP IAmb IAmb 08 08 46.4
comp=Z,9.4nm,1.1s
MT09 Talagante 35.03 291 P P 08 08 27.1 -0.6
VA06 Catapilco 36.13 292 P P 08 08 36.9 0.0
SUR Sutherland 42.47 79 P P 08 09 28.4 -1.7
SUR IAmb IAmb 08 10 00.3
comp=Z,6.7nm,1.0s
LVC Limon Verde 43.04 303 P P 08 09 33.0 -1.9
PB01 IPOC Station P 44.65 304 P P 08 09 47.7 +0.1
PB01 IAmb IAmb 08 10 19.1
comp=Z,14nm,1.5s
VNDA Vanda 47.38 184 P P 08 10 10.3 +1.9
comp=Z,0.8nm,0.8s,baz=185,slow=5.9,SNR=2.4
comp=Z,0.8nm,0.8s
VNDA Vanda 47.38 184 P P 08 10 08.6 +0.2
BOSA Boshof 47.82 80 P P 08 10 13.8 +1.3
comp=Z,5.6nm,1.1s,baz=217,slow=8.3,SNR=6.8
comp=Z,5.6nm,1.1s
BOSA Boshof 47.82 80 P P 08 10 10.8 -1.8
LPAZ La Paz 48.15 309 P P 08 10 17.4 +1.6
comp=Z,3.5nm,0.5s,baz=110,slow=4.3,SNR=12
comp=Z,3.5nm,0.5s
LPAZ La Paz 48.15 309 P P 08 10 16.8 +1.1
LPAZ IAmb IAmb 08 10 29.7
comp=Z,5.1nm,0.8s
LBTB Lobatse 50.79 77 P P 08 10 36.1 +0.9
comp=Z,3.4nm,0.8s,baz=216,slow=12,SNR=3.8
comp=Z,3.4nm,0.8s
LBTB Lobatse 50.79 77 P P 08 10 36.2 +0.9
TOA0 Torodi Ar. Sit 73.35 33 P P 08 13 05.1 -1.5
TORD Torodi Ar. Bea 73.35 33 P P 08 13 08.1 +1.5
comp=Z,2.6nm,0.9s,baz=198,slow=5.8,SNR=7.7
comp=Z,2.6nm,0.9s
TORD Torodi Ar. Bea 73.35 33 P P 08 13 04.8 -1.8
TORD IAmb IAmb 08 13 05.3
comp=Z,2.2nm,0.7s
FINES FINESS Array B 124.56 29 PKP PKiKP 08 20 33.7 +0.5
comp=Z,1.1nm,0.6s,baz=96,slow=3.8,SNR=4.7
ARCES ARCESS Array B 130.87 23 PKP PKiKP 08 20 45.6 +0.1
comp=Z,3.5nm,1.1s,baz=192,slow=2.2,SNR=7.4
ILAR Eielson Array 147.95 313 PKPbc PKPbc 08 21 18.6 -0.2
comp=Z,1.5nm,0.6s,baz=121,slow=1.7,SNR=7.4
SONM Songino Array 152.76 88 PKPbc PKiKP 08 21 31.3 +0.1
comp=Z,1.7nm,0.5s,baz=201,slow=3.5,SNR=8.8

*IDC **19** 08:02:49.6±1.5,54°.70S×30°.75W,h0km,mb4.3/2, mbtmp4.3/3,ML4.2/1,Error ellipse: s-maj=51.4km s-min=37.4km az=144.0*
*NEIC **19** 08:02:49.5±2.0,54°.98S±0°.04×30°.8W±0°.2,h10km±1km, mb4.7/21,Error ellipse: s-maj=15.8km s-min=5.1km az=79.0*
ISC 19 08:02:49.2±0.6,54°.9S±0°.1×30°.77W±0°.09,h10km,n31, σ1§49/30,mb4.7/12,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.38**	**278**	Pn	**Pn**	**08 03 41.6**	**-0.4**
ORCD	**Orcadas**	**9.48**	**226**	Pn	Pn	08 05 01.8	-3.9
PMSA	**Palmer Station**	**19.20**	**226**	P	**Pn**	**08 07 16.8**	**+3.1**
	0.7nm,0.3s,baz=71,slow=7.4,SNR=4.7						
	4.8nm,0.6s						
PMSA	**Palmer Station**	**19.20**	**226**	P	**P**	**08 07 13.0**	**+0.2**
SNAA	**Sanae**	**20.66**	**155**	P	**P**	**08 07 27.3**	**-1.4**
MG02	**Cerro Sombrero**	**22.60**	**259**	P	**P**	**08 07 49.2**	**-0.5**
MG05	**Puerto Natales**	**24.89**	**260**	P	**P**	**08 08 09.3**	**-2.6**
MG05				IAmb	IAmb	08 08 22.3	
	comp=Z,22nm,1.1s						
CPUP	**Villa Florida**	**34.52**	**315**	P	**P**	**08 09 37.9**	**+0.5**
MT09	**Talagante**	**35.00**	**290**	P	**P**	**08 09 40.6**	**-1.2**
MT09				IAmb	IAmb	08 09 42.2	
	comp=Z,18nm,1.4s						
MT01	**Popeta**	**35.07**	**290**	P	**P**	**08 09 42.3**	**+0.1**
MT01				IAmb	IAmb	08 09 45.6	
	comp=Z,14nm,0.9s						
VA06	**Catapilco**	**36.09**	**291**	P	**P**	**08 09 49.7**	**-1.3**
GO02	**Mina Guanaco**	**41.14**	**300**	P	**P**	**08 10 33.7**	**-0.1**
GO02				IAmb	IAmb	08 10 49.3	
	comp=Z,6.0nm,0.7s						
PB15	**IPOC Station P**	**42.71**	**302**	P	**P**	**08 10 46.2**	**-0.4**
PB15				IAmb	IAmb	08 10 53.5	
	comp=Z,18nm,1.1s						
LVC	**Limon Verde**	**42.95**	**303**	P	**P**	**08 10 47.8**	**-0.9**
SHEL	**Horse Pasture**	**43.38**	**36**	P	**P**	**08 10 52.3**	**+0.5**
PB01	**IPOC Station P**	**44.56**	**304**	P	**P**	**08 11 02.5**	**+1.3**
PB01				IAmb	IAmb	08 11 20.2	
	comp=Z,12nm,1.2s						
PTLB	**Pontes e Lacer**	**45.05**	**320**	P	**P**	**08 11 05.9**	**+0.8**
PTLB				IAmb	IAmb	08 11 20.1	
	comp=Z,5.6nm,1.2s						
GO01	**Chusmiza**	**45.59**	**305**	P	**P**	**08 11 11.1**	**+1.1**
GO01				IAmb	IAmb	08 11 12.4	
	comp=Z,10nm,0.8s						
SBA	**Scott Base**	**47.09**	**185**	P	**P**	**08 11 20.1**	**-0.4**
VNDA	**Vanda**	**47.64**	**184**	P	**P**	**08 11 24.5**	**-0.2**
VNDA				IAmb	IAmb	08 11 50.7	
	comp=Z,14nm,1.4s						
LPAZ	**La Paz**	**48.04**	**308**	P	**P**	**08 11 30.9**	**+1.6**
	comp=Z,8.6nm,0.7s,baz=134,slow=5.1,SNR=8.9						
	comp=Z,8.6nm,0.7s						
LPAZ	**La Paz**	**48.04**	**308**	P	**P**	**08 11 30.6**	**+1.3**
LPAZ				IAmb	IAmb	08 11 33.6	
	comp=Z,8.8nm,0.8s						
LPAZ	**La Paz**	**48.04**	**308**	*eP*	**P**	**08 11 30.1**	**+0.9**
TSUM	**Tsumeb**	**50.97**	**65**	P	**P**	**08 11 50.2**	**-0.9**
POGA	**Pongola**	**52.38**	**85**	P	**P**	**08 12 01.9**	**+0.4**
ETMB	**Extrema**	**52.97**	**314**	P	**P**	**08 12 01.8**	**-4.0**
ETMB				IAmb	IAmb	08 12 02.2	
	comp=Z,21nm,1.2s						
CASY	**Casey**	**55.68**	**162**	P	**P**	**08 12 25.1**	**+0.1**
CASY				IAmb	IAmb	08 12 33.1	
	comp=Z,4.7nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.11**	**33**	P	**P**	**08 14 17.8**	**-1.8**
TORD	**Torodi Ar. Bea**	**73.11**	**33**	P	**P**	**08 14 21.4**	**+1.8**
	comp=Z,1.2nm,0.9s,baz=193,slow=5.8,SNR=2.3						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**147.82**	**314**	PKPbc	**PKPbc**	**08 22 32.3**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=117,slow=1.5,SNR=8.5						
SONM	**Songino Array**	**152.70**	**87**	PKPbc	**PKiKP**	**08 22 47.7**	**+2.1**
	comp=Z,1.1nm,0.7s,baz=255,slow=2.2,SNR=2.9						

*IDC **19** 08:07:05.0±1.0,55°.13S×31°.24W,h0km,mb4.2/4, mbtmp4.3/5,ML3.6/1,Error ellipse: s-maj=31.5km s-min=28.7km az=9.0*
*NEIC **19** 08:07:06.1±1.3,55°.3S±0°.1×31°.46W±0°.09,h10km±1km, mb4.6/20,Error ellipse: s-maj=17.5km s-min=8.1km az=194.0*
ISC 19 08:07:05.8±0.7,55°.21S±0°.09×31°.40W±0°.09,h10km,n30, σ1§05/29,mb4.6/9,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.09**	**285**	Pn	**Pn**	**08 07 54.5**	**-0.1**
ORCD	**Orcadas**	**8.99**	**226**	Pn	**Pn**	**08 09 15.1**	**-0.3**
EFI	**East Falkland**	**16.23**	**272**	Pn	**Pn**	**08 10 53.8**	**+0.2**
EFI				IAmb	IAmb	08 10 58.1	
	comp=Z,115nm,1.4s						
PMSA	**Palmer Station**	**18.70**	**226**	P	**Pn**	**08 11 26.6**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=95,slow=6.3,SNR=4.0						
	comp=Z,9.1nm,1.0s						
SNAA	**Sanae**	**20.51**	**154**	P	**P**	**08 11 44.9**	**+1.2**
	comp=Z,7.8nm,0.8s,baz=293,slow=11,SNR=3.8						
	comp=Z,7.8nm,0.8s						
SNAA	**Sanae**	**20.51**	**154**	P	**P**	**08 11 43.2**	**-0.5**
SNAA				IAmb	IAmb	08 11 54.1	
	comp=Z,35nm,1.5s						
SMAI	**San Martin Ant**	**20.91**	**218**	P	**P**	**08 11 48.6**	**+0.6**
SMAI				IAmb	IAmb	08 12 11.4	
	comp=Z,40nm,1.3s						
TRIS	**Tristan da Cun**	**22.32**	**44**	P	**P**	**08 12 02.6**	**-0.7**
BELA	**Belgrano 2**	**22.80**	**182**	P	**P**	**08 12 06.3**	**-1.9**
BELA				IAmb	IAmb	08 12 15.3	
	comp=Z,59nm,1.5s						
MG05	**Puerto Natales**	**24.48**	**261**	P	**P**	**08 12 22.6**	**-2.1**
MG05				IAmb	IAmb	08 12 36.0	
	comp=Z,23nm,1.2s						
LMEL	**Las Melosas**	**34.30**	**292**	P	**P**	**08 13 50.1**	**-2.2**
CPUP	**Villa Florida**	**34.50**	**316**	P	**P**	**08 13 53.1**	**-0.7**
CPUP				IAmb	IAmb	08 13 58.4	
	comp=Z,12nm,1.5s						
MT09	**Talagante**	**34.78**	**291**	P	**P**	**08 13 55.9**	**-0.4**
VA06	**Catapilco**	**35.88**	**292**	P	**P**	**08 14 05.9**	**+0.2**
AC05	**El Transito**	**38.31**	**297**	P	**P**	**08 14 27.1**	**+0.6**
AC04	**Llanos de Chal**	**39.23**	**297**	P	**P**	**08 14 34.1**	**0.0**
GO02	**Mina Guanaco**	**41.00**	**301**	P	**P**	**08 14 50.0**	**+0.9**
GO02				IAmb	IAmb	08 15 05.8	
	comp=Z,7.4nm,0.7s						
LVC	**Limon Verde**	**42.83**	**304**	P	**P**	**08 15 03.7**	**-0.5**
PB01	**IPOC Station P**	**44.44**	**305**	P	**P**	**08 15 17.1**	**+0.2**
GO01	**Chusmiza**	**45.49**	**306**	P	**P**	**08 15 26.6**	**+0.9**
GO01				IAmb	IAmb	08 15 28.0	
	comp=Z,7.1nm,0.9s						
LPAZ	**La Paz**	**47.96**	**309**	P	**P**	**08 15 46.5**	**+1.3**
	comp=Z,3.2nm,0.6s,baz=141,slow=4.9,SNR=7.7						
	comp=Z,3.2nm,0.6s						
LPAZ	**La Paz**	**47.96**	**309**	P	**P**	**08 15 46.4**	**+1.2**
LBTB	**Lobatse**	**51.11**	**78**	P	**P**	**08 16 09.1**	**+0.5**
	comp=Z,4.1nm,0.7s,baz=221,slow=8.0,SNR=6.0						
	comp=Z,4.1nm,0.7s						
LBTB	**Lobatse**	**51.11**	**78**	P	**P**	**08 16 08.8**	**+0.2**
LBTB				IAmb	IAmb	08 16 13.9	
	comp=Z,14nm,1.5s						
ETMB	**Extrema**	**52.94**	**315**	P	**P**	**08 16 23.1**	**+1.0**
ETMB				IAmb	IAmb	08 16 31.2	
	comp=Z,3.6nm,1.2s						
TOA0	**Torodi Ar. Sit**	**73.58**	**34**	P	**P**	**08 18 39.4**	**+0.4**
TOA0				IAmb	IAmb	08 19 00.7	
	comp=Z,7.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**08 18 39.4**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=198,slow=5.9,SNR=7.3						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**144.16**	**65**	PKP	PKPbc	08 26 38.8	+0.1
	comp=Z,2.4nm,0.6s,baz=238,slow=2.8,SNR=4.1						
ILAR	**Eielson Array**	**147.78**	**313**	PKPbc	**PKPbc**	**08 26 48.7**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=101,slow=1.6,SNR=2.9						
SONM	**Songino Array**	**153.07**	**88**	PKPbc	**PKPbc**	**08 27 02.6**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=223,slow=2.8,SNR=7.0						

*IDC **19** 08:09:32.5±3.9,55°.40S×30°.13W,h0km,mb4.2/2, mbtmp4.2/2,Error ellipse: s-maj=134.2km s-min=51.0km az=175.0*
*NEIC **19** 08:09:34.0±1.7,55°.42S±0°.10×30°.3W±0°.2,h10km±1km, mb4.5/20,Error ellipse: s-maj=17.1km s-min=15.4km az=35.0*
ISC 19 08:09:33.8±0.6,55°.36S±0°.09×30°.35W±0°.09,h10km,n29, σ1§07/27,mb4.5/11,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.71**	**284**	Pn	**Pn**	**08 10 32.5**	**+1.4**
ORCD	**Orcadas**	**9.33**	**229**	Pn	**Pn**	**08 11 48.3**	**+0.1**
ESPZ	**Base Esperanza**	**15.68**	**228**	Pn	**Pn**	**08 13 15.1**	**+0.6**
VNA3	**Neumayer Olymp**	**18.27**	**159**	P	**P**	**08 13 50.6**	**+3.5**
PMSA	**Palmer Station**	**19.04**	**227**		**Pn**	**08 13 56.2**	**-0.2**
SNAA	**Sanae**	**20.12**	**155**	P	Pn	08 14 13.4	+4.1
SNAA	**Sanae**	**20.12**	**155**	P	Pn	08 14 07.5	-1.8
BELA	**Belgrano 2**	**22.67**	**182**	P	**P**	**08 14 34.0**	**-0.8**
MG04	**Isla Riesco**	**24.05**	**259**	P	**P**	**08 14 48.9**	**+0.2**
GO09	**Cerro Castillo**	**25.13**	**262**	P	**P**	**08 14 60.0**	**+1.3**
GO09				IAmb	IAmb	08 15 05.3	
	comp=Z,13nm,1.1s						
COYC	**Coyhaique**	**27.92**	**273**	P	**P**	**08 15 24.4**	**+0.6**
COYC				IAmb	IAmb	08 15 49.3	
	comp=Z,10.0nm,1.2s						
GO07	**Milladeo Hill,**	**30.31**	**276**	P	**P**	**08 15 43.9**	**-1.2**
LL07	**Hotel Espejo d**	**30.39**	**276**	P	**P**	**08 15 44.9**	**-0.8**
VA06	**Catapilco**	**36.49**	**291**	P	**P**	**08 16 38.8**	**-0.1**
VA06				IAmb	IAmb	08 16 48.8	
	comp=Z,30nm,1.1s						
AC05	**El Transito**	**38.91**	**296**	P	**P**	**08 16 59.4**	**-0.2**
AC05				IAmb	IAmb	08 17 21.6	
	comp=Z,36nm,1.3s						
AQDB	**Aquidauana**	**39.71**	**321**	P	**P**	**08 17 05.9**	**-0.3**
AQDB				IAmb	IAmb	08 17 12.4	
	comp=Z,2.1nm,0.7s						
PB01	**IPOC Station P**	**45.03**	**304**	P	**P**	**08 17 49.6**	**0.0**
PB01				IAmb	IAmb	08 18 16.0	
	comp=Z,21nm,1.5s						
GO01	**Chusmiza**	**46.07**	**305**	P	**P**	**08 17 57.6**	**-0.7**
VNDA	**Vanda**	**47.17**	**184**	P	**P**	**08 18 03.6**	**-2.1**
VNDA				IAmb	IAmb	08 18 12.0	
	comp=Z,2.4nm,1.3s						
BOSA	**Boshof**	**47.56**	**79**	P	**P**	**08 18 08.7**	**-0.9**
BOSA				IAmb	IAmb	08 18 13.4	
	comp=Z,5.5nm,1.1s						
LPAZ	**La Paz**	**48.53**	**308**	P	**P**	**08 18 18.8**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=125,slow=4.0,SNR=5.7						
	comp=Z,2.2nm,0.6s						
LPAZ	**La Paz**	**48.53**	**308**	P	**P**	**08 18 17.4**	**-0.3**
LPAZ				IAmb	IAmb	08 18 20.9	
	comp=Z,3.1nm,0.8s						
LBTB	**Lobatse**	**50.55**	**77**	P	**P**	**08 18 32.2**	**-0.3**
LBTB				IAmb	IAmb	08 18 40.6	
	comp=Z,4.2nm,1.1s						
TSUM	**Tsumeb**	**50.95**	**65**	P	**P**	**08 18 35.4**	**-0.1**
CASY	**Casey**	**55.15**	**162**	P	**P**	**08 19 06.5**	**+0.8**
RER	**Riviere de l'E**	**70.67**	**99**	P	**P**	**08 20 49.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P	**P**	**08 21 06.0**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=199,slow=5.3,SNR=5.4						
	comp=Z,1.6nm,0.6s						
ANWB	**Willy Bob**	**77.47**	**329**	P	**P**	**08 21 29.3**	**+0.1**
ILAR	**Eielson Array**	**148.33**	**313**	PKPbc	**PKPbc**	**08 29 18.9**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=123,slow=1.7,SNR=14						

*IDC **19** 08:11:10.8±2.1,55°.18S×31°.67W,h0km,mb4.3/4, mbtmp4.3/4,Error ellipse: s-maj=73.4km s-min=35.0km az=7.0*
*NEIC **19** 08:11:12.8±1.4,55°.13S±0°.09×32°.0W±0°.1,h10km±1km, mb4.5/17,Error ellipse: s-maj=17.7km s-min=10.8km az=36.0*
ISC 19 08:11:12.6±0.6,55°.11S±0°.09×32°.00W±0°.09,h10km,n31, σ1§37/30,mb4.5/11,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.73**	**286**		**Pn**	**08 11 57.2**	**+0.7**
ORCD	**Orcadas**	**8.81**	**225**	Pn	**Pn**	**08 13 18.0**	**-1.8**
PMSA	**Palmer Station**	**18.52**	**226**	P	**Pn**	**08 15 29.4**	**+0.4**
VNA3	**Neumayer Olymp**	**18.85**	**158**	P	**Pn**	**08 15 34.8**	**+1.8**
VNA2	**Neumayer--Watz**	**19.15**	**155**	P	**Pn**	**08 15 41.1**	**+4.6**
	baz=320,slow=13						
SNAA	**Sanae**	**20.75**	**154**	P	Pn	08 15 57.3	+1.7
SNAA	**Sanae**	**20.75**	**154**	P	**P**	**08 15 52.1**	**-1.0**
MG05	**Puerto Natales**	**24.15**	**261**	P	**P**	**08 16 25.4**	**-3.1**
MG05				IAmb	IAmb	08 16 27.3	
	comp=Z,27nm,1.1s						
GO09	**Cerro Castillo**	**24.23**	**262**	P	**P**	**08 16 29.1**	**-0.2**
GO09				IAmb	IAmb	08 16 36.9	
	comp=Z,38nm,1.4s						
TRQA	**Tornquist**	**26.45**	**298**	P	**P**	**08 16 49.4**	**-0.1**
TRQA				IAmb	IAmb	08 17 04.6	
	comp=Z,8.7nm,1.1s						
COYC	**Coyhaique**	**26.95**	**274**	P	**P**	**08 16 53.2**	**-0.8**
COYC				IAmb	IAmb	08 17 21.9	
	comp=Z,8.0nm,1.2s						
GO07	**Milladeo Hill,**	**29.34**	**277**	P	**P**	**08 17 16.2**	**+0.9**
LL04	**Puerto Octay**	**30.06**	**281**	P	**P**	**08 17 21.2**	**-0.4**
LL04				IAmb	IAmb	08 17 48.9	
	comp=Z,16nm,1.3s						
CPUP	**Villa Florida**	**34.19**	**317**	P	**P**	**08 17 58.6**	**+0.6**
PEL	**Peldehue**	**34.75**	**293**	P	**P**	**08 18 02.8**	**0.0**
CO06	**Fray Jorge**	**37.18**	**295**	P	**P**	**08 18 23.3**	**-0.4**
MAW	**Mawson**	**42.50**	**146**	P	**P**	**08 19 07.7**	**+0.3**
SUR	**Sutherland**	**43.11**	**81**	P	**P**	**08 19 12.0**	**-1.0**
PB16	**IPOC Station P**	**46.46**	**307**	P	**P**	**08 19 40.2**	**-0.1**
PB16				IAmb	IAmb	08 19 50.1	
	comp=Z,2.2nm,0.8s						
SBA	**Scott Base**	**46.80**	**185**	P	**P**	**08 19 41.6**	**0.0**
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**08 19 46.7**	**+0.7**
LPAZ	**La Paz**	**47.64**	**310**	P	**P**	**08 19 51.2**	**+1.6**
	comp=Z,3.0nm,0.7s,baz=189,slow=7.7,SNR=3.9						
	comp=Z,3.0nm,0.7s						
LPAZ	**La Paz**	**47.64**	**310**	P	**P**	**08 19 50.7**	**+1.2**
LPAZ				IAmb	IAmb	08 19 57.9	
	comp=Z,2.9nm,0.8s						
LBTB	**Lobatse**	**51.43**	**78**	P	**P**	**08 20 16.8**	**-1.0**
	comp=Z,3.4nm,0.8s,baz=205,slow=8.3,SNR=4.9						
	comp=Z,3.4nm,0.8s						
LBTB	**Lobatse**	**51.43**	**78**	P	**P**	**08 20 17.5**	**-0.4**
LBTB				IAmb	IAmb	08 20 23.1	
	comp=Z,8.5nm,1.1s						
DBIC	**Dimbokro**	**65.58**	**30**	P	**P**	**08 21 55.7**	**-0.7**
	comp=Z,4.3nm,0.8s,baz=188,slow=1.6,SNR=3.9						
	comp=Z,4.3nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.70**	**34**	P	**P**	**08 22 46.1**	**-0.4**
TOA0				IAmb	IAmb	08 22 46.9	
	comp=Z,2.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.70**	**34**	P	**P**	**08 22 45.9**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=201,slow=6.4,SNR=6.7						
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.70**	**34**	P	**P**	**08 22 46.3**	**-0.1**
ILAR	**Eielson Array**	**147.47**	**314**	PKPbc	**PKPbc**	**08 30 54.6**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=132,slow=2.0,SNR=5.5						
SONM	**Songino Array**	**153.42**	**88**	PKPbc	**PKPbc**	**08 31 09.4**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=211,slow=2.5,SNR=2.6						

*IDC **19** 08:12:49.7±1.0,55°.01S×30°.51W,h0km,mb4.1/4, mbtmp4.1/4,Error ellipse: s-maj=43.5km s-min=27.8km az=62.0*
*NEIC **19** 08:12:52.2±1.5,55°.2S±0°.1×30°.9W±0°.1,h10km±1km, mb4.5/21,Error ellipse: s-maj=20.0km s-min=9.4km az=198.0*
ISC 19 08:12:51.7±0.6,55°.1S±0°.1×30°.8W±0°.1,h10km,n30, σ0§93/30,mb4.5/12,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.41**	**282**	Pn	**Pn**	**08 13 45.6**	**+0.8**
PMSA	**Palmer Station**	**19.01**	**226**	P	**P**	**08 17 13.4**	**+0.2**
SNAA	**Sanae**	**20.44**	**155**	P	**P**	**08 17 27.0**	**-1.9**
SMAI	**San Martin Ant**	**21.19**	**218**	P	**P**	**08 17 37.7**	**+0.8**
SMAI				IAmb	IAmb	08 17 45.0	
	comp=Z,36nm,0.8s						
MG02	**Cerro Sombrero**	**22.54**	**260**	P	**P**	**08 17 51.5**	**0.0**
MG05	**Puerto Natales**	**24.83**	**261**	P	**P**	**08 18 12.1**	**-1.7**
MG05				IAmb	IAmb	08 18 12.7	
	comp=Z,14nm,0.8s						
TRQA	**Tornquist**	**27.07**	**296**	P	**P**	**08 18 33.9**	**-0.3**
PLTB	**Pedras Altas**	**28.38**	**316**	P	**P**	**08 18 45.4**	**-0.5**
ITQB	**Itaqui**	**31.45**	**313**	P	**P**	**08 19 12.6**	**-0.4**
ITQB				IAmb	IAmb	08 19 29.7	
	comp=Z,12nm,1.1s						
CPUP	**Villa Florida**	**34.68**	**315**	P	**P**	**08 19 41.0**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=152,slow=5.7,SNR=9.1						
	comp=Z,3.5nm,0.6s						
VA06	**Catapilco**	**36.17**	**292**	P	**P**	**08 19 54.0**	**-0.1**
CO01	**Juntas del Tor**	**37.56**	**296**	P	**P**	**08 20 07.5**	**+1.1**
CO01				IAmb	IAmb	08 20 18.7	
	comp=Z,5.5nm,1.1s						
GO02	**Mina Guanaco**	**41.25**	**301**	P	**P**	**08 20 37.2**	**+0.1**
MAW	**Mawson**	**42.10**	**145**	P	**P**	**08 20 45.0**	**+1.8**
AF01	**San Pedro de A**	**42.43**	**304**	P	**P**	**08 20 46.9**	**+0.1**
LVC	**Limon Verde**	**43.07**	**303**	P	**P**	**08 20 52.1**	**0.0**
LVC				IAmb	IAmb	08 21 15.0	
	comp=Z,13nm,1.4s						
PB01	**IPOC Station P**	**44.68**	**304**	P	**P**	**08 21 05.2**	**+0.5**
PB01				IAmb	IAmb	08 21 13.5	
	comp=Z,14nm,1.3s						
PTLB	**Pontes e Lacer**	**45.23**	**320**	P	**P**	**08 21 08.4**	**-0.6**
PTLB				IAmb	IAmb	08 21 09.1	
	comp=Z,2.1nm,0.6s						
VNDA	**Vanda**	**47.38**	**184**	P	**P**	**08 21 26.2**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=192,slow=4.3,SNR=7.5						
	comp=Z,1.4nm,0.7s						
VNDA	**Vanda**	**47.38**	**184**	P	**P**	**08 21 25.1**	**-0.1**
VNDA				IAmb	IAmb	08 21 32.4	
	comp=Z,3.3nm,1.1s						
LPAZ	**La Paz**	**48.18**	**309**	P	**P**	**08 21 33.0**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=127,slow=3.5,SNR=9.0						
	comp=Z,3.1nm,0.6s						
LPAZ	**La Paz**	**48.18**	**309**	P	**P**	**08 21 33.4**	**+0.5**
LPAZ				IAmb	IAmb	08 21 55.8	
	comp=Z,1.2nm,0.7s						
DBIC	**Dimbokro**	**65.25**	**29**	P	**P**	**08 23 34.7**	**+1.3**
SACV	**Santiago Islan**	**70.08**	**7**	P	**P**	**08 24 04.0**	**+0.1**
TOA0	**Torodi Ar. Sit**	**73.33**	**33**	P	**P**	**08 24 24.0**	**+0.6**
TOA0				IAmb	IAmb	08 24 42.7	
	comp=Z,6.5nm,1.3s						
TORD	**Torodi Ar. Bea**	**73.33**	**33**	P	**P**	**08 24 22.9**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=201,slow=5.7,SNR=2.6						
	comp=Z,1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.33**	**33**	P	**P**	**08 24 23.8**	**+0.5**
TORD				IAmb	IAmb	08 24 42.6	
	comp=Z,7.1nm,1.4s						
ARCES	**ARCESS Array B**	**130.86**	**23**	PKP	**PKPdf**	**08 32 00.2**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=202,slow=1.3,SNR=5.1						
ILAR	**Eielson Array**	**147.98**	**313**	PKPbc	**PKPbc**	**08 32 34.5**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=128,slow=1.5,SNR=7.0						
SONM	**Songino Array**	**152.73**	**88**	PKPbc	**PKPbc**	**08 32 46.1**	**-1.7**
	comp=Z,1.0nm,0.5s,baz=209,slow=3.3,SNR=4.8						

*IDC **19** 08:13:28.4±0.6,55°.14S×30°.64W,h0km,mb4.4/9, mbtmp4.4/10,ML3.9/1,Error ellipse: s-maj=21.4km s-min

AF01	**San Pedro de A**	**42.38**	**305**	P		**P**	**08 21 27.4**	**+1.7**
LVC	**Limon Verde**	**43.02**	**304**	P		**P**	**08 21 31.4**	**+0.4**
	comp=Z,3.3nm,0.5s,baz=104,slow=1.8,SNR=6.0							
	comp=Z,3.3nm,0.5s							
LVC	**Limon Verde**	**43.02**	**304**	P		**P**	**08 21 31.0**	**0.0**
PB09	**IPOC Station P**	**43.87**	**304**	P		**P**	**08 21 37.9**	**+0.3**
PB09				IAmb	IAmb		08 21 46.9	
	comp=Z,50nm,1.3s							
PB01	**IPOC Station P**	**44.63**	**305**	P		**P**	**08 21 43.3**	**-0.3**
GO01	**Chusmiza**	**45.68**	**306**	P		**P**	**08 21 52.4**	**-0.1**
GO01				IAmb	IAmb		08 22 01.3	
	comp=Z,15nm,0.9s							
VNDA	**Vanda**	**47.13**	**184**	P		**P**	**08 22 04.5**	**+1.9**
	comp=Z,3.7nm,0.7s,baz=187,slow=6.0,SNR=17							
	comp=Z,3.7nm,0.7s							
VNDA	**Vanda**	**47.13**	**184**	P		**P**	**08 22 03.0**	**+0.4**
VILB	**Vilhena**	**47.96**	**320**	P		**P**	**08 22 09.8**	**+0.1**
VILB				IAmb	IAmb		08 22 17.5	
	comp=Z,45nm,1.3s							
BOSA	**Boshof**	**48.04**	**80**	P		**P**	**08 22 06.8**	**-3.6**
	comp=Z,1.5nm,0.6s,baz=200,slow=6.2,SNR=3.8							
	comp=Z,1.5nm,0.6s							
BOSA	**Boshof**	**48.04**	**80**	P		**P**	**08 22 06.7**	**-3.7**
LPAZ	**La Paz**	**48.16**	**309**	P		**P**	**08 22 12.1**	**+0.1**
	comp=Z,5.6nm,0.5s,baz=95,slow=3.5,SNR=19							
	comp=Z,5.6nm,0.5s							
LPAZ	**La Paz**	**48.16**	**309**	P		**P**	**08 22 12.0**	**+0.1**
ASCN	**Ascension**	**49.16**	**22**	P		**P**	**08 22 21.0**	**+2.0**
RCBR	**Riachuelo**	**49.54**	**354**	P		**P**	**08 22 23.1**	**+1.3**
RCBR				IAmb	IAmb		08 22 28.3	
	comp=Z,13nm,1.4s							
LBTB	**Lobatse**	**51.03**	**78**	P		**P**	**08 22 30.2**	**-2.9**
	comp=Z,4.0nm,0.7s,baz=262,slow=19,SNR=6.1							
	comp=Z,4.0nm,0.7s							
LBTB	**Lobatse**	**51.03**	**78**	P		**P**	**08 22 30.3**	**-2.9**
ETMB	**Extrema**	**53.14**	**315**	P		**P**	**08 22 47.3**	**-1.6**
ETMB				IAmb	IAmb		08 22 56.6	
	comp=Z,23nm,1.4s							
CASY	**Casey**	**55.29**	**162**	P		**P**	**08 23 02.6**	**-1.3**
BOAV	**Boa Vista**	**62.40**	**326**	P		**P**	**08 23 51.8**	**-2.1**
BOAV				IAmb	IAmb		08 23 55.0	
	comp=Z,4.7nm,1.0s							
DBIC	**Dimbokro**	**65.57**	**29**	P		**P**	**08 24 15.8**	**+1.1**
DBIC				IAmb	IAmb		08 24 19.2	
	comp=Z,13nm,1.2s							
OTAV	**Otavalo**	**67.41**	**307**	P		**P**	**08 24 28.4**	**+1.3**
ROSC	**El Rosal**	**69.73**	**313**	P		**P**	**08 24 42.7**	**+1.2**
ROSC				IAmb	IAmb		08 24 51.5	
	comp=Z,12nm,1.1s							
GUY2C	**Guyana, Caldas**	**70.51**	**313**	*e*P		**P**	**08 24 45.4**	**-1.0**
BAUV	**El Baul**	**71.06**	**321**	P		**P**	**08 24 50.4**	**+1.3**
PTBC	**PUERTO BERRIO,**	**71.32**	**314**	*e*P		**P**	**08 24 46.9**	**-3.8**
SDV	**Santo Domingo**	**71.96**	**319**	P		**P**	**08 24 55.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.65**	**33**	P		**P**	**08 25 02.0**	**-2.6**
	comp=Z,2.9nm,0.8s,baz=202,slow=6.2,SNR=7.1							
	comp=Z,2.9nm,0.8s							
KMBO	**Kilima Mbogo**	**76.95**	**73**	*i* P		**P**	**08 25 28.0**	**+4.0**
STKA	**Stephens Creek**	**92.89**	**174**	*e*P		**P**	**08 26 43.8**	**-0.2**
KBZ	**Khabaz**	**116.87**	**51**	*i* PKIKP		**PKiKP**	**08 32 19.3**	**+4.5**
NVAR	**Mina Array Bea**	**119.05**	**296**	PKP		**PKPdf**	**08 32 18.5**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=106,slow=2.6,SNR=3.7							
FINES	**FINESS Array B**	**124.87**	**30**	PKP		**PKPdf**	**08 32 27.1**	**-2.5**
	comp=Z,1.3nm,0.6s,baz=176,slow=3.1,SNR=6.9							
KIRV	**Kirov**	**130.58**	**43**	*i* PKIKP		**PKiKP**	**08 32 46.6**	**+5.2**
ARCES	**ARCESS Array B**	**131.17**	**23**	PKP		**PKPdf**	**08 32 39.1**	**-2.3**
	comp=Z,1.3nm,0.6s,baz=214,slow=1.4,SNR=13							
LZH	**Lanzhou**	**143.97**	**103**	*e*PKP		**PKPdf**	**08 33 06.8**	**+0.6**
GTA	**Gaotai**	**144.03**	**95**	*e*PKPbc		**PKPab**	**08 33 03.4**	**-0.3**
ZALV	**Zalesovo Beam**	**144.12**	**65**	PKP		PKPbc	08 33 03.7	-0.1
	comp=Z,3.0nm,0.3s,baz=228,slow=3.7,SNR=4.1							
ILAR	**Eielson Array**	**147.98**	**313**	PKPbc		**PKPdf**	**08 33 13.2**	**+1.3**
	comp=Z,6.2nm,0.8s,baz=118,slow=1.6,SNR=15							
HHC	**Hu-ho-hao-te**	**151.61**	**105**	*e*P		**PKPdf**	**08 33 20.4**	**+1.8**
MOY	**Mondy**	**151.78**	**77**	*e*PKIKP		**PKPab**	**08 33 34.8**	**+0.8**
MOY				pmax	pmax			
	comp=Z,23nm,1.5s							
ZAK	**Zakamensk**	**152.47**	**81**	*e*PKIKP		**PKPbc**	**08 33 23.9**	**-2.5**
ZAK				pmax	pmax			
	comp=Z,8.0nm,1.5s							
SONM	**Songino Array**	**152.96**	**88**	PKPbc		**PKPbc**	**08 33 24.8**	**-2.8**
	comp=Z,3.1nm,0.6s,baz=221,slow=3.6,SNR=12							

*IDC **19** 08:13:40.1±0.5,54.97S×31.17W,h0km,mb4.7/11, mbtmp4.7/11, Error ellipse: s-maj=23.7km s-min=15.2km az=57.0*
*NEIC **19** 08:13:40.5±1.8,55.23S±0.09×31.3W±0.2,h10km±1km, mb5.1/38, Error ellipse: s-maj=16.1km s-min=14.4km az=43.0*

ISC 19 08:13:40.4±0.3,55.13S±0.06×31.40W±0.07,h10km,n170, σ1s19/156,mb5.0/29,2C,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.07**	**284**	Pn		**Pn**	**08 14 30.1**	**+1.1**
HOPE	**Hope Point**	**3.07**	**284**	P		**Pn**	**08 14 30.1**	**+1.1**
ORCD	**Orcadas**	**9.04**	**226**	Pn		**Pn**	**08 15 49.6**	**-1.2**
PMSA	**Palmer Station**	**18.75**	**226**	P		**P**	**08 17 57.7**	**-1.4**
PMSA				IAmb	IAmb		08 18 09.0	
	comp=Z,82nm,1.2s							
PMSA	**Palmer Station**	**18.75**	**226**	*e*P		**P**	**08 17 57.2**	**-2.0**
SNAA	**Sanae**	**20.58**	**155**	P		Pn	08 18 21.5	+0.2
	comp=Z,30nm,0.7s,baz=304,slow=6.6,SNR=17							
	comp=Z,30nm,0.7s							
SNAA	**Sanae**	**20.58**	**155**	P		**P**	**08 18 16.5**	**-2.6**
SNAA	**Sanae**	**20.58**	**155**	P		Pn	08 18 21.5	+0.2
MG01	**Puerto William**	**20.62**	**256**	P		**P**	**08 18 20.3**	**+0.7**
MG01				IAmb	IAmb		08 18 32.5	
	comp=Z,115nm,1.1s							
BELA	**Belgrano 2**	**22.87**	**182**	P		**P**	**08 18 42.4**	**-1.1**
BELA				IAmb	IAmb		08 18 57.5	
	comp=Z,58nm,1.4s							
GO10	**Punta Arenas**	**23.10**	**258**	P		**P**	**08 18 46.2**	**+0.1**
MG04	**Isla Riesco**	**23.50**	**259**	P		**P**	**08 18 50.0**	**-0.1**
MG04				IAmb	IAmb		08 18 52.0	
	comp=Z,80nm,0.8s							
TRQA	**Tornquist**	**26.77**	**297**	P		**P**	**08 19 20.6**	**+0.4**
TRQA				IAmb	IAmb		08 19 26.0	
	comp=Z,31nm,1.3s							
TRQA	**Tornquist**	**26.77**	**297**	P		**P**	**08 19 20.6**	**+0.4**
TRQA	**Tornquist**	**26.77**	**297**	pmax	pmax			
	comp=Z,31nm,1.3s							
COYC	**Coyhaique**	**27.30**	**273**	P		**P**	**08 19 25.3**	**+0.3**
COYC				IAmb	IAmb		08 19 27.1	
	comp=Z,46nm,1.1s							
PLTB	**Pedras Altas**	**28.14**	**317**	*e*P		**P**	**08 19 32.3**	**-0.3**
AY01	**Puyuhuapi**	**28.30**	**275**	P		**P**	**08 19 34.2**	**+0.3**
AY01				IAmb	IAmb		08 19 35.2	
	comp=Z,29nm,1.1s							
PLCA	**Paso Flores**	**29.48**	**283**	P		**P**	**08 19 44.6**	**+0.2**
PLCA				IAmb	IAmb		08 19 45.0	
	comp=Z,14nm,1.2s							
PLCA	**Paso Flores**	**29.48**	**283**	P		**P**	**08 19 44.7**	**+0.2**
PLCA	**Paso Flores**	**29.48**	**283**	*e*P		**P**	**08 19 44.4**	**0.0**
PLCA	**Paso Flores**	**29.48**	**283**	pmax	pmax			
	comp=Z,14nm,1.2s							
TER01	**Tubaro-SC**	**29.51**	**327**	*e*P		**P**	**08 19 45.5**	**+0.8**
ALGR	**Alto Alegre (B**	**30.59**	**321**	*e*P		**P**	**08 19 54.5**	**+0.2**
UNIS	**Unistalda (Bra**	**31.11**	**317**	*e*P		**P**	**08 19 58.9**	**0.0**
ITQB	**Itaqui**	**31.20**	**314**	P		**P**	**08 19 59.7**	**0.0**
ITQB				IAmb	IAmb		08 20 02.2	
	comp=Z,28nm,1.1s							
ITQB	**Itaqui**	**31.20**	**314**	*e*P		**P**	**08 19 60.0**	**+0.3**
ITAB	**Concordia**	**31.69**	**323**	*e*P		**P**	**08 20 03.0**	**-1.0**
CRSM	**Crissiumal (Br**	**32.14**	**320**	*e*P		**P**	**08 20 08.6**	**+0.6**
PTGB	**Pitanga**	**34.00**	**325**	*e*P		**P**	**08 20 23.6**	**-0.6**
VAO	**Valinhos**	**34.12**	**334**	*e*P		**P**	**08 20 25.7**	**+0.3**
LMEL	**Las Melosas**	**34.28**	**292**	P		**P**	**08 20 27.8**	**+1.0**
LMEL				IAmb	IAmb		08 20 42.6	
	comp=Z,27nm,1.4s							
CPUP	**Villa Florida**	**34.45**	**316**	*e*P		**P**	**08 20 28.3**	**+0.2**
MT03	**Universidad Ad**	**34.71**	**292**	P		**P**	**08 20 29.8**	**-0.6**
MT03				IAmb	IAmb		08 20 32.4	
	comp=Z,60nm,1.3s							
RCLB	**Rio Claro- Sao**	**34.83**	**333**	*e*P		**P**	**08 20 31.6**	**+0.2**
PEL	**Peldehue**	**35.07**	**292**	P		**P**	**08 20 33.9**	**+0.4**
PEL				IAmb	IAmb		08 20 35.5	
	comp=Z,67nm,1.4s							
PEL	**Peldehue**	**35.07**	**292**	P		**P**	**08 20 33.9**	**+0.4**
PEL	**Peldehue**	**35.07**	**292**	pmax	pmax			
	comp=Z,67nm,1.4s							
QSPA	**South Pole Qui**	**35.12**	**180**	P		**P**	**08 20 36.4**	**+2.7**
	comp=Z,19nm,1.0s,baz=208,slow=7.1,SNR=7.3							
	comp=Z,19nm,1.0s							

VA05	**Santo Domingo**	**35.18**	**291**	P		**P**	**08 20 35.1**	**+0.8**
VA05				IAmb	IAmb		08 20 36.0	
	comp=Z,47nm,0.8s							
MT02	**Curacav**	**35.23**	**292**	P		**P**	**08 20 35.7**	**+0.9**
VA03	**San Esteban**	**35.30**	**293**	P		**P**	**08 20 36.7**	**+1.2**
VA03				IAmb	IAmb		08 20 37.6	
	comp=Z,43nm,1.1s							
TRCB	**Terra Rica**	**35.97**	**325**	*e*P		**P**	**08 20 41.9**	**+0.7**
BB19B	**Bebedouro**	**36.38**	**332**	*e*P		**P**	**08 20 44.8**	**0.0**
ITRB	**Iturama**	**38.18**	**330**	*e*P		**P**	**08 21 00.2**	**+0.2**
IPMB	**Ipameri, GO**	**39.25**	**334**	*e*P		**P**	**08 21 09.0**	**-0.1**
C2SB	**Chapadao do Su**	**39.80**	**327**	*e*P		**P**	**08 21 13.9**	**+0.3**
CMC01	**Camacan, BA**	**40.19**	**348**	*e*P		**P**	**08 21 15.5**	**-1.2**
BDFB	**Brasilia**	**41.45**	**335**	*e*P		**P**	**08 21 26.9**	**-0.5**
MAW	**Mawson**	**42.29**	**145**	P		**P**	**08 21 35.1**	**+1.6**
	comp=Z,7.2nm,0.8s,baz=248,slow=8.2,SNR=14							
	comp=Z,7.2nm,0.8s							
MAW	**Mawson**	**42.29**	**145**	P		**P**	**08 21 33.2**	**-0.3**
MAW	**Mawson**	**42.29**	**145**	P		**P**	**08 21 35.1**	**+1.6**
LVC	**Limon Verde**	**42.79**	**304**	P		**P**	**08 21 40.0**	**+1.4**
	comp=Z,11nm,0.7s,baz=114,slow=2.3,SNR=8.2							
	comp=Z,11nm,0.7s							
LVC	**Limon Verde**	**42.79**	**304**	P		**P**	**08 21 39.9**	**+1.4**
LVC				IAmb	IAmb		08 21 40.4	
	comp=Z,28nm,1.1s							
LVC	**Limon Verde**	**42.79**	**304**	*e*P		**P**	**08 21 38.5**	**0.0**
LVC	**Limon Verde**	**42.79**	**304**	*e*P		**P**	**08 21 39.5**	**+1.0**
SALV	**Santo Antonio**	**43.40**	**325**	*e*P		**P**	**08 21 43.1**	**0.0**
PB09	**IPOC Station P**	**43.64**	**304**	P		**P**	**08 21 46.4**	**+1.2**
PB09				IAmb	IAmb		08 22 12.9	
	comp=Z,53nm,1.3s							
NBLA	**Lagarto - SE**	**44.32**	**351**	*e*P		**P**	**08 21 50.2**	**-0.3**
VNDA	**Vanda**	**47.35**	**184**	P		**P**	**08 22 16.4**	**+2.6**
	comp=Z,3.9nm,0.8s,baz=194,slow=6.1,SNR=7.9							
	comp=Z,3.9nm,0.8s							
VNDA	**Vanda**	**47.35**	**184**	P		**P**	**08 22 14.5**	**+0.7**
VNDA	**Vanda**	**47.35**	**184**	P		**P**	**08 22 16.4**	**+2.6**
VILB	**Vilhena**	**47.71**	**321**	*e*P		**P**	**08 22 16.6**	**-0.6**
PDRB	**Porto dos Gac**	**47.76**	**326**	*e*P		**P**	**08 22 16.8**	**-0.7**
SMTB	**Santa Maria do**	**47.91**	**338**	*e*P		**P**	**08 22 19.9**	**+1.1**
LPAZ	**La Paz**	**47.92**	**309**	P		**P**	**08 22 20.6**	**+1.1**
	comp=Z,17nm,0.5s,baz=147,slow=5.9,SNR=20							
	comp=Z,17nm,0.5s							
LPAZ	**La Paz**	**47.92**	**309**	P		**P**	**08 22 20.4**	**+0.9**
LPAZ				IAmb	IAmb		08 22 22.2	
	comp=Z,35nm,0.8s							
LPAZ	**La Paz**	**47.92**	**309**	*e*P		**P**	**08 22 19.5**	**0.0**
LPAZ	**La Paz**	**47.92**	**309**	*e*P		**P**	**08 22 20.8**	**+1.3**
H10S2	**ASCENSION HYDR**	**47.94**	**23**	T		T	09 13 42.0	
	baz=27,slow=74,SNR=7.7							
H10S3	**ASCENSION HYDR**	**47.94**	**23**	T		T	09 13 41.4	
	baz=193,slow=74,SNR=6.9							
BOSA	**Boshof**	**48.12**	**81**	P		**P**	**08 22 21.1**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=206,slow=7.2,SNR=3.1							
	comp=Z,3.2nm,0.6s							
BOSA	**Boshof**	**48.12**	**81**	P		**P**	**08 22 19.0**	**-1.5**
BOSA	**Boshof**	**48.12**	**81**	P		**P**	**08 22 21.1**	**+0.6**
CLDB	**Colider**	**48.15**	**327**	*e*P		**P**	**08 22 19.9**	**-0.7**
ASCN	**Ascension**	**49.00**	**23**	P		**P**	**08 22 27.8**	**+0.7**
ASCN				IAmb	IAmb		08 22 48.1	
	comp=Z,110nm,0.9s							
H10N1	**ASCENSION HYDR**	**49.05**	**22**	T		T	09 15 07.5	
	baz=192,slow=75,SNR=6.9							
H10N3	**ASCENSION HYDR**	**49.05**	**22**	T		T	09 15 05.2	
	baz=192,slow=75,SNR=9.2							
H10N2	**ASCENSION HYDR**	**49.07**	**22**	T		T	09 15 06.0	
	baz=192,slow=75,SNR=9.3							
PRPB	**Paraupebas**	**51.01**	**336**	*e*P		**P**	**08 22 42.6**	**+0.2**
LBTB	**Lobatse**	**51.09**	**78**	P		**P**	**08 22 41.2**	**-2.0**
LBTB				IAmb	IAmb		08 23 05.8	
	comp=Z,17nm,1.2s							
LBTB	**Lobatse**	**51.09**	**78**	P		**P**	**08 22 41.2**	**-2.0**
LBTB	**Lobatse**	**51.09**	**78**	pmax	pmax			
	comp=Z,17nm,1.3s							
NPGB	**Novo Progresso**	**51.64**	**329**	*e*P		**P**	**08 22 46.9**	**-0.3**
ETMB	**Extrema**	**52.89**	**315**	*e*P		**P**	**08 22 56.0**	**-0.5**
ITTB	**Itaituba**	**54.29**	**330**	*e*P		**P**	**08 23 06.0**	**-0.7**
CASY	**Casey**	**55.54**	**162**	P		**P**	**08 23 15.4**	**+0.3**
CASY				IAmb	IAmb		08 23 18.2	
	comp=Z,19nm,0.8s							
NNA	**Nana**	**55.72**	**302**	pmax	pmax			
	comp=Z,46nm,1.8s							
NNA	**Nana**	**55.72**	**302**	*i* P		**P**	**08 23 13.7**	**-3.5**
MACA	**Manacapuru-AM**	**56.98**	**324**	P		**P**	**08 23 24.3**	**-1.7**
MACA				IAmb	IAmb		08 23 26.2	
	comp=Z,42nm,1.1s							
MACA	**Manacapuru-AM**	**56.98**	**324**	*e*P		**P**	**08 23 24.7**	**-1.3**
MCPB	**Macapa, AP**	**57.15**	**335**	*e*P		**P**	**08 23 27.4**	**+0.2**
CZSB	**Cruzeiro do Su**	**57.53**	**309**	P		**P**	**08 23 28.8**	**-1.2**
CZSB				IAmb	IAmb		08 23 29.9	
	comp=Z,46nm,1.2s							
CZSB	**Cruzeiro do Su**	**57.53**	**309**	*e*P		**P**	**08 23 29.3**	**-0.6**
LSZ	**Lusaka**	**60.34**	**73**	P		**P**	**08 23 50.0**	**+0.4**
LSZ	**Lusaka**	**60.34**	**73**	pmax	pmax			
	comp=Z,8.0nm,1.4s							
LSZ	**Lusaka**	**60.34**	**73**	P		**P**	**08 23 50.0**	**+0.4**
ATAH	**Atahualpa**	**60.68**	**304**	P		**P**	**08 23 54.3**	**+2.0**
	comp=Z,13nm,1.0s,baz=170,slow=2.9,SNR=6.7							
	comp=Z,13nm,1.0s							
BOAV	**Boa Vista**	**62.14**	**327**	P		**P**	**08 24 00.3**	**-1.3**
BOAV				IAmb	IAmb		08 24 02.7	
	comp=Z,19nm,1.0s							
BOSC	**San Juan Bosco**	**64.21**	**306**	P		**P**	**08 24 15.4**	**-0.2**
BOSC				IAmb	IAmb		08 24 36.6	
	comp=Z,7.7nm,0.7s							
ARNL	**Arenillas**	**64.60**	**304**			**P**	**08 24 18.2**	**+0.3**
DBIC	**Dimbokro**	**65.43**	**29**	P		**P**	**08 24 23.9**	**+0.6**
	comp=Z,4.5nm,0.8s,baz=220,slow=8.5,SNR=4.2							
	comp=Z,4.5nm,0.8s							
DBIC	**Dimbokro**	**65.43**	**29**	P		**P**	**08 24 23.9**	**+0.6**
CHSH	**Refugio Sur-Vo**	**65.84**	**306**	P		**P**	**08 24 26.6**	**-0.1**
CHSH				IAmb	IAmb		08 24 30.2	
	comp=Z,21nm,0.8s							
MACC	**Macarena, Meta**	**66.86**	**313**	*e*P		**P**	**08 24 31.7**	**-0.8**
FLOC	**Florencia**	**67.12**	**311**	*e*P		**P**	**08 24 33.7**	**-0.5**
OTAV	**Otavalo**	**67.18**	**307**	*e*P		**P**	**08 24 35.0**	**-0.1**
OTAV	**Otavalo**	**67.18**	**307**	*e*P		**P**	**08 24 36.6**	**+1.5**
OTAV	**Otavalo**	**67.18**	**307**	*e*P		**P**	**08 24 36.2**	**+1.2**
GCUF	**Volcan Galeras**	**67.55**	**309**	*e*P		**P**	**08 24 38.8**	**+1.3**
BBAC	**Balboa, Cauca**	**68.22**	**309**	*e*P		**P**	**08 24 41.4**	**0.0**
POPC	**Popayan, Colom**	**68.43**	**310**	*e*P		**P**	**08 24 40.5**	**-2.2**
PRAC	**Prado**	**68.71**	**313**	*e*P		**P**	**08 24 43.6**	**-0.6**
ROSC	**El Rosal**	**69.49**	**314**	P		**P**	**08 24 49.9**	**+0.5**
	comp=Z,4.7nm,0.4s,baz=91,slow=13,SNR=4.0							
	comp=Z,4.7nm,0.4s							
ROSC	**El Rosal**	**69.49**	**314**	P		**P**	**08 24 49.9**	**+0.5**
YOTC	**Yotoco, Valle**	**69.57**	**311**	*e*P		**P**	**08 24 49.5**	**-0.1**
RUSC	**La Rusia**	**69.93**	**315**	*e*P		**P**	**08 24 50.6**	**-1.6**
SPBC	**San Pablo de B**	**70.12**	**314**	*e*P		**P**	**08 24 50.6**	**-2.3**
BARC	**Barichara**	**70.61**	**315**	*e*P		**P**	**08 24 53.2**	**-2.9**
CBOC	**Ciudad Bolivar**	**71.12**	**312**	*e*P		**P**	**08 24 57.0**	**-2.2**
SOCV	**Socops**	**71.24**	**318**	*e*P		**P**	**08 24 59.3**	**-0.3**
SDV	**Santo Domingo**	**71.70**	**319**	*e*P		**P**	**08 25 02.9**	**+0.2**
ZARC	**Zaragoza, Cauc**	**72.10**	**314**	*e*P		**P**	**08 25 02.7**	**-2.2**
UREC	**San Jos de Ur**	**72.62**	**314**	*e*P		**P**	**08 25 06.0**	**-1.9**
TOA0	**Torodi Ar. Sit**	**73.53**	**34**	P		**P**	**08 25 13.3**	**+0.1**
TOA0				IAmb	IAmb		08 25 16.0	
	comp=Z,18nm,1.4s							
TORD	**Torodi Ar. Bea**	**73.53**	**34**	P		**P**	**08 25 13.3**	**+0.1**
	comp=Z,3.6nm,0.6s,baz=202,slow=6.3,SNR=7.7							
	comp=Z,3.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.53**	**34**	P		**P**	**08 25 13.4**	**+0.2**
ACON	**Acoyapa**	**80.59**	**307**	P		**P**	**08 25 53.0**	**-0.1**
ACON				IAmb	IAmb		08 25 53.9	
	comp=Z,32nm,1.1s							
BOAB	**BOACO BROADBA**	**81.24**	**307**	P		**P**	**08 25 56.6**	**+0.1**
ASAR	**Alice Springs**	**100.52**	**166**	PP		**PP**	**08 31 33.2**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=186,slow=9.0,SNR=6.0							
NVAR	**Mina Arraay Bea**	**118.84**	**296**	PKP		**PKiKP**	**08 32 29.9**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=132,slow=3.6,SNR=4.2							
NOA	**NORSAR Array B**	**120.63**	**23**	PKP		**PKPdf**	**08 32 31.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=206,slow=2.0,SNR=4.4							
NOA	**NORSAR Array B**	**120.63**	**23**	PKIKP		**PKPdf**	**08 32 31.1**	**+0.1**
VSU	**Vasula**	**122.49**	**32**	*i* PKIKP		**PKPdf**	**08 32 31.2**	**-3.3**
FINES	**FINESS Array B**	**124.72**	**30**	PKP		**PKiKP**	**08 32 39.5**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=127,slow=5.0,SNR=9.5							
FINES	**FINESS Array B**	**124.72**	**30**	PKIKP		**PKiKP**	**08 32 39.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**127.63**	**114**	PKP		**PKiKP**	**08 32 47.1**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=224,slow=4.1,SNR=7.8							
CMAR	**Chiang Mai Arr**	**127.63**	**114**	PKIKP		**PKiKP**	**08 32 47.1**	**+0.8**
KLMR	**Klimovskoe**	**128.46**	**36**	*e*PKIKP		**PKPdf**	**08 32 44.7**	**-1.2**
KLMR	**Klimovskoe**	**128.46**	**36**	*e*PKPdf		**PKPdf**	**08 32 44.8**	**-1.2**
AKTO	**Aktyubinsk**	**128.73**	**55**	PKP		**PKiKP**	**08 32 47.7**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=238,slow=5.8,SNR=5.1							

AKTO	**Aktyubinsk**	**128.73**	**55**	PKIKP		**PKiKP**	**08 32 47.7**	**+0.2**
ARCES	**ARCESS Array B**	**131.00**	**23**	PKP		**PKiKP**	**08 32 51.5**	**0.0**
	comp=Z,4.0nm,0.7s,baz=222,slow=1.6,SNR=16							
ARCES	**ARCESS Array B**	**131.00**	**23**	PKIKP		**PKiKP**	**08 32 51.5**	**0.0**
PRGR	**Permogore**	**131.13**	**38**	*e*PKIKP		**PKPdf**	**08 32 51.0**	**+0.1**
AAK	**Ala-Archa**	**131.96**	**73**	*i* PKIKP		**PKPdf**	**08 32 50.7**	**-2.7**
ARU	**Arti**	**132.88**	**49**	PKP		**PKPdf**	**08 32 55.2**	**+0.7**
	comp=Z,2.8nm,0.3s,baz=205,slow=3.6,SNR=4.8							
ARU	**Arti**	**132.88**	**49**	*i* PKIKP		**PKPdf**	**08 32 55.0**	**+0.5**
ARU	**Arti**	**132.88**	**49**				08 35 25.3	
YKA	**Yellowknife Ar**	**133.91**	**320**	PKP		**PKiKP**	**08 32 57.5**	**0.0**
	comp=Z,4.0nm,0.6s,baz=126,slow=2.2,SNR=12							
YKA	**Yellowknife Ar**	**133.91**	**320**	PKIKP		**PKiKP**	**08 32 57.5**	**0.0**
PZH	**PanZhiHua**	**135.66**	**111**	PKP		**PKPdf**	**08 32 58.5**	**-2.3**
WMQ	**Urumqi**	**140.09**	**80**	*e*P		**PKPdf**	**08 33 04.9**	**-3.5**
ZALV	**Zalesovo Beam**	**144.13**	**65**	PKP		**PKPdf**	**08 33 14.7**	**-0.4**
	comp=Z,4.6nm,0.3s,baz=212,slow=5.3,SNR=4.5							
ZALV	**Zalesovo Beam**	**144.13**	**65**	PKIKP		**PKPdf**	**08 33 14.7**	**-0.4**
XAN	**Xi'an**	**145.40**	**111**	PKP		**PKPab**	**08 33 18.8**	**+0.6**
XAN				sPKP			08 33 27.8	
WHN	**Wuhan**	**145.44**	**121**	PKPbc		**PKiKP**	**08 33 26.6**	**+4.5**
LYN	**LuoYang**	**147.67**	**114**	⇑PKPbc		**PKPbc**	**08 33 24.5**	**-0.1**
ILAR	**Eielson Array**	**147.73**	**314**	PKPbc		**PKPbc**	**08 33 24.2**	**+0.4**
	comp=Z,7.1nm,0.7s,baz=104,slow=1.8,SNR=4.8							
ILAR	**Eielson Array**	**147.73**	**314**	PKP2		**PKPbc**	**08 33 24.2**	**+0.4**
NRIK	**Noril'sk**	**149.78**	**38**	PKPbc		**PKPbc**	**08 33 29.4**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=179,slow=3.5,SNR=5.5							
NRIK	**Noril'sk**	**149.78**	**38**	PKP2		**PKPbc**	**

ORCD	Orcadas	8.90	227	Pn		Pn	08 21 24.8	+0.9
PMSA	Palmer Station	18.61	226	P		P	08 23 30.8	-1.8
SNAA	Sanae	20.43	154	P		P	08 23 53.7	+1.1
	2.4nm,0.8s,baz=302,slow=10,SNR=3.4							
	2.4nm,0.8s							
SNAA	Sanae	20.43	154	Pn		P	08 23 53.9	+1.3
ITQB	Itaqui	31.30	315	P		P	08 25 35.4	-0.2
CPUP	Villa Florida	34.55	316	P		P	08 26 05.3	+1.3
	1.5nm,0.5s,baz=138,slow=10,SNR=4.6							
	1.5nm,0.5s							
CPUP	Villa Florida	34.55	316	P		P	08 26 04.6	+0.6
QSPA	South Pole Qui	34.95	180	P		P	08 26 06.3	-0.9
ZON	Zonda	35.33	297	P		P	08 26 10.8	0.0
ZON				IAmb	IAmb		08 26 18.0	
	comp=Z,4.5nm,0.9s							
CO03	El Pedregal	36.93	295	P		P	08 26 25.6	+1.1
CO03				IAmb	IAmb		08 26 30.4	
	comp=Z,21nm,1.1s							
CO06	Fray Jorge	37.55	294	P		P	08 26 29.9	+0.2
AC05	El Transito	38.33	298	P		P	08 26 36.2	-0.2
AC05				IAmb	IAmb		08 26 38.5	
	comp=Z,25nm,1.3s							
AC02	Maricunga	39.40	301	P		P	08 26 45.6	-0.2
AC02				IAmb	IAmb		08 27 03.4	
	comp=Z,24nm,1.4s							
AF01	San Pedro de A	42.22	305	P		P	08 27 08.4	-0.5
LVC	Limon Verde	42.86	304	P		P	08 27 13.6	-0.6
LVC				IAmb	IAmb		08 27 23.3	
	comp=Z,20nm,1.5s							
PTLB	Pontes e Lacer	45.13	321	P		P	08 27 32.3	+0.2
PTLB				IAmb	IAmb		08 27 33.7	
	comp=Z,4.4nm,0.9s							
LPAZ	La Paz	48.01	309	P		P	08 27 54.8	-0.4
	comp=Z,3.3nm,0.6s,baz=162,slow=6.2,SNR=10.0							
	comp=Z,3.3nm,0.6s							
LPAZ	La Paz	48.01	309	P		P	08 27 54.6	-0.6
LPAZ				IAmb	IAmb		08 28 18.8	
	comp=Z,1.7nm,0.9s							
TOA0	Torodi Ar. Sit	73.69	34	P		P	08 30 48.7	-0.5
TOA0				IAmb	IAmb		08 31 06.3	
	comp=Z,7.6nm,1.5s							
TORD	Torodi Ar. Bea	73.69	34	P		P	08 30 49.2	0.0
	comp=Z,0.6nm,0.6s,baz=199,slow=5.7,SNR=4.2							
	comp=Z,0.6nm,0.6s							
TORD	Torodi Ar. Bea	73.69	34	P		P	08 30 48.9	-0.4
ILAR	Eielson Array	147.83	313	PKPbc		PKPbc	08 38 59.5	+0.3
	comp=Z,1.0nm,0.6s,baz=124,slow=2.0,SNR=6.5							
SONM	Songino Array	153.11	88	PKPbc		PKPbc	08 39 11.9	-0.5
	comp=Z,0.5nm,0.4s,baz=198,slow=2.9,SNR=3.6							

IDC ***19*** *08:21:01.8±0.5,55°14S×31°06W,h0km,mb4.8/12, mbtmp4.8/13,ML4.3/1,Error ellipse: s-maj=17.9km s-min=14.6km az=51.0*

MOS ***19*** *08:21:01.6±1.1,55°21S×31°25W,h10km,mb5.2/16,Error ellipse: s-maj=19.1km s-min=10.5km az=116.9*

NEIC ***19*** *08:21:03.2±1.9,55°22S±0°09×31°2W±0°2,h10km±1km, mb5.2/70,Error ellipse: s-maj=15.8km s-min=13.6km az=41.0*

ISC 19 08:21:03.0±0.3,55°22S±0°06×31°24W±0°06,h10km,n357, σ0°84/349,mb5.2/52,8C-8D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	Hope Point	3.18	285	Pn		Pn	08 21 53.1	+0.1
HOPE	Hope Point	3.18	285	eP		Pn	08 21 52.8	-0.2
ORCD	Orcadas	9.05	227	Pn		Pn	08 23 11.9	-1.5
EFI	East Falkland	16.32	271			Pn	08 24 52.1	+0.1
EFI	East Falkland	16.32	271	eP		P	08 24 54.0	-1.0
EFI				pmax		pmax		
	comp=Z,94nm,0.9s							
VNA1	Neumayer--Stat	18.47	156	P		Pn	08 25 19.8	+1.2
VNA3	Neumayer Olymp	18.59	158	P		Pn	08 25 21.2	+1.1
VNA3				S		Sn	08 28 19.2	-28
PMSA	Palmer Station	18.76	226	P		Pn	08 25 24.5	+2.3
	comp=Z,0.8nm,0.3s,baz=57,slow=7.9,SNR=18							
	comp=Z,22nm,0.8s							
PMSA	Palmer Station	18.76	226	P		P	08 25 21.8	0.0
PMSA	Palmer Station	18.76	226	eP		P	08 25 20.4	-1.4
VNA2	Neumayer--Watz	18.87	156	P		Pn	08 25 23.9	+0.4
	baz=307,slow=11							
SNAA	Sanae	20.46	155	P		P	08 25 41.2	+0.7
SNAA	Sanae	20.46	155	P		P	08 25 41.3	+0.9
	comp=Z,42nm,0.8s,baz=307,slow=9.1,SNR=68							
	comp=Z,42nm,0.8s							
SNAA	Sanae	20.46	155	P		P	08 25 41.1	+0.7
SNAA				IAmb		IAmb	08 25 50.3	
	comp=Z,108nm,1.0s							
SNAA	Sanae	20.46	155	eP		P	08 25 41.1	+0.7
MG01	Puerto William	20.69	256	P		P	08 25 43.1	+0.2
MG01				IAmb		IAmb	08 25 45.3	
	comp=Z,59nm,0.8s							
SMAI	San Martin Ant	20.96	218	P		Pn	08 25 49.8	+1.5
USHA	Ushuaia	21.16	256	P		P	08 25 49.4	+1.3
	comp=Z,26nm,0.8s,baz=86,slow=9.6,SNR=4.7							
	comp=Z,26nm,0.8s							
TROLL	Troll, Antarti	22.03	153	P		P	08 25 57.4	+0.1
MG02	Cerro Sombrero	22.28	260	P		P	08 25 59.4	-0.6
BELA	Belgrano 2	22.79	182	P		P	08 26 06.2	+1.0
BELA				IAmb		IAmb	08 26 12.2	
	comp=Z,172nm,2.0s							
GO10	Punta Arenas	23.17	259	P		P	08 26 10.1	+0.6
NVL	N'lazarevskaya	24.23	147	eP		P	08 26 18.6	-0.9
NVL				pmax		pmax		
	comp=Z,21nm,0.7s							
MG05	Puerto Natales	24.57	261	P		P	08 26 22.1	-0.6
MG05				IAmb		IAmb	08 26 27.8	
	comp=Z,74nm,1.1s							
GO09	Cerro Castillo	24.64	262	P		P	08 26 22.8	-0.6
GO09				IAmb		IAmb	08 26 25.6	
	comp=Z,35nm,0.9s							
TRQA	Tornquist	26.89	297	P		P	08 26 43.7	-0.2
TRQA	Tornquist	26.89	297	P		P	08 26 43.7	-0.2
TRQA				pmax		pmax		
	comp=Z,31nm,1.2s							
COYC	Coyhaique	27.40	273	P		P	08 26 48.2	-0.1
PLTB	Pedras Altas	28.27	317	P		P	08 26 56.0	-0.2
PLTB				IAmb		IAmb	08 26 57.7	
	comp=Z,20nm,0.8s							
PLTB	Pedras Altas	28.27	317	eP		P	08 26 55.7	-0.6
AY01	Puyuhuapi	28.40	275	P		P	08 26 57.2	-0.1
AY01				IAmb		IAmb	08 26 58.9	
	comp=Z,26nm,0.8s							
CPSB	Cacapava Do Su	29.41	318	eP		P	08 27 07.2	+0.8
CNLB	Canela	29.47	323	eP		P	08 27 08.1	+1.1
PLCA	Paso Flores	29.58	283	P		P	08 27 08.2	+0.2
	comp=Z,5.4nm,0.9s,baz=149,slow=8.0,SNR=7.8							
	comp=Z,5.4nm,0.9s							
PLCA	Paso Flores	29.58	283	P		P	08 27 07.5	-0.5
PLCA	Paso Flores	29.58	283	P		P	08 27 07.5	-0.5
PLCA				pmax		pmax		
	comp=Z,10.0nm,1.1s							
PLCA	Paso Flores	29.58	283	eP		P	08 27 07.1	-0.9
TER01	Tubaro-SC	29.63	327	eP		P	08 27 09.4	+1.1
RODS	Rosario do Sul	30.15	316	eP		P	08 27 13.8	+0.8
ALGR	Alto Alegre (B	30.71	320	eP		P	08 27 18.9	+1.0
UNIS	Unistalda (Bra	31.24	317	eP		P	08 27 23.4	+0.8
ITQB	Itaqui	31.33	314	P		P	08 27 22.7	-0.6
ITQB				IAmb		IAmb	08 27 25.1	
	comp=Z,51nm,1.1s							
ITQB	Itaqui	31.33	314	eP		P	08 27 23.5	+0.2
ITAB	Concordia	31.82	323	P		P	08 27 28.0	+0.3
ITAB				IAmb		IAmb	08 27 29.4	
	comp=Z,46nm,1.4s							
ITAB	Concordia	31.82	323	eP		P	08 27 28.4	+0.8
CRSM	Crissiumal (Br	32.26	320	eP		P	08 27 32.0	+0.4
PET01	Itanhaem-SP	33.09	333	eP		P	08 27 40.6	+1.7
FRBT	Francisco Belt	33.30	322	eP		P	08 27 41.4	+0.7
PARB	Paraibuna	33.59	336	eP		P	08 27 42.4	-0.9
MAN01	Angra dos Reis	33.67	339	eP		P	08 27 45.2	+1.2
PTGB	Pitanga	34.12	325	eP		P	08 27 48.1	+0.2
VAO	Valinhos	34.24	334	eP		P	08 27 50.5	+1.6
LMEL	Las Melosas	34.39	292	P		P	08 27 49.0	-1.3
LMEL				IAmb		IAmb	08 27 53.8	
	comp=Z,20nm,1.0s							
CPUP	Villa Florida	34.57	316	P		P	08 27 51.5	-0.2
	comp=Z,49nm,0.8s,baz=155,slow=8.3,SNR=79							
CPUP				ScP		ScP	08 34 11.6	+0.5
	comp=Z,1.7nm,0.8s,baz=163,slow=6.6,SNR=3.7							
	comp=Z,49nm,0.8s							
CPUP	Villa Florida	34.57	316	P		P	08 27 51.3	-0.4
CPUP	Villa Florida	34.57	316	P		P	08 27 51.3	-0.4
CPUP				pmax		pmax		
	comp=Z,56nm,0.9s							
CPUP	Villa Florida	34.57	316	eP		P	08 27 51.5	-0.2
MT09	Talagante	34.87	291	P		P	08 27 53.5	-0.9
MT09				IAmb		IAmb	08 27 55.2	
	comp=Z,36nm,0.9s							
MT01	Popeta	34.94	291	P		P	08 27 54.6	-0.3
MT01				IAmb		IAmb	08 27 56.0	
	comp=Z,32nm,1.0s							
MCR1	Marechal Candi	35.03	322	eP		P	08 27 55.8	+0.1
QSPA	South Pole Qui	35.04	180	P		P	08 27 54.1	-1.5
QSPA				IAmb		IAmb	08 28 03.0	
	comp=Z,27nm,0.8s							
PEL	Peldehue	35.19	292	P		P	08 27 56.6	-0.4
PEL	Peldehue	35.19	292	P		P	08 27 56.7	-0.4
PEL				pmax		pmax		
	comp=Z,66nm,0.8s							
ZON	Zonda	35.40	296	P		P	08 27 58.0	-0.9
ZON				IAmb		IAmb	08 27 59.5	
	comp=Z,22nm,0.5s							
ZON	Zonda	35.40	296	P		P	08 27 58.0	-0.9
ZON				pmax		pmax		
	comp=Z,22nm,0.5s							
VA03	San Esteban	35.41	293	P		P	08 27 58.9	-0.2
ROC1	El Roble	35.50	292	P		P	08 28 00.0	+0.1
ROC1				IAmb		IAmb	08 28 12.3	
	comp=Z,34nm,0.7s							
VA06	Catapilco	35.97	292	P		P	08 28 04.5	+0.8
TRCB	Terra Rica	36.09	325	P		P	08 28 03.9	-1.0
TRCB				IAmb		IAmb	08 28 05.9	
	comp=Z,76nm,1.4s							
TRCB	Terra Rica	36.09	325	eP		P	08 28 05.3	+0.5
BB19B	Bebedouro	36.50	332	eP		P	08 28 09.2	+0.8
RIB01	Linhares ES	36.51	345	eP		P	08 28 09.2	+0.8
PCMB	Pacembu	36.77	328	eP		P	08 28 11.0	+0.4
CO02	Combarbal	36.87	294	P		P	08 28 12.5	+0.9
CO03	El Pedregal	37.00	295	P		P	08 28 13.2	+0.5
SJMB	Sao Joao De Ma	37.23	344	eP		P	08 28 14.7	+0.1
CO01	Juntas del Tor	37.38	296	P		P	08 28 17.0	+0.9
CO01				IAmb		IAmb	08 28 19.9	
	comp=Z,26nm,0.8s							
NAN01	Guarapari, ES	37.92	346	eP		P	08 28 20.1	-0.2
ANTJ	Antonio Joao (	37.99	321	eP		P	08 28 20.3	-0.6
DIAM	Diamantina, MG	38.06	341	eP		P	08 28 22.6	+0.9
ITRB	Iturama	38.30	330	eP		P	08 28 24.2	+0.6
AC05	El Transito	38.39	297	P		P	08 28 25.4	+0.9
PMNB	Patos De Minas	38.40	336	eP		P	08 28 26.0	+1.4
GUA01	Guaratinga, BA	39.12	347	eP		P	08 28 30.5	0.0
IPMB	Ipameri, GO	39.36	334	eP		P	08 28 33.3	+0.7
AC02	Maricunga	39.46	300	P		P	08 28 32.5	-1.4
AC02				IAmb		IAmb	08 28 38.8	
	comp=Z,67nm,1.6s							
MC01	Montes Claros	39.66	341	eP		P	08 28 34.5	-0.5
C2SB	Chapadao do Su	39.92	327	eP		P	08 28 38.0	+0.9
CMC01	Camacan, BA	40.29	348	eP		P	08 28 40.8	+0.6
RVDE	Rio Verde (Bra	40.36	324	eP		P	08 28 40.6	-0.2
GO02	Mina Guanaco	41.08	301	P		P	08 28 47.2	+0.1
JANB	Januaria	41.34	341	eP		P	08 28 49.4	+0.4
BDFB	Brasilia	41.57	335	P		P	08 28 51.5	+0.7
	comp=Z,5.4nm,0.7s,baz=131,slow=5.2,SNR=6.6							
	comp=Z,5.4nm,0.7s							
BDFB	Brasilia	41.57	335	P		P	08 28 51.7	+0.8
BDFB	Brasilia	41.57	335	P		P	08 28 51.7	+0.8
BDFB				pmax		pmax		
	comp=Z,42nm,1.5s							
BDFB	Brasilia	41.57	335	eP		P	08 28 52.4	+1.5
GDU01	Guandu, BA	41.91	348	eP		P	08 28 54.0	+0.4
MAW	Mawson	42.16	145	P		P	08 28 55.4	+0.4
	comp=Z,18nm,0.7s,baz=234,slow=8.2,SNR=39							
	comp=Z,18nm,0.7s							
MAW	Mawson	42.16	145	P		P	08 28 55.5	+0.4
MAW	Mawson	42.16	145	P		P	08 28 55.5	+0.4
MAW				pmax		pmax		
	comp=Z,4.0nm,0.7s							
AF01	San Pedro de A	42.27	305	P		P	08 28 58.1	+1.2
PB15	IPOC Station P	42.67	303	P		P	08 28 59.8	-0.2
PB15				IAmb		IAmb	08 29 22.3	
	comp=Z,54nm,1.3s							
SUR	Sutherland	42.70	80	P		P	08 29 00.8	+0.7
SUR				IAmb		IAmb	08 29 28.4	
	comp=Z,71nm,1.6s							
LVC	Limon Verde	42.91	304	P		P	08 29 03.0	+0.9
LVC				IAmb		IAmb	08 29 05.3	
	comp=Z,38nm,0.8s							
LVC	Limon Verde	42.91	304	eP		P	08 29 02.0	-0.1
LVC	Limon Verde	42.91	304	eP		P	08 29 03.5	+1.5
SALV	Santo Antonio	43.52	325	eP		P	08 29 07.0	+0.3
PB09	IPOC Station P	43.76	304	P		P	08 29 09.9	+1.2
PB09				IAmb		IAmb	08 29 11.3	
	comp=Z,31nm,0.9s							
SDBA	SAO DESIDERIO	44.03	341	eP		P	08 29 10.4	-0.3
PB07	IPOC Station P	44.13	303	P		P	08 29 11.8	+0.1
PB07				IAmb		IAmb	08 29 13.9	
	comp=Z,66nm,1.2s							
NBLA	Lagarto - SE	44.42	351	eP		P	08 29 12.9	-0.9
PB02	IPOC Station P	44.48	304	P		P	08 29 14.9	+0.4
PB02				IAmb		IAmb	08 29 15.9	
	comp=Z,29nm,0.7s							
PB01	IPOC Station P	44.52	304	P		P	08 29 15.3	+0.6
PTLB	Pontes e Lacer	45.14	320	P		P	08 29 19.7	0.0
PTLB				IAmb		IAmb	08 29 20.7	
	comp=Z,84nm,0.8s							
PTLB	Pontes e Lacer	45.14	320	eP		P	08 29 19.6	0.0
SOE	Somerset East	45.15	84	P		P	08 29 18.1	-1.5
SOE				IAmb		IAmb	08 30 40.0	
	comp=Z,46nm,1.4s							
GO01	Chusmiza	45.57	306	P		P	08 29 24.6	+1.0
NBAN	Anadia - AL	45.61	353	eP		P	08 29 23.2	-0.1
SNDB	Serra Nova Dou	45.92	332	eP		P	08 29 26.3	+0.5
NBRF	Rio Formoso -	46.52	355	eP		P	08 29 29.9	-0.5
SBA	Scott Base	46.73	185	P		P	08 29 32.7	+1.3
SBA	Scott Base	46.73	185	P		P	08 29 32.7	+1.3
SBA				pmax		pmax		
	comp=Z,11nm,1.1s							
PB16	IPOC Station P	46.87	306	P		P	08 29 35.2	+1.2
PB16				IAmb		IAmb	08 29 35.7	
	comp=Z,23nm,1.3s							
VNDA	Vanda	47.28	184	P		P	08 29 37.2	+1.5
	comp=Z,8.6nm,0.7s,baz=187,slow=5.6,SNR=23							
	comp=Z,8.6nm,0.7s							
VNDA	Vanda	47.28	184	P		P	08 29 36.5	+0.8
VNDA	Vanda	47.28	184	P		P	08 29 36.5	+0.8
VNDA				pmax		pmax		
	comp=Z,9.0nm,0.8s							
VILB	Vilhena	47.83	320	P		P	08 29 40.6	-0.1
VILB				IAmb		IAmb	08 29 41.5	
	comp=Z,83nm,0.8s							
VILB	Vilhena	47.83	320	eP		P	08 29 40.5	-0.3
PDRB	Porto dos Gac	47.88	325	eP		P	08 29 40.5	-0.6
H10S3	ASCENSION HYDR	47.98	22	T		T	09 21 54.5	
	SNR=14							
SMTB	Santa Maria do	48.02	338	eP		P	08 29 43.1	+0.9
LPAZ	La Paz	48.04	309	P		P	08 29 44.3	+1.3
	comp=Z,62nm,0.5s,baz=104,slow=4.8,SNR=236							
LPAZ	La Paz	48.04	309	P		P	08 29 44.4	+1.3
BOSA	Boshof	48.05	80	P		P	08 29 42.1	-0.3
	comp=Z,11nm,1.0s,baz=225,slow=7.1,SNR=9.6							
	comp=Z,11nm,1.0s							
BOSA	Boshof	48.05	80	P		P	08 29 41.7	-0.7
BOSA				IAmb		IAmb	08 29 42.9	
	comp=Z,14nm,1.0s							
BOSA	Boshof	48.05	80	P		P	08 29 41.7	-0.7
BOSA				pmax		pmax		
	comp=Z,14nm,1.0s							
CLDB	Colider	48.27	327	eP		P	08 29 43.7	-0.4
H10N1	ASCENSION HYDR	49.10	22	T		T	09 23 15.9	
	baz=192,slow=75,SNR=18							
H10N3	ASCENSION HYDR	49.10	22	T		T	09 23 17.7	
	baz=192,slow=75,SNR=14							
H10N2	ASCENSION HYDR	49.11	22	T		T	09 23 23.0	
	baz=192,slow=75,SNR=14							
LBTB	Lobatse	51.02	78	P		P	08 30 04.6	-0.6
LBTB	Lobatse	51.02	78	P		P	08 30 04.6	-0.6
LBTB				pmax		pmax		
	comp=Z,11nm,0.8s							
PRPB	Parauapebas	51.12	336	eP		P	08 30 06.2	+0.4
TSUM	Tsumeb	51.36	66	P		P	08 30 07.7	-0.1
NPGB	Novo Progresso	51.76	329	eP		P	08 30 10.5	-0.1
ETMB	Extrema	53.02	315	eP		P	08 30 19.6	-0.3
ITTB	Itaituba	54.41	329	eP		P	08 30 29.8	-0.4
TMAB	Tom-Au,PA,Br	54.43	339	eP		P	08 30 31.0	+0.7
CASY	Casey	55.44	162	P		P	08 30 37.3	+0.3
CASY				IAmb		IAmb	08 30 38.5	
	comp=Z,21nm,0.7s							
NNA	Nana	55.85	302	eP		P	08 30 39.5	-1.1
NNA				pmax		pmax		
	comp=Z,54nm,1.0s							
MALB	Monte Alegre	56.40	332	eP		P	08 30 44.8	+0.4
MACA	Manacapuru-AM	57.10	324	eP		P	08 30 48.6	-0.8
MCPB	Macapa, AP	57.27	335	eP		P	08 30 51.1	+0.5
CZSB	Cruzeiro do Su	57.65	309	P		P	08 30 53.0	-0.4
CZSB				IAmb		IAmb	08 30 53.5	
	comp=Z,19nm,0.7s							
CZSB	Cruzeiro do Su	57.65	309	eP		P	08 30 53.1	-0.2
LSZ	Lusaka	60.27	73	P		P	08 31 10.9	-0.8
LSZ	Lusaka	60.27	73	P		P	08 31 11.0	-0.8
LSZ				pmax		pmax		
	comp=Z,9.0nm,1.1s							
BOAV	Boa Vista	62.27	326	P		P	08 31 24.2	-0.8
BOAV				IAmb		IAmb	08 31 25.0	
	comp=Z,23nm,0.9s							
BOAV	Boa Vista	62.27	326	eP		P	08 31 24.2	-0.8
ARNL	Arenillas	64.73	304	P		P	08 31 41.8	+0.5
LIC	Lamto	64.98	29	eP		P	08 31 42.3	-0.6
	comp=Z,88nm,0.8s							
KIC	Kosan Boka	65.19	29	eP		P	08 31 43.6	-0.7
	comp=Z,25nm,0.8s							
TIC	Toumodi	65.39	29	eP		P	08 31 44.8	-0.8
	comp=Z,52nm,0.8s							
DBIC	Dimbokro	65.46	29	P		P	08 31 45.7	-0.3
	comp=Z,14nm,0.7s,baz=195,slow=5.1,SNR=15							
	comp=Z,14nm,0.7s							
PTLC	Puerto Leguiza	65.61	311	eP		P	08 31 44.8	-2.3
MACC	Macarena, Meta	66.98	313	eP		P	08 31 55.0	-0.9
FLOC	Florencia	67.25	311	eP		P	08 31 56.0	-1.6
OTAV	Otavalo	67.30	307	P		P	08 31 58.5	+0.1
OTAV				IAmb		IAmb	08 32 03.2	
	comp=Z,19nm,1.1s							
OTAV	Otavalo	67.30	307	P		P	08 31 58.5	+0.1
OTAV				pmax		pmax		
	comp=Z,19nm,1.1s							
OTAV	Otavalo	67.30	307	eP		P	08 32 00.4	+2.0
TULM	Tulcn-Chalpat	67.42	308	P		P	08 31 59.1	-0.1
TULM				IAmb		IAmb	08 32 01.6	
	comp=Z,25nm,0.9s							
GARC	Garzon, Huila	67.72	311	eP		P	08 32 00.5	-0.3
BBAC	Balboa, Cauca	68.34	309	eP		P	08 32 04.6	-0.1
PRAC	Prado	68.83	312	eP		P	08 32 07.3	-0.3
CHIC	Chingaza	69.18	314	eP		P	08 32 09.8	-0.3
ROSC	El Rosal	69.61	313	P		P	08 32 13.5	+0.7
	comp=Z,4.4nm,0.5s,baz=149,slow=18,SNR=4.3							
	comp=Z,4.4nm,0.5s							
YOTC	Yotoco, Valle	69.70	311	eP		P	08 32 12.1	-0.9
SPBC	San Pablo de B	70.24	314	eP		P	08 32 13.0	-3.3
PLMC	San Jos del P	70.50	312	eP		P	08 32 16.9	-1.0
PTBC	PUERTO BERRIO,	71.20	314	eP		P	08 32 19.3	-2.7
CBOC	Ciudad Bolivar	71.24	312	eP		P	08 32 19.8	-2.7
SOCV	Socops	71.36	318	eP		P	08 32 23.4	+0.4
SDV	Santo Domingo	71.83	319	P		P	08 32 25.2	-0.8
SDV				IAmb		IAmb	08 32 27.0	
	comp=Z,14nm,0.8s							
SDV	Santo Domingo	71.83	319	eP		P	08 32 26.9	+0.9
TOA0	Torodi Ar. Sit	73.54	34	P		P	08 32 35.8	-0.1
TOA0				IAmb		IAmb	08 32 36.2	
	comp=Z,14nm,0.7s							
TORD	Torodi Ar. Bea	73.54	34	P		P	08 32 35.7	-0.2
	comp=Z,11nm,0.7s,baz=197,slow=6.5,SNR=55							
	comp=Z,11nm,0.7s							
TORD	Torodi Ar. Bea	73.54	34	P		P	08 32 35.2	-0.7
TORD				IAmb		IAmb	08 32 36.2	
	comp=Z,11nm,0.8s							
MBAR	Mbarara	73.87	67	eP		P	08 32 40.4	+2.2
SRBA	San Rafael, Bu	77.48	307	P		P	08 32 59.6	+0.9
SRBA				IAmb		IAmb	08 33 01.1	
	comp=Z,24nm,1.2s							
JTS	Las Juntas de	79.14	306	eP		P	08 33 08.9	+1.1
JTS				pmax		pmax		
	comp=Z,14nm,1.1s							
BOAB	BOACO BROADBA	81.37	307	P		P	08 33 18.6	-1.1
MATN	Matagalpa	81.91	307	P		P	08 33 22.0	-0.7
STKA	Stephens Creek	93.04	174	eP		P	08 34 14.9	-1.8
ESDC	Sonseca Array	97.36	21	P		Pdif	08 34 37.3	+1.3
	comp=Z,0.7nm,0.7s,baz=185,slow=4.9,SNR=4.7							
	comp=Z,0.7nm,0.7s							
ASAR	Alice Springs	100.41	166	P		Pdif	08 34 48.9	-1.4
	comp=Z,1.5nm,0.7s,baz=179,slow=4.3,SNR=17							
ASAR				PP		PP	08 38 53.5	-2.1
	comp=Z,1.1nm,0.9s,baz=181,slow=7.7,SNR=4.7							
ASAR				PKKPbc		PKKPbc	08 51 05.1	+1.6
	comp=Z,0.3nm,0.9s,baz=22,slow=2.5,SNR=4.1							
WRA	Warramunga Arr	104.14	166	Pdiff		Pdif	08 35 06.6	-0.2
	comp=Z,0.6nm,0.7s,baz=192,slow=4.1,SNR=3.1							
WRA				PKKPbc		PKKPbc	08 50 54.3	+1.7
	comp=Z,0.5nm,0.5s,baz=353,slow=2.9,SNR=10.0							
SCI2	San Clemente I	114.92	292	P		PKPdf	08 39 43.1	-0.3
	baz=

BCAR	Beaver Creek A	145.20 312	PKPbc	PKPbc	08 40 39.0	-0.1	
L27K	Beaver Creek,	145.22 312	PKPbc	PKPbc	08 40 39.3	+0.2	
L27K	Beaver Creek, baz=110,SNR=25	145.22 312	P	PKPbc	08 40 39.1	0.0	
KAIM	Kayak Island baz=112	145.24 306	P	PKPab	08 40 39.6	+0.3	
XAN	Xi'an XAN	145.29 111	PKPbc sPKP	PKPbc	08 40 40.3 08 40 48.6	+0.1	
WHN	Wuhan	145.31 121	⇓PKPbc	PKPbc	08 40 39.6	-0.7	
EGAK	Eagle baz=108,SNR=12	145.50 315	P	PKPdf	08 40 39.4	-0.3	
M26K	Nabesna, AK baz=110	145.50 310	P	PKPdf	08 40 40.1	+0.2	
K27K	Chicken baz=108	145.64 313	P	PKPdf	08 40 40.4	+0.4	
BMRM	Bremner River baz=111,SNR=9.4	145.72 307	P	PKPbc	08 40 41.0	+0.2	
L26K	Log Cabin Wild baz=109,SNR=15	145.86 311	P	PKPbc	08 40 41.2	+0.1	
I27K	Kandik River baz=106	145.93 316	P	PKPbc	08 40 41.6	+0.3	
N25K	Chitina, Valde baz=110	145.94 308	P	PKPdf	08 40 41.1	+0.4	
H27K	Steamboat Moun baz=106	146.07 317	P	PKPbc	08 40 41.8	+0.1	
EYAK	Cordova Ski Ar baz=111,SNR=5.6	146.09 306	P	PKPbc	08 40 41.8	0.0	
G27K	Doyon Strip baz=105,SNR=8.8	146.27 318	P	PKPbc	08 40 42.1	-0.2	
J26L	Joseph Creek baz=107,SNR=30	146.41 314	P	PKPbc	08 40 43.1	+0.3	
SCRK	Sand Creek baz=107,SNR=15	146.43 313	P	PKPbc	08 40 43.1	+0.2	
I26K	Coal Creek Min baz=106	146.46 315	P	PKPbc	08 40 42.8	0.0	
KLU	Klutina baz=109,SNR=10	146.50 308	P	PKPbc	08 40 43.4	+0.3	
E27K	Coleen River baz=103,SNR=17	146.58 320	P	PKPbc	08 40 43.5	+0.4	
P23K	Montague Islan baz=111	146.67 305	P	PKPbc	08 40 43.6	0.0	
RIDG	Independent Ri baz=107,SNR=29	146.72 312	P	PKPbc	08 40 44.3	+0.6	
PAX	Paxson baz=108,SNR=20	146.76 311	P	PKPbc	08 40 43.9	0.0	
M24K	Tolsona, Glenn baz=108,SNR=9.2	146.81 309	P	PKPbc	08 40 44.6	+0.6	
GLI	Glacier Island baz=110,SNR=8.3	146.83 306	P	PKPbc	08 40 44.1	+0.2	
G26K	Porcupine Rive baz=103,SNR=11	147.12 318	P	PKPbc	08 40 45.0	+0.4	
K24K	Donnelly Dome baz=106	147.14 312	P	PKPbc	08 40 45.1	+0.2	
J25K	Salcha River, baz=105,SNR=17	147.19 313	P	PKPbc	08 40 45.2	+0.2	
SCM	Sheep Creek Mo baz=108,SNR=7.9	147.24 308	P	PKPbc	08 40 45.8	+0.6	
PWL	Port Wells baz=109,SNR=8.1	147.39 306	P	PKPbc	08 40 46.0	+0.5	
M23K	Glacier View baz=108,SNR=7.9	147.41 308	P	PKPbc	08 40 46.3	+0.7	
F26K	Sheenjek River baz=101,SNR=14	147.41 319	P	PKPbc	08 40 46.4	+0.9	
PRP	Porcupine Dome baz=104	147.48 315	P	PKPbc	08 40 46.2	+0.3	
LYN	LuoYang	147.56 114	⇓PKPbc	PKPbc	08 40 45.9	-0.9	
C27K	Jago River baz=99,SNR=11	147.60 323	P	PKPbc	08 40 46.8	+0.9	
KNK	Knik Glacier baz=108	147.62 307	P	PKPbc	08 40 46.9	+0.6	
DHY	Denali Highway baz=106,SNR=14	147.63 310	P	PKPbc	08 40 46.6	+0.3	
WAT6	Susitna Watana baz=107,SNR=13	147.65 309	P	PKPbc	08 40 47.1	+0.7	
SEW	Seward baz=105	147.67 304	P	PKPbc	08 40 46.7	+0.4	
SML	Sawmill baz=107,SNR=7.6	147.69 308	P	PKPbc	08 40 47.0	+0.6	
H25K	Birch Creek baz=102	147.76 316	P	PKPbc	08 40 47.2	+0.8	
HDA	Harding Lake baz=104,SNR=6.9	147.79 313	P	PKPbc	08 40 46.7	+0.1	
ILAR	Eielson Array comp=Z,18nm,0.8s,baz=118,slow=1.7,SNR=81	147.86 313	PKPbc	PKPbc	08 40 46.6	-0.1	
F25K	Christian Rive baz=100,SNR=9.9	147.96 319	P	PKPbc	08 40 47.7	+0.7	
PMR	Palmer baz=107	147.99 307	P	PKPbc	08 40 47.9	+0.8	
E25K	Arctic Village baz=100,SNR=30	148.02 320	P	PKPbc	08 40 47.9	+0.8	
WAT1	Susitna Watana baz=106	148.08 310	P	PKPbc	08 40 47.7	+0.3	
RC01	Rabbit Creek A baz=108	148.12 306	P	PKPbc	08 40 47.7	+0.2	
BRSE	Bradley Lake S baz=109	148.16 303	P	PKPbc	08 40 48.0	+0.3	
COLA	College	148.28 313	⇑ePKP2	PKPbc	08 40 47.6	-0.2	
COLA	College baz=103	148.28 313	P	PKPbc	08 40 48.1	+0.3	
TCOL	CIGO, UAF Yank baz=103,SNR=13	148.29 313	P	PKPbc	08 40 47.6	-0.2	
KDAK	Kodiak Island baz=111	148.40 299	P	PKPbc	08 40 48.4	+0.1	
MCK	McKinley baz=104,SNR=11	148.48 311	P	PKPbc	08 40 48.6	+0.2	
M22K	Willow baz=106,SNR=9.9	148.49 307	P	PKPbc	08 40 48.7	+0.3	
D25K	Kavik River baz=97,SNR=13	148.49 322	P	PKPbc	08 40 48.4	+0.1	
H24K	Noodor Dome baz=101,SNR=11	148.50 315	P	PKPbc	08 40 48.6	+0.2	
G24K	Hadweenzic Riv baz=100,SNR=12	148.50 317	P	PKPbc	08 40 49.1	+0.7	
OHAK	Old Harbor baz=112	148.55 298	P	PKPbc	08 40 49.5	+0.8	
Q20K	Shuyak Island baz=110	148.59 301	P	PKiKP	08 40 50.1	-0.1	
NJ2	Nanjing NJ2 comp=Z,12nm,0.5s	148.72 125	eP pmax	PKPdf pmax	08 40 45.8	-0.4	
CUT	Chulitna baz=105	148.73 308	P	PKPbc	08 40 49.4	+0.4	
NEA2	Nenana baz=102,SNR=10	148.73 313	P	PKPbc	08 40 48.8	-0.2	
F24K	Squaw Lake baz=99,SNR=10	148.80 318	P	PKPbc	08 40 50.0	+0.8	
I23K	Minto, Yukon-K baz=101,SNR=7.2	148.97 314	P	PKPbc	08 40 49.3	-0.2	
TRF	Thorofare Moun baz=103,SNR=12	149.00 310	P	PKPbc	08 40 50.0	+0.1	
E24K	Your Creek baz=97,SNR=18	149.10 319	P	PKPbc	08 40 50.6	+0.7	
H23K	Yukon River baz=100,SNR=5.1	149.17 315	P	PKPbc	08 40 50.0	-0.1	
N20K	Mount Spurr baz=106	149.30 306	P	PKPbc	08 40 50.1	-0.5	
SPCR	Spurr Chakacha baz=106	149.30 306	P	PKPbc	08 40 50.2	-0.4	
Q19K	Cape Douglas, baz=109	149.31 301	P	PKPbc	08 40 50.1	-0.5	
D24K	Happy Valley baz=95	149.34 322	P	PKPbc	08 40 50.8	+0.4	
C24K	Franklin Bluff baz=94	149.34 323	P	PKPbc	08 40 51.0	+0.7	
BPAW	Bear Paw Mtn. baz=102,SNR=23	149.44 311	P	PKPbc	08 40 51.0	+0.2	
G23K	Bananza Creek baz=98,SNR=20	149.50 317	P	PKiKP	08 40 51.9	-0.1	
MLY	Manley baz=100,SNR=9.6	149.52 313	P	PKPbc	08 40 50.9	-0.1	
TOLK	Toolik Lake Re baz=95,SNR=29	149.56 320	P	PKPbc	08 40 51.6	+0.6	
PPLA	Purkeypile baz=103	149.71 309	P	PKPbc	08 40 52.3	+0.7	
CAST	Castle Rocks baz=102	149.78 310	P	PKPbc	08 40 51.9	+0.2	
M20K	Styx River baz=104	149.90 307	P	PKPbc	08 40 52.6	+0.6	
H22K	Ishtalitna Cre baz=98	149.93 315	P	PKiKP	08 40 52.7	-0.2	
CHUM	Lake Minchumin baz=101	149.97 311	P	PKiKP	08 40 52.9	-0.1	
D23K	Nanushuk River baz=94,SNR=5.3	149.99 321	P	PKiKP	08 40 53.1	+0.2	
C23K	Itkillik River baz=92,SNR=9.4	150.01 323	P	PKiKP	08 40 52.8	-0.1	
O19K	Port Alsworth baz=106	150.02 303	P	PKPbc	08 40 52.7	+0.5	
I21K	Tanana baz=99	150.06 313	P	PKPbc	08 40 52.5	+0.2	
G22K	Bettles baz=97,SNR=11	150.11 317	P	PKPbc	08 40 53.0	+0.7	
P18K	Big Mountain, baz=107	150.23 301	P	PKPbc	08 40 53.2	+0.4	
N19K	Bonanza Creek baz=105	150.26 304	P	PKPbc	08 40 53.0	0.0	
R17K	Ugashik Creek baz=109	150.26 298	P	PKPbc	08 40 52.8	-0.1	
E22K	Anaktuvuk Pass baz=94	150.35 319	P	PKPbc	08 40 53.5	+0.5	
O18K	Koktuh Hills baz=106	150.35 302	P	PKPbc	08 40 53.1	0.0	
L20K	Farewell, AK baz=102	150.38 308	P	PKPbc	08 40 53.4	+0.2	
F22K	John River baz=95	150.43 318	P	PKiKP	08 40 54.2	+0.3	
H21K	Melozitna Rive baz=98	150.47 314	P	PKiKP	08 40 54.0	0.0	
M19K	Big River Lodg baz=103	150.48 306	P	PKPbc	08 40 53.4	0.0	
K20K	Telida baz=101	150.64 309	P	PKPbc	08 40 54.0	+0.3	
Q16K	King Salmon baz=107	150.72 299	P	PKPbc	08 40 54.2	+0.3	
L19K	White Mountain baz=102	150.76 307	P	PKPbc	08 40 54.4	+0.4	
P17K	Kvichak River baz=106	150.77 301	P	PKPbc	08 40 54.4	+0.3	
J20K	Nowinta River baz=99	150.82 311	P	PKPbc	08 40 54.4	+0.3	
G21K	Allakaket baz=96	150.86 316	P	PKPbc	08 40 54.7	+0.6	
N18K	Kilae Creek baz=104	150.90 304	P	PKPbc	08 40 54.5	+0.1	
HNS	HongShan	150.90 114	⇑PKPbc	PKPbc	08 40 55.4	+0.3	
F21K	Alatna River baz=94	150.91 317	P	PKPbc	08 40 54.6	+0.3	
TIA	Tai'an	151.24 118	P	PKPbc	08 40 55.8	-0.2	
TIA	Tai'an comp=Z,10.0nm,0.8s	151.24 118	pmax	pmax			
O17K	Koliganek Bris baz=105	151.25 302	P	PKPbc	08 40 55.3	+0.1	
TTA	Tatalina baz=100	151.43 308	P	PKPbc	08 40 56.1	+0.5	
HHC	Hu-ho-hao-te	151.67 105	eP	PKPdf	08 40 45.8	-4.9	
O16K	Kokwok River B baz=105	151.69 301	P	PKPbc	08 40 55.9	-0.3	
MOY	Mondy MOY comp=Z,19nm,2.5s	151.77 77	ePKIKP pmax	PKPbc pmax	08 40 55.4	-1.4	
GCSA	Galena City Sc baz=96	152.07 312	P	PKiKP	08 40 57.6	+0.4	
N16K	Nishlik Lake baz=103	152.23 303	P	PKiKP	08 40 58.4	+0.7	
ZAK	Zakamensk ZAK comp=Z,7.0nm,1.3s	152.47 81	ePKIKP pmax	PKPbc pmax	08 40 56.8	-1.7	
SONM	Songino Array comp=Z,6.6nm,0.6s,baz=223,slow=3.4,SNR=18	152.98 88	PKPbc	PKPbc	08 40 59.3	-0.4	
XLT	XiLinHaoTe XLT comp=Z,10.0nm,1.0s	156.20 105	eP pmax	PKPdf pmax	08 40 48.6	-8.4	
KSRS	Korea Array comp=Z,2.1nm,0.8s,baz=209,slow=4.3,SNR=6.5	157.29 133	PKPab	PKPab	08 41 29.2	-0.4	

*IDC **19** 08:23:52.4±1.2,54.˙94S×31.˙34W, h0km, mb4.2/3, mbtmp4.3/3, Error ellipse: s-maj=57.0km s-min=31.9km az=54.0*
*NEIC **19** 08:23:54.5±1.4,55.˙07S±0.˙04×31.˙6W±0.˙2, h10km±1km, mb4.6/18, Error ellipse: s-maj=17.9km s-min=6.6km az=93.0*

ISC 19 08:23:54.1±0.8,55.˙0S±0.˙1×31.˙6W±0.˙1, h10km, n24, σ0s92/24, mb4.6/9, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	2.94	283	Pn	Pn		08 24 41.2	+0.4
ORCD	Orcadas	9.03	225	Pn	Pn		08 26 02.7	-1.6
PMSA	Palmer Station	18.75	226	P	P		08 28 13.3	+0.5
SNAA	Sanae 9.4nm,1.0s,baz=312,slow=15,SNR=5.9 9.4nm,1.0s	20.72	155	P	P		08 28 35.1	+0.7
SNAA	Sanae	20.72	155	P	P		08 28 34.1	-0.2
GO10	Punta Arenas	23.01	258	P	P		08 28 58.7	-0.2
TRQA	Tornquist TRQA comp=Z,16nm,1.4s	26.62	297	P IAmb	P IAmb		08 29 32.4 08 29 35.8	-0.2
ML02	Panimavida	33.34	289	P	P		08 30 31.4	-0.7
QSPA	South Pole Qui QSPA comp=Z,6.4nm,1.1s	35.23	180	P IAmb	P IAmb		08 30 49.6 08 31 05.3	+1.2
VA06	Catapilco	35.70	292	P	P		08 30 52.5	0.0
CO02	Combarbal CO02 comp=Z,32nm,1.2s	36.61	294	P IAmb	P IAmb		08 31 00.8 08 31 10.9	+0.4
GO02	Mina Guanaco GO02 comp=Z,14nm,0.8s	40.81	301	P IAmb	P IAmb		08 31 36.5 08 31 37.3	+0.6
MAW	Mawson	42.44	146	P	P		08 31 47.5	-0.9
PB01	IPOC Station P PB01 comp=Z,17nm,1.2s	44.25	305	P IAmb	P IAmb		08 32 04.0 08 32 13.7	+0.4
PTLB	Pontes e Lacer	44.87	321	P	P		08 32 08.3	-0.1
GO01	Chusmiza GO01 comp=Z,8.1nm,1.0s	45.29	306	P IAmb	P IAmb		08 32 12.2 08 32 16.0	-0.2
LPAZ	La Paz comp=Z,5.0nm,0.7s,baz=163,slow=6.3,SNR=5.6 comp=Z,5.0nm,0.7s	47.76	309	P	P		08 32 32.6	+0.7
LPAZ	La Paz LPAZ comp=Z,4.4nm,0.9s	47.76	309	P IAmb	P IAmb		08 32 32.2 08 32 45.1	+0.2
CASY	Casey	55.68	163	P	P		08 33 32.0	+2.2
TOA0	Torodi Ar. Sit TOA0 comp=Z,3.5nm,0.9s	73.50	34	P IAmb	P IAmb		08 35 26.4 08 35 27.4	-0.4
TORD	Torodi Ar. Bea comp=Z,1.2nm,0.8s,baz=208,slow=5.9,SNR=3.9 comp=Z,1.2nm,0.8s	73.50	34	P	P		08 35 26.5	-0.3
TORD	Torodi Ar. Bea TORD comp=Z,2.5nm,1.2s	73.50	34	P IAmb	P IAmb		08 35 26.2 08 35 40.3	-0.5
ILAR	Eielson Array comp=Z,2.8nm,0.8s,baz=125,slow=1.6,SNR=8.3	147.58	314	PKPbc	PKPbc		08 43 35.9	-1.1
SONM	Songino Array comp=Z,1.0nm,0.6s,baz=226,slow=3.9,SNR=3.6	153.18	88	PKPbc	PKPbc		08 43 49.5	-1.8

IDC 19 08:24:08.7±3.1,53.˙57N×87.˙91E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=30.0km s-min=18.0km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=99,slow=323,SNR=24	1.88	283	*i*			08 36 07.2	
ZALV	Zalesovo Beam 1.3nm,0.3s,baz=105,slow=16,SNR=5.7	1.88	283	Pn Lg		Pn Lg	08 24 41.7 08 25 08.5	-0.3
KURBB	Kurchatov Arra 2.2nm,0.3s,baz=103,slow=25,SNR=5.5	6.49	247	Pn Lg		Pn Lg	08 25 45.9 08 27 34.0	+0.5
MKAR	Makanchi Array baz=57,slow=33,SNR=4.2 1.0nm,0.3s	7.68	210	Pn		Pn	08 26 02.9	+1.2
	0.2nm,0.3s,baz=27,slow=13,SNR=8.2 0.2nm,0.3s							

*IDC **19** 08:31:24.1±0.7,55.˙05S×31.˙04W, h0km, mb4.2/9, mbtmp4.2/10, ML3.8/1, Error ellipse: s-maj=22.9km s-min=18.1km az=71.0*
*NEIC **19** 08:31:25.4±1.1,55.˙06S±0.˙08×31.˙01W±0.˙09, h10km±1km, mb4.6/20, Error ellipse: s-maj=16.2km s-min=5.0km az=149.0*

ISC 19 08:31:25.2±0.5,55.˙05S±0.˙08×31.˙07W±0.˙09, h10km, n40, σ0s80/40, mb4.5/15, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.24	281	Pn		Pn	08 32 17.3	+1.3
ORCD	Orcadas	9.24	226	Pn		Pn	08 33 37.6	-0.7
VNA1	Neumayer--Stat	18.59	156	P		Pn	08 35 42.2	0.0
VNA3	Neumayer Olymp	18.71	158	P		Pn	08 35 43.9	+0.1
PMSA	Palmer Station 0.3nm,0.3s,baz=62,slow=10.0,SNR=6.4 6.2nm,0.7s	18.95	226	P		Pn	08 35 48.0	+1.3
PMSA	Palmer Station PMSA comp=Z,21nm,1.4s	18.95	226	P IAmb		Pn IAmb	08 35 47.8 08 35 56.5	+1.0
VNA2	Neumayer--Watz baz=306,slow=11	18.98	156	P		Pn	08 35 46.8	-0.3
SNAA	Sanae	20.58	155	P		P	08 36 03.9	+0.1
SNAA	Sanae comp=Z,7.3nm,0.8s,baz=310,slow=11,SNR=15 comp=Z,7.3nm,0.8s	20.58	155	P		P	08 36 04.0	+0.1
SNAA	Sanae	20.58	155	P		P	08 36 03.7	-0.2
TROLL	Troll, Antarti	22.14	153	P		P	08 36 21.2	+0.5
MG02	Cerro Sombrero	22.40	260	P		P	08 36 23.4	-0.1
MG05	Puerto Natales MG05 comp=Z,26nm,1.2s	24.69	261	P IAmb		P IAmb	08 36 44.1 08 36 48.0	-1.9
GO09	Cerro Castillo GO09 comp=Z,39nm,1.4s	24.77	262	P IAmb		P IAmb	08 36 44.8 08 36 49.8	-2.0
CPUP	Villa Florida comp=Z,2.8nm,0.9s,baz=186,slow=8.0,SNR=4.1 comp=Z,2.8nm,0.9s	34.52	316	P		P	08 38 13.5	+0.1
MT09	Talagante	34.90	291	P		P	08 38 15.5	-1.3
QSPA	South Pole Qui comp=Z,4.9nm,0.8s,baz=199,slow=2.8,SNR=8.9 comp=Z,4.9nm,0.8s	35.21	180	P		P	08 38 19.4	+0.1
QSPA	South Pole Qui QSPA comp=Z,8.1nm,0.9s	35.21	180	P IAmb		P IAmb	08 38 19.1 08 38 23.8	-0.1
ZON	Zonda ZON comp=Z,9.7nm,1.2s	35.41	296	P IAmb		P IAmb	08 38 20.0 08 38 30.6	-1.2
VA06	Catapilco	35.99	292	P		P	08 38 26.2	+0.1
AC05	El Transito	38.40	297	P		P	08 38 46.9	+0.2
GO02	Mina Guanaco GO02 comp=Z,18nm,1.1s	41.08	301	P IAmb		P IAmb	08 39 09.9 08 39 37.5	+0.7
MAW	Mawson comp=Z,2.1nm,0.7s,baz=231,slow=9.3,SNR=4.1 comp=Z,2.1nm,0.7s	42.25	145	P		P	08 39 18.0	+0.1
PB01	IPOC Station P PB01 comp=Z,22nm,1.4s	44.51	304	P IAmb		P IAmb	08 39 37.0 08 39 42.6	+0.1
PTLB	Pontes e Lacer PTLB comp=Z,3.3nm,0.8s	45.07	320	P IAmb		P IAmb	08 39 40.8 08 39 42.0	-0.4
VNDA	Vanda comp=Z,1.4nm,0.9s,baz=190,slow=6.4,SNR=5.3 comp=Z,1.4nm,0.9s	47.45	184	P		P	08 39 59.5	+0.1
VNDA	Vanda	47.45	184	P		P	08 39 59.5	+0.1
LPAZ	La Paz comp=Z,5.8nm,0.8s,baz=163,slow=5.1,SNR=14 comp=Z,5.8nm,0.8s	48.01	309	P		P	08 40 05.8	+0.8
LPAZ	La Paz LPAZ comp=Z,5.9nm,0.7s	48.01	309	P IAmb		P IAmb	08 40 05.0 08 40 06.4	-0.1
ASCN	Ascension	48.84	22	P		P	08 40 09.5	-1.3
LBTB	Lobatse comp=Z,2.6nm,0.7s,baz=209,slow=3.6,SNR=4.5 comp=Z,2.6nm,0.7s	50.89	78	P		P	08 40 27.5	+1.1
CASY	Casey CASY comp=Z,4.0nm,0.8s	55.57	162	P IAmb		P IAmb	08 41 00.3 08 41 01.1	+0.2
MATP	Matopo comp=Z,1.8nm,0.7s,baz=242,slow=6.0,SNR=4.2 comp=Z,1.8nm,0.7s	56.14	77	P		P	08 41 05.1	+0.1
TOA0	Torodi Ar. Sit	73.35	33	P		P	08 42 55.9	-1.0
TORD	Torodi Ar. Bea comp=Z,0.7nm,0.5s,baz=204,slow=5.9,SNR=7.3 comp=Z,0.7nm,0.5s	73.35	33	P		P	08 42 57.8	+0.9
TORD	Torodi Ar. Bea	73.35	33	P		P	08 42 57.3	+0.4
ARCES	ARCESS Array B	130.85	23	PKP		PKPdf	08 50 35.3	+0.2
MKAR	Makanchi Array comp=Z,0.6nm,0.8s,baz=64,slow=2.8,SNR=4.4	138.68	73	PKP		PKPdf	08 50 51.4	+1.0
ILAR	Eielson Array comp=Z,3.8nm,0.8s,baz=125,slow=2.0,SNR=20	147.81	314	PKPbc		PKPbc	08 51 08.3	-0.5
SONM	Songino Array comp=Z,0.7nm,0.5s,baz=226,slow=3.2,SNR=4.9	152.88	88	PKPbc		PKPbc	08 51 21.4	-0.3

*IDC **19** 08:32:49.1±0.5,55.˙14S×30.˙57W, h0km, mb4.5/14, mbtmp4.5/15, ML4.8/1, MS6.0/2, Error ellipse: s-maj=16.9km s-min=14.5km az=34.0*
*MOS **19** 08:32:49.8±1.4,55.˙28S×30.˙79W, h10km, mb5.2/6, Error ellipse: s-maj=24.0km s-min=13.0km az=121.8*
*NEIC **19** 08:32:50.9±1.7,55.˙25S±0.˙09×30.˙8W±0.˙2, h10km±1km, mb5.1/45, Error ellipse: s-maj=16.6km s-min=14.3km az=42.0*

ISC 19 08:32:50.9±0.3,55.˙24S±0.˙06×30.˙75W±0.˙07, h10km, n252, σ1s76/247, mb5.0/32, 3C-5D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.46	284	Pn		Pn	08 33 44.3	-0.5
HOPE	Hope Point	3.46	284	eP		Pn	08 33 44.5	-0.2
ORCD	Orcadas	9.23	228	Pn		Pn	08 35 02.4	-1.5
EFI	East Falkland	16.60	271	Pn		Pn	08 36 42.0	-1.5
EFI	East Falkland	16.60	271	⇓eP		Pn	08 36 45.8	+2.3
VNA1	Neumayer--Stat	18.33	156	P		Pn	08 37 05.7	+0.9
VNA3	Neumayer Olymp	18.46	158	P		P	08 37 06.6	+0.2
VNA2	Neumayer--Watz baz=311,slow=10.0	18.73	156	P		P	08 37 08.1	-1.2
PMSA	Palmer Station 2.9nm,0.3s,baz=59,slow=7.4,SNR=24 14nm,0.8s	18.95	226	P		P	08 37 13.6	+1.9
PMSA	Palmer Station	18.95	226	P		P	08 37 10.9	-0.8
PMSA	Palmer Station	18.95	226	eP		P	08 37 13.5	+1.8
SNAA	Sanae	20.32	155	P		P	08 37 27.3	+0.6
SNAA	Sanae 12nm,0.9s,baz=305,slow=9.3,SNR=3.5	20.32	155	P		P	08 37 26.7	-0.1
SNAA	SNAA comp=Z,21μm,18.9s,baz=348,slow=35 12nm,0.9s			LR		LR	08 44 41.7	
SNAA	Sanae SNAA comp=Z,52nm,1.1s	20.32	155	P IAmb		P IAmb	08 37 26.5 08 37 43.6	-0.2
SMAI	San Martin Ant	21.11	218	P		P	08 37 34.0	-1.2
USHA	Ushuaia comp=Z,39nm,0.8s,baz=40,slow=3.8,SNR=4.7 comp=Z,39nm,0.8s	21.43	255	P		P	08 37 39.7	+0.9
TROLL	Troll, Antarti	21.88	153	P		P	08 37 43.6	0.0
BELA	Belgrano 2	22.77	182	P		P	08 37 52.4	-0.6
GO10	Punta Arenas	23.44	258	P		P	08 37 59.4	-0.6
MG05	Puerto Natales	24.84	261	P		P	08 38 11.9	-1.1
GO09	Cerro Castillo GO09 comp=Z,79nm,1.4s	24.92	262	P IAmb		P IAmb	08 38 12.8 08 38 16.8	-1.0
PLTB	Pedras Altas PLTB comp=Z,43nm,1.8s	28.48	316	P IAmb		P IAmb	08 38 46.0 08 38 49.2	-0.1
PLTB	Pedras Altas	28.48	316	eP		P	08 38 46.3	+0.3
CPSB	Cacapava Do Su	29.62	318	eP		P	08 38 56.8	+0.6
ITQB	Itaqui ITQB comp=Z,15nm,0.7s	31.55	313	P IAmb		P IAmb	08 39 13.0 08 39 13.7	-0.2
ITQB	Itaqui	31.55	313	eP		P	08 39 13.0	-0.2
BO01	Tunca	34.72	290	P		P	08 39 40.9	+0.1
CPUP	Villa Florida comp=Z,7.2nm,0.6s,baz=153,slow=9.8,SNR=21 comp=Z,7.2nm,0.6s	34.79	315	P		P	08 39 41.2	-0.3
CPUP	Villa Florida	34.79	315	P		P	08 39 40.6	-0.8
CPUP	Villa Florida	34.79	315	eP		P	08 39 41.1	-0.3
QSPA	South Pole Qui comp=Z,26nm,0.9s,baz=0.8,slow=0.8,SNR=18 comp=Z,26nm,0.9s	35.01	180	P		P	08 39 44.1	+0.9
QSPA	South Pole Qui QSPA comp=Z,35nm,1.1s	35.01	180	P IAmb		P IAmb	08 39 42.8 08 39 48.5	-0.4
MT09	Talagante	35.14	291	P		P	08 39 43.3	-1.3
MT01	Popeta	35.21	290	P		P	08 39 43.7	-1.3
ZON	Zonda ZON comp=Z,53nm,1.9s	35.66	296	P IAmb		P IAmb	08 39 47.6 08 39 59.8	-1.4
ZON	Zonda ZON comp=Z,53nm,1.9s	35.66	296	P pmax		P pmax	08 39 47.6	-1.4
VA03	San Esteban VA03	35.68	292	P IAmb		P IAmb	08 39 49.1 08 39 50.8	-0.1

comp=Z,34nm,1.2s
VA06 Catapilco 36.24 292 P **P** 08 39 54.0 +0.1
TRCB Terra Rica 36.27 324 *e*P **P** 08 39 53.4 -0.9
CO02 Combarbal 37.14 294 P **P** 08 40 01.4 -0.3
CO02 IAmb IAmb 08 40 12.7
comp=Z,51nm,1.2s
CO03 El Pedregal 37.27 294 P **P** 08 40 02.5 -0.2
CO03 IAmb IAmb 08 40 03.9
comp=Z,100nm,1.9s
CO01 Juntas del Tor 37.64 296 P **P** 08 40 07.0 +0.9
AC05 El Transito 38.65 297 P **P** 08 40 14.7 +0.2
AC05 IAmb IAmb 08 40 57.4
comp=Z,42nm,1.2s
LCO Las Campanas 38.73 296 P **P** 08 40 15.1 -0.3
LCO IAmb IAmb 08 41 16.9
comp=Z,95nm,1.7s
LCO Las Campanas 38.73 296 *e*P **P** 08 40 15.1 -0.3
AC04 Llanos de Chal 39.58 296 P **P** 08 40 22.3 +0.2
GO02 Mina Guanaco 41.33 301 P **P** 08 40 37.0 -0.1
GO02 IAmb IAmb 08 40 52.6
comp=Z,84nm,1.6s
MAW Mawson 41.98 145 P **P** 08 40 41.2 -0.3
comp=Z,1.4nm,0.4s,baz=234,slow=12,SNR=4.0
comp=Z,1.4nm,0.4s
LVC Limon Verde 43.16 303 P **P** 08 40 51.6 -0.4
comp=Z,7.4nm,0.5s,baz=209,slow=4.4,SNR=7.6
comp=Z,7.4nm,0.5s
LVC Limon Verde 43.16 303 P **P** 08 40 52.3 +0.3
LVC Limon Verde 43.16 303 *e*P **P** 08 40 52.3 +0.3
LVC Limon Verde 43.16 303 *e*P **P** 08 40 52.0 0.0
SALV Santo Antonio 43.71 324 *e*P **P** 08 40 56.1 +0.1
SDBA SAO DESIDERIO 44.15 340 *e*P **P** 08 41 00.5 +0.8
NBLA Lagarto - SE 44.49 350 *e*P **P** 08 41 02.4 +0.1
PTLB Pontes e Lacer 45.34 320 P **P** 08 41 08.7 -0.3
PTLB IAmb IAmb 08 41 09.5
comp=Z,8.5nm,0.7s
PTLB Pontes e Lacer 45.34 320 *e*P **P** 08 41 08.7 -0.3
SIV San Ignacio 45.58 317 P **P** 08 41 10.4 -0.6
comp=Z,1.5nm,0.6s,baz=149,slow=8.3,SNR=7.0
comp=Z,1.5nm,0.6s
GO01 Chusmiza 45.81 305 P **P** 08 41 12.9 -0.5
GO01 IAmb IAmb 08 42 19.1
comp=Z,29nm,0.9s
SNDB Serra Nova Dou 46.07 332 *e*P **P** 08 41 15.6 +0.7
SBA Scott Base 46.73 185 P **P** 08 41 19.8 +0.5
SBA IAmb IAmb 08 41 23.4
comp=Z,13nm,1.0s
SBA Scott Base 46.73 185 P **P** 08 41 19.8 +0.5
SBA pmax pmax
comp=Z,13nm,1.0s
PB12 IPOC Station P 47.26 305 P **P** 08 41 24.5 +0.2
VNDA Vanda 47.27 184 P **P** 08 41 24.2 +0.7
comp=Z,6.6nm,0.9s,baz=190,slow=6.0,SNR=20
comp=Z,6.6nm,0.9s
VNDA Vanda 47.27 184 P **P** 08 41 23.6 0.0
VNDA IAmb IAmb 08 41 26.8
comp=Z,9.4nm,1.0s
PB18 Visviri 47.75 306 P **P** 08 41 26.1 -2.5
BOSA Boshof 47.77 80 P **P** 08 41 27.0 -1.3
comp=Z,4.1nm,0.9s,baz=172,slow=11,SNR=4.2
comp=Z,4.1nm,0.9s
BOSA Boshof 47.77 80 P **P** 08 41 28.2 0.0
BOSA IAmb IAmb 08 41 44.8
comp=Z,31nm,1.8s
BOSA Boshof 47.77 80 P **P** 08 41 28.2 0.0
BOSA pmax pmax
comp=Z,31nm,1.8s
VILB Vilhena 48.03 320 P **P** 08 41 29.7 -0.5
VILB IAmb IAmb 08 43 08.9
comp=Z,21nm,1.3s
VILB Vilhena 48.03 320 *e*P **P** 08 41 28.9 -1.2
PDRB Porto dos Gac 48.06 325 *e*P **P** 08 41 29.7 -0.7
SMTB Santa Maria do 48.15 337 *e*P **P** 08 41 31.6 +0.5
LPAZ La Paz 48.28 309 P **P** 08 41 33.1 +0.3
comp=Z,7.1nm,0.5s,baz=107,slow=5.1,SNR=19
comp=Z,7.1nm,0.5s
LPAZ La Paz 48.28 309 P **P** 08 41 33.4 +0.6
LPAZ IAmb IAmb 08 41 46.1
comp=Z,16nm,0.8s
LPAZ La Paz 48.28 309 *e*P **P** 08 41 33.3 +0.6
LPAZ La Paz 48.28 309 *e*P **P** 08 41 33.1 +0.3
CLDB Colider 48.45 326 *e*P **P** 08 41 32.5 -0.9
H10N1 ASCENSION HYDR 49.02 22 T T 09 34 37.7
SNR=5.9
H10N3 ASCENSION HYDR 49.02 22 T T 09 35 38.1
baz=194,slow=74,SNR=6.6
H10N2 ASCENSION HYDR 49.03 22 T T 09 35 14.3
baz=261,slow=74,SNR=6.1
LBTB Lobatse 50.75 77 P **P** 08 41 50.0 -1.0
comp=Z,3.8nm,0.7s,baz=221,slow=3.7,SNR=5.0
comp=Z,3.8nm,0.7s
TSUM Tsumeb 51.11 65 P **P** 08 41 52.4 -1.4
comp=Z,3.8nm,0.8s,baz=118,slow=1.5,SNR=4.5
comp=Z,3.8nm,0.8s
ETMB Extrema 53.23 314 P **P** 08 42 08.4 -1.0
ETMB IAmb IAmb 08 42 09.8
comp=Z,20nm,1.6s
ETMB Extrema 53.23 314 *e*P **P** 08 42 08.9 -0.5
ROSB Rosrio 53.30 343 *e*P **P** 08 42 10.2 +0.3
ITTB Itaituba 54.58 329 *e*P **P** 08 42 19.1 -0.2
MATP Matopo 56.01 76 P **P** 08 42 28.8 -1.0
comp=Z,4.3nm,0.8s,baz=242,slow=6.2,SNR=8.1
comp=Z,4.3nm,0.8s
NNA Nana 56.10 302⇓ *e*P **P** 08 42 30.5 +0.2
NNA pmax pmax
comp=Z,41nm,1.3s
PAF Port-aux-Franc 56.70 130 P **P** 08 42 34.4 +0.3
PAF Port-aux-Franc 56.70 130 P **P** 08 42 34.4 +0.3
PAF pmax pmax
comp=Z,297nm,1.2s
MACA Manacapuru-AM 57.28 324 *e*P **P** 08 42 38.0 -0.6
BOAV Boa Vista 62.44 326 P **P** 08 43 12.7 -1.4
BOAV IAmb IAmb 08 44 43.0
comp=Z,36nm,1.9s
BOAV Boa Vista 62.44 326 *e*P **P** 08 43 13.0 -1.1
OTAV Otavalo 67.54 307 P **P** 08 43 47.8 0.0
OTAV IAmb IAmb 08 43 50.5
comp=Z,8.9nm,1.1s
OTAV Otavalo 67.54 307 P **P** 08 43 47.8 0.0
OTAV pmax pmax
comp=Z,9.0nm,1.1s
OTAV Otavalo 67.54 307 *e*P **P** 08 43 49.0 +1.2
SDV Santo Domingo 72.03 318 *e*P **P** 08 44 15.2 0.0
TOA0 Torodi Ar. Sit 73.41 33 P **P** 08 44 22.2 -0.8
TOA0 IAmb IAmb 08 44 35.3
comp=Z,10nm,1.1s
TORD Torodi Ar. Bea 73.41 33 P **P** 08 44 22.7 -0.3
comp=Z,3.6nm,0.7s,baz=201,slow=6.4,SNR=13
TORD LR LR 09 10 41.8
comp=Z,21µm,19.6s,baz=60,slow=31
comp=Z,3.6nm,0.7s
TORD Torodi Ar. Bea 73.41 33 P **P** 08 44 22.0 -1.1
JTS Las Juntas de 79.39 306⇓ *e*P **P** 08 44 57.6 +0.6
JTS pmax pmax
comp=Z,25nm,1.3s
MATN Matagalpa 82.15 306 P **P** 08 45 11.1 -0.8
ESQI Esquipulas 85.17 304 P **P** 08 45 26.6 -0.7
FURC Furnace Creek, 116.99 296 P **PKPdf** 08 51 34.6 -0.6
baz=140
MPMC Manual Prospec 117.00 295 P **PKPdf** 08 51 34.8 -0.7
baz=140
TPNV Topopah Spring 117.04 296 P **PKPdf** 08 51 35.0 -0.5
baz=140
ISA Isabella, Lake 117.21 294 P **PKPdf** 08 51 35.6 -0.2
baz=140
CWC Cottonwood Cre 117.60 295 P **PKPdf** 08 51 35.7 -0.9
baz=140
SMMC Simmler 117.75 292 P **PKPdf** 08 51 36.7 -0.1
baz=140
R11A Troy Canyon, C 117.77 298 P **PKPdf** 08 51 36.4 -0.5
baz=140
DUG Dugway, Tooele 117.80 301 P **PKPdf** 08 51 36.2 -0.7
baz=140
PDAR Pinedale Array 118.21 305 PKP **PKPdf** 08 51 35.6 -2.1
comp=Z,0.3nm,0.5s,baz=135,slow=5.8,SNR=4.3
NVAR Mina Array Bea 119.22 296 PKP **PKPdf** 08 51 39.6 -0.1
comp=Z,0.6nm,0.6s,baz=138,slow=2.5,SNR=5.8
NOA NORSAR Array B 120.59 22 PKP **PKPdf** 08 51 40.8 -0.5
comp=Z,0.2nm,0.6s,baz=174,slow=19,SNR=1.5
HLID Hailey 121.13 302 P **PKPdf** 08 51 42.6 -0.6
baz=138
BOZ Bozeman (W) 121.33 306 P **PKPdf** 08 51 42.9 -0.6
baz=139
EGMT Eagleton 122.30 309 P **PKPdf** 08 51 44.6 -0.5
baz=138
VSU Vasula 122.39 32⇓ *i*PKIKP **PKPdf** 08 51 46.7 +1.9

MSO Missoula 123.32 305 P **PKPdf** 08 51 47.0 -0.2
baz=137
J05D Fort Rock, OR 124.30 298 P **PKPdf** 08 51 49.1 -0.1
baz=136
FINES FINESS Array B 124.64 29 PKP **PKPdf** 08 51 48.1 -1.0
comp=Z,1.7nm,0.6s,baz=202,slow=4.1,SNR=6.1
I04A Tendick Farm, 125.27 298 P **PKPdf** 08 51 52.2 +1.3
baz=135
I03D Drain, OR 125.67 297 P **PKPdf** 08 51 52.4 +0.8
baz=135
G05D Wamic, OR 125.74 299 P **PKPdf** 08 51 52.7 +0.9
baz=135
KIRV Kirov 130.32 43⇑ *i*PKIKP **PKPdf** 08 52 01.4 +1.5
ARCES ARCESS Array B 130.96 23 PKP **PKPdf** 08 52 00.0 -0.9
comp=Z,1.2nm,0.5s,baz=204,slow=2.7,SNR=10
PRGR Permogore 130.99 38 *i* PKIKP **PKiKP** 08 52 08.3 +6.3
AAK Ala-Archa 131.64 72 *i* PKIKP **PKPdf** 08 52 04.5 +1.2
YKA Yellowknife Ar 134.23 320 PKP **PKPdf** 08 52 06.5 -0.8
comp=Z,1.6nm,0.7s,baz=138,slow=2.3,SNR=4.4
PZH PanZhiHua 135.28 110 PKP **PKPdf** 08 52 11.0 +0.4
BRVK Borovoye 136.04 59⇑ *i*PKIKP **PKPdf** 08 52 13.3 +2.4
MKAR Makanchi Array 138.56 73 PKhKP PKPpre 08 52 10.7
comp=Z,0.2nm,0.6s,baz=132,slow=2.1,SNR=2.8
WMQ Urumqi 139.74 80 *e*P **PKPdf** 08 52 19.5 +1.3
GTA Gaotai 143.79 95 *e*PKPbc **PKPdf** 08 52 27.9 +2.2
ZALV Zalesovo Beam 143.84 65 PKP PKPbc 08 52 24.5 +1.7
comp=Z,3.0nm,0.3s,baz=135,slow=57,SNR=2.8
MESA MESA 144.44 307 P **PKPab** 08 52 24.3 -0.2
baz=113
EPYK Eagle Plains 144.46 318 P **PKPab** 08 52 23.9 -0.3
baz=109
CTG Chitna Glacier 144.47 308 P **PKPab** 08 52 24.3 -0.2
baz=113
I29M Ogilvie Camp, 144.75 316 P **PKPab** 08 52 24.6 -0.7
baz=109
DAWY Dawson 144.76 314 P **PKPab** 08 52 25.1 -0.3
baz=110
BVCY Beaver Creek 144.80 311 P **PKPab** 08 52 25.6 0.0
baz=111
XAN Xi'an 145.02 110 P **PKPbc** 08 52 25.8 -1.4
XAN pmax pmax
comp=Z,12nm,1.0s
M27K Edge Creek, AK 145.23 310 P **PKPbc** 08 52 26.8 -0.4
baz=111
MCARA McCarthy VSAT 145.39 308 P **PKPdf** 08 52 27.5 0.0
baz=111
L27K Beaver Creek, 145.45 311 **PKPdf** 08 52 27.2 -0.4
L27K Beaver Creek, 145.45 311 P **PKPdf** 08 52 27.6 0.0
baz=110
EGAK Eagle 145.72 315 P **PKPdf** 08 52 27.7 -0.3
baz=108
M26K Nabesna, AK 145.73 310 P **PKPdf** 08 52 28.2 0.0
baz=110
K27K Chicken 145.87 313 P **PKPdf** 08 52 28.5 +0.3
baz=108
BMRM Bremner River 145.96 307 **PKPdf** 08 52 29.5 +0.9
BMRM Bremner River 145.96 307 P **PKPdf** 08 52 29.0 +0.4
baz=111
L26K Log Cabin Wild 146.09 311 P **PKPdf** 08 52 28.7 -0.1
baz=109
I27K Kandik River 146.14 316 P **PKPdf** 08 52 29.0 +0.2
baz=106
N25K Chitina, Valde 146.17 308 P **PKPdf** 08 52 29.9 +1.0
baz=110
Q23K Middleton Isla 146.21 304 P **PKPdf** 08 52 29.1 +0.1
baz=112
H27K Steamboat Moun 146.28 317 P **PKPdf** 08 52 29.8 +0.8
baz=105
EYAK Cordova Ski Ar 146.33 306 P **PKPdf** 08 52 29.5 +0.4
baz=111
G27K Doyon Strip 146.48 318 P **PKPdf** 08 52 30.5 +1.2
baz=104
J26L Joseph Creek 146.63 314 P **PKPdf** 08 52 30.4 +0.7
baz=106,SNR=14
SCRK Sand Creek 146.65 312 P **PKPdf** 08 52 30.6 +0.9
baz=107,SNR=7.0
I26K Coal Creek Min 146.68 315 P **PKPdf** 08 52 30.9 +1.3
baz=106
KLU Klutina 146.73 308 P **PKPdf** 08 52 31.4 +1.5
baz=109
E27K Coleen River 146.78 320 P **PKPdf** 08 52 31.4 +1.7
baz=102
P23K Montague Islan 146.91 305 P **PKPdf** 08 52 31.6 +1.5
baz=110
RIDG Independent Ri 146.95 312 P **PKPdf** 08 52 32.2 +2.0
baz=107,SNR=16
PAX Paxson 147.00 310 P **PKPdf** 08 52 31.6 +1.3
baz=107
M24K Tolsona, Glenn 147.04 309 P **PKPdf** 08 52 31.8 +1.4
baz=108
GLI Glacier Island 147.07 306 P **PKPdf** 08 52 32.2 +1.8
baz=109
G26K Porcupine Rive 147.33 318 P **PKPdf** 08 52 32.8 +2.2
baz=102,SNR=6.3
K24K Donnelly Dome 147.37 312 P **PKPdf** 08 52 32.8 +2.0
baz=107
J25K Salcha River, 147.41 313 P **PKPdf** 08 52 32.4 +1.5
baz=105
SCM Sheep Creek Mo 147.48 308 P **PKPdf** 08 52 33.0 +1.8
baz=108
F26K Sheenjek River 147.62 319 P **PKPdf** 08 52 33.7 +2.5
baz=101,SNR=6.7
PWL Port Wells 147.63 306 P **PKPdf** 08 52 33.2 +1.9
baz=109
M23K Glacier View 147.65 308 P **PKPdf** 08 52 33.9 +2.6
baz=108
PRP Porcupine Dome 147.69 315 P **PKPdf** 08 52 33.7 +2.2
baz=103
C27K Jago River 147.79 323 P **PKPdf** 08 52 34.1 +2.7
baz=98
DHY Denali Highway 147.86 310 P **PKPdf** 08 52 34.6 +2.8
baz=106,SNR=6.4
KNK Knik Glacier 147.87 307 P **PKPdf** 08 52 34.3 +2.6
baz=108
WAT6 Susitna Watana 147.88 309 P **PKPdf** 08 52 34.6 +2.6
baz=106
SEW Seward 147.92 304 P **PKPdf** 08 52 34.5 +2.7
baz=109
SML Sawmill 147.93 308 P **PKPdf** 08 52 34.3 +2.4
baz=107
H25K Birch Creek 147.98 316 P **PKPdf** 08 52 34.6 +2.9
baz=102
HDA Harding Lake 148.02 313 P **PKPdf** 08 52 34.5 +2.6
baz=104
ILAR Eielson Array 148.08 313 PKPbc **PKPdf** 08 52 34.4 +2.4
comp=Z,9.4nm,0.6s,baz=117,slow=1.9,SNR=40
ILAR Eielson Array 148.08 313 **PKPdf** 08 52 33.9 +1.9
F25K Christian Rive 148.16 319 P **PKPdf** 08 52 35.6 +3.5
baz=100,SNR=7.3
E25K Arctic Village 148.22 320 P **PKPdf** 08 52 35.4 +3.3
baz=99,SNR=13
PMR Palmer 148.23 307 P **PKPdf** 08 52 35.1 +2.9
baz=107
WAT1 Susitna Watana 148.31 309 P **PKPdf** 08 52 35.7 +3.3
baz=105
RC01 Rabbit Creek A 148.36 306 P **PKPdf** 08 52 36.0 +3.5
baz=107
BRSE Bradley Lake S 148.41 303 P **PKPdf** 08 52 35.6 +3.0
baz=109
NJ2 Nanjing 148.47 125 *e*P **PKPdf** 08 52 33.6 0.0
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
COLA College 148.50 313 P **PKPdf** 08 52 35.9 +3.3
baz=103
TCOL CIGO, UAF Yank 148.51 313 P **PKPdf** 08 52 35.7 +3.1
baz=103
KDAK Kodiak Island 148.65 299 P **PKPdf** 08 52 35.9 +2.8
baz=111
D25K Kavik River 148.68 322 P **PKPdf** 08 52 36.3 +3.4
baz=97
MCK McKinley 148.71 311 P **PKPdf** 08 52 36.3 +3.3
baz=104,SNR=7.2
G24K Hadweenzic Riv 148.71 317 P **PKPdf** 08 52 36.6 +3.6
baz=100
H24K Noodor Dome 148.71 315 P **PKPdf** 08 52 36.5 +3.4
baz=101
M22K Willow 148.72 307 P **PKPdf** 08 52 36.6 +3.6
baz=106
OHAK Old Harbor 148.81 298 P **PKPdf** 08 52 36.6 +3.3
baz=111
Q20K Shuyak Island 148.84 301 P **PKPdf** 08 52 36.6 +3.3
baz=110
NEA2 Nenana 148.96 313 P **PKPdf** 08 52 36.6 +3.2
baz=102,SNR=8.9
CUT Chulitna 148.97 308 P **PKPdf** 08 52 37.3 +3.9
baz=105
F24K Squaw Lake 149.00 318 P **PKPbc** 08 52 37.7 +0.1
baz=98,SNR=6.3

I23K Minto, Yukon-K 149.19 314 P **PKPdf** 08 52 37.1 +3.4
baz=101,SNR=6.5
TRF Thorofare Moun 149.23 310 P **PKPdf** 08 52 37.9 +3.8
baz=103
E24K Your Creek 149.30 319 P **PKPbc** 08 52 38.3 0.0
baz=97,SNR=8.4
C24K Franklin Bluff 149.53 323 P **PKPdf** 08 52 37.8 +3.7
baz=94
D24K Happy Valley 149.53 321 P **PKPdf** 08 52 38.1 +3.9
baz=95
BPAW Bear Paw Mtn. 149.67 311 P **PKPdf** 08 52 38.8 +4.2
baz=102,SNR=14
G23K Bananza Creek 149.72 317 P **PKPbc** 08 52 39.6 +0.3
baz=98,SNR=13
MLY Manley 149.74 313 P **PKPdf** 08 52 38.7 +4.0
baz=100,SNR=7.6
TOLK Toolik Lake Re 149.76 320 P **PKPbc** 08 52 39.3 -0.1
baz=95
CAST Castle Rocks 150.01 310 P **PKPdf** 08 52 39.4 +4.3
baz=102
M20K Styx River 150.14 307 P **PKPdf** 08 52 39.6 +4.1
baz=104
H22K Ishtalitna Cre 150.14 315 P **PKPbc** 08 52 40.0 -0.3
baz=98,SNR=12
CHUM Lake Minchumin 150.20 311 P **PKPbc** 08 52 40.1 -0.4
baz=101
C23K Itkillik River 150.20 323 P **PKPbc** 08 52 39.7 -0.6
baz=92
O19K Port Alsworth 150.27 303 P **PKPbc** 08 52 40.1 -0.6
baz=106
I21K Tanana 150.28 313 P **PKPbc** 08 52 40.5 -0.1
baz=99
G22K Bettles 150.32 317 P **PKPbc** 08 52 40.5 -0.2
baz=96,SNR=5.9
P18K Big Mountain, 150.48 301 P **PKPdf** 08 52 40.0 +4.0
baz=107
N19K Bonanza Creek 150.51 304 P **PKPdf** 08 52 40.4 +4.3
baz=105
R17K Ugashik Creek 150.53 297 P **PKPbc** 08 52 40.7 -0.7
baz=109
E22K Anaktuvuk Pass 150.55 319 P **PKPbc** 08 52 40.7 -0.6
baz=94
O18K Koktuh Hills 150.60 302 P **PKPdf** 08 52 40.8 +4.6
baz=106
L20K Farewell, AK 150.62 308 P **PKPdf** 08 52 40.5 +4.3
baz=102
HNS HongShan 150.63 113⇓ PKPbc **PKPbc** 08 52 41.6 -0.8
F22K John River 150.64 318 P **PKPbc** 08 52 41.3 -0.2
baz=95
H21K Melozitna Rive 150.69 314 P **PKPbc** 08 52 41.5 -0.2
baz=98,SNR=9.0
M19K Big River Lodg 150.72 306 P **PKPdf** 08 52 40.8 +4.6
baz=103
K20K Telida 150.88 309 P **PKPbc** 08 52 41.5 -0.6
baz=101
TIA Tai'an 150.98 118⇑ P **PKPab** 08 52 49.8 -1.0
TIA pmax pmax
comp=Z,9.0nm,0.9s
Q16K King Salmon 150.98 299 P **PKPdf** 08 52 41.5 +4.8
baz=107
L19K White Mountain 151.00 307 P **PKPdf** 08 52 41.4 +4.7
baz=102
P17K Kvichak River 151.02 300 P **PKPbc** 08 52 41.9 -0.7
baz=106
J20K Nowinta River 151.05 311 P **PKPbc** 08 52 41.9 -0.6
baz=99
G21K Allakaket 151.07 316 P **PKPbc** 08 52 42.3 -0.2
baz=95
F21K Alatna River 151.12 317 P **PKPbc** 08 52 42.5 -0.1
baz=94
N18K Kilae Creek 151.14 303 P **PKPbc** 08 52 41.9 -0.9
baz=104
CHNA Chernabura Isl 151.21 291 P **PKPbc** 08 52 42.3 -0.8
baz=112
HHC Hu-ho-hao-te 151.40 104 *e*P **PKPdf** 08 52 35.5 -2.6
O17K Koliganek Bris 151.50 301 P **PKPbc** 08 52 43.1 -0.5
baz=105
TTA Tatalina 151.67 308 P **PKPbc** 08 52 43.8 -0.3
baz=100
S14K Fog Glacier 151.71 293 P **PKPbc** 08 52 44.0 -0.4
baz=110
ZAK Zakamensk 152.20 81 *e*PKIKP **PKPab** 08 52 54.2 -1.4
ZAK pmax pmax
comp=Z,7.0nm,1.0s
SONM Songino Array 152.70 88 PKPbc **PKPbc** 08 52 45.8 -1.2
comp=Z,2.9nm,0.7s,baz=219,slow=3.5,SNR=8.6
XLT XiLinHaoTe 155.92 104 *e*P **PKPdf** 08 52 43.6 -0.9
KSRS Korea Array 157.07 132 PKPab **PKPab** 08 53 15.5 -1.0
comp=Z,0.7nm,0.5s,baz=225,slow=5.3,SNR=4.1

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*KRNET **19** 08:34:01.2±0.1, 39°.43N×73°.55E, mb3.4*
*NNC **19** 08:34:03.9±2.2, 39°.55N×73°.68E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=17.2km s-min=7.8km az=170.0*
*SOME **19** 08:34:04.3, 39°.67N×73°.65E, h0^{km}*
ISC 19 08:34:04.7±1.4, 39°.47N±0°.07×73°.41E±0°.04, h10^{km}, n33, σ1^{s}95/56, 9C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
DRK	**Karamyk** baz=73	**1.24**	**271**	⇑ *e*P	**Pn**	**08 34 27.0**	**-1.4**
DRK				⇑ *e*S	**Sn**	**08 34 45.8**	**+0.4**
GAR	**Garm** baz=61	**2.44**	**260**	⇑ *e*P	**Pn**	**08 34 46.0**	**+1.2**
GAR				⇑ *i*S	**Sb**	**08 35 18.7**	**-0.4**
ARLS	**Aral** baz=13	**2.49**	**16**	⇓ *e*P	**Pn**	**08 34 45.2**	**-0.3**
ARLS				⇓ *e*S	**Sn**	**08 35 17.4**	**+1.3**
UCH	**Uchtor** baz=14	**2.88**	**17**	⇓ *i*P	**Pn**	**08 34 51.1**	**-0.1**
UCH				⇓ *i*S	**Sn**	**08 35 27.2**	**+1.1**
EKS2	**Erkin-Say** baz=3.0	**3.21**	**5**	⇑ *e*P	**Pn**	**08 34 55.6**	**+0.3**
EKS2				⇑ *i*S	**Sn**	**08 35 35.1**	**+1.5**
AAK	**Ala-Archa** baz=12	**3.27**	**14**	⇓ *e*P	**Pn**	**08 34 56.3**	**+0.1**
AAK				⇓ *i*S	**Sn**	**08 35 36.4**	**+1.1**
MRKS	**Merke** 5.8nm,0.7s	**3.28**	**358**	*e*P	**Pg**	**08 35 05.0**	**-2.5**
MRKS	40nm,0.8s			*e*S	**Sg**	**08 35 48.2**	**-1.8**
KBK	**Karagaybulak** baz=18	**3.39**	**20**	⇓ *e*P	**Pn**	**08 34 57.6**	**-0.3**
KBK	baz=18			⇓ *i*S	**Sn**	**08 35 39.0**	**+0.7**
CHMS	**Chumysh** 3.2nm,0.5s	**3.67**	**16**	⇑ Pg	**Pb**	**08 35 07.7**	**-2.0**
CHMS	23nm,0.9s			⇓ Lg	Lg	08 35 56.5	
IUG	**Iuzhnay** 204nm,0.6s	**3.71**	**317**	*e*P	**Pg**	**08 35 13.8**	**-2.0**
IUG	30nm,1.2s			*e*S	**Sg**	**08 36 04.0**	**+0.3**
IUG	**Iuzhnay** 164nm,0.4s	**3.71**	**317**	Pg	**Pg**	**08 35 13.6**	**-2.1**
IUG	27nm,0.4s			Lg	Lg	08 36 03.8	
DZA	**Taraz** 104nm,0.1s	**3.76**	**336**	*e*P	**Pg**	**08 35 14.7**	**-2.1**
DZA	128nm,0.2s			*e*S	**Sg**	**08 36 04.9**	**-0.7**
TKM2	**Tokmak 2** 2.7nm,0.5s	**3.83**	**25**	⇓ Pg	**Pb**	**08 35 11.5**	**-0.9**
TKM2	5.5nm,0.5s			⇓ Lg	Lg	08 35 59.4	
CHM	**Chimkent** 92nm,0.3s	**4.05**	**316**	*e*P	**Pg**	**08 35 21.1**	**-1.3**
CHM	145nm,0.1s			*e*S	**Sg**	**08 36 15.8**	**+1.0**
KST	**Kastek** 3.6nm,0.9s	**4.06**	**28**	*e*P	**Pb**	**08 35 16.4**	**0.0**
KST	24nm,0.8s			*e*S	**Sb**	**08 36 08.0**	**+2.4**
KST	**Kastek** 4.2nm,0.4s	**4.06**	**28**	Pg	**Pb**	**08 35 14.5**	**-1.8**
KST	24nm,0.8s			Lg	Lg	08 36 05.3	
SGDS	**Sogindy** 1.6nm,0.3s	**4.09**	**13**	*e*P	**Pb**	**08 35 14.7**	**-2.1**
SGDS	7.6nm,0.7s			*e*S	**Sb**	**08 36 05.0**	**-1.3**

DGS	**Degeres**	**4.17**	**24**	*eP*		**Pb**	**08 35 17.6**	**-0.6**
	4.1nm,0.4s								
DGS				*eS*		**Sb**	**08 36 10.3**	**+1.6**
	12nm,0.8s								
DGS	**Degeres**	**4.17**	**24**	Pg		**Pb**	**08 35 17.7**	**-0.6**
	4.3nm,0.7s								
DGS				Lg		Lg	08 36 11.3		
	16nm,0.7s								
KK31	**Karatay Array**	**4.24**	**330**	⇑Pn		**Pn**	**08 35 10.5**	**+1.2**
	0.9nm,0.4s,baz=145,slow=14,SNR=9.2								
KK31				⇓Pg		**Pb**	**08 35 21.0**	**+1.7**
	2.2nm,0.6s,baz=137,slow=9.6,SNR=7.1								
KK31				⇓Sn		**Sn**	**08 36 02.8**	**+3.9**
	2.4nm,0.5s								
KK31				⇑Lg		Lg	08 36 19.6		
	17nm,0.8s,baz=150,slow=29								
KOTS	**Kotyrbulak**	**4.69**	**35**	*eP*		**Pb**	**08 35 26.6**	**-0.4**
	0.8nm,0.5s								
KOTS				*eS*		**Sb**	**08 36 25.7**	**+2.1**
	29nm,0.6s								
KOTS	**Kotyrbulak**	**4.69**	**35**	Pg		**Pb**	**08 35 26.6**	**-0.4**
	0.8nm,0.5s								
KOTS				Lg		Lg	08 36 25.7		
	29nm,0.6s								
KTBS	**Karatobe**	**4.90**	**29**	*eP*		**Pb**	**08 35 29.4**	**-1.3**
	1.8nm,0.6s								
KTBS				*eS*		**Sb**	**08 36 30.7**	**+1.0**
	3.3nm,0.6s								
KTBS	**Karatobe**	**4.90**	**29**	Pg		**Pb**	**08 35 29.4**	**-1.3**
	2.3nm,0.6s								
KTBS				Lg		Lg	08 36 31.2		
	12nm,0.3s								
KUU	**Kurty**	**4.94**	**25**	*eP*		**Pb**	**08 35 31.2**	**-0.1**
	2.9nm,0.7s								
KUU				*eS*		**Sb**	**08 36 33.4**	**+2.6**
	16nm,0.8s								
KUU	**Kurty**	**4.94**	**25**	Pg		**Pb**	**08 35 31.2**	**-0.1**
	2.9nm,0.7s								
KUU				Lg		Lg	08 36 33.3		
	16nm,0.8s								
BTLS	**Baital**	**5.59**	**5**	*eP*		**Pb**	**08 35 45.1**	**+2.7**
	1.3nm,0.9s								
BTLS				*eS*		**Sg**	**08 36 57.4**	**-6.8**
	5.3nm,0.7s								
KPKS	**Kokpek**	**5.63**	**43**	*eP*		**Pb**	**08 35 43.4**	**+0.3**
	2.7nm,0.5s								
KPKS				*eS*		**Sb**	**08 36 54.4**	**+3.8**
	16nm,0.4s								
KPKS	**Kokpek**	**5.63**	**43**	Pg		**Pb**	**08 35 43.4**	**+0.3**
	2.7nm,0.5s								
KPKS				Lg		Lg	08 36 54.4		
	16nm,0.4s								
ARXS	**Arharly**	**5.78**	**33**	*eP*		**Pb**	**08 35 45.9**	**+0.3**
	3.9nm,0.8s								
ARXS				*eS*		**Sb**	**08 36 59.4**	**+4.5**
	9.8nm,0.7s								
ARXS	**Arharly**	**5.78**	**33**	Pg		**Pb**	**08 35 45.9**	**+0.3**
	3.9nm,0.8s								
ARXS				Lg		Lg	08 36 59.4		
	9.8nm,0.7s								
BLB	**Baldybastay**	**5.98**	**38**	*eP*		**Pb**	**08 35 49.5**	**+0.4**
	4.0nm,0.5s								
BLB				*eS*		**Sb**	**08 37 04.9**	**+4.1**
	10nm,0.7s								
BLB	**Baldybastay**	**5.98**	**38**	Pg		**Pb**	**08 35 49.5**	**+0.4**
	4.0nm,0.5s								
BLB				Lg		Lg	08 37 04.9		
	10nm,0.7s								

*IDC **19** 08:34:16.8±0.7,54°.86S×31°.06W,h0km,mb4.4/10, mbtmp4.4/11,ML4.2/1,Error ellipse: s-maj=24.7km s-min=17.5km az=43.0*
*NEIC **19** 08:34:17.7±0.9,55°.03S±0°.05×31°.3W±0°.2,h10km±1km, mb4.8/24,Error ellipse: s-maj=17.6km s-min=5.1km az=66.0*

ISC 19 08:34:17.7±0.5,54°.96S±0°.07×31°.30W±0°.09,h10km,n48, σ0s79/47,mb4.7/18,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORCD	**Orcadas**	**9.20**	**226**	Pn	**Pn**	**08 36 29.0**	**-1.2**
VNA1	**Neumayer--Stat**	**18.71**	**156**	P	**Pn**	**08 38 37.3**	**+1.0**
VNA3	**Neumayer Olymp**	**18.84**	**158**	P	**Pn**	**08 38 37.4**	**-0.4**
PMSA	**Palmer Station**	**18.92**	**226**	P	**Pn**	**08 38 42.2**	**+3.4**
	0.7nm,0.3s,baz=64,slow=9.6,SNR=4.4						
	8.5nm,0.6s						
PMSA	**Palmer Station**	**18.92**	**226**	P	**Pn**	**08 38 38.9**	**+0.1**
VNA2	**Neumayer--Watz**	**19.11**	**156**	P	**P**	**08 38 40.4**	**+0.1**
	baz=319,slow=11						
SNAA	**Sanae**	**20.71**	**155**	P	**P**	**08 38 57.4**	**-0.4**
SNAA	**Sanae**	**20.71**	**155**	P	**P**	**08 38 58.2**	**+0.5**
	16nm,0.8s,baz=311,slow=8.8,SNR=4.6						
	16nm,0.8s						
SNAA	**Sanae**	**20.71**	**155**	P	**P**	**08 38 57.3**	**-0.4**
TROLL	**Troll, Antarti**	**22.27**	**153**	P	**P**	**08 39 14.9**	**+0.2**
BELA	**Belgrano 2**	**23.05**	**182**	P	**P**	**08 39 21.1**	**-1.5**
GO10	**Punta Arenas**	**23.19**	**258**	P	**P**	**08 39 23.9**	**-0.4**
MG05	**Puerto Natales**	**24.57**	**261**	P	**P**	**08 39 38.1**	**+0.7**
TRQA	**Tornquist**	**26.74**	**296**	P	**P**	**08 39 56.8**	**-0.4**
GO05	**Huala**	**34.32**	**289**	P	**P**	**08 41 03.7**	**-0.6**
CPUP	**Villa Florida**	**34.37**	**316**	P	**P**	**08 41 04.6**	**0.0**
	3.7nm,0.8s,baz=150,slow=6.3,SNR=3.6						
	3.7nm,0.8s						
CPUP	**Villa Florida**	**34.37**	**316**	P	**P**	**08 41 04.1**	**-0.5**
CPUP				IAmb	IAmb	08 41 08.5	
	comp=Z,9.1nm,1.1s						
MT09	**Talagante**	**34.74**	**291**	P	**P**	**08 41 07.7**	**-0.3**
MT09				IAmb	IAmb	08 41 09.5	
	comp=Z,24nm,1.1s						
QSPA	**South Pole Qui**	**35.29**	**180**	P	**P**	**08 41 12.7**	**+0.3**
QSPA				IAmb	IAmb	08 41 24.6	
	comp=Z,9.1nm,0.8s						
CO01	**Juntas del Tor**	**37.24**	**296**	P	**P**	**08 41 29.0**	**-0.5**
MAW	**Mawson**	**42.40**	**145**	P	**P**	**08 42 12.2**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=241,slow=9.7,SNR=7.0						
	comp=Z,5.2nm,0.9s						
MAW	**Mawson**	**42.40**	**145**	P	**P**	**08 42 11.5**	**-0.1**
LVC	**Limon Verde**	**42.74**	**304**	P	**P**	**08 42 16.7**	**+1.4**
	comp=Z,5.3nm,0.6s,baz=144,slow=7.0,SNR=2.1						
	comp=Z,5.3nm,0.6s						
PB06	**IPOC Station P**	**42.98**	**303**	P	**P**	**08 42 18.3**	**+1.2**
PB06				IAmb	IAmb	08 42 44.8	
	comp=Z,16nm,1.0s						
PTLB	**Pontes e Lacer**	**44.92**	**320**	P	**P**	**08 42 32.6**	**0.0**
PTLB				IAmb	IAmb	08 42 38.8	
	comp=Z,9.7nm,1.0s						
SIV	**San Ignacio**	**45.16**	**318**	P	**P**	**08 42 34.8**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=153,slow=4.5,SNR=2.1						
	comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**47.53**	**184**	P	**P**	**08 42 53.2**	**+0.8**
	comp=Z,3.2nm,1.0s,baz=192,slow=6.6,SNR=3.0						
	comp=Z,3.2nm,1.0s						
VNDA	**Vanda**	**47.53**	**184**	P	**P**	**08 42 52.5**	**+0.2**
LPAZ	**La Paz**	**47.85**	**309**	P	**P**	**08 42 57.5**	**+1.2**
	comp=Z,8.4nm,0.5s,baz=115,slow=4.6,SNR=9.0						
	comp=Z,8.4nm,0.5s						
LPAZ	**La Paz**	**47.85**	**309**	P	**P**	**08 42 57.0**	**+0.7**
BOSA	**Boshof**	**48.04**	**81**	P	**P**	**08 42 56.4**	**-0.7**
BOSA				IAmb	IAmb	08 43 10.5	
	comp=Z,18nm,1.5s						
LBTB	**Lobatse**	**51.00**	**78**	P	**P**	**08 43 19.7**	**0.0**
	comp=Z,5.0nm,0.8s,baz=212,slow=7.4,SNR=4.9						
	comp=Z,5.0nm,0.8s						
LBTB	**Lobatse**	**51.00**	**78**	P	**P**	**08 43 19.6**	**-0.1**
LBTB				IAmb	IAmb	08 43 19.9	
	comp=Z,8.4nm,0.9s						
CASY	**Casey**	**55.69**	**162**	P	**P**	**08 43 52.8**	**-0.7**
CASY				IAmb	IAmb	08 43 54.9	
	comp=Z,9.7nm,0.9s						
MATP	**Matopo**	**56.25**	**77**	P	**P**	**08 43 58.0**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=228,slow=8.2,SNR=4.4						
	comp=Z,3.4nm,0.7s						
CZSB	**Cruzeiro do Su**	**57.46**	**309**	P	**P**	**08 44 06.0**	**-0.7**
CZSB				IAmb	IAmb	08 44 08.0	
	comp=Z,9.2nm,0.6s						
BOAV	**Boa Vista**	**62.03**	**326**	P	**P**	**08 44 38.1**	**-0.1**
BOAV				IAmb	IAmb	08 44 49.1	
	comp=Z,12nm,1.3s						
BAUV	**El Baul**	**70.71**	**321**	P	**P**	**08 45 34.0**	**+0.3**
SDV	**Santo Domingo**	**71.61**	**319**	P	**P**	**08 45 39.1**	**-0.2**
SDV				IAmb	IAmb	08 45 56.7	
	comp=Z,11nm,1.2s						
TOA0	**Torodi Ar. Sit**	**73.35**	**34**	P	**P**	**08 45 49.7**	**+0.2**
TOA0				IAmb	IAmb	08 46 06.1	
	comp=Z,6.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.35**	**34**	P	**P**	**08 45 49.6**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=197,slow=6.1,SNR=3.8						
	comp=Z,2.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.35**	**34**	P	**P**	**08 45 49.8**	**+0.4**
TORD				IAmb	IAmb	08 46 06.2	
	comp=Z,7.2nm,1.1s						
FINES	**FINESS Array B**	**124.55**	**29**	PKP	**PKPdf**	**08 53 15.7**	**0.0**
	comp=Z,1.2nm,0.7s,baz=191,slow=6.5,SNR=3.5						
ARCES	**ARCESS Array B**	**130.82**	**23**	PKP	**PKPdf**	**08 53 27.8**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=197,slow=0.9,SNR=4.3						
YKA	**Yellowknife Ar**	**133.82**	**320**	PKP	**PKPdf**	**08 53 33.5**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=125,slow=3.0,SNR=5.6						
ZALV	**Zalesovo Beam**	**144.00**	**65**	PKP	PKPbc	08 53 50.6	+0.5
	comp=Z,2.1nm,0.3s,baz=267,slow=2.5,SNR=1.6						
ILAR	**Eielson Array**	**147.66**	**314**	PKPbc	**PKPbc**	**08 54 00.8**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=125,slow=1.7,SNR=6.1						
SONM	**Songino Array**	**153.01**	**88**	PKPbc	**PKPbc**	**08 54 14.5**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=215,slow=4.0,SNR=4.7						

*IDC **19** 08:35:44.8±1.2,54°.98S×31°.67W,h0km,mb4.3/5, mbtmp4.3/5,Error ellipse: s-maj=52.5km s-min=26.2km az=36.0*
*NEIC **19** 08:35:45.9±2.2,55°.1S±0°.1×31°.9W±0°.2,h10km±1km, mb4.3/20,Error ellipse: s-maj=17.6km s-min=15.5km az=207.0*

ISC 19 08:35:45.7±0.6,55°.07S±0°.10×31°.92W±0°.09,h10km,n28, σ0s84/28,mb4.3/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.77**	**285**	Pn	**Pn**	**08 36 28.3**	**-1.8**
ORCD	**Orcadas**	**8.87**	**225**	Pn	**Pn**	**08 37 53.0**	**-0.7**
PMSA	**Palmer Station**	**18.59**	**226**	P	**P**	**08 40 02.8**	**+0.2**
SNAA	**Sanae**	**20.76**	**154**	P	**P**	**08 40 26.5**	**+0.2**
SNAA				IAmb	IAmb	08 40 36.1	
	comp=Z,7.0nm,0.9s						
SMAI	**San Martin Ant**	**20.84**	**217**	P	**P**	**08 40 26.2**	**-0.9**
TRQA	**Tornquist**	**26.48**	**297**	P	**P**	**08 41 23.3**	**+0.4**
TRQA				IAmb	IAmb	08 41 24.6	
	comp=Z,11nm,1.4s						
PLTB	**Pedras Altas**	**27.90**	**318**	P	**P**	**08 41 36.3**	**+0.7**
PLTB				IAmb	IAmb	08 41 37.4	
	comp=Z,4.9nm,0.8s						
PLCA	**Paso Flores**	**29.17**	**283**	P	**P**	**08 41 47.3**	**+0.3**
PLCA				IAmb	IAmb	08 42 09.9	
	comp=Z,4.4nm,1.0s						
CPUP	**Villa Florida**	**34.20**	**317**	P	**P**	**08 42 31.4**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=157,slow=7.4,SNR=4.0						
	comp=Z,3.0nm,0.6s						
CPUP	**Villa Florida**	**34.20**	**317**	P	**P**	**08 42 31.1**	**0.0**
CPUP				IAmb	IAmb	08 42 32.3	
	comp=Z,3.6nm,0.8s						
MT09	**Talagante**	**34.45**	**292**	P	**P**	**08 42 32.9**	**-0.6**
VA06	**Catapilco**	**35.55**	**293**	P	**P**	**08 42 43.8**	**+1.0**
AC05	**El Transito**	**37.98**	**298**	P	**P**	**08 43 04.5**	**+0.8**
MAW	**Mawson**	**42.50**	**146**	P	**P**	**08 43 41.2**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=265,slow=14,SNR=2.6						
	comp=Z,3.3nm,0.8s						
MAW	**Mawson**	**42.50**	**146**	P	**P**	**08 43 40.7**	**+0.2**
SUR	**Sutherland**	**43.05**	**80**	P	**P**	**08 43 45.3**	**-0.4**
PB01	**IPOC Station P**	**44.12**	**305**	P	**P**	**08 43 55.2**	**+0.9**
PB01				IAmb	IAmb	08 43 56.2	
	comp=Z,7.1nm,0.7s						
PTLB	**Pontes e Lacer**	**44.79**	**321**	P	**P**	**08 43 59.4**	**0.0**
PTLB				IAmb	IAmb	08 44 06.0	
	comp=Z,5.2nm,0.9s						
LPAZ	**La Paz**	**47.65**	**310**	P	**P**	**08 44 24.1**	**+1.3**
	comp=Z,7.9nm,0.7s,baz=202,slow=5.7,SNR=4.3						
	comp=Z,7.9nm,0.7s						
LPAZ	**La Paz**	**47.65**	**310**	P	**P**	**08 44 24.0**	**+1.3**
ETMB	**Extrema**	**52.64**	**316**	P	**P**	**08 45 00.3**	**+0.5**
ETMB				IAmb	IAmb	08 45 06.5	
	comp=Z,1.8nm,0.9s						
MATP	**Matopo**	**56.62**	**78**	P	**P**	**08 45 27.3**	**-1.6**
	comp=Z,2.0nm,0.7s,baz=245,slow=6.4,SNR=1.8						
	comp=Z,2.0nm,0.7s						
BOAV	**Boa Vista**	**61.93**	**327**	P	**P**	**08 46 04.9**	**-0.5**
BOAV				IAmb	IAmb	08 46 13.6	
	comp=Z,2.1nm,1.0s						
TOA0	**Torodi Ar. Sit**	**73.64**	**34**	P	**P**	**08 47 19.5**	**+0.3**
TOA0				IAmb	IAmb	08 47 30.0	
	comp=Z,7.6nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.64**	**34**	P	**P**	**08 47 20.0**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=203,slow=7.0,SNR=2.8						
	comp=Z,1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.64**	**34**	P	**P**	**08 47 19.1**	**-0.1**
ILAR	**Eielson Array**	**147.48**	**314**	PKPbc	**PKPbc**	**08 55 28.1**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=118,slow=1.7,SNR=2.3						
SONM	**Songino Array**	**153.37**	**88**	PKPbc	**PKiKP**	**08 55 44.5**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=263,slow=2.1,SNR=3.2						

*IDC **19** 08:36:57.8±0.9,54°.92S×31°.10W,h0km,mb4.3/6, mbtmp4.4/7,ML4.3/1,Error ellipse: s-maj=34.6km s-min=21.2km az=65.0*
*NEIC **19** 08:36:59.2±0.7,55°.08S±0°.09×31°.3W±0°.1,h10km±1km, mb4.5/23,Error ellipse: s-maj=18.0km s-min=10.2km az=35.0*

ISC 19 08:36:59.1±0.6,55°.00S±0°.08×31°.31W±0°.10,h10km,n37, σ0s70/37,mb4.5/15,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORCD	**Orcadas**	**9.17**	**226**		**Pn**	**08 39 10.5**	**-0.7**
VNA1	**Neumayer--Stat**	**18.68**	**156**	P	**Pn**	**08 41 18.7**	**+1.4**
VNA3	**Neumayer Olymp**	**18.80**	**158**	P	**Pn**	**08 41 19.0**	**+0.2**
PMSA	**Palmer Station**	**18.89**	**226**	P	**Pn**	**08 41 22.2**	**+2.4**
	0.9nm,0.3s,baz=18,slow=16,SNR=5.5						
	12nm,0.7s						
PMSA	**Palmer Station**	**18.89**	**226**	P	**P**	**08 41 19.5**	**+0.3**
VNA2	**Neumayer--Watz**	**19.08**	**156**	P	**P**	**08 41 21.2**	**-0.2**
	baz=317,slow=13						
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**08 41 39.3**	**+0.4**
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**08 41 39.3**	**+0.4**
	12nm,0.9s,baz=310,slow=9.9,SNR=5.3						
	12nm,0.9s						
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**08 41 37.4**	**-1.5**
SNAA				IAmb	IAmb	08 41 45.1	
	comp=Z,15nm,0.8s						
SMAI	**San Martin Ant**	**21.11**	**217**	P	**P**	**08 41 43.3**	**-0.1**
SMAI				IAmb	IAmb	08 42 05.9	
	comp=Z,21nm,1.4s						
TROLL	**Troll, Antarti**	**22.24**	**153**	P	**P**	**08 41 55.7**	**-0.1**
MG02	**Cerro Sombrero**	**22.27**	**260**	P	**P**	**08 41 56.0**	**-0.1**
BELA	**Belgrano 2**	**23.01**	**182**	P	**P**	**08 42 02.6**	**-1.0**
GO10	**Punta Arenas**	**23.17**	**258**	P	**P**	**08 42 04.9**	**-0.7**
TRQA	**Tornquist**	**26.75**	**297**	P	**P**	**08 42 38.6**	**-0.2**
TRQA				IAmb	IAmb	08 42 48.7	
	comp=Z,9.4nm,1.1s						
AY01	**Puyuhuapi**	**28.35**	**275**	P	**P**	**08 42 52.8**	**-0.2**
AY01				IAmb	IAmb	08 42 53.4	
	comp=Z,12nm,1.1s						
PLCA	**Paso Flores**	**29.50**	**282**	P	**P**	**08 43 03.4**	**+0.1**
PLCA				IAmb	IAmb	08 43 16.8	
	comp=Z,13nm,1.4s						
LMEL	**Las Melosas**	**34.27**	**292**	P	**P**	**08 43 45.1**	**-0.3**
LMEL				IAmb	IAmb	08 44 04.5	
	comp=Z,6.7nm,1.0s						
CPUP	**Villa Florida**	**34.39**	**316**	P	**P**	**08 43 45.6**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=165,slow=11,SNR=2.6						
	comp=Z,2.5nm,0.8s						
CPUP	**Villa Florida**	**34.39**	**316**	P	**P**	**08 43 45.4**	**-0.9**
CPUP				IAmb	IAmb	08 43 47.0	
	comp=Z,5.4nm,1.1s						
MT09	**Talagante**	**34.75**	**291**	P	**P**	**08 43 49.9**	**+0.4**
QSPA	**South Pole Qui**	**35.25**	**180**	P	**P**	**08 43 53.8**	**+0.2**
	comp=Z,6.8nm,1.0s,baz=198,slow=4.7,SNR=3.2						
	comp=Z,6.8nm,1.0s						
QSPA	**South Pole Qui**	**35.25**	**180**	P	**P**	**08 43 52.7**	**-0.8**
QSPA				IAmb	IAmb	08 43 54.6	
	comp=Z,11nm,1.1s						
CO01	**Juntas del Tor**	**37.25**	**296**	P	**P**	**08 44 11.5**	**+0.5**
CO01				IAmb	IAmb	08 44 31.5	
	comp=Z,11nm,1.1s						
MAW	**Mawson**	**42.37**	**145**	P	**P**	**08 44 52.9**	**+0.1**
	comp=Z,4.4nm,0.9s,baz=242,slow=6.4,SNR=3.9						
	comp=Z,4.4nm,0.9s						
MAW	**Mawson**	**42.37**	**145**	P	**P**	**08 44 52.4**	**-0.4**
PB01	**IPOC Station P**	**44.37**	**304**	P	**P**	**08 45 10.3**	**+0.7**
PB01				IAmb	IAmb	08 45 24.9	
	comp=Z,10nm,0.9s						
VNDA	**Vanda**	**47.49**	**184**	P	**P**	**08 45 33.7**	**+0.1**
VNDA				IAmb	IAmb	08 45 58.9	
	comp=Z,2.4nm,0.9s						
LPAZ	**La Paz**	**47.87**	**309**	P	**P**	**08 45 38.7**	**+0.8**
	comp=Z,5.3nm,0.6s,baz=186,slow=4.3,SNR=4.1						
	comp=Z,5.3nm,0.6s						
LPAZ	**La Paz**	**47.87**	**309**	P	**P**	**08 45 37.9**	**0.0**
CASY	**Casey**	**55.66**	**162**	P	**P**	**08 46 34.6**	**-0.1**
CASY				IAmb	IAmb	08 46 38.4	
	comp=Z,6.6nm,1.1s						
DBIC	**Dimbokro**	**65.29**	**29**	P	**P**	**08 47 41.6**	**+0.6**
TOA0	**Torodi Ar. Sit**	**73.39**	**34**	P	**P**	**08 48 31.1**	**0.0**
TOA0				IAmb	IAmb	08 48 32.4	
	comp=Z,3.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.39**	**34**	P	**P**	**08 48 31.3**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=198,slow=6.3,SNR=3.6						
	comp=Z,1.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.39**	**34**	P	**P**	**08 48 31.2**	**+0.1**
ILAR	**Eielson Array**	**147.68**	**314**	PKPbc	**PKPbc**	**08 56 42.0**	**-0.4**
	comp=Z,6.6nm,1.0s,baz=129,slow=1.5,SNR=9.5						
SONM	**Songino Array**	**153.01**	**88**	PKPbc	**PKiKP**	**08 56 55.8**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=238,slow=2.9,SNR=3.9						

ISC 19 08:38:15.1±1.4,49°.87N±0°.05×17°.67E±0°.06,h3km±17km, n6,σ0s58/9,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORC	**Moravsky Berou**	**0.13**	**220**	*e*PG	**Pg**	**08 38 17.6**	**0.0**
MORC				*e*SG	**Sg**	**08 38 19.0**	**-0.3**
VRAC	**Vranov**	**0.90**	**231**	*e*PG	**Pg**	**08 38 32.7**	**+0.4**
JAVC	**Velka Javorina**	**1.02**	**180**	*e*PG	**Pn**	**08 38 37.0**	**+0.7**
KRUC	**Moravsky**	**1.16**	**226**	*e*PG	**Pb**	**08 38 37.2**	**-0.6**
KSP	**Ksiaz**	**1.31**	**318**	*e*Pg	**Pb**	**08 38 39.9**	**-0.5**
KSP				*e*Sg	**Sg**	**08 38 57.7**	**+0.5**
OJC	**Ojcow**	**1.42**	**75**	*e*Pg	**Pn**	**08 38 41.6**	**-0.2**
OJC				*e*Sg	**Sg**	**08 39 00.8**	**+0.3**

*IDC **19** 08:39:22.7±0.7,54°.99S×30°.82W,h0km,mb4.2/11, mbtmp4.3/12,ML4.4/1,Error ellipse: s-maj=23.8km s-min=16.0km az=53.0*
*NEIC **19** 08:39:24.8±1.5,55°.33S±0°.10×31°.4W±0°.2,h10km±1km, mb4.6/25,Error ellipse: s-maj=17.6km s-min=15.3km az=51.0*

ISC 19 08:39:24.1±0.5,55°.19S±0°.08×31°.19W±0°.08,h10km,n48, σ1s53/47,mb4.5/17,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.20**	**284**	Pn	**Pn**	**08 40 14.6**	**+0.2**
ORCD	**Orcadas**	**9.09**	**227**		**Pn**	**08 41 32.5**	**-2.6**
VNA1	**Neumayer--Stat**	**18.48**	**156**	P	**Pn**	**08 43 42.7**	**+2.8**
VNA3	**Neumayer Olymp**	**18.60**	**158**	P	**Pn**	**08 43 41.8**	**+0.4**
PMSA	**Palmer Station**	**18.80**	**226**	P	**Pn**	**08 43 47.9**	**+4.1**
	1.1nm,0.3s,baz=74,slow=6.1,SNR=9.2						
	6.6nm,0.6s						
PMSA	**Palmer Station**	**18.80**	**226**	P	**P**	**08 43 40.2**	**-3.1**
VNA2	**Neumayer--Watz**	**18.88**	**156**	P	**Pn**	**08 43 45.1**	**+0.4**
	baz=303,slow=13						
SNAA	**Sanae**	**20.47**	**155**	P	**P**	**08 44 01.6**	**-0.1**
SNAA	**Sanae**	**20.47**	**155**	P	Pn	08 44 03.0	-0.8
	13nm,1.0s,baz=304,slow=13,SNR=6.6						
	13nm,1.0s						
SNAA	**Sanae**	**20.47**	**155**	P	**P**	**08 44 01.2**	**-0.4**
SMAI	**San Martin Ant**	**21.00**	**218**	P	**P**	**08 44 03.2**	**-4.1**
SMAI				IAmb	IAmb	08 44 05.2	
	comp=Z,13nm,0.7s						
TROLL	**Troll, Antarti**	**22.04**	**153**	P	**P**	**08 44 19.5**	**+0.9**
MG05	**Puerto Natales**	**24.60**	**261**	P	**P**	**08 44 43.3**	**-0.8**
GO09	**Cerro Castillo**	**24.68**	**262**	P	**P**	**08 44 44.6**	**-0.3**
GO09				IAmb	IAmb	08 44 47.4	
	comp=Z,30nm,1.2s						
PLCA	**Paso Flores**	**29.61**	**283**	P	**P**	**08 45 29.8**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=170,slow=6.3,SNR=4.2						
	comp=Z,2.6nm,0.9s						
PLCA	**Paso Flores**	**29.61**	**283**	P	**P**	**08 45 30.3**	**+1.0**
CPUP	**Villa Florida**	**34.57**	**316**	P	**P**	**08 46 12.5**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=175,slow=10,SNR=6.0						
	comp=Z,3.9nm,0.9s						
CPUP	**Villa Florida**	**34.57**	**316**	P	**P**	**08 46 12.9**	**+0.1**
CPUP				IAmb	IAmb	08 46 25.5	
	comp=Z,12nm,1.4s						
MT09	**Talagante**	**34.88**	**291**	P	**P**	**08 46 14.9**	**-0.7**
QSPA	**South Pole Qui**	**35.06**	**180**	P	**P**	**08 46 17.5**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=181,slow=4.6,SNR=3.8						
	comp=Z,4.6nm,0.9s						
QSPA	**South Pole Qui**	**35.06**	**180**	P	**P**	**08 46 15.4**	**-1.5**
QSPA				IAmb	IAmb	08 46 41.6	
	comp=Z,12nm,1.1s						
MT02	**Curacav**	**35.36**

ORCD	**Orcadas**	**9.26**	**228**	Pn	**Pn**	**08 42 22.6**	**-1.7**
PMSA	**Palmer Station**	**18.97**	**226**	P	**Pn**	**08 44 34.5**	**+1.7**
	0.5nm,0.3s,baz=52,slow=9.9,SNR=2.4						
	16nm,0.7s						
PMSA	**Palmer Station**	**18.97**	**226**		**P**	**08 44 32.2**	**+0.1**
SNAA	**Sanae**	**20.30**	**155**	P	**P**	**08 44 47.5**	**+0.9**
	15nm,0.8s,baz=308,slow=10.0,SNR=5.8						
	15nm,0.8s						
SNAA	**Sanae**	**20.30**	**155**	P	**P**	**08 44 46.3**	**-0.3**
MG01	**Puerto William**	**21.00**	**256**	P	**P**	**08 44 54.2**	**0.0**
MG01				IAmb	IAmb	08 45 21.9	
	comp=Z,40nm,0.7s						
SMAI	**San Martin Ant**	**21.14**	**218**	P	**P**	**08 44 55.1**	**-0.5**
MG02	**Cerro Sombrero**	**22.59**	**260**	P	**P**	**08 45 11.6**	**+0.3**
BELA	**Belgrano 2**	**22.77**	**182**	P	**P**	**08 45 12.1**	**-1.0**
BELA				IAmb	IAmb	08 45 18.5	
	comp=Z,50nm,1.5s						
MG05	**Puerto Natales**	**24.88**	**261**	P	**P**	**08 45 33.2**	**-0.2**
GO09	**Cerro Castillo**	**24.96**	**262**	P	**P**	**08 45 33.1**	**-1.1**
GO09				IAmb	IAmb	08 45 38.0	
	comp=Z,45nm,1.1s						
TRQA	**Tornquist**	**27.19**	**296**	P	**P**	**08 45 55.1**	**+0.5**
ITQB	**Itaqui**	**31.58**	**313**	P	**P**	**08 46 34.0**	**+0.5**
ITQB				IAmb	IAmb	08 46 56.7	
	comp=Z,33nm,1.5s						
BI05	**Punta Hualpn**	**34.17**	**285**	P	**P**	**08 46 56.3**	**+0.2**
CPUP	**Villa Florida**	**34.82**	**315**	P	**P**	**08 47 01.6**	**-0.2**
QSPA	**South Pole Qui**	**35.00**	**180**	P	**P**	**08 47 04.1**	**+0.9**
	comp=Z,16nm,1.0s,baz=213,slow=5.2,SNR=5.7						
	comp=Z,16nm,1.0s						
QSPA	**South Pole Qui**	**35.00**	**180**	P	**P**	**08 47 03.1**	**-0.1**
QSPA				IAmb	IAmb	08 47 08.4	
	comp=Z,35nm,1.2s						
MT01	**Popeta**	**35.25**	**290**	P	**P**	**08 47 04.6**	**-0.9**
MT01				IAmb	IAmb	08 47 10.1	
	comp=Z,28nm,1.5s						
ZON	**Zonda**	**35.70**	**296**	P	**P**	**08 47 09.7**	**+0.2**
ZON				IAmb	IAmb	08 47 10.8	
	comp=Z,15nm,1.2s						
VA06	**Catapilco**	**36.28**	**292**	P	**P**	**08 47 14.2**	**0.0**
MAW	**Mawson**	**41.95**	**145**	P	**P**	**08 48 02.2**	**+0.9**
LVC	**Limon Verde**	**43.20**	**303**	P	**P**	**08 48 13.5**	**+1.2**
	comp=Z,11nm,0.9s,baz=156,slow=6.2,SNR=3.9						
	comp=Z,11nm,0.9s						
LVC	**Limon Verde**	**43.20**	**303**	P	**P**	**08 48 13.1**	**+0.8**
LVC				IAmb	IAmb	08 48 16.2	
	comp=Z,38nm,1.4s						
PB02	**IPOC Station P**	**44.77**	**303**	P	**P**	**08 48 25.5**	**+0.8**
PB02				IAmb	IAmb	08 48 26.2	
	comp=Z,35nm,1.3s						
PB01	**IPOC Station P**	**44.81**	**304**	P	**P**	**08 48 25.7**	**+0.7**
PB01				IAmb	IAmb	08 48 29.1	
	comp=Z,28nm,1.3s						
PTLB	**Pontes e Lacer**	**45.37**	**320**	P	**P**	**08 48 29.1**	**-0.3**
PTLB				IAmb	IAmb	08 48 30.5	
	comp=Z,17nm,1.3s						
SIV	**San Ignacio**	**45.61**	**317**	P	**P**	**08 48 31.2**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=170,slow=13,SNR=3.3						
	comp=Z,2.0nm,0.9s						
GO01	**Chusmiza**	**45.85**	**305**	P	**P**	**08 48 34.4**	**+0.6**
GO01				IAmb	IAmb	08 48 35.6	
	comp=Z,9.6nm,0.8s						
VNDA	**Vanda**	**47.27**	**184**	P	**P**	**08 48 44.2**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=182,slow=6.5,SNR=6.2						
	comp=Z,2.6nm,0.7s						
VNDA	**Vanda**	**47.27**	**184**	P	**P**	**08 48 44.3**	**+0.6**
VNDA				IAmb	IAmb	08 48 57.6	
	comp=Z,3.4nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.89**	**22**	T	T	09 40 28.5	
	baz=28,slow=74,SNR=4.9						
H10S3	**ASCENSION HYDR**	**47.89**	**22**	T	T	09 40 25.9	
	baz=192,slow=74,SNR=6.7						
VILB	**Vilhena**	**48.06**	**320**	P	**P**	**08 48 50.0**	**-0.5**
VILB				IAmb	IAmb	08 48 51.2	
	comp=Z,24nm,1.4s						
LPAZ	**La Paz**	**48.31**	**309**	P	**P**	**08 48 54.3**	**+1.1**
	comp=Z,7.8nm,0.7s,baz=116,slow=4.0,SNR=11						
	comp=Z,7.8nm,0.7s						
LPAZ	**La Paz**	**48.31**	**309**	P	**P**	**08 48 53.4**	**+0.3**
LPAZ				IAmb	IAmb	08 49 06.1	
	comp=Z,14nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.01**	**21**	T	T	09 41 55.7	
	baz=191,slow=75,SNR=4.3						
H10N3	**ASCENSION HYDR**	**49.01**	**21**	T	T	09 41 51.1	
	baz=191,slow=75,SNR=4.9						
H10N2	**ASCENSION HYDR**	**49.02**	**21**	T	T	09 41 53.9	
	baz=191,slow=75,SNR=5.6						
CRZF	**Crozet Islands**	**49.95**	**116**	P	**P**	**08 49 04.4**	**-0.2**
LBTB	**Lobatse**	**50.71**	**77**	P	**P**	**08 49 10.7**	**-0.1**
LBTB				IAmb	IAmb	08 49 17.6	
	comp=Z,31nm,1.5s						
TSUM	**Tsumeb**	**51.08**	**65**	P	**P**	**08 49 13.6**	**0.0**
TSUM				IAmb	IAmb	08 49 15.2	
	comp=Z,7.5nm,1.2s						
ETMB	**Extrema**	**53.27**	**314**	P	**P**	**08 49 29.2**	**-0.6**
ETMB				IAmb	IAmb	08 49 30.8	
	comp=Z,7.6nm,1.1s						
RPN	**Rapa Nui**	**61.82**	**262**	P	**P**	**08 50 30.1**	**+0.1**
BOAV	**Boa Vista**	**62.47**	**326**	P	**P**	**08 50 33.4**	**-0.9**
BOAV				IAmb	IAmb	08 50 34.3	
	comp=Z,11nm,1.2s						
ARNL	**Arenillas**	**65.01**	**303**	P	**P**	**08 50 51.8**	**+0.7**
TOA0	**Torodi Ar. Sit**	**73.39**	**33**	P	**P**	**08 51 43.2**	**+0.2**
TOA0				IAmb	IAmb	08 51 59.4	
	comp=Z,4.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.39**	**33**	P	**P**	**08 51 43.3**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=200,slow=7.5,SNR=3.7						
	comp=Z,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.39**	**33**	P	**P**	**08 51 43.4**	**+0.4**
NVAR	**Mina Array Bea**	**119.26**	**296**	PKP	**PKPdf**	**08 59 00.0**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=104,slow=3.3,SNR=4.4						
ARCES	**ARCESS Array B**	**130.95**	**23**	PKP	**PKPdf**	**08 59 19.9**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=238,slow=2.9,SNR=3.8						
ILAR	**Eielson Array**	**148.11**	**313**	PKPbc	**PKPbc**	**08 59 54.7**	**-0.7**
	comp=Z,10.0nm,0.8s,baz=123,slow=1.8,SNR=16						
SONM	**Songino Array**	**152.66**	**88**	PKPbc	**PKPbc**	**09 00 05.3**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=222,slow=3.3,SNR=4.0						

*IDC **19** 08:43:17.3±1.0,54°.93S×30°.75W,h0km,mb4.1/5,*
mbtmp4.1/5,Error ellipse: s-maj=45.3km s-min=23.5km
az=63.0
*NEIC **19** 08:43:18.4±1.4,55°.06S±0°.08×31°.1W±0°.2,h10km±1km,*
mb4.4/17,Error ellipse: s-maj=16.1km s-min=13.1km
az=56.0

ISC 19 08:43:18.4±0.6,55°.03S±0°.08×31°.10W±0°.08,h10km,n31,
σ0s87/31,mb4.4/8,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.22**	**281**	Pn	**Pn**	**08 44 09.4**	**+0.6**
ORCD	**Orcadas**	**9.23**	**226**	Pn	**Pn**	**08 45 31.3**	**-0.1**
EFI	**East Falkland**	**16.40**	**271**	Pn	**Pn**	**08 47 07.3**	**-1.1**
EFI				IAmb	IAmb	08 47 40.2	
	comp=Z,67nm,1.2s						
VNA1	**Neumayer--Stat**	**18.61**	**156**	P	**Pn**	**08 47 37.8**	**+2.1**
VNA3	**Neumayer Olymp**	**18.73**	**158**	P	**Pn**	**08 47 38.0**	**+0.7**
PMSA	**Palmer Station**	**18.95**	**226**	P	**P**	**08 47 38.5**	**-0.7**
PMSA				IAmb	IAmb	08 47 53.9	
	comp=Z,20nm,1.4s						
VNA2	**Neumayer--Watz**	**19.00**	**156**	P	**Pn**	**08 47 40.1**	**-0.5**
	baz=311,slow=14						
SNAA	**Sanae**	**20.60**	**155**	P	**P**	**08 47 56.2**	**-1.0**
SNAA	**Sanae**	**20.60**	**155**	P	**P**	**08 47 57.5**	**+0.2**
	comp=Z,5.1nm,0.9s,baz=304,slow=11,SNR=3.8						
	comp=Z,5.1nm,0.9s						
SNAA	**Sanae**	**20.60**	**155**	P	**P**	**08 47 55.5**	**-1.7**
SMAI	**San Martin Ant**	**21.16**	**218**	P	**P**	**08 48 02.1**	**-1.1**
TRIS	**Tristan da Cun**	**22.07**	**43**	P	**P**	**08 48 12.0**	**-1.3**
TROLL	**Troll, Antarti**	**22.16**	**153**	P	**P**	**08 48 14.4**	**+0.3**
BELA	**Belgrano 2**	**22.98**	**182**	P	**P**	**08 48 22.2**	**-0.4**
BELA				IAmb	IAmb	08 48 33.7	
	comp=Z,6.7nm,1.2s						
MG05	**Puerto Natales**	**24.67**	**261**	P	**P**	**08 48 38.6**	**-0.4**
GO09	**Cerro Castillo**	**24.75**	**262**	P	**P**	**08 48 39.3**	**-0.5**
CPUP	**Villa Florida**	**34.49**	**316**	P	**P**	**08 50 06.9**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=169,slow=9.1,SNR=3.2						
	comp=Z,2.6nm,1.0s						
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**08 50 14.2**	**+1.6**
	comp=Z,3.9nm,0.9s,baz=201,slow=6.1,SNR=5.1						
	comp=Z,3.9nm,0.9s						
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**08 50 12.6**	**0.0**
QSPA				IAmb	IAmb	08 50 17.7	
	comp=Z,5.7nm,1.0s						
SUR	**Sutherland**	**42.59**	**80**	P	**P**	**08 51 14.7**	**+0.1**
PTLB	**Pontes e Lacer**	**45.05**	**320**	P	**P**	**08 51 34.1**	**-0.2**
PTLB				IAmb	IAmb	08 51 47.0	
	comp=Z,5.8nm,0.9s						
VNDA	**Vanda**	**47.47**	**184**	P	**P**	**08 51 53.3**	**+0.7**
LPAZ	**La Paz**	**47.98**	**309**	P	**P**	**08 51 59.4**	**+1.4**
	comp=Z,2.8nm,0.6s,baz=103,slow=6.5,SNR=9.0						
	comp=Z,2.8nm,0.6s						
LPAZ	**La Paz**	**47.98**	**309**	P	**P**	**08 51 58.8**	**+0.8**
LPAZ				IAmb	IAmb	08 52 13.2	
	comp=Z,9.6nm,1.2s						
TSUM	**Tsumeb**	**51.21**	**66**	P	**P**	**08 52 22.1**	**0.0**
TSUM				IAmb	IAmb	08 52 29.0	
	comp=Z,11nm,1.5s						
TOA0	**Torodi Ar. Sit**	**73.34**	**33**	P	**P**	**08 54 50.6**	**+0.5**
TOA0				IAmb	IAmb	08 55 03.9	
	comp=Z,5.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.34**	**33**	P	**P**	**08 54 50.0**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=197,slow=6.8,SNR=3.3						
	comp=Z,1.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.34**	**33**	P	**P**	**08 54 49.9**	**-0.2**
TORD				IAmb	IAmb	08 55 03.9	
	comp=Z,4.2nm,1.1s						
ZALV	**Zalesovo Beam**	**143.93**	**65**	PKP	**PKPdf**	**09 02 52.4**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=159,slow=1.2,SNR=1.4						
ILAR	**Eielson Array**	**147.79**	**314**	PKPbc	**PKPbc**	**09 03 02.1**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=121,slow=1.8,SNR=14						
SONM	**Songino Array**	**152.90**	**88**	PKPbc	**PKPbc**	**09 03 14.2**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=166,slow=0.6,SNR=2.1						

*IDC **19** 08:45:59.3±1.4,55°.33S×30°.83W,h0km,mb3.7/3,*
mbtmp3.8/3,Error ellipse: s-maj=60.4km s-min=34.1km
az=53.0

ISC 19 08:46:00.4±1.1,55°.4S±0°.2×30°.9W±0°.3,h10km,n7,σ0s91/7,
South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**18.31**	**158**	P	**Pn**	**08 50 13.0**	**-1.1**
VNA2	**Neumayer--Watz**	**18.58**	**156**	P	**P**	**08 50 17.4**	**+0.2**
	baz=320,slow=8.0						
SNAA	**Sanae**	**20.18**	**154**	P	**P**	**08 50 35.6**	**+0.9**
SNAA	**Sanae**	**20.18**	**154**	P	**P**	**08 50 35.9**	**+1.2**
	1.9nm,0.8s,baz=309,slow=12,SNR=3.6						
	1.9nm,0.8s						
LPAZ	**La Paz**	**48.33**	**309**	P	**P**	**08 54 42.8**	**0.0**
	1.6nm,0.5s,baz=162,slow=3.9,SNR=7.8						
	1.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.63**	**33**	P	**P**	**08 57 33.7**	**-0.1**
	0.3nm,0.6s,baz=186,slow=6.2,SNR=2.1						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**148.15**	**313**	PKPbc	**PKPbc**	**09 05 44.9**	**0.0**
	0.6nm,0.7s,baz=126,slow=1.9,SNR=4.5						

*IDC **19** 08:48:22.1±1.3,55°.15S×30°.58W,h0km,mb3.8/4,*
mbtmp3.8/4,Error ellipse: s-maj=55.0km s-min=30.0km
az=48.0

ISC 19 08:48:23.5±0.9,55°.2S±0°.2×30°.6W±0°.3,h10km,n10,
σ0s56/10,mb4.0/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**18.49**	**159**	P	**Pn**	**08 52 39.8**	**+0.3**
VNA2	**Neumayer--Watz**	**18.76**	**156**	P	**P**	**08 52 41.8**	**-0.4**
	baz=318,slow=9.0						
SNAA	**Sanae**	**20.35**	**155**	P	**P**	**08 52 59.6**	**0.0**
SNAA	**Sanae**	**20.35**	**155**	P	**P**	**08 53 00.0**	**+0.4**
	1.4nm,0.9s,baz=306,slow=9.2,SNR=3.0						
	1.4nm,0.9s						
TROLL	**Troll, Antarti**	**21.90**	**153**	P	**P**	**08 53 16.2**	**-0.2**
CPUP	**Villa Florida**	**34.80**	**315**	P	**P**	**08 55 13.6**	**-0.6**
	1.4nm,0.7s,baz=127,slow=7.0,SNR=3.9						
	1.4nm,0.7s						
LPAZ	**La Paz**	**48.30**	**308**	P	**P**	**08 57 06.3**	**+0.8**
	1.3nm,0.8s,baz=124,slow=3.6,SNR=2.9						
	1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.31**	**33**	P	**P**	**08 59 55.4**	**+0.3**
	1.1nm,0.8s,baz=189,slow=6.7,SNR=4.8						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**148.09**	**313**	PKPbc	**PKPbc**	**09 08 07.2**	**-0.6**
	0.6nm,0.7s,baz=108,slow=1.4,SNR=5.4						
SONM	**Songino Array**	**152.62**	**87**	PKPbc	**PKiKP**	**09 08 19.1**	**-0.5**
	0.4nm,0.3s,baz=204,slow=2.5,SNR=2.6						

IDC 19 08:50:24.5±1.4,54°.75S×30°.47W,h0km,mb3.5/3,
mbtmp3.6/3,Error ellipse: s-maj=61.5km s-min=35.1km
az=58.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.70**	**155**	P	P	08 55 06.2	+0.3
	1.2nm,0.8s,baz=308,slow=8.1,SNR=3.8						
	1.2nm,0.8s						
LPAZ	**La Paz**	**48.10**	**308**	P	P	08 59 07.1	+0.5
	1.1nm,1.0s,baz=173,slow=8.1,SNR=2.2						
	1.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**72.91**	**33**	P	P	09 01 55.5	+0.2
	0.4nm,0.7s,baz=191,slow=5.6,SNR=2.4						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**147.86**	**314**	PKPbc	PKPdf	09 10 08.3	+1.4
	0.6nm,0.7s,baz=125,slow=1.7,SNR=5.7						

*IDC **19** 08:51:14.8±0.9,55°.06S×31°.82W,h0km,mb4.1/6,*
mbtmp4.1/6,Error ellipse: s-maj=43.0km s-min=20.3km
az=61.0
*NEIC **19** 08:51:15.9±1.8,55°.27S±0°.09×32°.0W±0°.2,h10km±1km,*
mb4.6/20,Error ellipse: s-maj=19.9km s-min=14.5km
az=63.0

ISC 19 08:51:16.0±0.7,55°.20S±0°.09×32°.1W±0°.1,h10km,n39,
σ1s17/32,mb4.5/11,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.69**	**288**		**Pn**	**08 52 01.1**	**+1.8**
ORCD	**Orcadas**	**8.69**	**225**		**Pn**	**08 53 22.3**	**+0.6**
EFI	**East Falkland**	**15.82**	**272**	Pn	**Pn**	**08 54 58.4**	**-0.2**
EFI				IAmb	IAmb	08 55 17.7	
	comp=Z,80nm,1.2s						
VNA1	**Neumayer--Stat**	**18.69**	**155**	P	**Pn**	**08 55 36.5**	**+2.1**
VNA3	**Neumayer Olymp**	**18.79**	**157**	P	**Pn**	**08 55 36.7**	**+1.0**
VNA2	**Neumayer--Watz**	**19.09**	**155**	P	**Pn**	**08 55 40.9**	**+1.7**
	baz=316,slow=11						
SMAI	**San Martin Ant**	**20.66**	**217**	P	**P**	**08 55 54.4**	**-1.2**
SNAA	**Sanae**	**20.70**	**154**	P	Pn	08 55 57.3	-1.0
SNAA	**Sanae**	**20.70**	**154**	P	Pn	08 55 57.7	-0.6
	comp=Z,2.2nm,0.7s,baz=315,slow=10,SNR=6.8						
	comp=Z,2.2nm,0.7s						
TROLL	**Troll, Antarti**	**22.28**	**152**	P	**P**	**08 56 14.6**	**+1.6**
BELA	**Belgrano 2**	**22.79**	**181**	P	**P**	**08 56 16.1**	**-2.3**
TRQA	**Tornquist**	**26.43**	**298**	P	**P**	**08 56 53.1**	**+0.3**
TRQA				IAmb	IAmb	08 57 09.4	
	comp=Z,8.4nm,1.1s						
LL02	**Futaleuf**	**28.20**	**279**	P	**P**	**08 57 07.6**	**-1.1**
LL02				IAmb	IAmb	08 57 10.0	
	comp=Z,15nm,1.4s						
CPUP	**Villa Florida**	**34.21**	**317**	P	**P**	**08 58 01.5**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=161,slow=11,SNR=4.4						
	comp=Z,2.1nm,0.7s						
PEL	**Peldehue**	**34.72**	**293**	P	**P**	**08 58 06.9**	**+0.9**
ZON	**Zonda**	**34.94**	**297**	P	**P**	**08 58 09.1**	**+1.1**
VA03	**San Esteban**	**34.94**	**294**	P	**P**	**08 58 09.1**	**+1.0**
QSPA	**South Pole Qui**	**35.05**	**180**	P	**P**	**08 58 10.4**	**+1.7**
	comp=Z,1.8nm,0.7s,baz=190,slow=4.0,SNR=3.8						
	comp=Z,1.8nm,0.7s						
QSPA	**South Pole Qui**	**35.05**	**180**	P	**P**	**08 58 08.1**	**-0.7**
QSPA				IAmb	IAmb	08 58 34.3	
	comp=Z,13nm,1.4s						
CO01	**Juntas del Tor**	**36.92**	**297**	P	**P**	**08 58 25.0**	**-0.2**
CO01				IAmb	IAmb	08 58 29.7	
	comp=Z,15nm,1.4s						
GO04	**Tololo Observa**	**37.12**	**296**	P	**P**	**08 58 26.2**	**-0.7**
AC05	**El Transito**	**37.94**	**298**	P	**P**	**08 58 34.9**	**+1.2**
AC05				IAmb	IAmb	08 58 48.8	
	comp=Z,14nm,0.9s						
GO02	**Mina Guanaco**	**40.64**	**302**	P	**P**	**08 58 58.4**	**+1.9**
MAW	**Mawson**	**42.47**	**146**	P	**P**	**08 59 10.3**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=241,slow=3.6,SNR=4.4						
	comp=Z,2.9nm,1.0s						
MAW	**Mawson**	**42.47**	**146**	P	**P**	**08 59 09.1**	**-1.4**
PB01	**IPOC Station P**	**44.10**	**305**	P	**P**	**08 59 24.3**	**-0.2**
PTLB	**Pontes e Lacer**	**44.81**	**322**	P	**P**	**08 59 29.7**	**-0.3**
PTLB				IAmb	IAmb	08 59 31.2	
	comp=Z,7.0nm,1.1s						
LPAZ	**La Paz**	**47.64**	**310**	P	**P**	**08 59 54.0**	**+1.0**
	comp=Z,2.3nm,0.5s,baz=156,slow=12,SNR=6.6						
	comp=Z,2.3nm,0.5s						
LPAZ	**La Paz**	**47.64**	**310**	P	**P**	**08 59 54.1**	**+1.1**
LPAZ				IAmb	IAmb	09 00 08.1	
	comp=Z,5.4nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.17**	**23**	T	T	09 51 58.6	
	baz=193,slow=74,SNR=5.4						
H10S3	**ASCENSION HYDR**	**48.17**	**23**	T	T	09 51 59.0	
	baz=27,slow=74,SNR=13						
H10N1	**ASCENSION HYDR**	**49.28**	**23**	T	T	09 53 23.9	
	baz=192,slow=75,SNR=21						
H10N3	**ASCENSION HYDR**	**49.28**	**23**	T	T	09 53 23.7	
	baz=192,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**49.30**	**23**	T	T	09 53 20.2	
	baz=192,slow=75,SNR=15						
TOA0	**Torodi Ar. Sit**	**73.81**	**34**	P	**P**	**09 02 50.0**	**-0.5**
TOA0				IAmb	IAmb	09 03 09.2	
	comp=Z,9.5nm,1.5s						
TORD	**Torodi Ar. Bea**	**73.81**	**34**	P	**P**	**09 02 50.2**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=193,slow=6.0,SNR=6.1						
	comp=Z,1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.81**	**34**	P	**P**	**09 02 50.2**	**-0.4**
ILAR	**Eielson Array**	**147.48**	**314**	PKPbc	**PKPbc**	**09 10 58.6**	**-0.1**
	comp=Z,5.8nm,1.1s,baz=114,slow=1.6,SNR=18						
SONM	**Songino Array**	**153.49**	**89**	PKPbc	**PKPbc**	**09 11 13.4**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=258,slow=1.1,SNR=4.4						

*NEIC **19** 08:53:22.9±2.0,54°.9S±0°.1×31°.4W±0°.2,h10km±2km,*
mb4.4/16,Error ellipse: s-maj=21.1km s-min=16.6km
az=57.0
*IDC **19** 08:53:23.9±1.2,54°.89S×31°.25W,h0km,mb3.9/4,*
mbtmp3.9/4,Error ellipse: s-maj=58.0km s-min=28.9km
az=47.0

ISC 19 08:53:23.6±0.7,54°.94S±0°.09×31°.5W±0°.1,h10km,n27,
σ2s11/25,mb4.4/8,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.96**	**281**	Pn	**Pn**	**08 54 10.2**	**-0.3**
ORCD	**Orcadas**	**9.12**	**225**	Pn	**Pn**	**08 55 36.5**	**+1.4**
VNA3	**Neumayer Olymp**	**18.91**	**158**	P	Pn	08 57 52.1	+7.5
VNA2	**Neumayer--Watz**	**19.19**	**156**	P	**Pn**	**08 57 52.0**	**+4.1**
	baz=315,slow=11						
SNAA	**Sanae**	**20.78**	**155**	P	**P**	**08 58 03.6**	**-0.9**
SNAA	**Sanae**	**20.78**	**155**	P	Pn	08 58 06.4	-0.5
	2.5nm,0.8s,baz=315,slow=13,SNR=2.7						
	2.5nm,0.8s						
SNAA	**Sanae**	**20.78**	**155**	P	**P**	**08 58 03.2**	**-1.3**
SNAA				IAmb	IAmb	08 58 16.1	
	comp=Z,15nm,1.4s						
SMAI	**San Martin Ant**	**21.08**	**217**	P	**P**	**08 58 08.9**	**+1.4**
TROLL	**Troll, Antarti**	**22.35**	**153**	P	**P**	**08 58 14.8**	**-6.6**
BELA	**Belgrano 2**	**23.06**	**182**	P	**P**	**08 58 27.0**	**-1.7**
LL02	**Futaleuf**	**28.51**	**277**	P	**P**	**08 59 18.5**	**-0.3**
LL02				IAmb	IAmb	08 59 20.5	
	comp=Z,15nm,1.5s						
LMEL	**Las Melosas**	**34.13**	**292**	P	**P**	**09 00 08.4**	**-0.3**
CPUP	**Villa Florida**	**34.26**	**316**	P	**P**	**09 00 11.4**	**+1.8**
	comp=Z,1.7nm,0.7s,baz=150,slow=12,SNR=4.0						
	comp=Z,1.7nm,0.7s						
CPUP	**Villa Florida**	**34.26**	**316**	P	**P**	**09 00 10.6**	**+1.1**
CPUP				IAmb	IAmb	09 00 28.6	
	comp=Z,4.6nm,1.1s						
ZON	**Zonda**	**35.13**	**296**	P	**P**	**09 00 15.2**	**-1.9**
QSPA	**South Pole Qui**	**35.31**	**180**	P	**P**	**09 00 17.3**	**-1.3**
QSPA				IAmb	IAmb	09 00 39.1	
	comp=Z,11nm,1.4s						
VA04	**Juan Fernndez**	**39.03**	**283**	P	**P**	**09 00 49.0**	**-1.2**
AC06	**Mina Casimiro**	**39.36**	**298**	P	**P**	**09 00 51.7**	**-1.4**
MAW	**Mawson**	**42.49**	**146**	P	**P**	**09 01 18.8**	**+0.5**
PTLB	**Pontes e Lacer**	**44.82**	**321**	P	**P**	**09 01 36.5**	**-1.2**
PTLB				IAmb	IAmb	09 01 40.5	
	comp=Z,5.0nm,1.3s						
SBA	**Scott Base**	**46.99**	**185**	P	**P**	**09 01 54.4**	**+0.3**
SBA				IAmb	IAmb	09 02 07.0	
	comp=Z,6.0nm,1.4s						
VNDA	**Vanda**	**47.54**	**184**	P	**P**	**09 01 58.0**	**-0.4**
VNDA				IAmb	IAmb	09 02 06.6	
	comp=Z,4.6nm,1.5s						
LPAZ	**La Paz**	**47.74**	**309**	P	**P**	**09 02 04.2**	**+2.9**
	comp=Z,1.8nm,0.5s,baz=157,slow=10,SNR=7.2						
	comp=Z,1.8nm,0.5s						
LPAZ	**La Paz**	**47.74**	**309**	P	**P**	**09 02 00.2**	**-1.1**

SBA	**Scott Base**	**46.81**	**185**	P	**P**	**09 07 36.4**	**-0.5**
SBA				IAmb	IAmb	09 07 55.1	
	comp=Z,3.7nm,1.3s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**09 07 43.3**	**+2.2**
	comp=Z,1.0nm,0.9s,baz=184,slow=6.3,SNR=4.1						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**09 07 42.2**	**+1.1**
VNDA				IAmb	IAmb	09 08 14.5	
	comp=Z,1.1nm,0.8s						
LPAZ	**La Paz**	**48.12**	**309**	P	**P**	**09 07 49.2**	**+0.8**
	comp=Z,2.3nm,0.5s,baz=136,slow=3.7,SNR=11						
	comp=Z,2.3nm,0.5s						
LPAZ	**La Paz**	**48.12**	**309**	P	**P**	**09 07 48.7**	**+0.2**
LPAZ				IAmb	IAmb	09 07 54.0	
	comp=Z,2.7nm,0.7s						
SOCV	**Socops**	**71.42**	**318**	*e*P	**P**	**09 10 27.8**	**-0.3**
TOA0	**Torodi Ar. Sit**	**73.40**	**33**	P	**P**	**09 10 40.5**	**+0.7**
TOA0				IAmb	IAmb	09 10 50.6	
	comp=Z,4.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P	**P**	**09 10 40.9**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=200,slow=6.2,SNR=2.4						
	comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P	**P**	**09 10 40.0**	**+0.1**
ILAR	**Eielson Array**	**147.93**	**313**	PKPbc	**PKPbc**	**09 18 51.1**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=115,slow=1.7,SNR=9.9						

*IDC **19** 09:00:02.9±1.3,54.°94S×31.°18W,h0km,mb3.9/3, mbtmp4.0/3,Error ellipse: s-maj=57.1km s-min=33.6km az=57.0*
*NEIC **19** 09:00:05.6±1.1,55.°14S±0.°08×32.°1W±0.°2,h17km±5km, mb4.6/15,Error ellipse: s-maj=16.6km s-min=6.2km az=47.0*

ISC 19 09:00:04.7±0.7,55.°04S±0.°10×32.°1W±0.°1,h10km,n25, σ1s77/25,mb4.5/10,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**2.64**	**285**	Pn		**Pn**	**09 00 47.7**	**+0.5**
ORCD	**Orcadas**	**8.80**	**224**	Pn		**Pn**	**09 02 09.6**	**-2.1**
VNA3	**Neumayer Olymp**	**18.94**	**158**	P		**Pn**	**09 04 31.5**	**+5.4**
SNAA	**Sanae**	**20.84**	**154**	P		**P**	**09 04 46.5**	**+0.3**
SNAA	**Sanae**	**20.84**	**154**	P		**P**	**09 04 45.3**	**-0.9**
	3.0nm,0.8s,baz=309,slow=11,SNR=4.5							
	3.0nm,0.8s							
SNAA	**Sanae**	**20.84**	**154**	P		**P**	**09 04 45.4**	**-0.8**
TROLL	**Troll, Antarti**	**22.42**	**152**	P		**P**	**09 05 01.2**	**-2.0**
GO09	**Cerro Castillo**	**24.16**	**262**	P		**P**	**09 05 21.2**	**+0.6**
GO09				IAmb		IAmb	09 05 46.4	
	comp=Z,37nm,1.4s							
TRQA	**Tornquist**	**26.35**	**298**	P		**P**	**09 05 41.8**	**+1.1**
TRQA				IAmb		IAmb	09 05 52.8	
	comp=Z,11nm,1.4s							
PLTB	**Pedras Altas**	**27.79**	**318**	P		**P**	**09 05 53.7**	**0.0**
PLTB				IAmb		IAmb	09 06 11.0	
	comp=Z,14nm,1.4s							
GO07	**Milladeo Hill,**	**29.26**	**277**	P		**P**	**09 06 05.9**	**-0.7**
MT09	**Talagante**	**34.32**	**292**	P		**P**	**09 06 50.8**	**-0.5**
MT09				IAmb		IAmb	09 06 58.1	
	comp=Z,35nm,1.5s							
MT01	**Popeta**	**34.40**	**292**	P		**P**	**09 06 51.6**	**-0.2**
MT01				IAmb		IAmb	09 06 57.3	
	comp=Z,11nm,0.9s							
VA03	**San Esteban**	**34.87**	**294**	P		**P**	**09 06 55.8**	**-0.2**
VA03				IAmb		IAmb	09 06 56.8	
	comp=Z,29nm,1.4s							
QSPA	**South Pole Qui**	**35.21**	**180**	P		**P**	**09 06 59.1**	**+0.3**
AC01	**Pan de Azucar**	**40.23**	**300**	P		**P**	**09 07 40.9**	**-0.5**
GO01	**Chusmiza**	**45.05**	**307**	P		**P**	**09 08 21.2**	**+0.1**
GO01				IAmb		IAmb	09 08 35.4	
	comp=Z,4.7nm,0.8s							
SOE	**Somerset East**	**45.65**	**85**	P		**P**	**09 08 25.7**	**+0.5**
LPAZ	**La Paz**	**47.53**	**310**	P		**P**	**09 08 43.9**	**+3.1**
	comp=Z,1.3nm,0.4s,baz=164,slow=7.6,SNR=2.2							
	comp=Z,1.3nm,0.4s							
LPAZ	**La Paz**	**47.53**	**310**	P		**P**	**09 08 42.2**	**+1.4**
LPAZ				IAmb		IAmb	09 08 54.2	
	comp=Z,4.0nm,0.7s							
TOA0	**Torodi Ar. Sit**	**73.69**	**34**	P		**P**	**09 11 37.0**	**-1.4**
TOA0				IAmb		IAmb	09 11 44.3	
	comp=Z,3.1nm,1.0s							
TORD	**Torodi Ar. Bea**	**73.69**	**34**	P		**P**	**09 11 36.7**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=211,slow=6.5,SNR=4.7							
	comp=Z,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.69**	**34**	P		**P**	**09 11 37.1**	**-1.4**
ILAR	**Eielson Array**	**147.37**	**314**	PKPbc		**PKPbc**	**09 19 46.6**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=124,slow=2.0,SNR=5.9							
SONM	**Songino Array**	**153.49**	**88**	PKPbc		**PKPbc**	**09 19 59.7**	**-2.8**
	comp=Z,0.9nm,0.5s,baz=209,slow=5.0,SNR=4.7							

IDC 19 09:01:08.5±2.8,54.°08N×86.°64E,h0km,mbtmp3.1/2, ML2.7/2,Error ellipse: s-maj=24.5km s-min=14.2km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.08**	**264**	*i*			09 07 51.6	
	baz=84,slow=311,SNR=19							
ZALV	**Zalesovo Beam**	**1.08**	**264**	Pg		Pg	09 01 27.4	-1.8
	1.2nm,0.3s,baz=84,slow=17,SNR=8.0							
ZALV				Lg		Lg	09 01 44.9	
	1.7nm,0.3s,baz=81,slow=29,SNR=7.2							
ZALV				Rg		Rg	09 01 48.5	
	59nm,1.2s,baz=82,slow=23,SNR=43							
KURBB	**Kurchatov Arra**	**6.05**	**238**	Pn		Pn	09 02 40.2	+1.1
	0.1nm,0.3s,baz=56,slow=14,SNR=10							
	1.0nm,0.4s							
MKAR	**Makanchi Array**	**7.80**	**203**	Pn		Pn	09 03 04.2	+1.0
	0.2nm,0.3s,baz=26,slow=14,SNR=11							
	0.3nm,0.2s							

ISK 19 09:03:25.8,39.°63N×29.°40E,h0km,ML2.3/3,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TVSB	**Tavsanli**	**0.19**	**165**	PG		Pg	09 03 30.3	+0.9
TVSB				SG		Sg	09 03 34.4	+2.5
BORA	**Eskisehir**	**0.85**	**73**	PG		Pg	09 03 42.7	+0.6
YLV	**Yalova**	**0.93**	**359**	PG		Pb	09 03 44.8	-0.1
ARMT	**Armutlu**	**1.02**	**336**	PG		Pb	09 03 46.5	+0.2
SRCK	**Saricakaya, Es**	**1.03**	**66**	PG		Pb	09 03 46.1	-0.4
SRCK				SG		Sn	09 04 01.9	-0.8

DDA 19 09:03:26.6±0.0,38.°47N×29.°15E,h7km±2km,ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
USAK	**Uak-Merkez**	**0.27**	**337**	P		Pg	09 03 32.3	+0.3
USAK				S		Sg	09 03 35.8	+0.3
PASA	**Karahalli, USA**	**0.29**	**114**	P		Pg	09 03 32.6	+0.3
MANT	**Manisa**	**0.47**	**273**	P		Pg	09 03 36.4	+0.8
MANT				*i* AML		AML	09 03 45.0	
	comp=N,41nm,1.2s							
MANT				*i* AML		AML	09 03 58.0	
	comp=E,190nm,2.0s							

*NEIC **19** 09:08:17.5±0.5,55.°70S±0.°10×32.°9W±0.°1,h15km±6km, mb4.0/9,Error ellipse: s-maj=15.3km s-min=9.8km az=151.0*
*IDC **19** 09:08:20.9±1.1,54.°95S×30.°79W,h0km,mb3.9/5, mbtmp4.0/5,Error ellipse: s-maj=48.9km s-min=22.4km az=66.0*

ISC 19 09:08:18.0±0.8,55.°50S±0.°10×33.°3W±0.°1,h10km,n22, σ1s88/20,mb4.0/7,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**2.22**	**302**			**Pb**	**09 08 57.9**	**-0.3**
ORCD	**Orcadas**	**8.02**	**224**	Pn		**Pn**	**09 10 13.4**	**-1.0**
PMSA	**Palmer Station**	**17.73**	**226**			**Pn**	**09 12 23.8**	**-0.9**
PMSA				IAmb		IAmb	09 12 29.5	
	comp=Z,12nm,1.4s							
VNA3	**Neumayer Olymp**	**18.78**	**156**	P		**Pn**	**09 12 39.6**	**+2.1**
VNA3				S		**S**	**09 16 11.7**	**+1.3**
VNA2	**Neumayer--Watz**	**19.11**	**154**	P		**P**	**09 12 41.5**	**+1.0**
	baz=308,slow=10.0							
SNAA	**Sanae**	**20.72**	**153**	P		**P**	**09 12 59.6**	**+1.3**
SNAA	**Sanae**	**20.72**	**153**	P		**P**	**09 12 59.5**	**+1.3**
	comp=Z,4.3nm,0.8s,baz=288,slow=11,SNR=6.2							
	comp=Z,4.3nm,0.8s							
SNAA	**Sanae**	**20.72**	**153**	P		**P**	**09 12 54.0**	**-4.3**
SNAA				IAmb		IAmb	09 13 05.8	
	comp=Z,6.7nm,0.9s							
TROLL	**Troll, Antarti**	**22.33**	**151**	P		**P**	**09 13 16.2**	**+0.6**
GO09	**Cerro Castillo**	**23.46**	**264**	P		**P**	**09 13 27.7**	**+0.4**
GO09				IAmb		IAmb	09 13 38.6	
	comp=Z,10nm,1.2s							
TRQA	**Tornquist**	**26.00**	**300**	P		**P**	**09 13 52.1**	**+1.3**
COYC	**Coyhaique**	**26.26**	**276**	P		**P**	**09 13 53.9**	**+0.8**
COYC				IAmb		IAmb	09 14 06.4	
	comp=Z,11nm,1.4s							
CPUP	**Villa Florida**	**33.99**	**319**	P		P	09 15 11.5	+10
	comp=Z,1.1nm,0.6s,baz=192,slow=8.7,SNR=2.8							
	comp=Z,1.1nm,0.6s							
QSPA	**South Pole Qui**	**34.76**	**180**	P		P	09 15 18.3	+10
	comp=Z,1.5nm,0.7s,baz=192,slow=3.8,SNR=9.4							
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**34.76**	**180**	P		**P**	**09 15 06.5**	**-1.7**
PB09	**IPOC Station P**	**42.98**	**307**	P		**P**	**09 16 18.1**	**+0.6**
LPAZ	**La Paz**	**47.34**	**312**	P		P	09 17 02.4	+10
	comp=Z,2.3nm,0.5s,baz=134,slow=4.7,SNR=15							
	comp=Z,2.3nm,0.5s							
LPAZ	**La Paz**	**47.34**	**312**	P		**P**	**09 16 54.0**	**+1.3**
TOA0	**Torodi Ar. Sit**	**74.43**	**35**	P		**P**	**09 19 54.8**	**-1.4**
TOA0				IAmb		IAmb	09 19 56.8	
	comp=Z,1.1nm,1.1s							
TORD	**Torodi Ar. Bea**	**74.43**	**35**	P		**P**	**09 19 53.9**	**-2.3**
	comp=Z,0.5nm,0.7s,baz=199,slow=6.6,SNR=1.9							
	comp=Z,0.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**74.43**	**35**	P		**P**	**09 19 53.3**	**-2.8**
ILAR	**Eielson Array**	**147.21**	**314**	PKPbc		**PKiKP**	**09 28 04.8**	**+2.5**
	comp=Z,0.8nm,0.8s,baz=112,slow=1.8,SNR=6.7							

*IDC **19** 09:08:39.5±2.1,55.°31S×30.°87W,h0km,mb4.0/2, mbtmp4.0/2,Error ellipse: s-maj=81.2km s-min=45.3km az=19.0*
*NEIC **19** 09:08:40.3±1.2,55.°60S±0.°09×33.°2W±0.°2,h14km±5km, mb4.3/7,Error ellipse: s-maj=16.8km s-min=11.6km az=124.0*

ISC 19 09:08:39.5±0.9,55.°6S±0.°1×33.°1W±0.°1,h10km,n13, σ0s94/11,mb4.2/6,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**2.35**	**303**	Pn		**Pn**	**09 09 17.1**	**-1.0**
ORCD	**Orcadas**	**7.99**	**225**	Pn		**Pn**	**09 10 35.0**	**-0.6**
SNAA	**Sanae**	**20.58**	**153**	P		**P**	**09 13 17.8**	**-0.4**
GO09	**Cerro Castillo**	**23.53**	**264**	P		**P**	**09 13 49.8**	**+0.3**
TRQA	**Tornquist**	**26.13**	**300**	P		**P**	**09 14 13.1**	**-0.4**
TRQA				IAmb		IAmb	09 14 25.6	
	comp=Z,4.0nm,1.0s							
CPUP	**Villa Florida**	**34.14**	**319**	P		P	09 15 31.4	+6.9
	comp=Z,2.4nm,0.7s,baz=150,slow=7.9,SNR=5.3							
	comp=Z,2.4nm,0.7s							
QSPA	**South Pole Qui**	**34.64**	**180**	P		**P**	**09 15 29.0**	**+0.4**
QSPA				IAmb		IAmb	09 15 33.2	
	comp=Z,6.1nm,1.4s							
LPAZ	**La Paz**	**47.48**	**312**	P		**P**	**09 17 16.7**	**+1.4**
LPAZ				IAmb		IAmb	09 17 31.8	
	comp=Z,1.9nm,0.8s							
TOA0	**Torodi Ar. Sit**	**74.48**	**35**	P		**P**	**09 20 18.0**	**0.0**
TOA0				IAmb		IAmb	09 20 22.7	
	comp=Z,8.3nm,1.5s							
TORD	**Torodi Ar. Bea**	**74.48**	**35**	P		P	09 20 13.9	-4.0
	comp=Z,0.6nm,0.5s,baz=200,slow=6.4,SNR=6.2							
	comp=Z,0.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**74.48**	**35**	P		**P**	**09 20 17.8**	**-0.1**
TORD				IAmb		IAmb	09 20 22.7	
	comp=Z,3.8nm,1.4s							
ILAR	**Eielson Array**	**147.35**	**313**	PKPbc		**PKiKP**	**09 28 25.0**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=129,slow=1.8,SNR=9.4							
SONM	**Songino Array**	**154.06**	**90**	PKPbc		**PKPbc**	**09 28 37.1**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=234,slow=2.2,SNR=4.9							

*SKO **19** 09:10:36.1,41.°92N×23.°11E,h24km,ML2.7*
*SOF **19** 09:10:37.0,41.°96N×23.°19E,h6km,MD3.0*
*BEO **19** 09:10:37.6±0.3,41.°93N×23.°09E,h8km±2km,ML2.6/15*
*THE **19** 09:10:38.2,41.°85N×23.°14E,h4km,ML2.7/8,Error ellipse: s-maj=1.5km s-min=0.7km az=177.0*

ISC 19 09:10:36.9±0.9,41.°91N±0.°01×23.°11E±0.°02,h10km±7km, n51,σ1s53/88,16C-6D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KKB	**Krupnik**	**0.05**	**206**	P		**Pg**	**09 10 39.8**	**+1.0**
MMB	**Musomiste**	**0.56**	**125**	P		**Pb**	**09 10 48.5**	**-0.4**
VTS	**Vitosha**	**0.71**	**7**	⇑P		**Pg**	**09 10 50.0**	**-0.7**
VTS				⇑S		**Sg**	**09 10 59.0**	**-1.1**
VTS	**Vitosha**	**0.71**	**7**	*i* Sg		**Sg**	**09 10 58.7**	**-1.3**
VTS	**Vitosha**	**0.71**	**7**	⇑*i*Pg		**Pg**	**09 10 49.9**	**-0.7**
VTS	**Vitosha**	**0.71**	**7**	P		**Pg**	**09 10 49.8**	**-0.9**
VAY	**Valandovo**	**0.71**	**215**	⇑*i*Pg		**Pg**	**09 10 51.2**	**+0.5**
VAY				*i* Sg		**Sg**	**09 11 01.4**	**+1.3**
VAY				*e*Lg		Lg	09 11 01.9	
	comp=N,107nm,0.3s							
STIP	**Stip**	**0.72**	**253**	*i* Pg		**Pg**	**09 10 47.0**	**-3.8**
STIP				*i* Sg		**Sg**	**09 10 54.2**	**-6.2**
BOSS	**Bosilegrad**	**0.75**	**321**	*e*Pg		**Pg**	**09 10 50.6**	**-0.8**
BOSS				*e*Sg		**Sg**	**09 11 01.1**	**-0.1**
KNT	**Kendrikon**	**0.77**	**192**	P		**Pg**	**09 10 52.0**	**+0.4**
KNT				S		**Sg**	**09 11 02.3**	**+0.7**
	comp=N,562nm,0.2s							
KNT	**Kendrikon**	**0.77**	**192**	⇑*i*Pg		**Pg**	**09 10 51.9**	**+0.2**
KNT				*i* Sg		**Sg**	**09 11 02.2**	**+0.7**
NVR	**Nevrokopi**	**0.79**	**135**	P		**Pb**	**09 10 52.1**	**-0.7**
NVR				S		**Sb**	**09 11 02.8**	**-0.8**
	comp=N,815nm,0.1s							
SRS	**Serrai**	**0.87**	**155**	P		**Pb**	**09 10 53.8**	**-0.4**
SRS				S		**Sb**	**09 11 06.0**	**+0.2**
	comp=N,400nm,0.2s							
SRS	**Serrai**	**0.87**	**155**	*e*Pg		**Pb**	**09 10 53.7**	**-0.4**
SRS				*e*Sg		**Sb**	**09 11 06.1**	**+0.2**
SRS	**Serrai**	**0.87**	**155**	⇑*i*Pg		**Pb**	**09 10 53.7**	**-0.4**
SRS				*i* Sg		**Sb**	**09 11 05.8**	**-0.1**
PRVS	**Prvonek**	**0.97**	**308**	*e*Pg		**Pg**	**09 10 55.1**	**-0.5**
PRVS				*e*Sg		**Sg**	**09 11 07.8**	**-0.5**
PGB	**Panagyurishte**	**1.01**	**50**	P		**Pb**	**09 10 55.2**	**-1.4**
GRG	**Griva**	**1.09**	**210**	P		**Pg**	**09 10 57.9**	**0.0**
GRG				S		**Sg**	**09 11 12.6**	**+0.6**
GRG	**Griva**	**1.09**	**210**	*i* Pg		**Pg**	**09 10 58.1**	**+0.2**
GRG				*i* Sg		**Sg**	**09 11 12.6**	**+0.6**
SOH	**Sokhos**	**1.10**	**170**	P		**Pb**	**09 10 58.1**	**0.0**
SOH				S		**Sb**	**09 11 13.1**	**+0.5**
	comp=N,338nm,0.5s							
SOH	**Sokhos**	**1.10**	**170**	⇑*i*Pg		**Pb**	**09 10 58.0**	**0.0**
SOH				*i* Sg		**Sb**	**09 11 13.5**	**+0.9**
PLD	**Plovdiv**	**1.20**	**80**	*e*Pg		**Pn**	**09 11 00.3**	**+0.5**
PLD				*e*Sg		**Sn**	**09 11 16.8**	**+0.6**
KOKK	**Kokkinochori,**	**1.28**	**148**	P		**Pn**	**09 11 01.0**	**+0.1**
KOKK				S		**Sn**	**09 11 18.5**	**+0.4**
	comp=N,138nm,0.2s							
THE	**Thessaloniki**	**1.28**	**185**	P		**Pg**	**09 11 01.5**	**+0.1**
THE				S		**Sn**	**09 11 18.9**	**+0.8**
THE	**Thessaloniki**	**1.28**	**185**	*i* Pg		**Pg**	**09 11 01.6**	**+0.1**
HORT	**Hortiatis**	**1.31**	**180**	P		**Pn**	**09 11 01.7**	**+0.3**
HORT				S		**Sn**	**09 11 20.4**	**+1.4**
BARS	**Barje**	**1.32**	**314**	*e*Pg		**Pn**	**09 11 01.8**	**+0.3**
BARS	**Barje**	**1.32**	**314**	*i* Pg		**Pn**	**09 11 01.4**	**0.0**
KAVA	**Kavala**	**1.39**	**130**	P		**Pg**	**09 11 02.8**	**-0.8**
KAVA				S		**Sn**	**09 11 21.5**	**+0.6**
	comp=N,490nm,0.2s							
ZAPS	**Zavoj**	**1.41**	**346**	*e*Pg		**Pg**	**09 11 03.3**	**-0.6**
ZAPS				*e*Sg		**Sn**	**09 11 22.0**	**+0.6**
BLKB	**Belogradchik**	**1.74**	**349**	⇑P		**Pb**	**09 11 08.8**	**-0.2**
BLKB				S		**Sg**	**09 11 32.1**	**-0.8**
THAS	**Thassos island**	**1.78**	**137**	P		**Pn**	**09 11 07.5**	**-0.2**
THAS				S		**Sg**	**09 11 32.1**	**-2.0**
	comp=N,192nm,0.3s							
SELS	**Selova**	**1.97**	**312**	*e*Pn		**Pb**	**09 11 12.4**	**-0.5**
SELS				*e*Sn		**Sn**	**09 11 36.2**	**+1.0**
RDO	**Rodhopi**	**1.97**	**112**	P		**Pb**	**09 11 11.6**	**-1.3**
RDO				S		**Sg**	**09 11 37.0**	**-3.3**
	comp=N,200nm,0.2s							
ZAGS	**Zajecar**	**2.01**	**342**	*e*Pn		**Pn**	**09 11 10.9**	**0.0**
ZAGS				*e*Sn		**Sn**	**09 11 36.1**	**0.0**
BOVS	**Bovan**	**2.01**	**329**	⇑P		**Pb**	**09 11 12.9**	**-0.7**
BOVS				⇑S		**Sb**	**09 11 39.5**	**+0.8**
BOVS	**Bovan**	**2.01**	**329**	*e*Pn		**Pn**	**09 11 10.4**	**-0.5**
BOVS				*e*Sn		**Sn**	**09 11 37.1**	**+0.9**
VLAD	**Vladila**	**2.29**	**24**	⇓S		**Sg**	**09 11 50.9**	**+0.4**
PUNG	**Punghina**	**2.37**	**357**	⇓S		**Sg**	**09 11 59.4**	**+6.4**
GRUS	**Gruza**	**2.65**	**319**	*e*Pn		**Pn**	**09 11 21.1**	**+1.4**
GRUS				*e*Sn		**Sn**	**09 11 53.2**	**+1.3**
SJES	**Sjenica**	**2.68**	**301**	*e*Pn		**Pn**	**09 11 20.0**	**-0.3**
SJES				*e*Sn		**Sn**	**09 11 53.5**	**+0.6**
IVAS	**Ivanjica**	**2.74**	**308**	*e*Pn		**Pn**	**09 11 21.7**	**+0.6**
IVAS				*e*Sn		**Sn**	**09 11 54.8**	**+0.5**
HERR	**Herculane**	**3.01**	**351**	⇑P		**Pn**	**09 11 25.4**	**+0.7**
MDVR	**Moldovita**	**3.05**	**341**	⇑P		**Pn**	**09 11 25.1**	**-0.1**
MDVR				⇑S		**Sb**	**09 12 10.1**	**+1.6**
TRUS	**Trudelj**	**3.05**	**320**	*e*Pn		**Pn**	**09 11 24.7**	**-0.5**
TRUS				*e*Sn		**Sn**	**09 12 01.7**	**0.0**
DIVS	**Divibare**	**3.17**	**315**	*e*Pn		**Pn**	**09 11 26.7**	**-0.2**
DIVS				*e*Sn		**Sn**	**09 12 05.3**	**+0.5**
GZR	**Gura Zlata**	**3.49**	**356**	⇓P		**Pn**	**09 11 32.1**	**+0.8**
GZR				⇓S		**Sb**	**09 12 21.7**	**+0.4**
VOIR		**3.79**	**21**	⇑P		**Pn**	**09 11 34.2**	**-1.3**
VOIR				⇓S		**Sn**	**09 12 23.2**	**+2.9**
BZS	**Buzias**	**3.86**	**344**	⇓P		**Pn**	**09 11 36.1**	**-0.3**
BZS				⇑S		**Sb**	**09 12 28.4**	**-3.5**
BZS	**Buzias**	**3.86**	**344**	*e*Pn		**Pn**	**09 11 35.9**	**-0.4**
DRGR		**4.89**	**357**	⇑S		**Sb**	**09 13 07.0**	**+5.4**

IDC 19 09:11:46.6±1.2,55.°07S×30.°34W,h0km,mb3.6/4, mbtmp3.7/4,Error ellipse: s-maj=56.2km s-min=26.4km az=74.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SNAA	**Sanae**	**20.38**	**155**	P		P	09 16 24.6	+0.1
	1.1nm,0.9s,baz=309,slow=13,SNR=2.6							
	1.1nm,0.9s							
CPUP	**Villa Florida**	**34.83**	**315**	P		P	09 18 39.1	0.0
	1.6nm,0.8s,baz=112,slow=5.4,SNR=2.9							
	1.6nm,0.8s							
QSPA	**South Pole Qui**	**35.19**	**180**	P		P	09 18 42.0	-0.1
	1.0nm,0.7s,baz=186,slow=1.8,SNR=6.2							
	1.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.13**	**33**	P		P	09 23 18.8	+0.1
	0.5nm,0.9s,baz=193,slow=5.6,SNR=2.9							
	0.5nm,0.9s							
ILAR	**Eielson Array**	**148.13**	**313**	PKPbc		PKPbc	09 31 32.0	-0.8
	0.6nm,0.5s,baz=118,slow=2.0,SNR=6.9							

*IDC **19** 09:12:56.7±1.2,54.°85S×31.°09W,h0km,mb3.8/5, mbtmp3.8/5,Error ellipse: s-maj=50.6km s-min=24.1km az=64.0*
*NEIC **19** 09:12:57.1±1.8,55.°02S±0.°09×31.°4W±0.°1,h10km±1km, mb4.2/10,Error ellipse: s-maj=18.5km s-min=9.2km az=140.0*

ISC 19 09:12:57.4±0.8,55.°0S±0.°1×31.°5W±0.°1,h10km,n22, σ1s28/22,mb4.1/7,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.01**	**282**	Pn		**Pn**	**09 13 45.5**	**+0.5**
ORCD	**Orcadas**	**9.12**	**225**	Pn		**Pn**	**09 15 08.1**	**-0.7**
VNA3	**Neumayer Olymp**	**18.84**	**158**	P		**P**	**09 17 16.6**	**-0.5**
VNA2	**Neumayer--Watz**	**19.13**	**156**	P		**Pn**	**09 17 20.8**	**-0.3**
	baz=319,slow=12							
SNAA	**Sanae**	**20.72**	**155**	P		**P**	**09 17 36.8**	**-0.8**
SNAA	**Sanae**	**20.72**	**155**	P		**P**	**09 17 37.0**	**-0.6**
	1.8nm,0.7s,baz=327,slow=10,SNR=6.7							
	1.8nm,0.7s							
SNAA	**Sanae**	**20.72**	**155**	P		**P**	**09 17 36.9**	**-0.7**
TROLL	**Troll, Antarti**	**22.29**	**153**	P		**P**	**09 17 54.4**	**-0.1**
CPUP	**Villa Florida**	**34.32**	**316**	P		P	**09 19 44.8**	**+0.9**
	1.0nm,0.6s,baz=188,slow=5.9,SNR=3.2							
	1.0nm,0.6s							
MT01	**Popeta**	**34.74**	**291**	P		**P**	**09 19 47.0**	**-0.5**
QSPA	**South Pole Qui**	**35.26**	**180**	P		P	**09 19 55.3**	**+3.3**
	1.0nm,0.8s,baz=192,slow=10,SNR=2.5							
	1.0nm,0.8s							
QSPA	**South Pole Qui**	**35.26**	**180**	P		**P**	**09 19 51.1**	**-0.8**
QSPA				IAmb		IAmb	09 20 31.8	
	comp=Z,3.3nm,1.2s							
CO01	**Juntas del Tor**	**37.17**	**296**	P		P	**09 20 05.9**	**-2.7**
CO01				IAmb		IAmb	09 20 33.6	
	comp=Z,17nm,1.4s							
GO02	**Mina Guanaco**	**40.85**	**301**	P		**P**	**09 20 38.0**	**-1.7**
VNDA	**Vanda**	**47.49**	**184**	P		**P**	**09 21 32.

baz=315,slow=11
PMSA Palmer Station 18.96 226 P **Pn** **09 20 12.5 +1.5**
0.2nm,0.3s,baz=76,slow=4.5,SNR=2.4
5.2nm,0.9s
PMSA Palmer Station 18.96 226 P **P** **09 20 10.8 +0.5**
PMSA IAmb IAmb 09 20 27.1
comp=Z,7.8nm,0.9s
SNAA Sanae 20.54 155 P **P** **09 20 25.9 -1.7**
comp=Z,0.5nm,0.5s,baz=294,slow=14,SNR=1.0
comp=Z,0.5nm,0.5s
SNAA Sanae 20.54 155 P **P** **09 20 25.4 -2.3**
QSPA South Pole Qui 35.18 180 P **P** **09 22 42.5 -0.7**
comp=Z,2.2nm,1.0s,baz=171,slow=6.0,SNR=3.8
comp=Z,2.2nm,1.0s
QSPA South Pole Qui 35.18 180 P **P** **09 22 42.4 -0.9**
QSPA IAmb IAmb 09 23 04.9
comp=Z,11nm,1.4s
PB06 IPOC Station P 43.18 303 P **P** **09 23 51.8 +1.3**
VNDA Vanda 47.43 184 P **P** **09 24 23.2 -0.2**
comp=Z,1.4nm,1.1s,baz=193,slow=7.7,SNR=5.4
comp=Z,1.4nm,1.1s
VNDA Vanda 47.43 184 P **P** **09 24 22.7 -0.7**
VNDA IAmb IAmb 09 24 41.9
comp=Z,2.0nm,1.0s
LPAZ La Paz 48.05 309 P **P** **09 24 31.3 +1.7**
comp=Z,0.9nm,0.7s,baz=171,slow=5.8,SNR=2.6
comp=Z,0.9nm,0.7s
TOA0 Torodi Ar. Sit 73.35 33 P **P** **09 27 21.1 -0.1**
TORD Torodi Ar. Bea 73.35 33 P **P** **09 27 19.9 -1.3**
comp=Z,0.8nm,0.8s,baz=191,slow=5.7,SNR=3.4
comp=Z,0.8nm,0.8s
TORD Torodi Ar. Bea 73.35 33 P **P** **09 27 20.2 -1.0**
TORD IAmb IAmb 09 27 36.2
comp=Z,5.2nm,1.4s
ILAR Eielson Array 147.86 314 PKPbc **PKPbc** **09 35 32.5 -0.6**
comp=Z,0.6nm,0.7s,baz=131,slow=2.1,SNR=4.9

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*IDC **19** 09:16:36.8±4.3,55.°11S×30.°92W,h0km,mb4.1/2, mbtmp4.1/2,Error ellipse: s-maj=146.4km s-min=54.2km az=178.0*
*NEIC **19** 09:16:36.6±1.4,55.°1S±0.°1×31.°0W±0.°1,h10km±1km, mb4.1/8,Error ellipse: s-maj=18.1km s-min=11.4km az=161.0*
ISC 19 09:16:37.0±0.8,55.°1S±0.°1×31.°0W±0.°1,h10km,n14, σ1§31/14,mb4.1/4,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.29**	**282**	Pn	**Pn**	**09 17 27.0**	**-1.4**
ORCD	**Orcadas**	**9.24**	**227**	Pn	**Pn**	**09 18 50.1**	**+0.1**
PMSA	**Palmer Station**	**18.95**	**226**	P	**P**	**09 20 56.6**	**-1.3**
PMSA				IAmb	IAmb	09 21 06.3	
comp=Z,7.9nm,0.9s							
SNAA	**Sanae**	**20.52**	**155**	P	**P**	**09 21 14.8**	**-0.3**
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**09 23 31.5**	**+0.8**
VNDA	**Vanda**	**47.41**	**184**	P	**P**	**09 25 10.3**	**-0.5**
VNDA				IAmb	IAmb	09 25 34.2	
comp=Z,1.7nm,1.1s							
LPAZ	**La Paz**	**48.07**	**309**	P	**P**	**09 25 18.9**	**+1.6**
comp=Z,3.5nm,0.6s,baz=128,slow=3.1,SNR=6.8							
comp=Z,3.5nm,0.6s							
LPAZ	**La Paz**	**48.07**	**309**	P	**P**	**09 25 19.1**	**+1.9**
TSUM	**Tsumeb**	**51.18**	**65**	P	**P**	**09 25 39.4**	**-1.0**
TSUM				IAmb	IAmb	09 25 50.4	
comp=Z,2.7nm,0.8s							
ETMB	**Extrema**	**53.02**	**315**	P	**P**	**09 25 55.3**	**+1.3**
ETMB				IAmb	IAmb	09 26 12.9	
comp=Z,1.2nm,0.8s							
TOA0	**Torodi Ar. Sit**	**73.36**	**33**	P	**P**	**09 28 07.8**	**-1.0**
TORD	**Torodi Ar. Bea**	**73.36**	**33**	P	**P**	**09 28 10.2**	**+1.4**
comp=Z,0.6nm,0.6s,baz=201,slow=5.9,SNR=2.3							
comp=Z,0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.36**	**33**	P	**P**	**09 28 07.8**	**-1.0**
TORD				IAmb	IAmb	09 28 14.8	
comp=Z,2.7nm,1.4s							
ILAR	**Eielson Array**	**147.87**	**314**	PKPbc	**PKPbc**	**09 36 21.7**	**+1.0**
comp=Z,2.3nm,0.9s,baz=126,slow=2.1,SNR=6.3							

IDC 19 09:16:52.0±3.0,53.°66N×86.°96E,h0km,mbtmp2.6/2, ML2.2/2,Error ellipse: s-maj=29.0km s-min=16.6km az=64.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**284**	*i*		09 25 00.0	
baz=104,slow=321,SNR=5.4							
ZALV	**Zalesovo Beam**	**1.30**	**284**	Pg	Pg	09 17 15.6	-1.4
0.7nm,0.3s,baz=95,slow=16,SNR=5.9							
ZALV				Lg	Lg	09 17 34.0	
0.9nm,0.3s,baz=103,slow=31,SNR=9.2							
ZALV				Rg	Rg	09 17 39.1	
2.2nm,0.5s,baz=99,slow=27,SNR=7.0							
KURBB	**Kurchatov Arra**	**6.01**	**243**	Pn	Pn	09 18 23.3	+1.1
baz=60,slow=14,SNR=2.4							
0.6nm,0.8s							
MKAR	**Makanchi Array**	**7.49**	**205**	Pn	Pn	09 18 43.8	+1.3
0.1nm,0.3s,baz=28,slow=14,SNR=4.2							
0.2nm,0.3s							

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*IDC **19** 09:17:52.3±1.1,55.°03S×30.°43W,h0km,mb4.0/5, mbtmp4.1/5,Error ellipse: s-maj=49.5km s-min=23.3km az=81.0*
*NEIC **19** 09:17:53.8±1.1,55.°1S±0.°1×30.°8W±0.°1,h10km±1km, mb4.3/10,Error ellipse: s-maj=18.3km s-min=13.5km az=170.0*
ISC 19 09:17:53.7±0.8,55.°1S±0.°1×30.°8W±0.°1,h10km,n23, σ1§10/23,mb4.3/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.40**	**281**	Pn	**Pn**	**09 18 47.1**	**+0.4**
ORCD	**Orcadas**	**9.33**	**227**	Pn	**Pn**	**09 20 08.6**	**+0.6**
VNA1	**Neumayer--Stat**	**18.49**	**156**	P	**Pn**	**09 22 12.4**	**+2.8**
VNA3	**Neumayer Olymp**	**18.62**	**159**	P	**Pn**	**09 22 12.3**	**+1.1**
VNA2	**Neumayer--Watz**	**18.89**	**156**	P	**Pn**	**09 22 14.9**	**+0.4**
baz=321,slow=8.0							
PMSA	**Palmer Station**	**19.04**	**226**	P	**P**	**09 22 14.0**	**-1.5**
PMSA				IAmb	IAmb	09 22 23.1	
comp=Z,9.9nm,0.7s							
SNAA	**Sanae**	**20.48**	**155**	P	**P**	**09 22 30.1**	**-1.2**
SNAA	**Sanae**	**20.48**	**155**	P	**P**	**09 22 30.5**	**-0.7**
comp=Z,3.2nm,0.8s,baz=312,slow=12,SNR=2.4							
comp=Z,3.2nm,0.8s							
SNAA	**Sanae**	**20.48**	**155**	P	**P**	**09 22 29.9**	**-1.4**
SMAI	**San Martin Ant**	**21.23**	**218**	P	**P**	**09 22 38.4**	**-0.9**
TROLL	**Troll, Antarti**	**22.04**	**153**	P	**P**	**09 22 46.4**	**-1.8**
MT09	**Talagante**	**35.05**	**291**	P	**P**	**09 24 45.8**	**-0.8**
MT09				IAmb	IAmb	09 24 49.9	
comp=Z,18nm,1.3s							
MT01	**Popeta**	**35.13**	**290**	P	**P**	**09 24 47.2**	**+0.1**
QSPA	**South Pole Qui**	**35.18**	**180**	P	**P**	**09 24 47.6**	**+0.1**
comp=Z,4.7nm,0.9s,baz=184,slow=6.5,SNR=11							
comp=Z,4.7nm,0.9s							
QSPA	**South Pole Qui**	**35.18**	**180**	P	**P**	**09 24 47.3**	**-0.1**
VNDA	**Vanda**	**47.43**	**184**	P	**P**	**09 26 28.8**	**+1.1**
comp=Z,1.3nm,0.7s,baz=192,slow=7.0,SNR=7.6							
comp=Z,1.3nm,0.7s							
VNDA	**Vanda**	**47.43**	**184**	P	**P**	**09 26 27.4**	**-0.3**
VNDA				IAmb	IAmb	09 26 29.7	
comp=Z,3.0nm,1.0s							
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**09 26 35.9**	**+1.3**
comp=Z,1.7nm,0.5s,baz=137,slow=5.5,SNR=2.4							
comp=Z,1.7nm,0.5s							
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**09 26 34.8**	**+0.2**
TOA0	**Torodi Ar. Sit**	**73.29**	**33**	P	**P**	**09 29 25.1**	**0.0**
TOA0				IAmb	IAmb	09 29 44.2	
comp=Z,4.6nm,1.2s							
TORD	**Torodi Ar. Bea**	**73.29**	**33**	P	**P**	**09 29 24.6**	**-0.4**
comp=Z,1.2nm,0.7s,baz=198,slow=6.3,SNR=5.2							
comp=Z,1.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.29**	**33**	P	**P**	**09 29 25.0**	**-0.1**
TORD				IAmb	IAmb	09 29 35.3	
comp=Z,1.8nm,0.9s							
ILAR	**Eielson Array**	**147.94**	**314**	PKPbc	**PKPbc**	**09 37 37.1**	**-0.5**
comp=Z,2.2nm,0.6s,baz=111,slow=1.5,SNR=12							

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*IDC **19** 09:23:30.5±1.0,55.°15S×30.°82W,h0km,mb4.0/4, mbtmp4.0/4,Error ellipse: s-maj=49.2km s-min=26.1km az=46.0*
*NEIC **19** 09:23:32.5±0.8,55.°4S±0.°1×31.°0W±0.°2,h10km±1km, mb4.7/19,Error ellipse: s-maj=19.9km s-min=16.6km az=55.0*
ISC 19 09:23:32.1±0.7,55.°30S±0.°09×31.°1W±0.°1,h10km,n35, σ0§86/32,mb4.6/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.30**	**286**		**Pn**	**09 24 24.6**	**+0.9**
ORCD	**Orcadas**	**9.06**	**227**		**Pn**	**09 25 41.8**	**-1.0**
VNA1	**Neumayer--Stat**	**18.35**	**156**	P	**P**	**09 27 48.1**	**+1.7**
VNA3	**Neumayer Olymp**	**18.47**	**158**	P	**Pn**	**09 27 49.5**	**+1.7**
VNA2	**Neumayer--Watz**	**18.75**	**156**	P	**Pn**	**09 27 52.3**	**+1.1**
baz=310,slow=10.0							
SNAA	**Sanae**	**20.35**	**155**	P	**P**	**09 28 09.1**	**+0.8**
SNAA	**Sanae**	**20.35**	**155**	P	**P**	**09 28 09.1**	**+0.8**
1.3nm,0.5s,baz=287,slow=11,SNR=13							
1.3nm,0.5s							
SNAA	**Sanae**	**20.35**	**155**	P	Pn	09 28 09.2	-1.1
TROLL	**Troll, Antarti**	**21.91**	**153**	P	**P**	**09 28 26.0**	**+0.8**
MG02	**Cerro Sombrero**	**22.36**	**261**	P	**P**	**09 28 30.6**	**+0.6**
GO09	**Cerro Castillo**	**24.73**	**262**	P	**P**	**09 28 52.4**	**-0.9**
GO09				IAmb	IAmb	09 29 16.6	
comp=Z,12nm,1.1s							
TRQA	**Tornquist**	**27.01**	**297**	P	**P**	**09 29 14.5**	**+0.4**
TRQA				IAmb	IAmb	09 29 38.5	
comp=Z,7.6nm,1.4s							
CPUP	**Villa Florida**	**34.70**	**316**	P	**P**	**09 30 21.4**	**-0.6**
comp=Z,1.7nm,0.5s,baz=153,slow=8.4,SNR=5.2							
comp=Z,1.7nm,0.5s							
QSPA	**South Pole Qui**	**34.95**	**180**	P	**P**	**09 30 24.0**	**0.0**
MT01	**Popeta**	**35.06**	**291**	P	**P**	**09 30 25.8**	**+0.8**
MT01				IAmb	IAmb	09 30 38.4	
comp=Z,20nm,1.2s							
VA06	**Catapilco**	**36.09**	**292**	P	**P**	**09 30 34.4**	**+0.5**
CO02	**Combarbal**	**36.99**	**294**	P	**P**	**09 30 43.1**	**+1.3**
CO02				IAmb	IAmb	09 30 49.1	
comp=Z,43nm,1.2s							
GO04	**Tololo Observa**	**37.71**	**295**	P	**P**	**09 30 48.9**	**+1.0**
AC04	**Llanos de Chal**	**39.44**	**297**	P	**P**	**09 31 01.8**	**-0.4**
GO02	**Mina Guanaco**	**41.21**	**301**	P	**P**	**09 31 17.4**	**+0.2**
GO02				IAmb	IAmb	09 31 41.2	
comp=Z,24nm,1.2s							
LVC	**Limon Verde**	**43.04**	**304**	P	**P**	**09 31 32.8**	**+0.6**
LVC				IAmb	IAmb	09 31 56.7	
comp=Z,15nm,1.5s							
PB02	**IPOC Station P**	**44.61**	**304**	P	**P**	**09 31 45.3**	**+0.7**
PB02				IAmb	IAmb	09 32 04.3	
comp=Z,29nm,1.3s							
PB01	**IPOC Station P**	**44.65**	**304**	P	**P**	**09 31 45.5**	**+0.6**
PB01				IAmb	IAmb	09 32 12.7	
comp=Z,20nm,1.4s							
VNDA	**Vanda**	**47.20**	**184**	P	**P**	**09 32 03.0**	**-1.3**
LPAZ	**La Paz**	**48.17**	**309**	P	**P**	**09 32 13.6**	**+0.4**
comp=Z,2.5nm,0.4s,baz=98,slow=5.0,SNR=24							
comp=Z,2.5nm,0.4s							
H10N3	**ASCENSION HYDR**	**49.14**	**22**	T	T	10 25 23.9	
baz=261,slow=74,SNR=3.3							
H10N2	**ASCENSION HYDR**	**49.15**	**22**	T	T	10 25 24.7	
baz=193,slow=74,SNR=3.5							
BAUV	**El Baul**	**71.05**	**321**	P	**P**	**09 34 49.8**	**-0.4**
BAUV				IAmb	IAmb	09 35 06.0	
comp=Z,11nm,1.1s							
TOA0	**Torodi Ar. Sit**	**73.56**	**33**	P	**P**	**09 35 05.3**	**+0.2**
TOA0				IAmb	IAmb	09 35 18.5	
comp=Z,7.6nm,1.5s							
TORD	**Torodi Ar. Bea**	**73.56**	**33**	P	**P**	**09 35 04.3**	**-0.9**
comp=Z,0.7nm,0.5s,baz=192,slow=7.2,SNR=6.7							
comp=Z,0.7nm,0.5s							
TORD	**Torodi Ar. Bea**	**73.56**	**33**	P	**P**	**09 35 04.8**	**-0.3**
TORD				IAmb	IAmb	09 35 18.6	
comp=Z,3.8nm,1.4s							
FINES	**FINESS Array B**	**124.78**	**29**	PKP	**PKPdf**	**09 42 29.6**	**-0.9**
comp=Z,8.8nm,1.3s,baz=169,slow=1.9,SNR=4.6							
ARCES	**ARCESS Array B**	**131.08**	**23**	PKP	**PKPdf**	**09 42 42.0**	**-0.4**
comp=Z,0.7nm,0.5s,baz=172,slow=2.5,SNR=6.4							
ILAR	**Eielson Array**	**147.99**	**313**	PKPbc	**PKPbc**	**09 43 15.6**	**-0.6**
comp=Z,1.5nm,0.6s,baz=122,slow=1.9,SNR=18							
SONM	**Songino Array**	**152.89**	**88**	PKPbc	**PKPbc**	**09 43 28.0**	**-0.6**
comp=Z,0.4nm,0.4s,baz=215,slow=3.1,SNR=3.6							

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*IDC **19** 09:27:53.7±3.1,54.°18N×87.°23E,h0km,mbtmp2.8/2, ML2.5/2,Error ellipse: s-maj=28.9km s-min=18.4km az=57.0*
*NNC **19** 09:27:54.6±2.4,54.°14N×87.°13E,h0km,mb3.0,mpv2.8, Error ellipse: s-maj=29.9km s-min=12.3km az=4.0, Suspected Mining explosion.*
ISC 19 09:27:53.7±4.2,54.°3N±0.°2×87.°1E±0.°2,h0km,n7,σ1§07/8, 3C-3D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.37**	**255**	*i*		09 37 00.5	
baz=81,slow=318,SNR=20							
ZAA0	**Zalesovo Array**	**1.37**	**255**	⇓P	**Pg**	**09 28 20.0**	**0.0**
1.2nm,0.7s							
ZAA0				⇑S	**Sb**	**09 28 39.3**	**+0.9**
7.6nm,0.9s							
ZALV	**Zalesovo Beam**	**1.37**	**255**	Pg	**Pn**	**09 28 19.4**	**-0.7**
3.0nm,0.3s,baz=82,slow=15,SNR=21							
ZALV				Lg	Lg	09 28 39.3	
2.6nm,0.3s,baz=79,slow=25,SNR=8.4							
KURBB	**Kurchatov Arra**	**6.39**	**238**	Pn	**Pn**	**09 29 30.1**	**+1.1**
0.1nm,0.3s,baz=57,slow=14,SNR=9.1							
0.9nm,0.4s							
KURBB	**Kurchatov Arra**	**6.39**	**238**	⇓Pn	**Pn**	**09 29 30.0**	**+0.9**
2.5nm,0.8s							
KURBB				⇓Sn	**Sn**	**09 30 41.2**	**-1.5**
3.6nm,0.5s							
KURBB				⇑Lg	Lg	09 31 16.6	
7.6nm,0.8s							
MK31	**Makanchi Array**	**8.12**	**204**	Pn	**Pn**	**09 29 53.1**	**+0.3**
0.4nm,0.6s,baz=27,slow=14,SNR=7.5							
MK31				⇑Lg	Lg	09 32 10.5	
8.4nm,1.1s,baz=31,slow=30,SNR=3.8							
MKAR	**Makanchi Array**	**8.12**	**204**	Pn	**Pn**	**09 29 52.6**	**-0.2**
0.1nm,0.3s,baz=28,slow=13,SNR=5.3							
MKAR				Lg	Lg	09 32 09.7	
0.1nm,0.3s,baz=34,slow=32,SNR=5.2							
0.1nm,0.3s							

IDC 19 09:33:52.0±52.0,16.°76S×177.°98W,h0km,mb3.9/3, mbtmp3.9/3,Error ellipse: s-maj=962.9km s-min=164.5km az=78.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.55**	**240**	P	P	09 41 25.8	+0.9
1.6nm,0.6s,baz=82,slow=12,SNR=4.1							
1.6nm,0.6s							
WRA	**Warramunga Arr**	**45.25**	**258**	P	P	09 42 11.0	-0.6
0.3nm,0.3s,baz=96,slow=7.6,SNR=4.5							
0.3nm,0.6s							
ASAR	**Alice Springs**	**45.50**	**253**	P	P	09 42 13.1	-0.5
2.2nm,0.5s,baz=90,slow=7.9,SNR=61							
2.2nm,0.5s							

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*IDC **19** 09:33:53.8±0.8,55.°12S×31.°32W,h0km,mb4.1/7, mbtmp4.1/7,Error ellipse: s-maj=31.9km s-min=19.5km az=64.0*
*NEIC **19** 09:33:55.4±1.4,55.°29S±0.°10×31.°4W±0.°2,h10km±1km, mb4.8/35,Error ellipse: s-maj=18.1km s-min=15.4km az=46.0*
ISC 19 09:33:55.3±0.6,55.°19S±0.°08×31.°4W±0.°1,h10km,n53, σ0§93/50,mb4.7/23,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.06**	**285**		**Pn**	**09 34 43.7**	**0.0**
ORCD	**Orcadas**	**8.99**	**226**		**Pn**	**09 36 03.0**	**-1.9**
VNA1	**Neumayer--Stat**	**18.54**	**156**	P	**Pn**	**09 38 14.0**	**+2.2**
VNA3	**Neumayer Olymp**	**18.66**	**158**	P	**Pn**	**09 38 15.4**	**+2.1**
VNA2	**Neumayer--Watz**	**18.94**	**156**	P	**Pn**	**09 38 17.1**	**+0.5**
baz=310,slow=11							
SNAA	**Sanae**	**20.54**	**154**	P	**P**	**09 38 33.8**	**+0.2**
SNAA	**Sanae**	**20.54**	**154**	P	**P**	**09 38 33.9**	**+0.4**
8.8nm,1.1s,baz=311,slow=13,SNR=13							
8.8nm,1.1s							
SNAA	**Sanae**	**20.54**	**154**	P	**P**	**09 38 33.5**	**0.0**
TROLL	**Troll, Antarti**	**22.11**	**153**	P	**P**	**09 38 50.9**	**+0.4**
MG02	**Cerro Sombrero**	**22.17**	**260**	P	**P**	**09 38 52.7**	**+1.6**
TRQA	**Tornquist**	**26.77**	**297**	P	**P**	**09 39 34.3**	**-0.8**
PLCA	**Paso Flores**	**29.47**	**283**	P	**P**	**09 39 59.0**	**-0.2**
1.3nm,0.8s,baz=157,slow=7.5,SNR=3.0							
1.3nm,0.8s							
CPUP	**Villa Florida**	**34.47**	**316**	P	**P**	**09 40 43.0**	**0.0**
2.9nm,0.6s,baz=150,slow=8.0,SNR=7.5							
2.9nm,0.6s							
CPUP	**Villa Florida**	**34.47**	**316**	P	**P**	**09 40 43.2**	**+0.1**
CPUP				IAmb	IAmb	09 40 43.7	
comp=Z,6.0nm,1.1s							
MT09	**Talagante**	**34.75**	**291**	P	**P**	**09 40 45.1**	**-0.6**
MT09				IAmb	IAmb	09 41 04.7	
comp=Z,31nm,1.4s							
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**09 40 49.1**	**+1.0**
comp=Z,1.2nm,0.8s,baz=321,slow=0.5,SNR=5.8							
comp=Z,1.2nm,0.8s							
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**09 40 45.5**	**-2.6**
MT02	**Curacav**	**35.23**	**292**	P	**P**	**09 40 48.7**	**-0.9**
VA06	**Catapilco**	**35.85**	**292**	P	**P**	**09 40 55.8**	**+0.9**
CO02	**Combarbal**	**36.76**	**294**	P	**P**	**09 41 03.5**	**+0.7**
CO03	**El Pedregal**	**36.88**	**295**	P	**P**	**09 41 04.8**	**+0.9**
CO03				IAmb	IAmb	09 41 31.3	
comp=Z,28nm,1.4s							
CO01	**Juntas del Tor**	**37.26**	**296**	P	**P**	**09 41 07.8**	**+0.5**
CO01				IAmb	IAmb	09 41 22.5	
comp=Z,22nm,1.4s							
CO06	**Fray Jorge**	**37.51**	**294**	P	**P**	**09 41 09.2**	**+0.2**
AC05	**El Transito**	**38.28**	**297**	P	**P**	**09 41 14.9**	**-0.8**
AC05				IAmb	IAmb	09 41 24.0	
comp=Z,38nm,1.4s							
AC04	**Llanos de Chal**	**39.20**	**297**	P	**P**	**09 41 24.0**	**+0.7**
AC01	**Pan de Azucar**	**40.65**	**299**	P	**P**	**09 41 36.0**	**+0.6**
GO02	**Mina Guanaco**	**40.97**	**301**	P	**P**	**09 41 38.7**	**+0.3**
GO02				IAmb	IAmb	09 41 56.6	
comp=Z,25nm,1.3s							
LVC	**Limon Verde**	**42.80**	**304**	P	**P**	**09 41 53.5**	**0.0**
LVC				IAmb	IAmb	09 41 56.4	
comp=Z,15nm,1.5s							
PB07	**IPOC Station P**	**44.02**	**304**	P	**P**	**09 42 04.1**	**+1.0**
PB07				IAmb	IAmb	09 42 31.8	
comp=Z,28nm,1.5s							
PB02	**IPOC Station P**	**44.37**	**304**	P	**P**	**09 42 06.2**	**+0.4**
PB02				IAmb	IAmb	09 42 09.9	
comp=Z,27nm,1.3s							
PB01	**IPOC Station P**	**44.41**	**305**	P	**P**	**09 42 06.9**	**+0.7**
PB01				IAmb	IAmb	09 42 07.4	
comp=Z,7.0nm,0.6s							
PTLB	**Pontes e Lacer**	**45.05**	**321**	P	**P**	**09 42 11.7**	**+0.6**
PTLB				IAmb	IAmb	09 42 11.8	
comp=Z,4.4nm,0.8s							
GO01	**Chusmiza**	**45.46**	**306**	P	**P**	**09 42 15.7**	**+0.8**
GO01				IAmb	IAmb	09 42 23.5	
comp=Z,6.6nm,0.9s							
PB16	**IPOC Station P**	**46.76**	**306**	P	**P**	**09 42 26.3**	**+1.0**
PB16				IAmb	IAmb	09 42 27.9	
comp=Z,11nm,1.5s							
PB12	**IPOC Station P**	**46.90**	**305**	P	**P**	**09 42 26.3**	**+0.5**
PB12				IAmb	IAmb	09 42 32.0	
comp=Z,17nm,1.1s							
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**09 42 28.7**	**+0.5**
comp=Z,0.4nm,0.7s,baz=176,slow=6.6,SNR=2.1							
comp=Z,0.4nm,0.7s							
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**09 42 28.7**	**+0.5**
LPAZ	**La Paz**	**47.93**	**309**	P	**P**	**09 42 35.3**	**+0.8**
comp=Z,7.6nm,0.6s,baz=121,slow=5.6,SNR=35							
comp=Z,7.6nm,0.6s							
LPAZ	**La Paz**	**47.93**	**309**	P	**P**	**09 42 35.3**	**+0.8**
LPAZ				IAmb	IAmb	09 42 36.1	
comp=Z,7.8nm,0.6s							
H10N3	**ASCENSION HYDR**	**49.11**	**22**	T	T	10 36 07.4	
baz=192,slow=75,SNR=8.0							
H10N1	**ASCENSION HYDR**	**49.11**	**22**	T	T	10 36 09.7	
baz=192,slow=75,SNR=13							
H10N2	**ASCENSION HYDR**	**49.13**	**22**	T	T	10 36 07.1	
baz=192,slow=75,SNR=7.2							
LBTB	**Lobatse**	**51.12**	**78**	P	**P**	**09 42 57.5**	**-0.7**
ETMB	**Extrema**	**52.91**	**315**	P	**P**	**09 43 11.2**	**-0.2**
ETMB				IAmb	IAmb	09 43 11.5	
comp=Z,2.5nm,0.8s							
MACA	**Manacapuru-AM**	**57.01**	**324**	P	**P**	**09 43 40.4**	**-0.6**
MACA				IAmb	IAmb	09 43 40.5	
comp=Z,9.9nm,0.6s							
BOAV	**Boa Vista**	**62.18**	**327**	P	**P**	**09 44 14.9**	**-1.7**
BOAV				IAmb	IAmb	09 44 16.6	
comp=Z,6.0nm,1.2s							
TOA0	**Torodi Ar. Sit**	**73.58**	**34**	P	**P**	**09 45 28.6**	**+0.2**
TOA0				IAmb	IAmb	09 45 28.8	
comp=Z,3.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**09 45 28.4**	**0.0**
comp=Z,1.4nm,0.5s,baz=199,slow=6.7,SNR=14							
comp=Z,1.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**09 45 28.5**	**+0.1**
EMPR	**Esperanza - Ma**	**79.20**	**326**	P	**P**	**09 46 00.1**	**-0.1**
ORTG	**Ortega, Santa**	**79.33**	**306**	P	**P**	**09 46 01.8**	**+0.6**
ORTG				IAmb	IAmb	09 46 08.3	
comp=Z,28nm,1.4s							
ILAR	**Eielson Array**	**147.75**	**314**	PKPbc	**PKPbc**	**09 53 38.0**	**-0.7**
comp=Z,2.9nm,0.8s,baz=137,slow=2.0,SNR=20							
SONM	**Songino Array**	**153.09**	**88**	PKPbc	**PKPbc**	**09 53 51.4**	**-0.8**
comp=Z,1.9nm,0.6s,baz=231,slow=2.4,SNR=7.3							

TRN 19 09:34:32.8,11.°30N×61.°06W,h45km,MD3.5,4C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPR	**Prospect**	**0.30**	**112**	⇑*eP*	Pn	09 34 41.8	+0.2
TPR				*eS*	Sn	09 34 48.1	+0.5
BOT	**Bacolet**	**0.36**	**111**	⇑*iP*	Pn	09 34 42.0	-0.2
TOSP	**Speyside**	**0.52**	**90**	⇑*iP*	Pn	09 34 44.0	0.0
TOSP				*eS*	Sn	09 34 52.2	+0.3
TRN	**Trinidad (W)**	**0.73**	**207**	⇑*iP*	Pn	09 34 47.5	+0.8
TRN				*eS*	Sn	09 34 58.0	+1.2

SNAA	Sanae	20.50	154	P		P	09 51 54.9	+1.0
SNAA	Sanae	20.50	154	P		P	09 51 54.8	+1.0
	1.2nm,0.8s,baz=305,slow=11,SNR=6.1							
	1.2nm,0.8s							
SNAA	Sanae	20.50	154	P		P	09 51 50.6	-3.3
TROLL	Troll, Antarti	22.08	152	P		P	09 52 13.1	+2.2
GO09	Cerro Castillo	24.39	262	P		P	09 52 33.7	-0.5
GO09				lAmb		lAmb	09 52 35.8	
	comp=Z,24nm,1.3s							
GO06	Curarrehue	30.66	284	P		P	09 53 30.1	-0.5
GO06				lAmb		lAmb	09 53 49.5	
	comp=Z,8.9nm,1.2s							
QSPA	South Pole Qui	34.96	180	P		P	09 54 11.3	+3.4
	comp=Z,1.0nm,0.7s,baz=213,slow=3.1,SNR=6.2							
	comp=Z,1.0nm,0.7s							
QSPA	South Pole Qui	34.96	180	P		P	09 54 06.8	-1.2
QSPA				lAmb		lAmb	09 54 32.3	
	comp=Z,8.9nm,1.4s							
CO02	Combarbal	36.68	295	P		P	09 54 22.3	-0.6
CO02				lAmb		lAmb	09 54 36.0	
	comp=Z,40nm,1.2s							
CO01	Juntas del Tor	37.19	297	P		P	09 54 26.1	-1.4
CO01				lAmb		lAmb	09 54 52.7	
	comp=Z,51nm,0.9s							
GO04	Tololo Observa	37.40	296	P		P	09 54 28.4	-0.7
CO06	Fray Jorge	37.43	294	P		P	09 54 28.4	-0.7
CO06				lAmb		lAmb	09 54 48.0	
	comp=Z,44nm,0.9s							
AC04	Llanos de Chal	39.13	297	P		P	09 54 43.0	-0.4
GO03	Copiap	39.20	299	P		P	09 54 44.8	+0.7
VNDA	Vanda	47.19	184	P		P	09 55 47.0	-1.0
LPAZ	La Paz	47.90	310	P		P	09 55 59.0	+4.1
	comp=Z,2.3nm,0.5s,baz=135,slow=13,SNR=1.5							
	comp=Z,2.3nm,0.5s							
LPAZ	La Paz	47.90	310	P		P	09 55 55.5	+0.5
H10N1	ASCENSION HYDR	49.26	23	T		T	10 49 18.3	
H10N3	ASCENSION HYDR	49.26	23	T		T	10 49 20.6	
H10N2	ASCENSION HYDR	49.28	23	T		T	10 49 24.8	
RCBR	Riachuelo	49.44	354	P		P	09 56 06.2	+0.1
RCBR				lAmb		lAmb	09 56 31.8	
	comp=Z,9.2nm,0.8s							
LBTB	Lobatse	51.28	78	P		P	09 56 18.4	-1.7
	comp=Z,3.6nm,0.7s,baz=184,slow=6.2,SNR=5.1							
	comp=Z,3.6nm,0.7s							
LBTB	Lobatse	51.28	78	P		P	09 56 17.5	-2.6
LBTB				lAmb		lAmb	09 56 21.4	
	comp=Z,4.4nm,0.7s							
TOA0	Torodi Ar. Sit	73.74	34	P		P	09 58 49.2	-0.9
TOA0				lAmb		lAmb	09 58 54.6	
	comp=Z,7.1nm,1.4s							
TORD	Torodi Ar. Bea	73.74	34	P		P	09 58 49.3	-0.7
	comp=Z,0.8nm,0.7s,baz=196,slow=5.7,SNR=5.9							
	comp=Z,0.8nm,0.7s							
TORD	Torodi Ar. Bea	73.74	34	P		P	09 58 49.0	-1.1
FINES	FINESS Array B	124.94	30	PKP		PKiKP	10 06 15.6	+0.6
	comp=Z,1.3nm,0.8s,baz=186,slow=2.8,SNR=4.8							
ARCES	ARCESS Array B	131.21	23	PKP		PKiKP	10 06 27.4	0.0
	comp=Z,1.2nm,0.9s,baz=205,slow=2.6,SNR=5.5							
ILAR	Eielson Array	147.73	313	PKPbc		PKPbc	10 06 59.0	-0.3
	comp=Z,1.0nm,0.7s,baz=152,slow=1.3,SNR=4.9							
SONM	Songino Array	153.23	89	PKPbc		PKPbc	10 07 12.8	-0.5
	comp=Z,0.8nm,0.6s,baz=201,slow=7.0,SNR=3.2							

IDC ***19*** *09:48:53.4±3.3,53.°70N×87.°97E, h0km, mbtmp3.4/2, MLI3.0/2, Error ellipse: s-maj=34.0km s-min=18.0km az=50.0*

NNC ***19*** *09:48:54.8±2.5,53.°50N×87.°83E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=19.8km s-min=9.5km az=64.0, Suspected Mining explosion.*

ISC 19 09:48:55.8±3.7, 53.°6N±0.°1×87.°7E±0.°2, h0km, n8, σ0s93/10, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	283	*i*			10 01 00.0	
	0.1nm,1.0s,baz=97,slow=319,SNR=23							
ZAA0	Zalesovo Array	1.75	283	⇓Pn		Pn	09 49 27.0	-0.3
	2.0nm,0.7s							
ZAA0				⇓Sn		Sg	09 49 52.9	+1.1
	3.0nm,0.4s							
ZALV	Zalesovo Beam	1.75	283	Pn		Pn	09 49 27.0	-0.3
	4.0nm,0.3s,baz=98,slow=13,SNR=34							
ZALV				Lg		Lg	09 49 52.6	
	4.9nm,0.3s,baz=94,slow=28,SNR=11							
KURBB	Kurchatov Arra	6.39	246	Pn		Pn	09 50 32.0	+0.9
	0.2nm,0.3s,baz=61,slow=14,SNR=17							
	2.6nm,0.5s							
KURBB	Kurchatov Arra	6.39	246	⇓Pn		Pn	09 50 31.2	+0.2
	3.9nm,0.5s							
KURBB				⇑Sn		Sn	09 51 43.5	-1.1
	5.0nm,0.6s							
KURBB				⇑Lg		Lg	09 52 19.5	
	9.3nm,0.6s							
MK31	Makanchi Array	7.64	209	⇓Pn		Pn	09 50 48.8	+0.4
	0.8nm,0.7s,baz=28,slow=13,SNR=9.0							
MK31				⇓Sn		Sn	09 52 14.4	-1.3
	1.2nm,0.6s,baz=75,slow=26,SNR=4.4							
MK31				⇑Lg		Lg	09 52 55.3	
	1.6nm,0.6s,baz=37,slow=31,SNR=4.2							
MKAR	Makanchi Array	7.64	209	Pn		Pn	09 50 49.0	+0.7
	0.3nm,0.3s,baz=28,slow=14,SNR=11							
	0.5nm,0.3s							
MAKZ	Makanchi	7.72	211	⇑Sn		Sn	09 52 17.1	-0.5
	1.4nm,0.7s							
MAKZ				⇑Lg		Lg	09 52 59.2	
	3.1nm,0.9s							

MOS ***19*** *09:49:09.0±1.4, 17.°04S×72.°48W, h44km, mb4.9/21, Error ellipse: s-maj=14.0km s-min=6.0km az=112.6*

NEIC ***19*** *09:49:10.8±1.5, 17.°02S±0.°06×72.°35W±0.°08, h45km±6km, mb5.0/285, ML5.2(ARE), Mwr5.3(GUC), Error ellipse: s-maj=11.6km s-min=7.9km az=67.0*

ARE ***19*** *09:49:11±1.7, 17.°08S±0.°06×72.°37W±0.°08, h54km±5km, Error ellipse: s-maj=11.0km s-min=7.9km az=67.0*

VAO ***19*** *09:49:12.9±0.3,16.°95S×71.°99W, h55km, mb4.8*

IDC ***19*** *09:49:12.5±0.3, 16.°88S×71.°93W, h53km±2km, mb4.4/19, mbtmp4.6/22, Error ellipse: s-maj=14.4km s-min=8.5km az=74.0*

GUC ***19*** *09:49:12.0±0.8, 16.°96S×72.°17W, h62km±7km, ML5.3*

ISC 19 09:49:11.8±0.3, 16.°98S±0.°04×72.°08W±0.°05, h52km±2km, h52km:pP-P, n628, σ1s**21**/609**, mb4.9**/157**, 17C-13D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AP01	Chacalluta	2.16	130			Pn	09 49 47.2	+1.8
AP01	Chacalluta	2.16	130	*e*P		Pn	09 49 46.9	+1.6
PB12	IPOC Station P	2.33	134	Pn		Pn	09 49 48.7	+0.9
PB12	IPOC Station P	2.33	134	⇓*i*P		Pn	09 49 48.5	+0.7
PB12				*e*S		Sn	09 50 15.1	-0.3
PB12				IAML			09 50 38.7	
	comp=E,13μm,0.9s							
PB16	IPOC Station P	2.80	119	Pn		Pn	09 49 56.5	+1.9
PB16	IPOC Station P	2.80	119	⇓*i*P		Pn	09 49 56.3	+1.6
PB16				*e*S		Sn	09 50 30.9	+3.3
TA02	Huaiquique	3.76	151			Pn	09 50 07.5	+0.2
TA02	Huaiquique	3.76	151	*e*P		Pn	09 50 07.5	+0.2
GO01	Chusmiza	3.83	135	Pn		Pn	09 50 09.8	+1.1
GO01	Chusmiza	3.83	135	⇓*i*P		Pn	09 50 09.8	+1.1
LPAZ	La Paz	3.85	80	P		Pn	09 50 14.7	+5.6
	comp=E,172nm,0.5s,baz=254,slow=10,SNR=619							
LPAZ	La Paz	3.85	80	Pn		Pn	09 50 14.5	+5.4
LPAZ	La Paz	3.85	80	P		Pn	09 50 14.5	+5.4
LPAZ	La Paz	3.85	80	*e*P		Pn	09 50 14.6	+5.5
TA01	Diego Aracena	4.00	154	Pn		Pn	09 50 10.1	-0.4
TA01	Diego Aracena	4.00	154	⇓*i*P		Pn	09 50 10.3	-0.2
TA01				*e*S		Sn	09 50 52.3	-3.9
PB01	IPOC Station P	4.73	149			Pn	09 50 20.4	-0.3
PB01	IPOC Station P	4.73	149	⇓*i*P		Pn	09 50 20.4	-0.3
PB01				*e*S		Sn	09 51 11.2	-3.1
PB02	IPOC Station P	4.79	155			Pn	09 50 21.2	-0.3
PB02	IPOC Station P	4.79	155	⇓*i*P		Pn	09 50 21.2	-0.3
PB07	IPOC Station P	5.16	157			Pn	09 50 25.9	-0.7
PB07	IPOC Station P	5.16	157	⇓*i*P		Pn	09 50 26.1	-0.5
PB09	IPOC Station P	5.49	151			Pn	09 50 31.8	+0.6
PB09	IPOC Station P	5.49	151	⇓*i*P		Pn	09 50 31.8	+0.6
PB04	IPOC Station P	5.63	161			Pn	09 50 32.0	-1.1
PB06	IPOC Station P	6.17	158			Pn	09 50 39.3	-1.2
LVC	Limon Verde	6.35	152	P		Pn	09 50 43.7	+0.6
	comp=E,936nm,0.3s,baz=358,slow=8.6,SNR=3120							
LVC				S		Sn	09 51 54.7	+0.2
	comp=E,353nm,0.5s,baz=58,slow=20,SNR=11							
LVC	Limon Verde	6.35	152	*e*P		Pn	09 50 43.3	+0.1
PB15	IPOC Station P	6.67	159			Pn	09 50 46.1	-1.2
NNA	Nana	6.77	316	P		Pn	09 50 49.6	+0.9
	comp=E,27nm,0.3s,baz=153,slow=11,SNR=24							
NNA	Nana	6.77	316	Pn		Pn	09 50 45.4	-3.2
NNA	Nana	6.77	316	P		Pn	09 50 45.4	-3.2
AF01	San Pedro de A	6.99	149	Pn		Pn	09 50 50.8	-1.0
PB14	IPOC Station P	7.77	169	Pn		Pn	09 51 00.6	-2.0
GO02	Mina Guanaco	8.47	164	Pn		Pn	09 51 11.1	-1.0
ETMB	Extrema	9.12	39	Pn		Pn	09 51 22.8	+1.9
ETMB	Extrema	9.12	39	*e*P		Pn	09 51 22.7	+1.9
CZSB	Cruzeiro do Su	9.21	356	Pn		Pn	09 51 20.2	-1.8
CZSB	Cruzeiro do Su	9.21	356	*e*P		Pn	09 51 21.0	-1.1
AC01	Pan de Azucar	9.23	172	Pn		Pn	09 51 19.5	-2.7
AC02	Maricunga	10.19	165			Pn	09 51 34.8	-1.0
AC06	Mina Casimiro	10.45	171			Pn	09 51 36.9	-2.1
SIV	San Ignacio	10.61	86	P		Pn	09 51 40.5	-0.7
	comp=E,13nm,0.4s,baz=268,slow=9.4,SNR=66							
GO03	Copiap	10.70	171			Pn	09 51 39.9	-2.6
AC04	Llanos de Chal	11.21	175	Pn		Pn	09 51 45.8	-3.6
AC05	El Transito	11.92	172			Pn	09 51 56.8	-2.3
LCO	Las Campanas	12.04	174			Pn	09 51 58.0	-3.0
LCO	Las Campanas	12.04	174	P		Pn	09 51 58.0	-3.0
VILB	Vilhena	12.16	72	Pn		Pn	09 52 03.9	+1.5
VILB	Vilhena	12.16	72	*e*P		Pn	09 52 03.6	+1.2
PTLB	Pontes e Lacer	12.53	85			Pn	09 52 08.1	+0.7
PTLB	Pontes e Lacer	12.53	85	*e*P		Pn	09 52 07.0	-0.4
CO01	Juntas del Tor	13.07	172			Pn	09 52 12.4	-2.6
GO04	Tololo Observa	13.19	175	Pn		Pn	09 52 14.1	-2.5
CO06	Fray Jorge	13.64	178	Pn		Pn	09 52 19.6	-2.9
CO03	El Pedregal	13.86	175			Pn	09 52 22.9	-2.6
CO02	Combarbal	14.20	176	Pn		Pn	09 52 27.9	-2.3
ZON	Zonda	14.83	169	Pn		Pn	09 52 38.5	+0.1
ZON	Zonda	14.83	169	P		Pn	09 52 38.5	+0.1
BOSC	San Juan Bosco	15.12	335			Pn	09 52 40.6	-1.6
ARNL	Arenillas	15.48	329	Pn		Pn	09 52 44.4	-2.4
ARNL				lAmb		lAmb	09 52 52.8	
	comp=Z,76nm,1.0s							
SALV	Santo Antonio	15.76	88	*e*P		Pn	09 52 50.7	+0.2
VA03	San Esteban	15.78	175	Pn		Pn	09 52 49.2	-1.5
PDRB	Porto dos Gac	15.80	72	*e*P		Pn	09 52 50.8	-0.2
AQDB	Aquidauana	15.90	105	Pn		Pn	09 52 51.2	-1.0
ANTJ	Antonio Joao (	15.96	111	*e*P		Pn	09 52 52.3	-0.7
ROC1	El Roble	15.96	177	Pn		Pn	09 52 52.5	-0.6
PEL	Peldehue	16.15	176	Pn		Pn	09 52 52.0	-3.3
PEL	Peldehue	16.15	176	P		Pn	09 52 52.0	-3.3
PEL				pmax		pmax		
	comp=Z,79nm,1.8s							
MT02	Curacav	16.23	177	Pn		Pn	09 52 54.8	-1.5
MT02				lAmb		lAmb	09 53 02.5	
	comp=Z,136nm,1.9s							
MT05	Renca	16.39	176	Pn		Pn	09 52 56.1	-2.3
CPUP	Villa Florida	16.56	127	P		Pn	09 52 59.3	-1.2
	comp=Z,11nm,1.0s,baz=292,slow=13,SNR=5.4							
CPUP	Villa Florida	16.56	127			P	09 53 01.5	-0.8
CPUP	Villa Florida	16.56	127	P		P	09 53 01.5	-0.8
CPUP				pmax		pmax		
	comp=Z,21nm,1.2s							
CPUP	Villa Florida	16.56	127	*e*P		Pn	09 52 59.5	-1.0
PORT	Chimborazo Vol	16.76	336	Pn		Pn	09 53 00.7	-3.0
MT01	Popeta	16.83	178	Pn		Pn	09 53 03.7	-0.1
MT01						P	09 53 03.9	-1.4
LMEL	Las Melosas	16.88	175			Pn	09 53 04.2	-0.4
CLDB	Colider	16.93	71	*e*P		Pn	09 53 05.3	+0.2
PTLC	Puerto Leguiza	17.25	351	*e*P		Pn	09 53 04.4	-4.8
H03N1	Juan Fernandez	17.51	199	P		P	09 53 13.7	+1.3
	baz=111,slow=14,SNR=22							
H03N1				T		T	10 11 17.7	
	baz=22,slow=74,SNR=632							
H03N2	Juan Fernandez	17.52	199	P		P	09 53 14.8	+2.4
	baz=111,slow=14,SNR=11							
H03N2				T		T	10 11 19.9	
	baz=22,slow=74,SNR=3188							
H03N3	Juan Fernandez	17.53	199	P		P	09 53 15.1	+2.4
	baz=111,slow=14,SNR=20							
H03N3				T		T	10 11 17.9	
	baz=22,slow=74,SNR=3644							
MACA	Manacapuru-AM	17.72	40			Pn	09 53 14.3	-0.5
MACA				lAmb		lAmb	09 53 18.3	
	comp=Z,73nm,0.6s							
MACA	Manacapuru-AM	17.72	40	*e*P		Pn	09 53 14.6	-0.3
BO02	Sierra Bellavi	17.78	176			Pn	09 53 12.9	-2.7
H03S3	Juan Fernandez	17.86	199	P		P	09 53 19.3	+2.9
H03S3				T		T	10 11 34.5	
	SNR=63							
H03S1	Juan Fernandez	17.88	199	P		P	09 53 19.1	+2.5
	SNR=10							
H03S1				T		T	10 11 36.4	
	SNR=114							
H03S2	Juan Fernandez	17.88	199	P		P	09 53 19.2	+2.7
	SNR=12							
H03S2				T		T	10 11 36.5	
	SNR=51							
OTAV	Otavalo	18.22	339	P		P	09 53 18.4	-2.8
OTAV	Otavalo	18.22	339	P		P	09 53 18.4	-2.8
OTAV				pmax		pmax		
	comp=Z,6.0nm,0.8s							
OTAV	Otavalo	18.22	339	*e*P		Pn	09 53 22.9	+1.4
OTAV	Otavalo	18.22	339	*e*P		Pn	09 53 23.0	+1.4
C2SB	Chapadao do Su	18.41	98	*e*P		Pn	09 53 23.6	+0.3
MCR1	Marechal Candi	18.44	117	*e*P		Pn	09 53 24.5	+0.8
FLOC	Florencia	18.78	349	*e*P		P	09 53 26.2	-0.6
GCUF	Volcan Galeras	18.82	343	*e*P		Pn	09 53 30.0	+1.3
ITQB	Itaqui	18.98	134	P		P	09 53 29.4	+0.5
ITQB				lAmb		lAmb	09 53 31.5	
	comp=Z,90nm,1.0s							
ITQB	Itaqui	18.98	134	*e*P		Pn	09 53 29.6	-0.4
CRUC	La Cruz	19.04	345	*e*P		Pn	09 53 36.9	+5.6
MACC	Macarena, Meta	19.08	355	*e*P		Pn	09 53 31.1	-0.3
NPGB	Novo Progresso	19.09	61	*e*P		P	09 53 29.6	-0.6
TRCB	Terra Rica	19.18	111	P		P	09 53 31.8	+0.6
TRCB				lAmb		lAmb	09 53 46.5	
	comp=Z,31nm,0.5s							
TRCB	Terra Rica	19.18	111	*e*P		P	09 53 31.1	-0.2
GARC	Garzon, Huila	19.34	350	*e*P		Pn	09 53 34.1	-0.6
BBAC	Balboa, Cauca	19.55	344	*e*P		Pn	09 53 37.9	+0.6
CRSM	Crissiumal (Br	19.68	125	*e*P		P	09 53 37.0	+0.4
UNIS	Unistalda (Bra	19.72	131	*e*P		Pn	09 53 38.0	-0.8
BETC	Betania	19.81	350	*e*P		Pn	09 53 44.5	+4.3
FRBT	Francisco Belt	19.82	120	*e*P		P	09 53 39.0	+0.8
POPC	Popayan, Colom	19.92	346	*e*P		P	09 53 38.9	-0.6
PCMB	Pacaembu	20.18	106	*e*P		P	09 53 42.4	+0.3
PTGB	Pitanga	20.21	116	*e*P		P	09 53 43.1	+0.5
ITTB	Itaituba	20.35	54	*e*P		P	09 53 43.7	-0.3
RODS	Rosario do Sul	20.37	134	*e*P		P	09 53 44.5	+0.4
SNDB	Serra Nova Dou	20.73	79	*e*P		P	09 53 47.1	-1.1
PRAC	Prado	20.75	352	*e*P		P	09 53 49.2	+0.9
ITRB	Iturama	20.80	101	*e*P		P	09 53 49.2	+0.3
ITAB	Concordia	21.09	122	P		P	09 53 50.9	-1.0
ITAB				lAmb		lAmb	09 54 12.6	
	comp=Z,82nm,1.3s							
ITAB	Concordia	21.09	122	*e*P		P	09 53 51.5	-0.4
ALGR	Alto Alegre (B	21.10	127	*e*P		P	09 53 52.1	+0.1
YOTC	Yotoco, Valle	21.25	348	*e*P		P	09 53 56.4	+2.6
CHIC	Chingaza	21.53	356	*e*P		P	09 54 02.2	+5.1
ANIL	Santa Ana	21.58	351	*e*P		P	09 54 02.2	+4.6
CPSB	Cacapava Do Su	21.64	132	*e*P		P	09 53 57.4	-0.4
ROSC	El Rosal	21.79	354	P		P	09 54 02.2	+2.3
	comp=Z,8.0nm,0.4s,baz=138,slow=15,SNR=5.0							
ROSC	El Rosal	21.79	354	P		P	09 53 58.2	-1.7
ROSC	El Rosal	21.79	354	P		P	09 53 58.2	-1.7
ROSC				pmax		pmax		
	comp=Z,34nm,1.1s							
ROSC	El Rosal	21.79	354	*e*P		P	09 53 59.3	-0.6
PLMC	San Jos del P	22.14	349	*e*P		P	09 54 04.8	+1.6
GUY2C	Guyana, Caldas	22.30	351	*e*P		P	09 54 06.8	+1.4
PLTB	Pedras Altas	22.31	135	P		P	09 54 04.5	-0.5
PLTB				lAmb		lAmb	09 54 25.5	
	comp=Z,31nm,1.0s							
PLTB	Pedras Altas	22.31	135	*e*P		P	09 54 05.3	+0.3
BOAV	Boa Vista	22.38	32	P		P	09 54 06.4	+0.6
BOAV				lAmb		lAmb	09 54 29.5	
	comp=Z,22nm,1.2s							
BOAV	Boa Vista	22.38	32	*e*P		P	09 54 06.6	+0.8
GO06	Curarrehue	22.53	179	P		P	09 54 06.4	-1.0
GO06				lAmb		lAmb	09 54 10.6	
	comp=Z,34nm,1.1s							
NORC	Norcasia	22.57	353	*e*P		P	09 54 08.5	+0.7
SPBC	San Pablo de B	22.57	355	*e*P		P	09 54 08.9	+0.9
RUSC	La Rusia	22.75	357	*e*P		P	09 54 10.6	+0.5
IPMB	Ipameri, GO	22.79	96	*e*P		P	09 54 08.8	-1.5
TRQA	Tornquist	22.80	159	P		P	09 54 10.7	+0.6
TRQA				lAmb		lAmb	09 54 21.5	
	comp=Z,38nm,0.9s							
TRQA	Tornquist	22.80	159	P		P	09 54 10.7	+0.6
TRQA				pmax		pmax		
	comp=Z,38nm,1.0s							
CNLB	Canela	23.02	126	*e*P		P	09 54 11.8	-0.7
CBOC	Ciudad Bolivar	23.02	350	*e*P		P	09 54 13.6	+0.8
MALB	Monte Alegre	23.09	51	*e*P		P	09 54 13.0	-0.2
BDFB	Brasilia	23.14	90	P		P	09 54 13.2	-0.6
	comp=Z,2.1nm,0.4s,baz=261,slow=10,SNR=4.3							
	comp=Z,2.1nm,0.4s							
BDFB	Brasilia	23.14	90	P		P	09 54 14.8	+1.0
BDFB	Brasilia	23.14	90	P		P	09 54 14.8	+1.0
BDFB				pmax		pmax		
	comp=Z,25nm,1.2s							
BDFB	Brasilia	23.14	90	*e*P		P	09 54 13.4	-0.4
HELC	Santa Helena	23.27	351	*e*P		P	09 54 15.9	+0.5
PTBC	PUERTO BERRIO,	23.48	354	*e*P		P	09 54 15.5	-1.5
PLCA	Paso Flores	23.71	177	P		P	09 54 19.7	+0.7
	comp=Z,23nm,1.1s,baz=358,slow=11,SNR=20							
PLCA				pP		pP	09 54 34.7	+3.0
	comp=Z,29nm,1.0s,baz=353,slow=13,SNR=14							
PLCA				PcP		PcP	09 58 02.7	+0.8
	comp=Z,2.1nm,0.8s,baz=340,slow=2.0,SNR=3.1							
	comp=Z,23nm,1.1s							
PLCA	Paso Flores	23.71	177	P		P	09 54 18.3	-0.7
PLCA				lAmb		lAmb	09 54 20.9	
	comp=Z,63nm,1.3s							
PLCA	Paso Flores	23.71	177	P		P	09 54 18.3	-0.7
PLCA				pmax		pmax		
	comp=Z,63nm,1.3s							
PLCA	Paso Flores	23.71	177	*e*P		P	09 54 20.3	+1.3
RCLB	Rio Claro- Sao	23.73	107	*e*P		P	09 54 19.1	-0.3
LL04	Puerto Octay	23.85	181	P		P	09 54 17.4	-2.8
LL04				lAmb		lAmb	09 54 43.3	
	comp=Z,22nm,0.8s							
TER01	Tubaro-SC	24.04	123	*e*P		P	09 54 23.4	+1.3
LL03	Petrohue	24.08	181	P		P	09 54 19.6	-2.6
PRPB	Parauapebas	24.28	66	*e*P		P	09 54 24.7	+0.3
VAO	Valinhos	24.34	108	*e*P		P	09 54 25.0	+0.1
PMNB	Patos De Minas	24.47	98	*e*P		P	09 54 25.9	-0.2
ZARC	Zaragoza, Cauc	24.47	353	*e*P		P	09 54 25.6	-0.5
UREC	San Jos de Ur	24.81	352	*e*P		P	09 54 28.4	-0.7
OCAC	Ocana	25.09	357	*e*P		P	09 54 30.3	-1.5
SOCV	Socops	25.13	3	*e*P		P	09 54 32.0	-0.1
SMTB	Santa Maria do	25.18	74	*e*P		P	09 54 32.4	-0.1
PARB	Paraibuna	25.61	109	*e*P		P	09 54 38.3	+1.8
MCPB	Macapa, AP	25.72	52	*e*P		P	09 54 37.3	-0.2
SDV	Santo Domingo	25.74	3	P		P	09 54 38.4	+0.7
	comp=Z,18nm,0.9s,baz=172,slow=8.6,SNR=11							
SDV				pP		pP	09 54 52.3	+0.9
	comp=Z,22nm,0.8s,baz=169,slow=4.8,SNR=5.2							
	comp=Z,18nm,0.9s							
SDV	Santo Domingo	25.74	3	P		P	09 54 36.9	-0.9
SDV				lAmb		lAmb	09 54 60.0	
	comp=Z,28nm,0.8s							
SDV	Santo Domingo	25.74	3	*e*P		P	09 54 38.5	+0.7
BAUV	El Baul	26.06	9	P		P	09 54 40.1	-0.4
BSCB	Bom Sucesso	26.12	103	*e*P		P	09 54 41.9	+0.8
LL02	Futaleuf	26.13	180	P		P	09 54 39.1	-1.7
SDBA	SAO DESIDERIO	26.67	84	*e*P		P	09 54 45.7	-0.4
JANB	Januaria	26.75	90	*e*P		P	09 54 47.1	+0.2
MC01	Montes Claros	26.93	94	*e*P		P	09 54 48.4	0.0
DIAM	Diamantina, MG	27.10	97	*e*P		P	09 54 49.9	-0.1
AY01	Puyuhuapi	27.36	181	P		P	09 54 49.8	-2.1
AY01				lAmb		lAmb	09 54 52.5	
	comp=Z,19nm,0.8s							
VAS01	Vassouras-RJ	27.46	106	*e*P		P	09 54 54.2	+1.0
TMAB	Tom-Au,PA,Br	27.69	61	*e*P		P	09 54 55.4	+0.3
DUB01	Friburgo-RJ

baz=153
X48A **Hartselle** 53.09 345 P P 09 58 21.9 -2.0
X48A IAmb IAmb 09 58 44.2
comp=Z,14nm,1.2s
V55A **Taylorsville** 53.25 351 IAmb IAmb 09 58 26.9
comp=Z,10nm,0.9s
U59A **Littleton** 53.31 354 IAmb IAmb 09 58 40.4
comp=Z,14nm,1.1s
W50A **Signal Mountai** 53.39 346 IAmb IAmb 09 58 26.5
comp=Z,11nm,1.1s
CPCT **Cooper Cave** 53.46 347 P P 09 58 24.8 -1.8
SWET **Sewanee** 53.55 346 IAmb IAmb 09 58 27.4
comp=Z,9.4nm,0.9s
V52A **Sevierville** 53.65 348 P P 09 58 27.0 -1.1
V52A IAmb IAmb 09 58 28.5
comp=Z,14nm,0.8s
OXF **Oxford** 53.79 342 P P 09 58 29.9 +0.8
baz=160
PLAL **Pickwick Lake** 53.86 344 P P 09 58 27.4 -2.2
T59A **Double "B" Far** 53.91 355 P P 09 58 29.8 0.0
U54A **Nelsons Funny** 54.00 350 P P 09 58 30.7 0.0
U54A IAmb IAmb 09 58 51.4
comp=Z,19nm,1.1s
T57A **Hurt** 54.11 353 P P 09 58 31.0 -0.3
T57A IAmb IAmb 09 58 55.8
comp=Z,26nm,1.2s
WLAR **White Oak Lake** 54.23 338 P P 09 58 30.6 -1.7
V48A **Smith Brothers** 54.26 345 P P 09 58 30.6 -1.8
V48A IAmb IAmb 09 58 35.8
comp=Z,41nm,1.8s
TZTN **Tazewell** 54.32 349 P P 09 58 32.5 -0.5
baz=167
WHTX **Lake Whitney,** 54.43 333 P P 09 58 32.1 -1.6
WHTX IAmb IAmb 09 58 34.9
comp=Z,14nm,0.9s
WHTX **Lake Whitney,** 54.43 333 P P 09 58 34.0 +0.2
baz=150
CLTN **Cedars of Leba** 54.48 346 P P 09 58 32.9 -1.1
U49A **Red Boiling Sp** 54.75 346 IAmb IAmb 09 58 35.9
comp=Z,9.5nm,0.6s
SLBS **Sierra La Lagu** 54.78 316 P P 09 58 37.1 +0.5
SLBS sP **sP** 09 58 57.5 +0.5
S57A **Dark Hollow, R** 54.83 353 IAmb IAmb 09 58 58.1
comp=Z,14nm,0.9s
WVT **Waverly** 54.88 344 P P 09 58 35.0 -2.0
WVT **Waverly** 54.88 344 P P 09 58 35.0 -2.0
WVT pmax pmax
comp=Z,8.0nm,1.0s
WVT **Waverly** 54.88 344 P P 09 58 35.6 -1.3
baz=162
WVT **Waverly** 54.88 344 P P 09 58 35.7 -1.3
WVT pP **pP** 09 58 50.0 -1.6
WVT sP **sP** 09 58 55.5 -2.2
R58B **Mineral** 54.92 354 P P 09 58 36.8 -0.4
R58B IAmb IAmb 09 58 53.0
comp=Z,36nm,1.4s
UALR **University of** 54.95 340 P P 09 58 36.6 -0.9
UALR IAmb IAmb 09 58 38.7
comp=Z,23nm,1.2s
T50A **Nancy** 55.04 348 IAmb IAmb 09 58 38.1
comp=Z,8.3nm,0.8s
MIAR **Mount Ida** 55.17 338 P P 09 58 39.1 +0.1
MIAR **Mount Ida** 55.17 338 P P 09 58 39.2 +0.1
MIAR pmax pmax
comp=Z,25nm,0.7s
MIAR **Mount Ida** 55.17 338 P P 09 58 39.1 +0.1
baz=155
S54A **Dingess, Beckl** 55.17 351 P P 09 58 38.8 -0.3
S54A IAmb IAmb 09 58 40.9
comp=Z,22nm,1.3s
TXAR **Lajitas Array** 55.22 326 P P 09 58 39.4 -0.3
comp=Z,0.9nm,0.6s,baz=152,slow=8.8,SNR=18
comp=Z,0.9nm,0.6s
TXAR **Lajitas Array** 55.22 326 P P 09 58 38.7 -1.0
TXAR **Lajitas Array** 55.22 326 P P 09 58 38.7 -1.0
TX31 **Lajitas Ar. Si** 55.22 326 P P 09 58 39.0 -0.7
TX31 IAmb IAmb 09 59 00.9
comp=Z,12nm,1.1s
TX32 **Lajitas Array** 55.22 326 P P 09 58 38.3 -1.4
Z35A **Perchaven, San** 55.50 334 P P 09 58 41.6 +0.1
Z35A IAmb IAmb 09 58 45.1
comp=Z,20nm,0.9s
T47A **Sharon Grove** 55.52 345 P P 09 58 40.5 -1.0
T47A IAmb IAmb 09 58 42.8
comp=Z,34nm,1.8s
HICK **Hickman** 55.64 343 P P 09 58 41.2 -1.2
FCAR **Ozark Folk Cen** 55.90 340 P P 09 58 43.4 -0.9
FCAR IAmb IAmb 09 58 44.4
comp=Z,7.0nm,0.8s
PARMO **Parma** 55.90 343 P P 09 58 43.4 -0.9
ABTX **Abilene, Hawle** 55.93 332 P P 09 58 43.7 -1.0
ABTX IAmb IAmb 09 59 05.9
comp=Z,19nm,0.9s
ABTX **Abilene, Hawle** 55.93 332 P P 09 58 44.6 0.0
baz=148
Q56A **Snyder Ridge,** 56.12 353 IAmb IAmb 09 58 47.8
comp=Z,17nm,0.8s
Q54A **Coxs Mills** 56.27 352 IAmb IAmb 09 58 47.5
comp=Z,7.8nm,0.7s
CGM3 **Cape Girardeau** 56.47 343 IAmb IAmb 09 58 48.5
comp=Z,10nm,0.9s
MCWV **Mont Chateau** 56.80 353 P P 09 58 51.7 +1.0
baz=171
P53A **Whipple** 56.84 351 P P 09 58 50.7 -0.2
P53A IAmb IAmb 09 59 32.3
comp=Z,14nm,1.0s
HHAR **Hobbs** 56.86 339 P P 09 58 50.6 -0.6
HHAR IAmb IAmb 09 58 52.3
comp=Z,14nm,1.1s
P52A **Corning** 57.09 351 P P 09 58 52.2 -0.5
baz=169
MGMO **Mountain Grove** 57.11 341 IAmb IAmb 09 58 53.3
comp=Z,13nm,0.9s
RLO **Rose Lookout** 57.14 338 P 09 58 52.7 -0.5
RLO IAmb IAmb 09 58 54.0
comp=Z,20nm,0.6s
U38A **Gravette** 57.16 339 P P 09 58 52.6 -0.6
U38A IAmb IAmb 09 58 54.4
comp=Z,9.5nm,1.0s
TUL1 **Leonard** 57.19 337 P 09 58 53.0 -0.5
TUL1 **Leonard** 57.19 337 P P 09 58 53.6 +0.1
baz=153
FVM **French Village** 57.32 343 IAmb IAmb 09 58 54.7
comp=Z,9.7nm,0.7s
WMOK **Wichita Mounta** 57.35 334 P P 09 58 55.2 +0.5
baz=150
P49A **Miami Univ. Ec** 57.44 348 P P 09 58 54.0 -1.3
P49A IAmb IAmb 09 59 15.0
comp=Z,16nm,0.9s
P49A **Miami Univ. Ec** 57.44 348 P P 09 58 53.9 -1.3
baz=166
OK025 **Westminster Rd** 57.49 336 P 09 58 54.8 -0.8
P48A **Milroy** 57.51 348 IAmb IAmb 09 58 55.0
comp=Z,7.9nm,0.6s
O53A **New Philadelph** 57.56 352 P P 09 58 56.2 +0.2
baz=170
CCM **Cathedral Cave** 57.63 342 P P 09 58 56.0 -0.5
CCM IAmb IAmb 09 58 59.5
comp=Z,17nm,1.3s
CCM **Cathedral Cave** 57.63 342 P P 09 58 56.0 -0.5
CCM pmax pmax
comp=Z,17nm,1.3s
CCM **Cathedral Cave** 57.63 342 P P 09 58 56.5 0.0
baz=158
CCM **Cathedral Cave** 57.63 342 P P 09 58 56.1 -0.5
CCM pP **pP** 09 59 10.7 -0.5
CCM sP **sP** 09 59 16.4 -1.0
QUOK **Quay** 57.77 337 P 09 58 56.7 -0.9
QUOK IAmb IAmb 09 58 58.2
comp=Z,24nm,0.8s
Q44A **Meyer Farm, Va** 57.80 344 P P 09 58 56.6 -1.1
Q44A IAmb IAmb 09 58 57.4
comp=Z,11nm,0.7s
ACSO **Alum Creek Sta** 57.81 350 P P 09 58 57.1 -0.7
ACSO IAmb IAmb 09 58 57.9
comp=Z,18nm,0.9s
ACSO **Alum Creek Sta** 57.81 350 P P 09 58 57.3 -0.5
baz=168,SNR=5.7
S39A **Bolivar** 57.93 340 P P 09 58 57.9 -0.8
S39A IAmb IAmb 09 58 59.1
comp=Z,12nm,0.8s
MNTX **Cornudas Mount** 57.99 327 P P 09 58 58.2 -1.1
MNTX **Cornudas Mount** 57.99 327 P P 09 58 58.6 -0.6
baz=142
O49A **Covington** 58.00 349 P P 09 58 58.2 -0.9
O49A IAmb IAmb 09 58 58.9
comp=Z,14nm,1.1s
CSTR **Hydro, Custer** 58.09 335 IAmb IAmb 09 59 00.8
comp=Z,1.8nm,0.7s
R40A **Maddies Statio** 58.15 341 IAmb IAmb 09 58 59.8
comp=Z,8.2nm,0.6s
O48B **Farmland** 58.23 348 P P 09 58 59.8 -0.9
baz=166
T35A **Sooner Cattle** 58.35 337 P 09 59 00.8 -0.8
M55A **Ridgway** 58.48 354 IAmb IAmb 09 59 24.1
comp=Z,16nm,0.8s
BLOK **Blackwell** 58.48 336 P 09 59 01.0 -1.5
BLOK IAmb IAmb 09 59 03.4
comp=Z,29nm,0.7s
MSTX **Muleshoe** 58.50 330 P P 09 59 01.2 -1.7
MSTX IAmb IAmb 09 59 23.7
comp=Z,19nm,1.1s
MSTX **Muleshoe** 58.50 330 P P 09 59 02.3 -0.5
baz=145
CROK **Carrier** 58.55 336 IAmb IAmb 09 59 03.5
comp=Z,18nm,0.8s
BRYW **Bryant College** 58.60 0 P P 09 59 02.8 -0.4
P43A **Skaggs, Pawnee** 58.63 344 P P 09 59 02.5 -1.0
P43A IAmb IAmb 09 59 03.3
comp=Z,16nm,0.8s
M53A **WI Miller and** 58.66 352 P P 09 59 03.8 +0.1
baz=171
N49A **Columbus Grove** 58.69 349 IAmb IAmb 09 59 24.1
comp=Z,19nm,1.0s
AMTX **Amarillo** 58.74 332 P P 09 59 03.8 -0.7
baz=147
OK032 **Salt Plains WL** 58.90 336 IAmb IAmb 09 59 06.1
comp=Z,15nm,0.8s
KAN14 **Manchester OK** 58.94 336 IAmb IAmb 09 59 06.2
comp=Z,13nm,0.7s
BINY **Binghamton** 58.99 357 P P 09 59 05.0 -1.0
BINY **Binghamton** 58.99 357 P P 09 59 06.9 +0.9
baz=176
L56A **Greenwood** 59.03 355 P P 09 59 06.2 -0.1
HRV **Adam Dziewonsk** 59.19 0 P P 09 59 08.7 +1.4
baz=181
HRV **Adam Dziewonsk** 59.19 0 P P 09 59 07.9 +0.6
HRV pP **pP** 09 59 22.0 -0.1
HRV sP **sP** 09 59 28.7 +0.5
WVNY **West Valley, N** 59.39 354 P P 09 59 09.2 +0.4
TRY **Troy** 59.43 359 P P 09 59 09.4 +0.4
HDIL **Hopedale** 59.43 345 P P 09 59 07.9 -1.2
HDIL IAmb IAmb 09 59 08.4
comp=Z,12nm,0.8s
HDIL **Hopedale** 59.43 345 P P 09 59 07.7 -1.3
baz=161
K57A **Scipio Center** 59.55 356 P P 09 59 09.8 0.0
MMNY **Mt. Morris Dam** 59.65 355 P P 09 59 10.9 +0.4
L48A **N Adams** 59.73 349 P P 09 59 10.0 -1.0
P38A **Dawn** 59.76 341 P P 09 59 10.8 -0.6
P38A IAmb IAmb 09 59 11.5
comp=Z,9.2nm,1.0s
319A **Douglas** 59.89 323 IAmb IAmb 09 59 34.4
comp=Z,15nm,0.9s
121A **Cookes Peak, D** 59.93 325 P P 09 59 11.6 -1.2
121A IAmb IAmb 09 59 34.9
comp=Z,11nm,1.1s
121A **Cookes Peak, D** 59.93 325 P P 09 59 13.0 +0.1
baz=140
KSU1 **Kansas State U** 60.32 338 IAmb IAmb 09 59 15.5
comp=Z,15nm,0.8s
KSU1 **Kansas State U** 60.32 338 P P 09 59 14.5 -0.7
baz=153
LBNH **Lisbon** 60.92 0 P P 09 59 20.8 +1.6
baz=180
J47A **Sunmer** 61.05 349 P P 09 59 18.9 -1.1
ANMO **Albuquerque** 61.09 328 P P 09 59 19.8 -1.0
ANMO IAmb IAmb 09 59 42.3
comp=Z,20nm,1.9s
ANMO **Albuquerque** 61.09 328 *i eP P 09 59 19.8 -1.0
ANMO *i *PP pP 09 59 33.9 -1.6
ANMO pmax pmax
comp=Z,6.0nm,1.7s
ANMO **Albuquerque** 61.09 328 P P 09 59 21.0 +0.2
baz=142
ANMO **Albuquerque** 61.09 328 P P 09 59 21.0 +0.2
ANMO pP **pP** 09 59 35.4 -0.1
ANMO sP **sP** 09 59 41.6 0.0
CBKS **Cedar Bluff** 61.25 336 P P 09 59 20.4 -1.2
CBKS IAmb IAmb 09 59 38.5
comp=Z,16nm,0.9s
CBKS **Cedar Bluff** 61.25 336 P P 09 59 20.4 -1.2
CBKS pmax pmax
comp=Z,16nm,0.9s
CBKS **Cedar Bluff** 61.25 336 P P 09 59 21.2 -0.3
baz=150
LONY **Lake Ozonia** 61.34 358 P P 09 59 22.1 +0.1
baz=178
L40A **Anamosa** 61.35 344 IAmb IAmb 09 59 27.1
comp=Z,13nm,1.1s
DELO **Delco Mine** 61.40 355 IAmb IAmb 09 59 43.8
comp=Z,18nm,1.2s
TUC **Tucson** 61.44 323 P P 09 59 22.3 -0.8
TUC **Tucson** 61.44 323 P P 09 59 22.3 -0.8
TUC pmax pmax
comp=Z,6.0nm,1.1s
TUC **Tucson** 61.44 323 P P 09 59 22.7 -0.3
baz=137
TUC **Tucson** 61.44 323 P P 09 59 23.3 +0.2
TUC pP **pP** 09 59 37.5 -0.4
TUC sP **sP** 09 59 44.1 +0.2
N35A **Tabor** 61.56 340 P P 09 59 22.9 -0.6
SCIA **State Center** 61.76 342 P P 09 59 24.0 -0.9
baz=157
SADO **Sadowa** 61.78 354 P P 09 59 24.7 -0.2
SADO IAmb IAmb 09 59 46.0
comp=Z,16nm,0.9s
T25A **Trinidad** 61.85 331 P P 09 59 25.7 -0.2
baz=145
JFWS **Jewell Farm** 61.89 345 P P 09 59 25.8 0.0
baz=161
G62A **West of Eustis** 61.91 1 P P 09 59 26.6 +0.8
PKME **Peaks-Kenny Pk** 61.99 2 P P 09 59 27.3 +0.9
baz=183
214A **Organ Pipe Nat** 62.38 321 IAmb IAmb 09 59 51.5
comp=Z,8.9nm,0.9s
214A **Organ Pipe Nat** 62.38 321 P P 09 59 29.3 0.0
baz=136
I42A **Draeger Farm,** 62.50 346 P P 09 59 28.3 -1.5
I42A IAmb IAmb 09 59 44.7
comp=Z,8.5nm,0.8s
KSCO **Gaye Shedlock'** 62.60 334 P P 09 59 30.8 +0.1
baz=147
SDCO **Great Sand Dun** 62.85 331 IAmb IAmb 09 59 54.4
comp=Z,9.1nm,1.0s
SDCO **Great Sand Dun** 62.85 331 P P 09 59 33.0 +0.4
baz=144
I40A **Norwalk** 62.90 345 P P 09 59 31.8 -0.7
I40A IAmb IAmb 09 59 32.2
comp=Z,8.2nm,0.6s
BGNE **Belgrade** 62.91 338 P P 09 59 32.5 0.0
BGNE **Belgrade** 62.91 338 P P 09 59 32.6 0.0
baz=152
TRQ **Mont Tremblant** 62.94 358 P P 09 59 32.2 -0.5
TRQ IAmb IAmb 09 59 49.6
comp=Z,20nm,1.1s
W18A **Petrified Fore** 62.94 326 P P 09 59 33.4 +0.2
baz=139
E62A **Clayton Lake** 63.34 2 P P 09 59 36.4 +1.1
X16A **Lo Mia Camp, P** 63.36 324 P P 09 59 35.9 0.0
X16A IAmb IAmb 09 59 58.3
comp=Z,11nm,1.0s
S22A **4UR Ranch, Cre** 63.49 330 P P 09 59 36.3 -0.6
S22A **4UR Ranch, Cre** 63.49 330 P P 09 59 37.3 +0.4
baz=143
BELA **Belgrano 2** 63.62 172 P P 09 59 37.7 +0.9
BELA IAmb IAmb 09 59 39.0
comp=Z,20nm,1.3s
Q24A **Divide** 63.67 332 P P 09 59 37.3 -0.8
Q24A **Divide** 63.67 332 P P 09 59 38.6 +0.5
baz=145
I37A **Lemond, Waseca** 63.75 343 P P 09 59 37.6 -0.4
I37A IAmb IAmb 09 59 38.5
comp=Z,17nm,1.1s
MVCO **Mesa Verde** 63.89 328 P P 09 59 39.5 0.0
baz=141
Y14A **Wickenburg** 63.90 323 P P 09 59 38.7 -0.7
WUAZ **Wupatki** 64.13 325 P P 09 59 39.2 -1.7
WUAZ IAmb IAmb 10 00 03.9
comp=Z,9.9nm,0.9s
WUAZ **Wupatki** 64.13 325 P P 09 59 42.0 +1.0
baz=138
ECSD **EROS Data Cent** 64.46 341 IAmb IAmb 09 59 43.4
comp=Z,19nm,0.9s
ECSD **EROS Data Cent** 64.46 341 P P 09 59 42.8 +0.1
baz=154
ISCO **Idaho Springs** 64.56 332 P P 09 59 44.2 +0.3
baz=144
COWI **Conover** 64.65 347 P P 09 59 42.8 -1.1
COWI IAmb IAmb 09 59 44.4
comp=Z,8.4nm,0.9s
SPMN **Marine on St.** 64.71 344 P P 09 59 43.6 -0.7
SPMN IAmb IAmb 09 59 45.2
comp=Z,16nm,0.8s
SPMN **Marine on St.** 64.71 344 P P 09 59 44.0 -0.3
baz=158,SNR=5.3
PV15 **Paradox Valley** 64.76 329 IAmb IAmb 10 00 07.4
comp=Z,12nm,1.0s
IKP **In-Ko-Pah, Jac** 64.87 320 P P 09 59 46.8 +1.0
baz=133
BC3 **Big Chuckawall** 65.16 321 P P 09 59 48.1 +0.5
baz=134
MONP2 **Monument Peak** 65.23 320 P P 09 59 48.9 +0.6
baz=133
VNA3 **Neumayer Olymp** 65.29 162 P P 09 59 48.5 +0.6
IRM **Iron Mountain** 65.32 321 P P 09 59 49.7 +1.1
baz=134,SNR=5.6
F36A **Milaca** 65.49 344 P P 09 59 49.0 -0.3
F36A IAmb IAmb 09 59 49.8
comp=Z,17nm,0.8s
VNA1 **Neumayer--Stat** 65.52 161 P P 09 59 50.4 +1.1
N23A **Red Feather La** 65.60 332 P P 09 59 51.9 +1.3
baz=144
E38A **The Farm, Brul** 65.68 345 P P 09 59 50.1 -0.5
E38A IAmb IAmb 09 59 50.9
comp=Z,12nm,1.1s
TPFO **Pinon Flats** 65.73 320 P P 09 59 52.2 +0.9
baz=133
PFO **Pinyon Flats O** 65.74 320 P P 09 59 49.4 -2.0
PFO IAmb IAmb 10 00 14.6
comp=Z,15nm,1.2s
PFO **Pinyon Flats O** 65.74 320 P P 09 59 49.4 -2.0
PFO pmax pmax
comp=Z,15nm,1.2s
PFO **Pinyon Flats O** 65.74 320 P P 09 59 52.3 +0.9
baz=133
PFO **Pinyon Flats O** 65.74 320 P P 09 59 52.7 +1.3
PFO pP **pP** 10 00 07.4 +1.0
PFO sP **sP** 10 00 13.3 +0.9
SUSD **Miller** 65.86 339 P P 09 59 51.4 -0.4
SUSD IAmb IAmb 09 59 52.3
comp=Z,22nm,0.9s
SUSD **Miller** 65.86 339 P P 09 59 51.9 +0.1
baz=152
VNA2 **Neumayer--Watz** 65.88 161 P P 09 59 52.3 +0.6
baz=282,slow=7.0
KNB **Kanab** 66.02 325 IAmb IAmb 10 00 16.1
comp=Z,13nm,0.9s
O20A **White River Ci** 66.05 330 IAmb IAmb 09 59 58.1
comp=Z,18nm,1.5s
O20A **White River Ci** 66.05 330 P P 09 59 53.7 +0.4
baz=142
GMRC **Granite Mounta** 66.06 322 P P 09 59 54.3 +0.8
baz=134
LCMT **Little Creek M** 66.25 325 P P 09 59 52.0 -2.6
LCMT IAmb IAmb 10 00 18.0
comp=Z,26nm,2.0s
F33A **5 Mile Ranch,** 66.26 342 P P 09 59 53.9 -0.4
F33A IAmb IAmb 09 59 54.8
comp=Z,17nm,0.8s
SRU **San Rafael Swe** 66.37 328 IAmb IAmb 10 00 24.7
comp=Z,22nm,1.8s
HEC **Hector,Ludlow** 66.49 321 P P 09 59 57.6 +1.5
baz=134
SCI2 **San Clemente I** 66.62 318 P P 09 59 57.2 +0.3
baz=131
P18A **Preston Nutter** 66.62 329 P P 09 59 54.2 -3.0
P18A IAmb IAmb 10 00 21.4
comp=Z,9.3nm,1.1s
TUQ **Turquoise Moun** 66.66 322 P P 09 59 58.0 +0.6
baz=134
CCUT **Cedar City** 66.71 325 P P 09 59 55.9 -1.8
CCUT IAmb IAmb 10 00 20.8
comp=Z,8.5nm,1.0s
P17A **Butcher Ranch,** 66.75 328 IAmb IAmb 09 59 59.2
comp=Z,6.2nm,0.8s
MVU **Marysvale** 66.79 327 P P 09 59 58.0 -0.2
CIS **Catalina Islan** 66.81 319 P P 09 59 57.6 -0.6
baz=132
BFSC **Mount Baldy Ra** 66.90 320 P P 09 59 59.7 +0.9
baz=132
EYMN **Ely** 66.92 346 P P 09 59 58.1 -0.4
EYMN IAmb IAmb 09 59 58.7
comp=Z,9.6nm,0.8s
EYMN **Ely** 66.92 346 P P 09 59 58.2 -0.3
baz=160,SNR=5.6
GSC **Goldstone, Bar** 67.09 321 P P 10 00 00.6 +0.6
baz=133
SHOC **Shoshone, Teco** 67.19 322 P P 10 00 01.7 +1.1
baz=134
K22A **Casper** 67.27 333 IAmb IAmb 10 00 24.8
comp=Z,9.7nm,0.9s
K22A **Casper** 67.27 333 P P 10 00 01.2 +0.1
baz=144
RSSD **Black Hills** 67.45 336 P P 10 00 02.7 +0.4
RSSD **Black Hills** 67.45 336 P P 10 00 02.7 +0.4
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD **Black Hills** 67.45 336 P P 10 00 03.0 +0.8
baz=147
RSSD **Black Hills** 67.45 336 P P 10 00 02.2 0.0
RSSD pP **pP** 10 00 17.9 +0.8
RSSD sP **sP** 10 00 23.9 +0.7
SNAA **Sanae** 67.51 161 P P 10 00 02.5 +0.5
SNAA **Sanae** 67.51 161 P P 10 00 02.7 +0.6
comp=Z,14nm,0.7s,baz=279,slow=6.3,SNR=76
comp=Z,14nm,0.7s
SNAA **Sanae** 67.51 161 P P 10 00 02.7 +0.6
SNAA IAmb IAmb 10 00 03.8
comp=Z,18nm,0.8s
SNAA **Sanae** 67.51 161 P P 10 00 02.7 +0.6
SNAA pmax pmax
comp=Z,18nm,0.8s
EDW2 **Edwards Air Fo** 67.53 320 P P 10 00 03.0 +0.3
baz=132
PRN **Pahroc Range** 67.54 324 P P 10 00 01.3 -1.6
MPU **Maple Canyon** 67.61 328 P P 10 00 02.4 -0.9
D32A **Dogwood Acres,** 67.64 342 P P 10 00 03.0 -0.1
B35A **Bob, Littlefor** 67.85 345 IAmb IAmb 10 00 04.6
comp=Z,10nm,0.9s
TPNV **Topopah Spring** 67.90 323 P P 10 00 06.6 +1.5
baz=134,SNR=6.0
FURC **Furnace Creek,** 67.92 322 P P 10 00 06.5 +1.4
baz=134,SNR=9.0
JLU **Jordanelle** 67.97 329 P P 10 00 05.7 +0.1
MPMC **Manual Prospec** 68.02 322 P P 10 00 06.8 +0.9
baz=133,SNR=7.2
SPR3 **Spring Creek 3** 68.28 326 IAmb IAmb 10 00 29.9
comp=Z,8.6nm,1.1s
E28A **Huff** 68.32 339 P P 10 00 07.2 -0.1
TCUT **Toone Canyon** 68.33 329 P P 10 00 08.2 +0.3
TCUT IAmb IAmb 10 00 32.9
comp=Z,48nm,2.0s
ISA **Isabella, Lake** 68.34 321 P P 10 00 09.0 +1.2
baz=132,SNR=5.1
DUG **Dugway, Tooele** 68.35 327 P P 10 00 07.8 -0.1
DUG IAmb IAmb 10 00 30.5
comp=Z,13nm,1.1s
DUG **Dugway, Tooele** 68.35 327 P P 10 00 07.8 -0.1
DUG pmax pmax
comp=Z,13nm,1.2s
DUG **Dugway, Tooele** 68.35 327 P P 10 00 09.2 +1.3
baz=138,SNR=8.0
AGMN **Agassiz Nation** 68.36 343 P P 10 00 07.0 -0.5
AGMN IAmb IAmb 10 00 08.1
comp=Z,12nm,0.8s
AGMN **Agassiz Nation** 68.36 343 P P 10 00 07.3 -0.3
baz=156,SNR=9.3
R11A **Troy Canyon, C** 68.50 324 P P 10 00 07.6 -1.3
R11A **Troy Canyon, C** 68.50 324 P P 10 00 10.3 +1.4
baz=135,SNR=10
GRAC **Grapevine Rang** 68.58 322 P P 10 00 10.5 +1.2
baz=133
CWC **Cottonwood Cre** 68.63 321 P P 10 00 10.4 +0.7
baz=133
PKM **Mcpherson Peak** 68.66 319 P P 10 00 10.9 +0.9
baz=131
BW06 **Boulder Array** 68.72 331 P P 10 00 09.4 -0.9

BW06	**Boulder Array**	68.72	331	P		**P**		10 00 10.2	0.0	
	baz=142									
PDAR	**Pinedale Array**	68.72	331	P		**P**		10 00 10.1	-0.1	
	comp=Z,0.5nm,0.6s,baz=140,slow=7.2,SNR=8.5									
	comp=Z,0.5nm,0.6s									
PDAR	**Pinedale Array**	68.72	331	P		**P**		10 00 09.9	-0.4	
GMN	**Gold Mountain**	68.73	323	P		**P**		10 00 09.4	-1.0	
HWUT	**Hardware Ranch**	68.78	329	IAmb		IAmb		10 00 34.2		
	comp=Z,17nm,1.5s									
VES	**Vestal, Richgr**	68.83	320	P		**P**		10 00 08.1	-2.7	
	baz=132									
MDND	**Maddock**	69.08	341	P		**P**		10 00 12.4	+0.4	
MDND	**Maddock**	69.08	341	P		**P**		10 00 12.7	+0.6	
	baz=152,SNR=10									
TROLL	**Troll, Antarti**	69.22	161	P		**P**		10 00 13.8	+0.9	
HVU	**Hansel Valley**	69.51	329	P		**P**		10 00 12.5	-2.6	
HVU	**Hansel Valley**	69.51	329	P		**P**		10 00 12.5	-2.6	
HVU				pmax		pmax				
	comp=Z,5.0nm,1.0s									
MLAC	**Mammoth, Mammo**	69.87	322	P		**P**		10 00 18.5	+1.0	
	baz=132									
OMMB	**Old Mammoth Mi**	69.96	322	IAmb		IAmb		10 00 40.7		
	comp=Z,9.8nm,0.9s									
FXWY	**Fox Creek**	70.07	331	P		**P**		10 00 18.1	-0.5	
NVAR	**Mina Array Bea**	70.10	323	P		**P**		10 00 19.7	+0.8	
	comp=Z,1.7nm,0.8s,baz=162,slow=7.5,SNR=15									
NVAR				pP		**pP**		10 00 35.2	+1.3	
	comp=Z,1.2nm,0.8s,baz=148,slow=6.0,SNR=3.9									
NVAR				sP		**PcP**		10 00 40.5	-0.1	
	comp=Z,3.0nm,0.8s,baz=158,slow=7.7,SNR=9.7									
	comp=Z,1.7nm,0.8s									
LIC	**Lamto**	70.14	77	⇑*i*P		pP		10 00 33.1	-1.3	
	comp=Z,33nm,0.9s									
ULM	**Lac du Bonnet**	70.14	344	P		**P**		10 00 17.9	-0.6	
	comp=Z,7.2nm,0.6s,baz=160,slow=9.0									
ULM				pP		**pP**		10 00 32.7	-1.0	
	comp=Z,4.1nm,0.5s,baz=160,slow=4.8,SNR=4.9									
	comp=Z,7.2nm,0.6s									
ULM	**Lac du Bonnet**	70.14	344	P		**P**		10 00 18.1	-0.5	
ULM				IAmb		IAmb		10 00 18.7		
	comp=Z,24nm,1.4s									
ULM	**Lac du Bonnet**	70.14	344	⇑*e*P		**P**		10 00 17.0	-1.6	
IMW	**Indian Meadow**	70.23	331	P		**P**		10 00 18.3	-1.4	
FLWY	**Flagg Ranch**	70.27	331	P		**P**		10 00 20.5	+0.8	
FLWY				IAmb		IAmb		10 00 52.1		
	comp=Z,14nm,1.1s									
TIC	**Toumodi**	70.30	76	⇑*e*P		pP		10 00 34.0	-1.4	
	comp=Z,21nm,1.0s									
KVN	**Kaiserville**	70.41	324	P		**P**		10 00 21.3	+0.6	
KVN	**Kaiserville**	70.41	324	P		**P**		10 00 21.3	+0.6	
KVN				pmax		pmax				
	comp=Z,6.0nm,1.0s									
RLMT	**Red Lodge**	70.44	333	P		**P**		10 00 19.8	-1.0	
RLMT				IAmb		IAmb		10 00 42.9		
	comp=Z,12nm,1.0s									
RLMT	**Red Lodge**	70.44	333	P		**P**		10 00 21.4	+0.6	
	baz=142,SNR=5.8									
LAO	**LASA Array**	70.44	336	P		**P**		10 00 20.9	+0.3	
	baz=146									
KIC	**Kosan Boka**	70.46	77	⇑*i*P		pP		10 00 35.1	-1.2	
	comp=Z,35nm,0.6s									
DBIC	**Dimbokro**	70.46	76	P		**P**		10 00 20.9	-0.4	
	comp=Z,12nm,0.8s,baz=246,slow=3.5,SNR=9.8									
DBIC				pP		**pP**		10 00 35.3	-1.0	
	comp=Z,24nm,0.8s,baz=256,slow=4.9,SNR=11									
	comp=Z,12nm,0.8s									
DBIC	**Dimbokro**	70.46	76	P		**P**		10 00 20.9	-0.4	
DBIC				IAmb		IAmb		10 00 35.9		
	comp=Z,24nm,0.8s									
DBIC	**Dimbokro**	70.46	76	P		**P**		10 00 20.8	-0.5	
DBIC				pP		**pP**		10 00 35.3	-1.0	
DBIC				sP		**sP**		10 00 41.2	-1.1	
YERR	**Yerington**	71.02	323	P		**P**		10 00 23.4	-1.0	
YERR				IAmb		IAmb		10 00 47.3		
	comp=Z,10nm,0.9s									
CMB	**Columbia Colle**	71.06	321	P		**P**		10 00 23.9	-0.6	
CMB	**Columbia Colle**	71.06	321	P		**P**		10 00 23.9	-0.6	
CMB				pmax		pmax				
	comp=Z,4.0nm,1.1s									
YHL	**Hebgen Lake**	71.08	332	P		**P**		10 00 23.8	-1.0	
YHL				IAmb		IAmb		10 00 49.2		
	comp=Z,31nm,1.6s									
GCMT	**Greycliff**	71.14	333	P		**P**		10 00 24.7	-0.2	
DGMT	**Dagmar**	71.17	338	P		**P**		10 00 25.5	+0.6	
DGMT				IAmb		IAmb		10 00 26.6		
	comp=Z,21nm,0.8s									
DGMT	**Dagmar**	71.17	338	P		**P**		10 00 25.9	+1.0	
	baz=148,SNR=9.4									
PNTR	**Pine Nut**	71.29	323	P		**P**		10 00 26.8	+0.7	
PNTR				IAmb		IAmb		10 00 49.2		
	comp=Z,13nm,0.8s									
PAHR	**Pah Rah Range**	71.58	323	IAmb		IAmb		10 00 51.3		
	comp=Z,19nm,0.9s									
HLID	**Hailey**	71.64	329	P		**P**		10 00 27.9	-0.2	
HLID	**Hailey**	71.64	329	P		**P**		10 00 28.5	+0.5	
	baz=138									
SCHQ	**Schefferville**	71.66	3	P		**P**		10 00 27.6	-0.1	
	comp=Z,3.7nm,1.0s,baz=198,slow=6.4,SNR=4.3									
SCHQ				pP		**pP**		10 00 42.5	-0.4	
	comp=Z,19nm,1.0s,baz=152,slow=3.7,SNR=13									
	comp=Z,3.7nm,1.0s									
BOZ	**Bozeman (W)**	71.85	332	P		**P**		10 00 29.5	+0.2	
	baz=140									
NVL	**N'lazarevskaya**	72.10	160	*e*P		**P**		10 00 30.3	+0.1	
NVL				pmax		pmax				
	comp=Z,15nm,0.9s									
MFID	**Camas Ranch**	72.24	328	IAmb		IAmb		10 00 54.4		
	comp=Z,12nm,1.0s									
EGMT	**Eagleton**	72.94	335	P		**P**		10 00 34.6	-0.9	
EGMT				IAmb		IAmb		10 00 57.5		
	comp=Z,12nm,0.9s									
EGMT	**Eagleton**	72.94	335	P		**P**		10 00 36.2	+0.7	
	baz=143,SNR=5.7									
QSPA	**South Pole Qui**	73.19	180	P		**P**		10 00 37.8	+0.9	
	comp=Z,9.7nm,0.6s,baz=288,slow=0.4,SNR=26									
	comp=Z,9.7nm,0.6s									
QSPA	**South Pole Qui**	73.19	180	P		**P**		10 00 38.0	+1.0	
QSPA				IAmb		IAmb		10 00 39.0		
	comp=Z,32nm,1.2s									
MSO	**Missoula**	73.83	332	IAmb		IAmb		10 01 05.1		
	comp=Z,14nm,1.4s									
MSO	**Missoula**	73.83	332	P		**P**		10 00 42.1	+1.2	
	baz=139									
BMO	**Blue Mountains**	74.01	328	P		**P**		10 00 42.4	+0.4	
BMO	**Blue Mountains**	74.01	328	P		**P**		10 00 42.4	+0.4	
BMO				pmax		pmax				
	comp=Z,4.0nm,1.0s									
KOWA	**Kowa**	74.10	69	P		**P**		10 00 41.6	-1.4	
KOWA				IAmb		IAmb		10 00 57.3		
	comp=Z,9.2nm,0.8s									
J05D	**Fort Rock, OR**	75.00	325	P		**P**		10 00 49.0	+1.2	
	baz=132									
J04D	**Umpqua Nationa**	75.45	325	P		**P**		10 00 50.7	+0.2	
	baz=131									
WALA	**Waterton Lakes**	75.50	333	P		**P**		10 00 49.5	-1.0	
WALA				IAmb		IAmb		10 01 13.3		
	comp=Z,11nm,1.1s									
L02F	**Cave Junction**	75.56	323	P		**P**		10 00 51.2	+0.3	
	baz=130									
I05D	**Terrebonne, OR**	75.76	326	P		**P**		10 00 52.9	+0.9	
	baz=132									
HAWA	**Hanford**	76.20	328	P		**P**		10 00 52.1	-2.3	
C09A	**Chrisman Ranch**	76.57	330	P		**P**		10 00 54.7	-1.8	
C09A				IAmb		IAmb		10 01 20.2		
	comp=Z,22nm,1.7s									
B08A	**Colville Reser**	77.47	330	P		**P**		10 01 01.0	-0.6	
EDM	**Edmonton**	78.43	336	P		**P**		10 01 06.3	-0.4	
EDM	**Edmonton**	78.43	336	P		**P**		10 01 06.3	-0.4	
EDM				pmax		pmax				
	comp=Z,42nm,1.1s									
TOA0	**Torodi Ar. Sit**	78.77	72	P		**P**		10 01 08.4	-1.0	
TORD	**Torodi Ar. Bea**	78.77	72	P		**P**		10 01 08.7	-0.7	
	comp=Z,15nm,0.9s,baz=259,slow=5.2,SNR=59									
TORD				pP		**pP**		10 01 23.3	-1.4	
	comp=Z,35nm,0.7s,baz=253,slow=5.7,SNR=39									
	comp=Z,15nm,0.9s									
TORD	**Torodi Ar. Bea**	78.77	72	P		**P**		10 01 08.5	-0.9	
IVI	**Ivigtut**	80.23	11	P		**P**		10 01 16.7	+0.4	
IVI				IAmb		IAmb		10 01 32.5		
	comp=Z,26nm,1.1s									
MORF	**Marmelete**	80.44	46	*e*pP		pP		10 01 34.4	+0.9	
VNDA	**Vanda**	80.75	190	P		**P**		10 01 21.2	+2.1	
	comp=Z,5.1nm,0.8s,baz=96,slow=3.4,SNR=14									
	comp=Z,5.1nm,0.8s									
PNCL	**Nicolau / Gran**	80.92	46	*e*pP		pP		10 01 36.3	+0.3	
MESJ	**Messejana**	81.00	46	*e*pP		pP		10 01 37.0	+0.6	

PCVE	**Castro Verde**	81.02	46	*e*pP		pP		10 01 37.2	+0.7	
PBEJ	**Beja**	81.33	46	*e*pP		pP		10 01 38.5	+0.3	
PMTG	**Montargil**	81.60	45	*e*pP		pP		10 01 39.9	+0.3	
PESTR	**Estremoz**	81.93	45	*e*pP		pP		10 01 41.5	+0.1	
PBAR	**Barrancos**	81.97	46	*e*pP		pP		10 01 41.7	+0.1	
TSUM	**Tsumeb**	84.25	108	P		**P**		**10 01 37.8**	**-0.8**	
PAB	**San Pablo**	84.47	46	P		**P**		**10 01 40.0**	**+0.8**	
PAB				IAmb		IAmb		10 01 55.7		
	comp=Z,13nm,0.9s									
PAB	**San Pablo**	84.47	46	P		**P**		**10 01 40.0**	**+0.8**	
PAB				pmax		pmax				
	comp=Z,13nm,1.0s									
ESDC	**Sonseca Array**	84.80	46	P		**P**		**10 01 41.6**	**+0.9**	
	comp=Z,3.8nm,0.8s,baz=255,slow=5.3,SNR=29									
ESDC				pP		**pP**		**10 01 56.4**	**+0.1**	
	comp=Z,9.7nm,1.1s,baz=253,slow=5.7,SNR=15									
	comp=Z,3.8nm,0.8s									
ESDC	**Sonseca Array**	84.80	46	P		**P**		**10 01 40.9**	**+0.2**	
ESDC				IAmb		IAmb		10 01 57.5		
	comp=Z,29nm,1.6s									
ESBB	**Sonseca Array**	84.80	46	P		**P**		**10 01 40.7**	**0.0**	
YKA	**Yellowknife Ar**	85.96	342	P		**P**		**10 01 45.7**	**-0.2**	
	comp=Z,14nm,0.8s,baz=138,slow=5.1,SNR=24									
YKA				pP		**pP**		**10 02 00.9**	**-0.6**	
	comp=Z,6.4nm,0.6s,baz=136,slow=5.0,SNR=8.4									
	comp=Z,14nm,0.8s									
YKA	**Yellowknife Ar**	85.96	342	P		**P**		**10 01 45.6**	**-0.3**	
FLDN	**Fort Liard**	87.34	337	P		**P**		**10 01 53.2**	**+0.6**	
	baz=132									
T35M	**Bob Quinn**	88.08	332	P		**P**		**10 01 57.1**	**+0.7**	
	baz=126									
DLBC	**Dease Lake**	88.83	334	P		**P**		**10 01 59.5**	**-0.5**	
DLBC				IAmb		IAmb		10 02 01.7		
	comp=Z,12nm,1.0s									
DLBC	**Dease Lake**	88.83	334	P		**P**		**10 02 00.5**	**+0.6**	
	baz=126									
WRGLY	**Wrigley**	89.33	339	P		**P**		**10 02 02.5**	**+0.5**	
	baz=132									
MAW	**Mawson**	89.49	164	P		**P**		**10 02 04.1**	**+1.3**	
	comp=Z,6.6nm,1.0s,baz=214,slow=5.6,SNR=8.9									
MAW				pP		**pP**		**10 02 19.1**	**+1.1**	
	comp=Z,3.1nm,0.6s,baz=228,slow=4.2,SNR=3.7									
MAW				sP		**sP**		**10 02 25.2**	**+1.5**	
	comp=Z,5.5nm,0.7s,baz=226,slow=5.9,SNR=5.8									
	comp=Z,6.6nm,1.0s									
R33M	**Jennings River**	89.79	334	P		**P**		**10 02 05.4**	**+1.0**	
	baz=125									
TGTN	**Hyland Airport**	89.97	337	P		**P**		**10 02 06.0**	**+0.8**	
	baz=128									
P33M	**Teslin, Yukon**	91.02	334	P		**P**		**10 02 10.4**	**+0.3**	
	baz=124									
P32M	**Atlin**	91.06	333	P		**P**		**10 02 11.0**	**+0.7**	
	baz=123									
SUMG	**Summit**	92.10	10	P		**P**		**10 02 15.4**	**+0.1**	
SUMG	**Summit**	92.10	10	P		**P**		**10 02 15.4**	**+0.1**	
SUMG				pmax		pmax				
	comp=Z,27nm,1.1s									
SUMG	**Summit**	92.10	10	*i* P		**P**		**10 02 15.0**	**-0.3**	
FARO	**Faro, Yukon**	92.34	336	P		**P**		**10 02 16.9**	**+0.7**	
	baz=123									
P30M	**Million Dollar**	92.74	333	P		**P**		**10 02 19.4**	**+1.4**	
	baz=120									
N31M	**Braeburn, Yuko**	92.93	334	P		**P**		**10 02 19.0**	**+0.1**	
	baz=121									
N30M	**Aishikik Lake**	93.46	334	P		**P**		**10 02 21.7**	**+0.4**	
	baz=120									
PINM	**Pinnacle**	94.18	332	P		**P**		**10 02 25.0**	**+0.3**	
	baz=117									
M29M	**Somme Creek**	94.51	335	P		**P**		**10 02 26.9**	**+0.6**	
	baz=119									
YUK3	**Moose Creek**	95.03	334	P		**P**		**10 02 28.7**	**0.0**	
	baz=117									
DAWY	**Dawson**	95.64	336	P		**P**		**10 02 30.9**	**-0.4**	
	baz=118									
INK	**Inuvik**	95.70	341	P		**P**		**10 02 31.2**	**-0.2**	
	comp=Z,2.5nm,0.8s,baz=136,slow=3.7,SNR=4.2									
INK				pP		**pP**		**10 02 46.1**	**-0.7**	
	comp=Z,3.5nm,0.9s,baz=20,slow=6.4,SNR=4.2									
	comp=Z,2.5nm,0.8s									
I29M	**Ogilvie Camp,**	95.84	337	P		**P**		**10 02 31.9**	**-0.2**	
	baz=119									
M27K	**Edge Creek, AK**	95.89	334	P		**P**		**10 02 31.6**	**-1.0**	
	baz=116									
K27K	**Chicken**	96.69	335	P		**P**		**10 02 35.6**	**-0.3**	
	baz=115									
I27K	**Kandik River**	97.18	337	P		**P**		**10 02 37.8**	**-0.5**	
	baz=116									
J26L	**Joseph Creek**	97.47	336	P		**P**		**10 02 39.2**	**-0.5**	
	baz=114									
J25K	**Salcha River,**	98.23	335	P		**P**		**10 02 42.4**	**-0.6**	
	baz=112									
G26K	**Porcupine Rive**	98.54	338	P		Pdif		10 02 44.7	+0.5	
	baz=114									
GERES	**GERESS Array B**	99.87	42	P		**Pdif**		**10 02 50.2**	**-0.5**	
	comp=Z,0.7nm,0.7s,baz=280,slow=5.9,SNR=4.4									
	comp=Z,0.7nm,0.7s									
TOLK	**Toolik Lake Re**	101.19	339	P		**Pdif**		**10 02 56.1**	**0.0**	
	baz=108									
C23K	**Itkillik River**	101.90	340	P		**Pdif**		**10 02 59.3**	**+0.1**	
	baz=107									
F21K	**Alatna River**	102.22	337	P		**Pdif**		**10 03 00.6**	**-0.1**	
	baz=105									
OBN	**Obninsk**	114.42	37	*i* PKIKP		PKPdf		10 07 44.1	-1.4	
OBN				pmax		pmax				
	comp=Z,5.0nm,1.1s									
KBZ	**Khabaz**	119.53	49	PKP		**PKiKP**		**10 07 56.8**	**+1.0**	
	comp=Z,3.6nm,0.9s,baz=124,slow=1.1,SNR=5.4									
KBZ	**Khabaz**	119.53	49	⇓*i*PKIKP		**PKiKP**		**10 07 56.3**	**+0.5**	
KIRV	**Kirov**	120.60	31	⇑*i*PKIKP		**PKPdf**		**10 07 55.7**	**-1.6**	
H11N3	**WAKE ISLAND Hy**	124.18	283	T		T		12 25 00.6		
	baz=98,slow=74,SNR=107									
H11N2	**WAKE ISLAND Hy**	124.19	283	T		T		12 25 01.7		
	baz=98,slow=74,SNR=129									
H11N1	**WAKE ISLAND Hy**	124.19	283	T		T		12 25 06.7		
	baz=98,slow=74,SNR=94									
H11S2	**WAKE ISLAND Hy**	124.20	281	T		T		12 23 51.1		
	SNR=306									
H11S1	**WAKE ISLAND Hy**	124.21	281	T		T		12 24 12.5		
	baz=348,slow=74,SNR=276									
H11S3	**WAKE ISLAND Hy**	124.22	281	T		T		12 24 39.7		
	baz=98,slow=74,SNR=180									
SEY	**Seymchan**	124.78	337	PKP		**PKiKP**		**10 08 06.5**	**+0.9**	
	comp=Z,5.0nm,0.9s,baz=133,slow=21,SNR=4.3									
ARU	**Arti**	125.99	31	PKP		**PKiKP**		**10 08 08.3**	**+0.1**	
	comp=Z,1.6nm,0.3s,baz=258,slow=3.0,SNR=4.6									
ARU				pPKP		**pPKPdf**		**10 08 24.0**	**+0.4**	
	comp=Z,4.1nm,0.5s,baz=188,slow=3.3,SNR=2.2									
ARU	**Arti**	125.99	31	⇑*i*PKIKP		**PKiKP**		**10 08 08.2**	**+0.1**	
ARU				pmax		pmax				
	comp=Z,8.0nm,2.5s									
AKTO	**Aktyubinsk**	128.12	38	PKP		**PKiKP**		**10 08 12.9**	**+0.3**	
	comp=Z,2.3nm,0.9s,baz=343,slow=2.8,SNR=5.7									
SKR	**Severo-Kuril's**	129.03	322	⇑*i*PKIKP		**PKPdf**		**10 08 10.8**	**-2.9**	
ASAR	**Alice Springs**	132.29	213	PKP		**PKPdf**		**10 08 20.3**	**-0.6**	
	comp=Z,1.7nm,0.7s,baz=142,slow=1.6,SNR=11									
ASAR				pPKP		**pPKPdf**		**10 08 37.0**	**+0.5**	
	comp=Z,1.6nm,0.8s,baz=151,slow=2.6,SNR=5.1									
YAK	**Yakutsk**	132.45	346	⇑*i*PKIKP		**PKPdf**		**10 08 19.0**	**-0.8**	
BRVK	**Borovoye**	133.54	31	⇑*i*PKIKP		**PKiKP**		**10 08 23.5**	**+0.1**	
BRVK				pmax		pmax				
	comp=Z,5.0nm,2.5s									
WRA	**Warramunga Arr**	135.06	216	PKP		**PKPdf**		**10 08 26.2**	**+0.1**	
	comp=Z,2.9nm,0.9s,baz=137,slow=1.6,SNR=8.8									
WRA				pPKP		**pPKPdf**		**10 08 42.1**	**+0.3**	
	comp=Z,2.2nm,0.8s,baz=144,slow=1.7,SNR=6.2									
WRAB	**Tennant Creek**	135.06	216	⇑*i*PKIKP		**PKPdf**		**10 08 25.7**	**-0.4**	
ZALV	**Zalesovo Beam**	138.97	21	PKP		**PKPdf**		**10 08 32.3**	**+0.1**	
	comp=Z,5.2nm,0.8s,baz=321,slow=2.0,SNR=8.6									
ZALV				pPKP		**pPKPdf**		**10 08 48.9**	**+0.7**	
	comp=Z,8.4nm,0.8s,baz=296,slow=2.4,SNR=5.5									
AAK	**Ala-Archa**	141.74	41	⇑*i*PKIKP		**PKPdf**		**10 08 39.2**	**+1.3**	
KLR	**Kul'dur**	142.47	334	⇓*i*PKIKP		**PKPdf**		**10 08 39.6**	**+0.9**	
KLR				pmax		pmax				
	comp=Z,10.0nm,2.5s									
DGZ	**Jazzator, Alta**	143.40	22	⇓*i*PKIKP		**PKPdf**		**10 08 39.7**	**-0.9**	
MK31	**Makanchi Array**	143.48	30	*i* PKIKP		**PKiKP**		**10 08 43.0**	**-1.0**	
MKAR	**Makanchi Array**	143.48	30	PKP		PKPbc		10 08 38.0	+0.1	
	comp=Z,3.6nm,0.7s,baz=326,slow=3.8,SNR=21									
MKAR	**Makanchi Array**	143.48	30	*c* PKIKP		**PKiKP**		**10 08 42.9**	**-1.1**	
MKAR				pmax		pmax				
	comp=Z,2.0nm,0.8s									
KSH	**Kashi**	144.30	45	PKP		**PKPdf**		**10 08 41.8**	**-0.6**	
MOY	**Mondy**	144.96	8	*e*PKIKP		**PKPdf**		**10 08 43.5**	**+0.3**	
MOY				pmax		pmax				
	comp=Z,30nm,1.8s									
KNGR	**Kungurtug, Tuv**	145.43	12	⇓*i*PKP2		**PKPab**		**10 08 45.3**	**+1.1**	
USRK	**Ussuriysk Ar.**	146.10	328	PKPbc		**PKPbc**		**10 08 46.3**	**+0.2**	
	comp=Z,5.0nm,0.7s,baz=173,slow=3.1,SNR=12									
HIA	**Hailar**	146.39	346	⇑*i*PKP2		**PKPbc**		**10 08 46.7**	**-0.2**	
ZAK	**Zakamensk**	146.47	5	*e*PKP2		**PKPdf**		**10 08 45.8**	**0.0**	
ZAK				*e*				10 12 05.9		
ZAK				pmax		pmax				
	comp=Z,12nm,1.6s									
MJAR	**Matsushiro Arr**	146.88	312	PKPbc		**PKPbc**		**10 08 48.8**	**+0.1**	
	comp=Z,4.1nm,0.5s,baz=206,slow=8.5,SNR=31									
MAJO	**Matsushiro**	146.88	312	*d* PKP2		**PKPbc**		**10 08 49.0**	**+0.3**	
MSHR	**Mys Shultsa**	147.68	327	*c* PKP2		**PKPbc**		**10 08 51.3**	**+0.6**	
MSHR				pmax		pmax				
	comp=Z,13nm,1.3s									
WMQ	**Urumqi**	148.24	28	*e*P		**PKPdf**		**10 08 48.9**	**0.0**	
SONM	**Songino Array**	149.20	2	PKP		**PKPdf**		**10 08 51.2**	**+0.8**	
	comp=Z,5.5nm,0.7s,baz=332,slow=4.3,SNR=9.8									
SONM				PKPbc		**PKPbc**		**10 08 55.2**	**+0.5**	
	comp=Z,5.5nm,0.7s,baz=317,slow=1.2,SNR=20									
SONM				pPKPbc		**pPKPbc**		**10 09 11.2**	**+0.4**	
	comp=Z,6.2nm,0.8s,baz=322,slow=1.4,SNR=8.8									
HYBB	**Hyderabad (bro**	151.96	85	*e*PKIKP		**PKPbc**		**10 09 01.6**	**-0.4**	
XLT	**XiLinHaoTe**	152.29	347	*e*P		**PKPdf**		**10 08 53.4**	**-1.8**	
XLT				pmax		pmax				
	comp=Z,18nm,0.9s									
KSRS	**Korea Array**	153.04	323	PKP		**PKPdf**		**10 08 57.1**	**+0.7**	
	comp=Z,2.3nm,0.9s,baz=23,slow=1.3,SNR=11									
KSRS				PKPbc		**PKiKP**		**10 09 04.2**	**+0.3**	
	comp=Z,5.0nm,0.8s,baz=15,slow=1.4,SNR=18									
KSRS				pPKPbc		**pPKPbc**		**10 09 20.1**	**+0.7**	
	comp=Z,3.0nm,0.9s,baz=41,slow=0.8,SNR=3.9									
KAPI	**Kappang**	155.22	209	PKPab		**PKPab**		**10 09 26.8**	**+1.8**	
	comp=Z,1.4nm,0.6s,baz=253,slow=2.9,SNR=7.1									
HHC	**Hu-ho-hao-te**	156.00	353	*e*P		**PKPdf**		**10 09 00.3**	**-0.3**	
LZH	**Lanzhou**	160.63	10	*e*P		**PKPdf**		**10 09 06.4**	**0.0**	
LZH				pP		pPKPdf		10 09 13.0	-9.4	
LZH				pmax		pmax				
	comp=Z,18nm,1.4s									
PZH	**PanZhiHua**	168.92	30	PKP		**PKPdf**		**10 09 12.5**	**-1.3**	
CMAR	**Chiang Mai Arr**	171.32	79	PKP		**PKPdf**		**10 09 15.2**	**0.0**	
	comp=Z,1.9nm,0.9s,baz=308,slow=2.0,SNR=7.4									

IDC ***19*** *09:51:06.1±0.6,22.86S×173.35E, h0km, mb4.5/17, mbtmp4.4/18, ML3.9/1, Error ellipse: s-maj=19.3km s-min=17.8km az=160.0*

NEIC ***19*** *09:51:08.5±2.2,22.86S±0.09×173.20E±0.08, h10km±1km, mb4.9/31, Error ellipse: s-maj=15.1km s-min=12.5km az=9.0*

NOU ***19*** *09:51:11.1,22.67S×173.14E, h0km, MLv4.8/9, Southeast of Loyalty Islands*

ISC 19 09:51:08.1±0.4, 22.87S±0.07×173.18E±0.06, h10km, n116, σ1.56/115, mb4.7/30, Southeast of Loyalty Islands

| Code | Station Name | Δ° | AZ° | Ph

SMAI	**San Martin Ant**	**79.22**	**161**	P	**P**	**10 03 13.7**	**+0.6**
SMAI				IAmb	IAmb	10 03 14.8		
	comp=Z,12nm,1.0s							
CMAR	**Chiang Mai Arr**	**83.33**	**293**	P	**P**	**10 03 38.7**	**+3.0**
	comp=Z,0.6nm,0.3s,baz=146,slow=3.4,SNR=5.4							
TROLL	**Troll, Antarti**	**85.16**	**183**	P	**P**	**10 03 42.8**	**-1.5**
SNAA	**Sanae**	**85.67**	**181**	P	**P**	**10 03 44.7**	**-2.1**
SNAA	**Sanae**	**85.67**	**181**	P	**P**	**10 03 45.6**	**-1.2**
	comp=Z,5.7nm,0.8s,baz=181,slow=4.9,SNR=12							
	comp=Z,5.7nm,0.8s							
SNAA	**Sanae**	**85.67**	**181**	P	**P**	**10 03 45.8**	**-1.0**
SNAA				IAmb	IAmb	10 05 11.5		
	comp=Z,12nm,1.0s							
VNA3	**Neumayer Olymp**	**86.12**	**179**	P	**P**	**10 03 47.0**	**-1.9**
VNA2	**Neumayer--Watz**	**86.46**	**180**	P	**P**	**10 03 48.9**	**-1.7**
	baz=182,slow=4.0							
VNA1	**Neumayer--Stat**	**86.73**	**180**	P	**P**	**10 03 50.9**	**-1.0**
PAHR	**Pah Rah Range**	**88.44**	**45**	P	**P**	**10 03 59.9**	**-0.9**
PAHR				IAmb	IAmb	10 04 01.4		
	comp=Z,3.4nm,1.0s							
NVAR	**Mina Array Bea**	**88.50**	**47**	P	**P**	**10 04 00.9**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=227,slow=6.1,SNR=1.7							
	comp=Z,1.3nm,1.0s							
BMN	**Battle Mountai**	**90.24**	**46**	P	**P**	**10 04 09.5**	**+0.2**
BMN				IAmb	IAmb	10 04 10.4		
	comp=Z,5.7nm,0.9s							
J08A	**Circle Bar Ran**	**90.92**	**43**	P	**P**	**10 04 11.1**	**-1.1**
J08A				IAmb	IAmb	10 04 13.3		
	comp=Z,3.5nm,0.9s							
GTA	**Gaotai**	**92.28**	**312**	*e*PKPbc	**PKiKP**	**10 09 02.4**	**-5.8**
GTA				sPKP		10 09 19.0		
SONM	**Songino Array**	**92.33**	**322**	P	**P**	**10 04 18.0**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=134,slow=4.3,SNR=5.3							
	comp=Z,1.2nm,0.9s							
DOT	**Dot Lake**	**92.50**	**18**	P	**P**	**10 04 17.9**	**-1.0**
DOT				IAmb	IAmb	10 05 28.2		
	comp=Z,5.4nm,0.7s							
ILAR	**Eielson Array**	**92.64**	**16**	P	**P**	**10 04 17.4**	**-2.2**
	comp=Z,2.1nm,0.8s,baz=225,slow=5.9,SNR=13							
	comp=Z,2.1nm,0.8s							
PLCA	**Paso Flores**	**93.39**	**137**	P	**P**	**10 04 24.1**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=235,slow=4.6,SNR=4.4							
	comp=Z,1.8nm,0.9s							
EGAK	**Eagle**	**94.18**	**18**	P	**P**	**10 04 26.1**	**-0.5**
EGAK				IAmb	IAmb	10 08 01.8		
	comp=Z,14nm,1.7s							
TXAR	**Lajitas Array**	**95.30**	**61**	P	**P**	**10 04 33.2**	**+0.5**
	comp=Z,0.5nm,1.0s,baz=210,slow=7.2,SNR=3.8							
	comp=Z,0.5nm,1.0s							
BMAR	**Burnt Mountain**	**95.33**	**15**	P	**P**	**10 04 31.6**	**-0.3**
ARCES	**ARCESS Array B**	**129.48**	**346**	PKP	**PKPdf**	**10 10 14.7**	**-1.7**
	comp=Z,1.6nm,0.6s,baz=101,slow=1.2,SNR=8.9							
BURAR	**Bucovina Array**	**144.44**	**322**		**PKPab**	**10 10 42.0**	**-1.0**
ISP	**Isparta**	**144.75**	**304**	PKPdf	**PKPab**	**10 10 43.2**	**-1.2**
MLR	**Muntele Rosu**	**145.11**	**318**	PKPbc	**PKPbc**	**10 10 44.5**	**-0.9**
	comp=Z,3.3nm,0.7s,baz=51,slow=4.1,SNR=6.7							
MLR	**Muntele Rosu**	**145.11**	**318**	PKPbc	**PKPbc**	**10 10 44.8**	**-0.6**
OJC	**Ojcow**	**145.67**	**329**	PKPdf	**PKPdf**	**10 10 45.5**	**-1.2**
MORC	**Moravsky Berou**	**147.02**	**331**	PKPbc	**PKPbc**	**10 10 50.5**	**-0.5**
MORC	**Moravsky Berou**	**147.02**	**331**	*e*PKP	**PKPdf**	**10 10 50.3**	**+1.3**
OSTC	**Ostas**	**147.03**	**333**	*e*PKP	**PKPbc**	**10 10 51.2**	**+0.2**
DPC	**Dobruska-Polom**	**147.14**	**332**	*e*PKP	**PKPbc**	**10 10 50.8**	**-0.5**
KRLC	**Kraliky**	**147.15**	**332**	*e*PKP	**PKPbc**	**10 10 50.8**	**-0.6**
EKA	**Eskdalemuir Ar**	**147.46**	**356**	PKPbc	**PKPdf**	**10 10 50.3**	**+0.8**
	comp=Z,7.7nm,0.7s,baz=351,slow=3.0,SNR=17							
JAVC	**Velka Javorina**	**147.62**	**329**	*e*PKP	**PKPbc**	**10 10 53.4**	**+0.7**
BRG	**Berggiesshubel**	**147.71**	**335**	*e*P	**PKPbc**	**10 10 52.1**	**-0.7**
BRG				Amp		10 10 55.5		
	comp=Z,7.9nm,1.0s							
BRG				Amp		10 11 02.0		
	comp=N,10nm,17.9s							
BRG				Amp		10 11 05.0		
	comp=Z,16nm,17.7s							
BRG				Amp		10 11 16.0		
	comp=E,3.9nm,19.3s							
CLL	**Collm**	**147.72**	**337**	PKPbc	**PKPbc**	**10 10 51.9**	**-0.9**
CLL	**Collm**	**147.72**	**337**	*i* PKP	**PKPbc**	**10 10 51.8**	**-1.0**
	comp=Z,14nm,0.9s							
CLL				*i* PKiKP	**pPKPbc**	**10 10 54.0**	**-0.2**
	comp=Z,6.0nm,0.9s							
VRAC	**Vranov**	**147.79**	**331**	*e*PKP	**PKPbc**	**10 10 52.4**	**-0.7**
KRUC	**Moravsky**	**148.06**	**331**	*e*PKP	**PKPbc**	**10 10 53.1**	**-0.7**
PRU	**Pruhonice**	**148.16**	**334**	*e*PKP	**PKPbc**	**10 10 53.0**	**-1.1**
NKC	**Novy Kostel**	**148.80**	**336**	*e*PKP	**PKPbc**	**10 10 55.3**	**-0.4**
RONA	**Rosalia, Austr**	**149.08**	**329**	*e*P	**PKPbc**	**10 10 55.9**	**-0.6**
	comp=Z,3.8nm,0.9s							
CONA	**Conrad Observa**	**149.13**	**330**	*e*P	**PKPbc**	**10 10 56.0**	**-0.7**
	comp=Z,1.8nm,0.8s							
CKRC	**Cesky Krumlov**	**149.16**	**332**	*e*PKP	**PKPbc**	**10 10 55.6**	**-1.1**
KHC	**Kasperske Hory**	**149.23**	**333**	*e*PKP	**PKPbc**	**10 10 55.5**	**-1.4**
KHC				*ex*	x	10 11 00.4		
GEC2	**GERESS Array S**	**149.40**	**333**	PKPbc	**PKPbc**	**10 10 56.5**	**-0.9**
GERES	**GERESS Array B**	**149.40**	**333**	PKPbc	**PKPbc**	**10 10 56.2**	**-1.2**
	comp=Z,2.3nm,1.0s,baz=51,slow=0.9,SNR=16							
GERES	**GERESS Array B**	**149.40**	**333**	PKPbc	**PKPbc**	**10 10 56.4**	**-1.0**
DIVS	**Divibare**	**149.43**	**320**	PKPbc	**PKPbc**	**10 10 56.6**	**-1.0**
SOKA	**Soboth**	**150.42**	**329**	*e*P	**PKPbc**	**10 10 58.3**	**-1.6**
	comp=Z,3.0nm,0.7s							
KBA	**Koelnbreinsper**	**150.90**	**331**	*e*P	**PKPbc**	**10 10 59.7**	**-1.5**
	comp=Z,6.2nm,1.1s							
ABTA	**Abfaltersbach**	**151.53**	**331**	*e*P	**PKPbc**	**10 11 00.3**	**-2.2**
	comp=Z,6.8nm,1.2s							
MOTA	**Moosalm**	**151.65**	**334**	*e*P	**PKPbc**	**10 11 01.5**	**-1.3**
	comp=Z,5.5nm,0.9s							
FETA	**Feichten**	**152.06**	**334**	*e*P	**PKPbc**	**10 11 02.8**	**-1.1**
	comp=Z,4.4nm,1.1s							
TORD	**Torodi Ar. Bea**	**167.39**	**221**	PKP	**PKPdf**	**10 11 14.3**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=308,slow=1.8,SNR=7.9							

HEL 19 09:52:28.8±0.2, 67°.62N×20°.81E, h0km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.62**	**46**	PG	Pg	09 52 40.3	-0.4
	baz=230						
LANU				SG	Sg	09 52 48.1	-0.6
PAJU	**Pajala**	**1.08**	**123**	PG	Pg	09 52 48.3	-1.1
PAJU				SG	Sg	09 53 02.1	-1.3
KLF	**Kolari**	**1.28**	**106**	PG	Pg	09 52 52.2	-1.1
KLF				SB	Sg	09 53 08.4	-1.4
HEF	**Hetta**	**1.33**	**52**	*e*P	Pg	09 52 53.3	-1.0
HEF	**Hetta**	**1.33**	**52**	PG	Pg	09 52 52.7	-1.6
	baz=237						
HEF				MSG		09 53 09.0	
	comp=Z,7.2nm,0.2s						
HEF				SG	Sg	09 53 09.8	-1.7
KIF	**Kilpisjarvi**	**1.39**	**360**	*e*P	Pb	09 52 55.7	+0.1
KIF	**Kilpisjarvi**	**1.39**	**360**	PN	Pb	09 52 55.5	-0.1
KIF				MSG		09 53 11.8	
	comp=Z,29nm,0.2s						
KIF				SN	Sn	09 53 15.1	+0.7
KTK1	**Kautokeino**	**1.66**	**32**	PG	Pn	09 52 59.3	+0.1
KTK1				SN	Sg	09 53 22.9	+0.8
KALU	**Kalix**	**2.04**	**149**	PG	Pb	09 53 05.6	-1.1
KALU				SG	Sb	09 53 32.6	+0.1
TOF	**Tornio**	**2.08**	**136**	PG	Pb	09 53 06.3	-1.1
TOF				MSG		09 53 30.7	
	comp=Z,6.7nm,0.2s						
TOF				SG	Sb	09 53 33.2	-0.5
SGF	**Sodankyl**	**2.21**	**92**	PG	Pn	09 53 07.4	+0.8
SGF				SG	Sb	09 53 35.9	-1.4
RNF	**Rovaniemi**	**2.28**	**114**	PG	Pn	09 53 09.0	+1.5
RNF				SG	Sb	09 53 38.4	-1.0
ARA0	**ARCESS Array S**	**2.58**	**40**	PB	Pn	09 53 12.5	+0.7
	baz=220						
ARA0				SB	Sn	09 53 45.6	+1.8
KEV	**Kevo**	**3.12**	**44**	PB	Pn	09 53 20.2	+1.1
	baz=228						
KEV				SN	Sn	09 53 57.1	+0.1
KEV				MSG		09 54 00.3	
	comp=Z,3.3nm,0.2s						
VRF	**Varrio**	**3.36**	**84**	SB	Sb	09 54 10.1	-0.4
OBF8	**Ulkokalla**	**3.48**	**161**	SN	Sn	09 54 07.1	+1.2
OLKF	**Oulanka, Finla**	**3.62**	**107**	PN	Pn	09 53 27.7	+1.6
OLKF				SG	Sb	09 54 17.4	-0.7
MSF	**Maaselka**	**3.69**	**114**	SN	Sn	09 54 11.7	+0.6
KU6	**Riekki**	**3.93**	**110**	PG	Pb	09 53 39.4	+0.5

HEL 19 09:53:10.4±0.1, 61°.52N×23°.39E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAF	**Rauma**	**0.93**	**238**	PB	Pg	09 53 27.6	-0.6
RAF				MSG		09 53 38.9	
	comp=Z,2.6nm,0.2s						
RAF				SB	Sg	09 53 40.6	+0.4
KEF	**Keuruu**	**0.96**	**47**	PG	Pg	09 53 27.5	-1.2
KEF				MSG		09 53 39.7	
	comp=Z,1.8nm,0.2s						
KEF				SB	Sg	09 53 41.3	+0.2
FIA0	**FINESS Array S**	**1.29**	**92**	PG	Pg	09 53 33.6	-1.5
	baz=275						
FIA0				SN	Sg	09 53 51.5	-0.4
KAF	**Kangasniemi**	**1.51**	**65**	PG	Pn	09 53 37.3	-1.4
KAF				MSG		09 53 55.5	
	comp=Z,1.7nm,0.2s						
KAF				SN	Sg	09 53 58.4	-0.3
VAF	**Ylistaro**	**1.56**	**348**	PN	Pn	09 53 39.1	-0.3
VAF	**Ylistaro**	**1.56**	**348**	PN	Pn	09 53 39.1	-0.3
	baz=169						
VAF				MSG		09 53 57.3	
	comp=Z,0.9nm,0.2s						
VAF				SN	Sb	09 54 00.5	0.0
AAL	**Aland**	**2.14**	**232**	PG	Pn	09 53 48.4	+1.1
AAL				SG	Sb	09 54 16.6	-0.3

*IDC **19** 09:59:26.9±0.8, 71°.82N×129°.95E, h15km±4km, mb3.8/14, mbtmp3.9/15, ML4.0/1, Error ellipse: s-maj=17.2km s-min=8.7km az=145.0*
*NEIC **19** 09:59:26.2±1.6, 71°.8N±0°.1×129°.8E±0°.3, h19km±4km, mb4.7/77, Error ellipse: s-maj=19.8km s-min=9.6km az=155.0*
*YARS **19** 09:59:27.3±0.0, 71°.54N×129°.25E, h36km*
ISC 19 09:59:25.0±0.4, 71°.71N±0°.06×130°.01E±0°.04, h10km, n108, σ1s9/117, mb4.7/53, Near north coast of eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**0.37**	**261**	Pg	**Pb**	**09 59 34.7**	**+1.1**
	42µm,0.3s,baz=68,slow=18,SNR=885						
TIXI				Lg	Lg	09 59 40.9	
	98µm,0.3s,baz=93,slow=22,SNR=63						
TIXI	**Tiksi**	**0.37**	**261**	*i* P	**Pb**	**09 59 34.8**	**+1.2**
	93nm,0.2s						
TIXI				*e*S	**Sb**	**09 59 40.9**	**+1.5**
	9µm,0.2s						
TIXI				*e*S	**Sb**	**09 59 40.9**	**+1.5**
	227µm,0.8s						
BTGS	**Batagay**	**4.38**	**156**	*e*P	**Pn**	**10 00 30.6**	**-0.9**
	8.5nm,0.2s						
BTGS				*e*S	**Sn**	**10 01 20.1**	**-2.5**
	76nm,0.7s						
BTGS				*e*S	**Sn**	**10 01 20.1**	**-2.5**
	116nm,0.6s						
YBGR	**Belaya Gora**	**6.36**	**112**	*e*P	Pn	10 01 03.9	+5.3
	17nm,0.3s						
YBGR				*e*S	**Sn**	**10 02 12.1**	**+0.8**
	124nm,1.0s						
YBGR				*e*S	**Sn**	**10 02 12.1**	**+0.8**
	151nm,1.1s						
MOMR	**Moma**	**7.06**	**132**	*e*P	**Pn**	**10 01 09.4**	**+1.2**
	23nm,1.0s						
MOMR				*e*S	**Sn**	**10 02 30.0**	**+1.7**
	158nm,1.2s						
YCRN	**Chernyshevskiy**	**10.97**	**226**	*e*P	Pn	10 01 57.4	-4.4
	20nm,0.8s						
YCRN				*e*S	Sn	10 03 56.6	-7.6
	44nm,1.0s						
YCRN				*e*S	Sn	10 03 56.6	-7.6
	60nm,0.9s						
NRIK	**Noril'sk**	**14.13**	**281**	Pn	**Pn**	**10 02 46.5**	**+1.6**
	0.8nm,0.3s,baz=57,slow=13,SNR=4.3						
NRIK				Sn	Sn	10 05 10.5	-11
	0.5nm,0.3s,baz=277,slow=14,SNR=3.1						
NRIK				Lg	Lg	10 06 50.9	
	0.8nm,0.3s,baz=158,slow=7.4,SNR=3.9						
	2.9nm,0.4s						
NRIK	**Noril'sk**	**14.13**	**281**	Pn	**Pn**	**10 02 42.6**	**-2.2**
PETK	**Petropavlovsk-**	**22.25**	**132**	P	**P**	**10 04 24.7**	**+3.2**
	2.7nm,0.8s,baz=335,slow=6.4,SNR=2.5						
	2.7nm,0.8s						
PETK	**Petropavlovsk-**	**22.25**	**132**	P	**P**	**10 04 22.0**	**+0.5**
TOLK	**Toolik Lake Re**	**25.56**	**57**	P	**P**	**10 04 51.6**	**-1.9**
TOLK				IAmb	IAmb	10 05 03.6	
	comp=Z,15nm,1.4s						
ULN	**Ulaanbaatar**	**26.20**	**217**	P	**P**	**10 04 57.4**	**-2.2**
ZAA0	**Zalesovo Array**	**26.25**	**251**	P	**P**	**10 04 57.8**	**-2.0**
ZALV	**Zalesovo Beam**	**26.25**	**251**	P	**P**	**10 05 02.8**	**+2.9**
	comp=Z,1.8nm,0.6s,baz=40,slow=11,SNR=2.4						
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**26.25**	**251**	P	**P**	**10 04 57.3**	**-2.5**
IMAR	**Indian Mountai**	**26.30**	**64**	P	**P**	**10 04 57.9**	**-2.4**
SONM	**Songino Array**	**26.35**	**217**	P	**P**	**10 05 04.1**	**+3.1**
	comp=Z,1.8nm,0.7s,baz=23,slow=11,SNR=5.3						
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**26.35**	**217**	P	**P**	**10 04 59.6**	**-1.4**
SMY	**Shemya**	**26.98**	**111**	P	**P**	**10 05 05.9**	**-0.5**
I21K	**Tanana**	**27.39**	**64**	P	**P**	**10 05 09.1**	**-0.9**
J20K	**Nowinta River**	**27.52**	**67**	P	**P**	**10 05 09.9**	**-1.3**
ILAR	**Eielson Array**	**29.13**	**61**	P	**P**	**10 05 26.7**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=322,slow=9.1,SNR=7.8						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**29.13**	**61**	P	**P**	**10 05 26.6**	**+1.1**
AMKA	**Amchitka**	**29.72**	**107**	P	**P**	**10 05 31.5**	**+0.7**
ARCES	**ARCESS Array B**	**30.64**	**318**	P	**P**	**10 05 37.2**	**-1.7**
ARCES				IAmb	IAmb	10 06 03.6	
	comp=Z,9.2nm,1.4s						
DAWY	**Dawson**	**31.71**	**57**	P	**P**	**10 05 47.5**	**-0.8**
MK31	**Makanchi Array**	**33.34**	**248**	P	**P**	**10 06 03.2**	**+0.4**
MKAR	**Makanchi Array**	**33.34**	**248**	P	**P**	**10 06 03.5**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=45,slow=8.1,SNR=12						
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**33.34**	**248**	P	**P**	**10 06 03.2**	**+0.4**
M30M	**Minto, Yukon**	**33.61**	**57**	P	**P**	**10 06 05.6**	**+0.6**
ABKAR	**Akbulak array**	**38.06**	**272**	P	**P**	**10 06 42.6**	**-0.5**
AAK	**Ala-Archa**	**39.44**	**253**	P	**P**	**10 06 53.4**	**-1.6**
KK31	**Karatay Array**	**40.23**	**258**	P	**P**	**10 06 59.8**	**-1.7**
KKAR	**Karatay Array**	**40.23**	**258**	P	**P**	**10 06 59.6**	**-1.8**
NB2	**NORSAR Subarra**	**40.99**	**319**	P	**P**	**10 07 07.5**	**0.0**
	comp=Z,3.6nm,0.7s,baz=26,slow=8.6						
NOA	**NORSAR Array B**	**40.99**	**319**	P	**P**	**10 07 07.6**	**0.0**
	comp=Z,1.4nm,0.7s,baz=27,slow=8.1,SNR=7.5						
NOA				pP	**sP**	**10 07 12.7**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=27,slow=8.1,SNR=9.9						
	comp=Z,1.4nm,0.7s						
HFS	**Hagfors**	**41.29**	**317**	P	**P**	**10 07 09.5**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=82,slow=11,SNR=3.5						
	comp=Z,2.7nm,0.9s						
GAR	**Garm**	**44.04**	**255**	P	**P**	**10 07 31.6**	**-1.1**
GAR				IAmb	IAmb	10 07 37.0	
	comp=Z,9.9nm,0.9s						
CHGR	**Chuyangaron**	**44.71**	**256**	P	**P**	**10 07 36.4**	**-1.6**
CHGR				IAmb	IAmb	10 07 44.8	
	comp=Z,10nm,0.9s						
EDM	**Edmonton**	**47.70**	**47**	P	**P**	**10 08 01.3**	**+0.1**
EDM				IAmb	IAmb	10 08 21.2	
	comp=Z,10nm,1.4s						
GERES	**GERESS Array B**	**51.69**	**311**	P	**P**	**10 08 32.8**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=355,slow=4.2,SNR=2.0						
GERES				pP	**sP**	**10 08 37.3**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=15,slow=5.5,SNR=2.9						
	comp=Z,0.2nm,0.4s						
ULM	**Lac du Bonnet**	**54.10**	**35**	P	**P**	**10 08 49.1**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=337,slow=9.4,SNR=2.5						
	comp=Z,3.6nm,0.9s						
DGMT	**Dagmar**	**54.18**	**42**	P	**P**	**10 08 49.3**	**-0.7**
DGMT				IAmb	IAmb	10 08 52.1	
	comp=Z,7.8nm,0.8s						
RLMT	**Red Lodge**	**56.23**	**47**	P	**P**	**10 09 04.3**	**-0.8**
RLMT				IAmb	IAmb	10 09 08.4	
	comp=Z,8.5nm,1.4s						
B35A	**Bob, Littlefor**	**56.30**	**34**	P	**P**	**10 09 05.1**	**-0.2**
B35A				IAmb	IAmb	10 09 11.0	
	comp=Z,11nm,1.4s						
EYMN	**Ely**	**57.08**	**32**	P	**P**	**10 09 10.5**	**-0.4**
EYMN				IAmb	IAmb	10 09 11.0	
	comp=Z,4.1nm,0.9s						
MOOW	**Moose Ponds**	**57.18**	**49**	P	**P**	**10 09 11.2**	**-0.6**
BW06	**Boulder Array**	**58.39**	**48**	P	**P**	**10 09 18.2**	**-2.2**
PD31	**Pinedale Array**	**58.39**	**48**	P	**P**	**10 09 18.3**	**-2.1**
PDAR	**Pinedale Array**	**58.39**	**48**	P	**P**	**10 09 20.2**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=246,slow=1.5,SNR=5.2						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**58.39**	**48**	P	**P**	**10 09 19.0**	**-1.4**
DUG	**Dugway, Tooele**	**60.03**	**52**	P	**P**	**10 09 31.9**	**+0.2**
ECSD	**EROS Data Cent**	**60.23**	**37**	P	**P**	**10 09 32.5**	**-0.4**
ECSD				IAmb	IAmb	10 09 33.2	
	comp=Z,5.6nm,0.8s						
NVAR	**Mina Array Bea**	**60.29**	**57**	P	**P**	**10 09 33.2**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=319,slow=6.5,SNR=4.5						
	comp=Z,0.7nm,0.9s						
P18A	**Preston Nutter**	**61.20**	**50**	P	**P**	**10 09 39.0**	**-0.8**
L34A	**Svendsen Farm,**	**61.99**	**38**	P	**P**	**10 09 43.8**	**-1.0**
BGNE	**Belgrade**	**62.17**	**39**	P	**P**	**10 09 46.3**	**+0.2**
L40A	**Anamosa**	**62.84**	**33**	P	**P**	**10 09 48.6**	**-1.8**
L40A				IAmb	IAmb	10 09 50.1	
	comp=Z,10nm,0.8s						
ISA	**Isabella, Lake**	**62.84**	**58**	P	**P**	**10 09 50.6**	**-0.1**
ISA				IAmb	IAmb	10 09 52.1	
	comp=Z,2.8nm,0.4s						
PV15	**Paradox Valley**	**62.84**	**49**	P	**P**	**10 09 50.4**	**-0.4**
PV15				IAmb	IAmb	10 09 58.1	
	comp=Z,4.2nm,0.9s						
PV13	**Radium Mtn., P**	**62.94**	**49**	P	**P**	**10 09 51.5**	**0.0**
PV13				IAmb	IAmb	10 09 53.4	
	comp=Z,3.6nm,1.0s						
Q24A	**Divide**	**63.02**	**46**	P	**P**	**10 09 52.2**	**+0.1**
SDCO	**Great Sand Dun**	**64.11**	**47**	P	**P**	**10 09 58.8**	**-0.5**
SDCO				IAmb	IAmb	10 10 00.8	
	comp=Z,4.0nm,0.8s						
ESDC	**Sonseca Array**	**64.27**	**322**	P	**P**	**10 10 00.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=15,slow=6.8,SNR=5.7						
ESDC				pP	**sP**	**10 10 05.8**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=7.7,slow=7.1,SNR=3.2						
	comp=Z,0.6nm,0.6s						
KSU1	**Kansas State U**	**64.71**	**39**	P	**P**	**10 10 02.6**	**-0.2**
P38A	**Dawn**	**64.79**	**36**	P	**P**	**10 10 02.6**	**-0.7**
L61B	**Northampton**	**65.01**	**18**	P	**P**	**10 10 03.3**	**-1.4**
L61B				IAmb	IAmb	10 10 03.4	
	comp=Z,4.3nm,0.8s						
S39A	**Bolivar**	**66.70**	**36**	P	**P**	**10 10 15.1**	**-0.6**
S39A				IAmb	IAmb	10 10 15.6	
	comp=Z,6.5nm,0.8s						
CCM	**Cathedral Cave**	**66.73**	**35**	P	**P**	**10 10 15.0**	**-0.8**
CCM				IAmb	IAmb	10 10 15.4	
	comp=Z,6.5nm,0.8s						
T35A	**Sooner Cattle**	**66.84**	**39**	P	**P**	**10 10 16.2**	**-0.3**
FVM	**French Village**	**66.94**	**34**	P	**P**	**10 10 16.4**	**-0.8**
FVM				IAmb	IAmb	10 10 17.4	
	comp=Z,4.1nm,0.9s						
MGMO	**Mountain Grove**	**67.42**	**36**	P	**P**	**10 10 19.0**	**-1.3**
MGMO				IAmb	IAmb	10 10 20.6	
	comp=Z,5.9nm,0.8s						
S44A	**Carbondale**	**67.43**	**33**	P	**P**	**10 10 19.7**	**-0.5**
OK034	**N. Norfolk Rd.**	**67.67**	**40**	P	**P**	**10 10 21.2**	**-0.6**
OK031	**S. Brethren Rd**	**67.70**	**40**	P	**P**	**10 10 21.8**	**-0.2**
U38A	**Gravette**	**67.72**	**38**	P	**P**	**10 10 20.9**	**-1.2**
U38A				IAmb	IAmb	10 10 21.6	
	comp=Z,3.0nm,0.6s						
OK030	**Cody Creek RV**	**67.74**	**40**	P	**P**	**10 10 21.9**	**-0.4**
BCOK	**Bluff Creek, N**	**67.83**	**41**	P	**P**	**10 10 22.9**	**+0.1**
BCOK				IAmb	IAmb	10 10 23.3	
	comp=Z,13nm,0.9s						
RLO	**Rose Lookout**	**67.86**	**38**	P	**P**	**10 10 21.7**	**-1.3**
RLO				IAmb	IAmb	10 10 23.3	
	comp=Z,8.7nm,0.9s						
HHAR	**Hobbs**	**67.95**	**37**	P	**P**	**10 10 22.6**	**-1.1**
HHAR				IAmb	IAmb	10 10 23.2	
	comp=Z,4.5nm,1.1s						
TUL1	**Leonard**	**67.95**	**39**	P	**P**	**10 10 23.2**	**-0.4**
TUL1				IAmb	IAmb	10 10 24.3	
	comp=Z,11nm,0.8s						
WMOK	**Wichita Mounta**	**68.48**	**42**	P	**P**	**10 10 26.9**	**0.0**
WMOK				IAmb	IAmb	10 10 27.5	
	comp=Z,4.7nm,0.8s						
FCAR	**Ozark Folk Cen**	**68.68**	**36**	P	**P**	**10 10 27.2**	**-0.9**
FCAR				IAmb	IAmb	10 10 27.8	
	comp=Z,3.9nm,0.8s						
LCAR	**Lake Charles**	**68.68**	**35**	P	**P**	**10 10 27.6**	**-0.5**
LCAR				IAmb	IAmb	10 10 28.2	
	comp=Z,5.2nm,0.7s						
U49A	**Red Boiling Sp**	**69.16**	**30**	P	**P**	**10 10 29.5**	**-1.6**
U49A				IAmb	IAmb	10 10 31.5	
	comp=Z,5.1nm,0.8s						
WVT	**Waverly**	**69.20**	**32**	P	**P**	**10 10 31.4**	**0.0**
WVT			

SMAI	**San Martin Ant**	**21.00**	**217**	P		**P**	**10 05 07.4**	**-1.0**
MG02	**Cerro Sombrero**	**22.07**	**260**	P		**P**	**10 05 20.1**	**+0.1**
TROLL	**Troll, Antarti**	**22.36**	**153**	P		**P**	**10 05 24.6**	**+1.3**
BELA	**Belgrano 2**	**23.03**	**182**	P		**P**	**10 05 29.5**	**-0.6**
MG05	**Puerto Natales**	**24.35**	**261**	P		**P**	**10 05 42.1**	**-0.9**
MG05				IAmb	IAmb		10 05 43.8	
	comp=Z,54nm,1.2s							
GO09	**Cerro Castillo**	**24.43**	**262**	P		**P**	**10 05 43.2**	**-0.6**
GO09				IAmb	IAmb		10 05 55.6	
	comp=Z,51nm,1.5s							
PLTB	**Pedras Altas**	**27.92**	**317**	P		**P**	**10 06 16.0**	**+0.5**
AY01	**Puyuhuapi**	**28.13**	**275**	P		**P**	**10 06 17.2**	**0.0**
AY01				IAmb	IAmb		10 06 29.7	
	comp=Z,97nm,2.0s							
LL02	**Futaleuf**	**28.42**	**278**	P		**P**	**10 06 19.8**	**-0.1**
LL02				IAmb	IAmb		10 06 31.5	
	comp=Z,50nm,1.8s							
PLCA	**Paso Flores**	**29.28**	**283**	P		**P**	**10 06 27.6**	**0.0**
	comp=Z,2.1nm,0.8s,baz=135,slow=8.4,SNR=5.7							
	comp=Z,2.1nm,0.8s							
GO05	**Huala**	**34.12**	**289**	P		**P**	**10 07 10.0**	**-0.1**
GO05				IAmb	IAmb		10 08 07.2	
	comp=Z,64nm,1.8s							
CPUP	**Villa Florida**	**34.22**	**316**	P		**P**	**10 07 11.0**	**+0.1**
	comp=Z,8.5nm,0.7s,baz=165,slow=9.8,SNR=17							
	comp=Z,8.5nm,0.7s							
CPUP	**Villa Florida**	**34.22**	**316**	P		**P**	**10 07 11.1**	**+0.1**
MT09	**Talagante**	**34.54**	**291**	P		**P**	**10 07 14.2**	**+0.3**
MT01	**Popeta**	**34.61**	**291**	P		**P**	**10 07 14.6**	**+0.2**
VA05	**Santo Domingo**	**34.97**	**291**	P		**P**	**10 07 18.3**	**+0.9**
VA05				IAmb	IAmb		10 07 24.0	
	comp=Z,58nm,1.3s							
MT02	**Curacav**	**35.02**	**292**	P		**P**	**10 07 17.9**	**0.0**
QSPA	**South Pole Qui**	**35.28**	**180**	P		**P**	**10 07 20.7**	**+0.7**
	comp=Z,7.6nm,0.9s,baz=188,slow=2.6,SNR=16							
	comp=Z,7.6nm,0.9s							
QSPA	**South Pole Qui**	**35.28**	**180**	P		**P**	**10 07 20.8**	**+0.8**
VA01	**Torpederas**	**35.47**	**292**	P		**P**	**10 07 22.4**	**+0.7**
VA06	**Catapilco**	**35.64**	**292**	P		**P**	**10 07 23.9**	**+0.7**
CO01	**Juntas del Tor**	**37.04**	**297**	P		**P**	**10 07 35.6**	**+0.1**
CO01				IAmb	IAmb		10 08 12.4	
	comp=Z,47nm,1.7s							
AC05	**El Transito**	**38.05**	**297**	P		**P**	**10 07 43.7**	**-0.3**
AC05				IAmb	IAmb		10 08 31.2	
	comp=Z,102nm,1.9s							
VA04	**Juan Fernndez**	**38.95**	**283**	P		**P**	**10 07 50.7**	**-0.6**
GO02	**Mina Guanaco**	**40.73**	**301**	P		**P**	**10 08 07.4**	**+0.9**
GO02				IAmb	IAmb		10 08 09.1	
	comp=Z,25nm,0.8s							
BDFB	**Brasilia**	**41.24**	**336**	P		**P**	**10 08 11.9**	**+1.4**
	comp=Z,2.8nm,0.4s,baz=150,slow=4.8,SNR=6.3							
	comp=Z,2.8nm,0.4s							
MAW	**Mawson**	**42.51**	**146**	P		**P**	**10 08 21.0**	**+0.8**
	comp=Z,7.9nm,0.9s,baz=246,slow=8.1,SNR=13							
	comp=Z,7.9nm,0.9s							
MAW	**Mawson**	**42.51**	**146**	P		**P**	**10 08 19.8**	**-0.4**
LVC	**Limon Verde**	**42.56**	**304**	P		**P**	**10 08 21.6**	**0.0**
PB02	**IPOC Station P**	**44.13**	**304**	P		**P**	**10 08 34.9**	**+0.9**
PB02				IAmb	IAmb		10 08 48.9	
	comp=Z,27nm,1.1s							
PB01	**IPOC Station P**	**44.18**	**305**	P		**P**	**10 08 35.4**	**+1.1**
PB01				IAmb	IAmb		10 08 37.4	
	comp=Z,15nm,0.9s							
PTLB	**Pontes e Lacer**	**44.79**	**321**	P		**P**	**10 08 39.0**	**-0.1**
PTLB				IAmb	IAmb		10 08 41.5	
	comp=Z,9.6nm,1.0s							
TA01	**Diego Aracena**	**44.91**	**304**	P		**P**	**10 08 41.2**	**+1.1**
GO01	**Chusmiza**	**45.22**	**306**	P		**P**	**10 08 43.6**	**+0.5**
GO01				IAmb	IAmb		10 08 46.3	
	comp=Z,15nm,0.8s							
PB16	**IPOC Station P**	**46.52**	**307**	P		**P**	**10 08 52.4**	**-1.1**
PB16				IAmb	IAmb		10 09 21.1	
	comp=Z,31nm,1.7s							
VILB	**Vilhena**	**47.48**	**321**	P		**P**	**10 08 59.9**	**-0.5**
VILB				IAmb	IAmb		10 09 21.4	
	comp=Z,31nm,1.6s							
VNDA	**Vanda**	**47.50**	**184**	P		**P**	**10 09 00.3**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=182,slow=6.1,SNR=9.3							
	comp=Z,1.4nm,0.8s							
VNDA	**Vanda**	**47.50**	**184**	P		**P**	**10 08 59.8**	**-0.1**
LPAZ	**La Paz**	**47.69**	**310**	P		**P**	**10 09 03.5**	**+0.8**
	comp=Z,8.2nm,0.6s,baz=147,slow=4.9,SNR=40							
	comp=Z,8.2nm,0.6s							
LPAZ	**La Paz**	**47.69**	**310**	P		**P**	**10 09 03.0**	**+0.3**
H10S2	**ASCENSION HYDR**	**47.86**	**23**	T		T	11 00 47.6	
	baz=27,slow=74,SNR=3.9							
H10S3	**ASCENSION HYDR**	**47.86**	**23**	T		T	11 00 45.4	
	baz=193,slow=74,SNR=6.6							
BOSA	**Boshof**	**48.26**	**81**	P		**P**	**10 09 06.4**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=234,slow=7.6,SNR=5.9							
	comp=Z,3.0nm,0.9s							
H10N1	**ASCENSION HYDR**	**48.97**	**23**	T		T	11 01 59.0	
H10N3	**ASCENSION HYDR**	**48.97**	**23**	T		T	11 01 58.0	
	baz=261,slow=74,SNR=12							
H10N2	**ASCENSION HYDR**	**48.99**	**23**	T		T	11 02 06.2	
	baz=194,slow=74,SNR=12							
LBTB	**Lobatse**	**51.22**	**78**	P		**P**	**10 09 28.9**	**-0.1**
LBTB				IAmb	IAmb		10 10 32.8	
	comp=Z,13nm,1.2s							
TSUM	**Tsumeb**	**51.49**	**66**	P		**P**	**10 09 30.6**	**-0.5**
ETMB	**Extrema**	**52.66**	**315**	P		**P**	**10 09 39.9**	**+0.2**
ETMB				IAmb	IAmb		10 09 52.3	
	comp=Z,28nm,1.8s							
CASY	**Casey**	**55.74**	**163**	P		**P**	**10 10 00.6**	**-0.9**
CASY				IAmb	IAmb		10 10 14.3	
	comp=Z,9.8nm,1.1s							
MACA	**Manacapuru-AM**	**56.75**	**325**	P		**P**	**10 10 08.1**	**-1.2**
MACA				IAmb	IAmb		10 10 21.7	
	comp=Z,59nm,1.8s							
CZSB	**Cruzeiro do Su**	**57.30**	**309**	P		**P**	**10 10 12.6**	**-0.7**
CZSB				IAmb	IAmb		10 10 31.8	
	comp=Z,18nm,1.4s							
LSZ	**Lusaka**	**60.45**	**74**	P		**P**	**10 10 33.9**	**-1.4**
LSZ				IAmb	IAmb		10 10 36.8	
	comp=Z,19nm,1.6s							
BOAV	**Boa Vista**	**61.92**	**327**	P		**P**	**10 10 44.6**	**-0.5**
BOAV				IAmb	IAmb		10 10 46.6	
	comp=Z,8.9nm,0.9s							
DBIC	**Dimbokro**	**65.37**	**30**	P		**P**	**10 11 07.7**	**-0.1**
BAUV	**El Baul**	**70.58**	**322**	P		**P**	**10 11 40.5**	**0.0**
SDV	**Santo Domingo**	**71.48**	**319**	P		**P**	**10 11 46.0**	**-0.2**
SDV				IAmb	IAmb		10 11 48.6	
	comp=Z,11nm,0.8s							
TOA0	**Torodi Ar. Sit**	**73.48**	**34**	P		**P**	**10 11 57.8**	**-0.1**
TOA0				IAmb	IAmb		10 12 26.6	
	comp=Z,13nm,1.4s							
TORD	**Torodi Ar. Bea**	**73.48**	**34**	P		**P**	**10 11 58.0**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=199,slow=6.2,SNR=9.4							
	comp=Z,2.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.48**	**34**	P		**P**	**10 11 58.1**	**+0.2**
TORD				IAmb	IAmb		10 12 22.4	
	comp=Z,20nm,1.9s							
TEIG	**Tepich**	**89.01**	**308**	P		**P**	**10 13 21.4**	**+1.2**
ASAR	**Alice Springs**	**100.71**	**167**	P		**Pdif**	**10 14 12.6**	**-1.3**
	comp=Z,0.7nm,0.9s,baz=187,slow=3.6,SNR=2.9							
FINES	**FINESS Array B**	**124.67**	**30**	PKP		**PKPdf**	**10 19 23.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=106,slow=4.2,SNR=6.0							
CMAR	**Chiang Mai Arr**	**127.84**	**114**	PKP		**PKiKP**	**10 19 31.7**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=230,slow=3.7,SNR=5.7							
YKA	**Yellowknife Ar**	**133.68**	**320**	PKP		**PKPdf**	**10 19 41.2**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=127,slow=2.3,SNR=3.9							
KMI	**Kunming**	**135.30**	**113**	⇓P		**PKiKP**	**10 19 45.8**	**-1.0**
KMI				pmax	pmax			
	comp=Z,12nm,0.6s							
WMQ	**Urumqi**	**140.22**	**80**	*e*P		**PKiKP**	**10 19 55.3**	**-0.7**
ZALV	**Zalesovo Beam**	**144.21**	**65**	PKP		**PKPdf**	**10 19 59.9**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=245,slow=3.4,SNR=11							
GTA	**Gaotai**	**144.35**	**95**	*e*PKPbc		**PKPdf**	**10 20 01.5**	**+0.4**
GTA				sPKP			10 20 16.8	
XAN	**Xi'an**	**145.61**	**111**	P		**PKPab**	**10 20 03.8**	**-0.1**
XAN				pP		PKiKP	10 20 08.0	+0.6
XAN				pmax		pmax		
	comp=Z,24nm,1.2s							
ILAR	**Eielson Array**	**147.50**	**314**	PKPbc		**PKPbc**	**10 20 07.8**	**-0.3**
	comp=Z,3.9nm,0.6s,baz=123,slow=1.8,SNR=44							
TIA	**Tai'an**	**151.58**	**118**	⇑P		**PKiKP**	**10 20 20.3**	**+0.8**
TIA				pmax		pmax		
	comp=Z,8.0nm,0.7s							
HHC	**Hu-ho-hao-te**	**151.98**	**105**	*e*P		**PKPdf**	**10 20 10.0**	**-3.5**
SONM	**Songino Array**	**153.23**	**88**	PKPbc		**PKiKP**	**10 20 22.6**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=212,slow=4.0,SNR=6.4							

*PDG **19** 10:02:18.1±0.4,43.05N×17.51E,h2km,MD3.2/1, ML3.2/14, Error ellipse: s-maj=0.8km s-min=0.8km*

az=90.0
*BEO **19** 10:02:18.6±0.4,43.02N×17.44E,h0km,ML2.8/11*
*RHSSO **19** 10:02:18.8±0.3,42.95N×17.49E,h4km±2km,ML3.2/18*

ISC 19 10:02:18.2±1.1,**42.99N**±0.02×**17.48E**±0.02,**h1**km±10km, **n113,**σ1s**00**/191,**30C-22D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.20**	**126**	⇑*i*Pg	**Pg**	**10 02 21.4**	**-0.7**
STON				*e*Sg	**Sg**	**10 02 25.0**	**+0.3**
STON	**Ston**	**0.20**	**126**	*i* Pg	**Pg**	**10 02 21.4**	**-0.7**
STON				Sg	**Sg**	**10 02 24.8**	**+0.1**
STON	**Ston**	**0.20**	**126**	*e*Pg	**Pg**	**10 02 21.4**	**-0.7**
STON				*e*Sg	**Sg**	**10 02 24.9**	**+0.3**
MAKA	**Makarska**	**0.45**	**312**	*e*Pg	**Pg**	**10 02 26.2**	**-0.6**
LSTV	**Lastovo**	**0.48**	**243**	*i* Pg	**Pg**	**10 02 26.3**	**-1.2**
RICI	**Ricice**	**0.56**	**334**	*e*Pg	**Pg**	**10 02 28.3**	**-0.7**
DBRK	**Dubrovnik**	**0.59**	**123**	*e*Pg	**Pg**	**10 02 28.1**	**-1.4**
DBRK				Sg	**Sg**	**10 02 37.3**	**+0.2**
TREB	**Trebinje**	**0.70**	**113**	⇑*i*Pg	**Pg**	**10 02 30.8**	**-0.8**
TREB				*e*Sg	**Sg**	**10 02 41.0**	**+0.4**
TREB	**Trebinje**	**0.70**	**113**	*e*Pg	**Pg**	**10 02 31.2**	**-0.4**
TREB				*e*Sg	**Sb**	**10 02 42.2**	**-1.1**
BRY	**Bratogost**	**0.79**	**96**	⇑*i*Pg	**Pg**	**10 02 32.4**	**-0.8**
BRY				*e*Sg	**Sg**	**10 02 43.9**	**+0.5**
BRY	**Bratogost**	**0.79**	**96**	⇑*i*Pg	**Pg**	**10 02 32.4**	**-0.8**
BRY				*i* Sg	**Sb**	**10 02 44.7**	**-1.3**
HCY	**Herceg Novi**	**0.93**	**126**	⇑*i*Pg	**Pg**	**10 02 34.5**	**-1.4**
HCY				*e*Sg	**Sg**	**10 02 47.9**	**0.0**
HCY	**Herceg Novi**	**0.93**	**126**	⇓*i*Pg	**Pg**	**10 02 34.7**	**-1.2**
HCY				*i* Sg	**Sb**	**10 02 50.3**	**+0.4**
UPM	**Unac-Piva**	**1.07**	**78**	*e*Pg	**Pg**	**10 02 38.0**	**-0.7**
UPM				*e*Sg	**Sg**	**10 02 53.2**	**+0.7**
UPM	**Unac-Piva**	**1.07**	**78**	⇓*i*Pg	**Pg**	**10 02 37.5**	**-1.2**
UPM				*i* Sg	**Sb**	**10 02 54.0**	**-0.2**
SRKY	**Kupres RS**	**1.10**	**348**	⇑*i*Pg	**Pg**	**10 02 38.7**	**-0.6**
SRKY				*e*Sg	**Sg**	**10 02 55.4**	**+1.8**
NKME	**Niksic**	**1.11**	**101**	⇓*i*Pg	**Pg**	**10 02 38.7**	**-0.7**
NKME				*i* Sg	**Sn**	**10 02 55.9**	**-1.0**
NKY	**Niksic**	**1.13**	**99**	⇑*i*Pg	**Pg**	**10 02 38.9**	**-0.9**
NKY				*i* Sg	**Sn**	**10 02 56.4**	**-1.1**
CEME	**Cevo**	**1.15**	**112**	⇑*i*Pg	**Pg**	**10 02 38.7**	**-1.5**
CEME				*i* Sg	**Sn**	**10 02 57.3**	**-0.7**
BUM	**Brajici-Budva**	**1.25**	**123**	⇓*i*Pg	**Pg**	**10 02 40.8**	**-1.4**
BUM				*i* Sg	**Sn**	**10 03 01.0**	**+0.5**
KIJV	**Kijevo**	**1.28**	**323**	*e*Pg	**Pn**	**10 02 40.8**	**-2.5**
KIJV				Sg	**Sg**	**10 03 00.5**	**+1.1**
PDG	**Podgorica**	**1.43**	**113**	⇓P	**Pg**	**10 02 45.9**	**+0.3**
PDG				⇑S	**Sn**	**10 03 06.2**	**+1.6**
PDG	**Podgorica**	**1.43**	**113**	*e*Pg	**Pb**	**10 02 45.5**	**-0.1**
PDG				*e*Sg	**Sn**	**10 03 06.1**	**+1.5**
TTG	**Podgorica**	**1.43**	**113**	⇑*i*Pg	**Pn**	**10 02 44.4**	**-0.9**
TTG				*i* Sg	**Sn**	**10 03 06.9**	**+2.3**
PLE	**Pljevlja**	**1.44**	**76**	⇓*i*Pg	**Pn**	**10 02 43.9**	**-1.7**
PLE				*i* Sg	**Sn**	**10 03 06.2**	**+1.0**
MGRS	**Mrkonjic Grad**	**1.46**	**349**	⇑*i*Pg	**Pn**	**10 02 45.4**	**-0.3**
MGRS				*e*Sg	**Sn**	**10 03 06.1**	**+0.6**
DRME	**Dracevica, Mon**	**1.50**	**122**	*e*Pg	**Pn**	**10 02 45.5**	**-0.8**
DRME				*e*Sg	**Sb**	**10 03 05.5**	**-0.8**
DRME	**Dracevica, Mon**	**1.50**	**122**	⇓*i*Pg	**Pn**	**10 02 45.4**	**-0.8**
DRME				*i* Sg	**Sg**	**10 03 09.2**	**+3.0**
KOME	**Kolasin**	**1.50**	**95**	⇓*i*Pg	**Pn**	**10 02 45.5**	**-0.9**
KOME				*i* Sg	**Sg**	**10 03 09.0**	**+2.5**
RUDO	**Rudo**	**1.52**	**65**	⇑*i*Pg	**Pn**	**10 02 45.4**	**-1.2**
RUDO				*e*Sg	**Sb**	**10 03 07.3**	**+0.3**
RUDO	**Rudo**	**1.52**	**65**	*e*Pg	**Pn**	**10 02 45.6**	**-1.0**
RUDO				*e*Sg	**Sb**	**10 03 07.4**	**+0.4**
MORI	**Morici**	**1.56**	**305**	*e*Pn	**Pn**	**10 02 47.1**	**0.0**
MORI				Sn	**Sn**	**10 03 08.8**	**+0.8**
A050A	**Klekovaca**	**1.64**	**336**	*e*Pn	**Pn**	**10 02 48.8**	**+0.5**
A050A				*e*Sn	**Sn**	**10 03 10.7**	**+0.5**
BBLS	**Lazići**	**1.66**	**57**	*e*Pn	**Pn**	**10 02 48.8**	**+0.3**
BBLS				*e*Sn	**Sn**	**10 03 11.0**	**+0.5**
ULC	**Ulcinj**	**1.66**	**128**	⇑*i*Pn	**Pn**	**10 02 48.5**	**-0.1**
ULC				*i* Sn	**Sg**	**10 03 14.6**	**+3.0**
BLY	**Banja Luka**	**1.77**	**353**	⇑*i*Pn	**Pn**	**10 02 50.7**	**+0.7**
BLY				*e*Sn	**Sn**	**10 03 13.8**	**+0.6**
BLY	**Banja Luka**	**1.77**	**353**	*e*Pg	**Pn**	**10 02 51.2**	**+1.2**
BLY				*e*Sg	**Sb**	**10 03 14.9**	**+0.7**
IVA	**Berane**	**1.78**	**93**	⇑*i*Pn	**Pn**	**10 02 50.8**	**+0.6**
IVA				*i* Sn	**Sg**	**10 03 16.8**	**+1.5**
DOB	**Doboj**	**1.80**	**14**	*e*Sn	**Sn**	**10 03 14.8**	**+0.9**
SJES	**Sjenica**	**1.85**	**81**	*e*Pn	**Pn**	**10 02 51.5**	**+0.3**
SJES				*e*Sn	**Sn**	**10 03 14.6**	**-0.7**
SJES	**Sjenica**	**1.85**	**81**	*e*Pn	**Pn**	**10 02 52.1**	**+0.9**
SJES				*e*Sn	**Sn**	**10 03 15.5**	**+0.2**
PVY	**Plav**	**1.87**	**101**	⇓*i*Pn	**Pn**	**10 02 52.3**	**+0.8**
PVY				*i* Sn	**Sg**	**10 03 19.1**	**+0.9**
UDBI	**Udbina**	**1.98**	**322**	*e*Pn	**Pn**	**10 02 54.4**	**+1.4**
DUGI	**Dugi Otok**	**2.02**	**300**	*e*Pn	**Pn**	**10 02 53.6**	**+0.1**
IVAS	**Ivanjica**	**2.04**	**72**	*e*Pn	**Pn**	**10 02 54.3**	**+0.5**
IVAS				*e*Sn	**Sb**	**10 03 21.9**	**-0.1**
A051A	**Mrakovica**	**2.06**	**349**	⇓*i*Pn	**Pn**	**10 02 55.0**	**+0.9**
A051A				*e*Sn	**Sn**	**10 03 20.8**	**+0.2**
A052A	**Srbac**	**2.11**	**1**	*e*Pn	**Pn**	**10 02 55.8**	**+1.1**
A052A				*e*Sn	**Sn**	**10 03 22.7**	**+1.1**
DIVS	**Divibare**	**2.14**	**58**	⇑*i*Pn	**Pn**	**10 02 55.7**	**+0.5**
DIVS				*e*Sn	**Sn**	**10 03 22.2**	**-0.2**
DIVS	**Divibare**	**2.14**	**58**	*e*Pn	**Pn**	**10 02 55.7**	**+0.5**
DIVS				*e*Sn	**Sb**	**10 03 24.4**	**-0.5**
TEKS	**Tekeris**	**2.15**	**43**	*e*Pn	**Pn**	**10 02 55.3**	**0.0**
TEKS				*e*Sn	**Sn**	**10 03 22.1**	**-0.6**
VIRC	**Vir**	**2.19**	**307**	*e*Pn	**Pn**	**10 02 56.1**	**+0.3**
BLJ	**Bijeljina**	**2.21**	**35**	*e*Sn	**Sn**	**10 03 22.7**	**-1.3**
PLIT	**Plitvice**	**2.31**	**325**	*e*Pn	**Pn**	**10 02 58.9**	**+1.3**
MATE	**Matera**	**2.41**	**194**	⇓P	**Pb**	**10 03 01.6**	**-0.8**
MATE				⇑S	**Sb**	**10 03 33.1**	**+0.5**
NVLJ	**Novalja**	**2.46**	**311**	*e*Pn	**Pn**	**10 02 59.1**	**-0.3**
TRUS	**Trudelj**	**2.46**	**59**	*e*Pn	**Pn**	**10 02 59.8**	**+0.3**
TRUS				*e*Sn	**Sn**	**10 03 31.0**	**+0.8**
A252A	**Venje**	**2.46**	**6**	*e*Pn	**Pn**	**10 02 59.8**	**+0.3**
A252A				Sn	**Sn**	**10 03 31.5**	**+1.3**
GRUS	**Gruza**	**2.52**	**68**	*e*Pn	**Pn**	**10 03 01.1**	**+0.7**
GRUS				*e*Sn	**Sn**	**10 03 33.9**	**+2.1**
RABC	**Rab**	**2.63**	**313**	*e*Pn	**Pn**	**10 03 03.6**	**+1.8**
MOSL	**Moslavina**	**2.67**	**349**	*e*Pn	**Pn**	**10 03 03.0**	**+0.5**
SELS	**Selova**	**2.68**	**84**	*e*Pn	**Pn**	**10 03 03.2**	**+0.7**
SELS				*e*Sn	**Sn**	**10 03 36.3**	**+0.7**
FRGS	**Fruska Gora**	**2.74**	**37**	⇓P	**Pn**	**10 03 02.9**	**-0.5**
FRGS				⇓S	**Sn**	**10 03 36.2**	**-1.0**
FRGS	**Fruska Gora**	**2.74**	**37**	*e*Pn	**Pn**	**10 03 03.7**	**+0.3**
FRGS				*e*Sn	**Sn**	**10 03 37.0**	**-0.2**
FRGS	**Fruska Gora**	**2.74**	**37**	*e*Pn	**Pn**	**10 03 03.4**	**0.0**
FRGS				*e*Sn	**Sn**	**10 03 37.2**	**0.0**
BOJS	**Bojanci**	**2.98**	**328**	*e*Pn	**Pn**	**10 03 07.9**	**+1.3**
BOJS				*e*Sn	**Sn**	**10 03 43.5**	**+0.5**
BOJS	**Bojanci**	**2.98**	**328**	*e*Pn	**Pn**	**10 03 07.5**	**+0.9**
SVIS	**Svilajnac**	**3.00**	**64**	*e*Sn	**Sn**	**10 03 45.2**	**+1.7**
PTJ	**Puntijarka**	**3.11**	**340**	*e*Pn	**Pn**	**10 03 09.3**	**+0.8**
SMRN	**Sveta Marina**	**3.15**	**312**	*e*Pn	**Pn**	**10 03 08.7**	**-0.2**
BOVS	**Bovan**	**3.15**	**77**	⇑S	**Sn**	**10 03 47.4**	**+0.1**
CRES	**Cresnjev**	**3.18**	**334**	*e*Pn	**Pn**	**10 03 10.0**	**+0.5**
CRES				*e*Sn	**Sn**	**10 03 49.0**	**+0.9**
BARS	**Barje**	**3.19**	**92**	*e*Pn	**Pn**	**10 03 11.1**	**+1.5**
KALN	**Kalnik**	**3.22**	**347**	*e*Pn	**Pn**	**10 03 09.8**	**-0.2**
BRJN	**Brijuni**	**3.30**	**307**	*e*Pn	**Pn**	**10 03 10.5**	**-0.5**
LOBO	**Lobor**	**3.32**	**343**	*e*Pn	**Pn**	**10 03 11.9**	**+0.6**
MORH	**Mrgy, Hungar**	**3.33**	**14**	⇓P	**Pn**	**10 03 10.8**	**-0.7**
MORH				⇓S	**Sn**	**10 03 49.8**	**-1.9**
MORH	**Mrgy, Hungar**	**3.33**	**14**	⇑*i*Pn	**Pn**	**10 03 11.4**	**0.0**
MORH				*e*Sn	**Sn**	**10 03 52.1**	**+0.4**
MORH	**Mrgy, Hungar**	**3.33**	**14**	*e*Pn	**Pn**	**10 03 11.4**	**0.0**
MORH				*e*Sn	**Sn**	**10 03 50.4**	**-1.3**
MORH	**Mrgy, Hungar**	**3.33**	**14**	P	**Pn**	**10 03 11.5**	**0.0**
MORH				S	**Sn**	**10 03 50.1**	**-1.6**
KUBS	**Kucevo**	**3.36**	**64**	*e*Sn	**Sn**	**10 03 51.8**	**-0.6**
PRVS	**Prvonek**	**3.42**	**97**	*e*Pn	**Pn**	**10 03 14.1**	**+1.3**
PRVS				*e*Sn	**Sn**	**10 03 54.6**	**+0.6**
CEY	**Cerknica**	**3.51**	**323**	⇑*i*Pn	**Pn**	**10 03 15.0**	**+0.9**
CEY				*e*Sn	**Sn**	**10 03 55.8**	**-0.4**
CEY	**Cerknica**	**3.51**	**323**	*e*Pn	**Pn**	**10 03 14.9**	**+0.9**
MDVR	**Moldovita**	**3.55**	**58**	⇓P	**Pn**	**10 03 14.7**	**+0.2**
MDVR				⇓S	**Sn**	**10 03 56.5**	**-0.6**
ZAGS	**Zajecar**	**3.56**	**75**	*e*Pn	**Pn**	**10 03 15.1**	**+0.5**
ZAGS				*e*Sn	**Sn**	**10 03 56.6**	**-0.8**
SKDS	**Skadanscina**	**3.57**	**317**	*e*Pn	**Pn**	**10 03 14.7**	**0.0**
SKDS				*e*Sn	**Sn**	**10 03 57.1**	**-0.4**
SKDS	**Skadanscina**	**3.57**	**317**	*e*Pn	**Pn**	**10 03 13.3**	**-1.4**
BOSS	**Bosilegrad**	**3.72**	**96**	*e*Sn	**Sn**	**10 04 02.4**	**+1.1**
ZAPS	**Zavoj**	**3.79**	**84**	*e*Pn	**Pn**	**10 03 19.0**	**+1.2**
ZAPS				*e*Sn	**Sn**	**10 04 03.1**	**+0.1**
BLKB	**Belogradchik**	**3.85**	**79**	⇑P	**Pn**	**10 03 19.8**	**+1.2**
BLKB				⇓S	**Sn**	**10 04 04.9**	**+0.4**
TIP	**Timpagrande**	**3.85**	**188**	⇑P	**Pn**	**10 03 21.0**	**+2.4**
BZS	**Buzias**	**3.96**	**47**	⇑P	**Pn**	**10 03 20.5**	**+0.3**
BZS				⇑S	**Sn**	**10 04 06.2**	**-1.2**
BZS	**Buzias**	**3.96**	**47**	*e*Pn	**Pn**	**10 03 20.7**	**+0.5**
BZS				*e*Sn	**Sn**	**10 04 06.0**	**-1.3**
DJES	**Djerdap**	**4.01**	**64**	⇑S	**Sn**	**10 04 07.9**	**-0.7**
HERR	**Herculane**	**4.04**	**60**	⇓S	**Sn**	**10 04 08.7**	**-0.5**
SOKA	**Soboth**	**4.08**	**336**	*e*Pn	**Pn**	**10 03 22.6**	**+0.8**
	1.4nm,0.2s						
SOKA				*e*Sn	**Sn**	**10 04 08.9**	**-1.3**
	9.3nm,0.5s						
OBKA	**Obir**	**4.09**	**330**	*e*Pn	**Pn**	**10 03 22.8**	**+0.8**
OBKA				*e*Sn	**Sn**	**10 04 09.7**	**-0.9**
OBKA	**Obir**	**4.09**	**330**	*e*Pn	**Pn**	**10 03 23.1**	**+1.1**
	1.0nm,0.1s						
VTS	**Vitosha**	**4.25**	**93**	⇑S	**Sn**	**10 04 15.3**	**+0.6**
SIRR	**Siria**	**4.43**	**41**	⇑P	**Pn**	**10 03 26.6**	**0.0**
SIRR				⇓S	**Sn**	**10 04 18.2**	**-0.7**
ARSA	**Arzberg**	**4.48**	**343**	*e*Pn	**Pn**	**10 03 27.7**	**+0.4**
ARSA				*e*Sn	**Sn**	**10 04 18.9**	**-1.2**
ARSA	**Arzberg**	**4.48**	**343**	*e*Pn	**Pn**	**10 03 28.0**	**+0.7**
	5.0nm,0.3s						
ARSA				*e*Sn	**Sn**	**10 04 20.3**	**+0.2**
	3.4nm,0.3s						
GZR	**Gura Zlata**	**4.50**	**56**	⇑P	**Pn**	**10 03 27.9**	**+0.2**
GZR				⇑S	**Sn**	**10 04 20.4**	**-0.4**
MYKA	**Terra Mystica**	**4.55**	**324**	*e*Pn	**Pn**	**10 03 28.4**	**+0.1**
	1.0nm,0.3s						
**R

CPUP	**Villa Florida**	**34.53**	**316**	P	**P**	**10 13 54.3**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=159,slow=8.0,SNR=8.6						
	comp=Z,4.5nm,0.9s						
CPUP	**Villa Florida**	**34.53**	**316**	P	**P**	**10 13 54.4**	**+0.8**
CPUP				IAmb	IAmb	10 13 55.7	
	comp=Z,9.6nm,1.3s						
MT09	**Talagante**	**34.81**	**291**	P	**P**	**10 13 56.8**	**+0.7**
QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**10 13 59.2**	**+1.5**
	comp=Z,3.4nm,0.8s,baz=217,slow=1.1,SNR=5.9						
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**10 13 56.2**	**-1.5**
QSPA				IAmb	IAmb	10 14 12.3	
	comp=Z,11nm,1.4s						
MT02	**Curacav**	**35.29**	**292**	P	**P**	**10 14 01.9**	**+1.8**
MT02				IAmb	IAmb	10 14 10.3	
	comp=Z,31nm,1.4s						
VA06	**Catapilco**	**35.91**	**292**	P	**P**	**10 14 04.8**	**-0.5**
CO02	**Combarbal**	**36.82**	**294**	P	**P**	**10 14 13.0**	**-0.3**
CO03	**El Pedregal**	**36.95**	**295**	P	**P**	**10 14 14.2**	**-0.1**
CO03				IAmb	IAmb	10 14 30.1	
	comp=Z,31nm,1.4s						
CO01	**Juntas del Tor**	**37.33**	**296**	P	**P**	**10 14 16.0**	**-1.8**
CO01				IAmb	IAmb	10 14 26.8	
	comp=Z,23nm,1.4s						
GO04	**Tololo Observa**	**37.54**	**295**	P	**P**	**10 14 19.1**	**-0.5**
AC05	**El Transito**	**38.34**	**297**	P	**P**	**10 14 26.5**	**+0.3**
AC05				IAmb	IAmb	10 14 39.7	
	comp=Z,42nm,1.2s						
AC04	**Llanos de Chal**	**39.26**	**297**	P	**P**	**10 14 35.5**	**+1.7**
GO02	**Mina Guanaco**	**41.03**	**301**	P	**P**	**10 14 48.4**	**-0.5**
MAW	**Mawson**	**42.19**	**145**	P	**P**	**10 14 58.7**	**+1.2**
	comp=Z,4.7nm,0.8s,baz=255,slow=9.5,SNR=7.4						
	comp=Z,4.7nm,0.8s						
PB01	**IPOC Station P**	**44.48**	**305**	P	**P**	**10 15 17.2**	**+0.6**
PB01				IAmb	IAmb	10 15 35.1	
	comp=Z,19nm,1.4s						
PTLB	**Pontes e Lacer**	**45.11**	**321**	P	**P**	**10 15 21.6**	**+0.1**
PTLB				IAmb	IAmb	10 15 24.6	
	comp=Z,5.3nm,0.7s						
PB16	**IPOC Station P**	**46.83**	**306**	P	**P**	**10 15 35.6**	**-0.1**
PB16				IAmb	IAmb	10 16 00.5	
	comp=Z,6.9nm,1.2s						
VNDA	**Vanda**	**47.27**	**184**	P	**P**	**10 15 39.3**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=188,slow=5.0,SNR=7.1						
	comp=Z,1.2nm,0.8s						
VNDA	**Vanda**	**47.27**	**184**	P	**P**	**10 15 37.2**	**-0.7**
LPAZ	**La Paz**	**48.00**	**309**	P	**P**	**10 15 46.3**	**+1.4**
	comp=Z,5.3nm,0.4s,baz=117,slow=6.8,SNR=35						
	comp=Z,5.3nm,0.4s						
LPAZ	**La Paz**	**48.00**	**309**	P	**P**	**10 15 46.3**	**+1.4**
LPAZ				IAmb	IAmb	10 15 51.8	
	comp=Z,6.8nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.01**	**22**	T	T	11 07 21.2	
	baz=192,slow=74,SNR=6.0						
H10S3	**ASCENSION HYDR**	**48.01**	**22**	T	T	11 07 25.3	
	baz=28,slow=74,SNR=9.2						
BOSA	**Boshof**	**48.10**	**80**	P	**P**	**10 15 45.1**	**0.0**
	comp=Z,2.2nm,0.7s,baz=234,slow=4.9,SNR=5.3						
	comp=Z,2.2nm,0.7s						
BOSA	**Boshof**	**48.10**	**80**	P	**P**	**10 15 44.5**	**-0.6**
BOSA				IAmb	IAmb	10 15 57.5	
	comp=Z,16nm,1.4s						
H10N1	**ASCENSION HYDR**	**49.13**	**22**	T	T	11 09 20.3	
	baz=192,slow=75,SNR=11						
H10N3	**ASCENSION HYDR**	**49.13**	**22**	T	T	11 08 53.0	
	baz=192,slow=75,SNR=11						
H10N2	**ASCENSION HYDR**	**49.14**	**22**	T	T	11 08 53.9	
	baz=192,slow=75,SNR=11						
DBIC	**Dimbokro**	**65.49**	**29**	P	**P**	**10 17 46.9**	**-1.5**
DBIC				IAmb	IAmb	10 17 51.2	
	comp=Z,16nm,1.5s						
TOA0	**Torodi Ar. Sit**	**73.58**	**34**	P	**P**	**10 18 38.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**10 18 37.8**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=197,slow=6.7,SNR=9.2						
	comp=Z,1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**10 18 38.1**	**-0.3**
ASAR	**Alice Springs**	**100.42**	**166**	P	**Pdif**	**10 20 51.5**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=182,slow=4.5,SNR=5.1						
FINES	**FINESS Array B**	**124.79**	**30**	PKP	**PKPdf**	**10 26 03.0**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=180,slow=1.5,SNR=9.6						
ARCES	**ARCESS Array B**	**131.07**	**23**	PKP	**PKPdf**	**10 26 15.0**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=259,slow=0.5,SNR=8.5						
ZALV	**Zalesovo Beam**	**144.14**	**65**	PKP	**PKPdf**	**10 26 40.3**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=233,slow=6.1,SNR=4.4						
ILAR	**Eielson Array**	**147.82**	**313**	PKPbc	**PKPbc**	**10 26 48.4**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=120,slow=2.1,SNR=23						
SONM	**Songino Array**	**153.04**	**88**	PKPbc	**PKPbc**	**10 27 01.6**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=216,slow=3.9,SNR=4.8						

*IDC **19** 10:10:30.4±0.6,55.°10S×30.°66W,h0km,mb4.3/9, mbtmp4.3/10,ML3.6/1,Error ellipse: s-maj=22.9km s-min=17.0km az=75.0*
*NEIC **19** 10:10:31.9±2.5,55.°24S±0.°10×30.°9W±0.°2,h10km±1km, mb4.7/32,Error ellipse: s-maj=17.3km s-min=16.0km az=34.0*

ISC 19 10:10:31.4±0.5,**55.°19S**±0.°07×**30.°86W**±0.°08,**h10**km,**n58,** σ1°**09**/53,**mb4.7**/19,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.39**	**283**	Pn	**Pn**	**10 11 23.6**	**-0.7**
ORCD	**Orcadas**	**9.23**	**227**	Pn	**Pn**	**10 12 42.1**	**-2.3**
VNA1	**Neumayer--Stat**	**18.41**	**156**	P	**Pn**	**10 14 47.8**	**+1.5**
VNA3	**Neumayer Olymp**	**18.53**	**158**	P	**Pn**	**10 14 48.5**	**+0.6**
VNA3				S	S	10 18 32.6	+14
VNA2	**Neumayer--Watz**	**18.80**	**156**	P	**P**	**10 14 50.6**	**-0.1**
	baz=312,slow=11						
PMSA	**Palmer Station**	**18.94**	**226**	P	**Pn**	**10 14 53.8**	**+1.0**
	0.2nm,0.3s,baz=64,slow=4.0,SNR=2.5						
	7.5nm,0.9s						
PMSA	**Palmer Station**	**18.94**	**226**	P	**P**	**10 14 51.6**	**-0.6**
SNAA	**Sanae**	**20.40**	**155**	P	**P**	**10 15 07.9**	**-0.2**
SNAA				S	**S**	**10 18 52.4**	**-3.8**
SNAA	**Sanae**	**20.40**	**155**	P	**P**	**10 15 08.1**	**0.0**
	4.4nm,0.8s,baz=300,slow=10,SNR=12						
	4.4nm,0.8s						
SNAA	**Sanae**	**20.40**	**155**	P	**P**	**10 15 07.8**	**-0.3**
SMAI	**San Martin Ant**	**21.12**	**218**	P	**P**	**10 15 15.8**	**0.0**
TROLL	**Troll, Antarti**	**21.96**	**153**	P	**P**	**10 15 24.9**	**-0.1**
BELA	**Belgrano 2**	**22.83**	**182**	P	**P**	**10 15 35.2**	**+1.1**
MG05	**Puerto Natales**	**24.79**	**261**	P	**P**	**10 15 52.9**	**-0.2**
MG05				IAmb	IAmb	10 15 54.6	
	comp=Z,36nm,1.1s						
GO09	**Cerro Castillo**	**24.87**	**262**	P	**P**	**10 15 53.2**	**-0.7**
GO09				IAmb	IAmb	10 16 03.6	
	comp=Z,32nm,1.4s						
TRQA	**Tornquist**	**27.07**	**296**	P	**P**	**10 16 12.4**	**-1.6**
CPUP	**Villa Florida**	**34.70**	**315**	P	**P**	**10 17 21.7**	**+0.4**
	comp=Z,5.4nm,0.5s,baz=150,slow=6.9,SNR=14						
	comp=Z,5.4nm,0.5s						
CPUP	**Villa Florida**	**34.70**	**315**	P	**P**	**10 17 21.7**	**+0.4**
CPUP				IAmb	IAmb	10 17 25.4	
	comp=Z,6.2nm,0.8s						
MT09	**Talagante**	**35.06**	**291**	P	**P**	**10 17 24.9**	**+0.4**
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**10 17 25.5**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=87,slow=1.5,SNR=13						
	comp=Z,2.1nm,0.6s						
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**10 17 25.6**	**+1.3**
QSPA				IAmb	IAmb	10 17 34.8	
	comp=Z,6.1nm,0.8s						
MT02	**Curacav**	**35.54**	**291**	P	**P**	**10 17 29.5**	**+1.1**
VA06	**Catapilco**	**36.16**	**292**	P	**P**	**10 17 34.8**	**+1.0**
CO02	**Combarbal**	**37.06**	**294**	P	**P**	**10 17 42.9**	**+1.2**
CO03	**El Pedregal**	**37.19**	**294**	P	**P**	**10 17 41.2**	**-1.4**
CO03				IAmb	IAmb	10 17 54.9	
	comp=Z,20nm,1.1s						
CO01	**Juntas del Tor**	**37.56**	**296**	P	**P**	**10 17 44.4**	**-1.7**
CO01				IAmb	IAmb	10 17 54.0	
	comp=Z,16nm,1.2s						
AC05	**El Transito**	**38.58**	**297**	P	**P**	**10 17 54.2**	**-0.3**
AC05				IAmb	IAmb	10 18 06.6	
	comp=Z,32nm,1.4s						
VA04	**Juan Fernndez**	**39.46**	**283**	P	**P**	**10 18 01.2**	**-0.5**
AC04	**Llanos de Chal**	**39.50**	**296**	P	**P**	**10 18 00.5**	**-1.5**
GO02	**Mina Guanaco**	**41.25**	**301**	P	**P**	**10 18 17.0**	**+0.1**
GO02				IAmb	IAmb	10 18 32.3	
	comp=Z,25nm,1.2s						
LVC	**Limon Verde**	**43.08**	**303**	P	**P**	**10 18 31.7**	**-0.1**
LVC				IAmb	IAmb	10 18 55.5	
	comp=Z,23nm,1.5s						
PB02	**IPOC Station P**	**44.65**	**303**	P	**P**	**10 18 43.6**	**-0.6**
PB01	**IPOC Station P**	**44.69**	**304**	P	**P**	**10 18 45.3**	**+0.8**
PB01				IAmb	IAmb	10 18 59.2	
	comp=Z,22nm,1.5s						
PTLB	**Pontes e Lacer**	**45.26**	**320**	P	**P**	**10 18 49.4**	**+0.4**
PTLB				IAmb	IAmb	10 18 53.2	
	comp=Z,8.4nm,0.7s						
TA01	**Diego Aracena**	**45.43**	**304**	P	**P**	**10 18 51.0**	**+0.7**
SIV	**San Ignacio**	**45.50**	**317**	P	**P**	**10 18 51.0**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=134,slow=7.1,SNR=5.0						
	comp=Z,2.1nm,0.7s						
GO01	**Chusmiza**	**45.73**	**305**	P	**P**	**10 18 54.0**	**+0.7**
GO01				IAmb	IAmb	10 19 13.1	
	comp=Z,18nm,1.3s						
VNDA	**Vanda**	**47.32**	**184**	P	**P**	**10 19 06.7**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=201,slow=5.3,SNR=12						
	comp=Z,1.7nm,0.7s						
VNDA	**Vanda**	**47.32**	**184**	P	**P**	**10 19 05.8**	**+1.3**
BOSA	**Boshof**	**47.82**	**80**	P	**P**	**10 19 09.1**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=199,slow=7.2,SNR=5.0						
	comp=Z,4.2nm,0.8s						
BOSA	**Boshof**	**47.82**	**80**	P	**P**	**10 19 07.6**	**-1.6**
BOSA				IAmb	IAmb	10 19 09.4	
	comp=Z,9.0nm,1.0s						
H10S2	**ASCENSION HYDR**	**47.87**	**22**	T	T	11 11 05.5	
H10S3	**ASCENSION HYDR**	**47.87**	**22**	T	T	11 11 09.4	
	SNR=14						
LPAZ	**La Paz**	**48.19**	**309**	P	**P**	**10 19 14.0**	**+1.3**
	comp=Z,4.7nm,0.6s,baz=114,slow=5.6,SNR=14						
	comp=Z,4.7nm,0.6s						
LPAZ	**La Paz**	**48.19**	**309**	P	**P**	**10 19 14.0**	**+1.3**
LPAZ				IAmb	IAmb	10 19 16.6	
	comp=Z,4.6nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.99**	**22**	T	T	11 12 35.7	
	baz=192,slow=75,SNR=6.1						
H10N3	**ASCENSION HYDR**	**48.99**	**22**	T	T	11 12 35.9	
	baz=192,slow=75,SNR=22						
H10N2	**ASCENSION HYDR**	**49.00**	**22**	T	T	11 12 35.5	
	baz=192,slow=75,SNR=18						
LBTB	**Lobatse**	**50.80**	**77**	P	**P**	**10 19 32.0**	**0.0**
DBIC	**Dimbokro**	**65.32**	**29**	P	**P**	**10 21 13.5**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=191,slow=8.7,SNR=3.4						
	comp=Z,5.0nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.40**	**33**	P	**P**	**10 22 02.5**	**-1.0**
TOA0				IAmb	IAmb	10 22 04.8	
	comp=Z,6.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P	**P**	**10 22 03.6**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=204,slow=6.6,SNR=17						
	comp=Z,3.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P	**P**	**10 22 02.9**	**-0.6**
TORD				IAmb	IAmb	10 22 04.7	
	comp=Z,5.7nm,1.1s						
FINES	**FINESS Array B**	**124.62**	**29**	PKP	**PKPdf**	**10 29 29.3**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=218,slow=2.2,SNR=5.9						
ARCES	**ARCESS Array B**	**130.93**	**23**	PKP	**PKPdf**	**10 29 41.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=211,slow=1.4,SNR=12						
ZALV	**Zalesovo Beam**	**143.87**	**65**	PKP	PKPbc	10 30 03.2	-0.2
	comp=Z,1.5nm,0.5s,baz=243,slow=3.2,SNR=5.4						
ILAR	**Eielson Array**	**148.00**	**313**	PKPbc	**PKPbc**	**10 30 15.4**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=132,slow=1.9,SNR=19						
SONM	**Songino Array**	**152.76**	**88**	PKPbc	**PKPbc**	**10 30 27.4**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=230,slow=2.4,SNR=8.6						

*IDC **19** 10:11:16.4±2.3,32.°74N×139.°45E,h0km,mb3.9/2, mbtmp3.9/4,ML3.3/2,Error ellipse: s-maj=125.5km s-min=29.4km az=78.0*
*JMA **19** 10:11:17.9±0.2,33.°2N±0.°5×14.°1E±.°,h53km,MV3.5/36,E OFF HACHIJOJIMA ISLAND*
*NEIC **19** 10:11:24.4±1.7,33.°06N±0.°09×139.°7E±0.°1,h84km±8km, mb4.6/9,Error ellipse: s-maj=17.1km s-min=10.2km az=123.0*

ISC 19 10:11:17.7±1.4,**33.°18N**±0.°04×**141.°05E**±0.°08,**h44**km±21km, **n40,** σ1°**40**/38,**mb4.6**/7,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.04**	**267**		**Pn**	**10 11 36.6**	**+0.9**
JHJ2	**Mitsune**	**1.04**	**267**	P	**Pn**	**10 11 36.5**	**+0.7**
JHCJ	**Hachijojimakas**	**1.06**	**264**	P	**Pn**	**10 11 36.5**	**+0.5**
JHCJ				eS	**Sn**	**10 11 48.8**	**-0.8**
JAOM	**Aogashimamukai**	**1.30**	**237**	P	**Pn**	**10 11 40.5**	**+1.1**
JAOM				eS	**Sn**	**10 11 56.2**	**+0.6**
JMKN	**Mikurajimanish**	**1.41**	**301**	eP	**Pn**	**10 11 41.1**	**+0.2**
JMKN				S	**Sn**	**10 11 58.5**	**+0.2**
BSO1	**Boso 1**	**1.47**	**358**	eP	**Pn**	**10 11 41.8**	**+0.5**
BSO3	**Boso 3**	**1.68**	**345**	eP	**Pn**	**10 11 44.5**	**+0.1**
BSO3				eS	**Sn**	**10 12 05.2**	**+0.7**
JIM2	**Oshima 2**	**2.04**	**319**	eP	**Pn**	**10 11 49.5**	**-0.1**
JIZS	**Izushimoda**	**2.37**	**311**	P	**Pn**	**10 11 54.7**	**+0.7**
JIZS				eS	**Sn**	**10 12 22.1**	**+0.2**
JOD2	**Odawara 2**	**2.64**	**322**	P	**Pn**	**10 11 57.9**	**+0.1**
JOD2				eS	**Sn**	**10 12 25.5**	**-3.0**
JFNN	**Fujinakano**	**2.81**	**316**	eP	**Pn**	**10 12 00.9**	**+0.9**
TK02	**Tokai 2**	**2.85**	**286**	P	**Pn**	**10 12 02.2**	**+1.7**
SHZ3	**Shizuoka 3**	**3.02**	**309**	P	**Pn**	**10 12 04.8**	**+1.8**
JYN	**Shimob**	**3.11**	**319**	P	**Pn**	**10 12 05.5**	**+1.2**
JRY	**Ryogami san**	**3.34**	**329**	P	**Pn**	**10 12 08.4**	**+1.0**
JRY				eS	**Sn**	**10 12 45.5**	**-0.4**
JAG	**Ashikaga**	**3.49**	**338**	P	**Pn**	**10 12 09.7**	**+0.2**
JAG				eS	**Sn**	**10 12 49.0**	**-0.6**
JGF	**Kuroka**	**3.89**	**309**	Pn	**Pn**	**10 12 12.7**	**-2.3**
INU	**Inuyama**	**3.98**	**304**	Pn	**Pn**	**10 12 11.9**	**-4.3**
MJAR	**Matsushiro Arr**	**4.09**	**326**	Pn	**Pn**	**10 12 17.4**	**-0.2**
	0.5nm,0.3s,baz=158,slow=12,SNR=30						
	2.0nm,0.3s						
MAJO	**Matsushiro**	**4.09**	**326**		**Pn**	**10 12 20.0**	**+2.3**
JWT	**Wachi**	**5.13**	**296**	Pn	Pn	10 12 24.4	-7.6
JMN	**Monobe**	**6.02**	**277**	Pn	Pn	10 12 36.7	-7.5
JCJ	**Chichijima**	**6.14**	**171**	Pn	**Pn**	**10 12 46.4**	**+0.5**
	2.4nm,0.3s,baz=127,slow=22,SNR=1.5						
JCJ				Sn	**Sn**	**10 13 51.8**	**-3.1**
	2.6nm,0.3s,baz=273,slow=22,SNR=1.0						
	43nm,0.7s						
JHS	**Saijyo**	**6.83**	**288**	Pn	Pn	10 12 47.8	-7.5
NAWB	**Namwon**	**11.51**	**285**	Pn	Pn	10 13 51.3	-8.1
H11N2	**WAKE ISLAND Hy**	**26.65**	**114**	T	T	10 45 03.5	
	baz=306,slow=74,SNR=7.0						
H11N1	**WAKE ISLAND Hy**	**26.65**	**114**	T	T	10 45 09.7	
	baz=88,slow=74,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	**26.67**	**114**	T	T	10 45 49.7	
	SNR=6.4						
L19K	**White Mountain**	**49.24**	**34**	P	P	10 20 08.9	+7.5
L19K				IAmb	IAmb	10 20 34.0	
	comp=Z,7.1nm,1.4s						
M19K	**Big River Lodg**	**49.43**	**34**	P	P	10 20 09.6	+6.6
M19K				IAmb	IAmb	10 20 33.4	
	comp=Z,5.8nm,1.0s						
M20K	**Styx River**	**50.02**	**34**	P	P	10 20 13.2	+5.7
IMAR	**Indian Mountai**	**50.14**	**29**	P	P	10 20 16.3	+8.1
WB0	**Warramunga Arr**	**53.03**	**188**	P	**P**	**10 20 31.0**	**+0.7**
WB0				IAmb	IAmb	10 20 38.5	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**53.20**	**188**	P	**P**	**10 20 31.2**	**-0.3**
WR0	**Warramunga Arr**	**53.21**	**188**	P	**P**	**10 20 32.2**	**+0.7**
WR0				IAmb	IAmb	10 20 50.2	
	comp=Z,9.3nm,1.5s						
WB2	**Warramunga Arr**	**53.21**	**188**	P	**P**	**10 20 32.0**	**+0.4**
WB2				IAmb	IAmb	10 20 53.1	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**53.21**	**188**	P	**P**	**10 20 32.1**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=2.4,slow=7.6,SNR=38						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**53.21**	**188**	P	**P**	**10 20 32.2**	**+0.6**
AS31	**Alice Springs**	**56.94**	**188**	P	**P**	**10 20 57.4**	**-1.0**
ASAR	**Alice Springs**	**56.94**	**188**	P	**P**	**10 20 59.4**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=5.0,slow=6.9,SNR=11						
	comp=Z,0.5nm,0.4s						

*IDC **19** 10:13:00.6±1.2,55.°12S×30.°55W,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=55.3km s-min=28.6km az=73.0*
*NEIC **19** 10:13:01.3±0.9,55.°19S±0.°08×30.°4W±0.°2,h10km±1km, mb4.3/9,Error ellipse: s-maj=22.9km s-min=12.6km az=256.0*

ISC 19 10:13:01.5±0.9,**55.°2S**±0.°1×**30.°5W**±0.°1,**h10**km,**n16,** σ0°**53**/15,**mb4.2**/5,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.60**	**282**	Pn	**Pn**	**10 13 57.7**	**+0.4**
ORCD	**Orcadas**	**9.41**	**228**	Pn	**Pn**	**10 15 17.1**	**+0.1**
PMSA	**Palmer Station**	**19.12**	**226**	P	**P**	**10 17 23.5**	**-0.8**
PMSA				IAmb	IAmb	10 17 32.3	
	comp=Z,24nm,1.4s						
SNAA	**Sanae**	**20.33**	**155**	P	Pn	10 17 39.6	+0.1
	comp=Z,1.9nm,0.9s,baz=318,slow=12,SNR=1.7						
	comp=Z,1.9nm,0.9s						
SNAA	**Sanae**	**20.33**	**155**	P	**P**	**10 17 38.2**	**+0.7**
GO10	**Punta Arenas**	**23.61**	**258**	P	**P**	**10 18 12.3**	**-0.1**
QSPA	**South Pole Qui**	**35.10**	**180**	P	**P**	**10 19 55.0**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=146,slow=2.3,SNR=2.8						
	comp=Z,3.3nm,0.8s						
QSPA	**South Pole Qui**	**35.10**	**180**	P	**P**	**10 19 54.9**	**+0.3**
QSPA				IAmb	IAmb	10 20 02.0	
	comp=Z,7.9nm,1.1s						
GO02	**Mina Guanaco**	**41.43**	**300**	P	**P**	**10 20 48.7**	**+0.2**
VNDA	**Vanda**	**47.36**	**184**	P	**P**	**10 21 34.6**	**-0.4**
VNDA				IAmb	IAmb	10 21 43.8	
	comp=Z,2.2nm,0.9s						
LPAZ	**La Paz**	**48.35**	**308**	P	**P**	**10 21 44.5**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=170,slow=9.3,SNR=2.7						
	comp=Z,1.1nm,0.5s						
LPAZ	**La Paz**	**48.35**	**308**	P	**P**	**10 21 43.9**	**-0.1**
TOA0	**Torodi Ar. Sit**	**73.25**	**33**	P	**P**	**10 24 32.0**	**-0.7**
TOA0				IAmb	IAmb	10 24 46.1	
	comp=Z,6.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.25**	**33**	P	**P**	**10 24 33.3**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=201,slow=5.7,SNR=2.7						
	comp=Z,0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.25**	**33**	P	**P**	**10 24 32.1**	**-0.6**
TORD				IAmb	IAmb	10 24 45.2	
	comp=Z,2.6nm,1.4s						
ILAR	**Eielson Array**	**148.14**	**313**	PKPbc	**PKPbc**	**10 32 45.6**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=115,slow=1.2,SNR=7.1						

*IDC **19** 10:18:08.3±0.8,55.°16S×31.°35W,h0km,mb4.2/7, mbtmp4.2/7,Error ellipse: s-maj=38.5km s-min=17.9km az=63.0*
*NEIC **19** 10:18:09.5±1.2,55.°3S±0.°1×31.°5W±0.°2,h10km±1km, mb4.7/29,Error ellipse: s-maj=18.3km s-min=15.9km az=30.0*

ISC 19 10:18:09.6±0.6,**55.°27S**±0.°09×**31.°6W**±0.°1,**h10**km,**n48,** σ0°**82**/43,**mb4.7**/21,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.01**	**287**		**Pn**	**10 18 57.7**	**+0.3**
ORCD	**Orcadas**	**8.88**	**226**		**Pn**	**10 20 17.0**	**-0.8**
VNA1	**Neumayer--Stat**	**18.50**	**155**	P	**Pn**	**10 22 27.0**	**+1.3**
VNA3	**Neumayer Olymp**	**18.61**	**158**	P	**Pn**	**10 22 28.7**	**+1.7**
VNA2	**Neumayer--Watz**	**18.90**	**155**	P	**Pn**	**10 22 31.3**	**+0.8**
	baz=313,slow=12						
SNAA	**Sanae**	**20.50**	**154**	P	**P**	**10 22 47.3**	**-0.1**
SNAA	**Sanae**	**20.50**	**154**	P	Pn	10 22 48.1	-1.5
	10.0nm,0.9s,baz=299,slow=11,SNR=12						
	10.0nm,0.9s						
SNAA	**Sanae**	**20.50**	**154**	P	**P**	**10 22 45.1**	**-2.3**
TROLL	**Troll, Antarti**	**22.08**	**152**	P	**P**	**10 23 04.9**	**+0.5**
BELA	**Belgrano 2**	**22.74**	**182**	P	**P**	**10 23 11.1**	**-0.2**
GO09	**Cerro Castillo**	**24.45**	**262**	P	**P**	**10 23 28.0**	**-0.3**
GO09				IAmb	IAmb	10 23 35.1	
	comp=Z,38nm,1.4s						
TRQA	**Tornquist**	**26.74**	**297**	P	**P**	**10 23 48.9**	**-0.3**
PLCA	**Paso Flores**	**29.41**	**283**	P	**P**	**10 24 12.5**	**-0.6**
PLCA				IAmb	IAmb	10 24 14.8	
	comp=Z,14nm,1.5s						
CPUP	**Villa Florida**	**34.48**	**316**	P	**P**	**10 24 57.1**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=163,slow=8.3,SNR=6.2						
	comp=Z,2.0nm,0.6s						
MT09	**Talagante**	**34.71**	**292**	P	**P**	**10 24 59.1**	**-0.6**
MT09				IAmb	IAmb	10 24 59.3	
	comp=Z,8.1nm,0.7s						
MT01	**Popeta**	**34.78**	**291**	P	**P**	**10 24 59.7**	**-0.4**
MT01				IAmb	IAmb	10 25 01.3	
	comp=Z,11nm,1.2s						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**10 25 02.9**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=172,slow=1.4,SNR=8.8						
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**10 25 01.4**	**-0.4**
MT02	**Curacav**	**35.18**	**292**	P	**P

SNAA	Sanae	20.33	155	P		P		10 26 21.5	-0.5
SNAA	Sanae	20.33	155	P		P		10 26 22.1	+0.2
	comp=Z,2.3nm,0.7s,baz=302,slow=10.0,SNR=6.4								
	comp=Z,2.3nm,0.7s								
SNAA	Sanae	20.33	155	P		P		10 26 21.2	-0.8
TROLL	Troll, Antarti	21.89	153	P		P		10 26 40.1	+1.2
BELA	Belgrano 2	22.75	182	P		P		10 26 47.5	-0.3
MG05	Puerto Natales	24.77	261	P		P		10 27 07.3	-0.3
GO09	Cerro Castillo	24.85	262	P		P		10 27 08.3	-0.1
GO09				IAmb		IAmb		10 27 27.9	
	comp=Z,15nm,1.1s								
TRQA	Tornquist	27.10	296	P		P		10 27 27.1	-1.8
TRQA				IAmb		IAmb		10 27 47.1	
	comp=Z,12nm,1.5s								
CPUP	Villa Florida	34.76	315	P		P		10 28 36.3	0.0
	comp=Z,1.7nm,0.7s,baz=165,slow=8.1,SNR=4.4								
	comp=Z,1.7nm,0.7s								
CPUP	Villa Florida	34.76	315	P		P		10 28 36.8	+0.5
QSPA	South Pole Qui	34.99	180	P		P		10 28 39.5	+1.3
	comp=Z,5.0nm,1.0s,baz=195,slow=3.7,SNR=7.3								
	comp=Z,5.0nm,1.0s								
QSPA	South Pole Qui	34.99	180	P		P		10 28 38.8	+0.6
QSPA				IAmb		IAmb		10 28 44.0	
	comp=Z,4.1nm,0.8s								
VA06	Catapilco	36.19	292	P		P		10 28 47.8	-0.7
CO02	Combarbal	37.09	294	P		P		10 28 56.5	+0.1
CO01	Juntas del Tor	37.60	296	P		P		10 29 01.7	+0.8
CO01				IAmb		IAmb		10 29 05.3	
	comp=Z,9.5nm,1.1s								
AC05	El Transito	38.61	297	P		P		10 29 09.7	+0.4
PB01	IPOC Station P	44.73	304	P		P		10 29 58.1	-1.3
PB01				IAmb		IAmb		10 30 17.1	
	comp=Z,13nm,1.3s								
PTLB	Pontes e Lacer	45.32	320	P		P		10 30 04.1	+0.1
PTLB				IAmb		IAmb		10 30 17.8	
	comp=Z,3.5nm,0.9s								
PB16	IPOC Station P	47.08	306	P		P		10 30 17.1	-1.4
PB16				IAmb		IAmb		10 30 38.3	
	comp=Z,6.4nm,1.3s								
VNDA	Vanda	47.24	184	P		P		10 30 20.7	+2.2
	comp=Z,1.4nm,0.7s,baz=183,slow=5.5,SNR=9.0								
	comp=Z,1.4nm,0.7s								
VNDA	Vanda	47.24	184	P		P		10 30 16.8	-1.7
BOSA	Boshof	47.84	80	P		P		10 30 23.5	-0.4
LPAZ	La Paz	48.24	309	P		P		10 30 28.8	+1.2
	comp=Z,2.5nm,0.6s,baz=122,slow=3.5,SNR=9.3								
	comp=Z,2.5nm,0.6s								
LPAZ	La Paz	48.24	309	P		P		10 30 29.1	+1.5
LPAZ				IAmb		IAmb		10 30 46.9	
	comp=Z,2.7nm,0.8s								
H10N1	ASCENSION HYDR	49.06	22	T		T		11 23 27.2	
H10N3	ASCENSION HYDR	49.06	22	T		T		11 23 32.6	
H10N2	ASCENSION HYDR	49.08	22	T		T		11 23 32.3	
RCBR	Riachuelo	49.46	353	P		P		10 30 35.7	-0.6
RCBR				IAmb		IAmb		10 30 36.3	
	comp=Z,10nm,1.0s								
TOA0	Torodi Ar. Sit	73.46	33	P		P		10 33 17.5	-0.9
TOA0				IAmb		IAmb		10 33 19.1	
	comp=Z,2.4nm,0.7s								
TORD	Torodi Ar. Bea	73.46	33	P		P		10 33 18.4	-0.1
	comp=Z,1.9nm,0.6s,baz=199,slow=6.2,SNR=12								
	comp=Z,1.9nm,0.6s								
TORD	Torodi Ar. Bea	73.46	33	P		P		10 33 18.4	-0.1
TORD				IAmb		IAmb		10 33 19.1	
	comp=Z,2.0nm,0.8s								
ZALV	Zalesovo Beam	143.90	65	PKP		PKPbc		10 41 18.6	+0.5
	comp=Z,1.1nm,0.6s,baz=219,slow=3.8,SNR=3.6								
ILAR	Eielson Array	148.05	313	PKPbc		PKPbc		10 41 30.1	-0.2
	comp=Z,1.7nm,0.8s,baz=135,slow=2.2,SNR=8.5								
SONM	Songino Array	152.77	88	PKPbc		PKPbc		10 41 41.6	-0.6
	comp=Z,0.7nm,0.6s,baz=253,slow=3.3,SNR=3.8								

IDC ***19*** *10:27:13.1±1.0,55°15S×31°38W,h0km,mb3.9/5, mbtmp4.0/5,Error ellipse: s-maj=44.9km s-min=23.4km az=62.0*

NEIC ***19*** *10:27:14.0±1.4,55°51S±0°09×31°6W±0°2,h10km±1km, mb4.5/11,Error ellipse: s-maj=19.7km s-min=15.5km az=259.0*

ISC 19 10:27:14.2±0.7,55°3S±0°1×31°6W±0°1,h10km,n28, σ1ᵍ19/25,mb4.4/9,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.01	288		Pn	10 28 02.4	+0.6
PMSA	Palmer Station	18.57	226	P	P	10 31 28.7	-2.1
PMSA				IAmb	IAmb	10 31 30.0	
	comp=Z,29nm,1.2s						
VNA3	Neumayer Olymp	18.59	158	P	Pn	10 31 32.7	+1.4
VNA2	Neumayer--Watz	18.88	155	P	P	10 31 33.2	-1.1
	baz=319,slow=18						
SNAA	Sanae	20.48	154	P	P	10 31 53.1	+1.2
SNAA	Sanae	20.48	154	P	P	10 31 53.0	+1.2
	comp=Z,5.7nm,0.8s,baz=298,slow=11,SNR=8.7						
	comp=Z,5.7nm,0.8s						
SNAA	Sanae	20.48	154	P	P	10 31 50.0	-1.8
TROLL	Troll, Antarti	22.06	152	P	P	10 32 09.8	+1.0
MG04	Isla Riesco	23.36	259	P	P	10 32 24.2	+1.8
GO09	Cerro Castillo	24.43	262	P	P	10 32 32.8	+0.1
GO09				IAmb	IAmb	10 32 55.9	
	comp=Z,17nm,1.1s						
CPUP	Villa Florida	34.49	317	P	P	10 34 01.0	-1.1
	comp=Z,1.0nm,0.5s,baz=141,slow=6.5,SNR=3.7						
	comp=Z,1.0nm,0.5s						
QSPA	South Pole Qui	34.96	180	P	P	10 34 07.5	+1.4
	comp=Z,0.6nm,0.6s,baz=174,slow=6.6,SNR=1.4						
	comp=Z,0.6nm,0.6s						
QSPA	South Pole Qui	34.96	180	P	P	10 34 04.0	-2.0
CO03	El Pedregal	36.85	295	P	P	10 34 24.1	+1.6
CO01	Juntas del Tor	37.23	297	P	P	10 34 25.7	-0.3
CO01				IAmb	IAmb	10 34 40.1	
	comp=Z,9.3nm,1.2s						
GO02	Mina Guanaco	40.95	302	P	P	10 34 56.4	-0.8
GO02				IAmb	IAmb	10 35 20.4	
	comp=Z,21nm,1.3s						
PB01	IPOC Station P	44.40	305	P	P	10 35 25.7	+0.7
PB01				IAmb	IAmb	10 35 31.8	
	comp=Z,18nm,1.4s						
LPAZ	La Paz	47.94	310	P	P	10 35 53.9	+0.5
	comp=Z,1.8nm,0.5s,baz=102,slow=7.0,SNR=8.3						
	comp=Z,1.8nm,0.5s						
LPAZ	La Paz	47.94	310	P	P	10 35 54.3	+0.8
H10S3	ASCENSION HYDR	48.13	23	T	T	11 27 59.8	
	SNR=4.2						
H10N3	ASCENSION HYDR	49.24	23	T	T	11 29 25.9	
	baz=202,slow=74,SNR=2.5						
H10N1	ASCENSION HYDR	49.24	23	T	T	11 29 26.9	
	baz=2.9,slow=74,SNR=5.2						
TOA0	Torodi Ar. Sit	73.72	34	P	P	10 38 48.2	+0.1
TOA0				IAmb	IAmb	10 39 10.7	
	comp=Z,7.5nm,1.5s						
TORD	Torodi Ar. Bea	73.72	34	P	P	10 38 47.9	-0.2
	comp=Z,0.9nm,0.7s,baz=211,slow=6.5,SNR=4.4						
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	73.72	34	P	P	10 38 48.4	+0.3
TORD				IAmb	IAmb	10 39 06.8	
	comp=Z,3.3nm,1.4s						
ZALV	Zalesovo Beam	144.29	65	PKP	PKPab	10 46 47.1	0.0
	comp=Z,1.0nm,0.5s,baz=212,slow=3.5,SNR=3.7						
ILAR	Eielson Array	147.76	313	PKPbc	PKiKP	10 46 59.2	-0.4
	comp=Z,1.5nm,0.8s,baz=142,slow=2.1,SNR=10.0						
SONM	Songino Array	153.19	88	PKPbc	PKPbc	10 47 10.7	-0.6
	comp=Z,0.8nm,0.6s,baz=208,slow=1.5,SNR=2.8						

IDC ***19*** *10:31:18.0±0.5,55°09S×30°50W,h0km,mb4.7/12, mbtmp4.7/13,ML4.3/1,Error ellipse: s-maj=17.5km s-min=15.2km az=84.0*

MOS ***19*** *10:31:17.4±1.4,55°33S×30°72W,h10km,mb5.1/13,Error ellipse: s-maj=19.8km s-min=12.6km az=114.6*

NEIC ***19*** *10:31:19.4±2.4,55°31S±0°07×30°7W±0°1,h10km±1km, mb5.1/60,Error ellipse: s-maj=14.0km s-min=11.7km az=126.0*

ISC 19 10:31:18.8±0.3,55°24S±0°06×30°62W±0°06,h10km,n317, σ1ᵍ04/301,mb5.1/42,3C-3D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.53	283	Pn	Pn	10 32 12.1	-1.5
HOPE	Hope Point	3.53	283	eP	Pn	10 32 12.1	-1.5
ORCD	Orcadas	9.30	228	Pn	Pn	10 33 30.3	-2.4
EFI	East Falkland	16.68	271	eP	Pn	10 35 11.8	-0.6
VNA1	Neumayer--Stat	18.30	156	P	P	10 35 34.2	+1.7
VNA3	Neumayer Olymp	18.44	159	P	P	10 35 36.2	+2.2
VNA3	Neumayer Olymp	18.44	159	PcP	PcP	10 39 57.8	-6.0
VNA2	Neumayer--Watz	18.70	156	P	Pn	10 35 38.3	+1.0
	baz=313,slow=13						
VNA2	Neumayer--Watz	18.70	156	PcP	PcP	10 40 04.5	+0.3
PMSA	Palmer Station	19.01	226	P	Pn	10 35 43.3	+2.4
	1.0nm,0.3s,baz=67,slow=7.8,SNR=16						
	23nm,0.9s						
PMSA	Palmer Station	19.01	226	P	P	10 35 37.8	-2.5
SNAA	Sanae	20.29	155	P	P	10 35 54.8	+0.5
SNAA	Sanae	20.29	155	P	P	10 35 55.0	+0.6
	8.1nm,0.6s,baz=306,slow=8.5,SNR=42						
	8.1nm,0.6s						
SNAA	Sanae	20.29	155	P	P	10 35 53.8	-0.6
SNAA	Sanae	20.29	155	eP	P	10 35 54.5	+0.1
SMAI	San Martin Ant	21.17	218	P	P	10 36 03.4	-0.3
USHA	Ushuaia	21.51	255	P	P	10 36 08.9	+1.4
	30nm,0.8s,baz=109,slow=11,SNR=9.5						
	30nm,0.8s						
TROLL	Troll, Antarti	21.85	153	P	P	10 36 11.8	+0.6
MG02	Cerro Sombrero	22.63	260	P	P	10 36 19.6	+0.1
BELA	Belgrano 2	22.79	182	P	P	10 36 19.7	-1.3
GO10	Punta Arenas	23.52	258	P	P	10 36 28.8	+0.1
MG04	Isla Riesco	23.92	259	P	P	10 36 31.8	-0.7
MG05	Puerto Natales	24.91	261	P	P	10 36 42.2	+0.6
GO09	Cerro Castillo	25.00	262	P	P	10 36 41.0	-1.4
GO09				IAmb	IAmb	10 36 56.2	
	comp=Z,42nm,1.0s						
COYC	Coyhaique	27.75	273	P	P	10 37 07.2	-0.2
PLTB	Pedras Altas	28.53	316	P	P	10 37 13.8	-0.6
PLTB	Pedras Altas	28.53	316	eP	P	10 37 16.2	+1.9
RODS	Rosario do Sul	30.42	315	eP	P	10 37 31.1	0.0
ALGR	Alto Alegre (B	30.95	319	eP	P	10 37 37.4	+1.4
UNIS	Unistalda (Bra	31.50	316	eP	P	10 37 41.8	+1.1
ITQB	Itaqui	31.60	313	eP	P	10 37 42.3	+0.8
CRSM	Crissumal (Br	32.51	319	eP	P	10 37 51.5	+2.0
FRBT	Francisco Belt	33.53	322	eP	P	10 37 59.9	+1.4
PTGB	Pitanga	34.34	324	eP	P	10 38 06.4	+0.8
CPUP	Villa Florida	34.84	315	P	P	10 38 09.8	0.0
	comp=Z,6.7nm,0.8s,baz=155,slow=6.5,SNR=9.5						
	comp=Z,6.7nm,0.8s						
CPUP	Villa Florida	34.84	315	P	P	10 38 11.5	+1.7
CPUP				IAmb	IAmb	10 38 24.1	
	comp=Z,20nm,0.8s						
CPUP	Villa Florida	34.84	315	P	P	10 38 11.5	+1.7
CPUP				pmax	pmax		
	comp=Z,20nm,0.9s						
QSPA	South Pole Qui	35.02	180	P	P	10 38 13.1	+1.9
	comp=Z,22nm,0.9s,baz=192,slow=1.2,SNR=56						
	comp=Z,22nm,0.9s						
QSPA	South Pole Qui	35.02	180	P	P	10 38 13.3	+2.1
QSPA				IAmb	IAmb	10 38 19.9	
	comp=Z,41nm,1.1s						
MT09	Talagante	35.21	291	P	P	10 38 13.4	+0.3
MT09				IAmb	IAmb	10 38 14.4	
	comp=Z,17nm,0.7s						
MT01	Popeta	35.28	290	P	P	10 38 13.2	-0.4
MT01				IAmb	IAmb	10 39 07.8	
	comp=Z,48nm,1.5s						
PEL	Peldehue	35.53	292	P	P	10 38 16.8	+1.0
PEL	Peldehue	35.53	292	P	P	10 38 16.8	+1.0
PEL				pmax	pmax		
	comp=Z,33nm,0.7s						
VA05	Santo Domingo	35.63	290	P	P	10 38 17.0	+0.4
MT02	Curacav	35.68	291	P	P	10 38 17.0	-0.1
ZON	Zonda	35.73	296	P	P	10 38 17.7	+0.2
ZON				IAmb	IAmb	10 38 34.3	
	comp=Z,14nm,0.7s						
ZON	Zonda	35.73	296	P	P	10 38 17.7	+0.2
ZON				pmax	pmax		
	comp=Z,14nm,0.7s						
VA03	San Esteban	35.75	292	P	P	10 38 16.9	-0.8
VA03				IAmb	IAmb	10 38 26.2	
	comp=Z,24nm,0.8s						
ROC1	El Roble	35.83	291	P	P	10 38 17.2	-1.4
ROC1				IAmb	IAmb	10 38 35.4	
	comp=Z,26nm,0.7s						
VA06	Catapilco	36.30	292	P	P	10 38 23.1	+0.8
PCMB	Pacaembu	36.98	327	eP	P	10 38 28.1	0.0
CO01	Juntas del Tor	37.71	296	P	P	10 38 35.3	+0.7
GO04	Tololo Observa	37.92	295	P	P	10 38 35.1	-1.3
GO04				IAmb	IAmb	10 39 52.3	
	comp=Z,45nm,1.2s						
NAN01	Guarapari, ES	38.02	345	eP	P	10 38 36.8	-0.3
DIAM	Diamantina, MG	38.20	340	eP	P	10 38 38.9	+0.3
ITRB	Iturama	38.49	329	eP	P	10 38 40.9	-0.1
PMNB	Patos De Minas	38.57	335	eP	P	10 38 42.1	+0.4
AC05	El Transito	38.72	296	P	P	10 38 44.2	+1.2
AC05				IAmb	IAmb	10 39 02.3	
	comp=Z,42nm,1.0s						
GUA01	Guaratinga, BA	39.22	346	eP	P	10 38 48.3	+1.2
GO02	Mina Guanaco	41.40	300	P	P	10 39 06.4	+0.9
MAW	Mawson	41.95	145	P	P	10 39 10.0	+0.9
	comp=Z,5.8nm,0.8s,baz=224,slow=12,SNR=9.3						
	comp=Z,5.8nm,0.8s						
MAW	Mawson	41.95	145	P	P	10 39 09.2	+0.1
MAW	Mawson	41.95	145	P	P	10 39 09.2	+0.1
MAW				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SUR	Sutherland	42.35	79	P	P	10 39 14.6	+1.6
	comp=Z,6.0nm,0.8s,baz=135,slow=17,SNR=3.7						
	comp=Z,6.0nm,0.8s						
LVC	Limon Verde	43.22	303	P	P	10 39 20.8	+0.5
LVC				IAmb	IAmb	10 39 35.4	
	comp=Z,24nm,0.8s						
LVC	Limon Verde	43.22	303	eP	P	10 39 20.9	+0.5
LVC	Limon Verde	43.22	303	eP	P	10 39 22.0	+1.7
SDBA	SAO DESIDERIO	44.17	340	eP	P	10 39 27.1	-0.6
NBLA	Lagarto - SE	44.49	350	eP	P	10 39 30.0	-0.3
SOE	Somerset East	44.79	84	P	P	10 39 35.3	+2.7
SOE				IAmb	IAmb	10 40 26.0	
	comp=Z,45nm,1.1s						
PB01	IPOC Station P	44.83	304	P	P	10 39 34.0	+0.9
PB01				IAmb	IAmb	10 39 46.7	
	comp=Z,51nm,1.2s						
PTLB	Pontes e Lacer	45.39	320	P	P	10 39 37.0	-0.3
PTLB				IAmb	IAmb	10 39 52.0	
	comp=Z,13nm,0.8s						
PTLB	Pontes e Lacer	45.39	320	eP	P	10 39 37.3	0.0
NBAN	Anadia - AL	45.67	352	eP	P	10 39 38.6	-1.0
GO01	Chusmiza	45.87	305	P	P	10 39 42.9	+1.1
GO01				IAmb	IAmb	10 39 55.1	
	comp=Z,27nm,0.8s						
SNDB	Serra Nova Dou	46.10	331	eP	P	10 39 42.6	-0.4
NBRF	Rio Formoso -	46.57	354	eP	P	10 39 46.6	-0.1
SBA	Scott Base	46.74	185	P	P	10 39 45.6	-1.7
SBA				IAmb	IAmb	10 39 53.1	
	comp=Z,14nm,0.9s						
SBA	Scott Base	46.74	185	P	P	10 39 45.6	-1.7
SBA				pmax	pmax		
	comp=Z,14nm,0.9s						
PB16	IPOC Station P	47.17	306	P	P	10 39 50.7	-1.4
PB16				IAmb	IAmb	10 40 13.4	
	comp=Z,44nm,1.8s						
VNDA	Vanda	47.28	184	P	P	10 39 53.8	+2.2
	comp=Z,10nm,0.8s,baz=187,slow=6.3,SNR=50						
	comp=Z,10nm,0.8s						
VNDA	Vanda	47.28	184	P	P	10 39 50.8	-0.8
VNDA				IAmb	IAmb	10 39 58.0	
	comp=Z,12nm,0.8s						
VNDA	Vanda	47.28	184	P	P	10 39 50.8	-0.8
VNDA				pmax	pmax		
	comp=Z,12nm,0.9s						
BOSA	Boshof	47.70	80	P	P	10 39 55.6	0.0
	comp=Z,3.3nm,0.6s,baz=205,slow=7.9,SNR=7.1						
	comp=Z,3.3nm,0.6s						
BOSA	Boshof	47.70	80	P	P	10 39 55.9	+0.3
BOSA	Boshof	47.70	80	P	P	10 39 55.9	+0.3
BOSA				pmax	pmax		
	comp=Z,58nm,2.0s						
H10S2	ASCENSION HYDR	47.87	22	T	T	11 31 09.4	
	baz=28,slow=74,SNR=11						
H10S3	ASCENSION HYDR	47.87	21	T	T	11 31 08.7	
	baz=192,slow=74,SNR=18						
VILB	Vilhena	48.07	320	P	P	10 39 57.9	-0.5
VILB				IAmb	IAmb	10 40 19.9	
	comp=Z,15nm,0.9s						
VILB	Vilhena	48.07	320	eP	P	10 39 59.4	+0.9
PDRB	Porto dos Gac	48.10	325	eP	P	10 39 59.5	+0.9
SMTB	Santa Maria do	48.18	337	eP	P	10 39 59.6	+0.4
LPAZ	La Paz	48.33	308	P	P	10 40 02.0	+0.9
	comp=Z,14nm,0.7s,baz=114,slow=4.0,SNR=53						
	comp=Z,14nm,0.7s						
LPAZ	La Paz	48.33	308	P	P	10 40 01.4	+0.3
LPAZ				IAmb	IAmb	10 40 17.3	
	comp=Z,20nm,0.8s						
LPAZ	La Paz	48.33	308	eP	P	10 39 59.5	-1.6
LPAZ	La Paz	48.33	308	eP	P	10 40 02.2	+1.1
CLDB	Colider	48.48	326	eP	P	10 40 01.9	+0.3
H10N1	ASCENSION HYDR	48.98	21	T	T	11 32 40.9	
	baz=192,slow=75,SNR=13						
H10N3	ASCENSION HYDR	48.98	21	T	T	11 32 42.5	
	baz=192,slow=75,SNR=17						
H10N2	ASCENSION HYDR	49.00	21	T	T	11 32 42.1	
	baz=192,slow=75,SNR=20						
LBTB	Lobatse	50.68	77	P	P	10 40 18.8	+0.4
LBTB	Lobatse	50.68	77	P	P	10 40 18.8	+0.4
LBTB				pmax	pmax		
	comp=Z,11nm,0.9s						
TSUM	Tsumeb	51.04	65	P	P	10 40 20.8	-0.3
NPGB	Novo Progresso	51.96	328	eP	P	10 40 28.9	+1.0
ETMB	Extrema	53.28	314	P	P	10 40 36.8	-0.9
ETMB				IAmb	IAmb	10 40 52.3	
	comp=Z,12nm,1.2s						
ETMB	Extrema	53.28	314	eP	P	10 40 37.5	-0.2
ROSB	Rosrio	53.32	343	eP	P	10 40 38.2	+0.3
ITTB	Itaituba	54.61	329	eP	P	10 40 47.5	+0.2
CASY	Casey	55.31	162	P	P	10 40 50.9	-1.0
MALB	Monte Alegre	56.58	331	eP	P	10 41 01.6	0.0
MACA	Manacapuru-AM	57.32	324	P	P	10 41 05.8	-1.0
MACA				IAmb	IAmb	10 41 36.2	
	comp=Z,13nm,0.9s						
MCPB	Macapa, AP	57.43	334	eP	P	10 41 07.3	-0.3
CZSB	Cruzeiro do Su	57.94	308	P	P	10 41 09.9	-1.2
CZSB				IAmb	IAmb	10 41 24.8	
	comp=Z,16nm,1.1s						
LSZ	Lusaka	59.94	73	P	P	10 41 25.7	+0.5
LSZ	Lusaka	59.94	73	P	P	10 41 25.7	+0.5
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BOAV	Boa Vista	62.48	326	P	P	10 41 41.7	-0.5
BOAV				IAmb	IAmb	10 42 05.9	
	comp=Z,11nm,1.0s						
BOAV	Boa Vista	62.48	326	eP	P	10 41 41.6	-0.7
LIC	Lamto	64.83	28||	eP	P	10 41 57.6	-0.1
	comp=Z,47nm,0.9s						
KIC	Kosan Boka	65.04	29||	eP	P	10 41 58.8	-0.3
	comp=Z,10nm,0.7s						
TIC	Toumodi	65.23	28||	eP	P	10 42 00.2	-0.2
	comp=Z,33nm,0.9s						
DBIC	Dimbokro	65.30	28	P	P	10 42 00.5	-0.3
	comp=Z,6.7nm,0.7s,baz=217,slow=7.2,SNR=7.8						
	comp=Z,6.7nm,0.7s						
DBIC	Dimbokro	65.30	28	P	P	10 42 01.2	+0.4
DBIC				IAmb	IAmb	10 42 26.9	
	comp=Z,21nm,1.2s						
DBIC	Dimbokro	65.30	28	P	P	10 42 01.2	+0.4
DBIC				pmax	pmax		
	comp=Z,21nm,1.2s						
PORT	Chimborazo Vol	66.25	306	P	P	10 42 08.0	+0.3
OTAV	Otavalo	67.60	307	P	P	10 42 15.8	-0.3
OTAV				IAmb	IAmb	10 42 33.4	
	comp=Z,15nm,1.1s						
OTAV	Otavalo	67.60	307	P	P	10 42 15.8	-0.3
OTAV				pmax	pmax		
	comp=Z,15nm,1.1s						
OTAV	Otavalo	67.60	307	eP	P	10 42 16.8	+0.7
BAUV	El Baul	71.17	321	P	P	10 42 37.6	+0.1
BAUV				IAmb	IAmb	10 42 52.2	
	comp=Z,22nm,0.9s						
BIRV	Birongo	71.96	323	P	P	10 42 42.7	+0.4
SDV	Santo Domingo	72.08	318	P	P	10 42 42.8	-0.5
SDV				IAmb	IAmb	10 42 56.1	
	comp=Z,13nm,0.8s						
MCLT	Moule a Chique	73.29	329	P	P	10 42 49.4	-0.9
TOA0	Torodi Ar. Sit	73.36	33	P	P	10 42 50.6	0.0
TOA0				IAmb	IAmb	10 42 52.0	
	comp=Z,13nm,0.7s						
TORD	Torodi Ar. Bea	73.36	33	P	P	10 42 50.3	-0.4
	comp=Z,13nm,0.8s,baz=201,slow=6.5,SNR=57						
	comp=Z,13nm,0.8s						
TORD	Torodi Ar. Bea	73.36	33	P	P	10 42 50.5	-0.2
TORD				IAmb	IAmb	10 42 52.0	
	comp=Z,8.9nm,0.8s						
MBAR	Mbarara	73.55	66	eP	P	10 42 50.6	-1.5
MBAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
JTS	Las Juntas de	79.44	306	*i* P	P	10 43 22.5	-2.7
JTS				pmax	pmax		
	comp=Z,18nm,1.4s						
RPZ	Rata Peaks	79.72	196	P	P	10 43 28.2	+1.7
	comp=Z,19nm,0.9s,baz=109,slow=4.3,SNR=4.3						
	comp=Z,19nm,0.9s						
ORTG	Ortega, Santa	79.74	305	P	P	10 43 28.4	+1.4
ACON	Acoyapa	81.02	306	P	P	10 43 33.6	-0.1
ACON				IAmb	IAmb	10 43 47.1	
	comp=Z,28nm,1.1s						
MATN	Matagalpa	82.21	306	P	P	10 43 40.0	-0.1
STKA	Stephens Creek	92.98	173	*i* P	P	10 44 31.1	-1.1
ASAR	Alice Springs	100.31	166	P	Pdif	10 45 06.0	+0.4
	comp=Z,0.6nm,0.9s,baz=177,slow=4.4,SNR=4.2						
ASAR				PP	PP	10 49 10.8	+0.2
	comp=Z,1.1nm,0.9s,baz=180,slow=7.6,SNR=5.0						
KBZ	Khabaz	116.54	51	*i* PKIKP	PKPdf	10 50 02.3	+0.4
KIV	Kislovodsk	116.62	51	*e*PKIKP	PKPdf	10 50 02.5	+0.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKBB	Malin Array Si	116.72	38	*i* PKIKP	PKPdf	10 50 02.6	+0.5
MPMC	Manual Prospec	117.07

PZH	PanZhiHua	135.21 110	PKP	PKPdf	10 50 36.6	-1.7	
MKAR	Makanchi Array	138.49 73	PKhKP	PKPpre	10 50 37.3		
	comp=Z,0.4nm,0.6s,baz=198,slow=2.1,SNR=4.9						
KURBB	Kurchatov Arra	138.73 66	PKhKP	PKPpre	10 50 40.5		
	comp=Z,0.4nm,0.5s,baz=248,slow=3.8,SNR=4.0						
KURK	Kurchatov	138.83 66	PKIKP	PKPdf	10 50 40.5	-3.5	
N30M	Aishikik Lake	142.84 310	P	PKPdf	10 50 52.2	+1.1	
	baz=115						
O29M	Mount Kennedy	143.01 308	P	PKPdf	10 50 52.4	+0.9	
	baz=115						
LZH	Lanzhou	143.68 103	*e*PKP	PKPbc	10 50 52.3	+1.3	
LZH			pPKP	PKiKP	10 51 06.5	+10	
ZALV	Zalesovo Beam	143.76 65	PKP	PKPab	10 50 50.9	+1.2	
	comp=Z,1.6nm,0.6s,baz=233,slow=3.8,SNR=5.6						
M29M	Somme Creek	143.83 311	P	PKPdf	10 50 53.2	+0.4	
	baz=113						
O28M	Mount Upton	143.94 308	P	PKPdf	10 50 53.5	+0.2	
	baz=114						
INK	Inuvik	143.95 322	PKP	PKPbc	10 50 51.4	+0.8	
	comp=Z,4.2nm,0.9s,baz=60,slow=0.7,SNR=12						
INK	Inuvik	143.95 322	P	PKPdf	10 50 53.8	+1.1	
	baz=108						
LOGN	Logan Glacier	144.32 308	PKPdf	PKPdf	10 50 53.7	-0.1	
YUK3	Moose Creek	144.45 310	P	PKPdf	10 50 54.3	+0.2	
	baz=112						
MESA	MESA	144.50 307	P	PKPbc	10 50 53.9	+1.1	
	baz=113						
EPYK	Eagle Plains	144.51 318	P	PKPbc	10 50 53.8	+1.3	
	baz=109						
CTG	Chitna Glacier	144.53 308	P	PKPbc	10 50 53.5	+0.6	
	baz=113						
I29M	Ogilvie Camp,	144.80 316	P	PKPbc	10 50 54.4	+0.9	
	baz=109						
DAWY	Dawson	144.81 314	P	PKPbc	10 50 54.3	+0.7	
	baz=110						
BVCY	Beaver Creek	144.86 311	P	PKPbc	10 50 54.3	+0.6	
	baz=111						
XAN	Xi'an	144.95 110	P	PKPbc	10 50 55.8	+0.9	
XAN			pP	PKiKP	10 51 02.8	+3.4	
XAN			sP	sPKPdf	10 51 07.0	+9.4	
XAN			pmax	pmax			
	comp=Z,16nm,0.9s						
BGLC	Bering Glacier	145.09 306	P	PKPbc	10 50 54.9	+0.5	
	baz=113						
M27K	Edge Creek, AK	145.28 310	P	PKPbc	10 50 55.7	+0.4	
	baz=110						
MCARA	McCarthy VSAT	145.44 308	P	PKPdf	10 50 56.0	+0.5	
	baz=111						
BCAR	Beaver Creek A	145.48 311		PKPdf	10 50 55.3	-0.3	
L27K	Beaver Creek,	145.50 311		PKPbc	10 50 56.5	+0.7	
L27K	Beaver Creek,	145.50 311	P	PKPab	10 50 56.7	+0.7	
	baz=110						
EGAK	Eagle	145.77 315	P	PKPab	10 50 58.0	+1.0	
	baz=108						
M26K	Nabesna, AK	145.79 310	P	PKPab	10 50 58.2	+1.1	
	baz=110						
K27K	Chicken	145.92 313	P	PKPab	10 50 58.4	+0.9	
	baz=108						
BMRM	Bremner River	146.01 307	P	PKPab	10 50 58.8	+0.8	
	baz=111						
L26K	Log Cabin Wild	146.14 311	P	PKPbc	10 50 58.4	+0.6	
	baz=109						
I27K	Kandik River	146.19 316	P	PKPbc	10 50 58.8	+0.9	
	baz=106						
N25K	Chitina, Valde	146.23 308	P	PKPbc	10 50 58.7	+0.6	
	baz=110						
MENT	Mentasta	146.28 311		PKPab	10 50 59.4	+0.4	
H27K	Steamboat Moun	146.33 317	P	PKPbc	10 50 58.9	+0.7	
	baz=105						
EYAK	Cordova Ski Ar	146.39 306	PKPbc	PKPab	10 50 59.7	+0.3	
EYAK	Cordova Ski Ar	146.39 306	P	PKPbc	10 50 58.9	+0.4	
	baz=111						
G27K	Doyon Strip	146.52 318	P	PKPbc	10 50 59.8	+1.0	
	baz=104						
DOT	Dot Lake	146.64 312		PKPbc	10 51 00.1	+0.9	
J26L	Joseph Creek	146.68 313	P	PKPbc	10 51 00.0	+0.7	
	baz=106						
SCRK	Sand Creek	146.71 312	P	PKPbc	10 51 00.1	+0.6	
	baz=107						
I26K	Coal Creek Min	146.73 315	P	PKPbc	10 51 00.1	+0.8	
	baz=105						
KLU	Klutina	146.79 308	P	PKPbc	10 51 00.4	+0.7	
	baz=109						
E27K	Coleen River	146.82 320	P	PKPbc	10 51 00.4	+0.8	
	baz=102						
P23K	Montague Islan	146.97 305	P	PKPbc	10 51 01.1	+0.9	
	baz=110						
RIDG	Independent Ri	147.00 312	P	PKPbc	10 51 01.1	+0.9	
	baz=106						
PAX	Paxson	147.05 310	P	PKPbc	10 51 01.2	+0.8	
	baz=107						
LYN	LuoYang	147.22 114	*e*PKPbc	PKPbc	10 51 01.8	+0.1	
LYN			PKPab	PKiKP	10 51 05.0	+1.0	
LYN			pPKP	sPKPab	10 51 11.9	+6.6	
LYN			PP	PP	10 54 25.9	-1.4	
G26K	Porcupine Rive	147.37 318	P	PKPbc	10 51 02.0	+0.9	
	baz=102,SNR=7.9						
K24K	Donnelly Dome	147.42 312	P	PKPbc	10 51 02.4	+1.0	
	baz=106						
J25K	Salcha River,	147.46 313	P	PKPbc	10 51 02.5	+0.9	
	baz=105						
SCM	Sheep Creek Mo	147.53 308	P	PKPbc	10 51 02.9	+1.1	
	baz=108						
F26K	Sheenjek River	147.66 319	P	PKPbc	10 51 03.3	+1.4	
	baz=101,SNR=6.8						
PWL	Port Wells	147.69 306	P	PKPbc	10 51 03.1	+0.9	
	baz=108						
PRP	Porcupine Dome	147.74 315	P	PKPbc	10 51 03.0	+0.7	
	baz=103						
BMAR	Burnt Mountain	147.78 319		PKPbc	10 51 03.3	+1.0	
C27K	Jago River	147.83 323	P	PKPbc	10 51 03.5	+1.2	
	baz=98						
DHY	Denali Highway	147.91 310	P	PKPbc	10 51 03.4	+0.5	
	baz=106						
SEW	Seward	147.97 304	P	PKPbc	10 51 03.6	+0.7	
	baz=109						
H25K	Birch Creek	148.03 316	P	PKPbc	10 51 04.0	+1.1	
	baz=102						
HDA	Harding Lake	148.07 313	P	PKPbc	10 51 04.3	+1.2	
	baz=104						
IL31		148.13 313		PKPbc	10 51 03.9	+0.8	
ILAR	Eielson Array	148.13 313	PKPbc	PKPbc	10 51 02.6	-0.7	
	comp=Z,11nm,0.6s,baz=118,slow=1.6,SNR=106						
F25K	Christian Rive	148.21 319	P	PKPbc	10 51 04.8	+1.4	
	baz=100,SNR=7.2						
E25K	Arctic Village	148.27 320	P	PKPbc	10 51 04.4	+0.9	
	baz=99,SNR=16						
WAT1	Susitna Watana	148.36 309	P	PKPbc	10 51 04.7	+0.8	
	baz=105						
RC01	Rabbit Creek A	148.41 306	P	PKPbc	10 51 04.9	+0.8	
	baz=107						
BRSE	Bradley Lake S	148.47 303	P	PKPbc	10 51 04.9	+0.6	
	baz=109						
COLA	College	148.56 313	P	PKPbc	10 51 05.4	+1.1	
	baz=103						
TCOL	CIGO, UAF Yank	148.56 313	P	PKPbc	10 51 05.0	+0.7	
	baz=103						
KDAK	Kodiak Island	148.72 299	P	PKPbc	10 51 05.1	+0.2	
	baz=111						
D25K	Kavik River	148.72 322	P	PKPbc	10 51 05.7	+0.9	
	baz=97						
MCK	McKinley	148.76 311	P	PKPbc	10 51 05.2	+0.3	
	baz=104						
G24K	Hadweenzic Riv	148.76 317	P	PKPbc	10 51 05.7	+0.8	
	baz=100,SNR=5.7						
H24K	Noodor Dome	148.76 315		PKPbc	10 51 05.6	+0.7	
H24K	Noodor Dome	148.76 315	P	PKPbc	10 51 05.7	+0.7	
	baz=101,SNR=7.0						
M22K	Willow	148.78 307	P	PKiKP	10 51 06.4	+0.1	
	baz=106						
OHAK	Old Harbor	148.87 298	P	PKiKP	10 51 06.6	0.0	
	baz=111						
NEA2	Nenana	149.01 313	P	PKPbc	10 51 05.7	+0.3	
	baz=102,SNR=6.1						
F24K	Squaw Lake	149.05 318	P	PKiKP	10 51 06.9	+0.1	
	baz=98,SNR=5.6						
I23K	Minto, Yukon-K	149.24 314	P	PKPbc	10 51 06.5	+0.5	
	baz=101,SNR=7.5						
TRF	Thorofare Moun	149.28 310	P	PKPbc	10 51 07.0	+0.6	
	baz=103						
E24K	Your Creek	149.34 319	P	PKiKP	10 51 07.6	+0.2	
	baz=97,SNR=9.5						
H23K	Yukon River	149.44 315		PKPbc	10 51 07.4	+0.9	
H23K	Yukon River	149.44 315	P	PKPbc	10 51 07.5	+0.9	
	baz=100						
C24K	Franklin Bluff	149.57 323	P	PKiKP	10 51 07.9	+0.2	
	baz=94						
D24K	Happy Valley	149.57 321	P	PKPbc	10 51 07.6	+0.8	
	baz=95						
BPAW	Bear Paw Mtn.	149.72 311	P	PKPbc	10 51 07.8	+0.5	
	baz=102,SNR=12						
G23K	Bananza Creek	149.76 317	P	PKiKP	10 51 08.7	+0.3	
	baz=98,SNR=12						
MLY	Manley	149.79 313	P	PKPbc	10 51 07.9	+0.4	
	baz=100						
TOLK	Toolik Lake Re	149.80 320		PKPbc	10 51 08.3	+0.9	
TOLK	Toolik Lake Re	149.80 320	P	PKPbc	10 51 08.3	+0.9	
	baz=95						
PPLA	Purkeypile	150.00 309	P	PKPbc	10 51 09.1	+1.0	
	baz=103						
CAST	Castle Rocks	150.06 310	P	PKPbc	10 51 09.0	+0.9	
	baz=102						
M20K	Styx River	150.20 307	P	PKPbc	10 51 09.1	+0.5	
	baz=104						
C23K	Itkillik River	150.24 323	P	PKPbc	10 51 09.1	+0.7	
	baz=92						
CHUM	Lake Minchumin	150.26 311	P	PKPbc	10 51 09.1	+0.5	
	baz=101						
BTO	Baotou	150.30 103	*e*PKPbc	PKPdf	10 51 02.8	-1.5	
O19K	Port Alsworth	150.33 303	P	PKPbc	10 51 08.8	0.0	
	baz=106						
I21K	Tanana	150.34 313	P	PKPbc	10 51 09.4	+0.7	
	baz=99						
G22K	Bettles	150.37 317	P	PKPbc	10 51 09.6	+0.9	
	baz=96						
P18K	Big Mountain,	150.54 301	P	PKPbc	10 51 09.4	0.0	
	baz=107						
HNS	HongShan	150.56 113	⇑PKPbc	PKPbc	10 51 09.5	-0.6	
N19K	Bonanza Creek	150.57 304	P	PKPbc	10 51 09.7	+0.2	
	baz=105,SNR=7.9						
R17K	Ugashik Creek	150.59 297	P	PKiKP	10 51 10.5	+0.3	
	baz=109						
E22K	Anaktuvuk Pass	150.59 319	P	PKPbc	10 51 10.2	+0.9	
	baz=94						
O18K	Koktuh Hills	150.66 302		PKPbc	10 51 10.0	+0.3	
O18K	Koktuh Hills	150.66 302	P	PKPbc	10 51 10.0	+0.3	
	baz=106,SNR=16						
L20K	Farewell, AK	150.67 308	P	PKPbc	10 51 10.5	+0.9	
	baz=102						
F22K	John River	150.69 318	P	PKiKP	10 51 10.6	+0.5	
	baz=95						
H21K	Melozitna Rive	150.74 314		PKPbc	10 51 10.4	+0.7	
H21K	Melozitna Rive	150.74 314	P	PKPbc	10 51 10.6	+0.9	
	baz=97,SNR=7.2						
M19K	Big River Lodg	150.78 306	P	PKPbc	10 51 10.2	+0.3	
	baz=103						
K20K	Telida	150.93 309	P	PKPbc	10 51 10.4	+0.2	
	baz=100						
Q16K	King Salmon	151.04 299	P	PKPbc	10 51 11.0	+0.5	
	baz=107						
P17K	Kvichak River	151.09 300	P	PKiKP	10 51 11.4	+0.3	
	baz=106						
J20K	Nowinta River	151.10 311	P	PKiKP	10 51 11.7	+0.6	
	baz=99						
G21K	Allakaket	151.12 316	P	PKPbc	10 51 11.3	+0.8	
	baz=95						
IMAR	Indian Mountai	151.17 315		PKiKP	10 51 11.6	+0.4	
F21K	Alatna River	151.17 317	P	PKiKP	10 51 11.7	+0.5	
	baz=94						
CHGN	Chignik	151.19 294	P	PKPbc	10 51 11.7	+0.8	
	baz=110						
N18K	Kilae Creek	151.20 303	P	PKiKP	10 51 11.7	+0.3	
	baz=104						
CNBA	Chernabura Isl	151.28 291		PKPbc	10 51 11.8	+0.7	
CHNA	Chernabura Isl	151.28 291	P	PKPbc	10 51 11.5	+0.3	
	baz=112						
O17K	Koliganek Bris	151.56 301	P	PKPbc	10 51 12.2	+0.5	
	baz=105,SNR=6.3						
TTA	Tatalina	151.72 308	P	PKiKP	10 51 13.2	+0.7	
	baz=100						
S14K	Fog Glacier	151.78 293	P	PKPbc	10 51 13.2	+0.7	
	baz=110						
SDPT	Sand Point	151.95 291	P	PKPbc	10 51 13.3	+0.6	
	baz=111						
O16K	Kokwok River B	152.01 301	P	PKPbc	10 51 13.3	+0.6	
	baz=104						
ZAK	Zakamensk	152.12 81	*e*PKIKP	PKPab	10 51 21.1	-2.1	
ZAK			pmax	pmax			
	comp=Z,5.0nm,1.2s						
GCSA	Galena City Sc	152.35 312	P	PKiKP	10 51 15.7	+2.2	
	baz=96						
N16K	Nishlik Lake	152.54 302	P	PKiKP	10 51 16.1	+1.9	
	baz=102						
SONM	Songino Array	152.63 88	PKPbc	PKPbc	10 51 14.8	+0.1	
	comp=Z,2.4nm,0.6s,baz=222,slow=2.8,SNR=12						
SONM	Songino Array	152.63 88		PKPbc	10 51 15.4	+0.7	
SONM	Songino Array	152.63 88	PKIKP	PKPbc	10 51 15.4	+0.7	
KSRS	Korea Array	157.01 132	PKPab	PKPab	10 51 45.5	+1.3	
	comp=Z,2.4nm,0.9s,baz=214,slow=4.8,SNR=6.6						
BILL	Bilibino	164.94 335	*i* PKIKP	PKPdf	10 51 19.0	-2.4	
BILL			pmax	pmax			
	comp=Z,8.0nm,0.8s						

IDC 19 10:35:37.8±1.4, 55°.01S×30°.95W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=56.1km s-min=30.4km az=50.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	20.58	155	P	P	10 40 17.9	+0.1
	2.6nm,0.8s,baz=295,slow=7.2,SNR=4.0						
	2.6nm,0.8s						
CPUP	Villa Florida	34.54	315	P	P	10 42 27.4	-0.3
	3.6nm,1.1s,baz=124,slow=12,SNR=3.0						
	3.6nm,1.1s						
LPAZ	La Paz	48.04	309	P	P	10 44 19.6	+0.2
	2.3nm,0.5s,baz=124,slow=6.1,SNR=6.2						
	2.3nm,0.5s						
TORD	Torodi Ar. Bea	73.28	33	P	P	10 47 10.9	+0.1
	1.0nm,0.8s,baz=202,slow=6.3,SNR=4.0						
	1.0nm,0.8s						
ILAR	Eielson Array	147.84	314	PKPbc	PKPbc	10 55 22.1	-1.0
	1.3nm,0.7s,baz=119,slow=1.7,SNR=4.7						

*IDC **19** 10:39:17.0±2.1, 54°.12N×168°.74E, h0km, mb3.3/2, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=61.8km s-min=32.6km az=179.0*

*KRSC **19** 10:39:20.7±1.9, 53°.82N×167°.98E, h16km±38km, ML3.9*

ISC 19 10:39:20.0±1.0, 53°.9N±0°.1×168°.61E±0°.06, h30km, n20, σ1§58/17, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	2.05	313	*e*P	Pn	10 39 52.3	-0.1
BKI				*e*S	Sn	10 40 16.7	-0.2
SHEM	Shemya Is, Ala	3.48	107	Pn	Pn	10 40 12.8	+0.8
	5.4nm,0.3s,baz=55,slow=1.8,SNR=11						
SHEM				Sn	Sn	10 40 51.0	-1.2
	3.6nm,0.3s,baz=168,slow=21,SNR=5.7						
	14nm,0.3s						
MKZ	Mys Kozlova	4.10	283	*e*S	Sn	10 41 05.3	-2.1
TUMR	Tumrok	5.13	290	*e*P	Pn	10 40 36.1	+1.3
SPN	Mys Shipunski	5.18	265	*e*S	Sn	10 41 32.1	-2.0
KOK	Koryaka	5.97	269	*e*P	Pn	10 40 46.7	+0.4
RUS	Russkaya	6.24	261	*e*P	Pn	10 40 50.8	+0.9
GNL	Ganaly	6.33	273	*e*P	Pn	10 40 52.8	+1.6
MTVR	Mutnovka	6.42	262	*e*P	Pn	10 40 53.9	+1.4
MTVR				*e*S	Sn	10 42 03.7	-1.0
GRL	Gorelyy	6.46	263	*e*P	Pn	10 40 56.4	+3.3
PETK	Petropavlovsk-	6.55	268	Pn	Pn	10 40 56.1	+1.8
	0.4nm,0.3s,baz=92,slow=16,SNR=2.2						
	1.5nm,0.6s						
KDTR	Khodutka, Kamc	6.70	257	*e*S	Sn	10 42 10.0	-1.5
ILAR	Eielson Array	24.64	46	P	P	10 44 37.0	-0.6
	0.3nm,0.5s,baz=261,slow=8.8,SNR=3.7						
	0.3nm,0.5s						
H11N2	WAKE ISLAND Hy 34.08	183		T	T	11 22 35.0	
	baz=1.6,slow=76,SNR=468						
H11N3	WAKE ISLAND Hy 34.09	183		T	T	11 22 35.9	
	baz=1.6,slow=76,SNR=352						
H11N1	WAKE ISLAND Hy 34.10	183		T	T	11 22 36.3	
	baz=1.6,slow=76,SNR=310						
H11S1	WAKE ISLAND Hy 35.30	183		T	T	11 24 09.1	
	baz=1.8,slow=76,SNR=120						
H11S3	WAKE ISLAND Hy 35.32	183		T	T	11 24 08.5	
	baz=1.8,slow=76,SNR=58						
H11S2	WAKE ISLAND Hy 35.32	183		T	T	11 24 10.9	
	baz=1.8,slow=76,SNR=190						
TXAR	Lajitas Array	65.60	73	P	P	10 50 01.2	+0.1
	0.4nm,0.7s,baz=286,slow=6.5,SNR=2.5						
	0.4nm,0.7s						

IDC 19 10:40:27.2±1.4, 55°.11S×30°.36W, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=55.1km s-min=35.8km az=57.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	20.34	155	P	P	10 45 04.8	0.0
	0.6nm,0.7s,baz=303,slow=14,SNR=1.6						
	0.6nm,0.7s						
LPAZ	La Paz	48.37	308	P	P	10 49 11.3	-0.1
	0.8nm,0.5s,baz=173,slow=8.0,SNR=4.0						
	0.8nm,0.5s						
TORD	Torodi Ar. Bea	73.18	33	P	P	10 51 59.6	0.0
	0.3nm,0.4s,baz=200,slow=6.2,SNR=5.9						
	0.3nm,0.4s						
ILAR	Eielson Array	148.15	313	PKPbc	PKPbc	11 00 12.8	-0.6
	0.8nm,0.6s,baz=126,slow=1.8,SNR=7.2						

*IDC **19** 10:40:42.7±1.0, 37°.68N×97°.93W, h0km, mbtmp3.4/5, ML3.3/5, Error ellipse: s-maj=13.9km s-min=12.1km az=148.0*

*NEIC **19** 10:40:44.0±0.9, 37°.57N±0°.03×97°.81W±0°.07, h2km±7km, mb_Lg3.5/112, Error ellipse: s-maj=7.7km s-min=4.4km az=94.0*

*ANF **19** 10:40:43.1±0.2, 37°.58N×97°.84W, h2km, ML4.4/18, Error ellipse: s-maj=2.2km s-min=1.8km az=47.0*

ISC 19 10:40:43.4±0.9, 37°.57N±0°.02×97°.86W±0°.03, h15km±7km, n173, σ1§41/177, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN12	Harper NE Stat	0.30	202	Pg	Pg	10 40 49.3	-0.3
KAN12				Sg	Sg	10 40 53.8	-0.1
KS21	Milan North St	0.33	152	Pg	Pg	10 40 49.3	-0.8
KS21				Sg	Sg	10 40 54.0	-0.7
KAN06	Argonia West S	0.33	180		Pg	10 40 49.6	-0.5
KAN06				Sg	Sg	10 40 54.3	-0.4
KAN08	Anthony NE Sta	0.36	195		Pg	10 40 50.4	-0.3
KAN08				Sg	Sg	10 40 55.6	0.0
KAN16	Harper SW Stat	0.39	206	Pg	Pg	10 40 51.0	-0.2
KAN16				Sg	Sg	10 40 56.6	+0.2
KS20	Mayfield South	0.42	145		Pg	10 40 51.0	-0.8
KAN01	Argonia South	0.43	170	Pg	Pg	10 40 51.3	-0.6
KAN05	Bluff City Nor	0.47	182		Pg	10 40 52.2	-0.4
KAN05				Sg	Sg	10 40 58.8	-0.1
KAN10	Anthony SW Sta	0.49	203	Pg	Pg	10 40 52.8	-0.3
KAN17	Caldwell West	0.53	172	Pg	Pg	10 40 53.4	-0.5
KAN13	South Haven SW	0.64	152		Pg	10 40 55.0	-0.9
GC02	Grant County #	0.72	180	Pg	Pg	10 40 56.9	-0.6
OK032	Salt Plains WL	0.82	200	Pg	Pg	10 40 58.8	-0.5
BLOK	Blackwell	0.96	148	Pg	Pg	10 41 00.8	-1.1
CROK	Carrier	1.07	186	Pg	Pg	10 41 03.1	-0.9
R32A	Long Quarter,	1.08	322	Pg	Pg	10 41 03.5	-0.8
R32A	Long Quarter,	1.08	322	P	Pg	10 41 03.5	-0.8
	baz=140,SNR=244						
R32A				S	Sg	10 41 18.2	-0.2
	baz=140						
OK035	E0210 Rd and N	1.10	219	Pg	Pg	10 41 04.0	-0.6
T35A	Sooner Cattle	1.26	121		Pg	10 41 06.1	-1.5
T35B	Sooner Cattle	1.26	121	P	Pg	10 41 06.0	-1.6
	baz=303						
NOKA	Waynoka	1.27	223	Pg	Pg	10 41 07.1	-0.7
OK038	West end E0370	1.30	213		Pg	10 41 06.8	-1.7
U32A	Winter Ranch,	1.50	218		Pn	10 41 11.4	+1.5
U32A	Winter Ranch,	1.50	218	P	Pn	10 41 11.2	+1.3
	baz=38,SNR=27						
QUOK	Quay	1.68	146		Pn	10 41 13.4	+1.1
OK029	Liberty Lake	1.80	170		Pn	10 41 15.7	+1.7
KSU1	Kansas State U	1.81	32		Pn	10 41 15.4	+1.3
KSU1				lAmb_Lg		10 41 42.5	
	comp=Z,396nm,1.0s						
KSU1	Kansas State U	1.81	32	P	Pn	10 41 15.2	+1.1
	baz=213,SNR=38						
KSU1				S	Sn	10 41 39.2	+2.3
	baz=213						
KSU1	Kansas State U	1.81	32	P	Pn	10 41 15.4	+1.3
	baz=213,SNR=58						
KSU1				S	Sn	10 41 39.1	+2.3
	baz=213						
OK031	S. Brethren Rd	1.81	153		Pn	10 41 15.3	+1.2
OK030	Cody Creek RV	1.85	152		Pn	10 41 15.8	+1.2
BCOK	Bluff Creek, N	1.92	174	Pn	Pn	10 41 17.2	+1.6
BCOK				lAmb_Lg		10 41 44.6	
	comp=Z,341nm,0.9s						
CBKS	Cedar Bluff	1.93	310	Pn	Pb	10 41 18.3	0.0
CBKS				lAmb_Lg		10 41 47.6	
	comp=Z,218nm,0.8s						
CBKS	Cedar Bluff	1.93	310	P	Pn	10 41 17.4	+1.6
	baz=129						
CBKS				S	Sb	10 41 44.0	+1.7
	baz=129						
CBKS	Cedar Bluff	1.93	310	P	Pn	10 41 17.7	+1.9
	baz=129,SNR=77						
CBKS				S	Sb	10 41 43.7	+1.4
	baz=129						
ELIS	Ellis County	1.96	220	Pn	Pb	10 41 18.9	+0.1
OK025	Westminster Rd	2.03	168		Pn	10 41 18.4	+1.3
CSTR	Hydro, Custer	2.04	199	Pn	Pn	10 41 18.8	+1.6
DEOK	Depew	2.04	147		Pn	10 41 18.3	+1.1
DEOK				lAmb_Lg		10 41 48.5	
	comp=Z,61nm,0.7s						
OKCSW	OKLAHOMA CITY	2.19	171	Pn	Pn	10 41 20.9	+1.6
FNO	Franklin	2.34	171	Pn	Pn	10 41 22.8	+1.4
TUL1	Leonard	2.35	134		Pn	10 41 22.6	+1.2
TUL1	Leonard	2.35	134	P	Pn	10 41 22.5	+1.1
	baz=316,SNR=63						
TUL1	Leonard	2.35	134	P	Pn	10 41 22.2	+0.8
	baz=316						
TUL1				Sb	Sb	10 41 56.0	+1.9
	baz=316						
RLO	Rose Lookout	2.67	121		Pn	10 41 27.1	+1.2
WMOK	Wichita Mounta	2.93	195		Pn	10 41 31.1	+1.7
WMOK	Wichita Mounta	2.93	195	P	Pn	10 41 30.8	+1.3
	baz=15,SNR=53						
WMOK	Wichita Mounta	2.93	195	P	Pn	10 41 30.7	+1.3
	baz=15						
WMOK				S	Sn	10 42 06.6	+2.1
	baz=15						
X34A	Smith Ranch, M	2.97	180	Pn	Pn	10 41 32.1	+2.1
U38A	Gravette	3.00	111	Pn	Pn	10 41 31.5	+1.1
U38A				lAmb_Lg		10 42 26.0	
	comp=Z,154nm,0.7s						
U38A	Gravette	3.00	111	P	Pn	10 41 31.6	+1.2
	baz=294						
N33B	J Bar K, Exete	3.17	6	P	Pn	10 41 33.4	+0.6
	baz=185,SNR=42						
N33A	J Bar K, Exete	3.17	6		Pn	10 41 33.5	+0.6
HHAR	Hobbs	3.39	111		Pn	10 41 37.0	+1.2
HHAR				lAmb_Lg		10 42 39.3	
	comp

baz=109
KSCO Sb **Sg** **10 42 48.8 -3.6**
baz=109
AMTX **Amarillo** **4.09 230** Pn **Pn** **10 41 47.5 +1.9**
AMTX IAmb_Lg 10 42 56.0
comp=Z,106nm,0.8s
AMTX **Amarillo** **4.09 230** P **Pn** **10 41 47.2 +1.6**
baz=48
AMTX S **Sn** **10 42 36.5 +3.2**
baz=48
Z35A **Perchaven, San** **4.26 173** Pn **Pn** **10 41 49.7 +1.9**
MGMO **Mountain Grove** **4.47 94** Pn **Pn** **10 41 52.1 +1.4**
MGMO IAmb_Lg 10 43 04.1
comp=Z,156nm,0.8s
R40A **Maddies Statio** **4.47 79** **Pn** **10 41 51.9 +1.2**
R40A IAmb_Lg 10 43 01.3
comp=Z,81nm,1.0s
R40A **Maddies Statio** **4.47 79** P **Pn** **10 41 51.6 +1.0**
baz=263,SNR=37
L34A **Svendsen Farm,** **4.53 14** Pn **Pn** **10 41 52.9 +1.4**
MIAR **Mount Ida** **4.60 130** Pn **Pn** **10 41 53.8 +1.4**
MIAR IAmb_Lg 10 43 13.6
comp=Z,113nm,0.8s
MIAR **Mount Ida** **4.60 130** P **Pn** **10 41 52.7 +0.3**
baz=313
MIAR S **Sn** **10 42 46.2 +0.7**
baz=313
OGNE **Ogallala** **4.67 317** Pn **Pn** **10 41 55.8 +2.3**
OGNE IAmb_Lg 10 43 23.1
comp=Z,160nm,0.8s
OGNE **Ogallala** **4.67 317** P **Pn** **10 41 55.5 +2.0**
baz=135,SNR=12
OGNE S **Sn** **10 42 50.0 +2.4**
baz=135
N38A **Joes South For** **4.82 47** Pn **Pn** **10 41 56.6 +1.2**
N38A **Joes South For** **4.82 47** P **Pn** **10 41 56.6 +1.2**
baz=229,SNR=17
FCAR **Ozark Folk Cen** **4.90 108** Pn **Pn** **10 41 57.0 +0.5**
FCAR IAmb_Lg 10 43 25.2
comp=Z,88nm,0.8s
Z38A **Mt. Pleasant** **4.90 151** **Pn** **10 41 57.1 +0.5**
Z38A IAmb_Lg 10 43 30.5
comp=Z,153nm,1.0s
P40A **Paris** **4.95 65** Pn **Pn** **10 41 57.8 +0.5**
P40A IAmb_Lg 10 43 18.5
comp=Z,64nm,0.7s
WHAR **Wooly Hollow** **5.03 115** Pn **Pn** **10 41 58.9 +0.5**
K31A **O'Neill** **5.09 352** IAmb_Lg 10 43 37.8
comp=Z,104nm,0.8s
K31A **O'Neill** **5.09 352** P **Pn** **10 42 00.9 +1.7**
baz=172,SNR=10
ABTX **Abilene, Hawle** **5.15 197** Pn **Pn** **10 42 00.9 +0.9**
ABTX **Abilene, Hawle** **5.15 197** P **Pn** **10 42 01.1 +1.1**
baz=16
ABTX S **Sn** **10 42 59.3 0.0**
baz=16
T25A **Trinidad** **5.24 267** **Pn** **10 42 02.4 +1.0**
T25A IAmb_Lg 10 43 31.5
comp=Z,97nm,0.9s
T25A **Trinidad** **5.24 267** P **Pn** **10 42 02.4 +1.0**
baz=83,SNR=6.2
T25A S **Sn** **10 43 04.7 +2.9**
baz=83
CCM **Cathedral Cave** **5.26 83** Pn **Pn** **10 42 02.7 +1.3**
CCM IAmb_Lg 10 43 37.2
comp=Z,64nm,0.7s
CCM **Cathedral Cave** **5.26 83** P **Pn** **10 42 02.0 +0.6**
baz=267
CCM S **Sn** **10 43 02.9 +1.1**
baz=267
MSTX **Muleshoe** **5.38 229** Pn **Pn** **10 42 05.0 +1.8**
MSTX **Muleshoe** **5.38 229** P **Pn** **10 42 04.8 +1.6**
baz=46
MSTX **Muleshoe** **5.38 229** P **Pn** **10 42 04.2 +0.9**
baz=46,SNR=5.1
MSTX S **Sn** **10 43 06.7 +1.7**
baz=46
WLAR **White Oak Lake** **5.47 134** Pn **Pn** **10 42 05.3 +0.9**
WLAR IAmb_Lg 10 43 43.7
comp=Z,132nm,1.1s
WHTX **Lake Whitney,** **5.58 177** Pn **Pn** **10 42 06.8 +0.9**
WHTX **Lake Whitney,** **5.58 177** P **Pn** **10 42 06.5 +0.6**
baz=357
LCAR **Lake Charles** **5.58 104** IAmb_Lg 10 43 38.3
comp=Z,68nm,0.9s
SCIA **State Center** **5.61 38** IAmb_Lg 10 43 53.5
comp=Z,124nm,0.8s
SCIA **State Center** **5.61 38** S **Sn** **10 43 12.8 +2.2**
baz=221
237A **Washetta, Mont** **5.81 163** **Pn** **10 42 08.7 -0.3**
237A IAmb_Lg 10 43 56.2
comp=Z,62nm,0.9s
Q24A **Divide** **5.91 286** Pn **Pn** **10 42 11.2 +0.5**
Q24A **Divide** **5.91 286** P **Pn** **10 42 11.6 +1.0**
baz=101
Q24A S **Sn** **10 43 19.4 +1.2**
baz=101
SDCO **Great Sand Dun** **6.07 274** Pn **Pn** **10 42 14.1 +1.3**
SDCO **Great Sand Dun** **6.07 274** P **Pn** **10 42 13.7 +0.9**
baz=89
SLM **Saint Louis** **6.10 78** Pn **Pn** **10 42 14.5 +1.4**
SLM IAmb_Lg 10 43 56.8
comp=Z,54nm,0.8s
CCAR **Cane Creek** **6.15 125** IAmb_Lg 10 44 10.7
comp=Z,51nm,0.8s
ECSD **EROS Data Cent** **6.22 8** Pn **Pn** **10 42 15.0 +0.3**
ECSD **EROS Data Cent** **6.22 8** P **Pn** **10 42 15.0 +0.3**
baz=189,SNR=7.6
ECSD S **Sn** **10 43 25.8 +0.1**
baz=189
N41A **Harden Midland** **6.28 58** **Pn** **10 42 15.9 +0.5**
NATX **Nacogdoches** **6.37 155** IAmb_Lg 10 44 11.0
comp=Z,47nm,0.8s
NATX **Nacogdoches** **6.37 155** S **Sn** **10 43 28.6 -0.6**
baz=337
K38A **Parkersburg** **6.39 36** Pn **Pn** **10 42 17.4 +0.4**
ISCO **Idaho Springs** **6.46 292** Pn **Pn** **10 42 20.0 +1.7**
ISCO **Idaho Springs** **6.46 292** P **Pn** **10 42 20.1 +1.7**
baz=108,SNR=8.5
ISCO S **Sn** **10 43 32.2 +0.2**
baz=108
CGM3 **Cape Girardeau** **6.53 90** IAmb_Lg 10 44 07.9
comp=Z,95nm,1.1s
PARMO **Parma** **6.54 96** Pn **Pn** **10 42 20.6 +1.6**
435B **Jarrell** **6.78 178** IAmb_Lg 10 44 32.5
comp=Z,52nm,0.8s
435B **Jarrell** **6.78 178** S **Sn** **10 43 38.1 -1.3**
baz=358
L40A **Anamosa** **6.79 47** **Pn** **10 42 23.2 +0.7**
S44A **Carbondale** **6.83 86** **Pn** **10 42 23.2 +0.2**
S44A IAmb_Lg 10 44 22.1
comp=Z,94nm,0.8s
P43A **Skaggs, Pawnee** **6.84 70** Pn **Pn** **10 42 24.6 +1.3**
P43A IAmb_Lg 10 44 27.1
comp=Z,90nm,0.8s
SUSD **Miller** **6.91 353** Pn **Pn** **10 42 24.8 +0.6**
SUSD IAmb_Lg 10 44 38.2
comp=Z,54nm,0.8s
SUSD **Miller** **6.91 353** P **Pn** **10 42 24.6 +0.4**
baz=173
SUSD S **Sn** **10 43 41.1 -1.5**
baz=173
PHWY **Pilot Hill** **6.96 305** IAmb_Lg 10 44 40.1
comp=Z,38nm,0.8s
HALT **Halls** **7.04 101** IAmb_Lg 10 44 36.6
comp=Z,89nm,0.8s
Q44A **Meyer Farm, Va** **7.08 76** **Pn** **10 42 27.2 +0.8**
Q44A IAmb_Lg 10 44 43.5
comp=Z,46nm,0.8s
N23A **Red Feather La** **7.10 300** Pn **Pn** **10 42 29.9 +2.9**
N23A **Red Feather La** **7.10 300** P **Pn** **10 42 29.0 +2.0**
baz=115
143A **Socs Landing,** **7.18 131** IAmb_Lg 10 44 35.3
comp=Z,44nm,0.8s
JCT **Junction City** **7.26 193** IAmb_Lg 10 44 42.3
comp=Z,54nm,1.1s
I37A **Lemond, Waseca** **7.27 26** IAmb_Lg 10 44 47.1
comp=Z,59nm,0.8s
HDIL **Hopedale** **7.29 63** Pn **Pn** **10 42 30.1 +0.7**
HDIL **Hopedale** **7.29 63** P **Pn** **10 42 30.7 +1.3**
baz=249,SNR=9.3
HDIL **Hopedale** **7.29 63** P **Pn** **10 42 30.1 +0.7**
baz=249
HDIL S **Sn** **10 43 50.7 -1.3**
baz=249
T45A **Paducah** **7.36 92** IAmb_Lg 10 44 41.8
comp=Z,93nm,0.7s

ANMO **Albuquerque** **7.43 252** Pn **Pn** **10 42 34.2 +2.8**
comp=Z,0.1nm,0.3s,baz=53,slow=15,SNR=2.1
ANMO Pg **Pg** **10 43 01.1 -4.4**
comp=Z,1.1nm,0.3s,baz=53,slow=15,SNR=11
ANMO Lg Lg 10 44 36.5
comp=Z,1.5nm,0.3s,baz=164,slow=22,SNR=3.8
comp=Z,0.3nm,0.3s
OXF **Oxford** **7.49 112** Pn **Pn** **10 42 32.1 0.0**
OXF **Oxford** **7.49 112** P **Pn** **10 42 31.8 -0.4**
baz=297
OXF S **Sn** **10 43 53.2 -3.6**
baz=297
L42A **Oliver, Polo** **7.70 52** Pn **Pn** **10 42 35.9 +0.9**
L42A IAmb_Lg 10 44 57.5
comp=Z,79nm,0.8s
Y45A **Yeager Farm, C** **7.71 116** IAmb_Lg 10 45 05.3
comp=Z,77nm,0.9s
O44A **Mansfield** **7.76 68** Pn **Pn** **10 42 37.6 +1.7**
O44A IAmb_Lg 10 44 56.0
comp=Z,61nm,0.8s
JFWS **Jewell Farm** **7.89 45** Pn **Pn** **10 42 38.2 +0.6**
JFWS IAmb_Lg 10 45 13.9
comp=Z,58nm,0.7s
JFWS **Jewell Farm** **7.89 45** P **Pn** **10 42 38.0 +0.4**
baz=230
JFWS S **Sn** **10 44 03.9 -2.7**
baz=230
RSSD **Black Hills** **8.04 326** IAmb_Lg 10 45 08.8
comp=Z,40nm,0.9s
RSSD **Black Hills** **8.04 326** P **Pn** **10 42 41.8 +2.0**
baz=142
Y22D **IRIS PASSCAL I** **8.15 247** IAmb_Lg 10 45 23.2
comp=Z,58nm,0.9s
RWWY **Rawlins** **8.30 303** IAmb_Lg 10 45 21.4
comp=Z,39nm,1.0s
F33A **5 Mile Ranch,** **8.34 8** Pn **Pn** **10 42 44.1 +0.4**
K22A **Casper** **8.35 310** IAmb_Lg 10 45 27.4
comp=Z,58nm,0.8s
K22A **Casper** **8.35 310** P **Pn** **10 42 45.7 +1.6**
baz=124
I40A **Norwalk** **8.36 39** IAmb_Lg 10 45 21.2
comp=Z,43nm,0.9s
M44A **Midewin, Midew** **8.49 60** IAmb_Lg 10 45 19.8
comp=Z,71nm,0.9s
MNTX **Cornudas Mount** **8.53 229** Pn **Pn** **10 42 47.6 +1.2**
MNTX **Cornudas Mount** **8.53 229** P **Pn** **10 42 47.3 +0.9**
baz=44
SPMN **Marine on St.** **8.53 25** IAmb_Lg 10 45 16.7
comp=Z,35nm,0.9s
T47A **Sharon Grove** **8.59 91** Pn **Pn** **10 42 48.6 +1.4**
735A **Kenedy** **8.70 180** IAmb_Lg 10 45 40.0
comp=Z,34nm,1.1s
146A **Union** **8.73 122** IAmb_Lg 10 45 36.1
comp=Z,45nm,0.8s
HQIL **Hanson Quary C** **8.79 58** IAmb_Lg 10 45 31.0
comp=Z,86nm,1.2s
Z47A **Carrollton** **9.10 116** IAmb_Lg 10 45 46.8
comp=Z,31nm,1.0s
I42A **Draeger Farm,** **9.26 44** Pn **Pn** **10 42 57.2 +0.8**
I42A IAmb_Lg 10 45 53.1
comp=Z,37nm,0.9s
TX31 **Lajitas Ar. Si** **9.54 212** Pn **Pn** **10 43 01.3 +0.9**
TXAR **Lajitas Array** **9.54 212** Pn **Pn** **10 43 00.6 +0.2**
comp=Z,0.1nm,0.3s,baz=37,slow=11,SNR=9.9
TXAR Lg Lg 10 45 40.4
comp=Z,0.4nm,0.3s,baz=40,slow=24,SNR=3.8
comp=Z,0.1nm,0.3s
TXAR **Lajitas Array** **9.54 212** Pn **Pn** **10 43 01.2 +0.8**
Y49A **Blount Mountai** **10.02 108** Pn **Pn** **10 43 07.4 +0.6**
BW06 **Boulder Array** **10.35 304** Pn **Pn** **10 43 12.7 +1.3**
PDAR **Pinedale Array** **10.35 304** Pn **Pn** **10 43 11.2 -0.2**
comp=Z,0.3nm,0.3s,baz=122,slow=15,SNR=9.7
PDAR Lg Lg 10 46 08.9
comp=Z,1.2nm,0.3s,baz=107,slow=32,SNR=13
comp=Z,0.5nm,0.4s
TKL **Tuckaleechee C** **11.48 95** Pn **Pn** **10 43 27.3 +0.5**
comp=Z,0.3nm,0.3s,baz=250,slow=12,SNR=5.1
TKL Lg Lg 10 46 38.0
comp=Z,0.7nm,0.3s,baz=6.9,slow=22,SNR=3.7
comp=Z,1.2nm,0.4s
ULM **Lac du Bonnet** **12.75 6** Pn **Pn** **10 43 41.0 -3.1**
comp=Z,0.3nm,0.3s,baz=184,slow=12,SNR=1.7
ULM Lg Lg 10 47 17.1
comp=Z,0.3nm,0.3s,baz=279,slow=18,SNR=6.3
comp=Z,1.4nm,0.4s
SADO **Sadowa** **15.80 57** Lg Lg 10 48 54.2
comp=Z,0.2nm,0.3s,baz=59,slow=5.1,SNR=4.8

*IDC **19** 10:45:53.7±1.2,22°.80N×95°.97E, h0km, mb3.7/4, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=38.7km s-min=15.9km az=60.0*
*NEIC **19** 10:45:55.5±1.6,22°.36N±0°.06×95°.66E±0°.05, h22km±5km, mb4.2/10, Error ellipse: s-maj=9.8km s-min=6.2km az=205.0*
*NDI **19** 10:45:56.9±1.6,22°.57N×95°.96E, h33km, ML3.2, mb4.2(NEIC)*
ISC 19 10:45:57.5±0.6, 22°.55N±0°.06×95°.80E±0°.07, h35km, n38, σ1s72/38, mb4.1/13, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MND	**Mandalay**	**0.60**	**151**		**Pn**	**10 46 08.2**	**-1.4**
MND				Sg	**Sn**	**10 46 19.6**	**+1.5**
IMP	**Imphal**	**2.84**	**324**	*eP*	**Pn**	**10 46 41.5**	**+1.1**
IMP				IAML		10 47 23.9	
	comp=E,83nm,0.4s						
IMP				IAML		10 47 26.6	
	comp=N,102nm,0.6s						
KOHI	**KOHIMA**	**3.52**	**334**	*eP*	**Pn**	**10 46 50.4**	**+0.7**
KOHI				IAML		10 47 40.4	
	comp=Z,77nm,1.5s						
KOHI				IAML		10 47 40.4	
	comp=N,169nm,0.6s						
SILR	**SILCHAR**	**3.54**	**310**	*ex*	x	10 47 01.7	
MOKO	**MOKOCHONG**	**3.94**	**343**	*eP*	**Pn**	**10 46 56.2**	**+0.7**
SHL	**Shillong**	**4.67**	**311**	*eP*	**Pn**	**10 47 05.7**	**0.0**
SHL				*eS*	**Sn**	**10 47 58.1**	**-0.7**
CHTO	**Chiang Mai**	**4.74**	**141**		**Pn**	**10 47 06.0**	**-0.5**
CRAI	**Chiangrai**	**4.85**	**118**		**Pn**	**10 47 07.9**	**-0.1**
TEZP	**TEZPUR**	**4.89**	**327**	*eP*	**Pn**	**10 47 07.7**	**-0.7**
CM31	**Chiang Mai Arr**	**5.02**	**144**		**Pn**	**10 47 09.3**	**-1.1**
CMAR	**Chiang Mai Arr**	**5.02**	**144**	Pn	**Pn**	**10 47 11.5**	**+1.1**
	comp=N,1.0nm,0.3s,baz=322,slow=14,SNR=22						
CMAR				Pg		10 47 28.4	
	comp=N,6.1nm,0.3s,baz=325,slow=17,SNR=51						
CMAR				Lg	Lg	10 48 35.6	
	comp=N,5.7nm,0.3s,baz=321,slow=30,SNR=7.8						
	comp=N,5.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**5.02**	**144**	Pn	**Pn**	**10 47 09.1**	**-1.3**
GUWA	**GUWAHATI**	**5.22**	**315**	IAML		10 48 16.2	
	comp=N,32nm,0.3s						
GUWA				IAML		10 48 16.3	
	comp=E,26nm,0.3s						
ZIRO	**ZIRO**	**5.26**	**341**	*eP*	**Pn**	**10 47 13.0**	**-0.8**
TURI	**Tura**	**5.82**	**302**	*eP*	**Pn**	**10 47 24.2**	**+2.9**
TURI				*eS*	**Sn**	**10 48 26.1**	**-0.8**
HYBB	**Hyderabad (bro**	**16.99**	**256**	*eP*	**Pn**	**10 49 51.7**	**-0.9**
HYBB				*epP*	**P**	**10 49 57.4**	**+3.3**
HYBB				*eS*	**S**	**10 53 06.7**	**-2.9**
WMQ	**Urumqi**	**22.25**	**344**	*eP*	**P**	**10 50 46.3**	**-5.0**
WMQ				LR	LR		
	comp=Z,890nm,20.5s						
NJ2	**Nanjing**	**22.53**	**60**	*eP*	P	10 51 01.8	+7.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**22.58**	**32**	*eP*	P	10 51 02.0	+7.0
TIA	**Tai'an**	**22.97**	**49**	*eP*	P	10 51 11.6	+13
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH	**Kashi**	**23.89**	**320**	P	**P**	**10 51 08.4**	**+0.4**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	**Makanchi Array**	**26.54**	**339**	P	**P**	**10 51 31.4**	**-0.6**
MK31				IAmb	IAmb	10 51 35.6	
	comp=Z,4.7nm,1.4s						
MKAR	**Makanchi Array**	**26.54**	**339**	P	**P**	**10 51 31.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=151,slow=11,SNR=14						
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**26.54**	**339**	P	**P**	**10 51 31.5**	**-0.5**
MAKZ	**Makanchi**	**26.66**	**339**	P	**P**	**10 51 33.3**	**+0.3**
MAKZ				IAmb	IAmb	10 51 38.6	
	comp=Z,3.6nm,1.2s						
GAR	**Garm**	**27.22**	**313**	P	**P**	**10 51 35.8**	**-2.5**
GAR				IAmb	IAmb	10 51 39.7	
	comp=Z,7.6nm,0.9s						
KK31	**Karatay Array**	**29.33**	**320**	P	**P**	**10 51 56.3**	**-0.6**
KKAR	**Karatay Array**	**29.33**	**320**	P	**P**	**10 51 55.1**	**-1.8**
KURBB	**Kurchatov Arra**	**31.11**	**339**	P	**P**	**10 52 11.8**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=146,slow=9.4,SNR=5.0						
	comp=Z,0.7nm,0.5s						
USA0B	**Ussuriysk Arra**	**36.73**	**45**	P	**P**	**10 53 02.5**	**+1.2**
USA0B				IAmb	IAmb	10 53 28.6	
	comp=Z,4.0nm,0.9s						
ABKAR	**Akbulak array**	**38.84**	**322**	P	**P**	**10 53 19.2**	**+0.2**
MAJO	**Matsushiro**	**39.13**	**59**	P	**P**	**10 53 20.9**	**-0.8**
MAJO				IAmb	IAmb	10 53 22.9	
	comp=Z,5.1nm,0.8s						
WB0	**Warramunga Arr**	**56.47**	**135**	P	**P**	**10 55 35.9**	**-0.3**
WRA	**Warramunga Arr**	**56.56**	**135**	P	**P**	**10 55 38.9**	**+2.0**
	comp=Z,0.9nm,0.8s,baz=328,slow=7.8,SNR=4.7						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**56.56**	**135**	P	**P**	**10 55 35.2**	**-1.7**
WB2	**Warramunga Arr**	**56.57**	**135**	P	**P**	**10 55 35.4**	**-1.5**
ASAR	**Alice Springs**	**59.02**	**139**	P	**P**	**10 55 56.5**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=321,slow=7.2,SNR=4.1						
	comp=Z,0.3nm,0.7s						
J20K	**Nowinta River**	**78.23**	**25**	P	**P**	**10 57 56.1**	**+2.8**
J20K				IAmb	IAmb	10 58 13.8	
	comp=Z,3.7nm,1.3s						

IDC 19 10:50:47.3±4.2, 54°.85S×31°.26W, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=144.8km s-min=53.3km az=179.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.80**	**155**	P	P	10 55 18.8	-11
TROLL	**Troll, Antarti**	**22.36**	**153**	P	P	10 55 38.1	-8.6
H10S2	**ASCENSION HYDR**	**47.65**	**22**	T	T	11 50 34.8	
	baz=193,slow=74,SNR=8.3						
H10S3	**ASCENSION HYDR**	**47.65**	**22**	T	T	11 50 35.8	
	baz=27,slow=74,SNR=13						
LPAZ	**La Paz**	**47.80**	**309**	P	P	10 59 27.0	-0.1
	1.7nm,0.6s,baz=132,slow=6.9,SNR=8.1						
	1.7nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.77**	**22**	T	T	11 52 00.3	
	baz=192,slow=75,SNR=19						
H10N3	**ASCENSION HYDR**	**48.77**	**22**	T	T	11 51 59.3	
	baz=192,slow=75,SNR=48						
H10N2	**ASCENSION HYDR**	**48.78**	**22**	T	T	11 52 01.6	
	baz=192,slow=75,SNR=42						
TORD	**Torodi Ar. Bea**	**73.25**	**34**	P	P	11 02 20.2	0.0
	0.5nm,0.7s,baz=191,slow=5.2,SNR=2.7						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**147.60**	**314**	PKPbc	PKPbc	11 10 31.3	-0.8
	0.9nm,0.9s,baz=111,slow=1.9,SNR=7.5						

*IDC **19** 10:52:42.8±2.1,55°.37S×31°.09W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=85.2km s-min=48.4km az=9.0*
ISC 19 10:52:44.7±1.2, 54°.7S±0°.3×30°.4W±0°.5, h10km, n10, σ0s92/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.86**	**159**	P	**Pn**	**10 57 05.4**	**+0.4**
SNAA	**Sanae**	**20.69**	**156**	P	**P**	**10 57 23.7**	**-0.9**
TROLL	**Troll, Antarti**	**22.24**	**154**	P	**P**	**10 57 41.7**	**+0.4**
LPAZ	**La Paz**	**48.14**	**308**	P	**P**	**11 01 25.8**	**+0.3**
	1.1nm,0.6s,baz=161,slow=3.1,SNR=3.3						
	1.1nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.46**	**21**	T	T	11 54 56.6	
	baz=192,slow=74,SNR=2.4						
H10N3	**ASCENSION HYDR**	**48.46**	**21**	T	T	11 54 59.0	
	baz=13,slow=74,SNR=6.8						
TORD	**Torodi Ar. Bea**	**72.86**	**33**	P	P	11 04 17.9	+4.3
	0.7nm,0.7s,baz=192,slow=6.9,SNR=6.3						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**143.41**	**64**	PKP	**PKPdf**	**11 12 17.5**	**-0.6**
	0.9nm,0.5s,baz=252,slow=5.7,SNR=3.6						
ILAR	**Eielson Array**	**147.89**	**314**	PKPbc	**PKPbc**	**11 12 27.6**	**-0.9**
	0.8nm,0.8s,baz=113,slow=1.5,SNR=6.2						
SONM	**Songino Array**	**152.45**	**86**	PKPbc	**PKiKP**	**11 12 41.5**	**+1.0**
	0.8nm,0.7s,baz=259,slow=3.5,SNR=3.8						

*IDC **19** 10:59:57.8±0.7,55°.12S×31°.11W, h0km, mb4.2/8, mbtmp4.2/9, ML3.7/1, Error ellipse: s-maj=23.7km s-min=18.4km az=63.0*
*NEIC **19** 10:59:59.2±2.1,55°.29S±0°.05×31°.3W±0°.2, h10km±1km, mb5.0/35, Error ellipse: s-maj=17.1km s-min=7.9km az=78.0*
ISC 19 10:59:58.9±0.6, 55°.19S±0°.08×31°.32W±0°.09, h10km, n59, σ1s03/52, mb4.9/23, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.13**	**285**		**Pn**	**11 00 48.0**	**-0.3**
ORCD	**Orcadas**	**9.03**	**227**	Pn	**Pn**	**11 02 07.2**	**-2.0**
VNA1	**Neumayer--Stat**	**18.51**	**156**	P	**Pn**	**11 04 17.0**	**+1.9**
VNA3	**Neumayer Olymp**	**18.63**	**158**	P	**Pn**	**11 04 17.9**	**+1.4**
PMSA	**Palmer Station**	**18.75**	**226**	P	**Pn**	**11 04 20.6**	**+2.6**
	0.2nm,0.3s,baz=43,slow=10,SNR=2.8						
	6.0nm,0.8s						
PMSA	**Palmer Station**	**18.75**	**226**	P	**P**	**11 04 17.1**	**-0.4**
VNA2	**Neumayer--Watz**	**18.91**	**156**	P	**Pn**	**11 04 20.7**	**+0.8**
	baz=311,slow=11						
SNAA	**Sanae**	**20.51**	**154**	P	Pn	11 04 37.6	-1.4
SNAA	**Sanae**	**20.51**	**154**	P	Pn	11 04 37.9	-1.1
	6.3nm,0.8s,baz=302,slow=9.7,SNR=20						
	6.3nm,0.8s						
SNAA	**Sanae**	**20.51**	**154**	P	**P**	**11 04 35.9**	**-1.0**
SMAI	**San Martin Ant**	**20.96**	**218**	P	**P**	**11 04 41.7**	**+0.1**
TROLL	**Troll, Antarti**	**22.08**	**153**	P	**P**	**11 04 54.3**	**+0.5**
BELA	**Belgrano 2**	**22.82**	**182**	P	**P**	**11 05 00.6**	**-0.9**
GO09	**Cerro Castillo**	**24.60**	**262**	P	**P**	**11 05 19.0**	**0.0**
GO09				IAmb	IAmb	11 05 22.1	
	comp=Z,110nm,1.8s						
TRQA	**Tornquist**	**26.84**	**297**	P	**P**	**11 05 39.6**	**+0.3**
TRQA				IAmb	IAmb	11 05 45.5	
	comp=Z,26nm,1.7s						
PLCA	**Paso Flores**	**29.53**	**283**	P	**P**	**11 06 03.6**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=352,slow=19,SNR=2.9						
	comp=Z,2.1nm,0.9s						
GO07	**Milladeo Hill,**	**29.74**	**276**	P	**P**	**11 06 05.2**	**0.0**
GO05	**Huala**	**34.39**	**289**	P	**P**	**11 06 45.9**	**-0.1**
CPUP	**Villa Florida**	**34.52**	**316**	P	**P**	**11 06 47.5**	**+0.3**
	comp=Z,7.9nm,0.9s,baz=156,slow=8.9,SNR=12						
	comp=Z,7.9nm,0.9s						
CPUP	**Villa Florida**	**34.52**	**316**	P	**P**	**11 06 47.5**	**+0.3**
CPUP				IAmb	IAmb	11 06 49.0	
	comp=Z,12nm,1.0s						
MT09	**Talagante**	**34.81**	**291**	P	**P**	**11 06 48.2**	**-1.6**
QSPA	**South Pole Qui**	**35.06**	**180**	P	**P**	**11 06 53.2**	**+1.5**
	comp=Z,2.3nm,0.7s,baz=202,slow=3.4,SNR=13						
	comp=Z,2.3nm,0.7s						
QSPA	**South Pole Qui**	**35.06**	**180**	P	**P**	**11 06 51.5**	**-0.3**
MT02	**Curacav**	**35.29**	**292**	P	**P**	**11 06 52.5**	**-1.3**
VA03	**San Esteban**	**35.36**	**293**	P	**P**	**11 06 53.5**	**-1.0**
VA03				IAmb	IAmb	11 06 57.0	
	comp=Z,25nm,1.1s						
VA06	**Catapilco**	**35.91**	**292**	P	**P**	**11 07 00.6**	**+1.4**
VA06				IAmb	IAmb	11 07 03.6	
	comp=Z,32nm,0.8s						
CO02	**Combarbal**	**36.82**	**294**	P	**P**	**11 07 08.5**	**+1.4**
CO02				IAmb	IAmb	11 08 15.6	
	comp=Z,53nm,1.3s						
CO03	**El Pedregal**	**36.95**	**295**	P	**P**	**11 07 06.8**	**-1.3**
CO01	**Juntas del Tor**	**37.33**	**296**	P	**P**	**11 07 12.3**	**+0.8**
CO01				IAmb	IAmb	11 07 14.7	
	comp=Z,43nm,1.8s						
GO04	**Tololo Observa**	**37.53**	**295**	P	**P**	**11 07 12.3**	**-1.0**
AC05	**El Transito**	**38.34**	**297**	P	**P**	**11 07 21.4**	**+1.4**
AC04	**Llanos de Chal**	**39.26**	**297**	P	**P**	**11 07 26.1**	**-1.5**
AC04				IAmb	IAmb	11 08 23.4	
	comp=Z,92nm,1.4s						
GO02	**Mina Guanaco**	**41.03**	**301**	P	**P**	**11 07 42.7**	**+0.1**
LVC	**Limon Verde**	**42.86**	**304**	P	**P**	**11 07 58.0**	**+0.4**
LVC				IAmb	IAmb	11 08 00.9	
	comp=Z,16nm,1.1s						
PB02	**IPOC Station P**	**44.43**	**304**	P	**P**	**11 08 11.4**	**+1.5**
PB02				IAmb	IAmb	11 08 15.4	
	comp=Z,48nm,1.4s						
PB01	**IPOC Station P**	**44.47**	**305**	P	**P**	**11 08 11.6**	**+1.3**
PB01				IAmb	IAmb	11 08 12.0	
	comp=Z,12nm,0.8s						
PTLB	**Pontes e Lacer**	**45.09**	**321**	P	**P**	**11 08 15.7**	**+0.6**

PTLB						IAmb	IAmb	11 08 16.6		
	comp=Z,26nm,1.3s									
GO01	**Chusmiza**	**45.52**	**306**		P	**P**		**11 08 19.9**	**+0.8**
GO01					IAmb	IAmb		11 08 35.5		
	comp=Z,14nm,1.0s									
VNDA	**Vanda**	**47.30**	**184**		P	**P**		**11 08 31.6**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=181,slow=5.6,SNR=3.5									
	comp=Z,0.5nm,0.7s									
VNDA	**Vanda**	**47.30**	**184**		P	**P**		**11 08 31.3**	**-0.6**
VILB	**Vilhena**	**47.78**	**321**		P	**P**		**11 08 35.0**	**-1.3**
VILB					IAmb	IAmb		11 08 39.2		
	comp=Z,15nm,1.0s									
H10S2	**ASCENSION HYDR**	**47.97**		**22**	T	T		12 00 52.1		
	baz=27,slow=74,SNR=6.1									
H10S3	**ASCENSION HYDR**	**47.98**		**22**	T	T		12 00 51.9		
	baz=193,slow=74,SNR=9.2									
LPAZ	**La Paz**	**47.99**	**309**		P	**P**		**11 08 40.0**	**+1.4**
	comp=Z,8.9nm,0.5s,baz=116,slow=4.9,SNR=42									
	comp=Z,8.9nm,0.5s									
LPAZ	**La Paz**	**47.99**	**309**		P	**P**		**11 08 39.8**	**+1.2**
LPAZ					IAmb	IAmb		11 08 40.5		
	comp=Z,12nm,0.6s									
BOSA	**Boshof**	**48.09**	**80**		P	**P**		**11 08 37.4**	**-1.3**
	comp=Z,5.1nm,1.1s,baz=232,slow=13,SNR=3.3									
	comp=Z,5.1nm,1.1s									
BOSA	**Boshof**	**48.09**	**80**		P	**P**		**11 08 38.7**	**0.0**
BOSA					IAmb	IAmb		11 09 46.8		
	comp=Z,42nm,1.9s									
H10N1	**ASCENSION HYDR**	**49.09**		**22**	T	T		12 02 18.3		
	baz=192,slow=75,SNR=13									
H10N3	**ASCENSION HYDR**	**49.09**		**22**	T	T		12 02 17.2		
	baz=192,slow=75,SNR=14									
H10N2	**ASCENSION HYDR**	**49.10**		**22**	T	T		12 02 18.1		
	baz=192,slow=75,SNR=14									
ETMB	**Extrema**	**52.96**	**315**		P	**P**		**11 09 15.0**	**-0.5**
ETMB					IAmb	IAmb		11 09 19.7		
	comp=Z,14nm,1.6s									
CASY	**Casey**	**55.48**	**162**		P	**P**		**11 09 33.2**	**0.0**
CASY					IAmb	IAmb		11 09 38.0		
	comp=Z,9.7nm,1.1s									
TOA0	**Torodi Ar. Sit**	**73.55**	**34**		P	**P**		**11 11 32.0**	**+0.2**
TOA0					IAmb	IAmb		11 11 42.5		
	comp=Z,16nm,1.8s									
TORD	**Torodi Ar. Bea**	**73.55**	**34**		P	**P**		**11 11 32.3**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=196,slow=6.5,SNR=12									
	comp=Z,0.8nm,0.5s									
TORD	**Torodi Ar. Bea**	**73.55**	**34**		P	**P**		**11 11 32.3**	**+0.5**
FINES	**FINESS Array B**	**124.75**	**30**		PKP	**PKPdf**		**11 18 56.8**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=193,slow=7.8,SNR=4.2									
CMAR	**Chiang Mai Arr**	**127.56**	**114**		PKP	**PKPdf**		**11 19 04.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=256,slow=2.5,SNR=4.0									
ILAR	**Eielson Array**	**147.81**	**313**		PKPbc	**PKPbc**		**11 19 42.5**	**0.0**
	comp=Z,3.8nm,0.8s,baz=118,slow=1.4,SNR=29									
SONM	**Songino Array**	**153.03**	**88**		PKPbc	**PKPbc**		**11 19 55.4**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=226,slow=2.7,SNR=5.4									

*IDC **19** 11:13:32.9±0.9, 55.°05S×30.°43W, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=39.9km s-min=20.2km az=72.0*

*NEIC **19** 11:13:33.8±1.7, 55.°2S±0.°1×30.°8W±0.°2, h10km±1km, mb4.3/12, Error ellipse: s-maj=19.8km s-min=17.5km az=57.0*

ISC 19 11:13:34.0±0.8, 55.°16S±0.°10×30.°9W±0.°1, h10km, n23, σ1§12/23, mb4.1/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.35**	**283**	Pn		**Pn**	**11 14 25.9**	**-0.4**
ORCD	**Orcadas**	**9.22**	**227**			**Pn**	**11 15 45.0**	**-1.8**
PMSA	**Palmer Station**	**18.93**	**226**	P		**P**	**11 17 54.6**	**-0.1**
PMSA				IAmb		IAmb	11 17 58.7	
	comp=Z,19nm,1.2s							
SNAA	**Sanae**	**20.43**	**155**	P		**P**	**11 18 10.9**	**-0.3**
SNAA	**Sanae**	**20.43**	**155**	P		**P**	**11 18 11.1**	**0.0**
	comp=Z,1.2nm,0.8s,baz=310,slow=9.1,SNR=5.0							
	comp=Z,1.2nm,0.8s							
SNAA	**Sanae**	**20.43**	**155**	P		**P**	**11 18 10.2**	**-0.9**
TROLL	**Troll, Antarti**	**22.00**	**153**	P		**P**	**11 18 29.6**	**+1.6**
GO09	**Cerro Castillo**	**24.83**	**262**	P		**P**	**11 18 56.6**	**+0.4**
CPUP	**Villa Florida**	**34.66**	**315**	P		**P**	**11 20 24.9**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=158,slow=7.0,SNR=4.6							
	comp=Z,1.8nm,0.6s							
CPUP	**Villa Florida**	**34.66**	**315**	P		**P**	**11 20 23.6**	**+0.1**
QSPA	**South Pole Qui**	**35.09**	**180**	P		**P**	**11 20 28.0**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=202,slow=2.1,SNR=10							
	comp=Z,0.6nm,0.4s							
QSPA	**South Pole Qui**	**35.09**	**180**	P		**P**	**11 20 28.0**	**+0.9**
QSPA				IAmb		IAmb	11 20 55.6	
	comp=Z,6.4nm,1.4s							
GO01	**Chusmiza**	**45.69**	**305**	P		**P**	**11 21 55.8**	**+0.2**
PB16	**IPOC Station P**	**46.99**	**306**	P		**P**	**11 22 04.9**	**-0.9**
PB16				IAmb		IAmb	11 22 23.6	
	comp=Z,3.2nm,1.0s							
VNDA	**Vanda**	**47.34**	**184**	P		**P**	**11 22 09.3**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=200,slow=5.1,SNR=6.7							
	comp=Z,0.9nm,0.7s							
VNDA	**Vanda**	**47.34**	**184**	P		**P**	**11 22 07.1**	**-0.2**
VNDA				IAmb		IAmb	11 22 18.0	
	comp=Z,1.7nm,1.1s							
LPAZ	**La Paz**	**48.15**	**309**	P		**P**	**11 22 16.6**	**+1.7**
	comp=Z,2.2nm,0.6s,baz=168,slow=8.0,SNR=6.7							
	comp=Z,2.2nm,0.6s							
LPAZ	**La Paz**	**48.15**	**309**	P		**P**	**11 22 15.0**	**+0.1**
LPAZ				IAmb		IAmb	11 22 21.7	
	comp=Z,2.2nm,0.7s							
TOA0	**Torodi Ar. Sit**	**73.40**	**33**	P		**P**	**11 25 04.0**	**-2.0**
TOA0				IAmb		IAmb	11 25 15.0	
	comp=Z,3.9nm,1.2s							
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P		**P**	**11 25 05.5**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=198,slow=5.3,SNR=6.3							
	comp=Z,0.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P		**P**	**11 25 04.8**	**-1.2**
ILAR	**Eielson Array**	**147.96**	**313**	PKPbc		**PKPbc**	**11 33 17.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=119,slow=1.7,SNR=11							
SONM	**Songino Array**	**152.80**	**88**	PKPbc		**PKPbc**	**11 33 29.7**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=189,slow=4.8,SNR=2.5							

*IDC **19** 11:14:28.4±0.6, 55.°06S×31.°31W, h0km, mb4.2/11, mbtmp4.3/12, ML3.9/1, Error ellipse: s-maj=20.7km s-min=15.9km az=46.0*

*NEIC **19** 11:14:29.1±2.0, 55.°34S±0.°10×31.°5W±0.°2, h10km±1km, mb4.8/40, Error ellipse: s-maj=17.3km s-min=15.3km az=52.0*

ISC 19 11:14:29.4±0.5, 55.°20S±0.°08×31.°54W±0.°09, h10km, n68, σ1§35/60, mb4.7/25, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.01**	**286**	Pn		**Pn**	**11 15 17.2**	**+0.1**
ORCD	**Orcadas**	**8.93**	**226**	Pn		**Pn**	**11 16 35.2**	**-3.1**
VNA1	**Neumayer--Stat**	**18.55**	**156**	P		**Pn**	**11 18 49.8**	**+3.7**
PMSA	**Palmer Station**	**18.65**	**226**	P		**Pn**	**11 18 50.8**	**+3.5**
	0.4nm,0.3s,baz=60,slow=7.7,SNR=6.6							
	14nm,0.8s							
VNA3	**Neumayer Olymp**	**18.66**	**158**	P		**Pn**	**11 18 50.0**	**+2.5**
VNA2	**Neumayer--Watz**	**18.95**	**156**	P		**Pn**	**11 18 50.8**	**-0.2**
	baz=317,slow=11							
SNAA	**Sanae**	**20.55**	**154**	P		Pn	11 19 08.6	-1.4
SNAA	**Sanae**	**20.55**	**154**	P		Pn	11 19 08.6	-1.4
	4.0nm,0.6s,baz=298,slow=8.9,SNR=14							
	4.0nm,0.6s							
SNAA	**Sanae**	**20.55**	**154**	P		**P**	**11 19 04.4**	**-3.4**
SMAI	**San Martin Ant**	**20.87**	**218**	P		**P**	**11 19 10.2**	**-0.9**
TROLL	**Troll, Antarti**	**22.12**	**152**	P		**P**	**11 19 26.4**	**+1.6**
BELA	**Belgrano 2**	**22.80**	**182**	P		**P**	**11 19 30.3**	**-1.5**
MG05	**Puerto Natales**	**24.40**	**261**	P		**P**	**11 19 46.1**	**-1.5**
MG05				IAmb		IAmb	11 19 51.1	
	comp=Z,36nm,1.1s							
GO09	**Cerro Castillo**	**24.48**	**262**	P		**P**	**11 19 47.0**	**-1.4**
GO09				IAmb		IAmb	11 20 00.9	
	comp=Z,15nm,1.1s							
TRQA	**Tornquist**	**26.73**	**297**	P		**P**	**11 20 09.6**	**+0.7**
TRQA				IAmb		IAmb	11 20 14.0	
	comp=Z,25nm,1.5s							
PLTB	**Pedras Altas**	**28.14**	**317**	P		**P**	**11 20 21.3**	**-0.3**
PLCA	**Paso Flores**	**29.41**	**283**	P		**P**	**11 20 35.0**	**+2.1**
	comp=Z,2.5nm,0.7s,baz=147,slow=8.9,SNR=4.9							
	comp=Z,2.5nm,0.7s							
PLCA	**Paso Flores**	**29.41**	**283**	P		**P**	**11 20 34.4**	**+1.5**
GO05	**Huala**	**34.27**	**289**	P		**P**	**11 21 14.3**	**-1.3**
GO05				IAmb		IAmb	11 21 34.0	
	comp=Z,17nm,1.1s							
CPUP	**Villa Florida**	**34.44**	**316**	P		**P**	**11 21 16.8**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=150,slow=6.9,SNR=7.3							
	comp=Z,3.5nm,0.8s							
CPUP	**Villa Florida**	**34.44**	**316**	P		**P**	**11 21 17.1**	**+0.1**
CPUP				IAmb		IAmb	11 21 17.2	
	comp=Z,9.5nm,1.1s							
MT09	**Talagante**	**34.70**	**292**	P		**P**	**11 21 19.0**	**-0.4**
MT01	**Popeta**	**34.77**	**291**	P		**P**	**11 21 19.4**	**-0.4**
PEL	**Peldehue**	**35.03**	**293**	P		**P**	**11 21 22.0**	**-0.1**
QSPA	**South Pole Qui**	**35.05**	**180**	P		**P**	**11 21 23.7**	**+1.5**
	comp=Z,2.6nm,0.7s,baz=174,slow=3.1,SNR=7.7							
	comp=Z,2.6nm,0.7s							
QSPA	**South Pole Qui**	**35.05**	**180**	P		**P**	**11 21 21.9**	**-0.3**
QSPA				IAmb		IAmb	11 21 40.1	
	comp=Z,17nm,1.4s							
MT02	**Curacav**	**35.18**	**292**	P		**P**	**11 21 23.3**	**0.0**
VA03	**San Esteban**	**35.25**	**293**	P		**P**	**11 21 24.0**	**-0.1**
VA03				IAmb		IAmb	11 21 38.8	
	comp=Z,22nm,1.1s							
ROC1	**El Roble**	**35.33**	**292**	P		**P**	**11 21 26.7**	**+1.8**
VA06	**Catapilco**	**35.80**	**293**	P		**P**	**11 21 29.5**	**+0.8**
CO02	**Combarbal**	**36.71**	**294**	P		**P**	**11 21 37.3**	**+0.7**
CO03	**El Pedregal**	**36.84**	**295**	P		**P**	**11 21 38.0**	**+0.3**
CO03				IAmb		IAmb	11 22 01.5	
	comp=Z,27nm,1.2s							
CO01	**Juntas del Tor**	**37.22**	**297**	P		**P**	**11 21 42.5**	**+1.4**
CO01				IAmb		IAmb	11 21 47.4	
	comp=Z,8.9nm,0.8s							
CO06	**Fray Jorge**	**37.46**	**294**	P		**P**	**11 21 44.2**	**+1.4**
AC05	**El Transito**	**38.23**	**297**	P		**P**	**11 21 50.1**	**+0.6**
AC05				IAmb		IAmb	11 22 03.5	
	comp=Z,19nm,1.2s							
AC04	**Llanos de Chal**	**39.15**	**297**	P		**P**	**11 21 58.3**	**+1.2**
AC04				IAmb		IAmb	11 22 09.7	
	comp=Z,32nm,1.1s							
GO02	**Mina Guanaco**	**40.92**	**302**	P		**P**	**11 22 13.2**	**+1.0**
GO02				IAmb		IAmb	11 22 21.9	
	comp=Z,14nm,0.8s							
MAW	**Mawson**	**42.28**	**145**	P		**P**	**11 22 23.6**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=250,slow=13,SNR=4.6							
	comp=Z,2.5nm,0.9s							
LVC	**Limon Verde**	**42.76**	**304**	P		**P**	**11 22 28.2**	**+0.8**
	comp=Z,2.5nm,0.4s,baz=123,slow=4.6,SNR=5.2							
	comp=Z,2.5nm,0.4s							
LVC	**Limon Verde**	**42.76**	**304**	P		**P**	**11 22 28.0**	**+0.7**
PB07	**IPOC Station P**	**43.98**	**304**	P		**P**	**11 22 36.2**	**-0.7**
PB02	**IPOC Station P**	**44.33**	**304**	P		**P**	**11 22 39.3**	**-0.4**
PB01	**IPOC Station P**	**44.37**	**305**	P		**P**	**11 22 41.0**	**+1.0**
PB01				IAmb		IAmb	11 22 44.9	
	comp=Z,10nm,0.7s							
PTLB	**Pontes e Lacer**	**45.02**	**321**	P		**P**	**11 22 45.3**	**+0.2**
PTLB				IAmb		IAmb	11 22 45.5	
	comp=Z,5.8nm,0.9s							
GO01	**Chusmiza**	**45.42**	**306**	P		**P**	**11 22 49.6**	**+0.8**
GO01				IAmb		IAmb	11 22 54.0	
	comp=Z,8.1nm,0.8s							
PB16	**IPOC Station P**	**46.73**	**307**	P		**P**	**11 22 59.9**	**+0.7**
PB16				IAmb		IAmb	11 23 12.4	
	comp=Z,7.8nm,1.4s							
VNDA	**Vanda**	**47.28**	**184**	P		**P**	**11 23 02.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=173,slow=7.1,SNR=3.0							
	comp=Z,0.6nm,0.7s							
VNDA	**Vanda**	**47.28**	**184**	P		**P**	**11 23 02.8**	**+0.5**
LPAZ	**La Paz**	**47.90**	**310**	P		**P**	**11 23 09.0**	**+0.6**
	comp=Z,8.0nm,0.6s,baz=134,slow=4.0,SNR=12							
	comp=Z,8.0nm,0.6s							
LPAZ	**La Paz**	**47.90**	**310**	P		**P**	**11 23 08.9**	**+0.6**
LPAZ				IAmb		IAmb	11 23 13.3	
	comp=Z,8.2nm,0.7s							
H10S2	**ASCENSION HYDR**	**48.03**		**23**	T	T	12 15 16.3	
	baz=27,slow=74,SNR=8.6							
H10S3	**ASCENSION HYDR**	**48.04**		**23**	T	T	12 15 15.2	
	baz=193,slow=74,SNR=12							
BOSA	**Boshof**	**48.21**		**81**	P	**P**	**11 23 09.9**	**-0.3**
	comp=Z,4.3nm,1.0s,baz=197,slow=6.4,SNR=5.6							
	comp=Z,4.3nm,1.0s							
BOSA	**Boshof**	**48.21**		**81**	P	**P**	**11 23 08.3**	**-1.9**
BOSA					IAmb	IAmb	11 23 14.9	
	comp=Z,12nm,1.2s							
H10N1	**ASCENSION HYDR**	**49.15**		**23**	T	T	12 16 39.6	
	baz=193,slow=75,SNR=22							
H10N3	**ASCENSION HYDR**	**49.15**		**23**	T	T	12 16 39.4	
	baz=193,slow=75,SNR=21							
H10N2	**ASCENSION HYDR**	**49.16**		**23**	T	T	12 16 40.3	
	baz=193,slow=75,SNR=18							
LBTB	**Lobatse**	**51.19**		**78**	P	**P**	**11 23 32.8**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=218,slow=7.7,SNR=4.8							
	comp=Z,3.6nm,0.7s							
LBTB	**Lobatse**	**51.19**		**78**	P	**P**	**11 23 31.4**	**-1.5**
BOAV	**Boa Vista**	**62.16**	**327**		P	**P**	**11 24 49.8**	**-0.9**
BOAV					IAmb	IAmb	11 24 54.1	
	comp=Z,4.9nm,0.8s							
TOA0	**Torodi Ar. Sit**	**73.63**		**34**	P	**P**	**11 26 02.7**	**-0.1**
TOA0					IAmb	IAmb	11 26 03.8	
	comp=Z,9.9nm,1.3s							
TORD	**Torodi Ar. Bea**	**73.63**		**34**	P	**P**	**11 26 02.5**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=196,slow=6.5,SNR=14							
	comp=Z,2.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.63**		**34**	P	**P**	**11 26 02.6**	**-0.2**
TORD					IAmb	IAmb	11 26 03.7	
	comp=Z,11nm,1.5s							
ASAR	**Alice Springs**	**100.47**	**166**		P	**Pdif**	**11 28 18.6**	**+1.7**
	comp=Z,0.4nm,0.9s,baz=184,slow=4.5,SNR=5.3							
CMAR	**Chiang Mai Arr**	**127.67**	**114**		PKP	**PKiKP**	**11 33 35.6**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=243,slow=3.7,SNR=5.1							
ZALV	**Zalesovo Beam**	**144.23**	**65**		PKP	PKPbc	11 34 02.1	-0.5
	comp=Z,1.4nm,0.5s,baz=243,slow=1.7,SNR=5.9							
ILAR	**Eielson Array**	**147.72**	**314**		PKPbc	**PKPbc**	**11 34 12.1**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=122,slow=1.9,SNR=14							
SONM	**Songino Array**	**153.15**	**88**		PKPbc	**PKPbc**	**11 34 25.9**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=214,slow=4.2,SNR=5.9							

AUST 19 11:15:41.3±2.0, 19.°85S×148.°84E, h0km, Error ellipse: s-maj=22.9km s-min=13.5km az=2.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CTA	**Charters Tower**	**2.45**	**264**	P		Pn	11 16 22.3	-0.2
	baz=2.4							
CTA				S		Sn	11 16 51.9	-1.3
	baz=2.4							
CTA	**Charters Tower**	**2.45**	**264**	P		Pn	11 16 22.3	-0.2
	baz=2.4							
CTA				S		Sn	11 16 51.9	-1.3
	baz=2.4							
MTSU	**Mount Surprise**	**4.61**	**291**	P		Pn	11 16 51.4	-1.0
	baz=4.6							
MTSU	**Mount Surprise**	**4.61**	**291**	P		Pn	11 16 51.4	-1.0
	baz=4.5							
MTSU				S		Sb	11 17 59.6	+0.3
	baz=4.5							
EIDS	**Eidsvold**	**5.87**	**160**	P		Pn	11 17 10.1	+0.5
	baz=5.9							

*IDC **19** 11:18:33.7±0.6, 55.°04S×31.°60W, h0km, mb4.3/9, mbtmp4.3/10, ML3.8/1, Error ellipse: s-maj=21.5km s-min=15.9km az=55.0*

*NEIC **19** 11:18:34.9±1.8, 55.°17S±0.°03×31.°7W±0.°2, h10km±1km, mb4.9/41, Error ellipse: s-maj=16.2km s-min=4.5km az=86.0*

ISC 19 11:18:35.0±0.5, 55.°08S±0.°07×31.°80W±0.°08, h10km, n67, σ1§16/60, mb4.8/23, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**2.84**	**284**			**Pn**	**11 19 20.8**	**+0.6**
ORCD	**Orcadas**	**8.92**	**225**	Pn		**Pn**	**11 20 41.3**	**-2.3**
PMSA	**Palmer Station**	**18.63**	**226**	P		**Pn**	**11 22 54.8**	**+2.2**
	0.3nm,0.3s,baz=82,slow=9.2,SNR=4.4							
	25nm,1.2s							
PMSA	**Palmer Station**	**18.63**	**226**	P		**P**	**11 22 50.8**	**-1.5**
VNA1	**Neumayer--Stat**	**18.73**	**156**	P		**Pn**	**11 22 57.8**	**+4.0**
VNA3	**Neumayer Olymp**	**18.84**	**158**	P		**Pn**	**11 22 57.6**	**+2.5**
VNA2	**Neumayer--Watz**	**19.13**	**156**	P		**Pn**	**11 23 01.5**	**+2.9**
	baz=315,slow=13							
SNAA	**Sanae**	**20.73**	**154**	P		Pn	11 23 17.1	-0.5
SNAA	**Sanae**	**20.73**	**154**	P		Pn	11 23 15.9	-1.7
	2.4nm,0.7s,baz=288,slow=14,SNR=19							
	2.4nm,0.7s							
SNAA	**Sanae**	**20.73**	**154**	P		**P**	**11 23 14.9**	**-0.3**
SMAI	**San Martin Ant**	**20.88**	**217**	P		**P**	**11 23 17.0**	**+0.2**
MG02	**Cerro Sombrero**	**21.99**	**260**	P		**P**	**11 23 29.4**	**+0.5**
TROLL	**Troll, Antarti**	**22.30**	**153**	P		**P**	**11 23 32.5**	**+0.3**
BELA	**Belgrano 2**	**22.92**	**182**	P		**P**	**11 23 37.0**	**-1.6**
MG05	**Puerto Natales**	**24.27**	**261**	P		**P**	**11 23 51.4**	**-0.6**
MG05				IAmb		IAmb	11 23 53.0	
	comp=Z,23nm,0.8s							
TRQA	**Tornquist**	**26.54**	**297**	P		**P**	**11 24 13.1**	**+0.4**
PLTB	**Pedras Altas**	**27.95**	**318**	P		**P**	**11 24 26.1**	**+0.8**
AY01	**Puyuhuapi**	**28.07**	**275**	P		**P**	**11 24 26.1**	**-0.2**
AY01				IAmb		IAmb	11 24 27.1	
	comp=Z,16nm,0.9s							
LL02	**Futaleuf**	**28.37**	**278**	P		**P**	**11 24 28.0**	**-1.0**
LL02				IAmb		IAmb	11 25 21.8	
	comp=Z,30nm,1.6s							
PLCA	**Paso Flores**	**29.24**	**283**	P		**P**	**11 24 36.5**	**-0.4**
GO05	**Huala**	**34.09**	**289**	P		**P**	**11 25 18.1**	**-1.4**
GO05				IAmb		IAmb	11 25 20.2	
	comp=Z,14nm,0.8s							
BO01	**Tunca**	**34.10**	**291**	P		**P**	**11 25 19.8**	**+0.2**
BO01				IAmb		IAmb	11 25 44.0	
	comp=Z,52nm,1.8s							
CPUP	**Villa Florida**	**34.25**	**317**	P		**P**	**11 25 20.9**	**+0.1**
	comp=Z,7.4nm,0.9s,baz=155,slow=9.0,SNR=14							
	comp=Z,7.4nm,0.9s							
CPUP	**Villa Florida**	**34.25**	**317**			**P**	**11 25 19.9**	**-1.0**
CPUP				IAmb		IAmb	11 25 21.7	
	comp=Z,7.8nm,0.9s							
MT09	**Talagante**	**34.52**	**292**	P		**P**	**11 25 22.4**	**-0.9**
MT01	**Popeta**	**34.59**	**291**	P		**P**	**11 25 23.8**	**-0.1**
MT02	**Curacav**	**34.99**	**292**	P		**P**	**11 25 26.5**	**-0.8**
MT02				IAmb		IAmb	11 26 04.7	
	comp=Z,56nm,1.4s							
VA03	**San Esteban**	**35.07**	**293**	P		**P**	**11 25 29.1**	**+1.1**
VA03				IAmb		IAmb	11 25 30.6	
	comp=Z,22nm,1.1s							
QSPA	**South Pole Qui**	**35.18**	**180**	P		**P**	**11 25 29.0**	**+0.2**
	comp=Z,4.8nm,1.0s,baz=232,slow=2.7,SNR=9.7							
	comp=Z,4.8nm,1.0s							
QSPA	**South Pole Qui**	**35.18**	**180**	P		**P**	**11 25 28.4**	**-0.4**
VA06	**Catapilco**	**35.62**	**293**	P		**P**	**11 25 32.6**	**0.0**
CO01	**Juntas del Tor**	**37.03**	**297**	P		**P**	**11 25 45.0**	**-0.1**
CO01				IAmb		IAmb	11 25 54.4	
	comp=Z,23nm,1.2s							
CO06	**Fray Jorge**	**37.28**	**294**	P		**P**	**11 25 48.2**	**+1.4**
CO06				IAmb		IAmb	11 26 23.8	
	comp=Z,59nm,1.3s							
AC05	**El Transito**	**38.05**	**298**	P		**P**	**11 25 54.7**	**+1.2**
AC04	**Llanos de Chal**	**38.97**	**297**	P		**P**	**11 26 01.8**	**+0.7**
AC02	**Maricunga**	**39.11**	**301**	P		**P**	**11 26 03.2**	**+0.3**
AC02				IAmb		IAmb	11 27 28.8	
	comp=Z,45nm,1.9s							
GO02	**Mina Guanaco**	**40.73**	**302**	P		**P**	**11 26 17.2**	**+1.1**
MAW	**Mawson**	**42.46**	**146**	P		**P**	**11 26 29.5**	**+0.1**
	comp=Z,5.9nm,0.8s,baz=235,slow=7.0,SNR=9.4							
	comp=Z,5.9nm,0.8s							
LVC	**Limon Verde**	**42.57**	**304**	P		**P**	**11 26 32.4**	**+1.1**
	baz=129,slow=8.1							
LVC	**Limon Verde**	**42.57**	**304**	P		**P**	**11 26 31.5**	**+0.3**
LVC				IAmb		IAmb	11 26 59.7	
	comp=Z,38nm,1.7s							
PB02	**IPOC Station P**	**44.14**	**304**	P		**P**	**11 26 43.0**	**-0.6**
PB01	**IPOC Station P**	**44.18**	**305**	P		**P**	**11 26 44.8**	**+0.8**
PB01				IAmb		IAmb	11 28 22.7	
	comp=Z,86nm,2.0s							
PTLB	**Pontes e Lacer**	**44.83**	**321**	P		**P**	**11 26 49.1**	**0.0**
PTLB				IAmb		IAmb	11 26 50.1	
	comp=Z,6.8nm,0.8s							
GO01	**Chusmiza**	**45.23**	**306**	P		**P**	**11 26 53.7**	**+0.8**
VNDA	**Vanda**	**47.40**	**184**	P		**P**	**11 27 08.9**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=195,slow=7.7,SNR=2.9							
	comp=Z,0.9nm,0.9s							
LPAZ	**La Paz**	**47.71**	**310**	P		**P**	**11 27 13.5**	**+1.1**
	comp=Z,7.0nm,0.6s,baz=147,slow=6.2,SNR=20							
	comp=Z,7.0nm,0.6s							
LPAZ	**La Paz**	**47.71**	**310**	P		**P**	**11 27 13.0**	**+0.6**
LPAZ				IAmb		IAmb	11 27 13.8	
	comp=Z

comp=Z,12nm,1.1s
TROLL Troll, Antarti 22.27 153 P **P** 11 32 17.0 +1.1
CPUP Villa Florida 34.30 316 P **P** 11 34 04.1 -1.1
CPUP IAmb IAmb 11 34 31.1
comp=Z,6.0nm,1.4s
QSPA South Pole Qui 35.20 180 P **P** 11 34 12.7 -0.2
QSPA IAmb IAmb 11 34 34.8
comp=Z,3.0nm,1.1s
VA06 Catapilco 35.70 293 P **P** 11 34 17.1 -0.2
PB01 IPOC Station P 44.26 305 P **P** 11 35 28.6 +0.1
GO01 Chusmiza 45.30 306 P **P** 11 35 37.5 +0.3
GO01 IAmb IAmb 11 35 48.9
comp=Z,6.6nm,1.3s
LPAZ La Paz 47.77 309 P **P** 11 35 58.4 +1.5
comp=Z,1.5nm,0.5s,baz=194,slow=4.2,SNR=7.6
comp=Z,1.5nm,0.5s
LPAZ La Paz 47.77 309 P **P** 11 35 58.7 +1.9
LPAZ IAmb IAmb 11 36 00.7
comp=Z,8.4nm,1.4s
TOA0 Torodi Ar. Sit 73.53 34 P **P** 11 38 50.8 -0.9
TOA0 IAmb IAmb 11 39 02.0
comp=Z,8.5nm,1.5s
TORD Torodi Ar. Bea 73.53 34 P **P** 11 38 51.4 -0.3
comp=Z,0.6nm,0.7s,baz=203,slow=6.2,SNR=3.8
comp=Z,0.6nm,0.7s
TORD Torodi Ar. Bea 73.53 34 P **P** 11 38 51.6 -0.1
ILAR Eielson Array 147.59 314 PKPbc **PKPbc** 11 47 01.7 -0.1
comp=Z,0.6nm,0.8s,baz=130,slow=1.6,SNR=4.7
SONM Songino Array 153.19 88 PKPbc **PKPbc** 11 47 15.3 -0.8
comp=Z,0.5nm,0.4s,baz=132,slow=2.1,SNR=1.8

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*UCR **19** 11:27:41.6±1.5, 10°45N×85°66W, h44km±4km, MW3.6*
*INET **19** 11:27:42.3±1.3, 10°39N×85°65W, h41km±5km, MW3.1*
ISC 19 11:27:42.4±1.6, 10.42N±0.03×85.63W±0.06, h42km±9km, n35, σ0.83/56, 9C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ORTG	**Ortega, Santa**	**0.18**	**110**	*eP*		**Pn**	**11 27 49.5**	**-0.3**
ORTG				*eS*		**Sn**	**11 27 55.7**	**+0.6**
GUAI	**GUAI**	**0.19**	**142**	↑*iP*		**Pn**	**11 27 49.7**	**-0.2**
GUAI				*eS*		**Sn**	**11 27 56.1**	**+1.1**
HZTE	**Horizontes, Gu**	**0.29**	**7**	*eP*		**Pn**	**11 27 50.3**	**-0.4**
HZTE				*eS*		**Sn**	**11 27 57.4**	**+0.8**
HZTE	**Horizontes, Gu**	**0.29**	**7**	*eP*		**Pn**	**11 27 50.4**	**-0.4**
HZTE				*eS*		**Sn**	**11 27 57.5**	**+0.8**
SAJU	**San Juanillo,**	**0.36**	**192**	*eP*		**Pn**	**11 27 51.0**	**-0.6**
SAJU				*eS*		**Sn**	**11 27 58.4**	**+0.5**
DUNO	**Dulce Nombre,**	**0.37**	**158**	*eP*		**Pn**	**11 27 51.3**	**-0.3**
DUNO				*eS*		**Sn**	**11 27 58.8**	**+0.7**
GPS2	**Hotel Rincn d**	**0.43**	**40**	↑*iP*		**Pn**	**11 27 51.6**	**-0.8**
GPS2				*eS*		**Sn**	**11 27 59.3**	**-0.1**
BUEV	**Buena Vista**	**0.43**	**31**	↑*iP*		**Pn**	**11 27 51.5**	**-1.0**
BUEV				*eS*		**Sn**	**11 27 58.9**	**-0.7**
GB1A	**Borinquen Arri**	**0.45**	**30**	↑*eP*		**Pn**	**11 27 51.8**	**-1.0**
GB1A				*eS*		**Sn**	**11 27 59.6**	**-0.4**
COLC	**Colonia**	**0.48**	**60**	↑*iP*		**Pn**	**11 27 52.3**	**-0.8**
COLC				*eS*		**Sn**	**11 28 00.6**	**0.0**
GUAB	**Guayabo de Bag**	**0.49**	**54**	↑*iP*		**Pn**	**11 27 52.2**	**-0.9**
GUAB				*eS*		**Sn**	**11 28 00.6**	**-0.1**
CUI	**Cuipilapa**	**0.52**	**63**	↑*iP*		**Pn**	**11 27 52.8**	**-0.7**
CUI				*eS*		**Sn**	**11 28 01.3**	**-0.1**
HORNC	**Hornillas**	**0.53**	**57**	↑*iP*		**Pn**	**11 27 52.9**	**-0.9**
HORNC				*eS*		**Sn**	**11 28 01.1**	**-0.6**
INDI	**Punta indio, G**	**0.57**	**167**	*eP*		**Pn**	**11 27 53.4**	**-0.8**
INDI				*eS*		**Sn**	**11 28 02.1**	**-0.4**
ACAL	**Aguas Claras**	**0.62**	**70**	*eP*		**Pn**	**11 27 54.4**	**-0.6**
ACAL				*eS*		**Sn**	**11 28 04.3**	**+0.4**
VMAR	**Armenia, Volca**	**0.63**	**52**	*eP*		**Pn**	**11 27 54.5**	**-0.6**
VMAR				*eS*		**Sn**	**11 28 05.1**	**+0.9**
JTS	**Las Juntas de**	**0.68**	**101**	*eP*		**Pn**	**11 27 54.9**	**-0.8**
JTS	**Las Juntas de**	**0.68**	**101**	*eP*		**Pn**	**11 27 54.9**	**-0.8**
VERA	**Finca Concepci**	**0.86**	**60**	*eP*		**Pn**	**11 27 57.4**	**-0.8**
CASO	**Castillo**	**0.88**	**89**	↓*eP*		**Pn**	**11 27 58.2**	**-0.2**
CASO				*eS*		**Sn**	**11 28 11.4**	**+1.3**
ARE1	**Arenal 1**	**0.90**	**88**	*eP*		**Pn**	**11 27 58.3**	**-0.3**
CEDE	**Laguna Cedeo**	**0.91**	**86**	↑*eP*		**Pn**	**11 27 58.7**	**-0.2**
CEDE				*eS*		**Sn**	**11 28 13.2**	**+2.3**
LAFE	**Finca La Fe, P**	**0.94**	**131**	*eP*		**Pn**	**11 27 58.0**	**-1.1**
LAFE	**Finca La Fe, P**	**0.94**	**131**	*eP*		**Pn**	**11 27 58.0**	**-1.1**
LAFE				*eS*		**Sn**	**11 28 10.5**	**-0.9**
FORC	**Fortuna**	**0.95**	**87**	↓*eP*		**Pn**	**11 27 59.0**	**-0.3**
FORC				*eS*		**Sn**	**11 28 13.2**	**+1.5**
SRA1	**San Ramn**	**1.18**	**106**	*eP*		**Pn**	**11 28 02.6**	**0.0**
COVE	**Coope Vega, Sa**	**1.24**	**76**	*eP*		**Pn**	**11 28 01.6**	**-1.8**
ACON	**Acoyapa**	**1.60**	**16**	*eP*		**Pn**	**11 28 08.4**	**+0.1**
ACON				*eS*		**Sn**	**11 28 29.4**	**+1.7**
LCR2	**La Lucha 2**	**1.74**	**113**	*eP*		**Pn**	**11 28 10.1**	**-0.3**
RIMA	**Rio Macho**	**1.86**	**110**	*eP*		**Pn**	**11 28 11.8**	**-0.2**
RIMA	**Rio Macho**	**1.86**	**110**	*eP*		**Pn**	**11 28 12.2**	**+0.2**
CDM	**Cerro de Muert**	**2.03**	**115**	*eP*		**Pn**	**11 28 14.3**	**-0.3**
CDM	**Cerro de Muert**	**2.03**	**115**	*eP*		**Pn**	**11 28 15.5**	**+0.9**
ESPN	**Las Esperanzas**	**2.19**	**36**	*eP*		**Pn**	**11 28 16.1**	**-0.3**
SRBA	**San Rafael, Bu**	**2.53**	**118**	*eP*		**Pn**	**11 28 20.7**	**-0.5**

IDC 19 11:40:45.4±1.1, 55.07S×30.96W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=49.2km s-min=25.7km az=72.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNAA	**Sanae**	**20.52**	**155**	P		P	11 45 24.7	-0.1
	3.0nm,1.1s,baz=300,slow=8.2,SNR=4.4							
	3.0nm,1.1s							
QSPA	**South Pole Qui**	**35.18**	**180**	P		P	11 47 40.9	+0.1
	0.8nm,0.8s,baz=236,slow=11,SNR=5.8							
	0.8nm,0.8s							
LPAZ	**La Paz**	**48.08**	**309**	P		P	11 49 27.4	+0.1
	1.6nm,0.5s,baz=169,slow=5.2,SNR=8.0							
	1.6nm,0.5s							
H10N1	**ASCENSION HYDR**	**48.90**	**22**	T		T	12 42 44.8	
	baz=192,slow=75,SNR=6.4							
H10N3	**ASCENSION HYDR**	**48.90**	**22**	T		T	12 42 43.3	
	baz=192,slow=75,SNR=8.1							
H10N2	**ASCENSION HYDR**	**48.92**	**22**	T		T	12 42 43.6	
	baz=192,slow=75,SNR=7.6							
TORD	**Torodi Ar. Bea**	**73.33**	**33**	P		P	11 52 18.9	+0.2
	0.6nm,0.7s,baz=198,slow=6.4,SNR=4.4							
	0.6nm,0.7s							
ILAR	**Eielson Array**	**147.88**	**314**	PKPbc		PKPbc	12 00 29.6	-1.2
	0.7nm,0.6s,baz=129,slow=1.8,SNR=12							

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*IDC **19** 11:44:15.6±0.8, 39°24N×10°41W, h0km, mb4.0/15, mbtmp4.1/18, ML4.6/4, MS3.5/1, Error ellipse: s-maj=19.4km s-min=15.8km az=4.0*
*NEIC **19** 11:44:17.3±1.7, 39°26N±0°05×10°35W±0°08, h10km±1km, mb4.4/67, Error ellipse: s-maj=10.2km s-min=9.0km az=81.0*
*MDD **19** 11:44:18.8±0.4, 39°31N×10°44W, h37km±11km, mb_Lg4.5/35, Error ellipse: s-maj=4.9km s-min=1.9km az=83.0*
*IGIL **19** 11:44:19.1, 39°31N×10°44W, h29km, ML4.2*
*INMG **19** 11:44:19.6±2.5, 39°30N×10°31W, h16km±4km, ML4.1, Error ellipse: s-maj=4.5km s-min=2.2km az=93.0*
*LDG **19** 11:44:23.6±0.4, 39°39N×9°69W, h30km, Ml4.4/17, Error ellipse: s-maj=8.7km s-min=4.2km az=84.0*
*CNRM **19** 11:44:35.9, 38°99N×8°71W, h30km, ml3.6*
ISC 19 11:44:19.5±1.3, 39°25N±0°03×10°27W±0°04, h28km±9km, n278, σ2°15/359, mb4.4/48, 10C-16D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCASC	**Cascais**	**0.78**	**128**	↓*eP*		**Pb**	**11 44 34.2**	**-0.2**
PCASC				*eS*		**Sb**	**11 44 45.1**	**+0.5**
PCASC				A		A	11 44 45.9	
	2μm,0.4s							
PMAFR	**Mafra**	**0.82**	**111**	↓*iP*		**Pb**	**11 44 35.1**	**-0.1**
PMAFR				*eS*		**Sn**	**11 44 46.7**	**+0.2**
PMAFR				A		A	11 44 48.8	
	8μm,0.2s							
PVERD	**Verdizela**	**0.85**	**124**	*eP*		**Pn**	**11 44 39.9**	**+4.4**
PVERD				*eS*		Sn	11 44 56.7	+10
PVERD				A		A	11 45 07.7	
	11μm,0.5s							
PCDRA	**Caldas da Rain**	**0.89**	**80**	*eP*		**Pn**	**11 44 36.2**	**+0.1**
PCDRA				*eS*		**Sn**	**11 44 49.0**	**+0.9**
PCDRA				A		A	11 44 56.5	
	21μm,0.3s							

PMST Lisbon--Monsan 0.99 121 ↓*iP* **Pn** **11 44 37.9 +0.4**
PMST *eS* **Sn** **11 44 52.0 +1.4**
PMST A A 11 45 00.3
5μm,0.3s
INMG Instituto de M 1.01 118 *eP* **Pn** **11 44 38.3 +0.5**
INMG *eS* **Sn** **11 44 52.5 +1.4**
INMG A A 11 45 03.2
11μm,0.4s
LIS Lisbon 1.03 121 *eP* **Pn** **11 44 38.4 +0.4**
LIS *eS* **Sb** **11 44 52.1 +0.4**
LIS IAML 11 44 57.7
comp=N,10μm,0.4s
LIS Lisbon 1.03 121 ↓*iP* **Pn** **11 44 38.4 +0.4**
LIS *eS* **Sb** **11 44 52.8 +1.1**
LIS A A 11 45 01.0
comp=N,10μm,0.4s
PVFX Vila Franca de 1.04 106 *eP* **Pn** **11 44 38.6 +0.4**
PVFX *eS* **Sb** **11 44 53.1 +1.0**
PVFX A A 11 45 02.2
comp=N,12μm,0.3s
PBEN Benavente 1.17 105 *eP* **Pn** **11 44 40.2 +0.3**
PBEN *eS* **Sb** **11 44 56.2 +0.6**
PBEN A A 11 45 03.4
comp=N,1μm,0.2s
PSBE So Bento 1.17 77 *eP* **Pn** **11 44 39.9 -0.1**
PSBE *eS* **Sb** **11 44 58.0 +2.1**
PSBE A A 11 45 04.6
comp=N,3μm,0.5s
PACT Alcochete 1.22 113 ↓*iP* **Pn** **11 44 40.9 +0.3**
PACT *eS* **Sb** **11 44 57.4 +0.2**
PSANT Santarm 1.23 90 *eS* **Sn** **11 44 56.9 +0.6**
PSANT A A 11 45 05.5
comp=N,5μm,0.3s
PSETU Setᵇbal 1.31 123 *eP* **Pn** **11 44 42.8 +0.9**
PSETU A A 11 45 18.0
comp=N,9μm,0.6s
PCAS Casmilo, Conde 1.58 59 ↑*ePn* **Pn** **11 44 45.4 -0.3**
PCAS *eS* **Sb** **11 45 10.1 +2.4**
PCAS A A 11 45 13.4
comp=N,964nm,0.1s
PMTG Montargil 1.60 96 ↓*ePn* **Pn** **11 44 45.5 -0.4**
PMTG *eSn* **Sn** **11 45 05.7 +0.1**
PMTG *eSg* 11 45 09.4
PMTG A A 11 45 16.4
comp=N,2μm,0.6s
PSINE Sines 1.70 139 *ePn* **Pn** **11 44 47.0 -0.2**
PSINE *eSn* **Sn** **11 45 08.1 +0.1**
PSINE A A 11 45 29.8
comp=N,988nm,0.5s
COI Coimbra 1.72 56 **Pn** **11 44 47.3 -0.3**
PNCL Nicolau / Gran 1.78 129 ↓*iPn* **Pn** **11 44 48.3 0.0**
PNCL *eSn* **Sn** **11 45 10.1 +0.1**
PNCL A A 11 45 23.8
comp=N,821nm,0.5s
EVO Evora 1.90 112 P **Pn** **11 44 49.8 -0.3**
EVO S **Sn** **11 45 14.7 +1.6**
PTEO Sao Teotonio 2.09 144 ↓*ePn* **Pn** **11 44 52.4 -0.3**
PTEO *eSn* **Sn** **11 45 18.3 +0.5**
PTEO A A 11 45 35.3
comp=N,1μm,0.5s
PESTR Estremoz 2.12 100 **Pn** **11 44 52.6 -0.5**
PESTR Estremoz 2.12 100 P **Pn** **11 44 52.5 -0.5**
PESTR Estremoz 2.12 100 P **Pb** **11 44 58.8 +1.6**
PESTR S **Sb** **11 45 23.9 +0.7**
PESTR Estremoz 2.12 100 *ePn* **Pn** **11 44 52.6 -0.5**
PESTR Estremoz 2.12 100 *ePg* **Pb** **11 45 00.4 +3.2**
PESTR *eSn* **Sn** **11 45 18.1 -0.4**
PESTR A A 11 45 32.3
comp=N,661nm,0.4s
MESJ Messejana 2.14 131 *eP* **Pn** **11 44 53.4 +0.1**
MESJ *eS* **Sn** **11 45 18.4 -0.5**
MESJ IAML 11 45 35.5
comp=N,592nm,0.5s
MESJ Messejana 2.14 131 ↓*iPn* **Pn** **11 44 53.4 +0.1**
MESJ *eSn* **Sn** **11 45 19.3 +0.4**
MESJ A A 11 45 39.0
comp=N,650nm,0.4s
PCBR Castelo Branco 2.24 74 *ePn* **Pn** **11 44 54.4 -0.2**
PCBR *eSn* **Sn** **11 45 20.0 -1.3**
PCBR *eSg* 11 45 31.2
PCBR A A 11 45 43.6
comp=N,536nm,0.7s
PMRV Marv??o 2.24 85 *ePn* **Pn** **11 44 54.3 -0.4**
PMRV *eSn* **Sn** **11 45 20.7 -0.7**
PMRV A A 11 45 41.9
comp=N,965nm,0.7s
PBEJ Beja 2.25 122 *ePn* **Pn** **11 44 54.7 -0.1**
PBEJ *eSn* **Sn** **11 45 21.8 +0.2**
PBEJ A A 11 45 38.9
comp=N,480nm,0.6s
PALJ Aljezur 2.25 149 *ePn* **Pn** **11 44 54.4 -0.5**
PALJ *eSn* **Sn** **11 45 21.7 0.0**
PALJ A A 11 45 41.2
comp=N,747nm,0.6s
PTO Porto 2.27 34 *ePn* **Pn** **11 44 54.3 -0.8**
PTO *eSn* **Sn** **11 45 20.6 -1.6**
PTO A A 11 45 42.4
comp=N,657nm,0.3s
MORF Marmelete 2.33 146 *eP* **Pn** **11 44 55.5 -0.5**
MORF *eS* **Sn** **11 45 22.5 -1.1**
MORF IAML 11 45 27.2
comp=N,1μm,0.3s
MORF Marmelete 2.33 146 ↓*eP* **Pn** **11 44 55.4 -0.5**
MORF *eSn* **Sn** **11 45 23.8 +0.2**
MORF A A 11 45 37.7
comp=N,525nm,0.7s
PVIS Viseu 2.34 51 ↑*iPn* **Pn** **11 44 55.5 -0.6**
PVIS *eSn* **Sn** **11 45 21.8 -2.1**
PVIS *eSg* 11 45 32.6
PVIS A A 11 45 35.8
comp=N,933nm,0.4s
PCVE Castro Verde 2.39 132 ↓*ePn* **Pn** **11 44 56.8 +0.1**
PCVE *eSn* **Sn** **11 45 25.5 +0.5**
PCVE A A 11 45 46.9
comp=N,460nm,0.7s
MTE Manteigas 2.39 61 **Pn** **11 44 56.3 -0.5**
MTE Manteigas 2.39 61 ↑*ePn* **Pn** **11 44 56.4 -0.5**
MTE *eSn* **Sn** **11 45 24.6 -0.6**
MTE *eSg* 11 45 33.8
MTE A A 11 45 48.3
comp=N,811nm,0.6s
PFVI Vila Bisbo 2.40 151 **Pn** **11 44 56.1 -0.8**
PFVI Vila Bisbo 2.40 151 ↓*iPn* **Pn** **11 44 56.3 -0.6**
PFVI *eSn* **Sn** **11 45 24.3 -1.1**
PFVI A A 11 45 35.9
comp=N,356nm,0.5s
PSVI Cabo S. Vicent 2.44 155 *ePn* **Pn** **11 44 57.5 0.0**
PSVI *eSn* **Sn** **11 45 26.9 +0.5**
PLAGO Lagos 2.49 149 ↑*iPn* **Pn** **11 44 57.9 -0.2**
PLAGO *eSn* **Sn** **11 45 27.8 +0.3**
PLAGO A A 11 45 36.0
comp=N,490nm,0.8s
PPOR Portimao 2.52 147 *ePn* **Pn** **11 44 58.5 0.0**
PPOR *eSn* **Sn** **11 45 28.6 +0.3**
EBAD Badajoz 2.59 100 P **Pn** **11 44 58.9 -0.6**
EBAD S **Sn** **11 45 27.9 -2.0**
PALBU Albufeira 2.68 143 *ePn* **Pn** **11 45 01.0 +0.3**
PALBU *eSn* **Sn** **11 45 32.8 +0.6**
PBDV Barranco-do-Ve 2.72 137 ↓*ePn* **Pn** **11 45 01.6 +0.2**
PBDV *eSn* **Sn** **11 45 33.3 -0.1**
PBDV A A 11 46 00.6
comp=N,486nm,0.4s
PVAQ Vaqueiros 2.73 132 **Pn** **11 45 01.5 +0.1**
PVAQ Vaqueiros 2.73 132 P **Pn** **11 45 01.9 +0.5**
PVAQ S **Sn** **11 45 30.8 -2.6**
PVAQ Vaqueiros 2.73 132 ↓*ePn* **Pn** **11 45 01.5 +0.1**
PVAQ *eSn* **Sn** **11 45 33.8 +0.3**
PBAR Barrancos 2.75 112 *ePn* **Pn** **11 45 01.6 -0.1**
PBAR *eSn* **Sn** **11 45 33.6 -0.3**
PBAR A A 11 46 04.6
comp=N,677nm,0.4s
EGRO El Granado 2.78 127 ↓P **Pn** **11 45 02.2 0.0**
EGRO S **Sn** **11 45 33.9 -0.9**
EGRO *i* Vmb_Lg 11 45 36.6
PVRL Vila Real 2.81 43 ↑*ePn* **Pn** **11 45 01.8 -0.8**
PVRL *eSn* **Sn** **11 45 33.0 -2.5**
PVRL *eSg* 11 45 48.4
PVRL A A 11 45 55.7
comp=N,389nm,0.4s
POLO Lamas de Olo 2.84 41 *ePn* **Pn** **11 45 02.2 -0.8**
POLO *eSn* **Sn** **11 45 33.0 -3.4**
POLO A A 11 46 01.9
comp=N,174nm,0.7s

PFARO Faro 2.89 140 *ePn* **Pn** **11 45 04.2 +0.5**
PTAV Tavira 2.96 135 *ePn* **Pn** **11 45 05.7 +1.1**
PTAV *eSn* **Sn** **11 45 39.8 +0.6**
PTAV A A 11 45 43.8
comp=N,491nm,0.7s
PCAB Cabril 2.99 34 *ePn* **Pn** **11 45 04.4 -0.6**
PCAB *eSn* **Sn** **11 45 37.2 -2.8**
PCAB A A 11 46 03.1
comp=N,447nm,0.4s
ELOB Lobios 3.10 32 P **Pn** **11 45 05.8 -0.9**
ELOB S **Sn** **11 45 38.6 -4.3**
ELOB *i* Vmb_Lg 11 45 41.3
PGAV Gavieira, Arco 3.11 29 ↑*ePn* **Pn** **11 45 05.9 -0.8**
PGAV *eSn* **Sn** **11 45 40.6 -2.3**
PGAV A A 11 46 08.3
comp=N,321nm,0.9s
EZAM Zamans 3.13 22 P **Pn** **11 45 05.9 -1.0**
EZAM S **Sn** **11 45 39.1 -4.3**
EZAM *i* Vmb_Lg 11 45 41.8
MVO Moncorvo 3.13 51 ↑*ePn* **Pn** **11 45 06.1 -0.9**
MVO *eSn* **Sn** **11 45 39.8 -3.7**
MVO *eSg* 11 45 55.6
MVO A A 11 46 08.0
comp=N,613nm,0.5s
EMIN Mina Concepcio 3.19 117 P **Pn** **11 45 07.6 -0.1**
EMIN S **Sn** **11 45 43.0 -1.8**
EMIN *i* Vmb_Lg 11 46 16.9
PBRG Braganca 3.70 45 ↑*ePn* **Pn** **11 45 14.1 -0.8**
PBRG *eSn* **Sn** **11 45 54.1 -3.5**
PBRG A A 11 46 29.9
comp=N,159nm,0.5s
ECAL Calabor 3.80 44 ↑P **Pn** **11 45 15.4 -0.8**
ECAL S **Sn** **11 45 55.2 -4.8**
ECAL *i* Vmb_Lg 11 46 37.6
EMAZ Mazaricos 3.82 14 ↑P **Pn** **11 45 14.9 -1.5**
EMAZ S Sn 11 45 53.7 -6.7
EMAZ *i* Vmb_Lg 11 45 58.1
EAGO Agolada(Pontev 3.91 24 P **Pn** **11 45 16.4 -1.2**
EAGO S **Sn** **11 45 57.0 -5.7**
EAGO *i* Vmb_Lg 11 46 30.4
ECAB El Cabril 3.98 106 P **Pn** **11 45 18.6 0.0**
ECAB S **Sn** **11 46 01.3 -3.0**
ECAB *i* Vmb_Lg 11 46 03.9
ESPR Espera 4.22 123 ↓P **Pn** **11 45 22.6 +0.7**
ESPR S **Sn** **11 46 09.9 -0.4**
ESPR *i* Vmb_Lg 11 46 13.0
EADA Adamuz 4.58 102 P **Pn** **11 45 26.6 -0.4**
EADA S **Sn** **11 46 15.6 -3.6**
EADA *i* Vmb_Lg 11 46 21.0
PAB San Pablo 4.60 85 **Pn** **11 45 26.0 -1.1**
PAB San Pablo 4.60 85 P **Pn** **11 45 26.4 -0.7**
PAB S **Sn** **11 46 16.0 -3.7**
PAB *i* Vmb_Lg 11 46 18.1
PAB San Pablo 4.60 85 P **Pn** **11 45 27.0 -0.1**
EPON Pontenova 4.70 29 P **Pn** **11 45 27.1 -1.4**
EPON S Sn 11 46 15.3 -6.7
EPON *i* Vmb_Lg 11 46 19.0
EJIF Jimena Fronter 4.72 125 P **Pn** **11 45 29.6 +0.8**
EJIF S **Sn** **11 46 17.2 -5.4**
ESDC Sonseca Array 4.90 83 Pn **Pn** **11 45 31.4 +0.1**
comp=N,55nm,0.3s,baz=266,slow=13,SNR=1706
ESDC Sn **Sn** **11 46 23.8 -3.3**
comp=N,24nm,0.3s,baz=266,slow=24,SNR=8.6
ESDC Lg Lg 11 46 55.3
comp=N,17nm,0.3s,baz=271,slow=27,SNR=6.4
ESDC LR LR 11 47 17.1
comp=N,439nm,19.4s,baz=214,slow=36
ESDC Sonseca Array 4.90 83 **Pn** **11 45 30.5 -0.8**
ESDC Sonseca Array 4.90 83 P **Pn** **11 45 31.3 +0.1**
ESDC S **Sn** **11 46 22.2 -4.8**
ESDC *i* Vmb_Lg 11 46 58.7
ESBB Sonseca Array 4.90 83 **Pn** **11 45 31.1 -0.2**
GUD Guadarrama 4.90 72 P **Pn** **11 45 30.6 -0.8**
GUD S **Sn** **11 46 23.1 -4.2**
GUD *i* Vmb_Lg 11 47 02.2
EMIJ Mijas 5.11 120 P **Pn** **11 45 34.9 +0.8**
EMIJ S **Sn** **11 46 29.8 -2.4**
EMIJ *i* Vmb_Lg 11 46 43.1
CEU Ceuta 5.13 129 P **Pn** **11 45 36.2 +1.7**
CEU S **Sn** **11 46 32.3 -0.5**
EMAL Malaga-Limoner 5.24 117 P **Pn** **11 45 36.5 +0.6**
EMAL S **Sn** **11 46 33.8 -1.6**
SMIR Smir Dam 5.28 131 P **Pn** **11 45 38.0 +1.5**
SMIR Smir Dam 5.28 131 P **Pn** **11 45 37.9 +1.5**
SMIR S **Sn** **11 46 31.2 -5.1**
EGOR Sierra Gorda, 5.30 112 P **Pn** **11 45 37.3 +0.9**
EGOR S **Sn** **11 46 33.5 -3.7**
EGOR *i* Vmb_Lg 11 47 25.4
UCM Universidad Co 5.51 77 P **Pn** **11 45 40.1 +0.4**
UCM S **Sn** **11 46 39.5 -2.8**
EARI Arriondas 5.56 42 P **Pn** **11 45 39.9 -0.4**
EARI S **Sn** **11 46 38.9 -4.3**
EARI *i* Vmb_Lg 11 47 45.4
CHEFC Chefchaouen 5.71 135 P **Pn** **11 45 45.0 +2.5**
CHEFC Chefchaouen 5.71 135 P **Pn** **11 45 44.2 +1.7**
CHEFC S **Sn** **11 46 41.1 -6.0**
EQUE Quentar 5.75 109 P **Pn** **11 45 43.6 +0.5**
EQUE S **Sn** **11 46 44.6 -3.6**
EQUE *i* Vmb_Lg 11 47 34.0
ELGU Los Guajares, 5.76 112 P **Pn** **11 45 44.3 +1.2**
ELGU S **Sn** **11 46 47.8 -0.5**
ELGU *i* Vmb_Lg 11 46 56.8
EQES Quesada 5.83 102 P **Pn** **11 45 43.5 -0.7**
EQES S **Sn** **11 46 45.9 -4.1**
EQES *i* Vmb_Lg 11 47 41.5
PVLZ Peæn de 6.27 129 P **Pn** **11 45 50.5 +0.4**
PVLZ S **Sn** **11 47 01.4 +0.8**
EBER Berja 6.28 110 P **Pn** **11 45 51.5 +1.1**
EBER S **Sn** **11 46 59.1 -2.2**
EBER *i* Vmb_Lg 11 48 09.7
AVE Averroes 6.38 158 P **Pn** **11 45 51.1 -0.5**
AVE S **Sn** **11 46 57.6 -5.8**
AVE Averroes 6.38 158 **Pn** **11 45 50.9 -0.6**
PALE Palemas 6.46 127 P **Pn** **11 45 53.4 +0.7**
PALE S **Sn** **11 47 02.6 -2.9**
ZHG ZHG 6.49 152 P **Pn** **11 45 52.9 -0.4**
ZHG S **Sn** **11 46 59.4 -7.0**
ETOR Torete 6.50 73 P **Pn** **11 45 53.1 -0.2**
ETOR S **Sn** **11 47 01.7 -4.7**
ETOR *i* Vmb_Lg 11 48 04.1
ENIJ Nijar 6.75 107 P **Pn** **11 45 57.0 +0.3**
ENIJ S **Sn** **11 47 09.5 -3.2**
ENIJ *i* Vmb_Lg 11 48 10.1
ETOB Tobarra 6.83 92 P **Pn** **11 45 57.4 -0.4**
ETOB S **Sn** **11 47 10.2 -4.4**
ETOB *i* Vmb_Lg 11 48 14.5
EZAR Zarzadilla de 6.86 99 P **Pn** **11 45 56.9 -1.3**
EZAR S **Sn** **11 47 10.9 -4.5**
SRHM Skhour des Reh 7.04 163 P **Pn** **11 45 59.3 -1.4**
SRHM S **Sn** **11 47 14.3 -5.5**
GOG Mont Gurugu 7.06 122 P **Pn** **11 46 00.9 -0.1**
GOG S **Sn** **11 47 18.2 -2.2**
LCRM LCR 7.06 140 P **Pn** **11 46 00.8 -0.3**
LCRM S **Sn** **11 47 15.1 -5.4**
IFR Ifrane 7.07 143 P **Pn** **11 46 01.0 -0.2**
IFR S **Sn** **11 47 15.2 -5.6**
ECHE Chera 7.21 84 P **Pn** **11 46 02.7 -0.3**
ECHE S **Sn** **11 47 17.6 -6.3**
ECHE *i* Vmb_Lg 11 48 31.2
EMUR La Murta 7.22 98 P **Pn** **11 46 02.5 -0.6**
EMUR S **Sn** **11 47 20.4 -3.8**
EMUR *i* Vmb_Lg 11 48 24.1
EARA Aranguren 7.45 59 P **Pn** **11 46 05.6 -0.7**
EARA *i* Vmb_Lg 11 48 42.3
CHAS Isla Isabel II 7.46 121 P **Pn** **11 46 05.5 -0.9**
CHAS S **Sn** **11 47 24.1 -5.9**
CART Cartagena 7.46 100 P **Pn** **11 46 05.7 -0.8**
CART S **Sn** **11 47 24.6 -5.5**
CART Cartagena 7.46 100 **Pn** **11 46 05.6 -0.8**
CART Cartagena 7.46 100 P **Pn** **11 46 05.7 -0.8**
CART Cartagena 7.46 100 P **Pn** **11 46 05.7 -0.8**
CART S **Sn** **11 47 31.3 +1.1**
CZD Col de Zad 7.51 144 P **Pn** **11 46 07.7 +0.3**
CZD S **Sn** **11 47 23.9 -7.8**
AFON Font Roja 7.60 91 P **Pn** **11 46 08.9 +0.4**
AFON S **Sn** **11 47 28.4 -5.3**
AFON *i* Vmb_Lg 11 48 45.0
EAH EAH 7.61 176 P **Pn** **11 46 06.5 -2.0**
EAH S Sn 11 47 25.4 -8.4
EMOS Mosqueruela 7.62 79 P **Pn** **11 46 08.7 -0.2**

EMOS S Sn 11 47 28.7 -5.6
EMOS i Vmb_Lg 11 47 32.7
EORO Oroz-Betelu 7.68 59 P Pn **11 46 09.2 -0.3**
EORO S Sn **11 47 30.2 -5.4**
EORO i Vmb_Lg 11 48 50.7
TAF Taforalt 7.69 123 P Pn **11 46 11.1 +1.5**
EALK Alkurruntz 7.70 56 S Sn **11 47 30.4 -5.7**
EALK i Vmb_Lg 11 48 49.2
MD31 MD31 7.78 143 P Pn **11 46 10.7 -0.2**
MD31 S Sn **11 47 32.5 -5.5**
SJPF Ste Jean 7.83 58 ePn Pn **11 46 10.8 -0.7**
SJPF eSn Sn 11 47 30.2 -9.1
comp=N,36nm,0.4s
ESAC San Caprasio 7.87 69 P Pn **11 46 11.8 -0.2**
ESAC S Sn **11 47 35.4 -4.7**
PMPST Porto Santo, M 7.87 220 ePn Pn **11 46 08.9 -3.2**
PMPST eSn Sn 11 47 26.6 -14
PMPST A A 11 47 37.3
comp=N,48nm,0.3s
PMPST e- 11 53 54.1
EBEN2 Beniarda presa 7.88 91 P Pn **11 46 12.1 -0.1**
JBK JBK 7.89 126 P Pn **11 46 12.8 +0.3**
JBK S Sn **11 47 35.2 -5.8**
PMPS Porto Santo 7.89 220 ePn Pn **11 46 09.7 -2.6**
PMPS eSn Sn 11 47 28.3 -12
PMPS A A 11 47 31.8
comp=N,38nm,0.2s
PMPS e- 11 53 52.1
MDT Midelt 7.89 143 Pn Pn **11 46 11.4 -1.0**
comp=N,19nm,0.3s,baz=307,slow=14,SNR=233
MDT Sn Sn **11 47 34.0 -6.9**
comp=N,3.6nm,0.3s,baz=136,slow=16,SNR=1.9
comp=N,37nm,0.3s
MDT Midelt 7.89 143 P Pn **11 46 12.4 -0.1**
ETSF Etsaut 8.19 60 ePn Pn **11 46 16.4 0.0**
ETSF eSn Sn 11 47 37.4 -11
comp=N,18nm,0.3s
OUK Oukaimeden 8.27 166 P Pn **11 46 16.1 -1.7**
OUK S Sn 11 47 40.8 -10
ERTA Horta de San J 8.30 75 P Pn **11 46 17.4 -0.6**
ERTA S Sn **11 47 45.6 -5.2**
ERTA i Vmb_Lg 11 48 55.5
PMAR Madeira 8.45 222 P Pn **11 46 18.3 -1.9**
PMAR S Sn **11 47 46.9 -7.8**
PMAR Madeira 8.45 222 ePn Pn **11 46 18.8 -1.4**
PMAR eSn Sn 11 47 42.7 -12
PMAR A A 11 47 52.7
comp=N,60nm,0.4s
PMAR e- 11 54 44.4
ECOL Islas Columbre 8.49 82 P Pn **11 46 18.8 -1.7**
ECOL S Sn **11 47 49.0 -6.2**
PMOZ Porto Moniz, M 8.52 223 Pn Pn 11 46 17.3 -3.8
PMOZ Porto Moniz, M 8.52 223 ePn Pn 11 46 17.2 -3.8
PMOZ eSn Sn 11 47 46.0 -10
PMOZ A A 11 47 58.1
comp=N,61nm,0.6s
PMOZ e- 11 54 48.2
CGR Cap Guir 8.61 178 P Pn **11 46 19.9 -2.2**
CGR S Sn 11 47 47.6 -11
ECHI Chisagues Biel 8.62 63 P Pn **11 46 22.2 -0.3**
ECHI S Sn **11 47 52.0 -6.8**
TTIG Tnine Tigouga, 8.82 170 P Pn 11 46 20.2 -4.9
TTIG S Sn 11 47 54.0 -10
EPF Esparros 8.85 61 ePn Pn **11 46 25.8 +0.3**
EPF eSn Sn 11 47 55.4 -8.8
comp=N,35nm,0.6s
EPOB Poblet 8.92 73 P Pn **11 46 25.3 -1.2**
EPOB S Sn 11 47 58.8 -7.3
EIBI Ibiza 9.03 88 P Pn **11 46 27.1 -0.8**
EIBI S Sn 11 48 01.0 -7.7
EMIR Miracle 9.36 70 P Pn **11 46 31.7 -0.8**
EMIR S Sn **11 48 11.3 -5.5**
LFF La Frestale 9.96 52 ePn Pn **11 46 39.1 -1.5**
LFF eSn Sn 11 48 18.5 -13
comp=N,10nm,0.4s
QUIF Quistinic 10.07 28 ePn Pn **11 46 40.6 -1.5**
QUIF eSn Sn 11 48 22.5 -12
comp=N,72nm,1.1s
ETOS Mallorca 10.13 83 P Pn **11 46 41.5 -1.5**
MTLF Montolieu 10.24 63 ePn Pn **11 46 43.7 -0.8**
MTLF eSn Sn 11 48 28.6 -10
comp=N,8.7nm,0.5s
ROSF Rostrenen 10.39 27 ePn Pn **11 46 44.0 -2.5**
ROSF eSn Sn 11 48 30.5 -11
comp=N,145nm,1.3s
MFF Saint Martin d 10.44 42 ePn Pn **11 46 45.0 -2.1**
MFF eSn Sn 11 48 31.1 -12
comp=N,18nm,0.8s
EJON La Jonquera 10.47 68 P Pn **11 46 47.7 0.0**
SGMF Saint Gilles 10.58 29 ePn Pn 11 46 45.5 -3.6
SGMF eSn Sn 11 48 34.4 -12
comp=N,161nm,1.6s
RJF Les Rejaudoux 10.62 51 ePn Pn 11 46 46.0 -3.6
RJF eSn Sn 11 48 35.6 -12
comp=N,10nm,0.3s
CAF Calviac 10.77 54 ePn Pn 11 46 48.4 -3.4
CAF eSn Sn 11 48 38.0 -13
comp=N,7.5nm,0.3s
TANT Tantan 10.85 185 P Pn **11 46 51.6 -1.3**
CFUE Fuerteventura 11.01 197 S Sn 11 48 45.2 -12
GRR Gorron 11.37 34 ePn Pn **11 46 57.2 -2.8**
GRR eSn Sn 11 48 53.3 -13
comp=N,166nm,1.5s
CCA1 Carnmenellis 11.50 16 P Pn 11 46 58.1 -3.6
TCF Toulx Ste Croi 11.55 48 ePn Pn **11 46 59.6 -2.8**
TCF eSn Sn 11 48 58.6 -12
comp=N,8.7nm,0.4s
LASF Ste Croix 11.61 61 ePn Pn 11 46 59.3 -4.0
FLN La Foliniere 11.82 33 ePn Pn 11 47 03.0 -3.1
baz=224
LDF La Druitiere 11.85 35 ePn Pn 11 47 02.1 -4.4
LDF eSn Sn 11 49 06.4 -11
comp=N,135nm,1.7s
BGF Bois d'Agland 12.06 49 ePn Pn 11 47 06.1 -3.3
BGF eSn Sn 11 49 11.7 -11
comp=N,28nm,0.6s
MACI Morro de la Ar 12.14 207 Pn Pn **11 47 07.9 -2.8**
HYF Humbligny 12.35 45 ePn Pn **11 47 10.4 -2.9**
VIVF Saint-Julien-l 12.43 58 ePn Pn **11 47 12.2 -2.3**
AVF Avril sur Loir 12.48 48 ePn Pn 11 47 11.6 -3.5
AVF eSn Sn 11 49 22.2 -11
comp=N,16nm,1.0s
SMF Signal de Mont 12.69 50 ePn Pn 11 47 14.4 -3.6
SMF eSn Sn 11 49 23.3 -15
comp=N,57nm,1.7s
SSF Saint Saulge 12.72 48 ePn Pn 11 47 14.7 -3.6
LOR Lormes 13.03 47 ePn Pn 11 47 19.4 -3.3
baz=231
LPL La Plagne 14.03 58 ePn Pn 11 47 31.6 -4.8
CABF La Chapelle 14.04 53 ePn Pn 11 47 31.6 -4.9
SFTF Sexfontaines 14.21 46 ePn Pn 11 47 35.6 -3.1
HAU Haudompre 14.85 49 ePn Pn 11 47 42.9 -4.6
BAIF Baives 14.90 39 ePn Pn 11 47 44.6 -3.4
PGF Pioggiola 14.94 71 ePn Pn **11 47 46.6 -2.1**
HINF Hinteralfeld 15.06 50 ePn Pn 11 47 44.8 -5.4
GIVF Givet 15.23 40 ePn Pn **11 47 49.9 -2.5**
ECH Echery 15.43 49 Pn Pn **11 47 53.8 -1.3**
WLF Walferdange 15.64 43 Pn Pn **11 47 55.9 -1.9**
EKA Eskdalemuir Ar 16.78 14 Pn Pn **11 48 10.6 -1.7**
baz=198,slow=14
comp=N,3.0nm,0.6s
GERES GERESS Array B 19.65 53 P P **11 48 46.9 +0.9**
comp=N,0.1nm,0.3s,baz=248,slow=10,SNR=8.3
comp=N,1.0nm,0.6s
GERES GERESS Array B 19.65 53 P P **11 48 44.3 -1.6**
KHC Kasperske Hory 19.67 52 P P **11 48 45.6 -0.6**
KHC Kasperske Hory 19.67 52 eP Pn **11 48 49.2 +1.5**
CLL Collm 20.23 46 eP P **11 48 53.0 +0.8**
comp=Z,4.0nm,0.7s
CLL ex x 11 49 14.0
TAM Tamanrasset 21.22 136 P P **11 49 00.4 -2.8**
VRAC Vranov 21.59 53 P P **11 49 08.0 +1.1**
comp=Z,1.4nm,0.4s,baz=240,slow=16,SNR=3.9
comp=Z,1.4nm,0.4s
NBO00 NORSAR Array S 25.41 24 P P **11 49 43.0 -1.4**
NBO00 IAmb IAmb 11 50 05.4
comp=Z,14nm,1.2s
NC602 NORSAR Array S 25.43 25 P P **11 49 44.1 -0.4**
NC602 IAmb IAmb 11 49 47.0
comp=Z,12nm,0.9s
NB2 NORSAR Subarra 25.56 24 P P **11 49 47.0 +1.3**
comp=Z,13nm,2.0s,baz=222,slow=9.3
NOA NORSAR Array B 25.56 24 P P **11 49 47.1 +1.3**
comp=Z,1.6nm,0.9s,baz=226,slow=11,SNR=4.1
comp=Z,1.6nm,0.9s
NC303 NORSAR Array S 25.75 24 P P **11 49 46.4 -0.9**
NC303 IAmb IAmb 11 49 50.8
comp=Z,12nm,1.4s
HFS Hagfors 25.75 28 P P **11 49 47.3 -0.1**
comp=Z,4.7nm,0.4s,baz=217,slow=8.9,SNR=36
comp=Z,4.7nm,0.4s
TOA0 Torodi Ar. Sit 28.07 155 P P **11 50 09.2 +0.5**
TORD Torodi Ar. Bea 28.07 155 P P **11 50 09.2 +0.5**
comp=Z,1.0nm,0.7s,baz=345,slow=8.2,SNR=7.5
comp=Z,1.0nm,0.7s
FINES FINESS Array B 31.44 33 P P **11 50 38.2 +0.2**
comp=Z,2.6nm,0.7s,baz=237,slow=7.8,SNR=10
comp=Z,2.6nm,0.7s
FINES FINESS Array B 31.44 33 P P **11 50 38.1 0.0**
ARCES ARCESS Array B 35.76 21 P P **11 51 15.6 +0.1**
comp=Z,4.0nm,0.5s,baz=222,slow=8.9,SNR=20
comp=Z,4.0nm,0.5s
ARCES ARCESS Array B 35.76 21 P P **11 51 15.9 +0.4**
ARCES IAmb IAmb 11 51 16.2
comp=Z,5.0nm,0.7s
KEV Kevo 36.31 21 P P **11 51 20.9 +0.7**
KBZ Khabaz 39.51 66 P P **11 51 50.4 +2.9**
comp=Z,3.8nm,0.8s,baz=314,slow=9.6,SNR=7.1
comp=Z,3.8nm,0.8s
SCHQ Schefferville 40.40 312 P P **11 51 55.8 +0.9**
SPITS Spitsbergen Ar 40.56 8 P P **11 51 57.5 +1.7**
comp=Z,2.6nm,0.5s,baz=154,slow=6.3,SNR=4.6
comp=Z,2.6nm,0.5s
ARU Arti 47.17 45 P P **11 52 50.5 +1.3**
comp=Z,2.2nm,0.3s,baz=247,slow=8.5,SNR=3.6
comp=Z,2.2nm,0.3s
ABKAR Akbulak array 49.59 54 P P **11 53 08.1 +0.2**
P52A Corning 54.05 295 P P **11 53 41.7 +0.4**
KK31 Karatay Array 58.66 58 P P **11 54 15.0 +0.9**
KKAR Karatay Array 58.66 58 P P **11 54 14.9 +0.7**
T47A Sharon Grove 58.73 294 P P **11 54 14.8 +0.1**
CHGR Chuyangaron 59.76 63 P P **11 54 23.5 +1.5**
X48A Hartselle 59.89 292 P P **11 54 22.4 -0.4**
X48A IAmb IAmb 11 54 24.1
comp=Z,4.9nm,0.8s
KURK Kurchatov 60.26 47 P P **11 54 25.5 +0.4**
KURK IAmb IAmb 11 54 26.3
comp=Z,2.3nm,0.7s
PLAL Pickwick Lake 60.37 293 P P **11 54 25.6 -0.4**
GAR Garm 60.40 62 P P **11 54 26.4 +0.1**
KSH Kashi 63.98 59 P P **11 54 51.8 +1.5**
KSH pmax pmax
comp=Z,9.0nm,0.7s
MK31 Makanchi Array 64.27 50 P P **11 54 52.7 +0.7**
MKAR Makanchi Array 64.27 50 P P **11 54 52.6 +0.6**
comp=Z,0.6nm,0.6s,baz=318,slow=4.0,SNR=6.1
comp=Z,0.6nm,0.6s
MKAR Makanchi Array 64.27 50 P P **11 54 51.6 -0.4**
QUOK Quay 65.84 298 P P **11 55 02.0 -0.3**
QUOK IAmb IAmb 11 55 29.1
comp=Z,9.7nm,1.1s
KAN01 Argonia South 66.03 299 P P **11 55 04.2 +0.6**
KAN14 Manchester OK 66.28 299 P P **11 55 05.7 +0.5**
WMOK Wichita Mounta 68.03 297 P P **11 55 16.2 -0.1**
WMOK IAmb IAmb 11 55 17.2
comp=Z,3.4nm,1.1s
I29M Ogilvie Camp, 68.19 339 P P **11 55 17.1 +0.3**
I29M IAmb IAmb 11 55 17.8
comp=Z,2.9nm,0.7s
TOLK Toolik Lake Re 68.24 345 P P **11 55 18.4 +1.3**
WHTX Lake Whitney, 68.61 294 P P **11 55 19.1 -0.9**
K22A Casper 68.71 308 P P **11 55 20.3 -0.4**
K22A IAmb IAmb 11 55 22.2
comp=Z,3.1nm,0.8s
GCMT Greycliff 68.80 312 P P **11 55 21.4 +0.2**
PHWY Pilot Hill 68.81 306 P P **11 55 21.5 +0.1**
PHWY IAmb IAmb 11 55 22.7
comp=Z,3.7nm,0.7s
N23A Red Feather La 69.34 306 P P **11 55 25.2 +0.5**
N23A IAmb IAmb 11 55 26.3
comp=Z,2.5nm,0.8s
I26K Coal Creek Min 69.52 341 P P **11 55 25.9 +0.9**
I26K IAmb IAmb 11 55 26.9
comp=Z,3.8nm,0.9s
RWWY Rawlins 69.68 308 P P **11 55 27.1 +0.3**
ISCO Idaho Springs 69.75 305 P P **11 55 27.6 +0.3**
BOZ Bozeman (W) 70.04 313 P P **11 55 29.3 +0.4**
BOZ IAmb IAmb 11 55 30.1
comp=Z,1.8nm,0.8s
J26L Joseph Creek 70.27 340 P P **11 55 30.0 +0.2**
J26L IAmb IAmb 11 55 43.2
comp=Z,3.7nm,1.3s
PD31 Pinedale Array 70.48 310 P P **11 55 30.7 -1.0**
PD31 IAmb IAmb 11 55 56.3
comp=Z,4.1nm,1.5s
PDAR Pinedale Array 70.48 310 P P **11 55 30.9 -0.8**
comp=Z,1.0nm,0.6s,baz=63,slow=7.4,SNR=9.9
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 70.48 310 P P **11 55 31.1 -0.6**
BW06 Boulder Array 70.48 310 P P **11 55 30.9 -0.8**
BW06 IAmb IAmb 11 55 56.3
comp=Z,4.8nm,1.5s
H23K Yukon River 70.61 343 P P **11 55 33.3 +1.5**
H23K IAmb IAmb 11 55 34.2
comp=Z,3.1nm,0.8s
J25K Salcha River, 70.64 341 P P **11 55 33.0 +1.0**
J25K IAmb IAmb 11 55 38.2
comp=Z,6.0nm,1.5s
SDCO Great Sand Dun 70.85 303 P P **11 55 34.8 +0.7**
SDCO IAmb IAmb 11 55 35.3
comp=Z,2.0nm,0.8s
IL31 70.88 342 P P **11 55 33.2 -0.1**
IL31 IAmb IAmb 11 56 04.2
comp=Z,4.4nm,1.4s
ILAR Eielson Array 70.88 342 P P **11 55 33.9 +0.5**
comp=Z,1.1nm,0.8s,baz=26,slow=4.9,SNR=13
comp=Z,1.1nm,0.8s
ILAR Eielson Array 70.88 342 P P **11 55 34.2 +0.8**
BCAR Beaver Creek A 70.93 339 P P **11 55 32.3 -1.5**
MSTX Muleshoe 71.20 299 P P **11 55 35.8 -0.2**
MSTX IAmb IAmb 11 55 37.4
comp=Z,4.2nm,0.8s
IMAR Indian Mountai 71.36 345 P P **11 55 37.8 +1.5**
L26K Log Cabin Wild 71.39 339 P P **11 55 38.0 +1.4**
L26K IAmb IAmb 11 55 38.8
comp=Z,3.6nm,0.7s
I21K Tanana 71.69 344 P P **11 55 39.2 +0.9**
I21K IAmb IAmb 11 55 40.3
comp=Z,3.2nm,0.9s
S22A 4UR Ranch, Cre 71.71 304 P P **11 55 39.8 +0.6**
S22A IAmb IAmb 11 55 42.0
comp=Z,3.1nm,1.5s
RDMU Red Mountain 71.78 308 P P **11 55 40.2 +0.7**
HWUT Hardware Ranch 72.37 309 P P **11 55 43.4 +0.3**
HWUT IAmb IAmb 11 55 44.2
comp=Z,4.2nm,0.8s
RND Reindeer 72.50 342 P P **11 55 43.4 +0.1**
RND IAmb IAmb 11 55 54.7
comp=Z,3.5nm,0.9s
P18A Preston Nutter 72.75 307 P P **11 55 45.9 +0.4**
P18A IAmb IAmb 11 55 47.3
comp=Z,3.5nm,0.9s
KTH Kantishna Hill 72.86 343 P P **11 55 45.8 +0.4**
JLU Jordanelle 72.91 309 P P **11 55 46.6 +0.3**
JLU IAmb IAmb 11 55 47.4
comp=Z,3.0nm,0.8s
HVU Hansel Valley 72.99 310 P P **11 55 46.8 +0.1**
P17A Butcher Ranch, 73.15 307 P P **11 55 48.1 +0.4**
P17A IAmb IAmb 11 55 48.7
comp=Z,2.9nm,0.7s
SRU San Rafael Swe 73.24 307 P P **11 55 49.0 +0.8**
SRU IAmb IAmb 11 55 49.2
comp=Z,2.5nm,0.6s
TMUT Trail Mountain 73.55 307 P P **11 55 50.5 +0.3**
TMUT IAmb IAmb 11 55 51.8
comp=Z,2.7nm,0.9s
BGU Big Grassy Mou 73.66 310 P P **11 55 51.0 +0.4**
K20K Telida 73.74 344 P P **11 55 51.4 +0.9**
K20K IAmb IAmb 11 55 52.1
comp=Z,3.2nm,0.8s
SKT Skwentna 74.36 342 P P **11 55 54.8 +0.6**
TXAR Lajitas Array 74.52 295 P P **11 55 56.9 +1.2**
comp=Z,0.2nm,0.5s,baz=82,slow=5.2,SNR=4.1
comp=Z,0.2nm,0.5s
MTPU Mount Pierson 74.92 307 P P **11 55 58.1 -0.2**
MTPU IAmb IAmb 11 55 59.9
comp=Z,3.1nm,1.0s
ELK Elko 75.09 311 P P **11 55 59.9 +0.8**
PSUT Pine Spring 75.64 308 P P **11 56 01.6 -0.7**
PSUT IAmb IAmb 11 56 04.9
comp=Z,2.6nm,1.1s
KNB Kanab 75.95 306 P P **11 56 03.7 -0.3**
CCUT Cedar City 75.95 307 P P **11 56 04.2 +0.1**
SONM Songino Array 76.65 38 P P **11 56 09.0 +1.3**
comp=Z,1.8nm,0.7s,baz=300,slow=6.2,SNR=8.7
comp=Z,1.8nm,0.7s
SONM Songino Array 76.65 38 P P **11 56 07.8 +0.1**
SONM IAmb IAmb 11 56 09.9
comp=Z,1.9nm,0.8s
R11A Troy Canyon, C 76.81 309 P P **11 56 08.9 0.0**
LPAZ La Paz 77.23 236 P P **11 56 12.3 +0.4**
NVAR Mina Array Bea 78.39 310 P P **11 56 18.3 +0.6**
comp=Z,0.3nm,0.7s,baz=78,slow=6.7,SNR=4.1
comp=Z,0.3nm,0.7s
WRA Warramunga Arr 144.01 68 PKP PKPbc 12 03 51.0 +0.4
comp=Z,0.3nm,0.4s,baz=319,slow=2.7,SNR=7.3
ASAR Alice Springs 145.97 74 PKPbc **PKPbc 12 03 57.4 +0.6**
comp=Z,2.3nm,0.7s,baz=314,slow=2.7,SNR=28

*IDC **19** 11:44:43.6±0.8, 55.06°S×31.73°W, h0km, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=28.2km s-min=19.0km az=48.0*
*NEIC **19** 11:44:44.2±1.6, 55.21°S±0.10°×31.7°W±0.2, h10km±1km, mb4.5/24, Error ellipse: s-maj=17.8km s-min=15.5km az=59.0*
ISC 19 11:44:44.7±0.6, 55.13°S±0.08°×31.91°W±0.10, h10km, n45, σ1°46/38, mb4.5/14, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.79**	**286**		**Pn**	**11 45 29.7**	**+0.3**
ORCD	**Orcadas**	**8.83**	**225**	Pn	**Pn**	**11 46 50.7**	**-1.5**
VNA1	**Neumayer--Stat**	**18.70**	**155**	P	**Pn**	**11 49 07.8**	**+4.6**
VNA3	**Neumayer Olymp**	**18.81**	**158**	P	**Pn**	**11 49 08.0**	**+3.5**
VNA2	**Neumayer--Watz**	**19.11**	**155**	P	**Pn**	**11 49 09.5**	**+1.4**
	baz=311,slow=14						
SNAA	**Sanae**	**20.71**	**154**	P	Pn	11 49 25.6	-1.5
SNAA	**Sanae**	**20.71**	**154**	P	Pn	11 49 25.5	-1.6
	1.2nm,0.6s,baz=299,slow=13,SNR=13						
	1.2nm,0.6s						
SNAA	**Sanae**	**20.71**	**154**	P	**P**	**11 49 23.6**	**-1.2**
SMAI	**San Martin Ant**	**20.80**	**217**	P	**P**	**11 49 24.7**	**-1.0**
TROLL	**Troll, Antarti**	**22.29**	**152**	P	**P**	**11 49 42.9**	**+1.1**
BELA	**Belgrano 2**	**22.87**	**181**	P	**P**	**11 49 45.1**	**-2.7**
TRQA	**Tornquist**	**26.51**	**298**	P	**P**	**11 50 22.0**	**-0.1**
TRQA				IAmb	IAmb	11 50 37.6	
	comp=Z,12nm,1.4s						
CPUP	**Villa Florida**	**34.24**	**317**	P	**P**	**11 51 31.1**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=169,slow=8.3,SNR=6.2						
	comp=Z,3.0nm,0.8s						
CPUP	**Villa Florida**	**34.24**	**317**	P	**P**	**11 51 29.5**	**-1.1**
MT09	**Talagante**	**34.48**	**292**	P	**P**	**11 51 32.5**	**-0.2**
MT09				IAmb	IAmb	11 51 33.5	
	comp=Z,8.9nm,0.8s						
MT02	**Curacav**	**34.95**	**292**	P	**P**	**11 51 37.6**	**+0.9**
QSPA	**South Pole Qui**	**35.12**	**180**	P	**P**	**11 51 39.2**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=199,slow=8.8,SNR=8.9						
	comp=Z,1.1nm,0.7s						
QSPA	**South Pole Qui**	**35.12**	**180**	P	**P**	**11 51 37.6**	**-0.4**
QSPA				IAmb	IAmb	11 51 46.4	
	comp=Z,5.0nm,1.2s						
CO02	**Combarbal**	**36.49**	**295**	P	**P**	**11 51 50.9**	**+0.9**
CO01	**Juntas del Tor**	**37.00**	**297**	P	**P**	**11 51 56.0**	**+1.6**
CO01				IAmb	IAmb	11 52 20.8	
	comp=Z,30nm,1.4s						
CO06	**Fray Jorge**	**37.24**	**294**	P	**P**	**11 51 56.4**	**+0.2**
AC05	**El Transito**	**38.01**	**298**	P	**P**	**11 52 03.8**	**+0.8**
AC04	**Llanos de Chal**	**38.93**	**298**	P	**P**	**11 52 11.2**	**+0.7**
GO02	**Mina Guanaco**	**40.71**	**302**	P	**P**	**11 52 25.8**	**+0.1**
BDFB	**Brasilia**	**41.33**	**336**	P	**P**	**11 52 30.0**	**-0.6**
BDFB				IAmb	IAmb	11 52 34.8	
	comp=Z,16nm,1.4s						
PB01	**IPOC Station P**	**44.16**	**305**	P	**P**	**11 52 54.1**	**+0.6**
PB01				IAmb	IAmb	11 53 05.5	
	comp=Z,25nm,1.4s						
SIV	**San Ignacio**	**45.05**	**319**	P	**P**	**11 53 00.6**	**0.0**
	comp=Z,0.5nm,0.4s,baz=198,slow=9.6,SNR=4.0						
	comp=Z,0.5nm,0.4s						
GO01	**Chusmiza**	**45.21**	**306**	P	**P**	**11 53 04.0**	**+1.6**
GO01				IAmb	IAmb	11 53 08.5	
	comp=Z,8.9nm,1.0s						
VNDA	**Vanda**	**47.34**	**184**	P	**P**	**11 53 18.4**	**+0.5**
LPAZ	**La Paz**	**47.69**	**310**	P	**P**	**11 53 23.4**	**+1.3**
	comp=Z,2.8nm,0.6s,baz=180,slow=6.9,SNR=11						
	comp=Z,2.8nm,0.6s						
LPAZ	**La Paz**	**47.69**	**310**	P	**P**	**11 53 22.6**	**+0.6**
LPAZ				IAmb	IAmb	11 53 30.1	
	comp=Z,3.7nm,0.7s						
H10S3	**ASCENSION HYDR**	**48.05**	**23**	T	T	12 45 29.4	
	SNR=11						
BOSA	**Boshof**	**48.41**	**81**	P	**P**	**11 53 26.6**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=204,slow=9.6,SNR=2.2						
	comp=Z,1.2nm,0.4s						
H10N1	**ASCENSION HYDR**	**49.16**	**23**	T	T	12 46 50.2	
	baz=192,slow=75,SNR=15						
H10N3	**ASCENSION HYDR**	**49.16**	**23**	T	T	12 46 55.4	
	baz=192,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	**49.18**	**23**	T	T	12 46 50.2	
	baz=192,slow=75,SNR=16						
LBTB	**Lobatse**	**51.38**	**78**	P	**P**	**11 53 49.1**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=214,slow=8.3,SNR=6.5						
	comp=Z,3.6nm,0.7s						
LBTB	**Lobatse**	**51.38**	**78**	P	**P**	**11 53 46.2**	**-3.3**
LBTB				IAmb	IAmb	11 53 59.3	
	comp=Z,11nm,1.4s						
TOA0	**Torodi Ar. Sit**	**73.69**	**34**	P	**P**	**11 56 17.6**	**-0.9**
TOA0				IAmb	IAmb	11 56 19.3	
	comp=Z,2.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.69**	**34**	P	**P**	**11 56 18.7**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=199,slow=6.4,SNR=8.5						
	comp=Z,1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.69**	**34**	P	**P**	**11 56 17.9**	**-0.6**
TORD				IAmb	IAmb	11 56 24.8	
	comp=Z,4.5nm,1.5s						
CMAR	**Chiang Mai Arr**	**127.89**	**115**	PKP	**PKiKP**	**12 03 51.4**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=92,slow=0.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**144.39**	**65**	PKP	PKPbc	12 04 17.7	-0.6
	comp=Z,1.4nm,0.4s,baz=232,slow=4.5,SNR=3.8						
ILAR	**Eielson Array**	**147.52**	**314**	PKPbc	**PKPbc**	**12 04 27.2**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=125,slow=1.8,SNR=22						
SONM	**Songino Array**	**153.36**	**88**	PKPbc	**PKPbc**	**12 04 41.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=234,slow=4.8,SNR=3.9						

*KOLA **19** 11:58:08.7, 67.64N×34.24E, h0km, ML2.2*
HEL 19 11:58:09.0±0.2, 67.79N×34.05E, h0km, ML2.1, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.26**	**64**	PG	Pg	11 58 13.3	-0.5
LVZ				SG	Sg	11 58 17.4	+0.3
APA	**Apatity**	**0.33**	**228**	P	Pg	11 58 14.2	-1.1
APA				S	Sg	11 58 18.8	-0.7
APA0	**Apatity Array**	**0.44**	**246**	P	Pg	11 58 16.6	-0.8
APA0				S	Sg	11 58 23.4	+0.2
TERR	**Teriberka**	**1.47**	**15**	P	Pb	11 58 38.6	+1.4
TERR				S	Sn	11 58 57.5	+0.8
VRF	**Varrio**	**1.69**	**271**	PG	Pn	11 58 39.4	-0.3
VRF				MSG		11 58 59.5	
	comp=Z,16nm,0.2s						
VRF				SN	Sn	11 59 02.1	+0.1
OLKF	**Oulanka, Finla**	**2.34**	**233**	PN	Pn	11 58 48.2	-0.5
KU6	**Riekki**	**2.41**	**225**	PN	Pn	11 58 49.1	-0.6
KU6				SN	Sn	11 59 20.8	+0.9
MSF	**Maaselka**	**2.73**	**229**	PN	Pn	11 58 54.2	+0.1
MSF				SB	Sb	11 59 30.3	-2.3
SGF	**Sodankyl**	**2.90**	**267**	PG	Pb	11 59 00.3	-1.2
SGF				SG	Sb	11 59 37.5	+0.1
KEV	**Kevo**	**3.23**	**311**	MSG		11 59 43.8	
	comp=Z,8.0nm,0.2s						
RNF	**Rovaniemi**	**3.34**	**253**	PN	Pn	11 59 01.7	-0.7
ARCES	**ARCESS Array B**	**3.58**	**303**	S	Sn	11 59 50.0	+1.4
TOF	**Tornio**	**4.19**	**250**	PG	Pb	11 59 22.3	-1.2
OUL	**Oulu**	**4.25**	**234**	SG	Sb	12 00 19.3	+3.0
PAJU	**Pajala**	**4.29**	**265**	SN	Sn	12 00 05.9	-0.2
KALU	**Kalix**	**4.64**	**250**	PN	Pn	11 59 21.2	+0.9

HEL 19 11:58:09.4±0.3, 67.86N×34.27E, h0km, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.68**	**73**	PG	Pg	11 58 21.8	-0.6
LANU				SG	Sg	11 58 30.0	-1.1
KIF	**Kilpisjarvi**	**1.17**	**9**	*eP*	Pg	11 58 31.3	-0.5
KIF	**Kilpisjarvi**	**1.17**	**9**	PG	Pg	11 58 31.1	-0.7
KIF				MSG		11 58 46.0	
	comp=Z,4.8nm,0.2s						
KIF				SB	Sg	11 58 46.8	-0.2
PAJU	**Pajala**	**1.38**	**126**	PG	Sg	11 58 33.8	-2.0
PAJU				SG	Sg	11 58 52.7	-0.9
HEF	**Hetta**	**1.39**	**65**	*eP*	Pg	11 58 34.6	-1.4
HEF	**Hetta**	**1.39**	**65**	PG	Pg	11 58 34.5	-1.4
	baz=245						
HEF				MSG		11 58 51.1	
	comp=Z,4.1nm,0.2s						
KLF	**Kolari**	**1.55**	**112**	PG	Pn	11 58 37.9	-0.3
KLF				SN	Sg	11 58 59.3	+0.2
KTK1	**Kautokeino**	**1.60**	**42**	PG	Pn	11 58 38.7	-0.2
KTK1				SN	Sg	11 59 01.4	+0.7
TRO	**Tromso**	**1.85**	**345**	SN	Sb	11 59 07.9	+0.2
KALU	**Kalix**	**2.35**	**147**	PB	Pn	11 58 49.8	+0.7
	baz=328						
TOF	**Tornio**	**2.39**	**136**	PB	Pn	11 58 50.9	+1.2
TOF				MSG		11 59 20.1	
	comp=Z,3.1nm,0.2s						
SGF	**Sodankyl**	**2.43**	**97**	PG	Pb	11 58 52.7	-1.2
ARA0	**ARCESS Array S**	**2.55**	**46**	PN	Pn	11 58 51.9	-0.1
	baz=229						
ARA0				SG	Sb	11 59 26.9	-0.9
RNF	**Rovaniemi**	**2.56**	**117**	PB	Pn	11 58 53.3	+1.2
RNF				SG	Sb	11 59 27.8	-0.4
KEV	**Kevo**	**3.10**	**49**	PB	Pn	11 59 01.8	+2.3
KEV				MSG		11 59 40.6	
	comp=Z,5.6nm,0.2s						
KEV				SB	Sb	11 59 41.6	-2.1
OBF0	**Syolatti, Pyha**	**3.74**	**153**	SB	Sb	12 00 01.8	-0.1
OBF8	**Ulkokalla**	**3.77**	**158**	PN	Pn	11 59 10.1	+1.4
	baz=345						
OBF8				SB	Sb	12 00 01.4	-1.4
OLKF	**Oulanka, Finla**	**3.89**	**109**	PG	Pb	11 59 19.3	+0.5
MSF	**Maaselka**	**3.97**	**115**	PN	Pn	11 59 11.9	+0.4

*IDC **19** 12:03:24.6±1.1,55.22S×30.25W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=45.9km s-min=27.4km az=76.0*

*NEIC **19** 12:03:25.9±1.7,55.34S±0.09×30.8W±0.2, h10km±2km, mb4.3/12, Error ellipse: s-maj=20.6km s-min=13.9km az=61.0*

ISC 19 12:03:25.9±0.8, 55.30S±0.10×30.8W±0.1, h10km, n28, σ1§46/23, mb4.3/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.46**	**285**		**Pn**	**12 04 19.7**	**0.0**
ORCD	**Orcadas**	**9.19**	**228**		**Pn**	**12 05 37.5**	**-0.7**
VNA1	**Neumayer--Stat**	**18.29**	**156**	P	**P**	**12 07 43.0**	**+3.6**
VNA3	**Neumayer Olymp**	**18.41**	**158**	P	**P**	**12 07 43.9**	**+3.0**
PMSA	**Palmer Station**	**18.90**	**227**		**P**	**12 07 45.9**	**-0.3**
SNAA	**Sanae**	**20.28**	**155**	P	**P**	**12 08 01.0**	**-0.3**
SNAA	**Sanae**	**20.28**	**155**	P	**P**	**12 08 01.0**	**-0.3**
TROLL	**Troll, Antarti**	**21.84**	**153**	P	**P**	**12 08 17.4**	**-0.8**
BELA	**Belgrano 2**	**22.72**	**182**	P	**P**	**12 08 27.2**	**-0.2**
GO09	**Cerro Castillo**	**24.89**	**262**	P	**P**	**12 08 47.3**	**-1.3**
TRQA	**Tornquist**	**27.16**	**296**	P	**P**	**12 09 10.4**	**+1.2**
TRQA				IAmb	IAmb	12 09 28.8	
	comp=Z,6.5nm,1.2s						
GO06	**Curarrehue**	**31.16**	**283**	P	**P**	**12 09 45.9**	**+1.1**
GO06				IAmb	IAmb	12 10 02.1	
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**34.96**	**180**	P	**P**	**12 10 17.7**	**0.0**
GO04	**Tololo Observa**	**37.86**	**295**	P	**P**	**12 10 40.9**	**-2.0**
MAW	**Mawson**	**41.95**	**145**	P	**P**	**12 11 14.9**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=243,slow=9.0,SNR=2.6						
	comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**47.21**	**184**	P	**P**	**12 11 59.5**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=184,slow=4.9,SNR=8.3						
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**47.21**	**184**	P	**P**	**12 11 58.3**	**+0.2**
VNDA				IAmb	IAmb	12 12 02.9	
	comp=Z,4.2nm,1.4s						
H10S2	**ASCENSION HYDR**	**47.96**	**22**	T	T	13 03 43.4	
	baz=28,slow=74,SNR=5.2						
H10S3	**ASCENSION HYDR**	**47.96**	**22**	T	T	13 03 43.2	
	baz=192,slow=74,SNR=9.8						
LPAZ	**La Paz**	**48.30**	**309**	P	**P**	**12 12 09.4**	**+1.5**
	comp=Z,2.3nm,0.6s,baz=164,slow=8.7,SNR=2.9						
	comp=Z,2.3nm,0.6s						
LPAZ	**La Paz**	**48.30**	**309**	P	**P**	**12 12 09.8**	**+1.9**
H10N1	**ASCENSION HYDR**	**49.07**	**22**	T	T	13 05 04.5	
	baz=192						
H10N3	**ASCENSION HYDR**	**49.07**	**22**	T	T	13 05 06.9	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**49.09**	**22**	T	T	13 05 08.7	
	baz=192,slow=74						
TOA0	**Torodi Ar. Sit**	**73.47**	**33**	P	**P**	**12 14 57.7**	**-0.7**
TOA0				IAmb	IAmb	12 15 01.1	
	comp=Z,6.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.47**	**33**	P	**P**	**12 14 57.6**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=207,slow=6.1,SNR=7.6						
	comp=Z,1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.47**	**33**	P	**P**	**12 14 57.5**	**-0.8**
TORD				IAmb	IAmb	12 15 01.1	
	comp=Z,4.4nm,1.1s						
ILAR	**Eielson Array**	**148.10**	**313**	PKPbc	**PKPbc**	**12 23 10.3**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=117,slow=1.6,SNR=29						

*VAO **19** 12:06:38.7±0.6,20.63S×70.99W, h10km, mb4.4*

*SJA **19** 12:06:44.2±0.6,21.05S×70.29W, h35km±1km, ML4.4, MW4.1*

*NEIC **19** 12:06:45.6±1.9,21.05S±0.03×70.24W±0.07, h32km±7km, mb4.4/8, ML4.2(GUC), Error ellipse: s-maj=9.8km s-min=4.3km az=88.0*

*GUC **19** 12:06:46.4±0.5,21.05S×70.25W, h38km±2km, ML4.2*

*IDC **19** 12:06:50.1±3.2,21.03S×70.01W, h72km±23km, mb3.7/2, mbtmp4.0/6, Error ellipse: s-maj=42.1km s-min=16.1km az=87.0*

ISC 19 12:06:43.5±1.3, 21.04S±0.02×70.31W±0.05, h15km±8km, n103, σ1§55/114, mb4.3/5, 4C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.48**	**126**		**Pb**	**12 06 54.5**	**+0.7**
PB02				Sg	**Sb**	**12 07 02.0**	**+1.2**
PB02	**IPOC Station P**	**0.48**	**126**	⇓*iP*	**Pn**	**12 06 55.6**	**-0.5**
PB02				*i* S	**Sb**	**12 07 02.2**	**+1.4**
PB02				IAML		12 07 02.5	
	comp=E,145μm,0.2s						
PB02	**IPOC Station P**	**0.48**	**126**	*eP*	**Pn**	**12 06 55.0**	**-1.0**
PB02				IAML		12 07 04.6	
	comp=Z,60μm,0.2s						
TA01	**Diego Aracena**	**0.48**	**15**		**Pn**	**12 06 55.9**	**0.0**
TA01					**Sb**	**12 07 03.2**	**+2.6**
TA01	**Diego Aracena**	**0.48**	**15**	⇓*iP*	**Pn**	**12 06 56.1**	**+0.1**
TA01				*i* S	**Sb**	**12 07 03.3**	**+2.6**
TA01				IAML		12 07 04.0	
	comp=N,6μm,0.5s						
TA01	**Diego Aracena**	**0.48**	**15**	*eP*	**Pn**	**12 06 55.8**	**-0.1**
TA01				*eS*	**Sb**	**12 07 03.7**	**+3.0**
PB01	**IPOC Station P**	**0.77**	**91**	Pn	**Pb**	**12 06 59.0**	**+0.3**
TA02	**Huaiquique**	**0.78**	**13**		**Pn**	**12 07 00.1**	**0.0**
TA02	**Huaiquique**	**0.78**	**13**	*eP*	**Pn**	**12 07 00.0**	**0.0**
TA02				*eP*	**Pb**	**12 07 00.3**	**+1.4**
TA02				*eS*	**Sn**	**12 07 12.2**	**+0.7**
TA02				IAML		12 07 14.0	
	comp=Z,5μm,0.1s						
PB07	**IPOC Station P**	**0.80**	**150**		**Pn**	**12 06 60.0**	**-0.4**
PB07				Sn	**Sb**	**12 07 10.4**	**+0.5**
PB07	**IPOC Station P**	**0.80**	**150**	⇑*iP*	**Pn**	**12 06 60.0**	**-0.4**
PB07				*i* S	**Sb**	**12 07 09.6**	**-0.2**
PB07				IAML		12 07 11.2	
	comp=E,11μm,0.3s						
PB07	**IPOC Station P**	**0.80**	**150**	*eP*	**Pn**	**12 07 00.0**	**-0.4**
PB07				*eS*	**Sg**	**12 07 09.0**	**-0.6**
PB07				IAML		12 07 11.3	
	comp=Z,10μm,0.5s						
PB09	**IPOC Station P**	**1.25**	**127**		**Pg**	**12 07 07.0**	**-0.7**
PB09	**IPOC Station P**	**1.25**	**127**	⇓*iP*	**Pg**	**12 07 07.0**	**-0.7**
PB09				IAML		12 07 28.5	
	comp=E,5μm,0.4s						
PB09	**IPOC Station P**	**1.25**	**127**	*eP*	**Pg**	**12 07 07.0**	**-0.7**
PB09				*eS*	**Sn**	**12 07 23.5**	**0.0**
PB09				IAML		12 07 29.6	
	comp=E,6μm,0.5s						
PB04	**IPOC Station P**	**1.30**	**173**		**Pg**	**12 07 07.7**	**-0.9**
PB04	**IPOC Station P**	**1.30**	**173**	⇑*iP*	**Pg**	**12 07 07.7**	**-0.9**
PB04				*i* S	**Sn**	**12 07 24.7**	**+0.1**
PB04				IAML		12 07 27.1	
	comp=E,23μm,0.1s						
PB04	**IPOC Station P**	**1.30**	**173**	*eP*	**Pn**	**12 07 07.0**	**-0.4**
PB04				*eP*	**Pg**	**12 07 07.8**	**-0.9**
PB04				*eS*	**Sn**	**12 07 25.1**	**+0.5**
PB04				IAML		12 07 26.8	
	comp=Z,17μm,0.3s						
GO01	**Chusmiza**	**1.72**	**38**		**Pb**	**12 07 14.4**	**-0.7**
GO01	**Chusmiza**	**1.72**	**38**	⇓*iP*	**Pb**	**12 07 14.4**	**-0.7**
GO01				IAML		12 07 37.6	
	comp=N,6μm,0.3s						
GO01	**Chusmiza**	**1.72**	**38**	*eP*	**Pb**	**12 07 14.5**	**-0.7**
GO01				*eS*	**Sb**	**12 07 36.7**	**-0.1**
PB06	**IPOC Station P**	**1.80**	**158**		**Pn**	**12 07 14.9**	**+0.6**
PB06	**IPOC Station P**	**1.80**	**158**	⇓*iP*	**Pn**	**12 07 14.8**	**+0.6**
PB06				IAML		12 07 41.1	
	comp=N,5μm,0.2s						
PB06	**IPOC Station P**	**1.80**	**158**	*eP*	**Pn**	**12 07 14.9**	**+0.6**
PB06				*eS*	**Sn**	**12 07 37.6**	**+0.7**
PB06				IAML		12 07 41.2	
	comp=Z,3μm,0.3s						
LVC	**Limon Verde**	**2.04**	**140**	P	**Pb**	**12 07 19.7**	**-0.8**
	comp=Z,285nm,0.4s,baz=337,slow=8.4,SNR=409						
LVC				S	**Sn**	**12 07 43.8**	**+0.7**
	comp=Z,1μm,0.4s,baz=330,slow=9.3,SNR=24						
LVC	**Limon Verde**	**2.04**	**140**		**Pn**	**12 07 17.0**	**-0.7**
LVC	**Limon Verde**	**2.04**	**140**	*eP*	**Pb**	**12 07 19.7**	**-0.8**
LVC				*eS*	**Sb**	**12 07 46.4**	**+0.5**
PB15	**IPOC Station P**	**2.30**	**160**		**Pn**	**12 07 21.3**	**+0.1**
PB15	**IPOC Station P**	**2.30**	**160**	⇓*iP*	**Pn**	**12 07 21.7**	**+0.5**
PB15	**IPOC Station P**	**2.30**	**160**	*eP*	**Pn**	**12 07 22.0**	**+0.8**
PB15				*eS*	**Sg**	**12 08 00.6**	**+3.0**
PB15				IAML		12 08 06.7	
	comp=Z,5μm,0.3s						
PB12	**IPOC Station P**	**2.41**	**360**		**Pn**	**12 07 23.5**	**+1.0**
PB12	**IPOC Station P**	**2.41**	**360**	⇑*iP*	**Pn**	**12 07 23.7**	**+1.1**
PB12	**IPOC Station P**	**2.41**	**360**	*eP*	**Pn**	**12 07 24.0**	**+1.5**
PB12				*eS*	**Sn**	**12 07 51.6**	**-0.3**
PB12				IAML		12 08 00.3	
	comp=Z,1μm,0.6s						
AP01	**Chacalluta**	**2.65**	**359**	Pn	**Pn**	**12 07 26.1**	**+0.3**
AF01	**San Pedro de A**	**2.75**	**134**		**Pn**	**12 07 26.8**	**-0.6**
PB16	**IPOC Station P**	**2.79**	**16**		**Pn**	**12 07 30.1**	**+1.9**
PB16	**IPOC Station P**	**2.79**	**16**	⇑*iP*	**Pn**	**12 07 30.0**	**+1.8**
PB16	**IPOC Station P**	**2.79**	**16**	*eP*	**Pn**	**12 07 30.0**	**+1.8**
PB16				*eS*	**Sn**	**12 08 00.6**	**-1.4**
PB16				*eS*	**Sb**	**12 08 04.6**	**-3.2**
PB14	**IPOC Station P**	**3.57**	**181**		**Pn**	**12 07 37.9**	**-0.8**
GO02	**Mina Guanaco**	**4.16**	**171**		**Pn**	**12 07 47.1**	**+0.2**
AC01	**Pan de Azucar**	**5.09**	**183**	Pn	**Pn**	**12 07 57.4**	**-2.0**
LPAZ	**La Paz**	**5.16**	**24**	P	**Pn**	**12 08 04.3**	**+3.5**
	comp=Z,3.0nm,0.3s,baz=218,slow=3.0,SNR=33						
LPAZ	**La Paz**	**5.16**	**24**		**Pn**	**12 08 02.0**	**+1.2**
AC02	**Maricunga**	**5.87**	**170**		**Pn**	**12 08 11.0**	**+0.5**
AC06	**Mina Casimiro**	**6.29**	**180**		**Pn**	**12 08 17.8**	**-1.1**
GO03	**Copiapo**	**6.53**	**179**	Pn	**Pn**	**12 08 17.1**	**-2.1**
AC05	**El Transito**	**7.77**	**180**	Pn	**Pn**	**12 08 33.7**	**-2.5**
CO01	**Juntas del Tor**	**8.91**	**179**	Pn	**Pn**	**12 08 51.2**	**-0.7**
GO04	**Tololo Observa**	**9.11**	**183**	Pn	**Pn**	**12 08 53.7**	**-1.1**
CO06	**Fray Jorge**	**9.67**	**187**	Pn	**Pn**	**12 09 01.4**	**-0.8**
SIV	**San Ignacio**	**10.10**	**62**	P	**Pn**	**12 09 07.8**	**-0.4**
	comp=Z,15nm,0.4s,baz=251,slow=9.9,SNR=37						
SIV				S	Sn	12 10 51.0	-10
	comp=Z,1.8nm,0.7s,baz=288,slow=14,SNR=1.1						
ETMB	**Extrema**	**11.83**	**20**		**Pn**	**12 09 31.4**	**-0.5**
PTLB	**Pontes e Lacer**	**11.98**	**64**		**Pn**	**12 09 33.9**	**0.0**
PTLB	**Pontes e Lacer**	**11.98**	**64**	*eP*	**Pn**	**12 09 34.7**	**+0.8**
MT02	**Curacav**	**12.20**	**183**	Pn	**Pn**	**12 09 37.7**	**+0.9**
VILB	**Vilhena**	**12.57**	**52**		**Pn**	**12 09 41.5**	**-0.6**
VILB	**Vilhena**	**12.57**	**52**	*eP*	**Pn**	**12 09 42.0**	**0.0**
VA05	**Santo Domingo**	**12.62**	**185**	Pn	**Pn**	**12 09 41.6**	**-1.0**
CPUP	**Villa Florida**	**13.01**	**116**	P	**Pn**	**12 09 49.6**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=260,slow=0.4,SNR=3.3						
CPUP				S	Sn	12 11 49.1	-23
	comp=Z,5.1nm,0.7s,baz=348,slow=19,SNR=4.3						
ANTJ	**Antonio Joao (**	**13.35**	**97**	*eP*	**P**	**12 09 58.4**	**-3.9**
CZSB	**Cruzeiro do Su**	**13.43**	**350**	*eP*	Pn	12 09 42.8	-11
H03N1	**Juan Fernandez**	**14.52**	**210**	T	T	12 24 45.3	
	baz=35,slow=72,SNR=231						
H03N2	**Juan Fernandez**	**14.53**	**210**	T	T	12 24 38.8	
	baz=35,slow=72,SNR=197						
H03N3	**Juan Fernandez**	**14.54**	**210**	T	T	12 24 44.1	
	baz=35,slow=72,SNR=258						
BI05	**Punta Hualpn**	**15.86**	**188**	Pn	**Pn**	**12 10 25.9**	**-0.3**
PDRB	**Porto dos Gac**	**16.04**	**56**	*eP*	**Pn**	**12 10 29.5**	**+0.7**
CRSM	**Crissiumal (Br**	**16.16**	**117**	*eP*	**P**	**12 10 36.5**	**+3.1**
RODS	**Rosario do Sul**	**16.47**	**127**	*eP*	**P**	**12 10 39.7**	**+2.9**
TRCB	**Terra Rica**	**16.50**	**99**	Pn	**Pn**	**12 10 33.3**	**-1.4**
TRCB	**Terra Rica**	**16.50**	**99**	*eP*	**P**	**12 10 39.7**	**+2.5**
FRBT	**Francisco Belt**	**16.57**	**111**	*eP*	**P**	**12 10 40.9**	**+3.0**
CLDB	**Colider**	**17.22**	**56**	*eP*	**Pn**	**12 10 43.1**	**-0.6**
ALGR	**Alto Alegre (B**	**17.47**	**120**	*eP*	**P**	**12 10 50.8**	**+2.9**
ITAB	**Concordia**	**17.70**	**114**		**Pn**	**12 10 48.7**	**-0.9**
PCMB	**Pacaembu**	**17.76**	**95**	*eP*	**P**	**12 10 55.5**	**+4.3**
CPSB	**Cacapava Do Su**	**17.82**	**125**	*eP*	**P**	**12 10 54.8**	**+3.0**
TRQA	**Tornquist**	**18.43**	**159**	P	**P**	**12 10 56.1**	**-2.4**
PLCA	**Paso Flores**	**19.64**	**181**	P	**P**	**12 11 12.2**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=2.5,slow=8.9,SNR=4.7						
PLCA	**Paso Flores**	**19.64**	**181**	*eP*	**P**	**12 11 12.3**	**+0.5**
NPGB	**Novo Progresso**	**20.07**	**48**	*eP*	**P**	**12 11 15.2**	**-1.4**
MACA	**Manacapuru-AM**	**20.09**	**29**	P	**P**	**12 11 16.3**	**-0.4**
MACA				IAmb	IAmb	12 11 30.1	
	comp=Z,13nm,0.7s						
BB19B	**Bebedouro**	**20.34**	**94**	*eP*	Pn	12 11 21.2	-0.3
IPMB	**Ipameri, GO**	**21.05**	**86**	*eP*	**P**	**12 11 28.9**	**+1.6**
VAO	**Valinhos**	**21.73**	**99**	*eP*	**P**	**12 11 38.9**	**+4.3**
ITTB	**Itatiuba**	**21.80**	**43**	*eP*	**P**	**12 11 32.5**	**-2.7**
BDFB	**Brasilia**	**21.83**	**79**	P	**P**	**12 11 33.7**	**-2.0**
	comp=Z,2.3nm,0.4s,baz=229,slow=9.3,SNR=1.5						
	comp=Z,2.3nm,0.4s						
BDFB	**Brasilia**	**21.83**	**79**	*eP*	**P**	**12 11 37.4**	**+1.7**
PMNB	**Patos De Minas**	**22.60**	**88**	*eP*	**P**	**12 11 45.1**	**+1.2**
SMTB	**Santa Maria do**	**25.03**	**64**	*eP*	**P**	**12 12 06.9**	**-0.4**
BOAV	**Boa Vista**	**25.18**	**24**	P	**P**	**12 12 07.7**	**-0.9**
BOAV				IAmb	IAmb	12 12 10.5	
	comp=Z,7.8nm,1.0s						
MC01	**Montes Claros**	**25.31**	**85**	*eP*	**P**	**12 12 11.8**	**+1.9**
JANB	**Januaria**	**25.41**	**81**	*eP*	**P**	**12 12 11.0**	**+0.2**
SDBA	**SAO DESIDERIO**	**25.77**	**75**	*eP*	**P**	**12 12 14.3**	**+0.2**
SNAA	**Sanae**	**63.15**	**161**	P	**P**	**12 17 10.6**	**+0.1**
SNAA				IAmb	IAmb	12 17 28.3	
	comp=Z,4.2nm,1.2s						
QSPA	**South Pole Qui**	**69.15**	**180**	P	**P**	**12 17 49.9**	**+0.7**
QSPA				IAmb	IAmb	12 18 09.3	
	comp=Z,9.2nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	**P**	**12 18 41.5**	**-2.8**
	comp=Z,1.2nm,0.8s,baz=254,slow=5.6,SNR=6.5						
	comp=Z,1.2nm,0.8s						
H11S2	**WAKE ISLAND Hyd**	**26.52**	**278**	T	T	14 45 02.5	
	baz=104,slow=75						
H11S1	**WAKE ISLAND Hyd**	**26.53**	**278**	T	T	14 45 02.9	
	baz=104,slow=75						
H11S3	**WAKE ISLAND Hyd**	**26.54**	**278**	T	T	14 45 03.6	
	baz=104,slow=75						
H11N3	**WAKE ISLAND Hyd**	**26.59**	**279**	T	T	14 45 08.5	
	baz=102,slow=74						
H11N2	**WAKE ISLAND Hyd**	**26.61**	**279**	T	T	14 45 09.5	
	baz=102,slow=74						
H11N1	**WAKE ISLAND Hyd**	**26.61**	**279**	T	T	14 45 10.5	
	baz=102,slow=74						
MKAR	**Makanchi Array**	**146.01**	**34**	PKPbc	**PKPdf**	**12 26 21.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=338,slow=2.8,SNR=4.6						

*MOS **19** 12:07:39.8±0.9,36.64N×141.12E, h36km, mb5.4/85, MS4.6/12, Error ellipse: s-maj=5.8km s-min=3.8km az=107.6*

*BJI **19** 12:07:40.8±0.0,36.71N×141.14E, h49km, mb5.0/76, mB5.2/40, Ms4.6/60, Ms7 4.5/58*

*NIED **19** 12:07:42.0,36.56N×141.13E, h48km, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.09; Mθθ3.01; Mφφ-4.10; Mrθ3.08; Mθφ-3.99; Mφr0.65; Fault plane solution: M₀6.27000×10¹⁶ NP1: φs161.00000°, δ59.00000°, λ10.00000°. NP2:φs66.00000°, δ81.00000°, λ149.00000°.*

*JMA **19** 12:07:42.0±0.1,36.6N±0.3×141.1E±0.7, h48km±1km, MD5.4/40, MV5.4/40, E OFF IBARAKI PREF*

JMA Felt IV J1 at E OFF IBARAKI PREF .

*NEIC **19** 12:07:42.5±2.3,36.61N±0.05×141.21E±0.08, h37km±4km, mb5.3/452, Mwr5.0/19, Error ellipse: s-maj=9.8km s-min=7.6km az=109.0*

*NEIC **19** 12:07:42.5,36.63N×141.19E, h48km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.47; Mθθ1.85; Mφφ-3.33; Mrθ2.52; Mθφ-2.45; Mφr0.65; Fault plane solution: M₀4.60000×10¹⁶ NP1:φs60.52000°, δ75.87000°, λ140.47000°. NP2:φs161.91000°, δ51.89000°, λ18.08000°. Principal axes: T 4.4550, Plg38.0000°, Azm14.0000°; N 0.2699, Plg48.0000°, Azm224.0000°; P -4.7249, Plg15.0000°, Azm116.0000°;*

*IDC **19** 12:07:44.1±1.6,36.60N×141.09E, h58km±14km, mb4.8/38, mbtmp5.1/42, MS4.5/29 Error ellipse: s-maj=11.2km s-min=8.0km az=107.0*

ISC 19 12:07:41.0±0.2, 36.61N±0.03×141.18E±0.03, h32km, h32km:pP-P, n1359, σ1§34/1198, mb5.3/361, MS4.6/51, 62C-49D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.49**	**270**	⇓*iP*	**Pn**	**12 07 52.4**	**+0.5**
JHO				⇓S	**Sn**	**12 07 59.9**	**+0.6**
JHO	**Hitachi**	**0.49**	**270**	A	A	12 07 52.4	
	comp=E,331nm,0.9s,comp=E,404nm,1.4s						
JHYU	**Hitachinakayam**	**0.55**	**241**	*iP*	**Pn**	**12 07 53.0**	**+0.4**
JHYU				S	**Sn**	**12 08 00.8**	**+0.1**
JHYU	**Hitachinakayam**	**0.55**	**241**	A	A	12 07 53.0	
	comp=E,774nm,2.2s,comp=E,1μm,0.9s						
ONAJ	**Iwakimizuishiy**	**0.58**	**328**	⇓*iP*	**Pn**	**12 07 54.0**	**+0.9**
ONAJ				⇓eS	**Sn**	**12 08 02.7**	**+1.2**
ONAJ	**Iwakimizuishiy**	**0.58**	**328**	A	A	12 07 54.0	
	comp=E,305nm,2.5s,comp=E,125nm,1.2s						
JFFD	**Fukushimafurud**	**0.69**	**314**	⇓*iP*	**Pb**	**12 07 55.6**	**+0.9**
JFFD				⇓S	**Sn**	**12 08 05.1**	**+0.8**
JFFD	**Fukushimafurud**	**0.69**	**314**	A	A	12 07 55.6	
	comp=E,164nm,1.6s,comp=E,124nm,4.1s						
JFK	**Kawauchi**	**0.79**	**342**	⇓*iP*	**Pb**	**12 07 57.0**	**+0.6**
JFK				⇓S	**Sb**	**12 08 07.9**	**+1.0**
JFK	**Kawauchi**	**0.79**	**342**	A	A	12 07 57.0	
	comp=E,185nm,2.3s,comp=E,84nm,1.2s						
JIHU	**Itakohorinouch**	**0.84**	**220**	A	A	12 07 56.5	
	comp=E,575nm,1.2s,comp=E,503nm,0.7s						
JYT	**Yasato**	**0.89**	**245**	Pn	**Pn**	**12 07 57.2**	**0.0**
JYT	**Yasato**	**0.89**	**245**	*iP*	**Pn**	**12 07 57.3**	**0.0**
JYT				S	**Sn**	**12 08 07.9**	**-1.1**
JYT	**Yasato**	**0.89**	**245**	A	A	12 07 57.3	
	comp=E,547nm,0.4s,comp=E,385nm,0.6s						
CHOJ	**Chosi**	**0.95**	**196**	A	A	12 07 58.1	
	comp=E,140nm,0.7s,comp=E,197nm,1.7s						
JSB	**Shiboa**	**1.07**	**290**	A	A	12 08 00.7	
	comp=E,244nm,3.6s,comp=E,209nm,2.0s						
JFT	**Otama**	**1.13**	**323**	⇓*iP*	**Pb**	**12 08 02.7**	**+0.7**
JFT				⇓S	**Sb**	**12 08 17.5**	**+1.1**
JFT	**Otama**	**1.13**	**323**	A	A	12 08 02.7	
	comp=E,371nm,1.1s,comp=E,386nm,0.7s						
JMST	**Minamisoumatoc**	**1.13**	**348**	A	A	12 08 02.5	
	comp=E,101nm,1.7s,comp=E,79nm,1.0s						
JSMT	**Sammumatsuo**	**1.14**	**212**	A	A	12 08 00.8	
	comp=E,194nm,1.5s,comp=E,234nm,1.2s						
JMM	**Marumori**	**1.29**	**346**	Pn	**Pb**	**12 08 04.2**	**-0.6**
JMM	**Marumori**	**1.29**	**346**	⇓*iP*	**Pb**	**12 08 04.1**	**-0.6**
JMM				⇓S	**Sb**	**12 08 21.1**	**+0.2**
JMM	**Marumori**	**1.29**	**346**	A	A	12 08 04.1	
	comp=E,141nm,1.2s,comp=E,105nm,0.5s						
JAG	**Ashikaga**	**1.41**	**263**	⇓*iP*	**Pn**	**12 08 05.0**	**+0.5**
JAG				⇓S	**Sn**	**12 08 22.0**	**+0.1**
JAG	**Ashikaga**	**1.41**	**263**	A	A	12 08 05.0	
	comp=E,60nm,0.5s,comp=E,100nm,2.0s						
JFY	**Yanaizu**	**1.42**	**304**	⇓*iP*	**Pb**	**12 08 06.2**	**-0.8**
JFY	**Yanaizu**	**1.42**	**304**	A	A	12 08 06.2	
	comp=E,39nm,2.1s,comp=E,

JOM Ohasama 2.86 2 A A 12 08 27.1
comp=E,26nm,0.6s,comp=E,18nm,0.7s
SHZ3 Shizuoka 3 2.87 238 A A 12 08 25.6
comp=E,64nm,1.4s,comp=E,80nm,1.0s
JTB Tobi-shima 2.88 334 A A 12 08 27.1
comp=E,64nm,3.0s,comp=E,48nm,2.8s
JNY Yasuok 2.97 246 A A 12 08 27.1
comp=E,74nm,1.1s,comp=E,175nm,1.7s
MIYJ Miyakonagasawa 3.00 9 A A 12 08 29.2
comp=E,20nm,3.0s,comp=E,17nm,1.6s
JYW Yuwa 3.02 346 A A 12 08 29.4
comp=E,90nm,1.1s,comp=E,123nm,1.8s
JTT Ttatey 3.10 271 A A 12 08 29.2
comp=E,25nm,1.4s,comp=E,42nm,2.7s
JSG Sagara 3.12 232 A A 12 08 29.0
comp=E,58nm,4.7s,comp=E,64nm,2.2s
JSZI Iwateshizukuis 3.13 357 A A 12 08 30.9
comp=E,55nm,1.2s,comp=E,64nm,2.5s
JGN Niukaw 3.14 264 A A 12 08 29.7
comp=E,11nm,3.4s,comp=E,18nm,7.2s
JSZ Suzu 3.17 286 A A 12 08 30.4
comp=E,10.0nm,8.2s,comp=E,11nm,4.4s
JKKS Kakegawashinom 3.20 235 A A 12 08 30.2
comp=E,47nm,1.5s,comp=E,51nm,2.6s
JGF Kuroka 3.26 253 Pn Pn 12 08 32.8 +2.8
JGF Kuroka 3.26 253 A A 12 08 31.2
comp=E,25nm,1.6s,comp=E,45nm,1.6s
HMMJ Hamamatsu 2 3.32 239 A A 12 08 31.9
comp=E,19nm,2.7s,comp=E,21nm,2.1s
JTH Tanohata 3.36 9 A A 12 08 34.4
comp=E,30nm,1.7s,comp=E,19nm,1.0s
JKZ Kuzumaki 3.37 2 A A 12 08 34.4
comp=E,25nm,3.7s,comp=E,19nm,2.2s
JSSY Shinshiroyabe 3.44 242 A A 12 08 33.6
comp=E,16nm,2.0s,comp=E,21nm,1.5s
JAO Obara 3.46 248 A A 12 08 34.0
comp=E,38nm,3.3s,comp=E,33nm,2.1s
JJH Hakui 3.55 276 A A 12 08 35.6
comp=E,8.0nm,2.0s,comp=E,24nm,3.0s
JAH Hinai 3.60 353 A A 12 08 37.5
comp=E,35nm,2.5s,comp=E,21nm,1.6s
INU Inuyama 3.61 251 Pn Pn 12 08 37.0 +2.3
INU Inuyama 3.61 251 P Pn 12 08 37.9 +3.2
JKEN Kujiedanarisaw 3.61 6 A A 12 08 37.9
comp=E,53nm,1.0s,comp=E,52nm,0.8s
JHG Hegura jima 3.62 291 A A 12 08 36.9
comp=E,7.0nm,2.7s,comp=E,9.0nm,2.3s
JHJ2 Mitsune 3.67 198 Pn Pn 12 08 36.5 +0.9
JOG3 Oga3 3.69 334 A A 12 08 35.6
comp=E,32nm,2.6s,comp=E,38nm,2.5s
JNTW Noshirotokiwa 3.74 348 A A 12 08 39.5
comp=E,78nm,3.9s,comp=E,79nm,2.3s
JYTA Yamagatataniai 3.74 256 A A 12 08 38.1
comp=E,25nm,1.1s,comp=E,24nm,2.3s
JICN Ichinomiyachia 3.76 251 A A 12 08 38.2
comp=E,79nm,1.8s,comp=E,115nm,2.7s
JANG Nango 3.76 4 A A 12 08 40.0
comp=E,21nm,1.9s,comp=E,15nm,2.1s
JAA Atsumi 3.84 240 A A 12 08 39.4
comp=E,15nm,4.8s,comp=E,22nm,6.4s
JIW Iwasaki 4.08 347 A A 12 08 44.2
comp=E,13nm,5.4s,comp=E,15nm,1.9s
JHHS Hirosakihyakuz 4.08 351 A A 12 08 44.4
comp=E,61nm,5.1s,comp=E,61nm,4.1s
JEG Eigenji 4.16 251 A A 12 08 44.0
comp=E,13nm,1.5s,comp=E,15nm,1.6s
JTM Tenmabayashi 4.17 359 Pn Pn 12 08 44.7 +2.3
JTM Tenmabayashi 4.17 359 A A 12 08 45.6
comp=E,20nm,1.6s,comp=E,15nm,3.9s
JIE Ise 4.27 240 A A 12 08 45.5
comp=E,14nm,3.4s,comp=E,15nm,1.3s
JFM Mihama 4.35 257 A A 12 08 46.6
comp=E,11nm,1.2s,comp=E,19nm,1.8s
JARK Aomorirokkasho 4.39 2 A A 12 08 48.8
comp=E,29nm,2.0s,comp=E,18nm,1.2s
JSI2 Shiura 2 4.48 352 A A 12 08 50.0
comp=E,17nm,3.1s,comp=E,16nm,2.2s
JAHD Aomorihigashid 4.65 1 A A 12 08 52.4
comp=E,45nm,1.4s,comp=E,38nm,1.7s
JOT Ohata 4.76 359 A A 12 08 54.0
comp=E,18nm,2.9s,comp=E,24nm,3.5s
JWT Wachi 4.88 256 A A 12 08 54.0
comp=E,6.0nm,5.8s,comp=E,10.0nm,1.5s
JHE Heguri 4.89 248 A A 12 08 54.1
comp=E,9.0nm,3.7s,comp=E,15nm,2.1s
JSR Shiriuchi 4.95 353 A A 12 08 56.5
comp=E,20nm,3.8s,comp=E,12nm,3.3s
JOMM Oshimamatsumae 4.99 350 A A 12 08 57.0
comp=E,8.0nm,3.9s,comp=E,7.0nm,3.7s
JKY Yasaka 5.02 261 A A 12 08 56.0
comp=E,11nm,1.9s,comp=E,20nm,1.6s
JKB Kayabe 5.27 359 A A 12 09 01.0
comp=E,45nm,1.6s,comp=E,25nm,1.3s
JYM2 Yakumo 2 5.53 354 A A 12 09 04.6
comp=E,14nm,7.6s,comp=E,8.0nm,4.6s
ERM Erimo 5.61 15 Pn Pn 12 09 02.5 +0.3
ERM Erimo 5.61 15*d* *i*P Pn 12 09 02.5 +0.3
ERM pmax pmax
comp=Z,794nm,1.0s
ERM Erimo 5.61 15 P Pn 12 09 03.0 +0.9
JNBK Urakawa-nobuka 5.79 12 A A 12 09 08.3
comp=Z,23nm,1.6s,comp=Z,19nm,1.1s
JNB Noboribetsu 5.85 359 A A 12 09 09.1
comp=Z,11nm,3.2s,comp=Z,8.0nm,3.5s
JIAM Iburiatsuma 6.03 5 A A 12 09 11.6
comp=Z,24nm,1.3s,comp=Z,23nm,2.0s
JEW Eniwo 6.22 2 Pn 12 09 11.3 +0.7
JEW Eniwo 6.22 2 A A 12 09 14.3
comp=Z,13nm,1.3s,comp=Z,13nm,2.0s
JBT2 Biratori 2 6.22 8 A A 12 09 14.4
comp=Z,9.0nm,6.4s,comp=Z,11nm,1.5s
JCH Churui 6.22 15 A A 12 09 14.5
comp=Z,13nm,2.2s,comp=Z,12nm,1.8s
JOB Onbets 6.61 17 A A 12 09 19.9
comp=Z,16nm,1.3s,comp=Z,12nm,1.4s
JMN Monobe 6.64 246 Pn 12 09 17.8 +1.4
JHS Saijyo 6.75 259 Pn 12 09 20.6 +2.7
JAB Ashibetsu 6.93 6 A A 12 09 24.2
comp=Z,16nm,3.6s,comp=Z,19nm,1.5s
JHR Hokuryu 7.13 3 A A 12 09 27.0
comp=Z,10.0nm,4.3s,comp=Z,10.0nm,2.8s
NMR Nemuro--Hokkai 7.59 26⇑ *i*P Pn 12 09 27.4 -2.0
NMR *e*S Sn 12 10 48.9 -5.4
RUSJ Misakicho 8.10 21 *e*P Pn 12 09 35.3 -1.0
RUSJ *e*S Sn 12 11 02.2 -4.5
YUK Yuzh-Kuril'sk 8.23 24 *e*P Pn 12 09 36.4 -1.7
YUK *e*S Sn 12 11 05.7 -4.2
YUK pmax pmax
comp=E,314nm,0.2s
YUK pmax pmax
comp=Z,1μm,0.2s
YUK smax smax
comp=N,3μm,1.5s
YUK smax smax
comp=E,2μm,1.3s
YUK MLR MLR
comp=Z,2μm,18.0s
TEY Ternei 9.10 339⇓ *e*P Pn 12 09 52.6 +2.5
TEY pmax pmax
comp=Z,10.0nm,1.2s
TEY pmax pmax
comp=N,10.0nm,1.2s
TEY pmax pmax
comp=N,100nm,0.9s
TEY pmax pmax
comp=E,100nm,0.9s
TEY pmax pmax
comp=Z,100nm,0.9s
TEY pmax pmax
comp=Z,120nm,0.8s
JCJ Chichijima 9.53 175 P Pn 12 09 53.1 -2.9
comp=Z,482nm,0.5s,baz=58,slow=11,SNR=39
JCJ S Sn 12 11 31.4 -11
comp=Z,890nm,0.4s,baz=63,slow=22,SNR=12
JCJ Chichijima 9.53 175 P Pn 12 09 53.5 -2.5
VLA Vladivostok 9.66 315*c* *i*P Pn 12 09 59.5 +1.8
MSHR Mys Shultsa 9.76 311*d* *i*P Pn 12 10 02.5 +3.4
JTU Tsushima 9.82 261 Pn 12 09 59.7 -0.4
KSBUS Busan 9.88 266 Pn Pn 12 10 04.1 +3.3
KUR Kuril'sk 9.98 28*ce*P Pn 12 10 01.6 -0.5
JSU Suzuyama 10.25 243 Pn 12 10 08.0 +2.0
USRK Ussuriysk Ar. 10.32 320 P Pn 12 10 10.5 +3.7
comp=Z,150nm,0.8s,baz=130,slow=12,SNR=75
USRK LR LR 12 13 57.3
comp=Z,2μm,18.7s,baz=251,slow=36
YSS Yuzh-Sakhalins 10.40 6 Pn Pn 12 10 07.5 -0.3
YSS Yuzh-Sakhalins 10.40 6*de*P Pn 12 10 07.4 -0.4
YSS pmax pmax
comp=Z,209nm,0.7s
YSS Yuzh-Sakhalins 10.40 6 P Pn 12 10 07.7 -0.1
SEHB SEOHWA 10.41 283 Pn 12 10 10.2 +2.1
KSCHJ Chungju 10.61 275 Pn 12 10 14.8 +4.1
KSRS Korea Array 10.64 278 P Pn 12 10 14.9 +3.8
comp=Z,88nm,0.9s,baz=93,slow=14,SNR=160
KSRS LR LR 12 14 12.8
KSRS comp=Z,3μm,18.4s,baz=85,slow=37 ScP ScP 12 19 41.1 -1.7
comp=Z,1.4nm,0.8s,baz=162,slow=1.3,SNR=7.2
KSAR Wonju Array Be 10.67 278 Pn 12 10 15.7 +4.1
KSAR Wonju Array Be 10.67 278 P Pn 12 10 15.7 +4.1
KS19 Wonju Array Si 10.68 279 Pn 12 10 15.8 +4.1
TJN Taejon 11.13 273 Pn 12 10 18.3 +0.4
TJN Taejon 11.13 273*d* *i*P Pn 12 10 22.1 +4.2
TJN Taejon 11.13 273 P Pn 12 10 20.4 +2.5
NAWB Namwon 11.23 268 Pn 12 10 21.1 +1.8
INCN Inchon 11.66 279 Pn 12 10 30.4 +5.2
INCN Inchon 11.66 279 P Pn 12 10 30.4 +5.2
MDJ Mudanjiang 11.88 316 P Pn 12 10 31.4 +3.2
MDJ S Sn 12 12 42.0 +2.4
MDJ pmax pmax
comp=Z,15nm,1.3s
MDJ pmax pmax
comp=Z,360nm,3.8s
MDJ LR LR
comp=Z,2μm,16.8s
MDJ LR LR
comp=Z,1μm,19.0s
MDJ LR LR
comp=Z,3μm,20.6s
BNX BinXian 13.80 316 ⇓P Pn 12 10 54.8 +0.5
BNX S Sn 12 13 24.8 -1.5
BNX pmax pmax
comp=Z,35nm,1.2s
BNX LR LR
comp=Z,1μm,17.2s
BNX LR LR
comp=Z,1μm,17.7s
BNX LR LR
comp=Z,2μm,16.1s
CN2 Changchun 13.99 306 *e*P Pn 12 10 57.8 +0.8
CN2 S Sn 12 13 24.4 -6.7
CN2 pmax pmax
comp=Z,30nm,1.6s
CN2 pmax pmax
comp=Z,610nm,12.0s
CN2 LR LR
comp=Z,1μm,19.0s
CN2 LR LR
comp=Z,1μm,19.0s
CN2 LR LR
comp=Z,1μm,20.0s
TYV Tymovskoe 14.28 4 *e*P Pn 12 10 59.3 -1.6
TYV *e*S Sn 12 13 37.1 -1.0
TYV pmax pmax
comp=Z,200nm,2.2s
TYV pmax pmax
comp=Z,115nm,0.8s
TYV smax smax
comp=N,100nm,2.5s
TYV smax smax
comp=E,200nm,2.5s
KLR Kul'dur 14.36 334 P Pn 12 11 02.4 +0.4
comp=E,8.4nm,0.5s,baz=154,slow=11,SNR=21
KLR LR LR 12 16 30.9
comp=E,2μm,18.3s,baz=150,slow=37
KLR Kul'dur 14.36 334⇑ *e*P Pn 12 11 01.1 -0.9
KLR pmax pmax
comp=Z,8.0nm,0.7s
GRNR Gornyy 14.56 348⇑ *i*P Pn 12 10 57.8 -6.9
GRNR pmax pmax
comp=E,3.0nm,0.5s
GRNR pmax pmax
comp=N,8.0nm,0.8s
GRNR pmax pmax
comp=Z,5.0nm,0.6s
GRNR MLR MLR
comp=E,560nm,15.0s
GRNR MLR MLR
comp=N,660nm,16.0s
GRNR MLR MLR
comp=Z,710nm,20.0s
SNY Shenyang 14.60 296 ⇓P Pn 12 11 06.9 +1.6
SNY pmax pmax
comp=Z,76nm,1.8s
SNY pmax pmax
comp=Z,460nm,6.9s
SNY LR LR
comp=Z,880nm,17.5s
SNY LR LR
comp=Z,2μm,18.6s
SNY LR LR
comp=Z,3μm,17.9s
JOW Kunigami 14.68 232 Pn Pn 12 11 05.3 -1.1
DL2 Dalian 15.64 284 P P 12 11 23.6 +0.8
DL2 pmax pmax
comp=Z,88nm,0.7s
DL2 LR LR
comp=Z,670nm,13.1s
DL2 LR LR
comp=Z,2μm,16.2s
DL2 LR LR
comp=Z,2μm,16.4s
SKR Severo-Kuril's 17.69 33 *e*P Pn 12 11 44.4 -0.3
SKR pmax pmax
comp=Z,122nm,1.0s
SKR MLR MLR
comp=Z,500nm,15.0s
JMJ Miyako jima 2 18.00 234 P P 12 11 51.4 +2.4
NJ2 Nanjing 18.98 263 *e*P Pn 12 12 02.3 +1.6
NJ2 pmax pmax
comp=Z,61nm,1.2s
NJ2 LR LR
comp=Z,2μm,21.1s
NJ2 LR LR
comp=Z,1μm,22.1s
NJ2 LR LR
comp=Z,1μm,20.1s
TIA Tai'an 19.36 276 ⇓P P 12 12 02.6 -1.4
TIA pmax pmax
comp=Z,20nm,1.1s
ZEA Zeya 19.68 335 *e*P P 12 12 04.8 -2.4
ZEA pmax pmax
comp=E,30nm,0.5s
ZEA pmax pmax
comp=N,80nm,0.8s
ZEA pmax pmax
comp=Z,190nm,0.9s
ZEA MLR MLR
comp=N,500nm,13.0s
ZEA MLR MLR
comp=Z,800nm,15.0s
YOJ Yonaguni jima 19.75 237 P P 12 12 07.1 -1.2
YOJ Yonaguni jima 19.75 237 P P 12 12 07.1 -1.2
YOJ pmax pmax
comp=Z,46nm,0.7s
YOJ Yonaguni jima 19.75 237 P P 12 12 07.3 -1.0
comp=Z,74nm,1.0s
BJI Beijing 19.90 288 P P 12 12 09.5 -0.2
BJI pmax pmax
comp=Z,62nm,1.0s
HIA Hailar 20.07 316 P P 12 12 11.4 -0.2
HIA Hailar 20.07 316 P P 12 12 11.4 -0.2
HIA pmax pmax
comp=Z,19nm,0.7s
PEA0B Petropavlovsk- 20.14 30 P Pn 12 12 13.6 -0.8
PEA0B IAmb IAmb 12 12 15.2
comp=Z,124nm,1.1s
PEA0B Petropavlovsk- 20.14 30*ce*P Pn 12 12 13.5 -0.8
PETK Petropavlovsk- 20.14 30 P P 12 12 12.9 +0.6
comp=Z,49nm,0.9s,baz=214,slow=2.7,SNR=36
comp=Z,49nm,0.9s
PETK Petropavlovsk- 20.14 30 P P 12 12 12.7 +0.4
XLT XiLinHaoTe 20.45 299 *e*P P 12 12 13.1 -2.7
XLT pP pP 12 12 22.4 -1.9
XLT S S 12 15 55.9 -7.1
XLT sS sS 12 16 12.4 -4.1
XLT PcP PcP 12 16 26.3 -0.7
XLT pmax pmax
comp=Z,190nm,1.2s
XLT pmax pmax
comp=Z,670nm,4.0s
XLT LR LR
comp=Z,2μm,17.7s
XLT LR LR
comp=Z,2μm,17.7s
PET Petropavlovsk 20.47 31 P P 12 12 16.8 +0.9
PET IAmb IAmb 12 12 18.7
comp=Z,289nm,1.2s
PET Petropavlovsk 20.47 31 *e*P Pn 12 12 17.1 -1.0
PET pmax pmax
comp=Z,289nm,1.2s
YHNB Yeheng 20.74 241 P P 12 12 19.6 +0.5
YHNB Yeheng 20.74 241 P P 12 12 20.1 +1.0
NACB Ninganchiao 20.91 239 P P 12 12 21.4 +0.5
HNS HongShan 21.14 280 ⇑P P 12 12 21.6 -1.6
HNS S S 12 16 12.3 -4.4
HNS pmax pmax
comp=Z,120nm,0.8s
HNS LR LR
comp=Z,590nm,15.1s
HNS LR LR
comp=Z,1μm,16.8s
HNS LR LR
comp=Z,1μm,17.7s
SSLB Suanglung 21.60 239 P P 12 12 25.2 -3.1
SSLB Suanglung 21.60 239 P P 12 12 29.3 +0.9
YULB Yu-li 21.63 238 P P 12 12 27.7 -0.9
TPUB Ta-pu 22.15 239 P P 12 12 32.9 -1.2
TPUB Ta-pu 22.15 239 P P 12 12 33.6 -0.6
TWG Pinlang 22.17 237 P P 12 12 33.0 -1.4
TWG IAmb IAmb 12 12 57.1
comp=Z,47nm,0.7s
WHN Wuhan 23.12 263 ⇓P P 12 12 43.5 -0.8
GUMO Guam 23.16 171 P P 12 12 47.6 +2.8
comp=Z,204nm,1.1s,baz=20,slow=13,SNR=1.3
GUMO LR LR 12 24 26.7
comp=Z,365nm,18.4s,baz=352,slow=43
comp=Z,204nm,1.1s
LYN LuoYang 23.41 274⇑ *i*P P 12 12 45.1 -2.1
LYN pP sP 12 12 58.4 -1.6
LYN sP pP 12 13 02.5 +6.5
LYN PP PnPn 12 13 16.4 +2.4
LYN S S 12 16 52.1 -6.2
LYN sS sS 12 17 13.8 +0.4
LYN pmax pmax
comp=Z,20nm,0.8s
LYN LR LR
comp=Z,1μm,16.4s
LYN LR LR
comp=Z,1μm,17.7s
LYN LR LR
comp=Z,1μm,20.6s
HHC Hu-ho-hao-te 23.43 289 *e*P P 12 12 48.8 +1.3
HHC pmax pmax
comp=Z,21nm,0.6s
HHC pmax pmax
comp=Z,500nm,5.5s
MA2 Magadan 23.80 12 P P 12 12 50.6 -0.1
comp=Z,88nm,0.9s,baz=204,slow=9.3,SNR=29
comp=Z,88nm,0.9s
MA2 Magadan 23.80 12 P P 12 12 50.4 -0.3
MA2 IAmb IAmb 12 12 53.4
comp=Z,152nm,1.0s
MA2 Magadan 23.80 12*de*P P 12 12 51.7 +1.0
MA2 pmax pmax
comp=Z,153nm,1.1s
MA2 MLR MLR
comp=Z,1μm,18.0s
MA2 Magadan 23.80 12 P P 12 12 51.9 +1.2
BTO Baotou 24.61 289 *e*P P 12 12 59.4 +0.9
CNSH ChangSha 25.23 259 ⇑P P 12 13 03.8 -0.2
CNSH pmax pmax
comp=Z,9.0nm,0.4s
XAN Xi'an 26.38 274 P P 12 13 14.4 -0.1
XAN pP sP 12 13 26.8 -0.8
XAN sP pP 12 13 32.8 +9.1
XAN PP PnPn 12 14 00.1 +5.4
XAN S S 12 17 44.1 -1.7
XAN sS sS 12 18 05.3 +4.3
XAN pmax pmax
comp=Z,32nm,0.7s
XAN pmax pmax
comp=Z,220nm,4.8s
XAN LR LR
comp=Z,580nm,15.1s
XAN LR LR
comp=Z,830nm,15.5s
XAN LR LR
comp=Z,1μm,17.7s
YAK Yakutsk 26.44 348 P P 12 13 14.3 -0.4
comp=Z,90nm,0.7s,baz=340,slow=4.2,SNR=31
comp=Z,90nm,0.7s
YAK Yakutsk 26.44 348 P P 12 13 14.5 -0.1
YAK Yakutsk 26.44 348*c* *i*P P 12 13 14.2 -0.4
YAK pmax pmax
comp=Z,270nm,1.0s
ENH Enshi 27.11 266 P P 12 13 20.0 -1.2
ENH IAmb IAmb 12 13 26.9
comp=Z,64nm,0.7s
SEY Seymchan 27.24 11 P P 12 13 23.1 +1.2
comp=Z,77nm,1.0s,baz=193,slow=8.4,SNR=30
SEY LR LR 12 24 50.7
comp=Z,976nm,20.6s,baz=328,slow=38
comp=Z,77nm,1.0s
SEY Seymchan 27.24 11⇑ *e*P P 12 13 22.5 +0.7
SEY pmax pmax
comp=Z,124nm,1.1s
SEY MLR MLR
comp=Z,1μm,20.0s
ULN Ulaanbaatar 27.44 305 P P 12 13 23.8 -0.3
ULN IAmb IAmb 12 13 29.8
comp=Z,56nm,0.9s
ULN Ulaanbaatar 27.44 305*de*P P 12 13 24.4 +0.3
ULN pmax pmax
comp=Z,65nm,1.0s
BOD Bodaibo 27.79 328 *e*P P 12 13 26.4 -0.4
BOD pmax pmax
comp=Z,106nm,1.2s
SONM Songino Array 27.87 305 P P 12 13 27.9 0.0
comp=Z,74nm,0.8s,baz=108,slow=9.1,SNR=38
comp=Z,74nm,0.8s
SONM Songino Array 27.87 305 P P 12 13 27.4 -0.5
SONM IAmb IAmb 12 13 32.9
comp=Z,81nm,0.8s
H11N2 WAKE ISLAND Hy 28.09 120 T T 12 43 22.6
baz=312,slow=75,SNR=226
H11N1 WAKE ISLAND Hy 28.10 120 T T 12 43 37.3
baz=312,slow=75,SNR=265
H11N3 WAKE ISLAND Hy 28.11 120 T T 12 43 16.4
baz=312,slow=75,SNR=250
H11S1 WAKE ISLAND Hy 28.79 122 T T 12 44 27.6
baz=314,slow=76,SNR=700
H11S3 WAKE ISLAND Hy 28.79 122 T T 12 44 28.0
baz=314,slow=76,SNR=523
H11S2 WAKE ISLAND Hy 28.81 122 T T 12 44 29.0
baz=314,slow=76,SNR=572
LZH Lanzhou 29.96 280 *e*P P 12 13 47.8 +1.2
LZH pP sP 12 13 57.8 -1.9
LZH S S 12 18 48.1 +5.8
LZH SS SnSn 12 20 13.0 -2.0
LZH pmax pmax
comp=Z,57nm,1.3s
LZH pmax pmax
comp=Z,210nm,4.7s
LZH LR LR
comp=Z,930nm,18.6s
LZH LR LR
comp=Z,1μm,16.8s
LZH LR LR
comp=Z,2μm,19.6s
IRK Irkutsk 30.25 313 *e*P P 12 13 48.8 0.0
IRK pmax pmax
comp=Z,35nm,1.8s
ZAK Zakamensk 30.39 309 *e*P P 12 13 49.8 -0.3
ZAK pmax pmax
comp=Z,22nm,1.1s
AMKA Amchitka 30.74 49 P P 12 13 52.2 -0.9
GYA Guiyang 30.97 261⇑ *i*P P 12 13 56.6 +1.1
GYA pP sP 12 14 08.3 -0.3
GYA pmax pmax
comp=Z,63nm,1.0s
GYA pmax pmax
comp=Z,550nm,4.2s
GYA LR LR
comp=Z,790nm,16.3s
CD2 Chengdu 31.49 271 P P 12 13 59.5 -0.5
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 LR LR

comp=Z,1µm,15.3s
CD2 LR LR
comp=Z,1µm,18.6s
CD2 LR LR
comp=Z,1µm,20.1s
MOY Mondy 32.07 311 *e*P **P 12 14 05.5 +0.5**
MOY pmax pmax
comp=Z,24nm,1.6s
GTA Gaotai 32.51 288 *e*P **P 12 14 08.9 -0.1**
GTA pP pP 12 14 16.3 -1.9
GTA PcP **PcP 12 16 56.0 +0.7**
GTA S **S 12 19 21.8 -0.3**
GTA ScP **ScP 12 20 35.6 -1.1**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,220nm,6.7s
GTA LR LR
comp=Z,530nm,16.0s
GTA LR LR
comp=Z,480nm,16.0s
GTA LR LR
comp=Z,550nm,15.3s
DAV Davao City (W) 32.68 210 LR LR 12 26 32.1
comp=Z,540nm,21.0s,baz=40,slow=35
KIWB Kanaga Island 33.01 49 P **P 12 14 12.0 -1.0**
ADK Adak 33.30 49 P **P 12 14 15.4 -0.1**
ADK IAmb IAmb 12 14 35.0
comp=Z,86nm,1.6s
ADK Adak 33.30 49 P **P 12 14 15.4 -0.1**
ADK pmax pmax
comp=Z,86nm,1.7s
ADK Adak 33.30 49 P **P 12 14 16.3 +0.8**
ADK Adak 33.30 49 P **P 12 14 15.8 +0.3**
ADK pP **pP 12 14 26.6 +1.8**
ADK sP **sP 12 14 31.2 +2.7**
PATS Pohnpei 33.52 148 P **P 12 14 17.9 +0.1**
BILL Bilibino 34.48 16*c i*P **P 12 14 26.1 +0.5**
BILL pmax pmax
comp=Z,32nm,1.0s
KMI Kunming 34.72 262 ⇓P **P 12 14 29.6 +1.2**
KMI pP pP 12 14 39.4 +1.7
KMI pmax pmax
comp=Z,42nm,1.2s
KMI LR LR
comp=Z,770nm,19.9s
KMI LR LR
comp=Z,550nm,21.0s
KMI LR LR
comp=Z,690nm,19.9s
ATKA Atka Island 34.87 49 P **P 12 14 29.5 +0.4**
PZH PanZhiHua 34.88 265 P **P 12 14 28.3 -1.4**
PZH S **S 12 19 58.3 -0.6**
PZH pmax pmax
comp=Z,20nm,0.7s
PZH pmax pmax
comp=Z,250nm,6.5s
PZH LR LR
comp=Z,3µm,22.6s
PZH LR LR
comp=Z,2µm,21.6s
PZH LR LR
comp=Z,2µm,17.8s
TIXI Tiksi 35.69 353 P **P 12 14 35.5 -0.4**
comp=Z,24nm,0.8s,baz=90,slow=23,SNR=20
TIXI LR LR 12 28 59.4
comp=Z,1µm,20.5s,baz=194,slow=36
comp=Z,24nm,0.8s
TIXI Tiksi 35.69 353 P **P 12 14 35.1 -0.8**
TIXI IAmb IAmb 12 14 36.9
comp=Z,22nm,0.8s
TIXI Tiksi 35.69 353*ce*P **P 12 14 35.4 -0.4**
TIXI pmax pmax
comp=Z,22nm,1.0s
TIXI Tiksi 35.69 353 P **P 12 14 35.5 -0.4**
TIXI pP **pP 12 14 46.0 +0.8**
GOMU GeErMu 37.04 284 P **P 12 14 48.8 +0.4**
GOMU PcP **PcP 12 17 08.8 0.0**
GOMU pmax pmax
comp=Z,30nm,1.3s
GOMU LR LR
comp=Z,510nm,16.5s
GOMU LR LR
comp=Z,500nm,16.5s
GOMU LR LR
comp=Z,470nm,17.0s
MYLDM Lahad Datu 37.57 219 P **P 12 14 51.4 -1.1**
MYLDM IAmb IAmb 12 15 14.0
comp=Z,31nm,0.9s
TNTI Ternate 37.89 203 P P 12 15 08.6 +13
SPIA Saint Paul Isl 38.00 42 P **P 12 14 57.2 +1.4**
baz=258
NIKH Nikolski High 38.19 48 P **P 12 14 58.2 +0.7**
NIKH IAmb IAmb 12 14 59.0
comp=Z,48nm,0.7s
NIKH Nikolski High 38.19 48 P **P 12 14 57.6 +0.2**
baz=265
SIJI Sorong 38.41 196 P **P 12 14 59.7 0.0**
comp=Z,17nm,0.7s,baz=330,slow=21,SNR=4.4
SIJI LR LR 12 28 14.1
comp=Z,506nm,21.4s,baz=38,slow=32
comp=Z,17nm,0.7s
LBMI Labuha 39.18 202 P **P 12 15 05.5 -0.6**
comp=Z,1µmcomp=Z,64nm,0.8s
KMSI Cibinong 39.24 208 P **P 12 15 05.6 -1.0**
comp=Z,189nm,0.8s
GTOI Gorontalo 39.56 209 P **P 12 15 06.2 -3.1**
comp=Z,27nm,1.0s
UNV Unalaska Valle 39.66 47 P **P 12 15 10.7 +0.9**
baz=266
MRSI Marisa 40.13 211 P **P 12 15 14.8 +0.8**
comp=Z,44nm,1.1s
FAKI Fak Fak 40.20 194 P **P 12 15 13.8 -0.8**
FAKI Fak Fak 40.20 194 P **P 12 15 15.4 +0.8**
DGZ Jazzator, Alta 40.49 306*ce*P **P 12 15 17.7 +0.8**
DGZ pmax pmax
comp=Z,214nm,0.7s
DGZ MLR MLR
comp=Z,728nm,21.0s
WMQ Urumqi 40.87 297 *e*P **P 12 15 23.3 +3.3**
WMQ pP pP 12 15 29.6 +0.2
WMQ pmax pmax
comp=Z,63nm,0.9s
WMQ LR LR
comp=Z,310nm,19.7s
WMQ LR LR
comp=Z,460nm,20.7s
WMQ LR LR
comp=Z,520nm,21.9s
SANI Sanana 40.99 204 P **P 12 15 18.8 -2.3**
comp=Z,2µmcomp=Z,255nm,0.8s
SANI Sanana 40.99 204 P **P 12 15 19.9 -1.2**
CHTO Chiang Mai 41.01 256 P **P 12 15 19.6 -1.7**
CHTO Chiang Mai 41.01 256 P **P 12 15 19.6 -1.7**
CHTO pmax pmax
comp=Z,12nm,1.0s
MPSI Mapaga 41.13 213 P **P 12 15 26.3 +4.0**
comp=Z,20nm,0.7s
CM31 Chiang Mai Arr 41.21 256 P **P 12 15 21.3 -1.7**
CMAR Chiang Mai Arr 41.21 256 P **P 12 15 23.7 +0.7**
comp=Z,2.8nm,0.6s,baz=44,slow=6.4,SNR=15
comp=Z,2.8nm,0.6s
CMAR Chiang Mai Arr 41.21 256 P **P 12 15 22.4 -0.6**
TNA Tin City 41.31 29 P **P 12 15 24.6 +1.4**
baz=251
MSAI Masohi 41.37 199 P **P 12 15 27.1 +2.9**
comp=Z,772nmcomp=Z,42nm,1.1s
APSI Ampana 41.51 210 P **P 12 15 25.5 +0.1**
comp=Z,603nmcomp=Z,64nm,1.0s
NLAI Namlea 41.77 201 P P 12 15 40.9 +13
RABL Rabaul 41.87 163 P **P 12 15 26.3 -2.1**
RABL IAmb IAmb 12 16 29.5
comp=Z,94nm,1.4s
AAI Ambon 41.89 200 P **P 12 15 28.0 -0.5**
comp=Z,5µmcomp=Z,563nm,0.8s
ANM Nome 42.05 31 P **P 12 15 30.8 +1.5**
baz=255
ZALV Zalesovo Beam 42.06 313 P **P 12 15 29.7 +0.2**
comp=Z,59nm,0.7s,baz=90,slow=7.0,SNR=92
ZALV PcP **PcP 12 17 23.1 -0.8**
comp=Z,4.9nm,0.6s,baz=83,slow=4.1,SNR=2.0
comp=Z,59nm,0.7s
ZALV Zalesovo Beam 42.06 313 P **P 12 15 29.0 -0.5**
ZALV Zalesovo Beam 42.06 313 *i*P **P 12 15 29.7 +0.2**
ZALV pmax pmax
comp=Z,58nm,0.7s

LSA Lhasa 42.06 276 P **P 12 15 31.1 +0.7**
LSA Lhasa 42.06 276 P **P 12 15 31.5 +1.1**
LSA pmax pmax
comp=Z,15nm,1.0s
LSA Lhasa 42.06 276 P **P 12 15 31.1 +0.7**
LSA pmax pmax
comp=Z,19nm,0.8s
ZSN Zaisan 42.36 303 *e*P **P 12 15 32.2 +0.1**
ZSN *e*S **S 12 21 52.5 +1.4**
ZSN pmax pmax
comp=Z,45nm,1.5s
ZSN Zaisan 42.36 303 *e*P **P 12 15 32.2 +0.1**
comp=Z,45nm,1.5s,baz=303
ZSN *e*S **S 12 21 52.5 +1.4**
baz=303
SDPT Sand Point 43.23 45 P **P 12 15 38.4 -0.5**
baz=269
NRIK Noril'sk 43.57 336 P **P 12 15 41.6 0.0**
comp=Z,12nm,0.5s,baz=108,slow=8.9,SNR=20
comp=Z,12nm,0.5s
NRIK Noril'sk 43.57 336 P **P 12 15 41.0 -0.6**
NRIK IAmb IAmb 12 15 42.5
comp=Z,85nm,1.5s
NRIK Noril'sk 43.57 336*c i*P **P 12 15 40.9 -0.6**
NRIK pmax pmax
comp=Z,32nm,1.2s
NRIK MLR MLR
comp=Z,972nm,17.0s
CHNA Chernabura Isl 43.74 46 P **P 12 15 43.9 +0.8**
baz=271
CNBA Chernabura Isl 43.74 46 P **P 12 15 43.2 +0.2**
CNBA IAmb IAmb 12 15 44.2
comp=Z,70nm,1.2s
MK31 Makanchi Array 44.19 302 P **P 12 15 46.7 -0.1**
MK31 IAmb IAmb 12 15 51.9
comp=Z,22nm,0.7s
MK31 Makanchi Array 44.19 302 *i*P **P 12 15 46.8 -0.1**
MK31 pmax pmax
comp=Z,9.0nm,0.4s
MKAR Makanchi Array 44.19 302 P **P 12 15 46.9 0.0**
comp=Z,21nm,0.7s,baz=88,slow=9.7,SNR=35
comp=Z,21nm,0.7s
MKAR Makanchi Array 44.19 302 P **P 12 15 46.6 -0.3**
TTSI Tana Toraja 44.20 211 P P 12 15 55.8 +8.6
N16K Nishlik Lake 44.37 38 P **P 12 15 49.9 +1.8**
baz=266,SNR=28
MAKZ Makanchi 44.40 303 P **P 12 15 48.0 -0.6**
MAKZ IAmb IAmb 12 15 53.3
comp=Z,30nm,0.9s
MAKZ Makanchi 44.40 303 P **P 12 15 48.0 -0.6**
MAKZ pmax pmax
comp=Z,30nm,0.9s
MAKZ Makanchi 44.40 303 P **P 12 15 48.5 -0.1**
O16K Kokwok River B 44.65 39 P **P 12 15 51.8 +1.5**
baz=267,SNR=18
P16K Nushagak River 44.68 40 P **P 12 15 52.2 +1.7**
baz=268,SNR=5.1
SPSI Sidrap Palu 45.05 211 P P 12 16 03.5 +10
KSM Kuching 45.13 226 P **P 12 15 54.4 -0.3**
KSM IAmb IAmb 12 16 11.6
comp=Z,18nm,0.7s
O17K Koliganek Bris 45.16 39 P **P 12 15 56.3 +1.9**
baz=268,SNR=15
Q16K King Salmon 45.36 40 P **P 12 15 57.4 +1.4**
baz=269,SNR=17
P17K Kvichak River 45.48 40 P **P 12 15 58.5 +1.6**
baz=269
R17K Ugashik Creek 45.50 42 P **P 12 15 57.0 -0.1**
baz=270
GCSA Galena City Sc 45.67 32 P **P 12 15 58.5 +0.2**
baz=263,SNR=14
N18K Kilae Creek 45.80 38 P **P 12 16 01.7 +2.2**
N18K IAmb IAmb 12 16 03.0
comp=Z,53nm,1.0s
N18K Kilae Creek 45.80 38 P **P 12 16 01.5 +2.0**
baz=268,SNR=21
TTA Tatalina 45.87 35 P **P 12 16 01.3 +1.2**
TTA IAmb IAmb 12 16 02.8
comp=Z,26nm,1.2s
TTA Tatalina 45.87 35 P **P 12 16 01.3 +1.2**
TTA pmax pmax
comp=Z,26nm,1.2s
TTA Tatalina 45.87 35 P **P 12 16 01.5 +1.4**
baz=266
SVW2 Sparrevohn 45.97 37 P **P 12 16 03.1 +2.4**
KAPI Kappang 46.01 210 P **P 12 16 01.6 0.0**
comp=Z,21nm,0.6s,baz=6.2,slow=8.0,SNR=5.0
comp=Z,21nm,0.6s
KAPI Kappang 46.01 210 P **P 12 16 01.5 0.0**
KAPI Kappang 46.01 210⇑*e*P **P 12 16 01.9 +0.4**
KAPI pmax pmax
comp=Z,19nm,1.0s
KAPI Kappang 46.01 210 P **P 12 16 03.8 +2.3**
KAPI pP **sP 12 16 14.5 -0.2**
KURK Kurchatov 46.05 308 P **P 12 16 01.2 -0.3**
KURK Kurchatov 46.05 308*c i*P **P 12 16 01.0 -0.5**
KURK pmax pmax
comp=Z,49nm,0.7s
KURK Kurchatov 46.05 308 P **P 12 16 01.1 -0.3**
P18K Big Mountain, 46.10 39 P **P 12 16 02.3 +0.4**
P18K IAmb IAmb 12 16 04.8
comp=Z,65nm,1.0s
P18K Big Mountain, 46.10 39 P **P 12 16 03.6 +1.6**
baz=270,SNR=21
KURBB Kurchatov Arra 46.12 308 P **P 12 16 01.5 -0.6**
O18K Koktuh Hills 46.12 39 P **P 12 16 04.1 +2.1**
O18K IAmb IAmb 12 16 06.5
comp=Z,37nm,0.7s
O18K Koktuh Hills 46.12 39 P **P 12 16 03.7 +1.7**
baz=269
BKSI Bulukumba 46.14 210 P **P 12 16 05.8 +3.3**
comp=Z,40nm,0.9s
ODAN Odare 46.26 274 *e*P **P 12 16 03.8 0.0**
comp=Z,35nm,1.0s
L19K White Mountain 46.36 36 P **P 12 16 06.0 +2.1**
L19K IAmb IAmb 12 16 07.0
comp=Z,73nm,1.4s
L19K White Mountain 46.36 36 P **P 12 16 05.1 +1.2**
baz=267,SNR=28
N19K Bonanza Creek 46.49 38 P **P 12 16 06.3 +1.3**
N19K IAmb IAmb 12 16 11.8
comp=Z,20nm,0.8s
N19K Bonanza Creek 46.49 38 P **P 12 16 06.9 +1.9**
baz=269,SNR=12
M19K Big River Lodg 46.57 36 P **P 12 16 07.3 +1.8**
M19K IAmb IAmb 12 16 08.8
comp=Z,50nm,1.4s
M19K Big River Lodg 46.57 36 P **P 12 16 07.3 +1.8**
baz=268,SNR=11
O19K Port Alsworth 46.57 38 P **P 12 16 07.5 +2.0**
O19K Port Alsworth 46.57 38 P **P 12 16 07.1 +1.6**
baz=270,SNR=13
SII Sitkinak Islan 46.74 43 P **P 12 16 07.4 +0.5**
baz=273
K20K Telida 46.78 34 P **P 12 16 09.4 +2.2**
K20K Telida 46.78 34 P **P 12 16 09.0 +1.9**
baz=267,SNR=61
J20K Nowinta River 46.80 33 P **P 12 16 09.2 +2.0**
J20K IAmb IAmb 12 16 10.3
comp=Z,55nm,1.0s
J20K Nowinta River 46.80 33 P **P 12 16 08.9 +1.7**
baz=266,SNR=38
L20K Farewell, AK 46.83 35 P **P 12 16 09.7 +2.1**
baz=268,SNR=34
RAMN Ramite 46.85 274 *e*P **P 12 16 08.4 -0.1**
comp=Z,152nm,0.8s
SHLS Shalkode 46.87 298 *e*P **P 12 16 05.2 -3.0**
SHLS *e*S **S 12 22 49.6 -7.3**
SHLS Shalkode 46.87 298 *e*P **P 12 16 05.3 -3.0**
baz=298
SHLS *e*S **S 12 22 49.6 -7.3**
baz=298
JIRN Jiri 46.87 275 *e*P **P 12 16 09.7 +0.9**
comp=Z,155nm,1.1s
SRIT Nakonsritamara 46.90 244 P **P 12 16 09.5 +0.9**
SRIT IAmb IAmb 12 16 24.4
comp=Z,36nm,0.6s
Q19K Cape Douglas, 46.93 40 P **P 12 16 09.2 +0.8**
Q19K Cape Douglas, 46.93 40 P **P 12 16 08.5 +0.1**
baz=272,SNR=14
GUN Gumba 47.01 276 *e*P **P 12 16 10.6 +0.8**
comp=Z,88nm,0.9s
IMAR Indian Mountai 47.11 30 P **P 12 16 10.9 +1.3**
P19K Oil Pt 47.12 39 P **P 12 16 10.9 +1.1**
baz=271
ILSW Iliamna Southw 47.16 39 IAmb IAmb 12 16 14.4

comp=Z,51nm,1.5s
M20K Styx River 47.16 36 IAmb IAmb 12 16 13.0
comp=Z,21nm,0.8s
M20K Styx River 47.16 36 P **P 12 16 11.9 +1.7**
baz=269
UZB Uzynbulak 47.18 298 *e*P **P 12 16 09.8 -0.9**
UZB Uzynbulak 47.18 298 *e*P **P 12 16 09.9 -0.9**
baz=298
TDK Taldyqorghan 47.19 301 *e*P **P 12 16 10.3 -0.3**
TDK *e*S **S 12 22 58.7 -2.4**
TDK pmax pmax
comp=Z,20nm,0.6s
TDK Taldyqorghan 47.19 301 *e*P **P 12 16 10.3 -0.3**
comp=Z,20nm,0.6s,baz=301
TDK *e*S **S 12 22 58.8 -2.4**
baz=301
OHAK Old Harbor 47.19 42 P **P 12 16 10.7 +0.3**
baz=273
G21K Allakaket 47.26 30 P **P 12 16 12.3 +1.5**
baz=265
F21K Alatna River 47.34 29 P **P 12 16 12.7 +1.3**
baz=264,SNR=11
KPKS Kokpek 47.35 299 *e*P **P 12 16 11.5 -0.4**
KPKS *e*S **S 12 23 03.9 +0.3**
KPKS Kokpek 47.35 299 *e*P **P 12 16 11.5 -0.4**
baz=299
KPKS *e*S **S 12 23 04.0 +0.3**
baz=299
RSO Redoubt South 47.35 38 P **P 12 16 12.6 +0.8**
O20K Slope Mountain 47.42 39 P **P 12 16 12.7 +0.4**
baz=271
H21K Melozitna Rive 47.47 31 IAmb IAmb 12 16 14.8
comp=Z,24nm,0.8s
H21K Melozitna Rive 47.47 31 P **P 12 16 14.3 +1.8**
baz=266,SNR=28
KDAK Kodiak Island 47.53 42 P **P 12 16 13.7 +0.7**
KDAK Kodiak Island 47.53 42 P **P 12 16 13.7 +0.7**
KDAK pmax pmax
comp=Z,74nm,0.8s
KDAK Kodiak Island 47.53 42 P **P 12 16 13.7 +0.7**
baz=274
KDAK Kodiak Island 47.53 42 P **P 12 16 13.9 +0.8**
KDAK sP **sP 12 16 28.5 +2.3**
PKI Pulchoki 47.54 276 *e*P **P 12 16 14.2 +0.3**
comp=Z,50nm,0.9s
PKIN Phulchoki 47.54 276 *e*P **P 12 16 14.1 +0.2**
KKN Kakani 47.55 276 *e*P **P 12 16 13.9 +0.1**
comp=Z,38nm,1.0s
CHUM Lake Minchumin 47.59 33 P **P 12 16 15.5 +2.2**
baz=268
Q20K Shuyak Island 47.59 41 P **P 12 16 14.0 +0.5**
baz=273,SNR=13
ZHN Zhinishke 47.60 298 *e*P **P 12 16 13.9 0.0**
ZHN Zhinishke 47.60 298 *e*P **P 12 16 13.9 0.0**
baz=298
SPCR Spurr Chakacha 47.60 37 P **P 12 16 15.5 +1.8**
baz=271,SNR=16
PPLA Purkeypile 47.62 35 P **P 12 16 16.0 +2.2**
PPLA Purkeypile 47.62 35 P **P 12 16 15.7 +1.9**
baz=269
CAST Castle Rocks 47.67 34 P **P 12 16 15.9 +1.8**
baz=269
DMN Daman 47.76 276 *e*P **P 12 16 16.0 +0.4**
I21K Tanana 47.78 32 P **P 12 16 15.8 +0.9**
I21K Tanana 47.78 32 P **P 12 16 16.8 +2.0**
baz=267,SNR=19
F22K John River 47.87 28 P **P 12 16 17.2 +1.7**
baz=265,SNR=26
SKT Skwentna 47.92 36 IAmb IAmb 12 16 18.4
comp=Z,38nm,1.2s
SKT Skwentna 47.92 36 P **P 12 16 17.0 +1.0**
baz=270
GKN Gorkha 47.97 277 *e*P **P 12 16 17.4 +0.4**
comp=Z,141nm,0.7s
E22K Anaktuvuk Pass 48.06 28 P **P 12 16 19.0 +1.9**
baz=265
H22K Ishtalitna Cre 48.07 31 P **P 12 16 19.4 +2.2**
baz=267,SNR=32
G22K Bettles 48.08 29 P **P 12 16 18.5 +1.4**
baz=266
CNPM China Poot 48.14 39 IAmb IAmb 12 16 19.6
comp=Z,31nm,0.9s
BPAW Bear Paw Mtn. 48.18 33 P **P 12 16 17.9 -0.1**
BPAW Bear Paw Mtn. 48.18 33 P **P 12 16 19.5 +1.5**
baz=269,SNR=15
MLY Manley 48.30 32 P **P 12 16 21.0 +2.0**
baz=268,SNR=51
BRLK Bradley Lake 48.30 39 P **P 12 16 19.2 +0.2**
BRSE Bradley Lake S 48.38 39 P **P 12 16 21.9 +2.3**
baz=273,SNR=12
MMRI Maumere 48.40 205 P **P 12 16 24.1 +3.9**
comp=Z,2µmcomp=Z,88nm,0.9s
TRF Thorofare Moun 48.48 34 IAmb IAmb 12 16 24.1
comp=Z,21nm,0.8s
TRF Thorofare Moun 48.48 34 P **P 12 16 21.5 +1.0**
baz=270,SNR=20
CUT Chulitna 48.51 35 IAmb IAmb 12 17 08.8
comp=Z,37nm,0.8s
CUT Chulitna 48.51 35 P **P 12 16 21.2 +0.7**
baz=271
DANN Dangsing 48.52 278 *e*P **P 12 16 22.3 +0.8**
comp=Z,255nm,0.7s
D23K Nanushuk River 48.55 27 P **P 12 16 22.6 +1.9**
baz=265,SNR=12
MDOK Medeo 48.58 299 *e*P **P 12 16 21.5 0.0**
MDOK Medeo 48.58 299 *e*P **P 12 16 21.5 0.0**
baz=299
M22K Willow 48.59 36 P **P 12 16 22.1 +0.9**
baz=272,SNR=10
G23K Bananza Creek 48.65 30 P **P 12 16 23.4 +1.7**
baz=268,SNR=20
C23K Itkillik River 48.66 25 P **P 12 16 23.4 +1.9**
baz=264,SNR=22
AAA Alma-Ata 48.66 299 *e*P **P 12 16 22.2 +0.1**
AAA pmax pmax
comp=Z,24nm,0.5s
AAA Alma-Ata 48.66 299 *e*P **P 12 16 22.2 +0.1**
comp=Z,24nm,0.5s,baz=299
EDFI Ende, Flores 48.70 206 P **P 12 16 23.0 +0.4**
comp=Z,490nmcomp=Z,36nm,0.9s
IPM Ipoh 48.77 239 P **P 12 16 21.7 -1.4**
RC01 Rabbit Creek A 48.81 37 P **P 12 16 23.8 +1.0**
RC01 Rabbit Creek A 48.81 37 P **P 12 16 23.3 +0.5**
baz=273,SNR=24
H23K Yukon River 48.82 31 P **P 12 16 25.3 +2.4**
baz=269,SNR=61
O22K Cooper Landing 48.84 38 P **P 12 16 24.5 +1.4**
baz=273,SNR=12
KUU Kurty 48.89 300 *e*P **P 12 16 22.8 -0.9**
KUU *e*S **S 12 23 23.9 -1.4**
KUU pmax pmax
comp=Z,29nm,0.9s
KUU Kurty 48.89 300 *e*P **P 12 16 22.9 -0.9**
comp=Z,29nm,0.9s,baz=300
KUU *e*S **S 12 23 23.9 -1.4**
baz=300
I23K Minto, Yukon-K 48.89 32 IAmb IAmb 12 16 26.6
comp=Z,36nm,1.1s
I23K Minto, Yukon-K 48.89 32 P **P 12 16 25.2 +1.8**
baz=270,SNR=32
TOLK Toolik Lake Re 48.93 27 P **P 12 16 25.4 +1.7**
TOLK Toolik Lake Re 48.93 27 P **P 12 16 25.0 +1.3**
baz=266,SNR=16
SEW Seward 49.01 38 P **P 12 16 25.0 +0.7**
baz=274,SNR=20
NEA2 Nenana 49.01 32 P **P 12 16 25.7 +1.3**
NEA2 Nenana 49.01 32 P **P 12 16 26.1 +1.7**
baz=270,SNR=73
PMR Palmer 49.07 36 P **P 12 16 25.1 +0.3**
PMR Palmer 49.07 36 P **P 12 16 25.1 +0.3**
PMR pmax pmax
comp=Z,98nm,1.3s
PMR Palmer 49.07 36 P **P 12 16 25.5 +0.7**
baz=273
HNR Honiara 49.08 155 LR LR 12 35 15.0
comp=Z,278nm,21.9s,baz=332,slow=34
MCK McKinley 49.08 34 IAmb IAmb 12 16 27.2
comp=Z,32nm,1.0s
MCK McKinley 49.08 34 P **P 12 16 26.2 +1.2**
baz=271,SNR=12
D24K Happy Valley 49.23 26 P **P 12 16 27.6 +1.6**
baz=267
WAT1 Susitna Watana 49.29 35 P **P 12 16 27.1 +0.6**
baz=272
E24K Your Creek 49.30 28 P **P 12 16 28.5 +1.9**
baz=268,SNR=32
C24K Franklin Bluff 49.31 26 P **P 12 16 28.2 +1.6**

baz=266
MDM **Murphy Dome** 49.37 32 P P 12 16 29.1 +2.0
BATI **Baumata** 49.40 203 P P 12 16 28.4 +0.5
comp=Z,56nm,0.7s,baz=20,slow=1.7,SNR=8.7
comp=Z,56nm,0.7s
BATI **Baumata** 49.40 203 P P 12 16 35.0 +7.1
KNK **Knik Glacier** 49.40 37 IAmb IAmb 12 16 29.6
comp=Z,37nm,0.8s
KNK **Knik Glacier** 49.40 37 P P 12 16 28.5 +1.1
baz=274,SNR=17
WRH **Wood River Hil** 49.44 33 IAmb IAmb 12 18 05.7
comp=Z,30nm,1.0s
SML **Sawmill** 49.44 36 P P 12 16 29.0 +1.2
baz=274,SNR=28
PWL **Port Wells** 49.50 37 P P 12 16 28.9 +0.8
PWL **Port Wells** 49.50 37 P P 12 16 29.0 +0.9
baz=274,SNR=27
H24K **Noodor Dome** 49.51 31 P P 12 16 30.0 +1.8
H24K IAmb IAmb 12 16 30.9
comp=Z,28nm,0.7s
H24K **Noodor Dome** 49.51 31 P P 12 16 30.3 +2.1
baz=270,SNR=31
F24K **Squaw Lake** 49.51 29 P P 12 16 29.9 +1.7
baz=269,SNR=7.2
TCOL **CIGO, UAF Yank** 49.53 32 P P 12 16 29.6 +1.4
TCOL IAmb IAmb 12 16 31.4
comp=Z,39nm,0.9s
TCOL **CIGO, UAF Yank** 49.53 32 P P 12 16 29.7 +1.5
baz=271,SNR=7.2
COLA **College** 49.53 32 P P 12 16 29.9 +1.6
COLA IAmb IAmb 12 16 31.4
comp=Z,37nm,0.8s
COLA **College** 49.53 32*c i* P P 12 16 29.6 +1.3
COLA pmax pmax
comp=Z,26nm,1.1s
COLA **College** 49.53 32 P P 12 16 29.9 +1.6
baz=271
COLA **College** 49.53 32 P P 12 16 29.8 +1.5
CCB **Clear Creek Bu** 49.56 32 IAmb IAmb 12 16 32.2
comp=Z,30nm,1.4s
G24K **Hadweenzic Wh** 49.67 30 P P 12 16 31.6 +2.3
baz=270,SNR=21
TKM2 **Tokmak 2** 49.67 299 P P 12 16 30.7 +0.8
SNR=42
TKM2 **Tokmak 2** 49.67 299 *i* P P 12 16 30.5 +0.5
TKM2 pmax pmax
comp=Z,35nm,0.6s
WAT6 **Susitna Watana** 49.67 35 P P 12 16 30.5 +0.9
baz=273,SNR=21
POKR **Poker Plat Res** 49.70 32 P P 12 16 31.6 +1.9
baz=271,SNR=23
KDU **Kakadu** 49.72 191 P P 12 16 30.2 0.0
M23K **Glacier View** 49.73 36 P P 12 16 30.9 +1.0
baz=274,SNR=28
NRN **Naryn** 49.80 297 IAmb IAmb 12 16 52.4
comp=Z,21nm,0.8s
DHY **Denali Highway** 49.81 34 P P 12 16 31.7 +1.0
baz=273,SNR=17
SCM **Sheep Creek Mo** 49.91 36 P P 12 16 32.8 +1.4
baz=274,SNR=24
BRZS **Berezniki** 49.92 308 *eP* P 12 16 30.4 -1.1
BRZS *eS* S 12 23 38.9 -0.6
BRZS **Berezniki** 49.92 308 *eP* P 12 16 30.4 -1.1
baz=308
BRZS *eS* S 12 23 39.0 -0.6
baz=308
HDA **Harding Lake** 49.94 33 P P 12 16 32.0 +0.6
HDA **Harding Lake** 49.94 33 P P 12 16 32.0 +0.6
baz=272,SNR=44
IL31 49.95 32 P P 12 16 32.1 +0.7
ILAR **Eielson Array** 49.95 32 P P 12 16 32.1 +0.7
comp=Z,40nm,0.8s,baz=269,slow=6.3,SNR=384
comp=Z,40nm,0.8s
ILAR **Eielson Array** 49.95 32 P P 12 16 31.7 +0.2
P23K **Montague Islan** 50.04 38 P P 12 16 33.7 +1.5
baz=276,SNR=9.3
MTN **Manton Dam** 50.09 193 P P 12 16 32.5 -0.6
MTN **Manton Dam** 50.09 193 P P 12 16 33.2 +0.1
GLI **Glacier Island** 50.10 37 P P 12 16 33.8 +1.0
baz=275,SNR=8.1
D25K **Kavik River** 50.11 26 P P 12 16 34.4 +1.7
baz=269,SNR=22
BTLS **Baital** 50.18 302 *eP* P 12 16 32.6 -0.9
BTLS *eS* S 12 23 43.7 +0.5
BTLS **Baital** 50.18 302 *eP* P 12 16 32.7 -0.9
baz=302
BTLS *eS* S 12 23 43.7 +0.5
baz=302
KBK **Karagaybulak** 50.20 299 P P 12 16 34.6 +0.6
SNR=9.5
SGDS **Sogindy** 50.20 300 *eP* P 12 16 33.3 -0.5
SGDS **Sogindy** 50.20 300 *eP* P 12 16 33.4 -0.5
baz=300
CHMS **Chumysh** 50.24 299 P P 12 16 34.3 +0.2
SNR=7.2
CHMS **Chumysh** 50.24 299 *i* P P 12 16 34.0 -0.1
CHMS pmax pmax
comp=Z,28nm,1.1s
PLAI **Plampang** 50.27 211 P P 12 16 34.5 +0.1
COEN **Coen** 50.33 177 P P 12 16 34.0 -0.9
COEN IAmb IAmb 12 16 50.3
comp=Z,34nm,0.8s
H25K **Birch Creek** 50.34 30 P P 12 16 36.8 +2.4
baz=272
USP **Ospenovka** 50.34 299 P P 12 16 35.1 +0.3
SNR=6.8
F25K **Christian Rive** 50.38 28 P P 12 16 37.3 +2.5
baz=271,SNR=15
E25K **Arctic Village** 50.40 28 P P 12 16 37.3 +2.4
baz=271,SNR=14
KSH **Kashi** 50.41 294 P P 12 16 39.4 +3.9
KSH pmax pmax
comp=Z,19nm,0.8s
KSH LR LR
comp=Z,720nm,17.9s
FID **Port Fidalgo** 50.42 37 P P 12 16 35.6 +0.4
FID IAmb IAmb 12 16 37.3
comp=Z,61nm,1.2s
M24K **Tolsona, Glenn** 50.44 36 P P 12 16 36.1 +0.8
M24K **Tolsona, Glenn** 50.44 36 P P 12 16 37.1 +1.8
baz=275,SNR=13
K24K **Donnelly Dome** 50.48 33 P P 12 16 36.5 +0.9
baz=274,SNR=22
PRP **Porcupine Dome** 50.49 31 P P 12 16 35.5 -0.2
PRP IAmb IAmb 12 16 38.4
comp=Z,37nm,0.9s
PRP **Porcupine Dome** 50.49 31 P P 12 16 37.3 +1.6
baz=273,SNR=16
OTUK **Ortayu** 50.52 306 P P 12 16 35.8 -0.3
AAK **Ala-Archa** 50.53 299 P P 12 16 38.4 +2.0
SNR=8.4
AAK **Ala-Archa** 50.53 299 P P 12 16 35.5 -0.9
AAK IAmb IAmb 12 16 43.0
comp=Z,16nm,0.8s
AAK **Ala-Archa** 50.53 299*ce* P P 12 16 36.5 +0.1
AAK pmax pmax
comp=Z,23nm,1.3s
AAK **Ala-Archa** 50.53 299 P P 12 16 36.6 +0.2
FYU **Fort Yukon** 50.56 30 P P 12 16 36.8 +0.7
J25K **Salcha River,** 50.61 32 P P 12 16 36.3 -0.3
J25K **Salcha River,** 50.61 32 P P 12 16 36.5 0.0
baz=274,SNR=13
KLU **Klutina** 50.61 36 P P 12 16 38.3 +1.6
KLU **Klutina** 50.61 36 P P 12 16 38.3 +1.6
baz=276,SNR=31
C26K **Camden Bay** 50.63 25 P P 12 16 39.0 +2.4
baz=270
Q23K **Middleton Isla** 50.63 39 P P 12 16 38.5 +1.8
baz=277
UCH **Uchtor** 50.63 298 P P 12 16 28.3 -9.2
SNR=40
PAX **Paxson** 50.69 34 P P 12 16 38.6 +1.4
baz=275,SNR=16
DIV **Divide** 50.72 37 P P 12 16 39.1 +1.6
BRVK **Borovoye** 50.77 313 P P 12 16 37.8 -0.2
BRVK IAmb IAmb 12 16 40.7
comp=Z,32nm,0.8s
BRVK **Borovoye** 50.77 313*c i* P P 12 16 37.7 -0.2
BRVK pmax pmax
comp=Z,29nm,0.7s
BRVK **Borovoye** 50.77 313 P P 12 16 37.7 -0.2
BMAR **Burnt Mountain** 50.79 29 P P 12 16 40.3 +2.4
EYAK **Cordova Ski Ar** 50.80 38 P P 12 16 39.7 +1.7
EYAK **Cordova Ski Ar** 50.80 38 P P 12 16 40.0 +2.1
baz=277,SNR=18
HARP **HAARP** 50.88 35 P P 12 16 40.4 +1.8
baz=276,SNR=14
RIDG **Independent Ri** 50.90 33 P P 12 16 39.4 +0.6
RIDG IAmb IAmb 12 16 40.0
comp=Z,19nm,0.7s
RIDG **Independent Ri** 50.90 33 P P 12 16 39.5 +0.7
baz=275,SNR=17
F26K **Sheenjek River** 50.95 28 P P 12 16 41.8 +2.8
baz=272,SNR=37
EKS2 **Erkin-Say** 51.03 299 P P 12 16 40.6 +0.5
SNR=7.9
C27K **Jago River** 51.05 26 P P 12 16 41.9 +2.1
baz=271,SNR=14
G26K **Porcupine Rive** 51.12 29 P P 12 16 42.6 +2.3
baz=273,SNR=23
N25K **Chitina, Valde** 51.23 36 P P 12 16 43.0 +1.7
N25K IAmb IAmb 12 16 43.6
comp=Z,16nm,0.7s
N25K **Chitina, Valde** 51.23 36 P P 12 16 42.9 +1.6
baz=277,SNR=14
AML **Almayashu** 51.24 298 P P 12 16 43.1 +1.0
SNR=17
DOT **Dot Lake** 51.26 34 IAmb IAmb 12 16 43.2
comp=Z,28nm,0.8s
SCRK **Sand Creek** 51.26 33 P P 12 16 42.3 +0.7
SCRK **Sand Creek** 51.26 33 P P 12 16 42.4 +0.9
baz=275,SNR=84
BMRM **Bremner River** 51.30 37 P P 12 16 43.5 +1.6
BMRM **Bremner River** 51.30 37 P P 12 16 43.6 +1.8
baz=277,SNR=35
J26L **Joseph Creek** 51.39 32 IAmb IAmb 12 16 44.1
comp=Z,18nm,0.7s
J26L **Joseph Creek** 51.39 32 P P 12 16 42.8 +0.3
baz=275,SNR=30
PSI **Prapat** 51.42 239 P P 12 16 43.5 +0.1
comp=Z,7.2nm,0.6s,baz=36,slow=9.0,SNR=3.2
comp=Z,7.2nm,0.6s
MENT **Menata** 51.48 34 P P 12 16 44.8 +1.7
I26K **Coal Creek Min** 51.49 31 P P 12 16 43.4 +0.2
baz=275,SNR=11
RPSI **Rantau Prapat** 51.50 239 P P 12 16 42.8 -1.0
RPSI IAmb IAmb 12 16 52.4
comp=Z,13nm,0.6s
KAIM **Kayak Island** 51.54 38 P P 12 16 45.6 +2.1
baz=278,SNR=5.6
GLB **Gilahina Butte** 51.62 36 IAmb IAmb 12 16 47.2
comp=Z,49nm,1.3s
L26K **Log Cabin Wild** 51.64 34 P P 12 16 46.4 +2.1
baz=277,SNR=62
SUCK **Suckling Hills** 51.84 38 P P 12 16 46.2 +0.4
E27K **Coleen River** 51.88 28 P P 12 16 48.2 +2.2
baz=274,SNR=22
M26K **Nabesna, AK** 51.88 35 P P 12 16 47.6 +1.5
M26K IAmb IAmb 12 16 49.4
comp=Z,56nm,1.2s
M26K **Nabesna, AK** 51.88 35 P P 12 16 48.1 +2.0
baz=278,SNR=31
G27K **Doyon Strip** 51.97 29 P P 12 16 49.0 +2.2
baz=275,SNR=12
MCARA **McCarthy VSAT** 52.01 36 P P 12 16 48.9 +1.9
baz=278,SNR=19
H27K **Steamboat Moun** 52.08 30 P P 12 16 50.0 +2.5
baz=276
K27K **Chicken** 52.09 33 P P 12 16 49.3 +1.7
baz=277
I27K **Kandik River** 52.10 31 P P 12 16 48.9 +1.1
baz=276
TGL **Tana Glacier** 52.20 37 IAmb IAmb 12 16 51.3
comp=Z,35nm,0.7s
PWJI **Pagerwojo** 52.27 218 P P 12 16 48.6 -0.8
comp=Z,155nm,0.8s
L27K **Beaver Creek,** 52.33 34 P P 12 16 51.5 +2.1
baz=278,SNR=61
BCAR **Beaver Creek A** 52.34 34 P P 12 16 51.3 +1.7
EGAK **Eagle** 52.39 32 P P 12 16 50.5 +0.7
EGAK IAmb IAmb 12 16 51.6
comp=Z,28nm,0.6s
EGAK **Eagle** 52.39 32 P P 12 16 50.7 +0.9
baz=277,SNR=44
M27K **Edge Creek, AK** 52.40 35 P P 12 16 51.9 +1.8
M27K IAmb IAmb 12 16 53.1
comp=Z,50nm,0.9s
M27K **Edge Creek, AK** 52.40 35 P P 12 16 52.1 +1.9
baz=278,SNR=49
ISLE **Juniper Island** 52.46 37 P P 12 16 51.5 +1.0
DZA **Taraz** 52.67 300 *eP* P 12 16 52.0 -0.2
DZA pmax pmax
comp=Z,12nm,0.6s
DZA **Taraz** 52.67 300 *eP* P 12 16 52.1 -0.2
comp=Z,12nm,0.6s,baz=300
MESA **MESA** 52.72 38 P P 12 16 54.2 +1.6
baz=280
BVCY **Beaver Creek** 52.86 35 P P 12 16 55.2 +1.8
baz=279,SNR=36
CTG **Chitna Glacier** 52.88 37 P P 12 16 55.4 +1.7
baz=280,SNR=16
LOGN **Logan Glacier** 53.07 37 IAmb IAmb 12 17 03.5
comp=Z,36nm,1.3s
TABL **Table Mountain** 53.07 37 P P 12 16 54.8 -0.4
TABL IAmb IAmb 12 16 57.4
comp=Z,26nm,0.8s
YUK3 **Moose Creek** 53.16 36 P P 12 16 57.1 +1.4
baz=280,SNR=28
KK31 **Karatay Array** 53.18 300 P P 12 16 55.2 -0.8
KK31 IAmb IAmb 12 17 02.9
comp=Z,57nm,1.2s
KK31 **Karatay Array** 53.18 300 *i* P P 12 16 55.7 -0.3
KKAR **Karatay Array** 53.18 300 P P 12 16 55.4 -0.6
KKAR **Karatay Array** 53.18 300 P P 12 16 55.4 -0.6
DAWY **Dawson** 53.25 33 P P 12 16 56.3 0.0
DAWY IAmb IAmb 12 17 00.2
comp=Z,56nm,1.6s
DAWY **Dawson** 53.25 33 P P 12 16 57.6 +1.4
baz=279,SNR=18
KNRA **Kununurra** 53.31 195 P P 12 16 57.0 -0.1
KNRA **Kununurra** 53.31 195 P P 12 16 57.2 +0.1
GSI **Gunungsitoli** 53.43 239 P P 12 16 58.7 +0.6
LEM **Lembang** 53.44 223 P P 12 16 57.8 -0.5
comp=Z,27nm,0.6s,baz=135,slow=12,SNR=6.1
comp=Z,27nm,0.6s
O28M **Mount Upton** 53.47 37 P P 12 16 59.7 +1.5
baz=281,SNR=8.3
I29M **Ogilvie Camp,** 53.51 31 P P 12 16 59.8 +1.7
baz=279,SNR=81
PCA **Pinnacle** 53.57 38 IAmb IAmb 12 17 01.2
comp=Z,68nm,1.4s
PINM **Pinnacle** 53.57 38 P P 12 17 00.1 +1.4
baz=282
J29M **Klondike Camp** 53.70 32 P P 12 17 01.1 +1.6
baz=280
IUG **Iuzhnay** 53.82 299 *eP* P 12 17 00.7 -0.1
IUG **Iuzhnay** 53.82 299 *eP* P 12 17 00.8 -0.1
baz=299
M29M **Somme Creek** 53.96 35 P P 12 17 03.9 +2.4
baz=281
EPYK **Eagle Plains** 53.98 30 P P 12 17 03.6 +2.1
baz=280,SNR=78
PNL **Peninsula** 54.08 38 P P 12 17 04.1 +1.7
baz=282
YUK4 **Talbot Arm** 54.09 36 P P 12 17 04.7 +2.1
baz=282,SNR=28
YUK6 **Outpost Mounta** 54.31 36 P P 12 17 06.5 +2.3
baz=282,SNR=17
O29M **Mount Kennedy** 54.35 37 P P 12 17 06.9 +2.5
baz=283,SNR=41
NIL **Nilore** 54.57 288 P P 12 17 06.4 +0.1
NIL IAmb IAmb 12 17 09.0
comp=Z,39nm,0.9s
NIL **Nilore** 54.57 288 P P 12 17 06.4 +0.1
NIL pmax pmax
comp=Z,39nm,0.9s
NIL **Nilore** 54.57 288 P P 12 17 06.8 +0.5
M30M **Minto, Yukon** 54.69 34 IAmb IAmb 12 17 09.6
comp=Z,26nm,0.7s
M30M **Minto, Yukon** 54.69 34 P P 12 17 09.0 +2.3
baz=282
GAR **Garm** 54.71 296 P P 12 17 07.1 -0.3
HYT **Haines Junctio** 54.74 36 P P 12 17 09.6 +2.4
HYT **Haines Junctio** 54.74 36 P P 12 17 09.7 +2.4
baz=283,SNR=38
N30M **Aishikik Lake** 54.80 36 P P 12 17 09.5 +1.9
baz=283,SNR=9.4
INK **Inuvik** 54.84 27 P P 12 17 09.0 +1.3
comp=Z,26nm,0.6s,baz=292,slow=6.7,SNR=138
comp=Z,26nm,0.6s
INK **Inuvik** 54.84 27 P P 12 17 08.5 +0.8
INK **Inuvik** 54.84 27 P P 12 17 08.5 +0.8
INK pmax pmax
comp=Z,75nm,1.3s
INK **Inuvik** 54.84 27 P P 12 17 09.1 +1.4
baz=281,SNR=26
MAYO **Mayo, Yukon** 54.87 33 P P 12 17 09.3 +1.3
MAYO **Mayo, Yukon** 54.87 33 P P 12 17 10.1 +2.1
baz=282,SNR=13
P29M **Windy Craggy** 54.91 38 P P 12 17 11.2 +2.8
baz=284,SNR=24
P30M **Million Dollar** 55.17 37 P P 12 17 12.9 +2.6
baz=284
N31M **Braeburn, Yuko** 55.40 35 P P 12 17 14.4 +2.5
baz=284,SNR=28
O30N **Mendenhall** 55.43 36 P P 12 17 14.1 +1.9
baz=284,SNR=15
PLBC **Pleasant Camp** 55.63 38 P P 12 17 15.9 +2.4
baz=285,SNR=27
CHGR **Chuyangaron** 55.68 296 P P 12 17 14.2 -0.2
CHGR **Chuyangaron** 55.68 296 P P 12 17 14.2 -0.2
CHGR pmax pmax
comp=Z,112nm,0.7s
M31M **Drury Creek, Y** 55.86 34 P P 12 17 16.7 +1.5
M31M IAmb IAmb 12 17 18.2
comp=Z,44nm,1.1s
M31M **Drury Creek, Y** 55.86 34 P P 12 17 17.0 +1.8
baz=285,SNR=21
WHY **Whitehorse** 56.03 36 P P 12 17 18.5 +2.0
WHY IAmb IAmb 12 17 19.8
comp=Z,43nm,0.9s
WHY **Whitehorse** 56.03 36 P P 12 17 18.6 +2.0
baz=285,SNR=19
SKAG **Skagway** 56.14 38 P P 12 17 19.5 +2.4
SKAG IAmb IAmb 12 17 20.6
comp=Z,52nm,1.0s
SKAG **Skagway** 56.14 38 P P 12 17 19.5 +2.4
baz=286
FARO **Faro, Yukon** 56.33 34 IAmb IAmb 12 17 21.5
comp=Z,45nm,1.2s
FARO **Faro, Yukon** 56.33 34 P P 12 17 20.2 +1.6
baz=286,SNR=27
FITZ **Fitzroy Crossi** 56.36 198 P P 12 17 19.4 +0.3
comp=Z,6.5nm,0.7s,baz=27,slow=8.6,SNR=12
comp=Z,6.5nm,0.7s
FITZ **Fitzroy Crossi** 56.36 198 P P 12 17 19.4 +0.3
ARU **Arti** 56.55 319 LR LR 12 43 58.4
comp=Z,524nm,18.5s,baz=46,slow=38
ARU **Arti** 56.55 319 P P 12 17 19.9 -0.3
ARU **Arti** 56.55 319*c i* P P 12 17 19.8 -0.3
ARU 12 18 16.2
ARU 12 19 26.8
ARU PPP PPP 12 20 42.8
ARU S S 12 25 11.2 +1.8
ARU SS SS 12 28 52.0 -4.5
ARU pmax pmax
comp=Z,114nm,1.2s
ARU **Arti** 56.55 319 P P 12 17 19.9 -0.3
ARU pP pP 12 17 31.7 +1.8
CTA **Charters Tower** 56.60 174 LR LR 12 41 41.1
comp=Z,197nm,20.4s,baz=350,slow=36
WRAB **Tennant Creek** 56.61 188 *eP* P 12 17 20.1 -0.8
WRAB pmax pmax
comp=Z,33nm,1.3s
WRA **Warramunga Arr** 56.62 188 P P 12 17 19.8 -1.2
comp=Z,18nm,1.0s,baz=2.4,slow=7.4,SNR=23
comp=Z,18nm,1.0s
WRA **Warramunga Arr** 56.62 188 *i* P P 12 17 19.7 -1.2
WRA pmax pmax
comp=Z,12nm,0.7s
N32M **Quiet Lake** 56.75 35 P P 12 17 23.2 +1.7
baz=286
SIT **Sitka** 56.83 40 P P 12 17 24.1 +2.0
baz=287
P32M **Atlin** 56.89 37 P P 12 17 24.8 +2.2
baz=287,SNR=17
JIS **Juneau Island** 56.95 39 P P 12 17 24.0 +1.2
P33M **Teslin, Yukon** 57.14 36 P P 12 17 26.2 +1.8
P33M **Teslin, Yukon** 57.14 36 P P 12 17 26.6 +2.2
baz=287,SNR=46
MMPY **Sheldon Lake,** 57.15 33 P P 12 17 26.5 +2.1
baz=287,SNR=14
KBL **Kabul** 57.39 291 P P 12 17 26.0 -0.7
KBL IAmb IAmb 12 17 28.5
comp=Z,23nm,0.9s
KBL **Kabul** 57.39 291 P P 12 17 26.0 -0.7
KBL pmax pmax
comp=Z,23nm,1.0s
C36M **Paulatuk** 57.89 25 P P 12 17 30.4 +1.1
baz=289,SNR=8.4
HYBB **Hyderabad (bro** 58.01 269 *eP* P 12 17 32.8 +1.8
HYBB *es*P **sP** 12 17 47.3 +2.8
HYBB *e*PcP **PcP** 12 18 23.0 +0.2
HYBB *e*PP **PP** 12 19 40.1 +0.5
HYBB *e*PcS **PcS** 12 22 24.7 +0.1
HYBB *eS* S 12 25 31.3 +1.7
AB31 **Akbulak array** 58.07 310 *i* P P 12 17 30.2 -0.8
ABKAR **Akbulak array** 58.07 310 P P 12 17 30.2 -0.8
R33M **Jennings River** 58.29 37 P P 12 17 35.0 +2.5
baz=289,SNR=19
CRAG **Craig** 58.50 42 P P 12 17 35.9 +2.1
baz=290
WRAK **Wrangell Islan** 58.59 41 P P 12 17 35.3 +0.9
WRAK IAmb IAmb 12 17 37.8
comp=Z,32nm,1.3s
WRAK **Wrangell Islan** 58.59 41 P P 12 17 36.3 +1.9
baz=290
TGTN **Hyland Airport** 58.83 34 P P 12 17 38.4 +2.2
baz=290,SNR=23
DLBC **Dease Lake** 59.07 38 P P 12 17 39.6 +1.7
DLBC IAmb IAmb 12 17 41.6
comp=Z,43nm,1.1s
DLBC **Dease Lake** 59.07 38 P P 12 17 40.3 +2.4
baz=290,SNR=19
T35M **Bob Quinn** 59.47 39 P P 12 17 43.3 +2.6
baz=291,SNR=12
WRGLY **Wrigley** 60.30 31 P P 12 17 48.0 +1.9
baz=293,SNR=11
ASAR **Alice Springs** 60.35 188 P P 12 17 46.2 -0.7
comp=Z,5.1nm,0.7s,baz=8.5,slow=5.8,SNR=23
comp=Z,5.1nm,0.7s
KIRV **Kirov** 60.47 323 LR LR 12 46 18.4
comp=Z,573nm,18.1s,baz=62,slow=38
KIRV **Kirov** 60.47 323*c i* P P 12 17 47.4 0.0
ALE **Alert** 60.54 3 P P 12 17 47.6 0.0
ALE sP **sP** 12 18 03.6 +2.6
SPA0 **Spitsbergen Ar** 60.90 349 *eP* P 12 17 49.3 -0.8
MBWA **Marble Bar** 60.93 203 P P 12 17 51.8 +0.9
MBWA **Marble Bar** 60.93 203 P P 12 17 50.9 0.0
PRGR **Permogore** 61.02 327 *eP* P 12 17 49.8 -1.3
PRGR *e* 12 20 03.7
KBS **Kingsbay** 61.04 350 P P 12 17 51.9 +0.9
KBS IAmb IAmb 12 17 53.2
comp=Z,28nm,0.8s
KBS **Kingsbay** 61.04 350*de* P P 12 17 51.9 +0.9
KBS pmax pmax
comp=Z,27nm,0.9s
KBS **Kingsbay** 61.04 350 *eP* P 12 17 51.9 +0.9
KBS IAmb IAmb 12 17 52.5
comp=Z,30nm,0.9s
PSA00 **Pilbara Seismi** 61.28 203 P P 12 17 52.5 -0.8
PSA00 IAmb IAmb 12 18 08.2
comp=Z,33nm,1.0s
HSPB **Hornsund (broa** 61.82 348 *eP* P 12 17 56.3 +0.1
HSPB IAmb IAmb 12 17 58.7
comp=Z,146nm,1.7s
PALK **Pallekele** 62.10 258 LR LR 12 47 45.9
comp=Z,189nm,19.4s,baz=123,slow=39
EIDS **Eidsvold** 62.35 170 P P 12 18 00.1 -0.3
EIDS IAmb IAmb 12 18 17.9
comp=Z,43nm,1.5s
LVZ **Lovozero** 62.42 336 P P 12 17 59.4 -1.0
LVZ IAmb IAmb 12 18 16.3
comp=Z,52nm,1.5s
LVZ **Lovozero** 62.42 336 *eP* P 12 17 59.7 -0.8
LVZ pmax pmax
comp=Z,17nm,1.2s
LVZ **Lovozero** 62.42 336 P P 12 17 59.7 -0.8
LVZ sP **sP** 12 18 16.1 +2.1
HRA **Herat** 62.52 294 P P 12 18 02.0 +0.1
HRA IAmb IAmb 12 18 04.3
comp=Z,29nm,1.2s
APA **Apatity** 62.99 336 *iP* P 12 18 03.1 -1.1
APA *i* 12 18 21.5
APA *i* S S 12 26 25.0 -7.0
APA *i* SSS SSS 12 33 28.0
APA pmax pmax
comp=Z,10.0nm,0.8s

APA MLR MLR
comp=Z,700nm,24.0s
DZM Mont Dzumac 63.06 154 LR LR 12 44 14.6
comp=Z,266nm,19.8s,baz=11,slow=35
DZM Mont Dzumac 63.06 154 *e*LR LR 12 36 57.0
comp=Z,709nm,25.6s
PCHI Peechi 63.62 263 *e*P **P** **12 18 09.6 +0.4**
KEV Kevo 63.77 339 P **P** **12 18 09.0 -0.3**
KEV IAmb IAmb 12 18 25.4
comp=Z,17nm,1.0s
KEV Kevo 63.77 339 P **P** **12 18 09.0 -0.3**
KEV pmax pmax
comp=Z,17nm,1.0s
KEV Kevo 63.77 339 P **P** **12 18 09.3 -0.1**
KEV *s*P **sP** **12 18 24.6 +1.7**
GEYT Alibeck 63.88 299 P **P** **12 18 10.4 -0.3**
comp=Z,5.0nm,0.6s,baz=6.6,slow=3.9,SNR=8.0
comp=Z,5.0nm,0.6s
GEYT Alibeck 63.88 299 P **P** **12 18 10.2 -0.5**
GEYT IAmb IAmb 12 18 37.7
comp=Z,19nm,1.0s
GYA0B ALIBECK ARRAY 63.88 299 P **P** **12 18 10.6 -0.1**
GYA0B IAmb IAmb 12 18 20.8
comp=Z,17nm,0.8s
BELG Belogornoye 63.98 317*c i*P **P** **12 18 10.4 -0.6**
BELG pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 64.01 328 *e*P **P** **12 18 08.9 -2.2**
KLMR *e* 12 20 30.3
KLMR pmax pmax
comp=Z,18nm,0.7s
KLMR Klimovskoe 64.01 328 *e*P **P** **12 18 08.9 -2.2**
KLMR AMP 12 18 11.2
comp=Z,18nm,0.7s
KLMR *e*PP **PP** **12 20 30.4 -1.2**
YKA Yellowknife Ar 64.26 30 P **P** **12 18 13.2 +0.5**
comp=Z,10nm,0.8s,baz=295,slow=6.5,SNR=13
YKA PcP **PcP** **12 18 47.9 +0.7**
comp=Z,2.1nm,0.6s,baz=298,slow=3.9,SNR=4.5
comp=Z,10nm,0.8s
MSVF Nonsavu 64.30 141 P **P** **12 18 14.5 +1.0**
comp=Z,11nm,1.0s,baz=205,slow=9.4,SNR=3.9
comp=Z,11nm,1.0s
MSVF Nonsavu 64.30 141 P **P** **12 18 14.5 +1.0**
MSVF IAmb IAmb 12 18 38.0
comp=Z,47nm,1.4s
ARA0 ARCESS Array S 64.32 339 *e*P **P** **12 18 13.3 +0.2**
ARA0 IAmb IAmb 12 18 13.4
comp=Z,18nm,1.0s
ARCES ARCESS Array B 64.32 339 P **P** **12 18 13.1 0.0**
comp=Z,4.4nm,0.5s,baz=56,slow=8.1,SNR=90
ARCES LR LR 12 49 52.3
comp=Z,334nm,19.1s,baz=58,slow=39
comp=Z,4.4nm,0.5s
ARCES ARCESS Array B 64.32 339 P **P** **12 18 12.9 -0.1**
KTK1 Kautokeino 65.28 339 *e*P **P** **12 18 19.5 +0.2**
KTK1 IAmb IAmb 12 18 19.7
comp=Z,12nm,0.7s
JETT Jettan, Norway 65.71 341 *e*P **P** **12 18 22.0 0.0**
JETT IAmb IAmb 12 18 22.4
comp=Z,20nm,1.1s
TRO Tromso 66.05 341 *e*P **P** **12 18 23.9 -0.2**
TRO IAmb IAmb 12 18 25.1
comp=Z,11nm,0.6s
DAG Danmarks Havn 66.18 355 *i*P **P** **12 18 24.6 -0.3**
DAG IAmb IAmb 12 18 25.2
comp=Z,26nm,0.8s
AFI Afiamalu 67.01 129 LR LR 12 40 41.5
comp=Z,197nm,21.6s,baz=341,slow=30
NLWA Neilton Lookou 67.14 47 IAmb IAmb 12 18 34.8
comp=Z,29nm,1.1s
VALR Valaam 67.30 331*c i*P **P** **12 18 31.7 -0.6**
VALR pmax pmax
comp=Z,42nm,0.9s
ARMA Armidale 67.40 170 P **P** **12 18 33.2 -0.1**
ARMA IAmb IAmb 12 18 34.7
comp=Z,23nm,1.1s
MOS Moscow 67.48 323 *e*P **P** **12 18 31.0 -2.5**
MOS *e*S **S** **12 27 23.7 -3.6**
MOS pmax pmax
comp=Z,38nm,0.8s
MOS MLR MLR
comp=Z,600nm,20.0s
E03A Lebam 67.74 48 P **P** **12 18 35.1 -0.1**
E03A IAmb IAmb 12 18 59.8
comp=Z,24nm,0.8s
VRH Novokhopyorsk 67.77 318 *e*P **P** **12 18 33.9 -1.5**
VRH pmax pmax
comp=Z,70nm,1.8s
STKA Stephens Creek 68.14 180 P **P** **12 18 37.5 -0.2**
comp=Z,5.5nm,0.5s,baz=337,slow=9.0,SNR=8.0
comp=Z,5.5nm,0.5s
STKA Stephens Creek 68.14 180 P **P** **12 18 37.7 -0.1**
FORT Forrest 68.16 192 P **P** **12 18 37.7 -0.2**
STEI Steigen 68.20 341 *e*P **P** **12 18 37.5 -0.3**
STEI IAmb IAmb 12 18 38.0
comp=Z,15nm,0.7s
OBN Obninsk 68.32 323 LR LR 12 50 44.7
comp=Z,77nm,19.0s,baz=41,slow=38
OBN Obninsk 68.32 323 *i*P **P** **12 18 38.7 -0.1**
OBN *i* 12 19 04.9
OBN *i* 12 21 08.6
OBN pmax pmax
comp=Z,17nm,1.1s
D05A Enumclaw 68.34 47 P **P** **12 18 39.0 -0.1**
LPSR Galich'ya Gora 68.50 320 *e*P **P** **12 18 39.0 -1.0**
LPSR pmax pmax
comp=Z,20nm,0.8s
MAK Makhachkala 68.57 308 *e*P **P** **12 18 39.4 -1.2**
MAK *e* 12 21 07.3
MAK *e*S **S** **12 27 40.7 0.0**
MAK pmax pmax
comp=Z,346nm,1.6s
MAK MLR MLR
comp=Z,380nm,17.0s
FAUS Fauske 68.58 340 *e*P **P** **12 18 40.2 0.0**
FAUS IAmb IAmb 12 18 40.5
comp=Z,20nm,0.8s
G03D McMinnville, O 68.59 49 P **P** **12 18 42.4 +1.7**
baz=301
F04A Amboy 68.73 48 IAmb IAmb 12 18 43.6
comp=Z,23nm,0.8s
I02E Swisshome, OR 68.80 50 P **P** **12 18 43.7 +1.8**
baz=301
VORR Voronezh 68.86 319 *e*P **P** **12 18 42.2 0.0**
VORR pmax pmax
comp=Z,80nm,0.5s
LTY Liberty 69.08 46 P **P** **12 18 44.4 +0.6**
FIA1 FINESS Array S 69.10 332 P **P** **12 18 43.0 -0.5**
FIA1 IAmb IAmb 12 18 47.2
comp=Z,32nm,0.8s
FINES FINESS Array B 69.10 332 P **P** **12 18 43.2 -0.3**
comp=Z,25nm,0.7s,baz=55,slow=7.7,SNR=64
FINES LR LR 12 51 23.3
comp=Z,409nm,18.2s,baz=64,slow=38
comp=Z,25nm,0.7s
VSR Storozhevoye 69.13 319 *e*P **P** **12 18 42.9 -1.0**
VSR pmax pmax
comp=Z,30nm,1.7s
J01E Myrtle Point 69.23 51 P **P** **12 18 46.4 +1.8**
baz=301
H04D Lebanon 69.27 50 P **P** **12 18 46.6 +1.7**
baz=301
I03D Drain, OR 69.32 51 P **P** **12 18 47.2 +1.9**
baz=301
HOOD Mount Hood Mea 69.51 48 IAmb IAmb 12 18 49.2
comp=Z,68nm,1.4s
H04A Detroit Lake 69.52 49 IAmb IAmb 12 18 48.5
comp=Z,16nm,0.9s
K02D Willamette Mer 69.64 52 P **P** **12 18 48.7 +1.3**
baz=301
MOR8 Moi Rana 69.69 340 *e*P **P** **12 18 45.9 -1.3**
MOR8 IAmb IAmb 12 18 46.2
comp=Z,25nm,0.7s
G05D Wamic, OR 69.75 48 P **P** **12 18 49.4 +1.5**
baz=302
EDM Edmonton 69.79 38 P **P** **12 18 47.7 -0.4**
EDM IAmb IAmb 12 18 49.7
comp=Z,45nm,1.0s
EDM Edmonton 69.79 38 P **P** **12 18 47.7 -0.4**
EDM pmax pmax
comp=Z,45nm,1.0s
I04A Tendick Farm, 69.85 50 P **P** **12 18 50.1 +1.5**
baz=302
L02F Cave Junction 70.00 52 P **P** **12 18 51.1 +1.7**
baz=302

C09A Chrisman Ranch 70.16 45 IAmb IAmb 12 18 52.0
comp=Z,13nm,0.7s
D08A Wollman Farm, 70.20 46 P **P** **12 18 50.7 +0.1**
HAWA Hanford 70.20 47 P **P** **12 18 51.9 +1.3**
HAWA IAmb IAmb 12 18 53.0
comp=Z,25nm,1.4s
I05D Terrebonne, OR 70.22 49 P **P** **12 18 52.1 +1.3**
baz=302
F07A Phinny Hill Vi 70.23 47 IAmb IAmb 12 18 53.4
comp=Z,18nm,0.9s
GOF Gofitskoye 70.23 312⇑*e*P **P** **12 18 50.1 -0.8**
J04D Umpqua Nationa 70.33 50 P **P** **12 18 52.6 +0.9**
J04D IAmb IAmb 12 18 58.1
comp=Z,31nm,1.1s
J04D Umpqua Nationa 70.33 50 P **P** **12 18 53.4 +1.6**
baz=302
E08A Dider Farm, El 70.42 46 IAmb IAmb 12 18 54.1
comp=Z,69nm,1.8s
NEW Newport 70.56 44 P **P** **12 18 53.8 +1.0**
baz=303
VSU Vasula 70.72 330*d i*P **P** **12 18 53.8 +0.3**
VSU pmax pmax
comp=Z,69nm,0.9s
VSU Vasula 70.72 330 *e*P **P** **12 18 53.6 +0.1**
L04D Klamath Falls 70.75 51 P **P** **12 18 53.7 -0.6**
L04D IAmb IAmb 12 18 56.9
comp=Z,35nm,1.1s
L04D Klamath Falls 70.75 51 P **P** **12 18 55.8 +1.6**
baz=302,SNR=6.0
YBH Yreka Blue Hor 70.75 52 P **P** **12 18 53.6 -0.5**
YBH Yreka Blue Hor 70.75 52 P **P** **12 18 53.7 -0.5**
YBH pmax pmax
comp=Z,9.0nm,1.0s
PINE Pine Mountain 70.75 49 IAmb IAmb 12 18 57.3
comp=Z,27nm,0.9s
J05D Fort Rock, OR 70.84 50 P **P** **12 18 56.8 +1.9**
baz=302,SNR=11
K04D Chiloquin, OR 70.87 51 P **P** **12 18 56.4 +1.4**
baz=302
ZEI Tsey 70.92 309 *e*P **P** **12 18 55.6 +0.2**
ZEI pmax pmax
comp=Z,8.0nm,0.5s
E09A Wood Farm, Sta 70.94 46 P **P** **12 18 56.2 +1.0**
E09A IAmb IAmb 12 18 57.5
comp=Z,37nm,1.4s
RAF Rauma 70.96 333 *e*P **P** **12 18 54.7 -0.2**
KBZ Khabaz 71.04 311 P **P** **12 18 56.1 +0.4**
comp=Z,7.0nm,0.8s,baz=52,slow=2.4,SNR=16
comp=Z,7.0nm,0.8s
KBZ Khabaz 71.04 311*c i*P **P** **12 18 55.2 -0.5**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KBZ MLR MLR
comp=Z,338nm,18.0s
KIV Kislovodsk 71.04 311 P **P** **12 18 54.9 -1.0**
KIV IAmb IAmb 12 19 09.6
comp=Z,27nm,0.7s
KIV Kislovodsk 71.04 311 *e*P **P** **12 18 55.7 -0.2**
KIV pmax pmax
comp=Z,33nm,1.0s
SUMG Summit 71.10 360 P **P** **12 18 56.1 -0.1**
SUMG IAmb IAmb 12 18 58.2
comp=Z,40nm,1.0s
SUMG Summit 71.10 360 P **P** **12 18 56.1 -0.1**
SUMG pmax pmax
comp=Z,40nm,1.0s
SUMG Summit 71.10 360 *e*P **P** **12 18 57.2 +1.1**
SUMG IAmb IAmb 12 18 57.9
comp=Z,37nm,1.0s
G08A Pilot Rock 71.13 47 P **P** **12 18 57.5 +1.0**
ONI Oni 71.31 309 P **P** **12 18 57.2 -0.3**
ONI IAmb IAmb 12 19 21.1
comp=Z,40nm,1.4s
ONI Oni 71.31 309 P **P** **12 18 57.2 -0.3**
ONI pmax pmax
comp=Z,40nm,1.4s
K05A Summer Lake 71.35 50 P **P** **12 18 58.7 +0.7**
K05A IAmb IAmb 12 19 16.4
comp=Z,43nm,1.2s
I07A Izee 71.47 49 P **P** **12 18 58.4 -0.1**
NSS Namsos 71.61 339 *e*P **P** **12 18 58.4 -0.5**
NSS IAmb IAmb 12 18 58.7
comp=Z,21nm,1.1s
GNI Garni 71.81 307 P **P** **12 18 59.5 -1.2**
GNI IAmb IAmb 12 19 17.6
comp=Z,33nm,1.0s
GNI Garni 71.81 307⇑*e*P **P** **12 19 01.9 +1.2**
GNI pmax pmax
comp=Z,20nm,1.1s
WALA Waterton Lakes 71.87 42 P **P** **12 19 00.7 -0.2**
WALA IAmb IAmb 12 19 03.2
comp=Z,53nm,1.6s
MOD Modoc Plateau 72.17 51 P **P** **12 19 03.8 +1.0**
GDXM Geysers 72.26 55 P **P** **12 19 04.0 +0.7**
BMO Blue Mountains 72.35 47 P **P** **12 19 03.4 -0.4**
BMO Blue Mountains 72.35 47 P **P** **12 19 03.4 -0.4**
BMO pmax pmax
comp=Z,11nm,0.9s
JTMT Jette 72.43 43 P **P** **12 19 03.7 -0.6**
JTMT IAmb IAmb 12 19 23.6
comp=Z,23nm,1.0s
J08A Circle Bar Ran 72.49 49 P **P** **12 19 05.7 +1.1**
ORV Oroville 72.70 53 P **P** **12 19 05.9 +0.1**
ORV Oroville 72.70 53 P **P** **12 19 05.9 +0.1**
ORV pmax pmax
comp=Z,8.0nm,0.8s
MNK Minsk 72.74 326 *i*P **P** **12 19 06.1 +0.3**
MNK *i* 12 21 48.0
MNK *i* PPP PPP 12 23 32.6
MNK *i* S **S** **12 28 30.1 +1.2**
MNK *i* SS **SS** **12 33 11.2 +3.3**
MNK pmax pmax
comp=Z,25nm,0.7s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=Z,340nm,16.0s
MNK MLR MLR
comp=E,52nm,16.0s
MNK Minsk 72.74 326 *i*P **P** **12 19 06.1 +0.3**
comp=E,3.0nm,0.9s
MNK *i*P **P** **12 19 06.1 +0.3**
MNK *i*P **P** **12 19 06.1 +0.3**
comp=Z,25nm,0.7s,baz=231
MNK *i* PP **PP** **12 21 48.0 +0.8**
MNK *i* PPP PPP 12 23 32.7
MNK *i* S **S** **12 28 30.1 +1.2**
MNK *i* SS **SS** **12 33 11.2 +3.3**
MNK *i* SSS SSS 12 36 32.2
MNK *i* LQ LQ 12 46 13.2
MNK *i* LR LR 12 51 45.7
MNK *i* LRM MLR 12 54 10.8
comp=Z,340nm,16.4s
MNK *i* LRM MLR 12 54 12.1
MNK *i* LRM MLR 12 54 25.7
comp=E,52nm,16.4s
WVOR Wild Horse Val 72.91 50 P **P** **12 19 08.1 +0.9**
WVOR Wild Horse Val 72.91 50 P **P** **12 19 08.1 +0.9**
WVOR pmax pmax
comp=Z,26nm,1.6s
NACGM Naroch 72.97 327⇓*e*P **P** **12 19 07.5 +0.4**
baz=50
PLID Pearl Lake 72.98 46 P **P** **12 19 07.4 -0.3**
SOC Sochi 73.04 312 *e*P **P** **12 19 05.6 -2.2**
SOC *e* 12 21 45.3
SOC *e*PPP PPP 12 23 28.7
SOC *e*S **S** **12 28 30.8 -1.9**
SOC *e* 12 29 08.3
SOC MLR MLR
comp=Z,229nm,20.0s
BCA Borcka 73.08 309⇑P **P** **12 19 07.2 -0.8**
MSO Missoula 73.15 44 P **P** **12 19 08.5 0.0**
MSO Missoula 73.15 44 P **P** **12 19 09.2 +0.7**
baz=306,SNR=10
BEKR Beckworth 73.26 53 P **P** **12 19 10.2 +0.8**
ANN Anapa 73.69 314 *e*P **P** **12 19 09.3 -2.2**
ANN pmax pmax
comp=Z,32nm,0.8s
MPK Martis Peak 73.79 53 P **P** **12 19 13.7 +1.1**
MPK IAmb IAmb 12 19 15.1
comp=Z,38nm,1.3s
PABE Paberze 73.80 328 P **P** **12 19 12.3 +0.3**
PABE IAmb IAmb 12 19 13.1
comp=Z,56nm,1.0s
PABE Paberze 73.80 328 *e*P **P** **12 19 11.9 0.0**

PAHR Pah Rah Range 73.97 52 P **P** **12 19 14.1 +0.6**
VCNR Virginia City 74.03 53 P **P** **12 19 14.9 +0.9**
MFID Camas Ranch 74.04 48 P **P** **12 19 14.8 +0.9**
ILULI Ilulissat 74.09 5 IAmb IAmb 12 19 15.1
comp=Z,56nm,1.4s
PNTR Pine Nut 74.18 53 P **P** **12 19 15.6 +0.7**
CMB Columbia Colle 74.26 54 P **P** **12 19 16.2 +1.1**
CMB IAmb IAmb 12 19 17.4
comp=Z,29nm,1.4s
CMB Columbia Colle 74.26 54 P **P** **12 19 16.2 +1.1**
CMB pmax pmax
comp=Z,29nm,1.4s
NC405 NORSAR Array S 74.29 337 P **P** **12 19 14.9 +0.1**
NC303 NORSAR Array S 74.31 337 P **P** **12 19 15.0 +0.1**
NC303 IAmb IAmb 12 19 16.1
comp=Z,49nm,1.5s
NC303 NORSAR Array S 74.31 337 *e*P **P** **12 19 15.0 +0.1**
NC303 IAmb IAmb 12 19 15.9
comp=Z,51nm,1.5s
DOMB Dombas 74.37 339 *e*P **P** **12 19 15.5 +0.2**
DOMB IAmb IAmb 12 19 15.6
comp=Z,16nm,0.8s
MOL Molde 74.38 340 *e*P **P** **12 19 15.2 -0.1**
MOL IAmb IAmb 12 19 15.8
comp=Z,11nm,0.9s
HFS Hagfors 74.39 336 LR LR 12 54 28.0
comp=Z,698nm,20.4s,baz=56,slow=38
NC204 NORSAR Array S 74.46 338 P **P** **12 19 16.0 +0.2**
YERR Yerington 74.47 53 P **P** **12 19 17.0 +0.5**
YERR IAmb IAmb 12 19 18.9
comp=Z,25nm,1.1s
NB201 NORSAR Array S 74.47 337 P **P** **12 19 15.9 0.0**
NB201 NORSAR Array S 74.47 337 *e*P **P** **12 19 15.8 0.0**
NB201 IAmb IAmb 12 19 16.2
comp=Z,26nm,0.8s
NB2 NORSAR Subarra 74.50 337 P **P** **12 19 15.7 -0.4**
comp=Z,55nm,1.2s,baz=40,slow=6.2
NB2 NORSAR Subarra 74.50 337 P **P** **12 19 15.7 -0.4**
baz=40,slow=6.2
NOA NORSAR Array B 74.50 337 P **P** **12 19 15.8 -0.2**
comp=Z,11nm,0.8s,baz=39,slow=5.8,SNR=67
NOA LR LR 12 55 13.4
comp=Z,479nm,19.2s,baz=35,slow=38
comp=Z,11nm,0.8s
AKASG Malin Array Be 74.52 322 P **P** **12 19 15.6 -0.6**
comp=Z,10nm,0.6s,baz=46,slow=6.1,SNR=46
AKASG LR LR 12 54 53.1
comp=Z,560nm,18.9s,baz=74,slow=38
comp=Z,10nm,0.6s
AKASG Malin Array Be 74.52 322 IAmb IAmb 12 19 36.3
comp=Z,43nm,1.9s
AKASG Malin Array Be 74.52 322 *i*P **P** **12 19 15.6 -0.6**
AKASG pmax pmax
comp=Z,12nm,0.6s
AKBB Malin Array Si 74.52 322 P **P** **12 19 15.7 -0.6**
AKBB IAmb IAmb 12 19 28.6
comp=Z,23nm,0.8s
AKBB Malin Array Si 74.52 322*c i*P **P** **12 19 15.4 -0.9**
LRM Limekiln Ridge 74.58 44 P **P** **12 19 18.2 +1.2**
ICESG Greenland Ices 74.61 0 *e*P **P** **12 19 17.8 +0.9**
ICESG IAmb IAmb 12 19 18.1
comp=Z,26nm,0.7s
NC602 NORSAR Array S 74.63 337 P **P** **12 19 16.6 -0.2**
NBO00 NORSAR Array S 74.64 337 P **P** **12 19 16.7 -0.1**
NBO00 IAmb IAmb 12 19 17.4
comp=Z,41nm,0.9s
BBGB Big Mountain B 74.65 56 P **P** **12 19 18.2 +0.7**
BBGB IAmb IAmb 12 19 42.1
comp=Z,27nm,1.0s
EGMT Eagleton 74.71 41 IAmb IAmb 12 19 19.6
comp=Z,54nm,1.2s
EGMT Eagleton 74.71 41 P **P** **12 19 18.4 +0.8**
baz=308,SNR=18
NAO01 NORSAR Array S 74.75 337 P **P** **12 19 16.6 -0.9**
NAO01 IAmb IAmb 12 19 17.8
comp=Z,30nm,1.0s
HLID Hailey 74.79 47 P **P** **12 19 19.6 +1.4**
baz=306,SNR=10
AKN Aaknes 74.85 340 *e*P **P** **12 19 18.7 +0.6**
BMN Battle Mountai 74.92 51 P **P** **12 19 20.3 +1.3**
BMN IAmb IAmb 12 19 21.7
comp=Z,27nm,1.3s
BMN Battle Mountai 74.92 51 P **P** **12 19 20.3 +1.3**
BMN pmax pmax
comp=Z,27nm,1.3s
RYN Ryan 75.13 53 P **P** **12 19 21.6 +1.3**
KVN Kaiserville 75.16 52 P **P** **12 19 21.8 +1.3**
KVN IAmb IAmb 12 19 22.9
comp=Z,31nm,1.2s
KVN Kaiserville 75.16 52 P **P** **12 19 21.8 +1.3**
KVN pmax pmax
comp=Z,31nm,1.2s
BOZ Bozeman (W) 75.17 44 P **P** **12 19 21.5 +1.1**
BOZ IAmb IAmb 12 19 22.0
comp=Z,18nm,0.7s
BOZ Bozeman (W) 75.17 44 P **P** **12 19 21.5 +1.1**
BOZ pmax pmax
comp=Z,18nm,0.7s
BOZ Bozeman (W) 75.17 44 P **P** **12 19 21.4 +1.1**
baz=307,SNR=38
LHV Little Huntoon 75.36 53 P **P** **12 19 23.4 +2.0**
LHV IAmb IAmb 12 19 24.5
comp=Z,46nm,1.3s
NVAR Mina Array Bea 75.39 53 P **P** **12 19 23.2 +1.3**
comp=Z,8.1nm,0.7s,baz=296,slow=5.6,SNR=73
comp=Z,8.1nm,0.7s
OMMB Old Mammoth Mi 75.41 54 P **P** **12 19 23.4 +1.3**
NV11 Mina Array Sit 75.48 53 P **P** **12 19 23.6 +1.3**
SIM Simferopol' 75.50 315 *e*P **P** **12 19 21.4 -0.7**
SIM pmax pmax
comp=Z,25nm,0.9s
MLAC Mammoth, Mammo 75.50 54 P **P** **12 19 24.1 +1.5**
baz=305
OSL Oslo 75.51 337 *e*P **P** **12 19 22.0 +0.2**
OSL IAmb IAmb 12 19 22.4
comp=Z,89nm,0.2s
PAGB Antelope Grade 75.66 56 IAmb IAmb 12 19 25.7
comp=Z,29nm,1.2s
QLMT Earthquake Lak 75.75 44 P **P** **12 19 24.6 +0.8**
FOO Floro 75.87 340 *e*P **P** **12 19 24.2 +0.4**
FOO IAmb IAmb 12 19 24.2
comp=Z,14nm,0.9s
HYA Hoyanger 75.90 339 *e*P **P** **12 19 24.5 +0.5**
HYA IAmb IAmb 12 19 25.0
comp=Z,23nm,0.9s
ELK Elko 75.96 50 P **P** **12 19 25.6 +0.5**
ELK Elko 75.96 50 P **P** **12 19 25.6 +0.5**
ELK pmax pmax
comp=Z,8.0nm,0.9s
MARD Mardin 75.96 306 P **P** **12 19 25.1 +0.1**
MARD IAmb IAmb 12 19 45.2
comp=Z,20nm,0.7s
KONO Kongsberg 76.09 337⇑*e*P **P** **12 19 24.5 -0.7**
KONO pmax pmax
comp=Z,6.0nm,1.0s
KONO Kongsberg 76.09 337 *e*P **P** **12 19 25.2 0.0**
KONO IAmb IAmb 12 19 25.5
comp=Z,8.2nm,1.1s
GCMT Greycliff 76.14 43 P **P** **12 19 27.2 +1.3**
DSP Deep Springs 76.22 54 P **P** **12 19 27.8 +1.6**
TIN Tinemaha, Big 76.23 54 P **P** **12 19 27.7 +1.2**
baz=306
YNR Norris Junctio 76.24 44 IAmb IAmb 12 19 32.1
comp=Z,37nm,1.6s
TPH Tonopah 76.29 53 P **P** **12 19 27.8 +0.9**
TPH Tonopah 76.29 53 P **P** **12 19 27.8 +0.9**
TPH pmax pmax
comp=Z,114nm,1.2s
VES Vestal, Richgr 76.37 55 P **P** **12 19 27.2 0.0**
baz=306,SNR=6.3
SUE Sulen 76.39 340 *e*P **P** **12 19 27.0 +0.2**
SUE IAmb IAmb 12 19 28.8
comp=Z,29nm,1.4s
MZP Montezuma Peak 76.40 53 P **P** **12 19 28.2 +0.5**
PKM Mcpherson Peak 76.43 57 P **P** **12 19 29.2 +1.4**
baz=305,SNR=8.7
H17A Grant Village 76.50 44 P **P** **12 19 31.1 +3.0**
baz=308,SNR=6.6
LCH Last Change Ra 76.50 54 P **P** **12 19 28.8 +0.7**
SORM Soroca 76.60 321⇓P **P** **12 19 26.9 -1.4**
IMW Indian Meadow 76.60 45 P **P** **12 19 30.6 +1.8**
IMW IAmb IAmb 12 19 31.7
comp=Z,29nm,1.2s
FLWY Flagg Ranch 76.62 45 IAmb IAmb 12 19 32.2
comp=Z,21nm,0.9s

BCW Bitter Crk WRg 76.67 56 P P 12 19 30.3 +1.2
BCW IAmb IAmb 12 19 31.6
comp=Z,14nm,0.7s
CWC Cottonwood Cre 76.68 55 P P 12 19 30.1 +0.9
baz=306
FXWY Fox Creek 76.71 45 P P 12 19 30.9 +1.6
ASK Askoy 76.74 339 *eP* P 12 19 28.9 +0.2
ASK IAmb IAmb 12 19 29.9
comp=Z,253nm,2.0s
SBC Santa Barbara 76.75 57 P P 12 19 30.9 +1.5
baz=306
RLMT Red Lodge 76.78 43 P P 12 19 30.7 +1.1
RLMT IAmb IAmb 12 19 32.3
comp=Z,57nm,1.6s
RLMT Red Lodge 76.78 43 P P 12 19 31.1 +1.5
baz=309,SNR=15
BER Bergen 76.78 339 *eP* P 12 19 29.2 +0.2
BER IAmb IAmb 12 19 29.5
comp=Z,18nm,1.0s
ODD1 Odda 76.79 338 *eP* P 12 19 29.7 +0.5
ODD1 IAmb IAmb 12 19 29.7
comp=Z,18nm,1.0s
MOOW Moose Ponds 76.80 45 IAmb IAmb 12 19 32.8
comp=Z,31nm,1.5s
GRAC Grapevine Rang 76.83 54 IAmb IAmb 12 19 31.7
comp=Z,14nm,0.7s
GRAC Grapevine Rang 76.83 54 P P 12 19 31.3 +1.5
baz=306
HVU Hansel Valley 76.83 48 P P 12 19 31.5 +1.6
HVU Hansel Valley 76.83 48 P P 12 19 31.5 +1.6
HVU pmax pmax
comp=Z,11nm,0.8s
DIKM Dikmen 76.84 312 ⇑P P 12 19 29.9 +0.2
TPAW Teton Pass 76.84 45 P P 12 19 30.9 +0.8
TPAW IAmb IAmb 12 19 31.9
comp=Z,39nm,1.5s
ISA Isabella, Lake 76.88 55 P P 12 19 30.1 -0.1
ISA Isabella, Lake 76.88 55 P P 12 19 30.1 -0.1
ISA pmax pmax
comp=Z,15nm,1.5s
ISA Isabella, Lake 76.88 55 P P 12 19 30.2 -0.1
baz=306,SNR=5.2
LOHW Long Hollow 76.97 45 P P 12 19 31.5 +0.8
REDW Red Top Meadow 76.98 45 P P 12 19 31.9 +1.1
REDW IAmb IAmb 12 19 33.6
comp=Z,21nm,1.2s
SCZ2 Santa Cruz Isl 77.07 57 P P 12 19 32.3 +1.1
baz=306
DY2G Dye2 77.08 3 *i* P P 12 19 31.6 +0.7
DY2G IAmb IAmb 12 19 32.6
comp=Z,82nm,1.2s
R11A Troy Canyon, C 77.17 52 IAmb IAmb 12 19 34.3
comp=Z,30nm,1.4s
R11A Troy Canyon, C 77.17 52 P P 12 19 33.0 +1.1
baz=307
BGU Big Grassy Mou 77.19 48 P P 12 19 33.0 +1.0
FRB Frobisher Bay 77.22 13 LR LR 12 56 07.6
comp=Z,438nm,20.1s,baz=338,slow=38
BLS5 Blasjo 77.24 338 *eP* P 12 19 32.0 +0.4
BLS5 IAmb IAmb 12 19 32.8
comp=Z,30nm,1.3s
DGMT Dagmar 77.28 38 IAmb IAmb 12 19 33.9
comp=Z,60nm,1.2s
DGMT Dagmar 77.28 38 P P 12 19 32.8 +0.6
baz=312
DGMT Dagmar 77.28 38 P P 12 19 32.7 +0.6
baz=312,SNR=5.9
MPMC Manual Prospec 77.29 55 P P 12 19 34.0 +1.3
baz=306,SNR=20
LAO LASA Array 77.41 41 IAmb IAmb 12 19 35.3
comp=Z,53nm,1.2s
LAO LASA Array 77.41 41 P P 12 19 34.2 +1.2
baz=311
LAO LASA Array 77.41 41 P P 12 19 34.2 +1.2
baz=311,SNR=5.7
FURC Furnace Creek, 77.46 54 P P 12 19 34.2 +0.9
baz=306,SNR=12
CCAC Calif City Air 77.48 56 IAmb IAmb 12 19 35.1
comp=Z,15nm,0.8s
LRMC Laurel Mtn Rad 77.51 55 P P 12 19 34.3 +0.5
baz=306,SNR=9.7
HOMB Homborsund 77.53 337 *eP* P 12 19 33.3 0.0
HOMB IAmb IAmb 12 19 35.9
comp=Z,12nm,0.5s
SPR3 Spring Creek 3 77.56 51 P P 12 19 36.0 +1.7
SPR3 IAmb IAmb 12 19 52.1
comp=Z,26nm,1.5s
SNCC San Nicolas Is 77.57 58 P P 12 19 35.0 +1.0
baz=306
TPNV Topopah Spring 77.57 53 P P 12 19 35.2 +1.0
baz=307,SNR=25
LVV L'vov 77.61 324 *eP* P 12 19 33.8 -0.1
HWUT Hardware Ranch 77.65 47 IAmb IAmb 12 19 37.1
comp=Z,27nm,1.2s
EDW2 Edwards Air Fo 77.65 56 P P 12 19 35.6 +1.1
baz=306,SNR=12
GWY Greenwater Val 77.75 54 IAmb IAmb 12 19 37.3
comp=Z,49nm,1.6s
QSM Queen of Sheba 77.75 54 IAmb IAmb 12 19 37.2
comp=Z,49nm,1.4s
DUG Dugway, Tooele 77.77 49 IAmb IAmb 12 19 37.7
comp=Z,27nm,1.1s
DUG Dugway, Tooele 77.77 49 P P 12 19 36.4 +1.2
baz=308
SNART Snartemo 77.89 337 *eP* P 12 19 35.6 +0.4
SNART IAmb IAmb 12 19 59.2
comp=Z,104nm,1.4s
BORG Borgarnes 78.04 352 P P 12 19 36.5 +0.5
BORG IAmb IAmb 12 19 54.5
comp=Z,30nm,0.8s
BORG Borgarnes 78.04 352 P P 12 19 36.5 +0.5
BORG pmax pmax
comp=Z,30nm,0.9s
TCUT Toone Canyon 78.05 47 IAmb IAmb 12 19 38.7
comp=Z,15nm,0.7s
BW06 Boulder Array 78.09 45 P P 12 19 37.5 +0.5
BW06 Boulder Array 78.09 45 P P 12 19 37.4 +0.4
baz=309,SNR=16
PD31 Pinedale Array 78.09 45 P P 12 19 37.7 +0.6
PDAR Pinedale Array 78.09 45 P P 12 19 37.6 +0.6
comp=Z,6.3nm,0.6s,baz=268,slow=2.6,SNR=55
comp=Z,6.3nm,0.6s
PDAR Pinedale Array 78.09 45 P P 12 19 37.5 +0.4
ILGA Ilgaz 78.12 313 IAmb IAmb 12 19 58.3
comp=Z,43nm,0.9s
PSUT Pine Spring 78.14 51 P P 12 19 38.3 +0.9
SHOC Shoshone, Teco 78.18 54 P P 12 19 38.3 +0.9
baz=307
GSC Goldstone, Bar 78.19 55 P P 12 19 36.9 -0.6
GSC Goldstone, Bar 78.19 55 P P 12 19 36.9 -0.6
GSC pmax pmax
comp=Z,11nm,1.3s
GSC Goldstone, Bar 78.19 55 P P 12 19 38.4 +0.9
baz=307,SNR=6.1
VLDR Vladesti 78.23 319 ⇓P P 12 19 37.5 +0.1
CIS Catalina Islan 78.24 57 P P 12 19 38.3 +0.5
baz=306
BFSC Mount Baldy Ra 78.25 56 P P 12 19 38.4 +0.4
baz=306
JLU Jordanelle 78.34 48 P P 12 19 39.6 +1.1
KWP Kalwaria Pacla 78.36 324 *eP* P 12 19 38.6 +0.5
BUR08 Bucovina Ar. S 78.51 322 P P 12 19 38.9 -0.2
BURAR Bucovina Array 78.53 322 ⇓P P 12 19 39.4 +0.2
BURAR Bucovina Array 78.53 322 P P 12 19 39.0 -0.1
BURAR Bucovina Array 78.53 322 P P 12 19 39.4 +0.2
BIZ Bicaz 78.53 321 ⇑P P 12 19 39.2 +0.1
TESR Tescani 78.54 320 ⇑P P 12 19 39.0 -0.2
MPU Maple Canyon 78.59 48 P P 12 19 41.0 +1.2
MPU IAmb IAmb 12 19 42.2
comp=Z,30nm,1.3s
CFR Carcaliu 78.64 318 ⇑P P 12 19 39.2 -0.5
TUQ Turquoise Moun 78.69 54 P P 12 19 41.2 +0.9
baz=307,SNR=7.9
TPGR Topolog 78.70 318 ⇑P P 12 19 39.9 -0.1
BBRC Big Bear Solar 78.73 56 P P 12 19 41.7 +1.0
baz=307
HEC Hector,Ludlow 78.78 55 P P 12 19 41.3 +0.6
baz=307
VRI Vrincioaia 78.93 320 ⇑P P 12 19 41.4 +0.1
MURC Murrieta 78.94 56 P P 12 19 42.4 +0.8
baz=307
PLOR Plostina 78.98 320 ⇑P P 12 19 41.9 +0.3
BR131 Keskin Array S 78.99 311 P P 12 19 41.9 -0.1
BR131 Keskin Array S 78.99 311 *deP* P 12 19 42.0 +0.1
BRTR Keskin Array B 78.99 311 P P 12 19 42.5 +0.6
comp=Z,4.8nm,0.8s,baz=110,slow=4.1,SNR=11
comp=Z,4.8nm,0.8s
BRTR Keskin Array B 78.99 311 P P 12 19 41.5 -0.4
BRTR Keskin Array B 78.99 311 *i* P P 12 19 45.0 +3.1
BRTR pmax pmax
comp=Z,5.0nm,0.8s
NUUK Nuuk 79.02 6 *i* P P 12 19 42.4 +1.0
NUUK IAmb IAmb 12 19 43.1
comp=Z,61nm,1.3s
CCUT Cedar City 79.05 51 P P 12 19 43.8 +1.4
MVU Manysvale 79.18 50 P P 12 19 44.1 +1.0
COVR Voineasa-Covas 79.21 320 ⇑P P 12 19 43.1 +0.2
GMRC Granite Mounta 79.25 55 P P 12 19 44.0 +0.6
baz=307,SNR=11
UZH Uzhgorod 79.25 324 ⇑*iP* P 12 19 42.4 -0.6
UZH *i* 12 19 51.4
UZH *e* 12 19 57.3
OZUR 79.26 320 ⇑P P 12 19 43.8 +0.7
OJC Ojcow 79.28 326 *eP* P 12 19 42.7 -0.5
OJC Ojcow 79.28 326 IAmb IAmb 12 20 03.0
comp=Z,36nm,1.2s
109C Camp Elliot, M 79.42 57 P P 12 19 44.9 +0.7
baz=307
PFO Pinyon Flats O 79.43 56 P P 12 19 44.0 -0.4
PFO Pinyon Flats O 79.43 56⇑ *eP* P 12 19 44.7 +0.3
PFO pmax pmax
comp=Z,14nm,1.0s
PFO Pinyon Flats O 79.43 56 P P 12 19 45.2 +0.8
baz=307,SNR=6.8
TPFO Pinon Flats 79.43 56 P P 12 19 44.9 +0.5
baz=307,SNR=8.2
LCMT Little Creek M 79.45 52 P P 12 19 45.2 +0.7
CRVS Cervenica-Dubn 79.46 324 *eP* P 12 19 44.5 +0.4
CRVS Cervenica-Dubn 79.46 324 *eP* P 12 19 44.5 +0.4
PMD Palm Desert 79.46 56 P P 12 19 44.5 +0.1
PMD IAmb IAmb 12 19 46.0
comp=Z,11nm,1.2s
P17A Butcher Ranch, 79.47 48 P P 12 19 45.8 +1.2
P17A IAmb IAmb 12 19 46.9
comp=Z,70nm,1.4s
RDMU Red Mountain 79.47 47 IAmb IAmb 12 19 46.5
comp=Z,26nm,0.7s
BELC Belle Mtn. Jos 79.50 55 P P 12 19 45.3 +0.5
baz=307,SNR=5.3
DOPR Dopca 79.55 320 ⇓P P 12 19 45.6 +0.9
Q16A Castle Valley 79.56 49 P P 12 19 46.4 +1.3
Q16A IAmb IAmb 12 19 47.8
comp=Z,59nm,1.8s
MLR Muntele Rosu 79.59 320 ⇓P P 12 19 46.0 +0.9
MLR Muntele Rosu 79.59 320 LR LR 12 58 20.9
comp=Z,723nm,18.1s,baz=48,slow=38
MLR Muntele Rosu 79.59 320 P P 12 19 45.7 +0.6
MLR Muntele Rosu 79.59 320 P P 12 19 45.7 +0.6
MLR pmax pmax
comp=Z,11nm,1.1s
NIE Niedzica 79.63 325 *eP* P 12 19 45.8 +0.7
P18A Preston Nutter 79.67 48 P P 12 19 47.1 +1.2
P18A IAmb IAmb 12 19 48.4
comp=Z,15nm,0.7s
KNB Kanab 79.72 51 IAmb IAmb 12 19 48.8
comp=Z,46nm,1.4s
PKCU Pink Cliffs 79.77 51 P P 12 19 45.7 -0.8
SRU San Rafael Swe 79.83 49 IAmb IAmb 12 19 48.1
comp=Z,25nm,0.6s
K22A Casper 79.88 44 P P 12 19 45.7 -1.1
K22A IAmb IAmb 12 19 53.1
comp=Z,24nm,1.2s
K22A Casper 79.88 44 P P 12 19 47.2 +0.5
baz=311
K22A Casper 79.88 44 P P 12 19 47.1 +0.3
baz=311
MONP2 Monument Peak 79.88 57 P P 12 19 47.5 +0.5
baz=307
ULM Lac du Bonnet 79.95 33 P P 12 19 46.8 0.0
comp=Z,9.3nm,0.5s,baz=324,slow=6.1,SNR=14
comp=Z,9.3nm,0.5s
ULM Lac du Bonnet 79.95 33 *ceP* P 12 19 46.6 -0.2
MDND Maddock 79.96 37 P P 12 19 47.3 +0.4
baz=315
IRM Iron Mountain 79.97 55 P P 12 19 47.8 +0.6
baz=308,SNR=8.0
RAR Rarotonga 80.06 126 LR LR 12 50 18.4
comp=Z,370nm,19.2s,baz=308,slow=32
BC3 Big Chuckawall 80.07 55 P P 12 19 48.6 +0.7
baz=308,SNR=6.9
VOIR 80.09 320 ⇑P P 12 19 47.9 +0.2
RWWY Rawlins 80.12 45 IAmb IAmb 12 19 49.9
comp=Z,31nm,1.4s
LANS Liptovska Anna 80.20 325 *eP* P 12 19 49.3 +1.1
LANS Liptovska Anna 80.20 325 *eP* P 12 19 49.3 +1.1
W13A Hualapai Mount 80.22 54 P P 12 19 46.9 -1.8
IKP In-Ko-Pah, Jac 80.24 57 P P 12 19 49.4 +0.6
baz=307
RSSD Black Hills 80.27 42 P P 12 19 47.6 -1.3
RSSD Black Hills 80.27 42 P P 12 19 47.6 -1.3
RSSD pmax pmax
comp=Z,10.0nm,0.6s
RSSD Black Hills 80.27 42 P P 12 19 49.3 +0.4
baz=312
RSSD Black Hills 80.27 42 P P 12 19 49.2 +0.4
baz=312
SWSC Sam W. Stewart 80.27 56 P P 12 19 49.4 +0.6
baz=308
RMX La Rumorosa 80.29 57 P P 12 19 49.4 +0.2
RMX IAmb IAmb 12 19 51.2
comp=Z,31nm,1.4s
OKC Ostrava-Krasne 80.30 327 AMS AMS 12 57 00.0
comp=Z,300nm,21.6s
E28A Huff 80.31 38 IAmb IAmb 12 19 50.3
comp=Z,100nm,1.7s
E28A Huff 80.31 38 P P 12 19 49.4 +0.6
baz=314
DRGR 80.33 322 ⇑P P 12 19 48.7 -0.3
ARR Arges 80.35 320 ⇓P P 12 19 50.3 +1.2
KSP Ksiaz 80.36 328 *eP* P 12 19 49.4 +0.4
YUH Yuha Desert 80.36 57 P P 12 19 49.0 -0.3
U15A North Rim 80.41 52 P P 12 19 50.0 +0.1
O20A White River Ci 80.53 47 P P 12 19 50.2 -0.2
O20A IAmb IAmb 12 19 52.2
comp=Z,21nm,1.1s
O20A White River Ci 80.53 47 P P 12 19 50.7 +0.4
baz=310
PDMCI Parker Dam,Lak 80.54 54 P P 12 19 51.0 +0.8
baz=308,SNR=11
OSTC Ostas 80.61 328 *eP* P 12 19 51.6 +1.3
MORC Moravsky Berou 80.61 327 ⇑P P 12 19 50.4 0.0
MORC Moravsky Berou 80.61 327 P P 12 19 49.7 -0.7
MORC Moravsky Berou 80.61 327 P P 12 19 49.7 -0.7
MORC pmax pmax
comp=Z,15nm,1.0s
MORC Moravsky Berou 80.61 327 *eP* P 12 19 50.3 -0.1
BLYC Blythe 80.62 55 P P 12 19 50.1 -0.6
RAYN Ar Rayn 80.64 292 P P 12 19 50.1 -0.9
RAYN Ar Rayn 80.64 292 P P 12 19 50.2 -0.9
RAYN pmax pmax
comp=Z,16nm,0.9s
DPC Dobruska-Polom 80.72 328 *eP* P 12 19 51.4 +0.5
DPC Dobruska-Polom 80.72 328 *eP* P 12 19 51.4 +0.5
KRLC Kraliky 80.72 327 *eP* P 12 19 51.2 +0.2
KRLC Kraliky 80.72 327 *eP* P 12 19 51.2 +0.2
BORA Eskisehir 80.79 313 P P 12 19 51.2 -0.4
GLA Glamis 80.85 56 P P 12 19 52.6 +0.6
GLA IAmb IAmb 12 19 53.6
comp=Z,14nm,0.7s
GLA Glamis 80.85 56 P P 12 19 52.6 +0.6
GLA pmax pmax
comp=Z,14nm,0.7s
GLA Glamis 80.85 56 P P 12 19 52.9 +0.9
baz=308,SNR=5.6
PSZ Piszkesteto 80.89 324 ⇑P P 12 19 52.2 +0.2
PSZ Piszkesteto 80.89 324 P P 12 19 52.3 +0.4
PSZ IAmb IAmb 12 20 10.2
comp=Z,27nm,1.1s
PSZ Piszkesteto 80.89 324 P P 12 19 52.3 +0.4
PSZ pmax pmax
comp=Z,27nm,1.1s
PSZ Piszkesteto 80.89 324 P P 12 19 52.0 0.0
VYHS Vyhne 80.97 325 *eP* P 12 19 52.6 +0.3
VYHS Vyhne 80.97 325 *eP* P 12 19 52.6 +0.3
PV23 Carpenter Ridg 81.16 48 P P 12 19 55.1 +1.3
SIRR Siria 81.22 322 ⇑P P 12 19 54.1 +0.4
JAVC Velka Javorina 81.23 326 *eP* P 12 19 55.0 +1.3
GZR Gura Zlata 81.28 321 ⇓P P 12 19 53.7 -0.4
BRG Berggiesshubel 81.32 329 *eP* P 12 19 54.1 0.0
BRG Amp 12 19 55.2
comp=Z,12nm,1.0s
BRG *ex* x 12 20 02.7
BRG Amp 12 20 03.4
comp=Z,15nm,1.2s
BRG Berggiesshubel 81.32 329 *eP* P 12 19 54.0 0.0
BRG *e* 12 20 02.7
BRG pmax pmax
comp=Z,12nm,1.0s
BRG pmax pmax
comp=Z,15nm,1.2s
PVCC Panska Ves 81.32 329 AMS AMS 12 58 30.0
comp=Z,400nm,18.5s
PV11 David Mesa, Pa 81.34 48 IAmb IAmb 12 19 57.6
comp=Z,31nm,0.9s
N23A Red Feather La 81.36 45 IAmb IAmb 12 19 57.3
comp=Z,33nm,1.2s
N23A Red Feather La 81.36 45 P P 12 19 56.3 +1.4
baz=312
CLL Collm 81.37 330 IAmb IAmb 12 20 08.1
comp=Z,23nm,0.9s
CLL Collm 81.37 330⇑ *iP* P 12 19 54.0 -0.3
CLL *e*PP* sP 12 20 07.0 -1.0
CLL pmax pmax
comp=Z,17nm,0.8s
CLL Collm 81.37 330⇑ *iP* P 12 19 54.0 -0.3
comp=Z,17nm,0.8s
CLL *e*PcP PcP 12 20 00.0 -0.4
CLL *e*pP sP 12 20 07.0 -1.0
comp=Z,25nm,1.0s
CLL *es*P pP 12 20 13.0 +8.6
CLL *ex* x 12 20 32.0
CLL *e*PP PP 12 23 00.0 +0.4
VRAC Vranov 81.37 327 LR LR 12 58 21.2
comp=Z,305nm,21.5s,baz=39,slow=37
VRAC Vranov 81.37 327 *eP* P 12 19 54.6 +0.2
AGMN Agassiz Nation 81.39 35 P P 12 19 54.2 -0.3
AGMN Agassiz Nation 81.39 35 P P 12 19 54.1 -0.4
baz=317
AGMN Agassiz Nation 81.39 35 P P 12 19 54.3 -0.3
baz=317,SNR=6.4
PV13 Radium Mtn., P 81.46 49 P P 12 19 56.2 +0.8
PV13 IAmb IAmb 12 19 57.6
comp=Z,68nm,1.3s
WUAZ Wupatki 81.56 52 P P 12 19 56.0 +0.1
WUAZ Wupatki 81.56 52 P P 12 19 57.2 +1.3
baz=309,SNR=14
KRUC Moravsky 81.64 327 *eP* P 12 19 55.9 +0.1
BZS Buzias 81.70 322 ⇑P P 12 19 55.8 -0.4
PRU Pruhonice 81.74 328 *eP* P 12 19 56.5 +0.2
PRU Pruhonice 81.74 328 *eP* P 12 19 56.5 +0.2
IVI Ivigtut 82.23 5 IAmb IAmb 12 20 00.0
comp=Z,18nm,1.0s
IVI Ivigtut 82.23 5 *i* P P 12 19 58.9 +0.3
IVI IAmb IAmb 12 19 59.3
comp=Z,16nm,0.9s
MDVR Moldovita 82.24 321 ⇓P P 12 19 58.7 -0.4
MVCO Mesa Verde 82.27 49 P P 12 20 00.8 +1.1
baz=311,SNR=10
ISCO Idaho Springs 82.28 46 P P 12 19 59.2 -0.6
ISCO Idaho Springs 82.28 46 P P 12 19 59.2 -0.6
ISCO pmax pmax
comp=Z,7.0nm,0.7s
ISCO Idaho Springs 82.28 46 P P 12 20 00.1 +0.4
baz=312
ISCO Idaho Springs 82.28 46 P P 12 20 00.7 +0.9
baz=312,SNR=9.8
B35A Bob, Littlefor 82.30 33 P P 12 19 59.1 -0.2
B35A IAmb IAmb 12 20 00.4
comp=Z,45nm,1.4s
B35A Bob, Littlefor 82.30 33 P P 12 19 59.0 -0.3
baz=318
MPLH Magyarpolny 82.53 325 P P 12 20 01.9 +1.4
BLKB Belogradchik 82.57 320 ⇑P P 12 20 01.0 +0.1
SUSD Miller 82.68 39 IAmb IAmb 12 20 02.1
comp=Z,28nm,0.7s
SUSD Miller 82.68 39 P P 12 20 01.4 0.0
baz=315
RONA Rosalia, Austr 82.70 326 *eP* P 12 20 01.9 +0.4
comp=Z,14nm,1.2s,SNR=8.3
MORH Mrgy, Hungar 82.71 324 ⇑P P 12 20 01.1 -0.4
MORH Mrgy, Hungar 82.71 324 P P 12 20 01.0 -0.5
CONA Conrad Observa 82.73 326 *eP* P 12 20 01.8 +0.2
comp=Z,9.9nm,1.2s,SNR=8.6
CKRC Cesky Krumlov 82.73 328 *eP* P 12 20 01.7 +0.1
RDO Rodhopi 82.75 317 IAmb IAmb 12 20 03.1
comp=Z,21nm,1.2s
KHC Kasperske Hory 82.80 328 *eP* P 12 20 00.6 -1.4
KHC *e* 12 20 10.9
KHC *e* 12 20 19.0
KHC MLR MLR
comp=Z,500nm,19.8s
KHC Kasperske Hory 82.80 328 *eP* P 12 20 00.6 -1.4
KHC *epP* pP 12 20 10.9 -1.2
KHC *ex* x 12 20 19.0
KHC *ex* x 12 20 42.5
KHC AMS AMS 12 59 40.0
comp=Z,500nm,19.8s
W18A Petrified Fore 82.85 51 P P 12 20 02.3 -0.3
baz=310
214A Organ Pipe Nat 82.86 55 P P 12 20 03.3 +0.7
baz=309
FRGS Fruska Gora 82.92 323 ⇑P P 12 20 01.5 -1.1
S22A 4UR Ranch, Cre 82.92 48 IAmb IAmb 12 20 05.9
comp=Z,29nm,1.6s
S22A 4UR Ranch, Cre 82.92 48 P P 12 20 04.6 +1.4
baz=311,SNR=15
GERES GERESS Array B 82.97 328 P P 12 20 02.5 -0.4
comp=Z,3.3nm,0.7s,baz=40,slow=5.2,SNR=30
comp=Z,3.3nm,0.7s
GERES GERESS Array B 82.97 328 P P 12 20 02.4 -0.5
VTS Vitosha 82.98 319 ⇑P P 12 20 03.3 +0.2
F33A 5 Mile Ranch, 82.98 36 P P 12 20 02.9 0.0
F33A IAmb IAmb 12 20 04.3
comp=Z,39nm,1.2s
F33A 5 Mile Ranch, 82.98 36 P P 12 20 02.9 0.0
baz=317
BOVS Bovan 83.06 320 ⇑P P 12 20 02.2 -1.1
Q24A Divide 83.10 46 P P 12 20 04.7 +0.6
baz=312
ARSA Arzberg 83.39 326 *eP* P 12 20 04.9 -0.1
comp=Z,11nm,1.4s
MOA Molln 83.49 327 *eP* P 12 20 05.3 -0.2
comp=Z,9.6nm,1.0s,SNR=6.4
OGNE Ogallala 83.51 43 P P 12 20 06.2 +0.3
baz=314
OGNE Ogallala 83.51 43 P P 12 20 05.7 -0.1
baz=314
EYMN Ely 83.59 33 P P 12 20 06.0 -0.1
EYMN IAmb IAmb 12 20 07.1
comp=Z,31nm,1.1s
EYMN Ely 83.59 33 P P 12 20 06.0 -0.1
baz=320,SNR=16
EYMN Ely 83.59 33 P P 12 20 05.8 -0.2
baz=320
DIVS Divibare 83.59 322 P P 12 20 05.8 -0.4
DIVS IAmb IAmb 12 20 07.2
comp=Z,42nm,1.8s
SDCO Great Sand Dun 83.71 47 P P 12 20 08.1 +0.9
baz=312
SDCO Great Sand Dun 83.71 47 P P 12 20 08.0 +0.9
baz=312,SNR=19
BIOA Bad Ischl, Aus 83.88 327 *eP* P 12 20 07.4 -0.2
comp=Z,6.4nm,0.7s,SNR=5.8
TUC Tucson 83.97 54 P P 12 20 08.3 0.0
TUC Tucson 83.97 54 P P 12 20 08.4 0.0
TUC pmax pmax
comp=Z,21nm,1.6s
TUC Tucson 83.97 54 P P 12 20 08.8 +0.5
baz=310
PERS Pernice 84.03 326 *iP* P 12 20 08.0 -0.4
SOKA Soboth 84.04 326 *eP* P 12 20 08.1 -0.3
comp=Z,12nm,1.0s,SNR=11
K31A O'Neill 84.08 40 P P 12 20 08.3 -0.3
PMOR Pomariorio Ree 84.18 113 *eT* T 13 52 41.7
comp=Z,21nm,0.2s
ECSD EROS Data Cent 84.36 38 P P 12 20 10.1 +0.1
ECSD IAmb IAmb 12 20 10.6
comp=Z,12nm,0.8s
ECSD EROS Data Cent 84.36 38 P P 12 20 10.1 +0.1
baz=317
ECSD EROS Data Cent 84.36 38 P P 12 20 09.9 -0.1
baz=317,SNR=12
KBA Koelnbreinsper 84.48 327 *eP* P 12 20 11.0 +0.2
comp=Z,6.2nm,0.8s,SNR=5.2
KSCO Kaye Shedlock' 84.51 45 P P 12 20 11.2 +0.1
baz=314
BTNL Ternell 84.58 333 *dP* P 12 20 10.1 -0.9

E38A	The Farm, Brul	84.59	33	P		P		12 20 10.8	-0.3
E38A	comp=Z,51nm,1.3s			IAmb		IAmb		12 20 11.9	
E38A	The Farm, Brul	84.59	33	P		P		12 20 11.0	-0.1
	baz=320,SNR=11								
MEM	Membach	84.60	333	*d*P		P		12 20 11.0	0.0
PPT	Papeete	84.61	116	LR		LR		12 51 04.7	
	comp=Z,284nm,21.3s,baz=310,slow=31								
PPT2	Papeete2	84.63	116	*e*LR		LR		12 46 56.7	
	comp=Z,705nm,24.8s								
PPT2	Papeete2	84.63	116	*e*T		T		13 53 17.6	
	comp=Z,4.1nm,0.3s								
LJU	Ljubljana	84.75	326	*e*P		P		12 20 10.8	-1.1
T25A	Trinidad	84.76	47	P		P		12 20 12.3	-0.1
T25A				IAmb		IAmb		12 20 14.5	
	comp=Z,18nm,0.8s								
T25A	Trinidad	84.76	47	P		P		12 20 13.5	+1.0
	baz=313,SNR=17								
TIAR	Tiarei	84.77	116	*e*T		T		13 53 35.2	
	comp=Z,1.2nm,0.2s								
BHOU	Houvegnez	84.81	333	*d*P		P		12 20 11.5	-0.7
PRED	Cave del Predi	84.87	327	P		P		12 20 11.7	-1.0
PRED				IAmb		IAmb		12 20 29.8	
	comp=Z,41nm,1.9s								
ANMO	Albuquerque	85.00	50	P		P		12 20 13.5	-0.1
ANMO	Albuquerque	85.00	50	P		P		12 20 13.5	-0.1
ANMO				pmax		pmax			
	comp=Z,12nm,1.1s								
ANMO	Albuquerque	85.00	50	P		P		12 20 14.6	+1.0
	baz=312								
ANMO	Albuquerque	85.00	50	P		P		12 20 14.7	+1.0
	baz=312								
BCLA	Clavier	85.01	333	*d*P		P		12 20 12.3	-0.9
SPMN	Marine on St.	85.08	35	IAmb		IAmb		12 20 14.7	
	comp=Z,27nm,1.4s								
SPMN	Marine on St.	85.08	35	P		P		12 20 13.6	0.0
	baz=319								
ABTA	Abfaltersbach	85.10	327	*e*P		P		12 20 12.3	-1.5
	comp=Z,4.6nm,0.9s								
CLUD	Cludinico	85.16	327	IAmb		IAmb		12 20 26.5	
	comp=Z,20nm,0.9s								
PDG	Podgorica	85.17	321	⇑P		P		12 20 12.4	-1.6
MOTA	Moosalm	85.23	329	*e*P		P		12 20 13.8	-0.7
	comp=Z,6.3nm,1.1s								
RCHB	Rochefort	85.26	333	*d*P		P		12 20 14.1	-0.3
BGNE	Belgrade	85.26	40	P		P		12 20 14.5	-0.2
	baz=316								
RETA	Reutte	85.26	329	*e*P		P		12 20 14.2	-0.4
	comp=Z,15nm,1.1s								
BMRD	Maredsous	85.30	334	*d*P		P		12 20 14.3	-0.3
BMRD				*d*PcP		PcP		12 20 17.1	-0.6
Y22A	Socorro	85.35	51	P		P		12 20 16.1	+0.7
	baz=312								
STAL	STALIGIAL	85.39	327	IAmb		IAmb		12 20 28.6	
	comp=Z,13nm,0.7s								
CIMO	Cimolais	85.47	327	P		P		12 20 13.6	-2.0
CIMO				IAmb		IAmb		12 21 23.3	
	comp=Z,6.4nm,1.0s								
DOU	Dourbes	85.53	334	*d*P		P		12 20 15.4	-0.3
BFO	Black Forest	85.58	331	P		P		12 20 15.4	-0.6
BFO				IAmb		IAmb		12 20 29.9	
	comp=Z,19nm,0.9s								
BFO	Black Forest	85.58	331	P		P		12 20 15.5	-0.6
BFO				pmax		pmax			
	comp=Z,19nm,0.9s								
FETA	Feichten	85.65	329	*e*P		P		12 20 15.9	-0.7
	comp=Z,3.5nm,1.0s								
121A	Cookes Peak, D	85.76	52	IAmb		IAmb		12 20 34.9	
	comp=Z,13nm,1.1s								
L34A	Svendsen Farm,	85.77	39	P		P		12 20 17.1	-0.1
L34A				IAmb		IAmb		12 20 18.2	
	comp=Z,34nm,1.1s								
DAVA	Damuels	85.79	329	*e*P		P		12 20 16.8	-0.5
	comp=Z,9.8nm,0.8s,SNR=5.0								
SCHQ	Schefferville	85.79	16	P		P		12 20 17.4	+0.5
	comp=Z,14nm,0.6s,baz=352,slow=5.0,SNR=23								
	comp=Z,14nm,0.6s								
SCHQ	Schefferville	85.79	16	IAmb		IAmb		12 20 18.3	
	comp=Z,18nm,0.8s								
COWI	Conover	86.04	32	IAmb		IAmb		12 20 19.6	
	comp=Z,24nm,1.4s								
ECH	Echery	86.13	331	IAmb		IAmb		12 20 32.5	
	comp=Z,15nm,0.9s								
DAVOX	Davos/Dischmat	86.19	329	LR		LR		13 02 27.0	
	comp=Z,532nm,18.1s,baz=84,slow=38								
G40A	Rib Lake	86.22	34	IAmb		IAmb		12 20 20.5	
	comp=Z,25nm,1.2s								
G40A	Rib Lake	86.22	34	P		P		12 20 19.6	+0.2
	baz=321,SNR=8.5								
TAOE	Nuku Hiva Isla	86.25	104	*e*T		T		13 55 30.8	
	comp=Z,12nm,0.2s								
CBKS	Cedar Bluff	86.26	43	P		P		12 20 19.1	-0.6
	baz=315								
E43A	Lone Tree Farm	86.73	31	P		P		12 20 21.6	-0.1
E43A				IAmb		IAmb		12 20 22.3	
	comp=Z,17nm,0.9s								
E43A	Lone Tree Farm	86.73	31	P		P		12 20 22.0	+0.3
	baz=323								
ITM	Ithomi	87.52	316	P		P		12 20 24.7	-1.1
ITM				IAmb		IAmb		12 20 34.7	
	comp=Z,22nm,0.7s								
KSU1	Kansas State U	87.75	41	P		P		12 20 26.4	-0.4
KSU1	Kansas State U	87.75	41	P		P		12 20 27.0	+0.2
	baz=317								
KSU1	Kansas State U	87.75	41	P		P		12 20 26.8	0.0
	baz=317								
MATE	Matera	87.78	321	⇑P		P		12 20 25.3	-1.6
E46A	Sault Ste Mari	87.83	30	P		P		12 20 27.0	-0.1
E46A	Sault Ste Mari	87.83	30	P		P		12 20 27.7	+0.6
	baz=325								
MNTX	Cornudas Mount	87.84	52	P		P		12 20 27.5	+0.1
MNTX				IAmb		IAmb		12 20 44.3	
	comp=Z,18nm,1.8s								
MNTX	Cornudas Mount	87.84	52	P		P		12 20 28.0	+0.6
	baz=313								
MNTX	Cornudas Mount	87.84	52	P		P		12 20 27.8	+0.4
	baz=313								
NRCA	Norcia	87.86	325	P		P		12 20 26.5	-0.9
NRCA				IAmb		IAmb		12 20 44.5	
	comp=Z,44nm,1.5s								
I42A	Draeger Farm,	87.87	34	P		P		12 20 27.0	-0.2
I42A				IAmb		IAmb		12 20 28.0	
	comp=Z,12nm,0.6s								
I42A	Draeger Farm,	87.87	34	P		P		12 20 27.1	-0.2
	baz=322								
MSTX	Muleshoe	87.90	48	P		P		12 20 27.7	-0.1
	baz=314								
MSTX	Muleshoe	87.90	48	P		P		12 20 27.7	-0.1
	baz=314								
AMTX	Amarillo	87.91	47	IAmb		IAmb		12 20 29.1	
	comp=Z,13nm,0.7s								
AMTX	Amarillo	87.91	47	P		P		12 20 29.0	+1.2
	baz=314								
AMTX	Amarillo	87.91	47	P		P		12 20 28.2	+0.4
	baz=314								
JFWS	Jewell Farm	88.03	35	P		P		12 20 27.6	-0.4
JFWS				IAmb		IAmb		12 20 38.9	
	comp=Z,13nm,0.5s								
JFWS	Jewell Farm	88.03	35	P		P		12 20 27.7	-0.4
JFWS				pmax		pmax			
	comp=Z,13nm,0.5s								
JFWS	Jewell Farm	88.03	35	P		P		12 20 27.9	-0.2
	baz=321								
L40A	Anamosa	88.23	36	IAmb		IAmb		12 20 29.9	
	comp=Z,25nm,1.1s								
ELIS	Ellis County	88.39	45	IAmb		IAmb		12 20 31.4	
	comp=Z,16nm,0.7s								
TBI	Tubuai	88.47	121	*e*T		T		13 58 12.8	
	comp=Z,35nm,0.3s								
TIP	Timpagrande	88.85	320	⇑P		P		12 20 30.3	-1.8
VLDQ	Val d'Or	88.88	25	P		P		12 20 30.3	-1.7
P38A	Dawn	88.95	39	IAmb		IAmb		12 20 34.0	
	comp=Z,35nm,1.6s								
P38A	Dawn	88.95	39	P		P		12 20 32.9	+0.3
	baz=319,SNR=5.7								
GLMI	Grayling	88.97	31	P		P		12 20 32.6	+0.1
	baz=325								
L42A	Oliver, Polo	89.01	35	P		P		12 20 32.6	-0.1
	baz=322								
T35B	Sooner Cattle	89.40	43	P		P		12 20 35.0	+0.4
	baz=317								
WMOK	Wichita Mounta	89.70	45	P		P		12 20 35.7	-0.5
WMOK				IAmb		IAmb		12 20 37.6	
	comp=Z,40nm,1.9s								
WMOK	Wichita Mounta	89.70	45	P		P		12 20 35.7	-0.5
WMOK				pmax		pmax			
	comp=Z,40nm,1.9s								
WMOK	Wichita Mounta	89.70	45	P		P		12 20 36.3	+0.1
	baz=316								
WMOK	Wichita Mounta	89.70	45	P		P		12 20 36.4	+0.3
	baz=316								
P40A	Paris	89.77	38	P		P		12 20 36.1	-0.3
P40A	Paris	89.77	38	P		P		12 20 36.4	0.0
	baz=320,SNR=6.1								
QUOK	Quay	89.83	43	P		P		12 20 36.5	-0.2
QUOK				IAmb		IAmb		12 20 38.2	
	comp=Z,18nm,0.9s								
DEOK	Depew	90.19	43	P		P		12 20 38.8	+0.4
DEOK				IAmb		IAmb		12 20 39.2	
	comp=Z,17nm,0.6s								
S39A	Bolivar	90.52	40	P		P		12 20 39.6	-0.2
S39A				IAmb		IAmb		12 20 40.2	
	comp=Z,6.5nm,0.7s								
S39A	Bolivar	90.52	40	P		P		12 20 39.9	0.0
	baz=319								
TX31	Lajitas Ar. Si	90.52	52	P		P		12 20 40.5	+0.4
TX31				IAmb		IAmb		12 20 41.7	
	comp=Z,21nm,1.0s								
TX31	Lajitas Ar. Si	90.52	52	P		P		12 20 40.9	+0.7
	baz=313,SNR=15								
TX32	Lajitas Array	90.52	52	P		P		12 20 40.4	+0.3
TXAR	Lajitas Array	90.52	52	P		P		12 20 40.7	+0.6
	comp=Z,6.1nm,0.8s,baz=302,slow=3.2,SNR=58								
	comp=Z,6.1nm,0.8s								
TUL1	Leonard	90.53	43	P		P		12 20 40.5	+0.5
TUL1	Leonard	90.53	43	P		P		12 20 40.3	+0.3
	baz=318,SNR=5.2								
TUL1	Leonard	90.53	43	P		P		12 20 40.3	+0.3
	baz=318								
R40A	Maddies Statio	90.61	39	IAmb		IAmb		12 20 41.1	
	comp=Z,35nm,1.6s								
R40A	Maddies Statio	90.61	39	P		P		12 20 40.0	-0.3
	baz=320,SNR=5.8								
ABTX	Abilene, Hawle	90.71	47	P		P		12 20 41.2	+0.3
ABTX				IAmb		IAmb		12 20 42.5	
	comp=Z,27nm,1.3s								
ABTX	Abilene, Hawle	90.71	47	P		P		12 20 41.6	+0.7
	baz=316								
ABTX	Abilene, Hawle	90.71	47	P		P		12 20 41.3	+0.5
	baz=316								
RLO	Rose Lookout	90.76	42	P		P		12 20 41.3	+0.3
RLO				IAmb		IAmb		12 20 41.7	
	comp=Z,12nm,0.7s								
U38A	Gravette	90.90	42	IAmb		IAmb		12 20 42.1	
	comp=Z,12nm,0.7s								
U38A	Gravette	90.90	42	P		P		12 20 41.8	+0.1
	baz=319,SNR=7.2								
HHAR	Hobbs	91.25	42	IAmb		IAmb		12 20 43.5	
	comp=Z,9.1nm,0.7s								
HHAR	Hobbs	91.25	42	P		P		12 20 43.1	-0.2
	baz=319								
CCM	Cathedral Cave	91.30	39	P		P		12 20 43.5	0.0
CCM				IAmb		IAmb		12 20 44.0	
	comp=Z,7.2nm,0.8s								
CCM	Cathedral Cave	91.30	39	P		P		12 20 43.5	0.0
CCM				pmax		pmax			
	comp=Z,7.0nm,0.9s								
CCM	Cathedral Cave	91.30	39	P		P		12 20 43.6	0.0
	baz=320,SNR=5.3								
CCM	Cathedral Cave	91.30	39	P		P		12 20 43.6	0.0
	baz=320								
MGMO	Mountain Grove	91.47	40	IAmb		IAmb		12 20 44.9	
	comp=Z,10nm,0.8s								
SFIN	Lafayette	91.48	35	P		P		12 20 44.5	+0.2
	baz=323								
TRQ	Mont Tremblant	91.49	24	IAmb		IAmb		12 20 45.5	
	comp=Z,18nm,1.1s								
Z35A	Perchaven, San	91.59	46	P		P		12 20 45.1	+0.1
	baz=317,SNR=7.2								
X37A	Clayton	91.73	44	IAmb		IAmb		12 20 49.9	
	comp=Z,6.3nm,0.8s								
X37A	Clayton	91.73	44	P		P		12 20 45.9	+0.3
	baz=318								
DELO	Deloro Mine	91.93	27	IAmb		IAmb		12 21 01.9	
	comp=Z,17nm,1.2s								
JCT	Junction City	92.13	49	IAmb		IAmb		12 20 48.2	
	comp=Z,8.1nm,0.7s								
JCT	Junction City	92.13	49	P		P		12 20 47.3	-0.2
	baz=315								
JCT	Junction City	92.13	49	P		P		12 20 47.8	+0.2
	baz=315								
WHTX	Lake Whitney,	92.45	47	P		P		12 20 49.6	+0.7
WHTX	Lake Whitney,	92.45	47	P		P		12 20 49.8	+0.9
	baz=317,SNR=5.4								
WHTX	Lake Whitney,	92.45	47	P		P		12 20 49.3	+0.4
	baz=317								
O48B	Farmland	92.46	34	P		P		12 20 48.7	0.0
	baz=324								
O48B	Farmland	92.46	34	P		P		12 20 48.8	0.0
	baz=324								
FCAR	Ozark Folk Cen	92.51	41	P		P		12 20 49.0	-0.1
FCAR				IAmb		IAmb		12 20 49.7	
	comp=Z,11nm,1.0s								
S44A	Carbondale	92.58	38	P		P		12 20 49.7	+0.3
S44A				IAmb		IAmb		12 24 28.9	
	comp=Z,12nm,0.7s								
E62A	Clayton Lake	92.67	21	IAmb		IAmb		12 20 50.9	
	comp=Z,14nm,1.1s								
MIAR	Mount Ida	92.75	42	IAmb		IAmb		12 20 51.7	
	comp=Z,13nm,0.8s								
MIAR	Mount Ida	92.75	42	P		P		12 20 50.4	+0.1
	baz=319								
MIAR	Mount Ida	92.75	42	P		P		12 20 50.6	+0.3
	baz=319								
WHAR	Wooly Hollow	92.88	41	P		P		12 20 50.2	-0.7
WHAR				IAmb		IAmb		12 20 51.8	
	comp=Z,15nm,0.9s								
LONY	Lake Ozonia	92.90	25	P		P		12 20 50.9	+0.1
	baz=332								
M53A	WI Miller and	93.38	30	P		P		12 20 52.8	-0.2
	baz=328								
ACSO	Alum Creek Sta	93.43	32	P		P		12 20 53.3	0.0
	baz=326								
NCB	Newcomb	93.59	25	P		P		12 20 54.8	+0.8
	baz=332								
G62A	West of Eustis	93.65	22	IAmb		IAmb		12 20 56.0	
	comp=Z,17nm,1.1s								
G62A	West of Eustis	93.65	22	P		P		12 20 55.3	+1.1
	baz=335								
G62A				P		P		12 20 55.3	+1.1
	baz=335								
833A	Chaparral WMA,	93.91	50	P		P		12 20 56.2	+0.5
	baz=316								
J59A	Piesco	93.94	25	P		P		12 20 56.3	+0.7
	baz=332								
J59A				P		P		12 20 56.3	+0.7
	baz=332								
PKME	Peaks-Kenny Pk	93.97	21	P		P		12 20 55.9	+0.3
PKME				IAmb		IAmb		12 20 57.3	
	comp=Z,12nm,0.9s								
PKME	Peaks-Kenny Pk	93.97	21	P		P		12 20 56.6	+0.9
	baz=336								
PKME	Peaks-Kenny Pk	93.97	21	P		P		12 20 56.3	+0.7
	baz=336								
H62A	Milan	94.04	23	P		P		12 20 55.5	-0.5
LBNH	Lisbon	94.10	23	P		P		12 20 56.6	+0.3
	baz=334								
O53A	New Philadelph	94.16	31	P		P		12 20 56.8	+0.1
	baz=327								
WVT	Waverly	94.51	38	P		P		12 20 58.4	+0.1
	baz=323								
BINY	Binghamton	94.53	27	P		P		12 20 58.0	-0.3
	baz=331								
I63A	Otisfield	94.69	22	P		P		12 20 58.9	0.0
OXF	Oxford	94.98	40	P		P		12 21 00.3	-0.2
	baz=322								
U49A	Red Boiling Sp	95.20	36	P		P		12 21 01.5	0.0
U49A	Red Boiling Sp	95.20	36	P		P		12 21 01.4	-0.1
	baz=324								
T50A	Nancy	95.23	35	P		P		12 21 01.6	0.0
T50A				IAmb		IAmb		12 21 02.4	
	comp=Z,5.3nm,0.6s								
T50A	Nancy	95.23	35	P		P		12 21 01.3	-0.3
	baz=325								
T50A				P		P		12 21 01.3	-0.3
	baz=325								
KEST	Kesra	95.24	323	LR		LR		13 07 45.7	
	comp=Z,280nm,19.3s,baz=212,slow=38								
Q54A	Coxs Mills	95.38	32	P		P		12 21 02.3	+0.1
	baz=327								
Q54A				P		P		12 21 02.3	+0.1
	baz=327								
PAGS	Pennsylvania G	95.97	28	P		P		12 21 04.4	-0.4
TZTN	Tazewell	96.21	35	P		P		12 21 06.0	-0.1
	baz=325								
ESDC	Sonseca Array	97.58	334	P		P		12 21 11.5	-0.8
	comp=Z,0.8nm,0.7s,baz=12,slow=4.4,SNR=3.8								
	comp=Z,0.8nm,0.7s								
TORD	Torodi Ar. Bea	117.50	314	PKP		PKPdf		12 26 22.2	-1.9
	comp=Z,0.5nm,0.5s,baz=350,slow=1.4,SNR=7.8								
MATP	Matopo	119.80	266	PKP		PKPdf		12 26 27.4	-1.1
	comp=Z,1.7nm,0.6s,baz=171,slow=1.0,SNR=4.9								
SDV	Santo Domingo	125.77	40	*e*P		PKPdf		12 26 39.2	-1.1
BOSA	Boshof	126.31	259	PKP		PKPdf		12 26 39.6	-1.1
	comp=Z,2.3nm,0.9s,baz=206,slow=9.4,SNR=1.9								
QSPA	South Pole Qui	126.36	180	PKP		PKPdf		12 26 37.0	-2.5
	comp=Z,4.7nm,1.1s,baz=286,slow=3.1,SNR=10.0								
DBIC	Dimbokro	126.47	316	PKP		PKPdf		12 26 40.4	-1.0
	comp=Z,3.9nm,0.9s,baz=0.0,slow=22,SNR=1.8								
OTAV	Otavalo	128.11	54	*e*P		PKPdf		12 26 43.8	-1.3
BOAV	Boa Vista	136.24	32	*e*P		PKPdf		12 26 59.6	-0.3
CZSB	Cruzeiro do Su	137.84	55	*e*P		PKPdf		12 27 02.7	-0.1
TROLL	Troll, Antarti	138.78	198	PKPdf		PKPpre		12 26 54.9	
SNAA	Sanae	140.29	197	PKPdf		PKPpre		12 26 58.2	
SNAA	Sanae	140.29	197	PKhKP		PKPpre		12 26 58.7	
	comp=Z,0.8nm,0.5s,baz=200,slow=4.2,SNR=7.9								
VNA2	Neumayer--Watz	141.86	196	PKPdf		PKPpre		12 27 04.6	
	baz=122,slow=3.0								
MCPB	Macapa, AP	141.90	22	*e*P		PKPdf		12 27 10.3	+0.1
VNA3	Neumayer Olymp	142.11	195	PKPdf		PKPpre		12 27 04.5	
VNA1	Neumayer--Stat	142.26	196	PKPdf		PKPdf		12 27 06.6	-2.4
MALB	Monte Alegre	142.58	26	*e*P		PKPdf		12 27 12.2	+0.8
ETMB	Extrema	143.57	50			PKPpre		12 27 09.4	
ITTB	Itaituba	144.34	30	*e*P		PKPbc		12 27 12.8	0.0
SAML	Samuel	144.68	45	PKPdf		PKPab		12 27 13.2	-0.5
SAML	Samuel	144.68	45	PKIKP		PKPab		12 27 13.2	-0.5
SMAI	San Martin Ant	144.69	162			PKPdf		12 27 13.3	-0.1
ROSB	Rosrio	146.09	10	*e*P		PKPdf		12 27 17.4	-0.1
NPGB	Novo Progresso	146.92	31	*e*P		PKPbc		12 27 20.3	-0.5
LPAZ	La Paz	147.06	60	PKPbc		PKPbc		12 27 21.7	-0.2
	comp=Z,8.1nm,0.6s,baz=348,slow=2.8,SNR=37								
LPAZ	La Paz	147.06	60	*e*P		PKPdf		12 27 19.8	0.0
H03N2	Juan Fernandez	147.16	97	T		T		15 12 30.9	
	baz=291,slow=76,SNR=177								
H03N3	Juan Fernandez	147.17	97	T		T		15 12 17.3	
	baz=291,slow=76,SNR=130								
H03N1	Juan Fernandez	147.18	97	T		T		15 12 37.9	
	baz=291,slow=76,SNR=197								
H03S2	Juan Fernandez	147.28	97	T		T		15 12 25.6	
	baz=283								
H03S3	Juan Fernandez	147.29	97	T		T		15 12 27.2	
	baz=283								
H03S1	Juan Fernandez	147.30	97	T		T		15 12 32.9	
	baz=283								
PB16	IPOC Station P	147.44	64	PKPbc		PKPbc		12 27 23.4	+0.6
PRPB	Parauapebas	148.07	21	*e*P		PKPdf		12 27 22.2	+1.4
GOIC	Chusmiza	148.52	66	PKPbc		PKPbc		12 27 26.1	+0.6
SCBR	Blachuelo	149.24	354	*e*P		PKPdf		12 27 23.0	+0.2
VILB	Vilhena	149.62	45	PKPbc		PKPbc		12 27 28.1	+0.3
CLDB	Colider	150.13	35	*e*P		PKPdf		12 27 25.1	+1.0
LVC	Limon Verde	150.49	70	PKPbc		PKPbc		12 27 30.5	+0.3
LVC	Limon Verde	150.49	70	PKIKP		PKPbc		12 27 30.5	+0.3
LVC	Limon Verde	150.49	70	*e*P		PKPdf		12 27 25.6	+0.7
ESPZ	Base Esperanza	150.97	163	PKPdf		PKPdf		12 27 25.0	+1.2
SMTB	Santa Maria do	151.25	18	*e*P		PKPdf		12 27 26.4	+0.5
GO02	Mina Guanaco	151.35	75	PKPdf		PKPdf		12 27 24.7	-1.3
NBRF	Rio Formoso -	151.99	352	*e*P		PKPdf		12 27 27.7	+0.8
PTLB	Pontes e Lacer	152.23	46			PKPbc		12 27 33.5	-0.4
PTLB				PKPab		PKPab		12 27 42.7	-0.9
PTLB	Pontes e Lacer	152.23	46	*e*P		PKPdf		12 27 28.9	+1.7
AC05	El Transito	152.51	83	PKPbc		PKiKP		12 27 35.0	+0.3
AC02	Maricunga	152.53	78	PKPbc		PKiKP		12 27 35.2	0.0
LL07	Hotel Espejo d	152.76	114	PKPdf		PKPdf		12 27 27.7	+0.6
SNDB	Serra Nova Dou	153.01	28	*e*P		PKPdf		12 27 29.8	+1.4
NBAN	Anadia - AL	153.08	354	*e*P		PKPdf		12 27 29.9	+1.4
BO02	Sierra Bellavi	154.04	96			PKiKP		12 27 37.8	+0.2
NBLA	Lagarto - SE	154.47	358	*e*P		PKPdf		12 27 32.0	+1.5
SALV	Santo Antonio	154.49	40	*e*P		PKPdf		12 27 31.9	+1.4
PLCA	Paso Flores	154.96	109	PKPab		PKPab		12 27 56.0	+1.1
	comp=Z,3.1nm,1.0s,baz=270,slow=4.9,SNR=3.9								
PLCA	Paso Flores	154.96	109	PKP2		PKPab		12 27 56.0	+1.1
PLCA	Paso Flores	154.96	109	*e*P		PKPdf		12 27 31.1	+0.6
SDBA	SAO DESIDERIO	155.28	14	*e*P		PKPdf		12 27 33.1	+1.4
BDFB	Brasilia	157.56	24	PKPab		PKPab		12 28 07.1	+0.6
	comp=Z,5.4nm,0.7s,baz=328,slow=1.7,SNR=5.4								
VAO	Valinhos	164.71	30	*e*P		PKPdf		12 27 41.2	-0.8
CAM01	Campos-RJ	165.06	10	*e*P		PKPdf		12 27 44.4	+2.1
ITAB	Concordia	165.34	54	*e*P		PKPdf		12 27 44.4	+2.0

NOU ***19*** *12:08:17.3,30˚.19S×171˚.96W,h24km,mB5.3/15, Kermadec Islands Region*
MOS ***19*** *12:08:57.1±1.0,30˚.11S×177˚.73W,h33km,mb4.9/11, Error ellipse: s-maj=12.2km s-min=10.5km az=103.0*
NEIC ***19*** *12:08:59.1±1.9,30˚.16S±0˚.06×177˚.7W±0˚.1, h34km±3km, mb5.2/38, Error ellipse: s-maj=17.0km s-min=9.3km az=92.0*
IDC ***19*** *12:09:00.1±1.3,30˚.01S×177˚.78W,h45km±11km,mb4.4/15,

NEZ	**North Egmont**	**11.30 214**	P	Pn	12 11 43.8	+6.2
BFZ	**Birch Farm**	**11.59 203**	Pn	**Pn**	**12 11 39.5**	**-1.9**
BFZ	**Birch Farm**	**11.59 203**	P	Pn	12 11 35.2	-6.2
BFZ	**Birch Farm**	**11.59 203**	P	**Pn**	**12 11 36.9**	**-4.5**
TIWZ	**Tintock**	**11.80 204**	P	Pn	12 11 38.7	-5.6
MRZ	**Mangatainoka R**	**11.81 206**	P	Pn	12 11 38.2	-6.3
OGWZ	**Otaki Gorge**	**12.10 207**	P	Pn	12 11 42.8	-5.6
SNZO	**South Karori**	**12.71 207**	P	**Pn**	**12 11 53.7**	**-2.9**
TCW	**Tory Channel**	**12.79 208**	P	Pn	12 11 52.0	-5.8
MSVF	**Nonsavu**	**12.96 342**	P	**Pn**	**12 12 04.4**	**+4.2**
	7.5nm,0.8s,baz=174,slow=16,SNR=4.5					
MSVF	**Nonsavu**	**12.96 342**	Pn	**Pn**	**12 11 59.0**	**-1.3**
MSVF	**Nonsavu**	**12.96 342**	P	**Pn**	**12 11 59.0**	**-1.3**
NIUE	**Niue**	**13.11 34**	Pn	**Pn**	**12 11 58.8**	**-3.5**
TUWZ	**Tuamarina**	**13.11 209**	P	**Pn**	**12 11 58.1**	**-4.2**
NNZ	**Nelson**	**13.18 211**	P	**Pn**	**12 11 59.8**	**-3.4**
QRZ	**Quartz Range**	**13.27 214**	P	**Pn**	**12 12 04.7**	**+0.4**
MRNZ	**Matariki Terra**	**13.61 212**	P	**Pn**	**12 12 08.9**	**-0.1**
THZ	**Tophouse**	**13.83 211**	P	**Pn**	**12 12 07.8**	**-4.3**
KHZ	**Kahutara**	**14.10 207**	P	Pn	12 12 09.8	-5.9
KHZ	**Kahutara**	**14.10 207**	P	**Pn**	**12 12 11.8**	**-3.9**
OUENC	**Ouen Island, N**	**15.83 296**	P	P	12 12 53.6	+11
YATNC	**Mamie plateau,**	**15.99 297**	P	P	12 12 55.4	+11
RPZ	**Rata Peaks**	**16.21 210**	P	**P**	**12 12 44.8**	**-1.6**
	1.4nm,0.3s,baz=11,slow=22,SNR=3.0					
RPZ			S	Sn	12 15 27.1	-15
	8.0nm,0.6s,baz=123,slow=22,SNR=2.3					
	9.1nm,0.5s					
DZM	**Mont Dzumac**	**16.33 296**	P	**P**	**12 12 49.3**	**+1.4**
	28nm,1.2s,baz=65,slow=15,SNR=3.7					
DZM	**Mont Dzumac**	**16.33 296**	P	P	12 12 59.1	+11
NOUC	**Port Laguerre**	**16.42 295**	P	P	12 13 00.2	+11
RAR	**Rarotonga**	**18.45 65**	P	**P**	**12 13 10.1**	**-1.1**
	0.5nm,0.3s,baz=1.2,slow=23,SNR=1.3					
RAR			S	Sn	12 16 21.2	-15
	9.6nm,0.7s,baz=272,slow=21,SNR=1.7					
	24nm,0.9s					
KOUNC	**Koumac, New Ca**	**18.84 296**	P	Pn	12 13 24.7	+8.5
ARMA	**Armidale**	**26.43 262**	P	**P**	**12 14 33.2**	**+1.0**
MGCD	**Mangrove Creek**	**26.64 255**	P	**P**	**12 14 36.9**	**+2.9**
SYDH	**Sydney Hard Ro**	**26.94 254**	P	**P**	**12 14 39.3**	**+2.7**
EIDS	**Eidsvold**	**27.96 272**	P	**P**	**12 14 46.8**	**+0.9**
CNB	**Canberra Magne**	**28.08 251**	P	**P**	**12 14 49.1**	**+2.2**
CAN	**Canberra**	**28.38 251**	P	**P**	**12 14 51.0**	**+1.4**
CAN			IAmb	IAmb	12 15 50.3	
	comp=Z,79nm,1.7s					
CAN	**Canberra**	**28.38 251**	P	**P**	**12 14 51.0**	**+1.4**
CAN			pmax	pmax		
	comp=Z,79nm,1.7s					
CAN	**Canberra**	**28.38 251**	P	**P**	**12 14 51.7**	**+2.1**
RMQ	**Roma**	**29.67 269**	P	**P**	**12 15 03.6**	**+2.5**
TOO	**Toolangi**	**31.28 246**	P	**P**	**12 15 16.8**	**+1.6**
TOO			IAmb	IAmb	12 15 17.4	
	comp=Z,29nm,1.3s					
TOO	**Toolangi**	**31.28 246**	P	**P**	**12 15 16.8**	**+1.6**
TOO			pmax	pmax		
	comp=Z,29nm,1.3s					
CTA	**Charters Tower**	**33.99 279**	P	**P**	**12 15 40.0**	**+0.9**
	comp=Z,22nm,0.4s,baz=102,slow=10,SNR=106					
	comp=Z,22nm,0.4s					
CTAO	**Charters Tower**	**33.99 279**	P	**P**	**12 15 40.4**	**+1.3**
CTAO			IAmb	IAmb	12 15 41.2	
	comp=Z,30nm,0.5s					
CTAO	**Charters Tower**	**33.99 279**	P	**P**	**12 15 40.4**	**+1.3**
CTAO			pmax	pmax		
	comp=Z,30nm,0.5s					
STKA	**Stephens Creek**	**34.76 257**	P	**P**	**12 15 47.0**	**+1.4**
	comp=Z,12nm,0.4s,baz=99,slow=11,SNR=62					
	comp=Z,12nm,0.4s					
STKA	**Stephens Creek**	**34.76 257**	P	**P**	**12 15 47.0**	**+1.4**
BBOO	**Buckleboo**	**39.26 254**	P	**P**	**12 16 23.6**	**-0.3**
BBOO			IAmb	IAmb	12 16 41.0	
	comp=Z,136nm,1.6s					
COEN	**Coen**	**39.43 285**	P	**P**	**12 16 25.4**	**0.0**
AS31	**Alice Springs**	**43.36 267**	P	**P**	**12 16 56.8**	**-0.9**
ASAR	**Alice Springs**	**43.36 267**	P	**P**	**12 16 56.6**	**-1.1**
	comp=Z,6.6nm,0.4s,baz=106,slow=7.5,SNR=77					
	comp=Z,6.6nm,0.4s					
ASAR	**Alice Springs**	**43.36 267**	P	**P**	**12 16 56.5**	**-1.2**
WR0	**Warramunga Arr**	**44.15 272**	P	**P**	**12 17 03.1**	**-0.8**
WB2	**Warramunga Arr**	**44.31 272**	P	**P**	**12 17 04.5**	**-0.9**
WB2			IAmb	IAmb	12 17 35.3	
	comp=Z,60nm,0.8s					
WRAB	**Tennant Creek**	**44.32 272**	P	**P**	**12 17 04.3**	**-1.1**
WRAB			IAmb	IAmb	12 17 35.3	
	comp=Z,52nm,0.8s					
WRAB	**Tennant Creek**	**44.32 272**	*ce*P	**P**	**12 17 04.2**	**-1.2**
WRAB			pmax	pmax		
	comp=Z,12nm,0.6s					
WRA	**Warramunga Arr**	**44.33 272**	P	**P**	**12 17 04.5**	**-0.9**
	comp=Z,13nm,0.4s,baz=110,slow=8.1,SNR=456					
	comp=Z,13nm,0.4s					
WRA	**Warramunga Arr**	**44.33 272**	P	**P**	**12 17 03.4**	**-2.1**
WRA	**Warramunga Arr**	**44.33 272**	P	**P**	**12 17 03.4**	**-2.1**
WRA			pmax	pmax		
	comp=Z,5.0nm,0.9s					
WB0	**Warramunga Arr**	**44.35 272**	P	**P**	**12 17 04.7**	**-0.9**
FORT	**Forrest**	**46.34 255**	P	**P**	**12 17 19.9**	**-1.4**
SBA	**Scott Base**	**48.30 184**	P	**P**	**12 17 36.4**	**+0.6**
SBA	**Scott Base**	**48.30 184**	P	**P**	**12 17 36.4**	**+0.6**
SBA			pmax	pmax		
	comp=Z,6.0nm,0.9s					
VNDA	**Vanda**	**48.36 186**	P	**P**	**12 17 39.1**	**+2.8**
	comp=Z,0.8nm,0.6s,baz=355,slow=7.2,SNR=10.0					
	comp=Z,0.8nm,0.6s					
VNDA	**Vanda**	**48.36 186**	P	**P**	**12 17 38.7**	**+2.4**
VNDA	**Vanda**	**48.36 186**	P	**P**	**12 17 38.7**	**+2.4**
VNDA			pmax	pmax		
	comp=Z,11nm,2.0s					
VNDA	**Vanda**	**48.36 186**	P	**P**	**12 17 39.3**	**+3.0**
FITZ	**Fitzroy Crossi**	**52.60 270**	P	**P**	**12 18 09.1**	**0.0**
	comp=Z,17nm,0.9s,baz=113,slow=6.2,SNR=1.9					
	comp=Z,17nm,0.9s					
CCD	**Concordia, Ant**	**53.25 196**	P	**P**	**12 18 14.7**	**+1.0**
FAKI	**Fak Fak**	**54.48 290**	P	**P**	**12 18 22.1**	**-0.8**
FAKI			IAmb	IAmb	12 20 17.8	
	comp=Z,61nm,1.4s					
CASY	**Casey**	**55.46 208**	P	**P**	**12 18 28.4**	**-1.0**
CASY			IAmb	IAmb	12 18 31.4	
	comp=Z,11nm,0.8s					
CASY	**Casey**	**55.46 208**	P	**P**	**12 18 29.0**	**-0.3**
CASY			sP	**sP**	**12 18 41.3**	**-1.3**
MORW	**Morawa**	**56.83 253**	P	**P**	**12 18 37.9**	**-1.8**
QSPA	**South Pole Qui**	**59.95 180**	P	**P**	**12 19 03.7**	**+2.6**
QSPA			IAmb	IAmb	12 19 10.2	
	comp=Z,9.3nm,0.6s					
QSPA	**South Pole Qui**	**59.95 180**	P	**P**	**12 19 03.6**	**+2.5**
QSPA			sP	**pwP**	**12 19 20.4**	**+5.0**
JCJ	**Chichijima**	**68.64 322**	P	**P**	**12 19 58.6**	**+0.4**
BELA	**Belgrano 2**	**69.99 172**	P	**P**	**12 20 06.9**	**+0.9**
BELA			IAmb	IAmb	12 20 07.7	
	comp=Z,6.1nm,0.7s					
PMSA	**Palmer Station**	**72.39 156**	P	**P**	**12 20 21.2**	**+0.6**
PMSA			IAmb	IAmb	12 22 15.7	
	comp=Z,24nm,1.4s					
MAW	**Mawson**	**72.62 200**	P	**P**	**12 20 22.6**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=136,slow=6.0,SNR=16					
	comp=Z,2.9nm,0.5s					
MAW	**Mawson**	**72.62 200**	P	**P**	**12 20 23.1**	**+1.2**
MAW	**Mawson**	**72.62 200**	P	**P**	**12 20 23.1**	**+1.2**
MAW			pmax	pmax		
	comp=Z,5.0nm,2.0s					
KKM	**Kota Kinabalu**	**72.71 288**	P	**P**	**12 20 22.5**	**-1.0**
KKM			IAmb	IAmb	12 20 23.0	
	comp=Z,12nm,0.8s					
KSM	**Kuching**	**75.21 281**	P	**P**	**12 20 37.2**	**-0.8**
KSM			IAmb	IAmb	12 20 37.5	
	comp=Z,10nm,0.7s					
JOW	**Kunigami**	**76.67 312**	P	**P**	**12 20 46.0**	**0.0**
JOW			IAmb	IAmb	12 23 22.2	
	comp=Z,38nm,1.3s					
TROLL	**Troll, Antarti**	**78.11 180**	P	**P**	**12 20 54.9**	**+1.3**
MAJO	**Matsushiro**	**78.18 325**⇑	*e*P	**P**	**12 20 55.1**	**+0.8**
MAJO			pmax	pmax		
	comp=Z,6.0nm,1.1s					
SNAA	**Sanae**	**78.39 178**	P	**P**	**12 20 56.0**	**+0.9**
SNAA	**Sanae**	**78.39 178**	P	**P**	**12 20 55.9**	**+0.9**
	comp=Z,1.4nm,0.4s,baz=198,slow=7.1,SNR=34					
	comp=Z,1.4nm,0.4s					
SNAA	**Sanae**	**78.39 178**	P	**P**	**12 20 56.1**	**+1.0**
SNAA	**Sanae**	**78.39 178**	P	**P**	**12 20 56.1**	**+0.9**
SNAA			pmax	pmax		
	comp=Z,4.0nm,1.0s					
VNA3	**Neumayer Olymp**	**78.53 176**	P	**P**	**12 20 56.5**	**+0.7**
VNA2	**Neumayer--Watz**	**78.97 177**	P	**P**	**12 20 59.3**	**+1.1**
	baz=172,slow=6.0					
VNA1	**Neumayer--Stat**	**79.19 176**	P	**P**	**12 21 00.6**	**+1.2**
H03S2	**Juan Fernandez**	**80.40 123**	T	T	13 50 20.4	
	baz=238,SNR=291					
H03S1	**Juan Fernandez**	**80.41 123**	T	T	13 50 24.8	
	baz=238,SNR=635					
H03S3	**Juan Fernandez**	**80.42 123**	T	T	13 50 23.7	
	baz=238,SNR=676					
H03N3	**Juan Fernandez**	**80.59 123**	T	T	13 50 35.7	
	baz=240,slow=71,SNR=100					
H03N2	**Juan Fernandez**	**80.59 123**	T	T	13 50 33.8	
	baz=240,slow=71,SNR=92					
H03N1	**Juan Fernandez**	**80.61 123**	T	T	13 50 28.9	
	baz=240,slow=71,SNR=160					
KIWB	**Kanaga Island**	**81.66 0**	P	**P**	**12 21 13.0**	**+0.3**
ADK	**Adak**	**81.69 1**	P	**P**	**12 21 12.9**	**+0.2**
ADK			IAmb	IAmb	12 21 13.5	
	comp=Z,18nm,0.8s					
ADK	**Adak**	**81.69 1**	P	**P**	**12 21 13.0**	**+0.2**
ADK			pmax	pmax		
	comp=Z,18nm,0.9s					
PLCA	**Paso Flores**	**82.50 133**	P	**P**	**12 21 19.2**	**+1.5**
	comp=Z,2.1nm,0.7s,baz=236,slow=5.4,SNR=5.9					
	comp=Z,2.1nm,0.7s					
PLCA	**Paso Flores**	**82.50 133**	P	**P**	**12 21 18.1**	**+0.4**
PLCA			IAmb	IAmb	12 23 42.7	
	comp=Z,37nm,1.9s					
PLCA	**Paso Flores**	**82.50 133**	P	**P**	**12 21 18.2**	**+0.4**
PLCA			pmax	pmax		
	comp=Z,37nm,1.9s					
UNV	**Unalaska Valle**	**84.22 7**	P	**P**	**12 21 26.1**	**+0.3**
KSRS	**Korea Array**	**84.32 319**	P	**P**	**12 21 27.2**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=135,slow=5.8,SNR=7.5					
	comp=Z,1.3nm,0.6s					
AKUT	**Akutan**	**84.58 7**	P	**P**	**12 21 28.3**	**+0.6**
YSS	**Yuzh-Sakhalins**	**84.63 334**	*e*P	**P**	**12 21 29.4**	**+1.3**
YSS			pmax	pmax		
	comp=Z,10.0nm,0.8s					
PEA0B	**Petropavlovsk-**	**85.64 345**	P	**P**	**12 21 33.5**	**+0.4**
PEA0B	**Petropavlovsk-**	**85.64 345**	P	**P**	**12 21 33.5**	**+0.4**
PEA0B			pmax	pmax		
	comp=Z,130nm,2.0s					
PETK	**Petropavlovsk-**	**85.64 345**	P	**P**	**12 21 32.9**	**-0.2**
	comp=Z,5.3nm,0.6s,baz=117,slow=6.9,SNR=30					
	comp=Z,5.3nm,0.6s					
PETK	**Petropavlovsk-**	**85.64 345**	P	**P**	**12 21 32.6**	**-0.4**
PETK	**Petropavlovsk-**	**85.64 345**	P	**P**	**12 21 32.6**	**-0.4**
PFO	**Pinyon Flats O**	**85.87 47**⇑	*e*P	**P**	**12 21 35.7**	**+0.9**
PFO			pmax	pmax		
	comp=Z,4.0nm,0.9s					
SDPT	**Sand Point**	**86.44 10**	P	**P**	**12 21 37.7**	**+0.8**
USRK	**Ussuriysk Ar.**	**87.09 326**	P	**P**	**12 21 40.8**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=149,slow=2.0,SNR=4.3					
	comp=Z,3.0nm,0.8s					
NVAR	**Mina Array Bea**	**87.90 43**	P	**P**	**12 21 46.4**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=215,slow=7.7,SNR=2.4					
	comp=Z,1.1nm,0.7s					
O18K	**Koktuh Hills**	**91.59 11**	P	**P**	**12 22 01.7**	**+0.5**
O18K			IAmb	IAmb	12 22 02.2	
	comp=Z,14nm,0.7s					
O19K	**Port Alsworth**	**92.06 11**	P	**P**	**12 22 03.4**	**0.0**
O19K			IAmb	IAmb	12 22 04.2	
	comp=Z,8.6nm,0.7s					
CMAR	**Chiang Mai Arr**	**93.55 289**	P	**P**	**12 22 12.4**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=137,slow=3.7,SNR=4.2					
	comp=Z,0.7nm,0.4s					
CMAR	**Chiang Mai Arr**	**93.55 289**	*ce*P	**P**	**12 22 13.1**	**+1.9**
CMAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
ZEA	**Zeya**	**96.15 331**⇑	*e*P	**P**	**12 22 24.2**	**+1.9**
HIA	**Hailar**	**96.66 324**⇑	*e*P	**P**	**12 22 25.8**	**+1.0**
HIA			pmax	pmax		
	comp=Z,2.0nm,0.8s					
COLA	**College**	**97.55 12**⇑	*e*P	Pdif	12 22 28.6	+0.2
COLA			pmax	pmax		
	comp=Z,1.0nm,0.8s					
ILAR	**Eielson Array**	**97.64 13**	P	Pdif	12 22 28.4	-0.4
	comp=Z,0.4nm,0.7s,baz=221,slow=6.6,SNR=3.4					
	comp=Z,0.4nm,0.7s					
J26L	**Joseph Creek**	**98.07 14**	P	Pdif	12 22 31.8	+0.9
J26L			IAmb	IAmb	12 22 34.2	
	comp=Z,2.8nm,0.7s					
LZH	**Lanzhou**	**98.77 307**	*e*P	Pdif	12 22 37.3	+2.5
LZH			pP	sP	12 22 46.1	-2.4
LZH			pmax	pmax		
	comp=Z,17nm,1.0s					
ETMB	**Extrema**	**103.20 110**	*e*P	**PKiKP**	**12 27 13.4**	**-1.0**
VILB	**Vilhena**	**106.19 116**	*e*P	**PKiKP**	**12 27 24.0**	**+4.1**
PDRB	**Porto dos Gac**	**109.70 117**	*e*P	**PKiKP**	**12 27 25.3**	**-1.1**
WMQ	**Urumqi**	**113.26 308**	*e*P	**PKiKP**	**12 27 33.0**	**+0.6**
DGZ	**Jazzator, Alta**	**115.32 314**⇑	*i*PKIKP	**PKPdf**	**12 27 35.4**	**-0.8**
MK31	**Makanchi Array**	**117.80 310**		**PKPdf**	**12 27 39.2**	**-1.8**
MK31	**Makanchi Array**	**117.80 310**	||*i*PKIKP	**PKPdf**	**12 27 39.1**	**-1.8**
MKAR	**Makanchi Array**	**117.80 310**	PKP	**PKPdf**	**12 27 39.5**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=118,slow=0.3,SNR=8.0					
MKAR	**Makanchi Array**	**117.80 310**	PKPdf	**PKPdf**	**12 27 39.4**	**-1.6**
P61A	**Hammonton**	**117.87 58**	PKPdf	**PKiKP**	**12 27 41.1**	**-0.2**
ZALV	**Zalesovo Beam**	**118.01 318**	PKP	**PKPdf**	**12 27 39.2**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=185,slow=5.4,SNR=3.7					
NRIK	**Noril'sk**	**119.51 336**⇑	*i*PKIKP	**PKPdf**	**12 27 42.4**	**-1.1**
KURK	**Kurchatov**	**121.05 314**		**PKPdf**	**12 27 45.2**	**-1.8**
KURK	**Kurchatov**	**121.05 314**	*d i*PKIKP	**PKPdf**	**12 27 45.8**	**-1.2**
KURK			pmax	pmax		
	comp=Z,9.0nm,2.5s					
AAK	**Ala-Archa**	**122.18 304**⇑	*i*PKIKP	**PKPdf**	**12 27 48.6**	**-1.1**
KK31	**Karatay Array**	**125.14 304**		**PKPdf**	**12 27 54.3**	**-0.9**
KK31	**Karatay Array**	**125.14 304**	PKIKP	**PKPdf**	**12 27 54.3**	**-0.9**
KKAR	**Karatay Array**	**125.14 304**		**PKPdf**	**12 27 53.2**	**-1.9**
KKAR	**Karatay Array**	**125.14 304**	PKIKP	**PKPdf**	**12 27 53.2**	**-1.9**
BRVK	**Borovoye**	**126.46 316**	||*i*PKIKP	**PKPdf**	**12 27 56.7**	**-0.6**
BRVK			pmax	pmax		
	comp=Z,2.0nm,0.8s					
ARU	**Arti**	**133.05 321**⇑	*i*PKIKP	**PKiKP**	**12 28 13.3**	**+2.4**
ARCES	**ARCESS Array B**	**138.40 348**	PKhKP	PKPpre	12 28 09.2	
	comp=Z,0.8nm,0.5s,baz=74,slow=3.0,SNR=10					
ARCES			PKP	**PKPdf**	**12 28 17.6**	**-1.8**
	comp=Z,1.0nm,0.4s,baz=71,slow=1.0,SNR=11					
H10N3	**ASCENSION HYDR**	**138.93 154**	T	T	15 04 15.9	
	baz=203,slow=75,SNR=153					
H10N1	**ASCENSION HYDR**	**138.93 154**	T	T	15 04 12.9	
	baz=203,slow=75,SNR=153					
H10N2	**ASCENSION HYDR**	**138.94 154**	T	T	15 04 24.4	
	baz=203,slow=75,SNR=154					
BELG	**Belogornoye**	**140.18 317**	*c i*PKIKP	**PKiKP**	**12 28 27.8**	**+2.3**
FIA1	**FINESS Array S**	**145.00 340**		**PKPbc**	**12 28 29.9**	**-0.8**
FINES	**FINESS Array S**	**145.00 340**	PKP	**PKPbc**	**12 28 29.6**	**-1.1**
	comp=Z,17nm,0.4s,baz=55,slow=3.7,SNR=179					
NSS	**Namsos**	**145.07 353**	*e*P	**PKPbc**	**12 28 29.9**	**-0.9**
NSS			IAmb	IAmb	12 28 30.6	
	comp=Z,28nm,0.6s					
OBN	**Obninsk**	**145.11 326**	*i* PKP2	**PKPbc**	**12 28 29.7**	**-1.5**
OBN			pmax	pmax		
	comp=Z,6.0nm,0.6s					
KBZ	**Khabaz**	**145.17 304**	PKPbc	**PKPbc**	**12 28 31.0**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=197,slow=1.0,SNR=5.3					
KIV	**Kislovodsk**	**145.29 305**⇑	*e*PKIKP	**PKiKP**	**12 28 37.3**	**+0.8**
VORR	**Voronezh**	**145.31 319**	*e*PKIKP	**PKPbc**	**12 28 30.9**	**-1.1**
VORR			pmax	pmax		
	comp=Z,40nm,0.3s					
GEVA	**Gevas**	**145.54 295**	PKPdf	**PKPab**	**12 28 33.6**	**-0.1**
MEF	**Metsahovi**	**146.48 340**	*e*P	**PKPbc**	**12 28 34.2**	**-1.1**
RAF	**Rauma**	**146.53 343**	*e*P	**PKPdf**	**12 28 33.7**	**-0.2**
VSU	**Vasula**	**147.10 336**	*e*P	**PKPbc**	**12 28 36.3**	**-0.8**
MARD	**Mardin**	**147.36 293**	PKPbc	**PKPab**	**12 28 39.2**	**-1.6**
MOL	**Molde**	**147.40 355**	*e*P	**PKPbc**	**12 28 36.6**	**-1.2**
DOMB	**Dombas**	**147.80 354**	*e*P	**PKPbc**	**12 28 38.6**	**-0.4**
DOMB			IAmb	IAmb	12 28 50.9	
	comp=Z,26nm,1.6s					
AKN	**Aaknes**	**147.82 356**	*e*P	**PKPbc**	**12 28 39.1**	**0.0**
AKN			IAmb	IAmb	12 28 39.5	
	comp=Z,27nm,0.9s					
NC303	**NORSAR Array S**	**148.35 352**		**PKPbc**	**12 28 40.1**	**-0.4**
NC303	**NORSAR Array S**	**148.35 352**	*e*P	**PKPbc**	**12 28 40.1**	**-0.4**
NC303			IAmb	IAmb	12 28 40.5	
	comp=Z,17nm,0.7s					
NC204	**NORSAR Array S**	**148.37 352**	PKPdf	**PKPdf**	**12 28 37.0**	**-0.1**
NC204			PKPbc	**PKiKP**	**12 28 40.8**	**-1.5**
NC204			PKPab	**PKPab**	**12 28 44.0**	**+0.1**
NC204	**NORSAR Array S**	**148.37 352**	*e*P	**PKPbc**	**12 28 40.0**	**-0.6**
NC204			IAmb	IAmb	12 28 45.2	
	comp=Z,10.0nm,1.2s					
NC405	**NORSAR Array S**	**148.41 351**	PKPdf	**PKPdf**	**12 28 37.3**	**+0.2**
NC405			PKPbc	**PKiKP**	**12 28 41.0**	**-1.3**
NC405			PKPab	**PKPab**	**12 28 44.9**	**+0.9**
FOO	**Floro**	**148.50 357**	*e*P	**PKPbc**	**12 28 40.6**	**-0.2**
FOO			IAmb	IAmb	12 28 41.4	
	comp=Z,9.4nm,0.9s					
NB201	**NORSAR Array S**	**148.53 352**	PKPdf	**PKPdf**	**12 28 37.1**	**-0.2**
NB201				**PKPbc**	**12 28 40.7**	**-0.3**
NB201			PKPab	**PKPab**	**12 28 45.3**	**+0.9**
NB2	**NORSAR Subarra**	**148.55 352**	PKP	**PKPbc**	**12 28 40.5**	**-0.6**
	comp=Z,3.4nm,0.6s,baz=14,slow=2.8					
NB2	**NORSAR Subarra**	**148.55 352**	PKP	**PKPbc**	**12 28 40.5**	**-0.6**
	baz=14,slow=2.8					
NOA	**NORSAR Array B**	**148.55 352**	PKPbc	**PKPbc**	**12 28 40.2**	**-0.8**
	comp=Z,5.8nm,0.7s,baz=15,slow=4.3,SNR=28					
NBO00	**NORSAR Array S**	**148.61 352**		**PKPbc**	**12 28 40.9**	**-0.3**
NAO01	**NORSAR Array S**	**148.78 352**	PKPdf	**PKPdf**	**12 28 35.3**	**-2.4**
NAO01				**PKPbc**	**12 28 41.0**	**-0.6**
NAO01			PKPab	**PKPab**	**12 28 44.5**	**-1.0**
NC602	**NORSAR Array S**	**148.80 351**	PKPdf	**PKPdf**	**12 28 34.9**	**-2.9**
NC602				**PKPbc**	**12 28 41.0**	**-0.6**
NC602	**NORSAR Array S**	**148.80 351**	*e*P	**PKPbc**	**12 28 40.9**	**-0.8**
NC602			IAmb	IAmb	12 28 41.0	
	comp=Z,7.3nm,0.7s					
SUE	**Sulen**	**149.05 358**	*e*P	**PKPbc**	**12 28 41.9**	**-0.3**
SUE			IAmb	IAmb	12 28 42.6	
	comp=Z,10.0nm,0.8s					
ASK	**Askoy**	**149.61 357**	*e*P	**PKPbc**	**12 28 43.4**	**-0.2**
ASK			IAmb	IAmb	12 28 43.7	
	comp=Z,10nm,0.7s					
NACGM	**Naroch**	**149.68 332**⇑	*e*PKP	**PKPbc**	**12 28 43.2**	**-0.7**
	baz=44					
KONO	**Kongsberg**	**150.09 353**	PKPdf	**PKPdf**	**12 28 39.8**	**-0.1**
KONO			PKPab	**pPKPdf**	**12 28 49.5**	**-0.6**
KONO	**Kongsberg**	**150.09 353**	PKIKP	**PKPbc**	**12 28 43.6**	**-1.3**
KONO	**Kongsberg**	**150.09 353**	*e*P	**PKPbc**	**12 28 44.2**	**-0.6**
KONO			IAmb	IAmb	12 28 45.4	
	comp=Z,7.8nm,0.8s					
ODD1	**Odda**	**150.10 356**	*e*P	**PKiKP**	**12 28 44.9**	**-0.9**
ODD1			IAmb	IAmb	12 28 45.5	
	comp=Z,9.7nm,0.8s					
PABE	**Paberze**	**150.33 335**	*e*P	**PKPbc**	**12 28 45.1**	**-0.4**
BLS5	**Blasjo**	**150.60 356**	*e*P	**PKiKP**	**12 28 48.3**	**+1.5**
KMY	**Karmoy**	**150.88 357**	*e*P	**PKiKP**	**12 28 46.8**	**-0.5**
BNN	**Bunyan**	**151.13 297**	PKPdf	**PKPdf**	**12 28 40.2**	**-2.1**
BNN				**PKPbc**	**12 28 47.1**	**-1.1**
BNN			PKPab	**sPKPdf**	**12 28 53.8**	**-2.5**
AKASG	**Malin Array Be**	**151.25 323**	PKPbc	**PKPbc**	**12 28 47.0**	**-0.9**
	comp=Z,7.1nm,0.4s,baz=49,slow=3.5,SNR=44					
AKASG	**Malin Array Be**	**151.25 323**	PKPbc	**PKPbc**	**12 28 47.4**	**-0.5**
AKASG	**Malin Array Be**	**151.25 323**	PKIKP	**PKPbc**	**12 28 47.4**	**-0.5**
AKBB	**Malin Array Si**	**151.25 323**		**PKPbc**	**12 28 47.0**	**-0.9**
AKBB	**Malin Array Si**	**151.25 323**	PKIKP	**PKPbc**	**12 28 47.0**	**-0.9**
AK05	**Malin Array Si**	**151.31 323**	PKPbc	**PKPbc**	**12 28 47.5**	**-0.5**
HOMB	**Homborsund**	**151.57 353**	*e*P	**PKiKP**	**12 28 48.4**	**-0.4**
HOMB			IAmb	IAmb	12 28 48.9	
	comp=Z,25nm,1.1s					
SNART	**Snartemo**	**151.62 355**	*e*P	**PKiKP**	**12 28 48.4**	**-0.5**
ILGA	**Ilgaz**	**152.36 302**		**PKiKP**	**12 28 50.6**	**-0.7**
BR131	**Keskin Array S**	**152.69 299**	PKPdf	**PKPdf**	**12 28 42.5**	**-2.1**
BR131				**PKPbc**	**12 28 49.2**	**-2.5**
BR131			PKPab	**pPKPbc**	**12 29 00.4**	**-1.7**
BR131	**Keskin Array S**	**152.69 299**	PKIKP	**PKPdf**	**12 28 43.2**	**-1.4**
BR131			P	**PKPbc**	**12 28 50.6**	**-1.1**
BR131			P	**PKPab**	**12 29 01.8**	**-0.8**
BRTR	**Keskin Array B**	**152.69 299**	PKPbc	**PKPbc**	**12 28 51.0**	**-0.8**
	comp=Z,2.1nm,0.4s,baz=145,slow=4.1,SNR=12					
BRTR	**Keskin Array B**	**152.69 299**	PKPdf	**PKPd

WR0	**Warramunga Arr**	**24.11**	**235**	P	**P**	**12 38 07.0**	**+0.2**
WB0	**Warramunga Arr**	**24.13**	**236**	P	**P**	**12 38 07.3**	**+0.3**
WB0				IAmb	IAmb	12 38 10.5	
	comp=Z,6.8nm,1.2s						
WB2	**Warramunga Arr**	**24.25**	**235**	P	**P**	**12 38 08.5**	**+0.4**
WB2				IAmb	IAmb	12 38 35.4	
	comp=Z,7.7nm,1.1s						
WRA	**Warramunga Arr**	**24.26**	**235**	P	**P**	**12 38 08.2**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=60,slow=9.9,SNR=18						
WRA				PcP	**PcP**	**12 41 46.5**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=60,slow=2.2,SNR=1.5						
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**24.26**	**235**	P	**P**	**12 38 08.4**	**+0.1**
MTN	**Manton Dam**	**24.62**	**254**	P	**P**	**12 38 12.5**	**+0.9**
ASAR	**Alice Springs**	**26.61**	**228**	P	**P**	**12 38 28.9**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=60,slow=9.5,SNR=9.2						
ASAR				PcP	**PcP**	**12 41 52.0**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=68,slow=2.5,SNR=1.4						
	comp=Z,0.4nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.45**	**24**	T	T	13 07 02.2	
	baz=203,slow=75,SNR=39						
H11S2	**WAKE ISLAND Hy**	**27.46**	**24**	T	T	13 06 57.0	
	baz=203,slow=75,SNR=48						
H11S1	**WAKE ISLAND Hy**	**27.47**	**24**	T	T	13 07 03.5	
	baz=203,slow=75,SNR=23						
KNRA	**Kununurra**	**27.53**	**249**	P	**P**	**12 38 37.5**	**-0.3**
KNRA				IAmb	IAmb	12 39 02.2	
	comp=Z,11nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**28.63**	**23**	T	T	13 08 26.1	
	baz=203						
H11N3	**WAKE ISLAND Hy**	**28.64**	**23**	T	T	13 08 22.4	
	baz=203						
H11N2	**WAKE ISLAND Hy**	**28.65**	**23**	T	T	13 08 24.7	
	baz=203						
AFI	**Afiamalu**	**33.07**	**105**	P	**P**	**12 39 27.6**	**+0.7**
PSA00	**Pilbara Seismi**	**37.34**	**243**	P	**P**	**12 40 02.6**	**-0.8**
PSA00				IAmb	IAmb	12 40 21.1	
	comp=Z,5.9nm,1.2s						
PETK	**Petropavlovsk-**	**59.65**	**2**	P	**P**	**12 42 55.3**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=186,slow=4.2,SNR=2.7						
	comp=Z,1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.01**	**295**	P	**P**	**12 43 05.2**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=123,slow=5.4,SNR=8.7						
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**69.32**	**327**	P	**P**	**12 43 56.8**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=144,slow=5.4,SNR=2.4						
	comp=Z,0.5nm,0.5s						
SVW2	**Sparrevohn**	**77.63**	**22**	P	**P**	**12 44 45.6**	**-0.7**
SVW2				IAmb	IAmb	12 44 57.0	
	comp=Z,9.1nm,1.4s						
CNPM	**China Poot**	**78.38**	**25**	P	**P**	**12 44 48.6**	**-2.0**
L19K	**White Mountain**	**78.59**	**21**	P	**P**	**12 44 52.1**	**+0.5**
L19K				IAmb	IAmb	12 45 18.8	
	comp=Z,8.2nm,1.5s						
RC01	**Rabbit Creek A**	**79.89**	**24**	P	**P**	**12 44 58.6**	**-0.1**
RC01				IAmb	IAmb	12 45 18.6	
	comp=Z,4.3nm,0.8s						
J20K	**Nowinta River**	**80.10**	**20**	P	**P**	**12 44 58.4**	**-1.4**
J20K				IAmb	IAmb	12 45 04.0	
	comp=Z,4.7nm,1.4s						
PMR	**Palmer**	**80.41**	**24**	P	**P**	**12 45 01.2**	**-0.3**
PMR				IAmb	IAmb	12 45 03.5	
	comp=Z,2.1nm,1.0s						
IMAR	**Indian Mountai**	**81.37**	**19**	P	**P**	**12 45 06.7**	**+0.1**
H21K	**Melozitna Rive**	**81.47**	**19**	P	**P**	**12 45 07.0**	**-0.2**
ILAR	**Eielson Array**	**83.01**	**21**	P	**P**	**12 45 13.3**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=247,slow=5.4,SNR=9.2						
	comp=Z,0.4nm,0.6s						
QSPA	**South Pole Qui**	**83.23**	**180**	P	**P**	**12 45 15.9**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=256,slow=1.0,SNR=7.7						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**83.46**	**319**	P	**P**	**12 45 17.3**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=93,slow=5.8,SNR=5.2						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**84.17**	**326**	P	**P**	**12 45 20.1**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=114,slow=6.5,SNR=2.0						
	comp=Z,0.5nm,0.4s						
MAW	**Mawson**	**84.77**	**203**	P	**P**	**12 45 24.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=8.6,slow=6.1,SNR=2.1						
	comp=Z,1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**153.31**	**286**	PKPbc	**PKPbc**	**12 52 47.8**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=63,slow=2.5,SNR=6.3						
TORD	**Torodi Ar. Bea**	**153.31**	**286**	P	**PKPbc**	**12 52 47.6**	**-1.6**

*IDC **19** 12:36:28.9±0.8,54°.92S×31°.66W,h0km,mb4.0/8, mbtmp4.1/9,ML3.5/1,Error ellipse: s-maj=30.4km s-min=18.0km az=58.0*

*NEIC **19** 12:36:30.2±1.5,55°.11S±0°.07×31°.9W±0°.1,h10km±1km, mb4.4/17,Error ellipse: s-maj=16.2km s-min=7.8km az=131.0*

ISC 19 12:36:30.7±0.7,54°.97S±0°.09×32°.0W±0°.1,h10km,n39, σ1ş56/36,mb4.3/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.71**	**283**	Pn	**Pn**	**12 37 14.0**	**-0.2**
ORCD	**Orcadas**	**8.91**	**224**	Pn	**Pn**	**12 38 37.4**	**-1.9**
PMSA	**Palmer Station**	**18.63**	**225**	P	**Pn**	**12 40 49.3**	**+1.0**
	0.2nm,0.3s,baz=72,slow=8.3,SNR=2.4						
	8.6nm,1.0s						
PMSA	**Palmer Station**	**18.63**	**225**	P	**Pn**	**12 40 49.0**	**+0.6**
VNA1	**Neumayer--Stat**	**18.87**	**156**	P	**Pn**	**12 40 54.6**	**+3.4**
VNA3	**Neumayer Olymp**	**18.98**	**158**	P	**Pn**	**12 40 58.1**	**+5.6**
VNA2	**Neumayer--Watz**	**19.27**	**156**	P	**Pn**	**12 40 58.0**	**+1.9**
	baz=319,slow=11						
SNAA	**Sanae**	**20.87**	**154**	P	**P**	**12 41 12.6**	**+0.1**
SNAA	**Sanae**	**20.87**	**154**	P	**P**	**12 41 11.7**	**-0.8**
	2.0nm,0.7s,baz=284,slow=9.2,SNR=8.8						
	2.0nm,0.7s						
SNAA	**Sanae**	**20.87**	**154**	P	**P**	**12 41 09.8**	**-2.7**
TROLL	**Troll, Antarti**	**22.45**	**153**	P	**P**	**12 41 30.3**	**+0.7**
TRQA	**Tornquist**	**26.39**	**297**	P	**P**	**12 42 07.5**	**+0.3**
TRQA				IAmb	IAmb	12 42 11.7	
	comp=Z,5.6nm,1.0s						
PLCA	**Paso Flores**	**29.11**	**283**	P	**P**	**12 42 31.7**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=130,slow=16,SNR=1.8						
	comp=Z,2.7nm,1.0s						
CPUP	**Villa Florida**	**34.10**	**317**	P	**P**	**12 43 15.7**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=152,slow=7.7,SNR=7.5						
	comp=Z,2.7nm,0.6s						
CPUP	**Villa Florida**	**34.10**	**317**	P	**P**	**12 43 15.3**	**+0.1**
CPUP				IAmb	IAmb	12 43 16.0	
	comp=Z,10nm,1.4s						
MT09	**Talagante**	**34.38**	**292**	P	**P**	**12 43 16.9**	**-0.9**
MT01	**Popeta**	**34.45**	**291**	P	**P**	**12 43 18.6**	**+0.3**
MT02	**Curacav**	**34.85**	**292**	P	**P**	**12 43 21.3**	**-0.6**
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**12 43 25.8**	**+0.4**
	comp=Z,2.3nm,1.0s,baz=210,slow=2.3,SNR=5.4						
	comp=Z,2.3nm,1.0s						
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**12 43 24.1**	**-1.3**
QSPA				IAmb	IAmb	12 43 32.4	
	comp=Z,9.6nm,1.4s						
CO01	**Juntas del Tor**	**36.89**	**297**	P	**P**	**12 43 40.0**	**+0.5**
CO01				IAmb	IAmb	12 43 58.5	
	comp=Z,5.7nm,0.9s						
GO02	**Mina Guanaco**	**40.59**	**302**	P	**P**	**12 44 11.0**	**+0.3**
GO02				IAmb	IAmb	12 44 33.8	
	comp=Z,12nm,0.9s						
MAW	**Mawson**	**42.61**	**146**	P	**P**	**12 44 25.4**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=278,slow=13,SNR=2.2						
	comp=Z,1.0nm,0.8s						
MAW	**Mawson**	**42.61**	**146**	P	**P**	**12 44 24.1**	**-2.3**
PB01	**IPOC Station P**	**44.03**	**305**	P	**P**	**12 44 39.7**	**+1.2**
PTLB	**Pontes e Lacer**	**44.68**	**321**	P	**P**	**12 44 43.3**	**-0.3**
PTLB				IAmb	IAmb	12 44 45.0	
	comp=Z,4.2nm,0.9s						
SIV	**San Ignacio**	**44.90**	**319**	P	**P**	**12 44 45.6**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=202,slow=7.6,SNR=2.2						
	comp=Z,1.2nm,0.7s						
GO01	**Chusmiza**	**45.08**	**306**	P	**P**	**12 44 45.9**	**-1.5**
GO01				IAmb	IAmb	12 44 49.4	
	comp=Z,14nm,1.2s						
LPAZ	**La Paz**	**47.55**	**310**	P	**P**	**12 45 08.2**	**+1.2**
	comp=Z,2.5nm,0.4s,baz=154,slow=4.7,SNR=14						
	comp=Z,2.5nm,0.4s						
LPAZ	**La Paz**	**47.55**	**310**	P	**P**	**12 45 08.4**	**+1.4**
H10N1	**ASCENSION HYDR**	**49.03**	**23**	T	T	13 38 09.8	
	baz=199						
H10N3	**ASCENSION HYDR**	**49.03**	**23**	T	T	13 38 13.5	
	baz=199,slow=74						
H10N2	**ASCENSION HYDR**	**49.05**	**23**	T	T	13 38 16.8	
	baz=199,slow=74						
TOA0	**Torodi Ar. Sit**	**73.58**	**34**	P	**P**	**12 48 04.1**	**+0.3**
TOA0				IAmb	IAmb	12 48 22.7	
	comp=Z,5.6nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**12 48 02.5**	**-1.3**
	comp=Z,2.4nm,1.0s,baz=198,slow=6.1,SNR=5.8						
	comp=Z,2.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**12 48 03.6**	**-0.2**
TORD				IAmb	IAmb	12 48 22.7	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**144.36**	**65**	PKP	**PKPdf**	**12 56 04.8**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=240,slow=2.2,SNR=6.9						
ILAR	**Eielson Array**	**147.38**	**314**	PKPbc	**PKPbc**	**12 56 13.0**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=118,slow=1.7,SNR=19						
SONM	**Songino Array**	**153.40**	**88**	PKPbc	**PKPbc**	**12 56 27.8**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=191,slow=3.8,SNR=2.2						

*IDC **19** 12:40:06.8±1.3,21°.41S×178°.33W,h468km±13km, mb3.6/17,mbtmp4.4/20,Error ellipse: s-maj=14.9km s-min=10.9km az=141.0*

*NEIC **19** 12:40:07.0±2.1,21°.3S±0°.1×178°.1W±0°.1,h469km±6km, mb4.3/114,Error ellipse: s-maj=16.5km s-min=13.6km az=146.0*

ISC 19 12:40:04.8±0.3,21°.34S±0°.06×178°.10W±0°.06,h450km, n375,σ1ş53/396,mb4.2/79,25C-13D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.10**	**314**	P	**P**	**12 41 32.9**	**+2.6**
	109nm,0.5s,baz=113,slow=23,SNR=139						
RAO	**Raoul Island**	**7.88**	**179**	P	**P**	**12 42 00.5**	**+1.7**
NIUE	**Niue**	**8.00**	**75**	P	**P**	**12 42 02.3**	**+2.0**
AFI	**Afiamalu**	**9.54**	**40**	P	**P**	**12 42 16.7**	**-0.3**
	9.7nm,0.8s,baz=2.7,slow=21,SNR=1.7						
AFI				S	**S**	**12 43 59.8**	**-6.0**
	20nm,0.7s,baz=224,slow=16,SNR=4.7						
AFI	**Afiamalu**	**9.54**	**40**	P	**P**	**12 42 17.6**	**+0.6**
MARNC	**Mare, Loyalty**	**12.92**	**267**	P	**P**	**12 42 54.7**	**+1.1**
PINNC	**Pines, Island,**	**13.47**	**262**	P	**P**	**12 43 01.7**	**+2.1**
DZM	**Mont Dzumac**	**14.38**	**264**	P	**P**	**12 43 10.6**	**+1.1**
	9.4nm,0.9s,baz=71,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**14.38**	**264**	P	**P**	**12 43 12.4**	**+2.9**
URZ	**Urewera**	**17.36**	**193**	P	**P**	**12 43 39.9**	**-0.8**
	8.7nm,0.8s,baz=284,slow=5.5,SNR=9.3						
URZ				S	**S**	**12 46 31.8**	**-7.0**
	4.5nm,0.8s,baz=124,slow=23,SNR=1.5						
URZ	**Urewera**	**17.36**	**193**	P	**P**	**12 43 41.4**	**+0.6**
QRZ	**Quartz Range**	**20.99**	**200**	P	**P**	**12 44 16.4**	**+1.3**
NNZ	**Nelson**	**21.09**	**198**	P	**P**	**12 44 15.4**	**-0.5**
LTZ	**Lake Taylor**	**22.85**	**198**	P	**P**	**12 44 31.9**	**0.0**
LTZ				IAmb	IAmb	12 45 15.1	
	comp=Z,25nm,1.4s						
WHZ	**Wether Hill Ro**	**27.02**	**202**	P	**P**	**12 45 09.8**	**+0.8**
EIDS	**Eidsvold**	**28.54**	**256**	P	**P**	**12 45 22.1**	**-0.5**
EIDS				IAmb	IAmb	12 45 55.8	
	comp=Z,12nm,1.3s						
ARMA	**Armidale**	**28.62**	**245**	P	**P**	**12 45 24.1**	**+0.7**
ARMA				IAmb	IAmb	12 45 43.8	
	comp=Z,17nm,1.2s						
CTA	**Charters Tower**	**33.32**	**266**	P	**P**	**12 46 03.2**	**-0.8**
	comp=Z,3.6nm,0.5s,baz=90,slow=10,SNR=11						
	comp=Z,3.6nm,0.5s						
CTAO	**Charters Tower**	**33.32**	**266**	P	**P**	**12 46 03.5**	**-0.5**
CTAO				IAmb	IAmb	12 46 33.7	
	comp=Z,21nm,1.4s						
TOO	**Toolangi**	**35.33**	**235**	P	**P**	**12 46 21.1**	**+0.3**
TOO				IAmb	IAmb	12 46 21.6	
	comp=Z,15nm,0.9s						
STKA	**Stephens Creek**	**37.34**	**245**	P	**P**	**12 46 36.9**	**-0.6**
	comp=Z,4.2nm,0.7s,baz=80,slow=10,SNR=6.4						
	comp=Z,4.2nm,0.7s						
STKA	**Stephens Creek**	**37.34**	**245**	P	**P**	**12 46 37.4**	**-0.2**
COEN	**Coen**	**37.55**	**275**	P	**P**	**12 46 39.3**	**-0.1**
COEN				IAmb	IAmb	12 46 60.0	
	comp=Z,32nm,1.5s						
TAOE	**Nuku Hiva Isla**	**38.58**	**77**	P	**P**	**12 46 47.5**	**-0.4**
BBOO	**Buckleboo**	**42.09**	**244**	P	**P**	**12 47 15.5**	**-0.5**
WR0	**Warramunga Arr**	**44.21**	**263**	P	**P**	**12 47 31.3**	**-1.4**
AS31	**Alice Springs**	**44.24**	**258**	P	**P**	**12 47 32.4**	**-0.6**
ASAR	**Alice Springs**	**44.24**	**258**	P	**P**	**12 47 31.9**	**-1.2**
	comp=Z,6.7nm,0.7s,baz=88,slow=8.4,SNR=45						
ASAR				PcP	**pwP**	**12 49 07.2**	**+4.3**
	comp=Z,1.1nm,0.7s,baz=111,slow=3.7,SNR=4.9						
ASAR				ScP	**ScP**	**12 52 14.9**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=101,slow=4.8,SNR=1.8						
ASAR				S	**S**	**12 53 28.5**	**-4.5**
	comp=Z,1.0nm,1.0s,baz=194,slow=24,SNR=4.8						
	comp=Z,6.7nm,0.7s						
WB0	**Warramunga Arr**	**44.38**	**263**	P	**P**	**12 47 32.4**	**-1.7**
WB0				IAmb	IAmb	12 47 38.8	
	comp=Z,7.5nm,0.9s						
WB2	**Warramunga Arr**	**44.38**	**263**	IAmb	IAmb	12 47 32.8	
	comp=Z,7.3nm,1.0s						
WB2				P	**P**	**12 47 33.1**	**-1.1**
WRA	**Warramunga Arr**	**44.40**	**263**	P	**P**	**12 47 32.2**	**-2.0**
	comp=Z,2.0nm,0.7s,baz=96,slow=7.6,SNR=39						
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**44.40**	**263**	P	**P**	**12 47 32.7**	**-1.6**
FORT	**Forrest**	**48.88**	**247**	P	**P**	**12 48 07.8**	**-0.5**
MTN	**Manton Dam**	**49.08**	**271**	P	**P**	**12 48 08.5**	**-1.4**
MTN				IAmb	IAmb	12 48 16.0	
	comp=Z,13nm,1.2s						
KNRA	**Kununurra**	**50.51**	**267**	P	**P**	**12 48 19.4**	**-1.1**
KNRA				IAmb	IAmb	12 48 47.9	
	comp=Z,20nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.83**	**263**	P	**P**	**12 48 36.9**	**-0.4**
VNDA	**Vanda**	**57.07**	**185**	P	**P**	**12 49 07.1**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=21,slow=4.1,SNR=2.5						
	comp=Z,0.4nm,0.7s						
PSA00	**Pilbara Seismi**	**57.39**	**257**	P	**P**	**12 49 08.1**	**-1.3**
PSA00				IAmb	IAmb	12 49 09.3	
	comp=Z,20nm,1.0s						
MBWA	**Marble Bar**	**57.58**	**258**	P	**P**	**12 49 09.4**	**-1.3**
MBWA				IAmb	IAmb	12 49 10.1	
	comp=Z,13nm,0.6s						
MORW	**Morawa**	**59.42**	**248**	P	**P**	**12 49 22.2**	**-0.9**
MORW				IAmb	IAmb	12 49 41.3	
	comp=Z,24nm,1.5s						
GIRL	**Giralia**	**62.24**	**255**	P	**P**	**12 49 42.3**	**+0.5**
CASY	**Casey**	**63.17**	**205**	P	**P**	**12 49 47.0**	**-0.1**
CASY				IAmb	IAmb	12 49 52.5	
	comp=Z,12nm,1.5s						
QSPA	**South Pole Qui**	**68.73**	**180**	P	**P**	**12 50 22.8**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=359,slow=2.5,SNR=2.4						
	comp=Z,1.1nm,0.6s						
QSPA	**South Pole Qui**	**68.73**	**180**	P	**P**	**12 50 23.4**	**+1.3**
QSPA				IAmb	IAmb	12 50 45.4	
	comp=Z,8.1nm,1.5s						
MJAR	**Matsushiro Arr**	**70.83**	**324**	P	**P**	**12 50 34.6**	**-0.3**
	comp=Z,4.9nm,0.8s,baz=153,slow=6.6,SNR=14						
	comp=Z,4.9nm,0.8s						
MAJO	**Matsushiro**	**70.83**	**324**	P	**P**	**12 50 34.2**	**-0.8**
MAJO				IAmb	IAmb	12 50 35.5	
	comp=Z,6.5nm,0.8s						
JSU	**Suzuyama**	**72.05**	**315**	P	**P**	**12 50 42.4**	**+0.1**
AMKA	**Amchitka**	**72.44**	**358**	P	**P**	**12 50 43.7**	**-0.3**
JTM	**Tenmabayashi**	**72.53**	**329**	P	**P**	**12 50 45.8**	**+1.0**
JHS	**Saijyo**	**72.68**	**320**	P	**P**	**12 50 46.4**	**+0.6**
KIWB	**Kanaga Island**	**72.88**	**1**	P	**P**	**12 50 47.1**	**+0.6**
ADK	**Adak**	**72.92**	**1**	P	**P**	**12 50 46.7**	**-0.1**
YOJ	**Yonaguni jima**	**73.14**	**305**	P	**P**	**12 50 48.9**	**+0.2**
YULB	**Yu-li**	**73.88**	**304**	P	**P**	**12 50 52.4**	**-0.6**
NACB	**Ninganchiao**	**74.07**	**304**	P	**P**	**12 50 52.3**	**-1.7**
TPUB	**Ta-pu**	**74.35**	**303**	P	**P**	**12 50 54.4**	**-1.3**
SSLB	**Suanglung**	**74.36**	**304**	P	**P**	**12 50 54.5**	**-1.2**
NIKH	**Nikolski High**	**74.43**	**6**	P	**P**	**12 50 55.1**	**-0.3**
	baz=189						
UNV	**Unalaska Valle**	**75.54**	**7**	P	**P**	**12 51 01.3**	**-0.3**
	baz=191						
PETK	**Petropavlovsk-**	**77.05**	**345**	P	**P**	**12 51 10.7**	**+0.6**
	comp=Z,3.3nm,0.6s,baz=130,slow=8.0,SNR=5.1						
	comp=Z,3.3nm,0.6s						
PETK	**Petropavlovsk-**	**77.05**	**345**	P	**P**	**12 51 10.1**	**0.0**
KSRS	**Korea Array**	**77.45**	**319**	P	**P**	**12 51 13.3**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=136,slow=6.3,SNR=16						
	comp=Z,3.3nm,0.8s						
KSAR	**Wonju Array Be**	**77.47**	**319**	P	**P**	**12 51 12.4**	**-0.3**
KS19	**Wonju Array Si**	**77.52**	**319**	P	**P**	**12 51 13.3**	**+0.4**
KS19				IAmb	IAmb	12 51 40.8	
	comp=Z,20nm,1.5s						
USRK	**Ussuriysk Ar.**	**79.60**	**326**	P	**P**	**12 51 24.9**	**+0.8**
	comp=Z,10nm,0.9s,baz=103,slow=3.4,SNR=13						
	comp=Z,10nm,0.9s						
USRK	**Ussuriysk Ar.**	**79.60**	**326**	P	**P**	**12 51 25.1**	**+1.1**
BFSC	**Mount Baldy Ra**	**79.73**	**47**	P	**P**	**12 51 25.8**	**+0.7**
	baz=235						
MONP2	**Monument Peak**	**79.83**	**49**	P	**P**	**12 51 27.0**	**+1.3**
	baz=236						
EDW2	**Edwards Air Fo**	**79.86**	**46**	P	**P**	**12 51 27.0**	**+1.3**
	baz=235,SNR=5.3						
IKP	**In-Ko-Pah, Jac**	**79.92**	**49**	P	**P**	**12 51 27.9**	**+1.9**
	baz=237						
PFO	**Pinyon Flats O**	**80.20**	**48**	P	**P**	**12 51 28.9**	**+1.3**
	baz=236						
TPFO	**Pinon Flats**	**80.20**	**48**	P	**P**	**12 51 28.9**	**+1.3**
	baz=236						
NJ2	**Nanjing**	**80.34**	**310**	*e*P	**P**	**12 51 26.9**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RRX	**Edison Barstow**	**80.53**	**47**	P	**P**	**12 51 31.3**	**+2.1**
	baz=236						
CWC	**Cottonwood Cre**	**80.70**	**45**	P	**P**	**12 51 31.8**	**+1.6**
	baz=235						
BELC	**Belle Mtn. Jos**	**80.74**	**48**	P	**P**	**12 51 32.0**	**+1.6**
	baz=236						
MAW	**Mawson**	**80.75**	**200**	P	**P**	**12 51 29.8**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=131,slow=6.9,SNR=4.1						
	comp=Z,1.7nm,0.8s						
R17K	**Ugashik Creek**	**80.75**	**12**	P	**P**	**12 51 30.9**	**+1.2**
	baz=200						
MPMC	**Manual Prospec**	**80.87**	**46**	P	**P**	**12 51 32.4**	**+1.2**
	baz=235						
HEC	**Hector,Ludlow**	**80.96**	**47**	P	**P**	**12 51 33.3**	**+1.8**
	baz=236						
YBH	**Yreka Blue Hor**	**81.00**	**39**	P	**P**	**12 51 33.5**	**+2.0**
	comp=Z,4.1nm,0.7s,baz=113,slow=4.5,SNR=5.4						
	comp=Z,4.1nm,0.7s						
GLA	**Glamis**	**81.04**	**49**	P	**P**	**12 51 33.4**	**+1.5**
	baz=237						
PNTR	**Pine Nut**	**81.27**	**42**	P	**P**	**12 51 34.6**	**+1.4**
PNTR				IAmb	IAmb	12 51 35.6	
	comp=Z,7.5nm,0.9s						
GMRC	**Granite Mounta**	**81.40**	**48**	P	**P**	**12 51 34.8**	**+1.0**
	baz=237						
IRM	**Iron Mountain**	**81.41**	**48**	P	**P**	**12 51 34.8**	**+1.0**
	baz=237						
YERR	**Yerington**	**81.43**	**42**	P	**P**	**12 51 35.4**	**+1.4**
YERR				IAmb	IAmb	12 51 36.1	
	comp=Z,7.0nm,1.1s						
LCH	**Last Change Ra**	**81.44**	**45**	P	**P**	**12 51 34.5**	**+0.5**
LHV	**Little Huntoon**	**81.47**	**43**	P	**P**	**12 51 33.4**	**-0.5**
GWY	**Greenwater Val**	**81.49**	**46**	P	**P**	**12 51 35.7**	**+1.4**
FURC	**Furnace Creek,**	**81.52**	**46**	P	**P**	**12 51 35.6**	**+1.4**
	baz=236						
L04D	**Klamath Falls**	**81.54**	**38**	P	**P**	**12 51 35.6**	**+1.2**
	baz=231						
TUQ	**Turquoise Moun**	**81.58**	**47**	P	**P**	**12 51 35.4**	**+0.7**
	baz=236						
Q16K	**King Salmon**	**81.67**	**11**	P	**P**	**12 51 35.0**	**+0.5**
	baz=200						
NVAR	**Mina Array Bea**	**81.70**	**43**	P	**P**	**12 51 36.9**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=225,slow=9.0,SNR=22						
	comp=Z,2.3nm,0.8s						
GMN	**Gold Mountain**	**81.73**	**45**	P	**P**	**12 51 36.4**	**+0.8**
PAHR	**Pah Rah Range**	**81.77**	**42**	P	**P**	**12 51 37.1**	**+1.5**
NV11	**Mina Array Sit**	**81.79**	**43**	P	**P**	**12 51 35.8**	**0.0**
KVN	**Kaiserville**	**82.19**	**43**	P	**P**	**12 51 38.5**	**+0.6**
TPH	**Tonopah**	**82.19**	**44**	P	**P**	**12 51 38.8**	**+0.9**
PDMCI	**Parker Dam,Lak**	**82.19**	**49**	P	**P**	**12 51 39.2**	**+1.5**
	baz=238						
TPNV	**Topopah Spring**	**82.20**	**45**	P	**P**	**12 51 39.4**	**+1.5**
TPNV	**Topopah Spring**	**82.20**	**45**	P	**P**	**12 51 39.0**	**+1.1**
	baz=236,SNR=5.1						
P17K	**Kvichak River**	**82.20**	**11**	P	**P**	**12 51 37.6**	**+0.5**
	baz=200,SNR=6.1						
O16K	**Kokwok River B**	**82.29**	**10**	P	**P**	**12 51 37.7**	**+0.1**
	baz=199						
J04D	**Umpqua Nationa**	**82.29**	**38**	P	**P**	**12 51 39.4**	**+1.1**
	baz=231						
MOD	**Modoc Plateau**	**82.52**	**40**	P	**P**	**12 51 40.6**	**+1.2**
MOD				IAmb	IAmb	12 51 41.7	
	comp=Z,8.7nm,1.3s						
P18K	**Big Mountain,**	**82.61**	**12**	P	**P**	**12 51 39.5**	**+0.2**
P18K				IAmb	IAmb	12 51 40

K20K	Telida	86.51	11	P	P	12 51 58.6	+0.2	
K20K	Telida	86.51	11	P	P	12 51 58.9	+0.6	
	baz=202							
YAH	Yahtse	86.61	17	P	P	12 51 57.9	-1.3	
TMUT	Trail Mountain	86.81	46	P	P	12 52 01.4	+0.6	
N25K	Chitina, Valde	86.92	15	P	P	12 52 01.0	+0.6	
N25K				IAmb	IAmb	12 52 01.1		
	comp=Z,2.7nm,0.7s							
N25K	Chitina, Valde	86.92	15	P	P	12 52 00.7	+0.3	
	baz=211							
CAST	Castle Rocks	86.92	11	P	P	12 51 59.2	-1.2	
	baz=204							
PLID	Pearl Lake	86.92	39	P	P	12 52 01.9	+0.8	
PLID				IAmb	IAmb	12 52 17.6		
	comp=Z,5.2nm,1.4s							
GLB	Gilahina Butte	86.97	16	P	P	12 52 01.3	+0.6	
GLB				IAmb	IAmb	12 52 01.5		
	comp=Z,4.9nm,1.1s							
M24K	Tolsona, Glenn	86.97	14	P	P	12 52 01.3	+0.7	
	baz=210							
B08A	Colville Reser	86.97	35	P	P	12 52 01.6	+0.6	
B08A				IAmb	IAmb	12 52 02.2		
	comp=Z,4.0nm,0.8s							
HLID	Hailey	87.02	41	P	P	12 52 02.9	+1.4	
HLID	Hailey	87.02	41	P	P	12 52 02.2	+0.7	
	baz=237							
WAT6	Susitna Watana	87.04	14	P	P	12 52 01.4	+0.3	
	baz=208							
WAT1	Susitna Watana	87.08	13	P	P	12 52 01.5	+0.4	
	baz=207							
SRU	San Rafael Swe	87.17	46	P	P	12 52 03.4	+1.1	
SRU				IAmb	IAmb	12 52 04.2		
	comp=Z,3.8nm,0.9s							
P29M	Windy Craggy	87.17	19	P	P	12 52 02.2	+0.6	
	baz=217							
J20K	Nowinta River	87.25	10	P	P	12 52 01.5	-0.3	
	baz=202							
KTH	Kantishna Hill	87.26	12	P	P	12 52 00.8	-1.2	
KTH				IAmb	IAmb	12 52 02.5		
	comp=Z,4.9nm,0.9s							
TRF	Thorofare Moun	87.29	12	P	P	12 52 01.6	-0.6	
TRF	Thorofare Moun	87.29	12	P	P	12 52 01.4	-0.8	
	baz=206,SNR=8.7							
MNTX	Cornudas Mount	87.31	55	P	P	12 52 02.6	-0.3	
MNTX	Cornudas Mount	87.31	55	P	P	12 52 04.5	+1.5	
	baz=243							
GCSA	Galena City Sc	87.36	9	P	P	12 52 02.0	-0.3	
	baz=200							
O28M	Mount Upton	87.38	18	P	P	12 52 02.4	-0.4	
	baz=215							
PLBC	Pleasant Camp	87.46	20	P	P	12 52 03.5	+0.6	
	baz=218							
RND	Reindeer	87.53	13	P	P	12 52 03.3	0.0	
DHY	Denali Highway	87.55	13	P	P	12 52 03.4	-0.1	
DHY				IAmb	IAmb	12 52 14.8		
	comp=Z,3.3nm,1.0s							
TX31	Lajitas Ar. Si	87.59	57	P	P	12 52 05.5	+1.1	
TX32	Lajitas Array	87.59	57	P	P	12 52 05.2	+0.9	
TX32				IAmb	IAmb	12 52 07.2		
	comp=Z,5.9nm,1.2s							
TXAR	Lajitas Array	87.59	57	P	P	12 52 06.3	+1.9	
	comp=Z,1.4nm,0.8s,baz=226,slow=6.4,SNR=14							
	comp=Z,1.4nm,0.8s							
TXAR	Lajitas Array	87.59	57	P	P	12 52 05.9	+1.5	
P30M	Million Dollar	87.80	19	P	P	12 52 05.0	+0.4	
	baz=218							
MCK	McKinley	87.81	13	P	P	12 52 04.6	+0.1	
MCK				IAmb	IAmb	12 52 05.8		
	comp=Z,7.6nm,0.8s							
MCK	McKinley	87.81	13	P	P	12 52 04.9	+0.4	
	baz=207							
PAX	Paxson	87.89	14	P	P	12 52 04.5	-0.5	
	baz=210							
M26K	Nabesna, AK	87.99	16	P	P	12 52 05.2	-0.2	
M26K				IAmb	IAmb	12 52 07.6		
	comp=Z,4.2nm,0.9s							
M26K	Nabesna, AK	87.99	16	P	P	12 52 06.0	+0.5	
	baz=212							
ANMO	Albuquerque	88.00	51	P	P	12 52 05.9	-0.4	
	baz=242							
YUK6	Outpost Mounta	88.04	18	P	P	12 52 06.2	+0.3	
	baz=217							
NEW	Newport	88.11	36	P	P	12 52 06.3	0.0	
	baz=235							
YUK3	Moose Creek	88.13	17	P	P	12 52 06.4	+0.1	
	baz=215							
HYT	Haines Junctio	88.20	19	P	P	12 52 07.2	+0.6	
	baz=217							
M27K	Edge Creek, AK	88.24	16	P	P	12 52 07.3	+0.6	
M27K				IAmb	IAmb	12 52 08.3		
	comp=Z,7.5nm,1.0s							
M27K	Edge Creek, AK	88.24	16	P	P	12 52 07.4	+0.6	
	baz=214							
MENT	Mentasta	88.27	15	P	P	12 52 07.1	+0.4	
MENT				IAmb	IAmb	12 52 13.6		
	comp=Z,2.9nm,0.9s							
YUK4	Talbot Arm	88.28	18	P	P	12 52 07.5	+0.5	
	baz=216							
P32M	Atlin	88.43	21	P	P	12 52 08.2	+0.7	
	baz=221							
L26K	Log Cabin Wild	88.43	15	P	P	12 52 08.3	+0.8	
	baz=212							
K24K	Donnelly Dome	88.54	14	P	P	12 52 08.4	+0.5	
	baz=210							
I21K	Tanana	88.55	11	P	P	12 52 07.7	-0.2	
I21K				IAmb	IAmb	12 52 09.8		
	comp=Z,7.4nm,0.9s							
I21K	Tanana	88.55	11	P	P	12 52 08.2	+0.3	
	baz=204							
BVCY	Beaver Creek	88.55	16	P	P	12 52 09.0	+1.0	
	baz=214							
NEA2	Nenana	88.55	12	P	P	12 52 06.3	-1.6	
NEA2				IAmb	IAmb	12 52 08.5		
	comp=Z,3.6nm,0.9s							
NEA2	Nenana	88.55	12	P	P	12 52 06.9	-1.1	
	baz=207							
XAN	Xi'an	88.56	307	P	P	12 52 09.4	+0.6	
XAN				pmax	pmax			
	comp=Z,15nm,1.0s							
O30N	Mendenhall	88.58	19	P	P	12 52 08.8	+0.6	
	baz=219							
MLY	Manley	88.63	11	P	P	12 52 07.5	-0.9	
MLY				IAmb	IAmb	12 52 09.0		
	comp=Z,2.5nm,0.8s							
MLY	Manley	88.63	11	P	P	12 52 07.5	-0.9	
	baz=205							
WRH	Wood River Hil	88.64	13	P	P	12 52 08.0	-0.3	
WRH				IAmb	IAmb	12 52 09.1		
	comp=Z,7.9nm,0.9s							
MCMT	McKenzie Canyo	88.65	40	P	P	12 52 10.3	+1.1	
RIDG	Independent Ri	88.69	14	P	P	12 52 08.8	+0.1	
	baz=211							
DOT	Dot Lake	88.80	14	P	P	12 52 08.6	-0.6	
DOT				IAmb	IAmb	12 52 09.9		
	comp=Z,4.0nm,1.0s							
HDA	Harding Lake	88.82	13	P	P	12 52 08.7	-0.5	
HDA				IAmb	IAmb	12 52 10.3		
	comp=Z,5.0nm,0.7s							
HDA	Harding Lake	88.82	13	P	P	12 52 08.9	-0.3	
	baz=209,SNR=5.7							
N30M	Aishikik Lake	88.82	18	P	P	12 52 10.0	+0.6	
	baz=216							
L27K	Beaver Creek,	88.84	16	P	P	12 52 10.1	+0.8	
	baz=214							
H21K	Melozitna Rive	88.85	10	P	P	12 52 09.3	0.0	
H21K				IAmb	IAmb	12 52 10.9		
	comp=Z,3.3nm,0.8s							
H21K	Melozitna Rive	88.85	10	P	P	12 52 09.8	+0.5	
	baz=204							
CCB	Clear Creek Bu	88.85	13	P	P	12 52 08.7	-0.6	
CCB				IAmb	IAmb	12 52 10.3		
	comp=Z,4.7nm,0.8s							
BCAR	Beaver Creek A	88.85	16	P	P	12 52 09.9	+0.5	
DLBC	Dease Lake	88.86	23	P	P	12 52 10.7	+1.1	
	baz=224							
I23K	Minto, Yukon-K	88.99	12	P	P	12 52 08.8	-1.1	
	baz=207							
IMAR	Indian Mountai	89.00	10	P	P	12 52 09.9	-0.1	
TCOL	CIGO, UAF Yank	89.04	12	P	P	12 52 09.6	-0.6	
TCOL	CIGO, UAF Yank	89.04	12	P	P	12 52 09.6	-0.6	
	baz=208							
COLA	College	89.04	12	P	P	12 52 09.4	-0.7	
COLA				IAmb	IAmb	12 52 10.3		
	comp=Z,7.7nm,0.8s							
COLA	College	89.04	12	P	P	12 52 09.7	-0.5	
	baz=208							
MDM	Murphy Dome	89.04	12	P	P	12 52 09.6	-0.6	
MDM				IAmb	IAmb	12 52 10.7		
	comp=Z,5.8nm,0.9s							
MSO	Missoula	89.08	38	P	P	12 52 11.3	+0.3	
	baz=237							
SCRK	Sand Creek	89.09	14	P	P	12 52 11.8	+1.2	
SCRK	Sand Creek	89.09	14	P	P	12 52 10.9	+0.2	
	baz=212							
REDW	Red Top Meadow	89.12	42	P	P	12 52 12.5	+1.1	
REDW				IAmb	IAmb	12 52 13.5		
	comp=Z,4.5nm,1.1s							
IL31		89.15	13	P	P	12 52 10.1	-0.5	
IL31				IAmb	IAmb	12 52 11.2		
	comp=Z,6.3nm,1.3s							
ILAR	Eielson Array	89.15	13	P	P	12 52 09.9	-0.8	
	comp=Z,3.3nm,1.0s,baz=222,slow=5.4,SNR=18							
	comp=Z,3.3nm,1.0s							
ILAR	Eielson Array	89.15	13	P	P	12 52 10.1	-0.6	
P33M	Teslin, Yukon	89.19	21	P	P	12 52 11.7	+0.5	
	baz=222							
R33M	Jennings River	89.22	22	P	P	12 52 11.8	+0.4	
	baz=223							
M29M	Somme Creek	89.22	17	P	P	12 52 11.9	+0.7	
	baz=216							
N31M	Braeburn, Yuko	89.23	19	P	P	12 52 10.7	-0.5	
	baz=219							
H22K	Ishtalitna Cre	89.30	11	P	P	12 52 11.5	+0.1	
	baz=205							
J25K	Salcha River,	89.33	13	P	P	12 52 11.6	-0.1	
J25K				IAmb	IAmb	12 52 15.9		
	comp=Z,3.7nm,1.1s							
J25K	Salcha River,	89.33	13	P	P	12 52 11.8	+0.2	
	baz=210							
IMW	Indian Meadow	89.33	42	P	P	12 52 12.9	+0.5	
IMW				IAmb	IAmb	12 52 14.6		
	comp=Z,2.9nm,0.7s							
LOHW	Long Hollow	89.40	42	P	P	12 52 14.0	+1.3	
LRM	Limekiln Ridge	89.42	40	P	P	12 52 14.3	+1.6	
QLMT	Earthquake Lak	89.51	41	P	P	12 52 14.8	+1.6	
G21K	Allakaket	89.53	10	P	P	12 52 12.8	+0.4	
	baz=200							
K27K	Chicken	89.59	15	P	P	12 52 13.4	+0.7	
K27K				IAmb	IAmb	12 52 14.9		
	comp=Z,5.7nm,1.1s							
K27K	Chicken	89.59	15	P	P	12 52 13.7	+0.9	
	baz=213							
BW06	Boulder Array	89.64	43	P	P	12 52 14.2	+0.4	
BW06				IAmb	IAmb	12 52 14.7		
	comp=Z,2.5nm,0.9s							
BW06	Boulder Array	89.64	43	P	P	12 52 14.0	+0.2	
	baz=240							
PD31	Pinedale Array	89.64	43	P	P	12 52 14.4	+0.6	
PDAR	Pinedale Array	89.64	43	P	P	12 52 14.4	+0.6	
	comp=Z,1.6nm,0.7s,baz=208,slow=2.9,SNR=15							
	comp=Z,1.6nm,0.7s							
PDAR	Pinedale Array	89.64	43	P	P	12 52 14.2	+0.4	
J26L	Joseph Creek	89.64	14	P	P	12 52 13.9	+0.7	
J26L				IAmb	IAmb	12 52 16.0		
	comp=Z,6.5nm,0.9s							
J26L	Joseph Creek	89.64	14	P	P	12 52 13.8	+0.7	
	baz=212,SNR=9.5							
BOZ	Bozeman (W)	89.79	40	P	P	12 52 14.9	+0.6	
BOZ	Bozeman (W)	89.79	40	P	P	12 52 15.4	+1.1	
	baz=239							
M30M	Minto, Yukon	89.80	18	P	P	12 52 14.5	+0.6	
M30M				IAmb	IAmb	12 52 15.0		
	comp=Z,6.8nm,1.1s							
M30M	Minto, Yukon	89.80	18	P	P	12 52 14.4	+0.6	
	baz=218							
HHC	Hu-ho-hao-te	89.87	314	*e*P	P	12 52 15.6	+0.8	
HHC				pmax	pmax			
	comp=Z,340nm,8.6s							
SDCO	Great Sand Dun	89.97	49	P	P	12 52 17.1	+1.5	
	baz=243							
G22K	Bettles	90.22	10	P	P	12 52 16.3	+0.7	
	baz=205							
DAWY	Dawson	90.29	16	P	P	12 52 15.4	-0.7	
DAWY				IAmb	IAmb	12 52 18.7		
	comp=Z,6.7nm,1.2s							
DAWY	Dawson	90.29	16	P	P	12 52 16.5	+0.4	
	baz=216							
CMAR	Chiang Mai Arr	90.30	290	P	P	12 52 17.5	+0.4	
	comp=Z,4.7nm,0.9s,baz=129,slow=3.0,SNR=22							
	comp=Z,4.7nm,0.9s							
I26K	Coal Creek Min	90.42	14	P	P	12 52 16.9	+0.4	
	baz=212							
EGAK	Eagle	90.44	15	P	P	12 52 17.4	+0.7	
	baz=214,SNR=5.6							
F22K	John River	90.65	10	P	P	12 52 17.8	+0.1	
	baz=204							
PZH	PanZhiHua	91.02	298	P	P	12 52 20.9	+0.5	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.7s							
PZH				pmax	pmax			
	comp=Z,160nm,4.4s							
MMPY	Sheldon Lake,	91.49	20	P	P	12 52 23.7	+2.0	
	baz=223							
K22A	Casper	91.54	44	P	P	12 52 23.2	+0.7	
	baz=242							
H27K	Steamboat Moun	91.56	14	P	P	12 52 22.4	+0.5	
	baz=214							
G26K	Porcupine Rive	91.68	13	P	P	12 52 24.5	+2.2	
	baz=212							
E24K	Your Creek	91.77	11	P	P	12 52 24.6	+1.8	
	baz=208							
TOLK	Toolik Lake Re	92.10	10	P	P	12 52 26.0	+1.6	
	baz=206							
MKAR	Manchi Array	111.70	313	PKiKP	PKiKP	12 57 45.8	-1.6	
	comp=Z,0.5nm,0.8s,baz=64,slow=2.8,SNR=4.6							
ARU	Arti	125.83	325	PKP	PKPdf	12 58 13.1	-1.0	
	comp=Z,2.7nm,0.3s,baz=135,slow=5.6,SNR=5.6							
AKTO	Aktyubinsk	127.62	318	PKP	PKPdf	12 58 17.2	-0.6	
	comp=Z,0.8nm,0.4s,baz=329,slow=3.0,SNR=5.2							
ARCES	ARCESS Array B	129.72	349	PKP	PKPdf	12 58 20.3	-0.9	
	comp=Z,1.5nm,0.6s,baz=21,slow=1.5,SNR=15							
KLMR	Klimovskoe	132.60	336	*e*PKPdf	PKPdf	12 58 25.7	-1.1	
KLMR				AMP		12 58 38.0		
	comp=Z,6.0nm,1.1s							
KLMR				*e*PP	PP	13 01 07.3	+10	
BELG	Belogornoye	133.21	323	PKP	PKPdf	12 58 28.1	-0.1	
	comp=Z,4.8nm,0.4s,baz=215,slow=1.7,SNR=3.8							
FINES	FINESS Array B	136.55	343	PKP	PKPdf	12 58 33.8	-0.3	
	comp=Z,0.9nm,0.6s,baz=62,slow=4.5,SNR=1.6							
FINES				SKPbc	SKPbc	13 01 22.9	-0.9	
	comp=Z,1.7nm,0.6s,baz=51,slow=4.4,SNR=7.0							
NB2	NORSAR Subarra	139.80	353	PKP	PKPdf	12 58 31.7	-8.5	
	comp=Z,0.8nm,0.8s,baz=12,slow=3.2							
NOA	NORSAR Array B	139.80	353	PKhKP	PKPpre	12 58 32.8		
	comp=Z,0.7nm,0.7s,baz=7.6,slow=2.0,SNR=5.4							
NOA				PKP	PKPdf	12 58 42.0	+1.7	
	comp=Z,0.5nm,0.5s,baz=14,slow=4.0,SNR=4.0							
HFS	Hagfors	140.35	351	PKhKP	PKPpre	12 58 34.2		
	comp=Z,1.5nm,0.3s,baz=62,slow=3.4,SNR=16							
AKASG	Malin Array Be	143.70	330	PKP	PKPab	12 58 44.5	-1.4	
	comp=Z,9.2nm,0.5s,baz=43,slow=4.5,SNR=61							
AKBB	Malin Array Si	143.70	330	PKPdf	PKPab	12 58 45.0	-0.9	
AK05	Malin Array Si	143.76	330	PKPdf	PKPab	12 58 45.4	-0.7	
EKA	Eskdalemuir Ar	145.84	5	PKPbc	PKPdf	12 58 50.9	-0.1	
	comp=Z,2.2nm,0.6s,baz=20,slow=2.7,SNR=4.9							
SORM	Soroca	145.87	328	⇓P	PKPdf	12 58 51.3	+0.1	
ASF	Jabal al Asfar	147.07	297	PKPbc	PKPdf	12 58 56.3	+2.4	
	comp=Z,4.0nm,0.8s,baz=106,slow=3.2,SNR=6.1							
BR131	Keskin Array S	147.32	311	PKPdf	PKPdf	12 58 52.9	-1.2	
BR131				PKPbc	PKPdf	12 58 56.5	+2.3	
BR131				PKPab	PKiKP	12 58 59.4	+0.4	
BRTR	Keskin Array B	147.32	311	PKPbc	PKPdf	12 58 56.4	+2.2	
	comp=Z,2.0nm,0.6s,baz=136,slow=4.0,SNR=13							
BRTR	Keskin Array B	147.32	311	PKPbc	PKPdf	12 58 56.5	+2.3	
TLCR		147.53	323	⇓P	PKPdf	12 58 55.7	+1.6	
BURAR	Bucovina Array	147.74	330	⇓P	PKPbc	12 58 58.9	+0.9	
BURAR	Bucovina Array	147.74	330	PKPbc	PKPdf	12 58 57.8	+3.3	
BIZ	Bicaz	147.79	328	⇑P	PKPdf	12 58 58.1	+3.6	
TESR	Tescani	147.82	327	⇑P	PKPdf	12 58 56.9	+2.4	
TPGR	Topolog	147.95	323	⇑P	PKPdf	12 58 58.3	+3.5	
TIRR	Tirgusor	148.20	323	⇑P	PKPdf	12 58 58.3	+3.1	
VRI	Vrincioaia	148.21	326	⇑P	PKPdf	12 58 58.6	+3.4	
HARR	Harsova	148.33	323	⇑P	PKPdf	12 58 58.1	+2.7	
OSTC	Ostas	148.74	342	*e*PKP	PKPdf	12 58 58.9	+3.0	
DOPR	Dopca	148.82	328	⇓P	PKPbc	12 59 00.8	0.0	
CLL	Collm	148.85	346	PKPbc	PKPdf	12 59 00.0	+4.0	
CLL	Collm	148.85	346	*i* PKPbc	PKPdf	12 59 00.2	+4.2	
	comp=Z,13nm,0.9s							
CLL				*i* PKPab	PKPab	12 59 06.3	+0.2	
	comp=Z,6.0nm,0.7s							
MLR	Muntele Rosu	148.87	326	⇑P	PKPbc	12 59 01.0	0.0	
MLR	Muntele Rosu	148.87	326	PKPbc	PKPdf	12 59 00.3	+3.9	
DPC	Dobruska-Polom	148.89	342	⇑*e*PKP	PKPdf	12 59 00.6	+4.4	
DPC				*e*PKPAB	PKPab	12 59 06.7	+0.3	
KRLC	Kraliky	149.00	341	⇑*e*PKP	PKPbc	12 59 01.2	+0.2	
MORC	Moravsky Berou	149.03	340	*e*PKP	PKPbc	12 59 01.1	0.0	
BRG	Berggiesshubel	149.04	345	*i* PKP	PKPbc	12 59 01.0	0.0	
BRG				Amp		12 59 02.3		
	comp=Z,5.0nm,0.7s							
VOIR		149.37	327	⇑P	PKPdf	12 59 01.6	+4.4	
BORA	Eskisehir	149.45	314	PKPbc	PKPdf	12 59 01.3	+3.8	
DRGR		149.50	331	⇑P	PKPdf	12 59 01.3	+4.0	
ARR	Arges	149.62	327	⇑P	PKPdf	12 59 03.1	+0.3	
PRU	Pruhonice	149.71	344	⇑*e*PKP	PKPbc	12 59 02.3	-0.4	
VRAC	Vranov	149.74	341	*e*PKP	PKPbc	12 59 03.1	+0.3	
JAVC	Velka Javorina	149.79	339	*e*PKP	PKPbc	12 59 03.5	+0.5	
KRUC	Moravsky	150.02	341	*e*PKP	PKPdf	12 59 02.9	+4.9	
SIRR	Siria	150.37	332	⇑P	PKPbc	12 59 04.2	-0.2	
GZR	Gura Zlata	150.51	329	⇑P	PKPdf	12 59 04.1	+5.1	
MEM	Membach	150.61	355	*d*PKP	PKPbc	12 59 04.1	-0.7	
BTNL	Ternell	150.62	354	*d*PKP	PKPbc	12 59 04.4	-0.5	
KHC	Kasperske Hory	150.75	344	PKPdf	PKPdf	12 58 58.0	-1.1	
KHC				PKPbc	PKPbc	12 59 04.5	-0.7	
KHC				PKPab	PKPab	12 59 14.5	+0.3	
KHC	Kasperske Hory	150.75	344	⇑*e*PKP	PKPbc	12 59 04.9	-0.3	
KHC				*ex*	x	12 59 14.3		
CKRC	Cesky Krumlov	150.84	343	⇑*e*PKP	PKPbc	12 59 05.1	-0.3	
BHOU	Houvegnez	150.86	355	*d*PKP	PKPbc	12 59 06.9	+1.5	
BZS	Buzias	150.88	331	⇓P	PKPbc	12 59 04.8	-0.8	
GEC2	GERESS Array S	150.98	344	PKPdf	PKPdf	12 58 57.3	-2.3	
GEC2				PKPbc	PKPbc	12 59 05.0	-0.9	
GEC2				PKPab	PKPab	12 59 14.0	-1.2	
GERES	GERESS Array B	150.98	344	PKPbc	PKPbc	12 59 05.4	-0.4	
	comp=Z,4.2nm,0.9s,baz=281,slow=0.7,SNR=22							
GERES	GERESS Array B	150.98	344	PKPbc	PKPdf	12 59 04.8	+5.2	
BMRD	Maredsous	151.01	356	*d*PKP	PKPbc	12 59 05.5	-0.1	
HERR	Herculane	151.06	329	⇑P	PKPbc	12 59 05.4	-0.6	
RCHB	Rochefort	151.12	356	*d*PKP	PKPbc	12 59 05.3	-0.6	
CONA	Conrad Observa	151.19	340	*e*P	PKPbc	12 59 05.7	-0.6	
	comp=Z,4.0nm,0.7s							
DOU	Dourbes	151.22	356	*d*PKP	PKPbc	12 59 06.0	-0.2	
RONA	Rosalia, Austr	151.25	340	*e*P	PKPbc	12 59 06.1	-0.3	
	comp=Z,5.6nm,0.6s							
MDVR	Moldovita	151.47	330	⇓P	PKPdf	12 59 03.5	+3.1	
WLF	Walferdange	151.53	354	*d*PKP	PKPbc	12 59 06.4	-0.5	
MORH	Mrgy, Hungar	151.67	335	⇑P	PKPbc	12 59 06.7	-0.6	
ALN	Alexandroupoli	151.74	319	PKPbc	PKPdf	12 59 06.1	+5.2	
BLKB	Belogradchik	151.85	327	⇑P	PKPbc	12 59 07.3	-0.6	
RDO	Rodhopi	151.90	320	PKPbc	PKPbc	12 59 06.9	-1.1	
VTS	Vitosha	152.26	325	⇑P	PKPdf	12 59 01.0	-0.8	
BOVS	Bovan	152.32	328	⇑P	PKPdf	12 59 07.2	+5.6	
SOKA	Soboth	152.56	340	*e*P	PKPbc	12 59 08.3	-1.1	
	comp=Z,2.4nm,0.8s							
BFO	Black Forest	152.58	351	PKPbc	PKPdf	12 59 07.8	+5.9	
BFO				PKPab	PKPab	12 59 21.7	-0.1	
KBA	Koelnbreinsper	152.69	343	*e*P	PKPbc	12 59 09.0	-0.8	
	comp=Z,2.3nm,0.8s							
DIVS	Divibare	152.79	331	PKPbc	PKPbc	12 59 09.4	-0.6	
WATA	Walderalm	152.91	345	*e*P	PKPbc	12 59 10.8	+0.6	
	comp=Z,2.4nm,0.5s							
WTTA	Wattenberg	152.96	345	*e*P	PKPbc	12 59 10.0	-0.4	
	comp=Z,4.9nm,0.5s							
MOTA	Moosalm	153.01	346	*e*P	PKPbc	12 59 10.0	-0.5	
ABTA	Abfaltersbach	153.22	344	*e*P	PKPbc	12 59 09.7	-1.2	
	comp=Z,5.3nm,0.8s							
FETA	Feichten	153.40	346	*e*P	PKPbc	12 59 11.3	0.0	
	comp=Z,4.5nm,1.1s							
STAL	STALIGIAL	153.62	343	PKPbc	PKPbc	12 59 10.5	-1.2	
STAL				PKPab	PKPab	12 59 24.8	-1.5	
CIMO	Cimolais	153.65	343	PKPbc	PKPbc	12 59 10.0	-1.7	
CIMO				PKPab	PKPab	12 59 25.3	-1.2	
FUORN	Ofenpass-Fuorn	153.88	347	PKPdf	PKPdf	12 59 02.6	-1.5	
FUORN				PKPab	PKPab	12 59 26.7	-1.0	
LIT	Litokhoron	154.36	321	PKPdf	PKPdf	12 59 02.2	-2.5	
LIT				PKPab	PKPab	12 59 29.1	-0.6	
PDG	Podgorica	154.42	329	PKPdf	PKPdf	12 59 03.4	-1.3	
PDG				PKPbc	PKiKP	12 59 12.6	-0.8	
PDG				PKPab	PKPab	12 59 29.2	-0.6	
MURB	Monte Urbino	156.41	340	PKPdf	PKPdf	12 59 04.5	-2.9	
CASP	Castiglione de	157.33	343	PKPdf	PKPdf	12 59 06.4	-2.1	
CASP				PKPab	PKPab	12 59 42.4	0.0	
CUC	Castrocucco	157.94	331	PKPdf	PKPdf	12 59 07.5	-1.9	
TIP	Timpagrande	158.12	328	PKPdf	PKPdf	12 59 08.0	-1.6	
TIP				PKPab	PKPab	12 59 45.4	-0.7	
COI	Coimbra	159.24	23	PKPdf	PKPdf	12 59 08.1	-2.7	
CEL	Celeste	159.26	327	PKPdf	PKPdf	12 59 08.8	-2.2	
ESDC	Sonseca Array	161.05	14	PKPab	PKPab	12 59 59.4	+0.6	
	comp=Z,1.2nm,1.1s,baz=326,slow=4.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.27**	**241**	P	**Pb**	**12 44 44.7**	**+0.4**
LTHK				S	**Sb**	**12 44 48.5**	**-0.4**
	10μm,0.2s						
LTHK	**Lithakia**	**0.27**	**241**	P	**Pb**	**12 44 44.7**	**+0.4**
LTHK				S	**Sb**	**12 44 49.3**	**+0.5**
RLS	**Riolos of Patr**	**0.34**	**51**	P	**Pb**	**12 44 45.9**	**+0.5**
RLS				S	**Sb**	**12 44 51.8**	**+1.1**
	11μm,0.5s						
RLS	**Riolos of Patr**	**0.34**	**51**	P	**Pb**	**12 44 45.7**	**+0.3**
RLS				S	**Sb**	**12 44 51.7**	**+1.0**
RLS				AML	AML	12 44 51.8	
	comp=E,23771μm,0.5s						
RLS				AML	AML	12 44 51.9	
	comp=N,18402μm,0.5s						
DRO	**Drossia**	**0.47**	**76**	P	**Pb**	**12 44 47.9**	**+0.3**
DRO				S	**Sb**	**12 44 55.0**	**+0.6**
	comp=N,6μm,0.3s						
DRO	**Drossia**	**0.47**	**76**	P	**Pb**	**12 44 47.7**	**+0.1**
DRO				S	**Sb**	**12 44 56.0**	**+1.6**
DRO				AML	AML	12 44 58.8	
	comp=E,13643μm,0.4s						
DRO				AML	AML	12 44 59.5	
	comp=N,11415μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.51**	**302**	P	**Pb**	**12 44 48.3**	**-0.1**
PSDA				S	**Sb**	**12 44 56.0**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.51**	**302**	P	**Pb**	**12 44 48.2**	**-0.2**
PSDA				S	**Sb**	**12 44 56.1**	**+0.2**
VLS	**Valsamata**	**0.55**	**308**	P	**Pb**	**12 44 48.8**	**-0.2**
VLS				S	**Sb**	**12 44 56.8**	**0.0**
	comp=N,3μm,0.2s						
VLS	**Valsamata**	**0.55**	**308**	P	**Pg**	**12 44 48.4**	**+0.2**
VLS				S	**Sb**	**12 44 56.7**	**-0.1**
VLS				AML	AML	12 44 59.0	
	comp=N,5309μm,0.2s						
VLS				AML	AML	12 44 59.5	
	comp=E,5327μm,0.2s						
ARGA	**Argostoli. Kep**	**0.62**	**303**	P	**Pb**	**12 44 50.9**	**+0.7**
ARGA				S	**Sb**	**12 44 59.7**	**+0.9**
UPR	**University Cam**	**0.67**	**49**	P	**Pn**	**12 44 52.1**	**-0.7**
UPR				S	**Sn**	**12 45 02.3**	**-0.9**
KEF4	**Livadi, Kephal**	**0.70**	**306**	P	**Pb**	**12 44 51.4**	**-0.2**
KEF4				S	**Sb**	**12 45 02.1**	**+1.0**
KEF4	**Livadi, Kephal**	**0.70**	**306**	P	**Pg**	**12 44 51.2**	**+0.2**
KEF4				S	**Sb**	**12 45 02.2**	**+1.1**
KEF3	**Kipouria, Keph**	**0.72**	**300**	P	**Pg**	**12 44 51.6**	**+0.1**
KEF3				S	**Sb**	**12 45 01.7**	**0.0**
KEF3	**Kipouria, Keph**	**0.72**	**300**	P	**Pg**	**12 44 51.5**	**+0.1**
KEF3				S	**Sb**	**12 45 01.7**	**0.0**
DMLN	**Damoulianata-K**	**0.72**	**303**	P	**Pb**	**12 44 52.0**	**0.0**
DMLN				S	**Sb**	**12 45 02.4**	**+0.6**
	comp=E,4μm,0.4s						
FSK	**Fiskardo**	**0.76**	**324**	P	**Pb**	**12 44 53.2**	**+0.5**
FSK				S	**Sb**	**12 45 04.6**	**+1.6**
	comp=E,950nm,0.4s						
FSK	**Fiskardo**	**0.76**	**324**	P	**Pb**	**12 44 52.7**	**+0.1**
FSK				AML	AML	12 45 18.6	
	comp=N,1914μm,1.0s						
FSK				AML	AML	12 45 21.4	
	comp=E,2756μm,0.6s						
LAKA	**Lakka**	**0.77**	**59**	P	**Pb**	**12 44 53.1**	**+0.2**
LAKA				S	**Sn**	**12 45 04.8**	**-0.9**
	comp=E,4μm,0.5s						
LAKA	**Lakka**	**0.77**	**59**	P	**Pb**	**12 44 52.8**	**-0.1**
LAKA				S	**Sb**	**12 45 03.7**	**+0.4**
LAKA				AML	AML	12 45 09.8	
	comp=N,5529μm,0.5s						
LAKA				AML	AML	12 45 14.9	
	comp=E,9589μm,0.5s						
KLV	**Kalavryta, Ach**	**0.82**	**76**	P	**Pb**	**12 44 53.6**	**-0.2**
KLV				S	**Sn**	**12 45 06.7**	**-0.4**
	comp=E,558nm,0.5s						
KLV	**Kalavryta, Ach**	**0.82**	**76**	P	**Pb**	**12 44 53.6**	**-0.2**
KLV				S	**Sb**	**12 45 05.5**	**+0.7**
KLV				AML	AML	12 45 10.5	
	comp=N,1188μm,0.7s						
KLV				AML	AML	12 45 12.0	
	comp=E,1040μm,0.4s						
PVO	**Paravola**	**0.83**	**21**	P	**Pb**	**12 44 54.5**	**+0.7**
PVO				S	**Sn**	**12 45 07.2**	**+0.1**
	comp=E,3μm,0.3s						
PVO	**Paravola**	**0.83**	**21**	P	**Pb**	**12 44 54.3**	**+0.5**
PVO				S	**Sn**	**12 45 07.0**	**-0.1**
EFP	**Efpalio**	**0.84**	**46**	P	**Pb**	**12 44 54.3**	**+0.3**
EFP				S	**Sn**	**12 45 06.9**	**-0.4**
	comp=E,1μm,0.6s						
EFP	**Efpalio**	**0.84**	**46**	P	**Pb**	**12 44 53.9**	**0.0**
EFP				S	**Sn**	**12 45 07.3**	**0.0**
EFP				AML	AML	12 45 09.3	
	comp=N,2872μm,0.5s						
EFP				AML	AML	12 45 10.3	
	comp=E,2532μm,0.7s						
EVGI	**Lefkada island**	**0.86**	**334**	P	**Pb**	**12 44 54.3**	**-0.1**
EVGI				S	**Sb**	**12 45 07.1**	**+1.2**
	comp=E,2μm,0.2s						
EVGI	**Lefkada island**	**0.86**	**334**	P	**Pb**	**12 44 54.2**	**-0.2**
EVGI				S	**Sn**	**12 45 07.5**	**-0.4**
ITM	**Ithomi**	**0.91**	**136**	P	**Pb**	**12 44 55.6**	**+0.3**
ITM				S	**Sb**	**12 45 08.8**	**+1.5**
	comp=E,575nm,0.8s						
ITM	**Ithomi**	**0.91**	**136**	P	**Pb**	**12 44 55.5**	**+0.3**
ITM				AML	AML	12 45 16.7	
	comp=E,980μm,0.7s						
ITM				AML	AML	12 45 18.3	
	comp=N,1257μm,0.8s						
SERG	**Sergoula**	**0.92**	**52**	P	**Pb**	**12 44 55.4**	**0.0**
SERG				S	**Sn**	**12 45 09.2**	**-0.2**
	comp=N,868nm,0.4s						
SERG	**Sergoula**	**0.92**	**52**	P	**Pb**	**12 44 55.3**	**-0.1**
SERG				AML	AML	12 45 19.9	
	comp=N,2452μm,0.5s						
SERG				AML	AML	12 45 20.6	
	comp=E,1908μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.93**	**338**	P	**Pg**	**12 44 55.3**	**-0.2**
NYDR				S	**Sn**	**12 45 09.5**	**-0.1**
	comp=E,895nm,0.5s						
DRAG	**Dragano-Lefkad**	**0.95**	**332**	P	**Pg**	**12 44 55.6**	**-0.2**
DRAG				S	**Sb**	**12 45 09.8**	**+1.4**
	comp=E,8μm,0.3s						
ANX	**Ano Chora**	**0.97**	**39**	P	**Pb**	**12 44 56.4**	**+0.1**
ANX				S	**Sn**	**12 45 10.2**	**-0.5**
	comp=E,2μm,0.6s						
ANX	**Ano Chora**	**0.97**	**39**	P	**Pb**	**12 44 56.2**	**0.0**
ANX				AML	AML	12 45 19.1	
	comp=E,3824μm,0.5s						
ANX				AML	AML	12 45 19.9	
	comp=N,3517μm,0.6s						
LKD2	**Lefkada island**	**1.02**	**338**	P	**Pg**	**12 44 56.9**	**-0.2**
LKD2				S	**Sb**	**12 45 11.1**	**+0.8**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**1.02**	**338**	P	**Pg**	**12 44 56.8**	**-0.2**
LKD2				S	**Sb**	**12 45 11.3**	**+1.0**
LKD2				AML	AML	12 45 18.8	
	comp=E,4943μm,0.5s						
LKD2				AML	AML	12 45 19.2	
	comp=N,3586μm,0.6s						
TSLK	**Tsoukalades, L**	**1.05**	**339**	P	**Pb**	**12 44 57.6**	**0.0**
TSLK				S	**Sb**	**12 45 12.2**	**+0.9**
	comp=N,2μm,0.5s						
TSLK	**Tsoukalades, L**	**1.05**	**339**	P	**Pg**	**12 44 57.3**	**-0.4**
TSLK				AML	AML	12 45 19.9	
	comp=E,4580μm,0.5s						
TSLK				AML	AML	12 45 22.6	
	comp=N,4086μm,0.6s						
PYL	**PYLOS**	**1.06**	**153**	P	**Pb**	**12 44 57.9**	**+0.1**
PYL				S	**Sn**	**12 45 13.4**	**+0.6**
PYL	**PYLOS**	**1.06**	**153**	P	**Pg**	**12 44 57.5**	**-0.4**
PYL				AML	AML	12 45 24.9	
	comp=N,909μm,0.5s						
PYL				AML	AML	12 45 27.9	
	comp=E,773μm,0.5s						
EVR	**Evrytania**	**1.19**	**26**	P	**Pn**	**12 45 00.2**	**+0.1**
EVR				S	**Sb**	**12 45 15.7**	**+0.2**
	comp=E,522nm,0.5s						
EVR	**Evrytania**	**1.19**	**26**	P	**Pb**	**12 45 00.0**	**-0.1**
EVR				AML	AML	12 45 25.9	
	comp=E,1044μm,0.5s						
EVR				AML	AML	12 45 28.7	
	comp=N,1037μm,0.6s						
THAL	**Thalero**	**1.22**	**80**	P	**Pn**	**12 45 00.9**	**+0.6**
THAL	**Thalero**	**1.22**	**80**	P	**Pn**	**12 45 00.9**	**+0.6**
THAL				AML	AML	12 45 33.1	
	comp=N,2962μm,0.4s						
THAL				AML	AML	12 45 36.1	
	comp=E,3234μm,0.8s						
ACOR	**Acrocorinthos**	**1.37**	**88**	P	**Pg**	**12 45 04.2**	**+0.4**
ACOR				AML	AML	12 45 29.2	
	comp=E,485μm,0.8s						
ACOR				AML	AML	12 45 30.9	
	comp=N,546μm,0.8s						
MAKR	**Makrakomi, Fth**	**1.40**	**33**	P	**Pg**	**12 45 04.1**	**-0.4**
MAKR				AML	AML	12 45 30.6	
	comp=E,2834μm,0.7s						
MAKR				AML	AML	12 45 35.6	
	comp=N,1789μm,0.5s						
AGG	**Agios Georgios**	**1.50**	**38**	P	**Pg**	**12 45 06.8**	**+0.4**
AGG				AML	AML	12 45 34.6	
	comp=N,586μm,0.4s						
AGG				AML	AML	12 45 34.8	
	comp=E,668μm,0.6s						
AXAR	**Agios Charalam**	**1.51**	**52**	P	**Pb**	**12 45 05.5**	**+0.1**
AXAR				AML	AML	12 45 36.0	
	comp=E,2480μm,0.4s						
AXAR				AML	AML	12 45 39.2	
	comp=N,2541μm,0.6s						
EPID	**Epidavros**	**1.59**	**98**	P	**Pg**	**12 45 07.9**	**-0.1**
LKR	**Lokris**	**1.67**	**61**	P	**Pg**	**12 45 08.9**	**-0.7**
LKR				AML	AML	12 45 35.8	
	comp=E,357μm,0.2s						
LKR				AML	AML	12 45 38.9	
	comp=N,405μm,0.5s						
ATAL	**Atalanti**	**1.71**	**60**	P	**Pg**	**12 45 09.4**	**-0.9**
ATAL				AML	AML	12 45 42.0	
	comp=N,404μm,0.7s						
ATAL				AML	AML	12 45 42.7	
	comp=E,248μm,1.0s						
VIL2	**Platees**	**1.72**	**77**	P	**Pg**	**12 45 10.1**	**-0.5**
VIL2				AML	AML	12 45 42.8	
	comp=N,524μm,0.6s						
VIL2				AML	AML	12 45 49.1	
	comp=E,860μm,0.7s						
IGT	**Igoumenitsa**	**1.80**	**340**	P	**Pb**	**12 45 10.9**	**+0.5**
VLI	**Veliai**	**1.82**	**128**	P	**Pg**	**12 45 11.7**	**-0.8**
ATHU	**Athens Univers**	**2.10**	**86**	P	**Pb**	**12 45 15.4**	**0.0**
KTHR	**Kythira**	**2.17**	**136**	P	**Pb**	**12 45 17.4**	**+0.6**
NEO	**Neokhori**	**2.19**	**48**	P	**Pb**	**12 45 16.5**	**-0.6**
DION	**Dionisos Attik**	**2.22**	**83**	P	**Pb**	**12 45 17.2**	**-0.3**
KYMI	**Kymi, Euboea I**	**2.46**	**70**	P	**Pb**	**12 45 20.9**	**-0.8**
ANKY	**Antikythira Is**	**2.63**	**138**	P	**Pb**	**12 45 22.9**	**-1.5**
IDI	**Anoyia**	**3.95**	**129**	Pn	**Pn**	**12 45 39.7**	**+1.7**
	comp=E,0.6nm,0.3s,baz=315,slow=20,SNR=1.5						
IDI				Sn	**Sn**	**12 46 24.3**	**0.0**
	comp=E,0.8nm,0.3s,baz=54,slow=16,SNR=1.6						
	comp=E,3.8nm,0.6s						
STON	**Ston**	**5.67**	**333**	*e*Pn	**Pn**	**12 45 59.6**	**-1.8**
LSTV	**Lastovo**	**5.89**	**328**	*e*Pn	**Pn**	**12 46 03.9**	**-0.7**
KIJV	**Kijevo**	**7.12**	**331**	*e*Pn	**Pn**	**12 46 21.1**	**-0.3**
MORI	**Morici**	**7.29**	**327**	*e*Pn	**Pn**	**12 46 23.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**30.08**	**220**	P	**P**	**12 50 46.3**	**-0.5**
	comp=E,0.3nm,0.6s,baz=37,slow=10,SNR=2.4						
	comp=E,0.3nm,0.6s						
MKAR	**Makanchi Array**	**45.06**	**58**	P	**P**	**12 52 53.0**	**-0.1**
	comp=E,0.3nm,0.5s,baz=276,slow=8.0,SNR=4.1						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**45.55**	**48**	P	**P**	**12 52 56.9**	**+0.1**
	comp=E,0.7nm,0.5s,baz=261,slow=7.2,SNR=2.0						
	comp=E,0.7nm,0.5s						

*IDC **19** 12:46:45.1±0.9,55°.04S×30°.80W, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=41.0km s-min=18.9km az=66.0*
*NEIC **19** 12:46:46.2±1.0,55°.09S±0°.09×31°.1W±0°.2, h10km±1km, mb4.2/7, Error ellipse: s-maj=21.1km s-min=13.1km az=117.0*

ISC 19 12:46:46.9±0.7,55°.08S±0°.10×31°.2W±0°.1,h10km,n28, σ1s40/23,mb4.0/7,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.19**	**282**		**Pn**	**12 47 36.6**	**-0.5**
ORCD	**Orcadas**	**9.17**	**226**		**Pn**	**12 48 58.7**	**-0.4**
VNA1	**Neumayer--Stat**	**18.57**	**156**	P	**Pn**	**12 51 07.0**	**+3.2**
VNA3	**Neumayer Olymp**	**18.69**	**158**	P	**Pn**	**12 51 06.8**	**+1.5**
VNA2	**Neumayer--Watz**	**18.97**	**156**	P	**Pn**	**12 51 09.3**	**+0.6**
	baz=318,slow=12						
SNAA	**Sanae**	**20.56**	**155**	P	**P**	**12 51 26.6**	**+1.2**
SNAA	**Sanae**	**20.56**	**155**	P	**P**	**12 51 26.2**	**+0.8**
	4.3nm,0.8s,baz=303,slow=9.7,SNR=17						
	4.3nm,0.8s						
SNAA	**Sanae**	**20.56**	**155**	P	**P**	**12 51 24.2**	**-1.2**
SNAA				IAmb	IAmb	12 51 40.9	
	comp=Z,11nm,1.1s						
TROLL	**Troll, Antarti**	**22.13**	**153**	P	**P**	**12 51 44.7**	**+2.4**
BELA	**Belgrano 2**	**22.93**	**182**	P	**P**	**12 51 48.5**	**-2.1**
BELA				IAmb	IAmb	12 52 03.9	
	comp=Z,10nm,1.5s						
CPUP	**Villa Florida**	**34.51**	**316**	P	**P**	**12 53 37.2**	**+2.2**
	comp=Z,1.7nm,0.8s,baz=142,slow=8.1,SNR=4.2						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**12 53 40.1**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=274,slow=21,SNR=13						
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**12 53 40.0**	**-0.6**
QSPA				IAmb	IAmb	12 53 57.7	
	comp=Z,6.8nm,1.1s						
MAW	**Mawson**	**42.25**	**145**	P	**P**	**12 54 37.9**	**-1.7**
	comp=Z,0.9nm,0.4s,baz=232,slow=12,SNR=3.6						
	comp=Z,0.9nm,0.4s						
VNDA	**Vanda**	**47.41**	**184**	P	**P**	**12 55 21.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=199,slow=3.2,SNR=5.6						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**47.41**	**184**	P	**P**	**12 55 21.5**	**+0.8**
VNDA				IAmb	IAmb	12 55 37.2	
	comp=Z,3.3nm,1.3s						
H10S2	**ASCENSION HYDR**	**47.84**	**22**	T	T	13 46 44.7	
	baz=193,slow=74,SNR=21						
H10S3	**ASCENSION HYDR**	**47.84**	**22**	T	T	13 46 44.9	
	baz=27,slow=74,SNR=44						
LPAZ	**La Paz**	**47.99**	**309**	P	**P**	**12 55 26.5**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=75,slow=5.7,SNR=6.5						
	comp=Z,1.5nm,0.5s						
LPAZ	**La Paz**	**47.99**	**309**	P	**P**	**12 55 26.5**	**-0.1**
H10N1	**ASCENSION HYDR**	**48.96**	**22**	T	T	13 48 10.6	
	baz=194,slow=75						
H10N3	**ASCENSION HYDR**	**48.96**	**22**	T	T	13 48 08.8	
	baz=194,slow=75						
H10N2	**ASCENSION HYDR**	**48.97**	**22**	T	T	13 48 12.3	
	baz=194,slow=75						
TORD	**Torodi Ar. Bea**	**73.41**	**33**	P	**P**	**12 58 18.2**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=220,slow=5.6,SNR=3.1						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.41**	**33**	P	**P**	**12 58 18.0**	**-1.0**
TORD				IAmb	IAmb	12 58 29.7	
	comp=Z,2.2nm,0.9s						
ZALV	**Zalesovo Beam**	**143.98**	**65**	PKP	**PKPab**	**13 06 19.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=254,slow=4.0,SNR=1.9						
ILAR	**Eielson Array**	**147.80**	**314**	PKPbc	**PKPbc**	**13 06 29.8**	**-0.7**
	comp=Z,1.6nm,1.0s,baz=94,slow=1.9,SNR=6.1						
SONM	**Songino Array**	**152.93**	**88**	PKPbc	**PKPbc**	**13 06 42.7**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=258,slow=3.8,SNR=3.3						

*IDC **19** 12:53:41.8±1.2,54°.93S×30°.14W, h0km, mb3.7/5, mbtmp3.8/5, Error ellipse: s-maj=49.2km s-min=24.8km az=63.0*
*NEIC **19** 12:53:44.8±0.6,55°.76S±0°.07×32°.6W±0°.3, h10km±2km, mb4.0/3, Error ellipse: s-maj=31.4km s-min=12.1km az=87.0*

ISC 19 12:53:45.3±1.2,55°.8S±0°.1×32°.6W±0°.2,h10km,n11, σ1s23/9,mb4.1/5,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.72**	**303**	Pn	**Pn**	**12 54 27.6**	**-1.3**
ORCD	**Orcadas**	**8.06**	**227**	Pn	**Pn**	**12 55 42.2**	**-0.1**
SNAA	**Sanae**	**20.25**	**153**	P	**P**	**12 58 20.0**	**-0.5**
	1.1nm,1.0s,baz=302,slow=13,SNR=2.7						
	1.1nm,1.0s						
SNAA	**Sanae**	**20.25**	**153**	P	**P**	**12 58 21.1**	**+0.6**
SNAA				IAmb	IAmb	12 58 36.0	
	comp=Z,2.0nm,1.0s						
QSPA	**South Pole Qui**	**34.42**	**180**	P	**P**	**13 00 31.4**	**-1.2**
QSPA				IAmb	IAmb	13 00 58.3	
	comp=Z,5.0nm,1.4s						
CPUP	**Villa Florida**	**34.50**	**318**	P	**P**	**13 00 33.6**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=167,slow=8.5,SNR=4.4						
	comp=Z,1.7nm,0.6s						
VNDA	**Vanda**	**46.61**	**184**	P	**P**	**13 02 18.6**	**+5.8**
	comp=Z,0.4nm,0.7s,baz=166,slow=4.9,SNR=3.6						
	comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**46.61**	**184**	P	**P**	**13 02 13.2**	**+0.4**
VNDA				IAmb	IAmb	13 02 28.7	
	comp=Z,3.4nm,1.5s						
LPAZ	**La Paz**	**47.85**	**311**	P	**P**	**13 02 25.9**	**+2.1**
	comp=Z,2.0nm,0.3s,baz=220,slow=7.9,SNR=40						
	comp=Z,2.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**74.48**	**35**	P	**P**	**13 05 12.9**	**-11**
	comp=Z,0.4nm,0.8s,baz=197,slow=5.8,SNR=1.9						
	comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**147.71**	**313**	PKPbc	**PKPbc**	**13 13 27.6**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=117,slow=1.9,SNR=6.4						

*IDC **19** 12:56:08.1±0.5,55°.10S×31°.94W, h0km, mb4.4/12, mbtmp4.4/13, ML3.8/1, MS4.2/2, Error ellipse: s-maj=19.0km s-min=14.8km az=60.0*
*NEIC **19** 12:56:10.1±1.4,55°.23S±0°.09×32°.1W±0°.2, h15km±4km, mb5.1/64, Error ellipse: s-maj=14.0km s-min=11.9km az=48.0*

ISC 19 12:56:09.3±0.3,55°.16S±0°.06×32°.04W±0°.07,h10km,n236, σ0s81/230,mb5.0/41,5C,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.72**	**287**	Pn	**Pn**	**12 56 52.8**	**-0.2**
ORCD	**Orcadas**	**8.76**	**225**	Pn	**Pn**	**12 58 13.7**	**-2.1**
PMSA	**Palmer Station**	**18.47**	**226**	P	**Pn**	**13 00 25.9**	**+0.9**
	0.3nm,0.3s,baz=72,slow=12,SNR=3.6						
PMSA				LR	LR	13 06 52.0	
	comp=Z,626nm,18.4s,baz=82,slow=35						
	10nm,0.9s						
PMSA	**Palmer Station**	**18.47**	**226**	*e*P	Pn	13 00 33.2	+8.2
VNA1	**Neumayer--Stat**	**18.71**	**155**	P	**Pn**	**13 00 29.2**	**+1.3**
VNA3	**Neumayer Olymp**	**18.81**	**158**	P	**Pn**	**13 00 32.1**	**+3.0**
VNA2	**Neumayer--Watz**	**19.11**	**155**	P	**Pn**	**13 00 34.9**	**+2.1**
	baz=310,slow=13						
SNAA	**Sanae**	**20.71**	**154**	P	**P**	**13 00 50.1**	**+0.7**
SNAA	**Sanae**	**20.71**	**154**	P	**P**	**13 00 50.3**	**+0.8**
	3.3nm,0.8s,baz=291,slow=9.0,SNR=16						
	3.3nm,0.8s						
SNAA	**Sanae**	**20.71**	**154**	P	**P**	**13 00 48.3**	**-1.1**
SMAI	**San Martin Ant**	**20.73**	**217**	P	**P**	**13 00 48.9**	**-0.5**
TROLL	**Troll, Antarti**	**22.30**	**152**	P	**P**	**13 01 08.9**	**+2.4**
BELA	**Belgrano 2**	**22.84**	**181**	P	**P**	**13 01 12.3**	**+0.3**
GO09	**Cerro Castillo**	**24.20**	**262**	P	**P**	**13 01 23.9**	**-1.8**
GO09				IAmb	IAmb	13 01 45.1	
	comp=Z,57nm,1.6s						
TRQA	**Tornquist**	**26.45**	**298**	P	**P**	**13 01 46.9**	**+0.6**
TRQA				IAmb	IAmb	13 01 52.6	
	comp=Z,46nm,1.6s						
AY01	**Puyuhuapi**	**27.94**	**276**	P	**P**	**13 01 59.0**	**-0.4**
PLCA	**Paso Flores**	**29.12**	**284**	P	**P**	**13 02 10.6**	**+0.5**
	comp=Z,4.3nm,1.1s,baz=133,slow=2.7,SNR=6.3						
PLCA				LR	LR	13 13 56.5	
	comp=Z,545nm,19.8s,baz=150,slow=37						
	comp=Z,4.3nm,1.1s						
PLCA	**Paso Flores**	**29.12**	**284**	P	**P**	**13 02 10.4**	**+0.3**
ITQB	**Itaqui**	**30.96**	**315**	P	**P**	**13 02 26.4**	**+0.1**
ITQB				IAmb	IAmb	13 02 30.8	
	comp=Z,40nm,1.3s						
ITQB	**Itaqui**	**30.96**	**315**	*e*P	**P**	**13 02 28.9**	**+2.5**
BO02	**Sierra Bellavi**	**33.53**	**291**	P	**P**	**13 02 47.5**	**-1.5**
BO02				IAmb	IAmb	13 02 54.8	
	comp=Z,55nm,1.9s						
GO05	**Huala**	**33.98**	**290**	P	**P**	**13 02 52.3**	**-0.6**
GO05				IAmb	IAmb	13 02 59.3	
	comp=Z,12nm,0.7s						
CPUP	**Villa Florida**	**34.21**	**317**	P	**P**	**13 02 54.7**	**-0.1**
	comp=Z,14nm,1.0s,baz=154,slow=7.9,SNR=16						
	comp=Z,14nm,1.0s						
CPUP	**Villa Florida**	**34.21**	**317**	P	**P**	**13 02 54.8**	**-0.1**
CPUP				IAmb	IAmb	13 02 56.8	
	comp=Z,27nm,1.1s						
CPUP	**Villa Florida**	**34.21**	**317**	*e*P	**P**	**13 02 56.3**	**+1.4**
MT09	**Talagante**	**34.42**	**292**	P	**P**	**13 02 56.8**	**-0.1**
MT01	**Popeta**	**34.49**	**292**	P	**P**	**13 02 56.8**	**-0.4**
PEL	**Peldehue**	**34.74**	**293**	P	**P**	**13 02 58.9**	**-0.7**
VA05	**Santo Domingo**	**34.84**	**292**	P	**P**	**13 02 59.5**	**-0.8**
MT02	**Curacav**	**34.89**	**293**	P	**P**	**13 03 00.8**	**0.0**
ZON	**Zonda**	**34.96**	**297**	P	**P**	**13 03 00.8**	**-0.6**
VA03	**San Esteban**	**34.97**	**294**	P	**P**	**13 03 00.6**	**-0.9**
VA03				IAmb	IAmb	13 03 03.9	
	comp=Z,40nm,1.2s						
ROC1	**El Roble**	**35.05**	**293**	P	**P**	**13 03 02.0**	**-0.4**
ROC1				IAmb	IAmb	13 03 26.0	
	comp=Z,24nm,0.7s						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**13 03 03.3**	**+1.0**
	comp=Z,3.1nm,0.7s,baz=178,slow=1.9,SNR=15						
	comp=Z,3.1nm,0.7s						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**13 03 02.6**	**+0.2**
VA01	**Torpederas**	**35.35**	**292**	P	**P**	**13 03 04.5**	**-0.2**
VA06	**Catapilco**	**35.52**	**293**	P	**P**	**13 03 07.0**	**+0.9**
CO02	**Combarbal**	**36.43**	**295**	P	**P**	**13 03 14.4**	**+0.3**
CO02				IAmb	IAmb	13 03 25.4	
	comp=Z,35nm,1.1s						
CO01	**Juntas del Tor**	**36.94**	**297**	P	**P**	**13 03 19.1**	**+0.4**
GO04	**Tololo Observa**	**37.15**	**296**	P	**P**	**13 03 20.4**	**0.0**
AC05	**El Transito**	**37.96**	**298**	P	**P**	**13 03 27.9**	**+0.8**
AC05				IAmb	IAmb	13 03 29.4	
	comp=Z,69nm,1.6s						
LCO	**Las Campanas**	**38.03**	**297**	P	**P**	**13 03 26.9**	**-1.0**
PMNB	**Patos De Minas**	**38.17**	**338**	*e*P	**P**	**13 03 29.8**	**+0.8**
AC04	**Llanos de Chal**	**38.88**

baz=193,slow=74,SNR=50
BOSA Boshof 48.49 81 P **P** 13 04 51.8 -0.4
comp=Z,6.4nm,0.9s,baz=225,slow=8.3,SNR=7.9
comp=Z,6.4nm,0.9s
BOSA Boshof 48.49 81 P **P** 13 04 52.0 -0.2
BOSA IAmb IAmb 13 05 05.3
comp=Z,12nm,1.0s
H10N1 ASCENSION HYDR 49.22 23 T T 13 58 15.7
baz=193,slow=75,SNR=66
H10N3 ASCENSION HYDR 49.22 23 T T 13 58 12.4
baz=193,slow=75,SNR=51
H10N2 ASCENSION HYDR 49.24 23 T T 13 58 16.5
baz=193,slow=75,SNR=64
PRPB Parauapebas 50.89 337 *e*P **P** **13 05 12.0 +1.6**
LBTB Lobatse 51.46 78 P **P** **13 05 14.6 -0.2**
LBTB IAmb IAmb 13 05 15.1
comp=Z,11nm,0.8s
NPGB Novo Progresso 51.47 330 *e*P **P** **13 05 15.8 +1.0**
ETMB Extrema 52.65 316 P **P** **13 05 23.8 +0.3**
ETMB IAmb IAmb 13 05 24.8
comp=Z,18nm,1.4s
ETMB Extrema 52.65 316 *e*P **P** **13 05 24.1 +0.6**
ROSB Rosrio 53.02 345 *e*P **P** **13 05 26.9 +0.7**
ITTB Itaituba 54.13 330 *e*P **P** **13 05 34.8 +0.4**
TMAB Tom-Au,PA,Br 54.22 340 *e*P **P** **13 05 37.0 +2.0**
CASY Casey 55.63 163 P **P** **13 05 45.0 +0.4**
CASY IAmb IAmb 13 07 06.6
comp=Z,37nm,1.9s
MALB Monte Alegre 56.13 333 *e*P **P** **13 05 50.5 +1.6**
MACA Manacapuru-AM 56.79 325 P **P** **13 05 52.4 -1.1**
MACA IAmb IAmb 13 06 01.1
comp=Z,38nm,1.6s
MCPB Macapa, AP 57.02 336 *e*P **P** **13 05 57.1 +1.9**
CZSB Cruzeiro do Su 57.26 310 P **P** **13 05 57.3 +0.4**
CZSB IAmb IAmb 13 05 57.9
comp=Z,37nm,1.5s
CZSB Cruzeiro do Su 57.26 310 *e*P **P** **13 05 57.8 +0.9**
LSZ Lusaka 60.70 74 P **P** **13 06 20.0 -0.9**
BOAV Boa Vista 61.97 327 P **P** **13 06 28.5 -0.8**
BOAV IAmb IAmb 13 06 30.3
comp=Z,8.6nm,1.0s
BOAV Boa Vista 61.97 327 *e*P **P** **13 06 29.3 0.0**
BOSC San Juan Bosco 63.93 306 P **P** **13 06 42.8 +0.2**
BOSC IAmb IAmb 13 06 43.1
comp=Z,20nm,1.0s
LIC Lamto 65.16 30⇑ *e*P **P** **13 06 49.9 -0.5**
comp=Z,40nm,0.9s
KIC Kosan Boka 65.37 30⇑ *e*P **P** **13 06 51.3 -0.5**
comp=Z,7.2nm,0.8s
TIC Toumodi 65.56 30⇑ *e*P **P** **13 06 52.8 -0.2**
comp=Z,17nm,0.9s
DBIC Dimbokro 65.63 30 P **P** **13 06 53.5 +0.1**
comp=Z,6.3nm,0.8s,baz=197,slow=8.9,SNR=5.8
comp=Z,6.3nm,0.8s
DBIC Dimbokro 65.63 30 P **P** **13 06 53.4 -0.1**
DBIC IAmb IAmb 13 08 04.8
comp=Z,24nm,1.4s
VOI Vohitsoka 65.99 94 P **P** **13 06 54.7 -1.3**
VOI IAmb IAmb 13 08 37.2
comp=Z,28nm,1.4s
OTAV Otavalo 66.90 308 P **P** **13 07 01.7 -0.5**
OTAV IAmb IAmb 13 07 04.6
comp=Z,26nm,1.5s
OTAV Otavalo 66.90 308 *e*P **P** **13 07 03.9 +1.7**
TULM Tulcn-Chalpat 67.03 309 P **P** **13 07 01.7 -1.3**
ROSC El Rosal 69.24 314 P **P** **13 07 16.9 +0.2**
ROSC IAmb IAmb 13 09 44.8
comp=Z,14nm,0.9s
BAUV El Baul 70.59 322 P **P** **13 07 24.1 -0.5**
SDV Santo Domingo 71.48 319 P **P** **13 07 29.1 -1.2**
SDV IAmb IAmb 13 07 47.8
comp=Z,7.7nm,0.8s
SDV Santo Domingo 71.48 319 *e*P **P** **13 07 31.5 +1.3**
KOWA Kowa 73.33 28 P **P** **13 07 41.6 +0.7**
KOWA IAmb IAmb 13 08 18.1
comp=Z,33nm,1.9s
TOA0 Torodi Ar. Sit 73.75 34 P **P** **13 07 43.6 +0.2**
TORD Torodi Ar. Bea 73.75 34 P **P** **13 07 43.2 -0.2**
comp=Z,5.3nm,0.8s,baz=204,slow=6.6,SNR=26
comp=Z,5.3nm,0.8s
TORD Torodi Ar. Bea 73.75 34 P **P** **13 07 43.5 +0.1**
TEIG Tepich 88.96 309 P **P** **13 09 04.2 +0.3**
ASAR Alice Springs 100.58 167 P **Pdif** **13 09 57.8 +0.5**
comp=Z,0.4nm,0.7s,baz=174,slow=3.6,SNR=1.8
NVAR Mina Array Bea 118.52 297 PKP **PKPdf** **13 14 56.8 0.0**
comp=Z,0.2nm,0.5s,baz=163,slow=4.3,SNR=2.9
FINES FINESS Array B 124.93 30 PKP **PKPdf** **13 15 07.3 -0.7**
comp=Z,1.9nm,0.8s,baz=56,slow=3.4,SNR=3.8
CMAR Chiang Mai Arr 127.95 115 PKP **PKPdf** **13 15 14.4 -0.8**
comp=Z,0.5nm,0.3s,baz=231,slow=4.3,SNR=5.5
ARCES ARCESS Array B 131.17 23 PKP **PKPdf** **13 15 19.7 -0.1**
comp=Z,1.3nm,0.6s,baz=224,slow=5.1,SNR=5.5
YKA Yellowknife Ar 133.69 320 PKP **PKPdf** **13 15 25.3 +0.6**
comp=Z,1.1nm,0.7s,baz=258,slow=8.5,SNR=2.5
PZH PanZhiHua 136.00 111 PKP **PKiKP** **13 15 32.1 +0.1**
MKAR Makanchi Array 139.25 74 PKP **PKPdf** **13 15 34.9 -0.7**
comp=Z,1.6nm,1.1s,baz=222,slow=1.9,SNR=4.4
WMQ Urumqi 140.45 81 *e*PKP **PKiKP** **13 15 39.8 -0.6**
ZALV Zalesovo Beam 144.47 65 PKP **PKPab** **13 15 42.8 -0.2**
comp=Z,2.2nm,0.5s,baz=224,slow=4.1,SNR=13
LZH Lanzhou 144.49 104 *e*PKP **PKPdf** **13 15 44.9 -0.5**
GTA Gaotai 144.54 96 *e*PKP **PKPdf** **13 15 44.8 -0.6**
M27K Edge Creek, AK 144.61 311 P **PKPab** **13 15 43.1 -0.4**
baz=111
MCARA McCarthy VSAT 144.76 309 P **PKPab** **13 15 43.5 -0.3**
baz=112
L27K Beaver Creek, 144.84 312 P **PKPab** **13 15 43.7 -0.4**
baz=110,SNR=15
M26K Nabesna, AK 145.11 310 P **PKPbc** **13 15 44.2 -0.9**
baz=110
EGAK Eagle 145.13 315 P **PKPbc** **13 15 44.1 -0.9**
baz=109,SNR=8.3
BMRM Bremner River 145.32 308 P **PKPbc** **13 15 45.4 -0.4**
baz=112
L26K Log Cabin Wild 145.48 311 P **PKPdf** **13 15 45.7 -0.4**
baz=110,SNR=8.6
N25K Chitina, Valde 145.54 309 P **PKPbc** **13 15 46.6 0.0**
baz=111
I27K Kandik River 145.57 316 P **PKPbc** **13 15 46.4 -0.1**
baz=107
EYAK Cordova Ski Ar 145.69 307 P **PKPbc** **13 15 47.0 +0.1**
baz=111
H27K Steamboat Moun 145.71 317 P **PKPbc** **13 15 46.7 -0.2**
baz=106
XAN Xi'an 145.74 112 PKPbc **PKPbc** **13 15 48.1 +0.2**
XAN pPKP PKiKP 13 15 54.6 +3.0
G27K Doyon Strip 145.92 318 P **PKPbc** **13 15 47.4 -0.1**
baz=105,SNR=13
J26L Joseph Creek 146.03 314 P **PKPbc** **13 15 47.6 -0.4**
baz=107,SNR=16
SCRK Sand Creek 146.05 313 P **PKPbc** **13 15 48.1 0.0**
baz=108,SNR=14
HARP HAARP 146.06 310 P **PKPbc** **13 15 48.3 +0.3**
baz=109
KLU Klutina 146.10 308 P **PKPbc** **13 15 48.4 +0.1**
baz=110,SNR=8.0
I26K Coal Creek Min 146.10 315 P **PKPbc** **13 15 47.9 -0.1**
baz=106
E27K Coleen River 146.24 321 P **PKPbc** **13 15 48.3 -0.2**
baz=103
P23K Montague Islan 146.26 305 P **PKPbc** **13 15 48.3 -0.4**
baz=111
RIDG Independent Ri 146.34 312 P **PKPbc** **13 15 49.0 +0.1**
baz=107,SNR=14
PAX Paxson 146.38 311 P **PKPbc** **13 15 48.8 -0.2**
baz=108,SNR=14
M24K Tolsona, Glenn 146.41 309 P **PKPbc** **13 15 48.9 -0.3**
baz=109,SNR=5.6
GLI Glacier Island 146.42 307 P **PKPbc** **13 15 48.9 -0.2**
baz=110
K24K Donnelly Dome 146.76 312 P **PKPbc** **13 15 49.6 -0.5**
baz=107
G26K Porcupine Rive 146.77 318 P **PKPbc** **13 15 49.6 -0.3**
baz=104
J25K Salcha River, 146.81 314 P **PKPbc** **13 15 50.0 -0.2**
baz=106
SCM Sheep Creek Mo 146.84 308 P **PKPbc** **13 15 50.4 0.0**
baz=108
PWL Port Wells 146.99 306 P **PKPbc** **13 15 50.4 -0.4**
baz=109
M23K Glacier View 147.01 308 P **PKPbc** **13 15 50.5 -0.3**
baz=108,SNR=7.1
F26K Sheenjek River 147.07 319 P **PKPbc** **13 15 51.1 +0.3**
baz=102,SNR=6.9
PRP Porcupine Dome 147.11 315 P **PKPbc** **13 15 51.3 +0.1**
baz=104
KNK Knik Glacier 147.22 307 P **PKPbc** **13 15 50.9 -0.5**
baz=108
DHY Denali Highway 147.24 311 P **PKPbc** **13 15 51.5 -0.1**
baz=107,SNR=16
WAT6 Susitna Watana 147.26 310 P **PKPbc** **13 15 51.1 -0.6**
baz=107,SNR=16
SEW Seward 147.26 305 P **PKPbc** **13 15 51.4 -0.1**
baz=110
C27K Jago River 147.28 323 P **PKPbc** **13 15 51.0 -0.3**
baz=100
SML Sawmill 147.29 308 P **PKPbc** **13 15 51.5 -0.1**
baz=108
H25K Birch Creek 147.41 317 P **PKPbc** **13 15 51.9 +0.2**
baz=103
HDA Harding Lake 147.42 313 P **PKPbc** **13 15 51.7 -0.2**
baz=105
ILAR Eielson Array 147.49 314 PKPbc **PKPbc** **13 15 51.6 -0.4**
comp=Z,6.3nm,0.9s,baz=129,slow=1.6,SNR=38
PMR Palmer 147.59 307 P **PKPbc** **13 15 52.1 -0.3**
baz=108
F25K Christian Rive 147.61 319 P **PKPbc** **13 15 52.7 +0.3**
baz=101
E25K Arctic Village 147.68 320 P **PKPbc** **13 15 52.7 +0.2**
baz=100,SNR=7.4
WAT1 Susitna Watana 147.69 310 P **PKPbc** **13 15 52.5 -0.2**
baz=106
RC01 Rabbit Creek A 147.71 306 P **PKPbc** **13 15 52.4 -0.4**
baz=108
COLA College 147.91 314 P **PKPbc** **13 15 52.0 -1.1**
baz=104
TCOL CIGO, UAF Yank 147.91 314 P **PKPbc** **13 15 52.7 -0.4**
baz=104
LYN LuoYang 148.00 115 ⇑PKPbc **PKPbc** **13 15 53.9 -0.4**
MCK McKinley 148.09 311 P **PKPbc** **13 15 53.5 -0.3**
baz=104,SNR=5.6
OHAK Old Harbor 148.11 298 P **PKPbc** **13 15 53.7 -0.2**
baz=112
H24K Noodor Dome 148.13 315 P **PKPbc** **13 15 53.5 -0.3**
baz=102
G24K Hadweenzic Riv 148.15 317 P **PKPbc** **13 15 53.5 -0.2**
baz=101,SNR=6.2
D25K Kavik River 148.16 322 P **PKPbc** **13 15 53.1 -0.7**
baz=98
Q20K Shuyak Island 148.16 301 P **PKPbc** **13 15 53.8 -0.1**
baz=110
CUT Chulitna 148.33 309 P **PKPbc** **13 15 53.9 -0.4**
baz=106
NEA2 Nenana 148.35 313 P **PKPbc** **13 15 53.6 -0.7**
baz=103
F24K Squaw Lake 148.45 319 P **PKPbc** **13 15 54.4 -0.2**
baz=99,SNR=5.6
I23K Minto, Yukon-K 148.60 314 P **PKPbc** **13 15 53.8 -1.1**
baz=102
TRF Thorofare Moun 148.61 311 P **PKPbc** **13 15 54.5 -0.7**
baz=104
E24K Your Creek 148.76 320 P **PKPbc** **13 15 54.6 -0.7**
baz=98,SNR=6.4
SKT Skwentna 148.79 308 P **PKPbc** **13 15 55.1 -0.4**
baz=106
H23K Yukon River 148.80 315 P **PKPbc** **13 15 54.8 -0.7**
baz=101
Q19K Cape Douglas, 148.89 301 P **PKPbc** **13 15 55.4 -0.5**
baz=109
P19K Oil Pt 148.92 303 P **PKPbc** **13 15 55.7 -0.3**
baz=108
D24K Happy Valley 149.01 322 P **PKPbc** **13 15 55.6 -0.3**
baz=96
C24K Franklin Bluff 149.02 323 P **PKPbc** **13 15 56.0 +0.1**
baz=95
BPAW Bear Paw Mtn. 149.06 312 P **PKPbc** **13 15 55.6 -0.6**
baz=102,SNR=9.2
MLY Manley 149.15 313 P **PKPbc** **13 15 55.7 -0.7**
baz=101
G23K Bananza Creek 149.15 317 P **PKPbc** **13 15 56.5 +0.2**
baz=99,SNR=9.4
TOLK Toolik Lake Re 149.22 321 P **PKPbc** **13 15 56.4 -0.1**
baz=96
PPLA Purkeypile 149.31 309 P **PKPbc** **13 15 56.8 -0.2**
baz=104
CAST Castle Rocks 149.39 310 P **PKPbc** **13 15 56.3 -0.7**
baz=103
M20K Styx River 149.50 307 P **PKPbc** **13 15 56.6 -0.8**
baz=105
H22K Ishtalitna Cre 149.56 315 P **PKPbc** **13 15 57.5 +0.1**
baz=99,SNR=11
CHUM Lake Minchumin 149.59 311 P **PKPbc** **13 15 57.0 -0.5**
baz=102
O19K Port Alsworth 149.60 303 P **PKPbc** **13 15 56.6 -0.9**
baz=107
D23K Nanushuk River 149.66 321 P **PKPbc** **13 15 57.3 -0.2**
baz=94
C23K Itkillik River 149.69 323 P **PKPbc** **13 15 57.2 -0.3**
baz=93
I21K Tanana 149.69 314 P **PKPbc** **13 15 57.3 -0.3**
baz=100
G22K Bettles 149.76 317 P **PKPbc** **13 15 57.5 -0.3**
baz=97
P18K Big Mountain, 149.81 302 P **PKPbc** **13 15 57.1 -1.1**
baz=107
R17K Ugashik Creek 149.83 298 P **PKPbc** **13 15 57.2 -1.0**
baz=103
N19K Bonanza Creek 149.85 305 P **PKPbc** **13 15 56.8 -1.5**
baz=106
O18K Koktuh Hills 149.93 303 P **PKPbc** **13 15 57.4 -1.1**
baz=107
L20K Farewell, AK 149.98 308 P **PKPbc** **13 15 58.0 -0.4**
baz=103
E22K Anaktuvuk Pass 150.00 319 P **PKPbc** **13 15 58.0 -0.4**
baz=95
M19K Big River Lodg 150.08 307 P **PKPbc** **13 15 58.0 -0.7**
baz=104
F22K John River 150.08 318 P **PKPbc** **13 15 58.4 -0.2**
baz=96,SNR=6.3
H21K Melozitna Rive 150.10 314 P **PKPbc** **13 15 58.6 -0.1**
baz=98,SNR=9.7
K20K Telida 150.25 310 P **PKPbc** **13 15 58.1 -1.0**
baz=101,SNR=6.5
Q16K King Salmon 150.30 300 P **PKPbc** **13 15 59.1 -0.2**
baz=108
P17K Kvichak River 150.34 301 P **PKPbc** **13 15 58.6 -0.8**
baz=107
L19K White Mountain 150.36 307 P **PKPbc** **13 15 58.6 -0.8**
baz=103
J20K Nowinta River 150.43 311 P **PKPbc** **13 15 59.6 +0.2**
baz=100,SNR=5.5
G21K Allakaket 150.50 316 P **PKPbc** **13 15 59.7 +0.1**
baz=96
F21K Alatna River 150.56 317 P **PKPbc** **13 15 59.7 0.0**
baz=95,SNR=5.7
O17K Koliganek Bris 150.82 302 P **PKPbc** **13 16 00.5 0.0**
baz=106
TTA Tatalina 151.03 308 P **PKiKP** **13 16 01.3 -0.3**
baz=101
BTO Baotou 151.11 104 *e*PKPbc **PKPdf** **13 15 54.4 -1.7**
SDPT Sand Point 151.16 292 P **PKiKP** **13 16 01.8 -0.1**
baz=111
HNS HongShan 151.34 114 ⇑PKPbc **PKiKP** **13 16 02.8 -0.1**
TIA Tai'an 151.67 119 PKPbc **PKPbc** **13 16 02.8 -0.5**
GCSA Galena City Sc 151.69 312 P **PKiKP** **13 16 03.1 +0.4**
baz=97
N16K Nishlik Lake 151.81 303 P **PKiKP** **13 16 03.5 +0.3**
baz=103
HHC Hu-ho-hao-te 152.13 106 *e*PKPbc **PKPdf** **13 15 54.3 -3.4**
SONM Songino Array 153.44 89 PKPbc **PKPbc** **13 16 06.2 -0.8**
comp=Z,2.5nm,0.7s,baz=217,slow=1.8,SNR=8.1

*IDC **19** 12:58:42.5±1.1,55°.45S×26°.69W,h0km,mb4.1/6, mbtmp4.0/7,ML2.9/1,MS4.4/8,Error ellipse: s-maj=38.4km s-min=21.9km az=76.0*
*NEIC **19** 12:58:45.4±2.0,55°.5S±0°.1×27°.0W±0°.2,h21km±7km, mb4.5/20,Error ellipse: s-maj=18.4km s-min=15.5km az=86.0*
ISC 19 12:58:45.6±0.7,55°.51S±0°.08×27°.0W±0°.1,h25km,n38, σ1s10/30,mb4.4/9,MS4.6/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.63**	**279**	Pn	**Pn**	**13 00 06.0**	**-1.6**
ORCD	**Orcadas**	**10.74**	**234**	Pn	**Pn**	**13 01 17.8**	**+0.2**
VNA3	**Neumayer Olymp**	**17.46**	**161**	P	**Pn**	**13 02 45.4**	**-1.6**
VNA2	**Neumayer--Watz**	**17.65**	**159**	P	**Pn**	**13 02 49.0**	**-0.3**
	baz=319,slow=15						
SNAA	**Sanae**	**19.19**	**157**	P	**P**	**13 03 06.7**	**-0.4**
	baz=299,slow=8.5,SNR=1.3						
	1.1nm,0.8s						
SNAA	**Sanae**	**19.19**	**157**	P	**P**	**13 03 07.5**	**+0.4**
PMSA	**Palmer Station**	**20.36**	**228**	P	Pn	13 03 22.1	+0.2
	6.8nm,0.8s,baz=73,slow=9.0,SNR=2.4						
	6.8nm,0.8s						
PMSA	**Palmer Station**	**20.36**	**228**	P	Pn	13 03 22.0	+0.1
PMSA				IAmb	IAmb	13 03 40.3	
	comp=Z,19nm,1.1s						
TROLL	**Troll, Antarti**	**20.68**	**154**	P	**P**	**13 03 22.7**	**-0.6**
SMAI	**San Martin Ant**	**22.26**	**220**	P	**P**	**13 03 39.0**	**-1.3**
BELA	**Belgrano 2**	**22.63**	**184**	P	**P**	**13 03 42.9**	**-1.2**
MG04	**Isla Riesco**	**25.90**	**257**	P	**P**	**13 04 14.4**	**-0.8**
MG05	**Puerto Natales**	**26.92**	**259**	P	**P**	**13 04 24.1**	**-0.3**
MG05				IAmb	IAmb	13 04 27.4	
	comp=Z,25nm,1.2s						
GO07	**Milladeo Hill,**	**32.25**	**273**	P	**P**	**13 05 13.3**	**+1.6**
QSPA	**South Pole Qui**	**34.74**	**180**	P	**P**	**13 05 34.1**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=186,slow=6.8,SNR=3.0						
	comp=Z,2.6nm,0.7s						
QSPA	**South Pole Qui**	**34.74**	**180**	P	**P**	**13 05 33.7**	**+0.3**
QSPA				IAmb	IAmb	13 05 38.8	
	comp=Z,10nm,1.4s						
CPUP	**Villa Florida**	**36.55**	**310**	P	**P**	**13 05 49.0**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=135,slow=5.7,SNR=2.1						
CPUP				LR	LR	13 19 07.9	
	comp=Z,191nm,19.2s,baz=157,slow=33						
	comp=Z,1.2nm,0.4s						
CPUP	**Villa Florida**	**36.55**	**310**	P	**P**	**13 05 49.4**	**+0.3**
CPUP				IAmb	IAmb	13 06 08.3	
	comp=Z,7.8nm,1.5s						
PEL	**Peldehue**	**37.59**	**288**	P	**P**	**13 05 58.5**	**+0.6**
VA05	**Santo Domingo**	**37.70**	**287**	P	**P**	**13 05 57.9**	**-0.9**
BOSA	**Boshof**	**45.71**	**76**	LR	LR	13 23 08.1	
	comp=Z,199nm,19.8s,baz=42,slow=32						
VNDA	**Vanda**	**47.12**	**183**	P	**P**	**13 07 16.4**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=195,slow=4.9,SNR=7.6						
	comp=Z,1.8nm,0.7s						
VNDA	**Vanda**	**47.12**	**183**	P	**P**	**13 07 16.0**	**+1.1**
VNDA				IAmb	IAmb	13 07 18.2	
	comp=Z,2.8nm,0.8s						
VILB	**Vilhena**	**49.68**	**316**	P	**P**	**13 07 33.6**	**-1.7**
VILB				IAmb	IAmb	13 07 36.7	
	comp=Z,6.5nm,0.6s						
RCBR	**Riachuelo**	**50.06**	**348**	P	**P**	**13 07 37.7**	**-0.5**
RCBR				IAmb	IAmb	13 08 04.7	
	comp=Z,10nm,1.1s						
LPAZ	**La Paz**	**50.17**	**305**	P	**P**	**13 07 41.8**	**+2.0**
	comp=Z,3.2nm,0.8s,baz=177,slow=4.8,SNR=4.3						
	comp=Z,3.2nm,0.8s						
LPAZ	**La Paz**	**50.17**	**305**	P	**P**	**13 07 42.4**	**+2.6**
LPAZ				IAmb	IAmb	13 07 44.6	
	comp=Z,2.7nm,0.8s						
ETMB	**Extrema**	**55.01**	**310**	P	**P**	**13 08 14.5**	**-0.3**
ETMB				IAmb	IAmb	13 08 19.0	
	comp=Z,3.0nm,0.9s						
OPO	**Ambohidratompo**	**65.94**	**88**	LR	LR	13 31 38.5	
	comp=Z,200nm,21.4s,baz=356,slow=30						
OTAV	**Otavalo**	**69.46**	**303**	P	**P**	**13 09 52.8**	**+0.6**
TOA0	**Torodi Ar. Sit**	**72.52**	**29**	P	**P**	**13 10 09.8**	**-0.3**
TOA0				IAmb	IAmb	13 10 27.0	
	comp=Z,7.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**72.52**	**29**	P	**P**	**13 10 10.4**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=195,slow=6.8,SNR=3.5						
TORD				LR	LR	13 37 12.2	
	comp=Z,446nm,19.3s,baz=224,slow=32						
	comp=Z,1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**72.52**	**29**	P	**P**	**13 10 10.3**	**+0.3**
TORD				IAmb	IAmb	13 10 26.2	
	comp=Z,8.4nm,1.5s						
ATD	**Arta Tunnel**	**88.33**	**67**	LR	LR	13 48 20.9	
	comp=Z,191nm,20.1s,baz=192,slow=34						
KEST	**Kesra**	**96.04**	**29**	LR	LR	13 51 06.2	
	comp=Z,385nm,20.0s,baz=160,slow=33						
ASAR	**Alice Springs**	**99.47**	**162**	LR	LR	13 56 45.3	
	comp=Z,347nm,19.1s,baz=180,slow=35						
EIL	**Elat**	**99.90**	**51**	LR	LR	13 54 02.4	
	comp=Z,216nm,19.2s,baz=270,slow=33						
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	**PKiKP**	**13 18 33.0**	**+0.2**
	comp=Z,2.7nm,1.1s,baz=126,slow=1.3,SNR=8.1						

*IDC **19** 13:00:05.5±0.5,55°.05S×31°.57W,h0km,mb4.7/16, mbtmp4.7/17,ML4.2/1,MS4.2/2,Error ellipse: s-maj=17.2km s-min=12.8km az=48.0*
*NEIC **19** 13:00:06.9±1.6,55°.15S±0°.09×31°.6W±0°.2,h10km±1km, mb5.1/53,Error ellipse: s-maj=15.9km s-min=13.4km az=42.0*
ISC 19 13:00:06.5±0.3,55°.06S±0°.06×31°.61W±0°.06,h10km,n343, σ0s78/332,mb5.0/38,4C-2D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.94**	**283**		**Pn**	**13 00 53.3**	**+0.1**
ORCD	**Orcadas**	**9.00**	**225**	Pn	**Pn**	**13 02 14.4**	**-1.9**
EFI	**East Falkland**	**16.11**	**271**		**Pn**	**13 03 50.8**	**-2.0**
VNA1	**Neumayer--Stat**	**18.70**	**156**	P	**Pn**	**13 04 26.0**	**+1.1**
PMSA	**Palmer Station**	**18.71**	**226**	P	**Pn**	**13 04 26.4**	**+1.2**
	0.8nm,0.3s,baz=61,slow=8.8,SNR=8.1						
	20nm,0.8s						
VNA3	**Neumayer Olymp**	**18.81**	**158**	P	**Pn**	**13 04 28.4**	**+2.1**
VNA2	**Neumayer--Watz**	**19.09**	**156**	P	**Pn**	**13 04 29.4**	**-0.4**
	baz=309,slow=12						
VNA2	**Neumayer--Watz**	**19.09**	**156**	ScP	**ScP**	**13 12 26.5**	**-1.7**
	baz=323,slow=7.0						
SNAA	**Sanae**	**20.69**	**154**	P	**P**	**13 04 46.6**	**+0.2**
SNAA	**Sanae**	**20.69**	**154**	ScP	**ScP**	**13 12 31.1**	**-0.9**
SNAA	**Sanae**	**20.69**	**154**	P	**P**	**13 04 46.7**	**+0.3**
	20nm,0.8s,baz=301,slow=9.3,SNR=18						
SNAA				LR	LR	13 11 38.3	
	comp=Z,484nm,18.3s,baz=284,slow=34						
	20nm,0.8s						
SNAA	**Sanae**	**20.69**	**154**	P	**P**	**13 04 45.5**	**-0.9**
SMAI	**San Martin Ant**	**20.95**	**217**	P	**P**	**13 04 49.2**	**0.0**
TROLL	**Troll, Antarti**	**22.27**	**153**	P	**P**	**13 05 05.2**	**+1.8**
TROLL	**Troll, Antarti**	**22.27**	**153**	ScP	**ScP**	**13 12 34.7**	**-1.3**
BELA	**Belgrano 2**	**22.94**	**182**	P	**P**	**13 05 08.5**	**-1.8**
BELA				IAmb	IAmb	13 05 16.5	
	comp=Z,74nm,1.5s						
MG05	**Puerto Natales**	**24.38**	**261**	P	**P**	**13 05 23.5**	**-1.0**
MG05				IAmb	IAmb	13 05 27.5	
	comp=Z,93nm,1.4s						
COYC	**Coyhaique**	**27.18**	**273**	P	**P**	**13 05 48.9**	**-1.0**
COYC				IAmb	IAmb	13 06 23.8	
	comp=Z,28nm,1.1s						
PLTB	**Pedras Altas**	**28.01**	**317**	P	**P**	**13 05 58.4**	**+0.9**
PLTB	**Pedras Altas**	**28.01**	**317**	*e*P	**P**	**13 05 57.9**	**+0.4**
AY01	**Puyuhuapi**	**28.18**	**275**	P	**P**	**13 05 57.1**	**-1.7**
AY01				IAmb	IAmb	13 06 00.9	
	comp=Z,24nm,1.0s						
LL02	**Futaleuf**	**28.48**	**278**	P	**P**	**13 06 00.2**	**-1.4**
CPSB	**Cacapava Do Su**	**29.16**	**319**	*e*P	**P**	**13 06 09.1**	**+1.4**
CNLB	**Canela**	**29.22**	**324**	*e*P	**P**	**13 06 09.5**	**+1.2**
PLCA	**Paso Flores**	**29.34**	**283**	P	**P**	**13 06 09.9**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=181,slow=14,SNR=4.2						
	comp=Z,2.6nm,0.8s						
PLCA	**Paso Flores**	**29.34**	**283**	*e*P	P	13 06 15.8	+6.5
ITQB	**Itaqui**	**31.07**	**315**	P	**P**	**13 06 24.3**	**-0.3**
ITQB				IAmb	IAmb	13 06 26.0	
	comp=Z,31nm,1.0s						
ITQB	**Itaqui**	**31.07**	**315**	*e*P	**P**	**13 06 25.3**	**+0.8**
PARB	**Paraibuna**	**33.36**	**336**	*e*P	**P**	**13 06 45.1**	**+0.3**
MAN01	**Angra dos Reis**	**33.45**	**339**	*e*P	**P**	**13 06 46.6**	**+0.9**
BO02	**Sierra Bellavi**	**33.73**	**291**	P	**P**	**13 06 48.2**	**+0.2**
PTGB	**Pitanga**	**33.87**	**325**	*e*P	**P**	**13 06 49.8**	**+0.5**
DUB01	**Friburgo-RJ**	**33.91**	**324**	*e*P	**P**	**13 06 49.4**	**-0.3**
VAO	**Valinhos**	**34.01**	**334**	*e*P	**P**	**13 06 52.1**	**+1.6**
CPUP	**Villa Florida**	**34.31**	**316**	P	**P**	**13 06 53.2**	**+0.2**
	comp=Z,35nm,1.0s,baz=156,slow=8.4,SNR=40						
	comp=Z,35nm,1.0s						
CPUP	**Villa Florida**	**34.31**	**316**	P	**P**	**13 06 52.4**	**-0.6**
CPUP	**Villa Florida**	**34.31**	**316**	*e*P	**P**	**13 06 53.1**	**+0.2**
MT09	**Talagante**	**34.61**	**292**	P	**P**	**13 06 55.3**	**-0.4**
MT09				IAmb	IAmb	13 06 56.8	
	comp=Z,26nm,0.7s						
MT01	**Popeta**	**34.68**	**291**	P	**P**	**13 06 55.9**	**-0.3**
MT01				IAmb	IAmb	13 06 57.1	
	comp=Z,28nm,0.8s						
RCLB	**Rio Claro- Sao**	**34.71**	**334**	*e*P	**P**	**13 06 56.7**	**+0.2**
PEL	**Peldehue**	**34.94**	**293**	P	**P**	**13 06 58.7**	**+0.3**
PEL				IAmb	IAmb	13 07 00.3	
	comp=Z,35nm,0.9s						
VA05	**Santo Domingo**	**35.04**	**291**	P	**P**	**13 06 59.1**	**-0.1**
MT02	**Curacav**	**35.09**	**292**	P	**P**	**13 07 00.1**	**+0.4**
ZON	**Zonda**	**35.14**	**297**	P	**P**	**13 07 00.1**	**0.0**
ZON				IAmb	IAmb	13 07 03.2	

comp=Z,20nm,0.8s
VA03 San Esteban 35.16 293 P P 13 07 00.7 +0.3
VA03 IAmb IAmb 13 07 04.9
comp=Z,30nm,0.9s
QSPA South Pole Qui 35.19 180 P P 13 07 01.0 +0.6
comp=Z,9.8nm,0.8s,baz=202,slow=7.1,SNR=8.8
QSPA LR LR 13 20 43.3
comp=Z,515nm,18.3s,baz=228,slow=35
comp=Z,9.8nm,0.8s
QSPA South Pole Qui 35.19 180 P P 13 07 01.1 +0.7
QSPA IAmb IAmb 13 07 09.3
comp=Z,36nm,1.2s
VA06 Catapilco 35.71 293 P P 13 07 06.1 +1.1
TRCB Terra Rica 35.84 326 *eP* **P 13 07 06.6 +0.4**
BB19B Bebedouro 36.26 333 *eP* **P 13 07 10.2 +0.3**
SJMB Sao Joao De Ma 37.02 345 *eP* **P 13 07 16.6 +0.3**
CO01 Juntas del Tor 37.12 297 P P 13 07 19.4 +2.0
CO01 IAmb IAmb 13 07 20.3
comp=Z,16nm,0.7s
DIAM Diamantina, MG 37.84 341 *eP* **P 13 07 22.9 -0.5**
ITRB Iturama 38.06 331 *eP* **P 13 07 25.5 +0.4**
AC05 El Transito 38.13 297 P P 13 07 26.7 +0.9
AC05 IAmb IAmb 13 07 27.9
comp=Z,28nm,0.8s
PMNB Patos De Minas 38.18 337 *eP* **P 13 07 26.4 +0.2**
GUA01 Guaratinga, BA 38.92 347 *eP* **P 13 07 31.4 -1.0**
IPMB Ipameri, GO 39.13 334 *eP* **P 13 07 34.5 +0.3**
MC01 Montes Claros 39.44 341 *eP* **P 13 07 36.4 -0.4**
C2SB Chapadao do Su 39.68 328 *eP* **P 13 07 39.4 +0.8**
CMC01 Camacan, BA 40.09 348 *eP* **P 13 07 41.2 -0.9**
JANB Januaria 41.12 341 *eP* **P 13 07 50.3 -0.4**
BDFB Brasilia 41.34 336 P P 13 07 52.8 +0.2
comp=Z,14nm,0.9s,baz=146,slow=7.0,SNR=11
comp=Z,14nm,0.9s
BDFB Brasilia 41.34 336 P P 13 07 52.9 +0.4
BDFB Brasilia 41.34 336 *eP* **P 13 07 52.9 +0.4**
GDU01 Guandu, BA 41.72 348 *eP* **P 13 07 54.5 -1.0**
MAW Mawson 42.41 146 P P 13 08 00.9 +0.3
comp=Z,13nm,0.8s,baz=241,slow=8.3,SNR=19
comp=Z,13nm,0.8s
MAW Mawson 42.41 146 P P 13 08 01.1 +0.4
LVC Limon Verde 42.65 304 P P 13 08 03.8 +0.3
comp=Z,23nm,0.8s,baz=156,slow=7.3
comp=Z,23nm,0.8s
LVC Limon Verde 42.65 304 P P 13 08 04.8 +1.3
LVC IAmb IAmb 13 08 06.9
comp=Z,25nm,0.8s
LVC Limon Verde 42.65 304 *eP* **P 13 08 05.4 +1.9**
SUR Sutherland 42.88 80 P P 13 08 05.5 +0.4
comp=Z,8.7nm,1.1s,baz=197,slow=11,SNR=1.9
comp=Z,8.7nm,1.1s
SALV Santo Antonio 43.28 325 *eP* **P 13 08 08.3 +0.1**
SDBA SAO DESIDERIO 43.81 341 *eP* **P 13 08 12.2 -0.4**
NBLA Lagarto - SE 44.23 351 *eP* **P 13 08 14.2 -1.7**
PB01 IPOC Station P 44.26 305 P P 13 08 16.9 +0.7
PTLB Pontes e Lacer 44.89 321 P P 13 08 19.6 -1.5
PTLB IAmb IAmb 13 08 22.6
comp=Z,29nm,0.9s
PTLB Pontes e Lacer 44.89 321 *eP* **P 13 08 21.3 +0.2**
SIV San Ignacio 45.12 318 P P 13 08 23.1 +0.2
comp=Z,7.9nm,0.9s,baz=154,slow=9.6
comp=Z,7.9nm,0.9s
GO01 Chusmiza 45.31 306 P P 13 08 25.8 +0.7
SNDB Serra Nova Dou 45.68 333 *eP* **P 13 08 28.5 +1.1**
NBRF Rio Formoso - 46.35 355 *eP* **P 13 08 31.6 -1.1**
PB16 IPOC Station P 46.61 307 P P 13 08 37.5 +2.1
PB16 IAmb IAmb 13 09 06.7
comp=Z,42nm,1.8s
VNDA Vanda 47.41 184 P P 13 08 41.2 +0.9
comp=Z,3.6nm,0.8s,baz=193,slow=7.3,SNR=8.2
comp=Z,3.6nm,0.8s
VNDA Vanda 47.41 184 P P 13 08 41.2 +0.9
VILB Vilhena 47.58 321 P P 13 08 41.7 -0.6
VILB IAmb IAmb 13 08 43.1
comp=Z,24nm,0.9s
VILB Vilhena 47.58 321 *eP* **P 13 08 42.3 -0.1**
PDRB Porto dos Gac 47.63 326 *eP* **P 13 08 42.6 -0.2**
LPAZ La Paz 47.78 309 P P 13 08 46.0 +1.4
comp=Z,14nm,0.6s,baz=152,slow=6.4,SNR=32
comp=Z,14nm,0.6s
LPAZ La Paz 47.78 309 P P 13 08 45.1 +0.6
LPAZ IAmb IAmb 13 08 46.6
comp=Z,18nm,0.8s
LPAZ La Paz 47.78 309 *eP* **P 13 08 46.1 +1.5**
SMTB Santa Maria do 47.80 338 *eP* **P 13 08 45.2 +1.1**
H10S2 ASCENSION HYDR 47.92 23 T T 14 00 54.6
baz=193,slow=74,SNR=4.3
H10S3 ASCENSION HYDR 47.92 23 T T 14 00 55.3
baz=27,slow=74,SNR=20
CLDB Colider 48.03 327 *eP* **P 13 08 45.4 -0.5**
BOSA Boshof 48.23 81 P P 13 08 48.1 +0.7
comp=Z,8.8nm,0.8s,baz=214,slow=7.2,SNR=13
comp=Z,8.8nm,0.8s
BOSA Boshof 48.23 81 P P 13 08 47.8 +0.3
BOSA IAmb IAmb 13 08 48.9
comp=Z,25nm,1.3s
H10N1 ASCENSION HYDR 49.04 23 T T 14 02 17.5
baz=192,slow=75,SNR=21
H10N3 ASCENSION HYDR 49.04 23 T T 14 02 25.3
baz=192,slow=75,SNR=16
H10N2 ASCENSION HYDR 49.05 23 T T 14 02 18.3
baz=192,slow=75,SNR=14
RCBR Riachuelo 49.22 354 *eP* **P 13 08 54.0 -1.0**
PRPB Parauapebas 50.90 336 *eP* **P 13 09 08.5 +0.8**
LBTB Lobatse 51.20 78 P P 13 09 10.4 +0.4
comp=Z,12nm,0.8s,baz=216,slow=10
comp=Z,12nm,0.8s
LBTB Lobatse 51.20 78 P P 13 09 10.2 +0.2
LBTB IAmb IAmb 13 09 11.1
comp=Z,16nm,0.9s
TSUM Tsumeb 51.49 66 P P 13 09 11.3 -1.0
NPGB Novo Progresso 51.52 329 *eP* **P 13 09 12.3 -0.1**
ETMB Extrema 52.76 315 P P 13 09 21.2 -0.4
ETMB IAmb IAmb 13 09 29.2
comp=Z,28nm,1.8s
ETMB Extrema 52.76 315 *eP* **P 13 09 22.0 +0.4**
ROSB Rosrio 52.99 344 *eP* **P 13 09 23.6 +0.3**
ITTB Itaituba 54.17 330 *eP* **P 13 09 32.1 +0.1**
TMAB Tom-Au,PA,Br 54.22 340 *eP* **P 13 09 32.4 +0.1**
CASY Casey 55.65 163 P P 13 09 42.7 +0.7
CASY IAmb IAmb 13 09 43.7
comp=Z,13nm,1.1s
MALB Monte Alegre 56.16 332 *eP* **P 13 09 47.0 +0.7**
MACA Manacapuru-AM 56.85 325 P P 13 09 49.9 -1.3
MACA IAmb IAmb 13 09 51.5
comp=Z,40nm,0.8s
MACA Manacapuru-AM 56.85 325 *eP* **P 13 09 50.5 -0.7**
MCPB Macapa, AP 57.04 335 *eP* **P 13 09 53.5 +0.9**
CZSB Cruzeiro do Su 57.39 309 *eP* **P 13 09 55.1 0.0**
LSZ Lusaka 60.43 74 P P 13 10 16.6 +0.2
LSZ IAmb IAmb 13 10 17.4
comp=Z,7.8nm,0.8s
BOAV Boa Vista 62.02 327 P P 13 10 25.9 -1.0
BOAV IAmb IAmb 13 10 27.6
comp=Z,38nm,1.0s
BOAV Boa Vista 62.02 327 *eP* **P 13 10 26.7 -0.2**
LIC Lamto 64.95 29⇓ *eP* **P 13 10 45.8 -0.5**
comp=Z,50nm,0.9s
KIC Kosan Boka 65.17 30⇑ *iP* **P 13 10 47.6 -0.1**
comp=Z,8.9nm,0.8s
TIC Toumodi 65.36 29⇓ *eP* **P 13 10 48.4 -0.5**
comp=Z,28nm,0.9s
DBIC Dimbokro 65.43 29 P P 13 10 49.6 +0.3
comp=Z,9.3nm,0.9s,baz=214,slow=6.0,SNR=4.4
comp=Z,9.3nm,0.9s
OTAV Otavalo 67.04 308 *eP* **P 13 11 02.3 +2.0**
GARC Garzon, Huila 67.46 311 *eP* **P 13 11 02.1 -0.6**
BBAC Balboa, Cauca 68.08 310 *eP* **P 13 11 06.7 +0.2**
POPC Popayan, Colom 68.29 310 *eP* **P 13 11 08.2 +0.2**
PRAC Prado 68.57 313 *eP* **P 13 11 09.5 +0.1**
CHIC Chingaza 68.92 314 *eP* **P 13 11 09.6 -2.4**
YOTC Yotoco, Valle 69.44 311 *eP* **P 13 11 13.6 -1.3**
RUSC La Rusia 69.80 315 *eP* **P 13 11 16.4 -1.2**
SPBC San Pablo de B 69.98 314 *eP* **P 13 11 14.7 -3.5**
GUY2C Guyana, Caldas 70.13 313 *eP* **P 13 11 18.6 -1.0**
NORC Norcasia 70.23 314 *eP* **P 13 11 17.9 -1.8**
PLMC San Jos del P 70.24 312 *eP* **P 13 11 18.4 -1.3**
BAUV El Baul 70.67 322 P P 13 11 22.6 +0.3
PTBC PUERTO BERRIO, 70.94 314 *eP* **P 13 11 21.2 -2.8**
SDV Santo Domingo 71.57 319 P P 13 11 27.3 -0.7
SDV IAmb IAmb 13 11 29.5
comp=Z,20nm,0.8s
SDV Santo Domingo 71.57 319 *eP* **P 13 11 27.9 -0.1**
TOA0 Torodi Ar. Sit 73.53 34 P P 13 11 39.5 +0.1
TOA0 IAmb IAmb 13 11 47.4
comp=Z,13nm,1.0s
TORD Torodi Ar. Bea 73.53 34 P P 13 11 39.7 +0.3
comp=Z,7.4nm,0.9s,baz=201,slow=6.3,SNR=16
comp=Z,7.4nm,0.9s
TORD Torodi Ar. Bea 73.53 34 P P 13 11 39.4 0.0
MBAR Mbarara 74.01 67 P P 13 11 41.0 -1.5
GDHS Morne Mazeau, 75.53 330 P P 13 11 51.4 +0.4
ACON Acoyapa 80.45 307 P P 13 12 18.8 +0.5
ACON IAmb IAmb 13 12 19.7
comp=Z,21nm,0.8s
BOAB BOACO BROADBAN 80.10 307 P P 13 12 21.9 +0.1
MATN Matagalpa 81.64 307 P P 13 12 25.3 +0.5
MATN IAmb IAmb 13 12 26.7
comp=Z,12nm,0.9s
ESDC Sonseca Array 97.29 21 P Pdif 13 13 40.2 +1.0
comp=Z,1.1nm,0.9s,baz=202,slow=3.8,SNR=6.3
comp=Z,1.1nm,0.9s
ASAR Alice Springs 100.61 167 P Pdif 13 13 54.1 -0.6
comp=Z,0.7nm,0.6s,baz=182,slow=4.0,SNR=11
N23A Red Feather La 114.56 307 P PKiKP 13 18 47.2 +0.8
baz=143
EDW2 Edwards Air Fo 115.84 294 P PKiKP 13 18 49.5 +0.7
baz=141
MPMC Manual Prospec 116.48 295 P PKiKP 13 18 50.7 +0.5
baz=140
CWC Cottonwood Cre 117.08 295 P PKiKP 13 18 52.3 +1.0
baz=140
VES Vestal, Richgr 117.14 294 P PKiKP 13 18 52.4 +1.2
baz=140
DUG Dugway, Tooele 117.29 302 P PKiKP 13 18 52.5 +1.0
baz=140
PDAR Pinedale Array 117.71 306 PKP **PKPdf 13 18 51.2 -1.2**
comp=Z,0.4nm,0.9s,baz=123,slow=3.3,SNR=2.0
HWUT Hardware Ranch 117.77 303 PKPdf **PKPdf 13 18 52.2 -0.2**
NVAR Mina Array Bea 118.70 297 PKP **PKPdf 13 18 54.4 0.0**
comp=Z,0.6nm,0.8s,baz=150,slow=2.6,SNR=4.3
MOOW Moose Ponds 119.02 306 PKiKP 13 18 55.5 +0.6
FXWY Fox Creek 119.06 305 PKPdf 13 18 54.1 -0.8
RLMT Red Lodge 119.38 307 P PKiKP 13 18 57.2 +1.6
baz=140
H17A Grant Village 119.43 306 P PKiKP 13 18 57.0 +1.3
baz=140
NOA NORSAR Array B 120.61 23 PKP **PKPdf 13 18 57.5 +0.4**
comp=Z,0.5nm,0.7s,baz=208,slow=2.2,SNR=3.2
WVOR Wild Horse Val 121.86 299 PKiKP 13 19 00.7 +0.4
MSO Missoula 122.82 306 PKiKP 13 19 02.6 +0.5
MSO Missoula 122.82 306 P PKiKP 13 19 03.5 +1.4
baz=137
BMO Blue Mountains 122.97 302 PKPdf 13 19 02.2 0.0
J05D Fort Rock, OR 123.78 299 P PKiKP 13 19 04.9 +0.7
baz=136
G08A Pilot Rock 124.10 302 PKPdf **PKiKP 13 19 05.0 +0.3**
I05D Terrebonne, OR 124.59 299 P PKiKP 13 19 06.6 +0.9
baz=136
K02D Willamette Mer 124.60 296 P PKiKP 13 19 06.7 +0.9
baz=136
FINES FINESS Array B 124.72 30 PKP **PKPdf 13 19 05.1 +0.2**
comp=Z,7.7nm,0.6s,baz=157,slow=1.9,SNR=21
NEW Newport 125.34 305 P PKiKP 13 19 08.5 +1.5
baz=136
AKTO Aktyubinsk 128.79 55 PKP **PKPdf 13 19 13.2 +0.1**
comp=Z,2.3nm,0.8s,baz=216,slow=5.6,SNR=4.9
ABKAR Akbulak array 128.92 57 PKPdf **PKPdf 13 19 12.9 -0.4**
ABKAR Akbulak array 128.92 57 PKPdf 13 19 13.3 0.0
ARCES ARCESS Array B 130.99 23 PKP **PKPdf 13 19 16.9 +0.3**
comp=Z,5.6nm,0.9s,baz=196,slow=2.1,SNR=11
ARCES ARCESS Array B 130.99 23 PKPdf 13 19 17.3 +0.7
YKA Yellowknife Ar 133.78 320 PKP **PKPdf 13 19 22.9 +0.9**
comp=Z,11nm,0.7s,baz=127,slow=2.3,SNR=3.9
PZH PanZhiHua 135.80 111 PKP **PKPdf 13 19 27.3 +0.1**
R33M Jennings River 138.65 310 P PKiKP 13 19 33.3 -0.3
baz=121
MKAR Makanchi Array 138.98 73 PKhKP PKPpre 13 19 25.3
comp=Z,0.7nm,0.8s,baz=298,slow=0.4,SNR=2.9
MKAR PKP **PKPdf 13 19 33.0 +0.6**
comp=Z,2.2nm,1.0s,baz=222,slow=3.4,SNR=6.9
KURBB Kurchatov Arra 139.18 66 PP **PP 13 22 25.7 -1.0**
comp=Z,0.4nm,0.6s,baz=244,slow=6.1,SNR=4.7
WMQ Urumqi 140.19 80 *e*PKP **PKiKP 13 19 36.3 -0.9**
LOGN Logan Glacier 143.77 309 PKPbc 13 19 39.8 +1.5
ZALV Zalesovo Beam 144.21 65 PKP PKPbc 13 19 40.1 +0.5
comp=Z,5.2nm,0.5s,baz=232,slow=3.5,SNR=13
ZALV Zalesovo Beam 144.21 65 PKPbc 13 19 40.4 +0.8
LZH Lanzhou 144.27 103 *e*PKP PKPbc 13 19 41.3 +0.7
LZH pPKP PKiKP 13 19 47.4 +1.5
DAWY Dawson 144.28 314 PKPab 13 19 39.6 +0.3
I29M Ogilvie Camp, 144.28 317 PKPab 13 19 39.4 +0.2
ISLE Juniper Island 144.28 308 PKPab 13 19 40.0 +0.5
GTA Gaotai 144.30 95 *e*PKP PKPbc 13 19 41.3 +0.7
GTA sPKP 13 19 47.5
M27K Edge Creek, AK 144.74 311 PKPab 13 19 41.2 +0.1
M27K Edge Creek, AK 144.74 311 P PKPab 13 19 41.0 -0.1
baz=111,SNR=20
MCARA McCarthy VSAT 144.89 309 P PKPab 13 19 41.7 +0.2
baz=112
BCAR Beaver Creek A 144.94 312 PKPbc 13 19 42.0 +0.2
L27K Beaver Creek, 144.96 312 PKPbc 13 19 41.8 0.0
L27K Beaver Creek, 144.96 312 P PKPbc 13 19 42.3 +0.4
baz=110,SNR=32
KAIM Kayak Island 144.98 306 P PKPab 13 19 42.6 +0.7
baz=113
M26K Nabesna, AK 145.24 310 P PKPbc 13 19 43.2 +0.4
baz=110
EGAK Eagle 145.24 315 PKPbc 13 19 42.1 -0.5
EGAK Eagle 145.24 315 P PKPbc 13 19 42.9 +0.3
baz=108
K27K Chicken 145.38 313 PKPbc 13 19 43.7 +0.6
BMRM Bremner River 145.45 308 P PKPbc 13 19 44.1 +0.6
baz=111,SNR=11
XAN Xi'an 145.54 111 PKPbc **PKPdf 13 19 44.5 +0.1**
L26K Log Cabin Wild 145.60 311 PKPdf 13 19 44.0 +0.5
L26K Log Cabin Wild 145.60 311 P PKPbc 13 19 44.5 +0.6
baz=109
I27K Kandik River 145.67 316 P PKPbc 13 19 44.4 +0.4
baz=107
N25K Chitina, Valde 145.68 309 P PKPdf 13 19 44.4 +0.6
baz=110,SNR=6.9
MENT Mentasta 145.73 311 PKPdf 13 19 44.2 +0.5
H27K Steamboat Moun 145.81 317 P PKPdf 13 19 44.4 +0.6
baz=106
EYAK Cordova Ski Ar 145.83 307 PKPbc 13 19 45.3 +0.7
EYAK Cordova Ski Ar 145.83 307 P PKPab 13 19 45.4 +0.4
baz=111
G27K Doyon Strip 146.01 318 P PKPbc 13 19 45.5 +0.5
baz=105,SNR=9.8
DIV Divide 146.04 308 PKPbc 13 19 45.8 +0.5
J26L Joseph Creek 146.15 314 PKPbc 13 19 45.8 +0.2
J26L Joseph Creek 146.15 314 P PKPbc 13 19 45.6 +0.1
baz=107
SCRK Sand Creek 146.17 313 P PKPbc 13 19 45.9 +0.2
baz=107
I26K Coal Creek Min 146.21 315 PKPbc 13 19 45.5 -0.1
I26K Coal Creek Min 146.21 315 P PKPbc 13 19 45.8 +0.3
baz=106
KLU Klutina 146.23 308 P PKPbc 13 19 46.3 +0.4
baz=110,SNR=17
E27K Coleen River 146.32 321 P PKPbc 13 19 46.6 +0.7
baz=103,SNR=11
P23K Montague Islan 146.40 305 P PKPbc 13 19 46.9 +0.6
baz=111
RIDG Independent Ri 146.46 312 PKPbc 13 19 47.0 +0.5
RIDG Independent Ri 146.46 312 P PKPbc 13 19 47.0 +0.5
baz=107,SNR=22
PAX Paxson 146.50 311 P PKPdf 13 19 46.3 +1.2
baz=108,SNR=44
M24K Tolsona, Glenn 146.55 309 PKPbc 13 19 47.1 +0.3
M24K Tolsona, Glenn 146.55 309 P PKPbc 13 19 47.1 +0.3
baz=108,SNR=8.7
GLI Glacier Island 146.56 307 P PKPbc 13 19 47.3 +0.5
baz=110
G26K Porcupine Rive 146.86 318 P PKPbc 13 19 47.7 +0.3
baz=103,SNR=5.8
K24K Donnelly Dome 146.88 312 P PKPbc 13 19 47.9 +0.2
baz=106,SNR=7.2
J25K Salcha River, 146.93 314 PKPbc 13 19 48.0 +0.2
J25K Salcha River, 146.93 314 P PKPbc 13 19 48.1 +0.2
baz=105,SNR=17
SCM Sheep Creek Mo 146.98 308 P PKPbc 13 19 48.6 +0.5
baz=108,SNR=13
PWL Port Wells 147.13 306 P PKPbc 13 19 48.6 +0.2
baz=109,SNR=12
M23K Glacier View 147.15 308 P PKPbc 13 19 49.1 +0.6
baz=108,SNR=12
F26K Sheenjek River 147.16 319 P PKPbc 13 19 49.1 +0.8
baz=102,SNR=10
PRP Porcupine Dome 147.22 315 P PKPbc 13 19 49.6 +0.9
baz=104,SNR=7.4
BMAR Burnt Mountain 147.27 319 PKPbc **PKPbc 13 19 49.7 +1.0**
C27K Jago River 147.35 323 P PKPbc 13 19 49.7 +0.9
baz=99
KNK Knik Glacier 147.36 307 P PKPbc 13 19 49.3 +0.3
baz=108
DHY Denali Highway 147.37 311 PKPbc 13 19 49.8 +0.6
DHY Denali Highway 147.37 311 P PKPbc 13 19 49.8 +0.6
baz=106
WAT6 Susitna Watana 147.39 310 P PKPbc 13 19 49.6 +0.3
baz=107,SNR=19
SEW Seward 147.41 305 P PKPbc 13 19 49.6 +0.5
baz=109,SNR=6.3
SML Sawmill 147.42 308 P PKPbc 13 19 49.4 +0.2
baz=108,SNR=13
H25K Birch Creek 147.51 317 P PKPbc 13 19 50.0 +0.8
baz=102
HDA Harding Lake 147.53 313 PKPbc 13 19 49.6 +0.2
HDA Harding Lake 147.53 313 P PKPbc 13 19 49.3 -0.1
baz=104
IL31 147.60 314 PKPbc 13 19 49.5 0.0
ILAR Eielson Array 147.60 314 PKPbc **PKPbc 13 19 49.5 0.0**
comp=Z,16nm,0.8s,baz=115,slow=2.1,SNR=30
ILAR Eielson Array 147.60 314 PKPbc 13 19 49.3 -0.2
O22K Cooper Landing 147.66 305 P PKPbc 13 19 50.0 +0.2
baz=109
GHO Glory Hole Cre 147.68 308 PKPbc 13 19 50.1 +0.1
F25K Christian River 147.70 319 P PKPbc 13 19 50.2 +0.4
baz=101,SNR=11
PMR Palmer 147.72 307 P PKPbc 13 19 50.5 +0.5
baz=107
E25K Arctic Village 147.77 320 P PKPbc 13 19 50.4 +0.4
baz=100,SNR=14
LYN LuoYang 147.81 115 ⇑PKPbc **PKPbc 13 19 50.6 -0.5**
WAT1 Susitna Watana 147.81 310 P PKPbc 13 19 50.6 +0.4
baz=106
RC01 Rabbit Creek A 147.85 306 P PKPbc 13 19 50.8 +0.4
baz=108
BRSE Bradley Lake S 147.90 304 P PKPbc 13 19 50.8 +0.2
baz=109,SNR=6.7
POKR Poker Plat Res 147.90 314 P PKPbc 13 19 50.9 +0.5
baz=103
CCB Clear Creek Bu 147.95 313 PKPbc 13 19 50.6 +0.1
COLA College 148.02 314 PKPbc 13 19 50.5 -0.2
COLA College 148.02 314 P PKPbc 13 19 50.6 0.0
baz=103
TCOL CIGO, UAF Yank 148.03 314 PKPbc 13 19 50.5 -0.2
TCOL CIGO, UAF Yank 148.03 314 P PKPbc 13 19 50.6 0.0
baz=103
RND Reindeer 148.10 311 PKPbc 13 19 51.4 +0.4
KDAK Kodiak Island 148.13 300 P PKPbc 13 19 51.1 0.0
baz=111
MDM Murphy Dome 148.20 314 PKPbc 13 19 50.8 -0.5
MCK McKinley 148.21 311 P PKPbc 13 19 51.5 +0.2
baz=104
M22K Willow 148.22 307 P PKPbc 13 19 51.5 +0.3
baz=106
D25K Kavik River 148.24 322 P PKPbc 13 19 51.3 +0.1
baz=97
H24K Noodor Dome 148.24 315 P PKPbc 13 19 51.4 +0.1
baz=102,SNR=7.5
G24K Hadweenzic Riv 148.24 317 P PKPbc 13 19 51.8 +0.5
baz=100,SNR=12
OHAK Old Harbor 148.29 298 P PKPbc 13 19 51.6 0.0
baz=112
HOM Homer 148.31 303 P PKPbc 13 19 51.5 0.0
baz=109
Q20K Shuyak Island 148.33 301 P PKPbc 13 19 51.8 +0.1
baz=110
CUT Chulitna 148.47 309 P PKPbc 13 19 52.4 +0.5
baz=105,SNR=9.9
NEA2 Nenana 148.47 313 P PKPbc 13 19 51.9 0.0
baz=103
F24K Squaw Lake 148.54 319 P PKPbc 13 19 52.4 +0.4
baz=99,SNR=8.8
BWN Browne 148.54 312 PKPdf 13 19 46.9 -1.5
BWN PKPbc **PKPbc 13 19 52.5 +0.4**
I23K Minto, Yukon-K 148.71 314 P PKPbc 13 19 52.4 0.0
baz=102
TRF Thorofare Moun 148.74 311 P PKPbc 13 19 52.5 -0.4
baz=104,SNR=12
E24K Your Creek 148.84 320 P PKPbc 13 19 53.2 +0.4
baz=98,SNR=14
O20K Slope Mountain 148.91 304 P PKPbc 13 19 53.6 +0.4
baz=108
H23K Yukon River 148.91 315 P PKPbc 13 19 53.5 +0.5
baz=100
SKT Skwentna 148.93 308 PKPbc 13 19 53.2 +0.1
SKT Skwentna 148.93 308 P PKPbc 13 19 53.3 +0.2
baz=105
KTH Kantishna Hill 149.03 311 PKPbc 13 19 53.6 +0.2
D24K Happy Valley 149.09 322 P PKPbc 13 19 53.8 +0.5
baz=95
C24K Franklin Bluff 149.09 323 P PKPbc 13 19 53.7 +0.5
baz=94
BPAW Bear Paw Mtn. 149.18 312 PKPbc 13 19 54.0 +0.3
BPAW Bear Paw Mtn. 149.18 312 P PKPbc 13 19 53.8 +0.1
baz=102,SNR=14
G23K Bananza Creek 149.25 317 P PKPbc 13 19 54.4 +0.6
baz=98,SNR=21
MLY Manley 149.26 313 P PKPbc 13 19 53.6 -0.3
baz=101,SNR=8.6
TOLK Toolik Lake Re 149.31 321 PKPbc 13 19 54.1 +0.1
TOLK Toolik Lake Re 149.31 321 P PKPbc 13 19 54.4 +0.5
baz=96,SNR=22
PPLA Purkeypile 149.45 309 P PKPbc 13 19 54.8 +0.3
baz=103
CAST Castle Rocks 149.51 310 P PKPbc 13 19 54.7 +0.1
baz=102
M20K Styx River 149.64 307 P PKPbc 13 19 54.9 -0.1
baz=104,SNR=8.4
H22K Ishtalitna Cre 149.66 315 P PKPbc 13 19 55.2 +0.3
baz=99,SNR=8.0
CHUM Lake Minchumin 149.71 311 P PKPbc 13 19 55.1 +0.2
baz=101
D23K Nanushuk River 149.74 321 P PKPbc 13 19 55.5 +0.6
baz=94
O19K Port Alsworth 149.75 303 P PKPbc 13 19 55.1 -0.1
baz=106
C23K Itkillik River 149.76 323 P PKPbc 13 19 55.6 +0.6
baz=93
NRIK Noril'sk 149.80 38 PKPbc **PKPbc 13 19 55.6 +0.6**
comp=Z,2.2nm,0.4s,baz=342,slow=1.2,SNR=6.2
I21K Tanana 149.80 314 P PKiKP 13 19 56.4 +0.3
baz=100,SNR=8.1
G22K Bettles 149.85 317 P PKPbc 13 19 55.5 +0.2
baz=97
P18K Big Mountain, 149.97 302 P PKPbc 13 19 55.5 -0.3
baz=107,SNR=5.8
N19K Bonanza Creek 150.00 305 P PKPbc 13 19 55.4 -0.5
baz=105
R17K Ugashik Creek 150.00 298 P PKPbc 13 19 55.8 -0.1
baz=109
O18K Koktuh Hills 150.09 303 P PKPbc 13 19 55.9 -0.1
baz=106,SNR=19
E22K Anaktuvuk Pass 150.09 320 P PKPbc 13 19 56.2 +0.3
baz=94
L20K Farewell, AK 150.12 308 P PKPbc 13 19 55.9 -0.2
baz=103,SNR=9.9
F22K John River 150.18 318 P PKiKP 13 19 57.1 +0.2
baz=95,SNR=16
H21K Melozitna Rive 150.21 314 P PKPbc 13 19 56.6 +0.4
baz=98,SNR=14
M19K Big River Lodg 150.22 307 P PKPbc 13 19 56.4 +0.1
baz=103
K20K Telida 150.38 310 P PKPbc 13 19 56.7 +0.1
baz=101,SNR=10
Q16K King Salmon 150.46 300 P PKPbc 13 19 56.5 -0.4
baz=107
L19K White Mountain 150.50 307 P PKPbc 13 19 57.0 0.0
baz=102
P17K Kvichak River 150.51 301 P PKPbc 13 19 56.7 -0.3
baz=107
J20K Nowinta River 150.56 311 P PKPbc 13 19 57.0 0.0
baz=100
G21K Allakaket 150.60 316 P PKPbc 13 19 57.0 -0.1
baz=96
N18K Kilae Creek 150.63 304 P PKPbc 13 19 57.2 -0.1
baz=104
IMAR Indian Mountai 150.64 315 PKiKP 13 19 58.1 +0.2
IMAR PKPab **pPKPab 13 20 07.3 +1.2**
F21K Alatna River 150.66 318 P PKPbc 13 19 57.2 0.0
baz=95,SNR=12
CHNA Chernabura Isl 150.69 291 P PKPbc 13 19 56.7 -0.9
baz=112
O17K Koliganek Bris 150.99 302 P PKPbc 13 19 57.7 -0.4
baz=105,SNR=10

HNS	**HongShan**	**151.16**	**114**	⇑PKPbc	**PKiKP**	**13**	**19**	**59.8 0.0**
TTA	**Tatalina**	**151.17**	**308**	P	**PKPbc**	**13**	**19**	**58.4 -0.2**
	baz=100,SNR=6.1							
S14K	**Fog Glacier**	**151.19**	**294**	P	**PKPbc**	**13**	**19**	**57.9 -0.9**
	baz=110							
SDPT	**Sand Point**	**151.35**	**292**	P	**PKPbc**	**13**	**19**	**59.0 -0.1**
	baz=111							
O16K	**Kokwok River B**	**151.43**	**301**	P	**PKPbc**	**13**	**19**	**59.2 0.0**
	baz=105							
TIA	**Tai'an**	**151.50**	**118**	⇑P	**PKPbc**	**13**	**20**	**00.3 +0.2**
TIA				pmax	pmax			
	comp=Z,7.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**151.92**	**105**	*e*PKPbc	**PKPdf**	**13**	**19**	**51.0 -3.6**
N16K	**Nishlik Lake**	**151.97**	**303**	P	**PKPbc**	**13**	**20**	**00.7 +0.3**
	baz=103							
SONM	**Songino Array**	**153.19**	**88**	PKPbc	**PKPbc**	**13**	**20**	**03.8 +0.1**
	comp=Z,4.6nm,0.7s,baz=219,slow=3.7,SNR=12							
SONM	**Songino Array**	**153.19**	**88**		**PKPbc**	**13**	**20**	**03.2 -0.6**
UNV	**Unalaska Valle**	**154.09**	**286**	P	**PKPbc**	**13**	**20**	**04.6 -0.6**
	baz=111							
KSRS	**Korea Array**	**157.55**	**133**	PKPab	**PKPab**	**13**	**20**	**34.0 -0.2**
	comp=Z,1.0nm,0.8s,baz=204,slow=2.7,SNR=4.3							
KLR	**Kul'dur**	**168.24**	**113**	PKPab	**PKPab**	**13**	**21**	**21.1 +0.2**
	comp=Z,1.4nm,0.5s,baz=203,slow=7.0,SNR=3.5							

DJA 19 13:00:29.6±1.2,2°S±2°×12°8E±°,h17km±12km,M3.8/12, mb4.1/3,mB5.0/1,MLv3.7/12,Mw(mB)4.4/1,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
MSAI	**Masohi**	**1.45**	**153**	P	Pb	13	00	55.8	-0.3
MSAI				S	Sb	13	01	14.4	+0.2
LBMI	**Labuha**	**1.60**	**331**	P	Pb	13	00	58.1	-0.6
LBMI				S	Sb	13	01	18.6	-0.1
AAI	**Ambon**	**1.63**	**183**	P	Pn	13	00	55.6	-1.9
NLAI	**Namlea**	**1.66**	**225**	P	Pn	13	00	58.1	+0.1
SANI	**Sanana**	**2.28**	**270**	P	Pn	13	01	05.4	-1.1
BNDI	**Bandanaira**	**2.95**	**146**	P	Pn	13	01	15.6	-0.1
SWI	**Sorong**	**3.21**	**69**	P	Pn	13	01	19.4	+0.1
FAKI	**Fak Fak**	**4.07**	**102**	P	Pn	13	01	30.2	-0.9
APSI	**Ampana**	**6.71**	**280**	P	Pn	13	02	08.6	+1.1
BKSI	**Bulukumba**	**8.76**	**248**	P	Pn	13	02	41.5	+6.0

IDC 19 13:02:32.5±2.4,55°26S×31°67W,h0km,mb4.0/2, mbtmp4.0/2,Error ellipse: s-maj=99.5km s-min=52.1km az=12.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
LPAZ	**La Paz**	**47.88**	**310**	P	P	13	11	12.7	-0.2
	2.2nm,0.7s,baz=158,slow=7.9,SNR=2.1 2.2nm,0.7s								
TORD	**Torodi Ar. Bea**	**73.71**	**34**	P	P	13	14	08.3	+0.2
	0.9nm,0.8s,baz=200,slow=5.4,SNR=2.4 0.9nm,0.8s								
ILAR	**Eielson Array**	**147.71**	**313**	PKPbc	PKPbc	13	22	17.0	-0.6
	1.4nm,0.8s,baz=108,slow=1.8,SNR=3.8								
SONM	**Songino Array**	**153.23**	**88**	PKPbc	PKPbc	13	22	31.2	-0.3
	0.6nm,0.6s,baz=266,slow=1.0,SNR=1.6								

*IDC **19** 13:05:31.9±0.8,55°13S×31°60W,h0km,mb3.9/7, mbtmp4.0/7,Error ellipse: s-maj=33.4km s-min=22.0km az=76.0*

*NEIC **19** 13:05:33.4±1.4,55°2S±0°1×31°8W±0°2,h10km±1km, mb4.4/9,Error ellipse: s-maj=26.0km s-min=17.0km az=212.0*

ISC 19 13:05:33.4±0.6,55°1S±0°1×31°8W±0°1,h10km,n36, σ0§67/31,mb4.3/7,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
HOPE	**Hope Point**	**2.88**	**285**	Pn	**Pn**	**13**	**06**	**18.7**	**-0.5**
VNA3	**Neumayer Olymp**	**18.77**	**158**	P	**Pn**	**13**	**09**	**53.3**	**+0.6**
SNAA	**Sanae**	**20.66**	**154**	P	**P**	**13**	**10**	**13.6**	**+0.7**
SNAA	**Sanae**	**20.66**	**154**	P	**P**	**13**	**10**	**13.7**	**+0.8**
	2.2nm,0.8s,baz=307,slow=11,SNR=4.2 2.2nm,0.8s								
SNAA	**Sanae**	**20.66**	**154**	P	**P**	**13**	**10**	**13.4**	**+0.5**
TROLL	**Troll, Antarti**	**22.23**	**152**	P	**P**	**13**	**10**	**28.9**	**-1.0**
QSPA	**South Pole Qui**	**35.11**	**180**	P	**P**	**13**	**12**	**26.8**	**+0.2**
	2.3nm,0.9s,baz=207,slow=4.5,SNR=3.6 2.3nm,0.9s								
QSPA	**South Pole Qui**	**35.11**	**180**	P	**P**	**13**	**12**	**26.8**	**+0.2**
QSPA				IAmb	IAmb	13	12	42.0	
	comp=Z,7.0nm,1.4s								
MAW	**Mawson**	**42.39**	**145**	P	**P**	**13**	**13**	**27.0**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=270,slow=13,SNR=5.0 comp=Z,2.2nm,0.8s								
MAW	**Mawson**	**42.39**	**145**	P	**P**	**13**	**13**	**26.9**	**-0.5**
VNDA	**Vanda**	**47.33**	**184**	P	**P**	**13**	**14**	**06.5**	**0.0**
	comp=Z,1.0nm,0.7s,baz=186,slow=6.7,SNR=5.1 comp=Z,1.0nm,0.7s								
VNDA	**Vanda**	**47.33**	**184**	P	**P**	**13**	**14**	**06.3**	**-0.3**
VNDA				IAmb	IAmb	13	14	36.5	
	comp=Z,3.4nm,0.7s								
LPAZ	**La Paz**	**47.77**	**310**	P	**P**	**13**	**14**	**12.7**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=194,slow=3.8,SNR=4.1 comp=Z,1.7nm,0.7s								
LPAZ	**La Paz**	**47.77**	**310**	P	**P**	**13**	**14**	**12.0**	**+0.7**
LPAZ				IAmb	IAmb	13	14	38.0	
	comp=Z,7.0nm,1.4s								
H10S2	**ASCENSION HYDR**	**48.03**	**23**	T	T	14	06	15.3	
	baz=193,slow=74,SNR=14								
H10S3	**ASCENSION HYDR**	**48.03**	**23**	T	T	14	06	16.8	
	baz=27,slow=74,SNR=25								
H10N1	**ASCENSION HYDR**	**49.14**	**23**	T	T	14	07	40.7	
	baz=193,slow=75,SNR=29								
H10N3	**ASCENSION HYDR**	**49.14**	**23**	T	T	14	07	36.3	
	baz=193,slow=75,SNR=26								
H10N2	**ASCENSION HYDR**	**49.16**	**23**	T	T	14	07	41.5	
	baz=193,slow=75,SNR=27								
LBTB	**Lobatse**	**51.30**	**78**	P	**P**	**13**	**14**	**37.1**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=244,slow=6.0,SNR=4.1 comp=Z,2.6nm,0.7s								
LBTB	**Lobatse**	**51.30**	**78**	P	**P**	**13**	**14**	**37.0**	**-0.6**
BIRV	**Birongo**	**71.50**	**324**	P	**P**	**13**	**16**	**54.2**	**0.0**
TOA0	**Torodi Ar. Sit**	**73.65**	**34**	P	**P**	**13**	**17**	**07.6**	**+0.7**
TOA0				IAmb	IAmb	13	17	32.5	
	comp=Z,5.1nm,1.4s								
TORD	**Torodi Ar. Bea**	**73.65**	**34**	P	**P**	**13**	**17**	**07.1**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=201,slow=5.8,SNR=5.0 comp=Z,0.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.65**	**34**	P	**P**	**13**	**17**	**07.6**	**+0.7**
TORD				IAmb	IAmb	13	17	19.1	
	comp=Z,1.5nm,1.1s								
CMAR	**Chiang Mai Arr**	**127.81**	**114**	PKP	**PKPdf**	**13**	**24**	**38.9**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=236,slow=4.2,SNR=1.8								
MKAR	**Makanchi Array**	**139.08**	**73**	PKP	**PKPdf**	**13**	**25**	**00.1**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=270,slow=1.4,SNR=1.9								
ZALV	**Zalesovo Beam**	**144.31**	**65**	PKP	**PKPab**	**13**	**25**	**06.5**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=224,slow=4.0,SNR=4.9								
BCAR	**Beaver Creek A**	**144.94**	**312**		**PKPab**	**13**	**25**	**07.6**	**-1.0**
L27K	**Beaver Creek,**	**144.95**	**312**		**PKPab**	**13**	**25**	**08.0**	**-0.6**
K27K	**Chicken**	**145.38**	**313**		**PKPbc**	**13**	**25**	**09.7**	**-0.3**
RIDG	**Independent Ri**	**146.46**	**312**		**PKPdf**	**13**	**25**	**12.5**	**+0.7**
ILAR	**Eielson Array**	**147.59**	**314**	PKPbc	**PKPbc**	**13**	**25**	**15.4**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=132,slow=2.0,SNR=13								
RND	**Reindeer**	**148.09**	**311**		**PKPbc**	**13**	**25**	**17.6**	**-0.2**
O18K	**Koktuh Hills**	**150.06**	**302**		**PKPbc**	**13**	**25**	**21.8**	**-1.0**
SONM	**Songino Array**	**153.28**	**88**	PKPbc	**PKPbc**	**13**	**25**	**30.0**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=211,slow=3.2,SNR=7.6								

*SOME **19** 13:08:39.7,42°27N×73°82E,h5km*

*KNET **19** 13:08:40.4±0.7,42°27N×73°91E,h0km,ml2.1,Error ellipse: s-maj=6.1km s-min=3.8km az=151.0*

*KRNET **19** 13:08:40.2±0.1,42°26N×73°85E,h12km,mb3.4*

*NNC **19** 13:08:41.1±0.7,42°34N×73°81E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=7.2km s-min=3.8km az=160.0*

ISC 19 13:08:40.5±1.0,42°26N±0°03×73°85E±0°02,h6km±9km, n40,σ0§62/72,27C-10D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
AML	**Almayashu**	**0.18**	**222**	P	**Pg**	**13**	**08**	**43.8**	**-0.3**
	240nm,0.1s,SNR=682								
AML				⇓S	**Sg**	**13**	**08**	**46.3**	**-0.3**
	2μm,0.4s								
EKS2	**Erkin-Say**	**0.40**	**352**	P	**Pg**	**13**	**08**	**48.5**	**+0.1**
	96nm,0.2s,SNR=242								
EKS2				⇑S	**Sg**	**13**	**08**	**54.2**	**+0.5**
	54nm,0.1s								
EKS2	**Erkin-Say**	**0.40**	**352**	⇓*i*P	**Pg**	**13**	**08**	**48.3**	**-0.1**
	baz=52								
EKS2				⇓*i*S	**Sg**	**13**	**08**	**53.9**	**+0.2**
	baz=52								
ARLS	**Aral**	**0.53**	**139**	⇑*e*P	**Pg**	**13**	**08**	**50.7**	**-0.1**
	baz=39								
ARLS				⇑*e*S	**Sg**	**13**	**08**	**58.2**	**+0.4**
	baz=39								
AAK	**Ala-Archa**	**0.61**	**52**	⇓P	**Pg**	**13**	**08**	**52.6**	**+0.4**
	6.8nm,0.1s,SNR=8.6								
AAK				⇑S	**Sg**	**13**	**09**	**00.9**	**+0.8**
	39nm,0.2s								
AAK	**Ala-Archa**	**0.61**	**52**	⇑*i*P	**Pg**	**13**	**08**	**51.9**	**-0.3**
	baz=51								
AAK				⇑*i*S	**Sg**	**13**	**09**	**00.3**	**+0.2**
	baz=51								
KBK	**Karagaybulak**	**0.90**	**64**	⇑P	**Pg**	**13**	**08**	**57.7**	**-0.1**
	12nm,0.1s,SNR=9.4								
KBK				⇓S	**Sg**	**13**	**09**	**09.8**	**+0.2**
	66nm,0.2s								
KBK	**Karagaybulak**	**0.90**	**64**	⇑*i*P	**Pg**	**13**	**08**	**57.5**	**-0.3**
	baz=64								
KBK				⇑*i*S	**Sg**	**13**	**09**	**09.9**	**+0.3**
	baz=64								
CHMS	**Chumysh**	**0.99**	**42**	⇓P	**Pg**	**13**	**08**	**59.4**	**-0.1**
	5.5nm,0.1s,SNR=15								
CHMS				⇓S	**Sb**	**13**	**09**	**12.9**	**-0.5**
	45nm,0.2s								
CHMS	**Chumysh**	**0.99**	**42**	⇓P	**Pg**	**13**	**08**	**59.3**	**-0.3**
	2.9nm,0.3s								
CHMS				⇑S	**Sg**	**13**	**09**	**12.7**	**+0.3**
	56nm,0.8s								
CHMS	**Chumysh**	**0.99**	**42**	⇑*i*P	**Pg**	**13**	**08**	**58.9**	**-0.6**
	baz=42								
CHMS				⇑*i*S	**Sg**	**13**	**09**	**12.7**	**+0.3**
	baz=42								
USP	**Ospenovka**	**1.11**	**25**	⇑P	**Pg**	**13**	**09**	**01.4**	**-0.4**
	11nm,0.2s,SNR=7.2								
USP				⇑S	**Sb**	**13**	**09**	**16.5**	**-0.4**
	32nm,0.1s								
USP	**Ospenovka**	**1.11**	**25**	⇑*i*P	**Pg**	**13**	**09**	**01.2**	**-0.6**
	baz=25								
USP				⇑*i*S	**Sg**	**13**	**09**	**16.4**	**+0.1**
	baz=25								
SGDS	**Sogindy**	**1.32**	**25**	*e*P	**Pn**	**13**	**09**	**05.1**	**-0.5**
	642nm,0.1s								
SGDS				*e*S	**Sg**	**13**	**09**	**22.7**	**-0.3**
	2μm,0.1s								
SGDS	**Sogindy**	**1.32**	**25**	P	**Pn**	**13**	**09**	**05.1**	**-0.5**
	4.2nm,0.1s								
SGDS				S	**Sg**	**13**	**09**	**22.6**	**-0.3**
	34nm,0.1s								
TKM2	**Tokmak 2**	**1.45**	**62**	⇓P	**Pn**	**13**	**09**	**07.7**	**+0.3**
	8.2nm,0.1s,SNR=14								
TKM2				⇑S	**Sn**	**13**	**09**	**27.0**	**+0.2**
	20nm,0.1s								
TKM2	**Tokmak 2**	**1.45**	**62**	⇑P	**Pg**	**13**	**09**	**08.2**	**0.0**
	2.5nm,0.2s								
TKM2				⇑S	**Sn**	**13**	**09**	**26.9**	**+0.2**
	15nm,0.5s								
TKM2	**Tokmak 2**	**1.45**	**62**	⇑*i*P	**Pn**	**13**	**09**	**07.4**	**0.0**
	baz=62								
TKM2				⇑*i*S	**Sn**	**13**	**09**	**27.0**	**+0.2**
	baz=62								
DGS	**Degeres**	**1.72**	**55**	*e*P	**Pb**	**13**	**09**	**12.8**	**+0.2**
	226nm,0.1s								
DGS				*e*S	**Sg**	**13**	**09**	**35.9**	**+0.2**
	500nm,0.1s								
DGS	**Degeres**	**1.72**	**55**	P	**Pg**	**13**	**09**	**13.4**	**-0.1**
	3.1nm,0.2s								
DGS				S	**Sg**	**13**	**09**	**36.5**	**+0.7**
	32nm,0.4s								
DGS	**Degeres**	**1.72**	**55**	*e*P	**Pb**	**13**	**09**	**12.8**	**+0.2**
	baz=55								
DGS				*e*S	**Sg**	**13**	**09**	**36.0**	**+0.2**
	baz=55								
KST	**Kastek**	**1.74**	**63**	*e*P	**Pg**	**13**	**09**	**13.4**	**-0.5**
	254nm,0.2s								
KST				*e*S	**Sg**	**13**	**09**	**37.0**	**+0.5**
	669nm,0.2s								
KST	**Kastek**	**1.74**	**63**	P	**Pg**	**13**	**09**	**13.3**	**-0.5**
	3.6nm,0.2s								
KST				S	**Sg**	**13**	**09**	**36.7**	**+0.2**
	29nm,0.3s								
KST	**Kastek**	**1.74**	**63**	*e*P	**Pg**	**13**	**09**	**13.4**	**-0.5**
	baz=63								
KST				*e*S	**Sg**	**13**	**09**	**37.0**	**+0.5**
	baz=63								
ULHL	**Ulahol**	**1.77**	**90**	⇑*i*P	**Pb**	**13**	**09**	**13.0**	**-0.6**
	baz=90								
ULHL				⇑*i*S	**Sg**	**13**	**09**	**37.1**	**-0.5**
	baz=90								
KRBS	**Karabastau**	**1.96**	**42**	*e*P	**Pb**	**13**	**09**	**17.0**	**+0.4**
	165nm,0.1s								
KRBS				*e*S	**Sg**	**13**	**09**	**43.4**	**-0.1**
	920nm,0.2s								
KRBS	**Karabastau**	**1.96**	**42**	Pg	**Pb**	**13**	**09**	**16.8**	**+0.1**
	4.1nm,0.3s								
KRBS				Lg	Lg	13	09	42.5	
	25nm,0.2s								
KRBS	**Karabastau**	**1.96**	**42**	*e*P	**Pb**	**13**	**09**	**17.0**	**+0.4**
	baz=42								
KRBS				*e*S	**Sg**	**13**	**09**	**43.4**	**-0.1**
	baz=42								
MTBS	**Maitube**	**2.09**	**65**	Pg	**Pg**	**13**	**09**	**20.1**	**-0.4**
	4.3nm,0.2s								
MTBS				Lg	Lg	13	09	48.4	
	26nm,0.3s								
KUU	**Kurty**	**2.44**	**47**	Pg	**Pb**	**13**	**09**	**25.5**	**+0.6**
	2.0nm,0.1s								
KUU				Lg	Lg	13	09	57.5	
	33nm,0.4s								
MDOK	**Medeo**	**2.52**	**68**	*e*P	**Pb**	**13**	**09**	**27.1**	**+0.8**
	83nm,0.1s								
MDOK				*e*S	**Sg**	**13**	**10**	**00.9**	**-0.6**
	371nm,0.3s								
MDOK	**Medeo**	**2.52**	**68**	⇑Pg	**Pb**	**13**	**09**	**26.8**	**+0.5**
	4.6nm,0.4s								
MDOK				Pg	**Pb**	**13**	**09**	**27.1**	**+0.8**
	9.1nm,0.4s								
MDOK				Lg	Lg	13	10	00.1	
	28nm,0.4s								
MDOK				⇓Lg	Lg	13	10	00.4	
	11nm,0.5s								
KTBS	**Karatobe**	**2.53**	**54**	*e*P	**Pb**	**13**	**09**	**26.7**	**+0.3**
	90nm,0.2s								
KTBS				*e*S	**Sg**	**13**	**10**	**00.1**	**-1.7**
KTBS	**Karatobe**	**2.53**	**54**	Pg	**Pb**	**13**	**09**	**27.5**	**+1.1**
	3.0nm,0.2s								
KTBS				Lg	Lg	13	10	00.8	
	55nm,0.3s								
KOTS	**Kotyrbulak**	**2.59**	**67**	Pg	**Pg**	**13**	**09**	**29.3**	**-0.9**
	1.2nm,0.5s								
KOTS				Lg	Lg	13	10	04.0	
	24nm,0.5s								
KK31	**Karatay Array**	**2.60**	**290**	Pg	**Pb**	**13**	**09**	**26.6**	**-0.9**
	1.0nm,0.4s,baz=114,slow=16,SNR=19								
KK31				⇑Lg	Lg	13	10	00.5	
	27nm,0.8s,baz=110,slow=27,SNR=4.8								
KKAR	**Karatay Array**	**2.60**	**290**	⇑*i*P	**Pn**	**13**	**09**	**25.3**	**+2.2**
	baz=90								
KKAR				⇑*i*S	**Sb**	**13**	**09**	**58.4**	**-1.3**
	baz=90								
BTLS	**Baital**	**2.78**	**3**	Pg	**Pb**	**13**	**09**	**30.6**	**+0.1**
	1.9nm,0.2s								
BTLS				Lg	Lg	13	10	06.4	
	8.9nm,0.4s								
IUG	**luzhnay**	**2.84**	**269**	*e*P	**Pb**	**13**	**09**	**32.5**	**+0.9**
IUG				*e*S	**Sg**	**13**	**10**	**10.3**	**-1.4**
IUG	**luzhnay**	**2.84**	**269**	Pg	**Pb**	**13**	**09**	**32.6**	**+0.9**
	86nm,0.4s								
IUG				Lg	Lg	13	10	09.7	
	52nm,0.4s								

*IDC **19** 13:16:19.2±1.1,54°97S×30°07W,h0km,mb3.9/4, mbtmp4.0/5,ML4.1/1,Error ellipse: s-maj=37.0km s-min=24.8km az=84.0*

ISC 19 13:16:20.8±1.0,55°0S±0°1×30°2W±0°2,h10km,n14, σ1§36/9,mb4.2/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
VNA3	**Neumayer Olymp**	**18.61**	**159**	P	**Pn**	**13**	**20**	**40.5**	**+2.3**
PMSA	**Palmer Station**	**19.38**	**226**	P	**Pn**	**13**	**20**	**47.5**	**0.0**
	0.6nm,0.3s,baz=64,slow=8.8,SNR=4.3 3.1nm,0.4s								
SNAA	**Sanae**	**20.45**	**155**	P	**P**	**13**	**20**	**56.7**	**-1.3**
SNAA	**Sanae**	**20.45**	**155**	P	**P**	**13**	**20**	**57.2**	**-0.8**
	1.1nm,0.6s,baz=294,slow=14,SNR=6.2 1.1nm,0.6s								
TROLL	**Troll, Antarti**	**21.99**	**153**	P	**P**	**13**	**21**	**13.0**	**-1.7**
H10S2	**ASCENSION HYDR**	**47.52**	**21**	T	T	14	16	16.6	
	baz=192,slow=74,SNR=7.1								
H10S3	**ASCENSION HYDR**	**47.52**	**21**	T	T	14	16	17.5	
	baz=28,slow=74,SNR=12								
VNDA	**Vanda**	**47.58**	**184**	P	**P**	**13**	**24**	**55.6**	**-0.2**
	0.8nm,0.8s,baz=187,slow=4.9,SNR=6.0 0.8nm,0.8s								
LPAZ	**La Paz**	**48.35**	**308**	P	**P**	**13**	**25**	**03.5**	**+0.2**
	2.9nm,0.8s,baz=175,slow=4.7,SNR=9.4 2.9nm,0.8s								
H10N1	**ASCENSION HYDR**	**48.63**	**21**	T	T	14	17	40.3	
	baz=192,slow=75,SNR=9.6								
H10N3	**ASCENSION HYDR**	**48.63**	**21**	T	T	14	17	41.1	
	baz=192,slow=75,SNR=17								
H10N2	**ASCENSION HYDR**	**48.65**	**21**	T	T	14	17	42.3	
	baz=192,slow=75,SNR=19								
TORD	**Torodi Ar. Bea**	**72.99**	**33**	P	**P**	**13**	**27**	**50.8**	**+0.3**
	1.7nm,0.8s,baz=203,slow=6.8,SNR=6.9 1.7nm,0.8s								
ILAR	**Eielson Array**	**148.11**	**314**	PKPbc	**PKPbc**	**13**	**36**	**04.5**	**-0.6**
	1.6nm,0.7s,baz=119,slow=1.3,SNR=14								

*IDC **19** 13:18:52.1±1.7,0°04S×122°98E,h0km,mb3.2/3, mbtmp3.4/4,ML3.8/1,Error ellipse: s-maj=57.6km s-min=27.2km az=68.0*

*DJA **19** 13:18:58.6±0.7,0°S±2°×12°3E±°,h20km±8km,M3.9/12, mb4.0/3,mB4.0/1,MLv3.9/12,Mw(mB)3.0/1*

ISC 19 13:18:57.3±0.9,0°32S±0°04×122°82E±0°05,h10km,n15, σ1§86/18,mb3.2/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
LUWI	**Luwuk**	**0.72**	**184**	P	**Pg**	**13**	**19**	**13.4**	**+2.1**
LUWI				S	**Sb**	**13**	**19**	**24.4**	**+2.5**
GTOI	**Gorontalo**	**0.97**	**11**	P	**Pn**	**13**	**19**	**18.1**	**+1.2**
GTOI				S	**Sn**	**13**	**19**	**32.4**	**+1.7**
MRSI	**Marisa**	**1.18**	**312**	P	**Pb**	**13**	**19**	**19.6**	**-0.2**
MRSI				S	**Sb**	**13**	**19**	**34.6**	**-0.6**
APSI	**Ampana**	**1.31**	**243**	P	**Pn**	**13**	**19**	**22.9**	**+1.2**
KMSI	**Cibinong**	**1.46**	**53**	P	**Pn**	**13**	**19**	**22.9**	**-0.8**
MPSI	**Mapaga**	**2.99**	**283**	P	**Pn**	**13**	**19**	**45.2**	**+0.3**
TTSI	**Tana Toraja**	**4.04**	**228**	P	**Pn**	**13**	**19**	**59.9**	**+0.6**
LBMI	**Labuha**	**4.69**	**94**	P	**Pn**	**13**	**20**	**08.4**	**+0.2**
BBSI	**Bau Bau**	**5.14**	**183**	P	**Pn**	**13**	**20**	**14.6**	**+0.2**
	0.0nm145nm4.9nm,0.7s								
KAPI	**Kappang**	**5.58**	**213**	Pn	**Pn**	**13**	**20**	**20.8**	**+0.3**
	2.4nm,0.3s,baz=54,slow=8.7,SNR=10								
KAPI				Sn	**Sn**	**13**	**21**	**19.9**	**-4.8**
	0.9nm,0.3s,baz=205,slow=22,SNR=2.0 6.1nm,0.3s								
BKSI	**Bulukumba**	**5.65**	**208**	P	**Pn**	**13**	**20**	**22.4**	**+1.0**
	0.1nm9.9nm,0.8s								
BSSI	**Bau Bau, Buton**	**6.24**	**202**	P	**Pn**	**13**	**20**	**30.2**	**+0.7**
WRA	**Warramunga Arr**	**22.53**	**151**	P	**P**	**13**	**23**	**55.8**	**-1.8**
	0.3nm,0.6s,baz=329,slow=10,SNR=1.9 0.3nm,0.6s								
ASAR	**Alice Springs**	**25.58**	**156**	P	**P**	**13**	**24**	**24.4**	**-2.4**
	0.3nm,0.6s,baz=327,slow=6.9,SNR=2.8 0.3nm,0.6s								
MKAR	**Makanchi Array**	**58.79**	**329**	P	P	13	28	51.3	-4.5
	0.3nm,0.5s,baz=120,slow=8.3,SNR=4.7 0.3nm,0.5s								

*IDC **19** 13:32:04.5±2.0,55°21S×31°12W,h0km,mb4.1/2, mbtmp4.0/3,ML3.8/1,Error ellipse: s-maj=64.9km s-min=38.5km az=140.0*

*NEIC **19** 13:32:07.0±0.6,55°1S±0°1×31°2W±0°2,h10km±1km, mb4.3/6,Error ellipse: s-maj=21.2km s-min=11.4km az=148.0*

ISC 19 13:32:07.0±0.9,55°1S±0°1×31°3W±0°1,h10km,n22, σ0§62/19,mb4.4/4,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC	h	m	s	ISC
HOPE	**Hope Point**	**3.15**	**283**	Pn	**Pn**	**13**	**32**	**56.5**	**0.0**
ORCD	**Orcadas**	**9.10**	**226**	Pn	**Pn**	**13**	**34**	**18.4**	**+0.3**
VNA3	**Neumayer Olymp**	**18.68**	**158**	P	**P**	**13**	**36**	**24.8**	**-0.1**
PMSA	**Palmer Station**	**18.82**	**226**	P	**P**	**13**	**36**	**25.4**	**-0.9**
	0.3nm,0.3s,baz=60,slow=8.1,SNR=1.7 4.4nm,0.9s								
PMSA	**Palmer Station**	**18.82**	**226**	P	**Pn**	**13**	**36**	**26.6**	**-0.2**
PMSA				IAmb	IAmb	13	36	33.7	
	comp=Z,13nm,0.9s								
VNA2	**Neumayer--Watz**	**18.96**	**156**	P	**P**	**13**	**36**	**27.8**	**0.0**
	baz=311,slow=11			

ISC 19 13:42:23.5±0.3,55°09S±0'.06×31°52W±0'.07, h10km, n240, σ1°13/216, mb4.9/28, MS4.2/20, 1C-1D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	2.99	284		Pn	13 43 12.8	+1.8
ORCD	Orcadas	9.02	226	Pn	Pn	13 44 31.5	-2.1
VNA1	Neumayer--Stat	18.65	156	P	Pn	13 46 44.5	+3.2
PMSA	Palmer Station	18.73	226	P	Pn	13 46 44.1	+1.7
	0.5nm,0.3s,baz=75,slow=8.6,SNR=8.8						
PMSA				LR	LR	13 53 03.7	
	comp=Z,604nm,18.1s,baz=78,slow=34						
	30nm,1.0s						
PMSA	Palmer Station	18.73	226	eP	Pn	13 46 46.7	+4.3
VNA3	Neumayer Olymp	18.76	158	P	P	13 46 38.3	-4.0
VNA2	Neumayer--Watz	19.05	156	P	P	13 46 43.4	-2.0
	baz=315,slow=11						
SNAA	Sanae	20.65	154	P	P	13 46 57.4	-5.5
SNAA	Sanae	20.65	154	P	P	13 47 03.8	+0.9
	10nm,0.8s,baz=291,slow=11,SNR=8.8						
SNAA				LR	LR	13 53 37.0	
	comp=Z,214nm,20.5s,baz=292,slow=33						
	10nm,0.8s						
SNAA	Sanae	20.65	154	P	P	13 47 00.7	-2.2
SMAI	San Martin Ant	20.96	218	P	P	13 47 05.7	-0.5
USHA	Ushuaia	21.04	255	P	P	13 47 07.0	-0.2
	29nm,1.0s,baz=131,slow=8.7,SNR=3.1						
	29nm,1.0s						
TROLL	Troll, Antarti	22.22	153	P	P	13 47 15.2	-4.7
BELA	Belgrano 2	22.91	182	P	P	13 47 26.8	-0.2
BELA				IAmb	IAmb	13 47 31.2	
	comp=Z,32nm,1.2s						
MG05	Puerto Natales	24.43	261	P	P	13 47 38.9	-3.0
MG05				IAmb	IAmb	13 47 44.4	
	comp=Z,72nm,1.2s						
PLTB	Pedras Altas	28.07	317	P	P	13 48 15.2	+0.2
LL02	Futaleuf	28.53	278	P	P	13 48 16.1	-2.9
LL02				IAmb	IAmb	13 49 10.7	
	comp=Z,23nm,1.2s						
PLCA	Paso Flores	29.40	283	P	P	13 48 26.7	-0.2
	comp=Z,1.7nm,0.7s,baz=132,slow=12,SNR=4.8						
	comp=Z,1.7nm,0.7s						
PLCA	Paso Flores	29.40	283	P	P	13 48 25.5	-1.4
PLCA				IAmb	IAmb	13 49 11.6	
	comp=Z,55nm,1.9s						
PLCA	Paso Flores	29.40	283	eP	P	13 48 31.2	+4.4
CPUP	Villa Florida	34.37	316	P	P	13 49 09.7	-0.7
	comp=Z,11nm,0.8s,baz=155,slow=8.9,SNR=21						
CPUP				LR	LR	14 03 07.1	
	comp=Z,171nm,19.9s,baz=166,slow=36						
	comp=Z,11nm,0.8s						
CPUP	Villa Florida	34.37	316	P	P	13 49 08.9	-1.6
CPUP				IAmb	IAmb	13 49 12.4	
	comp=Z,17nm,1.1s						
MT09	Talagante	34.67	291	P	P	13 49 13.7	+0.5
MT09				IAmb	IAmb	13 49 17.4	
	comp=Z,20nm,0.7s						
MT01	Popeta	34.74	291	P	P	13 49 12.1	-1.6
MT01				IAmb	IAmb	13 49 29.0	
	comp=Z,20nm,0.9s						
PEL	Peldehue	34.99	292	P	P	13 49 16.6	+0.7
VA05	Santo Domingo	35.10	291	P	P	13 49 15.6	-1.1
QSPA	South Pole Qui	35.16	180	P	P	13 49 18.0	+0.8
	comp=Z,5.7nm,0.8s,baz=187,slow=7.9,SNR=14						
QSPA				LR	LR	14 02 32.9	
	comp=Z,225nm,20.0s,baz=198,slow=34						
	comp=Z,5.7nm,0.8s						
QSPA	South Pole Qui	35.16	180	P	P	13 49 18.1	+1.0
QSPA				IAmb	IAmb	13 49 42.9	
	comp=Z,23nm,1.1s						
ZON	Zonda	35.20	297	P	P	13 49 18.7	+1.1
ZON				IAmb	IAmb	13 49 22.4	
	comp=Z,16nm,0.7s						
VA03	San Esteban	35.22	293	P	P	13 49 17.0	-0.9
VA03				IAmb	IAmb	13 49 52.6	
	comp=Z,27nm,1.1s						
VA06	Catapilco	35.77	292	P	P	13 49 22.2	-0.3
BB19B	Bebedouro	36.31	333	eP	P	13 49 28.1	+0.9
DIAM	Diamantina, MG	37.88	341	eP	P	13 49 41.9	+1.2
AC05	El Transito	38.19	297	P	P	13 49 41.0	-2.3
AC05				IAmb	IAmb	13 50 37.9	
	comp=Z,67nm,1.6s						
PMNB	Patos De Minas	38.22	337	eP	P	13 49 44.2	+0.6
GUA01	Guaratinga, BA	38.96	347	eP	P	13 49 50.3	+0.7
IPMB	Ipameri, GO	39.18	334	eP	P	13 49 51.8	+0.3
GO02	Mina Guanaco	40.88	301	P	P	13 50 06.3	+0.4
JANB	Januaria	41.16	341	eP	P	13 50 07.2	-0.8
BDFB	Brasilia	41.38	336	P	P	13 50 10.2	+0.3
	comp=Z,4.1nm,0.5s,baz=134,slow=7.2,SNR=5.9						
BDFB				LR	LR	14 05 32.9	
	comp=Z,171nm,18.1s,baz=149,slow=34						
	comp=Z,4.1nm,0.5s						
BDFB	Brasilia	41.38	336	P	P	13 50 10.0	+0.1
BDFB	Brasilia	41.38	336	eP	P	13 50 10.0	+0.1
MAW	Mawson	42.36	145	P	P	13 50 17.9	+0.8
	comp=Z,7.4nm,0.9s,baz=217,slow=7.7,SNR=15						
	comp=Z,7.4nm,0.9s						
MAW	Mawson	42.36	145	P	P	13 50 18.2	+1.0
LVC	Limon Verde	42.71	304	P	P	13 50 21.7	+0.8
	comp=Z,10nm,0.6s,baz=135,slow=7.8,SNR=5.2						
LVC				LR	LR	14 11 00.3	
	comp=Z,103nm,18.2s,baz=174,slow=40						
	comp=Z,10nm,0.6s						
LVC	Limon Verde	42.71	304	eP	P	13 50 22.5	+1.6
SALV	Santo Antonio	43.33	325	eP	P	13 50 25.3	-0.2
SDBA	SAO DESIDERIO	43.86	341	eP	P	13 50 29.6	-0.3
PB01	IPOC Station P	44.32	305	P	P	13 50 33.6	0.0
PB01				IAmb	IAmb	13 50 40.3	
	comp=Z,31nm,1.1s						
PTLB	Pontes e Lacer	44.94	321	P	P	13 50 37.5	-1.0
PTLB				IAmb	IAmb	13 50 40.2	
	comp=Z,14nm,0.9s						
GO01	Chusmiza	45.37	306	P	P	13 50 42.0	-0.5
GO01				IAmb	IAmb	13 50 54.9	
	comp=Z,29nm,1.1s						
SBA	Scott Base	46.84	185	P	P	13 50 53.9	+1.0
SBA				IAmb	IAmb	13 52 38.7	
	comp=Z,26nm,1.8s						
VNDA	Vanda	47.39	184	P	P	13 50 58.2	+1.1
	comp=Z,1.6nm,0.8s,baz=206,slow=6.4,SNR=13						
	comp=Z,1.6nm,0.8s						
VNDA	Vanda	47.39	184	P	P	13 50 56.5	-0.6
LPAZ	La Paz	47.84	309	P	P	13 51 02.2	+0.2
	comp=Z,7.0nm,0.5s,baz=121,slow=6.2,SNR=24						
	comp=Z,7.0nm,0.5s						
LPAZ	La Paz	47.84	309	P	P	13 51 02.3	+0.3
H10S2	ASCENSION HYDR	47.93	23	T	T	14 43 15.5	
	baz=27,slow=74,SNR=10						
H10S3	ASCENSION HYDR	47.93	23	T	T	14 43 11.5	
	baz=193,slow=74,SNR=18						
BOSA	Boshof	48.18	81	P	P	13 51 05.8	+1.7
	comp=Z,2.2nm,0.5s,baz=210,slow=7.5,SNR=5.5						
	comp=Z,2.2nm,0.5s						
H10N1	ASCENSION HYDR	49.04	23	T	T	14 44 35.8	
	baz=192,slow=75,SNR=22						
H10N3	ASCENSION HYDR	49.04	23	T	T	14 44 35.7	
	baz=192,slow=75,SNR=25						
H10N2	ASCENSION HYDR	49.06	23	T	T	14 44 36.8	
	baz=192,slow=75,SNR=26						
RCBR	Riachuelo	49.25	354	LR	LR	14 07 03.3	
	comp=Z,258nm,22.0s,baz=318,slow=30						
TSUM	Tsumeb	51.45	66	LR	LR	14 08 13.8	
	comp=Z,83nm,21.3s,baz=180,slow=30						
MACA	Manacapuru-AM	56.90	324	P	P	13 52 06.8	-1.8
MACA				IAmb	IAmb	13 52 09.1	
	comp=Z,21nm,0.6s						
ATAH	Atahualpa	60.60	304	P	P	13 52 35.8	+1.0
	comp=Z,4.3nm,0.7s,baz=188,slow=8.9,SNR=2.5						
	comp=Z,4.3nm,0.7s						
BOAV	Boa Vista	62.07	327	P	P	13 52 42.8	-1.4
BOAV				IAmb	IAmb	13 52 45.2	
	comp=Z,13nm,0.8s						
MDP	Montagnes des	62.49	336	P	P	13 52 47.1	+0.1
	comp=Z,14nm,0.9s,baz=160,slow=9.8,SNR=5.8						
MDP				LR	LR	14 17 18.3	
	comp=Z,136nm,22.0s,baz=170,slow=34						
	comp=Z,14nm,0.9s						
DBIC	Dimbokro	65.42	29	P	P	13 53 06.3	+0.1
	comp=Z,7.8nm,1.0s,baz=187,slow=7.1,SNR=4.7						
DBIC				LR	LR	14 17 44.6	
	comp=Z,117nm,18.1s,baz=160,slow=32						
	comp=Z,7.8nm,1.0s						
BBTS	Babate	70.63	15	LR	LR	14 17 08.7	
	comp=Z,178nm,20.7s,baz=150,slow=30						
BAUV	El Baul	70.73	321	P	P	13 53 39.4	-0.2
GRGR	Grenville	71.62	329	P	P	13 53 44.5	-0.5
SDV	Santo Domingo	71.63	319	P	P	13 53 45.1	-0.2
	comp=Z,11nm,0.8s,baz=194,slow=1.7,SNR=5.9						
SDV				LR	LR	14 25 32.4	
	comp=Z,186nm,20.4s,baz=140,slow=36						
	comp=Z,11nm,0.8s						
SDV	Santo Domingo	71.63	319	P	P	13 53 44.5	-0.8
SDV				IAmb	IAmb	13 54 01.9	
	comp=Z,12nm,0.8s						
TOA0	Torodi Ar. Sit	73.53	34	P	P	13 53 56.0	-0.3
TORD	Torodi Ar. Bea	73.53	34	P	P	13 53 56.6	+0.2
	comp=Z,5.0nm,0.8s,baz=201,slow=6.2,SNR=17						
TORD				LR	LR	14 21 50.5	
	comp=Z,187nm,18.2s,baz=190,slow=32						
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	73.53	34	P	P	13 53 56.8	+0.4
TORD				IAmb	IAmb	13 54 25.3	
	comp=Z,10nm,0.8s						
MBAR	Mbarara	73.97	67	LR	LR	14 23 52.7	
	comp=Z,184nm,18.6s,baz=88,slow=34						
KMBO	Kilima Mbogo	77.05	73	LR	LR	14 25 42.5	
	comp=Z,169nm,18.5s,baz=102,slow=34						
SJG	San Juan	78.64	327	LR	LR	14 29 35.8	
	comp=Z,47nm,21.0s,baz=256,slow=36						
TAM	Tamanrasset	83.78	34	P	P	13 54 49.6	-3.2
TEIG	Tepich	89.16	308	P	P	13 55 19.6	+0.6
MDT	Midelt	90.55	22	LR	LR	14 29 54.2	
	comp=Z,304nm,21.8s,baz=168,slow=32						
ATD	Arta Tunnel	90.61	71	LR	LR	14 34 56.5	
	comp=Z,176nm,18.0s,baz=225,slow=35						
STKA	Stephens Creek	93.18	174	LR	LR	14 35 16.5	
	comp=Z,258nm,19.4s,baz=201,slow=34						
KEST	Kesra	97.01	32	LR	LR	14 35 45.8	
	comp=Z,193nm,19.6s,baz=140,slow=33						
ESDC	Sonseca Array	97.30	21	P	Pdif	13 55 57.5	+1.3
	comp=Z,0.6nm,0.8s,baz=201,slow=2.5,SNR=5.5						
ESDC				LR	LR	14 34 43.3	
	comp=Z,183nm,20.5s,baz=178,slow=32						
	comp=Z,0.6nm,0.8s						
ASAR	Alice Springs	100.57	166	P	Pdif	13 56 10.2	-1.3
	comp=Z,0.4nm,0.8s,baz=179,slow=4.9,SNR=4.5						
CLL	Collm	112.32	28	*i* PP	PP	14 01 45.8	+1.2
NVAR	Mina Array Bea	118.76	297	PKP	PKPdf	14 01 11.8	+0.4
	comp=Z,0.3nm,0.6s,baz=132,slow=2.2,SNR=3.6						
GEYT	Alibeck	119.87	66	PP	PP	14 02 37.2	-0.6
	comp=Z,3.0nm,0.6s,baz=188,slow=8.7,SNR=5.3						
NOA	NORSAR Array B	120.62	23	PKP	PKiKP	14 01 15.0	+0.8
	comp=Z,0.4nm,0.8s,baz=206,slow=1.9,SNR=2.8						
G08A	Pilot Rock	124.16	302		PKiKP	14 01 22.5	+0.7
FINES	FINESS Array B	124.72	30	PKP	PKPdf	14 01 22.1	+0.3
	comp=Z,2.5nm,0.9s,baz=90,slow=0.2,SNR=7.5						
CMAR	Chiang Mai Arr	127.71	114	PKP	PKPdf	14 01 29.2	+0.2
	comp=Z,0.9nm,0.6s,baz=231,slow=4.0,SNR=4.1						
ARCES	ARCESS Array B	130.99	23	PKP	PKPdf	14 01 34.0	+0.4
	comp=Z,3.1nm,1.0s,baz=172,slow=1.8,SNR=6.3						
PZH	PanZhiHua	135.74	111	PKP	PKPdf	14 01 43.8	-0.3
MKAR	Makanchi Array	138.94	73	PKhKP	PKPpre	14 01 40.4	
	comp=Z,2nm,0.5s,baz=245,slow=2.7,SNR=2.2						
WMQ	Urumqi	140.15	80	ePKP	PKPdf	14 01 52.3	+0.8
M29M	Somme Creek	143.35	312	P	PKPbc	14 01 54.4	+0.5
	baz=113						
YUK3	Moose Creek	143.96	310	P	PKPab	14 01 55.6	+0.3
	baz=113						
CTGM	Chitina Glacie	144.03	309		PKPbc	14 01 56.5	+0.5
CTG	Chitna Glacier	144.03	309	P	PKPbc	14 01 56.4	+0.3
	baz=113						
EPYK	Eagle Plains	144.06	318		PKPbc	14 01 57.0	+1.1
EPYK	Eagle Plains	144.06	318	P	PKPbc	14 01 56.8	+1.0
	baz=109						
ZALV	Zalesovo Beam	144.17	65	PKP	PKPbc	14 01 57.0	+0.5
	comp=Z,3.7nm,0.5s,baz=237,slow=3.6,SNR=9.0						
LZH	Lanzhou	144.21	103	ePKP	PKPdf	14 01 59.0	-0.2
LZH				pPKP	PKiKP	14 02 07.4	+4.7
GTA	Gaotai	144.25	95	ePKP	PKPdf	14 02 00.4	+1.3
DAWY	Dawson	144.34	314	P	PKPab	14 01 56.5	0.0
	baz=110,SNR=13						
I29M	Ogilvie Camp,	144.34	316		PKPab	14 01 56.0	-0.4
I29M	Ogilvie Camp,	144.34	316	P	PKPbc	14 01 57.8	+1.1
	baz=109						
BVCY	Beaver Creek	144.37	311	P	PKPdf	14 01 58.2	-0.2
	baz=112						
BGLC	Bering Glacier	144.59	307	P	PKPab	14 01 56.8	-0.6
	baz=113						
M27K	Edge Creek, AK	144.79	311	P	PKPab	14 01 57.5	-0.8
	baz=111						
MCARA	McCarthy VSAT	144.95	309	P	PKPab	14 01 58.4	-0.3
	baz=112						
BCAR	Beaver Creek A	145.00	312		PKPbc	14 01 58.2	-0.7
L27K	Beaver Creek,	145.02	312	P	PKPbc	14 01 58.2	-0.7
	baz=110,SNR=17						
KAIM	Kayak Island	145.04	306	P	PKPbc	14 01 59.2	+0.1
	baz=113						
EGAK	Eagle	145.30	315		PKPbc	14 01 58.7	-1.0
EGAK	Eagle	145.30	315	P	PKPbc	14 01 59.5	-0.2
	baz=108						
M26K	Nabesna, AK	145.30	310	P	PKPbc	14 01 59.6	-0.3
	baz=110						
K27K	Chicken	145.44	313		PKPdf	14 02 00.2	+0.1
XAN	Xi'an	145.48	111	PKPbc	PKPdf	14 02 01.0	-0.3
BMRM	Bremner River	145.51	308	P	PKPdf	14 02 00.0	-0.4
	baz=111						
L26K	Log Cabin Wild	145.66	311	P	PKPdf	14 02 00.5	-0.1
	baz=109,SNR=6.6						
I27K	Kandik River	145.73	316	P	PKPbc	14 02 01.3	+0.1
	baz=107						
N25K	Chitina, Valde	145.73	309	P	PKPdf	14 02 00.7	-0.1
	baz=110						
MENT	Mentasta	145.79	311		PKPdf	14 02 00.6	-0.2
H27K	Steamboat Moun	145.87	317	P	PKPdf	14 02 01.3	+0.4
	baz=106						
EYAK	Cordova Ski Ar	145.89	307	P	PKPdf	14 02 01.7	+0.7
	baz=111						
G27K	Doyon Strip	146.07	318	P	PKPbc	14 02 02.4	+0.2
	baz=105,SNR=8.7						
J26L	Joseph Creek	146.20	314		PKPdf	14 02 01.6	0.0
J26L	Joseph Creek	146.20	314	P	PKPdf	14 02 02.4	+0.8
	baz=107,SNR=13						
SCRK	Sand Creek	146.23	313	P	PKPdf	14 02 02.4	+0.7
	baz=107,SNR=15						
HARP	HAARP	146.25	310	P	PKPbc	14 02 02.7	-0.1
	baz=109						
I26K	Coal Creek Min	146.26	315		PKPdf	14 02 01.8	+0.2
I26K	Coal Creek Min	146.26	315	P	PKPdf	14 02 02.5	+0.9
	baz=106						
KLU	Klutina	146.29	308		PKPbc	14 02 03.5	+0.5
KLU	Klutina	146.29	308	P	PKPdf	14 02 02.7	+0.9
	baz=110						
E27K	Coleen River	146.38	321	P	PKPbc	14 02 02.9	-0.1
	baz=103						
P23K	Montague Islan	146.46	305	P	PKPdf	14 02 02.5	+0.5
	baz=111						
RIDG	Independent Ri	146.52	312	P	PKPbc	14 02 03.4	-0.2
	baz=107						
PAX	Paxson	146.56	311		PKPdf	14 02 03.2	+0.9
PAX	Paxson	146.56	311	P	PKPdf	14 02 03.1	+0.9
	baz=108,SNR=17						
M24K	Tolsona, Glenn	146.60	309	P	PKPbc	14 02 03.8	-0.1
	baz=108						
G26K	Porcupine Rive	146.92	318	P	PKPbc	14 02 04.7	+0.1
	baz=103						
K24K	Donnelly Dome	146.94	312	P	PKPbc	14 02 04.7	-0.1
	baz=106						
J25K	Salcha River,	146.98	314	P	PKPbc	14 02 05.0	+0.1
	baz=105						
SCM	Sheep Creek Mo	147.04	308	P	PKPbc	14 02 05.3	+0.1
	baz=108						
PWL	Port Wells	147.19	306	P	PKPbc	14 02 05.2	-0.4
	baz=109						
M23K	Glacier View	147.20	308	P	PKPbc	14 02 05.1	-0.5
	baz=108						
F26K	Sheenjek River	147.22	319	P	PKPbc	14 02 05.1	-0.3
	baz=102,SNR=6.0						
BMAR	Burnt Mountain	147.32	319		PKPbc	14 02 06.2	+0.4
C27K	Jago River	147.40	323	P	PKPbc	14 02 05.8	-0.1
	baz=99						
KNK	Knik Glacier	147.42	307	P	PKPbc	14 02 06.1	0.0
	baz=108						
DHY	Denali Highway	147.42	310		PKPbc	14 02 06.2	-0.1
DHY	Denali Highway	147.42	310	P	PKPbc	14 02 06.4	+0.1
	baz=106,SNR=15						
WAT6	Susitna Watana	147.44	309	P	PKPbc	14 02 06.3	-0.1
	baz=107,SNR=14						
SEW	Seward	147.47	305		PKPbc	14 02 06.6	+0.4
SEW	Seward	147.47	305	P	PKPbc	14 02 06.2	-0.1
	baz=109						
SML	Sawmill	147.48	308		PKPbc	14 02 06.5	+0.1
SML	Sawmill	147.48	308	P	PKPbc	14 02 05.9	-0.5
	baz=108						
H25K	Birch Creek	147.56	317	P	PKPbc	14 02 06.2	-0.2
	baz=102						
HDA	Harding Lake	147.59	313	P	PKPbc	14 02 06.3	-0.2
	baz=104						
IL31		147.66	314		PKPbc	14 02 05.7	-0.9
ILAR	Eielson Array	147.66	314	PKP	PKPdf	14 02 04.0	+0.1
	comp=Z,4.1nm,0.8s,baz=117,slow=1.3,SNR=26						
ILAR				PKPbc	pPKPdf	14 02 06.6	+0.4
	comp=Z,5.1nm,0.7s,baz=125,slow=1.9,SNR=28						
ILAR	Eielson Array	147.66	314		PKPbc	14 02 06.1	-0.6
LYN	LuoYang	147.75	115	↑PKPbc	PKPdf	14 02 06.8	+1.8
F25K	Christian Rive	147.76	319	P	PKPbc	14 02 06.7	-0.3
	baz=100						
PMR	Palmer	147.78	307	P	PKPbc	14 02 06.6	-0.5
	baz=107						
E25K	Arctic Village	147.82	320	P	PKPbc	14 02 06.6	-0.5
	baz=100,SNR=10						
C26K	Camden Bay	147.86	323	P	PKPbc	14 02 07.2	+0.2
	baz=98						
WAT1	Susitna Watana	147.87	310	P	PKPbc	14 02 06.8	-0.6
	baz=106						
RC01	Rabbit Creek A	147.91	306	P	PKPbc	14 02 06.9	-0.6
	baz=108						
BRSE	Bradley Lake S	147.96	304	P	PKPbc	14 02 07.2	-0.5
	baz=109						
POKR	Poker Plat Res	147.96	314	P	PKPbc	14 02 07.4	-0.1
	baz=103						
COLA	College	148.08	314	P	PKPbc	14 02 07.7	-0.1
	baz=103						
TCOL	CIGO, UAF Yank	148.08	314	P	PKPbc	14 02 07.7	-0.1
	baz=103						
KDAK	Kodiak Island	148.19	299	P	PKPbc	14 02 07.7	-0.6
	baz=111						
MCK	McKinley	148.27	311	P	PKPbc	14 02 08.1	-0.3
	baz=104						
M22K	Willow	148.28	307	P	PKPbc	14 02 08.1	-0.3
	baz=106						
D25K	Kavik River	148.29	322	P	PKPbc	14 02 07.6	-0.8
	baz=97						
H24K	Noodor Dome	148.29	315	P	PKPbc	14 02 08.0	-0.4
	baz=102						
G24K	Hadweenzic Riv	148.30	317	P	PKPbc	14 02 08.0	-0.3
	baz=100						
Q20K	Shuyak Island	148.39	301	P	PKPbc	14 02 08.5	-0.3
	baz=110						
CUT	Chulitna	148.53	309	P	PKPbc	14 02 08.6	-0.4
	baz=105						
NEA2	Nenana	148.53	313		PKPbc	14 02 08.2	-0.8
NEA2	Nenana	148.53	313	P	PKPbc	14 02 08.7	-0.3
	baz=103,SNR=7.7						
F24K	Squaw Lake	148.59	319	P	PKPbc	14 02 09.2	0.0
	baz=99						
I23K	Minto, Yukon-K	148.76	314	P	PKPbc	14 02 08.8	-0.8
	baz=102						
TRF	Thorofare Moun	148.79	311	P	PKPbc	14 02 09.3	-0.6
	baz=104						
E24K	Your Creek	148.90	320	P	PKPbc	14 02 09.8	-0.1
	baz=97						
H23K	Yukon River	148.97	315	P	PKPbc	14 02 09.8	-0.3
	baz=100						
SKT	Skwentna	148.99	307	P	PKPbc	14 02 09.7	-0.6
	baz=105						
Q19K	Cape Douglas,	149.11	301	P	PKPbc	14 02 10.2	-0.5
	baz=109						
D24K	Happy Valley	149.14	322	P	PKPbc	14 02 10.3	-0.1
	baz=95						
C24K	Franklin Bluff	149.14	323	P	PKPbc	14 02 10.5	+0.1
	baz=94						
BPAW	Bear Paw Mtn.	149.24	312	P	PKPbc	14 02 10.5	-0.3
	baz=102,SNR=5.1						
G23K	Bananza Creek	149.30	317	P	PKPbc	14 02 10.8	-0.2
	baz=98,SNR=9.2						
MLY	Manley	149.31	313	P	PKPbc	14 02 10.2	-0.8
	baz=101						
TOLK	Toolik Lake Re	149.36	321		PKPdf	14 02 07.4	+0.7
TOLK				PKPbc	PKPbc	14 02 11.4	+0.4
TOLK	Toolik Lake Re	149.36	321	P	PKPbc	14 02 10.7	-0.3
	baz=96,SNR=10						
PPLA	Purkeypile	149.50	309		PKPbc	14 02 11.6	0.0
PPLA	Purkeypile	149.50	309	P	PKPbc	14 02 11.0	-0.6
	baz=103,SNR=6.6						
M20K	Styx River	149.69	307	P	PKPbc	14 02 11.3	-0.8
	baz=104						
H22K	Ishtalitna Cre	149.72	315	P	PKPbc	14 02 11.4	-0.6
	baz=99,SNR=7.1						
CHUM	Lake Minchumin	149.77	311	P	PKPbc	14 02 12.0	-0.1
	baz=101						
D23K	Nanushuk River	149.79	321	P	PKPbc	14 02 12.3	+0.3
	baz=94						
C23K	Itkillik River	149.81	323	P	PKPbc	14 02 11.9	-0.1
	baz=92						
O19K	Port Alsworth	149.81	303	P	PKPbc	14 02 11.7	-0.5
	baz=106						
I21K	Tanana	149.86	314	P	PKPbc	14 02 11.7	-0.5
	baz=99						
G22K	Bettles	149.91	317	P	PKPbc	14 02 12.3	-0.1
	baz=97						
P18K	Big Mountain,	150.03	302		PKPbc	14 02 12.7	-0.2
P18K	Big Mountain,	150.03	302	P	PKPbc	14 02 12.0	-0.9
	baz=107						
N19K	Bonanza Creek	150.06	305	P	PKPbc	14 02 11.7	-1.3
	baz=105						
E22K	Anaktuk Pass	150.15	319	P	PKPbc	14 02 12.4	-0.5
	baz=94,SNR=6.7						
O18K	Koktuh Hills	150.15	302	P	PKPbc	14 02 11.9	-1.2
	baz=106						
L20K	Farewell, AK	150.17	308	P	PKPbc	14 02 12.0	-1.2
	baz=103						
F22K	John River	150.23	318	P	PKPbc	14 02 12.5	-0.6
	baz=95						
H21K	Melozitna Rive	150.27	314	P	PKPbc	14 02 12.9	-0.3
	ba

CPUP	**Villa Florida**	**34.81**	**314**	P	**P**	**13 54 00.2**	**-0.5**
	1.2nm,0.4s,baz=152,slow=7.2,SNR=3.4							
	1.2nm,0.4s							
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**13 54 02.9**	**-1.2**
	2.2nm,0.8s,baz=192,slow=3.9,SNR=3.7							
	2.2nm,0.8s							
VNDA	**Vanda**	**47.49**	**184**	P	**P**	**13 55 44.4**	**0.0**
	1.1nm,0.7s,baz=195,slow=5.6,SNR=7.2							
	1.1nm,0.7s							
LPAZ	**La Paz**	**48.34**	**308**	P	**P**	**13 55 52.2**	**-0.1**
	1.8nm,0.4s,baz=106,slow=5.6,SNR=7.6							
	1.8nm,0.4s							
H10N1	**ASCENSION HYDR**	**48.73**	**21**	T	T	14 48 57.8		
	baz=193							
H10N3	**ASCENSION HYDR**	**48.73**	**21**	T	T	14 48 56.1		
	baz=193,slow=74,SNR=5.5							
H10N2	**ASCENSION HYDR**	**48.75**	**21**	T	T	14 48 56.9		
	baz=193,slow=74,SNR=4.9							
TORD	**Torodi Ar. Bea**	**73.10**	**33**	P	**P**	**13 58 41.5**	**+1.2**
	0.6nm,0.7s,baz=202,slow=6.5,SNR=2.9							
	0.6nm,0.7s							
ILAR	**Eielson Array**	**148.11**	**313**	PKPbc	**PKPbc**	**14 06 53.6**	**-0.8**
	1.3nm,0.7s,baz=116,slow=1.8,SNR=9.5							
SONM	**Songino Array**	**152.45**	**87**	PKPbc	**PKPbc**	**14 07 05.3**	**-0.2**
	0.7nm,0.6s,baz=222,slow=2.0,SNR=3.6							

*IDC **19** 13:52:23.3±0.6,55.19S×30.23W,h0km,mb4.3/11, mbtmp4.3/12,ML4.6/1,Error ellipse: s-maj=19.7km s-min=16.5km az=61.0*
*NEIC **19** 13:52:25.4±1.0,55.24S±0.09×30.3W±0.2,h10km±1km, mb4.7/20,Error ellipse: s-maj=17.3km s-min=14.3km az=51.0*

ISC 19 13:52:24.8±0.5,**55.22S**±0.08×**30.31W**±0.09,**h10**km,**n50,** σ**0.75**/**46**,**mb4.7**/**17**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.70**	**282**	Pn	**Pn**	**13 53 22.2**	**+0.2**
ORCD	**Orcadas**	**9.44**	**228**	Pn	**Pn**	**13 54 39.6**	**-1.0**
VNA1	**Neumayer--Stat**	**18.25**	**158**	P	**P**	**13 56 38.9**	**+1.1**
VNA3	**Neumayer Olymp**	**18.39**	**159**	P	**P**	**13 56 39.6**	**+0.2**
VNA2	**Neumayer--Watz**	**18.64**	**156**	P	**P**	**13 56 42.3**	**0.0**
	baz=316,slow=12						
PMSA	**Palmer Station**	**19.14**	**227**	P	**Pn**	**13 56 48.7**	**+0.1**
	1.6nm,0.3s,baz=66,slow=8.2,SNR=14						
	8.0nm,0.7s						
PMSA	**Palmer Station**	**19.14**	**227**	P	**Pn**	**13 56 49.0**	**+0.4**
SNAA	**Sanae**	**20.23**	**155**	P	**P**	**13 56 58.9**	**-0.8**
SNAA	**Sanae**	**20.23**	**155**	P	**P**	**13 56 59.5**	**-0.2**
	4.5nm,0.9s,baz=299,slow=10,SNR=15						
	4.5nm,0.9s						
SNAA	**Sanae**	**20.23**	**155**	P	**P**	**13 56 59.3**	**-0.4**
TROLL	**Troll, Antarti**	**21.78**	**153**	P	**P**	**13 57 15.5**	**-1.1**
MG02	**Cerro Sombrero**	**22.80**	**260**	P	**P**	**13 57 27.8**	**+0.4**
TRQA	**Tornquist**	**27.37**	**296**	P	**P**	**13 58 10.4**	**+0.4**
CPUP	**Villa Florida**	**34.95**	**315**	P	**P**	**13 59 16.3**	**-0.5**
	1.5nm,0.6s,baz=166,slow=10.0,SNR=3.5						
	1.5nm,0.6s						
QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**13 59 18.0**	**+0.7**
	8.2nm,0.8s,baz=198,slow=3.6,SNR=32						
	8.2nm,0.8s						
QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**13 59 18.1**	**+0.7**
QSPA				IAmb	IAmb	13 59 19.2	
	comp=Z,10nm,0.8s						
CO01	**Juntas del Tor**	**37.86**	**295**	P	**P**	**13 59 43.3**	**+1.3**
CO01				IAmb	IAmb	13 59 54.8	
	comp=Z,14nm,1.1s						
GO04	**Tololo Observa**	**38.07**	**294**	P	**P**	**13 59 41.4**	**-2.3**
GO02	**Mina Guanaco**	**41.54**	**300**	P	**P**	**14 00 13.0**	**+0.4**
GO02				IAmb	IAmb	14 00 15.5	
	comp=Z,18nm,0.8s						
MAW	**Mawson**	**41.86**	**145**	P	**P**	**14 00 13.9**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=254,slow=10,SNR=7.7						
	comp=Z,2.8nm,0.7s						
MAW	**Mawson**	**41.86**	**145**	P	**P**	**14 00 14.8**	**+0.5**
LVC	**Limon Verde**	**43.36**	**303**	P	**P**	**14 00 27.6**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=128,slow=5.5,SNR=3.6						
	comp=Z,3.5nm,0.5s						
PB01	**IPOC Station P**	**44.97**	**303**	P	**P**	**14 00 40.2**	**0.0**
GO01	**Chusmiza**	**46.01**	**305**	P	**P**	**14 00 49.6**	**+0.8**
GO01				IAmb	IAmb	14 01 03.8	
	comp=Z,10.0nm,1.1s						
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**14 00 58.2**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=172,slow=6.4,SNR=9.4						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**14 00 58.6**	**+0.8**
PB16	**IPOC Station P**	**47.31**	**305**	P	**P**	**14 00 59.1**	**0.0**
PB16				IAmb	IAmb	14 01 02.2	
	comp=Z,10nm,1.4s						
BOSA	**Boshof**	**47.52**	**79**	P	**P**	**14 00 59.8**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=213,slow=5.3,SNR=3.7						
	comp=Z,1.7nm,0.6s						
LPAZ	**La Paz**	**48.46**	**308**	P	**P**	**14 01 08.8**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=115,slow=5.5,SNR=16						
	comp=Z,4.5nm,0.6s						
LPAZ	**La Paz**	**48.46**	**308**	P	**P**	**14 01 08.7**	**+0.5**
LPAZ				IAmb	IAmb	14 01 09.0	
	comp=Z,4.9nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.91**	**21**	T	T	14 54 03.5	
	baz=192,slow=75,SNR=3.5						
H10N3	**ASCENSION HYDR**	**48.91**	**21**	T	T	14 54 06.1	
	baz=192,slow=75,SNR=5.9						
H10N2	**ASCENSION HYDR**	**48.92**	**21**	T	T	14 54 08.5	
	baz=192,slow=75,SNR=4.9						
LBTB	**Lobatse**	**50.51**	**77**	P	**P**	**14 01 23.1**	**0.0**
	comp=Z,2.7nm,0.6s,baz=222,slow=7.7,SNR=5.7						
	comp=Z,2.7nm,0.6s						
LBTB	**Lobatse**	**50.51**	**77**	P	**P**	**14 01 23.1**	**0.0**
LBTB				IAmb	IAmb	14 01 25.1	
	comp=Z,4.3nm,0.8s						
SAML	**Samuel**	**52.98**	**318**	P	**P**	**14 01 40.8**	**-0.7**
SAML				IAmb	IAmb	14 01 42.1	
	comp=Z,15nm,1.5s						
BOAV	**Boa Vista**	**62.57**	**326**	P	**P**	**14 02 48.1**	**-0.7**
BOAV				IAmb	IAmb	14 02 51.7	
	comp=Z,2.7nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.26**	**33**	P	**P**	**14 03 56.7**	**+0.7**
TOA0				IAmb	IAmb	14 04 09.0	
	comp=Z,11nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.26**	**33**	P	**P**	**14 03 56.2**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=197,slow=6.5,SNR=12						
	comp=Z,2.0nm,0.6s						
KMBO	**Kilima Mbogo**	**76.43**	**72**	P	**P**	**14 04 15.3**	**+0.5**
	comp=Z,2.2nm,0.3s,baz=198,slow=19,SNR=7.3						
	comp=Z,2.2nm,0.3s						
LTZ	**Lake Taylor**	**80.49**	**197**	P	**P**	**14 04 36.1**	**-0.6**
THZ	**Tophouse**	**81.38**	**197**	P	**P**	**14 04 41.9**	**+0.5**
ASAR	**Alice Springs**	**100.28**	**165**	P	**Pdif**	**14 06 09.1**	**-2.4**
	comp=Z,1.3nm,1.0s,baz=189,slow=5.5,SNR=4.3						
NVAR	**Mina Aray Bea**	**119.44**	**296**	PKP	**PKiKP**	**14 11 14.2**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=122,slow=3.8,SNR=4.3						
FINES	**FINESS Array B**	**124.50**	**29**	PKP	**PKPdf**	**14 11 22.1**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=199,slow=4.0,SNR=5.0						
ARCES	**ARCESS Array B**	**130.84**	**23**	PKP	**PKPdf**	**14 11 34.4**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=197,slow=1.3,SNR=9.4						
ZALV	**Zalesovo Beam**	**143.60**	**64**	PKP	PKPbc	14 11 55.8	-0.2
	comp=Z,1.6nm,0.5s,baz=231,slow=3.3,SNR=6.7						
INK	**Inuvik**	**144.05**	**322**	PKP	**PKPab**	**14 11 56.7**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=50,slow=2.4,SNR=7.4						
ILAR	**Eielson Array**	**148.25**	**313**	PKPbc	**PKPbc**	**14 12 09.2**	**-0.3**
	comp=Z,7.1nm,0.7s,baz=118,slow=1.6,SNR=69						
SONM	**Songino Array**	**152.45**	**87**	PKPbc	**PKPbc**	**14 12 20.0**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=227,slow=3.3,SNR=9.9						

*IDC **19** 14:02:29.1±0.8,54.93S×31.14W,h0km,mb4.2/6, mbtmp4.2/6,Error ellipse: s-maj=32.4km s-min=22.1km az=67.0*
*NEIC **19** 14:02:30.1±2.1,55.1S±0.1×31.31W±0.08,h10km±1km, mb4.5/13,Error ellipse: s-maj=17.3km s-min=7.9km az=172.0*

ISC 19 14:02:30.2±0.6,**55.12S**±0.09×**31.3W**±0.1,**h10**km,**n27,** σ**1.17**/**26**,**mb4.5**/**11**,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.14**	**283**		**Pn**	**14 03 19.1**	**-0.4**
ORCD	**Orcadas**	**9.10**	**226**	Pn	**Pn**	**14 04 40.6**	**-0.8**
VNA3	**Neumayer Olymp**	**18.69**	**158**	P	**P**	**14 06 48.0**	**-0.2**
SNAA	**Sanae**	**20.56**	**155**	P	**P**	**14 07 06.0**	**-2.7**
TRQA	**Tornquist**	**26.82**	**297**	P	**P**	**14 08 09.2**	**-1.2**
PLCA	**Paso Flores**	**29.54**	**283**	P	**P**	**14 08 34.8**	**+0.1**
	1.5nm,0.5s,baz=317,slow=4.5,SNR=3.1						
	1.5nm,0.5s						
CPUP	**Villa Florida**	**34.48**	**316**	P	**P**	**14 09 17.4**	**-0.6**
	2.8nm,0.5s,baz=143,slow=7.5,SNR=8.6						
	2.8nm,0.5s						
QSPA	**South Pole Qui**	**35.14**	**180**	P	**P**	**14 09 24.6**	**+1.0**
	2.6nm,0.9s,baz=212,slow=5.0,SNR=5.6						
	2.6nm,0.9s						
QSPA	**South Pole Qui**	**35.14**	**180**	P	**P**	**14 09 22.5**	**-1.1**
QSPA				IAmb	IAmb	14 09 27.3	
	comp=Z,4.0nm,1.1s						
VA06	**Catapilco**	**35.91**	**292**	P	**P**	**14 09 29.6**	**-0.7**
CO01	**Juntas del Tor**	**37.32**	**296**	P	**P**	**14 09 43.7**	**+1.1**
CO01				IAmb	IAmb	14 09 50.2	
	comp=Z,9.1nm,0.9s						
GO02	**Mina Guanaco**	**41.01**	**301**	P	**P**	**14 10 13.1**	**-0.6**
GO01	**Chusmiza**	**45.50**	**306**	P	**P**	**14 10 50.1**	**0.0**
VNDA	**Vanda**	**47.38**	**184**	P	**P**	**14 11 07.0**	**+3.4**
	comp=Z,0.9nm,0.8s,baz=219,slow=5.2,SNR=6.1						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**47.38**	**184**	P	**P**	**14 11 04.6**	**+0.9**
LPAZ	**La Paz**	**47.96**	**309**	P	**P**	**14 11 10.2**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=123,slow=5.7,SNR=13						
	comp=Z,2.6nm,0.5s						
LPAZ	**La Paz**	**47.96**	**309**	P	**P**	**14 11 10.3**	**+0.6**
LPAZ				IAmb	IAmb	14 11 27.1	
	comp=Z,4.4nm,0.9s						
LBTB	**Lobatse**	**51.02**	**78**	P	**P**	**14 11 32.8**	**+0.5**
LBTB				IAmb	IAmb	14 11 34.9	
	comp=Z,7.4nm,1.2s						
SAML	**Samuel**	**52.53**	**319**	P	**P**	**14 11 44.8**	**+1.3**
SAML				IAmb	IAmb	14 11 56.5	
	comp=Z,6.6nm,1.4s						
BOAV	**Boa Vista**	**62.17**	**326**	P	**P**	**14 12 50.9**	**-0.6**
BOAV				IAmb	IAmb	14 12 51.5	
	comp=Z,3.7nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.47**	**34**	P	**P**	**14 14 01.8**	**-0.9**
TOA0				IAmb	IAmb	14 14 09.3	
	comp=Z,7.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.47**	**34**	P	**P**	**14 14 02.6**	**0.0**
	comp=Z,1.3nm,0.6s,baz=203,slow=5.2,SNR=6.4						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**124.67**	**29**	PKP	**PKPdf**	**14 21 27.6**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=158,slow=2.1,SNR=5.0						
ARCES	**ARCESS Array B**	**130.96**	**23**	PKP	**PKPdf**	**14 21 40.0**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=208,slow=2.3,SNR=5.9						
ZALV	**Zalesovo Beam**	**144.06**	**65**	PKhKP	PKPpre	14 22 00.5	
	comp=Z,1.0nm,0.4s,baz=193,slow=4.4,SNR=2.9						
ILAR	**Eielson Array**	**147.77**	**314**	PKPbc	**PKPbc**	**14 22 14.2**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=117,slow=1.8,SNR=18						
SONM	**Songino Array**	**153.00**	**88**	PKPbc	**PKPbc**	**14 22 26.4**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=202,slow=4.5,SNR=3.6						

*IDC **19** 14:04:30.7±0.9,54.92S×30.98W,h0km,mb4.2/6, mbtmp4.3/7,ML3.7/1,Error ellipse: s-maj=34.4km s-min=19.9km az=72.0*
*NEIC **19** 14:04:33.4±2.3,55.0S±0.1×31.4W±0.2,h10km±1km, mb4.6/15,Error ellipse: s-maj=20.4km s-min=15.6km az=57.0*

ISC 19 14:04:32.9±0.7,**54.96S**±0.09×**31.3W**±0.1,**h10**km,**n31,** σ**1.31**/**30**,**mb4.6**/**11**,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.08**	**281**	Pn	**Pn**	**14 05 20.9**	**-0.7**
ORCD	**Orcadas**	**9.20**	**226**	Pn	**Pn**	**14 06 44.0**	**-1.4**
VNA1	**Neumayer--Stat**	**18.72**	**156**	P	**Pn**	**14 08 52.0**	**+0.3**
VNA3	**Neumayer Olymp**	**18.84**	**158**	P	**P**	**14 08 50.7**	**-2.0**
PMSA	**Palmer Station**	**18.91**	**226**	P	**Pn**	**14 08 55.4**	**+1.4**
	0.2nm,0.3s,baz=42,slow=5.8,SNR=2.8						
	12nm,1.0s						
VNA2	**Neumayer--Watz**	**19.12**	**156**	P	**Pn**	**14 08 55.5**	**-1.1**
	baz=308,slow=11						
SNAA	**Sanae**	**20.72**	**155**	P	**P**	**14 09 11.0**	**-2.1**
SNAA	**Sanae**	**20.72**	**155**	P	**P**	**14 09 11.6**	**-1.5**
	10.0nm,1.0s,baz=298,slow=12,SNR=12						
	10.0nm,1.0s						
SNAA	**Sanae**	**20.72**	**155**		**P**	**14 09 11.3**	**-1.8**
SNAA				IAmb	IAmb	14 09 21.6	
	comp=Z,11nm,0.9s						
TROLL	**Troll, Antarti**	**22.29**	**153**	P	**P**	**14 09 28.7**	**-1.3**
CPUP	**Villa Florida**	**34.35**	**316**	P	**P**	**14 11 19.6**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=154,slow=7.9,SNR=6.8						
	comp=Z,5.0nm,0.8s						
CPUP	**Villa Florida**	**34.35**	**316**	P	**P**	**14 11 19.5**	**-0.2**
CPUP				IAmb	IAmb	14 11 20.2	
	comp=Z,9.2nm,1.1s						
QSPA	**South Pole Qui**	**35.30**	**180**	P	**P**	**14 11 28.1**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=193,slow=3.2,SNR=6.5						
	comp=Z,4.6nm,0.9s						
QSPA	**South Pole Qui**	**35.30**	**180**	P	**P**	**14 11 29.1**	**+1.3**
QSPA				IAmb	IAmb	14 11 30.8	
	comp=Z,8.5nm,1.1s						
CO01	**Juntas del Tor**	**37.23**	**296**	P	**P**	**14 11 46.4**	**+1.7**
CO01				IAmb	IAmb	14 11 48.0	
	comp=Z,18nm,1.2s						
MAW	**Mawson**	**42.41**	**145**	P	**P**	**14 12 29.2**	**+2.2**
LVC	**Limon Verde**	**42.73**	**304**	P	**P**	**14 12 28.9**	**-1.6**
LVC				IAmb	IAmb	14 12 32.8	
	comp=Z,12nm,1.1s						
PTLB	**Pontes e Lacer**	**44.91**	**320**	P	**P**	**14 12 47.4**	**-0.3**
PTLB				IAmb	IAmb	14 12 48.3	
	comp=Z,7.0nm,0.9s						
VNDA	**Vanda**	**47.53**	**184**	P	**P**	**14 13 06.3**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=186,slow=4.8,SNR=2.6						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**47.53**	**184**	P	**P**	**14 13 09.9**	**+2.2**
LPAZ	**La Paz**	**47.84**	**309**	P	**P**	**14 13 11.9**	**+0.5**
	comp=Z,5.4nm,0.6s,baz=159,slow=5.5,SNR=10						
	comp=Z,5.4nm,0.6s						
LPAZ	**La Paz**	**47.84**	**309**	P	**P**	**14 13 12.0**	**+0.5**
SAML	**Samuel**	**52.40**	**319**	P	**P**	**14 13 45.2**	**-0.1**
SAML				IAmb	IAmb	14 13 45.8	
	comp=Z,9.6nm,1.0s						
ETMB	**Extrema**	**52.80**	**315**	P	**P**	**14 13 48.0**	**-0.3**
ETMB				IAmb	IAmb	14 13 49.9	
	comp=Z,5.4nm,1.1s						
CASY	**Casey**	**55.70**	**162**	P	**P**	**14 14 09.5**	**+0.8**
BOAV	**Boa Vista**	**62.02**	**326**	P	**P**	**14 14 53.4**	**0.0**
BOAV				IAmb	IAmb	14 14 56.7	
	comp=Z,5.5nm,1.0s						
TOA0	**Torodi Ar. Sit**	**73.35**	**34**	P	**P**	**14 16 05.2**	**+0.5**
TOA0				IAmb	IAmb	14 16 45.5	
	comp=Z,8.7nm,1.5s						
TORD	**Torodi Ar. Bea**	**73.35**	**34**	P	**P**	**14 16 04.0**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=208,slow=6.3,SNR=4.7						
	comp=Z,1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**144.01**	**65**	PKhKP	PKPpre	14 24 03.3	
	comp=Z,0.9nm,0.4s,baz=219,slow=4.0,SNR=4.6						
ILAR	**Eielson Array**	**147.65**	**314**	PKPbc	**PKPbc**	**14 24 14.6**	**-1.5**
	comp=Z,5.2nm,1.0s,baz=132,slow=1.7,SNR=17						
SONM	**Songino Array**	**153.02**	**88**	PKPbc	**PKPbc**	**14 24 28.3**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=197,slow=4.4,SNR=3.5						

*NIC **19** 14:07:06.9±0.0,36.63N×31.26E,h7km±1km,Ml3.6/4*
*ISK **19** 14:07:13.1,36.07N×31.18E,h10km,ML3.3/28*
*DDA **19** 14:07:14.4±0.0,36.13N×31.23E,h35km±1km,ML3.0*
*GII **19** 14:07:20.9±0.0,35.67N×31.25E,h18km,Mm3.0/2*

ISC 19 14:07:13.8±1.1,**36.14N**±0.02×**31.27E**±0.02,**h14**km±9km, **n81,**σ1**36**/**107**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.77**	**284**	P	**Pb**	**14 07 28.8**	**-0.2**
AKUM				S	**Sn**	**14 07 41.1**	**-0.5**
AKUM				*i* AML	AML	14 07 44.0	
	comp=N,442nm,0.7s						
AKUM				*i* AML	AML	14 07 47.0	
	comp=E,438nm,0.5s						
KEPZ	**Antalya-Kepez**	**0.81**	**20**	P	**Pn**	**14 07 30.7**	**-0.1**
KEPZ				S	**Sn**	**14 07 42.2**	**-0.4**
GAZI	**Gazipasa**	**0.85**	**83**	PG	**Pn**	**14 07 31.5**	**+0.1**
GAZI	**Gazipasa**	**0.85**	**83**	P	**Pn**	**14 07 31.7**	**+0.2**
GAZI				S	**Sn**	**14 07 43.8**	**0.0**
GAZI				*i* AML	AML	14 07 44.0	
	comp=N,984nm,0.8s						
GAZI				*i* AML	AML	14 07 44.0	
	comp=E,1μm,0.7s						
ANTB	**Antalya**	**0.90**	**327**	PG	**Pb**	**14 07 31.0**	**-0.3**
KORT	**Korkueli**	**1.13**	**319**	PN	**Pn**	**14 07 35.5**	**+0.1**
KORT	**Korkueli**	**1.13**	**319**	P	**Pn**	**14 07 36.4**	**+1.0**
KORT				S	**Sn**	**14 07 54.2**	**+3.4**
KORT				*i* AML	AML	14 08 00.0	
	comp=E,379nm,0.6s						
ELL	**Elmali**	**1.25**	**299**	PN	**Pn**	**14 07 37.0**	**0.0**
ELL				SN	**Sn**	**14 07 54.2**	**+0.4**
BUCA	**Burdur, Bucak-**	**1.31**	**335**	P	**Pg**	**14 07 40.2**	**+1.0**
SEYD	**Seydisehir-KON**	**1.34**	**20**	PN	**Pg**	**14 07 39.3**	**-0.4**
AKAS	**Kas**	**1.35**	**274**	PN	**Pn**	**14 07 37.7**	**-0.7**
AKAS	**Kas**	**1.35**	**274**	P	**Pn**	**14 07 36.3**	**-2.0**
AKAS				S	**Sg**	**14 07 57.1**	**-0.3**
AKAS				*i* AML	AML	14 08 00.0	
	comp=E,180nm,0.5s						
AKAS				*i* AML	AML	14 08 04.0	
	comp=N,351nm,0.5s						
SEDI	**Konya, Seydise**	**1.36**	**16**	P	**Pg**	**14 07 39.4**	**-0.8**
SEDI				S	**Sg**	**14 07 58.1**	**+0.2**
SEDI				*i* AML	AML	14 08 05.0	
	comp=E,148nm,0.5s						
ERMK	**Ermenek**	**1.42**	**69**	P	**Pg**	**14 07 41.0**	**-0.1**
ERMK				*i* AML	AML	14 08 11.0	
	comp=E,317nm,0.4s						
ERMK				*i* AML	AML	14 08 12.0	
	comp=N,338nm,0.3s						
AKMS	**Akamas**	**1.42**	**142**	P	**Pn**	**14 07 38.4**	**-0.8**
AKMS				S	**Sg**	**14 08 03.8**	**+4.2**
AKMS				AML	AML	14 08 06.8	
	2.6nm,0.6s						
AKMS				AML	AML	14 08 06.8	
	2.6nm,0.6s						
AKMS				AML	AML	14 08 07.9	
	4.2nm,0.4s						
AKMS				AML	AML	14 08 07.9	
	4.2nm,0.4s						
BCK	**Bucak**	**1.43**	**338**	PN	**Pb**	**14 07 40.3**	**+0.1**
ALFC	**Alefka**	**1.46**	**132**	P	**Pn**	**14 07 38.8**	**-1.1**
ALFC				S	**Sg**	**14 08 03.4**	**+2.3**
ALFC				AML	AML	14 08 06.0	
	1.5nm,0.3s						
ALFC				AML	AML	14 08 06.0	
	1.5nm,0.3s						
ALFC				AML	AML	14 08 08.4	
	1.9nm,0.4s						
ALFC				AML	AML	14 08 08.4	
	1.9nm,0.4s						
TEKE	**Tekeli-Mersin**	**1.49**	**89**	PN	**Pg**	**14 07 41.6**	**-1.0**
BERE	**Bereket-Mersin**	**1.59**	**82**	PN	**Pg**	**14 07 43.9**	**-0.6**
BERE				SN	**Sg**	**14 08 04.9**	**-0.3**
AKDN	**Akdeniz- Kıbrı**	**1.62**	**121**	PN	**Pb**	**14 07 42.7**	**-0.8**
LEF	**Lefka**	**1.67**	**127**	PN	**Pn**	**14 07 42.2**	**-0.4**
LEF	**Lefka**	**1.67**	**127**	P	**Pb**	**14 07 43.3**	**-1.0**
KKBE	**Karaman, Kazim**	**1.72**	**51**	P	**Pg**	**14 07 46.0**	**-0.9**
KKBE				S	**Sg**	**14 08 09.5**	**+0.2**
KKBE				*i* AML	AML	14 08 15.0	
	comp=N,240nm,0.4s						
KKBE				*i* AML	AML	14 08 18.0	
	comp=E,139nm,0.4s						
NATA	**Nata**	**1.73**	**142**	S	**Sg**	**14 08 10.7**	**+1.3**
YORU	**Yoruktepe-Mers**	**1.73**	**89**	PN	**Pb**	**14 07 45.4**	**0.0**
GOLH	**Golhisar**	**1.75**	**309**	P	**Pb**	**14 07 45.6**	**-0.2**
GOLH				S	**Sn**	**14 08 07.0**	**+0.8**
OREN	**Orenkoy-Mersin**	**1.77**	**87**	PN	**Pb**	**14 07 45.9**	**-0.2**
CAME	**Cameli-Denizli**	**1.77**	**297**	PN	**Pn**	**14 07 44.3**	**+0.1**
ISP	**Isparta**	**1.78**	**341**	PN	**Pb**	**14 07 45.4**	**-0.9**
TEVE	**Tevekalti-Mers**	**1.78**	**80**	PN	**Pb**	**14 07 46.4**	**+0.1**
BRDR	**BURDUR-Merkez**	**1.83**	**328**	P	**Pn**	**14 07 44.8**	**-0.2**
BRDR				S	**Sb**	**14 08 09.8**	**-0.1**
AKK1	**Akkuyu-Mersin**	**1.84**	**89**	PN	**Pb**	**14 07 46.9**	**-0.3**
TEPK	**Tepekoy-MERSIN**	**1.84**	**87**	PN	**Pb**	**14 07 46.9**	**-0.4**
AKK2	**Akkuyu-Mersin**	**1.85**	**89**	PN	**Pb**	**14 07 46.9**	**-0.4**
AKKU	**Akkuyu-Mersin**	**1.85**	**89**	PN	**Pb**	**14 07 46.9**	**-0.5**
KMER	**Konya-Meram**	**1.85**	**28**	P	**Pb**	**14 07 47.4**	**-0.1**
KMER				S	**Sg**	**14 08 12.2**	**-1.1**
KMER				*i* AML	AML	14 08 15.0	
	comp=N,146nm,0.5s						
KMER				*i* AML	AML	14 08 15.0	
	comp=E,87nm,0.6s						
CAEL	**Denizli, Camel**	**1.85**	**303**	P	**Pn**	**14 07 46.4**	**+1.1**
CAEL				S	**Sn**	**14 08 08.8**	**+0.3**
CAEL				*i* AML	AML	14 08 23.0	
	comp=E,150nm,0.6s						
CAEL				*i* AML	AML	14 08 35.0	
	comp=N,201nm,1.0s						
BAGO	**Egridir - ISPA**	**1.89**	**348**	P	**Pn**	**14 07 46.3**	**+0.6**
BAGO				S	**Sb**	**14 08 10.9**	**-0.6**
KRMN	**Karaman**	**1.91**	**57**

*AZER **19** 14:11:41.1±0.0,39.92N×47.85E,h28km±2km, Error ellipse: s-maj=0.7km s-min=0.5km az=242.0*
*MOS **19** 14:11:43.2±0.0,40.16N×47.45E,h16km±1km, MPVA4.1*
*DRS **19** 14:11:47.3±0.0,39.80N×47.61E,h28km*

ISC 19 14:11:39.3±1.1,39.91N±0.02×47.82E±0.02,h3km±10km, n75,σ0.99/112,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLQ	**Beylaqan**	**0.27**	**227**	*e*Pg	**Pn**	**14 11 49.6**	**-0.6**
BLQ	**Beylaqan** SNR=55	**0.27**	**227**	P	**Pn**	**14 11 49.7**	**-0.6**
BLQ				S	**Sb**	**14 11 55.9**	**+4.0**
ZRD	**Zardab**	**0.38**	**345**	S	**Sb**	**14 11 58.8**	**+3.7**
SAAT	**Saatly**	**0.47**	**96**	*e*Pg	**Pb**	**14 11 49.5**	**-0.7**
SAAT	**Saatly** SNR=9.3	**0.47**	**96**	P	**Pb**	**14 11 49.5**	**-0.7**
SAAT				S	**Sb**	**14 11 56.5**	**-1.0**
KDMR	**Kurdemir**	**0.55**	**31**	*e*Pg	**Pn**	**14 11 52.4**	**-1.5**
KDMR	**Kurdemir** SNR=9.4	**0.55**	**31**	P	**Pn**	**14 11 52.4**	**-1.5**
KDMR				S	**Sn**	**14 12 01.7**	**-1.9**
AGDM	**Agdam** SNR=53	**0.58**	**290**	P	**Pn**	**14 11 54.0**	**-0.4**
AGDM				S	**Sn**	**14 12 04.0**	**-0.5**
QRD	**Qoradiz**	**0.59**	**221**	*e*Pg	**Pn**	**14 11 54.2**	**-0.3**
QRD	**Qoradiz** SNR=17	**0.59**	**221**	P	**Pn**	**14 11 54.2**	**-0.3**
QRD				S	**Sn**	**14 12 04.2**	**-0.4**
BRDA	**Brd**	**0.60**	**306**	*e*Pg	**Pn**	**14 11 55.1**	**+0.4**
BRDA	**Brd** SNR=11	**0.60**	**306**	P	**Pn**	**14 11 55.2**	**+0.4**
BRDA				S	**Sn**	**14 12 04.8**	**-0.3**
GLBA	**Clilabad**	**0.80**	**146**	*e*Pg	**Pn**	**14 11 57.4**	**0.0**
GLBA	**Clilabad** SNR=9.4	**0.80**	**146**	P	**Pn**	**14 11 57.5**	**0.0**
GLBA				S	**Sn**	**14 12 09.4**	**-0.5**
ALIB	**Äli-Bayra**	**0.92**	**87**	*e*Pg	**Pn**	**14 11 59.6**	**+0.5**
ALIB	**Äli-Bayra** SNR=25	**0.92**	**87**	P	**Pn**	**14 11 59.6**	**+0.5**
ALIB				S	**Sn**	**14 12 13.4**	**+0.6**
IML	**Ismayilli**	**0.93**	**17**	*e*Pg	**Pn**	**14 11 58.9**	**-0.3**
IML	**Ismayilli** SNR=12	**0.93**	**17**	P	**Pn**	**14 11 59.0**	**-0.3**
IML	SNR=7.3			P	**Pb**	**14 11 59.1**	**+1.0**
IML				S	**Sn**	**14 12 11.9**	**-1.3**
MNGR	**Mingechevir, A**	**1.03**	**327**	*e*Pg	**Pn**	**14 12 01.2**	**+0.6**
MNGR	**Mingechevir, A** SNR=9.0	**1.03**	**327**	P	**Pn**	**14 12 01.3**	**+0.6**
MNGR				S	**Sn**	**14 12 16.2**	**+0.7**
QBL	**Gabala**	**1.04**	**1**	*e*Pn	**Pn**	**14 12 00.9**	**+0.1**
QBL	**Gabala** SNR=12	**1.04**	**1**	P	**Pn**	**14 12 00.8**	**0.0**
QBL				S	**Sn**	**14 12 14.9**	**-1.0**
YRD	**Yardimli**	**1.04**	**162**	*e*Pg	**Pn**	**14 12 00.9**	**-0.1**
YRD	**Yardimli** SNR=31	**1.04**	**162**	P	**Pn**	**14 12 01.0**	**-0.1**
YRD				S	**Sn**	**14 12 15.5**	**-0.7**
PQL	**Pirkuli**	**1.06**	**34**	*e*Pg	**Pn**	**14 12 00.9**	**-0.3**
PQL	**Pirkuli** SNR=4.9	**1.06**	**34**	P	**Pn**	**14 12 00.9**	**-0.3**
PQL				S	**Sn**	**14 12 15.7**	**-0.9**
GBS	**Qobustan**	**1.06**	**54**	*e*Pn	**Pn**	**14 12 01.8**	**+0.6**
GBS	**Qobustan** SNR=10.0	**1.06**	**54**	P	**Pn**	**14 12 02.2**	**+1.0**
GBS				S	**Sn**	**14 12 17.1**	**+0.5**
GRMI	**Germi** comp=Z,99nm,0.2s	**1.10**	**177**	*e*		14 12 18.0	
GRMI				*e*Pg	**Pn**	**14 12 02.0**	**+0.3**
ATGJ	**Altiaghaj** SNR=5.2	**1.28**	**42**	P	**Pn**	**14 12 05.4**	**+1.2**
ATGJ				S	**Sn**	**14 12 23.4**	**+1.5**
XNQ	**Khinaliq**	**1.28**	**11**	*e*Pg	**Pg**	**14 12 03.6**	**-0.4**
XNQ	**Khinaliq** SNR=49	**1.28**	**11**	P	**Pg**	**14 12 03.7**	**-0.3**
XNQ				S	**Sg**	**14 12 20.4**	**-0.3**
LRK	**Lerik**	**1.33**	**162**	*e*Pg	**Pb**	**14 12 05.4**	**+0.4**
LRK	**Lerik** SNR=23	**1.33**	**162**	Pn	**Pb**	**14 12 05.4**	**+0.4**
LRK				Sn	**Sn**	**14 12 23.5**	**+0.4**
GANJ	**Ganja**	**1.36**	**303**	*e*Pg	**Pn**	**14 12 04.9**	**-0.3**
GANJ	**Ganja** SNR=9.6	**1.36**	**303**	Pn	**Pn**	**14 12 05.0**	**-0.3**
GANJ				Sn	**Sn**	**14 12 23.9**	**+0.2**
SEKA	**Sheki**	**1.38**	**340**	*e*Pn	**Pn**	**14 12 05.1**	**-0.4**
SEKA	**Sheki** SNR=31	**1.38**	**340**	Pn	**Pn**	**14 12 05.1**	**-0.4**
SEKA				Sn	**Sg**	**14 12 24.0**	**+0.3**
LKRN	**Lenkeran, Azer**	**1.41**	**148**	*e*Pn	**Pg**	**14 12 05.4**	**-0.9**
LKRN	**Lenkeran, Azer**	**1.41**	**148**	Pn	**Pg**	**14 12 05.5**	**-0.9**
LKRN				Sn	**Sn**	**14 12 24.4**	**-0.5**
SIZA	**Siyzn**	**1.43**	**35**	*e*Pg	**Pg**	**14 12 07.6**	**+0.9**
SIZA	**Siyzn** SNR=48	**1.43**	**35**	Pg	**Pg**	**14 12 07.6**	**+0.9**
SIZA				Sg	**Sn**	**14 12 27.4**	**+1.9**
QUB	**Quba**	**1.53**	**16**	*e*Pn	**Pb**	**14 12 07.9**	**-0.4**
QUBA	**Quba, Azerbaij**	**1.53**	**19**	Pn	**Pb**	**14 12 08.0**	**-0.4**
QUBA				Sn	**Sn**	**14 12 27.6**	**-0.4**
ASTR	**Astara**	**1.54**	**150**	*e*Pn	**Pg**	**14 12 09.0**	**+0.1**
ASTR	**Astara** SNR=7.7	**1.54**	**150**	Pn	**Pg**	**14 12 09.0**	**+0.1**
ASTR				Sn	**Sg**	**14 12 29.3**	**+0.4**
AKT	**Akhty**	**1.57**	**358**	*e*Pg	**Pb**	**14 12 08.6**	**-0.5**
AKT				*e*Sg	**Sb**	**14 12 29.1**	**-0.2**
QSAR	**Qusar**	**1.64**	**12**	*e*Pn	**Pg**	**14 12 10.2**	**-0.5**
QSAR	**Qusar** SNR=12	**1.64**	**12**	Pn	**Pg**	**14 12 10.3**	**-0.5**
QSAR				Sn	**Sn**	**14 12 29.7**	**-1.0**
TVRZ	**Varzaqan**	**1.66**	**213**	*e*Pg	**Pg**	**14 12 11.5**	**+0.3**
TVRZ	comp=Z,3μm,0.4s			*e*		14 12 38.8	
IHRS	**Heris**	**1.70**	**201**	*e*Pg	**Pg**	**14 12 12.1**	**+0.2**
IHRS				*e*Sg	**Sg**	**14 12 34.6**	**+0.7**
IHRS	comp=Z,5μm,0.2s			*e*		14 12 36.0	
KSMR	**Kasumkent**	**1.71**	**8**	*e*Pg	**Pg**	**14 12 12.7**	**+0.6**
KSMR				*e*Sg	**Sb**	**14 12 33.5**	**+0.2**
ORD	**Ordubad**	**1.72**	**236**	*e*Pn	**Pg**	**14 12 11.9**	**-0.3**
ORD	**Ordubad** SNR=20	**1.72**	**236**	Pn	**Pg**	**14 12 12.0**	**-0.3**
ORD				Sn	**Sg**	**14 12 34.7**	**+0.2**
GDB	**GEDABAY**	**1.77**	**298**	*e*Pn	**Pb**	**14 12 11.9**	**-0.6**
GDB	**GEDABAY** SNR=6.9	**1.77**	**298**	Pn	**Pb**	**14 12 12.0**	**-0.6**
GDB				Sn	**Sb**	**14 12 35.6**	**+0.3**
SBZ	**Shahbuz**	**1.82**	**254**	*e*Pn	**Pg**	**14 12 13.9**	**-0.3**
SBZ	**Shahbuz**	**1.82**	**254**	Pn	**Pg**	**14 12 14.0**	**-0.3**
SBZ				Sn	**Sg**	**14 12 38.2**	**+0.4**
NAX	**Nakhchivan**	**1.94**	**248**	*e*Pn	**Pg**	**14 12 16.4**	**-0.1**
NAX	**Nakhchivan**	**1.94**	**248**	Pg	**Pg**	**14 12 16.9**	**+0.4**
NAX				Sg	**Sg**	**14 12 42.8**	**+1.2**
ZKT	**Zaqatala**	**1.95**	**334**	*e*Pn	**Pn**	**14 12 13.7**	**+0.4**
ZKTA	**Zakatala**	**1.95**	**333**	Pn	**Pn**	**14 12 13.7**	**+0.4**
ZKTA				Sn	**Sb**	**14 12 39.3**	**-0.9**
IMRD	**Marand**	**2.03**	**235**	*e*Pg	**Pg**	**14 12 17.2**	**-1.0**
IMRD	comp=Z,3μm,0.2s			*e*		14 12 48.7	
ISRB	**Sarab**	**2.08**	**183**	*e*Pn	**Pb**	**14 12 17.0**	**-0.9**
ISRB	comp=Z,751nm,0.2s			*e*		14 12 49.8	
QZX	**Qazax, Azerbai**	**2.19**	**302**	*e*Pn	**Pb**	**14 12 18.1**	**-1.4**
QZX	**Qazax, Azerbai**	**2.19**	**302**	Pn	**Pb**	**14 12 18.2**	**-1.4**
QZX				Sn	**Sb**	**14 12 46.7**	**-0.4**
URKR	**Urkarakh**	**2.26**	**357**	*e*Pg	**Pb**	**14 12 20.3**	**-0.5**
URKR				*e*Sg	**Sn**	**14 12 47.0**	**+0.9**
KMKR	**Kumukh**	**2.29**	**346**	*e*Pg	**Pb**	**14 12 19.7**	**-1.6**
KMKR				*e*Sg	**Sn**	**14 12 45.6**	**-1.2**
HYR	**Heyderabad**	**2.29**	**266**	Sg	**Sg**	**14 12 54.5**	**+1.6**
IBST	**Bostanabad**	**2.32**	**198**	*e*Pn	**Pb**	**14 12 21.0**	**-0.9**
ISHB	**Shabestar**	**2.36**	**227**	*e*Pn	**Pb**	**14 12 22.4**	**-0.2**
ISHB	comp=Z,432nm,0.3s			*e*		14 12 54.8	
MAKU	**Maku**	**2.48**	**258**	*e*Pn	**Pb**	**14 12 22.8**	**-1.8**
SGKR	**Sergokala**	**2.55**	**357**	*e*Pn	**Pb**	**14 12 24.3**	**-1.4**
SGKR				*e*Sn	**Sn**	**14 12 54.3**	**+1.2**
IAZR	**Azarshahr**	**2.65**	**213**	*e*Pn	**Pn**	**14 12 24.6**	**+1.4**
IAZR	comp=Z,1μm,0.4s			*e*		14 12 36.6	
ZNJK	**Zanjan**	**3.31**	**168**	*e*Pn	**Pb**	**14 12 35.4**	**-3.3**

*IDC **19** 14:13:54.7±0.9,55.01S×31.08W,h0km,mb3.8/5, mbtmp3.8/5,Error ellipse: s-maj=41.8km s-min=23.0km az=59.0*

ISC 19 14:13:56.6±0.8,54.9S±0.2×31.2W±0.2,h10km,n16, σ1.8s17/12,mb3.9/4,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.83**	**158**	P	**Pn**	**14 18 17.4**	**+0.8**
VNA2	**Neumayer--Watz** baz=315,slow=11	**19.11**	**156**	P	**Pn**	**14 18 22.1**	**+2.1**
SNAA	**Sanae**	**20.70**	**155**	P	**P**	**14 18 36.4**	**-0.2**
SNAA	**Sanae** 2.9nm,0.8s,baz=306,slow=9.5,SNR=13 2.9nm,0.8s	**20.70**	**155**	P	**P**	**14 18 35.6**	**-1.0**
TROLL	**Troll, Antarti**	**22.26**	**153**	P	**P**	**14 18 53.6**	**+0.2**
CPUP	**Villa Florida** 0.6nm,0.3s,baz=48,slow=15,SNR=2.8 0.6nm,0.3s	**34.40**	**316**	P	**P**	**14 20 44.3**	**+0.5**
VNDA	**Vanda** 0.7nm,0.8s,baz=184,slow=2.9,SNR=4.4 0.7nm,0.8s	**47.56**	**184**	P	**P**	**14 22 30.8**	**-0.7**
H10S2	**ASCENSION HYDR** baz=194	**47.70**	**22**	T	T	15 14 09.2	
H10S3	**ASCENSION HYDR** baz=26,SNR=18	**47.71**	**22**	T	T	15 14 08.1	
LPAZ	**La Paz** 1.9nm,0.4s,baz=94,slow=7.7,SNR=12 1.9nm,0.4s	**47.90**	**309**	P	**P**	**14 22 35.9**	**+0.4**
H10N1	**ASCENSION HYDR** baz=192	**48.82**	**22**	T	T	15 15 28.8	
H10N3	**ASCENSION HYDR** baz=192,slow=74,SNR=9.2	**48.82**	**22**	T	T	15 15 29.5	
H10N2	**ASCENSION HYDR** baz=192,slow=74,SNR=9.7	**48.84**	**22**	T	T	15 15 29.0	
TORD	**Torodi Ar. Bea** 0.6nm,1.0s,baz=199,slow=7.2,SNR=2.4 0.6nm,1.0s	**73.28**	**33**	P	**P**	**14 25 28.8**	**+0.8**
ILAR	**Eielson Array** 1.4nm,1.0s,baz=118,slow=1.9,SNR=8.3	**147.70**	**314**	PKPbc	**PKPbc**	**14 33 38.6**	**-1.2**
SONM	**Songino Array** 0.4nm,0.5s,baz=236,slow=1.0,SNR=2.2	**152.93**	**87**	PKPbc	**PKPbc**	**14 33 52.8**	**-0.4**
SONM	0.9nm,0.5s,baz=250,slow=3.1,SNR=4.1			PKPab	**PKPab**	**14 34 02.8**	**-1.7**

*IDC **19** 14:29:18.7±1.9,55.21S×31.82W,h0km,mb4.2/3, mbtmp4.2/3,Error ellipse: s-maj=77.4km s-min=35.6km az=18.0*
*NEIC **19** 14:29:22.7±1.5,55.4S±0.2×32.5W±0.3,h10km±2km, mb4.5/8,Error ellipse: s-maj=38.9km s-min=17.2km az=41.0*

ISC 19 14:29:21.4±0.7,55.0S±0.1×32.0W±0.2,h10km,n29, σ1.9s34/24,mb4.5/6,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.69**	**284**		**Pn**	**14 30 04.1**	**-0.6**
VNA1	**Neumayer--Stat**	**18.83**	**155**	P	**Pn**	**14 33 44.8**	**+3.5**
VNA3	**Neumayer Olymp**	**18.93**	**158**	P	**P**	**14 33 42.2**	**+0.2**
VNA2	**Neumayer--Watz** baz=309,slow=13	**19.23**	**155**	P	**P**	**14 33 45.0**	**-0.2**
SNAA	**Sanae**	**20.83**	**154**	P	**P**	**14 34 02.3**	**-0.4**
SNAA	**Sanae**	**20.83**	**154**	P	**P**	**14 34 02.0**	**-0.7**
TROLL	**Troll, Antarti**	**22.41**	**152**	P	**P**	**14 34 16.4**	**-3.3**
CPUP	**Villa Florida** 1.4nm,0.5s,baz=123,slow=11,SNR=5.2 1.4nm,0.5s	**34.12**	**317**	P	**P**	**14 36 06.2**	**+0.1**
CPUP	**Villa Florida**	**34.12**	**317**	P	**P**	**14 36 06.5**	**+0.4**
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**14 36 14.1**	**-1.4**
QSPA	comp=Z,11nm,1.5s			IAmb	IAmb	14 36 47.0	
CO01	**Juntas del Tor**	**36.89**	**297**	P	**P**	**14 36 30.9**	**+0.7**
GO02	**Mina Guanaco**	**40.59**	**302**	P	**P**	**14 37 01.2**	**-0.2**
PB01	**IPOC Station P**	**44.04**	**305**	P	**P**	**14 37 29.6**	**+0.3**
PB01	comp=Z,12nm,1.4s			IAmb	IAmb	14 37 59.9	
GO01	**Chusmiza**	**45.09**	**307**	P	**P**	**14 37 38.2**	**+0.1**
GO01	comp=Z,4.6nm,0.8s			IAmb	IAmb	14 37 51.3	
LPAZ	**La Paz** comp=Z,2.9nm,0.6s,baz=151,slow=5.3,SNR=12 comp=Z,2.9nm,0.6s	**47.57**	**310**	P	**P**	**14 37 58.7**	**+0.9**
LPAZ	**La Paz**	**47.57**	**310**	P	**P**	**14 37 58.4**	**+0.6**
LPAZ	comp=Z,3.7nm,0.7s			IAmb	IAmb	14 37 59.0	
H10S2	**ASCENSION HYDR** baz=193,slow=74,SNR=7.4	**47.99**	**23**	T	T	15 30 02.2	
H10S3	**ASCENSION HYDR** baz=27,slow=74,SNR=15	**47.99**	**23**	T	T	15 30 03.4	
H10N1	**ASCENSION HYDR** baz=192,slow=75,SNR=31	**49.10**	**23**	T	T	15 31 27.3	
H10N3	**ASCENSION HYDR** baz=192,slow=75,SNR=21	**49.10**	**23**	T	T	15 31 27.0	
H10N2	**ASCENSION HYDR** baz=192,slow=75,SNR=25	**49.12**	**23**	T	T	15 31 28.2	
TORD	**Torodi Ar. Bea** comp=Z,0.9nm,0.6s,baz=190,slow=5.8,SNR=7.6 comp=Z,0.9nm,0.6s	**73.64**	**34**	P	**P**	**14 40 54.5**	**-0.4**
ZALV	**Zalesovo Beam** comp=Z,1.6nm,0.6s,baz=263,slow=3.1,SNR=6.8	**144.41**	**65**	PKP	**PKPab**	**14 48 53.8**	**-1.0**
IL31		**147.40**	**314**		**PKPdf**	**14 49 03.1**	**+1.8**
ILAR	**Eielson Array** comp=Z,2.6nm,0.8s,baz=121,slow=1.6,SNR=25	**147.40**	**314**	PKPbc	**PKPdf**	**14 49 02.9**	**+1.5**
CCB	**Clear Creek Bu**	**147.75**	**313**		**PKPbc**	**14 49 05.6**	**+0.9**
RND	**Reindeer**	**147.89**	**311**		**PKPbc**	**14 49 04.8**	**-0.5**
SKT	**Skwentna**	**148.71**	**308**		**PKPbc**	**14 49 06.8**	**-0.6**
SONM	**Songino Array** comp=Z,0.6nm,0.5s,baz=204,slow=3.6,SNR=3.8	**153.43**	**88**	PKPbc	**PKPbc**	**14 49 18.0**	**-1.0**

*NOU **19** 14:39:22.8,25.57S×129.80E,h10km,mb4.3/26,Northern Territory, Australia*
*AUST **19** 14:39:22.0±0.3,25.58S×129.81E,h0km,Error ellipse: s-maj=4.1km s-min=2.8km az=38.0*
*IDC **19** 14:39:23.0±3.2,25.53S×129.95E,h0km,mbtmp4.0/4, ML4.0/4,Error ellipse: s-maj=27.8km s-min=24.5km az=31.0*
*NEIC **19** 14:39:24.4±1.4,25.58S±0.03×129.76E±0.06,h17km±6km, Error ellipse: s-maj=8.6km s-min=1.7km az=61.0*

ISC 19 14:39:22.6±0.6,25.56S±0.05×129.82E±0.04,h10km,n69, σ1.83/82,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRKA	**Warakurna** baz=1.5,SNR=216	**1.47**	**291**	P	**Pn**	**14 39 50.5**	**+1.3**
WRKA	baz=1.5			S	**Sb**	**14 40 09.9**	**+1.0**
WRKA	**Warakurna**	**1.47**	**291**		**Pb**	**14 39 51.6**	**+1.5**
WRKA					**Sg**	**14 40 10.6**	**+0.7**
WRKA	**Warakurna**	**1.47**	**291**	P	**Pn**	**14 39 50.7**	**+1.5**
ASAR	**Alice Springs** 5.4nm,0.3s,baz=244,slow=12,SNR=345	**4.17**	**64**	Pn	**Pn**	**14 40 28.0**	**+1.6**
ASAR	5.6nm,0.3s,baz=237,slow=16,SNR=30			Pg	**Pb**	**14 40 39.8**	**+3.7**
ASAR	6.4nm,0.3s,baz=242,slow=24,SNR=5.0			Sn	**Sn**	**14 41 17.4**	**+2.2**
ASAR	9.0nm,0.3s,baz=245,slow=26,SNR=11 14nm,0.5s			Lg	Lg	14 41 30.6	
ASAR	**Alice Springs**	**4.17**	**64**		**Pn**	**14 40 28.6**	**+2.2**
AS31	**Alice Springs**	**4.17**	**64**		**Pn**	**14 40 28.4**	**+2.0**
FORT	**Forrest** baz=5.4,SNR=12	**5.42**	**196**	P	**Pn**	**14 40 45.8**	**+2.3**
FORT	baz=5.4			S	**Sn**	**14 41 48.4**	**+2.4**
FORT	**Forrest**	**5.42**	**196**		**Pn**	**14 40 47.0**	**+3.5**
FORT	**Forrest**	**5.42**	**196**	P	**Pn**	**14 40 46.7**	**+3.2**
OOD	**Oodnadatta** baz=5.7,SNR=9.5	**5.70**	**114**	P	**Pn**	**14 40 49.2**	**+1.9**
OOD	baz=5.7			S	**Sn**	**14 41 54.6**	**+1.7**
OOD	**Oodnadatta**	**5.70**	**114**	P	**Pn**	**14 40 49.2**	**+1.9**
MULG	**Mulgathing** baz=6.0	**6.01**	**142**	P	**Pn**	**14 40 53.3**	**+1.6**
MULG	baz=6.0			S	**Sn**	**14 42 01.8**	**+1.3**
MULG	**Mulgathing**	**6.01**	**142**	P	**Pn**	**14 40 54.5**	**+2.9**
WRA	**Warramunga Arr** 3.1nm,0.3s,baz=222,slow=14,SNR=95	**6.98**	**38**	Pn	**Pn**	**14 41 06.5**	**+1.6**
WRA	2.6nm,0.3s,baz=216,slow=22,SNR=9.3			Sn	**Sn**	**14 42 24.5**	**+0.1**
WRA	3.7nm,0.3s,baz=211,slow=27,SNR=12 8.6nm,0.5s			Lg	Lg	14 43 00.8	
WRA	**Warramunga Arr**	**6.98**	**38**		**Pn**	**14 41 06.7**	**+1.7**
WB2	**Warramunga Arr** baz=7.0	**6.99**	**38**	P	**Pn**	**14 41 06.2**	**+1.2**
WB2	**Warramunga Arr**	**6.99**	**38**		**Pn**	**14 41 06.6**	**+1.6**
WRAB	**Tennant Creek**	**6.99**	**38**	P	**Pn**	**14 41 06.8**	**+1.7**
WR0	**Warramunga Arr**	**7.08**	**39**		**Pn**	**14 41 08.0**	**+1.7**
WB0	**Warramunga Arr**	**7.15**	**37**		**Pn**	**14 41 08.8**	**+1.5**
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=153,slow=14,SNR=44	**8.38**	**332**	Pn	**Pn**	**14 41 25.6**	**+1.6**
FITZ	1.2nm,0.3s,baz=29,slow=12,SNR=4.5 1.8nm,0.4s			Sn	**Sn**	**14 42 56.2**	**-2.7**
FITZ	**Fitzroy Crossi** baz=8.4,SNR=7.2	**8.38**	**332**	P	**Pn**	**14 41 25.7**	**+1.6**
FITZ	baz=8.4			S	**Sn**	**14 42 56.3**	**-2.5**
FITZ	**Fitzroy Crossi**	**8.38**	**332**	Pn	**Pn**	**14 41 25.9**	**+1.8**
FITZ	**Fitzroy Crossi**	**8.38**	**332**	P	**Pn**	**14 41 25.9**	**+1.8**
LCRK	**Leigh Creek** baz=8.9,SNR=4.7	**8.88**	**125**	P	**Pn**	**14 41 31.7**	**+0.8**
LCRK	**Leigh Creek**	**8.88**	**125**	P	**Pn**	**14 41 31.6**	**+0.7**
BBOO	**Buckleboo** baz=9.1,SNR=5.7	**9.05**	**144**	P	**Pn**	**14 41 33.8**	**+0.5**
BBOO	baz=9.1			S	**Sn**	**14 43 10.6**	**-4.6**
BBOO	**Buckleboo**	**9.05**	**144**	Pn	**Pn**	**14 41 33.5**	**+0.2**
BBOO	**Buckleboo**	**9.05**	**144**	P	**Pn**	**14 41 33.8**	**+0.5**
KNRA	**Kununurra** baz=10.0,SNR=5.4	**9.88**	**354**	P	**Pn**	**14 41 46.0**	**+1.2**
KNRA	**Kununurra**	**9.88**	**354**	Pn	**Pn**	**14 41 46.0**	**+1.2**
KNRA	**Kununurra**	**9.88**	**354**	P	**Pn**	**14 41 46.1**	**+1.3**
PSA00	**Pilbara Seismi**	**9.97**	**291**	Pn	**Pn**	**14 41 45.7**	**-0.2**
PSA00	**Pilbara Seismi**	**9.97**	**291**	P	**Pn**	**14 41 46.3**	**+0.4**
INKA	**Innaminka** baz=10.0,SNR=6.9	**10.02**	**105**	P	**Pn**	**14 41 46.0**	**-0.6**
INKA	**Innaminka**	**10.02**	**105**	P	**Pn**	**14 41 47.9**	**+1.4**
MEEK	**Meekatharra** baz=10,SNR=8.3	**10.13**	**261**	P	**Pn**	**14 41 46.4**	**-1.8**
MEEK	baz=10			S	Sn	14 43 31.7	-10
MEEK	**Meekatharra**	**10.13**	**261**	P	**Pn**	**14 41 47.9**	**-0.2**
MBWA	**Marble Bar**	**10.25**	**293**	Pn	**Pn**	**14 41 49.0**	**-0.7**
MBWA	**Marble Bar**	**10.25**	**293**	P	**Pn**	**14 41 49.6**	**-0.1**
QIS	**Mount Isa** baz=10,SNR=7.4	**10.30**	**63**	P	**Pn**	**14 41 51.3**	**+0.8**
QIS	**Mount Isa**	**10.30**	**63**	P	**Pn**	**14 41 51.4**	**+1.0**
HTT	**Hallett**	**11.15**	**137**	P	**Pn**	**14 42 01.6**	**-0.5**
STKA	**Stephens Creek** 0.8nm,0.3s,baz=306,slow=12,SNR=24	**12.10**	**124**	Pn	**Pn**	**14 42 13.6**	**-1.4**
STKA	0.9nm,0.3s,baz=345,slow=13,SNR=4.4 2.7nm,0.2s			Sn	**Sn**	**14 44 27.9**	**-2.2**
STKA	**Stephens Creek** baz=12,SNR=12	**12.10**	**124**	P	**Pn**	**14 42 13.5**	**-1.6**
STKA	baz=12			S	**Sn**	**14 44 26.3**	**-3.7**
STKA	**Stephens Creek**	**12.10**	**124**	Pn	**Pn**	**14 42 13.4**	**-1.7**
STKA	**Stephens Creek**	**12.10**	**124**	P	**Pn**	**14 42 14.9**	**-0.1**
KLBR	**Kellerberrin**	**12.18**	**238**	P	**Pn**	**14 42 15.0**	**-1.2**
BLDU	**Ballidu**	**12.62**	**244**	P	**Pn**	**14 42 21.2**	**-0.9**
MTN	**Manton Dam** baz=13,SNR=3.2	**12.71**	**6**	P	**Pn**	**14 42 21.3**	**-2.2**
MTN	**Manton Dam**	**12.71**	**6**	Pn	**Pn**	**14 42 21.3**	**-2.2**
MTN	**Manton Dam**	**12.71**	**6**	P	**Pn**	**14 42 23.5**	**0.0**
MORW	**Morawa**	**12.73**	**251**	Pn	**Pn**	**14 42 20.6**	**-3.2**
MORW	**Morawa**	**12.73**	**251**	P	**Pn**	**14 42 22.7**	**-1.1**
QLP	**Quilpie** baz=13,SNR=5.4	**13.00**	**98**	P	**Pn**	**14 42 26.5**	**-0.9**
QLP	**Quilpie**	**13.00**	**98**	P	**Pn**	**14 42 27.1**	**-0.3**
KDU	**Kakadu** baz=13,SNR=10	**13.05**	**12**	P	**Pn**	**14 42 27.0**	**-1.2**
KDU	baz=13			S	Sn	14 44 46.6	-6.9
KDU	**Kakadu**	**13.05**	**12**	P	**Pn**	**14 42 27.2**	**-0.9**
NWAO	**Narrogin (SRO)**	**13.20**	**233**	Pn	**Pn**	**14 42 27.7**	**-2.4**
GIRL	**Giralia**	**14.52**	**278**	Pn	**Pn**	**14 42 45.8**	**-2.5**
GIRL	**Giralia**	**14.52**	**278**	P	**Pn**	**14 42 46.0**	**-2.2**
CMSA	**Cobar Meteorol**	**15.16**	**117**	P	**Pn**	**14 42 54.7**	**-2.1**
ARPS	**Mount Arapiles**	**15.17**	**140**	P	**Pn**	**14 42 55.8**	**-1.1**
MTSU	**Mount Surprise**	**15.35**	**64**	P	**Pn**	**14 42 58.0**	**-1.4**
COEN	**Coen** baz=17,SNR=3.8	**17.05**	**50**	P	**Pn**	**14 43 18.6**	**-2.6**
COEN	**Coen**	**17.05**	**50**		**Pn**	**14 43 18.7**	**-2.5**
COEN	comp=Z,8.7nm,1.1s			IAmb	IAmb	14 43 34.0	
EIDS	**Eidsvold**	**19.20**	**94**	P	**P**	**14 43 48.0**	**+1.3**
EIDS	comp=Z,7.6nm,1.1s			IAmb	IAmb	14 44 06.6	
ARMA	**Armidale**	**19.85**	**109**	P	**P**	**14 43 54.6**	**+0.7**
ARMA	comp=Z,9.9nm,1.1s			IAmb	IAmb	14 43 55.9	
MKAR	**Makanchi Array**	**83.84**	**329**	P	**P**	**14 51 52.9**	**+0.7**

*IDC **19** 14:40:20.0±1.1,55.05S×31.24W,h0km,mb3.8/6, mbtmp3.9/6,Error ellipse: s-maj=46.3km s-min=20.8km az=71.0*

ISC 19 14:40:21.9±0.9,55.0S±0.2×31.4W±0.3,h10km,n16, σ1.01/11,mb3.9/5,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.81**	**158**	P	**Pn**	**14 44 43.4**	**+1.6**
VNA2	**Neumayer--Watz** baz=314,slow=12	**19.09**	**156**	P	**Pn**	**14 44 46.1**	**+1.0**
SNAA	**Sanae**	**20.69**	**155**	P	**P**	**14 45 01.7**	**-0.1**
SNAA	**Sanae** 2.9nm,0.8s,baz=306,slow=11 2.9nm,0.8s	**20.69**	**155**	P	**P**	**14 45 00.3**	**-1.5**
TROLL	**Troll, Antarti**	**22.26**	**153**	P	**P**	**14 45 19.4**	**+0.7**
CPUP	**Villa Florida** 1.1nm,0.6s,baz=

MG02	**Cerro Sombrero**	**22.57**	**260**	P		**P**		**14 50 48.1**	**+1.0**
GO09	**Cerro Castillo**	**24.93**	**262**	P		**P**		**14 51 09.2**	**-0.9**
GO09				IAmb		IAmb		14 51 44.3	
	comp=Z,33nm,1.1s								
TRQA	**Tornquist**	**27.15**	**296**	P		**P**		**14 51 30.0**	**-0.3**
CPUP	**Villa Florida**	**34.78**	**315**	P		**P**		**14 52 37.6**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=145,slow=6.9,SNR=10.0								
	comp=Z,3.9nm,0.7s								
CPUP	**Villa Florida**	**34.78**	**315**	P		**P**		**14 52 36.7**	**-0.8**
CPUP				IAmb		IAmb		14 52 49.4	
	comp=Z,6.5nm,0.7s								
QSPA	**South Pole Qui**	**35.03**	**180**	P		**P**		**14 52 40.2**	**+0.7**
	comp=Z,2.8nm,0.5s,baz=324,slow=1.0,SNR=25								
	comp=Z,2.8nm,0.5s								
QSPA	**South Pole Qui**	**35.03**	**180**	P		**P**		**14 52 41.4**	**+1.8**
QSPA				IAmb		IAmb		14 52 57.3	
	comp=Z,11nm,1.2s								
MT09	**Talagante**	**35.14**	**291**	P		**P**		**14 52 39.4**	**-1.4**
MT09				IAmb		IAmb		14 52 52.9	
	comp=Z,17nm,1.2s								
VA06	**Catapilco**	**36.24**	**292**	P		**P**		**14 52 49.9**	**-0.1**
CO02	**Combarbal**	**37.14**	**293**	P		**P**		**14 52 58.2**	**+0.3**
CO02				IAmb		IAmb		14 53 39.5	
	comp=Z,34nm,1.4s								
CO01	**Juntas del Tor**	**37.64**	**296**	P		**P**		**14 53 02.9**	**+0.6**
GO02	**Mina Guanaco**	**41.33**	**301**	P		**P**		**14 53 33.7**	**+0.5**
GO02				IAmb		IAmb		14 53 54.0	
	comp=Z,23nm,1.0s								
PTLB	**Pontes e Lacer**	**45.33**	**320**	P		**P**		**14 54 05.1**	**0.0**
PTLB				IAmb		IAmb		14 54 17.6	
	comp=Z,10nm,1.2s								
GO01	**Chusmiza**	**45.81**	**305**	P		**P**		**14 54 09.8**	**+0.3**
VNDA	**Vanda**	**47.29**	**184**	P		**P**		**14 54 21.6**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=191,slow=4.9,SNR=14								
	comp=Z,1.9nm,0.7s								
VNDA	**Vanda**	**47.29**	**184**	P		**P**		**14 54 21.9**	**+2.0**
BOSA	**Boshof**	**47.76**	**80**	P		**P**		**14 54 23.7**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=236,slow=12,SNR=3.9								
	comp=Z,3.4nm,0.7s								
BOSA	**Boshof**	**47.76**	**80**	P		**P**		**14 54 23.1**	**-1.1**
LPAZ	**La Paz**	**48.27**	**309**	P		**P**		**14 54 29.3**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=160,slow=6.2,SNR=14								
	comp=Z,3.5nm,0.6s								
LPAZ	**La Paz**	**48.27**	**309**	P		**P**		**14 54 29.8**	**+0.9**
LPAZ				IAmb		IAmb		14 54 41.7	
	comp=Z,5.3nm,0.8s								
LBTB	**Lobatse**	**50.74**	**77**	IAmb		IAmb		14 54 47.5	
	comp=Z,9.2nm,1.0s								
LBTB				P		**P**		**14 54 47.6**	**+0.6**
TOA0	**Torodi Ar. Sit**	**73.38**	**33**	P		**P**		**14 57 19.2**	**+0.2**
TOA0				IAmb		IAmb		14 57 19.8	
	comp=Z,5.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P		**P**		**14 57 19.0**	**0.0**
	comp=Z,4.9nm,0.7s,baz=201,slow=6.7,SNR=23								
	comp=Z,4.9nm,0.7s								
FINES	**FINESS Array B**	**124.61**	**29**	PKP		**PKPdf**		**15 04 45.2**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=120,slow=2.2,SNR=1.2								
ARCES	**ARCESS Array B**	**130.93**	**23**	PKP		**PKPdf**		**15 04 57.5**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=216,slow=1.0,SNR=6.2								
MKAR	**Makanchi Array**	**138.54**	**73**	PKP		**PKPdf**		**15 05 10.8**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=222,slow=1.9,SNR=2.5								
ZALV	**Zalesovo Beam**	**143.81**	**65**	PKhKP		PKPpre		15 05 17.9	
	comp=Z,1.5nm,0.6s,baz=193,slow=6.1,SNR=3.8								
ZALV				PKP		pPKPdf		15 05 22.1	-0.5
	comp=Z,1.3nm,0.5s,baz=275,slow=2.9,SNR=4.9								
ILAR	**Eielson Array**	**148.07**	**313**	PKPbc		**PKPbc**		**15 05 31.0**	**-0.3**
	comp=Z,4.6nm,0.9s,baz=113,slow=1.8,SNR=25								
SONM	**Songino Array**	**152.69**	**88**	PKPbc		**PKPbc**		**15 05 42.4**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=220,slow=2.6,SNR=7.5								
SONM				PKPab		**PKPab**		**15 05 52.7**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=232,slow=2.3,SNR=6.3								

*IDC **19** 14:47:02.4±0.7,55.17S×30.50W,h0km,mb4.3/9, mbtmp4.3/10,MS4.0/3,Error ellipse: s-maj=23.3km s-min=19.1km az=70.0*
*NEIC **19** 14:47:05.4±1.7,55.38S±0.10×31.11W±0.06,h10km±2km, mb4.7/15,Error ellipse: s-maj=16.6km s-min=5.4km az=166.0*

ISC 19 14:47:03.8±0.6,55°20S±0.09×30°58W±0.09,h10km,n44, σ1s03/35,mb4.5/14,MS4.0/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.55**	**283**	Pn	**Pn**	**14 48 00.3**	**+1.5**
ORCD	**Orcadas**	**9.34**	**228**	Pn	Pn	14 49 11.6	-6.5
VNA1	**Neumayer--Stat**	**18.33**	**156**	P	**P**	**14 51 19.9**	**+2.2**
VNA3	**Neumayer Olymp**	**18.46**	**159**	P	**Pn**	**14 51 20.0**	**+0.7**
VNA2	**Neumayer--Watz**	**18.73**	**156**	P	**P**	**14 51 20.2**	**-2.0**
	baz=311,slow=12						
PMSA	**Palmer Station**	**19.05**	**226**	P	**Pn**	**14 51 26.0**	**-0.5**
	3.2nm,0.6s,baz=81,slow=10.0,SNR=0.5						
SNAA	**Sanae**	**20.32**	**155**	P	Pn	14 51 42.3	+0.8
SNAA	**Sanae**	**20.32**	**155**	P	**P**	**14 51 40.4**	**+0.9**
	4.3nm,0.8s,baz=320,slow=12,SNR=2.5						
	4.3nm,0.8s						
SNAA	**Sanae**	**20.32**	**155**	P	**P**	**14 51 40.7**	**+1.1**
TROLL	**Troll, Antarti**	**21.87**	**153**	P	**P**	**14 51 56.0**	**-0.4**
GO10	**Punta Arenas**	**23.55**	**258**	P	**P**	**14 52 12.6**	**-1.4**
MG05	**Puerto Natales**	**24.94**	**261**	P	**P**	**14 52 24.9**	**-2.0**
GO09	**Cerro Castillo**	**25.02**	**262**	P	**P**	**14 52 25.1**	**-2.5**
GO09				IAmb	IAmb	14 52 32.8	
	comp=Z,29nm,1.1s						
PLTB	**Pedras Altas**	**28.52**	**316**	P	**P**	**14 52 58.8**	**-0.5**
PLTB				IAmb	IAmb	14 52 59.7	
	comp=Z,5.2nm,0.8s						
CPUP	**Villa Florida**	**34.83**	**315**	P	**P**	**14 53 54.1**	**-0.5**
	comp=Z,3.1nm,0.5s,baz=153,slow=6.0,SNR=7.1						
	comp=Z,3.1nm,0.5s						
CPUP	**Villa Florida**	**34.83**	**315**	P	**P**	**14 53 54.5**	**-0.2**
CPUP				IAmb	IAmb	14 54 06.0	
	comp=Z,5.6nm,0.8s						
QSPA	**South Pole Qui**	**35.05**	**180**	P	**P**	**14 53 56.5**	**0.0**
	comp=Z,7.4nm,0.8s,baz=177,slow=1.9,SNR=5.0						
	comp=Z,7.4nm,0.8s						
QSPA	**South Pole Qui**	**35.05**	**180**	P	**P**	**14 53 56.6**	**+0.2**
QSPA				IAmb	IAmb	14 54 00.8	
	comp=Z,10nm,0.9s						
CO02	**Combarbal**	**37.22**	**293**	P	**P**	**14 54 15.0**	**-0.2**
CO01	**Juntas del Tor**	**37.71**	**296**	P	**P**	**14 54 19.7**	**+0.1**
CO01				IAmb	IAmb	14 54 21.1	
	comp=Z,6.6nm,0.7s						
GO02	**Mina Guanaco**	**41.40**	**300**	P	**P**	**14 54 50.9**	**+0.4**
GO02				IAmb	IAmb	14 55 19.2	
	comp=Z,46nm,1.4s						
LVC	**Limon Verde**	**43.22**	**303**	P	**P**	**14 55 06.4**	**+1.1**
	comp=Z,5.5nm,0.6s,baz=207,slow=7.3,SNR=3.8						
	comp=Z,5.5nm,0.6s						
GO01	**Chusmiza**	**45.87**	**305**	P	**P**	**14 55 26.2**	**-0.5**
GO01				IAmb	IAmb	14 55 32.5	
	comp=Z,15nm,1.1s						
VNDA	**Vanda**	**47.32**	**184**	P	**P**	**14 55 37.0**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=191,slow=5.7,SNR=4.4						
	comp=Z,1.9nm,0.9s						
VNDA	**Vanda**	**47.32**	**184**	P	**P**	**14 55 36.9**	**+0.1**
BOSA	**Boshof**	**47.67**	**80**	P	**P**	**14 55 40.0**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=107,slow=11,SNR=2.4						
	comp=Z,2.8nm,0.9s						
H10S2	**ASCENSION HYDR**	**47.83**	**21**	T	T	15 47 26.9	
	baz=28,slow=74,SNR=3.7						
H10S3	**ASCENSION HYDR**	**47.83**	**21**	T	T	15 47 28.6	
	baz=192,slow=74,SNR=12						
LPAZ	**La Paz**	**48.33**	**308**	P	**P**	**14 55 46.4**	**+0.4**
	comp=Z,4.1nm,0.5s,baz=69,slow=15,SNR=6.1						
	comp=Z,4.1nm,0.5s						
LPAZ	**La Paz**	**48.33**	**308**	P	**P**	**14 55 46.5**	**+0.4**
LPAZ				IAmb	IAmb	14 55 49.8	
	comp=Z,4.3nm,0.7s						
H10N1	**ASCENSION HYDR**	**48.94**	**21**	T	T	15 48 49.8	
	baz=192,slow=76,SNR=11						
H10N3	**ASCENSION HYDR**	**48.94**	**21**	T	T	15 48 47.3	
	baz=192,slow=76,SNR=5.5						
H10N2	**ASCENSION HYDR**	**48.96**	**21**	T	T	15 48 49.0	
	baz=192,slow=76,SNR=5.4						
RCBR	**Riachuelo**	**49.42**	**353**	LR	LR	15 14 52.4	
	comp=Z,77nm,18.4s,baz=336,slow=34						
ETMB	**Extrema**	**53.27**	**314**	P	**P**	**14 56 24.4**	**+1.8**
ETMB				IAmb	IAmb	14 56 54.8	
	comp=Z,3.5nm,1.2s						
DBIC	**Dimbokro**	**65.26**	**28**	P	**P**	**14 57 45.0**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=234,slow=3.1,SNR=2.6						
	comp=Z,1.9nm,0.7s						
TOA0	**Torodi Ar. Sit**	**73.32**	**33**	P	**P**	**14 58 35.9**	**+0.5**
TOA0				IAmb	IAmb	14 58 36.2	
	comp=Z,4.6nm,0.8s						

TORD	**Torodi Ar. Bea**	**73.32**	**33**	P		**P**		**14 58 35.5**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=200,slow=6.3,SNR=7.7								
TORD				LR		LR		15 24 27.1	
	comp=Z,76nm,21.2s,baz=212,slow=31								
	comp=Z,3.7nm,0.7s								
KEST	**Kesra**	**96.82**	**32**	LR		LR		15 39 45.2	
	comp=Z,138nm,20.6s,baz=294,slow=33								
FINES	**FINESS Array B**	**124.55**	**29**	PKP		**PKPdf**		**15 06 01.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=90,slow=1.9,SNR=3.6								
ARCES	**ARCESS Array B**	**130.88**	**23**	PKP		**PKPdf**		**15 06 14.1**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=215,slow=1.5,SNR=6.1								
ZALV	**Zalesovo Beam**	**143.73**	**64**	PKhKP		PKPpre		15 06 34.5	
	comp=Z,0.9nm,0.5s,baz=198,slow=4.4,SNR=2.3								
ILAR	**Eielson Array**	**148.12**	**313**	PKPbc		**PKPbc**		**15 06 47.3**	**-0.9**
	comp=Z,6.6nm,0.9s,baz=126,slow=2.0,SNR=8.2								
SONM	**Songino Array**	**152.60**	**87**	PKPbc		**PKiKP**		**15 07 00.3**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=226,slow=2.0,SNR=3.6								
SONM				PKPab		**PKPab**		**15 07 09.4**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=218,slow=3.0,SNR=6.7								

*IDC **19** 14:49:32.8±0.7,55.05S×31.29W,h0km,mb4.2/8, mbtmp4.2/8,MS3.8/7,Error ellipse: s-maj=29.7km s-min=19.0km az=64.0*
*NEIC **19** 14:49:34.8±0.7,55.0S±0.1×31.3W±0.2,h10km±1km, mb4.6/10,Error ellipse: s-maj=18.6km s-min=16.3km az=3.0*

ISC 19 14:49:34.3±0.6,54.99S±0.09×31.3W±0.1,h10km,n43, σ0s66/32,mb4.5/11,MS3.8/6,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.10**	**281**		**Pn**	**14 50 22.8**	**-0.4**
ORCD	**Orcadas**	**9.18**	**226**	Pn	**Pn**	**14 51 46.5**	**0.0**
VNA1	**Neumayer--Stat**	**18.68**	**156**	P	**Pn**	**14 53 54.2**	**+1.6**
VNA3	**Neumayer Olymp**	**18.81**	**158**	P	**Pn**	**14 53 54.8**	**+0.7**
PMSA	**Palmer Station**	**18.89**	**226**	LR	LR	14 59 25.8	
	comp=Z,300nm,20.1s,baz=56,slow=31						
VNA2	**Neumayer--Watz**	**19.08**	**156**	P	**P**	**14 53 56.0**	**-0.6**
	baz=313,slow=12						
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**14 54 13.0**	**-1.1**
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**14 54 13.9**	**-0.2**
	7.6nm,0.8s,baz=310,slow=9.3,SNR=10						
	7.6nm,0.8s						
SNAA	**Sanae**	**20.68**	**155**	P	**P**	**14 54 13.8**	**-0.3**
TROLL	**Troll, Antarti**	**22.25**	**153**	P	**P**	**14 54 31.6**	**+0.6**
PLCA	**Paso Flores**	**29.50**	**282**	LR	LR	15 07 18.1	
	comp=Z,244nm,19.5s,baz=130,slow=36						
CPUP	**Villa Florida**	**34.39**	**316**	P	**P**	**14 56 21.8**	**+0.3**
	3.3nm,1.0s,baz=190,slow=8.2,SNR=3.4						
	3.3nm,1.0s						
QSPA	**South Pole Qui**	**35.26**	**180**	P	**P**	**14 56 28.8**	**0.0**
	3.3nm,1.0s,baz=187,slow=7.3,SNR=3.6						
	3.3nm,1.0s						
QSPA	**South Pole Qui**	**35.26**	**180**	P	**P**	**14 56 28.8**	**0.0**
QSPA				IAmb	IAmb	14 56 47.2	
	comp=Z,11nm,1.1s						
CO01	**Juntas del Tor**	**37.25**	**296**	P	**P**	**14 56 47.2**	**+0.9**
CO01				IAmb	IAmb	14 57 10.2	
	comp=Z,26nm,1.5s						
MAW	**Mawson**	**42.37**	**145**	P	**P**	**14 57 27.4**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=237,slow=8.3,SNR=5.2						
MAW				LR	LR	15 11 59.7	
	comp=Z,130nm,20.3s,baz=264,slow=32						
	comp=Z,2.2nm,0.8s						
MAW	**Mawson**	**42.37**	**145**	P	**P**	**14 57 28.1**	**0.0**
LVC	**Limon Verde**	**42.76**	**304**	LR	LR	15 15 08.2	
	comp=Z,110nm,20.6s,baz=182,slow=36						
PB01	**IPOC Station P**	**44.37**	**304**	P	**P**	**14 57 45.2**	**+0.3**
PB01				IAmb	IAmb	14 57 51.0	
	comp=Z,7.5nm,0.8s						
SIV	**San Ignacio**	**45.19**	**318**	LR	LR	15 16 33.8	
	comp=Z,83nm,20.9s,baz=112,slow=36						
VNDA	**Vanda**	**47.50**	**184**	P	**P**	**14 58 08.0**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=172,slow=2.6,SNR=2.0						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**47.50**	**184**	P	**P**	**14 58 08.8**	**0.0**
H10S2	**ASCENSION HYDR**	**47.79**	**22**	T	T	15 49 59.4	
H10S3	**ASCENSION HYDR**	**47.79**	**22**	T	T	15 50 18.1	
	SNR=7.1						
LPAZ	**La Paz**	**47.88**	**309**	P	**P**	**14 58 13.6**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=180,slow=6.6,SNR=8.1						
LPAZ				LR	LR	15 19 03.2	
	comp=Z,58nm,20.8s,baz=164,slow=37						
	comp=Z,4.5nm,0.7s						
LPAZ	**La Paz**	**47.88**	**309**	P	**P**	**14 58 13.7**	**+0.5**
LPAZ				IAmb	IAmb	14 58 24.7	
	comp=Z,7.0nm,0.9s						
BOSA	**Boshof**	**48.04**	**81**	P	**P**	**14 58 14.0**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=191,slow=8.0,SNR=6.6						
	comp=Z,5.4nm,0.8s						
BOSA	**Boshof**	**48.04**	**81**	P	**P**	**14 58 13.9**	**+0.2**
H10N3	**ASCENSION HYDR**	**48.90**	**22**	T	T	15 51 23.9	
	baz=192,slow=76,SNR=7.6						
H10N1	**ASCENSION HYDR**	**48.90**	**22**	T	T	15 51 42.8	
	baz=192,slow=76,SNR=9.3						
H10N2	**ASCENSION HYDR**	**48.92**	**22**	T	T	15 51 23.8	
	baz=192,slow=76,SNR=12						
LBTB	**Lobatse**	**51.01**	**78**	P	**P**	**14 58 36.5**	**+0.1**
LBTB				IAmb	IAmb	14 58 37.6	
	comp=Z,6.0nm,0.8s						
CASY	**Casey**	**55.66**	**162**	P	**P**	**14 59 10.3**	**+0.4**
LSZ	**Luska**	**60.24**	**73**	LR	LR	15 24 18.5	
	comp=Z,72nm,18.1s,baz=198,slow=35						
TOA0	**Torodi Ar. Sit**	**73.38**	**34**	P	**P**	**15 01 06.5**	**+0.3**
TOA0				IAmb	IAmb	15 01 27.4	
	comp=Z,4.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.38**	**34**	P	**P**	**15 01 06.9**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=201,slow=6.5,SNR=8.0						
	comp=Z,2.3nm,0.7s						
FINES	**FINESS Array B**	**124.57**	**29**	PKP		**PKPdf**		**15 08 31.9**	**-0.5**
	comp=Z,4.1nm,1.1s,baz=187,slow=3.1,SNR=4.5								
CMAR	**Chiang Mai Arr**	**127.63**	**114**	PKP		**PKPdf**		**15 08 39.6**	**0.0**
	comp=Z,1.0nm,0.8s,baz=224,slow=5.5,SNR=4.3								
ARCES	**ARCESS Array B**	**130.85**	**23**	PKP		**PKiKP**		**15 08 44.8**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=224,slow=2.5,SNR=2.3								
MKAR	**Makanchi Array**	**138.79**	**73**	PKP		**PKPdf**		**15 08 57.9**	**-1.8**
	comp=Z,0.4nm,0.9s,baz=232,slow=1.6,SNR=2.7								
ZALV	**Zalesovo Beam**	**144.01**	**65**	PKP		PKPbc		15 09 06.7	-0.1
	comp=Z,2.2nm,0.6s,baz=264,slow=3.9,SNR=8.0								
ILAR	**Eielson Array**	**147.68**	**314**	PKPbc		**PKPbc**		**15 09 17.1**	**-0.5**
	comp=Z,3.8nm,0.9s,baz=138,slow=2.0,SNR=8.5								
SONM	**Songino Array**	**153.01**	**88**	PKPbc		**PKPbc**		**15 09 30.7**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=213,slow=2.5,SNR=9.6								

*NNC **19** 14:52:47.9±1.2,40.77N×78.12E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=8.1km s-min=5.7km az=165.0*
*KRNET **19** 14:52:49.7±0.1,40.41N×78.23E,mb3.2*
*SOME **19** 14:52:50.6,40.92N×78.18E,h5km*

ISC 19 14:52:44.6±2.4,40°60N±0.10×78°04E±0.04,h10km,n50, σ1s71/80,11C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.13**	**321**	⇑*eP*	**Pg**	**14 53 27.5**	**+2.1**
	baz=21						
ULHL				⇑*iS*	**Sg**	**14 53 55.8**	**+2.8**
	baz=21						
SATY	**Saty**	**2.47**	**6**	*eP*	**Pg**	**14 53 32.0**	**0.0**
	7.2nm,0.1s						
SATY				*eS*	**Sb**	**14 54 01.9**	**+2.2**
	36nm,0.5s						
SATY	**Saty**	**2.47**	**6**	Pg	**Pg**	**14 53 30.5**	**-1.4**
	9.1nm,0.4s						
SATY				Lg	Lg	14 54 01.9	
	36nm,0.5s						
SATY	**Saty**	**2.47**	**6**	*eP*	**Pg**	**14 53 32.0**	**0.0**
	baz=3.0						
SATY				*eS*	**Sb**	**14 54 01.9**	**+2.2**
	baz=3.0						
ZHN	**Zhinishke**	**2.58**	**6**	*eP*	**Pg**	**14 53 33.9**	**-0.2**
	14nm,0.5s						
ZHN				*eS*	**Sb**	**14 54 05.2**	**+2.3**
	49nm,0.4s						
ZHN	**Zhinishke**	**2.58**	**6**	Pg	**Pg**	**14 53 33.3**	**-0.8**
ZHN				Lg	Lg	14 54 06.3	
ZHN	**Zhinishke**	**2.58**	**6**	*eP*	**Pg**	**14 53 33.9**	**-0.2**
	baz=3.0						
ZHN				*eS*	**Sb**	**14 54 05.2**	**+2.3**
	baz=3.0						
UZB	**Uzynbulak**	**2.65**	**16**	*eP*	**Pg**	**14 53 33.8**	**-1.5**
	2.3nm,0.2s						
UZB				*eS*	**Sb**	**14 54 05.2**	**+0.3**
	23nm,0.6s						

UZB	**Uzynbulak**	**2.65**	**16**	Pg		**Pb**		**14 53 33.0**	**+0.8**
UZB				Lg		Lg		14 54 05.8	
MDOK	**Medeo**	**2.67**	**344**	*eP*		**Pg**		**14 53 36.2**	**+0.6**
	7.0nm,0.4s								
MDOK				*eS*		**Sg**		**14 54 09.3**	**-0.9**
	44nm,0.5s								
MDOK	**Medeo**	**2.67**	**344**	Pg		**Pg**		**14 53 33.9**	**-1.8**
	4.1nm,0.4s								
MDOK				Pg		**Pb**		**14 53 35.3**	**+2.8**
	7.3nm,0.3s								
MDOK				Lg		Lg		14 54 09.6	
	44nm,0.5s								
MDOK				Lg		Lg		14 54 09.7	
	31nm,0.7s								
KOTS	**Kotyrbulak**	**2.72**	**346**	*eP*		**Pg**		**14 53 36.3**	**-0.4**
	0.9nm,0.2s								
KOTS				*eS*		**Sg**		**14 54 09.6**	**-2.5**
	44nm,0.3s								
KOTS	**Kotyrbulak**	**2.72**	**346**	Pg		**Pg**		**14 53 35.5**	**-1.2**
	0.9nm,0.2s								
KOTS				Lg		Lg		14 54 10.1	
	44nm,0.5s								
KOTS	**Kotyrbulak**	**2.72**	**346**	*eP*		**Pg**		**14 53 36.3**	**-0.4**
	baz=44								
KOTS				*eS*		**Sg**		**14 54 09.5**	**-2.5**
	baz=44								
SHLS	**Shalkode**	**2.77**	**22**	*eP*		**Pg**		**14 53 37.4**	**-0.2**
	3.9nm,0.2s								
SHLS				*eS*		**Sg**		**14 54 11.0**	**-2.5**
	31nm,0.5s								
SHLS	**Shalkode**	**2.77**	**22**	*eP*		**Pg**		**14 53 37.4**	**-0.2**
	baz=24								
SHLS				*eS*		**Sg**		**14 54 11.0**	**-2.5**
	baz=24								
MTBS	**Maitube**	**2.80**	**335**	*eP*		**Pg**		**14 53 38.6**	**+0.4**
	7.9nm,0.2s								
MTBS				*eS*		**Sg**		**14 54 13.2**	**-1.3**
	22nm,0.4s								
MTBS	**Maitube**	**2.80**	**335**	Pg		**Pg**		**14 53 37.2**	**-1.0**
	3.6nm,0.1s								
MTBS				Lg		Lg		14 54 13.2	
	22nm,0.4s								
KURS	**Kuram**	**2.89**	**2**	*eP*		**Pg**		**14 53 39.6**	**-0.3**
	3.8nm,0.5s								
KURS				*eS*		**Sg**		**14 54 14.8**	**-2.5**
	21nm,0.3s								
KURS	**Kuram**	**2.89**	**2**	Pg		**Pg**		**14 53 37.9**	**-2.0**
	9.3nm,0.7s								
KURS				Lg		Lg		14 54 14.2	
	21nm,0.6s								
KST	**Kastek**	**2.89**	**328**	*eP*		**Pg**		**14 53 41.0**	**+1.0**
	2.8nm,0.2s								
KST				*eS*		**Sg**		**14 54 17.2**	**-0.3**
	19nm,0.3s								
KST	**Kastek**	**2.89**	**328**	Pg		**Pg**		**14 53 39.8**	**-0.2**
	3.3nm,0.4s								
KST				Lg		Lg		14 54 17.2	
	21nm,0.9s								
KPKS	**Kokpek**	**2.90**	**9**	*eP*		**Pg**		**14 53 38.5**	**-1.7**
	13nm,0.3s								
KPKS				*eS*		**Sb**		**14 54 13.1**	**+1.0**
	41nm,0.5s								
KPKS	**Kokpek**	**2.90**	**9**	Pg		**Pb**		**14 53 37.6**	**+1.1**
	8.8nm,0.2s								
KPKS				Lg		Lg		14 54 13.4	
	41nm,0.5s								
PDGK	**Podgornoye**	**2.93**	**21**	Pg		**Pb**		**14 53 37.5**	**+0.5**
	2.1nm,0.3s								
PDGK				Lg		Lg		14 54 13.1	
	9.4nm,0.7s								
TKM2	**Tokmak 2**	**2.95**	**323**	⇓Pg		**Pb**		**14 53 37.4**	**0.0**
	2.1nm,0.5s								
TKM2				⇑Lg		Lg		14 54 19.8	
	13nm,0.7s								
TKM2	**Tokmak 2**	**2.95**	**323**	⇑*iP*		**Pg**		**14 53 39.0**	**-2.1**
	baz=23								
TKM2				⇑*iS*		**Sb**		**14 54 15.5**	**+1.9**
	baz=23								
ARLS	**Aral**	**3.07**	**295**	⇑*iP*		**Pb**		**14 53 40.2**	**+0.8**
	baz=97								
ARLS				⇑*eS*		**Sb**		**14 54 17.6**	**+0.6**
	baz=97								
KBK	**Karagaybulak**	**3.10**	**313**	⇓*iP*		**Pb**		**14 53 40.9**	**+1.1**
	baz=13								
KBK			

BTLS Lg Lg 14 55 31.7
4.1nm,0.6s

*IDC **19** 15:01:23.7±1.8,23˚.73S×179˚.45W, h536km±19km, mb3.4/9, mbtmp4.3/12, Error ellipse: s-maj=23.5km s-min=16.2km az=128.0*
ISC 19 15:01:21.3±0.8,**23˚.8S**±0˚.1×**179˚.5W**±0˚.1,**h500**km,**n18,**
σ2$26/17,mb4.0/9,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.44**	**339**	P	**P**	**15 03 06.4**	**+4.3**
	7.2nm,0.5s,baz=237,slow=23,SNR=9.8						
AFI	**Afiamalu**	**12.26**	**38**	P	**P**	**15 04 02.8**	**-0.1**
	12nm,0.5s,baz=224,slow=18,SNR=2.4						
URZ	**Urewera**	**14.70**	**190**	P	**P**	**15 04 30.5**	**+2.4**
	3.7nm,0.3s,baz=269,slow=3.7,SNR=11						
RPZ	**Rata Peaks**	**21.33**	**199**	P	**P**	**15 05 33.3**	**+1.6**
	8.0nm,0.7s,baz=332,slow=15,SNR=6.0						
	8.0nm,0.7s						
CTA	**Charters Tower**	**31.91**	**270**	P	**P**	**15 07 06.2**	**+0.9**
	5.0nm,0.3s,baz=56,slow=3.6						
	5.0nm,0.3s						
STKA	**Stephens Creek**	**35.16**	**248**	P	**P**	**15 07 33.8**	**+1.2**
	2.4nm,0.4s,baz=103,slow=11,SNR=7.2						
	2.4nm,0.4s						
ASAR	**Alice Springs**	**42.48**	**260**	P	**P**	**15 08 32.2**	**+0.1**
	2.1nm,0.4s,baz=96,slow=7.4,SNR=79						
ASAR				S	**S**	**15 14 12.3**	**-5.3**
	0.5nm,0.7s,baz=94,slow=14,SNR=7.3						
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**42.84**	**266**	P	**P**	**15 08 34.3**	**-0.7**
	2.8nm,0.5s,baz=90,slow=5.8,SNR=62						
	2.8nm,0.5s						
KSRS	**Korea Array**	**78.44**	**320**	P	**P**	**15 12 29.4**	**-0.5**
	0.7nm,0.7s,baz=120,slow=7.1,SNR=4.5						
	0.7nm,0.7s						
PETK	**Petropavlovsk-**	**79.10**	**346**	P	**P**	**15 12 32.0**	**-1.0**
	1.2nm,0.6s,baz=121,slow=3.9,SNR=1.6						
	1.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.89**	**290**	P	**P**	**15 13 27.7**	**+0.7**
	0.9nm,0.8s,baz=104,slow=2.9,SNR=4.6						
	0.9nm,0.8s						
TXAR	**Lajitas Array**	**90.01**	**58**	P	**P**	**15 13 25.4**	**-2.1**
	0.7nm,0.9s,baz=251,slow=5.6,SNR=5.7						
	0.7nm,0.9s						
ARCES	**ARCESS Array B**	**131.87**	**348**	PKP	**PKPdf**	**15 19 34.8**	**-1.8**
	0.5nm,0.5s,baz=281,slow=2.0,SNR=8.9						
FINES	**FINESS Array B**	**138.48**	**342**	PKP	**PKPdf**	**15 19 49.0**	**-0.1**
	1.9nm,1.0s,baz=116,slow=7.0,SNR=4.3						
NB2	**NORSAR Subarra**	**142.04**	**352**	PKP	PKPpre	15 19 50.1	
	comp=Z,0.5nm,0.6s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**142.04**	**352**	PKhKP	PKPpre	15 19 49.7	
	comp=Z,0.4nm,0.6s,baz=22,slow=3.8,SNR=4.2						
AKASG	**Malin Array Be**	**145.11**	**328**	PKPbc	**PKPdf**	**15 19 59.7**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=49,slow=4.4,SNR=5.8						
BRTR	**Keskin Array B**	**147.86**	**308**	PKPbc	**PKPbc**	**15 20 08.4**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=147,slow=5.5,SNR=3.0						

RSNC 19 15:09:50.1±1.0,**6˚.82N**×**73˚.16W, h146**km±4km,**ML3.4, Mw3.6,4C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**185**	*i*P	Pn	15 10 09.8	-0.4
BARC				*e*S	Sn	15 10 24.5	-1.0
BARC				*i*		15 10 26.1	
	comp=Z,1000nm,0.3s						
BRRC	**Barranca, Sant**	**0.62**	**298**	*i*P	Pn	15 10 11.7	0.0
BRRC				*e*S	Sn	15 10 28.2	+0.2
BRRC				*i*		15 10 33.6	
	comp=Z,377nm,0.1s						
PAMC	**Pamplona, Colo**	**0.69**	**41**	*i*P	Pn	15 10 12.7	0.0
PAMC				*e*S	Sn	15 10 29.9	+0.1
PAMC				*i*		15 10 32.4	
	comp=Z,282nm,0.5s						
RUSC	**La Rusia**	**0.92**	**175**	*e*P	Pn	15 10 13.8	-0.6
RUSC				*e*S	Sn	15 10 32.3	-0.6
RUSC				*i*		15 10 33.5	
	comp=Z,292nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	*e*P	Pn	15 10 16.2	-1.2
PTBC				*e*S	Sn	15 10 37.5	-0.9
PTBC				*i*		15 10 44.8	
	comp=Z,323nm,0.5s						
TAMC	**Tame, Arauca**	**1.41**	**106**	*e*P	Pn	15 10 18.3	-0.2
TAMC				*e*S	Sn	15 10 40.0	-0.1
TAMC				*i*		15 10 40.7	
	comp=Z,109nm,0.2s						
OCAC	**Ocana**	**1.42**	**354**	*e*P	Pn	15 10 17.9	-0.8
OCAC				*e*S	Sn	15 10 39.8	-0.7
OCAC				*i*		15 10 41.8	
	comp=Z,473nm,0.3s						
SPBC	**San Pablo de B**	**1.47**	**218**	*e*P	Pn	15 10 18.8	-0.4
SPBC				*e*S	Sn	15 10 41.0	-0.4
SPBC				*i*		15 10 43.4	
	comp=Z,484nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.81**	**292**	*e*P	Pn	15 10 22.5	-0.3
ZARC				*e*S	Sn	15 10 47.3	-0.6
ZARC				*i*		15 10 53.5	
	comp=Z,312nm,0.4s						
NORC	**Norcasia**	**2.11**	**234**	*e*P	Pn	15 10 26.0	-0.3
NORC				*e*S	Sn	15 10 53.4	-0.7
NORC				*i*		15 10 59.6	
	comp=Z,141nm,0.2s						
CHIC	**Chingaza**	**2.25**	**195**	*e*P	Pn	15 10 28.2	-0.2
CHIC				*e*S	Sn	15 10 57.2	-0.5
CHIC				*i*		15 10 59.7	
	comp=Z,138nm,0.4s						
ROSC	**El Rosal**	**2.28**	**210**	*e*P	Pn	15 10 29.8	+1.0
ROSC				*e*S	Sn	15 10 58.6	+0.2
ROSC				*i*		15 11 04.6	
	comp=Z,340nm,0.3s						
HELC	**Santa Helena**	**2.43**	**255**	*e*P	Pn	15 10 31.8	+1.2
HELC				*e*S	Sn	15 11 02.3	+0.7
HELC				*i*		15 11 09.2	
	comp=Z,106nm,0.6s						
UREC	**San Jos de Ur**	**2.53**	**292**	*e*P	Pn	15 10 29.7	-1.7
UREC				*e*S	Sn	15 11 01.2	-2.0
UREC				*i*		15 11 11.2	
	comp=Z,224nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.70**	**234**	*e*P	Pn	15 10 35.1	+1.1
GUY2C				*e*S	Sn	15 11 08.4	+0.6
GUY2C				*i*		15 11 18.4	
	comp=Z,94nm,0.4s						
SOCV	**Socops**	**2.71**	**57**	*e*P	Pn	15 10 32.6	-1.0
SOCV				*e*S	Sn	15 11 04.3	-3.0
LL1C	**La Loma 1 Cana**	**2.73**	**352**	*e*P	Pn	15 10 35.0	+1.0
LL1C				*e*S	Sn	15 11 10.4	+2.6
PTGC	**Puerto Gaitan,**	**2.79**	**158**	*e*P	Pn	15 10 33.0	-1.7
PTGC				*i*		15 10 57.1	
	comp=Z,86nm,0.3s						
PTGC				*e*S	Sn	15 11 06.3	-3.0
CBOC	**Ciudad Bolivar**	**2.99**	**252**	*e*P	Pn	15 10 36.5	-0.9
CBOC				*e*S	Sn	15 11 12.9	-0.9
CBOC				*i*		15 11 30.1	
	comp=Z,29nm,0.6s						
DBBC	**Dabeiba**	**3.03**	**274**	*e*P	Pn	15 10 37.4	-0.5
DBBC				*e*S	Sn	15 11 11.8	-2.8
DBBC				*i*		15 11 22.8	
	comp=Z,41nm,0.7s						
ANIL	**Santa Ana**	**3.21**	**224**	*e*P	Pn	15 10 41.5	+1.1
ANIL				*e*S	Sn	15 11 20.1	+1.0
ANIL				*i*		15 11 26.2	
	comp=Z,252nm,0.3s						
PRAC	**Prado**	**3.53**	**209**	*e*P	Pn	15 10 43.5	-0.7
PRAC				*e*S	Sn	15 11 25.3	-0.8
PRAC				*i*		15 11 30.1	
	comp=Z,106nm,0.6s						
SJCC	**San Jacinto, C**	**3.65**	**327**	*e*P	Pn	15 10 43.5	-2.3
SJCC				*e*S	Sn	15 11 25.0	-4.0
SJCC				*i*		15 11 39.6	
	comp=Z,80nm,0.8s						
CRJC	**Cerrejon, Guaj**	**4.18**	**4**	*e*P	Pn	15 10 50.3	-2.5
CRJC				*e*S	Sn	15 11 37.0	-4.6
CRJC				*i*		15 11 42.9	
	comp=Z,46nm,0.5s						
BETC	**Betania**	**4.70**	**209**	*e*P	Pn	15 10 57.7	-1.8
BETC				*e*S	Sn	15 11 44.5	-9.0
BETC				*i*		15 11 57.8	
	comp=Z,14nm,0.7s						
GARC	**Garzon, Huila**	**5.15**	**207**	*e*P	Pn	15 11 04.1	-1.7
GARC				*e*S	Sn	15 11 54.9	-10
GARC				*i*		15 12 08.0	
	comp=Z,26nm,0.3s						

*IDC **19** 15:19:36.0±1.1,55˚.01S×30˚.28W, h0km, mb3.6/5, mbtmp3.7/5, Error ellipse: s-maj=48.5km s-min=23.8km az=79.0*
ISC 19 15:19:37.3±1.0,**55˚.0S**±0˚.2×**30˚.1W**±0˚.3,**h10**km,**n8,σ2$07/8, mb3.9/4,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.51**	**159**	P	**P**	**15 23 53.8**	**+0.4**
SNAA	**Sanae**	**20.35**	**155**	P	**P**	**15 24 09.3**	**-4.2**
SNAA	**Sanae**	**20.35**	**155**	P	**P**	**15 24 13.3**	**-0.2**
	0.8nm,0.8s,baz=284,slow=13,SNR=2.2						
	0.8nm,0.8s						
QSPA	**South Pole Qui**	**35.21**	**180**	P	**P**	**15 26 32.8**	**+1.5**
	0.7nm,0.7s,baz=317,slow=1.4,SNR=5.9						
	0.7nm,0.7s						
VNDA	**Vanda**	**47.49**	**184**	P	**P**	**15 28 11.9**	**+0.2**
	0.8nm,0.9s,baz=200,slow=5.8,SNR=4.2						
	0.8nm,0.9s						
LPAZ	**La Paz**	**48.44**	**308**	P	**P**	**15 28 19.8**	**-0.6**
	1.4nm,0.6s,baz=167,slow=5.8,SNR=4.7						
	1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.04**	**32**	P	**P**	**15 31 08.1**	**+0.8**
	0.8nm,0.7s,baz=199,slow=6.2,SNR=5.0						
	0.9nm,0.7s						
ILAR	**Eielson Array**	**148.21**	**313**	PKPbc	**PKPbc**	**15 39 21.2**	**-0.7**
	1.2nm,0.7s,baz=108,slow=1.1,SNR=13						

*NEIC **19** 15:25:04.7±3.0,55˚.0S±0˚.1×32˚.3W±0˚.2, h10km±2km, mb4.1/5, Error ellipse: s-maj=27.9km s-min=9.8km az=316.0*
*IDC **19** 15:25:05.7±1.0,55˚.09S×30˚.83W, h0km, mb3.9/5, mbtmp4.0/5, MS3.4/3, Error ellipse: s-maj=47.3km s-min=23.5km az=66.0*
ISC 19 15:25:05.0±0.9,**55˚.1S**±0˚.1×**32˚.1W**±0˚.1,**h10**km,**n24,**
σ1$63/15,mb4.2/4,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.69**	**286**		**Pn**	**15 25 46.9**	**-1.4**
ORCD	**Orcadas**	**8.80**	**225**	Pn	**Pn**	**15 27 12.5**	**+0.5**
PMSA	**Palmer Station**	**18.52**	**226**	LR	LR	15 36 08.9	
	comp=Z,71nm,18.5s,baz=285,slow=35						
VNA3	**Neumayer Olymp**	**18.88**	**158**	P	**Pn**	**15 29 25.4**	**-0.2**
VNA2	**Neumayer--Watz**	**19.18**	**155**	P	**Pn**	**15 29 29.0**	**-0.2**
	baz=317,slow=10.0						
SMAI	**San Martin Ant**	**20.78**	**217**	P	**P**	**15 29 45.1**	**-0.6**
SMAI				IAmb	IAmb	15 30 10.0	
	comp=Z,8.1nm,1.4s						
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**15 29 44.0**	**-1.8**
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**15 29 44.0**	**-1.8**
	comp=Z,1.3nm,0.8s,baz=300,slow=9.9,SNR=2.9						
	comp=Z,1.3nm,0.8s						
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**15 29 42.6**	**-3.2**
TROLL	**Troll, Antarti**	**22.36**	**152**	P	**P**	**15 30 01.1**	**-1.8**
CPUP	**Villa Florida**	**34.15**	**317**	P	P	15 31 56.1	+6.0
	comp=Z,1.1nm,0.5s,baz=165,slow=12,SNR=3.0						
	comp=Z,1.1nm,0.5s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**15 32 01.2**	**+2.6**
	comp=Z,4.1nm,1.0s,baz=207,slow=6.0,SNR=7.2						
	comp=Z,4.1nm,1.0s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**15 31 59.4**	**+0.7**
QSPA				IAmb	IAmb	15 32 06.9	
	comp=Z,5.9nm,1.0s						
LPAZ	**La Paz**	**47.60**	**310**	P	P	15 33 48.0	+6.4
	comp=Z,2.0nm,0.4s,baz=144,slow=7.7,SNR=8.8						
	comp=Z,2.0nm,0.4s						
LPAZ	**La Paz**	**47.60**	**310**	P	**P**	**15 33 42.1**	**+0.5**
H10N3	**ASCENSION HYDR**	**49.16**	**23**	T	T	16 26 47.7	
	baz=192,slow=75,SNR=5.3						
H10N1	**ASCENSION HYDR**	**49.16**	**23**	T	T	16 26 43.3	
	baz=192,slow=75,SNR=4.9						
H10N2	**ASCENSION HYDR**	**49.17**	**23**	T	T	16 26 51.0	
	baz=192,slow=75,SNR=5.4						
ATAH	**Atahualpa**	**60.34**	**304**	LR	LR	16 01 00.7	
	comp=Z,23nm,21.8s,baz=345,slow=35						
TORD	**Torodi Ar. Bea**	**73.70**	**34**	P	**P**	**15 36 39.2**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=205,slow=6.4,SNR=2.3						
	comp=Z,0.6nm,0.7s						
ATD	**Arta Tunnel**	**90.90**	**71**	LR	LR	16 17 34.2	
	comp=Z,31nm,18.3s,baz=214,slow=35						
FINES	**FINESS Array B**	**124.87**	**30**	PKP	**PKiKP**	**15 44 04.4**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=84,slow=4.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**144.45**	**65**	PKhKP	PKPpre	15 44 32.9	
	comp=Z,0.4nm,0.3s,baz=213,slow=4.4,SNR=3.7						
ILAR	**Eielson Array**	**147.43**	**314**	PKPbc	**PKiKP**	**15 44 50.8**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=117,slow=1.9,SNR=12						

*NEIC **19** 15:30:51.6±1.8,22˚.15N±0˚.10×145˚.4E±0˚.2, h35km±2km, mb4.4/9, Error ellipse: s-maj=37.1km s-min=15.8km az=79.0*
*IDC **19** 15:30:51.6±0.9,21˚.71N×144˚.52E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=34.9km s-min=21.3km az=104.0*
ISC 19 15:30:52.8±1.5,**22˚.0N**±0˚.1×**145˚.1E**±0˚.3,**h35**km,**n20,**
σ1$81/17,mb4.0/12,North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.72**	**333**	Pn	**Pn**	**15 32 10.6**	**-4.7**
GUMO	**Guam**	**8.39**	**182**	Pn	**Pn**	**15 32 49.5**	**-2.5**
JOW	**Kunigami**	**16.08**	**291**	Pn	**Pn**	**15 34 36.7**	**+0.5**
JOW				IAmb	IAmb	15 34 44.7	
	comp=Z,15nm,0.8s						
KSRS	**Korea Array**	**21.39**	**320**	P	P	15 35 45.8	+8.4
	comp=Z,0.9nm,0.7s,baz=144,slow=8.0,SNR=5.9						
COEN	**Coen**	**35.80**	**183**	P	**P**	**15 37 49.7**	**+0.7**
KNRA	**Kununurra**	**40.75**	**205**	P	**P**	**15 38 29.9**	**-0.7**
WB0	**Warramunga Arr**	**42.84**	**195**	P	**P**	**15 38 47.8**	**+0.2**
WB0				IAmb	IAmb	15 38 53.1	
	comp=Z,9.2nm,1.4s						
WR0	**Warramunga Arr**	**42.99**	**195**	P	**P**	**15 38 48.9**	**+0.1**
WR0				IAmb	IAmb	15 38 50.1	
	comp=Z,5.9nm,1.2s						
WB2	**Warramunga Arr**	**43.02**	**195**	P	**P**	**15 38 49.5**	**+0.4**
WB2				IAmb	IAmb	15 38 50.1	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**43.02**	**195**	P	**P**	**15 38 49.5**	**+0.4**
	comp=Z,3.2nm,0.5s,baz=15,slow=8.8,SNR=37						
	comp=Z,3.2nm,0.5s						
WRA	**Warramunga Arr**	**43.02**	**195**	P	**P**	**15 38 49.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**43.36**	**274**	P	**P**	**15 38 52.7**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=60,slow=7.5,SNR=2.2						
	comp=Z,0.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**44.20**	**207**	P	**P**	**15 38 58.4**	**-0.2**
FITZ				IAmb	IAmb	15 39 10.9	
	comp=Z,12nm,1.4s						
AS31	**Alice Springs**	**46.70**	**194**	P	**P**	**15 39 18.1**	**-0.4**
ASAR	**Alice Springs**	**46.71**	**194**	P	**P**	**15 39 18.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=12,slow=7.1,SNR=21						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**46.71**	**194**	P	**P**	**15 39 17.8**	**-0.7**
MKAR	**Makanchi Array**	**55.81**	**312**	P	**P**	**15 40 29.4**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=108,slow=4.0,SNR=4.9						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**60.93**	**27**	P	P	15 41 09.8	+7.9
	comp=Z,0.6nm,0.8s,baz=269,slow=6.4,SNR=7.8						
	comp=Z,0.6nm,0.8s						
NVAR	**Mina Array Bea**	**81.53**	**52**	P	P	15 43 15.7	+8.4
	comp=Z,0.5nm,0.6s,baz=278,slow=6.5,SNR=5.0						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**83.66**	**335**	P	**P**	**15 43 20.4**	**+2.8**
	comp=Z,0.8nm,0.5s,baz=43,slow=3.6,SNR=6.4						
	comp=Z,0.8nm,0.5s						

*SKHL **19** 15:48:16.1±0.4,50˚.50N×152˚.90E, h318km±9km, mb4.7/6, msha5.1/5*
*MOS **19** 15:48:16.7±0.8,50˚.53N×152˚.89E, h316km, mb3.9/18, Error ellipse: s-maj=9.7km s-min=5.0km az=63.8*
*NEIC **19** 15:48:17.2±1.5,50˚.4N±0˚.1×153˚.0E±0˚.2, h310km±11km, mb4.2/71, Error ellipse: s-maj=20.2km s-min=11.7km az=140.0*
*IDC **19** 15:48:18.9±1.5,50˚.64N×152˚.86E, h314km±15km, mb3.4/20, mbtmp4.1/24, Error ellipse: s-maj=13.2km s-min=9.8km az=152.0*
*KRSC **19** 15:48:18.3±1.6,50˚.32N×153˚.98E, h340km±14km, ML4.6*
ISC 19 15:48:16.8±0.4,**50˚.50N**±0˚.06×**153˚.02E**±0˚.05,**h300**km,
n341,σ1$39/368,mb4.1/69,6C-5D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.98**	**84**	*e*PN	**Pn**	**15 49 05.1**	**+1.7**
SKR				*e*S	**S**	**15 49 40.8**	**+0.3**
SKR				pmax	pmax		
	comp=Z,68nm,0.5s						
SKR				smax	smax		
	comp=N,71nm,1.0s						
SKR				smax	smax		
	comp=E,84nm,0.8s						
SKR	**Severo-Kuril's**	**1.98**	**84**	*e*P	**Pn**	**15 49 04.7**	**+1.4**
SKR				*e*S	**S**	**15 49 43.0**	**+2.5**
SKR	**Severo-Kuril's**	**1.98**	**84**	*e*P	**Pn**	**15 49 04.8**	**+1.4**
SKR				AMB	AMB	15 49 05.5	
	comp=E,70nm,0.5s						
SKR				*e*S	**S**	**15 49 41.6**	**+1.1**
SKR				A	A	15 49 44.5	
	comp=E,70nm,0.8s						
SKR				A	A	15 49 44.5	
	comp=E,80nm,0.8s						
PAU	**Pauzhetka**	**2.59**	**67**	PN	**Pn**	**15 49 10.2**	**+1.7**
PAU	**Pauzhetka**	**2.59**	**67**	*e*P	**Pn**	**15 49 10.2**	**+1.7**
PAU	**Pauzhetka**	**2.59**	**67**	*i* P	**Pn**	**15 49 10.3**	**+1.7**
PAU				AMB	AMB	15 49 10.7	
	comp=E,200nm,0.7s						
PAU				*e*S	**S**	**15 49 51.4**	**+1.7**
PAU				A	A	15 49 52.2	
	comp=E,200nm,0.9s						
KDTR	**Khodutka, Kamc**	**3.44**	**66**	PN	**Pn**	**15 49 17.9**	**+1.0**
KDTR				S	**S**	**15 50 02.4**	**-2.6**
KDTR	**Khodutka, Kamc**	**3.44**	**66**	*e*P	**Pn**	**15 49 17.9**	**+1.0**
KDTR				*e*S	**S**	**15 50 02.4**	**-2.6**
APC	**Apacha**	**3.54**	**45**	PN	**Pn**	**15 49 19.3**	**+1.4**
APC	**Apacha**	**3.54**	**45**	*e*P	**Pn**	**15 49 19.3**	**+1.4**
GRL	**Gorelyy**	**3.77**	**55**	PN	**Pn**	**15 49 22.1**	**+1.6**
GRL	**Gorelyy**	**3.77**	**55**	*e*P	**Pn**	**15 49 22.1**	**+1.6**
PEA0B	**Petropavlovsk-**	**3.91**	**46**	Pn	**Pn**	**15 49 23.0**	**+1.1**
PEA0B	**Petropavlovsk-**	**3.91**	**46**	*ce*PN	**Pn**	**15 49 23.3**	**+1.4**
PETK	**Petropavlovsk-**	**3.91**	**46**	P	**Pn**	**15 49 22.8**	**+0.9**
	comp=E,21nm,0.9s,baz=232,slow=4.6,SNR=46						
PETK	**Petropavlovsk-**	**3.91**	**46**	Pn	**Pn**	**15 49 22.4**	**+0.5**
KRMR	**Karymshinskiy**	**3.95**	**52**	PN	**Pn**	**15 49 24.5**	**+2.2**
KRMR	**Karymshinskiy**	**3.95**	**52**	*e*P	**Pn**	**15 49 24.5**	**+2.2**
PET	**Petropavlovsk**	**4.32**	**52**	Pn	**Pn**	**15 49 28.4**	**+2.0**
PET	**Petropavlovsk**	**4.32**	**52**	*e*PN	**Pn**	**15 49 29.2**	**+2.8**
PET				*e*S	**S**	**15 50 22.7**	**+0.5**
PET				smax	smax		
	comp=E,57nm,0.6s						
PET				smax	smax		
	comp=N,72nm,0.5s						
PET	**Petropavlovsk**	**4.32**	**52**	*e*P	**Pn**	**15 49 28.9**	**+2.5**
PET				AMB	AMB	15 49 29.3	
	comp=N,70nm,0.9s						
PET				*e*S	**S**	**15 50 22.7**	**+0.5**
PET				A	A	15 50 28.0	
	comp=N,70nm,0.5s						
PET				A	A	15 50 28.0	
	comp=N,60nm,0.5s						
DALK	**Dalny**	**4.37**	**52**	PN	**Pn**	**15 49 29.4**	**+2.4**
DALK				S	**S**	**15 50 22.5**	**-0.8**
DALK	**Dalny**	**4.37**	**52**	*e*P	**Pn**	**15 49 29.4**	**+2.4**
DALK				*e*S	**S**	**15 50 22.5**	**-0.8**
GNL	**Ganaly**	**4.41**	**42**	PN	**Pn**	**15 49 29.0**	**+1.4**
GNL				S	**S**	**15 50 23.4**	**-0.9**
GNL	**Ganaly**	**4.41**	**42**	*e*P	**Pn**	**15 49 29.0**	**+1.4**
GNL				*e*S	**S**	**15 50 23.4**	**-0.9**
KOK	**Koryaka**	**4.46**	**49**	PN	**Pn**	**15 49 31.2**	**+3.0**
KOK	**Koryaka**	**4.46**	**49**	*e*P	**Pn**	**15 49 31.2**	**+3.0**
KOK	**Koryaka**	**4.46**	**49**	*e*P	**Pn**	**15 49 31.2**	**+3.0**
AVH	**Avacha**	**4.50**	**50**	PN	**Pn**	**15 49 29.3**	**+0.8**
AVH	**Avacha**	**4.50**	**50**	*e*P	**Pn**	**15 49 29.3**	**+0.8**
UGLR	**Uglovaya**	**4.51**	**51**	PN	**Pn**	**15 49 31.6**	**+2.9**
UGLR				S	**S**	**15 50 26.1**	**-0.2**
UGLR	**Uglovaya**	**4.51**	**51**	*e*P	**Pn**	**15 49 31.6**	**+2.9**
UGLR				*e*S	**S**	**15 50 26.1**	**-0.2**
KRER	**Koryakskii**	**4.53**	**49**	PN	**Pn**	**15 49 31.9**	**+2.9**
KRER	**Koryakskii**	**4.53**	**49**	*e*P	**Pn**	**15 49 31.9**	**+2.9**
SMAR	**Somma**	**4.53**	**50**	PN	**Pn**	**15 49 29.7**	**+0.7**
SMAR	**Somma**	**4.53**	**50**	*e*P	**Pn**	**15 49 29.7**	**+0.7**
SPN	**Mys Shipunski**	**5.07**	**56**	PN	**Pn**	**15 49 35.5**	**+0.6**
SPN	**Mys Shipunski**	**5.07**	**56**	*e*P	**Pn**	**15 49 35.5**	**+0.6**
SPN				*e*S	**S**	**15 50 32.6**	**-5.2**
SPN	**Mys Shipunski**	**5.07**	**56**	*e*P	**Pn**	**15 49 35.5**	**+0.6**
KUR	**Kuril'sk**	**6.31**	**215**	*e*PN	**Pn**	**15 49 50.9**	**+1.1**
KUR				S	**S**	**15 51 04.9**	**+0.1**
KUR				pmax	pmax		
	comp=Z,51nm,0.4s						
KUR				pmax	pmax		
	comp=E,17nm,0.2s						
KUR				pmax	pmax		
	comp=N,25nm,0.4s						
KUR				smax	smax		
	comp=N,27nm,0.5s						
KUR				smax	smax		
	comp=E,9.0nm,0.5s						
KUR	**Kuril'sk**	**6.31**	**215**	*e*P	**Pn**	**15 49 50.9**	**+1.1**
KUR				AMB	AMB	15 49 53.6	
	comp=E,50nm,0.4s						
KUR				*e*S	**S**	**15 51 04.9**	**+0.1**
KUR				A	A	15 51 13.1	
	comp=E,30nm,0.5s						
KUR				A	A	15 51 13.1	
	comp=E,10.0nm,0.5s						
ESO	**Esso**	**6.42**	**30**	PN	**Pn**	**15 49 53.4**	**+2.5**
ESO	**Esso**	**6.42**	**30**	*e*P	**Pn**	**15 49 53.4**	**+2.5**
ESO	**Esso**	**6.42**	**30**	*e*P	**Pn**	**15 49 53.4**	**

ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA Zeya 16.12 292 *e*P **P 15 51 46.9 +1.0**
JSD Sado 16.30 226 P **Pn 15 51 50.8 +0.4**
YAK Yakutsk 17.24 321 P **P 15 51 58.3 +0.4**
comp=Z,6.2nm,0.4s,baz=233,slow=0.5,SNR=11
YAK Yakutsk 17.24 321 *e*P **P 15 51 57.9 +0.1**
YAK *e*S **S 15 55 04.0 +2.6**
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=Z,16nm,0.8s
YAK smax smax
comp=E,127nm,3.3s
YAK smax smax
comp=N,91nm,3.0s
YAK Yakutsk 17.24 321 *e*P **P 15 51 58.0 +0.1**
MAJO Matsushiro 17.56 223 P **Pn 15 52 03.4 -1.7**
MAJO Matsushiro 17.56 223 P **Pn 15 52 03.4 -1.7**
MAJO pmax pmax
comp=Z,21nm,0.9s
MJAR Matsushiro Arr 17.56 223 P **Pn 15 52 03.1 -2.0**
comp=Z,16nm,0.7s,baz=13,slow=12,SNR=46
ADK Adak 18.98 74 P **P 15 52 16.5 -0.1**
ADK Adak 18.98 74 P **P 15 52 16.5 -0.1**
ADK pmax pmax
comp=Z,35nm,1.5s
KSRS Korea Array 22.14 244 P **P 15 52 50.6 +2.7**
comp=Z,3.0nm,0.8s,baz=46,slow=10.0,SNR=10
comp=Z,3.0nm,0.8s
SDPT Sand Point 28.03 62 P **P 15 53 38.6 -1.9**
S14K Fog Glacier 28.40 60 P **P 15 53 44.3 +0.5**
baz=278
N16K Nishlik Lake 28.45 51 P **P 15 53 44.5 +0.3**
baz=271
CNBA Chernabura Isl 28.63 63 P **P 15 53 45.1 -0.7**
CHGN Chignik 29.02 59 P **P 15 53 49.0 -0.2**
baz=279
TTA Tatalina 29.74 46 P **P 15 53 56.3 +0.7**
baz=269
ULN Ulaanbaatar 29.79 283 *de*P **P 15 53 55.8 -0.6**
ULN pmax pmax
comp=Z,2.0nm,0.8s
ULN Ulaanbaatar 29.79 283 *e*P **P 15 53 55.8 -0.6**
N18K Kilae Creek 29.86 50 P **P 15 53 56.9 +0.3**
N18K IAmb IAmb 15 53 57.1
comp=Z,9.7nm,1.4s
N18K Kilae Creek 29.86 50 P **P 15 53 56.5 -0.1**
baz=273
R17K Ugashik Creek 29.91 56 P **P 15 53 57.0 -0.1**
baz=278
HHC Hu-ho-hao-te 30.18 268 *e*P **P 15 53 59.8 +0.1**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,270nm,5.8s
SONM Songino Array 30.21 283 P **P 15 53 59.9 -0.2**
comp=Z,0.8nm,0.4s,baz=74,slow=7.5,SNR=8.5
comp=Z,0.8nm,0.4s
SONM Songino Array 30.21 283 P **P 15 53 59.3 -0.7**
O18K Koktuh Hills 30.26 52 P **P 15 53 59.2 -0.9**
baz=275
JOW Kunigami 30.26 228 P **P 15 54 01.1 +0.6**
L19K White Mountain 30.29 47 P **P 15 54 01.0 +0.6**
P18K Big Mountain, 30.30 53 P **P 15 54 00.2 -0.3**
baz=276
M19K Big River Lodg 30.52 48 P **P 15 54 03.2 +0.9**
M19K Big River Lodg 30.52 48 P **P 15 54 03.3 +0.9**
baz=272
N19K Bonanza Creek 30.54 50 P **P 15 54 03.7 +1.1**
baz=274
J20K Nowinta River 30.60 43 P **P 15 54 02.9 -0.1**
J20K Nowinta River 30.60 43 P **P 15 54 03.9 +0.9**
baz=269
K20K Telida 30.63 45 P **P 15 54 04.2 +0.9**
baz=270
A21K Barrow 30.71 29 P **P 15 54 05.1 +1.3**
baz=254
L20K Farewell, AK 30.73 47 P **P 15 54 04.8 +0.5**
baz=272
IMAR Indian Mountai 30.84 40 P **P 15 54 05.3 +0.2**
G21K Allakaket 30.98 39 P **P 15 54 07.3 +0.9**
baz=266
F21K Alatna River 31.05 37 P **P 15 54 07.7 +0.8**
baz=264
M20K Styx River 31.11 48 P **P 15 54 08.8 +1.2**
baz=274
Q19K Cape Douglas, 31.16 54 P **P 15 54 08.7 +0.6**
baz=278
ZAK Zakamensk 31.20 289 *e*P **P 15 54 08.6 +0.1**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
ZAK Zakamensk 31.20 289 *e*P **P 15 54 08.6 +0.1**
H21K Melozitna Rive 31.21 40 P **P 15 54 08.7 +0.3**
H21K Melozitna Rive 31.21 40 P **P 15 54 09.0 +0.6**
baz=268
PPLA Purkeypile 31.49 46 P **P 15 54 12.2 +1.2**
baz=273
O20K Slope Mountain 31.53 51 P **P 15 54 11.9 +0.6**
baz=277
I21K Tanana 31.55 41 P **P 15 54 12.0 +0.7**
baz=269
F22K John River 31.58 37 P **P 15 54 12.1 +0.5**
baz=265
OHAK Old Harbor 31.64 57 P **P 15 54 11.8 -0.3**
OHAK IAmb IAmb 15 54 12.4
comp=Z,8.1nm,0.8s
OHAK Old Harbor 31.64 57 P **P 15 54 11.9 -0.2**
baz=281
E22K Anaktuvuk Pass 31.77 36 P **P 15 54 14.0 +0.7**
baz=264
G22K Bettles 31.80 38 P **P 15 54 13.8 +0.3**
baz=267
H22K Ishtalitna Cre 31.81 40 P **P 15 54 14.5 +0.9**
baz=269
KDAK Kodiak Island 31.90 56 P **P 15 54 14.3 -0.1**
KDAK Kodiak Island 31.90 56 P **P 15 54 14.3 -0.1**
KDAK pmax pmax
comp=Z,38nm,1.5s
KDAK Kodiak Island 31.90 56 P **P 15 54 14.3 -0.1**
baz=281
BPAW Bear Paw Mtn. 31.98 43 P **P 15 54 13.7 -1.4**
BPAW Bear Paw Mtn. 31.98 43 P **P 15 54 16.0 +0.9**
baz=272
MLY Manley 32.07 42 P **P 15 54 16.5 +0.6**
baz=270
CAPN Captain Cook N 32.17 50 P **P 15 54 16.9 +0.3**
baz=277
CNPM China Poot 32.30 52 P **P 15 54 18.2 +0.3**
CNPM IAmb IAmb 15 54 19.5
comp=Z,11nm,0.9s
TRF Thorofare Moun 32.32 45 P **P 15 54 18.6 +0.3**
TRF IAmb IAmb 15 54 19.8
comp=Z,6.7nm,1.0s
TRF Thorofare Moun 32.32 45 P **P 15 54 18.9 +0.6**
baz=273
G23K Bananza Creek 32.38 38 P **P 15 54 19.2 +0.7**
baz=268
C23K Itkillik River 32.39 33 P **P 15 54 19.2 +0.7**
baz=263
H23K Yukon River 32.56 40 P **P 15 54 21.0 +0.9**
H23K Yukon River 32.56 40 P **P 15 54 20.9 +0.9**
baz=270
TOLK Toolik Lake Re 32.64 35 P **P 15 54 21.1 +0.3**
TOLK IAmb IAmb 15 54 34.8
comp=Z,7.3nm,1.2s
TOLK Toolik Lake Re 32.64 35 P **P 15 54 21.3 +0.5**
baz=266
I23K Minto, Yukon-K 32.65 41 P **P 15 54 21.4 +0.6**
I23K Minto, Yukon-K 32.65 41 P **P 15 54 21.5 +0.7**
baz=272
NEA2 Nenana 32.80 42 P **P 15 54 22.6 +0.5**
baz=273
O22K Cooper Landing 32.90 50 P **P 15 54 23.1 +0.1**
baz=278
MCK McKinley 32.91 44 P **P 15 54 23.9 +0.8**
MCK IAmb IAmb 15 54 24.6
comp=Z,6.3nm,0.8s
MCK McKinley 32.91 44 P **P 15 54 23.9 +0.8**
MCK pmax pmax
comp=Z,6.0nm,0.8s
MCK McKinley 32.91 44 P **P 15 54 23.6 +0.5**
baz=274
D24K Happy Valley 32.95 34 P **P 15 54 23.8 +0.5**
baz=266
RND Reindeer 32.97 45 P **P 15 54 23.6 -0.1**
RND IAmb IAmb 15 54 24.4
comp=Z,4.8nm,0.6s
RND Reindeer 32.97 45 P **P 15 54 23.6 -0.1**
RND pmax pmax
comp=Z,5.0nm,0.6s
E24K Your Creek 33.02 36 P **P 15 54 25.4 +1.4**
baz=268,SNR=5.7
C24K Franklin Bluff 33.04 33 P **P 15 54 24.9 +0.8**
baz=265
SEW Seward 33.10 51 P **P 15 54 23.7 -1.0**
SEW IAmb IAmb 15 54 33.5
comp=Z,10nm,1.2s
SEW Seward 33.10 51 P **P 15 54 23.9 -0.8**
baz=279
GHO Glory Hole Cre 33.11 48 P **P 15 54 25.7 +0.7**
WAT1 Susitna Watana 33.16 46 P **P 15 54 25.7 +0.4**
baz=276
WRH Wood River Hil 33.23 43 P **P 15 54 27.0 +1.2**
F24K Squaw Lake 33.23 37 P **P 15 54 26.6 +0.7**
baz=269
H24K Noodor Dome 33.25 40 P **P 15 54 26.8 +0.8**
baz=272
TCOL CIGO, UAF Yank 33.30 42 P **P 15 54 27.5 +1.1**
baz=273
COLA College 33.31 42 *ce*P **P 15 54 27.3 +0.9**
COLA pmax pmax
comp=Z,7.0nm,0.6s
COLA College 33.31 42 P **P 15 54 27.3 +0.9**
baz=273
CCB Clear Creek Bu 33.34 42 P **P 15 54 27.5 +0.8**
CCB IAmb IAmb 15 54 27.8
comp=Z,4.1nm,0.4s
KNK Knik Glacier 33.38 48 P **P 15 54 27.3 +0.1**
KNK Knik Glacier 33.38 48 P **P 15 54 28.0 +0.8**
baz=278
SML Sawmill 33.38 47 P **P 15 54 28.2 +0.9**
SML Sawmill 33.38 47 P **P 15 54 28.3 +1.1**
baz=278,SNR=9.8
G24K Hadweenzic Riv 33.39 39 P **P 15 54 28.2 +1.0**
baz=271
POKR Poker Plat Res 33.47 41 P **P 15 54 29.0 +1.2**
baz=273
PWL Port Wells 33.52 49 P **P 15 54 28.5 +0.1**
PWL IAmb IAmb 15 54 29.9
comp=Z,4.5nm,0.5s
PWL Port Wells 33.52 49 P **P 15 54 29.2 +0.8**
baz=279
WAT6 Susitna Watana 33.56 46 P **P 15 54 29.0 +0.1**
baz=277
DHY Denali Highway 33.67 45 P **P 15 54 29.8 0.0**
DHY IAmb IAmb 15 54 33.4
comp=Z,7.8nm,1.4s
DHY Denali Highway 33.67 45 P **P 15 54 30.0 +0.2**
baz=276
M23K Glacier View 33.67 47 P **P 15 54 29.8 +0.1**
baz=278
IL31 33.72 42 P **P 15 54 30.4 +0.4**
IL31 IAmb IAmb 15 54 31.3
comp=Z,4.6nm,0.5s
ILAR Eielson Array 33.72 42 P **P 15 54 30.9 +0.8**
comp=Z,2.6nm,0.6s,baz=264,slow=5.8,SNR=44
comp=Z,2.6nm,0.6s
HDA Harding Lake 33.73 43 P **P 15 54 29.4 -0.7**
HDA IAmb IAmb 15 54 31.4
comp=Z,4.7nm,0.6s
HDA Harding Lake 33.73 43 P **P 15 54 30.4 +0.3**
baz=275,SNR=6.4
D25K Kavik River 33.83 34 P **P 15 54 31.7 +0.7**
baz=268
SCM Sheep Creek Mo 33.85 47 P **P 15 54 31.6 +0.3**
SCM IAmb IAmb 15 54 33.0
comp=Z,7.3nm,0.8s
SCM Sheep Creek Mo 33.85 47 P **P 15 54 31.6 +0.3**
SCM pmax pmax
comp=Z,7.0nm,0.8s
SCM Sheep Creek Mo 33.85 47 P **P 15 54 32.3 +1.0**
baz=278
H25K Birch Creek 34.07 39 P **P 15 54 34.2 +1.3**
baz=273
F25K Christian Rive 34.09 37 P **P 15 54 34.3 +1.0**
baz=271
E25K Arctic Village 34.11 36 P **P 15 54 33.7 +0.4**
baz=270
GLI Glacier Island 34.12 49 P **P 15 54 34.2 +0.8**
baz=280
PRP Porcupine Dome 34.24 41 P **P 15 54 33.7 -0.9**
PRP Porcupine Dome 34.24 41 P **P 15 54 36.1 +1.4**
baz=274,SNR=6.4
K24K Donnelly Dome 34.30 44 P **P 15 54 34.9 -0.1**
baz=277
M24K Tolsona, Glenn 34.35 47 P **P 15 54 36.3 +0.8**
M24K IAmb IAmb 15 54 50.1
comp=Z,9.0nm,0.9s
M24K Tolsona, Glenn 34.35 47 P **P 15 54 36.8 +1.2**
baz=279
J25K Salcha River, 34.39 42 P **P 15 54 35.5 -0.3**
J25K IAmb IAmb 15 54 36.7
comp=Z,3.1nm,0.6s
J25K Salcha River, 34.39 42 P **P 15 54 35.5 -0.3**
baz=276,SNR=6.6
FID Port Fidalgo 34.44 49 P **P 15 54 35.0 -1.2**
FID IAmb IAmb 15 55 17.4
comp=Z,6.4nm,1.0s
HIN Hinchinbrook I 34.49 50 P **P 15 54 36.3 -0.4**
BMAR Burnt Mountain 34.50 37 P **P 15 54 36.4 -0.3**
KLU Klutina 34.57 48 P **P 15 54 37.4 0.0**
KLU IAmb IAmb 15 55 05.2
comp=Z,14nm,1.4s
KLU Klutina 34.57 48 P **P 15 54 38.0 +0.5**
baz=280
F26K Sheenjek River 34.66 37 P **P 15 54 39.1 +1.0**
baz=272
RIDG Independent Ri 34.72 44 P **P 15 54 38.3 -0.4**
RIDG IAmb IAmb 15 54 51.9
comp=Z,9.6nm,1.3s
RIDG Independent Ri 34.72 44 P **P 15 54 39.4 +0.7**
baz=278
HARP HAARP 34.77 46 P **P 15 54 40.0 +0.9**
baz=279
C27K Jago River 34.78 33 P **P 15 54 39.8 +0.8**
baz=270
EYAK Cordova Ski Ar 34.83 49 P **P 15 54 40.9 +1.4**
baz=281
G26K Porcupine Rive 34.84 38 P **P 15 54 40.7 +1.2**
baz=274
SCRK Sand Creek 35.06 43 P **P 15 54 41.5 -0.1**
SCRK IAmb IAmb 15 54 42.3
comp=Z,5.8nm,0.5s
SCRK Sand Creek 35.06 43 P **P 15 54 41.7 +0.1**
baz=278,SNR=10
DOT Dot Lake 35.08 44 P **P 15 54 41.0 -0.6**
DOT IAmb IAmb 15 54 42.5
comp=Z,6.1nm,1.0s
N25K Chitina, Valde 35.17 47 P **P 15 54 40.8 -1.8**
N25K IAmb IAmb 15 54 44.6
comp=Z,4.1nm,0.7s
N25K Chitina, Valde 35.17 47 P **P 15 54 42.1 -0.4**
baz=281
J26L Joseph Creek 35.18 42 P **P 15 54 42.3 -0.3**
J26L Joseph Creek 35.18 42 P **P 15 54 42.3 -0.3**
baz=278
I26K Coal Creek Min 35.25 41 P **P 15 54 40.7 -2.3**
I26K Coal Creek Min 35.25 41 P **P 15 54 42.8 -0.3**
baz=277
BMRM Bremner River 35.29 48 P **P 15 54 44.8 +1.2**
baz=282
MENT Mentasta 35.34 45 P **P 15 54 43.5 -0.4**
MENT IAmb IAmb 15 54 48.0
comp=Z,4.3nm,0.5s
RAGM Ragged Mountai 35.38 49 P **P 15 54 43.1 -1.2**
RAGM IAmb IAmb 15 55 23.7
comp=Z,9.5nm,1.1s
E27K Coleen River 35.59 36 P **P 15 54 46.9 +1.0**
baz=274
HMT Hamilton 35.59 49 P **P 15 54 46.8 +0.8**
HMT IAmb IAmb 15 54 55.1
comp=Z,13nm,1.3s
G27K Doyon Strip 35.69 38 P **P 15 54 47.8 +1.0**
baz=276
M26K Nabesna, AK 35.77 46 P **P 15 54 47.2 -0.3**
M26K IAmb IAmb 15 54 50.1
comp=Z,7.1nm,0.8s
M26K Nabesna, AK 35.77 46 P **P 15 54 49.0 +1.5**
baz=281
H27K Steamboat Moun 35.81 39 P **P 15 54 49.6 +1.8**
baz=277
I27K Kandik River 35.85 40 P **P 15 54 48.5 +0.3**
baz=278
K27K Chicken 35.89 43 P **P 15 54 48.7 +0.2**
K27K IAmb IAmb 15 54 50.3
comp=Z,5.6nm,0.9s
K27K Chicken 35.89 43 P **P 15 54 49.2 +0.7**
baz=279
EGAK Eagle 36.16 41 P **P 15 54 50.6 -0.1**
EGAK IAmb IAmb 15 54 51.7
comp=Z,6.3nm,0.9s
EGAK Eagle 36.16 41 P **P 15 54 51.1 +0.3**
baz=279,SNR=8.3
L27K Beaver Creek, 36.17 44 P **P 15 54 52.2 +1.4**
L27K Beaver Creek, 36.17 44 P **P 15 54 52.7 +1.8**
baz=281,SNR=15
BCAR Beaver Creek A 36.19 44 P **P 15 54 52.7 +1.7**
M27K Edge Creek, AK 36.28 46 P **P 15 54 53.6 +1.6**
M27K IAmb IAmb 15 54 54.6
comp=Z,8.1nm,0.7s
M27K Edge Creek, AK 36.28 46 P **P 15 54 53.8 +1.8**
baz=282,SNR=7.7
BVCY Beaver Creek 36.74 45 P **P 15 54 57.1 +1.5**
baz=282
MESA MESA 36.75 49 P **P 15 54 57.5 +1.5**
baz=285
CTG Chitna Glacier 36.85 48 P **P 15 54 58.0 +1.3**
baz=284
CTGM Chitina Glacie 36.85 48 P **P 15 54 57.7 +1.0**
CTGM IAmb IAmb 15 54 59.6
comp=Z,13nm,1.1s
LOGN Logan Glacier 37.04 48 P **P 15 54 59.2 +0.8**
LOGN IAmb IAmb 15 55 15.3
comp=Z,13nm,1.5s
YUK3 Moose Creek 37.06 46 P **P 15 54 59.8 +1.1**
baz=284
TABL Table Mountain 37.07 49 P **P 15 54 59.0 +0.3**
TABL IAmb IAmb 15 55 00.4
comp=Z,11nm,0.8s
I29M Ogilvie Camp, 37.25 40 P **P 15 55 00.5 +0.6**
I29M IAmb IAmb 15 55 01.8
comp=Z,7.7nm,0.8s
I29M Ogilvie Camp, 37.25 40 P **P 15 55 01.2 +1.3**
baz=281,SNR=11
O28M Mount Upton 37.44 48 P **P 15 55 02.9 +1.1**
baz=285
PINM Pinnacle 37.59 49 P **P 15 55 03.9 +1.0**
baz=286
M29M Somme Creek 37.81 45 P **P 15 55 06.0 +1.2**
baz=284
YUK4 Talbot Arm 38.01 47 P **P 15 55 07.7 +1.2**
baz=285
O29M Mount Kennedy 38.34 48 P **P 15 55 10.7 +1.6**
baz=287
M30M Minto, Yukon 38.53 44 P **P 15 55 10.9 +0.3**
M30M Minto, Yukon 38.53 44 P **P 15 55 12.1 +1.5**
baz=285
INK Inuvik 38.56 35 P **P 15 55 11.8 +1.1**
comp=Z,3.4nm,0.3s,baz=268,slow=4.5,SNR=3.8
comp=Z,3.4nm,0.3s
INK Inuvik 38.56 35 P **P 15 55 11.2 +0.6**
baz=281
HYT Haines Junctio 38.69 47 P **P 15 55 14.1 +2.1**
HYT IAmb IAmb 15 55 15.5
comp=Z,9.3nm,1.2s
HYT Haines Junctio 38.69 47 P **P 15 55 14.2 +2.1**
baz=287
N30M Aishikik Lake 38.70 46 P **P 15 55 14.2 +2.2**
baz=286
P29M Windy Craggy 38.94 49 P **P 15 55 16.2 +2.2**
baz=288
P30M Million Dollar 39.16 48 P **P 15 55 17.6 +1.7**
baz=288
N31M Braeburn, Yuko 39.30 46 P **P 15 55 19.0 +2.1**
baz=287
O30N Mendenhall 39.37 47 P **P 15 55 19.4 +1.8**
baz=288
PLBC Pleasant Camp 39.66 49 P **P 15 55 21.7 +1.8**
baz=289
M31M Drury Creek, Y 39.71 44 P **P 15 55 21.4 +1.2**
M31M Drury Creek, Y 39.71 44 P **P 15 55 21.7 +1.5**
baz=288
WHY Whitehorse 39.97 47 P **P 15 55 24.4 +1.9**
baz=289
ZALV Zalesovo Beam 40.46 302 P **P 15 55 25.4 -0.9**
comp=Z,2.8nm,0.6s,baz=63,slow=6.5,SNR=12
ZALV PcP **PcP 15 57 21.9 -0.6**
comp=Z,0.7nm,0.4s,baz=108,slow=3.8,SNR=2.9
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 40.46 302 *i* P **P 15 55 25.2 -1.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
DGZ Jazzator, Alta 40.83 295 ⇑ *e*P **P 15 55 29.2 -0.5**
DGZ *i* *PP **pP 15 56 32.0 +2.4**
DGZ pmax pmax
comp=Z,4.0nm,0.8s
MMPY Sheldon Lake, 40.96 43 P **P 15 55 31.7 +1.3**
baz=289
SIT Sitka 41.03 52 P **P 15 55 32.7 +1.6**
baz=293
P33M Teslin, Yukon 41.09 47 P **P 15 55 32.3 +0.8**
P33M Teslin, Yukon 41.09 47 P **P 15 55 32.9 +1.4**
baz=291
R33M Jennings River 42.26 48 P **P 15 55 42.7 +1.7**
baz=293
WMQ Urumqi 43.62 288 *e*P **P 15 55 53.3 +1.3**
MK31 Makanchi Array 45.25 294 P **P 15 56 03.8 -1.0**
MK31 Makanchi Array 45.25 294 *d*P **P 15 56 04.0 -0.8**
MKAR Makanchi Array 45.25 294 P **P 15 56 04.4 -0.4**
comp=Z,3.6nm,0.7s,baz=60,slow=7.6,SNR=48
MKAR PcP **PcP 15 57 37.6 -1.3**
comp=Z,0.2nm,0.4s,baz=70,slow=5.8,SNR=1.9
comp=Z,3.6nm,0.7s
MKAR Makanchi Array 45.25 294 P **P 15 56 04.0 -0.7**
KURK Kurchatov 45.31 301 P **P 15 56 04.3 -0.8**
KURK IAmb IAmb 15 56 05.3
comp=Z,12nm,0.6s
KURK Kurchatov 45.31 301 *d*P **P 15 56 04.4 -0.7**
KURK pmax pmax
comp=Z,17nm,1.3s
KURK Kurchatov 45.31 301 *e*P **P 15 56 04.4 -0.7**
MAKZ Makanchi 45.43 294 P **P 15 56 04.9 -1.2**
MAKZ Makanchi 45.43 294 P **P 15 56 04.9 -1.2**
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
PZH PanZhiHua 45.61 258 P **P 15 56 07.1 -0.8**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,120nm,4.8s
YKA Yellowknife Ar 47.99 39 P **P 15 56 26.4 +0.8**
comp=Z,1.5nm,0.5s,baz=302,slow=6.9,SNR=4.7
comp=Z,1.5nm,0.5s
BRVK Borovoye 48.52 307 P **P 15 56 29.1 -0.6**
BRVK IAmb IAmb 15 56 30.0
comp=Z,5.9nm,0.7s
BRVK Borovoye 48.52 307 P **P 15 56 29.1 -0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 48.52 307 *e*P **P 15 56 29.1 -0.6**
AAK Ala-Archa 52.18 294 ⇑ *e*P **P 15 56 57.0 -0.3**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 52.18 294 *e*P **P 15 56 57.0 -0.3**
ARU Arti 52.24 316 P **P 15 56 56.1 -1.2**
ARU Arti 52.24 316 *d*P **P 15 56 56.5 -0.8**
ARU pmax pmax
comp=Z,12nm,0.8s
ARU Arti 52.24 316 *e*P **P 15 56 56.5 -0.8**
PRGR Permogore 54.20 326 *e*P **P 15 57 10.5 -0.9**
ARCES ARCESS Array B 54.30 340 P **P 15 57 11.0 -1.0**
comp=Z,0.3nm,0.3s,baz=38,slow=8.1,SNR=8.7
comp=Z,0.3nm,0.3s
JIRN Jiri 54.67 272 *e*P **P 15 57 14.2 -1.5**
comp=Z,6.5nm,0.4s
GUN Gumba 54.70 272 *e*P **P 15 57 14.9 -1.0**
comp=Z,6.3nm,0.3s
RAMN Ramite 54.90 271 *e*P **P 15 57 16.3 -0.9**
comp=Z,6.2nm,0.4s
PKI Pulchoki 55.23 272 *e*P **P 15 57 18.9 -0.8**
comp=Z,4.0nm,0.4s
PKIN Phulchoki 55.23 272 *e*P **P 15 57 18.4 -1.2**
comp=Z,4.1nm,0.4s
DMN Daman 55.40 273 *e*P **P 15 57 20.0 -0.8**
comp=Z,10nm,0.5s
GKN Gorkha 55.42 273 *e*P **P 15 57 20.2 -0.6**
comp=Z,5.3nm,0.3s
J04D Umpqua Nationa 55.46 62 P **P 15 57 22.7 +1.7**
baz=310

DANN	**Dangsing**	**55.74**	**274**	*e*P		**P**	**15 57 22.4**	**-0.9**
	comp=Z,16nm,0.7s							
J05D	**Fort Rock, OR**	**55.92**	**62**	P		**P**	**15 57 26.3**	**+2.1**
	baz=310							
ABKAR	**Akbulak array**	**56.02**	**308**	P		**P**	**15 57 24.1**	**-0.4**
ABKAR				IAmb		IAmb	15 57 24.6	
	comp=Z,7.2nm,0.6s							
CHGR	**Chuyangaron**	**57.84**	**293**	P		**P**	**15 57 36.3**	**-1.3**
CHGR	**Chuyangaron**	**57.84**	**293**	P		**P**	**15 57 36.3**	**-1.3**
CHGR				pmax		pmax		
	comp=Z,21nm,0.3s							
BOZ	**Bozeman (W)**	**59.59**	**54**	P		**P**	**15 57 50.9**	**+1.5**
	baz=313							
FINES	**FINESS Array B**	**60.63**	**334**	P		**P**	**15 57 55.6**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=36,slow=7.5,SNR=26							
	comp=Z,2.4nm,0.5s							
FINES	**FINESS Array B**	**60.63**	**334**	*i* P		**P**	**15 57 55.7**	**-0.2**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.5s							
NVAR	**Mina Array Bea**	**60.80**	**64**	P		**P**	**15 57 58.5**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=294,slow=6.4,SNR=4.3							
	comp=Z,0.5nm,0.6s							
OBN	**Obninsk**	**62.20**	**324**	*i* P		**P**	**15 58 04.0**	**-2.5**
OBN				pmax		pmax		
	comp=Z,6.0nm,1.1s							
OBN	**Obninsk**	**62.20**	**324**	*e*P		**P**	**15 58 04.0**	**-2.5**
R11A	**Troy Canyon, C**	**62.40**	**62**	P		**P**	**15 58 09.5**	**+1.1**
	baz=314							
BW06	**Boulder Array**	**62.62**	**55**	P		**P**	**15 58 09.6**	**-0.3**
BW06	**Boulder Array**	**62.62**	**55**	P		**P**	**15 58 10.7**	**+0.8**
	baz=315							
PD31	**Pinedale Array**	**62.62**	**55**	P		**P**	**15 58 09.1**	**-0.7**
PDAR	**Pinedale Array**	**62.62**	**55**	P		**P**	**15 58 11.2**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=322,slow=1.4,SNR=9.7							
	comp=Z,1.3nm,0.6s							
RSSD	**Black Hills**	**64.48**	**51**	P		**P**	**15 58 22.2**	**+0.3**
	baz=316							
NB2	**NORSAR Subarra**	**64.66**	**341**	P		**P**	**15 58 22.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=25,slow=6.5							
NOA	**NORSAR Array B**	**64.66**	**341**	P		**P**	**15 58 21.3**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=28,slow=6.6,SNR=11							
	comp=Z,0.7nm,0.5s							
HFS	**Hagfors**	**64.92**	**339**	P		**P**	**15 58 23.7**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=60,slow=3.6,SNR=26							
	comp=Z,1.6nm,0.4s							
MONP2	**Monument Peak**	**65.75**	**67**	P		**P**	**15 58 30.6**	**+0.4**
	baz=316							
S22A	**4UR Ranch, Cre**	**67.68**	**58**	P		**P**	**15 58 42.6**	**+0.4**
	baz=317							
KBZ	**Khabaz**	**68.23**	**313**	P		**P**	**15 58 44.7**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=91,slow=5.6,SNR=5.2							
	comp=Z,2.1nm,0.5s							
ECSD	**EROS Data Cent**	**68.35**	**47**	P		**P**	**15 58 46.1**	**+0.1**
	baz=320							
AKASG	**Malin Array Be**	**68.41**	**325**	P		**P**	**15 58 45.1**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=32,slow=6.7,SNR=7.0							
	comp=Z,1.4nm,0.5s							
AKASG	**Malin Array Be**	**68.41**	**325**	*i* P		**P**	**15 58 44.9**	**-1.2**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.5s							
WRA	**Warramunga Arr**	**72.05**	**198**	P		**P**	**15 59 08.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=13,slow=6.1,SNR=1.9							
	comp=Z,0.4nm,0.5s							
GERES	**GERESS Array B**	**75.06**	**334**	P		**P**	**15 59 25.8**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=41,slow=5.7,SNR=12							
	comp=Z,1.1nm,0.4s							
BRTR	**Keskin Array B**	**75.63**	**316**	P		**P**	**15 59 28.9**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=71,slow=2.9,SNR=5.0							
	comp=Z,0.7nm,0.5s							
BRTR	**Keskin Array B**	**75.63**	**316**	*i* P		**P**	**15 59 29.2**	**+0.1**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
TXAR	**Lajitas Array**	**75.72**	**61**	P		**P**	**15 59 30.5**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=295,slow=4.2,SNR=8.4							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**75.75**	**198**	P		**P**	**15 59 30.8**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=12,slow=5.2,SNR=8.7							
	comp=Z,0.4nm,0.6s							

ASRS 19 16:07:18.3±1.0, 49°N±5°×9°8E±°, h10km, MLh3.6/4, Error ellipse: s-maj=11.4km s-min=5.2km az=174.2, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.32**	**347**	Pg	Pg	16 07 47.5	+3.8
KNGR				Sg	Sg	16 08 05.0	+4.1
ERNS	**Erzin**	**2.07**	**298**	Pg	Pg	16 07 59.3	+1.3
ERNS				Sg	Sg	16 08 26.8	+2.1
MOY	**Mondy**	**3.03**	**38**	Pg	Pg	16 08 15.6	-0.7
MOY				Sg	Sg	16 08 56.9	+1.3
KZLR	**Kyzyl**	**3.29**	**318**	Pg	Pg	16 08 21.0	-0.2
KZLR				Sg	Sg	16 09 06.4	+2.6
ARDR	**Aradan**	**4.36**	**320**	Pg	Pg	16 08 39.5	-2.1
ARDR				Sg	Sg	16 09 39.1	+1.0
DJOS	**Djoyskaya Sosn**	**5.42**	**312**	Sg	Sg	16 10 18.9	+6.6
CERR	**Cheremushki**	**5.45**	**313**	Sg	Sg	16 10 18.2	+5.1
DJO	**Djoy, Khakassi**	**5.50**	**312**	Sg	Sg	16 10 18.8	+4.0
ULN	**Ulaanbaatar**	**6.18**	**100**	Sg	Sg	16 10 39.0	+2.3
CUR	**Chagan-Uzun**	**6.31**	**281**	Sg	Sg	16 10 39.0	-1.6
AKAR	**Aktash**	**6.79**	**282**	Sg	Sg	16 10 55.7	-0.3
CHBI	**Chibit, Altay**	**6.86**	**282**	Sg	Sg	16 10 57.3	-1.2
DGZ	**Jazzator, Alta**	**6.89**	**277**	Sg	Sg	16 10 59.3	-0.1
LUZB	**Luzhba, Kemero**	**7.15**	**311**	Sg	Sg	16 11 05.4	-2.2
TASR	**Tashtagol**	**7.25**	**302**	Sg	Sg	16 11 08.4	-2.4
ARTR	**Artybash**	**7.26**	**294**	Sg	Sg	16 11 10.0	-1.2
GZLN	**Zheleznogorsk**	**7.52**	**342**	Sg	Sg	16 11 23.6	+4.2
UKR	**Ust'-Kan**	**8.65**	**286**	Sg	Sg	16 11 53.8	-1.9

*IDC **19** 16:12:04.4±2.3, 36°21N×75°78E, h0km, mb3.6/5, mbtmp3.6/9, ML3.1/4, Error ellipse: s-maj=45.2km s-min=25.9km az=150.0*
*NNC **19** 16:12:17.6±10.0, 36°02N×73°46E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=85.7km s-min=72.6km az=129.0*
ISC 19 16:12:05.7±1.4, 36°19N±0°10×75°7E±0°1, h10km, n13, σ1s02/15, mb3.6/5, 1C-5D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**6.72**	**359**	⇓Pn	**Pb**	**16 14 01.6**	**-1.1**
	3.7nm,0.5s						
TKM2				⇓Sn	**Sb**	**16 15 26.1**	**+3.0**
	8.7nm,0.7s						
CHMS	**Chumysh**	**6.84**	**354**	⇑Pn	**Pb**	**16 14 04.2**	**-0.4**
	11nm,1.1s						
CHMS				⇓Sn	**Sb**	**16 15 25.5**	**-0.8**
	14nm,0.9s						
KK31	**Karatay Array**	**7.99**	**331**	⇓Pn	Pn	16 14 05.6	+3.8
	1.2nm,0.5s,baz=153,slow=13,SNR=21						
KK31				⇓Sn	**Sn**	**16 15 31.7**	**-0.4**
	6.7nm,0.9s,baz=158,slow=25,SNR=3.5						
MKAR	**Makanchi Array**	**11.67**	**23**	Pn	**Pn**	**16 14 51.8**	**-0.6**
	0.2nm,0.3s,baz=177,slow=12,SNR=8.9						
	0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**14.56**	**7**	Pn	**Pn**	**16 15 31.5**	**-0.3**
	baz=193,slow=12,SNR=4.5						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**18.85**	**17**	P	**Pn**	**16 16 26.5**	**+0.3**
	0.3nm,0.3s,baz=214,slow=10,SNR=6.5						
	1.6nm,0.7s						
AKTO	**Aktyubinsk**	**19.13**	**324**	P	**Pn**	**16 16 29.2**	**-0.4**
	0.2nm,0.3s,baz=116,slow=14,SNR=3.7						
	1.3nm,0.6s						
SONM	**Songino Array**	**25.42**	**53**	P	**P**	**16 17 33.5**	**0.0**
	1.5nm,1.0s,baz=229,slow=9.9,SNR=5.0						
	1.5nm,1.0s						
FINES	**FINESS Array B**	**39.89**	**325**	P	**P**	**16 19 39.6**	**+0.3**
	0.6nm,0.4s,baz=106,slow=10,SNR=5.5						
	0.6nm,0.4s						
ARCES	**ARCESS Array B**	**42.91**	**337**	P	**P**	**16 20 04.5**	**+0.4**
	0.3nm,0.5s,baz=119,slow=10,SNR=1.3						
	0.3nm,0.5s						
NB2	**NORSAR Subarra**	**46.92**	**323**	P	**P**	**16 20 36.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**46.92**	**323**	P	**P**	**16 20 36.1**	**0.0**
	comp=Z,0.4nm,0.7s,baz=91,slow=7.7,SNR=4.5						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.53**	**272**	P	**P**	**16 23 15.5**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=45,slow=5.8,SNR=5.0						
	comp=Z,0.6nm,0.8s						

*IDC **19** 16:18:21.2±2.0, 55°26S×30°80W, h0km, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=85.1km s-min=44.0km az=11.0*
*NEIC **19** 16:18:21.2±2.2, 55°4S±0°1×31°3W±0°2, h10km±1km, mb4.4/11, Error ellipse: s-maj=19.8km s-min=17.7km az=23.0*
ISC 19 16:18:21.0±0.7, 55°3S±0°1×31°72W±0°09, h10km, n25, σ1s89/21, mb4.4/6, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.94**	**288**	Pn	**Pb**	**16 19 12.2**	**-1.8**
ORCD	**Orcadas**	**8.80**	**226**	Pn	**Pn**	**16 20 29.8**	**+1.8**
EFI	**East Falkland**	**16.05**	**272**	Pn	**P**	**16 22 08.0**	**-2.0**
EFI				IAmb	IAmb	16 22 19.1	
	comp=Z,60nm,1.1s						
VNA1	**Neumayer--Stat**	**18.51**	**155**	P	**Pn**	**16 22 37.9**	**+0.8**
VNA3	**Neumayer Olymp**	**18.62**	**158**	P	**Pn**	**16 22 39.9**	**+1.4**
VNA2	**Neumayer--Watz**	**18.91**	**155**	P	**Pn**	**16 22 42.8**	**+0.8**
	baz=311,slow=12						
SNAA	**Sanae**	**20.51**	**154**	P	**P**	**16 23 00.0**	**+1.1**
SNAA	**Sanae**	**20.51**	**154**	P	**P**	**16 22 58.7**	**-0.3**
TROLL	**Troll, Antarti**	**22.09**	**152**	P	**P**	**16 23 17.1**	**+1.1**
QSPA	**South Pole Qui**	**34.96**	**180**	P	**P**	**16 25 09.5**	**-3.4**
QSPA				IAmb	IAmb	16 25 34.5	
	comp=Z,1.9nm,1.0s						
ROC1	**El Roble**	**35.27**	**293**	P	**P**	**16 25 14.7**	**-1.4**
PB01	**IPOC Station P**	**44.34**	**305**	P	**P**	**16 26 33.4**	**+2.1**
PB16	**IPOC Station P**	**46.70**	**307**	P	**P**	**16 26 53.2**	**+2.6**
PB16				IAmb	IAmb	16 27 04.1	
	comp=Z,5.2nm,1.1s						
LPAZ	**La Paz**	**47.88**	**310**	P	**P**	**16 27 03.7**	**+3.9**
	comp=Z,1.8nm,0.6s,baz=146,slow=5.1,SNR=7.9						
	comp=Z,1.8nm,0.6s						
LPAZ	**La Paz**	**47.88**	**310**	P	**P**	**16 27 01.8**	**+2.0**
LPAZ				IAmb	IAmb	16 27 11.8	
	comp=Z,2.7nm,0.7s						
BOSA	**Boshof**	**48.33**	**81**	P	P	16 26 57.8	-4.9
BOSA				IAmb	IAmb	16 27 34.5	
	comp=Z,5.8nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.27**	**23**	T	T	17 20 17.8	
	baz=192,slow=75,SNR=3.9						
H10N3	**ASCENSION HYDR**	**49.27**	**23**	T	T	17 20 17.3	
	baz=192,slow=75,SNR=5.0						
H10N2	**ASCENSION HYDR**	**49.29**	**23**	T	T	17 20 17.5	
	baz=192,slow=75,SNR=7.1						
LBTB	**Lobatse**	**51.30**	**78**	P	**P**	**16 27 24.0**	**-1.3**
LBTB				IAmb	IAmb	16 27 58.1	
	comp=Z,6.1nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.76**	**34**	P	**P**	**16 29 55.5**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=199,slow=5.0,SNR=6.5						
	comp=Z,0.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.76**	**34**	P	**P**	**16 29 54.5**	**-0.7**
TORD				IAmb	IAmb	16 29 58.2	
	comp=Z,2.9nm,1.5s						
FINES	**FINESS Array B**	**124.95**	**30**	PKP	**PKPdf**	**16 37 19.4**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=224,slow=3.8,SNR=4.0						
ILAR	**Eielson Array**	**147.71**	**313**	PKPbc	**PKPab**	**16 38 08.8**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=111,slow=2.1,SNR=3.9						
SONM	**Songino Array**	**153.26**	**89**	PKPbc	**PKPbc**	**16 38 18.6**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=214,slow=2.7,SNR=4.1						

*BUC **19** 16:38:45.6±0.3, 45°65N×26°52E, h145km±2km, ml3.8/36, Error ellipse: s-maj=1.8km s-min=1.5km az=163.0*
*SOF **19** 16:38:46.1, 45°71N×26°39E, h90km, MD3.4*
ISC 19 16:38:44.5±1.4, 45°67N±0°03×26°51E±0°03, h155km±7km, n118, σ0s66/202, 113C-83D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.21**	**28**	⇑P	**Pn**	**16 39 05.5**	**+0.1**
PLOR				⇓S	**Sn**	**16 39 21.5**	**+0.1**
PLOR	**Plostina**	**0.21**	**28**	⇑P	**Pn**	**16 39 05.5**	**+0.1**
PLOR				⇓S	**Sn**	**16 39 21.5**	**+0.1**
VRI	**Vrincioaia**	**0.25**	**37**	⇑P	**Pn**	**16 39 05.7**	**+0.3**
VRI				⇓S	**Sn**	**16 39 21.0**	**-0.5**
VRI	**Vrincioaia**	**0.25**	**37**	⇑P	**Pn**	**16 39 05.7**	**+0.3**
VRI				⇓S	**Sn**	**16 39 21.0**	**-0.5**
COVR	**Voineasa-Covas**	**0.28**	**310**	⇑P	**Pn**	**16 39 05.5**	**-0.1**
COVR				⇑S	**Sn**	**16 39 20.3**	**-1.4**
COVR	**Voineasa-Covas**	**0.28**	**310**	⇑P	**Pn**	**16 39 05.5**	**-0.1**
COVR				⇑S	**Sn**	**16 39 20.3**	**-1.4**
NEHR	**Nehoiu**	**0.28**	**212**	⇓P	**Pn**	**16 39 06.0**	**+0.4**
NEHR				⇓S	**Sn**	**16 39 21.2**	**-0.4**
NEHR	**Nehoiu**	**0.28**	**212**	⇓P	**Pn**	**16 39 06.0**	**+0.4**
NEHR				⇓S	**Sn**	**16 39 21.2**	**-0.4**
MLR	**Muntele Rosu**	**0.43**	**246**	⇑P	**Pn**	**16 39 06.4**	**+0.1**
MLR				⇑S	**Sn**	**16 39 22.9**	**+0.2**
MLR	**Muntele Rosu**	**0.43**	**246**	⇑P	**Pn**	**16 39 06.4**	**+0.1**
MLR				⇑S	**Sn**	**16 39 22.9**	**+0.2**
PANC	**Panciu**	**0.49**	**65**	⇑P	**Pn**	**16 39 07.0**	**+0.7**
PANC				⇑S	**Sn**	**16 39 22.9**	**-0.1**
PANC	**Panciu**	**0.49**	**65**	⇑P	**Pn**	**16 39 07.0**	**+0.7**
PANC				⇑S	**Sn**	**16 39 22.9**	**-0.1**
ISR	**Istrita**	**0.55**	**178**	⇑P	**Pn**	**16 39 07.5**	**+0.8**
ISR				⇓S	**Sn**	**16 39 22.3**	**-1.3**
ISR	**Istrita**	**0.55**	**178**	⇑P	**Pn**	**16 39 07.5**	**+0.8**
ISR				⇓S	**Sn**	**16 39 22.3**	**-1.3**
OZUR		**0.66**	**311**	⇑P	**Pn**	**16 39 07.2**	**-0.1**
OZUR				⇑S	**Sn**	**16 39 23.5**	**-1.3**
OZUR		**0.66**	**311**	⇑P	**Pn**	**16 39 07.2**	**-0.1**
OZUR				⇑S	**Sn**	**16 39 23.5**	**-1.3**
SECR		**0.70**	**206**	⇑P	**Pn**	**16 39 08.2**	**+0.6**
SECR		**0.70**	**206**	⇑P	**Pn**	**16 39 08.2**	**+0.6**
GHRR		**0.74**	**58**	⇑P	**Pn**	**16 39 08.5**	**+0.8**
GHRR				⇑S	**Sn**	**16 39 26.2**	**+0.7**
GHRR		**0.74**	**58**	⇑P	**Pn**	**16 39 08.5**	**+0.8**
GHRR				⇑S	**Sn**	**16 39 26.2**	**+0.7**
TUDR		**0.82**	**95**	⇑P	**Pn**	**16 39 08.7**	**+0.5**
TUDR				⇑S	**Sn**	**16 39 26.4**	**0.0**
TUDR		**0.82**	**95**	⇑P	**Pn**	**16 39 08.7**	**+0.5**
TUDR				⇑S	**Sn**	**16 39 26.4**	**0.0**
PLAR	**PLOIESTI**	**0.83**	**205**	⇓P	**Pn**	**16 39 09.0**	**+0.6**
PLAR				⇓S	**Sn**	**16 39 27.1**	**+0.6**
PLAR	**PLOIESTI**	**0.83**	**205**	⇓P	**Pn**	**16 39 09.0**	**+0.6**
PLAR				⇓S	**Sn**	**16 39 27.1**	**+0.6**
PGOR	**Pogoanele**	**0.83**	**156**	⇑S	**Sn**	**16 39 26.8**	**+0.2**
PGOR	**Pogoanele**	**0.83**	**156**	⇑S	**Sn**	**16 39 26.8**	**+0.2**
DOPR	**Dopca**	**0.84**	**291**	⇑P	**Pn**	**16 39 08.6**	**+0.1**
DOPR				⇑S	**Sn**	**16 39 26.0**	**-0.8**
DOPR	**Dopca**	**0.84**	**291**	⇑P	**Pn**	**16 39 08.6**	**+0.1**
DOPR				⇑S	**Sn**	**16 39 26.0**	**-0.8**
TESR	**Tescani**	**0.85**	**6**	⇑P	**Pn**	**16 39 08.6**	**+0.1**
TESR				⇑S	**Sn**	**16 39 26.4**	**-0.6**
TESR	**Tescani**	**0.85**	**6**	⇑P	**Pn**	**16 39 08.6**	**+0.1**
TESR				⇑S	**Sn**	**16 39 26.4**	**-0.6**
SLCR	**Slobozia Conac**	**0.89**	**95**	⇓P	**Pn**	**16 39 08.5**	**-0.2**
SLCR				⇓S	**Sn**	**16 39 27.2**	**-0.1**
SLCR	**Slobozia Conac**	**0.89**	**95**	⇓P	**Pn**	**16 39 08.5**	**-0.2**
SLCR				⇓S	**Sn**	**16 39 27.2**	**-0.1**
IZVR	**Izvoarele**	**0.89**	**98**	⇑P	**Pn**	**16 39 08.9**	**+0.1**
IZVR				⇑S	**Sn**	**16 39 26.5**	**-0.8**
IZVR	**Izvoarele**	**0.89**	**98**	⇑P	**Pn**	**16 39 08.9**	**+0.1**
IZVR				⇑S	**Sn**	**16 39 26.5**	**-0.8**
SCHL	**Schela**	**0.94**	**100**	⇓P	**Pn**	**16 39 09.5**	**+0.3**
SCHL				⇓S	**Sn**	**16 39 27.4**	**-0.7**
SCHL	**Schela**	**0.94**	**100**	⇓P	**Pn**	**16 39 09.5**	**+0.3**
SCHL				⇓S	**Sn**	**16 39 27.4**	**-0.7**
VARL	**Varlezi**	**0.96**	**76**	⇑P	**Pn**	**16 39 10.0**	**+0.6**
VARL				⇓S	**Sn**	**16 39 28.1**	**-0.3**
VARL	**Varlezi**	**0.96**	**76**	⇑P	**Pn**	**16 39 10.0**	**+0.6**
VARL				⇓S	**Sn**	**16 39 28.1**	**-0.3**
BIR	**Birlad**	**0.98**	**52**	⇑P	**Pn**	**16 39 10.2**	**+0.7**
BIR				⇑S	**Sn**	**16 39 28.3**	**-0.4**
BIR	**Birlad**	**0.98**	**52**	⇑P	**Pn**	**16 39 10.2**	**+0.7**
BIR				⇑S	**Sn**	**16 39 28.3**	**-0.4**
SULR		**1.01**	**190**	⇓P	**Pn**	**16 39 10.2**	**+0.5**
SULR				⇓S	**Sn**	**16 39 29.3**	**+0.3**
SULR		**1.01**	**190**	⇓P	**Pn**	**16 39 10.2**	**+0.5**
SULR				⇓S	**Sn**	**16 39 29.3**	**+0.3**
SCTR	**Scanteiesti**	**1.04**	**89**	⇓P	**Pn**	**16 39 10.6**	**+0.6**
SCTR				⇓S	**Sn**	**16 39 29.5**	**0.0**
SCTR	**Scanteiesti**	**1.04**	**89**	⇓P	**Pn**	**16 39 10.6**	**+0.6**
SCTR				⇓S	**Sn**	**16 39 29.5**	**0.0**
VOIR		**1.05**	**258**	⇓P	**Pn**	**16 39 10.2**	**0.0**
VOIR				⇑S	**Sn**	**16 39 28.8**	**-1.1**
VOIR		**1.05**	**258**	⇓P	**Pn**	**16 39 10.2**	**0.0**
VOIR				⇑S	**Sn**	**16 39 28.8**	**-1.1**
TATR	**Tatarca**	**1.08**	**93**	⇑P	**Pn**	**16 39 11.2**	**+0.8**
TATR				⇑S	**Sn**	**16 39 30.0**	**-0.1**
TATR	**Tatarca**	**1.08**	**93**	⇑P	**Pn**	**16 39 11.2**	**+0.8**
TATR				⇑S	**Sn**	**16 39 30.0**	**-0.1**
GISR	**Galati**	**1.11**	**101**	⇓S	**Sn**	**16 39 30.4**	**-0.1**
GISR	**Galati**	**1.11**	**101**	⇓S	**Sn**	**16 39 30.4**	**-0.1**
VLDR	**Vladesti**	**1.11**	**80**	⇓P	**Pn**	**16 39 11.5**	**+0.9**
VLDR				⇓S	**Sn**	**16 39 30.3**	**-0.4**
VLDR	**Vladesti**	**1.11**	**80**	⇓P	**Pn**	**16 39 11.5**	**+0.9**
VLDR				⇓S	**Sn**	**16 39 30.3**	**-0.4**
GIUM	**Giurgiulesti**	**1.21**	**98**	⇑P	**Pn**	**16 39 12.6**	**+1.2**
GIUM				⇓S	**Sn**	**16 39 32.2**	**+0.1**
GIUM	**Giurgiulesti**	**1.21**	**98**	⇑P	**Pn**	**16 39 12.6**	**+1.2**
GIUM				⇓S	**Sn**	**16 39 32.2**	**+0.1**
AMRR	**Amara**	**1.21**	**151**	⇓P	**Pn**	**16 39 12.1**	**+0.6**
AMRR				⇓S	**Sn**	**16 39 32.1**	**0.0**
AMRR	**Amara**	**1.21**	**151**	⇓P	**Pn**	**16 39 12.1**	**+0.6**
AMRR				⇓S	**Sn**	**16 39 32.1**	**0.0**
LEHL	**Lehliu**	**1.21**	**169**	⇑S	**Sn**	**16 39 32.1**	**-0.2**
LEHL	**Lehliu**	**1.21**	**169**	⇑S	**Sn**	**16 39 32.1**	**-0.2**
CFR	**Carcaliu**	**1.25**	**113**	⇑P	**Pn**	**16 39 12.3**	**+0.5**
CFR				⇑S	**Sn**	**16 39 32.5**	**-0.3**
CFR	**Carcaliu**	**1.25**	**113**	⇑P	**Pn**	**16 39 12.3**	**+0.5**
CFR				⇑S	**Sn**	**16 39 32.5**	**-0.3**
INCR	**INCERC-Sediu C**	**1.25**	**192**	⇑P	**Pn**	**16 39 12.1**	**+0.2**
INCR				⇑S	**Sn**	**16 39 33.3**	**+0.4**
INCR	**INCERC-Sediu C**	**1.25**	**192**	⇑P	**Pn**	**16 39 12.1**	**+0.2**
INCR				⇑S	**Sn**	**16 39 33.3**	**+0.4**
GIRR	**Girov**	**1.29**	**360**	⇑P	**Pn**	**16 39 13.1**	**+0.8**
GIRR	**Girov**	**1.29**	**360**	⇑P	**Pn**	**16 39 13.1**	**+0.8**
VASR	**Vaslui**	**1.32**	**42**	⇑P	**Pn**	**16 39 13.2**	**+0.7**
VASR				⇑S	**Sn**	**16 39 33.4**	**-0.8**
VASR	**Vaslui**	**1.32**	**42**	⇑P	**Pn**	**16 39 13.2**	**+0.7**
VASR				⇑S	**Sn**	**16 39 33.4**	**-0.8**
ARR	**Arges**	**1.35**	**258**	⇓P	**Pn**	**16 39 12.9**	**-0.1**
ARR				⇓S	**Sn**	**16 39 35.1**	**+0.3**
ARR	**Arges**	**1.35**	**258**	⇓P	**Pn**	**16 39 12.9**	**-0.1**
ARR				⇓S	**Sn**	**16 39 35.1**	**+0.3**
STFAR	**Stefanesti-Arg**	**1.36**	**234**	⇓P	**Pn**	**16 39 13.8**	**+0.8**
STFAR				⇓S	**Sn**	**16 39 35.5**	**+0.7**
STFAR	**Stefanesti-Arg**	**1.36**	**234**	⇓P	**Pn**	**16 39 13.8**	**+0.8**
STFAR				⇓S	**Sn**	**16 39 35.5**	**+0.7**
HARR	**Harsova**	**1.40**	**134**	⇓P	**Pn**	**16 39 13.8**	**+0.4**
HARR	**Harsova**	**1.40**	**134**	⇓P	**Pn**	**16 39 13.8**	**+0.4**
LEOM	**Leova**	**1.45**	**56**	⇑P	**Pn**	**16 39 14.7**	**+0.9**
LEOM				⇑S	**Sn**	**16 39 36.7**	**+0.3**
LEOM	**Leova**	**1.45**	**56**	⇑P	**Pn**	**16 39 14.7**	**+0.9**
LEOM				⇑S	**Sn**	**16 39 36.7**	**+0.3**
SGRR	**Singureni**	**1.49**	**195**	⇑P	**Pn**	**16 39 14.5**	**+0.1**
SGRR				⇓S	**Sn**	**16 39 35.7**	**-1.4**
SGRR	**Singureni**	**1.49**	**195**	⇑P	**Pn**	**16 39 14.5**	**+0.1**
SGRR				⇓S	**Sn**	**16 39 35.7**	**-1.4**
RASA	**Rasa**	**1.52**	**162**	⇓P	**Pn**	**16 39 14.9**	**+0.3**
RASA				⇓S	**Sn**	**16 39 37.5**	**-0.2**
RASA	**Rasa**	**1.52**	**162**	⇓P	**Pn**	**16 39 14.9**	**+0.3**
RASA				⇓S	**Sn**	**16 39 37.5**	**-0.2**
TLBR	**Topalu**	**1.56**	**135**	⇓P	**Pn**	**16 39 15.5**	**+0.5**
TLBR				⇓S	**Sn**	**16 39 37.1**	**-1.4**
TLBR	**Topalu**	**1.56**	**135**	⇓P	**Pn**	**16 39 15.5**	**+0.5**
TLBR				⇓S	**Sn**	**16 39 37.1**	**-1.4**
HUMR	**Humele

MONQ					Pg		**Pg**	**16 49 27.6**	**+1.4**
LFF	**La Frestale**	**2.04**	**29**	*e*Pg		**Pg**	**16 49 31.8**	**+1.2**
LFF				*e*Sg		**Sg**	**16 50 00.1**	**+3.0**
	17nm,0.2s								
EMIR	**Miracle**	**2.05**	**127**	Pg		**Pg**	**16 49 30.3**	**-0.5**
EMIR				Sg		**Sg**	**16 49 56.3**	**-1.2**
EMIR				*i* Vmb_Lg			16 50 00.7		
MTLF	**Montolieu**	**2.12**	**84**	*e*Pn		**Pb**	**16 49 28.5**	**-1.4**
MTLF	**Montolieu**	**2.12**	**84**	*e*Pg		**Pg**	**16 49 31.5**	**-0.6**
MTLF				*e*Sg		**Sg**	**16 49 59.8**	**+0.3**
	14nm,0.2s								
EPOB	**Poblet**	**2.23**	**144**	Pn		**Pb**	**16 49 30.6**	**-1.3**
EPOB				Pg		**Pg**	**16 49 32.9**	**-1.4**
EPOB				Sg		**Sb**	**16 50 00.9**	**+1.3**
EPOB				*i* Vmb_Lg			16 50 07.2		
ERTA	**Horta de San J**	**2.33**	**161**	Pn		**Pn**	**16 49 31.0**	**+1.2**
ERTA				Pg		**Pb**	**16 49 34.1**	**+0.5**
ERTA				Sg		**Sb**	**16 50 04.4**	**+2.0**
ERTA				*i* Vmb_Lg			16 50 11.2		
ETOR	**Torete**	**2.57**	**204**	Pn		**Pn**	**16 49 34.3**	**+1.2**
ETOR				Sn		**Sn**	**16 50 04.8**	**+0.5**
ETOR				*i* Vmb_Lg			16 50 19.5		
CAF	**Calviac**	**2.64**	**47**	*e*Pn		**Pn**	**16 49 35.6**	**+1.6**
CAF	**Calviac**	**2.64**	**47**	*e*Pg		**Pg**	**16 49 43.0**	**+0.9**
CAF				*e*Sn		**Sn**	**16 50 06.3**	**+0.2**
	4.2nm,0.2s								
CAF				*e*Sg		**Sg**	**16 50 17.1**	**+0.8**
	9.5nm,0.3s								
RJF	**Les Rejaudoux**	**2.65**	**36**	*e*Pn		**Pn**	**16 49 35.8**	**+1.6**
RJF	**Les Rejaudoux**	**2.65**	**36**	*e*Pg		**Pg**	**16 49 43.6**	**+1.3**
RJF				*e*Sn		**Sn**	**16 50 06.5**	**+0.2**
	4.0nm,0.2s								
RJF				*e*Sg		**Sg**	**16 50 17.3**	**+0.7**
	8.6nm,0.2s								
EJON	**La Jonquera**	**2.72**	**104**	Pn		**Pn**	**16 49 37.6**	**+2.5**
EJON				Pg		**Pg**	**16 49 43.0**	**-0.5**
EJON				Sn		**Sn**	**16 50 10.1**	**+2.2**
EJON				Sg		**Sg**	**16 50 18.2**	**-0.6**
EJON				*i* Vmb_Lg			16 50 20.4		
EMOS	**Mosqueruela**	**2.81**	**177**	Pn		**Pn**	**16 49 37.9**	**+1.4**
EMOS				Pg		**Pb**	**16 49 43.3**	**+1.5**
EMOS				Sn		**Sn**	**16 50 11.6**	**+1.2**
EMOS				*i* Vmb_Lg			16 50 28.5		
EARI	**Arriondas**	**3.32**	**274**	Pn		**Pn**	**16 49 47.0**	**+3.5**
EARI				Sn		**Sn**	**16 50 24.2**	**+1.3**
LASF	**Ste Croix**	**3.41**	**73**	*e*Pn		**Pn**	**16 49 46.1**	**+1.5**
LASF				*e*Sn		**Sn**	**16 50 24.8**	**-0.2**
	1.3nm,0.2s								
LASF				*e*Sg		**Sg**	**16 50 40.8**	**-0.2**
	2.0nm,0.3s								
MFF	**Saint Martin d**	**3.45**	**6**	*e*Pn		**Pn**	**16 49 46.7**	**+1.5**
MFF	**Saint Martin d**	**3.45**	**6**	*e*Pg		**Pg**	**16 49 58.9**	**+1.3**
MFF				*e*Sg		**Sg**	**16 50 42.2**	**-0.1**
	6.9nm,0.4s								
GUD	**Guadarrama**	**3.62**	**227**	Pn		**Pn**	**16 49 50.3**	**+2.6**
GUD				Sn		**Sn**	**16 50 29.7**	**-0.8**
TCF	**Toulx Ste Croi**	**3.73**	**32**	*e*Pn		**Pn**	**16 49 50.4**	**+1.3**
TCF	**Toulx Ste Croi**	**3.73**	**32**	*e*Pg		**Pg**	**16 50 03.2**	**+0.2**
TCF				*e*Sn		**Sn**	**16 50 32.8**	**-0.2**
TCF				*e*Sg		**Sg**	**16 50 51.1**	**-0.2**
	6.5nm,0.3s								
VIVF	**Saint-Julien-l**	**4.21**	**65**	*e*Pn		**Pn**	**16 49 57.2**	**+1.6**
VIVF	**Saint-Julien-l**	**4.21**	**65**	*e*Pg		**Pg**	**16 50 12.7**	**+0.7**
VIVF				*e*Sn		**Sn**	**16 50 43.8**	**-0.9**
	1.7nm,0.2s								
VIVF				*e*Sg		**Sg**	**16 51 05.2**	**-1.3**
	2.3nm,0.3s								
BGF	**Bois d'Agland**	**4.21**	**35**	*e*Pn		**Pn**	**16 49 56.9**	**+1.3**
BGF				*e*Sg		**Sg**	**16 51 05.9**	**-0.7**
	13nm,0.4s								
PAB	**San Pablo**	**4.56**	**219**	Pn		**Pn**	**16 50 01.0**	**+0.5**
PAB				Sn		**Sn**	**16 50 51.8**	**-1.6**
AVF	**Avril sur Loir**	**4.61**	**37**	*e*Pn		**Pn**	**16 50 02.7**	**+1.6**
AVF				*e*Sn		**Sn**	**16 50 53.3**	**-1.2**
AVF				*e*Sg		**Sg**	**16 51 18.3**	**-1.1**
	3.0nm,0.4s								
ECAL	**Calabor**	**4.65**	**257**	Pn		**Pn**	**16 50 03.7**	**+2.0**
ECAL				Sn		**Sn**	**16 50 57.1**	**+1.4**
PBRG	**Braganca**	**4.69**	**255**	*e*Pn		**Pn**	**16 50 04.3**	**+2.0**
SMF	**Signal de Mont**	**4.73**	**41**	*e*Pn		**Pn**	**16 50 03.9**	**+1.2**
SMF				*e*Sg		**Sg**	**16 51 22.0**	**-1.2**
	1.7nm,0.3s								
SSF	**Saint Saulge**	**4.89**	**36**	*e*Pn		**Pn**	**16 50 06.1**	**+1.2**
SSF				*e*Sn		**Sn**	**16 50 58.6**	**-2.8**
SSF				*e*Sg		**Sg**	**16 51 27.1**	**-1.2**
	1.7nm,0.3s								
QUIF	**Quistinic**	**5.06**	**341**	*e*Pn		**Pn**	**16 50 08.4**	**+1.2**
QUIF	**Quistinic**	**5.06**	**341**	*e*Pg		**Pg**	**16 50 27.6**	**-0.8**
QUIF				*e*Sn		**Sn**	**16 51 04.1**	**-1.5**
	1.2nm,0.3s								
QUIF				*e*Sg		**Sg**	**16 51 32.3**	**-1.6**
	3.0nm,0.4s								
MVO	**Moncorvo**	**5.13**	**249**	*e*Pn		**Pn**	**16 50 10.1**	**+1.8**
MVO				*e*Sn		**Sn**	**16 51 06.4**	**-1.2**
LOR	**Lormes**	**5.20**	**36**	*e*Sg		**Sg**	**16 51 36.6**	**-1.7**
	2.3nm,0.3s,baz=214								
GRR	**Gorron**	**5.22**	**359**	*e*Pn		**Pn**	**16 50 11.7**	**+2.2**
GRR				*e*Sn		**Sn**	**16 51 08.3**	**-1.3**
	1.3nm,0.2s								
GRR				*e*Sg		**Sg**	**16 51 38.4**	**-0.6**
	2.0nm,0.3s								
SGMF	**Saint Gilles**	**5.25**	**346**	*e*Sn		**Sn**	**16 51 08.6**	**-1.8**
LDF	**La Druitiere**	**5.44**	**4**	*e*Pn		**Pn**	**16 50 13.8**	**+1.4**
LDF	**La Druitiere**	**5.44**	**4**	*e*Pg		**Pg**	**16 50 33.6**	**-2.0**
LDF				*e*Sn		**Sn**	**16 51 14.3**	**-0.7**
LDF				*e*Sg		**Sg**	**16 51 44.2**	**-1.8**
	1.6nm,0.4s								
FLN	**La Foliniere**	**5.59**	**1**	*e*Pg		**Pg**	**16 50 37.2**	**-1.4**
	baz=182								
FLN				*e*Sn		**Sn**	**16 51 17.0**	**-1.8**
FLN				*e*Sg		**Sg**	**16 51 49.1**	**-1.9**
	2.8nm,0.4s								
PMRV	**Marv??o**	**6.29**	**236**	*e*Pn		**Pn**	**16 50 25.7**	**+1.5**
PMRV				*e*Sn		**Sn**	**16 51 33.7**	**-2.4**
PESTR	**Estremoz**	**6.77**	**233**	*e*Pn		**Pn**	**16 50 31.5**	**+0.7**
HINF	**Hinteralfeld**	**7.04**	**46**	*e*Pn		**Pn**	**16 50 35.4**	**+1.0**
HINF	**Hinteralfeld**	**7.04**	**46**	*e*Pg		**Pg**	**16 51 04.2**	**-2.0**
HINF				*e*Sn		**Sn**	**16 51 51.4**	**-3.0**
	1.0nm,0.4s								

*IDC **19** 16:53:47.4±0.8,54˚.88S×31˚.81W, h0km, mb4.0/8, mbtmp4.1/8, MS3.4/5, Error ellipse: s-maj=31.1km s-min=18.6km az=66.0*
*NEIC **19** 16:53:48.5±0.9,55˚.09S±0˚.08×32˚.0W±0˚.2, h10km±1km, mb4.5/9, Error ellipse: s-maj=19.2km s-min=13.0km az=71.0*

ISC 19 16:53:48.9±0.7,**55˚.01S**±0˚.09×**32˚.1W**±0˚.1,**h10**km,**n31**, σ1§**24**/25,**mb4.3**/7,**MS3.2**/5,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.66**	**284**		**Pn**	**16 54 32.4**	**+0.6**
ORCD	**Orcadas**	**8.85**	**224**		**Pn**	**16 55 54.5**	**-2.2**
VNA1	**Neumayer--Stat**	**18.86**	**155**	P	**Pn**	**16 58 09.9**	**+0.8**
VNA3	**Neumayer Olymp**	**18.96**	**158**	P	**Pn**	**16 58 11.9**	**+1.4**
VNA2	**Neumayer--Watz**	**19.26**	**155**	P	**Pn**	**16 58 16.4**	**+2.4**
	baz=317,slow=11						
SNAA	**Sanae**	**20.86**	**154**	P	**P**	**16 58 30.0**	**-0.6**
SNAA	**Sanae**	**20.86**	**154**	P	**P**	**16 58 29.9**	**-0.6**
	2.5nm,0.8s,baz=308,slow=11,SNR=12						
SNAA				LR	LR	17 05 03.8	
	comp=Z,68nm,21.4s,baz=122,slow=32						
	2.5nm,0.8s						
SNAA	**Sanae**	**20.86**	**154**	P	**P**	**16 58 30.7**	**+0.2**
SNAA				IAmb	IAmb	16 58 48.9	
	comp=Z,12nm,1.2s						
TROLL	**Troll, Antarti**	**22.44**	**152**	P	**P**	**16 58 48.5**	**+0.9**
BELA	**Belgrano 2**	**22.99**	**181**	P	**P**	**16 58 51.8**	**-1.4**
CPUP	**Villa Florida**	**34.09**	**317**	P	**P**	**17 00 32.8**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=167,slow=9.8,SNR=3.8						
CPUP				LR	LR	17 14 26.7	
	comp=Z,50nm,20.7s,baz=188,slow=36						
	comp=Z,1.4nm,0.5s						
QSPA	**South Pole Qui**	**35.24**	**180**	P	**P**	**17 00 44.5**	**+1.3**
	comp=Z,3.1nm,0.9s,baz=196,slow=0.6,SNR=10						
	comp=Z,3.1nm,0.9s						
QSPA	**South Pole Qui**	**35.24**	**180**	P	**P**	**17 00 42.9**	**-0.3**
QSPA				IAmb	IAmb	17 01 00.5	
	comp=Z,7.1nm,1.1s						
LVC	**Limon Verde**	**42.40**	**305**	LR	LR	17 19 23.0	
	comp=Z,36nm,20.9s,baz=239,slow=36						
MAW	**Mawson**	**42.61**	**146**	P	**P**	**17 01 45.1**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=233,slow=9.6,SNR=4.6						
	comp=Z,2.2nm,0.9s						
PB09	**IPOC Station P**	**43.25**	**305**	P	**P**	**17 01 50.1**	**-0.4**
PB01	**IPOC Station P**	**44.01**	**305**	P	**P**	**17 01 58.4**	**+1.9**
VNDA	**Vanda**	**47.45**	**184**	P	**P**	**17 02 24.8**	**+1.8**
	comp=Z,2.1nm,1.3s,baz=190,slow=11,SNR=2.5						
	comp=Z,2.1nm,1.3s						
LPAZ	**La Paz**	**47.54**	**310**	P	**P**	**17 02 26.1**	**+1.1**
	comp=Z,2.4nm,0.7s,baz=159,slow=8.6,SNR=8.4						
	comp=Z,2.4nm,0.7s						
LPAZ	**La Paz**	**47.54**	**310**	P	**P**	**17 02 24.7**	**-0.3**
LPAZ				IAmb	IAmb	17 02 41.1	
	comp=Z,5.3nm,0.9s						
BOSA	**Boshof**	**48.49**	**81**	P	**P**	**17 02 31.8**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=212,slow=9.5,SNR=3.1						
BOSA				LR	LR	17 19 31.9	
	comp=Z,40nm,20.3s,baz=326,slow=32						
	comp=Z,3.7nm,1.0s						
BOSA	**Boshof**	**48.49**	**81**	P	**P**	**17 02 30.3**	**-1.4**
BOSA				IAmb	IAmb	17 03 00.7	
	comp=Z,9.7nm,1.4s						
H10N3	**ASCENSION HYDR**	**49.09**	**23**	T	T	17 55 25.8	
	baz=193,slow=75,SNR=6.9						
H10N1	**ASCENSION HYDR**	**49.09**	**23**	T	T	17 55 25.1	
	baz=193,slow=75,SNR=6.1						
H10N2	**ASCENSION HYDR**	**49.11**	**23**	T	T	17 55 26.1	
	baz=193,slow=75,SNR=7.5						
RCBR	**Riachuelo**	**49.13**	**355**	LR	LR	17 21 22.5	
	comp=Z,64nm,18.0s,baz=334,slow=34						
TORD	**Torodi Ar. Bea**	**73.64**	**34**	P	**P**	**17 05 21.3**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=197,slow=6.2,SNR=6.6						
	comp=Z,1.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.64**	**34**	P	**P**	**17 05 22.0**	**-0.3**
TORD				IAmb	IAmb	17 05 33.9	
	comp=Z,5.4nm,1.4s						
ZALV	**Zalesovo Beam**	**144.43**	**65**	PKP	PKPbc	17 13 22.3	-0.3
	comp=Z,2.6nm,0.9s,baz=250,slow=3.0,SNR=9.7						
ILAR	**Eielson Array**	**147.37**	**314**	PKPbc	**PKPbc**	**17 13 30.9**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=135,slow=1.9,SNR=13						
SONM	**Songino Array**	**153.46**	**88**	PKPbc	**PKPbc**	**17 13 44.8**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=243,slow=2.6,SNR=2.6						

*THE **19** 17:01:38.3, 38˚.00N×21˚.08E, h15km, ML3.1/17, Error ellipse: s-maj=0.7km s-min=0.3km az=232.0*
*ATH **19** 17:01:39.4, 38˚.00N×21˚.07E, h10km±2km, ML3.1/6, Error ellipse: s-maj=2.6km s-min=0.6km az=351.0*
*IDC **19** 17:01:40.7±3.7, 38˚.56N×21˚.53E, h0km, mb3.5/5, mbtmp3.5/6, ML2.7/1, MS3.2/1, Error ellipse: s-maj=81.3km s-min=28.1km az=53.0*

ISC 19 17:01:37.9±1.0,**37˚.98N**±0˚.02×**21˚.06E**±0˚.02,**h12**km±8km, **n59**,σ0§**66**/95,**mb3.6**/5,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.33**	**213**	P	**Pb**	**17 01 45.4**	**-0.3**
LTHK				S	**Sb**	**17 01 51.2**	**+0.4**
	4μm,0.3s						
RLS	**Riolos of Patr**	**0.33**	**77**	P	**Pg**	**17 01 44.2**	**-0.4**
RLS				S	**Sg**	**17 01 49.3**	**+0.2**
	8μm,0.3s						
RLS	**Riolos of Patr**	**0.33**	**77**	P	**Pg**	**17 01 44.9**	**+0.3**
RLS				S	**Sg**	**17 01 49.8**	**+0.7**
RLS				AML	AML	17 01 50.9	
	comp=N,19511μm,0.2s						
RLS				AML	AML	17 01 51.4	
	comp=E,13526μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.40**	**289**	P	**Pg**	**17 01 46.1**	**+0.3**
PSDA				S	**Sb**	**17 01 52.5**	**-0.4**
PSDA	**Pessada-Kefalo**	**0.40**	**289**	P	**Pb**	**17 01 46.7**	**-0.1**
PSDA				S	**Sb**	**17 01 52.6**	**-0.4**
VLS	**Valsamata**	**0.42**	**298**	P	**Pg**	**17 01 46.5**	**+0.3**
VLS				S	**Sb**	**17 01 53.5**	**-0.1**
	comp=E,2μm,0.3s						
VLS	**Valsamata**	**0.42**	**298**	P	**Pb**	**17 01 47.4**	**+0.1**
VLS				S	**Sb**	**17 01 53.3**	**-0.3**
VLS				AML	AML	17 01 55.4	
	comp=E,3394μm,0.2s						
VLS				AML	AML	17 01 56.9	
	comp=N,4899μm,0.5s						
ARGA	**Argostoli. Kep**	**0.50**	**293**	P	**Pb**	**17 01 49.0**	**+0.5**
ARGA				S	**Sb**	**17 01 56.1**	**+0.3**
DRO	**Drossia**	**0.52**	**93**	P	**Pg**	**17 01 47.6**	**-0.4**
DRO				S	**Sg**	**17 01 55.8**	**+0.9**
	comp=N,7μm,0.4s						
DRO	**Drossia**	**0.52**	**93**	P	**Pb**	**17 01 48.7**	**-0.3**
DRO				S	**Sg**	**17 01 55.7**	**+0.8**
DRO				AML	AML	17 01 58.6	
	comp=N,13716μm,0.3s						
DRO				AML	AML	17 01 59.5	
	comp=E,13608μm,0.4s						
KEF4	**Livadi, Kephal**	**0.57**	**299**	P	**Pg**	**17 01 49.3**	**+0.3**
KEF4				S	**Sb**	**17 01 57.6**	**-0.3**
KEF4	**Livadi, Kephal**	**0.57**	**299**	P	**Pb**	**17 01 49.7**	**-0.2**
KEF4				S	**Sb**	**17 01 58.2**	**+0.3**
DMLN	**Damoulianata-K**	**0.60**	**295**	P	**Pg**	**17 01 49.8**	**+0.2**
DMLN				S	**Sb**	**17 01 59.0**	**+0.3**
	comp=E,3μm,0.4s						
KEF3	**Kipouria, Keph**	**0.60**	**292**	P	**Pg**	**17 01 49.5**	**-0.1**
KEF3				S	**Sb**	**17 01 58.4**	**-0.4**
KEF3	**Kipouria, Keph**	**0.60**	**292**	P	**Pb**	**17 01 50.5**	**+0.1**
KEF3				S	**Sb**	**17 01 59.4**	**+0.6**
FSK	**Fiskardo**	**0.61**	**321**	P	**Pb**	**17 01 50.7**	**+0.1**
FSK				S	**Sb**	**17 01 59.5**	**+0.3**
	comp=E,2μm,0.7s						
FSK	**Fiskardo**	**0.61**	**321**	P	**Pb**	**17 01 50.9**	**+0.2**
UPR	**University Cam**	**0.65**	**62**	P	**Pg**	**17 01 50.4**	**-0.1**
UPR				S	**Sb**	**17 01 59.8**	**-0.4**
EVGI	**Lefkada island**	**0.71**	**334**	P	**Pg**	**17 01 51.7**	**0.0**
EVGI				S	**Sb**	**17 02 02.4**	**+0.4**
	comp=E,2μm,0.1s						
EVGI	**Lefkada island**	**0.71**	**334**	P	**Pb**	**17 01 52.3**	**0.0**
EVGI				S	**Sb**	**17 02 02.3**	**+0.4**
PVO	**Paravola**	**0.73**	**30**	P	**Pg**	**17 01 52.3**	**+0.2**
PVO				S	**Sb**	**17 02 02.8**	**+0.2**
	comp=E,2μm,0.4s						
PVO	**Paravola**	**0.73**	**30**	P	**Pb**	**17 01 52.8**	**+0.1**
PVO				S	**Sb**	**17 02 03.0**	**+0.4**
LAKA	**Lakka**	**0.77**	**70**	P	**Pg**	**17 01 52.2**	**-0.6**
LAKA				S	**Sb**	**17 02 04.3**	**+0.6**
	comp=E,4μm,0.6s						
LAKA	**Lakka**	**0.77**	**70**	P	**Pg**	**17 01 53.0**	**+0.2**
LAKA				S	**Sb**	**17 02 03.5**	**-0.2**
LAKA				AML	AML	17 02 06.4	
	comp=E,1334μm,0.8s						
LAKA				AML	AML	17 02 07.4	
	comp=N,1764μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.78**	**339**	P	**Pg**	**17 01 52.6**	**-0.4**
NYDR				S	**Sb**	**17 02 04.6**	**+0.6**
	comp=N,995nm,0.5s						
DRAG	**Dragano-Lefkad**	**0.80**	**332**	P	**Pg**	**17 01 53.0**	**-0.3**
DRAG				S	**Sb**	**17 02 04.9**	**+0.4**
EFP	**Efpalio**	**0.80**	**56**	P	**Pg**	**17 01 53.0**	**-0.4**
EFP				S	**Sb**	**17 02 04.5**	**-0.1**
	comp=N,2μm,0.7s						
EFP	**Efpalio**	**0.80**	**56**	P	**Pg**	**17 01 53.6**	**+0.2**
EFP				S	**Sb**	**17 02 05.1**	**+0.5**
EFP				AML	AML	17 02 06.8	
	comp=N,3405μm,0.7s						
EFP				AML	AML	17 02 07.5	
	comp=E,4464μm,0.7s						
LKD2	**Lefkada island**	**0.86**	**339**	P	**Pg**	**17 01 54.2**	**-0.4**
LKD2				S	**Sb**	**17 02 06.7**	**+0.3**
	comp=E,2μm,0.5s						
LKD2	**Lefkada island**	**0.86**	**339**	P	**Pb**	**17 01 55.2**	**+0.3**
KLV	**Kalavryta, Ach**	**0.86**	**86**	P	**Pg**	**17 01 53.4**	**-1.2**
KLV				S	**Sg**	**17 02 06.1**	**+0.1**
	comp=E,832nm,0.5s						
KLV	**Kalavryta, Ach**	**0.86**	**86**	P	**Pb**	**17 01 54.9**	**0.0**
SERG	**Sergoula**	**0.90**	**61**	P	**Pg**	**17 01 54.5**	**-0.7**
SERG				S	**Sg**	**17 02 07.1**	**+0.2**
	comp=E,1μm,0.2s						
SERG	**Sergoula**	**0.90**	**61**	P	**Pg**	**17 01 55.4**	**+0.1**
SERG				S	**Sb**	**17 02 07.9**	**+0.5**
SERG				AML	AML	17 02 10.4	
	comp=N,3171μm,0.2s						
SERG				AML	AML	17 02 10.6	
	comp=E,2829μm,0.3s						
TSLK	**Tsoukalades, L**	**0.90**	**339**	P	**Pg**	**17 01 55.0**	**-0.3**
TSLK				S	**Sb**	**17 02 07.8**	**+0.4**
	comp=E,1μm,0.5s						
TSLK	**Tsoukalades, L**	**0.90**	**339**	P	**Pb**	**17 01 55.7**	**+0.3**
ANX	**Ano Chora**	**0.91**	**48**	P	**Pg**	**17 01 55.2**	**-0.3**
ANX				S	**Sb**	**17 02 08.3**	**+0.4**
	comp=E,2μm,0.5s						
ANX	**Ano Chora**	**0.91**	**48**	P	**Pb**	**17 01 55.9**	**+0.2**
ITM	**Ithomi**	**1.06**	**139**	P	**Pg**	**17 01 58.4**	**+0.1**
ITM				S	**Sb**	**17 02 13.3**	**+1.3**
	comp=E,312nm,0.8s						
ITM	**Ithomi**	**1.06**	**139**	P	**Pb**	**17 01 58.8**	**+0.6**
EVR	**Evrytania**	**1.10**	**32**	P	**Pg**	**17 01 58.6**	**-0.6**
EVR				S	**Sg**	**17 02 12.9**	**-0.6**
EVR	**Evrytania**	**1.10**	**32**	P	**Pb**	**17 01 59.4**	**+0.4**
PYL	**PYLOS**	**1.22**	**153**	P	**Pb**	**17 02 00.3**	**-0.6**
PYL				S	**Sb**	**17 02 17.6**	**+1.1**
THAL	**Thalero**	**1.27**	**87**	P	**Pg**	**17 02 02.7**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.33**	**39**	P	**Pg**	**17 02 03.9**	**+0.4**
ACOR	**Acrocorinthos**	**1.44**	**93**	P	**Pg**	**17 02 05.4**	**-0.1**
AXAR	**Agios Charalam**	**1.48**	**58**	P	**Pg**	**17 02 06.8**	**+0.4**
LOUT	**Loutraki**	**1.51**	**89**	P	**Pg**	**17 02 07.3**	**+0.3**
EPID	**Epidavros**	**1.67**	**102**	P	**Pg**	**17 02 10.1**	**0.0**
ATAL	**Atalanti**	**1.70**	**65**	P	**Pg**	**17 02 10.3**	**-0.2**
VIL2	**Platees**	**1.76**	**82**	P	**Pg**	**17 02 11.7**	**0.0**
KRND	**KRANIDI**	**1.77**	**109**	P	**Pg**	**17 02 11.3**	**-0.5**
IDI	**Anoyia**	**4.09**	**130**	Pn	**Pb**	**17 02 47.1**	**-2.8**
	comp=E,0.4nm,0.3s,baz=314,slow=19,SNR=1.8						
IDI				Sn	**Sn**	**17 03 31.9**	**+3.7**
	comp=E,0.8nm,0.3s,baz=283,slow=19,SNR=2.0						
	comp=E,2.7nm,0.3s						
HFS	**Hagfors**	**22.66**	**350**	P	**P**	**17 06 38.7**	**-0.1**
	comp=E,2.2nm,1.0s,baz=170,slow=10,SNR=1.9						
	comp=E,2.2nm,1.0s						
NOA	**NORSAR Array B**	**23.89**	**348**	P	**P**	**17 06 50.8**	**-0.5**
	comp=E,0.5nm,0.9s,baz=158,slow=9.0,SNR=3.3						
	comp=E,0.5nm,0.9s						
ARCES	**ARCESS Array B**	**31.70**	**3**	P	**P**	**17 08 00.1**	**-0.9**
	comp=E,0.3nm,0.5s,baz=188,slow=8.2,SNR=4.6						
	comp=E,0.3nm,0.5s						
DBIC	**Dimbokro**	**39.04**	**224**	LR	LR	17 25 41.7	
	comp=E,32nm,19.5s,baz=160,slow=36						
MKAR	**Makanchi Array**	**45.04**	**58**	P	**P**	**17 09 53.0**	**-0.4**
	comp=E,0.3nm,0.4s,baz=274,slow=7.1,SNR=7.1						
	comp=E,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**45.51**	**48**	P	**P**	**17 09 56.2**	**-0.8**
	comp=E,0.9nm,0.5s,baz=275,slow=7.6,SNR=4.6						
	comp=E,0.9nm,0.5s						

*NEIC **19** 17:28:48.1±2.7, 8˚.5N±0˚.1×104˚.0W±0˚.1, h10km±2km, mb4.3/69, Error ellipse: s-maj=23.5km s-min=19.4km az=255.0*
*IDC **19** 17:29:00.6±21.0, 9˚.96N×103˚.49W, h0km, mb3.9/3, mbtmp3.7/4, ML3.4/1, MS3.8/10, Error ellipse: s-maj=386.3km s-min=139.0km az=139.0*

ISC 19 17:28:51.2±1.4,**8˚.6N**±0˚.1×**103˚.9W**±0˚.1,**h35**km,**n92**, σ1§**60**/79,**mb4.3**/34,**MS3.7**/9,**Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**10.30**	**30**	Pn	**Pn**	**17 31 18.8**	**+2.0**
CCIG	**Comitan**	**13.77**	**55**	Pn	**Pn**	**17 32 06.5**	**+2.3**
ZAIG	**Zacatecas**	**14.15**	**5**	Pn	**P**	**17 32 12.8**	**-3.8**
PETF	**Flores**	**15.96**	**57**	P	**P**	**17 32 37.8**	**+1.4**
LPIG	**La Paz**	**16.61**	**339**	LR	LR	17 36 34.0	
	comp=Z,42nm,21.4s,baz=172,slow=29						
CRIN	**San Cristobal**	**17.03**	**75**	P	**Pn**	**17 32 46.5**	**-0.3**
HPIG		**18.32**	**355**	P	**Pn**	**17 33 00.5**	**-2.4**
HPIG				IAmb	IAmb	17 33 13.0	
	comp=Z,26nm,1.4s						
CVTR	**Volcan Turrial**	**19.90**	**84**	P	**P**	**17 33 19.2**	**-1.1**
CVTR				IAmb	IAmb	17 33 38.2	
	comp=Z,32nm,1.3s						
TX31	**Lajitas Ar. Si**	**20.64**	**1**	P	**P**	**17 33 24.9**	**-3.0**
TX32	**Lajitas Array**	**20.64**	**1**	P	**P**	**17 33 25.1**	**-2.8**
TXAR	**Lajitas Array**	**20.64**	**1**	P	**P**	**17 33 26.8**	**-1.0**
	baz=188,slow=12,SNR=8.8						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	**20.64**	**1**	P	**P**	**17 33 25.0**	**-2.9**
JCT	**Junction City**	**22.11**	**9**	P	**P**	**17 33 42.1**	**-1.5**
JCT				IAmb	IAmb	17 34 22.7	
	comp=Z,20nm,1.4s						
HKT	**Hockley**	**22.55**	**18**	P	**P**	**17 33 46.8**	**-1.3

	comp=Z,5.0nm,1.3s							
MZP	**Montezuma Peak**	**31.45**	**339**	P	**P**	**17 35 10.3**	**+0.6**	
CCM	**Cathedral Cave**	**31.47**	**19**	P	**P**	**17 35 10.0**	**+0.4**	
PMPB	**Monarch Peak**	**31.53**	**333**	P	**P**	**17 35 10.3**	**+0.1**	
O20A	**White River Ci**	**31.65**	**354**	P	**P**	**17 35 12.4**	**+1.0**	
OMMB	**Old Mammoth Mi**	**31.97**	**337**	P	**P**	**17 35 13.1**	**-1.2**	
RDMU	**Red Mountain**	**32.25**	**352**	P	**P**	**17 35 17.2**	**+0.6**	
NVAR	**Mina Array Bea**	**32.43**	**339**	P	P	17 35 23.4	+5.1	
	comp=Z,0.5nm,0.7s,baz=162,slow=6.2,SNR=4.7							
NVAR				LR	LR	17 46 13.7		
	comp=Z,184nm,21.7s,baz=151,slow=33							
	comp=Z,0.5nm,0.7s							
P40A	**Paris**	**32.58**	**17**	P	**P**	**17 35 18.4**	**-0.8**	
TKL	**Tuckaleechee C**	**32.60**	**31**	LR	LR	17 49 57.1		
	comp=Z,116nm,20.6s,baz=214,slow=40							
V52A	**Sevierville**	**32.84**	**31**	P	**P**	**17 35 21.0**	**-0.6**	
KVN	**Kaiserville**	**32.91**	**339**	P	**P**	**17 35 22.9**	**+0.5**	
KVN				IAmb	IAmb	17 35 34.2		
	comp=Z,3.7nm,1.1s							
RWWY	**Rawlins**	**33.09**	**355**	P	**P**	**17 35 25.0**	**+1.0**	
RWWY				IAmb	IAmb	17 35 36.9		
	comp=Z,4.5nm,0.7s							
KMSC	**Kings Mountain**	**33.53**	**35**	P	**P**	**17 35 27.1**	**-0.5**	
ELK	**Elko**	**33.58**	**344**	LR	LR	17 47 16.7		
	comp=Z,90nm,21.2s,baz=158,slow=34							
BW06	**Boulder Array**	**34.41**	**353**	P	**P**	**17 35 36.4**	**+1.0**	
BW06				IAmb	IAmb	17 35 50.8		
	comp=Z,6.9nm,1.1s							
PD31	**Pinedale Array**	**34.41**	**353**	P	**P**	**17 35 35.9**	**+0.5**	
PD31				IAmb	IAmb	17 35 50.8		
	comp=Z,6.7nm,1.2s							
PDAR	**Pinedale Array**	**34.41**	**353**	P	**P**	**17 35 38.7**	**+3.3**	
	comp=Z,2.1nm,1.0s,baz=160,slow=8.4,SNR=3.7							
	comp=Z,2.1nm,1.0s							
PDAR	**Pinedale Array**	**34.41**	**353**	P	**P**	**17 35 35.9**	**+0.5**	
V58A	**Windy Hill, Pi**	**35.26**	**36**	P	**P**	**17 35 43.5**	**+0.9**	
V58A				IAmb	IAmb	17 36 05.0		
	comp=Z,6.9nm,1.2s							
LOHW	**Long Hollow**	**35.38**	**352**	P	**P**	**17 35 43.7**	**-0.1**	
LOHW				IAmb	IAmb	17 36 12.4		
	comp=Z,6.6nm,1.4s							
RSSD	**Black Hills**	**35.39**	**360**	P	**P**	**17 35 42.4**	**-1.5**	
RSSD				IAmb	IAmb	17 36 09.5		
	comp=Z,4.8nm,1.3s							
HLID	**Hailey**	**36.03**	**347**	P	**P**	**17 35 50.0**	**+0.7**	
YPP	**Pitchstone Pla**	**36.05**	**352**	P	**P**	**17 35 49.9**	**+0.2**	
YPP				IAmb	IAmb	17 36 18.8		
	comp=Z,6.1nm,1.0s							
MFID	**Camas Ranch**	**36.23**	**345**	P	**P**	**17 35 52.3**	**+1.3**	
GCMT	**Greycliff**	**37.40**	**353**	P	**P**	**17 36 04.9**	**+4.0**	
LRM	**Limekiln Ridge**	**37.82**	**350**	P	**P**	**17 36 07.9**	**+3.2**	
PLID	**Pearl Lake**	**37.84**	**346**	P	**P**	**17 36 07.1**	**+2.3**	
PLID				IAmb	IAmb	17 36 29.7		
	comp=Z,5.9nm,1.3s							
L56A	**Greenwood**	**40.66**	**30**	P	**P**	**17 36 29.4**	**+1.2**	
NEW	**Newport**	**41.10**	**347**	P	**P**	**17 36 35.5**	**+3.8**	
	comp=Z,2.6nm,0.7s,baz=162,slow=13,SNR=3.8							
	comp=Z,2.6nm,0.7s							
NEW	**Newport**	**41.10**	**347**	P	**P**	**17 36 33.1**	**+1.5**	
ETMB	**Extrema**	**41.72**	**115**	P	**P**	**17 36 37.5**	**+0.3**	
ETMB				IAmb	IAmb	17 36 43.6		
	comp=Z,3.5nm,1.0s							
LPAZ	**La Paz**	**43.16**	**125**	P	**P**	**17 36 49.8**	**+0.3**	
BBB	**Bella Bella**	**47.77**	**340**	LR	LR	17 55 51.7		
	comp=Z,211nm,18.9s,baz=200,slow=35							
H03N2	**Juan Fernandez**	**48.06**	**152**	T	T	18 28 49.3		
	baz=329,slow=78,SNR=9.7							
H03N1	**Juan Fernandez**	**48.07**	**152**	T	T	18 28 52.6		
	baz=329,slow=78,SNR=8.9							
H03N3	**Juan Fernandez**	**48.07**	**152**	T	T	18 28 44.7		
	baz=329,slow=78,SNR=9.4							
DLBC	**Dease Lake**	**53.62**	**343**	LR	LR	17 58 28.1		
	comp=Z,122nm,18.1s,baz=218,slow=34							
YKA	**Yellowknife Ar**	**54.37**	**354**	LR	LR	17 59 42.7		
	comp=Z,124nm,18.4s,baz=116,slow=35							

*NEIC **19** 17:33:27.1±0.9,59°.03N±0°.02×152°.26W±0°.06,h70$^{km}_{\pm 6}$km, Error ellipse: s-maj=4.6km s-min=3.4km az=82.0*

AEIC 19 17:33:28.1±1.0,**59°.02N**±0°.03×**152°.26W**±0°.06,**h62**$^{km}_{\pm 4}$**km, ML2.5**/84,**ML3.6**/117(NEIC),**Error ellipse: s-maj=4.4km s-min=3.9km az=85.0,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYI	**Shuyak Island**	**0.42**	**190**		Pn	17 33 38.9	-0.5
SYI					Sn	17 33 47.7	0.0
AU22	**Augustine Moun**	**0.67**	**302**		Pn	17 33 41.6	-0.5
AU22					Sn	17 33 52.0	-0.2
AUQ	**Augustine Qik'**	**0.68**	**300**		Pn	17 33 41.9	-0.4
AUQ					Sn	17 33 53.0	+0.3
AUCH	**Augustine Cone**	**0.70**	**300**		Pn	17 33 42.0	-0.5
AUH	**Augustine H**	**0.70**	**300**		Pn	17 33 42.3	-0.2
AUL	**Augustine Lava**	**0.71**	**301**		Pn	17 33 42.1	-0.4
HOM	**Homer**	**0.71**	**26**		Pn	17 33 42.2	-0.4
HOM					Sn	17 33 53.4	+0.2
HOM	**Homer**	**0.71**	**26**	IAML		17 33 53.9	
	comp=E,1μm,0.5s						
HOM				IAML		17 33 54.1	
	comp=N,917nm,0.7s						
CNPM	**China Poot**	**0.73**	**46**		Pn	17 33 42.3	-0.5
CNPM	**China Poot**	**0.73**	**46**	IAML		17 33 53.9	
	comp=E,436nm,0.3s						
Q19K	**Cape Douglas,**	**0.73**	**263**		Pn	17 33 42.0	-0.8
Q19K					Sn	17 33 53.0	-0.6
OPT	**Oil Point**	**0.81**	**322**		Pn	17 33 43.4	-0.4
P19K	**Oil Pt**	**0.81**	**322**		Pn	17 33 43.2	-0.6
P19K	**Oil Pt**	**0.81**	**322**	IAML		17 33 56.3	
	comp=N,1μm,0.5s						
P19K				IAML		17 33 57.6	
	comp=E,1μm,0.5s						
BRLK	**Bradley Lake**	**1.02**	**43**		Pn	17 33 45.5	-1.0
BRLK					Sn	17 33 58.9	-1.3
BRLK	**Bradley Lake**	**1.02**	**43**	IAML		17 33 59.2	
	comp=N,464nm,0.2s						
BRLK				IAML		17 34 00.4	
	comp=E,364nm,0.1s						
ILS	**Iliamna Low So**	**1.02**	**336**		Pn	17 33 45.7	-0.9
BRSE	**Bradley Lake S**	**1.06**	**46**		Pn	17 33 46.2	-0.8
ILSW	**Iliamna Southw**	**1.06**	**335**		Pn	17 33 46.1	-1.0
ILSW					Sn	17 34 00.1	-1.2
ILSW	**Iliamna Southw**	**1.06**	**335**	IAML		17 34 01.3	
	comp=E,241nm,0.4s						
ILSW				IAML		17 34 01.8	
	comp=N,253nm,0.4s						
IVE	**Iliamna Volcan**	**1.07**	**339**		Pn	17 33 46.2	-1.0
O20K	**Slope Mountain**	**1.08**	**350**		Pn	17 33 46.8	-0.5
KAPH	**Katmai Pasha**	**1.17**	**249**		Pn	17 33 48.3	-0.2
KDAK	**Kodiak Island**	**1.26**	**188**	Pn	Pn	17 33 48.9	-0.6
KDAK	**Kodiak Island**	**1.26**	**188**		Sn	17 34 05.7	+0.1
RED	**Redoubt Volcan**	**1.42**	**350**		Pn	17 33 51.0	-0.8
RSO	**Redoubt South**	**1.47**	**350**		Pn	17 33 51.7	-0.8
KAHC	**Katmai Hardscr**	**1.48**	**256**		Pn	17 33 51.8	-0.8
RDWB	**Redoubt West**	**1.50**	**349**		Pn	17 33 52.1	-0.9
P18K	**Big Mountain,**	**1.57**	**285**		Pn	17 33 52.0	-1.8
P18K					Sn	17 34 11.4	-1.8
O19K	**Port Alsworth**	**1.58**	**319**		Pn	17 33 52.6	-1.2
O19K				IAML		17 34 13.4	
	comp=N,607nm,0.4s						
O19K				IAML		17 34 13.9	
	comp=E,817nm,0.5s						
NCT	**North Crescent**	**1.58**	**348**		Pn	17 33 53.3	-0.7
DFR	**Drift River**	**1.59**	**352**		Pn	17 33 53.4	-0.7
RDJH	**Redoubt Jeurge**	**1.60**	**350**		Pn	17 33 53.7	-0.5
RDJH					Sn	17 34 13.8	-0.1
O18K	**Koktuh Hills**	**1.72**	**300**		Pn	17 33 54.4	-1.4
O18K	**Koktuh Hills**	**1.72**	**300**	IAML		17 34 15.6	
	comp=N,79nm,0.5s						
SEW	**Seward**	**1.79**	**52**		Pn	17 33 55.5	-1.2
SEW					Sn	17 34 16.0	-2.4
SLKM	**Skilak Lake**	**1.81**	**34**		Pn	17 33 56.0	-1.0
CAPN	**Captain Cook N**	**1.84**	**17**		Pn	17 33 58.2	+0.9
CAPN	**Captain Cook N**	**1.84**	**17**	IAML		17 34 29.1	
	comp=N,158nm,0.5s						
CAPN				IAML		17 35 06.6	
	comp=E,169nm,0.9s						
OHAK	**Old Harbor**	**1.89**	**197**		Pn	17 33 57.1	-0.9
O22K	**Cooper Landing**	**1.94**	**40**		Pn	17 33 58.0	-0.7
O22K	**Cooper Landing**	**1.94**	**40**	IAML		17 34 26.5	
	comp=E,184nm,0.4s						
O22K				IAML		17 34 29.4	
	comp=N,217nm,0.4s						
N19K	**Bonanza Creek**	**2.12**	**329**		Pn	17 34 00.3	-0.9
N19K					Sn	17 34 24.8	-1.6
SPU	**Mount Spurr**	**2.17**	**3**		Pn	17 34 01.4	-0.5
CKL	**Chakachamna La**	**2.18**	**359**		Pn	17 34 01.9	-0.2
SPCR	**Spurr Chakacha**	**2.18**	**1**		Pn	17 34 02.0	-0.1
SPCN	**Chakachatna No**	**2.21**	**1**		Pn	17 34 02.5	+0.1
FIS	**Fire Island**	**2.36**	**25**	Pn	Pn	17 34 04.8	+0.4
FIS				IAML		17 35 19.9	
	comp=E,133nm,0.9s						
FIS				IAML		17 35 27.0	
	comp=N,125nm,0.9s						
SPNN	**North Nagishla**	**2.36**	**355**		Pn	17 34 04.5	-0.1
RC01	**Rabbit Creek A**	**2.43**	**30**		Pn	17 34 04.7	-0.6
RC01	**Rabbit Creek A**	**2.43**	**30**	IAML		17 34 34.9	
	comp=E,46nm,0.3s						
N18K	**Kilae Creek**	**2.48**	**314**		Pn	17 34 04.7	-1.3
STLK	**Strandline Lak**	**2.49**	**5**		Pn	17 34 06.4	+0.1
O17K	**Koliganek Bris**	**2.59**	**289**		Pn	17 34 06.2	-1.3
SVW2	**Sparrevohn**	**2.67**	**323**	Pn	Pn	17 34 07.3	-1.3
SII	**Sitkinak Islan**	**2.68**	**204**		Pn	17 34 07.7	-1.1
SII	**Sitkinak Islan**	**2.68**	**204**	IAML		17 34 29.2	
	comp=N,89nm,2.9s						
SII				IAML		17 34 53.3	
	comp=E,66nm,2.8s						
PWL	**Port Wells**	**2.70**	**45**		Pn	17 34 07.9	-1.1
PWL	**Port Wells**	**2.70**	**45**	IAML		17 34 38.3	
	comp=N,99nm,0.5s						
PWL				IAML		17 34 39.2	
	comp=E,82nm,0.5s						
M20K	**Styx River**	**2.90**	**352**		Pn	17 34 11.7	-0.2
SKT	**Skwentna**	**2.99**	**7**		Pn	17 34 12.4	-0.6
PMR	**Palmer**	**3.01**	**30**	Pn	Pn	17 34 11.9	-1.3
O16K	**Kokwok River B**	**3.05**	**283**		Pn	17 34 12.8	-1.0
KNK	**Knik Glacier**	**3.06**	**37**		Pn	17 34 12.7	-1.2
KNK	**Knik Glacier**	**3.06**	**37**	IAML		17 34 46.9	
	comp=E,29nm,0.5s						
KNK				IAML		17 34 47.9	
	comp=N,28nm,0.5s						
Q23K	**Middleton Isla**	**3.06**	**80**	Pn	Pn	17 34 12.8	-1.2
Q23K				IAML		17 35 08.1	
	comp=E,87nm,2.7s						
Q23K				IAML		17 35 25.6	
	comp=N,76nm,3.2s						
MID	**Middleton Isla**	**3.07**	**80**	Pn	Pn	17 34 12.8	-1.3
MID				IAML		17 34 56.5	
	comp=E,90nm,3.6s						
MID				IAML		17 35 25.6	
	comp=N,70nm,2.6s						
M19K	**Big River Lodg**	**3.08**	**341**		Pn	17 34 13.8	-0.4
GLI	**Glacier Island**	**3.19**	**52**		Pn	17 34 13.9	-1.9
GLI	**Glacier Island**	**3.19**	**52**	IAML		17 34 48.6	
	comp=E,37nm,0.3s						
GLI				IAML		17 34 49.4	
	comp=N,30nm,0.2s						
GHO	**Glory Hole Cre**	**3.21**	**30**		Pn	17 34 15.2	-0.9
GHO	**Glory Hole Cre**	**3.21**	**30**	IAML		17 34 51.9	
	comp=N,28nm,0.6s						
GHO				IAML		17 34 52.3	
	comp=E,21nm,0.5s						
HIN	**Hinchinbrook I**	**3.22**	**62**		Pn	17 34 15.3	-0.9
HIN	**Hinchinbrook I**	**3.22**	**62**	IAML		17 34 52.0	
	comp=N,70nm,0.5s						
HIN				IAML		17 34 52.1	
	comp=E,68nm,0.7s						
FID	**Port Fidalgo**	**3.39**	**57**		Pn	17 34 16.3	-2.2
FID	**Port Fidalgo**	**3.39**	**57**	IAML		17 34 55.1	
	comp=E,39nm,0.3s						
SML	**Sawmill**	**3.40**	**33**		Pn	17 34 17.6	-1.0
L19K	**White Mountain**	**3.42**	**339**		Pn	17 34 18.4	-0.4
JPK	**Jack Peak**	**3.49**	**52**		Pn	17 34 18.4	-1.6
CUT	**Chulitna**	**3.53**	**15**	Pn	Pn	17 34 19.9	-0.4
CUT				IAML		17 35 07.1	
	comp=N,28nm,0.6s						
CUT				IAML		17 35 24.9	
	comp=E,26nm,0.5s						
L20K	**Farewell, AK**	**3.56**	**348**		Pn	17 34 20.5	-0.2
N16K	**Nishlik Lake**	**3.60**	**297**		Pn	17 34 20.7	-0.7
EYAK	**Cordova Ski Ar**	**3.63**	**62**	Pn	Pn	17 34 20.3	-1.3
CHIR	**Chirikof Islan**	**3.69**	**211**	Pn	Pn	17 34 20.8	-1.7
CHIR				IAML		17 36 13.6	
	comp=E,77nm,2.6s						
CHIR				IAML		17 36 38.7	
	comp=N,105nm,1.9s						
SCM	**Sheep Creek Mo**	**3.73**	**39**		Pn	17 34 22.5	-0.7
DIV	**Divide**	**3.87**	**54**	Pn	Pn	17 34 23.8	-1.4
PPLA	**Purkeypile**	**3.89**	**0**		Pn	17 34 24.6	-0.8
KLU	**Klutina**	**4.01**	**49**		Pn	17 34 26.1	-0.9
RAGM	**Ragged Mountai**	**4.08**	**67**		Pn	17 34 26.8	-1.1
KAIM	**Kayak Island**	**4.10**	**74**	Pn	Pn	17 34 27.6	-0.5
KAIM				IAML		17 37 08.3	
	comp=E,429nm,0.4s						
KAIM				IAML		17 37 11.4	
	comp=N,407nm,0.6s						
GOAT	**Goat Mountain**	**4.11**	**64**		Pn	17 34 27.6	-0.8
WAT7	**Susitna Watana**	**4.17**	**22**		Pn	17 34 28.6	-0.6
WAT6	**Susitna Watana**	**4.20**	**30**		Pn	17 34 28.8	-0.9
WAT1	**Susitna Watana**	**4.22**	**24**		Pn	17 34 29.2	-0.7
HMT	**Hamilton**	**4.26**	**69**	Pn	Pn	17 34 29.6	-0.8
TT01	**Tatalina**	**4.31**	**336**		Pn	17 34 30.4	-0.6
BMRM	**Bremner River**	**4.31**	**60**	Pn	Pn	17 34 29.8	-1.2
M24K	**Tolsona, Glenn**	**4.31**	**42**		Pn	17 34 30.7	-0.4
NICHA	**Nichawak Mount**	**4.38**	**70**		Pn	17 34 31.3	-0.7
K20K	**Telida**	**4.44**	**349**	Pn	Pn	17 34 32.4	-0.3
K20K				IAML		17 37 32.0	
	comp=N,29nm,0.7s						
K20K				IAML		17 37 32.7	
	comp=E,55nm,0.8s						
SUCK	**Suckling Hills**	**4.44**	**73**	Pn	Pn	17 34 32.0	-0.8
TRF	**Thorofare Moun**	**4.54**	**11**		Pn	17 34 35.6	+1.3
TRF				IAML		17 37 36.4	
	comp=E,510nm,1.0s						
TRF				IAML		17 37 38.1	
	comp=N,501nm,1.2s						
BERG	**Berg Lake**	**4.54**	**69**	Pn	Pn	17 34 33.2	-1.0
KTH	**Kantishna Hill**	**4.59**	**7**	Pn	Pn	17 34 32.8	-2.2
KTH				IAML		17 37 29.4	
	comp=N,420nm,1.1s						
KTH				IAML		17 37 31.8	
	comp=E,310nm,1.1s						
N25K	**Chitina, Valde**	**4.60**	**53**		Pn	17 34 33.9	-1.2
RND	**Reindeer**	**4.69**	**19**	Pn	Pn	17 34 35.6	-0.8
RND				IAML		17 37 30.7	
	comp=E,4μm,0.7s						
DHY	**Denali Highway**	**4.71**	**28**		Pn	17 34 36.0	-0.6
GLB	**Gilahina Butte**	**4.86**	**56**	Pn	Pn	17 34 37.2	-1.4
GLB				IAML		17 37 09.1	
	comp=E,4μm,0.4s						
SNH	**Sunshine Point**	**4.92**	**72**	Pn	Pn	17 34 38.6	-0.8
WAX	**Waxell Ridge**	**4.97**	**69**	Pn	Pn	17 34 39.0	-1.0
MCK	**McKinley**	**4.99**	**17**	Pn	Pn	17 34 40.1	-0.2
TGL	**Tana Glacier**	**5.05**	**66**	Pn	Pn	17 34 39.4	-1.9
BPAW	**Bear Paw Mtn.**	**5.13**	**6**	Pn	Pn	17 34 40.9	-1.4
BPAW				IAML		17 38 09.9	
	comp=E,727nm,1.5s						
BPAW				IAML		17 38 12.2	
	comp=N,962nm,1.1s						
PAX	**Paxson**	**5.15**	**37**	Pn	Pn	17 34 41.6	-1.1
MCARA	**McCarthy VSAT**	**5.18**	**59**	Pn	Pn	17 34 42.3	-0.6
ISLE	**Juniper Island**	**5.25**	**68**	Pn	Pn	17 34 43.3	-0.7
J20K	**Nowinta River**	**5.25**	**351**	Pn	Pn	17 34 43.3	-0.6
J20K				IAML		17 37 52.5	
	comp=E,157nm,1.0s						
J20K				IAML		17 38 03.5	
	comp=N,154nm,1.1s						
MESA	**MESA**	**5.36**	**73**	Pn	Pn	17 34 44.0	-1.6
YAH	**Yahtse**	**5.49**	**71**	Pn	Pn	17 34 47.0	-0.4
M26K	**Nabesna, AK**	**5.67**	**49**	Pn	Pn	17 34 48.3	-1.3
NEA2	**Nenana**	**5.79**	**14**	Pn	Pn	17 34 49.6	-1.6
TABL	**Table Mountain**	**5.80**	**71**	Pn	Pn	17 34 51.3	-0.3
WRH	**Wood River Hil**	**5.81**	**18**	Pn	Pn	17 34 50.0	-1.6
CTGM	**Chitina Glacie**	**5.82**	**66**	Pn	Pn	17 34 51.0	-0.8
CNBA	**Chernabura Isl**	**5.82**	**227**	Pn	Pn	17 34 49.5	-2.1
RIDG	**Independent Ri**	**5.92**	**34**	Pn	Pn	17 34 52.4	-0.7
LOGN	**Logan Glacier**	**5.94**	**68**	Pn	Pn	17 34 53.1	-0.3
HDA	**Harding Lake**	**5.96**	**23**	Pn	Pn	17 34 52.9	-0.7
CCB	**Clear Creek Bu**	**6.02**	**19**		Pn	17 34 53.2	-1.2
MLY	**Manley**	**6.07**	**6**	Pn	Pn	17 34 54.4	-0.8
M27K	**Edge Creek, AK**	**6.09**	**52**	Pn	Pn	17 34 54.5	-1.1
I21K	**Tanana**	**6.18**	**1**	Pn	Pn	17 34 55.6	-0.9
PCA	**Pinnacle**	**6.19**	**75**	Pn	Pn	17 34 55.6	-1.3
MDM	**Murphy Dome**	**6.25**	**16**	Pn	Pn	17 34 56.2	-1.3
I23K	**Minto, Yukon-K**	**6.29**	**11**		Pn	17 34 56.7	-1.4
IL31		**6.30**	**21**		Pn	17 34 57.0	-1.2
ILAR	**Eielson Array**	**6.30**	**21**	Pn	Pn	17 34 57.0	-1.2
SCRK	**Sand Creek**	**6.35**	**35**	Pn	Pn	17 34 56.9	-2.1
J25K	**Salcha River,**	**6.48**	**27**		Pn	17 34 59.5	-1.3
BCPM	**Bancas Point**	**6.50**	**76**	Pn	Pn	17 34 59.9	-1.1
BCAR	**Beaver Creek A**	**6.50**	**47**	Pn	Pn	17 34 59.8	-1.2
POKR	**Poker Plat Res**	**6.52**	**18**	Pn	Pn	17 35 00.2	-1.0
H21K	**Melozitna Rive**	**6.66**	**358**	Pn	Pn	17 35 02.2	-1.0
J26L	**Joseph Creek**	**6.87**	**33**	Pn	Pn	17 35 04.6	-1.4
H23K	**Yukon River**	**6.94**	**9**	Pn	Pn	17 35 05.8	-1.2
IMAR	**Indian Mountai**	**7.02**	**355**	Pn	Pn	17 35 06.9	-1.2
H24K	**Noodor Dome**	**7.13**	**15**	Pn	Pn	17 35 07.6	-2.0
P29M	**Windy Craggy**	**7.45**	**79**	Pn	Pn	17 35 13.5	-0.5
I26K	**Coal Creek Min**	**7.60**	**30**	Pn	Pn	17 35 14.9	-1.1
EGAK	**Eagle**	**7.79**	**38**	Pn	Pn	17 35 17.2	-1.3
BMAR	**Burnt Mountain**	**9.11**	**19**	Pn	Pn	17 35 36.7	0.0
JIS	**Juneau Island**	**9.35**	**87**	Pn	Pn	17 35 39.0	-0.9

*IDC **19** 17:33:40.4±0.3,55°.12S×32°.80W,h0^{km},mb5.1/24, mbtmp5.2/25,ML4.8/1,MS5.3/40,Error ellipse: s-maj=13.5km s-min=10.8km az=27.0*

*NEIC **19** 17:33:40.3±1.5,55°.22S±0°.08×32°.1W±0°.1,h3$^{km}_{\pm 3}$km, mb5.6/135,Ms_20 5.5/366,Mwb5.7/32,Mww5.8,Error ellipse: s-maj=11.9km s-min=10.9km az=203.0*

*MOS **19** 17:33:41.5±1.1,55°.20S×32°.17W,h16^{km},mb5.4/6, MS5.4/33,Error ellipse: s-maj=16.4km s-min=9.6km az=113.6*

*NEIC **19** 17:33:41.1,55°.21S×32°.10W,h7^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.70; $M_{\theta\theta}$-1.73; $M_{\phi\phi}$0.03; $M_{r\theta}$-2.19; $M_{r\phi}$1.36; $M_{\theta\phi}$3.58; Fault plane solution: $M_0$4.74000×10^{17} NP1:ϕ_s89.44000°, δ19.72000°,λ35.45000°. NP2:ϕ_s325.60000°,δ78.71000°, λ106.28000°. Principal axes: T 4.6771, Plg54.0000°, Azm255.0000°; N 0.1181, Plg16.0000°, Azm142.0000°; P -4.7952, Plg32.0000°, Azm42.0000°;*

*BJI **19** 17:33:41.5±0.0,55°.20S×32°.00W,h20^{km},mB5.7/45, Ms5.7/56,Ms7 5.5/56*

*NEIC **19** 17:33:45,55°.01S×32°.10W,h18^{km},Moment Tensor Solution. Duration: 10±0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.43; $M_{\theta\theta}$-3.60; $M_{\phi\phi}$-0.83; $M_{r\theta}$-3.12; $M_{r\phi}$2.76; $M_{\theta\phi}$1.91; Fault plane solution: $M_0$6.14000×10^{17} NP1: ϕ_s122.00000°,δ26.00000°,λ90.00000°. NP2: ϕ_s301.00000°,δ63.00000°,λ90.00000°. Principal axes: T 5.6538, Plg72.0000°, Azm211.0000°; N 0.8759, Plg0.0000°, Azm302.0000°; P -6.5297, Plg18.0000°, Azm32.0000°;*

*GCMT **19** 17:33:47.3±0.1,55°.09S±0°.01×31°.92W±0°.01, h12^{km}, MW5.8/153,Moment Tensor Solution. s127,c217; s153,c310; Duration: 1±9 Moment tensor: Scale 10^{17} Nm; M_{rr}3.17±.07; $M_{\theta\theta}$-2.22±.06; $M_{\phi\phi}$-0.95±.05; $M_{r\theta}$-2.32±.18; $M_{r\phi}$2.89±.04; $M_{\theta\phi}$3.80±.23; Best double couple: $M_0$5.95300×10^{17} NP1:ϕ_s326.00000°,δ71.00000°, λ106.00000°. NP2:ϕ_s105.00000°,δ25.00000°,λ51.00000°. Principal axes: T 5.4750, Plg61.0000°, Azm260.0000°; N 0.9530, Plg15.0000°, Azm141.0000°; P -6.4300, Plg24.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 19 17:33:41.3±0.2,**55°.20S**±0°.05×**31.96W**±0°.04,**h10**km,**n919,** σ1^{s}**38**/746,**mb5.6**/112,**MS5.5**/274,**14C-13D,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.78**	**287**		Pn	**17 34 24.8**	**-1.1**
HOPE	**Hope Point**	**2.78**	**287**	P	**Pn**	**17 34 24.8**	**-1.1**
ORCD	**Orcadas**	**8.76**	**226**	Pn	**Pn**	**17 35 45.1**	**-2.8**
EFI	**East Falkland**	**15.91**	**272**		**Pn**	**17 37 24.2**	**-0.9**
EFI				IAmb	IAmb	17 37 31.9	
	comp=Z,581nm,1.8s						
EFI	**East Falkland**	**15.91**	**272**	*eP*	**Pn**	**17 37 25.3**	**+0.2**
EFI				pmax	pmax		
	comp=Z,57nm,0.7s						
PMSA	**Palmer Station**	**18.48**	**226**	P	**Pn**	**17 37 59.3**	**+2.2**
	comp=Z,2.7nm,0.3s,baz=69,slow=10.0,SNR=44						
PMSA				LR	LR	17 44 35.8	
	comp=Z,13μm,18.3s,baz=64,slow=35						
	comp=Z,375nm,1.0s						
PMSA	**Palmer Station**	**18.48**	**226**	P	**Pn**	**17 37 58.2**	**+1.1**
PMSA				IAmb	IAmb	17 38 04.0	
	comp=Z,433nm,1.1s						
PMSA	**Palmer Station**	**18.48**	**226**	*eP*	**Pn**	**17 37 58.7**	**+1.6**
VNA1	**Neumayer--Stat**	**18.65**	**155

ITAB Concordia 31.56 324 P **P** **17 40 03.3 -0.4**
ITAB Concordia 31.56 324 *e*P **P** **17 40 04.9 +1.1**
CRSM Crissiumal (Br 31.99 321 *e*P **P** **17 40 07.9 +0.3**
RFA San Rafael 32.38 294 *i* P **P** **17 40 11.2 +0.1**
MRA San Martin 32.83 300 *i* P **P** **17 40 15.0 0.0**
FRBT Francisco Belt 33.04 324 *e*P **P** **17 40 16.9 +0.2**
TCA Tanti 33.16 302 *i* P **P** **17 40 17.9 0.0**
PARB Paraibuna 33.41 337 *e*P **P** **17 40 21.2 +1.2**
MAN01 Angra dos Reis 33.52 340 *e*P **P** **17 40 21.7 +0.8**
BO02 Sierra Bellavi 33.59 291 P **P** **17 40 20.4 -1.2**
PTGB Pitanga 33.87 326 *e*P **P** **17 40 22.7 -1.4**
AAGR Agrelo 33.88 295 *i* P **P** **17 40 23.7 -0.5**
VAS01 Vassouras-RJ 33.98 341 *e*P **P** **17 40 24.7 -0.3**
DUB01 Friburgo-RJ 33.98 343 *e*P **P** **17 40 26.2 +1.2**
LMEL Las Melosas 34.01 293 P **P** **17 40 23.2 -2.1**
GO05 Huala 34.05 290 P **P** **17 40 23.9 -1.5**
GO05 IAmb IAmb 17 40 28.5
comp=Z,68nm,0.8s
VAO Valinhos 34.05 335 *e*P **P** **17 40 27.8 +2.1**
BO01 Tunca 34.06 291 P **P** **17 40 23.6 -2.0**
CAM01 Campos-RJ 34.12 344 *e*P **P** **17 40 28.2 +2.2**
ASAL Salagasta 34.28 296 *i* P **P** **17 40 27.8 +0.2**
CPUP Villa Florida 34.28 317 P **P** **17 40 27.1 -0.4**
comp=Z,27nm,0.6s,baz=151,slow=7.3,SNR=59
CPUP LR LR 17 56 01.1
comp=Z,3µm,18.0s,baz=161,slow=39
comp=Z,27nm,0.6s
CPUP Villa Florida 34.28 317 P **P** **17 40 26.5 -1.0**
CPUP IAmb IAmb 17 40 35.4
comp=Z,98nm,1.1s
CPUP Villa Florida 34.28 317 *e*P **P** **17 40 27.5 0.0**
ACHE Chepes 34.32 300 *i* P **P** **17 40 27.4 -0.6**
MT03 Universidad Ad 34.45 293 P **P** **17 40 28.0 -1.1**
MT03 IAmb IAmb 17 40 45.2
comp=Z,85nm,1.1s
MT09 Talagante 34.48 292 P **P** **17 40 28.2 -1.2**
MT01 Popeta 34.55 292 P **P** **17 40 28.0 -1.8**
MT01 IAmb IAmb 17 40 33.0
comp=Z,70nm,0.9s
MT05 Renca 34.64 293 P **P** **17 40 29.3 -1.4**
RCLB Rio Claro- Sao 34.75 334 *e*P **P** **17 40 32.8 +1.1**
MCR1 Marechal Candi 34.77 323 *e*P **P** **17 40 32.4 +0.6**
PEL Peldehue 34.81 293 P **P** **17 40 31.3 -0.8**
PEL Peldehue 34.81 293 P **P** **17 40 31.3 -0.8**
PEL pmax pmax
comp=Z,145nm,0.8s
PEL MLR MLR
comp=Z,3µm,20.0s
APLL PUNTA DE LOS L 34.88 301 *i* P **P** **17 40 32.2 -0.6**
VA05 Santo Domingo 34.91 292 P **P** **17 40 32.6 -0.2**
MT02 Curacav 34.96 292 P **P** **17 40 32.8 -0.6**
MT02 IAmb IAmb 17 40 40.8
comp=Z,116nm,0.9s
ZON Zonda 35.03 297 P **P** **17 40 33.3 -0.7**
ZON IAmb IAmb 17 40 48.8
comp=Z,82nm,0.9s
ZON Zonda 35.03 297 P **P** **17 40 33.3 -0.7**
ZON pmax pmax
comp=Z,82nm,0.9s
VA03 San Esteban 35.03 294 P **P** **17 40 33.0 -1.2**
VA03 IAmb IAmb 17 40 38.3
comp=Z,107nm,0.9s
QSPA South Pole Qui 35.05 180 P **P** **17 40 36.0 +1.9**
comp=Z,38nm,1.0s,baz=193,slow=4.0,SNR=43
QSPA LR LR 17 54 25.4
comp=Z,5µm,19.0s,baz=188,slow=35
comp=Z,38nm,1.0s
QSPA South Pole Qui 35.05 180 P **P** **17 40 35.2 +1.2**
QSPA South Pole Qui 35.05 180 IAMs_20 IAMs_20 17 56 09.2
comp=Z,7µm,18.0s
RTLL Cerro Villicun 35.10 298 *i* P **P** **17 40 34.7 0.0**
ROC1 El Roble 35.11 293 P **P** **17 40 34.3 -0.7**
ROC1 El Roble 35.11 293 *i* P **P** **17 40 37.1 +2.1**
AVFE Valle Fertil 35.12 300 *i* P **P** **17 40 34.3 -0.6**
RTLS Leoncito 35.14 296 *i* P **P** **17 40 35.7 +0.4**
ALF01 Guarapari-ES 35.16 346 *e*P **P** **17 40 36.7 +1.5**
VA01 Torpederas 35.41 292 P **P** **17 40 37.2 0.0**
VA01 IAmb IAmb 17 40 41.0
comp=Z,125nm,1.0s
BSCB Bom Sucesso 35.49 339 *e*P **P** **17 40 39.2 +1.1**
VA06 Catapilco 35.58 293 P **P** **17 40 38.3 -0.4**
TRCB Terra Rica 35.85 326 P **P** **17 40 40.9 -0.3**
TRCB IAmb IAmb 17 41 13.0
comp=Z,68nm,0.7s
TRCB Terra Rica 35.85 326 *e*P **P** **17 40 42.6 +1.5**
ACLC CERRO LA CRUZ 35.89 301 *i* P **P** **17 40 40.7 -0.9**
ACCO Cerro Coronel 35.99 298 *i* P **P** **17 40 43.8 +1.2**
BB19B Bebedouro 36.30 333 *e*P **P** **17 40 46.0 +1.0**
ACDV Cuesta del Vie 36.36 298 *i* P **P** **17 40 46.6 +1.0**
RIB01 Linhares ES 36.40 346 *e*P **P** **17 40 47.1 +1.3**
CO02 Combarbal 36.49 295 P **P** **17 40 45.9 -0.8**
AROD Rodeo 36.54 298 *i* P **P** **17 40 49.5 +2.2**
PCMB Pacaembu 36.54 329 *e*P **P** **17 40 48.6 +1.6**
CO03 El Pedregal 36.62 296 P **P** **17 40 47.6 -0.1**
CO03 IAmb IAmb 17 41 20.2
comp=Z,223nm,1.6s
CO01 Juntas del Tor 37.01 297 P **P** **17 40 51.5 +0.3**
CO01 IAmb IAmb 17 41 08.2
comp=Z,138nm,1.2s
VCA Vinchina 37.07 301 *i* P **P** **17 40 52.9 +1.2**
SJMB Sao Joao De Ma 37.11 345 *e*P **P** **17 40 52.9 +1.1**
GO04 Tololo Observa 37.21 296 P **P** **17 40 51.4 -1.6**
GO04 IAmb IAmb 17 41 17.5
comp=Z,143nm,1.2s
CO06 Fray Jorge 37.24 295 P **P** **17 40 52.6 -0.4**
CO06 IAmb IAmb 17 41 13.8
comp=Z,126nm,1.4s
CO05 La Serena 37.64 296 P **P** **17 40 55.7 -0.6**
CO05 IAmb IAmb 17 41 00.7
comp=Z,113nm,0.8s
ANTJ Antonio Joao (37.72 322 *e*P **P** **17 40 57.4 +0.4**
NAN01 Guarapari, ES 37.81 347 *e*P **P** **17 40 58.4 +0.7**
DIAM Diamantina, MG 37.91 342 *e*P **P** **17 40 59.7 +0.9**
AC05 El Transito 38.02 298 P **P** **17 40 58.5 -1.2**
AC05 IAmb IAmb 17 41 14.0
comp=Z,94nm,0.8s
ITRB Iturama 38.08 331 *e*P **P** **17 41 01.1 +1.0**
LCO Las Campanas 38.10 297 P **P** **17 40 59.9 -0.6**
LCO Las Campanas 38.10 297 P **P** **17 40 59.9 -0.6**
LCO pmax pmax
comp=Z,76nm,1.2s
LCO MLR MLR
comp=Z,5µm,19.0s
FSA Cafayete 38.20 306 *i* P **P** **17 41 00.4 -0.9**
PMNB Patos De Minas 38.23 337 *e*P **P** **17 41 02.6 +1.1**
AC04 Llanos de Chal 38.94 298 P **P** **17 41 06.3 -0.9**
GUA01 Guaratinga, BA 39.02 348 *e*P **P** **17 41 09.0 +1.1**
AQDB Aquidauana 39.02 323 P **P** **17 41 06.2 -1.7**
GO03 Copiap 39.02 299 P **P** **17 41 06.7 -1.4**
AC02 Maricunga 39.10 301 P **P** **17 41 09.4 +0.3**
SLA San Lorenzo 39.17 307 *i* P **P** **17 41 08.7 -0.8**
IPMB Ipameri, GO 39.17 335 *e*P **P** **17 41 10.9 +1.6**
AC06 Mina Casimiro 39.27 299 P **P** **17 41 09.5 -0.6**
ALOL LOMAS DE OLMED 39.28 310 *e*P **P** **17 41 10.6 +0.5**
AZAP Zapla 39.40 308 *i* P **P** **17 41 10.8 -0.6**
MC01 Montes Claros 39.51 342 *e*P **P** **17 41 12.5 +0.4**
C2SB Chapadao do Su 39.69 328 *e*P **P** **17 41 14.8 +1.2**
CMC01 Camacan, BA 40.19 349 *e*P **P** **17 41 18.6 +0.9**
AC01 Pan de Azucar 40.40 300 P **P** **17 41 18.3 -1.1**
AC01 IAmb IAmb 17 41 34.5
comp=Z,162nm,1.1s
GO02 Mina Guanaco 40.72 302 P **P** **17 41 21.1 -1.3**
GO02 IAmb IAmb 17 41 37.6
comp=Z,186nm,1.0s
ELIM Elim 40.87 82 *e*P **P** **17 41 23.9 +0.6**
ELIM IAmb IAmb 17 41 24.2
comp=Z,56nm,1.2s
JANB Januaria 41.19 342 *e*P **P** **17 41 26.6 +0.6**
BDFB Brasilia 41.38 336 P **P** **17 41 28.5 +0.7**
comp=Z,11nm,0.7s,baz=153,slow=5.2,SNR=13
BDFB LR LR 17 58 15.1
comp=Z,1µm,19.5s,baz=161,slow=36
comp=Z,11nm,0.7s
BDFB Brasilia 41.38 336 P **P** **17 41 27.6 -0.1**
BDFB Brasilia 41.38 336 P **P** **17 41 27.6 -0.1**
BDFB pmax pmax
comp=Z,75nm,1.3s
BDFB Brasilia 41.38 336 *e*P **P** **17 41 28.7 +1.0**
PB14 IPOC Station P 41.57 301 P **P** **17 41 28.2 -1.2**
PB14 IAmb IAmb 17 41 43.9
comp=Z,134nm,1.2s
GDU01 Guandu, BA 41.81 349 *e*P **P** **17 41 31.0 -0.1**
MATJ Matjiesfontein 42.31 81 *e*P **P** **17 41 36.3 +1.1**
MATJ IAML 17 41 38.6
comp=Z,20nm,0.7s
MAW Mawson 42.41 146 P **P** **17 41 36.2 +0.8**
comp=Z,25nm,0.9s,baz=242,slow=8.7,SNR=44
MAW LR LR 17 58 50.2
comp=Z,2µm,18.9s,baz=250,slow=36
comp=Z,25nm,0.9s
MAW Mawson 42.41 146 P **P** **17 41 35.9 +0.5**
baz=42,SNR=39
MAW Mawson 42.41 146 P **P** **17 41 35.8 +0.4**
LVC Limon Verde 42.56 305 P **P** **17 41 38.3 +0.7**
comp=Z,73nm,0.8s,baz=138,slow=4.4,SNR=18
comp=Z,73nm,0.8s
LVC Limon Verde 42.56 305 P **P** **17 41 36.7 -0.9**
LVC Limon Verde 42.56 305 *e*P **P** **17 41 38.5 +0.9**
PB06 IPOC Station P 42.80 304 P **P** **17 41 38.6 -0.7**
SUR Sutherland 43.10 80 P **P** **17 41 42.1 +0.4**
comp=Z,30nm,0.8s,baz=202,slow=9.8,SNR=22
SUR LR LR 17 55 42.2
comp=Z,3µm,20.8s,baz=220,slow=31
comp=Z,30nm,0.8s
SUR Sutherland 43.10 80 P **P** **17 41 42.8 +1.1**
SUR IAmb IAmb 17 41 45.9
comp=Z,170nm,1.8s
CVNA Calvinia 43.18 79 *e*P **P** **17 41 44.6 +2.4**
CVNA IAmb IAmb 17 41 54.4
comp=Z,129nm,1.7s
SALV Santo Antonio 43.28 326 *e*P **P** **17 41 43.8 +0.8**
PB04 IPOC Station P 43.39 304 IAmb IAmb 17 41 59.5
comp=Z,115nm,1.1s
FRAZ Fraserburg 43.77 81 *e*P **P** **17 41 47.3 +0.2**
FRAZ IAmb IAmb 17 41 49.0
comp=Z,1µm,3.3s
SDBA SAO DESIDERIO 43.88 342 *e*P **P** **17 41 48.6 +0.7**
GRAN Grantham 43.92 82 *e*P **P** **17 41 48.5 +0.3**
GRAN IAmb IAmb 17 41 51.5
comp=Z,17nm,0.8s
KROM Kromhout 43.97 86 *e*P **P** **17 41 48.7 +0.2**
KROM IAmb IAmb 17 41 54.2
comp=Z,108nm,1.1s
SHEL Horse Pasture 44.06 38 P **P** **17 41 50.4 +1.1**
SHEL Horse Pasture 44.06 38 P **P** **17 41 50.4 +1.1**
SHEL MLR MLR
comp=Z,8µm,20.0s
PB02 IPOC Station P 44.13 305 P **P** **17 41 49.2 -0.8**
PB02 IAmb IAmb 17 42 07.2
comp=Z,66nm,0.8s
PB01 IPOC Station P 44.18 305 IAmb IAmb 17 41 55.5
comp=Z,116nm,0.9s
NBLA Lagarto - SE 44.34 352 *e*P **P** **17 41 51.1 -0.4**
BRAK Brakfontein 44.72 82 *e*P **P** **17 41 55.9 +1.3**
BRAK IAmb IAmb 17 41 57.8
comp=Z,223nm,2.0s
PTLB Pontes e Lacer 44.87 321 P **P** **17 41 55.2 -0.6**
PTLB IAmb IAmb 17 42 03.3
comp=Z,75nm,0.9s
PTLB Pontes e Lacer 44.87 321 *e*P **P** **17 41 55.5 -0.3**
TA01 Diego Aracena 44.92 305 P **P** **17 41 54.5 -1.6**
TA01 IAmb IAmb 17 42 12.5
comp=Z,108nm,1.2s
SIV San Ignacio 45.09 319 LR LR 18 03 37.6
comp=Z,1µm,18.0s,baz=170,slow=40
TA02 Huaiquique 45.15 305 IAmb IAmb 17 42 14.1
comp=Z,72nm,1.0s
BFON Badsfontein, M 45.16 82 *e*P **P** **17 41 56.9 -1.2**
BFON IAmb IAmb 17 42 02.3
comp=Z,275nm,2.2s
GRAF Camdeboo Natio 45.26 84 *e*P **P** **17 41 59.1 +0.2**
GRAF IAmb IAmb 17 42 00.1
comp=Z,63nm,1.1s
NBAN Anadia - AL 45.55 354 *e*P **P** **17 42 01.8 +0.7**
SOE Somerset East 45.55 85 P **P** **17 42 00.1 -1.1**
SOE IAmb IAmb 17 42 12.3
comp=Z,72nm,1.2s
SOE Somerset East 45.55 85 *e*P **P** **17 42 02.2 +1.0**
SOE IAmb IAmb 17 42 05.4
comp=Z,374nm,2.2s
AUGR Augrabies 45.70 76 *e*P **P** **17 42 02.9 +0.6**
AUGR IAmb IAmb 17 42 08.0
comp=Z,181nm,1.7s
SNDB Serra Nova Dou 45.72 333 *e*P **P** **17 42 02.3 -0.2**
KEIM Keimoes 45.96 77 *e*P **P** **17 42 04.8 +0.4**
KEIM IAmb IAmb 17 42 06.0
comp=Z,147nm,1.8s
UPI Upington 46.39 77 *e*P **P** **17 42 07.5 -0.3**
UPI IAmb IAmb 17 42 19.4
comp=Z,63nm,1.5s
NBRF Rio Formoso - 46.47 356 *e*P **P** **17 42 08.7 +0.3**
PB16 IPOC Station P 46.54 307 IAmb IAmb 17 42 29.5
comp=Z,58nm,1.3s
SBA Scott Base 46.70 185 P **P** **17 42 09.8 +0.2**
SBA Scott Base 46.70 185 P **P** **17 42 09.8 +0.2**
SBA pmax pmax
comp=Z,29nm,1.1s
SBA MLR MLR
comp=Z,2µm,18.0s
HVD Gariep Dam 47.08 83 *e*P **P** **17 42 13.0 -0.3**
HVD IAmb IAmb 17 42 14.0
comp=Z,146nm,1.8s
VNDA Vanda 47.26 184 P **P** **17 42 15.6 +1.7**
comp=Z,5.0nm,0.7s,baz=176,slow=6.0,SNR=20
VNDA LR LR 18 02 48.3
comp=Z,2µm,18.5s,baz=162,slow=37
comp=Z,5.0nm,0.7s
VNDA Vanda 47.26 184 P **P** **17 42 13.2 -0.8**
VILB Vilhena 47.56 321 P **P** **17 42 16.5 -0.5**
VILB IAmb IAmb 17 42 26.6
comp=Z,60nm,0.8s
VILB Vilhena 47.56 321 *e*P **P** **17 42 16.8 -0.2**
PDRB Porto dos Gac 47.63 326 *e*P **P** **17 42 16.7 -0.9**
LPAZ La Paz 47.72 310 P **P** **17 42 19.8 +0.9**
comp=Z,65nm,0.7s,baz=149,slow=6.2,SNR=85
LPAZ LR LR 18 05 23.9
comp=Z,2µm,18.5s,baz=168,slow=40
comp=Z,65nm,0.7s
LPAZ La Paz 47.72 310 P **P** **17 42 18.8 -0.1**
LPAZ La Paz 47.72 310 *e*P **P** **17 42 19.8 +0.9**
SMTB Santa Maria do 47.86 339 *e*P **P** **17 42 19.4 +0.1**
CLDB Colider 48.04 328 *e*P **P** **17 42 19.8 -0.9**
H10S2 ASCENSION HYDR 48.13 23 T T 18 34 26.4
baz=193,slow=74,SNR=63
H10S3 ASCENSION HYDR 48.13 23 T T 18 34 26.6
baz=27,slow=74,SNR=89
BOSA Boshof 48.45 81 P **P** **17 42 23.7 -0.1**
comp=Z,38nm,0.8s,baz=211,slow=7.6,SNR=52
BOSA LR LR 18 01 06.6
comp=Z,2µm,18.2s,baz=226,slow=34
comp=Z,38nm,0.8s
BOSA Boshof 48.45 81 P **P** **17 42 22.8 -1.1**
BOSA Boshof 48.45 81 ⇓*i*P **P** **17 42 23.8 -0.1**
BOSA IAmb IAmb 17 42 28.5
comp=Z,39nm,0.8s
BOSA Boshof 48.45 81 *i* P **P** **17 42 24.6 +0.7**
BOSA Boshof 48.45 81 *i* P **P** **17 42 24.6 +0.7**
ASCN Ascension 49.19 23 IAMs_20 IAMs_20 17 57 55.0
comp=Z,5µm,19.0s
H10N3 ASCENSION HYDR 49.24 23 T T 18 35 53.9
baz=193,slow=75,SNR=76
H10N1 ASCENSION HYDR 49.24 23 T T 18 35 50.4
baz=193,slow=75,SNR=114
KSTD Kokstad 49.24 86 *e*P **P** **17 42 31.2 +1.2**
KSTD IAmb IAmb 17 42 36.2
comp=Z,790nm,2.4s
H10N2 ASCENSION HYDR 49.26 23 T T 18 35 54.4
baz=193,slow=75,SNR=146
RCBR Riachuelo 49.34 355 LR LR 17 59 29.1
comp=Z,3µm,19.9s,baz=320,slow=31
RCBR Riachuelo 49.34 355 IAMs_20 IAMs_20 17 59 08.2
comp=Z,4µm,20.0s
RCBR Riachuelo 49.34 355 *e*P **P** **17 42 31.5 +0.8**
SWZ Schweizer 49.59 80 *e*P **P** **17 42 31.9 -0.7**
SWZ IAmb IAmb 17 42 37.4
comp=Z,44nm,0.9s
SNKL Senekal, Frees 50.13 83 *e*P **P** **17 42 36.8 -0.1**
SNKL IAmb IAmb 17 42 37.8
comp=Z,65nm,0.8s
PRYS Parys 50.93 81 *e*P **P** **17 42 42.1 -0.8**
PRYS IAmb IAmb 17 42 43.6
comp=Z,319nm,1.9s
PRPB Parauapebas 50.95 337 *e*P **P** **17 42 43.3 +0.4**
WDLM Western Deep L 51.35 81 *e*P **P** **17 42 45.8 -0.3**
WDLM IAmb IAmb 17 42 50.5
comp=Z,29nm,0.7s
LBTB Lobatse 51.42 78 P **P** **17 42 46.5 0.0**
comp=Z,49nm,0.7s,baz=213,slow=8.5,SNR=64
LBTB LR LR 18 00 47.8
comp=Z,1µm,21.1s,baz=216,slow=32
comp=Z,49nm,0.7s
LBTB Lobatse 51.42 78 P **P** **17 42 46.2 -0.3**
LBTB IAmb IAmb 17 42 49.0
comp=Z,53nm,0.7s
LBTB Lobatse 51.42 78 ⇓*i*P **P** **17 42 46.2 -0.3**
LBTB IAmb IAmb 17 42 46.5
comp=Z,300nm,1.9s
LBTB Lobatse 51.42 78 *i* P **P** **17 42 46.5 0.0**
LBTB Lobatse 51.42 78 *i* P **P** **17 42 46.5 0.0**
KSR Koster 51.50 80 *e*P **P** **17 42 47.0 -0.1**
KSR IAmb IAmb 17 42 51.7
comp=Z,98nm,0.8s
NPGB Novo Progresso 51.54 330 *e*P **P** **17 42 47.3 0.0**
TSUM Tsumeb 51.72 66 P **P** **17 42 48.6 -0.2**
comp=Z,15nm,0.9s,baz=210,slow=7.4,SNR=16
TSUM LR LR 17 59 48.4
comp=Z,3µm,21.2s,baz=218,slow=30
comp=Z,15nm,0.9s
TSUM Tsumeb 51.72 66 P **P** **17 42 48.0 -0.9**
TSUM IAmb IAmb 17 42 50.6
comp=Z,147nm,1.9s
TSUM Tsumeb 51.72 66 *e*P **P** **17 42 48.6 -0.2**
TSUM IAmb IAmb 17 42 49.4
comp=Z,43nm,1.2s
NWCL Newcastle 51.75 84 *e*P **P** **17 42 48.9 -0.1**
NWCL IAmb IAmb 17 42 49.7
comp=Z,30nm,0.8s
HRAO HartRAO 51.91 81 ⇓*i*P **P** **17 42 50.0 -0.3**
SAML Samuel 52.34 320 P **P** **17 42 52.4 -0.9**
SAML IAmb IAmb 17 43 09.0
comp=Z,72nm,1.2s
SAML IAMs_20 IAMs_20 18 06 24.4
comp=Z,3µm,18.0s
SAML Samuel 52.34 320 P **P** **17 42 52.4 -0.9**
SAML pmax pmax
comp=Z,72nm,1.2s
SAML MLR MLR
comp=Z,3µm,18.0s
SLR Silverton 52.37 81 *e*P **P** **17 42 52.7 -1.0**
SLR IAmb IAmb 17 42 56.0
comp=Z,220nm,2.0s
ETMB Extrema 52.72 316 P **P** **17 42 54.8 -1.3**
ETMB IAmb IAmb 17 43 10.2
comp=Z,96nm,1.3s
ETMB Extrema 52.72 316 *e*P **P** **17 42 55.6 -0.4**
ROSB Rosrio 53.07 345 *e*P **P** **17 42 58.9 +0.2**
POGA Pongola 53.09 86 P **P** **17 42 58.9 +0.2**
POGA IAmb IAmb 17 43 16.2
comp=Z,202nm,2.0s
POGA Pongola 53.09 86 *e*P **P** **17 42 59.0 +0.2**
POGA IAmb IAmb 17 42 59.9
comp=Z,216nm,1.9s
CRLN Carolina, Mapu 53.16 83 *e*P **P** **17 42 59.0 -0.6**
CRLN IAmb IAmb 17 43 03.2
comp=Z,20nm,0.6s
LEPH Lephalale, Lim 53.56 79 *e*P **P** **17 43 02.3 -0.1**
LEPH IAmb IAmb 17 43 05.6
comp=Z,806nm,2.9s
ITTB Itaituba 54.19 330 *e*P **P** **17 43 06.7 -0.2**
TMAB Tom-Au,PA,Br 54.28 340 *e*P **P** **17 43 08.0 +0.5**
NNA Nana 55.49 303 P **P** **17 43 17.7 +1.3**
comp=Z,55nm,0.9s,baz=181,slow=6.8,SNR=11
NNA LR LR 18 10 04.9
comp=Z,2µm,18.0s,baz=147,slow=39
comp=Z,55nm,0.9s
NNA Nana 55.49 303 P **P** **17 43 16.7 +0.3**
NNA Nana 55.49 303 *ce*P **P** **17 43 16.3 -0.1**
NNA pmax pmax
comp=Z,125nm,1.0s
CASY Casey 55.57 163 P **P** **17 43 16.9 +0.6**
CASY IAmb IAmb 17 43 20.2
comp=Z,135nm,1.8s
MOPA Mopani 55.87 82 *e*P **P** **17 43 18.3 -0.7**
MOPA IAmb IAmb 17 43 24.3
comp=Z,25nm,0.9s
MOPA Mopani 55.87 82 *i* P **P** **17 43 21.0 +2.0**
MOPA Mopani 55.87 82 *i* P **P** **17 43 21.0 +2.0**
MUSN Musina, Limpop 55.96 80 *e*P **P** **17 43 18.9 -0.8**
MUSN IAmb IAmb 17 43 30.6
comp=Z,110nm,1.3s
MUSN Musina, Limpop 55.96 80 *i* P **P** **17 43 19.5 -0.2**
MUSN Musina, Limpop 55.96 80 *i* P **P** **17 43 19.5 -0.2**
MALB Monte Alegre 56.19 333 *e*P **P** **17 43 22.1 +0.7**
MATP Matopo 56.67 78 P **P** **17 43 24.4 -0.6**
comp=Z,30nm,0.7s,baz=218,slow=6.9,SNR=42
MATP LR LR 18 04 18.0
comp=Z,2µm,21.9s,baz=229,slow=32
comp=Z,30nm,0.7s
MATP Matopo 56.67 78 *e*P **P** **17 43 24.5 -0.5**
MATP IAmb IAmb 17 43 35.5
comp=Z,224nm,1.2s
MATP Matopo 56.67 78 *i* P **P** **17 43 24.1 -0.8**
MATP Matopo 56.67 78 *i* P **P** **17 43 24.1 -0.8**
MACA Manacapuru-AM 56.85 325 P **P** **17 43 24.4 -1.6**
MACA IAmb IAmb 17 43 34.6
comp=Z,59nm,0.9s
MACA Manacapuru-AM 56.85 325 *e*P **P** **17 43 25.4 -0.6**
BLWY Bulawayo 56.96 77 ⇓*i*P **P** **17 43 25.8 -1.2**
BLWY IAmb IAmb 17 43 37.4
comp=Z,367nm,1.2s
BLWY Bulawayo 56.96 77 *i* P **P** **17 43 26.2 -0.8**
BLWY Bulawayo 56.96 77 *i* P **P** **17 43 26.2 -0.8**
MCPB Macapa, AP 57.08 336 *e*P **P** **17 43 27.6 -0.1**
CZSB Cruzeiro do Su 57.33 310 IAmb IAmb 17 43 40.9
comp=Z,47nm,0.9s
CZSB Cruzeiro do Su 57.33 310 *e*P **P** **17 43 30.0 +0.6**
ATAH Atahualpa 60.45 304 P **P** **17 43 53.4 +1.7**
comp=Z,55nm,1.0s,baz=159,slow=6.1,SNR=24
ATAH LR LR 18 09 31.7
comp=Z,2µm,21.9s,baz=157,slow=36
comp=Z,55nm,1.0s
LSZ Lusaka 60.66 74 LR LR 18 07 41.4
comp=Z,5µm,18.8s,baz=219,slow=34
RPN Rapa Nui 61.10 263 LR LR 18 04 47.7
comp=Z,2µm,20.3s,baz=136,slow=30
BOAV Boa Vista 62.03 327 P **P** **17 44 00.3 -1.4**
BOAV IAmb IAmb 17 44 16.7
comp=Z,59nm,1.1s
BOAV Boa Vista 62.03 327 *e*P **P** **17 44 00.7 -1.1**
MDP Montagnes des 62.49 337 LR LR 18 09 24.2
comp=Z,3µm,21.2s,baz=142,slow=34
BOSC San Juan Bosco 63.99 306 P **P** **17 44 14.0 -1.1**
BOSC IAmb IAmb 17 44 23.9
comp=Z,38nm,0.8s
LIC Lamto 65.17 30 ⇓*e*P **P** **17 44 22.3 -0.2**
comp=Z,194nm,1.2s
KIC Kosan Boka 65.38 30 ⇓*e*P **P** **17 44 23.6 -0.3**
comp=Z,29nm,0.9s
TIC Toumodi 65.58 30 ⇑*i*P **P** **17 44 25.1 0.0**
comp=Z,96nm,1.0s
DBIC Dimbokro 65.64 30 P **P** **17 44 25.1 -0.4**
comp=Z,30nm,1.1s,baz=199,slow=7.6,SNR=12
DBIC LR LR 18 06 51.6
comp=Z,3µm,19.4s,baz=214,slow=30
comp=Z,30nm,1.1s
DBIC Dimbokro 65.64 30 P **P** **17 44 24.8 -0.8**
DBIC IAmb IAmb 17 44 37.1
comp=Z,60nm,1.2s
DBIC Dimbokro 65.64 30 *e*P **P** **17 44 24.2 -1.3**
VOI Vohitsoka 65.93 94 P **P** **17 44 26.4 -1.2**
VOI Vohitsoka 65.93 94 P **P** 17 44 33.5 +5.9
OTAV Otavalo 66.97 308 P **P** **17 44 35.1 +0.5**
OTAV Otavalo 66.97 308 P **P** **17 44 35.1 +0.5**
OTAV pmax pmax
comp=Z,75nm,1.1s
OTAV MLR MLR
comp=Z,2µm,18.0s
OTAV Otavalo 66.97 308 *e*P **P** **17 44 36.0 +1.3**
ABPO Ambohimpanom 68.46 92 P **P** **17 44 44.9 +1.2**
ABPO Ambohimpanom 68.46 92 P **P** **17 44 44.9 +1.2**
ABPO pmax pmax
comp=Z,28nm,1.3s
ABPO MLR MLR
comp=Z,5µm,20.0s
OPO Ambohidratompo 68.79 92 P **P** **17 44 46.6 +0.8**
comp=Z,6.4nm,0.8s,baz=170,slow=12,SNR=2.8
OPO LR LR 18 09 19.2
comp=Z,3µm,21.0s,baz=339,slow=31
comp=Z,6.4nm,0.8s
ROSC El Rosal 69.30 314 P **P** **17 44 49.8 +0.5**
comp=Z,16nm,0.5s,baz=132,slow=5.3,SNR=9.0
ROSC LR LR 18 18 11.1
comp=Z,2µm,19.2s,baz=200,slow=38
comp=Z,16nm,0.5s
BBTS Babate 70.81 16 LR LR 18 11 05.5

comp=Z,3µm,18.9s,baz=212,slow=32
BIRV Birongo 71.48 324 IAmb IAmb 17 45 16.4
comp=Z,67nm,1.0s
SDV Santo Domingo 71.55 319 LR LR 18 18 44.7
comp=Z,3µm,18.2s,baz=143,slow=38
SDV Santo Domingo 71.55 319 P **P** **17 45 02.2 -0.5**
SDV IAmb IAmb 17 45 16.1
comp=Z,51nm,0.8s
SDV Santo Domingo 71.55 319 *e*P **P** **17 45 02.9 +0.2**
RER Riviere de l'E 71.61 101 P **P** **17 45 04.6 +1.6**
PAYG Puerto Ayora 71.91 296 IAMs_20 IAMs_20 18 14 26.9
comp=Z,3µm,18.0s
KOWA Kowa 73.34 28 P **P** **17 45 13.0 0.0**
KOWA IAmb IAmb 17 45 27.5
comp=Z,87nm,1.2s
TOA0 Torodi Ar. Sit 73.76 34 P **P** **17 45 14.8 -0.7**
TOA0 IAmb IAmb 17 45 20.3
comp=Z,64nm,1.2s
TORD Torodi Ar. Bea 73.76 34 P **P** **17 45 15.2 -0.3**
comp=Z,24nm,0.7s,baz=201,slow=5.2,SNR=79
TORD LR LR 18 10 52.7
comp=Z,5µm,20.6s,baz=204,slow=30
comp=Z,24nm,0.7s
TORD Torodi Ar. Bea 73.76 34 IAmb IAmb 17 45 20.3
comp=Z,55nm,1.1s
HATO Hato, Curacao 73.99 322 IAMs_20 IAMs_20 18 17 01.0
comp=Z,2µm,18.0s
MBAR Mbarara 74.25 67 LR LR 18 15 05.9
comp=Z,5µm,18.9s,baz=196,slow=34
MBAR Mbarara 74.25 67 P **P** **17 45 19.6 +0.9**
MBAR Mbarara 74.25 67 *de*P **P** **17 45 20.9 +2.2**
MBAR Mbarara 74.25 67 *e*P P 17 45 25.4 +6.7
MBAR *e*S S 17 55 02.1 +10
KIBK Kibwezi 76.75 75 P **P** **17 45 32.5 -0.6**
KIBK IAmb IAmb 17 45 51.1
comp=Z,66nm,1.6s
SRBA San Rafael, Bu 77.15 308 IAmb IAmb 17 45 50.2
comp=Z,50nm,1.1s
KMBO Kilima Mbogo 77.32 73 LR LR 18 16 45.8
comp=Z,6µm,19.5s,baz=238,slow=34
KMBO Kilima Mbogo 77.32 73 *de*P **P** **17 45 39.4 +3.0**
KMBO Kilima Mbogo 77.32 73 *e*P P 17 45 43.2 +6.8
RIMA Rio Macho 77.85 307 IAmb IAmb 17 45 42.8
comp=Z,72nm,1.4s
ODZ Otahua Downs 78.31 196 IAMs_20 IAMs_20 18 16 27.7
comp=Z,3µm,20.0s
STVI Saint Thomas 78.45 328 P **P** **17 45 42.0 -0.1**
STVI IAmb IAmb 17 45 59.7
comp=Z,56nm,1.1s
SJG San Juan 78.59 327 LR LR 18 20 31.7
comp=Z,758nm,20.9s,baz=150,slow=36
CRPR Cabo Rojo, PR 78.80 326 P **P** **17 45 43.1 -0.9**
CRPR IAmb IAmb 17 46 02.4
comp=Z,82nm,1.2s
JTS Las Juntas de 78.81 307 P **P** **17 45 44.5 +0.2**
JTS IAmb IAmb 17 45 54.9
comp=Z,106nm,1.3s
JTS Las Juntas de 78.81 307 *ce*P **P** **17 45 44.6 +0.3**
JTS pmax pmax
comp=Z,46nm,1.1s
DUNO Dulce Nombre, 78.87 306 IAmb IAmb 17 45 52.4
comp=Z,63nm,1.1s
LBZ Lake Benmore 79.02 196 P **P** **17 45 44.6 -0.6**
LBZ IAmb IAmb 17 45 48.5
comp=Z,61nm,1.3s
ORTG Ortega, Santa 79.10 306 IAmb IAmb 17 45 50.0
comp=Z,70nm,1.2s
MQZ McQueen's Vall 79.27 198 IAMs_20 IAMs_20 18 27 40.1
comp=Z,2µm,18.0s
RPZ Rata Peaks 79.53 197 P **P** **17 45 48.4 +0.4**
comp=Z,20nm,0.9s,baz=30,slow=0.6,SNR=5.8
RPZ LR LR 18 16 32.0
comp=Z,2µm,21.9s,baz=176,slow=32
comp=Z,20nm,0.9s
RPZ Rata Peaks 79.53 197 P **P** **17 45 47.9 -0.2**
RPZ IAmb IAmb 17 45 51.2
comp=Z,164nm,1.8s
OXZ Oxford 79.75 198 IAMs_20 IAMs_20 18 13 01.7
comp=Z,2µm,19.0s
LODK Lodwar 80.09 69 P **P** **17 45 51.9 +0.5**
LODK Lodwar 80.09 69 *e*P P 17 45 58.3 +6.9
LODK *e*S **SKSac** **17 56 10.2 +1.3**
LTZ Lake Taylor 80.23 198 IAmb IAmb 17 45 56.2
comp=Z,88nm,1.3s
LTZ IAMs_20 IAMs_20 18 23 28.6
comp=Z,2µm,19.0s
KHZ Kahutara 80.36 199 IAMs_20 IAMs_20 18 13 45.0
comp=Z,2µm,21.0s
THZ Tophouse 81.11 199 P **P** **17 45 56.2 -0.4**
SNZO South Karori 81.20 200 IAMs_20 IAMs_20 18 16 11.4
comp=Z,2µm,21.0s
TUWZ Tuamarina 81.24 199 P **P** **17 45 56.6 -0.5**
NNZ Nelson 81.55 199 IAmb IAmb 17 46 03.2
comp=Z,106nm,1.6s
NNZ IAMs_20 IAMs_20 18 16 07.4
comp=Z,2µm,21.0s
MATN Matagalpa 81.57 307 IAmb IAmb 17 46 06.2
comp=Z,59nm,1.3s
QRZ Quartz Range 82.09 199 IAMs_20 IAMs_20 18 20 43.6
comp=Z,2µm,20.0s
URZ Urewera 83.64 203 LR LR 18 18 51.6
comp=Z,2µm,21.4s,baz=202,slow=32
URZ Urewera 83.64 203 IAMs_20 IAMs_20 18 18 16.7
comp=Z,2µm,21.0s
HIZ Hauiti 83.87 201 IAMs_20 IAMs_20 18 26 45.9
comp=Z,2µm,18.0s
MXZ Matakaoa Point 84.03 204 IAMs_20 IAMs_20 18 22 55.2
comp=Z,2µm,19.0s
TBI Tubuai 85.44 235 *e*P **P** **17 46 19.7 +0.6**
comp=Z,357nm,26.5s
TBI Tubuai 85.44 235 *e*PP **PP** **17 49 35.8 -0.9**
comp=Z,133nm,38.0s
TBI *e*S **S** **17 56 49.9 -0.3**
comp=Z,858nm,25.5s
TBI *e*SS **SS** **18 02 25.8 +1.6**
comp=Z,524nm,25.8s
TBI Tubuai 85.44 235 *e*LR LR 18 13 13.2
comp=Z,4µm,27.5s
FURI Furi 86.45 69 *e*P P 17 46 30.4 +5.9
FURI *e*S **S** **17 56 58.8 -2.1**
AAE Adis Abeba 86.61 69 *e*P P 17 46 31.1 +5.9
AAE *e*S **S** **17 56 59.6 -2.7**
OUZ Omahuta 87.31 201 IAMs_20 IAMs_20 18 23 29.9
comp=Z,2µm,20.0s
CCIG Comitan 87.39 303 IAmb IAmb 17 47 11.3
comp=Z,41nm,1.4s
ANKE Ethiopia-Afar 87.59 70 *e*P P 17 46 35.8 +5.6
ANKE *e*S **S** **17 57 07.6 -4.4**
PMAR Madeira 88.52 13 *e*P P 17 46 39.3 +5.5
comp=Z,58nm,1.8s
PMOZ Porto Moniz, M 88.58 12 *e*SKSac **SKSac** **17 57 10.2 +7.4**
PMOZ Porto Moniz, M 88.58 12 *e*LR LR 18 14 30.1
comp=Z,1µm,16.0s
PMPS Porto Santo 88.92 13 *e*P **P** **17 46 38.9 +3.5**
comp=Z,87nm,1.2s
TEIG Tepich 89.03 309 P **P** **17 46 36.0 -0.2**
PPT2 Papeete2 90.42 238 *e*P **P** **17 46 43.4 +0.3**
comp=Z,164nm,23.8s
PPT2 Papeete2 90.42 238 *e*PP **PP** **17 50 15.8 -1.2**
comp=Z,229nm,24.8s
PPT2 Papeete2 90.42 238 *e*LR LR 18 15 31.7
comp=Z,4µm,29.5s
PPT Papeete 90.44 238 LR LR 18 18 45.4
comp=Z,1µm,21.0s,baz=165,slow=30
MDT Midelt 90.75 23 LR LR 18 21 28.0
comp=Z,5µm,21.5s,baz=196,slow=32
ATD Arta Tunnel 90.88 71 LR LR 18 25 42.8
comp=Z,4µm,18.7s,baz=203,slow=34
RAO Raoul Island 90.96 209 LR LR 18 24 16.5
comp=Z,426nm,19.1s,baz=134,slow=33
TLIG Tlapa 91.64 299 P **P** **17 46 48.3 -0.4**
TAOE Nuku Hiva Isla 92.96 250 *e*P **P** **17 46 55.3 +0.4**
comp=Z,196nm,23.6s
TAOE Nuku Hiva Isla 92.96 250 *e*PP **PP** **17 50 36.1 -1.1**
comp=Z,199nm,25.5s
TAOE Nuku Hiva Isla 92.96 250 *e*LR LR 18 16 42.1
comp=Z,3µm,27.8s
STKA Stephens Creek 93.10 175 P **P** **17 46 56.4 +1.2**
comp=Z,1.8nm,0.6s,baz=154,slow=5.5,SNR=5.1
STKA LR LR 18 26 49.7
comp=Z,4µm,19.5s,baz=180,slow=34
comp=Z,1.8nm,0.6s
DWPF Disney Wildern 93.15 318 IAMs_20 IAMs_20 18 30 34.7
comp=Z,2µm,19.0s
UNM Universidad Na 93.44 299 IAMs_20 IAMs_20 18 23 01.7
comp=Z,2µm,19.0s
MORF Marmelete 94.28 18 *e*SKSac **SKSac** **17 57 37.1 +2.2**
MORF IAMs_20 IAMs_20 18 24 39.0
comp=N,2µm,24.1s
PVAQ Vaqueiros 94.55 19 *e*P P 17 47 08.3 +6.9
PVAQ Vaqueiros 94.55 19 *e*LR LR 18 17 42.2
comp=N,1µm,20.0s
MESJ Messejana 94.88 19 *e*P **P** **17 47 03.2 +0.2**
MESJ *e*SKSac **SKSac** **17 57 40.2 +2.3**
MESJ IAMs_20 IAMs_20 18 23 53.8
comp=Z,2µm,16.2s
MESJ Messejana 94.88 19 *e*P **P** **17 47 03.1 +0.2**
MESJ *e* 17 57 40.2
MESJ Messejana 94.88 19 *e*P P 17 47 09.0 +6.1
comp=Z,35nm,1.8s
PBAR Barrancos 95.43 19 *e*P P 17 47 11.9 +6.5
comp=Z,31nm,1.6s
PMTG Montargil 96.07 18 *e*P P 17 47 14.8 +6.5
PMRV Marv??o 96.57 19 *e*P P 17 47 16.6 +5.9
comp=Z,16nm,1.7s
PMRV Marv??o 96.57 19 *e*SKSac **SKSac** **17 57 53.6 +6.7**
PMRV Marv??o 96.57 19 *e*LR LR 18 18 32.9
comp=Z,1µm,20.0s
KEST Kesra 97.24 33 LR LR 18 26 50.6
comp=Z,5µm,19.4s,baz=156,slow=33
MTE Manteigas 97.49 19 *e*SKSac **SKSac** **17 57 57.0 +5.3**
MTE Manteigas 97.49 19 *e*LR LR 18 19 14.5
comp=Z,2µm,18.0s
ESDC Sonseca Array 97.49 21 P Pdif 17 47 15.7 +0.8
comp=Z,1.2nm,0.8s,baz=197,slow=4.6,SNR=9.4
ESDC LR LR 18 26 47.1
comp=Z,4µm,19.9s,baz=184,slow=33
comp=Z,1.2nm,0.8s
MVO Moncorvo 98.32 19 *e*SKSac **SKSac** **17 58 01.8 +5.9**
MVO Moncorvo 98.32 19 *e*LR LR 18 19 22.3
comp=Z,2µm,18.0s
PGAV Gavieira, Arco 98.88 18 *e*SKSac **SKSac** **17 58 03.5 +4.8**
PGAV Gavieira, Arco 98.88 18 *e*LR LR 18 19 41.0
comp=Z,2µm,18.0s
LRAL Lakeview Retre 99.71 316 IAMs_20 IAMs_20 18 37 33.4
comp=Z,2µm,18.0s
CLTB Caltabellotta 100.17 35 IAMs_20 IAMs_20 18 33 05.0
comp=Z,2µm,20.0s
ASAR Alice Springs 100.52 167 P **Pdif** **17 47 28.1 -1.0**
comp=Z,1.3nm,0.6s,baz=180,slow=4.0,SNR=20
ASAR PP **PP** **17 51 33.9 -0.9**
comp=Z,2.0nm,1.1s,baz=187,slow=5.8,SNR=4.9
ASAR PKKP **PKKPbc** **18 03 42.8 +1.2**
comp=Z,0.4nm,0.7s,baz=24,slow=2.4,SNR=5.1
HKT Hockley 100.83 307 ‖ *e*P **Pdif** **17 47 30.9 +1.0**
HKT pmax pmax
comp=Z,14nm,2.0s
DZM Mont Dzumac 101.45 197 *e*PP **PP** **17 51 41.9 +0.1**
comp=Z,134nm,25.1s
DZM Mont Dzumac 101.45 197 *e*LR LR 18 20 39.2
comp=Z,4µm,25.1s
TZTN Tazewell 101.48 320 IAMs_20 IAMs_20 18 31 31.1
comp=Z,1µm,22.0s
PLAL Pickwick Lake 101.84 316 IAMs_20 IAMs_20 18 34 25.7
comp=Z,1µm,20.0s
IDI Arvia 102.40 45 IAMs_20 IAMs_20 18 34 30.5
comp=Z,1µm,20.0s
BRYW Bryant College 102.45 331 IAMs_20 IAMs_20 18 30 06.2
comp=Z,1µm,19.0s
TIP Timpagrande 102.80 37 IAMs_20 IAMs_20 18 28 05.8
comp=Z,2µm,22.0s
WES Weston 102.82 331 IAMs_20 IAMs_20 18 30 05.1
comp=Z,1µm,20.0s
HRV Adam Dziewonsk 103.00 331 IAMs_20 IAMs_20 18 29 59.8
comp=Z,1µm,20.0s
MSVF Mansvu 103.01 209 IAMs_20 IAMs_20 18 37 55.4
comp=Z,1µm,19.0s
QUA2 Belchertown 103.02 330 IAMs_20 IAMs_20 18 30 36.1
comp=Z,1µm,20.0s
KOUNC Koumac, New Ca 103.29 196 IAMs_20 IAMs_20 18 35 04.1
comp=Z,2µm,18.0s
KARP Karpathos 103.55 46 IAMs_20 IAMs_20 18 30 03.9
comp=Z,1µm,22.0s
FFD Franklin Falls 103.92 331 IAMs_20 IAMs_20 18 30 24.2
comp=Z,1µm,20.0s
TXAR Lajitas Array 104.02 301 Pdiff **Pdif** **17 47 44.5 +0.2**
comp=Z,0.7nm,1.0s,baz=152,slow=7.9,SNR=3.8
TXAR PP **PP** **17 52 02.9 +0.6**
comp=Z,0.5nm,0.8s,baz=150,slow=6.2,SNR=3.4
WRA Warramunga Arr 104.25 167 Pdiff **Pdif** **17 47 45.0 -0.6**
comp=Z,0.6nm,0.9s,baz=192,slow=4.2,SNR=2.1
WRA PP **PKiKP** **17 52 02.4 +0.1**
comp=Z,1.6nm,1.0s,baz=188,slow=6.2,SNR=5.1
HNH Hanover 104.31 331 IAMs_20 IAMs_20 18 30 37.5
comp=Z,1µm,20.0s
WVL Waterville 104.41 333 IAMs_20 IAMs_20 18 28 42.0
comp=Z,1µm,22.0s
P49A Miami Univ. Ec 104.55 321 IAMs_20 IAMs_20 18 37 10.5
comp=Z,1µm,18.0s
LBNH Lisbon 104.71 331 IAMs_20 IAMs_20 18 29 04.0
comp=Z,1µm,21.0s
SSB Saint Sauveur 104.77 26 IAMs_20 IAMs_20 18 30 19.5
comp=Z,2µm,21.0s
PKME Peaks-Kenny Pk 104.96 334 IAMs_20 IAMs_20 18 28 08.8
comp=Z,1µm,22.0s
VT1 Waterbury 105.02 331 IAMs_20 IAMs_20 18 31 09.0
comp=Z,1µm,21.0s
BNI Bardonecchia 105.10 27 IAMs_20 IAMs_20 18 29 11.4
comp=Z,2µm,22.0s
LONY Lake Ozonia 105.80 330 IAMs_20 IAMs_20 18 32 10.9
comp=Z,1µm,20.0s
TIR Tirane 105.81 38 IAMs_20 IAMs_20 18 32 56.5
comp=Z,1µm,21.0s
OK034 N. Norfolk Rd. 106.34 310 IAMs_20 IAMs_20 18 42 12.7
comp=Z,1µm,18.0s
AAM Ann Arbor 106.61 323 IAMs_20 IAMs_20 18 36 25.1
comp=Z,1µm,19.0s
MNTX Cornudas Mount 106.80 301 IAMs_20 IAMs_20 18 33 57.6
comp=Z,1µm,19.0s
EPT El Paso 107.41 301 IAMs_20 IAMs_20 18 33 44.8
comp=Z,1µm,19.0s
L44A Lake County Fo 108.03 320 IAMs_20 IAMs_20 18 39 35.7
comp=Z,1µm,19.0s
DIVS Divibare 108.28 37 IAMs_20 IAMs_20 18 35 10.8
comp=Z,1µm,20.0s
BFO Black Forest 108.57 27 IAMs_20 IAMs_20 18 32 59.1
comp=Z,1µm,21.0s
PALK Pallekele 108.79 105 IAMs_20 IAMs_20 18 30 43.8
comp=Z,1µm,20.0s
KSU1 Kansas State U 108.89 312 IAMs_20 IAMs_20 18 39 10.1
comp=Z,1µm,21.0s
STU Stuttgart 109.20 27 IAMs_20 IAMs_20 18 32 59.8
comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I 109.48 302 IAMs_20 IAMs_20 18 35 34.6
comp=Z,1µm,18.0s
ANTO Ankara 109.57 48 IAMs_20 IAMs_20 18 38 16.3
comp=Z,1µm,20.0s
BRTR Keskin Array B 109.81 48 PKiKP **PKiKP** **17 52 14.2 +2.1**
comp=Z,1.0nm,1.0s,baz=191,slow=1.5,SNR=3.6
BRTR PP **PP** **17 52 41.0 -3.9**
comp=Z,1.2nm,0.9s,baz=179,slow=4.9,SNR=4.7
BRTR PKKPbc **PKKPbc** **18 03 13.6 -0.6**
comp=Z,1.2nm,0.7s,baz=11,slow=1.3,SNR=6.1
SCIA State Center 109.84 316 IAMs_20 IAMs_20 18 40 35.5
comp=Z,1µm,20.0s
TUC Tucson 109.99 298 IAMs_20 IAMs_20 18 39 40.9
comp=Z,977nm,18.0s
TUC Tucson 109.99 298 P **PKiKP** **17 52 13.2 +0.7**
baz=143
CBKS Cedar Bluff 110.01 310 IAMs_20 IAMs_20 18 44 56.7
comp=Z,1µm,18.0s
GERES GERESS Array B 110.51 30 PKiKP **PKiKP** **17 52 15.2 +2.2**
comp=Z,0.5nm,0.8s,baz=175,slow=5.9,SNR=2.7
GERES PP **PP** **17 52 47.7 -2.0**
comp=Z,1.1nm,0.9s,baz=201,slow=6.8,SNR=5.8
GERES PKKPbc **PKKPbc** **18 03 13.2 +1.0**
comp=Z,0.5nm,0.7s,baz=358,slow=4.0,SNR=4.3
CKRC Cesky Krumlov 110.67 31 AMS AMS 18 34 20.0
comp=Z,2µm,18.7s
KHC Kasperske Hory 110.74 30 IAMs_20 IAMs_20 18 34 05.1
comp=Z,2µm,21.0s
KHC Kasperske Hory 110.74 30 *e*PP **PP** **17 52 49.4 -1.8**
KHC *e*SKS **SKSac** **17 58 50.6 -1.6**
KHC AMS AMS 18 33 40.0
comp=Z,2µm,20.9s
TREC Trest 111.44 31 AMS AMS 18 31 30.0
comp=Z,2µm,23.0s
PSZ Piszkesteto 111.60 35 IAMs_20 IAMs_20 18 38 19.6
comp=Z,1µm,20.0s
SDCO Great Sand Dun 111.76 305 IAMs_20 IAMs_20 18 41 06.1
comp=Z,932nm,19.0s
PRU Pruhonice 111.78 30 *e*PP **PP** **17 52 54.0 -4.7**
PRU *e*SKS **SKSac** **17 58 56.3 0.0**
PRU AMS AMS 18 34 30.0
comp=Z,2µm,19.3s
PMBI Palembang 112.04 132 IAMs_20 IAMs_20 18 32 37.6
comp=Z,1µm,20.0s
PVCC Panska Ves 112.27 30 AMS AMS 18 34 50.0
comp=Z,2µm,21.6s
KRLC Kraliky 112.52 32 AMS AMS 18 32 30.0
comp=Z,1µm,23.9s
CLL Collm 112.53 29 *e*PKiKP **PKiKP** **17 52 18.0 +1.4**
CLL *e* 17 59 00.0
CLL MLR MLR
comp=Z,2µm,21.5s
CLL Collm 112.53 29 *e*PKiKP **PKiKP** **17 52 18.0 +1.4**
CLL *e*PP **PP** **17 53 04.0 0.0**
CLL *ex* x 17 53 11.0
CLL *e*PPP PPP 17 55 21.0
CLL *e*SKSac **SKSac** **17 59 00.0 +0.8**
CLL *e*SKKSac **SKKSac** **18 00 08.0 +3.1**
CLL *e*Sdif **Sdif** **18 00 48.0 +3.9**
CLL *e*PS **PS** **18 02 42.0 +4.8**
CLL *e*PSmax 18 02 55.0
CLL *e*PPS PPS 18 03 47.0
CLL *e*SS **SS** **18 08 46.0 +1.3**
CLL *e*PPPrev 18 10 54.0
CLL *e*SSS SSS 18 12 42.0
CLL Lm MLR 18 34 00.0
comp=Z,2µm,21.5s
DPC Dobruska-Polom 112.63 31 *e*PP **PP** **17 53 00.7 -4.1**
DPC *e*SKS **SKSac** **17 59 01.0 +1.2**
DPC AMS AMS 18 34 10.0
comp=Z,2µm,22.7s
UPC Upice 112.67 31 AMS AMS 18 33 50.0
comp=Z,2µm,21.5s
OKC Ostrava-Krasne 112.73 33 AMS AMS 18 40 40.0
comp=Z,1µm,16.4s
OGNE Ogallala 112.76 309 IAMs_20 IAMs_20 18 45 44.6
comp=Z,918nm,19.0s
OSTC Ostas 112.78 31 AMS AMS 18 34 00.0
comp=Z,2µm,23.5s
BKNI Bangkinang 113.30 127 IAMs_20 IAMs_20 18 36 29.6
comp=Z,880nm,18.0s
MILM Milestii Mici 113.87 41 *e*PP **PP** **17 53 08.0 -5.6**
MILM Milestii Mici 113.87 41 *e*PS PS 18 02 46.0 -3.5
MILM *e*L L 18 27 44.0
MILM LRM MLR 18 42 30.0
comp=Z,800nm,19.0s
TPFO Pinon Flats 113.92 295 P **PKiKP** **17 52 20.4 +0.3**
baz=142
PFO Pinyon Flats O 113.93 295 P **PKiKP** **17 52 20.4 +0.3**
baz=142
KIS Kishinev 113.94 41 *e*PP **PP** **17 53 09.0 -5.1**
KIS Kishinev 113.94 41 *e*PS PS 18 02 46.0 -4.2
KIS *e*L L 18 34 34.0
KIS LRM MLR 18 42 27.0
comp=Z,300nm,17.0s
BELC Belle Mtn. Jos 114.00 295 P **PKiKP** **17 52 20.5 +0.3**
baz=142
EYMN Ely 114.28 321 P **PKiKP** **17 52 21.4 +1.3**
baz=147
RPSI Rantau Prapat 114.40 124 IAMs_20 IAMs_20 18 32 29.9
comp=Z,1µm,21.0s
GMRC Granite Mounta 114.43 296 P **PKiKP** **17 52 21.2 +0.3**
baz=141
N23A Red Feather La 114.49 307 P **PKiKP** **17 52 21.6 +0.5**
baz=143
HNR Honiara 114.84 193 IAMs_20 IAMs_20 18 42 56.1
comp=Z,1µm,18.0s
O20A White River Ci 114.95 305 P **PKiKP** **17 52 23.0 +1.1**
baz=142
BFSC Mount Baldy Ra 115.04 294 P **PKiKP** **17 52 22.2 0.0**
baz=141
GNI Garni 115.16 55 IAMs_20 IAMs_20 18 42 59.4
comp=Z,1µm,20.0s
P18A Preston Nutter 115.51 303 **PKPdf** **17 52 21.2 -1.9**
RGN Rugen 115.53 27 IAMs_20 IAMs_20 18 37 31.1
comp=Z,1µm,20.0s
ANN Anapa 115.58 48 *e*P **Pdif** **17 48 36.1 +1.0**
ANN *e* 17 53 25.3
ANN *e* 17 59 08.7
ANN *e*SP SP 18 03 06.3 +2.2
ANN pmax pmax
comp=Z,45nm,1.4s
SOC Sochi 115.59 50 *i* PKiKP **PKPdf** **17 52 20.7 -2.0**
SOC *e* 17 53 25.2
SOC *e*PS **PS** **18 03 06.3 +1.0**
SOC *e*SS SS 18 09 33.5 +8.2
SOC *e*SSS SSS 18 13 45.4
SOC MLR MLR
comp=Z,647nm,19.0s
MVU Marysvale 115.59 301 **PKPdf** **17 52 21.7 -1.5**
RWWY Rawlins 115.70 307 IAMs_20 IAMs_20 18 44 15.2
comp=Z,1µm,18.0s
EDW2 Edwards Air Fo 115.72 294 P **PKiKP** **17 52 23.6 +0.2**
baz=141
HYBB Hyderabad (bro 115.82 97 *e*PKiKP **PKiKP** **17 52 24.2 +0.2**
HYBB *e*SKiKP **SKiKP** **17 56 00.7 +1.4**
HYBB *e*SKSac **SKSac** **17 59 14.1 +0.4**
QSM Queen of Sheba 115.97 296 **PKPdf** **17 52 22.9 -0.8**
RSSD Black Hills 116.19 310 **PKPdf** **17 52 23.4 -0.8**
RSSD Black Hills 116.19 310 IAMs_20 IAMs_20 18 43 47.5
comp=Z,1µm,20.0s
RSSD Black Hills 116.19 310 PKiKP **PKPdf** **17 52 23.4 -0.8**
RSSD MLR MLR
comp=Z,1µm,20.0s
AGMN Agassiz Nation 116.20 318 IAMs_20 IAMs_20 18 41 40.8
comp=Z,951nm,20.0s
MPMC Manual Prospec 116.36 296 P **PKiKP** **17 52 24.9 +0.2**
baz=140
TPNV Topopah Spring 116.41 297 **PKPdf** **17 52 23.9 -0.9**
TPNV Topopah Spring 116.41 297 PKiKP **PKPdf** **17 52 23.9 -0.9**
TPNV MLR MLR
comp=Z,900nm,20.0s
TPNV Topopah Spring 116.41 297 P **PKiKP** **17 52 25.0 +0.3**
baz=141
NRS Narsarsuaq 116.51 353 IAMs_20 IAMs_20 18 35 52.6
comp=Z,940nm,20.0s
ISA Isabella, Lake 116.57 295 P **PKiKP** **17 52 25.3 +0.3**
baz=140
NLU North Lily Min 116.65 302 **PKPdf** **17 52 24.8 -0.4**
PKM Mcpherson Peak 116.68 293 P **PKiKP** **17 52 25.4 0.0**
baz=140
IPM Ipoh 116.95 125 IAMs_20 IAMs_20 18 34 01.5
comp=Z,1µm,20.0s
CWC Cottonwood Cre 116.96 295 P **PKPdf** **17 52 25.7 -0.1**
baz=140
KBZ Khabaz 117.12 52 PKP **PKiKP** **17 52 27.2 +1.6**
comp=Z,1.3nm,0.7s,baz=158,slow=5.4,SNR=2.6
KBZ Khabaz 117.12 52 ‖ *i* PKiKP **PKiKP** **17 52 27.5 +1.9**
KBZ MLR MLR
comp=Z,1µm,20.0s
R11A Troy Canyon, C 117.15 299 P **PKiKP** **17 52 26.8 +0.6**
baz=140
AKASG Malin Array Be 117.17 39 PKP **PKiKP** **17 52 25.5 0.0**
comp=Z,1.2nm,0.6s,baz=240,slow=0.9,SNR=4.3
DUG Dugway, Tooele 117.19 302 **PKPdf** **17 52 26.1 0.0**
DUG IAMs_20 IAMs_20 18 47 00.7
comp=Z,1µm,18.0s
DUG Dugway, Tooele 117.19 302 PKiKP **PKPdf** **17 52 26.1 0.0**
DUG MLR MLR
comp=Z,1µm,18.0s
DUG Dugway, Tooele 117.19 302 P **PKiKP** **17 52 27.0 +0.9**
baz=141
KIV Kislovodsk 117.20 52 *i* PKiKP **PKiKP** **17 52 29.5 +3.6**
KIV *e* 17 53 40.6
KIV *e* 17 59 21.0
KIV *e*PS **PS** **18 03 24.8 +4.6**
KIV *e*SS SS 18 09 51.8 +5.3
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,794nm,22.0s
KULM Kulim 117.48 124 IAMs_20 IAMs_20 18 34 23.7
comp=Z,1µm,21.0s
PDAR Pinedale Array 117.63 306 PKP **PKPdf** **17 52 26.2 -0.7**
comp=Z,0.7nm,0.6s,baz=141,slow=5.4,SNR=6.8
BW06 Boulder Array 117.63 306 IAMs_20 IAMs_20 18 45 00.3
comp=Z,913nm,19.0s
BW06 Boulder Array 117.63 306 P **PKiKP** **17 52 27.3 +0.3**
baz=141
HWUT Hardware Ranch 117.68 304 IAMs_20 IAMs_20 18 50 36.6
comp=Z,1µm,18.0s
BGU Big Grassy Mou 117.86 302 **PKPdf** **17 52 27.1 -0.3**
AHID Auburn Hatcher 118.35 305 IAMs_20 IAMs_20 18 46 19.4
comp=Z,1µm,18.0s
NVAR Mina Array Bea 118.59 297 PKP **PKiKP** **17 52 29.9 +0.9**
comp=Z,2.1nm,0.8s,baz=136,slow=3.5,SNR=11
MAK Makhachkala 118.65 55 *e*P **Pdif** **17 48 40.8 -8.0**

MAK ePPP PPP 17 56 17.1
MAK ePS **PS** **18 03 26.9 -6.2**
MAK pmax pmax
comp=Z,118nm,1.3s
MAK MLR MLR
comp=Z,1µm,16.0s
REDW Red Top Meadow 118.69 305 IAMs_20 IAMs_20 18 46 20.4
comp=Z,1µm,18.0s
SNOW Snow King Moun 118.72 305 IAMs_20 IAMs_20 18 45 15.2
comp=Z,807nm,18.0s
LOHW Long Hollow 118.77 306 IAMs_20 IAMs_20 18 46 13.4
comp=Z,1µm,18.0s
ELK Elko 118.80 301 **PKPdf** **17 52 28.8 -0.5**
ELK IAMs_20 IAMs_20 18 50 04.3
comp=Z,1µm,18.0s
ELK Elko 118.80 301 PKIKP **PKPdf** **17 52 28.8 -0.5**
ELK MLR MLR
comp=Z,1µm,18.0s
MOOW Moose Ponds 118.94 306 IAMs_20 IAMs_20 18 46 19.9
comp=Z,984nm,18.0s
KVN Kaiserville 118.95 297 **PKPdf** **17 52 28.6 -1.0**
KVN Kaiserville 118.95 297 PKIKP **PKPdf** **17 52 28.6 -1.0**
SAO San Andreas Ge 118.96 293 IAMs_20 IAMs_20 18 41 50.4
comp=Z,840nm,19.0s
IMW Indian Meadow 119.14 306 IAMs_20 IAMs_20 18 45 45.3
comp=Z,900nm,19.0s
KONO Kongsberg 119.21 23 IAMs_20 IAMs_20 18 45 27.3
comp=Z,1µm,18.0s
NLAI Namlea 119.25 156 PKP PKiKP 17 52 42.6 +12
RLMT Red Lodge 119.31 308 P **PKiKP** **17 52 30.3 +0.1**
baz=140
H17A Grant Village 119.35 306 P **PKPdf** **17 52 30.3 0.0**
baz=140
DGMT Dagmar 119.68 313 IAMs_20 IAMs_20 18 42 46.8
comp=Z,996nm,21.0s
DGMT Dagmar 119.68 313 P **PKiKP** **17 52 31.0 +0.4**
baz=141
NACGM Naroch 119.81 35 ePKP **PKiKP** **17 52 30.6 +0.1**
comp=Z,9.0nm,1.0s,baz=215
BORG Borgarnes 119.90 5 IAMs_20 IAMs_20 18 42 17.8
comp=Z,984nm,18.0s
SBUM Sibu 119.95 138 IAMs_20 IAMs_20 18 35 23.8
comp=Z,996nm,21.0s
YHL Hebgen Lake 119.98 306 **PKiKP** **17 52 31.9 +0.3**
HLID Hailey 120.53 303 P **PKiKP** **17 52 33.0 +0.4**
baz=139
NAO01 NORSAR Array S 120.57 23 **PKiKP** **17 52 32.3 +0.4**
ANGG Ammassalik, Gr 120.57 357 IAMs_20 IAMs_20 18 35 43.2
comp=Z,922nm,21.0s
BOZ Bozeman (W) 120.75 307 IAMs_20 IAMs_20 18 51 08.0
comp=Z,952nm,18.0s
BOZ Bozeman (W) 120.75 307 P **PKiKP** **17 52 33.3 +0.4**
baz=139
NB2 NORSAR Subarra 120.82 23 PKPdf **PKiKP** **17 52 33.6 +1.2**
comp=Z,8.9nm,1.4s,baz=202,slow=1.9
NB2 NORSAR Subarra 120.82 23 PKPdf **PKiKP** **17 52 33.6 +1.2**
baz=202,slow=1.9
NOA NORSAR Array B 120.82 23 PKP **PKiKP** **17 52 32.6 +0.2**
comp=Z,3.2nm,1.1s,baz=207,slow=1.9,SNR=6.8
NOA PKKPbc **PKKPbc** **18 02 37.0 +0.7**
comp=Z,0.9nm,0.9s,baz=26,slow=3.0,SNR=4.8
NB201 NORSAR Array S 120.84 23 **PKiKP** **17 52 33.5 +1.1**
ORV Oroville 121.08 295 IAMs_20 IAMs_20 18 39 49.4
comp=Z,936nm,19.0s
MFID Camas Ranch 121.10 302 IAMs_20 IAMs_20 18 49 32.2
comp=Z,924nm,18.0s
HOPS Hopland Field 121.48 294 IAMs_20 IAMs_20 18 39 09.1
comp=Z,1µm,21.0s
EGMT Eagleton 121.73 310 IAMs_20 IAMs_20 18 53 37.0
comp=Z,836nm,18.0s
EGMT Eagleton 121.73 310 P **PKiKP** **17 52 35.0 +0.3**
baz=139
DY2G Dye2 121.83 353 *i* P **PKiKP** **17 52 34.4 -0.1**
SFJD Kangerlussuaq 122.68 351 IAMs_20 IAMs_20 18 38 57.8
comp=Z,995nm,20.0s
SFJD Kangerlussuaq 122.68 351 *i* P **PKPdf** **17 52 34.4 -1.2**
VSU Vasula 122.72 32 ⇑*i* PKIKP **PKiKP** **17 52 37.4 +1.3**
MSO Missoula 122.74 306 IAMs_20 IAMs_20 18 47 41.6
comp=Z,922nm,18.0s
MSO Missoula 122.74 306 P **PKiKP** **17 52 37.3 +0.6**
baz=138
BMO Blue Mountains 122.88 302 **PKPdf** **17 52 36.2 -0.6**
BMO Blue Mountains 122.88 302 PKIKP **PKPdf** **17 52 36.2 -0.6**
BMO MLR MLR
comp=Z,2µm,18.0s
OBN Obninsk 123.37 40 IAMs_20 IAMs_20 18 47 28.2
comp=Z,906nm,18.0s
OBN Obninsk 123.37 40 *i* PKIKP **PKPdf** **17 52 37.1 -0.1**
OBN *i* SSS SSS 18 15 46.1
OBN pmax pmax
comp=Z,11nm,1.2s
OBN MLR MLR
comp=Z,818nm,17.0s
L04D Klamath Falls 123.45 297 P **PKPdf** **17 52 38.1 +0.1**
baz=137
J05D Fort Rock, OR 123.68 299 P **PKiKP** **17 52 39.1 +0.3**
baz=137
G08A Pilot Rock 124.00 302 **PKPdf** **17 52 38.2 -0.8**
L02F Cave Junction 124.02 296 P **PKiKP** **17 52 40.1 +0.9**
baz=136
HUMO Hull Mountain 124.06 297 IAMs_20 IAMs_20 18 41 28.4
comp=Z,853nm,21.0s
J04D Umpqua Nationa 124.09 298 P **PKiKP** **17 52 40.3 +0.6**
baz=136
ICESG Greenland Ices 124.11 357 *i* P **PKPdf** **17 52 38.3 -0.5**
MOS Moscow 124.24 40 *i* PKIKP **PKPdf** **17 52 38.6 -0.3**
MOS *e* 17 59 38.1
MOS MLR MLR
comp=Z,1µm,19.0s
K02D Willamette Mer 124.49 297 P **PKiKP** **17 52 41.4 +1.2**
baz=136
ILULI Ilulissat 124.89 352 IAMs_20 IAMs_20 18 39 22.3
comp=Z,1µm,20.0s
FINES FINESS Array B 124.94 30 PKP **PKPdf** **17 52 40.0 -0.1**
comp=Z,6.2nm,0.6s,baz=176,slow=2.1,SNR=42
FINES FINESS Array B 124.94 30 PKIKP **PKPdf** **17 52 40.0 -0.1**
I03D Drain, OR 125.04 298 P **PKiKP** **17 52 41.7 +0.5**
baz=136
HAWA Hanford 125.07 302 IAMs_20 IAMs_20 18 43 32.3
comp=Z,974nm,20.0s
D08A Wollman Farm, 125.25 303 **PKPdf** **17 52 40.0 -1.2**
NEW Newport 125.26 305 P **PKiKP** **17 52 42.0 +0.4**
baz=136
NIL Nilore 125.26 80 IAMs_20 IAMs_20 18 45 54.2
comp=Z,1µm,20.0s
H04D Lebanon 125.32 299 IAMs_20 IAMs_20 18 50 13.8
comp=Z,774nm,19.0s
H04D Lebanon 125.32 299 P **PKiKP** **17 52 42.2 +0.5**
baz=136
SCO Scoresbysund 125.59 4 IAMs_20 IAMs_20 18 44 53.1
comp=Z,995nm,19.0s
LGTI Lohaghat 126.14 89 *i* x x 17 52 42.8
FAUS Fauske 127.23 21 *eP* **PKiKP** **17 52 44.7 -0.1**
FAUS IAmb IAmb 17 52 59.4
comp=Z,12nm,0.9s
DANN Dangsing 127.32 93 *eP* **PKiKP** **17 52 47.0 +0.3**
comp=Z,28nm,0.6s
DMN Daman 127.53 95 *eP* **PKPdf** **17 52 46.4 -0.1**
comp=Z,23nm,0.7s
GKN Gorkha 127.56 94 *eP* **PKPdf** **17 52 46.4 0.0**
comp=Z,30nm,0.8s
SUMG Summit 127.57 358 **PKPdf** **17 52 44.0 -1.4**
SUMG Summit 127.57 358 PKIKP **PKPdf** **17 52 44.0 -1.4**
SUMG MLR MLR
comp=Z,700nm,19.0s
SUMG Summit 127.57 358 *i* P **PKiKP** **17 52 45.9 0.0**
PKIN Phulchoki 127.67 95 *eP* **PKPdf** **17 52 46.1 -0.7**
comp=Z,21nm,0.7s
PKI Pulchoki 127.67 95 *eP* **PKPdf** **17 52 46.4 -0.5**
comp=Z,52nm,1.0s
KKN Kakani 127.77 95 *eP* **PKPdf** **17 52 47.1 +0.2**
RAMN Ramite 127.88 97 *eP* **PKPdf** **17 52 46.4 -0.8**
comp=Z,36nm,0.6s
CMAR Chiang Mai Arr 127.89 115 PKP **PKiKP** **17 52 47.8 +0.1**
comp=Z,9.6nm,0.8s,baz=231,slow=3.5,SNR=28
NLWA Neilton Lookou 127.89 301 IAMs_20 IAMs_20 18 44 51.9
comp=Z,991nm,21.0s
CHTO Chiang Mai 128.18 114 PKPdf **PKPdf** **17 52 45.6 -2.1**
CHTO Chiang Mai 128.18 114 IAMs_20 IAMs_20 18 37 44.1
comp=Z,853nm,21.0s
CHTO Chiang Mai 128.18 114 PKIKP **PKPdf** **17 52 45.6 -2.1**
CHTO MLR MLR
comp=Z,900nm,21.0s
JIRN Jiri 128.19 96 *eP* **PKPdf** **17 52 47.9 0.0**
comp=Z,40nm,0.6s
ODAN Odare 128.26 97 *eP* **PKPdf** **17 52 47.3 -0.6**
KLMR Klimovskoe 128.71 36 *e*PKIKP **PKPdf** **17 52 46.1 -1.2**

KLMR ePS **PS** **18 04 57.6 -4.1**
KLMR pmax pmax
comp=Z,23nm,1.2s
KLMR MLR MLR
comp=Z,2µm,19.0s
KLMR Klimovskoe 128.71 36 *e*PKPdf **PKPdf** **17 52 46.2 -1.1**
KLMR AMP 17 52 53.4
comp=Z,23nm,1.2s
KLMR eSKKSac **SKKSac** **18 01 47.3 -2.9**
KLMR eSKKSac **SKKSac** **18 01 47.3 -2.9**
KLMR ePS **PS** **18 04 57.6 -4.1**
KLMR ePS **PS** **18 04 57.6 -4.1**
KLMR LQ LQ 18 39 45.6
KLMR LQ LQ 18 39 45.6
KLMR LR LR 18 43 47.3
KLMR AMP 18 47 41.7
comp=Z,2µm,19.3s
AKTO Aktyubinsk 129.03 55 PKP **PKPdf** **17 52 48.0 -0.3**
comp=Z,9.5nm,1.1s,baz=186,slow=3.0,SNR=8.2
IUG luzhnay 129.52 71 *e*PKIKP **PKiKP** **17 52 50.7 +0.4**
IUG *e* 17 55 00.9
IUG luzhnay 129.52 71 *e*PKP **PKiKP** **17 52 50.8 +0.4**
baz=71
IUG *e*PP **PP** **17 55 00.9 +0.6**
baz=71
IUG *e*PKS **PKSdf** **17 56 27.0 +0.8**
baz=71
TRO Tromso 129.86 21 *eP* **PKiKP** **17 52 49.8 -0.3**
TRO IAmb IAmb 17 53 04.7
comp=Z,11nm,1.0s
KTK1 Kautokeino 130.27 23 *eP* **PKPdf** **17 52 50.3 +0.2**
KTK1 IAmb IAmb 17 53 10.7
comp=Z,12nm,0.9s
DZA Taraz 130.73 71 *e*PKIKP **PKiKP** **17 52 52.5 -0.2**
DZA *e* 17 55 08.4
DZA Taraz 130.73 71 *e*PKP **PKiKP** **17 52 52.5 -0.2**
baz=71
DZA *e*PP **PP** **17 55 08.5 +0.3**
baz=71
KIRV Kirov 130.76 43 PKP **PKPdf** **17 52 51.6 +0.3**
comp=Z,5.5nm,0.7s,baz=161,slow=2.4,SNR=6.4
KIRV SKPab **SKPbc** **17 56 13.6 -1.4**
comp=Z,13nm,1.1s,baz=240,slow=3.6,SNR=19
KIRV Kirov 130.76 43 ⇑*e*PKIKP **PKiKP** **17 52 51.9 -0.2**
KSH Kashi 130.98 77 PKP **PKiKP** **17 52 53.4 0.0**
KSH SKKS 18 01 58.4
KSH AMB AMB
comp=Z,430nm,8.5s
KSH LR LR
comp=Z,750nm,18.6s
KSH LR LR
comp=Z,530nm,17.9s
KSH LR LR
comp=Z,1µm,20.5s
ARA0 ARCESS Array S 131.19 23 *eP* **PKPdf** **17 52 52.1 +0.3**
ARA0 IAmb IAmb 17 52 56.6
comp=Z,28nm,1.1s
ARCES ARCESS Array B 131.19 23 PKP **PKPdf** **17 52 50.8 -1.1**
comp=Z,11nm,0.9s,baz=222,slow=1.6,SNR=17
ARCES SKPab **SKPbc** **17 56 15.9 -0.3**
comp=Z,3.2nm,0.9s,baz=72,slow=0.4,SNR=10
PRGR Permogore 131.38 38 ⇑*i* PKIKP **PKiKP** **17 52 54.5 +1.2**
PRGR *e* 17 55 13.7
HAMF Hammerfest 131.65 22 *eP* **PKiKP** **17 52 53.1 -0.5**
HAMF IAmb IAmb 17 52 57.8
comp=Z,30nm,1.2s
APA Apatity 131.68 28 ⇑*i* PKIKP **PKPdf** **17 52 51.3 -1.4**
APA pmax pmax
comp=Z,7.0nm,1.1s
KEV Kevo 131.70 24 **PKiKP** **17 52 53.6 -0.1**
KEV Kevo 131.70 24 PKIKP **PKiKP** **17 52 53.6 -0.1**
KEV MLR MLR
comp=Z,1µm,21.0s
LVZ Lovozero 132.25 28 **PKPdf** **17 52 53.1 -0.7**
LVZ Lovozero 132.25 28 PKIKP **PKPdf** **17 52 53.2 -0.7**
LVZ MLR MLR
comp=Z,1µm,21.0s
AAK Ala-Archa 132.28 73 IAMs_20 IAMs_20 18 59 28.0
comp=Z,661nm,18.0s
AAK Ala-Archa 132.28 73 ⇑*e*PKIKP **PKiKP** **17 52 56.6 +0.6**
LSA Lhasa 132.56 98 IAMs_20 IAMs_20 18 42 02.6
comp=Z,1µm,22.0s
SGDS Sogindy 132.90 72 *e*PKIKP **PKiKP** **17 52 56.9 -0.2**
SGDS Sogindy 132.90 72 *e*PKP **PKiKP** **17 52 56.9 -0.2**
baz=72
ARU Arti 133.17 50 PKP **PKPdf** **17 52 55.9 0.0**
comp=Z,3.3nm,0.6s,baz=208,slow=1.5,SNR=8.4
ARU Arti 133.17 50 *de*PKIKP **PKiKP** **17 52 57.3 +0.2**
BTLS Baital 133.62 70 *e*PKIKP **PKPdf** **17 52 57.5 +0.4**
BTLS *e* 17 55 27.0
BTLS Baital 133.62 70 *e*PKP **PKPdf** **17 52 57.6 +0.4**
baz=70
BTLS *e*PP **PP** **17 55 27.0 +0.4**
baz=70
YKA Yellowknife Ar 133.76 320 PKP **PKPdf** **17 52 56.4 -0.4**
comp=Z,6.3nm,0.6s,baz=121,slow=2.0,SNR=13
QIZ Qiongzhong 133.77 126 PKP **PKiKP** **17 52 59.8 +0.3**
QIZ PP **PP** **17 55 27.8 +0.5**
QIZ SS SS 18 13 16.3 +2.5
QIZ LR LR
comp=Z,830nm,17.7s
QIZ LR LR
comp=Z,490nm,18.0s
QIZ LR LR
comp=Z,1µm,18.2s
AAA Alma-Ata 133.99 74 *e*PKIKP **PKPdf** **17 52 58.2 +0.2**
AAA Alma-Ata 133.99 74 *e*PKP **PKPdf** **17 52 58.2 +0.2**
baz=74
MDOK Medeo 134.03 74 *e*PKIKP **PKPdf** **17 52 58.4 +0.2**
MDOK *e* 17 55 30.3
MDOK Medeo 134.03 74 *e*PKP **PKPdf** **17 52 58.4 +0.2**
baz=74
MDOK *e*PP **PP** **17 55 30.3 +0.8**
baz=74
MDOK LR LR 18 53 21.0
comp=Z,304nm,18.0s,baz=74
KUU Kurty 134.12 73 *e*PKIKP **PKPdf** **17 52 58.1 0.0**
KUU *e* 17 55 31.1
KUU MLR MLR
comp=Z,379nm,17.0s
KUU Kurty 134.12 73 *e*PKP **PKPdf** **17 52 58.2 0.0**
baz=73
KUU *e*PP **PP** **17 55 31.2 +1.2**
baz=73
KUU LR LR 18 51 56.7
comp=Z,379nm,16.8s,baz=73
SATY Saty 134.72 75 *e*PKIKP **PKPdf** **17 52 59.5 0.0**
SATY *e* 17 55 34.2
SATY Saty 134.72 75 *e*PKP **PKPdf** **17 52 59.5 0.0**
baz=75
SATY *e*PP **PP** **17 55 34.3 +0.4**
baz=75
UZB Uzynbulak 135.12 76 *e*PKIKP **PKPdf** **17 53 00.1 -0.1**
UZB Uzynbulak 135.12 76 *e*PKP **PKPdf** **17 53 00.1 -0.1**
baz=76
KPKS Kokpek 135.14 75 *e*PKIKP **PKPdf** **17 53 00.2 0.0**
KPKS Kokpek 135.14 75 *e*PKP **PKPdf** **17 53 00.3 0.0**
baz=75
KMI Kunming 135.35 114 ⇑PKP **PKiKP** **17 53 02.8 -0.1**
KMI sPKP 17 53 04.1
KMI PP **PP** **17 55 40.1 +2.3**
KMI SS SS 18 13 32.0 -1.6
KMI AMB AMB
comp=Z,310nm,6.4s
KMI LR LR
comp=Z,750nm,25.6s
KMI LR LR
comp=Z,530nm,21.0s
KMI LR LR
comp=Z,900nm,24.4s
SHLS Shalkode 135.37 76 *e*PKIKP **PKPdf** **17 53 01.3 +0.7**
SHLS *e* 17 55 40.4
SHLS Shalkode 135.37 76 *e*PKP **PKPdf** **17 53 01.4 +0.7**
baz=76
SHLS *e*PP **PP** **17 55 40.4 +2.5**
baz=76
PZH PanZhiHua 135.94 111 PKP **PKPdf** **17 53 02.8 +0.5**
PZH PP **PP** **17 55 41.0 -0.4**
PZH SS SS 18 13 40.4 -0.1
PZH AMB AMB
comp=Z,320nm,6.6s
PZH LR LR
comp=Z,1µm,20.6s
PZH LR LR
comp=Z,1µm,21.4s
PZH LR LR
comp=Z,2µm,19.8s
TDK Taldyqorghan 135.97 73 *e*PKIKP **PKPdf** **17 53 02.2 +0.7**
TDK *e* 17 55 42.7
TDK MLR MLR
comp=Z,741nm,19.0s
TDK Taldyqorghan 135.97 73 *e*PKP **PKPdf** **17 53 02.3 +0.7**
baz=73
TDK *e*PP **PP** **17 55 42.7 +1.1**
baz=73
TDK LR LR 18 52 26.3
comp=Z,741nm,19.2s,baz=73
BRZS Berezniki 135.99 64 ePKIKP **PKiKP** **17 53 02.5 -0.5**
BRZS *e* 17 55 42.1
BRZS Berezniki 135.99 64 *e*PKP **PKiKP** **17 53 02.6 -0.5**
baz=64
BRZS *e*PP **PP** **17 55 42.1 +0.5**
baz=64
BRVK Borovoye 136.60 59 **PKPdf** **17 53 02.0 -0.4**
BRVK Borovoye 136.60 59 ⇑*e*PKIKP **PKiKP** **17 53 05.7 +1.5**
CRAG Craig 137.46 304 P **PKPdf** **17 53 04.8 +0.9**
baz=124
WRAK Wrangell Islan 137.62 306 P **PKPdf** **17 53 05.0 +0.9**
baz=123
DLBC Dease Lake 137.66 309 P **PKPdf** **17 53 05.0 +0.7**
baz=123
GYA Guiyang 138.48 117 ⇓PKP **PKPdf** **17 53 04.1 -2.9**
GYA PP **PP** **17 56 03.5 +6.3**
GYA AMB AMB
comp=Z,200nm,5.3s
GYA LR LR
comp=Z,640nm,18.7s
TGTN Hyland Airport 138.54 314 P **PKiKP** **17 53 07.0 -1.0**
baz=121
R33M Jennings River 138.59 310 P **PKPdf** **17 53 06.6 +0.5**
baz=121
MAKZ Makanchi 139.04 73 PKPpre 17 52 57.2
MAKZ IAMs_20 IAMs_20 18 55 32.9
comp=Z,980nm,21.0s
MAKZ Makanchi 139.04 73 PKHKP PKPpre 17 52 57.2
MAKZ MLR MLR
comp=Z,1µm,21.0s
MKAR Makanchi Array 139.21 74 PKhKP PKPpre 17 53 00.2
comp=Z,1.1nm,0.6s,baz=252,slow=2.1,SNR=6.7
MKAR PKP **PKPdf** **17 53 06.2 -1.3**
comp=Z,2.3nm,0.6s,baz=220,slow=3.2,SNR=12
MKAR SKP 17 56 40.9
comp=Z,1.9nm,0.9s,baz=248,slow=3.9,SNR=4.4
GOMU GeErMu 139.41 95 PKP **PKPdf** **17 53 07.6 -1.1**
GOMU PP **PP** **17 56 05.3 +1.9**
GOMU SKKS 18 02 55.5
GOMU AMB AMB
comp=Z,260nm,5.9s
GOMU LR LR
comp=Z,440nm,21.0s
GOMU LR LR
comp=Z,330nm,20.8s
GOMU LR LR
comp=Z,480nm,22.3s
KURBB Kurchatov Arra 139.41 67 PKhKP PKPpre 17 53 00.9
comp=Z,3.4nm,0.7s,baz=240,slow=3.3,SNR=14
KURBB PKP **PKPdf** **17 53 06.5 -1.2**
comp=Z,3.4nm,0.7s,baz=240,slow=3.4,SNR=18
KURBB SKPbc **SKPbc** **17 56 41.2 -1.6**
comp=Z,15nm,1.4s,baz=248,slow=4.0,SNR=14
KURK Kurchatov 139.51 66 PKPpre 17 52 59.1
KURK Kurchatov 139.51 66 PKIKP **PKPdf** **17 53 06.5 -1.4**
JIS Juneau Island 139.54 307 IAMs_20 IAMs_20 18 58 08.9
comp=Z,961nm,18.0s
P33M Teslin, Yukon 139.81 311 IAMs_20 IAMs_20 18 52 37.0
comp=Z,831nm,22.0s
P33M Teslin, Yukon 139.81 311 P **PKPdf** **17 53 09.2 +1.0**
baz=119
P32M Atlin 139.90 309 P **PKPdf** **17 53 08.6 +0.2**
baz=120
SEM Semipalatinsk 140.20 68 *e*PKIKP **PKPdf** **17 53 10.1 +0.6**
SEM Semipalatinsk 140.20 68 *e*PKP **PKPdf** **17 53 10.2 +0.7**
baz=68
MMPY Sheldon Lake, 140.30 314 P **PKPdf** **17 53 09.9 +0.9**
baz=118
N32M Quiet Lake 140.37 312 P **PKPdf** **17 53 09.6 +0.4**
baz=118
WMQ Urumqi 140.41 81 *e*PKP **PKPdf** **17 53 08.6 -1.3**
WMQ PP **PP** **17 56 15.4 +6.2**
WMQ PKS **PKSdf** **17 56 45.9 +0.2**
WMQ SKKS 18 03 02.3
WMQ AMB AMB
comp=Z,320nm,8.9s
WMQ LR LR
comp=Z,720nm,19.1s
WMQ LR LR
comp=Z,660nm,20.9s
WMQ LR LR
comp=Z,760nm,20.9s
CD2 Chengdu 140.49 109 PKP **PKiKP** **17 53 12.3 -0.7**
CD2 LR LR
comp=Z,650nm,16.2s
CD2 LR LR
comp=Z,380nm,18.1s
CD2 LR LR
comp=Z,630nm,22.6s
C36M Paulatuk 140.68 326 IAMs_20 IAMs_20 18 50 08.0
comp=Z,892nm,22.0s
WHY Whitehorse 140.92 310 P **PKPdf** **17 53 10.9 +0.6**
baz=118
FARO Faro, Yukon 140.99 313 P **PKPdf** **17 53 10.9 +0.6**
baz=117
PLBC Pleasant Camp 141.01 308 P **PKPdf** **17 53 11.1 +0.8**
baz=118
ZSN Zaisan 141.01 74 *e*PKIKP **PKPdf** **17 53 10.7 0.0**
ZSN *e* 17 56 14.2
ZSN Zaisan 141.01 74 *e*PKP **PKPdf** **17 53 10.8 0.0**
baz=74
ZSN *e*PP **PP** **17 56 14.3 +1.4**
baz=74
M31M Drury Creek, Y 141.41 313 P **PKPdf** **17 53 11.1 +0.1**
baz=116
O30N Mendenhall 141.50 310 P **PKPdf** **17 53 11.7 +0.4**
baz=117
N31M Braeburn, Yuko 141.68 311 **PKPdf** **17 53 09.4 -2.1**
N31M IAMs_20 IAMs_20 18 55 49.6
comp=Z,951nm,19.0s
A36M Sachs Harbour 142.09 330 IAMs_20 IAMs_20 18 54 09.3
comp=Z,936nm,19.0s
M30M Minto, Yukon 142.58 313 IAMs_20 IAMs_20 18 55 22.4
comp=Z,1µm,21.0s
BCPM Bancas Point 142.72 308 IAMs_20 IAMs_20 19 04 01.0
comp=Z,895nm,18.0s
PINM Pinnacle 143.06 308 P **PKPdf** **17 53 13.7 -0.4**
baz=115
O28M Mount Upton 143.32 309 P **PKPdf** **17 53 15.0 +0.3**
baz=114,SNR=10
INK Inuvik 143.46 322 PKPpre 17 53 11.0
INK Inuvik 143.46 322 PKIKP PKPab 17 53 11.0 +0.3
INK Inuvik 143.46 322 P **PKPdf** **17 53 15.0 +0.7**
baz=110,SNR=9.1
TABL Table Mountain 143.61 308 IAMs_20 IAMs_20 18 56 49.5
comp=Z,892nm,20.0s
YHNB Yeheng 143.72 136 IAMs_20 IAMs_20 19 02 07.0
comp=Z,879nm,20.0s
YUK3 Moose Creek 143.84 310 P **PKPdf** **17 53 15.8 +0.2**
baz=113
MESA MESA 143.87 307 PKPbc 17 53 13.3 -0.1
MESA IAMs_20 IAMs_20 18 55 56.4
comp=Z,840nm,20.0s
MESA MESA 143.87 307 P **PKPdf** **17 53 15.7 0.0**
baz=114,SNR=5.2
CTGM Chitina Glacie 143.91 309 IAMs_20 IAMs_20 18 54 49.4
comp=Z,946nm,22.0s
CTG Chitna Glacier 143.91 309 P **PKPdf** **17 53 15.7 +0.1**
baz=114,SNR=19
EPYK Eagle Plains 143.97 318 P **PKPdf** **17 53 15.9 +0.5**
baz=110,SNR=22
ISLE Juniper Island 144.22 308 IAMs_20 IAMs_20 18 59 38.6
comp=Z,724nm,19.0s
DAWY Dawson 144.24 314 P **PKPdf** **17 53 16.4 +0.4**
baz=111,SNR=44
I29M Ogilvie Camp, 144.25 316 IAMs_20 IAMs_20 18 54 05.4
comp=Z,848nm,22.0s
I29M Ogilvie Camp, 144.25 316 P **PKPdf** **17 53 16.4 +0.5**
baz=110,SNR=42
BVCY Beaver Creek 144.26 311 P **PKPdf** **17 53 16.0 -0.1**
baz=112
SNH Sunshine Point 144.28 307 PKPbc 17 53 14.6 +0.1
SNH IAMs_20 IAMs_20 18 58 16.1
comp=Z,848nm,19.0s

WAX	**Waxell Ridge**	**144.39**	**307**	IAMs_20	IAMs_20	19 00 35.1		
	comp=Z,851nm,19.0s							
LZH	**Lanzhou**	**144.43**	**104**	*e*PKP	PKPbc	17 53 16.0	+0.1	
LZH				pPKP	PKiKP	17 53 26.0	+5.0	
LZH				sPKP		17 53 29.8		
LZH				SKKS		18 03 27.8		
LZH				LR	LR			
	comp=Z,600nm,18.9s							
LZH				LR	LR			
	comp=Z,410nm,18.2s							
LZH				LR	LR			
	comp=Z,570nm,19.2s							
ZALV	**Zalesovo Beam**	**144.44**	**65**	PKP	PKPbc	17 53 15.4	+0.2	
	comp=Z,20nm,0.6s,baz=234,slow=3.6,SNR=61							
ZALV	**Zalesovo Beam**	**144.44**	**65**		**PKPab**	**17 53 14.3**	**-0.6**	
GTA	**Gaotai**	**144.48**	**96**	⇑PKP	**PKPab**	**17 53 15.8**	**+0.1**	
GTA				SKKS		18 03 23.3		
GTA				SS	**SS**	**18 15 23.3**	**+2.5**	
GTA				AMB	AMB			
	comp=Z,260nm,6.9s							
GTA				LR	LR			
	comp=Z,440nm,22.9s							
GTA				LR	LR			
	comp=Z,500nm,22.2s							
GTA				LR	LR			
	comp=Z,780nm,20.7s							
TGL	**Tana Glacier**	**144.50**	**308**	IAMs_20	IAMs_20	18 55 59.0		
	comp=Z,848nm,21.0s							
M27K	**Edge Creek, AK**	**144.68**	**311**	IAMs_20	IAMs_20	18 56 33.7		
	comp=Z,788nm,21.0s							
M27K	**Edge Creek, AK**	**144.68**	**311**	P	**PKPab**	**17 53 15.7**	**0.0**	
	baz=111							
MCARA	**McCarthy VSAT**	**144.82**	**309**	IAMs_20	IAMs_20	18 57 51.6		
	comp=Z,1µm,21.0s							
MCARA	**McCarthy VSAT**	**144.82**	**309**	P	PKPbc	17 53 16.6	+0.4	
	baz=112,SNR=16							
KAIM	**Kayak Island**	**144.90**	**306**		**PKPdf**	**17 53 16.8**	**-0.3**	
KAIM	**Kayak Island**	**144.90**	**306**	P	**PKPdf**	**17 53 16.8**	**-0.3**	
	baz=113							
HMT	**Hamilton**	**144.99**	**307**		PKPbc	17 53 16.3	-0.5	
M26K	**Nabesna, AK**	**145.18**	**310**	IAMs_20	IAMs_20	18 54 52.0		
	comp=Z,674nm,20.0s							
M26K	**Nabesna, AK**	**145.18**	**310**	P	**PKPbc**	**17 53 16.7**	**-0.6**	
	baz=111							
EGAK	**Eagle**	**145.20**	**315**	IAMs_20	IAMs_20	18 58 19.5		
	comp=Z,855nm,21.0s							
EGAK	**Eagle**	**145.20**	**315**	P	**PKPbc**	**17 53 16.8**	**-0.4**	
	baz=109,SNR=39							
RAGM	**Ragged Mountai**	**145.20**	**307**	IAMs_20	IAMs_20	18 56 38.6		
	comp=Z,953nm,19.0s							
K27K	**Chicken**	**145.34**	**313**		**PKPbc**	**17 53 17.4**	**-0.3**	
BMRM	**Bremner River**	**145.38**	**308**		**PKPbc**	**17 53 17.0**	**-1.0**	
BMRM	**Bremner River**	**145.38**	**308**	P	**PKPab**	**17 53 18.2**	**0.0**	
	baz=112,SNR=40							
L26K	**Log Cabin Wild**	**145.54**	**311**	P	**PKPdf**	**17 53 18.3**	**+0.1**	
	baz=110,SNR=26							
N25K	**Chitina, Valde**	**145.61**	**309**	IAMs_20	IAMs_20	18 58 05.4		
	comp=Z,776nm,20.0s							
N25K	**Chitina, Valde**	**145.61**	**309**	P	**PKPbc**	**17 53 18.7**	**-0.1**	
	baz=111,SNR=26							
Q23K	**Middleton Isla**	**145.62**	**304**	P	**PKPab**	**17 53 19.0**	**-0.1**	
	baz=112							
I27K	**Kandik River**	**145.63**	**316**	P	**PKPab**	**17 53 19.1**	**+0.1**	
	baz=107							
WHN	**Wuhan**	**145.67**	**122**	PKPbc	**PKPdf**	**17 53 19.3**	**-0.1**	
WHN				LR	LR			
	comp=Z,2µm,23.9s							
XAN	**Xi'an**	**145.67**	**112**	PKPbc	**PKPdf**	**17 53 18.5**	**-0.9**	
XAN				sPKP		17 53 29.8		
XAN				SKS	**SKSdf**	**18 00 28.1**	**-0.2**	
XAN				SS	**SS**	**18 15 30.4**	**-3.6**	
XAN				AMB	AMB			
	comp=Z,500nm,11.0s							
XAN				LR	LR			
	comp=Z,410nm,20.3s							
XAN				LR	LR			
	comp=Z,390nm,20.4s							
XAN				LR	LR			
	comp=Z,960nm,22.3s							
EYAK	**Cordova Ski Ar**	**145.75**	**307**		**PKPdf**	**17 53 18.5**	**-0.1**	
EYAK	**Cordova Ski Ar**	**145.75**	**307**	P	**PKPab**	**17 53 19.4**	**-0.1**	
	baz=111,SNR=33							
H27K	**Steamboat Moun**	**145.78**	**317**	P	**PKPbc**	**17 53 19.0**	**-0.1**	
	baz=106							
G27K	**Doyon Strip**	**145.99**	**318**	P	**PKPbc**	**17 53 19.8**	**+0.1**	
	baz=105,SNR=51							
DOT	**Dot Lake**	**146.05**	**312**		**PKPdf**	**17 53 18.7**	**-0.4**	
J26L	**Joseph Creek**	**146.10**	**314**	IAMs_20	IAMs_20	18 57 21.3		
	comp=Z,842nm,20.0s							
J26L	**Joseph Creek**	**146.10**	**314**	P	**PKPbc**	**17 53 20.5**	**+0.3**	
	baz=107,SNR=77							
SCRK	**Sand Creek**	**146.12**	**313**	P	**PKPbc**	**17 53 20.5**	**+0.2**	
	baz=108,SNR=50							
HARP	**HAARP**	**146.13**	**310**	P	**PKPbc**	**17 53 20.2**	**-0.1**	
	baz=109							
I26K	**Coal Creek Min**	**146.16**	**315**	P	**PKPbc**	**17 53 20.1**	**-0.1**	
	baz=106							
KLU	**Klutina**	**146.16**	**308**	IAMs_20	IAMs_20	18 58 35.1		
	comp=Z,726nm,20.0s							
KLU	**Klutina**	**146.16**	**308**	P	**PKPab**	**17 53 20.9**	**-0.3**	
	baz=110,SNR=51							
E27K	**Coleen River**	**146.31**	**321**	P	**PKPbc**	**17 53 20.8**	**+0.2**	
	baz=103,SNR=28							
P23K	**Montague Islan**	**146.32**	**305**	P	**PKPbc**	**17 53 20.9**	**0.0**	
	baz=111,SNR=13							
RIDG	**Independent Ri**	**146.41**	**312**	P	**PKPbc**	**17 53 21.3**	**+0.2**	
	baz=107,SNR=65							
PAX	**Paxson**	**146.44**	**311**	P	**PKPbc**	**17 53 21.1**	**-0.2**	
	baz=108,SNR=38							
M24K	**Tolsona, Glenn**	**146.48**	**309**		**PKPbc**	**17 53 21.2**	**-0.1**	
M24K	**Tolsona, Glenn**	**146.48**	**309**	P	**PKPab**	**17 53 22.1**	**-0.3**	
	baz=109,SNR=16							
GLI	**Glacier Island**	**146.49**	**307**	IAMs_20	IAMs_20	19 00 50.7		
	comp=Z,703nm,19.0s							
GLI	**Glacier Island**	**146.49**	**307**	P	**PKPbc**	**17 53 21.2**	**-0.1**	
	baz=110,SNR=25							
K24K	**Donnelly Dome**	**146.83**	**312**	P	**PKPbc**	**17 53 22.1**	**-0.2**	
	baz=107,SNR=24							
G26K	**Porcupine Rive**	**146.84**	**318**	P	**PKPbc**	**17 53 22.1**	**0.0**	
	baz=104,SNR=17							
J25K	**Salcha River,**	**146.88**	**314**	P	**PKPbc**	**17 53 22.7**	**+0.3**	
	baz=106,SNR=30							
SCM	**Sheep Creek Mo**	**146.91**	**308**	IAMs_20	IAMs_20	18 57 13.8		
	comp=Z,1µm,22.0s							
SCM	**Sheep Creek Mo**	**146.91**	**308**	P	**PKPbc**	**17 53 22.6**	**0.0**	
	baz=108,SNR=36							
PWL	**Port Wells**	**147.05**	**306**		**PKPdf**	**17 53 21.7**	**+0.9**	
PWL	**Port Wells**	**147.05**	**306**	P	**PKPbc**	**17 53 22.7**	**-0.3**	
	baz=109,SNR=26							
M23K	**Glacier View**	**147.08**	**308**	P	**PKPbc**	**17 53 22.9**	**-0.2**	
	baz=108,SNR=35							
F26K	**Sheenjek River**	**147.14**	**319**	P	**PKPbc**	**17 53 23.2**	**+0.2**	
	baz=102,SNR=23							
PRP	**Porcupine Dome**	**147.18**	**315**	IAMs_20	IAMs_20	18 59 15.8		
	comp=Z,928nm,20.0s							
PRP	**Porcupine Dome**	**147.18**	**315**	P	**PKPbc**	**17 53 23.2**	**-0.2**	
	baz=104,SNR=13							
KNK	**Knik Glacier**	**147.29**	**307**	IAMs_20	IAMs_20	18 56 06.8		
	comp=Z,930nm,22.0s							
KNK	**Knik Glacier**	**147.29**	**307**	P	**PKPbc**	**17 53 23.9**	**+0.2**	
	baz=108,SNR=10							
DHY	**Denali Highway**	**147.31**	**310**	IAMs_20	IAMs_20	18 58 01.2		
	comp=Z,983nm,22.0s							
DHY	**Denali Highway**	**147.31**	**310**	P	**PKPbc**	**17 53 24.2**	**+0.4**	
	baz=107,SNR=27							
FYU	**Fort Yukon**	**147.31**	**317**	IAMs_20	IAMs_20	19 02 55.3		
	comp=Z,661nm,20.0s							
WAT6	**Susitna Watana**	**147.32**	**309**	P	**PKPbc**	**17 53 23.8**	**0.0**	
	baz=107,SNR=60							
SEW	**Seward**	**147.32**	**305**		**PKPbc**	**17 53 22.5**	**-1.2**	
SEW	**Seward**	**147.32**	**305**	P	**PKPbc**	**17 53 23.6**	**-0.1**	
	baz=110,SNR=24							
C27K	**Jago River**	**147.34**	**323**	P	**PKPbc**	**17 53 24.1**	**+0.6**	
	baz=100,SNR=28							
SML	**Sawmill**	**147.35**	**308**	IAMs_20	IAMs_20	18 57 05.5		
	comp=Z,905nm,21.0s							
SML	**Sawmill**	**147.35**	**308**	P	**PKPbc**	**17 53 23.9**	**0.0**	
	baz=108,SNR=43							
H25K	**Birch Creek**	**147.47**	**316**	P	**PKPbc**	**17 53 24.3**	**+0.3**	
	baz=103							
HDA	**Harding Lake**	**147.49**	**313**		**PKPdf**	**17 53 19.1**	**-2.3**	
HDA				PKPbc	**sPKPdf**	**17 53 25.1**	**+0.4**	
HDA				IAMs_20	IAMs_20	19 02 57.0		
	comp=Z,880nm,20.0s							
HDA	**Harding Lake**	**147.49**	**313**	P	**PKPbc**	**17 53 23.9**	**-0.2**	
	baz=105,SNR=8.2							
ILAR	**Eielson Array**	**147.55**	**314**	PKPbc	**PKPbc**	**17 53 24.6**	**+0.3**	
	comp=Z,34nm,0.9s,baz=318,slow=0.8,SNR=97							
O22K	**Cooper Landing**	**147.58**	**305**	IAMs_20	IAMs_20	19 04 53.4		
	comp=Z,761nm,19.0s							
O22K	**Cooper Landing**	**147.58**	**305**	P	**PKPbc**	**17 53 24.1**	**-0.2**	
	baz=109,SNR=6.3							
GHO	**Glory Hole Cre**	**147.61**	**308**	IAMs_20	IAMs_20	18 57 21.4		
	comp=Z,861nm,21.0s							
PMR	**Palmer**	**147.65**	**307**	P	**PKPbc**	**17 53 24.5**	**0.0**	
	baz=108,SNR=6.2							
F25K	**Christian Rive**	**147.68**	**319**	P	**PKPbc**	**17 53 25.3**	**+0.7**	
	baz=101,SNR=17							
E25K	**Arctic Village**	**147.75**	**320**	P	**PKPbc**	**17 53 24.7**	**0.0**	
	baz=100,SNR=16							
RC01	**Rabbit Creek A**	**147.78**	**306**	IAMs_20	IAMs_20	18 57 03.7		
	comp=Z,895nm,21.0s							
RC01	**Rabbit Creek A**	**147.78**	**306**	P	**PKPbc**	**17 53 25.0**	**+0.1**	
	baz=108,SNR=18							
C26K	**Camden Bay**	**147.80**	**323**	P	**PKPbc**	**17 53 25.3**	**+0.6**	
	baz=98							
BRSE	**Bradley Lake S**	**147.81**	**304**	P	**PKPbc**	**17 53 24.9**	**-0.2**	
	baz=110,SNR=16							
POKR	**Poker Plat Res**	**147.86**	**314**	P	**PKPbc**	**17 53 24.7**	**-0.3**	
	baz=104							
CCB	**Clear Creek Bu**	**147.90**	**313**		**PKPdf**	**17 53 18.5**	**-3.6**	
CCB				PKPbc	**sPKPdf**	**17 53 26.0**	**+0.7**	
CCB				IAMs_20	IAMs_20	19 02 36.0		
	comp=Z,695nm,22.0s							
LYN	**LuoYang**	**147.93**	**115**	*i* PKPbc	**PKPdf**	**17 53 22.3**	**-0.8**	
LYN				PKPab	**sPKPbc**	**17 53 29.1**	**-0.2**	
LYN				PP	**PP**	**17 56 57.9**	**+3.9**	
LYN				AMB	AMB			
	comp=Z,310nm,9.8s							
LYN				LR	LR			
	comp=Z,880nm,22.3s							
LYN				LR	LR			
	comp=Z,520nm,31.9s							
LYN				LR	LR			
	comp=Z,920nm,22.7s							
COLA	**College**	**147.98**	**314**	IAMs_20	IAMs_20	19 02 34.1		
	comp=Z,774nm,19.0s							
COLA	**College**	**147.98**	**314**	P	**PKPbc**	**17 53 24.9**	**-0.4**	
	baz=104							
CNPM	**China Poot**	**147.98**	**303**	IAMs_20	IAMs_20	19 00 25.1		
	comp=Z,938nm,20.0s							
TCOL	**CIGO, UAF Yank**	**147.98**	**314**	IAMs_20	IAMs_20	19 02 34.1		
	comp=Z,826nm,19.0s							
TCOL	**CIGO, UAF Yank**	**147.98**	**314**	P	**PKPbc**	**17 53 24.5**	**-0.9**	
	baz=104							
WRH	**Wood River Hil**	**147.98**	**313**	IAMs_20	IAMs_20	19 05 28.1		
	comp=Z,788nm,18.0s							
KDAK	**Kodiak Island**	**148.03**	**299**		**PKPbc**	**17 53 24.6**	**-1.1**	
KDAK	**Kodiak Island**	**148.03**	**299**	PKP2	**PKPbc**	**17 53 24.6**	**-1.1**	
KDAK				MLR	MLR			
	comp=Z,1µm,19.0s							
KDAK	**Kodiak Island**	**148.03**	**299**	P	**PKPbc**	**17 53 25.3**	**-0.4**	
	baz=111							
RND	**Reindeer**	**148.04**	**311**	IAMs_20	IAMs_20	18 59 38.7		
	comp=Z,904nm,20.0s							
M22K	**Willow**	**148.15**	**307**	IAMs_20	IAMs_20	18 57 40.6		
	comp=Z,652nm,21.0s							
M22K	**Willow**	**148.15**	**307**	P	**PKPbc**	**17 53 25.3**	**-0.6**	
	baz=107,SNR=23							
MDM	**Murphy Dome**	**148.15**	**314**	IAMs_20	IAMs_20	19 02 46.6		
	comp=Z,767nm,19.0s							
MCK	**McKinley**	**148.16**	**311**		**PKPdf**	**17 53 20.2**	**-2.5**	
MCK				PKPbc	**PKPbc**	**17 53 26.2**	**+0.3**	
MCK	**McKinley**	**148.16**	**311**	PKHKP	PKPpre	17 53 20.2		
MCK				MLR	MLR			
	comp=Z,900nm,19.0s							
MCK	**McKinley**	**148.16**	**311**	P	**PKPbc**	**17 53 26.2**	**+0.3**	
	baz=105,SNR=29							
OHAK	**Old Harbor**	**148.18**	**298**	P	**PKPbc**	**17 53 25.8**	**-0.3**	
	baz=112,SNR=17							
H24K	**Noodor Dome**	**148.20**	**315**	IAMs_20	IAMs_20	19 03 09.8		
	comp=Z,862nm,19.0s							
H24K	**Noodor Dome**	**148.20**	**315**	P	**PKPbc**	**17 53 25.9**	**-0.2**	
	baz=102,SNR=15							
G24K	**Hadweenzic Riv**	**148.21**	**317**	P	**PKPbc**	**17 53 25.8**	**-0.2**	
	baz=101,SNR=9.9							
D25K	**Kavik River**	**148.22**	**322**	P	**PKPbc**	**17 53 25.6**	**-0.4**	
	baz=98,SNR=26							
Q20K	**Shuyak Island**	**148.23**	**301**	P	**PKPbc**	**17 53 25.9**	**-0.3**	
	baz=110,SNR=18							
CUT	**Chulitna**	**148.40**	**309**	IAMs_20	IAMs_20	18 58 22.1		
	comp=Z,714nm,22.0s							
CUT	**Chulitna**	**148.40**	**309**	P	**PKPbc**	**17 53 26.4**	**-0.1**	
	baz=106,SNR=18							
NEA2	**Nenana**	**148.42**	**313**	IAMs_20	IAMs_20	19 03 00.7		
	comp=Z,721nm,21.0s							
NEA2	**Nenana**	**148.42**	**313**	P	**PKPbc**	**17 53 26.1**	**-0.5**	
	baz=103,SNR=13							
F24K	**Squaw Lake**	**148.51**	**319**	P	**PKPbc**	**17 53 27.3**	**+0.6**	
	baz=99,SNR=20							
I23K	**Minto, Yukon-K**	**148.66**	**314**	P	**PKPbc**	**17 53 26.8**	**-0.4**	
	baz=102,SNR=17							
TRF	**Thorofare Moun**	**148.68**	**310**	P	**PKPbc**	**17 53 27.7**	**+0.2**	
	baz=104,SNR=13							
E24K	**Your Creek**	**148.82**	**320**	P	**PKPbc**	**17 53 27.8**	**+0.2**	
	baz=98							
O20K	**Slope Mountain**	**148.82**	**304**	P	**PKPbc**	**17 53 27.4**	**-0.4**	
	baz=108							
CHIR	**Chirikof Islan**	**148.84**	**295**	P	**PKPbc**	**17 53 27.6**	**-0.2**	
	baz=113							
SKT	**Skwentna**	**148.86**	**307**	IAMs_20	IAMs_20	19 06 40.3		
	comp=Z,781nm,20.0s							
H23K	**Yukon River**	**148.87**	**315**	PKPdf	**PKPdf**	**17 53 22.4**	**-1.4**	
H23K					**PKPbc**	**17 53 27.8**	**+0.1**	
H23K				IAMs_20	IAMs_20	19 08 34.5		
	comp=Z,646nm,19.0s							
H23K	**Yukon River**	**148.87**	**315**	P	**PKPbc**	**17 53 27.7**	**0.0**	
	baz=101,SNR=9.7							
Q19K	**Cape Douglas,**	**148.95**	**301**	IAMs_20	IAMs_20	19 05 19.9		
	comp=Z,898nm,19.0s							
Q19K	**Cape Douglas,**	**148.95**	**301**	P	**PKPbc**	**17 53 28.1**	**0.0**	
	baz=109,SNR=10							
SPCR	**Spurr Chakacha**	**148.96**	**306**	P	**PKPbc**	**17 53 27.6**	**-0.5**	
	baz=106							
KTH	**Kantishna Hill**	**148.98**	**311**	IAMs_20	IAMs_20	19 07 27.4		
	comp=Z,870nm,20.0s							
P19K	**Oil Pt**	**148.98**	**303**	IAMs_20	IAMs_20	18 59 18.6		
	comp=Z,811nm,20.0s							
P19K	**Oil Pt**	**148.98**	**303**	P	**PKPbc**	**17 53 27.8**	**-0.4**	
	baz=108							
NJ2	**Nanjing**	**149.06**	**126**	*e*PKPbc	**PKPbc**	**17 53 28.5**	**-0.7**	
NJ2				LR	LR			
	comp=Z,490nm,22.6s							
NJ2				LR	LR			
	comp=Z,400nm,21.1s							
NJ2				LR	LR			
	comp=Z,780nm,13.9s							
C24K	**Franklin Bluff**	**149.08**	**323**	P	**PKPbc**	**17 53 27.8**	**-0.2**	
	baz=95							
BPAW	**Bear Paw Mtn.**	**149.13**	**312**	IAMs_20	IAMs_20	19 04 09.4		
	comp=Z,951nm,20.0s							
BPAW	**Bear Paw Mtn.**	**149.13**	**312**	P	**PKPbc**	**17 53 28.4**	**0.0**	
	baz=102,SNR=35							
MLY	**Manley**	**149.21**	**313**	IAMs_20	IAMs_20	19 00 43.6		
	comp=Z,898nm,20.0s							
MLY	**Manley**	**149.21**	**313**	P	**PKPbc**	**17 53 28.0**	**-0.6**	
	baz=101,SNR=29							
G23K	**Bananza Creek**	**149.21**	**317**	P	**PKPbc**	**17 53 28.5**	**-0.1**	
	baz=99,SNR=38							
TOLK	**Toolik Lake Re**	**149.29**	**321**		**PKPbc**	**17 53 28.9**	**+0.2**	
TOLK	**Toolik Lake Re**	**149.29**	**321**	P	**PKPbc**	**17 53 28.6**	**-0.1**	
	baz=96,SNR=65							
SSE	**Sheshan**	**149.30**	**131**	PKPbc	**PKPdf**	**17 53 25.8**	**+0.4**	
SSE				SS	SS	18 16 18.8	+4.5	
SSE				AMB	AMB			
	comp=Z,170nm,10.8s							
SSE				LR	LR			
	comp=Z,230nm,18.5s							
SSE				LR	LR			
	comp=Z,190nm,19.2s							
PPLA	**Purkeypile**	**149.38**	**309**	P	**PKPbc**	**17 53 29.1**	**-0.1**	
	baz=104,SNR=30							
CAST	**Castle Rocks**	**149.46**	**310**	P	**PKPbc**	**17 53 29.0**	**-0.2**	
	baz=103,SNR=16							
M20K	**Styx River**	**149.56**	**307**	IAMs_20	IAMs_20	18 58 37.9		
	comp=Z,854nm,22.0s							
M20K	**Styx River**	**149.56**	**307**	P	**PKPbc**	**17 53 29.2**	**-0.4**	
	baz=105,SNR=30							
H22K	**Ishtalitna Cre**	**149.62**	**315**	P	**PKPbc**	**17 53 29.7**	**+0.2**	
	baz=99,SNR=29							
CHUM	**Lake Minchumin**	**149.65**	**311**	P	**PKPbc**	**17 53 29.6**	**0.0**	
	baz=102,SNR=10							
O19K	**Port Alsworth**	**149.67**	**303**	IAMs_20	IAMs_20	18 59 54.7		
	comp=Z,728nm,20.0s							
D23K	**Nanushuk River**	**149.72**	**321**	P	**PKPbc**	**17 53 29.8**	**+0.1**	
	baz=94,SNR=16							
C23K	**Itkillik River**	**149.75**	**323**	P	**PKPbc**	**17 53 29.6**	**-0.1**	
	baz=93							
I21K	**Tanana**	**149.76**	**313**	IAMs_20	IAMs_20	19 06 45.0		
	comp=Z,824nm,19.0s							
I21K	**Tanana**	**149.76**	**313**	P	**PKPbc**	**17 53 30.0**	**+0.2**	
	baz=100							
G22K	**Bettles**	**149.82**	**317**	P	**PKPbc**	**17 53 30.0**	**+0.1**	
	baz=97							
P18K	**Big Mountain,**	**149.87**	**302**	IAMs_20	IAMs_20	18 52 24.2		
	comp=Z,714nm,21.0s							
P18K	**Big Mountain,**	**149.87**	**302**	P	**PKPbc**	**17 53 29.6**	**-0.8**	
	baz=107,SNR=27							
R17K	**Ugashik Creek**	**149.90**	**298**	P	**PKPbc**	**17 53 30.2**	**-0.2**	
	baz=110,SNR=12							
N19K	**Bonanza Creek**	**149.91**	**304**	IAMs_20	IAMs_20	19 00 35.3		
	comp=Z,788nm,20.0s							
N19K	**Bonanza Creek**	**149.91**	**304**	P	**PKPbc**	**17 53 29.8**	**-0.7**	
	baz=106,SNR=42							
O18K	**Koktuh Hills**	**150.00**	**302**	IAMs_20	IAMs_20	19 01 05.5		
	comp=Z,925nm,20.0s							
O18K	**Koktuh Hills**	**150.00**	**302**	P	**PKPbc**	**17 53 30.0**	**-0.6**	
	baz=107							
NRIK	**Noril'sk**	**150.03**	**38**	PKPbc	**PKiKP**	**17 53 32.3**	**+1.0**	
	comp=Z,21nm,1.0s,baz=140,slow=3.4,SNR=13							
L20K	**Farewell, AK**	**150.04**	**308**	P	**PKPbc**	**17 53 30.1**	**-0.6**	
	baz=103,SNR=24							
E22K	**Anaktuvuk Pass**	**150.07**	**319**	P	**PKPbc**	**17 53 30.5**	**-0.1**	
	baz=95,SNR=36							
M19K	**Big River Lodg**	**150.15**	**307**	IAMs_20	IAMs_20	18 58 30.4		
	comp=Z,852nm,20.0s							
M19K	**Big River Lodg**	**150.15**	**307**	P	**PKPbc**	**17 53 30.5**	**-0.4**	
	baz=104,SNR=21							
F22K	**John River**	**150.15**	**318**	P	**PKiKP**	**17 53 31.2**	**-0.4**	
	baz=96,SNR=39							
H21K	**Melozitna Rive**	**150.17**	**314**		**PKPdf**	**17 53 23.4**	**-2.4**	
H21K				PKPbc	**PKiKP**	**17 53 31.3**	**-0.4**	
H21K				IAMs_20	IAMs_20	19 06 04.9		
	comp=Z,869nm,19.0s							
H21K	**Melozitna Rive**	**150.17**	**314**	P	**PKPbc**	**17 53 30.9**	**+0.1**	
	baz=98,SNR=22							
TIY	**Taiyuan**	**150.31**	**111**	PKPbc	**PKPdf**	**17 53 27.8**	**+0.8**	
TIY				SKKS		18 03 56.8		
TIY				SS	**SS**	**18 16 26.9**	**+0.6**	
K20K	**Telida**	**150.32**	**310**	IAMs_20	IAMs_20	18 59 17.8		
	comp=Z,839nm,20.0s							
K20K	**Telida**	**150.32**	**310**	P	**PKPbc**	**17 53 30.9**	**-0.4**	
	baz=102,SNR=31							
Q16K	**King Salmon**	**150.36**	**300**	P	**PKPbc**	**17 53 31.3**	**-0.2**	
	baz=108,SNR=15							
P17K	**Kvichak River**	**150.41**	**301**	P	**PKPbc**	**17 53 31.2**	**-0.3**	
	baz=107							
L19K	**White Mountain**	**150.42**	**307**	P	**PKPbc**	**17 53 31.4**	**-0.2**	
	baz=103,SNR=16							
R16K	**Pilot Point**	**150.47**	**297**	P	**PKPbc**	**17 53 32.1**	**+0.3**	
	baz=109							
CHGN	**Chignik**	**150.48**	**295**	P	**PKPbc**	**17 53 31.1**	**-0.7**	
	baz=111							
J20K	**Nowinta River**	**150.50**	**311**	IAMs_20	IAMs_20	18 59 33.7		
	comp=Z,731nm,21.0s							
J20K	**Nowinta River**	**150.50**	**311**	P	**PKPbc**	**17 53 31.9**	**+0.2**	
	baz=100,SNR=11							
N18K	**Kilae Creek**	**150.55**	**304**	IAMs_20	IAMs_20	19 03 13.0		
	comp=Z,640nm,19.0s							
N18K	**Kilae Creek**	**150.55**	**304**	P	**PKPbc**	**17 53 31.7**	**-0.2**	
	baz=105,SNR=17							
CNBA	**Chernabura Isl**	**150.55**	**291**		**PKPbc**	**17 53 31.4**	**-0.6**	
CHNA	**Chernabura Isl**	**150.56**	**291**	P	**PKPbc**	**17 53 31.4**	**-0.6**	
	baz=113,SNR=7.4							
G21K	**Allakaket**	**150.56**	**316**	P	**PKiKP**	**17 53 32.4**	**-0.1**	
	baz=96,SNR=18							
F21K	**Alatna River**	**150.62**	**317**	P	**PKiKP**	**17 53 32.4**	**-0.2**	
	baz=95,SNR=19							
O17K	**Koliganek Bris**	**150.89**	**302**	P	**PKPbc**	**17 53 32.2**	**-0.5**	
	baz=106,SNR=33							
BTO	**Baotou**	**151.05**	**104**	*e*PKPbc	**PKPdf**	**17 53 25.3**	**-2.8**	
BTO				LR	LR			
	comp=Z,1µm,16.7s							
BTO				LR	LR			
	comp=Z,890nm,16.6s							
S14K	**Fog Glacier**	**151.07**	**294**	P	**PKPbc**	**17 53 32.5**	**-0.9**	
	baz=110,SNR=6.3							
TTA	**Tatalina**	**151.10**	**308**	P	**PKPbc**	**17 53 33.0**	**-0.2**	
	baz=101,SNR=18							
P16K	**Nushagak River**	**151.13**	**300**	P	**PKPbc**	**17 53 32.6**	**-0.7**	
	baz=106							
SDPT	**Sand Point**	**151.22**	**292**	P	**PKP

XLT					AMB	AMB			
	comp=Z,260nm,5.9s								
XLT					LR	LR			
	comp=Z,53nm,19.8s								
XLT					LR	LR			
	comp=Z,470nm,18.5s								
XLT					LR	LR			
	comp=Z,690nm,20.6s								
KSRS	**Korea Array**	**157.60**	**134**		PKP	**PKPdf**	**17 53 37.9**	**+0.8**	
	comp=Z,1.9nm,0.9s,baz=236,slow=1.3,SNR=7.0								
KSRS					PKPab	**PKPab**	**17 54 09.4**	**+0.2**	
	comp=Z,2.4nm,0.9s,baz=223,slow=3.0,SNR=4.3								
CIT	**Chita**	**159.42**	**85**	*e*	PKIKP	**PKPdf**	**17 53 36.2**	**-2.7**	
CIT					pmax	pmax			
	comp=Z,92nm,2.7s								
BOD	**Bodaibo**	**161.15**	**68**	*e*	PKIKP	**PKPdf**	**17 53 38.4**	**-2.2**	
BOD					pmax	pmax			
	comp=Z,22nm,1.9s								
CN2	**Changchun**	**161.51**	**119**	*e*	PKP	**PKPdf**	**17 53 39.6**	**-1.8**	
CN2					PP	**PP**	**17 58 13.3**	**+3.3**	
CN2					SS	SS	18 18 22.3	-4.4	
CN2					AMB	AMB			
	comp=Z,310nm,13.0s								
CN2					LR	LR			
	comp=Z,730nm,21.0s								
CN2					LR	LR			
	comp=Z,440nm,21.0s								
CN2					LR	LR			
	comp=Z,870nm,21.0s								
TIXI	**Tiksi**	**161.56**	**19**		PKPdf	**PKPdf**	**17 53 39.7**	**-0.9**	
TIXI						**PKPab**	**17 54 26.1**	**+0.5**	
TIXI	**Tiksi**	**161.56**	**19**		PKIKP	**PKPdf**	**17 53 39.7**	**-0.9**	
TIXI							17 54 26.1		
MDJ	**Mudanjiang**	**164.13**	**124**			**PKPdf**	**17 53 41.2**	**-2.8**	
MDJ	**Mudanjiang**	**164.13**	**124**		PKP	**PKPdf**	**17 53 45.0**	**+1.0**	
MDJ					LR	LR			
	comp=Z,690nm,19.0s								
MDJ					LR	LR			
	comp=Z,550nm,20.1s								
MDJ					LR	LR			
	comp=Z,1μm,19.5s								
TEY	**Ternei**	**167.47**	**140**	*de*	PKIKP	**PKPdf**	**17 53 45.2**	**-1.4**	
TEY					pmax	pmax			
	comp=Z,100nm,5.1s								
ZEA	**Zeya**	**167.82**	**88**	*e*	PKIKP	**PKPdf**	**17 53 45.9**	**-0.7**	
ZEA				*e*			18 19 31.3		
ZEA					pmax	pmax			
	comp=Z,10.0nm,2.2s								
YAK	**Yakutsk**	**168.26**	**47**	*e*	PKIKP	PKPdf	17 53 57.2	+11	
YAK					pmax	pmax			
	comp=Z,13nm,1.3s								
YAK					pmax	pmax			
	comp=E,4.0nm,1.5s								
KLR	**Kul'dur**	**168.37**	**114**		PKP	**PKPdf**	**17 53 46.4**	**-0.7**	
	comp=E,3.4nm,0.9s,baz=8.9,slow=0.6,SNR=2.9								
KLR					PKPab	**PKPab**	**17 54 55.0**	**-1.3**	
	comp=E,6.0nm,0.9s,baz=274,slow=1.7,SNR=2.9								
YSS	**Yuzh-Sakhalins**	**171.10**	**156**	*i*	PKIKP	**PKPdf**	**17 53 49.6**	**+0.8**	
YSS				*e*	SS	SS	18 20 00.2	-2.8	
YSS					pmax	pmax			
	comp=Z,600nm,6.9s								
YSS					MLR	MLR			
	comp=Z,900nm,18.0s								
GRNR	**Gornyy**	**171.70**	**118**	*e*	PKIKP	**PKPdf**	**17 53 46.4**	**-2.6**	
GRNR					MLR	MLR			
	comp=E,200nm,15.0s								
PET	**Petropavlovsk**	**173.39**	**255**	*i*	PKIKP	**PKPdf**	**17 53 47.6**	**-2.0**	
PET				*e*			17 59 13.2		
PET				*e*	PPP	PPP	18 03 20.8		
PET				*e*	PPS	PPS	18 13 15.5		
PET				*e*	SS	SS	18 20 21.6	-5.1	
PET					pmax	pmax			
	comp=Z,900nm,20.2s								
PET					MLR	MLR			
	comp=Z,900nm,19.0s								

NOU 19 17:34:18.1, 16.81S×168.46E, h1km, MLv4.1/1, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.95**	**196**	P	Pg	17 34 35.9	-0.4
RTV	**Rentapao**	**0.98**	**182**	P	Pg	17 34 36.8	-0.1
KOUNC	**Koumac, New Ca**	**5.43**	**226**	P	Pn	17 35 40.0	-0.2
DZM	**Mont Dzumac**	**5.57**	**200**	P	Pn	17 35 41.8	-0.4
NOUC	**Port Laguerre**	**5.64**	**201**	P	Pn	17 35 43.4	+0.2

BJI ***19*** *17:36:22.6±0.0, 61.60N×146.30W, h25km, mb4.6/19, mB5.0/11, Ms4.7/2, Ms7 4.4/2*

NEIC ***19*** *17:36:26, 61.53N×146.44W, h43km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=2.97; $M_{\theta\theta}$1.18; $M_{\phi\phi}$ 1.79; $M_{r\theta}$-1.89; $M_{r\phi}$ 1.89; $M_{\theta\phi}$-1.58; Fault plane solution: M_o4.05000×10^{15} NP1:$\phi_1$212.61000°, δ26.75000°, λ-102.81000°. NP2:$\phi_2$46.90000°, δ63.97000°, λ-83.62000°. Principal axes: T 4.2317, Plg19.0000°, Azm132.0000°; N -0.3905, Plg6.0000°, Azm224.0000°; P -3.8411, Plg70.0000°, Azm330.0000°;*

ANF ***19*** *17:36:26.8±0.2, 61.60N×146.37W, h21km±2km, ML4.6/94, ML4.6/93 Error ellipse: s-maj=1.4km s-min=1.2km az=178.0*

MOS ***19*** *17:36:26.3±1.2, 61.65N×146.44W, h49km, mb4.5/14, Error ellipse: s-maj=16.6km s-min=5.9km az=97.1*

NEIC ***19*** *17:36:27.7±1.4, 61.61N±0.02×146.33W±0.05, h40km±5km, Error ellipse: s-maj=3.3km s-min=2.7km az=108.0*

AEIC ***19*** *17:36:28.2±1.5, 61.60N±0.02×146.335W±0.004, h24km±5km, ML4.2/151, mb4.1/2(NEIC), ML4.4/194(NEIC), Mwr4.3/131(NEIC), Error ellipse: s-maj=2.7km s-min=0.3km az=178.0*

IDC ***19*** *17:36:28.7±0.7, 61.79N×146.46W, h47km±5km, mb3.7/19, mbtmp4.0/23, MS3.5/6, Error ellipse: s-maj=20.2km s-min=11.6km az=36.0*

ISC 19 17:36:26.5±0.5, 61.62N±0.02×146.37W±0.02, h33km±3km, h34km; pP-P, n401, σ1§35/441, mb4.4/36, 10C-7D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLU	**Klutina**	**0.25**	**119**		**Pn**	**17 36 34.3**	**+0.4**
KLU					**Sn**	**17 36 40.1**	**+1.6**
KLU				IAML		17 36 40.2	
	comp=N,16μm,0.3s						
KLU				IAML		17 36 40.3	
	comp=E,28μm,0.3s						
KLU	**Klutina**	**0.25**	**119**	P	**Pn**	**17 36 34.7**	**+0.7**
	baz=300,SNR=1000						
M24K	**Tolsona, Glenn**	**0.50**	**11**		**Pn**	**17 36 37.5**	**+0.1**
M24K				IAML		17 36 47.0	
	comp=N,13μm,0.3s						
M24K				IAML		17 36 47.6	
	comp=E,26μm,0.8s						
M24K	**Tolsona, Glenn**	**0.50**	**11**		**Sn**	**17 36 46.5**	**+1.5**
M24K	**Tolsona, Glenn**	**0.50**	**11**	P	**Pn**	**17 36 37.8**	**+0.3**
	baz=189,SNR=1000						
M24K				S	**Sn**	**17 36 46.2**	**+1.1**
	baz=189						
SCM	**Sheep Creek Mo**	**0.50**	**296**		**Pb**	**17 36 37.4**	**+0.2**
SCM					**Sn**	**17 36 45.9**	**+0.8**
SCM				IAML		17 36 46.2	
	comp=N,24μm,0.4s						
SCM				IAML		17 36 46.3	
	comp=E,16μm,0.4s						
SCM	**Sheep Creek Mo**	**0.50**	**296**	P	**Pb**	**17 36 37.4**	**+0.2**
SCM						17 36 45.9	
SCM	**Sheep Creek Mo**	**0.50**	**296**	P	**Pn**	**17 36 37.8**	**+0.3**
	baz=116,SNR=1000						
VMT	**TAPS Tl Valdez**	**0.53**	**180**		**Pn**	**17 36 37.7**	**-0.1**
VMT					**Sn**	**17 36 45.6**	**0.0**
DIV	**Divide**	**0.57**	**149**		**Pb**	**17 36 38.0**	**-0.2**
DIV	**Divide**	**0.57**	**149**		**Sn**	**17 36 46.4**	**-0.2**
JPK	**Jack Peak**	**0.57**	**191**		**Pn**	**17 36 38.4**	**0.0**
PS12	**TAPS Pump St12**	**0.61**	**103**		**Pb**	**17 36 38.5**	**-0.3**
PS12					**Sb**	**17 36 47.0**	**-0.1**
PS11	**TAPS Pump St11**	**0.63**	**42**		**Pn**	**17 36 39.6**	**+0.5**
PS11					**Sn**	**17 36 50.0**	**+1.9**
M23K	**Glacier View**	**0.67**	**286**		**Pb**	**17 36 39.8**	**0.0**
M23K	**Glacier View**	**0.67**	**286**	P	**Pn**	**17 36 39.9**	**+0.2**
	baz=105,SNR=1000						
GLI	**Glacier Island**	**0.82**	**206**		**Pb**	**17 36 42.0**	**-0.2**
GLI				Sn	**Sn**	**17 36 53.5**	**+0.9**
GLI	**Glacier Island**	**0.82**	**206**	P	**Pb**	**17 36 42.2**	**-0.1**
	baz=26,SNR=422						
N25K	**Chitina, Valde**	**0.85**	**90**		**Pn**	**17 36 41.9**	**-0.4**
N25K				Sn	**Sn**	**17 36 52.8**	**-0.8**
N25K				IAML		17 36 55.0	
	comp=E,16μm,0.4s						
N25K				IAML		17 36 55.4	
	comp=N,19μm,0.5s						
N25K	**Chitina, Valde**	**0.85**	**90**	P	**Pn**	**17 36 42.0**	**-0.2**
	baz=271,SNR=1000						
N25K				S	**Sb**	**17 36 53.8**	**-0.2**
	baz=271						
FID	**Port Fidalgo**	**0.87**	**183**	Pn	**Pb**	**17 36 43.2**	**0.0**
FID				Sn	**Sb**	**17 36 56.2**	**+1.8**
FID				IAML		17 36 59.0	
	comp=N,11μm,0.4s						
FID				IAML		17 36 59.2	
	comp=E,16μm,0.4s						
SML	**Sawmill**	**0.95**	**283**		**Pn**	**17 36 43.6**	**0.0**
SML				Sn	**Sb**	**17 36 56.8**	**-0.1**
SML				IAML		17 36 58.4	
	comp=E,10μm,0.7s						
SML	**Sawmill**	**0.95**	**283**	P	**Pn**	**17 36 44.1**	**+0.4**
	baz=101,SNR=1000						
SML				S	**Sb**	**17 36 57.0**	**+0.1**
	baz=101						
HARP	**HAARP**	**0.97**	**36**		**Pn**	**17 36 44.4**	**+0.4**
HARP	**HAARP**	**0.97**	**36**	P	**Pb**	**17 36 44.5**	**-0.4**
	baz=215,SNR=695						
HARP				S	**Sb**	**17 36 58.6**	**+1.1**
	baz=215						
KNK	**Knik Glacier**	**1.02**	**259**	Pn	**Pb**	**17 36 45.6**	**0.0**
KNK				Sn	**Sb**	**17 36 58.7**	**-0.1**
KNK				IAML		17 37 00.7	
	comp=E,9μm,0.3s						
KNK				IAML		17 37 00.8	
	comp=N,10μm,1.0s						
KNK	**Knik Glacier**	**1.02**	**259**	P	**Pb**	**17 36 45.7**	**0.0**
	baz=78,SNR=1000						
WACK	**Wrangell Chich**	**1.04**	**68**		**Pn**	**17 36 45.0**	**0.0**
BMRM	**Bremner River**	**1.07**	**126**		**Pn**	**17 36 45.0**	**-0.2**
BMRM	**Bremner River**	**1.07**	**126**	P	**Pn**	**17 36 45.1**	**-0.2**
	baz=308,SNR=1000						
WASW	**Wrangell South**	**1.09**	**72**		**Pn**	**17 36 45.8**	**+0.1**
EYAK	**Cordova Ski Ar**	**1.11**	**164**		**Pb**	**17 36 46.6**	**-0.5**
EYAK	**Cordova Ski Ar**	**1.11**	**164**	P	**Pb**	**17 36 46.6**	**-0.5**
	baz=345,SNR=418						
WAT6	**Susitna Watana**	**1.16**	**327**		**Pn**	**17 36 46.7**	**+0.1**
WAT6	**Susitna Watana**	**1.16**	**327**	P	**Pn**	**17 36 46.7**	**+0.1**
	baz=145,SNR=1000						
WAT6				S	**Sn**	**17 37 02.1**	**+0.7**
	baz=145						
PWL	**Port Wells**	**1.21**	**232**		**Pb**	**17 36 48.5**	**-0.4**
PWL				Sn	**Sb**	**17 37 04.1**	**-0.2**
PWL				IAML		17 37 09.8	
	comp=E,5μm,0.8s						
PWL				IAML		17 37 11.0	
	comp=N,6μm,0.9s						
PWL	**Port Wells**	**1.21**	**232**	P	**Pb**	**17 36 48.7**	**-0.3**
	baz=51,SNR=133						
HIN	**Hinchinbrook I**	**1.22**	**183**		**Pb**	**17 36 48.8**	**-0.3**
HIN				Sn	**Sb**	**17 37 05.9**	**+1.3**
HIN				IAML		17 37 07.5	
	comp=N,11μm,1.1s						
HIN				IAML		17 37 09.6	
	comp=E,9μm,0.9s						
GHO	**Glory Hole Cre**	**1.23**	**279**		**Pn**	**17 36 48.1**	**+0.7**
GHO				Sn	**Sb**	**17 37 05.7**	**+1.0**
GLB	**Gilahina Butte**	**1.24**	**97**	Pn	**Pn**	**17 36 47.5**	**-0.1**
GLB				IAML		17 37 07.7	
	comp=N,6μm,0.4s						
GOAT	**Goat Mountain**	**1.31**	**142**		**Pb**	**17 36 49.7**	**-0.9**
PMR	**Palmer**	**1.32**	**270**		**Pb**	**17 36 49.8**	**-0.8**
PMR				Sn	**Sb**	**17 37 07.2**	**+0.1**
PMR				IAML		17 37 09.4	
	comp=N,8μm,0.6s						
PMR	**Palmer**	**1.32**	**270**	P	**Pb**	**17 36 49.8**	**-0.8**
PMR						17 37 07.3	
PMR	**Palmer**	**1.32**	**270**	P	**Pb**	**17 36 49.9**	**-0.7**
	baz=88,SNR=219						
PAX	**Paxson**	**1.42**	**17**		**Pn**	**17 36 50.5**	**+0.4**
PAX	**Paxson**	**1.42**	**17**	P	**Pn**	**17 36 50.7**	**+0.5**
	baz=197,SNR=925						
PAX				S	**Sn**	**17 37 08.6**	**+0.8**
	baz=197						
RAGM	**Ragged Mountai**	**1.48**	**145**		**Pb**	**17 36 52.1**	**-1.4**
RAGM				IAML		17 37 17.6	
	comp=E,18μm,0.6s						
RAGM				IAML		17 37 18.6	
	comp=N,40μm,0.7s						
DHY	**Denali Highway**	**1.54**	**343**		**Pn**	**17 36 52.3**	**+0.5**
DHY				Sn	**Sn**	**17 37 11.8**	**+1.1**
DHY				IAML		17 37 15.9	
	comp=E,6μm,0.6s						
DHY	**Denali Highway**	**1.54**	**343**	P	**Pn**	**17 36 52.5**	**+0.8**
	baz=161,SNR=756						
WAT1	**Susitna Watana**	**1.59**	**321**		**Pn**	**17 36 53.4**	**+1.0**
WAT1					**Sb**	**17 37 14.3**	**-0.6**
WAT1	**Susitna Watana**	**1.59**	**321**	P	**Pn**	**17 36 53.6**	**+1.2**
	baz=139						
WAT1				S	**Sb**	**17 37 14.5**	**-0.5**
	baz=139						
MCARA	**McCarthy VSAT**	**1.62**	**97**	Pn	**Pn**	**17 36 53.6**	**+0.8**
MCARA				Sn	**Sb**	**17 37 14.6**	**-1.3**
MCARA	**McCarthy VSAT**	**1.62**	**97**	P	**Pn**	**17 36 53.8**	**+1.0**
	baz=279,SNR=1000						
HMT	**Hamilton**	**1.65**	**140**		**Pn**	**17 36 53.6**	**+0.5**
HMT				Sn	**Sb**	**17 37 15.4**	**-1.2**
WAT7	**Susitna Watana**	**1.68**	**318**		**Pn**	**17 36 55.0**	**+1.3**
P23K	**Montague Islan**	**1.70**	**198**	P	**Pn**	**17 36 55.4**	**+1.6**
	baz=18						
RC01	**Rabbit Creek A**	**1.70**	**253**		**Pb**	**17 36 55.8**	**-1.4**
RC01				Sn	**Sb**	**17 37 18.1**	**-0.1**
RC01				IAML		17 37 20.9	
	comp=E,6μm,0.3s						
RC01	**Rabbit Creek A**	**1.70**	**253**	P	**Pb**	**17 36 56.3**	**-0.8**
	baz=71,SNR=344						
M26K	**Nabesna, AK**	**1.78**	**62**		**Pn**	**17 36 56.1**	**+1.2**
M26K				Sn	**Sb**	**17 37 18.6**	**-1.8**
M26K				IAML		17 37 20.8	
	comp=N,3μm,0.9s						
M26K	**Nabesna, AK**	**1.78**	**62**	P	**Pn**	**17 36 56.6**	**+1.6**
	baz=244,SNR=1000						
BERG	**Berg Lake**	**1.79**	**132**		**Pn**	**17 36 55.5**	**+0.4**
M22K	**Willow**	**1.79**	**276**		**Pb**	**17 36 57.0**	**-1.6**
M22K	**Willow**	**1.79**	**276**	P	**Pb**	**17 36 57.2**	**-1.4**
	baz=93,SNR=97						
NICHA	**Nichawak Mount**	**1.81**	**139**		**Pn**	**17 36 56.6**	**+1.1**
MENT	**Mentasta**	**1.82**	**42**		**Pn**	**17 36 56.2**	**+0.7**
MENT				IAML		17 37 22.5	
	comp=N,3μm,0.3s						
PS10	**TAPS Pump St10**	**1.84**	**9**		**Pb**	**17 36 57.7**	**-1.7**
PS10					**Sb**	**17 37 21.4**	**-0.7**
FIS	**Fire Island**	**1.91**	**257**		**Pb**	**17 36 59.5**	**-1.1**
TGL	**Tana Glacier**	**1.92**	**115**		**Pn**	**17 36 57.5**	**+0.5**
KHIT	**Khitrov Hills**	**1.92**	**126**		**Pn**	**17 36 57.8**	**+0.8**
PTPK	**Patty Peak**	**1.93**	**101**		**Pn**	**17 36 58.4**	**+1.2**
KAIM	**Kayak Island**	**1.95**	**150**	Pn	**Pn**	**17 36 57.9**	**+0.7**
KAIM				IAML		17 37 55.8	
	comp=N,2μm,1.9s						
KAIM	**Kayak Island**	**1.95**	**150**	P	**Pn**	**17 36 58.1**	**+0.9**
	baz=332,SNR=26						
O22K	**Cooper Landing**	**1.99**	**237**		**Pb**	**17 37 00.3**	**-1.7**
O22K	**Cooper Landing**	**1.99**	**237**	P	**Pb**	**17 37 00.5**	**-1.4**
	baz=54,SNR=29						
L26K	**Log Cabin Wild**	**2.00**	**44**		**Pn**	**17 36 59.3**	**+1.3**
L26K	**Log Cabin Wild**	**2.00**	**44**	P	**Pn**	**17 36 59.5**	**+1.4**
	baz=226,SNR=114						
CUT	**Chulitna**	**2.00**	**295**		**Pn**	**17 36 59.5**	**+1.6**
CUT	**Chulitna**	**2.00**	**295**	P	**Pb**	**17 37 00.5**	**-1.7**
	baz=112,SNR=135						
SUCK	**Suckling Hills**	**2.00**	**139**		**Pn**	**17 36 58.6**	**+0.6**
GRIN	**Grindle Hills**	**2.00**	**131**		**Pn**	**17 36 59.0**	**+1.0**
WAX	**Waxell Ridge**	**2.08**	**123**		**Pn**	**17 36 59.8**	**+0.7**
BGLC	**Bering Glacier**	**2.13**	**133**	P	**Pn**	**17 37 01.4**	**+1.7**
	baz=316,SNR=18						
RND	**Reindeer**	**2.13**	**328**	Pn	**Pn**	**17 37 01.3**	**+1.4**
RND				IAML		17 37 31.2	
	comp=N,3μm,1.0s						
RND	**Reindeer**	**2.13**	**328**	P	**Pn**	**17 37 01.3**	**+1.4**
SEW	**Seward**	**2.14**	**226**		**Pn**	**17 37 01.4**	**+1.6**
SEW	**Seward**	**2.14**	**226**	P	**Pn**	**17 37 01.6**	**+1.8**
	baz=44,SNR=101						
SLKM	**Skilak Lake**	**2.18**	**241**		**Pn**	**17 37 02.8**	**+2.4**
Q23K	**Middleton Isla**	**2.19**	**180**		**Pn**	**17 37 01.8**	**+1.2**
Q23K				IAML		17 37 38.8	
	comp=N,2μm,1.2s						
Q23K				IAML		17 37 48.8	
	comp=E,2μm,0.9s						
Q23K	**Middleton Isla**	**2.19**	**180**	P	**Pn**	**17 37 02.1**	**+1.5**
	baz=0.1,SNR=11						
MID	**Middleton Isla**	**2.19**	**180**		**Pn**	**17 37 01.8**	**+1.2**
MID				IAML		17 37 48.8	
	comp=E,2μm,0.9s						
MID	**Middleton Isla**	**2.19**	**180**	P	**Pn**	**17 37 01.8**	**+1.2**
ISLE	**Juniper Island**	**2.21**	**116**		**Pn**	**17 37 01.2**	**+0.3**
ISLE				IAML		17 37 38.0	
	comp=N,3μm,0.7s						
ISLE				IAML		17 37 38.9	
	comp=E,3μm,0.4s						
K24K	**Donnelly Dome**	**2.21**	**7**		**Pn**	**17 37 03.4**	**+2.5**
K24K	**Donnelly Dome**	**2.21**	**7**	P	**Pn**	**17 37 03.5**	**+2.5**
	baz=187,SNR=1000						
K24K				S	**Sb**	**17 37 31.6**	**-1.2**
	baz=187						
RIDG	**Independent Ri**	**2.25**	**18**	Pn	**Pn**	**17 37 03.6**	**+2.2**
RIDG	**Independent Ri**	**2.25**	**18**	P	**Pn**	**17 37 03.8**	**+2.4**
	baz=198,SNR=1000						
RIDG				S	**Sb**	**17 37 32.0**	**-1.8**
	baz=198						
BARK	**Barkley Ridge**	**2.25**	**121**		**Pn**	**17 37 02.4**	**+0.9**
M27K	**Edge Creek, AK**	**2.25**	**69**		**Pn**	**17 37 03.5**	**+1.9**
M27K	**Edge Creek, AK**	**2.25**	**69**	P	**Pn**	**17 37 03.7**	**+2.2**
	baz=252,SNR=358						
M27K				S	**Sb**	**17 37 31.7**	**-2.2**
	baz=252						
SNH	**Sunshine Point**	**2.25**	**128**		**Pn**	**17 37 02.4**	**+1.0**
SNH				IAML		17 37 44.0	
	comp=E,2μm,1.2s						
SNH				IAML		17 37 46.3	
	comp=N,2μm,0.9s						
DOT	**Dot Lake**	**2.30**	**27**		**Pn**	**17 37 03.7**	**+1.5**
BAGL	**Bagley Icefiel**	**2.37**	**117**		**Pn**	**17 37 03.8**	**+0.8**
MCK	**McKinley**	**2.43**	**332**	Pn	**Pn**	**17 37 05.6**	**+1.7**
MCK				IAML		17 37 38.8	
	comp=N,2μm,1.1s						
MCK				IAML		17 37 40.9	
	comp=E,2μm,0.8s						
MCK	**McKinley**	**2.43**	**332**	P	**Pn**	**17 37 05.6**	**+1.7**
MCK	**McKinley**	**2.43**	**332**	P	**Pn**	**17 37 06.0**	**+2.1**
	baz=150,SNR=317						
MCK				S	**Sb**	**17 37 36.6**	**-2.5**
	baz=150						
CYK	**Cape Yakataga**	**2.45**	**127**		**Pn**	**17 37 05.0**	**+0.9**
CAPN	**Captain Cook N**	**2.47**	**252**		**Pb**	**17 37 07.5**	**-2.5**
CTG	**Chitna Glacier**	**2.52**	**103**	P	**Pn**	**17 37 06.4**	**+1.2**
	baz=287,SNR=650						
CTGM	**Chitina Glacie**	**2.52**	**103**		**Pn**	**17 37 06.2**	**+1.0**
CTGM				IAML		17 37 48.7	
	comp=N,1μm,0.4s						
L27K	**Beaver Creek,**	**2.57**	**54**		**Pn**	**17 37 07.0**	**+1.1**
L27K	**Beaver Creek,**	**2.57**	**54**	P	**Pn**	**17 37 07.2**	**+1.3**
	baz=237,SNR=106						
YAH	**Yahtse**	**2.58**	**117**		**Pn**	**17 37 06.6**	**+0.4**
YAH				IAML		17 37 48.6	
	comp=E,2μm,0.9s						
TRF	**Thorofare Moun**	**2.59**	**317**		**Pn**	**17 37 07.3**	**+1.1**
TRF				IAML		17 37 46.5	
	comp=E,1μm,0.9s						
TRF				IAML		17 37 50.5	
	comp=N,2μm,0.9s						
TRF	**Thorofare Moun**	**2.59**	**317**	P	**Pn**	**17 37 08.3**	**+2.1**
	baz=134,SNR=287						
BC03		**2.59**	**54**		**Pn**	**17 37 07.5**	**+1.4**
BCAR	**Beaver Creek A**	**2.59**	**54**		**Pn**	**17 37 06.9**	**+0.8**
MESA	**MESA**	**2.60**	**122**		**Pn**	**17 37 06.8**	**+0.5**
MESA	**MESA**	**2.60**	**122**	P	**Pn**	**17 37 07.1**	**+0.8**
	baz=306,SNR=145						
SCRK	**Sand Creek**	**2.61**	**24**		**Pn**	**17 37 07.6**	**+1.1**
SCRK	**Sand Creek**	**2.61**	**24**	P	**Pn**	**17 37 07.9**	**+1.4**
	baz=205,SNR=142						
STLK	**Strandline Lak**	**2.62**	**270**		**Pn**	**17 37 08.9**	**+2.4**
YUK2	**White River**	**2.64**	**84**		**Pn**	**17 37 08.3**	**+1.5**
LOGN	**Logan Glacier**	**2.72**	**105**		**Pn**	**17 37 08.7**	**+0.7**
LOGN				IAML		17 37 54.0	
	comp=N,1μm,0.4s						
LOGN				IAML		17 37 56.5	
	comp=E,2μm,1.2s						
BVCY	**Beaver Creek**	**2.72**	**70**		**Pn**	**17 37 10.0**	**+2.1**
BVCY	**Beaver Creek**	**2.72**	**70**	P	**Pn**	**17 37 10.0**	**+2.1**
	baz=255,SNR=117						
BVCY				S	**Sn**	**17 37 42.9**	**+3.2**
	baz=255						
SPU	**Mount Spurr**	**2.77**	**263**		**Pn**	**17 37 10.0**	**+1.5**
TABL	**Table Mountain**	**2.81**	**113**		**Pn**	**17 37 09.5**	**+0.2**
HDA	**Harding Lake**	**2.82**	**355**		**Pn**	**17 37 09.8**	**+0.6**
HDA				IAML		17 37 48.0	
	comp=E,2μm,0.4s						
HDA	**Harding Lake**	**2.82**	**355**	P	**Pn**	**17 37 10.5**	**+1.3**
	baz=174,SNR=512						
YUK3	**Moose Creek**	**2.82**	**84**		**Pn**	**17 37 10.9**	**+1.4**
YUK3	**Moose Creek**	**2.82**	**84**	P	**Pn**	**17 37 10.9**	**+1.4**
	baz=269,SNR=530						
SPCR	**Spurr Chakacha**	**2.84**	**264**		**Pn**	**17 37 12.1**	**+2.6**
SPCR	**Spurr Chakacha**	**2.84**	**264**	P	**Pn**	**17 37 11.2**	**+1.6**
	baz=79,SNR=52						
BRSE	**Bradley Lake S**	**2.85**	**231**		**Pn**	**17 37 11.5**	**+1.8**
BRSE	**Bradley Lake S**	**2.85**	**231**	P	**Pn**	**17 37 11.2**	**+1.5**
	baz=47,SNR=35						
KTH	**Kantishna Hill**	**2.87**	**315**		**Pn**	**17 37 11.5**	**+1.6**
KTH				IAML		17 37 54.2	
	comp=N,2μm,0.9s						
KTH				IAML		17 37 58.7	
	comp=E,1μm,0.9s						
BRLK	**Bradley Lake**	**2.89**	**232**		**Pn**	**17 37 11.9**	**+1.7**
BRLK				IAML		17 37 57.4	
	comp=E,983nm,1.0s						
BRLK				IAML		17 37 58.1	
	comp=N,949nm,0.8s						
CKL	**Chakachamna La**	**2.90**	**264**		**Pn**	**17 37 11.9**	**+1.5**
BWN	**Browne**	**2.93**	**332**		**Pn**	**17 37 11.7**	**+0.9**
PS08	**TAPS Pump Stn8**	**2.95**	**356**		**Pn**	**17 37 12.1**	**+1.1**
WRH	**Wood River Hil**	**2.97**	**346**		**Pn**	**17 37 12.4**	**+1.1**
WRH				IAML		17 37 52.6	

M20K Styx River 3.23 278 P Pn 17 37 16.2 +1.4
baz=92,SNR=190
NEA2 Nenana 3.23 339 Pn 17 37 15.4 +0.6
NEA2 IAML 17 38 09.5
comp=E,930nm,1.3s
NEA2 Nenana 3.23 339 P Pn 17 37 15.6 +0.7
baz=156,SNR=108
NEA2 S Sn 17 37 56.6 +4.4
baz=156
DFR Drift River 3.23 254 Pn 17 37 16.6 +1.6
HOM Homer 3.25 235 Pn Pn 17 37 17.2 +2.0
BPAW Bear Paw Mtn. 3.27 322 Pn 17 37 16.4 +1.0
BPAW Bear Paw Mtn. 3.27 322 P Pn 17 37 16.7 +1.3
baz=138,SNR=74
RSO Redoubt South 3.31 252 Pn 17 37 17.3 +1.1
RED Redoubt Volcan 3.34 252 Pn 17 37 17.6 +1.2
COLA College 3.34 349 Pn 17 37 16.9 +0.6
COLA College 3.34 349*d i* P **Pn 17 37 17.4 +1.1**
COLA pmax pmax
comp=Z,92nm,1.0s
COLA College 3.34 349 P Pn 17 37 17.5 +1.1
baz=167
TCOL CIGO, UAF Yank 3.34 349 Pn 17 37 17.0 +0.7
TCOL CIGO, UAF Yank 3.34 349 P Pn 17 37 17.5 +1.1
baz=167,SNR=56
RDWB Redoubt West 3.34 253 Pn 17 37 18.5 +1.9
NCT North Crescent 3.35 255 Pn 17 37 18.4 +1.7
PCA Pinnacle 3.36 114 Pn 17 37 17.1 +0.5
PINM Pinnacle 3.36 114 P Pn 17 37 17.2 +0.4
baz=300,SNR=106
O20K Slope Mountain 3.42 246 Pn 17 37 19.1 +1.5
O20K Slope Mountain 3.42 246 P Pn 17 37 19.1 +1.5
baz=61,SNR=20
MDM Murphy Dome 3.46 347 Pn 17 37 18.8 +0.8
MDM IAML 17 38 05.6
comp=N,838nm,1.1s
MDM IAML 17 38 18.6
comp=E,846nm,1.1s
POKR Poker Plat Res 3.55 353 Pn 17 37 19.8 +0.5
POKR IAML 17 38 18.2
comp=E,651nm,1.3s
POKR IAML 17 38 20.2
comp=N,590nm,1.1s
POKR Poker Plat Res 3.55 353 P Pn 17 37 20.4 +1.1
baz=172,SNR=37
CHUM Lake Minchumin 3.56 312 Pn 17 37 20.9 +1.6
CHUM Lake Minchumin 3.56 312 P Pn 17 37 20.9 +1.6
baz=127,SNR=56
IVE Iliamna Volcan 3.63 247 Pn 17 37 21.3 +0.9
L20K Farewell, AK 3.64 287 Pn 17 37 21.4 +0.9
L20K Farewell, AK 3.64 287 P Pn 17 37 21.4 +0.9
baz=100,SNR=290
ILSW Iliamna Southw 3.70 247 Pn 17 37 22.0 +0.6
ILSW IAML 17 38 26.4
comp=E,365nm,1.0s
ILSW IAML 17 38 30.4
comp=N,329nm,0.8s
BCPM Bancas Point 3.70 114 Pn 17 37 21.2 -0.1
BCPM IAML 17 38 21.4
comp=E,805nm,0.6s
BCPM IAML 17 38 28.5
comp=N,676nm,1.5s
YUK4 Talbot Arm 3.72 91 P Pn 17 37 23.3 +1.5
baz=276,SNR=37
I23K Minto, Yukon-K 3.79 341 Pn 17 37 23.1 +0.5
I23K IAML 17 38 25.6
comp=E,900nm,1.2s
I23K Minto, Yukon-K 3.79 341 P Pn 17 37 23.7 +1.2
baz=158,SNR=200
M29M Somme Creek 3.82 74 Pn 17 37 24.9 +1.8
M29M Somme Creek 3.82 74 P Pn 17 37 24.8 +1.8
baz=261
M19K Big River Lodg 3.82 278 Pn 17 37 23.9 +0.9
M19K IAML 17 38 27.0
comp=E,605nm,0.9s
M19K IAML 17 38 29.8
comp=N,578nm,0.9s
M19K Big River Lodg 3.82 278 P Pn 17 37 24.0 +1.0
baz=91,SNR=49
OPT Oil Point 3.91 243 Pn 17 37 26.7 +2.5
P19K Oil Pt 3.91 243 Pn 17 37 26.0 +1.8
P19K IAML 17 38 43.3
comp=N,669nm,0.8s
P19K Oil Pt 3.91 243 P Pn 17 37 25.6 +1.4
baz=57
YUK6 Outpost Mounta 3.92 96 Pn 17 37 26.0 +1.4
YUK6 Outpost Mounta 3.92 96 P Pn 17 37 25.5 +0.9
baz=283,SNR=97
PRP Porcupine Dome 3.94 5 Pn 17 37 25.2 +0.6
PRP IAML 17 38 18.7
comp=N,384nm,0.8s
PRP IAML 17 38 33.2
comp=E,393nm,0.9s
PRP Porcupine Dome 3.94 5 P Pn 17 37 25.9 +1.2
baz=186,SNR=44
PNL Peninsula 3.95 117 Pn 17 37 25.1 +0.3
PNL Peninsula 3.95 117 P Pn 17 37 25.3 +0.5
baz=303,SNR=18
MLY Manley 3.95 332 Pn 17 37 25.6 +0.8
MLY IAML 17 38 17.4
comp=N,405nm,0.5s
MLY Manley 3.95 332 P Pn 17 37 25.9 +1.1
baz=148,SNR=291
EGAK Eagle 3.96 34 Pn 17 37 26.1 +1.3
EGAK IAML 17 38 41.6
comp=N,362nm,1.2s
EGAK Eagle 3.96 34 P Pn 17 37 26.8 +2.0
baz=219,SNR=270
K20K Telida 3.98 299 Pn 17 37 26.1 +0.9
K20K IAML 17 38 31.9
comp=N,697nm,1.8s
K20K IAML 17 38 32.4
comp=E,822nm,0.8s
K20K Telida 3.98 299 P Pn 17 37 26.4 +1.3
baz=113,SNR=91
I26K Coal Creek Min 3.98 20 Pn 17 37 26.9 +1.9
I26K IAML 17 38 54.1
comp=E,446nm,1.0s
I26K Coal Creek Min 3.98 20 P Pn 17 37 27.0 +1.9
baz=202
N19K Bonanza Creek 4.00 262 Pn 17 37 26.9 +1.3
N19K IAML 17 38 36.1
comp=N,435nm,1.1s
N19K Bonanza Creek 4.00 262 P Pn 17 37 26.3 +0.7
baz=75,SNR=16
O29M Mount Kennedy 4.02 106 Pn 17 37 27.1 +1.3
O29M Mount Kennedy 4.02 106 P Pn 17 37 26.8 +0.9
baz=292,SNR=33
DAWY Dawson 4.04 49 Pn 17 37 27.1 +1.1
DAWY Dawson 4.04 49 P Pn 17 37 27.7 +1.7
baz=235,SNR=13
L19K White Mountain 4.05 282 Pn Pn 17 37 27.0 +0.8
L19K IAML 17 38 44.5
comp=E,605nm,1.4s
L19K IAML 17 38 48.0
comp=N,401nm,1.1s
L19K White Mountain 4.05 282 P Pn 17 37 27.2 +1.0
baz=94,SNR=92
YUK5 Granite Creek 4.13 93 Pn 17 37 27.9 +0.6
O19K Port Alsworth 4.13 253 Pn 17 37 29.1 +1.8
O19K IAML 17 38 34.9
comp=E,434nm,0.5s
O19K IAML 17 38 44.2
comp=N,443nm,0.5s
YUK7 Dusty Glacier 4.14 102 Pn 17 37 29.0 +1.3
Q20K Shuyak Island 4.26 228 P Pn 17 37 30.6 +1.6
baz=43
H24K Noodor Dome 4.29 352 Pn 17 37 30.5 +1.0
H24K IAML 17 38 46.7
comp=E,370nm,1.2s
H24K IAML 17 38 47.1
comp=N,437nm,1.4s
H24K Noodor Dome 4.29 352 P Pn 17 37 30.9 +1.4
baz=170,SNR=88
HYT Haines Junctio 4.36 97 Pn 17 37 31.0 +0.5
HYT Haines Junctio 4.36 97 P Pn 17 37 31.2 +0.7
baz=284,SNR=47
I21K Tanana 4.38 327 Pn 17 37 31.7 +1.1
I21K IAML 17 38 43.5
comp=N,438nm,1.1s
I21K IAML 17 38 48.5
comp=E,438nm,1.4s
I21K Tanana 4.38 327 P Pn 17 37 32.0 +1.4
baz=142,SNR=157
J20K Nowinta River 4.39 309 Pn 17 37 31.8 +1.0
J20K IAML 17 38 48.6
comp=E,484nm,0.9s
J20K IAML 17 38 54.5
comp=N,422nm,1.1s
J20K Nowinta River 4.39 309 P Pn 17 37 31.9 +1.2
baz=122,SNR=121
N30M Aishikik Lake 4.45 88 P Pn 17 37 32.0 +0.4
baz=276,SNR=133
H23K Yukon River 4.46 343 Pn 17 37 32.8 +1.1
H23K IAML 17 38 29.3
comp=N,298nm,0.9s
H23K IAML 17 38 55.2
comp=E,283nm,1.4s
H23K Yukon River 4.46 343 P Pn 17 37 33.6 +1.9
baz=160,SNR=52
SVW2 Sparrevohn 4.46 267 Pn 17 37 32.0 +0.2
SVW2 IAML 17 38 50.2
comp=N,253nm,0.9s
Q19K Cape Douglas, 4.51 237 Pn 17 37 33.4 +0.9
Q19K Cape Douglas, 4.51 237 P Pn 17 37 33.0 +0.5
baz=50,SNR=6.9
I27K Kandik River 4.53 26 P Pn 17 37 34.7 +2.0
baz=210
M30M Minto, Yukon 4.61 74 Pn 17 37 34.9 +1.1
H25K Birch Creek 4.68 3 P Pn 17 37 36.2 +1.6
baz=183
J29M Klondike Camp 4.68 49 Pn 17 37 36.8 +1.9
J29M Klondike Camp 4.68 49 P Pn 17 37 36.9 +2.1
baz=236,SNR=17
O18K Koktuh Hills 4.68 252 Pn Pn 17 37 35.4 +0.6
O18K IAML 17 38 58.0
comp=N,288nm,0.9s
O18K Koktuh Hills 4.68 252 P Pn 17 37 35.1 +0.3
baz=64
TTA Tatalina 4.69 291 Pn 17 37 35.8 +0.8
TTA IAML 17 39 00.7
comp=E,415nm,1.5s
TTA IAML 17 39 13.3
comp=N,260nm,1.2s
TTA Tatalina 4.69 291 P Pn 17 37 35.8 +0.8
TTA Tatalina 4.69 291 P Pn 17 37 35.7 +0.8
baz=102,SNR=9.7
P29M Windy Craggy 4.70 111 Pn 17 37 35.9 +0.8
P29M IAML 17 38 47.5
comp=E,241nm,0.3s
P29M IAML 17 38 48.0
comp=N,371nm,0.4s
P29M Windy Craggy 4.70 111 P Pn 17 37 35.8 +0.8
baz=299,SNR=27
N18K Kilae Creek 4.71 263 Pn 17 37 35.9 +0.8
N18K IAML 17 38 58.5
comp=N,241nm,1.2s
N18K Kilae Creek 4.71 263 P Pn 17 37 35.3 +0.2
baz=74,SNR=24
H22K Ishtalitna Cre 4.83 335 P Pn 17 37 38.4 +1.5
baz=150,SNR=59
P30M Million Dollar 4.84 104 P Pn 17 37 37.6 +0.5
baz=292
P18K Big Mountain, 4.91 247 Pn 17 37 38.4 +0.4
P18K Big Mountain, 4.91 247 P Pn 17 37 38.1 +0.1
baz=59
KDAK Kodiak Island 4.96 222 Pn 17 37 39.2 +0.5
KDAK IAML 17 39 21.4
comp=N,228nm,1.7s
KDAK IAML 17 39 21.4
comp=N,293nm,0.9s
KDAK Kodiak Island 4.96 222 P Pn 17 37 39.2 +0.5
KDAK Kodiak Island 4.96 222 P Pn 17 37 38.9 +0.3
baz=37
H21K Melozitna Rive 4.97 328 Pn 17 37 39.5 +0.8
H21K IAML 17 39 11.8
comp=E,246nm,1.5s
H21K IAML 17 39 15.2
comp=N,215nm,1.3s
H21K Melozitna Rive 4.97 328 P Pn 17 37 40.1 +1.4
baz=142,SNR=94
FYU Fort Yukon 5.00 5 Pn 17 37 40.0 +0.9
FYU IAML 17 39 10.3
comp=E,317nm,1.2s
FYU IAML 17 39 14.5
comp=N,349nm,1.4s
O30N Mendenhall 5.05 95 P Pn 17 37 39.6 -0.2
baz=284,SNR=16
N31M Braeburn, Yuko 5.07 87 Pn 17 37 40.6 +0.5
N31M IAML 17 39 20.8
comp=E,180nm,1.0s
N31M IAML 17 39 27.6
comp=N,205nm,1.2s
N31M Braeburn, Yuko 5.07 87 P Pn 17 37 40.7 +0.5
baz=276,SNR=18
H27K Steamboat Moun 5.10 23 P Pn 17 37 42.2 +1.6
baz=207
G24K Hadweenzic Riv 5.13 355 P Pn 17 37 42.1 +1.2
baz=174,SNR=6.8
I29M Ogilvie Camp, 5.21 40 Pn 17 37 43.5 +1.5
I29M IAML 17 38 44.2
comp=N,197nm,1.1s
I29M IAML 17 38 44.3
comp=E,190nm,1.0s
I29M Ogilvie Camp, 5.21 40 P Pn 17 37 43.7 +1.6
baz=227,SNR=170
G23K Bananza Creek 5.36 344 P Pn 17 37 45.4 +1.2
baz=161,SNR=49
PLBC Pleasant Camp 5.39 109 P Pn 17 37 45.8 +1.2
baz=298,SNR=9.6
IMAR Indian Mountai 5.47 327 Pn 17 37 46.3 +0.7
G26K Porcupine Rive 5.47 11 P Pn 17 37 46.8 +1.2
baz=193,SNR=72
P17K Kvichak River 5.55 249 P Pn 17 37 47.4 +0.8
baz=60
O17K Koliganek Bris 5.58 255 P Pn 17 37 47.3 +0.2
baz=66
G27K Doyon Strip 5.61 19 P Pn 17 37 49.1 +1.6
baz=204,SNR=103
OHAK Old Harbor 5.64 222 Pn 17 37 48.1 +0.1
OHAK Old Harbor 5.64 222 P Pn 17 37 48.3 +0.3
baz=36
WHY Whitehorse 5.65 95 Pn 17 37 48.4 +0.2
WHY Whitehorse 5.65 95 P Pn 17 37 48.4 +0.2
baz=285,SNR=8.6
M31M Drury Creek, Y 5.70 79 Pn 17 37 49.5 +0.7
M31M Drury Creek, Y 5.70 79 P Pn 17 37 49.7 +1.0
baz=269,SNR=14
G22K Bettles 5.78 339 P Pn 17 37 53.3 +3.5
baz=155
G21K Allakaket 5.83 331 P Pn 17 37 51.9 +1.4
baz=144,SNR=57
SKAG Skagway 5.86 107 Pn 17 37 51.9 +0.9
SKAG Skagway 5.86 107 P Pn 17 37 52.5 +1.5
baz=296
BMAR Burnt Mountain 5.89 7 Pn 17 37 52.0 +0.6
F24K Squaw Lake 5.96 354 P Pn 17 37 54.0 +1.5
baz=173,SNR=169
F25K Christian Rive 6.01 3 P Pn 17 37 54.1 +1.1
baz=183,SNR=29
O16K Kokwok River B 6.12 256 P Pn 17 37 55.5 +1.0
baz=66
N16K Nishlik Lake 6.13 265 P Pn 17 37 56.5 +1.9
baz=74
F26K Sheenjek River 6.18 8 P Pn 17 37 56.9 +1.6
baz=190,SNR=37
FARO Faro, Yukon 6.18 79 Pn 17 37 56.3 +0.9
FARO Faro, Yukon 6.18 79 P Pn 17 37 56.4 +0.9
baz=270,SNR=44
P16K Nushagak River 6.32 251 P Pn 17 37 58.4 +1.1
baz=61
EPYK Eagle Plains 6.38 37 Pn 17 37 59.0 +0.9
EPYK Eagle Plains 6.38 37 P Pn 17 37 59.3 +1.2
baz=226,SNR=29
N32M Quiet Lake 6.41 88 P Pn 17 37 59.0 +0.5
baz=280
F21K Alatna River 6.41 334 P Pn 17 38 00.0 +1.5
baz=148,SNR=27
F22K John River 6.42 340 P Pn 17 38 00.2 +1.5
baz=154,SNR=19
BESE Bessie Mountai 6.51 113 Pn 17 38 00.1 +0.1
E25K Arctic Village 6.54 3 P Pn 17 38 01.0 +0.7
baz=183,SNR=7.8
E24K Your Creek 6.55 353 P Pn 17 38 02.1 +1.6
baz=171,SNR=70
P32M Atlin 6.56 102 P Pn 17 38 01.0 +0.4
baz=293
P33M Teslin, Yukon 6.76 96 Pn 17 38 03.3 -0.1
P33M Teslin, Yukon 6.76 96 P Pn 17 38 03.8 +0.4
baz=288,SNR=6.3
JIS Juneau Island 6.89 114 Pn 17 38 05.7 +0.6
E27K Coleen River 6.90 15 P Pn 17 38 06.8 +1.6
baz=199,SNR=40
E22K Anaktuvuk Pass 6.94 343 P Pn 17 38 09.0 +3.2
baz=158,SNR=23
MMPY Sheldon Lake, 7.16 75 P Pn 17 38 09.8 +1.0
baz=268,SNR=20
TOLK Toolik Lake Re 7.18 351 Pn 17 38 11.1 +2.0
TOLK Toolik Lake Re 7.18 351 P Pn 17 38 11.4 +2.3
baz=168,SNR=46
SIT Sitka 7.26 124 Pn 17 38 10.5 +0.3
SIT Sitka 7.26 124 P Pn 17 38 10.5 +0.3
SIT Sitka 7.26 124 P Pn 17 38 10.6 +0.5
baz=314
D23K Nanushuk River 7.60 348 P Pn 17 38 17.7 +3.0
baz=164
D24K Happy Valley 7.64 353 P Pn 17 38 18.1 +2.8
baz=171,SNR=17
D25K Kavik River 7.74 360 P Pn 17 38 19.2 +2.5
baz=180
R33M Jennings River 7.92 99 P Pn 17 38 20.2 +0.8
baz=293
C27K Jago River 8.12 7 P Pn 17 38 24.8 +2.9
baz=189,SNR=9.8
C24K Franklin Bluff 8.20 354 P Pn 17 38 26.0 +3.1
baz=172
C26K Camden Bay 8.36 3 P Pn 17 38 29.1 +3.9
baz=185
C23K Itkillik River 8.44 350 P Pn 17 38 28.9 +2.7
baz=166
INK Inuvik 8.63 33 P Pn 17 38 29.6 +0.7
comp=E,13nm,0.4s,baz=222,slow=16,SNR=22
INK LR LR 17 42 04.7
comp=E,155nm,18.3s,baz=180,slow=40
INK Inuvik 8.63 33 Pn 17 38 29.4 +0.6
INK Inuvik 8.63 33 P Pn 17 38 30.0 +1.1
baz=225
TGTN Hyland Airport 8.63 83 P Pn 17 38 30.6 +1.6
baz=278
DLBC Dease Lake 8.78 104 P Pn 17 38 33.3 +2.3
comp=E,1.8nm,0.5s,baz=278,slow=7.1,SNR=4.5
DLBC LR LR 17 42 07.8
comp=E,475nm,20.7s,baz=284,slow=38
WRAK Wrangell Islan 8.90 120 Pn 17 38 33.4 +0.8
WRAK Wrangell Islan 8.90 120 P Pn 17 38 34.5 +1.8
baz=312
ANM Nome 9.10 297 P Pn 17 38 38.1 +2.8
baz=100
C36M Paulatuk 12.00 40 Pn 17 39 13.6 -1.4
C36M Paulatuk 12.00 40 P Pn 17 39 14.1 -0.8
baz=241,SNR=5.4
BBB Bella Bella 13.69 125 LR LR 17 44 24.3
comp=E,197nm,21.1s,baz=304,slow=34
YKA Yellowknife Ar 14.84 73 P Pn 17 39 53.6 0.0
comp=E,1.7nm,0.8s,baz=273,slow=12,SNR=3.8
YKA LR LR 17 45 56.0
comp=E,114nm,19.0s,baz=278,slow=38
YKA Yellowknife Ar 14.84 73 *i* P **Pn 17 39 54.7 +1.1**
YKA pmax pmax
comp=Z,1.0nm,0.5s
LTY Liberty 20.54 123 P P 17 41 01.8 -0.2
LTY IAmb IAmb 17 41 08.7
comp=Z,10nm,0.9s
BILL Bilibino 20.66 308 *i* P **P 17 41 01.6 -1.4**
BILL *i* 17 41 18.7
BILL pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 21.23 116 P P 17 41 12.4 +3.1
comp=Z,4.2nm,0.9s,baz=313,slow=10,SNR=5.2
NEW LR LR 17 50 21.7
comp=Z,168nm,18.6s,baz=255,slow=39
comp=Z,4.2nm,0.9s
NEW Newport 21.23 116 P P 17 41 11.8 +2.4
baz=320
D08A Wollman Farm, 21.41 120 P P 17 41 11.9 +0.6
D08A IAmb IAmb 17 41 14.2
comp=Z,7.4nm,1.0s
BOZ Bozeman (W) 25.68 113 P P 17 41 55.7 +2.3
baz=321
RLMT Red Lodge 27.10 110 P P 17 42 08.0 +1.8
baz=321
BW06 Boulder Array 28.83 114 P P 17 42 22.1 +0.3
baz=324
PDAR Pinedale Array 28.83 114 P P 17 42 23.7 +2.0
comp=Z,0.7nm,0.8s,baz=320,slow=6.6,SNR=5.7
comp=Z,0.7nm,0.8s
NVAR Mina Array Bea 28.97 130 P P 17 42 24.3 +1.4
comp=Z,0.3nm,0.5s,baz=322,slow=13,SNR=3.5
NVAR pP **sP 17 42 37.0 +0.2**
comp=Z,0.3nm,0.6s,baz=303,slow=7.9,SNR=3.0
comp=Z,0.3nm,0.5s
PET Petropavlovsk 30.03 279‖ *e* P **P 17 42 31.6 -0.3**
PET pmax pmax
comp=Z,38nm,1.4s
R11A Troy Canyon, C 30.05 127 P P 17 42 33.9 +1.3
baz=331
TPNV Topopah Spring 31.03 129 P P 17 42 42.0 +0.8
baz=332
ISA Isabella, Lake 31.38 133 P P 17 42 44.8 +0.8
baz=335
PKM Mcpherson Peak 31.62 135 P P 17 42 48.6 +2.2
baz=336
YAK Yakutsk 37.02 309↑ *e* P **P 17 43 32.0 -0.5**
YAK pmax pmax
comp=Z,6.0nm,1.0s
TXAR Lajitas Array 42.71 119 P P 17 44 22.5 +2.2
comp=Z,0.2nm,0.6s,baz=316,slow=3.5,SNR=5.0
comp=Z,0.2nm,0.6s
NRIK Noril'sk 43.83 336 P P 17 44 28.3 -0.4
comp=Z,2.6nm,0.6s,baz=48,slow=7.2,SNR=6.3
comp=Z,2.6nm,0.6s
NRIK Noril'sk 43.83 336‖ *e* P **P 17 44 27.8 -0.9**
NRIK pmax pmax
comp=Z,6.0nm,1.1s
ARCES ARCESS Array B 49.01 4 P P 17 45 08.2 -1.1
comp=Z,1.1nm,0.7s,baz=3.4,slow=7.9,SNR=8.7
ARCES PcP **PcP 17 46 31.4 -1.3**
comp=Z,2.5nm,0.9s,baz=343,slow=3.8,SNR=4.7
comp=Z,1.1nm,0.7s
MJAR Matsushiro Arr 51.85 278 P P 17 45 31.2 0.0
comp=Z,1.5nm,0.9s,baz=26,slow=6.9,SNR=3.2
comp=Z,1.5nm,0.9s
KSRS Korea Array 55.91 287 P P 17 46 02.0 +1.2
comp=Z,1.3nm,1.0s,baz=21,slow=6.2,SNR=3.3
KSRS pP **sP 17 46 13.9 -1.2**
comp=Z,0.9nm,0.8s,baz=26,slow=7.3,SNR=3.9
comp=Z,1.3nm,1.0s
ULN Ulaanbaatar 56.11 309*de* P **P 17 46 02.5 +0.2**
ULN pmax pmax
comp=Z,6.0nm,1.0s
SONM Songino Array 56.38 309 P P 17 46 04.9 +0.7
comp=Z,3.6nm,0.8s,baz=28,slow=8.7,SNR=23
SONM pP **sP 17 46 16.7 -1.9**
comp=Z,1.3nm,0.8s,baz=29,slow=4.6,SNR=3.9
SONM sP pP 17 46 22.2 +7.8
comp=Z,3.5nm,0.8s,baz=26,slow=7.1,SNR=8.7
comp=Z,3.6nm,0.8s
PRGR Permogore 56.73 353 *e* P **P 17 46 05.9 -0.4**
FINES FINESS Array B 57.13 4 P P 17 46 08.4 -0.7
comp=Z,1.1nm,0.4s,baz=5.6,slow=7.4,SNR=24
comp=Z,1.1nm,0.4s
FINES FINESS Array B 57.13 4 *i* P **P 17 46 08.3 -0.8**
FINES pmax pmax
comp=Z,1.0nm,0.4s
KLMR Klimovskoe 57.77 357 *e* P **P 17 46 12.0 -1.6**
KLMR pmax pmax
comp=Z,16nm,1.0s
KLMR Klimovskoe 57.77 357 *e* P **P 17 46 12.1 -1.6**
KLMR AMP 17 46 14.2
comp=Z,16nm,1.0s
ZALV Zalesovo Beam 57.89 327 P P 17 46 13.3 -1.3
comp=Z,0.5nm,0.3s,baz=5.4,slow=6.3,SNR=6.3
comp=Z,0.5nm,0.3s
KIRV Kirov 59.51 350*ce* P **P 17 46 25.7 0.0**
HHC Hu-ho-hao-te 60.23 301 *e* P **P 17 46 34.9 +3.8**
HHC pmax pmax
comp=Z,140nm,5.3s
ARU Arti 60.68 344 P P 17 46 33.4 -0.4
baz=346,slow=7.7
ARU Arti 60.68 344*d i* P **P 17 46 33.1 -0.8**
ARU 17 47 15.6
ARU 17 48 43.9
ARU S **S 17 54 50.8 +3.1**
ARU SS **SS 17 58 42.5 -2.9**
ARU pmax pmax
comp=Z,13nm,0.9s
DGZ Jazzator, Alta 61.00 323↑ *e* P **P 17 46 35.6 -0.7**
DGZ pmax pmax
comp=Z,7.0nm,1.7s
BRVK Borovoye 62.03 336↑ *e* P **P 17 46 41.5 -1.6**

BRVK					pmax	pmax				
	comp=Z,3.0nm,1.0s									
KURK	**Kurchatov**	**62.40**	**330**		P	**P**	**17 46 45.2**	**-0.4**		
KURBB	**Kurchatov Arra**	**62.51**	**330**		P	**P**	**17 46 45.1**	**-1.1**		
	comp=Z,0.6nm,0.2s,baz=23,slow=6.0,SNR=5.4									
	comp=Z,0.6nm,0.2s									
OBN	**Obninsk**	**63.59**	**358**	*i*	P	**P**	**17 46 50.4**	**-2.9**		
OBN					pmax	pmax				
	comp=Z,13nm,0.9s									
NJ2	**Nanjing**	**64.52**	**290**	*e*	P	**P**	**17 46 56.3**	**-3.5**		
NJ2					pmax	pmax				
	comp=Z,6.0nm,0.6s									
MKAR	**Makanchi Array**	**65.08**	**325**		P	**P**	**17 47 01.7**	**-1.6**		
	comp=Z,0.3nm,0.3s,baz=36,slow=6.1,SNR=11									
	comp=Z,0.3nm,0.3s									
BELG	**Belogornoye**	**65.79**	**351**	*de*	P	**P**	**17 47 06.7**	**-1.0**		
BELG					pmax	pmax				
	comp=Z,4.0nm,1.0s									
GTA	**Gaotai**	**66.05**	**309**	*e*	P	**P**	**17 47 09.8**	**0.0**		
GTA					pP	pP	17 47 18.6	-1.5		
GTA					sP	sP	17 47 22.5	-1.7		
GTA					pmax	pmax				
	comp=Z,8.0nm,1.2s									
WMQ	**Urumqi**	**66.23**	**320**	*e*	P	P	17 47 16.1	+5.3		
AKTO	**Aktyubinsk**	**66.61**	**343**		P	**P**	**17 47 12.6**	**-0.5**		
	comp=Z,5.1nm,0.8s,baz=5.1,slow=5.1,SNR=11									
	comp=Z,5.1nm,0.8s									
VORR	**Voronezh**	**66.97**	**356**	*e*	P	**P**	**17 47 15.5**	**+0.2**		
VORR					pmax	pmax				
	comp=Z,50nm,0.4s									
AKASG	**Malin Array Be**	**67.98**	**3**		P	**P**	**17 47 20.7**	**-1.0**		
	comp=Z,0.6nm,0.3s,baz=360,slow=6.3,SNR=12									
AKASG					pP	**sP**	**17 47 35.0**	**-1.2**		
	comp=Z,0.4nm,0.3s,baz=0.4,slow=6.3,SNR=7.3									
	comp=Z,0.6nm,0.3s									
AKASG	**Malin Array Be**	**67.98**	**3**	*ce*	P	**P**	**17 47 20.6**	**-1.1**		
AKASG					pmax	pmax				
	comp=Z,1.0nm,0.3s									
AKBB	**Malin Array Si**	**67.98**	**3**	*de*	P	**P**	**17 47 20.6**	**-1.1**		
GOMU	**GeErMu**	**70.72**	**311**		P	**P**	**17 47 39.3**	**0.0**		
GOMU					PcP	**sP**	**17 47 56.6**	**+2.8**		
GOMU					pmax	pmax				
	comp=Z,6.0nm,0.8s									
AAK	**Ala-Archa**	**70.96**	**329**	⇑*e*	P	**P**	**17 47 40.2**	**-0.3**		
AAK					pmax	pmax				
	comp=Z,2.0nm,1.0s									
KIV	**Kislovodsk**	**74.53**	**353**	*e*	P	**P**	**17 48 01.2**	**-0.3**		
KIV					pmax	pmax				
	comp=Z,7.0nm,1.0s									
ESDC	**Sonseca Array**	**74.55**	**29**		P	**P**	**17 48 01.6**	**-0.1**		
	comp=Z,1.2nm,1.0s,baz=330,slow=8.6,SNR=4.2									
	comp=Z,1.2nm,1.0s									
KBZ	**Khabaz**	**74.74**	**353**		P	**P**	**17 48 02.8**	**+0.3**		
	comp=Z,2.6nm,0.8s,baz=38,slow=1.7,SNR=5.0									
	comp=Z,2.6nm,0.8s									
KBZ	**Khabaz**	**74.74**	**353**	⇑*e*	P	**P**	**17 48 02.9**	**+0.3**		
KBZ					pmax	pmax				
	comp=Z,4.0nm,0.9s									
PZH	**PanZhiHua**	**76.69**	**301**		P	P	17 48 19.5	+5.3		
PZH					pmax	pmax				
	comp=Z,10.0nm,0.8s									
PZH					pmax	pmax				
	comp=Z,100nm,4.2s									
BR131	**Keskin Array S**	**79.01**	**360**	⇑*e*	P	**P**	**17 48 27.3**	**+0.4**		
BRTR	**Keskin Array B**	**79.01**	**360**		P	**P**	**17 48 26.6**	**-0.3**		
	comp=Z,2.3nm,1.1s,baz=0.0,slow=2.5,SNR=7.4									
	comp=Z,2.3nm,1.1s									
BRTR	**Keskin Array B**	**79.01**	**360**	*ce*	P	**P**	**17 48 27.6**	**+0.7**		
BRTR					pmax	pmax				
	comp=Z,2.0nm,1.1s									
CMAR	**Chiang Mai Arr**	**85.01**	**300**		P	**P**	**17 48 58.1**	**-0.4**		
	comp=Z,3.6nm,0.9s,baz=6.3,slow=6.1,SNR=14									
	comp=Z,3.6nm,0.9s									
CMAR	**Chiang Mai Arr**	**85.01**	**300**	*ce*	P	**P**	**17 48 58.5**	**0.0**		
CMAR					pmax	pmax				
	comp=Z,3.0nm,0.9s									
BOSA	**Boshof**	**146.53**	**13**		PKPbc	**PKPdf**	**17 56 02.2**	**-0.3**		
	comp=Z,4.7nm,0.7s,baz=341,slow=3.0,SNR=11									

*IDC **19** 17:47:39.8±5.7,37.°40N×69.°51E,h0km,mb3.6/1, mbtmp3.8/5, ML3.3/4, MS3.5/2, Error ellipse: s-maj=83.7km s-min=26.8km az=171.0*

*NNC **19** 17:47:47.6±6.6,38.°16N×69.°14E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=48.5km s-min=44.2km az=29.0*

ISC 19 17:47:44.2±2.1,37.°7N±0.°2×69.°3E±0.°1,h10km,n14, σ1s53/16,2C-6D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**5.43**	**9**	Pn		**Pn**	**17 49 06.5**	**+1.3**
	0.5nm,0.3s,baz=196,slow=15,SNR=11							
KK31				⇓Pg		**Pb**	**17 49 22.1**	**+2.9**
	2.9nm,0.5s,baz=194,slow=13,SNR=6.2							
KK31				⇓Sn		**Sn**	**17 50 04.9**	**-2.9**
	8.1nm,0.6s							
KK31				⇑Lg		Lg	17 50 29.1	
	12nm,0.6s,baz=198,slow=28,SNR=6.7							
AML	**Almayashu**	**5.52**	**36**	P		**Pn**	**17 49 07.2**	**+0.4**
	SNR=10							
AAK	**Ala-Archa**	**6.29**	**37**	P		**Pn**	**17 49 18.8**	**+1.6**
	SNR=7.5							
KBK	**Karagaybulak**	**6.53**	**39**	P		**Pn**	**17 49 21.8**	**+1.4**
	SNR=7.3							
CHMS	**Chumysh**	**6.69**	**37**	P		**Pn**	**17 49 22.4**	**-0.1**
	SNR=6.8							
CHMS	**Chumysh**	**6.69**	**37**	⇓Pn		**Pn**	**17 49 22.3**	**-0.1**
	6.5nm,0.7s							
CHMS				⇓Sn		**Sn**	**17 50 37.3**	**-1.4**
	7.0nm,0.8s							
CHMS				⇓Lg		Lg	17 51 12.0	
	14nm,0.9s							
TKM2	**Tokmak 2**	**7.05**	**41**	P		**Pn**	**17 49 28.3**	**+0.7**
	SNR=6.9							
TKM2	**Tokmak 2**	**7.05**	**41**	⇓Pn		**Pn**	**17 49 28.0**	**+0.5**
	4.9nm,0.9s							
TKM2				⇑Lg		Lg	17 51 22.8	
	9.0nm,0.9s							
GEYT	**Alibeck**	**8.88**	**275**	Pn		**Pn**	**17 49 52.3**	**-0.2**
	0.8nm,0.3s,baz=93,slow=8.7,SNR=4.4							
GEYT				LR		LR	17 54 39.0	
	comp=Z,150nm,18.6s,baz=48,slow=46							
	1.2nm,0.3s							
MKAR	**Makanchi Array**	**13.17**	**43**	Pn		**Pn**	**17 50 50.3**	**-0.9**
	0.1nm,0.3s,baz=234,slow=13,SNR=18							
	1.9nm,0.7s							
KURBB	**Kurchatov Arra**	**14.46**	**24**	LR		LR	17 57 05.6	
	comp=Z,323nm,21.1s,baz=336,slow=38							
AKTO	**Aktyubinsk**	**15.05**	**331**	Pn		**Pn**	**17 51 15.8**	**-1.0**
	0.2nm,0.3s,baz=139,slow=15,SNR=4.9							
	0.9nm,0.4s							
ZALV	**Zalesovo Beam**	**19.40**	**28**	P		**P**	**17 52 08.7**	**-1.5**
	0.3nm,0.3s,baz=223,slow=9.8,SNR=8.7							
	2.1nm,0.7s							
ARU	**Arti**	**20.04**	**342**	P		**P**	**17 52 17.2**	**0.0**
	1.2nm,0.4s,baz=142,slow=12,SNR=3.1							
	1.2nm,0.4s							

*IDC **19** 17:52:06.0±0.9,14.°03N×145.°30E,h113km±6km,mb3.5/11, mbtmp3.9/11, Error ellipse: s-maj=30.4km s-min=14.4km az=92.0*

*NEIC **19** 17:52:07.4±1.2,13.°96N±0.°07×145.°2E±0.°1,h119km±5km, mb4.6/53, Error ellipse: s-maj=16.2km s-min=6.2km az=119.0*

ISC 19 17:52:05.3±0.5,14.°06N±0.°07×145.°35E±0.°10,h100km,n81, σ1s23/76,mb4.5/37,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**0.66**	**225**	P		**Pn**	**17 52 25.4**	**+3.1**
	3μm,0.3s,baz=114,slow=2.1,SNR=378							
GUMO				S		**Sn**	**17 52 38.8**	**+3.7**
	4μm,0.3s,baz=342,slow=20,SNR=13							
GUMO	**Guam**	**0.66**	**225**			**Pn**	**17 52 25.4**	**+3.1**
GUMO				Sn		**Sn**	**17 52 38.3**	**+3.2**
PATS	**Pohnpei**	**14.62**	**118**	Pn		**Pn**	**17 55 28.3**	**+1.0**
RABL	**Rabaul**	**19.35**	**159**	P		**Pn**	**17 56 24.2**	**-0.9**
RABL				IAmb		IAmb	17 56 25.7	
	comp=Z,60nm,1.3s							
JHJ2	**Mitsune**	**19.63**	**346**			**Pn**	**17 56 28.8**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**20.95**	**75**	T		T	18 18 21.1	
	baz=263,slow=73,SNR=28							
H11S1	**WAKE ISLAND Hy**	**20.96**	**75**	T		T	18 18 23.1	
	baz=263,slow=73,SNR=12							
H11S2	**WAKE ISLAND Hy**	**20.96**	**75**	T		T	18 18 22.1	
	baz=263,slow=73,SNR=14							
H11N1	**WAKE ISLAND Hy**	**21.36**	**72**	T		T	18 19 52.0	
	baz=258,slow=75,SNR=6.4							
H11N2	**WAKE ISLAND Hy**	**21.37**	**72**	T		T	18 19 48.2	
	baz=258,slow=75,SNR=4.5							
H11N3	**WAKE ISLAND Hy**	**21.38**	**72**	T		T	18 19 50.0	
	baz=258,slow=75,SNR=8.9							
JMN	**Monobe**	**22.18**	**334**	P		**P**	**17 56 54.4**	**+1.1**
JMN				IAmb		IAmb	17 57 29.9	
	comp=Z,22nm,1.3s							
INU	**Inuyama**	**22.49**	**342**	P		**P**	**17 56 57.5**	**+1.1**
INU				IAmb		IAmb	17 56 58.9	
	comp=Z,38nm,1.4s							
MJAR	**Matsushiro Arr**	**23.29**	**345**	P		**P**	**17 57 03.0**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=170,slow=12,SNR=7.1							
	comp=Z,1.2nm,0.5s							
MAJO	**Matsushiro**	**23.29**	**345**	P		**P**	**17 57 03.7**	**-0.5**
JHS	**Saijyo**	**23.59**	**334**	P		**P**	**17 57 06.8**	**-0.3**
JHS				IAmb		IAmb	17 57 39.7	
	comp=Z,34nm,1.4s							
YULB	**Yu-li**	**24.57**	**296**	P		**P**	**17 57 14.6**	**-1.4**
COEN	**Coen**	**27.92**	**185**	P		**P**	**17 57 45.8**	**-0.4**
COEN				IAmb		IAmb	17 57 55.0	
	comp=Z,15nm,1.1s							
KSAR	**Wonju Array Be**	**28.00**	**329**	P		**P**	**17 57 45.9**	**-0.8**
KNRA	**Kununurra**	**33.79**	**210**	P		**P**	**17 58 36.3**	**-1.5**
KNRA				IAmb		IAmb	17 58 41.8	
	comp=Z,24nm,1.4s							
CTAO	**Charters Tower**	**33.94**	**178**	P		**P**	**17 58 39.7**	**+0.6**
CTAO				IAmb		IAmb	17 58 50.0	
	comp=Z,18nm,1.4s							
WB0	**Warramunga Arr**	**35.30**	**198**	P		**P**	**17 58 49.4**	**-1.4**
WB0				IAmb		IAmb	17 59 01.5	
	comp=Z,13nm,1.4s							
WB2	**Warramunga Arr**	**35.48**	**198**	P		**P**	**17 58 51.1**	**-1.2**
WB2				IAmb		IAmb	17 58 51.8	
	comp=Z,5.5nm,0.9s							
WRA	**Warramunga Arr**	**35.48**	**198**	P		**P**	**17 58 51.4**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=24,slow=10,SNR=12							
	comp=Z,1.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**37.40**	**212**	P		**P**	**17 59 05.8**	**-2.9**
FITZ				IAmb		IAmb	17 59 08.5	
	comp=Z,6.9nm,1.2s							
AS31	**Alice Springs**	**39.12**	**197**	P		**P**	**17 59 21.5**	**-1.7**
ASAR	**Alice Springs**	**39.13**	**197**	P		**P**	**17 59 22.0**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=0.4,slow=12,SNR=10							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**39.13**	**197**	P		**P**	**17 59 21.9**	**-1.3**
STKA	**Stephens Creek**	**45.81**	**184**	P		**P**	**18 00 16.2**	**-1.0**
	comp=Z,2.4nm,0.7s,baz=358,slow=9.2,SNR=4.5							
	comp=Z,2.4nm,0.7s							
STKA	**Stephens Creek**	**45.81**	**184**	P		**P**	**18 00 16.0**	**-1.2**
BBOO	**Buckleboo**	**47.44**	**191**	P		**P**	**18 00 28.3**	**-1.6**
KIWB	**Kanaga Island**	**48.18**	**30**	P		**P**	**18 00 36.6**	**+1.3**
ADK	**Adak**	**48.42**	**31**	P		**P**	**18 00 38.0**	**+0.7**
YAK	**Yakutsk**	**49.20**	**350**	P		**P**	**18 00 42.4**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=216,slow=2.2,SNR=4.9							
	comp=Z,2.8nm,0.6s							
MORW	**Morawa**	**51.38**	**213**	P		**P**	**18 00 58.2**	**-1.8**
CLES	**Cleveland East**	**52.41**	**33**	P		**P**	**18 01 07.8**	**+0.5**
CLES				IAmb		IAmb	18 01 46.9	
	comp=Z,111nm,1.1s							
UNV	**Unalaska Valle**	**54.68**	**33**	P		**P**	**18 01 24.0**	**+0.1**
AKUT	**Akutan**	**55.20**	**33**	P		**P**	**18 01 28.1**	**+0.6**
SDPT	**Sand Point**	**58.50**	**33**	P		**P**	**18 01 51.3**	**+0.5**
CNBA	**Chernabura Isl**	**58.77**	**34**	P		**P**	**18 01 52.9**	**+0.2**
MK31	**Makanchi Array**	**61.48**	**316**	P		**P**	**18 02 12.9**	**+1.4**
MKAR	**Makanchi Array**	**61.48**	**316**	P		**P**	**18 02 11.7**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=92,slow=8.6,SNR=14							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**61.48**	**316**	P		**P**	**18 02 12.1**	**+0.6**
MAKZ	**Makanchi**	**61.70**	**316**	P		**P**	**18 02 13.2**	**+0.3**
OXZ	**Oxford**	**62.11**	**158**			pwP	18 02 47.3	+3.8
SII	**Sitkinak Islan**	**62.24**	**33**	P		**P**	**18 02 17.4**	**+1.0**
O18K	**Koktuh Hills**	**62.78**	**29**	P		**P**	**18 02 21.0**	**+1.1**
O18K				IAmb		IAmb	18 02 33.1	
	comp=Z,8.8nm,1.4s							
OHAK	**Old Harbor**	**62.90**	**32**	P		**P**	**18 02 21.3**	**+0.6**
OHAK				IAmb		IAmb	18 02 22.3	
	comp=Z,7.5nm,0.8s							
KDAK	**Kodiak Island**	**63.43**	**32**	P		**P**	**18 02 24.5**	**+0.3**
P19K	**Oil Pt**	**63.66**	**30**	P		**P**	**18 02 26.0**	**+0.2**
P19K				IAmb		IAmb	18 02 26.4	
	comp=Z,20nm,1.1s							
K20K	**Telida**	**64.51**	**26**	P		**P**	**18 02 32.4**	**+1.1**
KURBB	**Kurchatov Arra**	**64.57**	**320**	P		**P**	**18 02 31.0**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=100,slow=7.1,SNR=11							
	comp=Z,0.9nm,0.6s							
CNPM	**China Poot**	**64.60**	**30**	P		**P**	**18 02 31.8**	**0.0**
CNPM				IAmb		IAmb	18 02 32.5	
	comp=Z,25nm,1.4s							
PPLA	**Purkeypile**	**65.16**	**27**	P		**P**	**18 02 36.1**	**+0.5**
PPLA				IAmb		IAmb	18 02 56.9	
	comp=Z,6.7nm,1.3s							
RC01	**Rabbit Creek A**	**65.74**	**29**	P		**P**	**18 02 39.7**	**+0.5**
RC01				IAmb		IAmb	18 02 40.5	
	comp=Z,11nm,1.0s							
PWL	**Port Wells**	**66.34**	**29**	P		**P**	**18 02 43.1**	**0.0**
PWL				IAmb		IAmb	18 02 44.3	
	comp=Z,17nm,1.1s							
HIN	**Hinchinbrook I**	**67.12**	**30**	P		**P**	**18 02 48.5**	**+0.4**
HIN				IAmb		IAmb	18 03 15.9	
	comp=Z,21nm,1.2s							
FID	**Port Fidalgo**	**67.20**	**30**	P		**P**	**18 02 48.5**	**-0.1**
FID				IAmb		IAmb	18 02 49.4	
	comp=Z,5.0nm,0.6s							
ILAR	**Eielson Array**	**67.95**	**25**	P		**P**	**18 02 51.9**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=254,slow=5.8,SNR=7.8							
	comp=Z,0.8nm,0.6s							
TOLK	**Toolik Lake Re**	**68.02**	**21**	P		**P**	**18 02 53.6**	**+0.1**
TOLK				IAmb		IAmb	18 03 34.1	
	comp=Z,8.1nm,1.3s							
KAIM	**Kayak Island**	**68.05**	**31**	P		**P**	**18 02 54.2**	**+0.3**
SUCK	**Suckling Hills**	**68.39**	**31**	P		**P**	**18 02 57.0**	**+1.0**
YAH	**Yahtse**	**69.44**	**30**	P		**P**	**18 03 04.3**	**+1.6**
YAH				IAmb		IAmb	18 03 39.0	
	comp=Z,17nm,1.2s							
BMAR	**Burnt Mountain**	**69.49**	**23**	P		**P**	**18 03 03.4**	**+0.6**
M27K	**Edge Creek, AK**	**69.66**	**28**	P		**P**	**18 03 04.6**	**+0.6**
TABL	**Table Mountain**	**69.75**	**30**	P		**P**	**18 03 05.6**	**+1.0**
TABL				IAmb		IAmb	18 03 46.1	
	comp=Z,26nm,1.5s							
L27K	**Beaver Creek,**	**69.80**	**28**	P		**P**	**18 03 04.9**	**+0.3**
BCAR	**Beaver Creek A**	**69.81**	**28**	P		**P**	**18 03 04.9**	**+0.1**
LOGN	**Logan Glacier**	**69.86**	**30**	P		**P**	**18 03 06.1**	**+0.8**
LOGN				IAmb		IAmb	18 03 17.8	
	comp=Z,15nm,1.5s							
M30M	**Minto, Yukon**	**72.03**	**28**	P		**P**	**18 03 19.3**	**+1.0**
DIB	**Dawson Inlet,**	**74.20**	**38**	P		**P**	**18 03 32.2**	**+1.2**
DIB				IAmb		IAmb	18 04 06.0	
	comp=Z,12nm,1.1s							
ABKAR	**Akbulak array**	**76.51**	**318**	P		**P**	**18 03 44.2**	**-0.2**
PINE	**Pine Mountain**	**83.05**	**47**	P		**P**	**18 04 21.2**	**+1.0**
PINE				IAmb		IAmb	18 04 22.3	
	comp=Z,6.6nm,0.8s							
B08A	**Colville Reser**	**83.12**	**42**	P		**P**	**18 04 20.3**	**+0.1**
BMO	**Blue Mountains**	**85.33**	**45**	P		**P**	**18 04 31.2**	**-0.3**
NVAR	**Mina Array Bea**	**86.27**	**51**	P		**P**	**18 04 37.4**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=280,slow=5.4,SNR=4.6							
	comp=Z,0.5nm,0.6s							
MFID	**Camas Ranch**	**86.74**	**46**	P		**P**	**18 04 38.6**	**+0.1**
MFID				IAmb		IAmb	18 04 40.3	
	comp=Z,5.2nm,0.8s							
HLID	**Hailey**	**87.69**	**46**	P		**P**	**18 04 43.8**	**+0.7**
ELK	**Elko**	**87.92**	**49**	P		**P**	**18 04 45.0**	**+0.6**
ELK				IAmb		IAmb	18 04 46.7	
	comp=Z,3.3nm,0.8s							
FINES	**FINESS Array B**	**90.94**	**335**	P		**P**	**18 04 55.6**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=0.0,slow=1.9,SNR=6.1							
	comp=Z,0.4nm,0.4s							
PDAR	**Pinedale Array**	**91.31**	**45**	P		**P**	**18 04 59.7**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=210,slow=1.2,SNR=3.4							
	comp=Z,0.3nm,0.5s							

*IDC **19** 17:57:42.4±1.3,33.°59S×178.°33W,h0km,mb4.7/4, mbtmp4.6/6, ML4.1/2, MS4.8/4, Error ellipse: s-maj=38.2km s-min=26.3km az=132.0*

*NEIC **19** 17:57:44.9±2.9,33.°30S±0.°07×178.°4W±0.°2,h10km±1km, mb4.5/16, Error ellipse: s-maj=24.9km s-min=8.9km az=109.0*

*WEL **19** 17:57:46.5±0.6,33.°5±7.°×17.°8W±1.°5,h33km,M4.2/36, mB4.8/24, ML5.0/48, MLv4.7/36, Mw(mB)4.0/24, Error ellipse: s-maj=0.0km s-min=0.0km az=112.2*

*NOU **19** 17:58:28.0,36.°12S×179.°84E,h98km,MLv4.6/6, Off E. Coast of N. Island, N.Z.*

ISC 19 17:57:48.6±0.7,33.°45S±0.°06×178.°4W±0.°1,h41km,n115, σ2s08/128,mb4.6/10,MS4.8/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**4.19**	**6**	P		Pn	17 58 43.9	-6.1
GLKZ				S		**Sn**	**17 59 31.4**	**-6.3**
RAO	**Raoul Island**	**4.20**	**6**	Pn		Pn	17 58 43.9	-6.2
MXZ	**Matakaoa Point**	**4.91**	**212**	Pn		**Pn**	**17 58 56.4**	**-3.4**
MXZ	**Matakaoa Point**	**4.91**	**212**	P		**Pn**	**17 58 57.8**	**-2.0**
WMGZ	**Waiomatatini S**	**5.08**	**210**	P		**Pn**	**17 59 03.4**	**+1.2**
PKGZ	**Pakihiroa**	**5.28**	**212**	P		**Pn**	**17 59 03.7**	**-1.3**
PKGZ				S		**Sn**	**18 00 04.1**	**-0.5**
HAZ	**Te Kaha**	**5.31**	**215**	P		**Pn**	**17 59 04.0**	**-1.3**
HAZ				S		**Sn**	**18 00 06.7**	**+1.6**
PUZ	**Puketiti**	**5.36**	**210**	P		**Pn**	**17 59 02.9**	**-3.1**
PUZ				S		**Sn**	**18 00 04.5**	**-1.9**
RUGZ	**Raukumara Rang**	**5.53**	**214**	P		**Pn**	**17 59 06.9**	**-1.5**
RUGZ				S		**Sn**	**18 00 11.8**	**+1.0**
TWGZ	**Tauwhareparae**	**5.56**	**211**	P		**Pn**	**17 59 07.6**	**-1.2**
TWGZ				S		**Sn**	**18 00 12.2**	**+0.7**
CNGZ	**Carnagh Statio**	**5.73**	**208**	P		**Pn**	**17 59 09.3**	**-1.8**
CNGZ				S		**Sn**	**18 00 15.1**	**-0.5**
TKGZ	**Te Karaka**	**5.84**	**210**	P		**Pn**	**17 59 12.4**	**-0.2**
TKGZ				S		**Sn**	**18 00 18.8**	**+0.6**
MWZ	**Matawai**	**5.89**	**213**	P		**Pn**	**17 59 10.2**	**-3.2**
MWZ				S		**Sn**	**18 00 17.8**	**-1.8**
OPRZ	**Ohinepanea**	**6.01**	**222**	P		**Pn**	**17 59 16.3**	**+1.3**
URZ	**Urewera**	**6.03**	**216**	Pn		**Pn**	**17 59 13.2**	**-2.0**
	8.5nm,0.3s,baz=259,slow=5.6,SNR=31							
URZ				Sn		**Sn**	**18 00 21.0**	**-2.0**
	10nm,0.3s,baz=215,slow=22,SNR=8.6							
	23nm,0.3s							
URZ	**Urewera**	**6.03**	**216**			**Pn**	**17 59 13.1**	**-2.2**
URZ	**Urewera**	**6.03**	**216**	P		**Pn**	**17 59 13.9**	**-1.3**
URZ				S		**Sn**	**18 00 21.3**	**-1.7**
URZ	**Urewera**	**6.03**	**216**	P		**Pn**	**17 59 14.5**	**-0.7**
RAGZ	**Rawiri**	**6.08**	**213**	P		**Pn**	**17 59 14.8**	**-1.1**
RAGZ				S		**Sn**	**18 00 24.3**	**+0.1**
RIGZ	**Rimuhau**	**6.10**	**210**	P		**Pn**	**17 59 14.5**	**-1.8**
RIGZ				S		**Sn**	**18 00 24.1**	**-0.6**
EDRZ	**Edgecumbe**	**6.10**	**219**	P		**Pn**	**17 59 16.8**	**+0.5**
EDRZ				S		**Sn**	**18 00 25.4**	**+0.5**
PRGZ	**Paritu Road**	**6.24**	**208**	P		**Pn**	**17 59 17.9**	**-0.2**
PRGZ				S		**Sn**	**18 00 25.3**	**-2.9**
KARZ	**Kaharoa**	**6.31**	**222**	P		**Pn**	**17 59 19.6**	**+0.5**
TARZ	**Mount Tarawera**	**6.32**	**219**	P		**Pn**	**17 59 20.6**	**+1.3**
SNGZ	**Shannon Statio**	**6.34**	**212**	P		**Pn**	**17 59 18.3**	**-1.3**
SNGZ				S		**Sn**	**18 00 30.5**	**-0.2**
KMRZ	**Kaimai**	**6.37**	**225**	P		**Pn**	**17 59 21.7**	**+1.8**
MUGZ	**Murupara**	**6.37**	**217**	P		**Pn**	**17 59 18.2**	**-1.6**
KNZ	**Kokohu**	**6.41**	**209**	P		**Pn**	**17 59 19.0**	**-1.3**
MHGZ	**Mahia Peninsul**	**6.43**	**207**	P		**Pn**	**17 59 19.0**	**-1.7**
RAHZ	**Arahi**	**6.57**	**213**	P		**Pn**	**17 59 22.2**	**-0.4**
PRRZ	**Plateau Road**	**6.58**	**218**	P		**Pn**	**17 59 21.1**	**-1.6**
MTHZ	**Maungataniwha**	**6.63**	**214**	P		**Pn**	**17 59 22.7**	**-0.7**
WHHZ	**Waihua**	**6.63**	**211**	P		**Pn**	**17 59 23.4**	**-0.2**
MRHZ	**Matea Rd**	**6.82**	**217**	P		**Pn**	**17 59 24.5**	**-1.6**
NMHZ	**Naumai**	**6.84**	**213**	P		**Pn**	**17 59 26.0**	**-0.4**
ARHZ	**Aropaoanui**	**6.89**	**211**	P		**Pn**	**17 59 26.3**	**-0.8**
WHTZ	**Whakaora**	**6.93**	**220**	P		**Pn**	**17 59 28.0**	**+0.3**
BKZ	**Black Stump Fm**	**7.04**	**214**			**Pn**	**17 59 25.5**	**-3.6**
BKZ	**Black Stump Fm**	**7.04**	**214**	P		**Pn**	**17 59 28.7**	**-0.4**
RATZ	**Rangitukua**	**7.18**	**219**	P		**Pn**	**17 59 30.1**	**-0.9**
RITZ	**Rihia Road**	**7.21**	**218**	P		**Pn**	**17 59 31.5**	**0.0**
KWHZ	**Kawe

KAPI	**Kappang**	**63.86**	**282**	LR	LR	18 35 28.2	
	comp=Z,270nm,21.6s,baz=198,slow=35						
SNAA	**Sanae**	**75.13**	**179**	P	**P**	**18 09 27.8**	**+1.8**
SNAA	**Sanae**	**75.13**	**179**	P	**P**	**18 09 27.0**	**+1.0**
SNAA				IAmb	IAmb	18 09 57.6	
	comp=Z,4.9nm,1.3s						
VNA3	**Neumayer Olymp**	**75.30**	**176**	P	**P**	**18 09 27.6**	**+0.7**
VNA2	**Neumayer--Watz**	**75.72**	**177**	P	**P**	**18 09 31.3**	**+1.9**
	baz=170,slow=5.0						
VNA1	**Neumayer--Stat**	**75.96**	**177**	P	**P**	**18 09 34.4**	**+3.8**
NEW	**Newport**	**98.03**	**36**	LR	LR	18 52 58.8	
	comp=Z,962nm,18.2s,baz=110,slow=34						
KURBB	**Kurchatov Arra**	**122.92**	**312**	PKP	**PKPdf**	**18 16 39.6**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=109,slow=2.1,SNR=5.1						
ARCES	**ARCESS Array B**	**141.48**	**347**	PKhKP	PKPpre	18 17 11.5	
	comp=Z,0.9nm,0.9s,baz=5.2,slow=1.0,SNR=4.3						
FINES	**FINESS Array B**	**147.86**	**338**	PKPbc	**PKPbc**	**18 17 28.5**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=36,slow=4.8,SNR=25						
NB2	**NORSAR Subarra**	**151.70**	**350**	PKP	**PKiKP**	**18 17 39.8**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.70**	**350**	PKPbc	**PKiKP**	**18 17 38.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=16,slow=4.1,SNR=6.3						
AKASG	**Malin Array Be**	**153.44**	**319**	PKPbc	**PKiKP**	**18 17 42.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=60,slow=1.7,SNR=4.7						
BRTR	**Keskin Array B**	**153.62**	**293**	PKPbc	**PKiKP**	**18 17 43.7**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=72,slow=4.0,SNR=4.6						
BRTR				PKPab	**PKPab**	**18 17 55.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=127,slow=3.3,SNR=4.3						

*IDC **19** 18:06:26.7±1.4,55.02S×30.35W,h0km,mb3.8/4, mbtmp3.9/4,Error ellipse: s-maj=71.7km s-min=26.6km az=65.0*

ISC 19 18:06:31.9±1.4,55.5S±0.3×31.9W±0.4,h10km,n9,σ1s49/9, mb4.0/3,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**18.45**	**157**	P	**P**	**18 10 47.1**	**-0.1**
SNAA	**Sanae**	**20.35**	**154**	P	**P**	**18 11 08.2**	**+0.1**
SNAA	**Sanae**	**20.35**	**154**	P	**P**	**18 11 05.6**	**-2.5**
	3.6nm,0.8s,baz=313,slow=9.7,SNR=3.1						
	3.6nm,0.8s						
TROLL	**Troll, Antarti**	**21.94**	**152**	P	**P**	**18 11 24.4**	**-0.8**
QSPA	**South Pole Qui**	**34.74**	**180**	P	**P**	**18 13 22.2**	**+0.3**
	2.4nm,1.1s,baz=225,slow=2.6,SNR=3.0						
	2.4nm,1.1s						
VNDA	**Vanda**	**46.96**	**184**	P	**P**	**18 15 02.7**	**+0.6**
	0.7nm,0.8s,baz=213,slow=1.4,SNR=2.7						
	0.7nm,0.8s						
LPAZ	**La Paz**	**47.95**	**310**	P	**P**	**18 15 10.8**	**-0.5**
	1.4nm,0.6s,baz=170,slow=2.6,SNR=5.3						
	1.4nm,0.6s						
ILAR	**Eielson Array**	**147.80**	**313**	PKPbc	**PKPdf**	**18 26 11.6**	**-0.9**
	0.8nm,0.6s,baz=114,slow=1.9,SNR=5.9						
SONM	**Songino Array**	**153.35**	**89**	PKPbc	**PKPdf**	**18 26 24.0**	**+2.1**
	0.6nm,0.8s,baz=226,slow=3.8,SNR=3.7						

*KRNET **19** 18:08:54.4±0.1,39.24N×73.62E,mb3.5*
*SOME **19** 18:08:58.7,39.45N×73.42E,h5km*
*NNC **19** 18:09:04.2±1.8,39.62N×73.46E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=14.1km s-min=6.8km az=171.0*

ISC 19 18:09:02.0±1.6,39.36N±0.08×73.41E±0.04,h10km,n33, σ3s11/54,15C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.26**	**338**	⇓*i*P	Pn	18 09 21.6	-4.1
OHH	baz=34			⇓*i*S	**Sn**	**18 09 41.5**	**-1.3**
	baz=34						
GAR	**Garm**	**2.43**	**263**	⇑*i*P	**Pn**	**18 09 39.8**	**-2.1**
GAR	baz=66			⇑*i*S	**Sn**	**18 10 12.9**	**+1.2**
	baz=66						
ARLS	**Aral**	**2.60**	**15**	⇑*e*P	**Pn**	**18 09 40.8**	**-3.4**
	baz=11						
ARLS				⇑*i*S	**Sn**	**18 10 14.7**	**-1.2**
	baz=11						
ARK	**Arkit**	**2.68**	**336**	⇑*i*P	**Pn**	**18 09 43.5**	**-1.7**
	baz=34						
ARK				⇑*i*S	**Sn**	**18 10 19.3**	**+1.5**
	baz=34						
UCH	**Uchtor**	**2.99**	**16**	⇑*i*P	**Pn**	**18 09 46.4**	**-3.4**
	baz=13						
UCH				⇑*i*S	**Sn**	**18 10 24.6**	**-1.3**
	baz=13						
EKS2	**Erkin-Say**	**3.31**	**5**	⇑*e*P	**Pn**	**18 09 51.4**	**-2.6**
	baz=2.0						
EKS2				⇑*i*S	**Sn**	**18 10 32.9**	**-0.6**
	baz=2.0						
CHMS	**Chumysh**	**3.78**	**15**	⇓Pn	**Pn**	**18 09 59.8**	**-0.5**
	1.9nm,0.3s						
CHMS				⇑Lg	Lg	18 10 55.1	
	8.0nm,0.8s						
IUG	**Iuzhnay**	**3.79**	**318**	*e*P	**Pb**	**18 10 08.6**	**-0.4**
	222nm,0.6s						
IUG				*e*S	**Sb**	**18 10 58.9**	**+3.9**
	41nm,0.6s						
IUG	**Iuzhnay**	**3.79**	**318**	Pg	**Pb**	**18 10 10.6**	**+1.7**
	484nm,0.5s						
IUG				Lg	Lg	18 10 58.9	
	41nm,0.6s						
DZA	**Taraz**	**3.87**	**337**	*e*P	**Pb**	**18 10 09.3**	**-0.9**
	35nm,0.2s						
DZA				*e*S	**Sb**	**18 10 59.6**	**+2.5**
	66nm,0.2s						
TKM2	**Tokmak 2**	**3.92**	**24**	⇑Pg	**Pb**	**18 10 10.0**	**-1.4**
	3.0nm,0.6s						
TKM2				⇑Lg	Lg	18 11 02.4	
	12nm,1.0s						
KST	**Kastek**	**4.16**	**27**	*e*P	**Pb**	**18 10 14.5**	**-0.8**
	2.1nm,0.4s						
KST				*e*S	**Sb**	**18 11 08.6**	**+3.0**
	13nm,0.7s						
KST	**Kastek**	**4.16**	**27**	Pg	**Pb**	**18 10 15.8**	**+0.6**
	3.5nm,0.5s						
KST				Lg	Lg	18 11 07.6	
	13nm,0.7s						
SGDS	**Sogindy**	**4.19**	**12**	*e*P	**Pb**	**18 10 16.2**	**+0.3**
	2.9nm,0.8s						
SGDS				*e*S	**Sb**	**18 11 12.0**	**+5.4**
	6.4nm,0.8s						
DGS	**Degeres**	**4.27**	**24**	*e*P	**Pb**	**18 10 16.8**	**-0.4**
	5.9nm,0.5s						
DGS				*e*S	**Sb**	**18 11 12.4**	**+3.6**
	14nm,1.0s						
DGS	**Degeres**	**4.27**	**24**	Pg	**Pb**	**18 10 18.6**	**+1.5**
	6.3nm,0.7s						
DGS				Lg	Lg	18 11 12.4	
	14nm,1.0s						
KK31	**Karatay Array**	**4.33**	**331**	⇓Pn	**Pn**	**18 10 07.8**	**-0.2**
	0.5nm,0.2s,baz=133,slow=12,SNR=30						
KK31				⇑Pg	**Pb**	**18 10 16.5**	**-1.8**
	1.4nm,0.3s,baz=146,slow=14,SNR=13						
KK31				⇑Sn	**Sn**	**18 10 59.5**	**+1.0**
	2.2nm,0.4s						
KK31				⇓Lg	Lg	18 11 14.8	
	4.3nm,0.4s,baz=143,slow=30						
KRBS	**Karabastau**	**4.66**	**21**	*e*P	**Pb**	**18 10 25.2**	**+1.5**
	4.5nm,0.6s						
KRBS				*e*S	**Sb**	**18 11 27.3**	**+7.4**
	10nm,0.9s						
KRBS	**Karabastau**	**4.66**	**21**	Pg	**Pb**	**18 10 25.0**	**+1.3**
	4.5nm,0.6s						
KRBS				Lg	Lg	18 11 23.6	
	10nm,0.9s						
MDOK	**Medeo**	**4.69**	**35**	*e*P	**Pb**	**18 10 24.4**	**+0.1**
	2.4nm,0.3s						
MDOK				*e*S	**Sb**	**18 11 26.2**	**+5.3**
	8.2nm,0.9s						
MDOK	**Medeo**	**4.69**	**35**	Pg	**Pb**	**18 10 23.0**	**-1.3**
	3.0nm,0.6s						
MDOK				Pg	**Pb**	**18 10 26.5**	**+2.2**
	2.4nm,0.5s						
MDOK				Lg	Lg	18 11 26.0	
	12nm,1.1s						
MDOK				Lg	Lg	18 11 26.2	
	8.2nm,0.9s						
KOTS	**Kotyrbulak**	**4.77**	**35**	*e*P	**Pb**	**18 10 25.2**	**-0.5**
	0.6nm,0.4s						
KOTS				*e*S	**Sb**	**18 11 27.4**	**+4.1**
	18nm,1.0s						
KOTS	**Kotyrbulak**	**4.77**	**35**	Pg	**Pb**	**18 10 27.6**	**+1.8**
	0.5nm,0.7s						
KOTS				Lg	Lg	18 11 27.4	
	18nm,1.0s						
KTBS	**Karatobe**	**5.00**	**28**	*e*P	**Pb**	**18 10 30.1**	**+0.5**
	36nm,0.6s						
KTBS				*e*S	**Sb**	**18 11 35.2**	**+5.6**
	6.8nm,0.3s						
KTBS	**Karatobe**	**5.00**	**28**	Pg	**Pb**	**18 10 32.1**	**+2.6**
KTBS				Lg	Lg	18 11 35.4	
KUU	**Kurty**	**5.04**	**25**	*e*P	**Pb**	**18 10 30.1**	**-0.1**
	1.4nm,0.3s						
KUU				*e*S	**Sb**	**18 11 35.5**	**+4.7**
	7.0nm,0.7s						
KUU	**Kurty**	**5.04**	**25**	Pg	**Pb**	**18 10 32.0**	**+1.8**
KUU				Lg	Lg	18 11 35.4	
BTLS	**Baital**	**5.70**	**5**	*e*P	**Pb**	**18 10 41.8**	**+0.4**
	1.1nm,0.3s						
BTLS				*e*S	**Sb**	**18 11 56.1**	**+6.3**
	3.7nm,0.6s						
BTLS	**Baital**	**5.70**	**5**	Pg	**Pb**	**18 10 44.1**	**+2.6**
	1.5nm,0.4s						
BTLS				Lg	Lg	18 11 56.1	
	3.0nm,0.6s						
ARXS	**Arharly**	**5.87**	**33**	*e*P	**Pb**	**18 10 46.2**	**+1.8**
	2.9nm,0.6s						
ARXS				*e*S	**Sg**	**18 12 03.4**	**-6.9**
	6.0nm,0.7s						
ARXS	**Arharly**	**5.87**	**33**	Pg	**Pb**	**18 10 48.3**	**+3.9**
	4.2nm,0.8s						
ARXS				Lg	Lg	18 12 03.4	
	5.5nm,0.7s						
BLB	**Baldybastay**	**6.07**	**37**	*e*P	**Pb**	**18 10 50.1**	**+2.4**
	2.5nm,0.5s						
BLB				*e*S	**Sg**	**18 12 10.0**	**-6.6**
	5.5nm,0.7s						
BLB	**Baldybastay**	**6.07**	**37**	Pg	**Pb**	**18 10 52.2**	**+4.5**
	3.5nm,0.7s						
BLB				Lg	Lg	18 12 10.0	
	5.7nm,0.8s						

*IDC **19** 18:12:19.9±0.7,54.87S×31.91W,h0km,mb4.2/10, mbtmp4.2/10,Error ellipse: s-maj=23.1km s-min=17.0km az=63.0*
*NEIC **19** 18:12:21.7±2.2,55.11S±0.09×32.2W±0.1,h19km±5km, mb4.9/25,Error ellipse: s-maj=13.4km s-min=11.5km az=217.0*

ISC 19 18:12:21.2±0.5,54.83S±0.09×32.24W±0.08,h10km,n50, σ1s69/44,mb4.7/20,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.53**	**281**		**Pn**	**18 13 02.7**	**+0.3**
HOPE				Sn	**Sn**	**18 13 31.7**	**-1.5**
ORCD	**Orcadas**	**8.92**	**223**		Pn	18 14 25.9	-4.0
ORCD				Sn	Sn	18 16 02.8	-7.5
VNA1	**Neumayer--Stat**	**19.06**	**155**	P	**P**	**18 16 44.6**	**+1.3**
VNA3	**Neumayer Olymp**	**19.16**	**158**	P	**P**	**18 16 44.7**	**+0.2**
VNA2	**Neumayer--Watz**	**19.46**	**156**	P	**Pn**	**18 16 53.7**	**+4.8**
	baz=312,slow=10.0						
SNAA	**Sanae**	**21.06**	**154**	P	**P**	**18 17 05.1**	**-0.1**
SNAA	**Sanae**	**21.06**	**154**	P	**P**	**18 17 02.6**	**-2.5**
	2.0nm,0.8s,baz=305,slow=11,SNR=18						
	2.0nm,0.8s						
SNAA	**Sanae**	**21.06**	**154**	P	**P**	**18 17 01.9**	**-3.2**
TROLL	**Troll, Antarti**	**22.64**	**153**	P	**P**	**18 17 21.7**	**-0.4**
MG04	**Isla Riesco**	**23.08**	**259**	P	**P**	**18 17 24.4**	**-2.3**
BELA	**Belgrano 2**	**23.16**	**181**	P	**P**	**18 17 25.2**	**-2.2**
MG05	**Puerto Natales**	**24.06**	**261**	P	**P**	**18 17 35.7**	**-0.6**
MG05				IAmb	IAmb	18 17 58.0	
	comp=Z,35nm,1.1s						
GO09	**Cerro Castillo**	**24.13**	**262**	P	**P**	**18 17 33.0**	**-4.0**
GO09				IAmb	IAmb	18 17 45.9	
	comp=Z,86nm,1.9s						
TRQA	**Tornquist**	**26.20**	**297**	P	**P**	**18 17 56.4**	**+0.6**
TRQA				IAmb	IAmb	18 18 17.9	
	comp=Z,27nm,1.7s						
PLCA	**Paso Flores**	**28.94**	**283**	P	**P**	**18 18 21.7**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=133,slow=9.3,SNR=5.8						
	comp=Z,2.5nm,0.8s						
PLCA	**Paso Flores**	**28.94**	**283**	P	**P**	**18 18 19.4**	**-1.1**
GO05	**Huala**	**33.77**	**289**	P	**P**	**18 19 02.8**	**-0.2**
GO05				IAmb	IAmb	18 20 11.4	
	comp=Z,37nm,1.4s						
CPUP	**Villa Florida**	**33.89**	**317**	P	**P**	**18 19 05.0**	**+0.9**
	comp=Z,3.3nm,0.5s,baz=156,slow=8.9,SNR=7.5						
	comp=Z,3.3nm,0.5s						
CPUP	**Villa Florida**	**33.89**	**317**	P	**P**	**18 19 04.3**	**+0.2**
CPUP				IAmb	IAmb	18 19 17.3	
	comp=Z,12nm,1.4s						
MT09	**Talagante**	**34.19**	**292**	P	**P**	**18 19 07.4**	**+0.7**
MT02	**Curacav**	**34.66**	**292**	P	**P**	**18 19 10.8**	**+0.1**
MT02				IAmb	IAmb	18 20 09.3	
	comp=Z,38nm,1.4s						
VA06	**Catapilco**	**35.29**	**293**	P	**P**	**18 19 16.3**	**+0.2**
QSPA	**South Pole Qui**	**35.43**	**180**	P	**P**	**18 19 16.0**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=25,slow=0.9,SNR=13						
	comp=Z,2.2nm,0.8s						
QSPA	**South Pole Qui**	**35.43**	**180**	P	P	18 19 12.4	-4.8
CO01	**Juntas del Tor**	**36.69**	**297**	P	**P**	**18 19 29.4**	**+1.0**
CO01				IAmb	IAmb	18 20 24.1	
	comp=Z,45nm,1.6s						
GO04	**Tololo Observa**	**36.90**	**296**	P	**P**	**18 19 31.8**	**+1.6**
AC05	**El Transito**	**37.70**	**298**	P	**P**	**18 19 36.9**	**0.0**
GO02	**Mina Guanaco**	**40.39**	**302**	P	**P**	**18 20 01.4**	**+1.8**
GO02				IAmb	IAmb	18 20 07.3	
	comp=Z,85nm,1.8s						
MAW	**Mawson**	**42.81**	**146**	P	**P**	**18 20 18.0**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=249,slow=14,SNR=1.8						
	comp=Z,1.5nm,0.8s						
PTLB	**Pontes e Lacer**	**44.48**	**321**	P	**P**	**18 20 33.0**	**+0.4**
PTLB				IAmb	IAmb	18 20 37.0	
	comp=Z,8.9nm,0.9s						
GO01	**Chusmiza**	**44.88**	**307**	P	**P**	**18 20 38.4**	**+2.1**
GO01				IAmb	IAmb	18 21 11.0	
	comp=Z,12nm,1.1s						
LPAZ	**La Paz**	**47.35**	**310**	P	**P**	**18 20 58.2**	**+2.2**
	comp=Z,5.3nm,0.5s,baz=130,slow=3.5,SNR=22						
	comp=Z,5.3nm,0.5s						
LPAZ	**La Paz**	**47.35**	**310**	P	**P**	**18 20 57.8**	**+1.9**
LPAZ				IAmb	IAmb	18 20 59.7	
	comp=Z,5.8nm,0.6s						
VNDA	**Vanda**	**47.62**	**184**	P	**P**	**18 20 58.5**	**+1.8**
	comp=Z,0.6nm,0.9s,baz=198,slow=4.3,SNR=3.7						
	comp=Z,0.6nm,0.9s						
H10S2	**ASCENSION HYDR**	**47.85**	**24**	T	T	19 13 05.4	
	baz=193						
H10S3	**ASCENSION HYDR**	**47.85**	**24**	T	T	19 13 05.5	
	baz=27,SNR=7.3						
BOSA	**Boshof**	**48.55**	**82**	P	**P**	**18 21 03.3**	**-1.3**
BOSA				IAmb	IAmb	18 22 30.8	
	comp=Z,26nm,1.6s						
H10N1	**ASCENSION HYDR**	**48.96**	**24**	T	T	19 14 29.4	
	baz=193,slow=75,SNR=7.4						
H10N3	**ASCENSION HYDR**	**48.96**	**24**	T	T	19 14 18.7	
	baz=193,slow=75,SNR=8.1						
H10N2	**ASCENSION HYDR**	**48.98**	**24**	T	T	19 14 22.8	
	baz=193,slow=75,SNR=11						
LBTB	**Lobatse**	**51.51**	**79**	P	**P**	**18 21 25.6**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=202,slow=7.2,SNR=5.8						
	comp=Z,2.8nm,0.7s						
LBTB	**Lobatse**	**51.51**	**79**	P	**P**	**18 21 24.6**	**-2.5**
LBTB				IAmb	IAmb	18 22 29.2	
	comp=Z,20nm,1.5s						
DBIC	**Dimbokro**	**65.40**	**30**	P	**P**	**18 23 03.5**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=180,slow=5.7,SNR=6.2						
	comp=Z,6.3nm,0.8s						
DBIC	**Dimbokro**	**65.40**	**30**	P	**P**	**18 23 03.6**	**-0.3**
TOA0	**Torodi Ar. Sit**	**73.54**	**35**	P	**P**	**18 23 52.6**	**-1.5**
TORD	**Torodi Ar. Bea**	**73.54**	**35**	P	**P**	**18 23 54.2**	**0.0**
	comp=Z,3.6nm,0.8s,baz=199,slow=6.6,SNR=15						
	comp=Z,3.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.54**	**35**	P	**P**	**18 23 53.5**	**-0.7**
ZALV	**Zalesovo Beam**	**144.43**	**65**	PKP	**PKPab**	**18 31 54.7**	**0.0**
	comp=Z,2.2nm,0.6s,baz=234,slow=3.7,SNR=10						
ILAR	**Eielson Array**	**147.17**	**314**	PKPbc	**PKPdf**	**18 32 02.9**	**+2.1**
	comp=Z,2.2nm,0.9s,baz=119,slow=2.3,SNR=11						
SONM	**Songino Array**	**153.54**	**88**	PKPbc	**PKPbc**	**18 32 20.0**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=210,slow=3.4,SNR=4.7						

DJA 19 18:12:28.4±0.3,3.3S±3.3×12.8E±.,h10km,M3.9/12,mb4.3/4, MLv3.8/12,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.28**	**181**	P	Pg	18 12 34.6	+0.6
MSAI	**Masohi**	**0.73**	**85**	P	Pg	18 12 42.5	0.0
NLAI	**Namlea**	**1.11**	**279**	P	Pb	18 12 47.6	-2.1
BNDI	**Bandanaira**	**2.03**	**123**	P	Pn	18 13 03.0	+0.3
SANI	**Sanana**	**2.59**	**301**	P	Pn	18 13 09.5	-0.9
LBMI	**Labuha**	**2.84**	**346**	P	Pn	18 13 14.2	+0.3
FAKI	**Fak Fak**	**4.07**	**83**	P	Pn	18 13 31.5	+0.7
KMSI	**Cibinong**	**5.78**	**313**	P	Pn	18 13 54.4	+0.1
	0.2nm34nm,0.6s						
LUWI	**Luwuk**	**5.91**	**293**	P	Pn	18 13 56.4	+0.3
	0.2nm45nm,1.0s						
APSI	**Ampana**	**7.00**	**291**	P	Pn	18 14 13.3	+2.2

*KRNET **19** 18:17:36.1±0.1,39.36N×73.55E,mb3.7*
*SOME **19** 18:17:36.0,39.43N×73.53E,h5km*
*IDC **19** 18:17:40.4±23.0,39.20N×72.09E,h0km,mb3.6/3, mbtmp3.4/4,ML2.7/1,Error ellipse: s-maj=424.7km s-min=29.7km az=166.0*
*NNC **19** 18:17:40.1±1.4,39.51N×73.60E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=10.5km s-min=5.8km az=171.0*

ISC 19 18:17:39.5±1.1,39.48N±0.06×73.47E±0.03,h10km,n54, σ2s50/79,mb3.4/3,13C-7D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.17**	**333**	⇑*i*P	**Pb**	**18 18 00.8**	**-1.2**
OHH	baz=33			⇑*i*S	**Sn**	**18 18 19.0**	**+0.8**
	baz=33						
DRK	**Karamyk**	**1.29**	**271**	⇑*i*P	**Pn**	**18 18 01.9**	**-2.1**
DRK	baz=76			⇑*i*S	**Sb**	**18 18 20.6**	**-0.4**
	baz=76						
ARLS	**Aral**	**2.47**	**15**	⇓*i*P	**Pn**	**18 18 21.1**	**+1.1**
	baz=13						
ARLS				⇓*i*S	**Sb**	**18 18 53.9**	**-0.7**
	baz=13						
GAR	**Garm**	**2.50**	**260**	⇑*i*P	**Pn**	**18 18 20.5**	**+0.2**
	baz=63						
GAR				⇑*i*S	**Sn**	**18 18 53.0**	**+2.1**
	baz=63						
ARK	**Arkit**	**2.59**	**334**	⇑*e*P	**Pn**	**18 18 23.2**	**+1.6**
	baz=34						
ARK				⇑*i*S	**Sb**	**18 18 57.6**	**-0.4**
	baz=34						
AML	**Almayashu**	**2.66**	**4**	P	**Pn**	**18 18 24.9**	**+2.1**
	SNR=88						
UCH	**Uchtor**	**2.86**	**16**	⇑*e*P	**Pn**	**18 18 26.8**	**+1.2**
	baz=14						
UCH				⇑*i*S	**Sb**	**18 19 03.8**	**-2.4**
	baz=14						
EKS2	**Erkin-Say**	**3.19**	**4**	P	**Pb**	**18 18 33.1**	**-3.3**
	SNR=15						
AAK	**Ala-Archa**	**3.25**	**13**	P	**Pb**	**18 18 34.2**	**-3.2**
	SNR=18						
KBK	**Karagaybulak**	**3.37**	**19**	P	**Pb**	**18 18 40.9**	**+1.4**
	SNR=8.1						
ULHL	**Ulahol**	**3.47**	**36**	P	**Pb**	**18 18 41.9**	**+0.7**
	SNR=7.9						
CHMS	**Chumysh**	**3.65**	**15**	P	**Pn**	**18 18 39.1**	**+3.0**
	SNR=7.8						
CHMS	**Chumysh**	**3.65**	**15**	⇑Pn	**Pn**	**18 18 38.9**	**+2.8**
	13nm,0.6s						
CHMS				⇑Lg	Lg	18 19 34.2	
	28nm,0.8s						
IUG	**Iuzhnay**	**3.73**	**317**	*e*P	**Pb**	**18 18 47.3**	**+1.7**
	454nm,0.5s						
IUG				*e*S	**Sg**	**18 19 38.4**	**-1.0**
	162nm,0.5s						
TKM2	**Tokmak 2**	**3.80**	**24**	P	**Pb**	**18 18 48.1**	**+1.3**
	SNR=6.9						
TKM2	**Tokmak 2**	**3.80**	**24**	⇓Pg	**Pb**	**18 18 47.8**	**+1.1**
	6.2nm,0.4s						
TKM2				⇓Lg	Lg	18 19 39.1	
	47nm,1.2s						
USP	**Ospenovka**	**3.87**	**11**	P	**Pn**	**18 18 42.0**	**+2.9**
	SNR=5.7						
KST	**Kastek**	**4.03**	**27**	*e*P	**Pb**	**18 18 52.1**	**+1.4**
	3.6nm,0.3s						
KST				*e*S	**Sg**	**18 19 46.7**	**-2.2**
	42nm,0.9s						
KST	**Kastek**	**4.03**	**27**	Pg	**Pb**	**18 18 52.1**	**+1.4**
	3.6nm,0.3s						
KST				Lg	Lg	18 19 46.7	
	42nm,0.9s						
SGDS	**Sogindy**	**4.07**	**12**	*e*P	**Pb**	**18 18 52.5**	**+1.2**
	8.1nm,0.6s						
SGDS				*e*S	**Sg**	**18 19 47.6**	**-2.5**
	16nm,1.0s						
SGDS	**Sogindy**	**4.07**	**12**	Pg	**Pb**	**18 18 52.5**	**+1.2**
	8.1nm,0.6s						
SGDS				Lg	Lg	18 19 47.8	
	12nm,0.8s						
CHM	**Chimkent**	**4.08**	**315**	*e*P	**Pb**	**18 18 53.5**	**+2.0**
	13nm,0.7s						
CHM				*e*S	**Sg**	**18 19 49.0**	**-1.7**
	175nm,0.4s						
DGS	**Degeres**	**4.14**	**24**	*e*P	**Pb**	**18 18 54.7**	**+2.1**
	7.5nm,0.4s						
DGS				*e*S	**Sg**	**18 19 51.0**	**-1.6**
	33nm,0.9s						
DGS	**Degeres**	**4.14**	**24**	Pg	**Pb**	**18 18 54.7**	**+2.1**
	7.5nm,0.4s						
DGS				Lg	Lg	18 19 51.0	
	33nm,0.9s						
KK31	**Karatay Array**	**4.26**	**329**	Pn	**Pn**	**18 18 46.5**	**+2.1**
	1.3nm,0.2s,baz=131,slow=13,SNR=63						
KK31				⇓Pg	**Pb**	**18 18 55.3**	**+0.8**
	3.1nm,0.3s,baz=141,slow=16,SNR=20						
KK31				⇓Sn	**Sn**	**18 19 38.8**	**+4.7**
	4.8nm,0.3s						
KK31				⇓Lg	Lg	18 19 52.5	
	7.1nm,0.4s,baz=146,slow=28,SNR=3.9						
MTBS	**Maitube**	**4.28**	**30**	*e*P	**Pb**	**18 18 54.9**	**+0.1**
	5.7nm,0.4s						
MTBS				*e*S	**Sg**	**18 19 51.6**	**-5.2**
	19nm,0.5s						
MTBS	**Maitube**	**4.28**	**30**	Pg	**Pb**	**18 18 54.9**	**+0.1**
	5.7nm,0.4s						
MTBS				Lg	Lg	18 19 51.6	
	19nm,0.5s						
KRBS	**Karabastau**	**4.53**	**21**	*

SATY					*e*S	**Sg**	18 20 21.8	**-3.4**
	14nm,0.8s							
SATY	**Saty**	**5.16**	**44**	Pg	**Pb**		18 19 12.4	**+2.4**
	4.5nm,0.5s							
SATY				Lg	Lg		18 20 21.8	
	14nm,0.8s							
UZB	**Uzynbulak**	**5.56**	**47**	*e*P	**Pb**		18 19 19.0	**+2.2**
	0.7nm,0.1s							
UZB				*e*S	**Sg**		18 20 32.8	**-5.2**
	5.0nm,0.6s							
UZB	**Uzynbulak**	**5.56**	**47**	Pg	**Pb**		18 19 19.0	**+2.2**
UZB				Lg	Lg		18 20 32.9	
BTLS	**Baital**	**5.58**	**4**	*e*P	**Pb**		18 19 19.9	**+3.0**
	3.8nm,0.6s							
BTLS				*e*S	**Sg**		18 20 34.4	**-4.1**
	8.0nm,0.6s							
BTLS	**Baital**	**5.58**	**4**	Pg	**Pb**		18 19 19.9	**+3.0**
	3.8nm,0.6s							
BTLS				Lg	Lg		18 20 34.4	
	8.0nm,0.6s							
KPKS	**Kokpek**	**5.59**	**43**	*e*P	**Pb**		18 19 19.3	**+2.1**
	2.9nm,0.6s							
KPKS				*e*S	**Sg**		18 20 34.0	**-4.8**
	16nm,0.6s							
KPKS	**Kokpek**	**5.59**	**43**	Pg	**Pb**		18 19 19.3	**+2.1**
	2.9nm,0.6s							
KPKS				Lg	Lg		18 20 34.0	
	16nm,0.6s							
ARXS	**Arharly**	**5.74**	**33**	*e*P	**Pb**		18 19 22.7	**+2.8**
	5.3nm,0.8s							
ARXS				*e*S	**Sg**		18 20 39.1	**-4.8**
	17nm,1.2s							
ARXS	**Arharly**	**5.74**	**33**	Pg	**Pb**		18 19 22.7	**+2.8**
	5.3nm,0.8s							
ARXS				Lg	Lg		18 20 39.1	
	17nm,1.2s							
PDGK	**Podgornoye**	**5.94**	**48**	Pg	**Pb**		18 19 24.8	**+1.6**
	0.8nm,0.9s							
PDGK				Lg	Lg		18 20 43.7	
	3.7nm,1.1s							
BLB	**Baldybastay**	**5.94**	**37**	*e*P	**Pb**		18 19 26.9	**+3.6**
	8.2nm,0.5s							
BLB				*e*S	**Sg**		18 20 46.8	**-3.4**
	13nm,0.8s							
BLB	**Baldybastay**	**5.94**	**37**	Pg	**Pb**		18 19 26.9	**+3.6**
	8.2nm,0.5s							
BLB				Lg	Lg		18 20 46.8	
	13nm,0.8s							
MKAR	**Makanchi Array**	**9.74**	**38**	Pn	Pn		18 20 15.3	+16
	0.1nm,0.3s,baz=224,slow=16,SNR=4.1							
	0.3nm,0.6s							
FINES	**FINESS Array B**	**36.19**	**323**	P	**P**		**18 24 40.8**	**-1.1**
	0.9nm,0.6s,baz=118,slow=13,SNR=6.4							
	0.9nm,0.6s							
ARCES	**ARCESS Array B**	**39.19**	**336**	P	**P**		**18 25 07.2**	**-0.1**
	0.7nm,0.8s,baz=102,slow=8.4,SNR=1.9							
	0.7nm,0.8s							
NOA	**NORSAR Array B**	**43.24**	**321**	P	**P**		**18 25 39.9**	**-0.8**
	0.2nm,0.5s,baz=93,slow=7.6,SNR=2.3							
	0.2nm,0.5s							

IDC 19 18:19:34.4±1.5, 55°.04S×31°.45W, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=75.6km s-min=32.0km az=90.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.68**	**155**	P	P	18 24 14.7	-0.9
	1.0nm,0.8s,baz=318,slow=12,SNR=1.9						
	1.0nm,0.8s						
VNDA	**Vanda**	**47.45**	**184**	P	P	18 28 10.6	+0.5
	0.4nm,0.6s,baz=187,slow=7.2,SNR=5.3						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.46**	**34**	P	P	18 31 08.9	+0.4
	1.3nm,1.1s,baz=205,slow=6.4,SNR=3.6						
	1.3nm,1.1s						
ILAR	**Eielson Array**	**147.65**	**314**	PKPbc	PKPdf	18 39 17.9	+1.4
	0.4nm,0.7s,baz=123,slow=1.1,SNR=4.4						

DJA 19 18:21:38.7±0.3, 3°.3S±4°.×12°.8E±°, h10km, M4.2/13, mb4.6/6, mB4.9/1, MLv4.0/13, Mw(mB)4.2/1, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.29**	**187**	P	Pb	18 21 45.5	-0.5
MSAI	**Masohi**	**0.70**	**86**	P	Pb	18 21 53.1	+0.1
MSAI				S	Sg	18 22 01.6	+0.2
NLAI	**Namlea**	**1.14**	**278**	P	Pb	18 21 57.9	-2.6
SANI	**Sanana**	**2.61**	**301**	P	Pn	18 22 19.8	-1.2
LBMI	**Labuha**	**2.84**	**345**	P	Pn	18 22 24.8	+0.7
FAKI	**Fak Fak**	**4.04**	**83**	P	Pn	18 22 41.7	+1.0
KMSI	**Cibinong**	**5.80**	**313**	P	Pn	18 23 04.5	-0.3
	0.3nm46nm,0.5s						
LUWI	**Luwuk**	**5.94**	**293**	P	Pn	18 23 06.4	-0.3
	0.2nm77nm,0.6s						
APSI	**Ampana**	**7.03**	**290**	P	Pn	18 23 23.4	+1.7
	0.3nm780nm66nm,0.7s						
MRSI	**Marisa**	**7.37**	**301**	P	Pn	18 23 26.0	-0.5

*SOME **19** 18:29:01.6, 39°.45N×72°.93E, h15km*
*IDC **19** 18:29:02.6±1.0, 39°.08N×73°.04E, h0km, mb3.7/8, mbtmp3.6/13, ML3.1/5, Error ellipse: s-maj=19.8km s-min=16.1km az=176.0*
*KRNET **19** 18:29:02.1±0.1, 39°.35N×73°.51E, mb4.2*
*BJI **19** 18:29:05.0±0.0, 39°.40N×72°.90E, h30km, mb4.2/12, mB4.9/7, ML4.1/1, Ms3.9/4, Ms7 3.8/2*
*NNC **19** 18:29:08.1±1.3, 39°.46N×73°.28E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=10.7km s-min=6.3km az=176.0*
*NEIC **19** 18:29:10.4±1.5, 39°.30N±0°.07×72°.99E±0°.09, h46km±10km, mb4.3/10, Error ellipse: s-maj=11.2km s-min=8.3km az=137.0*

ISC 19 18:29:06.1±0.5, 39°.39N±0°.03×73°.17E±0°.03, h10km, n117, σ2s67/149, mb3.9/12, 23C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.07**	**275**	Pn	Pg	18 29 23.3	-3.3
OHH	**Osh**	**1.17**	**345**	⇑*i*P	**Pb**	**18 29 26.8**	**-1.7**
	baz=35						
OHH				⇑*i*S	**Sb**	**18 29 44.9**	**+1.2**
	baz=35						
KSH	**Kashi**	**2.17**	**86**	Pn	Pn	18 29 36.1	-6.3
KSH				Sn	Sn	18 29 55.0	-14
GAR	**Garm**	**2.25**	**261**		**Pn**	**18 29 42.5**	**-1.1**
GAR	**Garm**	**2.25**	**261**	⇑*i*P	**Pn**	**18 29 46.2**	**+2.6**
	baz=63						
GAR				⇑*i*S	**Sb**	**18 30 18.6**	**+3.6**
	baz=63						
ARK	**Arkit**	**2.58**	**339**	⇑*i*P	**Pn**	**18 29 49.2**	**+1.2**
	baz=35						
ARK				⇑*i*S	**Sb**	**18 30 23.6**	**-0.6**
	baz=35						
ARLS	**Aral**	**2.62**	**19**	⇑*i*P	**Pn**	**18 29 47.3**	**-1.3**
	baz=14						
ARLS				⇑*i*S	**Sn**	**18 30 20.1**	**-0.4**
	baz=14						
AML	**Almayashu**	**2.77**	**8**	P	**Pn**	**18 29 53.6**	**+2.8**
	SNR=75						
NRN	**Naryn**	**2.97**	**46**	Pn	**Pn**	**18 29 54.9**	**+1.3**
UCH	**Uchtor**	**3.01**	**19**	⇑*e*P	**Pn**	**18 29 53.0**	**-1.2**
	baz=14						
UCH				⇑*i*S	**Sn**	**18 30 30.0**	**-0.6**
	baz=14						
CHGR	**Chuyangaron**	**3.21**	**258**		**Pn**	**18 29 57.1**	**+0.4**
CHGR	**Chuyangaron**	**3.21**	**258**	⇓*i*P	**Pn**	**18 29 59.5**	**+2.8**
	baz=60						
CHGR				⇓*e*S	**Sn**	**18 30 41.4**	**+6.3**
	baz=60						
EKS2	**Erkin-Say**	**3.30**	**8**	P	**Pn**	**18 30 01.2**	**+3.3**
	SNR=30						
EKS2	**Erkin-Say**	**3.30**	**8**	⇓*e*P	**Pn**	**18 29 57.5**	**-0.4**
	baz=3.0						
EKS2				⇓*i*S	**Sn**	**18 30 37.9**	**+0.6**
	baz=3.0						
AAK	**Ala-Archa**	**3.39**	**17**	P	**Pn**	**18 30 02.6**	**+3.4**
	SNR=62						
AAK	**Ala-Archa**	**3.39**	**17**		**Pn**	**18 30 02.4**	**+3.1**
AAK	**Ala-Archa**	**3.39**	**17**	⇑*i*P	**Pn**	**18 29 58.2**	**-1.0**
	baz=12						
AAK				⇑*i*S	**Sn**	**18 30 39.1**	**-0.5**
	baz=12						
KBK	**Karagaybulak**	**3.53**	**22**	P	**Pb**	**18 30 05.8**	**-2.9**
	SNR=34						
KBK	**Karagaybulak**	**3.53**	**22**	⇓*e*P	**Pn**	**18 29 59.7**	**-1.4**
	baz=18						
KBK				⇓*i*S	**Sn**	**18 30 41.9**	**-1.1**
	baz=18						
TAS	**Tashkent**	**3.54**	**304**		**Pn**	**18 30 03.4**	**+2.3**
IUG	**Iuzhnay**	**3.64**	**320**	*e*P	**Pn**	**18 30 05.4**	**+2.8**
	869nm,0.3s						
IUG				*e*S	**Sn**	**18 30 51.7**	**+6.0**
	274nm,0.6s						
IUG	**Iuzhnay**	**3.64**	**320**	Pg	**Pn**	**18 30 05.2**	**+2.6**
	869nm,0.3s						
IUG				Lg	Lg	18 30 51.7	
	274nm,0.6s						
ULHL	**Ulahol**	**3.68**	**38**	P	**Pn**	**18 30 07.5**	**+4.2**
	SNR=7.3						
ULHL	**Ulahol**	**3.68**	**38**	⇑*e*P	**Pn**	**18 30 00.9**	**-2.3**
	baz=35						
ULHL				⇑*i*S	**Sn**	**18 30 43.7**	**-3.1**
	baz=35						
DZA	**Taraz**	**3.76**	**339**	*e*P	**Pb**	**18 30 10.3**	**-2.3**
	34nm,0.2s						
DZA				*e*S	**Sb**	**18 31 00.2**	**+1.9**
	174nm,0.4s						
CHMS	**Chumysh**	**3.79**	**18**	P	**Pn**	**18 30 07.8**	**+3.1**
	SNR=41						
CHMS	**Chumysh**	**3.79**	**18**	⇓Pn	**Pn**	**18 30 07.8**	**+3.1**
	28nm,0.6s						
CHMS				⇓Lg	Lg	18 31 06.3	
	20nm,0.6s						
CHMS	**Chumysh**	**3.79**	**18**	⇑*e*P	**Pn**	**18 30 03.6**	**-1.1**
	baz=14						
CHMS				⇑*i*S	**Sn**	**18 30 48.4**	**-1.0**
	baz=14						
TKM2	**Tokmak 2**	**3.97**	**27**	P	**Pn**	**18 30 10.4**	**+3.2**
	SNR=25						
TKM2	**Tokmak 2**	**3.97**	**27**	⇑Pn	**Pn**	**18 30 10.2**	**+3.0**
	17nm,0.6s						
TKM2				⇓Lg	Lg	18 31 11.7	
	83nm,1.2s						
CHM	**Chimkent**	**3.99**	**318**	*e*P	Pn	18 30 12.5	+5.2
	76nm,0.1s						
CHM				*e*S	**Sb**	**18 31 03.5**	**-1.2**
	96nm,0.1s						
USP	**Ospenovka**	**4.00**	**14**	P	**Pn**	**18 30 10.4**	**+3.0**
	SNR=6.3						
SGDS	**Sogindy**	**4.20**	**15**	*e*P	**Pb**	**18 30 21.0**	**+0.9**
	15nm,0.6s						
SGDS				*e*S	**Sg**	**18 31 18.4**	**-2.6**
	44nm,0.9s						
SGDS	**Sogindy**	**4.20**	**15**	Pg	**Pb**	**18 30 21.0**	**+0.9**
	15nm,0.6s						
SGDS				Lg	Lg	18 31 18.4	
	44nm,0.9s						
KST	**Kastek**	**4.21**	**29**	*e*P	**Pb**	**18 30 22.1**	**+1.8**
	12nm,0.5s						
KST				*e*S	**Sg**	**18 31 20.2**	**-1.1**
	73nm,0.8s						
KST	**Kastek**	**4.21**	**29**	Pg	**Pb**	**18 30 22.5**	**+2.2**
	26nm,0.7s						
KST				Lg	Lg	18 31 20.2	
	73nm,0.8s						
KK31	**Karatay Array**	**4.22**	**332**		**Pn**	**18 30 12.7**	**+2.3**
KK31	**Karatay Array**	**4.22**	**332**	Pn	**Pn**	**18 30 12.5**	**+2.1**
	9.8nm,0.5s,baz=137,slow=11,SNR=123						
KK31				⇑Sn	**Sn**	**18 31 05.3**	**+5.6**
	26nm,0.5s,baz=143,slow=24,SNR=4.0						
KK31				⇑Lg	Lg	18 31 19.4	
	23nm,0.5s						
KKAR	**Karatay Array**	**4.22**	**332**		**Pn**	**18 30 12.7**	**+2.3**
KKAR	**Karatay Array**	**4.22**	**332**		**Pn**	**18 30 12.3**	**+1.8**
DGS	**Degeres**	**4.32**	**26**	*e*P	**Pb**	**18 30 22.7**	**+0.6**
	15nm,0.6s						
DGS				*e*S	**Sg**	**18 31 21.7**	**-2.9**
	76nm,0.9s						
DGS	**Degeres**	**4.32**	**26**	Pg	**Pb**	**18 30 23.0**	**+0.9**
	15nm,0.6s						
DGS				Lg	Lg	18 31 22.2	
	76nm,0.9s						
MTBS	**Maitube**	**4.47**	**32**	*e*P	**Pb**	**18 30 26.4**	**+1.7**
	15nm,0.5s						
MTBS				*e*S	**Sg**	**18 31 27.6**	**-1.9**
	47nm,1.0s						
MTBS	**Maitube**	**4.47**	**32**	Pg	**Pb**	**18 30 26.4**	**+1.7**
	15nm,0.5s						
MTBS				Lg	Lg	18 31 27.6	
	47nm,1.0s						
KRBS	**Karabastau**	**4.69**	**23**	*e*P	**Pb**	**18 30 30.1**	**+1.6**
	11nm,0.8s						
KRBS				*e*S	**Sg**	**18 31 34.3**	**-2.4**
	44nm,0.8s						
KRBS	**Karabastau**	**4.69**	**23**	Pg	**Pb**	**18 30 30.1**	**+1.6**
	11nm,0.8s						
KRBS				Lg	Lg	18 31 34.3	
	44nm,0.8s						
MDOK	**Medeo**	**4.77**	**37**	*e*P	**Pb**	**18 30 32.5**	**+2.7**
	11nm,0.9s						
MDOK				*e*S	**Sg**	**18 31 37.5**	**-1.6**
	48nm,1.1s						
MDOK	**Medeo**	**4.77**	**37**	⇑Pn	**Pn**	**18 30 21.7**	**+3.6**
	6.9nm,0.6s						
MDOK				Pg	**Pb**	**18 30 32.5**	**+2.7**
	11nm,0.9s						
MDOK				Pg	**Pg**	**18 30 34.6**	**-2.8**
	19nm,0.8s						
MDOK				Lg	Lg	18 31 37.4	
	48nm,1.1s						
MDOK				⇓Lg	Lg	18 31 38.2	
	70nm,0.9s						
KNDC	**Almaty**	**4.77**	**36**	⇓Pn	**Pn**	**18 30 22.1**	**+4.0**
	44nm,0.7s						
KNDC				⇑Lg	Lg	18 31 38.2	
	353nm,0.9s						
KOTS	**Kotyrbulak**	**4.85**	**36**	*e*P	**Pb**	**18 30 34.2**	**+2.9**
	3.0nm,0.8s						
KOTS				*e*S	**Sg**	**18 31 40.6**	**-1.2**
	157nm,0.9s						
KOTS	**Kotyrbulak**	**4.85**	**36**	Pg	**Pb**	**18 30 34.2**	**+2.9**
	3.0nm,0.8s						
KOTS				Lg	Lg	18 31 40.6	
	157nm,0.9s						
KTBS	**Karatobe**	**5.05**	**30**	*e*P	**Pb**	**18 30 37.6**	**+2.9**
	12nm,0.6s						
KTBS				*e*S	**Sg**	**18 31 46.2**	**-2.2**
	21nm,0.5s						
KTBS	**Karatobe**	**5.05**	**30**	Pg	**Pb**	**18 30 37.6**	**+2.9**
	12nm,0.6s						
KTBS				Lg	Lg	18 31 46.2	
	21nm,0.5s						
KUU	**Kurty**	**5.08**	**27**	*e*P	**Pb**	**18 30 37.6**	**+2.5**
	5.5nm,0.3s						
KUU				*e*S	**Sg**	**18 31 46.3**	**-3.0**
	43nm,0.9s						
KUU	**Kurty**	**5.08**	**27**	Pg	**Pb**	**18 30 37.6**	**+2.5**
	5.5nm,0.3s						
KUU				Lg	Lg	18 31 46.3	
	43nm,0.9s						
SATY	**Saty**	**5.38**	**45**	*e*P	**Pb**	**18 30 42.7**	**+2.5**
	17nm,1.0s						
SATY				*e*S	**Sg**	**18 31 55.3**	**-3.5**
	40nm,1.1s						
SATY	**Saty**	**5.38**	**45**	Pg	**Pb**	**18 30 42.7**	**+2.5**
	17nm,1.0s						
SATY				Lg	Lg	18 31 55.3	
	40nm,1.1s						
ZHN	**Zhinishke**	**5.47**	**45**	*e*P	**Pb**	**18 30 43.7**	**+1.9**
	5.6nm,0.2s						
ZHN				*e*S	**Sg**	**18 31 57.4**	**-4.3**
	24nm,1.1s						
ZHN	**Zhinishke**	**5.47**	**45**	Pg	**Pb**	**18 30 43.7**	**+1.9**
	5.6nm,0.2s						
ZHN				Lg	Lg	18 31 57.4	
	24nm,1.1s						
KURS	**Kuram**	**5.55**	**41**	*e*P	**Pb**	**18 30 46.5**	**+3.3**
	9.3nm,0.8s						
KURS				*e*S	**Sg**	**18 32 02.6**	**-1.7**
	28nm,2.0s						
KURS	**Kuram**	**5.55**	**41**	Pg	**Pb**	**18 30 46.5**	**+3.3**
	9.3nm,0.8s						
KURS				Lg	Lg	18 32 02.6	
	28nm,2.0s						
BTLS	**Baital**	**5.68**	**6**	*e*P	**Pb**	**18 30 45.1**	**-0.2**
	2.5nm,0.5s						
BTLS				*e*S	**Sb**	**18 32 00.0**	**+6.6**
	16nm,0.8s						
UZB	**Uzynbulak**	**5.79**	**48**	*e*P	**Pb**	**18 30 49.4**	**+2.2**
	6.1nm,0.7s						
UZB				*e*S	**Sg**	**18 32 07.1**	**-4.7**
	20nm,1.1s						
UZB	**Uzynbulak**	**5.79**	**48**	Pg	**Pb**	**18 30 49.4**	**+2.2**
	6.1nm,0.7s						
UZB				Lg	Lg	18 32 07.1	
	20nm,1.1s						
KPKS	**Kokpek**	**5.81**	**44**	*e*P	**Pb**	**18 30 52.3**	**+4.8**
	15nm,0.9s						
KPKS				*e*S	**Sg**	**18 32 11.4**	**-1.1**
	30nm,1.6s						
KPKS	**Kokpek**	**5.81**	**44**	Pg	**Pb**	**18 30 52.3**	**+4.8**
	15nm,0.9s						
KPKS				Lg	Lg	18 32 11.4	
	30nm,1.6s						
KBL	**Kabul**	**5.86**	**216**		**Pn**	**18 30 33.2**	**-0.1**
ARXS	**Arharly**	**5.94**	**34**	*e*P	**Pb**	**18 30 52.6**	**+2.9**
	9.0nm,0.7s						
ARXS				*e*S	**Sg**	**18 32 12.8**	**-3.9**
	39nm,1.0s						
ARXS	**Arharly**	**5.94**	**34**	Pg	**Pb**	**18 30 52.6**	**+2.9**
	9.0nm,0.7s						
ARXS				Lg	Lg	18 32 12.8	
	39nm,1.0s						
SHLS	**Shalkode**	**6.05**	**50**	*e*P	**Pg**	**18 31 00.4**	**-1.5**
	7.5nm,0.5s						
SHLS				*e*S	**Sg**	**18 32 25.0**	**+4.8**
	19nm,1.4s						
SHLS	**Shalkode**	**6.05**	**50**	Pg	**Pg**	**18 31 00.4**	**-1.5**
	7.5nm,0.5s						
SHLS				Lg	Lg	18 32 25.0	
	19nm,1.4s						
BLB	**Baldybastay**	**6.15**	**38**	*e*P	**Pb**	**18 30 57.4**	**+4.0**
	12nm,0.3s						
BLB				*e*S	**Sg**	**18 32 20.7**	**-2.7**
	45nm,1.0s						
BLB	**Baldybastay**	**6.15**	**38**	Pg	**Pb**	**18 30 57.4**	**+4.0**
	12nm,0.3s						
BLB				Lg	Lg	18 32 20.7	
	45nm,1.0s						
JMU	**Jammu**	**6.81**	**168**	*e*S	**Sn**	**18 32 05.7**	**+2.2**
DJR	**Jarkent**	**6.98**	**43**	*e*P	Pb	18 31 12.7	+5.2
	0.9nm,0.2s						
DJR				*e*S	**Sg**	**18 32 46.3**	**-3.7**
	13nm,0.9s						
DJR	**Jarkent**	**6.98**	**43**	Pg	Pb	18 31 12.6	+5.2
DJR				Lg	Lg	18 32 46.5	
THN	**Thein Dam**	**7.24**	**163**	*e*P	**Pn**	**18 30 52.2**	**+0.3**
THN				*e*S	**Sn**	**18 32 13.3**	**-1.0**
BHK	**Bhakra**	**8.38**	**161**	*e*S	**Sn**	**18 32 41.2**	**-1.3**
SMLA	**Simla**	**8.87**	**157**	*e*P	**Pn**	**18 31 12.4**	**-1.8**
SMLA				*e*S	**Sn**	**18 32 50.8**	**-3.4**
SMLA				IAML		18 33 02.5	
	comp=E,23nm,0.3s						
SMLA				IAML		18 33 04.9	
	comp=N,16nm,0.4s						
MAKZ	**Makanchi**	**9.81**	**38**		**Pn**	**18 31 30.7**	**+3.5**
MK31	**Makanchi Array**	**9.95**	**39**		**Pn**	**18 31 31.8**	**+2.6**
MKAR	**Makanchi Array**	**9.95**	**39**	Pn	**Pn**	**18 31 32.6**	**+3.5**
	comp=N,0.1nm,0.3s,baz=202,slow=11,SNR=7.1						
	comp=N,0.6nm,0.7s						
MKAR	**Makanchi Array**	**9.95**	**39**	Pn	**Pn**	**18 31 32.0**	**+2.9**
WMQ	**Urumqi**	**11.73**	**63**	*e*P	**Pn**	**18 31 50.5**	**-3.1**
WMQ				smax	smax		
	comp=N,26nm,0.7s						
WMQ				smax	smax		
	comp=E,18nm,0.7s						
KURBB	**Kurchatov Arra**	**11.85**	**17**	Pn	**Pn**	**18 31 55.2**	**+0.2**
	baz=210,slow=12,SNR=5.5						
	comp=E,0.2nm,0.6s						
GEYT	**Alibeck**	**11.87**	**268**	Pn	Pn	18 31 51.5	-3.8
	comp=E,0.6nm,0.3s,baz=102,slow=9.6,SNR=5.8						
GEYT				Sn	**Sn**	**18 34 04.7**	**-3.1**
	comp=E,0.5nm,0.3s,baz=108,slow=9.5,SNR=3.3						
	comp=E,1.6nm,0.3s						
GEYT	**Alibeck**	**11.87**	**268**	Pn	Pn	18 31 50.6	-4.8
GYA0B	**ALIBECK ARRAY**	**11.87**	**268**	Pn	Pn	18 31 50.4	-5.0
AB31	**Akbulak array**	**13.65**	**321**	Pn	**Pn**	**18 32 20.7**	**+1.1**
	comp=E,1.0nm,0.5s,baz=123,slow=10,SNR=33						
AB31				⇑Sn	**Sn**	**18 34 54.8**	**+3.5**
	comp=E,1.5nm,0.6s,baz=136,slow=22,SNR=6.0						
ABKAR	**Akbulak array**	**13.65**	**321**	Pn	**Pn**	**18 32 17.4**	**-2.2**
ABKAR					**Sn**	**18 34 45.6**	**-5.7**
BRVK	**Borovoye**	**13.81**	**353**	Pn	**Pn**	**18 32 26.2**	**+4.3**
AKTO	**Aktyubinsk**	**15.37**	**321**	Pn	**Pn**	**18 32 41.9**	**-1.0**
	comp=E,0.3nm,0.3s,baz=123,slow=14,SNR=7.9						
	comp=E,2.1nm,0.7s						
AKTO	**Aktyubinsk**	**15.37**	**321**	⇑Pn	**Pn**	**18 32 47.1**	**+4.2**
	comp=E,5.5nm,1.1s						
AKTO				⇓Sn	**Sn**	**18 35 36.3**	**+3.2**
	comp=E,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**16.57**	**25**	Pn	**Pn**	**18 32 60.0**	**+1.6**
	comp=E,0.1nm,0.3s,baz=216,slow=7.1,SNR=2.5						
	comp=E,1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**16.57**	**25**	P	**Pn**	**18 33 00.5**	**+2.1**
GTA	**Gaotai**	**20.57**	**81**	*e*P	**P**	**18 33 45.4**	**+0.3**
GTA				pmax	pmax		
	comp=E,3.0nm,1.0s						
HYBB	**Hyderabad (bro**	**22.39**	**166**	*e*P	**P**	**18 34 04.1**	**-0.6**
SONM	**Songino Array**	**25.33**	**60**	P	**P**	**18 34 34.1**	**+1.1**
	comp=E,1.2nm,1.0s,baz=248,slow=9.8,SNR=6.2						
	comp=E,1.2nm,1.0s						
SONM	**Songino Array**	**25.33**	**60**	P	**P**	**18 34 33.3**	**+0.2**
PZH	**PanZhiHua**	**27.08**	**110**	P	**P**	**18 34 53.0**	**+4.0**
PZH				pmax	pmax		
	comp=E,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=E,170nm,5.4s						
HHC	**Hu-ho-hao-te**	**29.24**	**75**	*e*P	**P**	**18 35 09.3**	**+1.1**
HHC				pmax	pmax		
	comp=E,200nm,7.9s						
AKASG	**Malin Array Be**	**32.59**	**305**	P	**P**	**18 35 36.6**	**-0.9**
	comp=E,0.2nm,0.3s,baz=85,slow=8.5,SNR=6.1						
	comp=E,0.2nm,0.3s						
FIA1	**FINESS Array S**	**36.12**	**323**	P	**P**	**18 36 07.1**	**-0.8**
FINES	**FINESS Array B**	**36.12**	**323**	P	**P**	**18 36 07.5**	**-0.5**
	comp=E,1.2nm,0.5s,baz=107,slow=8.6,SNR=21						
	comp=E,1.2nm,0.5s						
ARCES	**ARCESS Array B**	**39.17**	**336**	P	**P**	**18 36 33.7**	**0.0**
	comp=E,0.8nm,0.5s,baz=106,slow=8.9,SNR=18						
	comp=E,0.8nm,0.5s						
ARCES	**ARCESS Array B**	**39.17**	**336**	P	**P**	**18 36 33.5**	**-0.2**
ARCES				IAmb	IAmb	18 36 58.3	
	comp=Z,5.7nm,1.2s						
NC405	**NORSAR Array S**	**42.92**	**321**	P	P	18 37 01.8	-2.9
NC405				IAmb	IAmb	18 37 29.9	
	comp=Z,13nm,1.3s						
NC303	**NORSAR Array S**	**43.09**	**321**	P	**P**	**18 37 05.4**	**-0.6**
NC303				IAmb	IAmb	18 37 47.2	
	comp=Z,8.7nm,1.4s						
NB201	**NORSAR Array S**	**43.12**	**321**	P	**P**	**18 37 04.0**	**-2.3**
NB2	**NORSAR Subarra**	**43.16**	**321**	P	**P**	**18 37 05.2**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9

baz=311,slow=13
PMSA Palmer Station 18.90 226 P **P** 18 48 19.5 +0.4
0.2nm,0.3s,baz=36,slow=8.7,SNR=1.8
4.8nm,0.8s
PMSA Palmer Station 18.90 226 **P** 18 48 17.8 -1.2
SNAA Sanae 20.38 155 P **P** 18 48 34.1 -1.0
SNAA Sanae 20.38 155 P **P** 18 48 34.2 -1.0
1.4nm,0.8s,baz=305,slow=8.4,SNR=5.5
1.4nm,0.8s
SNAA Sanae 20.38 155 P **P** 18 48 33.9 -1.3
TROLL Troll, Antarti 21.94 153 P **P** 18 48 51.2 -0.9
TRQA Tornquist 27.06 296 P **P** 18 49 40.7 -0.5
CPUP Villa Florida 34.71 315 P **P** 18 50 48.2 -0.4
2.9nm,0.5s,baz=148,slow=6.4,SNR=7.8
2.9nm,0.5s
CPUP Villa Florida 34.71 315 P **P** 18 50 48.2 -0.4
CPUP IAmb IAmb 18 50 48.7
comp=Z,3.8nm,0.7s
QSPA South Pole Qui 35.03 180 P **P** 18 50 51.6 +0.4
comp=Z,4.3nm,0.9s,baz=200,slow=2.4,SNR=13
comp=Z,4.3nm,0.9s
QSPA South Pole Qui 35.03 180 P **P** 18 50 51.3 +0.1
QSPA IAmb IAmb 18 51 05.6
comp=Z,7.1nm,1.0s
CO01 Juntas del Tor 37.55 296 P **P** 18 51 14.5 +1.3
CO01 IAmb IAmb 18 51 22.9
comp=Z,9.8nm,1.1s
GO02 Mina Guanaco 41.25 301 P **P** 18 51 45.1 +1.0
PTLB Pontes e Lacer 45.27 320 P **P** 18 52 16.4 +0.1
PTLB IAmb IAmb 18 52 16.8
comp=Z,3.6nm,0.8s
GO01 Chusmiza 45.73 305 P **P** 18 52 20.8 +0.2
VNDA Vanda 47.29 184 P **P** 18 52 32.0 +0.5
comp=Z,2.0nm,1.0s,baz=190,slow=6.2,SNR=5.3
comp=Z,2.0nm,1.0s
VNDA Vanda 47.29 184 P **P** 18 52 31.7 +0.2
VNDA IAmb IAmb 18 52 46.3
comp=Z,2.4nm,0.8s
LPAZ La Paz 48.19 309 P **P** 18 52 40.2 +0.2
comp=Z,2.4nm,0.6s,baz=154,slow=5.3,SNR=9.3
comp=Z,2.4nm,0.6s
LPAZ La Paz 48.19 309 P **P** 18 52 39.9 -0.1
H10N1 ASCENSION HYDR 49.03 22 T T 19 45 38.6
baz=192,SNR=4.5
H10N3 ASCENSION HYDR 49.03 22 T T 19 45 37.4
baz=192,slow=74,SNR=4.5
H10N2 ASCENSION HYDR 49.04 22 T T 19 45 37.4
baz=192,slow=74,SNR=5.4
LBTB Lobatse 50.83 77 P **P** 18 52 59.2 -0.3
LBTB IAmb IAmb 18 53 41.0
comp=Z,7.6nm,1.1s
SAML Samuel 52.75 318 P **P** 18 53 12.3 -1.4
SAML IAmb IAmb 18 53 13.7
comp=Z,3.1nm,0.8s
ETMB Extrema 53.15 315 P **P** 18 53 15.6 -1.0
ETMB IAmb IAmb 18 53 16.6
comp=Z,3.5nm,1.1s
OTAV Otavalo 67.46 307 P **P** 18 54 56.0 +0.9
OTAV IAmb IAmb 18 55 09.2
comp=Z,3.4nm,0.9s
TORD Torodi Ar. Bea 73.44 33 P **P** 18 55 30.5 -0.5
comp=Z,1.2nm,0.8s,baz=199,slow=6.2,SNR=7.6
comp=Z,1.2nm,0.8s
FINES FINESS Array B 124.66 29 PKP **PKPdf** 19 02 55.9 -1.0
comp=Z,1.1nm,0.7s,baz=184,slow=2.2,SNR=2.6
ARCES ARCESS Array B 130.97 23 PKP **PKPdf** 19 03 08.0 -0.8
comp=Z,0.6nm,0.7s,baz=177,slow=1.8,SNR=1.8
ILAR Eielson Array 148.00 313 PKPbc **PKPdf** 19 03 42.3 +2.6
comp=Z,2.9nm,0.8s,baz=114,slow=1.5,SNR=19
SONM Songino Array 152.79 88 PKPbc **PKPbc** 19 03 53.9 -1.1
comp=Z,0.6nm,0.6s,baz=230,slow=2.3,SNR=6.0
SONM PKPab **PKPab** 19 04 04.1 -1.9
comp=Z,1.5nm,0.7s,baz=214,slow=3.1,SNR=8.4

*IDC **19** 19:05:30.1±0.9,27.61N×92.63E,h0km,mb3.8/10, mbtmp3.8/10,Error ellipse: s-maj=39.2km s-min=16.5km az=57.0*
*NDI **19** 19:05:33.5±3.2,27.56N×92.80E,h10km,ML3.8*
ISC 19 19:05:31.5±1.5,27.62N±0.05×92.70E±0.04,h9km±10km, n25,σ1°75/32,mb3.8/9,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TEZP	**TEZPUR**	**1.01**	**175**	*eP*			**Pg**	**19 05 50.3**	**-0.5**
TEZP				*eS*			**Sg**	**19 06 04.1**	**+0.2**
TEZP				IAML				19 06 10.7	
	comp=E,4μm,0.2s								
TEZP				IAML				19 06 11.6	
	comp=N,6μm,0.1s								
ZIRO	**ZIRO**	**1.03**	**95**	*eP*			**Pg**	**19 05 50.2**	**-1.1**
ZIRO				*i* Sg			**Sg**	**19 06 02.7**	**-1.9**
ZIRO				IAML				19 06 05.2	
	comp=E,7μm,0.2s								
ITAN	**ITANAGAR**	**1.03**	**117**	*eP*			**Pg**	**19 05 51.2**	**0.0**
ITAN				IAML				19 06 12.6	
	comp=E,6μm,0.2s								
ITAN				IAML				19 06 12.6	
	comp=N,3μm,0.2s								
JORH	**JORHAT**	**1.64**	**122**	*eP*			**Pb**	**19 06 02.2**	**+0.4**
JORH				*eS*			**Sg**	**19 06 25.0**	**+0.9**
GUWA	**GUWAHATI**	**1.68**	**213**	*eP*			**Pn**	**19 06 02.4**	**+1.4**
GUWA				*eS*			**Sn**	**19 06 24.4**	**+1.6**
MOKO	**MOKOCHONG**	**2.08**	**128**	*eP*			**Pn**	**19 06 08.5**	**+1.9**
MOKO				*i* x			x	19 06 10.1	
MOKO				*es*			x	19 06 37.2	
SHL	**Shillong**	**2.17**	**200**	*eP*			**Pn**	**19 06 09.2**	**+1.2**
SHL				*i* x			x	19 06 11.0	
SHL				*eS*			**Sn**	**19 06 36.7**	**+1.6**
SHL				IAML				19 06 41.9	
	comp=E,863nm,0.4s								
SHL				IAML				19 06 42.3	
	comp=N,1μm,0.4s								
KOHI	**KOHIMA**	**2.28**	**146**	*eP*			**Pn**	**19 06 10.7**	**+1.4**
KOHI				*eS*			**Sn**	**19 06 37.9**	**+0.3**
KOHI				IAML				19 06 43.0	
	comp=N,463nm,0.2s								
LKP	**Lekhapani**	**2.81**	**95**	*eP*			**Pn**	**19 06 18.6**	**+2.0**
TURI	**Tura**	**2.96**	**226**	*eP*			**Pn**	**19 06 20.8**	**+2.2**
TURI				*eS*			**Sb**	**19 07 00.0**	**-0.6**
GTK	**Tadong**	**3.65**	**266**	*eP*			**Pn**	**19 06 30.4**	**+2.1**
GTK				*eS*			**Sn**	**19 07 14.9**	**+3.3**
AGT	**Agartala**	**3.95**	**200**	*ex*			x	19 06 44.5	
BOK	**Bokaro**	**7.23**	**240**	*eS*			**Sn**	**19 08 38.3**	**-1.3**
BOK				IAML				19 09 27.1	
	comp=E,22nm,0.5s								
BOK				IAML				19 09 27.3	
	comp=N,32nm,0.8s								
JBP	**Jabalpur**	**12.32**	**252**	*eP*			Pn	19 08 22.2	-4.9
JBP				*eS*			**Sn**	**19 10 38.5**	**-6.0**
MKAR	**Makanchi Array**	**20.82**	**340**	P			**P**	**19 10 13.4**	**+0.2**
	comp=N,2.1nm,0.8s,baz=148,slow=12,SNR=13								
	comp=N,2.1nm,0.8s								
SONM	**Songino Array**	**22.84**	**24**	P			**P**	**19 10 34.9**	**0.0**
	comp=N,0.6nm,0.5s,baz=215,slow=10,SNR=5.6								
	comp=N,0.6nm,0.5s								
KURBB	**Kurchatov Arra**	**25.38**	**339**	P			**P**	**19 10 59.6**	**+0.7**
	comp=N,1.0nm,0.5s,baz=164,slow=8.9,SNR=9.8								
	comp=N,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**26.93**	**350**	P			**P**	**19 11 12.9**	**0.0**
	comp=N,0.7nm,0.5s,baz=167,slow=7.1,SNR=3.0								
	comp=N,0.7nm,0.5s								
AKASG	**Malin Array Be**	**52.56**	**314**	P			**P**	**19 14 44.6**	**-0.6**
	comp=N,0.6nm,0.6s,baz=82,slow=6.9,SNR=4.8								
	comp=N,0.6nm,0.6s								
WRA	**Warramunga Arr**	**62.13**	**135**	P			**P**	**19 15 53.3**	**+0.2**
	comp=N,2.9nm,0.6s,baz=323,slow=7.4,SNR=40								
	comp=N,2.9nm,0.6s								
NB2	**NORSAR Subarra**	**62.17**	**327**	P			**P**	**19 15 51.7**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=83,slow=6.5								
NOA	**NORSAR Array B**	**62.17**	**327**	P			**P**	**19 15 51.8**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=83,slow=6.6,SNR=6.6								
	comp=Z,0.6nm,0.7s								
GERES	**GERESS Array B**	**62.73**	**313**	P			**P**	**19 15 57.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=73,slow=6.8,SNR=9.6								
	comp=Z,0.7nm,0.5s								
ASAR	**Alice Springs**	**64.66**	**138**	P			**P**	**19 16 10.3**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=322,slow=6.7,SNR=27								
	comp=Z,1.4nm,0.5s								
ILAR	**Eielson Array**	**77.05**	**22**	P			**P**	**19 17 24.9**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=301,slow=6.5,SNR=8.4								
	comp=Z,0.8nm,0.8s								

*IDC **19** 19:12:42.0±0.7,55.17S×30.34W,h0km,mb4.0/6, mbtmp4.0/6,MS3.9/1,Error ellipse: s-maj=33.3km s-min=19.3km az=74.0*
*NEIC **19** 19:12:44.1±2.5,55.37S±0.06×30.9W±0.2,h10km±2km, mb4.4/12,Error ellipse: s-maj=19.6km s-min=4.2km az=58.0*
ISC 19 19:12:43.6±0.7,55.23S±0.09×30.7W±0.1,h10km,n36, σ1°66/30,mb4.3/7,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
HOPE	**Hope Point**	**3.51**	**283**				**Pn**	**19 13 37.5**	**-0.5**
ORCD	**Orcadas**	**9.28**	**228**				**Pn**	**19 14 53.2**	**-4.0**
EFI	**East Falkland**	**16.66**	**271**				**P**	**19 16 39.5**	**+0.3**
VNA3	**Neumayer Olymp**	**18.45**	**159**	P			**Pn**	**19 16 60.0**	**+1.0**
VNA2	**Neumayer--Watz**	**18.72**	**156**	P			**Pn**	**19 17 02.2**	**-0.1**
	baz=315,slow=12								
PMSA	**Palmer Station**	**18.99**	**226**	P			**Pn**	**19 17 11.7**	**+6.2**
	6.2nm,0.6s,baz=60,slow=5.6,SNR=7.3								
SNAA	**Sanae**	**20.31**	**155**	P			**P**	**19 17 19.8**	**+0.5**
SNAA	**Sanae**	**20.31**	**155**	P			**P**	**19 17 19.1**	**-0.2**
	1.4nm,0.9s,baz=300,slow=12,SNR=13								
	1.4nm,0.9s								
SNAA	**Sanae**	**20.31**	**155**	P			**P**	**19 17 18.8**	**-0.5**
SMAI	**San Martin Ant**	**21.15**	**218**	P			**P**	**19 17 27.0**	**-1.4**
TROLL	**Troll, Antarti**	**21.87**	**153**	P			**P**	**19 17 37.6**	**+1.5**
GO09	**Cerro Castillo**	**24.97**	**262**	P			**P**	**19 18 05.2**	**-1.7**
CPUP	**Villa Florida**	**34.81**	**315**	P			**P**	**19 19 34.6**	**+0.2**
	1.3nm,0.6s,baz=142,slow=6.6,SNR=3.7								
	1.3nm,0.6s								
CPUP	**Villa Florida**	**34.81**	**315**	P			**P**	**19 19 33.6**	**-0.7**
CPUP						IAmb	IAmb	19 19 47.2	
	comp=Z,5.9nm,1.1s								
QSPA	**South Pole Qui**	**35.02**	**180**	P			**P**	**19 19 36.9**	**+0.9**
	comp=Z,2.6nm,0.7s,baz=193,slow=0.5,SNR=21								
	comp=Z,2.6nm,0.7s								
QSPA	**South Pole Qui**	**35.02**	**180**	P			**P**	**19 19 36.9**	**+0.9**
QSPA						IAmb	IAmb	19 19 39.2	
	comp=Z,7.6nm,1.2s								
SUR	**Sutherland**	**42.38**	**79**	LR			LR	19 34 22.6	
	comp=Z,136nm,18.8s,baz=116,slow=31								
PB01	**IPOC Station P**	**44.81**	**304**	P			**P**	**19 20 57.7**	**+0.1**
GO01	**Chusmiza**	**45.85**	**305**	P			**P**	**19 21 07.1**	**+0.8**
GO01						IAmb	IAmb	19 21 40.5	
	comp=Z,13nm,1.5s								
VNDA	**Vanda**	**47.28**	**184**	P			**P**	**19 21 16.9**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=173,slow=5.8,SNR=9.4								
	comp=Z,1.3nm,0.8s								
VNDA	**Vanda**	**47.28**	**184**	P			**P**	**19 21 16.4**	**+0.1**
H10S2	**ASCENSION HYDR**	**47.87**	**22**	T			T	20 13 47.6	
	baz=191								
H10S3	**ASCENSION HYDR**	**47.88**	**22**	T			T	20 13 49.0	
	baz=29,SNR=11								
LPAZ	**La Paz**	**48.31**	**309**	P			**P**	**19 21 26.9**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=114,slow=4.8,SNR=8.6								
	comp=Z,1.9nm,0.6s								
LPAZ	**La Paz**	**48.31**	**309**	P			**P**	**19 21 24.9**	**-0.8**
LPAZ						IAmb	IAmb	19 21 44.7	
	comp=Z,2.4nm,0.7s								
H10N1	**ASCENSION HYDR**	**48.99**	**21**	T			T	20 15 13.0	
	baz=192,slow=74,SNR=14								
H10N3	**ASCENSION HYDR**	**48.99**	**21**	T			T	20 15 13.5	
	baz=192,SNR=22								
H10N2	**ASCENSION HYDR**	**49.00**	**21**	T			T	20 15 11.8	
	baz=192,slow=74,SNR=17								
TOA0	**Torodi Ar. Sit**	**73.38**	**33**	P			**P**	**19 24 15.6**	**+0.1**
TOA0						IAmb	IAmb	19 24 58.0	
	comp=Z,2.9nm,1.1s								
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P			**P**	**19 24 15.4**	**0.0**
	comp=Z,1.7nm,0.7s,baz=200,slow=6.6,SNR=9.8								
	comp=Z,1.7nm,0.7s								
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P			**P**	**19 24 15.6**	**+0.1**
TORD						IAmb	IAmb	19 24 30.6	
	comp=Z,5.6nm,1.4s								
FINES	**FINESS Array B**	**124.60**	**29**	PKP			**PKPdf**	**19 31 40.5**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=96,slow=3.8,SNR=5.0								
ARCES	**ARCESS Array B**	**130.93**	**23**	PKP			**PKPdf**	**19 31 53.1**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=62,slow=3.3,SNR=4.6								
ZALV	**Zalesovo Beam**	**143.79**	**65**	PKP			PKPbc	19 32 15.4	+0.1
	comp=Z,0.5nm,0.4s,baz=298,slow=3.1,SNR=2.3								
ILAR	**Eielson Array**	**148.11**	**313**	PKPbc			**PKPbc**	**19 32 28.1**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=124,slow=1.6,SNR=19								
SONM	**Songino Array**	**152.65**	**88**	PKPbc			**PKPbc**	**19 32 37.3**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=233,slow=3.4,SNR=7.6								
SONM				PKPab			**PKPab**	**19 32 50.3**	**0.0**
	comp=Z,1.0nm,0.6s,baz=214,slow=3.5,SNR=7.8								

*IDC **19** 19:13:38.8±0.7,54.293S×31.28W,h0km,mb4.1/10, mbtmp4.1/10,MS4.0/1,Error ellipse: s-maj=30.1km s-min=16.7km az=59.0*
*NEIC **19** 19:13:40.9±2.9,55.04S±0.10×31.6W±0.2,h10km±1km, mb4.6/19,Error ellipse: s-maj=17.2km s-min=13.6km az=29.0*
ISC 19 19:13:40.6±0.5,54.97S±0.08×31.58W±0.08,h10km,n40, σ1°47/41,mb4.4/16,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
HOPE	**Hope Point**	**2.93**	**282**			Pn	**Pn**	**19 14 27.4**	**+0.2**
HOPE						Sn	**Sn**	**19 14 59.0**	**-3.4**
ORCD	**Orcadas**	**9.07**	**225**				**Pn**	**19 15 49.5**	**-1.9**
VNA3	**Neumayer Olymp**	**18.89**	**158**	P			**Pn**	**19 18 02.4**	**+1.2**
VNA2	**Neumayer--Watz**	**19.17**	**156**	P			**Pn**	**19 18 07.8**	**+3.0**
SNAA	**Sanae**	**20.77**	**155**	P			**P**	**19 18 20.8**	**-0.4**
SNAA	**Sanae**	**20.77**	**155**	P			**P**	**19 18 20.9**	**-0.4**
	6.6nm,1.0s,baz=316,slow=12,SNR=7.2								
	6.6nm,1.0s								
SNAA	**Sanae**	**20.77**	**155**	P			**P**	**19 18 20.2**	**-1.0**
SMAI	**San Martin Ant**	**21.04**	**217**				**P**	**19 18 25.9**	**+1.8**
TROLL	**Troll, Antarti**	**22.34**	**153**	P			**P**	**19 18 38.1**	**-0.2**
BELA	**Belgrano 2**	**23.03**	**182**	P			**P**	**19 18 44.7**	**-0.6**
TRQA	**Tornquist**	**26.60**	**297**	P			**P**	**19 19 20.1**	**+1.2**
TRQA						IAmb	IAmb	19 19 44.4	
	comp=Z,15nm,1.4s								
ITQB	**Itaqui**	**31.02**	**314**	P			**P**	**19 19 59.3**	**+1.1**
CPUP	**Villa Florida**	**34.26**	**316**	P			**P**	**19 20 26.3**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=151,slow=9.2,SNR=3.8								
	comp=Z,3.4nm,0.9s								
CPUP	**Villa Florida**	**34.26**	**316**	P			**P**	**19 20 26.7**	**+0.1**
CPUP						IAmb	IAmb	19 20 38.5	
	comp=Z,9.6nm,1.3s								
MT01	**Popeta**	**34.67**	**291**	P			**P**	**19 20 28.3**	**-1.8**
MT01						IAmb	IAmb	19 20 31.0	
	comp=Z,16nm,1.1s								
QSPA	**South Pole Qui**	**35.28**	**180**	P			**P**	**19 20 35.3**	**0.0**
	comp=Z,2.6nm,0.9s,baz=147,slow=4.3,SNR=2.6								
QSPA				LR			LR	19 34 16.6	
	comp=Z,216nm,19.2s,baz=209,slow=35								
	comp=Z,2.6nm,0.9s								
QSPA	**South Pole Qui**	**35.28**	**180**	P			**P**	**19 20 38.0**	**+2.7**
QSPA						IAmb	IAmb	19 21 11.3	
	comp=Z,9.4nm,1.2s								
CO03	**El Pedregal**	**36.72**	**295**	P			**P**	**19 20 50.2**	**+2.4**
CO01	**Juntas del Tor**	**37.09**	**296**	P			**P**	**19 20 53.7**	**+2.5**
CO01						IAmb	IAmb	19 21 08.0	
	comp=Z,20nm,1.2s								
GO02	**Mina Guanaco**	**40.78**	**301**	P			**P**	**19 21 23.6**	**+1.5**
BDFB	**Brasilia**	**41.26**	**336**	P			**P**	**19 21 25.2**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=239,slow=16,SNR=4.5								
	comp=Z,3.8nm,0.7s								
MAW	**Mawson**	**42.48**	**146**	P			**P**	**19 21 32.9**	**-2.3**
	comp=Z,1.3nm,0.9s,baz=270,slow=6.1,SNR=1.9								
	comp=Z,1.3nm,0.9s								
MAW	**Mawson**	**42.48**	**146**	P			**P**	**19 21 34.2**	**-1.0**
PTLB	**Pontes e Lacer**	**44.83**	**321**	P			**P**	**19 21 52.3**	**-2.4**
PTLB						IAmb	IAmb	19 21 56.3	
	comp=Z,4.9nm,0.9s								
SIV	**San Ignacio**	**45.06**	**318**	P			**P**	**19 21 55.8**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=152,slow=7.4,SNR=4.4								
	comp=Z,1.0nm,0.5s								
GO01	**Chusmiza**	**45.27**	**306**	P			**P**	**19 21 58.0**	**-0.8**
GO01						IAmb	IAmb	19 22 06.5	
	comp=Z,12nm,1.0s								
VNDA	**Vanda**	**47.51**	**184**	P			**P**	**19 22 15.7**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=215,slow=3.6,SNR=4.5								
	comp=Z,0.8nm,0.7s								
VNDA	**Vanda**	**47.51**	**184**	P			**P**	**19 22 15.5**	**+0.4**
LPAZ	**La Paz**	**47.73**	**309**	P			**P**	**19 22 20.0**	**+1.8**
	comp=Z,5.3nm,0.6s,baz=163,slow=4.9,SNR=9.5								
	comp=Z,5.3nm,0.6s								
LPAZ	**La Paz**	**47.73**	**309**	P			**P**	**19 22 18.2**	**-0.1**
BOSA	**Boshof**	**48.20**	**81**	P			**P**	**19 22 19.9**	**-1.3**
	comp=Z,2.9nm,0.8s,baz=198,slow=13,SNR=2.4								
	comp=Z,2.9nm,0.8s								
BOSA	**Boshof**	**48.20**	**81**	P			**P**	**19 22 19.9**	**-1.3**
BOSA						IAmb	IAmb	19 22 39.0	
	comp=Z,6.7nm,1.1s								
SAML	**Samuel**	**52.31**	**319**	P			**P**	**19 22 52.4**	**+0.1**
SAML						IAmb	IAmb	19 22 53.3	
	comp=Z,5.9nm,0.9s								
TOA0	**Torodi Ar. Sit**	**73.45**	**34**	P			**P**	**19 25 14.0**	**+1.1**
TOA0						IAmb	IAmb	19 25 29.3	
	comp=Z,3.5nm,1.1s								
TORD	**Torodi Ar. Bea**	**73.45**	**34**	P			**P**	**19 25 12.5**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=200,slow=7.2,SNR=2.9								
	comp=Z,0.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**73.45**	**34**	P			**P**	**19 25 12.7**	**-0.2**
TORD						IAmb	IAmb	19 25 13.3	
	comp=Z,7.0nm,1.4s								
FINES	**FINESS Array B**	**124.64**	**30**	PKP			**PKiKP**	**19 32 39.0**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=183,slow=3.6,SNR=4.4								
ZALV	**Zalesovo Beam**	**144.15**	**65**	PKP			**PKPdf**	**19 33 14.4**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=258,slow=4.0,SNR=4.9								
ILAR	**Eielson Array**	**147.55**	**314**	PKPbc			**PKPbc**	**19 33 23.5**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=120,slow=1.4,SNR=6.4								
SONM	**Songino Array**	**153.17**	**88**	PKPbc			**PKPbc**	**19 33 36.7**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=224,slow=3.4,SNR=5.2								

IDC 19 19:18:16.3±1.5,55.00S×31.84W,h0km,mb3.6/3, mbtmp3.7/3,Error ellipse: s-maj=59.0km s-min=35.2km az=58.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SNAA	**Sanae**	**20.81**	**154**	P			P	19 22 59.3	+0.3
	1.1nm,0.7s,baz=321,slow=11,SNR=3.3								
	1.1nm,0.7s								
LPAZ	**La Paz**	**47.63**	**310**	P			P	19 26 55.2	+0.4
	1.2nm,0.6s,baz=135,slow=4.3,SNR=2.9								
	1.2nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.55**	**34**	P			P	19 29 51.1	+0.2
	0.3nm,0.5s,baz=200,slow=5.9,SNR=4.5								
	0.3nm,0.5s								
ILAR	**Eielson Array**	**147.45**	**314**	PKPbc		PKPdf		19 37 59.1	+1.0
	0.8nm,0.7s,baz=121,slow=1.7,SNR=5.0								

*IDC **19** 19:28:57.6±1.2,55.11S×31.81W,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=55.2km s-min=28.2km az=73.0*
ISC 19 19:28:59.2±1.0,55.15S±0.2×31.9W±0.3,h10km,n14, σ1°48/9,mb3.9/3,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VNA3	**Neumayer Olymp**	**18.85**	**158**	P			**Pn**	**19 33 21.3**	**+1.8**
VNA2	**Neumayer--Watz**	**19.15**	**155**	P			**Pn**	**19 33 24.8**	**+1.8**
	baz=311,slow=13								
SNAA	**Sanae**	**20.75**	**154**	P			**P**	**19 33 37.8**	**-1.9**
SNAA	**Sanae**	**20.75**	**154**	P			**P**	**19 33 39.4**	**-0.3**
	0.7nm,0.8s,baz=326,slow=7.3,SNR=2.6								
	0.7nm,0.8s								
TROLL	**Troll, Antarti**	**22.33**	**152**	P			**P**	**19 33 55.3**	**-1.4**
QSPA	**South Pole Qui**	**35.18**	**180**	P			**P**	**19 35 52.5**	**-0.5**
	1.8nm,1.1s,baz=180,slow=2.0,SNR=3.5								
	1.8nm,1.1s								
LPAZ	**La Paz**	**47.67**	**310**	P			**P**	**19 37 36.9**	**+0.5**
	0.8nm,0.5s,baz=166,slow=4.2,SNR=2.5								
	0.8nm,0.5s								
H10S2	**ASCENSION HYDR**	**48.00**	**23**	T			T	20 29 42.2	
	baz=27,slow=74,SNR=6.1								
H10S3	**ASCENSION HYDR**	**48.00**	**23**	T			T	20 29 38.4	
	baz=193,slow=74,SNR=17								
H10N3	**ASCENSION HYDR**	**49.11**	**23**	T			T	20 31 08.1	
	baz=192,slow=75,SNR=30								
H10N1	**ASCENSION HYDR**	**49.11**	**23**	T			T	20 31 02.9	
	baz=192,slow=75,SNR=29								
H10N2	**ASCENSION HYDR**	**49.13**	**23**	T			T	20 31 05.8	
	baz=192,slow=75,SNR=33								
TORD	**Torodi Ar. Bea**	**73.63**	**34**	P			**P**	**19 40 32.8**	**+0.1**
	0.3nm,0.6s,baz=213,slow=5.5,SNR=1.7								
	0.3nm,0.6s								
ILAR	**Eielson Array**	**147.50**	**314**	PKPbc			**PKPbc**	**19 48 41.1**	**-0.8**
	0.6nm,0.9s,baz=112,slow=1.5,SNR=4.6								

*IDC **19** 19:39:04.1±0.9,55.14S×30.78W,h0km,mb3.9/6, mbtmp3.9/6,Error ellipse: s-maj=43.2km s-min=20.4km az=72.0*
ISC 19 19:39:05.8±0.8,55.11S±0.1×30.8W±0.3,h10km,n12, σ0°93/12,mb4.0/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VNA1	**Neumayer--Stat**	**18.44**	**156**	P			**Pn**	**19 43 21.9**	**+0.9**
VNA3	**Neumayer Olymp**	**18.57**	**159**	P			**Pn**	**19 43 23.4**	**+0.7**
VNA2	**Neumayer--Watz**	**18.84**	**156**	P			**P**	**19 43 25.2**	**-0.2**
	baz=314,slow=11								
SNAA	**Sanae**	**20.43**	**155**	P			**P**	**19 43 42.4**	**-0.4**
SNAA	**Sanae**	**20.43**	**155**	P			**P**	**19 43 42.5**	**-0.4**
	1.1nm,0.8s,baz=318,slow=11,SNR=4.6								
	1.1nm,0.8s								
CPUP	**Villa Florida**	**34.69**	**315**	P			**P**	**19 45 57.0**	**+1.4**
	1.6nm,0.7s,baz=180,slow=15,SNR

GAR					Sn		Sn	20 02 29.6	+0.7
CHGR	Chuyangaron	2.51	303		Pn		Pn	20 02 08.1	+1.8
CHGR					Sn		Sn	20 02 38.2	0.0
KBL	Kabul	3.58	220		Pn		Pn	20 02 22.0	+2.1
KBL					Sn		Sn	20 03 04.1	+1.6
CHCP	Chirah Chowk	3.82	162		P		Pn	20 02 24.9	+1.9
KSH	Kashi	3.92	55		P		Pn	20 02 20.3	-4.0
KSH					S		Sn	20 03 00.5	-10
KSH					smax		smax		
	comp=N,1μm,0.6s								
KSH					smax		smax		
	comp=E,1μm,0.5s								
TAS	Tashkent	4.47	335				Pn	20 02 31.3	-0.1
TAS					Sn		Sn	20 03 20.9	-2.2
AML	Almayashu	5.02	16		P		Pn	20 02 39.8	+0.8
	SNR=303								
IUG	Iuzhnay	5.03	344		*e*P		Pn	20 02 42.1	+3.2
	753nm,0.4s								
IUG					*e*S		Sn	20 03 34.3	-2.2
	624nm,0.5s								
CHM	Chimkent	5.29	342		*e*P		Pn	20 02 46.3	+4.0
	74nm,0.3s								
CHM					*e*S		Sn	20 03 41.8	-0.8
	630nm,0.4s								
SARP	Sargodha	5.42	173		P		Pn	20 02 44.0	0.0
EKS2	Erkin-Say	5.55	15		P		Pn	20 02 46.9	+1.1
	SNR=43								
DZA	Taraz	5.59	356		*e*P		Pn	20 02 49.9	+3.7
	151nm,0.3s								
DZA					*e*S		Sn	20 03 47.9	-1.8
	913nm,0.3s								
AAK	Ala-Archa	5.70	20		P		Pn	20 02 49.0	+1.3
	SNR=52								
AAK	Ala-Archa	5.70	20		Pn		Pn	20 02 48.6	+0.8
AAK					Sn		Sn	20 03 49.3	-3.1
THN	Thein Dam	5.81	146		*e*P		Pn	20 02 49.7	+0.5
THN					*e*S		Sn	20 03 52.0	-3.0
KBK	Karagaybulak	5.85	23		P		Pn	20 02 50.9	+1.1
	SNR=21								
KK31	Karatay Array	5.88	350		Pn		Pn	20 02 51.1	+1.1
KK31					Sn		Sn	20 03 52.9	-3.5
KK31	Karatay Array	5.88	350		⇑P		Pn	20 02 48.3	-1.7
	9.5nm,0.2s,baz=159,slow=10,SNR=520								
KK31					⇑S		Sn	20 03 53.0	-3.5
	94nm,0.3s,baz=182,slow=24,SNR=37								
KKAR	Karatay Array	5.88	350				Pn	20 02 51.2	+1.2
KKAR					Sn		Sn	20 03 53.0	-3.5
ULHL	Ulahol	5.98	33		P		Pn	20 02 51.8	+0.2
	SNR=20								
CHMS	Chumysh	6.10	20		P		Pn	20 02 53.8	+0.7
	SNR=48								
CHMS	Chumysh	6.10	20		⇑P		Pn	20 02 53.5	+0.5
	54nm,0.8s								
CHMS					⇑S		Sn	20 03 59.0	-3.0
	78nm,0.7s								
USP	Ospenovka	6.29	18		P		Pn	20 02 55.6	+0.2
	SNR=23								
TKM2	Tokmak 2	6.30	26		P		Pn	20 02 56.4	+0.6
	SNR=21								
TKM2	Tokmak 2	6.30	26		⇓P		Pn	20 02 56.1	+0.3
	13nm,0.7s								
TKM2					⇑S		Sn	20 04 05.4	-1.5
	27nm,1.1s								
SGDS	Sogindy	6.49	18		*e*P		Pn	20 03 01.0	+2.7
	6.2nm,0.5s								
SGDS					*e*S		Sn	20 04 07.0	-4.3
	20nm,0.8s								
KST	Kastek	6.54	28		*e*P		Pn	20 03 03.0	+4.1
	6.1nm,0.6s								
KST					*e*S		Sn	20 04 10.4	-2.1
	28nm,0.5s								
DGS	Degeres	6.64	26		*e*P		Pn	20 03 04.5	+4.2
	11nm,0.3s								
DGS					*e*S		Sn	20 04 12.4	-2.6
	19nm,0.7s								
MTBS	Maitube	6.79	30		*e*P		Pn	20 03 07.9	+5.6
	6.3nm,0.5s								
MTBS					*e*S		Sn	20 04 18.1	-0.3
	14nm,0.3s								
BHK	Bhakra	6.99	146		*e*P		Pn	20 03 04.3	-0.6
BHK					*e*S		Sn	20 04 19.4	-3.8
KRBS	Karabastau	7.01	23		*e*P		Pn	20 03 10.8	+5.6
	3.3nm,0.4s								
KRBS					*e*S		Sn	20 04 23.5	-0.3
	8.3nm,1.0s								
MDOK	Medeo	7.07	33		⇑P		Pn	20 03 06.2	+0.1
	14nm,0.7s								
MDOK					⇓S		Sn	20 04 27.3	+2.0
	6.3nm,0.5s								
KOTS	Kotyrbulak	7.16	33		*e*P		Pn	20 03 15.1	+7.9
	17nm,0.5s								
KOTS					*e*S		Sn	20 04 30.8	+3.4
	17nm,0.5s								
SMLA	Simla	7.58	143		*e*P		Pn	20 03 11.8	-1.0
SMLA					*e*S		Sn	20 04 30.9	-6.4
SMLA					IAML			20 04 34.4	
	comp=E,383nm,0.5s								
SMLA					IAML			20 04 35.0	
	comp=N,156nm,0.4s								
SMLA					IAML			20 04 36.9	
	comp=E,298nm,0.5s								
SMLA					IAML			20 04 38.8	
	comp=N,191nm,0.5s								
HRA	Herat	8.32	252		Pn		Pn	20 03 22.2	-0.6
KUDL	Kundal	9.94	156		*e*P		Pn	20 03 41.4	-2.7
KUDL					*e*S		Sn	20 05 24.2	-10
PTH	Pithoragarh	10.43	135		*e*P		Pn	20 03 48.2	-2.6
GEYT	Alibeck	10.91	277		P		Pn	20 03 55.6	-1.3
	comp=N,1.1nm,0.3s,baz=122,slow=9.3,SNR=8.1								
GEYT					S		Sn	20 05 51.0	-6.6
	comp=N,1.2nm,0.4s,baz=90,slow=13,SNR=2.1								
GEYT	Alibeck	10.91	277		Pn		Pn	20 03 56.8	-0.2
GYA0B	ALIBECK ARRAY	10.91	277		Pn		Pn	20 03 55.8	-1.1
GYA0B	ALIBECK ARRAY	10.91	277		⇓P		Pn	20 03 57.9	+0.9
GYA0B					⇑S		Sn	20 06 02.7	+5.1
OTUK	Ortayu	10.94	2		⇓P		Pn	20 03 56.2	-1.0
	comp=N,8.4nm,0.7s								
OTUK					⇑S		Sn	20 05 56.9	-1.2
	comp=N,5.8nm,0.9s								
AJM	Ajmer	11.05	167		*e*P		Pn	20 03 57.8	-1.2
MAKZ	Makanchi	12.11	35				Pn	20 04 11.4	-1.1
MK31	Makanchi Array	12.24	36		Pn		Pn	20 04 13.3	-1.0
MKAR	Makanchi Array	12.24	36		P		Pn	20 04 12.0	-2.2
	comp=N,2.6nm,0.8s,baz=224,slow=15,SNR=19								
MKAR	Makanchi Array	12.24	36		Pn		Pn	20 04 13.3	-1.0
DANN	Dangsing	13.41	128		*e*P		Pn	20 04 27.2	-2.6
	comp=N,35nm,0.3s								
WMQ	Urumqi	13.68	57		*e*P		Pn	20 04 34.4	+1.6
KURBB	Kurchatov Arra	14.14	18		P		Pn	20 04 36.1	-2.4
	comp=N,2.3nm,0.3s,baz=209,slow=12,SNR=8.2								
GKN	Gorkha	14.21	127		*e*P		Pn	20 04 36.9	-2.8
	comp=N,39nm,0.3s								
KURK	Kurchatov	14.25	18		Pn		Pn	20 04 40.3	+0.4
AB31	Akbulak array	14.73	328		⇓P		P	20 04 48.6	+0.6
	comp=N,2.1nm,0.3s,baz=141,slow=12,SNR=205								
AB31					S		Sn	20 07 27.5	-1.7
	comp=N,5.1nm,0.4s,baz=140,slow=24,SNR=14								
ABKAR	Akbulak array	14.73	328				Pn	20 04 45.1	-0.8
ABKAR	Akbulak array	14.73	328				Pn	20 04 45.0	-0.8
KKN	Kakani	14.77	126		*e*P		Pn	20 04 43.8	-2.9
DMN	Daman	14.78	127		*e*P		Pn	20 04 43.6	-3.3
	comp=N,22nm,0.3s								
PKIN	Phulchoki	14.99	126		*e*P		Pn	20 04 46.7	-2.8
	comp=N,17nm,0.2s								
PKI	Pulchoki	15.00	126		*e*P		Pn	20 04 46.7	-3.0
	comp=N,17nm,0.3s								
GUN	Gumba	15.07	124		*e*P		Pn	20 04 48.8	-1.9
	comp=N,24nm,0.4s								
BRVK	Borovoye	15.79	357				Pn	20 04 58.4	-0.5
BRVK					IAmb		IAmb	20 05 00.5	
	comp=Z,12nm,0.7s								
AKTO	Aktyubinsk	16.44	327		P		Pn	20 05 05.8	-1.1
	comp=Z,3.9nm,0.4s,baz=148,slow=8.8,SNR=18								
AKTO					S		S	20 07 59.8	-10
	comp=Z,1.1nm,0.5s,baz=126,slow=20,SNR=1.7								
AKTO	Aktyubinsk	16.44	327		⇓P		P	20 05 10.4	+3.5
	comp=Z,4.6nm,0.7s								
AKTO					⇑S		Sn	20 08 09.5	-0.7
	comp=Z,9.8nm,0.8s								
WSAR	Wadi Sarin	18.05	223		P		P	20 05 22.9	-1.9
	comp=Z,6.2nm,1.0s,baz=29,slow=5.0,SNR=1.9								
UOSS	Minazif	18.17	232		P		P	20 05 27.0	+0.9
ZALV	Zalesovo Beam	18.90	24		P		P	20 05 34.2	+0.4
	comp=Z,12nm,0.4s,baz=225,slow=9.7,SNR=58								
ZALV	Zalesovo Beam	18.90	24		P		P	20 05 33.5	-0.3
HYBB	Hyderabad (bro	20.68	162		*e*P		P	20 05 54.8	+1.5
ARU	Arti	21.10	339		P		P	20 05 58.2	+0.8
	comp=Z,4.2nm,0.5s,baz=154,slow=8.4,SNR=12								
ARU					S		S	20 09 48.9	+5.5
	comp=Z,1.0nm,0.3s,baz=135,slow=22,SNR=1.6								
	comp=Z,4.2nm,0.5s								
ARU	Arti	21.10	339		P		P	20 05 57.0	-0.4
ARU					IAmb		IAmb	20 05 59.6	
	comp=Z,7.7nm,0.9s								
RAYN	Ar Rayn	26.44	246		P		P	20 06 49.8	+1.8
RAYN					IAmb		IAmb	20 06 55.8	
	comp=Z,3.9nm,0.5s								
SONM	Songino Array	27.32	56		P		P	20 06 56.1	+0.3
	comp=Z,0.4nm,0.5s,baz=263,slow=10,SNR=4.6								
	comp=Z,0.4nm,0.5s								
PZH	PanZhiHua	27.47	104		P		P	20 07 00.3	+3.1
PZH					pmax		pmax		
	comp=Z,10.0nm,1.1s								
HHC	Hu-ho-hao-te	30.85	71		*e*P		P	20 07 28.6	+1.6
AKASG	Malin Array Be	32.98	308		P		P	20 07 46.5	+1.2
	comp=Z,0.2nm,0.3s,baz=106,slow=7.7,SNR=1.5								
	comp=Z,0.2nm,0.3s								
NRIK	Noril'sk	33.21	10		P		P	20 07 47.6	+0.5
	comp=Z,3.7nm,0.6s,baz=207,slow=5.1,SNR=4.5								
	comp=Z,3.7nm,0.6s								
FIA1	FINESS Array S	37.20	325		P		P	20 08 21.7	+0.4
FINES	FINESS Array B	37.20	325		P		P	20 08 22.5	+1.2
	comp=Z,1.0nm,0.4s,baz=120,slow=8.6,SNR=12								
	comp=Z,1.0nm,0.4s								
FINES	FINESS Array B	37.20	325		P		P	20 08 22.1	+0.8
ARCES	ARCESS Array B	40.66	337		P		P	20 08 51.5	+1.5
	comp=Z,0.7nm,0.5s,baz=116,slow=8.5,SNR=12								
	comp=Z,0.7nm,0.5s								
ARCES	ARCESS Array B	40.66	337		P		P	20 08 50.0	-0.1
ARCES					IAmb		IAmb	20 09 02.8	
	comp=Z,5.0nm,1.5s								
GSI	Gunungsitoli	42.97	140		P		P	20 09 10.0	+0.6
NB201	NORSAR Array S	44.11	323		P		P	20 09 18.9	+0.9
NB201					IAmb		IAmb	20 09 48.6	
	comp=Z,10nm,1.3s								
NB2	NORSAR Subarra	44.15	322		P		P	20 09 19.2	+0.9
	comp=Z,0.4nm,0.4s,baz=97,slow=7.9								
NOA	NORSAR Array B	44.15	322		P		P	20 09 18.8	+0.4
	comp=Z,0.6nm,0.7s,baz=94,slow=7.6,SNR=8.6								
	comp=Z,0.6nm,0.7s								
NC204	NORSAR Array S	44.38	323		P		P	20 09 21.0	+0.8
NC204					IAmb		IAmb	20 09 39.9	
	comp=Z,13nm,1.5s								
TIXI	Tiksi	44.77	22		P		P	20 09 23.6	+0.6
KONO	Kongsberg	44.89	320		P		P	20 09 25.1	+1.0
KONO					IAmb		IAmb	20 09 36.5	
	comp=Z,6.7nm,1.1s								
ESDC	Sonseca Array	57.68	298		P		P	20 11 00.5	+0.7
	comp=Z,0.2nm,0.4s,baz=58,slow=6.7,SNR=4.3								
	comp=Z,0.2nm,0.4s								
TOA0	Torodi Ar. Sit	66.41	269		P		P	20 11 57.1	-1.2
TOA0					IAmb		IAmb	20 12 30.7	
	comp=Z,7.1nm,1.5s								
TORD	Torodi Ar. Bea	66.41	269		P		P	20 11 57.2	-1.0
	comp=Z,0.4nm,0.4s,baz=52,slow=6.1,SNR=12								
	comp=Z,0.4nm,0.4s								
TORD	Torodi Ar. Bea	66.41	269		P		P	20 11 56.3	-1.9
DHY	Denali Highway	75.16	17		P		P	20 12 50.6	+0.1
ASAR	Alice Springs	84.17	125		P		P	20 13 38.1	-1.4
	comp=Z,0.3nm,0.8s,baz=302,slow=5.4,SNR=2.0								
	comp=Z,0.3nm,0.8s								

*NOU **19** 20:08:44.6,35˚.84S×178˚.83E,h300km,MLv4.8/8, Off E. Coast of N. Island, N.Z.*
*WEL **19** 20:08:57.9±1.0,36˚.5±8˚×17˚.8E±˚,h204km±5km, M4.0/66, ML4.2/48, MLv4.0/66, Error ellipse: s-maj=0.0km s-min=0.0km az=44.3*

ISC 19 20:08:54.2±2.2,36˚.29S±0˚.09×178˚.05E±0˚.09,h221km±8km, n112,σ1§92/103,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
MXZ	Matakaoa Point	1.29	171	P		Pn	20 09 29.6			+1.5
MXZ				S		S	20 09 53.8			-0.8
WSRZ	White Island S	1.41	209	P		Pn	20 09 29.9			+0.9
WIZ	White Island	1.41	209	P		Pn	20 09 30.2			+1.1
HAZ	Te Kaha	1.48	188	P		Pn	20 09 30.6			+1.1
HAZ				S		S	20 09 56.7			-0.6
WMGZ	Waiomatatini S	1.56	169	P		Pn	20 09 32.6			+2.4
PKGZ	Pakihiroa	1.60	179	P		Pn	20 09 32.7			+2.0
PKGZ				S		S	20 09 58.7			-0.4
RUGZ	Raukumara Rang	1.70	190	P		Pn	20 09 32.3			+0.7
RUGZ				S		S	20 09 58.7			-2.2
PUZ	Puketiti	1.79	175	P		Pn	20 09 34.3			+1.9
PUZ				S		S	20 10 02.6			+0.5
TWGZ	Tauwhareparae	1.89	182	P		Pn	20 09 35.8			+2.5
TWGZ				S		S	20 10 05.0			+1.2
KUZ	Kuaotunu	1.93	256	P		Pn	20 09 33.6			0.0
OPRZ	Ohinepanea	1.96	217	P		Pn	20 09 35.8			+1.9
MARZ	Manawahe	2.02	212	P		Pn	20 09 37.0			+2.5
MWZ	Matawai	2.08	191	P		Pn	20 09 36.4			+1.2
MWZ				S		S	20 10 07.2			0.0
GRZ	Great Barrier	2.09	270	P		Pn	20 09 34.8			-0.4
EDRZ	Edgecumbe	2.09	209	P		Pn	20 09 38.8			+3.5
URZ	Urewera	2.10	200	P		Pn	20 09 36.6			+1.3
URZ				S		S	20 10 07.7			+0.4
URZ	Urewera	2.10	200	P		Pn	20 09 37.3			+2.0
TKGZ	Te Karaka	2.15	184	P		Pn	20 09 38.0			+2.3
TKGZ				S		S	20 10 08.5			+0.2
CNGZ	Carnagh Statio	2.20	177	P		Pn	20 09 39.2			+3.0
CNGZ				S		S	20 10 05.3			-3.7
MKRZ	Makatiti	2.24	214	P		Pn	20 09 41.5			+4.8
KARZ	Kaharoa	2.25	219	P		Pn	20 09 39.1			+2.3
OMRZ	Omania	2.25	216	P		Pn	20 09 40.9			+4.1
RAGZ	Rawiri	2.26	193	P		Pn	20 09 39.2			+2.2
KMRZ	Kaimai	2.29	227	P		Pn	20 09 39.4			+2.2
TARZ	Mount Tarawera	2.30	212	P		Pn	20 09 41.7			+4.3
RRRZ	Republican Roa	2.38	210	P		Pn	20 09 42.5			+4.3
MUGZ	Murupara	2.41	205	P		Pn	20 09 40.8			+2.3
RIGZ	Rimuhau	2.42	185	P		Pn	20 09 40.7			+2.1
MKAZ	Moumakai	2.46	250	P		Pn	20 09 40.1			+1.2
HSRZ	Hossack Road	2.48	215	P		Pn	20 09 43.8			+4.7
TOZ	Tahuroa Road	2.50	234	P		Pn	20 09 41.6			+2.3
SNGZ	Shannon Statio	2.55	192	P		Pn	20 09 41.8			+1.9
PRRZ	Plateau Road	2.57	210	P		Pn	20 09 43.1			+2.9
GRRZ	Galatos Road	2.57	216	P		Pn	20 09 44.5			+4.3
MBAZ	Motutapu North	2.58	258	P		Pn	20 09 41.3			+1.0
ABAZ	Army Bay	2.61	262	P		Pn	20 09 41.4			+0.8
ALRZ	Allen Road	2.64	210	P		Pn	20 09 43.9			+3.0
MTHZ	Maungataniwha	2.73	200	P		Pn	20 09 44.1			+2.2
RAHZ	Arahi	2.73	196	P		Pn	20 09 44.2			+2.3
KNZ	Kokohu	2.75	186	P		Pn	20 09 44.1			+2.0
KUTZ	Kaahu Road	2.82	218	P		Pn	20 09 47.2			+4.2
MRHZ	Matea Rd	2.85	206	P		Pn	20 09 45.5			+2.2
TLZ	Tolley Road	2.85	224	P		Pn	20 09 46.5			+3.2
WHHZ	Waihua	2.86	193	P		Pn	20 09 45.9			+2.6
MHGZ	Mahia Peninsul	2.86	182	P		Pn	20 09 46.0			+2.6
NMHZ	Naumai	2.97	199	P		Pn	20 09 47.5			+2.8
WCZ	Waipu Caves	3.02	276	P		Pn	20 09 45.5			+0.3
WATZ	Wairara	3.04	217	P		Pn	20 09 48.0			+3.5
ARHZ	Arapaoanui	3.08	195	P		Pn	20 09 48.3			+2.5
BKZ	Black Stump Fm	3.13	203	P		Pn	20 09 48.5			+2.1
BKZ	Black Stump Fm	3.13	203	P		Pn	20 09 49.7			+3.3
RATZ	Rangitukua	3.15	214	P		Pn	20 09 50.0			+3.3
KATZ	Kakaramea	3.27	214	P		Pn	20 09 52.0			+3.9
HIZ	Hauiti	3.38	228	P		Pn	20 09 52.9			+3.7
HIZ	Hauiti	3.38	228	P		Pn	20 09 53.0			+3.7
NTVZ	North Tongarir	3.38	213	P		Pn	20 09 52.3			+2.9
TMVZ	Te Maari	3.38	213	P		Pn	20 09 52.0			+2.6
KWHZ	Kaweka Forest	3.38	202	P		Pn	20 09 51.6			+2.2
KRVZ	Karewarewa	3.39	214	P		Pn	20 09 52.5			+3.0
ETVZ	East Tongariro	3.39	212	P		Pn	20 09 52.1			+2.5
WTVZ	West Tongariro	3.43	214	P		Pn	20 09 52.5			+2.5
NNVZ	North Ngauruho	3.43	213	P		Pn	20 09 52.9			+2.8
OTVZ	Oturere	3.44	213	P		Pn	20 09 52.6			+2.4
CKHZ	Cape Kidnapper	3.45	193	P		Pn	20 09 52.4			+2.2
TWVZ	Taurewa	3.46	216	P		Pn	20 09 53.0			+2.6
SNVZ	South Ngauruho	3.46	213	P		Pn	20 09 53.0			+2.5
NGZ	Ngauruhoe	3.47	213	P		Pn	20 09 53.3			+2.7
TUVZ	Tukino	3.53	212	P		Pn	20 09 53.6			+2.4
BHHZ	Black Hill Sta	3.56	206	P		Pn	20 09 53.1			+1.6
FWVZ	Far West T-bar	3.56	213	P		Pn	20 09 54.0			+2.4
WHVZ	Whangaehu Hut	3.57	212	P		Pn	20 09 54.1			+2.4
DRZ	Dome Shelter	3.57	213	P		Pn	20 09 55.8			+3.9
WNVZ	Wahianoa	3.60	212	P		Pn	20 09 54.2			+2.2
KRHZ	Kereru	3.60	201	P		Pn	20 09 53.5			+1.5
MOVZ	Moawhango	3.60	210	P		Pn	20 09 53.5			+1.5
KAHZ	Kahuranaki	3.62	194	P		Pn	20 09 54.4			+2.2
PKVZ	Pokaka	3.68	215	P		Pn	20 09 55.4			+2.5
MTVZ	Mangateitei	3.70	213	P		Pn	20 09 55.8			+2.5
VRZ	Vera Road	3.85	222	P		Pn	20 09 59.4			+4.5
PXZ	Pawanui	3.85	194	P		Pn	20 09 56.6			+1.7
PNHZ	Pukenui	3.90	201	P		Pn	20 09 56.7			+1.2
WPHZ	Waipukurau	3.98	198	P		Pn	20 09 58.0			+1.6
TSZ	Takapari Road	4.11	203	P		Pn	20 09 59.0			+1.0
PRHZ	Porangahau	4.12	195	P		Pn	20 09 59.9			+1.7
WAZ	Wanganui	4.22	214	P		Pn	20 10 01.6			+2.1
DVHZ	Dannevirke	4.27	200	P		Pn	20 10 01.1			+1.1
LREZ	Lake Rotokare	4.28	221	P		Pn	20 10 04.4			+4.2
NEZ	North Egmont	4.32	225	P		Pn	20 10 05.3			+4.6
PKE	Pukeiti	4.33	227	P		Pn	20 10 05.3			+4.5
ANWZ	Angora Road	4.34	196	P		Pn	20 10 02.6			+1.7
KHEZ	Kahui Hut	4.38	226	P		Pn	20 10 05.7			+4.2
POWZ	Post Office Ro	4.47	203	P		Pn	20 10 03.7			+1.3
PRWZ	Pori Road	4.56	200	P		Pn	20 10 05.1			+1.5
BFZ	Birch Farm	4.61	197	P		Pn	20 10 05.2			+1.0
BFZ	Birch Farm	4.61	197	P		Pn	20 10 05.2			+1.0
MRZ	Mangatainoka R	4.78	203	P		Pn	20 10 06.7			+0.5
TIWZ	Tintock	4.79	200	P		Pn	20 10 07.5			+1.0
CPWZ	Castlepoint	4.84	197	P		Pn	20 10 09.0			+2.0
HOWZ	Holdsworth Sta	5.01	203	P		Pn	20 10 09.4			+0.2
OGWZ	Otaki Gorge	5.05	206	P		Pn	20 10 10.3			+0.6
TMWZ	Te Maipa	5.10	199	P		Pn	20 10 10.9			+0.6
KIW	Kapiti Island	5.18	207	P		Pn	20 10 11.5			+0.1
MTW	Mount Morrison	5.25	201	P		Pn	20 10 12.3			+0.1
CAW	Cannon Point	5.35	205	P		Pn	20 10 13.4			0.0
TRWZ	Traveller	5.42	199	P		Pn	20 10 15.1			+0.7
PAWZ	Paruwai Farm	5.48	201	P		Pn	20 10 15.2			+0.1
DUWZ	D'Urville Isla	5.55	214	P		Pn	20 10 15.9			-0.1
WEL	Wellington	5.61	206	P		Pn	20 10 16.7			+0.1
SNZO	South Karori	5.65	206	P		Pn	20 10 17.2			0.0
QRZ	Quartz Range	6.26	222	P		Pn	20 10 25.3			+0.3
KHZ	Kahutara	7.04	208	P		Pn	20 10 34.5			-0.5
RPZ	Rata Peaks	9.15	214	P		Pn	20 11 01.8			-0.3

*IDC **19** 20:10:41.1±0.7,55˚.06S×31˚.23W,h0km,mb4.1/7, mbtmp4.1/7, Error ellipse: s-maj=29.6km s-min=19.4km az=69.0*
*NEIC **19** 20:10:43.1±1.6,55˚.06S±0˚.09×31˚.5W±0˚.1,h10km±2km, mb4.4/12, Error ellipse: s-maj=16.5km s-min=8.7km az=336.0*

ISC 19 20:10:42.8±0.6,55˚.04S±0˚.09×31˚.47W±0˚.09,h10km,n37, σ1§04/32,mb4.3/9,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
HOPE	Hope Point	3.01	282			Pn	20 11 31.2			+0.7
HOPE				Sn		Sn	20 11 04.3			-2.3
ORCD	Orcadas	9.08	226			Pn	20 12 53.1			-0.6
VNA1	Neumayer--Stat	18.68	156	P		Pn	20 15 01.8			+0.7
VNA3	Neumayer Olymp	18.80	158	P		Pn	20 15 02.2			-0.3
VNA2	Neumayer--Watz	19.09	156	P		Pn	20 15 05.0			-0.9
	baz=312,slow=11									
SNAA	Sanae	20.68	155	P		P	20 15 22.4			-0.2
SNAA	Sanae	20.68	155	P		P	20 15 22.0			-0.6
	3.0nm,0.8s,baz=305,slow=9.9,SNR=16									
	3.0nm,0.8s									
SNAA	Sanae	20.68	155	P		P	20 15 21.9			-0.7
TROLL	Troll, Antarti	22.25	153	P		P	20 15 39.0			-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.73**	**284**		**Pn**	**20 14 39.8**	**-1.1**
ORCD	**Orcadas**	**8.90**	**225**	Pn	Pn	20 16 02.1	-3.5
VNA1	**Neumayer--Stat**	**18.83**	**155**	P	**Pn**	**20 18 19.7**	**+2.5**
VNA3	**Neumayer Olymp**	**18.93**	**158**	P	**P**	**20 18 18.1**	**+0.2**
VNA2	**Neumayer--Watz** baz=316,slow=10.0	**19.23**	**155**	P	**Pn**	**20 18 24.2**	**+2.2**
SNAA	**Sanae**	**20.83**	**154**	P	**P**	**20 18 38.4**	**-0.1**
SNAA	**Sanae** 1.4nm,0.8s,baz=290,slow=13,SNR=8.3 1.4nm,0.8s	**20.83**	**154**	P	**P**	**20 18 38.5**	**-0.1**
SNAA	**Sanae**	**20.83**	**154**	P	**P**	**20 18 36.1**	**-2.4**
TROLL	**Troll, Antarti**	**22.41**	**153**	P	**P**	**20 18 56.4**	**+0.8**
BELA	**Belgrano 2**	**22.99**	**181**	P	**P**	**20 19 01.4**	**-0.1**
PLTB	**Pedras Altas**	**27.84**	**318**	P	**P**	**20 19 45.3**	**-1.3**
PLTB	comp=Z,15nm,1.4s			IAmb	IAmb	20 20 01.7	
CPUP	**Villa Florida** comp=Z,5.3nm,0.8s,baz=146,slow=8.8,SNR=9.6 comp=Z,5.3nm,0.8s	**34.14**	**317**	P	**P**	**20 20 41.7**	**-0.3**
CPUP	**Villa Florida**	**34.14**	**317**	P	**P**	**20 20 42.2**	**+0.1**
CPUP	comp=Z,9.7nm,1.1s			IAmb	IAmb	20 20 43.5	
MT09	**Talagante**	**34.41**	**292**	P	**P**	**20 20 44.3**	**-0.2**
QSPA	**South Pole Qui** comp=Z,0.8nm,0.7s,baz=159,slow=7.4,SNR=1.9 comp=Z,0.8nm,0.7s	**35.25**	**180**	P	**P**	**20 20 51.6**	**+0.1**
CO02	**Combarbal**	**36.41**	**295**	P	**P**	**20 21 02.5**	**+0.7**
CO01	**Juntas del Tor**	**36.92**	**297**	P	**P**	**20 21 07.2**	**+0.9**
CO01	comp=Z,18nm,1.4s			IAmb	IAmb	20 21 18.4	
AC05	**El Transito**	**37.93**	**298**	P	**P**	**20 21 15.1**	**+0.4**
GO02	**Mina Guanaco**	**40.62**	**302**	P	**P**	**20 21 38.1**	**+0.7**
LVC	**Limon Verde** comp=Z,7.3nm,0.8s,baz=210,slow=5.6,SNR=6.4 comp=Z,7.3nm,0.8s	**42.45**	**305**	P	**P**	**20 21 52.9**	**+0.4**
LVC	**Limon Verde**	**42.45**	**305**	P	**P**	**20 21 52.2**	**-0.3**
LVC	comp=Z,14nm,1.1s			IAmb	IAmb	20 22 05.8	
MAW	**Mawson** comp=Z,3.1nm,1.0s,baz=260,slow=11,SNR=5.2 comp=Z,3.1nm,1.0s	**42.57**	**146**	P	**P**	**20 21 50.8**	**-1.7**
MAW	**Mawson**	**42.57**	**146**	P	**P**	**20 21 51.3**	**-1.2**
PB01	**IPOC Station P**	**44.07**	**305**	P	**P**	**20 22 05.9**	**+0.6**
PB01	comp=Z,15nm,0.9s			IAmb	IAmb	20 22 08.1	
PTLB	**Pontes e Lacer**	**44.72**	**321**	P	**P**	**20 22 10.7**	**+0.3**
PTLB	comp=Z,9.3nm,0.9s			IAmb	IAmb	20 22 11.6	
GO01	**Chusmiza**	**45.12**	**306**	P	**P**	**20 22 15.2**	**+1.1**
GO01	comp=Z,15nm,1.1s			IAmb	IAmb	20 22 22.1	
PB16	**IPOC Station P**	**46.42**	**307**	P	**P**	**20 22 23.7**	**-0.8**
PB16	comp=Z,7.0nm,1.1s			IAmb	IAmb	20 22 39.8	
VNDA	**Vanda** comp=Z,0.8nm,1.0s,baz=222,slow=3.5,SNR=3.3 comp=Z,0.8nm,1.0s	**47.46**	**184**	P	**P**	**20 22 31.1**	**-0.1**
LPAZ	**La Paz** comp=Z,5.8nm,0.7s,baz=158,slow=4.5,SNR=15 comp=Z,5.8nm,0.7s	**47.59**	**310**	P	**P**	**20 22 35.0**	**+1.2**
LPAZ	**La Paz**	**47.59**	**310**	P	**P**	**20 22 35.1**	**+1.4**
LPAZ	comp=Z,5.6nm,0.7s			IAmb	IAmb	20 22 35.8	
H10S2	**ASCENSION HYDR** baz=193,slow=74,SNR=6.9	**47.95**	**23**	T	T	21 14 39.4	
H10S3	**ASCENSION HYDR** baz=27,slow=74,SNR=9.6	**47.95**	**23**	T	T	21 14 39.8	
BOSA	**Boshof** 2.4.5nm,1.1s,baz=191,slow=10,SNR=2.3 comp=Z,4.5nm,1.1s	**48.42**	**81**	P	**P**	**20 22 38.5**	**-1.1**
BOSA	**Boshof**	**48.42**	**81**	P	**P**	**20 22 38.4**	**-1.1**
BOSA	comp=Z,9.7nm,1.3s			IAmb	IAmb	20 22 49.8	
H10N1	**ASCENSION HYDR** baz=192,slow=75,SNR=24	**49.06**	**23**	T	T	21 16 10.7	
H10N3	**ASCENSION HYDR** baz=192,slow=75,SNR=22	**49.06**	**23**	T	T	21 15 58.8	
H10N2	**ASCENSION HYDR** baz=192,slow=75,SNR=18	**49.08**	**23**	T	T	21 16 00.5	
LBTB	**Lobatse** comp=Z,3.7nm,0.8s,baz=212,slow=11,SNR=5.4 comp=Z,3.7nm,0.8s	**51.38**	**79**	P	**P**	**20 23 00.7**	**-1.4**
LBTB	**Lobatse**	**51.38**	**79**	P	**P**	**20 23 01.7**	**-0.4**
LBTB	comp=Z,7.5nm,1.1s			IAmb	IAmb	20 23 03.4	
DBIC	**Dimbokro** comp=Z,5.0nm,0.8s,baz=211,slow=7.3,SNR=4.6 comp=Z,5.0nm,0.8s	**65.48**	**30**	P	**P**	**20 24 40.8**	**+0.5**
TOA0	**Torodi Ar. Sit**	**73.60**	**34**	P	**P**	**20 25 31.3**	**+0.9**
TORD	**Torodi Ar. Bea** comp=Z,2.9nm,0.7s,baz=200,slow=6.4,SNR=14 comp=Z,2.9nm,0.7s	**73.60**	**34**	P	**P**	**20 25 31.1**	**+0.7**
TORD	**Torodi Ar. Bea**	**73.60**	**34**	P	**P**	**20 25 31.3**	**+0.9**
FINES	**FINESS Array B** comp=Z,1.0nm,0.7s,baz=207,slow=12,SNR=1.7	**124.77**	**30**	PKP	**PKPdf**	**20 32 54.7**	**-0.8**
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.6s,baz=251,slow=3.7,SNR=5.3	**127.97**	**114**	PKP	**PKPdf**	**20 33 01.4**	**-1.7**
ZALV	**Zalesovo Beam** comp=Z,3.1nm,0.7s,baz=245,slow=4.5,SNR=14	**144.36**	**65**	PKP	**PKPab**	**20 33 30.9**	**+0.5**
ILAR	**Eielson Array** comp=Z,4.4nm,0.9s,baz=130,slow=2.0,SNR=22	**147.41**	**314**	PKPbc	**PKPdf**	**20 33 39.5**	**+2.3**
SONM	**Songino Array** comp=Z,0.5nm,0.4s,baz=231,slow=6.4,SNR=3.6	**153.39**	**88**	PKPbc	**PKPbc**	**20 33 53.9**	**-0.8**

*IDC **19**20:16:37.3±0.9,55.°05S×30.°73W,h0km,mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=45.9km s-min=23.9km az=74.0*

*NEIC **19**20:16:39.6±2.3,55.°2S±0.°1×31.°5W±0.°1,h10km±2km, mb4.2/7, Error ellipse: s-maj=19.8km s-min=6.7km az=24.0*

ISC 19 20:16:38.6±0.8,55.°0S±0.°1×31.°80W±0.°09,h10km,n28, σ1§76/24,mb3.9/5,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.83**	**284**	Pn	**Pb**	**20 17 28.6**	**-0.6**
HOPE				Sn	**Sb**	**20 18 02.7**	**-1.1**
ORCD	**Orcadas**	**8.94**	**225**	Pn	**Pn**	**20 18 46.9**	**-0.7**
VNA1	**Neumayer--Stat**	**18.76**	**156**	P	**Pn**	**20 20 59.6**	**+1.9**
VNA3	**Neumayer Olymp**	**18.86**	**158**	P	**P**	**20 20 58.1**	**-0.4**
VNA2	**Neumayer--Watz** baz=311,slow=11	**19.16**	**156**	P	**Pn**	**20 21 03.9**	**+1.4**
SNAA	**Sanae**	**20.76**	**154**	P	**P**	**20 21 17.6**	**-1.6**
SNAA	**Sanae** 3.6nm,0.8s,baz=296,slow=11,SNR=9.1 3.6nm,0.8s	**20.76**	**154**	P	**P**	**20 21 17.3**	**-1.8**
SNAA	**Sanae**	**20.76**	**154**	P	**P**	**20 21 17.6**	**-1.6**
SNAA	comp=Z,6.5nm,1.0s			IAmb	IAmb	20 21 26.4	
TROLL	**Troll, Antarti**	**22.33**	**153**	P	**P**	**20 21 35.7**	**-0.4**
QSPA	**South Pole Qui** comp=Z,1.0nm,0.6s,baz=135,slow=8.6,SNR=2.6 comp=Z,1.0nm,0.6s	**35.21**	**180**	P	**P**	**20 23 31.9**	**-0.7**
QSPA	**South Pole Qui**	**35.21**	**180**	P	**P**	**20 23 33.3**	**+0.6**
PB07	**IPOC Station P**	**43.77**	**304**	P	**P**	**20 24 47.2**	**+2.8**
PB01	**IPOC Station P**	**44.16**	**305**	P	**P**	**20 24 50.2**	**+2.8**
PB01	comp=Z,18nm,1.4s			IAmb	IAmb	20 25 29.9	
VNDA	**Vanda** comp=Z,0.4nm,0.8s,baz=180,slow=5.8,SNR=2.2 comp=Z,0.4nm,0.8s	**47.43**	**184**	P	**P**	**20 25 13.7**	**+1.2**
VNDA	**Vanda**	**47.43**	**184**	P	**P**	**20 25 13.9**	**+1.5**
VNDA	comp=Z,1.9nm,1.2s			IAmb	IAmb	20 25 28.1	
LPAZ	**La Paz** comp=Z,2.3nm,0.5s,baz=128,slow=6.2,SNR=7.1 comp=Z,2.3nm,0.5s	**47.69**	**310**	P	**P**	**20 25 20.1**	**+4.2**
LPAZ	**La Paz**	**47.69**	**310**	P	**P**	**20 25 17.1**	**+1.2**
LPAZ	comp=Z,2.9nm,0.6s			IAmb	IAmb	20 25 20.3	
H10S2	**ASCENSION HYDR** baz=191	**47.95**	**23**	T	T	21 16 55.9	
H10S3	**ASCENSION HYDR** baz=29	**47.95**	**23**	T	T	21 16 58.9	
H10N1	**ASCENSION HYDR** baz=199	**49.06**	**23**	T	T	21 18 24.3	
H10N3	**ASCENSION HYDR** baz=199	**49.06**	**23**	T	T	21 18 28.1	
H10N2	**ASCENSION HYDR** baz=199	**49.08**	**23**	T	T	21 18 26.9	
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.7s,baz=204,slow=4.5,SNR=2.9 comp=Z,0.6nm,0.7s	**73.58**	**34**	P	**P**	**20 28 11.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**73.58**	**34**	P	**P**	**20 28 11.7**	**0.0**
TORD	comp=Z,1.7nm,1.1s			IAmb	IAmb	20 28 46.0	
FINES	**FINESS Array B** comp=Z,0.8nm,0.8s,baz=161,slow=13,SNR=1.2	**124.76**	**30**	PKP	**PKPdf**	**20 35 35.6**	**-1.3**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.5s,baz=222,slow=7.2,SNR=3.4	**144.29**	**65**	PKP	**PKPdf**	**20 36 12.4**	**-1.1**
ILAR	**Eielson Array** comp=Z,1.1nm,0.6s,baz=120,slow=1.7,SNR=8.8	**147.51**	**314**	PKPbc	**PKiKP**	**20 36 22.3**	**-1.2**
SONM	**Songino Array** comp=Z,0.2nm,0.3s,baz=215,slow=1.8,SNR=1.8	**153.29**	**88**	PKPbc	**PKPbc**	**20 36 33.7**	**-2.2**

*IDC **19**20:18:34.0±0.8,13.°83N×120.°75E,h117km±10km,mb3.0/5, mbtmp3.4/5, Error ellipse: s-maj=43.9km s-min=17.4km az=56.0*

*MAN **19**20:18:35,13.°89N×120.°84E,h106km,Ms2.9*

ISC 19 20:18:34.2±0.8,13.°81N±0.°05×120.°54E±0.°08,h113km±6km, n16,σ0.°87/23,mb3.3/5,1C-9D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.30**	**255**	**i**P	**Pn**	**20 18 50.8**	**+0.5**
LUBP				eS	**Sn**	**20 19 02.7**	**+0.3**
TGY	**Tagaytay City** 1µm,0.4s,baz=214,slow=3.6,SNR=16	**0.48**	**53**	P	**Pn**	**20 18 51.4**	**0.0**
TGY	2µm,0.4s,baz=209,slow=19,SNR=19			S	**Sn**	**20 19 05.1**	**+0.9**
TGY	**Tagaytay City**	**0.48**	**53**	**i**P	**Pn**	**20 18 51.6**	**+0.2**
TGY				eS	**Sn**	**20 19 04.6**	**+0.3**
MACP	**Maragondon, Ca**	**0.48**	**21**	**i**P	**Pn**	**20 18 51.2**	**-0.1**
MACP				eS	**Sn**	**20 19 03.5**	**-0.6**
PGP	**Puerto Galera**	**0.50**	**127**	**i**P	**Pn**	**20 18 50.6**	**-0.9**
PGP				i S	**Sn**	**20 19 04.1**	**-0.4**
LQP	**Lukban**	**1.01**	**73**	**i**P	**Pn**	**20 18 56.8**	**+0.8**
BOAC	**Boac**	**1.31**	**105**	**i**P	**Pn**	**20 19 00.1**	**+1.0**
SJMP	**San Jose**	**1.45**	**157**	**i**P	**Pn**	**20 19 01.6**	**+0.9**
SJMP				eS	**Sn**	**20 19 21.7**	**+0.9**
BUSP	**Coron**	**1.83**	**191**	**i**P	**Pn**	**20 19 05.5**	**+0.2**
BUSP				eS	**Sn**	**20 19 28.9**	**0.0**
BOLP	**Bolinao**	**2.63**	**347**	**i**P	**Pn**	**20 19 16.0**	**+0.6**
CUYO	**Cuyo Island**	**2.98**	**171**	**i**P	**Pn**	**20 19 20.6**	**+0.6**
CMAR	**Chiang Mai Arr** 0.5nm,0.4s,baz=107,slow=8.1,SNR=5.4 0.5nm,0.4s	**21.25**	**285**	P	**P**	**20 23 12.3**	**+0.8**
SONM	**Songino Array** 0.5nm,0.5s,baz=160,slow=9.8,SNR=4.4 0.5nm,0.5s	**35.91**	**344**	P	**P**	**20 25 22.7**	**-0.9**
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=343,slow=9.0,SNR=1.7 0.2nm,0.5s	**36.18**	**158**	P	**P**	**20 25 23.9**	**-2.2**
ASAR	**Alice Springs** 0.2nm,0.3s,baz=337,slow=7.7,SNR=7.4 0.2nm,0.3s	**39.47**	**161**	P	**P**	**20 25 53.4**	**-0.4**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=115,slow=7.1,SNR=2.5 0.2nm,0.6s	**45.85**	**324**	P	**P**	**20 26 46.2**	**+1.1**

*IDC **19**20:18:50.1±1.2,33.°69S×178.°69W,h0km,mb4.1/4, mbtmp4.2/6,ML4.1/2,MS3.5/1,Error ellipse: s-maj=31.8km s-min=27.2km az=104.0*

*NEIC **19**20:18:53.1±1.0,33.°7S±0.°2×178.°71W±0.°09,h10km±2km, mb4.4/6,Error ellipse: s-maj=31.1km s-min=11.7km az=186.0*

ISC 19 20:18:57.6±1.1,34.°0S±0.°1×178.°8W±0.°2,h50km,n29, σ2§36/30,mb4.2/8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.28**	**212**	Pn	**Pn**	**20 20 02.4**	**+2.2**
URZ	**Urewera** 8.5nm,0.3s,baz=20,slow=4.3,SNR=40	**5.40**	**216**	Pn	**Pn**	**20 20 17.0**	**+1.5**
URZ	4.7nm,0.3s,baz=323,slow=18,SNR=7.4 46nm,0.6s			Sn	**Sn**	**20 21 21.8**	**+5.5**
URZ	**Urewera**	**5.40**	**216**		**Pn**	**20 20 17.7**	**+2.2**
BKZ	**Black Stump Fm**	**6.41**	**214**		**Pn**	**20 20 30.7**	**+1.3**
BFZ	**Birch Farm**	**7.76**	**209**	Pn	**Pn**	**20 20 46.2**	**-1.7**
PLWZ	**Palliser**	**8.91**	**210**	Pn	**Pn**	**20 21 00.1**	**-3.7**
TUWZ	**Tuamarina**	**9.39**	**215**	Pn	**Pn**	**20 21 07.2**	**-3.0**
NNZ	**Nelson**	**9.51**	**218**	Pn	**Pn**	**20 21 07.9**	**-4.0**
THZ	**Tophouse**	**10.15**	**218**	Pn	**Pn**	**20 21 18.8**	**-2.0**
LTZ	**Lake Taylor**	**11.23**	**216**	Pn	**Pn**	**20 21 34.1**	**-1.3**
OXZ	**Oxford**	**11.75**	**215**	Pn	**Pn**	**20 21 41.4**	**-1.1**
RPZ	**Rata Peaks** 0.5nm,0.3s,baz=1.7,slow=9.4,SNR=1.8	**12.51**	**216**	Pn	**Pn**	**20 21 52.6**	**-0.3**
RPZ	0.4nm,0.3s,baz=338,slow=19,SNR=1.8 4.7nm,0.5s			Sn	**Sn**	**20 24 05.3**	**-5.5**
RPZ	**Rata Peaks**	**12.51**	**216**	Pn	**Pn**	**20 21 49.6**	**-3.4**
DZM	**Mont Dzumac** comp=Z,154nm,18.5s,baz=222,slow=32	**17.55**	**309**	LR	LR	20 28 06.9	
EIDS	**Eidsvold**	**27.42**	**280**	P	**P**	**20 24 40.3**	**+1.6**
EIDS	comp=Z,13nm,1.3s			IAmb	IAmb	20 24 44.0	
CTA	**Charters Tower** comp=Z,3.1nm,0.8s,baz=103,slow=3.3,SNR=2.2 comp=Z,3.1nm,0.8s	**33.84**	**285**	P	**P**	**20 25 36.7**	**+1.3**
CTAO	**Charters Tower**	**33.84**	**285**	P	**P**	**20 25 36.3**	**+0.9**
ASAR	**Alice Springs** comp=Z,2.3nm,0.7s,baz=111,slow=7.3,SNR=23 comp=Z,2.3nm,0.7s	**42.34**	**271**	P	**P**	**20 26 46.2**	**-0.7**
WB2	**Warramunga Arr**	**43.63**	**276**	P	**P**	**20 26 57.1**	**-0.3**
WB2	comp=Z,3.8nm,0.8s			IAmb	IAmb	20 26 59.7	
WRA	**Warramunga Arr** comp=Z,2.8nm,0.7s,baz=118,slow=7.2,SNR=21 comp=Z,2.8nm,0.7s	**43.65**	**276**	P	**P**	**20 26 57.1**	**-0.4**
WRA	**Warramunga Arr**	**43.65**	**276**	P	**P**	**20 26 57.5**	**0.0**
WB0	**Warramunga Arr**	**43.69**	**277**	P	**P**	**20 26 57.9**	**+0.1**
WB0	comp=Z,3.9nm,0.7s			IAmb	IAmb	20 26 58.6	
FITZ	**Fitzroy Crossi**	**51.74**	**273**	P	**P**	**20 27 59.5**	**-0.7**
FITZ	comp=Z,7.9nm,1.2s			IAmb	IAmb	20 28 22.8	
QSPA	**South Pole Qui** comp=Z,0.5nm,0.3s,baz=344,slow=3.5,SNR=2.5 comp=Z,0.5nm,0.3s	**56.16**	**180**	P	**P**	**20 28 34.6**	**+2.6**
FINES	**FINESS Array B** comp=Z,2.0nm,0.6s,baz=46,slow=4.1,SNR=20	**148.19**	**337**	PKPbc	**PKPbc**	**20 38 36.4**	**-0.8**
NB2	**NORSAR Subarra** comp=Z,2.2nm,0.5s,baz=15,slow=2.5	**152.13**	**350**	PKP	**PKiKP**	**20 38 46.1**	**-1.0**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.8s,baz=14,slow=4.1,SNR=5.3	**152.3**	**350**	PKPbc	**PKiKP**	**20 38 46.0**	**-1.0**
BRTR	**Keskin Array B** comp=Z,1.0nm,0.8s,baz=154,slow=5.1,SNR=5.8	**153.47**	**292**	PKPbc	**PKiKP**	**20 38 50.1**	**-0.6**
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.5s,baz=174,slow=5.2,SNR=1.7	**159.27**	**181**	PKPab	**PKPab**	**20 39 27.2**	**-0.9**

*IDC **19**20:30:13.9±1.5,33.°30S×178.°82W,h0km,mb3.9/3, mbtmp4.1/5,ML3.8/2,MS3.4/2,Error ellipse: s-maj=39.2km s-min=28.3km az=107.0*

*NEIC **19**20:30:14.5±2.6,33.°7S±0.°1×178.°2W±0.°2,h10km±2km, mb4.3/6,Error ellipse: s-maj=23.5km s-min=22.0km az=110.0*

*WEL **19**20:30:16.3±0.9,33.°S±13.°×17.°9W±3.°2,h33km,M4.3/7, mB4.8/6,ML4.7/10,MLv4.5/7,Mw(mB)4.1/6,Error ellipse: s-maj=0.0km s-min=0.0km az=111.5*

ISC 19 20:30:18.7±0.9,33.°44S±0.°08×178.°5W±0.°1,h50km,n40, σ1§91/50,mb3.9/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.19**	**7**	P	Pn	20 31 13.8	-6.2
GLKZ				S	**Sn**	**20 32 01.4**	**-6.3**
MXZ	**Matakaoa Point**	**4.88**	**212**	P	**Pn**	**20 31 27.9**	**-1.6**
MXZ				S	**Sn**	**20 32 25.1**	**+0.4**
PKGZ	**Pakihiroa**	**5.25**	**211**	P	**Pn**	**20 31 33.0**	**-1.7**
PKGZ				S	**Sn**	**20 32 33.0**	**-1.0**
HAZ	**Te Kaha**	**5.28**	**214**	P	**Pn**	**20 31 35.0**	**0.0**
HAZ				S	**Sn**	**20 32 36.4**	**+2.0**
PUZ	**Puketiti**	**5.33**	**209**	P	**Pn**	**20 31 34.2**	**-1.5**
PUZ				S	**Sn**	**20 32 36.1**	**+0.2**
RUGZ	**Raukumara Rang**	**5.50**	**214**	P	**Pn**	**20 31 37.0**	**-1.1**
RUGZ				S	**Sn**	**20 32 40.1**	**+0.1**
TWGZ	**Tauwhareparae**	**5.54**	**210**	P	**Pn**	**20 31 38.3**	**-0.2**
TWGZ				S	**Sn**	**20 32 41.3**	**+0.4**
MWZ	**Matawai**	**5.87**	**212**	P	**Pn**	**20 31 42.2**	**-0.8**
MWZ				S	**Sn**	**20 32 48.5**	**-0.4**
URZ	**Urewera** 4.1nm,0.3s,baz=9.2,slow=9.4,SNR=18	**6.00**	**215**	Pn	**Pn**	**20 31 43.0**	**-1.8**
URZ				Sn	**Sn**	**20 32 51.2**	**-1.0**
URZ	**Urewera** 2.0nm,0.3s,baz=7.0,slow=14,SNR=8.3 13nm,0.3s	**6.00**	**215**		**Pn**	**20 31 42.8**	**-2.1**
URZ	**Urewera**	**6.00**	**215**	P	**Pn**	**20 31 43.5**	**-1.4**
URZ				S	**Sn**	**20 32 51.9**	**-0.3**
RIGZ	**Rimuhau**	**6.08**	**209**	P	**Pn**	**20 31 45.2**	**-0.7**
RIGZ				S	**Sn**	**20 32 53.0**	**-1.2**
SNGZ	**Shannon Statio**	**6.32**	**211**	P	**Pn**	**20 31 48.4**	**-0.8**
SNGZ				S	**Sn**	**20 32 58.7**	**-1.4**
MUGZ	**Murupara**	**6.34**	**216**	P	**Pn**	**20 31 50.1**	**+0.7**
MUGZ				S	**Sn**	**20 32 59.0**	**-1.6**
OUZ	**Omahuta**	**6.80**	**253**	Pn	**Pn**	**20 31 56.9**	**+1.1**
BKZ	**Black Stump Fm**	**7.01**	**214**	Pn	**Pn**	**20 31 56.6**	**-2.2**
HIZ	**Hauiti**	**7.41**	**225**	Pn	**Pn**	**20 32 02.6**	**-1.5**
BFZ	**Birch Farm**	**8.37**	**209**	Pn	**Pn**	**20 32 13.9**	**-3.4**
MSWZ	**Moikau Station**	**9.40**	**210**	Pn	**Pn**	**20 32 30.2**	**-1.2**
SNZO	**South Karori**	**9.55**	**213**	Pn	**Pn**	**20 32 30.1**	**-3.3**
TUWZ	**Tuamarina**	**10.00**	**215**	Pn	**Pn**	**20 32 35.8**	**-3.8**
NNZ	**Nelson**	**10.12**	**218**	Pn	**Pn**	**20 32 39.6**	**-1.5**
THZ	**Tophouse**	**10.76**	**217**	Pn	**Pn**	**20 32 47.5**	**-2.5**
KHZ	**Kahutara**	**10.96**	**213**	Pn	**Pn**	**20 32 49.6**	**-3.0**
RPZ	**Rata Peaks** 0.2nm,0.3s,baz=12,slow=14,SNR=2.1	**13.12**	**216**	Pn	**Pn**	**20 33 20.6**	**-1.6**
RPZ	0.3nm,0.3s,baz=349,slow=21,SNR=1.8 10nm,1.0s			Sn	Sn	20 35 33.5	-13
DZM	**Mont Dzumac** comp=Z,136nm,19.4s,baz=218,slow=32	**17.48**	**307**	LR	LR	20 39 25.3	
STKA	**Stephens Creek** comp=Z,60nm,19.8s,baz=118,slow=32	**33.52**	**261**	LR	LR	20 47 41.0	
AS31	**Alice Springs**	**42.64**	**270**	P	**P**	**20 38 10.0**	**-0.4**
AS31	comp=Z,1.2nm,0.8s			IAmb	IAmb	20 38 23.3	
ASAR	**Alice Springs** comp=Z,1.5nm,0.7s,baz=109,slow=7.1,SNR=14 comp=Z,1.5nm,0.7s	**42.64**	**270**	P	**P**	**20 38 10.2**	**-0.2**
ASAR	**Alice Springs**	**42.64**	**270**	P	**P**	**20 38 09.0**	**-1.5**
WB2	**Warramunga Arr**	**43.89**	**276**	P	**P**	**20 38 20.4**	**-0.1**
WB2	comp=Z,8.7nm,1.2s			IAmb	IAmb	20 38 40.0	
WRA	**Warramunga Arr** comp=Z,1.3nm,0.7s,baz=117,slow=7.2,SNR=11 comp=Z,1.3nm,0.7s	**43.90**	**276**	P	**P**	**20 38 19.7**	**-0.9**
WRA	**Warramunga Arr**	**43.90**	**276**	P	**P**	**20 38 20.1**	**-0.5**
WB0	**Warramunga Arr**	**43.94**	**276**	P	**P**	**20 38 20.9**	**0.0**
WB0	comp=Z,5.1nm,1.0s			IAmb	IAmb	20 38 30.5	
QSPA	**South Pole Qui** comp=Z,0.3nm,0.2s,baz=46,slow=6.6,SNR=1.4 comp=Z,0.3nm,0.2s	**56.68**	**180**	P	**P**	**20 40 00.3**	**+3.6**
SMAI	**San Martin Ant**	**66.77**	**158**	P	**P**	**20 41 04.2**	**-0.2**
BELA	**Belgrano 2**	**66.84**	**172**	P	**P**	**20 41 04.8**	**+0.1**
BELA	comp=Z,4.4nm,1.2s			IAmb	IAmb	20 41 16.2	
FINES	**FINESS Array B** comp=Z,0.7nm,0.5s,baz=25,slow=4.6,SNR=13	**147.83**	**338**	PKPbc	**PKPbc**	**20 49 57.7**	**+0.4**
NB2	**NORSAR Subarra**	**151.68**	**350**	PKP	**PKiKP**	**20 50 10.3**	**+3.1**
NOA	**NORSAR Array B** comp=Z,0.1nm,0.5s,baz=16,slow=4.1,SNR=1.8	**151.68**	**350**	PKPbc	**PKiKP**	**20 50 09.7**	**+2.5**

*IDC **19**20:35:57.4±1.0,55.°20S×30.°79W,h0km,mb3.8/5, mbtmp3.9/6,ML3.5/1,Error ellipse: s-maj=36.9km s-min=22.7km az=70.0*

ISC 19 20:35:58.9±0.9,55.°1S±0.°1×31.°0W±0.°2,h10km,n13, σ1§60/13,mb4.1/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**18.49**	**156**	P	**Pn**	**20 40 17.4**	**+2.6**
VNA3	**Neumayer Olymp**	**18.62**	**158**	P	**Pn**	**20 40 19.5**	**+3.1**
VNA2	**Neumayer--Watz** baz=318,slow=7.0	**18.89**	**156**	P	**Pn**	**20 40 19.7**	**0.0**
PMSA	**Palmer Station** 0.2nm,0.3s,baz=147,slow=15,SNR=1.9 6.6nm,1.0s	**18.96**	**226**	P	**P**	**20 40 19.5**	**-0.4**
SNAA	**Sanae**	**20.48**	**155**	P	**P**	**20 40 36.3**	**-0.3**
SNAA	**Sanae** 0.6nm,0.6s,baz=317,slow=11,SNR=7.4 0.6nm,0.6s	**20.48**	**155**	P	**P**	**20 40 34.3**	**-2.3**
TROLL	**Troll, Antarti**	**22.05**	**153**	P	**P**	**20 40 51.8**	**-1.7**
CPUP	**Villa Florida** 1.5nm,0.5s,baz=158,slow=19,SNR=4.2 1.5nm,0.5s	**34.62**	**315**	P	**P**	**20 42 48.4**	**+0.4**
QSPA	**South Pole Qui** 1.7nm,0.7s,baz=174,slow=2.2,SNR=5.5 1.7nm,0.7s	**35.14**	**180**	P	**P**	**20 42 52.1**	**-0.3**
LPAZ	**La Paz** 1.2nm,0.6s,baz=180,slow=7.1,SNR=5.0 1.2nm,0.6s	**48.11**	**309**	P	**P**	**20 44 39.8**	**+0.3**
TORD	**Torodi Ar. Bea** 0.6nm,0.8s,baz=190,slow=4.8,SNR=2.5 0.6nm,0.8s	**73.36**	**33**	P	**P**	**20 47 31.0**	**+0.2**
ILAR	**Eielson Array** 1.5nm,0.7s,baz=117,slow=1.9,SNR=12	**147.91**	**313**	PKPbc	**PKiKP**	**20 55 44.2**	**-0.4**
SONM	**Songino Array** 0.1nm,0.4s,baz=242,slow=3.1,SNR=2.2	**152.81**	**88**	PKPbc	**PKPbc**	**20 55 54.5**	**-0.8**

*IDC **19**20:37:14.8±0.3,55.°14S×31.°92W,h0km,mb5.1/27, mbtmp5.1/28,ML4.6/1,MS5.1/29,Error ellipse: s-maj=10.7km s-min=8.8km az=48.0*

*NEIC **19**20:37:15.7±1.5,55.°20S±0.°07×32.°1W±0.°1,h7km±3km, mb5.6/133,Ms_20 5.2/299,Mwb5.5/25,Error ellipse: s-maj=10.6km s-min=9.2km az=222.0*

*MOS **19**20:37:15.4±1.0,55.°18S×32.°20W,h10km,mb5.5/7, MS5.2/23,Error ellipse: s-maj=16.3km s-min=9.4km az=111.8*

*NEIC **19**20:37:16.3,55.°20S×32.°13W,h7km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; $M_{r

SNAA Sanae 20.71 154 P **P** **20 41 56.7 +0.7**
SNAA Sanae 20.71 154 ScP **ScP** **20 49 37.5 -4.0**
SNAA Sanae 20.71 154 P **P** **20 41 56.6 +0.5**
comp=Z,18nm,1.0s,baz=306,slow=8.9,SNR=20
SNAA S **S** **20 45 49.3 +2.3**
comp=Z,3.0nm,0.9s,baz=219,slow=17,SNR=1.0
SNAA PcP **PcP** **20 46 06.0 +0.8**
comp=Z,2.4nm,0.7s,baz=283,slow=4.6,SNR=1.4
SNAA LR LR 20 48 26.9
comp=Z,3µm,19.7s,baz=313,slow=32
SNAA ScP **ScP** **20 49 39.3 -2.1**
comp=Z,5.2nm,1.1s,baz=307,slow=3.3,SNR=3.8
comp=Z,18nm,1.0s
SNAA Sanae 20.71 154 P **P** **20 41 55.8 -0.3**
SMAI San Martin Ant 20.74 217 P Pn 20 41 57.7 -0.9
USHA Ushuaia 20.75 256 P Pn 20 41 58.2 -0.6
comp=Z,52nm,0.8s,baz=98,slow=13,SNR=4.8
USHA S **S** **20 45 50.2 +2.4**
comp=Z,7.5nm,0.4s,baz=29,slow=19,SNR=1.6
comp=Z,52nm,0.8s
MG02 Cerro Sombrero 21.85 261 P **P** **20 42 09.2 +0.8**
TROLL Troll, Antarti 22.29 152 P **P** **20 42 14.0 +0.9**
GO10 Punta Arenas 22.74 259 P **P** **20 42 17.1 -0.9**
GO10 IAmb IAmb 20 42 24.9
comp=Z,269nm,1.2s
BELA Belgrano 2 22.84 181 P **P** **20 42 19.1 +0.3**
BELA IAmb IAmb 20 42 27.9
comp=Z,394nm,1.7s
MG04 Isla Riesco 23.14 259 P **P** **20 42 22.4 +0.3**
MG05 Puerto Natales 24.13 261 P **P** **20 42 31.6 -0.2**
MG05 IAmb IAmb 20 42 33.9
comp=Z,218nm,0.9s
GO09 Cerro Castillo 24.21 262 P **P** **20 42 30.7 -1.8**
NVL N'lazarevskaya 24.52 146 *e*P **P** **20 42 36.3 +1.2**
NVL *e*S **S** **20 46 50.9 -4.3**
NVL pmax pmax
comp=Z,29nm,0.9s
NVL MLR MLR
comp=Z,2µm,19.0s
COYC Coyhaique 26.95 274 P **P** **20 42 57.6 +0.3**
PLTB Pedras Altas 27.92 318 P **P** **20 43 06.8 +0.6**
PLTB Pedras Altas 27.92 318 *e*P **P** **20 43 07.2 +1.1**
AY01 Puyuhuapi 27.95 276 P **P** **20 43 06.1 -0.2**
AY01 IAmb IAmb 20 43 09.6
comp=Z,74nm,1.1s
LL02 Futaleuf 28.26 278 P **P** **20 43 08.4 -0.6**
LL02 IAmb IAmb 20 43 16.4
comp=Z,98nm,1.1s
CPSB Cacapava Do Su 29.07 320 *e*P **P** **20 43 16.8 +0.4**
PLCA Paso Flores 29.14 284 P **P** **20 43 17.7 +0.8**
comp=Z,30nm,0.9s,baz=138,slow=8.1,SNR=26
PLCA S **S** **20 48 11.2 +2.4**
comp=Z,1.3nm,0.9s,baz=76,slow=13,SNR=1.4
PLCA LR LR 20 55 04.9
comp=Z,4µm,19.9s,baz=135,slow=37
comp=Z,30nm,0.9s
PLCA Paso Flores 29.14 284 P **P** **20 43 16.7 -0.3**
PLCA IAmb IAmb 20 43 26.5
comp=Z,142nm,1.4s
PLCA Paso Flores 29.14 284 *e*P **P** **20 43 17.6 +0.6**
CNLB Canela 29.16 325 *e*P **P** **20 43 18.8 +1.6**
TER01 Tubaro-SC 29.34 328 *e*P **P** **20 43 20.5 +1.8**
RODS Rosario do Sul 29.80 317 *e*P **P** **20 43 23.4 +0.6**
LL03 Petrohue 29.90 281 P **P** **20 43 23.1 -0.6**
LL03 IAmb IAmb 20 43 27.7
comp=Z,98nm,0.8s
LL04 Puerto Octay 30.06 281 P **P** **20 43 24.3 -0.8**
LL04 IAmb IAmb 20 43 33.4
comp=Z,84nm,1.3s
LL05 Los Muermos 30.33 280 P **P** **20 43 26.9 -0.6**
ALGR Alto Alegre (B 30.38 322 *e*P **P** **20 43 29.3 +1.3**
GO06 Curarrehue 30.44 284 P **P** **20 43 27.4 -1.1**
UNIS Unistalda (Bra 30.89 318 *e*P **P** **20 43 33.9 +1.4**
ITQB Itaqui 30.97 315 P **P** **20 43 34.3 +1.1**
ITQB IAmb IAmb 20 43 47.7
comp=Z,94nm,0.9s
ITQB Itaqui 30.97 315 *e*P **P** **20 43 34.4 +1.3**
LR04 Corral 31.32 282 P **P** **20 43 35.3 -0.9**
ITAB Concordia 31.50 324 P **P** **20 43 38.8 +0.9**
ITAB IAmb IAmb 20 43 43.8
comp=Z,107nm,1.5s
ITAB Concordia 31.50 324 *e*P **P** **20 43 38.7 +0.9**
CRSM Crissiumal (Br 31.93 321 *e*P **P** **20 43 42.7 +1.0**
RFA San Rafael 32.33 294 *i* P **P** **20 43 46.4 +1.2**
MRA San Martin 32.78 300 *i* P **P** **20 43 49.8 +0.6**
FRBT Francisco Belt 32.98 324 *e*P **P** **20 43 51.5 +0.6**
TCA Tanti 33.11 302 *e*P **P** **20 43 52.6 +0.5**
ML02 Panimavida 33.16 289 P **P** **20 43 51.3 -1.0**
MAN01 Angra dos Reis 33.46 340 *e*P **P** **20 43 56.1 +1.0**
BO02 Sierra Bellavi 33.54 291 P **P** **20 43 55.3 -0.5**
PTGB Pitanga 33.81 326 *e*P **P** **20 43 58.5 +0.3**
AAGR Agrelo 33.83 295 *i* P **P** **20 43 59.1 +0.7**
VAS01 Vassouras-RJ 33.93 341 *e*P **P** **20 44 00.3 +1.2**
DUB01 Friburgo-RJ 33.93 343 *e*P **P** **20 44 01.3 +2.1**
LMEL Las Melosas 33.96 293 P **P** **20 43 59.5 -0.1**
VAO Valinhos 33.99 335 *e*P **P** **20 44 01.6 +1.9**
GO05 Huala 34.00 290 P **P** **20 43 59.6 -0.1**
GO05 IAmb IAmb 20 44 08.8
comp=Z,52nm,0.8s
BO01 Tunca 34.01 291 P **P** **20 43 59.9 +0.1**
CAM01 Campos-RJ 34.06 344 *e*P **P** **20 44 03.1 +2.8**
ARCO CERRO ARCO 34.08 296 *i* P **P** **20 44 00.2 -0.4**
CPUP Villa Florida 34.22 317 P **P** **20 44 02.1 +0.5**
comp=Z,28nm,0.7s,baz=155,slow=8.4,SNR=16
CPUP S **S** **20 49 26.8 -1.4**
comp=Z,1.3nm,0.7s,baz=180,slow=12,SNR=1.7
CPUP LR LR 20 59 35.8
comp=Z,2µm,18.2s,baz=165,slow=39
comp=Z,28nm,0.7s
CPUP Villa Florida 34.22 317 P **P** **20 44 01.6 0.0**
CPUP IAmb IAmb 20 44 08.7
comp=Z,89nm,1.1s
CPUP Villa Florida 34.22 317 *e*P **P** **20 44 02.1 +0.5**
ASAL Salagasta 34.22 296 *i* P **P** **20 44 03.1 +1.4**
MT03 Universidad Ad 34.39 293 P **P** **20 44 02.4 -0.8**
MT03 IAmb IAmb 20 44 10.1
comp=Z,102nm,0.9s
MT09 Talagante 34.43 292 P **P** **20 44 02.8 -0.7**
MT01 Popeta 34.50 292 P **P** **20 44 03.5 -0.6**
MT01 IAmb IAmb 20 44 08.4
comp=Z,74nm,0.7s
MT05 Renca 34.59 293 P **P** **20 44 04.3 -0.6**
MT05 IAmb IAmb 20 44 14.0
comp=Z,147nm,1.1s
RCLB Rio Claro- Sao 34.69 334 *e*P **P** **20 44 07.8 +2.0**
MCR1 Marechal Candi 34.71 323 *e*P **P** **20 44 07.1 +1.2**
PEL Peldehue 34.76 293 P **P** **20 44 06.1 -0.2**
PEL Peldehue 34.76 293 P **P** **20 44 06.1 -0.2**
PEL pmax pmax
comp=Z,172nm,0.9s
PEL Peldehue 34.76 293 *i* P **P** **20 44 08.0 +1.7**
APLL PUNTA DE LOS L 34.83 301 *e*P **P** **20 44 07.0 +0.1**
VA05 Santo Domingo 34.85 292 P **P** **20 44 06.2 -0.9**
MT02 Curacav 34.91 293 P **P** **20 44 07.7 +0.1**
MT02 IAmb IAmb 20 44 12.5
comp=Z,96nm,0.8s
ZON Zonda 34.97 297 P **P** **20 44 08.1 -0.1**
ZON IAmb IAmb 20 44 24.1
comp=Z,127nm,1.2s
ZON Zonda 34.97 297 P **P** **20 44 08.1 -0.1**
ZON pmax pmax
comp=Z,127nm,1.2s
ZON Zonda 34.97 297 *i* P **P** **20 44 09.3 +1.1**
VA03 San Esteban 34.98 294 P **P** **20 44 08.0 -0.3**
RTLL Cerro Villicun 35.04 298 *e*P **P** **20 44 09.9 +1.1**
ROC1 El Roble 35.06 293 P **P** **20 44 08.9 -0.3**
ROC1 El Roble 35.06 293 *e*P **P** **20 44 10.4 +1.3**
AVFE Valle Fertil 35.07 300 *e*P **P** **20 44 09.7 +0.6**
RTLS Leoncito 35.09 296 *e*P **P** **20 44 11.1 +1.6**
QSPA South Pole Qui 35.10 180 P **P** **20 44 10.5 +1.4**
comp=Z,38nm,1.0s,baz=191,slow=4.1,SNR=36
QSPA S **S** **20 49 44.4 +3.1**
comp=Z,0.8nm,0.2s,baz=139,slow=19,SNR=1.3
QSPA ScP **ScP** **20 50 23.7 -1.9**
comp=Z,4.7nm,0.9s,baz=117,slow=2.3,SNR=4.1
QSPA LR LR 20 57 58.6
comp=Z,3µm,18.9s,baz=188,slow=35
comp=Z,38nm,1.0s
QSPA South Pole Qui 35.10 180 P **P** **20 44 09.3 +0.2**
QSPA IAmb IAmb 20 44 18.7
comp=Z,122nm,1.1s
ALF01 Guarapari-ES 35.11 346 *e*P **P** **20 44 09.6 +0.3**
VA01 Torpederas 35.36 292 P **P** **20 44 12.7 +1.2**
BSCB Bom Sucesso 35.44 339 *e*P **P** **20 44 11.8 -0.5**

VA06 Catapilco 35.53 293 P **P** **20 44 13.5 +0.6**
TRCB Terra Rica 35.79 326 P **P** **20 44 15.1 -0.1**
TRCB IAmb IAmb 20 44 20.6
comp=Z,105nm,1.3s
TRCB Terra Rica 35.79 326 *e*P **P** **20 44 16.9 +1.6**
ACLC CERRO LA CRUZ 35.83 301 *i* P **P** **20 44 15.8 +0.1**
ACCO Cerro Coronel 35.94 298 *e*P **P** **20 44 18.7 +1.9**
BB19B Bebedouro 36.24 333 *e*P **P** **20 44 20.7 +1.6**
RIB01 Linhares ES 36.34 347 *e*P **P** **20 44 22.4 +2.4**
CO02 Combarbal 36.44 295 P **P** **20 44 20.9 0.0**
PCMB Pacaembu 36.48 329 *e*P **P** **20 44 23.1 +1.9**
AROD Rodeo 36.48 298 *i* P **P** **20 44 23.8 +2.3**
CO03 El Pedregal 36.57 296 P **P** **20 44 22.1 +0.2**
CO03 IAmb IAmb 20 44 34.6
comp=Z,112nm,1.2s
CO01 Juntas del Tor 36.95 297 P **P** **20 44 25.9 +0.5**
VCA Vinchina 37.02 301 *e*P **P** **20 44 27.9 +2.0**
SJMB Sao Joao De Ma 37.05 345 *e*P **P** **20 44 27.8 +1.7**
GO04 Tololo Observa 37.16 296 P **P** **20 44 26.0 -1.1**
GO04 IAmb IAmb 20 44 42.0
comp=Z,141nm,1.2s
CO06 Fray Jorge 37.19 295 P **P** **20 44 27.3 +0.1**
CO06 IAmb IAmb 20 44 36.5
comp=Z,176nm,1.4s
CO05 La Serena 37.59 296 P **P** **20 44 30.0 -0.5**
ANTJ Antonio Joao (37.66 322 *e*P **P** **20 44 31.8 +0.6**
NAN01 Guarapari, ES 37.76 347 *e*P **P** **20 44 32.7 +0.8**
DIAM Diamantina, MG 37.85 342 *e*P **P** **20 44 33.5 +0.5**
AC05 El Transito 37.97 298 P **P** **20 44 33.6 -0.3**
AC05 IAmb IAmb 20 44 47.8
comp=Z,162nm,0.9s
ITRB Iturama 38.02 331 *e*P **P** **20 44 35.5 +1.2**
LCO Las Campanas 38.04 297 P **P** **20 44 34.8 +0.1**
LCO IAmb IAmb 20 44 43.3
comp=Z,90nm,0.9s
LCO Las Campanas 38.04 297 P **P** **20 44 34.8 +0.1**
LCO pmax pmax
comp=Z,90nm,0.9s
LCO MLR MLR
comp=Z,2µm,18.0s
FSA Cafayete 38.14 306 *i* P **P** **20 44 35.1 -0.3**
PMNB Patos De Minas 38.17 338 *e*P **P** **20 44 37.1 +1.5**
AC04 Llanos de Chal 38.89 298 P **P** **20 44 41.8 +0.3**
AQDB Aquidauana 38.96 323 P **P** **20 44 41.8 -0.3**
GUA01 Guaratinga, BA 38.96 348 *e*P **P** **20 44 42.6 +0.5**
GO03 Copiap 38.97 299 P **P** **20 44 42.8 +0.6**
GO03 IAmb IAmb 20 44 55.4
comp=Z,87nm,0.8s
AC02 Maricunga 39.04 301 P **P** **20 44 42.9 -0.4**
AC02 IAmb IAmb 20 44 56.3
comp=Z,225nm,1.4s
SLA San Lorenzo 39.11 307 *i* P **P** **20 44 43.8 +0.2**
IPMB Ipameri, GO 39.12 335 *e*P **P** **20 44 45.1 +1.7**
AC06 Mina Casimiro 39.22 299 P **P** **20 44 43.8 -0.5**
AC06 IAmb IAmb 20 44 57.5
comp=Z,90nm,0.8s
AZAP Zapla 39.34 308 *e*P **P** **20 44 45.2 -0.3**
MC01 Montes Claros 39.46 342 *e*P **P** **20 44 47.1 +0.7**
C2SB Chapadao do Su 39.63 328 *e*P **P** **20 44 48.2 +0.5**
CMC01 Camacan, BA 40.14 349 *e*P **P** **20 44 52.9 +1.0**
AC01 Pan de Azucar 40.34 300 P **P** **20 44 52.6 -1.0**
AC01 IAmb IAmb 20 45 07.2
comp=Z,177nm,1.0s
GO02 Mina Guanaco 40.67 302 P **P** **20 44 55.1 -1.6**
JANB Januaria 41.13 342 *e*P **P** **20 45 01.5 +1.3**
BDFB Brasilia 41.33 336 P **P** **20 45 02.8 +0.9**
comp=Z,17nm,1.0s,baz=150,slow=16,SNR=7.4
BDFB S **S** **20 51 15.8 -0.4**
comp=Z,1.0nm,0.4s,baz=203,slow=23,SNR=1.5
comp=Z,17nm,1.0s
BDFB Brasilia 41.33 336 P **P** **20 45 02.4 +0.5**
BDFB Brasilia 41.33 336 P **P** **20 45 02.4 +0.5**
BDFB pmax pmax
comp=Z,73nm,1.4s
BDFB Brasilia 41.33 336 *e*P **P** **20 45 02.1 +0.2**
PB14 IPOC Station P 41.52 302 P **P** **20 45 03.9 +0.2**
PB14 IAmb IAmb 20 45 16.7
comp=Z,110nm,0.8s
GDU01 Guandu, BA 41.76 349 *e*P **P** **20 45 06.4 +1.1**
AF01 San Pedro de A 41.87 305 P **P** **20 45 06.0 -0.6**
PB15 IPOC Station P 42.26 304 P **P** **20 45 08.7 -1.0**
PB15 IAmb IAmb 20 45 27.1
comp=Z,86nm,0.7s
MAW Mawson 42.47 146 P **P** **20 45 10.5 0.0**
comp=Z,16nm,0.9s,baz=235,slow=7.3,SNR=14
MAW ScP **ScP** **20 50 50.9 -2.7**
comp=Z,4.7nm,1.0s,baz=298,slow=4.6,SNR=4.4
MAW S **S** **20 51 31.7 -0.2**
comp=Z,0.6nm,0.7s,baz=225,slow=24,SNR=0.8
comp=Z,16nm,0.9s
MAW Mawson 42.47 146 P **P** **20 45 09.5 -1.0**
LVC Limon Verde 42.51 305 P **P** **20 45 12.4 +0.6**
comp=Z,62nm,1.1s,baz=160,slow=6.8,SNR=18
LVC S **S** **20 51 34.5 +0.4**
comp=Z,2.5nm,0.5s,baz=185,slow=18,SNR=1.8
comp=Z,62nm,1.1s
LVC Limon Verde 42.51 305 P **P** **20 45 11.4 -0.4**
LVC IAmb IAmb 20 45 26.0
comp=Z,108nm,0.8s
LVC Limon Verde 42.51 305 *e*P **P** **20 45 12.4 +0.6**
PB10 IPOC Station P 42.52 302 P **P** **20 45 11.3 -0.2**
PB06 IPOC Station P 42.74 304 P **P** **20 45 13.7 +0.2**
SUR Sutherland 43.13 81 P **P** **20 45 17.6 +1.0**
comp=Z,32nm,0.9s,baz=201,slow=13,SNR=12
SUR LR LR 20 59 09.6
comp=Z,954nm,20.0s,baz=220,slow=30
comp=Z,32nm,0.9s
SUR Sutherland 43.13 81 P **P** **20 45 16.8 +0.3**
SALV Santo Antonio 43.22 326 *e*P **P** **20 45 17.9 +0.8**
PB04 IPOC Station P 43.33 304 P **P** **20 45 18.0 -0.3**
PB04 IAmb IAmb 20 45 32.1
comp=Z,101nm,0.8s
PB09 IPOC Station P 43.36 305 P **P** **20 45 17.1 -1.4**
PB09 IAmb IAmb 20 45 33.4
comp=Z,146nm,1.1s
PB07 IPOC Station P 43.73 304 P **P** **20 45 21.2 -0.2**
PB07 IAmb IAmb 20 45 35.5
comp=Z,77nm,0.9s
SDBA SAO DESIDERIO 43.83 342 *e*P **P** **20 45 22.8 +0.6**
SHEL Horse Pasture 44.04 38 P **P** **20 45 25.4 +1.5**
SHEL Horse Pasture 44.04 38 P **P** **20 45 25.4 +1.5**
SHEL MLR MLR
comp=Z,4µm,20.0s
PB02 IPOC Station P 44.08 305 P **P** **20 45 23.2 -1.0**
PB01 IPOC Station P 44.12 305 P **P** **20 45 24.2 -0.3**
NBLA Lagarto - SE 44.29 352 *e*P **P** **20 45 25.9 +0.2**
PTLB Pontes e Lacer 44.81 321 P **P** **20 45 29.7 -0.3**
PTLB IAmb IAmb 20 45 44.7
comp=Z,52nm,0.9s
PTLB Pontes e Lacer 44.81 321 *e*P **P** **20 45 30.5 +0.5**
TA01 Diego Aracena 44.86 305 P **P** **20 45 32.1 +1.8**
TA01 IAmb IAmb 20 45 43.9
comp=Z,66nm,0.8s
SIV San Ignacio 45.03 319 P **P** **20 45 31.5 -0.2**
comp=Z,11nm,0.6s,baz=146,slow=8.4,SNR=17
SIV PcP **PcP** **20 47 12.6 0.0**
comp=Z,7.8nm,0.8s,baz=163,slow=4.3,SNR=2.4
SIV S **S** **20 52 06.9 -3.5**
comp=Z,0.6nm,0.3s,baz=151,slow=23,SNR=1.2
SIV ScS **ScS** **20 55 26.4 -2.6**
comp=Z,0.6nm,0.3s,baz=151,slow=23,SNR=1.5
comp=Z,11nm,0.6s
TA02 Huaiquique 45.09 305 P **P** **20 45 31.7 -0.5**
GO01 Chusmiza 45.17 307 P **P** **20 45 33.2 -0.2**
NBAN Anadia - AL 45.49 354 *e*P **P** **20 45 35.9 +0.5**
SOE Somerset East 45.59 85 P **P** **20 45 37.0 +0.9**
SNDB Serra Nova Dou 45.66 333 *e*P **P** **20 45 38.5 +1.8**
NBRF Rio Formoso - 46.42 356 *e*P **P** **20 45 43.7 +1.1**
SBA Scott Base 46.75 185 P **P** **20 45 44.7 +0.1**
SBA Scott Base 46.75 185 P **P** **20 45 44.7 +0.1**
SBA pmax pmax
comp=Z,28nm,1.2s
SBA MLR MLR
comp=Z,2µm,18.0s
VNDA Vanda 47.31 184 P **P** **20 45 49.8 +0.8**
comp=Z,3.8nm,0.7s,baz=169,slow=6.6,SNR=11
VNDA ScP **ScP** **20 51 12.3 -1.1**
comp=Z,1.5nm,0.9s,baz=178,slow=3.5,SNR=3.3
VNDA S **S** **20 52 37.3 -4.5**
comp=Z,0.6nm,1.1s,baz=83,slow=18,SNR=1.1
comp=Z,3.8nm,0.7s
VNDA Vanda 47.31 184 P **P** **20 45 48.2 -0.7**
VILB Vilhena 47.50 321 P **P** **20 45 50.5 -0.6**
VILB IAmb IAmb 20 46 06.7
comp=Z,56nm,0.8s
VILB Vilhena 47.50 321 *e*P **P** **20 45 52.1 +1.0**
PDRB Porto dos Gac 47.58 326 *e*P **P** **20 45 51.7 0.0**
LPAZ La Paz 47.66 310 P **P** **20 45 54.5 +1.4**
comp=Z,50nm,0.9s,baz=148,slow=5.6,SNR=43
LPAZ S **S** **20 52 47.3 -1.9**
comp=Z,1.2nm,0.6s,baz=71,slow=8.8,SNR=2.4
LPAZ LR LR 21 09 17.2
comp=Z,839nm,18.4s,baz=185,slow=40
comp=Z,50nm,0.9s
LPAZ La Paz 47.66 310 P **P** **20 45 53.0 -0.1**
LPAZ La Paz 47.66 310 *e*P **P** **20 45 52.0 -1.1**
LPAZ La Paz 47.66 310 *e*P **P** **20 45 54.7 +1.6**
LPAZ La Paz 47.66 310 *e*P **P** **20 45 55.0 +1.9**
SMTB Santa Maria do 47.80 339 *e*P **P** **20 45 54.6 +1.1**
CLDB Colider 47.98 328 *e*P **P** **20 45 54.8 -0.1**
H10S2 ASCENSION HYDR 48.10 23 T T 21 37 60.0
baz=193,slow=74,SNR=66
H10S3 ASCENSION HYDR 48.10 23 T T 21 38 00.1
baz=27,slow=74,SNR=154
BOSA Boshof 48.48 81 P **P** **20 45 59.0 +0.3**
comp=Z,45nm,0.9s,baz=211,slow=7.2,SNR=41
BOSA S **S** **20 52 56.8 -2.9**
comp=Z,2.7nm,1.0s,baz=265,slow=6.1,SNR=1.5
BOSA LR LR 21 01 48.8
comp=Z,1µm,21.3s,baz=226,slow=30
comp=Z,45nm,0.9s
BOSA Boshof 48.48 81 P **P** **20 45 58.4 -0.4**
BOSA IAmb IAmb 20 46 12.9
comp=Z,81nm,1.1s
BOSA Boshof 48.48 81 *i* P **P** **20 45 59.4 +0.7**
BOSA Boshof 48.48 81 *i* P **P** **20 45 59.4 +0.7**
ASCN Ascension 49.16 23 IAMs_20 IAMs_20 21 02 18.5
comp=Z,3µm,19.0s
H10N1 ASCENSION HYDR 49.21 23 T T 21 39 29.4
baz=192,slow=75,SNR=172
H10N3 ASCENSION HYDR 49.21 23 T T 21 39 30.4
baz=192,slow=75,SNR=211
H10N2 ASCENSION HYDR 49.23 23 T T 21 39 21.6
baz=192,slow=75,SNR=259
RCBR Riachuelo 49.28 355 P **P** **20 46 04.5 -0.5**
comp=Z,12nm,1.1s,baz=252,slow=3.2,SNR=2.4
RCBR LR LR 21 02 55.7
comp=Z,3µm,20.1s,baz=318,slow=31
comp=Z,12nm,1.1s
RCBR Riachuelo 49.28 355 IAMs_20 IAMs_20 21 02 45.1
comp=Z,2µm,19.0s
PRPB Parauapebas 50.89 337 *e*P **P** **20 46 17.1 0.0**
LBTB Lobatse 51.45 78 P **P** **20 46 21.4 +0.2**
comp=Z,56nm,0.8s,baz=215,slow=7.9,SNR=66
comp=Z,56nm,0.8s
LBTB Lobatse 51.45 78 P **P** **20 46 21.5 +0.2**
LBTB IAmb IAmb 20 46 23.2
comp=Z,70nm,0.9s
LBTB Lobatse 51.45 78 P **P** **20 46 21.5 +0.2**
LBTB pmax pmax
comp=Z,70nm,0.9s
LBTB Lobatse 51.45 78 *i* P **P** **20 46 21.6 +0.2**
LBTB Lobatse 51.45 78 *i* P **P** **20 46 21.6 +0.2**
NPGB Novo Progresso 51.48 330 *e*P **P** **20 46 21.9 +0.4**
TSUM Tsumeb 51.74 66 P **P** **20 46 24.0 +0.4**
comp=Z,20nm,1.0s,baz=212,slow=5.1,SNR=14
comp=Z,20nm,1.0s
TSUM Tsumeb 51.74 66 P **P** **20 46 23.4 -0.2**
SAML Samuel 52.28 320 P **P** **20 46 27.0 -0.5**
SAML IAmb IAmb 20 46 49.3
comp=Z,58nm,1.1s
SAML Samuel 52.28 320 P **P** **20 46 27.0 -0.5**
SAML pmax pmax
comp=Z,58nm,1.1s
SAML MLR MLR
comp=Z,1µm,18.0s
ETMB Extrema 52.66 316 P **P** **20 46 29.7 -0.6**
ETMB IAmb IAmb 20 46 37.5
comp=Z,92nm,1.3s
ETMB Extrema 52.66 316 *e*P **P** **20 46 31.0 +0.7**
ROSB Rosrio 53.02 345 *e*P **P** **20 46 33.8 +0.9**
POGA Pongola 53.12 86 P **P** **20 46 33.6 -0.1**
ITTB Itaituba 54.13 330 *e*P **P** **20 46 41.4 +0.3**
TMAB Tom-Au,PA,Br 54.22 340 *e*P **P** **20 46 43.6 +1.8**
NNA Nana 55.44 303 P **P** **20 46 52.6 +1.9**
baz=198,slow=9.6
NNA S **S** **20 54 36.0 +0.6**
comp=Z,5.5nm,0.3s,baz=294,slow=7.3,SNR=1.5
NNA Nana 55.44 303 P **P** **20 46 49.0 -1.6**
NNA IAmb IAmb 20 46 59.7
comp=Z,134nm,1.4s
NNA Nana 55.44 303↑ *e*P **P** **20 46 52.1 +1.4**
NNA pmax pmax
comp=Z,85nm,1.4s
CASY Casey 55.63 163 P **P** **20 46 51.7 +0.4**
MOPA Mopani 55.90 82 *i* P **P** **20 46 50.2 -3.7**
MOPA Mopani 55.90 82 *i* P **P** **20 46 50.2 -3.7**
MUSN Musina, Limpop 55.99 80 *i* P **P** **20 46 52.6 -2.0**
MUSN Musina, Limpop 55.99 80 *i* P **P** **20 46 52.6 -2.0**
MALB Monte Alegre 56.13 333 *e*P **P** **20 46 56.2 +0.7**
MATP Matopo 56.70 78 LR LR 21 07 56.7
comp=Z,794nm,21.4s,baz=238,slow=32
MATP Matopo 56.70 78 *i* P **P** **20 46 58.4 -1.4**
MATP Matopo 56.70 78 *i* P **P** **20 46 58.4 -1.4**
MACA Manacapuru-AM 56.79 325 P **P** **20 46 59.4 -0.9**
MACA IAmb IAmb 20 47 04.2
comp=Z,45nm,0.7s
MACA Manacapuru-AM 56.79 325 *e*P **P** **20 46 59.9 -0.3**
MCPB Macapa, AP 57.02 336 *e*P **P** **20 47 02.6 +0.7**
CZSB Cruzeiro do Su 57.27 310 P **P** **20 47 02.8 -0.9**
CZSB IAmb IAmb 20 47 16.5
comp=Z,63nm,0.7s
CZSB Cruzeiro do Su 57.27 310 *e*P **P** **20 47 03.7 0.0**
ATAH Atahualpa 60.40 304 P **P** **20 47 28.2 +2.3**
comp=Z,61nm,0.9s,baz=137,slow=4.4,SNR=22
ATAH S **S** **20 55 41.7 +0.6**
comp=Z,2.8nm,0.7s,baz=169,slow=16,SNR=1.6
comp=Z,61nm,0.9s
LSZ Lusaka 60.68 74 LR LR 21 11 09.5
comp=Z,2µm,18.3s,baz=220,slow=34
BOAV Boa Vista 61.97 327 P **P** **20 47 35.5 -0.6**
BOAV IAmb IAmb 20 47 42.4
comp=Z,70nm,1.2s
BOAV Boa Vista 61.97 327 *e*P **P** **20 47 35.7 -0.3**
MDP Montagnes des 62.44 337 S **S** **20 56 03.4 -2.7**
comp=Z,1.6nm,0.6s,baz=180,slow=19,SNR=1.1
MDP LR LR 21 13 00.9
comp=Z,1µm,21.1s,baz=140,slow=34
FOMA Nahampoana Res 63.69 96 IAmb IAmb 20 47 50.6
comp=Z,42nm,0.8s
BOSC San Juan Bosco 63.94 306 P **P** **20 47 49.4 0.0**
BOSC IAmb IAmb 20 47 54.3
comp=Z,37nm,0.6s
LIC Lamto 65.15 30↑ *e*P **P** **20 47 56.9 -0.1**
comp=Z,152nm,0.9s
PTLC Puerto Leguiza 65.24 312 *e*P **P** **20 48 01.8 +4.1**
KIC Kosan Boka 65.36 30↑ *e*P **P** **20 47 58.2 -0.2**
comp=Z,46nm,0.9s
TIC Toumodi 65.55 30↑ *e*P **P** **20 47 59.6 0.0**
comp=Z,149nm,1.0s
DBIC Dimbokro 65.62 30 P **P** **20 47 59.7 -0.3**
comp=Z,46nm,1.0s,baz=197,slow=6.8,SNR=22
DBIC S **S** **20 56 41.7 -3.9**
comp=Z,6.3nm,1.2s,baz=215,slow=14,SNR=1.8
DBIC LR LR 21 10 28.8
comp=Z,2µm,19.1s,baz=216,slow=30
comp=Z,46nm,1.0s
DBIC Dimbokro 65.62 30 P **P** **20 48 00.1 0.0**
DBIC IAmb IAmb 20 48 01.9
comp=Z,49nm,0.9s
DBIC Dimbokro 65.62 30 P **P** **20 48 00.1 0.0**
DBIC pmax pmax
comp=Z,49nm,1.0s
VOI Vohitsoka 65.97 94 P **P** **20 48 02.2 -0.3**
VOI IAmb IAmb 20 48 11.6
comp=Z,19nm,0.7s
VOI Vohitsoka 65.97 94 P **P** **20 48 05.8 +3.3**
MACC Macarena, Meta 66.61 313 *e*P **P** **20 48 06.4 -0.1**
FLOC Florencia 66.87 311 *e*P **P** **20 48 07.6 -0.5**
OTAV Otavalo 66.91 308 P **P** **20 48 09.9 +1.0**
OTAV Otavalo 66.91 308 P **P** **20 48 09.9 +1.0**
OTAV pmax pmax
comp=Z,102nm,1.3s
OTAV MLR MLR
comp=Z,800nm,18.0s
OTAV Otavalo 66.91 308 *e*P **P** **20 48 10.4 +1.4**
OTAV Otavalo 66.91 308 *e*P **P** **20 48 09.4 +0.4**
PAC1 Pacto, Paraso 67.09 308 *e*P **P** **20 48 10.1 +0.4**
GCUF Volcan Galeras 67.29 310 *e*P **P** **20 48 12.0 +0.6**
GARC Garzon, Huila 67.35 312 *e*P **P** **20 48 10.9 -0.6**

BETC Betania 67.77 312 *e*P **P** **20 48 13.5 -0.3**
BBAC Balboa, Cauca 67.96 310 *e*P **P** **20 48 14.2 -1.1**
POPC Popayan, Colom 68.17 311 *e*P **P** **20 48 17.6 +1.0**
VILC Villavicencio, 68.33 314 *e*P **P** **20 48 17.4 -0.1**
PRAC Prado 68.46 313 *e*P **P** **20 48 18.7 +0.5**
ABPO Ambohimpanom 68.50 93 P **P** **20 48 19.8 +1.2**
ABPO Ambohimpanom 68.50 93 P **P** **20 48 19.8 +1.2**
ABPO pmax pmax
comp=Z,28nm,1.2s
ABPO MLR MLR
comp=Z,2µm,18.0s
CHIC Chingaza 68.81 315 *e*P P 20 48 11.1 -10
OPO Ambohidratompo 68.83 92 LR LR 21 12 56.6
comp=Z,1µm,20.8s,baz=344,slow=31
GR1C Gorgona, Isla 69.24 310 *e*P **P** **20 48 21.0 -2.0**
ROSC El Rosal 69.25 314 P **P** **20 48 24.2 +0.8**
comp=Z,15nm,0.4s,baz=140,slow=6.3,SNR=6.5
ROSC S **S** **20 57 30.4 +0.4**
comp=Z,7.9nm,0.3s,baz=91,slow=21,SNR=1.5
ROSC LR LR 21 23 00.5
comp=Z,1µm,18.1s,baz=213,slow=40
comp=Z,15nm,0.4s
ROSC El Rosal 69.25 314 P **P** **20 48 23.4 0.0**
ROSC IAmb IAmb 20 49 00.7
comp=Z,77nm,1.2s
ANIL Santa Ana 69.38 313 *e*P **P** **20 48 24.9 +0.7**
TAMC Tame, Arauca 69.68 317 *e*P **P** **20 48 27.1 +1.3**
RUSC La Rusia 69.70 316 *e*P **P** **20 48 25.8 -0.6**
SPBC San Pablo de B 69.88 315 *e*P **P** **20 48 25.5 -1.5**
GUY2C Guyana, Caldas 70.03 313 *e*P **P** **20 48 24.8 -3.6**
PLMC San Jos del P 70.12 312 *e*P **P** **20 48 27.7 -0.8**
NORC Norcasia 70.13 314 *e*P **P** **20 48 27.0 -1.5**
BARC Barichara 70.38 316 *e*P **P** **20 48 32.3 +2.1**
BAUV El Baul 70.60 322 P **P** **20 48 30.8 -0.5**
BBTS Babate 70.77 16 LR LR 21 14 42.5
comp=Z,1µm,18.6s,baz=212,slow=32
PTBC PUERTO BERRIO, 70.84 315 *e*P **P** **20 48 30.8 -2.1**
CBOC Ciudad Bolivar 70.87 313 *e*P **P** **20 48 30.5 -2.7**
HELC Santa Helena 70.97 314 *e*P **P** **20 48 31.2 -2.8**
BIRV Birongo 71.42 324 P **P** **20 48 36.3 0.0**
SDV Santo Domingo 71.49 319 P **P** **20 48 37.2 +0.2**
SDV LR LR 21 22 00.7
comp=Z,23nm,0.8s,baz=210,slow=2.2,SNR=9.8
comp=Z,2µm,18.8s,baz=146,slow=38
comp=Z,23nm,0.8s
SDV Santo Domingo 71.49 319 P **P** **20 48 36.9 -0.1**
SDV IAmb IAmb 20 48 45.2
comp=Z,57nm,0.9s
SDV Santo Domingo 71.49 319 *e*P **P** **20 48 37.7 +0.8**
ZARC Zaragoza, Cauc 71.87 315 *e*P **P** **20 48 37.5 -1.5**
PTAC Punta Ardita, 72.79 312 *e*P **P** **20 48 45.8 +1.3**
KOWA Kowa 73.31 28 P **P** **20 48 47.6 +0.1**
KOWA IAmb IAmb 20 49 02.7
comp=Z,61nm,1.2s
TOA0 Torodi Ar. Sit 73.74 34 IAmb IAmb 20 48 52.3
comp=Z,44nm,0.9s
TORD Torodi Ar. Bea 73.74 34 P **P** **20 48 50.1 0.0**
comp=Z,35nm,0.8s,baz=201,slow=6.3,SNR=108
TORD LR LR 21 14 30.4
comp=Z,3µm,20.5s,baz=198,slow=30
comp=Z,35nm,0.8s
TORD Torodi Ar. Bea 73.74 34 IAmb IAmb 20 48 52.3
comp=Z,41nm,0.9s
SJCC San Jacinto, C 74.18 316 *e*P **P** **20 48 53.1 +0.3**
MBAR Mbarara 74.26 67 LR LR 21 18 43.1
comp=Z,3µm,18.7s,baz=198,slow=34
MBAR Mbarara 74.26 67 P **P** **20 48 54.3 +0.8**
MBAR Mbarara 74.26 67 P **P** **20 48 54.3 +0.8**
MBAR pmax pmax
comp=Z,38nm,1.2s
MBAR MLR MLR
comp=Z,3µm,19.0s
BRU2 Volcan 76.40 308 *e*P **P** **20 49 07.7 +2.0**
KIBK Kibwezi 76.78 75 P **P** **20 49 08.1 +0.3**
SRBA San Rafael, Bu 77.09 308 P **P** **20 49 08.8 -0.7**
SRBA IAmb IAmb 20 49 22.9
comp=Z,68nm,1.3s
KMBO Kilima Mbogo 77.34 73 P **P** **20 49 12.5 +1.3**
comp=Z,0.4nm,0.4s,baz=272,slow=18,SNR=1.7
KMBO S **S** **20 59 05.7 +4.1**
comp=Z,0.3nm,0.3s,baz=307,slow=5.1,SNR=1.2
KMBO LR LR 21 20 23.4
comp=Z,3µm,19.3s,baz=238,slow=34
KMBO Kilima Mbogo 77.34 73i *e*P **P** **20 49 12.8 +1.6**
PEZE Perez Zeledon, 77.37 308 P **P** **20 49 11.1 0.0**
PEZE IAmb IAmb 20 49 19.4
comp=Z,78nm,1.2s
RIMA Rio Macho 77.79 308 IAmb IAmb 20 49 21.7
comp=Z,82nm,1.4s
CUPR Culebra, Puert 78.45 328 P **P** **20 49 16.1 -0.7**
HUMP Col San Antoni 78.47 327 P **P** **20 49 17.2 +0.3**
SJG San Juan 78.53 327 P **P** **20 49 18.5 +1.3**
comp=Z,5.6nm,0.3s,baz=221,slow=2.9,SNR=4.9
SJG LR LR 21 25 42.5
comp=Z,624nm,19.4s,baz=149,slow=37
comp=Z,5.6nm,0.3s
CBYP Canovanas 78.59 327 P **P** **20 49 17.7 0.0**
CBYP IAmb IAmb 20 49 23.5
comp=Z,94nm,1.4s
JTS Las Juntas de 78.75 307 P **P** **20 49 19.0 +0.4**
JTS IAmb IAmb 20 49 32.5
comp=Z,51nm,1.1s
JTS Las Juntas de 78.75 307*ce*P **P** **20 49 19.7 +1.1**
JTS pmax pmax
comp=Z,43nm,1.1s
DUNO Dulce Nombre, 78.81 306 IAmb IAmb 20 49 26.5
comp=Z,107nm,1.3s
ORTG Ortega, Santa 79.05 306 IAmb IAmb 20 49 23.8
comp=Z,48nm,1.0s
RPZ Rata Peaks 79.57 197 P **P** **20 49 23.2 +0.4**
comp=Z,31nm,1.1s,baz=208,slow=6.0,SNR=4.7
RPZ LR LR 21 23 00.4
comp=Z,769nm,18.4s,baz=168,slow=34
comp=Z,31nm,1.1s
RPZ Rata Peaks 79.57 197 P **P** **20 49 22.8 0.0**
RPZ IAmb IAmb 20 49 24.8
comp=Z,69nm,1.3s
ESPN Las Esperanzas 80.13 308 P **P** **20 49 25.8 -0.2**
ESPN IAmb IAmb 20 49 29.0
comp=Z,52nm,0.9s
LTZ Lake Taylor 80.27 198 P **P** **20 49 26.4 -0.3**
ACON Acoyapa 80.33 307 IAmb IAmb 20 49 29.7
comp=Z,68nm,0.9s
ACON Acoyapa 80.33 307 *e*P **P** **20 49 26.8 -0.3**
BOAB BOACO BROADBAN 80.97 307 P **P** **20 49 30.2 -0.4**
THZ Tophouse 81.14 199 IAMs_20 IAMs_20 21 18 54.9
comp=Z,1µm,19.0s
SNZO South Karori 81.24 200 IAMs_20 IAMs_20 21 19 21.7
comp=Z,1µm,21.0s
MATN Matagalpa 81.51 307 P **P** **20 49 32.8 -0.8**
MATN IAmb IAmb 20 49 40.9
comp=Z,62nm,1.1s
NNZ Nelson 81.58 199 IAMs_20 IAMs_20 21 19 14.6
comp=Z,1µm,22.0s
MTDJ Mount Denham 82.67 317 IAMs_20 IAMs_20 21 29 54.9
comp=Z,1µm,18.0s
URZ Urewera 83.67 203 P **P** **20 49 45.3 +0.8**
comp=Z,12nm,1.0s,baz=144,slow=18,SNR=2.3
URZ LR LR 21 22 24.0
comp=Z,794nm,21.6s,baz=210,slow=32
comp=Z,12nm,1.0s
ESQI Esquipulas 84.52 305 P **P** **20 49 48.7 -0.5**
TBI Tubuai 85.43 235 *e*P **P** **20 49 54.9 +1.2**
comp=Z,158nm,36.8s
TBI Tubuai 85.43 235 *e*S **S** **21 00 24.5 -0.3**
comp=Z,364nm,25.2s
TBI Tubuai 85.43 235 *e*LR LR 21 16 48.5
comp=Z,2µm,27.8s
SOR Soroa 88.97 314 IAmb IAmb 20 50 18.2
comp=Z,38nm,1.2s
TEIG Tepich 88.97 309 P **P** **20 50 10.2 -0.4**
TEIG Tepich 88.97 309 *e*P **P** **20 50 11.6 +1.0**
CMIG Matias Romero 89.36 302 P **P** **20 50 12.7 +0.2**
comp=Z,7.8nm,0.8s,baz=163,slow=3.3,SNR=12
comp=Z,7.8nm,0.8s
PPT2 Papeete2 90.42 238 *e*P **P** **20 50 18.9 +1.1**
comp=Z,130nm,24.5s
PPT2 Papeete2 90.42 238 *e*PP **PP** **20 53 51.3 -0.2**
comp=Z,127nm,24.8s
PPT2 Papeete2 90.42 238 *e*LR LR 21 19 07.2
comp=Z,1µm,22.0s
PPT Papeete 90.44 238 LR LR 21 22 17.7
comp=Z,734nm,20.9s,baz=174,slow=30
MDT Midelt 90.72 23 LR LR 21 25 16.1
comp=Z,3µm,21.0s,baz=197,slow=32
ATD Arta Tunnel 90.90 71 LR LR 21 29 20.2
comp=Z,2µm,18.6s,baz=202,slow=34
TAOE Nuku Hiva Isla 92.94 250 *e*LR LR 21 20 17.5
comp=Z,1µm,27.3s
DWPF Disney Wildern 93.09 318 IAMs_20 IAMs_20 21 34 01.2
comp=Z,779nm,19.0s
STKA Stephens Creek 93.15 175 P **P** **20 50 30.5 +0.3**
comp=Z,2.3nm,0.8s,baz=186,slow=2.9,SNR=4.0
STKA LR LR 21 30 33.0
comp=Z,2µm,19.4s,baz=184,slow=34
comp=Z,2.3nm,0.8s
UNM Universidad Na 93.39 299 IAMs_20 IAMs_20 21 32 48.9
comp=Z,852nm,18.0s
KEST Kesra 97.22 33 LR LR 21 30 28.1
comp=Z,3µm,19.2s,baz=156,slow=33
ESDC Sonseca Array 97.46 21 P Pdif 20 50 50.3 +0.9
comp=Z,0.6nm,0.6s,baz=191,slow=4.7,SNR=6.7
ESDC S **SKSac** **21 01 25.3 -0.8**
comp=Z,0.2nm,0.4s,baz=73,slow=38,SNR=2.2
ESDC PKKPbc **PKKPbc** **21 07 26.6 +0.6**
comp=Z,0.6nm,0.7s,baz=313,slow=6.6,SNR=5.5
ESDC LR LR 21 30 24.4
comp=Z,2µm,19.8s,baz=182,slow=33
comp=Z,0.6nm,0.6s
ESDC Sonseca Array 97.46 21 P Pdif 20 50 49.6 +0.2
CNNC Cliffs of the 98.24 324 IAMs_20 IAMs_20 21 41 12.7
comp=Z,697nm,19.0s
LRAL Lakeview Retre 99.65 316 IAMs_20 IAMs_20 21 40 50.9
comp=Z,826nm,18.0s
ASAR Alice Springs 100.58 167 P **Pdif** **20 51 02.8 -1.1**
comp=Z,1.3nm,0.7s,baz=180,slow=3.6,SNR=16
ASAR PP **PP** **20 55 10.7 +0.9**
comp=Z,1.8nm,1.0s,baz=174,slow=9.2,SNR=4.1
TKL Tuckaleechee C 100.72 319 PP **PP** **20 55 13.9 +2.0**
comp=Z,3.3nm,0.9s,baz=147,slow=8.3,SNR=4.3
CBN Corbin Frederi 100.76 325 IAMs_20 IAMs_20 21 37 01.4
comp=Z,630nm,19.0s
BLA Blacksburg 100.89 323 IAMs_20 IAMs_20 21 38 00.8
comp=Z,749nm,20.0s
TZTN Tazewell 101.42 320 P **Pdif** **20 51 08.2 +1.2**
baz=153
DZM Mont Dzumac 101.48 197 *e*LR LR 21 24 15.5
comp=Z,2µm,26.5s
CEL Celeste 101.66 37 IAMs_20 IAMs_20 21 36 50.8
comp=Z,812nm,18.0s
RAYN Ar Rayn 102.19 66 IAMs_20 IAMs_20 21 35 48.6
comp=Z,1µm,21.0s
YLE Yale 102.23 330 IAMs_20 IAMs_20 21 36 44.7
comp=Z,660nm,19.0s
BRYW Bryant College 102.39 331 IAMs_20 IAMs_20 21 33 33.0
comp=Z,795nm,20.0s
WES Weston 102.77 331 IAMs_20 IAMs_20 21 33 18.9
comp=Z,740nm,20.0s
TIP Timpagrande 102.78 37 IAMs_20 IAMs_20 21 31 55.5
comp=Z,875nm,21.0s
HRV Adam Dziewonsk 102.94 331 IAMs_20 IAMs_20 21 33 46.6
comp=Z,755nm,20.0s
QUA2 Belchertown 102.96 330 IAMs_20 IAMs_20 21 34 11.9
comp=Z,740nm,20.0s
WHTX Lake Whitney, 103.24 307 P **Pdif** **20 51 16.2 +0.9**
baz=148
MIAR Mount Ida 103.69 312 P **Pdif** **20 51 18.7 +1.5**
baz=149
TRY Troy 103.75 330 IAMs_20 IAMs_20 21 37 00.8
comp=Z,784nm,20.0s
FFD Franklin Falls 103.86 331 IAMs_20 IAMs_20 21 33 59.9
comp=Z,699nm,20.0s
EMMW East Machias 103.93 335 IAMs_20 IAMs_20 21 31 15.7
comp=Z,823nm,21.0s
TXAR Lajitas Array 103.97 301 Pdiff **Pdif** **20 51 19.6 +0.9**
comp=Z,0.2nm,0.7s,baz=98,slow=2.8,SNR=4.4
TXAR PP **PP** **20 55 37.8 +1.2**
comp=Z,0.7nm,0.9s,baz=129,slow=7.1,SNR=4.4
HNH Hanover 104.25 331 IAMs_20 IAMs_20 21 42 48.3
comp=Z,823nm,19.0s
WRA Warramunga Arr 104.30 167 Pdiff **Pdif** **20 51 21.4 +0.9**
comp=Z,0.5nm,0.8s,baz=188,slow=4.1,SNR=2.8
WRA PP **PKiKP** **20 55 36.5 -0.5**
comp=Z,2.9nm,1.2s,baz=189,slow=7.1,SNR=4.9
WRA PKKPbc **PKKPbc** **21 07 05.4 +0.2**
comp=Z,0.3nm,0.6s,baz=350,slow=3.0,SNR=1.9
WVL Waterville 104.35 333 IAMs_20 IAMs_20 21 31 44.8
comp=Z,868nm,22.0s
ACSO Alum Creek Sta 104.48 322 IAMs_20 IAMs_20 21 39 01.0
comp=Z,603nm,19.0s
LBNH Lisbon 104.65 332 IAMs_20 IAMs_20 21 33 21.7
comp=Z,688nm,20.0s
M53A WI Miller and 104.77 324 IAMs_20 IAMs_20 21 37 32.5
comp=Z,650nm,20.0s
VT1 Waterbury 104.96 331 IAMs_20 IAMs_20 21 34 54.7
comp=Z,720nm,20.0s
LONY Lake Ozonia 105.75 330 IAMs_20 IAMs_20 21 35 57.6
comp=Z,610nm,19.0s
TIR Tirane 105.80 38 IAMs_20 IAMs_20 21 36 45.1
comp=Z,875nm,21.0s
OK034 N. Norfolk Rd. 106.29 310 IAMs_20 IAMs_20 21 44 58.2
comp=Z,862nm,21.0s
AAM Ann Arbor 106.55 323 IAMs_20 IAMs_20 21 40 11.7
comp=Z,651nm,19.0s
HDIL Hopedale 107.10 318 IAMs_20 IAMs_20 21 42 58.9
comp=Z,741nm,21.0s
EPT El Paso 107.36 301 IAMs_20 IAMs_20 21 37 16.1
comp=Z,583nm,18.0s
OK032 Salt Plains WL 107.61 310 IAMs_20 IAMs_20 21 47 12.2
comp=Z,584nm,18.0s
L44A Lake County Fo 107.97 320 IAMs_20 IAMs_20 21 43 11.3
comp=Z,612nm,20.0s
DIVS Divibare 108.26 37 IAMs_20 IAMs_20 21 38 47.4
comp=Z,816nm,19.0s
KSU1 Kansas State U 108.83 312 IAMs_20 IAMs_20 21 42 43.6
comp=Z,680nm,21.0s
STU Stuttgart 109.18 27 IAMs_20 IAMs_20 21 36 27.4
comp=Z,712nm,20.0s
JFWS Jewell Farm 109.49 319 IAMs_20 IAMs_20 21 44 11.2
comp=Z,583nm,18.0s
ANTO Ankara 109.56 48 IAMs_20 IAMs_20 21 41 53.0
comp=Z,730nm,20.0s
SCIA State Center 109.79 316 IAMs_20 IAMs_20 21 45 37.0
comp=Z,658nm,19.0s
BRTR Keskin Array B 109.81 48 PKiKP **PKiKP** **20 55 48.3 +1.6**
comp=Z,0.5nm,0.8s,baz=174,slow=4.3,SNR=2.4
BRTR PP **PP** **20 56 19.1 -0.4**
comp=Z,3.4nm,1.1s,baz=179,slow=5.8,SNR=5.9
BRTR PKKPbc **PKKPbc** **21 06 49.9 +0.9**
comp=Z,1.6nm,0.7s,baz=83,slow=2.2,SNR=7.8
GERES GERESS Array B 110.49 30 PKiKP **PKiKP** **20 55 46.8 -0.8**
comp=Z,0.1nm,0.3s,baz=149,slow=2.3,SNR=2.3
GERES PP **PP** **20 56 22.9 -1.3**
comp=Z,2.4nm,1.0s,baz=190,slow=8.8,SNR=8.8
GERES PKKPbc **PKKPbc** **21 06 47.1 +0.2**
comp=Z,0.2nm,0.5s,baz=36,slow=7.1,SNR=3.6
CKRC Cesky Krumlov 110.65 31 AMS AMS 21 38 00.0
comp=Z,1µm,19.6s
KHC Kasperske Hory 110.71 30 IAMs_20 IAMs_20 21 37 43.6
comp=Z,773nm,21.0s
KHC Kasperske Hory 110.71 30 *e*SKS **SKSac** **21 02 25.9 -0.8**
KHC AMS AMS 21 36 50.0
comp=Z,800nm,23.0s
TREC Trest 111.42 31 AMS AMS 21 35 10.0
comp=Z,900nm,22.1s
PSZ Piszkesteto 111.58 35 IAMs_20 IAMs_20 21 41 55.2
comp=Z,654nm,19.0s
SDCO Great Sand Dun 111.70 305 IAMs_20 IAMs_20 21 44 41.4
comp=Z,550nm,19.0s
PRU Pruhonice 111.76 30 AMS AMS 21 37 50.0
comp=Z,900nm,21.2s
PVCC Panska Ves 112.25 30 AMS AMS 21 38 20.0
comp=Z,1µm,19.3s
KRLC Kraliky 112.50 32 AMS AMS 21 41 40.0
comp=Z,600nm,19.4s
CLL Collm 112.51 29 *e*PKIKP **PKiKP** **20 55 53.0 +1.8**
CLL MLR MLR
comp=Z,900nm,21.1s
CLL Collm 112.51 29 *e*PKiKP **PKiKP** **20 55 53.0 +1.8**
CLL *e*PP **PP** **20 56 41.0 +2.5**
CLL *e*PS **PS** **21 06 17.0 +5.4**
CLL *e*PSmax 21 06 30.0
CLL *e*PPS PPS 21 07 20.0
CLL *e*SS SS 21 12 21.0 +2.0
CLL *e*PPPrev 21 14 30.0
CLL *e*SSS SSS 21 16 18.0
CLL *e*SSSS 21 19 36.0
CLL Lm MLR 21 38 00.0
comp=N,800nm,21.8s
CLL Lm MLR 21 38 00.0
comp=E,200nm,20.1s
CLL Lm MLR 21 38 00.0
comp=Z,900nm,21.1s
DPC Dobruska-Polom 112.61 31 AMS AMS 21 37 50.0
comp=Z,800nm,19.4s
UPC Upice 112.65 31 AMS AMS 21 39 30.0
comp=Z,900nm,21.3s
ECSD EROS Data Cent 112.68 315 IAMs_20 IAMs_20 21 42 05.7
comp=Z,606nm,20.0s
OKC Ostrava-Krasne 112.71 33 AMS AMS 21 44 10.0
comp=Z,500nm,16.4s
OSTC Ostas 112.76 31 AMS AMS 21 38 00.0
comp=Z,900nm,21.9s
SCHQ Schefferville 113.28 339 PKiKP **PKiKP** **20 55 52.0 -0.6**
comp=Z,2.0nm,0.5s,baz=215,slow=7.4,SNR=4.8
MONP2 Monument Peak 113.30 294 P **PKiKP** **20 55 54.3 +0.7**
baz=142
BKNI Bangkinang 113.36 127 IAMs_20 IAMs_20 21 39 14.9
comp=Z,523nm,18.0s
ISCO Idaho Springs 113.41 306 P **PKiKP** **20 55 54.6 +0.9**
baz=143
EYMN Ely 114.22 321 IAMs_20 IAMs_20 21 40 54.5
comp=Z,579nm,21.0s
EYMN Ely 114.22 321 P **PKiKP** **20 55 56.9 +2.3**
baz=147
GMRC Granite Mounta 114.38 296 P **PKiKP** **20 55 57.3 +1.8**
baz=141
RPSI Rantau Prapat 114.45 124 IAMs_20 IAMs_20 21 35 56.3
comp=Z,578nm,20.0s
GNI Garni 115.16 56 IAMs_20 IAMs_20 21 46 37.2
comp=Z,632nm,20.0s
P18A Preston Nutter 115.45 303 **PKPdf** **20 55 55.7 -1.9**
RGN Rugen 115.50 27 IAMs_20 IAMs_20 21 44 15.7
comp=Z,720nm,19.0s
ANN Anapa 115.57 48 *e*P **Pdif** **20 52 07.6 -2.1**
ANN *e* 20 57 03.6
ANN *e* 21 02 45.0
ANN *e*SP SP 21 06 43.7 +5.0
ANN pmax pmax
comp=Z,48nm,1.2s
SOC Sochi 115.59 50 *i* PKiKP **PKiKP** **20 55 58.6 +1.3**
SOC *e* 20 57 00.6
SOC *e*PPP PPP 20 59 26.9
SOC *e*PS **PKKPab** **21 06 34.7 +1.7**
SOC *e*SS SS 21 12 56.3 -3.6
SOC *e*SSS SSS 21 17 14.3
SOC MLR MLR
comp=Z,308nm,21.0s
RWWY Rawlins 115.64 307 IAMs_20 IAMs_20 21 47 39.6
comp=Z,651nm,19.0s
EDW2 Edwards Air Fo 115.66 295 P **PKiKP** **20 55 59.0 +1.1**
baz=141
SCZ2 Santa Cruz Isl 115.84 293 P **PKiKP** **20 55 59.2 +1.0**
baz=141
QSM Queen of Sheba 115.91 296 **PKPdf** **20 55 56.9 -1.3**
K22A Casper 116.08 308 P **PKiKP** **20 55 59.7 +1.1**
baz=142
RSSD Black Hills 116.14 310 IAMs_20 IAMs_20 21 45 01.9
comp=Z,683nm,22.0s
AGMN Agassiz Nation 116.14 318 IAMs_20 IAMs_20 21 45 35.4
comp=Z,610nm,19.0s
MPMC Manual Prospec 116.31 296 P **PKiKP** **20 56 00.1 +0.8**
baz=140
TPNV Topopah Spring 116.35 297 P **PKiKP** **20 56 00.6 +1.4**
baz=141
ISA Isabella, Lake 116.51 295 **PKPdf** **20 55 58.7 -0.8**
ISA Isabella, Lake 116.51 295 PKiKP **PKPdf** **20 55 58.7 -0.8**
ISA Isabella, Lake 116.51 295 P **PKiKP** **20 56 00.9 +1.4**
baz=140
PKM Mcpherson Peak 116.62 293 P **PKiKP** **20 56 00.9 +1.0**
baz=140
CWC Cottonwood Cre 116.90 296 P **PKiKP** **20 56 01.2 +0.9**
baz=140
IPM Ipoh 117.01 125 IAMs_20 IAMs_20 21 37 38.9
comp=Z,567nm,20.0s
R11A Troy Canyon, C 117.09 299 P **PKiKP** **20 56 01.6 +0.9**
baz=140
KBZ Khabaz 117.12 52 PKP **PKPdf** **20 55 59.8 -0.4**
comp=Z,0.6nm,0.4s,baz=170,slow=8.1,SNR=1.9
DUG Dugway, Tooele 117.14 302 IAMs_20 IAMs_20 21 50 37.0
comp=Z,528nm,18.0s
DUG Dugway, Tooele 117.14 302 P **PKiKP** **20 56 01.7 +1.1**
baz=141
AKASG Malin Array Be 117.16 39 PKP **PKPdf** **20 55 59.1 -1.0**
comp=Z,0.5nm,0.5s,baz=256,slow=1.3,SNR=2.3
AKASG PP **PP** **20 57 07.2 -4.1**
comp=Z,0.2nm,0.3s,baz=226,slow=7.5,SNR=6.0
KIV Kislovodsk 117.20 52 *i* PKiKP **PKiKP** **20 56 02.2 +1.6**
KIV *e* 21 02 52.4
KIV *e*PS **PS** **21 06 57.5 +2.6**
KIV *e*SS SS 21 13 24.0 +2.8
KIV pmax pmax
comp=Z,2.0nm,1.0s
KIV MLR MLR
comp=Z,313nm,22.0s
MDND Maddock 117.25 316 P **PKiKP** **20 56 01.8 +1.4**
baz=144
MZP Montezuma Peak 117.51 297 **PKPdf** **20 56 01.6 0.0**
KULM Kulim 117.54 124 IAMs_20 IAMs_20 21 38 02.1
comp=Z,727nm,22.0s
PDAR Pinedale Array 117.57 306 PKP **PKPdf** **20 55 59.7 -1.9**
comp=Z,0.7nm,0.6s,baz=144,slow=4.4,SNR=7.5
PDAR PP **PP** **20 57 16.8 +2.1**
comp=Z,0.4nm,0.6s,baz=129,slow=7.1,SNR=1.1
HWUT Hardware Ranch 117.62 304 IAMs_20 IAMs_20 21 48 33.9
comp=Z,494nm,18.0s
ULM Lac du Bonnet 117.74 319 PKP **PKiKP** **20 56 01.4 +0.1**
comp=Z,1.8nm,0.5s,baz=108,slow=19,SNR=2.0
AHID Auburn Hatcher 118.29 305 IAMs_20 IAMs_20 21 52 40.7
comp=Z,623nm,18.0s
NVAR Mina Array Bea 118.53 297 PKP **PKiKP** **20 56 04.1 +0.5**
comp=Z,1.6nm,0.6s,baz=124,slow=2.0,SNR=8.1
NVAR PP **PP** **20 57 25.0 +3.6**
comp=Z,0.2nm,0.4s,baz=115,slow=10,SNR=1.4
MAK Makhachkala 118.65 55 *e*P **Pdif** **20 52 20.7 -2.8**
MAK *i* 20 56 01.4
MAK pmax pmax
comp=Z,106nm,1.2s
MAK MLR MLR
comp=Z,792nm,19.0s
FXWY Fox Creek 118.93 305 **PKPdf** **20 56 03.7 -0.4**
IMW Indian Meadow 119.08 306 IAMs_20 IAMs_20 21 49 22.7
comp=Z,621nm,20.0s
LAO LASA Array 119.11 311 IAMs_20 IAMs_20 21 38 05.5
comp=Z,685nm,22.0s
FLWY Flagg Ranch 119.11 306 IAMs_20 IAMs_20 21 49 47.5
comp=Z,665nm,19.0s
KONO Kongsberg 119.18 23 IAMs_20 IAMs_20 21 48 20.8
comp=Z,594nm,18.0s
RLMT Red Lodge 119.25 308 P **PKiKP** **20 56 05.4 +0.7**
baz=140
PABE Paberze 119.39 33 IAMs_20 IAMs_20 21 47 22.8
comp=Z,670nm,18.0s
PCI Palu 119.55 147 PKP PKiKP 20 56 19.2 +13
DGMT Dagmar 119.62 313 P **PKiKP** **20 56 06.2 +1.2**
baz=141
NACGM Naroch 119.79 35 *e*PKP PKiKP 20 56 15.1 +10
baz=214
MNK Minsk 119.82 36 *i* PKiKP **PKiKP** **20 56 06.9 +1.7**
MNK *i* 20 57 32.0
MNK *i* PPP PPP 21 00 04.6
MNK *i* 21 03 14.7
MNK *i* SS SS 21 14 00.7 +6.1
MNK *i* SSS SSS 21 18 27.0
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK MLR MLR
comp=E,35nm,17.0s
MNK MLR MLR
comp=Z,240nm,17.0s
MNK Minsk 119.82 36 *i* PKP **PKiKP** **20 56 06.9 +1.7**
comp=E,1.0nm,0.8s,baz=216
MNK *i* PKP **PKiKP** **20 56 06.9 +1.7**
MNK *i* PKP **PKiKP** **20 56 06.9 +1.7**
comp=Z,5.0nm,0.8s
MNK *i* PP **PP** **20 57 32.0 +2.4**
MNK *i* PPP PPP 21 00 04.7
MNK *i* SKS **SKSdf** **21 03 14.8 -1.7**
MNK *i* SS **SKKSdf** **21 14 00.7 +2.1**
MNK *i* SSS SSS 21 18 27.1
MNK *i* LQ LQ 21 40 53.3
MNK *i* LR LR 21 44 47.4
MNK *i* LRM MLR 21 47 21.3
comp=E,35nm,16.6s
MNK *i* LRM MLR 21 47 21.3
MNK *i* LRM MLR 21 47 21.3
comp=Z,240nm,16.6s
BORG Borgarnes 119.86 5 IAMs_20 IAMs_20 21 48 15.0

comp=Z,594nm,18.0s
GEYT Alibeck 120.16 66 PP **PP** **20 57 29.4 -2.9**
comp=Z,0.9nm,0.5s,baz=219,slow=11,SNR=2.3
HLID Hailey 120.47 303 P **PKiKP** **20 56 07.8 +0.7**
baz=139
ANGG Ammassalik, Gr 120.52 357 IAMs_20 IAMs_20 21 39 30.4
comp=Z,526nm,20.0s
BOZ Bozeman (W) 120.69 307 IAMs_20 IAMs_20 21 48 27.4
comp=Z,511nm,20.0s
BOZ Bozeman (W) 120.69 307 P **PKiKP** **20 56 08.6 +1.1**
baz=139
NB2 NORSAR Subarra 120.79 23 PKPdf **PKiKP** **20 56 07.0 0.0**
comp=Z,8.6nm,1.7s,baz=202,slow=1.9
NOA NORSAR Array B 120.79 23 PKP **PKPdf** **20 56 06.1 -0.8**
comp=Z,1.0nm,0.6s,baz=208,slow=2.0,SNR=15
NOA SKP 20 59 40.6
comp=Z,0.9nm,0.9s,baz=199,slow=1.7,SNR=3.2
NOA PKKPbc **PKKPbc** **21 06 11.4 +0.4**
comp=Z,0.9nm,1.1s,baz=25,slow=3.4,SNR=3.5
NB201 NORSAR Array S 120.81 23 **PKiKP** **20 56 07.6 +0.6**
AKN Aaknes 120.93 20 *e*PP **PP** **20 57 38.1 +1.0**
MFID Camas Ranch 121.05 302 IAMs_20 IAMs_20 21 52 40.5
comp=Z,473nm,19.0s
EGMT Eagleton 121.68 310 IAMs_20 IAMs_20 21 49 09.4
comp=Z,513nm,21.0s
EGMT Eagleton 121.68 310 P **PKiKP** **20 56 10.2 +1.0**
baz=139
VORR Voronezh 121.72 44 *e*PKiKP **PKiKP** **20 56 11.3 +2.3**
VORR pmax pmax
comp=Z,60nm,0.5s
SFJD Kangerlussuaq 122.63 351 IAMs_20 IAMs_20 21 42 04.9
comp=Z,588nm,20.0s
MSO Missoula 122.68 306 **PKPdf** **20 56 10.8 -0.2**
MSO IAMs_20 IAMs_20 21 50 25.9
comp=Z,514nm,18.0s
MSO Missoula 122.68 306 P **PKiKP** **20 56 12.0 +0.8**
baz=138
VSU Vasula 122.70 32⇑ *i*PKiKP **PKiKP** **20 56 11.6 +0.9**
OBN Obninsk 123.36 40 IAMs_20 IAMs_20 21 48 37.8
comp=Z,456nm,19.0s
OBN Obninsk 123.36 40 *i* PKiKP **PKiKP** **20 56 12.6 +0.5**
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,401nm,18.0s
L04D Klamath Falls 123.39 297 P **PKiKP** **20 56 13.5 +0.7**
baz=137
J05D Fort Rock, OR 123.62 299 P **PKiKP** **20 56 14.1 +0.8**
baz=137
G08A Pilot Rock 123.95 302 PKPdf **PKiKP** **20 56 13.7 -0.1**
L02F Cave Junction 123.97 296 P **PKiKP** **20 56 14.7 +0.9**
baz=136
J04D Umpqua Nationa 124.03 298 P **PKiKP** **20 56 14.9 +0.7**
baz=136
ICESG Greenland Ices 124.06 357 *e*P **PKiKP** **20 56 14.3 +0.7**
MOS Moscow 124.22 40 *i* PKiKP **PKPdf** **20 56 07.7 -5.8**
MOS *e* 20 58 07.5
MOS *e* 21 03 09.0
MOS MLR MLR
comp=Z,500nm,19.0s
K02D Willamette Mer 124.43 297 P **PKiKP** **20 56 16.1 +1.2**
baz=136
I05D Terrebonne, OR 124.44 300 P **PKiKP** **20 56 15.9 +1.1**
baz=136
I04A Tendick Farm, 124.58 298 P **PKiKP** **20 56 15.9 +0.9**
baz=136
PUL Pulkovo 124.86 33⇑ *i*PKiKP **PKiKP** **20 56 16.1 +1.2**
J01E Myrtle Point 124.90 297 P **PKiKP** **20 56 16.8 +1.3**
baz=136
FINES FINESS Array B 124.92 30 PKP **PKPdf** **20 56 14.6 -0.1**
comp=Z,7.4nm,0.5s,baz=181,slow=1.9,SNR=29
I03D Drain, OR 124.99 298 P **PKiKP** **20 56 16.7 +0.9**
baz=136
D08A Wollman Farm, 125.20 303 **PKPdf** **20 56 15.8 0.0**
NEW Newport 125.21 305 P **PKiKP** **20 56 16.7 +0.6**
baz=136
H04D Lebanon 125.27 299 P **PKiKP** **20 56 17.6 +1.3**
baz=136
I02E Swisshome, OR 125.53 298 P **PKiKP** **20 56 17.7 +0.9**
baz=135
MOR8 Moi Rana 125.99 21 *e*P **PKiKP** **20 56 18.8 +1.8**
VALR Valaam 126.27 32 *d i*PKiKP **PKiKP** **20 56 17.7 0.0**
F04D Rainier, OR 126.50 300 P **PKiKP** **20 56 19.7 +1.0**
baz=135
CHGR Chuyangaron 126.62 73 PKPdf **PKPdf** **20 56 18.0 -0.8**
CHGR Chuyangaron 126.62 73 PKiKP **PKPdf** **20 56 18.0 -0.8**
FAUS Fauske 127.20 21 *e*P **PKiKP** **20 56 20.2 +0.8**
FAUS IAmb IAmb 20 56 26.1
comp=Z,7.6nm,0.9s
SUMG Summit 127.52 358 *i* P **PKiKP** **20 56 21.0 +0.5**
STEI Steigen 127.66 21 *e*P **PKiKP** **20 56 21.7 +1.4**
STEI IAmb IAmb 20 56 22.2
comp=Z,3.7nm,0.7s
CMAR Chiang Mai Arr 127.94 115 PKP **PKiKP** **20 56 22.2 -0.2**
comp=Z,3.6nm,0.6s,baz=226,slow=3.9,SNR=18
CHTO Chiang Mai 128.24 114 **PKPdf** **20 56 21.6 -0.8**
CHTO Chiang Mai 128.24 114 IAMs_20 IAMs_20 21 40 47.6
comp=Z,518nm,22.0s
CHTO Chiang Mai 128.24 114 PKIKP **PKPdf** **20 56 21.6 -0.8**
CHTO MLR MLR
comp=Z,500nm,22.0s
KLMR Klimovskoe 128.69 37 *e*PKIKP **PKPdf** **20 56 21.6 -0.3**
KLMR *e* 20 58 28.6
KLMR pmax pmax
comp=Z,17nm,1.1s
KLMR MLR MLR
comp=Z,854nm,19.0s
KLMR Klimovskoe 128.69 37 *e*PKPdf **PKPdf** **20 56 21.6 -0.3**
KLMR AMP 20 56 39.1
comp=Z,17nm,1.1s
KLMR *e*PP **PP** **20 58 28.7 -0.4**
KLMR LQ LQ 21 44 16.1
KLMR LQ LQ 21 44 16.1
KLMR LR LR 21 47 17.4
KLMR AMP 21 51 19.6
comp=Z,854nm,18.6s
AKTO Aktyubinsk 129.03 55 PKP **PKPdf** **20 56 22.7 -0.2**
baz=168,slow=2.6
AKTO SKPbc SKPab 20 59 42.2 -0.4
comp=Z,5.1nm,1.2s,baz=185,slow=2.4,SNR=6.2
IUG luzhnay 129.54 71 *e*PKIKP **PKPdf** **20 56 24.3 0.0**
IUG luzhnay 129.54 71 *e*PKP **PKPdf** **20 56 24.3 0.0**
baz=71
TRO Tromso 129.83 21 *e*P **PKiKP** **20 56 24.9 +0.3**
TRO IAmb IAmb 20 56 34.9
comp=Z,6.8nm,1.0s
JETT Jettan, Norway 130.07 21 *e*P **PKiKP** **20 56 26.0 +0.8**
JETT IAmb IAmb 20 56 35.6
comp=Z,10nm,0.8s
KTK1 Kautokeino 130.25 23 *e*P **PKiKP** **20 56 26.0 +0.5**
KTK1 IAmb IAmb 20 56 30.3
comp=Z,12nm,1.0s
DZA Taraz 130.75 71 *e*PKIKP **PKPdf** **20 56 26.3 -0.2**
DZA Taraz 130.75 71 *e*PKP **PKPdf** **20 56 26.3 -0.2**
baz=71
KIRV Kirov 130.75 43 *d i*PKIKP **PKiKP** **20 56 26.6 -0.1**
KSH Kashi 131.00 77 PKP **PKPdf** **20 56 27.5 +0.3**
KSH SKKS 21 05 37.9
KSH LR LR
comp=Z,320nm,17.8s
KSH LR LR
comp=Z,330nm,19.2s
KSH LR LR
comp=Z,530nm,20.8s
ARA0 ARCESS Array S 131.16 23 *e*P **PKiKP** **20 56 27.6 +0.2**
ARA0 IAmb IAmb 20 56 37.5
comp=Z,27nm,1.3s
ARCES ARCESS Array B 131.16 23 PKP **PKPdf** **20 56 26.8 +0.4**
comp=Z,6.5nm,0.8s,baz=225,slow=1.5,SNR=22
ARCES SKPbc **SKPbc** **20 59 50.5 -0.3**
comp=Z,9.8nm,1.1s,baz=292,slow=0.7,SNR=8.3
ARCES ARCESS Array B 131.16 23 PKPdf **PKPdf** **20 56 26.1 -0.2**
ARCES ARCESS Array B 131.16 23 PKIKP **PKPdf** **20 56 26.2 -0.2**
PRGR Permogore 131.37 38 *e*PKIKP **PKiKP** **20 56 27.7 -0.2**
PRGR *i* 21 03 31.6
HAMF Hammerfest 131.62 22 *e* **PKiKP** **20 56 31.0 +2.8**
APA Apatity 131.65 28⇑ *i*PKIKP **PKPdf** **20 56 26.4 -0.9**
APA *i* 20 58 51.0
APA *i* SS SS 21 16 23.0 +0.5
APA pmax pmax
comp=Z,7.0nm,0.8s
KEV Kevo 131.67 24 IAMs_20 IAMs_20 21 52 02.1
comp=Z,582nm,20.0s
LVZ Lovozero 132.22 28 **PKPdf** **20 56 27.9 -0.6**
LVZ Lovozero 132.22 28 *d i*PKIKP **PKiKP** **20 56 29.7 +0.1**
AAK Ala-Archa 132.30 73 PKPdf **PKPdf** **20 56 27.1 -2.5**
AAK Ala-Archa 132.30 73⇑ *i*PKIKP **PKiKP** **20 56 31.3 +0.6**
LSA Lhasa 132.60 98 PKP **PKiKP** **20 56 32.1 0.0**
SGDS Sogindy 132.92 72 *e*PKIKP **PKiKP** **20 56 31.2 -0.6**
SGDS Sogindy 132.92 72 *e*PKP **PKiKP** **20 56 31.3 -0.6**
baz=72
ARU Arti 133.17 50 PP **PP** **20 58 55.0 -3.2**
comp=Z,1.9nm,0.7s,baz=217,slow=8.6,SNR=1.8
ARU SKPbc **SKPbc** **20 59 57.2 -1.1**
comp=Z,1.0nm,0.4s,baz=173,slow=5.9,SNR=6.0
ARU Arti 133.17 50 PKPdf **PKPdf** **20 56 30.0 -0.6**
ARU Arti 133.17 50 *i* PKIKP **PKiKP** **20 56 31.2 -0.5**
ARU 20 58 56.2
ARU MLR MLR
comp=Z,701nm,18.0s
BTLS Baital 133.64 70 *e*PKIKP **PKiKP** **20 56 32.9 -0.2**
BTLS Baital 133.64 70 *e*PKP **PKiKP** **20 56 33.0 -0.2**
baz=70
YKA Yellowknife Ar 133.70 320 PKP **PKiKP** **20 56 32.1 -0.5**
comp=Z,6.2nm,0.7s,baz=125,slow=2.3,SNR=12
YKA PP **PP** **20 59 00.7 -0.8**
comp=Z,2.3nm,0.8s,baz=119,slow=6.4,SNR=1.1
YKA Yellowknife Ar 133.70 320 PKPdf **PKPdf** **20 56 30.5 -0.8**
YKA Yellowknife Ar 133.70 320 PKIKP **PKPdf** **20 56 30.5 -0.8**
BJO1 Bjornoya 133.76 17 *e*SKPdf **SKPab** **21 00 02.6 +0.3**
AAA Alma-Ata 134.01 74 *e*PKIKP **PKPdf** **20 56 33.0 +0.3**
AAA Alma-Ata 134.01 74 *e*PKP **PKPdf** **20 56 33.0 +0.3**
baz=74
MDOK Medeo 134.06 74 *e*PKIKP **PKiKP** **20 56 33.8 -0.4**
MDOK *e* 20 59 04.6
MDOK Medeo 134.06 74 *e*PKP **PKiKP** **20 56 33.8 -0.4**
baz=74
MDOK *e*PP **PP** **20 59 04.7 +0.3**
baz=74
KUU Kurty 134.14 73 *e*PKIKP **PKiKP** **20 56 34.2 0.0**
KUU Kurty 134.14 73 *e*PKP **PKiKP** **20 56 34.3 0.0**
baz=73
SATY Saty 134.74 75 *e*PKIKP **PKiKP** **20 56 35.0 -0.6**
SATY Saty 134.74 75 *e*PKP **PKiKP** **20 56 35.0 -0.6**
baz=75
UZB Uzynbulak 135.14 76 *e*PKIKP **PKiKP** **20 56 36.0 -0.4**
UZB Uzynbulak 135.14 76 *e*PKP **PKiKP** **20 56 36.0 -0.4**
baz=76
SHLS Shalkode 135.39 76 *e*PKIKP **PKiKP** **20 56 36.8 -0.1**
SHLS Shalkode 135.39 76 *e*PKP **PKiKP** **20 56 36.8 -0.1**
baz=76
PZH PanZhiHua 135.99 111 PKP **PKiKP** **20 56 37.9 -0.7**
PZH PP **PP** **20 59 16.3 0.0**
PZH SS SS 21 17 16.3 +0.6
PZH AMB AMB
comp=Z,290nm,6.3s
PZH LR LR
comp=Z,560nm,22.4s
PZH LR LR
comp=Z,510nm,19.6s
PZH LR LR
comp=Z,900nm,21.6s
KBS Kingsbay 136.35 11 IAMs_20 IAMs_20 21 47 47.9
comp=Z,403nm,20.0s
BRVK Borovoye 136.61 59 PKPpre PKPpre 20 56 25.8
BRVK **PKPdf** **20 56 36.9 -0.2**
BRVK Borovoye 136.61 59 IAMs_20 IAMs_20 22 01 12.1
comp=Z,554nm,20.0s
BRVK Borovoye 136.61 59⇑ *e*PKIKP **PKiKP** **20 56 38.1 -0.8**
CRAG Craig 137.40 304 P **PKiKP** **20 56 39.8 -0.6**
baz=124
WRAK Wrangell Islan 137.56 306 P **PKiKP** **20 56 40.6 0.0**
baz=123
DLBC Dease Lake 137.61 309 P **PKiKP** **20 56 40.7 -0.1**
baz=123
TGTN Hyland Airport 138.48 314 P **PKiKP** **20 56 42.5 0.0**
baz=121
R33M Jennings River 138.53 310 P **PKiKP** **20 56 41.8 -0.9**
baz=121
GYA Guiyang 138.53 117 PKP **PKPdf** **20 56 40.3 -1.4**
GYA PP **PP** **20 59 38.3 +6.1**
GYA SS SS 21 17 43.5 -2.3
GYA AMB AMB
comp=Z,190nm,4.8s
MAKZ Makanchi 139.07 73 IAMs_20 IAMs_20 21 57 27.0
comp=Z,488nm,22.0s
MKAR Makanchi Array 139.23 74 PKhKP PKPpre 20 56 34.5
comp=Z,1.7nm,0.8s,baz=267,slow=2.8,SNR=8.7
MKAR PP **PP** **20 59 38.9 +2.4**
comp=Z,0.6nm,0.9s,baz=224,slow=4.0,SNR=3.9
MKAR SKPbc **SKPbc** **21 00 16.2 -1.0**
comp=Z,4.9nm,1.1s,baz=234,slow=4.1,SNR=4.4
SIT Sitka 139.29 305 P **PKiKP** **20 56 43.7 -0.5**
baz=121
KURBB Kurchatov Arra 139.43 66 PKhKP PKPpre 20 56 34.2
comp=Z,1.5nm,0.8s,baz=240,slow=3.4,SNR=15
KURBB PP **PP** **20 59 36.6 -1.0**
comp=Z,1.6nm,0.9s,baz=246,slow=6.7,SNR=4.2
KURBB SKPbc **SKPbc** **21 00 16.4 -1.1**
comp=Z,4.2nm,1.1s,baz=236,slow=3.6,SNR=11
GOMU GeErMu 139.45 95 PKP **PKPdf** **20 56 41.1 -2.3**
GOMU PP **PP** **20 59 39.8 +1.5**
GOMU AMB AMB
comp=Z,160nm,5.4s
GOMU LR LR
comp=Z,200nm,20.6s
GOMU LR LR
comp=Z,190nm,19.3s
GOMU LR LR
comp=Z,260nm,21.2s
KURK Kurchatov 139.53 66 PKPpre PKPpre 20 56 32.9
KURK **PKPdf** **20 56 41.3 -1.3**
KURK Kurchatov 139.53 66⇑ *e*PKIKP **PKPdf** **20 56 43.1 +0.6**
P33M Teslin, Yukon 139.75 311 IAMs_20 IAMs_20 22 06 05.5
comp=Z,415nm,18.0s
SEM Semipalatinsk 140.22 68 *e*PKIKP **PKPdf** **20 56 44.1 0.0**
SEM Semipalatinsk 140.22 68 *e*PKP **PKPdf** **20 56 44.1 0.0**
baz=68
WMQ Urumqi 140.44 81 PKP **PKPdf** **20 56 44.1 -0.4**
WMQ sPKP 20 56 58.6
WMQ PP PP 20 59 52.9 +8.8
WMQ PKS **PKSdf** **21 00 20.8 +0.4**
WMQ SKKS 21 06 36.1
WMQ AMB AMB
comp=Z,170nm,8.7s
WMQ LR LR
comp=Z,230nm,18.1s
WMQ LR LR
comp=Z,260nm,19.3s
WMQ LR LR
comp=Z,310nm,19.3s
C36M Paulatuk 140.62 326 IAMs_20 IAMs_20 21 53 56.7
comp=Z,491nm,21.0s
ZSN Zaisan 141.04 74 *e*PKIKP **PKPdf** **20 56 45.2 -0.2**
ZSN Zaisan 141.04 74 *e*PKP **PKPdf** **20 56 45.2 -0.2**
baz=74
M31M Drury Creek, Y 141.35 313 IAMs_20 IAMs_20 21 56 43.9
comp=Z,611nm,22.0s
N31M Braeburn, Yuko 141.63 311 PKPpre 20 56 40.5
N31M IAMs_20 IAMs_20 22 03 37.2
comp=Z,487nm,21.0s
P29M Windy Craggy 141.66 308 IAMs_20 IAMs_20 22 02 39.0
comp=Z,378nm,20.0s
A36M Sachs Harbour 142.03 330 IAMs_20 IAMs_20 21 57 10.1
comp=Z,540nm,20.0s
BCPM Bancas Point 142.66 308 IAMs_20 IAMs_20 22 01 36.5
comp=Z,420nm,20.0s
ENH Enshi 143.07 116 IAMs_20 IAMs_20 21 50 12.8
comp=Z,542nm,22.0s
INK Inuvik 143.40 322 PKPdf PKPab 20 56 45.2 +0.1
INK Inuvik 143.40 322 PKIKP PKPab 20 56 45.2 +0.1
TABL Table Mountain 143.55 308 IAMs_20 IAMs_20 22 00 04.0
comp=Z,523nm,22.0s
DGZ Jazzator, Alta 143.71 73⇑ *e*PKIKP **PKPdf** **20 56 49.2 -1.1**
DGZ MLR MLR
comp=Z,636nm,19.0s
YAH Yahtse 143.79 308 IAMs_20 IAMs_20 22 01 58.4
comp=Z,547nm,20.0s
MESA MESA 143.81 307 IAMs_20 IAMs_20 22 10 34.9
comp=Z,470nm,19.0s
CTGM Chitina Glacie 143.85 309 IAMs_20 IAMs_20 22 02 37.9
comp=Z,433nm,20.0s
ISLE Juniper Island 144.16 308 **PKPab** **20 56 48.6 +0.1**
ISLE IAMs_20 IAMs_20 22 03 15.1
comp=Z,517nm,19.0s
I29M Ogilvie Camp, 144.19 317 IAMs_20 IAMs_20 22 06 33.0
comp=Z,381nm,18.0s
BGLC Bering Glacier 144.40 307 P **PKPdf** **20 56 52.0 +1.2**
baz=113
TGL Tana Glacier 144.44 308 IAMs_20 IAMs_20 21 59 22.5
comp=Z,537nm,22.0s
ZALV Zalesovo Beam 144.46 65 PKP PKPbc 20 56 49.8 0.0
comp=Z,30nm,0.7s,baz=243,slow=3.8,SNR=114
ZALV PP **PP** **21 00 07.2 -0.9**
comp=Z,2.2nm,0.9s,baz=237,slow=4.8,SNR=4.8
ZALV Zalesovo Beam 144.46 65 PKPdf **PKPab** **20 56 49.6 0.0**
LZH Lanzhou 144.47 104 *e*PKP PKPbc 20 56 51.4 +0.7
LZH pPKP PKiKP 20 57 02.1 +6.3
LZH sPKP 20 57 05.0
LZH SKKS 21 07 00.8
LZH SS **SS** **21 18 57.9 +2.5**
LZH LR LR
comp=Z,220nm,17.2s
LZH LR LR
comp=Z,270nm,21.3s
LZH LR LR
comp=Z,360nm,22.3s
GTA Gaotai 144.53 96⇑ PKP PKPbc 20 56 51.1 +0.4
GTA PP **PP** **21 00 14.8 +6.0**
GTA SS SS 21 18 58.8 +2.8
GTA AMB AMB
comp=Z,120nm,6.5s
GTA LR LR
comp=Z,250nm,21.1s
GTA LR LR
comp=Z,230nm,20.0s
GTA LR LR
comp=Z,290nm,21.1s
M27K Edge Creek, AK 144.62 311 IAMs_20 IAMs_20 22 07 32.3
comp=Z,408nm,19.0s
M27K Edge Creek, AK 144.62 311 P PKPbc 20 56 50.5 +0.2
baz=111,SNR=62
BERG Berg Lake 144.70 307 IAMs_20 IAMs_20 22 03 25.3
comp=Z,481nm,18.0s
MCARA McCarthy VSAT 144.76 309 IAMs_20 IAMs_20 22 00 22.1
comp=Z,534nm,21.0s
MCARA McCarthy VSAT 144.76 309 P **PKPdf** **20 56 51.2 -0.4**
baz=112,SNR=12
KAIM Kayak Island 144.85 306 P **PKPdf** **20 56 51.4 -0.3**
baz=113
L27K Beaver Creek, 144.85 312 P PKPbc 20 56 50.9 0.0
baz=110,SNR=93
HMT Hamilton 144.93 307 **PKPdf** **20 56 51.7 -0.2**
M26K Nabesna, AK 145.12 310 IAMs_20 IAMs_20 22 05 14.6
comp=Z,338nm,18.0s
M26K Nabesna, AK 145.12 310 P **PKPbc** **20 56 51.7 -0.2**
baz=111,SNR=32
EGAK Eagle 145.14 315 IAMs_20 IAMs_20 22 01 54.1
comp=Z,417nm,20.0s
EGAK Eagle 145.14 315 P **PKPbc** **20 56 51.6 -0.1**
baz=109,SNR=52
GLB Gilahina Butte 145.14 309 IAMs_20 IAMs_20 22 02 20.0
comp=Z,520nm,19.0s
RAGM Ragged Mountai 145.14 307 **PKPbc** **20 56 51.9 0.0**
K27K Chicken 145.28 313 IAMs_20 IAMs_20 22 03 37.9
comp=Z,540nm,20.0s
BMRM Bremner River 145.32 308 P **PKPbc** **20 56 52.5 0.0**
baz=112,SNR=44
L26K Log Cabin Wild 145.49 311 **PKPdf** **20 56 51.9 -0.9**
L26K Log Cabin Wild 145.49 311 P **PKPab** **20 56 53.3 +0.2**
baz=110,SNR=23
N25K Chitina, Valde 145.55 309 IAMs_20 IAMs_20 22 02 37.9
comp=Z,432nm,19.0s
N25K Chitina, Valde 145.55 309 P **PKPbc** **20 56 53.3 +0.1**
baz=111,SNR=26
I27K Kandik River 145.58 316 P **PKPab** **20 56 53.5 0.0**
baz=107
EYAK Cordova Ski Ar 145.70 307 P **PKPab** **20 56 54.4 +0.5**
baz=111,SNR=21
H27K Steamboat Moun 145.72 317 P **PKPab** **20 56 54.1 +0.1**
baz=106
XAN Xi'an 145.72 112 PKPbc **PKPdf** **20 56 53.5 -0.7**
XAN sPKP 20 57 05.3
XAN SS SS 21 19 09.9 +0.6
XAN AMB AMB
comp=Z,430nm,10.0s
XAN LR LR
comp=Z,320nm,18.4s
XAN LR LR
comp=Z,230nm,18.4s
XAN LR LR
comp=Z,370nm,19.1s
WHN Wuhan 145.73 122⇑ PKPbc **PKiKP** **20 56 58.8 +0.5**
WHN LR LR
comp=Z,950nm,21.3s
G27K Doyon Strip 145.93 318 P **PKPab** **20 56 54.7 -0.1**
baz=105,SNR=108
J26L Joseph Creek 146.04 314 **PKPdf** **20 56 54.0 +0.2**
J26L Joseph Creek 146.04 314 P **PKPab** **20 56 55.2 -0.1**
baz=107,SNR=67
SCRK Sand Creek 146.06 313 P **PKPab** **20 56 55.3 -0.1**
baz=108,SNR=48
HARP HAARP 146.07 310 P **PKPab** **20 56 55.2 -0.2**
baz=109
I26K Coal Creek Min 146.11 315 IAMs_20 IAMs_20 22 04 39.6
comp=Z,444nm,19.0s
KLU Klutina 146.11 308 IAMs_20 IAMs_20 22 03 27.6
comp=Z,421nm,19.0s
KLU Klutina 146.11 308 P **PKPab** **20 56 55.9 +0.3**
baz=110,SNR=45
E27K Coleen River 146.25 321 P **PKPab** **20 56 55.7 -0.2**
baz=103,SNR=24
RIDG Independent Ri 146.35 312 IAMs_20 IAMs_20 22 01 37.1
comp=Z,474nm,20.0s
RIDG Independent Ri 146.35 312 P **PKPab** **20 56 56.5 +0.1**
baz=108,SNR=80
PAX Paxson 146.39 311 P **PKPbc** **20 56 56.1 +0.3**
baz=108,SNR=75
M24K Tolsona, Glenn 146.42 309 P **PKPab** **20 56 57.1 +0.3**
baz=108,SNR=19
GLI Glacier Island 146.43 307 **PKPbc** **20 56 55.3 -0.6**
GLI IAMs_20 IAMs_20 22 04 20.2
comp=Z,420nm,19.0s
GLI Glacier Island 146.43 307 P **PKPbc** **20 56 56.3 +0.5**
baz=110,SNR=36
K24K Donnelly Dome 146.77 312 P **PKPbc** **20 56 57.2 +0.4**
baz=107,SNR=21
G26K Porcupine Rive 146.78 318 P **PKPbc** **20 56 57.2 +0.6**
baz=104,SNR=8.2
J25K Salcha River, 146.82 314 IAMs_20 IAMs_20 22 04 22.5
comp=Z,499nm,20.0s
J25K Salcha River, 146.82 314 P **PKPbc** **20 56 57.4 +0.5**
baz=106,SNR=30
SCM Sheep Creek Mo 146.85 308 IAMs_20 IAMs_20 22 00 39.3
comp=Z,534nm,22.0s
SCM Sheep Creek Mo 146.85 308 P **PKPab** **20 56 58.1 -0.4**
baz=109,SNR=44
PWL Port Wells 147.00 306 IAMs_20 IAMs_20 21 57 21.1
comp=Z,402nm,22.0s
PWL Port Wells 147.00 306 P **PKPbc** **20 56 58.1 +0.7**
baz=109,SNR=38
M23K Glacier View 147.02 308 P **PKPbc** **20 56 58.2 +0.7**
baz=108,SNR=33
F26K Sheenjek River 147.08 319 P **PKPab** **20 56 58.7 -0.5**
baz=102,SNR=16
PRP Porcupine Dome 147.12 315 P **PKPbc** **20 56 58.2 +0.4**
baz=104,SNR=5.2
KNK Knik Glacier 147.23 307 IAMs_20 IAMs_20 22 01 44.3
comp=Z,420nm,20.0s
KNK Knik Glacier 147.23 307 P **PKPbc** **20 56 58.4 +0.3**
baz=108,SNR=18
DHY Denali Highway 147.25 311 **PKPbc** **20 56 58.2 -0.1**
DHY IAMs_20 IAMs_20 22 01 47.8
comp=Z,444nm,21.0s
DHY Denali Highway 147.25 311 P **PKPbc** **20 56 58.9 +0.6**
baz=107,SNR=47
WAT6 Susitna Watana 147.26 310 P **PKPbc** **20 56 59.1 +0.8**
baz=107,SNR=47
SEW Seward 147.27 305 P **PKPbc** **20 56 58.4 +0.3**
baz=110,SNR=19
C27K Jago River 147.28 323 P **PKPab** **20 56 59.0 -0.9**
baz=100,SNR=26
SML Sawmill 147.30 308 IAMs_20 IAMs_20 22 01 16.0
comp=Z,432nm,20.0s
SML Sawmill 147.30 308 P **PKPbc** **20 56 58.6 +0.3**
baz=108,SNR=28
H25K Birch Creek 147.41 317 P **PKPbc** **20 56 59.2 +0.7**
baz=103
HDA Harding Lake 147.43 313 **PKPdf** **20 56 53.7 -2.3**
HDA PKPbc **sPKPdf** **20 56 58.9 +0.3**
HDA IAMs_20 IAMs_20 22 06 31.5
comp=Z,508nm,20.0s
HDA Harding Lake 147.43 313 P **PKPbc** **20 56 58.6 +0.1**
baz=105,SNR=20
ILAR Eielson Array 147.49 314 PKPbc **PKPbc** **20 56 58.9 +0.1**
comp=Z,43nm,0.8s,baz=121,slow=1.9,SNR=93
O22K Cooper Landing 147.52 305 IAMs_20 IAMs_20 22 01 00.9
comp=Z,406nm,22.0s
O22K Cooper Landing 147.52 305 P **PKPbc** **20 56 59.1 +0.2**

baz=109
PMR Palmer 147.59 307 P **PKiKP 20 57 00.3 -0.7**
baz=108
F25K Christian Rive 147.62 319 P **PKiKP 20 57 00.2 -0.9**
baz=101,SNR=14
E25K Arctic Village 147.69 320 P **PKPbc 20 57 00.0 +0.8**
baz=100,SNR=30
WAT1 Susitna Watana 147.69 310 P **PKPbc 20 56 59.9 +0.6**
baz=106
RC01 Rabbit Creek A 147.72 306 IAMs_20 IAMs_20 22 00 17.2
comp=Z,407nm,21.0s
RC01 Rabbit Creek A 147.72 306 P **PKPbc 20 56 59.7 +0.3**
baz=108,SNR=30
C26K Camden Bay 147.74 323 P **PKiKP 20 57 00.3 -0.9**
baz=98,SNR=6.9
BRSE Bradley Lake S 147.76 304 P **PKPbc 20 57 00.3 +0.7**
baz=110,SNR=15
POKR Poker Plat Res 147.80 314 P **PKPbc 20 56 59.7 +0.1**
baz=104
CCB Clear Creek Bu 147.84 313 **PKPdf 20 56 54.2 -2.4**
CCB PKPbc **PKPbc 20 57 00.2 +0.6**
COLA College 147.92 314 **PKPbc 20 57 00.5 +0.7**
COLA College 147.92 314 IAMs_20 IAMs_20 22 06 19.6
comp=Z,373nm,20.0s
COLA College 147.92 314 PKP2 **PKPbc 20 57 00.5 +0.7**
COLA MLR MLR
comp=Z,400nm,20.0s
COLA College 147.92 314 P **PKPbc 20 57 00.1 +0.3**
baz=104
TCOL CIGO, UAF Yank 147.92 314 IAMs_20 IAMs_20 22 05 59.6
comp=Z,406nm,20.0s
TCOL CIGO, UAF Yank 147.92 314 P **PKPbc 20 56 60.0 +0.1**
baz=104
WRH Wood River Hil 147.92 313 IAMs_20 IAMs_20 22 09 02.6
comp=Z,428nm,18.0s
KDAK Kodiak Island 147.98 300 **PKPbc 20 57 00.4 +0.2**
KDAK Kodiak Island 147.98 300 PKP2 **PKPbc 20 57 00.4 +0.2**
KDAK MLR MLR
comp=Z,600nm,19.0s
KDAK Kodiak Island 147.98 300 P **PKPbc 20 57 00.3 +0.1**
baz=111
RND Reindeer 147.98 311 IAMs_20 IAMs_20 22 00 47.3
comp=Z,562nm,22.0s
LYN LuoYang 147.99 115 *i* PKPbc **PKPdf 20 56 57.1 -0.8**
LYN PKPab **sPKPab 20 57 06.6 +0.7**
LYN AMB AMB
comp=Z,270nm,12.0s
LYN LR LR
comp=Z,350nm,21.0s
LYN LR LR
comp=Z,230nm,19.8s
LYN LR LR
comp=Z,420nm,24.8s
M22K Willow 148.09 307 IAMs_20 IAMs_20 22 03 59.1
comp=Z,401nm,20.0s
M22K Willow 148.09 307 P **PKPbc 20 57 00.5 +0.1**
baz=107,SNR=14
MDM Murphy Dome 148.09 314 IAMs_20 IAMs_20 22 06 23.2
comp=Z,493nm,20.0s
MCK McKinley 148.10 311 IAMs_20 IAMs_20 22 02 42.3
comp=Z,397nm,20.0s
MCK McKinley 148.10 311 P **PKPbc 20 57 00.9 +0.5**
baz=105,SNR=31
OHAK Old Harbor 148.12 298 P **PKPbc 20 57 01.3 +0.7**
baz=112,SNR=14
H24K Noodor Dome 148.14 315 IAMs_20 IAMs_20 22 00 48.4
comp=Z,397nm,21.0s
H24K Noodor Dome 148.14 315 P **PKPbc 20 57 00.9 +0.4**
baz=102,SNR=19
G24K Hadweenzic Riv 148.15 317 P **PKPbc 20 57 01.3 +0.8**
baz=101,SNR=33
HOM Homer 148.16 303 **PKiKP 20 57 02.2 -0.2**
HOM Homer 148.16 303 P **PKPbc 20 57 01.2 +0.6**
baz=109
D25K Kavik River 148.16 322 P **PKPbc 20 57 01.0 +0.5**
baz=98,SNR=22
Q20K Shuyak Island 148.18 301 P **PKPbc 20 57 01.1 +0.5**
baz=110,SNR=11
SUA Susitna One 148.30 307 IAMs_20 IAMs_20 22 10 58.7
comp=Z,388nm,20.0s
SII Sitkinak Islan 148.33 297 P **PKPbc 20 57 01.4 +0.2**
baz=112
CUT Chulitna 148.34 309 IAMs_20 IAMs_20 22 05 22.6
comp=Z,391nm,20.0s
CUT Chulitna 148.34 309 P **PKPbc 20 57 01.2 +0.2**
baz=106,SNR=6.0
NEA2 Nenana 148.36 313 IAMs_20 IAMs_20 22 06 36.3
comp=Z,374nm,21.0s
NEA2 Nenana 148.36 313 P **PKPbc 20 57 01.2 +0.2**
baz=103,SNR=35
F24K Squaw Lake 148.45 319 P **PKiKP 20 57 02.2 -0.6**
baz=99,SNR=19
I23K Minto, Yukon-K 148.60 314 IAMs_20 IAMs_20 22 04 01.6
comp=Z,532nm,21.0s
I23K Minto, Yukon-K 148.60 314 P **PKPbc 20 57 01.8 +0.2**
baz=102,SNR=15
TRF Thorofare Moun 148.62 311 **PKPdf 20 56 56.6 -1.6**
TRF PKPbc **PKPbc 20 57 02.5 +0.6**
TRF IAMs_20 IAMs_20 22 02 25.0
comp=Z,495nm,20.0s
TRF Thorofare Moun 148.62 311 P **PKPbc 20 57 02.4 +0.5**
baz=104,SNR=15
E24K Your Creek 148.76 320 P **PKPbc 20 57 02.5 +0.4**
baz=98,SNR=34
O20K Slope Mountain 148.77 304 P **PKPbc 20 57 02.3 0.0**
baz=108,SNR=10
CHIR Chirikof Islan 148.79 295 P **PKPbc 20 57 02.9 +0.5**
baz=113
SKT Skwentna 148.80 308 IAMs_20 IAMs_20 22 11 48.0
comp=Z,443nm,19.0s
H23K Yukon River 148.81 315 IAMs_20 IAMs_20 22 08 40.1
comp=Z,337nm,19.0s
H23K Yukon River 148.81 315 P **PKPbc 20 57 02.4 +0.2**
baz=101,SNR=13
Q19K Cape Douglas, 148.90 301 IAMs_20 IAMs_20 22 08 44.2
comp=Z,436nm,18.0s
Q19K Cape Douglas, 148.90 301 P **PKPbc 20 57 02.6 0.0**
baz=109,SNR=12
SPCR Spurr Chakacha 148.90 306 P **PKPbc 20 57 02.5 -0.1**
baz=106
P19K Oil Pt 148.93 303 P **PKPbc 20 57 02.6 -0.1**
baz=108
C24K Franklin Bluff 149.02 323 P **PKPbc 20 57 02.6 0.0**
baz=95,SNR=15
BPAW Bear Paw Mtn. 149.07 312 PKPdf **PKPdf 20 56 56.0 -2.7**
BPAW PKPbc **PKPbc 20 57 03.3 +0.4**
BPAW IAMs_20 IAMs_20 22 07 34.9
comp=Z,434nm,21.0s
BPAW Bear Paw Mtn. 149.07 312 P **PKPbc 20 57 03.3 +0.4**
baz=102,SNR=47
NJ2 Nanjing 149.12 126 *e*PKPbc **PKPbc 20 57 03.8 -0.1**
MLY Manley 149.15 313 IAMs_20 IAMs_20 22 04 30.2
comp=Z,492nm,20.0s
MLY Manley 149.15 313 P **PKPbc 20 57 03.1 0.0**
baz=101,SNR=28
G23K Bananza Creek 149.15 317 P **PKiKP 20 57 04.2 0.0**
baz=99,SNR=38
TOLK Toolik Lake Re 149.23 321 IAMs_20 IAMs_20 22 01 40.3
comp=Z,527nm,21.0s
TOLK Toolik Lake Re 149.23 321 P **PKiKP 20 57 04.1 -0.3**
baz=96,SNR=48
PPLA Purkeypile 149.32 309 PKPdf **PKPdf 20 56 57.0 -2.3**
PPLA PKPbc **PKPbc 20 57 04.2 +0.5**
PPLA Purkeypile 149.32 309 P **PKPbc 20 57 03.9 +0.2**
baz=104,SNR=28
CAST Castle Rocks 149.40 310 P **PKPbc 20 57 03.5 -0.3**
baz=103,SNR=13
M20K Styx River 149.50 307 IAMs_20 IAMs_20 22 02 03.4
comp=Z,460nm,22.0s
M20K Styx River 149.50 307 P **PKPbc 20 57 04.2 +0.1**
baz=105,SNR=23
H22K Ishtalitna Cre 149.57 315 P **PKiKP 20 57 04.8 -0.3**
baz=99,SNR=30
CHUM Lake Minchumin 149.59 311 P **PKPbc 20 57 04.5 +0.3**
baz=102,SNR=5.4
O19K Port Alsworth 149.61 303 IAMs_20 IAMs_20 22 06 03.2
comp=Z,372nm,20.0s
D23K Nanushuk River 149.66 321 P **PKiKP 20 57 05.1 -0.1**
baz=95,SNR=10
C23K Itkillik River 149.69 323 P **PKiKP 20 57 04.9 -0.3**
baz=93,SNR=23
I21K Tanana 149.70 314 IAMs_20 IAMs_20 21 59 58.5
comp=Z,551nm,21.0s
I21K Tanana 149.70 314 P **PKPbc 20 57 04.6 +0.3**
baz=100,SNR=10
G22K Bettles 149.76 317 P **PKiKP 20 57 05.5 +0.1**
baz=97,SNR=24
P18K Big Mountain, 149.82 302 IAMs_20 IAMs_20 22 03 34.6
comp=Z,477nm,21.0s
R17K Ugashik Creek 149.84 298 P **PKPbc 20 57 05.3 +0.3**
baz=110,SNR=13
N19K Bonanza Creek 149.86 305 IAMs_20 IAMs_20 21 59 08.7
comp=Z,359nm,20.0s
N19K Bonanza Creek 149.86 305 P **PKPbc 20 57 04.8 -0.2**
baz=106,SNR=40
O18K Koktuh Hills 149.94 303 IAMs_20 IAMs_20 22 04 30.9
comp=Z,504nm,21.0s
L20K Farewell, AK 149.99 308 P **PKPbc 20 57 05.0 -0.2**
baz=103,SNR=16
NRIK Noril'sk 150.01 38 PKPbc **PKPbc 20 57 04.6 -0.4**
comp=Z,6.1nm,0.8s,baz=228,slow=2.3,SNR=5.3
NRIK Noril'sk 150.01 38 **PKPbc 20 57 04.7 -0.3**
NRIK Noril'sk 150.01 38 PKIKP **PKPbc 20 57 04.7 -0.3**
M19K Big River Lodg 150.09 307 P **PKPbc 20 57 05.4 0.0**
baz=104,SNR=18
H21K Melozitna Rive 150.11 314 **PKPdf 20 56 58.5 -1.8**
H21K PKPbc **PKiKP 20 57 05.8 -0.4**
H21K IAMs_20 IAMs_20 22 09 38.5
comp=Z,378nm,20.0s
H21K Melozitna Rive 150.11 314 P **PKiKP 20 57 06.0 -0.2**
baz=98,SNR=24
K20K Telida 150.26 310 IAMs_20 IAMs_20 22 11 53.3
comp=Z,466nm,18.0s
K20K Telida 150.26 310 P **PKPbc 20 57 05.8 +0.1**
baz=102,SNR=26
Q16K King Salmon 150.31 300 P **PKPbc 20 57 06.2 +0.3**
baz=108,SNR=17
P17K Kvichak River 150.35 301 P **PKPbc 20 57 06.2 +0.2**
baz=107,SNR=31
L19K White Mountain 150.37 307 P **PKPbc 20 57 06.3 +0.2**
baz=103,SNR=12
R16K Pilot Point 150.42 297 P **PKPbc 20 57 06.5 +0.2**
baz=109
CHGN Chignik 150.42 295 P **PKPbc 20 57 06.3 -0.1**
baz=111
J20K Nowinta River 150.44 311 **PKPdf 20 56 57.0 -3.9**
J20K **PKPbc 20 57 06.2 0.0**
J20K IAMs_20 IAMs_20 22 10 39.2
comp=Z,417nm,19.0s
J20K Nowinta River 150.44 311 P **PKPbc 20 57 06.4 +0.3**
baz=100,SNR=11
N18K Kilae Creek 150.49 304 P **PKPbc 20 57 06.5 +0.1**
baz=105,SNR=13
CHNA Chernabura Isl 150.50 291 P **PKPbc 20 57 06.8 +0.3**
baz=113
G21K Allakaket 150.50 316 P **PKiKP 20 57 06.7 -0.3**
baz=96
F21K Alatna River 150.57 317 P **PKiKP 20 57 07.3 +0.2**
baz=95
O17K Koliganek Bris 150.84 302 P **PKiKP 20 57 07.5 -0.3**
baz=106,SNR=29
S14K Fog Glacier 151.01 294 P **PKPbc 20 57 08.0 +0.1**
baz=110,SNR=7.8
TTA Tatalina 151.04 308 P **PKiKP 20 57 08.4 +0.1**
baz=101,SNR=18
P16K Nushagak River 151.07 300 P **PKiKP 20 57 08.1 -0.3**
baz=106
BTO Baotou 151.10 104 *e*PKPbc **PKPdf 20 57 04.8 +2.0**
BTO LR LR
comp=Z,760nm,14.6s
BTO LR LR
comp=Z,600nm,19.2s
SDPT Sand Point 151.17 292 P **PKPbc 20 57 08.1 0.0**
baz=111
O16K Kokwok River B 151.28 301 P **PKPbc 20 57 08.1 -0.1**
baz=105,SNR=10
HNS HongShan 151.33 114 ⇓PKPbc **PKPdf 20 57 01.9 -1.2**
HNS PP **PP 21 00 48.9 +0.6**
HNS SS SS 21 20 12.9 +1.0
HNS AMB AMB
comp=Z,190nm,6.2s
HNS LR LR
comp=Z,210nm,21.8s
HNS LR LR
comp=Z,280nm,18.8s
HNS LR LR
comp=Z,350nm,19.2s
TIA Tai'an 151.66 119 ⇓P **PKiKP 20 57 10.4 +0.1**
TIA pmax pmax
comp=Z,21nm,0.6s
A21K Barrow 151.67 326 IAMs_20 IAMs_20 22 02 50.8
comp=Z,472nm,22.0s
A21K Barrow 151.67 326 P **PKiKP 20 57 09.8 +0.6**
baz=85
N16K Nishlik Lake 151.82 303 P **PKiKP 20 57 10.8 +0.9**
baz=103,SNR=15
HHC Hu-ho-hao-te 152.12 106 *e*PKPbc **PKPdf 20 57 01.3 -3.0**
HHC PP **PP 21 00 52.9 -0.2**
HHC SS SS 21 20 19.8 -1.3
HHC LR LR
comp=Z,450nm,18.2s
HHC LR LR
comp=Z,250nm,16.2s
HHC LR LR
comp=Z,340nm,19.8s
MOY Mondy 152.19 77 *e*PKIKP **PKPdf 20 57 04.3 +0.2**
MOY pmax pmax
comp=Z,58nm,2.3s
ZAK Zakamensk 152.91 81 *e*PKIKP **PKPdf 20 57 04.7 -0.5**
ZAK pmax pmax
comp=Z,20nm,1.4s
JSU Suzuyama 153.29 145 **PKPbc 20 57 12.0 -1.8**
SONM Songino Array 153.43 89 PKP **PKPdf 20 57 06.9 +0.8**
comp=Z,1.2nm,0.6s,baz=207,slow=2.0,SNR=9.1
SONM PKPbc **PKiKP 20 57 13.9 +0.2**
comp=Z,12nm,0.7s,baz=221,slow=2.8,SNR=53
SONM Songino Array 153.43 89 PKPdf **PKPdf 20 57 04.9 -1.2**
SONM PKPbc **PKPbc 20 57 13.3 -0.4**
SONM PKPab **PKPab 20 57 23.2 -2.8**
ULN Ulaanbaatar 153.82 89 **PKPdf 20 57 05.4 -1.2**
ULN PKPab **PKPab 20 57 26.2 -1.5**
ULN Ulaanbaatar 153.82 89 PKIKP **PKPdf 20 57 05.4 -1.2**
ULN 20 57 26.2
ULN MLR MLR
comp=Z,600nm,20.0s
UNV Unalaska Valle 153.89 286 P **PKiKP 20 57 14.9 +0.6**
baz=112
BJT Baijiatuu 154.03 112 IAMs_20 IAMs_20 22 21 49.2
comp=Z,430nm,20.0s
BJI Beijing 154.05 112 PKPbc **PKPdf 20 57 09.3 +2.3**
BJI LR LR
comp=Z,53nm,21.8s
BJI LR LR
comp=Z,210nm,20.0s
BJI LR LR
comp=Z,360nm,22.3s
RDOG Red Dog Mine 154.17 319 IAMs_20 IAMs_20 22 11 58.7
comp=Z,465nm,21.0s
IRK Irkutsk 154.28 78 *e*PKIKP **PKPdf 20 57 04.9 -2.0**
IRK pmax pmax
comp=Z,44nm,2.3s
ANM Nome 155.33 311 IAMs_20 IAMs_20 22 00 21.5
comp=Z,424nm,21.0s
XLT XiLinHaoTe 156.65 106 *e*PKP **PKPdf 20 57 10.5 0.0**
XLT pPKP sPKPdf 20 57 21.8 +8.6
XLT sPKP 20 57 25.6
XLT PKPab **PKPab 20 57 40.1 +0.3**
XLT PKS **PKSdf 21 00 44.0 -0.3**
XLT SS SS 21 21 11.0 +0.7
XLT AMB AMB
comp=Z,170nm,5.5s
XLT LR LR
comp=Z,29nm,17.7s
XLT LR LR
comp=Z,290nm,16.8s
XLT LR LR
comp=Z,370nm,21.9s
INCN Inchon 157.14 132 IAMs_20 IAMs_20 22 02 18.5
comp=Z,394nm,20.0s
KSRS Korea Array 157.66 134 PKP **PKPdf 20 57 11.2 -0.6**
comp=Z,0.3nm,0.3s,baz=224,slow=3.4,SNR=4.4
GAMB Gambell 158.14 309 IAMs_20 IAMs_20 22 10 49.6
comp=Z,448nm,20.0s
CIT Chita 159.45 84 *e*PKIKP **PKPdf 20 57 12.8 -0.8**
CIT *e* 20 57 52.8
CIT *e* 21 01 38.8
CIT pmax pmax
comp=Z,52nm,2.7s
BOD Bodaibo 161.17 68 *e*PKIKP **PKPdf 20 57 11.0 -4.2**
BOD pmax pmax
comp=Z,51nm,1.9s
TIXI Tiksi 161.53 19 PP **PP 21 01 42.7 -1.5**
comp=Z,3.2nm,0.9s,baz=273,slow=23,SNR=5.4
CN2 Changchun 161.56 119 *e*PKP **PKPdf 20 57 13.0 -3.1**
CN2 PP **PP 21 01 45.1 +0.2**
CN2 SKKS 21 08 28.0
CN2 SS **SS 21 21 56.8 -5.1**
CN2 AMB AMB
comp=Z,150nm,8.0s
CN2 LR LR
comp=Z,410nm,17.0s
CN2 LR LR
comp=Z,270nm,17.0s
CN2 LR LR
comp=Z,430nm,19.0s
HIA Hailar 161.80 97 PKPdf **PKPdf 20 57 15.8 -0.4**
HIA **PKPab 20 58 01.1 -0.9**
HIA Hailar 161.80 97 PKIKP **PKPdf 20 57 15.8 -0.4**
HIA 20 58 01.1
MDJ Mudanjiang 164.19 124 PKP **PKPdf 20 57 18.4 -0.3**
TEY Ternei 167.53 140 *e*PKIKP **PKPdf 20 57 20.8 -0.5**
ZEA Zeya 167.85 88 *e*PKIKP **PKPdf 20 57 19.5 -1.8**
ZEA *e* 21 23 14.9
ZEA pmax pmax
comp=Z,100nm,7.8s
KLR Kul'dur 168.42 114 PKP **PKPdf 20 57 21.2 -0.6**
comp=Z,2.2nm,0.9s,baz=160,slow=2.4,SNR=7.5
KLR PKPab **PKPab 20 58 30.0 -1.1**
comp=Z,4.0nm,1.0s,baz=247,slow=6.2,SNR=4.0
KUR Kuril'sk 170.07 180 *e*PKIKP **PKPdf 20 57 23.5 +0.6**
KUR *e* 21 02 36.2
YSS Yuzh-Sakhalins 171.16 156 *i* PKIKP **PKPdf 20 57 23.6 +0.1**
YSS *e*SS SS 21 23 38.9 +0.7
YSS pmax pmax
comp=Z,300nm,6.7s
YSS MLR MLR
comp=Z,500nm,18.0s
PET Petropavlovsk 173.37 256 *i* PKIKP **PKPdf 20 57 22.1 -2.1**
PET *e* 21 02 47.9
PET *e*PPS PPS 21 16 51.8
PET *e*SS SS 21 23 56.8 -4.3
PET pmax pmax
comp=Z,500nm,22.6s
PET MLR MLR
comp=Z,600nm,17.0s
PETK Petropavlovsk- 173.93 254 PKP **PKPdf 20 57 23.6 -0.9**
comp=Z,2.1nm,0.9s,baz=26,slow=4.0,SNR=2.4

*KRNET **19** 20:39:05.3±0.1, 41.08N×76.04E, h18km, mb3.1*
*NNC **19** 20:39:06.7±1.5, 41.05N×76.14E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=10.5km s-min=8.0km az=173.0*
*KNET **19** 20:39:07.2±0.7, 41.18N×75.95E, h0km, ml2.5, Error ellipse: s-maj=5.7km s-min=3.2km az=121.0*
*SOME **19** 20:39:08.9, 41.17N×76.07E, h10km*
ISC 19 20:39:08.0±2.0, 41.17N±0.07×76.04E±0.03, h1km±15km, n51,σ1s13/79, 25C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
ULHL	**Ulahol**	**1.09**	**8**	⇑P	**Pg**	**20 39 28.1**	**-0.7**
	5.9nm,0.1s,SNR=6.1						
ULHL				⇓S	**Sb**	**20 39 44.5**	**0.0**
	57nm,0.2s						
ULHL	**Ulahol**	**1.09**	**8**	⇑*i*P	**Pg**	**20 39 27.6**	**-1.2**
	baz=7.0						
ULHL				⇑*i*S	**Sb**	**20 39 44.3**	**-0.2**
	baz=7.0						
KBK	**Karagaybulak**	**1.69**	**332**	⇓P	**Pn**	**20 39 38.9**	**+0.1**
	16nm,0.1s,SNR=13						
KBK				⇓S	**Sg**	**20 40 02.9**	**+0.5**
	37nm,0.2s						
KBK	**Karagaybulak**	**1.69**	**332**	⇑*e*P	**Pn**	**20 39 38.4**	**-0.5**
	baz=33						
KBK				⇑*i*S	**Sb**	**20 40 02.4**	**+0.5**
	baz=33						
TKM2	**Tokmak 2**	**1.78**	**350**	⇓P	**Pb**	**20 39 40.7**	**-0.8**
	24nm,0.3s,SNR=17						
TKM2				⇑S	**Sg**	**20 40 06.6**	**+1.4**
	49nm,0.3s						
TKM2	**Tokmak 2**	**1.78**	**350**	⇑Pn	**Pb**	**20 39 40.7**	**-0.8**
	8.2nm,0.3s						
TKM2				⇑Lg	Lg	20 40 09.1	
	19nm,0.3s						
TKM2	**Tokmak 2**	**1.78**	**350**	⇑*i*P	**Pn**	**20 39 40.1**	**0.0**
	baz=50						
TKM2				⇑*i*S	**Sg**	**20 40 05.4**	**+0.2**
	baz=50						
AAK	**Ala-Archa**	**1.86**	**322**	⇑P	**Pn**	**20 39 41.8**	**+0.6**
	35nm,0.2s,SNR=24						
AAK				⇑S	**Sg**	**20 40 09.1**	**+1.2**
	16nm,0.2s						
AAK	**Ala-Archa**	**1.86**	**322**	⇑*i*P	**Pn**	**20 39 41.2**	**0.0**
	baz=24						
AAK				⇑*i*S	**Sb**	**20 40 07.5**	**+0.6**
	baz=24						
KST	**Kastek**	**1.87**	**358**	*e*P	**Pg**	**20 39 44.3**	**+0.4**
	4.3nm,0.2s						
KST				*e*S	**Sg**	**20 40 09.6**	**+1.5**
	30nm,0.5s						
KST	**Kastek**	**1.87**	**358**	Pg	**Pg**	**20 39 44.1**	**+0.2**
	4.3nm,0.2s						
KST				Lg	Lg	20 40 10.9	
	30nm,0.7s						
MTBS	**Maitube**	**1.98**	**8**	*e*P	**Pg**	**20 39 46.3**	**+0.4**
	5.1nm,0.2s						
MTBS				*e*S	**Sg**	**20 40 13.0**	**+1.4**
	21nm,0.3s						
MTBS	**Maitube**	**1.98**	**8**	Pg	**Pg**	**20 39 45.3**	**-0.6**
	5.1nm,0.2s						
MTBS				Lg	Lg	20 40 13.0	
	21nm,0.3s						
AML	**Almayashu**	**2.00**	**299**	⇑P	**Pn**	**20 39 43.2**	**-0.1**
	30nm,0.3s,SNR=35						
CHMS	**Chumysh**	**2.06**	**333**	⇓P	**Pb**	**20 39 45.7**	**-0.6**
	6.8nm,0.1s,SNR=9.1						
CHMS	**Chumysh**	**2.06**	**333**	⇑Pn	**Pb**	**20 39 46.1**	**-0.2**
	7.5nm,0.6s						
CHMS				⇓Lg	Lg	20 40 15.0	
	4.3nm,0.4s						
CHMS	**Chumysh**	**2.06**	**333**	⇓*i*P	**Pn**	**20 39 44.1**	**+0.3**
	baz=34						
CHMS				⇓*i*S	**Sb**	**20 40 12.6**	**+0.2**
	baz=34						
DGS	**Degeres**	**2.08**	**355**	*e*P	**Pg**	**20 39 48.4**	**+0.6**
	4.2nm,0.2s						
DGS				*e*S	**Sg**	**20 40 16.6**	**+1.8**
	28nm,0.5s						
DGS	**Degeres**	**2.08**	**355**	Pg	**Pg**	**20 39 47.3**	**-0.5**
	5.8nm,0.4s						
DGS				Lg	Lg	20 40 16.9	
	28nm,0.5s						
MDOK	**Medeo**	**2.13**	**20**	*e*P	**Pg**	**20 39 48.4**	**-0.4**
	11nm,0.3s						
MDOK				*e*S	**Sg**	**20 40 16.8**	**+0.4**
	19nm,0.7s						
MDOK	**Medeo**	**2.13**	**20**	⇑Pg	**Pb**	**20 39 47.3**	**-0.1**
	8.2nm,0.6s						
MDOK				Pg	**Pg**	**20 39 47.5**	**-1.2**
	11nm,0.3s						
MDOK				Lg	Lg	20 40 17.3	
	19nm,0.7s						
MDOK				Lg	Lg	20 40 17.7	
	20nm,0.7s						
KNDC	**Almaty**	**2.16**	**18**	⇑Pg	**Pb**	**20 39 48.2**	**+0.3**
	14nm,0.6s						
KNDC				⇑Lg	Lg	20 40 19.6	
	60nm,0.5s						
KOTS	**Kotyrbulak**	**2.21**	**21**	*e*P	**Pg**	**20 39 50.9**	**+0.5**
	16nm,0.3s						
KOTS				*e*S	**Sg**	**20 40 20.7**	**+1.7**
	36nm,0.4s						
KOTS	**Kotyrbulak**	**2.21**	**21**	Pg	**Pb**	**20 39 49.3**	**+0.5**
	1.5nm,0.5s						
KOTS				Lg	Lg	20 40 20.4	
	65nm,0.7s						
EKS2	**Erkin-Say**	**2.25**	**312**	⇑P	**Pb**	**20 39 48.1**	**-1.4**
	18nm,0.5s,SNR=21						
EKS2	**Erkin-Say**	**2.25**	**312**	⇑*i*P	**Pn**	**20 39 46.7**	**+0.2**
	baz=14						
EKS2				⇑*i*S	**Sb**	**20 40 16.8**	**-1.1**
	baz=14						
USP	**Ospenovka**	**2.39**	**332**	⇓P	**Pn**	**20 39 49.8**	**+1.6**
	6.0nm,0.2s,SNR=11						
USP	**Ospenovka**	**2.39**	**332**	⇑*i*P	**Pn**	**20 39 48.7**	**+0.4**
	baz=33						
USP				⇑*i*S	**Sb**	**20 40 20.4**	**-1.4**
	baz=33						
SGDS	**Sogindy**	**2.51**	**336**	*e*P	**Pg**	**20 39 55.1**	**-1.0**

	3.1nm,0.3s									
SGDS					*e*S		**Sg**	**20 40 28.1**	**-0.5**
	13nm,0.5s									
SGDS	**Sogindy**	**2.51**	**336**		Pg		**Pb**	**20 39 53.9**	**+0.1**
	3.9nm,0.2s									
SGDS					Lg		Lg	20 40 28.3		
	13nm,0.5s									
KRBS	**Karabastau**	**2.54**	**354**		*e*P		**Pg**	**20 39 56.5**	**-0.1**
	6.6nm,0.4s									
KRBS					*e*S		**Sg**	**20 40 30.5**	**+0.9**
	29nm,0.4s									
KRBS	**Karabastau**	**2.54**	**354**		Pg		**Pb**	**20 39 54.8**	**+0.4**
	3.9nm,0.3s									
KRBS					Lg		Lg	20 40 29.3		
	11nm,0.4s									
SATY	**Saty**	**2.58**	**42**		*e*P		**Pg**	**20 39 56.7**	**-0.8**
	13nm,0.3s									
SATY					*e*S		**Sg**	**20 40 30.8**	**-0.1**
	27nm,0.3s									
SATY	**Saty**	**2.58**	**42**		Pg		**Pb**	**20 39 54.8**	**-0.4**
	11nm,0.5s									
SATY					Lg		Lg	20 40 29.7		
	22nm,0.2s									
KTBS	**Karatobe**	**2.58**	**10**		*e*P		**Pg**	**20 39 57.2**	**-0.3**
	7.6nm,0.5s									
KTBS					*e*S		**Sg**	**20 40 31.8**	**+0.8**
	36nm,0.4s									
KTBS	**Karatobe**	**2.58**	**10**		Pg		**Pb**	**20 39 55.8**	**+0.7**
	6.8nm,0.3s									
KTBS					Lg		Lg	20 40 31.1		
	36nm,0.4s									
ZHN	**Zhinishke**	**2.68**	**41**		*e*P		**Pg**	**20 39 58.4**	**-0.8**
	12nm,0.2s									
ZHN					*e*S		**Sg**	**20 40 34.0**	**0.0**
	38nm,0.2s									
ZHN	**Zhinishke**	**2.68**	**41**		Pg		**Pb**	**20 39 56.3**	**-0.4**
	13nm,0.3s									
ZHN					Lg		Lg	20 40 32.3		
	32nm,0.5s									
KUU	**Kurty**	**2.73**	**5**		*e*P		**Pg**	**20 39 59.1**	**-1.1**
	2.4nm,0.3s									
KUU					*e*S		**Sg**	**20 40 35.1**	**-0.6**
	28nm,0.6s									
KUU	**Kurty**	**2.73**	**5**		Pg		**Pb**	**20 39 58.1**	**+0.5**
	2.4nm,0.3s									
KUU					Lg		Lg	20 40 35.1		
	28nm,0.6s									
KURS	**Kuram**	**2.81**	**34**		*e*P		**Pg**	**20 40 00.4**	**-1.3**
	6.1nm,0.5s									
KURS					*e*S		**Sg**	**20 40 37.4**	**-0.7**
	10nm,0.7s									
KURS	**Kuram**	**2.81**	**34**		Pg		**Pb**	**20 39 58.5**	**-0.4**
	10nm,0.6s									
KURS					Lg		Lg	20 40 35.8		
	10nm,0.7s									
UZB	**Uzynbulak**	**2.97**	**47**		*e*P		**Pb**	**20 40 02.4**	**+0.6**
	5.6nm,0.4s									
UZB					*e*S		**Sg**	**20 40 41.0**	**-2.4**
	11nm,0.5s									
UZB	**Uzynbulak**	**2.97**	**47**		Pg		**Pb**	**20 40 01.0**	**-0.8**
	6.7nm,0.3s									
UZB					Lg		Lg	20 40 40.2		
	11nm,0.5s									
KPKS	**Kokpek**	**3.02**	**40**		*e*P		**Pg**	**20 40 04.2**	**-1.7**
	5.8nm,0.3s									
KPKS					*e*S		**Sg**	**20 40 43.9**	**-1.0**
	46nm,0.7s									
KPKS	**Kokpek**	**3.02**	**40**		Pg		**Pb**	**20 40 01.8**	**-0.8**
	3.9nm,0.2s									
KPKS					Lg		Lg	20 40 41.7		
	46nm,0.7s									
SHLS	**Shalkode**	**3.23**	**51**		*e*P		**Pg**	**20 40 12.1**	**+2.2**
	2.7nm,0.3s									
SHLS					*e*S		**Sg**	**20 40 57.4**	**+5.8**
	7.5nm,0.5s									
SHLS	**Shalkode**	**3.23**	**51**		Pg		**Pg**	**20 40 09.9**	**0.0**
	6.0nm,0.4s									
SHLS					Lg		Lg	20 40 55.6		
	7.5nm,0.5s									
BLB	**Baldybastay**	**3.44**	**31**		*e*P		**Pg**	**20 40 11.8**	**-2.0**
	6.6nm,0.3s									
BLB					*e*S		**Sg**	**20 40 57.0**	**-1.3**
	20nm,0.3s									
BLB	**Baldybastay**	**3.44**	**31**		Pg		**Pb**	**20 40 09.7**	**+0.1**
	6.6nm,0.3s									
BLB					Lg		Lg	20 40 55.4		
	20nm,0.3s									
KK31	**Karatay Array**	**4.54**	**297**	⇑	Pg		**Pb**	**20 40 29.3**	**+0.8**
	0.2nm,0.3s,baz=130,slow=16,SNR=10									
KK31				⇓	Lg		Lg	20 41 31.8		
	1.0nm,0.5s,baz=124,slow=27,SNR=3.2									

IDC ***19*** *20:46:40.5±1.0,55°.09S×31°.58W,h0km,mb3.8/5, mbtmp3.8/5,Error ellipse: s-maj=48.0km s-min=23.9km az=61.0*

ISC 19 20:46:42.4±0.9,55°.0S±0°.2×31°.7W±0°.3,h10km,n16, σ1§27/11,mb3.9/4,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.89**	**158**	P	**P**	**20 51 02.8**	**+0.2**
VNA2	**Neumayer--Watz**	**19.18**	**156**	P	**Pn**	**20 51 08.9**	**+2.2**
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**20 51 23.2**	**-0.1**
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**20 51 20.9**	**-2.4**
	1.3nm,0.8s,baz=309,slow=9.6,SNR=2.8						
	1.3nm,0.8s						
TROLL	**Troll, Antarti**	**22.36**	**153**	P	**P**	**20 51 40.5**	**+0.3**
CPUP	**Villa Florida**	**34.22**	**316**	P	**P**	**20 53 28.7**	**+0.7**
	1.0nm,0.4s,baz=164,slow=7.4,SNR=2.4						
	1.0nm,0.4s						
QSPA	**South Pole Qui**	**35.25**	**180**	P	**P**	**20 53 35.8**	**-1.1**
	1.2nm,1.0s,baz=203,slow=7.7,SNR=1.3						
	1.2nm,1.0s						
LPAZ	**La Paz**	**47.68**	**310**	P	**P**	**20 55 19.4**	**-0.3**
	1.7nm,0.7s,baz=154,slow=4.9,SNR=5.5						
	1.7nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.89**	**23**	T	T	21 47 40.2	
	baz=190						
H10S3	**ASCENSION HYDR**	**47.90**	**23**	T	T	21 47 29.5	
	baz=30						
H10N1	**ASCENSION HYDR**	**49.01**	**23**	T	T	21 48 52.5	
	baz=199						
H10N3	**ASCENSION HYDR**	**49.01**	**23**	T	T	21 48 56.9	
	baz=199						
H10N2	**ASCENSION HYDR**	**49.02**	**23**	T	T	21 48 56.6	
	baz=199						
TORD	**Torodi Ar. Bea**	**73.52**	**34**	P	**P**	**20 58 14.9**	**-0.3**
	0.6nm,0.9s,baz=204,slow=5.8,SNR=2.3						
	0.6nm,0.9s						
ILAR	**Eielson Array**	**147.50**	**314**	PKPbc	**PKPbc**	**21 06 25.7**	**+0.5**
	1.2nm,0.7s,baz=113,slow=2.0,SNR=7.8						
SONM	**Songino Array**	**153.26**	**88**	PKPbc	**PKPbc**	**21 06 39.3**	**-0.5**
	0.3nm,0.6s,baz=224,slow=2.8,SNR=1.8						

IDC ***19*** *21:05:29.2±0.6,55°.04S×31°.92W,h0km,mb4.3/13, mbtmp4.3/14,ML4.2/1,MS3.9/5,Error ellipse: s-maj=19.1km s-min=14.3km az=59.0*

NEIC ***19*** *21:05:31.2±1.2,54°.99S±0°.09×32°.0W±0°.2,h10km±1km, mb4.8/45,Error ellipse: s-maj=15.9km s-min=14.2km az=42.0*

ISC 19 21:05:30.6±0.4,54°98S±0°.07×31°.99W±0°.07,h10km,n121, σ0§78/117,mb4.8/34,MS4.0/4,2C-1D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.71**	**283**	Pn	**Pn**	**21 06 13.3**	**-0.8**
ORCD	**Orcadas**	**8.91**	**224**	Pn	**Pn**	**21 07 37.9**	**-1.2**
ESPZ	**Base Esperanza**	**15.24**	**226**	Pn	**Pn**	**21 09 03.8**	**-1.8**
EFI	**East Falkland**	**15.89**	**271**	P	**Pn**	**21 09 13.4**	**-0.7**
EFI				IAmb	IAmb	21 09 14.1	
	comp=Z,123nm,1.4s						
PMSA	**Palmer Station**	**18.62**	**225**	P	**P**	**21 09 46.8**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=126,slow=4.1,SNR=7.6						
PMSA				LR	LR	21 17 12.8	
	comp=Z,45nm,19.0s,baz=66,slow=38						
	comp=Z,3.6nm,0.5s						
PMSA	**Palmer Station**	**18.62**	**225**	P	**Pn**	**21 09 48.1**	**0.0**
VNA1	**Neumayer--Stat**	**18.86**	**155**	P	**Pn**	**21 09 52.3**	**+1.2**
VNA3	**Neumayer Olymp**	**18.97**	**158**	P	**Pn**	**21 09 53.5**	**+1.1**
VNA2	**Neumayer--Watz**	**19.26**	**155**	P	**Pn**	**21 09 57.3**	**+1.4**
	baz=312,slow=13						
SNAA	**Sanae**	**20.86**	**154**	P	**P**	**21 10 12.6**	**+0.2**
SNAA	**Sanae**	**20.86**	**154**	P	**P**	**21 10 09.7**	**-2.7**
	comp=Z,3.7nm,1.1s,baz=314,slow=12,SNR=15						
SNAA	**Sanae**	**20.86**	**154**	P	**P**	**21 10 12.7**	**+0.3**
TROLL	**Troll, Antarti**	**22.44**	**153**	P	**P**	**21 10 30.6**	**+1.2**
BELA	**Belgrano 2**	**23.02**	**181**	P	**P**	**21 10 35.5**	**+0.3**
MG05	**Puerto Natales**	**24.18**	**261**	P	**P**	**21 10 47.2**	**+0.4**
MG05				IAmb	IAmb	21 10 50.8	
	comp=Z,20nm,0.8s						
GO09	**Cerro Castillo**	**24.25**	**262**	P	**P**	**21 10 48.3**	**+0.8**
GO09				IAmb	IAmb	21 11 15.5	
	comp=Z,26nm,1.2s						
AY01	**Puyuhuapi**	**27.95**	**275**	P	**P**	**21 11 20.9**	**-0.1**
AY01				IAmb	IAmb	21 11 25.0	
	comp=Z,14nm,0.8s						
LL02	**Futaleuf**	**28.25**	**278**	P	**P**	**21 11 23.8**	**+0.2**
LL02				IAmb	IAmb	21 11 59.9	
	comp=Z,18nm,1.6s						
PLCA	**Paso Flores**	**29.11**	**283**	P	**P**	**21 11 30.4**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=108,slow=10,SNR=3.2						
	comp=Z,1.3nm,0.8s						
GO05	**Huala**	**33.95**	**289**	P	**P**	**21 12 14.0**	**0.0**
GO05				IAmb	IAmb	21 13 27.8	
	comp=Z,30nm,1.4s						
CPUP	**Villa Florida**	**34.10**	**317**	P	**P**	**21 12 15.7**	**+0.5**
	comp=Z,8.8nm,1.0s,baz=160,slow=8.8,SNR=10						
	comp=Z,8.8nm,1.0s						
CPUP	**Villa Florida**	**34.10**	**317**	P	**P**	**21 12 15.8**	**+0.5**
CPUP				IAmb	IAmb	21 12 17.1	
	comp=Z,7.9nm,0.9s						
MT09	**Talagante**	**34.38**	**292**	P	**P**	**21 12 18.4**	**+0.6**
MT09				IAmb	IAmb	21 12 22.2	
	comp=Z,19nm,0.9s						
MT01	**Popeta**	**34.45**	**291**	P	**P**	**21 12 18.8**	**+0.5**
PEL	**Peldehue**	**34.70**	**293**	P	**P**	**21 12 19.2**	**-1.3**
VA05	**Santo Domingo**	**34.80**	**291**	P	**P**	**21 12 21.9**	**+0.6**
MT02	**Curacav**	**34.85**	**292**	P	**P**	**21 12 21.6**	**-0.2**
MT02				IAmb	IAmb	21 12 31.2	
	comp=Z,19nm,1.1s						
ROC1	**El Roble**	**35.01**	**293**	P	**P**	**21 12 23.2**	**-0.1**
ROC1				IAmb	IAmb	21 12 40.0	
	comp=Z,12nm,0.7s						
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**21 12 25.7**	**+0.5**
	comp=Z,5.0nm,0.9s,baz=211,slow=5.1,SNR=13						
	comp=Z,5.0nm,0.9s						
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**21 12 25.6**	**+0.3**
VA01	**Torpederas**	**35.31**	**292**	P	**P**	**21 12 23.9**	**-1.7**
VA06	**Catapilco**	**35.48**	**293**	P	**P**	**21 12 27.4**	**+0.3**
CO01	**Juntas del Tor**	**36.89**	**297**	P	**P**	**21 12 39.2**	**-0.3**
AC05	**El Transito**	**37.90**	**298**	P	**P**	**21 12 46.4**	**-1.5**
AC05				IAmb	IAmb	21 13 20.1	
	comp=Z,42nm,1.2s						
AQDB	**Aquidauana**	**38.83**	**323**	P	**P**	**21 12 55.9**	**+0.3**
AQDB				IAmb	IAmb	21 13 12.2	
	comp=Z,37nm,1.9s						
GO02	**Mina Guanaco**	**40.59**	**302**	P	**P**	**21 13 10.7**	**+0.1**
GO02				IAmb	IAmb	21 13 13.4	
	comp=Z,18nm,0.9s						
BDFB	**Brasilia**	**41.17**	**336**	P	**P**	**21 13 16.9**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=177,slow=14,SNR=4.1						
	comp=Z,4.4nm,0.8s						
MAW	**Mawson**	**42.61**	**146**	P	**P**	**21 13 26.6**	**+0.2**
	comp=Z,7.1nm,0.8s,baz=243,slow=9.4,SNR=9.9						
	comp=Z,4.7nm,0.8s						
MAW	**Mawson**	**42.61**	**146**	P	**P**	**21 13 26.5**	**+0.2**
PTLB	**Pontes e Lacer**	**44.69**	**321**	P	**P**	**21 13 44.0**	**+0.4**
PTLB				IAmb	IAmb	21 13 46.1	
	comp=Z,14nm,1.0s						
SIV	**San Ignacio**	**44.91**	**319**	P	**P**	**21 13 45.8**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=175,slow=14						
SIV				LR	LR	21 35 04.4	
	comp=Z,146nm,18.2s,baz=92,slow=40						
	comp=Z,2.3nm,0.6s						
GO01	**Chusmiza**	**45.08**	**306**	P	**P**	**21 13 47.4**	**+0.1**
GO01				IAmb	IAmb	21 15 03.6	
	comp=Z,30nm,1.3s						
SOE	**Somerset East**	**45.55**	**85**	P	**P**	**21 13 51.0**	**+0.4**
VILB	**Vilhena**	**47.37**	**321**	P	**P**	**21 14 05.0**	**+0.2**
VILB				IAmb	IAmb	21 14 06.5	
	comp=Z,9.9nm,0.8s						
VNDA	**Vanda**	**47.48**	**184**	P	**P**	**21 14 05.2**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=201,slow=5.4,SNR=4.8						
	comp=Z,0.8nm,0.7s						
LPAZ	**La Paz**	**47.56**	**310**	P	**P**	**21 14 08.6**	**+1.6**
	comp=Z,3.9nm,0.5s,baz=158,slow=6.2,SNR=14						
	comp=Z,3.9nm,0.5s						
LPAZ	**La Paz**	**47.56**	**310**	P	**P**	**21 14 07.5**	**+0.6**
LPAZ				IAmb	IAmb	21 14 10.2	
	comp=Z,29nm,1.6s						
H10S2	**ASCENSION HYDR**	**47.93**	**23**	T	T	22 06 16.9	
	baz=193,slow=74,SNR=5.8						
H10S3	**ASCENSION HYDR**	**47.93**	**23**	T	T	22 06 17.0	
	baz=27,slow=74,SNR=13						
BOSA	**Boshof**	**48.43**	**81**	P	**P**	**21 14 12.8**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=228,slow=6.5,SNR=6.4						
BOSA				LR	LR	21 30 48.6	
	comp=Z,182nm,20.2s,baz=232,slow=31						
	comp=Z,7.1nm,0.9s						
H10N1	**ASCENSION HYDR**	**49.04**	**23**	T	T	22 07 40.9	
	baz=192,slow=75,SNR=16						
H10N3	**ASCENSION HYDR**	**49.04**	**23**	T	T	22 07 38.8	
	baz=192,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**49.06**	**23**	T	T	22 07 41.7	
	baz=192,slow=75,SNR=18						
LBTB	**Lobatse**	**51.40**	**79**	P	**P**	**21 14 35.8**	**+0.1**
	comp=Z,6.7nm,0.8s,baz=218,slow=12						
	comp=Z,6.7nm,0.8s						
LBTB	**Lobatse**	**51.40**	**79**	P	**P**	**21 14 35.1**	**-0.5**
LBTB				PcP	**PcP**	**21 15 50.6**	**+0.4**
LBTB				IAmb	IAmb	21 15 52.0	
	comp=Z,32nm,1.5s						
TSUM	**Tsumeb**	**51.65**	**67**	P	**P**	**21 14 37.1**	**-0.5**
TSUM				PcP	**PcP**	**21 15 49.2**	**-2.0**
TSUM				IAmb	IAmb	21 16 19.8	
	comp=Z,11nm,1.3s						
SAML	**Samuel**	**52.16**	**320**	P	**P**	**21 14 41.5**	**+0.2**
ETMB	**Extrema**	**52.54**	**316**	P	**P**	**21 14 44.5**	**+0.5**
ETMB				IAmb	IAmb	21 15 17.3	
	comp=Z,14nm,1.7s						
COHC	**Cochancay**	**64.80**	**306**	P	**P**	**21 16 10.0**	**+0.5**
LIC	**Lamto**	**64.99**	**30**	⇑*i*P	**P**	**21 16 10.8**	**+0.2**
	comp=Z,35nm,0.8s						
KIC	**Kosan Boka**	**65.20**	**30**	⇑*i*P	**P**	**21 16 12.1**	**+0.1**
	comp=Z,10nm,0.8s						
TIC	**Toumodi**	**65.39**	**30**	⇓*i*P	**P**	**21 16 13.7**	**+0.5**
	comp=Z,33nm,0.9s						
DBIC	**Dimbokro**	**65.46**	**30**	P	**P**	**21 16 13.8**	**+0.1**
	comp=Z,12nm,1.1s,baz=200,slow=10,SNR=6.0						
	comp=Z,12nm,1.1s						
DBIC	**Dimbokro**	**65.46**	**30**	P	**P**	**21 16 13.6**	**0.0**
BIRV	**Birongo**	**71.28**	**324**	P	**P**	**21 16 51.1**	**+1.0**
SDV	**Santo Domingo**	**71.36**	**319**	P	**P**	**21 16 51.0**	**+0.2**
SDV				IAmb	IAmb	21 16 52.4	
	comp=Z,12nm,1.2s						
TOA0	**Torodi Ar. Sit**	**73.59**	**34**	P	**P**	**21 17 04.3**	**+0.5**
TOA0				IAmb	IAmb	21 17 06.6	
	comp=Z,8.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.59**	**34**	P	**P**	**21 17 04.0**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=198,slow=5.4,SNR=17						
TORD				LR	LR	21 41 50.3	
	comp=Z,244nm,20.2s,baz=191,slow=30						
	comp=Z,5.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.59**	**34**	P	**P**	**21 17 03.9**	**+0.1**
CBYP	**Canovanas**	**78.45**	**327**	P	**P**	**21 17 31.1**	**-0.4**
GCPR	**Guaynabo City**	**78.56**	**327**	P	**P**	**21 17 32.3**	**+0.2**
MATN	**Matagalpa**	**81.42**	**307**	P	**P**	**21 17 48.4**	**+0.6**
MATN				IAmb	IAmb	21 20 41.8	
	comp=Z,12nm,1.1s						
BKZ	**Black Stump Fm**	**83.10**	**202**	P	**P**	**21 17 57.1**	**+0.7**
TAM	**Tamanrasset**	**83.84**	**34**	P	**P**	**21 17 57.3**	**-3.0**
TEIG	**Tepich**	**88.87**	**309**	P	**P**	**21 18 25.1**	**+0.3**
ASAR	**Alice Springs**	**100.75**	**167**	P	**Pdif**	**21 19 18.1**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=172,slow=2.7,SNR=1.7						
CMAR	**Chiang Mai Arr**	**128.00**	**114**	PKP	**PKPdf**	**21 24 36.5**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=240,slow=4.1,SNR=6.1						
ARCES	**ARCESS Array B**	**130.99**	**23**	PKP	**PKPdf**	**21 24 40.4**	**-0.4**
	comp=Z,3.4nm,1.1s,baz=183,slow=2.4,SNR=6.8						
PZH	**PanZhiHua**	**136.04**	**111**	PKP	**PKPdf**	**21 24 51.8**	**0.0**
ZALV	**Zalesovo Beam**	**144.37**	**65**	PKP	PKPbc	21 25 04.6	+0.4
	comp=Z,6.5nm,0.8s,baz=248,slow=4.6,SNR=24						
LZH	**Lanzhou**	**144.50**	**104**	*e*PKP	**PKPdf**	**21 25 06.4**	**-0.4**
LZH				pPKP	PKiKP	21 25 13.8	+3.3
LZH				sPKP		21 25 20.9	
GTA	**Gaotai**	**144.53**	**96**	*e*PKPbc	**PKPdf**	**21 25 06.4**	**-0.3**
MCARA	**McCarthy VSAT**	**144.67**	**309**	P	**PKPdf**	**21 25 06.2**	**+0.1**
	baz=112						
BMRM	**Bremner River**	**145.23**	**308**	P	**PKPdf**	**21 25 07.8**	**+0.7**
	baz=111,SNR=6.4						
EYAK	**Cordova Ski Ar**	**145.60**	**307**	P	**PKPab**	**21 25 09.2**	**+0.9**
	baz=111						
J26L	**Joseph Creek**	**145.93**	**314**	P	**PKPab**	**21 25 09.9**	**+0.3**
	baz=107,SNR=10						
SCRK	**Sand Creek**	**145.95**	**313**	P	**PKPab**	**21 25 10.2**	**+0.5**
	baz=107,SNR=10						
KLU	**Klutina**	**146.01**	**308**	P	**PKPab**	**21 25 10.6**	**+0.7**
	baz=110,SNR=11						
RIDG	**Independent Ri**	**146.24**	**312**	P	**PKPab**	**21 25 11.1**	**+0.3**
	baz=107,SNR=12						
PAX	**Paxson**	**146.28**	**311**	P	**PKPab**	**21 25 10.9**	**-0.1**
	baz=108						
GLI	**Glacier Island**	**146.34**	**307**	P	**PKPab**	**21 25 11.3**	**+0.2**
	baz=110						
SCM	**Sheep Creek Mo**	**146.75**	**309**	P	**PKPab**	**21 25 12.7**	**-0.1**
	baz=108,SNR=8.2						
PWL	**Port Wells**	**146.90**	**307**	P	**PKPab**	**21 25 12.9**	**-0.4**
	baz=109						
KNK	**Knik Glacier**	**147.14**	**307**	P	**PKPbc**	**21 25 13.4**	**+0.8**
	baz=108						
DHY	**Denali Highway**	**147.14**	**311**	P	**PKPab**	**21 25 13.9**	**-0.5**
	baz=106,SNR=10						
WAT6	**Susitna Watana**	**147.16**	**310**	P	**PKPab**	**21 25 13.8**	**-0.7**
	baz=107,SNR=11						
SEW	**Seward**	**147.18**	**305**	P	**PKPbc**	**21 25 13.5**	**+0.9**
	baz=109						
SML	**Sawmill**	**147.20**	**308**	P	**PKPbc**	**21 25 13.5**	**+0.8**
	baz=108,SNR=7.0						
HDA	**Harding Lake**	**147.32**	**313**	P	**PKPbc**	**21 25 13.6**	**+0.6**
	baz=105						
ILAR	**Eielson Array**	**147.38**	**314**	PKPbc	**PKPbc**	**21 25 12.8**	**-0.3**
	comp=Z,7.0nm,1.0s,baz=130,slow=1.6,SNR=36						
WAT1	**Susitna Watana**	**147.59**	**310**	P	**PKPbc**	**21 25 14.2**	**+0.5**
	baz=106						
RC01	**Rabbit Creek A**	**147.62**	**307**	P	**PKiKP**	**21 25 14.9**	**-0.9**
	baz=108						
BRSE	**Bradley Lake S**	**147.67**	**304**	P	**PKPbc**	**21 25 14.9**	**+0.8**
	baz=109						
MCK	**McKinley**	**147.99**	**312**	P	**PKPbc**	**21 25 15.7**	**+0.9**
	baz=104,SNR=5.1						
LYN	**LuoYang**	**148.05**	**115**	*e*PKPbc	**PKPbc**	**21 25 14.6**	**-1.2**
OHAK	**Old Harbor**	**148.05**	**299**	P	**PKPbc**	**21 25 15.8**	**+0.8**
	baz=112						
CUT	**Chulitna**	**148.24**	**309**	P	**PKiKP**	**21 25 16.5**	**-0.6**
	baz=105						
NEA2	**Nenana**	**148.25**	**313**	P	**PKPbc**	**21 25 15.9**	**+0.5**
	baz=103,SNR=7.0						
TRF	**Thorofare Moun**	**148.51**	**311**	P	**PKPbc**	**21 25 16.9**	**+0.6**
	baz=104						
E24K	**Your Creek**	**148.64**	**320**	P	**PKiKP**	**21 25 17.6**	**-0.2**
	baz=98,SNR=6.5						
BPAW	**Bear Paw Mtn.**	**148.96**	**312**	P	**PKiKP**	**21 25 18.2**	**-0.4**
	baz=102,SNR=8.9						
G23K	**Bananza Creek**	**149.03**	**317**	P	**PKiKP**	**21 25 18.6**	**-0.1**
	baz=99,SNR=8.3						
MLY	**Manley**	**149.04**	**314**	P	**PKiKP**	**21 25 18.6**	**-0.1**
	baz=101,SNR=5.1						
TOLK	**Toolik Lake Re**	**149.10**	**321**	P	**PKiKP**	**21 25 18.7**	**-0.1**
	baz=96,SNR=9.0						
PPLA	**Purkeypile**	**149.22**	**309**	P	**PKiKP**	**21 25 19.1**	**-0.2**
	baz=103,SNR=5.0						
M20K	**Styx River**	**149.41**	**307**	P	**PKPbc**	**21 25 19.1**	**+0.5**
	baz=104,SNR=7.3						
H22K	**Ishtalitna Cre**	**149.45**	**315**	P	**PKiKP**	**21 25 19.3**	**-0.2**
	baz=99,SNR=7.1						
N19K	**Bonanza Creek**	**149.77**	**305**	P	**PKPbc**	**21 25 19.6**	**+0.2**
	baz=105,SNR=7.2						
TTA	**Tatalina**	**150.94**	**309**	P	**PKiKP**	**21 25 22.9**	**+0.1**
	baz=100						
SDPT	**Sand Point**	**151.12**	**292**	P	**PKPbc**	**21 25 22.8**	**+0.2**
	baz=111						
SONM	**Songino Array**	**153.41**	**88**	PKPbc	**PKPbc**	**21 25 28.1**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=216,slow=4.3,SNR=5.9						

IDC ***19*** *21:05:56.9±1.2,0°.93N×123°.01E,h0km,mb3.5/4, mbtmp3.6/5,ML4.3/1,Error ellipse: s-maj=113.8km s-min=20.0km az=69.0*

DJA ***19*** *21:06:05.7±0.3,1°.N±4°×12°.3E±°,h44km±5km,M4.2/14, mb4.3/7,mB4.0/1,MLv4.1/14,Mw(mB)3.0/1*

NEIC ***19*** *21:06:06.5±1.5,0°.87N±0°.07×122°.84E±0°.09,h76km±10km, mb4.0/11,Error ellipse: s-maj=13.5km s-min=9.5km az=60.0*

ISC 19 21:06:04.7±0.7,0°.94N±0°.05×122°.76E±0°.06,h50km,n36, σ1§96/39,mb4.0/9,1D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.39**	**140**	P	**Pn**	**21 06 15.2**	**+0.4**
GTOI				S	**Sn**	**21 06 23.4**	**+1.5**
MRSI	**Marisa**	**0.94**	**241**	P	**Pn**	**21 06 22.2**	**+0.6**
KMSI	**Cibinong**	**1.27**	**106**	P	**Pn**	**21 06 28.7**	**+2.6**
LUWI	**Luwuk**	**1.97**	**180**	Pn	**Pn**	**21 06 36.1**	**+0.5**
LUWI				Sn	**Sn**	**21 07 03.9**	**+4.8**
LUWI	**Luwuk**	**1.97**	**180**	P	**Pn**	**21 06 36.3**	**

*NEIC **19** 21:08:21.4±1.5,34.9S±0.1×179.4E±0.2,h149km±10km, mb4.5/8,Error ellipse: s-maj=20.0km s-min=18.2km az=162.0*

ISC 19 21:07:56.6±2.0,33.7S±0.1×178.5W±0.3,h35km,n39, σ1§47/50,mb4.4/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.42	6	S		Sn		21 09 47.1	-4.2
MXZ	Matakaoa Point	4.69	213	Pn		Pn		21 09 05.4	+0.5
MXZ	Matakaoa Point	4.69	213	P		Pn		21 09 05.4	+0.5
MXZ				S		Sn		21 09 58.9	+0.9
WMGZ	Waiomatatini S	4.86	211	P		Pn		21 09 08.7	+1.5
WMGZ				S		Sn		21 10 03.1	+0.9
PKGZ	Pakihiroa	5.06	213	P		Pn		21 09 09.3	-0.7
PKGZ				S		Sn		21 10 05.6	-1.7
HAZ	Te Kaha	5.09	216	P		Pn		21 09 10.8	+0.4
HAZ				S		Sn		21 10 10.3	+2.3
PUZ	Puketiti	5.14	210	P		Pn		21 09 08.9	-2.1
PUZ				S		Sn		21 10 08.7	-0.4
RUGZ	Raukumara Rang	5.31	215	P		Pn		21 09 12.7	-0.8
RUGZ				S		Sn		21 10 14.2	+0.7
TWGZ	Tauwhareparae	5.34	212	P		Pn		21 09 14.8	+0.9
TWGZ				S		Sn		21 10 14.5	+0.3
CNGZ	Carnagh Statio	5.51	208	P		Pn		21 09 17.1	+1.0
TKGZ	Te Karaka	5.62	211	P		Pn		21 09 18.4	+0.7
MWZ	Matawai	5.68	214	P		Pn		21 09 17.2	-1.3
MWZ				S		Sn		21 10 21.7	-0.7
URZ	Urewera	5.82	217	P		Pn		21 09 20.1	-0.2
	4.0nm,0.3s,baz=340,slow=12,SNR=25								
URZ				S		Sn		21 10 24.2	-1.6
	10nm,0.5s,baz=18,slow=20,SNR=7.7 12nm,0.3s								
URZ	Urewera	5.82	217	Pn		Pn		21 09 19.9	-0.5
URZ	Urewera	5.82	217	P		Pn		21 09 19.8	-0.6
URZ				S		Sn		21 10 24.5	-1.4
RAGZ	Rawiri	5.86	213	P		Pn		21 09 21.7	+0.6
RIGZ	Rimuhau	5.88	210	P		Pn		21 09 21.2	-0.1
RIGZ				S		Sn		21 10 26.7	-0.7
SNGZ	Shannon Statio	6.13	212	P		Pn		21 09 25.0	+0.4
SNGZ				S		Sn		21 10 34.2	+0.7
RAHZ	Arahi	6.35	213	P		Pn		21 09 27.8	+0.1
RAHZ				S		Sn		21 10 37.9	-1.1
MTHZ	Maungataniwha	6.41	215	P		Pn		21 09 28.7	+0.1
MTHZ				S		Sn		21 10 39.7	-0.9
NMHZ	Naumai	6.62	214	P		Pn		21 09 31.4	-0.1
NMHZ				S		Sn		21 10 44.1	-1.7
BKZ	Black Stump Fm	6.83	215	Pn		Pn		21 09 30.9	-3.4
BFZ	Birch Farm	8.17	210	Pn		Pn		21 09 50.2	-2.5
BSWZ	Blackbirch Sta	10.06	215	Pn		Pn		21 10 12.7	-5.9
WKZ	Wanaka	14.75	217			Pn		21 11 15.6	-7.0
MLZ	Mavora Lakes	15.58	217	P		Pn		21 11 30.6	-3.0
WHZ	Wether Hill Ro	16.04	216	P		Pn		21 11 38.3	-1.1
DCZ	Deep Cove	16.15	216	P		Pn		21 11 39.7	-1.1
EIDS	Eidsvold	27.68	279	P		P		21 13 42.5	+1.0
EIDS				IAmb		IAmb		21 14 06.4	
	comp=Z,13nm,1.3s								
ASAR	Alice Springs	42.64	271	P		P		21 15 49.5	-0.4
	comp=Z,0.6nm,0.7s,baz=112,slow=7.8,SNR=9.1 comp=Z,0.6nm,0.7s								
WB2	Warramunga Arr	43.92	276	P		P		21 15 59.9	-0.3
WRAB	Tennant Creek	43.92	276	P		P		21 15 59.1	-1.1
WRA	Warramunga Arr	43.93	276	P		P		21 15 59.8	-0.5
	comp=Z,1.2nm,0.7s,baz=118,slow=7.2,SNR=8.9 comp=Z,1.2nm,0.7s								
WRA	Warramunga Arr	43.93	276	P		P		21 15 59.7	-0.5
WB0	Warramunga Arr	43.96	276	P		P		21 16 00.3	-0.2
WB0				IAmb		IAmb		21 16 43.9	
	comp=Z,10nm,1.4s								
SMAI	San Martin Ant	66.56	158	P		P		21 18 52.9	+10
SMAI				IAmb		IAmb		21 18 55.4	
	comp=Z,8.6nm,1.3s								
MYLDM	Lahad Datu	70.90	290	P		P		21 19 14.7	+4.2
MYLDM				IAmb		IAmb		21 19 47.3	
	comp=Z,18nm,1.3s								
LL07	Hotel Espejo d	77.58	133	P		P		21 20 02.7	+14
FINES	FINESS Array B	148.04	338	PKPbc		PKPbc		21 27 37.3	-0.3
	comp=Z,2.6nm,0.9s,baz=23,slow=4.5,SNR=10								

*IDC **19** 21:11:09.2±1.9,54.6S×31.9W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=81.2km s-min=36.1km az=20.0*
*NEIC **19** 21:11:10.0±2.0,55.2S±0.9×32.1W±0.1,h10km±2km, mb4.7/19,Error ellipse: s-maj=15.8km s-min=12.7km az=198.0*

ISC 19 21:11:09.1±0.8,55.19S±0.09×32.07W±0.08,h10km,n33, σ1§17/30,mb4.6/12,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	2.72	288	Pn		Pn		21 11 52.9	+0.1
HOPE						Pg		21 12 01.4	+0.1
HOPE				Sn		Sn		21 12 25.5	-0.2
ORCD	Orcadas	8.73	225	Pn		Pn		21 13 14.4	-0.8
ORCD				Sn		Sn		21 14 53.5	0.0
PMSA	Palmer Station	18.44	226	P		P		21 15 24.1	-0.3
SNAA	Sanae	20.69	154	P		Pn		21 15 51.3	-0.1
MG05	Puerto Natales	24.10	261	P		P		21 16 24.6	+0.1
MG05				IAmb		IAmb		21 16 50.3	
	comp=Z,17nm,1.1s								
TRQA	Tornquist	26.45	298	P		P		21 16 46.6	+0.5
TRQA				IAmb		IAmb		21 17 13.7	
	comp=Z,15nm,1.4s								
CPUP	Villa Florida	34.23	317	P		P		21 17 51.8	-3.1
	comp=Z,1.7nm,0.6s,baz=199,slow=14,SNR=2.9 comp=Z,1.7nm,0.6s								
MT09	Talagante	34.42	292	P		P		21 17 56.9	+0.3
MT09				IAmb		IAmb		21 17 57.6	
	comp=Z,13nm,0.8s								
MT01	Popeta	34.49	292	P		P		21 17 57.2	+0.1
MT01				IAmb		IAmb		21 18 23.8	
	comp=Z,11nm,1.1s								
MT02	Curacav	34.89	293	P		P		21 18 01.0	+0.4
ROC1	El Roble	35.05	293	P		P		21 18 02.6	+0.3
VA06	Catapilco	35.52	293	P		P		21 18 07.2	+1.2
CO02	Combarbal	36.43	295	P		P		21 18 14.8	+0.9
CO01	Juntas del Tor	36.95	297	P		P		21 18 20.8	+2.3
CO01				IAmb		IAmb		21 18 55.2	
	comp=Z,17nm,1.4s								
AC05	El Transito	37.96	298	P		P		21 18 28.2	+1.2
AC05				IAmb		IAmb		21 18 30.3	
	comp=Z,18nm,0.9s								
GO02	Mina Guanaco	40.66	302	P		P		21 18 51.4	+1.7
GO02				IAmb		IAmb		21 18 57.3	
	comp=Z,11nm,0.8s								
SHEL	Horse Pasture	44.09	38	P		P		21 19 16.4	-1.0
PB01	IPOC Station P	44.12	305	P		P		21 19 19.0	+1.3
PB01				IAmb		IAmb		21 19 26.7	
	comp=Z,21nm,1.5s								
GO01	Chusmiza	45.17	307	P		P		21 19 27.9	+1.4
GO01				IAmb		IAmb		21 19 49.4	
	comp=Z,11nm,1.2s								
LPAZ	La Paz	47.66	310	P		P		21 19 46.6	+0.4
	comp=Z,2.4nm,0.6s,baz=174,slow=5.8,SNR=11 comp=Z,2.4nm,0.6s								
LPAZ	La Paz	47.66	310			P		21 19 46.7	+0.4
LPAZ				IAmb		IAmb		21 19 48.5	
	comp=Z,3.6nm,0.7s								
H10S2	ASCENSION HYDR	48.14	23	T		T		22 11 48.4	
	baz=193,slow=74,SNR=9.1								
H10S3	ASCENSION HYDR	48.14	23	T		T		22 11 52.9	
	baz=27,slow=74,SNR=8.3								
H10N3	ASCENSION HYDR	49.25	23	T		T		22 13 07.1	
	baz=193,slow=75,SNR=13								
H10N1	ASCENSION HYDR	49.25	23	T		T		22 13 07.1	
	baz=193,slow=75,SNR=7.9								
H10N2	ASCENSION HYDR	49.27	23	T		T		22 13 08.3	
	baz=193,slow=75,SNR=12								
TOA0	Torodi Ar. Sit	73.78	34	P		P		21 22 44.2	+0.8
TORD	Torodi Ar. Bea	73.78	34	P		P		21 22 42.5	-0.9
	comp=Z,0.7nm,0.6s,baz=190,slow=5.4,SNR=5.2 comp=Z,0.7nm,0.6s								
TORD	Torodi Ar. Bea	73.78	34	P		P		21 22 43.1	-0.4
FINES	FINESS Array B	124.96	30	PKP		PKiKP		21 30 10.1	+1.8
	comp=Z,2.1nm,1.1s,baz=212,slow=4.9,SNR=3.5								
ZALV	Zalesovo Beam	144.50	65	PKP		PKPdf		21 30 46.4	+2.0
	comp=Z,1.2nm,0.6s,baz=237,slow=3.5,SNR=5.7								
ILAR	Eielson Array	147.50	314	PKPbc		PKPbc		21 30 51.9	0.0
	comp=Z,1.6nm,0.7s,baz=124,slow=2.0,SNR=12								
SONM	Songino Array	153.45	89	PKPbc		PKPbc		21 31 06.5	-0.3
	comp=Z,0.5nm,0.6s,baz=219,slow=3.2,SNR=3.8								

*VAO **19** 21:20:52.8±1.0,23.96S×67.31W,h277km±16km,mb3.9*
*IDC **19** 21:20:52.5±1.2,23.82S×66.67W,h197km±10km,mb3.3/4, mbtmp3.8/10,Error ellipse: s-maj=19.8km s-min=14.8km az=15.0*
*GUC **19** 21:20:53.5±0.6,23.95S×67.17W,h242km±9km,ML4.3*

ISC 19 21:20:52.1±0.8,23.92S±0.05×66.79W±0.07,h200km±9km, n39,σ1§22/54,mb3.4/4,9C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.34	303	P		Pn		21 21 36.2	+1.6
	101nm,0.3s,baz=133,slow=5.8,SNR=127								
LVC				S		Sn		21 22 08.6	+0.9
	95nm,0.3s,baz=204,slow=20,SNR=14								
LVC	Limon Verde	2.34	303	*e*P		Pn		21 21 36.0	+1.4
LVC				*e*S		Sn		21 22 08.7	+1.0
LVC	Limon Verde	2.34	303	*e*P		Pn		21 21 36.4	+1.8
PB15	IPOC Station P	2.56	285	*i* P		Pn		21 21 38.1	+1.3
PB15				*i* S		Sn		21 22 11.8	+0.1
PB06	IPOC Station P	2.82	295	*e*P		Pn		21 21 41.1	+1.2
PB06				*e*S		Sn		21 22 16.4	-0.7
PB06				IAML				21 22 18.0	
	comp=N,628nm,0.5s								
GO02	Mina Guanaco	2.83	243	*e*P		Pn		21 21 40.9	+0.8
GO02				*e*S		Sn		21 22 17.2	-0.3
PB09	IPOC Station P	3.09	313	*e*P		Pn		21 21 44.4	+1.4
PB09				*e*S		Sn		21 22 23.5	+0.7
PB14	IPOC Station P	3.37	257	*i*P		Pn		21 21 46.7	+0.3
PB14				*i* S		Sn		21 22 26.5	-2.5
PB14				IAML				21 22 30.5	
	comp=E,288nm,0.5s								
PB04	IPOC Station P	3.47	296	*e*P		Pn		21 21 47.9	+0.3
PB04				*i* S		Sn		21 22 29.5	-1.4
PB10	IPOC Station P	3.47	276	*e*P		Pn		21 21 47.5	+0.2
PB10				*e*S		Sn		21 22 28.3	-2.4
PB07	IPOC Station P	3.59	307	*e*P		Pn		21 21 49.6	+0.5
PB07				*e*S		Sn		21 22 32.1	-1.5
PB01	IPOC Station P	3.79	318	*e*P		Pn		21 21 52.0	+0.6
PB01				*e*S		Sn		21 22 35.8	-2.2
PB02	IPOC Station P	3.86	311	*e*P		Pn		21 21 52.3	0.0
PB02				*e*S		Sn		21 22 37.3	-2.1
AC01	Pan de Azucar	4.11	236	*i* P		Pn		21 21 54.2	-0.9
TA01	Diego Aracena	4.58	316	*e*P		Pn		21 22 00.8	-0.3
TA01				*i* S		Sn		21 22 52.5	-3.0
GO01	Chusmiza	4.78	332	*i* P		Pn		21 22 04.8	+0.6
GO01				*i* S		Sn		21 22 59.7	-1.2
LPAZ	La Paz	7.69	350	P		Pn		21 22 42.8	+0.8
	comp=E,3.3nm,0.3s,baz=167,slow=6.5,SNR=15								
LPAZ				S		Sn		21 24 08.7	-0.6
	comp=E,1.2nm,0.5s,baz=184,slow=19,SNR=1.6								
LPAZ	La Paz	7.69	350	*e*P		Pn		21 22 43.8	+1.8
CPUP	Villa Florida	8.91	108	P		Pn		21 22 55.5	-1.6
	comp=E,3.1nm,0.6s,baz=297,slow=12,SNR=7.1								
SIV	San Ignacio	9.54	35	P		Pn		21 23 04.4	-1.1
	comp=E,0.9nm,0.3s,baz=166,slow=15,SNR=1.8								
CRSM	Crissiumal (Br	12.03	110	*e*P		P		21 23 42.4	+0.4
RODS	Rosario do Sul	12.15	124	*e*P		P		21 23 42.9	-0.4
FRBT	Francisco Belt	12.63	102	*e*P		P		21 23 49.3	+0.7
TRCB	Terra Rica	13.05	88	*e*P		P		21 23 53.9	+0.4
ALGR	Alto Alegre (B	13.26	114	*e*P		P		21 23 56.1	+0.4
PTGB	Pitanga	13.45	96	*e*P		P		21 23 59.0	+1.1
CPSB	Cacapava Do Su	13.53	121	*e*P		P		21 23 58.1	-0.4
PLCA	Paso Flores	17.06	190	P		Pn		21 24 41.4	+2.4
	comp=E,0.8nm,0.5s,baz=348,slow=15,SNR=3.2								
IPMB	Ipameri, GO	18.32	75	*e*P		P		21 24 51.4	-0.1
SNDB	Serra Nova Dou	18.91	54	*e*P		P		21 24 57.4	-0.4
BDFB	Brasilia	19.48	68	P		P		21 25 03.4	-0.7
	comp=E,4.1nm,0.6s,baz=234,slow=12,SNR=5.0								
JANB	Januaria	22.93	72	*e*P		P		21 25 37.7	-1.3
TXAR	Lajitas Array	63.72	324	P		P		21 31 02.6	+0.1
	comp=E,0.4nm,0.8s,baz=137,slow=8.3,SNR=4.6 comp=E,0.4nm,0.8s								
TORD	Torodi Ar. Bea	76.36	69	P		P		21 32 19.1	-0.5
	comp=E,0.7nm,0.6s,baz=269,slow=6.8,SNR=9.0 comp=E,0.7nm,0.6s								
ULM	Lac du Bonnet	78.21	341	P		P		21 32 29.4	+0.3
	comp=E,2.4nm,0.5s,baz=135,slow=1.4,SNR=2.6 comp=E,2.4nm,0.5s								
NVAR	Mina Array Bea	78.59	321	P		P		21 32 32.9	+1.2
	comp=E,0.2nm,0.6s,baz=146,slow=6.4,SNR=1.7 comp=E,0.2nm,0.6s								
ASAR	Alice Springs	128.61	205	PKP		PKPdf		21 39 36.2	+0.3
	comp=E,0.7nm,0.8s,baz=110,slow=2.3,SNR=6.1								
WRA	Warramunga Arr	131.79	207	PKP		PKPdf		21 39 42.4	+0.3
	comp=E,0.4nm,0.4s,baz=154,slow=1.8,SNR=6.6								
MKAR	Makanchi Array	146.34	40	PKPbc		PKPbc		21 40 09.8	+0.7
	comp=E,1.3nm,0.5s,baz=323,slow=2.8,SNR=18								

*SKO **19** 21:25:30.4,41.10N×23.82E,h24km*
*ATH **19** 21:25:30.8,41.21N×23.86E,h14km±1km,ML1.7/6,Error ellipse: s-maj=2.0km s-min=1.0km az=350.0*

BEO 19 21:25:32.6±0.6,41.18N×23.77E,h5km±3km,ML1.6/7, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SRS	Serrai	0.15	245	*e*Pg		Pg		21 25 35.6	0.0
SRS				*e*Sg		Sg		21 25 38.6	+1.1
SRS	Serrai	0.15	245	*i* Pg		Pg		21 25 35.6	0.0
SRS				*i* Sg		Sg		21 25 39.1	+1.6
SRS	Serrai	0.15	245	P		Pg		21 25 35.6	0.0
SRS				S		Sg		21 25 38.8	+1.3
SRS				AML		AML		21 25 39.3	
	comp=N,470μm,0.2s								
SRS				AML		AML		21 25 39.5	
	comp=E,413μm,0.3s								
NVR	Nevrokopi	0.18	22	P		Pg		21 25 34.5	-1.8
NVR				S		Sg		21 25 36.9	-1.8
NVR				AML		AML		21 25 37.1	
	comp=N,1278μm,0.2s								
NVR				AML		AML		21 25 37.2	
	comp=E,1394μm,0.2s								
KOKK	Kokkinochori,	0.40	154	P		Pg		21 25 38.8	-1.5
KOKK				S		Sg		21 25 44.8	-0.8
SOH	Sokhos	0.48	221	*i* Pg		Pg		21 25 41.2	-0.5
SOH				*i* Sg		Sg		21 25 48.8	+0.8
SOH	Sokhos	0.48	221	P		Pg		21 25 41.5	-0.3
SOH				S		Sg		21 25 48.8	+0.8
SOH				AML		AML		21 25 49.2	
	comp=E,113μm,0.3s								
SOH				AML		AML		21 25 52.2	
	comp=N,144μm,0.4s								
KAVA	Kavala	0.59	108	P		Pg		21 25 41.3	-2.6
KAVA				S		Sg		21 25 48.7	-3.0
KNT	Kendrikon	0.66	269	*i* Pg		Pg		21 25 44.6	-0.6
KNT	Kendrikon	0.66	269	P		Pg		21 25 44.6	-0.7
HORT	Hortiatis	0.77	221	P		Pg		21 25 46.9	-0.6
HORT				S		Sg		21 25 57.9	+0.5
HORT				AML		AML		21 25 59.8	
	comp=N,55μm,0.3s								
HORT				AML		AML		21 26 01.9	
	comp=E,69μm,0.2s								
THE	Thessaloniki	0.82	228	*i* Pg		Pb		21 25 48.9	-0.4
THE				*i* Sg		Sg		21 25 59.4	+0.5
VAY	Valandovo	0.92	279	*i* Pg		Pg		21 25 50.0	-0.1
VAY				*i* Sg		Sb		21 26 03.1	-0.3
VAY				*e*Lg		Lg		21 26 03.3	
	comp=N,9.1nm,0.7s								
THAS	Thassos island	0.92	128	P		Pg		21 25 47.6	-2.6
THAS				AML		AML		21 26 01.9	
	comp=N,273μm,0.5s								
THAS				AML		AML		21 26 02.3	
	comp=E,394μm,0.2s								
PLD	Plovdiv	1.16	37	*e*Pg		Pg		21 25 53.2	-1.6
PLD				*e*Sg		Sg		21 26 09.3	-0.6
PAIG	Paliouri	1.25	183	P		Pg		21 25 54.5	-2.1
STIP	Stip	1.30	294	*i* Pg		Pn		21 25 53.7	-3.7
STIP				*i* Sg		Sg		21 26 10.0	-4.2
RDO	Rodhopi	1.34	91	P		Pn		21 25 54.4	-3.5
RDO				AML		AML		21 26 16.2	
	comp=E,95μm,0.2s								
RDO				AML		AML		21 26 16.8	
	comp=N,69μm,0.1s								
VTS	Vitosha	1.49	345	*i* Pg		Pn		21 25 58.9	-1.3
SMTH	Samothraki Isl	1.51	117	P		Pn		21 25 56.7	-3.6
BOSS	Bosilegrad	1.63	324	*e*Pn		Pn		21 26 01.4	-0.6
BOSS				*e*Sn		Sb		21 26 23.8	-0.2
LIA	Limnos Island	1.67	139	P		Pn		21 25 59.4	-3.1
ALN	Alexandroupoli	1.75	99	P		Pn		21 26 00.3	-3.2
PRVS	Prvonek	1.83	317	*e*Pn		Pn		21 26 04.6	-0.2
PRVS				*e*Sn		Sn		21 26 27.6	-0.8
BARS	Barje	2.19	319	*e*Pn		Pn		21 26 10.6	+0.9
BARS				*e*Sn		Sn		21 26 36.4	-0.8
ZAPS	Zavoj	2.26	338	*e*Pn		Pn		21 26 11.5	+0.9
ZAPS				*e*Sn		Sn		21 26 38.8	0.0

*IDC **19** 21:34:28.0±0.9,55.2S×30.69W,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=45.8km s-min=23.6km az=77.0*

ISC 19 21:34:29.5±0.9,55.2S±0.1×30.8W±0.3,h10km,n18, σ0§79/12,mb3.8/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	18.39	156	P		Pn		21 38 43.3	-0.9
VNA3	Neumayer Olymp	18.52	158	P		Pn		21 38 47.1	+1.3
VNA2	Neumayer--Watz	18.79	156	P		Pn		21 38 48.4	-0.7
	baz=329,slow=12								
SNAA	Sanae	20.38	155	P		Pn		21 39 06.5	-1.6
SNAA	Sanae	20.38	155	P		P		21 39 05.7	-0.3
	1.2nm,0.9s,baz=306,slow=11,SNR=7.2 1.2nm,0.9s								
TROLL	Troll, Antarti	21.94	153	P		P		21 39 23.9	+1.0
QSPA	South Pole Qui	35.07	180	P		P		21 41 22.4	0.0
	2.1nm,1.0s,baz=202,slow=3.6,SNR=4.3 2.1nm,1.0s								
VNDA	Vanda	47.33	184	P		P		21 43 02.8	+0.1
	0.4nm,0.8s,baz=184,slow=6.7,SNR=4.4 0.4nm,0.8s								
H10S2	ASCENSION HYDR	47.85	22	T		T		22 34 57.1	
	baz=199								
H10S3	ASCENSION HYDR	47.85	22	T		T		22 34 58.4	
	baz=21								
LPAZ	La Paz	48.23	309	P		P		21 43 11.4	+0.3
	1.5nm,0.6s,baz=177,slow=2.2,SNR=5.9 1.5nm,0.6s								
H10N1	ASCENSION HYDR	48.96	22	T		T		22 36 26.2	
	baz=191								
H10N3	ASCENSION HYDR	48.96	22	T		T		22 36 15.9	
	baz=191,slow=74								
H10N2	ASCENSION HYDR	48.98	22	T		T		22 36 25.0	
	baz=191,slow=74								
TORD	Torodi Ar. Bea	73.36	33	P		P		21 46 01.9	+0.6
	0.6nm,0.8s,baz=210,slow=6.0,SNR=2.7 0.6nm,0.8s								
FINES	FINESS Array B	124.59	29	PKP		PKiKP		21 53 27.3	-0.6
	1.7nm,1.0s,baz=129,slow=5.2,SNR=3.7								
ILAR	Eielson Array	148.03	313	PKPbc		PKPbc		21 54 13.0	-0.7
	0.8nm,0.8s,baz=118,slow=2.0,SNR=6.4								
SONM	Songino Array	152.71	88	PKPbc		PKPbc		21 54 25.1	-0.6
	0.5nm,0.5s,baz=185,slow=5.2,SNR=5.8								

*IDC **19** 21:39:03.6±1.5,15.74S×165.73E,h0km,mb3.8/4, mbtmp3.8/5,ML4.1/1,Error ellipse: s-maj=35.7km s-min=30.7km az=115.0*
*NOU **19** 21:39:06.9,15.64S×167.82E,h71km,MLv4.3/10, Vanuatu Islands*

ISC 19 21:39:05.1±1.2,15.70S±0.10×165.7E±0.2,h10km,n11, σ1§04/11,mb3.8/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVP	Devils Point	3.10	131	P		Pn		21 39 40.6	-14
KOUNC	Koumac, New Ca	5.01	196	P		Pb		21 40 32.6	-0.4
DZM	Mont Dzumac	6.37	174	Pn		Pn		21 40 38.1	-1.1
	3.9nm,0.3s,baz=34,slow=3.6,SNR=36								
DZM						Sn		21 41 52.6	+0.5
	1.5nm,0.3s,baz=308,slow=20,SNR=8.1 8.5nm,0.3s								
DZM	Mont Dzumac	6.37	174	P		Pn		21 40 39.8	+0.6
NOUC	Port Laguerre	6.39	175	P		Pn		21 40 41.3	+2.0
YATNC	Mamie plateau,	6.42	170	P		Pn		21 40 39.0	-0.8
OUENC	Ouen Island, N	6.76	171	P		Pn		21 40 43.4	-1.1
WRA	Warramunga Arr	30.15	257	P		P		21 45 15.8	+0.3
	0.3nm,0.6s,baz=83,slow=7.1,SNR=1.8 0.3nm,0.6s								
ASAR	Alice Springs	30.94	250	P		P		21 45 22.7	+0.2
	1.0nm,0.6s,baz=80,slow=8.8,SNR=13 1.0nm,0.6s								
NVAR	Mina Array Bea	89.03	50	P		P		21 52 01.5	+0.6
	0.2nm,0.3s,baz=224,slow=6.3,SNR=5.5 0.2nm,0.3s								
MKAR	Makanchi Array	96.88	317	P		P		21 52 35.9	-0.7
	0.1nm,0.4s,baz=117,slow=4.0,SNR=1.5 0.1nm,0.4s								

*NIC **19** 21:51:13.9±0.0,34.04N×34.25E,h13km±3km,Ml2.4/4*
*GII **19** 21:51:15.8±0.0,33.81N×34.55E,h10km,MD2.2/3, Mm2.5/5*
*GRAL **19** 21:51:19.6±0.3,33.99N×34.88E,h11km±1km,MD3.3*

ISC 19 21:51:12.9±1.2,34.05N±0.03×34.53E±0.04,h26km±14km, n38,σ1§22/65,1D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BEYL	Beirut	0.82	102	*e*P		Pn		21 51 29.3	+0.5
DQRL	Deir Qamar	0.93	111	*e*P		Pb		21 51 31.3	+0.8
DQRL				*e*S		Sb		21 51 40.0	-2.5
BHL	Bhannes	0.95	99

OSC2				S	Sn	21 52 10.3	-1.9		
AMAZ	**Amatzia**	**2.53**	**172**	Pn	**Pn**	21 51 53.9	+1.5		
AMAZ				Sn	**Sn**	21 52 22.4	0.0		
DSI	**Dead Sea**	**2.58**	**164**	P	**Pb**	21 51 57.4	-1.0		
YTIR	**Yattir**	**2.73**	**169**	Pn	**Pn**	21 51 56.7	+1.6		
YTIR				Sn	**Sn**	21 52 27.7	+0.4		
ASF	**Jabal al Asfar**	**2.73**	**133**	P	**Pn**	21 51 56.3	+1.1		
KZIT	**Kziot**	**3.14**	**182**	Pn	**Pn**	21 52 01.9	+1.2		
KZIT				Sn	**Sn**	21 52 36.2	-1.1		
PRNI	**Paran**	**3.71**	**174**	Pn	**Pn**	21 52 10.1	+1.5		
PRNI				Sn	**Sn**	21 52 50.2	-1.3		
KRMI	**Paran Flat**	**3.92**	**177**	Pn	**Pn**	21 52 13.1	+1.6		
KRMI				Sn	**Sn**	21 52 55.4	-1.4		
HRFI	**Mount Harif**	**4.03**	**174**	Pn	**Pn**	21 52 14.5	+1.6		
HRFI				Sn	**Sn**	21 52 58.4	-0.9		
MBRI	**Mt Berech**	**4.26**	**175**	P	**Pn**	21 52 18.1	+2.0		
MBRI	**Mt Berech**	**4.26**	**175**	Pn	**Pn**	21 52 17.8	+1.7		
MBRI				Sn	**Sn**	21 53 05.2	+0.2		

NEIC ***19*** *21:56:47.4±2.2,28°.33N±0°.07×138°.8E±0°.1, h509km±8km, mb4.1/66, Error ellipse: s-maj=14.6km s-min=8.2km az=66.0*

IDC ***19*** *21:56:47.3±0.7,28°.24N×138°.76E, h514km±10km, mb3.0/14, mbtmp3.9/18, Error ellipse: s-maj=19.5km s-min=12.3km az=75.0*

JMA ***19*** *21:56:47.2±0.1,28°.1N±1°.1×13°.9E±°, h536km, MV3.5/21, W OFF OGASAWARA*

ISC 19 21:56:46.9±0.4,28°.26N±0°.05×138°.70E±0°.07, h500km, n117, σ1§61/121, mb4.0/44, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.30**	**110**	P	**P**	**P**	21 58 02.6	+2.7
CBIJ				*eS*	**S**	**S**	21 59 01.2	+1.8
JCJ	**Chichijima**	**3.30**	**110**	P	**P**	**P**	21 58 02.2	+2.2
	25nm,0.3s,baz=274,slow=19,SNR=7.7							
JCJ				S		**S**	21 59 00.6	+1.2
	138nm,0.4s,baz=278,slow=23,SNR=15							
JCJ	**Chichijima**	**3.30**	**110**	P	**P**		21 58 02.2	+2.2
JCJ				S	**S**		21 59 02.1	+2.7
JHH2	**Haha-jima-NKT2**	**3.49**	**117**	*eS*	**S**		21 59 04.4	+2.5
JTNC	**Tanabenakahech**	**6.14**	**335**	P	**P**		21 58 28.9	+4.5
JIE	**Ise**	**6.34**	**345**	*eP*	P		21 58 31.4	+5.0
BSO1	**Boso 1**	**6.66**	**16**	*eS*	**S**		21 59 55.7	+3.1
JMN	**Monobe**	**6.84**	**324**	P	**P**		21 58 35.6	+4.2
JTO	**Tosashimizu**	**6.84**	**313**	P	**P**		21 58 35.9	+4.5
JOD2	**Odawara 2**	**6.99**	**3**	*eP*	**P**		21 58 36.6	+3.8
JOD2				*eS*	**S**		22 00 01.0	+1.4
JMZ	**Minamidaito 2**	**7.10**	**252**	*eP*	**P**		21 58 36.9	+2.8
JRY	**Ryogami san**	**7.73**	**1**	P	**P**		21 58 42.5	+2.1
JRY				*eS*	**S**		22 00 14.6	+1.0
JHS	**Saijyo**	**8.23**	**326**	P	**P**		21 58 48.6	+3.1
JHS	**Saijyo**	**8.23**	**326**	P	**P**		21 58 49.5	+4.0
MJAR	**Matsushiro Arr**	**8.27**	**357**	P	**P**		21 58 47.2	+1.3
	4.1nm,0.4s,baz=169,slow=10,SNR=19							
MAJO	**Matsushiro**	**8.27**	**357**	P	**P**		21 58 47.2	+1.4
JAMN	**Amaminishikomi**	**8.40**	**272**	P	**P**		21 58 51.1	+3.6
JOW	**Kunigami**	**9.37**	**264**	P	**P**		21 59 00.2	+2.6
JOW	**Kunigami**	**9.37**	**264**	*eP*	**P**		21 59 00.8	+3.3
JMM	**Marumori**	**9.73**	**10**	P	**P**		21 59 03.6	+2.4
JSD	**Sado**	**9.75**	**358**	P	**P**		21 59 01.9	+0.5
JMK	**Ichinoseki**	**10.86**	**10**	*eP*	**P**		21 59 16.2	+3.0
JMK				S	**S**		22 01 14.2	+0.5
KSRS	**Korea Array**	**12.88**	**318**	P	**P**		21 59 35.7	+1.1
	0.6nm,0.4s,baz=133,slow=10,SNR=2.7							
SEHB	**SEOHWA**	**13.26**	**321**	P	**P**		21 59 39.9	+1.3
JOSM	**Okushiri--Mats**	**13.80**	**2**	*eP*	**P**		21 59 46.3	+2.0
YOJ	**Yonaguni jima**	**14.57**	**259**	P	**P**		21 59 51.6	-1.0
NACB	**Ninganchiao**	**15.88**	**259**	P	**P**		22 00 05.5	-0.9
YHNB	**Yeheng**	**15.92**	**261**	P	**P**		22 00 05.9	-0.9
YULB	**Yu-li**	**16.40**	**257**	P	**P**		22 00 10.7	-1.2
YULB				IAmb	IAmb		22 00 13.5	
	comp=Z,12nm,1.1s							
SSLB	**Suanglung**	**16.56**	**258**	P	**P**		22 00 14.1	+0.6
USRK	**Ussuriysk Ar.**	**16.79**	**343**	P	**P**		22 00 16.6	+1.1
	comp=Z,22nm,0.8s,baz=164,slow=10,SNR=31							
USRK	**Ussuriysk Ar.**	**16.79**	**343**	P	**P**		22 00 16.9	+1.4
USA0B	**Ussuriysk Arra**	**16.79**	**343**	P	**P**		22 00 16.9	+1.4
TPUI	**Ta-pu**	**17.01**	**257**	P	**P**		22 00 18.2	+0.2
KLR	**Kul'dur**	**21.61**	**348**	P	**P**		22 01 00.8	+1.0
	comp=Z,2.9nm,0.6s,baz=141,slow=7.8,SNR=8.4							
	comp=Z,2.9nm,0.6s							
HKPS	**Hong Kong Po S**	**22.98**	**261**	P	**P**		22 01 09.3	-3.2
MYLDM	**Lahad Datu**	**29.92**	**224**	P	**P**		22 02 15.4	+1.7
SONM	**Songino Array**	**31.74**	**317**	P	**P**		22 02 29.4	+0.3
	comp=Z,0.9nm,0.5s,baz=128,slow=9.0,SNR=8.7							
	comp=Z,0.9nm,0.5s							
SONM	**Songino Array**	**31.74**	**317**	P	**P**		22 02 29.6	+0.5
SONM				IAmb	IAmb		22 02 30.2	
	comp=Z,3.4nm,1.4s							
MA2	**Magadan**	**32.38**	**11**	P	**P**		22 02 35.0	+0.8
YAK	**Yakutsk**	**34.29**	**352**	P	**P**		22 02 48.9	-1.4
CMAR	**Chiang Mai Arr**	**37.64**	**264**	P	**P**		22 03 19.3	+0.5
	comp=Z,0.5nm,0.4s,baz=89,slow=16,SNR=2.4							
	comp=Z,0.5nm,0.4s							
KIWB	**Kanaga Island**	**40.35**	**42**	P	**P**		22 03 37.7	-2.6
KULM	**Kulim**	**42.71**	**245**	P	**P**		22 03 59.7	+0.2
KULM				IAmb	IAmb		22 04 42.1	
	comp=Z,12nm,1.1s							
TIXI	**Tiksi**	**43.77**	**356**	P	**P**		22 04 06.2	-0.7
TIXI				IAmb	IAmb		22 04 30.4	
	comp=Z,5.2nm,1.2s							
KNRA	**Kununurra**	**44.73**	**194**	P	**P**		22 04 14.8	-0.3
KNRA				IAmb	IAmb		22 04 36.4	
	comp=Z,17nm,1.2s							
ZALV	**Zalesovo Beam**	**46.58**	**319**	P	**P**		22 04 28.4	-0.4
	comp=Z,0.6nm,0.4s,baz=116,slow=6.7,SNR=2.5							
	comp=Z,0.6nm,0.4s							
MK31	**Makanchi Array**	**47.35**	**309**	P	**P**		22 04 34.6	-0.2
MKAR	**Makanchi Array**	**47.35**	**309**	P	**P**		22 04 34.7	-0.2
	comp=Z,1.1nm,0.7s,baz=90,slow=11,SNR=14							
	comp=Z,1.1nm,0.7s							
MAKZ	**Makanchi**	**47.56**	**309**	P	**P**		22 04 36.2	-0.2
MAKZ				IAmb	IAmb		22 04 55.7	
	comp=Z,3.9nm,1.3s							
FITZ	**Fitzroy Crossi**	**47.79**	**197**	P	**P**		22 04 38.6	+0.2
FITZ				IAmb	IAmb		22 05 04.5	
	comp=Z,7.3nm,1.4s							
WB0	**Warramunga Arr**	**47.93**	**185**	P	**P**		22 04 39.2	-0.3
WB0				IAmb	IAmb		22 04 43.4	
	comp=Z,8.8nm,1.4s							
WB2	**Warramunga Arr**	**48.11**	**186**	P	**P**		22 04 39.9	-0.8
WB2				IAmb	IAmb		22 04 41.1	
	comp=Z,11nm,1.4s							
WR0	**Warramunga Arr**	**48.11**	**185**	P	**P**		22 04 40.3	-0.5
WR0				IAmb	IAmb		22 05 22.5	
	comp=Z,13nm,1.5s							
WRA	**Warramunga Arr**	**48.11**	**186**	P	**P**		22 04 40.0	-0.8
	comp=Z,0.3nm,0.3s,baz=359,slow=7.5,SNR=11							
	comp=Z,0.3nm,0.3s							
KURK	**Kurchatov**	**49.96**	**314**	P	**P**		22 04 53.6	-0.5
KURK				IAmb	IAmb		22 04 55.1	
	comp=Z,8.7nm,1.4s							
NRIK	**Noril'sk**	**50.45**	**339**	P	**P**		22 04 57.1	-0.3
	comp=Z,3.5nm,0.5s,baz=113,slow=9.5,SNR=5.9							
	comp=Z,3.5nm,0.5s							
NRIK	**Noril'sk**	**50.45**	**339**	P	**P**		22 04 56.8	-0.6
NRIK				IAmb	IAmb		22 04 57.5	
	comp=Z,3.9nm,0.6s							
SDPT	**Sand Point**	**50.78**	**40**	P	**P**		22 04 58.5	-1.6
CNBA	**Chernabura Isl**	**51.24**	**41**	P	**P**		22 05 00.9	-2.5
ASAR	**Alice Springs**	**51.84**	**186**	P	**P**		22 05 08.0	-0.2
	comp=Z,0.1nm,0.3s,baz=1.7,slow=7.9,SNR=1.7							
	comp=Z,0.1nm,0.3s							
MBWA	**Marble Bar**	**52.44**	**203**	P	**P**		22 05 12.0	-0.5
MBWA				IAmb	IAmb		22 05 29.5	
	comp=Z,31nm,1.4s							
PSA00	**Pilbara Seismi**	**52.79**	**202**	P	**P**		22 05 14.3	-0.7
PSA00				IAmb	IAmb		22 05 32.3	
	comp=Z,24nm,1.4s							
O18K	**Koktuh Hills**	**54.05**	**35**	P	**P**		22 05 25.1	+1.6
Q19K	**Cape Douglas,**	**54.78**	**36**	P	**P**		22 05 27.6	-1.1
Q19K				IAmb	IAmb		22 05 38.3	
	comp=Z,37nm,1.5s							
J20K	**Nowinta River**	**55.01**	**30**	P	**P**		22 05 31.7	+1.5
BRVK	**Borovoye**	**55.15**	**317**	P	**P**		22 05 31.2	-0.1
BRVK				IAmb	IAmb		22 05 31.9	
	comp=Z,6.9nm,0.9s							
KDAK	**Kodiak Island**	**55.30**	**37**	P	**P**		22 05 32.3	0.0
KDAK				IAmb	IAmb		22 06 08.8	
	comp=Z,24nm,1.4s							
IMAR	**Indian Mountai**	**55.41**	**27**	P	**P**		22 05 33.6	+0.7
H21K	**Melozitna Rive**	**55.75**	**28**	P	**P**		22 05 36.2	+0.8
KK31	**Karatay Array**	**55.89**	**305**	P	**P**		22 05 36.7	0.0
KK31				IAmb	IAmb		22 05 37.4	
	comp=Z,2.5nm,0.7s							
KKAR	**Karatay Array**	**55.89**	**305**	P	**P**		22 05 36.7	-0.1
KKAR	**Karatay Array**	**55.89**	**305**	P	**P**		22 05 36.6	-0.1
SKT	**Skwentna**	**55.99**	**32**	P	**P**		22 05 37.3	+0.2
CNPM	**China Poot**	**56.04**	**35**	P	**P**		22 05 37.0	-0.4
CNPM				IAmb	IAmb		22 05 39.3	
	comp=Z,9.7nm,1.1s							
TRF	**Thorofare Moun**	**56.65**	**31**	P	**P**		22 05 41.6	-0.1
TRF				IAmb	IAmb		22 06 12.4	
	comp=Z,6.8nm,1.5s							
GAR	**Garm**	**56.74**	**300**	P	**P**		22 05 42.6	-0.2
GAR				IAmb	IAmb		22 06 24.4	
	comp=Z,3.8nm,0.9s							
I23K	**Minto, Yukon-K**	**57.15**	**29**	P	**P**		22 05 43.4	-1.5
MDM	**Murphy Dome**	**57.61**	**29**	P	**P**		22 05 48.9	+0.7
CHGR	**Chuyangaron**	**57.70**	**300**	P	**P**		22 05 49.3	-0.1
CHGR				IAmb	IAmb		22 05 49.8	
	comp=Z,5.8nm,0.7s							
H24K	**Noodor Dome**	**57.80**	**28**	P	**P**		22 05 49.5	0.0
IL31		**58.18**	**29**	P	**P**		22 05 51.0	-0.9
ILAR	**Eielson Array**	**58.18**	**29**	P	**P**		22 05 51.4	-0.7
	comp=Z,0.3nm,0.6s,baz=244,slow=6.0,SNR=6.2							
	comp=Z,0.3nm,0.6s							
BMAR	**Burnt Mountain**	**59.15**	**26**	P	**P**		22 06 00.1	+1.5
DOT	**Dot Lake**	**59.43**	**30**	P	**P**		22 06 00.5	0.0
SCRK	**Sand Creek**	**59.45**	**30**	P	**P**		22 06 00.6	-0.1
J26L	**Joseph Creek**	**59.62**	**29**	P	**P**		22 06 01.3	-0.5
M27K	**Edge Creek, AK**	**60.51**	**32**	P	**P**		22 06 07.9	0.0
EGAK	**Eagle**	**60.64**	**29**	P	**P**		22 06 08.7	+0.2
ARU	**Arti**	**61.60**	**322**	P	**P**		22 06 14.2	-0.8
ARU				IAmb	IAmb		22 06 14.9	
	comp=Z,4.4nm,1.0s							
ABKAR	**Akbulak array**	**62.06**	**313**	P	**P**		22 06 17.5	-0.5
ABKAR				IAmb	IAmb		22 06 18.0	
	comp=Z,3.3nm,0.6s							
ABKAR	**Akbulak array**	**62.06**	**313**	P	**P**		22 06 17.6	-0.5
LHI	**Lord Howe Isla**	**62.54**	**160**	P	**P**		22 06 21.4	+0.1
C36M	**Paulatuk**	**66.36**	**23**	P	**P**		22 06 44.3	-0.7
KEV	**Kevo**	**70.85**	**340**	P	**P**		22 07 11.8	-0.4
KEV				IAmb	IAmb		22 07 49.5	
	comp=Z,7.7nm,1.3s							
ARCES	**ARCESS Array B**	**71.41**	**340**	P	**P**		22 07 15.3	-0.3
	comp=Z,1.4nm,0.4s,baz=67,slow=8.1,SNR=29							
	comp=Z,1.4nm,0.4s							
ARCES	**ARCESS Array B**	**71.41**	**340**	P	**P**		22 07 15.4	-0.2
ARCES				IAmb	IAmb		22 07 47.8	
	comp=Z,6.0nm,1.5s							
OZB	**Mount Ozzard**	**72.81**	**43**	P	**P**		22 07 23.6	-0.6
FIA1	**FINESS Array S**	**75.52**	**333**	P	**P**		22 07 38.4	-0.8
FIA1				IAmb	IAmb		22 07 43.9	
	comp=Z,21nm,1.5s							
FINES	**FINESS Array B**	**75.52**	**333**	P	**P**		22 07 38.2	-0.9
	comp=Z,3.6nm,0.3s,baz=68,slow=4.9,SNR=96							
FINES	**FINESS Array B**	**75.52**	**333**	P	**P**		22 07 38.4	-0.7
WKZ	**Wanaka**	**77.83**	**158**	P	**P**		22 07 51.9	-0.1
SUMG	**Summit**	**79.41**	**359**	P	**P**		22 08 00.6	-0.1
SUMG				IAmb	IAmb		22 08 19.0	
	comp=Z,13nm,1.5s							
AKASG	**Malin Array Be**	**79.83**	**322**	P	**P**		22 08 01.3	-1.4
	comp=Z,0.6nm,0.4s,baz=60,slow=3.0,SNR=5.7							
	comp=Z,0.6nm,0.4s							
NC405	**NORSAR Array S**	**81.14**	**337**	P	**P**		22 08 08.2	-1.2
NC303	**NORSAR Array S**	**81.17**	**337**	P	**P**		22 08 08.2	-1.4
NC303				IAmb	IAmb		22 08 23.1	
	comp=Z,5.1nm,1.2s							
NB201	**NORSAR Array S**	**81.33**	**337**	P	**P**		22 08 09.0	-1.4
NB201				IAmb	IAmb		22 08 15.5	
	comp=Z,14nm,1.4s							
NC204	**NORSAR Array S**	**81.35**	**337**	P	**P**		22 08 09.3	-1.2
NC204				IAmb	IAmb		22 08 10.2	
	comp=Z,5.7nm,1.0s							
NB2	**NORSAR Subarra**	**81.36**	**337**	P	**P**		22 08 08.8	-1.7
	comp=Z,0.8nm,0.5s,baz=44,slow=5.1							
NOA	**NORSAR Array B**	**81.36**	**337**	P	**P**		22 08 08.9	-1.7
	comp=Z,1.0nm,0.6s,baz=46,slow=5.0,SNR=14							
	comp=Z,1.0nm,0.6s							
NBO00	**NORSAR Array S**	**81.52**	**337**	P	**P**		22 08 09.7	-1.6
NBO00				IAmb	IAmb		22 08 13.3	
	comp=Z,20nm,1.4s							
NAO01	**NORSAR Array S**	**81.61**	**337**	P	**P**		22 08 10.0	-1.8
NAO01				IAmb	IAmb		22 08 40.1	
	comp=Z,9.1nm,1.2s							
NVAR	**Mina Array Bea**	**82.19**	**51**	P	**P**		22 08 16.5	+1.0
	comp=Z,0.3nm,0.7s,baz=292,slow=4.8,SNR=1.8							
	comp=Z,0.3nm,0.7s							
BRTR	**Keskin Array B**	**82.93**	**311**	P	**P**		22 08 18.2	-0.9
	comp=Z,0.3nm,0.5s,baz=88,slow=6.9,SNR=2.3							
	comp=Z,0.3nm,0.5s							
BURAR	**Bucovina Array**	**83.74**	**321**	P	**P**		22 08 22.3	-0.6
TCRU	**Three Creeks R**	**86.02**	**48**		pP		22 10 21.2	-2.9
TORD	**Torodi Ar. Bea**	**121.47**	**309**	PKP	**PKPdf**		22 14 42.2	-1.7
	comp=Z,0.2nm,0.4s,baz=61,slow=4.6,SNR=1.4							

IDC ***19*** *22:03:46.0±0.6,55°.12S×30°.57W, h0km, mb4.2/10, mbtmp4.3/11, ML4.0/1, MS3.5/8, Error ellipse: s-maj=20.6km s-min=17.2km az=79.0*

NEIC ***19*** *22:03:48.2±1.7,55°.22S±0°.04×30°.8W±0°.1, h10km±1km, mb4.7/31, Error ellipse: s-maj=15.1km s-min=4.3km az=68.0*

ISC 19 22:03:47.5±0.5,55°.20S±0°.08×30°.82W±0°.07, h10km, n66, σ1§05/58, mb4.7/21, MS3.5/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.41**	**283**			**Pn**	22 04 40.4	-0.3
HOPE					Sn	**Sn**	22 05 19.1	-2.0
ORCD	**Orcadas**	**9.23**	**227**		Pn	**Pn**	22 05 57.8	-2.8
VNA1	**Neumayer--Stat**	**18.39**	**156**	P	P	**P**	22 08 02.3	+0.2
VNA3	**Neumayer Olymp**	**18.51**	**158**	P	P	**P**	22 08 03.6	0.0
VNA2	**Neumayer--Watz**	**18.79**	**156**	P	P	**P**	22 08 06.2	-0.3
	baz=315,slow=13							
PMSA	**Palmer Station**	**18.95**	**226**	P	P	**Pn**	22 08 10.7	+1.7
	0.5nm,0.3s,baz=68,slow=8.6,SNR=2.9							
PMSA					LR	LR	22 14 41.0	
	comp=Z,148nm,19.2s,baz=44,slow=34							
	15nm,0.8s							
PMSA	**Palmer Station**	**18.95**	**226**	P	P	**Pn**	22 08 09.7	+0.7
SNAA	**Sanae**	**20.38**	**155**	P	P	**P**	22 08 23.4	-0.6
SNAA	**Sanae**	**20.38**	**155**	P	P	**P**	22 08 23.6	-0.4
	2.9nm,0.8s,baz=315,slow=14,SNR=16							
	2.9nm,0.8s							
SNAA	**Sanae**	**20.38**	**155**	P	P	**P**	22 08 23.6	-0.4
USHA	**Ushuaia**	**21.40**	**255**	P	P	**P**	22 08 35.6	+0.5
	17nm,0.7s,baz=148,slow=3.0,SNR=2.2							
	17nm,0.7s							
TROLL	**Troll, Antarti**	**21.94**	**153**	P	P	**P**	22 08 39.9	-1.0
MG02	**Cerro Sombrero**	**22.52**	**260**	P	P	**P**	22 08 47.3	+0.2
GO10	**Punta Arenas**	**23.41**	**258**	P	P	**P**	22 08 56.6	+0.3
MG05	**Puerto Natales**	**24.80**	**261**	P	P	**P**	22 09 07.7	-1.6
MG05					IAmb	IAmb	22 09 15.1	
	comp=Z,26nm,1.0s							
GO09	**Cerro Castillo**	**24.88**	**262**	P	P	**P**	22 09 09.3	-0.8
GO09					IAmb	IAmb	22 09 13.0	
	comp=Z,52nm,1.4s							
TRQA	**Tornquist**	**27.09**	**296**	P	P	**P**	22 09 30.6	+0.4
TRQA					IAmb	IAmb	22 09 54.9	
	comp=Z,13nm,1.2s							
PLCA	**Paso Flores**	**29.81**	**282**	LR	LR		22 21 55.7	
	comp=Z,89nm,20.1s,baz=140,slow=36							
CPUP	**Villa Florida**	**34.73**	**315**	P	P	**P**	22 10 37.6	+0.1
	comp=Z,2.9nm,0.7s,baz=153,slow=5.8,SNR=5.9							
CPUP					LR	LR	22 26 16.4	
	comp=Z,49nm,18.2s,baz=135,slow=39							
	comp=Z,2.9nm,0.7s							
CPUP	**Villa Florida**	**34.73**	**315**	P	P	**P**	22 10 37.9	+0.3
CPUP					IAmb	IAmb	22 10 38.4	
	comp=Z,11nm,1.2s							
QSPA	**South Pole Qui**	**35.05**	**180**	P	P	**P**	22 10 41.1	+0.8
	comp=Z,4.9nm,0.9s,baz=197,slow=4.8,SNR=3.1							
	comp=Z,4.9nm,0.9s							
QSPA	**South Pole Qui**	**35.05**	**180**	P	P	**P**	22 10 40.8	+0.5
QSPA					IAmb	IAmb	22 10 48.5	
	comp=Z,10nm,1.1s							
VA06	**Catapilco**	**36.18**	**292**	P	P	**P**	22 10 50.7	+0.7
CO02	**Combarbal**	**37.09**	**294**	P	P	**P**	22 10 57.8	-0.1
CO03	**El Pedregal**	**37.21**	**294**	P	P	**P**	22 10 59.4	+0.5
CO03					IAmb	IAmb	22 11 33.7	
	comp=Z,23nm,1.4s							
CO01	**Juntas del Tor**	**37.59**	**296**	P	P	**P**	22 11 03.8	+1.5
GO04	**Tololo Observa**	**37.80**	**295**	P	P	**P**	22 11 03.4	-0.7
CO06	**Fray Jorge**	**37.84**	**293**	P	P	**P**	22 11 03.4	-0.8
AC05	**El Transito**	**38.60**	**297**	P	P	**P**	22 11 12.2	+1.4
AC05					IAmb	IAmb	22 11 33.8	
	comp=Z,23nm,1.1s							
GO02	**Mina Guanaco**	**41.28**	**301**	P	P	**P**	22 11 34.0	+0.8
GO02					IAmb	IAmb	22 11 58.0	
	comp=Z,24nm,1.1s							
MAW	**Mawson**	**42.04**	**145**	P	P	**P**	22 11 38.7	+0.1
	comp=Z,1.9nm,0.9s,baz=207,slow=9.0,SNR=1.8							
MAW					LR	LR	22 27 43.4	
	comp=Z,70nm,19.1s,baz=282,slow=34							
	comp=Z,1.9nm,0.9s							
LVC	**Limon Verde**	**43.10**	**303**	LR	LR		22 29 22.0	
	comp=Z,29nm,21.1s,baz=148,slow=36							
PB01	**IPOC Station P**	**44.71**	**304**	P	P	**P**	22 12 01.6	+0.8
PB01					IAmb	IAmb	22 12 11.2	
	comp=Z,15nm,1.1s							
PTLB	**Pontes e Lacer**	**45.28**	**320**	P	P	**P**	22 12 05.7	+0.5
PTLB					IAmb	IAmb	22 12 11.2	
	comp=Z,3.9nm,0.9s							
SIV	**San Ignacio**	**45.52**	**317**	LR	LR		22 31 50.0	
	comp=Z,50nm,18.2s,baz=115,slow=37							
GO01	**Chusmiza**	**45.76**	**305**	P	P	**P**	22 12 10.1	+0.5
GO01					IAmb	IAmb	22 12 11.7	
	comp=Z,6.5nm,0.8s							
SBA	**Scott Base**	**46.77**	**185**	P	P	**P**	22 12 18.0	+1.8
PB16	**IPOC Station P**	**47.06**	**306**	P	P	**P**	22 12 19.7	-0.2
PB16					IAmb	IAmb	22 12 51.5	
	comp=Z,12nm,1.4s							
VNDA	**Vanda**	**47.31**	**184**	P	P	**P**	22 12 21.2	+0.7
	comp=Z,1.6nm,0.8s,baz=186,slow=5.4,SNR=18							
	comp=Z,1.6nm,0.8s							
VNDA	**Vanda**	**47.31**	**184**	P	P	**P**	22 12 22.8	+2.3
BOSA	**Boshof**	**47.81**	**80**	P	P	**P**	22 12 23.6	-1.5
	comp=Z,1.8nm,0.7s,baz=191,slow=10.0,SNR=4.3							
	comp=Z,1.8nm,0.7s							
BOSA	**Boshof**	**47.81**	**80**	P	P	**P**	22 12 24.8	-0.4
BOSA					IAmb	IAmb	22 12 47.9	
	comp=Z,17nm,1.5s							
LPAZ	**La Paz**	**48.22**	**309**	P	P	**P**	22 12 29.6	+0.7
	comp=Z,2.9nm,0.5s,baz=167,slow=7.6,SNR=13							
	comp=Z,2.9nm,0.5s							
LPAZ	**La Paz**	**48.22**	**309**	P	P	**P**	22 12 29.5	+0.5
LPAZ					IAmb	IAmb	22 12 56.1	
	comp=Z,6.4nm,0.9s							
H10N1	**ASCENSION HYDR**	**48.99**	**22**	T	T		23 05 33.9	
	baz=192,slow=75,SNR=14							
H10N3	**ASCENSION HYDR**	**48.99**	**22**	T	T		23 05 41.4	
	baz=192,slow=75,SNR=20							
H10N2	**ASCENSION HYDR**	**49.01**	**22**	T	T		23 05 36.8	
	baz=192,slow=75,SNR=19							
LBTB	**Lobatse**	**50.78**	**77**	P	P	**P**	22 12 48.5	+0.6
LBTB					IAmb	IAmb	22 13 04.3	
	comp=Z,11nm,1.1s							
TSUM	**Tsumeb**	**51.13**	**65**	LR	LR		22 31 54.0	
	comp=Z,50nm,18.8s,baz=149,slow=33							
POGA	**Pongola**	**52.44**	**85**	P	P	**P**	22 13 00.0	-0.1
POGA					IAmb	IAmb	22 13 09.4	
	comp=Z,16nm,1.2s							
SAML	**Samuel**	**52.77**	**318**	P	P	**P**	22 13 04.3	+1.7
LSZ	**Lusaka**	**60.04**	**73**	LR	LR		22 36 48.2	
	comp=Z,63nm,19.4s,baz=174,slow=33							
DBIC	**Dimbokro**	**65.33**	**29**	P	P	**P**	22 14 29.4	-0.3
	comp=Z,5.5nm,0.9s,baz=244,slow=3.5,SNR=4.1							
	comp=

comp=Z,0.6nm,0.6s,baz=224,slow=7.8,SNR=4.0
ARCES ARCESS Array B 130.93 23 PKP **PKPdf** **22 28 55.2 -0.4**
comp=Z,0.5nm,0.6s,baz=222,slow=1.2,SNR=4.0
ILAR Eielson Array 148.00 313 PKPbc **PKPbc** **22 29 29.5 -0.3**
comp=Z,1.8nm,0.7s,baz=92,slow=1.1,SNR=9.6
SONM Songino Array 152.75 88 PKPbc **PKPbc** **22 29 41.1 -0.8**
comp=Z,0.5nm,0.6s,baz=218,slow=4.7,SNR=2.6
SONM PKPab **PKPab** **22 29 52.0 -0.8**
comp=Z,1.0nm,0.6s,baz=224,slow=3.0,SNR=7.3

*IDC **19** 22:32:08.7±1.7,38°.29N×70°.71E, h0km, mb3.6/6, mbtmp3.6/12, ML3.0/6, Error ellipse: s-maj=28.5km s-min=16.0km az=149.0*
*NNC **19** 22:32:10.0±2.5,38°.37N×70°.23E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=18.6km s-min=11.4km az=177.0*
*NEIC **19** 22:32:11.0±2.1,38°.43N±0°.04×70°.58E±0°.03, h10km±1km, mb4.2/8, Error ellipse: s-maj=6.7km s-min=4.1km az=10.0*
ISC 19 22:32:11.0±0.5, 38°.55N±0°.04×70°.61E±0°.03, h10km, n61, σ2s30/64, mb3.7/9, 8C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.51**	**333**	Pg	**Pg**	**22 32 20.1**	**-0.8**
GAR				Sg	**Sg**	**22 32 30.1**	**+2.5**
CHGR	**Chuyangaron**	**1.15**	**276**	Pg	**Pb**	**22 32 29.6**	**-3.4**
CHGR					**Sb**	**22 32 48.2**	**+0.2**
TAS	**Tashkent**	**2.95**	**340**	Pg	**Pg**	**22 33 10.4**	**+2.9**
KBL	**Kabul**	**4.20**	**198**	Pn	**Pn**	**22 33 13.1**	**-2.1**
AML	**Almayashu**	**4.28**	**32**	P	**Pb**	**22 33 24.0**	**-2.6**
	SNR=25						
KSH	**Kashi**	**4.28**	**75**	Pn	**Pn**	**22 33 16.3**	**-0.1**
KSH				Sn	**Sn**	**22 34 07.8**	**+1.3**
KSH				smax	smax		
	comp=N,100nm,0.8s						
KSH				smax	smax		
	comp=E,83nm,1.0s						
KK31	**Karatay Array**	**4.55**	**359**	Pn	**Pn**	**22 33 22.3**	**+2.3**
KK31	**Karatay Array**	**4.55**	**359**	⇓Pn	**Pn**	**22 33 22.4**	**+2.5**
	comp=E,4.1nm,0.3s,baz=178,slow=13,SNR=145						
KK31				⇑Sn	**Sn**	**22 34 19.8**	**+6.9**
	comp=E,12nm,0.6s						
KK31				⇑Lg	Lg	22 34 37.2	
	comp=E,28nm,0.6s,baz=181,slow=29						
KKAR	**Karatay Array**	**4.55**	**359**	Pn	**Pn**	**22 33 22.1**	**+2.2**
KKAR	**Karatay Array**	**4.55**	**359**		**Pn**	**22 33 22.0**	**+2.0**
EKS2	**Erkin-Say**	**4.76**	**29**	P	**Pb**	**22 33 32.4**	**-2.2**
	SNR=17						
AAK	**Ala-Archa**	**5.04**	**35**	P	**Pn**	**22 33 31.4**	**+4.6**
	SNR=9.6						
AAK	**Ala-Archa**	**5.04**	**35**	Pn	**Pn**	**22 33 30.1**	**+3.3**
KBK	**Karagaybulak**	**5.26**	**37**	P	Pb	22 33 38.5	-4.7
	SNR=17						
NIL	**Nilore**	**5.34**	**156**	Pg	**Pb**	**22 33 46.2**	**+1.8**
CHMS	**Chumysh**	**5.44**	**34**	P	Pn	22 33 39.7	+7.5
	SNR=14						
CHMS	**Chumysh**	**5.44**	**34**	⇑Pn	Pn	22 33 38.6	+6.4
	comp=E,7.6nm,0.5s						
CHMS				⇑Sn	Sn	22 34 46.1	+11
	comp=E,28nm,1.2s						
CHMS				⇑Lg	Lg	22 35 13.3	
	comp=E,31nm,1.1s						
USP	**Ospenovka**	**5.55**	**31**	P	Pn	22 33 40.2	+6.4
	SNR=17						
TKM2	**Tokmak 2**	**5.78**	**39**	P	Pn	22 33 45.0	+8.0
	SNR=17						
TKM2	**Tokmak 2**	**5.78**	**39**	⇑Pn	**Pn**	**22 33 40.6**	**+3.6**
	comp=E,7.7nm,0.6s						
TKM2				⇓Sn	**Sb**	**22 34 56.6**	**-4.7**
	comp=E,5.0nm,0.5s						
TKM2				⇑Lg	Lg	22 35 23.3	
	comp=E,12nm,0.8s						
KST	**Kastek**	**6.05**	**40**	Pg	Pg	22 34 03.9	-3.0
	comp=E,3.0nm,0.3s						
KST				Lg	Lg	22 35 27.7	
	comp=E,16nm,1.1s						
DGS	**Degeres**	**6.10**	**38**	Pg	**Pg**	**22 34 06.4**	**-1.4**
	comp=E,6.0nm,0.6s						
DGS				Lg	Lg	22 35 32.1	
	comp=E,13nm,0.8s						
KRBS	**Karabastau**	**6.40**	**35**	Pg	**Pg**	**22 34 14.0**	**+0.4**
	comp=E,4.6nm,0.4s						
KRBS				Lg	Lg	22 35 44.2	
	comp=E,6.9nm,1.1s						
MDOK	**Medeo**	**6.71**	**45**	Pg	**Pg**	**22 34 17.5**	**-1.9**
	comp=E,3.5nm,0.4s						
MDOK				Lg	Lg	22 35 50.6	
	comp=E,8.9nm,1.1s						
KOTS	**Kotyrbulak**	**6.79**	**44**	Pg	**Pg**	**22 34 19.0**	**-2.0**
	comp=E,1.2nm,0.9s						
KOTS				Lg	Lg	22 35 53.0	
	comp=E,15nm,0.5s						
KTBS	**Karatobe**	**6.89**	**40**	Pg	Pg	22 34 20.2	-2.9
	comp=E,4.3nm,0.9s						
KTBS				Lg	Lg	22 35 54.9	
	comp=E,5.6nm,0.5s						
BTLS	**Baital**	**6.97**	**20**	Pg	**Pg**	**22 34 22.7**	**-1.8**
	comp=E,3.5nm,0.7s						
BTLS				Lg	Lg	22 35 59.4	
	comp=E,16nm,0.7s						
THN	**Thein Dam**	**7.39**	**144**	*eP*	**Pn**	**22 34 02.5**	**+3.6**
THN				*eS*	Sn	22 35 30.0	+7.3
HRA	**Herat**	**7.92**	**241**	Pn	**Pn**	**22 34 05.0**	**-1.4**
SMLA	**Simla**	**9.15**	**142**	*eP*	**Pn**	**22 34 24.2**	**+1.1**
SMLA				*eS*	**Sn**	**22 36 04.9**	**-1.2**
GEYT	**Alibeck**	**9.85**	**270**	Pn	**Pn**	**22 34 31.9**	**-0.8**
	comp=E,0.4nm,0.3s,baz=97,slow=12,SNR=2.3						
GEYT				Sn	**Sn**	**22 36 16.4**	**-7.0**
	comp=E,0.5nm,0.3s,baz=44,slow=39,SNR=1.5						
	comp=E,0.6nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**9.85**	**270**	Pn	**Pn**	**22 34 31.5**	**-1.2**
MAKZ	**Makanchi**	**11.74**	**42**	Pn	**Pn**	**22 34 59.7**	**+1.2**
MK31	**Makanchi Array**	**11.89**	**42**	Pn	**Pn**	**22 35 01.1**	**+0.5**
MKAR	**Makanchi Array**	**11.89**	**42**	Pn	**Pn**	**22 35 03.0**	**+2.4**
	comp=E,0.2nm,0.3s,baz=230,slow=12,SNR=11						
MKAR				Lg	Lg	22 38 28.5	
	baz=254,slow=32						
	comp=E,1.8nm,0.8s						
MKAR	**Makanchi Array**	**11.89**	**42**	Pn	**Pn**	**22 35 00.6**	**-0.1**
AB31	**Akbulak array**	**13.16**	**328**	Pn	**Pn**	**22 35 17.1**	**-0.9**
	comp=E,2.2nm,0.5s,baz=143,slow=12,SNR=55						
AB31				⇑Sn	**Sn**	**22 37 45.3**	**+1.0**
	comp=E,1.7nm,0.5s,baz=159,slow=20,SNR=5.8						
ABKAR	**Akbulak array**	**13.16**	**328**	Pn	**Pn**	**22 35 17.7**	**-0.2**
KURBB	**Kurchatov Arra**	**13.31**	**22**	Pn	**Pn**	**22 35 18.8**	**-1.1**
	baz=216,slow=12,SNR=3.0						
KURBB				Lg	Lg	22 39 15.8	
	baz=206,slow=30,SNR=3.9						
	comp=E,0.3nm,0.6s						
WMQ	**Urumqi**	**13.89**	**62**	*eP*	**Pn**	**22 35 31.8**	**+3.8**
BRVK	**Borovoye**	**14.51**	**359**		**Pn**	**22 35 37.6**	**+1.3**
AKTO	**Aktyubinsk**	**14.87**	**327**	Pn	**Pn**	**22 35 41.8**	**+0.5**
	comp=E,0.4nm,0.3s,baz=133,slow=8.0,SNR=6.0						
AKTO				Sn	**Sn**	**22 38 22.6**	**-3.3**
	comp=E,0.1nm,0.3s,baz=139,slow=20,SNR=2.5						
	comp=E,0.8nm,0.3s						
AKTO	**Aktyubinsk**	**14.87**	**327**	⇓Pn	**Pn**	**22 35 41.0**	**-0.3**
	comp=E,2.7nm,0.8s						
AKTO				⇓Sn	**Sn**	**22 38 26.0**	**0.0**
	comp=E,3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**18.21**	**28**	P	**Pn**	**22 36 23.6**	**-0.1**
	comp=E,0.3nm,0.3s,baz=215,slow=12,SNR=6.3						
	comp=E,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**18.21**	**28**		**Pn**	**22 36 23.3**	**-0.4**
ARU	**Arti**	**19.60**	**340**	P	**Pn**	**22 36 42.1**	**+1.6**
	baz=104,slow=12,SNR=4.1						
	comp=E,2.2nm,0.7s						
ARU	**Arti**	**19.60**	**340**	P	**P**	**22 36 40.2**	**+1.0**
ONI	**Oni**	**20.99**	**290**	P	**P**	**22 36 54.6**	**+0.1**
HYBB	**Hyderabad (bro**	**22.17**	**160**	*eP*	**P**	**22 37 05.1**	**-2.2**
PZH	**PanZhiHua**	**28.73**	**105**	P	**P**	**22 38 08.4**	**-0.3**
PZH				pmax	pmax		
	comp=E,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=E,130nm,6.6s						
FIA1	**FINESS Array S**	**35.62**	**325**	P	**P**	**22 39 10.3**	**+1.8**
FINES	**FINESS Array B**	**35.62**	**325**	P	**P**	**22 39 09.4**	**+0.8**
	comp=Z,2.0nm,1.0s,baz=114,slow=9.2,SNR=5.1						
	comp=Z,2.0nm,1.0s						
KEV	**Kevo**	**38.79**	**337**	P	**P**	**22 39 34.9**	**-0.4**
KEV				IAmb	IAmb	22 39 46.0	
	comp=Z,15nm,1.5s						
VLO	**Vlora**	**39.04**	**289**	P	**P**	**22 39 37.5**	**-0.3**
ARCES	**ARCESS Array B**	**39.14**	**337**	P	**P**	**22 39 38.3**	**0.0**
	comp=Z,0.4nm,0.5s,baz=108,slow=8.0,SNR=7.8						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**39.14**	**337**	P	**P**	**22 39 40.4**	**+2.0**
ARCES				IAmb	IAmb	22 40 19.6	
	comp=Z,6.0nm,1.3s						
HFS	**Hagfors**	**41.28**	**321**	P	**P**	**22 39 57.1**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=112,slow=16,SNR=1.7						
	comp=Z,0.4nm,0.4s						
NC303	**NORSAR Array S**	**42.51**	**322**	P	**P**	**22 40 06.6**	**+0.4**
NC303				IAmb	IAmb	22 40 08.7	
	comp=Z,11nm,1.5s						
NOA	**NORSAR Array B**	**42.57**	**322**	P	**P**	**22 40 07.8**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=94,slow=8.1,SNR=3.3						
	comp=Z,0.5nm,0.9s						
ESDC	**Sonseca Array**	**56.25**	**297**	P	**P**	**22 41 51.9**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=55,slow=7.0,SNR=7.8						
	comp=Z,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.48**	**267**	P	**P**	**22 42 54.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=48,slow=6.1,SNR=5.5						
	comp=Z,0.2nm,0.4s						

*IDC **19** 22:37:39.7±1.2,54°.93S×31°.61W, h0km, mb3.8/4, mbtmp3.8/4, MS3.1/1, Error ellipse: s-maj=56.8km s-min=28.5km az=49.0*
ISC 19 22:37:41.4±1.0, 55°.0S±0°.2×31°.7W±0°.3, h10km, n11, σ0s99/7, mb4.1/3, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**18.74**	**225**	LR	LR	22 48 03.3	
	comp=Z,59nm,20.3s,baz=9.0,slow=33						
SNAA	**Sanae**	**20.82**	**155**	P	**P**	**22 42 23.2**	**+0.5**
	1.9nm,1.0s,baz=314,slow=13,SNR=4.4						
	1.9nm,1.0s						
CPUP	**Villa Florida**	**34.18**	**316**	P	**P**	**22 44 26.7**	**0.0**
	2.6nm,0.9s,baz=154,slow=8.5,SNR=3.3						
	2.6nm,0.9s						
LPAZ	**La Paz**	**47.65**	**310**	P	**P**	**22 46 18.7**	**+0.3**
	0.9nm,0.5s,baz=172,slow=6.3,SNR=4.4						
	0.9nm,0.5s						
H10N3	**ASCENSION HYDR**	**48.97**	**23**	T	T	23 39 40.9	
	baz=192						
H10N1	**ASCENSION HYDR**	**48.97**	**23**	T	T	23 39 48.5	
	baz=192						
H10N2	**ASCENSION HYDR**	**48.98**	**23**	T	T	23 39 46.2	
	baz=192						
TORD	**Torodi Ar. Bea**	**73.49**	**34**	P	**P**	**22 49 14.3**	**+0.4**
	1.0nm,0.9s,baz=203,slow=5.4,SNR=3.6						
	1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**144.23**	**65**	PKP	**PKPab**	**22 57 14.7**	**+0.6**
	1.3nm,0.7s,baz=224,slow=3.4,SNR=5.8						
ILAR	**Eielson Array**	**147.47**	**314**	PKPbc	**PKPbc**	**22 57 23.9**	**-0.2**
	1.2nm,0.7s,baz=124,slow=2.0,SNR=9.2						
SONM	**Songino Array**	**153.26**	**88**	PKPbc	**PKPbc**	**22 57 36.9**	**-1.8**
	0.2nm,0.4s,baz=225,slow=3.9,SNR=1.9						

DNK 19 22:37:42.6±1.6, 81°.49N×17°.59W, h14km±12km, ML2.5, Near north coast of Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**0.17**	**49**	*i* P	Pg	22 37 46.3	-0.5
NOR				*i* S	Sg	22 37 50.0	+0.4
DAG	**Danmarks Havn**	**4.75**	**183**	*e*	Pn	22 38 51.7	-1.9
	baz=9.5,slow=16						
DAG				*i* P	Pn	22 38 52.7	-0.8
DAG				*i* S	Sn	22 39 45.3	-3.0
DAG				IAML		22 40 07.6	
	comp=Z,39nm,0.3s						
KBS	**Kingsbay**	**5.59**	**102**	*i* P	Pn	22 39 04.3	-0.8
DBG	**Daneborg**	**7.24**	**186**	*i* P	Pn	22 39 25.8	-1.9
DBG				*i* S	Sn	22 40 43.8	-5.8
DBG				IAML		22 40 48.0	
	comp=Z,20nm,0.4s						
SUMG	**Summit**	**9.99**	**218**	*i* P	Pn	22 40 02.5	-3.2
SUMG				*i* S	Sn	22 41 49.6	-8.0
SUMG				IAML		22 42 12.9	
	comp=Z,6.0nm,0.3s						
TULEG	**Thule**	**10.53**	**270**	*i* P	Pn	22 40 08.7	-4.0
TULEG				*i* S	Sn	22 41 58.2	-12
TULEG				IAML		22 42 03.9	
	comp=Z,7.2nm,0.3s						
NB2	**NORSAR Subarra**	**21.97**	**141**	P	P	22 42 35.0	-0.6
	comp=Z,1.3nm,0.9s,baz=349,slow=11						

*IDC **19** 22:56:57.9±0.5, 55°.12S×30°.75W, h0km, mb4.5/11, mbtmp4.5/12, ML4.1/1, MS3.8/32, Error ellipse: s-maj=19.0km s-min=15.4km az=32.0*
*NEIC **19** 22:56:59.5±0.8, 55°.22S±0°.08×31°.0W±0°.1, h10km±1km, mb5.0/59, Error ellipse: s-maj=14.5km s-min=14.0km az=76.0*
*GCMT **19** 22:57:05.5±0.4, 55°.15S±0°.03×31°.13W±0°.06, h29km, MW5.1/75, Moment Tensor Solution. s17,c18; s75,c90; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 5.54±.39; Mθθ -4.05±.26; Mφφ -1.50±.22; Mrθ -0.60±.32; Mrφ 1.50±.12; Mθφ 0.48±.27; Best double couple: M0 5.19800×10^16 NP1: φs 297.00000°, δ49.00000°, λ92.00000°. NP2: φs 113.00000°, δ41.00000°, λ88.00000°. Principal axes: T 5.5980, Plg86.0000°, Azm227.0000°; N -0.8110, Plg2.0000°, Azm115.0000°; P -4.7970, Plg4.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 22:56:59.1±0.3, 55°.20S±0°.06×31°.00W±0°.07, h10km, n152, σ1s00/124, mb4.9/36, MS3.8/31, 1D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.31**	**284**	Pn	**Pn**	**22 57 50.1**	**-0.8**
ORCD	**Orcadas**	**9.16**	**227**	Pn	**Pn**	**22 59 06.9**	**-4.2**
EFI	**East Falkland**	**16.46**	**271**	P	**P**	**23 00 52.8**	**+0.1**
EFI				IAmb	IAmb	23 00 56.0	
	comp=Z,82nm,1.0s						
VNA1	**Neumayer--Stat**	**18.43**	**156**	P	**Pn**	**23 01 16.6**	**+2.4**
VNA3	**Neumayer Olymp**	**18.55**	**158**	P	**Pn**	**23 01 16.9**	**+1.1**
VNA2	**Neumayer--Watz**	**18.83**	**156**	P	**Pn**	**23 01 20.5**	**+1.4**
	baz=314,slow=12						
PMSA	**Palmer Station**	**18.87**	**226**	P	**Pn**	**23 01 22.1**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=75,slow=7.3,SNR=5.3						
PMSA				LR	LR	23 07 50.2	
	comp=Z,324nm,19.5s,baz=60,slow=34						
	comp=Z,18nm,0.7s						
PMSA	**Palmer Station**	**18.87**	**226**	P	**P**	**23 01 17.6**	**-1.5**
PMSA	**Palmer Station**	**18.87**	**226**	*eP*	Pn	23 01 27.2	+7.5
SNAA	**Sanae**	**20.42**	**155**	P	**P**	**23 01 36.5**	**+0.4**
SNAA	**Sanae**	**20.42**	**155**	P	**P**	**23 01 36.5**	**+0.4**
	comp=Z,28nm,1.0s,baz=306,slow=8.9,SNR=35						
	comp=Z,28nm,1.0s						
SNAA	**Sanae**	**20.42**	**155**	P	**P**	**23 01 36.6**	**+0.4**
SMAI	**San Martin Ant**	**21.06**	**218**		**P**	**23 01 45.7**	**+2.8**
USHA	**Ushuaia**	**21.30**	**255**	P	**P**	**23 01 46.9**	**+1.2**
	comp=Z,35nm,1.0s,baz=99,slow=9.4,SNR=3.7						
	comp=Z,35nm,1.0s						
TROLL	**Troll, Antarti**	**21.99**	**153**	P	**P**	**23 01 53.5**	**+0.5**
MG02	**Cerro Sombrero**	**22.41**	**260**	P	**P**	**23 01 57.8**	**+0.2**
BELA	**Belgrano 2**	**22.81**	**182**	P	**P**	**23 02 01.2**	**-0.4**
MG05	**Puerto Natales**	**24.70**	**261**	P	**P**	**23 02 19.8**	**-0.2**
GO09	**Cerro Castillo**	**24.78**	**262**	P	**P**	**23 02 19.8**	**-1.0**
GO09				IAmb	IAmb	23 02 38.1	
	comp=Z,30nm,1.0s						
TRQA	**Tornquist**	**27.00**	**297**	P	**P**	**23 02 40.9**	**-0.1**
PLTB	**Pedras Altas**	**28.35**	**316**	P	**P**	**23 02 52.9**	**-0.3**
PLTB				IAmb	IAmb	23 03 40.3	
	comp=Z,49nm,1.9s						
CPSB	**Cacapava Do Su**	**29.49**	**318**	*eP*	**P**	**23 03 03.7**	**+0.5**
PLCA	**Paso Flores**	**29.71**	**283**	P	**P**	**23 03 08.4**	**+3.1**
	comp=Z,1.6nm,0.8s,baz=100,slow=3.3,SNR=5.9						
PLCA				LR	LR	23 14 50.7	
	comp=Z,222nm,20.9s,baz=138,slow=36						
	comp=Z,1.6nm,0.8s						
PLCA	**Paso Flores**	**29.71**	**283**	P	**P**	**23 03 06.8**	**+1.6**
RODS	**Rosario do Sul**	**30.23**	**315**	*eP*	**P**	**23 03 10.5**	**+0.6**
ITQB	**Itaqui**	**31.41**	**314**	P	**P**	**23 03 19.8**	**-0.4**
ITQB				IAmb	IAmb	23 03 28.2	
	comp=Z,21nm,1.2s						
ITQB	**Itaqui**	**31.41**	**314**	*eP*	**P**	**23 03 19.9**	**-0.3**
ITAB	**Concordia**	**31.88**	**323**	P	**P**	**23 03 24.4**	**+0.1**
ITAB				IAmb	IAmb	23 04 18.3	
	comp=Z,41nm,1.3s						
PTGB	**Pitanga**	**34.18**	**324**	*eP*	**P**	**23 03 44.6**	**0.0**
CPUP	**Villa Florida**	**34.65**	**316**	P	**P**	**23 03 48.4**	**-0.2**
	comp=Z,10nm,0.8s,baz=149,slow=7.8,SNR=20						
CPUP				LR	LR	23 15 43.1	
	comp=Z,69nm,21.4s,baz=158,slow=32						
	comp=Z,10nm,0.8s						
CPUP	**Villa Florida**	**34.65**	**316**	P	**P**	**23 03 48.3**	**-0.3**
CPUP				IAmb	IAmb	23 03 49.5	
	comp=Z,20nm,1.1s						
CPUP	**Villa Florida**	**34.65**	**316**	*eP*	**P**	**23 03 48.7**	**+0.1**
MT09	**Talagante**	**34.99**	**291**	P	**P**	**23 03 51.1**	**-0.5**
MT09				IAmb	IAmb	23 04 15.9	
	comp=Z,47nm,1.6s						
QSPA	**South Pole Qui**	**35.05**	**180**	LR	LR	23 17 49.1	
	comp=Z,206nm,19.7s,baz=192,slow=36						
QSPA	**South Pole Qui**	**35.05**	**180**	P	**P**	**23 03 52.0**	**+0.2**
QSPA				IAmb	IAmb	23 04 02.5	
	comp=Z,17nm,1.0s						
MT01	**Popeta**	**35.06**	**291**	P	**P**	**23 03 52.8**	**+0.8**
MT01				IAmb	IAmb	23 04 43.1	
	comp=Z,26nm,1.4s						
PEL	**Peldehue**	**35.31**	**292**	P	**P**	**23 03 53.9**	**-0.3**
PEL				IAmb	IAmb	23 04 01.6	
	comp=Z,19nm,0.9s						
MT02	**Curacav**	**35.46**	**291**	P	**P**	**23 03 55.6**	**+0.1**
MT02				IAmb	IAmb	23 05 09.4	
	comp=Z,20nm,1.1s						
VA03	**San Esteban**	**35.53**	**293**	P	**P**	**23 03 56.1**	**-0.1**
VA03				IAmb	IAmb	23 04 13.7	
	comp=Z,19nm,0.8s						
BSCB	**Bom Sucesso**	**35.69**	**338**	*eP*	**P**	**23 03 58.8**	**+1.2**
VA06	**Catapilco**	**36.09**	**292**	P	**P**	**23 04 00.8**	**0.0**
RIB01	**Linhares ES**	**36.53**	**345**	*eP*	**P**	**23 04 05.2**	**+0.5**
CO02	**Combarbal**	**36.99**	**294**	P	**P**	**23 04 09.2**	**+0.5**
CO03	**El Pedregal**	**37.12**	**294**	P	**P**	**23 04 10.2**	**+0.4**
CO03				IAmb	IAmb	23 04 42.8	
	comp=Z,51nm,1.6s						
CO01	**Juntas del Tor**	**37.49**	**296**	P	**P**	**23 04 13.2**	**+0.1**
GO04	**Tololo Observa**	**37.70**	**295**	P	**P**	**23 04 13.8**	**-1.1**
AC05	**El Transito**	**38.51**	**297**	P	**P**	**23 04 21.4**	**-0.1**
AC05				IAmb	IAmb	23 04 23.2	
	comp=Z,60nm,1.5s						
LCO	**Las Campanas**	**38.58**	**296**	P	**P**	**23 04 22.2**	**-0.2**
LCO				IAmb	IAmb	23 04 49.3	
	comp=Z,57nm,1.6s						
AQDB	**Aquidauana**	**39.35**	**322**	*eP*	**P**	**23 04 27.9**	**-0.6**
AC04	**Llanos de Chal**	**39.43**	**297**	P	**P**	**23 04 29.1**	**0.0**
GO02	**Mina Guanaco**	**41.19**	**301**	P	**P**	**23 04 44.9**	**+0.8**
BDFB	**Brasilia**	**41.61**	**335**	P	**P**	**23 04 48.2**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=164,slow=7.4,SNR=3.4						
BDFB				LR	LR	23 20 31.1	
	comp=Z,75nm,21.7s,baz=58,slow=34						
	comp=Z,2.5nm,0.8s						
MAW	**Mawson**	**42.10**	**145**	P	**P**	**23 04 50.9**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=245,slow=9.4,SNR=11						
MAW				LR	LR	23 20 28.8	
	comp=Z,93nm,19.6s,baz=230,slow=34						
	comp=Z,3.2nm,0.7s						
MAW	**Mawson**	**42.10**	**145**	P	**P**	**23 04 51.1**	**+0.4**
SUR	**Sutherland**	**42.56**	**80**	P	**P**	**23 04 55.0**	**-0.1**
	comp=Z,9.2nm,0.8s,baz=255,slow=10,SNR=2.9						
	comp=Z,9.2nm,0.8s						
SUR	**Sutherland**	**42.56**	**80**	P	**P**	**23 04 55.1**	**-0.1**
LVC	**Limon Verde**	**43.01**	**304**	LR	LR	23 22 42.4	
	comp=Z,58nm,21.2s,baz=190,slow=36						
LVC	**Limon Verde**	**43.01**	**304**	P	**P**	**23 04 58.9**	**-0.2**
LVC				IAmb	IAmb	23 05 28.5	
	comp=Z,78nm,2.0s						
LVC	**Limon Verde**	**43.01**	**304**	*eP*	**P**	**23 05 00.1**	**+1.1**
SALV	**Santo Antonio**	**43.59**	**324**	*eP*	**P**	**23 05 03.5**	**+0.2**
PB04	**IPOC Station P**	**43.84**	**302**	P	**P**	**23 05 03.2**	**-2.4**
PB09	**IPOC Station P**	**43.87**	**304**	P	**P**	**23 05 06.4**	**+0.7**
PB02	**IPOC Station P**	**44.59**	**303**	P	**P**	**23 05 10.8**	**-0.6**
PB01	**IPOC Station P**	**44.63**	**304**	P	**P**	**23 05 11.8**	**+0.1**
PTLB	**Pontes e Lacer**	**45.22**	**320**	P	**P**	**23 05 16.3**	**-0.1**
PTLB				IAmb	IAmb	23 05 17.1	
	comp=Z,14nm,0.7s						
PTLB	**Pontes e Lacer**	**45.22**	**320**	*eP*	**P**	**23 05 16.2**	**-0.1**
SIV	**San Ignacio**	**45.45**	**317**	LR	LR	23 24 20.3	
	comp=Z,65nm,19.7s,baz=311,slow=36						
GO01	**Chusmiza**	**45.67**	**305**	P	**P**	**23 05 20.3**	**-0.2**
GO01				IAmb	IAmb	23 05 27.2	
	comp=Z,12nm,0.8s						
SNDB	**Serra Nova Dou**	**45.97**	**332**	*eP*	**P**	**23 05 23.1**	**+0.8**
PB16	**IPOC Station P**	**46.97**	**306**	P	**P**	**23 05 31.1**	**+0.2**
PB16				IAmb	IAmb	23 07 08.5	
	comp=Z,44nm,2.0s						
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**23 05 32.9**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=184,slow=6.2,SNR=12						
	comp=Z,1.5nm,0.8s						
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**23 05 32.8**	**+0.7**
VNDA				IAmb	IAmb	23 05 39.7	
	comp=Z,15nm,1.7s						
VILB	**Vilhena**	**47.90**	**320**	P	**P**	**23 05 37.2**	**-0.2**
VILB				IAmb	IAmb	23 05 43.4	
	comp=Z,16nm,0.9s						
VILB	**Vilhena**	**47.90**	**320**	*eP*	**P**	**23 05 37.8**	**+0.4**
BOSA	**Boshof**	**47.91**	**80**	P	**P**	**23 05 37.4**	**-0.2

OTAV	**Otavalo**	**67.40**	**307**	P	**P**	**23 07 55.0**	**-0.2**
OTAV				IAmb	IAmb	23 08 01.6	
	comp=Z,8.9nm,1.1s						
OTAV	**Otavalo**	**67.40**	**307**	*e*P	**P**	**23 07 56.8**	**+1.7**
OPO	**Ambohidratompo**	**68.24**	**91**	LR	LR	23 33 23.1	
	comp=Z,91nm,19.8s,baz=28,slow=32						
ROSC	**El Rosal**	**69.70**	**313**	LR	LR	23 39 35.9	
	comp=Z,53nm,21.2s,baz=210,slow=37						
BBTS	**Babate**	**70.86**	**15**	LR	LR	23 32 57.4	
	comp=Z,90nm,20.6s,baz=226,slow=31						
BAUV	**El Baul**	**71.00**	**321**	P	**P**	**23 08 16.7**	**-0.1**
BAUV				IAmb	IAmb	23 08 17.8	
	comp=Z,22nm,1.2s						
SDV	**Santo Domingo**	**71.91**	**318**	LR	LR	23 41 23.5	
	comp=Z,43nm,19.1s,baz=132,slow=37						
TOA0	**Torodi Ar. Sit**	**73.45**	**33**	P	**P**	**23 08 30.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**73.45**	**33**	P	**P**	**23 08 31.6**	**0.0**
	comp=Z,3.5nm,0.7s,baz=199,slow=6.6,SNR=39						
TORD				LR	LR	23 36 10.0	
	comp=Z,134nm,18.4s,baz=212,slow=32						
	comp=Z,3.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.45**	**33**	P	**P**	**23 08 31.6**	**+0.1**
MBAR	**Mbarara**	**73.74**	**67**	LR	LR	23 38 23.5	
	comp=Z,127nm,19.4s,baz=210,slow=34						
KMBO	**Kilima Mbogo**	**76.80**	**73**	LR	LR	23 40 30.1	
	comp=Z,155nm,19.7s,baz=221,slow=34						
HUMP	**Col San Antoni**	**78.82**	**326**	P	**P**	**23 09 02.2**	**+0.2**
RPZ	**Rata Peaks**	**79.69**	**196**	LR	LR	23 39 28.7	
	comp=Z,50nm,21.1s,baz=104,slow=32						
ATD	**Arta Tunnel**	**90.37**	**70**	LR	LR	23 48 40.6	
	comp=Z,85nm,19.4s,baz=190,slow=34						
MDT	**Midelt**	**90.54**	**22**	LR	LR	23 44 45.8	
	comp=Z,137nm,21.9s,baz=198,slow=32						
RAR	**Rarotonga**	**92.31**	**227**	LR	LR	23 46 35.4	
	comp=Z,55nm,18.5s,baz=282,slow=32						
STKA	**Stephens Creek**	**93.04**	**174**	LR	LR	23 49 51.5	
	comp=Z,162nm,18.8s,baz=203,slow=34						
KEST	**Kesra**	**96.94**	**32**	LR	LR	23 52 13.2	
	comp=Z,142nm,18.2s,baz=262,slow=34						
ESDC	**Sonseca Array**	**97.29**	**21**	LR	LR	23 49 15.8	
	comp=Z,94nm,21.3s,baz=168,slow=32						
NVAR	**Mina Array Bea**	**119.07**	**296**	PKP	**PKiKP**	**23 15 47.9**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=145,slow=3.3,SNR=2.5						
NB2	**NORSAR Subarra**	**120.60**	**22**	PKPdf	**PKPdf**	**23 15 49.4**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=202,slow=1.9						
NOA	**NORSAR Array B**	**120.60**	**22**	PKP	**PKPdf**	**23 15 49.4**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=207,slow=1.9,SNR=6.2						
FINES	**FINESS Array B**	**124.67**	**29**	PKP	**PKPdf**	**23 15 56.7**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=222,slow=1.9,SNR=55						
CMAR	**Chiang Mai Arr**	**127.39**	**114**	PKP	**PKiKP**	**23 16 04.3**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=224,slow=3.8,SNR=5.1						
ABKAR	**Akbulak array**	**128.70**	**57**	PKPdf	**PKPdf**	**23 16 05.4**	**0.0**
KK31	**Karatay Array**	**129.92**	**69**		**PKiKP**	**23 16 08.7**	**-0.2**
KKAR	**Karatay Array**	**129.92**	**69**		**PKPdf**	**23 16 08.4**	**+0.4**
KSH	**Kashi**	**130.45**	**76**	PKP	**PKiKP**	**23 16 12.9**	**+2.7**
ARCES	**ARCESS Array B**	**130.97**	**23**	PKP	**PKPdf**	**23 16 08.9**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=213,slow=1.8,SNR=52						
ARCES	**ARCESS Array B**	**130.97**	**23**	PKPdf	**PKPdf**	**23 16 09.3**	**+0.1**
YKA	**Yellowknife Ar**	**134.11**	**320**	PKP	**PKPdf**	**23 16 15.7**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=130,slow=2.0,SNR=4.1						
PZH	**PanZhiHua**	**135.43**	**110**	PKP	**PKPdf**	**23 16 18.4**	**-0.7**
MKAR	**Makanchi Array**	**138.69**	**73**	PKhKP	PKPpre	23 16 16.4	
	comp=Z,0.4nm,0.6s,baz=228,slow=4.6,SNR=4.3						
WMQ	**Urumqi**	**139.87**	**80**	*e*PKP	**PKiKP**	**23 16 28.9**	**-0.2**
GTA	**Gaotai**	**143.94**	**95**	*e*PKP	**PKPdf**	**23 16 34.5**	**+0.3**
ZALV	**Zalesovo Beam**	**143.95**	**65**	PKhKP	PKPpre	23 16 30.9	
	comp=Z,3.9nm,0.6s,baz=236,slow=4.1,SNR=14						
XAN	**Xi'an**	**145.17**	**111**	PKPbc	**PKPbc**	**23 16 35.8**	**-0.2**
XAN				pPKP	PKiKP	23 16 44.3	+4.1
BCAR	**Beaver Creek A**	**145.29**	**312**		**PKPbc**	**23 16 35.0**	**-0.5**
L27K	**Beaver Creek,**	**145.31**	**312**		**PKPbc**	**23 16 35.2**	**-0.3**
LYN	**LuoYang**	**147.44**	**114**	⇓PKPbc	**PKPbc**	**23 16 41.5**	**-1.1**
LYN				PKPab	**sPKPbc**	**23 16 45.5**	**+0.5**
ILAR	**Eielson Array**	**147.94**	**313**	PKPbc	**PKPbc**	**23 16 42.8**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=116,slow=1.9,SNR=38						
H24K	**Noodor Dome**	**148.58**	**315**		**PKPbc**	**23 16 44.9**	**+0.1**
NRIK	**Noril'sk**	**149.69**	**38**	PKPab	**PKPab**	**23 16 51.0**	**-1.7**
	comp=Z,1.8nm,0.4s,baz=213,slow=4.0,SNR=3.6						
BTO	**Baotou**	**150.52**	**103**	*e*PKPbc	**PKPdf**	**23 16 40.9**	**-4.1**
SONM	**Songino Array**	**152.85**	**88**	PKPbc	**PKPbc**	**23 16 55.1**	**-0.4**
	comp=Z,4.6nm,0.5s,baz=220,slow=2.7,SNR=24						
SONM				PKPab	**PKPab**	**23 17 05.1**	**-1.6**
	comp=Z,3.8nm,0.7s,baz=218,slow=3.1,SNR=7.7						

WEL 19 23:04:34.2±1.0, 44°S±5°×17°E±°, h33km, M3.7/13, ML3.9/13, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=130.6, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCZ	**Okains Bay**	**1.99**	**289**	P	Pn	23 05 06.6	+0.9
AKCZ	**Akaroa Harbour**	**2.05**	**284**	P	Pn	23 05 06.6	+0.2
AKCZ				S	Sn	23 05 30.6	-0.2
MQZ	**McQueen's Vall**	**2.28**	**287**	P	Pn	23 05 08.3	-1.1
GVZ	**Greta Valley S**	**2.39**	**306**	S	Sn	23 05 39.6	+0.5
AMCZ	**Amberley**	**2.50**	**299**	P	Pn	23 05 12.4	-0.2
AMCZ				S	Sn	23 05 42.4	+0.5
KHZ	**Kahutara**	**2.52**	**322**	P	Pn	23 05 14.0	+1.2
KHZ				S	Sn	23 05 44.7	+2.3
WACZ	**Wakanui South**	**2.79**	**278**	P	Pn	23 05 16.4	-0.1
WACZ				S	Sn	23 05 49.5	+0.6
OXZ	**Oxford**	**2.83**	**291**	P	Pn	23 05 17.9	+0.7
OXZ				S	Sn	23 05 49.4	-0.6
LTZ	**Lake Taylor**	**2.95**	**302**	P	Pn	23 05 18.9	+0.1
LTZ				S	Sn	23 05 53.4	+0.4
PAWZ	**Paruwai Farm**	**3.03**	**357**	P	Pn	23 05 19.8	-0.1
PAWZ				S	Sn	23 05 54.8	-0.2
MTW	**Mount Morrison**	**3.25**	**358**	P	Pn	23 05 23.8	+0.1
MTW				S	Sn	23 05 59.2	-1.3
ARCZ	**Arundel**	**3.25**	**277**	P	Pn	23 05 22.3	-0.6
THZ	**Tophouse**	**3.33**	**322**	P	Pn	23 05 25.8	+1.8
THZ				S	Sn	23 06 04.9	+2.5
TMZ	**Timaru**	**3.33**	**269**	P	Pn	23 05 23.8	-0.2
RPZ	**Rata Peaks**	**3.39**	**280**	P	Pn	23 05 25.5	+0.7
ODZ	**Otahua Downs**	**3.63**	**258**	P	Pn	23 05 28.0	-0.1
ODZ				S	Sn	23 06 03.2	-6.5
DSZ	**Denniston Nort**	**3.88**	**312**	P	Pn	23 05 33.0	+1.4
DSZ				S	Sn	23 06 14.0	-2.0
LBZ	**Lake Benmore**	**3.92**	**268**	P	Pn	23 05 32.5	+0.4
LBZ				S	Sn	23 06 16.9	-0.1
GCSZ	**Gaunt Creek Bo**	**4.01**	**284**	P	Pn	23 05 35.9	+2.7
GCSZ				S	Sn	23 06 19.4	+0.3
FOZ	**Fox Glacier**	**4.31**	**280**	P	Pn	23 05 39.5	+2.1
FOZ				S	Sn	23 06 29.1	+2.6
TUZ	**Tuapeka**	**4.53**	**248**	P	Pn	23 05 40.1	-0.3
TUZ				S	Sn	23 06 26.4	-5.6
EAZ	**Earnscleugh**	**4.59**	**257**	P	Pn	23 05 42.0	+0.7
EAZ				S	Sn	23 06 29.1	-4.4
WKZ	**Wanaka**	**4.76**	**263**	P	Pn	23 05 44.9	+1.3
WKZ				S	Sn	23 06 35.5	-2.1
JCZ	**Jackson Bay**	**4.95**	**272**	P	Pn	23 05 47.5	+1.2
CTZ	**Chatham Island**	**5.61**	**86**	P	Pn	23 05 50.0	-5.3
CTZ				S	Sn	23 06 45.8	-13
DCZ	**Deep Cove**	**6.13**	**257**	P	Pn	23 06 03.4	+1.0

WEL 19 23:06:08.2±0.5, 42°S±3°×17°3E±°, h5km, M2.4/4, ML2.7/6, MLv2.4/4, Error ellipse: s-maj=0.0km s-min=0.0km az=89.6, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.34**	**121**	P	Pg	23 06 15.6	+0.7
KHZ				S	Sg	23 06 20.6	+1.2
THZ	**Tophouse**	**0.51**	**340**	P	Pb	23 06 18.9	-0.7
THZ				S	Sg	23 06 25.1	+0.6
GVZ	**Greta Valley S**	**0.73**	**186**	P	Pb	23 06 24.1	+0.7
BSWZ	**Blackbirch Sta**	**0.76**	**46**	P	Pg	23 06 23.0	+0.3
DSZ	**Denniston Nort**	**1.11**	**296**	P	Pb	23 06 30.0	+0.1
DSZ				S	Sn	23 06 47.8	+1.7
MQZ	**McQueen's Vall**	**1.51**	**194**	P	Pn	23 06 34.4	-1.4
MQZ				S	Sn	23 06 53.3	-2.6

KRSC 19 23:09:29.7±1.7, 48°91N×156°51E, h51km±24km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.80**	**352**	*e*P	Pn	23 09 59.4	+1.2
PAU	**Pauzhetka**	**2.57**	**4**	*e*P	Pn	23 10 12.2	+3.4
PAU				*e*S	Sn	23 10 41.7	+2.9
KDTR	**Khodutka, Kamc**	**3.07**	**18**	*e*P	Pn	23 10 19.7	+4.0
KDTR				*e*S	Sn	23 10 56.1	+4.9
MTVR	**Mutnovka**	**3.73**	**16**	*e*P	Pn	23 10 29.2	+4.3
MTVR				*e*S	Sn	23 11 12.7	+5.0
RUS	**Russkaya**	**3.75**	**19**	*e*P	Pn	23 10 28.6	+3.6
RUS				*e*S	Sn	23 11 11.8	+3.9
GRL	**Gorelyy**	**3.78**	**15**	*e*P	Pn	23 10 30.1	+4.5
AVH	**Avacha**	**4.58**	**17**	*e*P	Pn	23 10 40.7	+4.2
KOK	**Koryaka**	**4.59**	**16**	*e*P	Pn	23 10 41.5	+4.9
KRER	**Koryakskii**	**4.62**	**17**	*e*P	Pn	23 10 41.0	+3.9
SDLR	**Sedlovina**	**4.62**	**18**	*e*P	Pn	23 10 40.8	+3.7
KRX	**Arik**	**4.66**	**16**	*e*P	Pn	23 10 41.4	+3.8
SPN	**Mys Shipunski**	**4.75**	**27**	*e*P	Pn	23 10 42.8	+4.2
SPN				*e*S	Sn	23 11 36.3	+4.0
GNL	**Ganaly**	**4.88**	**10**	*e*P	Pn	23 10 42.7	+2.1
MKZ	**Mys Kozlova**	**6.52**	**28**	*e*P	Pn	23 11 06.0	+3.1
TUMR	**Tumrok**	**6.77**	**18**	*e*P	Pn	23 11 10.9	+4.5

NIED ***19*** *23:14:37.1, 37.3N×136.7E, h8km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=0.94; Mθθ=1.55; Mφφ=-0.60; Mrθ=0.10; Mrφ=-0.15; Mθφ=1.17; Fault plane solution: M₀1.76000×10¹⁴ NP1: φs127.00000°, δ57.00000°, λ-39.00000°. NP2: φs241.00000°, δ58.00000°, λ-140.00000°.*

JMA 19 23:14:37.1±0.1, 37.3N±0.1×136.7E±0.3, h8km, MV3.9/32, 2D, OFF NOTO PENINSULA, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**168**	P	Pg	23 14 44.0	+0.2
JJH				S	Sg	23 14 49.1	+0.8
JSZ	**Suzu**	**0.57**	**70**	⇓P	Pg	23 14 48.0	0.0
JSZ				⇓*e*S	Sg	23 14 55.8	+0.3
JHG	**Hegura jima**	**0.62**	**17**	P	Pg	23 14 49.0	0.0
JTT	**Ttatey**	**0.83**	**142**	*e*P	Pg	23 14 53.0	-0.1
JTT				*e*S	Sg	23 15 03.5	-0.3
JKG	**Kaga**	**1.02**	**197**	P	Pg	23 14 56.3	-0.4

IDC ***19*** *23:15:25.1±1.1, 55.6S×31.8W, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=44.7km s-min=29.0km az=64.0*

ISC 19 23:15:26.1±1.0, 55.6S±0.2×31.9W±0.3, h10km, n11, σ0.892/8, mb3.9/5, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**34.59**	**317**	P	**P**	**23 22 14.2**	**-0.7**
	0.9nm,0.5s,baz=141,slow=13,SNR=2.8						
	0.9nm,0.5s						
BDFB	**Brasilia**	**41.76**	**336**	P	**P**	**23 23 15.9**	**+0.4**
	1.2nm,0.3s,baz=166,slow=8.3,SNR=3.0						
	1.2nm,0.3s						
VNDA	**Vanda**	**46.87**	**184**	P	**P**	**23 23 55.5**	**-0.2**
	0.4nm,0.8s,baz=161,slow=4.6,SNR=2.4						
	0.4nm,0.8s						
LPAZ	**La Paz**	**47.99**	**310**	P	**P**	**23 24 06.5**	**+0.8**
	1.6nm,0.5s,baz=146,slow=5.5,SNR=4.2						
	1.6nm,0.5s						
H10N3	**ASCENSION HYDR**	**49.60**	**23**	T	T	00 17 26.7	
	baz=193,slow=75,SNR=21						
H10N1	**ASCENSION HYDR**	**49.60**	**23**	T	T	00 17 26.2	
	baz=193,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**49.61**	**23**	T	T	00 17 27.3	
	baz=193,slow=75,SNR=25						
TORD	**Torodi Ar. Bea**	**74.07**	**34**	P	**P**	**23 27 01.6**	**-0.5**
	0.9nm,0.8s,baz=202,slow=5.6,SNR=5.3						
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**144.59**	**66**	PKP	**PKPdf**	**23 35 01.3**	**-0.2**
	0.5nm,0.3s,baz=264,slow=4.3,SNR=3.9						
ILAR	**Eielson Array**	**147.84**	**313**	PKPbc	**PKPab**	**23 35 11.4**	**-0.9**
	1.3nm,0.7s,baz=113,slow=1.9,SNR=1.6						
SONM	**Songino Array**	**153.37**	**89**	PKPbc	**PKiKP**	**23 35 25.1**	**+1.3**
	0.7nm,0.6s,baz=212,slow=3.8,SNR=4.9						

IDC ***19*** *23:18:33.2±1.4, 47.0N×155.8E, h0km, mb3.7/11, mbtmp3.7/13, ML2.6/2, MS3.3/5, Error ellipse: s-maj=36.4km s-min=19.2km az=164.0*

ISC 19 23:18:35.9±1.1, 47.1N±0.1×155.8E±0.1, h18km, n24, σ1.919/15, mb3.8/12, MS3.7/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.18**	**11**	Pn	**Pn**	**23 20 04.5**	**-1.6**
	0.7nm,0.3s,baz=188,slow=14,SNR=15						
PETK				Sn	**Sn**	**23 21 17.4**	**+1.2**
	0.2nm,0.3s,baz=296,slow=39,SNR=0.9						
	1.7nm,0.5s						
KLR	**Kul'dur**	**16.18**	**287**	LR	LR	23 28 30.0	
	comp=Z,46nm,18.0s,baz=230,slow=37						
USRK	**Ussuriysk Ar.**	**16.88**	**269**	Pn	**Pn**	**23 22 30.2**	**-0.9**
	0.2nm,0.3s,baz=83,slow=14,SNR=1.8						
	2.8nm,0.7s						
KSRS	**Korea Array**	**22.65**	**255**	P	**P**	**23 23 36.9**	**+1.0**
	0.7nm,0.3s,baz=56,slow=8.8,SNR=4.1						
KSRS				LR	LR	23 33 44.3	
	comp=Z,12nm,18.3s,baz=215,slow=40						
	0.7nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.73**	**158**	T	T	23 54 37.0	
	baz=345						
H11N1	**WAKE ISLAND Hy**	**28.75**	**158**	T	T	23 54 31.4	
	baz=345						
H11N3	**WAKE ISLAND Hy**	**28.75**	**158**	T	T	23 54 29.4	
	baz=345						
H11S1	**WAKE ISLAND Hy**	**29.85**	**159**	T	T	23 55 49.1	
	baz=345,slow=76,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**29.86**	**159**	T	T	23 55 50.9	
	baz=345,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**29.87**	**159**	T	T	23 55 49.9	
	baz=345,slow=76,SNR=8.2						
SONM	**Songino Array**	**32.96**	**290**	P	**P**	**23 25 08.6**	**-0.9**
	0.5nm,0.7s,baz=65,slow=8.1,SNR=3.0						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**35.16**	**39**	P	**P**	**23 25 27.2**	**-0.9**
	0.2nm,0.7s,baz=261,slow=7.6,SNR=1.7						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**43.92**	**306**	P	**P**	**23 26 39.8**	**-1.4**
	0.8nm,0.4s,baz=59,slow=6.5,SNR=3.5						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**48.42**	**298**	P	**P**	**23 27 16.5**	**-0.3**
	0.8nm,0.7s,baz=69,slow=6.9,SNR=5.4						
	0.8nm,0.7s						
ARCES	**ARCESS Array B**	**58.15**	**342**	P	**P**	**23 28 28.8**	**+0.8**
	1.2nm,1.0s,baz=30,slow=9.3,SNR=1.9						
	1.2nm,1.0s						
PDAR	**Pinedale Array**	**63.06**	**55**	P	**P**	**23 29 02.1**	**-0.1**
	0.2nm,0.3s,baz=326,slow=7.9,SNR=2.4						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**64.53**	**336**	P	**P**	**23 29 11.2**	**+0.1**
	0.6nm,0.4s,baz=28,slow=6.3,SNR=12						
	0.6nm,0.4s						
NB2	**NORSAR Subarra**	**68.51**	**342**	P	**P**	**23 29 38.4**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**68.51**	**342**	P	**P**	**23 29 38.2**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=26,slow=6.6,SNR=2.7						
	comp=Z,0.2nm,0.6s						
HFS	**Hagfors**	**68.79**	**341**	LR	LR	00 05 07.8	
	comp=Z,35nm,18.5s,baz=212,slow=41						
KBZ	**Khabaz**	**71.95**	**315**	P	**P**	**23 29 59.3**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=74,slow=7.4,SNR=4.5						
KBZ				LR	LR	00 05 19.5	
	comp=Z,43nm,18.1s,baz=206,slow=39						
	comp=Z,1.3nm,0.7s						
AKASG	**Malin Array Be**	**72.29**	**328**	LR	LR	00 05 35.0	
	comp=Z,38nm,18.4s,baz=186,slow=39						
TXAR	**Lajitas Array**	**75.73**	**62**	P	**P**	**23 30 20.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=296,slow=4.3,SNR=11						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**79.40**	**318**	P	P	23 30 45.3	+4.3
	comp=Z,0.7nm,0.9s,baz=27,slow=4.9,SNR=2.7						

ATH ***19*** *23:39:42.7, 40.32N×19.56E, h79km±3km, ML2.7/15, Error ellipse: s-maj=3.5km s-min=1.4km az=205.0*
TIR ***19*** *23:39:44.5, 40.36N×19.64E, h22km±1km, Md2.9, Ml2.9*
BEO ***19*** *23:39:44.1±0.7, 40.24N×19.35E, h29km±4km, ML2.5/10*
THE ***19*** *23:39:45.5, 40.40N×19.67E, h9km±4km, ML2.7/1, Error ellipse: s-maj=4.3km s-min=0.8km az=278.0*

ISC 19 23:39:44.2±1.0, 40.36N±0.02×19.52E±0.03, h13km±7km, n75, σ1.934/99, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLO	**Vlora**	**0.11**	**350**	P	**Pg**	**23 39 47.7**	**+0.4**
	baz=315						
VLO				S	**Sb**	**23 39 52.0**	**+1.1**
	baz=315						
VLO				AMP			
	comp=N,251nm,0.2s,baz=315						
SRN	**Sarande**	**0.60**	**142**	P	**Pg**	**23 39 55.5**	**-0.5**
	baz=149						
SRN				S	**Sg**	**23 40 04.2**	**+0.2**
	baz=149						
SRN				AMP			
	comp=N,1.3nm,0.3s,baz=149						
KEK	**Kerkira**	**0.68**	**162**	P	**Pb**	**23 39 58.4**	**+0.5**
KEK				S	**Sn**	**23 40 11.5**	**+1.5**
KEK				AML	AML	23 40 13.7	
	comp=N,844μm,0.3s						
KEK				AML	AML	23 40 14.6	
	comp=E,1036μm,0.2s						
KASA	**Kassiopi**	**0.69**	**152**	P	**Pb**	**23 39 58.0**	**-0.1**
KASA				S	**Sn**	**23 40 10.6**	**+0.3**
LSK	**Leskovik**	**0.85**	**104**	P	**Pb**	**23 39 58.6**	**-2.4**
	baz=105						
LSK				S	**Sb**	**23 40 11.2**	**-1.1**
	baz=105						
LSK				AMP			
	comp=E,1.7nm,0.4s,baz=105						
SCTE	**Santa Cesarea**	**0.86**	**251**	P	**Pn**	**23 40 02.7**	**+0.7**
	baz=253						
SCTE				S	**Sn**	**23 40 16.5**	**+2.1**
	baz=253						
SCTE				AMP			
	comp=N,1.3nm,0.3s,baz=253						
SCTE	**Santa Cesarea**	**0.86**	**251**	P	**Pn**	**23 40 02.7**	**+0.7**
SCTE				S	**Sn**	**23 40 16.4**	**+2.1**
SCTE				AML	AML	23 40 19.0	
	comp=E,906μm,0.6s						
SCTE				AML	AML	23 40 19.1	
	comp=N,665μm,0.3s						
KBN	**Korca**	**1.00**	**74**	P	**Pb**	**23 40 00.8**	**-2.6**
	baz=72						
KBN				S	**Sb**	**23 40 15.9**	**-0.7**
	baz=72						
KBN				AMP			
	comp=N,1.7nm,0.5s,baz=72						
TIR	**Tirane**	**1.02**	**15**	*e*Pg	**Pg**	**23 40 04.9**	**+1.0**
TIR				*e*Sg	**Sn**	**23 40 21.9**	**+3.4**
TIR	**Tirane**	**1.02**	**15**	P	**Pn**	**23 40 04.2**	**0.0**
	baz=9.0						
TIR				S	**Sg**	**23 40 18.2**	**+0.9**
	baz=9.0						
TIR				AMP			
	comp=E,0.4nm,0.3s,baz=9.0						
IGT	**Igoumenitsa**	**1.03**	**143**	P	**Pb**	**23 40 03.7**	**-0.3**
	baz=147						
IGT	**Igoumenitsa**	**1.03**	**143**	P	**Pb**	**23 40 03.8**	**-0.2**
IGT				S	**Sn**	**23 40 19.4**	**+0.6**
IGT				AML	AML	23 40 24.8	
	comp=N,536μm,0.4s						
IGT				AML	AML	23 40 26.6	
	comp=E,392μm,0.7s						
NEST	**Nestorio**	**1.17**	**87**	P	**Pn**	**23 40 06.0**	**-0.4**
NEST	**Nestorio**	**1.17**	**87**	P	**Pn**	**23 40 06.0**	**-0.4**
NEST				AML	AML	23 40 28.6	
	comp=E,468μm,0.4s						
NEST				AML	AML	23 40 30.4	
	comp=N,396μm,0.6s						
OHR	**Ohrid**	**1.23**	**52**	*i* Pn	**Pn**	**23 40 07.1**	**0.0**
JAN	**Janina**	**1.24**	**124**	P	**Pn**	**23 40 06.7**	**-0.6**
JAN				S	**Sg**	**23 40 24.2**	**0.0**
	comp=N,368nm,0.4s						
JAN	**Janina**	**1.24**	**124**	P	**Pn**	**23 40 06.7**	**-0.6**
JAN				S	**Sg**	**23 40 24.2**	**0.0**
JAN				AML	AML	23 40 32.4	
	comp=N,614μm,0.4s						
JAN				AML	AML	23 40 33.5	
	comp=E,881μm,0.3s						
PENT	**Pentalofos**	**1.25**	**97**	P	**Pn**	**23 40 07.4**	**0.0**
PENT	**Pentalofos**	**1.25**	**97**	P	**Pn**	**23 40 07.5**	**0.0**
PHP	**Peshkopia**	**1.50**	**27**	P	**Pb**	**23 40 11.8**	**-0.1**
	baz=24						
PHP				S	**Sb**	**23 40 31.9**	**+1.1**
	baz=24						
PHP				AMP			
	comp=N,0.7nm,1.1s,baz=24						
KZN	**Kozani**	**1.72**	**91**	P	**Pn**	**23 40 14.5**	**+0.6**
KZN				AML	AML	23 40 44.1	
	comp=E,675μm,0.6s						
KZN				AML	AML	23 40 47.4	
	comp=N,297μm,0.7s						
TSLK	**Tsoukalades, L**	**1.77**	**150**	P	**Pn**	**23 40 14.4**	**-0.1**
TSLK	**Tsoukalades, L**	**1.77**	**150**	P	**Pn**	**23 40 14.5**	**-0.1**
LKD2	**Lefkada island**	**1.80**	**150**	P	**Pb**	**23 40 15.9**	**-1.1**
LKD2	**Lefkada island**	**1.80**	**150**	P	**Pb**	**23 40 15.9**	**-1.1**
LKD2				AML	AML	23 40 45.5	
	comp=E,283μm,0.6s						
LKD2				AML	AML	23 40 49.6	
	comp=N,234μm,0.4s						
EVGI	**L

SJES				*e*Sn	**Sn**	**23 41 06.1 +0.7**
BARS	**Barje**	**3.00**	**34**	*e*Pn	**Pn**	**23 40 32.0 +0.6**
BARS				*e*Sn	**Sn**	**23 41 07.9 +0.7**
BOSS	**Bosilegrad**	**3.08**	**45**	*e*Pn	**Pn**	**23 40 33.1 +0.5**
BOSS				*e*Sn	**Sn**	**23 41 10.8 +1.4**
SELS	**Selova**	**3.10**	**22**	*e*Pn	**Pn**	**23 40 34.6 +1.8**
LSTV	**Lastovo**	**3.11**	**322**	*e*Pn	**Pn**	**23 40 32.6 -0.3**
LSTV					Sn	**Sn**	**23 41 07.5 -2.5**
SRS	**Serrai**	**3.18**	**75**	*e*Pn	**Pn**	**23 40 33.5 -0.5**
SRS				*e*Sn	**Sn**	**23 41 13.0 +1.2**
IVAS	**Ivanjica**	**3.25**	**8**	*e*Pn	**Pn**	**23 40 34.6 -0.3**
IVAS				*e*Sn	**Sn**	**23 41 14.0 +0.5**
MAKA	**Makarska**	**3.47**	**328**	*e*Pn	**Pn**	**23 40 38.2 +0.3**
BOVS	**Bovan**	**3.66**	**26**	*e*Pn	**Pn**	**23 40 40.0 -0.5**
ZAPS	**Zavoj**	**3.73**	**38**	*e*Pn	**Pn**	**23 40 42.9 +1.4**
ZAPS				*e*Sn	**Sn**	**23 41 26.7 +1.4**
ZAGS	**Zajecar**	**4.00**	**29**	*e*Pn	**Pn**	**23 40 45.1 -0.1**
KIJV	**Kijevo**	**4.32**	**329**	*e*Pn	**Pn**	**23 40 49.6 0.0**
MORI	**Morici**	**4.51**	**322**	*e*Pn	**Pn**	**23 40 52.3 +0.1**
DUGI	**Dugi Otok**	**4.92**	**319**	*e*Pn	**Pn**	**23 40 58.2 +0.4**
VIRC	**Vir**	**5.14**	**321**	*e*Pn	**Pn**	**23 41 01.1 +0.3**
NVLJ	**Novalja**	**5.43**	**322**	*e*Pn	**Pn**	**23 41 05.7 +0.9**
BZS	**Buzias**	**5.47**	**16**	*e*Sn	**Sn**	**23 42 05.5 -2.7**
RABC	**Rab**	**5.61**	**323**	*e*Pn	**Pn**	**23 41 08.5 +1.2**
MOSL	**Moslavina**	**5.63**	**340**	*e*Pn	**Pn**	**23 41 05.5 -2.1**
SOKA	**Soboth**	**7.11**	**334**	*e*Pn	Pb	23 41 38.2 -9.3
	comp=N,0.6nm,0.4s					
OBKA	**Obir**	**7.13**	**331**	*e*Pn	**Pn**	**23 41 31.2 +2.9**
	comp=N,1.3nm,0.6s					
KBA	**KoelnBreinsper**	**8.07**	**328**	*e*Pn	Pn	23 41 49.7 +8.5
	comp=N,2.6nm,1.5s					

JMA ***19*** *23:58:25.1±0.1, 39.˚8N±0.˚2×141.˚8E±0.˚4, h58km, MV3.8/40, NORTHERN IWATE PREF*
JMA Felt II J1 at NORTHERN IWATE PREF .
NIED ***19*** *23:58:25.1, 39.˚76N×141.˚84E, h58km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.61; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$-2.32; $M_{r\theta}$1.12; $M_{\theta\phi}$0.13; $M_{\phi r}$2.20; Fault plane solution: $M_0$3.81000×10^{14} NP1: ϕ_s175.00000°, δ27.00000°, λ73.00000°. NP2:ϕ_s15.00000°, δ65.00000°, λ98.00000°.*
IDC ***19*** *23:58:26.9±5.6, 39.˚66N×141.˚82E, h86km±44km, mb3.5/8, mbtmp3.8/10 Error ellipse: s-maj=63.3km s-min=24.7km az=76.0*

ISC 19 23:58:24.4±0.9, 39.˚75N±0.˚04×141.˚90E±0.˚08, h62km±6km, n30, σ0.˚60/35, mb3.8/8, 12D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.18**	**201**	*i* P	**Pn**	**23 58 34.4**	**+0.4**
MIYJ				S	**Sn**	**23 58 40.7**	**-0.2**
JTH	**Tanohata**	**0.19**	**351**	*i* P	**Pn**	**23 58 34.4**	**+0.4**
JTH				S	**Sn**	**23 58 40.9**	**-0.1**
JKEN	**Kujiedanarisaw**	**0.48**	**342**	*i* P	**Pn**	**23 58 36.5**	**+0.2**
JKEN				S	**Sn**	**23 58 44.6**	**-0.3**
JKZ	**Kuzumaki**	**0.50**	**298**	⇓*i* P	**Pn**	**23 58 36.7**	**+0.1**
JKZ				⇓S	**Sn**	**23 58 44.7**	**-0.7**
JOM	**Ohasama**	**0.55**	**240**	⇓*i* P	**Pn**	**23 58 36.9**	**-0.1**
JOM				⇓S	**Sn**	**23 58 45.5**	**-0.6**
JANG	**Nango**	**0.69**	**335**	⇓*i* P	**Pn**	**23 58 38.6**	**-0.1**
JANG				⇓S	**Sn**	**23 58 48.6**	**-0.5**
JMK	**Ichinoseki**	**0.96**	**214**	*i* P	**Pn**	**23 58 42.1**	**+0.2**
JMK				S	**Sn**	**23 58 54.6**	**-0.2**
JRG	**Rokugo**	**1.04**	**251**	*i* P	**Pn**	**23 58 42.9**	**-0.1**
JRG				*e*S	**Sn**	**23 58 56.5**	**-0.4**
JAH	**Hinai**	**1.07**	**295**	⇓*i* P	**Pn**	**23 58 43.4**	**0.0**
JAH				⇓S	**Sn**	**23 58 57.3**	**-0.1**
JTM	**Tenmabayashi**	**1.22**	**329**	⇓*i* P	**Pn**	**23 58 45.4**	**+0.1**
JTM				⇓S	**Sn**	**23 59 00.8**	**-0.2**
JIO	**Ouri**	**1.36**	**199**	*i* P	**Pn**	**23 58 47.7**	**+0.5**
JIO				S	**Sn**	**23 59 04.3**	**-0.1**
JYK	**Kaneyama**	**1.46**	**236**	⇓*i* P	**Pn**	**23 58 48.7**	**+0.1**
JYK				⇓*e*S	**Sn**	**23 59 06.6**	**-0.1**
MJAR	**Matsushiro Arr**	**4.33**	**223**	P	**Pn**	**23 59 29.8**	**+2.1**
	1.7nm,0.4s,baz=32,slow=14,SNR=1.8						
USRK	**Ussuriysk Ar.**	**8.62**	**304**	P	**Pn**	**00 00 27.8**	**+1.4**
	2.8nm,0.8s,baz=110,slow=13,SNR=5.5						
KSRS	**Korea Array**	**11.18**	**263**	P	Pn	00 01 09.6	+8.2
	0.7nm,0.3s,baz=72,slow=14,SNR=2.4						
H11N2	**WAKE ISLAND Hy 29.31**	**126**		T	T	00 34 57.9	
	baz=318,slow=76,SNR=132						
H11N1	**WAKE ISLAND Hy 29.32**	**126**		T	T	00 34 54.1	
	baz=318,slow=76,SNR=122						
H11N3	**WAKE ISLAND Hy 29.33**	**126**		T	T	00 34 54.7	
	baz=318,slow=76,SNR=86						
H11S1	**WAKE ISLAND Hy 30.11**	**128**		T	T	00 36 04.1	
	baz=319,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy 30.11**	**128**		T	T	00 36 01.0	
	baz=319,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy 30.12**	**128**		T	T	00 36 07.4	
	baz=319,slow=76,SNR=31						
ZALV	**Zalesovo Beam**	**40.42**	**310**	P	**P**	**00 05 56.5**	**+0.3**
	2.2nm,0.6s,baz=93,slow=8.0,SNR=8.5						
	2.2nm,0.6s						
MKAR	**Makanchi Array**	**43.05**	**300**	P	**P**	**00 06 18.1**	**+0.1**
	0.9nm,0.6s,baz=86,slow=10,SNR=6.6						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**44.68**	**306**	P	**P**	**00 06 30.6**	**-0.2**
	1.7nm,0.6s,baz=80,slow=8.5,SNR=11						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**59.80**	**188**	P	**P**	**00 08 22.0**	**-1.2**
	0.4nm,0.7s,baz=21,slow=6.9,SNR=1.6						
	0.4nm,0.7s						
ARCES	**ARCESS Array B**	**61.60**	**339**	P	**P**	**00 08 35.2**	**+0.3**
	0.6nm,0.7s,baz=54,slow=9.1,SNR=4.4						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**66.60**	**332**	P	**P**	**00 09 07.9**	**+0.1**
	1.0nm,0.7s,baz=57,slow=7.0,SNR=5.6						
	1.0nm,0.7s						
HFS	**Hagfors**	**71.78**	**336**	P	**P**	**00 09 40.3**	**+0.5**
	0.4nm,0.3s,baz=45,slow=7.4,SNR=9.8						
	0.4nm,0.3s						
NB2	**NORSAR Subarra**	**71.84**	**337**	P	**P**	**00 09 40.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**71.84**	**337**	P	**P**	**00 09 40.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=38,slow=6.1,SNR=5.1						
	comp=Z,0.4nm,0.7s						

IDC 20 00:00:09.0±1.5, 55.˚10S×31.˚08W, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=61.4km s-min=34.6km az=56.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.53**	**155**	P	P	00 04 48.9	+0.4
	1.0nm,0.8s,baz=302,slow=8.6,SNR=3.5						
	1.0nm,0.8s						
LPAZ	**La Paz**	**48.04**	**309**	P	P	00 08 51.0	+0.4
	1.1nm,0.6s,baz=180,slow=5.1,SNR=4.8						
	1.1nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.95**	**22**	T	T	01 02 01.4	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.95**	**22**	T	T	01 02 04.2	
	baz=192						
H10N2	**ASCENSION HYDR**	**48.97**	**22**	T	T	01 02 00.4	
	baz=192						
TORD	**Torodi Ar. Bea**	**73.39**	**33**	P	P	00 11 42.8	+0.2
	0.3nm,0.7s,baz=183,slow=5.0,SNR=1.3						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**147.85**	**314**	PKPbc	PKPdf	00 19 52.6	+1.2
	0.3nm,0.6s,baz=100,slow=1.2,SNR=2.1						

IDC ***20*** *00:04:20.0±0.4, 55.˚15S×31.˚02W, h0km, mb4.9/14, mbtmp5.0/15, ML4.3/1, Error ellipse: s-maj=17.2km s-min=13.8km az=51.0*
MOS ***20*** *00:04:21.7±1.1, 55.˚18S×31.˚28W, h17km, mb5.4/26, Error ellipse: s-maj=16.8km s-min=10.5km az=115.2*
BJI ***20*** *00:04:22.2±0.0, 55.˚20S×31.˚20W, h20km, mB5.3/6, Ms5.3/8, Ms7 5.0/9*
NEIC ***20*** *00:04:22.5±1.4, 55.˚16S±0.˚07×31.˚2W±0.˚1, h10km±1km, mb5.3/112, Error ellipse: s-maj=14.6km s-min=10.4km az=226.0*
GCMT ***20*** *00:04:29.5±0.5, 55.˚34S±0.˚04×31.˚15W±0.˚07, h15km±2km, MW5.1/75, Moment Tensor Solution. s10,c12; s75,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.17±.36; $M_{\theta\theta}$-2.01±.23; $M_{\phi\phi}$-1.16±.20; $M_{r\theta}$-3.35±.85; $M_{\theta\phi}$1.37±.13; $M_{\phi r}$2.14±.71; Best double couple: $M_0$5.03800×10^{16} NP1:ϕ_s303.00000°, δ71.00000°, λ88.00000°. NP2: ϕ_s129.00000°, δ19.00000°, λ95.00000°. Principal axes: T 5.1170, Plg64.0000°, Azm211.0000°; N -0.1590, Plg2.0000°, Azm304.0000°; P -4.9580, Plg26.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 00:04:21.6±0.2, 55.˚14S±0.˚05×31.˚15W±0.˚05, h10km, n504, σ1.˚23/503, mb5.2/93, MS4.6/7, 13C-17D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.22**	**283**	Pn	**Pn**	**00 05 11.4**	**-0.7**
HOPE	**Hope Point**	**3.22**	**283**	P	**Pn**	**00 05 11.4**	**-0.7**
ORCD	**Orcadas**	**9.14**	**227**	Pn	**Pn**	**00 06 30.4**	**-2.9**
EFI	**East Falkland**	**16.38**	**271**	P	**P**	**00 08 14.7**	**+0.5**
EFI	**East Falkland**	**16.38**	**271**	⇓*e*P	**Pn**	**00 08 09.9**	**-1.4**
VNA1	**Neumayer--Stat**	**18.51**	**156**	P	**Pn**	**00 08 38.7**	**+0.9**
VNA3	**Neumayer Olymp**	**18.63**	**158**	P	**Pn**	**00 08 39.8**	**+0.6**
PMSA	**Palmer Station**	**18.85**	**226**	P	**Pn**	**00 08 42.3**	**+0.3**
	0.9nm,0.3s,baz=78,slow=10,SNR=18						
	70nm,1.0s						
PMSA	**Palmer Station**	**18.85**	**226**	P	**Pn**	**00 08 42.8**	**+0.8**
PMSA	**Palmer Station**	**18.85**	**226**	*e*P	**Pn**	**00 08 44.8**	**+2.8**
VNA2	**Neumayer--Watz**	**18.91**	**156**	P	**Pn**	**00 08 42.8**	**+0.2**
	baz=312,slow=13						
SNAA	**Sanae**	**20.50**	**155**	P	**P**	**00 08 59.9**	**+0.4**
SNAA	**Sanae**	**20.50**	**155**	P	**P**	**00 09 00.0**	**+0.5**
	50nm,0.9s,baz=311,slow=10.0,SNR=138						
SNAA				PcP	**PcP**	**00 13 08.4**	**-2.0**
	1.7nm,0.4s,baz=267,slow=3.4,SNR=60						
SNAA				ScP	**ScP**	**00 16 44.9**	**-1.7**
	3.8nm,1.1s,baz=54,slow=3.4,SNR=4.0						
	50nm,0.9s						
SNAA	**Sanae**	**20.50**	**155**		**P**	**00 09 00.2**	**+0.7**
SNAA				IAmb	IAmb	00 09 09.2	
	comp=Z,105nm,1.0s						
SNAA	**Sanae**	**20.50**	**155**	P	**P**	**00 09 00.2**	**+0.7**
SNAA				pmax	pmax		
	comp=Z,105nm,1.0s						
SNAA	**Sanae**	**20.50**	**155**	⇑*i* P	**P**	**00 08 60.0**	**+0.4**
MG01	**Puerto William**	**20.76**	**255**	P	**P**	**00 09 02.2**	**-0.1**
SMAI	**San Martin Ant**	**21.05**	**218**	P	**P**	**00 09 06.4**	**+1.1**
USHA	**Ushuaia**	**21.24**	**255**	P	**P**	**00 09 07.7**	**+0.3**
	comp=Z,44nm,1.0s,baz=94,slow=8.9,SNR=4.8						
	comp=Z,44nm,1.0s						
TROLL	**Troll, Antarti**	**22.07**	**153**	P	**P**	**00 09 16.4**	**0.0**
MG02	**Cerro Sombrero**	**22.34**	**260**	P	**P**	**00 09 20.1**	**+0.8**
BELA	**Belgrano 2**	**22.86**	**182**	P	**P**	**00 09 26.1**	**+1.5**
GO10	**Punta Arenas**	**23.24**	**258**	P	**P**	**00 09 29.0**	**+0.3**
GO10					IAmb	IAmb	00 09 31.1	
	comp=Z,112nm,0.8s						
MG04	**Isla Riesco**	**23.64**	**259**	P	**P**	**00 09 32.7**	**0.0**
NVL	**N'lazarevskaya**	**24.26**	**147**	*e*P	**P**	**00 09 37.5**	**-0.8**
NVL				*e*S	**S**	**00 13 49.8**	**-6.7**
NVL				pmax	pmax		
	comp=Z,14nm,1.0s						
MG05	**Puerto Natales**	**24.63**	**261**	P	**P**	**00 09 41.6**	**-0.3**
MG05				IAmb	IAmb	00 09 43.9	
	comp=Z,101nm,1.0s						
GO09	**Cerro Castillo**	**24.71**	**262**	P	**P**	**00 09 42.4**	**-0.3**
TRQA	**Tornquist**	**26.90**	**297**	P	**P**	**00 10 03.7**	**+1.1**
TRQA	**Tornquist**	**26.90**	**297**	P	**P**	**00 10 03.7**	**+1.1**
TRQA				pmax	pmax		
	comp=Z,26nm,1.0s						
COYC	**Coyhaique**	**27.45**	**273**	P	**P**	**00 10 07.8**	**+0.4**
COYC				IAmb	IAmb	00 10 27.9	
	comp=Z,49nm,1.2s						
PLTB	**Pedras Altas**	**28.25**	**317**	P	**P**	**00 10 15.3**	**+0.5**
PLTB	**Pedras Altas**	**28.25**	**317**	*e*P	**P**	**00 10 15.1**	**+0.4**
AY01	**Puyuhuapi**	**28.45**	**275**	P	**P**	**00 10 16.3**	**0.0**
LL02	**Futaleuf**	**28.75**	**277**	P	**P**	**00 10 19.3**	**+0.2**
CPUB	**Cacapava Do Su**	**29.40**	**318**	*e*P	**P**	**00 10 25.9**	**+1.1**
CNLB	**Canela**	**29.44**	**323**	*e*P	**P**	**00 10 26.6**	**+1.2**
TER01	**Tubaro-SC**	**29.60**	**327**	*e*P	**P**	**00 10 27.0**	**+0.3**
PLCA	**Paso Flores**	**29.62**	**283**	P	**P**	**00 10 27.1**	**+0.2**
	comp=Z,7.8nm,0.9s,baz=137,slow=7.6,SNR=10						
	comp=Z,7.8nm,0.9s						
PLCA	**Paso Flores**	**29.62**	**283**	P	**P**	**00 10 27.4**	**+0.5**
PLCA	**Paso Flores**	**29.62**	**283**	P	**P**	**00 10 27.4**	**+0.5**
PLCA				pmax	pmax		
	comp=Z,15nm,1.0s						
PLCA	**Paso Flores**	**29.62**	**283**	*e*P	**P**	**00 10 29.0**	**+2.1**
RODS	**Rosario do Sul**	**30.14**	**315**	*e*P	**P**	**00 10 32.1**	**+0.7**
ALGR	**Alto Alegre (B**	**30.69**	**320**	*e*P	**P**	**00 10 37.3**	**+0.9**
UNIS	**Unistalda (Bra**	**31.22**	**317**	*e*P	**P**	**00 10 41.5**	**+0.5**
ITQB	**Itaqui**	**31.32**	**314**	P	**P**	**00 10 42.1**	**+0.3**
ITQB	**Itaqui**	**31.32**	**314**	*e*P	**P**	**00 10 42.4**	**+0.6**
ITAB	**Concordia**	**31.79**	**323**	*e*P	**P**	**00 10 47.7**	**+1.7**
CRSM	**Crissiumal (Br**	**32.24**	**320**	*e*P	**P**	**00 10 50.3**	**+0.3**
FRBT	**Francisco Belt**	**33.27**	**322**	*e*P	**P**	**00 10 59.8**	**+0.7**
PARB	**Paraibuna**	**33.54**	**335**	*e*P	**P**	**00 11 02.0**	**+0.5**
DUB01	**Friburgo-RJ**	**34.07**	**341**	*e*P	**P**	**00 11 06.7**	**+0.6**
PTGB	**Pitanga**	**34.09**	**325**	*e*P	**P**	**00 11 06.5**	**+0.3**
VAO	**Valinhos**	**34.20**	**333**	*e*P	**P**	**00 11 08.0**	**+0.7**
LMEL	**Las Melosas**	**34.42**	**292**	P	**P**	**00 11 09.4**	**+0.3**
GO05	**Huala**	**34.47**	**289**	P	**P**	**00 11 09.5**	**+0.1**
GO05				IAmb	IAmb	00 11 38.1	
	comp=Z,101nm,2.0s						
BO01	**Tunca**	**34.48**	**290**	P	**P**	**00 11 10.7**	**+1.3**
CPUP	**Villa Florida**	**34.56**	**316**	P	**P**	**00 11 10.3**	**+0.1**
	comp=Z,66nm,0.9s,baz=155,slow=8.1,SNR=101						
CPUP				PcP	**PcP**	**00 13 44.8**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=55,slow=1.0,SNR=3.2						
	comp=Z,66nm,0.9s						
CPUP	**Villa Florida**	**34.56**	**316**	P	**P**	**00 11 10.3**	**+0.1**
CPUP	**Villa Florida**	**34.56**	**316**	P	**P**	**00 11 10.3**	**+0.1**
CPUP				pmax	pmax		
	comp=Z,79nm,1.0s						
CPUP	**Villa Florida**	**34.56**	**316**	*e*P	**P**	**00 11 10.1**	**0.0**
MT03	**Universidad Ad**	**34.85**	**292**	P	**P**	**00 11 12.2**	**-0.6**
MT03				IAmb	IAmb	00 11 17.6	
	comp=Z,35nm,0.8s						
MT09	**Talagante**	**34.89**	**291**	IAmb	IAmb	00 11 14.3	
	comp=Z,31nm,0.8s						
RCLB	**Rio Claro- Sao**	**34.90**	**333**	*e*P	**P**	**00 11 13.9**	**+0.6**
MT01	**Popeta**	**34.97**	**291**	IAmb	IAmb	00 11 14.1	
	comp=Z,27nm,0.9s						
MCR1	**Marechal Candi**	**35.01**	**322**	*e*P	**P**	**00 11 14.4**	**+0.3**
MT05	**Renca**	**35.05**	**292**	P	**P**	**00 11 13.9**	**-0.6**
MT05				IAmb	IAmb	00 11 18.3	
	comp=Z,34nm,1.0s						
QSPA	**South Pole Qui**	**35.11**	**180**	P	**P**	**00 11 15.7**	**+0.9**
ALF01	**Guarapari-ES**	**35.23**	**344**	*e*P	**P**	**00 11 16.5**	**+0.5**
VA05	**Santo Domingo**	**35.32**	**291**	P	**P**	**00 11 16.6**	**-0.1**
VA05				IAmb	IAmb	00 11 18.5	
	comp=Z,53nm,1.0s						
MT02	**Curacav**	**35.37**	**292**	P	**P**	**00 11 16.7**	**-0.4**
MT02				IAmb	IAmb	00 11 18.6	
	comp=Z,27nm,0.8s						
ZON	**Zonda**	**35.41**	**296**	P	**P**	**00 11 17.2**	**-0.4**
ZON				IAmb	IAmb	00 11 19.8	
	comp=Z,29nm,0.9s						
ZON	**Zonda**	**35.41**	**296**	P	**P**	**00 11 17.2**	**-0.4**
ZON				pmax	pmax		
	comp=Z,29nm,0.9s						
VA03	**San Esteban**	**35.44**	**293**	P	**P**	**00 11 18.1**	**+0.2**
VA03				IAmb	IAmb	00 11 21.8	
	comp=Z,69nm,1.0s						
ROC1	**El Roble**	**35.52**	**292**	P	**P**	**00 11 19.2**	**+0.4**
ROC1				IAmb	IAmb	00 11 31.3	
	comp=Z,49nm,0.9s						
VA01	**Torpederas**	**35.82**	**291**	P	**P**	**00 11 21.5**	**+0.5**
VA01				IAmb	IAmb	00 11 23.0	
	comp=Z,46nm,0.9s						
VA06	**Catapilco**	**35.99**	**292**	P	**P**	**00 11 23.1**	**+0.6**
TRCB	**Terra Rica**	**36.06**	**325**	P	**P**	**00 11 23.5**	**+0.3**
TRCB				IAmb	IAmb	00 11 24.6	
	comp=Z,60nm,1.1s						
TRCB	**Terra Rica**	**36.06**	**325**	*e*P	**P**	**00 11 23.5**	**+0.3**
RIB01	**Linhares ES**	**36.45**	**345**	*e*P	**P**	**00 11 26.6**	**+0.1**
BB19B	**Bebedouro**	**36.46**	**332**	*e*P	**P**	**00 11 27.4**	**+0.8**
PCMB	**Pacaembu**	**36.73**	**328**	*e*P	**P**	**00 11 29.9**	**+0.9**
CO02	**Combarbal**	**36.89**	**294**	P	**P**	**00 11 31.4**	**+1.0**
SJMB	**Sao Joao De Ma**	**37.17**	**344**	*e*P	**P**	**00 11 33.1**	**+0.4**
CO01	**Juntas del Tor**	**37.40**	**296**	P	**P**	**00 11 35.5**	**+0.7**
GO04	**Tololo Observa**	**37.61**	**295**	P	**P**	**00 11 36.5**	**-0.1**
GO04				IAmb	IAmb	00 11 45.9	
	comp=Z,40nm,0.9s						
NAN01	**Guarapari, ES**	**37.86**	**346**	*e*P	**P**	**00 11 38.5**	**0.0**
ANTJ	**Antonio Joao (**	**37.97**	**321**	*e*P	**P**	**00 11 39.0**	**-0.4**
DIAM	**Diamantina, MG**	**38.01**	**340**	*e*P	**P**	**00 11 40.4**	**+0.5**
CO05	**La Serena**	**38.04**	**295**	P	**P**	**00 11 39.5**	**-0.4**
CO05				IAmb	IAmb	00 11 41.7	
	comp=Z,63nm,0.8s						
ITRB	**Iturama**	**38.26**	**330**	*e*P	**P**	**00 11 43.0**	**+1.1**
PMNB	**Patos De Minas**	**38.36**	**336**	*e*P	**P**	**00 11 43.9**	**+1.1**
AC05	**El Transito**	**38.41**	**297**	P	**P**	**00 11 44.2**	**+1.0**
LCO	**Las Campanas**	**38.49**	**296**	P	**P**	**00 11 44.1**	**+0.1**
LCO				IAmb	IAmb	00 12 45.1	
	comp=Z,61nm,1.5s						
LCO	**Las Campanas**	**38.49**	**296**	P	**P**	**00 11 44.1**	**+0.1**
LCO				pmax	pmax		
	comp=Z,61nm,1.5s						
GUA01	**Guaratinga, BA**	**39.06**	**347**	*e*P	**P**	**00 11 48.7**	**+0.1**
AQDB	**Aquidauana**	**39.26**	**322**	P	**P**	**00 11 50.0**	**-0.2**
AQDB	**Aquidauana**	**39.26**	**322**	*e*P	**P**	**00 11 49.8**	**-0.4**
IPMB	**Ipameri, GO**	**39.32**	**334**	*e*P	**P**	**00 11 51.8**	**+0.9**
AC04	**Llanos de Chal**	**39.33**	**297**	P	**P**	**00 11 51.6**	**+0.8**
AC04				IAmb	IAmb	00 11 53.0	
	comp=Z,69nm,1.1s						
AC02	**Maricunga**	**39.47**	**300**	P	**P**	**00 11 52.5**	**0.0**
MC01	**Montes Claros**	**39.61**	**341**	*e*P	**P**	**00 11 53.6**	**+0.3**
C2SB	**Chapadao do Su**	**39.89**	**327**	*e*P	**P**	**00 11 56.4**	**+0.9**
GO02	**Mina Guanaco**	**41.09**	**301**	P	**P**	**00 12 06.5**	**+0.8**
GO02				IAmb	IAmb	00 12 07.5	
	comp=Z,57nm,0.8s						
JANB	**Januaria**	**41.28**	**341**	*e*P	**P**	**00 12 08.0**	**+0.9**
BDFB	**Brasilia**	**41.52**	**335**	P	**P**	**00 12 09.0**	**-0.1**
	comp=Z,6.2nm,0.7s,baz=141,slow=7.0,SNR=10						
BDFB				PcP	**PcP**	**00 14 07.4**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=175,slow=3.0,SNR=4.6						
	comp=Z,6.2nm,0.7s						
BDFB	**Brasilia**	**41.52**	**335**	P	**P**	**00 12 10.2**	**+1.1**
BDFB	**Brasilia**	**41.52**	**335**	P	**P**	**00 12 10.2**	**+1.1**
BDFB				pmax	pmax		
	comp=Z,36nm,1.4s						
BDFB	**Brasilia**	**41.52**	**335**	*e*P	**P**	**00 12 09.5**	**+0.4**
MATJ	**Matjiesfontein**	**41.85**	**80**	*e*P	**P**	**00 12 13.2**	**+1.5**
MATJ				IAmb	IAmb	00 12 13.7	
	comp=Z,47nm,1.1s						
MAW	**Mawson**	**42.19**	**145**	P	**P**	**00 12 14.0**	**0.0**
	comp=Z,18nm,0.8s,baz=235,slow=8.3,SNR=37						
	comp=Z,18nm,0.8s						
MAW	**Mawson**	**42.19**	**145**	P	**P**	**00 12 14.3**	**+0.4**
MAW	**Mawson**	**42.19**	**145**	P	**P**	**00 12 14.3**	**+0.4**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AF01	**San Pedro de A**	**42.28**	**304**	P	**P**	**00 12 16.3**	**+0.8**
PB15	**IPOC Station P**	**42.68**	**303**	P	**P**	**00 12 19.2**	**+0.6**
PB15				IAmb	IAmb	00 12 25.6	
	comp=Z,30nm,0.8s						
CVNA	**Calvinia**	**42.71**	**78**	*e*P	**P**	**00 12 19.1**	**+0.4**
CVNA				IAmb	IAmb	00 12 21.3	
	comp=Z,15nm,1.2s						
LVC	**Limon Verde**	**42.91**	**304**	P	**P**	**00 12 21.4**	**+0.7**
LVC				IAmb	IAmb	00 12 23.8	
	comp=Z,45nm,0.9s						
LVC	**Limon Verde**	**42.91**	**304**	P	**P**	**00 12 21.4**	**+0.7**
LVC				pmax	pmax		
	comp=Z,45nm,1.0s						
LVC	**Limon Verde**	**42.91**	**304**	*e*P	**P**	**00 12 22.0**	**+1.3**
PB10	**IPOC Station P**	**42.95**	**301**	P	**P**	**00 12 21.5**	**+1.0**
PB10				IAmb	IAmb	00 13 40.1	
	comp=Z,91nm,1.3s						
PB06	**IPOC Station P**	**43.15**	**303**	P	**P**	**00 12 22.8**	**+0.4**
FRAZ	**Fraserburg**	**43.30**	**80**	*e*P	**P**	**00 12 23.3**	**-0.2**
FRAZ				IAmb	IAmb	00 12 25.4	
	comp=Z,16nm,1.1s						
GRAN	**Grantham**	**43.46**	**81**	*e*P	**P**	**00 12 25.8**	**+1.1**
GRAN				IAmb	IAmb	00 12 26.9	
	comp=Z,9.8nm,0.9s						
SALV	**Santo Antonio**	**43.50**	**324**	*e*P	**P**	**00 12 25.5**	**+0.5**
SHEL	**Horse Pasture**	**43.73**	**37**	P	**P**	**00 12 28.6

H10N3 ASCENSION HYDR 49.01 22 T T 01 06 02.2
baz=192,slow=74
H10N2 ASCENSION HYDR 49.02 22 T T 01 06 03.5
baz=192
SWZ Schweizer 49.12 79 *e*P **P 00 13 07.6 -1.8**
SWZ IAmb IAmb 00 13 10.0
comp=Z,25nm,1.0s
RCBR Riachuelo 49.32 354 *e*P **P 00 13 11.2 +0.4**
SNKL Senekal, Frees 49.66 82 *e*P **P 00 13 12.6 -0.9**
SNKL IAmb IAmb 00 13 14.6
comp=Z,43nm,1.0s
PRYS Parys 50.46 81 *e*P **P 00 13 18.4 -1.2**
PRYS IAmb IAmb 00 13 20.1
comp=Z,29nm,1.0s
LBTB Lobatse 50.95 78 P **P 00 13 23.5 +0.3**
LBTB IAmb IAmb 00 13 24.3
comp=Z,42nm,1.1s
LBTB Lobatse 50.95 78 P **P 00 13 23.5 +0.3**
LBTB pmax pmax
comp=Z,42nm,1.1s
LBTB Lobatse 50.95 78 *e*P **P 00 13 22.6 -0.7**
LBTB IAmb IAmb 00 13 24.1
comp=Z,27nm,1.1s
KSR Koster 51.03 80 *e*P **P 00 13 22.7 -1.2**
KSR IAmb IAmb 00 13 24.6
comp=Z,57nm,1.1s
PRPB Parauapebas 51.08 336 *e*P **P 00 13 25.0 +0.9**
TSUM Tsumeb 51.28 66 P **P 00 13 26.0 +0.2**
TSUM IAmb IAmb 00 13 27.1
comp=Z,30nm,1.1s
TSUM Tsumeb 51.28 66⇓ *i*P **P 00 13 26.0 +0.2**
TSUM IAmb IAmb 00 13 26.9
comp=Z,17nm,1.1s
NWCL Newcastle 51.28 84 *e*P **P 00 13 26.0 +0.3**
NWCL IAmb IAmb 00 13 26.7
comp=Z,27nm,1.0s
HRAO HartRAO 51.45 80 *e*P **P 00 13 26.9 -0.1**
NPGB Novo Progresso 51.72 329 *e*P **P 00 13 28.6 -0.3**
SLR Silverton 51.91 81 *e*P **P 00 13 28.9 -1.5**
SLR IAmb IAmb 00 13 30.9
comp=Z,16nm,1.1s
POGA Pongola 52.62 85 P **P 00 13 35.1 -0.5**
POGA Pongola 52.62 85 *e*P **P 00 13 35.0 -0.6**
POGA IAmb IAmb 00 13 35.9
comp=Z,11nm,1.0s
CRLN Carolina, Mapu 52.69 82 *e*P **P 00 13 35.4 -0.9**
CRLN IAmb IAmb 00 13 36.8
comp=Z,10nm,1.0s
ETMB Extrema 53.00 315 P **P 00 13 38.2 -0.2**
ETMB IAmb IAmb 00 13 39.5
comp=Z,48nm,1.5s
ETMB Extrema 53.00 315 *e*P **P 00 13 38.6 +0.1**
LEPH Lephalale, Lim 53.09 79 *e*P **P 00 13 38.5 -0.7**
LEPH IAmb IAmb 00 13 39.8
comp=Z,28nm,1.3s
ROSB Rosrio 53.14 344 *e*P **P 00 13 39.6 +0.1**
ITTB Itaituba 54.38 329 *e*P **P 00 13 48.4 -0.1**
TMAB Tom-Au,PA,Br 54.38 339 *e*P **P 00 13 49.8 +1.2**
MOPA Mopani 55.40 82 *e*P **P 00 13 55.2 -0.7**
MOPA IAmb IAmb 00 13 56.6
comp=Z,13nm,1.0s
CASY Casey 55.49 162 P **P 00 13 56.6 +0.7**
CASY IAmb IAmb 00 13 57.6
comp=Z,29nm,0.9s
MUSN Musina, Limpop 55.49 79⇓ *i*P **P 00 13 56.3 -0.3**
MUSN IAmb IAmb 00 13 57.4
comp=Z,21nm,1.0s
NNA Nana 55.85 302⇑ *e*P **P 00 13 59.6 +0.3**
NNA pmax pmax
comp=Z,45nm,0.9s
MATP Matopo 56.21 77⇓ *i*P **P 00 14 01.3 -0.6**
MATP IAmb IAmb 00 14 02.3
comp=Z,53nm,1.1s
MALB Monte Alegre 56.36 332 *e*P **P 00 14 02.8 0.0**
BLWY Bulawayo 56.50 77⇓ *i*P **P 00 14 03.3 -0.7**
BLWY IAmb IAmb 00 14 04.1
comp=Z,88nm,1.1s
MACA Manacapuru-AM 57.07 324 IAmb IAmb 00 14 07.8
comp=Z,51nm,0.7s
MACA Manacapuru-AM 57.07 324 *e*P **P 00 14 07.7 -0.2**
MCPB Macapa, AP 57.22 335 *e*P **P 00 14 09.5 +0.6**
CZSB Cruzeiro do Su 57.65 309 P **P 00 14 11.3 -0.7**
CZSB IAmb IAmb 00 14 12.5
comp=Z,23nm,0.9s
CZSB Cruzeiro do Su 57.65 309 *e*P **P 00 14 12.8 +0.9**
LSZ Lusaka 60.20 73 P **P 00 14 29.7 -0.2**
LSZ IAmb IAmb 00 14 30.9
comp=Z,31nm,1.2s
LSZ Lusaka 60.20 73 P **P 00 14 29.7 -0.2**
LSZ pmax pmax
comp=Z,31nm,1.2s
LSZ Lusaka 60.20 73⇓ *i*P **P 00 14 29.6 -0.2**
LSZ IAmb IAmb 00 14 30.6
comp=Z,26nm,1.1s
BOAV Boa Vista 62.23 326 P **P 00 14 42.7 -0.7**
BOAV IAmb IAmb 00 14 43.6
comp=Z,33nm,0.9s
BOAV Boa Vista 62.23 326 *e*P **P 00 14 42.7 -0.7**
BOSC San Juan Bosco 64.34 305 P **P 00 14 57.7 +0.1**
BOSC IAmb IAmb 00 15 20.8
comp=Z,12nm,0.8s
ARNL Arenillas 64.73 304 P **P 00 15 00.7 +0.7**
LIC Lamto 64.89 29⇓ *i*P **P 00 15 00.5 -0.5**
comp=Z,119nm,1.0s
KIC Kosan Boka 65.10 29⇓ *i*P **P 00 15 02.0 -0.3**
comp=Z,29nm,0.9s
TIC Toumodi 65.30 29⇓ *i*P **P 00 15 03.2 -0.4**
comp=Z,89nm,1.0s
DBIC Dimbokro 65.37 29 P **P 00 15 03.9 -0.1**
comp=Z,22nm,0.9s,baz=193,slow=7.3,SNR=16
comp=Z,22nm,0.9s
DBIC Dimbokro 65.37 29 P **P 00 15 04.1 +0.1**
DBIC IAmb IAmb 00 15 04.9
comp=Z,29nm,0.9s
DBIC Dimbokro 65.37 29 P **P 00 15 04.1 +0.1**
DBIC pmax pmax
comp=Z,29nm,0.9s
DBIC Dimbokro 65.37 29 *e*P **P 00 15 04.1 +0.1**
PORT Chimborazo Vol 65.95 306 P **P 00 15 09.7 +1.1**
PORT IAmb IAmb 00 15 27.1
comp=Z,28nm,1.1s
CHSH Refugio Sur-Vo 65.97 306 P **P 00 15 09.0 +0.3**
CHSH IAmb IAmb 00 15 11.4
comp=Z,35nm,0.8s
SLOR San Lorenzo - 66.47 307 P **P 00 15 12.5 +0.7**
SLOR IAmb IAmb 00 15 47.2
comp=Z,13nm,1.0s
MACC Macarena, Meta 66.97 313 *e*P **P 00 15 13.8 -0.7**
PULU Pululahua 67.13 307 P **P 00 15 16.7 +0.8**
OTAV Otavalo 67.30 307 P **P 00 15 17.2 +0.2**
OTAV IAmb IAmb 00 15 21.6
comp=Z,26nm,1.1s
OTAV Otavalo 67.30 307 P **P 00 15 17.2 +0.2**
OTAV pmax pmax
comp=Z,27nm,1.1s
OTAV Otavalo 67.30 307 *e*P **P 00 15 18.4 +1.4**
OTAV Otavalo 67.30 307 *e*P **P 00 15 19.1 +2.0**
TULM Tulcn-Chalpat 67.42 308 P **P 00 15 17.4 -0.4**
ABPO Ambohimpanom 68.00 92 P **P 00 15 23.6 +2.5**
ABPO IAmb IAmb 00 15 24.5
comp=Z,30nm,1.4s
ABPO Ambohimpanom 68.00 92 P **P 00 15 23.6 +2.5**
ABPO pmax pmax
comp=Z,30nm,1.4s
BBAC Balboa, Cauca 68.34 309 *e*P **P 00 15 22.4 -0.9**
POPC Popayan, Colom 68.55 310 *e*P **P 00 15 25.0 +0.4**
PRAC Prado 68.82 312 *e*P **P 00 15 26.0 -0.1**
CHIC Chingaza 69.17 314 *e*P **P 00 15 26.2 -2.4**
ROSC El Rosal 69.60 313 P **P 00 15 32.2 +0.9**
comp=Z,6.8nm,0.4s,baz=6.7,slow=4.2,SNR=3.6
comp=Z,6.8nm,0.4s
ROSC El Rosal 69.60 313 P **P 00 15 31.7 +0.4**
ROSC IAmb IAmb 00 16 10.4
comp=Z,22nm,1.1s
ROSC El Rosal 69.60 313 P **P 00 15 31.7 +0.4**
ROSC pmax pmax
comp=Z,22nm,1.2s
YOTC Yotoco, Valle 69.69 311 *e*P **P 00 15 31.1 -0.5**
RUSC La Rusia 70.04 315 *e*P **P 00 15 33.9 -0.2**
RUSC *e*P **P 00 15 34.9 +0.7**
GUY2C Guyana, Caldas 70.39 312 *e*P **P 00 15 34.9 -1.3**
PLMC San Jos del P 70.49 311 *e*P **P 00 15 35.6 -0.8**
BAUV El Baul 70.90 321 P **P 00 15 38.4 -0.4**
BAUV IAmb IAmb 00 15 39.8
comp=Z,39nm,1.0s

PTBC PUERTO BERRIO, 71.19 314 *e*P **P 00 15 37.8 -2.8**
CBOC Ciudad Bolivar 71.23 312 *e*P **P 00 15 39.7 -1.4**
SOCV Socops 71.34 318 *e*P **P 00 15 41.6 +0.1**
BIRV Birongo 71.70 323 **P 00 15 44.1 +0.5**
BIRV IAmb IAmb 00 15 45.1
comp=Z,42nm,1.3s
SDV Santo Domingo 71.81 319 P **P 00 15 44.9 +0.4**
SDV IAmb IAmb 00 15 45.5
comp=Z,18nm,0.8s
SDV Santo Domingo 71.81 319 *e*P **P 00 15 45.6 +1.1**
ZARC Zaragoza, Cauc 72.22 314 *e*P **P 00 15 45.0 -1.7**
KOWA Kowa 73.07 27 P **P 00 15 52.0 +0.3**
KOWA IAmb IAmb 00 15 53.3
comp=Z,34nm,1.1s
TOA0 Torodi Ar. Sit 73.45 33 P **P 00 15 54.2 +0.2**
TOA0 IAmb IAmb 00 15 55.3
comp=Z,25nm,0.9s
TORD Torodi Ar. Bea 73.45 33 P **P 00 15 54.2 +0.2**
comp=Z,17nm,0.9s,baz=200,slow=6.4,SNR=70
comp=Z,17nm,0.9s
TORD Torodi Ar. Bea 73.45 33 IAmb IAmb 00 15 55.3
comp=Z,23nm,1.0s
MBAR Mbarara 73.79 67 P **P 00 15 57.6 +1.2**
MBAR IAmb IAmb 00 16 00.3
comp=Z,26nm,1.2s
MBAR Mbarara 73.79 67 *c e*P **P 00 15 59.8 +3.4**
MBAR pmax pmax
comp=Z,30nm,1.4s
KIBK Kibwezi 76.29 74 P **P 00 16 12.4 +1.8**
KIBK IAmb IAmb 00 16 15.7
comp=Z,26nm,1.2s
KMBO Kilima Mbogo 76.86 73⇓ *e*P **P 00 16 13.0 -1.1**
DRK0 Durika 77.46 307 P **P 00 16 18.2 +1.0**
SRBA San Rafael, Bu 77.48 307 P **P 00 16 17.9 +0.6**
PEZE Perez Zeledon, 77.76 307 P **P 00 16 19.7 +0.9**
PEZE IAmb IAmb 00 16 21.8
comp=Z,35nm,1.3s
JTS Las Juntas de 79.15 306 P **P 00 16 27.0 +0.6**
JTS IAmb IAmb 00 16 28.7
comp=Z,23nm,1.1s
JTS Las Juntas de 79.15 306⇑ *e*P **P 00 16 26.3 -0.1**
JTS pmax pmax
comp=Z,25nm,1.1s
LODK Lodwar 79.64 69 P **P 00 16 30.0 +0.8**
ESPN Las Esperanzas 80.52 308 P **P 00 16 33.0 -0.8**
ESPN IAmb IAmb 00 16 34.9
comp=Z,23nm,0.8s
ACON Acoyapa 80.72 307 P **P 00 16 34.7 -0.2**
ACON IAmb IAmb 00 16 35.6
comp=Z,37nm,0.9s
MATN Matagalpa 81.91 306 P **P 00 16 41.0 -0.3**
MATN IAmb IAmb 00 16 42.6
comp=Z,16nm,0.8s
TBI Tubuai 85.85 234 *e*LR LR 00 44 05.2
comp=Z,201nm,26.5s
PETF Flores 87.22 305 P **P 00 17 08.3 +0.3**
TEIG Tepich 89.36 308 P **P 00 17 18.4 +0.4**
PPT2 Papeete2 90.85 237 *e*LR LR 00 46 25.7
comp=Z,240nm,22.8s
H08S1 Diego Carcia H 91.48 105 T T 01 57 40.1
baz=214,slow=76,SNR=13
H08S2 Diego Garcia H 91.49 106 T T 01 57 41.3
baz=214,slow=76,SNR=12
H08S3 Diego Garcia H 91.50 105 T T 01 57 41.6
baz=214,slow=76,SNR=10
STKA Stephens Creek 93.11 174 P **P 00 17 36.3 +0.7**
comp=Z,1.9nm,0.8s,baz=87,slow=17,SNR=1.5
comp=Z,1.9nm,0.8s
TAOE Nuku Hiva Isla 93.41 249 *e*LR LR 00 47 36.7
comp=Z,169nm,25.1s
ESDC Sonseca Array 97.27 21 P Pdif 00 17 54.8 +0.6
comp=Z,1.7nm,1.0s,baz=183,slow=5.0,SNR=9.0
comp=Z,1.7nm,1.0s
ASAR Alice Springs 100.47 166 P **Pdif 00 18 07.7 -1.4**
comp=Z,1.4nm,0.9s,baz=175,slow=3.7,SNR=7.6
ASAR PP **PP 00 22 15.8 +1.2**
comp=Z,2.4nm,1.0s,baz=183,slow=8.5,SNR=7.4
ASAR PKKPbc **PKKPbc 00 34 22.2 +0.3**
comp=Z,0.8nm,1.0s,baz=351,slow=11,SNR=4.1
DZM Mont Dzumac 101.64 197 *e*LR LR 00 51 25.0
comp=Z,409nm,24.4s
WRA Warramunga Arr 104.20 166 Pdiff **Pdif 00 18 25.0 -0.6**
comp=Z,0.5nm,0.9s,baz=188,slow=4.4,SNR=1.7
WRA PP **PP 00 22 46.7 +4.1**
comp=Z,1.3nm,1.1s,baz=189,slow=6.0,SNR=5.1
WRA PKKPab **PKKPab 00 34 32.8 -2.2**
comp=Z,3.1nm,0.9s,baz=8.6,slow=4.8,SNR=10
TXAR Lajitas Array 104.39 301 Pdiff **Pdif 00 18 24.8 -1.4**
comp=Z,0.2nm,0.8s,baz=141,slow=5.8,SNR=2.0
BRTR Keskin Array B 109.42 48 PP **PP 00 23 20.6 -1.7**
comp=Z,1.1nm,0.9s,baz=156,slow=13,SNR=5.4
GERES GERESS Array B 110.23 30 PKiKP **PKiKP 00 22 51.7 -1.0**
comp=Z,0.3nm,0.6s,baz=194,slow=1.6,SNR=4.5
GERES PP **PP 00 23 27.7 -0.2**
comp=Z,0.9nm,0.9s,baz=189,slow=7.7,SNR=3.6
KRJI Kerinci 111.02 128 P **Pdif 00 19 07.7 +12**
MSU Marysvale 115.95 300 **PKiKP 00 23 04.9 +0.7**
MSU Marysvale 115.95 300 PKiKP **PKiKP 00 23 04.9 +0.7**
KBZ Khabaz 116.72 51 PKP **PKPdf 00 23 04.8 -0.3**
comp=Z,0.4nm,0.4s,baz=273,slow=2.5,SNR=3.8
KBZ Khabaz 116.72 51⇑ *i*PKiKP **PKPdf 00 23 04.6 -0.5**
PSUT Pine Spring 116.80 299 **PKiKP 00 23 06.7 +0.9**
KIV Kislovodsk 116.80 51 *i* PKiKP **PKPdf 00 23 05.1 -0.3**
KIV pmax pmax
comp=Z,3.0nm,1.1s
AKASG Malin Array Be 116.83 38 PKP **PKPdf 00 23 04.2 -0.9**
comp=Z,0.3nm,0.3s,baz=246,slow=1.2,SNR=2.5
AKASG PP **PP 00 24 13.1 -1.6**
comp=Z,0.3nm,0.5s,baz=202,slow=2.1,SNR=5.2
AKBB Malin Array Si 116.83 38⇑ *i*PKiKP **PKPdf 00 23 04.2 -0.9**
PDAR Pinedale Array 117.97 305 PKP **PKPdf 00 23 07.1 -0.8**
comp=Z,0.3nm,0.3s,baz=148,slow=5.3,SNR=1.9
NVAR Mina Array Bea 118.98 296 PKP **PKiKP 00 23 10.5 +0.5**
comp=Z,1.0nm,0.8s,baz=138,slow=2.9,SNR=7.9
NACGM Naroch 119.50 34 *e*PKP **PKiKP 00 23 10.8 +0.7**
comp=Z,8.0nm,0.9s,baz=214
MNK Minsk 119.52 35 *i* PKiKP **PKPdf 00 23 09.1 -1.0**
MNK *i* 00 24 38.9
MNK *i* PPP PPP 00 27 15.6
MNK *i* SS SS 00 40 58.1 +1.8
MNK *i* SSS SSS 00 45 18.5
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK MLR MLR
comp=E,9.0nm,20.0s
MNK MLR MLR
comp=Z,86nm,20.0s
MNK Minsk 119.52 35 *i* PKP **PKPdf 00 23 09.2 -1.0**
comp=E,1.0nm,0.9s
MNK *i* PKP **PKPdf 00 23 09.2 -1.0**
MNK *i* PKP **PKPdf 00 23 09.2 -1.0**
comp=Z,10.0nm,0.9s,baz=215
MNK *i* PP **PP 00 24 38.9 +5.6**
MNK *i* PPP PPP 00 27 15.6
MNK *i* SKS SKSac 00 29 49.4 -16
MNK *i* SKKS **SKKSac 00 31 37.0 +5.2**
MNK *i* SP SP 00 33 59.8 -20
MNK *i* PS **PS 00 34 10.7 -10**
MNK *i* SS **SS 00 40 58.1 +1.8**
MNK *i* SSS SSS 00 45 18.6
MNK *i* LQ LQ 01 07 55.4
MNK *i* LR LR 01 10 01.4
MNK *i* LRM MLR 01 14 07.9
comp=E,9.0nm,19.9s
MNK *i* LRM MLR 01 14 37.9
comp=Z,86nm,19.8s
MNK *i* LRM MLR 01 14 48.8
NB2 NORSAR Subarra 120.58 22 PKPdf **PKPdf 00 23 11.5 -0.6**
comp=Z,1.2nm,1.0s,baz=202,slow=1.9
NOA NORSAR Array B 120.58 22 PKP **PKiKP 00 23 12.2 0.0**
comp=Z,1.9nm,0.8s,baz=206,slow=1.9,SNR=15
VSR Storozhevoye 120.99 44 *e*PKiKP **PKPdf 00 23 10.8 -2.3**
VSR pmax pmax
comp=Z,4.0nm,0.6s
VORR Voronezh 121.36 43 *e*PKiKP **PKPdf 00 23 09.7 -4.1**
VORR pmax pmax
comp=Z,30nm,0.4s
LPSR Galich'ya Gora 121.97 43 *e*PKiKP **PKPdf 00 23 12.3 -2.6**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
VRH Novokhopyorsk 122.01 45 *e*PKiKP **PKPdf 00 23 13.1 -1.9**
VRH pmax pmax
comp=Z,10.0nm,0.7s
VSU Vasula 122.42 32⇑ *i*PKiKP **PKPdf 00 23 15.1 -0.5**

HEL Helsinki 123.31 30 PKiKP PKPdf 00 23 06.8 -10
K05A Summer Lake 123.48 298 **PKiKP 00 23 19.8 +1.1**
ICESG Greenland Ices 124.08 356 *e*P **PKPdf 00 23 17.4 -1.5**
G08A Pilot Rock 124.37 301 PKPdf **PKiKP 00 23 20.7 +0.4**
FINES FINESS Array B 124.66 29 PKP **PKPdf 00 23 19.5 -0.3**
comp=Z,8.3nm,0.8s,baz=165,slow=2.6,SNR=41
NIL Nilore 124.80 80 **PKPdf 00 23 21.0 -0.1**
NIL Nilore 124.80 80 PKiKP **PKPdf 00 23 21.0 -0.1**
BELG Belogornoye 125.35 47 *d i*PKiKP **PKPdf 00 23 21.4 0.0**
VALR Valaam 126.00 32 *d i*PKiKP **PKiKP 00 23 22.8 0.0**
DANN Dangsing 126.86 92 *e*P **PKPdf 00 23 25.0 -0.5**
comp=Z,60nm,0.9s
DMN Daman 127.07 94 *e*P **PKPdf 00 23 25.9 0.0**
GKN Gorkha 127.10 93 *e*P **PKPdf 00 23 25.5 -0.3**
comp=Z,40nm,1.0s
PKIN Phulchoki 127.21 94 *e*P **PKPdf 00 23 25.9 -0.3**
PKI Pulchoki 127.21 94 *e*P **PKPdf 00 23 25.4 -0.9**
comp=Z,26nm,0.9s
CMAR Chiang Mai Arr 127.49 114 PKP **PKPdf 00 23 26.8 +0.2**
comp=Z,8.7nm,0.9s,baz=233,slow=3.8,SNR=26
CMAR Chiang Mai Arr 127.49 114 PKPdf **PKiKP 00 23 27.0 -0.2**
SUMG Summit 127.53 357 PKPdf **PKiKP 00 23 26.1 0.0**
SUMG Summit 127.53 357 PKiKP **PKiKP 00 23 26.1 0.0**
SUMG Summit 127.53 357 *i* P **PKPdf 00 23 25.0 -0.6**
GUN Gumba 127.74 94 *e*P **PKPdf 00 23 26.5 -0.8**
KLMR Klimovskoe 128.38 36 *e*PKiKP **PKPdf 00 23 25.4 -1.5**
KLMR *e* 00 25 30.7
KLMR pmax pmax
comp=Z,11nm,1.2s
KLMR Klimovskoe 128.38 36 *e*PKPdf **PKPdf 00 23 25.5 -1.5**
KLMR AMP 00 23 27.7
comp=Z,11nm,1.2s
KLMR *e*PP **PP 00 25 30.7 -2.0**
MND Mandalay 128.88 108 PKPdf **PKPdf 00 23 29.3 +0.2**
KK31 Karatay Array 129.97 69 PKPdf **PKPdf 00 23 30.0 -0.6**
KK31 Karatay Array 129.97 69 PKiKP **PKPdf 00 23 30.0 -0.6**
KIRU Kiruna 130.40 43⇓ *e*PKiKP **PKiKP 00 23 31.4 -0.3**
KSH Kashi 130.51 77 PKP **PKPdf 00 23 31.4 -0.5**
ARCES ARCESS Array B 130.96 23 PKP **PKPdf 00 23 31.4 -0.2**
comp=Z,13nm,0.8s,baz=222,slow=1.6,SNR=45
ARCES PP **PP 00 25 47.6 -1.7**
comp=Z,2.6nm,1.0s,baz=212,slow=4.3,SNR=4.2
ARCES ARCESS Array B 130.96 23 PKPdf **PKPdf 00 23 31.7 0.0**
ARCES ARCESS Array B 130.96 23 PKiKP **PKPdf 00 23 31.7 0.0**
PRGR Permogore 131.04 38 *e*PKiKP **PKPdf 00 23 30.6 -1.4**
AAK Ala-Archa 131.82 72 PKPdf **PKiKP 00 23 35.2 -0.2**
AAK Ala-Archa 131.82 72 PKiKP **PKiKP 00 23 35.2 -0.2**
LVZ Lovozero 131.98 28 **PKPdf 00 23 33.3 -0.3**
LVZ Lovozero 131.98 28 *d e*PKiKP **PKPdf 00 23 33.5 -0.2**
ARU Arti 132.78 49 PKPdf **PKPdf 00 23 35.9 +0.4**
ARU Arti 132.78 49 *i* PKiKP **PKPdf 00 23 35.5 +0.1**
ARU SS SS 00 43 37.5 -4.8
YKA Yellowknife Ar 134.01 320 PKP **PKPdf 00 23 37.8 +0.2**
comp=Z,1.6nm,0.7s,baz=114,slow=3.3,SNR=6.8
PZH PanZhiHua 135.52 110 PKP **PKPdf 00 23 42.3 +0.5**
BRVK Borovoye 136.18 59 PKPdf **PKPdf 00 23 42.4 +0.4**
BRVK Borovoye 136.18 59⇑ *e*PKiKP **PKPdf 00 23 42.3 +0.4**
EUNU Eureka 138.54 348 **PKiKP 00 23 48.3 +0.5**
MKAR Makanchi Array 138.75 73 PKhKP PKPpre 00 23 38.2
comp=Z,2.6nm,0.9s,baz=253,slow=3.7,SNR=10
MKAR PP **PP 00 26 43.6 +4.4**
comp=Z,1.5nm,0.9s,baz=249,slow=5.1,SNR=4.1
MKAR Makanchi Array 138.75 73 *c e*PKiKP **PKiKP 00 23 48.4 -0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
GOMU GeErMu 138.95 94 PKP **PKPdf 00 23 45.3 -2.8**
GOMU AMB AMB
comp=Z,66nm,4.6s
KURBB Kurchatov Arra 138.97 66 PKhKP PKPpre 00 23 40.0
comp=Z,1.1nm,0.6s,baz=242,slow=4.6,SNR=5.2
KURK Kurchatov 139.06 66 PKPpre 00 23 43.1
KURK Kurchatov 139.06 66 PKiKP **PKPdf 00 23 43.1 -4.2**
WMQ Urumqi 139.94 80 *e*PKiKP **PKPdf 00 23 50.3 +1.0**
WMQ sPKP 00 24 02.5
DGZ Jazzator, Alta 143.23 72⇓ *e*PKiKP **PKPdf 00 23 55.0 -0.1**
INK Inuvik 143.69 322 PKPbc 00 23 52.6 -0.1
INK Inuvik 143.69 322 PKiKP **PKPbc 00 23 52.6 -0.1**
LZH Lanzhou 143.99 103 *e*PKP PKPbc 00 23 55.5 +0.7
LZH pPKP PKiKP 00 24 03.0 +2.6
LZH sPKP 00 24 08.3
ZALV Zalesovo Beam 144.00 65 PKP PKPab 00 23 53.7 +0.3
comp=Z,5.1nm,0.4s,baz=239,slow=3.9,SNR=36
ZALV PP **PP 00 27 10.5 -0.5**
comp=Z,0.7nm,0.5s,baz=263,slow=5.8,SNR=4.8
GTA Gaotai 144.03 95⇑ PKP PKPbc 00 23 55.0 +0.2
GTA AMB AMB
comp=Z,26nm,5.3s
GTA LR LR
comp=Z,62nm,20.0s
GTA LR LR
comp=Z,130nm,19.6s
GTA LR LR
comp=Z,97nm,19.3s
BERG Berg Lake 145.09 307 **PKPab 00 23 57.5 +0.2**
MCARA McCarthy VSAT 145.15 309 **PKPdf 00 23 57.8 -0.1**
BCAR Beaver Creek A 145.20 312 **PKPbc 00 23 57.6 0.0**
KAIM Kayak Island 145.25 306 **PKPdf 00 23 59.1 +1.1**
XAN Xi'an 145.26 111 PKPbc **PKPbc 00 23 58.4 -0.3**
XAN pPKP PKPbc 00 24 06.6 +3.7
WHN Wuhan 145.31 121⇑ PKPbc **PKPbc 00 23 58.3 -0.6**
H27K Steamboat Moun 146.05 317 P **PKPbc 00 24 00.3 0.0**
baz=106
EYAK Cordova Ski Ar 146.09 306 P **PKPbc 00 24 00.6 +0.2**
baz=111,SNR=18
G27K Doyon Strip 146.25 318 P **PKPbc 00 24 00.7 -0.1**
baz=105,SNR=12
J26L Joseph Creek 146.40 314 **PKPbc 00 24 01.3 -0.1**
J26L Joseph Creek 146.40 314 P **PKPbc 00 24 01.4 +0.1**
baz=107,SNR=51
SCRK Sand Creek 146.42 313 P **PKPbc 00 24 01.5 0.0**
baz=107,SNR=25
HARP HAARP 146.45 310 P **PKPbc 00 24 01.4 -0.1**
baz=108
I26K Coal Creek Min 146.45 315 PKPdf **PKPbc 00 24 01.2 -0.2**
I26K Coal Creek Min 146.45 315 P **PKPbc 00 24 01.2 -0.2**
baz=106,SNR=55
KLU Klutina 146.50 308 P **PKPbc 00 24 01.9 +0.2**
baz=109,SNR=28
E27K Coleen River 146.56 321 P **PKPbc 00 24 01.9 +0.2**
baz=103,SNR=44
P23K Montague Islan 146.67 305 P **PKPbc 00 24 02.1 0.0**
baz=110
RIDG Independent Ri 146.72 312 P **PKPbc 00 24 02.6 +0.4**
baz=107,SNR=69
PAX Paxson 146.76 311 P **PKPbc 00 24 02.4 -0.1**
baz=108
M24K Tolsona, Glenn 146.81 309 P **PKPbc 00 24 03.2 +0.6**
baz=108,SNR=18
GLI Glacier Island 146.83 307 P **PKPbc 00 24 02.8 +0.2**
baz=110,SNR=29
G26K Porcupine Rive 147.10 318 P **PKPbc 00 24 03.2 +0.1**
baz=103
K24K Donnelly Dome 147.13 312 P **PKPbc 00 24 03.5 +0.1**
baz=106
J25K Salcha River, 147.18 314 P **PKPbc 00 24 03.7 +0.1**
baz=105,SNR=24
SCM Sheep Creek Mo 147.24 308 P **PKPbc 00 24 04.3 +0.5**
baz=108,SNR=30
PWL Port Wells 147.40 306 P **PKPbc 00 24 04.2 0.0**
baz=109,SNR=19
F26K Sheenjek River 147.40 319 P **PKPbc 00 24 04.6 +0.5**
baz=101,SNR=18
M23K Glacier View 147.41 308 P **PKPbc 00 24 04.4 +0.2**
baz=108,SNR=15
PRP Porcupine Dome 147.46 315 P **PKPbc 00 24 04.4 0.0**
baz=104
LYN LuoYang 147.53 114⇓ PKPbc **PKPdf 00 24 02.5 -0.3**
LYN LR LR
comp=Z,160nm,12.5s
LYN LR LR
comp=Z,170nm,18.1s
C27K Jago River 147.57 323 P **PKPbc 00 24 05.0 +0.6**
baz=99
DHY Denali Highway 147.62 310 P **PKPbc 00 24 05.2 +0.2**
baz=106,SNR=35
KNK Knik Glacier 147.62 307 P **PKPbc 00 24 05.0 +0.2**
baz=108,SNR=8.1
WAT6 Susitna Watana 147.65 309 P **PKPbc 00 24 05.1 0.0**
baz=106,SNR=28
SEW Seward 147.67 304 P **PKPbc 00 24 05.5 +0.6**
baz=109
SML Sawmill 147.69 308 P **PKPbc 00 24 04.9 -0.1**
baz=107,SNR=33
H25K Birch Creek 147.75 316 P **PKPbc 00 24 05.4 +0.5**
baz=102

HDA	Harding Lake	147.79	313	P		PKPbc	00 24 05.0	-0.2
	baz=104,SNR=9.6							
ILAR	Eielson Array	147.85	313	PKPbc		PKPbc	00 24 05.2	-0.2
	comp=Z,31nm,0.8s,baz=128,slow=1.9,SNR=173							
ILAR	Eielson Array	147.85	313			PKPbc	00 24 05.5	+0.2
ILAR	Eielson Array	147.85	313	PKP2		PKPbc	00 24 05.5	+0.2
F25K	Christian Rive	147.94	319	P		PKPbc	00 24 06.0	+0.4
	baz=100,SNR=23							
E25K	Arctic Village	148.00	320	P		PKPbc	00 24 06.3	+0.6
	baz=100,SNR=45							
C26K	Camden Bay	148.03	323	P		PKPbc	00 24 06.2	+0.6
	baz=97,SNR=7.9							
WAT1	Susitna Watana	148.07	310	P		PKPbc	00 24 06.2	+0.2
	baz=106							
RC01	Rabbit Creek A	148.12	306	P		PKPbc	00 24 06.5	+0.4
	baz=108,SNR=16							
POKR	Poker Plat Res	148.15	314	P		PKPbc	00 24 06.0	-0.2
	baz=103,SNR=5.3							
BRSE	Bradley Lake S	148.17	303	P		PKPbc	00 24 06.5	+0.2
	baz=109							
COLA	College	148.27	314⇑	*e*PKP2		PKPbc	00 24 05.6	-0.8
COLA	College	148.27	314	P		PKPbc	00 24 06.9	+0.6
	baz=103							
TCOL	CIGO, UAF Yank	148.28	314	P		PKPbc	00 24 07.1	+0.8
	baz=103,SNR=6.5							
KDAK	Kodiak Island	148.41	299			PKPbc	00 24 07.4	+0.4
KDAK	Kodiak Island	148.41	299	PKP2		PKPbc	00 24 07.4	+0.4
KDAK	Kodiak Island	148.41	299	P		PKPbc	00 24 07.3	+0.4
	baz=111							
D25K	Kavik River	148.46	322	P		PKPbc	00 24 06.8	-0.1
	baz=97							
MCK	McKinley	148.47	311	P		PKPbc	00 24 07.3	+0.3
	baz=104,SNR=19							
H24K	Noodor Dome	148.49	315	P		PKPbc	00 24 07.1	+0.1
	baz=101,SNR=12							
M22K	Willow	148.49	307	P		PKPbc	00 24 07.3	+0.3
	baz=106,SNR=9.5							
G24K	Hadweenzic Riv	148.49	317	P		PKPbc	00 24 07.3	+0.4
	baz=100,SNR=11							
OHAK	Old Harbor	148.56	298	P		PKPbc	00 24 07.6	+0.2
	baz=111,SNR=8.1							
HOM	Homer	148.58	303	P		PKiKP	00 24 08.3	-0.5
	baz=108							
Q20K	Shuyak Island	148.60	301	P		PKPbc	00 24 07.7	+0.3
	baz=110							
SUA	Susitna One	148.69	307	P		PKPbc	00 24 07.9	+0.2
	baz=106							
NJ2	Nanjing	148.72	125	*e*PKPbc		PKPdf	00 24 04.8	0.0
NEA2	Nenana	148.72	313	P		PKPbc	00 24 07.3	-0.3
	baz=102,SNR=27							
CUT	Chulitna	148.73	308	P		PKPbc	00 24 08.0	+0.3
	baz=105,SNR=6.5							
SII	Sitkinak Islan	148.78	296	P		PKPbc	00 24 08.1	+0.1
	baz=112							
F24K	Squaw Lake	148.78	319	P		PKPbc	00 24 08.1	+0.4
	baz=99,SNR=40							
I23K	Minto, Yukon-K	148.96	314			PKPbc	00 24 07.7	-0.4
I23K	Minto, Yukon-K	148.96	314	P		PKPbc	00 24 07.7	-0.4
	baz=101,SNR=9.6							
TRF	Thorofare Moun	148.99	310	P		PKPbc	00 24 08.4	-0.1
	baz=103,SNR=11							
E24K	Your Creek	149.08	320	P		PKPbc	00 24 08.8	+0.3
	baz=97							
H23K	Yukon River	149.16	315	pPKPab		pPKPab	00 24 19.0	+4.1
H23K	Yukon River	149.16	315	P		PKPbc	00 24 08.7	0.0
	baz=100							
O20K	Slope Mountain	149.18	303	P		PKPbc	00 24 09.0	+0.1
	baz=107							
CHIR	Chirikof Islan	149.24	295	P		PKPbc	00 24 09.2	+0.1
	baz=112							
SPCR	Spurr Chakacha	149.30	306	P		PKPbc	00 24 08.9	-0.4
	baz=106							
D24K	Happy Valley	149.31	322	P		PKPbc	00 24 08.8	-0.1
	baz=95							
C24K	Franklin Bluff	149.32	323	P		PKPbc	00 24 09.0	+0.1
	baz=94							
Q19K	Cape Douglas,	149.32	301	P		PKPbc	00 24 08.9	-0.3
	baz=108							
P19K	Oil Pt	149.34	302	P		PKPbc	00 24 09.0	-0.3
	baz=108							
BPAW	Bear Paw Mtn.	149.44	311	P		PKPbc	00 24 09.3	-0.1
	baz=102,SNR=31							
G23K	Bananza Creek	149.49	317	P		PKiKP	00 24 10.3	-0.2
	baz=98,SNR=34							
MLY	Manley	149.51	313	P		PKPbc	00 24 09.5	-0.1
	baz=100,SNR=19							
TOLK	Toolik Lake Re	149.54	321	P		PKPbc	00 24 10.1	+0.5
	baz=95,SNR=51							
NRIK	Noril'sk	149.69	38	PKPbc		PKPbc	00 24 09.8	0.0
	comp=Z,16nm,0.8s,baz=39,slow=0.7,SNR=26							
NRIK	Noril'sk	149.69	38			PKPbc	00 24 10.2	+0.4
NRIK	Noril'sk	149.69	38	*de*PKP2		PKPbc	00 24 09.2	-0.6
PPLA	Purkeypile	149.71	309	P		PKPbc	00 24 10.3	0.0
	baz=103,SNR=13							
CAST	Castle Rocks	149.77	310	P		PKPbc	00 24 10.7	+0.4
	baz=102							
M20K	Styx River	149.90	307	pPKPab		pPKPab	00 24 20.6	+2.2
M20K	Styx River	149.90	307	P		PKPbc	00 24 10.2	-0.5
	baz=104							
H22K	Ishtalitna Cre	149.91	315	P		PKPbc	00 24 10.7	+0.1
	baz=98,SNR=18							
CHUM	Lake Minchumin	149.97	311	P		PKPbc	00 24 10.4	-0.3
	baz=101,SNR=5.5							
D23K	Nanushuk River	149.97	321	P		PKPbc	00 24 10.9	+0.3
	baz=94							
C23K	Itkillik River	149.99	323	P		PKPbc	00 24 10.9	+0.3
	baz=92							
I21K	Tanana	150.05	313	P		PKPbc	00 24 11.0	+0.2
	baz=99							
G22K	Bettles	150.10	317	P		PKPbc	00 24 11.2	+0.3
	baz=96							
P18K	Big Mountain,	150.24	301	P		PKPbc	00 24 11.1	-0.4
	baz=107							
N19K	Bonanza Creek	150.27	304	P		PKPbc	00 24 11.2	-0.4
	baz=105,SNR=28							
R17K	Ugashik Creek	150.28	298	P		PKPbc	00 24 11.8	+0.3
	baz=109,SNR=9.4							
O18K	Koktuh Hills	150.36	302	P		PKPbc	00 24 11.6	-0.2
	baz=106							
L20K	Farewell, AK	150.38	308	P		PKPbc	00 24 11.6	-0.1
	baz=102,SNR=7.8							
F22K	John River	150.42	318	P		PKPbc	00 24 11.8	+0.1
	baz=95							
H21K	Melozitna Rive	150.46	314	P		PKPbc	00 24 12.1	+0.3
	baz=98,SNR=19							
M19K	Big River Lodg	150.49	307	P		PKPbc	00 24 11.6	-0.4
	baz=103,SNR=9.1							
BTO	Baotou	150.61	103	*e*PKPbc		PKPbc	00 24 12.8	-0.3
K20K	Telida	150.64	309	P		PKPbc	00 24 11.9	-0.4
	baz=101,SNR=22							
Q16K	King Salmon	150.74	300	P		PKPbc	00 24 12.5	-0.1
	baz=107,SNR=6.8							
L19K	White Mountain	150.76	307	P		PKPbc	00 24 12.6	-0.1
	baz=102,SNR=6.4							
P17K	Kvichak River	150.78	301	P		PKPbc	00 24 12.8	+0.1
	baz=106,SNR=14							
J20K	Nowinta River	150.81	311			PKiKP	00 24 13.3	0.0
J20K	Nowinta River	150.81	311	P		PKPbc	00 24 12.9	+0.2
	baz=99,SNR=8.0							
G21K	Allakaket	150.84	316	P		PKPbc	00 24 12.8	+0.1
	baz=96,SNR=15							
HNS	HongShan	150.88	113	⇑PKPbc		PKPbc	00 24 13.5	-0.2
CHGN	Chignik	150.88	294	P		PKPbc	00 24 13.0	0.0
	baz=110							
F21K	Alatna River	150.90	317	P		PKiKP	00 24 13.3	-0.1
	baz=94,SNR=20							
N18K	Kilae Creek	150.90	304	P		PKPbc	00 24 13.0	-0.1
	baz=104,SNR=9.7							
CHNA	Chernabura Isl	150.97	291	P		PKPbc	00 24 13.2	-0.1
	baz=112,SNR=6.1							
TIA	Tai'an	151.22	118	*e*PKPbc		PKPdf	00 24 08.6	0.0
O17K	Koliganek Bris	151.26	302	P		PKPbc	00 24 13.8	0.0
	baz=105							
TTA	Tatalina	151.43	308	P		PKiKP	00 24 14.6	-0.1
	baz=100,SNR=10							
S14K	Fog Glacier	151.47	294	P		PKPbc	00 24 14.6	0.0
	baz=110							
P16K	Nushagak River	151.50	300	P		PKPbc	00 24 13.9	-0.5
	baz=106							
SDPT	Sand Point	151.63	292	P		PKPbc	00 24 14.7	-0.2
	baz=111,SNR=5.8							
HHC	Hu-ho-hao-te	151.64	105	*e*PKPbc		PKPdf	00 24 06.8	-2.4
O16K	Kokwok River B	151.70	301	P		PKiKP	00 24 15.2	-0.1
	baz=105							
MOY	Mondy	151.70	77	*e*PKIKP		PKiKP	00 24 15.8	+0.1
MOY				pmax		pmax		
	comp=Z,28nm,1.8s							
A21K	Barrow	151.94	326	P		PKiKP	00 24 15.4	0.0
	baz=84							
N16K	Nishlik Lake	152.24	303	P		PKiKP	00 24 16.9	+0.5
	baz=103,SNR=5.8							
ZAK	Zakamensk	152.41	81	*e*PKIKP		PKPbc	00 24 13.6	-3.3
ZAK				pmax		pmax		
	comp=Z,13nm,1.3s							
SONM	Songino Array	152.93	88	PKP		PKPdf	00 24 09.7	-1.3
	comp=Z,1.8nm,1.0s,baz=196,slow=2.4,SNR=9.1							
SONM				PKPbc		PKPbc	00 24 18.0	-0.2
	comp=Z,11nm,0.8s,baz=224,slow=3.3,SNR=43							
SONM	Songino Array	152.93	88	PKPdf		PKPdf	00 24 10.4	-0.5
SONM	Songino Array	152.93	88	PKIKP		PKPdf	00 24 10.4	-0.5
ULN	Ulaanbaatar	153.32	88			PKPbc	00 24 18.9	-0.2
ULN	Ulaanbaatar	153.32	88	PKIKP		PKPbc	00 24 18.9	-0.2
XLT	XiLinHaoTe	156.16	104	*i* PKP		PKPdf	00 24 15.3	-0.2
XLT				PKPab		PKPab	00 24 43.8	+0.4
KSRS	Korea Array	157.30	133	PKP		PKPdf	00 24 14.8	-2.3
	comp=Z,1.2nm,0.8s,baz=222,slow=1.4,SNR=2.5							
KSRS				PKPab		PKPab	00 24 46.9	-1.4
	comp=Z,3.0nm,0.8s,baz=224,slow=4.4,SNR=8.2							
MDJ	Mudanjiang	163.78	123	PKP		PKPdf	00 24 24.4	+0.5
MDJ				PP		PP	00 29 02.8	+0.5
MDJ				SKS		SKSdf	00 31 23.3	-4.7
MDJ				LR		LR		
	comp=Z,89nm,6.7s							
MDJ				LR		LR		
	comp=Z,150nm,5.4s							
MDJ				LR		LR		
	comp=Z,130nm,12.5s							
KLR	Kul'dur	167.96	112	PKP		PKPdf	00 24 26.9	-0.2
	comp=Z,0.8nm,0.6s,baz=79,slow=1.0,SNR=3.7							
KLR				PKPab		PKPab	00 25 33.7	-1.0
	comp=Z,4.9nm,1.0s,baz=247,slow=4.8,SNR=5.4							

*IDC **20** 00:15:37.4±0.4,54.°91S×31.°83W,h0km,mb4.9/19, mbtmp4.9/20,ML3.9/1,MS4.3/6, Error ellipse: s-maj=15.2km s-min=12.1km az=50.0*

*BJI **20** 00:15:39.5±0.0,55.°10S×32.°00W,h15km, mB5.3/6, Ms5.2/6, Ms7 5.0/7*

*MOS **20** 00:15:39.1±1.1,55.°02S×32.°07W,h18km, mb5.3/22, Error ellipse: s-maj=17.9km s-min=10.4km az=116.4*

*NEIC **20** 00:15:39.3±1.1,55.°06S±0.°08×32.°0W±0.°1,h10km±1km, mb5.3/131, Error ellipse: s-maj=14.4km s-min=13.0km az=228.0*

*GCMT **20** 00:15:44.3±0.2,54.°97S±0.°01×31.°94W±0.°02,h12km, MW5.3/127, Moment Tensor Solution. s68,c99; s127,c207; Duration: 1ꢀ1 Moment tensor: Scale 10^{17} Nm; Mrr0.58±.01; Mθθ-0.48±.01; Mϕϕ-0.09±.01; Mrθ-0.61±.04; Mθϕ0.45±.01; Mϕr0.43±.04; Best double couple: M0 1.00700×10^{17} NP1:ϕs305.00000°, δ69.00000°, λ92.00000°. NP2:ϕs120.00000°, δ21.00000°, λ86.00000°. Principal axes: T 0.9060, Plg66.0000°, Azm218.0000°; N 0.2010, Plg1.0000°, Azm124.0000°; P -1.1070, Plg24.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 00:15:39.0±0.2,55.°02S±0.°05×32.°03W±0.°05,h10km,n544, σ1ꢀ24/543,mb5.2/96,MS4.7/12,16C-2D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HOPE	Hope Point	2.69	284	Pn	Pn		00 16 21.2	-1.1
HOPE	Hope Point	2.69	284	P	Pn		00 16 21.2	-1.1
ORCD	Orcadas	8.86	225	Pn	Pn		00 17 43.7	-3.3
EFI	East Falkland	15.87	271	Pn	Pn		00 19 22.3	+0.1
EFI	East Falkland	15.87	271⇑	*e*P	Pn		00 19 22.9	+0.7
PMSA	Palmer Station	18.58	225	P	Pn		00 19 57.8	+1.8
	0.4nm,0.3s,baz=64,slow=12,SNR=6.9							
PMSA				LR	LR		00 26 15.8	
	comp=Z,1μm,18.9s,baz=70,slow=34							
	52nm,1.0s							
PMSA	Palmer Station	18.58	225	P	P		00 19 55.7	-0.1
PMSA	Palmer Station	18.58	225	*e*P	Pn		00 19 58.3	+2.2
VNA1	Neumayer--Stat	18.84	155	P	Pn		00 20 00.5	+1.3
VNA3	Neumayer Olymp	18.94	158	P	Pn		00 20 00.6	+0.2
VNA2	Neumayer--Watz	19.24	155	P	Pn		00 20 04.5	+0.5
	baz=313,slow=11							
MG01	Puerto William	20.30	256	P	P		00 20 12.3	-2.4
MG01				IAmb	IAmb		00 20 20.8	
	comp=Z,124nm,1.2s							
USHA	Ushuaia	20.78	255	P	P		00 20 20.8	+0.9
	comp=Z,47nm,0.9s,baz=106,slow=9.2,SNR=5.0							
	comp=Z,47nm,0.9s							
SNAA	Sanae	20.84	154	P	P		00 20 20.6	+0.1
SNAA	Sanae	20.84	154	P	P		00 20 20.8	+0.3
	comp=Z,8.1nm,0.8s,baz=313,slow=11,SNR=16							
SNAA				PcP	PcP		00 24 27.8	-0.7
	comp=Z,1.5nm,0.6s,baz=166,slow=9.2,SNR=2.5							
SNAA				LR	LR		00 27 13.3	
	comp=Z,335nm,18.1s,baz=312,slow=33							
	comp=Z,8.1nm,0.8s							
SNAA	Sanae	20.84	154	P	P		00 20 19.8	-0.7
SNAA	Sanae	20.84	154	P	P		00 20 19.8	-0.7
SNAA				pmax	pmax			
	comp=Z,137nm,1.9s							
SNAA	Sanae	20.84	154	*e*P	Pn		00 20 21.8	-1.2
SMAI	San Martin Ant	20.84	217	P	P		00 20 20.3	-0.2
MG02	Cerro Sombrero	21.86	260	P	P		00 20 31.6	+0.1
TROLL	Troll, Antarti	22.42	152	P	P		00 20 37.6	+0.1
GO10	Punta Arenas	22.77	258	P	P		00 20 40.9	-0.3
GO10				IAmb	IAmb		00 20 43.1	
	comp=Z,122nm,1.0s							
BELA	Belgrano 2	22.98	181	P	P		00 20 42.6	-0.7
MG04	Isla Riesco	23.16	259	P	P		00 20 43.8	-1.6
MG05	Puerto Natales	24.15	261	P	P		00 20 53.9	-1.1
MG05				IAmb	IAmb		00 20 56.6	
	comp=Z,81nm,0.8s							
GO09	Cerro Castillo	24.22	262	P	P		00 20 55.0	-0.7
GO09				IAmb	IAmb		00 21 11.0	
	comp=Z,86nm,1.1s							
NVL	N'lazarevskaya	24.64	147	*e*P	P		00 20 59.6	+0.3
NVL				*e*S	S		00 25 24.2	+4.0
NVL				pmax	pmax			
	comp=Z,13nm,0.8s							
TRQA	Tornquist	26.39	298	P	P		00 21 15.9	+0.4
TRQA				IAmb	IAmb		00 21 21.1	
	comp=Z,48nm,1.1s							
TRQA	Tornquist	26.39	298	P	P		00 21 15.9	+0.4
TRQA				pmax	pmax			
	comp=Z,48nm,1.1s							
COYC	Coyhaique	26.93	274	P	P		00 21 20.3	+0.1
PLTB	Pedras Altas	27.82	318	P	P		00 21 28.5	+0.2
PLTB	Pedras Altas	27.82	318	*e*P	P		00 21 28.9	+0.6
AY01	Puyuhuapi	27.93	275	P	P		00 21 28.9	-0.3
AY01				IAmb	IAmb		00 21 31.0	
	comp=Z,42nm,0.8s							
LL02	Futaleuf	28.23	278	P	P		00 21 30.9	-1.0
LL02				IAmb	IAmb		00 21 39.0	
	comp=Z,102nm,1.8s							
CPSB	Cacapava Do Su	28.96	319	*e*P	P		00 21 39.8	+1.3
CNLB	Canela	29.04	325	*e*P	P		00 21 41.5	+2.3
PLCA	Paso Flores	29.10	283	P	P		00 21 39.8	+0.1
	comp=Z,9.5nm,0.9s,baz=136,slow=9.6,SNR=15							
	comp=Z,9.5nm,0.9s							
PLCA	Paso Flores	29.10	283	P	P		00 21 39.8	+0.1
PLCA	Paso Flores	29.10	283	P	P		00 21 39.8	+0.1
PLCA				pmax	pmax			
	comp=Z,28nm,1.3s							
PLCA	Paso Flores	29.10	283	*e*P	P		00 21 40.4	+0.7
TER01	Tubaro-SC	29.21	328	*e*P	P		00 21 43.3	+2.5
RODS	Rosario do Sul	29.69	317	*e*P	P		00 21 45.3	+0.3
LL04	Puerto Octay	30.02	281	P	P		00 21 47.4	-0.4
ALGR	Alto Alegre (B	30.27	321	*e*P	P		00 21 51.6	+1.5
UNIS	Unistalda (Bra	30.79	318	*e*P	P		00 21 55.4	+0.8
ITQB	Itaqui	30.86	315	P	P		00 21 55.2	-0.1
ITQB	Itaqui	30.86	315	*e*P	P		00 21 55.6	+0.3
ITAB	Concordia	31.39	324	*e*P	P		00 22 01.3	+1.4
CRSM	Crissiumal (Br	31.82	321	*e*P	P		00 22 04.5	+0.8
FRBT	Francisco Belt	32.86	323	*e*P	P		00 22 13.7	+0.7
ML02	Panimavida	33.10	289	P	P		00 22 15.2	+0.2
ML02				IAmb	IAmb		00 22 30.3	
	comp=Z,28nm,0.8s							
PARB	Paraibuna	33.22	337	*e*P	P		00 22 17.5	+1.4
MAN01	Angra dos Reis	33.33	340	*e*P	P		00 22 18.7	+1.7
BO02	Sierra Bellavi	33.49	291	P	P		00 22 18.6	+0.2
PTGB	Pitanga	33.70	326	*e*P	P		00 22 20.6	+0.3
VAS01	Vassouras-RJ	33.79	341	*e*P	P		00 22 21.3	+0.2
DUB01	Friburgo-RJ	33.79	343	*e*P	P		00 22 23.0	+1.9
VAO	Valinhos	33.86	335	*e*P	P		00 22 23.1	+1.4
LMEL	Las Melosas	33.90	293	P	P		00 22 22.3	+0.2
CAM01	Campos-RJ	33.92	344	*e*P	P		00 22 23.9	+1.8
GO05	Huala	33.94	289	P	P		00 22 21.6	-0.7
GO05				IAmb	IAmb		00 22 23.2	
	comp=Z,31nm,0.8s							
BO01	Tunca	33.95	291	P	P		00 22 21.8	-0.5
CPUP	Villa Florida	34.11	317	P	P		00 22 23.4	-0.4
	comp=Z,36nm,0.9s,baz=156,slow=8.4,SNR=44							
	comp=Z,36nm,0.9s							
CPUP	Villa Florida	34.11	317	P	P		00 22 23.6	-0.2
CPUP				IAmb	IAmb		00 22 26.4	
	comp=Z,35nm,0.9s							
CPUP	Villa Florida	34.11	317	P	P		00 22 23.6	-0.2
CPUP				pmax	pmax			
	comp=Z,35nm,0.9s							
CPUP	Villa Florida	34.11	317	*e*P	P		00 22 24.0	+0.2
MT03	Universidad Ad	34.33	293	P	P		00 22 25.7	-0.1
MT03				IAmb	IAmb		00 22 30.1	
	comp=Z,48nm,0.9s							
MT09	Talagante	34.37	292	P	P		00 22 25.7	-0.5
MT09				IAmb	IAmb		00 22 27.2	
	comp=Z,33nm,0.8s							
MT01	Popeta	34.44	292	P	P		00 22 25.7	-0.9
MT01				IAmb	IAmb		00 22 27.6	
	comp=Z,32nm,0.8s							
MT05	Renca	34.53	293	P	P		00 22 27.6	+0.2
MT05				IAmb	IAmb		00 22 42.5	
	comp=Z,56nm,1.1s							
RCLB	Rio Claro- Sao	34.56	334	*e*P	P		00 22 29.3	+1.5
MCR1	Marechal Candi	34.59	323	*e*P	P		00 22 29.4	+1.4
PEL	Peldehue	34.70	293	IAmb	IAmb		00 22 30.6	
	comp=Z,36nm,0.8s							
VA05	Santo Domingo	34.80	291	P	P		00 22 30.2	+0.6
MT02	Curacav	34.85	292	P	P		00 22 30.1	0.0
ZON	Zonda	34.90	297	P	P		00 22 30.5	-0.2
ZON	Zonda	34.90	297	P	P		00 22 30.5	-0.2
ZON				pmax	pmax			
	comp=Z,19nm,0.8s							
VA03	San Esteban	34.92	294	P	P		00 22 31.1	+0.3
VA03				IAmb	IAmb		00 22 33.7	
	comp=Z,64nm,1.1s							
ALF01	Guarapari-ES	34.97	346	*e*P	P		00 22 32.7	+1.5
ROC1	El Roble	35.00	293	P	P		00 22 32.4	+0.7
QSPA	South Pole Qui	35.24	180	P	P		00 22 34.4	+1.1
QSPA				PcP	PcP		00 25 03.8	+0.1
	comp=Z,22nm,0.8s,baz=196,slow=3.1,SNR=43							
	comp=Z,5.0nm,0.8s,baz=150,slow=7.1,SNR=2.4							
	comp=Z,22nm,0.8s							
QSPA	South Pole Qui	35.24	180	P	P		00 22 33.7	+0.3
QSPA				IAmb	IAmb		00 22 40.9	
	comp=Z,27nm,0.8s							
VA01	Torpederas	35.30	292	P	P		00 22 34.3	+0.3
VA06	Catapilco	35.47	293	P	P		00 22 35.8	+0.3
TRCB	Terra Rica	35.67	326	P	P		00 22 37.5	+0.2
TRCB				IAmb	IAmb		00 22 39.9	
	comp=Z,23nm,0.8s							
TRCB	Terra Rica	35.67	326	*e*P	P		00 22 38.4	+1.1
BB19B	Bebedouro	36.11	333	*e*P	P		00 22 41.9	+0.8
RIB01	Linhares ES	36.21	347	*e*P	P		00 22 42.9	+1.0
PCMB	Pacaembu	36.36	329	*e*P	P		00 22 45.3	+2.1
CO02	Combarbal	36.38	295	P	P		00 22 44.2	+0.8
CO02				IAmb	IAmb		00 22 50.0	
	comp=Z,51nm,1.1s							
CO03	El Pedregal	36.50	295	P	P		00 22 45.5	+1.0
CO01	Juntas del Tor	36.88	297	P	P		00 22 48.6	+0.7
CO01				IAmb	IAmb		00 22 51.2	
	comp=Z,33nm,0.9s							
SJMB	Sao Joao De Ma	36.92	345	*e*P	P		00 22 48.5	+0.6
CO05	La Serena	37.52	296	P	P		00 22 53.0	0.0
ANTJ	Antonio Joao (	37.55	322	*e*P	P		00 22 53.0	-0.3
NAN01	Guarapari, ES	37.62	347	*e*P	P		00 22 54.4	+0.5
DIAM	Diamantina, MG	37.72	342	*e*P	P		00 22 55.8	+0.9
AC05	El Transito	37.90	298	P	P		00 22 56.5	+0.2
AC05				IAmb	IAmb		00 22 58.7	
	comp=Z,44nm,0.9s							
ITRB	Iturama	37.90	331	*e*P	P		00 22 57.9	+1.6
LCO	Las Campanas	37.98	297	P	P		00 22 57.2	0.0
LCO				IAmb	IAmb		00 23 14.7	
	comp=Z,44nm,1.2s							
LCO	Las Campanas	37.98	297	P	P		00 22 57.2	0.0
LCO				pmax	pmax			
	comp=Z,44nm,1.2s							
PMNB	Patos De Minas	38.04	337	*e*P	P		00 22 59.3	+1.7
AC04	Llanos de Chal	38.82	298	P	P		00 23 03.3	-0.6
AC04				IAmb	IAmb		00 23 06.2	
	comp=Z,56nm,1.0s							
GUA01	Guaratinga, BA	38.82	348	*e*P	P		00 23 04.6	+0.5
AQDB	Aquidauana	38.85	323	P	P		00 23 03.5	-0.7
AQDB	Aquidauana	38.85	323	*e*P	P		00 23 03.9	-0.3
GO03	Copiap	38.89	299	P	P		00 23 04.5	-0.1
AC02	Maricunga	38.97	301	P	P		00 23 04.9	-0.9
IPMB	Ipameri, GO	38.99	335	*e*P	P		00 23 07.2	+1.7
AC06	Mina Casimiro	39.15	299	P	P		00 23 05.5	-1.2
MC01	Montes Claros	39.32	342	*e*P	P		00 23 09.3	+0.7
C2SB	Chapadao do Su	39.51	328	*e*P	P		00 23 11.9	+2.1
CMC01	Camacan, BA	40.00	349

SIV San Ignacio 44.92 319 P **P** **00 23 53.1 -0.8**
comp=Z,17nm,0.9s,baz=156,slow=7.6,SNR=7.4
SIV LR LR 00 42 11.8
comp=Z,403nm,20.8s,baz=148,slow=36
comp=Z,17nm,0.9s
TA02 Huaiquique 45.01 305 P **P** **00 23 54.5 0.0**
GO01 Chusmiza 45.09 306 P **P** **00 23 56.0 +0.2**
GO01 IAmb IAmb 00 23 58.4
comp=Z,46nm,1.0s
SNDB Serra Nova Dou 45.53 333 *eP* **P** **00 23 59.5 +0.7**
KEIM Keimoes 45.97 77 *eP* **P** **00 24 04.3 +2.1**
KEIM IAmb IAmb 00 24 14.7
comp=Z,103nm,2.1s
NBRF Rio Formoso - 46.28 356 *eP* **P** **00 24 05.3 +0.6**
UPI Upington 46.39 77 *eP* **P** **00 24 04.0 -1.6**
UPI IAmb IAmb 00 24 16.7
comp=Z,12nm,1.4s
PB16 IPOC Station P 46.39 307 IAmb IAmb 00 24 49.7
comp=Z,51nm,1.9s
SBA Scott Base 46.88 185 P **P** **00 24 09.5 +0.8**
SBA Scott Base 46.88 185 P **P** **00 24 09.5 +0.8**
SBA pmax pmax
comp=Z,7.0nm,1.0s
PB18 Visviri 47.03 308 P **P** **00 24 11.7 +0.5**
VILB Vilhena 47.39 321 P **P** **00 24 12.6 -0.8**
VILB IAmb IAmb 00 24 15.8
comp=Z,38nm,0.9s
VILB Vilhena 47.39 321 *eP* **P** **00 24 13.7 +0.3**
VNDA Vanda 47.44 184 P **P** **00 24 13.6 +0.5**
comp=Z,2.9nm,0.7s,baz=184,slow=6.3,SNR=27
VNDA PcP **PcP** **00 25 43.9 +0.7**
comp=Z,3.6nm,1.0s,baz=198,slow=3.1,SNR=3.5
comp=Z,2.9nm,0.7s
VNDA Vanda 47.44 184 P **P** **00 24 13.2 +0.1**
VNDA Vanda 47.44 184 P **P** **00 24 13.2 +0.1**
VNDA pmax pmax
comp=Z,10.0nm,1.3s
PDRB Porto dos Gac 47.46 326 *eP* **P** **00 24 13.3 -0.6**
LPAZ La Paz 47.56 310 P **P** **00 24 15.9 +0.5**
comp=Z,24nm,0.7s,baz=140,slow=6.6,SNR=42
LPAZ LR LR 00 47 18.4
comp=Z,347nm,18.1s,baz=166,slow=40
comp=Z,24nm,0.7s
LPAZ La Paz 47.56 310 P **P** **00 24 15.6 +0.2**
LPAZ IAmb IAmb 00 24 20.8
comp=Z,32nm,0.9s
LPAZ La Paz 47.56 310 P **P** **00 24 15.6 +0.2**
LPAZ pmax pmax
comp=Z,32nm,1.0s
LPAZ La Paz 47.56 310 *eP* **P** **00 24 16.5 +1.1**
SMTB Santa Maria do 47.67 339 *eP* **P** **00 24 16.3 +0.8**
CLDB Colider 47.86 328 *eP* **P** **00 24 16.9 -0.1**
H10S2 ASCENSION HYDR 47.97 23 T T 01 16 24.0
baz=193,slow=74,SNR=15
H10S3 ASCENSION HYDR 47.98 23 T T 01 16 24.1
baz=27,slow=74,SNR=30
BOSA Boshof 48.46 81 P **P** **00 24 20.4 -1.3**
comp=Z,12nm,0.9s,baz=208,slow=7.5,SNR=17
comp=Z,12nm,0.9s
BOSA Boshof 48.46 81 P **P** **00 24 21.4 -0.3**
BOSA Boshof 48.46 81 P **P** **00 24 21.4 -0.3**
BOSA pmax pmax
comp=Z,14nm,0.9s
BOSA Boshof 48.46 81 *eP* **P** **00 24 21.9 +0.1**
BOSA IAmb IAmb 00 24 24.5
comp=Z,119nm,2.2s
H10N1 ASCENSION HYDR 49.09 23 T T 01 17 49.7
baz=192,slow=75,SNR=48
H10N3 ASCENSION HYDR 49.09 23 T T 01 17 49.5
baz=192,slow=75,SNR=49
H10N2 ASCENSION HYDR 49.10 23 T T 01 17 50.7
baz=192,slow=75,SNR=41
KSTD Kokstad 49.28 87 *eP* **P** **00 24 28.7 +0.7**
KSTD IAmb IAmb 00 24 33.6
comp=Z,236nm,2.5s
SWZ Schweizer 49.60 80 *eP* **P** **00 24 30.0 -0.5**
SWZ IAmb IAmb 00 24 50.3
comp=Z,15nm,1.0s
SNKL Senekal, Frees 50.15 83 *eP* **P** **00 24 35.7 +1.0**
SNKL IAmb IAmb 00 24 42.4
comp=Z,34nm,0.9s
PRPB Parauapebas 50.76 337 *eP* **P** **00 24 40.3 +1.2**
PRYS Parys 50.95 82 *eP* **P** **00 24 39.9 -0.8**
PRYS IAmb IAmb 00 24 47.9
comp=Z,12nm,1.0s
NPGB Novo Progresso 51.35 330 *eP* **P** **00 24 44.3 +0.6**
LBTB Lobatse 51.42 79 P **P** **00 24 43.4 -0.8**
comp=Z,16nm,0.7s,baz=214,slow=9.2,SNR=5.5
comp=Z,16nm,0.7s
LBTB Lobatse 51.42 79 P **P** **00 24 43.4 -0.8**
LBTB IAmb IAmb 00 24 47.9
comp=Z,19nm,0.8s
LBTB Lobatse 51.42 79 P **P** **00 24 43.4 -0.8**
LBTB pmax pmax
comp=Z,19nm,0.8s
LBTB Lobatse 51.42 79 *eP* **P** **00 24 43.9 -0.4**
LBTB IAmb IAmb 00 24 47.7
comp=Z,17nm,0.8s
KSR Koster 51.51 80 *eP* **P** **00 24 45.5 +0.5**
KSR IAmb IAmb 00 24 57.5
comp=Z,30nm,1.0s
TSUM Tsumeb 51.69 67 P **P** **00 24 46.0 -0.3**
TSUM Tsumeb 51.69 67 *eP* **P** **00 24 46.6 +0.3**
TSUM IAmb IAmb 00 24 47.7
comp=Z,182nm,2.9s
NWCL Newcastle 51.78 85 *eP* **P** **00 24 47.0 +0.1**
NWCL IAmb IAmb 00 24 55.0
comp=Z,64nm,1.8s
HRAO HartRAO 51.93 81 *eP* **P** **00 24 47.8 -0.3**
SLR Silverton 52.39 82 *eP* **P** **00 24 50.9 -0.6**
SLR IAmb IAmb 00 24 58.0
comp=Z,445nm,3.5s
ETMB Extrema 52.55 316 P **P** **00 24 52.2 -0.3**
ETMB IAmb IAmb 00 24 55.3
comp=Z,12nm,1.0s
ETMB Extrema 52.55 316 *eP* **P** **00 24 53.2 +0.6**
ROSB Rosrio 52.88 345 *eP* **P** **00 24 55.9 +0.9**
POGA Pongola 53.11 86 P **P** **00 24 56.7 0.0**
POGA Pongola 53.11 86 *eP* **P** **00 24 57.2 +0.5**
POGA IAmb IAmb 00 24 59.4
comp=Z,8.1nm,0.7s
LEPH Lephalale, Lim 53.57 80 *eP* **P** **00 24 59.2 -1.0**
LEPH IAmb IAmb 00 25 09.6
comp=Z,676nm,4.1s
ITTB Itaituba 54.01 330 *eP* **P** **00 25 03.1 -0.1**
TMAB Tom-Au,PA,Br 54.09 340 *eP* **P** **00 25 05.2 +1.4**
NNA Nana 55.36 303 *eP* **P** **00 25 13.9 +0.8**
NNA pmax pmax
comp=Z,34nm,1.0s
CASY Casey 55.76 163 P **P** **00 25 13.9 -1.5**
CASY IAmb IAmb 00 25 32.8
comp=Z,43nm,1.2s
MOPA Mopani 55.89 83 *eP* **P** **00 25 17.1 +0.3**
MOPA IAmb IAmb 00 25 20.7
comp=Z,8.3nm,0.9s
MUSN Musina, Limpop 55.97 80 *eP* **P** **00 25 16.6 -0.9**
MUSN IAmb IAmb 00 25 18.8
comp=Z,14nm,0.8s
MALB Monte Alegre 56.01 333 *eP* **P** **00 25 18.6 +0.8**
MACA Manacapuru-AM 56.67 325 IAmb IAmb 00 25 23.1
comp=Z,23nm,0.8s
MACA Manacapuru-AM 56.67 325 *eP* **P** **00 25 21.6 -0.9**
MATP Matopo 56.68 78 *eP* **P** **00 25 21.4 -1.3**
MATP IAmb IAmb 00 25 23.5
comp=Z,26nm,0.8s
MCPB Macapa, AP 56.89 336 *eP* **P** **00 25 24.8 +0.8**
BLWY Bulawayo 56.97 78 *eP* **P** **00 25 22.9 -1.8**
BLWY IAmb IAmb 00 25 27.4
comp=Z,65nm,1.1s
CZSB Cruzeiro do Su 57.17 310 P **P** **00 25 25.4 -0.6**
CZSB IAmb IAmb 00 25 26.8
comp=Z,21nm,1.0s
CZSB Cruzeiro do Su 57.17 310 *eP* **P** **00 25 26.4 +0.3**
ATAH Atahualpa 60.31 304 LR LR 00 53 48.4
comp=Z,224nm,19.1s,baz=150,slow=38
LSZ Lusaka 60.65 74 P **P** **00 25 49.8 -0.6**
LSZ IAmb IAmb 00 26 13.4
comp=Z,42nm,1.8s
LSZ Lusaka 60.65 74 P **P** **00 25 49.8 -0.6**
LSZ pmax pmax
comp=Z,42nm,1.8s
LSZ Lusaka 60.65 74 *eP* **P** **00 25 49.8 -0.6**
LSZ IAmb IAmb 00 25 53.8
comp=Z,10nm,1.1s
BOAV Boa Vista 61.85 327 P **P** **00 25 57.2 -1.0**
BOAV IAmb IAmb 00 25 58.8
comp=Z,16nm,1.0s
BOAV Boa Vista 61.85 327 *eP* **P** **00 25 58.0 -0.3**
BOSC San Juan Bosco 63.85 306 P **P** **00 26 11.9 0.0**
BOSC IAmb IAmb 00 26 14.9
comp=Z,28nm,1.3s
ARNL Arenillas 64.24 305 P **P** **00 26 15.0 +0.8**
LIC Lamto 65.03 30 *eP* **P** **00 26 18.6 -0.7**
comp=Z,146nm,0.8s
KIC Kosan Boka 65.25 30 *eP* **P** **00 26 19.9 -0.8**
comp=Z,32nm,0.8s
TIC Toumodi 65.44 30 *eP* **P** **00 26 21.1 -0.8**
comp=Z,81nm,0.8s
PORT Chimborazo Vol 65.46 307 P **P** **00 26 22.7 -0.2**
PORT IAmb IAmb 00 26 53.0
comp=Z,15nm,0.9s
DBIC Dimbokro 65.51 30 P **P** **00 26 21.2 -1.2**
comp=Z,29nm,0.8s,baz=208,slow=6.5,SNR=23
comp=Z,29nm,0.8s
DBIC Dimbokro 65.51 30 P **P** **00 26 21.6 -0.8**
DBIC Dimbokro 65.51 30 P **P** **00 26 21.6 -0.8**
DBIC pmax pmax
comp=Z,31nm,0.9s
DBIC Dimbokro 65.51 30 *eP* **P** **00 26 21.9 -0.5**
SLOR San Lorenzo - 65.98 307 P **P** **00 26 26.6 +0.5**
MACC Macarena, Meta 66.51 313 *eP* **P** **00 26 25.6 -3.3**
PULU Pululahua 66.65 308 P **P** **00 26 31.2 +1.0**
IMBA Imbabura, San 66.74 308 P **P** **00 26 31.2 +0.4**
FLOC Florencia 66.78 311 *eP* **P** **00 26 28.5 -2.1**
OTAV Otavalo 66.82 308 P **P** **00 26 32.5 +1.1**
OTAV IAmb IAmb 00 26 49.5
comp=Z,27nm,1.4s
OTAV Otavalo 66.82 308 P **P** **00 26 32.5 +1.1**
OTAV pmax pmax
comp=Z,27nm,1.4s
OTAV Otavalo 66.82 308 *eP* **P** **00 26 32.8 +1.4**
TULM Tulcn-Chalpat 66.94 309 P **P** **00 26 32.7 +0.4**
GCUF Volcan Galeras 67.20 310 *eP* **P** **00 26 34.2 +0.4**
PTGC Puerto Gaitan, 67.67 316 *eP* **P** **00 26 39.0 +2.8**
BBAC Balboa, Cauca 67.86 310 *eP* **P** **00 26 35.2 -2.5**
PTGL Punta Galera 68.02 307 *eP* **P** **00 26 41.9 +3.4**
POPC Popayan, Colom 68.08 311 *eP* **P** **00 26 38.1 -1.0**
CHIC Chingaza 68.71 315 *eP* **P** **00 26 42.6 -0.6**
ROSC El Rosal 69.14 314 P **P** **00 26 46.6 +0.7**
comp=Z,7.6nm,0.4s,baz=140,slow=11,SNR=5.6
ROSC LR LR 01 00 42.9
comp=Z,413nm,18.3s,baz=220,slow=39
comp=Z,7.6nm,0.4s
ROSC El Rosal 69.14 314 P **P** **00 26 46.2 +0.3**
ROSC IAmb IAmb 00 26 49.2
comp=Z,26nm,1.1s
ROSC El Rosal 69.14 314 P **P** **00 26 46.2 +0.3**
ROSC pmax pmax
comp=Z,26nm,1.2s
YOTC Yotoco, Valle 69.23 312 *eP* **P** **00 26 43.8 -2.3**
RUSC La Rusia 69.59 316 *eP* **P** **00 26 45.4 -3.4**
SPBC San Pablo de B 69.78 315 *eP* **P** **00 26 46.7 -2.8**
GUY2C Guyana, Caldas 69.93 313 *eP* **P** **00 26 49.7 -1.1**
NORC Norcasia 70.03 314 *eP* **P** **00 26 49.9 -1.1**
PLMC San Jos del P 70.03 312 *eP* **P** **00 26 49.6 -1.4**
SACV Santiago Islan 70.08 9 P **P** **00 26 52.1 +1.0**
BARC Barichara 70.27 316 *eP* **P** **00 26 50.4 -2.3**
BAUV El Baul 70.49 322 P **P** **00 26 53.1 -0.5**
PTBC PUERTO BERRIO, 70.74 315 *eP* **P** **00 26 51.5 -3.7**
CBOC Ciudad Bolivar 70.77 313 *eP* **P** **00 26 54.8 -0.9**
SOCV Socops 70.91 319 *eP* **P** **00 26 56.3 0.0**
BIRV Birongo 71.30 324 P **P** **00 26 59.2 +0.6**
BIRV IAmb IAmb 00 27 04.0
comp=Z,23nm,0.9s
SDV Santo Domingo 71.38 319 P **P** **00 26 59.4 0.0**
SDV IAmb IAmb 00 27 00.8
comp=Z,21nm,0.8s
SDV Santo Domingo 71.38 319 *eP* **P** **00 26 56.3 -3.0**
SDV Santo Domingo 71.38 319 *eP* **P** **00 27 00.0 +0.7**
ZARC Zaragoza, Cauc 71.77 315 *eP* **P** **00 26 59.2 -2.3**
UREC San Jos de Ur 72.28 314 *eP* P 00 26 58.2 -6.3
SVB Belmont 72.37 330 P **P** **00 27 04.0 -1.0**
KOWA Kowa 73.20 28 P **P** **00 27 09.5 -0.4**
KOWA IAmb IAmb 00 27 12.8
comp=Z,19nm,1.0s
BIM Bigot 73.50 331 P **P** **00 27 12.3 +0.6**
TOA0 Torodi Ar. Sit 73.63 34 P **P** **00 27 12.3 -0.2**
TOA0 IAmb IAmb 00 27 15.8
comp=Z,56nm,1.4s
TORD Torodi Ar. Bea 73.63 34 P **P** **00 27 11.8 -0.6**
comp=Z,23nm,0.9s,baz=200,slow=4.8,SNR=67
comp=Z,23nm,0.9s
TORD Torodi Ar. Bea 73.63 34 IAmb IAmb 00 27 15.8
comp=Z,40nm,1.3s
SJCC San Jacinto, C 74.07 316 *eP* **P** **00 27 14.5 -0.6**
MBAR Mbarara 74.21 68 P **P** **00 27 16.8 +0.5**
MBAR Mbarara 74.21 68 *eP* **P** **00 27 16.7 +0.5**
CBE Ff, Capester 75.13 331 P **P** **00 27 19.5 -1.7**
GDHS Morne Mazeau, 75.37 331 P **P** **00 27 22.9 +0.3**
DRKG Durika 76.97 308 P **P** **00 27 32.5 +0.6**
SRBA San Rafael, Bu 77.00 308 P **P** **00 27 32.0 -0.1**
SRBA IAmb IAmb 00 27 34.6
comp=Z,26nm,1.3s
PEZE Perez Zeledon, 77.28 308 P **P** **00 27 33.5 0.0**
PEZE IAmb IAmb 00 27 36.1
comp=Z,29nm,1.1s
SMRT St. Maarten 77.43 330 P **P** **00 27 34.2 0.0**
SMRT IAmb IAmb 00 27 34.5
comp=Z,40nm,1.1s
RIMA Rio Macho 77.70 308 P **P** **00 27 36.1 0.0**
RIMA IAmb IAmb 00 27 40.5
comp=Z,36nm,1.6s
CVTR Volcan Turrial 77.88 308 P **P** **00 27 37.4 +0.1**
CVTR IAmb IAmb 00 30 26.0
comp=Z,22nm,0.6s
STVI Saint Thomas 78.27 328 P **P** **00 27 36.7 -2.2**
STVI IAmb IAmb 00 30 32.4
comp=Z,38nm,1.2s
CUPR Culebra, Puert 78.33 328 P **P** **00 27 39.2 +0.1**
CUPR IAmb IAmb 00 27 40.6
comp=Z,21nm,0.9s
HUMP Col San Antoni 78.35 327 P **P** **00 27 38.9 -0.4**
HUMP IAmb IAmb 00 27 43.6
comp=Z,33nm,1.1s
SJG San Juan 78.41 327 P **P** **00 27 39.1 -0.5**
SJG IAmb IAmb 00 28 21.4
comp=Z,52nm,1.7s
SJG San Juan 78.41 327 P **P** **00 27 39.1 -0.5**
SJG pmax pmax
comp=Z,52nm,1.7s
CBYP Canovanas 78.47 327 IAmb IAmb 00 27 42.0
comp=Z,23nm,1.1s
MLZ Mavora Lakes 78.54 194 P **P** **00 27 40.2 0.0**
MLPR Magueyes Islan 78.56 326 P **P** **00 27 39.8 -0.7**
JTS Las Juntas de 78.66 307 P **P** **00 27 41.4 +0.2**
JTS IAmb IAmb 00 27 43.7
comp=Z,22nm,0.9s
JTS Las Juntas de 78.66 307 *eP* **P** **00 27 42.4 +1.2**
JTS pmax pmax
comp=Z,23nm,1.0s
DUNO Dulce Nombre, 78.73 306 P **P** **00 27 42.1 +0.6**
RPZ Rata Peaks 79.70 197 P **P** **00 27 46.7 +0.1**
RPZ IAmb IAmb 00 30 37.8
comp=Z,44nm,1.2s
OXZ Oxford 79.91 198 P **P** **00 27 48.2 +0.4**
ESPN Las Esperanzas 80.04 308 P **P** **00 27 48.7 0.0**
ESPN IAmb IAmb 00 27 53.2
comp=Z,30nm,1.0s
ACON Acoyapa 80.24 307 P **P** **00 27 49.4 -0.3**
ACON IAmb IAmb 00 27 51.1
comp=Z,47nm,1.0s
BOAB BOACO BROADBA 80.88 307 P **P** **00 27 53.4 +0.2**
MSWZ Moikau Station 81.16 200 P **P** **00 27 53.8 -0.7**
TUWZ Tuamarina 81.40 199 P **P** **00 27 55.1 -0.6**
MATN Matagalpa 81.42 307 P **P** **00 27 56.3 +0.1**
MATN IAmb IAmb 00 27 57.7
comp=Z,19nm,0.9s
TGUH Tegucigalpa,Un 83.03 307 *eP* **P** **00 28 01.5 -3.1**
GRTK Grand Turk 83.22 324 P **P** **00 28 05.3 +0.1**
TAM Tamanrasset 83.89 34 P **P** **00 28 05.8 -3.1**
TAM IAmb IAmb 00 28 22.2
comp=Z,14nm,1.1s
TAM Tamanrasset 83.89 34 P **P** **00 28 05.8 -3.1**
TAM pmax pmax
comp=Z,14nm,1.1s
ESQI Esquipulas 84.44 305 P **P** **00 28 12.3 +0.5**
TBI Tubuai 85.51 235 *eLR* LR 00 55 15.0
comp=Z,559nm,29.8s
TEIG Tepich 88.88 309 P **P** **00 28 33.6 +0.4**
TEIG Tepich 88.88 309 *eP* **P** **00 28 31.3 -2.0**
PPT2 Papeete2 90.49 238 *eLR* LR 00 57 33.5
comp=Z,273nm,23.8s
TAOE Nuku Hiva Isla 92.98 250 *eLR* LR 00 58 43.0
comp=Z,414nm,28.5s
STKA Stephens Creek 93.28 175 P **P** **00 28 54.1 +0.2**
comp=Z,3.2nm,0.9s,baz=195,slow=5.2,SNR=3.7
comp=Z,3.2nm,0.9s
ESDC Sonseca Array 97.33 21 P **P** **00 29 11.2 -0.6**
comp=Z,0.8nm,0.8s,baz=189,slow=4.9,SNR=8.8
comp=Z,0.8nm,0.8s
HKT Hockley 100.69 308 *eP* **Pdif** **00 29 28.0 +1.1**
HKT pmax pmax
comp=Z,2.0nm,1.0s
ASAR Alice Springs 100.71 167 P **Pdif** **00 29 26.5 -1.1**
comp=Z,0.6nm,0.7s,baz=177,slow=3.5,SNR=7.4
ASAR PP **PP** **00 33 35.6 +1.7**
comp=Z,0.7nm,0.8s,baz=191,slow=8.5,SNR=2.6
DZM Mont Dzumac 101.61 197 *eLR* LR 01 02 42.0
comp=Z,737nm,25.4s
WVT Waverly 102.58 317 P **Pdif** **00 29 36.9 +1.6**
baz=151
WRA Warramunga Arr 104.44 167 Pdiff **Pdif** **00 29 43.4 -0.8**
comp=Z,0.3nm,0.8s,baz=173,slow=4.4,SNR=1.6
WRA PP **PP** **00 34 02.4 +0.6**
comp=Z,0.6nm,0.9s,baz=196,slow=6.3,SNR=2.5
WRA PKKPab **PKKPab** **00 45 48.9 -2.5**
comp=Z,0.6nm,0.8s,baz=15,slow=5.6,SNR=6.9
BRTR Keskin Array B 109.72 48 PKKPbc PKKPbc 00 45 12.0 -0.3
comp=Z,0.6nm,0.8s,baz=14,slow=2.0,SNR=4.6
GERES GERESS Array B 110.38 30 PP **PP** **00 34 44.6 -1.8**
comp=Z,0.2nm,0.3s,baz=191,slow=10.0,SNR=4.5
GERES PKKPbc **PKKPbc** **00 45 10.2 -0.1**
comp=Z,0.1nm,0.3s,baz=50,slow=1.7,SNR=5.0
S22A 4UR Ranch, Cre 112.25 304 P **PKiKP** **00 34 15.3 +0.7**
baz=143
CLL Collm 112.39 29 *eP*KiKP **PKiKP** **00 34 18.0 +4.0**
CLL MLR MLR
comp=Z,400nm,21.1s
CLL Collm 112.39 29 *eP*KiKP **PKiKP** **00 34 18.0 +4.0**
CLL *e*SKSac **SKSac** **00 41 06.0 +10**
CLL *e*SKKSac **SKKSac** **00 42 00.0 -1.6**
CLL *e*Sdif **Sdif** **00 42 46.0 +5.4**
CLL *e*PS **PS** **00 44 36.0 +2.4**
CLL *ex* x 00 44 45.0
CLL *e*(PKKPbc) 00 45 01.0
CLL *e*PKKPdf **PKKPdf** **00 45 26.0 +1.9**
CLL *e*PPS PPS 00 45 35.0
CLL *e*SS **SS** **00 50 45.0 +4.5**
CLL *e*SSS SSS 00 54 53.0
CLL Lm MLR 01 05 00.0
comp=Z,100nm,21.5s
CLL Lm MLR 01 15 00.0
comp=Z,400nm,21.1s
O20A White River Ci 114.81 305 P **PKiKP** **00 34 20.0 +0.7**
baz=142
MSU Marysvale 115.44 301 **PKiKP** **00 34 21.2 +0.6**
MSU Marysvale 115.44 301 PKiKP **PKiKP** **00 34 21.3 +0.6**
EDW2 Edwards Air Fo 115.60 295 P **PKiKP** **00 34 21.4 +0.5**
baz=141
MPMC Manual Prospec 116.24 296 P **PKiKP** **00 34 22.8 +0.6**
baz=140
TPNV Topopah Spring 116.28 297 P **PKiKP** **00 34 22.6 +0.4**
baz=140
ISA Isabella, Lake 116.45 295 P **PKiKP** **00 34 23.6 +1.1**
baz=140
CWC Cottonwood Cre 116.84 296 P **PKiKP** **00 34 23.7 +0.4**
baz=140
KBZ Khabaz 117.04 52 *i*PKiKP **PKPdf** **00 34 23.0 -0.1**
DUG Dugway, Tooele 117.06 302 P **PKiKP** **00 34 24.1 +0.5**
baz=140
KIV Kislovodsk 117.12 52 *e*PKiKP **PKiKP** **00 34 23.9 +0.4**
KIV pmax pmax
comp=Z,3.0nm,1.1s
PDAR Pinedale Array 117.48 306 PKP **PKPdf** **00 34 23.0 -1.4**
comp=Z,0.3nm,0.3s,baz=126,slow=2.6,SNR=4.3
NVAR Mina Array Bea 118.47 297 PKP **PKiKP** **00 34 26.8 +0.3**
comp=Z,1.1nm,0.9s,baz=182,slow=2.1,SNR=6.1
NVAR PKKPab **PKKPab** **00 44 44.4 -0.1**
comp=Z,0.2nm,0.5s,baz=232,slow=2.5,SNR=3.6
MNK Minsk 119.71 36 *i* PKiKP **PKiKP** **00 34 28.2 +0.2**
MNK *i* PPP PPP 00 38 23.6
MNK *i* SS SS 00 52 18.0 +1.8
MNK *i* SSS SSS 00 56 43.5
MNK pmax pmax
comp=Z,4.0nm,0.9s
MNK MLR MLR
comp=Z,390nm,19.0s
MNK MLR MLR
comp=E,6.0nm,19.0s
MNK Minsk 119.71 36 *i* PKP **PKiKP** **00 34 28.2 +0.2**
MNK *i* PKP **PKiKP** **00 34 28.2 +0.2**
MNK *i* PKP **PKiKP** **00 34 28.2 +0.2**
comp=Z,4.0nm,0.9s,baz=215
MNK *i* PPP PPP 00 38 23.6
MNK *i* SKKS 00 43 09.0
MNK *i* PS **PS** **00 45 27.2 -13**
MNK *i* SS **SS** **00 52 18.0 +1.8**
MNK *i* SSS SSS 00 56 43.6
MNK *i* LQ LQ 01 19 03.7
MNK *i* LRM MLR 01 23 39.1
comp=Z,390nm,19.4s
MNK *i* LRM MLR 01 24 02.2
comp=E,6.0nm,19.4s
MNK *i* LRM MLR 01 24 26.1
HLID Hailey 120.39 303 P **PKiKP** **00 34 30.7 +0.7**
baz=139
BOZ Bozeman (W) 120.61 307 P **PKiKP** **00 34 30.8 +0.5**
baz=139
NB2 NORSAR Subarra 120.66 23 PKPdf **PKiKP** **00 34 30.0 +0.2**
comp=Z,0.6nm,1.0s,baz=202,slow=1.9
NOA NORSAR Array B 120.66 23 PKP **PKPdf** **00 34 29.7 0.0**
comp=Z,0.9nm,0.9s,baz=205,slow=1.6,SNR=5.6
NOA PKKPbc **PKKPab** **00 44 33.3 +0.3**
comp=Z,0.8nm,1.0s,baz=26,slow=3.4,SNR=3.6
EGMT Eagleton 121.58 310 P **PKiKP** **00 34 32.9 +0.8**
baz=139
VORR Voronezh 121.62 44 *e*PKiKP **PKiKP** **00 34 33.8 +1.9**
VORR pmax pmax
comp=Z,20nm,0.4s
MSO Missoula 122.59 306 P **PKiKP** **00 34 34.5 +0.3**
baz=138
J05D Fort Rock, OR 123.55 299 P **PKiKP** **00 34 36.5 +0.3**
baz=136
PINE Pine Mountain 123.77 299 PKPdf **PKiKP** **00 34 37.5 +0.8**
G08A Pilot Rock 123.87 302 PKPdf **PKiKP** **00 34 37.2 +0.5**
I04A Tendick Farm, 124.51 299 P **PKiKP** **00 34 38.1 +0.1**
baz=136
FINES FINESS Array B 124.80 30 PKP **PKPdf** **00 34 37.5 0.0**
comp=Z,3.1nm,0.9s,baz=132,slow=2.8,SNR=9.8
G05D Wamic, OR 125.00 300 P **PKiKP** **00 34 39.3 +0.5**
baz=136
D08A Wollman Farm, 125.11 303 PKPdf **PKiKP** **00 34 39.6 +0.7**
VALR Valaam 126.16 32 *i*PKiKP **PKiKP** **00 34 40.6 +0.1**
SUMG Summit 127.38 358 *i* P **PKPdf** **00 34 42.0 -0.7**
CMAR Chiang Mai Arr 128.00 115 PKP **PKPdf** **00 34 45.1 0.0**
comp=Z,4.7nm,0.8s,baz=237,slow=3.7,SNR=19
CMAR Chiang Mai Arr 128.00 115 PKPdf **PKiKP** **00 34 45.5 -0.2**
CMAR Chiang Mai Arr 128.00 115 PKiKP **PKiKP** **00 34 45.5 -0.2**
KLMR Klimovskoe 128.58 36 *e*PKiKP **PKPdf** **00 34 44.0 -0.7**
KLMR *e* 00 36 50.8
KLMR pmax pmax
comp=Z,9.0nm,1.3s
KLMR Klimovskoe 128.58 36 *e*PKPdf **PKPdf** **00 34 44.1 -0.7**
KLMR AMP 00 34 55.4
comp=Z,9.0nm,1.3s
KLMR *e*PP **PP** **00 36 50.8 -0.7**
LLLB Lillooet 128.99 305 **PKPdf** **00 34 45.9 0.0**
ABKAR Akbulak array 129.09 58 PKPdf **PKPdf** **00 34 46.5 +0.3**
ABKAR Akbulak array 129.09 58 PKPdf **PKPdf** **00 34 46.1 0.0**
KKAR Karatay Array 130.41 70 PKPdf **PKPdf** **00 34 49.2 +0.3**
KKAR Karatay Array 130.41 70 PKiKP **PKPdf** **00 34 49.2 +0.3**
ARCES ARCESS Array B 131.04 23 PKP **PKPdf** **00 34 49.3 0.0**
comp=Z,7.1nm,0.9s,baz=232,slow=1.4,SNR=22
ARCES ARCESS Array B 131.04 23 PKPdf **PKPdf** **00 34 49.7 +0.5**
ARCES ARCESS Array B 131.04 23 PKiKP **PKPdf** **00 34 49.7 +0.5**
PRGR Permogore 131.26 38 *e*PKiKP **PKiKP** **00 34 50.4 -0.4**
AAK Ala-Archa 132.27 73 *i*PKiKP **PKPdf** **00 34 53.1 +0.5**
ARU Arti 133.08 50 **PKPdf** **00 34 52.8 -0.7**
ARU Arti 133.08 50 *i* PKiKP **PKPdf** **00 34 53.5 +0.1**
ARU 00 37 19.3
YKA Yellowknife Ar 133.59 321 PKP **PKPdf** **00 34 54.2 0.0**
comp=Z,3.4nm,0.7s,baz=122,slow=2.5,SNR=7.2
PZH PanZhiHua 136.04 111 PKP **PKPdf** **00 35 00.8 +0.6**
BRVK Borovoye 136.55 59 *e*PKiKP **PKiKP** **00 35 01.1 -0.7**

WRAK	Wrangell Islan	137.47	306	P		PKPdf	00 35 02.5 +0.9
	baz=123						
DLBC	Dease Lake	137.51	310	PKP		PKiKP	00 35 02.9 -0.8
	comp=Z,2.9nm,0.8s,baz=194,slow=7.0,SNR=3.0						
DLBC	Dease Lake	137.51	310	P		PKiKP	00 35 03.1 -0.6
	baz=122						
R33M	Jennings River	138.43	310	P		PKPdf	00 35 04.4 +0.8
	baz=121						
MKAR	Makanchi Array	139.20	73	PKhKP		PKPpre	00 35 00.7
	comp=Z,1.3nm,0.9s,baz=236,slow=5.4,SNR=4.7						
KURBB	Kurchatov Arra	139.38	66	PKhKP		PKPpre	00 34 57.7
	comp=Z,0.5nm,0.2s,baz=235,slow=4.2,SNR=5.5						
KURBB				PKP		PKPdf	00 35 04.8 -0.5
	comp=Z,0.4nm,0.2s,baz=236,slow=3.5,SNR=1.6						
GOMU	GeErMu	139.47	95	PKP		PKiKP	00 35 08.0 -0.8
GOMU				sPKP			00 35 12.3
KURK	Kurchatov	139.48	66⇓	*e*PKIKP		PKPdf	00 35 06.6 +1.1
P33M	Teslin, Yukon	139.65	311	P		PKPdf	00 35 06.6 +0.9
	baz=119						
WMQ	Urumqi	140.42	81	*e*PKP		PKPdf	00 35 08.6 +1.0
HYT	Haines Junctio	141.99	310	P		PKiKP	00 35 11.5 -1.4
	baz=116						
INK	Inuvik	143.28	322	PKP		PKPbc	00 35 09.5 +0.5
	comp=Z,8.5nm,1.1s,baz=51,slow=3.9,SNR=6.4						
INK	Inuvik	143.28	322			PKPbc	00 35 09.7 +0.7
INK	Inuvik	143.28	322	PKIKP		PKPbc	00 35 09.7 +0.8
DGZ	Jazzator, Alta	143.67	73⇓	*e*PKIKP		PKiKP	00 35 15.4 -1.3
ZALV	Zalesovo Beam	144.41	65	PKP		PKPab	00 35 12.3 -0.1
	comp=Z,19nm,0.9s,baz=244,slow=4.1,SNR=52						
ZALV	Zalesovo Beam	144.41	65	PKPdf		PKPab	00 35 12.1 -0.3
ZALV	Zalesovo Beam	144.41	65	PKIKP		PKPab	00 35 12.1 -0.3
CRQE	Cirque	144.47	308	P		PKPbc	00 35 13.3 +0.4
	baz=112						
LZH	Lanzhou	144.51	104	PKP		PKPab	00 35 03.8 -10
LZH				pPKP		PKiKP	00 35 23.1 +4.2
LZH				sPKP			00 35 30.4
M27K	Edge Creek, AK	144.52	311	P		PKPbc	00 35 13.4 +0.4
	baz=111						
GTA	Gaotai	144.54	96	*e*PKP		PKPdf	00 35 14.8 -0.3
GTA				LR		LR	
	comp=Z,61nm,18.5s						
GTA				LR		LR	
	comp=Z,130nm,16.7s						
GTA				LR		LR	
	comp=Z,100nm,21.4s						
MCARA	McCarthy VSAT	144.67	309	P		PKPbc	00 35 13.7 +0.3
	baz=112,SNR=7.8						
L27K	Beaver Creek,	144.75	312	P		PKPbc	00 35 14.1 +0.5
	baz=110						
KAIM	Kayak Island	144.76	306			PKPdf	00 35 15.0 +0.4
KAIM	Kayak Island	144.76	306	P		PKPdf	00 35 14.6 0.0
	baz=113						
M26K	Nabesna, AK	145.03	311	P		PKPbc	00 35 14.4 -0.2
	baz=110,SNR=8.2						
EGAK	Eagle	145.04	315	P		PKPbc	00 35 14.3 -0.1
	baz=108						
K27K	Chicken	145.18	314	P		PKPdf	00 35 15.8 +0.5
	baz=109						
BMRM	Bremner River	145.24	308	P		PKPdf	00 35 15.7 +0.2
	baz=111,SNR=19						
L26K	Log Cabin Wild	145.39	312	P		PKPab	00 35 16.0 +0.1
	baz=109						
N25K	Chitina, Valde	145.46	309	P		PKPab	00 35 16.5 +0.2
	baz=110,SNR=15						
I27K	Kandik River	145.47	316	P		PKPab	00 35 16.4 +0.2
	baz=107						
EYAK	Cordova Ski Ar	145.61	307	P		PKPab	00 35 17.1 +0.4
	baz=111						
H27K	Steamboat Moun	145.61	317	P		PKPab	00 35 16.9 +0.3
	baz=106						
XAN	Xi'an	145.78	112	PKPbc		PKPdf	00 35 17.4 +0.1
XAN				pPKP		PKiKP	00 35 22.1 +0.7
WHN	Wuhan	145.81	122	PKPbc		PKPbc	00 35 18.0 +0.1
G27K	Doyon Strip	145.82	318	P		PKPab	00 35 17.4 0.0
	baz=105,SNR=36						
J26L	Joseph Creek	145.94	314	P		PKPab	00 35 18.0 0.0
	baz=107						
SCRK	Sand Creek	145.96	313	P		PKPab	00 35 18.0 -0.1
	baz=108						
HARP	HAARP	145.97	310	P		PKPab	00 35 17.8 -0.2
	baz=109						
I26K	Coal Creek Min	146.00	316	P		PKPab	00 35 17.8 -0.3
	baz=106						
KLU	Klutina	146.02	308			PKPbc	00 35 17.4 -0.3
KLU	Klutina	146.02	308	P		PKPab	00 35 18.6 +0.3
	baz=110,SNR=32						
E27K	Coleen River	146.13	321	P		PKPbc	00 35 18.1 +0.2
	baz=103						
P23K	Montague Islan	146.18	305	P		PKPab	00 35 18.7 -0.1
	baz=111						
RIDG	Independent Ri	146.25	312	P		PKPab	00 35 19.3 +0.1
	baz=107						
PAX	Paxson	146.29	311	P		PKPbc	00 35 18.9 +0.3
	baz=108						
M24K	Tolsona, Glenn	146.33	309	P		PKPab	00 35 19.7 +0.2
	baz=109,SNR=14						
GLI	Glacier Island	146.34	307	P		PKPbc	00 35 19.0 +0.4
	baz=110,SNR=18						
G26K	Porcupine Rive	146.67	318	P		PKPbc	00 35 19.9 +0.5
	baz=103,SNR=5.2						
K24K	Donnelly Dome	146.67	312	P		PKPbc	00 35 20.0 +0.5
	baz=106						
J25K	Salcha River,	146.72	314	P		PKPbc	00 35 20.0 +0.3
	baz=106						
SCM	Sheep Creek Mo	146.76	308	P		PKPab	00 35 20.6 -0.6
	baz=108,SNR=31						
PWL	Port Wells	146.91	307	P		PKPbc	00 35 20.7 +0.4
	baz=109						
M23K	Glacier View	146.93	308	P		PKPbc	00 35 21.0 +0.7
	baz=108,SNR=18						
F26K	Sheenjek River	146.97	320	P		PKPab	00 35 21.3 -0.5
	baz=102,SNR=8.3						
PRP	Porcupine Dome	147.02	315	P		PKPbc	00 35 20.9 +0.3
	baz=104						
KNK	Knik Glacier	147.14	307	P		PKPbc	00 35 21.5 +0.6
	baz=108,SNR=6.1						
DHY	Denali Highway	147.15	311	P		PKPbc	00 35 21.8 +0.7
	baz=106						
C27K	Jago River	147.17	323	P		PKPbc	00 35 21.5 +0.8
	baz=99						
WAT6	Susitna Watana	147.17	310	P		PKPbc	00 35 21.7 +0.5
	baz=107						
SEW	Seward	147.18	305	P		PKPbc	00 35 21.5 +0.5
	baz=110						
SML	Sawmill	147.21	308	P		PKPbc	00 35 21.6 +0.4
	baz=108,SNR=20						
H25K	Birch Creek	147.31	317	P		PKPbc	00 35 22.1 +0.9
	baz=103						
HDA	Harding Lake	147.33	313	P		PKPbc	00 35 21.4 +0.1
	baz=105						
ILAR	Eielson Array	147.39	314	PKPbc		PKPbc	00 35 20.7 -0.8
	comp=Z,22nm,0.9s,baz=129,slow=1.9,SNR=83						
ILAR	Eielson Array	147.39	314			PKPbc	00 35 21.1 -0.4
ILAR	Eielson Array	147.39	314	PKP2		PKPbc	00 35 21.1 -0.4
PMR	Palmer	147.50	308	P		PKPbc	00 35 22.8 +1.0
	baz=108						
F25K	Christian River	147.51	319	P		PKPbc	00 35 22.6 +0.7
	baz=101,SNR=12						
E25K	Arctic Village	147.58	320	P		PKPbc	00 35 22.7 +0.7
	baz=100,SNR=24						
WAT1	Susitna Watana	147.60	310	P		PKPbc	00 35 22.6 +0.5
	baz=106						
C26K	Camden Bay	147.62	324	P		PKiKP	00 35 23.0 -0.9
	baz=98						
RC01	Rabbit Creek A	147.63	307	P		PKPbc	00 35 22.7 +0.5
	baz=108						
BRSE	Bradley Lake S	147.68	304	P		PKPbc	00 35 23.1 +0.7
	baz=109						
POKR	Poker Plat Res	147.70	314	P		PKPbc	00 35 22.5 +0.1
	baz=103						
CCB	Clear Creek Bu	147.75	313			PKPbc	00 35 22.4 0.0
COLA	College	147.82	314			PKPbc	00 35 22.7 +0.1
COLA	College	147.82	314*c*	*i*PKP2		PKPbc	00 35 22.0 -0.6
COLA	College	147.82	314	P		PKPbc	00 35 23.0 +0.4
	baz=103						
TCOL	CIGO, UAF Yank	147.82	314	P		PKPbc	00 35 23.4 +0.7
	baz=103						
WRH	Wood River Hil	147.82	313	PKPbc		PKiKP	00 35 23.9 -0.7
KDAK	Kodiak Island	147.90	300			PKPbc	00 35 23.3 +0.3
KDAK	Kodiak Island	147.90	300	PKP2		PKPbc	00 35 23.3 +0.3
KDAK	Kodiak Island	147.90	300	P		PKPbc	00 35 23.6 +0.5
	baz=111						
M22K	Willow	148.00	308	P		PKPbc	00 35 23.9 +0.7
	baz=107,SNR=7.9						
MCK	McKinley	148.00	312	P		PKPbc	00 35 23.8 +0.6
	baz=104						
H24K	Noodor Dome	148.04	316	P		PKPbc	00 35 23.8 +0.5
	baz=102						
G24K	Hadweenzic Riv	148.05	317	P		PKPbc	00 35 24.0 +0.8
	baz=101,SNR=5.7						
LYN	LuoYang	148.05	115	⇓PKPbc		PKPbc	00 35 22.9 -1.3
D25K	Kavik River	148.05	322	P		PKPbc	00 35 23.6 +0.3
	baz=98						
OHAK	Old Harbor	148.05	299	P		PKPbc	00 35 24.0 +0.6
	baz=112						
HOM	Homer	148.08	303	P		PKPbc	00 35 24.3 +0.8
	baz=109						
Q20K	Shuyak Island	148.10	301	P		PKPbc	00 35 24.3 +0.7
	baz=110						
SUA	Susitna One	148.21	307	P		PKPbc	00 35 24.8 +0.8
	baz=107						
CUT	Chulitna	148.25	309	P		PKPbc	00 35 24.5 +0.6
	baz=106,SNR=5.9						
NEA2	Nenana	148.26	313	P		PKPbc	00 35 23.9 +0.1
	baz=103						
SII	Sitkinak Islan	148.26	297	P		PKPbc	00 35 24.7 +0.6
	baz=112						
F24K	Squaw Lake	148.35	319	P		PKiKP	00 35 25.0 -0.6
	baz=99,SNR=14						
I23K	Minto, Yukon-K	148.50	314	P		PKPbc	00 35 24.4 0.0
	baz=102						
TRF	Thorofare Moun	148.52	311	P		PKPbc	00 35 25.2 +0.4
	baz=104,SNR=7.7						
E24K	Your Creek	148.65	320	P		PKPbc	00 35 25.5 +0.6
	baz=98						
H23K	Yukon River	148.71	315	P		PKPbc	00 35 25.2 +0.2
	baz=100						
CHIR	Chirikof Islan	148.73	295	P		PKPbc	00 35 25.5 +0.3
	baz=113						
SPCR	Spurr Chakacha	148.81	306	P		PKPbc	00 35 25.3 -0.1
	baz=106						
Q19K	Cape Douglas,	148.82	301	P		PKPbc	00 35 25.7 +0.2
	baz=109						
P19K	Oil Pt	148.84	303			PKPbc	00 35 25.3 -0.2
P19K	Oil Pt	148.84	303	P		PKPbc	00 35 25.6 +0.1
	baz=108						
D24K	Happy Valley	148.90	322	P		PKPbc	00 35 25.9 +0.5
	baz=96						
C24K	Franklin Bluff	148.91	323	P		PKiKP	00 35 26.1 -0.5
	baz=95						
BPAW	Bear Paw Mtn.	148.97	312	P		PKPbc	00 35 26.0 +0.3
	baz=102,SNR=30						
G23K	Bananza Creek	149.05	317	P		PKiKP	00 35 26.9 -0.2
	baz=99,SNR=33						
MLY	Manley	149.05	314	P		PKPbc	00 35 25.7 -0.3
	baz=101,SNR=14						
TOLK	Toolik Lake Re	149.12	321	P		PKiKP	00 35 26.7 -0.5
	baz=96						
NJ2	Nanjing	149.20	126	*e*PKPbc		PKPdf	00 35 24.1 +1.1
PPLA	Purkeypile	149.23	309	P		PKPbc	00 35 26.8 +0.2
	baz=103,SNR=15						
CAST	Castle Rocks	149.30	310	P		PKPbc	00 35 26.5 -0.1
	baz=102						
M20K	Styx River	149.42	307	P		PKPbc	00 35 27.1 +0.1
	baz=104						
H22K	Ishtalitna Cre	149.46	315	P		PKiKP	00 35 27.5 -0.5
	baz=99,SNR=20						
CHUM	Lake Minchumin	149.50	311	P		PKPbc	00 35 27.2 +0.3
	baz=102						
O19K	Port Alsworth	149.53	304	P		PKPbc	00 35 27.1 -0.1
	baz=106						
D23K	Nanushuk River	149.55	321	P		PKiKP	00 35 27.7 -0.3
	baz=94						
C23K	Itkillik River	149.58	323	P		PKiKP	00 35 27.8 -0.2
	baz=93						
I21K	Tanana	149.60	314	P		PKPbc	00 35 27.4 +0.2
	baz=100						
G22K	Bettles	149.66	317	P		PKiKP	00 35 28.5 +0.2
	baz=97						
P18K	Big Mountain,	149.74	302	P		PKPbc	00 35 27.5 -0.3
	baz=107						
R17K	Ugashik Creek	149.77	298	P		PKPbc	00 35 28.2 +0.4
	baz=109						
N19K	Bonanza Creek	149.77	305	P		PKPbc	00 35 27.6 -0.3
	baz=105						
O18K	Koktuh Hills	149.86	303	P		PKPbc	00 35 28.0 0.0
	baz=106						
L20K	Farewell, AK	149.90	308	P		PKPbc	00 35 27.8 -0.2
	baz=103						
NRIK	Noril'sk	149.91	38	PKPbc		PKPbc	00 35 27.3 -0.5
	comp=Z,5.3nm,1.0s,baz=205,slow=3.3,SNR=5.7						
NRIK	Noril'sk	149.91	38			PKiKP	00 35 28.5 -0.2
NRIK	Noril'sk	149.91	38	PKP2		PKiKP	00 35 28.5 -0.2
F22K	John River	149.98	318	P		PKiKP	00 35 29.1 +0.1
	baz=96						
M19K	Big River Lodg	150.00	307	P		PKPbc	00 35 28.5 +0.2
	baz=103						
H21K	Melozitna Rive	150.01	315	PKPbc		PKiKP	00 35 29.4 +0.3
H21K	Melozitna Rive	150.01	315	P		PKiKP	00 35 28.8 -0.2
	baz=98,SNR=18						
K20K	Telida	150.16	310	P		PKPbc	00 35 28.7 0.0
	baz=101,SNR=13						
Q16K	King Salmon	150.23	300	P		PKPbc	00 35 28.8 0.0
	baz=107						
L19K	White Mountain	150.28	307	P		PKPbc	00 35 29.1 +0.2
	baz=103						
P17K	Kvichak River	150.28	301	P		PKPbc	00 35 29.2 +0.3
	baz=107						
J20K	Nowinta River	150.35	311	P		PKiKP	00 35 29.6 -0.2
	baz=100,SNR=5.6						
CHGN	Chignik	150.36	295	P		PKiKP	00 35 29.9 -0.1
	baz=110						
G21K	Allakaket	150.40	316	P		PKiKP	00 35 29.7 -0.2
	baz=96,SNR=12						
N18K	Kilae Creek	150.41	304	P		PKPbc	00 35 29.3 0.0
	baz=104						
IMAR	Indian Mountai	150.44	315			PKiKP	00 35 29.9 -0.1
CHNA	Chernabura Isl	150.45	292	P		PKPbc	00 35 29.6 +0.1
	baz=112						
F21K	Alatna River	150.46	318	P		PKiKP	00 35 30.1 +0.1
	baz=95						
O17K	Koliganek Bris	150.76	302	P		PKPbc	00 35 30.2 +0.1
	baz=105						
S14K	Fog Glacier	150.95	294	P		PKPbc	00 35 31.0 +0.2
	baz=110						
TTA	Tatalina	150.95	309	P		PKiKP	00 35 31.4 +0.3
	baz=100						
P16K	Nushagak River	151.00	300	P		PKPbc	00 35 30.3 -0.4
	baz=106						
SDPT	Sand Point	151.11	292	P		PKPbc	00 35 30.8 -0.2
	baz=111						
BTO	Baotou	151.14	104	*e*PKPbc		PKPbc	00 35 31.8 0.0
O16K	Kokwok River B	151.20	301	P		PKPbc	00 35 30.8 -0.3
	baz=105						
HNS	HongShan	151.39	114	⇑PKPbc		PKPbc	00 35 32.5 +0.2
A21K	Barrow	151.55	326	P		PKiKP	00 35 33.1 +1.1
	baz=84						
TIA	Tai'an	151.73	119	⇑P		PKPbc	00 35 32.8 -0.4
TIA				pmax		pmax	
	comp=Z,26nm,1.0s						
N16K	Nishlik Lake	151.74	303	P		PKiKP	00 35 33.6 +0.8
	baz=103						
HHC	Hu-ho-hao-te	152.16	105	*e*PKPbc		PKPdf	00 35 24.3 -3.2
MOY	Mondy	152.17	77	*e*PKIKP		PKiKP	00 35 34.6 +0.5
MOY				pmax		pmax	
	comp=Z,22nm,2.3s						
ZAK	Zakamensk	152.89	81	*e*PKIKP		PKiKP	00 35 35.6 0.0
ZAK				pmax		pmax	
	comp=Z,8.0nm,1.4s						
SONM	Songino Array	153.43	88	PKPbc		PKPbc	00 35 36.8 +0.1
	comp=Z,2.9nm,0.6s,baz=211,slow=3.4,SNR=13						
SONM	Songino Array	153.43	88			PKPdf	00 35 29.4 +0.2
SONM						PKPbc	00 35 36.5 -0.3
SONM				PKPab		PKPab	00 35 45.7 -3.4
SONM	Songino Array	153.43	88	PKIKP		PKPbc	00 35 36.5 -0.3
SONM							00 35 45.7
XLT	XiLinHaoTe	156.69	105	*e*PKP		PKPdf	00 35 35.5 +1.9
XLT				PKPab		sPKPab	00 36 07.8 +2.6
XLT				PP		PP	00 39 42.4 +0.6
XLT				AMB		AMB	
	comp=Z,130nm,4.9s						
KSRS	Korea Array	157.76	134	PKP		PKPdf	00 35 35.0 0.0
	comp=Z,1.1nm,0.7s,baz=247,slow=2.6,SNR=4.9						
MDJ	Mudanjiang	164.27	124	PKP		PKPdf	00 35 41.5 -0.3
MDJ				PP		PP	00 40 21.3 -1.0
MDJ				SS		SS	01 00 49.0 -3.9
MDJ				AMB		AMB	
	comp=Z,100nm,4.8s						
MDJ				LR		LR	
	comp=Z,120nm,5.1s						
MDJ				LR		LR	
	comp=Z,120nm,6.2s						
MDJ				LR		LR	
	comp=Z,230nm,19.0s						
KLR	Kul'dur	168.48	114	PKPab		PKPab	00 36 53.7 -0.8
	comp=Z,2.3nm,0.7s,baz=288,slow=6.8,SNR=5.4						
SEY	Seymchan	171.74	346	PKPab		PKPab	00 37 05.7 -2.8
	comp=Z,4.7nm,1.0s,baz=8.4,slow=21,SNR=2.6						

IDC 20 00:16:50.3±4.9, 55°29S×32°00W, h0km, mb4.5/2, mbtmp4.5/2, Error ellipse: s-maj=165.2km s-min=58.2km az=178.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**47.75**	**310**	P	P	00 25 29.5	-0.2
	5.6nm,0.8s,baz=162,slow=7.1,SNR=1.0						
	5.6nm,0.8s						
H10N1	**ASCENSION HYDR**	**49.33**	**23**	T	T	01 18 58.0	
	baz=192						
H10N3	**ASCENSION HYDR**	**49.33**	**23**	T	T	01 19 00.7	
	baz=192						
H10N2	**ASCENSION HYDR**	**49.34**	**23**	T	T	01 19 01.8	
	baz=192						
TORD	**Torodi Ar. Bea**	**73.84**	**34**	P	P	00 28 26.6	0.0
	5.9nm,1.0s,baz=190,slow=6.0,SNR=1.3						
	5.9nm,1.0s						
ILAR	**Eielson Array**	**147.59**	**314**	PKPbc	PKPbc	00 36 34.3	-0.7
	4.4nm,0.9s,baz=122,slow=1.7,SNR=1.1						

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*IDC **20** 00:20:41.6±1.0, 54°.96S×31°.89W, h0km, mb4.0/7, mbtmp4.0/7, Error ellipse: s-maj=32.2km s-min=23.6km az=48.0*
*NEIC **20** 00:20:43.7±1.8, 55°.18S±0°.08×32°.2W±0°.1, h10km±1km, mb4.5/14, Error ellipse: s-maj=16.0km s-min=7.9km az=40.0*

ISC 20 00:20:43.0±0.7, 55°16S±0°.09×32°11W±0°.10, h10km, n30, σ0°95/25, mb4.3/11, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.68**	**287**		**Pn**	**00 21 25.9**	**-0.3**
ORCD	**Orcadas**	**8.73**	**225**	Pn	**Pn**	**00 22 48.4**	**-0.7**
ORCD				Sn	**Sn**	**00 24 26.2**	**-1.2**
SNAA	**Sanae**	**20.73**	**154**	P	Pn	00 25 25.5	-0.2
	0.8nm,0.8s,baz=305,slow=15,SNR=1.3						
	0.8nm,0.8s						
MG05	**Puerto Natales**	**24.08**	**261**	P	**P**	**00 25 58.5**	**+0.2**
MG05				IAmb	IAmb	00 26 10.5	
	comp=Z,13nm,1.1s						
GO05	**Huala**	**33.95**	**290**	P	**P**	**00 27 25.7**	**-0.5**
CPUP	**Villa Florida**	**34.18**	**317**	P	**P**	**00 27 27.4**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=150,slow=8.5,SNR=3.6						
	comp=Z,2.5nm,0.7s						
CPUP	**Villa Florida**	**34.18**	**317**	P	**P**	**00 27 28.3**	**0.0**
CPUP				IAmb	IAmb	00 27 30.2	
	comp=Z,3.4nm,0.9s						
MT09	**Talagante**	**34.38**	**292**	P	**P**	**00 27 30.7**	**+0.6**
MT09				IAmb	IAmb	00 27 33.1	
	comp=Z,5.2nm,0.6s						
MT01	**Popeta**	**34.45**	**292**	P	**P**	**00 27 30.9**	**+0.3**
MT01				IAmb	IAmb	00 27 43.6	
	comp=Z,13nm,1.1s						
MT02	**Curacav**	**34.86**	**293**	P	**P**	**00 27 35.3**	**+1.1**
MT02				IAmb	IAmb	00 27 40.6	
	comp=Z,10nm,1.1s						
QSPA	**South Pole Qui**	**35.10**	**180**	P	**P**	**00 27 37.7**	**+1.6**
	comp=Z,3.5nm,1.1s,baz=139,slow=7.1,SNR=2.6						
	comp=Z,3.5nm,1.1s						
QSPA	**South Pole Qui**	**35.10**	**180**	P	**P**	**00 27 38.3**	**+2.2**
CO01	**Juntas del Tor**	**36.91**	**297**	P	**P**	**00 27 53.1**	**+1.1**
AC05	**El Transito**	**37.92**	**298**	P	**P**	**00 28 01.2**	**+0.7**
PTLB	**Pontes e Lacer**	**44.78**	**322**	P	**P**	**00 28 56.8**	**+0.1**
PTLB				IAmb	IAmb	00 28 58.8	
	comp=Z,3.6nm,0.8s						
LPAZ	**La Paz**	**47.62**	**310**	P	**P**	**00 29 20.5**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=99,slow=4.2,SNR=3.4						
	comp=Z,1.4nm,0.6s						
LPAZ	**La Paz**	**47.62**	**310**	P	**P**	**00 29 20.6**	**+0.8**
LPAZ				IAmb	IAmb	00 29 27.3	
	comp=Z,3.2nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.12**	**23**	T	T	01 21 27.9	
	baz=192						
H10S3	**ASCENSION HYDR**	**48.12**	**23**	T	T	01 21 22.4	
	baz=28						
BOSA	**Boshof**	**48.53**	**81**	P	**P**	**00 29 25.2**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=190,slow=12,SNR=2.2						
	comp=Z,1.9nm,0.8s						
BOSA	**Boshof**	**48.53**	**81**	P	**P**	**00 29 26.1**	**-0.1**
ASCN	**Ascension**	**49.18**	**24**	P	**P**	**00 29 31.5**	**+0.4**
H10N3	**ASCENSION HYDR**	**49.23**	**23**	T	T	01 22 42.6	
	baz=193						
H10N1	**ASCENSION HYDR**	**49.23**	**23**	T	T	01 22 47.1	
	baz=193						
H10N2	**ASCENSION HYDR**	**49.25**	**23**	T	T	01 22 45.1	
	baz=193						
LBTB	**Lobatse**	**51.50**	**79**	P	**P**	**00 29 47.6**	**-1.1**
	comp=Z,3.5nm,1.0s,baz=227,slow=17,SNR=2.7						
	comp=Z,3.5nm,1.0s						
LBTB	**Lobatse**	**51.50**	**79**	P	**P**	**00 29 48.9**	**+0.1**
LBTB				IAmb	IAmb	00 29 49.4	
	comp=Z,6.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.77**	**34**	P	**P**	**00 32 16.3**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=199,slow=6.1,SNR=5.5						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**147.45**	**314**	PKPbc	**PKPbc**	**00 40 25.0**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=132,slow=2.0,SNR=5.7						
SONM	**Songino Array**	**153.48**	**89**	PKPbc	**PKPbc**	**00 40 39.7**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=242,slow=3.1,SNR=2.4						

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*IDC **20** 00:25:22.2±1.0, 54°.74S×31°.67W, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=45.4km s-min=24.7km az=64.0*

ISC 20 00:25:23.7±1.0, 54°.7S±0°.2×31°.8W±0°.3, h10km, n12, σ1°902/7, mb3.8/5, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**21.02**	**155**	P	**P**	**00 30 08.5**	**+1.3**
	0.5nm,0.6s,baz=308,slow=19,SNR=1.7						
	0.5nm,0.6s						
QSPA	**South Pole Qui**	**35.51**	**180**	P	**P**	**00 32 19.7**	**-0.7**
	1.5nm,1.0s,baz=11,slow=1.8,SNR=0.7						
	1.5nm,1.0s						
SIV	**San Ignacio**	**44.81**	**318**	P	**P**	**00 33 38.4**	**+0.6**
	0.8nm,0.6s,baz=155,slow=17,SNR=2.4						
	0.8nm,0.6s						
LPAZ	**La Paz**	**47.50**	**309**	P	**P**	**00 34 00.1**	**+0.5**
	1.5nm,0.9s,baz=142,slow

0.5nm,0.5s
LPAZ La Paz 47.54 310 P **P** **00 36 13.2 +0.5**
2.1nm,0.5s,baz=143,slow=5.1,SNR=10
2.1nm,0.5s
H10S2 ASCENSION HYDR 47.81 23 T T 01 28 20.6
baz=193
H10S3 ASCENSION HYDR 47.82 23 T T 01 28 15.5
baz=27
H10N1 ASCENSION HYDR 48.93 23 T T 01 29 43.3
baz=192,slow=75,SNR=9.7
H10N3 ASCENSION HYDR 48.93 23 T T 01 29 39.4
baz=192,slow=75,SNR=8.9
H10N2 ASCENSION HYDR 48.95 23 T T 01 29 38.5
baz=192,slow=75,SNR=7.3
DBIC Dimbokro 65.35 30 P **P** **00 38 18.3 -0.5**
3.5nm,0.8s,baz=184,slow=7.9,SNR=2.0
3.5nm,0.8s
TORD Torodi Ar. Bea 73.47 34 P **P** **00 39 09.3 +0.3**
1.0nm,0.6s,baz=199,slow=5.7,SNR=7.9
1.0nm,0.6s
ZALV Zalesovo Beam 144.28 65 PKP **PKPab** **00 47 09.8 +0.3**
1.0nm,0.6s,baz=270,slow=2.3,SNR=3.7
ILAR Eielson Array 147.35 314 PKPbc **PKPbc** **00 47 18.3 -0.6**
0.5nm,0.7s,baz=106,slow=2.2,SNR=5.9

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*IDC **20** 00:29:41.9±1.1,54.°90S×31.°10W,h0km,mb3.7/4,*
mbtmp3.7/4,Error ellipse: s-maj=50.4km s-min=26.9km az=70.0
ISC 20 00:29:43.2±1.0,54.°9S±0.°2×31.°2W±0.°3,h10km,n9,σ0s66/6,
mb3.7/3,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.73**	**155**	P	**P**	**00 34 22.8**	**-0.7**
	1.9nm,0.8s,baz=321,slow=9.1,SNR=4.7						
	1.9nm,0.8s						
QSPA	**South Pole Qui**	**35.35**	**180**	P	**P**	**00 36 38.9**	**+0.4**
	0.9nm,0.8s,baz=358,slow=2.9,SNR=3.5						
	0.9nm,0.8s						
LPAZ	**La Paz**	**47.88**	**309**	P	**P**	**00 38 21.6**	**-0.5**
	1.4nm,0.6s,baz=130,slow=7.9,SNR=5.0						
	1.4nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.80**	**22**	T	T	01 31 13.3	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.80**	**22**	T	T	01 31 06.6	
	baz=192						
H10N2	**ASCENSION HYDR**	**48.81**	**22**	T	T	01 31 11.9	
	baz=192						
TORD	**Torodi Ar. Bea**	**73.26**	**34**	P	**P**	**00 41 14.6**	**+0.1**
	0.2nm,0.5s,baz=201,slow=6.9,SNR=1.6						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**147.67**	**314**	PKPbc	**PKPbc**	**00 49 27.1**	**+0.7**
	1.8nm,0.8s,baz=119,slow=1.7,SNR=11						
SONM	**Songino Array**	**152.93**	**87**	PKPbc	**PKiKP**	**00 49 40.0**	**-0.1**
	0.5nm,0.7s,baz=204,slow=3.2,SNR=2.3						

IDC 20 00:30:02.9±3.1,6.°78S×132.°45E,h0km,mb3.4/1,
mbtmp3.3/3,ML3.0/2,Error ellipse: s-maj=164.0km
s-min=31.0km az=75.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.21**	**172**	Pn	Pn	00 33 13.4	+1.4
	0.1nm,0.3s,baz=354,slow=13,SNR=2.2						
WRA				Sn	Sn	00 35 38.5	-1.2
	0.1nm,0.3s,baz=352,slow=24,SNR=2.0						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**16.85**	**175**	Pn	Pn	00 33 60.0	-0.4
	baz=351,slow=9.3,SNR=2.3						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**69.39**	**326**	P	P	00 41 12.7	0.0
	0.1nm,0.3s,baz=126,slow=7.3,SNR=1.5						
	0.1nm,0.3s						

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*ISU **20** 00:38:38,40.°20N×72.°81E,h10km*
*KRNET **20** 00:38:40.0±0.1,40.°19N×72.°55E,mb2.7*
ISC 20 00:38:41.3±1.8,40.°25N±0.°08×72.°66E±0.°05,h6km±10km,
n14,σ1s05/25,8C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.29**	**20**	P	**Pg**	**00 38 45.6**	**-1.4**
OHH				S	**Sg**	**00 38 50.7**	**-0.1**
TSTA	**Tashata**	**0.35**	**337**	P	**Pg**	**00 38 47.8**	**-0.4**
TSTA				S	**Sb**	**00 38 54.9**	**-1.0**
ANR	**Andizhan**	**0.55**	**336**	P	**Pb**	**00 38 52.5**	**-0.9**
ANR				S	**Sb**	**00 39 02.7**	**+1.1**
FRG	**Fergana**	**0.68**	**281**	P	**Pg**	**00 38 53.6**	**-0.7**
FRG				S	**Sb**	**00 39 05.9**	**+0.7**
MINT	**Mingtut**	**1.30**	**280**	P	**Pg**	**00 39 06.3**	**+0.1**
MINT				S	**Sg**	**00 39 25.9**	**+2.8**
BTK	**Batken**	**1.42**	**263**	P	**Pn**	**00 39 06.2**	**-1.6**
BTK				S	**Sg**	**00 39 27.5**	**+0.5**
CHDK	**Chadak**	**1.62**	**297**	P	**Sg**	**00 39 34.8**	**+1.5**
ARLS	**Aral**	**2.04**	**38**	⇑*i*P	**Pn**	**00 39 16.3**	**-0.1**
	baz=38						
ARLS				⇑*i*S	**Sn**	**00 39 42.6**	**+0.2**
	baz=38						
CHMG	**Chimgan**	**2.39**	**304**	P	**Sg**	**00 39 57.6**	**-0.4**
EKS2	**Erkin-Say**	**2.55**	**19**	⇓*i*P	**Pn**	**00 39 23.0**	**-0.4**
	baz=20						
EKS2				⇓*i*S	**Sn**	**00 39 54.4**	**-0.4**
	baz=20						
AAK	**Ala-Archa**	**2.75**	**29**	⇑*i*P	**Pn**	**00 39 26.1**	**-0.1**
	baz=30						
AAK				⇑*i*S	**Sn**	**00 39 59.2**	**-0.7**
	baz=30						
KBK	**Karagaybulak**	**2.96**	**35**	⇑*i*P	**Pn**	**00 39 29.2**	**+0.2**
	baz=35						
KBK				⇑*i*S	**Sn**	**00 40 04.5**	**-0.4**
	baz=35						
KK31	**Karatay Array**	**3.27**	**331**	⇓Pn	**Pb**	**00 39 40.2**	**+0.5**
	0.5nm,0.3s,baz=141,slow=14,SNR=12						
KK31				⇓Sn	**Sn**	**00 40 13.0**	**+0.6**
	0.6nm,0.3s,baz=137,slow=25,SNR=4.0						
KK31				⇑Lg	Lg	00 40 23.0	
	1.3nm,0.5s,baz=152,slow=30,SNR=4.2						
TKM2	**Tokmak 2**	**3.46**	**39**	⇓Pg	**Pg**	**00 39 49.2**	**+1.6**
	0.7nm,0.5s						
TKM2				⇑Lg	Lg	00 40 25.7	
	1.0nm,0.5s						

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*IDC **20** 00:52:17.1±1.1,55.°03S×31.°16W,h0km,mb3.4/4,*
mbtmp3.5/4,Error ellipse: s-maj=50.2km s-min=27.4km az=68.0
ISC 20 00:52:18.4±1.0,55.°0S±0.°2×31.°2W±0.°3,h10km,n9,σ0s99/6,
mb3.5/3,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.62**	**155**	P	**P**	**00 56 58.4**	**+0.9**
	0.5nm,0.8s,baz=308,slow=6.1,SNR=1.5						
	0.5nm,0.8s						
QSPA	**South Pole Qui**	**35.21**	**180**	P	**P**	**00 59 11.6**	**-0.9**
	0.5nm,0.8s,baz=124,slow=3.8,SNR=1.3						
	0.5nm,0.8s						
LPAZ	**La Paz**	**47.94**	**309**	P	**P**	**01 00 57.9**	**+0.2**
	1.1nm,0.5s,baz=126,slow=2.1,SNR=6.6						
	1.1nm,0.5s						
H10N1	**ASCENSION HYDR**	**48.93**	**22**	T	T	01 54 29.8	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.93**	**22**	T	T	01 54 25.4	
	baz=192						
H10N2	**ASCENSION HYDR**	**48.94**	**22**	T	T	01 54 27.8	
	baz=192						
TORD	**Torodi Ar. Bea**	**73.39**	**34**	P	**P**	**01 03 49.7**	**-0.7**
	0.3nm,0.7s,baz=204,slow=7.2,SNR=1.5						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**147.74**	**314**	PKPbc	**PKPbc**	**01 12 02.2**	**+0.4**
	0.5nm,0.7s,baz=129,slow=1.9,SNR=5.5						
SONM	**Songino Array**	**152.96**	**88**	PKPbc	**PKiKP**	**01 12 16.1**	**+0.8**
	0.3nm,0.4s,baz=222,slow=3.9,SNR=2.1						

AUST 20 00:53:35.8±2.5,19.°79S×148.°73E,h0km,Error ellipse:
s-maj=32.7km s-min=14.3km az=9.0,Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.35**	**262**	P	Pn	00 54 15.0	-0.7
	baz=2.4						
CTA				S	Sb	00 54 47.7	-0.9
	baz=2.4						
CTA	**Charters Tower**	**2.35**	**262**	P	Pn	00 54 15.0	-0.7
	baz=2.3						
CTA				S	Sb	00 54 47.7	-0.9
	baz=2.3						
AUNRC	**North Rockhamp**	**3.92**	**155**	P	Pn	00 54 37.8	+0.5
	baz=3.9						
MTSU	**Mount Surprise**	**4.49**	**291**	P	Pn	00 54 47.3	+2.1
	baz=4.5						

IDC 20 00:54:03.5±4.8,55.°78S×31.°98W,h0km,mb3.8/2,
mbtmp3.8/2,Error ellipse: s-maj=161.9km
s-min=58.6km az=178.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**48.08**	**310**	P	P	01 02 45.3	-0.1
	1.1nm,0.7s,baz=168,slow=4.9,SNR=1.2						
	1.1nm,0.7s						
H10N1	**ASCENSION HYDR**	**49.78**	**23**	T	T	01 56 04.4	
	baz=192,slow=75,SNR=6.1						
H10N3	**ASCENSION HYDR**	**49.78**	**23**	T	T	01 56 03.1	
	baz=192,slow=75,SNR=13						
H10N2	**ASCENSION HYDR**	**49.79**	**23**	T	T	01 56 04.2	
	baz=192,slow=75,SNR=14						
TORD	**Torodi Ar. Bea**	**74.25**	**34**	P	P	01 05 42.2	0.0
	0.5nm,0.7s,baz=195,slow=5.3,SNR=2.2						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**147.94**	**313**	PKPbc	PKPbc	01 13 48.4	-0.7
	0.3nm,0.8s,baz=134,slow=2.6,SNR=2.1						

IDC 20 01:02:39.6±2.1,55.°22S×32.°07W,h0km,mb3.8/2,
mbtmp3.8/2,Error ellipse: s-maj=91.5km s-min=50.2km
az=13.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**47.68**	**310**	P	P	01 11 17.8	-0.7
	1.0nm,0.7s,baz=169,slow=8.3,SNR=2.6						
	1.0nm,0.7s						
H10N1	**ASCENSION HYDR**	**49.28**	**23**	T	T	02 04 49.7	
	baz=192						
H10N3	**ASCENSION HYDR**	**49.28**	**23**	T	T	02 04 39.4	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**49.30**	**23**	T	T	02 04 44.9	
	baz=192,slow=74						
TORD	**Torodi Ar. Bea**	**73.81**	**34**	P	P	01 14 15.9	+0.2
	0.7nm,0.8s,baz=200,slow=7.6,SNR=4.0						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**144.51**	**65**	PKP	PKPab	01 22 15.0	-0.1
	0.4nm,0.4s,baz=241,slow=3.0,SNR=3.7						
ILAR	**Eielson Array**	**147.52**	**314**	PKPbc	PKPbc	01 22 24.4	+0.3
	0.4nm,0.7s,baz=90,slow=1.8,SNR=4.8						
SONM	**Songino Array**	**153.46**	**89**	PKPbc	PKPbc	01 22 38.8	-0.3
	0.3nm,0.4s,baz=210,slow=3.0,SNR=1.9						

IDC 20 01:12:43.8±1.3,54.°42S×31.°60W,h0km,mb3.8/3,
mbtmp3.8/3,Error ellipse: s-maj=63.9km s-min=33.5km
az=49.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**42.94**	**146**	P	P	01 20 44.2	+0.5
	0.9nm,0.5s,baz=257,slow=14,SNR=3.3						
	0.9nm,0.5s						
LPAZ	**La Paz**	**47.38**	**309**	P	P	01 21 20.8	+0.6
	0.8nm,0.5s,baz=138,slow=7.8,SNR=5.0						
	0.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.99**	**34**	P	P	01 24 15.6	+0.5
	0.5nm,0.9s,baz=193,slow=5.0,SNR=2.4						
	0.5nm,0.9s						
ZALV	**Zalesovo Beam**	**143.92**	**64**	PKP	PKPab	01 32 16.8	-0.2
	0.6nm,0.5s,baz=225,slow=1.8,SNR=2.1						
ILAR	**Eielson Array**	**147.15**	**314**	PKPbc	PKPdf	01 32 25.5	+0.5
	0.3nm,0.5s,baz=123,slow=2.1,SNR=4.2						

IDC 20 01:19:18.8±4.3,54.°98S×29.°95W,h0km,mb3.6/2,
mbtmp3.6/2,Error ellipse: s-maj=150.4km
s-min=57.8km az=174.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**47.49**	**21**	T	T	02 19 07.8	
	baz=191						
H10S3	**ASCENSION HYDR**	**47.49**	**21**	T	T	02 19 07.9	
	baz=29						
LPAZ	**La Paz**	**48.48**	**308**	P	P	01 28 03.6	-0.1
	0.3nm,0.4s,baz=156,slow=10.0,SNR=1.5						
	0.3nm,0.4s						
H10N1	**ASCENSION HYDR**	**48.60**	**21**	T	T	02 20 31.9	
	baz=191						
H10N3	**ASCENSION HYDR**	**48.61**	**21**	T	T	02 20 31.6	
	baz=191,slow=74						
H10N2	**ASCENSION HYDR**	**48.62**	**21**	T	T	02 20 32.8	
	baz=191,slow=74						
TORD	**Torodi Ar. Bea**	**72.94**	**32**	P	P	01 30 49.8	0.0
	0.4nm,0.6s,baz=196,slow=6.3,SNR=1.9						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**148.24**	**313**	PKPbc	PKPbc	01 39 04.5	-0.7
	0.5nm,0.6s,baz=99,slow=1.5,SNR=7.2						

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*ISK **20** 01:30:46.7,41.°42N×43.°88E,h5km,ML2.5/7*
*DDA **20** 01:30:47.3±0.0,41.°38N×43.°80E,h6km±4km,ML2.3*
*TIF **20** 01:30:47.2,41.°38N×43.°86E,h16km*
*NORS **20** 01:30:48.9±0.0,41.°51N×43.°81E,h9km,MPVA3.4*
*MOS **20** 01:30:51.1±0.0,41.°51N×43.°89E,h6km,MPVA3.1*
ISC 20 01:30:47.9±0.8,41.°39N±0.°02×43.°89E±0.°02,h14km±6km,
n54,σ1s20/101,Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRLG	**Trialeti**	**0.22**	**48**	P	**Pg**	**01 30 53.4**	**+0.6**
TRLG				S	**Sg**	**01 30 57.0**	**+0.8**
BRNG	**Burnasheti**	**0.23**	**349**	P	**Pg**	**01 30 52.9**	**-0.2**
BRNG				S	**Sg**	**01 30 57.0**	**+0.3**
DMNI	**Dmanisi**	**0.24**	**106**	P	**Pg**	**01 30 53.0**	**-0.1**
DMNI				S	**Sg**	**01 30 56.8**	**+0.1**
BGD	**Bogdanovka**	**0.25**	**239**	P	**Pg**	**01 30 52.8**	**-0.6**
BGD				S	**Sg**	**01 30 56.6**	**-0.6**
AKH	**Akhalkalaki**	**0.30**	**273**	P	**Pg**	**01 30 53.4**	**-0.7**
AKH				S	**Sg**	**01 30 57.5**	**-0.8**
AKH	**Akhalkalaki**	**0.30**	**273**	PG	**Pg**	**01 30 53.1**	**-1.0**
AKH				SG	**Sg**	**01 30 57.6**	**-0.8**
KZRT	**Kazreti**	**0.39**	**91**	P	**Pg**	**01 30 55.5**	**-0.2**
KZRT				S	**Sg**	**01 31 01.1**	**+0.1**
BKRG	**Bakuriani**	**0.46**	**323**	P	**Pb**	**01 30 56.7**	**-1.1**
BKRG				S	**Sb**	**01 31 03.4**	**-1.1**
EAK	**Akyaka**	**0.74**	**197**	P	**Pg**	**01 31 00.4**	**-1.9**
EAK				S	**Sg**	**01 31 10.3**	**-1.7**
BTNK	**Botanikuri**	**0.74**	**67**	P	Pg	01 30 54.6	-7.7
BTNK				S	**Sg**	**01 31 05.0**	**-7.2**
SEAG	**Tbilisi Sea**	**0.78**	**61**	P	**Pb**	**01 31 03.0**	**-0.3**
SEAG				S	**Sb**	**01 31 14.2**	**+0.5**
ABS	**Abastumani**	**0.88**	**295**	P	**Pg**	**01 31 03.9**	**-1.1**
ABS				S	**Sb**	**01 31 16.2**	**-0.6**
KARS	**Kars**	**0.98**	**219**	PG	**Pg**	**01 31 06.2**	**-0.6**
DIGO	**Kars**	**1.05**	**202**	P	**Pg**	**01 31 06.5**	**-1.7**
DIGO				*i* AML	AML	01 31 27.0	
	comp=E,90nm,0.4s						
DIGO				*i* AML	AML	01 31 29.0	
	comp=N,118nm,0.3s						
DGRG	**David-gareji**	**1.12**	**87**	P	**Pg**	**01 31 08.2**	**-1.3**
DGRG				S	**Sn**	**01 31 25.1**	**+0.7**
GUDG	**Gudauri**	**1.16**	**22**	P	**Pb**	**01 31 09.4**	**-0.4**
GUDG				S	**Sn**	**01 31 25.8**	**+0.2**
TKB	**Tkibuli**	**1.17**	**325**	P	**Pb**	**01 31 09.3**	**-0.5**
TKB				S	**Sn**	**01 31 25.2**	**-0.3**
ONI	**Oni**	**1.24**	**345**	P	**Pg**	**01 31 10.5**	**-1.2**
ONI				S	**Sn**	**01 31 27.5**	**+0.1**
ONI	**Oni**	**1.24**	**345**	PN	**Pg**	**01 31 10.4**	**-1.3**
ONI				SN	**Sn**	**01 31 27.5**	**+0.1**
ONI	**Oni**	**1.24**	**345**	*e*Pg	**Pn**	**01 31 11.7**	**+0.9**
ONI				*e*Sg	**Sn**	**01 31 27.5**	**+0.1**
PNSH	**Pansheti**	**1.35**	**23**	P	**Pb**	**01 31 12.9**	**-0.3**
PNSH				S	**Sn**	**01 31 31.6**	**+1.2**
ZEI	**Tsey**	**1.39**	**0**	*e*Pg	**Pg**	**01 31 15.8**	**+1.1**
ZEI				*e*Sg	**Sn**	**01 31 33.2**	**+1.8**
GNI	**Garni**	**1.40**	**152**	PN	**Pn**	**01 31 13.8**	**+0.6**
SENK	**Senkaya-Erzuru**	**1.43**	**235**	PN	**Pn**	**01 31 14.1**	**+0.5**
SENK				SN	**Sg**	**01 31 34.2**	**+0.2**
TASB	**TASBURUN-IGDIR**	**1.44**	**169**	PN	**Pn**	**01 31 14.3**	**+0.8**
TASB				SN	**Sg**	**01 31 34.5**	**+0.4**
LACR	**Lac**	**1.46**	**12**	*e*Pg	**Pg**	**01 31 14.9**	**-1.1**
LACR				*e*Sg	**Sb**	**01 31 33.3**	**-0.2**
DAGI	**Agillar**	**1.52**	**259**	P	**Pb**	**01 31 15.8**	**-0.1**
DAGI				S	**Sb**	**01 31 35.2**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.52**	**352**	*e*Pg	**Pg**	**01 31 17.1**	**-0.1**
DIGR				*e*Sg	**Sg**	**01 31 37.1**	**+0.2**
IGDI	**IGDIR**	**1.53**	**174**	P	**Pn**	**01 31 15.3**	**+0.4**
IGDI				S	**Sn**	**01 31 35.9**	**+1.3**
IGDI				*i* AML	AML	01 31 37.0	
	comp=N,41nm,0.2s						
BATM	**Batumi**	**1.66**	**278**	P	**Pb**	**01 31 17.5**	**-0.7**
BATM				S	**Sb**	**01 31 38.9**	**-0.1**
DBOC	**Borcka**	**1.67**	**269**	P	**Pb**	**01 31 17.7**	**-0.8**
DBOC				S	**Sb**	**01 31 39.1**	**-0.2**
DBOC				*i* AML	AML	01 31 40.0	
	comp=Z,33nm,0.3s						
DBOC				*i* AML	AML	01 31 40.0	
	comp=E,37nm,0.3s						
KOTA	**Agri, Merkez-K**	**1.67**	**198**	P	**Pg**	**01 31 19.7**	**-0.3**
DDFL	**Dedoflistskaro**	**1.68**	**88**	P	**Pg**	**01 31 19.9**	**-0.2**
DDEM	**Demirkent**	**1.69**	**253**	P	**Pb**	**01 31 18.7**	**0.0**
DDEM				S	**Sb**	**01 31 40.4**	**+0.4**
DDEM				*i* AML	AML	01 31 42.0	
	comp=E,86nm,0.3s						
DDEM				*i* AML	AML	01 31 43.0	
	comp=N,79nm,0.4s						
DBAD	**Bademkaya**	**1.69**	**258**	P	**Pg**	**01 31 20.0**	**-0.4**
DBAD				S	**Sg**	**01 31 41.2**	**-1.3**
DBAD				*i* AML	AML	01 31 45.0	
	comp=E,30nm,0.3s						
DBAD				*i* AML	AML	01 31 47.0	
	comp=N,42nm,0.6s						
KORR	**Kora**	**1.70**	**5**	*e*Pg	**Pg**	**01 31 20.9**	**+0.5**
KORR				*e*Sg	**Sg**	**01 31 43.8**	**+1.3**
BCA	**Borcka**	**1.70**	**272**	PN	**Pn**	**01 31 17.8**	**+0.6**
BCA				SN	**Sn**	**01 31 40.3**	**+0.1**
ARNR	**Ardon**	**1.81**	**9**	*e*Pg	**Pg**	**01 31 22.8**	**+0.2**
ARNR				*e*Sg	**Sg**	**01 31 47.4**	**+1.3**
KMGR	**Komgaron**	**1.81**	**23**	*i* Pg	**Pg**	**01 31 22.3**	**-0.4**
KMGR				*e*Sg	**Sg**	**01 31 47.6**	**+1.4**
LGD	**Lagodekhi**	**1.82**	**75**	P	**Pb**	**01 31 21.0**	**0.0**
LGD				S	**Sg**	**01 31 46.1**	**-0.3**
HOPA	**Hopa-Artvin**	**1.84**	**271**	PN	**Pn**	**01 31 20.0**	**+1.1**
EATA	**Eleskirt**	**1.86**	**215**	P	**Pb**	**01 31 21.4**	**-0.5**
EATA				S	**Sb**	**01 31 45.4**	**+0.3**
LSNR	**Lesken**	**1.88**	**359**	*e*Pg	**Pg**	**01 31 23.0**	**-1.0**
LSNR				*e*Sg	**Sg**	**01 31 48.9**	**+0.4**
STDR	**Stavd-Durt**	**1.98**	**4**	*e*Pg	**Pg**	**01 31 26.1**	**+0.2**
STDR				*e*Sg	**Sg**	**01 31 50.7**	**-0.7**
BTKR	**Batakoyurt**	**2.04**	**14**	*e*Pg	**Pg**	**01 31 26.6**	**-0.3**
BTKR				*e*Sg	**Sg**	**01 31 52.7**	**-0.7**
NEY	**Neytrino**	**2.04**	**335**	*e*Pg	**Pb**	**01 31 25.1**	**+0.2**
NEY				*e*Sg	**Sg**	**01 31 51.0**	**-2.6**
DVE	**Vedeno**	**2.28**	**46**	*e*Pg	**Pg**	**01 31 30.2**	**-1.4**
DVE				*e*Sg	**Sg**	**01 31 59.6**	**-1.7**
GROC	**Groznyy**	**2.30**	**37**	*e*Pg	**Pg**	**01 31 31.1**	**-0.9**
GROC				*e*Sg	**Sg**	**01 31 59.7**	**-1.9**
KBZ	**Khabaz**	**2.44**	**343**	*i* Pn	**Pg**	**01 31 34.1**	**-0.6**
KBZ				*e*Sn	**Sg**	**01 32 03.9**	**-2.5**
KRIK	**Erzurum-spir**	**2.48**	**246**	P	**Pg**	**01 31 35.4**	**0.0**
KRIK				S	**Sg**	**01 32 08.2**	**+0.7**
SHA1	**Shidzhatmaz**	**2.51**	**339**	*e*Pn	**Pb**	**01 31 33.2**	**+0.3**
SHA1				*e*Sn	**Sb**	**01 32 04.0**	**+0.2**
KIV	**Kislovodsk**	**2.71**	**341**	*e*Pn	**Pg**	**01 31 38.0**	**-1.8**
KIV				*i* Sn	**Sb**	**01 32 10.7**	**+1.5**
AKT	**Akhty**	**2.89**	**87**	*e*Pn	**Pb**	**01 31 38.6**	**-0.7**
AKT				*e*Sn	**Sb**	**01 32 14.8**	**+0.2**
BAYB	**BAYBURT**	**2.98**	**249**	P	**Pb**	**01 31 42.2**	**+1.4**
BAYB				S	**Sb**	**01 32 19.8**	**+2.7**

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*IDC **20** 01:31:34.0±1.2,3.°34N×96.°12E,h0km,mb3.6/8,*
mbtmp3.6/9,ML3.2/1,MS2.9/2,Error ellipse: s-maj=44.9km s-min=13.6km az=30.0
*DJA **20** 01:31:40.2±1.0,3.°7N±7.°9×97.°6E±.°,h10km,M4.2/6,MLv4.2/6*
ISC 20 01:31:35.8±1.0,3.°3N±0.°1×96.°12E±0.°09,h10km,n20,
σ1s08/15,mb3.6/9,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCSI	**Kotacane, Aceh**	**1.67**	**81**	P	**Pn**	**01 32 05.9**	**+0.8**
KCSI				S	**Sn**	**01 32 26.4**	**-0.3**
LHMI	**Lhok Sumawe**	**2.12**	**23**	P	**Pn**	**01 32 12.0**	**+0.7**
TSI	**Tuntungan**	**2.46**	**84**	P	**Pb**	**01 32 19.8**	**-0.2**
PSI	**Prapat**	**2.84**	**99**	Pn	**Pn**	**01 32 22.4**	**+1.1**
	3.2nm,0.3s,baz=305,slow=9.1,SNR=6.5						
PSI				Pg	**Pb**	**01 32 25.6**	**-1.1**
	8.0nm,0.3s,baz=310,slow=16,SNR=13						
PSI				Lg	Lg	01 33 05.4	
	19nm,0.3s,baz=345,slow=20,SNR=7.5						
PSI				LR	LR	01 33 36.4	
	comp=Z,120nm,20.8s,baz=244,slow=43						
	7.8nm,0.3s						
LEM	**Lembang**	**15.24**	**131**	LR	LR	01 42 03.5	
	comp=Z,89nm,19.3s,baz=230,slow=41						
H08S2	**Diego Garcia H**	**25.94**	**245**	T	T	02 03 29.3	
	baz=65,slow=76,SNR=59						
H08S3	**Diego Garcia H**	**25.94**	**245**	T	T	02 03 35.7	
	baz=65,slow=76,SNR=47						
H08S1	**Diego Carcia H**	**25.96**	**245**	T	T	02 03 26.8	
	baz=65,slow=76,SNR=43						
H01W3	**Cape Leeuwin H**	**41.55**	**157**	T	T	02 23 09.6	
	baz=332						
H01W2	**Cape Leeuwin H**	**41.56**	**157**	T	T	02 23 10.0	
	baz=332,slow=74,SNR=6.3						
H01W1	**Cape Leeuwin H**	**41.57**	**157**	T	T	02 23 10.0	
	baz=332,slow=74,SNR=6.2						
WRA	**Warramunga Arr**	**44.05**	**123**	P	**P**	**01 39 44.4**	**+0.2**
	0.4nm,0.6s,baz=302,slow=9.1,SNR=7.0						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**45.00**	**347**	P	**P**	**01 39 49.5**	**-1.8**
	0.4nm,0.4s,baz=160,slow=8.5,SNR=9.3						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**45.50**	**128**	P	**P**	**01 39 55.5**	**-0.3**
	0.3nm,0.4s,baz=302,slow=8.0,SNR=5.8						
	0.3nm,0.4s					

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.51**	**280**		**Pn**	**01 44 01.3**	**-0.8**
ORCD	**Orcadas**	**9.43**	**227**		**Pn**	**01 45 21.3**	**-2.0**
VNA1	**Neumayer--Stat**	**18.46**	**156**	P	**Pn**	**01 47 24.7**	**+1.6**
VNA3	**Neumayer Olymp**	**18.59**	**159**	P	**Pn**	**01 47 25.2**	**+0.4**
VNA2	**Neumayer--Watz**	**18.86**	**156**	P	**Pn**	**01 47 27.7**	**-0.3**
	baz=312,slow=15						
PMSA	**Palmer Station**	**19.14**	**226**	P	**Pn**	**01 47 33.8**	**+2.5**
	0.6nm,0.3s,baz=43,slow=7.5,SNR=4.5						
	8.5nm,0.9s						
SNAA	**Sanae**	**20.44**	**155**	P	**P**	**01 47 44.5**	**-0.3**
SNAA	**Sanae**	**20.44**	**155**	P	**P**	**01 47 44.8**	**0.0**
	2.0nm,0.8s,baz=291,slow=11,SNR=16						
	2.0nm,0.8s						
SNAA	**Sanae**	**20.44**	**155**	P	**P**	**01 47 42.6**	**-2.2**
SMAI	**San Martin Ant**	**21.31**	**218**	P	**P**	**01 47 53.4**	**-0.7**
SMAI				IAmb	IAmb	01 48 10.7	
	comp=Z,10nm,1.2s						
TROLL	**Troll, Antarti**	**22.00**	**153**	P	**P**	**01 48 01.3**	**-0.3**
BELA	**Belgrano 2**	**22.96**	**182**	P	**P**	**01 48 12.5**	**+0.8**
PLCA	**Paso Flores**	**29.91**	**282**	LR	LR	02 01 15.8	
	comp=Z,31nm,20.4s,baz=148,slow=36						
CPUP	**Villa Florida**	**34.72**	**315**	P	**P**	**01 49 57.5**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=147,slow=7.1,SNR=7.5						
CPUP				LR	LR	02 04 00.9	
	comp=Z,29nm,19.2s,baz=183,slow=36						
	comp=Z,2.4nm,0.6s						
QSPA	**South Pole Qui**	**35.19**	**180**	P	**P**	**01 50 01.6**	**+0.1**
	comp=Z,5.0nm,1.1s,baz=193,slow=3.2,SNR=6.3						
	comp=Z,5.0nm,1.1s						
QSPA	**South Pole Qui**	**35.19**	**180**	P	**P**	**01 50 00.8**	**-0.7**
QSPA				IAmb	IAmb	01 50 21.4	
	comp=Z,4.9nm,1.1s						
LVC	**Limon Verde**	**43.13**	**303**	LR	LR	02 07 26.9	
	comp=Z,12nm,21.4s,baz=187,slow=34						
PTLB	**Pontes e Lacer**	**45.26**	**320**	P	**P**	**01 51 26.2**	**+1.0**
PTLB				IAmb	IAmb	01 51 26.6	
	comp=Z,2.6nm,0.6s						
TA01	**Diego Aracena**	**45.49**	**303**	P	**P**	**01 51 26.1**	**-0.8**
VNDA	**Vanda**	**47.45**	**184**	P	**P**	**01 51 42.4**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=191,slow=6.2,SNR=14						
	comp=Z,1.8nm,0.8s						
VNDA	**Vanda**	**47.45**	**184**	P	**P**	**01 51 42.8**	**+1.1**
VNDA				IAmb	IAmb	01 51 45.0	
	comp=Z,2.8nm,0.9s						
BOSA	**Boshof**	**47.65**	**80**	P	**P**	**01 51 42.7**	**-1.3**
	comp=Z,2.6nm,0.8s,baz=198,slow=20,SNR=3.2						
	comp=Z,2.6nm,0.8s						
LPAZ	**La Paz**	**48.23**	**308**	P	**P**	**01 51 49.3**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=165,slow=6.3,SNR=4.3						
	comp=Z,2.8nm,0.8s						
LPAZ	**La Paz**	**48.23**	**308**	P	**P**	**01 51 48.8**	**-0.3**
ETMB	**Extrema**	**53.17**	**314**	P	**P**	**01 52 25.6**	**-0.1**
ETMB				IAmb	IAmb	01 52 33.8	
	comp=Z,3.2nm,1.4s						
RPN	**Rapa Nui**	**61.90**	**262**	LR	LR	02 13 52.9	
	comp=Z,267nm,21.0s,baz=178,slow=30						
TORD	**Torodi Ar. Bea**	**73.21**	**33**	P	**P**	**01 54 39.2**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=198,slow=6.0,SNR=8.2						
	comp=Z,1.5nm,0.8s						
STKA	**Stephens Creek**	**93.15**	**173**	P	**P**	**01 56 22.1**	**+0.4**
STKA				IAmb	IAmb	01 56 41.7	
	comp=Z,3.1nm,1.4s						
VAE	**Valguarnera**	**99.91**	**35**	LR	LR	02 37 27.3	
	comp=Z,51nm,18.3s,baz=57,slow=33						
FINES	**FINESS Array B**	**124.44**	**29**	PKP	**PKPdf**	**02 02 05.1**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=279,slow=3.5,SNR=7.3						
ARCES	**ARCESS Array B**	**130.76**	**23**	PKP	**PKPdf**	**02 02 17.8**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=180,slow=3.2,SNR=7.4						
ZALV	**Zalesovo Beam**	**143.68**	**64**	PKP	PKPbc	02 02 39.4	+0.3
	comp=Z,0.7nm,0.4s,baz=197,slow=3.0,SNR=2.8						
ILAR	**Eielson Array**	**148.02**	**313**	PKPbc	**PKPbc**	**02 02 52.0**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=117,slow=1.2,SNR=20						
SONM	**Songino Array**	**152.60**	**87**	PKPbc	**PKPbc**	**02 03 03.4**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=256,slow=3.2,SNR=4.5						

*IDC **20** 01:54:58.6±0.8, 55.°14S×30.°55W, h0km, mb4.0/7, mbtmp4.1/7, MS3.1/2, Error ellipse: s-maj=34.6km s-min=18.7km az=78.0*
*NEIC **20** 01:55:01.6±0.8, 55.°38S±0.°10×31.°32W±0.°09, h10km±2km, mb4.4/10, Error ellipse: s-maj=17.0km s-min=7.9km az=162.0*
ISC 20 01:55:00.3±0.6, 55.°29S±0.°09×31.°1W±0.°1, h10km, n32, σ1s30/28, mb4.3/7, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.28**	**286**		**Pn**	**01 55 52.2**	**+0.5**
ORCD	**Orcadas**	**9.06**	**227**		**Pn**	**01 57 09.9**	**-1.0**
VNA1	**Neumayer--Stat**	**18.37**	**156**	P	**P**	**01 59 15.8**	**+1.0**
VNA3	**Neumayer Olymp**	**18.49**	**158**	P	**Pn**	**01 59 16.7**	**+0.5**
VNA2	**Neumayer--Watz**	**18.77**	**156**	P	**P**	**01 59 19.3**	**+0.1**
	baz=315,slow=14						
PMSA	**Palmer Station**	**18.78**	**226**	LR	LR	02 05 02.1	
	comp=Z,66nm,19.3s,baz=50,slow=32						
SNAA	**Sanae**	**20.36**	**155**	P	**P**	**01 59 36.0**	**-0.7**
SNAA	**Sanae**	**20.36**	**155**	P	**P**	**01 59 35.8**	**-0.9**
	1.5nm,0.8s,baz=311,slow=10,SNR=21						
	1.5nm,0.8s						
SNAA	**Sanae**	**20.36**	**155**	P	**P**	**01 59 37.3**	**+0.6**
MG01	**Puerto William**	**20.76**	**256**	P	**P**	**01 59 40.6**	**-0.3**
TROLL	**Troll, Antarti**	**21.93**	**153**	P	**P**	**01 59 52.9**	**-0.7**
MG05	**Puerto Natales**	**24.64**	**261**	P	**P**	**02 00 20.5**	**-0.2**
CPUP	**Villa Florida**	**34.68**	**316**	P	**P**	**02 01 50.3**	**+0.3**
	2.0nm,0.7s,baz=79,slow=6.1,SNR=3.4						
CPUP				LR	LR	02 14 45.1	
	comp=Z,27nm,19.7s,baz=167,slow=34						
	2.0nm,0.7s						
CPUP	**Villa Florida**	**34.68**	**316**	P	**P**	**02 01 50.4**	**+0.5**
CPUP				IAmb	IAmb	02 02 02.9	
	comp=Z,6.5nm,1.1s						
QSPA	**South Pole Qui**	**34.97**	**180**	P	**P**	**02 01 53.7**	**+1.4**
	comp=Z,3.9nm,0.8s,baz=203,slow=2.5,SNR=16						
	comp=Z,3.9nm,0.8s						
QSPA	**South Pole Qui**	**34.97**	**180**	P	**P**	**02 01 51.8**	**-0.5**
QSPA				IAmb	IAmb	02 01 55.3	
	comp=Z,4.9nm,1.0s						
PTLB	**Pontes e Lacer**	**45.25**	**320**	P	**P**	**02 03 15.6**	**-2.2**
PTLB				IAmb	IAmb	02 03 30.2	
	comp=Z,4.7nm,1.1s						
VNDA	**Vanda**	**47.21**	**184**	P	**P**	**02 03 33.9**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=189,slow=6.1,SNR=17						
	comp=Z,2.3nm,0.8s						
VNDA	**Vanda**	**47.21**	**184**	P	**P**	**02 03 33.1**	**+0.5**
VNDA				IAmb	IAmb	02 03 36.6	
	comp=Z,2.3nm,0.8s						
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**02 03 42.1**	**+0.9**
	comp=Z,2.2nm,0.6s,baz=162,slow=5.7,SNR=9.6						
	comp=Z,2.2nm,0.6s						
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**02 03 41.7**	**+0.4**
LPAZ				IAmb	IAmb	02 03 50.6	
	comp=Z,5.9nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.13**	**22**	T	T	02 56 41.0	
	baz=191						
H10N3	**ASCENSION HYDR**	**49.13**	**22**	T	T	02 56 38.9	
	baz=191,slow=74						
H10N2	**ASCENSION HYDR**	**49.15**	**22**	T	T	02 56 43.2	
	baz=191,slow=74						
DBIC	**Dimbokro**	**65.48**	**29**	P	**P**	**02 05 42.5**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=174,slow=10,SNR=1.5						
	comp=Z,2.0nm,0.7s						
TOA0	**Torodi Ar. Sit**	**73.56**	**33**	P	**P**	**02 06 36.7**	**+3.4**
TOA0				IAmb	IAmb	02 06 44.1	
	comp=Z,3.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.56**	**33**	P	**P**	**02 06 31.6**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=195,slow=5.8,SNR=4.9						
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.56**	**33**	P	**P**	**02 06 35.6**	**+2.3**
NVAR	**Mina Array Bea**	**119.07**	**296**	PKP	**PKiKP**	**02 13 49.8**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=78,slow=4.7,SNR=2.1						
FINES	**FINESS Array B**	**124.77**	**29**	PKP	**PKPdf**	**02 13 57.4**	**-1.4**
	comp=Z,1.9nm,1.1s,baz=204,slow=3.3,SNR=2.2						
ILAR	**Eielson Array**	**147.97**	**313**	PKPbc	**PKPbc**	**02 14 43.7**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=130,slow=1.9,SNR=16						
SONM	**Songino Array**	**152.90**	**88**	PKPbc	**PKPbc**	**02 14 55.0**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=253,slow=2.1,SNR=3.7						

*MOS **20** 02:07:12.4±1.1, 50.°35N×142.°44E, h7km, mb4.5/7, Error ellipse: s-maj=13.4km s-min=7.5km az=75.6*
*IDC **20** 02:07:13.5±0.7, 50.°22N×142.°55E, h0km, mb3.9/13, mbtmp3.8/17, ML3.1/4, MS3.0/1, Error ellipse: s-maj=22.1km s-min=13.9km az=151.0*

*SKHL **20** 02:07:14.8±0.5, 50.°50N×142.°20E, h13km±2km, mb4.9/5*
*NEIC **20** 02:07:15.7±1.1, 50.°3N±0.°1×142.°5E±0.°1, h15km±3km, mb4.5/38, Error ellipse: s-maj=15.0km s-min=12.3km az=178.0*
ISC 20 02:07:14.9±0.4, 50.°38N±0.°04×142.°43E±0.°05, h10km, n88, σ1s04/93, mb4.4/35, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TYV	**Tymovskoe**	**0.51**	**16**	*e*PN	**Pb**	**02 07 25.4**	**-0.5**
TYV				*e*S	**Sb**	**02 07 32.9**	**-0.4**
TYV				pmax	pmax		
	comp=Z,530nm,0.3s						
TYV				pmax	pmax		
	comp=Z,800nm,0.6s						
TYV				smax	smax		
	comp=N,2μm,0.3s						
TYV				smax	smax		
	comp=E,4μm,0.3s						
TYV	**Tymovskoe**	**0.51**	**16**	*e*Pg	**Pb**	**02 07 25.3**	**-0.6**
TYV				AMB	AMB	02 07 27.3	
	comp=E,800nm,0.4s						
TYV				*e*Sg	**Sb**	**02 07 33.0**	**-0.4**
TYV				A	A	02 07 33.4	
	comp=E,2μm,0.3s						
TYV				A	A	02 07 33.4	
	comp=E,4μm,0.3s						
UGL	**Uglegorsk**	**1.32**	**191**	⇓*i*PN	**Pn**	**02 07 37.4**	**-2.0**
UGL				*e*S	**Sn**	**02 07 56.1**	**-0.9**
UGL				pmax	pmax		
	comp=Z,712nm,0.6s						
UGL				smax	smax		
	comp=E,3μm,0.6s						
UGL				smax	smax		
	comp=N,1μm,0.6s						
UGL	**Uglegorsk**	**1.32**	**191**	*e*P	**Pn**	**02 07 37.8**	**-1.6**
UGL				AMB	AMB	02 07 39.0	
	comp=N,700nm,0.6s						
UGL				*e*S	**Sg**	**02 07 57.2**	**-0.2**
UGL				A	A	02 07 59.0	
	comp=N,3μm,0.6s						
UGL				A	A	02 07 59.0	
	comp=N,4μm,0.6s						
NKL	**Nikolayevsk**	**2.98**	**339**	*e*PN	**Pn**	**02 08 01.7**	**-0.5**
NKL				*e*S	**Sb**	**02 08 47.4**	**+2.9**
NKL				pmax	pmax		
	comp=E,65nm,0.2s						
NKL				pmax	pmax		
	comp=N,120nm,0.3s						
NKL				pmax	pmax		
	comp=Z,291nm,0.3s						
NKL				smax	smax		
	comp=E,244nm,0.5s						
NKL				smax	smax		
	comp=N,100nm,0.4s						
NKL	**Nikolayevsk**	**2.98**	**339**	*e*P	**Pn**	**02 08 01.7**	**-0.5**
NKL				AMB	AMB	02 08 01.8	
	comp=N,120nm,0.3s						
NKL				AMB	AMB	02 08 01.8	
	comp=N,291nm,0.3s						
YSS	**Yuzh-Sakhalins**	**3.43**	**176**		**Pn**	**02 08 07.5**	**-0.9**
YSS	**Yuzh-Sakhalins**	**3.43**	**176**	*e*PN	**Pn**	**02 08 09.8**	**+1.4**
YSS				pmax	pmax		
	comp=Z,70nm,0.5s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS	**Yuzh-Sakhalins**	**3.43**	**176**	*e*P	**Pn**	**02 08 10.5**	**+2.1**
YSS				AMB	AMB	02 08 13.8	
	comp=Z,30nm,0.4s						
YSS				*e*S	**Sn**	**02 08 51.3**	**+2.2**
YSS				A	A	02 08 51.7	
	comp=Z,60nm,0.6s						
YSS				A	A	02 08 51.7	
	comp=Z,80nm,0.6s						
GRNR	**Gornyy**	**3.85**	**278**	*e*PN	**Pn**	**02 08 13.5**	**-0.7**
GRNR				pmax	pmax		
	comp=E,20nm,0.4s						
GRNR				pmax	pmax		
	comp=N,5.0nm,0.3s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.3s						
GRNR				MLR	MLR		
	comp=E,510nm,17.0s						
GRNR				MLR	MLR		
	comp=N,320nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,420nm,12.0s						
GRNR	**Gornyy**	**3.85**	**278**	*e*P	**Pn**	**02 08 13.5**	**-0.7**
GRNR				*e*Pg	**Pg**	**02 08 27.0**	**-1.7**
GRNR				AMB	AMB	02 08 27.6	
	comp=Z,20nm,0.3s						
GRNR				*e*Sg	**Sg**	**02 09 17.9**	**-0.6**
GRNR				A	A	02 09 18.4	
	comp=Z,70nm,0.3s						
KLR	**Kul'dur**	**7.01**	**265**	Pn	**Pn**	**02 08 57.9**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=73,slow=18,SNR=13						
KLR				Lg	Lg	02 10 50.5	
	comp=Z,1.3nm,0.3s,baz=160,slow=21,SNR=3.9						
	comp=Z,1.1nm,0.3s						
USRK	**Ussuriysk Ar.**	**9.40**	**233**	Pn	**Pn**	**02 09 30.3**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=41,slow=15,SNR=22						
USRK				Lg	Lg	02 12 08.3	
	comp=Z,0.4nm,0.3s,baz=132,slow=50,SNR=2.6						
	comp=Z,5.1nm,0.4s						
PETK	**Petropavlovsk-**	**9.86**	**68**	Pn	**Pn**	**02 09 36.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=310,slow=5.3,SNR=5.8						
PETK				LR	LR	02 12 53.5	
	comp=Z,87nm,20.6s,baz=225,slow=34						
	comp=Z,1.3nm,0.7s						
MAJO	**Matsushiro**	**14.16**	**194**	Pn	**Pn**	**02 10 35.5**	**0.0**
MAJO	**Matsushiro**	**14.16**	**194**	P	**Pn**	**02 10 35.5**	**0.0**
KSRS	**Korea Array**	**16.58**	**224**	Pn	**Pn**	**02 11 05.4**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=2.0						
	comp=Z,0.4nm,0.3s						
KSAR	**Wonju Array Be**	**16.61**	**224**	Pn	**Pn**	**02 11 06.7**	**-1.0**
KSAR	**Wonju Array Be**	**16.61**	**224**	P	**Pn**	**02 11 06.7**	**-1.0**
BJT	**Baijiatuau**	**21.10**	**251**	P	**P**	**02 11 58.5**	**-0.9**
BJT	**Baijiatuau**	**21.10**	**251**	P	**P**	**02 11 58.6**	**-0.9**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	**Songino Array**	**23.59**	**278**	P	**P**	**02 12 26.0**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=61,slow=10,SNR=6.1						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**23.59**	**278**	P	**P**	**02 12 26.0**	**+0.3**
IMAR	**Indian Mountai**	**35.27**	**40**	P	**P**	**02 14 09.4**	**+0.1**
BRLK	**Bradley Lake**	**37.74**	**49**	P	**P**	**02 14 30.3**	**-0.2**
BRLK				IAmb	IAmb	02 14 47.0	
	comp=Z,6.5nm,0.7s						
WRH	**Wood River Hil**	**37.86**	**41**	P	**P**	**02 14 31.6**	**+0.2**
WRH				IAmb	IAmb	02 14 32.8	
	comp=Z,5.7nm,0.6s						
CCB	**Clear Creek Bu**	**37.94**	**41**	P	**P**	**02 14 32.3**	**+0.2**
IL31		**38.30**	**41**	P	**P**	**02 14 35.0**	**0.0**
IL31				IAmb	IAmb	02 14 37.0	
	comp=Z,4.6nm,0.7s						
ILAR	**Eielson Array**	**38.30**	**41**	P	**P**	**02 14 35.4**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=279,slow=8.6,SNR=55						
	comp=Z,3.8nm,0.6s						
HDA	**Harding Lake**	**38.35**	**41**	P	**P**	**02 14 35.8**	**+0.2**
HDA				IAmb	IAmb	02 14 58.0	
	comp=Z,8.9nm,1.5s						
BMAR	**Burnt Mountain**	**38.65**	**36**	P	**P**	**02 14 39.2**	**+1.1**
J25K	**Salcha River,**	**38.97**	**41**	P	**P**	**02 14 41.2**	**+0.3**
MK31	**Makanchi Array**	**39.00**	**289**	P	**P**	**02 14 42.8**	**+1.5**
MK31	**Makanchi Array**	**39.00**	**289**	P	**P**	**02 14 42.8**	**+1.5**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**39.00**	**289**	P	**P**	**02 14 42.9**	**+1.7**
	comp=Z,1.8nm,0.6s,baz=66,slow=7.9,SNR=13						
	comp=Z,1.8nm,0.6s						
MKAR	**Makanchi Array**	**39.00**	**289**	P	**P**	**02 14 41.5**	**+0.2**
PAX	**Paxson**	**39.36**	**43**	P	**P**	**02 14 41.3**	**-2.8**
PAX	**Paxson**	**39.36**	**43**	P	**P**	**02 14 41.3**	**-2.8**
PAX				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**39.41**	**296**	P	**P**	**02 14 44.5**	**-0.1**
KURK	**Kurchatov**	**39.41**	**296**	P	**P**	**02 14 44.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RIDG	**Independent Ri**	**39.41**	**42**	P	**P**	**02 14 42.8**	**-1.7**
EGAK	**Eagle**	**40.66**	**40**	P	**P**	**02 14 54.2**	**-0.6**
EGAK				IAmb	IAmb	02 14 55.9	
	comp=Z,7.2nm,0.6s						
HYT	**Haines Junctio**	**43.63**	**44**	P	**P**	**02 15 20.4**	**+1.2**
P29M	**Windy Craggy**	**44.02**	**46**	P	**P**	**02 15 23.1**	**+0.8**
KKAR	**Karatay Array**	**48.05**	**291**	P	**P**	**02 15 55.0**	**+0.8**
KKAR	**Karatay Array**	**48.05**	**291**	P	**P**	**02 15 55.0**	**+0.8**
ABKAR	**Akbulak array**	**50.57**	**303**	P	**P**	**02 16 13.8**	**+0.5**
FINES	**FINESS Array B**	**57.51**	**329**	P	**P**	**02 17 04.7**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=28,slow=8.6,SNR=4.3						
	comp=Z,1.2nm,0.8s						
NOA	**NORSAR Array B**	**62.24**	**336**	P	**P**	**02 17 36.6**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=32,slow=6.6,SNR=2.3						
	comp=Z,0.3nm,0.7s						
KIV	**Kislovodsk**	**63.06**	**307**	P	**P**	**02 17 43.4**	**+1.2**
HRY	**Holter Researc**	**64.03**	**47**	P	**P**	**02 17 48.8**	**+0.2**
EGMT	**Eagleton**	**64.03**	**45**	P	**P**	**02 17 48.5**	**0.0**
BEKR	**Beckworth**	**64.62**	**58**	P	**P**	**02 17 52.4**	**-0.2**
BEKR				IAmb	IAmb	02 17 54.0	
	comp=Z,2.1nm,0.8s						
BOZ	**Bozeman (W)**	**64.94**	**48**	P	**P**	**02 17 54.5**	**-0.1**
BOZ				IAmb	IAmb	02 17 56.1	
	comp=Z,2.3nm,0.8s						
BOZ	**Bozeman (W)**	**64.94**	**48**	P	**P**	**02 17 54.5**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PAHR	**Pah Rah Range**	**65.26**	**57**	P	**P**	**02 17 56.5**	**-0.2**
PAHR				IAmb	IAmb	02 17 58.3	
	comp=Z,3.4nm,0.8s						
RLMT	**Red Lodge**	**66.41**	**47**	P	**P**	**02 18 03.5**	**-0.7**
RLMT				IAmb	IAmb	02 18 05.9	
	comp=Z,2.5nm,0.6s						
KVN	**Kaiserville**	**66.42**	**57**	P	**P**	**02 18 03.8**	**-0.5**
KVN				IAmb	IAmb	02 18 06.0	
	comp=Z,3.2nm,0.7s						
KVN	**Kaiserville**	**66.42**	**57**	P	**P**	**02 18 03.8**	**-0.5**
KVN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**66.76**	**58**	P	**P**	**02 18 07.5**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=304,slow=6.1,SNR=20						
	comp=Z,1.6nm,0.6s						
NVAR	**Mina Array Bea**	**66.76**	**58**	P	**P**	**02 18 06.5**	**-0.1**
HWUT	**Hardware Ranch**	**67.93**	**51**	P	**P**	**02 18 13.2**	**-0.6**
HWUT				IAmb	IAmb	02 18 15.4	
	comp=Z,3.7nm,0.8s						
BW06	**Boulder Array**	**68.04**	**49**	P	**P**	**02 18 14.7**	**+0.1**
BW06				IAmb	IAmb	02 18 15.6	
	comp=Z,2.4nm,0.7s						
PD31	**Pinedale Array**	**68.04**	**49**	P	**P**	**02 18 14.1**	**-0.5**
PD31				IAmb	IAmb	02 18 15.6	
	comp=Z,2.1nm,0.7s						
PDAR	**Pinedale Array**	**68.04**	**49**	P	**P**	**02 18 14.8**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=336,slow=1.9,SNR=20						
	comp=Z,1.7nm,0.5s						
PDAR	**Pinedale Array**	**68.04**	**49**	P	**P**	**02 18 14.1**	**-0.5**
ULM	**Lac du Bonnet**	**68.10**	**36**	P	**P**	**02 18 14.7**	**+0.2**
ULM	**Lac du Bonnet**	**68.10**	**36**	P	**P**	**02 18 14.7**	**+0.2**
SPR3	**Spring Creek 3**	**68.46**	**55**	P	**P**	**02 18 18.4**	**+1.1**
SPR3				IAmb	IAmb	02 18 19.7	
	comp=Z,2.7nm,0.9s						
TPNV	**Topopah Spring**	**68.95**	**57**	P	**P**	**02 18 21.3**	**+1.0**
TPNV	**Topopah Spring**	**68.95**	**57**	P	**P**	**02 18 21.3**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
QSM	**Queen of Sheba**	**69.35**	**58**	IAmb	IAmb	02 18 24.1	
	comp=Z,2.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**69.77**	**197**	P	**P**	**02 18 24.9**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=37,slow=20,SNR=3.5						
	comp=Z,1.7nm,0.8s						
TMUT	**Trail Mountain**	**69.84**	**52**	IAmb	IAmb	02 18 27.2	
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**70.37**	**188**	P	**P**	**02 18 28.1**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=357,slow=6.5,SNR=1.9						
	comp=Z,0.3nm,0.7s						
B35A	**Bob, Littlefor**	**70.45**	**36**	P	**P**	**02 18 28.9**	**-0.2**
BRTR	**Keskin Array B**	**70.74**	**309**	P	**P**	**02 18 34.1**	**+2.9**
	comp=Z,0.8nm,0.9s,baz=41,slow=2.7,SNR=4.1						
	comp=Z,0.8nm,0.9s						
EYMN	**Ely**	**71.63**	**35**	P	**P**	**02 18 34.8**	**-1.4**
PV13	**Radium Mtn., P**	**71.92**	**52**	P	**P**	**02 18 38.3**	**-0.2**
PV13				IAmb	IAmb	02 18 39.8	
	comp=Z,2.4nm,0.7s						
ECSD	**EROS Data Cent**	**73.11**	**41**	P	**P**	**02 18 44.9**	**-0.3**
ECSD				IAmb	IAmb	02 18 45.6	
	comp=Z,5.5nm,0.9s						
X16A	**Lo Mia Camp, P**	**73.43**	**56**	IAmb	IAmb	02 18 49.5	
	comp=Z,2.5nm,0.9s						
ASAR	**Alice Springs**	**74.10**	**188**	P	**P**	**02 18 50.2**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=4.5,slow=5.0,SNR=2.7						
	comp=Z,0.3nm,0.6s						
VLDQ	**Val d'Or**	**76.06**	**26**	P	**P**	**02 19 00.6**	**-1.6**
WVNY	**West Valley, N**	**80.88**	**30**	P	**P**	**02 19 28.2**	**-0.8**
TXAR	**Lajitas Array**	**81.50**	**54**	P	**P**	**02 19 32.7**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=291,slow=4.9,SNR=14						
	comp=Z,0.8nm,0.7s						
TXAR	**Lajitas Array**	**81.50**	**54**	P	**P**	**02 19 33.0**	**+0.5**
TXAR	**Lajitas Array**	**81.50**	**54**	P	**P**	**02 19 33.0**	**+0.5**
ESDC	**Sonseca Array**	**85.59**	**335**	P	**P**	**02 19 54.1**	**+0.7**
	comp=Z,0.7nm,1.1s,baz=354,slow=6.4,SNR=2.6						
	comp=Z,0.7nm,1.1s						

*UCR **20** 02:11:53.5±1.5, 8.°59

MCLT	**Moule a Chique**	**1.90**	**2**	*eP*		Pn	02 17 02.6	-0.7
MCLT				*eS*		Sn	02 17 25.8	-0.6
SLB	**Belfond**	**2.01**	**359**	*eS*		Sn	02 17 29.2	-0.1
SLBI	**Saint Lucia, B**	**2.21**	**1**	*eP*		Pn	02 17 07.5	0.0
SLBI				*eS*		Sn	02 17 33.5	-0.5
MPOM	**Morne Pois Mar**	**2.63**	**3**	*eP*		Pn	02 17 13.2	-0.2
MPOM				*eS*		Sn	02 17 43.6	-0.8
BIM	**Bigot**	**2.70**	**359**	*eP*		Pn	02 17 15.3	+1.0
BIM				*eS*		Sn	02 17 46.0	-0.2
TRMF	**Trois Ilets**	**2.72**	**359**	*eP*		Pn	02 17 15.4	+0.9
ZAM	**Aeronautique**	**2.75**	**360**	*eP*		Pn	02 17 16.4	+1.4
LPMF	**Morne Lapointe**	**2.75**	**1**	*eP*		Pn	02 17 15.8	+0.8
FDF	**Fort de France**	**2.92**	**358**	*eP*		Pn	02 17 19.2	+1.9
PML	**Morne Lenard**	**2.96**	**357**	*eP*		Pn	02 17 19.1	+1.1
BAMF	**Morne Balai**	**3.00**	**358**	*eP*		Pb	02 17 21.9	-3.3
PCM	**Pelee Case Pet**	**3.00**	**356**	*eP*		Pn	02 17 20.4	+2.0
DSLB	**Salisbury**	**3.63**	**354**	*eP*		Pn	02 17 27.2	0.0
DSLB				*eS*		Sn	02 18 09.0	-0.3
MAGL	**Barre de l'ile**	**4.13**	**356**	*eP*		Pn	02 17 35.4	+1.4
CBE	**Ff, Capester**	**4.28**	**352**	*eP*		Pn	02 17 36.7	+0.7
CBE	**Ff, Capester**	**4.28**	**352**	*eS*		Sn	02 18 23.1	-2.1
BAUV	**El Baul**	**7.47**	**248**	*eP*		Pn	02 18 20.1	+0.2
BAUV	**El Baul**	**7.47**	**248**	*eS*		Sn	02 19 39.9	-4.0

IDC ***20*** *02:17:03.9±0.6,55°.09S×32°.00W, h0km, mb4.2/10, mbtmp4.3/11, ML3.8/1, MS3.6/4, Error ellipse: s-maj=21.3km s-min=16.5km az=66.0*
NEIC ***20*** *02:17:05.3±1.7,55°.2S±0°.1×32°.19W±0°.09, h10km±1km, mb4.6/19, Error ellipse: s-maj=17.5km s-min=8.3km az=186.0*

ISC 20 02:17:05.1±0.4, 55°.12S±0°.07×32°.15W±0°.08, h10km, n63, σ0s79/55, mb4.5/16, MS3.6/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.65**	**287**		**Pn**	**02 17 48.0**	**+0.1**
ORCD	**Orcadas**	**8.74**	**225**	Pn	**Pn**	**02 19 09.2**	**-2.2**
PMSA	**Palmer Station**	**18.45**	**226**	P	**Pn**	**02 21 22.5**	**+1.8**
	0.3nm,0.3s,baz=77,slow=10,SNR=4.9 21nm,1.0s						
VNA1	**Neumayer--Stat**	**18.77**	**155**	P	**Pn**	**02 21 26.0**	**+1.5**
VNA3	**Neumayer Olymp**	**18.87**	**158**	P	**Pn**	**02 21 26.0**	**+0.3**
VNA2	**Neumayer--Watz**	**19.17**	**155**	P	**Pn**	**02 21 30.0**	**+0.7**
	baz=308,slow=9.0						
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**02 21 46.1**	**+0.2**
SNAA	**Sanae**	**20.78**	**154**	P	**P**	**02 21 46.4**	**+0.4**
	2.1nm,0.7s,baz=310,slow=10,SNR=14 2.1nm,0.7s						
SNAA	**Sanae**	**20.78**	**154**		**P**	**02 21 45.4**	**-0.6**
TROLL	**Troll, Antarti**	**22.36**	**152**	P	**P**	**02 22 02.9**	**-0.1**
MG05	**Puerto Natales**	**24.06**	**261**	P	**P**	**02 22 19.7**	**-0.5**
PLCA	**Paso Flores**	**29.05**	**284**	P	**P**	**02 23 06.5**	**+1.1**
	2.8nm,1.0s,baz=135,slow=8.4,SNR=3.9						
PLCA				LR	LR	02 34 51.6	
	comp=Z,127nm,19.0s,baz=134,slow=37 2.8nm,1.0s						
CPUP	**Villa Florida**	**34.14**	**317**	P	**P**	**02 23 49.6**	**-0.5**
	4.6nm,0.8s,baz=174,slow=7.4,SNR=8.7 4.6nm,0.8s						
CPUP	**Villa Florida**	**34.14**	**317**	P	**P**	**02 23 50.2**	**+0.1**
CPUP				IAmb	IAmb	02 23 51.4	
	comp=Z,5.0nm,0.8s						
MT09	**Talagante**	**34.34**	**292**	P	**P**	**02 23 50.9**	**-1.1**
MT01	**Popeta**	**34.42**	**292**	P	**P**	**02 23 51.2**	**-1.2**
MT01				IAmb	IAmb	02 23 53.6	
	comp=Z,10nm,0.8s						
QSPA	**South Pole Qui**	**35.13**	**180**	P	**P**	**02 23 59.1**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=207,slow=2.8,SNR=25 comp=Z,3.1nm,0.6s						
QSPA	**South Pole Qui**	**35.13**	**180**	P	**P**	**02 23 59.1**	**+0.5**
QSPA				IAmb	IAmb	02 24 02.5	
	comp=Z,3.4nm,0.7s						
LVC	**Limon Verde**	**42.42**	**305**	P	**P**	**02 24 59.8**	**-0.5**
LVC				IAmb	IAmb	02 25 05.0	
	comp=Z,13nm,0.9s						
MAW	**Mawson**	**42.54**	**146**	P	**P**	**02 24 59.8**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=246,slow=13,SNR=5.6 comp=Z,2.0nm,0.8s						
PTLB	**Pontes e Lacer**	**44.74**	**322**	P	**P**	**02 25 18.5**	**0.0**
PTLB				IAmb	IAmb	02 25 21.0	
	comp=Z,6.1nm,0.9s						
GO01	**Chusmiza**	**45.09**	**307**	P	**P**	**02 25 22.7**	**+0.8**
GO01				IAmb	IAmb	02 25 24.4	
	comp=Z,7.4nm,0.8s						
VNDA	**Vanda**	**47.34**	**184**	P	**P**	**02 25 39.1**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=202,slow=7.7,SNR=2.5 comp=Z,0.5nm,0.7s						
LPAZ	**La Paz**	**47.58**	**310**	P	**P**	**02 25 43.2**	**+1.6**
	comp=Z,5.8nm,0.6s,baz=133,slow=6.0,SNR=23						
LPAZ				LR	LR	02 47 57.5	
	comp=Z,15nm,19.2s,baz=212,slow=39 comp=Z,5.8nm,0.6s						
LPAZ	**La Paz**	**47.58**	**310**	P	**P**	**02 25 42.3**	**+0.7**
LPAZ				IAmb	IAmb	02 25 44.1	
	comp=Z,6.4nm,0.7s						
H10S2	**ASCENSION HYDR**	**48.10**	**24**	T	T	03 17 35.6	
	baz=193,slow=74,SNR=33						
H10S3	**ASCENSION HYDR**	**48.10**	**24**	T	T	03 17 37.3	
	baz=27,slow=74,SNR=62						
BOSA	**Boshof**	**48.55**	**81**	P	**P**	**02 25 48.3**	**-0.2**
	comp=Z,5.1nm,0.9s,baz=227,slow=6.6,SNR=5.6 comp=Z,5.1nm,0.9s						
BOSA	**Boshof**	**48.55**	**81**	P	**P**	**02 25 48.2**	**-0.2**
H10N1	**ASCENSION HYDR**	**49.21**	**23**	T	T	03 18 59.3	
	baz=192,slow=75,SNR=64						
H10N3	**ASCENSION HYDR**	**49.21**	**23**	T	T	03 18 59.2	
	baz=192,slow=75,SNR=119						
H10N2	**ASCENSION HYDR**	**49.23**	**23**	T	T	03 19 01.2	
	baz=192,slow=75,SNR=106						
LBTB	**Lobatse**	**51.51**	**79**	P	**P**	**02 26 10.5**	**-0.5**
LBTB				IAmb	IAmb	02 26 14.5	
	comp=Z,8.2nm,1.0s						
TSUM	**Tsumeb**	**51.79**	**67**	P	**P**	**02 26 13.7**	**+0.6**
ETMB	**Extrema**	**52.58**	**316**	P	**P**	**02 26 19.4**	**+0.5**
ETMB				IAmb	IAmb	02 26 22.0	
	comp=Z,3.5nm,1.0s						
LSZ	**Lusaka**	**60.75**	**74**	LR	LR	02 51 45.6	
	comp=Z,56nm,19.0s,baz=180,slow=34						
LSZ	**Lusaka**	**60.75**	**74**	P	**P**	**02 27 17.4**	**+0.2**
LSZ				IAmb	IAmb	02 27 18.9	
	comp=Z,3.7nm,0.8s						
DBIC	**Dimbokro**	**65.63**	**30**	P	**P**	**02 27 50.0**	**+0.7**
	comp=Z,6.3nm,0.9s,baz=199,slow=8.2,SNR=4.3 comp=Z,6.3nm,0.9s						
TOA0	**Torodi Ar. Sit**	**73.75**	**34**	P	**P**	**02 28 39.9**	**+0.6**
TOA0				IAmb	IAmb	02 28 40.8	
	comp=Z,3.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.75**	**34**	P	**P**	**02 28 39.5**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=197,slow=6.4,SNR=18 comp=Z,2.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.75**	**34**	P	**P**	**02 28 39.8**	**+0.5**
MBAR	**Mbarara**	**74.32**	**68**	LR	LR	02 58 49.7	
	comp=Z,67nm,18.4s,baz=220,slow=34						
TAM	**Tamanrasset**	**84.01**	**35**	P	**P**	**02 29 33.4**	**-2.2**
NVAR	**Mina Array Bea**	**118.45**	**297**	PKP	**PKPdf**	**02 35 51.7**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=126,slow=6.4,SNR=2.3						
FINES	**FINESS Array B**	**124.93**	**30**	PKP	**PKPdf**	**02 36 02.8**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=186,slow=1.7,SNR=6.0						
CMAR	**Chiang Mai Arr**	**128.02**	**115**	PKP	**PKiKP**	**02 36 11.8**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=228,slow=4.8,SNR=5.1						
ARCES	**ARCESS Array B**	**131.16**	**23**	PKP	**PKiKP**	**02 36 16.8**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=207,slow=1.0,SNR=4.6						
ZALV	**Zalesovo Beam**	**144.51**	**65**	PKP	**PKPab**	**02 36 38.8**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=261,slow=4.4,SNR=11						
L27K	**Beaver Creek,**	**144.77**	**312**		PKPbc	02 36 39.9	+0.1
EGAK	**Eagle**	**145.06**	**315**	PKPbc	**PKPbc**	**02 36 40.5**	**-0.1**
L26K	**Log Cabin Wild**	**145.41**	**312**		**PKPab**	**02 36 42.4**	**+0.3**
DIV	**Divide**	**145.83**	**308**	PKPbc	**PKPbc**	**02 36 43.6**	**+0.3**
KLU	**Klutina**	**146.03**	**308**	PKPbc	**PKPab**	**02 36 44.7**	**+0.3**
PAX	**Paxson**	**146.31**	**311**	PKPbc	**PKPab**	**02 36 45.5**	**0.0**
SCM	**Sheep Creek Mo**	**146.77**	**308**	PKPbc	**PKPbc**	**02 36 46.8**	**+0.7**
SEW	**Seward**	**147.19**	**305**	PKPbc	**PKPbc**	**02 36 47.7**	**+0.6**
ILAR	**Eielson Array**	**147.41**	**314**	PKPbc	**PKPbc**	**02 36 47.5**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=123,slow=1.9,SNR=34						
ILAR	**Eielson Array**	**147.41**	**314**		**PKPbc**	**02 36 47.3**	**-0.3**
COLA	**College**	**147.84**	**314**	PKPbc	**PKPbc**	**02 36 48.9**	**+0.1**
NEA2	**Nenana**	**148.28**	**313**		**PKPbc**	**02 36 50.0**	**0.0**
TOLK	**Toolik Lake Re**	**149.16**	**321**	PKPbc	**PKiKP**	**02 36 52.9**	**-0.5**
N19K	**Bonanza Creek**	**149.78**	**305**	PKPbc	**PKPbc**	**02 36 53.8**	**-0.2**
SONM	**Songino Array**	**153.50**	**89**	PKPbc	**PKPbc**	**02 37 02.6**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=227,slow=4.7,SNR=7.2						

NEIC ***20*** *02:17:48.9±1.0,54°.12N±0°.08×161°.23W±0°.08, h25km±11km, ML3.4/12, ML3.3(AEIC), Error ellipse: s-maj=12.4km s-min=5.2km az=157.0*
AEIC ***20*** *02:17:48±1.3,54°.11N±0°.04×161°.25W±0°.05, h27km±7km, Error ellipse: s-maj=5.7km s-min=3.4km az=212.0*
IDC ***20*** *02:17:50.5±1.3,55°.06N×162°.19W, h0km, mb3.6/8, mbtmp3.6/10, ML3.6/2, MS2.8/1, Error ellipse: s-maj=32.0km s-min=17.9km az=172.0*

ISC 20 02:17:49.8±1.1, 54°.11N±0°.10×161°.25W±0°.04, h40km±9km, n96, σ0s75/89, mb3.5/8, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DT1	**Dutton Round H**	**1.17**	**329**		**Pn**	**02 18 08.6**	**-1.0**
CNBA	**Chernabura Isl**	**1.20**	**53**		**Pn**	**02 18 09.7**	**-0.3**
CHNA	**Chernabura Isl**	**1.21**	**53**	P	**Pn**	**02 18 09.7**	**-0.4**
	baz=234						
HAG	**Hague Volcano**	**1.27**	**343**		**Pn**	**02 18 10.7**	**-0.3**
PS4A	**Pavlof South-4**	**1.29**	**344**		**Pn**	**02 18 10.9**	**-0.4**
PVV	**Pavlof Volcano**	**1.31**	**346**		**Pn**	**02 18 11.4**	**-0.1**
SDPT	**Sand Point**	**1.32**	**19**		**Pn**	**02 18 11.0**	**-0.7**
SDPT					**Sn**	**02 18 27.8**	**-0.3**
SDPT	**Sand Point**	**1.32**	**19**	IAML		02 18 29.8	
	comp=N,623nm,0.4s						
SDPT	**Sand Point**	**1.32**	**19**	P	**Pn**	**02 18 11.0**	**-0.7**
	baz=200						
SDPT				S	**Sn**	**02 18 27.8**	**-0.3**
	baz=200						
PN7A	**Pavlof North-7**	**1.40**	**342**		**Pn**	**02 18 13.0**	**+0.2**
BRPK	**Brown Peak**	**1.56**	**291**		**Pn**	**02 18 14.7**	**-0.2**
ISLZ	**Isanotski Laza**	**1.57**	**294**		**Pn**	**02 18 14.7**	**-0.5**
ISLZ					**Sn**	**02 18 33.6**	**-0.6**
ISNN	**Isanotski Nort**	**1.65**	**297**		**Pn**	**02 18 16.6**	**+0.4**
ISNN					**Sn**	**02 18 37.2**	**+1.1**
SSLS	**Shishaldin Sou**	**1.72**	**292**		**Pn**	**02 18 17.6**	**+0.4**
SSLN	**Shishaldin Nor**	**1.75**	**295**		**Pn**	**02 18 18.2**	**+0.6**
SSLN					**Sn**	**02 18 40.2**	**+1.4**
SSLW	**Shishaldin Wes**	**1.81**	**293**		**Pn**	**02 18 18.9**	**+0.5**
SSBA	**Shishaldin**	**1.81**	**293**		**Pn**	**02 18 18.6**	**+0.1**
WESN	**West Dahl Nort**	**2.01**	**285**		**Pn**	**02 18 22.0**	**+0.8**
WESP	**Westdahl Peak**	**2.07**	**282**		**Pn**	**02 18 21.9**	**-0.2**
WESP					**Sn**	**02 18 46.8**	**+0.1**
WECS	**Westdahl Cape**	**2.11**	**283**		**Pn**	**02 18 23.4**	**+0.8**
VNSG	**Veniaminof 6**	**2.37**	**31**		**Pn**	**02 18 26.9**	**+0.7**
VNFG	**Fog Glacier, M**	**2.39**	**23**		**Pn**	**02 18 27.8**	**+1.3**
VNHG	**Veniaminof 1**	**2.43**	**29**		**Pn**	**02 18 27.7**	**+0.7**
AKSA	**Akutan Strait**	**2.62**	**272**		**Pn**	**02 18 30.1**	**+0.5**
AKSA	**Akutan Strait**	**2.62**	**272**		**Pn**	**02 18 29.9**	**+0.4**
AKUT	**Akutan**	**2.66**	**272**	Pn	**Pn**	**02 18 28.7**	**-1.4**
AKUT				IAML		02 19 06.2	
	comp=N,135nm,0.4s						
CHGN	**Chignik**	**2.73**	**35**		**Pn**	**02 18 31.8**	**+0.8**
CHGN	**Chignik**	**2.73**	**35**	IAML		02 19 04.8	
	comp=E,206nm,0.1s						
CHGN	**Chignik**	**2.73**	**35**	P	**Pn**	**02 18 31.8**	**+0.8**
	baz=218						
AKBBA	**Akutan Broad B**	**2.76**	**272**		**Pn**	**02 18 32.2**	**+0.8**
AKLV	**Akutan Long Va**	**2.77**	**273**		**Pn**	**02 18 31.6**	**0.0**
AKGG	**Akutan Green G**	**2.79**	**274**		**Pn**	**02 18 31.2**	**-0.7**
UNV	**Unalaska Valle**	**3.12**	**267**		**Pn**	**02 18 36.8**	**+0.5**
UNV	**Unalaska Valle**	**3.12**	**267**	P	**Pn**	**02 18 36.8**	**+0.5**
	baz=83						
ANPB	**Aniakchak Plen**	**3.18**	**31**		**Pn**	**02 18 38.2**	**+0.8**
MNAT	**Makushin Natee**	**3.22**	**268**		**Pn**	**02 18 38.1**	**+0.3**
ANPK	**Aniakchak Peak**	**3.26**	**32**		**Pn**	**02 18 39.7**	**+1.2**
MGOD	**Makushin Gods**	**3.34**	**267**		**Pn**	**02 18 40.0**	**+0.5**
ANNE	**Aniakchak Nort**	**3.34**	**32**		**Pn**	**02 18 40.4**	**+0.9**
MAPS	**Pakushin South**	**3.38**	**267**		**Pn**	**02 18 40.1**	**+0.2**
CHIR	**Chirikof Islan**	**3.67**	**60**		**Pn**	**02 18 44.0**	**0.0**
CHIR	**Chirikof Islan**	**3.67**	**60**	IAML		02 19 25.7	
	comp=E,93nm,1.2s						
CHIR				IAML		02 19 41.3	
	comp=N,77nm,1.9s						
CHIR	**Chirikof Islan**	**3.67**	**60**	P	**Pn**	**02 18 43.9**	**0.0**
	baz=245						
R16K	**Pilot Point**	**4.04**	**29**		**Pn**	**02 18 49.3**	**+0.3**
OKNC	**Okmok New Cone**	**4.13**	**264**		**Pn**	**02 18 51.3**	**+1.0**
R17K	**Ugashik Creek**	**4.47**	**36**		**Pn**	**02 18 55.9**	**+0.9**
PLK1	**Peulik 1**	**4.53**	**33**		**Pn**	**02 18 56.4**	**+0.7**
NIKH	**Nikolski High**	**4.68**	**259**		**Pn**	**02 18 58.2**	**+0.4**
NIKH	**Nikolski High**	**4.68**	**259**	P	**Pn**	**02 18 58.2**	**+0.4**
	baz=73						
SII	**Sitkinak Islan**	**4.72**	**56**		**Pn**	**02 18 58.3**	**-0.1**
SII	**Sitkinak Islan**	**4.72**	**56**	P	**Pn**	**02 18 58.3**	**-0.1**
	baz=242						
P16K	**Nushagak River**	**5.25**	**19**		**Pn**	**02 19 05.7**	**+0.1**
KABR	**Katmai Barrier**	**5.34**	**39**		**Pn**	**02 19 07.3**	**+0.3**
OHAK	**Old Harbor**	**5.48**	**52**		**Pn**	**02 19 08.1**	**-0.6**
OHAK	**Old Harbor**	**5.48**	**52**	P	**Pn**	**02 19 08.1**	**-0.6**
	baz=239						
P17K	**Kvichak River**	**5.75**	**26**		**Pn**	**02 19 13.5**	**+1.1**
O16K	**Kokwok River B**	**5.76**	**16**		**Pn**	**02 19 12.6**	**0.0**
KDAK	**Kodiak Island**	**6.10**	**49**		**Pn**	**02 19 16.2**	**-1.1**
O17K	**Koliganek Bris**	**6.12**	**20**		**Pn**	**02 19 17.2**	**-0.3**
P18K	**Big Mountain,**	**6.24**	**30**		**Pn**	**02 19 19.7**	**+0.4**
P18K	**Big Mountain,**	**6.24**	**30**	P	**Pn**	**02 19 19.7**	**+0.4**
	baz=215						
Q19K	**Cape Douglas,**	**6.40**	**38**		**Pn**	**02 19 21.5**	**0.0**
Q19K	**Cape Douglas,**	**6.40**	**38**	P	**Pn**	**02 19 21.5**	**0.0**
	baz=224						
N16K	**Nishlik Lake**	**6.52**	**11**		**Pn**	**02 19 23.2**	**+0.1**
O18K	**Koktuh Hills**	**6.63**	**27**		**Pn**	**02 19 25.3**	**+0.6**
O18K	**Koktuh Hills**	**6.63**	**27**	P	**Pn**	**02 19 25.3**	**+0.6**
	baz=212						
SYI	**Shuyak Island**	**6.67**	**44**		**Pn**	**02 19 24.8**	**-0.3**
P19K	**Oil Pt**	**7.08**	**35**		**Pn**	**02 19 31.0**	**+0.2**
P19K	**Oil Pt**	**7.08**	**35**	P	**Pn**	**02 19 31.0**	**+0.2**
	baz=222						
ILSW	**Iliamna Southw**	**7.36**	**34**		**Pn**	**02 19 35.2**	**+0.6**
SVW2	**Sparrevohn**	**7.64**	**21**	Pn	**Pn**	**02 19 38.4**	**0.0**
N19K	**Bonanza Creek**	**7.64**	**26**		**Pn**	**02 19 38.7**	**+0.2**
N19K	**Bonanza Creek**	**7.64**	**26**	P	**Pn**	**02 19 38.7**	**+0.2**
	baz=211						
CNPM	**China Poot**	**7.72**	**41**		**Pn**	**02 19 38.9**	**-0.6**
RSO	**Redoubt South**	**7.85**	**32**		**Pn**	**02 19 40.0**	**-1.5**
BRLK	**Bradley Lake**	**8.01**	**41**	Pn	**Pn**	**02 19 43.0**	**-0.5**
SLKM	**Skilak Lake**	**8.75**	**38**		**Pn**	**02 19 53.4**	**-0.2**
SEW	**Seward**	**8.78**	**42**		**Pn**	**02 19 54.1**	**+0.1**
SEW	**Seward**	**8.78**	**42**	P	**Pn**	**02 19 54.1**	**+0.1**
	baz=232						
ILAR	**Eielson Array**	**12.90**	**28**	Pn	Pn	02 20 45.1	-5.2
	comp=N,0.1nm,0.3s,baz=222,slow=14,SNR=4.7 comp=N,0.4nm,0.5s						
INK	**Inuvik**	**19.25**	**32**	P	**P**	**02 22 08.3**	**-2.0**
	comp=N,0.3nm,0.3s,baz=213,slow=8.6,SNR=8.4 comp=N,0.8nm,0.3s						
PETK	**Petropavlovsk-**	**24.14**	**284**	P	**P**	**02 23 00.8**	**-0.9**
	comp=N,6.6nm,0.6s,baz=82,slow=13,SNR=35 comp=N,6.6nm,0.6s						
YKA	**Yellowknife Ar**	**25.37**	**52**	P	**P**	**02 23 15.9**	**+3.2**
	comp=N,0.5nm,0.6s,baz=271,slow=9.2,SNR=2.8 comp=N,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**32.98**	**101**	P	P	02 24 33.7	+13
	comp=N,0.2nm,0.5s,baz=289,slow=11,SNR=2.1 comp=N,0.2nm,0.5s						
YAK	**Yakutsk**	**35.71**	**311**	LR	LR	02 38 52.2	
	comp=N,16nm,19.4s,baz=90,slow=36						
H11N2	**WAKE ISLAND Hy**	**42.07**	**228**	T	T	03 10 29.6	
	baz=27,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**42.07**	**228**	T	T	03 10 29.8	
	baz=27,slow=76,SNR=38						
H11N1	**WAKE ISLAND Hy**	**42.08**	**228**	T	T	03 10 31.0	
	baz=27,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**43.23**	**227**	T	T	03 12 06.1	
	baz=27,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**43.24**	**227**	T	T	03 12 14.4	
	baz=27,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**43.25**	**227**	T	T	03 12 09.6	
	baz=27,slow=76,SNR=13						
TXAR	**Lajitas Array**	**47.96**	**97**	P	**P**	02 26 36.4	+12
	comp=N,0.2nm,0.8s,baz=289,slow=5.4,SNR=2.3 comp=N,0.2nm,0.8s						
KSRS	**Korea Array**	**49.96**	**281**	P	**P**	**02 26 40.3**	**+0.8**
	comp=N,0.9nm,0.6s,baz=42,slow=7.4,SNR=4.5 comp=N,0.9nm,0.6s						
SONM	**Songino Array**	**54.48**	**304**	P	**P**	**02 27 12.5**	**-0.7**
	comp=N,0.4nm,0.7s,baz=79,slow=7.5,SNR=1.5 comp=N,0.4nm,0.7s						
FINES	**FINESS Array B**	**64.64**	**356**	P	**P**	**02 28 21.6**	**-1.1**
	comp=N,0.7nm,0.6s,baz=354,slow=5.9,SNR=6.4 comp=N,0.7nm,0.6s						
MKAR	**Makanchi Array**	**65.98**	**318**	P	**P**	**02 28 32.3**	**+0.6**
	comp=N,0.3nm,0.7s,baz=40,slow=6.4,SNR=1.8						
	comp=N,0.3nm,0.7s						

IDC ***20*** *02:22:56.8±0.6,55°.23S×30°.16W, h0km, mb4.3/11, mbtmp4.4/12, ML4.2/1, MS3.6/11, Error ellipse: s-maj=18.6km s-min=16.6km az=84.0*
NEIC ***20*** *02:22:58.9±1.4,55°.34S±0°.10×30°.4W±0°.2, h10km±1km, mb4.7/21, Error ellipse: s-maj=16.7km s-min=16.2km az=38.0*

ISC 20 02:22:58.2±0.4, 55°.29S±0°.07×30°.33W±0°.08, h10km, n77, σ0s78/65, mb4.6/17, MS3.6/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.71**	**283**	Pn	**Pn**	**02 23 55.1**	**-0.3**
ORCD	**Orcadas**	**9.38**	**229**	Pn	**Pn**	**02 25 11.1**	**-2.1**
VNA1	**Neumayer--Stat**	**18.18**	**156**	P	**P**	**02 27 11.3**	**+0.7**
VNA3	**Neumayer Olymp**	**18.32**	**159**	P	**P**	**02 27 13.9**	**+1.7**
VNA2	**Neumayer--Watz**	**18.58**	**156**	P	**Pn**	**02 27 15.4**	**+0.2**
	baz=315,slow=11						
PMSA	**Palmer Station**	**19.09**	**227**	P	**P**	**02 27 20.2**	**-0.3**
	0.6nm,0.3s,baz=80,slow=9.0,SNR=6.6						
PMSA				LR	LR	02 33 11.7	
	comp=Z,135nm,19.1s,baz=76,slow=32 13nm,0.8s						
PMSA	**Palmer Station**	**19.09**	**227**	P	**P**	**02 27 18.7**	**-1.9**
PMSA				IAmb	IAmb	02 27 29.2	
	comp=Z,25nm,0.8s						
SNAA	**Sanae**	**20.17**	**155**	P	**P**	**02 27 32.1**	**-0.3**
SNAA	**Sanae**	**20.17**	**155**	P	**P**	**02 27 32.2**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=283,slow=12,SNR=21						
SNAA				LR	LR	02 34 36.3	
	comp=Z,101nm,18.2s,baz=314,slow=35 comp=Z,2.2nm,0.5s						
SNAA	**Sanae**	**20.17**	**155**	P	**P**	**02 27 32.1**	**-0.3**
SMAI	**San Martin Ant**	**21.22**	**218**	P	**P**	**02 27 43.7**	**0.0**
USHA	**Ushuaia**	**21.65**	**255**	P	**P**	**02 27 49.3**	**+0.9**
	comp=Z,20nm,0.8s,baz=106,slow=11,SNR=3.8 comp=Z,20nm,0.8s						
TROLL	**Troll, Antarti**	**21.72**	**153**	P	**P**	**02 27 50.2**	**+1.0**
BELA	**Belgrano 2**	**22.73**	**182**	P	**P**	**02 28 00.3**	**+0.5**
GO10	**Punta Arenas**	**23.67**	**258**	P	**P**	**02 28 08.6**	**-0.9**
MG05	**Puerto Natales**	**25.07**	**261**	P	**P**	**02 28 22.6**	**+0.2**
GO09	**Cerro Castillo**	**25.15**	**262**	P	**P**	**02 28 22.7**	**-0.5**
QSPA	**South Pole Qui**	**34.96**	**180**	P	**P**	**02 29 51.6**	**+1.5**
	comp=Z,4.0nm,0.6s,baz=195,slow=2.6,SNR=26						
QSPA				LR	LR	02 43 47.9	
	comp=Z,132nm,18.2s,baz=192,slow=36 comp=Z,4.0nm,0.6s						
QSPA	**South Pole Qui**	**34.96**	**180**	P	**P**	**02 29 50.3**	**+0.2**
QSPA				IAmb	IAmb	02 30 01.2	
	comp=Z,15nm,1.1s						
CPUP	**Villa Florida**	**34.99**	**315**	P	**P**	**02 29 50.5**	**0.0**
	comp=Z,3.8nm,1.0s,baz=142,slow=7.1,SNR=3.8 comp=Z,3.8nm,1.0s						
PEL	**Peldehue**	**35.71**	**291**	P	**P**	**02 29 56.0**	**-0.6**
PEL				IAmb	IAmb	02 29 58.4	
	comp=Z,15nm,0.8s						
VA03	**San Esteban**	**35.93**	**292**	P	**P**	**02 29 58.2**	**-0.4**
VA03				IAmb	IAmb	02 30 06.5	
	comp=Z,14nm,0.8s						
MAW	**Mawson**	**41.80**	**145**	P	**P**	**02 30 46.1**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=270,slow=8.0,SNR=6.1 comp=Z,2.2nm,0.7s						
BDFB	**Brasilia**	**41.86**	**334**	LR	LR	02 45 33.5	
	comp=Z,70nm,21.0s,

comp=Z,3.2nm,0.7s,baz=212,slow=3.0,SNR=18

*TUL **20** 02:32:06.5±1.2,36°.54N±0°.05×98°.96W±0°.05,h6km±7km, ML3.2,mb_Lg3.2/81(NEIC),Error ellipse: s-maj=6.7km s-min=5.0km az=198.0*
*ANF **20** 02:32:07.5±0.3,36°.52N×98°.88W,h6km,ML3.9/11,Error ellipse: s-maj=4.3km s-min=3.0km az=132.0*
*NEIC **20** 02:32:07.4±1.3,36°.54N±0°.04×98°.92W±0°.05,h10km±7km, Error ellipse: s-maj=6.3km s-min=5.5km az=217.0*

ISC 20 02:32:06.9±0.9,36°.52N±0°.03×98°.91W±0°.03,h7km±7km, n87,σ0°70/71,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOKA	**Waynoka**	**0.11**	**352**	Pg	**Pg**	**02 32 09.4**	**-0.2**
OK038	**West end E0370**	**0.14**	**108**		**Pg**	**02 32 09.8**	**-0.2**
U32A	**Winter Ranch,**	**0.16**	**207**	Pg	**Pg**	**02 32 10.2**	**0.0**
U32A				Sg	**Sg**	**02 32 13.0**	**+0.5**
U32A	**Winter Ranch,** baz=27,SNR=255	**0.16**	**207**	P	**Pg**	**02 32 10.3**	**0.0**
U32A	baz=27			S	**Sg**	**02 32 13.0**	**+0.5**
OK035	**E0210 Rd and N**	**0.25**	**41**	Pg	**Pg**	**02 32 12.3**	**+0.4**
OK035				Sg	**Sg**	**02 32 16.3**	**+1.1**
ELIS	**Ellis County**	**0.61**	**222**		**Pg**	**02 32 18.3**	**-0.4**
OK032	**Salt Plains WL**	**0.63**	**63**	Pg	**Pg**	**02 32 19.3**	**+0.2**
OK032				Sg	**Sb**	**02 32 28.2**	**-1.1**
CROK	**Carrier**	**0.75**	**91**	Pg	**Pb**	**02 32 21.7**	**-0.6**
CROK				Sg	**Sb**	**02 32 32.3**	**-0.4**
KAN14	**Manchester OK**	**0.88**	**60**		**Pb**	**02 32 23.8**	**-0.7**
KAN10	**Anthony SW Sta**	**0.89**	**47**		**Pg**	**02 32 23.8**	**-0.3**
CSTR	**Hydro, Custer**	**0.89**	**168**	Pg	**Pg**	**02 32 24.0**	**-0.1**
GC02	**Grant County #**	**0.91**	**68**		**Pb**	**02 32 24.4**	**-0.6**
GC02				Sg	**Sb**	**02 32 36.8**	**-0.5**
KAN16	**Harper SW Stat**	**0.98**	**44**		**Pg**	**02 32 25.4**	**-0.3**
KAN05	**Bluff City Nor**	**1.02**	**55**		**Pb**	**02 32 26.5**	**-0.4**
BCOK	**Bluff Creek, N**	**1.36**	**129**		**Pn**	**02 32 32.3**	**-0.1**
OK029	**Liberty Lake**	**1.38**	**121**		**Pn**	**02 32 32.6**	**0.0**
BLOK	**Blackwell**	**1.39**	**80**		**Pb**	**02 32 32.9**	**-0.3**
WMOK	**Wichita Mounta**	**1.78**	**177**		**Pn**	**02 32 38.2**	**0.0**
WMOK	**Wichita Mounta** baz=357,SNR=121	**1.78**	**177**	P	**Pn**	**02 32 38.2**	**0.0**
QUOK	**Quay**	**1.81**	**100**		**Pn**	**02 32 39.2**	**+0.7**
R32A	**Long Quarter,**	**1.90**	**5**		**Pn**	**02 32 40.2**	**+0.4**
R32A	comp=Z,125nm,1.1s			IAmb_Lg		02 33 07.5	
R32A	**Long Quarter,** baz=185,SNR=61	**1.90**	**5**	P	**Pn**	**02 32 39.9**	**0.0**
T35A	**Sooner Cattle**	**1.97**	**78**	IAmb_Lg		02 33 15.3	
T35B	comp=Z,77nm,0.8s **Sooner Cattle** baz=259,SNR=28	**1.97**	**78**	P	**Pn**	**02 32 41.1**	**+0.4**
T35B	baz=259			Sb	**Sg**	**02 33 09.4**	**-0.8**
X34A	**Smith Ranch, M**	**2.11**	**155**		**Pb**	**02 32 44.8**	**-0.7**
X34A	comp=Z,119nm,0.7s			IAmb_Lg		02 33 18.4	
CBKS	**Cedar Bluff**	**2.38**	**344**		**Pn**	**02 32 47.5**	**+1.1**
CBKS	**Cedar Bluff** baz=164,SNR=19	**2.38**	**344**	P	**Pn**	**02 32 46.8**	**+0.4**
CBKS	baz=164			S	**Sb**	**02 33 19.1**	**-0.6**
TUL1	**Leonard**	**2.59**	**103**		**Pn**	**02 32 50.5**	**+1.2**
TUL1	**Leonard** baz=285,SNR=8.8	**2.59**	**103**	P	**Pn**	**02 32 49.7**	**+0.4**
AMTX	**Amarillo**	**2.78**	**235**	Pn	**Pn**	**02 32 52.5**	**+0.5**
AMTX	**Amarillo** baz=53,SNR=66	**2.78**	**235**	P	**Pn**	**02 32 53.0**	**+1.0**
AMTX	baz=53			S	**Sb**	**02 33 31.4**	**+0.1**
LOOK	**Love County**	**2.89**	**150**		**Pn**	**02 32 54.0**	**+0.6**
LOOK	comp=Z,34nm,0.8s			IAmb_Lg		02 33 40.3	
KSU1	**Kansas State U**	**3.15**	**35**	IAmb_Lg		02 33 54.6	
KSU1	**Kansas State U** baz=216,SNR=6.1	**3.15**	**35**	P	**Pn**	**02 32 57.8**	**+0.9**
KSU1	baz=216			S	**Sn**	**02 33 36.6**	**+1.7**
RLO	**Rose Lookout**	**3.16**	**95**	IAmb_Lg		02 33 55.5	
Z35A	comp=Z,36nm,0.7s **Perchaven, San** baz=338	**3.46**	**156**	P	**Pn**	**02 33 02.6**	**+1.4**
X37A	**Clayton**	**3.47**	**123**	Pn	**Pn**	**02 33 02.0**	**+0.7**
X37A	comp=Z,64nm,0.8s			IAmb_Lg		02 34 01.6	
X37A	**Clayton** baz=305,SNR=42	**3.47**	**123**	P	**Pn**	**02 33 02.0**	**+0.7**
X37A	baz=305			S	**Sn**	**02 33 44.1**	**+1.4**
U38A	**Gravette**	**3.65**	**90**		**Pn**	**02 33 03.9**	**+0.1**
U38A	comp=Z,48nm,1.1s			IAmb_Lg		02 34 09.0	
KSCO	**Kaye Shedlock'**	**3.85**	**311**	Pn	**Pn**	**02 33 07.8**	**+1.1**
ABTX	**Abilene, Hawle**	**3.94**	**189**		**Pn**	**02 33 07.5**	**-0.3**
HHAR	**Hobbs** comp=Z,35nm,0.9s	**4.02**	**92**	IAmb_Lg		02 34 19.0	
N33A	**J Bar K, Exete**	**4.36**	**15**	Pn	**Pn**	**02 33 12.2**	**-1.4**
T25A	**Trinidad**	**4.45**	**280**	Pn	**Pn**	**02 33 15.1**	**0.0**
T25A	comp=Z,62nm,0.8s			IAmb_Lg		02 34 28.1	
Z38A	**Mt. Pleasant** comp=Z,38nm,0.7s	**4.58**	**134**	IAmb_Lg		02 34 41.6	
S39A	**Bolivar**	**4.62**	**74**	Pn	**Pn**	**02 33 17.0**	**-0.1**
S39A	comp=Z,64nm,0.8s			IAmb_Lg		02 34 31.9	
WHTX	**Lake Whitney,**	**4.68**	**165**	Pn	**Pn**	**02 33 18.2**	**+0.3**
MIAR	**Mount Ida**	**4.78**	**113**	Pn	**Pn**	**02 33 19.6**	**+0.3**
MIAR	**Mount Ida** baz=296,SNR=20	**4.78**	**113**	P	**Pn**	**02 33 20.0**	**+0.8**
BGNE	**Belgrade**	**4.92**	**7**	Pn	**Pn**	**02 33 21.4**	**+0.2**
BGNE	comp=Z,69nm,0.9s			IAmb_Lg		02 34 50.6	
OGNE	**Ogallala**	**5.05**	**332**	Pn	**Pn**	**02 33 22.8**	**-0.3**
OGNE	comp=Z,56nm,0.8s			IAmb_Lg		02 34 57.6	
237A	**Washetta, Mont** comp=Z,44nm,0.9s	**5.19**	**149**	IAmb_Lg		02 35 03.1	
P38A	**Dawn**	**5.25**	**52**	Pn	**Pn**	**02 33 26.0**	**+0.2**
P38A	comp=Z,45nm,0.9s			IAmb_Lg		02 35 04.8	
MGMO	**Mountain Grove** comp=Z,52nm,0.7s	**5.37**	**81**	IAmb_Lg		02 35 00.3	
SDCO	**Great Sand Dun**	**5.41**	**285**	Pn	**Pn**	**02 33 28.9**	**+0.8**
SDCO	comp=Z,27nm,0.9s			IAmb_Lg		02 35 04.6	
Q24A	**Divide**	**5.51**	**298**	Pn	**Pn**	**02 33 29.3**	**-0.4**
Q24A	comp=Z,30nm,0.7s			IAmb_Lg		02 35 07.6	
WHAR	**Wooly Hollow**	**5.51**	**101**	Pn	**Pn**	**02 33 29.2**	**-0.3**
WHAR	comp=Z,46nm,1.0s			IAmb_Lg		02 35 07.3	
R40A	**Maddies Statio**	**5.58**	**70**		**Pn**	**02 33 30.7**	**+0.5**
R40A	comp=Z,32nm,0.8s			IAmb_Lg		02 35 13.7	
UALR	**University of** comp=Z,24nm,0.9s	**5.62**	**106**	IAmb_Lg		02 35 15.3	
CLN7	**Carlsbad 7**	**5.76**	**226**	Pn	**Pn**	**02 33 32.1**	**-0.8**
435B	**Jarrell** comp=Z,40nm,0.9s	**5.83**	**169**	IAmb_Lg		02 35 27.5	
JCT	**Junction City** comp=Z,34nm,0.7s	**6.07**	**187**	IAmb_Lg		02 35 28.0	
P40A	**Paris**	**6.19**	**59**	Pn	**Pn**	**02 33 38.4**	**-0.3**
GDL2	**Guadalupe Moun**	**6.24**	**228**	Pn	**Pn**	**02 33 40.0**	**+0.5**
LCAR	**Lake Charles** comp=Z,22nm,1.0s	**6.28**	**92**	IAmb_Lg		02 35 32.9	
CCM	**Cathedral Cave**	**6.30**	**74**	Pn	**Pn**	**02 33 40.4**	**+0.2**
CCM	comp=Z,36nm,0.8s			IAmb_Lg		02 35 34.6	
ANMO	**Albuquerque**	**6.33**	**258**	Pn	**Pn**	**02 33 41.0**	**+0.1**
FVM	**French Village**	**6.92**	**75**	Pn	**Pn**	**02 33 48.7**	**-0.1**
SCIA	**State Center** comp=Z,26nm,0.8s	**6.96**	**38**	IAmb_Lg		02 35 52.9	
PHWY	**Pilot Hill** comp=Z,28nm,0.7s	**6.99**	**315**	IAmb_Lg		02 35 51.9	
N23A	**Red Feather La** comp=Z,44nm,1.1s	**7.02**	**311**	IAmb_Lg		02 35 53.6	
SLM	**Saint Louis** comp=Z,23nm,0.8s	**7.21**	**70**	IAmb_Lg		02 36 04.3	
MNTX	**Cornudas Mount**	**7.21**	**230**	Pn	**Pn**	**02 33 51.9**	**-0.7**
MNTX	comp=Z,24nm,0.9s			IAmb_Lg		02 36 10.9	
GNAR	**Gosnell**	**7.21**	**92**	IAmb_Lg		02 36 02.8	
ECSD	**EROS Data Cent** comp=Z,39nm,0.8s	**7.42**	**13**	Pn	**Pn**	**02 33 53.3**	**-2.2**
CGM3	**Cape Girardeau** comp=Z,27nm,1.0s	**7.45**	**81**	IAmb_Lg		02 36 03.2	
SIUC	**Southern Illin** comp=Z,34nm,0.8s	**7.84**	**78**	IAmb_Lg		02 36 15.8	
SUSD	**Miller** comp=Z,18nm,0.8s	**7.91**	**360**	IAmb_Lg		02 36 14.6	
W45A	**Hickory Valley** comp=Z,28nm,0.9s	**8.02**	**97**	IAmb_Lg		02 36 34.9	
L40A	**Anamosa** comp=Z,38nm,0.9s	**8.13**	**45**	IAmb_Lg		02 36 28.1	
833A	**Chaparral WMA,** comp=Z,20nm,1.0s	**8.19**	**183**	IAmb_Lg		02 36 40.4	
TX31	**Lajitas Ar. Si** baz=28,SNR=15	**8.21**	**210**	P	**Pn**	**02 34 06.1**	**-0.3**
K22A	**Casper** comp=Z,35nm,1.0s	**8.48**	**319**	IAmb_Lg		02 36 56.2	
RSSD	**Black Hills** comp=Z,15nm,0.8s	**8.54**	**334**	IAmb_Lg		02 36 46.2	
I37A	**Lemond, Waseca** comp=Z,18nm,0.9s	**8.59**	**28**	IAmb_Lg		02 36 45.9	
JFWS	**Jewell Farm** comp=Z,23nm,0.8s	**9.23**	**44**	IAmb_Lg		02 37 08.6	
I40A	**Norwalk** comp=Z,11nm,0.8s	**9.71**	**38**	IAmb_Lg		02 37 23.9	

*IDC **20** 02:40:37.5±1.2,55°.08S×31°.65W,h0km,mb3.9/3, mbtmp3.9/3,MS2.9/1,Error ellipse: s-maj=63.0km s-min=32.6km az=47.0*

ISC 20 02:40:38.8±1.1,55°.1S±0°.3×31°.7W±0°.3,h10km,n9,σ0°36/6, mb3.8/3,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.78**	**158**	P	Pn	02 45 11.0	+13
VNA2	**Neumayer--Watz** baz=314,slow=11	**19.07**	**156**	P	Pn	02 45 10.9	+9.2
CPUP	**Villa Florida** comp=Z,20nm,18.1s,baz=167,slow=41	**34.31**	**316**	LR	LR	03 03 57.6	
MAW	**Mawson** 0.8nm,0.4s,baz=221,slow=20,SNR=2.5 0.8nm,0.4s	**42.40**	**145**	P	**P**	**02 48 32.7**	**-0.1**
LPAZ	**La Paz** 0.9nm,0.5s,baz=166,slow=4.2,SNR=5.7 0.9nm,0.5s	**47.77**	**310**	P	**P**	**02 49 16.8**	**0.0**
TORD	**Torodi Ar. Bea** 0.8nm,0.8s,baz=196,slow=5.4,SNR=3.2 0.8nm,0.8s	**73.61**	**34**	P	**P**	**02 52 12.0**	**-0.1**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=225,slow=3.3,SNR=1.8	**144.28**	**65**	PKP	**PKPdf**	**03 00 13.7**	**-0.1**
ILAR	**Eielson Array** 1.3nm,0.9s,baz=116,slow=1.4,SNR=12	**147.59**	**314**	PKPbc	**PKPbc**	**03 00 21.6**	**-0.2**
SONM	**Songino Array** 0.3nm,0.5s,baz=225,slow=0.6,SNR=2.0	**153.25**	**88**	PKPbc	**PKiKP**	**03 00 36.8**	**+0.6**

*IDC **20** 02:47:04.4±2.3,43°.80N×127°.80W,h0km,mb3.0/3, mbtmp3.3/8,ML3.5/4,MS3.0/11,Error ellipse: s-maj=38.0km s-min=15.7km az=60.0*
*ANF **20** 02:47:06.0±1.3,43°.74N×127°.90W,h10km,ML3.6/13, Error ellipse: s-maj=13.8km s-min=4.9km az=54.0*
*NEIC **20** 02:47:09.2±2.8,43°.81N±0°.09×127°.6W±0°.2,h10km±2km, ML3.2/50,Error ellipse: s-maj=21.9km s-min=14.0km az=254.0*

ISC 20 02:47:05.7±1.5,43°.81N±0°.08×128°.0W±0°.1,h10km,n69, σ1§19/65,MS3.2/4,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.82**	**108**	Pn	**Pn**	**02 47 47.4**	**-3.5**
I02E	**Swisshome, OR**	**3.00**	**83**	Pn	**Pn**	**02 47 51.4**	**-1.8**
I02E	comp=E,79nm,2.0s			IAML		02 48 37.5	
I02E	**Swisshome, OR** baz=264,SNR=76	**3.00**	**83**	P	**Pn**	**02 47 51.8**	**-1.4**
I02E	baz=264			S	**Sn**	**02 48 29.0**	**-0.2**
J01E	**Myrtle Point**	**3.01**	**101**	Pn	**Pn**	**02 47 52.2**	**-1.3**
J01E	comp=N,103nm,0.3s			IAML		02 48 32.3	
J01E	**Myrtle Point** baz=283,SNR=32	**3.01**	**101**	P	**Pn**	**02 47 51.0**	**-2.5**
J01E	baz=283			S	**Sn**	**02 48 28.8**	**-0.8**
HEBO	**Mount Hebo**	**3.33**	**64**	Pn	**Pn**	**02 47 56.5**	**-1.4**
HEBO	comp=N,74nm,2.1s			IAML		02 48 42.4	
K02D	**Willamette Mer** baz=290,SNR=54	**3.34**	**108**	P	**Pn**	**02 47 55.6**	**-2.5**
K02D	baz=290			S	**Sn**	**02 48 36.4**	**-1.4**
I03D	**Drain, OR** baz=272,SNR=97	**3.35**	**90**	P	**Pn**	**02 47 56.6**	**-1.5**
I03D	baz=272			S	**Sn**	**02 48 37.8**	**-0.2**
COR	**Corvallis**	**3.45**	**75**	Pn	**Pn**	**02 47 58.5**	**-0.9**
DBO	**Dodson Butte**	**3.51**	**100**	Pn	**Pn**	**02 47 59.3**	**-1.2**
DBO	comp=E,52nm,0.7s			IAML		02 48 46.2	
DBO	comp=N,46nm,0.7s			IAML		02 48 46.8	
BUCK	**Buck Mountain**	**3.62**	**82**	Pn	**Pn**	**02 48 01.3**	**-0.6**
BUCK	comp=N,41nm,2.6s			IAML		02 48 49.2	
BUCK	comp=E,46nm,2.3s			IAML		02 49 01.6	
L02F	**Cave Junction** baz=298	**3.65**	**116**	S	**Sn**	**02 48 44.4**	**-1.0**
G03D	**McMinnville, O**	**3.65**	**66**		**Pn**	**02 48 02.2**	**0.0**
G03D	comp=N,48nm,1.2s			IAML		02 48 52.9	
G03D	comp=E,44nm,3.0s			IAML		02 48 56.0	
G03D	**McMinnville, O** baz=248,SNR=65	**3.65**	**66**	P	**Pn**	**02 48 02.2**	**0.0**
H04D	**Lebanon**	**3.83**	**78**		**Pn**	**02 48 04.7**	**-0.1**
H04D	**Lebanon** baz=260,SNR=19	**3.83**	**78**	P	**Pn**	**02 48 04.6**	**-0.2**
HUMO	**Hull Mountain**	**3.86**	**106**	Pn	**Pn**	**02 48 03.5**	**-1.7**
HUMO	comp=N,45nm,0.8s			IAML		02 48 53.8	
HUMO	comp=E,38nm,0.6s			IAML		02 48 55.4	
I04A	**Tendick Farm,** baz=271,SNR=14	**4.03**	**88**	P	**Pn**	**02 48 07.4**	**-0.1**
E03A	**Lebam**	**4.15**	**47**	Pn	**Pn**	**02 48 08.4**	**-0.6**
E03A	comp=N,27nm,1.2s			IAML		02 49 00.9	
E03A	comp=E,32nm,0.9s			IAML		02 49 02.8	
F04D	**Rainier, OR** baz=238,SNR=9.0	**4.19**	**55**	P	**Pn**	**02 48 10.0**	**+0.4**
H04A	**Detroit Lake**	**4.25**	**76**	Pn	**Pn**	**02 48 10.7**	**+0.1**
J04D	**Umpqua Nationa**	**4.30**	**96**		**Pn**	**02 48 11.9**	**+0.5**
J04D	**Umpqua Nationa** baz=279,SNR=16	**4.30**	**96**	P	**Pn**	**02 48 11.7**	**+0.2**
YBH	**Yreka Blue Hor** comp=E,0.4nm,0.3s,baz=307,slow=15,SNR=1.6	**4.40**	**116**	Pn	**Pn**	**02 48 12.2**	**-0.5**
YBH	comp=E,0.4nm,0.3s,baz=75,slow=12,SNR=2.5			Sn	**Sn**	**02 49 06.5**	**+2.5**
YBH	comp=E,122nm,18.3s,baz=308,slow=39 comp=E,0.9nm,0.3s			LR	LR	02 49 50.8	
YBH	**Yreka Blue Hor**	**4.40**	**116**	Pn	**Pn**	**02 48 13.1**	**+0.5**
WISH	**Wishkah**	**4.43**	**40**		**Pn**	**02 48 12.9**	**0.0**
WISH	comp=N,34nm,4.2s			IAML		02 49 48.4	
L04D	**Klamath Falls**	**4.45**	**109**	Pn	**Pn**	**02 48 13.9**	**+0.4**
L04D	comp=N,33nm,1.9s			IAML		02 49 09.3	
L04D	**Klamath Falls** baz=292,SNR=18	**4.45**	**109**	P	**Pn**	**02 48 13.6**	**+0.2**
L04D	baz=292			S	**Sn**	**02 49 06.2**	**+0.8**
F04A	**Amboy**	**4.48**	**60**	Pn	**Pn**	**02 48 14.2**	**+0.5**
NLWA	**Neilton Lookou**	**4.59**	**37**	Pn	**Pn**	**02 48 14.9**	**-0.3**
K04D	**Chiloquin, OR** baz=286	**4.70**	**102**	S	**Sn**	**02 49 11.8**	**+0.4**
HOOD	**Mount Hood Mea**	**4.76**	**69**		**Pn**	**02 48 17.9**	**+0.2**
HOOD	comp=N,25nm,0.8s			IAML		02 48 55.5	
HOOD	comp=E,23nm,0.9s			IAML		02 49 24.6	
I05D	**Terrebonne, OR**	**4.81**	**81**	P	**Pn**	**02 48 18.1**	**-0.1**
J05D	**Fort Rock, OR** baz=278	**4.93**	**94**	P	**Pn**	**02 48 19.7**	**-0.3**
J05D	baz=278			S	**Sn**	**02 49 18.5**	**+1.5**
G05D	**Wamic, OR** baz=255,SNR=19	**4.97**	**71**	P	**Pn**	**02 48 21.4**	**+1.0**
PINE	**Pine Mountain**	**5.09**	**88**	Pn	**Pn**	**02 48 22.2**	**0.0**
PINE	comp=E,17nm,4.8s			IAML		02 49 47.4	
PINE	comp=N,16nm,4.2s			IAML		02 50 07.7	
B04A	**Port Angeles**	**5.27**	**35**		**Pn**	**02 48 24.4**	**0.0**
B04A	comp=E,15nm,0.1s			IAML		02 50 17.6	
B04A	comp=N,14nm,0.1s			IAML		02 50 18.0	
K05A	**Summer Lake** comp=N,18nm,4.8s	**5.28**	**99**	IAML		02 49 57.3	
K05A	comp=E,19nm,4.6s			IAML		02 50 10.8	
D05A	**Enumclaw**	**5.39**	**49**		**Pn**	**02 48 26.9**	**+0.7**
D05A	comp=E,17nm,2.1s			IAML		02 49 45.1	
CLRS	**Cowichan Lake**	**5.67**	**27**	Pn	**Pn**	**02 48 30.4**	**+0.4**
PGC	**Sidney**	**5.77**	**31**		**Pn**	**02 48 31.6**	**+0.4**
F07A	**Phinny Hill Vi**	**6.09**	**67**		**Pn**	**02 48 36.5**	**+0.8**
I07A	**Izee**	**6.12**	**85**		**Pn**	**02 48 36.9**	**+0.6**
ORV	**Oroville**	**6.45**	**129**		**Pn**	**02 48 42.0**	**+1.3**
HAWA	**Hanford**	**6.51**	**64**	Pn	**Pn**	**02 48 42.3**	**+0.8**
G08A	**Pilot Rock**	**6.61**	**74**	Pn	**Pn**	**02 48 42.5**	**-0.5**
D08A	**Wollman Farm,**	**7.15**	**60**	Pn	**Pn**	**02 48 51.0**	**+0.8**
PNTR	**Pine Nut**	**7.86**	**124**	Pn	**Pn**	**02 49 02.8**	**+2.5**
CMB	**Columbia Colle**	**8.14**	**133**	Pn	**Pn**	**02 49 06.0**	**+2.0**
BBB	**Bella Bella** comp=E,0.7nm,0.3s,baz=199,slow=5.1,SNR=18	**8.38**	**359**	Pn	**Pn**	**02 49 08.9**	**+1.8**
BBB	comp=E,0.3nm,0.3s,baz=270,slow=20,SNR=2.1			Sn	**Sn**	**02 50 40.5**	**-1.2**
BBB	comp=E,35nm,21.3s,baz=101,slow=31 comp=E,9.7nm,0.8s			LR	LR	02 51 22.1	
NEW	**Newport** comp=E,0.6nm,0.3s,baz=245,slow=14,SNR=7.9	**8.76**	**56**	Pn	**Pn**	**02 49 12.3**	**-0.2**
NEW	comp=E,129nm,18.9s,baz=244,slow=38 comp=E,1.5nm,0.3s			LR	LR	02 52 35.9	
NEW	**Newport** baz=243	**8.76**	**56**	P	**Pn**	**02 49 12.6**	**+0.2**
LHV	**Little Huntoon**	**9.06**	**125**	Pn	**Pn**	**02 49 18.7**	**+2.2**
NVAR	**Mina Array Bea** comp=E,1.2nm,0.8s,baz=300,slow=16,SNR=8.2	**9.06**	**123**	Pn	**Pn**	**02 49 16.6**	**-0.2**
NVAR	comp=E,95nm,18.4s,baz=276,slow=38			LR	LR	02 52 45.0	
PDAR	**Pinedale Array** baz=268,slow=12,SNR=4.2	**13.46**	**88**	Pn	**Pn**	**02 50 19.1**	**+2.2**
PDAR	comp=E,87nm,19.5s,baz=282,slow=39 comp=E,0.4nm,0.7s			LR	LR	02 55 47.5	
PFO	**Pinyon Flats O** comp=E,38nm,18.9s,baz=292,slow=39	**13.57**	**135**	LR	LR	02 55 53.9	
ANMO	**Albuquerque** comp=E,51nm,19.2s,baz=280,slow=40	**18.80**	**111**	LR	LR	02 59 23.8	
YKA	**Yellowknife Ar** comp=E,0.8nm,0.7s,baz=202,slow=10,SNR=2.8 comp=E,0.8nm,0.7s	**20.28**	**18**	P	**P**	**02 51 40.9**	**-0.2**
ILAR	**Eielson Array** comp=E,0.2nm,0.6s,baz=138,slow=8.5,SNR=2.2	**23.54**	**340**	P	**P**	**02 52 14.9**	**-0.9**
ILAR	comp=E,30nm,21.0s,baz=277,slow=32 comp=E,0.2nm,0.6s			LR	LR	02 59 52.0	
TXAR	**Lajitas Array** comp=E,0.5nm,0.8s,baz=297,slow=8.3,SNR=6.6 comp=E,0.5nm,0.8s	**24.17**	**119**	P	**P**	**02 52 22.3**	**0.0**
INK	**Inuvik** comp=E,45nm,18.4s,baz=170,slow=35	**24.73**	**355**	LR	LR	03 01 30.3	
SADO	**Sadowa** comp=E,67nm,18.4s,baz=128,slow=37	**34.55**	**71**	LR	LR	03 08 21.9	
TKL	**Tuckaleechee C** comp=E,63nm,20.5s,baz=300,slow=36	**34.61**	**88**	LR	LR	03 07 45.7	
H11N3	**WAKE ISLAND Hy** baz=50,slow=75,SNR=534	**58.78**	**268**	T	T	04 00 20.9	
H11N2	**WAKE ISLAND Hy** baz=50,slow=75,SNR=333	**58.78**	**268**	T	T	04 00 13.2	
H11N1	**WAKE ISLAND Hy** baz=50,slow=75,SNR=334	**58.80**	**268**	T	T	04 00 11.0	
H11S1	**WAKE ISLAND Hy** baz=50,slow=75,SNR=241	**59.70**	**267**	T	T	04 01 30.0	
H11S2	**WAKE ISLAND Hy** baz=50,slow=75,SNR=183	**59.71**	**267**	T	T	04 01 23.6	
H11S3	**WAKE ISLAND Hy** baz=50,slow=75,SNR=183	**59.72**	**267**	T	T	04 01 28.5	

*IDC **20** 02:47:26.5±2.3,54°.68S×31°.26W,h0km,mb3.6/2, mbtmp3.6/2,Error ellipse: s-maj=98.4km s-min=51.5km az=10.0*

ISC 20 02:47:25.5±1.0,55°.3S±0°.2×31°.4W±0°.3,h10km,n7,σ1§67/7, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.59**	**158**	P	**Pn**	**02 51 43.8**	**+1.3**
VNA2	**Neumayer--Watz** baz=311,slow=12	**18.87**	**156**	P	**Pn**	**02 51 46.8**	**+0.8**
SNAA	**Sanae**	**20.47**	**154**	P	**P**	**02 52 00.8**	**-2.2**
LPAZ	**La Paz** 0.5nm,0.5s,baz=133,slow=5.2,SNR=2.0 0.5nm,0.5s	**47.98**	**309**	P	**P**	**02 56 05.0**	**-0.1**
TORD	**Torodi Ar. Bea** 0.4nm,0.9s,baz=195,slow=5.5,SNR=1.6 0.4nm,0.9s	**73.64**	**34**	P	**P**	**02 58 58.5**	**-0.4**
ILAR	**Eielson Array** 0.9nm,0.8s,baz=116,slow=1.8,SNR=9.4	**147.81**	**313**	PKPbc	**PKiKP**	**03 07 10.6**	**-0.4**
SONM	**Songino Array** 0.5nm,0.6s,baz=242,slow=3.1,SNR=2.6	**153.09**	**88**	PKPbc	**PKiKP**	**03 07 24.5**	**+1.9**

*IDC **20** 02:53:03.9±10.0,36°.22N×71°.16E,h179km±103km, mb3.2/6,mbtmp3.7/8,Error ellipse: s-maj=56.0km s-min=43.8km az=117.0*
*NNC **20** 02:53:23.4±33.0,37°.80N×71°.28E,h252km±127km,mb2.5, mpv3.5,Error ellipse: s-maj=468.6km s-min=58.1km az=4.0*

ISC 20 02:53:10.2±0.8,36°.76N±0°.08×70°.9E±0°.1,h200km,n16, σ1§30/18,mb3.4/5,3C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.04**	**164**	P	**Pn**	**02 54 02.2**	**+1.8**
CHCP	**Chirah Chowk**	**3.65**	**147**	P	**Pn**	**02 54 08.4**	**+0.8**
SARP	**Sargodha**	**5.04**	**163**	P	**Pn**	**02 54 24.3**	**-0.8**
KK31	**Karatay Array** 3.2nm,0.5s,baz=173,slow=11,SNR=26	**6.35**	**357**	⇑Pn	**Pn**	**02 54 43.1**	**+1.3**
KK31	2.5nm,0.3s,baz=188,slow=22,SNR=8.8			⇓Sn	**Sn**	**02 55 52.7**	**-1.8**
TKM2	**Tokmak 2** 3.0nm,0.6s	**7.14**	**29**	⇑Pn	**Pn**	**02 54 52.9**	**+0.6**
TKM2	6.7nm,0.7s			⇑Sn	**Sn**	**02 56 12.2**	**-1.2**
AB31	**Akbulak array** 1.5nm,0.6s,baz=146,slow=12,SNR=30	**14.82**	**331**	P	**P**	**02 56 33.0**	**+2.1**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=210,slow=12,SNR=4.9	**14.91**	**19**	P	**Pn**	**02 56 30.1**	**-0.9**
AKTO	**Aktyubinsk** 1.9nm,0.5s,baz=122,slow=4.0,SNR=10.0	**16.52**	**330**	P	**Pn**	**02 56 51.4**	**+0.8**
AKTO	**Aktyubinsk** 1.9nm,0.7s	**16.52**	**330**	⇓P	**Pn**	**02 56 50.7**	**+0.2**
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=228,slow=11,SNR=3.2 0.7nm,0.3s	**19.72**	**25**	P	**P**	**02 57 24.2**	**0.0**
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=76,slow=2.0,SNR=1.5 0.2nm,0.3s	**32.72**	**309**	P	**P**	**02 59 23.6**	**-0.1**
FINES	**FINESS Array B** 0.7nm,0.4s,baz=120,slow=9.8,SNR=13 0.7nm,0.4s	**37.23**	**326**	P	**P**	**03 00 02.5**	**+0.5**
**

DJA 20 03:06:08.7±0.4, 9°S 9°×11°3E±°, h136km±8km, M4.0/12, mb4.5/1, MLv3.7/12, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**0.50**	**29**	P	Pn	03 06 30.0	+1.6
GMJI				S	Sn	03 06 45.7	+2.3
BLJI	**Banyuglugur**	**1.03**	**22**	P	Pn	03 06 32.7	+0.2
BLJI				S	Sn	03 06 50.8	+0.2
ABJI	**Asem Bagus**	**1.37**	**48**	P	Pn	03 06 36.3	+0.5
ABJI				S	Sn	03 06 56.9	+0.5
PWJI	**Pagerwojo**	**1.54**	**296**	P	Pn	03 06 37.2	-0.5
PWJI				S	Sn	03 07 00.6	+0.8
DNP	**Denpasar**	**1.99**	**89**	P	Pn	03 06 42.6	-0.2
SRBI	**Singaraja**	**2.09**	**73**	P	Pn	03 06 44.7	+0.7
UGM	**Wanagama**	**2.77**	**286**	P	Pn	03 06 53.2	+0.6
TWSI	**Taliwang, Sumb**	**3.64**	**91**	P	Pn	03 07 03.6	-0.3
PLAI	**Plampang**	**4.53**	**92**	P	Pn	03 07 15.9	+0.3
CNJI	**Cibinong**	**6.17**	**283**	P	Pn	03 07 37.5	-0.1
	0.4nm80nm,1.1s						

*IDC **20** 03:10:38.5±1.1, 51°.57N×16°.29E, h0km, mbtmp3.1/7, ML3.0/7, Error ellipse: s-maj=16.8km s-min=9.6km az=95.0*
*IPEC **20** 03:10:40.4±0.3, 51°.51N×16°.19E, h1km, ML2.5/4, Error ellipse: s-maj=2.0km s-min=1.5km az=32.0*
*PRU **20** 03:10:40.7±0.0, 51°.49N×16°.13E, h0km*
*DNK **20** 03:10:41.4±2.3, 51°.60N×15°.66E, h0km, ML2.0(UPP), Suspected explosion*
*VIE **20** 03:10:43.2±1.0, 51°.31N×16°.05E, h0km, mb2.6/17, ml2.7/15, ms3.5/2, Error ellipse: s-maj=6.7km s-min=4.6km az=171.0 71 km WNW of Wroclaw Suspected Mining induced.*
*UPP **20** 03:10:44.5±2.9, 51°.70N×15°.55E, h0km, ML2.0, Suspected explosion*

ISC 20 03:10:38.7±0.6, 51°.57N±0°.03×16°.17E±0°.02, h0km, n80, σ1§50/143, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.74**	**174**	*i* P	**Pg**	**03 10 53.5**	**+0.8**
KSP				*e*Sg	**Sg**	**03 11 02.1**	**-0.2**
CHVC	**Chvalec**	**0.99**	**184**	*e*PG	**Pb**	**03 10 58.2**	**-0.5**
OSTC	**Ostas**	**1.02**	**178**	*e*PG	**Pb**	**03 10 58.9**	**-0.3**
OSTC				*e*SG	**Sg**	**03 11 11.2**	**-0.2**
	comp=Z,62nm,0.3s						
UPC	**Upice**	**1.07**	**185**	*e*PG	**Pb**	**03 10 59.8**	**-0.3**
UPC				*e*SG	**Sg**	**03 11 12.2**	**-0.9**
DPC	**Dobruska-Polom**	**1.23**	**175**	*e*PG	**Pg**	**03 11 02.3**	**+0.1**
DPC				*e*SG	**Sg**	**03 11 16.9**	**-1.2**
	comp=Z,69nm,0.6s						
PVCC	**Panska Ves**	**1.46**	**225**	*e*PG	**Pb**	**03 11 06.8**	**+0.2**
PVCC				*e*SG	**Sg**	**03 11 25.4**	**0.0**
	comp=Z,236nm,0.3s						
KRLC	**Kraliky**	**1.55**	**165**	*e*PG	**Pb**	**03 11 08.1**	**-0.1**
KRLC				*e*SG	**Sn**	**03 11 27.5**	**-0.9**
	comp=Z,83nm,0.7s						
BRG	**Berggiesshubel**	**1.57**	**244**	Pn	**Pn**	**03 11 07.8**	**+0.1**
BRG				Pg	**Pg**	**03 11 09.3**	**+0.6**
BRG				Sg	**Sg**	**03 11 29.3**	**+0.3**
BRG				Amp		03 11 30.0	
	comp=Z,91nm,0.3s						
PRU	**Pruhonice**	**1.90**	**214**	*e*PN	**Pn**	**03 11 12.1**	**-0.1**
PRU				*e*PG	**Pb**	**03 11 13.5**	**-0.6**
PRU				*e*SG	**Sn**	**03 11 37.1**	**+0.3**
	comp=Z,38nm,0.4s						
MORC	**Moravsky Berou**	**2.00**	**154**	*e*Pn	**Pn**	**03 11 14.4**	**+0.7**
	baz=334						
MORC				*e*Sg	**Sb**	**03 11 41.0**	**-0.4**
	comp=Z,41nm,0.4s,baz=334						
MORC	**Moravsky Berou**	**2.00**	**154**	*e*PN	**Pn**	**03 11 14.4**	**+0.7**
MORC				*e*SG	**Sb**	**03 11 41.0**	**-0.4**
CLL	**Collm**	**2.00**	**264**	*e*Pn	**Pn**	**03 11 14.0**	**+0.3**
CLL				*e*Pg	**Pg**	**03 11 17.0**	**0.0**
CLL				*i* x	x	03 11 20.2	
CLL				*i* x	x	03 11 32.2	
CLL				*e*Sg	**Sb**	**03 11 41.0**	**-0.3**
	comp=Z,30nm,0.4s						
OKC	**Ostrava-Krasne**	**2.15**	**143**	*e*SG	**Sb**	**03 11 46.2**	**+0.7**
VRAC	**Vranov**	**2.28**	**173**	Pn	**Pn**	**03 11 17.8**	**+0.2**
	comp=Z,3.1nm,0.3s,baz=348,slow=15,SNR=13						
VRAC				Lg	Lg	03 11 50.2	
	comp=Z,4.9nm,0.3s,baz=268,slow=21,SNR=10 comp=Z,6.7nm,0.3s						
VRAC	**Vranov**	**2.28**	**173**	*e*Pn	**Pn**	**03 11 18.4**	**+0.8**
	baz=354						
VRAC				*e*Sg	**Sb**	**03 11 49.8**	**+0.3**
	comp=Z,35nm,0.5s,baz=354						
VRAC	**Vranov**	**2.28**	**173**	*e*PN	**Pn**	**03 11 18.4**	**+0.8**
VRAC				*e*SG	**Sb**	**03 11 49.8**	**+0.3**
KRUC	**Moravsky**	**2.52**	**177**	*e*Pn	**Pn**	**03 11 21.5**	**+0.7**
	baz=357						
KRUC				*e*Sg	**Sb**	**03 11 57.2**	**+0.9**
	comp=Z,20nm,0.4s,baz=357						
KRUC	**Moravsky**	**2.52**	**177**	*e*PN	**Pn**	**03 11 21.6**	**+0.7**
KRUC				*e*SG	**Sb**	**03 11 57.2**	**+0.9**
OJC	**Ojcow**	**2.67**	**119**	*e*Pn	**Pn**	**03 11 22.2**	**-0.6**
OJC				*e*Pg	**Pg**	**03 11 30.8**	**+1.1**
OJC				*e*Sg	**Sg**	**03 12 05.5**	**+1.2**
JAVC	**Velka Javorina**	**2.88**	**160**	*e*PN	**Pn**	**03 11 26.8**	**+0.9**
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	**Pn**	**03 11 27.4**	**+0.5**
KHC				*e*PG	**Pb**	**03 11 33.3**	**+1.1**
KHC				*e*SN	**Sn**	**03 12 01.9**	**-1.2**
KHC				*e*SG	**Sg**	**03 12 11.8**	**-1.8**
	comp=Z,20nm,0.5s						
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*PN	**Pn**	**03 11 28.7**	**+1.2**
CKRC				*e*PG	**Pb**	**03 11 34.2**	**+1.2**
CKRC				*e*SG	**Sb**	**03 12 11.6**	**+1.3**
	comp=Z,18nm,0.4s						
GERES	**GERESS Array B**	**3.16**	**211**	Pn	**Pn**	**03 11 30.4**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=29,slow=13,SNR=46						
GERES				Pg	**Pb**	**03 11 36.6**	**+0.9**
	comp=Z,5.2nm,0.3s,baz=31,slow=17,SNR=32						
GERES				Lg	Lg	03 12 18.0	
	comp=Z,4.4nm,0.3s,baz=33,slow=26,SNR=5.4 comp=Z,2.2nm,0.4s						
LANS	**Liptovska Anna**	**3.22**	**138**	*e*PN	**Pn**	**03 11 31.8**	**+1.4**
LANS				*e*PG	**Pg**	**03 11 40.2**	**-0.1**
LANS				*e*SG	**Sg**	**03 12 22.3**	**+0.4**
MODS	**Modra-Piesok**	**3.28**	**167**	*e*PN	Pn	03 11 25.4	-5.9
MODS				*e*PG	**Pg**	**03 11 41.3**	**-0.2**
MODS				*e*SG	**Sg**	**03 12 22.1**	**-2.0**
MODS				*e*		03 33 16.0	
NIE	**Niedzica**	**3.41**	**128**	*e*P	**Pg**	**03 11 44.3**	**+0.4**
NIE				*e*S	**Sg**	**03 12 28.8**	**+0.8**
ZST	**Bratislava**	**3.44**	**170**	*e*PG	**Pg**	**03 11 43.5**	**-1.0**
ZST				*e*SG	**Sg**	**03 12 27.3**	**-1.6**
VYHS	**Vyhne**	**3.53**	**150**	*e*PN	**Pn**	**03 11 35.3**	**+0.6**
VYHS				*e*PG	**Pg**	**03 11 45.0**	**-1.3**
VYHS				*e*SG	**Sg**	**03 12 31.4**	**-0.6**
CONA	**Conrad Observa**	**3.66**	**183**	Pn	**Pn**	**03 11 37.9**	**+1.4**
	comp=Z,2.8nm,0.4s,SNR=11						
CONA				*e*Sn	**Sn**	**03 12 20.4**	**0.0**
	comp=Z,4.6nm,0.4s						
RONA	**Rosalia, Austr**	**3.88**	**179**	*e*Pn	**Pn**	**03 11 40.4**	**+0.8**
	comp=Z,0.9nm,0.2s						
RONA				*e*Sg	**Sg**	**03 12 43.8**	**+0.6**
	comp=Z,6.9nm,0.3s						
SOP	**Sopron**	**3.90**	**176**	P	**Pn**	**03 11 40.3**	**+0.5**
MOA	**Molln**	**3.93**	**199**	Pn	**Pn**	**03 11 41.3**	**+1.1**
	comp=Z,0.7nm,0.2s,SNR=8.0						
MOA				*e*Sg	**Sg**	**03 12 43.8**	**-1.0**
	comp=Z,6.6nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.22**	**204**	*e*Pn	**Pn**	**03 11 45.1**	**+0.8**
	comp=Z,1.4nm,0.2s						
BIOA				*e*Sg	**Sg**	**03 12 53.4**	**-0.7**
	comp=Z,9.2nm,0.4s						
ARSA	**Arzberg**	**4.35**	**186**	*e*Pn	**Pn**	**03 11 47.8**	**+1.8**
	comp=Z,1.0nm,0.3s						
ARSA				*e*Sn	**Sn**	**03 12 38.1**	**+0.7**
	comp=Z,3.1nm,0.4s						
LUNU	**Lund**	**4.38**	**339**	*i* P	**Pn**	**03 11 47.0**	**+0.7**
LUNU				P	**Pn**	**03 11 47.6**	**+1.3**
LUNU				S	**Sn**	**03 12 37.6**	**-0.4**
LUNU				*e*S	**Sn**	**03 12 38.6**	**+0.7**
LUNU	**Lund**	**4.38**	**339**	P	**Pn**	**03 11 47.6**	**+1.3**
LUNU				S	**Sn**	**03 12 37.6**	**-0.4**
PSZ	**Piszkesteto**	**4.38**	**145**	P	**Pn**	**03 11 47.9**	**+1.4**
MPLH	**Magyarpolny**	**4.50**	**168**	P	**Pn**	**03 11 49.5**	**+1.5**
KOLS	**Kolonicke sedl**	**4.72**	**122**	*e*PN	**Pn**	**03 11 52.7**	**+1.6**
BLEU	**Blekinge**	**4.74**	**358**	*i* P	**Pn**	**03 11 54.4**	**+3.0**
BLEU				*e*S	**Sn**	**03 12 41.6**	**-5.4**
KBA	**Koelnbreinsper**	**4.86**	**203**	*e*Pn	**Pn**	**03 11 54.2**	**+1.0**
	comp=Z,0.7nm,0.2s						
KBA				*e*Sg	**Sg**	**03 13 10.8**	**-4.1**
	comp=Z,4.2nm,0.4s						
BJUU	**Bjuv**	**4.88**	**339**	*e*P	**Pn**	**03 11 53.2**	**0.0**
BJUU				P	**Pn**	**03 11 54.6**	**+1.4**
BJUU				*e*S	**Sn**	**03 12 45.2**	**-5.1**
BJUU	**Bjuv**	**4.88**	**339**	P	**Pn**	**03 11 54.6**	**+1.4**
SOKA	**Soboth**	**4.96**	**189**	*e*Pn	**Pn**	**03 11 56.3**	**+1.9**
	comp=Z,1.1nm,0.4s						
SOKA				*e*Sn	**Sn**	**03 12 53.0**	**+0.5**
	comp=Z,0.6nm,0.4s						
DEL	**Delary**	**5.09**	**345**	*i* P	**Pn**	**03 11 57.0**	**+0.9**
DEL				P	**Pn**	**03 11 57.8**	**+1.7**
DEL				*e*S	**Sn**	**03 12 51.8**	**-3.7**
DEL				S	**Sn**	**03 12 54.4**	**-1.2**
DEL	**Delary**	**5.09**	**345**	P	**Pn**	**03 11 57.8**	**+1.7**
DEL				S	**Sn**	**03 12 54.4**	**-1.2**
OBKA	**Obir**	**5.18**	**193**	*e*Pn	**Pn**	**03 11 58.3**	**+0.8**
	comp=Z,0.3nm,0.3s						
OBKA				*e*Sg	**Sg**	**03 13 24.1**	**-0.9**
	comp=Z,0.3nm,0.3s						
WATA	**Walderalm**	**5.19**	**217**	*e*Pn	**Pn**	**03 11 58.6**	**+0.9**
	comp=Z,0.9nm,0.3s						
WATA				*e*Sg	**Sg**	**03 13 25.8**	**+0.4**
	comp=Z,1.1nm,0.2s						
MYKA	**Terra Mystica**	**5.22**	**200**	*e*Sg	**Sg**	**03 13 25.3**	**-0.9**
	comp=Z,2.0nm,0.4s						
WTTA	**Wattenberg**	**5.23**	**216**	Pn	**Pn**	**03 12 00.0**	**+1.7**
	comp=Z,2.1nm,0.4s,SNR=5.2						
WTTA				*e*Sg	**Sg**	**03 13 25.6**	**-1.1**
	comp=Z,6.2nm,0.7s						
MOTA	**Moosalm**	**5.37**	**220**	*e*Pn	**Pn**	**03 12 00.6**	**+0.5**
	comp=Z,1.1nm,0.2s						
MOTA				*e*Sg	**Sg**	**03 13 32.1**	**+1.0**
	comp=Z,4.4nm,0.4s						
ABTA	**Abfaltersbach**	**5.39**	**208**	*e*Pn	**Pn**	**03 12 02.2**	**+1.8**
	comp=Z,0.7nm,0.3s						
ABTA				*e*Sg	**Sg**	**03 13 33.2**	**+1.3**
	comp=Z,8.8nm,0.8s						
RETA	**Reutte**	**5.40**	**223**	*i* Pn	**Pn**	**03 12 00.6**	**+0.2**
	comp=Z,0.7nm,0.2s,SNR=4.5						
RETA				*e*Sg	**Sg**	**03 13 30.7**	**-1.2**
	comp=Z,1.6nm,0.3s						
VXJU	**Vaexsjoe**	**5.41**	**353**	P	**Pn**	**03 12 02.9**	**+2.4**
VXJU	**Vaexsjoe**	**5.41**	**353**	P	**Pn**	**03 12 02.9**	**+2.4**
SQTA	**Sankt Quirin**	**5.43**	**219**	Pn	**Pn**	**03 12 02.9**	**+2.0**
	comp=Z,1.1nm,0.2s,SNR=5.7						
SQTA				*e*Sg	**Sg**	**03 13 36.9**	**+3.9**
	comp=Z,0.4nm,0.2s						
KALN	**Kalnik**	**5.45**	**178**	*i* P	**Pn**	**03 12 02.0**	**+0.9**
BYXU	**Byxelkrok**	**5.75**	**5**	P	**Pn**	**03 12 08.1**	**+3.0**
BYXU				S	**Sn**	**03 13 11.1**	**-0.6**
BYXU	**Byxelkrok**	**5.75**	**5**	P	**Pn**	**03 12 08.1**	**+3.0**
BYXU				S	**Sn**	**03 13 11.1**	**-0.6**
FETA	**Feichten**	**5.78**	**220**	*e*Pn	**Pn**	**03 12 06.9**	**+1.1**
FETA				*e*Sn	**Sn**	**03 13 14.1**	**+1.3**
	comp=Z,1.6nm,0.6s						
FABU	**Falkenberg**	**5.80**	**341**	P	**Pn**	**03 12 07.6**	**+1.7**
FABU	**Falkenberg**	**5.80**	**341**	P	**Pn**	**03 12 07.6**	**+1.7**
GNOU	**Gnosjoe**	**5.90**	**347**	P	**Pn**	**03 12 09.2**	**+2.0**
GNOU	**Gnosjoe**	**5.90**	**347**	P	**Pn**	**03 12 09.2**	**+2.0**
DAVA	**Damuels**	**5.94**	**226**	*e*Pn	**Pn**	**03 12 07.9**	**0.0**
	comp=Z,0.3nm,0.2s						
DAVA				*e*Sg	**Sg**	**03 13 51.6**	**+2.4**
	comp=Z,5.5nm,0.7s						
MOSL	**Moslavina**	**5.98**	**176**	*i* P	**Pn**	**03 12 09.2**	**+0.9**
EKSU	**Eksjoe**	**6.03**	**356**	P	**Pn**	**03 12 11.6**	**+2.5**
EKSU	**Eksjoe**	**6.03**	**356**	P	**Pn**	**03 12 11.6**	**+2.5**
DAVOX	**Davos/Dischmat**	**6.33**	**223**	Pn	**Pn**	**03 12 12.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=213,slow=15,SNR=2.3						
DAVOX				Lg	Lg	03 13 58.6	
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=2.3 comp=Z,0.7nm,0.4s						
BORU	**Boraas**	**6.39**	**343**	P	**Pn**	**03 12 16.2**	**+2.3**
BORU	**Boraas**	**6.39**	**343**	P	**Pn**	**03 12 16.2**	**+2.3**
LNKU	**Linkoeping**	**6.67**	**357**	P	**Pn**	**03 12 20.2**	**+2.4**
LNKU	**Linkoeping**	**6.67**	**357**	P	**Pn**	**03 12 20.2**	**+2.4**
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**03 12 39.6**	**0.0**
	comp=Z,0.9nm,0.3s,baz=279,slow=12,SNR=4.6						
HFS	**Hagfors**	**8.69**	**352**	Pn	**Pn**	**03 12 47.6**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=164,slow=15,SNR=11						
NOA	**NORSAR Array B**	**9.88**	**346**	Pn	**Pn**	**03 12 59.6**	**-2.2**
	baz=164,slow=12,SNR=6.0 comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	**Pn**	**03 13 21.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=213,slow=11,SNR=15						
FINES				Sn	**Sn**	**03 15 27.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=211,slow=20,SNR=4.2						
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn	**Pn**	**03 13 33.1**	**+0.8**
	baz=103,slow=13 comp=Z,0.2nm,0.3s						
BRTR	**Keskin Array B**	**16.96**	**127**	Pn	**Pn**	**03 14 36.0**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=316,slow=14,SNR=2.0 comp=Z,0.7nm,1.0s						
ARCES	**ARCESS Array B**	**18.55**	**10**	P	**P**	**03 14 54.6**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=15 comp=Z,0.6nm,0.4s						

IDC 20 03:11:46.9±1.4, 54°.77S×31°.70W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=57.7km s-min=35.9km az=82.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**35.49**	**180**	P	P	03 18 44.9	0.0
	0.8nm,0.8s,baz=197,slow=2.2,SNR=2.1 0.8nm,0.8s						
LPAZ	**La Paz**	**47.55**	**309**	P	P	03 20 24.8	0.0
	0.8nm,0.6s,baz=163,slow=17,SNR=2.0 0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.32**	**34**	P	P	03 23 20.2	+0.1
	0.4nm,0.7s,baz=217,slow=5.9,SNR=2.4 0.4nm,0.7s						
ILAR	**Eielson Array**	**147.36**	**314**	PKPbc	PKPbc	03 31 30.1	-1.0
	0.5nm,0.6s,baz=103,slow=2.2,SNR=4.7						

*BJI **20** 03:13:40.9±0.0, 22°.68S×173°.59E, h7km, mb5.0/40, mB5.4/35, Ms5.1/35, Ms7 4.9/34*
*NOU **20** 03:13:44.9, 23°.19S×173°.35E, h10km, mb5.5/34, Southeast of Loyalty Islands*
*NEIC **20** 03:13:45.3, 22°.93S×173°.25E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr-1.10; Mθθ 0.53; Mθφ 0.57; Mrθ 0.13; Mθφ 0.60; Mφr 0.28; Fault plane solution: Mo 1.17000×10^17 NP1:φs 49.69000°, δ 38.01000°, λ -81.30000°. NP2:φs 218.71000°, δ 52.51000°, λ -96.74000°. Principal axes: T 1.1905, Plg 7.0000°, Azm 314.0000°; N -0.0425, Plg 5.0000°, Azm 223.0000°; P -1.1480, Plg 81.0000°, Azm 97.0000°;*
*NEIC **20** 03:13:45.2±1.8, 22°.95S±0°.08×173°.28E±0°.08, h10km±1km, mb5.3/252, Ms_20 5.1/319, Mwb5.3/23, Mww5.5 Error ellipse: s-maj=13.7km s-min=12.4km az=160.0*
*IDC **20** 03:13:46.1±2.4, 22°.87S×173°.22E, h24km±15km, mb4.8/22, mbtmp4.9/24, ML6.0/1, MS4.8/52, Error ellipse: s-maj=12.8km s-min=11.7km az=155.0*
*MOS **20** 03:13:47.3±1.5, 22°.86S×173°.08E, h33km, mb5.3/32, MS5.0/21, Error ellipse: s-maj=9.4km s-min=8.7km az=97.6*
*GCMT **20** 03:13:49.2±0.1, 23°.01S±0°.01×173°.28E±0°.01, h12km, MW5.5/167, Moment Tensor Solution. s150,c290; s167,c333; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr-2.07±.02; Mθθ 1.37±.02; Mφφ 0.69±.02; Mrθ-0.12±.05; Mθφ 0.96±.02; Mφr 0.09±.05; Best double couple: Mo 2.06500×10^17 NP1:φs 58.00000°, δ 46.00000°, λ -85.00000°. NP2:φs 231.00000°, δ 44.00000°, λ -95.00000°. Principal axes: T 2.0510, Plg 1.0000°, Azm 145.0000°; N 0.0270, Plg 4.0000°, Azm 235.0000°; P -2.0790, Plg 86.0000°, Azm 45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 03:13:50, 22°.94S×173°.25E, h12km, Moment Tensor Solution. Duration: 10s4 Moment tensor: Scale 10^17 Nm; Mrr-2.39; Mθθ 1.40; Mφφ 0.99; Mrθ-0.39; Mθφ 1.09; Mφr-0.51; Fault plane solution: Mo 2.43000×10^17 NP1: φs 233.00000°, δ 38.00000°, λ -84.00000°. NP2:φs 47.00000°, δ 53.00000°, λ -93.00000°. Principal axes: T 2.3832,*
Plg 7.0000°, Azm 140.0000°; N 0.0957, Plg 3.0000°, Azm 49.0000°; P -2.4789, Plg 82.0000°, Azm 297.0000°;

ISC 20 03:13:45.3±0.5, 23°.00S±0°.04×173°.27E±0°.04, h18km±2km, h18km:pP-P, n1070, σ1§43/884, mb5.3/176, MS5.1/235, 96C-35D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.08**	**286**	Pn	**Pn**	**03 15 01.3**	**+0.7**
MARNC	**Mare, Loyalty**	**5.08**	**286**	P	**Pn**	**03 15 01.4**	**+0.8**
PINNC	**Pines Island,**	**5.38**	**273**		**Pn**	**03 15 06.2**	**+1.5**
PINNC	**Pines Island,**	**5.38**	**273**	P	**Pn**	**03 15 06.4**	**+1.6**
OUENC	**Ouen Island, N**	**5.96**	**274**	Pn	**Pn**	**03 15 14.2**	**+1.4**
OUENC	**Ouen Island, N**	**5.96**	**274**	P	**Pn**	**03 15 14.1**	**+1.4**
YATNC	**Mamie plateau,**	**5.97**	**278**	P	**Pn**	**03 15 14.7**	**+1.9**
ONTNC	**Ouen Toro**	**6.33**	**275**	Pn	**Pn**	**03 15 19.0**	**+1.2**
ONTNC	**Ouen Toro**	**6.33**	**275**	P	**Pn**	**03 15 20.1**	**+2.3**
DZM	**Mont Dzumac**	**6.38**	**277**	Pn	**Pn**	**03 15 17.9**	**-0.6**
	20nm,0.3s,baz=118,slow=18,SNR=35						
DZM				Sn	**Sn**	**03 16 30.7**	**-0.2**
	13nm,0.3s,baz=100,slow=19,SNR=10.0						
DZM	**Mont Dzumac**	**6.38**	**277**	*e*Pn	**Pn**	**03 15 21.1**	**+2.6**
	217nm,0.8s						
DZM				*e*Sn	**Sn**	**03 16 26.3**	**-4.6**
	620nm,0.8s						
DZM				*e*LR	LR	03 16 41.6	
	comp=Z,17μm,26.6s						
DZM	**Mont Dzumac**	**6.38**	**277**	Pn	**Pn**	**03 15 19.0**	**+0.5**
NOUC	**Port Laguerre**	**6.50**	**277**	P	**Pn**	**03 15 22.2**	**+2.1**
MSVF	**Nonsavu**	**6.90**	**41**	Pn	**Pn**	**03 15 25.4**	**-0.3**
	9.7nm,0.3s,baz=218,slow=8.8,SNR=38						
MSVF				Sn	**Sn**	**03 16 46.3**	**+2.4**
	7.8nm,0.3s,baz=280,slow=23,SNR=5.7						
MSVF				LR	LR	03 17 38.3	
	comp=Z,9μm,18.6s,baz=175,slow=34 13nm,0.4s						
MSVF	**Nonsavu**	**6.90**	**41**	Pn	**Pn**	**03 15 26.7**	**+1.1**
MSVF	**Nonsavu**	**6.90**	**41**	*de*P	**Pn**	**03 15 30.0**	**+4.3**
MSVF				pmax	pmax		
	comp=Z,85nm,1.0s						
MSVF	**Nonsavu**	**6.90**	**41**	P	**Pn**	**03 15 26.8**	**+1.1**
NFK	**Norfolk Island**	**7.69**	**217**	P	**Pn**	**03 15 37.4**	**+1.0**
	baz=7.7,SNR=12						
NFK	**Norfolk Island**	**7.69**	**217**	P	**Pn**	**03 15 36.5**	**+0.1**
KOUNC	**Koumac, New Ca**	**8.69**	**285**		**Pn**	**03 15 50.7**	**+0.4**
RAO	**Raoul Island**	**10.07**	**130**	LR	LR	03 19 06.8	
	comp=Z,17μm,21.1s,baz=284,slow=32						
LHI	**Lord Howe Isla**	**15.20**	**233**	Pn	**Pn**	**03 17 20.3**	**+1.1**
LHI				IAmb	IAmb	03 17 28.5	
	comp=Z,219nm,1.2s						
FUNA	**Funafuti**	**15.48**	**23**	Pn	**Pn**	**03 17 23.5**	**+0.6**
HIZ	**Hauiti**	**15.52**	**175**	Pn	**P**	**03 17 25.7**	**-1.8**
HIZ				IAmb	IAmb	03 17 33.8	
	comp=Z,334nm,1.6s						
URZ	**Urewera**	**15.56**	**169**	Pn	**Pn**	**03 17 23.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=31,slow=5.3,SNR=1.2						
URZ				LR	LR	03 21 59.5	
	comp=Z,10μm,20.7s,baz=13,slow=31						
URZ	**Urewera**	**15.56**	**169**	Pn	**Pn**	**03 17 24.6**	**+0.9**
BKZ	**Black Stump Fm**	**16.34**	**171**	Pn	**Pn**	**03 17 34.7**	**+0.7**
BKZ	**Black Stump Fm**	**16.34**	**171**	P	**Pn**	**03 17 32.0**	**-1.9**
AFI	**Afiamalu**	**16.81**	**60**	Pn	**Pn**	**03 17 37.0**	**-3.0**
	comp=Z,1.0nm,0.3s,baz=274,slow=14,SNR=1.9						
AFI				LR	LR	03 23 06.5	
	comp=Z,2μm,19.6s,baz=234,slow=33						
MRZ	**Mangatainoka R**	**17.71**	**174**	P	**P**	**03 17 54.3**	**+2.4**
DUWZ	**D'Urville Isla**	**17.75**	**178**	P	**P**	**03 17 56.9**	**+4.6**
BFZ	**Birch Farm**	**17.80**	**173**	P	**P**	**03 17 54.8**	**+2.0**
OGWZ	**Otaki Gorge**	**17.83**	**175**	P	**P**	**03 17 55.9**	**+2.7**
HOWZ	**Holdsworth Sta**	**17.94**	**174**	P	**P**	**03 17 56.3**	**+1.9**
CAW	**Cannon Point**	**18.11**	**176**	P	**P**	**03 17 58.6**	**+2.3**
TCW	**Tory Channel**	**18.17**	**178**	P	**P**	**03 17 60.0**	**+3.1**
TUWZ	**Tuamarina**	**18.38**	**178**	P	**Pn**	**03 18 02.7**	**+3.5**
MSWZ	**Moikau Station**	**18.43**	**175**	P	**Pn**	**03 18 01.3**	**+1.4**
HNR	**Honiara**	**18.57**	**314**	LR	LR	03 23 45.2	
	comp=Z,3μm,19.2s,baz=146,slow=32						
LTZ	**Lake Taylor**	**19.74**	**182**	P	**Pn**	**03 18 16.8**	**+1.1**
EIDS	**Eidsvold**	**20.37**	**259**	P	Pn	03 18 22.8	-0.5
	baz=20,SNR=12						
EIDS	**Eidsvold**	**20.37**	**259**	P	**P**	**03 18 22.0**	**+0.9**
EIDS				IAmb	IAmb	03 18 40.2	
	comp=Z,117nm,1.1s						
ARMA	**Armidale**	**20.67**	**244**	P	Pn	03 18 26.4	-0.4
	baz=21,SNR=5.2						
ARMA	**Armidale**	**20.67**	**244**	P	Pn	03 18 26.6	-0.2
RPZ	**Rata Peaks**	**20.74**	**185**	P	**P**	**03 18 26.1**	**+1.2**
	comp=Z,28nm,0.8s,

comp=Z,4µm,29.5s
PPT2 Papeete2 35.20 88 *e*S **S** **03 26 14.8 +3.2**
comp=Z,847nm,24.8s
PPT2 *e*LQ LQ 03 28 35.3
comp=Z,4µm,28.5s
PPT2 *e*LR LR 03 30 04.2
comp=Z,4µm,26.5s
PPT Papeete 35.20 88 LR LR 03 30 48.6
comp=Z,1µm,20.8s,baz=252,slow=29
MULG Mulgathing 35.65 250 P **P** **03 20 43.2 +0.7**
ASAR Alice Springs 36.07 261 P **P** **03 20 45.9 -0.3**
comp=Z,47nm,1.1s,baz=84,slow=8.3,SNR=130
ASAR PcP **PcP** **03 23 12.6 +0.3**
comp=Z,3.9nm,0.8s,baz=118,slow=2.4,SNR=4.4
ASAR S **S** **03 26 23.7 -1.2**
comp=Z,0.3nm,0.6s,baz=163,slow=19,SNR=2.0
ASAR PKIKP **PKiKP** **03 30 30.5 -1.6**
comp=Z,0.3nm,0.8s,baz=87,slow=1.0,SNR=4.7
ASAR LR LR 03 37 09.7
comp=Z,641nm,18.1s,baz=102,slow=39
ASAR PKKP **PKKPdf** **03 45 16.6 -4.7**
comp=Z,0.9nm,0.7s,baz=102,slow=3.9,SNR=4.7
ASAR P3KPbc 03 51 26.4
comp=Z,0.6nm,0.9s,baz=272,slow=3.1,SNR=4.1
comp=Z,47nm,1.1s
ASAR Alice Springs 36.07 261 P **P** **03 20 45.7 -0.5**
WB0 Warramunga Arr 36.27 268 IAmb IAmb 03 20 48.2
comp=Z,42nm,1.2s
WB2 Warramunga Arr 36.27 267 IAmb IAmb 03 20 48.3
comp=Z,61nm,1.6s
WRAB Tennant Creek 36.27 267 P **P** **03 20 47.0 -1.0**
WRAB IAmb IAmb 03 20 48.2
comp=Z,76nm,1.7s
WRAB Tennant Creek 36.27 267 IAMs_20 IAMs_20 03 35 37.2
comp=Z,3µm,18.0s
WRAB Tennant Creek 36.27 267⇑ *e*P **P** **03 20 47.3 -0.6**
WRAB pmax pmax
comp=Z,43nm,2.5s
WRA Warramunga Arr 36.28 267 P **P** **03 20 46.9 -1.1**
comp=Z,7.3nm,0.9s,baz=96,slow=8.2,SNR=43
WRA PcP **PcP** **03 23 13.9 +0.9**
comp=Z,1.5nm,0.8s,baz=87,slow=6.2,SNR=2.4
WRA S **S** **03 26 27.2 -0.9**
comp=Z,0.8nm,0.9s,baz=97,slow=13,SNR=3.6
WRA PKIKP **PKiKP** **03 30 30.8 -1.6**
comp=Z,0.6nm,0.7s,baz=60,slow=0.7,SNR=6.1
WRA LR LR 03 35 57.9
comp=Z,3µm,18.3s,baz=104,slow=37
comp=Z,7.3nm,0.9s
XMAS Kiritimati 37.88 53 IAMs_20 IAMs_20 03 34 40.8
comp=Z,3µm,18.0s
GENI Genyem 37.95 297 P **P** **03 21 01.8 -0.3**
comp=Z,81nm,0.6s
SMPI Sarmi 39.48 297 P **P** **03 21 14.2 -0.9**
comp=Z,10nm,0.7s
KDU Kakadu 40.04 278 P **P** **03 21 18.5 -1.2**
baz=40,SNR=5.6
FORT Forrest 40.84 249 P **P** **03 21 26.5 +0.3**
baz=41,SNR=7.4
FORT Forrest 40.84 249 P **P** **03 21 26.5 +0.3**
FORT Forrest 40.84 249 P **P** **03 21 26.7 +0.6**
WRKA Warakurna 40.99 258 P **P** **03 21 27.7 +0.2**
baz=41,SNR=47
WRKA Warakurna 40.99 258 P **P** **03 21 28.0 +0.5**
MTN Manton Dam 41.21 277 P **P** **03 21 29.6 +0.2**
baz=41,SNR=5.7
MTN Manton Dam 41.21 277 P **P** **03 21 29.1 -0.3**
H11S2 WAKE ISLAND Hy 41.74 351 T T 04 06 07.7
baz=171,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 41.74 351 T T 04 06 09.1
baz=171,slow=76,SNR=12
H11S1 WAKE ISLAND Hy 41.75 351 T T 04 06 10.1
baz=171,slow=76,SNR=10
KNRA Kununurra 42.49 272 P **P** **03 21 39.7 -0.1**
baz=42,SNR=4.8
KNRA Kununurra 42.49 272 P **P** **03 21 39.8 -0.1**
H11N1 WAKE ISLAND Hy 42.91 351 T T 04 07 39.9
baz=172,slow=76,SNR=21
H11N3 WAKE ISLAND Hy 42.91 351 T T 04 07 43.7
baz=172,slow=76,SNR=7.6
H11N2 WAKE ISLAND Hy 42.93 351 T T 04 07 53.7
baz=172,slow=76,SNR=3.6
FITZ Fitzroy Crossi 44.71 267 P **P** **03 21 58.0 +0.2**
comp=Z,36nm,0.9s,baz=79,slow=5.3,SNR=38
FITZ LR LR 03 39 11.4
comp=Z,996nm,19.4s,baz=104,slow=34
comp=Z,36nm,0.9s
FITZ Fitzroy Crossi 44.71 267 P **P** **03 21 58.4 +0.7**
baz=45,SNR=59
FITZ Fitzroy Crossi 44.71 267 P **P** **03 21 58.5 +0.7**
FITZ Fitzroy Crossi 44.71 267 P **P** **03 21 58.6 +0.9**
GUMO Guam 45.78 320 LR LR 03 39 20.2
comp=Z,2µm,21.8s,baz=118,slow=34
SIJI Sorong 46.33 292 LR LR 03 41 21.4
comp=Z,2µm,21.1s,baz=116,slow=36
SWI Sorong 46.34 292 P **P** **03 22 10.1 -0.5**
comp=Z,74nm,0.7s
TAOE Nuku Hiva Isla 46.75 80 *e*P **P** **03 22 17.0 +3.0**
comp=Z,80nm,25.2s
TAOE *e*S **S** **03 29 05.2 +1.7**
comp=Z,816nm,24.7s
TAOE *e*LR LR 03 35 24.0
comp=Z,2µm,26.2s
SOEI Soe 48.60 277 P **P** **03 22 28.2 -0.2**
SOEI IAmb IAmb 03 22 47.6
comp=Z,21nm,0.8s
SOEI Soe 48.60 277 P **P** **03 22 29.2 +0.8**
comp=Z,42nm,1.3s
BATI Baumata 48.99 277 LR LR 03 42 58.0
comp=Z,4µm,20.7s,baz=134,slow=36
PSA00 Pilbara Seismi 49.22 261 P **P** **03 22 33.4 +0.4**
PSA00 Pilbara Seismi 49.22 261 P **P** **03 22 33.4 +0.4**
MBWA Marble Bar 49.41 261 P **P** **03 22 35.0 +0.5**
MBWA Marble Bar 49.41 261 P **P** **03 22 34.9 +0.5**
MEEK Meekatharra 49.43 254 P **P** **03 22 34.5 0.0**
baz=49,SNR=16
MEEK Meekatharra 49.43 254 P **P** **03 22 34.7 +0.2**
KLBR Kellerberrin 49.62 247 P **P** **03 22 36.1 +0.1**
baz=50,SNR=10.0
KLBR Kellerberrin 49.62 247 P **P** **03 22 36.4 +0.5**
NWAO Narrogin (SRO) 49.97 246 P **P** **03 22 39.3 +0.7**
NWAO Narrogin (SRO) 49.97 246 P **P** **03 22 39.3 +0.7**
NWAO pmax pmax
comp=Z,130nm,1.7s
SANI Sanana 50.32 287 P **P** **03 22 41.1 -0.3**
comp=Z,1µmcomp=Z,104nm,0.6s
SANI Sanana 50.32 287 P **P** **03 22 42.3 +0.9**
comp=Z,103nm,0.6s
BLDU Ballidu 50.60 249 P **P** **03 22 43.4 0.0**
baz=50,SNR=7.6
MUN Mundaring 50.91 247 P **P** **03 22 46.0 +0.4**
baz=51,SNR=5.4
EDFI Ende, Flores 51.33 277 P **P** **03 22 47.8 -1.4**
comp=Z,495nmcomp=Z,15nm,0.6s
MORW Morawa 51.36 250 P **P** **03 22 49.2 +0.2**
baz=51,SNR=13
MORW Morawa 51.36 250 P **P** **03 22 49.4 +0.2**
MORW Morawa 51.36 250 P **P** **03 22 49.3 +0.2**
MIDW Midway 51.72 11 IAMs_20 IAMs_20 03 44 22.1
comp=Z,2µm,19.0s
LUWI Luwuk 53.62 287 P **P** **03 23 06.3 +0.3**
GIRL Giralia 54.07 258 P **P** **03 23 11.0 +1.8**
baz=54,SNR=4.6
GTOI Gorontalo 54.21 289 P **P** **03 23 13.0 +2.7**
comp=Z,368nmcomp=Z,19nm,0.6s
KAPI Kappang 54.58 281 LR LR 03 45 23.3
comp=Z,962nm,21.7s,baz=114,slow=35
KAPI Kappang 54.58 281 P **P** **03 23 13.3 +0.3**
KAPI Kappang 54.58 281 *d* iP **P** **03 23 13.5 +0.5**
KAPI pmax pmax
comp=Z,34nm,1.3s
KAPI Kappang 54.58 281 P **P** **03 23 14.9 +1.9**
comp=Z,34nm,1.4s
VNDA Vanda 54.85 183 P **P** **03 23 15.2 +1.1**
comp=Z,3.6nm,0.7s,baz=2.6,slow=7.4,SNR=22
VNDA LR LR 03 42 33.5
comp=Z,2µm,21.8s,baz=14,slow=31
comp=Z,3.6nm,0.7s
VNDA Vanda 54.85 183 P **P** **03 23 15.8 +1.7**
VNDA Vanda 54.85 183 P **P** **03 23 15.8 +1.7**
VNDA pmax pmax
comp=Z,17nm,1.2s
SBA Scott Base 54.99 182 P **P** **03 23 17.4 +2.3**
SBA Scott Base 54.99 182 IAMs_20 IAMs_20 03 42 21.4
comp=Z,1µm,20.0s
SBA Scott Base 54.99 182 P **P** **03 23 17.4 +2.3**
SBA pmax pmax
comp=Z,119nm,1.2s
DAV Davao City (W) 55.38 297 LR LR 03 46 36.8
comp=Z,394nm,20.5s,baz=156,slow=36
TWSI Taliwang, Sumb 55.74 275 P **P** **03 23 22.0 +0.6**
TOLI2 Tolitoli 56.39 288 P **P** **03 23 25.6 -0.4**
TOLI2 Tolitoli 56.39 288 P **P** **03 23 27.5 +1.5**
JCJ Chichijima 58.17 327 LR LR 03 44 42.1
comp=Z,588nm,21.8s,baz=142,slow=32
SMRI Semarang 62.29 274 P **P** **03 24 07.2 +0.3**
KKM Kota Kinabalu 62.76 290 P **P** **03 24 09.2 -0.9**
KKM IAmb IAmb 03 24 22.4
comp=Z,27nm,1.3s
TGY Tagaytay City 63.11 301 LR LR 03 47 44.4
comp=Z,346nm,20.9s,baz=179,slow=32
SBUM Sibu 64.58 285 P **P** **03 24 22.7 +0.6**
LEM Lembang 64.97 273 LR LR 03 51 29.0
comp=Z,875nm,21.9s,baz=70,slow=35
KSM Kuching 65.87 283 P **P** **03 24 30.9 +0.6**
QSPA South Pole Qui 67.07 180 P **P** **03 24 37.9 +0.5**
comp=Z,42nm,1.0s,baz=12,slow=1.4,SNR=79
QSPA LR LR 03 49 00.7
comp=Z,1µm,21.8s,baz=42,slow=32
comp=Z,42nm,1.0s
QSPA South Pole Qui 67.07 180 P **P** **03 24 37.6 +0.1**
QSPA South Pole Qui 67.07 180 IAMs_20 IAMs_20 03 49 19.5
comp=Z,1µm,20.0s
MJAR Matsushiro Arr 67.85 330 P **P** **03 24 40.1 -2.4**
comp=Z,8.0nm,1.0s,baz=157,slow=7.2,SNR=10
MJAR LR LR 03 49 44.2
comp=Z,510nm,21.5s,baz=133,slow=32
comp=Z,8.0nm,1.0s
MAJO Matsushiro 67.85 330 P **P** **03 24 42.8 +0.3**
MAJO IAmb IAmb 03 24 43.1
comp=Z,26nm,1.3s
MAJO Matsushiro 67.85 330⇑ *e*P **P** **03 24 42.0 -0.5**
MAJO pmax pmax
comp=Z,68nm,3.3s
JSD Sado 69.05 331 P **P** **03 24 49.1 -0.8**
RPN Rapa Nui 69.18 111 LR LR 03 47 15.6
comp=Z,739nm,21.2s,baz=295,slow=29
MYKOM Kota Tinggi 71.84 280 IAMs_20 IAMs_20 03 56 21.8
comp=Z,830nm,20.0s
TJN Taejon 73.26 323⇑ *e*P **P** **03 25 15.2 -0.3**
SSE Sheshan 73.38 315 P **P** **03 25 17.3 +1.0**
SSE S **SKiKP** **03 34 46.0 -1.0**
SSE pmax pmax
comp=Z,12nm,0.6s
SSE pmax pmax
comp=Z,52nm,7.5s
SSE LR LR
comp=Z,270nm,22.7s
SSE LR LR
comp=Z,190nm,22.8s
KSRS Korea Array 73.73 324 P **P** **03 25 18.2 0.0**
comp=Z,2.8nm,0.9s,baz=146,slow=6.3,SNR=6.3
KSRS LR LR 03 54 04.4
comp=Z,393nm,21.1s,baz=130,slow=33
comp=Z,2.8nm,0.9s
KSAR Wonju Array Be 73.75 324 P **P** **03 25 18.2 -0.2**
KSAR Wonju Array Be 73.75 324 P **P** **03 25 18.2 -0.2**
BKNI Bangkinang 73.80 277 P **P** **03 25 19.8 +0.6**
BKNI IAMs_20 IAMs_20 04 03 08.7
comp=Z,747nm,18.0s
INCN Inchon 74.46 323 P **P** **03 25 22.4 -0.2**
INCN IAmb IAmb 03 25 23.5
comp=Z,48nm,1.5s
INCN Inchon 74.46 323 P **P** **03 25 22.4 -0.2**
INCN pmax pmax
comp=Z,48nm,1.5s
QIZ Qiongzhong 74.69 299 P **P** **03 25 25.3 +1.0**
QIZ S **S** **03 35 02.4 +2.4**
QIZ LR LR
comp=Z,340nm,12.2s
QIZ LR LR
comp=Z,370nm,17.1s
QIZ LR LR
comp=Z,490nm,17.1s
YSS Yuzh-Sakhalins 74.89 339 P **P** **03 25 26.1 +1.4**
YSS IAmb IAmb 03 25 32.9
comp=Z,28nm,0.9s
YSS Yuzh-Sakhalins 74.89 339 *d* iP **P** **03 25 26.1 +1.4**
YSS *e*S **S** **03 35 02.3 +1.3**
YSS pmax pmax
comp=Z,500nm,6.5s
YSS pmax pmax
comp=Z,40nm,0.9s
YSS smax smax
comp=N,400nm,7.8s
ADK Adak 75.08 6 IAMs_20 IAMs_20 03 51 03.5
comp=Z,982nm,22.0s
NJ2 Nanjing 75.52 315 *e*P **P** **03 25 29.1 +0.4**
NJ2 pmax pmax
comp=Z,13nm,0.6s
KULM Kulim 76.20 282 IAMs_20 IAMs_20 03 56 40.4
comp=Z,744nm,21.0s
MAW Mawson 76.36 202 P **P** **03 25 33.9 +0.9**
comp=Z,21nm,0.9s,baz=121,slow=7.9,SNR=28
MAW LR LR 03 56 09.3
comp=Z,464nm,18.1s,baz=102,slow=33
comp=Z,21nm,0.9s
MAW Mawson 76.36 202 P **P** **03 25 34.3 +1.3**
baz=76,SNR=16
MAW Mawson 76.36 202 P **P** **03 25 34.1 +1.1**
RPSI Rantau Prapat 76.69 279 P **P** **03 25 35.9 0.0**
PSI Prapat 76.73 279 LR LR 03 57 48.1
comp=Z,477nm,22.0s,baz=121,slow=34
PSI Prapat 76.73 279 P **P** **03 25 35.9 -0.4**
PSI pmax pmax
comp=Z,71nm,1.8s
PET Petropavlovsk 76.77 351 IAMs_20 IAMs_20 04 04 12.1
comp=Z,657nm,18.0s
PET Petropavlovsk 76.77 351 *e*P **P** **03 25 38.3 +3.0**
PET *e*S **S** **03 35 23.4 +1.9**
PET *e*PS **PnS** **03 36 06.5 +5.4**
PET *e*SS **SS** **03 40 22.6 +4.3**
PET MLR MLR
comp=Z,800nm,17.0s
PET MLR MLR
comp=Z,800nm,17.0s
USRK Ussuriysk Ar. 76.81 331 P **P** **03 25 35.1 -0.7**
comp=Z,7.7nm,0.8s,baz=143,slow=4.8,SNR=20
USRK LR LR 03 54 37.6
comp=Z,336nm,21.3s,baz=230,slow=32
comp=Z,7.7nm,0.8s
PEA0B Petropavlovsk- 76.99 350 P **P** **03 25 37.6 +0.9**
PEA0B Petropavlovsk- 76.99 350 *ce*P **P** **03 25 37.0 +0.3**
PETK Petropavlovsk- 76.99 350 P **P** **03 25 37.0 +0.3**
comp=Z,16nm,1.0s,baz=168,slow=7.6,SNR=15
PETK LR LR 03 55 56.5
comp=Z,715nm,19.2s,baz=158,slow=33
comp=Z,16nm,1.0s
NIKH Nikolski High 77.24 11 P **P** **03 25 37.3 -0.8**
NIKH Nikolski High 77.24 11 P **P** **03 25 36.8 -1.3**
baz=197,SNR=9.8
GSI Gunungsitoli 77.36 277 P **P** **03 25 39.7 0.0**
BELA Belgrano 2 78.02 174 P **P** **03 25 42.0 -0.3**
MDJ Mudanjiang 78.23 330 IAMs_20 IAMs_20 03 55 09.5
comp=Z,755nm,22.0s
TYV Tymovskoe 78.35 341 *e*P P 03 25 58.4 +14
TYV pmax pmax
comp=Z,600nm,6.9s
TYV pmax pmax
comp=Z,19nm,1.4s
UNV Unalaska Valle 78.50 12 P **P** **03 25 43.3 -1.7**
baz=199
SMAI San Martin Ant 79.07 161 P **P** **03 25 49.5 +1.3**
SNY Shenyang 79.20 325 ⇓P **P** **03 25 45.3 -3.9**
SNY pmax pmax
comp=Z,10.0nm,0.9s
SNY pmax pmax
comp=Z,300nm,6.6s
SNY LR LR
comp=Z,370nm,23.0s
SNY LR LR
comp=Z,290nm,12.2s
SNY LR LR
comp=Z,710nm,21.6s
CN2 Changchun 79.63 327 *e*P **P** **03 25 50.6 -0.9**
CN2 S **S** **03 35 54.1 +1.3**
CN2 SS **SS** **03 41 04.6 +2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,6.2s
CN2 LR LR
comp=Z,400nm,22.0s
CN2 LR LR
comp=Z,400nm,22.0s
CN2 LR LR
comp=Z,500nm,22.0s
BNX BinXian 80.09 329⇑ P **P** **03 25 53.0 -0.9**
BNX pmax pmax
comp=Z,17nm,0.9s
BNX pmax pmax
comp=Z,230nm,6.5s
GRNR Gornyy 80.33 337⇓ *i*P **P** **03 25 55.3 +0.2**
GRNR pmax pmax
comp=Z,20nm,1.1s
KLR Kul'dur 80.86 334 LR LR 03 59 40.8
comp=Z,319nm,19.4s,baz=148,slow=34
KLR Kul'dur 80.86 334⇑ *e*P **P** **03 25 58.3 +0.3**
KLR pmax pmax
comp=Z,7.0nm,1.3s
GYA Guiyang 81.03 304⇑ P **P** **03 26 00.5 +0.9**
GYA S **S** **03 36 15.3 +6.8**
GYA pmax pmax
comp=Z,230nm,7.0s
GYA LR LR
comp=Z,670nm,29.8s
SDPT Sand Point 81.20 15 P **P** **03 25 57.9 -1.7**
baz=204
LYN LuoYang 81.28 313⇑ P **P** **03 26 00.1 -0.4**
LYN S **S** **03 36 08.9 -1.5**
LYN pmax pmax
comp=Z,220nm,7.9s
LYN LR LR
comp=Z,480nm,20.7s
LYN LR LR
comp=Z,610nm,26.7s
HNS HongShan 81.50 317⇑ P **P** **03 26 01.9 +0.2**
HNS PP **PP** **03 29 09.1 +0.7**
HNS S **S** **03 36 13.9 +1.3**
HNS SS **SS** **03 41 28.6 -1.4**
HNS pmax pmax
comp=Z,9.0nm,1.3s
HNS pmax pmax
comp=Z,260nm,7.4s
HNS LR LR
comp=Z,530nm,22.1s
HNS LR LR
comp=Z,660nm,24.3s
PMSA Palmer Station 82.08 159 P **P** **03 26 05.3 +1.0**
comp=Z,29nm,0.8s,baz=272,slow=2.1,SNR=9.2
PMSA LR LR 03 55 21.6
comp=Z,772nm,21.4s,baz=234,slow=30
comp=Z,29nm,0.8s
PMSA Palmer Station 82.08 159 P **P** **03 26 04.9 +0.6**
PMSA Palmer Station 82.08 159 IAMs_20 IAMs_20 03 55 00.2
comp=Z,813nm,20.0s
S14K Fog Glacier 82.27 15 P **P** **03 26 04.4 -1.0**
baz=205
CHGN Chignik 82.56 15 P **P** **03 26 05.7 -1.0**
baz=206
XAN Xi'an 83.41 311 P **P** **03 26 11.6 -0.2**
XAN pmax pmax
comp=Z,6.0nm,0.9s
CMAR Chiang Mai Arr 83.45 293 P **P** **03 26 12.6 +0.2**
comp=Z,3.3nm,0.3s,baz=143,slow=3.3,SNR=13
CMAR PKKPbc **PKKPbc** **03 44 32.1 +1.0**
comp=Z,0.8nm,0.3s,baz=289,slow=4.5,SNR=5.4
CMAR LR LR 04 03 19.2
comp=Z,213nm,21.3s,baz=120,slow=36
comp=Z,3.3nm,0.3s
CMAR Chiang Mai Arr 83.45 293 *ce*P **P** **03 26 13.5 +1.2**
CMAR pmax pmax
comp=Z,3.0nm,0.4s
CHTO Chiang Mai 83.61 293 P **P** **03 26 13.2 +0.1**
CHTO Chiang Mai 83.61 293 P **P** **03 26 13.2 +0.1**
CHTO pmax pmax
comp=Z,15nm,1.3s
CHTO MLR MLR
comp=Z,400nm,19.0s
SII Sitkinak Islan 83.89 17 IAMs_20 IAMs_20 03 55 43.6
comp=Z,1µm,21.0s
R17K Ugashik Creek 84.26 16 P **P** **03 26 14.8 -0.7**
baz=206
MA2 Magadan 84.33 349 IAMs_20 IAMs_20 03 59 35.2
comp=Z,763nm,20.0s
XLT XiLinHaoTe 84.69 322 *e*P **P** **03 26 18.1 -0.1**
XLT pP sP 03 26 23.0 -0.7
XLT sP PcP 03 26 25.0 +3.4
XLT S **S** **03 36 47.3 +2.3**
XLT sS ScS 03 36 54.8 -1.4
XLT pmax pmax
comp=Z,18nm,0.7s
XLT pmax pmax
comp=Z,220nm,6.8s
XLT LR LR
comp=Z,400nm,21.2s
XLT LR LR
comp=Z,610nm,20.8s
OHAK Old Harbor 84.71 18 P **P** **03 26 18.0 +0.2**
OHAK Old Harbor 84.71 18 P **P** **03 26 17.4 -0.3**
baz=211
PZH PanZhiHua 84.88 301 P **P** **03 26 21.8 +2.2**
PZH PP **PP** **03 29 39.6 +3.1**
PZH SKS **S** **03 36 41.8 -5.9**
PZH S **SKKSac** **03 36 49.0 -0.6**
PZH sS **sS** **03 36 55.5 +1.4**
PZH SS **SS** **03 42 22.8 +2.0**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,200nm,6.4s
PZH LR LR
comp=Z,750nm,24.1s
PZH LR LR
comp=Z,1µm,24.7s
PZH LR LR
comp=Z,2µm,24.3s
TROLL Troll, Antarti 85.03 183 P **P** **03 26 18.8 -0.7**
Q16K King Salmon 85.11 15 P **P** **03 26 18.9 -0.9**
baz=208
SCZ2 Santa Cruz Isl 85.32 50 P **P** **03 26 19.5 -1.9**
baz=238
MCCM Marconi Confer 85.35 45 IAMs_20 IAMs_20 03 58 28.2
comp=Z,670nm,19.0s
KDAK Kodiak Island 85.39 18 IAMs_20 IAMs_20 03 56 28.2
comp=Z,932nm,22.0s
KDAK Kodiak Island 85.39 18 P **P** **03 26 21.0 -0.1**
baz=211
HHC Hu-ho-hao-te 85.52 318 *e*P **P** **03 26 24.1 +1.7**
HHC S **S** **03 36 59.6 +6.3**
HHC SS **SS** **03 42 26.6 -3.0**
HHC pmax pmax
comp=Z,18nm,0.7s
HHC pmax pmax
comp=Z,380nm,6.8s
HHC LR LR
comp=Z,740nm,17.9s
HHC LR LR
comp=Z,1µm,19.2s
HHC LR LR
comp=Z,2µm,20.6s
SAO San Andreas Ge 85.54 47 IAmb IAmb 03 26 24.5
comp=Z,13nm,0.9s
SAO IAMs_20 IAMs_20 04 03 29.4
comp=Z,1µm,20.0s
SNAA Sanae 85.54 181 P **P** **03 26 20.8 -1.3**
SNAA Sanae 85.54 181 P **P** **03 26 21.2 -0.9**
comp=Z,18nm,0.7s,baz=205,slow=5.1,SNR=163
SNAA LR LR 04 00 45.7
comp=Z,945nm,21.8s,baz=172,slow=33
comp=Z,18nm,0.7s
SNAA Sanae 85.54 181 P **P** **03 26 21.9 -0.2**
SNAA Sanae 85.54 181 P **P** **03 26 21.9 -0.2**
SNAA pmax pmax
comp=Z,46nm,1.2s
NVL N'lazarevskaya 85.58 186 *e*P **P** **03 26 20.8 -1.3**
NVL *e*S **S** **03 36 46.5 -6.4**
NVL pmax pmax
comp=Z,19nm,0.9s
NVL MLR MLR
comp=Z,591nm,17.0s
O16K Kokwok River B 85.59 14 P **P** **03 26 20.7 -1.5**
baz=206
P17K Kvichak River 85.62 15 P **P** **03 26 20.6 -1.7**
baz=208
PMPB Monarch Peak 85.68 48 P **P** **03 26 23.9 +0.6**
PMPB IAmb IAmb 03 26 27.9
comp=Z,40nm,1.4s
HOPS Hopland Field 85.69 44 IAmb IAmb 03 26 25.2

	comp=Z,29nm,1.3s							
BBGB	**Big Mountain B**	**85.71**	**47**	IAmb	IAmb	03 26 28.4		
	comp=Z,35nm,1.2s							
BCW	**Bitter Crk WRg**	**85.97**	**49**	IAmb	IAmb	03 26 27.0		
	comp=Z,16nm,0.8s							
O17K	**Koliganek Bris**	**85.98**	**15**	P	**P**	**03 26 22.7**	**-1.3**	
	baz=207							
VNA3	**Neumayer Olymp**	**85.99**	**179**	P	**P**	**03 26 23.5**	**-0.7**	
MG05	**Puerto Natales**	**86.07**	**145**	P	**P**	**03 26 26.1**	**+1.2**	
Q19K	**Cape Douglas,**	**86.09**	**16**	IAmb	IAmb	03 26 26.1		
	comp=Z,25nm,0.9s							
Q19K	**Cape Douglas,**	**86.09**	**16**	P	**P**	**03 26 23.2**	**-1.5**	
	baz=210							
P18K	**Big Mountain,**	**86.09**	**16**	IAmb	IAmb	03 26 27.1		
	comp=Z,15nm,0.9s							
P18K	**Big Mountain,**	**86.09**	**16**	P	**P**	**03 26 23.0**	**-1.7**	
	baz=209							
ZEA	**Zeya**	**86.13**	**335**	*e*P	**P**	**03 26 24.5**	**-0.4**	
ZEA				*e*S	**S**	**03 36 59.9**	**+1.4**	
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
ZEA				pmax	pmax			
	comp=E,100nm,6.9s							
ZEA				pmax	pmax			
	comp=Z,100nm,6.5s							
ZEA				smax	smax			
	comp=E,100nm,10.7s							
Q20K	**Shuyak Island**	**86.15**	**17**	P	**P**	**03 26 24.0**	**-0.9**	
	baz=211							
N16K	**Nishlik Lake**	**86.24**	**13**	P	**P**	**03 26 24.6**	**-0.8**	
	baz=206,SNR=6.4							
HIA	**Hailar**	**86.26**	**328**	*ce*P	**P**	**03 26 25.1**	**-0.7**	
HIA				pmax	pmax			
	comp=Z,16nm,1.3s							
VNA2	**Neumayer--Watz**	**86.33**	**180**	P	**P**	**03 26 24.8**	**-1.1**	
	baz=180,slow=5.0							
BTO	**Baotou**	**86.34**	**317**	*e*P	**P**	**03 26 27.6**	**+1.1**	
BTO				S	**S**	**03 37 01.3**	**-0.1**	
BTO				LR	LR			
	comp=Z,2µm,18.2s							
BTO				LR	LR			
	comp=Z,1µm,19.8s							
PASC	**Pasadena Art C**	**86.44**	**51**	IAMs_20	IAMs_20	04 01 59.3		
	comp=Z,901nm,18.0s							
ARVC	**Arvin**	**86.47**	**50**	P	**P**	**03 26 27.0**	**-0.1**	
	baz=239							
O18K	**Koktuh Hills**	**86.50**	**15**	P	**P**	**03 26 25.3**	**-1.4**	
	baz=209							
109C	**Camp Elliot, M**	**86.57**	**52**	IAMs_20	IAMs_20	04 01 34.8		
	comp=Z,948nm,20.0s							
VNA1	**Neumayer--Stat**	**86.60**	**179**	P	**P**	**03 26 25.8**	**-1.4**	
VES	**Vestal, Richgr**	**86.66**	**49**	P	**P**	**03 26 26.8**	**-1.2**	
	baz=239							
KSXB	**Camp Six Broad**	**86.79**	**42**	IAmb	IAmb	03 26 33.4		
	comp=Z,24nm,1.1s							
P19K	**Oil Pt**	**86.82**	**16**	IAMs_20	IAMs_20	03 58 15.1		
	comp=Z,814nm,20.0s							
MURC	**Murrieta**	**86.86**	**52**	P	**P**	**03 26 27.2**	**-1.9**	
	baz=240							
CMB	**Columbia Colle**	**86.93**	**46**	P	**P**	**03 26 29.7**	**+0.3**	
CMB				IAmb	IAmb	03 26 31.0		
	comp=Z,16nm,1.1s							
CMB	**Columbia Colle**	**86.93**	**46**	P	**P**	**03 26 29.7**	**+0.3**	
CMB				pmax	pmax			
	comp=Z,16nm,1.2s							
EDW2	**Edwards Air Fo**	**86.94**	**50**	P	**P**	**03 26 30.0**	**+0.5**	
	baz=239,SNR=6.3							
ISA	**Isabella, Lake**	**87.00**	**49**	IAmb	IAmb	03 26 31.7		
	comp=Z,23nm,1.1s							
ISA	**Isabella, Lake**	**87.00**	**49**	P	**P**	**03 26 30.5**	**+0.7**	
	baz=239,SNR=18							
O19K	**Port Alsworth**	**87.02**	**16**	IAmb	IAmb	03 26 30.1		
	comp=Z,20nm,0.8s							
O19K	**Port Alsworth**	**87.02**	**16**	P	**P**	**03 26 29.8**	**+0.7**	
	baz=210							
ORV	**Oroville**	**87.02**	**45**	IAMs_20	IAMs_20	03 59 49.5		
	comp=Z,646nm,19.0s							
MONP2	**Monument Peak**	**87.07**	**52**	P	**P**	**03 26 31.1**	**+0.8**	
	baz=240							
N18K	**Kilae Creek**	**87.07**	**15**	IAMs_20	IAMs_20	03 58 35.6		
	comp=Z,638nm,21.0s							
ILSW	**Iliamna Southw**	**87.13**	**16**	P	**P**	**03 26 29.0**	**-0.9**	
ILSW				IAmb	IAmb	03 26 30.7		
	comp=Z,22nm,1.2s							
L02F	**Cave Junction**	**87.14**	**42**	P	**P**	**03 26 31.1**	**+0.8**	
	baz=235							
IKP	**In-Ko-Pah, Jac**	**87.18**	**53**	P	**P**	**03 26 31.1**	**+0.4**	
	baz=240							
SEY	**Seymchan**	**87.23**	**351⇑**	*e*P	**P**	**03 26 29.4**	**-0.7**	
SEY				pmax	pmax			
	comp=Z,9.0nm,0.8s							
CNPM	**China Poot**	**87.25**	**17**	IAMs_20	IAMs_20	03 58 04.3		
	comp=Z,774nm,22.0s							
HOM	**Homer**	**87.25**	**17**	IAMs_20	IAMs_20	03 58 17.3		
	comp=Z,926nm,22.0s							
GAMB	**Gambell**	**87.29**	**7**	IAMs_20	IAMs_20	04 00 44.3		
	comp=Z,578nm,20.0s							
PFO	**Pinyon Flats O**	**87.40**	**52**	LR	LR	03 59 40.7		
	comp=Z,496nm,18.2s,baz=241,slow=32							
PFO	**Pinyon Flats O**	**87.40**	**52⇑**	*e*P	**P**	**03 26 30.8**	**-1.0**	
PFO				pmax	pmax			
	comp=Z,8.0nm,1.4s							
PFO	**Pinyon Flats O**	**87.40**	**52**	P	**P**	**03 26 30.7**	**-1.2**	
	baz=240							
K02D	**Willamette Mer**	**87.41**	**41**	P	**P**	**03 26 32.1**	**+0.5**	
	baz=235							
YBH	**Yreka Blue Hor**	**87.45**	**42**	LR	LR	04 00 43.0		
	comp=Z,662nm,18.3s,baz=248,slow=32							
YBH	**Yreka Blue Hor**	**87.45**	**42**	IAMs_20	IAMs_20	04 04 03.9		
	comp=Z,892nm,18.0s							
J01E	**Myrtle Point**	**87.52**	**41**	P	**P**	**03 26 31.9**	**-0.1**	
	baz=235							
N19K	**Bonanza Creek**	**87.52**	**15**	IAMs_20	IAMs_20	04 01 48.5		
	comp=Z,537nm,19.0s							
BRLK	**Bradley Lake**	**87.54**	**17**	IAMs_20	IAMs_20	03 58 12.7		
	comp=Z,654nm,22.0s							
SWSC	**Sam W. Stewart**	**87.55**	**53**	P	**P**	**03 26 32.2**	**-0.2**	
	baz=241							
BRSE	**Bradley Lake S**	**87.56**	**17**	P	**P**	**03 26 33.2**	**+1.3**	
	baz=213							
MDPB	**Devils Postpil**	**87.60**	**47**	IAmb	IAmb	03 26 37.7		
	comp=Z,14nm,1.0s							
OMMB	**Old Mammoth Mi**	**87.64**	**47**	IAmb	IAmb	03 26 35.2		
	comp=Z,20nm,1.5s							
CWC	**Cottonwood Cre**	**87.67**	**49**	P	**P**	**03 26 32.5**	**-0.7**	
	baz=239							
LPIG	**La Paz**	**87.72**	**63**	LR	LR	04 00 55.4		
	comp=Z,566nm,18.2s,baz=244,slow=32							
HUMO	**Hull Mountain**	**87.79**	**42**	IAmb	IAmb	03 26 35.7		
	comp=Z,20nm,1.0s							
MPMC	**Manual Prospec**	**87.89**	**49**	P	**P**	**03 26 34.1**	**-0.2**	
	baz=240,SNR=6.4							
BELC	**Belle Mtn. Jos**	**87.92**	**52**	P	**P**	**03 26 34.5**	**+0.2**	
	baz=240							
BEKR	**Beckworth**	**87.93**	**45**	P	**P**	**03 26 35.0**	**+0.6**	
BEKR				IAmb	IAmb	03 26 37.6		
	comp=Z,9.2nm,0.8s							
L04D	**Klamath Falls**	**87.98**	**42**	P	**P**	**03 26 35.0**	**+0.6**	
	baz=236,SNR=5.3							
GSC	**Goldstone, Bar**	**87.99**	**50**	IAmb	IAmb	03 26 38.6		
	comp=Z,32nm,1.9s							
GSC	**Goldstone, Bar**	**87.99**	**50**	P	**P**	**03 26 34.6**	**+0.1**	
	baz=240							
LZH	**Lanzhou**	**88.03**	**311**	⇑P	**P**	**03 26 35.9**	**+1.1**	
LZH				sP	sP	03 26 42.4	+2.0	
LZH				pmax	pmax			
	comp=Z,16nm,1.4s							
LZH				pmax	pmax			
	comp=Z,220nm,4.5s							
LZH				LR	LR			
	comp=Z,410nm,14.8s							
LZH				LR	LR			
	comp=Z,380nm,16.8s							
LZH				LR	LR			
	comp=Z,340nm,15.5s							
HEC	**Hector,Ludlow**	**88.09**	**51**	P	**P**	**03 26 35.0**	**-0.1**	
	baz=240							
VCNR	**Virginia City**	**88.09**	**46**	IAmb	IAmb	03 26 41.8		
	comp=Z,16nm,1.4s							
BC3	**Big Chuckawall**	**88.15**	**52**	P	**P**	**03 26 35.7**	**+0.3**	
	baz=241							
I03D	**Drain, OR**	**88.17**	**40**	P	**P**	**03 26 35.5**	**+0.4**	
	baz=236							
YERR	**Yerington**	**88.20**	**46**	IAmb	IAmb	03 26 37.4		
	comp=Z,30nm,1.5s							
DSP	**Deep Springs**	**88.22**	**48**	IAmb	IAmb	03 26 40.0		
	comp=Z,36nm,1.7s							
LHV	**Little Huntoon**	**88.31**	**47**	IAmb	IAmb	03 26 38.2		
	comp=Z,13nm,1.0s							
GLA	**Glamis**	**88.31**	**53**	P	**P**	**03 26 36.5**	**+0.4**	
	baz=241							
LCH	**Last Change Ra**	**88.37**	**48**	IAmb	IAmb	03 26 39.6		
	comp=Z,20nm,1.7s							
GRAC	**Grapevine Rang**	**88.45**	**49**	P	**P**	**03 26 37.0**	**+0.4**	
	baz=240							
PAHR	**Pah Rah Range**	**88.48**	**45**	IAmb	IAmb	03 26 38.7		
	comp=Z,30nm,1.3s							
RYN	**Ryan**	**88.49**	**47**	P	**P**	**03 26 37.3**	**+0.3**	
RYN				IAmb	IAmb	03 26 38.8		
	comp=Z,30nm,1.7s							
M19K	**Big River Lodg**	**88.49**	**15**	IAMs_20	IAMs_20	03 59 20.2		
	comp=Z,591nm,21.0s							
M19K	**Big River Lodg**	**88.49**	**15**	P	**P**	**03 26 35.6**	**-0.6**	
	baz=210							
FURC	**Furnace Creek,**	**88.53**	**49**	P	**P**	**03 26 37.1**	**+0.1**	
	baz=240							
NVAR	**Mina Array Bea**	**88.54**	**47**	P	**P**	**03 26 37.3**	**0.0**	
	comp=Z,2.4nm,0.6s,baz=226,slow=7.3,SNR=32							
NVAR				PKKP	**PKKPbc**	**03 44 20.1**	**0.0**	
	comp=Z,0.6nm,0.7s,baz=80,slow=3.8,SNR=6.2							
NVAR				PKPPKP	**P'P'df**	**03 52 25.1**	**+0.5**	
	comp=Z,1.3nm,0.9s,baz=151,slow=2.1,SNR=3.9							
NVAR				LR	LR	03 58 33.4		
	comp=Z,216nm,20.3s,baz=266,slow=30							
	comp=Z,2.4nm,0.6s							
GMRC	**Granite Mounta**	**88.55**	**51**	P	**P**	**03 26 36.9**	**-0.4**	
	baz=241							
IRM	**Iron Mountain**	**88.62**	**52**	P	**P**	**03 26 38.0**	**+0.5**	
	baz=241							
L19K	**White Mountain**	**88.63**	**14**	IAMs_20	IAMs_20	03 59 34.8		
	comp=Z,720nm,22.0s							
L19K	**White Mountain**	**88.63**	**14**	P	**P**	**03 26 36.4**	**-0.5**	
	baz=209							
NV11	**Mina Array Sit**	**88.64**	**47**	IAmb	IAmb	03 26 39.5		
	comp=Z,14nm,1.2s							
SHOC	**Shoshone, Teco**	**88.66**	**50**	P	**P**	**03 26 37.7**	**0.0**	
	baz=240							
J04D	**Umpqua Nationa**	**88.66**	**41**	IAMs_20	IAMs_20	04 07 02.8		
	comp=Z,904nm,18.0s							
J04D	**Umpqua Nationa**	**88.66**	**41**	P	**P**	**03 26 38.3**	**+0.5**	
	baz=236,SNR=6.3							
TUQ	**Turquoise Moun**	**88.68**	**50**	P	**P**	**03 26 38.2**	**+0.3**	
	baz=240							
COR	**Corvallis**	**88.70**	**40**	IAMs_20	IAMs_20	04 09 01.7		
	comp=Z,725nm,18.0s							
M20K	**Styx River**	**88.77**	**15**	IAMs_20	IAMs_20	04 10 43.7		
	comp=Z,575nm,18.0s							
I04A	**Tendick Farm,**	**88.79**	**41**	P	**P**	**03 26 38.1**	**0.0**	
	baz=236,SNR=5.9							
ANM	**Nome**	**88.85**	**9**	IAMs_20	IAMs_20	03 59 59.5		
	comp=Z,886nm,21.0s							
WCT	**Wildcat Mounta**	**88.86**	**49**	IAmb	IAmb	03 26 40.6		
	comp=Z,18nm,1.5s							
BLYC	**Blythe**	**88.87**	**53**	IAmb	IAmb	03 26 40.8		
	comp=Z,17nm,1.4s							
PLTX	**Planet X, Gerl**	**88.95**	**45**	P	**P**	**03 26 40.5**	**+1.5**	
PLTX				IAmb	IAmb	03 27 00.0		
	comp=Z,18nm,0.8s							
KVN	**Kaiserville**	**88.99**	**46**	IAmb	IAmb	03 26 41.1		
	comp=Z,28nm,1.4s							
H04D	**Lebanon**	**89.00**	**40**	IAMs_20	IAMs_20	04 06 16.6		
	comp=Z,651nm,19.0s							
H04D	**Lebanon**	**89.00**	**40**	P	**P**	**03 26 39.5**	**+0.5**	
	baz=236							
SUA	**Susitna One**	**89.02**	**16**	IAMs_20	IAMs_20	03 59 15.1		
	comp=Z,1µm,22.0s							
SUA	**Susitna One**	**89.02**	**16**	P	**P**	**03 26 38.8**	**-0.1**	
	baz=213							
MOD	**Modoc Plateau**	**89.06**	**43**	IAmb	IAmb	03 26 41.4		
	comp=Z,29nm,1.3s							
G03D	**McMinnville, O**	**89.08**	**39**	IAMs_20	IAMs_20	04 11 58.7		
	comp=Z,779nm,18.0s							
G03D	**McMinnville, O**	**89.08**	**39**	P	**P**	**03 26 38.9**	**-0.5**	
	baz=236							
L20K	**Farewell, AK**	**89.11**	**15**	P	**P**	**03 26 37.7**	**-1.4**	
	baz=210							
PWL	**Port Wells**	**89.16**	**18**	IAmb	IAmb	03 26 39.2		
	comp=Z,13nm,0.9s							
PWL	**Port Wells**	**89.16**	**18**	P	**P**	**03 26 37.3**	**-2.1**	
	baz=215,SNR=8.0							
TPNV	**Topopah Spring**	**89.20**	**49**	P	**P**	**03 26 39.8**	**-0.6**	
	baz=240,SNR=15							
J05D	**Fort Rock, OR**	**89.22**	**42**	P	**P**	**03 26 40.2**	**-0.1**	
	baz=237,SNR=22							
DIB	**Dawson Inlet,**	**89.23**	**29**	IAmb	IAmb	03 26 41.3		
	comp=Z,16nm,0.9s							
SKT	**Skwentna**	**89.25**	**16**	IAMs_20	IAMs_20	03 58 50.3		
	comp=Z,602nm,22.0s							
PDMCI	**Paver Dam,Lak**	**89.42**	**52**	P	**P**	**03 26 41.3**	**+0.1**	
	baz=242							
H04A	**Detroit Lake**	**89.42**	**40**	IAmb	IAmb	03 26 41.8		
	comp=Z,13nm,0.6s							
GLI	**Glacier Island**	**89.53**	**18**	IAmb	IAmb	03 26 40.8		
	comp=Z,18nm,0.8s							
GLI	**Glacier Island**	**89.53**	**18**	P	**P**	**03 26 39.0**	**-2.1**	
	baz=216,SNR=12							
PMR	**Palmer**	**89.55**	**17**	P	**P**	**03 26 40.2**	**-0.9**	
PMR	**Palmer**	**89.55**	**17**	P	**P**	**03 26 40.2**	**-0.9**	
PMR				pmax	pmax			
	comp=Z,9.0nm,1.2s							
PMR	**Palmer**	**89.55**	**17**	P	**P**	**03 26 39.9**	**-1.2**	
	baz=214							
KAIM	**Kayak Island**	**89.57**	**20**	P	**P**	**03 26 40.6**	**-0.7**	
	baz=218							
KNK	**Knik Glacier**	**89.58**	**17**	IAmb	IAmb	03 26 41.3		
	comp=Z,13nm,1.0s							
KNK	**Knik Glacier**	**89.58**	**17**	P	**P**	**03 26 39.7**	**-1.7**	
	baz=215							
FID	**Port Fidalgo**	**89.61**	**19**	IAmb	IAmb	03 26 41.2		
	comp=Z,13nm,1.0s							
FID				IAMs_20	IAMs_20	04 02 39.3		
	comp=Z,588nm,19.0s							
COYC	**Coyhaique**	**89.62**	**140**	P	**P**	**03 26 43.6**	**+1.5**	
EYAK	**Cordova Ski Ar**	**89.66**	**19**	P	**P**	**03 26 40.8**	**-0.8**	
	baz=217							
PINE	**Pine Mountain**	**89.68**	**41**	IAmb	IAmb	03 26 44.5		
	comp=Z,19nm,0.8s							
I05D	**Tebenone, OR**	**89.73**	**41**	P	**P**	**03 26 42.0**	**-0.5**	
	baz=237,SNR=5.7							
GHO	**Glory Hole Cre**	**89.75**	**17**	IAmb	IAmb	03 26 42.2		
	comp=Z,15nm,1.0s							
K20K	**Telida**	**89.83**	**14**	IAMs_20	IAMs_20	04 00 23.7		
	comp=Z,764nm,21.0s							
K20K	**Telida**	**89.83**	**14**	P	**P**	**03 26 40.8**	**-1.7**	
	baz=210							
RAGM	**Ragged Mountai**	**89.86**	**19**	IAmb	IAmb	03 26 43.1		
	comp=Z,15nm,1.2s							
RAGM				IAMs_20	IAMs_20	04 06 47.3		
	comp=Z,597nm,19.0s							
S11A	**Rachel**	**89.89**	**49**	IAmb	IAmb	03 26 45.4		
	comp=Z,17nm,1.2s							
CUT	**Chulitna**	**89.93**	**16**	IAMs_20	IAMs_20	03 59 56.3		
	comp=Z,828nm,21.0s							
CUT	**Chulitna**	**89.93**	**16**	P	**P**	**03 26 41.1**	**-1.8**	
	baz=213							
HMT	**Hamilton**	**89.94**	**20**	IAmb	IAmb	03 26 43.4		
	comp=Z,16nm,0.9s							
HMT				IAMs_20	IAMs_20	04 09 23.7		
	comp=Z,531nm,19.0s							
SML	**Sawmill**	**89.94**	**17**	P	**P**	**03 26 42.5**	**-0.6**	
SML	**Sawmill**	**89.94**	**17**	P	**P**	**03 26 40.9**	**-2.2**	
	baz=215							
NLWA	**Neilton Lookou**	**89.97**	**37**	IAMs_20	IAMs_20	04 06 41.3		
	comp=Z,772nm,18.0s							
HOOD	**Mount Hood Mea**	**90.08**	**40**	IAmb	IAmb	03 26 47.9		
	comp=Z,15nm,0.8s							
M23K	**Glacier View**	**90.10**	**17**	P	**P**	**03 26 41.8**	**-1.9**	
	baz=215							
DIV	**Divide**	**90.12**	**19**	IAmb	IAmb	03 26 46.1		
	comp=Z,14nm,0.8s							
G05D	**Wamic, OR**	**90.24**	**40**	P	**P**	**03 26 43.7**	**-1.1**	
	baz=237							
SCM	**Sheep Creek Mo**	**90.24**	**18**	IAmb	IAmb	03 26 46.3		
	comp=Z,20nm,0.9s							
SCM	**Sheep Creek Mo**	**90.24**	**18**	P	**P**	**03 26 43.3**	**-1.2**	
	baz=216,SNR=10							
PRN	**Pahroc Range**	**90.25**	**49**	P	**P**	**03 26 45.8**	**+0.5**	
PRN				IAmb	IAmb	03 26 47.6		
	comp=Z,13nm,1.0s							
SNH	**Sunshine Point**	**90.27**	**20**	IAMs_20	IAMs_20	04 13 28.3		
	comp=Z,924nm,19.0s							
BMRM	**Bremner River**	**90.34**	**19**	IAmb	IAmb	03 26 44.9		
	comp=Z,16nm,0.9s							
BMRM	**Bremner River**	**90.34**	**19**	P	**P**	**03 26 43.2**	**-1.8**	
	baz=218,SNR=10							
R11A	**Troy Canyon, C**	**90.34**	**48**	P	**P**	**03 26 45.7**	**0.0**	
	baz=241,SNR=9.9							
KLU	**Klutina**	**90.36**	**18**	IAmb	IAmb	03 26 45.1		
	comp=Z,8.9nm,0.8s							
KLU	**Klutina**	**90.36**	**18**	P	**P**	**03 26 43.8**	**-1.3**	
	baz=217,SNR=7.1							
WVOR	**Wild Horse Val**	**90.39**	**43**	IAmb	IAmb	03 26 47.7		
	comp=Z,29nm,1.3s							
WAX	**Waxell Ridge**	**90.47**	**20**	IAMs_20	IAMs_20	04 13 33.7		
	comp=Z,675nm,18.0s							
J20K	**Nowinta River**	**90.53**	**14**	IAMs_20	IAMs_20	04 00 57.1		
	comp=Z,982nm,20.0s							
J20K	**Nowinta River**	**90.53**	**14**	P	**P**	**03 26 44.1**	**-1.6**	
	baz=210							
MESA	**MESA**	**90.55**	**21**	IAMs_20	IAMs_20	03 58 06.9		
	comp=Z,573nm,20.0s							
MESA	**MESA**	**90.55**	**21**	P	**P**	**03 26 44.2**	**-2.0**	
	baz=220							
B04A	**Port Angeles**	**90.56**	**37**	IAmb	IAmb	03 26 48.6		
	comp=Z,16nm,1.1s							
BBB	**Bella Bella**	**90.62**	**32**	LR	LR	04 00 36.7		
	comp=Z,562nm,20.0s,baz=248,slow=31							
CRQM	**Cirque**	**90.62**	**20**	P	**P**	**03 26 45.6**	**-0.8**	
CRQM				IAmb	IAmb	03 26 46.7		
	comp=Z,20nm,1.0s							
CRQE	**Cirque**	**90.63**	**20**	P	**P**	**03 26 44.9**	**-1.5**	
	baz=220							
CLRS	**Cowichan Lake**	**90.65**	**36**	IAmb	IAmb	03 26 48.2		
	comp=Z,20nm,1.1s							
CBB	**Campbell River**	**90.70**	**34**	IAmb	IAmb	03 26 48.6		
	comp=Z,23nm,1.1s							
I07A	**Izee**	**90.71**	**42**	IAmb	IAmb	03 26 49.0		
	comp=Z,22nm,1.1s							
TGL	**Tana Glacier**	**90.72**	**20**	IAmb	IAmb	03 26 47.0		
	comp=Z,21nm,1.0s							
TGL				IAMs_20	IAMs_20	04 14 24.1		
	comp=Z,539nm,18.0s							
WAT1	**Susitna Watana**	**90.73**	**16**	P	**P**	**03 26 45.0**	**-1.7**	
	baz=215							
KTH	**Kantishna Hill**	**90.74**	**15**	IAMs_20	IAMs_20	04 00 30.5		
	comp=Z,531nm,20.0s							
WAT6	**Susitna Watana**	**90.74**	**17**	P	**P**	**03 26 45.3**	**-1.6**	
	baz=215							
ISLE	**Juniper Island**	**90.75**	**20**	IAmb	IAmb	03 26 47.2		
	comp=Z,18nm,1.0s							
ISLE				IAMs_20	IAMs_20	04 13 01.1		
	comp=Z,580nm,18.0s							
YAH	**Yahtse**	**90.76**	**21**	IAmb	IAmb	03 26 47.8		
	comp=Z,12nm,0.8s							
YAH				IAMs_20	IAMs_20	03 58 13.2		
	comp=Z,521nm,20.0s							
M24K	**Tolsona, Glenn**	**90.78**	**18**	P	**P**	**03 26 46.9**	**-0.1**	
M24K				IAmb	IAmb	03 26 48.0		
	comp=Z,14nm,0.9s							
M24K	**Tolsona, Glenn**	**90.78**	**18**	P	**P**	**03 26 46.2**	**-0.8**	
	baz=217							
TRF	**Thorofare Moun**	**90.80**	**15**	IAMs_20	IAMs_20	03 59 52.3		
	comp=Z,600nm,21.0s							
TRF	**Thorofare Moun**	**90.80**	**15**	P	**P**	**03 26 44.6**	**-2.7**	
	baz=213							
N25K	**Chitina, Valde**	**90.84**	**19**	IAmb	IAmb	03 26 47.5		
	comp=Z,13nm,0.8s							
N25K	**Chitina, Valde**	**90.84**	**19**	P	**P**	**03 26 46.0**	**-1.4**	
	baz=218,SNR=12							
BILL	**Bilibino**	**90.92**	**357⇓**	*e*P	**P**	**03 26 47.3**	**-0.1**	
BILL				*e*		03 27 02.1		
BILL				SS	SS	03 43 44.0	-3.1	
BILL				pmax	pmax			
	comp=Z,11nm,1.2s							
PGC	**Sidney**	**90.92**	**36**	IAmb	IAmb	03 26 49.4		
	comp=Z,22nm,1.1s							
GLB	**Gilahina Butte**	**90.95**	**19**	IAmb	IAmb	03 26 47.8		
	comp=Z,11nm,0.8s							
TUC	**Tucson**	**90.99**	**55**	P	**P**	**03 26 49.8**	**+1.1**	
TUC				IAmb	IAmb	03 26 51.2		
	comp=Z,10nm,1.1s							
TUC	**Tucson**	**90.99**	**55**	IAMs_20	IAMs_20	04 01 02.1		
	comp=Z,743nm,19.0s							
TUC	**Tucson**	**90.99**	**55**	P	**P**	**03 26 49.8**	**+1.1**	
TUC				pmax	pmax			
	comp=Z,10.0nm,1.1s							
TUC	**Tucson**	**90.99**	**55**	P	**P**	**03 26 49.8**	**+1.1**	
	baz=243							
TABL	**Table Mountain**	**91.02**	**21**	IAmb	IAmb	03 26 48.7		
	comp=Z,15nm,0.9s							
ORCD	**Orcadas**	**91.05**	**162**	P	**P**	**03 26 48.4**	**-0.1**	
PCA	**Pinnacle**	**91.05**	**21**	IAmb	IAmb	03 26 51.1		
	comp=Z,14nm,0.8s							
PINM	**Pinnacle**	**91.05**	**21**	P	**P**	**03 26 49.2**	**+0.9**	
	baz=222							
RND	**Reindeer**	**91.13**	**16**	IAmb	IAmb	03 26 48.2		
	comp=Z,16nm,1.1s							
RND				IAMs_20	IAMs_20	04 00 42.8		
	comp=Z,896nm,21.0s							
MCARA	**McCarthy VSAT**	**91.14**	**19**	IAmb	IAmb	03 26 50.0		
	comp=Z,16nm,1.0s							
MCARA	**McCarthy VSAT**	**91.14**	**19**	P	**P**	**03 26 47.8**	**-0.8**	
	baz=220,SNR=5.3							
BCPM	**Bancas Point**	**91.15**	**22**	IAMs_20	IAMs_20	04 15 11.7		
	comp=Z,512nm,18.0s							
BPAW	**Bear Paw Mtn.**	**91.18**	**15**	IAMs_20	IAMs_20	04 00 53.3		
	comp=Z,578nm,21.0s							
DHY	**Denali Highway**	**91.24**	**17**	IAmb	IAmb	03 26 48.9		
	comp=Z,29nm,1.7s							
DHY	**Denali Highway**	**91.24**	**17**	P	**P**	**03 26 47.4**	**-1.9**	
	baz=216,SNR=6.4							
HARP	**HAARP**	**91.31**	**18**	P	**P**	**03 26 48.1**	**-1.3**	
	baz=218							
LCMT	**Little Creek M**	**91.33**	**50**	IAmb	IAmb	03 26 52.3		
	comp=Z,16nm,1.4s							
CTG	**Chitna Glacier**	**91.35**	**20**	P	**P**	**03 26 48.3**	**-1.5**	
	baz=221,SNR=5.7							
CTGM	**Chitina Glacie**	**91.35**	**20**	IAmb	IAmb	03 26 50.1		
	comp=Z,11nm,0.8s							
CTGM				IAMs_20	IAMs_20	04 13

comp=Z,711nm,21.0s
I21K Tanana 91.87 14 P **P** **03 26 51.0 -0.9**
baz=212
BESE Bessie Mountai 91.89 24 IAmb IAmb 03 26 53.5
comp=Z,14nm,1.0s
M26K Nabesna, AK 91.94 19 IAmb IAmb 03 26 52.6
comp=Z,12nm,1.1s
M26K Nabesna, AK 91.94 19 P **P** **03 26 50.4 -1.9**
baz=220,SNR=10
PLBC Pleasant Camp 91.94 23 P **P** **03 26 51.8 -0.5**
baz=225,SNR=5.7
LL04 Puerto Octay 91.96 136 IAmb IAmb 03 26 55.7
comp=Z,15nm,0.9s
WUAZ Wupatki 91.99 52 IAMs_20 IAMs_20 04 05 54.4
comp=Z,590nm,18.0s
MLY Manley 92.03 14 IAMs_20 IAMs_20 04 01 30.6
comp=Z,562nm,21.0s
MLY Manley 92.03 14 P **P** **03 26 50.9 -1.8**
baz=213
NEA2 Nenana 92.06 15 IAMs_20 IAMs_20 04 00 52.4
comp=Z,544nm,21.0s
NEA2 Nenana 92.06 15 P **P** **03 26 50.9 -1.9**
baz=214
H21K Melozitna Rive 92.10 13 IAMs_20 IAMs_20 04 02 03.6
comp=Z,824nm,20.0s
ULN Ulaanbaatar 92.12 322 P **P** **03 26 52.5 -1.2**
ULN IAmb IAmb 03 26 54.0
comp=Z,11nm,1.1s
ULN Ulaanbaatar 92.12 322 IAMs_20 IAMs_20 04 04 52.4
comp=Z,603nm,22.0s
ULN Ulaanbaatar 92.12 322⇑ *e*P **P** **03 26 53.0 -0.7**
ULN pmax pmax
comp=Z,8.0nm,1.1s
MENT Mentasta 92.14 18 IAmb IAmb 03 26 53.5
comp=Z,8.3nm,0.7s
WRH Wood River Hil 92.20 16 IAmb IAmb 03 26 52.8
comp=Z,11nm,1.1s
WRH IAMs_20 IAMs_20 04 00 55.2
comp=Z,971nm,22.0s
P30M Million Dollar 92.20 22 P **P** **03 26 52.4 -1.2**
baz=225
M27K Edge Creek, AK 92.24 19 IAmb IAmb 03 26 54.4
comp=Z,12nm,1.1s
M27K Edge Creek, AK 92.24 19 P **P** **03 26 52.5 -1.4**
baz=221,SNR=11
YUK3 Moose Creek 92.24 20 P **P** **03 26 53.2 -0.8**
baz=222,SNR=8.7
E08A Dider Farm, El 92.24 40 P **P** **03 26 54.9 +0.9**
E08A IAmb IAmb 03 26 55.0
comp=Z,6.8nm,0.6s
K24K Donnelly Dome 92.25 17 P **P** **03 26 52.4 -1.4**
baz=217,SNR=15
L26K Log Cabin Wild 92.32 18 P **P** **03 26 52.8 -1.3**
baz=219
CCB Clear Creek Bu 92.41 16 IAmb IAmb 03 26 53.5
comp=Z,9.3nm,0.8s
CCB IAMs_20 IAMs_20 04 01 11.8
comp=Z,903nm,22.0s
GTA Gaotai 92.43 312⇓ P **P** **03 26 56.1 +0.8**
GTA pP sP 03 26 59.3 -1.6
GTA sP pwP 03 27 02.4 -4.8
GTA SKS **SKSac** **03 37 24.3 -3.8**
GTA S **ScS** **03 38 01.3 +0.7**
GTA SS **SS** **03 44 12.3 +2.0**
GTA pmax pmax
comp=Z,9.0nm,1.4s
GTA pmax pmax
comp=Z,89nm,4.0s
GTA LR LR
comp=Z,220nm,18.5s
GTA LR LR
comp=Z,330nm,21.8s
GTA LR LR
comp=Z,510nm,20.4s
HDA Harding Lake 92.44 16 IAMs_20 IAMs_20 04 01 01.5
comp=Z,694nm,21.0s
HDA Harding Lake 92.44 16 P **P** **03 26 52.6 -1.9**
baz=216,SNR=8.4
RIDG Independent Ri 92.46 17 IAmb IAmb 03 26 54.7
comp=Z,16nm,0.9s
RIDG IAMs_20 IAMs_20 04 12 41.1
comp=Z,509nm,18.0s
RIDG Independent Ri 92.46 17 P **P** **03 26 53.5 -1.2**
baz=218,SNR=14
RDOG Red Dog Mine 92.48 9 IAMs_20 IAMs_20 04 08 22.4
comp=Z,865nm,21.0s
SONM Songino Array 92.48 322 P **P** **03 26 54.6 -0.7**
comp=Z,7.4nm,1.1s,baz=136,slow=4.1,SNR=22
SONM LR LR 04 08 16.3
comp=Z,195nm,19.4s,baz=138,slow=35
SONM Songino Array 92.48 322 P **P** **03 26 53.9 -1.5**
comp=Z,7.4nm,1.1s
SONM IAmb IAmb 03 26 55.5
comp=Z,11nm,1.3s
HYT Haines Junctio 92.52 22 P **P** **03 26 54.0 -1.2**
baz=224
MTPU Mount Pierson 92.56 50 IAmb IAmb 03 26 58.9
comp=Z,23nm,1.3s
MDM Murphy Dome 92.56 15 IAmb IAmb 03 26 54.3
comp=Z,10nm,1.0s
MDM IAMs_20 IAMs_20 04 01 16.8
comp=Z,698nm,21.0s
TCOL CIGO, UAF Yank 92.58 16 IAMs_20 IAMs_20 04 01 29.4
comp=Z,786nm,21.0s
TCOL CIGO, UAF Yank 92.58 16 P **P** **03 26 53.5 -1.6**
baz=215
COLA College 92.59 16 P **P** **03 26 54.0 -1.2**
COLA College 92.59 16 IAMs_20 IAMs_20 04 01 29.4
comp=Z,750nm,21.0s
COLA College 92.59 16*ce*P **P** **03 26 53.7 -1.5**
COLA pmax pmax
comp=Z,15nm,1.1s
COLA College 92.59 16 P **P** **03 26 53.4 -1.8**
baz=215
BVCY Beaver Creek 92.59 20 P **P** **03 26 54.2 -1.1**
baz=221,SNR=5.2
DOT Dot Lake 92.60 18 IAmb IAmb 03 26 55.3
comp=Z,12nm,0.8s
H22K Ishtalitna Cre 92.61 14 P **P** **03 26 54.7 -0.7**
baz=212
D08A Wollman Farm, 92.62 39 IAmb IAmb 03 26 57.1
comp=Z,11nm,0.9s
G21K Allakaket 92.70 13 P **P** **03 26 54.3 -1.4**
baz=210
IL31 92.75 16 IAmb IAmb 03 26 55.2
comp=Z,9.6nm,0.8s
ILAR Eielson Array 92.75 16 P **P** **03 26 53.9 -2.1**
comp=Z,5.9nm,0.6s,baz=228,slow=4.9,SNR=114
ILAR PP **PP** **03 30 36.6 -1.8**
comp=Z,0.2nm,0.3s,baz=188,slow=33,SNR=6.6
ILAR PKKP **PKKPdf** **03 44 07.6 -1.2**
comp=Z,0.6nm,0.7s,baz=348,slow=2.9,SNR=4.9
ILAR PKPPKP **P'P'df** **03 52 19.6 +5.6**
comp=Z,0.3nm,0.8s,baz=355,slow=1.1,SNR=4.5
ILAR LR LR 04 01 22.0
comp=Z,818nm,22.0s,baz=214,slow=31
comp=Z,5.9nm,0.6s
ILAR Eielson Array 92.75 16 P **P** **03 26 54.6 -1.4**
ILAR Eielson Array 92.75 16 P **P** **03 26 54.6 -1.4**
L27K Beaver Creek, 92.79 19 P **P** **03 26 55.8 -0.5**
L27K Beaver Creek, 92.79 19 P **P** **03 26 54.9 -1.3**
baz=221,SNR=7.4
SCRK Sand Creek 92.88 17 IAmb IAmb 03 26 56.9
comp=Z,7.2nm,0.8s
SCRK Sand Creek 92.88 17 P **P** **03 26 55.7 -1.1**
baz=219,SNR=12
POKR Poker Plat Res 92.89 16 IAMs_20 IAMs_20 04 01 38.4
comp=Z,869nm,21.0s
O30N Mendenhall 92.97 22 P **P** **03 26 55.5 -1.7**
baz=226
H23K Yukon River 92.97 14 IAMs_20 IAMs_20 04 01 58.5
comp=Z,762nm,22.0s
H23K Yukon River 92.97 14 P **P** **03 26 54.3 -2.7**
baz=214
J25K Salcha River, 93.01 17 IAmb IAmb 03 26 56.9
comp=Z,7.4nm,0.7s
J25K IAMs_20 IAMs_20 04 07 45.6
comp=Z,508nm,20.0s
J25K Salcha River, 93.01 17 P **P** **03 26 55.7 -1.6**
baz=218,SNR=14
P32M Atlin 93.01 24 P **P** **03 26 55.1 -2.3**
baz=228
DUG Dugway, Tooele 93.11 47 IAMs_20 IAMs_20 04 11 19.9
comp=Z,624nm,18.0s
PLCA Paso Flores 93.23 137 P **P** **03 26 59.3 +0.2**
comp=Z,10nm,1.0s,baz=233,slow=4.1,SNR=16
PLCA LR LR 03 59 05.6
comp=Z,470nm,21.4s,baz=257,slow=29
comp=Z,10nm,1.0s
PLCA Paso Flores 93.23 137 P **P** **03 26 59.9 +0.7**
PLCA IAmb IAmb 03 27 02.0
comp=Z,16nm,1.0s
GO06 Curarrehue 93.28 136 IAmb IAmb 03 27 02.2
comp=Z,12nm,1.0s
F21K Alatna River 93.32 12 P **P** **03 26 57.6 -1.0**
baz=210
WHY Whitehorse 93.32 23 P **P** **03 26 57.1 -1.8**
baz=226
121A Cookes Peak, D 93.37 56 P **P** **03 27 01.2 +1.3**
baz=245
121A Cookes Peak, D 93.37 56 P **P** **03 26 59.5 -0.3**
baz=245
M29M Somme Creek 93.37 20 P **P** **03 26 57.7 -1.4**
baz=224
C09A Chrisman Ranch 93.38 39 P **P** **03 26 59.5 +0.2**
J26L Joseph Creek 93.41 17 IAmb IAmb 03 26 59.7
comp=Z,14nm,0.8s
J26L Joseph Creek 93.41 17 P **P** **03 26 57.6 -1.5**
baz=219,SNR=21
K27K Chicken 93.46 18 P **P** **03 26 58.6 -0.6**
baz=220
G22K Bettles 93.46 13 P **P** **03 26 57.9 -1.3**
baz=212
N31M Braeburn, Yuko 93.58 22 P **P** **03 26 59.5 -0.4**
baz=226
G23K Bananza Creek 93.60 14 P **P** **03 26 59.2 -0.7**
baz=214
HLID Hailey 93.64 44 P **P** **03 27 01.4 +0.6**
HLID IAmb IAmb 03 27 02.9
comp=Z,20nm,1.9s
HLID IAMs_20 IAMs_20 04 04 32.5
comp=Z,673nm,19.0s
HLID Hailey 93.64 44 P **P** **03 27 00.4 -0.4**
baz=242
Q16A Castle Valley 93.66 49 IAmb IAmb 03 27 03.4
comp=Z,19nm,1.5s
PRP Porcupine Dome 93.69 16 IAMs_20 IAMs_20 04 02 01.6
comp=Z,891nm,21.0s
DLBC Dease Lake 93.69 26 LR LR 04 05 00.2
comp=Z,423nm,18.3s,baz=262,slow=33
P33M Teslin, Yukon 93.77 24 IAMs_20 IAMs_20 04 08 14.9
comp=Z,616nm,18.0s
P33M Teslin, Yukon 93.77 24 P **P** **03 26 59.2 -1.6**
TMUT Trail Mountain 93.81 49 IAmb IAmb 03 27 05.1
comp=Z,32nm,1.9s
F22K John River 93.82 13 P **P** **03 26 59.0 -1.9**
baz=212
HVU Hansel Valley 93.87 46 IAmb IAmb 03 27 02.9
comp=Z,22nm,1.8s
M30M Minto, Yukon 94.00 21 P **P** **03 27 00.1 -1.8**
baz=225,SNR=6.6
KIDD KDD Seismic O 94.04 57 P **P** **03 27 04.2 +1.3**
baz=246
EPT El Paso 94.04 57 IAMs_20 IAMs_20 04 05 47.9
comp=Z,731nm,19.0s
I26K Coal Creek Min 94.14 17 IAmb IAmb 03 27 02.8
comp=Z,14nm,0.9s
I26K IAMs_20 IAMs_20 04 08 10.6
comp=Z,553nm,20.0s
I26K Coal Creek Min 94.14 17 P **P** **03 27 01.3 -1.1**
baz=220
SRU San Rafael Swe 94.20 49 IAmb IAmb 03 27 06.0
comp=Z,19nm,1.6s
DAWY Dawson 94.27 19 P **P** **03 27 02.6 -0.5**
DAWY Dawson 94.27 19 P **P** **03 27 02.2 -0.8**
baz=223
NEW Newport 94.28 39 LR LR 04 03 47.7
comp=Z,238nm,18.8s,baz=259,slow=32
EGAK Eagle 94.29 18 IAmb IAmb 03 27 03.4
comp=Z,12nm,0.9s
EGAK Eagle 94.29 18 P **P** **03 27 01.5 -1.5**
baz=221,SNR=12
GOMU GeErMu 94.55 307 P **P** **03 27 04.6 -0.8**
GOMU S **S** **03 38 15.8 -1.9**
GOMU SS **SS** **03 44 39.4 -1.8**
GOMU LR LR
comp=Z,240nm,20.2s
GOMU LR LR
comp=Z,370nm,23.2s
GOMU LR LR
comp=Z,450nm,23.9s
M31M Drury Creek, Y 94.55 22 IAMs_20 IAMs_20 04 07 28.5
comp=Z,603nm,20.0s
Y22A Socorro 94.58 55 P **P** **03 27 06.3 +0.9**
baz=245
FYU Fort Yukon 94.60 15 IAMs_20 IAMs_20 04 02 40.5
comp=Z,707nm,22.0s
HWUT Hardware Ranch 94.60 47 IAMs_20 IAMs_20 04 10 08.1
comp=Z,487nm,18.0s
Y22D IRIS ASCAL I 94.67 55 IAMs_20 IAMs_20 04 05 43.5
comp=Z,578nm,19.0s
F24K Squaw Lake 94.74 14 P **P** **03 27 04.1 -1.1**
baz=215
I27K Kandik River 94.78 17 P **P** **03 27 03.7 -1.7**
baz=221
MVCO Mesa Verde 94.82 52 IAMs_20 IAMs_20 04 07 20.2
comp=Z,678nm,18.0s
MNTX Cornudas Mount 94.88 58 IAMs_20 IAMs_20 04 06 48.2
comp=Z,767nm,18.0s
MNTX Cornudas Mount 94.88 58 P **P** **03 27 07.4 +0.8**
baz=246
MNTX Cornudas Mount 94.88 58 P **P** **03 27 06.3 -0.3**
baz=246
J29M Klondike Camp 94.90 19 IAMs_20 IAMs_20 04 17 36.8
comp=Z,573nm,18.0s
E24K Your Creek 95.07 13 P **P** **03 27 05.9 -0.8**
baz=215
PALK Pallekele 95.15 276 LR LR 04 11 24.1
comp=Z,617nm,19.3s,baz=238,slow=36
G26K Porcupine Rive 95.26 16 P **P** **03 27 06.9 -0.5**
baz=219
H27K Steamboat Moun 95.28 17 P **P** **03 27 06.8 -0.8**
baz=221
TX31 Lajitas Ar. Si 95.29 61 IAmb IAmb 03 27 10.7
comp=Z,20nm,1.2s
TX31 Lajitas Ar. Si 95.29 61 P **P** **03 27 09.8 +1.2**
baz=247
TXAR Lajitas Array 95.29 61 P **P** **03 27 09.4 +0.8**
comp=Z,3.0nm,1.0s,baz=216,slow=5.3,SNR=22
TXAR PKKPbc **PKKPbc** **03 44 00.2 -1.9**
comp=Z,2.4nm,0.6s,baz=119,slow=7.3,SNR=24
TXAR PKKP **PKKPdf** **03 44 03.5 +0.7**
comp=Z,2.6nm,0.6s,baz=97,slow=3.7,SNR=28
TXAR LR LR 04 04 09.5
comp=Z,447nm,18.1s,baz=254,slow=32
comp=Z,3.0nm,1.0s
TOLK Toolik Lake Re 95.31 13 IAMs_20 IAMs_20 04 04 09.4
comp=Z,620nm,21.0s
TOLK Toolik Lake Re 95.31 13 P **P** **03 27 06.7 -1.0**
baz=214
F25K Christian Rive 95.32 15 P **P** **03 27 07.4 -0.4**
baz=218
D23K Nanushuk River 95.36 12 P **P** **03 27 07.6 -0.3**
baz=213
ANMO Albuquerque 95.38 54 LR LR 04 05 00.6
comp=Z,541nm,18.0s,baz=260,slow=32
ANMO Albuquerque 95.38 54 P **P** **03 27 09.5 +0.5**
ANMO Albuquerque 95.38 54 IAMs_20 IAMs_20 04 06 51.2
comp=Z,724nm,18.0s
ANMO Albuquerque 95.38 54*ce*P **P** **03 27 09.6 +0.5**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
ANMO Albuquerque 95.38 54 P **P** **03 27 08.9 -0.2**
baz=246
ANMO Albuquerque 95.38 54 P **P** **03 27 08.0 -1.0**
baz=246
ZAK Zakamensk 95.54 323*e*P **P** **03 27 07.8 -1.5**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
G27K Doyon Strip 95.69 16 P **P** **03 27 08.5 -0.9**
baz=221
F26K Sheenjek River 95.75 15 P **P** **03 27 09.2 -0.6**
baz=219
E25K Arctic Village 95.75 14 P **P** **03 27 08.6 -1.1**
baz=218
TPAW Teton Pass 95.84 45 IAMs_20 IAMs_20 04 10 42.8
comp=Z,467nm,18.0s
REDW Red Top Meadow 95.85 45 IAmb IAmb 03 27 13.8
comp=Z,10nm,1.5s
FXWY Fox Creek 95.86 45 IAMs_20 IAMs_20 04 10 47.4
comp=Z,514nm,18.0s
D24K Happy Valley 95.89 13 P **P** **03 27 09.1 -1.2**
baz=215
MMPY Sheldon Lake, 95.92 23 P **P** **03 27 09.4 -1.2**
baz=230
IMW Indian Meadow 96.03 45 IAMs_20 IAMs_20 04 11 17.8
comp=Z,475nm,18.0s
C23K Itkillik River 96.11 12 P **P** **03 27 09.7 -1.5**
baz=213
S22A 4UR Ranch, Cre 96.25 52 P **P** **03 27 12.8 -0.3**
baz=246
BOZ Bozeman (W) 96.34 43 P **P** **03 27 12.3 -0.8**
baz=244
A21K Barrow 96.38 9 IAMs_20 IAMs_20 04 05 13.5
comp=Z,774nm,21.0s
C24K Franklin Bluff 96.38 12 P **P** **03 27 11.5 -0.9**
baz=215
PDAR Pinedale Array 96.45 46 P **P** **03 27 12.3 -1.5**
comp=Z,0.5nm,0.5s,baz=302,slow=2.8,SNR=5.7
PDAR PP **PP** **03 31 06.0 -2.1**
comp=Z,1.2nm,0.9s,baz=243,slow=6.5,SNR=6.7
PDAR PKPPKP **P'P'df** **03 52 13.9 +4.0**
comp=Z,0.3nm,0.9s,baz=125,slow=2.3,SNR=3.8
PDAR LR LR 04 04 57.5
comp=Z,299nm,19.1s,baz=270,slow=32
comp=Z,0.5nm,0.5s
PDAR Pinedale Array 96.45 46 P **P** **03 27 13.3 -0.5**
D25K Kavik River 96.54 13 P **P** **03 27 12.0 -1.3**
baz=217
LKWY Lake 96.67 44 IAMs_20 IAMs_20 04 04 23.8
comp=Z,560nm,19.0s
EPYK Eagle Plains 96.72 18 IAMs_20 IAMs_20 04 18 41.6
comp=Z,549nm,18.0s
SMCO Snowmass 96.73 50 P **P** **03 27 15.9 +0.5**
E27K Coleen River 96.75 15 P **P** **03 27 13.2 -1.1**
baz=221
SDCO Great Sand Dun 97.21 52 IAMs_20 IAMs_20 04 07 54.6
comp=Z,681nm,18.0s
C26K Camden Bay 97.32 13 P **P** **03 27 15.2 -1.6**
baz=218
PEL Peldehue 97.36 131 P Pdif 03 27 18.4 +0.3
PEL Peldehue 97.36 131 P Pdif 03 27 18.4 +0.3
PEL pmax pmax
comp=Z,73nm,1.9s
C27K Jago River 97.36 14 P **P** **03 27 16.6 -0.4**
baz=219
RLMT Red Lodge 97.64 44 IAMs_20 IAMs_20 04 14 13.3
comp=Z,613nm,19.0s
RLMT Red Lodge 97.64 44 P **P** **03 27 17.7 -1.4**
baz=245
MSTX Muleshoe 97.79 57 P Pdif 03 27 20.4 +0.5
baz=248
MSTX Muleshoe 97.79 57 P **P** **03 27 18.8 -1.1**
baz=248
ISCO Idaho Springs 97.94 50 IAMs_20 IAMs_20 04 10 57.8
comp=Z,781nm,18.0s
EGMT Eagleton 98.55 41 IAMs_20 IAMs_20 04 15 47.3
comp=Z,510nm,18.0s
PHWY Pilot Hill 98.64 49 IAMs_20 IAMs_20 04 10 39.2
comp=Z,709nm,18.0s
JCT Junction City 98.83 61 IAMs_20 IAMs_20 04 05 43.0
comp=Z,505nm,19.0s
INK Inuvik 98.95 18 LR LR 04 06 02.6
comp=Z,331nm,21.1s,baz=214,slow=32
TIXI Tiksi 99.21 347 LR LR 04 09 37.2
comp=Z,278nm,19.4s,baz=178,slow=34
TRQA Tornquist 100.14 139 IAMs_20 IAMs_20 04 02 18.2
comp=Z,681nm,22.0s
RSSD Black Hills 100.67 47 IAMs_20 IAMs_20 04 11 53.9
comp=Z,671nm,18.0s
435B Jarrell 100.72 61 IAMs_20 IAMs_20 04 09 13.2
comp=Z,507nm,20.0s
OGNE Ogallala 100.91 50 IAMs_20 IAMs_20 04 12 54.3
comp=Z,580nm,18.0s
CBKS Cedar Bluff 101.82 53 IAMs_20 IAMs_20 04 10 43.7
comp=Z,526nm,19.0s
HKT Hockley 101.86 62⇑ *e*P **Pdif** **03 27 38.8 +0.9**
HKT pmax pmax
comp=Z,4.0nm,1.1s
OK032 Salt Plains WL 102.28 55 IAMs_20 IAMs_20 04 13 07.1
comp=Z,696nm,19.0s
WMQ Urumqi 102.51 312 *e*P **Pdif** **03 27 44.9 +4.3**
WMQ pP sPdif 03 27 47.8 +1.6
WMQ LR LR
comp=Z,280nm,18.7s
WMQ LR LR
comp=Z,360nm,22.7s
WMQ LR LR
comp=Z,640nm,26.5s
NATX Nacogdoches 103.41 61 IAMs_20 IAMs_20 04 12 27.3
comp=Z,667nm,18.0s
TUL1 Leonard 103.84 57 IAMs_20 IAMs_20 04 13 48.4
comp=Z,616nm,18.0s
KSU1 Kansas State U 104.22 53 IAMs_20 IAMs_20 04 10 02.2
comp=Z,581nm,20.0s
MIAR Mount Ida 105.14 59 IAMs_20 IAMs_20 04 12 08.0
comp=Z,565nm,18.0s
ECSD EROS Data Cent 105.61 49 IAMs_20 IAMs_20 04 17 29.7
comp=Z,541nm,18.0s
ECSD EROS Data Cent 105.61 49 P **PKiKP** **03 32 05.0 -2.6**
baz=253
VBMS Vicksburg 106.90 62 IAMs_20 IAMs_20 04 14 38.8
comp=Z,414nm,18.0s
MKAR Makanchi Array 107.04 314 PKKPbc PKKPbc 03 43 26.8 -1.7
comp=Z,1.8nm,0.7s,baz=286,slow=3.7,SNR=12
MKAR PKKP **PKKPdf** **03 43 41.3 -0.4**
comp=Z,0.9nm,0.8s,baz=291,slow=3.4,SNR=3.8
MKAR PKPPKP **P'P'df** **03 51 52.6 +2.9**
comp=Z,0.6nm,0.9s,baz=336,slow=2.7,SNR=3.5
AGMN Agassiz Nation 107.37 44 IAMs_20 IAMs_20 04 11 26.0
comp=Z,734nm,20.0s
JFWS Jewell Farm 109.88 51 P **PKiKP** **03 32 14.2 -1.4**
baz=257
LRAL Lakeview Retre 109.98 62 IAMs_20 IAMs_20 04 27 57.4
comp=Z,419nm,18.0s
LRAL Lakeview Retre 109.98 62 P **PKiKP** **03 32 14.7 -1.3**
baz=255
HDIL Hopedale 110.03 54 IAMs_20 IAMs_20 04 15 19.1
comp=Z,369nm,18.0s
WVT Waverly 110.09 58 IAMs_20 IAMs_20 04 12 49.1
comp=Z,632nm,18.0s
KURK Kurchatov 110.33 317 IAMs_20 IAMs_20 04 16 22.3
comp=Z,654nm,22.0s
COWI Conover 111.34 48 IAMs_20 IAMs_20 04 18 20.1
comp=Z,587nm,18.0s
L44A Lake County Fo 111.41 52 IAMs_20 IAMs_20 04 29 32.3
comp=Z,418nm,18.0s
AAK Ala-Archa 111.47 308 IAMs_20 IAMs_20 04 17 57.2
comp=Z,499nm,22.0s
GOGA Godfrey 112.94 62 IAMs_20 IAMs_20 04 16 35.8
comp=Z,444nm,19.0s
GOGA Godfrey 112.94 62 P **PKiKP** **03 32 20.6 -1.0**
baz=257
O48B Farmland 113.06 55 P **PKiKP** **03 32 19.5 -2.1**
baz=259
P49A Miami Univ. Ec 113.25 55 P **PKiKP** **03 32 20.8 -1.2**
baz=259
ACSO Alum Creek Sta 114.69 55 P PKPdf 03 32 23.5 -1.2
baz=260
P52A Corning 115.23 56 IAMs_20 IAMs_20 04 17 02.8
comp=Z,506nm,19.0s
P52A Corning 115.23 56 P **PKPdf** **03 32 23.4 -2.4**
baz=260
NHSC New Hope 115.57 63 IAMs_20 IAMs_20 04 20 12.4
comp=Z,508nm,18.0s
NHSC New Hope 115.57 63 P **PKPdf** **03 32 25.5 -1.1**
baz=258
BRVK Borovoye 115.77 319 IAMs_20 IAMs_20 04 21 52.1
comp=Z,463nm,21.0s
BRVK Borovoye 115.77 319⇓ *i*PKIKP **PKPdf** **03 32 25.4 -1.0**
BRVK pmax pmax
comp=Z,7.0nm,2.5s
P53A Whipple 115.77 56 PKPdf **PKPdf** **03 32 26.1 -0.7**
O53A New Philadelph 116.03 55 P **PKPdf** **03 32 25.6 -1.7**
baz=261
PTLB Pontes e Lacer 116.06 122 **PKPdf** **03 32 27.1 -1.0**
W57A Gilead 116.12 61 P **PKPdf** **03 32 27.0 -0.6**
baz=259
W57A P **PKPdf** **03 32 27.0 -0.6**
baz=259
BLA Blacksburg 116.14 59 IAMs_20 IAMs_20 04 16 28.2
comp=Z,538nm,19.0s
BLA Blacksburg 116.14 59 P **PKPdf** **03 32 25.5 -2.2**
baz=260
N53A Lisbon 116.39 55 P **PKPdf** **03 32 27.2 -0.9**
baz=262
N53A P **PKPdf** **03 32 27.2 -0.9**
baz=262
R55A Marlinton 116.56 57 P **PKPdf** **03 32 27.7 -0.8**
baz=261
R55A P **PKPdf** **03 32 27.7 -0.8**
baz=261
M53A WI Miller and 116.61 54 P **PKPdf** **03 32 26.6 -1.8**

baz=262
O54A Avella 116.65 55 P PKPdf 03 32 27.8 -0.7
baz=262,SNR=5.3
O54A P PKPdf 03 32 27.8 -0.7
baz=262,SNR=5.3
T57A Hurt 117.03 59 P PKPdf 03 32 28.5 -0.9
baz=261
T57A P PKPdf 03 32 28.5 -0.9
baz=261
ERPA Erie 117.20 53 IAMs_20 IAMs_20 04 23 14.8
comp=Z,490nm,19.0s
ERPA Erie 117.20 53 P PKPdf 03 32 28.3 -1.2
baz=263
Q56A Snyder Ridge, 117.39 57 P PKPdf 03 32 28.9 -1.2
baz=262
Q56A P PKPdf 03 32 28.9 -1.2
baz=262
SDV Santo Domingo 117.40 92 PKPdf PKPdf 03 32 29.6 -1.4
CNNC Cliffs of the 117.83 61 IAMs_20 IAMs_20 04 20 45.0
comp=Z,407nm,20.0s
WVNY West Valley, N 118.26 53 P PKPdf 03 32 30.6 -1.0
baz=264
L56A Greenwood 119.00 53 P PKPdf 03 32 31.8 -1.3
baz=264,SNR=6.0
L56A P PKPdf 03 32 31.8 -1.3
baz=264,SNR=6.0
M57A Sunshine Farm, 119.24 54 P PKPdf 03 32 32.4 -1.1
baz=264,SNR=5.9
M57A P PKPdf 03 32 32.4 -1.1
baz=264,SNR=5.9
SDMD Soldier's Deli 119.25 57 P PKPdf 03 32 32.7 -0.9
baz=263
N58A Sunbury 119.50 55 PKPdf PKPdf 03 32 32.5 -1.4
N58A Sunbury 119.50 55 P PKPdf 03 32 32.6 -1.4
baz=264,SNR=7.0
N58A P PKPdf 03 32 32.6 -1.4
baz=264,SNR=7.0
J56A Wolcott 119.62 52 P PKPdf 03 32 32.7 -1.5
baz=265
J56A P PKPdf 03 32 32.7 -1.5
baz=265
K57A Scipio Center 119.82 53 P PKPdf 03 32 33.1 -1.5
baz=265,SNR=5.2
PSWB Penn State Wil 120.07 55 P PKPdf 03 32 34.1 -1.0
baz=265
BOSA Boshof 120.13 213 PKP PKiKP 03 32 36.3 +0.4
comp=Z,8.1nm,0.6s,baz=148,slow=1.5,SNR=38
BOSA Boshof 120.13 213 PKPdf PKiKP 03 32 36.0 0.0
BOSA Boshof 120.13 213 PKIKP PKiKP 03 32 36.0 0.0
BINY Binghamton 120.17 53 P PKPdf 03 32 34.2 -1.1
baz=265
J57A Williamstown 120.25 52 P PKPdf 03 32 34.2 -1.1
baz=266,SNR=5.3
J57A P PKPdf 03 32 34.2 -1.1
baz=266,SNR=5.3
KSPA Keystone Colle 120.28 54 P PKPdf 03 32 34.5 -1.0
baz=265
WCNY West Carthage 120.54 51 P PKPdf 03 32 34.6 -1.3
baz=267,SNR=7.8
J58A Remsen 120.77 52 P PKPdf 03 32 35.0 -1.4
baz=266,SNR=7.6
J58A P PKPdf 03 32 35.0 -1.4
baz=266,SNR=7.6
BRNJ Basking Ridge 121.11 55 P PKPdf 03 32 36.2 -0.9
baz=265
ODNJ Ogdensburg 121.11 55 P PKPdf 03 32 35.7 -1.4
baz=266
LONY Lake Ozonia 121.34 51 IAMs_20 IAMs_20 04 23 29.1
comp=Z,442nm,18.0s
LONY Lake Ozonia 121.34 51 P PKPdf 03 32 35.5 -1.9
baz=268
J59A Piesco 121.34 52 P PKPdf 03 32 35.9 -1.6
baz=267,SNR=5.6
J59A P PKPdf 03 32 35.9 -1.6
baz=267,SNR=5.6
HCNY Howe Caverns 121.38 53 P PKPdf 03 32 36.0 -1.6
baz=267,SNR=6.2
BMNY Brushton-Moira 121.40 50 P PKPdf 03 32 35.8 -1.7
baz=268
TRNY Table Rock, Ra 121.41 55 PKPdf PKiKP 03 32 37.8 0.0
NCB Newcomb 121.57 52 P PKPdf 03 32 36.6 -1.3
baz=268,SNR=6.9
BRNY Black Rk. Fore 121.58 55 P PKPdf 03 32 36.9 -1.1
baz=266
PAL Palisades 121.64 55 P PKPdf 03 32 37.4 -0.6
baz=266
PAL Palisades 121.64 55 P PKPdf 03 32 35.6 -2.4
baz=266
ARU Arti 122.48 323 PKP PKPdf 03 32 37.8 -1.4
comp=Z,3.5nm,0.6s,baz=143,slow=5.3,SNR=7.5
ARU Arti 122.48 323 PKPdf PKPdf 03 32 38.1 -1.2
ARU IAMs_20 IAMs_20 04 34 26.2
comp=Z,491nm,18.0s
ARU Arti 122.48 323 *i* PKIKP PKPdf 03 32 38.4 -0.8
ARU 03 34 13.2
ARU PPP PPP 03 36 50.4
ARU 03 39 50.1
ARU SP SP 03 44 08.5 +0.5
ARU SS **SS** **03 51 01.1 +4.9**
ARU MLR MLR
comp=Z,402nm,19.0s
J61A Chester 122.76 52 P PKPdf 03 32 39.1 -1.0
baz=268,SNR=11
J61A P PKPdf 03 32 39.1 -1.0
baz=268,SNR=11
LBTB Lobatse 122.89 215 PKPdf PKiKP 03 32 42.1 +0.6
LBTB Lobatse 122.89 215 PKIKP PKiKP 03 32 42.1 +0.6
HNH Hanover 122.96 52 P PKPdf 03 32 40.2 -0.4
baz=269
K62A Royalston 122.97 53 P PKPdf 03 32 40.0 -0.6
baz=268
K62A P PKPdf 03 32 40.0 -0.6
baz=268
LBNH Lisbon 123.23 51 P PKPdf 03 32 39.9 -1.2
baz=269
KBS Kingsbay 123.37 356 IAMs_20 IAMs_20 04 19 57.7
comp=Z,362nm,22.0s
AKTO Aktyubinsk 123.37 316 PKP PKPdf 03 32 39.2 -2.0
comp=Z,1.8nm,0.6s,baz=81,slow=1.5,SNR=7.3
AKTO PKKPbc **PKKPbc** **03 42 31.7 +0.2**
comp=Z,2.7nm,0.7s,baz=243,slow=3.6,SNR=6.9
FFD Franklin Falls 123.42 52 P PKPdf 03 32 41.0 -0.4
baz=269
HRV Adam Dziewonsk 123.47 53 P PKPdf 03 32 40.7 -0.9
baz=268
HRV Adam Dziewonsk 123.47 53 P PKPdf 03 32 40.1 -1.4
baz=268
I62A Tamworth 123.65 52 P PKPdf 03 32 41.2 -0.7
baz=270
I62A P PKPdf 03 32 41.2 -0.7
baz=270
SPA0 Spitsbergen Ar 123.71 354 *e*P PKPdf 03 32 39.8 -1.3
SPA0 IAmb IAmb 03 32 40.5
comp=Z,42nm,1.1s
SPITS Spitsbergen Ar 123.71 354 PKIKP PKPdf 03 32 39.4 -1.7
H62A Milan 123.79 51 P PKPdf 03 32 41.7 -0.5
baz=270,SNR=6.5
H62A P PKPdf 03 32 41.7 -0.5
baz=270,SNR=6.5
L64A Middleborough 123.98 54 P PKPdf 03 32 41.9 -0.7
baz=269
L64A P PKPdf 03 32 41.9 -0.7
baz=269
UNH University of 123.99 53 P PKPdf 03 32 41.7 -0.8
baz=269
BOAV Boa Vista 124.06 103 PKPdf PKPdf 03 32 43.7 +0.1
I63A Otisfield 124.20 51 P PKPdf 03 32 42.4 -0.5
baz=270,SNR=6.5
I63A P PKPdf 03 32 42.4 -0.5
baz=270,SNR=6.5
G62A West of Eustis 124.22 50 P PKPdf 03 32 42.0 -1.0
baz=271,SNR=8.6
G62A P PKPdf 03 32 42.0 -1.0
baz=271,SNR=8.6
BDFB Brasilia 124.26 130 PKP PKPdf 03 32 43.7 -0.4
comp=Z,10nm,0.8s,baz=201,slow=4.3,SNR=13
SJG San Juan 124.47 83 PKPdf 03 32 43.1 -1.0
SJG San Juan 124.47 83 PKIKP PKPdf 03 32 43.1 -1.0
HUMP Col San Antoni 124.75 83 PKPdf PKPdf 03 32 44.0 -0.7
WVL Waterville 124.86 51 P PKPdf 03 32 43.0 -1.1
baz=271
E62A Clayton Lake 124.89 48 PKPdf PKPdf 03 32 43.2 -0.9
E62A Clayton Lake 124.89 48 P PKPdf 03 32 42.8 -1.4
baz=273,SNR=9.6
E62A P PKPdf 03 32 42.8 -1.4
baz=273,SNR=9.6
PKME Peaks-Kenny Pk 125.10 50 P PKPdf 03 32 43.8 -0.8
baz=272,SNR=11
PKME Peaks-Kenny Pk 125.10 50 P PKPdf 03 32 42.8 -1.8
baz=272
F63A Nahmakanta, Br 125.22 49 P PKPdf 03 32 43.9 -0.9
baz=272,SNR=7.6
F63A P PKPdf 03 32 43.9 -0.9
baz=272,SNR=7.6
SCHQ Schefferville 125.64 38 PKP PKPdf 03 32 43.6 -1.7
comp=Z,9.7nm,0.9s,baz=294,slow=4.0,SNR=8.4
SCHQ Schefferville 125.64 38 PKPdf PKPdf 03 32 44.4 -0.9
E63A Oxbow 125.65 49 P PKPdf 03 32 44.0 -1.6
baz=273,SNR=5.1
E63A P PKPdf 03 32 44.0 -1.6
baz=273,SNR=5.1
F64A Sherman 125.73 49 PKPdf PKPdf 03 32 44.9 -0.9
F64A Sherman 125.73 49 P PKPdf 03 32 44.3 -1.5
baz=273,SNR=6.3
F64A P PKPdf 03 32 44.3 -1.5
baz=273,SNR=6.3
G65A Princeton 126.32 50 P PKPdf 03 32 45.8 -1.1
baz=273,SNR=13
G65A P PKPdf 03 32 45.8 -1.1
baz=273,SNR=13
ILULI Ilulissat 126.73 18 IAMs_20 IAMs_20 04 32 04.9
comp=Z,429nm,19.0s
KIRV Kirov 126.86 327 *c i* PKIKP PKPdf 03 32 46.8 -0.7
BATG Bathurst New B 127.20 47 PKPdf PKPdf 03 32 47.7 -0.9
SUMG Summit 127.35 11 PKPdf PKPdf 03 32 48.3 -0.4
SUMG IAMs_20 IAMs_20 04 31 22.8
comp=Z,450nm,20.0s
SUMG Summit 127.35 11 PKIKP PKPdf 03 32 48.3 -0.4
SUMG Summit 127.35 11 *i* P PKiKP 03 32 49.0 -0.2
SFJD Kangerlussuaq 128.19 20 PKPdf PKPdf 03 32 49.4 -0.5
SFJD Kangerlussuaq 128.19 20 IAMs_20 IAMs_20 04 28 11.5
comp=Z,431nm,20.0s
SFJD Kangerlussuaq 128.19 20 PKIKP PKPdf 03 32 49.4 -0.5
SFJD MLR MLR
comp=Z,400nm,20.0s
LSZ Lusaka 128.86 225 PKiKP 03 32 54.2 +0.7
LSZ Lusaka 128.86 225 PKIKP PKiKP 03 32 54.2 +0.7
KEV Kevo 129.12 346 IAMs_20 IAMs_20 04 25 47.9
comp=Z,401nm,22.0s
HAMF Hammerfest 129.15 347 *e*P PKPdf 03 32 50.2 -1.4
BELG Belogornoye 129.50 320 PKP PKPdf 03 32 52.1 -0.6
comp=Z,9.1nm,0.7s,baz=157,slow=7.0,SNR=4.9
BELG Belogornoye 129.50 320 *d i* PKIKP PKPdf 03 32 52.6 -0.1
KIBK Kibwezi 129.62 246 IAMs_20 IAMs_20 04 20 52.3
comp=Z,333nm,21.0s
ARA0 ARCESS Array S 129.63 346 *e*P PKPdf 03 32 51.2 -1.4
ARA0 IAmb IAmb 03 32 52.4
comp=Z,9.0nm,0.6s
ARCES ARCESS Array B 129.63 346 PKP PKPdf 03 32 51.2 -1.3
comp=Z,6.4nm,0.6s,baz=56,slow=1.1,SNR=30
ARCES ARCESS Array B 129.63 346 PKPdf PKPdf 03 32 51.4 -1.2
ICESG Greenland Ices 129.82 15 *i* P PKPdf 03 32 51.6 -1.8
DY2G Dye2 129.88 19 *i* P PKPdf 03 32 51.9 -1.5
KTK1 Kautokeino 130.54 346 *e*P PKPdf 03 32 52.8 -1.6
KTK1 IAmb IAmb 03 32 53.6
comp=Z,3.7nm,0.7s
KLMR Klimovskoe 130.60 332 *e*PKIKP PKPdf 03 32 51.3 -3.3
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 130.60 332 *e*PKPdf PKPdf 03 32 51.4 -3.2
KLMR AMP 03 32 54.9
comp=Z,14nm,1.3s
KLMR LQ LQ 04 19 37.0
KLMR LQ LQ 04 19 37.0
KLMR LR LR 04 22 18.1
JETT Jettan, Norway 130.68 348 *e*P PKPdf 03 32 53.9 -0.7
TRO Tromso 130.90 348 *e*P PKPdf 03 32 53.2 -1.7
TRO IAmb IAmb 03 32 54.3
comp=Z,4.5nm,0.7s
KMBO Kilima Mbogo 130.94 247 PKP PKPdf 03 32 56.2 -0.8
comp=Z,4.7nm,0.9s,baz=48,slow=3.7,SNR=7.7
KMBO Kilima Mbogo 130.94 247 *i* PKIKP PKiKP 03 32 59.4 +1.5
SCO Scoresbysund 131.66 7 IAMs_20 IAMs_20 04 23 46.7
comp=Z,508nm,21.0s
TSUM Tsumeb 131.80 211 PKPdf PKiKP 03 32 59.1 -0.3
RAYN Ar Rayn 132.23 281 IAMs_20 IAMs_20 04 29 40.1
comp=Z,272nm,19.0s
IVI Ivigtut 132.41 26 PKPdf PKPdf 03 32 56.5 -1.4
IVI Ivigtut 132.41 26 *i* P PKPdf 03 32 57.2 -0.8
ANGG Ammassalik, Gr 132.98 17 IAMs_20 IAMs_20 04 30 42.9
comp=Z,467nm,19.0s
STEI Steigen 133.05 349 *e*P PKPdf 03 32 58.4 -0.6
STEI IAmb IAmb 03 32 59.9
comp=Z,11nm,0.9s
FAUS Fauske 133.53 348 *e*P PKPdf 03 32 59.1 -0.8
FAUS IAmb IAmb 03 33 00.2
comp=Z,5.5nm,0.9s
KIV Kislovodsk 134.56 310 *i* PKIKP PKPdf 03 33 03.2 +0.5
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,244nm,24.0s
OBN Obninsk 134.69 326 IAMs_20 IAMs_20 04 31 30.8
comp=Z,478nm,21.0s
OBN Obninsk 134.69 326 *i* PKIKP PKiKP 03 33 04.7 +0.8
OBN *e*SSS SSS 03 58 29.5
OBN pmax pmax
comp=Z,3.0nm,0.4s
MOR8 Moi Rana 134.76 348 *e*P PKPdf 03 33 00.6 -1.7
MOR8 IAmb IAmb 03 33 01.7
comp=Z,3.9nm,0.7s
FINES FINESS Array B 135.47 338 PKhKP PKPpre 03 32 50.1
comp=Z,0.6nm,0.6s,baz=78,slow=4.5,SNR=4.5
FINES PKP PKPdf 03 33 01.4 -2.4
comp=Z,4.6nm,0.9s,baz=56,slow=4.1,SNR=8.5
FINES SKPbc **SKPbc** **03 36 32.9 -1.2**
comp=Z,3.5nm,1.1s,baz=35,slow=10,SNR=5.9
FINES FINESS Array B 135.47 338 PKPdf 03 33 03.3 -0.4
NSS Namsos 136.70 348 *e*P PKPdf 03 33 03.6 -2.3
SOC Sochi 136.74 310 *i* PKIKP PKPdf 03 33 07.2 +0.5
SOC *e* 03 35 46.4
SOC *e*PPP PPP 03 38 57.0
SOC *e*PS **PS** **03 46 11.9 -3.6**
SOC *e*SS SS 03 53 51.1 -1.5
SOC MLR MLR
comp=Z,234nm,21.0s
MNK Minsk 139.28 329 *i* PKIKP PKPdf 03 33 09.4 -1.5
MNK *i* 03 36 02.7
MNK *i* PPP PPP 03 39 05.0
MNK *i* 03 40 19.9
MNK *i* SS SS 03 54 21.3 -0.1
MNK *i* SSS SSS 03 59 31.9
MNK pmax pmax
comp=N,1.0nm,1.0s
MNK pmax pmax
comp=Z,12nm,1.0s
MNK MLR MLR
comp=Z,462nm,20.0s
MNK MLR MLR
comp=E,44nm,20.0s
MNK Minsk 139.28 329 *i* PKP PKPdf 03 33 09.5 -1.5
MNK *i* PKP PKPdf 03 33 09.5 -1.5
comp=N,1.0nm,1.0s
MNK *i* PKP PKPdf 03 33 09.5 -1.5
comp=Z,12nm,1.0s,baz=54
MNK *i* PP **PP** **03 36 02.8 -1.7**
MNK *i* PPP PPP 03 39 05.0
MNK *i* SKS **SKSdf** **03 40 19.9 -0.6**
MNK *i* SS **SS** **03 54 21.3 -0.1**
MNK *i* SSS SSS 03 59 31.9
MNK *i* LR LR 04 29 07.6
MNK *i* LRM MLR 04 32 55.0
comp=Z,462nm,20.4s
MNK *i* LRM MLR 04 33 02.0
comp=E,44nm,20.3s
MNK *i* LRM MLR 04 34 08.6
DOMB Dombas 139.51 349 *e*P PKPpre 03 33 03.9
DOMB IAmb IAmb 03 33 13.0
comp=Z,8.4nm,1.0s
NACGM **Naroch** 139.54 331 *e*PKP PKPdf 03 33 08.9 -2.6
comp=Z,11nm,0.8s,baz=52
AKN Aaknes 139.74 350 *e*P PKPpre 03 33 02.3
AKN IAmb IAmb 03 33 13.8
comp=Z,14nm,1.0s
NC303 NORSAR Array S 139.80 347 *e*P PKPpre 03 33 02.3
NC303 IAmb IAmb 03 33 13.4
comp=Z,20nm,1.5s
NB2 NORSAR Subarra 140.00 347 PKP PKPpre 03 33 02.4
comp=Z,94nm,5.0s,baz=22,slow=3.0
NOA NORSAR Array B 140.00 347 PKhKP PKPpre 03 33 02.8
comp=Z,0.3nm,0.5s,baz=17,slow=1.5,SNR=9.5
NOA PKP PKPdf 03 33 11.1 -1.1
comp=Z,0.8nm,0.7s,baz=42,slow=1.2,SNR=9.8
NAO01 NORSAR Array S 140.25 347 PKPdf PKPdf 03 33 13.2 +0.6
AKASG **Malin Array Be** 140.73 324 PKhKP PKPpre 03 33 04.7
comp=Z,0.6nm,0.5s,baz=52,slow=3.9,SNR=1.6
AKASG PKP PKPdf 03 33 13.4 -0.3
comp=Z,0.8nm,0.5s,baz=48,slow=2.9,SNR=7.4
KONO Kongsberg 141.61 347 IAMs_20 IAMs_20 04 41 58.9
comp=Z,271nm,20.0s
KONO Kongsberg 141.61 347 *e*P PKPpre 03 33 08.2
ASK Askoy 141.63 351 *e*P PKPpre 03 33 08.9
BER Bergen 141.70 350 *e*P PKPpre 03 33 08.3
ODD1 Odda 141.94 349 *e*P PKPpre 03 33 09.8
BRTR Keskin Array B 142.07 306 PKhKP PKPpre 03 33 06.8
comp=Z,0.2nm,0.3s,baz=360,slow=11,SNR=2.0
BRTR PKP PKPdf 03 33 14.0 -2.7
comp=Z,0.7nm,0.5s,baz=106,slow=2.6,SNR=6.5
BRTR Keskin Array B 142.07 306 *c i* PKIKP PKiKP 03 33 19.3 -0.4
BRTR pmax pmax
comp=Z,1.0nm,0.7s
MILM Milestii Mici 142.83 319 *e*PKP PKiKP 03 33 26.0 +5.2
MILM *e*L L 04 24 08.0
MILM LRM MLR 04 37 15.0
comp=Z,300nm,21.0s
MILM Milestii Mici 142.83 319 *e*PKIKP PKiKP 03 33 26.0 +5.2
MILM MLR MLR
comp=Z,300nm,21.0s
CSS Mathiatis 143.21 298 IAMs_20 IAMs_20 04 44 45.5
comp=Z,284nm,20.0s
LVV L'vov 143.99 326 *e*PKIKP PKiKP 03 33 32.2 +9.1
TPGR Topolog 144.00 316 ⇑P PKPab 03 33 17.1 0.0
CFR Carcaliu 144.03 316 ⇑P **PKPab** **03 33 17.4 +0.2**
CFR Carcaliu 144.03 316 ⇑PKIKP **PKPab** **03 33 17.4 +0.2**
GHRR 144.09 318 ⇑P PKPbc 03 33 17.9 0.0
IZVR Izvoarele 144.10 317 ⇑P **PKPab** **03 33 16.8 -0.6**
TIRR Tirgusor 144.17 315 ⇑P PKPbc 03 33 18.0 -0.2
TIRR Tirgusor 144.17 315 ⇑PKIKP PKPbc 03 33 18.0 -0.2
BEL Belsk 144.27 331 *e*PKPdf **PKPab** **03 33 17.3 -0.6**
TESR Tescani 144.33 319 ⇑P **PKPab** **03 33 17.8 -0.5**
PANC Panciu 144.34 318 ⇑P PKPbc 03 33 18.6 0.0
HARR Harsova 144.38 316 ⇑P **PKPab** **03 33 17.7 -0.8**
HARR Harsova 144.38 316 ⇑PKIKP **PKPab** **03 33 17.7 -0.8**
BIZ Bicaz 144.44 320 ⇑P PKPbc 03 33 18.8 -0.2
ODBI Odobesti 144.44 318 ⇑P PKPbc 03 33 19.3 +0.3
BURAR **Bucovina Array** 144.60 322 ⇑P PKPbc 03 33 19.7 +0.1
BURAR **Bucovina Array** 144.60 322 ⇑PKIKP PKPbc 03 33 19.7 +0.1
VRI Vrincioaia 144.60 318 ⇑P **PKPab** **03 33 19.0 -0.4**
VRI Vrincioaia 144.60 318 ⇑PKIKP **PKPab** **03 33 19.0 -0.4**
MUD Monsted U'grnd 144.60 345 *e*P **PKPab** **03 33 18.0 -1.0**
PLOR Plostina 144.65 318 ⇑P **PKPab** **03 33 19.1 -0.5**
PLOR Plostina 144.65 318 ⇑PKIKP **PKPab** **03 33 19.1 -0.5**
ICOR Ion Corvin 144.71 315 ⇑P **PKPab** **03 33 18.1 -1.7**
GKP Gorka Klasztor 144.72 335 *e*PKPdf **PKPab** **03 33 19.0 -0.5**
LINV Loch Inver, As 144.87 359 *e*P **PKPab** **03 33 18.8 -1.1**
ISP Isparta 144.89 304 IAMs_20 IAMs_20 04 45 32.4
comp=Z,249nm,19.0s
COVR Voineasa-Covas 144.93 319 ⇑P **PKPab** **03 33 18.8 -1.8**
OZUR 145.06 319 ⇑P **PKPbc** **03 33 20.9 -0.2**
ISR Istrita 145.07 317 ⇑P **PKPbc** **03 33 20.4 -0.7**
ISR Istrita 145.07 317 ⇑PKIKP **PKPbc** **03 33 20.4 -0.7**
NEHR Nehoiu 145.07 318 ⇑P **PKPbc** **03 33 18.8 -2.3**
RGN Rugen 145.09 340 **PKPbc** **03 33 20.7 -0.1**
RGN IAMs_20 IAMs_20 04 35 50.5
comp=Z,490nm,22.0s
MLR Muntele Rosu 145.26 318 ⇑P **PKPbc** **03 33 21.4 -0.4**
MLR Muntele Rosu 145.26 318 **PKPbc** **03 33 20.7 -1.1**
MLR Muntele Rosu 145.26 318 ⇑PKIKP **PKPbc** **03 33 21.4 -0.4**
DOPR Dopca 145.36 319 ⇑P **PKPbc** **03 33 21.8 -0.2**
MCD Coleburn Disti 145.36 357 *e*P **PKPbc** **03 33 20.0 -1.6**
ARCR ARCALIA 145.38 322 ⇑P **PKPab** **03 33 22.1 -0.1**
KOLS Kolonicke sedl 145.44 326 *e*PKIKP **PKPbc** **03 33 21.6 -0.5**
KOLS Kolonicke sedl 145.44 326 *e*PKP **PKPbc** **03 33 21.6 -0.5**
KOLS *e* 03 55 10.1
KAC Achnashellach 145.52 359 *e*P **PKPdf** **03 33 20.7 -1.3**
BMR Baia Mare 145.53 323 ⇑P **PKPbc** **03 33 22.5 0.0**
BMR Baia Mare 145.53 323 ⇑PKIKP **PKPbc** **03 33 22.5 0.0**
MDO Dochfour 145.56 358 *e*P **PKPdf** **03 33 21.0 -1.1**
UZH Uzhgorod 145.61 325 *e*PKP2 **PKPdf** **03 33 21.4 -1.0**
KPL Plockton 145.69 359 *e*P **PKPdf** **03 33 21.2 -1.1**
OJC Ojcow 145.83 329 *e*PKPbc **PKPdf** **03 33 21.0 -1.8**
VOIR 145.83 319 ⇑P **PKPdf** **03 33 22.2 -0.8**
VOIR 145.83 319 ⇑PKIKP **PKPdf** **03 33 22.2 -0.8**
CRVS Cervenica-Dubn 145.88 326 *e*PKP2 **PKPbc** **03 33 23.4 -0.1**
CRVS Cervenica-Dubn 145.88 326 *e*PKP **PKPbc** **03 33 23.4 -0.1**
CJR Cluj-Napoca 146.01 322 ⇑P **PKPdf** **03 33 23.4 +0.1**
CJR Cluj-Napoca 146.01 322 ⇑PKP2 **PKPdf** **03 33 23.4 +0.1**
ARR Arges 146.12 319 ⇑P **PKPbc** **03 33 24.4 -0.1**
NIE Niedzica 146.12 328 *e*PKPbc **PKPbc** **03 33 24.3 0.0**
HUMR Humele 146.32 317 ⇑P **PKPdf** **03 33 23.8 0.0**
DRGR 146.47 322 ⇑P **PKPdf** **03 33 24.4 +0.3**
DRGR 146.47 322 ⇑PKP2 **PKPdf** **03 33 24.4 +0.3**
INVG Invergeldie, C 146.56 357 *e*P **PKPdf** **03 33 23.9 +0.1**
LANS Liptovska Anna 146.71 328 *e*PKP2 **PKPbc** **03 33 25.9 -0.1**
LANS Liptovska Anna 146.71 328 *e*PKP **PKPbc** **03 33 25.9 -0.1**
LAWE Loch Awe, Argy 146.77 359 *e*P **PKPdf** **03 33 24.4 +0.3**
OKC Ostrava-Krasne 146.86 330 *e*PKP2 **PKPbc** **03 33 25.5 -0.9**
OKC MLR MLR
comp=Z,400nm,22.1s
OKC Ostrava-Krasne 146.86 330 ⇑ *e*PKP **PKPbc** **03 33 25.5 -0.9**
OKC AMS AMS 04 36 40.0
comp=Z,400nm,22.1s
KSP Ksiaz 146.94 333 *e*PKPbc **PKPdf** **03 33 25.3 +0.6**
ESY Stoneypath 146.99 356 *e*P **PKPdf** **03 33 25.4 +0.9**
EDI Edinburgh 147.02 356 *e*P **PKPdf** **03 33 25.4 +0.9**
EBL Broad Law 147.16 356 *e*P **PKPdf** **03 33 25.6 +0.8**
MORC Moravsky Berou 147.18 331 ⇑P **PKPbc** **03 33 26.6 -0.8**
MORC Moravsky Berou 147.18 331 PKPbc **PKPbc** **03 33 27.2 -0.1**
MORC Moravsky Berou 147.18 331 ⇑PKP2 **PKPbc** **03 33 26.6 -0.8**
MORC Moravsky Berou 147.18 331 *e*PKP **PKPbc** **03 33 26.9 -0.5**
OSTC Ostas 147.19 333 *e*PKPDF **PKPdf** **03 33 24.5 -0.6**
OSTC ⇑ *e*PKP **PKPbc** **03 33 27.1 -0.2**
OSTC AMS AMS 04 37 00.0
comp=Z,500nm,21.4s
PGBU Glenifferbraes 147.19 358 *e*P **PKPdf** **03 33 25.5 +0.6**
GZR Gura Zlata 147.22 320 ⇑P **PKPdf** **03 33 25.1 -0.3**
GZR Gura Zlata 147.22 320 ⇑PKHKP PKPpre 03 33 25.1
CHVC Chvalec 147.23 333 ⇑ *e*PKP **PKPbc** **03 33 26.7 -0.8**
DPC Dobruska-Polom 147.30 332 *e*PKP2 **PKPbc** **03 33 27.2 -0.5**
DPC MLR MLR
comp=Z,600nm,22.4s
DPC Dobruska-Polom 147.30 332 ⇑ *e*PKP **PKPbc** **03 33 27.2 -0.5**
DPC AMS AMS 04 34 10.0
comp=Z,600nm,22.4s
KRLC Kraliky 147.30 332 *e*PKP2 **PKPbc** **03 33 26.9 -0.8**
KRLC MLR MLR
comp=Z,600nm,21.5s
KRLC Kraliky 147.30 332 ⇑ *e*PKP **PKPbc** **03 33 26.9 -0.8**
KRLC AMS AMS 04 38 40.0
comp=Z,600nm,21.5s
PSZ Piszkesteto 147.31 326 ⇑P **PKPdf** **03 33 25.7 +0.2**
PSZ Piszkesteto 147.31 326 ⇑PKIKP **PKPdf** **03 33 25.7 +0.2**
PSZ Piszkesteto 147.31 326 PKP **PKPbc** **03 33 27.3 -0.5**
UPC Upice 147.31 333 *e*PKP2 **PKPbc** **03 33 27.0 -0.6**
UPC MLR MLR
comp=Z,600nm,17.3s
UPC Upice 147.31 333 ⇑ *e*PKP **PKPbc** **03 33 27.0 -0.6**
UPC AMS AMS 04 37 10.0
comp=Z,600nm,17.3s
SIRR Siria 147.37 322 ⇑P **PKPdf** **03 33 25.7 +0.2**
VYHS Vyhne 147.46 328 *e*PKP2 **PKPbc** **03 33 27.4 -0.7**
VYHS Vyhne 147.46 328 *e*PKP **PKPbc** **03 33 27.4 -0.7**
VYHS *e* 03 55 13.5
ESK Eskdalemuir 147.62 356 *e*P **PKPdf** **03 33 26.6 +1.0**
ESK Eskdalemuir 147.62 356 **PKPbc** **03 33 27.2 -1.1**
ESK Eskdalemuir 147.62 356 PKP2 **PKPbc** **03 33 27.2 -1.1**
HERR Herculane 147.71 320 ⇑P **PKPdf** **03 33 27.2 +1.1**
BZS Buzias 147.77 321 ⇑P **PKPdf** **03 33 26.0 -0.2**
BZS Buzias 147.77 321 ⇑PKIKP **PKPdf** **03 33 26.0 -0.2**
JAVC Velka Javorina 147.77 329 *e*PKP **PKPbc** **03 33 29.8 +0.8**
BRG Berggiesshubel 147.87 335 *e*PKP **PKPbc** **03 33 28.3 -0.9**
BRG Amp 03 33 30.2
comp=Z,25nm,0.9s
BRG *ex* x 03 33 42.1
BRG Amp 03 33 44.3
comp=Z,15nm,1.2s
BRG Berggiesshubel 147.87 335 *e*PKP2 **PKPbc** **03 33 28.2 -0.9**
BRG pmax pmax
comp=Z,25nm,0.9s
BRG pmax pmax
comp=Z,15nm,1.2s
CLL Collm 147.87 337 *i* PKP2 **PKPbc** **03 33 28.4 -0.7**
CLL pmax pmax
comp=Z,46nm,1.0s

CLL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CLL	**Collm**	**147.87**	**337**	*i* PKPbc	**PKPbc**	**03 33 28.4**	**-0.7**
	comp=Z,46nm,1.0s						
CLL				*i* PKPab	**PKiKP**	**03 33 31.0**	**0.0**
	comp=Z,10.0nm,0.6s						
CLL				*e*PKPlp		03 33 42.0	
	comp=Z,300nm,15.4s						
CLL				*e*PKSbc	**PKSbc**	**03 37 12.0**	**+3.8**
CLL				*e*PSKS		03 47 18.0	
CLL				*ex*	x	03 51 54.0	
CLL				*e*SS	SS	03 56 18.0	+18
CLL				*e*PSPS		03 57 00.0	
CLL				*ex*	x	03 58 16.0	
CLL				*e*SSS	SSS	04 01 24.0	
CLL				*e*SSSS		04 05 48.0	
CLL				*ex*	x	04 10 24.0	
NEWG	**New Galloway**	**147.87**	**357**	*e*P	**PKPbc**	**03 33 27.5**	**-1.5**
PVCC	**Panska Ves**	**147.89**	**334**	*e*PKP2	**PKPbc**	**03 33 28.6**	**-0.6**
PVCC				MLR	MLR		
	comp=Z,500nm,19.5s						
PVCC	**Panska Ves**	**147.89**	**334**⇑	*e*PKP	**PKPbc**	**03 33 28.6**	**-0.6**
PVCC				AMS	AMS	04 33 00.0	
	comp=Z,500nm,19.5s						
VRAC	**Vranov**	**147.95**	**331**	⇑P	**PKPbc**	**03 33 29.0**	**-0.4**
VRAC	**Vranov**	**147.95**	**331**	⇑PKP2	**PKPbc**	**03 33 29.0**	**-0.4**
VRAC	**Vranov**	**147.95**	**331**	*e*PKP	**PKPbc**	**03 33 28.9**	**-0.5**
EDMD	**Edmundbyers**	**148.01**	**355**	*e*P	**PKPbc**	**03 33 27.9**	**-1.5**
SMOL	**Smolenice**	**148.13**	**329**	*e*PKP2	**PKPbc**	**03 33 29.8**	**-0.1**
GAL1	**Galloway**	**148.14**	**358**	*e*P	**PKPbc**	**03 33 28.4**	**-1.3**
MDVR	**Moldovita**	**148.18**	**320**	⇑P	**PKPbc**	**03 33 28.7**	**-1.6**
KRUC	**Moravsky**	**148.22**	**331**	*e*PKP	**PKPbc**	**03 33 29.3**	**-0.8**
BLKB	**Belogradchik**	**148.22**	**317**	⇑P	**PKPbc**	**03 33 29.4**	**-1.0**
MODS	**Modra-Piesok**	**148.30**	**329**	*e*PKIKP	**PKPdf**	**03 33 27.7**	**+0.7**
MODS	**Modra-Piesok**	**148.30**	**329**	*e*PKP	**PKPdf**	**03 33 27.7**	**+0.7**
PRU	**Pruhonice**	**148.32**	**334**	*e*PKP2	**PKPbc**	**03 33 29.2**	**-1.2**
PRU				MLR	MLR		
	comp=Z,500nm,20.0s						
PRU	**Pruhonice**	**148.32**	**334**⇑	*e*PKP	**PKPbc**	**03 33 29.2**	**-1.2**
PRU				AMS	AMS	04 32 40.0	
	comp=Z,500nm,20.0s						
KESW	**Keswick, Cumbr**	**148.34**	**356**	*e*P	**PKPdf**	**03 33 27.9**	**+1.1**
VTS	**Vitosha**	**148.36**	**315**	⇑P	**PKPbc**	**03 33 29.7**	**-1.2**
VTS	**Vitosha**	**148.36**	**315**	⇑PKP2	**PKPbc**	**03 33 29.7**	**-1.2**
TREC	**Trest**	**148.45**	**332**	*e*PKP2	**PKPbc**	**03 33 29.8**	**-1.0**
TREC				MLR	MLR		
	comp=Z,500nm,23.0s						
TREC	**Trest**	**148.45**	**332**⇑	*e*PKP	**PKPbc**	**03 33 29.8**	**-1.0**
TREC				AMS	AMS	04 36 10.0	
	comp=Z,500nm,23.0s						
ZST	**Bratislava**	**148.50**	**329**	*e*PKIKP	**PKPdf**	**03 33 28.7**	**+1.4**
ZST	**Bratislava**	**148.50**	**329**	*e*PKP	**PKPdf**	**03 33 28.7**	**+1.4**
CSKK	**Cskako**	**148.51**	**327**	PKP	**PKPbc**	**03 33 30.1**	**-0.9**
NVR	**Nevrokopi**	**148.53**	**313**	P	**PKPbc**	**03 33 29.9**	**-1.3**
BOVS	**Bovan**	**148.81**	**318**	⇑P	**PKPbc**	**03 33 30.0**	**-1.8**
HPK	**Haverah Park**	**148.85**	**354**	*e*P	**PKPbc**	**03 33 30.5**	**-1.0**
WIM	**Isle of Man**	**148.86**	**358**	*e*P	**PKPbc**	**03 33 29.9**	**-1.7**
MPLH	**Magyarpolny**	**149.00**	**327**	PKP	**PKPbc**	**03 33 31.1**	**-1.1**
MORH	**Mrgy, Hungar**	**149.06**	**325**	⇓P	**PKPdf**	**03 33 27.8**	**-0.4**
MORH	**Mrgy, Hungar**	**149.06**	**325**	PKP	**PKPdf**	**03 33 27.8**	**-0.4**
FRGS	**Fruska Gora**	**149.07**	**322**	⇑P	**PKPbc**	**03 33 31.3**	**-1.2**
FRGS	**Fruska Gora**	**149.07**	**322**	⇓P	**PKPbc**	**03 33 30.9**	**-1.6**
SOP	**Sopron**	**149.13**	**329**	PKP	**PKPbc**	**03 33 32.7**	**+0.2**
RONA	**Rosalia, Austr**	**149.24**	**329**	*i* P	**PKPbc**	**03 33 31.9**	**-0.9**
	comp=Z,10nm,0.7s,SNR=12						
CONA	**Conrad Observa**	**149.28**	**330**	*i* P	**PKPbc**	**03 33 32.8**	**-0.2**
	comp=Z,28nm,1.3s,SNR=11						
CKRC	**Cesky Krumlov**	**149.31**	**332**	*e*PKPDF	**PKPdf**	**03 33 27.9**	**-0.7**
CKRC			⇑	*e*PKP	**pPKPdf**	**03 33 32.3**	**-0.5**
CKRC				AMS	AMS	04 38 50.0	
	comp=Z,600nm,18.7s						
KHC	**Kasperske Hory**	**149.38**	**333**	PKPbc	**PKPbc**	**03 33 32.4**	**-0.7**
KHC				IAMs_20	IAMs_20	04 50 35.5	
	comp=Z,328nm,19.0s						
KHC	**Kasperske Hory**	**149.38**	**333**	*e*PKHKP	PKPpre	03 33 28.2	
KHC				MLR	MLR		
	comp=Z,1μm,32.3s						
KHC	**Kasperske Hory**	**149.38**	**333**	*e*PKPDF	**PKPdf**	**03 33 28.2**	**-0.6**
KHC			⇑	*e*PKP	**pPKPdf**	**03 33 31.8**	**-1.2**
KHC				AMS	AMS	04 32 00.0	
	comp=Z,1μm,32.3s						
VAY	**Valandovo**	**149.41**	**314**	*i* P	**PKPbc**	**03 33 31.7**	**-1.7**
LBWR	**Ladybower, Pea**	**149.41**	**354**	*e*P	**PKPbc**	**03 33 31.6**	**-1.4**
AOS	**Alonnisos**	**149.41**	**309**	P	**PKPab**	**03 33 37.1**	**-1.2**
GERES	**GERESS Array B**	**149.55**	**333**	PKPbc	**PKPbc**	**03 33 32.9**	**-0.7**
	comp=Z,11nm,1.0s,baz=66,slow=1.6,SNR=57						
GERES	**GERESS Array B**	**149.55**	**333**	PKPbc	**PKPbc**	**03 33 32.1**	**-1.5**
DIVS	**Divibare**	**149.59**	**320**	IAMs_20	IAMs_20	04 41 34.5	
	comp=Z,414nm,22.0s						
DIVS	**Divibare**	**149.59**	**320**	⇓*i*P	**PKPbc**	**03 33 32.1**	**-1.8**
WME	**Myndd Eilian**	**149.60**	**357**	*e*P	**PKPbc**	**03 33 31.9**	**-1.5**
WLF1	**Llynfaes**	**149.71**	**357**	*e*P	**PKPbc**	**03 33 31.9**	**-1.8**
XOR	**Xorichti**	**149.83**	**310**	P	**PKPbc**	**03 33 32.3**	**-2.2**
SKO	**Skopje**	**149.84**	**316**	*i* P	**PKPbc**	**03 33 33.8**	**-0.7**
YLL	**Llanberis**	**149.85**	**357**	*e*P	**PKPdf**	**03 33 30.9**	**+1.7**
GRA1	**Grafenberg Arr**	**149.85**	**337**	IAMs_20	IAMs_20	04 56 05.6	
	comp=Z,402nm,19.0s						
GRFO	**Grafenberg**	**149.85**	**337**	PKPbc	**PKPbc**	**03 33 33.4**	**-0.8**
GRFO				IAMs_20	IAMs_20	04 55 55.7	
	comp=Z,402nm,19.0s						
GRFO	**Grafenberg**	**149.85**	**337**	PKHKP	PKPpre	03 33 33.4	
IDI	**Anoyia**	**149.92**	**301**	⇑P	**PKPbc**	**03 33 34.5**	**-0.4**
ARSA	**Arzberg**	**149.93**	**329**	*i* P	**PKPbc**	**03 33 34.3**	**-0.2**
	comp=Z,11nm,1.2s,SNR=6.6						
A252A	**Venje**	**149.99**	**324**	*i* P	**PKPbc**	**03 33 33.1**	**-1.6**
CWF	**Charnwood Fore**	**150.02**	**353**	*e*P	**PKPbc**	**03 33 32.5**	**-2.0**
MOA	**Molln**	**150.07**	**331**	*i* P	**PKPbc**	**03 33 33.9**	**-0.9**
	comp=Z,15nm,1.1s,SNR=5.3						
RUDO	**Rudo**	**150.23**	**320**	*e*P	**PKPbc**	**03 33 33.5**	**-1.9**
KALN	**Kalnik**	**150.25**	**327**	*i* P	**PKPbc**	**03 33 33.4**	**-2.0**
HLM1	**Long Mynd**	**150.38**	**355**	*e*P	**PKPbc**	**03 33 34.0**	**-1.4**
LOBO	**Lobor**	**150.43**	**327**	*i* P	**PKPbc**	**03 33 33.9**	**-1.9**
MOSL	**Moslavina**	**150.45**	**325**	*i* P	**PKPbc**	**03 33 34.0**	**-1.9**
BIOA	**Bad Ischl, Aus**	**150.46**	**332**	*i* P	**PKPbc**	**03 33 35.2**	**-0.7**
	comp=Z,19nm,1.3s,SNR=6.9						
GROS	**Grobnik**	**150.50**	**328**	*i* PKPdf	**PKPdf**	**03 33 29.4**	**-1.2**
GROS				*e*PKPbc	**pPKPdf**	**03 33 34.4**	**-0.4**
SOKA	**Soboth**	**150.57**	**329**	*i* P	**PKPbc**	**03 33 35.2**	**-1.0**
	comp=Z,27nm,1.2s,SNR=10						
OHR	**Ohrid**	**150.68**	**314**	*i* P	**PKPbc**	**03 33 35.7**	**-0.9**
MEM	**Membach**	**150.71**	**343**	*d*PKP	**PKPbc**	**03 33 35.1**	**-1.1**
MEM				*d*PKPab	**PKPab**	**03 33 42.3**	**-0.8**
MAKR	**Makrakomi, Fth**	**150.72**	**310**	P	**PKPbc**	**03 33 35.9**	**-0.8**
UPM	**Unac-Piva**	**150.75**	**320**	*e*P	**PKPbc**	**03 33 34.7**	**-2.1**
GOLS	**Golise**	**150.76**	**327**	*e*PKPdf	**PKPdf**	**03 33 30.1**	**-0.9**
GOLS				*e*PKPbc	**sPKPdf**	**03 33 35.1**	**-1.5**
A051A	**Mrakovica**	**150.76**	**324**	⇓*i*P	**PKPbc**	**03 33 35.1**	**-1.6**
BLY	**Banja Luka**	**150.79**	**324**	⇓*i*P	**PKPbc**	**03 33 35.3**	**-1.3**
BSTI	**Sart Tilman**	**150.84**	**344**	*d*PKP	**PKPbc**	**03 33 36.0**	**-0.5**
MCH1	**Michaelchurch**	**150.91**	**355**	*e*P	**PKPbc**	**03 33 35.1**	**-1.6**
OBKA	**Obir**	**150.93**	**329**	*e*P	**PKPbc**	**03 33 34.8**	**-2.2**
OBKA	**Obir**	**150.93**	**329**	*i* P	**PKPbc**	**03 33 35.7**	**-1.3**
	comp=Z,8.3nm,0.9s,SNR=5.1						
BHOU	**Houvegnez**	**150.94**	**343**	*d*PKP	**PKPbc**	**03 33 35.9**	**-1.0**
BHOU				*d*PKPab	**PKPab**	**03 33 43.8**	**-0.4**
CRES	**Cresnjev**	**150.97**	**327**	⇓*i*P	**PKPbc**	**03 33 35.1**	**-1.9**
PDG	**Podgorica**	**150.97**	**318**	⇑P	**PKPbc**	**03 33 35.4**	**-1.8**
PDG	**Podgorica**	**150.97**	**318**	IAMs_20	IAMs_20	04 52 01.4	
	comp=Z,272nm,20.0s						
SERG	**Sergoula**	**151.02**	**309**	P	**PKPbc**	**03 33 36.2**	**-1.2**
ANX	**Ano Chora**	**151.05**	**309**	P	**PKPbc**	**03 33 37.2**	**-0.4**
MONM	**Monmouth**	**151.05**	**355**	*e*P	**PKPbc**	**03 33 34.7**	**-2.3**
MGRS	**Mrkonjic Grad**	**151.05**	**323**	*e*P	**PKPbc**	**03 33 36.1**	**-1.2**
KBA	**Koelnbreinsper**	**151.06**	**331**	*i* P	**PKPbc**	**03 33 36.1**	**-1.4**
	comp=Z,12nm,0.8s,SNR=6.2						
BCLA	**Clavier**	**151.06**	**344**	*d*PKP	**PKPbc**	**03 33 36.3**	**-0.8**
KLV	**Kalavryta, Ach**	**151.10**	**308**	P	**PKPbc**	**03 33 36.4**	**-1.3**
KTHR	**Kythira**	**151.10**	**304**	P	**PKPbc**	**03 33 37.3**	**-0.4**
BRY	**Bratogost**	**151.14**	**319**	⇓*i*P	**PKPbc**	**03 33 36.1**	**-1.6**
DRME	**Dracevica, Mon**	**151.15**	**318**	*e*P	**PKPbc**	**03 33 35.1**	**-2.5**
MYKA	**Terra Mystica**	**151.26**	**330**	*e*P	**PKPbc**	**03 33 35.9**	**-1.9**
	comp=Z,7.6nm,0.6s						
LJU	**Ljubljana**	**151.27**	**328**	*e*PKPdf	**PKPdf**	**03 33 30.4**	**-1.4**
LJU				*i* PKPbc	**sPKPdf**	**03 33 36.8**	**-0.5**
SWN1	**Swindon**	**151.28**	**354**	*e*P	**PKPbc**	**03 33 36.3**	**-1.3**
BOJS	**Bojanci**	**151.30**	**327**	⇓*i*P	**PKPbc**	**03 33 36.5**	**-1.3**
BOJS	**Bojanci**	**151.30**	**327**	*e*PKPdf	**PKPdf**	**03 33 31.1**	**-0.7**
BMRD	**Maredsous**	**151.30**	**345**	*d*PKP	**PKPbc**	**03 33 36.5**	**-1.1**
A050A	**Klekovaca**	**151.31**	**324**	⇓*i*P	**PKPbc**	**03 33 35.6**	**-2.4**
PVO	**Paravola**	**151.32**	**309**	P	**PKPbc**	**03 33 37.5**	**-0.6**
RCHB	**Rochefort**	**151.32**	**344**	*d*PKP	**PKPbc**	**03 33 36.4**	**-1.3**
STU	**Stuttgart**	**151.35**	**338**	IAMs_20	IAMs_20	04 31 44.1	
	comp=Z,373nm,21.0s						
TREB	**Trebinje**	**151.36**	**319**	*e*P	**PKPbc**	**03 33 36.2**	**-1.8**
HCY	**Herceg Novi**	**151.43**	**319**	*e*P	**PKPbc**	**03 33 36.6**	**-1.6**
WLF	**Walferdange**	**151.52**	**342**	*d*PKP	**PKPbc**	**03 33 38.0**	**-0.2**
WLF				*d*PKPab	**PKPab**	**03 33 46.8**	**+0.2**
DOU	**Dourbes**	**151.54**	**345**	*d*PKP	**PKPbc**	**03 33 37.0**	**-1.2**
CEY	**Cerknica**	**151.54**	**328**	⇓*i*P	**PKPbc**	**03 33 37.0**	**-1.4**
RICI	**Ricice**	**151.61**	**322**	*i* P	**PKPbc**	**03 33 36.5**	**-2.1**
WATA	**Walderalm**	**151.62**	**333**	*i* P	**PKPbc**	**03 33 37.4**	**-1.2**
	comp=Z,12nm,0.7s,SNR=8.4						
WTTA	**Wattenberg**	**151.65**	**333**	*i* P	**PKPbc**	**03 33 37.8**	**-1.0**
	comp=Z,30nm,1.0s,SNR=8.5						
STON	**Ston**	**151.66**	**320**	⇓*i*P	**PKPbc**	**03 33 35.6**	**-3.1**
STON	**Ston**	**151.66**	**320**	*i* P	**PKPbc**	**03 33 35.6**	**-3.1**
ABTA	**Abfaltersbach**	**151.68**	**331**	*i* P	**PKPbc**	**03 33 37.0**	**-1.7**
	comp=Z,34nm,1.4s,SNR=9.5						
KIJV	**Kijevo**	**151.69**	**323**	*i* P	**PKPbc**	**03 33 36.8**	**-2.0**
UDBI	**Udbina**	**151.70**	**325**	*i* P	**PKPbc**	**03 33 36.8**	**-2.1**
MAKA	**Makarska**	**151.80**	**322**	*i* P	**PKPbc**	**03 33 36.6**	**-2.4**
MOTA	**Moosalm**	**151.81**	**334**	*i* P	**PKPbc**	**03 33 38.0**	**-1.1**
	comp=Z,23nm,1.1s,SNR=8.4						
RETA	**Reutte**	**151.83**	**334**	*e*P	**PKPbc**	**03 33 38.0**	**-1.0**
	comp=Z,6.3nm,0.7s						
SQTA	**Sankt Quirin**	**151.87**	**334**	*i* P	**PKPbc**	**03 33 37.9**	**-1.3**
	comp=Z,19nm,1.0s,SNR=7.6						
SKDS	**Skadanscina**	**151.88**	**328**	⇓*i*P	**PKPbc**	**03 33 37.1**	**-2.1**
STAL	**STALIGIAL**	**151.96**	**331**		**PKPdf**	**03 33 31.9**	**-1.0**
STAL				PKPbc	**sPKPdf**	**03 33 38.0**	**-0.4**
BFO	**Black Forest**	**152.03**	**338**		**PKPbc**	**03 33 37.5**	**-1.9**
BFO	**Black Forest**	**152.03**	**338**	PKIKP	**PKPbc**	**03 33 37.5**	**-1.9**
MORI	**Morici**	**152.17**	**324**	*i* P	**PKPbc**	**03 33 37.9**	**-2.0**
SMRN	**Sveta Marina**	**152.18**	**327**	*i* P	**PKPbc**	**03 33 36.9**	**-2.8**
FETA	**Feichten**	**152.22**	**334**	*i* P	**PKPbc**	**03 33 39.5**	**-0.6**
	comp=Z,22nm,1.2s,SNR=6.2						
VIRC	**Vir**	**152.23**	**325**	*i* P	**PKPbc**	**03 33 37.5**	**-2.5**
DAVA	**Damuels**	**152.34**	**335**	*i* P	**PKPbc**	**03 33 39.6**	**-0.8**
	comp=Z,7.8nm,0.7s,SNR=5.2						
DUGI	**Dugi Otok**	**152.43**	**325**	*i* P	**PKPdf**	**03 33 35.8**	**+2.3**
BRJN	**Brijuni**	**152.47**	**327**	*i* P	**PKPbc**	**03 33 37.6**	**-2.8**
TIP	**Timpagrande**	**154.33**	**314**	PKPdf	**PKPdf**	**03 33 35.4**	**-1.1**
TIP					**PKPab**	**03 33 58.8**	**-0.1**
TIP				IAMs_20	IAMs_20	04 58 05.8	
	comp=Z,402nm,22.0s						
VLC	**Villacollemand**	**154.63**	**330**	IAMs_20	IAMs_20	04 55 24.7	
	comp=Z,367nm,20.0s						
CEL	**Celeste**	**155.39**	**313**	IAMs_20	IAMs_20	04 54 42.9	
	comp=Z,298nm,21.0s						
KEST	**Kesra**	**161.13**	**316**	PKP	**PKPdf**	**03 33 41.9**	**-3.2**
	comp=Z,1.9nm,0.8s,baz=243,slow=9.0,SNR=2.4						
KEST				PKPab	**PKPab**	**03 34 26.4**	**-1.9**
	comp=Z,3.8nm,0.9s,baz=136,slow=15,SNR=4.0						
ESDC	**Sonseca Array**	**163.21**	**353**	PKP	**PKPdf**	**03 33 45.5**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=318,slow=3.6,SNR=4.5						
ESDC				PKPab	**PKPab**	**03 34 36.8**	**-0.4**
	comp=Z,1.7nm,1.0s,baz=7.7,slow=4.0,SNR=6.2						
LIC	**Lamto**	**163.24**	**186**⇑	*i*PKIKP	**PKPdf**	**03 33 48.0**	**+0.3**
	comp=Z,86nm,1.3s						
LIC	**Lamto**	**163.24**	**186**⇓	*e*PKP2	**PKPab**	**03 34 38.0**	**+0.2**
	comp=Z,28nm,1.0s						
KIC	**Kosan Boka**	**163.34**	**187**	⇓*i*PKIKP	**PKPdf**	**03 33 47.7**	**-0.2**
	comp=Z,23nm,1.1s						
KIC	**Kosan Boka**	**163.34**	**187**⇑	*i*PKP2	**PKPab**	**03 34 38.7**	**+0.4**
	comp=Z,6.6nm,0.6s						
TIC	**Toumodi**	**163.65**	**186**⇑	*e*PKIKP	**PKPdf**	**03 33 47.6**	**-0.6**
	comp=Z,22nm,0.9s						
TIC	**Toumodi**	**163.65**	**186**⇑	*e*PKP2	**PKPab**	**03 34 39.8**	**+0.2**
	comp=Z,32nm,1.2s						
DBIC	**Dimbokro**	**163.66**	**187**	PKP	**PKPdf**	**03 33 47.0**	**-1.2**
	comp=Z,11nm,1.0s,baz=129,slow=2.2,SNR=6.6						
DBIC				PKPab	**PKPab**	**03 34 40.2**	**+0.6**
	comp=Z,5.0nm,0.6s,baz=184,slow=6.9,SNR=6.0						
TOA0	**Torodi Ar. Sit**	**167.34**	**221**		**PKPdf**	**03 33 50.3**	**-0.9**
TOA0				PKPab	**PKPab**	**03 34 55.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**167.34**	**221**	PKP	**PKPdf**	**03 33 51.1**	**0.0**
	comp=Z,7.0nm,0.9s,baz=52,slow=0.6,SNR=25						
TORD				PKPab	**PKPab**	**03 34 56.1**	**+0.1**
	comp=Z,6.0nm,0.8s,baz=107,slow=3.5,SNR=12						
TORD				PP	**PP**	**03 38 41.1**	**-2.4**
	comp=Z,2.0nm,1.0s,baz=116,slow=6.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**167.34**	**221**		**PKPdf**	**03 33 50.0**	**-1.1**
TORD				PKPab	**PKPab**	**03 34 55.6**	**-0.4**
KOWA	**Kowa**	**171.16**	**197**		**PKPdf**	**03 33 51.9**	**-1.6**
KOWA				PKPab	**PKPab**	**03 35 12.3**	**-0.4**

IDC 20 03:14:15.4±1.4, 55°.14S×30°.68W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=58.0km s-min=36.1km az=83.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**35.12**	**180**	P	P		03 21 10.1	-0.1
	1.0nm,0.8s,baz=215,slow=4.7,SNR=2.3 1.0nm,0.8s							
H10S2	**ASCENSION HYDR**	**47.79**	**22**	T	T		04 14 25.6	
	baz=193							
H10S3	**ASCENSION HYDR**	**47.79**	**22**	T	T		04 14 34.5	
	baz=27							
LPAZ	**La Paz**	**48.24**	**308**	P	P		03 22 58.3	-0.2
	0.5nm,0.6s,baz=141,slow=6.5,SNR=1.0 0.5nm,0.6s							
H10N1	**ASCENSION HYDR**	**48.90**	**22**	T	T		04 16 03.3	
	baz=191,slow=75,SNR=5.5							
H10N3	**ASCENSION HYDR**	**48.90**	**21**	T	T		04 16 00.3	
	baz=191,slow=75,SNR=7.2							
H10N2	**ASCENSION HYDR**	**48.92**	**22**	T	T		04 15 57.1	
	baz=191,slow=75,SNR=7.9							
TORD	**Torodi Ar. Bea**	**73.30**	**33**	P	P		03 25 48.5	0.0
	0.6nm,0.7s,baz=185,slow=6.3,SNR=2.9 0.6nm,0.7s							
ILAR	**Eielson Array**	**148.04**	**313**	PKPbc	PKPbc		03 34 00.8	-0.5
	0.5nm,0.6s,baz=107,slow=1.8,SNR=5.1							

*KEA **20** 03:18:21.9, 38°.39N×128°.06E, h17km, ML3.3/5*
*KMA **20** 03:18:21.6±0.4, 38°.38N×128°.09E, h7km±6km, Error ellipse: s-maj=3.6km s-min=1.4km az=0.0*

ISC 20 03:18:20.8±1.0, 38°.40N±0°.03×128°.09E±0°.03, h14km±11km, n18, σ0°.42/32, North Korea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SEHB	**SEOHWA**	**0.18**	**136**	P	**Pg**		**03 18 25.2**	**+0.1**
	SNR=2139							
SEHB				S	**Sg**		03 18 27.5	-0.4
KSSKC	**Sokcho**	**0.36**	**108**	P	**Pb**		**03 18 28.5**	**-0.4**
	SNR=300							
KSSKC				P	**Pb**		03 18 28.5	-0.4
	SNR=300							
HWCB	**Hwacheon**	**0.38**	**242**	P	**Pg**		**03 18 28.8**	**+0.4**
	SNR=289							
HWCB				P	**Pg**		03 18 28.8	+0.4
	SNR=289							
HWCB				S	**Sg**		**03 18 33.5**	**0.0**
HWCB				S	**Sg**		**03 18 33.5**	**0.0**
KSIJA	**INJE**	**0.41**	**178**	P	**Pg**		**03 18 29.4**	**+0.3**
	SNR=23							
KSIJA				P	**Pg**		03 18 29.4	+0.3
	SNR=23							
HWCA	**Hwacheon Acc B**	**0.42**	**217**	P	**Pg**		**03 18 29.5**	**+0.3**
	SNR=98							
YAYA	**Ganghyeon**	**0.48**	**122**	P	**Pb**		**03 18 30.7**	**-0.3**
	SNR=62							
IJAA	**Inje Acc Boreh**	**0.49**	**158**	P	**Pg**		**03 18 30.8**	**+0.3**
	SNR=46							
KSCWO	**Cheorwon**	**0.55**	**235**	P	**Pg**		**03 18 32.0**	**+0.3**
	SNR=46							
KSCWO				P	**Pg**		03 18 32.0	+0.3
	SNR=46							
KSCHC	**Chuncheon**	**0.66**	**199**	P	**Pg**		**03 18 34.0**	**+0.4**
	SNR=232							
KSCHC				P	**Pg**		03 18 34.0	+0.4
	SNR=232							
GAPB	**Gapyeong**	**0.73**	**220**	P	**Pg**		**03 18 35.2**	**+0.3**
	SNR=23							
GAPB				P	**Pg**		03 18 35.2	+0.3
	SNR=23							
WOSN	**Wonsan**	**0.93**	**326**	Sg	**Sb**		**03 18 51.6**	**+0.9**
HHU	**Hamhung**	**1.59**	**344**	Pg	**Pg**		**03 18 51.6**	**+0.4**
HHU				Sg	**Sg**		**03 19 12.5**	**+0.7**
HHU				AML	AML			
	comp=N,225nm,0.4s							
HHU				AML	AML			
	comp=E,369nm,0.2s							
HHU				AML	AML			
	comp=Z,240nm,0.4s							
SRW	**Sariwon**	**1.84**	**274**	Pg	**Pg**		**03 18 56.5**	**+0.3**
HJU	**Haeju**	**1.90**	**260**	Pg	**Pg**		**03 18 57.0**	**-0.2**
HJU				Sg	**Sg**		**03 19 21.5**	**-0.3**
HJU				AML	AML			
	comp=N,912nm,0.5s							
HJU				AML	AML			
	comp=E,493nm,0.2s							
HJU				AML	AML			
	comp=Z,698nm,0.2s							
PYAG	**Pyongyang**	**1.94**	**290**	Pg	**Pg**		**03 18 58.1**	**+0.1**
PYAG				Sg	**Sg**		**03 19 23.2**	**+0.1**
PYAG				AML	AML			
	comp=N,233nm,0.5s							
PYAG				AML	AML			
	comp=E,146nm,0.3s							
PYAG				AML	AML			
	comp=Z,307nm,0.3s							
PYS	**Pyongsong**	**1.94**	**297**	Pg	**Pg**		**03 18 57.8**	**-0.3**
PYS				Sg	**Sg**		**03 19 23.0**	**-0.3**
PYS				AML	AML			
	comp=N,960nm,0.7s							
PYS				AML	AML			
	comp=E,550nm,0.3s							
PYS				AML	AML			
	comp=Z,522nm,0.5s							
KGE	**Kanggye**	**2.79**	**336**	Sg	**Sg**		**03 19 50.1**	**-0.1**
SUJ	**Sinuiju**	**3.27**	**302**	Pg	**Pg**		**03 19 23.1**	**-0.3**
SUJ				Sg	**Sg**		**03 20 04.8**	**-1.0**
SUJ				AML	AML			
	comp=N,325nm,0.9s							
SUJ				AML	AML			
	comp=E,164nm,0.2s							
SUJ				AML	AML			
	comp=Z,186nm,0.1s							

*IDC **20** 03:28:11.2±1.3, 22°.83S×173°.19E, h0km, mb3.7/5, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=47.2km s-min=25.3km az=1.0*

ISC 20 03:28:16.3±1.1, 22°.9S±0°.2×173°.2E±0°.1, h35km, n13, σ0°89/15, mb3.5/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.29**	**276**	Pn	**Pn**		**03 29 46.9**	**+0.2**
	1.3nm,0.3s,baz=126,slow=12,SNR=12							
DZM				Sn	**Sn**		03 30 57.0	-0.4
	2.5nm,0.3s,baz=146,slow=14,SNR=2.4 8.8nm,0.9s							
STKA	**Stephens Creek**	**29.35**	**245**	P	**P**		**03 34 16.7**	**+0.8**
	3.0nm,0.9s,baz=34,slow=3.7,SNR=4.0 3.0nm,0.9s							
ASAR	**Alice Springs**	**36.01**	**261**	P	**P**		**03 35 14.7**	**+0.3**
	2.1nm,0.8s,baz=88,slow=8.9,SNR=18 2.1nm,0.8s							
WRA	**Warramunga Arr**	**

*NEIC **20** 03:30:21.9±2.8,23°.2S×0°.1×173°.5E±0°.2,h10km±1km, mb4.5/6,Error ellipse: s-maj=25.5km s-min=19.0km az=54.0*

*IDC **20** 03:30:21.4±0.8,23°.12S×173°.49E,h0km,mb4.0/8, mbtmp4.0/9,MS3.3/1,Error ellipse: s-maj=31.9km s-min=24.5km az=171.0*

ISC 20 03:30:26.4±0.6,23°.1S±0°.1×173°.33E±0°.09,h35km,n36, σ1§55/34,mb4.2/10,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
MARNC	**Mare, Loyalty**	**5.17**	**288**	Pn		**Pn**		**03 31 39.2**	**-2.2**
PINNC	**Pines Island,**	**5.45**	**274**	Pn		**Pn**		**03 31 42.9**	**-2.2**
OUENC	**Ouen Island, N**	**6.03**	**276**	Pn		**Pn**		**03 31 53.6**	**+0.5**
DZM	**Mont Dzumac**	**6.45**	**278**	Pn		**Pn**		**03 31 59.8**	**+0.8**
	5.9nm,0.4s,baz=112,slow=17,SNR=1.1								
DZM				Sn		**Sn**		**03 33 10.4**	**-1.0**
	1.4nm,0.3s,baz=137,slow=21,SNR=1.9								
DZM	**Mont Dzumac**	**6.45**	**278**	Pn		**Pn**		**03 31 59.6**	**+0.6**
NNZ	**Nelson**	**18.02**	**180**	Pn		**Pn**		**03 34 30.4**	**-3.6**
NNZ				IAmb		IAmb		03 34 35.7	
	comp=Z,39nm,1.3s								
RAR	**Rarotonga**	**24.97**	**91**	LR		LR		03 44 48.5	
	comp=Z,68nm,18.8s,baz=265,slow=35								
CTA	**Charters Tower**	**25.34**	**272**	P		**P**		**03 35 52.6**	**+2.4**
	comp=Z,4.0nm,0.8s,baz=104,slow=5.3,SNR=2.5								
	comp=Z,4.0nm,0.8s								
AS31	**Alice Springs**	**36.10**	**261**	P		**P**		**03 37 26.0**	**+0.8**
ASAR	**Alice Springs**	**36.10**	**261**	P		**P**		**03 37 26.6**	**+1.4**
	comp=Z,6.7nm,0.9s,baz=82,slow=8.7,SNR=26								
	comp=Z,6.7nm,0.9s								
ASAR	**Alice Springs**	**36.10**	**261**	P		**P**		**03 37 25.5**	**+0.2**
WRA	**Warramunga Arr**	**36.33**	**267**	P		**P**		**03 37 27.4**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=96,slow=8.5,SNR=5.3								
	comp=Z,1.4nm,0.8s								
H11S2	**WAKE ISLAND Hy**	**41.88**	**351**	T		T		04 22 45.3	
	baz=171,slow=76,SNR=6.5								
H11S3	**WAKE ISLAND Hy**	**41.89**	**351**	T		T		04 22 47.8	
	baz=171,slow=76,SNR=6.5								
H11S1	**WAKE ISLAND Hy**	**41.90**	**351**	T		T		04 22 49.6	
	baz=171,slow=76,SNR=7.9								
H11N2	**WAKE ISLAND Hy**	**43.07**	**351**	T		T		04 24 16.4	
SBA	**Scott Base**	**54.86**	**182**	P		**P**		**03 39 52.2**	**-0.5**
SBA				IAmb		IAmb		03 40 02.1	
	comp=Z,8.0nm,1.1s								
QSPA	**South Pole Qui**	**66.93**	**180**	P		**P**		**03 41 14.1**	**-1.0**
	comp=Z,2.8nm,1.2s,baz=17,slow=0.7,SNR=4.0								
	comp=Z,2.8nm,1.2s								
QSPA	**South Pole Qui**	**66.93**	**180**	P		**P**		**03 41 13.6**	**-1.5**
USA0B	**Ussuriysk Arra**	**76.96**	**331**	P		**P**		**03 42 13.8**	**-1.5**
TROLL	**Troll, Antarti**	**84.89**	**183**	P		**P**		**03 43 00.1**	**+2.7**
SNAA	**Sanae**	**85.40**	**181**	P		**P**		**03 43 01.9**	**+1.9**
SNAA	**Sanae**	**85.40**	**181**	P		**P**		**03 43 01.8**	**+1.9**
	comp=Z,1.6nm,1.1s,baz=133,slow=5.5,SNR=3.8								
	comp=Z,1.6nm,1.1s								
VNA3	**Neumayer Olymp**	**85.85**	**179**	P		**P**		**03 43 04.4**	**+2.4**
VNA2	**Neumayer--Watz**	**86.19**	**180**	P		**P**		**03 43 05.5**	**+1.8**
	baz=183,slow=5.0								
N19K	**Bonanza Creek**	**87.64**	**15**	P		**P**		**03 43 09.7**	**-1.1**
N19K				IAmb		IAmb		03 43 24.2	
	comp=Z,3.7nm,1.1s								
NVAR	**Mina Array Bea**	**88.59**	**47**	P		**P**		**03 43 16.2**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=226,slow=6.2,SNR=2.0								
	comp=Z,0.2nm,0.6s								
SONM	**Songino Array**	**92.62**	**322**	P		**P**		**03 43 34.7**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=92,slow=4.9,SNR=2.0								
	comp=Z,0.2nm,0.4s								
ILAR	**Eielson Array**	**92.86**	**16**	P		**P**		**03 43 34.5**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=232,slow=5.3,SNR=6.2								
	comp=Z,0.7nm,0.8s								
MATP	**Matopo**	**124.76**	**221**	PKP		**PKiKP**		**03 49 25.4**	**+1.8**
	comp=Z,1.8nm,0.9s,baz=218,slow=2.2,SNR=4.3								
ARCES	**ARCESS Array B**	**129.78**	**346**	PKP		**PKPdf**		**03 49 30.9**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=75,slow=1.4,SNR=4.1								
BURAR	**Bucovina Array**	**144.74**	**322**	PKPdf		**PKPdf**		**03 50 00.1**	**+0.5**
CLL	**Collm**	**148.02**	**336**	PKPbc		**PKPdf**		**03 50 05.0**	**+0.2**
GERES	**GERESS Array B**	**149.70**	**333**	PKP		**PKPdf**		**03 50 06.6**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=66,slow=3.3,SNR=3.4								
GERES				PKPbc		**PKiKP**		**03 50 13.8**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=309,slow=0.9,SNR=7.4								
GERES	**GERESS Array B**	**149.70**	**333**	PKPbc		**PKPbc**		**03 50 11.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**161.28**	**220**	PKP		**PKPdf**		**03 50 31.3**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=167,slow=2.5,SNR=2.9								
TORD				PKPab		**PKPab**		**03 51 35.1**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=210,slow=4.1,SNR=2.1								

*JMA **20** 03:30:27.4±0.2,33°N±2°×13°.7E±°,h431km,MV3.2/67,SE OFF KII PENINSULA*

*IDC **20** 03:30:29.0±1.1,32°.99N×137°.15E,h400km±12km,mb2.8/9, mbtmp3.6/14,Error ellipse: s-maj=25.1km s-min=13.4km az=67.0*

ISC 20 03:30:28.9±0.6,32°.99N±0°.07×137°.11E±0°.06,h400km,n40, σ1§86/49,mb3.1/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TTO1	**TONANKAI O.B.S**	**0.69**	**337**	P		**Pn**		**03 31 21.4**	**+2.8**
TTO2	**TONANKAI O.B.S**	**0.75**	**355**	*eP*		**Pn**		**03 31 21.9**	**+3.2**
TK02	**Tokai 2**	**1.10**	**29**	P		**Pn**		**03 31 23.3**	**+3.4**
JKN2	**Miekihoku**	**1.43**	**331**	P		**Pn**		**03 31 23.2**	**+1.7**
JIE	**Ise**	**1.44**	**347**	P		**Pn**		**03 31 23.7**	**+2.0**
JEG	**Eigenji**	**2.22**	**345**	P		**Pn**		**03 31 28.2**	**+2.1**
JAO	**Obara**	**2.27**	**3**	P		**Pn**		**03 31 28.7**	**+2.1**
JAI	**Aioi**	**2.36**	**291**	P		**Pn**		**03 31 28.1**	**+0.9**
JNY	**Yasuok**	**2.44**	**15**	*eP*		**Pn**		**03 31 30.2**	**+2.4**
JYTA	**Yamagatataniai**	**2.62**	**353**	P		**Pn**		**03 31 30.7**	**+1.8**
JWT	**Wachi**	**2.69**	**329**	P		**Pn**		**03 31 30.6**	**+1.1**
JOD2	**Odawara 2**	**2.80**	**35**	P		**Pn**		**03 31 33.4**	**+3.0**
JMN	**Monobe**	**2.80**	**286**	P		**Pn**		**03 31 31.5**	**+1.0**
BSO4	**Boso 4**	**3.34**	**52**	P		**Pn**		**03 31 37.0**	**+2.3**
BSO4				S		**S**		**03 32 31.2**	**+3.0**
JRY	**Ryogami san**	**3.36**	**26**	P		**Pn**		**03 31 37.6**	**+2.5**
JRY				S		**S**		**03 32 30.6**	**+1.9**
JHU	**Hanno**	**3.37**	**32**	P		**Pn**		**03 31 37.1**	**+2.0**
JHU				S		**S**		**03 32 28.1**	**-0.8**
BSO1	**Boso 1**	**3.62**	**62**	P		**Pn**		**03 31 38.4**	**+1.7**
JTO	**Tosashimizu**	**3.62**	**269**	P		**Pn**		**03 31 38.0**	**+0.6**
MAT	**Matsushiro**	**3.66**	**14**	P		**Pn**		**03 31 40.0**	**+2.3**
MJAR	**Matsushiro Arr**	**3.66**	**14**	P		**Pn**		**03 31 39.3**	**+1.6**
	2.0nm,0.6s,baz=160,slow=17,SNR=9.3								
MJAR				S		**S**		**03 32 34.2**	**+0.6**
	2.1nm,0.6s,baz=141,slow=15,SNR=4.9								
JHS	**Saijyo**	**3.88**	**302**	*eP*		**Pn**		**03 31 40.0**	**+0.2**
JAG	**Ashikaga**	**3.93**	**29**	P		**Pn**		**03 31 41.1**	**+0.9**
JYT	**Yasato**	**4.11**	**37**	P		**Pn**		**03 31 42.9**	**+1.1**
JYT				*eS*		**S**		**03 32 38.1**	**-3.1**
JHO	**Hitachi**	**4.60**	**37**	P		**Pn**		**03 31 47.5**	**+0.9**
JHO				S		**S**		**03 32 47.0**	**-2.9**
JFK	**Kawauchi**	**5.34**	**34**	P		**Pn**		**03 31 55.4**	**+1.0**
JFK				S		**S**		**03 33 00.7**	**-3.4**
JCJ	**Chichijima**	**7.34**	**142**	P		**P**		**03 32 16.2**	**-0.8**
	20nm,0.4s,baz=270,slow=23,SNR=4.8								
JCJ				S		**S**		**03 33 41.3**	**-3.0**
	37nm,0.5s,baz=289,slow=21,SNR=5.7								
KSRS	**Korea Array**	**8.73**	**303**	P		**P**		**03 32 32.1**	**-0.2**
	0.8nm,0.6s,baz=108,slow=12,SNR=2.3								
USRK	**Ussuriysk Ar.**	**11.88**	**342**	P		**Pn**		**03 33 06.9**	**-1.6**
	2.3nm,0.5s,baz=153,slow=10,SNR=5.1								
KLR	**Kul'dur**	**16.71**	**348**	P		**P**		**03 33 59.0**	**-0.5**
	1.9nm,0.6s,baz=163,slow=4.4,SNR=4.3								
SONM	**Songino Array**	**27.47**	**312**	P		**P**		**03 35 40.2**	**-0.1**
	0.2nm,0.4s,baz=132,slow=8.6,SNR=1.9								
SONM				PcP		**PcP**		**03 38 47.0**	**+0.3**
	0.3nm,0.5s,baz=104,slow=7.3,SNR=2.5								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**43.41**	**305**	P		**P**		**03 37 53.9**	**-0.1**
	0.3nm,0.5s,baz=95,slow=9.0,SNR=2.4								
	0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**45.83**	**311**	P		**P**		**03 38 12.1**	**-0.6**
	0.5nm,0.4s,baz=92,slow=8.3,SNR=6.9								
	0.5nm,0.4s								
WRA	**Warramunga Arr**	**52.70**	**183**	P		**P**		**03 39 05.9**	**+1.6**
	0.2nm,0.3s,baz=1.1,slow=7.5,SNR=1.9								
	0.2nm,0.3s								
ILAR	**Eielson Array**	**54.78**	**31**	P		**P**		**03 39 17.9**	**-0.7**
	0.4nm,0.7s,baz=248,slow=5.0,SNR=5.2								
	0.4nm,0.7s								
ILAR	**Eielson Array**	**54.78**	**31**	P		**P**		**03 39 17.7**	**-0.9**
ARCES	**ARCESS Array B**	**66.52**	**339**	P		**P**		**03 40 38.1**	**+1.4**
	0.3nm,0.7s,baz=58,slow=10,SNR=4.0								
	0.3nm,0.7s								
FINES	**FINESS Array B**	**70.71**	**332**	P		**P**		**03 41 02.4**	**0.0**
	0.4nm,0.4s,baz=85,slow=6.1,SNR=9.3								
	0.4nm,0.4s								
NB2	**NORSAR Subarra**	**76.49**	**336**	P		**P**		**03 41 36.3**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=70,slow=4.6								
NOA	**NORSAR Array B**	**76.49**	**336**	P		**P**		**03 41 36.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=72,slow=4.5,SNR=4.4								
	comp=Z,0.3nm,0.6s								
BRTR	**Keskin Array B**	**78.81**	**310**	P		**P**		**03 41 49.7**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=76,slow=7.5,SNR=2.0								
	comp=Z,0.2nm,0.3s								

IDC 20 03:34:22.1±2.6,22°.13S×173°.11E,h0km,mb3.4/3, mbtmp3.4/4,ML2.8/1,Error ellipse: s-maj=214.0km s-min=35.3km az=168.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
DZM	**Mont Dzumac**	**6.18**	**269**	Pn		Pn		03 35 56.3	+1.6
	0.2nm,0.3s,baz=98,slow=12,SNR=0.8								
	2.8nm,0.7s								
ASAR	**Alice Springs**	**36.07**	**260**	P		P		03 41 25.5	-0.2
	0.7nm,0.9s,baz=90,slow=10,SNR=4.3								
	0.7nm,0.9s								
WRA	**Warramunga Arr**	**36.19**	**266**	P		P		03 41 25.9	-0.8
	0.1nm,0.5s,baz=98,slow=7.6,SNR=1.4								
	0.1nm,0.5s								
TXAR	**Lajitas Array**	**94.99**	**61**	P		P		03 47 47.2	+0.2
	0.1nm,0.5s,baz=236,slow=7.3,SNR=1.8								
	0.1nm,0.5s								

*IDC **20** 03:36:33.8±1.2,21°.37S×179°.42W,h625km±13km, mb3.4/14,mbtmp4.3/16,Error ellipse: s-maj=17.5km s-min=12.8km az=130.0*

*NEIC **20** 03:36:34.7±1.3,21°.0S±0°.3×179°.6W±0°.2,h625km±9km, mb4.2/45,Error ellipse: s-maj=40.0km s-min=19.0km az=155.0*

ISC 20 03:36:31.1±0.5,21°.55S±0°.08×179°.21W±0°.08,h600km, n102,σ1§08/94,mb4.3/37,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
MSVF	**Nonsavu**	**4.59**	**325**	P		**P**		**03 38 02.2**	**+1.1**
	9.6nm,0.4s,baz=219,slow=19,SNR=20								
MSVF				S		**S**		**03 39 17.7**	**+3.4**
	7.0nm,0.7s,baz=236,slow=23,SNR=1.9								
MSVF	**Nonsavu**	**4.59**	**325**	P		**P**		**03 38 01.4**	**+0.3**
RAO	**Raoul Island**	**7.76**	**172**	S		**S**		**03 40 02.7**	**-1.2**
	29.1nm,0.3s,baz=73,slow=22,SNR=1.5								
AFI	**Afiamalu**	**10.38**	**44**	P		**P**		**03 38 51.3**	**-2.5**
	62nm,0.6s,baz=125,slow=19,SNR=15								
AFI	**Afiamalu**	**10.38**	**44**	P		**P**		**03 38 52.7**	**-1.1**
MARNC	**Mare, Loyalty**	**11.88**	**268**	P		**P**		**03 39 08.6**	**-0.1**
DZM	**Mont Dzumac**	**13.34**	**265**	P		**P**		**03 39 22.9**	**-0.7**
	6.3nm,0.7s,baz=68,slow=20,SNR=2.4								
DZM	**Mont Dzumac**	**13.34**	**265**	P		**P**		**03 39 23.2**	**-0.3**
URZ	**Urewera**	**16.96**	**190**	P		**P**		**03 39 54.3**	**-2.7**
	6.8nm,0.3s,baz=356,slow=16,SNR=22								
URZ				S		**S**		**03 42 44.8**	**+0.3**
	3.5nm,0.5s,baz=54,slow=14,SNR=1.5								
RPZ	**Rata Peaks**	**23.54**	**198**	P		**P**		**03 40 57.1**	**+0.8**
	8.8nm,0.9s,baz=23,slow=19,SNR=1.8								
	8.8nm,0.9s								
EIDS	**Eidsvold**	**27.49**	**256**	P		**P**		**03 41 31.4**	**+0.1**
ARMA	**Armidale**	**27.60**	**245**	P		**P**		**03 41 33.5**	**+1.2**
CTA	**Charters Tower**	**32.28**	**266**	P		**P**		**03 42 12.7**	**+0.2**
	6.7nm,0.5s,baz=93,slow=9.1,SNR=14								
	6.7nm,0.5s								
CTAO	**Charters Tower**	**32.28**	**266**	P		**P**		**03 42 12.0**	**-0.5**
STKA	**Stephens Creek**	**36.32**	**245**	P		**P**		**03 42 46.5**	**+0.6**
	4.4nm,0.5s,baz=86,slow=10,SNR=14								
	4.4nm,0.5s								
STKA	**Stephens Creek**	**36.32**	**245**	P		**P**		**03 42 46.0**	**0.0**
BBOO	**Buckleboo**	**41.08**	**244**	P		**P**		**03 43 23.9**	**-0.3**
WR0	**Warramunga Arr**	**43.16**	**263**	P		**P**		**03 43 39.6**	**-1.0**
AS31	**Alice Springs**	**43.19**	**258**	P		**P**		**03 43 40.1**	**-0.8**
ASAR	**Alice Springs**	**43.19**	**258**	P		**P**		**03 43 40.9**	**0.0**
	9.1nm,0.8s,baz=95,slow=7.8,SNR=72								
	9.1nm,0.8s								
ASAR	**Alice Springs**	**43.19**	**258**	P		**P**		**03 43 40.3**	**-0.5**
WB0	**Warramunga Arr**	**43.33**	**264**	P		**P**		**03 43 41.2**	**-0.8**
WB0				IAmb		IAmb		03 43 42.1	
	comp=Z,5.2nm,0.6s								
WRA	**Warramunga Arr**	**43.35**	**263**	P		**P**		**03 43 41.4**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=95,slow=7.7,SNR=42								
	comp=Z,2.9nm,0.5s								
WRA	**Warramunga Arr**	**43.35**	**263**	P		**P**		**03 43 41.1**	**-1.0**
FORT	**Forrest**	**47.85**	**247**	P		**P**		**03 44 16.0**	**-0.1**
KNRA	**Kununurra**	**49.48**	**267**	P		**P**		**03 44 27.5**	**-0.7**
KNRA				IAmb		IAmb		03 44 29.3	
	comp=Z,17nm,1.4s								
FITZ	**Fitzroy Crossi**	**51.78**	**263**	P		**P**		**03 44 43.3**	**-1.6**
PSA00	**Pilbara Seismi**	**56.34**	**258**	P		**P**		**03 45 16.0**	**-0.9**
PSA00				IAmb		IAmb		03 45 26.1	
	comp=Z,32nm,1.4s								
MBWA	**Marble Bar**	**56.53**	**258**	P		**P**		**03 45 16.4**	**-1.7**
MBWA				IAmb		IAmb		03 45 30.5	
	comp=Z,35nm,1.4s								
QSPA	**South Pole Qui**	**68.53**	**180**	P		**P**		**03 46 36.3**	**+1.7**
	comp=Z,0.9nm,0.5s,baz=336,slow=1.0,SNR=6.6								
	comp=Z,0.9nm,0.5s								
MJAR	**Matsushiro Arr**	**70.39**	**325**	P		**P**		**03 46 45.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=153,slow=9.1,SNR=2.3								
	comp=Z,1.1nm,0.7s								
PETK	**Petropavlovsk-**	**77.00**	**346**	P		**P**		**03 47 22.4**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=236,slow=10,SNR=5.3								
	comp=Z,2.0nm,0.7s								
PMSA	**Palmer Station**	**80.77**	**157**	P		**P**		**03 47 45.9**	**+3.1**
	comp=Z,4.6nm,0.4s,baz=142,slow=12,SNR=10								
	comp=Z,4.6nm,0.4s								
ISA	**Isabella, Lake**	**80.87**	**46**	P		**P**		**03 47 44.8**	**+0.8**
CMB	**Columbia Colle**	**80.99**	**43**	P		**P**		**03 47 45.4**	**+1.0**
MDPB	**Devils Postpil**	**81.60**	**44**	P		**P**		**03 47 48.3**	**+0.5**
BEKR	**Beckworth**	**82.09**	**42**	P		**P**		**03 47 49.4**	**-0.9**
PNTR	**Pine Nut**	**82.11**	**43**	P		**P**		**03 47 51.6**	**+1.3**
PNTR				IAmb		IAmb		03 47 52.6	
	comp=Z,8.1nm,0.8s								
DSP	**Deep Springs**	**82.17**	**45**	P		**P**		**03 47 51.5**	**+1.2**
NVAR	**Mina Array Bea**	**82.56**	**44**	P		**P**		**03 47 54.0**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=226,slow=8.1,SNR=6.3								
	comp=Z,0.7nm,0.4s								
GMN	**Gold Mountain**	**82.60**	**45**	P		**P**		**03 47 52.9**	**0.0**
PAHR	**Pah Rah Range**	**82.61**	**42**	P		**P**		**03 47 53.0**	**+0.3**
PAHR				IAmb		IAmb		03 47 54.7	
	comp=Z,3.0nm,0.9s								
KVN	**Kaiserville**	**83.04**	**43**	P		**P**		**03 47 55.5**	**+0.5**
KVN				IAmb		IAmb		03 47 56.7	
	comp=Z,5.0nm,1.3s								
TPH	**Tonopah**	**83.06**	**45**	P		**P**		**03 47 56.0**	**+0.9**
O18K	**Koktuh Hills**	**83.45**	**12**	P		**P**		**03 47 55.9**	**-0.4**
O18K				IAmb		IAmb		03 47 56.8	
	comp=Z,5.9nm,0.8s								
O19K	**Port Alsworth**	**83.94**	**12**	P		**P**		**03 47 58.3**	**-0.3**
U15A	**North Rim**	**85.50**	**48**	P		**P**		**03 48 08.1**	**+0.9**
U15A				IAmb		IAmb		03 48 09.5	
	comp=Z,3.7nm,0.7s								
SUA	**Susitna One**	**85.83**	**13**	P		**P**		**03 48 06.7**	**-1.2**
SUA				IAmb		IAmb		03 48 08.2	
	comp=Z,4.6nm,0.6s								
G08A	**Pilot Rock**	**86.13**	**38**	P		**P**		**03 48 09.9**	**+0.2**
G08A				IAmb		IAmb		03 48 11.8	
	comp=Z,6.4nm,1.3s								
GHO	**Glory Hole Cre**	**86.50**	**14**	P		**P**		**03 48 10.8**	**-0.3**
SCM	**Sheep Creek Mo**	**86.92**	**15**	P		**P**		**03 48 12.0**	**-1.0**
N25K	**Chitina, Valde**	**87.39**	**16**	P		**P**		**03 48 14.8**	**-0.5**
N25K				IAmb		IAmb		03 48 16.3	
	comp=Z,3.9nm,0.7s								
TRF	**Thorofare Moun**	**87.71**	**13**	P		**P**		**03 48 16.5**	**-0.2**
CTGM	**Chitina Glacie**	**87.72**	**17**	P		**P**		**03 48 14.8**	**-2.1**
CTGM				IAmb		IAmb		03 48 18.0	
	comp=Z,6.5nm,0.8s								
B08A	**Colville Reser**	**87.73**	**35**	P		**P**		**03 48 17.0**	**-0.1**
B08A				IAmb		IAmb		03 48 18.7	
	comp=Z,4.9nm,1.1s								
LR04	**Corral**	**87.80**	**132**			pP		03 50 35.6	+10
HLID	**Hailey**	**87.85**	**41**	IAmb		IAmb		03 48 20.1	
	comp=Z,1.7nm,0.8s								
RND	**Reindeer**	**87.97**	**13**	P		**P**		**03 48 16.5**	**-1.3**
MNTX	**Cornudas Mount**	**88.27**	**55**	IAmb		IAmb		03 48 22.2	
	comp=Z,2.5nm,0.8s								
TX31	**Lajitas Ar. Si**	**88.57**	**58**	IAmb		IAmb		03 48 24.1	
	comp=Z,5.2nm,0.9s								
TX32	**Lajitas Array**	**88.57**	**58**	IAmb		IAmb		03 48 24.1	
	comp=Z,1.8nm,0.9s								
TXAR	**Lajitas Array**	**88.57**	**58**	P		**P**		**03 48 22.6**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=211,slow=5.6,SNR=18								
	comp=Z,1.4nm,0.8s								
TXAR	**Lajitas Array**	**88.57**	**58**	P		**P**		**03 48 22.3**	**+0.8**
M27K	**Edge Creek, AK**	**88.72**	**16**	P		**P**		**03 48 21.8**	**+0.3**
M27K				IAmb		IAmb		03 48 23.6	
	comp=Z,6.7nm,1.4s								
WRH	**Wood River Hil**	**89.07**	**13**	P		**P**		**03 48 21.9**	**-0.9**
WRH				IAmb		IAmb		03 48 23.4	
	comp=Z,5.8nm,1.1s								
HDA	**Harding Lake**	**89.25**	**13**	P		**P**		**03 48 23.6**	**-0.1**
HDA				IAmb		IAmb		03 48 23.9	
	comp=Z,2.8nm,0.6s								
CCB	**Clear Creek Bu**	**89.28**	**13**	P		**P**		**03 48 21.6**	**-2.2**
CCB				IAmb		IAmb		03 48 23.7	
	comp=Z,4.4nm,1.1s								
CM31	**Chiang Mai Arr**	**89.41**	**290**			pP		03 50 36.2	+2.4
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P		**P**		**03 48 26.1**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=140,slow=4.2,SNR=4.7								
	comp=Z,0.6nm,0.4s								
ILAR	**Eielson Array**	**89.58**	**13**	P		**P**		**03 48 24.6**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=215,slow=4.9,SNR=10								
	comp=Z,0.6nm,0.5s								
J26L	**Joseph Creek**	**90.10**	**15**	IAmb		IAmb		03 48 29.0	
	comp=Z,4.1nm,1.0s								
PDAR	**Pinedale Array**	**90.49**	**44**	P		**P**		**03 48 30.4**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=216,slow=3.2,SNR=6.6								
	comp=Z,0.8nm,0.8s								
GEYT	**Ailbeck**	**128.39**	**302**	PKP		**PKPdf**		**03 54 30.0**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=182,slow=3.9,SNR=2.5								
ARCES	**ARCESS Array B**	**129.74**	**349**	PKP		**PKPdf**		**03 54 31.7**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=11,slow=1.2,SNR=13								
FINES	**FINESS Array B**	**136.44**	**343**	PKP		**PKPdf**		**03 54 44.0**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=0.0,slow=1.9,SNR=8.1								
NB2	**NORSAR Subarra**	**139.87**	**352**	PKP		PKPpre		03 54 44.5	
	comp=Z,0.1nm,0.4s,baz=16,slow=3.2								
NOA	**NORSAR Array B**	**139.87**	**352**	PKhKP		PKPpre		03 54 43.3	
	comp=Z,0.6nm,0.6s,baz=16,slow=4.6,SNR=5.8								
NOA				PKP		**PKPdf**		**03 54 52.7**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=14,slow=4.0,SNR=1.6								
AKASG	**Malin Array Be**	**143.36**	**330**	PKP		PKPab		03 54 55.4	-1.1
	comp=Z,4.4nm,0.6s,baz=43,slow=4.7,SNR=28								
AKBB	**Malin Array Si**	**143.36**	**330**			PKPab		03 54 55.5	-1.0
BNN	**Bunyan**	**145.41**	**308**	PKPdf		**PKPdf**		**03 55 01.8**	**-0.3**
BR131	**Keskin Array S**	**146.68**	**310**	PKPbc		**PKPbc**		**03 55 06.6**	**-0.4**
BRTR	**Keskin Array B**	**146.68**	**310**	PKPbc		**PKPbc**		**03 55 06.0**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=135,slow=5.2,SNR=12								
BUR08	**Bucovina Ar. S**	**147.38**	**329**	PKPbc		**PKPbc**		**03 55 07.5**	**-1.0**
BURAR	**Bucovina Array**	**147.39**	**329**	PKPbc		**PKPbc**		**03 55 07.8**	**-0.8**
OSTC	**Ostas**	**148.61**	**341**	*e*PKP		**PKiKP**		**03 55 12.1**	**-0.3**
DPC	**Dobruska-Polom**	**148.76**	**341**	*e*PKP		**PKPbc**		**03 55 12.0**	**+0.2**
DPC				*ex*		x		03 55 18.4	
CLL	**Collm**	**148.80**	**345**	PKPbc		**PKPdf**		**03 55 09.4**	**+2.3**
KRLC	**Kraliky**	**148.86**	**340**	*e*PKP		**PKPbc**		**

0.9nm,0.9s,baz=18,slow=3.2,SNR=1.9
0.9nm,0.9s
FINES FINESS Array B 147.61 338 PKPbc PKPbc 04 21 00.9 -0.9
0.3nm,0.3s,baz=36,slow=4.6,SNR=6.4

*IDC **20** 04:17:42.3±4.8, 55°.24S×31°.94W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=160.9km s-min=54.8km az=180.0*
ISC 20 04:17:46.4±1.2, 54°.7S±0°.2×32°.0W±0°.3, h10km, n4, σ0s21/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**19.20**	**158**	P	**Pn**	**04 22 10.8**	**0.0**
LPAZ	**La Paz**	**47.41**	**310**	P	**P**	**04 26 21.5**	**-0.1**
	1.1nm,0.6s,baz=169,slow=7.8,SNR=6.0						
	1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.37**	**34**	P	**P**	**04 29 18.3**	**0.0**
	0.4nm,0.8s,baz=214,slow=4.5,SNR=2.5						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**147.22**	**314**	PKPbc	**PKPdf**	**04 37 26.2**	**+0.2**
	0.3nm,0.5s,baz=130,slow=1.4,SNR=3.0						

IDC 20 04:18:46.4±4.3, 55°.04S×31°.16W, h0km, mb3.9/2, mbtmp3.9/2, MS3.1/1, Error ellipse: s-maj=145.6km s-min=53.6km az=179.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**18.92**	**226**	LR	LR	04 29 12.9	
	comp=Z,62nm,20.5s,baz=110,slow=33						
LPAZ	**La Paz**	**47.96**	**309**	P	P	04 27 27.2	-0.1
	1.0nm,0.5s,baz=75,slow=9.1,SNR=7.7						
	1.0nm,0.5s						
H10N1	**ASCENSION HYDR**	**48.91**	**22**	T	T	05 20 09.7	
	baz=192,slow=76,SNR=5.5						
H10N3	**ASCENSION HYDR**	**48.91**	**22**	T	T	05 20 09.4	
	baz=192,slow=76,SNR=6.2						
H10N2	**ASCENSION HYDR**	**48.93**	**22**	T	T	05 20 11.2	
	baz=192,slow=76,SNR=11						
TORD	**Torodi Ar. Bea**	**73.37**	**33**	P	P	04 30 19.9	0.0
	0.8nm,1.0s,baz=210,slow=5.0,SNR=2.0						
	0.8nm,1.0s						
ILAR	**Eielson Array**	**147.76**	**314**	PKPbc	PKPbc	04 38 30.8	-0.7
	1.4nm,0.9s,baz=87,slow=2.2,SNR=6.7						

*IDC **20** 04:26:09.7±0.8, 2°.49S×139°.14E, h0km, mb4.0/9, mbtmp4.0/10, ML4.6/1, Error ellipse: s-maj=43.3km s-min=17.6km az=86.0*
*NEIC **20** 04:26:16.2±1.2, 2°.64S±0°.07×139°.1E±0°.1, h48km±11km, mb4.1/11, Error ellipse: s-maj=19.6km s-min=10.8km az=91.0*
ISC 20 04:26:15.1±0.8, 2°.58S±0°.09×139°.0E±0°.1, h37km, n27, σ0s82/27, mb4.1/11, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**6.79**	**267**	Pn	**Pn**	**04 27 53.1**	**+0.8**
COEN	**Coen**	**12.02**	**160**	Pn	**Pn**	**04 29 04.0**	**0.0**
MTN	**Manton Dam**	**12.86**	**217**	Pn	**Pn**	**04 29 15.7**	**+0.3**
SOEI	**Soe**	**16.32**	**243**	Pn	**Pn**	**04 30 00.5**	**-1.2**
KNRA	**Kununurra**	**16.49**	**217**	Pn	**Pn**	**04 30 03.4**	**-0.4**
KNRA				IAmb	IAmb	04 30 07.5	
	comp=Z,14nm,0.5s						
WB0	**Warramunga Arr**	**17.68**	**195**		**Pn**	**04 30 18.3**	**-0.3**
WR0	**Warramunga Arr**	**17.82**	**194**		**Pn**	**04 30 19.7**	**-0.7**
WR0				IAmb	IAmb	04 30 42.3	
	comp=Z,17nm,1.5s						
WRAB	**Tennant Creek**	**17.85**	**195**		**Pn**	**04 30 19.7**	**-1.0**
WRAB				IAmb	IAmb	04 30 24.4	
	comp=Z,17nm,1.0s						
WB2	**Warramunga Arr**	**17.86**	**195**		**Pn**	**04 30 19.6**	**-1.2**
WB2				IAmb	IAmb	04 30 24.6	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**17.86**	**195**	P	**P**	**04 30 21.3**	**+0.1**
	comp=Z,2.1nm,0.3s,baz=20,slow=12,SNR=50						
	comp=Z,4.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.26**	**220**	P	**P**	**04 30 47.6**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=35,slow=12,SNR=2.7						
	comp=Z,1.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.26**	**220**	P	**P**	**04 30 45.9**	**-1.6**
AS31	**Alice Springs**	**21.54**	**193**	P	**P**	**04 31 01.1**	**-0.2**
AS31				IAmb	IAmb	04 31 08.1	
	comp=Z,3.8nm,0.4s						
ASAR	**Alice Springs**	**21.54**	**193**	P	**P**	**04 31 02.5**	**+1.1**
	comp=Z,3.8nm,0.5s,baz=18,slow=10,SNR=54						
	comp=Z,3.8nm,0.5s						
ASAR	**Alice Springs**	**21.54**	**193**	P	**P**	**04 31 01.4**	**0.0**
PSA00	**Pilbara Seismi**	**26.55**	**223**	P	**P**	**04 31 49.0**	**-0.8**
PSA00				IAmb	IAmb	04 31 53.5	
	comp=Z,6.2nm,1.2s						
STKA	**Stephens Creek**	**29.24**	**176**	P	**P**	**04 32 15.4**	**+1.8**
	comp=Z,4.4nm,1.0s,baz=348,slow=14,SNR=3.1						
	comp=Z,4.4nm,1.0s						
SONM	**Songino Array**	**57.74**	**335**	P	**P**	**04 36 03.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=148,slow=8.5,SNR=2.2						
	comp=Z,0.2nm,0.3s						
MK31	**Makanchi Array**	**69.89**	**322**	P	**P**	**04 37 21.9**	**-0.5**
MKAR	**Makanchi Array**	**69.89**	**322**	P	**P**	**04 37 22.6**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=103,slow=8.5,SNR=15						
	comp=Z,1.2nm,0.5s						
MAKZ	**Makanchi**	**70.09**	**322**	P	**P**	**04 37 23.1**	**-0.5**
ZALV	**Zalesovo Beam**	**71.99**	**330**	P	**P**	**04 37 34.8**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=108,slow=3.2,SNR=2.0						
	comp=Z,0.7nm,0.5s						
VNDA	**Vanda**	**75.88**	**175**	P	**P**	**04 37 57.5**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=333,slow=6.1,SNR=9.2						
	comp=Z,0.7nm,0.6s						
BRVK	**Borovoye**	**79.47**	**325**	P	**P**	**04 38 17.4**	**-0.3**
BRVK				IAmb	IAmb	04 38 18.3	
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**85.58**	**24**	P	**P**	**04 38 48.5**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=262,slow=4.7,SNR=9.0						
	comp=Z,0.9nm,0.6s						
QSPA	**South Pole Qui**	**87.36**	**180**	P	**P**	**04 38 58.1**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=278,slow=1.8,SNR=12						
	comp=Z,0.9nm,0.5s						
LPAZ	**La Paz**	**147.25**	**126**	PKPbc	**PKPab**	**04 45 57.2**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=225,slow=2.9,SNR=5.3						

*IDC **20** 04:44:24.0±0.7, 55°.04S×31°.89W, h0km, mb4.1/10, mbtmp4.1/10, MS3.4/5, Error ellipse: s-maj=26.0km s-min=16.0km az=60.0*
*NEIC **20** 04:44:25.7±0.7, 55°.21S±0°.06×32°.1W±0°.2, h10km±1km, mb4.5/15, Error ellipse: s-maj=20.1km s-min=7.8km az=70.0*
ISC 20 04:44:25.8±0.5, 55°.11S±0°.08×32°.08W±0°.10, h10km, n58, σ0s79/52, mb4.4/15, MS3.3/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.69**	**286**		**Pn**	**04 45 09.2**	**+0.2**
ORCD	**Orcadas**	**8.78**	**225**		**Pn**	**04 46 31.1**	**-1.4**
PMSA	**Palmer Station**	**18.49**	**226**	LR	LR	04 55 28.3	
	comp=Z,124nm,18.2s,baz=219,slow=36						
VNA3	**Neumayer Olymp**	**18.87**	**158**	P	**P**	**04 48 46.6**	**+0.8**
VNA2	**Neumayer--Watz**	**19.17**	**155**	P	**Pn**	**04 48 52.8**	**+2.9**
	baz=310,slow=12						
SNAA	**Sanae**	**20.77**	**154**	P	**P**	**04 49 08.3**	**+1.8**
SNAA	**Sanae**	**20.77**	**154**	P	**P**	**04 49 07.6**	**+1.0**
	2.8nm,0.9s,baz=294,slow=12,SNR=9.6						
SNAA				LR	LR	04 55 15.1	
	comp=Z,45nm,18.2s,baz=322,slow=31						
	2.8nm,0.9s						
SNAA	**Sanae**	**20.77**	**154**	P	**P**	**04 49 05.4**	**-1.1**
TROLL	**Troll, Antarti**	**22.35**	**152**	P	**P**	**04 49 24.1**	**+0.6**
BELA	**Belgrano 2**	**22.89**	**181**	P	**P**	**04 49 28.0**	**-1.0**
MG05	**Puerto Natales**	**24.11**	**261**	P	**P**	**04 49 41.0**	**-0.3**
PLTB	**Pedras Altas**	**27.86**	**318**	P	**P**	**04 50 15.3**	**-0.1**
PLTB				IAmb	IAmb	04 50 42.0	
	comp=Z,13nm,1.3s						
AY01	**Puyuhuapi**	**27.91**	**275**	P	**P**	**04 50 16.1**	**+0.4**
AY01				IAmb	IAmb	04 50 17.6	
	comp=Z,6.6nm,0.7s						
PLCA	**Paso Flores**	**29.09**	**283**	P	**P**	**04 50 26.8**	**+0.4**
	comp=Z,2.4nm,1.0s,baz=93,slow=12,SNR=3.2						
PLCA				LR	LR	05 00 02.6	
	comp=Z,98nm,21.9s,baz=172,slow=32						
	comp=Z,2.4nm,1.0s						
CPUP	**Villa Florida**	**34.16**	**317**	P	**P**	**04 51 10.3**	**-0.6**
	comp=Z,4.0nm,0.6s,baz=148,slow=6.3,SNR=15						
CPUP				LR	LR	05 03 22.9	
	comp=Z,62nm,21.8s,baz=116,slow=33						
	comp=Z,4.0nm,0.6s						
CPUP	**Villa Florida**	**34.16**	**317**	P	**P**	**04 51 11.3**	**+0.4**
CPUP				IAmb	IAmb	04 51 12.2	
	comp=Z,4.9nm,0.7s						
MT09	**Talagante**	**34.38**	**292**	P	**P**	**04 51 13.2**	**+0.3**
QSPA	**South Pole Qui**	**35.15**	**180**	P	**P**	**04 51 19.0**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=204,slow=2.7,SNR=17						
QSPA				LR	LR	05 03 15.5	
	comp=Z,62nm,19.3s,baz=238,slow=32						
	comp=Z,3.4nm,0.9s						
QSPA	**South Pole Qui**	**35.15**	**180**	P	**P**	**04 51 18.3**	**-1.0**
QSPA				IAmb	IAmb	04 51 39.5	
	comp=Z,4.8nm,1.1s						
BDFB	**Brasilia**	**41.27**	**336**	P	**P**	**04 52 11.7**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=152,slow=12,SNR=3.6						
	comp=Z,3.6nm,0.9s						
MAW	**Mawson**	**42.53**	**146**	P	**P**	**04 52 20.5**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=254,slow=7.3,SNR=6.0						
	comp=Z,1.7nm,0.7s						
PTLB	**Pontes e Lacer**	**44.75**	**321**	P	**P**	**04 52 39.5**	**+0.3**
PTLB				IAmb	IAmb	04 52 40.5	
	comp=Z,14nm,1.5s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**04 53 00.1**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=237,slow=9.4,SNR=2.8						
	comp=Z,0.5nm,0.7s						
LPAZ	**La Paz**	**47.60**	**310**	P	**P**	**04 53 03.3**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=131,slow=4.6,SNR=25						
	comp=Z,2.6nm,0.5s						
LPAZ	**La Paz**	**47.60**	**310**	P	**P**	**04 53 02.4**	**0.0**
H10S2	**ASCENSION HYDR**	**48.07**	**23**	T	T	05 45 11.1	
	baz=27,slow=74,SNR=5.8						
H10S3	**ASCENSION HYDR**	**48.07**	**23**	T	T	05 45 09.9	
	baz=193,slow=74,SNR=14						
H10N1	**ASCENSION HYDR**	**49.18**	**23**	T	T	05 46 29.6	
	baz=193,slow=75,SNR=19						
H10N3	**ASCENSION HYDR**	**49.18**	**23**	T	T	05 46 23.5	
	baz=193,slow=75,SNR=17						
H10N2	**ASCENSION HYDR**	**49.20**	**23**	T	T	05 46 25.8	
	baz=193,slow=75,SNR=26						
LBTB	**Lobatse**	**51.47**	**79**	P	**P**	**04 53 29.9**	**-1.4**
	comp=Z,3.8nm,0.9s,baz=199,slow=8.6,SNR=3.8						
	comp=Z,3.8nm,0.9s						
ETMB	**Extrema**	**52.60**	**316**	P	**P**	**04 53 39.6**	**0.0**
ETMB				IAmb	IAmb	04 54 06.1	
	comp=Z,3.4nm,1.3s						
MACA	**Manacapuru-AM**	**56.73**	**325**	P	**P**	**04 54 08.5**	**-1.1**
MACA				IAmb	IAmb	04 54 14.7	
	comp=Z,6.1nm,0.9s						
BOAV	**Boa Vista**	**61.91**	**327**	P	**P**	**04 54 45.5**	**+0.1**
BOAV				IAmb	IAmb	04 54 57.2	
	comp=Z,3.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.72**	**34**	P	**P**	**04 55 59.0**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=198,slow=6.3,SNR=14						
	comp=Z,0.9nm,0.7s						
TAM	**Tamanrasset**	**83.98**	**34**	P	**P**	**04 56 56.3**	**+0.2**
TAM				IAmb	IAmb	04 57 04.0	
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**124.89**	**30**	PKP	**PKPdf**	**05 03 23.5**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=224,slow=3.8,SNR=2.0						
MKAR	**Makanchi Array**	**139.25**	**73**	PKP	**PKPdf**	**05 03 52.6**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=240,slow=2.8,SNR=1.5						
DAWY	**Dawson**	**144.12**	**314**	PKPdf	**PKPab**	**05 03 58.1**	**+0.3**
ZAA0	**Zalesovo Array**	**144.47**	**65**	PKPdf	**PKPab**	**05 03 59.8**	**+0.4**
ZALV	**Zalesovo Beam**	**144.47**	**65**	PKP	**PKPab**	**05 03 59.7**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=243,slow=5.1,SNR=5.3						
M27K	**Edge Creek, AK**	**144.56**	**311**	PKPdf	**PKPab**	**05 03 59.4**	**-0.3**
L27K	**Beaver Creek,**	**144.79**	**312**	PKPdf	**PKPab**	**05 03 59.8**	**-0.6**
K27K	**Chicken**	**145.22**	**314**	PKPbc	**PKPbc**	**05 04 01.7**	**-0.1**
BMRM	**Bremner River**	**145.27**	**308**	PKPbc	**PKPbc**	**05 04 01.3**	**-0.8**
EYAK	**Cordova Ski Ar**	**145.64**	**307**	PKPbc	**PKPab**	**05 04 03.7**	**+0.2**
DOT	**Dot Lake**	**145.93**	**312**	PKPbc	**PKPbc**	**05 04 03.9**	**-0.1**
SCRK	**Sand Creek**	**146.00**	**313**	PKPbc	**PKPbc**	**05 04 04.3**	**-0.1**
FID	**Port Fidalgo**	**146.04**	**307**	PKPbc	**PKPbc**	**05 04 04.4**	**0.0**
GLI	**Glacier Island**	**146.37**	**307**	PKPbc	**PKPab**	**05 04 06.2**	**-0.1**
DHY	**Denali Highway**	**147.19**	**311**	PKPbc	**PKPbc**	**05 04 08.4**	**+0.5**
IL31		**147.43**	**314**	PKPbc	**PKPbc**	**05 04 07.8**	**-0.5**
ILAR	**Eielson Array**	**147.43**	**314**	PKPbc	**PKPdf**	**05 04 06.3**	**+0.6**
	comp=Z,5.1nm,1.1s,baz=130,slow=1.9,SNR=22						
RND	**Reindeer**	**147.92**	**311**	PKPbc	**PKPbc**	**05 04 09.6**	**-0.1**
NEA2	**Nenana**	**148.30**	**313**	PKPbc	**PKPbc**	**05 04 10.0**	**-0.7**
TOLK	**Toolik Lake Re**	**149.17**	**321**	PKPbc	**PKPbc**	**05 04 12.5**	**-0.3**
O18K	**Koktuh Hills**	**149.88**	**303**	PKPbc	**PKPbc**	**05 04 14.1**	**-0.6**
SONM	**Songino Array**	**153.46**	**88**	PKPbc	**PKPbc**	**05 04 23.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=250,slow=2.2,SNR=4.9						

*IDC **20** 05:04:00.6±1.4, 55°.06S×30°.81W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=48.6km s-min=30.7km az=73.0*
*NEIC **20** 05:04:01.9±1.2, 55°.28S±0°.09×31°.1W±0°.2, h10km±1km, mb4.4/14, Error ellipse: s-maj=22.0km s-min=5.4km az=48.0*
ISC 20 05:04:02.1±0.7, 55°.20S±0°.09×31°.2W±0°.1, h10km, n23, σ1s04/23, mb4.3/9, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.22**	**284**	Pn	**Pn**	**05 04 52.5**	**-0.1**
ORCD	**Orcadas**	**9.09**	**227**	Pn	**Pn**	**05 06 12.3**	**-0.8**
VNA3	**Neumayer Olymp**	**18.58**	**158**	P	**P**	**05 08 18.8**	**-0.2**
VNA2	**Neumayer--Watz**	**18.86**	**156**	P	**Pn**	**05 08 25.7**	**+3.2**
	baz=316,slow=9.0						
SNAA	**Sanae**	**20.46**	**155**	P	**P**	**05 08 38.3**	**-1.2**
SNAA	**Sanae**	**20.46**	**155**	P	**P**	**05 08 38.5**	**-1.0**
BELA	**Belgrano 2**	**22.81**	**182**	P	**P**	**05 09 04.1**	**-0.4**
MG05	**Puerto Natales**	**24.61**	**261**	P	**P**	**05 09 21.9**	**-0.2**
MG05				IAmb	IAmb	05 09 42.1	
	comp=Z,18nm,1.1s						
GO09	**Cerro Castillo**	**24.69**	**262**	P	**P**	**05 09 22.8**	**-0.2**
GO09				IAmb	IAmb	05 09 33.2	
	comp=Z,40nm,1.4s						
LL04	**Puerto Octay**	**30.54**	**281**	P	**P**	**05 10 14.8**	**-0.6**
LL04				IAmb	IAmb	05 10 37.7	
	comp=Z,5.6nm,0.9s						
LL05	**Los Muermos**	**30.82**	**279**	P	**P**	**05 10 18.4**	**+0.5**
CPUP	**Villa Florida**	**34.59**	**316**	P	**P**	**05 10 51.2**	**+0.2**
	comp=Z,2.1nm,1.0s,baz=167,slow=9.0,SNR=3.1						
	comp=Z,2.1nm,1.0s						
CPUP	**Villa Florida**	**34.59**	**316**	P	**P**	**05 10 50.9**	**-0.1**
CPUP				IAmb	IAmb	05 11 11.5	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**35.05**	**180**	P	**P**	**05 10 54.7**	**-0.1**
QSPA				IAmb	IAmb	05 10 59.2	
	comp=Z,3.0nm,1.0s						
MAW	**Mawson**	**42.15**	**145**	P	**P**	**05 11 52.8**	**-1.3**
VNDA	**Vanda**	**47.29**	**184**	P	**P**	**05 12 36.1**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=199,slow=4.5,SNR=6.0						
	comp=Z,0.9nm,0.8s						
VILB	**Vilhena**	**47.84**	**320**	P	**P**	**05 12 39.9**	**-0.1**
VILB				IAmb	IAmb	05 13 15.9	
	comp=Z,13nm,1.3s						
LPAZ	**La Paz**	**48.06**	**309**	P	**P**	**05 12 43.0**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=138,slow=5.9,SNR=6.0						
	comp=Z,1.2nm,0.6s						
LPAZ	**La Paz**	**48.06**	**309**	P	**P**	**05 12 41.9**	**-0.5**
LPAZ				IAmb	IAmb	05 12 52.9	
	comp=Z,3.6nm,1.1s						
TOA0	**Torodi Ar. Sit**	**73.51**	**33**	P	**P**	**05 15 34.7**	**-0.1**
TOA0				IAmb	IAmb	05 15 59.5	
	comp=Z,6.2nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.51**	**33**	P	**P**	**05 15 33.6**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=197,slow=7.1,SNR=3.8						
	comp=Z,0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.51**	**33**	P	**P**	**05 15 33.7**	**-1.2**
ANWB	**Willy Bob**	**77.10**	**330**	P	**P**	**05 15 56.6**	**+1.2**

*IDC **20** 05:05:11.5±0.9, 22°.86S×173°.09E, h0km, mb4.0/6, mbtmp3.9/8, ML5.2/1, MS3.5/9, Error ellipse: s-maj=34.0km s-min=19.7km az=154.0*
*NEIC **20** 05:05:14.3±2.2, 23°.1S±0°.1×173°.20E±0°.10, h10km±1km, mb4.6/19, Error ellipse: s-maj=21.4km s-min=14.1km az=337.0*
ISC 20 05:05:16.9±0.6, 22°.99S±0°.09×173°.15E±0°.07, h35km, n53, σ1s02/47, mb4.4/13, MS3.5/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.98**	**287**	Pn	**Pn**	**05 06 28.4**	**-0.8**
PINNC	**Pines Island,**	**5.28**	**273**	Pn	**Pn**	**05 06 33.3**	**0.0**
OUENC	**Ouen Island, N**	**5.85**	**274**	Pn	**Pn**	**05 06 40.3**	**-1.0**
DZM	**Mont Dzumac**	**6.27**	**277**	Pn	**Pn**	**05 06 46.1**	**-1.0**
	4.2nm,0.7s,baz=101,slow=9.6,SNR=27						
DZM				Sn	**Sn**	**05 07 55.7**	**-1.9**
	1.9nm,0.3s,baz=118,slow=23,SNR=7.1						
DZM				LR	LR	05 08 39.3	
	comp=Z,156nm,19.2s,baz=172,slow=34						
DZM	**Mont Dzumac**	**6.27**	**277**	Pn	**Pn**	**05 06 48.2**	**+1.1**
MSVF	**Nonsavu**	**6.96**	**42**	Pn	**Pn**	**05 06 55.9**	**-0.7**
	1.5nm,0.3s,baz=212,slow=15,SNR=4.6						
	6.4nm,0.6s						
MSVF	**Nonsavu**	**6.96**	**42**		**Pn**	**05 06 56.6**	**0.0**
RAO	**Raoul Island**	**10.16**	**130**	LR	LR	05 10 34.7	
	comp=Z,420nm,20.5s,baz=140,slow=31						
LHI	**Lord Howe Isla**	**15.12**	**233**	Pn	**Pn**	**05 08 47.0**	**-1.0**
URZ	**Urewera**	**15.59**	**168**	LR	LR	05 13 27.7	
	comp=Z,278nm,19.9s,baz=31,slow=32						
BFZ	**Birch Farm**	**17.83**	**172**	P	**Pn**	**05 09 21.7**	**-0.5**
BFZ				IAmb	IAmb	05 09 23.9	
	comp=Z,52nm,1.1s						
MSWZ	**Moikau Station**	**18.45**	**175**	P	**P**	**05 09 28.4**	**-1.1**
HNR	**Honiara**	**18.49**	**315**	LR	LR	05 15 13.8	
	comp=Z,114nm,19.0s,baz=26,slow=33						
LTZ	**Lake Taylor**	**19.75**	**182**	P	**P**	**05 09 43.6**	**-0.2**
LTZ				IAmb	IAmb	05 10 02.3	
	comp=Z,33nm,1.2s						
EIDS	**Eidsvold**	**20.27**	**259**	P	**P**	**05 09 50.8**	**+1.2**
EIDS				IAmb	IAmb	05 09 56.4	
	comp=Z,19nm,1.1s						
RPZ	**Rata Peaks**	**20.74**	**184**	LR	LR	05 17 03.5	
	comp=Z,228nm,20.4s,baz=308,slow=34						
RPZ	**Rata Peaks**	**20.74**	**184**	P	**P**	**05 09 53.1**	**-1.4**
RPZ				IAmb	IAmb	05 10 04.6	
	comp=Z,26nm,1.1s						
CAN	**Canberra**	**24.34**	**234**	P	**P**	**05 10 32.9**	**+1.3**
CAN				IAmb	IAmb	05 10 52.6	
	comp=Z,28nm,1.2s						
RAR	**Rarotonga**	**25.14**	**91**	LR	LR	05 20 33.3	
	comp=Z,43nm,18.1s,baz=274,slow=37						
CTA	**Charters Tower**	**25.17**	**271**	LR	LR	05 20 28.2	
	comp=Z,71nm,18.4s,baz=82,slow=36						
CTAO	**Charters Tower**	**25.17**	**271**	P	**P**	**05 10 41.2**	**+2.0**
CTAO				IAmb	IAmb	05 10 44.1	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**29.29**	**246**	P	**P**	**05 11 16.8**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=91,slow=6.2,SNR=4.6						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**29.29**	**246**	P	**P**	**05 11 17.3**	**+1.2**
COEN	**Coen**	**29.77**	**282**	P	**P**	**05 11 22.3**	**+1.8**
COEN				IAmb	IAmb	05 11 54.1	
	comp=Z,22nm,1.4s						
AS31	**Alice Springs**	**35.97**	**261**	P	**P**	**05 12 14.1**	**-0.5**
ASAR	**Alice Springs**	**35.97**	**261**	P	**P**	**05 12 13.8**	**-0.8**
	comp=Z,5.4nm,0.9s,baz=86,slow=8.5,SNR=38						
	comp=Z,5.4nm,0.9s						
ASAR	**Alice Springs**	**35.97**	**261**	P	**P**	**05 12 15.1**	**+0.5**
WR0	**Warramunga Arr**	**35.99**	**267**	P	**P**	**05 12 15.2**	**+0.5**
WR0				IAmb	IAmb	05 12 25.5	
	comp=Z,4.2nm,0.9s						
WRA	**Warramunga Arr**	**36.18**	**267**	P	**P**	**05 12 15.1**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=107,slow=7.8,SNR=7.1						
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**36.18**	**267**	P	**P**	**05 12 15.7**	**-0.7**
FORT	**Forrest**	**40.74**	**249**	P	**P**	**05 12 54.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**44.61**	**267**	P	**P**	**05 13 27.2**	**+1.0**
FITZ				IAmb	IAmb	05 13 28.1	
	comp=Z,4.6nm,0.8s						
MBWA	**Marble Bar**	**49.31**	**261**	P	**P**	**05 14 03.1**	**+0.2**
VNDA	**Vanda**	**54.85**	**183**	P	**P**	**05 14 43.5**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=14,slow=6.4,SNR=5.2						
VNDA				LR	LR	05 35 21.5	
	comp=Z,33nm,18.1s,baz=34,slow=33						
	comp=Z,0.8nm,0.8s						
VNDA	**Vanda**	**54.85**	**183**	P	**P**	**05 14 44.4**	**+1.1**
SBA	**Scott Base**	**55.00**	**182**	P	**P**	**05 14 46.0**	**+1.7**
SBA				IAmb	IAmb	05 14 47.6	
	comp=Z,12nm,1.1s						
CASY	**Casey**	**58.22**	**205**	P	**P**	**05 15 06.0**	**-1.3**
QSPA	**South Pole Qui**	**67.08**	**180**	P	**P**	**05 16 06.9**	**+0.2**
QSPA				IAmb	IAmb	05 16 08.3	
	comp=Z,13nm,1.2s						
TROLL	**Troll, Antarti**	**85.03**	**183**	P	**P**	**05 17 48.4**	**-0.2**
SNAA	**Sanae**	**85.55**	**181**	P	**P**	**05 17 50.6**	**-0.6**
VNA3	**Neumayer Olymp**	**86.00**	**179**	P	**P**	**05 17 52.7**	**-0.7**
VNA2	**Neumayer--Watz**	**86.34**	**180**	P	**P**	**05 17 54.5**	**-0.5**
	baz=180,slow=5.0						
VNA1	**Neumayer--Stat**	**86.

comp=E,115nm,1.5s,comp=E,86nm,3.3s
JKEN Kujiedanarisaw 1.55 293 *i* P **Pn 05 15 22.1 -1.2**
JKEN Kujiedanarisaw 1.55 293 A A 05 15 22.1
comp=E,135nm,1.9s,comp=E,86nm,0.8s
OFUJ Ofunato 1.57 251 *i* P **Pn 05 15 22.8 -0.8**
OFUJ Ofunato 1.57 251 A A 05 15 22.8
comp=E,49nm,6.3s,comp=E,71nm,3.0s
JANG Nango 1.75 296 *i* P **Pn 05 15 25.1 -1.0**
JANG *eS* **Sn 05 15 46.1 -1.7**
JANG Nango 1.75 296 A A 05 15 25.1
comp=E,41nm,4.9s,comp=E,44nm,2.1s
JKZ Kuzumaki 1.77 283 A A 05 15 25.8
comp=E,69nm,1.9s,comp=E,73nm,2.1s
JOM Ohasama 1.77 266 *i* P **Pn 05 15 26.3 0.0**
JOM *eS* **Sn 05 15 48.6 +0.4**
JOM Ohasama 1.77 266 A A 05 15 26.3
comp=E,87nm,0.4s,comp=E,86nm,3.4s
JKMT Kesennumamotoy 1.82 244 A A 05 15 26.5
comp=E,35nm,4.9s,comp=E,57nm,3.7s
JMK Ichinoseki 1.94 251 *i* P **Pn 05 15 28.3 -0.4**
JMK Ichinoseki 1.94 251 A A 05 15 28.3
comp=E,31nm,2.9s,comp=E,44nm,3.3s
JSZI Iwateshizukuis 2.03 274 A A 05 15 29.5
comp=E,296nm,1.3s,comp=E,269nm,1.7s
JIO Ouri 2.08 237 *i* P **Pn 05 15 29.5 -1.1**
JIO Ouri 2.08 237 A A 05 15 29.5
comp=E,36nm,5.0s,comp=E,34nm,5.7s
JARK Aomorirokkasho 2.19 310 A A 05 15 31.6
comp=E,79nm,2.0s,comp=E,74nm,1.3s
JTM Tenmabayashi 2.25 302 Pn **Pn 05 15 32.3 -0.6**
JTM Tenmabayashi 2.25 302 *i* P **Pn 05 15 32.8 -0.1**
JTM Tenmabayashi 2.25 302 A A 05 15 32.8
comp=E,56nm,2.4s,comp=E,55nm,2.0s
JRG Rokugo 2.28 265 A A 05 15 33.2
comp=E,102nm,2.1s,comp=E,100nm,2.6s
JOFO Osakifurukawao 2.30 245 A A 05 15 33.4
comp=E,352nm,2.6s,comp=E,276nm,4.1s
JAH Hinai 2.33 285 A A 05 15 33.9
comp=E,77nm,2.5s,comp=E,77nm,2.8s
JAHD Aomorihigashid 2.37 315 A A 05 15 34.2
comp=E,177nm,1.9s,comp=E,129nm,2.0s
ERM Erimo 2.42 353 Pn **Pn 05 15 35.5 +0.2**
ERM Erimo 2.42 353*c i* P **Pn 05 15 34.7 -0.5**
ERM pmax pmax
comp=Z,528nm,1.0s
ERM Erimo 2.42 353 P **Pn 05 15 35.9 +0.7**
JEM Erimo 2.42 353 A A 05 15 34.4
comp=Z,41nm,5.4s,comp=Z,27nm,2.5s
JOU Okura 2.59 242 A A 05 15 37.5
comp=Z,73nm,1.3s,comp=Z,67nm,1.7s
JYK Kaneyama 2.59 255 *i* P **Pn 05 15 37.9 +0.3**
JYK Kaneyama 2.59 255 A A 05 15 37.9
comp=Z,48nm,3.2s,comp=Z,51nm,2.1s
JYW Yuwa 2.60 269 A A 05 15 37.7
comp=Z,315nm,2.6s,comp=Z,261nm,1.5s
JOT Ohata 2.61 313 *i* P **Pn 05 15 37.4 -0.5**
JOT Ohata 2.61 313 A A 05 15 37.4
comp=Z,37nm,1.9s,comp=Z,36nm,1.4s
JHHS Hirosakihyakuz 2.67 294 A A 05 15 38.6
comp=Z,119nm,2.6s,comp=Z,131nm,4.4s
JTHR Tokachihiroo 2.68 356 A A 05 15 38.1
comp=Z,45nm,8.2s,comp=Z,25nm,2.6s
JNTW Noshirotokiwa 2.70 285 A A 05 15 39.1
comp=Z,241nm,2.2s,comp=Z,197nm,2.0s
JNBK Urakawa-nobuka 2.73 347 P **Pn 05 15 40.2 +0.6**
JNBK Urakawa-nobuka 2.73 347 A A 05 15 40.2
comp=Z,42nm,1.8s,comp=Z,77nm,3.4s
JMM Marumori 2.79 232 Pn **Pn 05 15 38.6 -1.7**
JMM Marumori 2.79 232 A A 05 15 40.3
comp=Z,20nm,2.5s,comp=Z,20nm,4.7s
JSI2 Shiura 2 2.81 302 A A 05 15 40.6
comp=Z,61nm,2.4s,comp=Z,65nm,1.5s
JMST Minamisoumatoc 2.82 229 A A 05 15 40.8
comp=Z,24nm,2.7s,comp=Z,21nm,2.5s
JYYZ Yamagatayuza 2.89 259 A A 05 15 41.8
comp=Z,164nm,2.1s,comp=Z,168nm,3.0s
JIW Iwasaki 2.90 291 A A 05 15 42.0
comp=Z,41nm,2.4s,comp=Z,48nm,1.2s
JSHD Hidakashinhida 2.92 344 A A 05 15 41.5
comp=Z,113nm,3.1s,comp=Z,93nm,2.4s
JKB Kayabe 2.98 320 A A 05 15 42.8
comp=Z,32nm,3.2s,comp=Z,38nm,3.7s
JCH Churui 3.00 357 *i* P **Pn 05 15 42.6 -0.6**
JCH *eS* **Sn 05 16 16.0 -2.6**
JCH Churui 3.00 357 A A 05 15 42.6
comp=Z,40nm,5.0s,comp=Z,20nm,3.1s
JYS Shirataka 3.07 244 A A 05 15 44.3
comp=Z,54nm,1.4s,comp=Z,64nm,2.3s
JSR Shiriuchi 3.07 310 A A 05 15 44.2
comp=Z,29nm,2.4s,comp=Z,26nm,8.5s
JFK Kawauchi 3.08 224 A A 05 15 44.4
comp=Z,21nm,9.7s,comp=Z,15nm,3.3s
JTB Tobi-shima 3.14 264 A A 05 15 45.4
comp=Z,46nm,2.1s,comp=Z,47nm,3.9s
JYA Atsumi 3.17 252 A A 05 15 45.8
comp=Z,68nm,0.9s,comp=Z,72nm,1.6s
JYAR Yonezawaarcadi 3.17 239 A A 05 15 45.8
comp=Z,70nm,1.1s,comp=Z,63nm,1.2s
JIAM Iburiatsuma 3.25 338 A A 05 15 46.4
comp=Z,92nm,6.2s,comp=Z,103nm,3.1s
JFT Otama 3.29 231 *i* P **Pn 05 15 46.6 -0.6**
JFT Otama 3.29 231 A A 05 15 46.6
comp=Z,39nm,5.5s,comp=Z,44nm,1.5s
JBT2 Biratori 2 3.29 344 A A 05 15 46.9
comp=Z,30nm,4.8s,comp=Z,32nm,2.1s
JOB Onbets 3.29 3 A A 05 15 46.7
comp=Z,38nm,4.5s,comp=Z,37nm,3.6s
JOMM Oshimamatsumae 3.32 306 P **Pn 05 15 47.5 -0.1**
JOMM Oshimamatsumae 3.32 306 A A 05 15 47.5
comp=Z,14nm,4.1s,comp=Z,9nm,4.3s
ONAJ Iwakimizuishiy 3.32 222 A A 05 15 47.8
comp=Z,24nm,8.7s,comp=Z,16nm,8.7s
JNB Noboribetsu 3.44 327 A A 05 15 49.2
comp=Z,17nm,2.3s,comp=Z,12nm,1.4s
JFFD Fukushimafurud 3.46 224 A A 05 15 49.7
comp=Z,13nm,4.2s,comp=Z,12nm,3.3s
JOG3 Oga3 3.48 276 A A 05 15 42.2
comp=Z,127nm,2.0s,comp=Z,86nm,1.8s
JAK Akkeshi 3.48 14 *i* P **Pn 05 15 48.8 -1.0**
JAK *eS* **Sn 05 16 27.5 -3.0**
JAK Akkeshi 3.48 14 A A 05 15 48.8
comp=Z,32nm,2.8s,comp=Z,27nm,2.0s
JYM2 Yakumo 2 3.48 317 A A 05 15 50.0
comp=Z,23nm,1.9s,comp=Z,32nm,1.2s
JAW Awa shima 3.56 252 A A 05 15 51.3
comp=Z,43nm,4.1s,comp=Z,51nm,4.4s
JEW Eniwo 3.60 334 Pn **Pn 05 15 51.8 +0.4**
JEW Eniwo 3.60 334 A A 05 15 51.4
comp=Z,70nm,2.2s,comp=Z,58nm,3.4s
JFR Furan 3.62 349 A A 05 15 51.5
comp=Z,19nm,2.1s,comp=Z,17nm,2.1s
JKHN Kushirohamanak 3.67 19 A A 05 15 51.7
comp=Z,48nm,1.7s,comp=Z,24nm,2.4s
JAR Ashorobuto 3.68 2 A A 05 15 52.2
comp=Z,32nm,1.0s,comp=Z,36nm,0.7s
JFY Yanaizu 3.75 235 A A 05 15 53.9
comp=Z,16nm,6.8s,comp=Z,17nm,5.8s
JNS Sasagawa 3.78 243 A A 05 15 54.4
comp=Z,22nm,6.7s,comp=Z,26nm,2.5s
JHO Hitachi 3.82 219 A A 05 15 54.8
comp=Z,13nm,5.3s,comp=Z,10.0nm,3.9s
JSB Shiboa 3.90 229 A A 05 15 56.0
comp=Z,39nm,2.7s,comp=Z,37nm,4.7s
JHST Hiyamasetana 3.96 316 A A 05 15 56.6
comp=Z,29nm,1.8s,comp=Z,21nm,1.9s
JISS Ishikarishitsu 4.00 337 A A 05 15 57.0
comp=Z,61nm,3.0s,comp=Z,67nm,4.1s
JAB Ashibetsu 4.02 346 A A 05 15 57.1
comp=Z,48nm,3.5s,comp=Z,46nm,4.2s
JHYU Hitachinakayam 4.03 217 A A 05 15 57.7
comp=Z,17nm,5.4s,comp=Z,15nm,6.4s
JSH Shimam 4.03 320 A A 05 15 57.6
comp=Z,11nm,5.0s,comp=Z,12nm,6.1s
JNK Nakash 4.06 12 A A 05 15 57.4
comp=Z,12nm,1.8s,comp=Z,9.0nm,1.9s
NMR Nemuro--Hokkai 4.09 23 *eP* **Pn 05 15 56.6 -1.5**
NMR *eS* **Sn 05 16 41.5 -3.9**
NEM2 Nemuro 2 4.09 23 A A 05 15 57.6
comp=Z,14nm,1.5s,comp=Z,13nm,1.2s
JUON Uonuma 4.28 237 A A 05 16 01.4
comp=Z,11nm,5.9s,comp=Z,11nm,9.5s
JNSB Nemuroshibetsu 4.29 14 A A 05 16 00.6
comp=Z,26nm,4.1s,comp=Z,27nm,2.3s
JKK2 Kamakawa 2 4.30 352 A A 05 16 01.0
comp=Z,15nm,3.9s,comp=Z,14nm,2.9s
JYT Yasato 4.31 219 Pn **Pn 05 15 58.9 -2.3**
JYT Yasato 4.31 219 A A 05 16 01.6
comp=Z,12nm,7.5s,comp=Z,9.0nm,5.6s
JIZZ Izumozaki 4.34 243 A A 05 16 02.3
comp=Z,67nm,6.4s,comp=Z,63nm,2.8s
JHR Hokuryu 4.35 342 A A 05 16 01.9
comp=Z,43nm,2.8s,comp=Z,39nm,2.9s
JTKR Abashiri--Toko 4.36 3 A A 05 16 01.7
comp=Z,18nm,1.2s,comp=Z,15nm,1.7s
JIHU Itakohorinouch 4.37 214 A A 05 16 02.4
comp=Z,83nm,3.8s,comp=Z,104nm,6.0s
JMP Maruseppu 4.39 358 A A 05 16 02.2
comp=Z,12nm,6.3s,comp=Z,11nm,1.5s
JSK Shakotan 4.40 329 A A 05 16 02.7
comp=Z,12nm,2.6s,comp=Z,14nm,6.0s
JKT Katashina 4.44 232 A A 05 16 03.5
comp=Z,12nm,6.0s,comp=Z,11nm,5.0s
JSD Sado 4.44 251 Pn **Pn 05 16 02.7 -0.3**
JSD Sado 4.44 251 A A 05 16 03.6
comp=Z,10.0nm,4.0s,comp=Z,19nm,3.4s
CHOJ Chosi 4.46 210 A A 05 16 03.6
comp=Z,18nm,3.9s,comp=Z,17nm,4.2s
JRA Rausu 4.47 15 A A 05 16 03.1
comp=Z,12nm,3.4s,comp=Z,10.0nm,2.3s
JAG Ashikaga 4.55 227 A A 05 16 05.1
comp=Z,10.0nm,5.5s,comp=Z,11nm,4.7s
ASAJ Asahikawa 4.56 351 A A 05 16 04.6
comp=Z,12nm,3.6s,comp=Z,10.0nm,5.5s
RUSJ Misakicho 4.66 15 *eP* **Pn 05 16 05.1 -0.9**
RUSJ *eS* **Sn 05 16 58.2 -1.3**
JSMT Sammumatsuo 4.68 213 A A 05 16 06.7
comp=Z,70nm,5.9s,comp=Z,69nm,5.7s
YUK Yuzh-Kuril'sk 4.74 20 *eP* **Pn 05 16 05.6 -1.5**
YUK *eS* **Sn 05 16 57.8 -3.6**
YUK pmax pmax
comp=N,709nm,0.4s
YUK pmax pmax
comp=Z,1µm,0.4s
YUK pmax pmax
comp=E,605nm,0.3s
YUK smax smax
comp=N,5µm,0.6s
YUK smax smax
comp=E,6µm,0.5s
YUK smax smax
comp=E,15µm,1.0s
YUK smax smax
comp=N,19µm,1.1s
YUK MLR MLR
comp=Z,6µm,13.0s
YUK MLR MLR
comp=N,5µm,10.0s
YUK MLR MLR
comp=E,8µm,13.0s
JJN Nakama 4.94 241 A A 05 16 10.6
comp=E,22nm,3.5s,comp=E,21nm,3.8s
JGK Kuni 4.94 233 A A 05 16 10.6
comp=E,11nm,4.3s,comp=E,14nm,3.3s
JSS Shosan 4.95 346 A A 05 16 10.2
comp=E,33nm,4.2s,comp=E,38nm,3.6s
TOK Tokyo 4.95 219 A A 05 16 10.7
comp=E,48nm,5.2s,comp=E,49nm,4.1s
JCN Nagara 4.97 214 A A 05 16 10.9
comp=E,53nm,4.2s,comp=E,50nm,6.7s
JHU Hanno 5.07 223 A A 05 16 12.3
comp=E,11nm,6.4s,comp=E,9.0nm,3.6s
JYG Yagishiri 5.07 342 A A 05 16 11.9
comp=E,12nm,3.6s,comp=E,11nm,6.2s
JRY Ryogami san 5.15 227 A A 05 16 13.6
comp=E,8.0nm,3.5s,comp=E,11nm,7.5s
JKUC kamogawauchiur 5.19 212 A A 05 16 14.0
comp=E,18nm,2.7s,comp=E,19nm,6.2s
MAJO Matsushiro 5.23 236 Pn **Pn 05 16 14.5 +0.6**
MAJO Matsushiro 5.23 236*c i* P **Pn 05 16 14.7 +0.8**
MAJO Matsushiro 5.23 236 P **Pn 05 16 15.0 +1.1**
MJAR Matsushiro Arr 5.23 236 Pn **Pn 05 16 12.6 -1.2**
comp=E,3.6nm,0.3s,baz=48,slow=12,SNR=257
MJAR LR LR 05 18 06.6
comp=E,5µm,18.2s,baz=176,slow=37
comp=E,246nm,0.7s
JSGW Sagamiharawaka 5.29 222 A A 05 16 15.5
comp=E,10.0nm,7.8s,comp=E,9.0nm,2.9s
JSZ Suzu 5.33 248 A A 05 16 16.1
comp=E,6.0nm,5.7s,comp=E,8.0nm,6.2s
JYO Yokosk 5.37 217 A A 05 16 16.5
comp=E,27nm,3.2s,comp=E,27nm,6.4s
JNG Nsakai 5.38 235 A A 05 16 16.7
comp=E,8.0nm,5.5s,comp=E,11nm,5.9s
JSE Soyaes 5.39 353 A A 05 16 16.3
comp=E,9.0nm,4.7s,comp=E,10.0nm,2.7s
JOD2 Odawara 2 5.62 221 A A 05 16 20.0
comp=E,11nm,2.7s,comp=E,14nm,2.1s
JNT Takato 5.70 231 A A 05 16 21.2
comp=E,7.0nm,5.3s,comp=E,9.0nm,8.0s
JYN Shimob 5.73 226 A A 05 16 21.6
comp=E,10.0nm,7.3s,comp=E,10.0nm,6.0s
JTT Ttatey 5.76 241 A A 05 16 22.2
comp=E,10.0nm,4.6s,comp=E,10.0nm,4.1s
JRR Rishiri 5.77 344 A A 05 16 21.7
comp=E,49nm,4.5s,comp=E,58nm,5.9s
JFNN Fujinakano 5.88 223 A A 05 16 23.7
comp=E,18nm,3.5s,comp=E,17nm,4.8s
JIM2 Oshima 3 5.90 215 A A 05 16 23.9
comp=E,19nm,6.8s,comp=E,12nm,3.5s
JHTM Izuhatsuma 5.90 219 A A 05 16 23.9
comp=E,14nm,8.5s,comp=E,17nm,5.9s
JJH Hakui 5.98 245 A A 05 16 25.2
comp=E,8.0nm,3.6s,comp=E,10.0nm,3.8s
JNY Yasuok 6.22 229 A A 05 16 28.4
comp=E,9.0nm,2.0s,comp=E,12nm,2.5s
SHZ3 Shizuoka 3 6.23 225 A A 05 16 28.6
comp=E,7.0nm,4.5s,comp=E,8.0nm,4.1s
JGF Kuroka 6.36 233 **Pn 05 16 29.2 -0.2**
KUR Kuril'sk 6.45 28 *eP* **Pn 05 16 30.1 -0.5**
KUR *eS* **Sn 05 17 38.8 -4.8**
KUR pmax pmax
comp=Z,458nm,0.6s
KUR pmax pmax
comp=N,198nm,0.7s
KUR pmax pmax
comp=E,314nm,0.5s
KUR smax smax
comp=N,911nm,0.8s
KUR smax smax
comp=E,1µm,0.8s
INU Inuyama 6.73 233 **Pn 05 16 34.2 -0.3**
INU Inuyama 6.73 233 P **Pn 05 16 35.3 +0.8**
YSS Yuzh-Sakhalins 7.36 356 Pn **Pn 05 16 43.4 +0.3**
YSS Yuzh-Sakhalins 7.36 356*c i* P **Pn 05 16 43.4 +0.3**
YSS *eS* **Sn 05 18 06.5 +0.5**
YSS pmax pmax
comp=Z,170nm,0.9s
YSS pmax pmax
comp=Z,600nm,7.1s
YSS smax smax
comp=N,2µm,6.8s
YSS MLR MLR
comp=N,10µm,16.0s
YSS MLR MLR
comp=Z,13µm,16.0s
YSS Yuzh-Sakhalins 7.36 356 P **Pn 05 16 44.7 +1.6**
TEY Ternei 7.48 319⇑ *eP* **Pn 05 16 45.3 +0.5**
TEY pmax pmax
comp=E,10.0nm,2.0s
TEY pmax pmax
comp=N,10.0nm,1.8s
TEY pmax pmax
comp=Z,10.0nm,1.8s
TEY MLR MLR
comp=E,300nm,12.0s
TEY MLR MLR
comp=N,400nm,17.0s
TEY MLR MLR
comp=Z,700nm,14.0s
VLA Vladivostok 9.46 295*de* P **Pn 05 17 12.3 +0.4**
JHS Saijyo 9.52 244 **Pn 05 17 14.1 +1.3**
UGL Uglegorsk 9.52 354 *eP* **Pn 05 17 13.1 +0.4**
UGL S **Sn 05 19 00.5 +1.4**
UGL pmax pmax
comp=Z,107nm,1.1s
UGL MLR MLR
comp=Z,9µm,12.0s
UGL MLR MLR
comp=N,10µm,14.0s
UGL MLR MLR
comp=E,5µm,17.0s
JMN Monobe 9.75 236 **Pn 05 17 15.1 -0.8**
USA0B Ussuriysk Arra 9.77 302 **Pn 05 17 17.8 +1.6**
USA0B Ussuriysk Arra 9.77 302 P **Pn 05 17 17.8 +1.6**
USRK Ussuriysk Ar. 9.77 302 Pn **Pn 05 17 16.5 +0.3**
comp=E,4.9nm,0.3s,baz=109,slow=13,SNR=102
USRK LR LR 05 20 38.2
comp=E,5µm,18.4s,baz=230,slow=35
comp=E,209nm,0.9s
USRK Ussuriysk Ar. 9.77 302 **Pn 05 17 18.0 +1.8**
USRK Ussuriysk Ar. 9.77 302 P **Pn 05 17 18.0 +1.8**
MSHR Mys Shultsa 9.83 292*de* P **Pn 05 17 19.0 +2.0**
MSHR pmax pmax
comp=Z,209nm,1.7s
TYV Tymovskoe 11.27 357 *eP* **Pn 05 17 36.6 0.0**
TYV *eS* **Sn 05 19 43.4 +1.5**
TYV pmax pmax
comp=Z,100nm,3.4s
TYV pmax pmax
comp=Z,47nm,1.0s
TYV smax smax
comp=N,42nm,1.2s
TYV smax smax
comp=E,17nm,1.2s
TYV smax smax
comp=N,600nm,5.4s
TYV smax smax
comp=E,900nm,5.4s
TYV MLR MLR
comp=N,8µm,16.0s
TYV MLR MLR
comp=Z,12µm,16.0s
MDJ Mudanjiang 11.52 300 **Pn 05 17 41.0 +0.9**
MDJ Mudanjiang 11.52 300 P **Pn 05 17 41.5 +1.4**
MDJ pP 05 17 43.5
MDJ sP 05 17 46.8
MDJ S **Sn 05 19 51.1 +3.0**
MDJ sS 05 19 55.1
MDJ pmax pmax
comp=Z,170nm,1.1s
MDJ pmax pmax
comp=Z,3µm,7.7s
MDJ LR LR
comp=Z,11µm,12.6s
MDJ LR LR
comp=Z,17µm,14.5s
MDJ LR LR
comp=Z,21µm,14.9s
MDJ Mudanjiang 11.52 300 P **Pn 05 17 43.4 +3.3**
SEHB SEOHWA 12.01 268 **Pn 05 17 47.2 +0.4**
GRNR Gornyy 12.23 338⇑ *iP* **Pn 05 17 50.2 +0.4**
GRNR *eS* **Sn 05 20 08.6 +3.0**
GRNR pmax pmax
comp=N,70nm,0.9s
GRNR pmax pmax
comp=E,40nm,0.9s
GRNR pmax pmax
comp=Z,80nm,0.9s
GRNR smax smax
comp=N,5.0nm,0.9s
GRNR MLR MLR
comp=E,5µm,16.0s
GRNR MLR MLR
comp=N,3µm,14.0s
GRNR MLR MLR
comp=Z,5µm,14.0s
KSBUS Busan 12.29 254 **Pn 05 17 51.6 +0.9**
HHU Hamhung 12.35 277 P **Pn 05 17 51.9 +0.4**
HHU pP P 05 17 55.9 -7.6
HHU S **Sn 05 20 13.1 +4.6**
HHU AMS AMS
comp=N,11µm,12.3s
HHU AMS AMS
comp=E,13µm,14.3s
HHU AMS AMS
comp=Z,12µm,12.7s
JTU Tsushima 12.40 250 **Pn 05 17 52.2 -0.1**
KSRS Korea Array 12.45 265 Pn **Pn 05 17 53.0 +0.3**
comp=Z,1.3nm,0.3s,baz=86,slow=13,SNR=70
KSRS LR LR 05 22 22.1
comp=Z,7µm,18.3s,baz=75,slow=36
comp=Z,28nm,0.9s
KS19 Wonju Array Si 12.48 265 **Pn 05 17 52.5 -0.7**
KSAR Wonju Array Be 12.48 265 **Pn 05 17 53.3 +0.1**
KSAR Wonju Array Be 12.48 265 P **Pn 05 17 53.3 +0.1**
JCJ Chichijima 12.54 186 Pn Pn 05 17 48.9 -5.3
comp=Z,11nm,0.3s,baz=274,slow=20,SNR=8.7
JCJ Sn Sn 05 19 58.9 -14
comp=Z,11nm,0.3s,baz=71,slow=23,SNR=3.8
KLR Kul'dur 12.78 323 Pn **Pn 05 17 56.4 -1.0**
comp=Z,1.0nm,0.3s,baz=138,slow=12,SNR=52
KLR LR LR 05 23 03.8
comp=Z,6µm,20.0s,baz=136,slow=38
comp=Z,42nm,1.0s
KLR Kul'dur 12.78 323*ce* P **Pn 05 17 57.0 -0.3**
KLR pmax pmax
comp=Z,131nm,1.7s
TJN Taejon 13.19 261 **Pn 05 18 03.4 +0.5**
TJN Taejon 13.19 261*c i* P **Pn 05 18 03.6 +0.7**
TJN Taejon 13.19 261 P **Pn 05 18 04.6 +1.7**
BNX BinXian 13.37 302 ⇓ P **Pn 05 18 06.0 +0.7**
BNX S **Sn 05 20 38.9 +5.6**
BNX pmax pmax
comp=Z,170nm,1.0s
BNX pmax pmax
comp=Z,2µm,9.1s
BNX LR LR
comp=Z,6µm,12.5s
BNX LR LR
comp=Z,9µm,13.6s
BNX LR LR
comp=Z,12µm,14.4s
JSU Suzuyama 13.39 237 **Pn 05 18 04.0 -1.7**
INCN Inchon 13.43 266 **Pn 05 18 06.8 +0.6**
INCN Inchon 13.43 266 P **Pn 05 18 06.9 +0.6**
INCN Inchon 13.43 266 P **Pn 05 18 06.1 -0.2**
INCN P **Pn 05 18 06.1 -0.2**
INCN P **Pn 05 18 06.1 -0.2**
INCN Inchon 13.43 266 P **Pn 05 18 09.8 +3.5**
comp=Z,63nm,1.1s
NAWB Namwon 13.50 257 **Pn 05 18 07.9 +0.7**
PYAG Pyongyang 13.80 273 P **Pn 05 18 11.9 +0.6**
OKH Okha 13.95 358*c i* P **Pn 05 18 09.0 -4.2**
OKH pmax pmax
comp=Z,200nm,13.4s
OKH MLR MLR
comp=E,14µm,19.0s
OKH MLR MLR
comp=Z,9µm,18.0s
OKH MLR MLR
comp=N,14µm,16.0s
HJU Haeju 14.01 269 P **Pn 05 18 13.3 -0.8**
HJU pP P 05 18 16.7 -5.1
HJU S **Sn 05 20 51.6 +2.7**
HJU AMS AMS
comp=N,33µm,11.7s
HJU AMS AMS
comp=E,33µm,11.6s
HJU AMS AMS
comp=Z,35µm,12.3s
SKR Severo-Kuril's 14.15 34 *eP* **P 05 18 23.6 +0.2**
SKR pmax pmax
comp=Z,38nm,0.9s
SKR MLR MLR
comp=Z,3µm,12.0s
CN2 Changchun 14.17 293 *eP* **Pn 05 18 15.9 -0.4**
CN2 S **Sn 05 20 53.5 +0.7**
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 pmax pmax
comp=Z,1µm,10.0s
CN2 LR LR
comp=Z,6µm,15.0s
CN2 LR LR
comp=Z,5µm,15.0s
CN2 LR LR
comp=Z,6µm,16.5s
SUJ Sinuiju 14.67 278 P **Pn 05 18 21.9 -1.1**
SNY Shenyang 15.32 285 ⇓ P **Pn 05 18 31.3 -0.5**
SNY pmax pmax
comp=Z,32nm,1.1s
SNY pmax pmax
comp=Z,2µm,8.0s
SNY LR LR
comp=Z,4µm,15.1s
SNY LR LR
comp=Z,9µm,16.3s
SNY LR LR
comp=Z,13µm,16.5s
PEA0B Petropavlovsk- 16.61 31 P **P 05 18 50.1 -0.6**

PEA0B Petropavlovsk- 16.61 31 ⇑*i*P Pn 05 18 48.5 +0.2
PETK **Petropavlovsk-** **16.61 31** Pn **Pn** **05 18 48.2 -0.1**
comp=Z,0.5nm,0.3s,baz=201,slow=4.8,SNR=6.9
PETK LR LR 05 24 40.3
comp=Z,2μm,20.4s,baz=219,slow=35
comp=Z,26nm,1.0s
PETK Petropavlovsk- 16.61 31 P **P** **05 18 51.6 +1.0**
PET Petropavlovsk 16.93 33 P **P** **05 18 55.4 +1.1**
PET IAmb IAmb 05 18 58.5
comp=Z,211nm,1.4s
PET Petropavlovsk 16.93 33 *e*P **P** **05 18 55.6 +1.4**
PET *e*S **Sn** **05 22 01.3 +1.4**
PET pmax pmax
comp=Z,300nm,11.4s
PET pmax pmax
comp=Z,150nm,1.3s
PET MLR MLR
comp=Z,3μm,15.0s
PET MLR MLR
comp=Z,3μm,14.0s
PET Petropavlovsk 16.93 33 P **P** **05 18 56.3 +2.1**
comp=Z,373nm,1.1s
DL2 Dalian 17.01 275 P **Pn** **05 18 52.6 -0.9**
DL2 S **Sn** **05 22 05.3 +3.4**
DL2 pmax pmax
comp=Z,200nm,1.0s
DL2 pmax pmax
comp=Z,1μm,8.8s
DL2 LR LR
comp=Z,5μm,13.7s
DL2 LR LR
comp=Z,3μm,18.2s
DL2 LR LR
comp=Z,6μm,17.8s
ZEA Zeya 17.96 327 *e*P **Pn** **05 19 02.2 -3.0**
ZEA pmax pmax
comp=E,200nm,3.3s
ZEA pmax pmax
comp=N,300nm,2.5s
ZEA pmax pmax
comp=Z,500nm,2.4s
ZEA pmax pmax
comp=E,80nm,0.9s
ZEA pmax pmax
comp=N,120nm,0.7s
ZEA pmax pmax
comp=Z,160nm,0.8s
ZEA MLR MLR
comp=E,3μm,13.0s
ZEA MLR MLR
comp=N,4μm,15.0s
ZEA MLR MLR
comp=Z,4μm,13.0s
JOW Kunigami 18.03 230 P **Pn** **05 19 03.9 -2.3**
HIA Hailar 19.49 308 P **P** **05 19 19.9 -2.6**
HIA IAmb IAmb 05 19 24.5
comp=Z,109nm,0.8s
HIA Hailar 19.49 308 P **P** **05 19 19.9 -2.6**
HIA pmax pmax
comp=Z,109nm,0.8s
SSE Sheshan 20.10 252 P **P** **05 19 29.6 +0.4**
SSE S Sn 05 23 16.0 -0.8
SSE pmax pmax
comp=Z,34nm,1.0s
SSE LR LR
comp=Z,2μm,12.6s
SSE LR LR
comp=Z,2μm,13.1s
MA2 Magadan 20.49 10 P **P** **05 19 34.5 +1.2**
comp=Z,104nm,0.9s,baz=190,slow=8.7,SNR=28
MA2 LR LR 05 28 16.6
comp=Z,3μm,19.1s,baz=202,slow=39
comp=Z,104nm,0.9s
MA2 Magadan 20.49 10 P **P** **05 19 34.4 +1.1**
MA2 IAmb IAmb 05 19 35.6
comp=Z,126nm,0.9s
MA2 Magadan 20.49 10 P **P** **05 19 34.4 +1.1**
MA2 pmax pmax
comp=Z,126nm,0.9s
MA2 MLR MLR
comp=Z,2μm,19.0s
MA2 Magadan 20.49 10 P Pn 05 19 35.7 +0.2
XLT XiLinHaoTe 20.91 291 ⇑*i*P **P** **05 19 36.0 -2.0**
XLT pP Pn 05 19 40.3 -0.3
XLT sP pP 05 19 43.1 +0.2
XLT PP **PnPn** **05 19 56.0 -0.6**
XLT S **S** **05 23 25.3 -4.9**
XLT SS **SnSn** **05 23 57.5 +6.6**
XLT pmax pmax
comp=Z,300nm,1.1s
XLT pmax pmax
comp=Z,1μm,3.7s
XLT LR LR
comp=Z,5μm,15.1s
XLT LR LR
comp=Z,5μm,15.5s
BJI Beijing 21.02 280 P **P** **05 19 36.4 -2.7**
BJI S **S** **05 23 33.8 +1.5**
BJI PcP **PcP** **05 23 47.3 +1.7**
BJI pmax pmax
comp=Z,84nm,1.1s
BJI LR LR
comp=Z,800nm,13.5s
BJI LR LR
comp=Z,6μm,15.0s
BJI LR LR
comp=Z,7μm,15.4s
BJT Baijiatuau 21.03 280 P **P** **05 19 36.4 -2.8**
BJT IAmb IAmb 05 19 38.1
comp=Z,92nm,1.0s
BJT Baijiatuau 21.03 280 IAMs_20 IAMs_20 05 27 29.4
comp=Z,4μm,19.0s
BJT Baijiatuau 21.03 280 P **P** **05 19 36.4 -2.8**
BJT pmax pmax
comp=Z,92nm,1.0s
BJT MLR MLR
comp=Z,4μm,19.0s
TIA Tai'an 21.11 269 ⇑P **P** **05 19 37.4 -2.8**
TIA S **S** **05 23 31.3 -3.0**
TIA pmax pmax
comp=Z,190nm,1.0s
TIA pmax pmax
comp=Z,580nm,3.9s
TIA LR LR
comp=Z,6μm,14.3s
TIA LR LR
comp=Z,9μm,15.1s
TIA LR LR
comp=Z,13μm,13.7s
NJ2 Nanjing 21.37 257 ⇑*i*P **P** **05 19 40.5 -2.5**
NJ2 pP **pP** **05 19 43.4 -4.5**
NJ2 sP **sP** **05 19 45.6 -4.1**
NJ2 PP **PnPn** **05 20 02.5 -0.5**
NJ2 pmax pmax
comp=Z,35nm,1.0s
NJ2 pmax pmax
comp=Z,390nm,3.5s
NJ2 LR LR
comp=Z,5μm,14.2s
NJ2 LR LR
comp=Z,3μm,13.8s
NJ2 LR LR
comp=Z,5μm,16.6s
HNS HongShan 22.66 274 ⇑P **P** **05 19 52.9 -3.8**
HNS PP **PnPn** **05 20 23.6 +3.1**
HNS S **S** **05 24 01.1 -2.7**
HNS pmax pmax
comp=Z,47nm,1.3s
HNS LR LR
comp=Z,3μm,15.9s
HNS LR LR
comp=Z,10μm,15.9s
HNS LR LR
comp=Z,11μm,14.5s
YOJ Yonaguni jima 22.99 235 P **P** **05 19 58.5 -1.7**
YOJ IAmb IAmb 05 20 17.1
comp=Z,120nm,1.5s
YOJ Yonaguni jima 22.99 235 P **P** **05 19 58.5 -1.7**
YOJ pmax pmax
comp=Z,121nm,1.5s
YOJ Yonaguni jima 22.99 235 P **P** **05 20 03.7 +3.5**
TATO Taipei 23.61 238 P **P** **05 20 04.7 -1.8**
TATO Taipei 23.61 238 IAMs_20 IAMs_20 05 30 10.8
comp=Z,4μm,18.0s
TATO Taipei 23.61 238 P **P** **05 19 59.9 -6.6**
TATO P **P** **05 19 59.9 -6.6**

YHNB Yeheng 23.89 238 P **P** **05 20 07.0 -2.3**
YHNB IAmb IAmb 05 20 12.5
comp=Z,55nm,0.8s
YHNB IAMs_20 IAMs_20 05 30 37.4
comp=Z,3μm,18.0s
SEY Seymchan 23.95 10 P **P** **05 20 09.3 -0.1**
comp=Z,86nm,1.0s,baz=192,slow=6.9,SNR=57
comp=Z,86nm,1.0s
SEY Seymchan 23.95 10 *de*P **P** **05 20 10.1 +0.7**
SEY pmax pmax
comp=Z,166nm,1.3s
YAK Yakutsk 23.99 344 P **P** **05 20 09.0 -0.8**
comp=Z,142nm,0.9s,baz=338,slow=3.6,SNR=21
YAK LR LR 05 30 05.9
comp=Z,2μm,21.0s,baz=140,slow=38
comp=Z,142nm,0.9s
YAK Yakutsk 23.99 344 P **P** **05 20 08.1 -1.6**
YAK Yakutsk 23.99 344 *c i*P **P** **05 20 08.2 -1.6**
YAK *e**PP **pwP** **05 20 18.0 -0.2**
YAK *e*S **S** **05 24 25.1 -0.4**
YAK *e*SSS SSS 05 25 22.0
YAK pmax pmax
comp=Z,181nm,0.9s
YAK pmax pmax
comp=N,45nm,0.9s
YAK pmax pmax
comp=E,27nm,0.9s
YAK pmax pmax
comp=Z,248nm,1.4s
YAK pmax pmax
comp=N,151nm,1.3s
YAK pmax pmax
comp=E,181nm,1.8s
YAK smax smax
comp=N,690nm,2.5s
YAK smax smax
comp=E,250nm,1.7s
YAK MLR MLR
comp=Z,1μm,12.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK MLR MLR
comp=E,1μm,15.0s
NACB Ninganchiao 24.10 237 P **P** **05 20 07.7 -3.4**
NACB IAmb IAmb 05 20 17.6
comp=Z,67nm,0.8s
CIT Chita 24.13 311 *e*P **P** **05 20 09.6 -1.7**
CIT *e* 05 20 19.0
CIT *e* 05 20 40.8
CIT *e* 05 20 50.8
CIT *e*S **S** **05 24 32.8 +4.8**
CIT *e* 05 25 22.0
CIT pmax pmax
comp=Z,613nm,1.2s
TIY Taiyuan 24.33 275 *e*P **P** **05 20 14.8 +1.5**
TIY PP **PnPn** **05 20 42.9 -0.6**
TIY S **S** **05 24 34.0 +2.5**
TIY SS **SnSn** **05 25 19.4 +4.6**
TIY pmax pmax
comp=Z,59nm,0.8s
TIY pmax pmax
comp=Z,420nm,3.6s
TIY LR LR
comp=Z,4μm,15.0s
TIY LR LR
comp=Z,3μm,16.7s
TIY LR LR
comp=Z,5μm,17.0s
HHC Hu-ho-hao-te 24.40 283 *e*P **P** **05 20 11.8 -2.1**
HHC S **S** **05 24 25.3 -7.4**
HHC pmax pmax
comp=Z,66nm,1.0s
HHC pmax pmax
comp=Z,2μm,8.8s
HHC LR LR
comp=Z,7μm,14.1s
HHC LR LR
comp=Z,13μm,17.2s
HHC LR LR
comp=Z,19μm,16.8s
SHEM Shemya Is, Ala 24.66 48 LR LR 05 28 46.7
comp=Z,513nm,22.0s,baz=282,slow=34
SSLB Suanglung 24.79 237 P **P** **05 20 14.4 -3.0**
SSLB IAmb IAmb 05 20 32.4
comp=Z,115nm,1.1s
SSLB IAMs_20 IAMs_20 05 30 36.0
comp=Z,3μm,19.0s
YULB Yu-li 24.84 236 P **P** **05 20 15.3 -2.6**
YULB IAmb IAmb 05 20 27.5
comp=Z,69nm,0.9s
YULB IAMs_20 IAMs_20 05 31 37.5
comp=Z,3μm,18.0s
LYN LuoYang 25.25 268 ⇑P **P** **05 20 17.8 -3.7**
LYN pP pP 05 20 21.3 -5.4
LYN S **S** **05 24 44.6 -1.6**
LYN SS **SnSn** **05 25 36.1 -1.2**
LYN pmax pmax
comp=Z,140nm,1.1s
LYN pmax pmax
comp=Z,790nm,8.7s
LYN LR LR
comp=Z,6μm,13.1s
LYN LR LR
comp=Z,10μm,13.7s
LYN LR LR
comp=Z,11μm,13.7s
TPUB Ta-pu 25.34 237 P **P** **05 20 20.4 -2.0**
TPUB IAMs_20 IAMs_20 05 31 11.6
comp=Z,4μm,18.0s
TPUB Ta-pu 25.34 237 P **P** **05 20 23.8 +1.4**
TWG Pinlang 25.40 235 P **P** **05 20 20.5 -2.5**
WHN Wuhan 25.48 258 ⇑*i*P **P** **05 20 23.8 +0.2**
WHN pP **pP** **05 20 28.6 -0.2**
WHN S **S** **05 24 53.8 +4.0**
WHN pmax pmax
comp=Z,710nm,1.0s
WHN LR LR
comp=Z,7μm,13.1s
WHN LR LR
comp=Z,7μm,13.8s
WHN LR LR
comp=Z,10μm,12.5s
QZH Quanzhou 25.58 243 ⇑*i*P **P** **05 20 23.9 -0.7**
QZH S **S** **05 24 51.3 -0.2**
QZH pmax pmax
comp=Z,750nm,6.1s
QZH LR LR
comp=Z,3μm,12.5s
QZH LR LR
comp=Z,1μm,13.4s
QZH LR LR
comp=Z,3μm,12.3s
BTO Baotou 25.60 283 *e*P **P** **05 20 24.4 -0.4**
BTO S **S** **05 24 51.3 -0.5**
BTO LR LR
comp=Z,9μm,11.9s
BTO LR LR
comp=Z,27μm,15.7s
KNMB Chin-men Tao 26.03 242 P **P** **05 20 28.1 -0.6**
BOD Bodaibo 26.36 324 ⇑*i*P **P** **05 20 31.3 -0.1**
BOD pmax pmax
comp=Z,214nm,1.0s
ULN Ulaanbaatar 27.44 300 P **P** **05 20 41.6 +0.2**
ULN Ulaanbaatar 27.44 300 *c i*P **P** **05 20 41.9 +0.6**
ULN pmax pmax
comp=Z,122nm,1.1s
ULN Ulaanbaatar 27.44 300 P **P** **05 20 41.9 +0.6**
ULN P **P** **05 20 41.9 +0.6**
CNSH ChangSha 27.74 255 ⇑P **P** **05 20 43.9 -0.2**
CNSH pmax pmax
comp=Z,28nm,1.2s
CNSH LR LR
comp=Z,4μm,12.4s
CNSH LR LR
comp=Z,2μm,13.8s
CNSH LR LR
comp=Z,4μm,14.7s
SONM Songino Array 27.88 299 P **P** **05 20 46.1 +0.8**
comp=Z,59nm,1.1s,baz=103,slow=8.0,SNR=227
SONM LR LR 05 32 28.4
comp=Z,4μm,20.3s,baz=88,slow=38
comp=Z,59nm,1.1s
SONM Songino Array 27.88 299 P **P** **05 20 45.4 +0.1**
SONM Songino Array 27.88 299 P **P** **05 20 45.4 +0.1**
SONM pmax pmax
comp=Z,380nm,1.8s

XAN Xi'an 28.17 270 ⇑P **P** **05 20 46.8 -1.2**
XAN pP pP 05 20 51.9 -1.3
XAN PP **PnPn** **05 21 39.0 +3.0**
XAN S **S** **05 25 33.3 +0.8**
XAN sS sS 05 25 41.3 +1.4
XAN SS **SnSn** **05 26 50.9 +2.1**
XAN pmax pmax
comp=Z,100nm,1.3s
XAN pmax pmax
comp=Z,1μm,6.4s
XAN LR LR
comp=Z,4μm,13.7s
XAN LR LR
comp=Z,6μm,13.9s
XAN LR LR
comp=Z,7μm,15.1s
H11N2 WAKE ISLAND Hy 28.20 128 T T 05 50 17.6
baz=318,slow=75,SNR=839
H11N1 WAKE ISLAND Hy 28.21 128 T T 05 50 17.6
baz=318,slow=75,SNR=976
H11N3 WAKE ISLAND Hy 28.22 128 T T 05 50 17.6
baz=318,slow=75,SNR=1068
H11S1 WAKE ISLAND Hy 29.02 130 T T 05 51 20.2
baz=321,SNR=123
H11S3 WAKE ISLAND Hy 29.02 130 T T 05 51 16.5
baz=321,slow=74,SNR=111
H11S2 WAKE ISLAND Hy 29.04 130 T T 05 51 20.2
baz=321,slow=74,SNR=129
ENH Enshi 29.31 262 P **P** **05 20 56.9 -1.2**
ENH Enshi 29.31 262 IAMs_20 IAMs_20 05 33 13.0
comp=Z,3μm,18.0s
IRK Irkutsk 29.73 308 *e*P **P** **05 21 01.5 -0.1**
IRK pmax pmax
comp=Z,142nm,1.8s
ZAK Zakamensk 30.11 304 *e*P **P** **05 21 05.0 0.0**
ZAK pmax pmax
comp=Z,63nm,1.2s
BILL Bilibino 31.08 16 P **P** **05 21 13.4 +0.2**
BILL IAmb IAmb 05 21 26.5
comp=Z,44nm,1.2s
BILL Bilibino 31.08 16 *d i*P **P** **05 21 13.9 +0.7**
BILL *PP **pwP** **05 21 23.0 +1.1**
BILL *e*S **S** **05 26 16.9 -0.3**
BILL SS **SnSn** **05 27 57.0 -1.6**
BILL pmax pmax
comp=Z,29nm,1.1s
BILL MLR MLR
comp=Z,1μm,16.0s
GULI GuiLin 31.25 253 ⇓P **P** **05 21 15.6 +0.4**
GULI PP **PnPn** **05 22 20.9 +3.5**
GULI S **S** **05 26 21.6 +0.8**
GULI LR LR
comp=Z,2μm,14.1s
GULI LR LR
comp=Z,3μm,12.3s
GULI LR LR
comp=Z,4μm,14.1s
LZH Lanzhou 31.39 276 ⇑P **P** **05 21 16.8 +0.2**
LZH sP pwP 05 21 25.6 +0.5
LZH PP **PnPn** **05 22 14.9 -4.4**
LZH PcP **PcP** **05 24 11.8 +1.9**
LZH SS SS 05 28 07.4 -30
LZH pmax pmax
comp=Z,75nm,1.3s
LZH pmax pmax
comp=Z,500nm,5.2s
LZH LR LR
comp=Z,3μm,12.7s
LZH LR LR
comp=Z,8μm,13.1s
LZH LR LR
comp=Z,9μm,13.4s
MOY Mondy 31.67 307 *e*P **P** **05 21 19.4 +0.6**
MOY pmax pmax
comp=Z,100nm,1.9s
TIXI Tiksi 32.96 352 LR LR 05 36 04.0
comp=Z,2μm,18.4s,baz=180,slow=38
TIXI Tiksi 32.96 352 IAMs_20 IAMs_20 05 35 52.6
comp=Z,2μm,18.0s
GYA Guiyang 33.37 258 ⇑*i*P **P** **05 21 33.6 -0.4**
GYA sP pwP 05 21 42.3 -0.1
GYA PP **PnPn** **05 22 45.1 +0.3**
GYA S **S** **05 26 51.3 -2.8**
GYA sS pS 05 27 00.3 +0.1
GYA pmax pmax
comp=Z,140nm,1.1s
GYA pmax pmax
comp=Z,560nm,3.8s
GYA LR LR
comp=Z,3μm,15.0s
GYA LR LR
comp=Z,1μm,13.5s
GYA LR LR
comp=Z,2μm,19.0s
CD2 Chengdu 33.43 267 ⇑P **P** **05 21 33.8 -0.5**
CD2 PP **PnPn** **05 22 44.6 -0.8**
CD2 S **S** **05 26 55.0 +0.3**
CD2 pmax pmax
comp=Z,120nm,1.1s
CD2 pmax pmax
comp=Z,470nm,5.7s
CD2 LR LR
comp=Z,7μm,13.7s
CD2 LR LR
comp=Z,4μm,14.7s
CD2 LR LR
comp=Z,7μm,14.1s
GTA Gaotai 33.51 284 ⇑P **P** **05 21 35.8 +0.7**
GTA pP pP 05 21 41.0 +0.7
GTA sP pwP 05 21 44.8 +1.2
GTA PP **PP** **05 22 50.1 -0.8**
GTA PcP **PcP** **05 24 16.8 +1.2**
GTA S **S** **05 26 54.1 -1.9**
GTA ScS **ScS** **05 32 00.1 -0.1**
GTA pmax pmax
comp=Z,130nm,1.5s
GTA pmax pmax
comp=Z,100nm,5.0s
GTA LR LR
comp=Z,2μm,17.1s
GTA LR LR
comp=Z,7μm,17.4s
GTA LR LR
comp=Z,8μm,17.4s
NIKH Nikolski High 34.82 51 P **P** **05 21 44.3 -1.8**
baz=267
QIZ Qiongzhong 35.55 245 P **P** **05 21 53.3 +0.5**
QIZ sP **pP** **05 21 58.3 +0.3**
QIZ PP **PP** **05 23 14.3 +0.7**
QIZ S **S** **05 27 30.9 +3.3**
QIZ LR LR
comp=Z,3μm,14.1s
QIZ LR LR
comp=Z,2μm,14.1s
QIZ LR LR
comp=Z,3μm,13.5s
GAMB Gambell 35.63 32 IAMs_20 IAMs_20 05 39 09.5
comp=Z,1μm,18.0s
DAV Davao City (W) 36.21 211 IAMs_20 IAMs_20 05 33 39.5
comp=Z,2μm,19.0s
KMI Kunming 37.06 260 ⇑P **P** **05 22 06.0 +0.1**
KMI pP pP 05 22 10.6 -0.6
KMI PP **PnPn** **05 23 32.3 +1.6**
KMI S **S** **05 27 51.5 +0.4**
KMI SS **SnSn** **05 30 19.3 -5.9**
KMI pmax pmax
comp=Z,59nm,1.2s
KMI pmax pmax
comp=Z,620nm,4.4s
KMI LR LR
comp=Z,2μm,14.9s
KMI LR LR
comp=Z,3μm,16.1s
KMI LR LR
comp=Z,3μm,15.3s
PZH PanZhiHua 37.09 262 ⇑P **P** **05 22 05.9 -0.1**
PZH pP **pP** **05 22 10.5 -0.8**
PZH sP **pwP** **05 22 14.3 -0.2**
PZH PP **PP** **05 23 30.6 0.0**
PZH S **S** **05 27 50.6 -0.7**
PZH sS **sS** **05 28 03.8 +4.8**
PZH SS **SnSn** **05 30 17.6 -8.1**
PZH ScS **ScS** **05 32 19.9 -0.1**
PZH pmax pmax
comp=Z,60nm,1.3s

PZH pmax pmax
comp=Z,470nm,3.8s
PZH LR LR
comp=Z,3μm,13.3s
PZH LR LR
comp=Z,3μm,14.3s
PZH LR LR
comp=Z,5μm,13.8s
GOMU GeErMu 38.25 281 P **P** **05 22 17.0 +1.0**
GOMU sP pP 05 22 20.6 -0.7
GOMU PP **PP** **05 23 42.1 -1.3**
GOMU S **S** **05 28 11.1 +1.9**
GOMU ScS **ScS** **05 32 27.3 +0.5**
GOMU pmax pmax
comp=Z,170nm,1.1s
GOMU pmax pmax
comp=Z,750nm,4.9s
GOMU LR LR
comp=Z,2μm,14.5s
GOMU LR LR
comp=Z,2μm,13.8s
GOMU LR LR
comp=Z,2μm,13.2s
ANM Nome 38.51 33 IAMs_20 IAMs_20 05 39 21.7
comp=Z,1μm,19.0s
SDPT Sand Point 39.80 48 P **P** **05 22 25.8 -2.4**
baz=271
CHNA Chernabura Isl 40.32 48 P **P** **05 22 29.6 -2.9**
baz=272
CNBA Chernabura Isl 40.32 48 IAMs_20 IAMs_20 05 36 42.5
comp=Z,1μm,21.0s
DGZ Jazzator, Alta 40.32 304*c iP* **P** **05 22 34.1 +1.2**
DGZ pmax pmax
comp=Z,87nm,1.1s
RDOG Red Dog Mine 40.44 28 P **P** **05 22 32.2 -1.2**
baz=253
N16K Nishlik Lake 40.85 40 P **P** **05 22 36.3 -0.7**
baz=266
MYLDM Lahad Datu 41.08 220 P **P** **05 22 40.0 +0.7**
MYLDM IAmb IAmb 05 22 43.7
comp=Z,112nm,1.3s
O16K Kokwok River B 41.15 41 P **P** **05 22 39.0 -0.3**
baz=268
P16K Nushagak River 41.18 42 P **P** **05 22 39.3 -0.3**
baz=268
WMQ Urumqi 41.25 295⇑*iP* **P** **05 22 41.6 +1.1**
WMQ pP pP 05 22 46.5 +0.6
WMQ S **S** **05 28 55.0 +1.6**
WMQ pmax pmax
comp=Z,100nm,1.3s
WMQ pmax pmax
comp=Z,570nm,3.8s
WMQ LR LR
comp=Z,4μm,11.9s
WMQ LR LR
comp=Z,2μm,12.5s
WMQ LR LR
comp=Z,1μm,13.3s
R16K Pilot Point 41.39 44 P **P** **05 22 41.3 0.0**
baz=270
DLV T Lat 41.48 238 P **P** **05 22 45.6 +2.8**
comp=Z,47nm,1.1s
ZALV Zalesovo Beam 41.49 310 P **P** **05 22 42.4 +0.2**
comp=Z,21nm,0.5s,baz=90,slow=7.8,SNR=111
comp=Z,21nm,0.5s
ZALV Zalesovo Beam 41.49 310 P **P** **05 22 41.8 -0.4**
ZALV Zalesovo Beam 41.49 310 P **P** **05 22 41.8 -0.4**
KKM Kota Kinabalu 41.52 224 IAMs_20 IAMs_20 05 42 17.2
comp=Z,961nm,19.0s
O17K Koliganek Bris 41.66 41 P **P** **05 22 43.2 -0.3**
baz=268
CRAI Chiangrai 41.66 255 P **P** **05 22 44.1 0.0**
NRIK Noril'sk 41.67 334 P **P** **05 22 43.7 +0.2**
comp=Z,21nm,0.9s,baz=109,slow=8.5,SNR=19
NRIK LR LR 05 41 47.3
comp=Z,2μm,18.0s,baz=103,slow=39
comp=Z,21nm,0.9s
NRIK Noril'sk 41.67 334 P **P** **05 22 43.6 0.0**
NRIK IAmb IAmb 05 23 04.6
comp=Z,34nm,0.8s
NRIK Noril'sk 41.67 334*c iP* **P** **05 22 43.2 -0.3**
NRIK pmax pmax
comp=Z,46nm,1.5s
SIJI Sorong 41.84 199 LR LR 05 37 55.6
comp=Z,1μm,19.2s,baz=69,slow=33
Q16K King Salmon 41.87 43 P **P** **05 22 45.3 0.0**
baz=270
P17K Kvichak River 41.98 42 P **P** **05 22 45.6 -0.5**
baz=270
GCSA Galena City Sc 42.13 33 P **P** **05 22 46.9 -0.4**
baz=263
N18K Kilae Creek 42.28 40 P **P** **05 22 49.7 +1.0**
N18K Kilae Creek 42.28 40 P **P** **05 22 48.4 -0.3**
baz=268
TTA Tatalina 42.34 36 P **P** **05 22 48.7 -0.5**
baz=266
ZSN Zaisan 42.38 301*c iP* **P** **05 22 50.6 +1.0**
ZSN *i* S **S** **05 29 10.8 +0.9**
ZSN pmax pmax
comp=Z,97nm,1.9s
ZSN Zaisan 42.38 301⇑*iP* **P** **05 22 50.6 +1.0**
comp=Z,97nm,1.9s,baz=301
ZSN *i* S **S** **05 29 10.8 +0.9**
baz=301
SVW2 Sparrevohn 42.45 39 P **P** **05 22 51.4 +1.4**
CHIR Chirikof Islan 42.53 47 P **P** **05 22 49.5 -1.2**
baz=274
P18K Big Mountain, 42.60 41 P **P** **05 22 52.3 +1.0**
P18K Big Mountain, 42.60 41 P **P** **05 22 50.6 -0.7**
baz=270
O18K Koktuh Hills 42.61 41 P **P** **05 22 52.5 +1.1**
O18K Koktuh Hills 42.61 41 P **P** **05 22 51.0 -0.4**
baz=270
L19K White Mountain 42.83 37 P **P** **05 22 52.1 -1.1**
baz=268
N19K Bonanza Creek 42.98 39 P **P** **05 22 54.4 0.0**
baz=270
M19K Big River Lodg 43.04 38 P **P** **05 22 54.1 -0.7**
baz=269
O19K Port Alsworth 43.06 40 P **P** **05 22 53.6 -1.3**
baz=270
GTOI Gorontalo 43.10 211 P **P** **05 22 55.0 -0.7**
comp=Z,238nmcomp=Z,23nm,1.3s
K20K Telida 43.24 36 P **P** **05 22 57.3 +0.9**
K20K Telida 43.24 36 P **P** **05 22 55.6 -0.8**
baz=267
J20K Nowinta River 43.26 34 P **P** **05 22 57.7 +1.2**
J20K Nowinta River 43.26 34 P **P** **05 22 55.7 -0.8**
baz=266,SNR=9.3
SII Sitkinak Islan 43.28 46 P **P** **05 22 55.0 -1.8**
baz=274
L20K Farewell, AK 43.30 37 P **P** **05 22 56.1 -0.8**
baz=268
Q19K Cape Douglas, 43.43 42 P **P** **05 22 57.1 -0.9**
baz=272
IMAR Indian Mountai 43.57 32 P **P** **05 23 00.2 +1.2**
FAKI Fak Fak 43.59 197 IAMs_20 IAMs_20 05 38 41.9
comp=Z,1μm,19.0s
CHTO Chiang Mai 43.59 255 P **P** **05 22 59.0 -0.7**
CHTO IAmb IAmb 05 23 07.7
comp=Z,26nm,0.8s
CHTO Chiang Mai 43.59 255 P **P** **05 22 59.0 -0.7**
CHTO pmax pmax
comp=Z,26nm,0.8s
CHTO MLR MLR
comp=Z,2μm,18.0s
CHTO Chiang Mai 43.59 255 P **P** **05 22 57.7 -2.1**
CHTO P **P** **05 22 57.7 -2.1**
CHTO S **S** **05 29 24.1 -4.1**
CHTO S **S** **05 29 24.1 -4.1**
CHTO Chiang Mai 43.59 255 P **P** **05 23 00.6 +0.9**
P19K Oil Pt 43.62 41 P **P** **05 22 59.3 -0.2**
baz=272
M20K Styx River 43.64 38 P **P** **05 23 00.3 +0.6**
M20K IAMs_20 IAMs_20 05 43 43.1
comp=Z,874nm,19.0s
M20K Styx River 43.64 38 P **P** **05 22 59.2 -0.5**
baz=270
MRSI Marisa 43.67 212 P **P** **05 23 01.3 +0.9**
comp=Z,1μmcomp=Z,52nm,1.4s
LSA Lhasa 43.70 274 P **P** **05 23 01.2 +0.1**
LSA Lhasa 43.70 274 P **P** **05 23 02.3 +1.2**
LSA S **S** **05 29 26.8 -3.8**
LSA pmax pmax
comp=Z,46nm,1.3s
LSA LR LR
comp=Z,2μm,12.8s
LSA LR LR
comp=Z,2μm,15.7s
LSA LR LR
comp=Z,2μm,17.1s
LSA Lhasa 43.70 274 P **P** **05 23 01.2 +0.1**
LSA pmax pmax
comp=Z,223nm,1.9s
LSA MLR MLR
comp=Z,3μm,18.0s
LSA Lhasa 43.70 274 P **P** **05 23 01.8 +0.7**
G21K Allakaket 43.72 31 P **P** **05 22 59.3 -0.9**
baz=264
OHAK Old Harbor 43.72 45 P **P** **05 23 00.8 +0.5**
baz=274
F21K Alatna River 43.80 30 P **P** **05 22 58.5 -2.4**
baz=264
CM31 Chiang Mai Arr 43.81 254 P **P** **05 23 00.7 -0.8**
CMAR Chiang Mai Arr 43.81 254 P **P** **05 23 01.9 +0.5**
comp=Z,9.0nm,0.7s,baz=45,slow=7.3,SNR=48
CMAR LR LR 05 43 10.7
comp=Z,980nm,19.0s,baz=50,slow=39
comp=Z,9.0nm,0.7s
CMAR Chiang Mai Arr 43.81 254 P **P** **05 23 01.4 -0.1**
CMAR Chiang Mai Arr 43.81 254*i* P **P** **05 23 02.0 +0.5**
CMAR pmax pmax
comp=Z,9.0nm,0.7s
O20K Slope Mountain 43.91 40 P **P** **05 22 59.1 -2.8**
baz=272
H21K Melozitna Rive 43.93 32 P **P** **05 23 03.1 +1.2**
H21K Melozitna Rive 43.93 32 P **P** **05 22 59.8 -2.2**
baz=266,SNR=12
CHUM Lake Minchumin 44.05 35 P **P** **05 23 01.0 -1.9**
baz=268
KDAK Kodiak Island 44.05 44 P **P** **05 23 02.3 -0.7**
baz=274
PPLA Purkeypile 44.08 36 P **P** **05 23 04.5 +1.2**
PPLA IAmb IAmb 05 24 01.5
comp=Z,35nm,1.0s
PPLA Purkeypile 44.08 36 P **P** **05 23 02.3 -1.1**
baz=269
Q20K Shuyak Island 44.10 43 P **P** **05 23 02.1 -1.2**
baz=274
CAST Castle Rocks 44.14 36 P **P** **05 23 03.3 -0.4**
baz=269
SPU Mount Spurr 44.16 39 P **P** **05 23 05.2 +1.4**
MK31 Makanchi Array 44.24 300 P **P** **05 23 04.2 -0.5**
MK31 IAmb IAmb 05 23 06.2
comp=Z,71nm,1.1s
MK31 Makanchi Array 44.24 300*i* P **P** **05 23 04.6 -0.1**
MK31 pmax pmax
comp=Z,108nm,1.0s
MKAR Makanchi Array 44.24 300 P **P** **05 23 05.0 +0.3**
comp=Z,45nm,0.8s,baz=83,slow=9.3,SNR=271
MKAR LR LR 05 42 16.9
comp=Z,2μm,22.0s,baz=85,slow=37
comp=Z,45nm,0.8s
MKAR Makanchi Array 44.24 300 P **P** **05 23 04.5 -0.2**
I21K Tanana 44.24 33 P **P** **05 23 02.8 -1.6**
baz=267
F22K John River 44.33 30 P **P** **05 23 04.3 -0.8**
baz=265
KRVT Keravat (AS076 44.39 168 LR LR 05 41 45.7
comp=Z,277nm,18.2s,baz=127,slow=36
SKT Skwentna 44.39 38 P **P** **05 23 04.2 -1.5**
baz=271
MAKZ Makanchi 44.44 300 P **P** **05 23 06.4 +0.1**
SANI Sanana 44.49 206 P **P** **05 23 06.8 -0.1**
comp=Z,57nm,1.2s
H22K Ishilitna Cre 44.53 32 P **P** **05 23 06.3 -0.4**
baz=267,SNR=6.3
G22K Bettles 44.54 31 P **P** **05 23 07.5 +0.7**
baz=266
BPAW Bear Paw Mtn. 44.64 35 P **P** **05 23 09.5 +1.9**
BPAW Bear Paw Mtn. 44.64 35 P **P** **05 23 06.7 -1.0**
baz=269,SNR=7.1
KTH Kantishna Hill 44.66 35 P **P** **05 23 09.7 +1.8**
KTH IAmb IAmb 05 23 37.2
comp=Z,42nm,1.0s
MPSI Mapaga 44.67 215 P **P** **05 23 08.6 +0.2**
comp=Z,23nm,1.0s
MLY Manley 44.76 33 P **P** **05 23 10.5 +1.9**
MLY Manley 44.76 33 P **P** **05 23 06.4 -2.3**
baz=268,SNR=18
SEM Semipalatinsk 44.77 306*ce* P **P** **05 23 08.6 -0.5**
SEM pmax pmax
comp=Z,32nm,1.3s
SEM Semipalatinsk 44.77 306⇑*eP* **P** **05 23 08.7 -0.5**
comp=Z,32nm,1.3s,baz=306
SEM LR LR 05 42 21.0
baz=306
SUA Susitna One 44.78 38 P **P** **05 23 07.0 -1.9**
baz=272
TRF Thorofare Moun 44.95 36 IAMs_20 IAMs_20 05 43 33.8
comp=Z,708nm,18.0s
TRF Thorofare Moun 44.95 36 P **P** **05 23 08.8 -1.4**
baz=270
CUT Chulitna 44.98 37 IAMs_20 IAMs_20 05 45 37.6
comp=Z,782nm,19.0s
D23K Nanushuk River 45.02 28 P **P** **05 23 09.0 -1.6**
baz=265
FIS Fire Island 45.05 39 IAMs_20 IAMs_20 05 44 44.5
comp=Z,849nm,18.0s
APSI Ampana 45.05 212 P **P** **05 23 11.3 -0.1**
comp=Z,600nmcomp=Z,46nm,1.0s
G23K Bananza Creek 45.12 31 P **P** **05 23 11.0 -0.4**
baz=267
C23K Itkillik River 45.14 27 P **P** **05 23 10.4 -1.1**
baz=264,SNR=14
H23K Yukon River 45.28 32 P **P** **05 23 14.4 +1.6**
H23K IAmb IAmb 05 23 26.8
comp=Z,30nm,0.9s
H23K Yukon River 45.28 32 P **P** **05 23 11.3 -1.5**
baz=269,SNR=16
RC01 Rabbit Creek A 45.28 39 P **P** **05 23 13.5 +0.7**
RC01 IAmb IAmb 05 23 18.1
comp=Z,21nm,0.9s
RC01 IAMs_20 IAMs_20 05 45 07.7
comp=Z,798nm,18.0s
RC01 Rabbit Creek A 45.28 39 P **P** **05 23 11.5 -1.2**
baz=273
BWN Browne 45.31 35 P **P** **05 23 15.0 +2.1**
BWN IAMs_20 IAMs_20 05 43 52.2
comp=Z,821nm,18.0s
O22K Cooper Landing 45.33 40 IAMs_20 IAMs_20 05 45 40.9
comp=Z,912nm,18.0s
I23K Minto, Yukon-K 45.35 33 P **P** **05 23 14.1 +0.8**
I23K IAmb IAmb 05 23 40.6
comp=Z,33nm,1.2s
I23K Minto, Yukon-K 45.35 33 P **P** **05 23 13.5 +0.3**
baz=270,SNR=6.0
TOLK Toolik Lake Re 45.40 28 IAMs_20 IAMs_20 05 45 53.7
comp=Z,1μm,18.0s
TOLK Toolik Lake Re 45.40 28 P **P** **05 23 10.7 -3.0**
baz=266
NEA2 Nenana 45.48 34 P **P** **05 23 14.9 +0.6**
NEA2 IAmb IAmb 05 23 38.6
comp=Z,26nm,0.8s
NEA2 Nenana 45.48 34 P **P** **05 23 12.5 -1.7**
baz=270,SNR=11
SEW Seward 45.49 40 P **P** **05 23 12.2 -2.2**
baz=274
PMR Palmer 45.55 38 P **P** **05 23 13.2 -1.6**
baz=273,SNR=6.8
MCK McKinley 45.55 35 P **P** **05 23 15.6 +0.7**
MCK IAmb IAmb 05 24 10.2
comp=Z,47nm,1.4s
MCK McKinley 45.55 35 P **P** **05 23 15.6 +0.7**
MCK pmax pmax
comp=Z,47nm,1.4s
MCK MLR MLR
comp=Z,600nm,18.0s
MCK McKinley 45.55 35 P **P** **05 23 13.2 -1.7**
baz=271
RND Reindeer 45.59 36 P **P** **05 23 15.7 +0.4**
RND IAmb IAmb 05 24 08.3
comp=Z,22nm,1.0s
RND Reindeer 45.59 36 P **P** **05 23 15.7 +0.4**
RND pmax pmax
comp=Z,22nm,1.0s
RND MLR MLR
comp=Z,600nm,20.0s
GHO Glory Hole Cre 45.63 38 P **P** **05 23 16.1 +0.5**
GHO IAmb IAmb 05 23 44.9
comp=Z,50nm,1.1s
D24K Happy Valley 45.71 28 P **P** **05 23 14.4 -1.6**
baz=266
KURK Kurchatov 45.72 306 P **P** **05 23 16.4 0.0**
KURK pmax pmax
comp=Z,249nm,1.3s
KURK Kurchatov 45.72 306 P **P** **05 23 16.1 -0.3**
WAT1 Susitna Watana 45.75 36 P **P** **05 23 15.0 -1.5**
baz=273
E24K Your Creek 45.77 29 P **P** **05 23 15.1 -1.5**
baz=268
C24K Franklin Bluff 45.79 27 P **P** **05 23 15.8 -0.8**
baz=266
KURBB Kurchatov Arra 45.80 306 P **P** **05 23 17.2 +0.2**
comp=Z,93nm,0.9s,baz=81,slow=8.4,SNR=440
KURBB LR LR 05 42 58.0
comp=Z,617nm,18.9s,baz=52,slow=37
comp=Z,93nm,0.9s
KURBB Kurchatov Arra 45.80 306 P **P** **05 23 16.7 -0.3**
MDM Murphy Dome 45.83 33 P **P** **05 23 18.6 +1.5**
MDM IAmb IAmb 05 23 41.8
comp=Z,26nm,0.9s
KNK Knik Glacier 45.88 38 P **P** **05 23 18.4 +0.9**
KNK IAmb IAmb 05 23 42.2
comp=Z,33nm,1.1s
KNK Knik Glacier 45.88 38 P **P** **05 23 16.2 -1.3**
baz=274
WRH Wood River Hil 45.90 34 P **P** **05 23 18.4 +0.8**
SML Sawmill 45.91 38 P **P** **05 23 18.8 +1.0**
SML IAmb IAmb 05 23 47.4
comp=Z,44nm,1.0s
SML Sawmill 45.91 38 P **P** **05 23 17.3 -0.6**
baz=274
H24K Noodor Dome 45.97 32 P **P** **05 23 19.8 +1.6**
H24K IAmb IAmb 05 23 36.0
comp=Z,22nm,0.9s
H24K IAMs_20 IAMs_20 05 45 57.8
comp=Z,742nm,18.0s
H24K Noodor Dome 45.97 32 P **P** **05 23 17.2 -1.0**
baz=270,SNR=5.8
F24K Squaw Lake 45.98 30 P **P** **05 23 18.1 -0.1**
baz=269
PWL Port Wells 45.98 39 P **P** **05 23 19.1 +0.7**
PWL IAMs_20 IAMs_20 05 45 15.2
comp=Z,807nm,20.0s
PWL Port Wells 45.98 39 P **P** **05 23 18.9 +0.5**
baz=275,SNR=7.6
COLA College 45.99 34⇑*eP* **P** **05 23 19.4 +1.1**
COLA pmax pmax
comp=Z,9.0nm,1.0s
G24K Hadweenzic Riv 46.13 31 P **P** **05 23 20.0 +0.6**
baz=270,SNR=9.3
WAT6 Susitna Watana 46.14 37 P **P** **05 23 20.1 +0.4**
baz=274
POKR Poker Plat Res 46.16 33 P **P** **05 23 19.2 -0.5**
baz=271
M23K Glacier View 46.20 38 P **P** **05 23 18.4 -1.7**
baz=274
DHY Denali Highway 46.28 36 P **P** **05 23 21.8 +1.0**
DHY IAmb IAmb 05 24 03.9
comp=Z,28nm,1.1s
DHY Denali Highway 46.28 36 P **P** **05 23 19.7 -1.1**
baz=273
SCM Sheep Creek Mo 46.39 38 P **P** **05 23 20.9 -0.7**
baz=275,SNR=5.6
HDA Harding Lake 46.40 34 P **P** **05 23 20.5 -1.0**
baz=272,SNR=5.7
IL31 46.41 34 P **P** **05 23 22.0 +0.4**
IL31 IAmb IAmb 05 23 36.1
comp=Z,30nm,0.8s
ILAR Eielson Array 46.41 34 P **P** **05 23 22.2 +0.6**
comp=Z,8.0nm,0.9s,baz=267,slow=6.8,SNR=33
comp=Z,8.0nm,0.9s
ILAR Eielson Array 46.41 34 P **P** **05 23 22.0 +0.4**
ILAR Eielson Array 46.41 34 P **P** **05 23 22.0 +0.4**
P23K Montague Islan 46.53 40 P **P** **05 23 21.6 -1.0**
baz=276
GLI Glacier Island 46.59 39 P **P** **05 23 22.0 -1.0**
baz=276
D25K Kavik River 46.59 27 P **P** **05 23 23.2 +0.2**
baz=268,SNR=16
SBUM Sibu 46.68 226 P **P** **05 23 24.8 +0.5**
SBUM IAMs_20 IAMs_20 05 44 34.1
comp=Z,902nm,18.0s
H25K Birch Creek 46.80 32 P **P** **05 23 24.5 -0.1**
baz=272
F25K Christian Rive 46.84 30 P **P** **05 23 25.2 +0.2**
baz=271
E25K Arctic Village 46.87 29 P **P** **05 23 25.4 +0.2**
baz=270
FID Port Fidalgo 46.90 39 IAMs_20 IAMs_20 05 45 30.9
comp=Z,922nm,19.0s
M24K Tolsona, Glenn 46.91 37 P **P** **05 23 26.4 +0.8**
M24K Tolsona, Glenn 46.91 37 P **P** **05 23 25.0 -0.6**
baz=275
HIN Hinchinbrook I 46.93 40 IAMs_20 IAMs_20 05 46 12.2
comp=Z,1μm,18.0s
K24K Donnelly Dome 46.95 35 P **P** **05 23 26.4 +0.5**
baz=274
PRP Porcupine Dome 46.95 33 P **P** **05 23 26.7 +0.6**
PRP IAmb IAmb 05 23 40.3
comp=Z,26nm,0.8s
PRP IAMs_20 IAMs_20 05 46 54.7
comp=Z,655nm,18.0s
PRP Porcupine Dome 46.95 33 P **P** **05 23 25.1 -0.9**
baz=273
FYU Fort Yukon 47.03 31 P **P** **05 23 27.8 +1.4**
J25K Salcha River, 47.07 34 P **P** **05 23 27.7 +0.9**
baz=274
KLU Klutina 47.09 38 P **P** **05 23 25.4 -1.6**
baz=276,SNR=5.8
C26K Camden Bay 47.11 27 P **P** **05 23 26.6 -0.4**
baz=269
PAX Paxson 47.15 36 P **P** **05 23 26.9 -0.6**
baz=275
SHLS Shalkode 47.18 296*c iP* **P** **05 23 25.9 -2.2**
SHLS *eS* **S** **05 30 15.4 -4.4**
SHLS pmax pmax
comp=Z,42nm,1.7s
SHLS Shalkode 47.18 296⇑*iP* **P** **05 23 25.9 -2.2**
comp=Z,42nm,1.7s,baz=296
SHLS *eS* **S** **05 30 15.5 -4.4**
baz=296
BMAR Burnt Mountain 47.25 30 P **P** **05 23 29.9 +1.6**
EYAK Cordova Ski Ar 47.28 39 P **P** **05 23 29.6 +1.2**
EYAK IAmb IAmb 05 24 38.7
comp=Z,18nm,1.0s
EYAK Cordova Ski Ar 47.28 39 P **P** **05 23 28.2 -0.2**
baz=277,SNR=5.6
TDK Taldyqorghan 47.33 299*eP* **P** **05 23 29.5 +0.4**
TDK *eS* **S** **05 30 21.9 +0.2**
TDK MLR MLR
comp=Z,2μm,15.0s
TDK Taldyqorghan 47.33 299*eP* **P** **05 23 29.5 +0.4**
baz=299
TDK *eS* **S** **05 30 22.0 +0.2**
baz=299
TDK LR LR 05 43 22.2
comp=Z,2μm,14.9s,baz=299
HARP HAARP 47.35 37 P **P** **05 23 28.5 -0.5**
baz=276
RIDG Independent Ri 47.36 35 P **P** **05 23 31.0 +1.8**
RIDG IAmb IAmb 05 23 46.3
comp=Z,18nm,1.0s
RIDG Independent Ri 47.36 35 P **P** **05 23 28.6 -0.6**
baz=275
F26K Sheenjek River 47.41 30 P **P** **05 23 29.3 -0.2**
baz=272,SNR=20
TAPN Taplejung 47.48 273*eP* **P** **05 23 31.3 +0.4**
comp=Z,270nm,1.2s
UZB Uzynbulak 47.49 296*i* P **P** **05 23 30.5 0.0**
UZB pmax pmax
comp=Z,27nm,1.8s
UZB Uzynbulak 47.49 296*i* P **P** **05 23 30.6 0.0**
comp=Z,28nm,1.8s,baz=296
C27K Jago River 47.53 27 P **P** **05 23 29.3 -0.9**
baz=271,SNR=12
G26K Porcupine Rive 47.58 31 P **P** **05 23 29.5 -1.2**
baz=273,SNR=14
KPKS Kokpek 47.62 297*c iP* **P** **05 23 31.7 +0.2**
KPKS *eS* **S** **05 30 26.5 +0.5**
KPKS pmax pmax
comp=Z,21nm,1.1s
KPKS Kokpek 47.62 297⇑*iP* **P** **05 23 31.7 +0.2**
comp=Z,21nm,1.1s,baz=297
KPKS *eS* **S** **05 30 26.6 +0.5**
baz=297
N25K Chitina, Valde 47.70 38 P **P** **05 23 30.7 -1.2**
baz=277
SCRK Sand Creek 47.72 35 P **P** **05 23 32.6 +0.6**

SCRK IAmb IAmb 05 23 46.2
comp=Z,21nm,0.8s
SCRK Sand Creek 47.72 35 P **P** **05 23 30.9 -1.1**
baz=276,SNR=19
BMRM Bremner River 47.78 39 P **P** **05 23 31.4 -1.0**
baz=278
RAGM Ragged Mountai 47.83 40 IAMs_20 IAMs_20 05 47 37.0
comp=Z,1µm,18.0s
J26L Joseph Creek 47.85 34 P **P** **05 23 32.4 -0.6**
baz=275
ZHN Zhinishke 47.89 297 *e*P **P** **05 23 33.6 0.0**
ZHN pmax pmax
comp=Z,23nm,1.5s
ZHN Zhinishke 47.89 297 *e*P **P** **05 23 33.7 0.0**
comp=Z,23nm,1.5s,baz=296
SATY Saty 47.95 296*c i*P **P** **05 23 34.6 +0.6**
SATY pmax pmax
comp=Z,32nm,1.3s
SATY Saty 47.95 296⇑ *i*P **P** **05 23 34.6 +0.6**
comp=Z,32nm,1.3s,baz=296
I26K Coal Creek Min 47.95 33 P **P** **05 23 34.0 +0.4**
I26K IAMs_20 IAMs_20 05 47 36.3
comp=Z,737nm,19.0s
I26K Coal Creek Min 47.95 33 P **P** **05 23 32.7 -0.9**
baz=275
ARXS Arharly 47.97 298 *e*P **P** **05 23 34.5 +0.3**
ODAN Odare 47.98 272 *e*P **P** **05 23 34.1 -0.5**
comp=Z,115nm,1.6s
KAIM Kayak Island 48.02 40 P **P** **05 23 33.2 -1.1**
baz=279
HMT Hamilton 48.04 40 IAMs_20 IAMs_20 05 47 42.6
comp=Z,1µm,18.0s
GLB Gilahina Butte 48.10 38 P **P** **05 23 36.3 +1.4**
L26K Log Cabin Wild 48.11 36 P **P** **05 23 36.2 +1.3**
L26K IAmb IAmb 05 23 51.8
comp=Z,31nm,1.0s
L26K IAMs_20 IAMs_20 05 45 32.4
comp=Z,846nm,18.0s
L26K Log Cabin Wild 48.11 36 P **P** **05 23 35.0 +0.1**
baz=277
MTKI Muara Teweh, K 48.15 220 P **P** **05 23 35.9 +0.2**
BERG Berg Lake 48.31 39 IAMs_20 IAMs_20 05 46 28.6
comp=Z,964nm,20.0s
SUCK Suckling Hills 48.32 40 IAMs_20 IAMs_20 05 47 35.0
comp=Z,1µm,18.0s
E27K Coleen River 48.35 29 P **P** **05 23 35.8 -0.9**
baz=274,SNR=9.1
M26K Nabesna, AK 48.35 37 P **P** **05 23 38.5 +1.7**
M26K IAmb IAmb 05 24 31.7
comp=Z,36nm,1.2s
M26K IAMs_20 IAMs_20 05 45 45.7
comp=Z,730nm,19.0s
M26K Nabesna, AK 48.35 37 P **P** **05 23 36.4 -0.4**
baz=278,SNR=18
G27K Doyon Strip 48.43 31 P **P** **05 23 37.1 -0.2**
baz=275
MCARA McCarthy VSAT 48.48 38 P **P** **05 23 38.0 +0.2**
baz=279,SNR=5.7
JIRN Jiri 48.50 274 *e*P **P** **05 23 39.1 +0.3**
H27K Steamboat Moun 48.54 31 P **P** **05 23 38.3 +0.1**
baz=276
RAMN Ramite 48.54 273 *e*P **P** **05 23 39.2 +0.2**
comp=Z,369nm,1.2s
K27K Chicken 48.55 34 P **P** **05 23 38.9 +0.7**
K27K IAmb IAmb 05 23 56.5
comp=Z,22nm,0.9s
K27K Chicken 48.55 34 P **P** **05 23 37.7 -0.6**
baz=277
KSM Kuching 48.55 227 P **P** **05 23 39.0 +0.2**
KSM Kuching 48.55 227 P **P** **05 23 40.1 +1.3**
comp=Z,40nm,1.4s
I27K Kandik River 48.57 32 P **P** **05 23 39.6 +1.2**
baz=276
GUN Gumba 48.62 275 *e*P **P** **05 23 40.3 +0.6**
TGL Tana Glacier 48.67 39 P **P** **05 23 40.8 +1.5**
TGL IAmb IAmb 05 24 29.2
comp=Z,24nm,1.1s
WAX Waxell Ridge 48.71 39 IAMs_20 IAMs_20 05 45 14.4
comp=Z,672nm,18.0s
SNH Sunshine Point 48.77 40 IAMs_20 IAMs_20 05 46 54.8
comp=Z,1µm,19.0s
L27K Beaver Creek, 48.79 36 IAMs_20 IAMs_20 05 46 01.4
comp=Z,666nm,18.0s
L27K Beaver Creek, 48.79 36 P **P** **05 23 40.3 +0.1**
baz=278,SNR=14
BCAR Beaver Creek A 48.81 36 P **P** **05 23 41.9 +1.6**
MDOK Medeo 48.85 297 *i*P **P** **05 23 41.7 +0.7**
MDOK *e*S **S** **05 30 44.0 +0.5**
MDOK MLR MLR
comp=Z,2µm,16.0s
MDOK Medeo 48.85 297 *i*P **P** **05 23 41.7 +0.7**
baz=297
MDOK *e*S **S** **05 30 44.0 +0.5**
baz=297
MDOK LR LR 05 44 22.4
comp=Z,2µm,15.7s,baz=297
EGAK Eagle 48.85 33 P **P** **05 23 41.2 +0.7**
EGAK IAmb IAmb 05 23 55.0
comp=Z,27nm,0.9s
EGAK Eagle 48.85 33 P **P** **05 23 39.8 -0.8**
baz=277,SNR=7.2
M27K Edge Creek, AK 48.87 37 P **P** **05 23 40.1 -0.8**
baz=279
AAA Alma-Ata 48.93 297*c i*P **P** **05 23 42.3 +0.8**
AAA Alma-Ata 48.93 297⇑ *i*P **P** **05 23 42.3 +0.8**
baz=297
ISLE Juniper Island 48.94 39 IAMs_20 IAMs_20 05 44 21.3
comp=Z,662nm,18.0s
STKI Sintang 49.07 225 P **P** **05 23 42.3 -0.5**
KUU Kurty 49.09 298*c i*P **P** **05 23 42.5 -0.2**
KUU pmax pmax
comp=Z,59nm,0.9s
KUU MLR MLR
comp=Z,2µm,15.0s
KUU Kurty 49.09 298⇑ *i*P **P** **05 23 42.5 -0.2**
comp=Z,59nm,0.9s,baz=298
KUU LR LR 05 44 54.8
comp=Z,2µm,15.1s,baz=298
KKN Kakani 49.14 275 *e*P **P** **05 23 43.0 -0.5**
comp=Z,122nm,1.0s
PKI Pulchoki 49.15 274 *e*P **P** **05 23 43.7 0.0**
comp=Z,274nm,1.5s
PKIN Phulchoki 49.16 274 *e*P **P** **05 23 43.7 0.0**
comp=Z,221nm,1.5s
MESA MESA 49.20 40 IAMs_20 IAMs_20 05 47 08.3
comp=Z,869nm,19.0s
YAH Yahtse 49.27 39 IAMs_20 IAMs_20 05 47 23.0
comp=Z,845nm,20.0s
BVCY Beaver Creek 49.33 36 P **P** **05 23 44.0 -0.3**
baz=280
CTG Chitna Glacier 49.36 38 P **P** **05 23 44.4 -0.2**
baz=280
CTGM Chitina Glacie 49.36 38 P **P** **05 23 44.8 +0.1**
CTGM IAmb IAmb 05 24 21.4
comp=Z,18nm,0.8s
CTGM IAMs_20 IAMs_20 05 46 11.4
comp=Z,616nm,18.0s
DMN Daman 49.36 275 *e*P **P** **05 23 45.4 +0.1**
comp=Z,289nm,1.5s
GKN Gorkha 49.53 275 *e*P **P** **05 23 46.6 +0.2**
comp=Z,376nm,1.4s
KAPI Kappang 49.55 212 P **P** **05 23 47.0 +0.6**
KAPI LR LR 05 46 03.7
comp=Z,8.6nm,0.8s,baz=14,slow=2.6,SNR=5.4
comp=Z,322nm,18.8s,baz=28,slow=38
comp=Z,8.6nm,0.5s
KAPI Kappang 49.55 212 *de*P **P** **05 23 47.2 +0.8**
KAPI pmax pmax
comp=Z,22nm,1.2s
KAPI Kappang 49.55 212 P **P** **05 23 50.4 +4.0**
TABL Table Mountain 49.55 39 IAMs_20 IAMs_20 05 42 18.4
comp=Z,681nm,20.0s
BRZS Berezniki 49.59 307*c i*P **P** **05 23 46.5 +0.1**
BRZS *e*S **S** **05 30 53.5 0.0**
BRZS pmax pmax
comp=Z,29nm,1.5s
BRZS Berezniki 49.59 307⇑ *i*P **P** **05 23 46.6 +0.1**
comp=Z,29nm,1.5s,baz=307
BRZS *e*S **S** **05 30 53.5 0.0**
baz=307
YUK3 Moose Creek 49.63 37 P **P** **05 23 46.6 -0.2**
baz=280
DAWY Dawson 49.72 34 P **P** **05 23 46.3 -0.9**
baz=279
ULHL Ulahol 49.73 296 P **P** **05 23 48.4 +0.6**
SNR=10
TKM2 Tokmak 2 49.93 297 P **P** **05 23 50.4 +1.0**
SNR=94
TKM2 Tokmak 2 49.93 297 *i*P **P** **05 23 50.1 +0.7**
TKM2 pmax pmax
comp=Z,116nm,0.9s
O28M Mount Upton 49.95 39 P **P** **05 23 48.5 -0.8**
baz=281
I29M Ogilvie Camp, 49.97 32 IAMs_20 IAMs_20 05 48 51.4
comp=Z,720nm,19.0s
DANN Dangsing 50.03 276 *e*P **P** **05 23 51.1 +0.7**
comp=Z,343nm,0.6s
BVA0 Borovoye Array 50.13 311 P **P** **05 23 50.6 +0.1**
BVAR Borovoye Array 50.13 311 LR LR 05 46 11.5
comp=Z,1µm,18.3s,baz=312,slow=38
BRVK Borovoye 50.18 311 P **P** **05 23 51.0 +0.2**
BRVK Borovoye 50.18 311 IAMs_20 IAMs_20 05 45 59.9
comp=Z,1µm,18.0s
BRVK Borovoye 50.18 311*c i*P **P** **05 23 51.5 +0.7**
BRVK pmax pmax
comp=Z,56nm,0.8s
BRVK Borovoye 50.18 311 P **P** **05 23 51.0 +0.2**
BRVK S **S** **05 30 59.8 -1.7**
BTLS Baital 50.25 300*c i*P **P** **05 23 51.2 -0.3**
BTLS *e*S **S** **05 31 03.3 +0.5**
BTLS pmax pmax
comp=Z,42nm,2.0s
BTLS Baital 50.25 300⇑ *i*P **P** **05 23 51.2 -0.3**
comp=Z,42nm,2.0s,baz=300
BTLS *e*S **S** **05 31 03.3 +0.5**
baz=300
BCPM Bancas Point 50.39 39 IAMs_20 IAMs_20 05 46 20.6
comp=Z,652nm,19.0s
SGDS Sogindy 50.41 298*c i*P **P** **05 23 52.9 +0.1**
SGDS pmax pmax
comp=Z,60nm,2.2s
SGDS Sogindy 50.41 298⇑ *i*P **P** **05 23 53.0 +0.1**
comp=Z,60nm,2.2s,baz=298
M29M Somme Creek 50.42 36 P **P** **05 23 53.8 +1.1**
baz=281
EPYK Eagle Plains 50.45 31 IAMs_20 IAMs_20 05 47 37.1
comp=Z,646nm,18.0s
EPYK Eagle Plains 50.45 31 P **P** **05 23 53.1 +0.4**
baz=280,SNR=13
KBK Karagaybulak 50.47 297 P **P** **05 23 54.2 +0.8**
SNR=25
CHMS Chumysh 50.48 298 P **P** **05 23 53.3 -0.1**
SNR=9.6
CHMS Chumysh 50.48 298 *i*P **P** **05 23 53.0 -0.4**
CHMS pmax pmax
comp=Z,40nm,1.1s
USP Ospenovka 50.56 298 P **P** **05 23 54.4 +0.5**
SNR=24
YUK4 Talbot Arm 50.56 38 P **P** **05 23 53.2 -0.7**
baz=282
PNL Peninsula 50.57 40 P **P** **05 23 53.3 -0.4**
baz=283
YUK6 Outpost Mounta 50.78 38 P **P** **05 23 54.2 -1.4**
baz=283
AAK Ala-Archa 50.79 297 P **P** **05 23 56.2 +0.3**
SNR=11
AAK Ala-Archa 50.79 297 P **P** **05 23 55.7 -0.1**
AAK IAmb IAmb 05 23 56.9
comp=Z,25nm,0.9s
AAK Ala-Archa 50.79 297*c i*P **P** **05 23 56.1 +0.3**
AAK pmax pmax
comp=Z,53nm,1.7s
AAK Ala-Archa 50.79 297 P **P** **05 23 56.5 +0.7**
AAK P **P** **05 23 56.5 +0.7**
AAK Ala-Archa 50.79 297 *i*P **P** **05 23 56.1 +0.3**
SNR=11
O29M Mount Kennedy 50.83 39 P **P** **05 23 56.3 +0.5**
baz=283,SNR=6.3
KSH Kashi 50.94 293 P **P** **05 24 01.0 +4.1**
KSH pP sP 05 24 04.5 +0.1
KSH S **S** **05 31 18.8 +6.1**
KSH pmax pmax
comp=Z,37nm,1.5s
KSH pmax pmax
comp=Z,450nm,4.3s
KSH LR LR
comp=Z,2µm,15.8s
KSH LR LR
comp=Z,3µm,15.9s
KSH LR LR
comp=Z,4µm,16.2s
HNR Honiara 51.11 159 LR LR 05 43 28.8
comp=Z,456nm,22.0s,baz=318,slow=34
M30M Minto, Yukon 51.15 36 P **P** **05 24 00.1 +2.0**
M30M Minto, Yukon 51.15 36 P **P** **05 23 57.2 -0.9**
baz=283,SNR=11
HYT Haines Junctio 51.22 38 P **P** **05 24 00.2 +1.4**
HYT IAmb IAmb 05 24 25.8
comp=Z,51nm,1.0s
HYT Haines Junctio 51.22 38 P **P** **05 23 59.0 +0.2**
baz=284,SNR=52
N30M Aishikik Lake 51.27 37 P **P** **05 23 59.0 0.0**
baz=283
EKS2 Erkin-Say 51.27 297 P **P** **05 23 59.9 +0.5**
SNR=22
INK Inuvik 51.31 28 P **P** **05 24 00.5 +1.4**
comp=Z,6.8nm,0.7s,baz=296,slow=6.4,SNR=21
INK LR LR 05 49 53.3
comp=Z,566nm,18.4s,baz=282,slow=41
comp=Z,6.8nm,0.7s
INK Inuvik 51.31 28 P **P** **05 23 58.7 -0.5**
baz=281,SNR=8.2
MAYO Mayo, Yukon 51.33 34 P **P** **05 24 00.2 +0.8**
baz=283
P29M Windy Craggy 51.39 40 IAMs_20 IAMs_20 05 48 29.2
comp=Z,688nm,19.0s
P29M Windy Craggy 51.39 40 P **P** **05 24 01.1 +1.1**
baz=284,SNR=7.8
AML Almayashu 51.53 297 P **P** **05 24 02.5 +0.8**
SNR=52
KULM Kulim 51.58 240 IAMs_20 IAMs_20 05 46 50.0
comp=Z,744nm,20.0s
P30M Million Dollar 51.65 39 P **P** **05 24 01.4 -0.5**
baz=284
N31M Braeburn, Yuko 51.87 37 IAMs_20 IAMs_20 05 47 53.9
comp=Z,672nm,19.0s
N31M Braeburn, Yuko 51.87 37 P **P** **05 24 03.6 +0.1**
baz=284,SNR=11
O30N Mendenhall 51.91 38 P **P** **05 24 03.8 +0.1**
baz=285
IPM Ipoh 51.93 239 P **P** **05 24 03.9 -0.5**
IPM IAmb IAmb 05 24 39.0
comp=Z,74nm,1.6s
IPM IAMs_20 IAMs_20 05 47 37.3
comp=Z,1µm,19.0s
IPM Ipoh 51.93 239 P **P** **05 24 06.1 +1.6**
comp=Z,26nm,1.4s
PLBC Pleasant Camp 52.12 40 P **P** **05 24 04.4 -0.9**
baz=285,SNR=5.1
MYKOM Kota Tinggi 52.15 234 IAMs_20 IAMs_20 05 46 58.2
comp=Z,850nm,20.0s
EDFI Ende, Flores 52.22 208 P **P** **05 24 06.9 +0.3**
comp=Z,21nm,1.0s
M31M Drury Creek, Y 52.33 36 P **P** **05 24 08.0 +1.1**
baz=285
WHY Whitehorse 52.51 38 P **P** **05 24 09.0 +0.6**
baz=286
SKAG Skagway 52.62 39 P **P** **05 24 09.7 +0.7**
baz=286
FARO Faro, Yukon 52.79 36 P **P** **05 24 11.5 +1.1**
FARO Faro, Yukon 52.79 36 P **P** **05 24 12.1 +1.8**
baz=286,SNR=11
DZA Taraz 52.85 299*c i*P **P** **05 24 11.3 +0.3**
DZA Taraz 52.85 299⇑ *i*P **P** **05 24 11.4 +0.3**
baz=298
BATI Baumata 52.91 205 LR LR 05 45 51.9
comp=Z,537nm,21.4s,baz=34,slow=35
N32M Quiet Lake 53.22 37 P **P** **05 24 14.3 +0.8**
baz=287
A36M Sachs Harbour 53.23 23 P **P** **05 24 14.1 +0.8**
baz=285
KK31 Karatay Array 53.33 299 *i*P **P** **05 24 14.1 -0.4**
KKAR Karatay Array 53.33 299 P **P** **05 24 14.2 -0.4**
KKAR IAmb IAmb 05 24 38.7
comp=Z,54nm,1.1s
KKAR Karatay Array 53.33 299 P **P** **05 24 14.2 -0.4**
KKAR pmax pmax
comp=Z,54nm,1.2s
P32M Atlin 53.37 39 P **P** **05 24 15.4 +0.8**
baz=287
JIS Juneau Island 53.44 41 IAMs_20 IAMs_20 05 47 57.3
comp=Z,824nm,19.0s
MMPY Sheldon Lake, 53.61 35 P **P** **05 24 16.7 +0.3**
baz=287
P33M Teslin, Yukon 53.62 38 P **P** **05 24 16.0 -0.5**
baz=288,SNR=18
PPBI Pangkal Pinang 53.91 229 P **P** **05 24 20.0 +1.0**
comp=Z,24µmcomp=Z,41nm,0.8s
IUG Iuzhnay 54.03 298*c e*P **P** **05 24 20.3 +0.5**
IUG Iuzhnay 54.03 298⇑ *e*P **P** **05 24 20.4 +0.5**
baz=298
C36M Paulatuk 54.37 26 P **P** **05 24 21.5 -0.2**
baz=288
PSI Prapat 54.57 239 LR LR 05 49 07.8
comp=Z,601nm,19.5s,baz=36,slow=38
PSI Prapat 54.57 239 P **P** **05 24 25.7 +1.7**
comp=Z,19nm,1.2s
RPSI Rantau Prapat 54.65 239 IAMs_20 IAMs_20 05 50 25.4
comp=Z,799nm,18.0s
BLJI Banyuglugur 54.69 217 P **P** **05 24 26.0 +1.4**
comp=Z,31nm,0.9s
R33M Jennings River 54.77 39 P **P** **05 24 25.1 +0.2**
baz=290
NDI New Delhi 54.87 280 *e*P **P** **05 24 28.0 +2.0**
BKNI Bangkinang 55.05 236 IAMs_20 IAMs_20 05 49 31.1
comp=Z,867nm,19.0s
BKNI Bangkinang 55.05 236 P **P** **05 24 28.4 +1.0**
comp=Z,82nm,0.9s
BKNI Bangkinang 55.05 236 P **P** **05 24 28.0 +0.6**
GAR Garm 55.15 295 P **P** **05 24 27.4 -0.6**
TGTN Hyland Airport 55.30 36 P **P** **05 24 28.9 +0.3**
baz=290
NIL Nilore 55.44 288 P **P** **05 24 30.3 +0.3**
NIL Nilore 55.44 288 IAMs_20 IAMs_20 05 52 28.1
comp=Z,754nm,18.0s
NIL Nilore 55.44 288 P **P** **05 24 30.3 +0.3**
NIL pmax pmax
comp=Z,105nm,1.0s
NIL MLR MLR
comp=Z,800nm,18.0s
DLBC Dease Lake 55.55 40 LR LR 05 52 19.4
comp=Z,245nm,18.1s,baz=299,slow=40
DLBC Dease Lake 55.55 40 P **P** **05 24 32.3 +1.7**
baz=291
ARU Arti 55.57 318 P **P** **05 24 30.8 +0.2**
comp=Z,68nm,0.8s
ARU LR LR 05 50 53.8
comp=Z,4µm,18.1s,baz=63,slow=39
comp=Z,68nm,0.8s
ARU Arti 55.57 318 P **P** **05 24 30.6 0.0**
ARU Arti 55.57 318*c i*P **P** **05 24 31.1 +0.5**
ARU 05 25 29.3
ARU 05 26 34.0
ARU PPP PPP 05 27 45.4
ARU S **S** **05 32 17.7 +2.8**
ARU 05 34 20.7
ARU pmax pmax
comp=Z,177nm,1.2s
ARU MLR MLR
comp=Z,5µm,14.0s
PWJI Pagerwojo 55.78 219 P **P** **05 24 31.0 -1.5**
comp=Z,79nm,0.9s
T35M Bob Quinn 55.97 41 P **P** **05 24 34.9 +1.4**
baz=292
CHGR Chuyangaron 56.11 295 P **P** **05 24 34.5 -0.4**
CHGR Chuyangaron 56.11 295 P **P** **05 24 34.5 -0.4**
CHGR pmax pmax
comp=Z,126nm,0.9s
GSI Gunungsitoli 56.58 239 P **P** **05 24 38.9 +0.6**
comp=Z,79nm,1.6s
GSI Gunungsitoli 56.58 239 P **P** **05 24 39.7 +1.4**
comp=Z,79nm,1.6s
LEM Lembang 56.91 224 LR LR 05 50 09.7
comp=Z,298nm,19.6s,baz=22,slow=37
LEM Lembang 56.91 224 P **P** **05 24 40.6 -0.2**
comp=Z,40nm,1.0s
AB31 Akbulak array 57.59 310 *i*P **P** **05 24 45.3 +0.2**
ABKAR Akbulak array 57.59 310 P **P** **05 24 44.9 -0.1**
KBL Kabul 58.09 290 P **P** **05 24 48.3 -0.8**
KBL Kabul 58.09 290 P **P** **05 24 48.3 -0.8**
KBL pmax pmax
comp=Z,58nm,0.9s
KBL Kabul 58.09 290 P **P** **05 24 49.1 0.0**
SNR=10
KBL P **P** **05 24 49.1 0.0**
SNR=10
KBL S **S** **05 32 48.4 -1.0**
KBL S **S** **05 32 48.4 -1.0**
AKTO Aktyubinsk 58.23 311 LR LR 05 51 08.7
comp=Z,927nm,19.2s,baz=61,slow=37
AKTO Aktyubinsk 58.23 311 P **P** **05 24 48.8 -0.7**
SPITS Spitsbergen Ar 58.32 349 P **P** **05 24 50.2 +0.4**
comp=Z,9.2nm,1.0s,baz=164,slow=33,SNR=3.5
SPITS LR LR 05 52 46.1
comp=Z,1µm,18.4s,baz=358,slow=39
comp=Z,9.2nm,1.0s
KBS Kingsbay 58.41 350 IAMs_20 IAMs_20 05 51 30.4
comp=Z,756nm,18.0s
BBB Bella Bella 59.04 46 LR LR 05 46 54.2
comp=Z,163nm,21.9s,baz=304,slow=32
KIRV Kirov 59.23 323 P **P** **05 24 57.0 +0.7**
comp=Z,48nm,0.9s,baz=66,slow=3.7,SNR=34
KIRV LR LR 05 55 06.5
comp=Z,807nm,21.1s,baz=52,slow=41
comp=Z,48nm,0.9s
KIRV Kirov 59.23 323*c i*P **P** **05 24 56.9 +0.7**
HSPB Hornsund (broa 59.28 348 *e*P **P** **05 24 56.6 +0.2**
HSPB *e*L L 05 48 11.8
comp=Z,847nm,26.5s
PRGR Permogore 59.54 327⇑ *i*P **P** **05 24 59.1 +0.7**
PRGR *e**SP **pwP** **05 25 07.3 +0.3**
PRGR *e* 05 27 08.6
RES Resolute Bay 59.68 15 LR LR 05 54 55.9
comp=Z,612nm,18.7s,baz=308,slow=40
FITZ Fitzroy Crossi 59.81 200 P **P** **05 25 00.6 -0.1**
comp=Z,11nm,1.1s,baz=11,slow=13,SNR=7.6
comp=Z,11nm,1.1s
FITZ Fitzroy Crossi 59.81 200 P **P** **05 25 01.6 +0.9**
WRAB Tennant Creek 59.86 190⇑ *e*P **P** **05 25 00.5 -0.6**
WRAB pmax pmax
comp=Z,20nm,1.7s
WRA Warramunga Arr 59.87 190 P **P** **05 25 00.8 -0.4**
comp=Z,6.0nm,0.9s,baz=7.6,slow=6.9,SNR=38
comp=Z,6.0nm,0.9s
WRA Warramunga Arr 59.87 190 P **P** **05 25 00.5 -0.6**
HYBB Hyderabad (bro 59.98 268 *e*P **P** **05 25 02.0 -0.2**
HYBB *ep*P **sP** **05 25 09.8 +0.2**
HYBB *e*PP **PP** **05 27 14.5 0.0**
HYBB *e*PcS **PcS** **05 29 50.4 -0.4**
LVZ Lovozero 60.46 336*ce*P **P** **05 25 04.4 -0.3**
LVZ pmax pmax
comp=Z,10.0nm,0.8s
YKA Yellowknife Ar 60.73 31 P **P** **05 25 06.0 -0.6**
comp=Z,3.2nm,0.8s,baz=299,slow=6.7,SNR=11
comp=Z,3.2nm,0.8s
YKA Yellowknife Ar 60.73 31 *i*P **P** **05 25 07.4 +0.9**
YKA pmax pmax
comp=Z,4.0nm,0.8s
APA Apatity 61.04 336⇓ *i*P **P** **05 25 07.2 -1.4**
APA *i* 05 25 17.0
APA *i*S **S** **05 33 22.0 -3.9**
APA *i* 05 34 58.0
APA pmax pmax
comp=Z,19nm,1.0s
APA MLR MLR
comp=Z,1µm,15.0s
KEV Kevo 61.63 339 P **P** **05 25 12.8 +0.2**
KEV IAMs_20 IAMs_20 05 54 30.5
comp=Z,1µm,21.0s
KEV Kevo 61.63 339 P **P** **05 25 12.8 +0.2**
KEV pmax pmax
comp=Z,40nm,1.1s
KEV MLR MLR
comp=Z,1µm,21.0s
ARCES ARCESS Array B 62.18 339 P **P** **05 25 15.3 -1.0**
comp=Z,14nm,1.1s,baz=50,slow=8.0,SNR=22
ARCES LR LR 05 55 07.5
comp=Z,1µm,21.7s,baz=38,slow=39
comp=Z,14nm,1.1s
ARCES ARCESS Array B 62.18 339 P **P** **05 25 16.8 +0.5**
ARCES IAmb IAmb 05 25 27.3
comp=Z,44nm,1.4s
KLMR Klimovskoe 62.49 328 *e*P **P** **05 25 16.6 -1.8**
KLMR *e* 05 27 32.7
KLMR pmax pmax
comp=Z,83nm,1.4s
KLMR MLR MLR
comp=Z,2µm,16.0s
KLMR Klimovskoe 62.49 328 *e*P **P** **05 25 16.6 -1.8**
KLMR AMP 05 25 20.2

KLMR *e*PP **PP** **05 27 32.7 -2.8**
KLMR LQ LQ 05 46 42.9
KLMR LQ LQ 05 46 42.9
KLMR LR LR 05 51 42.2
KLMR AMP 05 54 56.3
comp=Z,2µm,15.5s
BELG Belogornoye 63.08 317 P **P** **05 25 22.4 -0.1**
comp=Z,106nm,0.9s,baz=5.6,slow=0.6,SNR=57
BELG LR LR 05 55 25.0
comp=Z,2µm,18.0s,baz=55,slow=39
comp=Z,106nm,0.9s
BELG Belogornoye 63.08 317 *c i*P **P** **05 25 23.0 +0.5**
BELG pmax pmax
comp=Z,21nm,0.9s
DAG Danmarks Havn 63.35 355⇑ *i*P **P** **05 25 24.5 +0.6**
DAG IAmb IAmb 05 25 25.4
comp=Z,33nm,1.0s
ASAR Alice Springs 63.60 190 P **P** **05 25 26.1 -0.2**
comp=Z,3.2nm,0.8s,baz=12,slow=7.0,SNR=23
ASAR LR LR 05 53 29.3
comp=Z,127nm,20.1s,baz=9.5,slow=36
comp=Z,3.2nm,0.8s
ASAR Alice Springs 63.60 190 P **P** **05 25 26.2 0.0**
KIF Kilpisjarvi 63.79 340 *e*P P 05 25 38.8 +12
GEYT Alibeck 64.08 299 P **P** **05 25 29.2 -0.3**
comp=Z,19nm,1.0s,baz=354,slow=1.5,SNR=17
GEYT LR LR 05 55 34.6
comp=Z,1µm,18.1s,baz=60,slow=38
comp=Z,19nm,1.0s
GEYT Alibeck 64.08 299 P **P** **05 25 29.1 -0.4**
GEYT IAmb IAmb 05 25 56.4
comp=Z,26nm,0.9s
GYA0 ALIBECK ARRAY 64.08 299 P **P** **05 25 29.2 -0.3**
GYA0B ALIBECK ARRAY 64.08 299 P **P** **05 25 29.1 -0.3**
GYA0B IAmb IAmb 05 25 39.7
comp=Z,33nm,1.1s
DZM Mont Dzumac 64.98 157 LR LR 05 49 19.1
comp=Z,421nm,21.7s,baz=19,slow=32
DZM Mont Dzumac 64.98 157 *e*LR LR 05 45 01.0
comp=Z,831nm,23.1s
MSVF Nonsavu 65.50 144 LR LR 05 49 40.5
comp=Z,309nm,20.2s,baz=324,slow=32
PCHI Peechi 65.84 264 *e*P **P** **05 25 41.3 +0.2**
PCHI *e*S **S** **05 34 26.6 -0.5**
QLP Quilpie 65.86 179 P **P** **05 25 43.3 +2.5**
comp=Z,30nm,1.0s
WRKA Warakurna 65.88 195 P **P** **05 25 42.8 +1.7**
comp=Z,20nm,2.7s
RMQ Roma 65.94 175 P **P** **05 25 43.0 +1.6**
comp=Z,15nm,0.8s
I03D Drain, OR 65.98 52 P **P** **05 25 43.3 +1.7**
baz=302
HOOD Mount Hood Mea 66.13 50 P **P** **05 25 43.7 +1.0**
HOOD IAmb IAmb 05 26 04.8
comp=Z,24nm,0.8s
MOS Moscow 66.19 324 *e*P **P** **05 25 40.8 -2.0**
MOS *e*S **S** **05 34 26.9 -3.4**
MOS pmax pmax
comp=Z,300nm,2.2s
MOS pmax pmax
comp=Z,110nm,1.5s
MOS MLR MLR
comp=E,2µm,16.0s
MOS MLR MLR
comp=Z,3µm,16.0s
MOS MLR MLR
comp=N,3µm,15.0s
K02D Willamette Mer 66.32 54 P **P** **05 25 44.3 +0.3**
baz=303
G05D Wamic, OR 66.37 50 P **P** **05 25 45.8 +1.6**
baz=303
I04A Tendick Farm, 66.50 52 P **P** **05 25 47.0 +2.0**
baz=303
L02F Cave Junction 66.69 54 P **P** **05 25 46.9 +0.7**
baz=303
VRH Novokhopyorsk 66.81 318 *e*P **P** **05 25 46.3 -0.5**
VRH pmax pmax
comp=Z,50nm,1.1s
VRH MLR MLR
comp=Z,4µm,15.0s
I05D Terrebonne, OR 66.85 51 P **P** **05 25 48.5 +1.2**
baz=303
J04D Umpqua Nationa 66.98 52 P **P** **05 25 49.4 +1.1**
baz=303
OBN Obninsk 67.05 323 P **P** **05 25 47.8 -0.4**
comp=Z,2.6nm,0.3s,baz=51,slow=3.7,SNR=18
comp=Z,2.6nm,0.3s
OBN Obninsk 67.05 323 IAMs_20 IAMs_20 05 56 26.8
comp=Z,604nm,19.0s
OBN Obninsk 67.05 323 *c i*P **P** **05 25 48.5 +0.3**
OBN *i* *PP **pP** **05 25 54.1 +0.4**
OBN *i* *SP **pwP** **05 25 57.4 +0.1**
OBN *i* 05 26 13.5
OBN *e* 05 28 22.8
OBN *e*PPP PPP 05 29 58.4
OBN *i* S **S** **05 34 40.9 +0.2**
OBN *e* 05 35 38.3
OBN *e*SS **SS** **05 38 55.9 -2.8**
OBN pmax pmax
comp=Z,102nm,1.8s
OBN MLR MLR
comp=Z,3µm,15.0s
INKA Innaminka 67.06 183 P **P** **05 25 51.4 +2.9**
NEW Newport 67.11 46 P **P** **05 25 49.1 +0.3**
NEW Newport 67.11 46 IAMs_20 IAMs_20 05 59 40.9
comp=Z,364nm,18.0s
NEW Newport 67.11 46 P **P** **05 25 49.1 +0.3**
NEW pmax pmax
comp=Z,16nm,1.2s
NEW MLR MLR
comp=Z,400nm,18.0s
NEW Newport 67.11 46 P **P** **05 25 50.4 +1.5**
baz=304,SNR=12
FIA0 FINESS Array S 67.32 332 P **P** **05 25 50.3 +0.4**
FIA0 FINESS Array S 67.32 332 P **P** **05 25 50.3 +0.4**
FINES FINESS Array B 67.32 332 P **P** **05 25 50.2 +0.4**
comp=Z,31nm,0.8s,baz=46,slow=8.2,SNR=102
FINES LR LR 05 58 17.0
comp=Z,3µm,18.3s,baz=34,slow=39
comp=Z,31nm,0.8s
LPSR Galich'ya Gora 67.41 320 *e*P **P** **05 25 50.4 -0.2**
LPSR pmax pmax
comp=Z,30nm,0.9s
LPSR MLR MLR
comp=Z,3µm,14.0s
L04D Klamath Falls 67.42 53 P **P** **05 25 51.6 +0.5**
baz=304
J05D Fort Rock, OR 67.49 52 P **P** **05 25 52.5 +1.0**
baz=304,SNR=7.9
K04D Chiloquin, OR 67.54 53 P **P** **05 25 51.6 -0.2**
baz=304
AFI Afiamalu 67.55 132 LR LR 05 51 08.1
comp=Z,410nm,20.0s,baz=329,slow=32
VORR Voronezh 67.82 319 *e*P **P** **05 25 53.9 +0.7**
VORR pmax pmax
comp=Z,47nm,1.3s
JMIC Jan Mayen 67.90 350 LR LR 05 55 26.8
comp=Z,208nm,19.5s,baz=36,slow=36
SUMG Summit 68.10 1 IAMs_20 IAMs_20 05 56 46.3
comp=Z,750nm,20.0s
SUMG Summit 68.10 1⇑ *i*P **P** **05 25 56.5 +1.4**
SUMG IAmb IAmb 05 25 57.0
comp=Z,27nm,0.9s
VSR Storozhevoye 68.11 319 *e*P **P** **05 25 55.1 +0.1**
VSR pmax pmax
comp=Z,30nm,1.2s
VSR MLR MLR
comp=Z,2µm,16.0s
MAK Makhachkala 68.20 308 *d i*P **P** **05 25 51.7 -4.1**
MAK *e*S **S** **05 34 48.6 -6.4**
MAK pmax pmax
comp=Z,313nm,1.6s
MAK MLR MLR
comp=Z,2µm,14.0s
WALA Waterton Lakes 68.39 44 P **P** **05 25 58.6 +1.6**
MEF Metsahovi 68.76 332 *e*P **P** **05 25 59.5 +0.6**
VSU Vasula 69.09 330 *e*P **P** **05 26 01.9 +0.9**
GROC Groznyy 69.10 309 *e*P **P** **05 26 02.1 +0.7**
GROC *e* 05 26 26.9
GROC pmax pmax
comp=Z,82nm,0.7s
RAF Rauma 69.12 334 *e*P **P** **05 26 01.7 +0.6**
SEKA Sheki 69.39 307 P **P** **05 26 02.6 -0.7**
GOF Gofitskoye 69.64 312⇓ *i*P **P** **05 26 05.6 +0.9**
GOF *e*S **S** **05 35 15.8 +3.8**
GOF pmax pmax
comp=Z,216nm,1.1s
MSO Missoula 69.69 46 P **P** **05 26 06.0 +0.8**
MSO Missoula 69.69 46 P **P** **05 26 05.4 +0.3**
baz=306,SNR=5.8
LKRN Lenkeran, Azer 69.82 304 P **P** **05 26 05.7 -0.2**
BEKR Beckworth 69.96 55 P **P** **05 26 08.1 +1.1**
BEKR IAmb IAmb 05 26 18.4
comp=Z,23nm,1.2s
MULG Mulgathing 70.10 189 P **P** **05 26 11.0 +3.5**
comp=Z,16nm,1.3s
GANJ Ganja 70.25 307 P **P** **05 26 08.0 -0.6**
ZEI Tsey 70.47 310 *e*P **P** **05 26 08.8 -1.3**
ZEI pmax pmax
comp=Z,47nm,1.5s
KVAR Kislovodsk Arr 70.49 311 P **P** **05 26 11.2 +1.1**
comp=Z,37nm,1.0s,baz=88,slow=23,SNR=8.6
comp=Z,37nm,1.0s
KIV Kislovodsk 70.49 311⇓ P **P** **05 26 11.7 +1.6**
KIV Kislovodsk 70.49 311 *e*P **P** **05 26 11.2 +1.1**
KIV Kislovodsk 70.49 311 P **P** **05 26 10.7 +0.7**
KIV Kislovodsk 70.49 311 *e*P **P** **05 26 10.2 +0.1**
KIV *e* 05 28 46.7
KIV *e*S **S** **05 35 22.4 +0.2**
KIV *e*SS **SS** **05 39 54.5 +1.8**
KIV pmax pmax
comp=Z,131nm,1.1s
KIV pmax pmax
comp=Z,81nm,3.5s
KIV Kislovodsk 70.49 311 *i* P **P** **05 26 11.2 +1.1**
SNR=21
KBZ Khabaz 70.50 311 P **P** **05 26 11.1 +1.1**
comp=Z,38nm,0.9s,baz=70,slow=5.0,SNR=75
KBZ LR LR 05 58 08.2
comp=Z,734nm,18.5s,baz=25,slow=37
comp=Z,38nm,0.9s
MFID Camas Ranch 70.65 49 P **P** **05 26 11.8 +0.8**
MFID IAmb IAmb 05 26 24.0
comp=Z,53nm,1.9s
PAHR Pah Rah Range 70.67 54 P **P** **05 26 12.1 +0.8**
PAHR IAmb IAmb 05 26 22.9
comp=Z,18nm,1.1s
VCNR Virginia City 70.74 55 P **P** **05 26 12.7 +0.9**
CMSA Cobar Meteorol 70.82 178 P **P** **05 26 16.3 +4.5**
ONI Oni 70.85 310 *e*P **P** **05 26 13.5 +1.2**
ONI Oni 70.85 310 P **P** **05 26 13.2 +0.9**
ONI Oni 70.85 310 P **P** **05 26 13.2 +0.9**
ONI pmax pmax
comp=Z,66nm,1.2s
PNTR Pine Nut 70.89 55 P **P** **05 26 14.2 +1.4**
PNTR IAmb IAmb 05 26 24.7
comp=Z,29nm,1.3s
HRY Holter Researc 70.92 45 P **P** **05 26 13.9 +1.2**
CMB Columbia Colle 71.01 56 P **P** **05 26 14.6 +1.3**
CMB IAmb IAmb 05 26 24.9
comp=Z,31nm,1.4s
CMB Columbia Colle 71.01 56 P **P** **05 26 14.6 +1.3**
CMB pmax pmax
comp=Z,31nm,1.4s
STKA Stephens Creek 71.15 182 P **P** **05 26 14.9 +1.0**
comp=Z,4.1nm,0.7s,baz=324,slow=8.0,SNR=6.9
STKA LR LR 06 02 18.1
comp=Z,141nm,18.6s,baz=12,slow=40
comp=Z,4.1nm,0.7s
EGMT Eagleton 71.22 43 IAMs_20 IAMs_20 06 00 40.6
comp=Z,346nm,19.0s
EGMT Eagleton 71.22 43 P **P** **05 26 13.4 -1.0**
baz=309
MNK Minsk 71.30 326 *i* P **P** **05 26 11.7 -2.9**
MNK *i* 05 26 31.0
MNK *i* 05 28 49.5
MNK *i* S **S** **05 35 28.6 -2.4**
MNK *i* SS **SS** **05 40 03.6 -0.7**
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,49nm,0.9s
MNK MLR MLR
comp=Z,2µm,19.0s
MNK MLR MLR
comp=E,274nm,19.0s
MNK Minsk 71.30 326 *i* P **P** **05 26 11.8 -2.9**
comp=E,2.0nm,0.8s
MNK *i* P **P** **05 26 11.8 -2.9**
MNK *i* P **P** **05 26 11.8 -2.9**
comp=Z,49nm,0.8s,baz=47
MNK *i* PcP **PcP** **05 26 31.1 -3.3**
MNK *i* PP **PP** **05 28 49.6 -2.7**
MNK *i* PPP PPP 05 30 27.7
MNK *i* S **S** **05 35 28.7 -2.4**
MNK *i* SS **SS** **05 40 03.6 -0.7**
MNK *i* SSS SSS 05 43 49.7
MNK *i* LQ LQ 05 52 37.1
MNK *i* LR LR 05 56 59.8
MNK *i* LRM MLR 06 00 20.7
MNK comp=Z,2µm,18.7s *i* LRM MLR 06 00 26.2
MNK comp=E,274nm,18.7s *i* LRM MLR 06 00 27.4
ISAL Salakas 71.31 328 *e*P **P** **05 26 16.0 +1.3**
SLIT Slitere, Latvi 71.36 331 *e*P **P** **05 26 15.5 +0.6**
HLID Hailey 71.38 49 P **P** **05 26 15.5 -0.1**
baz=307,SNR=8.4
NACGM Naroch 71.50 327⇓ *i*P **P** **05 26 16.5 +0.7**
GNI Garni 71.52 307 *e*P **P** **05 26 18.1 +1.6**
GNI Garni 71.52 307 IAMs_20 IAMs_20 05 58 44.7
comp=Z,361nm,18.0s
GNI Garni 71.52 307 P **P** **05 26 17.9 +1.4**
BMN Battle Mountai 71.58 53 P **P** **05 26 18.2 +1.4**
BMN IAmb IAmb 05 26 31.0
comp=Z,36nm,1.4s
BMN Battle Mountai 71.58 53 P **P** **05 26 18.2 +1.4**
BMN pmax pmax
comp=Z,36nm,1.4s
ICESG Greenland Ices 71.59 1⇑ *i*P **P** **05 26 17.4 +0.8**
ICESG IAmb IAmb 05 26 18.7
comp=Z,53nm,1.2s
BOZ Bozeman (W) 71.72 46 P **P** **05 26 18.6 +1.0**
BOZ Bozeman (W) 71.72 46 P **P** **05 26 18.6 +1.0**
BOZ Bozeman (W) 71.72 46 P **P** **05 26 17.2 -0.3**
baz=308,SNR=20
WSAR Wadi Sarin 71.83 285 LR LR 06 03 05.9
comp=Z,583nm,18.5s,baz=80,slow=40
RYN Ryan 71.84 55 P **P** **05 26 19.8 +1.3**
KVN Kaiserville 71.86 54 P **P** **05 26 19.9 +1.3**
KVN IAmb IAmb 05 26 30.3
comp=Z,36nm,1.3s
KVN Kaiserville 71.86 54 P **P** **05 26 19.9 +1.3**
KVN pmax pmax
comp=Z,36nm,1.3s
VSVD Vaisvydziai 71.91 329 *e*P **P** **05 26 18.9 +0.7**
TASB TASBURUN-IGDIR 71.93 307 *e*P **P** **05 26 20.2 +1.4**
WBK Wadi Bani Khal 71.95 285 P **P** **05 26 20.0 +0.9**
SNR=6.2
WBK P **P** **05 26 20.0 +0.9**
SNR=6.2
SHME Shamm 72.03 289 P **P** **05 26 19.9 +0.4**
LHV Little Huntoon 72.08 55 P **P** **05 26 20.8 +1.2**
LHV IAmb IAmb 05 26 32.7
comp=Z,28nm,0.9s
MDPB Devils Postpil 72.08 56 P **P** **05 26 20.5 +0.5**
NVAR Mina Array Bea 72.10 55 P **P** **05 26 21.8 +1.8**
comp=Z,3.9nm,0.8s,baz=284,slow=6.5,SNR=34
NVAR LR LR 05 58 52.7
comp=Z,132nm,18.2s,baz=312,slow=36
comp=Z,3.9nm,0.8s
NVAR Mina Array Bea 72.10 55 P **P** **05 26 21.3 +1.2**
OMMB Old Mammoth Mi 72.14 56 P **P** **05 26 22.3 +1.8**
PABE Paberze 72.23 329 *e*P **P** **05 26 21.3 +1.1**
KARS Kars 72.25 308 *e*P **P** **05 26 22.0 +1.2**
NC303 NORSAR Array S 72.26 338 P **P** **05 26 21.0 +0.7**
NC303 IAmb IAmb 05 26 37.8
comp=Z,34nm,0.9s
QLMT Earthquake Lak 72.30 46 P **P** **05 26 22.5 +1.3**
MDH Madha 72.35 288 P **P** **05 26 22.4 +0.9**
NC204 NORSAR Array S 72.39 338 P **P** **05 26 21.8 +0.7**
MSFE Esma-Masafi 72.42 289 P **P** **05 26 22.6 +0.7**
NB201 NORSAR Array S 72.42 338 P **P** **05 26 21.6 +0.3**
HFS Hagfors 72.43 336 P **P** **05 26 21.3 0.0**
comp=Z,18nm,0.8s,baz=38,slow=5.6,SNR=48
HFS LR LR 06 01 44.3
comp=Z,1µm,18.6s,baz=30,slow=39
comp=Z,18nm,0.8s
SOC Sochi 72.43 312 *e*P **P** **05 26 19.3 -2.3**
SOC *e**PP **pP** **05 26 25.9 -1.3**
SOC *e* 05 28 57.5
SOC *e*PPP PPP 05 30 41.9
SOC *e*S **S** **05 35 42.2 -2.2**
SOC *e* 05 36 24.0
SOC *e*SS **SS** **05 40 26.3 +4.2**
SOC *e*SSS SSS 05 43 38.4
SOC pmax pmax
comp=Z,31nm,1.1s
NB2 NORSAR Subarra 72.45 338 P **P** **05 26 21.7 +0.2**
comp=Z,58nm,1.2s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.45 338 P **P** **05 26 21.7 +0.2**
baz=38,slow=6.2
NOA NORSAR Array B 72.45 338 P **P** **05 26 21.3 -0.2**
comp=Z,19nm,0.9s,baz=37,slow=6.0,SNR=84
NOA LR LR 06 02 24.5
comp=Z,1µm,18.6s,baz=25,slow=39
comp=Z,19nm,0.9s
HOQ Hoqain 72.61 286 P **P** **05 26 23.9 +0.8**
SNR=6.9
HOQ P **P** **05 26 23.9 +0.8**
SNR=6.9
UOSS Minazif 72.63 288 IAMs_20 IAMs_20 06 01 05.6
comp=Z,555nm,20.0s
UOSS Minazif 72.63 288 P **P** **05 26 23.5 +0.3**
UOSS P **P** **05 26 23.5 +0.3**
UOSS Minazif 72.63 288 P **P** **05 26 22.7 -0.4**
BCA Borcka 72.63 310⇑ P **P** **05 26 24.5 +1.6**
CLDR Caldiran 72.63 307 *e*P **P** **05 26 23.6 +0.4**
PBUR Paburge 72.66 330 *e*P **P** **05 26 23.5 +0.7**
HATD Hatta, Dubai 72.75 288 P **P** **05 26 24.6 +0.8**
SNR=7.5
HATD P **P** **05 26 24.6 +0.8**
SNR=7.5
HATD Hatta, Dubai 72.75 288 *i* P **P** **05 26 24.0 +0.1**
SNR=7.5
SOHO SOHO 72.86 287 P **P** **05 26 24.7 +0.2**
ASHO Ashiyiah 72.89 288 P **P** **05 26 25.3 +0.6**
SNR=5.4
ASHO P **P** **05 26 25.3 +0.6**
SNR=5.4
ASHO Ashiyiah 72.89 288 *i* P **P** **05 26 24.8 +0.1**
SNR=7.8
AGRB Hanur-Agry 72.94 307 *e*P **P** **05 26 26.4 +1.4**
ANN Anapa 72.96 314 *e*P **P** **05 26 24.0 -0.7**
ANN *e*S **S** **05 35 48.7 -1.6**
ANN pmax pmax
comp=Z,88nm,1.3s
MORW Morawa 72.98 205 P **P** **05 26 26.4 +1.5**
LKWY Lake 73.04 46 IAMs_20 IAMs_20 05 59 52.0
comp=Z,691nm,20.0s
H17A Grant Village 73.05 46 P **P** **05 26 25.2 -0.5**
baz=309,SNR=8.9
SFJD Kangerlussuaq 73.16 6 P **P** **05 26 26.3 +0.8**
comp=Z,10nm,0.7s,baz=14,slow=12,SNR=4.0
SFJD LR LR 06 01 46.1
comp=Z,1µm,19.1s,baz=346,slow=38
comp=Z,10nm,0.7s
FAQ Al Faqa, Dubai 73.19 288 P **P** **05 26 26.1 -0.4**
PKM Mcpherson Peak 73.23 59 P **P** **05 26 27.0 +0.2**
baz=307
AKASG Malin Array Be 73.28 323 P **P** **05 26 26.7 +0.1**
comp=Z,9.6nm,0.6s,baz=43,slow=6.3,SNR=71
AKASG LR LR 06 03 36.8
comp=Z,884nm,18.7s,baz=44,slow=40
comp=Z,9.6nm,0.6s
AKASG Malin Array Be 73.28 323 P **P** **05 26 26.0 -0.5**
AKASG IAmb IAmb 05 26 37.2
comp=Z,33nm,1.4s
AKASG Malin Array Be 73.28 323 P **P** **05 26 26.0 -0.5**
AKASG pmax pmax
comp=Z,33nm,1.5s
AKBB Malin Array Si 73.28 323 P **P** **05 26 26.2 -0.3**
AKBB IAmb IAmb 05 27 09.3
comp=Z,42nm,0.9s
AKBB Malin Array Si 73.28 323 P **P** **05 26 26.3 -0.3**
AKBB pmax pmax
comp=Z,42nm,1.0s
VANB Van 73.29 306 *e*P **P** **05 26 28.1 +1.1**
RLMT Red Lodge 73.31 45 IAMs_20 IAMs_20 06 03 57.1
comp=Z,460nm,18.0s
RLMT Red Lodge 73.31 45 P **P** **05 26 26.5 -0.7**
baz=310
CHOM Cayeli-Rize 73.36 310 *e*P **P** **05 26 28.2 +1.0**
KOPR Koprukoy-ERZUR 73.38 308 *e*P **P** **05 26 29.0 +1.4**
CWC Cottonwood Cre 73.43 56 P **P** **05 26 29.4 +1.5**
baz=307
ASUD Al Ashush, Dub 73.46 288 P **P** **05 26 28.0 0.0**
ALNE Al Ain 73.48 288 P **P** **05 26 28.6 +0.3**
SNR=5.7
ALNE P **P** **05 26 28.6 +0.3**
SNR=5.7
GRAC Grapevine Rang 73.55 56 P **P** **05 26 29.1 +0.6**
baz=307,SNR=13
ISA Isabella, Lake 73.65 57 P **P** **05 26 29.2 +0.1**
baz=307
MHTO MHTO 73.65 284 P **P** **05 26 30.0 +0.8**
SNR=9.0
MHTO P **P** **05 26 30.0 +0.8**
SNR=9.0
DGMT Dagmar 73.77 40 P **P** **05 26 31.0 +1.5**
baz=312
DGMT Dagmar 73.77 40 P **P** **05 26 30.0 +0.5**
baz=312
R11A Troy Canyon, C 73.85 54 P **P** **05 26 30.3 -0.1**
baz=308,SNR=11
FRB Frobisher Bay 73.87 14 LR LR 06 03 26.3
comp=Z,798nm,19.0s,baz=354,slow=39
LAO LASA Array 73.92 42 P **P** **05 26 31.7 +1.2**
baz=311
LAO LASA Array 73.92 42 P **P** **05 26 30.9 +0.4**
baz=311
DY2G Dye2 73.97 4⇑ *i*P **P** **05 26 31.1 +0.4**
DY2G IAmb IAmb 05 26 32.4
comp=Z,154nm,1.8s
CUKT Cukurca 73.97 305 *e*P **P** **05 26 30.6 -0.4**
KTUT Trabzon 74.01 310 *e*P **P** **05 26 31.3 +0.3**
MPMC Manual Prospec 74.04 56 P **P** **05 26 31.8 +0.2**
baz=308,SNR=9.1
GURO Guroymak-BITLI 74.16 307 *e*P **P** **05 26 33.2 +1.1**
GURO Guroymak-BITLI 74.16 307 P **P** **05 26 33.0 +0.9**
GURO IAmb IAmb 05 26 34.8
comp=Z,46nm,1.1s
KOPT Kop Dagi 74.18 309 P **P** **05 26 33.7 +1.3**
KOPT IAmb IAmb 05 26 56.7
comp=Z,34nm,1.0s
FURC Furnace Creek, 74.19 56 P **P** **05 26 32.1 0.0**
baz=308,SNR=11
HWUT Hardware Ranch 74.25 49 P **P** **05 26 33.5 +0.9**
HWUT IAmb IAmb 05 26 52.5
comp=Z,41nm,1.6s
TPNV Topopah Spring 74.29 55 P **P** **05 26 32.9 0.0**
baz=308,SNR=9.6
DUG Dugway, Tooele 74.40 51 P **P** **05 26 33.7 +0.2**
baz=309,SNR=9.2
EDW2 Edwards Air Fo 74.43 58 P **P** **05 26 34.2 +0.5**
baz=308
BW06 Boulder Array 74.66 47 P **P** **05 26 35.4 +0.3**
BW06 IAmb IAmb 05 26 42.4
comp=Z,40nm,1.9s
BW06 Boulder Array 74.66 47 P **P** **05 26 35.3 +0.3**
baz=310
PDAR Pinedale Array 74.66 47 P **P** **05 26 36.0 +0.9**
comp=Z,1.9nm,0.6s,baz=258,slow=2.0,SNR=16
comp=Z,1.9nm,0.6s
PDAR Pinedale Array 74.66 47 P **P** **05 26 35.5 +0.4**
SIM Simferopol' 74.67 316 *e*P **P** **05 26 34.5 -0.3**
SIM *PP **pP** **05 26 39.0 -1.3**
SIM *e* 05 26 44.0
SIM pmax pmax
comp=Z,39nm,1.1s
SIM MLR MLR
comp=Z,770nm,16.0s
BNGB Bingl 74.71 308 *e*P **P** **05 26 36.7 +1.4**
PRN Pahroc Range 74.76 54 P **P** **05 26 36.3 +0.6**
SHOC Shoshone, Teco 74.92 56 P **P** **05 26 37.4 +0.9**
baz=308
SVAN Silvan-Diyarba 74.92 307 *e*P **P** **05 26 37.7 +1.3**
GSC Goldstone, Bar 74.94 57 P **P** **05 26 36.8 +0.1**
baz=308
BFSC Mount Baldy Ra 75.04 58 P **P** **05 26 36.8 -0.5**
baz=308
BORG Borgarnes 75.30 353 P **P** **05 26 39.1 +1.1**
comp=Z,12nm,0.9s,baz=13,slow=5.8,SNR=3.8
BORG LR LR 05 58 40.2
comp=Z,166nm,20.4s,baz=12,slow=35
comp=Z,12nm,0.9s

TUQ	Turquoise Moun		75.43	56	P		P		05 26 39.0	-0.5
	baz=308									
HEC	Hector,Ludlow		75.54	57	P		P		05 26 39.9	-0.2
	baz=308									
PTK	Pertek		75.56	309	*e*P		P		05 26 41.9	+1.6
DYBB	Diyarbakir		75.69	307	*e*P		P		05 26 42.3	+1.4
MURC	Murrieta		75.74	58	P		P		05 26 41.8	+0.6
	baz=308									
MZR	Muzera		75.78	288	P		P		05 26 41.4	-0.2
MAZI	Mazidag		75.82	307	*e*P		P		05 26 42.7	+1.0
RSDY	Resadiye-TOKAT		75.82	311	*e*P		P		05 26 42.4	+0.9
NUUK	Nuuk		75.84	7	⇑*i*P		P		05 26 42.2	+1.1
NUUK						IAmb	IAmb		05 26 42.7	
	comp=Z,20nm,0.9s									
MSU	Marysvale		75.84	52	P		P		05 26 43.4	+1.5
MSU	Marysvale		75.84	52	P		P		05 26 43.4	+1.5
GMRC	Granite Mounta		76.00	56	P		P		05 26 41.3	-1.5
	baz=309									
KIS	Kishinev		76.02	320	⇑*i*P		P		05 26 42.5	0.0
	comp=Z,130nm,3.7s									
KIS	Kishinev		76.02	320	*e*PP		PP		05 29 35.0	+2.4
KIS					*e*L		L		06 02 03.0	
KIS						LRM	MLR		06 04 09.0	
	comp=Z,700nm,14.0s									
KIS	Kishinev		76.02	320	*c i*P		P		05 26 42.5	0.0
KIS					*e*				05 29 35.0	
KIS						pmax	pmax			
	comp=Z,130nm,3.7s									
KIS						MLR	MLR			
	comp=Z,900nm,13.0s									
KIS						MLR	MLR			
	comp=E,700nm,14.0s									
ARPR	Arapgir-MALATY		76.06	309	*e*P		P		05 26 44.8	+1.7
MILM	Milestii Mici		76.08	320	⇑*i*P		P		05 26 42.4	-0.4
	comp=E,120nm,2.1s									
MILM	Milestii Mici		76.08	320	*e*PcP		PcP		05 26 52.0	-3.0
MILM	Milestii Mici		76.08	320	*e*PP		PP		05 29 34.0	+1.0
MILM	Milestii Mici		76.08	320	*c i*P		P		05 26 42.4	-0.4
MILM					*e*				05 26 52.0	
MILM					*e*				05 29 34.0	
MILM					*e*PPP		PPP		05 31 20.0	
MILM					*e*S		S		05 36 22.0	-3.2
MILM					*e*PS		PnS		05 36 57.0	-5.8
MILM						pmax	pmax			
	comp=Z,120nm,2.1s									
MILM						MLR	MLR			
	comp=N,2μm,14.5s									
MILM						MLR	MLR			
	comp=Z,2μm,14.5s									
P17A	Butcher Ranch,		76.09	50	P		P		05 26 44.6	+1.3
P17A						IAmb	IAmb		05 26 55.1	
	comp=Z,18nm,1.0s									
KVT	Kavak		76.12	312	*e*P		P		05 26 44.7	+1.4
SAKB	Bahrain		76.12	292	P		P		05 26 42.6	-0.8
MTPU	Mount Pierson		76.13	52	P		P		05 26 44.8	+1.0
LCMT	Little Creek M		76.13	53	P		P		05 26 45.1	+1.6
Q16A	Castle Valley		76.19	51	P		P		05 26 45.0	+1.1
Q16A						IAmb	IAmb		05 26 58.1	
	comp=Z,31nm,1.5s									
DIKM	Dikmen		76.20	313	⇓P		P		05 26 45.3	+1.7
BEL	Belsk		76.20	328	*e*P		P		05 26 44.5	+1.1
BEL					*e*L		L		06 03 00.4	
	comp=Z,2μm,18.1s									
PFO	Pinyon Flats O		76.21	58	LR		LR		05 53 57.3	
	comp=Z,243nm,20.6s,baz=302,slow=31									
PFO	Pinyon Flats O		76.21	58	P		P		05 26 43.3	-0.7
	baz=308									
TPFO	Pinon Flats		76.22	58	P		P		05 26 43.9	-0.2
	baz=308									
BELC	Belle Mtn. Jos		76.27	57	P		P		05 26 45.2	+0.8
	baz=309									
LVV	L'vov		76.28	325	*e*P		P		05 26 44.4	+0.5
LVV					*e*				05 29 34.3	
LVV					*e*S		S		05 36 25.4	-2.0
LVV					*e*				05 37 23.8	
LVV					*e*				05 41 28.0	
LVV						pmax	pmax			
	comp=Z,80nm,1.3s									
LVV						MLR	MLR			
	comp=N,2μm,15.0s									
LVV						MLR	MLR			
	comp=E,3μm,15.0s									
LVV						MLR	MLR			
	comp=Z,3μm,15.0s									
SVSK	Karacayir		76.32	311	*e*P		P		05 26 45.9	+1.6
TOKT	Tokat		76.33	311	*e*P		P		05 26 45.5	+1.0
ULM	Lac du Bonnet		76.42	35	P		P		05 26 47.0	+2.3
	comp=Z,5.5nm,0.8s,baz=218,slow=0.4,SNR=5.3									
	comp=Z,5.5nm,0.8s									
ULM	Lac du Bonnet		76.42	35	P		P		05 26 47.0	+2.3
K22A	Casper		76.43	46	P		P		05 26 45.1	0.0
	baz=312									
K22A	Casper		76.43	46	P		P		05 26 45.8	+0.7
	baz=312									
MDND	Maddock		76.43	38	P		P		05 26 46.5	+1.6
	baz=315									
MDND	Maddock		76.43	38	P		P		05 26 44.7	-0.2
	baz=315									
GKP	Gorka Klasztor		76.53	330	*e*P		P		05 26 43.9	-1.3
GKP					*e*L		L		06 03 41.2	
	comp=Z,2μm,18.2s									
RWWY	Rawlins		76.68	47	P		P		05 26 46.8	+0.1
MONP2	Monument Peak		76.68	58	P		P		05 26 46.8	0.0
	baz=309									
IRM	Iron Mountain		76.73	57	P		P		05 26 47.0	+0.2
	baz=309									
RSSD	Black Hills		76.78	43	P		P		05 26 47.1	-0.1
RSSD	Black Hills		76.78	43	IAMs_20		IAMs_20		06 03 55.8	
	comp=Z,400nm,20.0s									
RSSD	Black Hills		76.78	43	P		P		05 26 47.1	-0.1
RSSD						pmax	pmax			
	comp=Z,10.0nm,0.7s									
RSSD						MLR	MLR			
	comp=Z,400nm,20.0s									
RSSD	Black Hills		76.78	43	P		P		05 26 47.9	+0.7
	baz=313									
RSSD	Black Hills		76.78	43	P		P		05 26 47.4	+0.2
	baz=313									
E28A	Huff		76.80	40	P		P		05 26 47.5	+0.6
	baz=314									
URFA	Urfa		76.83	308	*e*P		P		05 26 44.5	-2.9
BC3	Big Chuckawall		76.84	57	P		P		05 26 48.4	+0.8
	baz=309									
DARE	Darende-Malaty		76.91	309	*e*P		P		05 26 49.7	+1.9
U15A	North Rim		77.10	53	P		P		05 26 50.6	+1.4
U15A						IAmb	IAmb		05 27 01.2	
	comp=Z,41nm,1.4s									
O20A	White River Ci		77.12	48	P		P		05 26 49.0	-0.1
	baz=311									
PDMCI	Parker Dam,Lak		77.28	56	P		P		05 26 50.1	+0.3
	baz=309									
BUR08	Bucovina Ar. S		77.31	322	P		P		05 26 50.6	+0.6
BUR08						IAmb	IAmb		05 27 08.2	
	comp=Z,15nm,0.8s									
BURAR	Bucovina Array		77.32	322	⇓P		P		05 26 50.8	+0.8
BURAR	Bucovina Array		77.32	322	P		P		05 26 50.2	+0.2
BURAR						IAmb	IAmb		05 27 08.5	
	comp=Z,18nm,0.8s									
BURAR	Bucovina Array		77.32	322	P		P		05 26 50.2	+0.2
BIZ	Bicaz		77.39	321	⇓P		P		05 26 51.0	+0.7
TESR	Tescani		77.42	321	⇑P		P		05 26 51.2	+0.8
YOZ	Yozgat		77.48	311	*e*P		P		05 26 51.0	-0.1
CORM	Corum		77.53	312	*e*P		P		05 26 51.6	+0.3
CFR	Carcaliu		77.63	319	⇓P		P		05 26 52.0	+0.4
SARI	SarD1z-Kayseri		77.65	310	*e*P		P		05 26 52.5	+0.4
BNN	Bunyan		77.69	310	*e*P		P		05 26 52.4	+0.1
BNN	Bunyan		77.69	310	P		P		05 26 52.0	-0.3
TPGR	Topolog		77.71	319	⇑P		P		05 26 52.8	+0.7
KOLS	Kolonicke sedl		77.71	325	*e*P		P		05 26 52.9	+0.9
KOLS						pmax	pmax			
	comp=Z,18nm,1.0s									
KOLS	Kolonicke sedl		77.71	325	*e*P		P		05 26 52.9	+0.9
PV10	Paradox Valley		77.81	50	P		P		05 26 54.0	+0.9
CANT	Cankiri		77.82	313	*e*P		P		05 26 53.7	+0.9
OJC	Ojcow		77.83	327	*e*P		P		05 26 52.0	-0.6
OJC					*e*L		L		06 04 22.9	
	comp=Z,2μm,18.1s									
VRI	Vrincioaia		77.84	320	⇑P		P		05 26 53.6	+0.7
VRI	Vrincioaia		77.84	320	*e*P		P		05 26 52.9	+0.1
AGMN	Agassiz Nation		77.85	36	IAMs_20		IAMs_20		06 06 20.8	
	comp=Z,410nm,18.0s									
AGMN	Agassiz Nation		77.85	36	P		P		05 26 52.7	-0.1
	baz=317									
AGMN	Agassiz Nation		77.85	36	P		P		05 26 53.3	+0.5
	baz=317									

PLOR	Plostina		77.89	320	⇓P		P		05 26 54.4	+1.3
N23A	Red Feather La		77.92	47	P		P		05 26 53.9	+0.2
	baz=312									
UZH	Uzhgorod		77.93	325	*e*P		P		05 26 51.4	-1.8
UZH					*e*				05 26 53.8	
UZH					*e*				05 27 06.4	
UZH					*e*				05 29 44.2	
UZH					*e*S		S		05 36 43.4	-1.9
UZH					*e*PS		PnS		05 37 37.2	+11
UZH					*e*SSS		SSS		05 45 04.4	
UZH						MLR	MLR			
	comp=N,440nm,16.0s									
UZH						MLR	MLR			
	comp=E,550nm,16.0s									
UZH						MLR	MLR			
	comp=Z,400nm,16.0s									
KMRS	Kahramanmaras		77.95	309	*e*P		P		05 26 54.7	+1.1
TIRR	Tirgusor		77.99	318	*e*P		P		05 26 54.0	+0.4
CRVS	Cervenica-Dubn		78.10	325	*e*P		P		05 26 55.3	+1.1
CRVS						pmax	pmax			
	comp=Z,44nm,1.3s									
CRVS	Cervenica-Dubn		78.10	325	*e*P		P		05 26 55.3	+1.1
COVR	Voineasa-Covas		78.12	321	⇓P		P		05 26 55.8	+1.5
OZUR			78.14	321	⇑P		P		05 26 56.2	+1.7
NIE	Niedzica		78.22	326	*e*P		P		05 26 56.1	+1.3
Y14A	Wickenburg		78.24	56	P		P		05 26 56.6	+1.3
WUAZ	Wupatki		78.25	54	P		P		05 26 55.2	-0.3
	baz=310									
BR131	Keskin Array S		78.39	312	P		P		05 26 56.0	-0.2
BR131	Keskin Array S		78.39	312	P		P		05 26 56.0	-0.2
BR131						pmax	pmax			
	comp=Z,76nm,1.7s									
BRTR	Keskin Array B		78.39	312	P		P		05 26 56.8	+0.6
	comp=Z,9.0nm,1.1s,baz=97,slow=4.2,SNR=30									
BRTR						PP	PP		05 29 58.4	+5.5
	comp=Z,4.7nm,1.1s,baz=59,slow=7.8,SNR=4.0									
BRTR						LR	LR		06 06 30.7	
	comp=Z,854nm,18.5s,baz=20,slow=40									
	comp=Z,9.0nm,1.1s									
DOPR	Dopca		78.43	321	⇓P		P		05 26 58.0	+2.0
ISR	Istrita		78.47	320	⇑P		P		05 26 57.8	+1.4
MLR	Muntele Rosu		78.50	321	⇑P		P		05 26 57.4	+0.8
MLR	Muntele Rosu		78.50	321	P		P		05 26 57.3	+0.7
	comp=Z,2.0nm,0.5s,baz=25,slow=4.6,SNR=10									
MLR						PP	PP		05 29 59.2	+5.7
	comp=Z,3.8nm,0.8s,baz=208,slow=11,SNR=3.3									
MLR						LR	LR		06 05 10.5	
	comp=Z,1μm,19.6s,baz=28,slow=38									
	comp=Z,2.0nm,0.5s									
MLR	Muntele Rosu		78.50	321	*e*P		P		05 26 57.5	+0.9
KAMT	Kaman		78.59	312	*e*P		P		05 26 56.9	-0.3
KOZT	Kozan		78.61	309	*e*P		P		05 26 58.7	+1.5
B35A	Bob, Littlefor		78.76	35	P		P		05 26 57.4	-0.4
B35A	Bob, Littlefor		78.76	35	P		P		05 26 58.0	+0.2
	baz=319									
LANS	Liptovska Anna		78.78	326	*e*P		P		05 26 59.7	+1.7
LANS						pmax	pmax			
	comp=Z,21nm,1.3s									
LANS	Liptovska Anna		78.78	326	*e*P		P		05 26 59.7	+1.7
ANTO	Ankara		78.78	313	⇑P		P		05 26 58.8	+0.7
ANTO	Ankara		78.78	313	*e*P		P		05 26 58.9	+0.7
ANTO	Ankara		78.78	313	P		P		05 26 57.9	-0.3
ANTO						IAmb	IAmb		05 27 00.4	
	comp=Z,52nm,1.2s									
ANTO	Ankara		78.78	313		IAMs_20	IAMs_20		06 03 44.6	
	comp=Z,445nm,21.0s									
ANTO	Ankara		78.78	313	P		P		05 26 57.9	-0.3
ANTO						pmax	pmax			
	comp=Z,52nm,1.3s									
ANTO						MLR	MLR			
	comp=Z,400nm,21.0s									
ANTO	Ankara		78.78	313	P		P		05 26 59.0	+0.7
ANTO					*S*		S		05 36 55.5	+0.6
LOD	Lodumlu		78.78	313	*e*P		P		05 26 57.8	-0.4
KSP	Ksiaz		78.78	329	*e*P		P		05 26 58.8	+0.8
KSP					*e*L		L		06 04 50.3	
	comp=Z,2μm,19.9s									
OKC	Ostrava-Krasne		78.81	327	*e*P		P		05 26 57.2	-0.9
OKC						MLR	MLR			
	comp=Z,2μm,14.1s									
OKC	Ostrava-Krasne		78.81	327	*e*P		P		05 26 57.2	-0.9
OKC						AMS	AMS		06 08 00.0	
	comp=Z,2μm,14.1s									
YAYX	Yaylak		78.82	312	*e*P		P		05 26 57.8	-0.7
ISCO	Idaho Springs		78.85	47		IAMs_20	IAMs_20		06 04 35.6	
	comp=Z,404nm,19.0s									
ISCO	Idaho Springs		78.85	47	P		P		05 27 00.4	+1.5
	baz=313									
ISCO	Idaho Springs		78.85	47	P		P		05 26 57.6	-1.3
	baz=313									
MVCO	Mesa Verde		78.90	51	P		P		05 26 59.3	+0.2
	baz=312,SNR=9.9									
SERE	Sereflikochisa		78.96	312	*e*P		P		05 26 59.6	+0.3
CEYT	Ceyhan		78.97	309	*e*P		P		05 27 00.8	+1.6
VOIR			78.97	321	⇓P		P		05 27 00.5	+1.4
CMRD	Camardi-Nigde		78.99	310	*e*P		P		05 27 00.6	+1.2
OSTC	Ostas		79.04	329	*e*P		P		05 27 00.6	+1.2
OSTC					*ex*		x		05 27 09.5	
OSTC					*e*S		S		05 36 57.0	-0.2
OSTC						AMS	AMS		06 07 20.0	
	comp=Z,2μm,15.0s									
YUVA	Yuva-Kibriscik		79.05	314	*e*P		P		05 27 00.6	+0.9
CHVC	Chvalec		79.08	329	*e*P		P		05 27 00.7	+1.1
DRGR			79.10	323	⇓P		P		05 27 01.0	+1.2
MORC	Moravsky Berou		79.11	328	⇓P		P		05 27 01.3	+1.5
MORC	Moravsky Berou		79.11	328	*e*P		P		05 27 00.6	+0.8
TAHT	Tahtakopru-Hat		79.12	308	*e*P		P		05 27 01.3	+1.3
DPC	Dobruska-Polom		79.16	329	*e*P		P		05 27 01.3	+1.3
DPC					*e*				05 27 11.0	
DPC						MLR	MLR			
	comp=Z,2μm,14.4s									
DPC	Dobruska-Polom		79.16	329	*e*P		P		05 27 01.3	+1.3
DPC					*ep*P		pwP		05 27 11.0	+1.9
DPC						AMS	AMS		06 07 20.0	
	comp=Z,2μm,14.4s									
UPC	Upice		79.16	329	*e*P		P		05 27 00.8	+0.8
UPC						MLR	MLR			
	comp=Z,2μm,14.7s									
UPC	Upice		79.16	329	*e*P		P		05 27 00.8	+0.8
UPC						AMS	AMS		06 07 20.0	
	comp=Z,2μm,14.7s									
KRLC	Kraliky		79.19	328	*e*P		P		05 27 01.0	+0.8
KRLC					*e*S		S		05 37 00.2	+1.3
KRLC						MLR	MLR			
	comp=Z,2μm,15.2s									
KRLC	Kraliky		79.19	328	*e*P		P		05 27 01.0	+0.8
KRLC					*e*S		S		05 37 00.2	+1.3
KRLC						AMS	AMS		06 07 00.0	
	comp=Z,2μm,15.2s									
KARA	Karaisali		79.22	310	*e*P		P		05 27 01.6	+1.1
KULU	Kulu		79.22	312	*e*P		P		05 27 01.3	+0.6
ARR	Arges		79.22	321	⇑P		P		05 27 02.4	+1.8
MDUB	Mudurnu		79.26	314	*e*P		P		05 27 00.8	-0.1
NRS	Narsarsuaq		79.31	4	IAMs_20		IAMs_20		06 03 24.6	
	comp=Z,491nm,20.0s									
YAYL	Yayladag		79.39	308	*e*P		P		05 27 02.7	+1.0
F33A	5 Mile Ranch,		79.45	38	P		P		05 27 02.3	+0.6
	baz=317									
SULT	Sultanhani-AKS		79.49	311	*e*P		P		05 27 02.7	+0.6
PSZ	Piszkesteto		79.53	325	⇓P		P		05 27 03.3	+1.1
S22A	4UR Ranch, Cre		79.53	49	P		P		05 27 03.9	+1.3
S22A	4UR Ranch, Cre		79.53	49	P		P		05 27 03.4	+0.8
	baz=312,SNR=9.9									
VYHS	Vyhne		79.55	326	*e*P		P		05 27 03.3	+1.1
VYHS						pmax	pmax			
	comp=Z,28nm,1.2s									
VYHS	Vyhne		79.55	326	*e*P		P		05 27 03.3	+1.1
214A	Organ Pipe Nat		79.64	57	P		P		05 27 03.5	+0.6
	baz=310									
YESY	Yesilyurt		79.64	311	*e*P		P		05 27 03.6	+0.6
GULT	Gulveren		79.67	314	*e*P		P		05 27 03.3	+0.2
BRG	Berggiesshubel		79.68	330	*e*P		P		05 27 03.7	+0.8
BRG						Amp			05 27 04.9	
	comp=Z,19nm,1.2s									
BRG					*ex*		x		05 27 13.0	
BRG						Amp			05 27 14.5	
	comp=Z,21nm,1.3s									
BRG	Berggiesshubel		79.68	330	S		S		05 37 06.0	+2.1
BRG						Amp			06 05 42.0	
	comp=E,0.7nm,15.6s									
BRG						Amp			06 05 45.0	
	comp=N,1.0nm,24.1s									
BRG						Amp			06 05 49.0	
	comp=Z,1.3nm,18.4s									

BRG	Berggiesshubel		79.68	330	*e*P		P		05 27 03.6	+0.8
BRG					*e*				05 27 13.0	
BRG					S		S		05 37 06.0	+2.1
BRG					pmax	pmax				
	comp=Z,19nm,1.2s									
BRG					pmax	pmax				
	comp=Z,21nm,1.3s									
BRG					smax	smax				
	comp=E,724nm,15.6s									
BRG					MLR	MLR				
	comp=N,967nm,24.1s									
BRG					MLR	MLR				
	comp=Z,1μm,18.4s									
CLL	Collm		79.69	331	P		P		05 27 02.6	-0.2
CLL					IAmb		IAmb		05 27 04.5	
	comp=Z,31nm,1.1s									
CLL	Collm		79.69	331	⇑*i*P		P		05 27 03.0	+0.2
CLL					*i*				05 27 12.1	
CLL					*e*S		S		05 37 00.0	-4.0
CLL					pmax	pmax				
	comp=Z,31nm,1.0s									
CLL					pmax	pmax				
	comp=Z,39nm,1.3s									
CLL					MLR	MLR				
	comp=Z,1μm,20.1s									
CLL	Collm		79.69	331	⇑*i*P		P		05 27 03.0	+0.2
	comp=Z,31nm,1.0s									
CLL					*i* PcP		pwP		05 27 12.1	+0.2
	comp=Z,39nm,1.3s									
CLL					*ex*		x		05 29 45.0	
CLL					*e*PP		PP		05 30 04.0	+0.9
	comp=Z,21nm,1.4s									
CLL					*e*PPP		PPP		05 31 52.0	
CLL					*e*S		S		05 37 00.0	-4.0
CLL					*e*PS		PnS		05 37 48.0	-0.4
CLL					*e*(SS)				05 42 00.0	
CLL					*e*SSS		SSS		05 45 42.0	
CLL					*e*(SSSS)				05 48 42.0	
CLL					LmH				06 00 00.0	
	comp=N,1μm,19.6s									
CLL					LmH				06 00 00.0	
	comp=E,2μm,20.5s									
CLL					LmV				06 05 00.0	
	comp=Z,1μm,20.1s									
CLL					Lmax				06 07 00.0	
PVCC	Panska Ves		79.71	330	*e*P		P		05 27 04.2	+1.2
PVCC					*e*S		S		05 37 04.7	+0.4
PVCC					MLR	MLR				
	comp=Z,2μm,15.9s									
PVCC	Panska Ves		79.71	330	*e*P		P		05 27 04.2	+1.2
PVCC					*e*S		S		05 37 04.7	+0.4
PVCC					AMS	AMS			06 06 40.0	
	comp=Z,2μm,15.9s									
JAVC	Velka Javorina		79.76	327	*e*P		P		05 27 05.4	+2.0
SVRH	Sivrihisar-ESK		79.78	313	*e*P		P		05 27 03.9	+0.2
MERS	Mersin		79.79	310	*e*P		P		05 27 03.1	-0.7
VRAC	Vranov		79.86	328	⇑P		P		05 27 05.4	+1.5
VRAC	Vranov		79.86	328	P		P		05 27 04.5	+0.7
	comp=Z,21nm,1.0s,baz=43,slow=5.4,SNR=30									
VRAC						LR	LR		06 05 57.0	
	comp=Z,2μm,18.7s,baz=20,slow=38									
	comp=Z,21nm,1.0s									
VRAC	Vranov		79.86	328	*e*P		P		05 27 04.9	+1.1
SRCK	Saricakaya, Es		79.88	314	*e*P		P		05 27 03.6	-0.5
KIZT	Kizilcal		79.97	313	*e*P		P		05 27 05.3	+0.5
OGNE	Ogallala		80.04	44	P		P		05 27 06.2	+1.2
	baz=314									
OGNE	Ogallala		80.04	44	P		P		05 27 04.6	-0.5
	baz=314									
EYMN	Ely		80.05	34	P		P		05 27 05.0	+0.1
EYMN	Ely		80.05	34	P		P		05 27 05.7	+0.8
	baz=320									
GZR	Gura Zlata		80.10	322	⇓P		P		05 27 05.9	+0.6
SMOL	Smolenice		80.13	327	*e*P		P		05 27 06.9	+1.6
SMOL					pmax	pmax				
	comp=Z,21nm,1.3s									
KRUC	Moravsky		80.14	328	*e*P		P		05 27 06.2	+0.9
PRU	Pruhonice		80.15	329	*e*P		P		05 27 06.5	+1.1
PRU					*e*				05 27 15.7	
PRU					*e*S		S		05 37 14.7	+5.8
PRU					MLR	MLR				
	comp=Z,2μm,14.5s									
PRU	Pruhonice		80.15	329	*e*P		P		05 27 06.5	+1.1
PRU					*ep*P		pwP		05 27 15.7	+1.2
PRU					*e*S		S		05 37 14.7	+5.8
PRU					AMS	AMS			06 07 00.0	
	comp=Z,2μm,14.5s									
LADK	Ladik-KONYA		80.16	312	*e*P		P		05 27 04.9	-0.9
CAVI	Cavuskoy		80.20	315	*e*P		P		05 27 06.5	+0.7
YLV	Yalova		80.20	315	*e*P		P		05 27 06.2	+0.3
KIZK	Mersin		80.28	310	*e*P		P		05 27 07.0	+0.7
MODS	Modra-Piesok		80.30	327	*e*P		P		05 27 07.9	+1.6
MODS					pmax	pmax				
	comp=Z,66nm,1.2s									
MODS	Modra-Piesok		80.30	327	*e*P		P		05 27 07.9	+1.6
SDCO	Great Sand Dun		80.30	49	P		P		05 27 05.3	-1.5
	baz=313									
KONT	Konya--Tatoy		80.33	312	*e*P		P		05 27 07.2	+0.6
RAR	Rarotonga		80.34	128	LR		LR		05 56 41.7	
	comp=Z,411nm,20.3s,baz=301,slow=31									
BZS

GEC2 GERESS Array S 81.39 329 P P 05 27 12.2 0.0
GERES GERESS Array B 81.39 329 P P 05 27 12.6 +0.4
comp=Z,3.6nm,0.9s,baz=29,slow=3.0,SNR=22
comp=Z,3.6nm,0.9s
GERES GERESS Array B 81.39 329 P P 05 27 12.2 0.0
GERES GERESS Array B 81.39 329 P P 05 27 12.2 0.0
LFK Lefkose 81.45 309 eP P 05 27 13.0 +0.3
ISP Isparta 81.47 313 IAMs_20 IAMs_20 06 07 52.7
comp=Z,503nm,20.0s
GAZI Gazipasa 81.53 310 eP P 05 27 12.3 -0.7
KDZ Kurdzhali 81.53 318 eP P 05 27 14.1 +1.2
SPMN Marine on St. baz=320 81.55 37 P P 05 27 14.5 +1.6
PLD Plovdiv 81.56 319 eP P 05 27 13.5 +0.4
ANMO Albuquerque 81.64 51 LR LR 05 57 44.2
comp=Z,153nm,21.9s,baz=337,slow=32
ANMO Albuquerque 81.64 51 P P 05 27 14.4 +0.6
ANMO Albuquerque 81.64 51 P P 05 27 14.4 +0.6
ANMO pmax pmax
comp=Z,14nm,1.1s
ANMO Albuquerque baz=313 81.64 51 P P 05 27 15.9 +2.0
ANMO Albuquerque baz=313 81.64 51 P P 05 27 14.9 +1.0
FRGS Fruska Gora 81.66 324 ⇑P P 05 27 14.0 +0.5
FRGS Fruska Gora 81.66 324 ⇑iP P 05 27 13.8 +0.2
GRA1 Grafenberg Arr 81.66 331 IAMs_20 IAMs_20 06 06 59.2
comp=Z,670nm,20.0s
GRFO Grafenberg 81.67 331 IAMs_20 IAMs_20 06 06 59.3
comp=Z,688nm,20.0s
ALN Alexandroupoli 81.75 317 eP P 05 27 14.4 +0.4
BGNE Belgrade baz=317 81.77 42 P P 05 27 15.0 +0.8
CSS Mathiatis 81.79 309 eP P 05 27 14.9 +0.5
CSS Mathiatis 81.79 309 IAMs_20 IAMs_20 06 09 09.5
comp=Z,481nm,19.0s
ENEZ Enez 81.81 317 eP P 05 27 14.1 -0.2
RDO Rodhopi 81.83 318 eP P 05 27 15.5 +1.0
RDO Rodhopi 81.83 318 P P 05 27 15.3 +0.8
RDO IAmb IAmb 05 27 54.9
comp=Z,59nm,1.4s
MMAI Mount Meron Ar 81.84 306 LR LR 06 07 53.6
comp=Z,905nm,18.5s,baz=208,slow=39
GELI Taytur-Gelibol 81.88 317 eP P 05 27 15.1 +0.4
BOVS Bovan 81.92 321 ⇓P P 05 27 15.0 +0.1
ARSA Arzberg 81.92 327 iP P 05 27 15.9 +1.0
comp=Z,13nm,1.1s,SNR=5.1
VTS Vitosha 81.93 320 P P 05 27 16.1 +0.9
VTS IAmb IAmb 05 28 01.1
comp=Z,22nm,0.9s
VTS Vitosha 81.93 320 P P 05 27 16.1 +0.9
VTS pmax pmax
comp=Z,22nm,0.9s
LEF Lefka 81.95 309 eP P 05 27 14.3 -0.9
MOA Molln 81.96 328 iP P 05 27 16.4 +1.3
comp=Z,18nm,1.3s,SNR=7.4
MOA eP PP 05 30 21.8 -0.3
comp=Z,9.5nm,1.2s
Y22A Socorro baz=313 82.01 52 P P 05 27 17.5 +1.7
KULA Kula-Manisa 82.03 314 eP P 05 27 15.7 0.0
KORT Korkueli 82.14 312 eP P 05 27 15.5 -0.9
I37B Waseca baz=319 82.18 38 P P 05 27 17.0 +0.7
I37A Lemond, Waseca 82.19 38 P P 05 27 16.8 +0.5
I37A IAmb IAmb 05 27 28.2
comp=Z,28nm,0.8s
MMLI Mount Malkishu 82.21 306 eP P 05 27 18.0 +1.3
L34A Svendsen Farm, L34A 82.26 41 P P 05 27 16.8 +0.1
IAmb IAmb 05 27 28.0
comp=Z,16nm,0.8s
A252A Venje 82.33 325 iP P 05 27 16.9 -0.1
BIOA Bad Ischl, Aus 82.34 328 iP P 05 27 18.2 +1.1
comp=Z,35nm,1.8s,SNR=14
BIOA eP PP 05 30 29.1 +4.0
comp=Z,7.4nm,1.1s
EZN Ezine 82.37 316 eP P 05 27 17.2 -0.1
DIVS Divibare 82.38 323 eP P 05 27 17.6 +0.2
SCHQ Schefferville 82.38 17 P P 05 27 17.9 +0.7
comp=Z,5.5nm,0.8s,baz=340,slow=8.0,SNR=4.5
SCHQ LR LR 06 07 08.7
comp=Z,346nm,19.8s,baz=13,slow=38
comp=Z,5.5nm,0.8s
KALN Kalnik 82.40 326 iP P 05 27 17.3 -0.1
121A Cookes Peak, D baz=312 82.45 54 P P 05 27 19.9 +1.8
121A Cookes Peak, D baz=312 82.45 54 P P 05 27 17.8 -0.3
BOZC Bozcaada 82.50 316 eP P 05 27 17.4 -0.6
LOBO Lobor 82.55 326 iP P 05 27 18.0 -0.2
ELL Elmali 82.57 312 eP P 05 27 17.4 -1.2
PERS Pernice 82.58 327 iP P 05 27 19.0 +0.6
SOKA Soboth 82.58 327 iP P 05 27 19.1 +0.7
comp=Z,44nm,1.3s,SNR=36
MOSL Moslavina 82.68 325 iP P 05 27 18.6 -0.3
BTNL Ternell 82.73 334 dP P 05 27 18.6 -0.4
comp=Z,7.8nm,1.1s
MEM Membach 82.75 334 dP P 05 27 19.8 +0.7
CBKS Cedar Bluff baz=316 82.80 45 P P 05 27 20.2 +0.5
AYDB Zeytinkoy-Aydi 82.86 314 eP P 05 27 20.8 +0.7
GHAJ Ghor Haditha 82.88 305 IAMs_20 IAMs_20 06 10 20.5
comp=Z,553nm,18.0s
OBKA Obir 82.92 327 ⇑iP P 05 27 19.7 -0.5
OBKA Obir 82.92 327 iP P 05 27 21.0 +0.8
comp=Z,10nm,0.9s,SNR=6.1
OBKA eP PP 05 30 26.6 -3.4
comp=Z,12nm,1.1s
BSTI Sart Tilman 82.92 335 dP P 05 27 20.4 +0.4
KBA Koelnbreinsper 82.95 328 iP P 05 27 21.6 +1.1
comp=Z,30nm,1.3s,SNR=10
KBA eP PP 05 30 32.9 +2.6
comp=Z,11nm,1.2s
BHOU Houvegnez 82.97 334 dP P 05 27 21.2 +0.9
comp=Z,9.8nm,1.3s
BLCB Balcova 83.02 315 eP P 05 27 20.9 +0.2
RUDO Rudo 83.04 323 ⇓iP P 05 27 20.9 +0.1
SIGR SIGRI 83.06 316 eP P 05 27 20.6 -0.3
CRES Cresnjev 83.07 326 ⇑iP P 05 27 20.6 -0.3
A051A Mrakovica 83.08 325 ⇑iP P 05 27 20.9 -0.1
PDKS Podkum 83.08 327 iP P 05 27 21.2 +0.2
FETY Fethiye 83.12 312 eP P 05 27 20.2 -1.1
BCLA Clavier 83.14 335 bP P 05 27 21.4 +0.3
BLY Banja Luka 83.16 325 ⇑iP P 05 27 31.7 +10
MYKA Terra Mystica 83.19 328 iP P 05 27 21.6 0.0
comp=Z,0.1nm,0.2s,SNR=7.5
YER Yerkesik 83.22 313 eP P 05 27 23.3 +1.4
OZLJ Ozalj 83.23 326 iP P 05 27 20.8 -0.9
LJU Ljubljana 83.30 327 iP P 05 27 22.0 0.0
PRED Cave del Predi 83.38 328 P P 05 27 22.4 -0.1
PRED IAmb IAmb 05 27 42.4
comp=Z,15nm,0.8s
URZ Urewera 83.38 154 LR LR 06 02 56.2
comp=Z,214nm,18.0s,baz=30,slow=35
RCHB Rochefort 83.39 335 bP P 05 27 22.5 0.0
comp=Z,9.6nm,1.3s
GCAM G?zelcaml? 83.40 314 eP P 05 27 23.3 +0.6
BOJS Bojanci 83.42 326 ⇑iP P 05 27 22.7 0.0
BMRD Maredsous 83.42 335 dP P 05 27 22.8 +0.3
N35A Tabor 83.45 41 P P 05 27 23.4 +0.5
N35A Tabor baz=318 83.45 41 P P 05 27 23.5 +0.5
WATA Walderalm 83.45 329 iP P 05 27 24.2 +1.1
comp=Z,30nm,1.3s,SNR=8.4
WATA eP PP 05 30 33.1 -1.3
comp=Z,25nm,2.0s
WTTA Wattenberg 83.49 329 iP P 05 27 23.9 +0.6
comp=Z,19nm,1.3s,SNR=7.1
WTTA eP PP 05 30 35.7 +1.0
comp=Z,13nm,1.2s
HORT Hortiatis 83.49 319 eP P 05 27 22.9 -0.4
WLF Walferdange 83.50 334 dx P 05 27 25.8 +2.8
ABTA Abfaltersbach 83.56 329 iP P 05 27 23.7 +0.2
comp=Z,19nm,1.2s,SNR=9.1
ABTA eP PP 05 30 33.8 -1.4
comp=Z,6.1nm,1.1s
UPM Unac-Piva 83.57 323 ⇑iP P 05 27 24.2 +0.4
CEY Cerknica 83.58 327 ⇑iP P 05 27 23.4 -0.2
MOTA Moosalm 83.63 330 iP P 05 27 25.1 +1.1
comp=Z,46nm,1.3s,SNR=14
MOTA eP PP 05 30 37.0 +1.2
comp=Z,11nm,1.8s
CLUD Cludinico 83.64 328 P P 05 27 23.5 -0.3
RETA Reutte 83.65 330 iP P 05 27 25.1 +1.1
comp=Z,46nm,1.5s,SNR=12

A050A Klekovaca 83.66 325 ⇑iP P 05 27 24.1 0.0
PAIG Paliouri 83.69 318 eP P 05 27 24.1 -0.1
SQTA Sankt Quirin 83.69 330 iP P 05 27 25.4 +1.2
comp=Z,29nm,1.5s,SNR=9.3
SQTA eP PP 05 30 38.3 +2.0
comp=Z,8.9nm,1.2s
PMOR Pomariorio Ree 83.70 115 eT T 06 59 37.0
comp=Z,7.1nm,0.2s
SRKY Kupres RS 83.70 324 ⇑iP P 05 27 24.6 +0.3
PLIT Plitvice 83.75 326 iP P 05 27 24.6 +0.1
BODT Bodrum 83.82 314 eP P 05 27 24.3 -0.6
SKDS Skadanscina 83.91 327 ⇑iP P 05 27 24.7 -0.5
CIMO Cimolais 83.94 328 P P 05 27 24.8 -0.6
CIMO IAmb IAmb 05 27 35.6
comp=Z,28nm,1.3s
BRY Bratogost 83.98 323 ⇑iP P 05 27 25.2 -0.6
PDG Podgorica 84.00 322 ⇑P P 05 27 26.2 +0.5
PDG Podgorica 84.00 322 P P 05 27 25.4 -0.3
FETA Feichten 84.04 330 iP P 05 27 26.8 +0.8
comp=Z,22nm,1.2s,SNR=11
FETA eP PP 05 30 40.5 +1.3
comp=Z,7.6nm,1.1s
KIJV Kijevo 84.09 325 iP P 05 27 26.2 0.0
DAVA Damuels 84.15 330 iP P 05 27 27.5 +0.9
comp=Z,38nm,1.2s,SNR=10
RICI Ricice 84.17 324 iP P 05 27 26.0 -0.5
LIT Litokhoron 84.17 319 P P 05 27 26.4 -0.2
LIT Litokhoron 84.17 319 P P 05 27 26.4 -0.2
RABC Rab 84.22 326 iP P 05 27 25.5 -1.2
DRME Dracevica, Mon 84.22 322 ⇑iP P 05 27 27.3 +0.4
SMRN Sveta Marina 84.26 327 iP P 05 27 26.0 -0.9
KSU1 Kansas State U baz=318 84.26 43 P P 05 27 27.7 +0.6
PPT Papeete 84.31 118 LR LR 05 57 24.6
comp=Z,433nm,21.2s,baz=312,slow=30
PPT2 Papeete2 84.32 118 eS S 05 37 53.0 +0.4
comp=Z,114nm,27.5s
PPT2 Papeete2 84.32 118 eLR LR 05 54 00.4
comp=Z,872nm,22.8s
NVLJ Novalja 84.33 326 iP P 05 27 25.5 -1.8
EIL Elat 84.37 304 LR LR 06 09 52.8
comp=Z,471nm,18.3s,baz=74,slow=39
MAKA Makarska 84.38 324 iP P 05 27 26.9 -0.6
STON Ston 84.39 323 ⇑iP P 05 27 24.1 -3.5
STON Ston 84.39 323 iP P 05 27 25.7 -2.0
JFWS Jewell Farm 84.50 37 IAMs_20 IAMs_20 06 10 27.7
comp=Z,570nm,19.0s
JFWS Jewell Farm baz=321 84.50 37 P P 05 27 30.4 +2.2
JFWS Jewell Farm baz=321 84.50 37 P P 05 27 27.8 -0.5
AMTX Amarillo 84.51 49 P P 05 27 29.2 +0.7
AMTX IAmb IAmb 05 27 40.9
comp=Z,15nm,0.8s
AMTX Amarillo baz=315 84.51 49 P P 05 27 28.3 -0.3
MSTX Muleshoe baz=315 84.51 50 P P 05 27 29.7 +1.1
MSTX Muleshoe baz=315 84.51 50 P P 05 27 28.1 -0.6
MNTX Cornudas Mount baz=314 84.51 53 P P 05 27 29.3 +0.8
MNTX Cornudas Mount baz=314 84.51 53 P P 05 27 28.4 -0.1
BRJN Brijuni 84.53 327 iP P 05 27 27.5 -0.8
FUORN Ofenpass-Fuorn 84.55 330 P P 05 27 28.9 +0.1
DAVOX Davos/Dischmat 84.57 330 P P 05 27 29.4 +0.6
comp=Z,10nm,1.0s,baz=350,slow=1.7,SNR=17
DAVOX LR LR 06 09 13.7
comp=Z,2µm,18.3s,baz=26,slow=39
comp=Z,10nm,1.0s
KBN Korca 84.63 320 P P 05 27 29.4 +0.3
KBN Korca 84.63 320 P P 05 27 29.4 +0.3
KBN pmax pmax
comp=Z,38nm,0.8s
DUGI Dugi Otok 84.70 325 iP P 05 27 28.2 -1.0
L40A Anamosa baz=321 84.71 38 P P 05 27 28.9 -0.4
GDL2 Guadalupe Moun 84.79 52 P P 05 27 30.8 +0.7
KARP Karpathos 84.99 313 IAMs_20 IAMs_20 06 11 44.9
comp=Z,512nm,20.0s
TEOL Teolo 85.03 328 P P 05 27 30.4 -0.5
OK032 Salt Plains WL 85.08 45 P 05 27 31.7 +0.4
OK032 IAmb IAmb 05 27 42.4
comp=Z,22nm,1.1s
OK032 IAMs_20 IAMs_20 06 09 05.7
comp=Z,462nm,18.0s
KS20 Mayfield South 85.13 45 P P 05 27 31.8 +0.2
TAOE Nuku Hiva Isla 85.19 106 eLR LR 05 54 24.1
comp=Z,846nm,21.5s
SALO Salr 85.28 329 P P 05 27 32.1 -0.1
SANT Santorini 85.34 314 IAMs_20 IAMs_20 06 10 07.3
comp=Z,550nm,19.0s
CROK Carrier 85.43 45 P P 05 27 33.3 +0.2
CROK IAmb IAmb 05 27 45.5
comp=Z,29nm,1.3s
GLMI Grayling baz=325 85.43 32 P P 05 27 32.6 -0.3
P38A Dawn 85.45 41 P P 05 27 33.8 +0.7
P38A IAmb IAmb 05 27 44.8
comp=Z,9.4nm,0.8s
P38A Dawn baz=320 85.45 41 P P 05 27 33.8 +0.7
SENIN Lac Senin/Sane 85.89 331 P P 05 27 34.6 -0.8
SENIN IAmb IAmb 05 27 55.0
comp=Z,16nm,0.9s
SGRT San Giovanni R 86.17 324 P P 05 27 36.5 -0.2
OK029 Liberty Lake 86.24 45 P P 05 27 37.9 +0.8
OK029 IAmb IAmb 05 27 48.2
comp=Z,24nm,1.2s
P40A Paris baz=320 86.26 40 P P 05 27 37.5 +0.4
WMOK Wichita Mounta baz=317 86.27 47 P P 05 27 37.7 +0.4
WMOK Wichita Mounta baz=317 86.27 47 P P 05 27 36.8 -0.5
IDI Anoyia 86.45 314 LR LR 06 12 30.6
comp=Z,331nm,18.8s,baz=28,slow=40
IDI Anoyia 86.45 314 IAMs_20 IAMs_20 06 10 51.6
comp=Z,446nm,19.0s
LPIG La Paz 86.45 62 LR LR 06 05 01.8
comp=Z,151nm,18.0s,baz=306,slow=35
OK025 Westminster Rd 86.46 46 P 05 27 37.5 -0.6
OK025 IAmb IAmb 05 27 49.2
comp=Z,18nm,1.0s
OK031 S. Brethren Rd 86.46 45 IAMs_20 IAMs_20 06 14 11.0
comp=Z,444nm,18.0s
NRCA Noncia 86.47 326 P P 05 27 38.7 +0.5
RPZ Rata Peaks 86.58 160 LR LR 06 01 39.9
comp=Z,244nm,19.4s,baz=332,slow=32
HDIL Hopedale baz=322 86.79 37 P P 05 27 38.9 -0.7
R40A Maddies Statio 87.10 41 P P 05 27 40.8 -0.4
R40A Maddies Statio baz=320 87.10 41 P P 05 27 41.5 +0.2
TX31 Lajitas Ar. Si baz=315 87.21 54 P P 05 27 43.2 +1.1
TXAR Lajitas Array 87.22 54 P P 05 27 43.1 +1.0
comp=Z,0.8nm,0.5s,baz=294,slow=3.4,SNR=14
TXAR LR LR 06 07 56.4
comp=Z,129nm,18.1s,baz=335,slow=36
comp=Z,0.8nm,0.5s
TXAR Lajitas Array 87.22 54 P P 05 27 42.1 0.0
TXAR Lajitas Array 87.22 54 P P 05 27 42.1 0.0
LATE Laterza 87.22 327 P P 05 27 41.6 -0.1
LATE IAmb IAmb 05 28 29.6
comp=Z,27nm,1.1s
U38A Gravette 87.42 43 P P 05 27 42.8 -0.1
SADO Sadowa 87.62 29 LR LR 06 11 31.1
comp=Z,289nm,18.7s,baz=0.0,slow=39
CCM Cathedral Cave 87.79 40 P P 05 27 45.0 +0.4
CCM IAmb IAmb 05 27 56.1
comp=Z,16nm,0.8s
CCM Cathedral Cave 87.79 40 IAMs_20 IAMs_20 06 12 53.1
comp=Z,314nm,20.0s
CCM Cathedral Cave 87.79 40 P P 05 27 45.0 +0.4
CCM pmax pmax
comp=Z,16nm,0.9s
CCM Cathedral Cave baz=321 87.79 40 P P 05 27 45.1 +0.4
CCM Cathedral Cave baz=321 87.79 40 P P 05 27 43.6 -1.0
L48A N Adams 87.86 34 P P 05 27 45.3 +0.4
L48A IAmb IAmb 05 27 56.1
comp=Z,15nm,0.9s
AAM Ann Arbor 87.90 33 IAMs_20 IAMs_20 06 11 17.5

comp=Z,473nm,21.0s
MGMO Mountain Grove 87.97 41 P P 05 27 45.1 -0.4
TBI Tubuai 88.42 122 eS S 05 38 32.2 0.0
comp=Z,154nm,30.5s
TBI Tubuai 88.42 122 eLR LR 05 55 53.6
comp=Z,396nm,26.5s
TBI Tubuai 88.42 122 eT T 07 05 30.8
comp=Z,11nm,0.3s
P46A Rosedale 88.51 37 P P 05 27 49.0 +1.1
P46A IAmb IAmb 05 28 15.2
comp=Z,14nm,0.6s
OLIL Olney 88.79 38 P P 05 27 49.4 +0.1
OLIL IAmb IAmb 05 28 47.1
comp=Z,36nm,1.6s
FCAR Ozark Folk Cen 89.02 42 P P 05 27 50.3 -0.1
MIAR Mount Ida 89.28 44 P P 05 27 52.0 +0.3
MIAR IAMs_20 IAMs_20 06 12 41.6
comp=Z,324nm,20.0s
MIAR Mount Ida 89.28 44 P P 05 27 52.0 +0.3
MIAR pmax pmax
comp=Z,7.0nm,1.0s
MIAR Mount Ida baz=320 89.28 44 P P 05 27 50.7 -1.0
LONY Lake Ozonia baz=332 89.38 26 P P 05 27 50.9 -1.1
ERPA Erie baz=328 89.55 31 P P 05 27 50.2 -2.6
P49A Miami Univ. Ec 89.70 35 IAMs_20 IAMs_20 06 07 01.4
comp=Z,345nm,19.0s
P49A Miami Univ. Ec baz=325 89.70 35 P P 05 27 51.0 -2.6
M53A WI Miller and 89.85 32 IAMs_20 IAMs_20 06 14 19.0
comp=Z,453nm,20.0s
M53A WI Miller and baz=328 89.85 32 P P 05 27 53.6 -0.6
ACSO Alum Creek Sta 89.89 34 IAMs_20 IAMs_20 06 14 47.3
comp=Z,447nm,19.0s
ACSO Alum Creek Sta baz=326 89.89 34 P P 05 27 55.1 +0.7
G62A West of Eustis 90.16 23 P P 05 27 55.6 0.0
G62A IAmb IAmb 05 28 08.3
comp=Z,13nm,1.1s
VAE Valguarnera 90.19 322 LR LR 06 11 00.9
comp=Z,326nm,19.2s,baz=38,slow=37
VT1 Waterbury 90.25 25 IAMs_20 IAMs_20 06 14 42.7
comp=Z,555nm,20.0s
PKME Peaks-Kenny Pk baz=335 90.49 23 P P 05 27 56.3 -0.8
LBNH Lisbon baz=333 90.60 25 P P 05 27 57.5 -0.1
O53A New Philadelph 90.62 33 IAMs_20 IAMs_20 06 13 41.7
comp=Z,419nm,21.0s
P52A Corning 90.75 34 IAMs_20 IAMs_20 06 15 07.0
comp=Z,300nm,20.0s
ATD Arta Tunnel 90.85 286 LR LR 06 13 35.8
comp=Z,189nm,18.7s,baz=266,slow=39
HNH Hanover 90.96 25 IAMs_20 IAMs_20 06 16 01.2
comp=Z,518nm,18.0s
WVT Waverly 90.99 39 IAMs_20 IAMs_20 06 14 20.7
comp=Z,362nm,20.0s
WVT Waverly baz=323 90.99 39 P P 05 27 58.8 -0.8
BINY Binghamton 91.00 28 IAMs_20 IAMs_20 06 15 37.5
comp=Z,541nm,19.0s
BINY Binghamton baz=331 91.00 28 P P 05 27 58.7 -0.9
J61A Chester 91.19 25 P P 05 28 01.4 +1.0
I63A Otisfield 91.20 24 P P 05 28 01.3 +0.9
I63A IAmb IAmb 05 28 03.0
comp=Z,27nm,1.3s
M57A Sunshine Farm, M57A 91.33 29 P P 05 28 01.8 +0.7
IAmb IAmb 05 28 32.9
comp=Z,19nm,1.1s
FFD Franklin Falls baz=328 91.38 25 IAMs_20 IAMs_20 06 09 01.2
comp=Z,348nm,20.0s
OXF Oxford 91.48 41 IAMs_20 IAMs_20 06 08 51.8
comp=Z,372nm,21.0s
SSPA Standing Stone 91.64 30 IAMs_20 IAMs_20 06 13 32.3
comp=Z,552nm,20.0s
MCWV Mont Chateau 91.69 32 IAMs_20 IAMs_20 06 15 23.8
comp=Z,483nm,18.0s
PLAL Pickwick Lake 91.78 40 IAMs_20 IAMs_20 06 16 49.7
comp=Z,371nm,18.0s
QUA2 Belchertown 92.21 26 IAMs_20 IAMs_20 06 14 56.3
comp=Z,523nm,20.0s
HRV Adam Dziewonsk 92.27 25 IAMs_20 IAMs_20 06 17 33.9
comp=Z,478nm,19.0s
BCX Boston College 92.55 25 IAMs_20 IAMs_20 06 18 17.3
comp=Z,521nm,20.0s
TZTN Tazewell 92.68 36 IAMs_20 IAMs_20 06 08 41.3
comp=Z,349nm,20.0s
TKL Tuckaleechee C 93.31 37 LR LR 06 11 38.1
comp=Z,218nm,20.8s,baz=333,slow=36
BLA Blacksburg 93.51 34 IAMs_20 IAMs_20 06 14 43.1
comp=Z,454nm,21.0s
KEST Kesra 93.96 324 LR LR 06 15 35.3
comp=Z,1µm,18.4s,baz=344,slow=39
GOGA Godfrey 95.29 38 IAMs_20 IAMs_20 06 16 19.6
comp=Z,388nm,18.0s
ESDC Sonseca Array 95.69 335 P P 05 28 20.0 -1.2
comp=Z,0.6nm,0.9s,baz=71,slow=40,SNR=3.7
ESDC PP PP 05 32 16.9 +5.1
comp=Z,2.3nm,0.9s,baz=26,slow=6.4,SNR=4.6
ESDC LR LR 06 17 21.3
comp=Z,1µm,18.0s,baz=18,slow=39
comp=Z,0.6nm,0.9s
DWPF Disney Wildern 100.65 39 IAMs_20 IAMs_20 06 22 51.4
comp=Z,472nm,20.0s
LODK Lodwar 101.73 284 IAMs_20 IAMs_20 06 20 40.9
comp=Z,426nm,19.0s
TAM Tamanrasset 106.59 320 IAMs_20 IAMs_20 06 22 54.6
comp=Z,382nm,20.0s
MBAR Mbarara 107.84 285 IAMs_20 IAMs_20 06 21 51.8
comp=Z,430nm,20.0s
SJG San Juan 116.22 32 IAMs_20 IAMs_20 06 28 46.4
comp=Z,320nm,20.0s
TORD Torodi Ar. Bea 116.64 318 PKP PKPdf 05 33 39.5 -0.5
comp=Z,0.3nm,0.6s,baz=333,slow=1.1,SNR=4.4
TORD PP PP 05 34 45.9 -0.8
comp=Z,8.0nm,1.1s,baz=5.9,slow=3.3,SNR=13
BCIP Isla Barro Col 116.97 50 IAMs_20 IAMs_20 06 29 23.6
comp=Z,412nm,22.0s
SDV Santo Domingo 122.26 41 IAMs_20 IAMs_20 06 33 39.3
comp=Z,310nm,21.0s
TROLL Troll, Antarti 142.21 199 PKPdf PKPdf 05 34 21.4 -5.3
SNAA Sanae 143.71 197 PKPdf PKPab 05 34 26.6 +0.5
LPAZ La Paz 143.92 59 PKP PKPdf 05 34 32.5 +0.6
comp=Z,2.8nm,0.8s,baz=225,slow=7.3,SNR=6.1
PRPB Parauapebas 144.59 23 eP PKPab 05 34 30.8 -0.1
VNA2 Neumayer--Watz baz=115,slow=3.0 145.27 196 PKPdf PKPbc 05 34 31.3 -0.4
VNA3 Neumayer Olymp 145.49 195 PKPdf PKPdf 05 34 31.5 -0.8
VNA1 Neumayer--Stat 145.66 196 PKPdf PKPdf 05 34 32.2 -0.3
CLDB Colidev 146.60 36 eP PKPdf 05 34 35.8 -0.1
BDFB Brasilia 154.05 26 PKPbc PKPbc 05 34 54.6 -1.1
comp=Z,3.1nm,0.8s,baz=21,slow=5.1,SNR=4.3

*NEIC **20** 05:26:06.6±1.4, 9.74S±0.07×161.0E±0.1, h41km±7km, mb4.6/18, Error ellipse: s-maj=15.8km s-min=9.8km az=68.0*

*IDC **20** 05:26:06.1±2.2, 9.80S×161.01E, h46km±18km, mb3.8/11, mbtmp4.2/13, ML4.4/2, MS3.8/4, Error ellipse: s-maj=21.6km s-min=14.7km az=64.0*

ISC 20 05:26:05.3±0.6, 9.70S±0.07×161.03E±0.08, h35km, n53, σ1§47/53, mb4.3/18, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	Honiara 4µm,0.5s,baz=165,slow=9.2,SNR=73	1.10	284	P		Pn		05 26 24.6	+0.4
HNR				S		Sn		05 26 39.5	+1.4
	10µm,0.3s,baz=356,slow=23,SNR=26								
HNR	Honiara	1.10	284			Pn		05 26 23.9	-0.2
HNR	Honiara	1.10	284	P		Pn		05 26 24.7	+0.6
DVP	Devils Point	10.59	140	P		Pn		05 28 36.9	+2.4
KOUNC	Koumac, New Ca	11.24	164	Pn		Pn		05 28 43.6	+0.1
KOUNC	Koumac, New Ca	11.24	164	P		Pn		05 28 44.4	+0.9
NOUC	Port Laguerre	13.34	158	P		Pn		05 29 14.4	+2.3
DZM	Mont Dzumac 2.4nm,0.3s,baz=317,slow=9.6,SNR=103	13.36	158	P		Pn		05 29 12.9	+0.3
DZM				S		Sn		05 31 37.8	-2.1
	5.1nm,0.5s,baz=118,slow=12,SNR=3.0								
DZM				LR		LR		05 33 47.7	
	comp=Z,270nm,18.3s,baz=14,slow=35								

	5.2nm,0.3s							
DZM	**Mont Dzumac**	**13.36**	**158**	Pn		**Pn**	**05 29 13.9**	**+1.4**
DZM	**Mont Dzumac**	**13.36**	**158**	P		**Pn**	**05 29 14.9**	**+2.3**
MARNC	**Mare, Loyalty**	**13.52**	**151**			**Pn**	**05 29 15.3**	**+0.6**
MARNC	**Mare, Loyalty**	**13.52**	**151**	P		**Pn**	**05 29 17.0**	**+2.4**
YATNC	**Mamie plateau,**	**13.52**	**156**	P		**Pn**	**05 29 16.8**	**+2.1**
ONTNC	**Ouen Toro**	**13.58**	**158**	P		**Pn**	**05 29 19.4**	**+3.9**
OUENC	**Ouen Island, N**	**13.83**	**157**	P		**Pn**	**05 29 20.2**	**+1.4**
	22nm,1.1s							
PINNC	**Pines Island,**	**14.24**	**155**	Pn		**Pn**	**05 29 25.4**	**+0.9**
PATS	**Pohnpei**	**16.64**	**351**	Pn		**Pn**	**05 29 54.8**	**-1.2**
CTA	**Charters Tower**	**17.61**	**232**	P		**P**	**05 30 08.8**	**0.0**
	0.6nm,0.3s,baz=68,slow=10.0,SNR=16							
CTA				LR		LR	05 36 52.7	
	comp=Z,231nm,18.3s,baz=19,slow=37							
	27nm,0.9s							
CTA	**Charters Tower**	**17.61**	**232**	P		**P**	**05 30 11.7**	**+2.9**
CTAO	**Charters Tower**	**17.61**	**232**	P		**Pn**	**05 30 08.0**	**-0.1**
CTAO				IAmb		IAmb	05 30 12.4	
	comp=Z,27nm,0.8s							
CTAO	**Charters Tower**	**17.61**	**232**	P		**P**	**05 30 11.4**	**+2.6**
EIDS	**Eidsvold**	**18.23**	**210**	P		**Pn**	**05 30 16.3**	**+0.7**
EIDS				IAmb		IAmb	05 30 45.0	
	comp=Z,32nm,0.6s							
MTSU	**Mount Surprise**	**18.25**	**241**	P		**P**	**05 30 18.4**	**+2.5**
ARMA	**Armidale**	**22.40**	**202**	P		**P**	**05 31 01.2**	**+0.2**
ARMA				IAmb		IAmb	05 31 01.4	
	comp=Z,33nm,1.5s							
QIS	**Mount Isa**	**23.30**	**240**	P		**P**	**05 31 10.6**	**+0.4**
WR0	**Warramunga Arr**	**27.52**	**245**	P		**P**	**05 31 47.8**	**-1.1**
WRA	**Warramunga Arr**	**27.70**	**245**	P		**P**	**05 31 49.6**	**-0.9**
	comp=Z,4.1nm,0.7s,baz=74,slow=9.1,SNR=32							
	comp=Z,4.1nm,0.7s							
WRA	**Warramunga Arr**	**27.70**	**245**	P		**P**	**05 31 48.5**	**-1.9**
STKA	**Stephens Creek**	**28.49**	**216**	P		**P**	**05 31 55.8**	**-1.5**
	comp=Z,3.0nm,0.7s,baz=59,slow=15,SNR=5.7							
	comp=Z,3.0nm,0.7s							
STKA	**Stephens Creek**	**28.49**	**216**	P		**P**	**05 31 57.0**	**-0.3**
ASAR	**Alice Springs**	**29.39**	**238**	P		**P**	**05 32 03.9**	**-1.6**
	comp=Z,1.6nm,0.9s,baz=64,slow=9.7,SNR=9.8							
	comp=Z,1.6nm,0.9s							
KNRA	**Kununurra**	**32.01**	**256**	P		**P**	**05 32 28.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**35.30**	**252**	P		**P**	**05 32 55.9**	**-1.3**
	comp=Z,1.8nm,0.4s,baz=77,slow=8.3,SNR=9.9							
	comp=Z,1.8nm,0.4s							
FITZ	**Fitzroy Crossi**	**35.30**	**252**	P		**P**	**05 32 55.9**	**-1.3**
FITZ				IAmb		IAmb	05 33 08.9	
	comp=Z,6.4nm,1.0s							
PSA00	**Pilbara Seismi**	**41.25**	**248**	P		**P**	**05 33 46.1**	**-1.2**
PSA00				IAmb		IAmb	05 33 47.4	
	comp=Z,15nm,0.9s							
MORW	**Morawa**	**46.27**	**239**	P		**P**	**05 34 26.7**	**-0.9**
KSRS	**Korea Array**	**56.23**	**328**	P		**P**	**05 35 41.3**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=134,slow=7.0,SNR=1.9							
	comp=Z,0.4nm,0.3s							
PETK	**Petropavlovsk-**	**62.62**	**358**	LR		LR	06 01 45.5	
	comp=Z,74nm,19.0s,baz=199,slow=34							
CMAR	**Chiang Mai Arr**	**67.33**	**295**	P		**P**	**05 36 57.6**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=135,slow=4.9,SNR=4.9							
	comp=Z,0.6nm,0.3s							
VNDA	**Vanda**	**67.81**	**180**	P		**P**	**05 36 58.9**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=339,slow=6.3,SNR=3.9							
	comp=Z,0.8nm,0.8s							
SONM	**Songino Array**	**74.88**	**325**	P		**P**	**05 37 43.4**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=142,slow=5.5,SNR=15							
	comp=Z,2.6nm,0.7s							
SONM	**Songino Array**	**74.88**	**325**	P		**P**	**05 37 43.3**	**+0.7**
YAK	**Yakutsk**	**75.56**	**345**	LR		LR	06 08 03.0	
	comp=Z,74nm,21.6s,baz=144,slow=33							
KDAK	**Kodiak Island**	**77.11**	**23**	P		**P**	**05 37 55.8**	**+0.9**
O18K	**Koktuh Hills**	**77.59**	**21**	P		**P**	**05 37 58.7**	**+1.1**
O18K				IAmb		IAmb	05 38 05.2	
	comp=Z,8.1nm,1.4s							
SVW2	**Sparrevohn**	**78.36**	**20**	P		**P**	**05 38 03.0**	**+1.3**
SVW2				IAmb		IAmb	05 38 04.5	
	comp=Z,5.3nm,0.9s							
M19K	**Big River Lodg**	**79.34**	**20**	P		**P**	**05 38 09.0**	**+1.9**
M19K				IAmb		IAmb	05 38 09.9	
	comp=Z,3.8nm,0.8s							
QSPA	**South Pole Qui**	**80.30**	**180**	P		**P**	**05 38 11.6**	**-1.0**
QSPA				IAmb		IAmb	05 38 14.3	
	comp=Z,9.2nm,1.3s							
IMAR	**Indian Mountai**	**82.44**	**17**	P		**P**	**05 38 24.0**	**+0.4**
ILAR	**Eielson Array**	**83.77**	**20**	P		**P**	**05 38 30.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=257,slow=4.6,SNR=6.1							
	comp=Z,0.4nm,0.7s							
M27K	**Edge Creek, AK**	**84.16**	**23**	P		**P**	**05 38 33.9**	**+1.1**
M27K				IAmb		IAmb	05 39 01.9	
	comp=Z,8.8nm,1.4s							
NVAR	**Mina Array Bea**	**88.74**	**51**	P		**P**	**05 38 55.1**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=214,slow=7.3,SNR=2.2							
	comp=Z,0.1nm,0.3s							
MKAR	**Makanchi Array**	**89.38**	**318**	P		**P**	**05 38 57.7**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=101,slow=6.2,SNR=10							
	comp=Z,1.0nm,0.7s							

*IDC **20** 05:34:24.6±3.5, 22˚.47S×68˚.95W, h0km, mb3.7/2, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=78.0km s-min=54.6km az=58.0*
*GUC **20** 05:34:43.8±0.6, 21˚.21S×68˚.68W, h112km±4km, ML3.3*
ISC 20 05:34:43.1±0.9, 21˚.19S±0˙.04×68˚.81W±0˙.08, h123km±9km, n19, σ0s85/32, 12C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.65**	**283**	*i*P	**Pn**	**05 35 02.0**	**-0.5**
PB01				*i* S	**Sn**	**05 35 16.9**	**-0.2**
PB01				IAML		05 35 18.0	
	comp=N,1μm,0.5s						
PB09	**IPOC Station P**	**0.72**	**214**	*i*P	**Pn**	**05 35 03.2**	**+0.1**
PB09				*i* S	**Sn**	**05 35 18.6**	**+0.2**
PB09				IAML		05 35 20.9	
	comp=N,807nm,0.4s						
PB02	**IPOC Station P**	**1.02**	**263**	*i*P	**Pn**	**05 35 06.0**	**+0.3**
PB02				*i* S	**Sn**	**05 35 23.5**	**+0.7**
PB02				IAML		05 35 25.5	
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**1.13**	**242**	*i*P	**Pn**	**05 35 07.1**	**+0.2**
PB07				*i* S	**Sn**	**05 35 25.4**	**+0.5**
PB07				IAML		05 35 27.0	
	comp=N,515nm,0.3s						
LVC	**Limon Verde**	**1.41**	**184**	*i*P	**Pn**	**05 35 10.1**	**-0.1**
LVC				*i* S	**Sn**	**05 35 30.1**	**-0.5**
TA01	**Diego Aracena**	**1.43**	**296**	*i*P	**Pn**	**05 35 10.5**	**+0.6**
TA01				*i* S	**Sn**	**05 35 30.8**	**+0.5**
TA01				IAML		05 35 32.4	
	comp=E,953nm,0.3s						
TA02	**Huaiquique**	**1.54**	**306**	*i*P	**Pn**	**05 35 11.5**	**+0.3**
TA02				*i* S	**Sn**	**05 35 33.2**	**+0.6**
GO01	**Chusmiza**	**1.56**	**347**	*i*P	**Pn**	**05 35 12.4**	**+0.4**
GO01				*i* S	**Sn**	**05 35 34.1**	**+0.3**
GO01				IAML		05 35 37.3	
	comp=E,582nm,0.1s						
PB06	**IPOC Station P**	**1.66**	**205**	*i*P	**Pn**	**05 35 12.9**	**+0.1**
PB06				*i* S	**Sn**	**05 35 35.8**	**+0.4**
PB06				IAML		05 35 37.1	
	comp=E,298nm,0.5s						
PB04	**IPOC Station P**	**1.68**	**227**	*i*P	**Pn**	**05 35 13.3**	**+0.3**
PB04				*e*S	**Sn**	**05 35 37.1**	**+1.2**
PB04				IAML		05 35 43.8	
	comp=N,294nm,0.3s						
AF01	**San Pedro de A**	**1.84**	**162**	*e*P	**Pn**	**05 35 15.7**	**+0.6**
AF01				*e*S	**Sn**	**05 35 40.7**	**+1.1**
AF01				IAML		05 35 54.1	
	comp=N,192nm,0.7s						
PB15	**IPOC Station P**	**2.10**	**197**	*e*P	**Pn**	**05 35 18.7**	**+0.6**
PB15				*e*S	**Sn**	**05 35 45.5**	**+0.6**
PB16	**IPOC Station P**	**2.92**	**347**	*i*P	**Pn**	**05 35 30.2**	**+1.2**
PB16				*e*S	**Sn**	**05 36 04.0**	**-0.3**
PB16				IAML		05 36 11.7	
	comp=E,43nm,0.2s						
PB12	**IPOC Station P**	**2.94**	**331**	*i*P	**Pn**	**05 35 28.4**	**-0.4**
PB12				*i* S	**Sn**	**05 36 02.8**	**-1.2**
PB12				IAML		05 36 05.2	
	comp=E,125nm,0.2s						
GO02	**Mina Guanaco**	**4.01**	**190**	IAML		05 35 16.3	
	comp=N,20nm,0.1s						
LPAZ	**La Paz**	**4.92**	**8**	Pn	**Pn**	**05 35 57.8**	**+2.1**
	comp=N,0.6nm,0.3s,baz=194,slow=5.3,SNR=14						
	comp=N,1.4nm,0.3s						
BDFB	**Brasilia**	**20.48**	**78**	P	**P**	**05 39 09.2**	**-2.3**
	comp=N,1.6nm,0.5s,baz=236,slow=11,SNR=4.2						
	comp=N,1.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.17**	**70**	P	**P**	**05 46 23.5**	**-0.2**
	comp=N,0.4nm,0.5s,baz=244,slow=4.2,SNR=4.9						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**145.33**	**36**	PKPbc	**PKPbc**	**05 54 07.1**	**+0.7**
	comp=N,0.4nm,0.8s,baz=329,slow=1.7,SNR=3.8						

*IDC **20** 05:51:23.7±4.0, 55˚.36S×31˚.06W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=125.7km s-min=43.6km az=170.0*
*NEIC **20** 05:51:25.1±0.7, 55˚.36S±0˙.04×31˚.2W±0˙.2, h10km±1km, mb4.6/19, Error ellipse: s-maj=16.2km s-min=6.8km az=77.0*
ISC 20 05:51:25.0±0.6, 55˚.31S±0˙.08×31˚.27W±0˙.08, h10km, n30, σ1s18/27, mb4.5/12, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.19**	**287**	Pn	**Pn**	**05 52 15.6**	**+0.5**
ORCD	**Orcadas**	**8.97**	**227**		**Pn**	**05 53 34.1**	**-0.3**
ESPZ	**Base Esperanza**	**15.32**	**228**	Pn	**Pn**	**05 55 01.2**	**+0.2**
ESPZ				IAmb	IAmb	05 55 12.6	
	comp=Z,43nm,1.5s						
EFI	**East Falkland**	**16.31**	**272**	Pn	**Pn**	**05 55 12.6**	**-1.3**
EFI				IAmb	IAmb	05 55 13.8	
	comp=Z,169nm,1.4s						
VNA3	**Neumayer Olymp**	**18.51**	**158**	P	**Pn**	**05 55 45.5**	**+4.3**
PMSA	**Palmer Station**	**18.69**	**226**	P	**P**	**05 55 41.7**	**-1.3**
VNA2	**Neumayer--Watz**	**18.79**	**156**	P	**Pn**	**05 55 46.1**	**+1.5**
	baz=328,slow=11						
SNAA	**Sanae**	**20.39**	**154**	P	**P**	**05 55 59.8**	**-1.8**
MG01	**Puerto William**	**20.65**	**256**	P	**P**	**05 56 03.9**	**-0.5**
TRIS	**Tristan da Cun**	**22.34**	**43**	P	**P**	**05 56 21.3**	**-1.5**
GO09	**Cerro Castillo**	**24.61**	**262**	P	**P**	**05 56 45.1**	**-0.1**
GO09				IAmb	IAmb	05 57 17.9	
	comp=Z,29nm,1.4s						
TRQA	**Tornquist**	**26.91**	**297**	P	**P**	**05 57 06.0**	**-0.1**
TRQA				IAmb	IAmb	05 57 34.4	
	comp=Z,12nm,1.5s						
LL02	**Futaleuf**	**28.70**	**278**	P	**P**	**05 57 22.2**	**+0.2**
LL02				IAmb	IAmb	05 57 26.3	
	comp=Z,8.0nm,1.2s						
CPUP	**Villa Florida**	**34.62**	**316**	P	**P**	**05 58 14.6**	**+0.5**
CPUP				IAmb	IAmb	05 58 49.7	
	comp=Z,7.4nm,1.3s						
MT09	**Talagante**	**34.88**	**291**	P	**P**	**05 58 16.8**	**+0.3**
MT09				IAmb	IAmb	05 58 47.6	
	comp=Z,7.1nm,1.1s						
QSPA	**South Pole Qui**	**34.95**	**180**		**P**	**05 58 16.3**	**-0.5**
MT01	**Popeta**	**34.95**	**291**	P	**P**	**05 58 17.1**	**+0.2**
MT01				IAmb	IAmb	05 58 38.4	
	comp=Z,18nm,1.4s						
PEL	**Peldehue**	**35.21**	**293**	P	**P**	**05 58 19.6**	**+0.3**
PEL				IAmb	IAmb	05 58 50.2	
	comp=Z,15nm,1.1s						
PB16	**IPOC Station P**	**46.91**	**306**	P	**P**	**05 59 56.3**	**+0.1**
PB16				IAmb	IAmb	06 00 33.2	
	comp=Z,9.1nm,1.3s						
BOSA	**Boshof**	**48.08**	**80**	P	**P**	**06 00 04.2**	**-0.5**
BOSA				IAmb	IAmb	06 00 10.3	
	comp=Z,16nm,1.4s						
LPAZ	**La Paz**	**48.09**	**309**	P	**P**	**06 00 06.5**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=180,slow=5.1,SNR=5.6						
	comp=Z,1.2nm,0.7s						
LPAZ	**La Paz**	**48.09**	**309**	P	**P**	**06 00 06.2**	**+0.8**
H10N1	**ASCENSION HYDR**	**49.19**	**22**	T	T	06 52 55.0	
	baz=196						
H10N3	**ASCENSION HYDR**	**49.19**	**22**	T	T	06 52 54.8	
	baz=196						
H10N2	**ASCENSION HYDR**	**49.20**	**22**	T	T	06 52 56.9	
	baz=196,SNR=5.0						
DBIC	**Dimbokro**	**65.55**	**29**	P	**P**	**06 02 09.0**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=164,slow=7.4,SNR=3.4						
	comp=Z,2.8nm,0.7s						
DBIC	**Dimbokro**	**65.55**	**29**	P	**P**	**06 02 08.4**	**-0.1**
GRGR	**Grenville**	**71.88**	**329**	P	**P**	**06 02 48.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.63**	**34**	P	**P**	**06 02 58.4**	**0.0**
	comp=Z,0.4nm,0.9s,baz=198,slow=8.8,SNR=1.8						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**147.91**	**313**	PKPbc	**PKPbc**	**06 11 08.9**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=115,slow=1.5,SNR=8.7						

*NEIC **20** 05:52:40.7±1.3, 39˚.47N±0˙.07×143˚.8E±0˙.1, h10km±5km, mb4.6/32, Error ellipse: s-maj=14.0km s-min=8.4km az=115.0*
*BJI **20** 05:52:40.6±0.0, 39˚.42N×143˚.31E, h10km, mb4.6/47, mB4.9/22, Ms4.3/16, Ms7 4.2/16*
*MOS **20** 05:52:40.9±0.9, 39˚.58N×143˚.61E, h19km, mb4.8/27, Error ellipse: s-maj=7.4km s-min=4.9km az=109.6*
*IDC **20** 05:52:40.1±0.6, 39˚.50N×143˚.55E, h0km, mb4.2/27, mbtmp4.2/32, ML2.9/5, MS3.8/6, Error ellipse: s-maj=16.6km s-min=13.5km az=155.0*
*JMA **20** 05:52:42.2±0.4, 39˚.6N±0˙.9×14˚4E±˚, h37km, MD4.5/35, MV4.5/35, FAR E OFF SANRIKU*
*NIED **20** 05:52:42.2, 39˚.59N×143˚.66E, h37km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr2.65; Mθθ0.73; Mφφ -3.39; Mrθ1.63; Mθφ-1.18; Mφr1.50; Fault plane solution: Mo3.94000×10^15^ NP1: φs170.00000°, δ35.00000°, λ49.00000°. NP2:φs36.00000°, δ64.00000°, λ114.00000°.*
ISC 20 05:52:42.3±0.8, 39˚.53N±0˙.05, h16km±4km, n237, σ1s57/232, mb4.5/68, MS4.2/8, 13C-11D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.43**	**273**	*i*P	**Pn**	**05 53 06.4**	**-1.2**
MIYJ	**Miyakonagasawa**	**1.43**	**273**	A	A	05 53 06.4	
	comp=E,8.0nm,1.2s,comp=E,7.0nm,5.7s						
JTH	**Tanohata**	**1.45**	**287**	*i*P	**Pn**	**05 53 06.2**	**-1.6**
JTH				*e*S	**Sn**	**05 53 25.0**	**-1.6**
OFUJ	**Ofunato**	**1.61**	**254**	*i*P	**Pn**	**05 53 09.2**	**-0.9**
JKEN	**Kujiedanarisaw**	**1.65**	**295**	P	**Pn**	**05 53 08.5**	**-2.2**
JKEN	**Kujiedanarisaw**	**1.65**	**295**	A	A	05 53 08.5	
	comp=E,9.0nm,1.1s,comp=E,7.0nm,2.9s						
JOM	**Ohasama**	**1.83**	**269**	*i*P	**Pn**	**05 53 12.8**	**-0.5**
JOM				*e*S	**Sn**	**05 53 35.0**	**-1.1**
JOM	**Ohasama**	**1.83**	**269**	A	A	05 53 12.8	
	comp=E,8.0nm,1.0s,comp=E,7.0nm,0.7s						
JANG	**Nango**	**1.85**	**298**	*i*P	**Pn**	**05 53 11.6**	**-1.9**
JANG				*e*S	**Sn**	**05 53 32.4**	**-4.2**
JMK	**Ichinoseki**	**1.98**	**254**	*i*P	**Pn**	**05 53 14.7**	**-0.6**
JIO	**Ouri**	**2.10**	**240**	*i*P	**Pn**	**05 53 15.9**	**-0.9**
JSZI	**Iwateshizukuis**	**2.10**	**277**	A	A	05 53 15.9	
	comp=E,18nm,2.6s,comp=E,15nm,1.4s						
JRG	**Rokugo**	**2.35**	**268**	A	A	05 53 19.7	
	comp=E,8.0nm,0.9s,comp=E,7.0nm,5.0s						
JTM	**Tenmabayashi**	**2.35**	**303**	Pn	**Pn**	**05 53 19.7**	**-0.6**
JTM	**Tenmabayashi**	**2.35**	**303**	P	**Pn**	**05 53 19.7**	**-0.6**
JTM				*e*S	**Sn**	**05 53 47.7**	**-1.2**
JAH	**Hinai**	**2.42**	**287**	A	A	05 53 20.4	
	comp=E,5.0nm,6.9s,comp=E,5.0nm,4.6s						
JAHD	**Aomorihigashid**	**2.48**	**315**	A	A	05 53 20.9	
	comp=E,10.0nm,1.4s,comp=E,8.0nm,1.1s						
ERM	**Erimo**	**2.51**	**351**		**Pn**	**05 53 21.4**	**-1.1**
ERM	**Erimo**	**2.51**	**351**	*de*P	**Pn**	**05 53 21.9**	**-0.6**
ERM				pmax	pmax		
	comp=Z,74nm,1.3s						
JYK	**Kaneyama**	**2.64**	**258**	P	**Pn**	**05 53 24.2**	**0.0**
JYK	**Kaneyama**	**2.64**	**258**	A	A	05 53 24.2	
	comp=Z,4.0nm,3.5s,comp=Z,3.0nm,2.8s						
JYW	**Yuwa**	**2.67**	**271**	A	A	05 53 24.2	
	comp=Z,19nm,2.3s,comp=Z,14nm,1.7s						
JOT	**Ohata**	**2.72**	**314**	P	**Pn**	**05 53 24.5**	**-0.9**
JOT	**Ohata**	**2.72**	**314**	A	A	05 53 24.5	
	comp=Z,2.0nm,3.0s,comp=Z,2.0nm,3.1s						
JHHS	**Hirosakihyakuz**	**2.77**	**295**	A	A	05 53 25.2	
	comp=Z,7.0nm,4.1s,comp=Z,6.0nm,1.4s						
JMM	**Marumori**	**2.79**	**234**	Pn	**Pn**	**05 53 24.9**	**-1.4**
JNTW	**Noshirotokiwa**	**2.79**	**287**	A	A	05 53 25.7	
	comp=Z,12nm,2.8s,comp=Z,13nm,1.8s						
JNBK	**Urakawa-nobuka**	**2.83**	**346**	P	**Pn**	**05 53 26.9**	**0.0**
JNBK				*e*S	**Sn**	**05 54 00.1**	**-0.6**
JNBK	**Urakawa-nobuka**	**2.83**	**346**	A	A	05 53 26.9	
	comp=Z,3.0nm,3.4s,comp=Z,4.0nm,3.2s						
JSI2	**Shiura 2**	**2.92**	**303**	A	A	05 53 27.2	
	comp=Z,4.0nm,2.7s,comp=Z,3.0nm,1.1s						
JSHD	**Hidakashinhida**	**3.02**	**343**	A	A	05 53 28.4	
	comp=Z,6.0nm,3.5s,comp=Z,6.0nm,5.6s						
JCH	**Churui**	**3.09**	**356**	P	**Pn**	**05 53 29.2**	**-1.3**
JCH				*e*S	**Sn**	**05 54 04.2**	**-2.9**
JYAR	**Yonezawaarcadi**	**3.19**	**241**	A	A	05 53 32.1	
	comp=Z,5.0nm,1.1s,comp=Z,5.0nm,1.1s						
JYA	**Atsumi**	**3.21**	**254**	A	A	05 53 32.2	
	comp=Z,6.0nm,0.9s,comp=Z,5.0nm,1.5s						
JFT	**Otama**	**3.29**	**233**	P	**Pn**	**05 53 33.0**	**-0.3**
JAK	**Akkeshi**	**3.55**	**12**	P	**Pn**	**05 53 35.2**	**-1.5**
JAK				*e*S	**Sn**	**05 54 14.6**	**-3.8**
JOG3	**Oga3**	**3.56**	**278**	A	A	05 53 28.8	
	comp=Z,6.0nm,2.1s,comp=Z,5.0nm,1.5s						
JEW	**Eniwo**	**3.71**	**334**		**Pn**	**05 53 38.8**	**-0.2**
JAR	**Ashorobuto**	**3.77**	**1**	A	A	05 53 39.0	
	comp=Z,2.0nm,0.9s,comp=Z,3.0nm,0.7s						
NMR	**Nemuro--Hokkai**	**4.14**	**21**	*e*P	**Pn**	**05 53 42.9**	**-2.0**
NMR				*e*S	**Sn**	**05 54 28.3**	**-4.6**
JYT	**Yasato**	**4.29**	**221**	Pn	**Pn**	**05 53 45.8**	**-1.1**
JSD	**Sado**	**4.48**	**252**	Pn	**Pn**	**05 53 48.8**	**-0.7**
RUSJ	**Misakicho**	**4.72**	**14**	*e*P	**Pn**	**05 53 52.0**	**-0.9**
RUSJ				*e*S	**Sn**	**05 54 44.2**	**-3.1**
YUK	**Yuzh-Kuril'sk**	**4.79**	**19**	*e*P	**Pn**	**05 53 52.0**	**-1.8**
YUK				*e*S	**Sn**	**05 54 44.4**	**-4.6**
YUK				smax	smax		
	comp=N,717nm,0.6s						
YUK				smax	smax		
	comp=E,958nm,0.6s						
MAJO	**Matsushiro**	**5.24**	**237**	Pn	**Pn**	**05 54 00.7**	**+0.7**
MAJO	**Matsushiro**	**5.24**	**237**	*c* *i*P	**Pn**	**05 54 00.9**	**+0.9**
MJAR	**Matsushiro Arr**	**5.24**	**237**	Pn	**Pn**	**05 53 58.5**	**-1.5**
	comp=E,0.5nm,0.3s,baz=49,slow=11,SNR=59						
MJAR				LR	LR	05 56 22.8	
	comp=E,499nm,18.1s,baz=160,slow=43						
	comp=E,43nm,0.8s						
KUR	**Kuril'sk**	**6.49**	**27**	*e*P	**Pn**	**05 54 17.4**	**+0.2**
KUR				*e*S	**Sn**	**05 55 25.8**	**-5.1**
KUR				pmax	pmax		
	comp=Z,90nm,0.6s						
KUR				pmax	pmax		
	comp=N,25nm,0.3s						
KUR				smax	smax		
	comp=N,75nm,0.6s						
KUR				smax	smax		
	comp=E,172nm,0.6s						
INU	**Inuyama**	**6.73**	**234**	Pn	**Pn**	**05 54 19.9**	**-0.7**
YSS	**Yuzh-Sakhalins**	**7.45**	**355**		**Pn**	**05 54 30.6**	**+0.3**
YSS	**Yuzh-Sakhalins**	**7.45**	**355**	*e*P	**Pn**	**05 54 30.6**	**+0.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
JHS	**Saijyo**	**9.54**	**245**		**Pn**	**05 54 59.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**9.88**	**302**	Pn	**Pn**	**05 55 02.3**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=100,slow=16,SNR=23						
USRK				LR	LR	05 58 55.5	
	comp=Z,323nm,18.6s,baz=247,slow=38						
	comp=Z,5.3nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.88**	**302**	Pn	**Pn**	**05 55 04.6**	**+1.0**
USRK	**Ussuriysk Ar.**	**9.88**	**302**	P	**Pn**	**05 55 04.6**	**+1.0**
USA0B	**Ussuriysk Arra**	**9.88**	**302**		**Pn**	**05 55 05.1**	**+1.5**
USA0B	**Ussuriysk Arra**	**9.88**	**302**	P	**Pn**	**05 55 05.1**	**+1.5**
TYV	**Tymovskoe**	**11.36**	**357**	*e*P	**Pn**	**05 55 27.1**	**+3.3**
TYV				*e*S	**Sn**	**05 57 37.9**	**+7.6**
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
TYV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TYV				smax	smax		
	comp=N,100nm,3.3s						
TYV				smax	smax		
	comp=E,200nm,3.3s						
MDJ	**Mudanjiang**	**11.62**	**300**	P	Pn	05 55 38.0	+10
MDJ				pP		05 55 40.9	
MDJ				sP		05 55 41.8	
MDJ				S	**Sn**	**05 57 41.3**	**+4.4**
MDJ				ScP	ScP	06 05 10.8	+21
MDJ				pmax	pmax		
	comp=Z,15nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,350nm,11.1s						
MDJ				LR	LR		
	comp=N,630nm,13.3s						
MDJ				LR	LR		
	comp=E,550nm,11.9s						
MDJ				LR	LR		
	comp=Z,880nm,13.1s						
SEHB	**SEOHWA**	**12.08**	**269**	Pn	**Pn**	**05 55 36.3**	**+2.5**
GRNR	**Gornyy**	**12.34**	**338**	*i*P	**Pn**	**05 55 36.7**	**-0.6**
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,410nm,16.0s						
GRNR				MLR	MLR		
	comp=N,220nm,18.0s						
GRNR				MLR	MLR

YULB	**Yu-li**	**24.85**	**236**	P	**P**	**05 58 03.0**	**-1.1**
YULB				IAmb	IAmb	05 58 23.7	
	comp=Z,9.9nm,0.9s						
LYN	**LuoYang**	**25.32**	**269**	*e*P	**P**	**05 58 03.6**	**-4.7**
LYN				pP	pP	05 58 07.8	-4.4
LYN				pmax	pmax		
	comp=Z,20nm,0.7s						
LYN				LR	LR		
	comp=Z,280nm,12.6s						
LYN				LR	LR		
	comp=Z,610nm,13.2s						
LYN				LR	LR		
	comp=Z,600nm,13.3s						
WHN	**Wuhan**	**25.53**	**259**	⇓P	**P**	**05 58 10.3**	**+0.1**
WHN				pP	**pP**	**05 58 14.8**	**+0.7**
WHN				pmax	pmax		
	comp=Z,81nm,0.9s						
BOD	**Bodaibo**	**26.47**	**324**	*e*P	**P**	**05 58 18.1**	**-0.4**
BOD				pmax	pmax		
	comp=Z,21nm,0.8s						
ULN	**Ulaanbaatar**	**27.54**	**300**	P	**P**	**05 58 28.2**	**-0.2**
ULN				IAmb	IAmb	05 58 29.7	
	comp=Z,17nm,1.2s						
ULN	**Ulaanbaatar**	**27.54**	**300**	*ce*P	**P**	**05 58 28.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,16nm,1.3s						
SONM	**Songino Array**	**27.98**	**300**	P	**P**	**05 58 31.4**	**-0.9**
	comp=Z,4.9nm,0.9s,baz=96,slow=8.6,SNR=21						
SONM				LR	LR	06 10 03.3	
	comp=Z,318nm,18.0s,baz=56,slow=37						
	comp=Z,4.9nm,0.9s						
SONM	**Songino Array**	**27.98**	**300**	P	**P**	**05 58 32.0**	**-0.3**
SONM	**Songino Array**	**27.98**	**300**	P	**P**	**05 58 32.0**	**-0.3**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**28.09**	**128**	T	T	06 28 00.3	
	baz=320,slow=75,SNR=86						
H11N1	**WAKE ISLAND Hy**	**28.10**	**128**	T	T	06 27 58.2	
	baz=320,slow=75,SNR=92						
H11N3	**WAKE ISLAND Hy**	**28.11**	**128**	T	T	06 28 02.4	
	baz=320,slow=75,SNR=90						
XAN	**Xi'an**	**28.24**	**270**	P	**P**	**05 58 34.6**	**-0.1**
XAN				pP	pP	05 58 39.3	+0.7
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN				LR	LR		
	comp=Z,350nm,13.7s						
XAN				LR	LR		
	comp=Z,310nm,13.2s						
XAN				LR	LR		
	comp=Z,420nm,14.4s						
H11S1	**WAKE ISLAND Hy**	**28.91**	**130**	T	T	06 29 02.3	
	baz=321,slow=74,SNR=13						
H11S3	**WAKE ISLAND Hy**	**28.91**	**130**	T	T	06 29 03.4	
	baz=321,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hy**	**28.93**	**130**	T	T	06 29 02.3	
	baz=321,SNR=12						
ZAK	**Zakamensk**	**30.21**	**304**	*e*P	**P**	**05 58 51.4**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LZH	**Lanzhou**	**31.47**	**277**	*e*P	**P**	**05 59 04.6**	**+1.2**
LZH				sP	pwP	05 59 12.5	+1.6
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
CD2	**Chengdu**	**33.49**	**268**	P	**P**	**05 59 20.3**	**-0.7**
GTA	**Gaotai**	**33.60**	**284**	⇑P	**P**	**05 59 22.1**	**+0.1**
GTA				pP	sP	05 59 27.5	0.0
GTA				sP	pwP	05 59 29.9	+0.4
GTA				pmax	pmax		
	comp=Z,14nm,1.3s						
KMI	**Kunming**	**37.12**	**260**	⇓P	**P**	**05 59 52.6**	**+0.1**
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
PZH	**PanZhiHua**	**37.15**	**262**	P	**P**	**05 59 52.8**	**+0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,120nm,5.9s						
GOMU	**GeErMu**	**38.33**	**281**	P	**P**	**06 00 00.8**	**-2.1**
GOMU				pP	pP	06 00 03.0	-3.8
GOMU				pmax	pmax		
	comp=Z,19nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,75nm,5.2s						
DGZ	**Jazzator, Alta**	**40.43**	**304**	*ce*P	**P**	**06 00 20.3**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,111nm,0.6s						
WMQ	**Urumqi**	**41.35**	**295**	*e*P	**P**	**06 00 24.3**	**-3.2**
WMQ				sP	pwP	06 00 39.5	+4.0
WMQ				pmax	pmax		
	comp=Z,52nm,1.1s						
WMQ				LR	LR		
	comp=Z,450nm,14.5s						
WMQ				LR	LR		
	comp=Z,160nm,17.9s						
ZAA0	**Zalesovo Array**	**41.60**	**310**	P	**P**	**06 00 28.7**	**-0.6**
ZALV	**Zalesovo Beam**	**41.60**	**310**	P	**P**	**06 00 28.4**	**-0.8**
	comp=Z,4.3nm,0.6s,baz=92,slow=7.8,SNR=16						
ZALV				PcP	**PcP**	**06 02 25.8**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=100,slow=3.9,SNR=3.9						
	comp=Z,4.3nm,0.6s						
ZALV	**Zalesovo Beam**	**41.60**	**310**	P	**P**	**06 00 28.8**	**-0.5**
ZALV	**Zalesovo Beam**	**41.60**	**310**	*i* P	**P**	**06 00 29.2**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CRAI	**Chiangrai**	**41.71**	**255**	P	**P**	**06 00 30.8**	**+0.2**
CRAI				IAmb	IAmb	06 00 38.5	
	comp=Z,8.4nm,0.6s						
ZSN	**Zaisan**	**42.48**	**301**	*e*P	**P**	**06 00 36.8**	**+0.2**
ZSN				*e*S	**S**	**06 06 59.3**	**+1.4**
ZSN	**Zaisan**	**42.48**	**301**	*e*P	**P**	**06 00 36.9**	**+0.2**
	baz=301						
ZSN				*e*S	**S**	**06 06 59.3**	**+1.4**
	baz=301						
IMAR	**Indian Mountai**	**43.60**	**32**	P	**P**	**06 00 44.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**43.85**	**255**	P	**P**	**06 00 48.7**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=45,slow=7.4,SNR=8.4						
CMAR				LR	LR	06 21 06.6	
	comp=Z,97nm,18.3s,baz=275,slow=39						
	comp=Z,1.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.85**	**255**	P	**P**	**06 00 46.6**	**-1.4**
MK31	**Makanchi Array**	**44.34**	**300**	P	**P**	**06 00 51.2**	**-0.5**
MK31				IAmb	IAmb	06 00 52.4	
	comp=Z,6.4nm,0.8s						
MK31	**Makanchi Array**	**44.34**	**300**	*c* *i*P	**P**	**06 00 51.3**	**-0.4**
MKAR	**Makanchi Array**	**44.34**	**300**	P	**P**	**06 00 51.5**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=83,slow=9.5,SNR=49						
	comp=Z,5.3nm,0.7s						
MKAR	**Makanchi Array**	**44.34**	**300**	P	**P**	**06 00 50.9**	**-0.7**
MAKZ	**Makanchi**	**44.55**	**300**	P	**P**	**06 00 52.8**	**-0.5**
MAKZ				IAmb	IAmb	06 00 54.2	
	comp=Z,8.6nm,1.1s						
MAKZ	**Makanchi**	**44.55**	**300**	P	**P**	**06 00 52.8**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SEM	**Semipalatinsk**	**44.88**	**306**	*e*P	**P**	**06 00 54.6**	**-1.5**
SEM	**Semipalatinsk**	**44.88**	**306**	*e*P	**P**	**06 00 54.6**	**-1.5**
	baz=306						
NEA2	**Nenana**	**45.51**	**34**	P	**P**	**06 00 59.6**	**-1.0**
NEA2				IAmb	IAmb	06 01 14.8	
	comp=Z,4.3nm,0.8s						
RND	**Reindeer**	**45.62**	**36**	P	**P**	**06 00 60.0**	**-1.7**
RND	**Reindeer**	**45.62**	**36**	P	**P**	**06 01 00.0**	**-1.7**
RND				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURK	**Kurchatov**	**45.83**	**307**	P	**P**	**06 01 02.6**	**-0.8**
KURK	**Kurchatov**	**45.83**	**307**	*c* *i*P	**P**	**06 01 02.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,22nm,1.3s						
MDM	**Murphy Dome**	**45.86**	**33**	P	**P**	**06 01 02.8**	**-0.7**
MDM				IAmb	IAmb	06 01 06.0	
	comp=Z,4.7nm,1.0s						
KURBB	**Kurchatov Arra**	**45.91**	**306**	P	**P**	**06 01 03.6**	**-0.3**
	comp=Z,10nm,0.7s,baz=80,slow=8.2,SNR=89						
	comp=Z,10nm,0.7s						
IL31		**46.44**	**34**	P	**P**	**06 01 06.7**	**-1.2**
IL31				IAmb	IAmb	06 01 22.8	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**46.44**	**34**	P	**P**	**06 01 08.8**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=266,slow=6.3,SNR=21						
	comp=Z,1.5nm,0.7s						
SHLS	**Shalkode**	**47.28**	**296**	*e*P	**P**	**06 01 12.0**	**-3.0**
SHLS	**Shalkode**	**47.28**	**296**	*e*P	**P**	**06 01 12.1**	**-3.0**
	baz=296						
TDK	**Taldyqorghan**	**47.44**	**299**	*e*P	**P**	**06 01 16.0**	**-0.1**
TDK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TDK	**Taldyqorghan**	**47.44**	**299**	*e*P	**P**	**06 01 16.1**	**-0.1**
	comp=Z,6.6nm,0.5s,baz=299						
UZB	**Uzynbulak**	**47.59**	**296**	*e*P	**P**	**06 01 17.7**	**+0.2**
UZB	**Uzynbulak**	**47.59**	**296**	*e*P	**P**	**06 01 17.7**	**+0.2**
	baz=296						
KPKS	**Kokpek**	**47.72**	**297**	*e*P	**P**	**06 01 18.0**	**-0.4**
KPKS	**Kokpek**	**47.72**	**297**	*e*P	**P**	**06 01 18.1**	**-0.4**
	baz=297						
SATY	**Saty**	**48.05**	**296**	*e*P	**P**	**06 01 20.2**	**-0.8**
SATY	**Saty**	**48.05**	**296**	*e*P	**P**	**06 01 20.2**	**-0.8**
	baz=296						
ODAN	**Odare**	**48.05**	**273**	*e*P	P	06 01 26.2	+4.9
	comp=Z,12nm,1.2s						
JIRN	**Jiri**	**48.58**	**274**	*e*P	**P**	**06 01 29.4**	**+3.8**
	comp=Z,16nm,0.7s						
GUN	**Gumba**	**48.70**	**275**	*e*P	**P**	**06 01 29.9**	**+3.5**
	comp=Z,51nm,0.9s						
MDOK	**Medeo**	**48.95**	**297**	*e*P	**P**	**06 01 27.1**	**-0.9**
MDOK	**Medeo**	**48.95**	**297**	*e*P	**P**	**06 01 27.2**	**-0.9**
	baz=297						
KUU	**Kurty**	**49.19**	**298**	*e*P	**P**	**06 01 28.3**	**-1.4**
KUU				*e*S	**S**	**06 08 34.6**	**0.0**
KUU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KUU	**Kurty**	**49.19**	**298**	*e*P	**P**	**06 01 28.3**	**-1.4**
	comp=Z,6.6nm,0.8s,baz=298						
KUU				*e*S	**S**	**06 08 34.6**	**0.0**
	baz=298						
KKN	**Kakani**	**49.22**	**275**	*e*P	**P**	**06 01 32.4**	**+2.1**
	comp=Z,14nm,0.7s						
YAH	**Yahtse**	**49.29**	**39**	P	**P**	**06 01 29.2**	**-1.2**
GKN	**Gorkha**	**49.61**	**275**	*e*P	**P**	**06 01 35.2**	**+2.0**
	comp=Z,6.4nm,0.3s						
BRZS	**Berezniki**	**49.70**	**307**	*e*P	**P**	**06 01 32.1**	**-1.3**
BRZS	**Berezniki**	**49.70**	**307**	*e*P	**P**	**06 01 32.2**	**-1.3**
	baz=307						
I29M	**Ogilvie Camp,**	**50.00**	**32**	P	**P**	**06 01 34.1**	**-1.4**
I29M				IAmb	IAmb	06 01 38.3	
	comp=Z,4.4nm,0.7s						
DANN	**Dangsing**	**50.11**	**276**	*e*P	**P**	**06 01 37.5**	**+0.3**
	comp=Z,57nm,0.7s						
BRVK	**Borovoye**	**50.29**	**311**	P	**P**	**06 01 37.2**	**-0.7**
BRVK				IAmb	IAmb	06 01 38.9	
	comp=Z,6.9nm,0.8s						
BRVK	**Borovoye**	**50.29**	**311**	*c* *i*P	**P**	**06 01 37.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BTLS	**Baital**	**50.35**	**300**	*e*P	**P**	**06 01 37.6**	**-0.8**
BTLS	**Baital**	**50.35**	**300**	*e*P	**P**	**06 01 37.6**	**-0.8**
	baz=300						
SGDS	**Sogindy**	**50.51**	**298**	*e*P	**P**	**06 01 39.1**	**-0.6**
SGDS	**Sogindy**	**50.51**	**298**	*e*P	**P**	**06 01 39.1**	**-0.6**
	baz=298						
AAK	**Ala-Archa**	**50.89**	**297**	P	**P**	**06 01 42.2**	**-0.6**
AAK	**Ala-Archa**	**50.89**	**297**	⇓*e*P	**P**	**06 01 43.2**	**+0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
INK	**Inuvik**	**51.36**	**28**	P	**P**	**06 01 45.5**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=294,slow=8.0,SNR=10						
	comp=Z,2.3nm,0.7s						
INK	**Inuvik**	**51.36**	**28**	P	**P**	**06 01 46.3**	**+0.7**
INK				IAmb	IAmb	06 01 58.8	
	comp=Z,5.7nm,0.9s						
INK	**Inuvik**	**51.36**	**28**	P	**P**	**06 01 46.3**	**+0.7**
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DZA	**Taraz**	**52.96**	**299**	*e*P	**P**	**06 01 57.8**	**-0.2**
DZA	**Taraz**	**52.96**	**299**	*e*P	**P**	**06 01 57.8**	**-0.2**
	baz=299						
KK31	**Karatay Array**	**53.43**	**299**	P	**P**	**06 02 00.5**	**-1.0**
KK31	**Karatay Array**	**53.43**	**299**	P	**P**	**06 02 00.5**	**-1.0**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KKAR	**Karatay Array**	**53.43**	**299**	P	**P**	**06 02 00.2**	**-1.3**
KKAR	**Karatay Array**	**53.43**	**299**	P	**P**	**06 02 00.2**	**-1.3**
IUG	**Iuzhnay**	**54.13**	**298**	*e*P	**P**	**06 02 06.4**	**-0.3**
IUG	**Iuzhnay**	**54.13**	**298**	*e*P	**P**	**06 02 06.5**	**-0.3**
	baz=298						
ARU	**Arti**	**55.68**	**318**	P	**P**	**06 02 16.9**	**-0.7**
	comp=Z,8.5nm,0.7s,baz=73,slow=4.3,SNR=14						
	comp=Z,8.5nm,0.7s						
ARU	**Arti**	**55.68**	**318**	P	**P**	**06 02 17.2**	**-0.4**
ARU	**Arti**	**55.68**	**318**	*c* *i*P	**P**	**06 02 17.0**	**-0.5**
ARU				S	**S**	**06 10 04.2**	**+1.2**
ARU				pmax	pmax		
	comp=Z,15nm,1.0s						
ARU				MLR	MLR		
	comp=Z,254nm,14.0s						
CHGR	**Chuyangaron**	**56.21**	**295**	P	**P**	**06 02 21.0**	**-0.7**
CHGR	**Chuyangaron**	**56.21**	**295**	P	**P**	**06 02 21.0**	**-0.7**
CHGR				pmax	pmax		
	comp=Z,13nm,0.8s						
ABKAR	**Akbulak array**	**57.70**	**310**	P	**P**	**06 02 31.5**	**-0.5**
ABKAR				IAmb	IAmb	06 02 32.8	
	comp=Z,4.7nm,0.7s						
AKTO	**Aktyubinsk**	**58.34**	**311**	P	**P**	**06 02 36.1**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=70,slow=10,SNR=12						
	comp=Z,3.1nm,0.7s						
KIRV	**Kirov**	**59.34**	**323**	⇑*e*P	**P**	**06 02 43.3**	**+0.1**
PRGR	**Permogore**	**59.65**	**327**	*e*P	**P**	**06 02 45.4**	**+0.1**
WRA	**Warramunga Arr**	**59.80**	**190**	P	**P**	**06 02 45.8**	**-1.0**
	comp=Z,1.0nm,1.0s,baz=9.5,slow=7.1,SNR=5.5						
	comp=Z,1.0nm,1.0s						
YKA	**Yellowknife Ar**	**60.76**	**31**	P	**P**	**06 02 53.4**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=292,slow=6.3,SNR=5.1						
	comp=Z,1.5nm,0.8s						
ARCES	**ARCESS Array B**	**62.29**	**339**	P	**P**	**06 03 04.3**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=17,slow=8.9,SNR=4.0						
	comp=Z,0.9nm,0.8s						
KLMR	**Klimovskoe**	**62.60**	**328**	*e*P	**P**	**06 03 03.9**	**-1.4**
KLMR				*e*		06 05 23.0	
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLMR	**Klimovskoe**	**62.60**	**328**	*e*P	**P**	**06 03 04.0**	**-1.4**
KLMR				AMP		06 03 05.8	
	comp=Z,8.0nm,1.2s						
KLMR				*e*PP	**PP**	**06 05 23.1**	**+0.5**
ASAR	**Alice Springs**	**63.52**	**190**	P	**P**	**06 03 11.7**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=16,slow=6.6,SNR=5.1						
	comp=Z,0.5nm,0.7s						
OBN	**Obninsk**	**67.16**	**323**	⇓*e*P	**P**	**06 03 35.4**	**+0.3**
OBN				*PP	**sP**	**06 03 42.0**	**+1.3**
OBN				*e*		06 03 47.3	
OBN				S	**S**	**06 12 33.0**	**+4.4**
OBN				*e*SSS	SSS	06 19 42.0	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,136nm,14.0s						
FINES	**FINESS Array B**	**67.43**	**333**	P	**P**	**06 03 36.5**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=46,slow=6.6,SNR=21						
	comp=Z,4.8nm,0.7s						
FINES	**FINESS Array B**	**67.43**	**333**	*i* P	**P**	**06 03 36.9**	**+0.2**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	**Summit**	**68.18**	**1**	*i* P	**P**	**06 03 42.0**	**+0.2**
KIV	**Kislovodsk**	**70.60**	**311**	P	**P**	**06 03 57.2**	**+0.3**
KIV	**Kislovodsk**	**70.60**	**311**	*e*P	**P**	**06 03 58.0**	**+1.1**
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KBZ	**Khabaz**	**70.61**	**311**	P	**P**	**06 03 58.0**	**+1.1**
	comp=Z,5.0nm,0.8s,baz=68,slow=3.6,SNR=13						
	comp=Z,5.0nm,0.8s						
KBZ	**Khabaz**	**70.61**	**311**	⇓*e*P	**P**	**06 03 57.3**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ONI	**Oni**	**70.96**	**310**	P	**P**	**06 03 59.8**	**+0.7**
ONI				IAmb	IAmb	06 04 00.6	
	comp=Z,6.6nm,1.1s						
ONI	**Oni**	**70.96**	**310**	P	**P**	**06 03 59.8**	**+0.7**
ONI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NACGM	**Naroch**	**71.61**	**327**	⇓*i*P	**P**	**06 04 03.0**	**+0.3**
	baz=47						
NVAR	**Mina Array Bea**	**72.09**	**55**	P	**P**	**06 04 08.2**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=285,slow=6.1,SNR=12						
	comp=Z,1.3nm,0.8s						
NC405	**NORSAR Array S**	**72.35**	**338**	P	**P**	**06 04 07.3**	**+0.2**
NC204	**NORSAR Array S**	**72.50**	**338**	P	**P**	**06 04 08.2**	**+0.2**
HFS	**Hagfors**	**72.53**	**336**	P	**P**	**06 04 08.3**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=56,slow=9.1,SNR=9.6						
	comp=Z,2.7nm,0.6s						
NB2	**NORSAR Subarra**	**72.56**	**338**	P	**P**	**06 04 08.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.56**	**338**	P	**P**	**06 04 08.4**	**0.0**
	comp=Z,2.4nm,0.8s,baz=38,slow=6.0,SNR=18						
	comp=Z,2.4nm,0.8s						
AKASG	**Malin Array Be**	**73.40**	**323**	P	**P**	**06 04 13.4**	**0.0**
	comp=Z,2.7nm,0.7s,baz=45,slow=5.8,SNR=10						
	comp=Z,2.7nm,0.7s						
AKBB	**Malin Array Si**	**73.40**	**323**	⇓*e*P	**P**	**06 04 13.3**	**-0.1**
PDAR	**Pinedale Array**	**74.67**	**47**	P	**P**	**06 04 22.4**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=262,slow=2.2,SNR=6.4						
	comp=Z,0.6nm,0.6s						
BUR08	**Bucovina Ar. S**	**77.42**	**322**	P	**P**	**06 04 36.8**	**+0.1**
BURAR	**Bucovina Array**	**77.44**	**322**	P	**P**	**06 04 36.1**	**-0.7**
BURAR	**Bucovina Array**	**77.44**	**322**	P	**P**	**06 04 36.1**	**-0.7**
BRTR	**Keskin Array B**	**78.50**	**312**	P	**P**	**06 04 43.9**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=116,slow=4.5,SNR=3.7						
	comp=Z,0.4nm,0.5s						
BRTR	**Keskin Array B**	**78.50**	**312**	*i* P	**P**	**06 04 45.0**	**+2.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MORC	**Moravsky Berou**	**79.22**	**328**	*e*P	**P**	**06 04 47.0**	**+0.5**
CLL	**Collm**	**79.80**	**331**	*i* P	**P**	**06 04 49.6**	**0.0**
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	**Collm**	**79.80**	**331**	*i* P	**P**	**06 04 49.6**	**0.0**
	comp=Z,5.0nm,1.0s						
VRAC	**Vranov**	**79.97**	**328**	P	**P**	**06 04 50.5**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=34,slow=10,SNR=3.5						
	comp=Z,1.5nm,0.5s						
VRAC	**Vranov**	**79.97**	**328**	*e*P	**P**	**06 04 51.2**	**+0.6**
KRUC	**Moravsky**	**80.24**	**328**	*e*P	**P**	**06 04 52.3**	**+0.2**
PRU	**Pruhonice**	**80.26**	**329**	*e*P	**P**	**06 04 53.0**	**+0.9**
PRU	**Pruhonice**	**80.26**	**329**	*e*P	**P**	**06 04 53.0**	**+0.9**
SDCO	**Great Sand Dun**	**80.31**	**49**	P	**P**	**06 04 53.2**	**+0.2**
KHC	**Kasperske Hory**	**81.32**	**329**	*e*P	**P**	**06 04 58.2**	**+0.3**
KHC	**Kasperske Hory**	**81.32**	**329**	*e*P	**P**	**06 04 58.2**	**+0.3**
GERES	**GERESS Array B**	**81.50**	**329**	P	**P**	**06 04 58.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=1.3,SNR=4.1						
	comp=Z,0.2nm,0.3s						
DAVOX	**Davos/Dischmat**	**84.68**	**330**	P	**P**	**06 05 16.2**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=5.9,slow=9.8,SNR=3.7						
	comp=Z,0.8nm,0.4s						
TXAR	**Lajitas Array**	**87.21**	**54**	P	**P**	**06 05 28.9**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=312,slow=3.5,SNR=5.5						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**87.21**	**54**	P	**P**	**06 05 29.0**	**+0.7**
SNAA	**Sanae**	**143.65**	**197**	PKP	PKPbc	06 12 12.7	-0.2
	comp=Z,1.8nm,0.8s,baz=142,slow=3.4,SNR=6.4						
SIV	**San Ignacio**	**148.12**	**50**	PKPbc	**PKPbc**	**06 12 27.9**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=186,slow=1.8,SNR=6.2						

IDC ***20*** *06:01:21.9±0.9,* ***55°.10S*** *×* ***30°.85W*** *,h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=40.8km s-min=20.5km az=70.0*
NEIC ***20*** *06:01:23.4±1.1,* ***55°.27S±0°.07×31°.0W±0°.1*** *,h10km±1km, mb4.5/25, Error ellipse: s-maj=17.6km s-min=4.5km az=49.0*

ISC 20 06:01:23.3±0.6, 55°.24S±0°.09×31°.0W±0°.1, h10km, n38, σ0s 81/35, mb4.4/15, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.31**	**285**			**Pn**	**06 02 14.6**	**-0.4**
ORCD	**Orcadas**	**9.12**	**227**			**Pn**	**06 03 33.3**	**-1.5**
SNAA	**Sanae**	**20.39**	**155**	P		**P**	**06 06 00.3**	**+0.3**
	1.6nm,0.8s,baz=308,slow=10,SNR=4.9							
	1.6nm,0.8s							
SNAA	**Sanae**	**20.39**	**155**	P		**P**	**06 05 59.5**	**-0.5**
SMAI	**San Martin Ant**	**21.02**	**218**	P		**P**	**06 06 06.3**	**-0.4**
BELA	**Belgrano 2**	**22.77**	**182**	P		**P**	**06 06 25.4**	**0.0**
MG05	**Puerto Natales**	**24.68**	**261**	P		**P**	**06 06 44.4**	**+0.4**
GO09	**Cerro Castillo**	**24.76**	**262**	P		**P**	**06 06 45.0**	**+0.2**
GO09				IAmb		IAmb	06 07 05.4	
	comp=Z,21nm,1.1s							
TRQA	**Tornquist**	**27.01**	**297**	P		**P**	**06 07 05.7**	**+0.4**
TRQA				IAmb		IAmb	06 07 47.4	
	comp=Z,8.4nm,1.3s							
COYC	**Coyhaique**	**27.52**	**273**	P		**P**	**06 07 08.6**	**-1.1**
COYC				IAmb		IAmb	06 07 43.8	
	comp=Z,22nm,1.5s							
ITAB	**Concordia**	**31.91**	**323**	P		**P**	**06 07 48.8**	**+0.1**
ITAB				IAmb		IAmb	06 08 22.2	
	comp=Z,17nm,1.2s							
ML02	**Panimavida**	**33.72**	**288**	P		**P**	**06 08 04.7**	**+0.2**
CPUP	**Villa Florida**	**34.67**	**316**	P		**P**	**06 08 12.2**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=136,slow=7.5,SNR=6.8							
	comp=Z,1.5nm,0.6s							
CPUP	**Villa Florida**	**34.67**	**316**	P		**P**	**06 08 12.5**	**-0.3**
CPUP				IAmb		IAmb	06 08 53.9	
	comp=Z,6.9nm,1.4s							
QSPA	**South Pole Qui**	**35.02**	**180**	P		**P**	**06 08 16.6**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=326,slow=2.5,SNR=5.9							
	comp=Z,1.2nm,0.6s							
QSPA	**South Pole Qui**	**35.02**	**180**	P		**P**	**06 08 16.2**	**+0.5**
VA03	**San Esteban**	**35.54**	**293**	P		**P**	**06 08 20.6**	**+0.2**
VA03				IAmb		IAmb	06 08 55.3	
	comp=Z,19nm,1.2s							
VA06	**Catapilco**	**36.09**	**292**	P		**P**	**06 08 25.6**	**+0.7**
CO02	**Combarbal**

IDC 20 06:39:57.9±4.4, 55°21S×30°97W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=148.5km s-min=54.3km az=178.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	48.16	309	P	P	06 48 40.3	-0.1
	1.0nm,0.5s,baz=141,slow=6.5,SNR=6.8 1.0nm,0.5s						
H10N1	**ASCENSION HYDR**	49.04	22	T	T	07 41 44.6	
	baz=192,slow=75,SNR=3.8						
H10N3	**ASCENSION HYDR**	49.04	22	T	T	07 41 44.1	
	baz=192,slow=75,SNR=5.3						
H10N2	**ASCENSION HYDR**	49.05	22	T	T	07 41 45.1	
	baz=192,slow=75,SNR=6.6						
TORD	**Torodi Ar. Bea**	73.46	33	P	P	06 51 31.9	0.0
	0.2nm,0.4s,baz=210,slow=8.3,SNR=1.8 0.2nm,0.4s						
ILAR	**Eielson Array**	147.97	313	PKPbc	PKPbc	06 59 42.9	-0.7
	0.5nm,0.7s,baz=131,slow=2.5,SNR=5.4						

*NNC **20** 06:43:59.5±0.9, 42°.93N×78°.40E, h0km, mb3.8, mpv3.8, Error ellipse: s-maj=7.2km s-min=3.1km az=163.0*
*KRNET **20** 06:44:00.1±0.1, 42°.96N×78°.43E, h20km, mb3.8*
*SOME **20** 06:44:00.5, 42°.97N×78°.37E, h10km*

ISC 20 06:44:01.0±0.9, 42°96N±0'.03×78°37E±0'.02, h8km±6km, n69, σ1§17/130, 17C-18D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	0.10	17	eP	Pg	06 44 03.4	-0.2
	691nm,0.2s 19µm,0.2s						
SATY	**Saty**	0.10	17	P	Pg	06 44 03.4	-0.2
	691nm,0.2s 19µm,0.2s						
SATY	**Saty**	0.10	17	eP	Pg	06 44 03.4	-0.2
	baz=51						
SATY				eS	Sg	06 44 05.4	0.0
	baz=51						
ZHN	**Zhinishke**	0.21	14	eP	Pg	06 44 05.1	-0.3
ZHN	7µm,0.4s			eS	Sg	06 44 08.5	+0.1
ZHN	**Zhinishke**	0.21	14	P	Pg	06 44 05.1	-0.3
ZHN	7µm,0.4s			S	Sg	06 44 08.5	+0.1
UZB	**Uzynbulak**	0.52	69	eP	Pg	06 44 09.3	-1.7
	95nm,0.1s						
UZB				eS	Sg	06 44 15.8	-2.1
	728nm,0.3s						
UZB	**Uzynbulak**	0.52	69	P	Pg	06 44 09.3	-1.7
	95nm,0.1s						
UZB				S	Sg	06 44 15.8	-2.1
	728nm,0.3s						
UZB	**Uzynbulak**	0.52	69	eP	Pg	06 44 09.3	-1.7
	baz=66						
UZB				eS	Sg	06 44 15.7	-2.1
	baz=66						
KURS	**Kuram**	0.55	345	eP	Pg	06 44 11.2	-0.4
KURS	154nm,0.1s			eS	Sg	06 44 19.1	+0.4
	122nm,0.4s						
KURS	**Kuram**	0.55	345	P	Pg	06 44 11.2	-0.4
KURS	154nm,0.1s			S	Sg	06 44 19.1	+0.4
	122nm,0.4s						
KURS	**Kuram**	0.55	345	eP	Pg	06 44 11.2	-0.4
KURS	baz=41			eS	Sg	06 44 19.1	+0.4
	baz=41						
KPKS	**Kokpek**	0.56	25	eP	Pg	06 44 10.8	-1.0
KPKS	192nm,0.4s			eS	Sg	06 44 18.4	-0.7
	1µm,0.4s						
KPKS	**Kokpek**	0.56	25	P	Pg	06 44 10.8	-1.0
KPKS	192nm,0.4s			S	Sg	06 44 18.4	-0.7
	1µm,0.4s						
KPKS	**Kokpek**	0.56	25	eP	Pg	06 44 10.8	-1.0
KPKS	baz=20			eS	Sg	06 44 18.4	-0.7
	baz=20						
SHLS	**Shalkode**	0.83	76	eP	Pn	06 44 20.6	+1.5
SHLS	14nm,0.1s			eS	Sn	06 44 34.7	+3.3
	92nm,0.2s						
SHLS	**Shalkode**	0.83	76	P	Pn	06 44 20.6	+1.5
SHLS	14nm,0.1s			S	Sn	06 44 34.7	+3.3
	92nm,0.2s						
SHLS	**Shalkode**	0.83	76	eP	Pn	06 44 20.6	+1.5
SHLS	baz=79			eS	Sn	06 44 34.8	+3.3
	baz=79						
KOTS	**Kotyrbulak**	0.96	287	eP	Pg	06 44 18.9	-0.4
KOTS	6.3nm,0.2s			eS	Sb	06 44 32.2	-0.6
	484nm,0.4s						
KOTS	**Kotyrbulak**	0.96	287	P	Pg	06 44 19.0	-0.4
KOTS	6.3nm,0.2s			S	Sb	06 44 32.2	-0.6
	484nm,0.4s						
KOTS	**Kotyrbulak**	0.96	287	eP	Pg	06 44 19.0	-0.4
KOTS	baz=87			eS	Sb	06 44 32.2	-0.6
	baz=87						
MDOK	**Medeo**	0.99	282	eP	Pg	06 44 19.2	-0.8
MDOK	54nm,0.2s			eS	Sg	06 44 32.9	+0.1
	228nm,0.3s						
MDOK	**Medeo**	0.99	282	⇓P	Pg	06 44 19.0	-0.9
MDOK	15nm,0.3s			Pg	Pg	06 44 19.2	-0.8
	54nm,0.2s						
MDOK				⇑S	Sg	06 44 32.5	-0.3
	145nm,0.5s						
MDOK				Lg	Lg	06 44 32.9	
	228nm,0.3s						
MDOK	**Medeo**	0.99	282	eP	Pg	06 44 19.2	-0.8
	baz=82						
MDOK				eS	Sg	06 44 32.9	+0.1
	baz=82						
KNDC	**Almaty**	1.06	284	⇑P	Pg	06 44 16.8	-4.5
KNDC	13nm,0.2s			⇑S	Sb	06 44 35.2	-0.3
	137nm,0.4s						
AAA	**Alma-Ata**	1.09	284	eP	Pn	06 44 21.8	-0.8
AAA	58nm,0.2s			eS	Sn	06 44 36.9	-1.0
	117nm,0.4s						
AAA	**Alma-Ata**	1.09	284	P	Pn	06 44 21.8	-0.8
AAA	58nm,0.2s			S	Sn	06 44 36.9	-1.0
	117nm,0.4s						
AAA	**Alma-Ata**	1.09	284	eP	Pn	06 44 21.8	-0.8
AAA	baz=83			eS	Sn	06 44 36.9	-1.0
	baz=83						
ARXS	**Arharly**	1.31	343	eP	Pn	06 44 24.8	-0.8
ARXS	65nm,0.2s			eS	Sg	06 44 42.6	-0.6
	538nm,0.6s						
ARXS	**Arharly**	1.31	343	P	Pn	06 44 24.8	-0.8
ARXS	65nm,0.2s			S	Sg	06 44 42.6	-0.6
	538nm,0.6s						
MTBS	**Maitube**	1.43	277	eP	Pb	06 44 27.5	-0.4
MTBS	22nm,0.2s			eS	Sg	06 44 46.9	-0.1
	98nm,0.5s						
MTBS	**Maitube**	1.43	277	P	Pb	06 44 27.5	-0.4
MTBS	22nm,0.2s			S	Sg	06 44 46.9	-0.1
	98nm,0.5s						
MTBS	**Maitube**	1.43	277	eP	Pb	06 44 27.5	-0.4
MTBS	baz=77			eS	Sg	06 44 46.9	-0.1
	baz=77						
KTBS	**Karatobe**	1.44	302	eP	Pb	06 44 27.5	-0.6
KTBS	142nm,0.4s			eS	Sg	06 44 47.1	-0.2
	754nm,0.3s						
KTBS	**Karatobe**	1.44	302	P	Pb	06 44 27.5	-0.6
	142nm,0.4s						
KTBS				S	Sg	06 44 47.1	-0.2
	754nm,0.3s						
KTBS	**Karatobe**	1.44	302	eP	Pb	06 44 27.5	-0.6
KTBS	baz=1.0			eS	Sg	06 44 47.1	-0.2
	baz=1.0						
DJR	**Jarkent**	1.72	37	eP	Pb	06 44 31.4	-1.4
DJR	68nm,0.3s			eS	Sb	06 44 53.7	-0.9
	214nm,0.6s						
DJR	**Jarkent**	1.72	37	P	Pb	06 44 31.4	-1.4
DJR	68nm,0.3s			S	Sb	06 44 53.7	-0.9
	214nm,0.6s						
ULHL	**Ulahol**	1.72	246	⇓iP	Pb	06 44 32.0	-1.0
ULHL	baz=47			⇓iS	Sb	06 44 55.1	+0.2
	baz=47						
KUU	**Kurty**	1.75	303	eP	Pb	06 44 32.8	-0.5
KUU	227nm,0.3s			eS	Sg	06 44 56.0	-1.1
	534nm,0.5s						
KUU	**Kurty**	1.75	303	P	Pb	06 44 32.8	-0.5
KUU	227nm,0.3s			S	Sg	06 44 56.0	-1.1
	534nm,0.5s						
KUU	**Kurty**	1.75	303	eP	Pb	06 44 32.8	-0.5
KUU	baz=2.0			eS	Sg	06 44 56.0	-1.1
	baz=2.0						
KST	**Kastek**	1.76	273	eP	Pb	06 44 33.3	-0.4
KST	19nm,0.3s			eS	Sg	06 44 57.1	-0.6
	74nm,0.7s						
KST	**Kastek**	1.76	273	P	Pb	06 44 33.3	-0.4
KST	19nm,0.3s			S	Sg	06 44 57.1	-0.6
	74nm,0.7s						
KST	**Kastek**	1.76	273	eP	Pb	06 44 33.3	-0.4
KST	baz=74			eS	Sg	06 44 57.1	-0.6
	baz=74						
DGS	**Degeres**	1.92	279	eP	Pb	06 44 35.8	-0.5
DGS	40nm,0.4s			eS	Sb	06 45 01.0	+0.6
	94nm,0.6s						
DGS	**Degeres**	1.92	279	Pg	Pb	06 44 35.8	-0.5
DGS	40nm,0.4s			Lg	Lg	06 45 01.0	
	94nm,0.6s						
DGS	**Degeres**	1.92	279	eP	Pb	06 44 35.8	-0.5
DGS	baz=79			eS	Sb	06 45 01.0	+0.6
	baz=79						
TKM2	**Tokmak 2**	2.03	270	⇓P	Pb	06 44 38.2	-0.1
TKM2	17nm,0.5s			⇑S	Sg	06 45 05.9	-0.5
	104nm,0.6s						
TKM2	**Tokmak 2**	2.03	270	⇓iP	Pb	06 44 36.9	-1.4
TKM2	baz=70			⇓iS	Sb	06 45 03.5	-0.3
	baz=70						
TDK	**Taldyqorghan**	2.04	1	eP	Pb	06 44 37.7	-0.6
TDK	89nm,0.3s			eS	Sb	06 45 04.3	+0.5
	377nm,0.3s						
KRBS	**Karabastau**	2.10	291	eP	Pb	06 44 38.4	-0.9
KRBS	28nm,0.3s			eS	Sb	06 45 06.0	+0.6
	151nm,0.4s						
KRBS	**Karabastau**	2.10	291	Pg	Pb	06 44 38.4	-0.9
KRBS	28nm,0.3s			Lg	Lg	06 45 06.0	
	151nm,0.4s						
KBK	**Karagaybulak**	2.53	264	⇑eP	Pn	06 44 43.7	+1.1
KBK	baz=65			⇑iS	Sb	06 45 15.5	-2.7
	baz=65						
CHMS	**Chumysh**	2.65	272	⇑Pg	Pb	06 44 48.4	-0.4
CHMS	4.2nm,0.3s			⇓Lg	Lg	06 45 22.9	
	16nm,0.2s						
CHMS	**Chumysh**	2.65	272	⇓iP	Pn	06 44 45.3	+1.2
CHMS	baz=72			⇓iS	Sn	06 45 18.2	+1.8
	baz=72						
SGDS	**Sogindy**	2.77	281	eP	Pb	06 44 50.8	-0.1
SGDS	3.9nm,0.6s			eS	Sb	06 45 26.7	+1.7
	35nm,0.5s						
SGDS	**Sogindy**	2.77	281	Pg	Pb	06 44 50.8	-0.1
SGDS	3.9nm,0.6s			Lg	Lg	06 45 26.7	
	35nm,0.5s						
USP	**Ospenovka**	2.85	277	⇓iP	Pn	06 44 48.0	+1.3
USP	baz=77			⇓iS	Sn	06 45 23.1	+1.9
	baz=77						
AAK	**Ala-Archa**	2.87	265	⇓iP	Pn	06 44 48.4	+1.3
AAK	baz=65			⇓iS	Sn	06 45 23.6	+1.7
	baz=65						
UCH	**Uchtor**	2.94	257	⇑iP	Pn	06 44 49.6	+1.2
UCH	baz=57			⇑iS	Sn	06 45 25.5	+1.5
	baz=57						
ARLS	**Aral**	3.19	251	⇓iP	Pn	06 44 52.7	+1.1
ARLS	baz=51			⇓iS	Sn	06 45 31.4	+1.6
	baz=51						
EKS2	**Erkin-Say**	3.39	266	⇑iP	Pn	06 44 55.6	+1.3
EKS2	baz=67			⇑iS	Sn	06 45 36.0	+1.3
	baz=67						
BTLS	**Baital**	3.75	305	eP	Pb	06 45 07.4	+0.1
BTLS	8.0nm,0.3s			eS	Sb	06 45 55.2	+2.4
	9.4nm,0.5s						
MRKS	**Merke**	3.79	268	eP	Pb	06 45 08.3	+0.2
MRKS	1.4nm,0.1s			eS	Sb	06 45 56.9	+2.8
	17nm,0.3s						
MAKZ	**Makanchi**	4.62	32	⇑Pn	Pn	06 45 11.4	+0.3
MAKZ	0.6nm,0.2s			⇑Lg	Lg	06 46 21.7	
	7.1nm,0.7s						
MK31	**Makanchi Array**	4.74	35	⇓Pn	Pn	06 45 13.1	+0.3
MK31	0.8nm,0.2s,baz=218,slow=11,SNR=39 5.4nm,0.5s			⇓Lg	Lg	06 46 26.2	
KK31	**Karatay Array**	5.76	274	⇑Pg	Pg	06 45 50.0	-1.3
KK31	0.9nm,0.4s,baz=83,slow=15,SNR=5.3 4.7nm,0.6s,baz=92,slow=24,SNR=6.4			⇓Lg	Lg	06 47 01.1	
KKAR	**Karatay Array**	5.76	274	⇑iP	Pn	06 45 28.2	+1.5
KKAR	baz=74			⇑iS	Sn	06 46 32.4	-0.6
	baz=74						
KURBB	**Kurchatov Arra**	7.66	1	⇑Lg	Lg	06 48 00.2	
	28nm,0.7s						

*IDC **20** 06:45:47.9±0.8, 55°.06S×30°.69W, h0km, mb3.9/6, mbtmp4.0/6, Error ellipse: s-maj=40.0km s-min=19.7km az=68.0*
*NEIC **20** 06:45:49±1.8, 55°.34S±0'.10×31°.13W±0'.09, h10km±1km, mb4.7/22, Error ellipse: s-maj=18.0km s-min=5.7km az=21.0*

ISC 20 06:45:49.1±0.6, 55°25S±0'.09×31°1W±0'.1, h10km, n40, σ1§12/36, mb4.5/14, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	3.26	285		Pn	06 46 40.1	-0.1
ORCD	**Orcadas**	9.08	227	Pn	Pn	06 47 58.1	-1.8
VNA1	**Neumayer--Stat**	18.41	156	P	P	06 50 03.0	-1.0
VNA3	**Neumayer Olymp**	18.53	158	P	Pn	06 50 05.9	+0.3
SNAA	**Sanae**	20.41	155	P	Pn	06 50 27.9	-0.1
SNAA	**Sanae**	20.41	155	P	P	06 50 25.9	+0.1
	3.4nm,0.8s,baz=316,slow=8.6,SNR=17 3.4nm,0.8s						
SNAA	**Sanae**	20.41	155	P	P	06 50 24.9	-0.9
TROLL	**Troll, Antarti**	21.97	153	P	P	06 50 44.8	+2.0
BELA	**Belgrano 2**	22.76	182	P	P	06 50 50.1	-1.0
ITQB	**Itaqui**	31.40	314	P	P	06 52 11.1	+1.1
ITQB	comp=Z,29nm,1.3s			IAmb	IAmb	06 52 11.6	
CPUP	**Villa Florida**	34.64	316	P	P	06 52 37.9	-0.5
	comp=Z,4.1nm,0.8s,baz=148,slow=7.8,SNR=7.9 comp=Z,4.1nm,0.8s						
CPUP	**Villa Florida**	34.64	316	P	P	06 52 38.4	0.0
CPUP	comp=Z,10.0nm,1.4s			IAmb	IAmb	06 52 39.5	
MT09	**Talagante**	34.94	291	P	P	06 52 41.4	+0.3
MT09	comp=Z,12nm,1.1s			IAmb	IAmb	06 52 53.4	
QSPA	**South Pole Qui**	35.01	180	P	P	06 52 42.8	+1.4
	comp=Z,1.5nm,0.7s,baz=167,slow=1.4,SNR=11 comp=Z,1.5nm,0.7s						
QSPA	**South Pole Qui**	35.01	180	P	P	06 52 40.4	-1.0
QSPA	comp=Z,7.1nm,1.4s			IAmb	IAmb	06 52 56.6	
VA05	**Santo Domingo**	35.37	291	P	P	06 52 43.8	-0.7
VA05	comp=Z,16nm,0.9s			IAmb	IAmb	06 53 07.6	
VA06	**Catapilco**	36.04	292	P	P	06 52 51.2	+0.8
CO02	**Combarbal**	36.95	294	P	P	06 52 58.9	+0.6
CO02	comp=Z,38nm,1.3s			IAmb	IAmb	06 53 01.8	
CO01	**Juntas del Tor**	37.46	296	P	P	06 53 02.3	-0.4
CO01	comp=Z,14nm,1.4s			IAmb	IAmb	06 53 10.4	
GO04	**Tololo Observa**	37.66	295	P	P	06 53 03.7	-0.8
CO06	**Fray Jorge**	37.70	294	P	P	06 53 05.0	+0.5
SUR	**Sutherland**	42.63	80	P	P	06 53 45.1	-0.5
SUR	comp=Z,40nm,1.4s			IAmb	IAmb	06 54 14.6	
SOE	**Somerset East**	45.08	84	P	P	06 54 05.4	+0.2
PTLB	**Pontes e Lacer**	45.21	320	P	P	06 54 06.2	+0.1
PTLB	comp=Z,4.2nm,0.8s			IAmb	IAmb	06 54 07.1	
TA02	**Huaiquique**	45.57	304	P	P	06 54 09.7	+0.7
PB16	**IPOC Station P**	46.95	306	P	P	06 54 20.2	-0.3
PB16	comp=Z,13nm,1.3s			IAmb	IAmb	06 54 23.0	
VNDA	**Vanda**	47.25	184	P	P	06 54 25.0	+3.4
	comp=Z,0.4nm,0.7s,baz=170,slow=3.9,SNR=2.3 comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	47.25	184	P	P	06 54 22.7	+1.1
LPAZ	**La Paz**	48.12	309	P	P	06 54 31.3	+1.6
	comp=Z,3.0nm,0.7s,baz=175,slow=4.1,SNR=14 comp=Z,3.0nm,0.7s						
LPAZ	**La Paz**	48.12	309	P	P	06 54 27.9	-1.8
LPAZ	comp=Z,2.8nm,0.8s			IAmb	IAmb	06 54 33.9	
H10N1	**ASCENSION HYDR**	49.10	22	T	T	07 47 39.1	
	baz=192,slow=75,SNR=9.7						
H10N3	**ASCENSION HYDR**	49.10	22	T	T	07 47 35.5	
	baz=192,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	49.11	22	T	T	07 47 27.5	
	baz=192,slow=75,SNR=18						
TOA0	**Torodi Ar. Sit**	73.53	33	P	P	06 57 20.3	-1.6
TOA0	comp=Z,4.7nm,1.4s			IAmb	IAmb	06 57 56.5	
TORD	**Torodi Ar. Bea**	73.53	33	P	P	06 57 20.9	-0.9
	comp=Z,0.6nm,0.6s,baz=207,slow=6.2,SNR=3.3 comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	73.53	33	P	P	06 57 21.2	-0.7
FINES	**FINESS Array B**	124.74	29	PKP	PKPdf	07 04 46.9	-0.5
	comp=Z,0.7nm,0.7s,baz=222,slow=2.6,SNR=3.9						
ARCES	**ARCESS Array B**	131.04	23	PKP	PKPdf	07 04 58.5	-0.7
	comp=Z,0.4nm,0.6s,baz=53,slow=6.2,SNR=4.6						
ILAR	**Eielson Array**	147.93	313	PKPbc	PKPbc	07 05 33.1	+0.1
	comp=Z,1.5nm,0.9s,baz=129,slow=1.7,SNR=15						
SONM	**Songino Array**	152.91	88	PKPbc	PKiKP	07 05 46.1	+0.3
	comp=Z,0.9nm,0.6s,baz=150,slow=3.2,SNR=4.0						

IDC 20 07:15:47.2±2.3, 55°37S×30°91W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=92.2km s-min=40.2km az=19.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	34.81	316	P	P	07 22 39.5	+0.1
	1.5nm,0.9s,baz=154,slow=9.2,SNR=3.5 1.5nm,0.9s						
LPAZ	**La Paz**	48.28	309	P	P	07 24 31.0	+0.3
	0.9nm,0.5s,baz=158,slow=5.4,SNR=7.8 0.9nm,0.5s						
H10N1	**ASCENSION HYDR**	49.16	22	T	T	08 17 29.8	
	baz=192						
H10N3	**ASCENSION HYDR**	49.16	22	T	T	08 17 28.0	
	baz=192,slow=74,SNR=4.9						
H10N2	**ASCENSION HYDR**	49.18	22	T	T	08 17 26.4	
	baz=192,slow=74,SNR=6.7						
TORD	**Torodi Ar. Bea**	73.56	33	P	P	07 27 21.8	0.0
	0.3nm,0.5s,baz=197,slow=6.6,SNR=2.0 0.3nm,0.5s						
ILAR	**Eielson Array**	148.10	313	PKPbc	PKPdf	07 35 31.2	+1.3
	0.3nm,0.5s,baz=89,slow=1.5,SNR=5.4						
SONM	**Songino Array**	152.80	88	PKPbc	PKiKP	07 35 45.9	+0.5
	0.3nm,0.4s,baz=262,slow=1.0,SNR=2.2						

*IDC **20** 07:24:15.0±1.2, 55°.31S×31°.11W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=47.1km s-min=31.2km az=59.0*

ISC 20 07:24:16.7±0.9, 55°3S±0'.2×31°3W±0'.3, h10km, n9, σ1§84/9, mb3.8/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	18.52	158	P	P	07 28 30.5	-2.4
SNAA	**Sanae**	20.40	154	P	P	07 28 53.5	0.0
TROLL	**Troll, Antarti**	21.98	152	P	P	07 29 14.1	+3.6
CPUP	**Villa Florida**	34.60	316	P	P	07 31 05.3	-0.3
	1.1nm,0.8s,baz=169,slow=5.2,SNR=3.5 1.1nm,0.8s						
VNDA	**Vanda**	47.19	184	P	P	07 32 48.4	-0.3
	0.3nm,0.7s,baz=177,slow=4.0,SNR=1.4 0.3nm,0.7s						
LPAZ	**La Paz**	48.06	309	P	P	07 32 57.7	+0.8
	2.3nm,0.6s,baz=137,slow=4.4,SNR=20 2.3nm,0.6s						
TORD	**Torodi Ar. Bea**	73.64	34	P	P	07 35 49.8	-0.4
	0.7nm,0.9s,baz=198,slow=6.6,SNR=2.2 0.7nm,0.9s						
ILAR	**Eielson Array**	147.88	313	PKPbc	PKPbc	07 44 00.8	+0.3
	0.9nm,0.7s,baz=111,slow=1.7,SNR=12						
SONM	**Songino Array**	153.03	88	PKPbc	PKPbc	07 44 12.9	-0.7
	0.3nm,0.4s,baz=249,slow=2.8,SNR=2.2						

*IDC **20** 07:57:36.6±9.7, 36°.11N×70°.32E, h118km±86km, mb3.2/8, mbtmp3.6/11, ML3.2/3, MS2.6/1, Error ellipse: s-maj=49.2km s-min=21.2km az=23.0*
*NNC **20** 07:57:50.7±7.7, 36°.83N×70°.48E, h199km±97km, mb3.0, mpv4.2, Error ellipse: s-maj=74.1km s-min=37.1km az=9.0*

ISC 20 07:57:46.4±1.1, 36°5N±0'.1×70°4E±0'.1, h204km, n23, σ1§08/24, mb3.2/7, 3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	6.14	23	P	Pn	07 59 16.4	+0.6
	SNR=99						
KK31	**Karatay Array**	6.57	0	P	Pn	07 59 21.1	+0.1
	2.3nm,0.2s,baz=175,slow=12,SNR=79						
KK31				⇓S	S	08 00 33.4	-2.5
	8.9nm,0.5s,baz=181,slow=21						
EKS2	**Erkin-Say**	6.64	22	P	Pn	07 59 23.0	+0.9
	SNR=17						
AAK	**Ala-Archa**	6.86	26	P	Pn	07 59 25.6	+0.7
	SNR=9.3						
CHMS	**Chumysh**	7.26	26	P	Pn	07 59 30.4	+0.4
	SNR=6.2						
USP	**Ospenovka**	7.42	24	P	Pn	07 59 32.4	+0.4
	SNR=7.7						
TKM2	**Tokmak 2**	7.52	30	P	Pn	07 59 33.9	+0.4
	SNR=25						
TKM2	**Tokmak 2**	7.52	30	⇓P	Pn	07 59 34.2	+0.7
	23nm,0.5s						
TKM2				⇓S	S	08 00 57.4	-1.2
	0.7nm,0.2s						
MKAR	**Makanchi Array**	13.54	37	P	Pn	08 00 50.7	+0.3
	0.2nm,0.3s,baz=214,slow=13,SNR=6.7 0.9nm,0.7s						
AB31	**Akbulak array**	14.84	332	P	P	08 01 08.5	+1.3
	0.6nm,0.3s,baz=156,slow=12,SNR=49						
KURBB	**Kurchatov Arra**	15.24	20	P	Pn	08 01 10.9	-0.3
	baz=206,slow=11,SNR=4.5 0.2nm,0.4s						
AKTO	**Aktyubinsk**	16.53	331	P	P	08 01 24.5	-1.3
	0.2nm,0.3s,baz=112,slow=5.4,SNR=1.8						

0.7nm,0.4s
AKTO Aktyubinsk 16.53 331 P Pn 08 01 27.1 +0.4
1.0nm,0.5s
ZALV Zalesovo Beam 20.08 25 P P 08 02 03.4 -0.7
0.9nm,0.4s,baz=212,slow=10,SNR=3.7
0.9nm,0.4s
SONM Songino Array 28.69 55 P P 08 03 25.7 +1.3
0.3nm,0.6s,baz=266,slow=5.8,SNR=2.3
0.3nm,0.6s
CMAR Chiang Mai Arr 30.86 118 LR LR 08 17 24.0
comp=Z,10.0nm,18.9s,baz=185,slow=39
FINES FINESS Array B 37.21 326 P P 08 04 39.2 +1.4
0.9nm,0.6s,baz=125,slow=12,SNR=4.9
0.9nm,0.6s
ARCES ARCESS Array B 40.95 338 P P 08 05 10.1 +1.4
0.8nm,0.6s,baz=106,slow=6.8,SNR=8.8
0.8nm,0.6s
NB2 NORSAR Subarra 44.09 323 P P 08 05 34.4 +0.4
comp=Z,0.2nm,0.5s,baz=97,slow=8.6
NOA NORSAR Array B 44.09 323 P P 08 05 34.4 +0.4
comp=Z,0.5nm,0.7s,baz=96,slow=8.0,SNR=4.3
comp=Z,0.5nm,0.7s
TORD Torodi Ar. Bea 65.27 268 P P 08 08 05.3 -1.4
comp=Z,0.4nm,0.8s,baz=47,slow=6.0,SNR=2.2
comp=Z,0.4nm,0.8s
WRA Warramunga Arr 82.39 122 P P 08 09 44.7 -1.1
comp=Z,0.7nm,1.1s,baz=322,slow=4.9,SNR=2.3
comp=Z,0.7nm,1.1s
ASAR Alice Springs 84.64 125 P P 08 09 56.5 -0.7
comp=Z,0.3nm,0.6s,baz=309,slow=5.0,SNR=4.7
comp=Z,0.3nm,0.6s

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*IDC **20** 07:58:20.7±6.0, 62°.89N×151°.02W, h91km±48km, mb3.0/3, mbtmp3.4/7, Error ellipse: s-maj=58.5km s-min=38.7km az=77.0*
*AEIC **20** 07:58:20±1.2, 62°.93N±0°.03×151°.33W±0°.07, h111km±3km, ML3.2, ML3.3/168(NEIC), Error ellipse: s-maj=4.9km s-min=4.7km az=168.0*
*NEIC **20** 07:58:20.1±1.2, 62°.93N±0°.04×151°.31W±0°.08, h116km±6km, Error ellipse: s-maj=5.2km s-min=5.1km az=50.0*
ISC 20 07:58:20.7±0.9, 62°.93N±0°.03×151°.28W±0°.03, h113km±6km, n312, σ0 81/285, mb3.2/3, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.42**	**265**			**Pn**	**07 58 37.5**	**-0.1**
PPLA						**Sn**	**07 58 50.1**	**-0.1**
PPLA	**Purkeypile**	**0.42**	**265**	P		**Pn**	**07 58 37.5**	**-0.1**
	baz=84							
PPLA				S		**Sn**	**07 58 50.1**	**-0.1**
	baz=84							
CAST	**Castle Rocks**	**0.61**	**324**			**Pn**	**07 58 38.3**	**-0.4**
CAST	**Castle Rocks**	**0.61**	**324**	IAML			07 58 38.5	
	comp=N,313nm,0.4s							
CAST				IAML			07 58 38.8	
	comp=E,382nm,0.6s							
CAST	**Castle Rocks**	**0.61**	**324**	P		**Pn**	**07 58 38.3**	**-0.4**
	baz=145							
KTH	**Kantishna Hill**	**0.64**	**14**			**Pn**	**07 58 39.0**	**0.0**
KTH						**Sn**	**07 58 52.4**	**-0.4**
KTH	**Kantishna Hill**	**0.64**	**14**	IAML			07 58 52.9	
	comp=E,2μm,0.6s							
KTH				IAML			07 58 52.9	
	comp=N,1μm,0.7s							
TRF	**Thorofare Moun**	**0.69**	**40**			**Pn**	**07 58 39.3**	**-0.2**
TRF						**Sn**	**07 58 53.8**	**+0.2**
TRF	**Thorofare Moun**	**0.69**	**40**	IAML			07 58 54.0	
	comp=N,2μm,0.5s							
TRF				IAML			07 58 54.8	
	comp=E,1μm,0.6s							
TRF	**Thorofare Moun**	**0.69**	**40**	P		**Pn**	**07 58 39.3**	**-0.2**
	baz=223							
TRF				S		**Sn**	**07 58 53.8**	**+0.2**
	baz=223							
CUT	**Chulitna**	**0.71**	**138**			**Pn**	**07 58 39.2**	**-0.2**
CUT						**Sn**	**07 58 53.2**	**-0.2**
CUT	**Chulitna**	**0.71**	**138**	IAML			07 58 54.9	
	comp=N,2μm,0.3s							
CUT	**Chulitna**	**0.71**	**138**	P		**Pn**	**07 58 39.2**	**-0.2**
	baz=317							
CUT				S		**Sn**	**07 58 53.2**	**-0.2**
	baz=317							
SKT	**Skwentna**	**0.96**	**187**			**Pn**	**07 58 41.3**	**-0.5**
SKT	**Skwentna**	**0.96**	**187**	IAML			07 58 58.4	
	comp=E,2μm,0.4s							
SKT				IAML			07 58 59.3	
	comp=N,1μm,0.3s							
SKT	**Skwentna**	**0.96**	**187**	P		**Pn**	**07 58 41.3**	**-0.5**
	baz=5.4							
CHUM	**Lake Minchumin**	**1.06**	**334**			**Pn**	**07 58 42.7**	**-0.1**
CHUM						**Sn**	**07 58 58.7**	**-0.7**
CHUM	**Lake Minchumin**	**1.06**	**334**	P		**Pn**	**07 58 42.7**	**-0.1**
	baz=155							
CHUM				S		**Sn**	**07 58 58.7**	**-0.7**
	baz=155							
WAT7	**Susitna Watana**	**1.12**	**94**			**Pn**	**07 58 42.8**	**-0.7**
WAT7						**Sn**	**07 58 59.9**	**-0.8**
BPAW	**Bear Paw Mtn.**	**1.18**	**6**			**Pn**	**07 58 43.7**	**-0.3**
BPAW	**Bear Paw Mtn.**	**1.18**	**6**	IAML			07 59 01.5	
	comp=N,433nm,0.8s							
BPAW	**Bear Paw Mtn.**	**1.18**	**6**	P		**Pn**	**07 58 43.7**	**-0.3**
	baz=188							
RND	**Reindeer**	**1.20**	**66**			**Pn**	**07 58 44.0**	**-0.3**
RND						**Sn**	**07 59 01.8**	**-0.4**
RND	**Reindeer**	**1.20**	**66**	IAML			07 59 02.7	
	comp=E,597nm,0.3s							
RND				IAML			07 59 02.8	
	comp=N,1μm,0.4s							
WAT1	**Susitna Watana**	**1.25**	**94**			**Pn**	**07 58 44.3**	**-0.6**
WAT1	**Susitna Watana**	**1.25**	**94**	P		**Pn**	**07 58 44.3**	**-0.6**
	baz=276							
L20K	**Farewell, AK**	**1.28**	**250**			**Pn**	**07 58 44.4**	**-0.8**
L20K						**Sn**	**07 59 02.6**	**-1.1**
L20K	**Farewell, AK**	**1.28**	**250**	P		**Pn**	**07 58 44.4**	**-0.8**
	baz=68							
L20K				S		**Sn**	**07 59 02.6**	**-1.1**
	baz=68							
M22K	**Willow**	**1.30**	**155**			**Pn**	**07 58 44.8**	**-0.6**
M22K						**Sn**	**07 59 04.4**	**+0.4**
M22K	**Willow**	**1.30**	**155**	P		**Pn**	**07 58 44.8**	**-0.6**
	baz=335							
M22K				S		**Sn**	**07 59 04.4**	**+0.4**
	baz=335							
MCK	**McKinley**	**1.33**	**52**			**Pn**	**07 58 45.7**	**0.0**
MCK	**McKinley**	**1.33**	**52**	P		**Pn**	**07 58 45.7**	**0.0**
	baz=234							
K20K	**Telida**	**1.34**	**290**			**Pn**	**07 58 45.0**	**-0.8**
K20K						**Sn**	**07 59 03.3**	**-1.5**
K20K	**Telida**	**1.34**	**290**	IAML			07 59 04.3	
	comp=N,866nm,0.7s							
K20K	**Telida**	**1.34**	**290**	P		**Pn**	**07 58 45.0**	**-0.8**
	baz=108							
K20K				S		**Sn**	**07 59 03.3**	**-1.5**
	baz=108							
M20K	**Styx River**	**1.36**	**220**			**Pn**	**07 58 45.2**	**-1.0**
M20K	**Styx River**	**1.36**	**220**	P		**Pn**	**07 58 45.2**	**-1.0**
	baz=38							
STLK	**Strandline Lak**	**1.46**	**190**			**Pn**	**07 58 46.7**	**-0.7**
BWN	**Browne**	**1.49**	**32**			**Pn**	**07 58 48.0**	**+0.6**
BWN	**Browne**	**1.49**	**32**	IAML			07 59 10.1	
	comp=N,396nm,1.1s							
BWN				IAML			07 59 14.1	
	comp=E,346nm,0.7s							
SUA	**Susitna One**	**1.50**	**170**			**Pn**	**07 58 47.8**	**+0.1**
SUA						**Sn**	**07 59 08.3**	**+0.1**
SUA	**Susitna One**	**1.50**	**170**	IAML			07 59 08.9	
	comp=E,470nm,0.7s							
SUA				IAML			07 59 10.6	
	comp=N,245nm,0.6s							
SUA	**Susitna One**	**1.50**	**170**	P		**Pn**	**07 58 47.8**	**+0.1**
	baz=350							
SUA				S		**Sn**	**07 59 08.3**	**+0.1**
	baz=350							
GHO	**Glory Hole Cre**	**1.60**	**136**			**Pn**	**07 58 48.8**	**-0.2**
GHO	**Glory Hole Cre**	**1.60**	**136**	IAML			07 59 14.6	
	comp=N,398nm,0.4s							
GHO				IAML			07 59 16.1	
	comp=E,610nm,0.7s							
WAT6	**Susitna Watana**	**1.67**	**101**			**Pn**	**07 58 49.0**	**-0.9**
WAT6	**Susitna Watana**	**1.67**	**101**	P		**Pn**	**07 58 49.0**	**-0.9**
	baz=284							
PMR	**Palmer**	**1.68**	**142**			**Pn**	**07 58 49.1**	**-0.7**
PMR	**Palmer**	**1.68**	**142**	IAML			07 59 16.1	
	comp=N,283nm,0.3s							
PMR				IAML			07 59 17.0	
	comp=E,320nm,0.3s							
PMR	**Palmer**	**1.68**	**142**	P		**Pn**	**07 58 49.1**	**-0.7**
	baz=324							
SPNN	**North Nagishla**	**1.71**	**204**			**Pn**	**07 58 49.9**	**-0.5**
SPCN	**Chakachatna No**	**1.77**	**194**			**Pn**	**07 58 51.2**	**+0.2**
M19K	**Big River Lodg**	**1.78**	**236**			**Pn**	**07 58 50.0**	**-1.0**
M19K						**Sn**	**07 59 13.1**	**-1.1**
M19K	**Big River Lodg**	**1.78**	**236**	P		**Pn**	**07 58 50.0**	**-1.0**
	baz=53							
M19K				S		**Sn**	**07 59 13.0**	**-1.1**
	baz=53							
SML	**Sawmill**	**1.78**	**128**			**Pn**	**07 58 50.4**	**-0.7**
SML	**Sawmill**	**1.78**	**128**	IAML			07 59 18.2	
	comp=E,348nm,0.9s							
SML				IAML			07 59 18.9	
	comp=N,325nm,0.4s							
SML	**Sawmill**	**1.78**	**128**	P		**Pn**	**07 58 50.4**	**-0.7**
	baz=310							
DHY	**Denali Highway**	**1.79**	**84**			**Pn**	**07 58 50.7**	**-0.6**
DHY						**Sn**	**07 59 13.8**	**-0.8**
DHY	**Denali Highway**	**1.79**	**84**	IAML			07 59 15.1	
	comp=E,292nm,0.5s							
DHY				IAML			07 59 15.4	
	comp=N,501nm,0.5s							
DHY	**Denali Highway**	**1.79**	**84**	P		**Pn**	**07 58 50.7**	**-0.6**
	baz=267							
DHY				S		**Sn**	**07 59 13.8**	**-0.8**
	baz=267							
J20K	**Nowinta River**	**1.79**	**316**			**Pn**	**07 58 50.8**	**-0.4**
J20K	**Nowinta River**	**1.79**	**316**	IAML			07 59 14.6	
	comp=E,517nm,0.5s							
J20K	**Nowinta River**	**1.79**	**316**	P		**Pn**	**07 58 50.8**	**-0.4**
	baz=134							
SPCR	**Spurr Chakacha**	**1.79**	**195**			**Pn**	**07 58 51.0**	**-0.3**
SPCR	**Spurr Chakacha**	**1.79**	**195**	P		**Pn**	**07 58 51.0**	**-0.3**
	baz=13							
SPU	**Mount Spurr**	**1.79**	**192**			**Pn**	**07 58 50.4**	**-0.9**
CKL	**Chakachamna La**	**1.81**	**196**			**Pn**	**07 58 51.9**	**+0.3**
L19K	**White Mountain**	**1.82**	**247**			**Pn**	**07 58 50.6**	**-0.9**
L19K	**White Mountain**	**1.82**	**247**	P		**Pn**	**07 58 50.6**	**-0.9**
	baz=64							
FIS	**Fire Island**	**1.86**	**164**			**Pn**	**07 58 53.0**	**+1.0**
NEA2	**Nenana**	**1.94**	**30**			**Pn**	**07 58 52.5**	**-0.5**
NEA2	**Nenana**	**1.94**	**30**	IAML			07 59 17.5	
	comp=E,200nm,0.8s							
NEA2				IAML			07 59 17.7	
	comp=N,173nm,0.9s							
NEA2	**Nenana**	**1.94**	**30**	P		**Pn**	**07 58 52.5**	**-0.5**
	baz=212							
RC01	**Rabbit Creek A**	**1.99**	**158**			**Pn**	**07 58 52.7**	**-1.0**
RC01	**Rabbit Creek A**	**1.99**	**158**	IAML			07 59 18.5	
	comp=E,362nm,0.5s							
RC01	**Rabbit Creek A**	**1.99**	**158**	P		**Pn**	**07 58 52.7**	**-1.0**
	baz=339							
M23K	**Glacier View**	**2.01**	**123**			**Pn**	**07 58 53.0**	**-1.0**
KNK	**Knik Glacier**	**2.02**	**138**			**Pn**	**07 58 53.6**	**-0.5**
KNK	**Knik Glacier**	**2.02**	**138**	IAML			07 59 25.0	
	comp=N,420nm,0.6s							
KNK	**Knik Glacier**	**2.02**	**138**	P		**Pn**	**07 58 53.6**	**-0.5**
	baz=320							
WRH	**Wood River Hil**	**2.10**	**41**			**Pn**	**07 58 54.8**	**-0.3**
MLY	**Manley**	**2.12**	**6**			**Pn**	**07 58 55.1**	**-0.2**
MLY	**Manley**	**2.12**	**6**	P		**Pn**	**07 58 55.1**	**-0.2**
	baz=187							
SCM	**Sheep Creek Mo**	**2.15**	**119**			**Pn**	**07 58 54.9**	**-0.8**
SCM	**Sheep Creek Mo**	**2.15**	**119**	IAML			07 59 23.4	
	comp=E,224nm,0.9s							
SCM				IAML			07 59 24.0	
	comp=N,246nm,0.7s							
TTA	**Tatalina**	**2.16**	**272**			**Pn**	**07 58 55.2**	**-0.8**
TTA	**Tatalina**	**2.16**	**272**	IAML			07 59 22.5	
	comp=E,167nm,0.9s							
TTA				IAML			07 59 22.8	
	comp=N,131nm,0.9s							
TTA	**Tatalina**	**2.16**	**272**	P		**Pn**	**07 58 55.2**	**-0.8**
	baz=88							
TT01	**Tatalina**	**2.17**	**271**			**Pn**	**07 58 55.0**	**-1.0**
CAPN	**Captain Cook N**	**2.17**	**178**			**Pn**	**07 58 57.6**	**+1.7**
CAPN	**Captain Cook N**	**2.17**	**178**	P		**Pn**	**07 58 57.6**	**+1.7**
	baz=358							
I21K	**Tanana**	**2.28**	**353**			**Pn**	**07 58 57.3**	**0.0**
I21K	**Tanana**	**2.28**	**353**	IAML			07 59 25.3	
	comp=E,104nm,0.8s							
I21K	**Tanana**	**2.28**	**353**	P		**Pn**	**07 58 57.3**	**0.0**
	baz=172							
CCB	**Clear Creek Bu**	**2.31**	**40**			**Pn**	**07 58 57.3**	**-0.4**
CCB	**Clear Creek Bu**	**2.31**	**40**	IAML			07 59 25.0	
	comp=E,101nm,0.6s							
I23K	**Minto, Yukon-K**	**2.38**	**20**			**Pn**	**07 58 58.5**	**0.0**
I23K	**Minto, Yukon-K**	**2.38**	**20**	P		**Pn**	**07 58 58.5**	**0.0**
	baz=202							
HDA	**Harding Lake**	**2.43**	**51**			**Pn**	**07 58 58.9**	**-0.5**
HDA	**Harding Lake**	**2.43**	**51**	IAML			07 59 29.4	
	comp=E,140nm,0.8s							
HDA				IAML			07 59 29.8	
	comp=N,126nm,0.5s							
HDA	**Harding Lake**	**2.43**	**51**	P		**Pn**	**07 58 58.9**	**-0.5**
	baz=235							
MDM	**Murphy Dome**	**2.44**	**32**			**Pn**	**07 58 59.1**	**-0.3**
MDM	**Murphy Dome**	**2.44**	**32**	IAML			07 59 30.4	
	comp=N,82nm,1.2s							
DFR	**Drift River**	**2.44**	**197**			**Pn**	**07 58 59.6**	**+0.1**
RDJH	**Redoubt Jeurge**	**2.46**	**198**			**Pn**	**07 59 00.0**	**+0.2**
TCOL	**CIGO, UAF Yank**	**2.47**	**36**			**Pn**	**07 58 59.5**	**-0.3**
TCOL	**CIGO, UAF Yank**	**2.47**	**36**	IAML			07 59 34.4	
	comp=N,277nm,0.6s							
TCOL				IAML			07 59 51.9	
	comp=E,188nm,0.5s							
TCOL	**CIGO, UAF Yank**	**2.47**	**36**	P		**Pn**	**07 58 59.5**	**-0.3**
	baz=220							
COLA	**College**	**2.47**	**36**			**Pn**	**07 58 59.4**	**-0.3**
COLA	**College**	**2.47**	**36**	IAML			07 59 51.9	
	comp=E,212nm,0.5s							
SLKM	**Skilak Lake**	**2.48**	**168**			**Pn**	**07 58 59.2**	**-0.9**
PWL	**Port Wells**	**2.50**	**145**			**Pn**	**07 58 59.0**	**-1.3**
NCT	**North Crescent**	**2.51**	**199**			**Pn**	**07 59 00.5**	**+0.1**
M24K	**Tolsona, Glenn**	**2.51**	**107**			**Pn**	**07 59 00.3**	**0.0**
M24K	**Tolsona, Glenn**	**2.51**	**107**	IAML			07 59 33.8	
	comp=N,182nm,0.6s							
M24K	**Tolsona, Glenn**	**2.51**	**107**	P		**Pn**	**07 59 00.3**	**0.0**
	baz=291							
PS10	**TAPS Pump St10**	**2.55**	**76**			**Pn**	**07 59 01.7**	**+0.9**
PS08	**TAPS Pump Stn8**	**2.56**	**49**			**Pn**	**07 59 00.6**	**-0.4**
RDWB	**Redoubt West**	**2.56**	**198**			**Pn**	**07 59 01.3**	**+0.1**
O22K	**Cooper Landing**	**2.57**	**163**			**Pn**	**07 59 00.5**	**-0.6**
O22K	**Cooper Landing**	**2.57**	**163**	P		**Pn**	**07 59 00.5**	**-0.6**
	baz=343							
RSO	**Redoubt South**	**2.58**	**196**			**Pn**	**07 59 00.3**	**-1.1**
N19K	**Bonanza Creek**	**2.61**	**217**			**Pn**	**07 59 01.3**	**-0.4**
N19K	**Bonanza Creek**	**2.61**	**217**	P		**Pn**	**07 59 01.3**	**-0.4**
	baz=34							
RED	**Redoubt Volcan**	**2.62**	**196**			**Pn**	**07 59 01.4**	**-0.5**
K24K	**Donnelly Dome**	**2.63**	**68**			**Pn**	**07 59 01.7**	**-0.2**
PAX	**Paxson**	**2.66**	**87**			**Pn**	**07 59 02.2**	**-0.1**
PAX	**Paxson**	**2.66**	**87**	P		**Pn**	**07 59 02.2**	**-0.1**
	baz=272							
IL31		**2.68**	**45**			**Pn**	**07 59 02.0**	**-0.5**
ILAR	**Eielson Array**	**2.68**	**45**	P		**Pn**	**07 59 02.1**	**-0.5**
	comp=N,38nm,0.5s,baz=227,slow=13,SNR=585							
ILAR				S		**Sn**	**07 59 32.5**	**-2.2**
	comp=N,14nm,0.6s,baz=230,slow=18,SNR=4.1							
ILAR	**Eielson Array**	**2.68**	**45**			**Pn**	**07 59 01.6**	**-0.9**
SVW2	**Sparrevohn**	**2.74**	**230**			**Pn**	**07 59 02.5**	**-0.8**
SVW2	**Sparrevohn**	**2.74**	**230**	IAML			07 59 35.2	
	comp=N,65nm,0.6s							
SVW2				IAML			07 59 35.5	
	comp=E,90nm,0.5s							
POKR	**Poker Plat Res**	**2.77**	**36**			**Pn**	**07 59 03.3**	**-0.4**
POKR	**Poker Plat Res**	**2.77**	**36**	P		**Pn**	**07 59 03.3**	**-0.4**
	baz=220							
H21K	**Melozitna Rive**	**2.81**	**347**			**Pn**	**07 59 04.0**	**-0.3**
H21K	**Melozitna Rive**	**2.81**	**347**	P		**Pn**	**07 59 04.0**	**-0.3**
	baz=166							
PS11	**TAPS Pump St11**	**2.83**	**105**			**Pn**	**07 59 04.6**	**+0.2**
GLI	**Glacier Island**	**2.86**	**134**			**Pn**	**07 59 03.7**	**-1.2**
GLI	**Glacier Island**	**2.86**	**134**	IAML			07 59 41.9	
	comp=N,188nm,0.6s							
GLI	**Glacier Island**	**2.86**	**134**	P		**Pn**	**07 59 03.7**	**-1.2**
	baz=318							
HARP	**HAARP**	**2.88**	**98**			**Pn**	**07 59 05.3**	**+0.1**
HARP	**HAARP**	**2.88**	**98**	P		**Pn**	**07 59 05.3**	**+0.1**
	baz=283							
KLU	**Klutina**	**2.90**	**118**			**Pn**	**07 59 04.0**	**-1.4**
KLU	**Klutina**	**2.90**	**118**	IAML			07 59 49.0	
	comp=E,148nm,0.5s							
KLU				IAML			07 59 52.0	
	comp=N,140nm,0.7s							
KLU	**Klutina**	**2.90**	**118**	P		**Pn**	**07 59 04.0**	**-1.4**
	baz=302							
JPK	**Jack Peak**	**2.90**	**128**			**Pn**	**07 59 04.0**	**-1.5**
O20K	**Slope Mountain**	**2.93**	**193**			**Pn**	**07 59 06.3**	**+0.3**
O20K	**Slope Mountain**	**2.93**	**193**	P		**Pn**	**07 59 06.3**	**+0.3**
	baz=12							
SEW	**Seward**	**2.97**	**162**			**Pn**	**07 59 05.5**	**-0.8**
SEW	**Seward**	**2.97**	**162**	P		**Pn**	**07 59 05.5**	**-0.8**
	baz=343							
H22K	**Ishtalitna Cre**	**2.97**	**359**			**Pn**	**07 59 06.2**	**-0.2**
H23K	**Yukon River**	**3.00**	**14**			**Pn**	**07 59 06.7**	**-0.1**
H23K	**Yukon River**	**3.00**	**14**	P		**Pn**	**07 59 06.7**	**-0.1**
	baz=196							
RIDG	**Independent Ri**	**3.01**	**72**			**Pn**	**07 59 07.0**	**+0.1**
RIDG	**Independent Ri**	**3.01**	**72**	IAML			07 59 48.6	
	comp=E,68nm,0.7s							
RIDG				IAML			07 59 52.7	
	comp=N,103nm,0.6s							
RIDG	**Independent Ri**	**3.01**	**72**	P		**Pn**	**07 59 07.0**	**+0.1**
	baz=257							
GCSA	**Galena City Sc**	**3.08**	**309**			**Pn**	**07 59 07.0**	**-0.7**
GCSA	**Galena City Sc**	**3.08**	**309**	P		**Pn**	**07 59 07.0**	**-0.7**
	baz=124							
ILSW	**Iliamna Southw**	**3.09**	**198**			**Pn**	**07 59 08.2**	**+0.1**
ILSW	**Iliamna Southw**	**3.09**	**198**	IAML			07 59 54.7	
	comp=N,19nm,0.9s							
ILSW				IAML			07 59 54.8	
	comp=E,19nm,0.9s							
J25K	**Salcha River,**	**3.12**	**55**			**Pn**	**07 59 07.7**	**-0.7**
J25K	**Salcha River,**	**3.12**	**55**	IAML			07 59 48.9	
	comp=E,83nm,0.5s							
J25K				IAML			07 59 51.9	
	comp=N,62nm,0.6s							
J25K	**Salcha River,**	**3.12**	**55**	P		**Pn**	**07 59 07.7**	**-0.7**
	baz=240							
N18K	**Kilae Creek**	**3.15**	**226**			**Pn**	**07 59 07.9**	**-0.8**
N18K	**Kilae Creek**	**3.15**	**226**	P		**Pn**	**07 59 07.9**	**-0.8**
	baz=42							
FID	**Port Fidalgo**	**3.16**	**132**			**Pn**	**07 59 07.3**	**-1.6**
DIV	**Divide**	**3.16**	**122**			**Pn**	**07 59 07.5**	**-1.5**
BRLK	**Bradley Lake**	**3.19**	**176**			**Pn**	**07 59 08.9**	**-0.4**
BRLK	**Bradley Lake**	**3.19**	**176**	IAML			07 59 49.2	
	comp=E,108nm,0.1s							
BRSE	**Bradley Lake S**	**3.21**	**175**			**Pn**	**07 59 09.1**	**-0.5**
BRSE	**Bradley Lake S**	**3.21**	**175**	P		**Pn**	**07 59 09.1**	**-0.5**
	baz=355							
IM03		**3.25**	**342**			**Pn**	**07 59 09.6**	**-0.3**
IMAR	**Indian Mountai**	**3.25**	**342**	Pn		**Pn**	**07 59 09.0**	**-0.9**
H24K	**Noodor Dome**	**3.27**	**25**			**Pn**	**07 59 10.1**	**-0.2**
H24K	**Noodor Dome**	**3.27**	**25**	P		**Pn**	**07 59 10.1**	**-0.2**
	baz=209							
HOM	**Homer**	**3.29**	**183**			**Pn**	**07 59 10.8**	**+0.2**
HOM	**Homer**	**3.29**	**183**	P		**Pn**	**07 59 10.8**	**+0.2**
	baz=2.5							
DOT	**Dot Lake**	**3.34**	**74**			**Pn**	**07 59 10.6**	**-0.6**
N25K	**Chitina, Valde**	**3.40**	**110**			**Pn**	**07 59 11.1**	**-1.0**
N25K	**Chitina, Valde**	**3.40**	**110**	IAML			07 59 52.2	
	comp=N,73nm,0.3s							
N25K				IAML			08 00 02.5	
	comp=E,50nm,0.5s							
N25K	**Chitina, Valde**	**3.40**	**110**	P		**Pn**	**07 59 11.1**	**-1.0**
	baz=296							
HIN	**Hinchinbrook I**	**3.42**	**136**			**Pn**	**07 59 11.5**	**-0.8**
HIN	**Hinchinbrook I**	**3.42**	**136**	IAML			08 00 08.9	
	comp=N,105nm,0.7s							
CNPM	**China Poot**	**3.42**	**180**			**Pn**	**07 59 11.8**	**-0.6**
CNPM	**China Poot**	**3.42**	**180**	IAML			08 00 00.8	
	comp=E,108nm,0.5s							
P19K	**Oil Pt**	**3.42**	**197**			**Pn**	**07 59 12.9**	**+0.5**
P19K	**Oil Pt**	**3.42**	**197**	IAML			08 00 03.1	
	comp=N,65nm,0.4s							
P19K				IAML			08 00 28.2	
	comp=E,55nm,0.5s							
P19K	**Oil Pt**	**3.42**	**197**	P		**Pn**	**07 59 12.9**	**+0.5**
	baz=15							
SCRK	**Sand Creek**	**3.44**	**69**			**Pn**	**07 59 11.7**	**-0.9**
SCRK	**Sand Creek**	**3.44**	**69**	IAML			08 00 00.1	
	comp=N,36nm,0.8s							
SCRK	**Sand Creek**	**3.44**	**69**	P		**Pn**	**07 59 11.7**	**-0.9**
	baz=256							
MENT	**Mentasta**	**3.46**	**87**			**Pn**	**07 59 11.9**	**-0.9**
MENT				IAML			08 00 00.9	
	comp=N,88nm,1.0s							
MENT				IAML			08 00 06.2	
	comp=E,78nm,0.7s							
P23K	**Montague Islan**	**3.48**	**146**			**Pn**	**07 59 11.3**	**-1.8**
EYAK	**Cordova Ski Ar**	**3.56**	**130**			**Pn**	**07 59 12.9**	**-1.1**
EYAK	**Cordova Ski Ar**	**3.56**	**130**	P		**Pn**	**07 59 12.9**	**-1.1**
	baz=314							
PRP	**Porcupine Dome**	**3.61**	**42**			**Pn**	**07 59 14.9**	**-0.1**
PRP	**Porcupine Dome**	**3.61**	**42**	IAML			08 00 15.8	
	comp=E,28nm,0.6s							
PRP	**Porcupine Dome**	**3.61**	**42**	P		**Pn**	**07 59 14.9**	**-0.1**
	baz=227							
O18K	**Koktuh Hills**	**3.62**	**213**			**Pn**	**07 59 14.4**	**-0.6**
L26K	**Log Cabin Wild**	**3.62**	**85**			**Pn**	**07 59 15.0**	**0.0**
L26K	**Log Cabin Wild**	**3.62**	**85**	IAML			08 00 03.0	
	comp=E,78nm,0.5s							
L26K				IAML			08 00 04.6	
	comp=N,70nm,0.5s							
L26K	**Log Cabin Wild**	**3.62**	**85**	P		**Pn**	**07 59 15.0**	**0.0**
	baz=272		

comp=N,24nm,1.1s
M27K IAML 08 00 49.5
comp=E,16nm,1.1s
M27K Edge Creek, AK 4.38 93 P **Pn 07 59 25.4 +0.1**
baz=282
F21K Alatna River 4.41 349 Pn 07 59 25.7 +0.2
NICHA Nichawak Mount 4.42 124 Pn 07 59 24.5 -1.2
BERG Berg Lake 4.42 122 Pn 07 59 24.6 -1.1
PTPK Patty Peak 4.50 109 Pn 07 59 26.0 -0.9
TGL Tana Glacier 4.56 115 Pn 07 59 26.5 -1.2
TGL Tana Glacier 4.56 115 IAML 08 00 38.1
comp=E,52nm,0.7s
TGL IAML 08 00 40.0
comp=N,48nm,1.0s
KHIT Khitrov Hills 4.57 120 Pn 07 59 26.7 -1.1
GRIN Grindle Hills 4.64 121 Pn 07 59 27.6 -1.0
KAHC Katmai Hardscr 4.67 205 Pn 07 59 30.1 +0.9
KAHC Katmai Hardscr 4.67 205 P **Pn 07 59 30.1 +0.9**
baz=21
WAX Waxell Ridge 4.72 118 Pn 07 59 28.0 -1.8
BVCY Beaver Creek 4.83 92 Pn 07 59 30.9 -0.3
BVCY Beaver Creek 4.83 92 P **Pn 07 59 30.9 -0.3**
baz=281
EGAK Eagle 4.84 63 Pn 07 59 31.3 -0.1
EGAK Eagle 4.84 63 IAML 08 00 30.7
comp=N,31nm,0.9s
EGAK IAML 08 00 43.1
comp=N,24nm,0.6s
EGAK Eagle 4.84 63 P **Pn 07 59 31.3 -0.1**
baz=252
ISLE Juniper Island 4.85 115 Pn 07 59 30.5 -1.1
ISLE Juniper Island 4.85 115 IAML 08 00 48.3
comp=E,42nm,0.9s
I27K Kandik River 4.99 53 Pn 07 59 33.8 +0.4
YUK2 White River 5.00 99 Pn 07 59 33.1 -0.4
CTG Chitna Glacier 5.09 108 P **Pn 07 59 33.9 -0.9**
baz=297
CTGM Chitina Glacie 5.09 108 Pn 07 59 34.0 -0.9
CTGM Chitina Glacie 5.09 108 IAML 08 00 36.2
comp=N,15nm,1.1s
CTGM IAML 08 01 00.4
comp=E,9.7nm,1.5s
G26K Porcupine Rive 5.14 35 Pn 07 59 35.1 -0.1
YUK3 Moose Creek 5.17 98 Pn 07 59 35.7 -0.4
YUK3 Moose Creek 5.17 98 P **Pn 07 59 35.7 -0.4**
baz=288
KDAK Kodiak Island 5.21 188 Pn 07 59 34.6 -1.7
F25K Christian Rive 5.24 24 Pn 07 59 36.6 -0.2
MESA MESA 5.25 118 Pn 07 59 36.5 -0.5
MESA MESA 5.25 118 P **Pn 07 59 36.5 -0.5**
baz=306
LOGN Logan Glacier 5.30 109 Pn 07 59 36.6 -1.1
LOGN Logan Glacier 5.30 109 IAML 08 00 40.3
comp=E,11nm,1.0s
LOGN IAML 08 00 59.1
comp=N,17nm,0.7s
BM03 Burnt Mountain 5.31 29 Pn 07 59 37.5 -0.1
BMAR Burnt Mountain 5.32 29 Pn **Pn 07 59 36.9 -0.9**
BM01 Burnt Mountain 5.35 29 Pn 07 59 38.1 0.0
TABL Table Mountain 5.43 113 Pn 07 59 38.5 -1.1
DAWY Dawson 5.45 73 Pn 07 59 38.9 -0.7
DAWY Dawson 5.45 73 P **Pn 07 59 38.9 -0.7**
baz=263
O28M Mount Upton 5.68 107 Pn 07 59 42.3 -0.6
SAMH Samovar Hills 5.75 115 Pn 07 59 43.3 -0.5
OHAK Old Harbor 5.82 191 Pn 07 59 41.6 -2.9
OHAK Old Harbor 5.82 191 P **Pn 07 59 41.6 -2.9**
baz=8.8
R17K Ugashik Creek 5.88 208 Pn 07 59 45.1 -0.3
M29M Somme Creek 5.92 89 Pn 07 59 45.6 -0.4
PCA Pinnacle 5.99 113 Pn 07 59 46.5 -0.4
PINM Pinnacle 5.99 113 P **Pn 07 59 46.5 -0.5**
baz=303
YUK4 Talbot Arm 6.13 99 P **Pn 07 59 49.0 0.0**
baz=290
I29M Ogilvie Camp, 6.17 61 Pn 07 59 48.2 -1.1
YUK5 Granite Creek 6.57 100 Pn 07 59 53.5 -1.3
PNL Peninsula 6.59 114 Pn 07 59 54.7 -0.3
O29M Mount Kennedy 6.61 108 Pn 07 59 54.9 -0.4
M30M Minto, Yukon 6.66 87 Pn 07 59 55.2 -0.7
YUK7 Dusty Glacier 6.69 105 Pn 07 59 56.2 -0.3
N30M Aishikik Lake 6.80 96 Pn 07 59 57.0 -0.9
HYT Haines Junctio 6.85 102 Pn 07 59 58.4 -0.2
HYT Haines Junctio 6.85 102 P **Pn 07 59 58.4 -0.2**
baz=294
EPYK Eagle Plains 7.13 55 Pn **Pn 08 00 01.4 -0.9**
P29M Windy Craggy 7.31 111 Pn 08 00 04.7 -0.1
N31M Braeburn, Yuko 7.39 94 Pn 08 00 05.3 -0.5
O30N Mendenhall 7.50 100 Pn 08 00 06.0 -1.4
PLBC Pleasant Camp 8.00 109 Pn 08 00 13.0 -1.0
PLBC Pleasant Camp 8.00 109 P **Pn 08 00 13.0 -1.0**
baz=302
WHY Whitehorse 8.09 99 Pn 08 00 14.3 -1.1
INK Inuvik 9.08 46 P **Pn 08 00 28.8 +0.3**
comp=N,1.1nm,0.8s,baz=254,slow=15,SNR=2.1
BESE Bessie Mountai 9.14 111 Pn 08 00 27.9 -1.6
DLBC Dease Lake 11.32 104 P **Pn 08 00 58.0 -1.0**
comp=N,1.0nm,0.4s,baz=306,slow=19,SNR=6.0
YKA Yellowknife Ar 16.68 75 P **P 08 02 07.5 -0.3**
comp=N,0.6nm,0.6s,baz=285,slow=9.1,SNR=3.2
PDAR Pinedale Array 31.46 110 P **P 08 04 32.0 +0.6**
comp=N,0.4nm,0.8s,baz=297,slow=4.0,SNR=4.5
comp=N,0.4nm,0.8s
NVAR Mina Array Bea 31.59 125 P **P 08 04 33.8 +1.2**
comp=N,0.3nm,0.7s,baz=317,slow=8.5,SNR=3.7
comp=N,0.3nm,0.7s
TXAR Lajitas Array 45.36 115 P **P 08 06 28.4 +0.8**
comp=N,0.5nm,0.8s,baz=340,slow=5.7,SNR=5.5
comp=N,0.5nm,0.8s

*ISK **20** 07:58:43.4, 37°.81N × 26°.91E, h5km, ML2.8/13*
*THE **20** 07:58:43.3, 37°.80N × 27°.03E, h9km ± 1km, ML2.7/5, Error ellipse: s-maj=1.1km s-min=0.6km az=96.0*
*DDA **20** 07:58:43.7 ± 0.0, 37°.81N × 26°.96E, h7km ± 3km, ML2.5*
ISC 20 07:58:43.7±0.8, **37°.81N**±0°.02×**26°.97E**±0°.02, **h17**km±6km, **n35**, σ0s**56**/56, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.14**	**226**	P	**Pg**	**07 58 47.4**	**-0.3**
SMG				S	**Sg**	**07 58 50.2**	**-0.3**
	6μm,0.2s						
GCAM	**G?zelcaml?**	**0.24**	**117**	PG	**Pg**	**07 58 49.2**	**+0.1**
GCAM				SG	**Sg**	**07 58 53.4**	**+0.6**
GCAM	**G?zelcaml?**	**0.24**	**117**	P	**Pg**	**07 58 49.2**	**+0.1**
GCAM				*i* AML	AML	07 58 53.0	
	comp=E,794nm,0.3s						
GCAM				S	**Sg**	**07 58 53.1**	**+0.3**
GCAM				*i* AML	AML	07 58 54.0	
	comp=N,1μm,0.2s						
DDIM	**Aydin, Didim**	**0.41**	**148**	P	**Pg**	**07 58 52.2**	**+0.1**
DDIM				S	**Sb**	**07 58 58.3**	**-0.2**
DDIM				*i* AML	AML	07 58 59.0	
	comp=E,487nm,0.6s						
ZEYE	**Izmir, Urla-Ze**	**0.56**	**320**	P	**Pg**	**07 58 55.4**	**+0.5**
ZEYE				S	**Sg**	**07 59 03.3**	**+0.9**
ZEYE				*i* AML	AML	07 59 05.0	
	comp=N,386nm,0.2s						
ZEYE				*i* AML	AML	07 59 07.0	
	comp=E,283nm,0.2s						
BLCB	**Balcova**	**0.58**	**6**	P	**Pg**	**07 58 55.2**	**0.0**
BLCB				S	**Sb**	**07 59 02.8**	**-0.5**
BLCB	**Balcova**	**0.58**	**6**	PG	**Pg**	**07 58 55.2**	**0.0**
BLCB				SG	**Sg**	**07 59 03.9**	**+1.0**
URLA	**Izmir**	**0.62**	**332**	PG	**Pb**	**07 58 55.1**	**-1.0**
URLA				SG	**Sg**	**07 59 04.6**	**+0.3**
URLA	**Izmir**	**0.62**	**332**	P	**Pb**	**07 58 55.2**	**-1.0**
URLA				S	**Sb**	**07 59 04.1**	**-0.5**
URLA				*i* AML	AML	07 59 06.0	
	comp=E,315nm,0.4s						
URLA				*i* AML	AML	07 59 08.0	
	comp=N,422nm,0.6s						
AYDN	**Tasoluk**	**0.74**	**101**	P	**Pg**	**07 58 58.3**	**+0.2**
AYDN				S	**Sg**	**07 59 08.4**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**0.74**	**79**	PG	**Pn**	**07 58 59.0**	**-0.5**
BODT	**Bodrum**	**0.80**	**160**	P	**Pb**	**07 58 58.0**	**-1.0**
BODT				S	**Sb**	**07 59 09.3**	**-0.2**
BDRM	**Kayabasi**	**0.83**	**153**	P	**Pg**	**07 58 59.8**	**-0.2**
BDRM				S	**Sg**	**07 59 11.1**	**+0.1**
FOCM	**Foa**	**0.92**	**348**	PG	**Pn**	**07 59 01.5**	**-0.3**
FOCM				SG	**Sn**	**07 59 14.8**	**+0.2**
CHOS	**Chios island**	**0.92**	**309**	P	**Pn**	**07 59 01.6**	**-0.3**
CHOS				S	**Sn**	**07 59 15.3**	**+0.5**
	522nm,0.2s						
CHOS	**Chios island**	**0.92**	**309**	PG	**Pb**	**07 59 01.1**	**-0.1**
CHOS				SG	**Sg**	**07 59 13.7**	**-0.1**
ZEDA	**zmir-Bergama**	**1.16**	**4**	P	**Pg**	**07 59 05.9**	**-0.1**
ZEDA				S	**Sg**	**07 59 22.0**	**+0.8**
GOMA	**Golmarmara-Man**	**1.17**	**40**	PN	**Pg**	**07 59 06.9**	**+0.6**
MULA	**Mugla, Merkez-**	**1.21**	**117**	P	**Pb**	**07 59 06.3**	**+0.1**
YER	**Yerkesik**	**1.25**	**122**	PN	**Pg**	**07 59 08.7**	**+1.0**
AKS	**Akhisar**	**1.26**	**32**	PN	**Pg**	**07 59 08.0**	**0.0**
DKL	**Dikili**	**1.26**	**358**	PN	**Pg**	**07 59 08.1**	**+0.1**
AMGA	**Amorgos Island**	**1.30**	**222**	P	**Pn**	**07 59 06.5**	**-0.5**
AMGA				S	**Sb**	**07 59 24.6**	**+0.6**
	258nm,0.5s						
APE	**Apeiranthos**	**1.36**	**238**	P	**Pn**	**07 59 07.4**	**-0.5**
APE				S	**Sb**	**07 59 26.2**	**+0.4**
	72nm,0.2s						
APE	**Apeiranthos**	**1.36**	**238**	PN	**Pb**	**07 59 09.3**	**+0.6**
MANT	**Manisa**	**1.43**	**61**	P	**Pg**	**07 59 11.5**	**+0.3**
MANT				S	**Sb**	**07 59 28.0**	**+0.1**
TURN	**Turunc**	**1.45**	**135**	PN	**Pg**	**07 59 11.7**	**+0.1**
TURN	**Turunc**	**1.45**	**135**	P	**Pg**	**07 59 12.9**	**+1.3**
KULA	**Kula-Manisa**	**1.51**	**62**	PN	**Pg**	**07 59 12.8**	**0.0**
PRK	**Paraskevi**	**1.53**	**339**	P	**Pn**	**07 59 10.4**	**+0.1**
PRK				S	**Sb**	**07 59 31.2**	**+0.4**
	182nm,0.6s						
TAVA	**DENIZLI Tavas**	**1.58**	**102**	P	**Pg**	**07 59 14.6**	**+0.4**
DALY	**Dalyan (Mula)**	**1.67**	**126**	PN	**Pg**	**07 59 15.1**	**-0.7**
STEP	**BALIKESIR_Sava**	**1.67**	**20**	P	**Pg**	**07 59 15.0**	**-0.8**
STEP				S	**Sg**	**07 59 37.3**	**-0.3**
STEP				*i* AML	AML	07 59 40.0	
	comp=E,44nm,0.3s						
STEP				*i* AML	AML	07 59 46.0	
	comp=N,55nm,0.7s						
BUHA	**Balikesir, Bur**	**1.69**	**3**	P	**Pb**	**07 59 14.9**	**+0.6**
BUHA				*i* AML	AML	07 59 44.0	
	comp=E,49nm,0.5s						
USAK	**Uak-Merkez**	**1.85**	**60**	P	**Pg**	**07 59 18.1**	**-1.2**

IDC 20 08:12:46.2±2.6, **0°.57S**×**16°.55W**, **h0**km, **mb3.5**/3, **mbtmp3.6**/3, **MS3.1**/2, **Error ellipse: s-maj=100.3km s-min=56.5km az=124.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.49**	**164**	T	T	08 22 00.7	
	baz=348,slow=74,SNR=82						
H10N3	**ASCENSION HYDR**	**7.50**	**164**	T	T	08 22 03.6	
	baz=348,slow=74,SNR=77						
H10N1	**ASCENSION HYDR**	**7.51**	**164**	T	T	08 22 06.4	
	baz=348,slow=74,SNR=159						
H10S3	**ASCENSION HYDR**	**8.53**	**167**	T	T	08 23 25.1	
	baz=231,slow=74,SNR=48						
H10S2	**ASCENSION HYDR**	**8.54**	**167**	T	T	08 23 23.8	
	baz=349,slow=74,SNR=11						
DBIC	**Dimbokro**	**13.71**	**58**	LR	LR	08 20 21.0	
	comp=Z,42nm,18.4s,baz=184,slow=33						
TORD	**Torodi Ar. Bea**	**22.65**	**52**	P	P	08 17 49.1	-0.2
	1.2nm,0.8s,baz=236,slow=11,SNR=4.9						
	1.2nm,0.8s						
KMBO	**Kilima Mbogo**	**53.79**	**91**	LR	LR	08 42 49.4	
	comp=Z,32nm,18.4s,baz=280,slow=34						
GERES	**GERESS Array B**	**55.72**	**24**	P	P	08 22 26.1	+1.3
	0.2nm,0.5s,baz=204,slow=12,SNR=2.3						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**69.83**	**20**	P	P	08 23 57.2	-1.2
	1.0nm,0.9s,baz=244,slow=6.0,SNR=2.1						
	1.0nm,0.9s						
ASAR	**Alice Springs**	**142.52**	**132**	PKP	PKPdf	08 32 21.3	-0.9
	0.3nm,0.6s,baz=220,slow=2.4,SNR=2.0						
WRA	**Warramunga Arr**	**144.93**	**127**	PKP	PKPdf	08 32 26.2	-0.3
	0.4nm,0.6s,baz=237,slow=2.5,SNR=6.2						

*IDC **20** 08:15:30.7±3.2, 53°.72N × 90°.81E, h0km, mbtmp3.4/3, ML2.7/3, Error ellipse: s-maj=27.4km s-min=23.1km az=48.0*
*NNC **20** 08:15:33.6±3.3, 53°.66N × 90°.45E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=26.6km s-min=20.1km az=34.0, Suspected Mining explosion.*
ISC 20 08:15:33.8±4.0, **53°.7N**±0°.1×**90°.5E**±0°.2, **h0**km, **n8**, σ0s**88**/12, **6C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.35**	**277**	*i*		08 37 55.5	
	baz=91,slow=324,SNR=5.4						
ZAA0	**Zalesovo Array**	**3.35**	**277**	⇑Pg	**Pb**	**08 16 33.7**	**-0.3**
	1.3nm,0.5s						
ZAA0				⇑Lg	Lg	08 17 22.6	
	36nm,1.2s						
ZALV	**Zalesovo Beam**	**3.35**	**277**	Pn	**Pn**	**08 16 27.9**	**+0.5**
	0.4nm,0.3s,baz=100,slow=11,SNR=3.0						
ZALV				Lg	Lg	08 17 22.3	
	4.3nm,0.3s,baz=89,slow=26,SNR=6.9						
	2.0nm,0.3s						
KURK	**Kurchatov**	**7.86**	**252**	⇑Pn	**Pn**	**08 17 30.1**	**+0.8**
	5.0nm,0.6s						
KURK				⇓Sn	**Sn**	**08 18 58.0**	**-0.8**
	13nm,0.8s						
KURK				⇑Lg	Lg	08 19 46.2	
	23nm,0.9s						
KURBB	**Kurchatov Arra**	**7.95**	**252**	Pn	**Pn**	**08 17 29.9**	**-0.6**
	0.2nm,0.3s,baz=66,slow=15,SNR=12						
KURBB				Sn	**Sn**	**08 19 02.3**	**+1.2**
	0.1nm,0.3s,baz=66,slow=25,SNR=4.4						
KURBB				Lg	Lg	08 19 48.4	
	0.1nm,0.3s,baz=69,slow=31,SNR=10						
	1.7nm,0.5s						
KURBB	**Kurchatov Arra**	**7.95**	**252**	⇓Pn	**Pn**	**08 17 30.5**	**0.0**
	1.7nm,0.4s						
KURBB				⇓Sn	**Sn**	**08 19 00.3**	**-0.8**
	39nm,0.8s						
KURBB				⇑Lg	Lg	08 19 48.7	
	65nm,1.1s						
MK31	**Makanchi Array**	**8.66**	**220**	Pn	**Pn**	**08 17 39.9**	**-0.4**
	2.5nm,0.8s,baz=34,slow=11,SNR=24						
MK31				⇓Sn	**Sn**	**08 19 20.2**	**+1.6**
	2.9nm,0.7s,baz=42,slow=25,SNR=3.7						
MK31				⇑Lg	Lg	08 20 07.1	
	20nm,1.0s,baz=51,slow=29,SNR=4.0						
MKAR	**Makanchi Array**	**8.66**	**220**	Pn	**Pn**	**08 17 40.2**	**-0.1**
	0.5nm,0.3s,baz=40,slow=13,SNR=18						
MKAR				Sn	**Sn**	**08 19 18.2**	**-0.4**
	0.3nm,0.3s,baz=49,slow=20,SNR=2.5						
MKAR				Lg	Lg	08 20 11.8	
	0.2nm,0.3s,baz=42,slow=28,SNR=5.3						
	0.8nm,0.3s						

*ANF **20** 08:33:12.4±1.2, 43°.67N × 128°.10W, h0km, ML3.8/12, Error ellipse: s-maj=13.5km s-min=6.1km az=32.0*
*IDC **20** 08:33:17.4±3.2, 43°.84N × 127°.45W, h0km, mb3.1/2, mbtmp3.3/7, ML3.3/5, MS3.1/11, Error ellipse: s-maj=48.3km s-min=18.3km az=69.0*
*NEIC **20** 08:33:20.4±2.6, 43°.91N±0°.08 × 127°.5W±0°.2, h10km±2km, ML3.2/52, Error ellipse: s-maj=20.2km s-min=12.5km az=250.0*
ISC 20 08:33:19.5±1.8, **43°.87N**±0°.08×**127°.56W**±0°.10, **h10**km, **n79**, σ1s**69**/72, **MS3.1**/6, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.55**	**112**	Pn	**Pn**	**08 33 57.7**	**-3.3**
I02E	**Swisshome, OR**	**2.69**	**84**	Pn	**Pn**	**08 34 01.4**	**-1.4**
I02E				IAML		08 34 44.5	
	comp=E,79nm,2.1s						
I02E	**Swisshome, OR**	**2.69**	**84**	P	**Pn**	**08 34 01.3**	**-1.4**
	baz=267,SNR=106						
I02E				S	**Sb**	**08 34 39.8**	**-1.0**
	baz=267						
J01E	**Myrtle Point**	**2.73**	**104**	Pn	**Pn**	**08 34 01.1**	**-2.3**
J01E				IAML		08 34 42.0	
	comp=N,122nm,0.4s						
J01E	**Myrtle Point**	**2.73**	**104**	P	**Pn**	**08 34 00.8**	**-2.6**
	baz=288,SNR=33						
J01E				S	**Sb**	**08 34 39.0**	**-2.9**
	baz=288						
KBO	**Bosley Butte**	**2.95**	**123**	Pn	**Pn**	**08 34 05.7**	**-0.7**
KBO				IAML		08 34 26.1	
	comp=E,74nm,2.3s						
KBO				IAML		08 35 11.7	
	comp=N,78nm,2.6s						
HEBO	**Mount Hebo**	**3.04**	**62**	Pn	**Pn**	**08 34 07.0**	**-0.7**
I03D	**Drain, OR**	**3.06**	**92**	P	**Pn**	**08 34 06.4**	**-1.4**
	baz=276,SNR=124						
I03D				S	**Sb**	**08 34 48.1**	**-3.1**
	baz=276						
K02D	**Willamette Mer**	**3.08**	**111**	P	**Pn**	**08 34 05.3**	**-2.9**
	baz=295,SNR=56						
K02D				S	**Sn**	**08 34 46.4**	**+1.3**
	baz=295						
COR	**Corvallis**	**3.14**	**75**	Pn	**Pn**	**08 34 08.7**	**-0.3**
COR				IAML		08 34 51.7	
	comp=N,62nm,2.5s						
COR				IAML		08 35 06.6	
	comp=N,54nm,2.0s						
DBO	**Dodson Butte**	**3.23**	**102**		**Pn**	**08 34 08.8**	**-1.4**
BUCK	**Buck Mountain**	**3.31**	**83**	Pn	**Pn**	**08 34 10.9**	**-0.6**
BUCK				IAML		08 36 04.1	
	comp=E,48nm,2.5s						
G03D	**McMinnville, O**	**3.35**	**65**		**Pn**	**08 34 11.7**	**-0.2**
G03D				IAML		08 35 02.2	
	comp=N,73nm,2.1s						
G03D				IAML		08 35 38.9	
	comp=E,60nm,2.3s						
G03D	**McMinnville, O**	**3.35**	**65**	P	**Pn**	**08 34 11.9**	**0.0**
	baz=248,SNR=43						
L02F	**Cave Junction**	**3.41**	**119**	S	**Sn**	**08 34 54.2**	**+1.1**
	baz=304						
H04D	**Lebanon**	**3.53**	**78**		**Pn**	**08 34 14.6**	**+0.3**
H04D				IAML		08 35 33.3	
	comp=E,57nm,2.4s						
H04D	**Lebanon**	**3.53**	**78**	P	**Pn**	**08 34 14.3**	**0.0**
	baz=261,SNR=23						
HUMO	**Hull Mountain**	**3.59**	**109**	Pn	**Pn**	**08 34 14.7**	**-0.6**
HUMO				IAML		08 35 03.3	
	comp=N,38nm,0.7s						
HUMO				IAML		08 35 05.1	
	comp=E,45nm,0.6s						
RADR	**Rader Ridge**	**3.69**	**45**	Pn	**Pn**	**08 34 15.7**	**-0.8**
RADR				IAML		08 35 15.6	
	comp=E,46nm,2.3s						
RADR				IAML		08 36 36.5	
	comp=N,48nm,1.9s						
I04A	**Tendick Farm,**	**3.73**	**89**	P	**Pn**	**08 34 17.0**	**-0.1**
	baz=274,SNR=20						
E03A	**Lebam**	**3.89**	**45**	Pn	**Pn**	**08 34 18.1**	**-1.2**
E03A				IAML		08 34 51.7	
	comp=N,29nm,2.5s						
E03A				IAML		08 35 15.4	
	comp=E,33nm,2.8s						
F04D	**Rainier, OR**	**3.92**	**54**	P	**Pn**	**08 34 19.7**	**+0.1**
	baz=237,SNR=7.1						
H04A	**Detroit Lake**	**3.94**	**76**	Pn	**Pn**	**08 34 20.2**	**+0.1**
J04D	**Umpqua Nationa**	**4.01**	**97**		**Pn**	**08 34 22.0**	**+0.9**
J04D	**Umpqua Nationa**	**4.01**	**97**	P	**Pn**	**08 34 21.8**	**+0.6**
	baz=282,SNR=16						
J04D				S	**Sb**	**08 35 13.9**	**-5.0**
	baz=282						
YBH	**Yreka Blue Hor**	**4.16**	**119**	Pn	**Pn**	**08 34 22.0**	**-1.1**
	comp=E,0.3nm,0.3s,baz=314,slow=18,SNR=2.3						
YBH				Sn	**Sn**	**08 35 14.6**	**+2.8**
	comp=E,0.5nm,0.3s,baz=140,slow=18,SNR=6.6						
	comp=E,1.4nm,0.5s						
YBH	**Yreka Blue Hor**	**4.16**	**119**		**Pn**	**08 34 21.8**	**-1.3**
L04D	**Klamath Falls**	**4.19**	**111**		**Pn**	**08 34 23.2**	**-0.4**
L04D				IAML		08 35 20.2	
	comp=N,30nm,0.6s						
L04D				IAML		08 35 20.9	
	comp=E,46nm,0.7s						
L04D	**Klamath Falls**	**4.19**	**111**	P	**Pn**	**08 34 23.2**	**-0.4**
	baz=296,SNR=16						
L04D				S	**Sn**	**08 35 16.0**	**+3.4**
	baz=296						
F04A	**Amboy**	**4.20**	**59**	Pn	**Pn**	**08 34 24.0**	**+0.5**
F04A				IAML		08 35 22.3	
	comp=N,38nm,0.9s						
F04A				IAML		08 35 22.9	
	comp=E,35nm,1.2s						
WISH	**Wishkah**	**4.20**	**38**	Pn	**Pn**	**08 34 22.8**	**-0.7**
WISH				IAML		08 36 39.4	
	comp=E,35nm,5.0s						
NLWA	**Neilton Lookou**	**4.37**	**35**	Pn	**Pn**	**08 34 24.5**	**-1.5**
K04D	**Chiloquin, OR**	**4.42**	**104**	S	**Sn**	**08 35 22.7**	**+4.4**
	baz=289						
HOOD	**Mount Hood Mea**	**4.46**	**69**		**Pn**	**08 34 27.9**	**+0.6**
HOOD				IAML		08 34 59.0	
	comp=N,26nm,1.2s						
I05D	**Terrebonne, OR**	**4.50**	**82**	P	**Pn**	**08 34 27.4**	**-0.4**
	baz=266						
J05D	**Fort Rock, OR**	**4.63**	**95**	S	**Sn**	**08 35 28.1**	**+4.6**
	baz=280						
G05D	**Wamic, OR**	**4.67**	**71**	P	**Pn**	**08 34 31.0**	**+1.0**
	baz=255,SNR=33						
B04A	**Port Angeles**	**5.06**	**33**		**Pn**	**08 34 34.2**	**-1.1**
B04A				IAML		08 35 47.2	
	comp=N,13nm,4.3s						
D05A	**Enumclaw**	**5.13**	**48**		**Pn**	**08 34 37.4**	**+1.0**
D05A				IAML		08 35 58.4	
	comp=N,23nm,3.8s						
D05A				IAML		08 37 20.4	
	comp=E,15nm,4.0s						
OZB	**Mount Ozzard**	**5.29**	**15**	Pn	**Pn**	**08 34 37.9**	**-0.7**
CLRS	**Cowichan Lake**	**5.49**	**24**	Pn	**Pn**	**08 34 39.6**	**-1.7**
PGC	**Sidney**	**5.57**	**29**		**Pn**	**08 34 40.5**	**-1.7**
I07A	**Izee**	**5.82**	**85**		**Pn**	**08 34 46.3**	**+0.4**
LTY	**Liberty**	**5.91**	**53**		**Pn**	**08 34 48.1**	**+1.1**
HAWA	**Hanford**	**6.21**	**63**	Pn	**Pn**	**08 34 51.5**	**+0.3**
G08A	**Pilot Rock**	**6.31**	**74**	Pn	**Pn**	**08 34 53.3**	**+0.7**
CBB	**Campbell River**	**6.35**	**13**	Pn	**Pn**	**08 34 52.3**	**-0.7**
D08A	**Wollman Farm,**	**6.86**	**59**	Pn	**Pn**	**08 35 01.0**	**+0.9**
MPK	**Martis Peak**	**7.26**	**126**	Pn	**Pn**	**08 35 07.1**	**+1.3**
B08A	**Colville Reser**	**7.27**	**49**		**Pn**	**08 35 05.3**	**-0.4**
BMO	**Blue Mountains**	**7.42**	**79**	Pn	**Pn**	**08 35 07.5**	**-0.3**
PNTR	**Pine Nut**	**7.65**	**126**		**Pn**	**08 35 12.2**	**+1.1**
YERR	**Yerington**	**7.93**	**125**		**Pn**	**08 35 16.0**	**+1.1**
BBB	**Bella Bella**	**8.33**	**358**	Pn	**Pn**	**08 35 19.1**	**-1.1**
	comp=E,0.2nm,0.3s,baz=192,slow=5.1,SNR=7.6						
	comp=E,7.7nm,0.9s						
NEW	**Newport**	**8.48**	**55**	Pn	**Pn**	**08 35 22.1**	**-0.2**
	comp=E,0.4nm,0.3s,baz=227,slow=12,SNR=5.6						
NEW				LR	LR	08 38 45.8	
	comp=E,124nm,19.7s,baz=252,slow=39						
	comp=E,2.8nm,0.8s						
NEW	**Newport**	**8.48**	**55**	P	**Pn**	**08 35 22.6**	**+0.2**
	baz=242						
NVAR	**Mina Array Bea**	**8.84**	**125**	Pn	**Pn**	**08 35 27.3**	**-0.2**
	comp=E,0.1nm,0.3s,baz=294,slow=15,SNR=17						
	comp=E,1.3nm,0.8s						
NV11	**Mina Array Sit**	**8.93**	**124**		**Pn**	**08 35 30.2**	**+1.6**
MDPB	**Devils Postpil**	**8.95**	**131**		**Pn**	**08 35 30.4**	**+1.3**
OMMB	**Old Mammoth Mi**	**9.01**	**131**		**Pn**	**08 35 31.6**	**+1.8**
ELK	**Elko**	**9.65**	**105**	LR	LR	08 39 38.9	
	comp=E,51nm,21.7s,baz=280,slow=40						
MCMT	**McKenzie Canyo**	**10.58**	**80**	Pn	**Pn**	**08 35 50.5**	**-0.9**
WALA	**Waterton Lakes**	**10.75**	**56**		**Pn**	**08 35 54.1**	**+0.6**
PDAR	**Pinedale Array**	**13.16**	**89**	Pn	**Pn**	**08 36 29.6**	**+3.1**
	comp=E,0.1nm,0.3s,baz=283,slow=16,SNR=4.2						
PDAR				LR	LR

H11S2	**WAKE ISLAND Hy 60.02 267** baz=50,slow=75,SNR=62	T	T	09 47 35.6	
H11S3	**WAKE ISLAND Hy 60.02 267** baz=50,slow=75,SNR=52	T	T	09 47 40.2	

*TAP **20** 08:44:49.5, 25°.32N × 122°.37E, h252km ± 1km, ML3.5, C*
*JMA **20** 08:44:51.4 ± 0.3, 25°N3°.3 × 12°2E1°, h232km ± 3km, MV3.5/14, TAIWAN REGION*
ISC 20 08:44:51.2 ± 2.3, 25°.29N ± 0°.09 × 122°.33E ± 0°.04, h235km ± 12km, n74, σ 0 74/128, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu** baz=319	**0.41**	**325**	*e*P	**Pn**	**08 45 22.5**	**+0.4**
TWB1	**Santiao Chiao** baz=227	**0.42**	**228**	P	**Pn**	**08 45 22.2**	**+0.1**
SXI1	**Grass Mountain** baz=243	**0.46**	**245**	*e*P	**Pn**	**08 45 22.2**	**-0.1**
SXI1	baz=243			*e*S	**S**	**08 45 47.8**	**+1.2**
NWF	**Wu-fen Shan** baz=245	**0.55**	**247**	P	**Pn**	**08 45 22.7**	**+0.1**
WFSB	**Wu-fen Shan** baz=245	**0.55**	**247**	P	**Pn**	**08 45 22.7**	**+0.2**
TIPB	**Shuangxi** baz=234	**0.56**	**236**	P	**Pn**	**08 45 22.4**	**-0.2**
TIPB	baz=234			*e*S	**S**	**08 45 49.6**	**+2.5**
EGS		**0.57**	**220**	P	**Pn**	**08 45 22.9**	**+0.3**
NTC	**Toucheng** baz=226	**0.63**	**227**	*e*P	**Pn**	**08 45 23.8**	**+1.0**
YM01	**YM01** baz=256	**0.70**	**259**	*e*P	**Pn**	**08 45 24.1**	**+0.9**
TWA	**Mucha** baz=244	**0.74**	**246**	P	**Pn**	**08 45 23.4**	**+0.1**
TWA	baz=244			S	**S**	**08 45 49.1**	**+0.7**
NHDH	**Xindian Distri** baz=245	**0.80**	**246**	P	**Pn**	**08 45 23.8**	**+0.3**
TWC	**Suao** baz=213	**0.81**	**213**	P	**Pn**	**08 45 23.3**	**-0.2**
TWC	baz=213			*e*S	**S**	**08 45 48.4**	**-0.6**
TATO	**Taipei** baz=246	**0.83**	**248**	P	**Pn**	**08 45 23.6**	**0.0**
TATO	baz=246			S	**S**	**08 45 49.1**	**+0.1**
TWE	**Neicheng** baz=226	**0.83**	**227**	P	**Pn**	**08 45 24.0**	**+0.3**
FUSB	**Fushanzhiwuyua** baz=231	**0.86**	**232**	P	**Pn**	**08 45 23.9**	**-0.1**
FUSB	baz=231			S	**S**	**08 45 49.0**	**-0.4**
NDS	**Dongshan** baz=220	**0.86**	**221**	P	**Pn**	**08 45 23.9**	**+0.1**
NDS	baz=220			S	**S**	**08 45 48.9**	**-0.5**
ENTT	**Nioudou** baz=226	**0.95**	**227**	*e*P	**Pn**	**08 45 23.4**	**-0.9**
ENTT	baz=226			*e*S	**S**	**08 45 49.4**	**-0.9**
EWUT	**Wuta** baz=211	**0.98**	**211**	*e*P	**Pn**	**08 45 23.8**	**-0.7**
EWUT	baz=211			S	**S**	**08 45 49.4**	**-1.1**
JYNG	**Yonagunijimaku**	**1.00**	**146**	P	**Pn**	**08 45 24.6**	**-0.1**
JYNG				*e*S	**S**	**08 45 50.6**	**-0.2**
NDT	**Datong Townshi** baz=227	**1.01**	**228**	*e*P	**Pn**	**08 45 25.3**	**+0.6**
NDT	baz=227			S	**S**	**08 45 51.0**	**+0.1**
ENA	**Nanau** baz=212	**1.01**	**212**	P	**Pn**	**08 45 25.1**	**+0.4**
ENA	baz=212			*e*S	**S**	**08 45 51.5**	**+0.6**
YOJ	**Yonaguni jima** baz=145	**1.03**	**143**	*e*P	**Pn**	**08 45 24.6**	**-0.2**
YOJ	baz=145			*e*S	**S**	**08 45 50.7**	**-0.3**
LATG	**Datong** baz=224	**1.05**	**224**	P	**Pn**	**08 45 25.3**	**+0.2**
LATG	baz=224			S	**S**	**08 45 51.9**	**+0.4**
YHNB	**Yeheng** baz=234	**1.06**	**235**	P	**Pn**	**08 45 24.6**	**-0.5**
YHNB	baz=234			S	**S**	**08 45 50.4**	**-1.2**
NSK	**Sanguang** baz=234	**1.07**	**236**	*e*P	**Pn**	**08 45 23.6**	**-1.5**
NSK	baz=234			*e*S	**S**	**08 45 49.6**	**-2.0**
NNS	**Nan Shan** baz=225	**1.21**	**226**	*e*P	**Pn**	**08 45 25.3**	**-0.9**
NNS	baz=225			*e*S	**S**	**08 45 52.9**	**-0.6**
NNSB	**Datong** baz=225	**1.22**	**225**	P	**Pn**	**08 45 26.2**	**0.0**
NNSB	baz=225			S	**S**	**08 45 52.8**	**-0.7**
NNSH	**Datong** baz=225	**1.22**	**225**	P	**Pn**	**08 45 26.1**	**0.0**
NNSH	baz=225			S	**S**	**08 45 52.8**	**-0.6**
NFF	**Wufeng Townshi** baz=238	**1.28**	**240**	*e*P	**Pn**	**08 45 25.1**	**-1.4**
NFF	baz=238			*e*S	**S**	**08 45 52.4**	**-1.7**
ETL	**Fush Village** baz=210	**1.30**	**210**	*e*P	**Pn**	**08 45 26.9**	**+0.3**
NACB	**Ninganchiao** baz=211	**1.30**	**211**	*e*P	**Pn**	**08 45 26.1**	**-0.5**
NACB	baz=211			*e*S	**S**	**08 45 53.2**	**-1.0**
ETLH	**Xiulin Townshi** baz=216	**1.33**	**216**	*e*P	**Pn**	**08 45 26.9**	**0.0**
ETLH	baz=216			*e*S	**S**	**08 45 55.0**	**+0.2**
LIOB	**Emei** baz=241	**1.36**	**242**	P	**Pn**	**08 45 26.9**	**-0.1**
LIOB	baz=241			S	**S**	**08 45 54.9**	**0.0**
NSTT	**Nanjuang** baz=240	**1.38**	**242**	*e*P	**Pn**	**08 45 26.8**	**-0.3**
NSTT	baz=240			S	**S**	**08 45 54.6**	**-0.6**
TWD	**Chiawan** baz=209	**1.38**	**209**	*e*P	**Pn**	**08 45 27.3**	**+0.1**
TWD	baz=209			*e*S	**S**	**08 45 55.2**	**-0.1**
FUSS	**Fushou** baz=223	**1.43**	**224**	*e*P	**Pn**	**08 45 28.5**	**+0.7**
FUSS	baz=223			*e*S	**S**	**08 45 57.4**	**+0.9**
TWT	**Tachien** baz=225	**1.47**	**226**	*e*P	**Pn**	**08 45 28.8**	**+0.7**
TWT	baz=225			*e*S	**S**	**08 45 57.8**	**+0.9**
TDCB	**Techi** baz=225	**1.48**	**226**	*e*P	**Pn**	**08 45 28.9**	**+0.8**
ETM	**Tongmen** baz=210	**1.52**	**210**	*e*P	**Pn**	**08 45 28.2**	**-0.1**
ETM	baz=210			*e*S	**S**	**08 45 56.8**	**-0.6**
TEYL	**Yanliau Villag** baz=206	**1.56**	**205**	*e*P	**Pn**	**08 45 28.9**	**+0.3**
TEYL	baz=206			*e*S	**S**	**08 45 59.2**	**+1.3**
IRIF	**Iriomote-Funau**	**1.59**	**127**	P	**Pn**	**08 45 28.9**	**+0.1**
IRIF				S	**S**	**08 45 57.9**	**-0.2**
WHP	**Taichung City** baz=231	**1.61**	**232**	*e*P	**Pn**	**08 45 29.2**	**+0.1**
CHGB	**Renai** baz=220	**1.61**	**221**	*e*P	**Pn**	**08 45 29.9**	**+0.6**
CHGB	baz=220			*e*S	**S**	**08 46 00.4**	**+1.4**
NSY	**Sanyi** baz=238	**1.67**	**239**	*e*P	**Pn**	**08 45 29.8**	**+0.3**
ESL	**Shilin** baz=209	**1.68**	**209**	*e*P	**Pn**	**08 45 28.9**	**-0.7**
ESL	baz=209			*e*S	**S**	**08 45 58.7**	**-1.0**
OWD	**Renai** baz=218	**1.69**	**219**	*e*P	**Pn**	**08 45 30.4**	**+0.5**
OWD	baz=218			*e*S	**S**	**08 46 01.0**	**+0.9**
TWQ1	**Liyutan** baz=236	**1.70**	**237**	*e*P	**Pn**	**08 45 29.8**	**0.0**
TWQ1	baz=236			*e*S	**S**	**08 45 59.5**	**-0.4**
WUSB	**Renai** baz=220	**1.70**	**221**	*e*P	**Pn**	**08 45 30.3**	**+0.4**
WUSB	baz=220			*e*S	**S**	**08 46 00.8**	**+0.7**
WCS	**Beigang Elemen** baz=226	**1.78**	**227**	*e*P	**Pn**	**08 45 29.5**	**-0.9**
WCS	baz=226			*e*S	**S**	**08 45 59.7**	**-1.4**
DPDB	**Guoxing** baz=225	**1.79**	**226**	*e*P	**Pn**	**08 45 30.8**	**+0.2**
HATJ	**Hateruma jima**	**1.82**	**132**	P	**Pn**	**08 45 31.6**	**+0.9**
HATJ				*e*S	**S**	**08 46 01.6**	**0.0**
JKRS	**Kuro-shima**	**1.85**	**124**	P	**Pn**	**08 45 31.8**	**+0.8**
JKRS				S	**S**	**08 46 01.8**	**-0.4**
JIJ	**Ishigaki jima**	**1.89**	**119**	P	**Pn**	**08 45 31.6**	**+0.2**
JIJ				S	**S**	**08 46 01.4**	**-1.4**
SMLT	**Sun Moon Lake** baz=222	**1.91**	**223**	*e*P	**Pn**	**08 45 31.9**	**+0.2**
SMLT	baz=222			*e*S	**S**	**08 46 04.6**	**+1.1**
SSLB	**Suanglung** baz=220	**1.95**	**220**	*e*P	**Pn**	**08 45 32.1**	**0.0**
SSLB	baz=220			*e*S	**S**	**08 46 04.0**	**0.0**
HGSD	**Ruisui** baz=205	**1.97**	**205**	*e*P	**Pn**	**08 45 32.5**	**+0.3**
HGSD	baz=205			*e*S	**S**	**08 46 04.5**	**+0.2**
EHY	**Hungye** baz=207	**2.00**	**208**	*e*P	**Pn**	**08 45 32.6**	**+0.1**
YULB	**Yu-li** baz=207	**2.11**	**207**	*e*P	**Pn**	**08 45 32.9**	**-0.6**
TWF1	**Yuli** baz=206	**2.15**	**206**	*e*P	**Pn**	**08 45 36.1**	**+2.2**
YUS	**Yu-Shan** baz=215	**2.19**	**215**	*e*P	**Pn**	**08 45 35.4**	**+0.6**
JTJ	**Tarama**	**2.25**	**106**	P	**Pn**	**08 45 35.3**	**+0.6**
JTJ				S	**S**	**08 46 08.4**	**-0.5**
ALS	**Alishan** baz=218	**2.25**	**219**	⇓*e*P	**Pn**	**08 45 35.5**	**+0.2**
ALS	baz=218			*e*S	**S**	**08 46 09.3**	**-0.4**
CHN5	**Tsauling** baz=221	**2.26**	**222**	*e*P	**Pn**	**08 45 34.5**	**-0.6**
FULB	**Fuli** baz=204	**2.29**	**205**	*e*P	**Pn**	**08 45 35.8**	**+0.5**
TPUB	**Ta-pu** baz=218	**2.52**	**218**	⇓*e*P	**Pn**	**08 45 37.6**	**0.0**
TPUB	baz=218			*e*S	**S**	**08 46 13.8**	**-0.2**
STYH	**Taoyuan** baz=214	**2.54**	**214**	*e*P	**Pn**	**08 45 37.3**	**-0.5**
STYH	baz=214			*e*S	**S**	**08 46 13.7**	**-0.7**
WTP	**Ta-pu** baz=217	**2.57**	**218**	⇓*e*P	**Pn**	**08 45 38.3**	**+0.1**
WTP	baz=217			*e*S	**S**	**08 46 14.2**	**-0.9**
JIRB	**Irabujima**	**2.62**	**99**	P	**Pn**	**08 45 38.9**	**+0.3**
JIRB				S	**S**	**08 46 14.1**	**-1.6**
CHN1	**Nanshi** baz=218	**2.67**	**219**	⇓*e*P	**Pn**	**08 45 39.3**	**+0.1**
CHN1	baz=218			*e*S	**S**	**08 46 16.9**	**0.0**
JIKM	**Ikemajima**	**2.67**	**97**	P	**Pn**	**08 45 39.5**	**+0.4**
JIKM				*e*S	**S**	**08 46 16.0**	**-0.7**
JMJ	**Miyako jima 2** baz=100	**2.73**	**99**	*e*P	**Pn**	**08 45 40.9**	**+1.1**
JMJ	baz=100			*e*S	**S**	**08 46 17.9**	**+0.1**
JMJ2	**Miyako jima3**	**2.77**	**101**	P	**Pn**	**08 45 40.9**	**+0.6**
JMJ2				S	**S**	**08 46 17.9**	**-0.9**
JOGS	**Gusukube**	**2.84**	**100**	P	**Pn**	**08 45 41.6**	**+0.6**
JOGS				S	**S**	**08 46 19.1**	**-0.9**
MASBT	**Mashibuluo** baz=210	**3.08**	**211**	*e*P	**Pn**	**08 45 44.3**	**+0.5**
MASBT	baz=210			*e*S	**S**	**08 46 24.8**	**-0.3**

*IDC **20** 08:48:49.5 ± 4.4, 55°.16S × 31°.69W, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=146.5km s-min=49.2km az=177.0*
*NEIC **20** 08:48:51.2 ± 1.0, 55°.13S ± 0°.05 × 31°.9W ± 0°.2, h10km ± 2km, mb4.6/20, Error ellipse: s-maj=19.5km s-min=6.5km az=75.0*
ISC 20 08:48:51.1 ± 0.9, 55°.12S ± 0°.10 × 31°.9W ± 0°.1, h10km, n32, σ 0 64/24, mb4.6/10, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.78**	**286**		**Pn**	**08 49 35.3**	**-0.3**
ORCD	**Orcadas**	**8.84**	**225**	Pn	**Pn**	**08 50 58.3**	**-0.4**
PMSA	**Palmer Station**	**18.56**	**226**		**P**	**08 53 07.2**	**-0.4**
PMSA	comp=Z,38nm,1.4s			IAmb	IAmb	08 53 18.2	
VNA1	**Neumayer--Stat**	**18.72**	**155**	P	Pn	08 53 18.7	+9.0
VNA3	**Neumayer Olymp**	**18.83**	**158**	P	Pn	08 53 19.8	+8.7
VNA2	**Neumayer--Watz** baz=315,slow=12	**19.12**	**155**	P	Pn	08 53 22.8	+8.1
SNAA	**Sanae**	**20.72**	**154**	P	**P**	**08 53 30.1**	**-1.2**
SMAI	**San Martin Ant**	**20.81**	**217**	P	**P**	**08 53 31.9**	**-0.2**
MG05	**Puerto Natales**	**24.20**	**261**	P	**P**	**08 54 07.8**	**+0.4**
MG05	comp=Z,31nm,1.4s			IAmb	IAmb	08 54 33.8	
PLCA	**Paso Flores**	**29.18**	**283**	P	**P**	**08 54 52.3**	**-0.2**
PLCA	comp=Z,11nm,1.5s			IAmb	IAmb	08 54 53.4	
LL05	**Los Muermos**	**30.38**	**279**	P	**P**	**08 55 03.6**	**+0.6**
ITQB	**Itaqui**	**30.98**	**315**	P	**P**	**08 55 08.9**	**+0.5**
ITQB	comp=Z,19nm,1.4s			IAmb	IAmb	08 55 12.1	
MT09	**Talagante**	**34.47**	**292**	P	**P**	**08 55 38.7**	**-0.4**
MT09	comp=Z,15nm,1.2s			IAmb	IAmb	08 56 19.3	
MT05	**Renca**	**34.63**	**293**	P	**P**	**08 55 40.1**	**-0.3**
QSPA	**South Pole Qui**	**35.14**	**180**	P	**P**	**08 55 44.7**	**+0.1**
QSPA	comp=Z,4.4nm,1.2s			IAmb	IAmb	08 55 45.0	
VA06	**Catapilco**	**35.57**	**293**	P	**P**	**08 55 47.9**	**-0.5**
CO03	**El Pedregal**	**36.61**	**295**	P	**P**	**08 55 56.5**	**-0.9**
CO03	comp=Z,23nm,1.4s			IAmb	IAmb	08 56 01.5	
CO05	**La Serena**	**37.62**	**296**	P	**P**	**08 56 06.0**	**+0.1**
AC05	**El Transito**	**38.00**	**298**	P	**P**	**08 56 08.8**	**-0.4**
PB01	**IPOC Station P**	**44.15**	**305**	P	**P**	**08 57 00.2**	**+0.4**
PB01	comp=Z,15nm,1.2s			IAmb	IAmb	08 57 42.3	
SBA	**Scott Base**	**46.79**	**185**	P	**P**	**08 57 21.4**	**+1.4**
LPAZ	**La Paz** comp=Z,1.2nm,0.7s,baz=164,slow=1.7,SNR=6.8 comp=Z,1.2nm,0.7s	**47.68**	**310**	P	**P**	**08 57 29.2**	**+0.9**
LPAZ	**La Paz**	**47.68**	**310**	P	**P**	**08 57 27.0**	**-1.3**
LPAZ	comp=Z,2.2nm,0.8s			IAmb	IAmb	08 57 29.8	
H10S2	**ASCENSION HYDR** baz=193,slow=74,SNR=5.5	**48.04**	**23**	T	T	09 49 30.6	
H10S3	**ASCENSION HYDR** baz=27,slow=74,SNR=14	**48.04**	**23**	T	T	09 49 30.8	
H10N1	**ASCENSION HYDR** baz=193,slow=75,SNR=20	**49.15**	**23**	T	T	09 50 58.1	
H10N3	**ASCENSION HYDR** baz=193,slow=75,SNR=31	**49.15**	**23**	T	T	09 50 54.2	
H10N2	**ASCENSION HYDR** baz=193,slow=75,SNR=25	**49.17**	**23**	T	T	09 50 48.3	
TOA0	**Torodi Ar. Sit**	**73.67**	**34**	P	**P**	**09 00 24.7**	**-0.1**
TOA0	comp=Z,5.6nm,1.4s			IAmb	IAmb	09 00 28.2	
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.6s,baz=194,slow=5.9,SNR=6.5 comp=Z,0.8nm,0.6s	**73.67**	**34**	P	**P**	**09 00 24.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**73.67**	**34**	P	**P**	**09 00 24.7**	**-0.1**
ILAR	**Eielson Array** comp=Z,1.1nm,1.0s,baz=130,slow=1.4,SNR=5.4	**147.51**	**314**	PKPbc	**PKPbc**	**09 08 33.6**	**-0.2**

*KEA **20** 09:01:22.6, 40°.52N × 144°.22E, h18km, MS5.8/4*
*NIED **20** 09:01:23.6, 40°.37N × 143°.78E, h11km, MW6.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁸Nm; Mrr0.59; Mθθ0.44; Mϕϕ-1.03; Mrθ0.51; Mθϕ-0.19; Mϕr0.53;*
Fault plane solution: M0 1.17000 × 10¹⁸ NP1: ϕs153.00000°, δ38.00000°, λ33.00000°. NP2: ϕs37.00000°, δ71.00000°, λ123.00000°.
*JMA **20** 09:01:23.6 ± 0.4, 40°.4N ± 0°.7 × 14°.4E1°, h11km ± 4km, MD6.4/34, MW6.0/34, FAR E OFF SANRIKU*
JMA Felt III J1 at FAR E OFF SANRIKU .
*IDC **20** 09:01:24.2 ± 0.4, 40°.36N × 143°.66E, h0km, mb5.3/34, mbtmp5.3/38, ML4.0/4, MS5.8/83, Error ellipse: s-maj=12.0km s-min=10.5km az=117.0*
*MOS **20** 09:01:25.5 ± 1.0, 40°.45N × 143°.63E, h17km, mb5.9/92, MS6.2/62, Error ellipse: s-maj=5.5km s-min=3.4km az=113.3*
*BJI **20** 09:01:25.0 ± 0.0, 40°.54N × 143°.66E, h10km, mb5.7/78, mB6.3/75, Ms6.4/98, Ms7 6.3/92*
*NEIC **20** 09:01:26.1, 40°.35N × 143°.70E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.45; Mθθ-0.05; Mϕϕ-0.40; Mrθ0.48; Mθϕ-0.19; Mϕr1.15; Fault plane solution: M0 1.33000 × 10¹⁸ NP1: ϕs204.56000°, δ10.19000°, λ91.71000°. NP2: ϕs22.82000°, δ79.82000°, λ89.69000°. Principal axes: T 1.3158, Plg55.0000°, Azm292.0000°; N 0.0280, Plg0.0000°, Azm23.0000°; P -1.3438, Plg35.0000°, Azm113.0000°;*
*NEIC **20** 09:01:26.2 ± 1.2, 40°.39N ± 0°.05 × 143°.68E ± 0°.10, h10km ± 1km, mb5.6/633, Ms_20 5.8/423, Mwb6.0/168, Mww6.0 Error ellipse: s-maj=12.5km s-min=8.8km az=99.0*
*GCMT **20** 09:01:30.2 ± 0.1, 40°.33N × 143°.91E, h12km, MW6.0/173, Moment Tensor Solution. s151,c324; s173,c586; Duration: 2s5 Moment tensor: Scale 10¹⁸Nm; Mrr0.68 ± 0.01; Mθθ-0.01 ± 0.00; Mϕϕ-0.66 ± 0.00; Mrθ0.41 ± 0.01; Mθϕ-0.17 ± 0.00; Mϕr1.03 ± 0.01; Best double couple: M0 1.30700 × 10¹⁸ NP1: ϕs21.00000°, δ74.00000°, λ94.00000°. NP2: ϕs186.00000°, δ16.00000°, λ76.00000°. Principal axes: T 1.2950, Plg61.0000°, Azm296.0000°; N 0.0240, Plg4.0000°, Azm199.0000°; P -1.3190, Plg29.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 09:01:33, 40°.36N × 144°.07E, h12km, Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10¹⁸Nm; Mrr0.61; Mθθ-0.09; Mϕϕ-0.52; Mrθ0.34; Mθϕ-0.14; Mϕr1.14; Fault plane solution: M0 1.33000 × 10¹⁸ NP1: ϕs197.00000°, δ13.00000°, λ91.00000°. NP2: ϕs16.00000°, δ77.00000°, λ90.00000°. Principal axes: T 1.3524, Plg58.0000°, Azm286.0000°; N -0.0509, Plg0.0000°, Azm17.0000°; P -1.3014, Plg32.0000°, Azm107.0000°;*
ISC 20 09:01:26.2 ± 0.3, 40°.40N ± 0°.02 × 143°.77E ± 0°.02, h12km ± 1km, h12km:pP-P, n2337, σ 1s 91/2431, mb5.6/526, MS5.9/356, 200C-44D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.53**	**253**	P	**Pn**	**09 01 51.0**	**-2.4**
JTH				*e*S	**Sn**	**09 02 11.0**	**-2.1**
JTH	**Tanohata** comp=E,246nm,6.0s,comp=E,442nm,6.7s	**1.53**	**253**	A	A	09 01 51.0	
JKEN	**Kujiedanarisaw**	**1.59**	**264**	*i* P	**Pn**	**09 01 51.8**	**-2.3**
JKEN	**Kujiedanarisaw** comp=E,336nm,1.6s,comp=E,335nm,4.9s	**1.59**	**264**	A	A	09 01 51.8	
ERM	**Erimo**	**1.68**	**344**	Pn	**Pn**	**09 01 54.7**	**-0.7**
ERM	**Erimo**	**1.68**	**344**	*ce*P	**Pn**	**09 01 55.1**	**-0.3**
ERM	comp=Z,2μm,0.8s			pmax	pmax		
ERM	**Erimo**	**1.68**	**344**	P	**Pb**	**09 01 57.2**	**+0.2**
ERM	**Erimo**	**1.68**	**344**	⇑P	**Pn**	**09 01 54.0**	**-1.4**
JEM	**Erimo**	**1.68**	**344**	P	**Pn**	**09 01 53.9**	**-1.4**
JEM	**Erimo** comp=Z,320nm,3.0s,comp=Z,238nm,6.6s	**1.68**	**344**	A	A	09 01 53.9	
MIYJ	**Miyakonagasawa**	**1.71**	**242**	P	**Pn**	**09 01 53.5**	**-2.2**
MIYJ	**Miyakonagasawa** comp=Z,403nm,4.7s,comp=Z,388nm,7.6s	**1.71**	**242**	A	A	09 01 53.5	
JANG	**Nango**	**1.72**	**270**	*i* P	**Pn**	**09 01 54.1**	**-1.9**
JANG				*e*S	**Sn**	**09 02 15.2**	**-2.6**
JANG	**Nango** comp=Z,446nm,8.3s,comp=Z,276nm,4.3s	**1.72**	**270**	A	A	09 01 54.1	
JKZ	**Kuzumaki** comp=Z,265nm,6.3s,comp=Z,271nm,5.2s	**1.91**	**258**	A	A	09 01 56.8	
JTHR	**Tokachihiroo** comp=Z,336nm,6.8s,comp=Z,199nm,9.5s	**1.92**	**350**	A	A	09 01 57.4	
JARK	**Aomorirokkasho** comp=Z,497nm,6.6s,comp=Z,417nm,6.1s	**1.92**	**289**	A	A	09 01 57.2	
JNBK	**Urakawa-nobuka**	**2.03**	**338**	P	**Pn**	**09 01 59.4**	**-0.8**
JNBK	**Urakawa-nobuka** comp=Z,314nm,3.5s,comp=Z,335nm,2.6s	**2.03**	**338**	A	A	09 01 59.4	
JAHD	**Aomorihigashid** comp=Z,359nm,7.6s,comp=Z,369nm,5.8s	**2.04**	**296**	A	A	09 01 58.9	
OFUJ	**Ofunato** comp=Z,377nm,4.3s,comp=Z,348nm,4.0s	**2.09**	**232**	A	A	09 01 59.1	
JTM	**Tenmabayashi**	**2.09**	**282**	Pn	**Pn**	**09 02 00.3**	**-0.8**
JTM	**Tenmabayashi** comp=Z,471nm,6.7s,comp=Z,504nm,6.0s	**2.09**	**282**	A	A	09 01 59.6	
JTM	**Tenmabayashi**	**2.09**	**282**	P	**Pn**	**09 02 00.1**	**-0.9**
JOM	**Ohasama**	**2.12**	**245**	P	**Pn**	**09 02 00.1**	**-1.3**
JOM	**Ohasama** comp=Z,272nm,5.3s,comp=Z,381nm,5.0s	**2.12**	**245**	A	A	09 02 00.1	
JCH	**Churui**	**2.23**	**352**	P	**Pn**	**09 02 01.7**	**-1.3**
JCH				*e*S	**Sn**	**09 02 28.7**	**-1.7**
JCH	**Churui** comp=Z,162nm,6.5s,comp=Z,188nm,8.5s	**2.23**	**352**	A	A	09 02 01.7	
JSHD	**Hidakashinhida** comp=Z,436nm,5.3s,comp=Z,413nm,3.5s	**2.23**	**334**	A	A	09 02 01.9	
JSZI	**Iwateshizukuis** comp=Z,759nm,2.9s,comp=Z,794nm,2.3s	**2.26**	**254**	A	A	09 02 01.7	
JOT	**Ohata**	**2.28**	**296**	P	**Pn**	**09 02 02.8**	**-0.9**
JOT	**Ohata** comp=Z,305nm,5.6s,comp=Z,296nm,5.5s	**2.28**	**296**	A	A	09 02 02.8	
JKMT	**Kesennumamotoy** comp=Z,350nm,4.2s,comp=Z,317nm,4.2s	**2.38**	**229**	A	A	09 02 03.3	
JAH	**Hinai** comp=Z,281nm,9.4s,comp=Z,272nm,4.1s	**2.41**	**266**	A	A	09 02 04.0	
JMK	**Ichinoseki**	**2.44**	**234**	*i* P	**Pn**	**09 02 04.3**	**-1.6**
JMK				*e*S	**Sn**	**09 02 34.0**	**-1.6**
JMK	**Ichinoseki** comp=Z,285nm,5.4s,comp=Z,399nm,4.7s	**2.44**	**234**	A	A	09 02 04.3	
JOB	**Onbets** comp=Z,211nm,9.1s,comp=Z,237nm,2.7s	**2.50**	**1**	A	A	09 02 05.8	
JOB	**Onbets**	**2.50**	**1**	P	**Pn**	**09 02 05.5**	**-1.2**
JKB	**Kayabe** comp=Z,169nm,6.2s,comp=Z,170nm,5.7s	**2.54**	**307**	A	A	09 02 06.3	
JKB	**Kayabe**	**2.54**	**307**	P	**Pn**	**09 02 06.3**	**-0.9**
JBT2	**Biratori 2** comp=Z,202nm,6.6s,comp=Z,187nm,4.1s	**2.60**	**337**	A	A	09 02 07.2	
JHHS	**Hirosakihyakuz** comp=Z,708nm,7.6s,comp=Z,782nm,4.8s	**2.61**	**277**	A	A	09 02 07.0	
JRG	**Rokugo** comp=Z,350nm,2.6s,comp=Z,476nm,6.9s	**2.61**	**248**	A	A	09 02 06.8	
JRG	**Rokugo**	**2.61**	**248**	P	**Pn**	**09 02 07.4**	**-0.8**
JIAM	**Ibaritsuma** comp=Z,435nm,5.9s,comp=Z,810nm,6.0s	**2.62**	**329**	A	A	09 02 07.4	
JSI2	**Shiura 2** comp=Z,587nm,7.4s,comp=Z,306nm,7.6s	**2.63**	**286**	A	A	09 02 07.4	
JAK	**Akkeshi**	**2.69**	**15**	P	**Pn**	**09 02 07.7**	**-1.5**
JAK				*e*S	**Sn**	**09 02 39.3**	**-2.3**
JAK	**Akkeshi** comp=Z,128nm,8.8s,comp=Z,101nm,7.0s	**2.69**	**15**	A	A	09 02 07.7	
JIO	**Ouri** comp=Z,216nm,8.1s,comp=Z,176nm,6.6s	**2.70**	**225**	A	A	09 02 07.8	
JIO	**Ouri**	**2.70**	**225**	P	**Pn**	**09 02 06.8**	**-2.6**
JIKH	**Ishinomakikobu** comp=Z,281nm,4.0s,comp=Z,196nm,4.2s	**2.75**	**221**	A	A	09 02 08.5	
JNTW	**Noshirotokiwa** comp=Z,919nm,3.5s,comp=Z,827nm,4.5s	**2.76**	**268**	A	A	09 02 09.0	
JSR	**Shiriuchi** comp=Z,269nm,8.1s,comp=Z,231nm,5.7s	**2.78**	**295**	A	A	09 02 09.5	
JSR	**Shiriuchi**	**2.78**	**295**	P	**Pn**	**09 02 10.1**	**-0.3**
JOFO	**Osakifurukawao** comp=Z,2μm,3.5s,comp=Z,2μm,2.5s	**2.85**	**232**	A	A	09 02 10.0	
JYW	**Yuwa** comp=Z,447nm,3.9s,comp=Z,708nm,4.9s	**2.87**	**254**	A	A	09 02 10.5	
JIW	**Iwasaki** comp=Z,308nm,5.5s,comp=Z,226nm,5.5s	**2.87**	**275**	A	A	09 02 10.8	
JIW	**Iwasaki**	**2.87**	**275**	P	**Pn**	**09 02 11.7**	**-0.1**
JKHN	**Kushirohamanak** comp=Z,158nm,7.7s,comp=Z,120nm,6.4s	**2.88**	**21**	A	A	09 02 11.0	
JKHN	**Kushirohamanak**	**2.88**	**21**	P	**Pn**	**09 02 10.2**	**-1.7**
JAR	**Ashorobuto**	**2.89**	**0**	P	**Pn**	**09 02 10.3**	**-1.8**
JAR				*e*S	**Sn**	**09 02 45.7**	**-1.1**
JAR	**Ashorobuto** comp=Z,120nm,2.9s,comp=Z,142nm,10.4s	**2.89**	**0**	A	A	09 02 10.3	
JFR	**Furan**	**2.90**	**343**	A	A	09 02 11.4	

comp=Z,115nm,3.4s,comp=Z,104nm,9.3s
JFR Furan 2.90 343 P **Pn 09 02 12.4 +0.2**
JNB Noboribetsu 2.91 316 A A 09 02 11.6
comp=Z,160nm,8.8s,comp=Z,136nm,8.2s
JNB Noboribetsu 2.91 316 P **Pn 09 02 11.7 -0.6**
JEW Eniwo 2.99 325 Pn **Pn 09 02 13.8 +0.4**
JEW Eniwo 2.99 325 ⇑P **Pn 09 02 13.1 -0.4**
JEW Eniwo 2.99 325 P **Pn 09 02 14.3 +0.8**
JEW Eniwo 2.99 325 A A 09 02 14.3
comp=Z,291nm,7.1s,comp=Z,312nm,8.2s
JYK Kaneyama 3.02 242 *i* P **Pn 09 02 12.8 -1.0**
JYK Kaneyama 3.02 242 A A 09 02 12.8
comp=Z,415nm,4.4s,comp=Z,427nm,3.9s
JOMM Oshimamatsumae 3.06 293 P **Pn 09 02 14.4 0.0**
JOMM Oshimamatsumae 3.06 293 A A 09 02 14.4
comp=Z,229nm,6.3s,comp=Z,163nm,7.2s
JYM2 Yakumo 2 3.08 305 A A 09 02 14.0
comp=Z,130nm,6.7s,comp=Z,135nm,7.2s
JYM2 Yakumo 2 3.08 305 P **Pn 09 02 14.6 -0.1**
JOU Okura 3.15 231 A A 09 02 14.3
comp=Z,421nm,3.8s,comp=Z,436nm,5.3s
JOU Okura 3.15 231 P **Pn 09 02 14.0 -1.6**
JNK Nakash 3.26 12 A A 09 02 16.5
comp=Z,85nm,21.8s,comp=Z,71nm,7.2s
JYYZ Yamagatayuza 3.27 246 A A 09 02 16.1
comp=Z,509nm,7.1s,comp=Z,943nm,7.3s
NMR Nemuro--Hokkai 3.31 26 *e*P **Pn 09 02 15.6 -2.2**
NMR *e*S **Sn 09 02 53.0 -4.0**
JAB Ashibetsu 3.31 340 A A 09 02 17.3
comp=Z,146nm,2.7s,comp=Z,298nm,3.1s
JAB Ashibetsu 3.31 340 P **Pn 09 02 19.5 +1.7**
NEM2 Nemuro 2 3.31 26 *i* P **Pn 09 02 15.5 -2.3**
NEM2 *e*S **Sn 09 02 54.4 -2.6**
NEM2 Nemuro 2 3.31 26 A A 09 02 15.5
comp=Z,76nm,7.4s,comp=Z,68nm,9.5s
JISS Ishikarishitsu 3.37 329 A A 09 02 18.1
comp=Z,350nm,7.4s,comp=Z,419nm,5.0s
JISS Ishikarishitsu 3.37 329 P **Pn 09 02 19.4 +0.8**
JMM Marumori 3.43 223 Pn **Pn 09 02 16.9 -2.6**
JMM Marumori 3.43 223 ⇑P **Pn 09 02 16.5 -2.9**
JMM Marumori 3.43 223 A A 09 02 18.2
comp=Z,190nm,10.0s,comp=Z,127nm,5.0s
JMM Marumori 3.43 223 P **Pn 09 02 16.5 -2.9**
JTB Tobi-shima 3.46 221 A A 09 02 18.9
comp=Z,234nm,9.9s,comp=Z,278nm,8.6s
JMST Minamisoumatoc 3.49 221 A A 09 02 19.0
comp=Z,180nm,4.1s,comp=Z,131nm,12.1s
JNSB Nemuroshibetsu 3.50 15 A A 09 02 19.9
comp=Z,133nm,7.8s,comp=Z,119nm,7.2s
JKK2 Kamakawa 2 3.55 348 A A 09 02 20.7
comp=Z,81nm,7.5s,comp=Z,109nm,7.0s
JKK2 Kamakawa 2 3.55 348 P **Pn 09 02 21.1 -0.1**
JHST Hiyamasetana 3.56 306 A A 09 02 20.6
comp=Z,143nm,8.5s,comp=Z,128nm,7.2s
JTKR Abashiri--Toko 3.57 2 A A 09 02 21.0
comp=Z,73nm,26.1s,comp=Z,73nm,8.4s
JTKR Abashiri--Toko 3.57 2 P **Pn 09 02 20.0 -1.4**
JSH Shimam 3.58 310 A A 09 02 21.1
comp=Z,100nm,8.3s,comp=Z,94nm,6.6s
JSH Shimam 3.58 310 P **Pn 09 02 21.2 -0.4**
JYS Shirataka 3.60 234 A A 09 02 20.8
comp=Z,318nm,2.3s,comp=Z,460nm,3.0s
JYS Shirataka 3.60 234 P **Pn 09 02 20.6 -1.2**
JMP Maruseppu 3.62 355 A A 09 02 21.7
comp=Z,69nm,2.7s,comp=Z,62nm,9.2s
JYA Atsumi 3.62 241 A A 09 02 21.0
comp=Z,380nm,4.3s,comp=Z,374nm,6.4s
JYA Atsumi 3.62 241 P **Pn 09 02 21.1 -0.9**
JOG3 Oga3 3.62 264 A A 09 02 13.5
comp=Z,341nm,5.0s,comp=Z,385nm,4.8s
JOSM Okushiri--Mats 3.65 299 A A 09 02 21.9
comp=Z,229nm,8.5s,comp=Z,122nm,7.1s
JOSM Okushiri--Mats 3.65 299 P **Pn 09 02 21.4 -1.0**
JHR Hokuryu 3.67 336 A A 09 02 22.4
comp=Z,211nm,7.4s,comp=Z,160nm,4.5s
JHR Hokuryu 3.67 336 P **Pn 09 02 24.4 +1.6**
JRA Rausu 3.68 15 A A 09 02 22.4
comp=Z,73nm,8.6s,comp=Z,70nm,7.6s
JYAR Yonezawaarcadi 3.76 230 A A 09 02 22.9
comp=Z,270nm,4.5s,comp=Z,313nm,6.4s
JFK Kawauchi 3.78 218 A A 09 02 23.1
comp=Z,155nm,4.0s,comp=Z,154nm,3.7s
JFK Kawauchi 3.78 218 P **Pn 09 02 21.2 -3.1**
ASAJ Asahikawa 3.81 347 A A 09 02 24.5
comp=Z,76nm,6.8s,comp=Z,76nm,7.2s
ASAJ Asahikawa 3.81 347 P **Pn 09 02 25.0 +0.3**
JSK Shakotan 3.84 321 A A 09 02 24.8
comp=Z,113nm,8.1s,comp=Z,100nm,8.5s
JSK Shakotan 3.84 321 P **Pn 09 02 25.9 +0.8**
RUSJ Misakicho 3.86 16 *e*P **Pn 09 02 25.1 -0.3**
RUSJ *e*S **Sn 09 03 10.1 -0.5**
JFT Otama 3.93 224 A A 09 02 25.3
comp=Z,218nm,3.8s,comp=Z,284nm,3.6s
JFT Otama 3.93 224 P **Pn 09 02 24.4 -1.9**
YUK Yuzh-Kuril'sk 3.95 22 *i* P **Pn 09 02 24.6 -2.0**
JAW Awa shima 4.00 242 A A 09 02 26.5
comp=Z,337nm,4.6s,comp=Z,363nm,3.9s
JAW Awa shima 4.00 242 P **Pn 09 02 26.7 -0.6**
ONAJ Iwakimizuishiy 4.03 216 A A 09 02 26.6
comp=Z,147nm,9.5s,comp=Z,120nm,6.2s
JFFD Fukushimafurud 4.15 218 A A 09 02 28.3
comp=Z,129nm,6.0s,comp=Z,84nm,4.1s
JSS Shosan 4.24 341 A A 09 02 30.5
comp=Z,174nm,6.3s,comp=Z,149nm,6.4s
JSS Shosan 4.24 341 P **Pn 09 02 31.4 +0.8**
JNS Sasagawa 4.32 235 A A 09 02 30.8
comp=Z,169nm,8.0s,comp=Z,270nm,6.4s
JNS Sasagawa 4.32 235 P **Pn 09 02 31.4 -0.2**
JFY Yanaizu 4.36 228 A A 09 02 31.3
comp=Z,199nm,3.9s,comp=Z,142nm,5.9s
JFY Yanaizu 4.36 228 P **Pn 09 02 31.0 -1.2**
JYG Yagishiri 4.38 337 A A 09 02 32.5
comp=Z,110nm,7.0s,comp=Z,112nm,7.1s
JHO Hitachi 4.54 215 A A 09 02 33.8
comp=Z,84nm,6.1s,comp=Z,74nm,5.6s
JSB Shiboa 4.56 223 A A 09 02 34.2
comp=Z,381nm,4.7s,comp=Z,305nm,5.9s
JSE Soyaes 4.64 350 A A 09 02 36.1
comp=Z,55nm,4.7s,comp=Z,56nm,10.4s
JSE Soyaes 4.64 350 P **Pn 09 02 35.4 -0.7**
JHYU Hitachinakayam 4.76 213 A A 09 02 37.0
comp=Z,130nm,4.4s,comp=Z,95nm,7.0s
JUON Uonuma 4.87 231 A A 09 02 38.6
comp=Z,147nm,6.9s,comp=Z,136nm,6.1s
JUON Uonuma 4.87 231 P **Pn 09 02 38.8 -0.5**
JIZZ Izumozaki 4.87 236 A A 09 02 38.7
comp=Z,722nm,5.5s,comp=Z,695nm,4.9s
JIZZ Izumozaki 4.87 236 P **Pn 09 02 39.8 +0.6**
JSD Sado 4.88 243 Pn **Pn 09 02 38.9 -0.6**
JSD Sado 4.88 243 ⇑P **Pn 09 02 37.6 -1.8**
JSD Sado 4.88 243 A A 09 02 38.9
comp=Z,108nm,6.9s,comp=Z,167nm,7.5s
JYT Yasato 5.03 215 Pn **Pn 09 02 38.5 -2.9**
JYT Yasato 5.03 215 ⇑P **Pn 09 02 38.5 -2.9**
JYT Yasato 5.03 215 A A 09 02 40.6
comp=Z,98nm,4.6s,comp=Z,78nm,7.2s
JRR Rishiri 5.07 340 A A 09 02 42.1
comp=Z,288nm,6.7s,comp=Z,548nm,6.3s
JKT Katashina 5.07 226 A A 09 02 41.3
comp=Z,107nm,6.4s,comp=Z,147nm,7.7s
JKT Katashina 5.07 226 P **Pn 09 02 41.8 -0.3**
JWK2 Keihoku 5.10 345 A A 09 02 42.6
comp=Z,131nm,8.4s,comp=Z,106nm,7.2s
JIHU Itakohorinouch 5.11 211 A A 09 02 41.8
comp=Z,916nm,4.2s,comp=Z,601nm,5.8s
JAG Ashikaga 5.22 222 A A 09 02 43.4
comp=Z,82nm,6.0s,comp=Z,74nm,7.6s
JAG Ashikaga 5.22 221 P **Pn 09 02 42.0 -2.1**
CHOJ Chosi 5.22 207 A A 09 02 43.3
comp=Z,179nm,9.8s,comp=Z,135nm,4.4s
JRBN Rebuntou 5.40 339 A A 09 02 46.7
comp=Z,46nm,15.0s,comp=Z,34nm,7.0s
JRBN Rebuntou 5.40 339 P **Pn 09 02 46.8 +0.4**
JSMT Sammumatsuo 5.42 210 A A 09 02 46.2
comp=Z,806nm,5.3s,comp=Z,528nm,5.1s
JJN Nakama 5.48 235 A A 09 02 47.2
comp=Z,273nm,4.0s,comp=Z,260nm,4.5s
JGK Kuni 5.56 228 A A 09 02 48.2
comp=Z,135nm,4.5s,comp=Z,199nm,8.0s
TOK Tokyo 5.67 215 A A 09 02 49.7
comp=Z,534nm,4.6s,comp=Z,379nm,4.4s
KUR Kuril'sk 5.69 31 ⇑*i*P **Pn 09 02 49.0 -1.5**
KUR *i* S **Sn 09 03 52.3 -3.4**
KUR pmax pmax
comp=Z,2µm,0.6s
KUR pmax pmax
comp=E,431nm,0.4s
KUR pmax pmax
comp=N,775nm,0.6s
KUR smax smax
comp=E,3µm,0.9s
KUR smax smax
comp=N,1µm,0.3s
KUR MLR MLR
comp=Z,86µm,17.0s
JCN Nagara 5.72 211 A A 09 02 50.3
comp=Z,562nm,9.2s,comp=Z,692nm,5.4s
JHU Hanno 5.75 219 A A 09 02 50.9
comp=Z,80nm,3.5s,comp=Z,73nm,6.7s
I30JP ISUMI INFRASON 5.77 209 Pn **Pn 09 02 53.6 +2.0**
baz=20,slow=17
JSZ Suzu 5.80 241 A A 09 02 51.7
comp=Z,90nm,10.3s,comp=Z,93nm,11.6s
JSZ Suzu 5.80 241 P **Pn 09 02 51.4 -0.6**
JRY Ryogami san 5.82 223 A A 09 02 51.8
comp=Z,96nm,5.8s,comp=Z,88nm,4.2s
JRY Ryogami san 5.82 223 P **Pn 09 02 50.4 -1.9**
MAJO Matsushiro 5.82 230 Pn **Pn 09 02 51.5 -0.8**
MAJO Matsushiro 5.82 230 *i* P **Pn 09 02 51.6 -0.7**
MAJO Matsushiro 5.82 230 P **Pn 09 02 53.1 +0.8**
MAJO Matsushiro 5.82 230 ⇑P **Pn 09 02 51.6 -0.7**
MAT Matsushiro 5.82 230 P **Pn 09 02 51.6 -0.8**
MJAR Matsushiro Arr 5.82 230 Pn **Pn 09 02 50.6 -1.7**
comp=Z,5.8nm,0.3s,baz=327,slow=9.3,SNR=188
MJAR LR LR 09 05 17.0
comp=Z,48µm,18.9s,baz=202,slow=41
comp=Z,554nm,0.9s
JHG Hegura jima 5.90 247 A A 09 02 53.2
comp=Z,102nm,7.7s,comp=Z,68nm,16.0s
JHG Hegura jima 5.90 247 P **Pn 09 02 54.1 +0.6**
JKUC kamogawauchiur 5.95 209 A A 09 02 53.5
comp=Z,251nm,4.1s,comp=Z,219nm,4.0s
JNG Nsakai 5.97 230 A A 09 02 54.1
comp=Z,109nm,6.6s,comp=Z,117nm,4.4s
JSGW Sagamiharawaka 5.99 218 A A 09 02 54.2
comp=Z,96nm,5.8s,comp=Z,61nm,3.4s
JYO Yokosk 6.10 213 A A 09 02 55.7
comp=Z,322nm,4.5s,comp=Z,253nm,4.8s
JTT Ttatey 6.31 235 A A 09 02 58.8
comp=Z,102nm,3.8s,comp=Z,114nm,4.0s
JTT Ttatey 6.31 235 P **Pn 09 02 59.4 +0.4**
JOD2 Odawara 2 6.33 217 A A 09 02 58.9
comp=Z,82nm,2.9s,comp=Z,149nm,3.5s
JOD2 Odawara 2 6.33 217 P **Pn 09 02 57.7 -1.6**
JYN Shimob 6.40 222 P **Pn 09 03 00.0 -0.4**
YSS Yuzh-Sakhalins 6.59 354 Pn **Pn 09 03 02.4 -0.5**
YSS Yuzh-Sakhalins 6.59 354*c i*P **Pn 09 03 02.1 -0.8**
YSS *e*S **Sn 09 04 16.1 -1.8**
YSS pmax pmax
comp=Z,8µm,7.7s
YSS pmax pmax
comp=N,7µm,8.8s
YSS pmax pmax
comp=Z,360nm,0.8s
YSS MLR MLR
comp=Z,171µm,14.0s
YSS MLR MLR
comp=N,113µm,16.0s
YSS Yuzh-Sakhalins 6.59 354 P **Pn 09 03 03.9 +1.0**
YSS Yuzh-Sakhalins 6.59 354 ⇑P **Pn 09 03 02.2 -0.6**
JGF Kuroka 6.97 229 **Pn 09 03 07.0 -1.1**
JGF Kuroka 6.97 229 ⇓P **Pn 09 03 09.3 +1.2**
TEY Ternei 7.02 314⇑*e*P **Pn 09 03 09.6 +0.9**
TEY pmax pmax
comp=Z,100nm,0.8s
TEY pmax pmax
comp=N,70nm,0.8s
TEY pmax pmax
comp=E,100nm,0.8s
TEY pmax pmax
comp=Z,1µm,7.7s
TEY pmax pmax
comp=E,600nm,16.7s
TEY pmax pmax
comp=N,500nm,19.1s
TEY MLR MLR
comp=E,3µm,15.0s
TEY MLR MLR
comp=N,4µm,12.0s
TEY MLR MLR
comp=Z,4µm,13.0s
JKG Kaga 7.15 237 P **Pn 09 03 11.0 +0.5**
INU Inuyama 7.34 229 **Pn 09 03 11.3 -1.9**
INU Inuyama 7.34 229 P **Pn 09 03 14.2 +1.0**
INU Inuyama 7.34 229 ⇑P **Pn 09 03 12.4 -0.8**
JHJ2 Mitsune 7.93 205 Pn **Pn 09 03 18.4 -2.9**
JHJ2 Mitsune 7.93 205 P **Pn 09 03 18.9 -2.5**
JHJ2 Mitsune 7.93 205 ⇑P **Pn 09 03 18.9 -2.5**
JHJ2 Mitsune 7.93 205 P **Pn 09 03 18.6 -2.7**
TSUJ Tsu 2 8.14 228 P **Pn 09 03 24.6 +0.4**
JIE Ise 8.22 225 P **Pn 09 03 24.1 -1.1**
JKY Yasaka 8.33 238 P **Pn 09 03 27.6 +0.8**
JWT Wachi 8.36 235 P **Pn 09 03 27.7 +0.5**
JKN2 Miekihoku 8.57 226 P **Pn 09 03 28.6 -1.4**
JHE Heguri 8.61 231 P **Pn 09 03 30.7 +0.1**
JKSM Kasumi 8.64 239 P **Pn 09 03 31.6 +0.5**
UGL Uglegorsk 8.76 353 *e*P **Pn 09 03 32.9 +0.3**
UGL *e*S **Sn 09 05 10.9 -0.3**
UGL pmax pmax
comp=Z,239nm,0.8s
UGL pmax pmax
comp=Z,7µm,9.3s
UGL smax smax
comp=E,16µm,9.3s
UGL smax smax
comp=N,12µm,7.9s
UGL MLR MLR
comp=N,75µm,15.0s
UGL MLR MLR
comp=Z,93µm,15.0s
UGL MLR MLR
comp=E,196µm,18.0s
JKS Kasai 8.90 235 P **Pn 09 03 35.5 +0.9**
VLA Vladivostok 9.29 291*c i*P **Pn 09 03 39.0 -0.8**
JAD Aida 9.36 237 P **Pn 09 03 41.2 +0.3**
USA0B Ussuriysk Arra 9.52 297 Pn **Pn 09 03 43.8 +0.8**
USA0B Ussuriysk Arra 9.52 297 P **Pn 09 03 43.8 +0.8**
USRK Ussuriysk Ar. 9.52 297 Pn **Pn 09 03 43.8 +0.8**
comp=E,12nm,0.3s,baz=97,slow=13,SNR=180
comp=E,380nm,0.8s
USRK Ussuriysk Ar. 9.52 297 Pn **Pn 09 03 43.6 +0.7**
MSHR Mys Shultsa 9.71 287*c i*P **Pn 09 03 46.6 +0.9**
JHS Saijyo 10.01 241 **Pn 09 03 49.1 -0.7**
JHS Saijyo 10.01 241 ⇑P **Pn 09 03 50.5 +0.7**
JHS Saijyo 10.01 241 P **Pn 09 03 50.5 +0.7**
JMN Monobe 10.33 233 **Pn 09 03 52.9 -1.3**
JMN Monobe 10.33 233 ⇑P **Pn 09 03 53.1 -1.1**
JMN Monobe 10.33 233 P **Pn 09 03 53.1 -1.1**
JGT2 ShimaneMisato 10.38 243 P **Pn 09 03 55.2 +0.3**
TYV Tymovskoe 10.49 356 *e*P **Pn 09 03 56.5 +0.2**
TYV *e*S **Sn 09 05 57.6 +3.9**
TYV pmax pmax
comp=Z,86nm,1.0s
TYV pmax pmax
comp=Z,6µm,8.1s
TYV smax smax
comp=N,10µm,12.2s
TYV smax smax
comp=E,29µm,12.2s
TYV MLR MLR
comp=N,1282µm,15.0s
TYV MLR MLR
comp=Z,148µm,15.0s
JHT Toyohira 10.67 241 P **Pn 09 03 59.4 +0.5**
JHM Kurahashi 10.91 239 P **Pn 09 04 01.5 -0.7**
JKU Kubokawa 11.11 234 P **Pn 09 04 03.5 -1.4**
MDJ Mudanjiang 11.28 297 **Pn 09 04 08.0 +0.9**
MDJ Mudanjiang 11.28 297 P **Pn 09 04 08.8 +1.7**
MDJ pP 09 04 10.6
MDJ S **Sn 09 06 12.9 -0.1**
MDJ pmax pmax
comp=Z,500nm,0.9s
MDJ pmax pmax
comp=Z,27µm,8.5s
MDJ LR LR
comp=Z,111µm,13.6s
MDJ LR LR
comp=Z,165µm,13.7s
MDJ LR LR
comp=Z,270µm,14.6s
JNA Nagahama 11.31 236 P **Pn 09 04 07.2 -0.5**
UWA2 Uwa jima 2 11.45 235 P **Pn 09 04 09.2 -0.3**
GRNR Gornyy 11.57 336⇓*i*P **Pn 09 04 13.7 +2.6**
GRNR *e*S **Sn 09 06 28.4 +8.3**
GRNR pmax pmax
comp=N,70nm,0.8s
GRNR pmax pmax
comp=E,50nm,0.8s
GRNR pmax pmax
comp=Z,80nm,0.8s
GRNR smax smax
comp=N,7.0nm,0.8s
GRNR MLR MLR
comp=E,69µm,15.0s
GRNR MLR MLR
comp=N,45µm,17.0s
GRNR MLR MLR
comp=Z,62µm,18.0s
JTO Tosashimizu 11.58 233 P **Pn 09 04 09.2 -2.1**
SEHB SEOHWA 12.20 265 Pn **Pn 09 04 19.4 -0.4**
KLR Kul'dur 12.26 320 Pn **Pn 09 04 20.7 +0.1**
comp=Z,1.1nm,0.3s,baz=127,slow=13,SNR=92
KLR LR LR 09 09 49.1
comp=Z,48µm,18.1s,baz=130,slow=41
comp=Z,114nm,1.0s
KLR Kul'dur 12.26 320*ce*P **Pn 09 04 20.9 +0.3**
KLR pmax pmax
comp=Z,418nm,1.7s
HHU Hamhung 12.44 273 P **Pn 09 04 23.0 +0.1**
HHU pP P 09 04 27.1 -7.8
HHU S Sn 09 06 52.1 +11
HHU AMS AMS
comp=N,129µm,12.0s
HHU AMS AMS
comp=E,145µm,13.4s
HHU AMS AMS
comp=Z,133µm,12.3s
KSBUS Busan 12.67 251 **Pn 09 04 25.5 -0.7**
KSRS Korea Array 12.69 262 Pn **Pn 09 04 26.2 -0.1**
comp=Z,0.6nm,0.3s,baz=71,slow=13,SNR=32
KSRS LR LR 09 09 27.8
comp=Z,75µm,18.0s,baz=70,slow=38
KS19 Wonju Array Si 12.71 262 **Pn 09 04 26.5 -0.2**
KSAR Wonju Array Be 12.72 262 **Pn 09 04 26.3 -0.5**
KSAR Wonju Array Be 12.72 262 P **Pn 09 04 26.3 -0.5**
JTU Tsushima 12.83 247 **Pn 09 04 25.5 -2.8**
JTU Tsushima 12.83 247 ⇑P **Pn 09 04 28.0 -0.3**
KSCHJ Chungju 12.84 259 **Pn 09 04 28.6 +0.1**
BNX BinXian 13.09 299 ⇓P **Pn 09 04 33.0 +1.1**
BNX S **Sn 09 07 01.8 +4.4**
BNX pmax pmax
comp=Z,210nm,1.4s
BNX pmax pmax
comp=Z,17µm,12.1s
BNX LR LR
comp=Z,50µm,11.9s
BNX LR LR
comp=Z,100µm,13.4s
BNX LR LR
comp=Z,109µm,15.1s
OKH Okha 13.17 358*c i*P **Pn 09 04 33.2 +0.4**
OKH *i* S **Sn 09 07 07.7 +8.6**
OKH pmax pmax
comp=Z,3µm,12.5s
OKH smax smax
comp=E,6µm,19.5s
OKH smax smax
comp=N,8µm,18.6s
OKH MLR MLR
comp=E,118µm,17.0s
OKH MLR MLR
comp=N,104µm,16.0s
OKH MLR MLR
comp=Z,89µm,16.0s
JCJ Chichijima 13.34 186 Pn Pn 09 04 29.6 -5.7
comp=Z,28nm,0.3s,baz=11,slow=5.8,SNR=13
JCJ Sn Sn 09 06 47.4 -16
comp=Z,59nm,0.3s,baz=281,slow=22,SNR=9.4
JCJ Chichijima 13.34 186 Pn 09 04 29.7 -5.6
SKR Severo-Kuril's 13.42 36 *e*P **P 09 04 42.6 -3.1**
SKR pmax pmax
comp=Z,89nm,0.8s
SKR pmax pmax
comp=Z,200nm,4.4s
SKR MLR MLR
comp=Z,29µm,14.0s
TJN Taejon 13.48 258 Pn **Pn 09 04 36.5 -0.7**
TJN Taejon 13.48 258*c i*P **Pn 09 04 37.5 +0.3**
TJN Taejon 13.48 258 P **Pn 09 04 36.5 -0.7**
INCN Inchon 13.65 263 **Pn 09 04 39.0 -0.6**
INCN Inchon 13.65 263 P **Pn 09 04 39.0 -0.6**
INCN Inchon 13.65 263 P **Pn 09 04 39.3 -0.3**
INCN P **Pn 09 04 39.3 -0.3**
NAWB Namwon 13.84 254 **Pn 09 04 41.5 -0.7**
PYAG Pyongyang 13.93 270 P **Pn 09 04 43.3 0.0**
PYAG pP **P 09 04 47.4 -4.1**
PYAG S **Sn 09 07 18.3 +0.4**
PYAG AMS AMS
comp=N,44µm,11.9s
PYAG AMS AMS
comp=E,47µm,12.6s
PYAG AMS AMS
comp=Z,43µm,11.5s
JSU Suzuyama 13.95 235 **Pn 09 04 41.1 -2.6**
JSU Suzuyama 13.95 235 ⇑P **Pn 09 04 41.7 -2.0**
CN2 Changchun 14.02 290 *e*P **Pn 09 04 42.9 -1.6**
CN2 *e*S **Sn 09 07 20.9 +0.9**
CN2 pmax pmax
comp=Z,15µm,10.3s
CN2 LR LR
comp=Z,86µm,13.0s
CN2 LR LR
comp=Z,68µm,13.0s
CN2 LR LR
comp=Z,69µm,14.4s
HJU Haeju 14.19 266 P **Pn 09 04 46.5 -0.4**
HJU pP **P 09 04 50.7 -3.7**
HJU S **Sn 09 07 28.8 +4.7**
HJU AMS AMS
comp=N,365µm,13.9s
HJU AMS AMS
comp=E,351µm,13.4s
HJU AMS AMS
comp=Z,354µm,13.5s
SUJ Sinuiju 14.73 275 P **Pn 09 04 53.2 -1.0**
SUJ pP **P 09 04 57.4 -2.9**
SUJ S **Sn 09 07 36.3 -0.9**
SUJ AMS AMS
comp=N,100µm,11.4s
SUJ AMS AMS
comp=E,111µm,12.7s
SUJ AMS AMS
comp=Z,103µm,11.7s
SNY Shenyang 15.29 282 ⇓P **Pn 09 05 02.3 +0.6**
SNY pmax pmax
comp=Z,200nm,1.6s
SNY pmax pmax
comp=Z,25µm,11.5s
SNY LR LR
comp=Z,46µm,15.5s
SNY LR LR
comp=Z,96µm,14.1s
SNY LR LR
comp=Z,132µm,14.1s
PEA0B Petropavlovsk- 15.86 32 **Pn 09 05 09.1 0.0**
PEA0B Petropavlovsk- 15.86 32*ce*P **Pn 09 05 10.3 +1.2**
PETK Petropavlovsk- 15.86 32 Pn **Pn 09 05 05.2 -3.9**
comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=9.4
PETK LR LR 09 11 04.2
comp=Z,30µm,19.4s,baz=218,slow=36
PETK Petropavlovsk- 15.86 32 **Pn 09 05 08.1 -1.0**
PETK Petropavlovsk- 15.86 32 P **Pn 09 05 08.1 -1.0**
PET Petropavlovsk 16.19 34 **Pn 09 05 12.7 -0.7**
PET Petropavlovsk 16.19 34*d i*P **Pn 09 05 09.9 -3.5**
PET *e*S **Sn 09 08 07.2 -5.5**
PET pmax pmax
comp=Z,2µm,9.0s
PET pmax pmax
comp=Z,187nm,1.0s
PET smax smax
comp=N,4µm,16.5s
PET smax smax
comp=E,16µm,12.6s
PET smax smax
comp=E,17µm,11.3s
PET MLR MLR
comp=Z,63µm,16.0s

PET MLR MLR
comp=Z,61µm,16.0s
DL2 Dalian 17.11 272 P **Pn** **09 05 23.9 -1.2**
DL2 S **Sn** **09 08 38.1 +2.9**
DL2 pmax pmax
comp=Z,640nm,1.7s
DL2 pmax pmax
comp=Z,14µm,8.2s
DL2 LR LR
comp=Z,30µm,12.8s
DL2 LR LR
comp=Z,49µm,12.9s
DL2 LR LR
comp=Z,35µm,12.4s
ZEA Zeya 17.39 326 *e*P **Pn** **09 05 25.9 -2.6**
ZEA *e*S Sn 09 08 28.4 -13
ZEA pmax pmax
comp=E,70nm,0.7s
ZEA pmax pmax
comp=N,160nm,0.8s
ZEA pmax pmax
comp=Z,310nm,0.9s
ZEA pmax pmax
comp=E,4µm,13.5s
ZEA pmax pmax
comp=N,4µm,13.9s
ZEA pmax pmax
comp=Z,8µm,11.3s
ZEA smax smax
comp=E,5µm,11.1s
ZEA smax smax
comp=N,6µm,13.4s
ZEA MLR MLR
comp=E,37µm,13.0s
ZEA MLR MLR
comp=N,41µm,15.0s
ZEA MLR MLR
comp=Z,47µm,14.0s
JOW Kunigami 18.66 228 P **P** **09 05 41.6 -2.4**
JOW Kunigami 18.66 228 P **P** **09 05 42.0 -2.0**
JOW Kunigami 18.66 228 ⇑P **P** **09 05 41.0 -3.0**
HIA Hailar 19.14 306 P **P** **09 05 46.4 -2.8**
HIA Hailar 19.14 306 P **P** **09 05 46.4 -2.8**
HIA pmax pmax
comp=Z,165nm,0.7s
MA2 Magadan 19.70 11 P **P** **09 05 55.5 +0.4**
comp=Z,76nm,0.8s,baz=197,slow=8.8,SNR=21
MA2 LR LR 09 14 36.7
comp=Z,39µm,18.0s,baz=197,slow=40
MA2 Magadan 19.70 11 P **P** **09 05 53.5 -1.6**
MA2 Magadan 19.70 11 *ce*P **P** **09 05 52.5 -2.6**
MA2 pmax pmax
comp=Z,132nm,0.8s
MA2 Magadan 19.70 11 P **Pn** **09 05 57.5 +1.0**
MA2 Magadan 19.70 11 ⇑P **P** **09 05 53.2 -1.9**
SSE Sheshan 20.50 250 P **P** **09 06 02.3 -1.7**
SSE S **S** **09 09 52.0 -1.2**
SSE pmax pmax
comp=Z,3µm,9.7s
XLT XiLinHaoTe 20.78 289 ⇑ *i*P **P** **09 06 05.3 -1.8**
XLT pP Pn 09 06 08.8 -0.8
XLT S **S** **09 09 59.6 +0.7**
XLT pmax pmax
comp=Z,220nm,1.8s
XLT LR LR
comp=Z,4µm,15.7s
XLT LR LR
comp=Z,38µm,14.7s
XLT LR LR
comp=Z,46µm,14.3s
BJI Beijing 21.05 278 P **P** **09 06 06.8 -3.1**
BJI S **S** **09 09 59.9 -4.0**
BJI PcP **PcP** **09 10 21.5 +5.2**
BJI pmax pmax
comp=Z,230nm,1.8s
BJI pmax pmax
comp=Z,5µm,7.1s
BJI LR LR
comp=Z,50µm,13.5s
BJI LR LR
comp=Z,72µm,13.3s
BJT Baijiatuau 21.05 278 P **P** **09 06 07.0 -3.0**
BJT IAmb IAmb 09 06 25.1
comp=Z,305nm,1.2s
BJT Baijiatuau 21.05 278 IAMs_20 IAMs_20 09 13 49.8
comp=Z,34µm,20.0s
BJT Baijiatuau 21.05 278 P **P** **09 06 07.0 -3.0**
BJT pmax pmax
comp=Z,305nm,1.2s
BJT MLR MLR
comp=Z,34µm,20.0s
TIA Tai'an 21.29 267 ⇑P **P** **09 06 09.9 -2.7**
TIA S **S** **09 10 03.8 -5.0**
TIA pmax pmax
comp=Z,86nm,1.2s
TIA pmax pmax
comp=Z,8µm,11.5s
TIA LR LR
comp=Z,54µm,12.4s
TIA LR LR
comp=Z,70µm,13.1s
TIA LR LR
comp=Z,94µm,14.7s
NJ2 Nanjing 21.70 255 ⇑ *i*P **P** **09 06 14.8 -2.2**
NJ2 PP **PnPn** **09 06 40.3 +2.5**
NJ2 S Sn 09 10 22.5 -3.6
NJ2 sS **pS** **09 10 26.3 +3.0**
NJ2 pmax pmax
comp=Z,94nm,0.7s
NJ2 pmax pmax
comp=Z,3µm,3.7s
NJ2 LR LR
comp=Z,59µm,14.7s
NJ2 LR LR
comp=Z,61µm,16.4s
NJ2 LR LR
comp=Z,80µm,16.1s
JMJ Miyako jima 2 21.93 230 P **P** **09 06 19.4 0.0**
HNS HongShan 22.77 272 ⇑P **P** **09 06 24.3 -4.1**
HNS PP **PnPn** **09 06 53.6 +1.2**
HNS S **S** **09 10 33.1 -3.9**
HNS SS **SnSn** **09 11 17.0 +10**
HNS pmax pmax
comp=Z,87nm,0.9s
HNS LR LR
comp=Z,29µm,12.7s
HNS LR LR
comp=Z,42µm,12.9s
HNS LR LR
comp=Z,48µm,13.3s
SEY Seymchan 23.15 10 P **P** **09 06 31.2 -0.8**
comp=Z,78nm,0.7s,baz=185,slow=8.3,SNR=62
SEY LR LR 09 16 55.8
comp=Z,47µm,18.2s,baz=191,slow=40
comp=Z,78nm,0.7s
SEY Seymchan 23.15 10 *ce*P **P** **09 06 31.1 -1.0**
SEY pmax pmax
comp=Z,49nm,0.7s
SEY MLR MLR
comp=Z,47µm,18.0s
YAK Yakutsk 23.28 343 P **P** **09 06 31.6 -1.8**
comp=Z,204nm,0.7s,baz=350,slow=3.0,SNR=19
YAK S **S** **09 10 45.1 -0.2**
comp=Z,60nm,1.1s,baz=170,slow=22,SNR=6.1
YAK LR LR 09 16 36.9
comp=Z,24µm,18.6s,baz=147,slow=39
comp=Z,204nm,0.7s
YAK Yakutsk 23.28 343 P **P** **09 06 30.0 -3.4**
YAK IAMs_20 IAMs_20 09 16 25.7
comp=Z,26µm,19.0s
YAK Yakutsk 23.28 343 *e*P **P** **09 06 29.4 -4.0**
YAK *e**PP **pwP** **09 06 40.8 +0.9**
YAK *e*S S **09 10 40.5 -4.8**
YAK *e*SSS SSS 09 11 38.9
YAK pmax pmax
comp=Z,422nm,0.9s
YAK pmax pmax
comp=N,66nm,0.9s
YAK pmax pmax
comp=E,58nm,0.9s
YAK pmax pmax
comp=Z,461nm,1.3s
YAK pmax pmax
comp=N,323nm,1.3s
YAK pmax pmax
comp=E,146nm,1.1s

YAK smax smax
comp=E,2µm,2.8s
YAK smax smax
comp=N,2µm,2.3s
YAK MLR MLR
comp=Z,59µm,15.0s
YAK MLR MLR
comp=N,39µm,15.0s
YAK MLR MLR
comp=E,29µm,16.0s
YAK Yakutsk 23.28 343 ⇑P **P** **09 06 29.5 -4.0**
YOJ Yonaguni jima 23.57 234 P **P** **09 06 31.8 -4.7**
YOJ IAmb IAmb 09 06 59.2
comp=Z,402nm,1.7s
YOJ Yonaguni jima 23.57 234 P **P** **09 06 31.8 -4.7**
YOJ pmax pmax
comp=Z,402nm,1.7s
YOJ Yonaguni jima 23.57 234 P **P** **09 06 34.1 -2.5**
YOJ Yonaguni jima 23.57 234 ⇑P **P** **09 06 31.2 -5.3**
CIT Chita 23.74 309 *e*P **P** **09 06 36.3 -1.8**
CIT *e* 09 07 08.5
CIT *e*S **S** **09 10 54.2 +1.2**
CIT pmax pmax
comp=Z,1µm,1.9s
SHEM Shemya Is, Ala 24.03 49 P **P** **09 06 41.7 +1.0**
comp=Z,126nm,1.0s,baz=310,slow=2.4,SNR=5.7
SHEM LR LR 09 15 24.0
comp=Z,5µm,21.8s,baz=260,slow=35
comp=Z,126nm,1.0s
SMY Shemya 24.03 49 P **P** **09 06 40.6 -0.1**
SMY IAmb IAmb 09 07 05.8
comp=Z,207nm,1.0s
SMY Shemya 24.03 49 P **P** **09 06 40.6 -0.1**
SMY pmax pmax
comp=Z,207nm,1.0s
SMY Shemya 24.03 49 ⇓P **P** **09 06 41.4 +0.6**
TATO Taipei 24.16 237 P **P** **09 06 39.5 -2.8**
TATO Taipei 24.16 237 P **P** **09 06 39.4 -2.8**
TATO P **P** **09 06 39.4 -2.8**
TATO P **P** **09 06 39.4 -2.8**
HHC Hu-ho-hao-te 24.38 282 *e*P **P** **09 06 41.8 -2.5**
HHC sP pP 09 06 47.4 +0.2
HHC S **S** **09 10 56.0 -7.5**
HHC SS **SnSn** **09 11 47.5 +0.7**
HHC pmax pmax
comp=Z,82nm,0.9s
HHC pmax pmax
comp=Z,15µm,7.8s
HHC LR LR
comp=Z,49µm,14.0s
HHC LR LR
comp=Z,91µm,14.7s
HHC LR LR
comp=Z,136µm,14.6s
TIY Taiyuan 24.42 274 ⇑P **P** **09 06 41.8 -2.8**
TIY S **S** **09 11 08.3 +4.2**
TIY pmax pmax
comp=Z,49nm,0.5s
TIY pmax pmax
comp=Z,8µm,8.0s
TIY LR LR
comp=Z,37µm,12.8s
TIY LR LR
comp=Z,21µm,12.7s
TIY LR LR
comp=Z,25µm,13.3s
YHNB Yeheng 24.44 237 P **P** **09 06 42.0 -2.9**
YHNB IAmb IAmb 09 06 58.3
comp=Z,130nm,0.8s
SSLB Suanglung 25.34 236 IAmb IAmb 09 07 09.3
comp=Z,132nm,1.0s
SSLB Suanglung 25.34 236 P **P** **09 06 51.8 -1.2**
YULB Yu-li 25.41 235 P **P** **09 06 49.8 -3.8**
YULB IAmb IAmb 09 07 10.6
comp=Z,117nm,0.8s
YULB IAMs_20 IAMs_20 09 17 23.0
comp=Z,37µm,20.0s
LYN LuoYang 25.43 267 ⇑P **P** **09 06 50.1 -3.6**
LYN S **S** **09 11 20.0 -0.3**
LYN pmax pmax
comp=Z,110nm,1.3s
LYN pmax pmax
comp=Z,9µm,8.3s
LYN LR LR
comp=Z,23µm,12.7s
LYN LR LR
comp=Z,66µm,13.8s
LYN LR LR
comp=Z,98µm,13.3s
BTO Baotou 25.57 282 *e*P **P** **09 06 54.8 -0.3**
BTO S **S** **09 11 21.5 -1.2**
BTO LR LR
comp=Z,135µm,12.2s
BTO LR LR
comp=Z,157µm,14.6s
WHN Wuhan 25.80 257 ⇑P **P** **09 06 55.9 -1.1**
WHN S **S** **09 11 28.8 +2.7**
WHN pmax pmax
comp=Z,600nm,1.0s
WHN LR LR
comp=Z,171µm,13.7s
WHN LR LR
comp=Z,132µm,14.8s
WHN LR LR
comp=Z,171µm,15.0s
BOD Bodaibo 25.82 322 *e*P **P** **09 06 56.1 -0.9**
BOD pmax pmax
comp=Z,484nm,1.6s
TPUB Ta-pu 25.90 236 IAmb IAmb 09 07 09.7
comp=Z,146nm,0.8s
TPUB Ta-pu 25.90 236 P **P** **09 06 57.7 -0.4**
QZH Quanzhou 26.08 241 ⇑ *i*P **P** **09 06 58.5 -1.2**
QZH S **S** **09 11 29.9 -0.7**
QZH pmax pmax
comp=Z,8µm,6.7s
QZH LR LR
comp=Z,27µm,17.9s
QZH LR LR
comp=Z,34µm,17.9s
QZH LR LR
comp=Z,32µm,12.8s
KNMB Chin-men Tao 26.54 241 P **P** **09 07 02.6 -1.2**
KNMB IAMs_20 IAMs_20 09 19 07.9
comp=Z,24µm,19.0s
AMKA Amchitka 26.80 54 P **P** **09 07 06.1 +0.2**
ULN Ulaanbaatar 27.19 298 P **P** **09 07 09.1 -0.6**
ULN Ulaanbaatar 27.19 298 *ce*P **P** **09 07 08.6 -1.1**
ULN pmax pmax
comp=Z,245nm,1.7s
ULN MLR MLR
comp=Z,93µm,15.0s
ULN Ulaanbaatar 27.19 298 P **P** **09 07 08.6 -1.1**
ULN P **P** **09 07 08.6 -1.1**
ULN S **S** **09 11 48.0 -0.1**
ULN S **S** **09 11 48.0 -0.1**
ULN Ulaanbaatar 27.19 298 ⇑P **P** **09 07 09.0 -0.7**
SONM Songino Array 27.63 298 P **P** **09 07 14.0 +0.4**
comp=Z,49nm,0.6s,baz=83,slow=5.5,SNR=104
SONM LR LR 09 18 34.1
comp=Z,27µm,20.0s,baz=85,slow=37
comp=Z,49nm,0.6s
SONM Songino Array 27.63 298 P **P** **09 07 13.4 -0.2**
SONM Songino Array 27.63 298 P **P** **09 07 13.4 -0.2**
SONM pmax pmax
comp=Z,600nm,1.8s
CNSH ChangSha 28.10 254 ⇑P **P** **09 07 17.8 0.0**
CNSH pmax pmax
comp=Z,30nm,1.0s
CNSH LR LR
comp=Z,26µm,15.4s
CNSH LR LR
comp=Z,44µm,12.9s
CNSH LR LR
comp=Z,44µm,12.7s
XAN Xi'an 28.34 268 ⇑P **P** **09 07 18.8 -1.2**
XAN pP pP 09 07 22.8 -0.1
XAN sP pwP 09 07 25.8 -0.9
XAN PP **PnPn** **09 08 10.0 +1.4**
XAN S **S** **09 12 05.3 -1.0**
XAN sS sS 09 12 12.8 +1.7
XAN pmax pmax
comp=Z,96nm,0.7s
XAN pmax pmax
comp=Z,8µm,8.1s
XAN LR LR
comp=Z,38µm,14.8s

XAN LR LR
comp=Z,37µm,14.1s
XAN LR LR
comp=Z,59µm,13.9s
H11N2 WAKE ISLAND Hy 28.57 129 T T 09 37 10.8
baz=318,slow=74,SNR=244
H11N1 WAKE ISLAND Hy 28.58 129 T T 09 37 15.3
baz=318,slow=74,SNR=345
H11N3 WAKE ISLAND Hy 28.59 129 T T 09 37 15.3
baz=318,slow=74,SNR=321
ADK Adak 29.35 54 IAMs_20 IAMs_20 09 15 39.4
comp=Z,18µm,19.0s
IRK Irkutsk 29.37 307 *e*P **P** **09 07 28.8 -0.1**
IRK pmax pmax
comp=Z,609nm,1.6s
H11S1 WAKE ISLAND Hy 29.41 131 T T 09 38 22.8
baz=323,slow=76,SNR=118
H11S3 WAKE ISLAND Hy 29.42 131 T T 09 38 22.9
baz=323,slow=76,SNR=117
H11S2 WAKE ISLAND Hy 29.43 131 T T 09 38 25.4
baz=323,slow=76,SNR=108
ENH Enshi 29.57 261 P **P** **09 07 30.0 -1.0**
ZAK Zakamensk 29.80 303 *e*P **P** **09 07 32.5 -0.3**
ZAK pmax pmax
comp=Z,67nm,1.2s
BILL Bilibino 30.28 17 P **P** **09 07 37.4 +0.6**
BILL IAmb IAmb 09 07 59.0
comp=Z,164nm,1.1s
BILL Bilibino 30.28 17 *ce*P **P** **09 07 37.3 +0.5**
BILL *i* *SP **sP** **09 07 40.9 +0.2**
BILL *e* 09 08 34.2
BILL *i* S **S** **09 12 34.9 -1.1**
BILL pmax pmax
comp=Z,132nm,1.0s
BILL MLR MLR
comp=Z,18µm,15.0s
GZH Guangzhou 30.89 245 P P 09 07 35.5 -7.1
GZH S S 09 12 36.3 -10
GZH LR LR
comp=Z,56µm,14.1s
GZH LR LR
comp=Z,32µm,12.2s
ATKA Atka Island 30.92 53 ⇓P **P** **09 07 41.8 -0.7**
MOY Mondy 31.33 306 *e*P **P** **09 07 45.7 -0.6**
MOY pmax pmax
comp=Z,211nm,1.7s
LZH Lanzhou 31.46 275 ⇑P **P** **09 07 47.5 -0.2**
LZH pP pwP 09 07 56.0 +1.5
LZH sP sP 09 08 00.8 +8.9
LZH S **S** **09 12 59.1 +3.6**
LZH SS **SnSn** **09 14 40.8 +1.0**
LZH pmax pmax
comp=Z,57nm,1.4s
LZH pmax pmax
comp=Z,2µm,4.5s
LZH LR LR
comp=Z,42µm,13.1s
LZH LR LR
comp=Z,32µm,13.7s
LZH LR LR
comp=Z,36µm,13.1s
GULI GuiLin 31.63 252 ⇑P **P** **09 07 48.9 -0.2**
GULI S **S** **09 12 57.5 -0.5**
GULI pmax pmax
comp=Z,90nm,0.9s
GULI LR LR
comp=Z,34µm,14.8s
GULI LR LR
comp=Z,42µm,14.9s
GULI LR LR
comp=Z,37µm,14.1s
TIXI Tiksi 32.21 351 P **P** **09 07 52.9 -0.8**
comp=Z,58nm,0.9s,baz=264,slow=22,SNR=20
TIXI LR LR 09 23 10.0
comp=Z,30µm,19.0s,baz=180,slow=40
comp=Z,58nm,0.9s
TIXI Tiksi 32.21 351 P **P** **09 07 53.1 -0.6**
TIXI IAmb IAmb 09 07 55.2
comp=Z,61nm,0.8s
TIXI Tiksi 32.21 351 *ce*P **P** **09 07 52.9 -0.8**
TIXI pmax pmax
comp=Z,70nm,0.8s
TIXI MLR MLR
comp=Z,40µm,16.0s
TIXI Tiksi 32.21 351 ⇑P **P** **09 07 52.5 -1.2**
GTA Gaotai 33.47 283 ⇑P **P** **09 08 05.9 +0.6**
GTA pP sP 09 08 09.6 +0.1
GTA sP pwP 09 08 12.1 +0.1
GTA PP **PnPn** **09 09 12.9 -3.4**
GTA S **S** **09 13 26.6 -0.1**
GTA sS sS 09 13 38.8 +7.2
GTA pmax pmax
comp=Z,130nm,1.1s
GTA pmax pmax
comp=Z,5µm,7.7s
GTA LR LR
comp=Z,29µm,14.5s
GTA LR LR
comp=Z,57µm,15.3s
GTA LR LR
comp=Z,57µm,15.3s
KNGR Kungurtug, Tuv 33.48 303 *i*P **P** **09 08 05.4 +0.2**
KNGR pmax pmax
comp=Z,147nm,1.2s
KNGR MLR MLR
comp=Z,30µm,15.0s
CD2 Chengdu 33.62 266 P **P** **09 08 05.8 -0.8**
CD2 PP **PnPn** **09 09 18.3 +0.1**
CD2 S **S** **09 13 27.8 -1.1**
CD2 pmax pmax
comp=Z,130nm,1.2s
CD2 pmax pmax
comp=Z,5µm,7.3s
CD2 LR LR
comp=Z,96µm,12.0s
CD2 LR LR
comp=Z,32µm,12.8s
CD2 LR LR
comp=Z,57µm,14.7s
GYA Guiyang 33.69 257 ⇑ *i*P **P** **09 08 06.8 -0.4**
GYA pP sP 09 08 11.8 +0.4
GYA PP **PP** **09 09 24.4 +1.0**
GYA S **S** **09 13 29.1 -1.1**
GYA SS **SnSn** **09 15 38.8 +4.9**
GYA pmax pmax
comp=Z,170nm,0.9s
GYA pmax pmax
comp=Z,5µm,5.6s
GYA LR LR
comp=Z,59µm,13.8s
GYA LR LR
comp=Z,45µm,15.0s
GYA LR LR
comp=Z,77µm,14.4s
NIKH Nikolski High 34.22 52 P **P** **09 08 08.8 -2.6**
NIKH Nikolski High 34.22 52 P **P** **09 08 09.1 -2.4**
baz=268
NIKH S **S** **09 13 33.4 -4.2**
baz=268
GAMB Gambell 34.89 33 P **P** **09 08 15.5 -1.6**
baz=250
GAMB S **S** **09 13 50.0 +2.3**
baz=250
UNV Unalaska Valle 35.65 51 P **P** **09 08 21.8 -2.0**
baz=269
PATS Pohnpei 35.87 155 IAMs_20 IAMs_20 09 20 49.6
comp=Z,18µm,19.0s
QIZ Qiongzhong 36.03 244 P **P** **09 08 26.4 -1.0**
QIZ IAmb IAmb 09 08 56.4
comp=Z,191nm,1.7s
QIZ Qiongzhong 36.03 244 P **P** **09 08 27.6 +0.2**
QIZ PP **PP** **09 09 48.4 -0.9**
QIZ S **S** **09 14 07.6 +1.5**
QIZ ScP **ScP** **09 14 41.1 +1.5**
QIZ pmax pmax
comp=Z,3µm,6.9s
QIZ LR LR
comp=Z,32µm,16.5s
QIZ LR LR
comp=Z,29µm,18.6s
QIZ LR LR
comp=Z,24µm,16.3s
DAV Davao City (W) 36.96 211 LR LR 09 24 25.5
comp=Z,19µm,18.9s,baz=50,slow=38
DAV Davao City (W) 36.96 211 IAMs_20 IAMs_20 09 24 52.6
comp=Z,20µm,19.0s

TNA	**Tin City**	**37.02**	**31**	P	**P**	**09 08 33.0**	**-2.3**				
	baz=251										
TNA				S	**S**	**09 14 23.0**	**+2.6**				
	baz=251										
PZH	**PanZhiHua**	**37.35**	**261**	P	**P**	**09 08 38.4**	**-0.4**				
PZH				pP	**pP**	**09 08 41.8**	**+0.1**				
PZH				PcP	**PcP**	**09 10 53.9**	**-3.9**				
PZH				S	**S**	**09 14 25.9**	**-0.6**				
PZH				PcS	**PcS**	**09 14 43.1**	**-3.3**				
PZH				SS	**SnSn**	**09 16 56.6**	**-6.2**				
PZH				ScS	**ScS**	**09 18 53.5**	**+0.6**				
PZH				pmax	pmax						
	comp=Z,280nm,0.8s										
PZH				pmax	pmax						
	comp=Z,5μm,7.4s										
PZH				LR	LR						
	comp=Z,22μm,13.7s										
PZH				LR	LR						
	comp=Z,38μm,13.9s										
PZH				LR	LR						
	comp=Z,44μm,14.1s										
KMI	**Kunming**	**37.36**	**259**	⇑P	**P**	**09 08 38.9**	**-0.1**				
KMI				pP	pP	09 08 41.8	-0.1				
KMI				PP	**PP**	**09 10 02.4**	**-1.7**				
KMI				S	**S**	**09 14 27.1**	**+0.3**				
KMI				ScP	**ScP**	**09 14 44.9**	**+0.1**				
KMI				PcS	**PcS**	**09 14 47.0**	**+0.3**				
KMI				pmax	pmax						
	comp=Z,99nm,1.6s										
KMI				pmax	pmax						
	comp=Z,6μm,8.2s										
KMI				LR	LR						
	comp=Z,63μm,14.9s										
KMI				LR	LR						
	comp=Z,28μm,18.1s										
KMI				LR	LR						
	comp=Z,55μm,15.7s										
ANM	**Nome**	**37.77**	**33**	P	**P**	**09 08 39.9**	**-1.8**				
	baz=255										
ANM				S	**S**	**09 14 36.2**	**+4.4**				
	baz=255										
KWAJ	**Kwajalein Atol**	**37.95**	**139**	IAMs_20	IAMs_20	09 23 43.1					
	comp=Z,13μm,19.0s										
GOMU	**GeErMu**	**38.26**	**280**	P	**P**	**09 08 46.1**	**-0.5**				
GOMU				pP	pP	09 08 48.5	-1.1				
GOMU				PP	**PP**	**09 10 12.9**	**-1.1**				
GOMU				S	**S**	**09 14 39.8**	**-0.7**				
GOMU				pmax	pmax						
	comp=Z,230nm,1.5s										
GOMU				pmax	pmax						
	comp=Z,6μm,6.3s										
GOMU				LR	LR						
	comp=Z,12μm,14.8s										
GOMU				LR	LR						
	comp=Z,16μm,13.4s										
GOMU				LR	LR						
	comp=Z,15μm,13.7s										
SDPT	**Sand Point**	**39.16**	**48**	P	**P**	**09 08 51.6**	**-1.9**				
	baz=272										
S14K	**Fog Glacier**	**39.66**	**47**	P	**P**	**09 08 55.9**	**-1.9**				
	baz=271										
S14K				S	**S**	**09 14 58.1**	**-2.6**				
	baz=271										
RDOG	**Red Dog Mine**	**39.67**	**28**	P	**P**	**09 08 56.6**	**-1.0**				
	baz=254										
CHNA	**Chernabura Isl**	**39.69**	**49**	P	**P**	**09 08 56.5**	**-1.4**				
	baz=273										
CHNA				S	**S**	**09 14 56.2**	**-4.7**				
	baz=273										
CNBA	**Chernabura Isl**	**39.69**	**49**	P	**P**	**09 08 57.1**	**-0.8**				
CNBA				IAmb	IAmb	09 10 14.5					
	comp=Z,216nm,1.9s										
DGZ	**Jazzator, Alta**	**40.02**	**303**	*c i*P	**P**	**09 09 01.1**	**+0.2**				
DGZ				pmax	pmax						
	comp=Z,280nm,0.8s										
DGZ				MLR	MLR						
	comp=Z,66μm,14.0s										
SGSI	**Sangihe**	**40.09**	**209**	P	**P**	**09 09 03.3**	**+1.7**				
	comp=Z,9μmcomp=Z,161nm,0.8s										
N16K	**Nishlik Lake**	**40.16**	**40**	P	**P**	**09 09 00.2**	**-1.5**				
	baz=267,SNR=11										
N16K				S	**S**	**09 15 09.4**	**+1.6**				
	baz=267										
CHGN	**Chignik**	**40.30**	**47**	P	**P**	**09 09 01.4**	**-1.5**				
	baz=272										
O16K	**Kokwok River B**	**40.46**	**42**	P	**P**	**09 09 02.9**	**-1.3**				
	baz=268,SNR=7.3										
O16K				S	**S**	**09 15 14.1**	**+1.8**				
	baz=268										
P16K	**Nushagak River**	**40.50**	**43**	P	**P**	**09 09 03.3**	**-1.3**				
	baz=269										
P16K				S	**S**	**09 15 15.1**	**+2.3**				
	baz=269										
R16K	**Pilot Point**	**40.72**	**45**	P	**P**	**09 09 05.6**	**-0.8**				
	baz=271										
O17K	**Koliganek Bris**	**40.97**	**41**	P	**P**	**09 09 06.5**	**-1.9**				
	baz=269,SNR=10										
O17K				S	**S**	**09 15 22.6**	**+2.7**				
	baz=269										
NRIK	**Noril'sk**	**41.04**	**333**	P	**P**	**09 09 09.2**	**+0.3**				
	comp=Z,32nm,0.9s,baz=104,slow=12,SNR=38										
NRIK				LR	LR	09 27 44.3					
	comp=Z,40μm,19.4s,baz=102,slow=38										
	comp=Z,32nm,0.9s										
NRIK	**Noril'sk**	**41.04**	**333**	P	**P**	**09 09 08.1**	**-0.8**				
NRIK				IAmb	IAmb	09 09 16.0					
	comp=Z,232nm,1.5s										
NRIK	**Noril'sk**	**41.04**	**333**	*ce*P	**P**	**09 09 08.8**	**-0.1**				
NRIK				pmax	pmax						
	comp=Z,181nm,1.5s										
NRIK				MLR	MLR						
	comp=Z,40μm,19.0s										
WMQ	**Urumqi**	**41.06**	**294**	⇑*i*P	**P**	**09 09 10.3**	**+0.7**				
WMQ				pP	pwP	09 09 15.3	-1.1				
WMQ				sP	sP	09 09 23.5	+10				
WMQ				PP	**PnPn**	**09 10 49.3**	**+0.8**				
WMQ				PcP	**PcP**	**09 11 12.6**	**+3.5**				
WMQ				S	**S**	**09 15 15.8**	**-6.1**				
WMQ				SS	**SS**	**09 18 23.0**	**-1.0**				
WMQ				pmax	pmax						
	comp=Z,110nm,0.7s										
WMQ				pmax	pmax						
	comp=Z,7μm,7.5s										
WMQ				LR	LR						
	comp=Z,41μm,12.7s										
WMQ				LR	LR						
	comp=Z,48μm,14.9s										
WMQ				LR	LR						
	comp=Z,27μm,16.5s										
ZAA0	**Zalesovo Array**	**41.10**	**310**	P	**P**	**09 09 09.2**	**-0.4**				
ZAA0				IAmb	IAmb	09 09 28.1					
	comp=Z,119nm,0.8s										
ZALV	**Zalesovo Beam**	**41.10**	**310**	P	**P**	**09 09 09.9**	**+0.3**				
	comp=Z,91nm,0.8s,baz=87,slow=7.3,SNR=162										
ZALV				LR	LR	09 26 28.8					
	comp=Z,6μm,20.2s,baz=85,slow=37										
	comp=Z,91nm,0.8s										
ZALV	**Zalesovo Beam**	**41.10**	**310**	P	**P**	**09 09 09.2**	**-0.4**				
Q16K	**King Salmon**	**41.19**	**43**	P	**P**	**09 09 08.7**	**-1.5**				
	baz=271										
Q16K				S	**S**	**09 15 25.2**	**+2.0**				
	baz=271										
P17K	**Kvichak River**	**41.30**	**42**	P	**P**	**09 09 10.8**	**-0.3**				
	baz=270										
P17K				S	**S**	**09 15 25.7**	**+0.9**				
	baz=270										
R17K	**Ugashik Creek**	**41.36**	**45**	P	**P**	**09 09 11.6**	**-0.1**				
	baz=272										
R17K				S	**S**	**09 15 23.3**	**-2.5**				
	baz=272										
GCSA	**Galena City Sc**	**41.40**	**34**	P	**P**	**09 09 12.2**	**+0.3**				
	baz=264										
GCSA				S	**S**	**09 15 27.2**	**+1.1**				
	baz=264										
LKP	**Lekhapani**	**41.40**	**267**	*e*P	**P**	**09 09 12.5**	**+0.2**				
N18K	**Kilae Creek**	**41.59**	**40**	P	**P**	**09 09 14.5**	**+0.9**				
N18K				IAMs_20	IAMs_20	09 25 12.5					
	comp=Z,11μm,20.0s										
N18K	**Kilae Creek**	**41.59**	**40**	P	**P**	**09 09 13.8**	**+0.3**				
	baz=269,SNR=13										
N18K				S	**S**	**09 15 32.0**	**+2.9**				
	baz=269										
TTA	**Tatalina**	**41.62**	**37**	P	**P**	**09 09 14.0**	**+0.2**				
	baz=266										
TTA				S	**S**	**09 15 31.1**	**+1.5**				
	baz=266										
MYLDM	**Lahad Datu**	**41.78**	**220**	⇑P	**P**	**09 09 17.4**	**+1.8**				
CHIR	**Chirikof Islan**	**41.89**	**47**	IAMs_20	IAMs_20	09 26 08.6					
	comp=Z,14μm,19.0s										
CHIR	**Chirikof Islan**	**41.89**	**47**	P	**P**	**09 09 15.5**	**-0.5**				
	baz=275										
CHIR				S	**S**	**09 15 31.9**	**-1.7**				
	baz=275										
P18K	**Big Mountain,**	**41.92**	**42**	P	**P**	**09 09 16.1**	**-0.2**				
	baz=271										
P18K				S	**S**	**09 15 36.1**	**+2.0**				
	baz=271										
O18K	**Koktuh Hills**	**41.92**	**41**	P	**P**	**09 09 16.6**	**+0.3**				
	baz=271										
O18K				S	**S**	**09 15 37.3**	**+3.1**				
	baz=271										
BAKI	**Biak**	**41.98**	**191**	P	**P**	**09 09 19.9**	**+2.7**				
	comp=Z,4μmcomp=Z,144nm,1.1s										
CRAI	**Chiangrai**	**42.01**	**255**	P	**P**	**09 09 17.4**	**-0.1**				
CRAI				IAmb	IAmb	09 09 56.5					
	comp=Z,145nm,1.0s										
DIBR	**DIBRUGARH**	**42.04**	**268**	*e*P	**P**	**09 09 18.7**	**+1.0**				
ZSN	**Zaisan**	**42.11**	**300**	*e*P	**P**	**09 09 17.1**	**-0.9**				
ZSN				*e*S	**S**	**09 15 35.7**	**-1.5**				
ZSN				pmax	pmax						
	comp=Z,194nm,1.9s										
ZSN	**Zaisan**	**42.11**	**300**	*e*P	**P**	**09 09 17.2**	**-0.9**				
	comp=Z,194nm,1.9s,baz=300										
ZSN				*e*S	**S**	**09 15 35.7**	**-1.5**				
	baz=300										
L19K	**White Mountain**	**42.12**	**38**	P	**P**	**09 09 18.8**	**+0.8**				
	baz=268,SNR=7.5										
L19K				S	**S**	**09 15 39.6**	**+2.6**				
	baz=268										
TNTI	**Ternate**	**42.17**	**205**	IAMs_20	IAMs_20	09 25 51.7					
	comp=Z,10μm,20.0s										
TNTI	**Ternate**	**42.17**	**205**	P	**P**	**09 09 19.1**	**+0.4**				
	comp=Z,2μmcomp=Z,4μmcomp=Z,127nm,1.8s										
KKM	**Kota Kinabalu**	**42.19**	**223**	P	**P**	**09 09 19.2**	**+0.1**				
KKM				IAmb	IAmb	09 09 59.0					
	comp=Z,291nm,1.7s										
KKM				IAMs_20	IAMs_20	09 28 30.9					
	comp=Z,12μm,20.0s										
N19K	**Bonanza Creek**	**42.28**	**40**	P	**P**	**09 09 19.0**	**-0.3**				
	baz=270										
N19K				S	**S**	**09 15 42.7**	**+3.2**				
	baz=270										
M19K	**Big River Lodg**	**42.33**	**38**	P	**P**	**09 09 20.9**	**+1.3**				
	baz=269										
M19K				S	**S**	**09 15 42.7**	**+2.7**				
	baz=269										
O19K	**Port Alsworth**	**42.36**	**41**	P	**P**	**09 09 20.4**	**+0.6**				
	baz=271										
O19K				S	**S**	**09 15 43.0**	**+2.5**				
	baz=271										
SMPI	**Sarmi**	**42.44**	**188**	P	**P**	**09 09 21.5**	**+0.6**				
	comp=Z,2μmcomp=Z,2μmcomp=Z,116nm,1.3s										
K20K	**Telida**	**42.52**	**36**	IAMs_20	IAMs_20	09 28 34.1					
	comp=Z,10μm,18.0s										
K20K	**Telida**	**42.52**	**36**	P	**P**	**09 09 20.0**	**-1.2**				
	baz=268,SNR=14										
K20K				S	**S**	**09 15 44.6**	**+1.8**				
	baz=268										
J20K	**Nowinta River**	**42.53**	**35**	P	**P**	**09 09 22.2**	**+1.1**				
J20K				IAmb	IAmb	09 09 43.9					
	comp=Z,69nm,0.8s										
J20K	**Nowinta River**	**42.53**	**35**	P	**P**	**09 09 21.9**	**+0.7**				
	baz=267,SNR=20										
J20K				S	**S**	**09 15 44.7**	**+1.8**				
	baz=267										
L20K	**Farewell, AK**	**42.58**	**37**	P	**P**	**09 09 21.5**	**-0.2**				
	baz=269										
L20K				S	**S**	**09 15 45.8**	**+2.0**				
	baz=269										
SWI	**Sorong**	**42.62**	**199**	P	**P**	**09 09 24.4**	**+2.0**				
	comp=Z,4μmcomp=Z,3μmcomp=Z,117nm,1.7s										
SII	**Sitkinak Islan**	**42.62**	**46**	IAMs_20	IAMs_20	09 24 21.1					
	comp=Z,12μm,21.0s										
SII	**Sitkinak Islan**	**42.62**	**46**	P	**P**	**09 09 21.9**	**-0.2**				
	baz=275										
SII				S	**S**	**09 15 43.0**	**-1.6**				
	baz=275										
SII	**Sitkinak Islan**	**42.62**	**46**	P	**P**	**09 09 24.0**	**+1.9**				
SRPI	**Serui, Papua**	**42.63**	**191**	P	**P**	**09 09 24.1**	**+1.7**				
	comp=Z,2μmcomp=Z,108nm,0.5s										
SIJI	**Sorong**	**42.63**	**199**	P	**P**	**09 09 22.7**	**+0.2**				
	comp=Z,30nm,0.8s,baz=32,slow=9.1,SNR=5.6										
	comp=Z,30nm,0.8s										
A21K	**Barrow**	**42.64**	**24**	IAMs_20	IAMs_20	09 29 51.8					
	comp=Z,12μm,18.0s										
A21K	**Barrow**	**42.64**	**24**	P	**P**	**09 09 22.3**	**+0.4**				
	baz=257										
A21K				S	**S**	**09 15 43.4**	**-0.9**				
	baz=257										
Q19K	**Cape Douglas,**	**42.75**	**43**	P	**P**	**09 09 23.7**	**+0.6**				
Q19K				IAMs_20	IAMs_20	09 25 46.4					
	comp=Z,9μm,18.0s										
Q19K	**Cape Douglas,**	**42.75**	**43**	P	**P**	**09 09 22.1**	**-0.9**				
	baz=273										
Q19K				S	**S**	**09 15 43.6**	**-2.7**				
	baz=273										
ZIRO	**ZIRO**	**42.82**	**268**	⇑*i*P	**P**	**09 09 24.4**	**+0.1**				
ZIRO				*i* x	**S**	**09 15 51.3**	**+2.9**				
IMAR	**Indian Mountai**	**42.82**	**32**	P	**P**	**09 09 25.5**	**+1.9**				
GENI	**Genyem**	**42.91**	**185**	P	**P**	**09 09 26.2**	**+1.5**				
	comp=Z,4μmcomp=Z,118nm,0.7s										
JORH	**JORHAT**	**42.92**	**267**	⇑*i*P	**P**	**09 09 25.7**	**+0.9**				
M20K	**Styx River**	**42.93**	**38**	IAMs_20	IAMs_20	09 27 09.9					
	comp=Z,9μm,18.0s										
M20K	**Styx River**	**42.93**	**38**	P	**P**	**09 09 24.5**	**0.0**				
	baz=270										
M20K				S	**S**	**09 15 52.2**	**+3.2**				
	baz=270										
P19K	**Oil Pt**	**42.93**	**42**	P	**P**	**09 09 24.3**	**-0.2**				
	baz=272										
P19K				S	**S**	**09 15 48.3**	**-0.7**				
	baz=272										
MOKO	**MOKOCHONG**	**42.94**	**267**	⇑*i*P	**P**	**09 09 25.8**	**+0.6**				
G21K	**Allakaket**	**42.97**	**32**	P	**P**	**09 09 24.8**	**+0.1**				
	baz=265										
G21K				S	**S**	**09 15 52.2**	**+2.8**				
	baz=265										
F21K	**Alatna River**	**43.05**	**30**	P	**P**	**09 09 23.6**	**-1.8**				
	baz=264,SNR=41										
F21K				S	**S**	**09 15 53.2**	**+2.7**				
	baz=264										
OHAK	**Old Harbor**	**43.06**	**45**	P	**P**	**09 09 25.4**	**-0.1**				
OHAK	**Old Harbor**	**43.06**	**45**	P	**P**	**09 09 25.7**	**+0.2**				
	baz=275										
OHAK				S	**S**	**09 15 49.3**	**-1.4**				
	baz=275										
ITAN	**ITANAGAR**	**43.12**	**268**	⇑*i*P	**P**	**09 09 27.3**	**+0.9**				
ITAN				IAmb	IAmb	09 09 29.4					
	comp=Z,164nm,1.0s										
H21K	**Melozitna Rive**	**43.19**	**33**	IAMs_20	IAMs_20	09 30 01.4					
	comp=Z,9μm,18.0s										
H21K	**Melozitna Rive**	**43.19**	**33**	P	**P**	**09 09 26.4**	**-0.1**				
	baz=266,SNR=16										
H21K				S	**S**	**09 15 56.1**	**+3.5**				
	baz=266										
O20K	**Slope Mountain**	**43.22**	**41**	P	**P**	**09 09 25.9**	**-1.0**				
	baz=273										
O20K				S	**S**	**09 15 54.2**	**+1.0**				
	baz=273										
CHUM	**Lake Minchumin**	**43.32**	**35**	P	**P**	**09 09 28.1**	**+0.6**				
	baz=269										
CHUM				S	**S**	**09 15 57.6**	**+3.1**				
	baz=269										
PPLA	**Purkeypile**	**43.37**	**37**	IAmb	IAmb	09 10 00.6					
	comp=Z,216nm,1.2s										
PPLA	**Purkeypile**	**43.37**	**37**	P	**P**	**09 09 28.6**	**+0.5**				
	baz=270,SNR=9.7										
PPLA				S	**S**	**09 15 58.3**	**+2.8**				
	baz=270										
SPCR	**Spurr Chakacha**	**43.38**	**39**	P	**P**	**09 09 29.0**	**+0.8**				
	baz=272										
SPCR				S	**S**	**09 15 57.7**	**+2.1**				
	baz=272										
KDAK	**Kodiak Island**	**43.39**	**44**	P	**P**	**09 09 28.3**	**+0.1**				
KDAK				IAmb	IAmb	09 09 50.4					
	comp=Z,103nm,1.0s										
KDAK	**Kodiak Island**	**43.39**	**44**	IAMs_20	IAMs_20	09 27 39.2					
	comp=Z,10μm,20.0s										
KDAK	**Kodiak Island**	**43.39**	**44**	P	**P**	**09 09 28.3**	**+0.1**				
KDAK				pmax	pmax						
	comp=Z,103nm,1.0s										
KDAK				MLR	MLR						
	comp=Z,10μm,20.0s										
KDAK	**Kodiak Island**	**43.39**	**44**	P	**P**	**09 09 27.4**	**-0.8**				
	baz=275										
KDAK				S	**S**	**09 15 53.1**	**-2.5**				
	baz=275										
KDAK	**Kodiak Island**	**43.39**	**44**	⇑P	**P**	**09 09 28.1**	**-0.1**				
CAST	**Castle Rocks**	**43.42**	**36**	IAMs_20	IAMs_20	09 29 20.0					
	comp=Z,9μm,18.0s										
CAST	**Castle Rocks**	**43.42**	**36**	P	**P**	**09 09 29.3**	**+0.9**				
	baz=270										
CAST				S	**S**	**09 15 59.1**	**+3.1**				
	baz=270										
Q20K	**Shuyak Island**	**43.42**	**43**	P	**P**	**09 09 28.3**	**-0.2**				
	baz=274,SNR=6.0										
Q20K				S	**S**	**09 15 52.6**	**-3.5**				
	baz=274										
LBMI	**Labuha**	**43.45**	**204**	P	**P**	**09 09 30.0**	**+0.8**				
	comp=Z,3μmcomp=Z,4μmcomp=Z,124nm,1.8s										
I21K	**Tanana**	**43.51**	**34**	IAmb	IAmb	09 10 34.0					
	comp=Z,132nm,1.5s										
I21K				IAMs_20	IAMs_20	09 30 04.0					
	comp=Z,10μm,18.0s										
I21K	**Tanana**	**43.51**	**34**	P	**P**	**09 09 30.2**	**+1.1**				
	baz=268,SNR=10										
I21K				S	**S**	**09 16 00.1**	**+2.9**				
	baz=268										
KMSI	**Cibinong**	**43.53**	**209**	P	**P**	**09 09 32.3**	**+2.5**				
	comp=Z,7μmcomp=Z,317nm,0.5s										
KOHI	**KOHIMA**	**43.57**	**266**	*e*P	**P**	**09 09 30.0**	**-0.3**				
KOHI				*i* x	**S**	**09 16 06.8**	**+7.5**				
F22K	**John River**	**43.58**	**30**	P	**P**	**09 09 30.2**	**+0.5**				
	baz=265										
F22K				S	**S**	**09 16 00.7**	**+2.4**				
	baz=265										
SKT	**Skwentna**	**43.68**	**38**	P	**P**	**09 09 30.6**	**0.0**				
	baz=272										
HOM	**Homer**	**43.73**	**42**	P	**P**	**09 09 31.1**	**+0.1**				
	baz=274										
HOM				S	**S**	**09 15 58.7**	**-1.9**				
	baz=274										
H22K	**Ishtalitna Cre**	**43.79**	**32**	P	**P**	**09 09 32.4**	**+1.1**				
	baz=268,SNR=44										
H22K				S	**S**	**09 16 04.6**	**+3.2**				
	baz=268										
G22K	**Bettles**	**43.79**	**31**	P	**P**	**09 09 32.3**	**+0.9**				
	baz=266										
G22K				S	**S**	**09 16 03.5**	**+2.2**				
	baz=266										
LSA	**Lhasa**	**43.81**	**273**	P	**P**	**09 09 31.8**	**-0.7**				
LSA				IAMs_20	IAMs_20	09 28 27.6					
	comp=Z,17μm,20.0s										
LSA	**Lhasa**	**43.81**	**273**	P	**P**	**09 09 33.8**	**+1.3**				
LSA				pP	**pwP**	**09 09 44.0**	**+4.7**				
LSA				S	**S**	**09 16 06.5**	**+3.1**				
LSA				pmax	pmax						
	comp=Z,80nm,1.8s										
LSA				pmax	pmax						
	comp=Z,2μm,3.4s										
LSA				LR	LR						
	comp=Z,13μm,15.7s										
LSA				LR	LR						
	comp=Z,14μm,14.2s										
LSA				LR	LR						
	comp=Z,12μm,17.1s										
LSA	**Lhasa**	**43.81**	**273**	P	**P**	**09 09 31.8**	**-0.7**				
LSA				pmax	pmax						
	comp=Z,887nm,2.0s										
LSA				MLR	MLR						
	comp=Z,17μm,20.0s										
LSA	**Lhasa**	**43.81**	**273**	P	**P**	**09 09 33.4**	**+0.9**				
GTOI	**Gorontalo**	**43.85**	**211**	P	**P**	**09 09 31.8**	**-0.5**				
	comp=Z,2μmcomp=Z,2μmcomp=Z,70nm,2.1s										
BPAW	**Bear Paw Mtn.**	**43.91**	**35**	P	**P**	**09 09 34.0**	**+1.7**				
	baz=270,SNR=11										
BPAW				S	**S**	**09 16 05.2**	**+2.0**				
	baz=270										
CAPN	**Captain Cook N**	**43.91**	**40**	P	**P**	**09 09 33.3**	**+0.9**				
	baz=273										
KTH	**Kantishna Hill**	**43.94**	**36**	IAmb	IAmb	09 10 10.8					
	comp=Z,129nm,1.0s										
KTH				IAMs_20	IAMs_20	09 29 36.5					
	comp=Z,10μm,19.0s										
CHTO	**Chiang Mai**	**43.94**	**254**	P	**P**	**09 09 32.4**	**-0.8**				
CHTO				IAmb	IAmb	09 09 42.9					
	comp=Z,84nm,0.8s										
CHTO	**Chiang Mai**	**43.94**	**254**	IAMs_20	IAMs_20	09 26 50.8					
	comp=Z,13μm,20.0s										
CHTO	**Chiang Mai**	**43.94**	**254**	P	**P**	**09 09 32.4**	**-0.8**				
CHTO				pmax	pmax						
	comp=Z,84nm,0.8s										
CHTO				MLR	MLR						
	comp=Z,13μm,20.0s										
CHTO	**Chiang Mai**	**43.94**	**254**	P	**P**	**09 09 32.3**	**-0.9**				
CHTO				P	**P**	**09 09 32.3**	**-0.9**				
CHTO				S	**S**	**09 16 02.5**	**-2.1**				
CHTO				S	**S**	**09 16 02.5**	**-2.1**				
CHTO	**Chiang Mai**	**43.94**	**254**	P	**P**	**09 09 34.0**	**+0.8**				
CHTO	**Chiang Mai**	**43.94**	**254**	⇑P	**P**	**09 09 33.4**	**+0.2**				
MK31	**Makanchi Array**	**43.98**	**300**	P	**P**	**09 09 32.2**	**-0.9**				
MK31				IAmb	IAmb	09 09 35.8					
	comp=Z,146nm,0.9s										
MK31	**Makanchi Array**	**43.98**	**300**	P	**P**	**09 09 32.2**	**-0.9**				
MK31				pmax	pmax						
	comp=Z,146nm,1.0s										
MKAR	**Makanchi Array**	**43.98**	**300**	P	**P**	**09 09 32.1**	**-1.0**				
	comp=Z,130nm,0.8s,baz=84,slow=7.1,SNR=334										
MKAR				LR	LR	09 28 31.0					
	comp=Z,17μm,18.3s,baz=88,slow=37										
	comp=Z,130nm,0.8s										
MKAR	**Makanchi Array**	**43.98**	**300**	P	**P**	**09 09 32.8**	**-0.4**				
MLY	**Manley**	**44.03**	**34**

baz=264
FAKI Fak Fak 44.38 197 P **P** **09 09 35.3 -1.3**
FAKI IAMs_20 IAMs_20 09 25 43.7
comp=Z,18µm,20.0s
FAKI Fak Fak 44.38 197 P **P** **09 09 37.8 +1.2**
comp=Z,2µmcomp=Z,3µmcomp=Z,212nm,1.2s
MRSI Marisa 44.42 212 P **P** **09 09 36.8 -0.1**
comp=Z,6µmcomp=Z,5µmcomp=Z,169nm,2.2s
SEM Semipalatinsk 44.44 305 *e*P **P** **09 09 36.0 -1.0**
SEM *e*S **S** **09 16 09.8 -1.8**
SEM pmax pmax
comp=Z,172nm,1.7s
SEM MLR MLR
comp=Z,8µm,13.0s
SEM Semipalatinsk 44.44 305 *e*P **P** **09 09 36.0 -1.0**
comp=Z,172nm,1.7s,baz=305
SEM *e*S **S** **09 16 09.9 -1.8**
baz=305
SEM LR LR 09 28 16.1
comp=Z,8µm,12.8s,baz=305
H23K Yukon River 44.54 33 IAmb IAmb 09 10 08.8
comp=Z,118nm,1.1s
H23K IAMs_20 IAMs_20 09 30 35.3
comp=Z,12µm,18.0s
H23K Yukon River 44.54 33 P **P** **09 09 37.8 +0.4**
baz=269,SNR=52
H23K S **S** **09 16 16.0 +3.6**
baz=269
RC01 Rabbit Creek A 44.58 39 P **P** **09 09 37.7 0.0**
RC01 IAmb IAmb 09 09 50.9
comp=Z,48nm,0.8s
RC01 IAMs_20 IAMs_20 09 30 51.6
comp=Z,9µm,19.0s
RC01 Rabbit Creek A 44.58 39 P **P** **09 09 36.9 -0.8**
baz=274,SNR=6.1
RC01 S **S** **09 16 11.3 -1.7**
baz=274
I23K Minto, Yukon-K 44.61 34 IAmb IAmb 09 10 09.8
comp=Z,81nm,1.2s
I23K IAMs_20 IAMs_20 09 30 39.8
comp=Z,9µm,18.0s
I23K Minto, Yukon-K 44.61 34 P **P** **09 09 38.1 +0.2**
baz=270
I23K S **S** **09 16 15.5 +2.2**
baz=270
O22K Cooper Landing 44.63 40 IAMs_20 IAMs_20 09 30 23.0
comp=Z,9µm,20.0s
O22K Cooper Landing 44.63 40 P **P** **09 09 38.3 +0.2**
baz=275
O22K S **S** **09 16 11.7 -2.0**
baz=275
TOLK Toolik Lake Re 44.64 29 IAmb IAmb 09 10 25.0
comp=Z,93nm,1.1s
TOLK IAMs_20 IAMs_20 09 29 54.7
comp=Z,15µm,18.0s
TOLK Toolik Lake Re 44.64 29 P **P** **09 09 38.0 -0.2**
baz=266,SNR=16
TOLK S **S** **09 16 13.9 +0.1**
baz=266
NEA2 Nenana 44.74 34 IAmb IAmb 09 09 57.0
comp=Z,86nm,0.8s
NEA2 Nenana 44.74 34 P **P** **09 09 39.0 0.0**
baz=271,SNR=45
NEA2 S **S** **09 16 17.6 +2.3**
baz=271
SEW Seward 44.80 41 IAmb IAmb 09 09 56.2
comp=Z,57nm,0.9s
SEW Seward 44.80 41 P **P** **09 09 38.2 -1.3**
baz=275
SEW S **S** **09 16 14.8 -1.3**
baz=275
MCK McKinley 44.82 36 P **P** **09 09 40.5 +0.8**
MCK IAmb IAmb 09 10 08.4
comp=Z,66nm,1.0s
MCK IAMs_20 IAMs_20 09 28 58.8
comp=Z,10µm,19.0s
MCK McKinley 44.82 36 P **P** **09 09 40.5 +0.8**
MCK pmax pmax
comp=Z,66nm,1.0s
MCK MLR MLR
comp=Z,10µm,19.0s
MCK McKinley 44.82 36 P **P** **09 09 38.4 -1.3**
baz=272,SNR=11
MCK S **S** **09 16 16.4 -0.1**
baz=272
PMR Palmer 44.84 39 P **P** **09 09 39.4 -0.4**
baz=274,SNR=18
PMR S **S** **09 16 15.5 -1.2**
baz=274
RND Reindeer 44.87 36 IAmb IAmb 09 10 19.3
comp=Z,78nm,1.0s
RND IAMs_20 IAMs_20 09 27 43.0
comp=Z,9µm,20.0s
GHO Glory Hole Cre 44.92 38 IAMs_20 IAMs_20 09 29 31.6
comp=Z,9µm,19.0s
D24K Happy Valley 44.94 28 P **P** **09 09 40.8 +0.3**
baz=267
D24K S **S** **09 16 18.8 +0.8**
baz=267
E24K Your Creek 45.01 29 P **P** **09 09 42.0 +0.8**
baz=268,SNR=46
E24K S **S** **09 16 21.9 +2.7**
baz=268
C24K Franklin Bluff 45.02 27 P **P** **09 09 41.6 +0.5**
baz=266
C24K S **S** **09 16 20.1 +1.0**
baz=266
WAT1 Susitna Watana 45.03 37 P **P** **09 09 40.8 -0.6**
baz=273
WAT1 S **S** **09 16 18.1 -1.5**
baz=273
SILR SILCHAR 45.07 266 *e*P **P** **09 09 42.5 +0.4**
MDM Murphy Dome 45.09 34 IAmb IAmb 09 09 57.8
comp=Z,85nm,1.1s
MDM IAMs_20 IAMs_20 09 28 32.8
comp=Z,11µm,20.0s
KRVT Keravat (AS076 45.13 168 LR LR 09 29 14.8
comp=Z,4µm,18.2s,baz=129,slow=37
GUWA GUWAHATI 45.16 268 *i* P **P** **09 09 42.1 -0.7**
WRH Wood River Hil 45.17 35 IAmb IAmb 09 09 59.0
comp=Z,60nm,0.9s
WRH IAMs_20 IAMs_20 09 28 24.8
comp=Z,10µm,19.0s
KNK Knik Glacier 45.17 39 P **P** **09 09 43.3 +0.8**
baz=275,SNR=6.9
KNK S **S** **09 16 20.0 -1.7**
baz=275
SML Sawmill 45.20 38 P **P** **09 09 43.3 +0.5**
baz=274,SNR=9.1
SML S **S** **09 16 21.6 -0.5**
baz=274
F24K Squaw Lake 45.23 30 P **P** **09 09 43.0 +0.2**
baz=269,SNR=30
F24K S **S** **09 16 23.9 +1.7**
baz=269
H24K Noodor Dome 45.23 33 IAmb IAmb 09 09 54.3
comp=Z,65nm,0.9s
H24K IAMs_20 IAMs_20 09 31 22.3
comp=Z,13µm,18.0s
H24K Noodor Dome 45.23 33 P **P** **09 09 43.7 +0.8**
baz=271,SNR=12
H24K S **S** **09 16 25.8 +3.4**
baz=271
TCOL CIGO, UAF Yank 45.25 34 IAmb IAmb 09 10 18.5
comp=Z,98nm,0.8s
TCOL CIGO, UAF Yank 45.25 34 P **P** **09 09 43.5 +0.5**
baz=272,SNR=8.0
TCOL S **S** **09 16 24.5 +1.9**
baz=272
COLA College 45.26 34 P **P** **09 09 46.1 +3.0**
COLA IAmb IAmb 09 10 18.5
comp=Z,98nm,0.8s
COLA College 45.26 34 IAMs_20 IAMs_20 09 28 27.2
comp=Z,9µm,21.0s
COLA College 45.26 34 *i* P **P** **09 09 44.6 +1.6**
COLA pmax pmax
comp=Z,61nm,0.9s
COLA MLR MLR
comp=Z,10µm,17.0s
COLA College 45.26 34 P **P** **09 09 42.8 -0.2**
baz=272
COLA S **S** **09 16 25.3 +2.6**
baz=272
COLA College 45.26 34 ⇓P **P** **09 09 44.6 +1.6**
SANI Sanana 45.27 205 P **P** **09 09 42.7 -0.9**
comp=Z,4µmcomp=Z,4µmcomp=Z,143nm,2.3s
SANI Sanana 45.27 205 P **P** **09 09 43.6 0.0**
PWL Port Wells 45.28 40 IAMs_20 IAMs_20 09 30 54.1
comp=Z,11µm,20.0s
PWL Port Wells 45.28 40 P **P** **09 09 42.5 -0.9**
baz=275,SNR=6.6
PWL S **S** **09 16 23.0 -0.2**
baz=275
SHL Shillong 45.34 267 *e*P **P** **09 09 42.9 -1.6**
G24K Hadweenzic Riv 45.38 31 P **P** **09 09 44.7 +0.6**
baz=270,SNR=9.8
G24K S **S** **09 16 28.1 +3.6**
baz=270
KURK Kurchatov 45.38 306 P **P** **09 09 44.0 -0.3**
KURK Kurchatov 45.38 306 IAMs_20 IAMs_20 09 29 27.6
comp=Z,11µm,19.0s
KURK Kurchatov 45.38 306 *ce*P **P** **09 09 43.1 -1.1**
KURK pmax pmax
comp=Z,415nm,1.7s
KURK MLR MLR
comp=Z,25µm,14.0s
KURK Kurchatov 45.38 306 P **P** **09 09 42.8 -1.4**
KURK P **P** **09 09 42.8 -1.4**
KURK S **S** **09 16 24.4 -0.4**
KURK S **S** **09 16 24.4 -0.4**
KURK Kurchatov 45.38 306 ⇑P **P** **09 09 43.2 -1.0**
MPSI Mapaga 45.40 215 P **P** **09 09 44.8 +0.1**
comp=Z,7µmcomp=Z,3µmcomp=Z,69nm,2.4s
WAT6 Susitna Watana 45.42 37 P **P** **09 09 45.2 +0.6**
baz=274,SNR=9.1
WAT6 S **S** **09 16 24.4 -1.0**
baz=274
POKR Poker Plat Res 45.43 34 P **P** **09 09 45.3 +0.8**
baz=272,SNR=14
POKR S **S** **09 16 27.0 +1.8**
baz=272
KURBB Kurchatov Arra 45.46 306 P **P** **09 09 44.0 -0.9**
comp=Z,169nm,0.7s,baz=80,slow=8.4,SNR=393
KURBB LR LR 09 27 46.7
comp=Z,3µm,21.4s,baz=56,slow=35
comp=Z,169nm,0.7s
KURBB Kurchatov Arra 45.46 306 P **P** **09 09 43.8 -1.0**
LUWI Luwuk 45.48 210 P **P** **09 09 45.5 +0.2**
comp=Z,5µmcomp=Z,128nm,1.2s
M23K Glacier View 45.49 38 P **P** **09 09 45.4 +0.4**
baz=275
M23K S **S** **09 16 26.4 +0.2**
baz=275
DHY Denali Highway 45.55 36 IAmb IAmb 09 10 25.7
comp=Z,121nm,1.2s
DHY Denali Highway 45.55 36 P **P** **09 09 45.9 +0.3**
baz=274,SNR=8.9
DHY S **S** **09 16 26.9 -0.4**
baz=274
MSAI Masohi 45.61 201 P **P** **09 09 48.4 +2.0**
comp=Z,14nm,0.7s
HDA Harding Lake 45.66 35 IAmb IAmb 09 10 02.5
comp=Z,59nm,0.9s
HDA IAMs_20 IAMs_20 09 28 40.0
comp=Z,9µm,19.0s
HDA Harding Lake 45.66 35 P **P** **09 09 46.1 -0.2**
baz=273,SNR=20
HDA S **S** **09 16 28.1 -0.5**
baz=273
HDA S **S** **09 16 28.1 -0.5**
baz=273
IL31 45.67 34 IAmb IAmb 09 10 04.4
comp=Z,79nm,1.0s
ILAR Eielson Array 45.67 34 P **P** **09 09 47.0 +0.7**
comp=Z,13nm,0.7s,baz=259,slow=5.9,SNR=92
ILAR LR LR 09 29 12.6
comp=Z,8µm,21.1s,baz=273,slow=36
comp=Z,13nm,0.7s
ILAR Eielson Array 45.67 34 P **P** **09 09 46.5 +0.1**
ILAR Eielson Array 45.67 34 P **P** **09 09 46.5 +0.1**
SCM Sheep Creek Mo 45.68 38 P **P** **09 09 46.4 -0.1**
baz=275,SNR=9.4
SCM S **S** **09 16 29.7 +0.7**
baz=275
APSI Ampana 45.80 212 P **P** **09 09 47.6 -0.3**
comp=Z,4µmcomp=Z,3µmcomp=Z,120nm,1.1s
D25K Kavik River 45.82 28 P **P** **09 09 48.1 +0.6**
baz=269,SNR=40
D25K S **S** **09 16 31.5 +0.7**
baz=269
P23K Montague Islan 45.83 41 P **P** **09 09 46.8 -0.9**
baz=277
P23K S **S** **09 16 33.1 +2.0**
baz=277
GLI Glacier Island 45.88 40 P **P** **09 09 47.1 -1.0**
baz=276
GLI S **S** **09 16 32.0 +0.2**
baz=276
NLAI Namlea 46.04 203 P **P** **09 09 51.8 +2.1**
comp=Z,4µmcomp=Z,57nm,1.0s
H25K Birch Creek 46.05 32 P **P** **09 09 50.2 +0.9**
baz=272
H25K S **S** **09 16 37.7 +3.6**
baz=272
F25K Christian Rive 46.09 30 P **P** **09 09 50.2 +0.5**
baz=271,SNR=20
F25K S **S** **09 16 38.3 +3.6**
baz=271
E25K Arctic Village 46.11 29 P **P** **09 09 50.6 +0.8**
baz=271,SNR=15
E25K S **S** **09 16 38.5 +3.5**
baz=271
AAI Ambon 46.14 202 P **P** **09 09 51.5 +1.0**
comp=Z,5µmcomp=Z,3µmcomp=Z,175nm,1.8s
M24K Tolsona, Glenn 46.19 38 IAmb IAmb 09 10 39.6
comp=Z,76nm,0.9s
M24K Tolsona, Glenn 46.19 38 P **P** **09 09 50.7 +0.1**
baz=276
M24K S **S** **09 16 38.4 +2.1**
baz=276
PRP Porcupine Dome 46.21 33 IAmb IAmb 09 10 39.7
comp=Z,70nm,0.8s
PRP Porcupine Dome 46.21 33 P **P** **09 09 51.0 +0.2**
baz=273
PRP S **S** **09 16 38.9 +2.2**
baz=273
K24K Donnelly Dome 46.22 35 P **P** **09 09 50.7 -0.1**
baz=275,SNR=9.2
K24K S **S** **09 16 35.0 -1.6**
baz=275
HIN Hinchinbrook I 46.23 40 IAmb IAmb 09 10 16.0
comp=Z,59nm,1.0s
HIN IAMs_20 IAMs_20 09 31 44.2
comp=Z,11µm,18.0s
J25K Salcha River, 46.33 34 P **P** **09 09 51.9 +0.2**
baz=274,SNR=13
J25K S **S** **09 16 36.6 -1.7**
baz=274
C26K Camden Bay 46.34 27 P **P** **09 09 52.2 +0.7**
baz=270
C26K S **S** **09 16 39.9 +1.8**
baz=270
KLU Klutina 46.38 39 P **P** **09 09 52.1 0.0**
baz=277
KLU S **S** **09 16 39.9 +0.8**
baz=277
PAX Paxson 46.43 37 P **P** **09 09 52.7 +0.3**
baz=276,SNR=12
PAX S **S** **09 16 39.2 -0.6**
baz=276
Q23K Middleton Isla 46.44 41 IAMs_20 IAMs_20 09 26 48.9
comp=Z,8µm,18.0s
Q23K Middleton Isla 46.44 41 P **P** **09 09 52.6 +0.2**
baz=278
Q23K S **S** **09 16 43.3 +3.6**
baz=278
BNDI Bandanaira 46.48 199 P **P** **09 09 54.5 +1.3**
comp=Z,798nm,1.8s
BMAR Bunt Mountain 46.50 30 P **P** **09 09 55.2 +2.3**
EYAK Cordova Ski Ar 46.58 40 IAmb IAmb 09 10 42.6
comp=Z,66nm,1.1s
EYAK Cordova Ski Ar 46.58 40 P **P** **09 09 54.4 +0.8**
baz=278,SNR=7.2
EYAK S **S** **09 16 44.4 +2.6**
baz=278
HARP HAARP 46.63 37 P **P** **09 09 54.4 +0.4**
baz=276,SNR=10
HARP S **S** **09 16 44.8 +2.2**
baz=276
RIDG Independent Ri 46.63 35 IAmb IAmb 09 10 42.7
comp=Z,82nm,1.2s
RIDG IAMs_20 IAMs_20 09 31 52.7
comp=Z,9µm,18.0s
RIDG Independent Ri 46.63 35 P **P** **09 09 54.2 +0.1**
baz=276,SNR=9.5
RIDG S **S** **09 16 41.5 -1.1**
baz=276
JOHN Johnston Islan 46.64 106 IAMs_20 IAMs_20 09 28 59.9
comp=Z,14µm,19.0s
F26K Sheenjek River 46.66 30 P **P** **09 09 55.1 +1.0**
baz=272,SNR=16
F26K S **S** **09 16 47.1 +4.3**
baz=272
AGT Agartala 46.74 266 *e*P **P** **09 09 56.0 +0.7**
C27K Jago River 46.76 27 P **P** **09 09 55.3 +0.4**
baz=271,SNR=20
C27K S **S** **09 16 44.6 +0.4**
baz=271
G26K Porcupine Rive 46.83 31 P **P** **09 09 55.6 +0.1**
baz=273,SNR=39
G26K S **S** **09 16 50.3 +5.0**
baz=273
GTK Tadong 46.94 272 *e*P **P** **09 09 57.1 +0.2**
GTK IAmb IAmb 09 10 08.6
comp=Z,80nm,1.0s
GTK *i* x S 09 16 59.2 +11
SHLS Shalkode 46.98 296 *e*P **P** **09 09 53.8 -3.3**
SHLS *e*S **S** **09 16 42.7 -5.5**
SHLS pmax pmax
comp=Z,98nm,1.9s
SHLS Shalkode 46.98 296 *e*P **P** **09 09 53.9 -3.3**
comp=Z,98nm,1.9s,baz=295
SHLS *e*S **S** **09 16 42.8 -5.5**
baz=295
SCRK Sand Creek 46.99 35 IAmb IAmb 09 10 09.0
comp=Z,50nm,0.8s
SCRK Sand Creek 46.99 35 P **P** **09 09 56.8 -0.1**
baz=276,SNR=35
SCRK S **S** **09 16 47.2 -0.7**
baz=276
N25K Chitina, Valde 46.99 38 IAmb IAmb 09 10 20.8
comp=Z,65nm,1.4s
N25K Chitina, Valde 46.99 38 P **P** **09 09 57.2 +0.3**
baz=278,SNR=7.7
N25K S **S** **09 16 49.8 +1.9**
baz=278
TARA Tarawa 47.01 138 IAMs_20 IAMs_20 09 31 25.1
comp=Z,11µm,19.0s
BMRM Bremner River 47.08 39 P **P** **09 09 57.5 0.0**
baz=278,SNR=12
BMRM S **S** **09 16 51.5 +2.5**
baz=278
TDK Taldyqorghan 47.09 298 *e*P **P** **09 09 57.1 -0.7**
TDK *e*S **S** **09 16 49.0 -0.5**
TDK pmax pmax
comp=Z,477nm,1.5s
TDK MLR MLR
comp=Z,24µm,12.0s
TDK Taldyqorghan 47.09 298 *e*P **P** **09 09 57.1 -0.7**
comp=Z,476nm,1.5s,baz=298
TDK *e*S **S** **09 16 49.1 -0.5**
baz=298
TDK LR LR 09 30 32.9
comp=Z,24µm,12.0s,baz=298
J26L Joseph Creek 47.12 34 P **P** **09 09 57.5 -0.4**
baz=276,SNR=23
J26L S **S** **09 16 49.6 0.0**
baz=276
RAGM Ragged Mountai 47.13 40 IAMs_20 IAMs_20 09 33 01.9
comp=Z,11µm,18.0s
I26K Coal Creek Min 47.22 33 IAMs_20 IAMs_20 09 32 18.4
comp=Z,12µm,18.0s
I26K Coal Creek Min 47.22 33 P **P** **09 09 59.0 +0.6**
baz=276
I26K S **S** **09 16 52.9 +2.1**
baz=276
MENT Mentasta 47.23 36 IAmb IAmb 09 10 41.3
comp=Z,87nm,1.1s
UZB Uzunbulak 47.28 296 *e*P **P** **09 09 58.2 -1.3**
UZB pmax pmax
comp=Z,62nm,1.8s
UZB Uzunbulak 47.28 296 *e*P **P** **09 09 58.3 -1.3**
comp=Z,62nm,1.8s,baz=296
SMKI Samarinda 47.31 217 P **P** **09 10 00.9 +1.2**
comp=Z,11µmcomp=Z,157nm,0.6s
KAIM Kayak Island 47.33 41 IAmb IAmb 09 11 08.2
comp=Z,79nm,1.1s
KAIM Kayak Island 47.33 41 P **P** **09 10 00.3 +0.8**
baz=279
KAIM S **S** **09 16 56.4 +3.8**
baz=279
HMT Hamilton 47.34 40 IAmb IAmb 09 10 17.7
comp=Z,54nm,1.0s
HMT IAMs_20 IAMs_20 09 33 08.5
comp=Z,10µm,18.0s
SBUM Sibu 47.34 225 IAmb IAmb 09 10 05.4
comp=Z,54nm,1.1s
SBUM IAMs_20 IAMs_20 09 31 28.3
comp=Z,10µm,20.0s
SBUM Sibu 47.34 225 ⇑P **P** **09 09 59.2 -0.8**
L26K Log Cabin Wild 47.39 36 IAmb IAmb 09 10 13.1
comp=Z,62nm,0.8s
L26K IAMs_20 IAMs_20 09 29 10.6
comp=Z,9µm,20.0s
L26K Log Cabin Wild 47.39 36 P **P** **09 09 59.8 -0.1**
baz=277,SNR=46
L26K S **S** **09 16 57.1 +3.8**
baz=277
GLB Gilahina Butte 47.39 38 IAmb IAmb 09 11 08.9
comp=Z,53nm,1.2s
SLGI Shiliguri 47.40 271 *e*P **P** **09 09 56.8 -3.6**
KPKS Kokpek 47.41 296 *e*P **P** **09 09 59.4 -1.0**
KPKS *e*S **S** **09 16 53.6 -0.6**
KPKS pmax pmax
comp=Z,71nm,1.1s
KPKS Kokpek 47.41 296 *e*P **P** **09 09 59.5 -1.0**
comp=Z,71nm,1.1s,baz=296
KPKS *e*S **S** **09 16 53.7 -0.6**
baz=296
E27K Coleen River 47.59 29 P **P** **09 10 02.6 +1.2**
baz=274,SNR=17
E27K S **S** **09 16 59.8 +3.6**
baz=274
TAPN Taplejung 47.60 272 *e*P **P** **09 10 02.1 -0.2**
BERG Berg Lake 47.61 40 IAMs_20 IAMs_20 09 32 58.6
comp=Z,8µm,18.0s
SUCK Suckling Hills 47.62 40 IAMs_20 IAMs_20 09 27 32.0
comp=Z,9µm,20.0s
M26K Nabesna, AK 47.63 37 P **P** **09 10 02.5 +0.7**
baz=278,SNR=24
M26K S **S** **09 17 00.5 +3.6**
baz=278
ZHN Zhinishke 47.68 296 *e*P **P** **09 10 01.3 -1.2**
ZHN *e*S **S** **09 16 57.5 -0.7**
ZHN pmax pmax
comp=Z,58nm,1.4s
ZHN Zhinishke 47.68 296 *e*P **P** **09 10 01.3 -1.2**
comp=Z,58nm,1.4s,baz=296
ZHN *e*S **S** **09 16 57.5 -0.7**
baz=296
G27K Doyon Strip 47.68 31 P **P** **09 10 03.1 +0.9**
baz=275,SNR=21
G27K S **S** **09 17 01.6 +4.1**
baz=275
SATY Saty 47.74 296 *e*P **P** **09 10 02.0 -1.0**
SATY pmax pmax
comp=Z,149nm,2.2s
SATY Saty 47.74 296 *e*P **P** **09 10 02.0 -1.0**
comp=Z,149nm,2.2s,baz=296
ARXS Arharly 47.74 297 *e*P P 09 10 20.0 +17
MCARA McCarthy VSAT 47.77 38 P **P** **09 10 03.5 +0.6**
baz=279,SNR=8.6
MCARA S **S** **09 17 01.9 +3.1**
baz=279
H27K Steamboat Moun 47.79 32 P **P** **09 10 03.8 +0.8**
baz=276
H27K S **S** **09 17 03.5 +4.4**
baz=276
K27K Chicken 47.82 35 IAMs_20 IAMs_20 09 29 57.5
comp=Z,9µm,21.0s
K27K Chicken 47.82 35 P **P** **09 10 04.0 +0.8**
baz=278
K27K S **S** **09 17 01.2 +1.8**
baz=278
I27K Kandik River 47.82 33 P **P** **09 10 04.4 +1.1**
baz=277
I27K S **S** **09 17 03.0 +3.5**
baz=277
BGLC Bering Glacier 47.86 40 P **P** **09 10 04.3 +0.8**
baz=280
BGLC S **S** **09 17 03.0 +3.0**
baz=280
TGL Tana Glacier 47.97 39 IAMs_20 IAMs_20 09 32 51.2
comp=Z,8µm,20.0s

WAX	**Waxell Ridge**	**48.01**	**40**	IAMs_20	IAMs_20	09 33 02.3					
	comp=Z,9µm,20.0s										
L27K	**Beaver Creek,**	**48.07**	**36**	IAmb	IAmb	09 10 33.4					
	comp=Z,62nm,0.8s										
L27K	**Beaver Creek,**	**48.07**	**36**	P	**P**	**09 10 04.8**	**-0.4**				
	baz=279,SNR=43										
L27K				S	**S**	**09 17 04.9**	**+1.9**				
	baz=279										
SNH	**Sunshine Point**	**48.07**	**40**	IAMs_20	IAMs_20	09 27 55.7					
	comp=Z,10µm,21.0s										
BCAR	**Beaver Creek A**	**48.09**	**36**	P	**P**	**09 10 05.5**	**+0.2**				
ODAN	**Odare**	**48.10**	**272**	*eP*	**P**	**09 10 05.7**	**-0.4**				
	comp=Z,210nm,1.6s										
EGAK	**Eagle**	**48.12**	**34**	IAmb	IAmb	09 10 22.5					
	comp=Z,68nm,0.9s										
EGAK	**Eagle**	**48.12**	**34**	P	**P**	**09 10 06.2**	**+0.8**				
	baz=278,SNR=11										
EGAK				S	**S**	**09 17 03.9**	**+0.3**				
	baz=278										
M27K	**Edge Creek, AK**	**48.15**	**37**	IAmb	IAmb	09 10 19.2					
	comp=Z,51nm,0.9s										
M27K				IAMs_20	IAMs_20	09 30 35.9					
	comp=Z,10µm,20.0s										
M27K	**Edge Creek, AK**	**48.15**	**37**	P	**P**	**09 10 06.2**	**+0.2**				
	baz=279,SNR=45										
M27K				S	**S**	**09 17 08.1**	**+3.7**				
	baz=279										
BKB	**Balikpapan**	**48.17**	**217**	P	**P**	**09 10 05.7**	**-0.7**				
	comp=Z,9µmcomp=Z,8µmcomp=Z,252nm,1.1s										
ISLE	**Juniper Island**	**48.23**	**39**	IAmb	IAmb	09 10 31.9					
	comp=Z,94nm,1.1s										
TTSI	**Tana Toraja**	**48.48**	**213**	P	**P**	**09 10 08.3**	**-0.5**				
	comp=Z,5µmcomp=Z,1µmcomp=Z,39nm,1.2s										
GRNC	**Granite Creek**	**48.49**	**39**	IAmb	IAmb	09 10 36.3					
	comp=Z,55nm,0.8s										
MESA	**MESA**	**48.50**	**40**	IAMs_20	IAMs_20	09 33 30.3					
	comp=Z,11µm,19.0s										
MESA	**MESA**	**48.50**	**40**	P	**P**	**09 10 08.8**	**0.0**				
	baz=281										
MESA				S	**S**	**09 17 11.6**	**+2.0**				
	baz=281										
YAH	**Yahtse**	**48.57**	**40**	IAmb	IAmb	09 10 32.2					
	comp=Z,102nm,1.1s										
JIRN	**Jiri**	**48.60**	**273**	*eP*	**P**	**09 10 10.3**	**+0.1**				
BVCY	**Beaver Creek**	**48.61**	**37**	P	**P**	**09 10 09.6**	**+0.3**				
	baz=280,SNR=18										
BVCY				S	**S**	**09 17 12.4**	**+1.6**				
	baz=280										
MDOK	**Medeo**	**48.63**	**296**	*eP*	**P**	**09 10 08.6**	**-1.3**				
MDOK				*eS*	**S**	**09 17 11.5**	**-0.2**				
MDOK				MLR	MLR						
	comp=Z,24µm,14.0s										
MDOK	**Medeo**	**48.63**	**296**	*eP*	**P**	**09 10 08.6**	**-1.3**				
	baz=296										
MDOK				*eS*	**S**	**09 17 11.6**	**-0.2**				
	baz=296										
MDOK				LR	LR	09 31 19.5					
	comp=Z,24µm,14.3s,baz=296										
CTG	**Chitna Glacier**	**48.65**	**39**	P	**P**	**09 10 10.6**	**+0.8**				
	baz=281,SNR=7.3										
CTG				S	**S**	**09 17 12.7**	**+1.2**				
	baz=281										
CTGM	**Chitina Glacie**	**48.65**	**39**	IAmb	IAmb	09 10 48.4					
	comp=Z,109nm,1.4s										
CTGM				IAMs_20	IAMs_20	09 34 07.1					
	comp=Z,8µm,19.0s										
RAMN	**Ramite**	**48.65**	**272**	*eP*	**P**	**09 10 10.6**	**+0.2**				
	comp=Z,225nm,0.9s										
AAA	**Alma-Ata**	**48.71**	**297**	*eP*	**P**	**09 10 09.2**	**-1.2**				
AAA				pmax	pmax						
	comp=Z,100nm,1.1s										
AAA				MLR	MLR						
	comp=Z,28µm,14.0s										
AAA	**Alma-Ata**	**48.71**	**297**	*eP*	**P**	**09 10 09.2**	**-1.2**				
	comp=Z,100nm,1.1s,baz=296										
AAA				LR	LR	09 31 32.8					
	comp=Z,28µm,14.4s,baz=296										
GUN	**Gumba**	**48.71**	**274**	*eP*	**P**	**09 10 10.1**	**-0.9**				
MTKI	**Muara Teweh, K**	**48.84**	**220**	P	**P**	**09 10 11.3**	**-0.3**				
	comp=Z,4µmcomp=Z,140nm,1.2s										
TABL	**Table Mountain**	**48.85**	**40**	IAmb	IAmb	09 11 15.0					
	comp=Z,127nm,1.6s										
KUU	**Kurty**	**48.86**	**298**	*eP*	**P**	**09 10 10.5**	**-1.0**				
KUU				*eS*	**S**	**09 17 14.9**	**+0.3**				
KUU				pmax	pmax						
	comp=Z,125nm,1.1s										
KUU				MLR	MLR						
	comp=Z,15µm,13.0s										
KUU	**Kurty**	**48.86**	**298**	*eP*	**P**	**09 10 10.6**	**-1.0**				
	comp=Z,125nm,1.1s,baz=298										
KUU				*eS*	**S**	**09 17 14.9**	**+0.3**				
	baz=298										
KUU				LR	LR	09 31 32.0					
	comp=Z,15µm,12.8s,baz=298										
YUK3	**Moose Creek**	**48.91**	**38**	P	**P**	**09 10 12.2**	**+0.2**				
	baz=281,SNR=17										
YUK3				S	**S**	**09 17 17.2**	**+1.9**				
	baz=281										
DAWY	**Dawson**	**48.98**	**35**	P	**P**	**09 10 12.5**	**+0.2**				
	baz=280										
DAWY				S	**S**	**09 17 17.0**	**+1.1**				
	baz=280										
DAWY	**Dawson**	**48.98**	**35**	⇓P	**P**	**09 10 14.2**	**+2.0**				
KSM	**Kuching**	**49.20**	**227**	P	**P**	**09 10 14.3**	**0.0**				
KSM	**Kuching**	**49.20**	**227**	⇑P	**P**	**09 10 14.8**	**+0.4**				
I29M	**Ogilvie Camp,**	**49.23**	**33**	IAmb	IAmb	09 10 28.9					
	comp=Z,91nm,1.1s										
I29M				IAMs_20	IAMs_20	09 33 14.0					
	comp=Z,10µm,18.0s										
I29M	**Ogilvie Camp,**	**49.23**	**33**	P	**P**	**09 10 14.1**	**+0.1**				
	baz=280,SNR=24										
I29M				S	**S**	**09 17 21.0**	**+1.8**				
	baz=280										
KKN	**Kakani**	**49.23**	**274**	*eP*	**P**	**09 10 14.3**	**-0.5**				
O28M	**Mount Upton**	**49.24**	**39**	P	**P**	**09 10 14.4**	**-0.1**				
	baz=282,SNR=6.9										
O28M				S	**S**	**09 17 21.9**	**+1.8**				
	baz=282										
PKI	**Pulchoki**	**49.24**	**274**	*eP*	**P**	**09 10 14.8**	**-0.2**				
	comp=Z,484nm,1.5s										
BRZS	**Berezniki**	**49.24**	**306**	*eP*	**P**	**09 10 13.9**	**-0.5**				
BRZS				*eS*	**S**	**09 17 20.7**	**+0.8**				
BRZS				pmax	pmax						
	comp=Z,124nm,1.4s										
BRZS	**Berezniki**	**49.24**	**306**	*eP*	**P**	**09 10 13.9**	**-0.5**				
	comp=Z,124nm,1.4s,baz=306										
BRZS				*eS*	**S**	**09 17 20.7**	**+0.8**				
	baz=306										
PKIN	**Phulchoki**	**49.25**	**274**	*eP*	**P**	**09 10 14.7**	**-0.3**				
SPSI	**Sidrap Palu**	**49.33**	**212**	P	**P**	**09 10 14.5**	**-0.8**				
	comp=Z,2µmcomp=Z,58nm,1.2s										
PINM	**Pinnacle**	**49.35**	**40**	P	**P**	**09 10 15.0**	**-0.1**				
	baz=282										
PINM				S	**S**	**09 17 24.2**	**+2.9**				
	baz=282										
J29M	**Klondike Camp**	**49.42**	**34**	IAMs_20	IAMs_20	09 30 57.2					
	comp=Z,8µm,20.0s										
J29M	**Klondike Camp**	**49.42**	**34**	P	**P**	**09 10 15.9**	**+0.3**				
	baz=280										
J29M				S	**S**	**09 17 24.7**	**+2.6**				
	baz=280										
DMN	**Daman**	**49.45**	**274**	*eP*	**P**	**09 10 16.8**	**+0.2**				
ULHL	**Ulahol**	**49.52**	**296**	P	**P**	**09 10 17.2**	**+0.3**				
	SNR=32										
GKN	**Gorkha**	**49.61**	**275**	*eP*	**P**	**09 10 17.6**	**0.0**				
BBSI	**Bau Bau**	**49.65**	**208**	P	**P**	**09 10 20.3**	**+2.6**				
	comp=Z,287nmcomp=Z,18nm,1.3s										
EPYK	**Eagle Plains**	**49.70**	**31**	IAMs_20	IAMs_20	09 34 11.4					
	comp=Z,9µm,18.0s										
EPYK	**Eagle Plains**	**49.70**	**31**	P	**P**	**09 10 18.1**	**+0.5**				
	baz=280,SNR=24										
EPYK				S	**S**	**09 17 29.3**	**+3.4**				
	baz=280										
M29M	**Somme Creek**	**49.70**	**37**	P	**P**	**09 10 17.3**	**-0.5**				
	baz=282										
M29M				S	**S**	**09 17 30.4**	**+4.3**				
	baz=282										
TKM2	**Tokmak 2**	**49.71**	**297**	P	**P**	**09 10 18.0**	**-0.3**				
	SNR=152										
TKM2	**Tokmak 2**	**49.71**	**297**	*i* P	**P**	**09 10 17.6**	**-0.7**				
TKM2				pmax	pmax						
	comp=Z,195nm,0.8s										
BVA0	**Borovoye Array**	**49.73**	**311**	*i* P	**P**	**09 10 18.2**	**+0.2**				
BVAR	**Borovoye Array**	**49.73**	**311**	LR	LR	09 32 42.8					
	comp=Z,18µm,18.7s,baz=315,slow=38										
STKI	**Sintang**	**49.74**	**224**	P	**P**	**09 10 19.6**	**+1.1**				
	comp=Z,4µmcomp=Z,60nm,0.8s										
BRVK	**Borovoye**	**49.78**	**311**	P	**P**	**09 10 18.1**	**-0.2**				
BRVK	**Borovoye**	**49.78**	**311**	*ce*P	**P**	**09 10 17.9**	**-0.4**				
BRVK				pmax	pmax						
	comp=Z,177nm,1.7s										
BRVK				MLR	MLR						
	comp=Z,27µm,15.0s										
BRVK	**Borovoye**	**49.78**	**311**	P	**P**	**09 10 17.7**	**-0.7**				
BRVK				P	**P**	**09 10 17.7**	**-0.7**				
BRVK				S	**S**	**09 17 23.5**	**-3.7**				
BRVK				S	**S**	**09 17 23.5**	**-3.7**				
BRVK	**Borovoye**	**49.78**	**311**	⇑P	**P**	**09 10 18.0**	**-0.4**				
BRVK				⇑P	**pP**	**09 10 19.0**	**-2.4**				
YUK4	**Talbot Arm**	**49.85**	**38**	P	**P**	**09 10 20.6**	**+1.5**				
	baz=283,SNR=12										
YUK4				S	**S**	**09 17 31.1**	**+2.6**				
	baz=283										
PNL	**Peninsula**	**49.87**	**40**	P	**P**	**09 10 20.0**	**+1.0**				
	baz=284										
PNL				S	**S**	**09 17 30.3**	**+1.9**				
	baz=284										
BTLS	**Baital**	**49.99**	**300**	*eP*	**P**	**09 10 18.8**	**-1.3**				
BTLS				pmax	pmax						
	comp=Z,74nm,1.6s										
BTLS	**Baital**	**49.99**	**300**	*eP*	**P**	**09 10 18.8**	**-1.3**				
	comp=Z,74nm,1.6s,baz=300										
YUK6	**Outpost Mounta**	**50.08**	**38**	P	**P**	**09 10 21.6**	**+0.8**				
	baz=283										
YUK6				S	**S**	**09 17 35.4**	**+3.8**				
	baz=283										
DANN	**Dangsing**	**50.10**	**276**	*eP*	**P**	**09 10 22.0**	**+0.5**				
	comp=Z,418nm,0.8s										
O29M	**Mount Kennedy**	**50.12**	**39**	P	**P**	**09 10 22.0**	**+0.9**				
	baz=284,SNR=6.5										
O29M				S	**S**	**09 17 35.1**	**+3.0**				
	baz=284										
SGDS	**Sogindy**	**50.17**	**298**	*ce*P	**P**	**09 10 20.8**	**-0.8**				
SGDS				*eS*	**S**	**09 17 33.2**	**+0.1**				
SGDS				pmax	pmax						
	comp=Z,118nm,1.8s										
SGDS	**Sogindy**	**50.17**	**298**	⇓*e*P	**P**	**09 10 20.8**	**-0.8**				
	comp=Z,118nm,1.8s,baz=298										
SGDS				*eS*	**S**	**09 17 33.2**	**+0.1**				
	baz=298										
KBK	**Karagaybulak**	**50.25**	**297**	P	**P**	**09 10 23.0**	**+0.7**				
	SNR=26										
CHMS	**Chumysh**	**50.26**	**297**	P	**P**	**09 10 22.4**	**+0.2**				
	SNR=12										
CHMS	**Chumysh**	**50.26**	**297**	*i* P	**P**	**09 10 21.8**	**-0.4**				
CHMS				pmax	pmax						
	comp=Z,46nm,0.8s										
KAPI	**Kappang**	**50.29**	**212**	LR	LR	09 33 44.5					
	comp=Z,3µm,18.1s,baz=24,slow=39										
KAPI	**Kappang**	**50.29**	**212**	P	**P**	**09 10 22.1**	**-0.5**				
KAPI	**Kappang**	**50.29**	**212**	*c i*P	**P**	**09 10 21.7**	**-0.9**				
KAPI				pmax	pmax						
	comp=Z,112nm,1.1s										
KAPI	**Kappang**	**50.29**	**212**	P	**P**	**09 10 21.5**	**-1.1**				
KAPI				P	**P**	**09 10 21.5**	**-1.1**				
KAPI				S	**S**	**09 17 33.7**	**-1.3**				
KAPI				S	**S**	**09 17 33.7**	**-1.3**				
KAPI	**Kappang**	**50.29**	**212**	⇑P	**P**	**09 10 22.3**	**-0.4**				
USP	**Ospenovka**	**50.33**	**297**	P	**P**	**09 10 23.1**	**+0.3**				
	SNR=41										
BKSI	**Bulukumba**	**50.42**	**211**	P	**P**	**09 10 24.0**	**+0.4**				
	comp=Z,4µmcomp=Z,2µmcomp=Z,54nm,1.3s										
M30M	**Minto, Yukon**	**50.43**	**36**	IAMs_20	IAMs_20	09 34 41.0					
	comp=Z,9µm,18.0s										
M30M	**Minto, Yukon**	**50.43**	**36**	P	**P**	**09 10 24.1**	**+0.8**				
	baz=283,SNR=16										
M30M				S	**S**	**09 17 40.6**	**+4.5**				
	baz=283										
HYT	**Haines Junctio**	**50.51**	**39**	P	**P**	**09 10 24.3**	**+0.3**				
	baz=284,SNR=51										
HYT				S	**S**	**09 17 40.5**	**+3.0**				
	baz=284										
INK	**Inuvik**	**50.55**	**29**	P	**P**	**09 10 25.9**	**+1.9**				
	comp=Z,16nm,0.7s,baz=293,slow=7.3,SNR=30										
INK				LR	LR	09 35 17.7					
	comp=Z,7µm,18.4s,baz=272,slow=40										
	comp=Z,16nm,0.7s										
INK	**Inuvik**	**50.55**	**29**	P	**P**	**09 10 24.6**	**+0.6**				
INK				IAmb	IAmb	09 10 36.8					
	comp=Z,50nm,0.9s										
INK	**Inuvik**	**50.55**	**29**	P	**P**	**09 10 24.6**	**+0.6**				
INK				pmax	pmax						
	comp=Z,50nm,1.0s										
INK	**Inuvik**	**50.55**	**29**	P	**P**	**09 10 24.1**	**+0.1**				
	baz=281,SNR=15										
INK				S	**S**	**09 17 39.0**	**+1.4**				
	baz=281										
INK	**Inuvik**	**50.55**	**29**	⇓P	**P**	**09 10 24.7**	**+0.6**				
N30M	**Aishikik Lake**	**50.55**	**38**	P	**P**	**09 10 24.6**	**+0.4**				
	baz=284										
N30M				S	**S**	**09 17 41.9**	**+4.0**				
	baz=284										
AAK	**Ala-Archa**	**50.57**	**297**	P	**P**	**09 10 24.7**	**-0.1**				
	SNR=22										
AAK	**Ala-Archa**	**50.57**	**297**	P	**P**	**09 10 24.2**	**-0.5**				
AAK				IAmb	IAmb	09 10 45.5					
	comp=Z,58nm,0.8s										
AAK	**Ala-Archa**	**50.57**	**297**	*ce*P	**P**	**09 10 24.0**	**-0.7**				
AAK				pmax	pmax						
	comp=Z,135nm,1.7s										
AAK				MLR	MLR						
	comp=Z,16µm,14.0s										
AAK	**Ala-Archa**	**50.57**	**297**	P	**P**	**09 10 24.1**	**-0.6**				
AAK				P	**P**	**09 10 24.1**	**-0.6**				
AAK				S	**S**	**09 17 31.6**	**-7.3**				
AAK				S	**S**	**09 17 31.6**	**-7.3**				
AAK	**Ala-Archa**	**50.57**	**297**	*i* P	**P**	**09 10 24.4**	**-0.4**				
	SNR=22										
AAK	**Ala-Archa**	**50.57**	**297**	⇑P	**P**	**09 10 24.9**	**+0.1**				
AAK				⇑P	**P**	**09 10 24.9**	**+0.1**				
MAYO	**Mayo, Yukon**	**50.60**	**35**	P	**P**	**09 10 24.8**	**+0.3**				
	baz=283										
MAYO				S	**S**	**09 17 42.6**	**+4.2**				
	baz=283										
P29M	**Windy Craggy**	**50.70**	**40**	IAmb	IAmb	09 10 44.2					
	comp=Z,109nm,0.9s										
P29M				IAMs_20	IAMs_20	09 31 05.2					
	comp=Z,8µm,21.0s										
P29M	**Windy Craggy**	**50.70**	**40**	P	**P**	**09 10 25.5**	**+0.2**				
	baz=285,SNR=20										
P29M				S	**S**	**09 17 44.5**	**+4.6**				
	baz=285										
KSH	**Kashi**	**50.77**	**292**	P	**P**	**09 10 29.9**	**+3.6**				
KSH				ScP	**ScP**	**09 15 42.0**	**+3.0**				
KSH				S	**S**	**09 17 48.8**	**+7.1**				
KSH				SS	**SS**	**09 21 23.9**	**+8.0**				
KSH				pmax	pmax						
	comp=Z,55nm,1.1s										
KSH				pmax	pmax						
	comp=Z,5µm,13.7s										
KSH				LR	LR						
	comp=Z,55µm,15.8s										
KSH				LR	LR						
	comp=Z,50µm,14.3s										
KSH				LR	LR						
	comp=Z,90µm,16.5s										
BOK	**Bokaro**	**50.88**	**269**	⇑*i*P	**P**	**09 10 27.7**	**+0.6**				
BOK				IAmb	IAmb	09 10 30.8					
	comp=Z,497nm,2.2s										
BOK				*i* PP	**PP**	**09 12 20.9**	**-2.4**				
P30M	**Million Dollar**	**50.95**	**39**	P	**P**	**09 10 27.5**	**+0.3**				
	baz=285										
P30M				S	**S**	**09 17 47.1**	**+3.6**				
	baz=285										
BSSI	**Bau Bau, Buton**	**51.03**	**210**	P	**P**	**09 10 29.6**	**+1.4**				
	comp=Z,3µmcomp=Z,2µmcomp=Z,56nm,1.1s										
EKS2	**Erkin-Say**	**51.05**	**297**	P	**P**	**09 10 28.3**	**0.0**				
	SNR=25										
BBKI	**Banjar Baru**	**51.06**	**218**	P	**P**	**09 10 30.1**	**+1.6**				
	comp=Z,4µmcomp=Z,113nm,2.3s										
N31M	**Braeburn, Yuko**	**51.16**	**37**	IAmb	IAmb	09 10 42.4					
	comp=Z,82nm,1.0s										
N31M	**Braeburn, Yuko**	**51.16**	**37**	P	**P**	**09 10 29.0**	**+0.2**				
	baz=285,SNR=25										
N31M				S	**S**	**09 17 50.4**	**+4.2**				
	baz=285										
O30N	**Mendenhall**	**51.20**	**38**	P	**P**	**09 10 30.3**	**+1.2**				
	baz=285,SNR=12										
O30N				S	**S**	**09 17 51.1**	**+4.2**				
	baz=285										
AML	**Almayashu**	**51.31**	**296**	P	**P**	**09 10 31.5**	**+0.9**				
	SNR=20										
PLBC	**Pleasant Camp**	**51.42**	**40**	P	**P**	**09 10 31.9**	**+1.3**				
	baz=286,SNR=8.7										
PLBC				S	**S**	**09 17 53.5**	**+3.7**				
	baz=286										
M31M	**Drury Creek, Y**	**51.61**	**36**	IAmb	IAmb	09 10 56.2					
	comp=Z,107nm,1.5s										
M31M				IAMs_20	IAMs_20	09 32 28.1					
	comp=Z,9µm,19.0s										
M31M	**Drury Creek, Y**	**51.61**	**36**	P	**P**	**09 10 31.2**	**-0.8**				
	baz=285,SNR=18										
M31M				S	**S**	**09 17 56.7**	**+4.2**				
	baz=285										
HNR	**Honiara**	**51.79**	**160**	IAMs_20	IAMs_20	09 35 18.6					
	comp=Z,9µm,18.0s										
WHY	**Whitehorse**	**51.80**	**38**	IAmb	IAmb	09 10 58.0					
	comp=Z,108nm,1.6s										
WHY	**Whitehorse**	**51.80**	**38**	P	**P**	**09 10 33.9**	**+0.3**				
	baz=286										
WHY				S	**S**	**09 17 59.9**	**+4.6**				
	baz=286										
WHY	**Whitehorse**	**51.80**	**38**	⇓P	**P**	**09 10 36.5**	**+2.8**				
SKAG	**Skagway**	**51.92**	**40**	P	**P**	**09 10 34.0**	**-0.4**				
	baz=287										
SKAG				S	**S**	**09 18 00.9**	**+4.1**				
	baz=287										
DGPR	**DIGLIPUR**	**51.98**	**253**	*e*P	**P**	**09 10 33.8**	**-1.6**				
FARO	**Faro, Yukon**	**52.07**	**36**	P	**P**	**09 10 35.9**	**+0.4**				
	baz=286,SNR=22										
FARO				S	**S**	**09 18 01.6**	**+2.7**				
	baz=286										
KULM	**Kulim**	**52.10**	**240**	IAmb	IAmb	09 10 42.2					
	comp=Z,108nm,1.1s										
KULM				IAMs_20	IAMs_20	09 34 20.2					
	comp=Z,12µm,18.0s										
KULM	**Kulim**	**52.10**	**240**	⇑P	**P**	**09 10 36.9**	**+0.6**				
PTH	**Pithoragarh**	**52.18**	**279**	⇑*i*P	**P**	**09 10 36.9**	**-0.1**				
LGTI	**Lohaghat**	**52.21**	**279**	*e*P	**P**	**09 10 37.1**	**+0.1**				
VAR	**Varanasi**	**52.26**	**273**	*e*P	**P**	**09 10 33.9**	**-3.4**				
VAR				*i* x	**PP**	**09 12 33.3**	**-2.5**				
A36M	**Sachs Harbour**	**52.45**	**23**	P	**P**	**09 10 38.8**	**+0.7**				
	baz=286										
A36M				S	**S**	**09 18 06.1**	**+2.5**				
	baz=286										
IPM	**Ipoh**	**52.47**	**239**	IAmb	IAmb	09 10 44.2					
	comp=Z,128nm,1.2s										
IPM				IAMs_20	IAMs_20	09 32 11.8					
	comp=Z,11µm,21.0s										
IPM	**Ipoh**	**52.47**	**239**	⇑P	**P**	**09 10 38.9**	**-0.1**				
KIP	**Kipapa**	**52.47**	**93**	P	**P**	**09 10 41.9**	**+3.0**				
KIP				IAmb	IAmb	09 10 43.9					
	comp=Z,112nm,1.1s										
KIP	**Kipapa**	**52.47**	**93**	*ce*P	**P**	**09 10 39.1**	**+0.1**				
KIP				pmax	pmax						
	comp=Z,166nm,1.7s										
KIP				MLR	MLR						
	comp=Z,4µm,17.0s										
N32M	**Quiet Lake**	**52.50**	**37**	P	**P**	**09 10 39.1**	**+0.4**				
	baz=287										
N32M				S	**S**	**09 18 07.7**	**+2.9**				
	baz=287										
DZA	**Taraz**	**52.62**	**298**	*e*P	**P**	**09 10 38.7**	**-1.1**				
DZA				pmax	pmax						
	comp=Z,74nm,0.9s										
DZA	**Taraz**	**52.62**	**298**	*e*P	**P**	**09 10 38.8**	**-1.1**				
	comp=Z,74nm,0.9s,baz=298										
SIT	**Sitka**	**52.65**	**43**	P	**P**	**09 10 40.3**	**+0.5**				
	baz=289										
SIT				S	**S**	**09 18 11.7**	**+5.0**				
	baz=289										
P32M	**Atlin**	**52.67**	**39**	P	**P**	**09 10 40.0**	**-0.1**				
	baz=288										
P32M				S	**S**	**09 18 10.7**	**+3.6**				
	baz=288										
MMRI	**Maumere**	**52.69**	**207**	IAMs_20	IAMs_20	09 32 27.7					
	comp=Z,7µm,20.0s										
MMRI	**Maumere**	**52.69**	**207**	P	**P**	**09 10 40.3**	**-0.3**				
	comp=Z,4µmcomp=Z,6µmcomp=Z,283nm,1.2s										
MYKOM	**Kota Tinggi**	**52.74**	**234**	P	**P**	**09 10 40.1**	**-0.9**				
MYKOM				IAmb	IAmb	09 11 00.7					
	comp=Z,112nm,1.4s										
MYKOM				IAMs_20	IAMs_20	09 33 45.2					
	comp=Z,9µm,18.0s										
MYKOM	**Kota Tinggi**	**52.74**	**234**	⇑P	**P**	**09 10 41.6**	**+0.6**				
JIS	**Juneau Island**	**52.75**	**41**	IAMs_20	IAMs_20	09 36 55.5					
	comp=Z,7µm,18.0s										
MMPY	**Sheldon Lake,**	**52.88**	**35**	P	**P**	**09 10 41.9**	**+0.3**				
	baz=288,SNR=12										
MMPY				S	**S**	**09 18 14.1**	**+4.1**				
	baz=288										
P33M	**Teslin, Yukon**	**52.91**	**38**

baz=291
JMU Jammu 54.59 285 *e*P **P** **09 10 54.5 0.0**
LHMI Lhok Sumawe 54.63 243 P **P** **09 10 56.7 +1.8**
comp=Z,16μmcomp=Z,9μmcomp=Z,254nm,1.1s
BLSP Bilaspur 54.68 270 *e*P **P** **09 10 54.4 -0.8**
TSI Tuntungan 54.81 240 P **P** **09 10 57.6 +1.4**
comp=Z,11μmcomp=Z,5μmcomp=Z,147nm,0.8s
DLBC Dease Lake 54.85 40 P **P** **09 10 57.8 +1.7**
comp=Z,5.4nm,1.0s,baz=276,slow=7.0,SNR=11
DLBC LR LR 09 34 39.0
comp=Z,3μm,20.5s,baz=299,slow=36
comp=Z,5.4nm,1.0s
DLBC Dease Lake 54.85 40 P **P** **09 10 57.2 +1.2**
DLBC IAmb IAmb 09 11 20.8
comp=Z,101nm,1.8s
DLBC Dease Lake 54.85 40 P **P** **09 10 56.4 +0.3**
baz=291,SNR=8.1
DLBC S **S** **09 18 40.8 +4.0**
baz=291
GAR Garm 54.96 294 P **P** **09 10 56.7 -0.5**
SRBI Singaraja 54.97 215 P **P** **09 10 57.6 +0.3**
comp=Z,6μmcomp=Z,4μmcomp=Z,106nm,2.2s
AYAN Aya Nagar 55.05 280 *e*P **P** **09 10 57.4 -0.4**
ARU Arti 55.09 318 LR LR 09 37 23.6
comp=Z,37μm,19.1s,baz=64,slow=39
ARU Arti 55.09 318 P **P** **09 10 57.7 0.0**
ARU Arti 55.09 318 *c i*P **P** **09 10 58.0 +0.3**
ARU 09 12 00.3
ARU 09 13 01.3
ARU PPP PPP 09 14 14.5
ARU S **S** **09 18 43.0 +3.2**
ARU 09 20 43.8
ARU SSS SSS 09 24 24.9
ARU pmax pmax
comp=Z,312nm,1.9s
ARU pmax pmax
comp=Z,2μm,8.8s
ARU smax smax
comp=N,4μm,22.9s
ARU MLR MLR
comp=Z,64μm,15.0s
ARU Arti 55.09 318 ⇑P **P** **09 10 57.5 -0.2**
ARU ⇑P **pP** **09 10 58.1 -2.7**
PSI Prapat 55.10 239 LR LR 09 36 17.5
comp=Z,11μm,18.0s,baz=39,slow=38
RPSI Rantau Prapat 55.18 239 IAmb IAmb 09 11 03.6
comp=Z,70nm,1.0s
RPSI IAMs_20 IAMs_20 09 35 26.7
comp=Z,10μm,18.0s
V35K Ketchikan 55.20 44 P **P** **09 10 59.1 +0.6**
baz=292
SONA Sohna 55.20 279 *e*P **P** **09 10 58.6 -0.4**
T35M Bob Quinn 55.28 42 P **P** **09 11 00.5 +1.4**
baz=292,SNR=7.7
T35M S **S** **09 18 48.2 +5.8**
baz=292
POHA Pohakuloa 55.32 93 IAMs_20 IAMs_20 09 35 43.5
comp=Z,7μm,18.0s
KCSI Kotacane, Aceh 55.32 241 P **P** **09 10 58.8 -1.1**
comp=Z,2μmcomp=Z,48nm,0.9s
RAGD RAYAGADA 55.33 266 *e*P **P** **09 10 58.8 -1.1**
RGRI Rengat 55.35 234 P **P** **09 11 01.0 +1.0**
comp=Z,110nm,0.4s
NIL Nilore 55.35 287 P **P** **09 10 59.4 -0.6**
NIL Nilore 55.35 287 P **P** **09 10 59.4 -0.6**
NIL pmax pmax
comp=Z,266nm,0.9s
NIL MLR MLR
comp=Z,6μm,21.0s
JMBI JAMBI 55.57 231 P **P** **09 11 04.0 +2.4**
comp=Z,3μmcomp=Z,72nm,0.4s
JHNI Jhansi 55.58 276 *e*P **P** **09 10 59.9 -1.8**
BKNI Bangkinang 55.62 235 IAMs_20 IAMs_20 09 33 03.6
comp=Z,7μm,20.0s
BKNI Bangkinang 55.62 235 P **P** **09 11 02.3 +0.2**
comp=Z,9μmcomp=Z,8μmcomp=Z,441nm,1.0s
PMBI Palembang 55.94 229 P **P** **09 11 05.6 +1.3**
comp=Z,446nm,0.4s
WRGLY Wrigley 56.02 33 P **P** **09 11 04.7 +0.4**
baz=293
WRGLY S **S** **09 18 55.6 +3.6**
baz=293
SMRI Semarang 56.31 221 P **P** **09 11 08.2 +1.2**
comp=Z,160nm,1.5s
VIS Vishakhapatnam 56.33 265 *e*P P 09 11 01.0 -6.1
PWJI Pagerwojo 56.49 219 P **P** **09 11 07.2 -0.9**
comp=Z,143nm,0.8s
PPI Padang Panjang 56.63 235 P **P** **09 11 10.4 +1.1**
GRNB Grenville Isla 56.67 45 IAmb IAmb 09 11 27.6
comp=Z,76nm,1.5s
GSI Gunungsitoli 57.10 239 P **P** **09 11 11.7 -0.9**
GSI Gunungsitoli 57.10 239 P **P** **09 11 13.1 +0.5**
comp=Z,260nm,2.8s
AB31 Akbulak array 57.21 309 *i*P **P** **09 11 11.6 -1.4**
ABKAR Akbulak array 57.21 309 P **P** **09 11 12.2 -0.8**
ABKAR Akbulak array 57.21 309 P **P** **09 11 12.2 -0.8**
ABKAR Akbulak array 57.21 309 ⇑P **P** **09 11 12.1 -0.8**
ABKAR ⇑P **pP** **09 11 12.3 -3.8**
HOPEN Hopen 57.23 346 *e*P **P** **09 11 13.2 +0.6**
HOPEN *e*PP **PP** **09 13 18.1 -1.1**
HOPEN *e*S **S** **09 19 11.1 +3.4**
HOPEN *e*ScS **ScS** **09 21 00.0 -1.2**
HOPEN IVMs_BB IVMs_BB 09 40 52.9
comp=Z,6μm,15.7s
FLDN Fort Liard 57.23 36 P **P** **09 11 13.5 +0.6**
baz=295
FLDN S **S** **09 19 12.2 +4.0**
baz=295
KRJI Kerinci 57.25 233 P **P** **09 11 14.6 +0.9**
comp=Z,9μmcomp=Z,18μmcomp=Z,322nm,1.5s
KLI Kotabumi 57.47 228 P **P** **09 11 14.1 -1.0**
comp=Z,7μmcomp=Z,270nm,1.1s
KNRA Kununurra 57.51 197 IAmb IAmb 09 11 46.3
comp=Z,70nm,0.8s
LEM Lembang 57.58 224 LR LR 09 37 13.8
comp=Z,6μm,19.4s,baz=13,slow=37
LEM Lembang 57.58 224 P **P** **09 11 15.5 -0.6**
comp=Z,4μmcomp=Z,2μmcomp=Z,98nm,1.3s
SPA0 Spitsbergen Ar 57.58 349 *e*P **P** **09 11 15.6 +0.4**
SPA0 IVmBBB 09 11 22.6
comp=Z,1μm,2.3s
SPA0 *e*S **S** **09 19 13.3 +0.9**
SPA0 IVMs_BB IVMs_BB 09 39 02.5
comp=Z,6μm,16.6s
SPB2 Spitsbergen Ar 57.58 349 IAmb IAmb 09 11 37.0
comp=Z,70nm,0.9s
SPITS Spitsbergen Ar 57.58 349 LR LR 09 39 23.3
comp=Z,18μm,18.5s,baz=356,slow=40
MASI Maura Aman, Be 57.61 232 P **P** **09 11 14.4 -1.8**
comp=Z,6μmcomp=Z,326nm,1.5s
BHPL Bhopal 57.65 274 ⇑*i*P **P** **09 11 14.5 -1.9**
KBS Kingsbay 57.66 350 P **P** **09 11 16.0 +0.3**
KBS Kingsbay 57.66 350 IAMs_20 IAMs_20 09 39 43.1
comp=Z,9μm,19.0s
KBS Kingsbay 57.66 350 *c e*P **P** **09 11 15.8 +0.1**
KBS pmax pmax
comp=Z,104nm,0.8s
KBS MLR MLR
comp=Z,9μm,18.0s
KBS Kingsbay 57.66 350 *e*P **P** **09 11 16.5 +0.8**
KBS Kingsbay 57.66 350 *e*P **P** **09 11 17.1 +1.4**
KBS IVmBBB 09 11 18.2
comp=Z,995nm,0.8s
KBS *e*S **S** **09 19 14.3 +1.0**
KBS IVMs_BB IVMs_BB 09 42 26.4
comp=Z,3μm,15.4s
BLSI Bandar Lampung 57.66 227 P **P** **09 11 15.6 -0.9**
KSI Kapahiang 57.80 231 P **P** **09 11 20.1 +2.5**
NOR Nord 57.81 357 ⇑*i*P **P** **09 11 17.0 +0.2**
NOR IAmb IAmb 09 11 23.4
comp=Z,50nm,1.2s
DBJI Dramaga 57.82 225 P **P** **09 11 16.8 -0.8**
comp=Z,64nm,0.8s
AKTO Aktyubinsk 57.83 311 LR LR 09 37 14.2
comp=Z,3μm,18.9s,baz=63,slow=37
AKTO Aktyubinsk 57.83 311 P **P** **09 11 16.5 -0.8**
KBL Kabul 57.96 290 P **P** **09 11 17.8 -1.0**
KBL Kabul 57.96 290 P **P** **09 11 17.8 -1.0**
KBL pmax pmax
comp=Z,135nm,1.0s
KBL Kabul 57.96 290 P **P** **09 11 17.0 -1.8**
SNR=72
KBL P **P** **09 11 17.0 -1.8**
SNR=72
KBL S **S** **09 19 10.7 -8.3**
KBL S **S** **09 19 10.7 -8.3**

AJM Ajmer 57.98 279 ⇑*i*P **P** **09 11 18.6 -0.2**
AJM *i* x **PP** **09 13 27.1 0.0**
SISI Saibi 58.13 236 P **P** **09 11 20.9 +1.1**
comp=Z,75nm,1.2s
MNAI Manna 58.16 230 IAMs_20 IAMs_20 09 37 24.3
comp=Z,7μm,18.0s
KASI Kota Agung 58.21 228 P P 09 11 26.9 +6.5
comp=Z,70nm,1.3s
BBB Bella Bella 58.39 46 LR LR 09 33 32.6
comp=Z,3μm,21.9s,baz=305,slow=33
HSPB Hornsund (broa 58.54 348 *e*P **P** **09 11 21.2 -0.6**
HSPB *e*PP **PP** **09 13 32.5 +1.5**
HSPB *e*S **S** **09 19 23.4 -1.5**
HSPB *e*L L 09 34 25.9
comp=Z,10μm,25.3s
HSPB Hornsund (broa 58.54 348 *e*P **P** **09 11 23.0 +1.1**
HSPB IVmBBB 09 11 24.3
comp=Z,1μm,1.1s
KIRV Kirov 58.70 322 LR LR 09 39 15.4
comp=Z,12μm,18.6s,baz=48,slow=39
KIRV Kirov 58.70 322 *c e*P **P** **09 11 23.6 +0.4**
RES Resolute Bay 58.88 15 P **P** **09 11 25.7 +1.5**
comp=Z,28nm,0.8s,baz=334,slow=6.5,SNR=3.7
RES LR LR 09 39 50.2
comp=Z,10μm,19.8s,baz=331,slow=39
comp=Z,28nm,0.8s
PRGR Permogore 58.96 327 ⇑*i*P **P** **09 11 25.4 +0.4**
PRGR *e* 09 13 35.3
PRGR *e*S **S** **09 19 35.1 +4.4**
AKL Akola 59.40 272 *e*P **P** **09 11 28.5 -0.2**
BJO1 Bjornoya 59.69 345 *e*P **P** **09 11 30.2 +0.3**
BJO1 IVmBBB 09 11 32.1
comp=Z,913nm,2.0s
BJO1 *e*S **S** **09 19 41.0 +1.2**
BJO1 IVMs_BB IVMs_BB 09 41 36.7
comp=Z,11μm,17.1s
LVZ Lovozero 59.81 336 P **P** **09 11 30.3 -0.6**
LVZ IAmb IAmb 09 12 45.8
comp=Z,55nm,1.1s
LVZ Lovozero 59.81 336 *c e*P **P** **09 11 29.7 -1.1**
LVZ pmax pmax
comp=Z,41nm,0.8s
LVZ MLR MLR
comp=Z,18μm,19.0s
YKA Yellowknife Ar 59.98 32 P **P** **09 11 32.6 +0.6**
comp=Z,6.0nm,0.6s,baz=300,slow=6.5,SNR=24
YKA LR LR 09 40 06.0
comp=Z,5μm,18.5s,baz=303,slow=39
YKA PKP2bc 09 41 07.2
comp=Z,1.1nm,0.8s,baz=117,slow=1.7,SNR=3.8
comp=Z,6.0nm,0.6s
YKA Yellowknife Ar 59.98 32 P **P** **09 11 32.5 +0.5**
YKA Yellowknife Ar 59.98 32 *i*P **P** **09 11 33.2 +1.2**
YKA pmax pmax
comp=Z,6.0nm,0.6s
HYBB Hyderabad (bro 60.15 268 *e*P **P** **09 11 33.2 -0.7**
HYBB IVmBBB 09 11 33.8
comp=Z,434nm,1.9s
HYBB *e*PP **PP** **09 13 46.9 +0.4**
HYBB *e*ScP **ScP** **09 16 20.1 -0.3**
HYBB *e*S **S** **09 19 47.3 0.0**
HYBB IVMs_BB IVMs_BB 09 49 43.9
comp=Z,2μm,13.1s
CTA Charters Tower 60.22 177 LR LR 09 37 37.7
comp=Z,4μm,19.6s,baz=346,slow=36
WB0 Warramunga Arr 60.49 190 P **P** **09 11 34.8 -1.2**
JASL Jaisalmer 60.55 282 *e*P **P** **09 11 36.8 +0.3**
FITZ Fitzroy Crossi 60.59 200 S **S** **09 19 51.2 -1.3**
comp=Z,2.9nm,1.1s,baz=283,slow=23,SNR=2.1
FITZ Fitzroy Crossi 60.59 200 P **P** **09 11 36.2 -0.4**
FITZ IAmb IAmb 09 11 50.6
comp=Z,54nm,0.9s
WRAB Tennant Creek 60.66 190 P **P** **09 11 35.4 -1.7**
WRAB IAmb IAmb 09 11 57.8
comp=Z,79nm,1.1s
WRAB Tennant Creek 60.66 190 *i*P **P** **09 11 36.0 -1.1**
WRAB pmax pmax
comp=Z,53nm,1.0s
WRAB MLR MLR
comp=Z,4μm,17.0s
WRAB Tennant Creek 60.66 190 P **P** **09 11 37.3 +0.2**
WR0 Warramunga Arr 60.66 190 P **P** **09 11 36.0 -1.1**
WR0 IAmb IAmb 09 11 57.8
comp=Z,70nm,1.1s
WB2 Warramunga Arr 60.67 190 P **P** **09 11 36.1 -1.1**
WRA Warramunga Arr 60.67 190 P **P** **09 11 35.9 -1.4**
comp=Z,39nm,0.9s,baz=8.4,slow=6.8,SNR=54
WRA S **S** **09 20 01.3 +7.8**
comp=Z,4.6nm,1.3s,baz=4.6,slow=12,SNR=5.4
WRA LR LR 09 38 17.3
comp=Z,2μm,19.8s,baz=353,slow=36
WRA PKP2bc 09 41 08.2
comp=Z,3.2nm,1.0s,baz=200,slow=2.1,SNR=8.2
comp=Z,39nm,0.9s
QIS Mount Isa 60.77 184 P **P** **09 11 38.2 +0.3**
KEV Kevo 60.95 339 P **P** **09 11 38.8 +0.2**
KEV IAmb IAmb 09 11 40.9
comp=Z,66nm,0.9s
KEV Kevo 60.95 339 P **P** **09 11 38.8 +0.2**
KEV pmax pmax
comp=Z,66nm,0.9s
KEV MLR MLR
comp=Z,19μm,20.0s
KEV Kevo 60.95 339 ⇑P **P** **09 11 38.8 +0.2**
KEV ⇑P **pP** **09 11 38.9 -2.8**
HAMF Hammerfest 61.25 341 *e*P **P** **09 11 41.1 +0.6**
HAMF IVmBBB 09 11 42.8
comp=Z,823nm,2.0s
HAMF *e*S **S** **09 19 58.9 -0.9**
HAMF *e*ScS **ScS** **09 21 32.8 +1.6**
HAMF IVMs_BB IVMs_BB 09 45 33.5
comp=Z,7μm,15.4s
ARA0 ARCESS Array S 61.50 339 *e*P **P** **09 11 42.9 +0.6**
ARA0 IVmBBB 09 11 45.0
comp=Z,1μm,2.5s
ARA0 *e*PP **PP** **09 14 01.8 +4.6**
ARA0 *e*S **S** **09 20 02.2 -0.9**
ARA0 *e*SS **SS** **09 24 06.8 +3.6**
ARA0 IVMs_BB IVMs_BB 09 46 22.4
comp=Z,9μm,14.6s
ARCES ARCESS Array B 61.50 339 P **P** **09 11 42.6 +0.3**
comp=Z,31nm,0.9s,baz=57,slow=7.4,SNR=58
ARCES LR LR 09 44 14.1
comp=Z,22μm,18.1s,baz=26,slow=42
comp=Z,31nm,0.9s
ARCES ARCESS Array B 61.50 339 P **P** **09 11 42.5 +0.2**
MDRS Chennai 61.52 263 *e*P **P** **09 11 43.1 -0.1**
KLMR Klimovskoe 61.91 327 *e*P **P** **09 11 44.0 -1.1**
KLMR *e* 09 14 00.5
KLMR *e*S **S** **09 20 07.3 -1.1**
KLMR *e*SS **SS** **09 24 08.4 -1.4**
KLMR *e*SSS SSS 09 26 57.6
KLMR pmax pmax
comp=Z,158nm,1.4s
KLMR MLR MLR
comp=Z,17μm,14.0s
KLMR Klimovskoe 61.91 327 *e*P **P** **09 11 44.1 -1.1**
KLMR AMP 09 11 50.3
comp=Z,158nm,1.4s
KLMR *e*PP **PP** **09 14 00.5 -0.4**
KLMR *e*S **S** **09 20 07.3 -1.1**
KLMR *e*S **S** **09 20 07.3 -1.1**
KLMR *e*SS **SS** **09 24 08.4 -1.4**
KLMR *e*SS **SS** **09 24 08.4 -1.4**
KLMR *e*SSS SSS 09 26 57.6
KLMR *e*SSS SSS 09 26 57.6
KLMR LQ LQ 09 33 57.4
KLMR LQ LQ 09 33 57.4
KLMR LR LR 09 37 13.1
KLMR AMP 09 42 58.5
comp=Z,17μm,13.9s
KTK1 Kautokeino 62.45 340 *e*P **P** **09 11 49.0 +0.3**
KTK1 IVmBBB 09 11 50.5
comp=Z,634nm,0.7s
KTK1 *e*PP **PP** **09 14 05.3 -0.2**
KTK1 *e*S **S** **09 20 15.7 +0.6**
KTK1 IVMs_BB IVMs_BB 09 45 16.5
comp=Z,9μm,14.8s
DAG Danmarks Havn 62.58 356 ⇑*i*P **P** **09 11 49.2 -0.2**
DAG IAmb IAmb 09 11 51.4
comp=Z,54nm,0.9s
BELG Belogornoye 62.61 317 LR LR 09 40 04.6
comp=Z,3μm,20.0s,baz=56,slow=37
BELG Belogornoye 62.61 317 *c i*P **P** **09 11 50.2 +0.2**
BELG pmax pmax
comp=Z,49nm,0.9s
BELG MLR MLR
comp=Z,8μm,16.0s
JETT Jettan, Norway 62.81 341 *e*P **P** **09 11 51.8 +0.6**
JETT IVmBBB 09 11 53.0
comp=Z,859nm,0.8s
JETT IVMs_BB IVMs_BB 09 45 41.0
comp=Z,5μm,15.2s
POO Poona 63.08 272 *e*P **P** **09 11 52.0 -1.7**
POO IAmb IAmb 09 12 06.5
comp=Z,147nm,1.5s
NLWA Neilton Lookou 63.11 50 IAmb IAmb 09 12 12.4
comp=Z,85nm,1.5s
TRO Tromso 63.13 341 *e*P **P** **09 11 53.3 +0.1**
TRO IVmBBB 09 11 54.8
comp=Z,884nm,1.1s
TRO *e*PP **PP** **09 14 18.8 +7.3**
TRO *e*S **S** **09 20 24.4 +0.8**
TRO IVMs_BB IVMs_BB 09 46 43.7
comp=Z,8μm,16.2s
KAD Karad 63.55 271 *e*P **P** **09 11 53.9 -3.0**
GEYT Alibeck 63.83 299 P **P** **09 11 57.7 -0.7**
comp=Z,65nm,0.8s,baz=23,slow=1.9,SNR=63
GEYT LR LR 09 41 22.4
comp=Z,13μm,19.2s,baz=74,slow=38
comp=Z,65nm,0.8s
GEYT Alibeck 63.83 299 P **P** **09 11 58.1 -0.4**
GYA0 ALIBECK ARRAY 63.83 299 P **P** **09 11 57.3 -1.1**
GYA0B ALIBECK ARRAY 63.83 299 P **P** **09 11 58.4 0.0**
SALM Salem 63.96 263 *e*P **P** **09 11 59.2 -0.3**
F04D Rainier, OR 64.30 50 P **P** **09 12 01.8 +0.5**
baz=302
F04D S **S** **09 20 40.6 +1.7**
baz=302
AS31 Alice Springs 64.39 190 P **P** **09 12 02.2 +0.1**
ASAR Alice Springs 64.39 190 P **P** **09 12 01.3 -0.8**
comp=Z,23nm,1.0s,baz=8.5,slow=5.7,SNR=34
ASAR LR LR 09 38 35.9
comp=Z,4μm,21.9s,baz=6.5,slow=35
ASAR PKPPKP P'P'df 09 40 54.0 +11
comp=Z,1.5nm,1.0s,baz=196,slow=2.6,SNR=4.1
comp=Z,23nm,1.0s
ASAR Alice Springs 64.39 190 P **P** **09 12 00.3 -1.8**
G03D McMinnville, O 64.61 51 S **S** **09 20 45.5 +2.8**
baz=303
F04A Amboy 64.73 50 IAmb IAmb 09 12 35.0
comp=Z,70nm,1.2s
I02E Swisshome, OR 64.86 53 P **P** **09 12 05.1 +0.1**
baz=303
I02E S **S** **09 20 48.9 +3.2**
baz=303
PALK Pallekele 64.89 258 LR LR 09 41 11.0
comp=Z,7μm,21.5s,baz=157,slow=37
PALK Pallekele 64.89 258 IAMs_20 IAMs_20 09 40 59.7
comp=Z,8μm,21.0s
GOA Goa 64.92 269 *e*P **P** **09 12 05.3 -0.5**
GOA IAmb IAmb 09 12 08.9
comp=Z,84nm,1.0s
VALR Valaam 65.00 331 *c i*P **P** **09 12 05.4 -0.2**
VALR pmax pmax
comp=Z,112nm,0.9s
LTY Liberty 65.02 48 IAmb IAmb 09 12 51.6
comp=Z,45nm,1.3s
DBG Daneborg 65.08 355 ⇑*i*P **P** **09 12 05.7 -0.2**
DBG IAmb IAmb 09 12 07.7
comp=Z,35nm,1.1s
B08A Colville Reser 65.17 47 IAmb IAmb 09 12 25.2
comp=Z,56nm,1.4s
MBWA Marble Bar 65.21 205 P **P** **09 12 07.3 -0.1**
MBWA IAmb IAmb 09 12 42.9
comp=Z,59nm,1.2s
STEI Steigen 65.29 341 *e*P **P** **09 12 07.4 0.0**
STEI IVmBBB 09 12 08.8
comp=Z,638nm,1.1s
STEI *e*PP **PP** **09 14 36.9 +6.4**
STEI *e*S **S** **09 20 49.5 -0.8**
STEI IVMs_BB IVMs_BB 09 47 59.7
comp=Z,7μm,14.6s
H04D Lebanon 65.30 52 P **P** **09 12 08.1 +0.3**
baz=303
H04D S **S** **09 20 52.9 +1.7**
baz=303
J01E Myrtle Point 65.32 54 P **P** **09 12 08.5 +0.5**
baz=303
J01E S **S** **09 20 53.4 +2.0**
baz=303
I03D Drain, OR 65.38 53 P **P** **09 12 08.3 -0.1**
baz=303
I03D S **S** **09 20 54.5 +2.3**
baz=303
H04A Detroit Lake 65.54 51 IAmb IAmb 09 13 09.0
comp=Z,64nm,1.1s
LOF Lofoten 65.56 342 *e*P **P** **09 12 09.3 +0.2**
LOF IVmBBB 09 12 10.8
comp=Z,580nm,1.0s
LOF *e*PP **PP** **09 14 32.4 -0.3**
LOF *e*S **S** **09 20 53.5 -0.1**
LOF IVMs_BB IVMs_BB 09 48 31.5
comp=Z,5μm,14.4s
PSA00 Pilbara Seismi 65.56 204 P **P** **09 12 11.6 +2.0**
PSA00 IAmb IAmb 09 13 16.6
comp=Z,76nm,1.8s
EDM Edmonton 65.58 40 IAmb IAmb 09 12 24.8
comp=Z,49nm,0.9s
DZM Mont Dzumac 65.64 157 LR LR 09 41 46.8
comp=Z,5μm,18.5s,baz=332,slow=37
DZM Mont Dzumac 65.64 157 *e*P **P** **09 12 09.4 -0.9**
DZM *e*S **S** **09 20 57.0 +1.2**
comp=Z,4μm,23.8s
DZM Mont Dzumac 65.64 157 *e*LR LR 09 31 50.7
comp=Z,8μm,22.3s
DZM Mont Dzumac 65.64 157 P **P** **09 12 10.5 +0.2**
DZM IAmb IAmb 09 12 18.0
comp=Z,52nm,1.1s
MOS Moscow 65.65 323 *e*P **P** **09 12 07.3 -2.6**
MOS *e* 09 12 38.6
MOS *e* 09 14 34.5
MOS *e*S **S** **09 20 50.2 -4.9**
MOS *e* 09 22 00.3
MOS pmax pmax
comp=Z,246nm,1.7s
MOS pmax pmax
comp=N,89nm,1.3s
MOS pmax pmax
comp=E,77nm,1.2s
MOS MLR MLR
comp=N,16μm,15.0s
MOS MLR MLR
comp=E,16μm,15.0s
MOS MLR MLR
comp=Z,22μm,15.0s
FAUS Fauske 65.70 341 *e*P **P** **09 12 10.5 +0.5**
FAUS IVmBBB 09 12 11.7
comp=Z,1μm,0.8s
FAUS *e*PP **PP** **09 14 41.2 +7.2**
FAUS *e*S **S** **09 20 55.2 -0.2**
FAUS IVMs_BB IVMs_BB 09 47 24.1
comp=Z,6μm,14.4s
MNGI Mangalore 65.72 266 *e*P **P** **09 12 10.8 -0.1**
K02D Willamette Mer 65.73 54 P **P** **09 12 10.1 -0.7**
baz=303
K02D S **S** **09 20 59.0 +2.2**
baz=303
G05D Wamic, OR 65.75 51 P **P** **09 12 10.6 -0.2**
baz=304
G05D S **S** **09 20 59.0 +2.2**
baz=304
EIDS Eidsvold 65.78 173 P **P** **09 12 11.1 +0.1**
EIDS IAmb IAmb 09 12 16.4
comp=Z,35nm,1.0s
I04A Tendick Farm, 65.90 52 P **P** **09 12 11.9 +0.1**
baz=304
I04A S **S** **09 20 59.7 +1.0**
baz=304
MSVF Nonsavu 66.05 144 LR LR 09 36 09.1
comp=Z,3μm,20.7s,baz=324,slow=32
MSVF Nonsavu 66.05 144 IAMs_20 IAMs_20 09 34 18.9
comp=Z,6μm,21.0s
MSVF Nonsavu 66.05 144 *e*P **P** **09 12 14.3 +1.3**
MSVF pmax pmax
comp=Z,58nm,2.2s
MSVF MLR MLR
comp=Z,3μm,16.0s
PCHI Peechi 66.07 263 *e*P **P** **09 12 12.3 -1.0**
PCHI *e*S **S** **09 21 00.1 -1.3**
C09A Chrisman Ranch 66.08 47 IAmb IAmb 09 12 24.9

comp=Z,29nm,0.8s
L02F Cave Junction 66.11 54 P **P** **09 12 12.4 -0.8**
baz=304
L02F S **S** **09 21 02.9 +1.7**
baz=304
HAWA Hanford 66.15 49 P **P** **09 12 13.8 +0.4**
HAWA IAmb IAmb 09 13 28.1
comp=Z,34nm,1.1s
F07A Phinny Hill Vi 66.20 49 IAmb IAmb 09 12 38.0
comp=Z,65nm,1.3s
PUL Pulkovo 66.23 330*ce*P **P** **09 12 14.2 +0.7**
PUL pmax pmax
comp=Z,88nm,0.5s
PUL MLR MLR
comp=Z,22µm,18.0s
I05D Terrebonne, OR 66.24 51 P **P** **09 12 13.3 -0.7**
baz=304
I05D S **S** **09 21 05.4 +2.6**
baz=304
UPNV Upernavik 66.27 6 *e*P **P** **09 12 13.3 -0.3**
VRH Novokhopyorsk 66.33 318 *e*P **P** **09 12 14.2 -0.1**
VRH *e* 09 14 37.8
VRH *e*S **S** **09 21 03.1 -0.3**
VRH pmax pmax
comp=Z,110nm,0.8s
VRH smax smax
comp=E,3µm,11.8s
VRH MLR MLR
comp=Z,46µm,15.0s
E08A Dider Farm, El 66.37 48 P **P** **09 12 15.1 +0.4**
J04D Umpqua Nationa 66.39 53 IAmb IAmb 09 12 28.0
comp=Z,49nm,0.8s
J04D Umpqua Nationa 66.39 53 P **P** **09 12 14.5 -0.6**
baz=304,SNR=5.5
J04D S **S** **09 21 07.1 +2.2**
baz=304
NEW Newport 66.45 46 LR LR 09 41 12.9
comp=Z,2µm,20.3s,baz=319,slow=36
NEW Newport 66.45 46 IAmb IAmb 09 12 30.9
comp=Z,31nm,1.1s
NEW Newport 66.45 46 P **P** **09 12 15.0 -0.2**
baz=305,SNR=18
NEW S **S** **09 21 06.0 +0.7**
baz=305
OBN Obninsk 66.50 323 ⇑P **P** **09 12 15.5 +0.1**
OBN Obninsk 66.50 323 LR LR 09 44 27.4
comp=Z,5µm,19.0s,baz=48,slow=39
OBN Obninsk 66.50 323 P **P** **09 12 15.1 -0.3**
OBN Obninsk 66.50 323*c* *i*P **P** **09 12 15.2 -0.2**
OBN *i* *P **pP** **09 12 17.7 -0.8**
OBN *i* *SP **sP** **09 12 19.3 -0.2**
OBN *i* 09 12 46.0
OBN PPP PPP 09 16 21.0
OBN *i* S **S** **09 21 04.3 -1.2**
OBN *i* 09 22 08.9
OBN *i* SS **SS** **09 25 22.6 +1.1**
OBN pmax pmax
comp=Z,230nm,1.7s
OBN MLR MLR
comp=Z,20µm,17.0s
FIA1 FINESS Array S 66.69 332 P **P** **09 12 16.1 -0.4**
FIA0 FINESS Array S 66.69 332 P **P** **09 12 16.4 -0.1**
FIA0 FINESS Array S 66.69 332 P **P** **09 12 16.4 -0.1**
FINES FINESS Array B 66.69 332 P **P** **09 12 15.7 -0.8**
comp=Z,120nm,0.8s,baz=51,slow=7.6,SNR=176
FINES PKPPKP P'P'df 09 40 45.5 -8.6
comp=Z,2.4nm,1.0s,baz=243,slow=6.2,SNR=4.9
FINES LR LR 09 44 03.5
comp=Z,17µm,21.5s,baz=38,slow=38
comp=Z,120nm,0.8s
FINES FINESS Array B 66.69 332 P **P** **09 12 15.4 -1.1**
KHMM Horse Mountain 66.70 56 IAmb IAmb 09 12 31.4
comp=Z,61nm,1.0s
KMPM Mount Pierce 66.71 56 IAmb IAmb 09 12 51.4
comp=Z,51nm,1.1s
PINE Pine Mountain 66.78 52 IAmb IAmb 09 12 33.8
comp=Z,48nm,0.8s
L04D Klamath Falls 66.84 54 P **P** **09 12 17.2 -0.7**
baz=304,SNR=10
L04D S **S** **09 21 11.5 +1.2**
baz=304
MOR8 Moi Rana 66.84 340 *e*P **P** **09 12 16.2 -1.2**
MOR8 IVmBBB 09 12 17.6
comp=Z,1µm,0.8s
MOR8 *e*PP **PP** **09 14 43.3 -0.7**
MOR8 *e*S **S** **09 21 07.0 -2.4**
MOR8 IVMs_BB IVMs_BB 09 46 24.2
comp=Z,10µm,17.8s
YBH Yreka Blue Hor 66.86 54 LR LR 09 35 34.8
comp=Z,2µm,21.6s,baz=315,slow=31
YBH Yreka Blue Hor 66.86 54 P **P** **09 12 18.6 +0.5**
YBH IAmb IAmb 09 12 35.9
comp=Z,48nm,1.4s
YBH Yreka Blue Hor 66.86 54 P **P** **09 12 18.6 +0.5**
YBH pmax pmax
comp=Z,48nm,1.4s
YBH MLR MLR
comp=Z,3µm,18.0s
E09A Wood Farm, Sta 66.88 48 IAmb IAmb 09 13 33.1
comp=Z,63nm,1.1s
J05D Fort Rock, OR 66.89 52 P **P** **09 12 17.5 -0.8**
baz=304,SNR=7.1
J05D S **S** **09 21 14.0 +3.0**
baz=304
TRD Trivandrum 66.90 261 *e*P **P** **09 12 18.1 -0.4**
LPSR Galich'ya Gora 66.90 320 *e*P **P** **09 12 18.1 +0.1**
LPSR *e* 09 14 41.6
LPSR *e*S **S** **09 21 06.9 -3.5**
LPSR pmax pmax
comp=Z,200nm,0.9s
LPSR smax smax
comp=E,2µm,10.2s
LPSR MLR MLR
comp=Z,26µm,14.0s
KONS Konsvik 66.93 341 *e*P **P** **09 12 19.2 +1.3**
K04D Chiloquin, OR 66.95 53 P **P** **09 12 17.5 -1.1**
baz=304
K04D S **S** **09 21 14.0 +2.4**
baz=304
STOK Stokkvaagen 67.08 341 *e*P **P** **09 12 19.7 +0.9**
JMIC Jan Mayen 67.15 350 LR LR 09 44 19.0
comp=Z,3µm,18.1s,baz=40,slow=38
JMIC Jan Mayen 67.15 350 *e*P **P** **09 12 19.4 +0.1**
JMIC *e*PP **PP** **09 14 47.3 +0.8**
JMIC *e*S **S** **09 21 17.8 +4.9**
JMIC IVMs_BB IVMs_BB 09 46 40.3
comp=Z,2µm,16.2s
SUMG Summit 67.31 1 P **P** **09 12 21.6 +0.8**
SUMG Summit 67.31 1 P **P** **09 12 21.6 +0.8**
SUMG pmax pmax
comp=Z,126nm,0.9s
SUMG Summit 67.31 1⇑ *i*P **P** **09 12 21.6 +0.8**
SUMG IAmb IAmb 09 12 29.2
comp=Z,55nm,0.8s
VORR Voronezh 67.32 319⇑ *i*P **P** **09 12 21.0 +0.3**
VORR *e**PP **pwP** **09 12 30.3 +2.8**
VORR *e* 09 14 52.5
VORR *e*S **S** **09 21 19.2 +3.7**
VORR *e*SS **SS** **09 25 33.5 -0.9**
VORR pmax pmax
comp=Z,104nm,1.5s
VORR MLR MLR
comp=Z,50µm,17.0s
KCPM Cahto Peak 67.46 57 IAmb IAmb 09 12 44.7
comp=Z,81nm,1.4s
VSR Storozhevoye 67.61 319 *e*P **P** **09 12 22.3 -0.2**
VSR *e* 09 14 50.2
VSR *e*S **S** **09 21 17.4 -1.6**
VSR pmax pmax
comp=Z,100nm,0.7s
VSR smax smax
comp=N,2µm,11.9s
VSR MLR MLR
comp=Z,32µm,15.0s
NUUG Nuugaatsiaq 67.71 6 *e*P **P** **09 12 23.0 +0.2**
WALA Waterton Lakes 67.72 44 P **P** **09 12 24.0 +0.6**
WALA IAmb IAmb 09 12 54.2
comp=Z,30nm,1.0s
MAK Makhachkala 67.84 308 *e*P P 09 12 15.5 -8.6
MAK *e* 09 14 48.5
MAK *e*SS SS 09 25 36.5 -6.3
MAK pmax pmax
comp=Z,311nm,1.5s
MAK pmax pmax
comp=Z,2µm,4.5s
MAK MLR MLR
comp=N,35µm,13.0s
MAK MLR MLR
comp=Z,24µm,14.0s
MAK MLR MLR
comp=E,37µm,13.0s
AFI Afiamalu 67.97 133 LR LR 09 39 54.9
comp=E,4µm,18.4s,baz=330,slow=34
AFI Afiamalu 67.97 133 IAMs_20 IAMs_20 09 38 54.8
comp=Z,6µm,20.0s
MEF Metsahovi 68.14 332 *e*P **P** **09 12 26.1 +0.4**
HOPS Hopland Field 68.17 57 IAMs_20 IAMs_20 09 41 47.1
comp=Z,5µm,20.0s
MOD Modoc Plateau 68.24 53 IAmb IAmb 09 12 57.8
comp=Z,41nm,1.3s
JTMT Jette 68.30 45 IAmb IAmb 09 12 43.1
comp=Z,41nm,0.9s
GDXM Geysers 68.46 57 IAmb IAmb 09 13 18.8
comp=Z,56nm,1.5s
RAF Rauma 68.48 334 *e*P **P** **09 12 27.9 +0.1**
VSU Vasula 68.48 330*c* *i*P **P** **09 12 27.5 -0.3**
VSU pmax pmax
comp=Z,207nm,1.0s
VSU Vasula 68.48 330 *e*P **P** **09 12 28.2 +0.3**
J08A Circle Bar Ran 68.50 51 IAmb IAmb 09 13 08.9
comp=Z,46nm,1.0s
GROC Groznyy 68.72 309 *e*P **P** **09 12 29.7 +0.1**
GROC *e* 09 12 54.0
GROC *e* 09 15 03.0
GROC *e*S **S** **09 21 33.7 +1.2**
GROC pmax pmax
comp=Z,102nm,0.6s
NSS Namsos 68.78 340 *e*P **P** **09 12 29.4 -0.1**
NSS IVmBBB 09 12 31.6
comp=Z,771nm,2.2s
NSS *e*PP **PP** **09 15 00.5 -0.3**
NSS *e*S **S** **09 21 30.7 -1.7**
NSS IVMs_BB IVMs_BB 09 47 08.5
comp=Z,10µm,18.9s
ORV Oroville 68.85 56 IAmb IAmb 09 12 46.4
comp=Z,120nm,2.0s
PLID Pearl Lake 68.93 48 IAmb IAmb 09 13 32.1
comp=Z,77nm,1.6s
SCO Scoresbysund 68.94 355 IAMs_20 IAMs_20 09 40 54.5
comp=Z,8µm,22.0s
SCO Scoresbysund 68.94 355 *e*P **P** **09 12 29.0 -1.5**
WVOR Wild Horse Val 68.94 52 IAmb IAmb 09 12 57.6
comp=Z,40nm,1.1s
SEKA Sheki 69.04 307 P **P** **09 12 31.5 -0.2**
MSO Missoula 69.04 46 P **P** **09 12 31.4 -0.4**
baz=307,SNR=13
MSO S **S** **09 21 36.4 -0.1**
baz=307
GOF Gofitskoye 69.22 312⇓ *i*P **P** **09 12 33.4 +0.7**
GOF *e*S **S** **09 21 32.9 -5.5**
GOF pmax pmax
comp=Z,268nm,0.9s
MNGR Mingechevir, A 69.36 306 P **P** **09 12 33.9 +0.3**
BEKR Beckworth 69.39 55 IAmb IAmb 09 13 30.0
comp=Z,48nm,1.3s
LKRN Lenkeran, Azer 69.50 304 P **P** **09 12 34.2 -0.3**
NCK Nalchik 69.84 310 *i* P **P** **09 12 37.4 +0.8**
NCK pmax pmax
comp=Z,117nm,1.0s
GANJ Ganja 69.90 307 P **P** **09 12 36.9 -0.2**
MPK Martis Peak 69.93 55 IAmb IAmb 09 12 50.1
comp=Z,70nm,1.1s
MFID Camas Ranch 70.02 50 IAmb IAmb 09 13 10.6
comp=Z,42nm,1.2s
EMB Emerald Bay 70.07 56 IAmb IAmb 09 12 56.8
comp=Z,39nm,0.9s
ZEI Tsey 70.08 310 *e*P **P** **09 12 37.5 -0.8**
ZEI pmax pmax
comp=Z,94nm,0.8s
PAHR Pah Rah Range 70.09 55 IAmb IAmb 09 13 00.6
comp=Z,47nm,1.3s
KIV Kislovodsk 70.09 311 *e*P **P** **09 12 39.4 +1.2**
KIV Kislovodsk 70.09 311 P **P** **09 12 38.8 +0.6**
KIV Kislovodsk 70.09 311 *e*P **P** **09 12 38.4 +0.2**
KIV *e* 09 15 13.4
KIV *e*S **S** **09 21 49.9 +1.0**
KIV *e*SS **SS** **09 26 20.6 +2.9**
KIV pmax pmax
comp=Z,216nm,2.9s
KIV pmax pmax
comp=Z,378nm,1.1s
KIV Kislovodsk 70.09 311 P **P** **09 12 38.5 +0.2**
KIV P **P** **09 12 38.5 +0.2**
KIV P **P** **09 12 38.5 +0.2**
KIV S **S** **09 21 47.2 -1.7**
KIV S **S** **09 21 47.2 -1.7**
KIV S **S** **09 21 47.2 -1.7**
KIV Kislovodsk 70.09 311 *i* P **P** **09 12 38.7 +0.4**
SNR=46
KBZ Khabaz 70.11 311 P **P** **09 12 38.8 +0.6**
comp=Z,123nm,0.9s,baz=42,slow=2.5,SNR=141
KBZ ScS **SKSac** **09 22 38.6 -0.5**
comp=Z,1.6nm,0.8s,baz=35,slow=8.9,SNR=3.6
KBZ PKP2bc 09 40 39.5
comp=Z,0.6nm,0.4s,baz=228,slow=4.7,SNR=3.6
KBZ LR LR 09 48 54.1
comp=Z,13µm,18.9s,baz=30,slow=41
comp=Z,123nm,0.9s
KBZ Khabaz 70.11 311*ce*P **P** **09 12 38.8 +0.6**
KBZ pmax pmax
comp=Z,159nm,0.9s
ILULI Ilulissat 70.15 6 IAmb IAmb 09 13 08.7
comp=Z,52nm,1.0s
ILULI Ilulissat 70.15 6 *i* P **P** **09 12 38.3 +0.3**
ILULI IAmb IAmb 09 12 39.8
comp=Z,23nm,0.9s
SHA1 Shidzhatmaz 70.24 311*c* *i*P **P** **09 12 39.7 +0.4**
TBLU Trondheim 70.25 340 *e*P **P** **09 12 37.1 -1.7**
TBLU *e*S **S** **09 21 46.2 -3.7**
TBLU IVMs_BB IVMs_BB 09 49 02.5
comp=Z,10µm,16.0s
PNTR Pine Nut 70.32 55 IAmb IAmb 09 12 59.7
comp=Z,30nm,0.8s
ONI Oni 70.47 310 *e*P **P** **09 12 41.3 +0.8**
NEY Neytrino 70.50 310 *i* P **P** **09 12 42.2 +1.4**
EGMT Eagleton 70.54 43 IAmb IAmb 09 13 00.9
comp=Z,59nm,0.9s
EGMT IAMs_20 IAMs_20 09 47 49.2
comp=Z,4µm,18.0s
EGMT Eagleton 70.54 43 P **P** **09 12 40.1 -0.8**
baz=309,SNR=12
EGMT S **S** **09 21 53.9 -0.1**
baz=309
ISAL Salakas 70.72 328 *e*P **P** **09 12 42.5 +0.7**
MNK Minsk 70.73 326 *i* P **P** **09 12 39.0 -2.8**
MNK *i* 09 12 59.6
MNK *i* 09 15 15.3
MNK *i* PPP PPP 09 16 57.8
MNK *i* S **S** **09 21 53.9 -1.8**
MNK pmax pmax
comp=E,13nm,0.9s
MNK pmax pmax
comp=Z,270nm,0.9s
MNK MLR MLR
comp=Z,20µm,18.0s
MNK MLR MLR
comp=E,3µm,19.0s
MNK Minsk 70.73 326 *i* P **P** **09 12 39.0 -2.8**
comp=E,13nm,0.9s
MNK *i* P **P** **09 12 39.0 -2.8**
MNK *i* P **P** **09 12 39.0 -2.8**
comp=Z,270nm,0.9s,baz=47
MNK *i* PcP **PcP** **09 12 59.7 -3.0**
MNK *i* PP **PP** **09 15 15.3 -2.6**
MNK *i* PPP PPP 09 16 57.9
MNK *i* S **S** **09 21 54.0 -1.8**
MNK *i* SS SS 09 26 14.7 -12
MNK *i* SSS SSS 09 29 45.4
MNK *i* LQ LQ 09 38 48.7
MNK *i* LR LR 09 44 29.7
MNK *i* LRM MLR 09 47 25.7
comp=Z,20µm,18.1s
MNK *i* LRM MLR 09 47 33.4
MNK *i* LRM MLR 09 47 51.1
comp=E,3µm,19.0s
SLIT Slitere, Latvi 70.75 331 *e*P **P** **09 12 41.9 +0.1**
HLID Hailey 70.75 49 P **P** **09 12 41.8 -0.6**
baz=308,SNR=17
HLID S **S** **09 21 57.8 +1.0**
baz=308
JASK Jask - Hormozg 70.77 288 P **P** **09 12 43.5 +0.9**
SNR=9.0
JASK S **S** **09 21 55.0 -2.1**
ICESG Greenland Ices 70.80 1⇑ *i*P **P** **09 12 42.9 +0.5**
ICESG IAmb IAmb 09 12 50.2
comp=Z,79nm,1.0s
BBGB Big Mountain B 70.89 58 IAmb IAmb 09 13 24.1
comp=Z,48nm,0.9s
NACGM Naroch 70.92 327⇓ *e*P **P** **09 12 43.6 +0.7**
baz=46
BMN Battle Mountai 70.99 53 IAmb IAmb 09 13 15.1
comp=Z,40nm,1.1s
BOZ Bozeman (W) 71.06 46 IAmb IAmb 09 12 59.4
comp=Z,49nm,0.9s
BOZ IAMs_20 IAMs_20 09 48 34.1
comp=Z,4µm,18.0s
BOZ Bozeman (W) 71.06 46 P **P** **09 12 43.6 -0.6**
baz=309,SNR=38
BOZ S **S** **09 22 00.0 -0.3**
baz=309
AKH Akhalkalaki 71.16 309 *e*P **P** **09 12 46.6 +1.7**
GNI Garni 71.17 307 LR LR 09 47 18.2
comp=Z,11µm,18.1s,baz=36,slow=39
GNI Garni 71.17 307 P **P** **09 12 45.4 +0.5**
GNI Garni 71.17 307*ce*P **P** **09 12 45.3 +0.4**
GNI pmax pmax
comp=Z,215nm,1.7s
GNI MLR MLR
comp=Z,10µm,18.0s
GNI Garni 71.17 307 P **P** **09 12 45.1 +0.1**
GNI S **S** **09 21 55.1 -6.6**
GNI Garni 71.17 307 P **P** **09 12 45.6 +0.6**
PMPB Monarch Peak 71.26 58 IAmb IAmb 09 13 40.7
comp=Z,98nm,1.7s
KVN Kaiserville 71.28 54 IAmb IAmb 09 13 53.3
comp=Z,46nm,1.1s
NAX Nakhchivan 71.29 306 P **P** **09 12 46.2 +0.6**
VSVD Vaisvydziai 71.31 329 *e*P **P** **09 12 46.8 +1.5**
LHV Little Huntoon 71.51 55 IAmb IAmb 09 13 07.8
comp=Z,58nm,1.1s
NVAR Mina Array Bea 71.53 55 P **P** **09 12 47.9 +0.7**
comp=Z,9.7nm,0.7s,baz=292,slow=6.4,SNR=52
NVAR LR LR 09 40 30.9
comp=Z,2µm,19.6s,baz=302,slow=33
comp=Z,9.7nm,0.7s
NVAR Mina Array Bea 71.53 55 P **P** **09 12 47.6 +0.4**
MOL Molde 71.53 340 *e*P **P** **09 12 45.8 -0.7**
MOL IVmBBB 09 12 48.2
comp=Z,826nm,1.9s
MOL *e*S **S** **09 22 02.5 -2.2**
MOL IVMs_BB IVMs_BB 09 48 53.0
comp=Z,6µm,17.8s
DOMB Dombas 71.56 339 *e*P **P** **09 12 47.1 +0.3**
DOMB IVmBBB 09 12 48.3
comp=Z,576nm,0.8s
DOMB *e*PP **PP** **09 15 25.6 +0.6**
DOMB *e*S **S** **09 22 05.1 -0.2**
DOMB IVMs_BB IVMs_BB 09 49 31.1
comp=Z,11µm,17.1s
TASB TASBURUN-IGDIR 71.58 307 *e*P **P** **09 12 48.6 +1.3**
NV11 Mina Array Sit 71.62 55 IAmb IAmb 09 13 04.1
comp=Z,75nm,1.6s
PABE Paberze 71.64 329 *e*P **P** **09 12 47.5 +0.2**
SOEG Soedalen 71.66 358 *i* P **P** **09 12 47.4 +0.3**
SOEG IAmb IAmb 09 12 51.0
comp=Z,83nm,1.4s
MLAC Mammoth, Mammo 71.67 56 P **P** **09 12 47.7 -0.4**
baz=307
MLAC S **S** **09 22 09.3 +1.6**
baz=307
NC204 NORSAR Array S 71.72 338 P **P** **09 12 47.1 -0.7**
HFS Hagfors 71.77 336 LR LR 09 46 55.1
comp=Z,10µm,19.6s,baz=36,slow=38
WSAR Wadi Sarin 71.77 285 LR LR 09 48 22.5
comp=Z,6µm,19.0s,baz=75,slow=39
YHL Hebgen Lake 71.78 46 IAmb IAmb 09 13 04.8
comp=Z,39nm,0.9s
NB2 NORSAR Subarra 71.78 338 P **P** **09 12 47.6 -0.5**
comp=Z,94nm,0.9s,baz=36,slow=6.2
NB2 NORSAR Subarra 71.78 338 P **P** **09 12 47.6 -0.5**
baz=36,slow=6.2
NOA NORSAR Array B 71.78 338 P **P** **09 12 47.9 -0.2**
comp=Z,72nm,0.9s,baz=36,slow=6.0,SNR=204
NOA LR LR 09 48 24.2
comp=Z,11µm,19.9s,baz=40,slow=39
comp=Z,72nm,0.9s
KARS Kars 71.88 308 *e*P **P** **09 12 50.3 +1.1**
WBK Wadi Bani Khal 71.89 284 P **P** **09 12 50.3 +0.9**
WBK S **S** **09 22 11.0 +0.7**
SHME Shamm 71.92 289 P **P** **09 12 49.5 0.0**
SHME P **P** **09 12 49.5 0.0**
SHME S **S** **09 22 06.8 -3.5**
SHME S **S** **09 22 06.8 -3.5**
SHME Shamm 71.92 289 *i* P **P** **09 12 49.1 -0.3**
SNR=21
NC602 NORSAR Array S 71.93 337 IAmb IAmb 09 13 38.7
comp=Z,63nm,1.0s
NC602 NORSAR Array S 71.93 337 *e*P **P** **09 12 48.6 -0.4**
NC602 *e*PP **PP** **09 15 32.1 +4.0**
NC602 *e*S **S** **09 22 07.3 -2.2**
NC602 *e*SS **SS** **09 26 50.0 +5.2**
NC602 IVMs_BB IVMs_BB 09 52 21.2
comp=Z,8µm,13.8s
STKA Stephens Creek 71.94 182 P **P** **09 12 48.7 -0.5**
comp=Z,11nm,0.7s,baz=339,slow=6.0,SNR=10
STKA LR LR 09 44 40.4
comp=Z,3µm,20.4s,baz=358,slow=36
comp=Z,11nm,0.7s
STKA Stephens Creek 71.94 182 P **P** **09 12 48.4 -0.8**
BIDO Bidbid 71.97 286 P **P** **09 12 50.5 +0.7**
BIDO P **P** **09 12 50.5 +0.7**
BIDO S **S** **09 22 07.9 -3.2**
BIDO S **S** **09 22 07.9 -3.2**
ELK Elko 72.00 52 LR LR 09 43 45.0
comp=Z,2µm,19.8s,baz=324,slow=35
ELK Elko 72.00 52 IAmb IAmb 09 13 15.7
comp=Z,72nm,1.8s
AKN Aaknes 72.00 340 *e*P **P** **09 12 50.2 +0.8**
AKN IVmBBB 09 12 52.2
comp=Z,898nm,2.6s
AKN *e*S **S** **09 22 12.0 +1.8**
AKN IVMs_BB IVMs_BB 09 49 07.7
comp=Z,8µm,17.1s
YMR Madison River 72.01 46 IAmb IAmb 09 13 27.9
comp=Z,40nm,1.1s
SOC Sochi 72.02 312*c* *i*P **P** **09 12 49.5 -0.3**
SOC *e*PPP PPP 09 17 12.0
SOC *e*S **S** **09 22 11.7 +0.7**
SOC *e* 09 22 54.6
SOC *e*SS **SS** **09 26 48.4 +1.4**
SOC pmax pmax
comp=Z,90nm,1.0s
SOC MLR MLR
comp=Z,7µm,19.0s
PBUR Paburge 72.06 330 *e*P **P** **09 12 50.1 +0.3**
VOG Valley Oaks Go 72.11 57 P **P** **09 12 50.0 -0.5**
baz=307
VOG S **S** **09 22 12.7 +0.4**
baz=307
BCA Borcka 72.25 309⇑P **P** **09 12 52.2 +1.0**
BCA Borcka 72.25 309 *e*P **P** **09 12 53.1 +1.9**
MDH Madha 72.25 288 *i* P **P** **09 12 50.2 -1.2**
SNR=6.4
CLDR Calditan 72.28 306 *e*P **P** **09 12 51.6 -0.2**
FORT Forrest 72.30 194 P **P** **09 12 50.8 -0.6**
FORT IAmb IAmb 09 13 33.7
comp=Z,38nm,0.8s
MASF Masafi 72.31 288 P **P** **09 12 51.6 -0.3**
SNR=7.9
MASF P **P** **09 12 51.6 -0.3**
SNR=7.9
MASF S **S** **09 22 11.3 -3.7**
MASF S **S** **09 22 11.3 -3.7**
SMDO Samad 72.31 285 P **P** **09 12 51.2 -0.7**
SNR=10.0
SMDO P **P** **09 12 51.2 -0.7**
SNR=10.0
SMDO S **S** **09 22 14.8 -0.3**
SMDO S **S** **09 22 14.8 -0.3**
MSFE Esma-Masafi 72.31 288 *i* P **P** **09 12 51.7 -0.2**
SNR=13
SMMC Simmler 72.32 59 P **P** **09 12 47.5 -4.3**
baz=307
SMMC S **S** **09 22 16.6 +1.7**
baz=307
SENK Senkaya-Erzuru 72.36 308 *e*P **P** **09 12 52.6 +0.4**
SFJD Kangerlussuaq 72.37 6 LR LR 09 46 49.1

comp=Z,7µm,20.4s,baz=350,slow=38
SFJD Kangerlussuaq 72.37 6 P **P** **09 12 51.1 -0.3**
SFJD Kangerlussuaq 72.37 6 IAMs_20 IAMs_20 09 46 37.2
comp=Z,8µm,20.0s
SFJD Kangerlussuaq 72.37 6 P **P** **09 12 51.1 -0.3**
SFJD pmax pmax
comp=Z,30nm,0.9s
SFJD MLR MLR
comp=Z,8µm,20.0s
SFJD Kangerlussuaq 72.37 6⇑ *i*P **P** **09 12 49.3 -2.1**
SFJD IAmb IAmb 09 13 01.7
comp=Z,31nm,0.9s
H17A Grant Village 72.40 46 IAmb IAmb 09 13 10.0
comp=Z,59nm,0.9s
H17A Grant Village 72.40 46 P **P** **09 12 52.9 +0.5**
baz=310,SNR=23
H17A S **SKiKP** **09 22 22.2 -5.3**
baz=310
TIN Tinemaha, Big 72.40 56 P **P** **09 12 51.7 -0.7**
baz=308
TIN S **S** **09 22 17.0 +1.1**
baz=308
ANN Anapa 72.52 314 *e*P **P** **09 12 52.1 -0.6**
ANN *e* 09 15 29.2
ANN *e*PPP PPP 09 17 17.9
ANN *e*S **S** **09 22 14.2 -2.4**
ANN *e*SS **SS** **09 26 56.2 +1.7**
ANN pmax pmax
comp=Z,103nm,1.0s
IMW Indian Meadow 72.52 47 IAmb IAmb 09 13 13.6
comp=Z,40nm,0.9s
UOSS Minazif 72.53 288 P **P** **09 12 52.4 -0.8**
UOSS IAmb IAmb 09 12 58.2
comp=Z,81nm,1.0s
UOSS Minazif 72.53 288 *i*P **P** **09 12 52.4 -0.8**
SNR=10
HOQ Hoqain 72.53 286 P **P** **09 12 53.0 -0.2**
SNR=18
HOQ P **P** **09 12 53.0 -0.2**
SNR=18
HOQ S **S** **09 22 16.7 -0.9**
HOQ S **S** **09 22 16.7 -0.9**
UMQ Umm Al-Quwin 72.57 289 P **P** **09 12 53.8 +0.4**
AGRB Hanur-Agry 72.58 307 *e*P **P** **09 12 53.9 +0.4**
VES Vestal, Richgr 72.59 58 P **P** **09 12 52.8 -0.5**
baz=308,SNR=6.9
VES S **S** **09 22 18.5 +0.7**
baz=308
HATD Hatta, Dubai 72.65 288 P **P** **09 12 53.7 -0.2**
SNR=15
HATD P **P** **09 12 53.7 -0.2**
SNR=15
HATD S **S** **09 22 15.2 -3.7**
HATD S **S** **09 22 15.2 -3.7**
HATD Hatta, Dubai 72.65 288 *i*P **P** **09 12 53.5 -0.4**
SNR=19
RLMT Red Lodge 72.65 45 IAmb IAmb 09 13 18.1
comp=Z,64nm,1.5s
RLMT IAMs_20 IAMs_20 09 49 56.1
comp=Z,6µm,18.0s
RLMT Red Lodge 72.65 45 P **P** **09 12 54.2 +0.3**
baz=310,SNR=14
RLMT S **S** **09 22 18.6 -0.1**
baz=310
LCH Last Change Ra 72.67 56 IAmb IAmb 09 13 24.9
comp=Z,97nm,1.8s
JMDO Jabal Madar 72.68 285 P **P** **09 12 54.1 0.0**
SNR=9.3
JMDO S **S** **09 22 19.8 +0.6**
PKM Mcpherson Peak 72.70 59 P **P** **09 12 54.5 +0.3**
baz=308,SNR=7.6
PKM S **S** **09 22 21.7 +2.2**
baz=308
AKASG Malin Array Be 72.75 323 P **P** **09 12 53.8 -0.3**
comp=Z,101nm,0.9s,baz=43,slow=6.5,SNR=166
AKASG LR LR 09 49 19.0
comp=Z,15µm,20.0s,baz=45,slow=40
comp=Z,101nm,0.9s
AKASG Malin Array Be 72.75 323 P **P** **09 12 53.1 -0.9**
AKASG Malin Array Be 72.75 323 *i*P **P** **09 12 53.7 -0.3**
AKASG pmax pmax
comp=Z,104nm,0.9s
AKBB Malin Array Si 72.75 323*ce*P **P** **09 12 53.9 -0.1**
AKBB pmax pmax
comp=Z,150nm,0.9s
AKBB MLR MLR
comp=Z,27µm,16.0s
TPAW Teton Pass 72.77 47 IAmb IAmb 09 13 10.5
comp=Z,60nm,1.2s
TPAW IAMs_20 IAMs_20 09 49 34.2
comp=Z,4µm,18.0s
SOHO SOHO 72.77 287 *i*P **P** **09 12 53.5 -1.1**
SNR=23
ASHO Ashiyiah 72.79 288 P **P** **09 12 53.8 -1.0**
SNR=15
ASHO P **P** **09 12 53.8 -1.0**
SNR=15
ASHO S **S** **09 22 20.0 -0.5**
ASHO S **S** **09 22 20.0 -0.5**
ASHO Ashiyiah 72.79 288 *i*P **P** **09 12 53.8 -1.0**
SNR=21
OSL Oslo 72.82 337 *e*P **P** **09 12 54.9 +0.6**
OSL IVmBBB 09 12 56.0
comp=Z,975nm,0.8s
OSL *e*PP **PP** **09 15 39.8 +4.2**
OSL *e*S **S** **09 22 19.5 -0.1**
OSL *e*S **SKiKP** **09 22 23.1 -4.2**
OSL *e*SS **SS** **09 27 01.1 +2.7**
OSL IVMs_BB IVMs_BB 09 45 36.4
comp=Z,6µm,22.7s
CWC Cottonwood Cre 72.87 57 P **P** **09 12 55.5 +0.3**
baz=308
CWC S **S** **09 22 22.0 +0.6**
baz=308
LOHW Long Hollow 72.88 47 IAmb IAmb 09 13 21.1
comp=Z,104nm,1.8s
NAZ Nazwa, Dubai 72.89 288 *i*P **P** **09 12 55.1 -0.2**
SNR=6.6
SKAR Skarslia 72.90 339 *e*P **P** **09 12 55.6 +0.8**
SKAR *e*S S **09 22 22.4 +1.8**
SKAR IVMs_BB IVMs_BB 09 50 50.0
comp=Z,9µm,14.9s
REDW Red Top Meadow 72.90 47 IAmb IAmb 09 13 52.2
comp=Z,74nm,1.4s
REDW IAMs_20 IAMs_20 09 49 40.9
comp=Z,4µm,18.0s
BCW Bitter Crk WRg 72.93 59 IAmb IAmb 09 13 14.2
comp=Z,58nm,1.1s
VANB Van 72.95 306 *e*P **P** **09 12 57.2 +1.6**
FOO Floro 72.99 341 *e*P **P** **09 12 55.8 +0.6**
FOO IVmBBB 09 12 57.8
comp=Z,682nm,2.2s
FOO *e*PP **PP** **09 15 40.2 +3.2**
FOO *e*S **S** **09 22 22.9 +1.4**
FOO IVMs_BB IVMs_BB 09 53 59.4
comp=Z,4µm,14.5s
GRAC Grapevine Rang 72.99 56 IAmb IAmb 09 13 13.1
comp=Z,39nm,0.8s
GRAC Grapevine Rang 72.99 56 P **P** **09 12 55.1 -0.6**
baz=308,SNR=22
GRAC S **S** **09 22 24.1 +1.6**
baz=308
KOPR Koprukoy-ERZUR 73.01 308 *e*P **P** **09 12 56.4 +0.4**
SBC Santa Barbara 73.03 59 P **P** **09 12 55.1 -0.9**
baz=308
SBC S **S** **09 22 24.1 +1.2**
baz=308
HYA Hoyanger 73.06 340 *e*P **P** **09 12 56.2 +0.6**
HYA *e*PP **PP** **09 15 40.2 +2.6**
HYA *e*S **S** **09 22 24.3 +2.0**
HYA IVMs_BB IVMs_BB 09 50 47.3
comp=Z,7µm,15.9s
FRB Frobisher Bay 73.07 14 LR LR 09 50 31.8
comp=Z,9µm,18.0s,baz=342,slow=40
DGMT Dagmar 73.07 40 IAmb IAmb 09 13 10.8
comp=Z,51nm,0.8s
DGMT Dagmar 73.07 40 IAMs_20 IAMs_20 09 44 40.0
comp=Z,4µm,21.0s
DGMT Dagmar 73.07 40 P **P** **09 12 56.9 +0.9**
baz=312
DGMT Dagmar 73.07 40 P **P** **09 12 55.5 -0.5**
baz=312,SNR=9.3
DGMT S **S** **09 22 22.4 -0.6**
baz=312
FAQ Al Faqa, Dubai 73.09 288 P **P** **09 12 55.7 -0.8**
SNR=6.1
FAQ P **P** **09 12 55.7 -0.8**
SNR=6.1
FAQ S **S** **09 22 19.3 -4.5**
FAQ S **S** **09 22 19.3 -4.5**
FAQ Al Faqa, Dubai 73.09 288 *i*P **P** **09 12 56.3 -0.2**
SNR=15
ISA Isabella, Lake 73.10 57 P **P** **09 12 55.0 -1.5**
baz=308,SNR=6.6
ISA S **S** **09 22 23.7 -0.1**
baz=308
BSY Bisya 73.12 286 P **P** **09 12 56.6 -0.1**
SNR=15
BSY P **P** **09 12 56.6 -0.1**
SNR=15
BSY S **S** **09 22 20.5 -3.7**
BSY S **S** **09 22 20.5 -3.7**
MLAZ Malazgirt-MUS 73.12 307 *e*P **P** **09 12 57.5 +0.8**
DY2G Dye2 73.18 4 *i*P **P** **09 12 54.7 -1.8**
DY2G IAmb IAmb 09 13 12.0
comp=Z,73nm,0.9s
ARVC Arvin 73.19 58 P **P** **09 12 56.4 -0.5**
baz=308
ARVC S **S** **09 22 24.6 -0.1**
baz=308
LAO LASA Array 73.24 42 IAmb IAmb 09 13 12.9
comp=Z,62nm,1.0s
LAO IAMs_20 IAMs_20 09 48 15.5
comp=Z,5µm,19.0s
LAO LASA Array 73.24 42 P **P** **09 12 57.9 +0.8**
baz=312
LAO LASA Array 73.24 42 P **P** **09 12 57.2 +0.1**
baz=312,SNR=8.1
LAO S **S** **09 22 25.3 +0.2**
baz=312
ARQ Araqi 73.26 287 P **P** **09 12 56.8 -0.7**
SNR=14
ARQ P **P** **09 12 56.8 -0.7**
SNR=14
ARQ S **S** **09 22 23.8 -2.0**
ARQ S **S** **09 22 23.8 -2.0**
R11A Troy Canyon, C 73.26 54 IAmb IAmb 09 13 15.0
comp=Z,118nm,1.9s
R11A Troy Canyon, C 73.26 54 P **P** **09 12 55.5 -2.1**
baz=309,SNR=25
R11A S **S** **09 22 26.7 +0.9**
baz=309
ASUD Al Ashush, Dub 73.35 288 *i*P **P** **09 12 58.2 +0.2**
SNR=10
SCZ2 Santa Cruz Isl 73.36 59 P **P** **09 12 56.8 -1.2**
baz=308
SCZ2 S **S** **09 22 27.4 +0.8**
baz=308
AKDM Akdamar-Van 73.36 306 *e*P **P** **09 12 57.9 -0.2**
KONO Kongsberg 73.39 338 *e*P **P** **09 12 57.5 -0.1**
KONO Kongsberg 73.39 338*ce*P **P** **09 12 57.5 -0.1**
KONO pmax pmax
comp=Z,26nm,0.8s
KONO Kongsberg 73.39 338 *e*P **P** **09 12 57.8 +0.1**
KONO IVmBBB 09 12 59.9
comp=Z,786nm,2.7s
KONO *e*PP PP 09 15 49.6 +9.1
KONO *e*S **SKiKP** **09 22 27.3 -0.8**
KONO IVMs_BB IVMs_BB 09 50 59.4
comp=Z,7µm,17.0s
ALNE Al Ain 73.39 288 P **P** **09 12 57.8 -0.5**
SNR=16
ALNE S **S** **09 22 24.8 -2.5**
ALNE Al Ain 73.39 288 *i*P **P** **09 12 58.1 -0.2**
SNR=13
MPMC Manual Prospec 73.48 57 P **P** **09 12 59.2 +0.3**
baz=308,SNR=18
MPMC S **S** **09 22 28.5 0.0**
baz=308
SUE Sulen 73.52 341 *e*P **P** **09 12 59.0 +0.7**
SUE IVmBBB 09 13 01.1
comp=Z,851nm,2.1s
SUE *e*PP **PP** **09 15 48.5 +7.0**
SUE *e*S **SKiKP** **09 22 29.6 +1.3**
SUE IVMs_BB IVMs_BB 09 50 04.2
comp=Z,7µm,17.6s
OSI Osito Audit: C 73.58 58 P **P** **09 12 59.5 +0.2**
baz=308
OSI S **S** **09 22 29.1 -0.1**
baz=308
MHTO MHTO 73.61 284 P **P** **09 12 59.7 +0.1**
SNR=24
MHTO P **P** **09 12 59.7 +0.1**
SNR=24
MHTO S **SKiKP** **09 22 27.0 -2.5**
MHTO S **SKiKP** **09 22 27.0 -2.5**
KTUT Trabzon 73.62 310 *e*P **P** **09 12 58.9 -0.5**
SPR3 Spring Creek 3 73.62 53 IAmb IAmb 09 13 18.8
comp=Z,87nm,1.7s
FURC Furnace Creek, 73.63 56 P **P** **09 12 59.9 +0.5**
baz=308,SNR=22
FURC S **S** **09 22 30.8 +1.2**
baz=308
AJN Ajban 73.64 288 P **P** **09 12 58.2 -1.6**
SNR=5.2
AJN P **P** **09 12 58.2 -1.6**
SNR=5.2
AJN S **SKiKP** **09 22 26.3 -3.2**
AJN S **SKiKP** **09 22 26.3 -3.2**
AJN Ajban 73.64 288 *i*P **P** **09 12 58.8 -0.9**
SNR=7.0
CUKT Cukurca 73.64 305 *e*P **P** **09 12 57.5 -2.2**
LRMC Laurel Mtn Rad 73.72 57 P **P** **09 12 59.8 -0.4**
baz=308
LRMC S **S** **09 22 31.7 +0.7**
baz=308
TPNV Topopah Spring 73.72 55 P **P** **09 12 59.0 -1.2**
baz=309,SNR=21
TPNV S **S** **09 22 33.4 +2.4**
baz=309
MORW Morawa 73.76 205 P **P** **09 13 00.1 +0.1**
MORW IAmb IAmb 09 13 14.4
comp=Z,68nm,1.5s
DUG Dugway, Tooele 73.78 51 IAmb IAmb 09 13 42.7
comp=Z,40nm,0.9s
DUG Dugway, Tooele 73.78 51 P **P** **09 13 00.3 -0.2**
baz=310,SNR=33
DUG S **S** **09 22 33.7 +2.1**
baz=310
GURO Guroymak-BITLI 73.81 307 *e*P **P** **09 13 01.7 +1.0**
KOPT Kop Dagi 73.81 309 IAmb IAmb 09 13 15.7
comp=Z,82nm,1.0s
EDW2 Edwards Air Fo 73.89 58 P **P** **09 13 01.7 +0.6**
baz=308,SNR=10
EDW2 S **S** **09 22 33.0 +0.3**
baz=308
SNCC San Nicolas Is 73.89 60 P **P** **09 13 01.0 -0.1**
baz=308
SNCC S **S** **09 22 34.9 +2.3**
baz=308
ASK Askoy 73.90 340 *e*P **P** **09 13 01.6 +1.1**
ASK *e*PP **PP** **09 15 46.8 +2.1**
ASK *e*S **S** **09 22 35.2 +3.4**
ASK IVMs_BB IVMs_BB 09 51 13.2
comp=Z,18µm,16.5s
GWY Greenwater Val 73.93 56 IAmb IAmb 09 13 18.4
comp=Z,145nm,1.7s
QSM Queen of Sheba 73.94 56 IAmb IAmb 09 13 32.0
comp=Z,72nm,1.3s
BER Bergen 73.95 340 *e*P **P** **09 13 01.7 +0.8**
BER IVmBBB 09 13 03.6
comp=Z,770nm,1.1s
BER *e*S **S** **09 22 34.8 +2.5**
BER IVMs_BB IVMs_BB 09 51 05.8
comp=Z,9µm,16.3s
ODD1 Odda 74.00 339 *e*P **P** **09 13 01.5 +0.2**
ODD1 IVmBBB 09 13 03.3
comp=Z,717nm,0.9s
ODD1 *e*PP **PP** **09 15 46.7 +0.9**
ODD1 *e*S **S** **09 22 35.6 +2.5**
BW06 Boulder Array 74.01 47 P **P** **09 13 01.0 -1.0**
baz=311,SNR=17
BW06 S **S** **09 22 34.3 0.0**
baz=311
PDAR Pinedale Array 74.01 47 P **P** **09 13 02.1 +0.2**
comp=Z,5.1nm,0.6s,baz=273,slow=1.6,SNR=53
comp=Z,5.1nm,0.6s
PDAR Pinedale Array 74.01 47 P **P** **09 13 01.4 -0.6**
TCUT Toone Canyon 74.02 49 IAmb IAmb 09 13 58.4
comp=Z,166nm,1.7s
DECC Green Verdugo 74.05 59 P **P** **09 13 01.5 -0.6**
baz=308
DECC S **S** **09 22 35.1 +0.6**
baz=308
PASC Pasadena Art C 74.20 59 IAMs_20 IAMs_20 09 46 30.6
comp=Z,5µm,18.0s
SIM Simferopol' 74.21 316 *e*P **P** **09 13 02.5 -0.2**
SIM *e*PP **pwP** **09 13 12.0 +2.5**
SIM *e* 09 13 18.0
SIM *e*SS SS 09 27 17.0 -3.3
SIM pmax pmax
comp=Z,103nm,0.9s
SIM MLR MLR
comp=Z,11µm,15.0s
ESPY Espiye-Giresun 74.27 311 *e*P **P** **09 13 03.0 -0.2**
ANGG Ammassalik, Gr 74.31 1 *e*P **P** **09 13 03.0 +0.1**
ANGG IAmb IAmb 09 13 03.7
comp=Z,22nm,1.0s
BNGB Bingl 74.35 308 *e*P **P** **09 13 04.5 +0.7**
SHOC Shoshone, Teco 74.36 56 P **P** **09 13 01.9 -1.8**
baz=309
SHOC S **S** **09 22 38.6 +0.8**
baz=309
GSC Goldstone, Bar 74.39 57 P **P** **09 13 04.0 0.0**
baz=309,SNR=8.9
GSC S **S** **09 22 38.8 +0.4**
baz=309
FMP Fort Macarthur 74.41 59 P **P** **09 13 04.0 -0.1**
baz=308
FMP S **S** **09 22 38.7 +0.2**
baz=308
BLS5 Blasjo 74.46 339 *e*P **P** **09 13 04.7 +0.7**
BLS5 IVmBBB 09 13 06.9
comp=Z,940nm,2.2s
BLS5 *e*PP **PP** **09 15 51.4 +1.7**
BLS5 *e*S **S** **09 22 39.4 +1.1**
BLS5 IVMs_BB IVMs_BB 09 51 48.0
comp=Z,8µm,15.5s
BFSC Mount Baldy Ra 74.50 58 P **P** **09 13 05.1 +0.4**
baz=309
BFSC S **S** **09 22 39.5 -0.3**
baz=309
CIS Catalina Islan 74.52 59 P **P** **09 13 04.9 +0.2**
baz=308
CIS S **S** **09 22 40.4 +0.6**
baz=308
RRX Edison Barstow 74.53 57 P **P** **09 13 05.3 +0.5**
baz=309
RRX S **S** **09 22 40.8 +0.9**
baz=309
BORG Borgarnes 74.54 353 LR LR 09 46 29.4
comp=Z,3µm,19.4s,baz=23,slow=36
BORG Borgarnes 74.54 353 P **P** **09 13 05.1 +0.9**
BORG IAmb IAmb 09 13 38.0
comp=Z,67nm,1.1s
BORG Borgarnes 74.54 353 IAMs_20 IAMs_20 09 51 20.4
comp=Z,4µm,18.0s
BORG Borgarnes 74.54 353 P **P** **09 13 05.1 +0.9**
BORG pmax pmax
comp=Z,67nm,1.1s
ERZN Erzincan 74.54 309 *e*P **P** **09 13 05.8 +0.9**
SVAN Sivan-Diyarba 74.57 307 *e*P **P** **09 13 05.2 +0.2**
SCI2 San Clemente I 74.70 60 P **P** **09 13 06.7 +0.9**
baz=308
SCI2 S **S** **09 22 42.2 +0.4**
baz=308
HOMB Homborsund 74.85 337 *e*P **P** **09 13 07.3 +1.1**
HOMB IVmBBB 09 13 08.7
comp=Z,878nm,2.7s
HOMB *e*PP **PP** **09 15 55.2 +2.4**
HOMB *e*S S **09 22 42.8 +0.3**
HOMB IVMs_BB IVMs_BB 09 53 36.5
comp=Z,7µm,13.8s
TUQ Turquoise Moun 74.87 56 P **P** **09 13 05.3 -1.6**
baz=309
TUQ S **S** **09 22 45.2 +1.4**
baz=309
BBRC Big Bear Solar 74.96 58 P **P** **09 13 06.0 -1.6**
baz=309
BBRC S **S** **09 22 45.1 -0.1**
baz=309
WTNK Soaring Height 74.97 55 IAmb IAmb 09 13 27.9
comp=Z,15nm,1.3s
KMY Karmoy 74.97 339 *e*P **P** **09 13 07.7 +0.9**
KMY *e*PP **PP** **09 15 57.2 +3.3**
KMY *e*S **S** **09 22 45.1 +1.3**
HEC Hector,Ludlow 74.98 57 P **P** **09 13 06.5 -1.1**
baz=309,SNR=6.4
HEC S **S** **09 22 46.6 +1.6**
baz=309
ELS Elsinore Mount 75.02 59 IAmb IAmb 09 13 24.5
comp=Z,62nm,1.4s
NUUK Nuuk 75.04 7 *i*P **P** **09 13 07.4 +0.2**
NUUK IAmb IAmb 09 13 09.5
comp=Z,43nm,0.8s
CCUT Cedar City 75.13 53 IAmb IAmb 09 13 26.1
comp=Z,67nm,1.6s
SNART Snartemo 75.17 338 *e*P **P** **09 13 08.7 +0.7**
SNART *e*PP **PP** **09 16 01.9 +6.4**
SNART *e*S **S** **09 22 50.6 +4.6**
SNART IVMs_BB IVMs_BB 09 52 37.2
comp=Z,21µm,16.1s
PTK Pertek 75.18 309 *e*P **P** **09 13 10.4 +1.7**
MURC Murrieta 75.20 58 P **P** **09 13 08.5 -0.2**
baz=309
MURC S **S** **09 22 46.8 -0.6**
baz=309
SZCU Shurtz Canyon 75.27 53 IAmb IAmb 09 13 40.4
comp=Z,84nm,1.8s
DYBB Diyarbakir 75.34 307 *e*P **P** **09 13 11.1 +1.6**
V12A Nelson 75.36 56 IAmb IAmb 09 14 18.4
comp=Z,142nm,2.0s
RSDY Resadiye-TOKAT 75.42 311 *e*P **P** **09 13 11.2 +1.3**
RDMU Red Mountain 75.44 49 IAmb IAmb 09 13 25.7
comp=Z,70nm,1.0s
GMRC Granite Mounta 75.44 57 P **P** **09 13 10.7 +0.5**
baz=309,SNR=14
GMRC S **S** **09 22 50.7 +0.4**
baz=309
MAZI Mazidag 75.47 307 *e*P **P** **09 13 10.0 -0.3**
P17A Butcher Ranch, 75.47 50 IAmb IAmb 09 13 43.2
comp=Z,56nm,1.1s
CAN Canberra 75.50 176 IAMs_20 IAMs_20 09 50 47.4
comp=Z,5µm,18.0s
KIS Kishinev 75.51 320⇑ *i*P **P** **09 13 08.0 -2.2**
comp=Z,1µm,8.6s
KIS Kishinev 75.51 320 *e*PP PP 09 16 00.0 +1.2
KIS Kishinev 75.51 320*c i*P **P** **09 13 08.0 -2.2**
KIS *e* 09 16 00.0
KIS *e*PPP PPP 09 17 46.0
KIS *e*S **S** **09 22 48.0 -2.3**
KIS *e* 09 23 47.0
KIS pmax pmax
comp=Z,1µm,8.6s
KIS MLR MLR
comp=Z,8µm,16.0s
LCMT Little Creek M 75.55 54 IAmb IAmb 09 13 28.5
comp=Z,101nm,2.0s
MILM Milestii Mici 75.57 320 *e*P **P** **09 13 08.0 -2.5**
comp=Z,900nm,3.2s
MILM Milestii Mici 75.57 320 *e*PP PP 09 16 01.0 +1.7
MILM Milestii Mici 75.57 320⇑ P **P** **09 13 11.0 +0.4**
MILM Milestii Mici 75.57 320 *e*P **P** **09 13 08.0 -2.5**
MILM *e* 09 16 01.0
MILM *e*PPP PPP 09 17 46.0
MILM *e*S **S** **09 22 46.0 -4.9**
MILM pmax pmax
comp=Z,900nm,3.2s
MILM MLR MLR
comp=Z,14µm,14.0s
Q16A Castle Valley 75.58 51 IAmb IAmb 09 13 37.5
comp=Z,164nm,2.0s
BEL Belsk 75.62 327 *e*P **P** **09 13 09.7 -1.0**
BEL *e*S **S** **09 22 49.9 -1.4**
BEL *e*L L 09 49 53.2
comp=Z,18µm,18.0s
GOET G??ttrup 75.66 336⇑ *i*P **P** **09 13 11.7 +0.9**
GOET IAmb IAmb 09 13 14.0
comp=Z,169nm,0.9s
PFO Pinyon Flats O 75.67 58 LR LR 09 39 58.6
comp=Z,3µm,21.4s,baz=300,slow=30
PFO Pinyon Flats O 75.67 58 P **P** **09 13 11.8 +0.3**
PFO Pinyon Flats O 75.67 58 IAMs_20 IAMs_20 09 47 44.6
comp=Z,4µm,18.0s
PFO Pinyon Flats O 75.67 58 *i*P **P** **09 13 12.5 +1.0**
PFO pmax pmax
comp=Z,23nm,1.0s
PFO Pinyon Flats O 75.67 58 P **P** **09 13 11.5 0.0**

baz=309
PFO S **S** **09 22 52.8 0.0**
baz=309
TPFO Pinon Flats 75.67 58 P **P** **09 13 11.7 +0.1**
baz=309,SNR=6.6
TPFO S **S** **09 22 52.1 -0.8**
baz=309
ARPR Arapgir-MALATY 75.68 309 *e*P **P** **09 13 12.6 +1.1**
MZR Muzera 75.68 288 P **P** **09 13 10.9 -0.8**
SNR=9.9
MZR S **S** **09 22 48.4 -4.6**
MZR Muzera 75.68 288 *i* P **P** **09 13 10.8 -0.8**
SNR=16
ULM Lac du Bonnet 75.69 35 P **P** **09 13 11.3 +0.2**
comp=Z,9.6nm,0.8s,baz=321,slow=6.3,SNR=10.0
comp=Z,9.6nm,0.8s
ULM Lac du Bonnet 75.69 35 P **P** **09 13 11.2 0.0**
PMD Palm Desert 75.70 58 IAmb IAmb 09 13 40.9
comp=Z,32nm,1.3s
109C Camp Elliot, M 75.70 59 P **P** **09 13 10.3 -1.2**
baz=309
109C S **S** **09 22 53.7 +0.8**
baz=309
KVT Kavak 75.71 312 *e*P **P** **09 13 12.9 +1.4**
BELC Belle Mtn. Jos 75.72 58 P **P** **09 13 11.1 -0.7**
baz=309,SNR=8.0
BELC S **S** **09 22 54.2 +0.8**
baz=309
MDND Maddock 75.72 38 P **P** **09 13 12.8 +1.4**
baz=315
MDND Maddock 75.72 38 P **P** **09 13 11.5 +0.1**
baz=315,SNR=11
MDND S **S** **09 22 52.3 -0.4**
baz=315
LVV L'vov 75.73 325 ⇓ *i* P **P** **09 13 11.8 +0.4**
LVV *e* 09 16 01.7
LVV *i* S **S** **09 22 50.7 -1.9**
LVV *e* 09 23 21.3
LVV *e* 09 23 45.7
LVV *e* 09 27 37.7
LVV pmax pmax
comp=Z,320nm,1.2s
LVV smax smax
comp=N,1μm,8.0s
LVV smax smax
comp=E,1μm,8.0s
LVV MLR MLR
comp=E,23μm,16.0s
LVV MLR MLR
comp=N,13μm,15.0s
LVV MLR MLR
comp=Z,16μm,15.0s
COP Copenhagen 75.73 334 *i* P **P** **09 13 11.7 +0.4**
COP IAmb IAmb 09 13 14.1
comp=Z,237nm,0.9s
SHMA Al-Shehemyia 75.74 292 P **P** **09 13 11.2 -0.6**
SHMA S **S** **09 22 48.5 -4.9**
K22A Casper 75.77 46 IAmb IAmb 09 13 34.9
comp=Z,96nm,1.4s
K22A Casper 75.77 46 P **P** **09 13 13.0 +1.0**
baz=312
K22A Casper 75.77 46 P **P** **09 13 11.8 -0.3**
baz=312,SNR=13
K22A S **S** **09 22 52.7 -1.0**
baz=312
DIKM Dikmen 75.78 313 ⇑ P **P** **09 13 12.9 +1.1**
DIKM Dikmen 75.78 313 *e*P **P** **09 13 12.9 +1.1**
SRU San Rafael Swe 75.83 51 IAmb IAmb 09 13 25.2
comp=Z,32nm,0.8s
PKCU Pink Cliffs 75.84 53 IAmb IAmb 09 14 26.4
comp=Z,137nm,1.6s
TOKT Tokat 75.92 311 *e*P **P** **09 13 13.9 +1.1**
SVSK Karacayir 75.93 311 *e*P **P** **09 13 14.2 +1.5**
GKP Gorka Klasztor 75.93 330 *e*P **P** **09 13 12.0 -0.4**
GKP *e*S **S** **09 22 52.2 -2.5**
GKP *e*L L 09 50 24.7
comp=Z,24μm,18.0s
RWWY Rawlins 76.03 47 IAmb IAmb 09 13 56.2
comp=Z,62nm,1.4s
E28A Huff 76.10 40 P **P** **09 13 14.5 +0.9**
baz=315
RSSD Black Hills 76.11 43 P **P** **09 13 14.8 +0.8**
RSSD Black Hills 76.11 43 IAMs_20 IAMs_20 09 50 10.4
comp=Z,4μm,19.0s
RSSD Black Hills 76.11 43 P **P** **09 13 14.8 +0.8**
RSSD pmax pmax
comp=Z,25nm,0.8s
RSSD MLR MLR
comp=Z,4μm,19.0s
RSSD Black Hills 76.11 43 P **P** **09 13 14.5 +0.5**
baz=313
RSSD Black Hills 76.11 43 P **P** **09 13 13.3 -0.6**
baz=313
RSSD S **S** **09 22 56.0 -1.5**
baz=313
NEE2 Needles Airpor 76.12 56 P **P** **09 13 15.9 +1.9**
baz=310
NEE2 S **S** **09 22 57.8 +0.4**
baz=310
MONP2 Monument Peak 76.14 59 P **P** **09 13 13.2 -1.2**
baz=309
MONP2 S **S** **09 22 58.4 +0.2**
baz=309
MUD Monsted U'grnd 76.16 336 ⇑ *i* P **P** **09 13 13.1 -0.5**
MUD IAmb IAmb 09 13 16.0
comp=Z,61nm,0.9s
IRM Iron Mountain 76.17 57 P **P** **09 13 13.3 -1.0**
baz=310,SNR=9.3
IRM S **S** **09 22 58.5 +0.4**
baz=310
BZK Bozkurt 76.27 314 ⇑ P **P** **09 13 14.6 0.0**
BZK Bozkurt 76.27 314 *e*P **P** **09 13 14.1 -0.5**
VASR Vaslui 76.27 320 ⇑ P **P** **09 13 15.2 +0.6**
BC3 Big Chuckawall 76.29 58 P **P** **09 13 13.6 -1.4**
baz=310
BC3 S **S** **09 22 59.2 -0.4**
baz=310
SLWR Sila 76.32 290 P **P** **09 13 14.9 -0.2**
SLWR P **P** **09 13 14.9 -0.2**
SLWR S **S** **09 22 55.7 -4.2**
SLWR S **S** **09 22 55.7 -4.2**
URFA Urfa 76.47 308 *e*P **P** **09 13 13.3 -2.6**
O20A White River Ci 76.49 49 P **P** **09 13 14.7 -1.5**
baz=312,SNR=16
O20A S **S** **09 23 00.8 -0.9**
baz=312
IKP In-Ko-Pah, Jac 76.50 59 P **P** **09 13 15.2 -1.0**
baz=310
IKP S **S** **09 23 03.3 +1.4**
baz=310
U15A North Rim 76.51 54 IAmb IAmb 09 14 14.0
comp=Z,85nm,1.4s
SWSC Sam W. Stewart 76.52 58 P **P** **09 13 16.0 -0.2**
baz=310
SWSC S **S** **09 23 03.0 +1.2**
baz=310
DARE Darende-Malaty 76.53 309 *e*P **P** **09 13 18.1 +1.8**
YUH Yuha Desert 76.62 59 IAmb IAmb 09 13 42.7
comp=Z,80nm,1.8s
VLDR Vladesti 76.69 320 ⇑ P **P** **09 13 17.6 +0.7**
PDMCI Parker Dam,Lak 76.72 56 P **P** **09 13 17.2 -0.1**
baz=310,SNR=5.8
PDMCI S **S** **09 23 05.2 +1.2**
baz=310
BUR08 Bucovina Ar. S 76.78 322 P **P** **09 13 17.8 +0.2**
TLCR 76.78 319 ⇓ P **P** **09 13 18.4 +0.9**
TLCR 76.78 319 P **P** **09 13 18.3 +0.9**
BURAR Bucovina Array 76.79 322 ⇓ P **P** **09 13 18.3 +0.6**
BURAR Bucovina Array 76.79 322 P **P** **09 13 17.5 -0.2**
BURAR Bucovina Array 76.79 322 P **P** **09 13 18.2 +0.6**
BLYC Blythe 76.83 57 IAmb IAmb 09 13 38.2
comp=Z,46nm,1.2s
BIZ Bicaz 76.86 321 ⇑ P **P** **09 13 18.8 +0.9**
TESR Tescani 76.91 321 ⇑ P **P** **09 13 18.8 +0.6**
KURC Kurucasile-Bar 77.03 314 *e*P **P** **09 13 20.2 +1.3**
GLA Glamis 77.08 58 P **P** **09 13 19.9 +0.5**
baz=310
GLA S **S** **09 23 07.6 -0.5**
baz=310
YOZ Yozgat 77.08 311 *e*P **P** **09 13 19.8 +0.4**
CORM Corum 77.11 312 *e*P **P** **09 13 19.9 +0.3**
PANC Panciu 77.13 320 ⇑ P **P** **09 13 20.4 +1.0**
AGMN Agassiz Nation 77.13 36 IAmb IAmb 09 13 32.4
comp=Z,33nm,0.8s
AGMN IAMs_20 IAMs_20 09 52 37.1
comp=Z,3μm,19.0s
AGMN Agassiz Nation 77.13 36 P **P** **09 13 19.9 +0.5**
baz=318
AGMN Agassiz Nation 77.13 36 P **P** **09 13 20.2 +0.8**
baz=318,SNR=9.7
AGMN S **S** **09 23 04.6 -3.5**
baz=318
CFR Carcaliu 77.13 319 ⇑ P **P** **09 13 19.2 -0.3**
CFR Carcaliu 77.13 319 P **P** **09 13 19.1 -0.3**
PV23 Carpenter Ridg 77.16 50 IAmb IAmb 09 13 51.9
comp=Z,55nm,1.0s
KOLS Kolonicke sedl 77.16 325 *e*P **P** **09 13 20.8 +1.2**
KOLS pmax pmax
comp=Z,77nm,0.9s
KOLS Kolonicke sedl 77.16 325 *e*P **P** **09 13 20.8 +1.2**
SHAO Shalim 77.17 283 P **P** **09 13 19.9 -0.2**
TPGR Topolog 77.22 319 ⇑ P **P** **09 13 20.6 +0.7**
OJC Ojcow 77.25 327 *e*P **P** **09 13 18.0 -2.1**
OJC *e*S **S** **09 23 06.6 -2.7**
OJC *e*L L 09 51 25.9
comp=Z,19μm,17.9s
SARI SarD1z-Kayseri 77.26 310 *e*P **P** **09 13 21.0 +0.5**
PHWY Pilot Hill 77.27 46 IAmb IAmb 09 13 37.6
comp=Z,88nm,2.0s
PHWY IAMs_20 IAMs_20 09 48 08.3
comp=Z,4μm,20.0s
N23A Red Feather La 77.27 47 IAmb IAmb 09 14 00.3
comp=Z,53nm,1.2s
N23A Red Feather La 77.27 47 P **P** **09 13 20.3 -0.4**
baz=313,SNR=15
N23A S **S** **09 23 10.7 +0.2**
baz=313
BNN Bunyan 77.30 310 *e*P **P** **09 13 20.8 +0.1**
VRI Vrincioaia 77.33 320 ⇑ P **P** **09 13 21.5 +0.9**
VRI Vrincioaia 77.33 320 *e*P **P** **09 13 20.5 -0.1**
PV11 David Mesa, Pa 77.34 50 IAmb IAmb 09 13 48.3
comp=Z,55nm,1.0s
UZH Uzhgorod 77.38 325 *e*P **P** **09 13 22.6 +1.9**
UZH *e* 09 13 32.0
UZH *e* 09 16 15.0
UZH *e*S **S** **09 23 10.6 -0.1**
UZH *e*PS **PnS** **09 24 03.8 +14**
UZH MLR MLR
comp=N,6μm,17.0s
UZH MLR MLR
comp=E,6μm,17.0s
UZH MLR MLR
comp=Z,3μm,17.0s
PV07 Paradox Valley 77.38 50 IAmb IAmb 09 13 47.7
comp=Z,128nm,1.9s
PLOR Plostina 77.38 320 ⇑ P **P** **09 13 22.4 +1.4**
PLOR Plostina 77.38 320 P **P** **09 13 22.3 +1.4**
CANT Cankiri 77.39 313 *e*P **P** **09 13 21.9 +0.8**
D32A Dogwood Acres, 77.45 38 IAmb IAmb 09 13 35.3
comp=Z,63nm,0.8s
D32B Dogwood Acres, 77.45 38 P **P** **09 13 21.7 +0.5**
baz=317
PV13 Radium Mtn., P 77.46 50 IAmb IAmb 09 13 44.0
comp=Z,54nm,1.1s
TIRR Tirgusor 77.50 318 ⇓ P **P** **09 13 22.7 +1.2**
TIRR Tirgusor 77.50 318 ⇓ P **P** **09 13 22.7 +1.2**
TIRR Tirgusor 77.50 318 *e*P **P** **09 13 22.2 +0.7**
TIRR Tirgusor 77.50 318 P **P** **09 13 21.1 -0.4**
TIRR Tirgusor 77.50 318 P **P** **09 13 21.1 -0.4**
TIRR pmax pmax
comp=Z,110nm,0.9s
TIRR MLR MLR
comp=Z,24μm,21.0s
CRVS Cervenica-Dubn 77.54 325 *e*P **P** **09 13 22.5 +0.8**
CRVS pmax pmax
comp=Z,516nm,2.2s
CRVS Cervenica-Dubn 77.54 325 *e*P **P** **09 13 22.5 +0.8**
BMR Baia Mare 77.55 323 ⇑ P **P** **09 13 22.8 +1.0**
BMR Baia Mare 77.55 323 P **P** **09 13 22.7 +1.0**
KMRS Kahramanmaras 77.57 309 *e*P **P** **09 13 22.9 +0.8**
HARR Harsova 77.58 319 ⇑ P **P** **09 13 23.1 +1.2**
ARCR ARCALIA 77.58 322 ⇓ P **P** **09 13 23.5 +1.5**
COVR Voineasa-Covas 77.60 321 ⇓ P **P** **09 13 22.4 +0.2**
TLBR Topalu 77.62 319 ⇑ P **P** **09 13 22.8 +0.6**
OZUR 77.62 321 ⇑ P **P** **09 13 23.8 +1.5**
NIE Niedzica 77.65 326 *e*P **P** **09 13 22.8 +0.5**
NIE *e*PP **PP** **09 16 16.3 -0.5**
NIE *e*S **S** **09 23 12.7 -1.1**
WUAZ Wupatki 77.67 54 IAmb IAmb 09 13 48.6
comp=Z,46nm,1.1s
WUAZ Wupatki 77.67 54 P **P** **09 13 22.0 -0.8**
baz=311,SNR=17
WUAZ S **S** **09 23 17.7 +3.0**
baz=311
NEHR Nehoiu 77.86 320 ⇑ P **P** **09 13 24.5 +1.0**
RAO Raoul Island 77.89 146 LR LR 09 43 49.1
comp=Z,4μm,20.2s,baz=344,slow=33
RAO Raul Island 77.89 146 IAMs_20 IAMs_20 09 51 35.0
comp=Z,5μm,19.0s
DOPR Dopca 77.91 321 ⇑ P **P** **09 13 24.1 +0.3**
ISR Istrita 77.96 320 ⇑ P **P** **09 13 25.8 +1.6**
BR131 Keskin Array S 77.98 312 P **P** **09 13 24.5 0.0**
BR131 IAmb IAmb 09 13 28.2
comp=Z,55nm,1.1s
BR131 Keskin Array S 77.98 312 *c i* P **P** **09 13 24.6 +0.1**
BRTR Keskin Array B 77.98 312 P **P** **09 13 24.9 +0.4**
comp=Z,19nm,0.9s,baz=39,slow=4.7,SNR=42
BRTR PP **PP** **09 16 20.1 +0.1**
comp=Z,9.9nm,0.9s,baz=61,slow=5.5,SNR=4.4
BRTR LR LR 09 55 15.5
comp=Z,11μm,18.3s,baz=16,slow=42
comp=Z,19nm,0.9s
BRTR Keskin Array B 77.98 312 *e*P **P** **09 13 25.0 +0.5**
BRTR Keskin Array B 77.98 312 P **P** **09 13 24.4 0.0**
MLR Muntele Rosu 77.99 321 ⇓ P **P** **09 13 25.6 +1.2**
MLR Muntele Rosu 77.99 321 LR LR 09 52 15.7
comp=Z,15μm,18.4s,baz=26,slow=39
MLR Muntele Rosu 77.99 321 *e*P **P** **09 13 24.3 -0.1**
MLR Muntele Rosu 77.99 321 IAmb IAmb 09 14 12.6
comp=Z,69nm,1.1s
B35A Bob, Littlefor 78.03 35 IAmb IAmb 09 13 37.7
comp=Z,39nm,0.9s
B35A Bob, Littlefor 78.03 35 P **P** **09 13 24.4 0.0**
baz=319
ICOR Ion Corvin 78.05 319 ⇑ P **P** **09 13 25.7 +1.1**
KDZE Karadeniz Ereo 78.11 315 *e*P **P** **09 13 23.6 -1.4**
KAMT Kaman 78.18 312 *e*P **P** **09 13 25.6 0.0**
KSP Ksiaz 78.19 329 *e*P **P** **09 13 23.2 -2.0**
KSP *e*S **S** **09 23 17.7 -1.7**
KSP *e*L L 09 51 56.4
comp=Z,22μm,17.9s
ISCO Idaho Springs 78.20 47 IAmb IAmb 09 14 02.9
comp=Z,73nm,1.6s
ISCO IAMs_20 IAMs_20 09 50 13.1
comp=Z,4μm,19.0s
ISCO Idaho Springs 78.20 47 P **P** **09 13 27.6 +1.6**
baz=313
ISCO Idaho Springs 78.20 47 P **P** **09 13 26.1 +0.2**
baz=313,SNR=15
ISCO S **S** **09 23 21.6 +1.0**
baz=313
CJR Cluj-Napoca 78.21 323 ⇓ P **P** **09 13 26.2 +0.7**
LANS Liptovska Anna 78.21 326 *e*P **P** **09 13 27.4 +2.0**
LANS pmax pmax
comp=Z,37nm,0.9s
LANS Liptovska Anna 78.21 326 *e*P **P** **09 13 27.4 +2.0**
KOZT Kozan 78.23 309 *e*P **P** **09 13 26.3 +0.6**
OKC Ostrava-Krasne 78.23 327 *e*P **P** **09 13 25.9 +0.4**
OKC *e*S **S** **09 23 22.0 +2.1**
OKC MLR MLR
comp=Z,22μm,14.0s
OKC Ostrava-Krasne 78.23 327 *e*P **P** **09 13 25.9 +0.4**
OKC *e*S **S** **09 23 22.0 +2.1**
OKC AMS AMS 09 53 00.0
comp=Z,22μm,14.0s
SECR 78.26 320 ⇑ P **P** **09 13 27.3 +1.6**
IVI Ivigtut 78.28 6 IAmb IAmb 09 13 41.0
comp=Z,38nm,0.8s
IVI Ivigtut 78.28 6 *i* P **P** **09 13 25.4 -0.1**
IVI IAmb IAmb 09 13 27.4
comp=Z,25nm,0.8s
MVCO Mesa Verde 78.28 51 IAmb IAmb 09 13 51.7
comp=Z,61nm,1.4s
MVCO Mesa Verde 78.28 51 P **P** **09 13 26.9 +0.6**
baz=312,SNR=11
MVCO S **S** **09 23 22.9 +1.5**
baz=312
ANTO Ankara 78.36 313 ⇑ P **P** **09 13 28.1 +1.6**
ANTO Ankara 78.36 313 *e*P P 09 13 40.7 +14
ANTO Ankara 78.36 313 P **P** **09 13 26.8 +0.3**
ANTO IAmb IAmb 09 13 29.3
comp=Z,73nm,0.9s
ANTO Ankara 78.36 313 IAMs_20 IAMs_20 09 53 09.7
comp=Z,5μm,18.0s
ANTO Ankara 78.36 313 P **P** **09 13 26.8 +0.3**
ANTO pmax pmax
comp=Z,73nm,0.9s
LOD Lodumlu 78.36 313 *e*P **P** **09 13 25.6 -0.9**
YAYX Yaylak 78.42 312 *e*P **P** **09 13 26.7 -0.2**
SULR 78.42 320 ⇑ P **P** **09 13 27.0 +0.4**
OSTC Ostas 78.44 329 *e*P **P** **09 13 27.5 +0.8**
OSTC *e*S **S** **09 23 23.3 +1.1**
OSTC AMS AMS 09 52 00.0
comp=Z,19μm,16.3s
VOIR 78.46 321 ⇓ P **P** **09 13 27.9 +1.0**
SUSD Miller 78.47 41 P **P** **09 13 26.7 -0.2**
baz=316
SUSD Miller 78.47 41 P **P** **09 13 26.0 -1.0**
baz=316
SUSD S **S** **09 23 19.4 -3.4**
baz=316
CHVC Chvalec 78.48 329 *e*P **P** **09 13 27.6 +0.7**
NRS Narsarsuaq 78.52 5 IAmb IAmb 09 13 46.0
comp=Z,55nm,0.8s
NRS Narsarsuaq 78.52 5 *i* P **P** **09 13 25.8 -1.1**
NRS IAmb IAmb 09 13 45.6
comp=Z,61nm,0.9s
MORC Moravsky Berou 78.52 328 ⇑ P **P** **09 13 28.2 +1.0**
MORC Moravsky Berou 78.52 328 P **P** **09 13 27.4 +0.2**
MORC IAmb IAmb 09 13 30.2
comp=Z,84nm,1.0s
MORC Moravsky Berou 78.52 328 P **P** **09 13 27.4 +0.2**
MORC pmax pmax
comp=Z,84nm,1.0s
MORC Moravsky Berou 78.52 328 *e*P **P** **09 13 28.0 +0.8**
MORC *e*PP **PP** **09 16 25.5 +1.4**
MORC *e*S **S** **09 23 22.2 -1.0**
SERE Sereflikochisa 78.55 312 *e*P **P** **09 13 27.4 -0.2**
UPC Upice 78.56 329 *e*P **P** **09 13 28.4 +1.1**
UPC *e*S **S** **09 23 22.9 -0.6**
UPC MLR MLR
comp=Z,22μm,16.5s
UPC Upice 78.56 329 *e*P **P** **09 13 28.4 +1.1**
UPC *e*S **S** **09 23 22.9 -0.6**
UPC AMS AMS 09 52 10.0
comp=Z,22μm,16.5s
DPC Dobruska-Polom 78.56 329 *e*P **P** **09 13 28.3 +0.9**
DPC MLR MLR
comp=Z,21μm,15.0s
DPC Dobruska-Polom 78.56 329 *e*P **P** **09 13 28.3 +0.9**
DPC AMS AMS 09 57 20.0
comp=Z,21μm,15.0s
GULA Gulagac 78.57 311 *e*P **P** **09 13 27.7 -0.1**
CEYT Ceyhan 78.59 309 *e*P **P** **09 13 29.5 +1.8**
KRLC Kraliky 78.60 328 *e*P **P** **09 13 27.9 +0.3**
KRLC *e*S **S** **09 23 23.5 -0.5**
KRLC MLR MLR
comp=Z,18μm,15.4s
KRLC Kraliky 78.60 328 *e*P **P** **09 13 27.9 +0.3**
KRLC *e*S **S** **09 23 23.5 -0.5**
KRLC AMS AMS 09 53 00.0
comp=Z,18μm,15.4s
ARR Arges 78.71 321 ⇑ P **P** **09 13 29.8 +1.5**
F33A 5 Mile Ranch, 78.74 38 IAmb IAmb 09 13 40.4
comp=Z,51nm,1.1s
F33A 5 Mile Ranch, 78.74 38 P **P** **09 13 29.3 +0.9**
baz=318
TAHT Tahtakopru-Hat 78.75 308 *e*P **P** **09 13 29.9 +1.3**
MDUB Mudurnu 78.83 314 *e*P **P** **09 13 28.9 -0.2**
KARA Karaisali 78.83 310 *e*P **P** **09 13 30.2 +1.1**
S22A 4UR Ranch, Cre 78.91 50 P **P** **09 13 30.7 +0.9**
baz=313,SNR=19
S22A S **S** **09 23 29.9 +1.7**
baz=313
PRD Provadia 78.91 318 *i* P **P** **09 13 29.9 +0.6**
W18A Petrified Fore 78.93 53 P **P** **09 13 29.0 -0.9**
baz=312
W18A S **S** **09 23 31.6 +3.2**
baz=312
PSZ Piszkesteto 78.97 325 ⇑ P **P** **09 13 30.8 +1.1**
PSZ Piszkesteto 78.97 325 P **P** **09 13 29.6 -0.1**
PSZ Piszkesteto 78.97 325 P **P** **09 13 29.6 -0.1**
PSZ pmax pmax
comp=Z,113nm,1.0s
PSZ MLR MLR
comp=Z,16μm,19.0s
PSZ Piszkesteto 78.97 325 P **P** **09 13 30.6 +0.9**
VYHS Vyhne 78.98 326 *e*P **P** **09 13 30.6 +0.9**
VYHS pmax pmax
comp=Z,61nm,1.0s
VYHS Vyhne 78.98 326 *e*P **P** **09 13 30.6 +0.9**
YAYL Yayladag 79.03 308 *e*P **P** **09 13 30.1 -0.2**
Q24A Divide 79.04 48 P **P** **09 13 30.2 -0.4**
baz=314
Q24A S **S** **09 23 29.1 -0.5**
baz=314
Q24A S SKSac 09 23 32.0 -14
baz=314
LOT Lotru 79.06 322 ⇑ P **P** **09 13 30.7 +0.4**
LOT Lotru 79.06 322 *e*P **P** **09 13 31.1 +0.8**
BRG Berggiesshubel 79.07 330 *i* P **P** **09 13 30.6 +0.5**
BRG Amp 09 13 32.7
comp=Z,50nm,1.0s
BRG *ex* x 09 13 43.1
BRG Amp 09 13 46.2
comp=Z,30nm,1.1s
BRG PP **PP** **09 16 23.7 -4.8**
BRG Amp 09 16 39.4
comp=Z,27nm,1.2s
BRG Berggiesshubel 79.07 330 *i* P **P** **09 13 30.6 +0.5**
BRG *e* 09 13 43.1
BRG 09 16 23.7
BRG S **S** **09 23 28.0 -0.9**
BRG pmax pmax
comp=Z,50nm,1.0s
BRG pmax pmax
comp=Z,30nm,1.1s
BRG pmax pmax
comp=Z,27nm,1.3s
CLL Collm 79.07 331 ⇑ *i* P **P** **09 13 30.4 +0.3**
CLL *i* 09 13 41.4
CLL *e*S **S** **09 23 28.0 -0.8**
CLL pmax pmax
comp=Z,104nm,0.9s
CLL Collm 79.07 331 ⇑ *i* P **P** **09 13 30.4 +0.3**
comp=Z,104nm,0.9s
CLL *i* (PcP) **PcP** **09 13 41.4 +2.8**
CLL *e*PP **PP** **09 16 26.0 -2.5**
CLL *ex* x 09 16 55.0
CLL *e*PPP PPP 09 18 17.0
CLL *e*S **S** **09 23 28.0 -0.8**
CLL *e*PS **PnS** **09 24 12.0 +1.0**
CLL *e*SS **SS** **09 28 30.0 -3.3**
CLL *e*SSS SSS 09 32 00.0
CLL *e*SSSS 09 34 48.0
CLL LmH 09 47 00.0
comp=N,17μm,20.9s
CLL LmH 09 47 00.0
comp=E,33μm,21.8s
CLL Lmax 09 53 00.0
214A Organ Pipe Nat 79.08 57 P **P** **09 13 30.4 -0.2**
baz=311
214A S **S** **09 23 31.8 +2.1**
baz=311
SULT Sultanhani-AKS 79.09 311 *e*P **P** **09 13 31.6 +1.0**
KRTS Karatas 79.10 309 *e*P **P** **09 13 30.1 -0.4**
PVCC Panska Ves 79.11 330 *e*P **P** **09 13 31.2 +0.9**
PVCC *e*S **S** **09 23 29.9 +0.6**
PVCC MLR MLR
comp=Z,20μm,14.6s
PVCC Panska Ves 79.11 330 *e*P **P** **09 13 31.2 +0.9**
PVCC *e*S **S** **09 23 29.9 +0.6**
PVCC AMS AMS 09 53 50.0
comp=Z,20μm,14.6s
SAUV Serdivan-Sakar 79.11 315 *e*P **P** **09 13 29.8 -0.7**
HUMR Humele 79.16 320 ⇓ P **P** **09 13 30.9 +0.2**
CHBY Cihanbeyli 79.18 312 *e*P **P** **09 13 31.8 +0.7**
JAVC Velka Javorina 79.19 327 *e*P **P** **09 13 32.6 +1.7**
JAVC *e*S **S** **09 23 31.2 +0.9**
SILT Sile 79.19 315 *e*P **P** **09 13 32.2 +1.3**
GULT Gulveren 79.23 314 *e*P **P** **09 13 28.4 -2.9**
VRAC Vranov 79.28 328 LR LR 09 52 20.4
comp=Z,12μm,18.2s,baz=22,slow=39
VRAC Vranov 79.28 328 *e*P **P** **09 13 32.2 +0.9**
VRAC *e*PP **PP** **09 16 28.5 -1.8**

VRAC eS S 09 23 29.5 -1.6
EYMN Ely 79.32 34 IAmb IAmb 09 13 42.7
comp=Z,53nm,1.1s
EYMN Ely 79.32 34 IAMs_20 IAMs_20 09 52 05.9
comp=Z,4µm,19.0s
EYMN Ely 79.32 34 P P 09 13 30.3 -1.2
baz=320
EYMN Ely 79.32 34 P P 09 13 29.7 -1.8
baz=320
EYMN S S 09 23 27.9 -3.8
baz=320
COPA Copaceanca 79.33 320 ⇓P P 09 13 32.4 +0.8
SVRH Sivrihisar-ESK 79.36 313 eP P 09 13 32.5 +0.5
OGNE Ogallala 79.38 45 IAmb IAmb 09 13 44.5
comp=Z,71nm,0.8s
OGNE IAMs_20 IAMs_20 09 51 24.1
comp=Z,3µm,19.0s
OGNE Ogallala 79.38 45 P P 09 13 31.1 -1.0
baz=315
OGNE S S 09 23 30.9 -1.8
baz=315
MERS Mersin 79.41 310 eP P 09 13 31.8 -0.5
HRT Hereke 79.41 315 eP P 09 13 31.5 -0.7
SIRR Siria 79.43 323 ⇑P P 09 13 32.9 +0.7
SRCK Saricakaya, Es 79.44 314 eP P 09 13 32.8 +0.5
KLYT Kilyos 79.44 316 eP P 09 13 30.8 -1.5
KIZT Kizilcal 79.55 313 eP P 09 13 33.6 +0.5
KRUC Moravsky 79.55 328 eP P 09 13 33.6 +0.8
KRUC ePP PP 09 16 32.6 0.0
KRUC eS S 09 23 34.6 +0.6
PRU Pruhonice 79.55 329 eP P 09 13 33.3 +0.6
PRU eS S 09 23 33.0 -1.0
PRU MLR MLR
comp=Z,23µm,16.4s
PRU Pruhonice 79.55 329 eP P 09 13 33.3 +0.6
PRU eS S 09 23 33.0 -1.0
PRU AMS AMS 09 52 50.0
comp=Z,23µm,16.4s
SMOL Smolenice 79.56 327 eP P 09 13 34.4 +1.6
SMOL pmax pmax
comp=Z,37nm,1.0s
ISK Istanbul-Kandi 79.57 316 eP P 09 13 32.5 -0.5
KAVV Kandilli-Istan 79.57 316 eP P 09 13 32.5 -0.5
GZR Gura Zlata 79.57 322 ⇑P P 09 13 33.5 +0.5
SZH Strazhica 79.61 319 iP P 09 13 33.3 +0.1
BGKT Bogazkoy 79.64 316 eP P 09 13 31.3 -2.0
BORA Eskisehir 79.65 314 IAmb IAmb 09 13 55.5
comp=Z,55nm,1.1s
ADVT Abdulvahap 79.65 315 eP P 09 13 33.2 -0.2
CIFT Cifteler, Eski 79.67 313 eP P 09 13 33.8 +0.1
SDCO Great Sand Dun 79.67 49 P P 09 13 34.1 0.0
baz=314
SDCO S S 09 23 37.0 +0.6
baz=314
BUD Budapest 79.68 325 P P 09 13 34.1 +0.7
CTYL Yalikoy Yolu 79.68 316 eP P 09 13 32.2 -1.4
MODS Modra-Piesok 79.73 327 eP P 09 13 35.0 +1.2
MODS pmax pmax
comp=Z,138nm,1.0s
MODS Modra-Piesok 79.73 327 eP P 09 13 35.0 +1.2
TREC Trest 79.73 329 eP P 09 13 34.7 +0.9
TREC MLR MLR
comp=Z,15µm,15.6s
TREC Trest 79.73 329 eP P 09 13 34.7 +0.9
TREC AMS AMS 09 53 50.0
comp=Z,15µm,15.6s
CTKS Kestanelik-??a 79.74 316 eP P 09 13 32.2 -1.7
LADK Ladik-KONYA 79.75 312 eP P 09 13 32.9 -1.3
YLV Yalova 79.75 315 eP P 09 13 34.5 +0.4
CAVI Cavuskoy 79.75 315 eP P 09 13 34.8 +0.7
VLAD Vladila 79.83 320 ⇑P P 09 13 34.5 +0.2
K31A O'Neill 79.89 42 IAmb IAmb 09 13 46.9
comp=Z,105nm,0.9s
KIZK Mersin 79.89 310 eP P 09 13 34.6 -0.2
SLVT Silivri 79.90 316 eP P 09 13 34.9 +0.1
KONT Konya--Tatoy 79.92 312 eP P 09 13 34.9 -0.1
ZST Bratislava 79.94 327 eP P 09 13 36.8 +1.9
ZST pmax pmax
comp=Z,145nm,1.0s
ZST Bratislava 79.94 327 eP P 09 13 36.8 +1.9
BZS Buzias 79.94 323 ⇑P P 09 13 35.3 +0.3
BZS Buzias 79.94 323 eP P 09 13 33.9 -1.0
GEMT Gemlik 79.94 315 eP P 09 13 34.9 -0.1
PHSR Pinarhisar 79.97 317 eP P 09 13 35.6 +0.4
F36A Milaca 80.01 37 P P 09 13 34.7 -0.7
baz=319
ARMT Armutlu 80.03 315 eP P 09 13 36.1 +0.6
CSKK Cskako 80.10 326 P P 09 13 36.3 +0.5
SILI Silifke-Mersin 80.10 310 eP P 09 13 35.6 -0.4
HERR Herculane 80.12 322 ⇑P P 09 13 35.6 -0.3
TUC Tucson 80.14 56 P P 09 13 36.6 +0.2
TUC Tucson 80.14 56 IAMs_20 IAMs_20 09 50 47.0
comp=Z,4µm,19.0s
TUC Tucson 80.14 56 P P 09 13 36.6 +0.2
TUC pmax pmax
comp=Z,19nm,1.1s
TUC MLR MLR
comp=Z,4µm,19.0s
TUC Tucson 80.14 56 P P 09 13 35.0 -1.4
baz=312
TUC S S 09 23 42.2 +1.2
baz=312
ECSD EROS Data Cent 80.14 40 IAMs_20 IAMs_20 09 49 19.1
comp=Z,5µm,20.0s
ECSD EROS Data Cent 80.14 40 P P 09 13 37.2 +1.1
baz=318
ECSD EROS Data Cent 80.14 40 P P 09 13 36.0 -0.1
baz=318,SNR=17
ECSD S S 09 23 37.9 -2.7
baz=318
MDNY Mudanya-Bursa 80.15 315 eP P 09 13 35.6 -0.6
KEBE Keben-Mersin 80.17 310 eP P 09 13 35.2 -1.2
CRLT Corlu 80.22 316 eP P 09 13 37.3 +0.8
EDRB Edirne 80.22 318 eP P 09 13 36.6 +0.1
DJES Djerdap 80.23 322 ⇑P P 09 13 37.1 +0.5
HWQ Hawqa 80.31 307 eP P 09 13 37.0 -0.2
E38A The Farm, Brul 80.33 35 IAmb IAmb 09 13 51.4
comp=Z,58nm,0.9s
E38A The Farm, Brul 80.33 35 P P 09 13 36.9 -0.1
baz=321
PUNG Punghina 80.33 321 ⇑P P 09 13 37.5 +0.5
IKL Isikli 80.33 310 eP P 09 13 37.5 +0.3
KSCO Kaye Shedlock' 80.42 46 P P 09 13 36.6 -1.2
baz=315
KSCO S S 09 23 42.0 -1.8
baz=315
EGYH Egyhazaskeszo 80.45 326 P P 09 13 38.6 +0.9
AKKU Akkuyu-Mersin 80.46 310 eP P 09 13 38.2 +0.3
TVSB Tavsanli 80.49 314 eP P 09 13 37.7 -0.5
SHUT Suhut-Afyon 80.52 313 eP P 09 13 37.9 -0.5
BERE Bereket-Mersin 80.53 310 eP P 09 13 36.6 -1.9
EREN Erenkoy 80.53 309 eP P 09 13 38.7 +0.4
MDVR Moldovita 80.53 322 ⇑P P 09 13 38.5 +0.3
EKA Eskdalemuir Ar 80.55 342 LR LR 09 55 13.4
comp=Z,12µm,18.3s,baz=30,slow=40
MPLH Magyarpolny 80.56 326 P P 09 13 38.6 +0.3
SOP Sopron 80.57 327 P P 09 13 39.2 +0.9
ESK Eskdalemuir 80.58 342 P P 09 13 38.2 0.0
ESK IAmb IAmb 09 14 09.6
comp=Z,61nm,1.1s
ESK Eskdalemuir 80.58 342 P P 09 13 38.2 0.0
ESK pmax pmax
comp=Z,61nm,1.2s
CKRC Cesky Krumlov 80.58 329 eP P 09 13 38.9 +0.6
CKRC eS S 09 23 44.8 -0.1
CKRC AMS AMS 09 57 10.0
comp=Z,13µm,14.8s
SEYD Seydisehir-KON 80.60 312 eP P 09 13 39.0 +0.2
KHC Kasperske Hory 80.61 329 IAmb IAmb 09 13 41.5
comp=Z,82nm,0.9s
KHC Kasperske Hory 80.61 329 eP P 09 13 39.2 +0.6
KHC e 09 13 49.0
KHC e 09 16 40.8
KHC eS S 09 23 44.4 -0.9
KHC MLR MLR
comp=Z,25µm,15.4s
KHC Kasperske Hory 80.61 329 eP P 09 13 39.2 +0.6
KHC ex x 09 13 49.0
KHC ePP PP 09 16 40.8 -0.6
KHC eS S 09 23 44.4 -0.9
KHC AMS AMS 09 54 40.0
comp=Z,25µm,15.4s
TIH Tihany 80.62 326 P P 09 13 40.8 +2.2
CONA Conrad Observa 80.66 327 iP P 09 13 39.8 +0.9
comp=Z,72nm,1.0s,SNR=51
RONA Rosalia, Austr 80.67 327 iP P 09 13 40.1 +1.2
comp=Z,134nm,1.0s,SNR=75
MRMT Marmara Adasi 80.67 316 eP P 09 13 39.7 +0.6
DIM Dimitrovgrad 80.69 318 iP P 09 13 40.0 +1.0
RAR Rarotonga 80.71 128 LR LR 09 49 47.7
comp=Z,3µm,18.3s,baz=318,slow=36
EDC Edincik 80.72 316 eP P 09 13 39.3 +0.1
T25A Trinidad 80.72 49 P P 09 13 40.5 +0.9
baz=314,SNR=15
T25A S S 09 23 48.0 +0.8
baz=314
TEKE Tekeli-Mersin 80.73 310 eP P 09 13 37.9 -1.5
BHL Bhannes 80.74 307 eP P 09 13 38.8 -0.8
GERES GERESS Array B 80.80 329 P P 09 13 39.5 -0.1
comp=Z,24nm,0.9s,baz=12,slow=1.9,SNR=106
GERES PKKPbc PKKPbc 09 32 20.6 +3.3
comp=Z,0.6nm,0.8s,baz=298,slow=2.9,SNR=4.6
GERES LR LR 09 53 56.6
comp=Z,24µm,18.0s,baz=12,slow=39
comp=Z,24nm,0.9s
GERES GERESS Array B 80.80 329 P P 09 13 39.7 +0.1
DGAR Diego Garcia 80.80 252 IAMs_20 IAMs_20 09 47 35.6
comp=Z,6µm,20.0s
GEDZ Gediz 80.81 314 eP P 09 13 39.3 -0.5
MORH Mrgy, Hungar 80.82 325 ⇑P P 09 13 39.8 +0.1
MORH Mrgy, Hungar 80.82 325 P P 09 13 39.5 -0.1
SPMN Marine on St. 80.83 37 P P 09 13 40.3 +0.6
baz=320
SPMN Marine on St. 80.83 37 P P 09 13 39.8 +0.1
baz=320
SPMN S S 09 23 44.0 -3.6
baz=320
RKY Sarkoy-Tekirda 80.83 316 eP P 09 13 39.7 -0.2
BLKB Belogradchik 80.94 321 ⇓P P 09 13 40.5 +0.1
PGB Panagyurishte 81.01 319 iP P 09 13 41.2 +0.4
ANMO Albuquerque 81.03 52 LR LR 09 48 17.9
comp=Z,1µm,20.1s,baz=338,slow=35
ANMO Albuquerque 81.03 52 P P 09 13 42.1 +0.8
ANMO Albuquerque 81.03 52 eP P 09 13 42.4 +1.1
ANMO pmax pmax
comp=Z,19nm,1.7s
ANMO Albuquerque 81.03 52 P P 09 13 42.6 +1.4
baz=314
ANMO Albuquerque 81.03 52 P P 09 13 40.2 -1.1
baz=314
ANMO S S 09 23 52.7 +2.2
baz=314
KDZ Kurdzhali 81.05 318 eP P 09 13 40.4 -0.6
KDZ Kurdzhali 81.05 318 iP P 09 13 41.7 +0.7
GRFO Grafenberg 81.05 331 P P 09 13 40.9 +0.1
GRFO Grafenberg 81.05 331 P P 09 13 40.9 +0.1
GRFO pmax pmax
comp=Z,112nm,0.9s
ISP Isparta 81.05 313 eP P 09 13 41.3 +0.1
ISP Isparta 81.05 313 IAMs_20 IAMs_20 09 54 33.9
comp=Z,7µm,20.0s
RAYN Ar Rayn 81.06 293 P P 09 13 41.0 -0.4
RAYN IAmb IAmb 09 14 06.3
comp=Z,107nm,1.2s
RAYN Ar Rayn 81.06 293 P P 09 13 41.0 -0.4
RAYN pmax pmax
comp=Z,107nm,1.3s
RAYN MLR MLR
comp=Z,3µm,21.0s
RAYN Ar Rayn 81.06 293 P P 09 13 41.3 -0.1
RAYN S S 09 23 47.4 -3.4
RAYN Ar Rayn 81.06 293 iP P 09 13 41.2 -0.1
SNR=30
PLD Plovdiv 81.07 319 eP P 09 13 41.4 +0.3
LFK Lefkose 81.08 309 eP P 09 13 41.7 +0.4
BGNE Belgrade 81.08 42 P P 09 13 40.4 -0.8
baz=317
BGNE S S 09 23 46.2 -4.3
baz=317
FRGS Fruska Gora 81.12 324 ⇑P P 09 13 41.7 +0.4
FRGS Fruska Gora 81.12 324 ⇑iP P 09 13 41.6 +0.3
GAZI Gazipasa 81.13 310 eP P 09 13 40.0 -1.5
KOVH Kovagotottos 81.16 325 P P 09 13 41.6 +0.1
D41A Chassel 81.25 33 IAmb IAmb 09 13 53.3
comp=Z,52nm,1.2s
D41A Chassel 81.25 33 P P 09 13 42.7 +0.8
baz=322
BCK Bucak 81.27 312 eP P 09 13 42.1 -0.2
ALN Alexandroupoli 81.27 317 eP P 09 13 42.4 +0.3
ALN Alexandroupoli 81.27 317 P P 09 13 43.3 +1.2
ALN Alexandroupoli 81.27 317 IAmb IAmb 09 13 44.7
comp=Z,49nm,1.0s
ENEZ Enez 81.33 317 eP P 09 13 42.1 -0.4
ARSA Arzberg 81.34 327 iP P 09 13 43.1 +0.6
comp=Z,28nm,0.8s,SNR=23
Y22D IRIS PASSCAL I 81.35 52 P P 09 13 42.4 -0.5
baz=313
Y22D S S 09 23 56.9 +3.2
baz=313
RDO Rodhopi 81.35 318 eP P 09 13 41.7 -0.9
RDO Rodhopi 81.35 318 P P 09 13 43.7 +1.1
RZN Rozhen 81.37 319 iP P 09 13 43.7 +0.8
MOA Molln 81.37 328 iP P 09 13 43.5 +0.9
comp=Z,43nm,1.7s,SNR=8.4
GELI Tayfur-Gelibol 81.41 317 eP P 09 13 43.7 +0.8
CSS Mathiatis 81.42 309 eP P 09 13 43.5 +0.4
CSS Mathiatis 81.42 309 IAmb IAmb 09 14 05.8
comp=Z,40nm,0.7s
Y22A Socorro 81.42 53 P P 09 13 43.9 +0.6
baz=313
VTS Vitosha 81.42 320 ⇑P P 09 13 44.4 +1.2
VTS Vitosha 81.42 320 eP P 09 13 43.4 +0.3
VTS Vitosha 81.42 320 iP P 09 13 44.3 +1.2
I37B Waseca 81.47 38 P P 09 13 43.7 +0.5
baz=320
MMAI Mount Meron Ar 81.49 306 LR LR 09 54 20.2
comp=Z,11µm,18.2s,baz=194,slow=39
LEF Lefka 81.57 309 eP P 09 13 42.8 -1.0
L34A Svendsen Farm, 81.57 41 IAmb IAmb 09 13 54.9
comp=Z,43nm,0.8s
L34A Svendsen Farm, 81.57 41 P P 09 13 44.9 +1.1
baz=318
SCHQ Schefferville 81.59 17 P P 09 13 44.1 +0.5
comp=Z,11nm,0.7s,baz=349,slow=6.5,SNR=15
SCHQ LR LR 09 55 15.7
comp=Z,7µm,18.3s,baz=352,slow=40
comp=Z,11nm,0.7s
SCHQ Schefferville 81.59 17 P P 09 13 44.0 +0.4
KULA Kula-Manisa 81.60 314 eP P 09 13 43.8 -0.2
ANTB Antalya 81.63 312 eP P 09 13 42.8 -1.3
319A Douglas 81.72 56 IAmb IAmb 09 14 05.1
comp=Z,55nm,1.0s
KORT Korkueli 81.73 312 eP P 09 13 44.5 -0.3
BIOA Bad Bachl, Aus 81.75 329 iP P 09 13 45.6 +0.9
comp=Z,80nm,1.0s,SNR=26
COWI Conover 81.77 34 IAMs_20 IAMs_20 09 53 58.8
comp=Z,5µm,20.0s
DIVS Divibare 81.85 323 IAmb IAmb 09 13 50.7
comp=Z,66nm,1.0s
DIVS Divibare 81.85 323 ⇑iP P 09 13 45.4 +0.1
GADA Gvkgeada 81.86 317 eP P 09 13 45.2 -0.1
121A Cookes Peak, D 81.87 54 IAmb IAmb 09 14 05.7
comp=Z,38nm,0.9s
121A Cookes Peak, D 81.87 54 P P 09 13 46.1 +0.4
baz=313,SNR=9.0
121A S S 09 24 00.8 +1.6
baz=313
MMLI Mount Malkishu 81.87 306 eP P 09 13 46.2 +0.7
EZN Ezine 81.91 316 eP P 09 13 45.9 +0.4
MMB Musomiste 81.94 319 iP P 09 13 46.8 +1.0
G40A Rib Lake 81.96 35 P P 09 13 45.3 -0.5
baz=322
APMY Acipayam-Deniz 81.98 313 eP P 09 13 46.4 +0.3
KAVA Kavala 81.99 318 P P 09 13 47.8 +1.9
PERS Pernice 82.00 327 iP P 09 13 46.5 +0.5
PERS ePP PP 09 16 56.3 +3.4
PERS eS S 09 23 59.4 -0.4
SOKA Soboth 82.00 327 iP P 09 13 46.7 +0.6
comp=Z,104nm,0.8s,SNR=110
BOZC Bozcaada 82.04 317 eP P 09 13 44.8 -1.4
SOCY Socotra 82.05 279 IAMs_20 IAMs_20 09 56 18.7
comp=Z,4µm,18.0s
BEBN Eben Emael 82.05 335 dP P 09 13 46.7 +0.7
comp=Z,77nm,1.0s
NVR Nevrokopi 82.05 319 P P 09 13 47.6 +1.3
KKB Krupnik 82.06 320 iP P 09 13 47.5 +1.2
BTNL Ternell 82.08 334 dP P 09 13 46.2 -0.1
comp=Z,67nm,1.0s
MEM Membach 82.11 334 dP P 09 13 46.9 +0.5
comp=Z,36nm,1.0s
CBKS Cedar Bluff 82.13 45 IAMs_20 IAMs_20 09 53 57.1
comp=Z,4µm,18.0s
CBKS Cedar Bluff 82.13 45 P P 09 13 46.8 -0.1
baz=316
CBKS S S 09 23 58.0 -3.5
baz=316
DKL Dikili 82.15 315 eP P 09 13 46.5 -0.3
ELL Elmali 82.16 312 eP P 09 13 46.5 -0.6
UJAP Al Uja 82.18 305 eP P 09 13 47.2 +0.2
BSTI Sart Tilman 82.27 335 dP P 09 13 46.6 -0.6
BHOU Houvegnez 82.33 334 dP P 09 13 48.8 +1.2
comp=Z,22nm,1.1s
OBKA Obir 82.33 327 ⇑iP P 09 13 47.8 0.0
OBKA Obir 82.33 327 iP P 09 13 48.1 +0.3
comp=Z,49nm,0.8s,SNR=36
SRS Serrai 82.36 319 P P 09 13 49.1 +1.2
KBA Koelnbreinsper 82.37 328 iP P 09 13 48.7 +0.7
comp=Z,94nm,0.9s,SNR=81
KOKK Kokkinochori, 82.38 318 P P 09 13 49.2 +1.2
AYDB Zeytinkoy-Aydi 82.42 314 eP P 09 13 48.9 +0.4
BCLA Clavier 82.50 335 dP P 09 13 48.4 -0.1
comp=Z,29nm,1.0s
CRES Cresnjev 82.50 326 ⇑iP P 09 13 48.5 -0.1
RUDO Rudo 82.50 323 ⇑iP P 09 13 48.5 -0.1
A051A Mrakovica 82.52 325 ⇑iP P 09 13 48.5 -0.3
BLCB Balcova 82.57 315 eP P 09 13 48.3 -0.7
SIGR SIGRI 82.60 316 eP P 09 13 49.6 +0.4
BLY Banja Luka 82.61 325 ⇑iP P 09 13 50.0 +0.9
MYKA Terra Mystica 82.61 328 iP P 09 13 49.1 -0.1
comp=Z,67nm,1.3s,SNR=25
KNT Kendrikon 82.68 319 eP P 09 13 48.9 -0.7
KNT Kendrikon 82.68 319 P P 09 13 51.2 +1.6
AKAS Kas 82.69 312 eP P 09 13 47.6 -2.3
AKAS Kas 82.69 312 IAmb IAmb 09 14 43.3
comp=Z,60nm,0.8s
FETY Fethiye 82.70 313 eP P 09 13 47.6 -2.2
PLE Pljevlja 82.72 323 ⇑iP P 09 13 50.4 +0.5
LJU Ljubljana 82.72 327 iP P 09 13 49.6 -0.1
LJU eS S 09 24 04.5 -2.6
RCHB Rochefort 82.75 335 dP P 09 13 49.7 0.0
comp=Z,34nm,1.1s
N35A Tabor 82.76 41 P P 09 13 51.0 +1.0
baz=319
BMRD Maredsous 82.78 335 dP P 09 13 50.0 +0.1
comp=Z,58nm,1.0s
PRED Cave del Predi 82.79 328 IAmb IAmb 09 14 03.9
comp=Z,59nm,1.0s
YER Yerkesik 82.79 313 eP P 09 13 51.2 +0.9
YER Yerkesik 82.79 313 P P 09 13 51.2 +0.9
CRNS Crni Vrh 82.80 327 iP P 09 13 49.6 -0.5
K38A Parkersburg 82.81 38 IAmb IAmb 09 14 12.7
comp=Z,72nm,1.4s
DALY Dalyan (Mula) 82.81 313 eP P 09 13 50.9 +0.6
URLA Izmir 82.83 315 eP P 09 13 47.9 -2.5
IVA Berane 82.83 322 ⇑iP P 09 13 50.4 -0.1
BOJS Bojanci 82.85 326 ⇑iP P 09 13 50.4 +0.1
BOJS Bojanci 82.85 326 ePP PP 09 17 02.2 +2.4
I40A Norwalk 82.85 36 IAmb IAmb 09 14 05.0
comp=Z,36nm,1.1s
I40A Norwalk 82.85 36 P P 09 13 51.1 +0.7
baz=321
WATA Walderalm 82.85 329 iP P 09 13 50.9 +0.4
comp=Z,39nm,0.8s,SNR=26
WLF Walferdange 82.87 334 IAmb IAmb 09 14 09.4
comp=Z,39nm,1.0s
WLF Walferdange 82.87 334 dP P 09 13 51.9 +1.5
comp=Z,23nm,1.0s
WTTA Wattenberg 82.89 329 iP P 09 13 51.5 +0.7
comp=Z,59nm,1.0s,SNR=24
MGRS Mrkonjic Grad 82.91 325 eP P 09 13 51.1 +0.3
GCAM G?zelcaml? 82.96 314 eP P 09 13 50.9 -0.2
ABTA Abfaltersbach 82.97 329 iP P 09 13 51.1 0.0
comp=Z,36nm,1.2s,SNR=19
HORT Hortiatis 83.00 319 eP P 09 13 50.7 -0.6
CEY Cerknica 83.00 327 ⇑iP P 09 13 50.9 -0.3
DOU Dourbes 83.01 335 dP P 09 13 50.4 -0.6
comp=Z,19nm,1.1s
MOTA Moosalm 83.03 330 iP P 09 13 51.8 +0.4
comp=Z,112nm,0.9s,SNR=64
KOME Kolasin 83.03 322 ⇑iP P 09 13 51.5 0.0
UPM Unac-Piva 83.04 323 ⇑iP P 09 13 52.0 +0.4
UPM Unac-Piva 83.04 323 ⇑iP P 09 13 51.4 -0.2
RETA Reutte 83.04 330 iP P 09 13 52.1 +0.7
comp=Z,77nm,1.1s,SNR=28
TURN Turunc 83.07 313 eP P 09 13 51.3 -0.3
GRG Griva 83.08 319 eP P 09 13 50.9 -0.8
SQTA Sankt Quirin 83.09 330 iP P 09 13 52.2 +0.4
comp=Z,53nm,0.9s,SNR=24
CHOS Chios island 83.10 316 eP P 09 13 51.3 -0.6
A050A Klekovaca 83.11 325 ⇑iP P 09 13 51.9 +0.1
SABO M.te Sabotino 83.15 328 IAmb IAmb 09 14 05.5
comp=Z,58nm,1.1s
SRKY Kupres RS 83.15 324 ⇑iP P 09 13 52.4 +0.3
SCIA State Center 83.17 39 IAMs_20 IAMs_20 09 56 06.0
comp=Z,5µm,19.0s
SCIA State Center 83.17 39 P P 09 13 53.4 +1.3
baz=320
SCIA State Center 83.17 39 P P 09 13 52.0 -0.1
baz=320
SCIA S S 09 24 08.6 -3.1
baz=320
EPT El Paso 83.18 54 IAMs_20 IAMs_20 09 53 48.0
comp=Z,3µm,19.0s
PAIG Paliouri 83.21 318 eP P 09 13 52.0 -0.3
DSB Dublin 83.22 342 IAMs_20 IAMs_20 09 56 52.8
comp=Z,6µm,18.0s
BFO Black Forest 83.24 332 P P 09 13 52.3 -0.1
BFO IAmb IAmb 09 14 05.4
comp=Z,41nm,0.9s
BFO Black Forest 83.24 332 P P 09 13 52.3 -0.1
BFO pmax pmax
comp=Z,41nm,0.9s
BFO MLR MLR
comp=Z,11µm,19.0s
STAL STALIGIAL 83.29 328 P P 09 13 51.6 -1.0
NKY Niksic 83.30 323 ⇑iP P 09 13 52.8 -0.1
SKDS Skadanscina 83.33 327 ⇑iP P 09 13 52.1 -0.8
SKDS Skadanscina 83.33 327 eS S 09 24 10.8 -2.6
CIMO Cimolais 83.35 328 IAmb IAmb 09 14 05.3
comp=Z,93nm,1.6s
NKME Niksic 83.36 323 ⇑iP P 09 13 52.9 -0.2
BODT Bodrum 83.38 314 eP P 09 13 52.7 -0.6
BODT Bodrum 83.38 314 P P 09 13 52.5 -0.8
FETA Feichten 83.44 330 iP P 09 13 54.2 +0.6
comp=Z,59nm,0.9s,SNR=36
BRY Bratogost 83.44 323 ⇑iP P 09 13 52.7 -1.0
BRY Bratogost 83.44 323 ⇑iP P 09 13 53.3 -0.4
DAT Datca 83.47 313 eP P 09 13 51.3 -2.6
PDG Podgorica 83.47 322 ⇑P P 09 13 53.9 +0.3
PDG Podgorica 83.47 322 eP P 09 13 52.7 -0.9
TTG Podgorica 83.47 322 ⇑iP P 09 13 53.8 +0.2
PHP Peshkopia 83.49 321 P P 09 13 54.5 +0.7
HIZ Hauiti 83.53 156 P P 09 13 56.4 +2.7
HIZ IAmb IAmb 09 14 02.0
comp=Z,63nm,1.1s
HIZ IAMs_20 IAMs_20 09 54 26.3
comp=Z,3µm,20.0s
ARG Arkhangelos 83.54 313 eP P 09 13 53.4 -0.7
CEME Cevo 83.54 322 ⇑iP P 09 13 53.9 -0.2
DAVA Damuels 83.54 330 iP P 09 13 54.6 +0.5
comp=Z,94nm,1.6s,SNR=22
E46A Sault Ste Mari 83.55 31 IAmb IAmb 09 14 24.8
comp=Z,74nm,1.4s
KSU1 Kansas State U 83.58 43 IAmb IAmb 09 14 05.2
comp=Z,34nm,0.8s
KSU1 Kansas State U 83.58 43 IAMs_20 IAMs_20 09 57 13.2
comp=Z,4µm,19.0s
KSU1 Kansas State U 83.58 43 P P 09 13 54.6 +0.4
baz=318
KSU1 Kansas State U 83.58 43 P P 09 13 54.1 -0.1
baz=318,SNR=5.5
KSU1 S S 09 24 11.2 -4.9
baz=318
I42A Draeger Farm, 83.61 35 IAmb IAmb 09 14 08.6
comp=Z,30nm,0.9s
I42A Draeger Farm, 83.61 35 P P 09 13 53.9 -0.4
baz=322
H43A Windswept, Lux 83.65 34 IAmb IAmb 09 14 05.8
comp=Z,38nm,0.9s
AOS Alonnisos 83.67 317 eP P 09 13 57.5 +2.8
TREB Trebinje 83.67 323 ⇑iP P 09 13 54.5 -0.2
LIT Litokhoron 83.68 319 P P 09 13 55.0 +0.2
DRME Dracevica, Mon 83.70 322 eP P 09 13 53.4 -1.4
DRME Dracevica, Mon 83.70 322 ⇑iP P 09 13 55.1 +0.3

BUM	Brajici-Budva	83.75	322	⇑*i*P		P		09 13 55.0	-0.1
ECH	Echery	83.75	332	IAmb		IAmb		09 13 57.3	
	comp=Z,47nm,0.9s								
JFWS	Jewell Farm	83.78	37	IAMs_20		IAMs_20		09 56 41.1	
	comp=Z,5µm,19.0s								
JFWS	Jewell Farm	83.78	37	P		P		09 13 55.5	+0.2
	baz=322								
JFWS				S		S		09 24 14.6	-3.3
	baz=322								
MXZ	Matakaoa Point	83.80	153	IAMs_20		IAMs_20		09 52 02.6	
	comp=Z,4µm,20.0s								
HCY	Herceg Novi	83.82	323	⇑*i*P		P		09 13 54.9	-0.5
HCY	Herceg Novi	83.82	323	⇑*i*P		P		09 13 55.0	-0.5
ULC	Ulcinj	83.84	322	⇑*i*P		P		09 13 55.4	-0.2
STON	Ston	83.85	323	⇑*i*P		P		09 13 53.5	-2.0
AMTX	Amarillo	83.88	49	P		P		09 13 56.9	+0.9
	baz=316								
AMTX	Amarillo	83.88	49	P		P		09 13 57.3	+1.3
	baz=316								
AMTX				S		S		09 24 20.8	+1.4
	baz=316								
XOR	Xorichti	83.88	318	P		P		09 13 55.4	-0.4
MSTX	Muleshoe	83.89	50	IAmb		IAmb		09 14 23.9	
	comp=Z,48nm,1.2s								
MSTX	Muleshoe	83.89	50	P		P		09 13 58.5	+2.4
	baz=315								
MSTX	Muleshoe	83.89	50	P		P		09 13 56.7	+0.6
	baz=315,SNR=8.6								
MSTX				S		S		09 24 20.9	+1.3
	baz=315								
PMOR	Pomariorio Ree	83.90	115	*e*T		T		10 46 12.6	
	comp=Z,8.9nm,0.2s								
MNTX	Cornudas Mount	83.92	53	P		P		09 13 56.8	+0.6
	baz=314								
MNTX	Cornudas Mount	83.92	53	P		P		09 13 56.4	+0.2
	baz=314,SNR=28								
MNTX				S		S		09 24 21.5	+1.7
	baz=314								
FUORN	Ofenpass-Fuorn	83.95	330	IAMs_20		IAMs_20		09 57 56.2	
	comp=Z,6µm,22.0s								
DAVOX	Davos/Dischmat	83.97	330	LR		LR		09 55 16.3	
	comp=Z,13µm,20.0s,baz=20,slow=38								
L40A	Anamosa	83.99	38	IAmb		IAmb		09 14 11.0	
	comp=Z,36nm,1.0s								
N38A	Joes South For	84.01	40	IAmb		IAmb		09 14 08.3	
	comp=Z,51nm,0.8s								
N38A	Joes South For	84.01	40	P		P		09 13 57.5	+1.1
	baz=320								
TIR	Tirane	84.02	321	⇑P		P		09 13 57.6	+1.1
URZ	Urewera	84.02	154	IAMs_20		IAMs_20		09 55 32.4	
	comp=Z,5µm,19.0s								
EIL	Elat	84.06	304	LR		LR		09 56 35.7	
	comp=Z,5µm,18.2s,baz=25,slow=39								
EIL	Elat	84.06	304	*e*P		P		09 13 56.8	-0.1
KBN	Korca	84.13	320	P		P		09 13 57.8	+0.7
NEST	Nestorio	84.16	320	P		P		09 13 57.6	+0.3
OK035	E0210 Rd and N	84.22	46	IAMs_20		IAMs_20		09 53 50.1	
	comp=Z,4µm,20.0s								
THL	Klokotos Trika	84.32	319	P		P		09 14 01.0	+3.0
APE	Apeiranthos	84.35	315	*e*P		P		09 13 55.8	-2.5
OK038	West end E0370	84.37	46	IAMs_20		IAMs_20		09 53 43.1	
	comp=Z,4µm,20.0s								
KAN01	Argonia South	84.41	45	IAmb		IAmb		09 14 10.1	
	comp=Z,37nm,0.9s								
OK032	Salt Plains WL	84.43	45	IAMs_20		IAMs_20		09 57 13.4	
	comp=Z,4µm,18.0s								
KAN14	Manchester OK	84.45	45	IAmb		IAmb		09 14 24.5	
	comp=Z,49nm,1.3s								
KS20	Mayfield South	84.47	45	IAmb		IAmb		09 14 24.6	
	comp=Z,54nm,1.1s								
ATAL	Atalanti	84.47	317	P		P		09 13 58.2	-0.6
LKR	Lokris	84.51	317	P		P		09 13 57.4	-1.6
PPT	Papeete	84.55	118	LR		LR		09 47 55.4	
	comp=Z,7µm,19.2s,baz=286,slow=33								
KARP	Karpathos	84.56	313	*e*P		P		09 13 58.2	-1.2
PPT2	Papeete2	84.56	118	*e*P		P		09 14 01.0	+1.5
	comp=Z,476nm,21.8s								
PPT2	Papeete2	84.56	118	*e*S		S		09 24 25.9	-0.5
	comp=Z,1µm,25.0s								
PPT2				*e*SS		SS		09 29 59.3	+1.4
	comp=Z,1µm,23.2s								
PPT2	Papeete2	84.56	118	*e*LR		LR		09 40 37.8	
	comp=Z,12µm,21.5s								
PPT2	Papeete2	84.56	118	*e*T		T		10 47 05.9	
	comp=Z,4.3nm,0.3s								
AGG	Agios Georgios	84.57	318	*e*P		P		09 13 56.5	-2.9
AGG	Agios Georgios	84.57	318	P		P		09 13 58.6	-0.8
AGG	Agios Georgios	84.57	318	IAmb		IAmb		09 14 16.8	
	comp=Z,35nm,0.9s								
LSK	Leskovik	84.58	320	P		P		09 14 00.2	+0.7
VLDQ	Val d'Or	84.59	26	IAmb		IAmb		09 14 33.1	
	comp=Z,34nm,0.9s								
AXAR	Agios Charalam	84.60	318	P		P		09 13 59.8	+0.3
KAN13	South Haven SW	84.67	45	IAmb		IAmb		09 14 25.7	
	comp=Z,50nm,1.1s								
MAKR	Makrakomi, Fth	84.68	318	P		P		09 14 01.1	+1.2
GLMI	Grayling	84.68	32	P		P		09 14 01.0	+1.2
	baz=325								
GLMI	Grayling	84.68	32	P		P		09 13 59.6	-0.2
	baz=325								
GLMI				S		S		09 24 22.4	-4.6
	baz=325								
P38A	Dawn	84.75	41	IAmb		IAmb		09 14 14.8	
	comp=Z,32nm,0.8s								
P38A	Dawn	84.75	41	P		P		09 14 00.5	+0.2
	baz=320								
QRZ	Quartz Range	84.97	158	IAMs_20		IAMs_20		09 48 38.4	
	comp=Z,4µm,21.0s								
SRN	Sarande	85.08	320	P		P		09 14 02.5	+0.6
ANX	Ano Chora	85.11	318	P		P		09 14 03.4	+1.3
SERG	Sergoula	85.17	318	P		P		09 14 01.6	-0.8
IGT	Igoumenitsa	85.19	320	P		P		09 14 02.1	-0.3
N41A	Harden Midland	85.22	38	IAmb		IAmb		09 14 19.0	
	comp=Z,38nm,0.8s								
EFP	Efpalio	85.24	318	P		P		09 14 04.3	+1.6
TAOE	Nuku Hiva Isla	85.25	106	*e*P		P		09 14 04.3	+1.2
	comp=Z,433nm,21.3s								
TAOE	Nuku Hiva Isla	85.25	106	*e*PP		PP		09 17 20.9	-0.1
	comp=Z,385nm,23.1s								
TAOE				*e*S		S		09 24 33.8	+0.3
	comp=Z,2µm,25.5s								
TAOE	Nuku Hiva Isla	85.25	106	*e*LR		LR		09 40 57.2	
	comp=Z,10µm,20.9s								
T35A	Sooner Cattle	85.26	44	IAmb		IAmb		09 14 29.6	
	comp=Z,49nm,1.1s								
T35B	Sooner Cattle	85.26	44	P		P		09 14 04.3	+1.5
	baz=318								
SENIN	Lac Senin/Sane	85.28	331	IAmb		IAmb		09 14 21.8	
	comp=Z,49nm,0.8s								
KEK	Kerkira	85.31	320	P		P		09 14 03.5	+0.5
LAKA	Lakka	85.34	318	P		P		09 14 02.6	-0.7
ZKR	Zakros	85.41	313	*e*P		P		09 14 01.9	-1.7
L44A	Lake County Fo	85.42	36	IAMs_20		IAMs_20		09 56 46.4	
	comp=Z,4µm,19.0s								
L44A	Lake County Fo	85.42	36	P		P		09 14 04.1	+0.6
	baz=323								
L44A				S		S		09 24 29.4	-4.9
	baz=323								
P40A	Paris	85.56	40	IAmb		IAmb		09 14 47.8	
	comp=Z,47nm,1.0s								
P40A	Paris	85.56	40	P		P		09 14 05.6	+1.3
	baz=321								
OK029	Liberty Lake	85.58	46	IAmb		IAmb		09 14 30.6	
	comp=Z,53nm,1.0s								
OK029				IAMs_20		IAMs_20		09 56 07.0	
	comp=Z,3µm,20.0s								
LKD2	Lefkada island	85.60	319	P		P		09 14 04.6	+0.1
WMOK	Wichita Mounta	85.62	47	IAMs_20		IAMs_20		09 57 55.6	
	comp=Z,5µm,18.0s								
WMOK	Wichita Mounta	85.62	47	P		P		09 14 05.3	+0.6
	baz=317								
WMOK	Wichita Mounta	85.62	47	P		P		09 14 05.8	+1.1
	baz=317,SNR=9.1								
WMOK				S		S		09 24 34.7	-2.0
	baz=317								
NYDR	Nydri-Lefkada	85.64	319	P		P		09 14 05.0	+0.4
DRO	Drossia	85.70	318	P		P		09 14 05.1	+0.1
EVGI	Lefkada island	85.73	319	P		P		09 14 05.2	+0.1
HQIL	Hanson Quary C	85.75	36	IAMs_20		IAMs_20		09 51 05.5	
	comp=Z,4µm,20.0s								
RLS	Riolos of Patr	85.75	318	P		P		09 14 06.1	+0.9
OK031	S. Brethren Rd	85.80	45	IAMs_20		IAMs_20		09 58 44.7	
	comp=Z,4µm,19.0s								
OK034	N. Norfolk Rd.	85.82	45	IAmb		IAmb		09 14 32.3	
	comp=Z,54nm,1.2s								
OK034				IAMs_20		IAMs_20		09 57 59.4	
	comp=Z,4µm,18.0s								
OK030	Cody Creek RV	85.85	45	IAMs_20		IAMs_20		09 58 46.0	
	comp=Z,4µm,18.0s								
FSK	Fiskardo	85.90	319	P		P		09 14 06.6	+0.7
J47A	Sunmer	85.90	33	IAmb		IAmb		09 14 37.8	
	comp=Z,57nm,1.1s								
J47A	Sunmer	85.90	33	P		P		09 14 06.0	+0.2
	baz=325								
J47A				P		P		09 14 06.0	+0.2
	baz=325								
LPIG	La Paz	85.95	62	LR		LR		09 51 18.1	
	comp=Z,945nm,18.1s,baz=317,slow=35								
THZ	Tophouse	85.95	159	IAMs_20		IAMs_20		09 49 17.2	
	comp=Z,4µm,22.0s								
FNO	Franklin	86.01	46	IAmb		IAmb		09 14 33.6	
	comp=Z,92nm,1.3s								
IDI	Anoyia	86.01	314	LR		LR		09 58 00.1	
	comp=Z,6µm,18.2s,baz=352,slow=40								
IDI	Anoyia	86.01	314	*e*P		P		09 14 05.0	-1.7
IDI	Anoyia	86.01	314	IAmb		IAmb		09 14 33.7	
	comp=Z,64nm,1.0s								
SNZO	South Karori	86.05	157	IAMs_20		IAMs_20		09 49 33.9	
	comp=Z,5µm,20.0s								
MATE	Matera	86.06	323	⇑P		P		09 14 06.7	0.0
DEOK	Depew	86.06	45	IAmb		IAmb		09 14 33.5	
	comp=Z,71nm,1.3s								
HDIL	Hopedale	86.08	38	IAmb		IAmb		09 14 20.2	
	comp=Z,36nm,0.8s								
HDIL				IAMs_20		IAMs_20		09 58 59.9	
	comp=Z,4µm,20.0s								
HDIL	Hopedale	86.08	38	P		P		09 14 06.7	-0.1
	baz=322								
HDIL	Hopedale	86.08	38	P		P		09 14 07.2	+0.4
	baz=322,SNR=11								
HDIL				S		S		09 24 38.1	-2.7
	baz=322								
MSSA	Maissana	86.16	329	IAmb		IAmb		09 14 51.0	
	comp=Z,49nm,1.0s								
ITM	Ithomi	86.18	317	*e*P		P		09 14 06.4	-1.0
ITM	Ithomi	86.18	317	P		P		09 14 07.7	+0.3
X34A	Smith Ranch, M	86.25	47	IAmb		IAmb		09 14 25.8	
	comp=Z,74nm,1.2s								
KTHA	Kythira Island	86.28	316	*e*P		P		09 14 05.4	-2.5
S39A	Bolivar	86.34	42	P		P		09 14 07.5	-0.6
	baz=320								
IMMV	Iera Moni Meta	86.38	315	*e*P		P		09 14 07.9	-0.5
TUL1	Leonard	86.39	45	IAmb		IAmb		09 14 34.4	
	comp=Z,40nm,1.1s								
TUL1				IAMs_20		IAMs_20		10 00 25.8	
	comp=Z,4µm,20.0s								
TUL1	Leonard	86.39	45	P		P		09 14 09.7	+1.3
	baz=319								
TUL1	Leonard	86.39	45	P		P		09 14 08.8	+0.3
	baz=319,SNR=9.5								
TUL1				S		S		09 24 43.1	-1.0
	baz=319								
R40A	Maddies Statio	86.41	41	IAmb		IAmb		09 14 34.7	
	comp=Z,32nm,1.1s								
R40A	Maddies Statio	86.41	41	P		P		09 14 08.4	-0.1
	baz=321								
RLO	Rose Lookout	86.61	44	IAmb		IAmb		09 14 26.2	
	comp=Z,22nm,0.9s								
TX31	Lajitas Ar. Si	86.63	54	P		P		09 14 09.9	0.0
TX31	Lajitas Ar. Si	86.63	54	P		P		09 14 10.4	+0.6
	baz=315								
TX32	Lajitas Array	86.63	54	IAmb		IAmb		09 14 32.6	
	comp=Z,88nm,1.6s								
TXAR	Lajitas Array	86.63	54	P		P		09 14 10.4	+0.6
	comp=Z,16nm,1.0s,baz=291,slow=3.9,SNR=58								
TXAR				PKKPbc		PKKPbc		09 32 08.7	+5.1
	comp=Z,0.3nm,0.8s,baz=123,slow=4.6,SNR=3.4								
TXAR				PKPPKP		P'P'df		09 40 14.2	-2.8
	comp=Z,0.5nm,1.1s,baz=193,slow=3.9,SNR=3.9								
TXAR				LR		LR		09 55 05.1	
	comp=Z,1µm,18.1s,baz=334,slow=37								
	comp=Z,16nm,1.0s								
ABTX	Abilene, Hawle	86.68	49	IAmb		IAmb		09 14 36.9	
	comp=Z,62nm,1.1s								
ABTX	Abilene, Hawle	86.68	49	P		P		09 14 12.9	+2.9
	baz=317								
ABTX	Abilene, Hawle	86.68	49	P		P		09 14 10.7	+0.7
	baz=317,SNR=7.8								
ABTX				S		S		09 24 45.7	-1.3
	baz=317								
P43A	Skaggs, Pawnee	86.69	38	P		P		09 14 11.2	+1.3
	baz=322								
LTZ	Lake Taylor	86.72	159	IAMs_20		IAMs_20		09 49 45.7	
	comp=Z,4µm,20.0s								
PAOL	Paolisi	86.73	324	IAmb		IAmb		09 15 02.2	
	comp=Z,88nm,1.7s								
KHZ	Kahutara	86.73	158	IAMs_20		IAMs_20		09 46 23.9	
	comp=Z,5µm,22.0s								
U38A	Gravette	86.74	43	P		P		09 14 10.6	+0.4
	baz=320								
O44A	Mansfield	86.78	37	P		P		09 14 11.1	+0.9
	baz=323								
FOZ	Fox Glacier	86.79	161	IAMs_20		IAMs_20		09 51 00.8	
	comp=Z,4µm,20.0s								
SADO	Sadowa	86.86	29	LR		LR		09 57 11.2	
	comp=Z,4µm,19.1s,baz=359,slow=38								
HHAR	Hobbs	87.09	43	IAmb		IAmb		09 14 37.2	
	comp=Z,28nm,1.1s								
HHAR	Hobbs	87.09	43	P		P		09 14 12.3	+0.4
	baz=320								
CCM	Cathedral Cave	87.10	40	P		P		09 14 11.9	+0.1
CCM				IAmb		IAmb		09 14 28.9	
	comp=Z,38nm,0.9s								
CCM	Cathedral Cave	87.10	40	IAMs_20		IAMs_20		09 59 13.2	
	comp=Z,4µm,18.0s								
CCM	Cathedral Cave	87.10	40	P		P		09 14 11.9	+0.1
CCM				pmax		pmax			
	comp=Z,38nm,0.9s								
CCM	Cathedral Cave	87.10	40	P		P		09 14 12.0	+0.1
	baz=321								
CCM	Cathedral Cave	87.10	40	P		P		09 14 12.8	+1.0
	baz=321								
CCM				S		S		09 24 49.4	-1.5
	baz=321								
L48A	N Adams	87.12	34	IAmb		IAmb		09 14 23.4	
	comp=Z,35nm,0.9s								
L48A	N Adams	87.12	34	P		P		09 14 11.8	-0.1
	baz=325								
L48A				P		P		09 14 11.8	-0.1
	baz=325								
SLM	Saint Louis	87.14	39	IAmb		IAmb		09 14 38.4	
	comp=Z,42nm,1.0s								
AAM	Ann Arbor	87.16	33	P		P		09 14 12.9	+0.8
	baz=326								
AAM				S		S		09 24 49.1	-2.1
	baz=326								
TIP	Timpagrande	87.20	322	⇑P		P		09 14 13.1	+0.7
SSB	Saint Sauveur	87.20	333	IAmb		IAmb		09 14 25.4	
	comp=Z,41nm,1.0s								
TRQ	Mont Tremblant	87.21	26	IAmb		IAmb		09 15 07.7	
	comp=Z,27nm,1.0s								
SFIN	Lafayette	87.23	36	P		P		09 14 13.7	+1.3
	baz=324								
SFIN				S		S		09 24 49.5	-2.4
	baz=324								
RPZ	Rata Peaks	87.27	161	LR		LR		09 48 37.5	
	comp=Z,3µm,20.7s,baz=330,slow=32								
RPZ	Rata Peaks	87.27	161	IAMs_20		IAMs_20		09 54 26.2	
	comp=Z,5µm,20.0s								
MGMO	Mountain Grove	87.28	42	IAmb		IAmb		09 14 23.8	
	comp=Z,22nm,0.8s								
N47A	Urbana	87.45	35	IAmb		IAmb		09 14 24.5	
	comp=Z,30nm,1.0s								
N47A	Urbana	87.45	35	P		P		09 14 13.0	-0.4
	baz=325								
N47A				P		P		09 14 13.0	-0.4
	baz=325								
Q44A	Meyer Farm, Va	87.51	38	IAmb		IAmb		09 15 28.6	
	comp=Z,33nm,1.0s								
Q44A	Meyer Farm, Va	87.51	38	P		P		09 14 14.5	+0.7
	baz=323								
Z35A	Perchaven, San	87.52	47	IAmb		IAmb		09 14 40.2	
	comp=Z,48nm,1.0s								
Z35A	Perchaven, San	87.52	47	P		P		09 14 15.2	+1.2
	baz=318								
FVM	French Village	87.56	40	IAmb		IAmb		09 14 30.7	
	comp=Z,28nm,1.0s								
FVM	French Village	87.56	40	P		P		09 14 15.0	+0.9
	baz=322								
X37A	Clayton	87.61	45	IAmb		IAmb		09 14 39.0	
	comp=Z,92nm,1.9s								
X37A	Clayton	87.61	45	P		P		09 14 15.3	+0.9
	baz=319								
MQZ	McQueen's Vall	87.68	159	IAMs_20		IAMs_20		09 53 27.1	
	comp=Z,4µm,18.0s								
LBZ	Lake Benmore	87.69	161	IAMs_20		IAMs_20		09 51 19.5	
	comp=Z,4µm,21.0s								
WKZ	Wanaka	87.83	162	IAMs_20		IAMs_20		09 54 33.1	
	comp=Z,5µm,19.0s								
N49A	Columbus Grove	88.07	34	IAmb		IAmb		09 14 33.0	
	comp=Z,30nm,1.0s								
N49A	Columbus Grove	88.07	34	P		P		09 14 16.8	+0.4
	baz=326								
N49A				P		P		09 14 16.8	+0.4
	baz=326								
OLIL	Olney	88.08	38	IAmb		IAmb		09 14 43.3	
	comp=Z,35nm,1.1s								
OLIL	Olney	88.08	38	P		P		09 14 17.1	+0.5
	baz=323								
MLZ	Mavora Lakes	88.13	163	IAMs_20		IAMs_20		09 50 26.2	
	comp=Z,3µm,20.0s								
JCT	Junction City	88.14	51	IAmb		IAmb		09 14 41.3	
	comp=Z,84nm,1.7s								
JCT	Junction City	88.14	51	P		P		09 14 14.9	-2.2
	baz=317								
JCT				S		S		09 25 00.0	-1.2
	baz=317								
O48B	Farmland	88.19	35	P		P		09 14 17.3	+0.2
	baz=325								
O48B	Farmland	88.19	35	P		P		09 14 17.3	+0.2
	baz=325								
O48B				S		S		09 24 59.2	-2.1
	baz=325								
FCAR	Ozark Folk Cen	88.33	42	IAmb		IAmb		09 14 34.6	
	comp=Z,34nm,1.1s								
S44A	Carbondale	88.36	39	P		P		09 14 18.9	+1.0
	baz=323								
WHTX	Lake Whitney,	88.39	48	P		P		09 14 18.5	+0.3
	baz=318								
WHTX				S		S		09 25 00.8	-2.6
	baz=318								
ODZ	Otahua Downs	88.42	161	IAMs_20		IAMs_20		09 51 06.8	
	comp=Z,3µm,19.0s								
O49A	Covington	88.61	35	P		P		09 14 19.8	+0.7
	baz=326								
O49A				P		P		09 14 19.8	+0.7
	baz=326								
MIAR	Mount Ida	88.61	44	IAmb		IAmb		09 14 36.1	
	comp=Z,32nm,0.9s								
MIAR	Mount Ida	88.61	44	P		P		09 14 20.3	+1.1
	baz=320								
MIAR	Mount Ida	88.61	44	P		P		09 14 18.6	-0.6
	baz=320,SNR=14								
MIAR				S		S		09 25 03.9	-1.5
	baz=320								
LONY	Lake Ozonia	88.61	26	IAMs_20		IAMs_20		09 57 10.8	
	comp=Z,5µm,20.0s								
LONY	Lake Ozonia	88.61	26	P		P		09 14 17.4	-1.6
	baz=332								
LONY				S		S		09 25 01.4	-3.7
	baz=332								
LCAR	Lake Charles	88.69	42	IAmb		IAmb		09 15 02.6	
	comp=Z,54nm,1.5s								
WHAR	Wooly Hollow	88.71	43	IAmb		IAmb		09 14 36.7	
	comp=Z,49nm,1.0s								
TBI	Tubuai	88.72	122	*e*P		P		09 14 21.3	+1.7
	comp=Z,525nm,24.8s								
TBI	Tubuai	88.72	122	*e*PP		PP		09 17 49.1	+0.3
	comp=Z,268nm,38.8s								
TBI				*e*S		S		09 25 05.3	-1.0
	comp=Z,2µm,28.2s								
TBI	Tubuai	88.72	122	*e*LR		LR		09 42 33.2	
	comp=Z,5µm,24.8s								
TBI	Tubuai	88.72	122	*e*T		T		10 52 14.5	
	comp=Z,13nm,0.3s								
P48A	Milroy	88.72	36	IAmb		IAmb		09 15 03.3	
	comp=Z,28nm,1.2s								
M52A	Chesterland	88.74	32	IAmb		IAmb		09 14 35.2	
	comp=Z,50nm,1.1s								
PQI	Presque Isle	88.79	21	IAmb		IAmb		09 14 56.5	
	comp=Z,99nm,2.0s								
ERPA	Erie	88.80	31	IAmb		IAmb		09 14 31.5	
	comp=Z,52nm,1.1s								
ERPA				IAMs_20		IAMs_20		09 58 25.6	
	comp=Z,5µm,20.0s								
ERPA	Erie	88.80	31	P		P		09 14 18.2	-1.6
	baz=328								
ERPA				S		S		09 25 03.4	-3.5
	baz=328								
P49A	Miami Univ. Ec	88.98	35	IAmb		IAmb		09 14 37.2	
	comp=Z,46nm,1.0s								
P49A				IAMs_20		IAMs_20		09 59 45.2	
	comp=Z,4µm,20.0s								
P49A	Miami Univ. Ec	88.98	35	P		P		09 14 19.3	-1.5
	baz=325								
P49A				S		S		09 25 06.5	-2.2
	baz=325								
MMNY	Mt. Morris Dam	89.07	29	IAmb		IAmb		09 14 37.6	
	comp=Z,30nm,1.1s								
WVNY	West Valley, N	89.09	30	IAmb		IAmb		09 14 56.1	
	comp=Z,59nm,1.4s								
WVNY	West Valley, N	89.09	30	P		P		09 14 21.9	+0.6
	baz=329								
M53A	WI Miller and	89.10	32	IAMs_20		IAMs_20		10 00 08.1	
	comp=Z,4µm,21.0s								
M53A	WI Miller and	89.10	32	P		P		09 14 21.1	-0.2
	baz=328								
M53A				S		S		09 25 07.0	-2.8
	baz=328								
ALLY	Alegheny Colle	89.13	31	IAmb		IAmb		09 15 28.5	
	comp=Z,42nm,0.9s								
ACSO	Alum Creek Sta	89.16	34	IAmb		IAmb		09 14 38.7	
	comp=Z,27nm,0.8s								
ACSO	Alum Creek Sta	89.16	34	P		P		09 14 22.5	+0.9
	baz=326								
ACSO	Alum Creek Sta	89.16	34	P		P		09 14 20.9	-0.7
	baz=326								
ACSO				S		S		09 25 06.6	-3.7
	baz=326								
435B	Jarrell	89.22	49	IAMs_20		IAMs_20		09 58 14.5	
	comp=Z,4µm,19.0s								
435B	Jarrell	89.22	49	P		P		09 14 22.0	0.0

O53A S **S** **09 25 13.6 -3.5**
baz=328
T47A **Sharon Grove** **89.95 38** IAmb IAmb 09 14 42.2
comp=Z,34nm,1.1s
833A **Chaparral WMA,** **89.96 52** P **P** **09 14 23.4 -2.1**
baz=317
833A S **S** **09 25 17.6 -0.6**
baz=317
Q51A **Peebles** **90.00 35** IAmb IAmb 09 14 42.3
comp=Z,34nm,0.9s
ACCN **Adirondack Com** **90.01 26** IAmb IAmb 09 15 20.7
comp=Z,46nm,1.5s
P52A **Corning** **90.01 34** IAMs_20 IAMs_20 10 02 10.5
comp=Z,5µm,18.0s
P52A **Corning** **90.01 34** P **P** **09 14 24.1 -1.5**
baz=327
P52A S **S** **09 25 15.3 -3.1**
baz=327
NATX **Nacogdoches** **90.14 47** IAMs_20 IAMs_20 10 00 53.8
comp=Z,3µm,18.0s
NATX **Nacogdoches** **90.14 47** P **P** **09 14 25.9 -0.4**
baz=320
NATX S **S** **09 25 17.3 -2.5**
baz=320
BINY **Binghamton** **90.24 28** IAmb IAmb 09 15 01.4
comp=Z,30nm,1.1s
BINY **Binghamton** **90.24 28** P **P** **09 14 25.3 -1.4**
baz=331
BINY S **S** **09 25 15.9 -4.5**
baz=331
WVT **Waverly** **90.29 39** P **P** **09 14 27.0 0.0**
WVT **Waverly** **90.29 39** IAMs_20 IAMs_20 09 59 12.1
comp=Z,5µm,19.0s
WVT **Waverly** **90.29 39** P **P** **09 14 27.0 0.0**
WVT pmax pmax
comp=Z,19nm,1.1s
WVT **Waverly** **90.29 39** P **P** **09 14 26.8 -0.1**
baz=323
WVT S **S** **09 25 18.5 -2.5**
baz=323
LMN **Caledonia Moun** **90.40 20** IAmb IAmb 09 14 42.6
comp=Z,30nm,1.1s
I63A **Otisfield** **90.42 24** IAmb IAmb 09 15 15.8
comp=Z,51nm,1.1s
J61A **Chester** **90.42 26** IAmb IAmb 09 15 00.6
comp=Z,50nm,1.8s
P53A **Whipple** **90.45 33** P **P** **09 14 28.6 +0.9**
baz=327
P53A P **P** **09 14 28.6 +0.9**
baz=327
M57A **Sunshine Farm,** **90.57 30** P **P** **09 14 28.6 +0.4**
baz=330
M57A P **P** **09 14 28.6 +0.4**
baz=330
L59A **Walton** **90.59 28** IAmb IAmb 09 14 51.5
comp=Z,28nm,0.9s
L59A **Walton** **90.59 28** P **P** **09 14 28.3 0.0**
baz=332
L59A P **P** **09 14 28.3 0.0**
baz=332
FFD **Franklin Falls** **90.60 25** IAMs_20 IAMs_20 09 56 56.4
comp=Z,6µm,20.0s
ATD **Arta Tunnel** **90.78 286** LR LR 09 59 04.6
comp=Z,1µm,20.2s,baz=32,slow=38
ATD **Arta Tunnel** **90.78 286** IAMs_20 IAMs_20 09 56 46.1
comp=Z,3µm,19.0s
ATD **Arta Tunnel** **90.78 286** *i* P **P** **09 14 30.2 +0.5**
ATD ⇓*e*S **SKSac** **09 25 05.0 +3.5**
ATD **Arta Tunnel** **90.78 286** *e*P **P** **09 14 28.0 -1.6**
ATD *i* P **P** **09 14 30.2 +0.5**
ATD *e*S **SKSac** **09 25 02.5 +0.9**
ATD **Arta Tunnel** **90.78 286** *e*P **P** **09 14 26.1 -3.6**
OXF **Oxford** **90.79 41** IAMs_20 IAMs_20 10 01 49.6
comp=Z,3µm,18.0s
OXF **Oxford** **90.79 41** P **P** **09 14 28.9 -0.5**
baz=322
OXF S **S** **09 25 22.0 -3.7**
baz=322
HKT **Hockley** **90.84 48** IAMs_20 IAMs_20 09 59 43.0
comp=Z,3µm,19.0s
KSPA **Keystone Colle** **90.88 29** P **P** **09 14 30.1 +0.5**
baz=331
SSPA **Standing Stone** **90.88 30** P **P** **09 14 30.0 +0.4**
SSPA IAmb IAmb 09 15 44.7
comp=Z,55nm,1.4s
SSPA **Standing Stone** **90.88 30** P **P** **09 14 30.4 +0.7**
baz=330
SSPA **Standing Stone** **90.88 30** P **P** **09 14 28.0 -1.7**
baz=330
SSPA S **S** **09 25 22.5 -3.8**
baz=330
MCWV **Mont Chateau** **90.94 32** P **P** **09 14 27.2 -2.7**
baz=328
MCWV S **S** **09 25 24.7 -2.2**
baz=328
U49A **Red Boiling Sp** **90.96 38** IAmb IAmb 09 14 45.4
comp=Z,44nm,1.4s
T50A **Nancy** **90.98 37** IAmb IAmb 09 14 46.8
comp=Z,28nm,1.1s
T50A **Nancy** **90.98 37** P **P** **09 14 31.2 +1.0**
baz=325
T50A P **P** **09 14 31.2 +1.0**
baz=325
PLAL **Pickwick Lake** **91.09 40** IAmb IAmb 09 15 02.7
comp=Z,49nm,1.9s
PLAL IAMs_20 IAMs_20 10 01 25.2
comp=Z,4µm,20.0s
Q54A **Coxs Mills** **91.11 33** IAmb IAmb 09 14 57.8
comp=Z,49nm,1.6s
N58A **Sunbury** **91.15 30** IAmb IAmb 09 15 05.7
comp=Z,42nm,1.1s
HRV **Adam Dziewonsk** **91.50 25** P **P** **09 14 31.9 -0.6**
HRV IAmb IAmb 09 15 27.9
comp=Z,26nm,1.1s
HRV **Adam Dziewonsk** **91.50 25** IAMs_20 IAMs_20 09 57 03.1
comp=Z,5µm,20.0s
HRV **Adam Dziewonsk** **91.50 25** P **P** **09 14 31.9 -0.6**
HRV pmax pmax
comp=Z,26nm,1.2s
HRV MLR MLR
comp=Z,5µm,20.0s
HRV **Adam Dziewonsk** **91.50 25** P **P** **09 14 29.7 -2.8**
baz=334
HRV S **S** **09 25 28.2 -3.6**
baz=334
KSCT **Kent School, K** **91.54 27** IAmb IAmb 09 15 02.9
comp=Z,23nm,1.1s
WES **Weston** **91.68 25** IAmb IAmb 09 15 40.0
comp=Z,21nm,1.1s
MSEY **Mahe Island** **91.69 265** IAMs_20 IAMs_20 09 56 06.1
comp=Z,4µm,20.0s
MSEY **Mahe Island** **91.69 265** P **P** **09 14 33.2 -0.7**
TZTN **Tazewell** **91.96 36** P **P** **09 14 33.0 -1.8**
baz=326
TZTN S **S** **09 25 33.8 -2.5**
baz=326
MAHO **Mahon** **91.97 330** Pdif **P** **09 14 34.4 -0.3**
MAHO **Mahon** **91.97 330** PP PP 09 18 14.9 +1.7
MAHO **Mahon** **91.97 330** IAmb IAmb 09 15 26.2
comp=Z,54nm,1.4s
R55A **Marlinton** **92.00 33** IAmb IAmb 09 15 56.0
comp=Z,29nm,1.1s
X48A **Hartselle** **92.02 40** P **P** **09 14 34.1 -0.9**
baz=324
VBMS **Vicksburg** **92.02 44** IAMs_20 IAMs_20 10 00 58.5
comp=Z,3µm,19.0s
VBMS **Vicksburg** **92.02 44** P **P** **09 14 35.3 +0.3**
baz=322
VBMS S **S** **09 25 34.3 -2.6**
baz=322
BRYW **Bryant College** **92.03 26** IAMs_20 IAMs_20 10 03 35.3
comp=Z,5µm,18.0s
PAL **Palisades** **92.03 28** IAMs_20 IAMs_20 10 00 05.5
comp=Z,5µm,20.0s
PAL **Palisades** **92.03 28** P **P** **09 14 34.0 -1.0**
baz=332
PAL S **S** **09 25 31.4 -5.2**
baz=332
TKL **Tuckaleechee C** **92.59 37** LR LR 09 58 00.4
comp=Z,4µm,20.0s,baz=341,slow=37
TKL **Tuckaleechee C** **92.59 37** IAmb IAmb 09 14 52.8
comp=Z,40nm,1.5s
BLA **Blacksburg** **92.78 34** IAMs_20 IAMs_20 10 00 21.6
comp=Z,5µm,21.0s
BLA **Blacksburg** **92.78 34** P **P** **09 14 38.6 0.0**
baz=328
BLA S **S** **09 25 40.4 -3.2**
baz=328

LRAL **Lakeview Retre** **93.18 41** IAMs_20 IAMs_20 10 02 05.5
comp=Z,4µm,19.0s
LRAL **Lakeview Retre** **93.18 41** P **P** **09 14 39.5 -0.9**
baz=324
LRAL S **S** **09 25 42.7 -4.5**
baz=324
CBN **Corbin Frederi** **93.18 31** P **P** **09 14 39.8 -0.5**
baz=330
CBN S **S** **09 25 43.7 -3.3**
baz=330
KEST **Kesra** **93.41 324** P **P** **09 14 40.6 -0.9**
comp=Z,20nm,1.0s,baz=299,slow=3.8,SNR=18
KEST LR LR 10 02 54.8
comp=Z,11µm,18.3s,baz=318,slow=40
comp=Z,20nm,1.0s
KEST **Kesra** **93.41 324** IAmb IAmb 09 14 44.3
comp=Z,24nm,1.0s
PBRG **Braganca** **93.91 338** *e*P P 09 14 49.8 +6.1
PBRG **Braganca** **93.91 338** *e*PP **PP** **09 18 29.9 +1.5**
KMSC **Kings Mountain** **94.12 36** P **P** **09 14 43.1 -1.6**
baz=327
PGAV **Gavieira, Arco** **94.18 339** *e*P **P** **09 14 49.8 +4.8**
PGAV **Gavieira, Arco** **94.18 339** *e*PP **PP** **09 18 32.9 +2.3**
PGAV *e*S **SKSac** **09 25 25.4 +5.5**
PGAV *e*SS **SS** **09 32 19.9 +5.2**
PGAV **Gavieira, Arco** **94.18 339** *e*LQ LQ 09 45 01.5
PGAV *e*LR LR 09 49 37.1
comp=Z,8µm,20.0s
UCM **Universidad Co** **94.23 335** Pdif **P** **09 14 45.9 +0.7**
UCM **Universidad Co** **94.23 335** PP **PP** **09 18 34.0 +3.0**
ANKE **Ethiopia-Afar** **94.34 286** *e*P **P** **09 14 44.7 -1.9**
GOGA **Godfrey** **94.58 38** P **P** **09 14 44.0 -2.8**
baz=326
GOGA S **S** **09 25 55.6 -3.8**
baz=326
MVO **Moncorvo** **94.59 338** *e*P **P** **09 14 49.8 +3.0**
MVO **Moncorvo** **94.59 338** *e*PP **PP** **09 18 35.9 +2.2**
MVO *e*S **SKSac** **09 25 27.8 +5.7**
MVO *e*SS **SS** **09 32 27.0 +6.6**
MVO **Moncorvo** **94.59 338** *e*LQ LQ 09 43 52.8
MVO *e*LR LR 09 50 03.8
comp=Z,7µm,20.0s
POLO **Lamas de Olo** **94.61 339** *e*P P 09 14 52.8 +5.8
POLO **Lamas de Olo** **94.61 339** *e*PP **PP** **09 18 37.4 +3.5**
BRAL **Brewton** **94.65 42** IAMs_20 IAMs_20 10 03 13.9
comp=Z,4µm,19.0s
BRAL **Brewton** **94.65 42** P **P** **09 14 46.3 -0.9**
baz=324
BRAL S **S** **09 25 55.7 -4.5**
baz=324
ESDC **Sonseca Array** **95.04 336** P **P** **09 14 48.4 -0.6**
comp=Z,4.1nm,1.0s,baz=16,slow=3.3,SNR=18
ESDC PP **PP** **09 18 33.0 -4.2**
comp=Z,3.0nm,0.9s,baz=14,slow=6.8,SNR=4.3
ESDC LR LR 10 02 12.8
comp=Z,10µm,18.8s,baz=25,slow=38
comp=Z,4.1nm,1.0s
ESDC **Sonseca Array** **95.04 336** P **P** **09 14 48.7 -0.2**
AAE **Adis Abeba** **95.43 287** *e*P **P** **09 14 51.0 -0.4**
AAE *e*S **SKSac** **09 25 17.7 -10**
AAE **Adis Abeba** **95.43 287** *e*P **P** **09 14 50.6 -0.8**
AAE *e*S **SKSac** **09 25 26.4 -1.4**
AAE **Adis Abeba** **95.43 287** *e*P P 09 14 42.3 -9.1
MTE **Manteigas** **95.44 338** *e*P **P** **09 14 54.3 +3.5**
MTE **Manteigas** **95.44 338** *e*PP **PP** **09 18 43.4 +3.1**
MTE *e*S **SKSac** **09 25 31.0 +4.3**
MTE *e*SS **SS** **09 32 36.7 +4.1**
MTE **Manteigas** **95.44 338** *e*LQ LQ 09 44 59.0
MTE *e*LR LR 09 51 49.7
comp=Z,6µm,20.0s
CNNC **Cliffs of the** **95.52 33** P **P** **09 14 51.1 +0.1**
baz=330
FURI **Furi** **95.58 287** *e*P **P** **09 14 52.5 +0.4**
FURI *e*S **SKSac** **09 25 31.4 +2.7**
FURI **Furi** **95.58 287** *e*P **P** **09 14 52.5 +0.4**
FURI *e*S **SKSac** **09 25 31.4 +2.7**
FURI **Furi** **95.58 287** *e*P **P** **09 14 49.3 -2.8**
COI **Coimbra** **95.86 339** *e*P **P** **09 14 52.8 +0.2**
COI **Coimbra** **95.86 339** *e*PP **PP** **09 18 46.5 +3.0**
CART **Cartagena** **95.94 333** Pdif **P** **09 14 53.3 +0.4**
CART **Cartagena** **95.94 333** PP **PP** **09 18 46.4 +2.2**
PCAS **Casmilo, Conde** **96.03 339** *e*P **P** **09 14 55.9 +2.5**
PCAS **Casmilo, Conde** **96.03 339** *e*PP **PP** **09 18 51.0 +6.2**
TIGA **Tifton** **96.15 39** S **S** **09 26 09.7 -3.5**
baz=326
PMRV **Marv??o** **96.30 338** *e*P **P** **09 14 55.9 +1.3**
PMRV **Marv??o** **96.30 338** *e*PP **PP** **09 18 51.0 +4.1**
PMRV *e*S **SKSac** **09 25 40.4 +9.3**
PMRV *e*SS **SS** **09 32 46.6 +1.9**
PMRV **Marv??o** **96.30 338** *e*LQ LQ 09 45 52.1
PMRV *e*LR LR 09 50 54.7
comp=Z,6µm,20.0s
NHSC **New Hope** **96.35 36** IAMs_20 IAMs_20 10 02 58.3
comp=Z,5µm,20.0s
PSBE **So Bento** **96.61 339** *e*P **P** **09 14 57.4 +1.3**
PSBE **So Bento** **96.61 339** *e*PP **PP** **09 18 54.0 +4.6**
UNM **Universidad Na** **96.64 58** IAMs_20 IAMs_20 09 56 14.8
comp=Z,3µm,19.0s
PMTG **Montargil** **96.87 338** *e*P **P** **09 15 00.4 +3.2**
PMTG **Montargil** **96.87 338** *e*PP **PP** **09 18 57.0 +5.7**
PESTR **Estremoz** **96.88 338** *e*P **P** **09 14 57.4 +0.2**
PESTR **Estremoz** **96.88 338** *e*PP **PP** **09 18 55.5 +4.1**
PMAFR **Mafra** **97.27 339** *e*P Pdif 09 15 00.4 +1.3
PMAFR **Mafra** **97.27 339** *e*PP **PP** **09 19 00.0 +5.6**
EVO **Evora** **97.31 338** Pdif Pdif 09 15 03.5 +4.2
EVO **Evora** **97.31 338** PP **PP** **09 18 57.7 +3.0**
PBAR **Barrancos** **97.36 337** *e*P Pdif 09 15 00.4 +0.9
PBAR **Barrancos** **97.36 337** *e*PP **PP** **09 19 00.0 +4.9**
LIS **Lisbon** **97.46 339** *e*PP **PP** **09 18 57.4 +1.6**
LIS IAMs_20 IAMs_20 09 54 43.4
comp=E,26µm,35.3s
EMAL **Malaga-Limoner** **97.84 335** Pdif **P** **09 15 01.4 -0.1**
EMAL **Malaga-Limoner** **97.84 335** PP **PP** **09 19 03.5 +4.7**
PNCL **Nicolau / Gran** **97.85 338** *e*P Pdif 09 15 04.9 +3.3
PNCL **Nicolau / Gran** **97.85 338** *e*PP **PP** **09 19 06.0 +7.2**
MESJ **Messejana** **98.01 338** *e*P Pdif 09 15 02.6 +0.2
MESJ *e*PP **PP** **09 19 01.5 +1.4**
MESJ *e*SKSac **SKSac** **09 25 40.4 +0.5**
MESJ IAMs_20 IAMs_20 10 07 54.6
comp=Z,11µm,17.7s
MESJ **Messejana** **98.01 338** *e*P Pdif 09 15 02.6 +0.2
MESJ *e* 09 19 01.5
MESJ *e* 09 25 40.3
PCVE **Castro Verde** **98.15 338** *e*P Pdif 09 15 06.4 +3.4
PCVE **Castro Verde** **98.15 338** *e*PP **PP** **09 19 06.0 +4.8**
PVAQ **Vaqueiros** **98.27 337** *e*P Pdif 09 15 07.9 +4.3
PVAQ **Vaqueiros** **98.27 337** *e*PP **PP** **09 19 04.5 +2.4**
PVAQ *e*S **SKSac** **09 25 48.9 +7.6**
PVAQ **Vaqueiros** **98.27 337** *e*LR LR 09 52 09.3
comp=Z,11µm,20.0s
PBDV **Barranco-do-Ve** **98.48 338** *e*P Pdif 09 15 09.4 +4.9
PBDV **Barranco-do-Ve** **98.48 338** *e*PP **PP** **09 19 06.0 +2.2**
CHAS **Isla Isabel II** **98.60 333** Pdif Pdif 09 15 05.4 +0.3
CHAS **Isla Isabel II** **98.60 333** PP **PP** **09 19 06.9 +2.2**
MORF **Marmelete** **98.63 338** *e*Pdif Pdif 09 15 05.5 +0.2
MORF PP **PP** **09 19 06.4 +1.5**
MORF *e*SKSac **SKSac** **09 25 43.6 +0.4**
MORF IAMs_20 IAMs_20 09 55 55.5
comp=E,15µm,24.4s
MORF **Marmelete** **98.63 338** *i* P Pdif 09 15 05.4 +0.2
MORF *e* 09 19 06.4
MORF *e* 09 25 43.6
MORF **Marmelete** **98.63 338** *e*P Pdif 09 15 09.4 +4.2
MORF **Marmelete** **98.63 338** *e*PP **PP** **09 19 09.1 +4.2**
WMELI **Melilla** **98.66 333** Pdif **P** **09 15 05.1 -0.2**
WMELI **Melilla** **98.66 333** PP **PP** **09 19 08.1 +2.9**
SFS **San Fernando** **98.68 336** PP PP 09 18 47.7 -18
PFVI **Vila Bisbo** **98.84 338** *e*P Pdif 09 15 10.9 +4.8
PFVI **Vila Bisbo** **98.84 338** *e*PP **PP** **09 19 12.1 +5.6**
CEU **Ceuta** **98.94 335** Pdif P **09 15 05.7 -0.8**
CEU **Ceuta** **98.94 335** PP **PP** **09 19 10.7 +2.8**
PVLZ **Peæn de** **99.25 334** Pdif **Pdif** **09 15 04.0 -4.0**
PVLZ **Peæn de** **99.25 334** PP **PP** **09 19 11.4 +1.8**
IFR **Ifrane** **101.04 334** Pdif **Pdif** **09 15 13.6 -2.6**
IFR **Ifrane** **101.04 334** PP **PP** **09 19 24.9 +1.4**
CMLA **Cha da Macela** **101.59 351** IAMs_20 IAMs_20 10 04 37.1
comp=Z,3µm,19.0s
LODK **Lodwar** **101.68 285** IAMs_20 IAMs_20 10 07 31.3
comp=Z,3µm,21.0s
LODK **Lodwar** **101.68 285** *e*P **Pdif** **09 15 16.3 -2.9**
LODK *e*S **SKSac** **09 25 58.7 -0.2**
LODK **Lodwar** **101.68 285** *e*P **Pdif** **09 15 16.3 -2.9**
LODK *e*S **SKSac** **09 25 58.7 -0.2**

LODK **Lodwar** **101.68 285** *e*P **Pdif** **09 15 21.9 +2.7**
AVE **Averroes** **101.98 336** Pdif **Pdif** **09 15 20.0 -0.2**
AVE **Averroes** **101.98 336** PP **PP** **09 19 32.2 +1.9**
TEIG **Tepich** **102.66 49** IAMs_20 IAMs_20 10 10 40.7
comp=Z,3µm,20.0s
BBSR **BB Station** **102.95 24** IAMs_20 IAMs_20 10 07 49.3
comp=Z,4µm,19.0s
KMBO **Kilima Mbogo** **103.28 280** Pdiff **Pdif** **09 15 25.8 -0.7**
comp=Z,3.2nm,0.9s,baz=58,slow=8.0,SNR=4.6
KMBO **Kilima Mbogo** **103.28 280** IAMs_20 IAMs_20 10 09 31.8
comp=Z,4µm,19.0s
KMBO **Kilima Mbogo** **103.28 280** *e*P **Pdif** **09 15 20.3 -6.2**
KMBO *e*S **SKSac** **09 26 06.5 -0.2**
KMBO **Kilima Mbogo** **103.28 280** *e*P **Pdif** **09 15 26.5 0.0**
KMBO **Kilima Mbogo** **103.28 280** P **Pdif** **09 15 26.4 -0.1**
KIBK **Kibwezi** **103.47 279** IAMs_20 IAMs_20 10 03 00.4
comp=Z,3µm,21.0s
PMPST **Porto Santo, M** **104.61 343** *e*P **Pdif** **09 15 33.5 +1.7**
PMPST **Porto Santo, M** **104.61 343** *e*PP **PP** **09 19 57.3 +7.4**
PMOZ **Porto Moniz, M** **105.05 343** *e*P **Pdif** **09 15 35.0 +1.1**
PMOZ **Porto Moniz, M** **105.05 343** *e*PP **PP** **09 20 00.3 +7.1**
PMOZ *e*S **SKSac** **09 26 24.1 +10**
PMOZ *e*SS **SKPbc** **09 34 59.6 +7.1**
PMOZ **Porto Moniz, M** **105.05 343** *e*LR LR 09 56 52.2
comp=Z,5µm,20.0s
PMAR **Madeira** **105.08 343** *e*P **Pdif** **09 15 38.0 +3.8**
PMAR **Madeira** **105.08 343** *e*PP **PP** **09 19 58.8 +5.2**
ABPO **Ambohimpanom** **106.94 259** IAMs_20 IAMs_20 10 03 40.6
comp=Z,3µm,20.0s
MBAR **Mbarara** **107.79 285** IAMs_20 IAMs_20 10 11 00.5
comp=Z,4µm,19.0s
MBAR **Mbarara** **107.79 285** *e*P **Pdif** **09 15 42.9 -3.6**
MBAR ⇓*e*S **SKSac** **09 26 24.0 -2.8**
MBAR **Mbarara** **107.79 285** *e*P **Pdif** **09 15 42.9 -3.6**
MBAR ⇓*e*S **SKSac** **09 26 24.0 -2.8**
MBAR **Mbarara** **107.79 285** *e*P **Pdif** **09 15 52.1 +5.7**
TGUH **Tegucigalpa,Un** **108.07 53** IAMs_20 IAMs_20 10 09 00.2
comp=Z,3µm,20.0s
VOI **Vohitsoka** **109.00 257** IAMs_20 IAMs_20 10 04 53.5
comp=Z,3µm,19.0s
MTDJ **Mount Denham** **110.16 42** IAMs_20 IAMs_20 10 13 07.6
comp=Z,3µm,19.0s
BOAB **BOACO BROADBAN** **110.29 52** IAMs_20 IAMs_20 10 13 42.2
comp=Z,4µm,21.0s
GRTK **Grand Turk** **110.36 35** IAMs_20 IAMs_20 10 12 10.3
comp=Z,3µm,20.0s
FOMA **Nahampoana Res** **110.67 254** IAMs_20 IAMs_20 10 10 31.2
comp=Z,3µm,18.0s
HDC **Heredia** **113.15 53** IAMs_20 IAMs_20 10 18 42.8
comp=Z,4µm,20.0s
SJG **San Juan** **115.47 32** IAMs_20 IAMs_20 10 17 09.5
comp=Z,3µm,19.0s
TOA0 **Torodi Ar. Sit** **116.16 318** **PKPdf** **09 20 08.4 -1.4**
TORD **Torodi Ar. Bea** **116.16 318** PKP **PKPdf** **09 20 08.4 -1.3**
comp=Z,4.2nm,1.0s,baz=357,slow=1.1,SNR=10
TORD PP **PP** **09 21 11.0 -2.9**
comp=Z,15nm,1.0s,baz=13,slow=6.0,SNR=11
TORD PKKPbc **PKKPab** **09 30 44.9 -1.3**
comp=Z,1.5nm,0.9s,baz=238,slow=4.5,SNR=4.4
TORD **Torodi Ar. Bea** **116.16 318** **PKPdf** **09 20 09.2 -0.6**
BCIP **Isla Barro Col** **116.35 49** IAMs_20 IAMs_20 10 16 23.4
comp=Z,2µm,20.0s
SMRT **St. Maarten** **116.71 29** IAMs_20 IAMs_20 10 13 11.0
comp=Z,3µm,20.0s
PAYG **Puerto Ayora** **117.12 65** IAMs_20 IAMs_20 10 08 27.8
comp=Z,3µm,19.0s
AZU **Azuero** **117.19 51** *e*P **PKPdf** **09 20 09.2 -2.6**
ANWB **Willy Bob** **117.53 28** IAMs_20 IAMs_20 10 11 28.5
comp=Z,3µm,21.0s
VNDA **Vanda** **118.18 176** PKP **PKPdf** **09 20 11.1 -0.6**
comp=Z,3.3nm,1.0s,baz=330,slow=4.1,SNR=13
VNDA PKKPbc **PKKPbc** **09 30 35.5 +3.5**
comp=Z,0.7nm,0.9s,baz=253,slow=4.0,SNR=3.8
VNDA **Vanda** **118.18 176** PKPdf **PKiKP** **09 20 12.2 +0.4**
SBA **Scott Base** **118.82 175** PKPdf **PKiKP** **09 20 14.1 +1.1**
SBA **Scott Base** **118.82 175** PKIKP **PKiKP** **09 20 14.1 +1.1**
GDHS **Morne Mazeau,** **118.82 28** IAMs_20 IAMs_20 10 12 41.9
comp=Z,4µm,21.0s
GDSD **La Dsirade Is** **119.03 27** IAMs_20 IAMs_20 10 17 49.5
comp=Z,3µm,19.0s
CBE **Ff, Capester** **119.06 28** IAMs_20 IAMs_20 10 12 36.4
comp=Z,4µm,21.0s
LSZ **Lusaka** **119.16 275** IAMs_20 IAMs_20 10 10 01.1
comp=Z,4µm,22.0s
MAGL **Barre d'Ile** **119.29 28** IAMs_20 IAMs_20 10 13 12.4
comp=Z,4µm,21.0s
SVN **Savane Anatole** **120.35 28** IAMs_20 IAMs_20 10 18 23.6
comp=Z,3µm,20.0s
FDF **Fort de France** **120.46 28** IAMs_20 IAMs_20 10 18 45.4
comp=Z,3µm,20.0s
BIM **Bigot** **120.69 28** IAMs_20 IAMs_20 10 19 00.4
comp=Z,3µm,20.0s
PTBC **PUERTO BERRIO** **121.54 46** *e*P **PKPdf** **09 20 18.1 -2.0**
SDV **Santo Domingo** **121.57 41** IAMs_20 IAMs_20 10 18 03.0
comp=Z,3µm,20.0s
SDV **Santo Domingo** **121.57 41** *e*P **PKiKP** **09 20 23.7 +3.1**
PLMC **San Jos del P** **121.84 49** *e*P **PKiKP** **09 20 25.0 +4.0**
SOCV **Socops** **121.97 42** *e*P **PKPdf** **09 20 20.2 -0.8**
GUY2C **Guyana, Caldas** **122.11 48** *e*P **PKPdf** **09 20 21.4 -0.5**
SPBC **San Pablo de B** **122.48 46** *e*P **PKiKP** **09 20 22.3 0.0**
YOTC **Yotoco, Valle** **122.55 50** *e*P **PKiKP** **09 20 25.7 +3.3**
GRGR **Grenville** **122.66 30** IAMs_20 IAMs_20 10 13 46.9
comp=Z,3µm,21.0s
ROSC **El Rosal** **123.01 47** PKP **PKiKP** **09 20 24.9 +1.2**
comp=Z,4.4nm,0.3s,baz=38,slow=3.1,SNR=4.6
MAW **Mawson** **123.37 207** PKP **PKiKP** **09 20 22.2 +0.1**
comp=Z,3.9nm,0.9s,baz=349,slow=3.2,SNR=18
MAW **Mawson** **123.37 207** PKPdf **PKiKP** **09 20 22.4 +0.3**
CHIC **Chingaza** **123.52 47** *e*P **PKPdf** **09 20 23.6 -0.8**
POPC **Popayan, Colom** **123.52 51** *e*P **PKPdf** **09 20 24.3 +0.1**
SACV **Santiago Islan** **123.68 345** IAMs_20 IAMs_20 10 13 20.9
comp=Z,3µm,20.0s
VILC **Villavicencio,** **123.96 47** *e*P **PKiKP** **09 20 26.2 +0.9**
OTAV **Otavalo** **124.26 54** IAMs_20 IAMs_20 10 24 51.2
comp=Z,2µm,19.0s
OTAV **Otavalo** **124.26 54** *e*P **PKiKP** **09 20 29.0 +2.8**
DBIC **Dimbokro** **124.97 321** PKP **PKPdf** **09 20 26.1 -0.6**
comp=Z,6.1nm,0.8s,baz=67,slow=4.9,SNR=6.2
DBIC PP **PP** **09 22 13.6 -0.6**
comp=Z,11nm,1.0s,baz=14,slow=8.1,SNR=3.8
TIC **Toumodi** **125.07 321**⇓*e*PKP1 **PKPdf** **09 20 26.2 -0.8**
comp=Z,23nm,0.9s
KIC **Kosan Boka** **125.18 321**⇓*e*PKP1 **PKPdf** **09 20 26.3 -0.9**
comp=Z,13nm,0.8s
LIC **Lamto** **125.44 321**⇓*e*PKP1 **PKPdf** **09 20 26.9 -0.7**
comp=Z,28nm,0.9s
MACC **Macarena, Meta** **125.49 49** *e*P **PKPdf** **09 20 20.7 -7.1**
PTLC **Puerto Leguiza** **126.53 51** *e*P **PKiKP** **09 20 30.5 +0.3**
BOSA **Boshof** **128.91 263** PKP **PKiKP** **09 20 34.7 +0.1**
comp=Z,5.0nm,0.9s,baz=44,slow=4.7,SNR=4.2
TSUM **Tsumeb** **129.58 278** IAMs_20 IAMs_20 10 27 22.2
comp=Z,3µm,18.0s
QSPA **South Pole Qui** **130.14 180** **PKiKP** **09 20 35.8 0.0**
QSPA **South Pole Qui** **130.14 180** IAMs_20 IAMs_20 10 13 37.6
comp=Z,3µm,22.0s
BOAV **Boa Vista** **131.96 34** *e*P **PKiKP** **09 20 42.9 +1.8**
CZSB **Cruzeiro do Su** **134.02 55** *e*P **PKiKP** **09 20 46.5 +1.3**
MACA **Manacapuru-AM** **136.84 37** PKPdf **PKPdf** **09 20 48.1 -1.1**
MACA **Manacapuru-AM** **136.84 37** *e*P **PKiKP** **09 20 51.8 +0.8**
MCPB **Macapa, AP** **137.62 24** *e*P **PKiKP** **09 20 53.0 +0.4**
MALB **Monte Alegre** **138.29 28** *e*P **PKiKP** **09 20 55.5 +1.6**
ETMB **Extrema** **139.58 49** PKPdf **PKPdf** **09 20 51.2 -2.9**
TMAB **Tom-Au,PA,Br** **140.65 19** *e*P **PKiKP** **09 20 58.6 -0.1**
NVL **N'lazarevskaya** **141.10 203** *e*PKHKP PKPpre 09 20 47.0
NVL MLR MLR
comp=Z,2µm,19.0s
ASCN **Ascension** **142.24 323** IAMs_20 IAMs_20 10 25 35.3
comp=Z,3µm,21.0s
TROLL **Troll, Antarti** **143.00 199** PKPdf PKPbc 09 20 55.2 -0.4
LPAZ **La Paz** **143.38 58** PKP PKPbc 09 20 59.3 +0.5
comp=Z,4.3nm,0.8s,baz=346,slow=4.5,SNR=16
SNAA **Sanae** **144.50 197** PKPdf **PKPab** **09 20 58.7 -1.0**
SNAA **Sanae** **144.50 197** IAMs_20 IAMs_20 10 21 53.1
comp=Z,2µm,21.0s
VILB **Vilhena** **145.50 44** *e*P **PKPab** **09 21 06.8 +1.9**
RCBR **Riachuelo** **145.58 359** IAMs_20 IAMs_20 10 24 22.4
comp=Z,2µm,20.0s
RCBR **Riachuelo** **145.58 359** *e*P **PKPab** **09 21 05.7 +0.5**
CLDB **Colider** **145.88 36** *e*P **PKPab** **09 21 07.8 +1.5**
VNA2 **Neumayer--Watz** **146.06 197** PKPdf **PKPdf** **09 21 03.1 -0.8**
baz=134,slow=3.0
PDRB **Porto dos Gac** **146.10 38** *e*P **PKiKP** **09 21 09.1 -0.7**
VNA3 **Neumayer Olymp** **146.29 195** PKPdf **PKPdf** **09 21 04.1 -0.2**
VNA1 **Neumayer--Stat** **146.46 196** PKPdf **PKPdf** **09 21 04.9 +0.4**
SMTB **Santa Maria do** **147.00 21** *e*P **PKPab** **09 21 10.2 -0.4**

LVC	Limon Verde	147.22	67			PKPdf	09 21 07.5	-0.3
LVC	Limon Verde	147.22	67	PKIKP		PKPdf	09 21 07.5	-0.3
LVC	Limon Verde	147.22	67	eP		PKPbc	09 21 09.7	-0.4
SMAI	San Martin Ant	147.58	159			PKPbc	09 21 09.4	+0.3
PTLB	Pontes e Lacer	148.13	45	eP		PKPbc	09 21 12.8	+0.6
NBRF	Rio Formoso -	148.40	358	eP		PKiKP	09 21 13.8	-0.7
SNDB	Serra Nova Dou	148.72	29	eP		PKPbc	09 21 14.4	+0.6
NBAN	Anadia - AL	149.40	0	eP		PKPbc	09 21 14.4	-1.1
SALV	Santo Antonio	150.30	40	eP		PKPbc	09 21 17.0	-0.6
NBLA	Lagarto - SE	150.68	3	eP		PKPdf	09 21 14.6	+1.5
SDBA	SAO DESIDERIO	151.09	18	eP		PKPbc	09 21 18.1	-1.6
LL04	Puerto Octay	152.67	103			PKPdf	09 21 16.0	+0.6
GO09	Cerro Castillo	152.86	126			PKPdf	09 21 16.3	+1.0
GDU01	Guandu, BA	153.26	7	eP		PKPdf	09 21 20.7	+3.7
BDFB	Brasilia	153.28	26	PKPbc		PKPbc	09 21 24.0	-0.6
	comp=Z,8.8nm,0.8s,baz=359,slow=8.3,SNR=4.7							
BDFB	Brasilia	153.28	26	PKPdf		PKPdf	09 21 16.1	-1.0
BDFB				PKPab		PKPab	09 21 35.1	-1.3
BDFB	Brasilia	153.28	26	PKIKP		PKPdf	09 21 16.1	-1.0
BDFB							09 21 35.1	
BDFB	Brasilia	153.28	26	eP		PKPbc	09 21 21.5	-3.1
JANB	Januaria	153.78	18	eP		PKPbc	09 21 22.0	-3.7
PLCA	Paso Flores	154.02	102	PKPbc		PKiKP	09 21 26.1	+0.6
	comp=Z,15nm,0.9s,baz=226,slow=3.0,SNR=4.7							
PLCA	Paso Flores	154.02	102	eP		PKPbc	09 21 23.0	-2.4
AQDB	Aquidauana	154.10	46	eP		PKPdf	09 21 21.2	+3.2
CMC01	Camacan, BA	154.89	7	eP		PKPdf	09 21 23.0	+3.8
ANTJ	Antonio Joao (	155.15	48	eP		PKPdf	09 21 23.6	+4.1
IPMB	Ipameri, GO	155.38	28	eP		PKPdf	09 21 23.3	+3.4
MC01	Montes Claros	155.46	18	eP		PKPdf	09 21 23.8	+3.7
GUA01	Guaratinga, BA	156.07	8	eP		PKPdf	09 21 24.6	+3.8
ITRB	Iturama	156.08	35	eP		PKPdf	09 21 24.4	+3.6
PCMB	Pacaembu	157.32	39	eP		PKPdf	09 21 26.7	+4.4
CPUP	Villa Florida	157.55	58	PKP		PKPdf	09 21 23.9	+1.5
	comp=Z,4.9nm,0.9s,baz=22,slow=4.8,SNR=6.8							
CPUP				PKPab		PKPab	09 21 53.7	-0.6
	comp=Z,4.1nm,1.0s,baz=227,slow=1.3,SNR=3.8							

IDC ***20*** *09:01:55.2±0.6,54°87'S×31°79'W,h0km,mb4.5/10, mbtmp4.5/11,ML3.7/1,MS4.3/2,Error ellipse: s-maj=21.4km s-min=16.1km az=56.0*

NEIC ***20*** *09:01:56.9±1.4,55°10S±0°07×32°1W±0°1,h10km±1km, mb4.9/56,Error ellipse: s-maj=14.5km s-min=8.1km az=129.0*

ISC 20 09:01:57.1±0.4,55°03S±0°06×32°05W±0°08,h10km,n242, σ0s99/221,mb4.9/37,3C,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	2.68	284		Pn	09 02 39.9	-0.3
ORCD	Orcadas	8.85	225	Pn	Pn	09 04 02.6	-2.2
PMSA	Palmer Station	18.57	226	P	Pn	09 06 16.6	+2.7
	0.2nm,0.3s,baz=89,slow=7.1,SNR=4.1						
PMSA				LR	LR	09 12 33.1	
	comp=Z,196nm,18.3s,baz=72,slow=34 16nm,0.9s						
PMSA	Palmer Station	18.57	226	P	P	09 06 11.9	-1.8
PMSA	Palmer Station	18.57	226	eP	Pn	09 06 16.1	+2.2
VNA1	Neumayer--Stat	18.83	155	P	Pn	09 06 21.2	+4.1
VNA3	Neumayer Olymp	18.94	158	P	Pn	09 06 18.6	+0.1
VNA2	Neumayer--Watz	19.23	155	P	Pn	09 06 22.7	+0.8
	baz=314,slow=10.0						
SMAI	San Martin Ant	20.83	217	P	P	09 06 37.0	-1.3
SNAA	Sanae	20.84	154	P	P	09 06 37.8	-0.7
SNAA	Sanae	20.84	154	P	P	09 06 39.2	+0.7
	4.7nm,0.9s,baz=302,slow=12,SNR=18 4.7nm,0.9s						
SNAA	Sanae	20.84	154	P	P	09 06 39.0	+0.4
TROLL	Troll, Antarti	22.42	152	P	P	09 06 56.3	+0.8
BELA	Belgrano 2	22.97	181	P	P	09 07 04.5	+3.3
MG05	Puerto Natales	24.14	261	P	P	09 07 12.2	-0.7
MG05				IAmb	IAmb	09 07 13.8	
	comp=Z,30nm,0.8s						
GO09	Cerro Castillo	24.21	262	P	P	09 07 11.0	-2.6
GO09				IAmb	IAmb	09 07 16.5	
	comp=Z,48nm,1.4s						
TRQA	Tornquist	26.39	298	P	P	09 07 32.5	-1.0
TRQA				IAmb	IAmb	09 07 51.9	
	comp=Z,21nm,1.1s						
COYC	Coyhaique	26.92	274	P	P	09 07 38.3	+0.1
PLTB	Pedras Altas	27.81	318	P	P	09 07 44.5	-1.8
PLTB				IAmb	IAmb	09 07 48.6	
	comp=Z,14nm,1.0s						
PLTB	Pedras Altas	27.81	318	eP	P	09 07 48.0	+1.7
AY01	Puyuhuapi	27.93	275	P	P	09 07 46.0	-1.1
AY01				IAmb	IAmb	09 07 48.2	
	comp=Z,16nm,0.8s						
LL02	Futaleuf	28.22	278	P	P	09 07 48.2	-1.7
PLCA	Paso Flores	29.09	283	P	P	09 07 57.3	-0.4
	comp=Z,3.5nm,1.0s,baz=112,slow=7.7,SNR=6.0 comp=Z,3.5nm,1.0s						
PLCA	Paso Flores	29.09	283	P	P	09 07 56.5	-1.2
PLCA	Paso Flores	29.09	283	eP	P	09 07 59.5	+1.8
ITQB	Itaqui	30.86	315	P	P	09 08 13.8	+0.5
ITQB				IAmb	IAmb	09 08 15.6	
	comp=Z,22nm,1.1s						
ITQB	Itaqui	30.86	315	eP	P	09 08 14.8	+1.5
PTGB	Pitanga	33.70	326	eP	P	09 08 39.6	+1.3
VAO	Valinhos	33.87	335	eP	P	09 08 41.6	+1.8
CPUP	Villa Florida	34.11	317	P	P	09 08 40.1	-1.6
	comp=Z,16nm,0.9s,baz=151,slow=7.4,SNR=21 comp=Z,16nm,0.9s						
CPUP	Villa Florida	34.11	317	P	P	09 08 41.3	-0.5
CPUP				IAmb	IAmb	09 08 43.5	
	comp=Z,16nm,0.9s						
CPUP	Villa Florida	34.11	317	eP	P	09 08 41.8	0.0
MT09	Talagante	34.36	292	P	P	09 08 43.5	-0.6
MT09				IAmb	IAmb	09 08 56.5	
	comp=Z,22nm,1.1s						
MT01	Popeta	34.44	292	P	P	09 08 43.8	-0.7
MT01				IAmb	IAmb	09 08 48.2	
	comp=Z,11nm,0.7s						
MT02	Curacav	34.84	292	P	P	09 08 48.0	0.0
VA03	San Esteban	34.91	294	P	P	09 08 48.5	-0.3
VA03				IAmb	IAmb	09 08 52.8	
	comp=Z,21nm,1.1s						
ALF01	Guarapari-ES	34.98	346	eP	P	09 08 51.4	+2.2
QSPA	South Pole Qui	35.23	180	P	P	09 08 50.3	-1.0
BSCB	Bom Sucesso	35.31	339	eP	P	09 08 54.0	+1.7
VA06	Catapilco	35.47	293	P	P	09 08 53.3	-0.1
TRCB	Terra Rica	35.67	326	P	P	09 08 56.0	+0.7
TRCB				IAmb	IAmb	09 08 57.1	
	comp=Z,16nm,0.8s						
BB19B	Bebedouro	36.11	333	eP	P	09 09 00.6	+1.4
CO02	Combarbal	36.37	295	P	P	09 09 01.6	+0.3
CO01	Juntas del Tor	36.88	297	P	P	09 09 04.3	-1.5
CO01				IAmb	IAmb	09 09 09.8	
	comp=Z,12nm,0.8s						
SJMB	Sao Joao De Ma	36.92	345	eP	P	09 09 07.7	+1.7
NAN01	Guarapari, ES	37.62	347	eP	P	09 09 12.9	+1.0
DIAM	Diamantina, MG	37.73	342	eP	P	09 09 14.0	+1.1
AC05	El Transito	37.89	298	P	P	09 09 13.5	-0.8
AC05				IAmb	IAmb	09 09 15.9	
	comp=Z,18nm,0.9s						
PMNB	Patos De Minas	38.05	338	eP	P	09 09 17.0	+1.4
AC04	Llanos de Chal	38.81	298	P	P	09 09 22.1	+0.2
AC04				IAmb	IAmb	09 09 44.4	
	comp=Z,40nm,1.1s						
GUA01	Guaratinga, BA	38.83	348	eP	P	09 09 23.3	+1.3
AQDB	Aquidauana	38.85	323	P	P	09 09 22.2	0.0
AQDB	Aquidauana	38.85	323	eP	P	09 09 23.0	+0.8
IPMB	Ipameri, GO	38.99	335	eP	P	09 09 25.7	+2.2
MC01	Montes Claros	39.33	342	eP	P	09 09 27.5	+1.2
GO02	Mina Guanaco	40.58	302	P	P	09 09 36.8	-0.2
JANB	Januaria	41.00	342	eP	P	09 09 41.4	+1.2
BDFB	Brasilia	41.20	336	P	P	09 09 40.5	-1.4
	comp=Z,7.8nm,0.9s,baz=144,slow=6.6,SNR=5.8 comp=Z,7.8nm,0.9s						
BDFB	Brasilia	41.20	336	eP	P	09 09 44.1	+2.2
PB14	IPOC Station P	41.43	301	P	P	09 09 44.3	+0.3
PB14				IAmb	IAmb	09 09 53.8	
	comp=Z,24nm,1.0s						
LVC	Limon Verde	42.42	305	P	P	09 09 52.1	0.0
LVC				IAmb	IAmb	09 09 54.2	
	comp=Z,22nm,1.1s						
LVC	Limon Verde	42.42	305	eP	P	09 09 53.6	+1.5
MAW	Mawson	42.59	146	P	P	09 09 51.9	-0.6
	comp=Z,2.9nm,0.8s,baz=228,slow=7.3,SNR=10 comp=Z,2.9nm,0.8s						
MAW	Mawson	42.59	146	P	P	09 09 52.1	-0.4
SALV	Santo Antonio	43.10	326	eP	P	09 09 58.9	+1.6
SDBA	SAO DESIDERIO	43.70	342	eP	P	09 10 03.6	+1.5
NBLA	Lagarto - SE	44.16	352	eP	P	09 10 05.6	-0.2
PTLB	Pontes e Lacer	44.70	321	P	P	09 10 09.4	-0.7
PTLB				IAmb	IAmb	09 10 12.4	
	comp=Z,25nm,0.9s						
PTLB	Pontes e Lacer	44.70	321	eP	P	09 10 09.7	-0.5
GO01	Chusmiza	45.08	307	IAmb	IAmb	09 10 16.9	
	comp=Z,16nm,0.9s						
SNDB	Serra Nova Dou	45.53	333	eP	P	09 10 19.0	+2.2
VILB	Vilhena	47.39	321	P	P	09 10 31.4	0.0
VILB				IAmb	IAmb	09 10 33.4	
	comp=Z,16nm,0.9s						
VILB	Vilhena	47.39	321	eP	P	09 10 32.6	+1.3
VNDA	Vanda	47.44	184	P	P	09 10 31.6	+0.5
	comp=Z,0.8nm,0.8s,baz=179,slow=5.9,SNR=7.0 comp=Z,0.8nm,0.8s						
VNDA	Vanda	47.44	184	P	P	09 10 31.3	+0.3
PDRB	Porto dos Gac	47.46	326	eP	P	09 10 32.8	+0.9
LPAZ	La Paz	47.56	310	P	P	09 10 34.1	+0.7
	comp=Z,9.3nm,0.7s,baz=105,slow=5.5,SNR=27 comp=Z,9.3nm,0.7s						
LPAZ	La Paz	47.56	310	P	P	09 10 33.7	+0.3
LPAZ	La Paz	47.56	310	eP	P	09 10 34.5	+1.1
SMTB	Santa Maria do	47.67	339	eP	P	09 10 35.4	+1.8
CLDB	Colider	47.86	328	eP	P	09 10 35.4	+0.3
H10S2	ASCENSION HYDR	47.98	23	T	T	10 02 38.0	
	baz=193,slow=74,SNR=12						
H10S3	ASCENSION HYDR	47.99	23	T	T	10 02 38.1	
	baz=27,slow=74,SNR=22						
BOSA	Boshof	48.47	81	P	P	09 10 36.7	-3.1
	comp=Z,7.4nm,1.0s,baz=208,slow=9.2,SNR=5.7 comp=Z,7.4nm,1.0s						
BOSA	Boshof	48.47	81	P	P	09 10 39.5	-0.3
BOSA				IAmb	IAmb	09 10 39.7	
	comp=Z,14nm,1.1s						
H10N1	ASCENSION HYDR	49.10	23	T	T	10 04 01.8	
	baz=193,slow=75,SNR=48						
H10N3	ASCENSION HYDR	49.10	23	T	T	10 04 04.1	
	baz=193,slow=75,SNR=56						
H10N2	ASCENSION HYDR	49.12	23	T	T	10 04 05.3	
	baz=193,slow=75,SNR=46						
PRPB	Paraupebas	50.76	337	eP	P	09 10 59.3	+2.1
NPGB	Novo Progresso	51.35	330	eP	P	09 11 02.0	+0.3
LBTB	Lobatse	51.44	79	P	P	09 11 01.6	-0.8
ETMB	Extrema	52.55	316	P	P	09 11 10.4	-0.2
ETMB				IAmb	IAmb	09 11 12.3	
	comp=Z,10nm,1.2s						
ETMB	Extrema	52.55	316	eP	P	09 11 10.6	0.0
ITTB	Itaituba	54.01	330	eP	P	09 11 22.8	+1.5
TMAB	Tom-Au,PA,Br	54.09	340	eP	P	09 11 23.5	+1.7
MALB	Monte Alegre	56.01	333	eP	P	09 11 37.5	+1.8
MACA	Manacapuru-AM	56.67	325	P	P	09 11 38.8	-1.7
MACA				IAmb	IAmb	09 11 41.0	
	comp=Z,12nm,0.9s						
MACA	Manacapuru-AM	56.67	325	eP	P	09 11 39.3	-1.2
MCPB	Macapa, AP	56.90	336	eP	P	09 11 44.2	+2.1
CZSB	Cruzeiro do Su	57.17	310	P	P	09 11 43.1	-1.0
CZSB				IAmb	IAmb	09 11 46.9	
	comp=Z,7.4nm,0.8s						
CZSB	Cruzeiro do Su	57.17	310	eP	P	09 11 44.6	+0.5
LSZ	Lusaka	60.66	74	LR	LR	09 32 32.9	
	comp=Z,980nm,21.9s,baz=238,slow=30						
BOAV	Boa Vista	61.85	327	P	P	09 12 15.0	-1.3
BOAV				IAmb	IAmb	09 12 17.7	
	comp=Z,14nm,1.2s						
BOAV	Boa Vista	61.85	327	eP	P	09 12 15.8	-0.5
BOSC	San Juan Bosco	63.84	306	P	P	09 12 29.6	-0.3
BOSC				IAmb	IAmb	09 12 30.1	
	comp=Z,12nm,1.4s						
LIC	Lamto	65.05	30	eP	P	09 12 36.6	-0.8
	comp=Z,64nm,1.0s						
KIC	Kosan Boka	65.26	30	eP	P	09 12 37.8	-1.0
	comp=Z,14nm,0.8s						
TIC	Toumodi	65.45	30	eP	P	09 12 39.1	-0.9
	comp=Z,37nm,0.9s						
DBIC	Dimbokro	65.52	30	P	P	09 12 38.8	-1.7
	comp=Z,8.7nm,0.8s,baz=207,slow=8.0,SNR=8.1 comp=Z,8.7nm,0.8s						
DBIC	Dimbokro	65.52	30	P	P	09 12 40.2	-0.3
OTAV	Otavalo	66.81	308	P	P	09 12 48.1	-1.3
OTAV				IAmb	IAmb	09 13 10.3	
	comp=Z,11nm,1.4s						
OTAV	Otavalo	66.81	308	eP	P	09 12 50.4	+1.0
ROSC	El Rosal	69.14	314	P	P	09 13 03.5	-0.4
ROSC				IAmb	IAmb	09 13 06.3	
	comp=Z,14nm,1.2s						
BAUV	El Baul	70.49	322	P	P	09 13 12.0	+0.3
BIRV	Birongo	71.30	324	P	P	09 13 15.6	-1.0
SDV	Santo Domingo	71.38	319	P	P	09 13 17.4	0.0
SDV				IAmb	IAmb	09 13 19.3	
	comp=Z,9.1nm,0.8s						
SDV	Santo Domingo	71.38	319	eP	P	09 13 18.7	+1.3
TOA0	Torodi Ar. Sit	73.64	34	P	P	09 13 30.4	-0.2
TOA0				IAmb	IAmb	09 13 32.5	
	comp=Z,15nm,1.0s						
TORD	Torodi Ar. Bea	73.64	34	P	P	09 13 30.0	-0.6
	comp=Z,12nm,1.0s,baz=201,slow=5.3,SNR=30 comp=Z,12nm,1.0s						
TORD	Torodi Ar. Bea	73.64	34	P	P	09 13 30.2	-0.3
TORD				IAmb	IAmb	09 13 32.5	
	comp=Z,13nm,1.1s						
TAM	Tamanrasset	83.90	34	IAmb	IAmb	09 14 24.9	
	comp=Z,8.3nm,1.2s						
PETF	Flores	86.72	306	P	P	09 14 40.3	-0.7
PETF				IAmb	IAmb	09 14 45.6	
	comp=Z,8.7nm,1.2s						
TEIG	Tepich	88.88	309	P	P	09 14 51.8	+0.6
FINES	FINESS Array B	124.81	30	PKP	PKPdf	09 20 54.4	-1.1
	comp=Z,1.2nm,0.6s,baz=108,slow=2.4,SNR=5.6						
CMAR	Chiang Mai Arr	128.01	115	PKP	PKiKP	09 21 03.6	-0.1
	comp=Z,1.7nm,0.6s,baz=243,slow=4.1,SNR=7.2						
ARCES	ARCESS Array B	131.05	23	PKP	PKPdf	09 21 07.1	-0.1
	comp=Z,2.1nm,0.8s,baz=354,slow=1.2,SNR=4.1						
PZH	PanZhiHua	136.05	111	PKP	PKPdf	09 21 18.8	+0.6
M29M	Somme Creek	143.08	312	P	PKPbc	09 21 27.8	+1.1
	baz=113						
O28M	Mount Upton	143.16	309	P	PKPbc	09 21 28.3	+1.0
	baz=114						
INK	Inuvik	143.28	322	PKP	PKPdf	09 21 28.5	-1.3
	comp=Z,3.1nm,1.0s,baz=124,slow=2.8,SNR=3.7						
INK	Inuvik	143.28	322	P	PKPbc	09 21 28.2	+1.3
	baz=110						
YUK3	Moose Creek	143.68	310	P	PKPbc	09 21 29.0	+0.4
	baz=113,SNR=5.5						
CTG	Chitna Glacier	143.76	309	P	PKPbc	09 21 29.7	+0.9
	baz=113						
EPYK	Eagle Plains	143.80	319	P	PKPbc	09 21 29.2	+0.6
	baz=110						
DAWY	Dawson	144.07	314	P	PKPbc	09 21 29.8	+0.3
	baz=111						
I29M	Ogilvie Camp,	144.08	317	P	PKPbc	09 21 29.8	+0.3
	baz=110						
BVCY	Beaver Creek	144.10	311	P	PKPbc	09 21 30.1	+0.5
	baz=112,SNR=13						
ZALV	Zalesovo Beam	144.42	65	PKP	PKPbc	09 21 30.6	-0.1
	comp=Z,8.2nm,0.7s,baz=248,slow=3.9,SNR=17						
M27K	Edge Creek, AK	144.52	311	P	PKPab	09 21 30.8	-0.1
	baz=111						
LZH	Lanzhou	144.52	104	ePKP	PKPdf	09 21 33.8	+0.5
LZH				pPKP	PKiKP	09 21 44.3	+7.4
LZH				sPKP		09 21 49.3	
GTA	Gaotai	144.56	96	ePKPbc	PKPdf	09 21 33.5	+0.3
MCARA	McCarthy VSAT	144.67	309	P	PKPbc	09 21 31.6	+0.2
	baz=112						
L27K	Beaver Creek,	144.75	312	P	PKPbc	09 21 31.6	0.0
	baz=110,SNR=15						
KAIM	Kayak Island	144.76	306	P	PKPbc	09 21 32.0	+0.3
	baz=113						
M26K	Nabesna, AK	145.02	311	P	PKPdf	09 21 33.0	-0.1
	baz=110						
EGAK	Eagle	145.03	315	P	PKPab	09 21 32.6	+0.1
	baz=108						
K27K	Chicken	145.18	314	P	PKPdf	09 21 33.6	+0.3
	baz=109						
BMRM	Bremner River	145.23	308	P	PKPdf	09 21 33.5	0.0
	baz=111						
L26K	Log Cabin Wild	145.39	312	P	PKPbc	09 21 33.5	-0.2
	baz=109,SNR=10						
N25K	Chitina, Valde	145.46	309	P	PKPab	09 21 34.3	0.0
	baz=110						
I27K	Kandik River	145.47	316	P	PKPab	09 21 34.5	+0.4
	baz=107						
Q23K	Middleton Isla	145.47	305	P	PKPab	09 21 34.5	+0.3
	baz=112						
EYAK	Cordova Ski Ar	145.60	307	P	PKPab	09 21 34.7	+0.1
	baz=111						
H27K	Steamboat Moun	145.61	317	P	PKPab	09 21 34.6	-0.1
	baz=106						
G27K	Doyon Strip	145.82	318	P	PKPbc	09 21 34.6	-0.4
	baz=105						
J26L	Joseph Creek	145.94	314	P	PKPbc	09 21 35.4	0.0
	baz=107						
SCRK	Sand Creek	145.96	313	P	PKPbc	09 21 35.4	-0.2
	baz=108,SNR=10						
I26K	Coal Creek Min	146.00	316	P	PKPab	09 21 36.0	-0.1
	baz=106						
KLU	Klutina	146.01	308	P	PKPab	09 21 36.0	-0.4
	baz=110						
E27K	Coleen River	146.13	321	P	PKPab	09 21 36.5	-0.1
	baz=103						
P23K	Montague Islan	146.18	305	P	PKPab	09 21 36.8	-0.1
	baz=111						
RIDG	Independent Ri	146.25	312	P	PKPbc	09 21 36.3	-0.1
	baz=107,SNR=12						
PAX	Paxson	146.29	311	P	PKPbc	09 21 36.2	-0.4
	baz=108,SNR=12						
M24K	Tolsona, Glenn	146.33	309	P	PKPab	09 21 38.1	+0.6
	baz=109						
GLI	Glacier Island	146.34	307	P	PKPab	09 21 37.4	-0.1
	baz=110						
K24K	Donnelly Dome	146.67	312	P	PKPab	09 21 38.3	-0.4
	baz=107						
G26K	Porcupine Rive	146.67	318	P	PKPab	09 21 38.4	-0.2
	baz=103						
J25K	Salcha River,	146.72	314	P	PKPab	09 21 38.8	-0.2
	baz=106						
SCM	Sheep Creek Mo	146.76	308	P	PKPab	09 21 38.5	-0.7
	baz=108						
PWL	Port Wells	146.91	307	P	PKPbc	09 21 38.8	+0.5
	baz=109						
M23K	Glacier View	146.93	308	P	PKPbc	09 21 38.9	+0.5
	baz=108						
F26K	Sheenjek River	146.97	320	P	PKPbc	09 21 38.9	+0.5
	baz=102						
DHY	Denali Highway	147.15	311	P	PKPbc	09 21 39.1	0.0
	baz=107,SNR=5.7						
C27K	Jago River	147.17	323	P	PKPab	09 21 39.9	-0.6
	baz=99						
WAT6	Susitna Watana	147.17	310	P	PKPbc	09 21 39.5	+0.3
	baz=107						
SEW	Seward	147.18	305	P	PKPab	09 21 40.1	-0.7
	baz=110						
SML	Sawmill	147.20	308	P	PKPbc	09 21 39.2	0.0
	baz=108						
H25K	Birch Creek	147.31	317	P	PKPab	09 21 40.2	-0.9
	baz=103						
HDA	Harding Lake	147.32	313	P	PKPab	09 21 40.4	-0.8
	baz=105						
ILAR	Eielson Array	147.39	314	PKPbc	PKPbc	09 21 38.9	-0.6
	comp=Z,8.7nm,0.9s,baz=118,slow=2.0,SNR=22						
O22K	Cooper Landing	147.43	305	P	PKPab	09 21 41.0	-0.7
	baz=109						
PMR	Palmer	147.50	308	P	PKPbc	09 21 40.4	+0.5
	baz=108						
F25K	Christian Rive	147.51	319	P	PKPbc	09 21 40.4	+0.6
	baz=101						
E25K	Arctic Village	147.58	320	P	PKPbc	09 21 40.2	+0.2
	baz=100						
WAT1	Susitna Watana	147.60	310	P	PKPbc	09 21 40.5	+0.3
	baz=106						
RC01	Rabbit Creek A	147.63	307	P	PKPbc	09 21 40.6	+0.3
	baz=108						
BRSE	Bradley Lake S	147.67	304	P	PKiKP	09 21 41.7	-0.8
	baz=109						
COLA	College	147.81	314	P	PKiKP	09 21 41.9	-0.6
	baz=104						
TCOL	CIGO, UAF Yank	147.82	314	P	PKPbc	09 21 41.1	+0.5
	baz=104						
KDAK	Kodiak Island	147.90	300	P	PKPbc	09 21 40.9	-0.2
	baz=111						
M22K	Willow	148.00	308	P	PKPbc	09 21 41.2	0.0
	baz=107						
MCK	McKinley	148.00	312	P	PKPbc	09 21 41.1	-0.1
	baz=104,SNR=6.1						
H24K	Noodor Dome	148.04	316	P	PKPbc	09 21 41.6	+0.3
	baz=102						
G24K	Hadweenzic Riv	148.04	317	P	PKiKP	09 21 42.2	-0.8
	baz=101						
OHAK	Old Harbor	148.05	299	P	PKPbc	09 21 41.4	0.0
	baz=112						
D25K	Kavik River	148.05	322	P	PKPbc	09 21 41.8	+0.5
	baz=98						
SUA	Susitna One	148.20	307	P	PKPbc	09 21 42.1	+0.1
	baz=107						
CUT	Chulitna	148.25	309	P	PKPbc	09 21 41.7	-0.1
	baz=106						
SII	Sitkinak Islan	148.26	297	P	PKPbc	09 21 41.8	-0.3
	baz=112						
NEA2	Nenana	148.26	313	P	PKPbc	09 21 41.4	-0.5
	baz=103,SNR=8.6						
F24K	Squaw Lake	148.34	319	P	PKPbc	09 21 42.3	+0.3
	baz=99						
I23K	Minto, Yukon-K	148.50	314	P	PKPbc	09 21 42.6	+0.2
	baz=102						
E24K	Your Creek	148.65	320	P	PKiKP	09 21 43.6	-0.7
	baz=98						
H23K	Yukon River	148.71	315	P	PKiKP	09 21 43.8	-0.6
	baz=101						
D24K	Happy Valley	148.90	322	P	PKPbc	09 21 43.7	+0.3
	baz=96						
C24K	Franklin Bluff	148.91	323	P	PKPbc	09 21 43.7	+0.4
	baz=95						
BPAW	Bear Paw Mtn.	148.97	312	P	PKPbc	09 21 43.5	-0.2
	baz=102,SNR=10.0						
G23K	Bananza Creek	149.05	317	P	PKPbc

SDPT	**Sand Point**	**151.11 292**	P		**PKiKP**	**09 21 50.0**	**+0.4**
	baz=111							
O16K	**Kokwok River B**	**151.19 301**	P		**PKiKP**	**09 21 49.4**	**-0.2**
	baz=105							
N16K	**Nishlik Lake**	**151.74 303**	P		**PKiKP**	**09 21 51.5**	**+0.7**
	baz=103							
SONM	**Songino Array**	**153.44 88**	PKPbc		**PKPbc**	**09 21 54.1**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=210,slow=3.4,SNR=5.5							

*IDC **20** 09:26:21.3±1.4,55.°09S×31.°68W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=51.9km s-min=33.7km az=71.0*
ISC 20 09:26:26.8±1.1,54.°3S±0.°2×31.°6W±0.°3, h10km, n9, σ0.°34/5, mb3.9/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**19.54**	**159**	P	**Pn**	**09 30 55.5**	**+0.1**
CPUP	**Villa Florida**	**33.75**	**316**	P	**P**	**09 33 08.6**	**+0.2**
	1.5nm,0.7s,baz=139,slow=11,SNR=3.6 1.5nm,0.7s						
LPAZ	**La Paz**	**47.28**	**309**	P	**P**	**09 35 01.0**	**0.0**
	0.8nm,0.6s,baz=146,slow=3.6,SNR=3.6 0.8nm,0.6s						
VNDA	**Vanda**	**48.19**	**184**	P	P	09 34 56.1	-11
	0.9nm,1.0s,baz=184,slow=7.8,SNR=2.1 0.9nm,1.0s						
H10N1	**ASCENSION HYDR**	**48.32**	**23**	T	T	10 28 34.7	
	baz=192,slow=75,SNR=4.5						
H10N3	**ASCENSION HYDR**	**48.32**	**23**	T	T	10 28 34.7	
	baz=192,slow=75,SNR=5.4						
H10N2	**ASCENSION HYDR**	**48.34**	**23**	T	T	10 28 35.8	
	baz=192,slow=75,SNR=4.6						
TORD	**Torodi Ar. Bea**	**72.89**	**34**	P	**P**	**09 37 56.0**	**+0.1**
	0.5nm,0.8s,baz=194,slow=5.9,SNR=2.4 0.5nm,0.8s						
ILAR	**Eielson Array**	**147.05**	**315**	PKPbc	**PKPdf**	**09 46 05.8**	**-0.4**
	0.5nm,0.6s,baz=127,slow=2.0,SNR=7.8						

IDC 20 09:30:28.7±1.4,54.°87S×31.°90W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=51.2km s-min=31.4km az=68.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**34.06**	**317**	P	P	09 37 13.9	-0.6
	1.9nm,0.9s,baz=126,slow=5.0,SNR=4.1 1.9nm,0.9s						
QSPA	**South Pole Qui**	**35.38**	**180**	P	P	09 37 25.6	-0.1
	3.4nm,1.3s,baz=62,slow=15,SNR=1.9 3.4nm,1.3s						
LPAZ	**La Paz**	**47.53**	**310**	P	P	09 39 06.6	+0.2
	0.8nm,0.5s,baz=176,slow=12,SNR=7.5 0.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.47**	**34**	P	P	09 42 02.9	0.0
	0.5nm,0.6s,baz=202,slow=7.1,SNR=2.6 0.5nm,0.6s						
ILAR	**Eielson Array**	**147.35**	**314**	PKPbc	PKPbc	09 50 12.2	-0.6
	0.2nm,0.3s,baz=119,slow=1.1,SNR=4.9						

*IDC **20** 09:32:08.8±2.6, 40.°34N×143.°54E, h0km, mb3.5/4, mbtmp3.5/6, ML2.2/2, Error ellipse: s-maj=57.1km s-min=31.4km az=150.0*
*JMA **20** 09:32:10.1±0.4, 40.°3N±0.°8×14.°4E±.°, h13km±4km, MV3.5/35, FAR E OFF SANRIKU*
ISC 20 09:32:10.4±1.2,40.°35N±0.°06×143.°71E±0.°08, h16km, n19, σ1.°01/25, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.47**	**254**	P	**Pn**	**09 32 34.7**	**-1.6**
JKEN	**Kujiedanarisaw**	**1.54**	**265**	P	**Pn**	**09 32 35.9**	**-1.2**
MIYJ	**Miyakonagasawa**	**1.64**	**243**	P	**Pn**	**09 32 37.9**	**-0.7**
JANG	**Nango**	**1.68**	**272**	P	**Pn**	**09 32 38.0**	**-1.1**
JOM	**Ohasama**	**2.05**	**246**	*i* P	**Pn**	**09 32 44.1**	**-0.1**
JTM	**Tenmabayashi**	**2.06**	**283**	P	**Pn**	**09 32 44.2**	**-0.1**
JNBK	**Urakawa-nobuka**	**2.06**	**340**	P	**Pn**	**09 32 44.4**	**+0.1**
JNBK					**Sn**	**09 33 09.5**	**-0.2**
JOT	**Ohata**	**2.27**	**298**	P	**Pn**	**09 32 46.8**	**-0.4**
JOT					**Sn**	**09 33 14.6**	**-0.2**
JCH	**Churui**	**2.28**	**354**	P	**Pn**	**09 32 47.0**	**-0.3**
JCH					**Sn**	**09 33 14.0**	**-1.1**
JAH	**Hinai**	**2.36**	**267**	P	**Pn**	**09 32 48.7**	**+0.3**
JAH					**Sn**	**09 33 17.4**	**+0.5**
JMK	**Ichinoseki**	**2.37**	**235**	P	**Pn**	**09 32 48.2**	**-0.4**
JMK					**Sn**	**09 33 16.4**	**-1.0**
JAK	**Akkeshi**	**2.75**	**15**	*e*P	**Pn**	**09 32 52.8**	**-1.0**
JAK					**Sn**	**09 33 23.9**	**-2.7**
JYK	**Kaneyama**	**2.95**	**242**	P	**Pn**	**09 32 56.9**	**+0.2**
MJAR	**Matsushiro Arr**	**5.75**	**230**	Pn	**Pn**	**09 33 33.8**	**-1.3**
	0.1nm,0.3s,baz=38,slow=11,SNR=9.2 2.2nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.50**	**298**	Pn	**Pn**	**09 34 25.8**	**-0.7**
	0.1nm,0.3s,baz=104,slow=17,SNR=2.2 3.3nm,0.6s						
SONM	**Songino Array**	**27.61**	**298**	P	**P**	**09 37 57.1**	**0.0**
	0.4nm,0.6s,baz=79,slow=7.5,SNR=2.8 0.4nm,0.6s						
MKAR	**Makanchi Array**	**43.96**	**300**	P	**P**	**09 40 16.6**	**0.0**
	1.2nm,0.9s,baz=82,slow=8.7,SNR=8.1 1.2nm,0.9s						
ILAR	**Eielson Array**	**45.74**	**34**	P	**P**	**09 40 32.4**	**+1.8**
	0.2nm,0.9s,baz=275,slow=9.6,SNR=1.5 0.2nm,0.9s						
FINES	**FINESS Array B**	**66.72**	**332**	P	**P**	**09 43 00.2**	**0.0**
	0.6nm,0.6s,baz=46,slow=6.0,SNR=4.3 0.6nm,0.6s						

*IDC **20** 09:33:06.5±1.4, 38.°83N×144.°92E, h0km, mb3.8/6, mbtmp3.8/9, ML2.7/2, Error ellipse: s-maj=33.9km s-min=22.5km az=139.0*
*JMA **20** 09:33:12.1±0.2, 39.°N±1.°×14.°5E±.°, h44km, MV4.1/28, FAR E OFF NORTH HONSHU*
ISC 20 09:33:11.6±1.0,38.°99N±0.°07×144.°93E±0.°07, h35km, n22, σ1.°50/30, mb3.9/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.49**	**285**	P	**Pn**	**09 33 49.5**	**0.0**
MIYJ				S	**Sn**	**09 34 17.2**	**-1.5**
OFUJ	**Ofunato**	**2.54**	**273**	P	**Pn**	**09 33 50.0**	**-0.3**
OFUJ				*e*S	**Sn**	**09 34 18.9**	**-1.1**
JTH	**Tanohata**	**2.56**	**293**	P	**Pn**	**09 33 50.7**	**+0.1**
JTH				S	**Sn**	**09 34 19.1**	**-1.3**
JOM	**Ohasama**	**2.87**	**281**	P	**Pn**	**09 33 55.1**	**+0.3**
JOM				*e*S	**Sn**	**09 34 27.0**	**-1.1**
JMK	**Ichinoseki**	**2.89**	**271**	P	**Pn**	**09 33 55.5**	**+0.4**
JMK				*e*S	**Sn**	**09 34 26.7**	**-1.9**
JYK	**Kaneyama**	**3.57**	**270**	*e*S	**Sn**	**09 34 44.9**	**-0.3**
JCH	**Churui**	**3.82**	**342**	P	**Pn**	**09 34 07.8**	**0.0**
JCH				*e*S	**Sn**	**09 34 50.9**	**-0.5**
JOT	**Ohata**	**3.82**	**310**	S	**Sn**	**09 34 50.6**	**-0.9**
NEM2	**Nemuro 2**	**4.42**	**8**	P	**Pn**	**09 34 14.4**	**-1.6**
NEM2				S	**Sn**	**09 35 02.0**	**-4.2**
JTKR	**Abashiri--Toko**	**5.04**	**352**	P	**Pn**	**09 34 24.6**	**0.0**
JTKR				*e*S	**Sn**	**09 35 19.4**	**-2.2**
JOSM	**Okushiri--Mats**	**5.18**	**308**	P	**Pn**	**09 34 28.1**	**+1.6**
JRY	**Ryogami san**	**5.64**	**240**	P	**Pn**	**09 34 31.4**	**-1.4**
MJAR	**Matsushiro Arr**	**5.86**	**247**	Pn	**Pn**	**09 34 33.1**	**-2.8**
	0.6nm,0.3s,baz=76,slow=16,SNR=18 10nm,0.6s						
JOD2	**Odawara 2**	**5.97**	**233**	P	**Pn**	**09 34 35.5**	**-1.9**
USRK	**Ussuriysk Ar.**	**11.00**	**302**	Pn	**Pn**	**09 35 46.5**	**+0.2**
	0.1nm,0.3s,baz=96,slow=17,SNR=3.0 2.9nm,0.6s						
KSRS	**Korea Array**	**13.46**	**269**	Pn	**Pn**	**09 36 20.4**	**+0.3**
	1.1nm,0.6s,baz=95,slow=14,SNR=5.1						
SEY	**Seymchan**	**24.40**	**8**	P	**P**	**09 38 28.2**	**+1.9**
	2.1nm,0.7s,baz=115,slow=6.3,SNR=3.7 2.1nm,0.7s						
MKAR	**Makanchi Array**	**45.47**	**301**	P	P	**09 41 27.9**	**+0.8**
	0.8nm,0.7s,baz=86,slow=8.1,SNR=4.7 0.8nm,0.7s						
ILAR	**Eielson Array**	**46.35**	**33**	P	**P**	**09 41 34.7**	**+0.9**
	0.8nm,0.8s,baz=266,slow=7.3,SNR=6.6 0.8nm,0.8s						
INK	**Inuvik**	**51.37**	**28**	P	**P**	**09 42 13.7**	**+1.5**
	0.9nm,0.6s,baz=277,slow=4.2,SNR=5.7 0.9nm,0.6s						
WRA	**Warramunga Arr**	**59.45**	**192**	P	**P**	**09 43 10.2**	**-0.7**
	0.9nm,0.8s,baz=13,slow=7.4,SNR=2.8 0.9nm,0.8s						
FINES	**FINESS Array B**	**68.36**	**333**	P	**P**	**09 44 09.4**	**+0.4**
	1.5nm,0.8s,baz=28,slow=8.6,SNR=5.7 1.5nm,0.8s						

*IDC **20** 09:39:35.7±2.7, 40.°42N×143.°75E, h0km, mb3.5/2, mbtmp3.6/4, ML2.1/2, MS4.2/1, Error ellipse: s-maj=59.6km s-min=32.6km az=149.0*
*JMA **20** 09:39:37.0±0.3, 40.°4N±0.°6×14.°4E±.°, h10km±3km, MV3.5/31, FAR E OFF SANRIKU*
ISC 20 09:39:37.1±1.3,40.°39N±0.°05×143.°74E±0.°08, h16km, n20, σ1.°10/28, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.50**	**253**	P	**Pn**	**09 40 02.5**	**-0.8**
JTH				*e*S	**Sn**	**09 40 21.2**	**-1.4**
JKEN	**Kujiedanarisaw**	**1.56**	**264**	P	**Pn**	**09 40 03.3**	**-0.9**
JKEN				S	**Sn**	**09 40 22.0**	**-2.0**
MIYJ	**Miyakonagasawa**	**1.68**	**242**	P	**Pn**	**09 40 05.6**	**-0.2**
MIYJ				*e*S	**Sn**	**09 40 25.6**	**-1.4**
JANG	**Nango**	**1.70**	**270**	P	**Pn**	**09 40 05.3**	**-0.8**
JNBK	**Urakawa-nobuka**	**2.03**	**339**	P	**Pn**	**09 40 11.4**	**+0.8**
JNBK				S	**Sb**	**09 40 37.4**	**-1.0**
JTM	**Tenmabayashi**	**2.07**	**282**	P	**Pn**	**09 40 11.6**	**+0.5**
JTM				S	**Sn**	**09 40 36.8**	**+0.2**
JOM	**Ohasama**	**2.09**	**245**	P	**Pn**	**09 40 11.7**	**+0.2**
JCH	**Churui**	**2.24**	**353**	P	**Pn**	**09 40 13.8**	**+0.3**
JCH				*e*S	**Sn**	**09 40 40.2**	**-0.6**
JOT	**Ohata**	**2.27**	**297**	*e*S	**Sn**	**09 40 41.2**	**-0.2**
JAH	**Hinai**	**2.38**	**266**	P	**Pn**	**09 40 15.3**	**-0.1**
JMK	**Ichinoseki**	**2.42**	**234**	P	**Pn**	**09 40 16.2**	**+0.3**
JMK				S	**Sn**	**09 40 44.7**	**-0.4**
JAK	**Akkeshi**	**2.70**	**15**	P	**Pn**	**09 40 19.9**	**+0.1**
JAK				*e*S	**Sn**	**09 40 50.8**	**-1.3**
JAR	**Ashorobuto**	**2.90**	**0**	P	**Pn**	**09 40 21.9**	**-0.7**
JAR				*e*S	**Sn**	**09 40 54.8**	**-2.3**
JEW	**Eniwo**	**2.99**	**326**	*e*S	**Sn**	**09 41 00.5**	**+1.3**
JYK	**Kaneyama**	**2.99**	**242**	P	**Pn**	**09 40 24.5**	**+0.7**
MJAR	**Matsushiro Arr**	**5.79**	**230**	Pn	**Pn**	**09 41 03.5**	**+1.1**
	0.1nm,0.3s,baz=45,slow=11,SNR=9.6 3.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**9.50**	**297**	Pn	**Pn**	**09 41 55.4**	**+2.3**
	0.2nm,0.3s,baz=104,slow=12,SNR=5.0 3.2nm,0.7s						
GUMO	**Guam**	**26.72**	**178**	LR	LR	09 53 17.8	
	comp=Z,512nm,21.8s,baz=296,slow=31						
MKAR	**Makanchi Array**	**43.96**	**300**	P	**P**	**09 47 43.4**	**+0.1**
	1.4nm,0.9s,baz=79,slow=6.3,SNR=7.0 1.4nm,0.9s						
ILAR	**Eielson Array**	**45.69**	**34**	P	**P**	**09 47 57.9**	**+1.1**
	0.4nm,1.0s,baz=256,slow=6.4,SNR=1.9 0.4nm,1.0s						

*IDC **20** 09:46:55.9±3.6, 23.°27N×142.°69E, h69km±36km, mb3.8/3, mbtmp4.2/6, ML3.7/2, Error ellipse: s-maj=55.0km s-min=19.8km az=94.0*
ISC 20 09:46:53.0±1.2,23.°12N±0.°10×142.°6E±0.°4, h35km, n14, σ1.°58/9, mb4.1/3, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.98**	**355**	P	**Pn**	**09 47 54.3**	**+2.8**
	596nm,0.4s,baz=1.0,slow=2.5,SNR=133						
JCJ				S	**Sn**	**09 48 36.4**	**-0.6**
	369nm,0.4s,baz=255,slow=23,SNR=11						
MJAR	**Matsushiro Arr**	**13.91**	**345**	P	**Pn**	**09 50 06.2**	**-1.4**
	0.2nm,0.3s,baz=159,slow=10,SNR=4.9 1.8nm,0.4s						
KSRS	**Korea Array**	**19.07**	**322**	P	**P**	**09 51 12.3**	**0.0**
	0.3nm,0.3s,baz=136,slow=12,SNR=16 5.3nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**22.86**	**94**	T	T	10 15 53.9	
	baz=282,slow=75,SNR=21						
H11N2	**WAKE ISLAND Hy**	**22.86**	**94**	T	T	10 15 55.9	
	baz=282,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**22.87**	**94**	T	T	10 15 53.7	
	baz=282,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**22.97**	**97**	T	T	10 15 22.2	
	baz=284,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**22.98**	**97**	T	T	10 15 23.1	
	baz=284,slow=75,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**22.98**	**97**	T	T	10 15 28.1	
	baz=284,slow=75,SNR=5.8						
KLR	**Kul'dur**	**27.43**	**344**	P	**P**	**09 52 34.5**	**-0.9**
	3.1nm,0.7s,baz=136,slow=7.7,SNR=5.9 3.1nm,0.7s						
WRA	**Warramunga Arr**	**43.55**	**191**	P	**P**	**09 54 54.7**	**+1.0**
	2.1nm,0.4s,baz=11,slow=8.5,SNR=52 2.1nm,0.4s						
ASAR	**Alice Springs**	**47.27**	**191**	P	**P**	**09 55 23.0**	**-0.1**
	0.4nm,0.5s,baz=19,slow=13,SNR=17 0.4nm,0.5s						
PLCA	**Paso Flores**	**147.09**	**130**	PKPbc	**PKPdf**	**10 06 30.5**	**+0.2**
	1.6nm,0.7s,baz=222,slow=6.7,SNR=5.7						
LPAZ	**La Paz**	**150.32**	**82**	PKPbc	**PKPbc**	**10 06 40.4**	**-1.8**
	2.6nm,0.6s,baz=318,slow=2.8,SNR=12						

*IDC **20** 09:47:45.8±0.8, 40.°27N×143.°77E, h0km, mb3.8/12, mbtmp3.8/16, ML2.6/4, Error ellipse: s-maj=19.8km s-min=18.6km az=139.0*
*NEIC **20** 09:47:46.3±0.9, 40.°20N±0.°06×143.°97E±0.°08, h10km±2km, mb4.4/5, Error ellipse: s-maj=12.3km s-min=7.8km az=48.0*
*JMA **20** 09:47:47.3±0.2, 40.°3N±0.°7×14.°4E±.°, h19km, MV3.8/28, FAR E OFF SANRIKU*
ISC 20 09:47:47.9±0.7,40.°31N±0.°06×143.°83E±0.°07, h16km, n55, σ1.°03/55, mb4.0/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.55**	**257**	P	**Pn**	**09 48 13.8**	**-1.1**
JKEN	**Kujiedanarisaw**	**1.62**	**267**	P	**Pn**	**09 48 14.7**	**-1.1**
JKEN				*e*S	**Sn**	**09 48 34.2**	**-2.2**
MIYJ	**Miyakonagasawa**	**1.71**	**245**	P	**Pn**	**09 48 16.6**	**-0.5**
JANG	**Nango**	**1.77**	**273**	P	**Pn**	**09 48 17.1**	**-0.7**
ERM	**Erimo**	**1.78**	**344**	P	**Pn**	**09 48 18.9**	**+0.9**
JEM	**Erimo**	**1.78**	**344**	P	**Pn**	**09 48 17.3**	**-0.7**
JEM				*e*S	**Sn**	**09 48 39.6**	**-0.6**
JOM	**Ohasama**	**2.12**	**248**	*i* P	**Pn**	**09 48 22.7**	**0.0**
JNBK	**Urakawa-nobuka**	**2.13**	**338**	P	**Pn**	**09 48 23.1**	**+0.3**
JTM	**Tenmabayashi**	**2.15**	**284**		**Pn**	**09 48 23.1**	**0.0**
JCH	**Churui**	**2.33**	**352**	P	**Pn**	**09 48 25.0**	**-0.6**
JCH				*e*S	**Sn**	**09 48 52.8**	**-1.1**
JOT	**Ohata**	**2.36**	**298**	P	**Pn**	**09 48 26.0**	**0.0**
JOT				*e*S	**Sn**	**09 48 54.1**	**-0.6**
JMK	**Ichinoseki**	**2.43**	**237**	*i* P	**Pn**	**09 48 26.6**	**-0.3**
JAK	**Akkeshi**	**2.76**	**13**	*e*P	**Pn**	**09 48 30.5**	**-1.1**
JAK				*e*S	**Sn**	**09 49 01.8**	**-2.7**
JAR	**Ashorobuto**	**2.99**	**359**	P	**Pn**	**09 48 33.3**	**-1.3**
JAR				*e*S	**Sn**	**09 49 07.4**	**-2.6**
JYK	**Kaneyama**	**3.02**	**244**	P	**Pn**	**09 48 35.4**	**+0.3**
JEW	**Eniwo**	**3.09**	**326**		**Pn**	**09 48 37.5**	**+1.4**
JMM	**Marumori**	**3.39**	**225**		**Pn**	**09 48 38.9**	**-1.4**
JSD	**Sado**	**4.88**	**244**	Pn	**Pn**	**09 49 00.7**	**0.0**
JYT	**Yasato**	**4.98**	**216**		**Pn**	**09 49 00.2**	**-1.8**
MJAR	**Matsushiro Arr**	**5.79**	**231**	Pn	**Pn**	**09 49 11.9**	**-1.3**
	0.3nm,0.3s,baz=44,slow=11,SNR=26 7.8nm,0.7s						
MAJO	**Matsushiro**	**5.80**	**231**		**Pn**	**09 49 13.5**	**+0.2**
INU	**Inuyama**	**7.32**	**230**	Pn	**Pn**	**09 49 33.2**	**-0.9**
USA0B	**Ussuriysk Arra**	**9.60**	**298**	Pn	**Pn**	**09 50 05.5**	**+0.1**
USRK	**Ussuriysk Ar.**	**9.60**	**298**	Pn	**Pn**	**09 50 05.3**	**0.0**
	1.1nm,0.3s,baz=101,slow=14,SNR=19 10nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.60**	**298**		**Pn**	**09 50 06.2**	**+0.8**
JHS	**Saijyo**	**10.01**	**241**	Pn	**Pn**	**09 50 11.3**	**+0.3**
MDJ	**Mudanjiang**	**11.36**	**297**	Pn	**Pn**	**09 50 30.7**	**+1.2**
KLR	**Kul'dur**	**12.36**	**320**	Pn	**Pn**	**09 50 43.6**	**+0.4**
	baz=125,slow=11,SNR=3.9 2.7nm,0.9s						
KSRS	**Korea Array**	**12.72**	**262**	Pn	**Pn**	**09 50 49.2**	**+1.2**
	0.1nm,0.3s,baz=69,slow=13,SNR=2.3 0.5nm,0.6s						
SEY	**Seymchan**	**23.23**	**10**	P	**P**	**09 52 52.8**	**-1.3**
	2.0nm,0.6s,baz=218,slow=5.2,SNR=3.7 2.0nm,0.6s						
SONM	**Songino Array**	**27.71**	**298**	P	**P**	**09 53 35.3**	**-0.2**
	1.2nm,0.6s,baz=104,slow=9.5,SNR=5.3 1.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.48**	**129**	T	T	10 23 33.5	
	baz=322,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**28.49**	**129**	T	T	10 23 29.5	
	baz=322,slow=75,SNR=10.0						
H11N3	**WAKE ISLAND Hy**	**28.50**	**129**	T	T	10 23 26.6	
	baz=322,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.32**	**131**	T	T	10 24 38.1	
	baz=323,slow=76,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**29.32**	**131**	T	T	10 24 35.5	
	baz=323,slow=76,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	**29.34**	**131**	T	T	10 24 31.4	
	baz=323,slow=76,SNR=6.6						
ZALV	**Zalesovo Beam**	**41.19**	**310**	P	**P**	**09 55 31.7**	**+0.2**
	2.2nm,0.6s,baz=102,slow=8.1,SNR=6.6 2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**41.19**	**310**	P	**P**	**09 55 31.5**	**0.0**
MK31	**Makanchi Array**	**44.06**	**300**	P	**P**	**09 55 55.0**	**0.0**
MKAR	**Makanchi Array**	**44.06**	**300**	P	**P**	**09 55 55.2**	**+0.2**
	2.8nm,0.9s,baz=82,slow=9.1,SNR=17 2.8nm,0.9s						
MKAR	**Makanchi Array**	**44.06**	**300**	P	**P**	**09 55 54.7**	**-0.3**
MAKZ	**Makanchi**	**44.26**	**300**	P	**P**	**09 55 56.6**	**0.0**
MAKZ				IAmb	IAmb	09 56 03.0	
	comp=Z,2.9nm,0.7s						
KURK	**Kurchatov**	**45.47**	**306**	P	**P**	**09 56 06.2**	**+0.1**
ILAR	**Eielson Array**	**45.72**	**34**	P	**P**	**09 56 08.8**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=262,slow=6.3,SNR=3.2 comp=Z,0.3nm,0.8s						
KSM	**Kuching**	**49.17**	**227**	P	**P**	**09 56 34.0**	**-1.2**
KSM				IAmb	IAmb	09 57 07.4	
	comp=Z,6.0nm,1.1s						
ABKAR	**Akbulak array**	**57.30**	**309**	P	**P**	**09 57 35.2**	**+0.5**
ABKAR				IAmb	IAmb	09 57 36.0	
	comp=Z,2.9nm,0.7s						
WRA	**Warramunga Arr**	**60.59**	**190**	P	**P**	**09 57 56.9**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=8.8,slow=6.9,SNR=6.8 comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**64.31**	**190**	P	**P**	**09 58 22.8**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=13,slow=14,SNR=1.6 comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**	**09 58 37.8**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=76,slow=8.0,SNR=8.8 comp=Z,1.8nm,0.7s						
KBZ	**Khabaz**	**70.20**	**311**	P	**P**	**09 59 01.6**	**+1.8**
	comp=Z,2.7nm,0.7s,baz=37,slow=4.8,SNR=6.7 comp=Z,2.7nm,0.7s						
NVAR	**Mina Array Bea**	**71.54**	**55**	P	**P**	**09 59 10.0**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=282,slow=4.5,SNR=12 comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**71.88**	**338**	P	**P**	**09 59 10.1**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**71.88**	**338**	P	**P**	**09 59 10.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=38,slow=6.1,SNR=5.3 comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**74.04**	**47**	P	**P**	**09 59 24.5**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=343,slow=2.8,SNR=1.6 comp=Z,0.2nm,0.7s						

*IDC **20** 10:09:11.5±3.2, 33.°59S×178.°98W, h0km, mb3.3/2, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=72.6km s-min=36.7km az=114.0*
*WEL **20** 10:09:20.5±0.9, 34.°S±9.°×17.°9W±2.°2, h33km, M4.0/10, mB4.7/7, ML4.4/18, MLv4.1/10, Mw(mB)3.9/7, Error ellipse: s-maj=0.0km s-min=0.0km az=112.9*
ISC 20 10:09:18.1±2.0,33.°6S±0.°1×179.°0W±0.°2, h48km, n31, σ1.°32/50, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.51**	**208**	P	**Pn**	**10 10 26.1**	**+2.2**
MXZ				S	**Sn**	**10 11 16.6**	**+1.4**
WMGZ	**Waiomatatini S**	**4.70**	**206**	P	**Pn**	**10 10 27.9**	**+1.5**
WMGZ				S	**Sn**	**10 11 22.3**	**+2.7**
PKGZ	**Pakihiroa**	**4.89**	**208**	P	**Pn**	**10 10 29.3**	**+0.2**
PKGZ				S	**Sn**	**10 11 27.0**	**+2.6**
HAZ	**Te Kaha**	**4.90**	**212**	P	**Pn**	**10 10 29.7**	**+0.5**
HAZ				S	**Sn**	**10 11 26.8**	**+2.2**
PUZ	**Puketiti**	**4.98**	**206**	P	**Pn**	**10 10 29.7**	**-0.6**
PUZ				S	**Sn**	**10 11 25.4**	**-1.2**
RUGZ	**Raukumara Rang**	**5.12**	**211**	P	**Pn**	**10 10 32.0**	**-0.3**
RUGZ				S	**Sn**	**10 11 29.1**	**-1.1**
TWGZ	**Tauwhareparae**	**5.18**	**207**	P	**Pn**	**10 10 33.1**	**+0.1**
TWGZ				S	**Sn**	**10 11 32.0**	**+0.5**
KUZ	**Kuaotunu**	**5.34**	**233**	P	**Pn**	**10 10 36.2**	**+0.9**
CNGZ	**Carnagh Statio**	**5.37**	**204**	P	**Pn**	**10 10 35.9**	**+0.3**
CNGZ				S	**Sn**	**10 11 36.2**	**+0.2**
TKGZ	**Te Karaka**	**5.46**	**207**	P	**Pn**	**10 10 37.5**	**+0.7**
TKGZ				S	**Sn**	**10 11 36.8**	**+1.5**
MWZ	**Matawai**	**5.49**	**210**	P	**Pn**	**10 10 37.5**	**+0.1**
MWZ				S	**Sn**	**10 11 37.9**	**-1.4**
OPRZ	**Ohinepanea**	**5.56**	**219**	P	**Pn**	**10 10 40.0**	**+1.7**
URZ	**Urewera**	**5.61**	**213**	Pn	**Pn**	**10 10 37.6**	**-1.4**
	2.5nm,0.3s,baz=268,slow=4.9,SNR=50						
URZ				Sn	**Sn**	**10 11 40.3**	**-1.8**
	1.2nm,0.3s,baz=151,slow=18,SNR=1.7 4.2nm,0.3s						
URZ	**Urewera**	**5.61**	**213**	P	**Pn**	**10 10 38.1**	**-0.8**
URZ				S	**Sn**	**10 11 40.7**	**-1.4**
**R

USRK Ussuriysk Ar. 9.56 298 Pn **Pn** **10 13 12.1 +1.7**
0.3nm,0.3s,baz=102,slow=14,SNR=7.7
2.2nm,0.6s
H11N2 WAKE ISLAND Hy 28.52 129 T T 10 46 37.6
H11N1 WAKE ISLAND Hy 28.53 129 T T 10 46 39.2
baz=320,slow=74,SNR=12
H11N3 WAKE ISLAND Hy 28.53 129 T T 10 46 38.3
baz=320,SNR=13
H11S1 WAKE ISLAND Hy 29.36 131 T T 10 47 46.9
baz=323,slow=76,SNR=4.5
H11S3 WAKE ISLAND Hy 29.36 131 T T 10 47 47.8
baz=323,slow=76,SNR=5.0
H11S2 WAKE ISLAND Hy 29.38 131 T T 10 47 42.2
baz=323,slow=76,SNR=5.0
ZALV Zalesovo Beam 41.15 310 P **P** **10 18 37.4 +0.7**
0.5nm,0.4s,baz=81,slow=9.3,SNR=1.6
0.5nm,0.4s
MKAR Makanchi Array 44.02 300 P **P** **10 19 01.1 +0.9**
0.5nm,0.7s,baz=81,slow=8.9,SNR=5.9
0.5nm,0.7s
KURBB Kurchatov Arra 45.51 306 P **P** **10 19 11.8 -0.1**
0.7nm,0.3s,baz=78,slow=8.7,SNR=4.6
0.7nm,0.3s
ILAR Eielson Array 45.72 34 P **P** **10 19 13.6 +0.1**
0.3nm,0.6s,baz=275,slow=6.5,SNR=4.7
0.3nm,0.6s
WRA Warramunga Arr 60.61 190 P **P** **10 21 03.0 -0.5**
0.2nm,0.7s,baz=6.6,slow=6.7,SNR=1.8
0.2nm,0.7s
FINES FINESS Array B 66.76 332 P **P** **10 21 43.6 0.0**
0.3nm,0.5s,baz=24,slow=11,SNR=3.4
0.3nm,0.5s
NVAR Mina Array Bea 71.55 55 P **P** **10 22 14.6 +0.6**
0.3nm,0.6s,baz=289,slow=4.5,SNR=4.0
0.3nm,0.6s
TXAR Lajitas Array 86.66 54 P **P** **10 23 37.6 +0.9**
0.6nm,1.1s,baz=259,slow=1.3,SNR=4.0
0.6nm,1.1s

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*NEIC **20** 10:27:30.7±1.4,43.18N±0.09×91.01E±0.06, h10km±2km, mb4.1/12, ML4.2(BJI), Error ellipse: s-maj=17.8km s-min=4.4km az=212.0*
*NNC **20** 10:27:31.1±3.3,43.64N×91.18E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=40.8km s-min=23.9km az=43.0*
*IDC **20** 10:27:31.0±1.0,43.63N×91.45E, h0km, mb3.7/8, mbtmp3.7/12, ML3.4/4, MS4.5/2, Error ellipse: s-maj=25.5km s-min=14.0km az=35.0*
ISC 20 10:27:30.3±0.7, 43°28N±0.07×91°08E±0.06, h10km, n42, σ1§71/47, mb3.7/11, 3C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**7.15**	**302**	Pn	**Pn**	**10 29 16.6**	**+1.7**
MK31				Sn	**Sn**	**10 30 36.5**	**+0.2**
MK31	**Makanchi Array**	**7.15**	**302**	⇓Pn	**Pn**	**10 29 17.0**	**+2.0**
	2.1nm,0.3s,baz=113,slow=14,SNR=18						
MK31				⇓Sn	**Sn**	**10 30 38.3**	**+2.1**
	11nm,0.4s,baz=101,slow=29,SNR=5.2						
MK31				Lg	Lg	10 31 14.3	
	48nm,0.7s,baz=108,slow=32,SNR=4.5						
MKAR	**Makanchi Array**	**7.15**	**302**	Pn	**Pn**	**10 29 17.0**	**+2.1**
	1.6nm,0.3s,baz=113,slow=14,SNR=40						
MKAR				Sn	**Sn**	**10 30 37.5**	**+1.3**
	8.9nm,0.3s,baz=105,slow=23,SNR=8.2						
MKAR				Lg	Lg	10 31 20.2	
	9.0nm,0.3s,baz=115,slow=28,SNR=6.3						
	2.7nm,0.3s						
MKAR	**Makanchi Array**	**7.15**	**302**	Pn	**Pn**	**10 29 16.5**	**+1.5**
MAKZ	**Makanchi**	**7.35**	**302**		**Pn**	**10 29 18.8**	**+1.1**
MAKZ	**Makanchi**	**7.35**	**302**	⇓Pn	**Pn**	**10 29 19.5**	**+1.9**
	7.6nm,0.6s						
MAKZ				⇑Sn	**Sn**	**10 30 40.7**	**-0.4**
	23nm,0.6s						
MAKZ				⇑Lg	Lg	10 31 25.8	
	118nm,1.1s						
MDOK	**Medeo**	**10.25**	**274**	⇑Pn	**Pn**	**10 29 58.1**	**+0.6**
	2.7nm,0.4s						
MDOK				⇓Lg	Lg	10 33 00.5	
	28nm,0.8s						
KURBB	**Kurchatov Arra**	**11.29**	**315**	Pn	**Pn**	**10 30 12.0**	**+0.5**
	0.3nm,0.3s,baz=121,slow=14,SNR=6.4						
KURBB				Lg	Lg	10 33 29.1	
	0.4nm,0.3s,baz=124,slow=26,SNR=4.8						
	1.5nm,0.3s						
KURBB	**Kurchatov Arra**	**11.29**	**315**	Pn	**Pn**	**10 30 10.0**	**-1.5**
KURBB				Sn	**Sn**	**10 32 14.9**	**-2.7**
KURBB				⇓Lg	Lg	10 33 28.7	
	84nm,0.7s						
KURK	**Kurchatov**	**11.29**	**316**	Pn	**Pn**	**10 30 11.6**	**0.0**
KURK	**Kurchatov**	**11.29**	**316**	Pn	**Pn**	**10 30 10.7**	**-0.9**
KURK				Sn	**Sn**	**10 32 15.7**	**-2.2**
KURK				⇓Lg	Lg	10 33 27.3	
	48nm,0.9s						
ZAA0	**Zalesovo Array**	**11.45**	**341**	Pn	**Pn**	**10 30 14.1**	**+0.4**
ZALV	**Zalesovo Beam**	**11.45**	**341**	Pn	**Pn**	**10 30 12.8**	**-0.9**
	1.3nm,0.3s,baz=163,slow=14,SNR=16						
ZALV				Sn	**Sn**	**10 32 18.2**	**-3.4**
	0.7nm,0.3s,baz=158,slow=25,SNR=5.2						
ZALV				Lg	Lg	10 33 27.8	
	0.5nm,0.3s,baz=182,slow=22,SNR=4.3						
	3.1nm,0.3s						
ZALV	**Zalesovo Beam**	**11.45**	**341**	Pn	**Pn**	**10 30 14.3**	**+0.6**
SONM	**Songino Array**	**11.66**	**62**	Pn	**Pn**	**10 30 14.7**	**-2.0**
	0.1nm,0.3s,baz=246,slow=14,SNR=2.0						
SONM				Lg	Lg	10 33 28.0	
	0.4nm,0.3s,baz=271,slow=28,SNR=3.9						
	0.3nm,0.4s						
SONM	**Songino Array**	**11.66**	**62**	Pn	**Pn**	**10 30 18.4**	**+1.6**
ULN	**Ulaanbaatar**	**12.09**	**62**	Pn	**Pn**	**10 30 24.3**	**+1.6**
AAK	**Ala-Archa**	**12.18**	**273**	Pn	**Pn**	**10 30 23.3**	**-0.5**
LSA	**Lhasa**	**13.55**	**180**	Pn	**Pn**	**10 30 40.0**	**-3.0**
KK31	**Karatay Array**	**15.01**	**276**	Pn	**Pn**	**10 31 01.7**	**-0.7**
KKAR	**Karatay Array**	**15.01**	**276**		**Pn**	**10 31 01.8**	**-0.6**
KKAR	**Karatay Array**	**15.01**	**276**	Pn	**Pn**	**10 31 01.8**	**-0.6**
BRVK	**Borovoye**	**16.92**	**313**	Pn	**Pn**	**10 31 26.6**	**-0.4**
NIL	**Nilore**	**16.92**	**241**	Pn	**Pn**	**10 31 25.4**	**-1.7**
CHGR	**Chuyangaron**	**17.18**	**262**	P	**Pn**	**10 31 29.5**	**-0.9**
CHGR				IAmb	IAmb	10 31 40.8	
	comp=Z,14nm,0.9s						
BJT	**Baijiatuau**	**19.00**	**91**	P	**P**	**10 31 51.4**	**-0.6**
KBL	**Kabul**	**19.20**	**250**	P	**P**	**10 31 52.0**	**-2.5**
KBL				IAmb	IAmb	10 31 59.5	
	comp=Z,5.8nm,0.6s						
ABKAR	**Akbulak array**	**22.24**	**296**	P	**P**	**10 32 26.5**	**-0.5**
ABKAR				IAmb	IAmb	10 32 38.0	
	comp=Z,6.8nm,1.2s						
AKTO	**Aktyubinsk**	**23.57**	**299**	P	**P**	**10 32 45.6**	**+4.7**
	comp=Z,1.2nm,0.7s,baz=122,slow=6.9,SNR=5.2						
	comp=Z,1.2nm,0.7s						
ARCES	**ARCESS Array B**	**41.79**	**331**	P	**P**	**10 35 19.9**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=87,slow=7.4,SNR=8.0						
	comp=Z,0.9nm,0.7s						
NB2	**NORSAR Subarra**	**48.76**	**320**	P	**P**	**10 36 14.0**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**48.76**	**320**	P	**P**	**10 36 14.9**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=73,slow=7.8,SNR=3.8						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**63.18**	**24**	P	**P**	**10 37 57.2**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=310,slow=5.4,SNR=6.7						
	comp=Z,0.5nm,0.7s						
KMBO	**Kilima Mbogo**	**65.32**	**243**	LR	LR	11 09 15.6	
	comp=Z,482nm,20.3s,baz=266,slow=38						
WRA	**Warramunga Arr**	**74.41**	**138**	P	**P**	**10 39 11.0**	**+2.6**
	comp=Z,0.4nm,0.9s,baz=338,slow=6.4,SNR=2.1						
	comp=Z,0.4nm,0.9s						
ASAR	**Alice Springs**	**77.38**	**140**	P	**P**	**10 39 28.8**	**+3.5**
	comp=Z,0.3nm,0.6s,baz=336,slow=6.5,SNR=5.2						
	comp=Z,0.3nm,0.6s						

IDC 20 10:29:48.4±2.2, 55.41S×31.03W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=95.1km s-min=47.6km az=14.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**48.26**	**309**	P	P	10 38 31.4	-0.3
	1.1nm,0.5s,baz=165,slow=20,SNR=5.8						
	1.1nm,0.5s						
H10N1	**ASCENSION HYDR**	**49.23**	**22**	T	T	11 31 46.3	
	baz=187						
H10N3	**ASCENSION HYDR**	**49.23**	**22**	T	T	11 31 35.4	
	baz=187,slow=74,SNR=4.6						
H10N2	**ASCENSION HYDR**	**49.25**	**22**	T	T	11 31 39.6	
	baz=187,slow=74,SNR=6.1						
TORD	**Torodi Ar. Bea**	**73.64**	**33**	P	P	10 41 23.5	0.0
	0.3nm,0.6s,baz=202,slow=6.6,SNR=2.0						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**148.08**	**313**	PKPbc	PKPbc	10 49 34.0	-0.4
	0.7nm,0.7s,baz=126,slow=1.8,SNR=6.2						
SONM	**Songino Array**	**152.87**	**88**	PKPbc	PKPbc	10 49 46.3	-0.2
	0.6nm,0.5s,baz=222,slow=3.1,SNR=4.4						

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*JMA **20** 10:32:57.7±0.4,40.4N±0.6×14.4E±, h10km±3km, MV3.2/32, FAR E OFF SANRIKU*
*IDC **20** 10:33:02.6±8.8,40.27N×143.16E, h0km, mb3.3/1, mbtmp3.3/3, ML2.1/2, Error ellipse: s-maj=140.3km s-min=51.3km az=94.0*
ISC 20 10:32:57.4±2.6, 40.48N±0.08×143.5E±0.1, h10km±14km, n17, σ1§26/22, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.39**	**248**	P	**Pn**	**10 33 22.9**	**0.0**
JKEN	**Kujiedanarisaw**	**1.42**	**260**	P	**Pn**	**10 33 23.5**	**+0.2**
JKEN				eS	**Sg**	**10 33 42.7**	**-0.4**
JANG	**Nango**	**1.54**	**267**	P	**Pn**	**10 33 25.8**	**+0.8**
JEM	**Erimo**	**1.56**	**350**	eP	**Pg**	**10 33 27.5**	**+0.1**
JEM				eS	**Sg**	**10 33 49.8**	**+1.2**
MIYJ	**Miyakonagasawa**	**1.59**	**236**	P	**Pn**	**10 33 25.9**	**+0.3**
MIYJ				eS	**Sn**	**10 33 45.6**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.90**	**342**	eP	**Pb**	**10 33 31.6**	**-0.5**
JNBK				eS	**Sg**	**10 33 57.3**	**-1.1**
JTM	**Tenmabayashi**	**1.90**	**280**	P	**Pb**	**10 33 32.0**	**-0.2**
JOM	**Ohasama**	**1.99**	**241**	P	**Pn**	**10 33 32.0**	**+0.8**
JOT	**Ohata**	**2.09**	**297**	P	**Pb**	**10 33 34.8**	**-0.6**
JCH	**Churui**	**2.14**	**357**	eP	**Pb**	**10 33 35.9**	**-0.4**
JCH				eS	**Sb**	**10 34 01.7**	**-1.2**
JMK	**Ichinoseki**	**2.34**	**230**	P	**Pn**	**10 33 36.3**	**+0.3**
JAK	**Akkeshi**	**2.67**	**19**	eS	**Sn**	**10 34 12.4**	**-0.4**
JAR	**Ashorobuto**	**2.83**	**4**	eP	**Pn**	**10 33 42.8**	**+0.2**
JAR				eS	**Sn**	**10 34 16.6**	**-0.1**
JYK	**Kaneyama**	**2.90**	**239**	eP	**Pn**	**10 33 44.8**	**+1.1**
MJAR	**Matsushiro Arr**	**5.73**	**228**	Pn	**Pn**	**10 34 23.9**	**+1.3**
	0.1nm,0.3s,baz=42,slow=12,SNR=5.8						
	1.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.32**	**297**	Pn	**Pn**	**10 35 16.1**	**+4.3**
	0.2nm,0.3s,baz=105,slow=14,SNR=7.7						
	1.6nm,0.6s						
MKAR	**Makanchi Array**	**43.78**	**299**	P	P	10 41 08.5	+5.4
	0.2nm,0.5s,baz=70,slow=8.3,SNR=2.7						
	0.2nm,0.5s						

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*DJA **20** 10:35:22.0±0.3,2.7N±3.12.7E±, h10km, M4.4/13, mb4.6/7, mB5.1/2, MLv4.2/13, Mw(mB)4.5/2*
*NEIC **20** 10:35:24.8±1.4, 1.62N±0.08×126.40E±0.07, h40km±8km, mb4.5/26, Error ellipse: s-maj=14.7km s-min=3.8km az=223.0*
*IDC **20** 10:35:24.9±4.5, 1.60N×126.07E, h51km±40km, mb4.0/8, mbtmp4.2/10, ML4.3/2, Error ellipse: s-maj=50.2km s-min=15.1km az=71.0*
ISC 20 10:35:25.1±0.5, 1.63N±0.05×126.41E±0.07, h47km, n81, σ1§37/87, mb4.5/25, 1C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**132**		**Pn**	**10 35 45.1**	**-1.6**
TNTI	**Ternate**	**1.29**	**132**	P	**Pn**	**10 35 46.8**	**+0.1**
TNTI	**Ternate**	**1.29**	**132**	P	**Pn**	**10 35 46.9**	**+0.2**
SGSI	**Sangihe**	**2.22**	**337**	P	**Pn**	**10 35 56.3**	**-3.2**
SGSI				S	**Sn**	**10 36 22.3**	**-3.4**
LBMI	**Labuha**	**2.51**	**154**	P	**Pn**	**10 36 05.1**	**+1.7**
KMSI	**Cibinong**	**2.64**	**247**	P	**Pn**	**10 36 05.5**	**+0.2**
GTOI	**Gorontalo**	**3.54**	**254**	P	**Pn**	**10 36 17.9**	**+0.4**
SANI	**Sanana**	**3.68**	**187**	P	**Pn**	**10 36 19.6**	**0.0**
SANI	**Sanana**	**3.68**	**187**	P	**Pn**	**10 36 20.1**	**+0.5**
DDMP	**Don Marcelino,**	**4.49**	**351**	⇓eP	**Pn**	**10 36 29.6**	**-1.2**
DDMP				eS	**Sn**	**10 37 23.1**	**+1.4**
LUWI	**Luwuk**	**4.50**	**234**		**Pn**	**10 36 30.3**	**-0.5**
LUWI	**Luwuk**	**4.50**	**234**	P	**Pn**	**10 36 31.8**	**+1.0**
MRSI	**Marisa**	**4.61**	**256**	P	**Pn**	**10 36 33.5**	**+1.2**
NLAI	**Namlea**	**4.89**	**172**	P	**Pn**	**10 36 37.2**	**+1.1**
APSI	**Ampana**	**5.39**	**242**	P	**Pn**	**10 36 43.8**	**+0.8**
	0.5nm1μm95nm,0.6s						
KCP	**Kidapawan**	**5.50**	**346**	⇑eP	**Pn**	**10 36 41.0**	**-3.6**
KCP				*i* S	**Sn**	**10 37 49.7**	**+3.1**
TOLI2	**Tolitoli**	**5.65**	**265**	Pn	**Pn**	**10 36 45.2**	**-1.3**
TOLI2	**Tolitoli**	**5.65**	**265**	P	**Pn**	**10 36 45.5**	**-1.0**
BUKP	**Musuan**	**6.35**	**348**	⇓*i*P	**Pn**	**10 36 58.2**	**+2.1**
MPSI	**Mapaga**	**6.63**	**259**	P	**Pn**	**10 37 00.9**	**+0.8**
	0.1nm36nm,0.8s						
TTSI	**Tana Toraja**	**8.06**	**235**	P	**Pn**	**10 37 21.1**	**+1.4**
	25nm,0.7s						
MYLDM	**Lahad Datu**	**8.64**	**294**	Pn	**Pn**	**10 37 27.4**	**-0.2**
SPSI	**Sidrap Palu**	**8.66**	**230**	P	**Pn**	**10 37 29.2**	**+1.4**
	24nm,0.7s						
KAPI	**Kappang**	**9.37**	**225**	P	**Pn**	**10 37 35.8**	**-1.8**
	2.7nm,0.3s,baz=131,slow=11,SNR=2.5						
	7.3nm,0.3s						
BSSI	**Bau Bau, Buton**	**9.72**	**217**	P	**Pn**	**10 37 44.6**	**+2.1**
KKM	**Kota Kinabalu**	**11.07**	**294**	Pn	**Pn**	**10 38 00.6**	**-0.4**
SBUM	**Sibu**	**14.20**	**274**		**Pn**	**10 38 42.5**	**-1.2**
MTN	**Manton Dam**	**15.13**	**162**	Pn	**Pn**	**10 38 55.1**	**-0.8**
MTN				IAmb	IAmb	10 39 03.6	
	comp=Z,9.4nm,0.7s						
MTN	**Manton Dam**	**15.13**	**162**	P	**Pn**	**10 38 55.1**	**-0.8**
KDU	**Kakadu**	**15.45**	**157**	P	**Pn**	**10 38 59.2**	**-0.8**
KNRA	**Kununurra**	**17.36**	**172**	P	**Pn**	**10 39 23.9**	**-0.2**
KNRA	**Kununurra**	**17.36**	**172**	P	**Pn**	**10 39 24.1**	**0.0**
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**10 39 48.7**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=13,slow=7.3,SNR=23						
	comp=Z,1.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**10 39 49.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**10 39 49.0**	**-0.8**
WB0	**Warramunga Arr**	**22.67**	**160**	P	**P**	**10 40 22.1**	**-0.5**
WB0				IAmb	IAmb	10 40 25.3	
	comp=Z,22nm,1.1s						
COEN	**Coen**	**22.72**	**134**	P	**P**	**10 40 23.2**	**-0.1**
COEN				IAmb	IAmb	10 40 29.0	
	comp=Z,22nm,1.3s						
COEN	**Coen**	**22.72**	**134**	P	**P**	**10 40 23.3**	**+0.1**
WRAB	**Tennant Creek**	**22.81**	**160**	P	**P**	**10 40 21.0**	**-3.1**
WRAB				IAmb	IAmb	10 40 26.7	
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**22.81**	**160**	P	**P**	**10 40 23.7**	**-0.4**
WRA	**Warramunga Arr**	**22.81**	**160**	P	**P**	**10 40 23.1**	**-1.1**
	comp=Z,5.7nm,0.4s,baz=337,slow=11,SNR=57						
WRA				PcP	**PcP**	**10 44 13.9**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=317,slow=2.4,SNR=4.7						
WRA				S	**S**	**10 44 31.6**	**+1.5**
	comp=Z,1.9nm,0.9s,baz=332,slow=19,SNR=7.6						
	comp=Z,5.7nm,0.4s						
WRA	**Warramunga Arr**	**22.81**	**160**	P	**P**	**10 40 22.3**	**-1.9**
WB2	**Warramunga Arr**	**22.82**	**160**	P	**P**	**10 40 23.6**	**-0.6**
WB2				IAmb	IAmb	10 40 27.3	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**22.90**	**160**	P	**P**	**10 40 24.3**	**-0.7**
WR0				IAmb	IAmb	10 40 27.6	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**23.58**	**196**	P	**P**	**10 40 30.5**	**-1.1**
MBWA				IAmb	IAmb	10 40 33.2	
	comp=Z,7.3nm,0.7s						
PSA00	**Pilbara Seismi**	**23.94**	**195**	P	**P**	**10 40 34.1**	**-0.9**
PSA00				IAmb	IAmb	10 40 36.9	
	comp=Z,37nm,1.5s						
QIS	**Mount Isa**	**25.57**	**150**	P	**P**	**10 40 51.5**	**+1.6**
AS31	**Alice Springs**	**26.18**	**164**	P	**P**	**10 40 55.4**	**-0.1**
AS31				IAmb	IAmb	10 40 58.8	
	comp=Z,3.2nm,0.5s						
ASAR	**Alice Springs**	**26.18**	**164**	P	**P**	**10 40 55.4**	**-0.1**
	comp=Z,3.8nm,0.4s,baz=346,slow=7.4,SNR=51						
ASAR				PcP	**PcP**	**10 44 21.7**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=341,slow=2.4,SNR=11						
	comp=Z,3.8nm,0.4s						
WRKA	**Warakurna**	**26.58**	**176**	P	**P**	**10 41 00.2**	**+1.2**
PSI	**Prapat**	**27.48**	**273**	P	**P**	**10 41 08.1**	**+0.7**
	comp=Z,7.8nm,1.0s						
MEEK	**Meekatharra**	**29.10**	**194**	P	**P**	**10 41 21.4**	**-0.1**
OOD	**Oodnadatta**	**30.59**	**164**	P	**P**	**10 41 34.6**	**0.0**
MORW	**Morawa**	**32.10**	**197**	P	**P**	**10 41 47.1**	**-0.9**
FORT	**Forrest**	**32.27**	**177**	P	**P**	**10 41 48.7**	**-0.7**
PZH	**PanZhiHua**	**34.25**	**318**	P	**P**	**10 42 09.5**	**+2.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,130nm,5.5s						
NWAO	**Narrogin (SRO)**	**35.45**	**193**	P	**P**	**10 42 16.2**	**-0.8**
BBOO	**Buckleboo**	**35.45**	**166**	P	**P**	**10 42 17.0**	**-0.1**
KSRS	**Korea Array**	**35.67**	**2**	P	**P**	**10 42 20.0**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=177,slow=9.0,SNR=3.1						
	comp=Z,0.8nm,0.7s						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**10 42 24.7**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=331,slow=12,SNR=8.4						
	comp=Z,4.1nm,0.7s						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**10 42 24.4**	**0.0**
ARMA	**Armidale**	**39.92**	**145**	P	**P**	**10 42 55.3**	**+0.3**
ARMA				IAmb	IAmb	10 43 16.8	
	comp=Z,26nm,1.4s						
HHC	**Hu-ho-hao-te**	**41.28**	**343**	eP	**P**	**10 43 08.8**	**+2.7**
HHC				pmax	pmax		
	comp=Z,53nm,0.8s						
HHC				pmax	pmax		
	comp=Z,390nm,5.5s						
CAN	**Canberra**	**42.41**	**152**	P	**P**	**10 43 16.8**	**+1.5**
SONM	**Songino Array**	**49.17**	**342**	P	**P**	**10 44 07.0**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=156,slow=7.6,SNR=2.9						
	comp=Z,0.7nm,0.7s						
WMQ	**Urumqi**	**54.26**	**326**	eP	**P**	**10 44 45.5**	**-1.0**
WMQ				pP	pwP	10 45 00.9	-0.3
WMQ				pmax	pmax		
	comp=Z,29nm,0.7s						
MK31	**Makanchi Array**	**59.09**	**326**	P	**P**	**10 45 19.5**	**-1.2**
MK31				IAmb	IAmb	10 45 22.5	
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**10 45 17.9**	**-2.8**
	comp=Z,2.8nm,0.6s,baz=124,slow=8.8,SNR=19						
	comp=Z,2.8nm,0.6s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**10 45 18.5**	**-2.2**
MAKZ	**Makanchi**	**59.28**	**326**	P	**P**	**10 45 20.4**	**-1.6**
MAKZ				IAmb	IAmb	10 45 23.3	
	comp=Z,3.3nm,0.8s						
LBZ	**Lake Benmore**	**60.15**	**145**	P	**P**	**10 45 28.3**	**+0.3**
KURK	**Kurchatov**	**63.33**	**328**	P	**P**	**10 45 47.1**	**-2.2**
KURK				IAmb	IAmb	10 45 51.7	
	comp=Z,4.5nm,0.8s						
NRIK	**Noril'sk**	**72.38**	**346**	P	**P**	**10 46 45.0**	**-0.8**
	comp=Z,3.5nm,0.6s,baz=82,slow=6.6,SNR=4.0						
	comp=Z,3.5nm,0.6s						
VNDA	**Vanda**	**81.40**	**173**	P	**P**	**10 47 36.1**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=319,slow=7.5,SNR=7.2						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**81.40**	**173**	P	**P**	**10 47 36.6**	**+0.1**
MAW	**Mawson**	**81.69**	**200**	P	**P**	**10 47 39.0**	**+0.9**
KDAK	**Kodiak Island**	**83.82**	**32**	P	**P**	**10 47 49.9**	**+0.4**
KDAK				IAmb	IAmb	10 47 57.4	
	comp=Z,6.2nm,1.1s						
BCAR	**Beaver Creek A**	**89.38**	**27**	P	**P**	**10 48 17.2**	**+0.6**
TXAR	**Lajitas Array**	**123.12**	**53**	PKP	**PKPdf**	**10 54 17.2**	**-0.2**
	comp=Z,0.1nm,0.8s,baz=245,slow=1.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**123.23**	**287**	PKP	**PKPdf**	**10 54 16.3**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=53,slow=1.3,SNR=5.2						
PLCA	**Paso Flores**	**138.16**	**161**	PKP	**PKPdf**	**10 54 45.6**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=210,slow=5.8,SNR=3.8						

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*IDC **20** 10:48:06.1±2.9, 20.89S×179.29W, h633km±21km, mb2.9/5, mbtmp3.8/6, Error ellipse: s-maj=87.5km s-min=15.2km az=155.0*
ISC 20 10:48:08.0±1.3, 20.5S±0.4×179.5W±0.2, h650km, n10, σ1§36/13, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.59**	**319**	P	**P**	**10 49 34.5**	**-0.4**
	12nm,0.5s,baz=162,slow=4.4,SNR=18						
ASAR	**Alice Springs**	**43.19**	**257**	P	**P**	**10 55 13.9**	**-0.8**
	2.5nm,0.8s,baz=96,slow=7.8,SNR=40						
ASAR				PcP	**PcP**	**10 56 48.1**	**-0.5**
	0.6nm,0.9s,baz=102,slow=3.3,SNR=4.1						
ASAR				ScP	**ScP**	**10 59 41.9**	**+2.5**
	0.7nm,1.0s,baz=101,slow=5.1,SNR=4.4						
ASAR				S	**S**	**11 00 58.2**	**+1.4**
	0.8nm,1.1s,baz=108,slow=14,SNR=4.4						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**43.25**	**262**	P	**P**	**10 55 15.3**	**+0.3**
	1.0nm,0.5s,baz=97,slow=7.6,SNR=36						
	1.0nm,0.5s						
NVAR	**Mina Array Bea**	**81.95**	**44**	P	**P**	**10 59 23.2**	**+1.0**
	0.4nm,0.6s,baz=225,slow=8.5,SNR=5.3						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**88.20**	**58**	P	**P**	**10 59 52.9**	**+0.6**
	0.4nm,0.8s,baz=224,slow=5.2,SNR=5.8						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**88.59**	**13**	P	**P**	**10 59 54.0**	**+0.8**
	0.3nm,0.5s,baz=212,slow=5.1,SNR=4.3						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**128.63**	**349**	PKP	**PKiKP**	**11 06 02.1**	**-1.1**
	0.8nm,0.6s,baz=49,slow=2.2,SNR=5.2						
AKASG	**Malin Array Be**	**142.31**	**330**	PKP	**PKPdf**	**11 06

comp=Z,3.7nm,0.8s,baz=88,slow=10,SNR=6.7
comp=Z,3.7nm,0.8s

STKA	Stephens Creek	29.43	245	P		P	11 07 13.9	0.0
BBOO	Buckleboo	34.20	245	P		P	11 07 55.4	-0.4
AS31	Alice Springs	36.09	261			P	11 08 11.8	-0.4
ASAR	Alice Springs	36.09	261	P		P	11 08 11.8	-0.5

comp=Z,8.5nm,0.8s,baz=87,slow=9.1,SNR=68
comp=Z,8.5nm,0.8s

WR0	Warramunga Arr	36.10	267	P		P	11 08 12.2	-0.2
WB0	Warramunga Arr	36.28	267	P		P	11 08 13.2	-0.6
WB2	Warramunga Arr	36.28	267	P		P	11 08 12.8	-1.0
WB2				IAmb	IAmb		11 08 52.3	

comp=Z,12nm,1.4s

WRA	Warramunga Arr	36.29	267	P		P	11 08 12.2	-1.7

comp=Z,1.5nm,0.9s,baz=97,slow=8.5,SNR=14
comp=Z,1.5nm,0.9s

WRA	Warramunga Arr	36.29	267	P		P	11 08 13.3	-0.6
FORT	Forrest	40.88	249	P		P	11 08 52.2	-0.2
MTN	Manton Dam	41.20	277	P		P	11 08 55.5	+0.3
MTN				IAmb	IAmb		11 09 00.6	

comp=Z,26nm,1.5s

KNRA	Kununurra	42.49	272	P		P	11 09 07.9	+2.2
KNRA				IAmb	IAmb		11 09 09.9	

comp=Z,13nm,1.1s

FITZ	Fitzroy Crossi	44.72	267	P		P	11 09 23.7	+0.1

comp=Z,5.1nm,0.9s,baz=116,slow=5.6,SNR=14
comp=Z,5.1nm,0.9s

FITZ	Fitzroy Crossi	44.72	267	P		P	11 09 23.9	+0.3
FITZ				IAmb	IAmb		11 09 29.2	

comp=Z,7.6nm,0.8s

GUMO	Guam	45.70	320	LR	LR		11 26 10.4	

comp=Z,193nm,21.6s,baz=104,slow=33

PSA00	Pilbara Seismi	49.24	261	P		P	11 09 59.2	+0.2
PSA00				IAmb	IAmb		11 09 59.6	

comp=Z,8.0nm,1.2s

MBWA	Marble Bar	49.43	261	P		P	11 10 00.4	0.0
MORW	Morawa	51.40	250	P		P	11 10 15.0	-0.2
MORW				IAmb	IAmb		11 10 15.7	

comp=Z,16nm,1.1s

VNDA	Vanda	54.96	183	P		P	11 10 40.6	-0.1

comp=Z,0.8nm,0.7s,baz=352,slow=7.0,SNR=7.5
comp=Z,0.8nm,0.7s

VNDA	Vanda	54.96	183	P		P	11 10 40.8	+0.1
SBA	Scott Base	55.10	182	P		P	11 10 43.1	+1.4
QSPA	South Pole Qui	67.18	180	P		P	11 12 03.7	-0.4
MAW	Mawson	76.46	202	P		P	11 12 59.7	+0.2

comp=Z,6.5nm,0.9s,baz=120,slow=7.5,SNR=16
comp=Z,6.5nm,0.9s

BELA	Belgrano 2	78.12	174	P		P	11 13 07.5	-1.3
BELA				IAmb	IAmb		11 13 08.2	

comp=Z,5.0nm,0.9s

TROLL	Troll, Antarti	85.13	183	P		P	11 13 44.4	-1.6
SNAA	Sanae	85.65	181	P		P	11 13 46.6	-2.0
SNAA	Sanae	85.65	181	P		P	11 13 46.9	-1.6
SNAA				IAmb	IAmb		11 13 47.7	

comp=Z,4.3nm,0.8s

VNA3	Neumayer Olymp	86.10	179	P		P	11 13 49.0	-1.7
VNA2	Neumayer--Watz	86.44	180	P		P	11 13 50.8	-1.6

baz=183,slow=5.0

VNA1	Neumayer--Stat	86.71	179	P		P	11 13 52.0	-1.6
NVAR	Mina Array Bea	88.46	47	P		P	11 14 01.7	-1.2

comp=Z,0.6nm,1.0s,baz=218,slow=5.7,SNR=2.1
comp=Z,0.6nm,1.0s

ILAR	Eielson Array	92.64	16	P		P	11 14 19.0	-2.4

comp=Z,0.4nm,0.7s,baz=242,slow=4.5,SNR=5.1
comp=Z,0.4nm,0.7s

PLCA	Paso Flores	93.31	137	P		P	11 14 25.3	-0.1

comp=Z,2.5nm,1.0s,baz=289,slow=6.7,SNR=3.2
comp=Z,2.5nm,1.0s

TORD	Torodi Ar. Bea	167.43	221	PKPab		PKPab	11 22 21.6	-0.7

comp=Z,1.2nm,0.8s,baz=113,slow=3.4,SNR=5.7

IDC 20 11:05:39.3±1.5, 15°59N×43°28E, h0km, mb3.7/3, mbtmp3.7/4, ML3.7/1, MS4.2/1, Error ellipse: s-maj=38.1km s-min=25.9km az=111.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	4.06	186	Pn	Pn	11 06 42.5	-0.2

4.3nm,0.3s,baz=299,slow=19,SNR=4.0

ATD				Sn	Sn	11 07 33.8	+2.8

9.7nm,0.3s,baz=288,slow=19,SNR=1.4
12nm,0.3s

PALK	Pallekele	37.55	98	LR	LR		11 27 14.3	

comp=Z,337nm,19.5s,baz=30,slow=34

TORD	Torodi Ar. Bea	40.31	272	P		P	11 13 18.2	-0.6

1.0nm,0.6s,baz=86,slow=8.1,SNR=6.9
1.0nm,0.6s

GERES	GERESS Array B	41.05	330	P		P	11 13 25.1	+0.5

0.4nm,0.6s,baz=117,slow=10,SNR=4.7
0.4nm,0.6s

MKAR	Makanchi Array	44.88	38	P		P	11 13 55.3	-0.3

1.1nm,0.8s,baz=232,slow=7.5,SNR=8.3
1.1nm,0.8s

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*IDC **20** 11:07:09.3±0.5, 4°73S×103°11E, h0km, mb4.7/30, mbtmp4.7/30, MS3.5/4, Error ellipse: s-maj=19.2km s-min=11.1km az=47.0*

*MOS **20** 11:07:14.0±1.0, 4°71S×103°09E, h49km, mb5.1/40, Error ellipse: s-maj=11.6km s-min=5.2km az=114.4*

*NEIC **20** 11:07:15.2±2.9, 5°14S±0°05×102°80E±0°07, h49km±7km, mb5.0/57, Error ellipse: s-maj=10.4km s-min=7.5km az=69.0*

*DJA **20** 11:07:15.3±0.3, 5°S±3°×10°3E±°, h51km±3km, M4.7/38, mB5.1/7, mb4.8/38, MLv5.0/20, Mw(mB)4.4/7*

*BJI **20** 11:07:16.0±0.0, 5°00S×102°90E, h72km, mb5.0/51, mB5.1/21, Ms4.9/5, Ms7 4.7/5*

ISC 20 11:07:15.9±0.4, 5°03S±0°05×102°92E±0°05, h57km±2km, h58km:pP-P, n384, σ1s31/426, mb4.9/106, MS4.1/5, 39C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.66	3		Pn	11 07 29.9	+0.4
MNAI				Sn	Sn	11 07 39.9	+0.5
MNAI	Manna	0.66	3	P	Pn	11 07 29.9	+0.4
MNAI				S	Sn	11 07 39.4	-0.1
MNAI	Manna	0.66	3	P	Pn	11 07 30.4	+0.9
LWLI	Liwa	1.13	90	P	Pn	11 07 35.7	0.0
KSI	Kapahiang	1.40	346	P	Pn	11 07 40.1	+0.8
KASI	Kota Agung	1.64	108	P	Pn	11 07 42.9	+0.5
KLI	Kotabumi	1.93	85	P	Pn	11 07 47.0	+0.6
MASI	Maura Aman, Be	1.99	340	P	Pn	11 07 48.8	+1.6
BLSI	Bandar Lampung	2.34	98	P	Pn	11 07 53.5	+1.6
PMBI	Palembang	2.78	42	Pn	Pn	11 07 58.6	+0.6
PMBI	Palembang	2.78	42	P	Pn	11 08 00.0	+2.0
KRJI	Kerinci	3.26	333	P	Pn	11 08 05.1	+0.5
SBJI	Serang	3.37	109	P	Pn	11 08 06.1	0.0
JMBI	JAMBI	3.45	12	P	Pn	11 08 07.8	+0.7
PPSI	Pulau Pagai	3.67	308	P	Pn	11 08 10.0	-0.2
TNG	Tangerang	3.88	107	P	Pn	11 08 14.8	+1.8
DBJI	Dramaga	4.10	112	P	Pn	11 08 17.5	+1.5
PPBI	Pangkal Pinang	4.29	49	P	Pn	11 08 18.1	-0.5
CNJI	Cibinong	4.76	119	P	Pn	11 08 24.9	-0.2
DSRI	Dabo	4.81	20	P	Pn	11 08 26.7	+0.9
LEM	Lembang	5.00	111	Pn	Pn	11 08 32.8	+4.2

9.9nm,0.3s,baz=180,slow=10,SNR=12

LEM				LR	LR		11 10 49.9	

comp=Z,315nm,20.2s,baz=358,slow=45

LEM	Lembang	5.00	111	P		Pn	11 08 29.8	+1.3

0.4nm91nm,1.0s

PPI	Padang Panjang	5.19	331	P		Pn	11 08 30.6	-0.4

909nm65nm,0.8s

SISI	Saibi	5.31	314	P		Pn	11 08 33.9	+1.3

0.9nm80nm,0.7s

BKNI	Bangkinang	5.64	340	Pn		Pn	11 08 38.7	+1.5
BKNI	Bangkinang	5.64	340	P		Pn	11 08 37.6	+0.4

1.3nm125nm,0.6s

XMIS	Christmas Isla	6.06	154	Pn		Pn	11 08 39.6	-3.3
XMIS	Christmas Isla	6.06	154	P		Pn	11 08 39.1	-3.8
TPRI	Tanjung Pinang	6.12	15	P		Pn	11 08 45.4	+1.7

0.7nm144nm,0.5s

MYKOM	Kota Tinggi	6.83	8	Pn		Pn	11 08 54.8	+1.3
UGM	Wanagama	8.08	111	Pn		Pn	11 09 13.1	+2.5
UGM	Wanagama	8.08	111	P		Pn	11 09 11.9	+1.3

133nm,1.8s

UGM	Wanagama	8.08	111	P		Pn	11 09 11.8	+1.2
GSI	Gunungsitoli	8.25	320	Pn		Pn	11 09 11.9	-1.1
GSI	Gunungsitoli	8.25	320	P		Pn	11 09 12.8	-0.2

35nm,0.4s

GSI	Gunungsitoli	8.25	320	P		Pn	11 09 13.6	+0.6
PSI	Prapat	8.74	333	LR		LR	11 12 36.8	

comp=Z,353nm,20.2s,baz=112,slow=39

PCJI	Pacitan	8.78	111	P		Pn	11 09 20.9	+0.7

71nm,2.7s

PWJI	Pagerwojo	9.31	109	P		Pn	11 09 29.0	+1.5

43nm,0.8s

IPM	Ipoh	9.63	349	Pn		Pn	11 09 35.4	+3.5
KSM	Kuching	9.80	49			Pn	11 09 35.3	+1.1
KULM	Kulim	10.50	347	Pn		Pn	11 09 43.7	0.0
JAGI	Jajag, Banyuwa	11.66	108	Pn		Pn	11 09 59.7	+0.1
JAGI	Jajag, Banyuwa	11.66	108	P		Pn	11 09 59.9	+0.2

116nm,0.7s

JAGI	Jajag, Banyuwa	11.66	108	P		Pn	11 09 59.8	+0.1
SBUM	Sibu	11.89	52			Pn	11 10 04.2	+1.5
SRBI	Singaraja	12.58	105	P		Pn	11 10 13.7	+1.5

63nm,0.6s

TWSI	Taliwang, Sumb	14.34	106	P		Pn	11 10 33.0	-2.9

19nm,0.6s

PLAI	Plampang	15.22	105	P		Pn	11 10 44.4	-3.0

60nm,0.7s

PLAI	Plampang	15.22	105	P		Pn	11 10 46.9	-0.5
KAPI	Kappang	16.77	91	*i* P		Pn	11 11 07.0	0.0
SPSI	Sidrap Palu	16.83	87	P		P	11 11 10.1	+1.0

34nm,0.9s

TTSI	Tana Toraja	16.97	84	P		P	11 11 12.1	+1.5

35nm,0.9s

BKSI	Bulukumba	17.13	92	P		P	11 11 12.1	-0.4

43nm,0.9s

MPSI	Mapaga	17.77	73	P		P	11 11 21.5	+2.0

26nm,1.0s

MYLDM	Lahad Datu	18.57	57	P		Pn	11 11 31.5	+2.4
TOLI2	Tolitoli	18.85	72	P		Pn	11 11 32.0	-0.5
TOLI2	Tolitoli	18.85	72	P		Pn	11 11 33.5	+1.0
EDFI	Ende, Flores	18.99	102	P		P	11 11 31.7	-1.4

12nm,0.7s

APSI	Ampana	19.14	78	P		Pn	11 11 36.0	+0.1

51nm,0.9s

MRSI	Marisa	19.77	74	P		P	11 11 41.7	+0.3

68nm,0.7s

LUWI	Luwuk	20.21	79	P		Pn	11 11 48.2	-0.4
LUWI				IAmb	IAmb		11 11 56.2	

comp=Z,60nm,0.9s

LUWI	Luwuk	20.21	79	P		P	11 11 45.7	-0.5

comp=Z,8μmcomp=Z,86nm,0.8s

GTOI	Gorontalo	20.84	75	P		P	11 11 53.5	+0.5

comp=Z,19nm,0.8s

BATI	Baumata	21.18	105	P		P	11 11 57.3	+0.5

comp=Z,25nm,0.4s,baz=260,slow=3.6,SNR=5.4
comp=Z,25nm,0.4s

BATI	Baumata	21.18	105	P		P	11 11 57.9	+1.1

comp=Z,30nm,0.7s

PSA00	Pilbara Seismi	23.23	137	P		P	11 12 18.2	-0.1
CM31	Chiang Mai Arr	23.66	351	P		P	11 12 21.5	-0.8
CMAR	Chiang Mai Arr	23.66	351	P		P	11 12 21.4	-0.9

comp=Z,9.1nm,0.9s,baz=184,slow=8.6,SNR=49

CMAR				PcP		PcP	11 16 07.5	+1.9

comp=Z,1.5nm,0.8s,baz=211,slow=3.0,SNR=5.5

CMAR				LR	LR		11 20 22.9	

comp=Z,100nm,21.4s,baz=195,slow=34
comp=Z,9.1nm,0.9s

CMAR	Chiang Mai Arr	23.66	351	P		P	11 12 21.0	-1.3
CMAR	Chiang Mai Arr	23.66	351	*ce*P		P	11 12 21.3	-1.0
CMAR				pmax	pmax			

comp=Z,9.0nm,0.6s

CHTO	Chiang Mai	24.01	351	P		P	11 12 24.5	-1.0
CHTO	Chiang Mai	24.01	351	P		P	11 12 24.5	-1.0
CHTO				pmax	pmax			

comp=Z,12nm,0.8s

CRAI	Chiangrai	25.22	354	P		P	11 12 35.7	-0.8
DAV	Davao City (W)	25.61	62	LR	LR		11 22 25.7	

comp=Z,218nm,19.1s,baz=336,slow=36

FITZ	Fitzroy Crossi	25.72	122	P		P	11 12 41.8	+0.7

comp=Z,11nm,0.5s,baz=322,slow=7.1,SNR=55

FITZ				PcP		PcP	11 16 11.9	+1.7

comp=Z,3.6nm,0.8s,baz=213,slow=3.3,SNR=3.6
comp=Z,11nm,0.5s

FITZ	Fitzroy Crossi	25.72	122	P		P	11 12 41.9	+0.9
FITZ	Fitzroy Crossi	25.72	122	P		P	11 12 42.0	+0.9
KNRA	Kununurra	27.50	115	P		P	11 12 57.0	-0.1
KNRA				IAmb	IAmb		11 12 57.6	

comp=Z,22nm,0.8s

KNRA	Kununurra	27.50	115	P		P	11 12 56.8	-0.3
MTN	Manton Dam	28.91	107	P		P	11 13 10.7	+1.0
MTN				IAmb	IAmb		11 13 16.9	

comp=Z,62nm,1.8s

FAKI	Fak Fak	29.33	87	P		P	11 13 11.8	-1.6
FAKI				IAmb	IAmb		11 13 17.4	

comp=Z,27nm,0.9s

FAKI	Fak Fak	29.33	87	P		P	11 13 15.8	+2.3
KMI	Kunming	29.97	360	⇑P		P	11 13 19.6	+0.4
KMI				pmax	pmax			

comp=Z,13nm,0.7s

KDU	Kakadu	30.15	107	P		P	11 13 22.1	+1.4
H08S2	Diego Garcia H	30.35	263	T		T	11 45 48.1	

baz=86,slow=76,SNR=41

H08S3	Diego Garcia H	30.36	264	T		T	11 45 49.6	

baz=86,slow=76,SNR=51

H08S1	Diego Garcia H	30.37	263	T		T	11 45 40.5	

baz=86,slow=76,SNR=36

PZH	PanZhiHua	31.36	358	P		P	11 13 34.6	+3.2
PZH				pmax	pmax			

comp=Z,10.0nm,0.5s

PZH				pmax	pmax			

comp=Z,130nm,6.0s

H01W3	Cape Leeuwin H	31.47	162	T		T	11 46 53.6	

baz=340,slow=76,SNR=19

H01W2	Cape Leeuwin H	31.48	162	T		T	11 46 55.4	

baz=340,slow=76,SNR=21

H01W1	Cape Leeuwin H	31.48	162	T		T	11 46 58.5	

baz=340,slow=76,SNR=20

HYBB	Hyderabad (bro	32.81	313	*e*P		P	11 13 46.0	+1.9
HYBB				*e*S		S	11 19 01.8	+4.3
WB0	Warramunga Arr	33.95	118	P		P	11 13 54.2	+0.1
WB0				IAmb	IAmb		11 13 55.8	

comp=Z,12nm,0.5s

WRA	Warramunga Arr	33.97	119	P		P	11 13 54.5	+0.3

comp=Z,5.7nm,0.6s,baz=303,slow=8.9,SNR=114

WRA				PcP		PcP	11 16 32.3	+0.8

comp=Z,2.3nm,0.6s,baz=303,slow=1.9,SNR=7.4

WRA				S		S	11 19 10.9	-4.5

comp=Z,2.2nm,1.1s,baz=296,slow=19,SNR=5.4
comp=Z,5.7nm,0.6s

WRA	Warramunga Arr	33.97	119	P		P	11 13 54.7	+0.5
WRAB	Tennant Creek	33.98	119	P		P	11 13 56.2	+1.9
WRAB				IAmb	IAmb		11 13 56.3	

comp=Z,37nm,1.6s

WRAB	Tennant Creek	33.98	119	*ce*P		P	11 13 54.1	-0.2
WRAB				pmax	pmax			

comp=Z,34nm,2.5s

WRAB	Tennant Creek	33.98	119	P		P	11 13 54.8	+0.5
WRAB	Tennant Creek	33.98	119	⇑P		P	11 13 54.7	+0.5
WB2	Warramunga Arr	33.98	119	P		P	11 13 54.9	+0.6
WB2				IAmb	IAmb		11 13 56.3	

comp=Z,10nm,0.5s

WR0	Warramunga Arr	34.15	119	P		P	11 13 56.5	+0.8
WR0				IAmb	IAmb		11 13 56.7	

comp=Z,11nm,0.6s

ODAN	Odare	35.08	335	*e*P		P	11 14 02.8	-1.1
AS31	Alice Springs	35.13	125	P		P	11 14 05.5	+1.3
ASAR	Alice Springs	35.13	125	P		P	11 14 05.5	+1.2

comp=Z,11nm,0.7s,baz=295,slow=7.7,SNR=118

ASAR				PcP		PcP	11 16 36.1	+1.3

comp=Z,4.4nm,0.8s,baz=302,slow=2.3,SNR=15

ASAR				S		S	11 19 31.4	-1.9

comp=Z,0.9nm,0.7s,baz=294,slow=16,SNR=7.5
comp=Z,11nm,0.7s

ASAR	Alice Springs	35.13	125	P		P	11 14 05.3	+1.1
ASAR	Alice Springs	35.13	125	P		P	11 14 05.3	+1.1
TAPN	Taplejung	35.38	336	*e*P		P	11 14 06.8	+0.2

comp=Z,12nm,0.4s

RAMN	Ramite	35.49	334	*e*P		P	11 14 06.1	-1.4

comp=Z,3.2nm,0.3s

CD2	Chengdu	35.74	1	P		P	11 14 08.0	-1.3
CD2				pmax	pmax			

comp=Z,20nm,0.8s

JIRN	Jiri	36.29	334	*e*P		P	11 14 14.7	+0.3
PKI	Pulchoki	36.56	333	*e*P		P	11 14 15.3	-1.4
PKIN	Phulchoki	36.57	333	*e*P		P	11 14 15.8	-0.9

comp=Z,20nm,0.8s

GKN	Gorkha	37.27	333	*e*P		P	11 14 22.0	-0.6

comp=Z,80nm,1.0s

DANN	Dangsing	37.98	332	*e*P		P	11 14 28.6	0.0

comp=Z,106nm,0.7s

XAN	Xi'an	39.27	8	⇓P		P	11 14 37.8	-1.3
XAN				pmax	pmax			

comp=Z,18nm,0.9s

NJ2	Nanjing	39.87	21	*e*P		P	11 14 47.8	+3.7
NJ2				pmax	pmax			

comp=Z,8.0nm,0.5s

LYN	LuoYang	40.38	12	⇓P		P	11 14 47.4	-0.9
LYN				pmax	pmax			

comp=Z,20nm,0.7s

COEN	Coen	40.62	106	P		P	11 14 49.6	-1.0
COEN				IAmb	IAmb		11 16 12.4	

comp=Z,46nm,1.7s

LZH	Lanzhou	40.91	1	⇓P		P	11 14 52.8	0.0
LZH				pmax	pmax			

comp=Z,21nm,1.5s

BBOO	Buckleboo	41.46	136	P		P	11 14 56.3	-0.9
GTA	Gaotai	44.31	357	*e*P		P	11 15 19.8	-0.5
GTA				pmax	pmax			

comp=Z,11nm,1.0s

CTAO	Charters Tower	44.70	114	P		P	11 15 24.5	+0.9
CTAO	Charters Tower	44.70	114	P		P	11 15 24.5	+0.9
CTAO				pmax	pmax			

comp=Z,28nm,0.8s

CTAO	Charters Tower	44.70	114	P		P	11 15 24.2	+0.6
CTAO				pP		pP	11 15 37.8	-0.4
CTAO				sP		sP	11 15 43.8	-0.8
STKA	Stephens Creek	44.97	131	P		P	11 15 27.6	+2.0

comp=Z,11nm,0.7s,baz=310,slow=7.7,SNR=35
comp=Z,11nm,0.7s

STKA	Stephens Creek	44.97	131	P		P	11 15 26.2	+0.6
STKA	Stephens Creek	44.97	131	P		P	11 15 26.2	+0.6
STKA				pmax	pmax			

comp=Z,3.0nm,0.7s

HHC	Hu-ho-hao-te	46.34	9	*e*P		P	11 15 36.4	+0.1
HHC				pmax	pmax			

comp=Z,27nm,1.0s

HHC				pmax	pmax			

comp=Z,350nm,6.9s

BJT	Baijiatuau	46.45	14	P		P	11 15 36.7	-0.3
BJI	Beijing	46.48	14	P		P	11 15 36.8	-0.4
BJI				pmax	pmax			

comp=Z,13nm,0.8s

NIL	Nilore	47.62	326	P		P	11 15 45.6	-0.7
NIL	Nilore	47.62	326	P		P	11 15 45.7	-0.7
NIL				pmax	pmax			

comp=Z,16nm,0.5s

KSAR	Wonju Array Be	48.23	27	P		P	11 15 50.4	-0.6
KSAR	Wonju Array Be	48.23	27	P		P	11 15 50.4	-0.6
KSRS	Korea Array	48.26	27	P		P	11 15 50.5	-0.7

comp=Z,4.2nm,0.6s,baz=229,slow=7.2,SNR=30

KSRS				PcP		PcP	11 17 17.5	+0.1

comp=Z,2.2nm,0.9s,baz=206,slow=2.8,SNR=7.6
comp=Z,4.2nm,0.6s

KS19	Wonju Array Si	48.27	27	P		P	11 15 50.6	-0.7
XLT	XiLinHaoTe	50.13

comp=Z,300nm,11.4s
MDJ LR LR
comp=Z,470nm,12.8s
MDJ LR LR
comp=Z,670nm,12.5s
BNX BinXian 55.05 21 ⇓P **P 11 16 41.0 -0.7**
BNX pmax pmax
comp=Z,31nm,0.8s
BNX pmax pmax
comp=Z,350nm,13.0s
ZAK Zakamensk 55.19 0 *e*P **P 11 16 41.8 -0.9**
ZAK pmax pmax
comp=Z,5.0nm,0.9s
USRK Ussuriysk Ar. 55.54 25 P **P 11 16 44.4 -0.8**
comp=Z,18nm,0.7s,baz=216,slow=3.7,SNR=23
comp=Z,18nm,0.7s
USRK Ussuriysk Ar. 55.54 25 P **P 11 16 44.1 -1.2**
USRK Ussuriysk Ar. 55.54 25 P **P 11 16 44.1 -1.2**
KNGR Kungurtug, Tuv 55.60 356 *i* P **P 11 16 44.7 -1.1**
KNGR pmax pmax
comp=Z,6.0nm,0.9s
IUG luzhnay 55.67 331 *e*P **P 11 16 45.9 -0.5**
IUG luzhnay 55.67 331 *e*P **P 11 16 45.9 -0.5**
baz=330
HIA Hailar 56.02 13 *i* P **P 11 16 46.5 -2.1**
HIA pmax pmax
comp=Z,8.0nm,1.1s
DGZ Jazzator, Alta 56.14 348 *i* P **P 11 16 49.1 -0.6**
DGZ pmax pmax
comp=Z,23nm,0.8s
BTLS Baital 56.15 336 *e*P **P 11 16 48.3 -1.2**
BTLS Baital 56.15 336 *e*P **P 11 16 48.4 -1.2**
baz=335
KK31 Karatay Array 56.17 332 P **P 11 16 49.5 -0.3**
KK31 Karatay Array 56.17 332 P **P 11 16 49.5 -0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 56.17 332 P **P 11 16 49.0 -0.8**
KKAR Karatay Array 56.17 332 P **P 11 16 49.2 -0.7**
KKAR IAmb IAmb 11 16 51.3
comp=Z,2.2nm,0.7s
KKAR Karatay Array 56.17 332 P **P 11 16 49.0 -0.8**
JTM Tenmabayashi 57.44 34 P **P 11 16 57.6 -1.2**
SEM Semipalatinsk 58.58 343 *e*P **P 11 17 05.3 -1.6**
SEM Semipalatinsk 58.58 343 *e*P **P 11 17 05.4 -1.6**
baz=343
KURK Kurchatov 59.34 342 P **P 11 17 11.2 -0.6**
KURK IAmb IAmb 11 17 12.1
comp=Z,14nm,0.9s
KURK Kurchatov 59.34 342 P **P 11 17 11.2 -0.6**
KURK pmax pmax
comp=Z,14nm,1.0s
KLR Kul'dur 59.58 22 P **P 11 17 12.2 -1.4**
comp=Z,8.3nm,0.8s,baz=240,slow=5.1,SNR=18
comp=Z,8.3nm,0.8s
KLR Kul'dur 59.58 22*ce*P **P 11 17 11.9 -1.6**
KLR pmax pmax
comp=Z,8.0nm,0.8s
GEYT Alibeck 59.63 320 P **P 11 17 14.9 +0.7**
comp=Z,6.5nm,0.6s,baz=148,slow=8.6,SNR=11
comp=Z,6.5nm,0.6s
GEYT Alibeck 59.63 320 P **P 11 17 14.9 +0.7**
GEYT IAmb IAmb 11 17 15.6
comp=Z,10nm,0.9s
ZAA0 Zalesovo Array 60.69 348 P **P 11 17 20.4 -0.7**
ZALV Zalesovo Beam 60.69 348 P **P 11 17 20.8 -0.3**
comp=Z,12nm,0.4s,baz=160,slow=4.7,SNR=50
comp=Z,12nm,0.4s
ZALV Zalesovo Beam 60.69 348 P **P 11 17 20.5 -0.6**
ZALV Zalesovo Beam 60.69 348 *i* P **P 11 17 20.2 -0.9**
ZALV pmax pmax
comp=Z,12nm,0.4s
BRZS Berezniki 60.72 338 *e*P **P 11 17 20.2 -1.2**
BRZS Berezniki 60.72 338 *e*P **P 11 17 20.2 -1.2**
baz=338
ZEA Zeya 62.01 16 *e*P **P 11 17 29.3 -0.7**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
YSS Yuzh-Sakhalins 62.57 30 P **P 11 17 33.0 -0.9**
YSS Yuzh-Sakhalins 62.57 30*ce*P **P 11 17 32.1 -1.8**
YSS pmax pmax
comp=Z,19nm,0.8s
BRVK Borovoye 64.09 339 P **P 11 17 43.0 -0.8**
BRVK IAmb IAmb 11 17 43.6
comp=Z,8.7nm,0.7s
BRVK Borovoye 64.09 339*ce*P **P 11 17 42.2 -1.6**
BRVK pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 64.09 339 ⇑P **P 11 17 42.9 -1.0**
ABKAR Akbulak array 65.68 331 P **P 11 17 53.5 -0.8**
ABKAR Akbulak array 65.68 331 P **P 11 17 54.7 +0.4**
ABKAR IAmb IAmb 11 17 55.2
comp=Z,16nm,0.9s
DRV Dumont d'Urvil 66.65 165 P **P 11 18 01.9 +1.8**
DRV pP **pP 11 18 14.4 -1.0**
DRV sP **sP 11 18 20.6 -1.0**
YAK Yakutsk 69.96 13 P **P 11 18 18.6 -2.3**
comp=Z,16nm,0.5s,baz=211,slow=1.7,SNR=4.9
comp=Z,16nm,0.5s
YAK Yakutsk 69.96 13 P **P 11 18 19.9 -0.9**
YAK Yakutsk 69.96 13*ce*P **P 11 18 18.0 -2.9**
YAK pmax pmax
comp=Z,14nm,0.6s
ARU Arti 71.14 336*c i*P **P 11 18 27.8 -0.3**
ARU *PP **pP 11 18 44.1 +0.3**
ARU 11 21 04.3
ARU S **S 11 27 39.2 -1.2**
ARU pmax pmax
comp=Z,14nm,1.1s
ARU Arti 71.14 336 P **P 11 18 27.9 -0.3**
MARD Mardin 71.42 312 P **P 11 18 32.0 +1.5**
MARD IAmb IAmb 11 18 32.7
comp=Z,16nm,0.9s
ONI Oni 71.64 318 P **P 11 18 32.2 +0.6**
ONI Oni 71.64 318 P **P 11 18 32.2 +0.6**
ONI pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 72.49 319 P **P 11 18 37.4 +0.8**
comp=Z,7.8nm,0.8s,baz=117,slow=6.3,SNR=20
comp=Z,7.8nm,0.8s
KBZ Khabaz 72.49 319*ce*P **P 11 18 37.3 +0.8**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
SHA1 Shidzhatmaz 72.65 319 *i* P **P 11 18 37.0 -0.8**
ASF Jabal al Asfar 72.71 306 P **P 11 18 40.8 +2.5**
comp=Z,9.3nm,0.8s,baz=124,slow=18,SNR=9.0
comp=Z,9.3nm,0.8s
KIV Kislovodsk 72.72 319 *e*P **P 11 18 36.7 -1.4**
KIV pmax pmax
comp=Z,7.0nm,1.1s
EIL Elat 73.60 303 P **P 11 18 45.9 +2.4**
comp=Z,13nm,0.8s,baz=0.9,slow=7.3,SNR=4.7
comp=Z,13nm,0.8s
BELG Belogornoye 73.81 328 *i* P **P 11 18 43.4 -0.7**
BELG pmax pmax
comp=Z,3.0nm,0.9s
PETK Petropavlovsk- 73.92 31 P **P 11 18 43.2 -1.7**
comp=Z,1.5nm,0.7s,baz=233,slow=7.0,SNR=3.8
comp=Z,1.5nm,0.7s
MMAI Mount Meron Ar 74.17 306 P **P 11 18 49.6 +2.9**
comp=Z,6.5nm,0.7s,baz=94,slow=8.4,SNR=10
comp=Z,6.5nm,0.7s
NRIK Noril'sk 74.96 354 P **P 11 18 49.8 -0.7**
comp=Z,3.7nm,0.4s,baz=172,slow=3.1,SNR=5.8
comp=Z,3.7nm,0.4s
NRIK Noril'sk 74.96 354*ce*P **P 11 18 48.4 -2.1**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
KIRV Kirov 76.34 334*ce*P **P 11 18 58.9 +0.4**
CSS Mathiatis 76.37 308 P **P 11 18 59.8 +0.5**
CSS IAmb IAmb 11 19 01.9
comp=Z,15nm,0.9s
VRH Novokhopyorsk 76.45 325 *e*P **P 11 18 58.8 -0.6**
VRH pmax pmax
comp=Z,20nm,0.7s
SEY Seymchan 77.36 21 P **P 11 19 03.1 -1.1**
comp=Z,3.5nm,0.7s,baz=246,slow=10,SNR=7.9
comp=Z,3.5nm,0.7s
BRTR Keskin Array B 77.50 312 P **P 11 19 05.7 -0.1**
comp=Z,5.3nm,0.7s,baz=128,slow=8.0,SNR=16
comp=Z,5.3nm,0.7s
BRTR Keskin Array B 77.50 312 P **P 11 19 06.2 +0.5**
BRTR Keskin Array B 77.50 312*ce*P **P 11 19 06.4 +0.6**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BR131 Keskin Array S 77.50 312 P **P 11 19 03.7 -2.1**
BR131 IAmb IAmb 11 19 07.9
comp=Z,11nm,0.9s
BR131 Keskin Array S 77.50 312 *i* P **P 11 19 05.7 -0.1**
VSR Storozhevoye 77.91 325 *e*P **P 11 19 07.0 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VORR Voronezh 78.08 325 *e*P **P 11 19 08.3 -0.2**
VORR pmax pmax
comp=Z,60nm,0.4s
LPSR Galich'ya Gora 78.61 326 *e*P **P 11 19 11.3 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VNDA Vanda 78.65 169 P **P 11 19 13.6 +2.4**
comp=Z,0.7nm,0.7s,baz=317,slow=4.9,SNR=4.7
comp=Z,0.7nm,0.7s
SIM Simferopol' 78.79 318 *e*P **P 11 19 11.9 -0.7**
SIM *e* 11 19 20.0
SIM *PP **sP 11 19 36.0 +1.5**
SIM pmax pmax
comp=Z,15nm,0.9s
PRGR Permogore 79.60 336 *e*P **P 11 19 15.1 -1.5**
MOS Moscow 80.58 329 *e*P **P 11 19 20.8 -1.2**
OBN Obninsk 80.89 328 ⇑*i*P **P 11 19 22.8 -0.9**
OBN *e*PP **sP 11 19 45.3 -0.3**
OBN S **S 11 29 32.0 +4.3**
OBN SSS SSS 11 38 08.0
OBN pmax pmax
comp=Z,19nm,0.8s
OBN MLR MLR
comp=Z,142nm,16.0s
KARP Karpathos 81.41 307 P **P 11 19 28.0 +1.1**
KLMR Klimovskoe 81.81 334 *e*P **P 11 19 27.7 -0.7**
KLMR pmax pmax
comp=Z,19nm,1.1s
KLMR Klimovskoe 81.81 334 *e*P **P 11 19 27.8 -0.7**
KLMR AMP 11 19 29.8
comp=Z,19nm,1.1s
IDI Anoyia 83.17 306 P **P 11 19 38.1 +1.8**
comp=Z,7.8nm,0.7s,baz=86,slow=9.1,SNR=6.1
comp=Z,7.8nm,0.7s
SORM Soroca 83.52 319 ⇑P **P 11 19 37.3 -0.3**
SORM Soroca 83.52 319 ⇑P **P 11 19 37.3 -0.3**
AKASG Malin Array Be 83.65 322 P **P 11 19 38.0 -0.2**
comp=Z,2.1nm,0.5s,baz=86,slow=5.1,SNR=18
comp=Z,2.1nm,0.5s
AKASG Malin Array Be 83.65 322*ce*P **P 11 19 38.2 0.0**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 83.65 322 P **P 11 19 38.2 +0.1**
AKBB IAmb IAmb 11 19 39.2
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 83.65 322*ce*P **P 11 19 37.9 -0.3**
AKBB pmax pmax
comp=Z,7.0nm,0.7s
VRI Vrincioaia 84.04 317 ⇑P **P 11 19 41.9 +1.5**
VRI Vrincioaia 84.04 317 ⇑P **P 11 19 41.9 +1.5**
TESR Tescani 84.24 318 ⇑P **P 11 19 42.5 +1.1**
MLR Muntele Rosu 84.49 316 ⇑P **P 11 19 44.2 +1.4**
MLR Muntele Rosu 84.49 316 P **P 11 19 44.1 +1.4**
MLR IAmb IAmb 11 19 45.8
comp=Z,13nm,1.0s
MLR Muntele Rosu 84.49 316 ⇑P **P 11 19 44.2 +1.4**
BURAR Bucovina Array 85.44 318 ⇑P **P 11 19 49.5 +2.0**
BURAR Bucovina Array 85.44 318 P **P 11 19 49.2 +1.7**
BURAR IAmb IAmb 11 19 50.7
comp=Z,9.4nm,0.8s
BURAR Bucovina Array 85.44 318 ⇑P **P 11 19 49.5 +2.0**
MNK Minsk 85.45 326 *i* P **P 11 19 45.9 -1.3**
MNK *i* *PP **pP 11 20 05.1 +2.0**
MNK *i* 11 23 04.1
MNK *i* S **SKSac 11 30 03.5 -3.9**
MNK *i* SS **SS 11 35 47.4 -2.9**
MNK *i* SSS SSS 11 39 18.7
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=Z,13nm,1.0s
MNK MLR MLR
comp=Z,119nm,19.0s
MNK MLR MLR
comp=E,30nm,19.0s
MNK Minsk 85.45 326 *i* P **P 11 19 46.0 -1.3**
comp=E,2.0nm,1.0s
MNK *i* P **P 11 19 46.0 -1.3**
MNK *i* P **P 11 19 46.0 -1.3**
comp=Z,13nm,1.0s,baz=105
MNK *i* pP **pP 11 20 05.1 +2.0**
MNK *i* sP **sP 11 20 15.9 +6.7**
MNK *i* PP **PP 11 23 04.1 -2.1**
MNK *i* PPP PPP 11 24 37.0
MNK *i* S **SKSac 11 30 03.6 -3.9**
MNK *i* sS **sS 11 30 38.1 -2.9**
MNK *i* SS **SS 11 35 47.4 -2.9**
MNK *i* SSS SSS 11 39 18.8
MNK *i* LQ LQ 11 52 25.5
MNK *i* LR LR 11 53 40.2
MNK *i* LRM MLR 11 59 01.2
MNK pmax pmax
comp=Z,119nm,18.5s
MNK *i* LRM MLR 11 59 06.7
comp=E,30nm,18.5s
MNK *i* LRM MLR 11 59 27.4
BUR08 Bucovina Ar. S 85.46 318 P **P 11 19 49.9 +2.3**
BUR08 IAmb IAmb 11 19 50.5
comp=Z,8.0nm,0.8s
VTS Vitosha 85.82 313 ⇑P **P 11 19 49.1 -0.5**
VTS Vitosha 85.82 313 ⇑P **P 11 19 49.1 -0.5**
LIT Litokhoron 85.92 311 P **P 11 19 49.7 -0.2**
LIT Litokhoron 85.92 311 P **P 11 19 49.7 -0.2**
NACGM Naroch 86.17 326 ⇑*e*P **P 11 19 52.5 +1.7**
baz=104
LVZ Lovozero 86.62 339 P **P 11 19 52.5 -0.3**
LVZ IAmb IAmb 11 19 53.1
comp=Z,10nm,0.8s
LVZ Lovozero 86.62 339*ce*P **P 11 19 51.5 -1.3**
LVZ pmax pmax
comp=Z,8.0nm,0.8s
DRGR 86.95 317 ⇑P **P 11 19 55.9 +1.0**
DRGR 86.95 317 ⇑P **P 11 19 55.9 +1.0**
VSU Vasula 87.08 329 *i* P **P 11 19 54.6 -0.5**
VSU pmax pmax
comp=Z,43nm,0.9s
VSU Vasula 87.08 329 *e*P **P 11 19 55.2 +0.1**
SIRR Siria 87.58 317 ⇓P **P 11 19 57.3 -0.6**
KOLS Kolonicke sedl 87.63 319 *e*P **P 11 20 00.2 +2.1**
KOLS pmax pmax
comp=Z,25nm,0.8s
KOLS Kolonicke sedl 87.63 319 *e*P **P 11 20 00.2 +2.1**
PABE Paberze 87.88 326 P **P 11 19 59.5 +0.5**
PABE Paberze 87.88 326 *e*P **P 11 19 59.0 0.0**
VSVD Vaisvydziai 88.00 326 *e*P **P 11 19 59.9 +0.3**
FINES FINESS Array B 88.13 332 P **P 11 20 00.7 +0.6**
comp=Z,8.0nm,0.6s,baz=114,slow=5.7,SNR=71
comp=Z,8.0nm,0.6s
FINES FINESS Array B 88.13 332 *i* P **P 11 20 00.7 +0.6**
FINES pmax pmax
comp=Z,9.0nm,0.6s
DIVS Divibare 88.40 314 P **P 11 20 02.5 +0.5**
DIVS IAmb IAmb 11 20 04.5
comp=Z,13nm,1.4s
MEF Metsahovi 88.65 331 *e*P **P 11 20 02.9 +0.3**
MORH Mrgy, Hungar 89.64 316 ⇑P **P 11 20 08.8 +1.3**
MORH Mrgy, Hungar 89.64 316 P **P 11 20 08.8 +1.3**
VYHS Vyhne 89.81 319 *e*P **P 11 20 09.3 +0.9**
VYHS pmax pmax
comp=Z,5.0nm,1.2s
VYHS Vyhne 89.81 319 *e*P **P 11 20 09.3 +0.9**
KOVH Kovagotottos 90.00 316 P **P 11 20 10.5 +1.2**
RAF Rauma 90.08 331 *e*P **P 11 20 08.7 -0.5**
ARA0 ARCESS Array S 90.29 340 *e*P **P 11 20 10.5 +0.4**
ARA0 IAmb IAmb 11 20 10.6
comp=Z,5.4nm,0.7s
ARCES ARCESS Array B 90.29 340 P **P 11 20 10.3 +0.2**
comp=Z,5.9nm,0.8s,baz=104,slow=5.1,SNR=21
comp=Z,5.9nm,0.8s
ARCES ARCESS Array B 90.29 340 P **P 11 20 09.9 -0.2**
ARCES ARCESS Array B 90.29 340 P **P 11 20 09.9 -0.2**
ARCES pmax pmax
comp=Z,34nm,1.9s
MPLH Magyarpolny 90.51 317 P **P 11 20 13.3 +1.6**
MORC Moravsky Berou 90.82 320 ⇑P **P 11 20 11.7 -1.4**
MORC Moravsky Berou 90.82 320 P **P 11 20 14.6 +1.6**
MORC IAmb IAmb 11 20 15.6
comp=Z,5.1nm,0.9s
MORC Moravsky Berou 90.82 320 ⇑P **P 11 20 11.7 -1.4**
JETT Jettan, Norway 92.06 340 *e*P **P 11 20 18.4 0.0**
JETT IAmb IAmb 11 20 19.4
comp=Z,8.5nm,0.6s
GERES GERESS Array B 93.23 319 P **P 11 20 25.3 +1.0**
comp=Z,0.9nm,0.6s,baz=70,slow=4.4,SNR=10
comp=Z,0.9nm,0.6s
GERES GERESS Array B 93.23 319 **P 11 20 25.0 +0.7**
GERES GERESS Array B 93.23 319 P **P 11 20 25.0 +0.7**
FAUS Fauske 93.69 337 *e*P **P 11 20 25.9 0.0**
FAUS IAmb IAmb 11 20 26.4
comp=Z,10.0nm,1.0s
STEI Steigen 93.75 338 *e*P **P 11 20 26.2 +0.1**
STEI IAmb IAmb 11 20 26.6
comp=Z,11nm,0.8s
CIMO Cimolais 93.93 316 P **P 11 20 27.6 +0.1**
CIMO IAmb IAmb 11 20 29.9
comp=Z,4.1nm,0.9s
NSS Namsos 94.91 334 *e*P **P 11 20 31.3 -0.2**
NSS IAmb IAmb 11 20 32.1
comp=Z,5.7nm,0.9s
NB2 NORSAR Subarra 95.19 331 P **P 11 20 32.7 -0.2**
comp=Z,2.9nm,0.9s,baz=93,slow=4.6
NB2 NORSAR Subarra 95.19 331 P **P 11 20 32.7 -0.2**
baz=93,slow=4.6
NOA NORSAR Array B 95.19 331 P **P 11 20 32.8 -0.2**
comp=Z,1.3nm,0.8s,baz=94,slow=4.9,SNR=7.8
comp=Z,1.3nm,0.8s
EFI East Falkland 121.22 194 *i* PKIKP **PKiKP 11 26 02.6 +0.1**
NVAR Mina Array Bea 129.97 42 PKP **PKiKP 11 26 21.4 +0.7**
comp=Z,0.8nm,0.6s,baz=320,slow=2.5,SNR=12
PDAR Pinedale Array 132.67 33 PKP **PKPdf 11 26 24.4 -0.4**
comp=Z,0.3nm,0.5s,baz=78,slow=0.6,SNR=6.4
ANMO Albuquerque 139.71 39 *i* PKIKP **PKPdf 11 26 37.1 -1.0**
WMOK Wichita Mounta 144.26 31 P **PKPab 11 26 43.8 -0.1**
baz=321,SNR=16
ACSO Alum Creek Sta 144.55 8 P **PKPab 11 26 44.4 -0.3**
baz=350
CCM Cathedral Cave 144.68 20 P **PKPab 11 26 43.9 -1.4**
baz=335
TUL1 Leonard 144.76 27 P **PKPab 11 26 45.2 -0.5**
baz=327,SNR=10
O52A Adamsville 144.80 6 P **PKPab 11 26 45.0 -0.8**
baz=352,SNR=5.3
O52A P **PKPab 11 26 45.0 -0.8**
baz=352,SNR=5.3
O54A Avella 144.87 4 P **PKPab 11 26 45.1 -0.9**
baz=354
O54A P **PKPab 11 26 45.1 -0.9**
baz=354
P48A Milroy 144.90 11 P **PKPab 11 26 44.8 -1.3**
baz=346
P48A P **PKPab 11 26 44.8 -1.3**
baz=346
U38A Gravette 144.93 25 P **PKPab 11 26 45.5 -0.8**
baz=329,SNR=36
P49A Miami Univ. Ec 144.96 10 P **PKPab 11 26 45.6 -0.7**
baz=347
OLIL Olney 144.99 15 P **PKPab 11 26 46.2 -0.2**
baz=341
FVM French Village 145.01 19 P **PKPbc 11 26 45.8 -0.8**
baz=337
TX31 Lajitas Ar. Si 145.11 43 P **PKPdf 11 26 47.9 +0.2**
baz=309
TXAR Lajitas Array 145.11 43 PKP **PKPdf 11 26 48.2 +0.5**
comp=Z,7.9nm,0.7s,baz=279,slow=1.4,SNR=121
TXAR SKP **SKPbc 11 30 22.9 +0.3**
comp=Z,0.3nm,0.8s,baz=259,slow=1.4,SNR=2.9
PSUB Penn St. - Bra 145.22 358 P **PKPbc 11 26 46.6 -0.5**
baz=3.0
HHAR Hobbs 145.25 24 P **PKPbc 11 26 46.5 -0.8**
baz=330
P51A Williamsport 145.28 8 P **PKPbc 11 26 46.4 -1.0**
baz=350,SNR=6.7
P51A P **PKPbc 11 26 46.4 -1.0**
baz=350,SNR=6.7
GEDE Greenville 145.35 358 P **PKPbc 11 26 47.2 -0.4**
baz=2.7
ABTX Abilene, Hawle 145.39 35 P **PKPbc 11 26 48.0 0.0**
baz=318
MCWV Mont Chateau 145.43 4 P **PKPbc 11 26 47.5 -0.3**
baz=355,SNR=6.4
P53A Whipple 145.47 6 P **PKPdf 11 26 47.4 -0.5**
baz=353,SNR=11
P53A P **PKPdf 11 26 47.4 -0.5**
baz=353,SNR=11
S44A Carbondale 145.64 17 P **PKPdf 11 26 48.0 -0.2**
baz=338,SNR=26
Q51A Peebles 145.68 9 P **PKPdf 11 26 47.8 -0.5**
baz=349,SNR=11
Q51A P **PKPdf 11 26 47.8 -0.5**
baz=349,SNR=11
P57A Homestead Farm 145.69 1 P **PKPdf 11 26 48.2 0.0**
baz=359
P57A P **PKPdf 11 26 48.2 0.0**
baz=359
SDMD Soldier's Deli 145.77 360 P **PKPdf 11 26 48.2 -0.2**
baz=0.6
Q52A Bidwell 145.89 7 P **PKPdf 11 26 48.3 -0.4**
baz=351,SNR=8.8
Q52A P **PKPdf 11 26 48.3 -0.4**
baz=351,SNR=8.8
Q54A Coxs Mills 146.03 5 P **PKPdf 11 26 49.2 +0.3**
baz=354,SNR=11
Q54A P **PKPdf 11 26 49.2 +0.3**
baz=354,SNR=11
R49A Shelbyville 146.08 11 P **PKPdf 11 26 49.3 +0.3**
baz=346,SNR=11
R49A P **PKPdf 11 26 49.3 +0.3**
baz=346,SNR=11
Z35A Perchaven, San 146.14 31 P **PKPdf 11 26 49.2 0.0**
baz=322
R50A Paris 146.25 10 P **PKPdf 11 26 49.6 +0.3**
baz=347,SNR=9.2
R50A P **PKPdf 11 26 49.6 +0.3**
baz=347,SNR=9.2
LCAR Lake Charles 146.50 21 P **PKPbc 11 26 50.5 -0.7**
baz=334,SNR=28
R53A Hurricane 146.55 7 P **PKPbc 11 26 50.9 -0.4**
baz=351,SNR=13
R53A P **PKPbc 11 26 50.9 -0.4**
baz=351,SNR=13
JCT Junction City 146.84 38 P **PKPbc 11 26 51.9 -0.6**
baz=316
MIAR Mount Ida 146.89 25 P **PKPbc 11 26 52.2 -0.2**
baz=329
T47A Sharon Grove 146.89 15 P **PKPbc 11 26 51.7 -0.6**
baz=342,SNR=5.7
S51A Beattyville 147.00 10 P **PKPbc 11 26 52.1 -0.4**
baz=348,SNR=12
S51A P **PKPbc 11 26 52.1 -0.4**
baz=348,SNR=12
R58B Mineral 147.21 1 P **PKPbc 11 26 52.9 -0.3**
baz=359
R58B P **PKPbc 11 26 52.9 -0.3**
baz=359
T50A Nancy 147.37 12 P **PKPdf 11 26 52.2 +1.0**
baz=346
T50A P **PKPdf 11 26 52.2 +1.0**
baz=346
WVT Waverly 147.50 16 P **PKPbc 11 26 53.7 -0.3**
baz=340,SNR=16
U49A Red Boiling Sp 147.66 13 P **PKPbc 11 26 53.9 -0.5**
baz=344,SNR=15
TZTN Tazewell 148.07 10 P **PKPbc 11 26 54.3 -1.3**
baz=348
V48A Smith Brothers 148.14 15 P **PKPbc 11 26 54.6 -1.2**
baz=342,SNR=8.9
V52A Sevierville 148.75 10 P **PKPbc 11 26 57.0 -0.3**
baz=348
W50A Signal Mountai 149.02 13 P **PKPbc 11 26 57.5 -0.6**
baz=344
V53A Saluda 149.05 9 P **PKPbc 11 26 57.9 -0.3**
baz=349
V53A P **PKPbc 11 26 57.9 -0.3**
baz=349
W52A Murphy 149.42 11 P **PKPbc 11 26 59.1 0.0**
baz=347
CASEE Lake Jocassee 149.69 10 P **PKPbc 11 26 59.9 +0.1**
baz=349
KMSC Kings Mountain 149.77 7 P **PKPbc 11 26 59.5 -0.4**
baz=352
PAULI Pauline 150.03 8 P **PKPbc 11 26 59.3 -1.2**
baz=351
152A Waverly Hall 151.59 14 P **PKPbc 11 27 04.3 0.0**
baz=344
250A Grady 151.84 17 P **PKPbc 11 27 04.8 0.0**
baz=341
352A Blakely 152.67 15 P **PKiKP 11 27 06.9 -0.1**

baz=343

DJA 20 11:16:00.3±0.5, 9°S±6°×11°0E±°, h10km, M3.8/8, mb4.0/1, MLv3.6/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.09**	**24**	P	Pb	11 16 20.3	-1.0
UGM	**Wanagama**	**1.13**	**37**	P	Pb	11 16 20.9	-1.0
PCJI	**Pacitan**	**1.46**	**65**	P	Pn	11 16 25.2	-1.5
SMRI	**Semarang**	**1.86**	**19**	P	Pn	11 16 33.2	+1.0
PWJI	**Pagerwojo**	**2.10**	**68**	P	Pn	11 16 34.9	-0.6
NGJI	**Ngawi**	**2.16**	**48**	P	Pn	11 16 36.9	+0.6
CNJI	**Cibinong**	**3.08**	**299**	P	Pn	11 16 48.9	-0.1
GMJI	**Gumukmas**	**3.61**	**82**	P	Pn	11 16 56.9	+0.6
TWSI	**Taliwang, Sumb**	**6.96**	**90**	P	Pn	11 17 43.4	+1.0

*BJI **20** 11:17:50.5±0.0, 55˚.28S×32˚.07W, h5km, mB5.4/9, Ms5.4/10, Ms7 5.1/8*
*IDC **20** 11:17:52.7±0.4, 54˚.82S×31˚.34W, h0km, mb4.9/22, mbtmp4.9/23, ML4.2/1, MS4.6/18, Error ellipse: s-maj=14.3km s-min=11.1km az=37.0*
*MOS **20** 11:17:53.7±1.2, 54˚.94S×31˚.58W, h13km, mb5.4/23, Error ellipse: s-maj=18.0km s-min=11.6km az=118.6*
*NEIC **20** 11:17:54.2±1.7, 54˚.92S±0˚.09×31˚.6W±0˚.1, h5km±3km, mb5.4/77, Error ellipse: s-maj=13.3km s-min=11.8km az=204.0*
*GCMT **20** 11:17:58.2±0.2, 54˚.78S±0˚.01×31˚.05W±0˚.03, h13km, MW5.3/122, Moment Tensor Solution. s63,c78; s122,c190; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; Mrr-0.67±.02; Mθθ 0.82±.02; Mφφ-0.14±.02; Mrθ 0.60±.05; Mθφ-0.15±.01; Mφr-0.07±.04; Best double couple: M0 0.96500×10^{17} NP1:φs277.00000°, δ64.00000°, λ-91.00000°. NP2:φs101.00000°, δ26.00000°, λ-87.00000°. Principal axes: T 1.0490, Plg19.0000°, Azm8.0000°; N -0.1690, Plg1.0000°, Azm278.0000°; P -0.8800, Plg71.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 11:17:54.2±0.2, 54˚.88S±0˚.05×31˚.47W±0˚.05, h10km, n537, σ1s28/531, mb5.4/58, MS4.6/25, 9C-4D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.98**	**280**	Pn	**Pn**	**11 18 40.3**	**-1.2**
HOPE	**Hope Point**	**2.98**	**280**	P	**Pn**	**11 18 40.3**	**-1.2**
ORCD	**Orcadas**	**9.19**	**225**	Pn	**Pn**	**11 20 03.2**	**-3.4**
EFI	**East Falkland**	**16.19**	**270**	*i* P	**Pn**	**11 21 41.4**	**-0.1**
VNA1	**Neumayer--Stat**	**18.82**	**156**	P	**Pn**	**11 22 14.4**	**+0.3**
VNA1	**Neumayer--Stat**	**18.82**	**156**	PcP	PcP	11 26 52.7	+13
PMSA	**Palmer Station**	**18.90**	**225**	P	**Pn**	**11 22 15.7**	**+0.6**
PMSA	0.8nm,0.3s,baz=83,slow=9.3,SNR=12			LR	LR	11 28 52.0	
	comp=Z,2μm,18.4s,baz=72,slow=35 40nm,1.0s						
PMSA	**Palmer Station**	**18.90**	**225**	P	**Pn**	**11 22 16.4**	**+1.2**
PMSA	**Palmer Station**	**18.90**	**225**	*e*P	**P**	**11 22 14.2**	**-0.3**
VNA3	**Neumayer Olymp**	**18.94**	**158**	P	**P**	**11 22 14.7**	**-0.3**
VNA3	**Neumayer Olymp**	**18.94**	**158**	PcP	PcP	11 26 52.3	+12
VNA2	**Neumayer--Watz**	**19.22**	**156**	P	**P**	**11 22 17.4**	**-0.6**
	baz=313,slow=11						
VNA2	**Neumayer--Watz**	**19.22**	**156**	PcP	PcP	11 26 53.2	+13
SNAA	**Sanae**	**20.82**	**155**	P	**P**	**11 22 34.2**	**-1.3**
SNAA	**Sanae**	**20.82**	**155**	PcP	PcP	11 26 55.2	+12
SNAA	**Sanae**	**20.82**	**155**	P	**P**	**11 22 35.3**	**-0.2**
SNAA	101nm,1.2s,baz=314,slow=9.8,SNR=57			LR	LR	11 29 46.3	
	comp=Z,874nm,18.1s,baz=314,slow=34 101nm,1.2s						
SNAA	**Sanae**	**20.82**	**155**	P	**P**	**11 22 35.9**	**+0.4**
SNAA	comp=Z,131nm,0.9s			IAmb	IAmb	11 22 48.3	
SNAA	**Sanae**	**20.82**	**155**	P	**P**	**11 22 35.9**	**+0.4**
SNAA	comp=Z,131nm,0.9s			pmax	pmax		
USHA	**Ushuaia**	**21.12**	**255**	P	**P**	**11 22 39.8**	**+1.0**
USHA	comp=Z,102nm,0.8s,baz=91,slow=9.9,SNR=14			LR	LR	11 29 29.2	
	comp=Z,2μm,18.4s,baz=82,slow=33 comp=Z,102nm,0.8s						
SMAI	**San Martin Ant**	**21.15**	**217**	P	**P**	**11 22 40.8**	**+1.9**
TROLL	**Troll, Antarti**	**22.39**	**153**	P	**P**	**11 22 51.8**	**-0.6**
GO10	**Punta Arenas**	**23.11**	**258**	P	**P**	**11 22 59.9**	**-0.2**
GO10	comp=Z,203nm,0.9s			IAmb	IAmb	11 23 13.3	
BELA	**Belgrano 2**	**23.12**	**182**	P	**P**	**11 22 59.0**	**-0.9**
BELA	comp=Z,286nm,1.7s			IAmb	IAmb	11 23 13.9	
MG04	**Isla Riesco**	**23.51**	**258**	P	**P**	**11 23 03.7**	**-0.3**
MG05	**Puerto Natales**	**24.49**	**260**	P	**P**	**11 23 12.2**	**-1.0**
MG05	comp=Z,73nm,0.9s			IAmb	IAmb	11 23 15.9	
GO09	**Cerro Castillo**	**24.56**	**261**	P	**P**	**11 23 14.5**	**+0.5**
GO09	comp=Z,127nm,1.3s			IAmb	IAmb	11 23 28.5	
NVL	**N'lazarevskaya**	**24.58**	**147**	*e*P	**P**	**11 23 12.3**	**-1.5**
NVL				*e*S	**S**	**11 27 40.4**	**+6.1**
NVL	comp=Z,22nm,1.1s			pmax	pmax		
COYC	**Coyhaique**	**27.25**	**273**	P	**P**	**11 23 38.8**	**+0.5**
COYC	comp=Z,48nm,0.9s			IAmb	IAmb	11 23 52.0	
PLTB	**Pedras Altas**	**27.94**	**317**	*e*P	**P**	**11 23 46.3**	**+1.8**
AY01	**Puyuhuapi**	**28.25**	**274**	P	**P**	**11 23 46.9**	**-0.2**
LL02	**Futaleuf**	**28.54**	**277**	P	**P**	**11 23 50.3**	**+0.6**
TER01	**Tubaro-SC**	**29.28**	**327**	*e*P	**P**	**11 23 58.2**	**+1.7**
PLCA	**Paso Flores**	**29.38**	**282**	P	**P**	**11 23 58.4**	**+1.0**
	comp=Z,6.0nm,0.9s,baz=134,slow=9.4,SNR=9.3 comp=Z,6.0nm,0.9s						
PLCA	**Paso Flores**	**29.38**	**282**	P	**P**	**11 23 57.9**	**+0.5**
PLCA	**Paso Flores**	**29.38**	**282**	P	**P**	**11 23 57.9**	**+0.5**
PLCA	comp=Z,18nm,1.1s			pmax	pmax		
PLCA	**Paso Flores**	**29.38**	**282**	*e*P	**P**	**11 23 57.2**	**-0.2**
RODS	**Rosario do Sul**	**29.82**	**316**	*e*P	**P**	**11 24 03.0**	**+1.8**
ALGR	**Alto Alegre (B**	**30.37**	**320**	*e*P	**P**	**11 24 07.3**	**+1.1**
UNIS	**Unistalda (Bra**	**30.91**	**317**	*e*P	**P**	**11 24 11.3**	**+0.5**
ITAB	**Concordia**	**31.47**	**323**	*e*P	**P**	**11 24 17.2**	**+1.4**
CRSM	**Crissiumal (Br**	**31.93**	**320**	*e*P	**P**	**11 24 20.3**	**+0.4**
FRBT	**Francisco Belt**	**32.95**	**322**	*e*P	**P**	**11 24 30.5**	**+1.6**
MAN01	**Angra dos Reis**	**33.32**	**339**	*e*P	**P**	**11 24 34.0**	**+1.9**
BO02	**Sierra Bellavi**	**33.74**	**290**	P	**P**	**11 24 36.6**	**+0.8**
PTGB	**Pitanga**	**33.77**	**325**	*e*P	**P**	**11 24 37.3**	**+1.2**
VAO	**Valinhos**	**33.88**	**334**	*e*P	**P**	**11 24 38.7**	**+1.6**
CAM01	**Campos-RJ**	**33.89**	**343**	*e*P	**P**	**11 24 38.2**	**+1.2**
LMEL	**Las Melosas**	**34.15**	**292**	P	**P**	**11 24 40.1**	**+0.7**
GO05	**Huala**	**34.21**	**289**	P	**P**	**11 24 39.2**	**-0.6**
GO05	comp=Z,28nm,0.7s			IAmb	IAmb	11 24 51.9	
BO01	**Tunca**	**34.21**	**290**	P	**P**	**11 24 40.8**	**+1.0**
CPUP	**Villa Florida**	**34.24**	**316**	P	**P**	**11 24 39.7**	**-0.4**
	comp=Z,5.5nm,0.5s,baz=155,slow=7.2,SNR=10.0 comp=Z,5.5nm,0.5s						
CPUP	**Villa Florida**	**34.24**	**316**	P	**P**	**11 24 40.2**	**+0.1**
CPUP	**Villa Florida**	**34.24**	**316**	P	**P**	**11 24 40.2**	**+0.1**
CPUP	comp=Z,22nm,0.8s			pmax	pmax		
MT03	**Universidad Ad**	**34.58**	**292**	P	**P**	**11 24 46.0**	**+2.9**
MT03	comp=Z,66nm,1.1s			IAmb	IAmb	11 25 09.8	
MT09	**Talagante**	**34.62**	**291**	P	**P**	**11 24 43.0**	**-0.5**
MT09	comp=Z,83nm,1.1s			IAmb	IAmb	11 24 55.8	
PEL	**Peldehue**	**34.95**	**292**	P	**P**	**11 24 46.8**	**+0.6**
PEL	comp=Z,92nm,1.2s			IAmb	IAmb	11 25 01.8	
PEL	**Peldehue**	**34.95**	**292**	P	**P**	**11 24 46.8**	**+0.6**
PEL	comp=Z,92nm,1.2s			pmax	pmax		
VA05	**Santo Domingo**	**35.05**	**291**	P	**P**	**11 24 47.1**	**+0.1**
MT02	**Curacav**	**35.10**	**292**	P	**P**	**11 24 46.9**	**-0.5**
MT02	comp=Z,83nm,1.2s			IAmb	IAmb	11 25 01.6	
ZON	**Zonda**	**35.13**	**296**	P	**P**	**11 24 48.0**	**+0.2**
ZON	comp=Z,34nm,0.8s			IAmb	IAmb	11 25 00.2	
ZON	**Zonda**	**35.13**	**296**	P	**P**	**11 24 48.0**	**+0.2**
ZON				pmax	pmax		
	comp=Z,34nm,0.8s						
VA03	**San Esteban**	**35.17**	**293**	P	**P**	**11 24 49.7**	**+1.6**
VA03	comp=Z,74nm,1.2s			IAmb	IAmb	11 24 51.2	
ROC1	**El Roble**	**35.25**	**292**	P	**P**	**11 24 48.8**	**-0.3**
ROC1	comp=Z,47nm,0.7s			IAmb	IAmb	11 25 12.9	
QSPA	**South Pole Qui**	**35.37**	**180**	P	**P**	**11 24 50.3**	**+0.7**
	comp=Z,34nm,1.0s,baz=201,slow=3.6,SNR=50 comp=Z,34nm,1.0s						
QSPA	**South Pole Qui**	**35.37**	**180**	P	**P**	**11 24 50.4**	**+0.7**
QSPA	comp=Z,77nm,0.9s			IAmb	IAmb	11 25 06.2	
VA01	**Torpederas**	**35.55**	**291**	P	**P**	**11 24 53.0**	**+1.7**
VA01	comp=Z,113nm,1.1s			IAmb	IAmb	11 25 05.0	
VA06	**Catapilco**	**35.72**	**292**	P	**P**	**11 24 52.9**	**+0.1**
TRCB	**Terra Rica**	**35.74**	**325**	*e*P	**P**	**11 24 53.8**	**+0.7**
BB19B	**Bebedouro**	**36.14**	**332**	*e*P	**P**	**11 24 58.1**	**+1.6**
RIB01	**Linhares ES**	**36.16**	**346**	*e*P	**P**	**11 24 58.4**	**+1.8**
PCMB	**Pacaembu**	**36.42**	**328**	*e*P	**P**	**11 24 59.6**	**+0.8**
CO02	**Combarbal**	**36.62**	**294**	P	**P**	**11 25 02.1**	**+1.5**
SJMB	**Sao Joao De Ma**	**36.87**	**345**	*e*P	**P**	**11 25 03.8**	**+1.0**
NAN01	**Guarapari, ES**	**37.56**	**346**	*e*P	**P**	**11 25 08.7**	**+0.1**
ANTJ	**Antonio Joao (**	**37.65**	**321**	*e*P	**P**	**11 25 10.1**	**+0.8**
DIAM	**Diamantina, MG**	**37.70**	**341**	*e*P	**P**	**11 25 10.8**	**+0.9**
ITRB	**Iturama**	**37.94**	**330**	*e*P	**P**	**11 25 12.8**	**+1.0**
PMNB	**Patos De Minas**	**38.05**	**337**	*e*P	**P**	**11 25 14.6**	**+1.8**
AC05	**El Transito**	**38.12**	**297**	P	**P**	**11 25 14.3**	**+0.9**
AC05	comp=Z,45nm,0.8s			IAmb	IAmb	11 25 26.9	
GUA01	**Guaratinga, BA**	**38.76**	**347**	*e*P	**P**	**11 25 20.9**	**+2.2**
AQDB	**Aquidauana**	**38.94**	**322**	P	**P**	**11 25 20.2**	**+0.1**
AQDB	**Aquidauana**	**38.94**	**322**	*e*P	**P**	**11 25 20.7**	**+0.6**
IPMB	**Ipameri, GO**	**39.01**	**334**	*e*P	**P**	**11 25 22.1**	**+1.3**
AC02	**Maricunga**	**39.18**	**300**	P	**P**	**11 25 22.8**	**+0.1**
AC02	comp=Z,95nm,1.6s			IAmb	IAmb	11 25 36.7	
MC01	**Montes Claros**	**39.30**	**341**	*e*P	**P**	**11 25 23.7**	**+0.5**
C2SB	**Chapadao do Su**	**39.57**	**327**	*e*P	**P**	**11 25 27.2**	**+1.8**
JANB	**Januaria**	**40.98**	**341**	*e*P	**P**	**11 25 37.7**	**+0.5**
BDFB	**Brasilia**	**41.21**	**335**	P	**P**	**11 25 39.0**	**-0.2**
BDFB	comp=Z,7.3nm,0.7s,baz=139,slow=4.8,SNR=7.4 comp=Z,7.3nm,0.7s			LR	LR	11 43 09.2	
	comp=Z,610nm,18.0s,baz=151,slow=37 comp=Z,7.3nm,0.7s						
BDFB	**Brasilia**	**41.21**	**335**	*e*P	**P**	**11 25 40.6**	**+1.4**
MAW	**Mawson**	**42.51**	**146**	P	**P**	**11 25 49.1**	**0.0**
	comp=Z,8.3nm,0.7s,baz=229,slow=8.8,SNR=37 comp=Z,8.3nm,0.7s						
MAW	**Mawson**	**42.51**	**146**	P	**P**	**11 25 49.1**	**0.0**
MAW	**Mawson**	**42.51**	**146**	P	**P**	**11 25 49.1**	**0.0**
MAW	comp=Z,10.0nm,1.0s			pmax	pmax		
LVC	**Limon Verde**	**42.62**	**304**	P	**P**	**11 25 51.1**	**+0.2**
	comp=Z,11nm,0.5s,baz=112,slow=6.1,SNR=8.6 comp=Z,11nm,0.5s						
LVC	**Limon Verde**	**42.62**	**304**	P	**P**	**11 25 50.3**	**-0.6**
LVC	comp=Z,56nm,1.0s			IAmb	IAmb	11 26 04.9	
LVC	**Limon Verde**	**42.62**	**304**	P	**P**	**11 25 50.3**	**-0.6**
LVC	comp=Z,55nm,1.0s			pmax	pmax		
LVC	**Limon Verde**	**42.62**	**304**	*e*P	**P**	**11 25 51.5**	**+0.6**
SUR	**Sutherland**	**42.77**	**80**	P	**P**	**11 25 52.0**	**+0.2**
	comp=Z,12nm,0.9s,baz=206,slow=10,SNR=5.6						
SUR				LR	LR	11 41 41.6	
	comp=Z,873nm,18.5s,baz=214,slow=34 comp=Z,12nm,0.9s						
SALV	**Santo Antonio**	**43.18**	**325**	*e*P	**P**	**11 25 56.0**	**+0.9**
SDBA	**SAO DESIDERIO**	**43.67**	**341**	*e*P	**P**	**11 25 58.2**	**-0.9**
NBLA	**Lagarto - SE**	**44.07**	**351**	*e*P	**P**	**11 26 01.9**	**-0.4**
PB01	**IPOC Station P**	**44.23**	**304**	P	**P**	**11 26 04.0**	**+0.3**
PB01	comp=Z,65nm,0.9s			IAmb	IAmb	11 26 17.3	
PTLB	**Pontes e Lacer**	**44.80**	**321**	P	**P**	**11 26 08.2**	**0.0**
PTLB	comp=Z,53nm,0.9s			IAmb	IAmb	11 26 20.8	
PTLB	**Pontes e Lacer**	**44.80**	**321**	*e*P	**P**	**11 26 07.7**	**-0.4**
SIV	**San Ignacio**	**45.04**	**318**	P	**P**	**11 26 08.8**	**-1.2**
	comp=Z,5.0nm,1.0s,baz=172,slow=8.2,SNR=11						
SIV	comp=Z,5.0nm,1.0s			LR	LR	11 47 43.5	
	comp=Z,411nm,18.1s,baz=125,slow=40 comp=Z,5.0nm,1.0s						
NBAN	**Anadia - AL**	**45.26**	**353**	*e*P	**P**	**11 26 10.8**	**-1.0**
GO01	**Chusmiza**	**45.27**	**306**	P	**P**	**11 26 12.9**	**+0.5**
GO01	comp=Z,87nm,1.0s			IAmb	IAmb	11 26 27.9	
SNDB	**Serra Nova Dou**	**45.56**	**332**	*e*P	**P**	**11 26 13.4**	**-0.8**
NBRF	**Rio Formoso -**	**46.17**	**355**	*e*P	**P**	**11 26 20.7**	**+1.8**
SBA	**Scott Base**	**47.05**	**185**	P	**P**	**11 26 26.1**	**+1.0**
SBA	comp=Z,43nm,1.2s			IAmb	IAmb	11 26 38.7	
SBA	**Scott Base**	**47.05**	**185**	P	**P**	**11 26 26.1**	**+1.0**
SBA	comp=Z,43nm,1.2s			pmax	pmax		
VILB	**Vilhena**	**47.49**	**321**	P	**P**	**11 26 29.8**	**+0.4**
VILB	comp=Z,48nm,1.0s			IAmb	IAmb	11 26 41.7	
VILB	**Vilhena**	**47.49**	**321**	*e*P	**P**	**11 26 30.0**	**+0.7**
PDRB	**Porto dos Gac**	**47.53**	**325**	*e*P	**P**	**11 26 28.2**	**-1.4**
VNDA	**Vanda**	**47.60**	**184**	P	**P**	**11 26 30.2**	**+0.8**
VNDA	comp=Z,5.0nm,0.5s,baz=173,slow=6.6,SNR=60 comp=Z,397nm,18.2s,baz=155,slow=37 comp=Z,5.0nm,0.5s			LR	LR	11 47 21.9	
VNDA	**Vanda**	**47.60**	**184**	P	**P**	**11 26 29.8**	**+0.3**
VNDA	comp=Z,26nm,1.1s			IAmb	IAmb	11 26 42.6	
VNDA	**Vanda**	**47.60**	**184**	P	**P**	**11 26 29.8**	**+0.3**
VNDA	comp=Z,26nm,1.1s			pmax	pmax		
SMTB	**Santa Maria do**	**47.67**	**338**	*e*P	**P**	**11 26 31.7**	**+1.0**
H10S2	**ASCENSION HYDR**	**47.72**	**23**	T	T	12 17 49.7	
	baz=193,slow=74,SNR=128						
H10S3	**ASCENSION HYDR**	**47.73**	**23**	T	T	12 17 49.8	
	baz=27,slow=74,SNR=134						
LPAZ	**La Paz**	**47.73**	**309**	P	**P**	**11 26 31.8**	**-0.1**
	comp=Z,22nm,0.7s,baz=142,slow=6.1,SNR=49						
LPAZ	comp=Z,323nm,19.3s,baz=152,slow=38 comp=Z,22nm,0.7s			LR	LR	11 48 19.5	
LPAZ	**La Paz**	**47.73**	**309**	P	**P**	**11 26 32.0**	**+0.1**
LPAZ	**La Paz**	**47.73**	**309**	P	**P**	**11 26 32.0**	**+0.1**
LPAZ	comp=Z,113nm,1.1s			pmax	pmax		
LPAZ	**La Paz**	**47.73**	**309**	*e*P	**P**	**11 26 31.9**	**-0.1**
CLDB	**Colider**	**47.92**	**327**	*e*P	**P**	**11 26 31.2**	**-1.4**
BOSA	**Boshof**	**48.12**	**81**	P	**P**	**11 26 33.2**	**-1.0**
	comp=Z,8.7nm,1.0s,baz=214,slow=7.5,SNR=7.6						
BOSA				LR	LR	11 41 38.4	
	comp=Z,353nm,19.9s,baz=218,slow=30 comp=Z,8.7nm,1.0s						
BOSA	**Boshof**	**48.12**	**81**	P	**P**	**11 26 34.0**	**-0.2**
BOSA	comp=Z,115nm,2.0s			IAmb	IAmb	11 26 35.0	
BOSA	**Boshof**	**48.12**	**81**	P	**P**	**11 26 34.0**	**-0.2**
BOSA	comp=Z,115nm,2.0s			pmax	pmax		
H10N3	**ASCENSION HYDR**	**48.84**	**23**	T	T	12 19 13.4	
	baz=192,slow=75,SNR=221						
H10N1	**ASCENSION HYDR**	**48.84**	**23**	T	T	12 19 13.3	
	baz=192,slow=75,SNR=110						
H10N2	**ASCENSION HYDR**	**48.85**	**23**	T	T	12 19 14.5	
	baz=192,slow=75,SNR=172						
RCBR	**Riachuelo**	**49.05**	**354**	LR	LR	11 42 24.9	
	comp=Z,637nm,21.9s,baz=326,slow=30						
PRPB	**Parauapebas**	**50.77**	**336**	*e*P	**P**	**11 26 55.4**	**+1.0**
LBTB	**Lobatse**	**51.08**	**78**	P	**P**	**11 26 56.3**	**-0.5**
	comp=Z,19nm,0.9s,baz=210,slow=8.1,SNR=19 comp=Z,19nm,0.9s						
LBTB	**Lobatse**	**51.08**	**78**	P	**P**	**11 26 56.7**	**-0.1**
LBTB	**Lobatse**	**51.08**	**78**	P	**P**	**11 26 56.7**	**-0.1**
LBTB	comp=Z,27nm,1.0s			pmax	pmax		
TSUM	**Tsumeb**	**51.34**	**66**	LR	LR	11 45 44.2	
	comp=Z,420nm,18.1s,baz=153,slow=33						
TSUM	**Tsumeb**	**51.34**	**66**	P	**P**	**11 26 58.4**	**-0.4**
NPGB	**Novo Progresso**	**51.41**	**329**	*e*P	**P**	**11 26 59.2**	**0.0**
ETMB	**Extrema**	**52.69**	**315**	P	**P**	**11 27 08.7**	**-0.1**
ETMB	comp=Z,70nm,1.4s			IAmb	IAmb	11 27 21.5	
ETMB	**Extrema**	**52.69**	**315**	*e*P	**P**	**11 27 09.2**	**+0.4**
ITTB	**Itaituba**	**54.06**	**330**	*e*P	**P**	**11 27 19.1**	**+0.3**
NNA	**Nana**	**55.56**	**302**	*i* P	**P**	**11 27 30.1**	**+0.3**
NNA	comp=Z,59nm,1.1s			pmax	pmax		
MALB	**Monte Alegre**	**56.04**	**332**	*e*P	**P**	**11 27 32.5**	**-0.6**
MACA	**Manacapuru-AM**	**56.75**	**324**	*e*P	**P**	**11 27 37.8**	**-0.4**
MCPB	**Macapa, AP**	**56.91**	**335**	*e*P	**P**	**11 27 40.8**	**+1.5**
CZSB	**Cruzeiro do Su**	**57.34**	**309**	P	**P**	**11 27 41.6**	**-0.8**
CZSB	comp=Z,201nm,1.6s			IAmb	IAmb	11 27 54.4	
LSZ	**Lusaka**	**60.30**	**74**	LR	LR	11 52 13.5	
	comp=Z,1μm,18.1s,baz=221,slow=34						
LSZ	**Lusaka**	**60.30**	**74**	P	**P**	**11 28 02.8**	**-0.4**
LSZ	**Lusaka**	**60.30**	**74**	P	**P**	**11 28 02.8**	**-0.4**
LSZ	comp=Z,21nm,1.1s			pmax	pmax		
ATAH	**Atahualpa**	**60.51**	**304**	P	**P**	**11 28 06.9**	**+2.0**
	comp=Z,19nm,1.1s,baz=155,slow=6.2,SNR=9.9 comp=Z,19nm,1.1s						
RPN	**Rapa Nui**	**61.42**	**263**	LR	LR	11 53 13.3	
	comp=Z,279nm,18.3s,baz=140,slow=34						
BOAV	**Boa Vista**	**61.92**	**327**	P	**P**	**11 28 13.7**	**-0.2**
BOAV	comp=Z,41nm,1.2s			IAmb	IAmb	11 28 25.7	
BOAV	**Boa Vista**	**61.92**	**327**	*e*P	**P**	**11 28 13.7**	**-0.2**
MDP	**Montagnes des**	**62.32**	**336**	LR	LR	11 52 41.5	
	comp=Z,475nm,21.4s,baz=148,slow=34						
BOSC	**San Juan Bosco**	**64.03**	**306**	P	**P**	**11 28 27.1**	**-1.1**
BOSC	comp=Z,66nm,1.5s			IAmb	IAmb	11 28 30.2	
ARNL	**Arenillas**	**64.43**	**304**	P	**P**	**11 28 30.0**	**-0.6**
LIC	**Lamto**	**64.76**	**29**⇓	*e*P	**P**	**11 28 31.6**	**-1.1**
	comp=Z,99nm,1.0s						
KIC	**Kosan Boka**	**64.97**	**30**⇑	*e*P	**P**	**11 28 32.7**	**-1.4**
	comp=Z,20nm,0.9s						
TIC	**Toumodi**	**65.16**	**29**⇓	*e*P	**P**	**11 28 34.4**	**-0.9**
	comp=Z,58nm,0.9s						
DBIC	**Dimbokro**	**65.23**	**29**	P	**P**	**11 28 35.1**	**-0.7**
	comp=Z,19nm,0.9s,baz=206,slow=6.5,SNR=12 comp=Z,19nm,0.9s						
DBIC	**Dimbokro**	**65.23**	**29**	P	**P**	**11 28 36.4**	**+0.7**
DBIC	comp=Z,23nm,0.8s			IAmb	IAmb	11 28 47.8	
DBIC	**Dimbokro**	**65.23**	**29**	P	**P**	**11 28 36.4**	**+0.7**
DBIC	comp=Z,23nm,0.8s			pmax	pmax		
CHSH	**Refugio Sur-Vo**	**65.66**	**306**	P	**P**	**11 28 40.9**	**+1.6**
CHSH	comp=Z,46nm,0.6s			IAmb	IAmb	11 28 54.0	
MACC	**Macarena, Meta**	**66.66**	**313**	*e*P	**P**	**11 28 44.4**	**-0.6**
OTAV	**Otavalo**	**67.00**	**307**	P	**P**	**11 28 47.9**	**+0.2**
OTAV	**Otavalo**	**67.00**	**307**	P	**P**	**11 28 47.9**	**+0.2**
OTAV	comp=Z,108nm,1.5s			pmax	pmax		
OTAV	**Otavalo**	**67.00**	**307**	*e*P	**P**	**11 28 48.3**	**+0.6**
TULM	**Tulcn-Chalpat**	**67.11**	**308**	P	**P**	**11 28 49.8**	**+1.3**
PAC1	**Pacto, Paraso**	**67.18**	**307**	*e*P	**P**	**11 28 46.8**	**-1.7**
VILC	**Villavicencio,**	**68.37**	**314**	*e*P	**P**	**11 28 55.2**	**-0.8**
PRAC	**Prado**	**68.51**	**313**	*e*P	**P**	**11 28 55.8**	**-1.0**
OPO	**Ambohidratompo**	**68.52**	**92**	P	**P**	**11 28 57.7**	**+0.7**
	comp=Z,11nm,1.2s,baz=232,slow=7.7,SNR=5.1 comp=Z,11nm,1.2s						
CHIC	**Chingaza**	**68.85**	**314**	*e*P	**P**	**11 28 58.9**	**-0.4**
ROSC	**El Rosal**	**69.29**	**314**	P	**P**	**11 29 03.3**	**+1.3**
	comp=Z,8.4nm,0.3s,baz=142,slow=6.8,SNR=9.8						
ROSC				LR	LR	12 01 43.9	
	comp=Z,198nm,19.5s,baz=191,slow=38 comp=Z,8.4nm,0.3s						
ROSC	**El Rosal**	**69.29**	**314**	*e*P	**P**	**11 29 01.7**	**-0.2**
YOTC	**Yotoco, Valle**	**69.38**	**311**	*e*P	**P**	**11 28 59.9**	**-2.3**
ANIL	**Santa Ana**	**69.43**	**312**	*e*P	**P**	**11 29 01.9**	**-0.9**
RUSC	**La Rusia**	**69.73**	**315**	*e*P	P	11 29 10.1	+5.3
SPBC	**San Pablo de B**	**69.92**	**314**	*e*P	**P**	**11 29 02.9**	**-2.6**
GUY2C	**Guyana, Caldas**	**70.07**	**313**	*e*P	**P**	**11 29 06.8**	**-0.1**
BBTS	**Babate**	**70.42**	**15**	LR	LR	11 56 23.3	
	comp=Z,586nm,18.2s,baz=212,slow=33						
BAUV	**El Baul**	**70.58**	**321**	P	**P**	**11 29 09.5**	**0.0**
PTBC	**PUERTO BERRIO,**	**70.88**	**314**	*e*P	P	11 29 05.9	-5.4
CBOC	**Ciudad Bolivar**	**70.92**	**312**	*e*P	**P**	**11 29 11.3**	**-0.5**
BIRV	**Birongo**	**71.39**	**324**	P	**P**	**11 29 15.2**	**+0.9**
SDV	**Santo Domingo**	**71.49**	**319**	P	**P**	**11 29 14.7**	**-0.5**
	comp=Z,18nm,0.6s,baz=179,slow=3.4,SNR=21						
SDV	comp=Z,1μm,18.3s,baz=130,slow=39 comp=Z,18nm,0.6s			LR	LR	12 04 08.1	
SDV	**Santo Domingo**	**71.49**	**319**	P	**P**	**11 29 14.7**	**-0.5**
SDV	**Santo Domingo**	**71.49**	**319**	*e*P	**P**	**11 29 15.5**	**+0.3**
SOLC	**Bahia Solano**	**71.85**	**311**	*e*P	P	11 29 11.9	-5.3
ZARC	**Zaragoza, Cauc**	**71.90**	**314**	*e*P	P	11 29 04.1	-13
KOWA	**Kowa**	**72.92**	**28**	P	**P**	**11 29 23.3**	**-0.2**
TOA0	**Torodi Ar. Sit**	**73.34**	**34**	P	**P**	**11 29 25.4**	**-0.6**
TORD	**Torodi Ar. Bea**	**73.34**	**34**	P	**P**	**11 29 25.2**	**-0.7**
	comp=Z,9.5nm,0.9s,baz=200,slow=4.4,SNR=34						
TORD	comp=Z,1μm,18.1s,baz=200,slow=32 comp=Z,9.5nm,0.9s			LR	LR	11 56 59.2	
TORD	**Torodi Ar. Bea**	**73.34**	**34**	P	**P**	**11 29 26.1**	**+0.1**
**M

CLL Lm MLR 12 18 00.0
comp=Z,300nm,20.6s
S22A 4UR Ranch, Cre 112.44 304 P PKiKP 11 36 31.0 +0.8
baz=143
OGNE Ogallala 112.78 309 P PKiKP 11 36 31.2 +0.8
baz=144
PDMCI Parker Dam,Lak 113.38 297 P PKiKP 11 36 33.0 +1.4
baz=142
BC3 Big Chuckawall 113.56 295 P PKiKP 11 36 33.0 +0.8
baz=141
GMRC Granite Mounta 114.54 296 P PKiKP 11 36 35.3 +1.2
baz=141
CIS Catalina Islan 114.93 293 P PKiKP 11 36 36.2 +1.5
baz=141
O20A White River Ci 115.00 305 P PKiKP 11 36 36.5 +1.6
baz=142
SOC Sochi 115.17 49 *i* PKIKP PKiKP 11 36 36.0 +1.2
SOC *e* 11 37 35.3
SOC *e*PPP PPP 11 40 00.5
SOC *e* 11 43 22.5
SOC *e*PS **PS 11 47 17.7 +3.3**
SOC *e*SS SS 11 53 32.3 -0.3
SOC *e*SSS SSS 11 57 58.4
P18A Preston Nutter 115.57 303 PKPdf 11 36 35.1 -1.0
SHPR Sheep Range 115.61 297 PKiKP 11 36 36.0 -0.1
MSU Marysvale 115.66 301 PKiKP 11 36 36.3 +0.1
MSU Marysvale 115.66 301 PKIKP **PKiKP 11 36 36.3 +0.1**
MVU Marysvale 115.67 301 PKiKP 11 36 37.1 +0.9
TMUT Trail Mountain 115.78 302 PKPdf 11 36 36.6 0.0
GWY Greenwater Val 116.15 296 PKiKP 11 36 38.7 +1.6
SBC Santa Barbara 116.42 293 P PKiKP 11 36 38.9 +1.5
baz=140
ZEI Tsey 116.42 53 *e*PKIKP PKiKP 11 36 40.3 +2.8
ZEI pmax pmax
comp=Z,16nm,0.6s
FURC Furnace Creek, 116.46 296 P PKiKP 11 36 39.3 +1.8
baz=140
MPMC Manual Prospec 116.48 295 P PKiKP 11 36 39.0 +1.1
baz=140
TPNV Topopah Spring 116.51 297 P PKiKP 11 36 39.6 +1.8
baz=140
ISA Isabella, Lake 116.69 294 P PKiKP 11 36 39.2 +1.1
baz=140
AKASG Malin Array Be 116.75 38 PKP PKPdf 11 36 36.9 -0.6
comp=Z,0.3nm,0.4s,baz=222,slow=0.5,SNR=4.8
AKASG PKKP PKKPab 11 47 17.5 +12
comp=Z,1.1nm,0.6s,baz=26,slow=4.5,SNR=5.5
AKASG Malin Array Be 116.75 38*c* *i*PKIKP PKiKP 11 36 38.5 +0.9
KIV Kislovodsk 116.78 51 *e*PKIKP PKiKP 11 36 40.1 +2.1
KIV pmax pmax
comp=Z,5.0nm,1.0s
CWC Cottonwood Cre 117.08 295 P PKiKP 11 36 39.3 +0.4
baz=140
GRAC Grapevine Rang 117.13 296 P PKiKP 11 36 39.8 +0.9
baz=140
R11A Troy Canyon, C 117.24 298 P PKiKP 11 36 40.3 +1.1
baz=140
DUG Dugway, Tooele 117.26 302 P PKiKP 11 36 40.3 +1.1
baz=140
PDAR Pinedale Array 117.67 306 PKP PKPdf 11 36 39.2 -0.7
comp=Z,0.6nm,0.8s,baz=132,slow=2.2,SNR=6.6
BW06 Boulder Array 117.67 306 PKPdf 11 36 39.6 -0.4
MAK Makhachkala 118.23 55 *i* PKIKP PKPdf 11 36 38.2 -2.5
MAK *e* 11 37 54.8
MAK *e*PS **PS 11 47 46.8 +4.6**
MAK pmax pmax
comp=Z,58nm,0.3s
NV11 Mina Array Sit 118.62 297 PKiKP 11 36 42.7 +0.9
NVAR Mina Array Bea 118.70 297 PKP PKiKP 11 36 42.3 +0.2
comp=Z,0.5nm,0.6s,baz=144,slow=2.2,SNR=8.6
NVAR PKKPab **PKKPab 11 46 59.0 +0.3**
comp=Z,1.1nm,1.0s,baz=270,slow=5.4,SNR=4.5
NVAR Mina Array Bea 118.70 297 PKiKP 11 36 42.9 +0.8
FXWY Fox Creek 119.03 305 PKPdf 11 36 42.1 -0.4
LAO LASA Array 119.17 310 P PKiKP 11 36 43.8 +1.2
baz=140
MNK Minsk 119.42 35 *i* PKIKP PKiKP 11 36 43.0 +0.4
MNK *i* 11 38 03.1
MNK *i* PPP PPP 11 40 34.4
MNK *i* PS **PS 11 47 55.6 +3.0**
MNK *i* SS SS 11 54 25.1 -2.5
MNK pmax pmax
comp=E,3.0nm,1.0s
MNK pmax pmax
comp=Z,3.0nm,1.0s
MNK MLR MLR
comp=Z,251nm,19.0s
MNK MLR MLR
comp=E,43nm,19.0s
MNK Minsk 119.42 35 *i* PKP PKiKP 11 36 43.0 +0.4
comp=E,3.0nm,1.0s
MNK *i* PKP **PKiKP 11 36 43.0 +0.4**
MNK *i* PKP **PKiKP 11 36 43.0 +0.4**
comp=Z,3.0nm,1.0s,baz=215
MNK *i* PP **PP 11 38 03.1 -2.0**
MNK *i* PPP PPP 11 40 34.4
MNK *i* SKS **SKSdf 11 44 03.4 +9.5**
MNK *i* SKKS **SKKSac 11 44 59.4 -4.3**
MNK *i* PS **PS 11 47 55.6 +3.0**
MNK *i* SS **SS 11 54 25.1 -2.4**
MNK *i* SSS SSS 11 58 45.8
MNK *i* LQ LQ 12 21 12.0
MNK *i* LR LR 12 22 26.2
MNK *i* LRM MLR 12 27 23.8
comp=Z,251nm,19.0s
MNK *i* LRM MLR 12 27 26.2
comp=E,43nm,19.0s
MNK *i* LRM MLR 12 27 26.2
BMN Battle Mountai 119.64 299 PKPdf PKiKP 11 36 44.4 +0.6
BMN Battle Mountai 119.64 299 PKIKP PKiKP 11 36 44.4 +0.6
DGMT Dagmar 119.67 313 P PKiKP 11 36 45.1 +1.7
baz=141
YHL Hebgen Lake 120.02 306 PKPdf PKiKP 11 36 45.7 +1.1
NB2 NORSAR Subarra120.41 22 PKPdf PKPdf 11 36 44.1 -0.3
comp=Z,8.7nm,1.4s,baz=202,slow=1.9
NB2 NORSAR Subarra120.41 22 PKPdf PKPdf 11 36 44.1 -0.3
baz=202,slow=1.9
NOA NORSAR Array B120.41 22 PKP PKiKP 11 36 44.5 +0.1
comp=Z,1.9nm,0.9s,baz=208,slow=2.0,SNR=7.2
HLID Hailey 120.59 303 P PKiKP 11 36 46.9 +1.3
baz=138
BOZ Bozeman (W) 120.79 306 P PKiKP 11 36 47.4 +1.5
baz=139
EGMT Eagleton 121.75 309 P PKiKP 11 36 48.2 +0.7
baz=138
WVOR Wild Horse Val 121.84 299 PKiKP 11 36 48.4 +0.4
WVOR Wild Horse Val 121.84 299 PKIKP PKiKP 11 36 48.4 +0.4
MOD Modoc Plateau 122.30 298 PKiKP 11 36 50.4 +1.4
MSO Missoula 122.78 306 P PKiKP 11 36 50.6 +0.9
baz=137
OBN Obninsk 122.95 39⇓*i*PKIKP PKiKP 11 36 50.8 +1.3
OBN *e* 11 36 58.0
OBN SS SS 11 55 21.0 +8.3
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,117nm,17.0s
L04D Klamath Falls 123.55 297 P PKiKP 11 36 52.4 +1.0
baz=136
K04D Chiloquin, OR 123.56 298 P PKiKP 11 36 52.1 +0.7
baz=136
NSS Namsos 123.68 21 *e*PKPdf PKiKP 11 36 51.5 +0.9
J05D Fort Rock, OR 123.77 299 P PKiKP 11 36 52.5 +0.6
baz=136
L02F Cave Junction 124.14 296 P PKiKP 11 36 54.0 +1.7
baz=136
J04D Umpqua Nationa 124.19 298 P PKiKP 11 36 53.8 +1.1
baz=136
FINES FINESS Array B 124.53 29 PKP PKPdf 11 36 52.1 -0.1
comp=Z,5.5nm,0.8s,baz=116,slow=4.4,SNR=23
FINES FINESS Array B 124.53 29 PKPdf PKPdf 11 36 51.4 -0.8
FINES FINESS Array B 124.53 29*c* *i*PKIKP PKPdf 11 36 51.9 -0.3
FINES pmax pmax
comp=Z,6.0nm,0.8s
FIA1 FINESS Array S 124.53 29 PKPdf PKPdf 11 36 51.6 -0.5
I05D Terrebonne, OR 124.58 299 P PKiKP 11 36 54.9 +1.7
baz=136
K02D Willamette Mer 124.60 296 P PKiKP 11 36 54.1 +0.7
baz=136
J01E Myrtle Point 125.06 297 P PKiKP 11 36 54.9 +0.8
baz=135
I03D Drain, OR 125.14 298 P PKiKP 11 36 55.9 +1.6
baz=135
G05D Wamic, OR 125.21 300 P PKiKP 11 36 55.7 +1.2
baz=135

F04D Rainier, OR 126.65 300 P PKiKP 11 36 58.4 +1.2
baz=134
FAUS Fauske 126.84 21 *e*PKPdf PKiKP 11 36 56.7 +0.3
SUMG Summit 127.26 357 PKPdf PKiKP 11 36 58.5 +0.3
SUMG Summit 127.26 357 PKIKP PKiKP 11 36 58.5 +0.3
STEI Steigen 127.29 20 *e*PKPdf PKiKP 11 36 58.2 +0.4
CMAR Chiang Mai Arr 127.76 114 PKP PKiKP 11 37 00.2 -0.1
comp=Z,3.1nm,0.9s,baz=240,slow=3.5,SNR=13
CMAR Chiang Mai Arr 127.76 114 PKPdf PKiKP 11 37 00.7 +0.3
CMAR Chiang Mai Arr 127.76 114*c* *i*PKIKP PKiKP 11 37 00.6 +0.3
CMAR pmax pmax
comp=Z,3.0nm,0.9s
KLMR Klimovskoe 128.28 36 *e*PKIKP PKPdf 11 36 58.1 -1.3
KLMR pmax pmax
comp=Z,19nm,1.2s
KLMR Klimovskoe 128.28 36 *e*PKPdf PKPdf 11 36 58.1 -1.3
KLMR AMP 11 37 12.6
comp=Z,19nm,1.2s
ABKAR Akbulak array 128.75 57 PKPdf PKPdf 11 37 00.4 -0.2
ABKAR Akbulak array 128.75 57 PKPdf PKiKP 11 37 01.2 -0.1
LLLB Lillooet 129.18 305 PKiKP 11 37 01.9 -0.3
KTK1 Kautokeino 129.87 23 *e*PKPdf PKiKP 11 37 02.8 -0.2
KKAR Karatay Array 130.06 69 PKPdf PKiKP 11 37 03.9 -0.3
KKAR Karatay Array 130.06 69 PKIKP PKiKP 11 37 03.9 -0.3
KIRV Kirov 130.34 43 *i* PKIKP PKiKP 11 37 04.0 -0.1
KSH Kashi 130.63 77 PKP PKiKP 11 37 03.8 -1.0
ARA0 ARCESS Array S 130.79 23 *e*PKPdf PKPdf 11 37 04.3 +0.4
ARCES ARCESS Array B 130.79 23 PKP PKPdf 11 37 03.5 -0.5
comp=Z,15nm,0.9s,baz=232,slow=1.4,SNR=39
ARCES ARCESS Array B 130.79 23 PKPdf PKPdf 11 37 04.2 +0.3
ARCES ARCESS Array B 130.79 23 PKIKP PKPdf 11 37 04.2 +0.3
PRGR Permogore 130.95 38 *e*PKIKP PKPdf 11 37 04.3 -0.1
LVZ Lovozero 131.83 28 PKiKP 11 37 06.8 -0.2
LVZ Lovozero 131.83 28⇑*i*PKIKP PKPdf 11 37 06.1 +0.1
AAK Ala-Archa 131.92 72 *i* PKIKP PKPdf 11 37 07.4 +0.3
ARU Arti 132.75 49 PKPdf PKPdf 11 37 08.3 +0.3
ARU Arti 132.75 49 *i* PKIKP PKPdf 11 37 06.9 -1.1
BJO1 Bjornoya 133.41 17 *e*PKPdf PKiKP 11 37 10.1 +0.1
YKA Yellowknife Ar 133.69 320 PKP PKPdf 11 37 09.2 -0.4
comp=Z,5.3nm,0.8s,baz=121,slow=2.2,SNR=13
YKA PP **PP 11 39 37.0 -2.7**
comp=Z,1.4nm,0.9s,baz=125,slow=6.1,SNR=3.8
YKA Yellowknife Ar 133.69 320 PKPdf PKPdf 11 37 10.0 +0.4
YKA Yellowknife Ar 133.69 320 PKIKP PKPdf 11 37 10.0 +0.4
PZH PanZhiHua 135.79 111 PKP PKiKP 11 37 15.9 -0.6
BRVK Borovoye 136.20 59 PKiKP 11 37 16.2 -0.1
BRVK Borovoye 136.20 59 *i* PKIKP PKPdf 11 37 13.3 -1.3
T35M Bob Quinn 137.00 308 P PKiKP 11 37 17.3 -0.5
baz=123
WRGLY Wrigley 137.46 318 P PKiKP 11 37 17.8 -0.7
baz=122
WRAK Wrangell Islan 137.66 306 P PKiKP 11 37 19.3 +0.2
baz=123
DLBC Dease Lake 137.68 309 PKP PKiKP 11 37 18.3 -0.9
comp=Z,2.7nm,0.9s,baz=95,slow=4.9,SNR=6.8
DLBC Dease Lake 137.68 309 PKPdf PKiKP 11 37 18.7 -0.5
DLBC Dease Lake 137.68 309 P PKiKP 11 37 19.1 -0.1
baz=122
TGTN Hyland Airport 138.52 314 P PKiKP 11 37 20.5 -0.3
baz=120
R33M Jennings River 138.59 310 P PKiKP 11 37 20.5 -0.6
baz=121
MKAR Makanchi Array 138.85 73 PKhKP PKPpre 11 37 12.3
comp=Z,0.9nm,0.9s,baz=342,slow=0.4,SNR=5.8
MKAR PKP **PKPdf 11 37 20.1 +0.3**
comp=Z,2.0nm,0.9s,baz=259,slow=3.2,SNR=8.9
MKAR Makanchi Array 138.85 73 PKPdf PKiKP 11 37 20.9 -1.0
MKAR Makanchi Array 138.85 73 PKIKP PKiKP 11 37 20.9 -1.0
KURK Kurchatov 139.13 66*c* *i*PKIKP PKiKP 11 37 24.0 +1.7
KURK pmax pmax
comp=Z,4.0nm,1.0s
GOMU GeErMu 139.15 94 PKP PKPdf 11 37 20.9 -0.2
GOMU sPKP 11 37 24.3
GOMU AMB AMB
comp=Z,67nm,5.3s
SIT Sitka 139.39 305 P PKiKP 11 37 21.9 -0.7
baz=121
P33M Teslin, Yukon 139.81 311 PKPdf PKPdf 11 37 22.1 +1.0
P33M Teslin, Yukon 139.81 311 P PKPdf 11 37 22.0 +0.9
baz=119,SNR=6.9
P32M Atlin 139.91 309 P PKiKP 11 37 22.5 -1.2
baz=119,SNR=5.6
WMQ Urumqi 140.08 80 *e*PKP PKiKP 11 37 23.8 -0.8
MMPY Sheldon Lake, 140.28 315 P PKiKP 11 37 23.6 -0.8
baz=117
N32M Quiet Lake 140.37 312 P PKPdf 11 37 23.0 +1.0
baz=118
SKAG Skagway 140.57 309 P PKiKP 11 37 23.7 -1.2
baz=118
WHY Whitehorse 140.93 311 P PKiKP 11 37 23.9 +0.7
baz=117
FARO Faro, Yukon 140.97 313 P PKiKP 11 37 25.0 -0.8
baz=116
PLBC Pleasant Camp 141.04 308 P PKiKP 11 37 24.9 -1.0
baz=118
M31M Drury Creek, Y 141.40 313 P PKPdf 11 37 25.1 +1.2
baz=116
O30N Mendenhall 141.51 310 P PKiKP 11 37 25.6 -1.3
baz=116
P30M Million Dollar 141.61 309 P PKPdf 11 37 24.7 +0.4
baz=116
N31M Braeburn, Yuko 141.69 311 PKiKP 11 37 27.1 -0.2
N31M Braeburn, Yuko 141.69 311 P PKPdf 11 37 25.7 +1.3
baz=116
P29M Windy Craggy 141.74 308 P PKPdf 11 37 25.2 +0.6
baz=116
A36M Sachs Harbour 141.95 330 P PKPdf 11 37 25.1 +0.6
baz=111
INK Inuvik 143.37 322 PKhKP PKPpre 11 37 23.6
comp=Z,4.8nm,0.8s,baz=166,slow=26,SNR=9.1
ZAA0 Zalesovo Array 144.05 65 PKPdf PKPbc 11 37 27.0 +0.2
ZALV Zalesovo Beam 144.05 65 PKP PKPbc 11 37 26.8 0.0
comp=Z,7.6nm,0.7s,baz=229,slow=4.2,SNR=20
ZALV Zalesovo Beam 144.05 65 PKPdf PKPab 11 37 26.5 +0.2
ZALV Zalesovo Beam 144.05 65 PKIKP PKPab 11 37 26.5 +0.2
LZH Lanzhou 144.23 103 *e*PKP PKPbc 11 37 28.3 +0.1
GTA Gaotai 144.23 95 *e*PKP PKPbc 11 37 28.1 +0.1
ISLE Juniper Island 144.24 308 PKPdf 11 37 28.5 -0.6
SNH Sunshine Point 144.31 307 PKPdf 11 37 29.0 -0.1
M27K Edge Creek, AK 144.68 311 PKPdf 11 37 29.5 -0.3
M27K Edge Creek, AK 144.68 311 P PKPab 11 37 27.5 -1.1
baz=111,SNR=29
BERG Berg Lake 144.79 307 PKPdf 11 37 29.9 0.0
MCARA McCarthy VSAT 144.84 309 PKPdf PKPdf 11 37 30.3 +0.3
MCARA McCarthy VSAT 144.84 309 P PKPab 11 37 28.4 -0.7
baz=111
BCAR Beaver Creek A 144.88 312 PKPdf PKPab 11 37 28.8 -0.4
L27K Beaver Creek, 144.90 312 PKPab 11 37 29.0 -0.2
L27K Beaver Creek, 144.90 312 P PKPab 11 37 28.4 -0.9
baz=110,SNR=49
KAIM Kayak Island 144.94 306 P PKPbc 11 37 29.6 +0.2
baz=112
HMT Hamilton 145.02 307 PKPab 11 37 29.9 +0.1
EGAK Eagle 145.17 315 P PKPbc 11 37 29.2 -0.9
baz=108
M26K Nabesna, AK 145.19 311 PKPbc 11 37 29.8 -0.5
M26K Nabesna, AK 145.19 311 P PKPbc 11 37 28.4 -1.9
baz=110,SNR=12
K27K Chicken 145.32 314 P PKPbc 11 37 29.6 -0.9
baz=108
BMRM Bremner River 145.41 308 P PKPdf 11 37 30.1 -0.9
baz=111,SNR=20
XAN Xi'an 145.53 111 PKPbc PKPdf 11 37 31.5 -0.6
XAN AMB AMB
comp=Z,210nm,11.3s
XAN LR LR
comp=Z,170nm,19.8s
XAN LR LR
comp=Z,200nm,18.0s
XAN LR LR
comp=Z,270nm,19.4s
L26K Log Cabin Wild 145.54 312 P PKPdf 11 37 30.6 -0.5
baz=109,SNR=24
WHN Wuhan 145.60 121 ⇑PKPbc PKPdf 11 37 31.8 -0.4
I27K Kandik River 145.60 316 P PKPdf 11 37 30.7 -0.5
baz=106
N25K Chitina, Valde 145.63 309 P PKPdf 11 37 31.2 -0.2
baz=110,SNR=12
H27K Steamboat Moun 145.74 317 P PKPdf 11 37 31.4 0.0
baz=106
EYAK Cordova Ski Ar 145.79 307 PKPab 11 37 32.8 +0.2
EYAK Cordova Ski Ar 145.79 307 P PKPdf 11 37 31.4 -0.2
baz=111,SNR=18
G27K Doyon Strip 145.94 318 P PKPdf 11 37 31.8 +0.1
baz=105

J26L Joseph Creek 146.08 314 P PKPdf 11 37 32.6 +0.5
baz=106,SNR=33
SCRK Sand Creek 146.11 313 P PKPdf 11 37 32.5 +0.3
baz=107,SNR=24
I26K Coal Creek Min 146.14 316 P PKPdf 11 37 32.0 -0.1
baz=106
HARP HAARP 146.14 310 P PKPbc 11 37 32.9 -0.3
baz=108
KLU Klutina 146.19 308 P PKPdf 11 37 32.6 +0.3
baz=109,SNR=28
E27K Coleen River 146.24 321 P PKPdf 11 37 32.3 +0.1
baz=102,SNR=7.4
P23K Montague Islan 146.37 305 P PKPdf 11 37 33.1 +0.6
baz=110
RIDG Independent Ri 146.41 312 P PKPdf 11 37 33.1 +0.5
baz=107,SNR=34
PAX Paxson 146.45 311 P PKPbc 11 37 33.6 -0.6
baz=107,SNR=26
M24K Tolsona, Glenn 146.50 309 P PKPbc 11 37 33.9 -0.4
baz=108,SNR=12
GLI Glacier Island 146.52 307 P PKPbc 11 37 33.7 -0.6
baz=109,SNR=15
G26K Porcupine Rive 146.79 318 P PKPdf 11 37 33.8 +0.8
baz=103
K24K Donnelly Dome 146.82 312 P PKPdf 11 37 34.1 +0.8
baz=106,SNR=5.2
J25K Salcha River, 146.86 314 P PKPbc 11 37 34.8 -0.5
baz=105,SNR=11
SCM Sheep Creek Mo 146.93 309 P PKPbc 11 37 35.2 -0.4
baz=108,SNR=15
F26K Sheenjek River 147.08 320 P PKPbc 11 37 35.2 -0.5
baz=101,SNR=7.6
PWL Port Wells 147.09 307 P PKPbc 11 37 35.2 -0.8
baz=109,SNR=13
M23K Glacier View 147.10 308 P PKPbc 11 37 35.2 -0.7
baz=108,SNR=13
PRP Porcupine Dome 147.15 315 P PKPbc 11 37 35.2 -0.9
baz=104
BMAR Burnt Mountain 147.19 319 PKPdf PKPbc 11 37 36.0 -0.2
C27K Jago River 147.25 323 P PKPbc 11 37 35.3 -0.9
baz=99
FYU Fort Yukon 147.26 317 PKPbc 11 37 35.2 -1.0
DHY Denali Highway 147.31 311 P PKPbc 11 37 36.1 -0.7
baz=106,SNR=16
KNK Knik Glacier 147.32 307 P PKPbc 11 37 35.8 -0.8
baz=108
WAT6 Susitna Watana 147.34 310 P PKPbc 11 37 35.6 -1.2
baz=106,SNR=19
SEW Seward 147.37 305 P PKPbc 11 37 35.8 -0.9
baz=109,SNR=12
SML Sawmill 147.38 308 P PKPbc 11 37 35.7 -1.1
baz=107,SNR=9.2
H25K Birch Creek 147.43 317 P PKPbc 11 37 36.2 -0.6
baz=102
HDA Harding Lake 147.47 313 PKPbc 11 37 37.7 +0.8
HDA Harding Lake 147.47 313 P PKPdf 11 37 34.6 +0.3
baz=104,SNR=8.0
IL31 147.53 314 PKPbc 11 37 37.4 +0.4
ILAR Eielson Array 147.53 314 PKPbc PKPbc 11 37 35.9 -1.2
comp=Z,15nm,0.9s,baz=126,slow=1.3,SNR=62
F25K Christian Rive 147.62 319 P PKPbc 11 37 37.4 +0.1
baz=100,SNR=5.8
O22K Cooper Landing 147.62 305 PKPbc 11 37 38.1 +0.8
O22K Cooper Landing 147.62 305 P PKPbc 11 37 36.8 -0.6
baz=108
PMR Palmer 147.68 308 P PKPbc 11 37 36.5 -1.0
baz=107,SNR=6.5
E25K Arctic Village 147.68 320 P PKPbc 11 37 36.9 -0.5
baz=100,SNR=11
WAT1 Susitna Watana 147.76 310 P PKPbc 11 37 36.9 -0.9
baz=106
LYN LuoYang 147.81 114 *e*PKPbc PKPdf 11 37 34.1 -1.7
LYN pPKP PKPbc 11 37 38.3 -0.4
LYN AMB AMB
comp=Z,280nm,11.8s
RC01 Rabbit Creek A 147.81 307 P PKPbc 11 37 37.0 -0.9
baz=107,SNR=8.5
POKR Poker Flat Res 147.84 314 P PKPbc 11 37 36.7 -1.2
baz=103,SNR=8.0
BRSE Bradley Lake S 147.87 304 P PKPdf 11 37 36.3 +1.1
baz=109,SNR=5.8
COLA College 147.96 314 PKPbc 11 37 37.4 -0.8
COLA College 147.96 314 PKP2 PKPbc 11 37 37.4 -0.8
COLA College 147.96 314 P PKPdf 11 37 36.5 +1.5
baz=103
TCOL CIGO, UAF Yank 147.96 314 PKPdf 11 37 38.4 +0.2
TCOL CIGO, UAF Yank 147.96 314 P PKPdf 11 37 36.5 +1.5
baz=103,SNR=10
KDAK Kodiak Island 148.12 300 PKPbc 11 37 38.5 -0.3
KDAK Kodiak Island 148.12 300 PKP2 PKPbc 11 37 38.5 -0.3
KDAK Kodiak Island 148.12 300 P PKPdf 11 37 36.1 +0.6
baz=111
D25K Kavik River 148.15 322 P PKPdf 11 37 36.6 +1.3
baz=97,SNR=6.6
MCK McKinley 148.16 312 P PKPbc 11 37 37.5 -1.3
baz=104,SNR=7.5
G24K Hadweenzic Riv 148.17 317 P PKPbc 11 37 37.1 -1.6
baz=100,SNR=8.4
H24K Noodor Dome 148.17 316 P PKPdf 11 37 36.2 +0.7
baz=101,SNR=8.4
M22K Willow 148.18 308 P PKPbc 11 37 37.3 -1.5
baz=106,SNR=9.8
OHAK Old Harbor 148.28 298 P PKPdf 11 37 37.1 +1.3
baz=111,SNR=12
HOM Homer 148.28 303 P PKPdf 11 37 37.4 +1.6
baz=108
Q20K Shuyak Island 148.31 301 P PKPdf 11 37 37.1 +1.3
baz=110
SUA Susitna One 148.39 307 PKPbc 11 37 40.0 +0.4
SUA Susitna One 148.39 307 P PKPdf 11 37 37.6 +1.5
baz=106
NEA2 Nenana 148.41 313 P PKPbc 11 37 37.9 -1.5
baz=102,SNR=16
CUT Chulitna 148.42 309 P PKPbc 11 37 37.9 -1.5
baz=105,SNR=7.7
F24K Squaw Lake 148.46 319 P PKPbc 11 37 37.8 -1.7
baz=98,SNR=9.4
SII Sitkinak Islan 148.49 297 P PKPdf 11 37 37.9 +1.7
baz=112
I23K Minto, Yukon-K 148.64 314 P PKPdf 11 37 37.8 +1.6
baz=101,SNR=7.4
TRF Thorofare Moun 148.68 311 P PKPdf 11 37 37.1 +0.6
baz=103,SNR=7.0
E24K Your Creek 148.76 320 P PKPdf 11 37 38.3 +1.9
baz=97,SNR=16
H23K Yukon River 148.84 315 P PKPbc 11 37 38.8 -1.7
baz=100,SNR=6.7
O20K Slope Mountain 148.88 304 P PKPbc 11 37 40.3 -0.5
baz=107
CHIR Chirikof Islan 148.97 295 P PKPbc 11 37 40.6 -0.4
baz=112
KTH Kantishna Hill 148.98 311 PKPbc 11 37 40.6 -0.4
D24K Happy Valley 149.00 322 P PKPbc 11 37 40.3 -0.5
baz=95
SPCR Spurr Chakacha 149.00 306 P PKPbc 11 37 39.8 -1.3
baz=106
C24K Franklin Bluff 149.00 323 P PKPbc 11 37 39.6 -1.1
baz=94
NJ2 Nanjing 149.02 125 *e*PKPbc PKPdf 11 37 36.4 -1.5
Q19K Cape Douglas, 149.03 301 P PKPbc 11 37 39.8 -1.4
baz=108
P19K Oil Pt 149.05 303 P PKPdf 11 37 39.4 -1.8
baz=107
BPAW Bear Paw Mtn. 149.12 312 PKPbc 11 37 41.8 +0.5
BPAW Bear Paw Mtn. 149.12 312 P PKPbc 11 37 40.4 -0.8
baz=102,SNR=18
G23K Bananza Creek 149.17 317 P PKPbc 11 37 40.0 -1.4
baz=98,SNR=22
MLY Manley 149.20 314 P PKPdf 11 37 38.5 +1.3
baz=100,SNR=9.0
TOLK Toolik Lake Re 149.22 321 P PKPbc 11 37 40.5 -0.9
baz=95,SNR=20
PPLA Purkeypile 149.40 309 P PKPdf 11 37 40.3 -1.8
baz=103,SNR=19
CAST Castle Rocks 149.46 310 P PKPdf 11 37 39.7 +2.1
baz=102
M20K Styx River 149.59 307 P PKPdf 11 37 40.7 -1.8
baz=104,SNR=15
H22K Ishtalitna Cre 149.60 315 P PKPbc 11 37 41.4 -0.9
baz=98,SNR=14
NRIK Noril'sk 149.60 38 PKPbc PKPbc 11 37 41.2 -1.0
comp=Z,10nm,1.0s,baz=107,slow=1.1,SNR=13
NRIK Noril'sk 149.60 38 PKiKP 11 37 43.2 0.0
NRIK Noril'sk 149.60 38 PKP2 PKiKP 11 37 43.2 0.0
D23K Nanushuk River 149.65 321 P PKPbc 11 37 41.2 -1.2
baz=94,SNR=9.0
CHUM Lake Minchumin 149.66 311 P PKPbc 11 37 41.1 -1.5

baz=101
C23K Itkillik River 149.67 323 P PKPbc 11 37 41.0 -1.4
baz=92,SNR=8.4
O19K Port Alsworth 149.73 304 PKPbc 11 37 42.7 -0.1
O19K Port Alsworth 149.73 304 P PKPdf 11 37 40.2 +2.2
baz=106
I21K Tanana 149.74 314 P PKPbc 11 37 41.3 -1.4
baz=99,SNR=7.2
G22K Bettles 149.78 317 P PKPbc 11 37 41.1 -1.6
baz=96
P18K Big Mountain, 149.94 302 P PKPdf 11 37 40.8 +2.3
baz=107
N19K Bonanza Creek 149.97 305 P PKPdf 11 37 40.9 +2.4
baz=105
R17K Ugashik Creek 149.99 298 P PKPbc 11 37 41.3 -2.2
baz=109,SNR=9.9
O18K Koktuh Hills 150.06 303 P PKPbc 11 37 41.5 -2.1
baz=106
L20K Farewell, AK 150.07 308 P PKPbc 11 37 41.7 -1.9
baz=102,SNR=7.6
F22K John River 150.10 318 P PKPbc 11 37 41.2 -2.4
baz=95,SNR=18
H21K Melozitna Rive 150.15 315 P PKPbc 11 37 42.2 -1.5
baz=98,SNR=18
M19K Big River Lodg 150.18 307 P PKPbc 11 37 41.4 -2.5
baz=103
K20K Telida 150.33 310 P PKPbc 11 37 42.0 -2.2
baz=101,SNR=16
Q16K King Salmon 150.45 300 P PKPdf 11 37 41.5 +2.2
baz=107,SNR=5.3
L19K White Mountain 150.45 307 P PKPdf 11 37 41.8 +2.6
baz=102
P17K Kvichak River 150.49 301 P PKPdf 11 37 41.7 +2.5
baz=106,SNR=10
J20K Nowinta River 150.50 312 P PKPbc 11 37 42.2 -2.3
baz=99,SNR=6.7
G21K Allakaket 150.53 316 P PKPbc 11 37 42.1 -2.5
baz=96
R16K Pilot Point 150.58 298 P PKPbc 11 37 43.5 -1.4
baz=108
F21K Alatna River 150.58 318 P PKPbc 11 37 42.6 -2.1
baz=94
CHGN Chignik 150.60 295 P PKPbc 11 37 43.0 -1.9
baz=110
N18K Kilae Creek 150.60 304 P PKPbc 11 37 43.0 -2.0
baz=104,SNR=6.0
CHNA Chernabura Isl 150.70 292 P PKPbc 11 37 43.0 -2.3
baz=112
BTO Baotou 150.85 103 *e*PKPbc PKPdf 11 37 40.3 -0.3
BTO SS SS 12 00 47.3 +1.9
BTO LR LR
comp=Z,440nm,10.3s
BTO LR LR
comp=Z,760nm,11.1s
O17K Koliganek Bris 150.96 302 P PKPbc 11 37 43.6 -2.1
baz=105,SNR=13
TTA Tatalina 151.12 309 P PKPbc 11 37 43.9 -2.3
baz=100,SNR=6.7
HNS HongShan 151.15 113 ⇓PKPbc PKPbc 11 37 46.1 -0.8
S14K Fog Glacier 151.19 294 P PKPbc 11 37 44.3 -2.3
baz=109
P16K Nushagak River 151.21 300 P PKPbc 11 37 43.8 -2.6
baz=106
SDPT Sand Point 151.36 292 P PKPdf 11 37 43.5 +2.8
baz=111
O16K Kokwok River B 151.41 301 P PKPbc 11 37 44.1 -2.7
baz=104
A21K Barrow 151.62 326 P PKPbc 11 37 45.0 -1.9
baz=84
GCSA Galena City Sc 151.75 312 P PKPbc 11 37 44.7 -2.7
baz=96
MOY Mondy 151.82 77 *e*PKIKP PKPdf 11 37 42.2 +0.4
MOY pmax pmax
comp=Z,45nm,2.0s
HHC Hu-ho-hao-te 151.88 105 *e*PKPbc PKPdf 11 37 40.0 -2.2
N16K Nishlik Lake 151.94 303 P PKPbc 11 37 46.2 -1.8
baz=102,SNR=5.6
ZAK Zakamensk 152.55 81 *e*PKIKP PKPbc 11 37 49.3 -0.5
ZAK pmax pmax
comp=Z,17nm,1.5s
SONM Songino Array 153.10 88 PKP PKPdf 11 37 44.3 +0.5
comp=Z,1.1nm,1.1s,baz=329,slow=1.7,SNR=5.7
SONM PKPbc PKPbc 11 37 50.1 -1.1
comp=Z,4.0nm,0.6s,baz=221,slow=3.4,SNR=22
SONM PKPab PKPab 11 38 02.3 -0.5
comp=Z,7.7nm,0.7s,baz=227,slow=3.2,SNR=16
SONM Songino Array 153.10 88 PKPdf PKPdf 11 37 42.7 -1.1
SONM PKPbc PKPbc 11 37 51.3 +0.1
SONM PKPab PKPab 11 38 02.9 0.0
SONM Songino Array 153.10 88 PKIKP PKPdf 11 37 42.7 -1.1
SONM 11 37 51.3
SONM 11 38 02.9
JSU Suzuyama 153.33 144 PKPdf PKPdf 11 37 42.5 -2.0
JSU PKPab 11 38 03.3 -0.7
ULN Ulaanbaatar 153.50 88 PKPdf PKPdf 11 37 43.3 -1.1
ULN PKPbc *s*PKPbc 11 37 56.4 +2.4
ULN PKPab 11 38 04.9 +0.3
ULN Ulaanbaatar 153.50 88 PKP2 PKPab 11 38 04.9 +0.3
ULN 12 37 43.3
BJI Beijing 153.86 111 PKPbc PKPdf 11 37 45.3 +0.4
IRK Irkutsk 153.91 77 *e*PKIKP PKPdf 11 37 42.7 -2.0
IRK pmax pmax
comp=Z,38nm,3.8s
KSAR Wonju Array Be 157.59 133 PKPdf 11 37 48.0 -2.0
KSAR PKPab PKPab 11 38 21.9 -0.2
KSAR Wonju Array Be 157.59 133 PKP2 PKPab 11 38 21.9 -0.2
KSAR 12 37 48.0
KSRS Korea Array 157.61 133 PKP PKPdf 11 37 50.3 +0.3
comp=Z,1.4nm,0.9s,baz=164,slow=1.4,SNR=6.2
BOD Bodaibo 160.77 67 *e*PKIKP PKPdf 11 37 51.7 -1.4
BOD pmax pmax
comp=Z,25nm,1.6s
CN2 Changchun 161.41 117 *e*PKP PKPdf 11 37 54.1 -0.1
MDJ Mudanjiang 164.07 122 PKP PKPdf 11 37 56.3 -0.5
MDJ PP PP 11 42 35.4 -1.0
MDJ SS SS 12 03 04.0 -2.1
MDJ AMB AMB
comp=Z,310nm,6.5s
MDJ LR LR
comp=Z,210nm,5.3s
MDJ LR LR
comp=Z,120nm,6.4s
MDJ LR LR
comp=Z,260nm,13.2s
KLR Kul'dur 168.23 112 PKP PKPdf 11 37 59.2 -0.7
comp=Z,2.8nm,0.8s,baz=286,slow=2.0,SNR=7.3
KLR PKPab PKPab 11 39 08.7 +0.2
comp=Z,4.5nm,0.9s,baz=244,slow=4.5,SNR=4.7
YSS Yuzh-Sakhalins 171.26 153 *e*PKIKP PKPdf 11 37 53.3 -8.5
SEY Seymchan 171.69 348 PKP PKPdf 11 38 00.7 -0.8
comp=Z,5.1nm,1.1s,baz=1.4,slow=4.1,SNR=3.9

*IDC **20** 11:20:07.7±0.9,54.74S×31.14W,h0km,mb4.5/6, mbtmp4.5/7, ML3.7/1, Error ellipse: s-maj=35.9km s-min=22.0km az=80.0*
*NEIC **20** 11:20:08.7±0.8,54.75S±0.2×31.3W±0.1,h13km±5km, mb4.7/13, Error ellipse: s-maj=22.5km s-min=9.0km az=198.0*
ISC 20 11:20:08.6±0.7,54.7S±0.1×31.3W±0.1,h10km,n31, σ0s84/30,mb4.7/8,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.05**	**276**	Pn	**Pn**	**11 20 56.1**	**-0.7**
EFI	**East Falkland**	**16.28**	**270**	P	**P**	**11 24 00.7**	**+0.6**
EFI				IAmb	IAmb	11 24 12.6	
	comp=Z,118nm,1.4s						
VNA1	**Neumayer--Stat**	**18.96**	**156**	P	**Pn**	**11 24 30.2**	**+0.1**
VNA3	**Neumayer Olymp**	**19.09**	**159**	P	**P**	**11 24 30.6**	**-0.3**
PMSA	**Palmer Station**	**19.10**	**225**	P	**P**	**11 24 31.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=63,slow=6.8,SNR=2.2						
	comp=Z,6.6nm,0.8s						
PMSA	**Palmer Station**	**19.10**	**225**	P	**P**	**11 24 30.8**	**-0.3**
VNA2	**Neumayer--Watz**	**19.36**	**156**	P	**P**	**11 24 34.3**	**+0.3**
SNAA	**Sanae**	**20.95**	**155**	P	**P**	**11 24 50.8**	**-0.5**
SNAA	**Sanae**	**20.95**	**155**	P	**P**	**11 24 50.9**	**-0.4**
	comp=Z,26nm,0.8s,baz=313,slow=9.8,SNR=6.5						
	comp=Z,26nm,0.8s						
SNAA	**Sanae**	**20.95**	**155**	P	**P**	**11 24 51.6**	**+0.3**
SNAA				IAmb	IAmb	11 24 52.1	
	comp=Z,25nm,0.8s						
SMAI	**San Martin Ant**	**21.35**	**217**	P	**P**	**11 24 58.3**	**+2.8**
TROLL	**Troll, Antarti**	**22.51**	**153**	P	**P**	**11 25 07.5**	**-0.6**
GO10	**Punta Arenas**	**23.24**	**257**	P	**P**	**11 25 15.0**	**-0.7**
BELA	**Belgrano 2**	**23.31**	**182**	P	**P**	**11 25 15.7**	**-0.5**
BELA				IAmb	IAmb	11 25 17.9	
	comp=Z,22nm,1.2s						
MG05	**Puerto Natales**	**24.61**	**260**	P	**P**	**11 25 28.6**	**-0.1**
MG05				IAmb	IAmb	11 25 46.7	
	comp=Z,30nm,1.1s						
QSPA	**South Pole Qui**	**35.56**	**180**	P	**P**	**11 27 06.2**	**+0.5**
	comp=Z,13nm,0.8s,baz=131,slow=2.6,SNR=3.6						
	comp=Z,13nm,0.8s						
QSPA	**South Pole Qui**	**35.56**	**180**	P	**P**	**11 27 04.8**	**-0.9**
QSPA				IAmb	IAmb	11 27 06.7	
	comp=Z,17nm,0.9s						
MAW	**Mawson**	**42.62**	**146**	P	**P**	**11 28 04.5**	**+0.1**
	comp=Z,7.0nm,0.9s,baz=238,slow=11,SNR=3.4						
	comp=Z,7.0nm,0.9s						
MAW	**Mawson**	**42.62**	**146**	P	**P**	**11 28 04.3**	**0.0**
PB01	**IPOC Station P**	**44.20**	**304**	P	**P**	**11 28 16.8**	**-1.0**
LPAZ	**La Paz**	**47.68**	**309**	P	**P**	**11 28 47.9**	**+2.0**
	comp=Z,3.6nm,0.5s,baz=93,slow=3.9,SNR=2.6						
	comp=Z,3.6nm,0.5s						
VNDA	**Vanda**	**47.79**	**184**	P	**P**	**11 28 45.9**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=214,slow=4.9,SNR=4.3						
	comp=Z,5.8nm,0.8s						
VNDA	**Vanda**	**47.79**	**184**	P	**P**	**11 28 45.7**	**+0.3**
VNDA				IAmb	IAmb	11 28 46.3	
	comp=Z,5.4nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.13**	**34**	P	**P**	**11 31 38.2**	**-0.9**
TOA0				IAmb	IAmb	11 32 05.2	
	comp=Z,5.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.13**	**34**	P	**P**	**11 31 39.7**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=213,slow=6.5,SNR=3.0						
	comp=Z,1.8nm,0.8s						
LTZ	**Lake Taylor**	**80.83**	**197**	P	**P**	**11 32 21.6**	**-0.7**
FINES	**FINESS Array B**	**124.32**	**29**	PKP	**PKiKP**	**11 39 06.3**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=186,slow=3.5,SNR=5.6						
ARCES	**ARCESS Array B**	**130.58**	**23**	PKP	**PKiKP**	**11 39 18.5**	**-0.3**
	comp=Z,6.6nm,0.7s,baz=222,slow=1.6,SNR=5.2						
ZALV	**Zalesovo Beam**	**143.89**	**64**	PKhKP	PKPpre	11 39 39.5	
	comp=Z,1.8nm,0.5s,baz=209,slow=3.3,SNR=3.2						
ILAR	**Eielson Array**	**147.47**	**314**	PKPbc	**PKPbc**	**11 39 51.6**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=129,slow=1.9,SNR=5.4						
SONM	**Songino Array**	**153.00**	**87**	PKPbc	**PKiKP**	**11 40 05.5**	**0.0**
	comp=Z,2.3nm,0.6s,baz=223,slow=3.2,SNR=4.4						

*IDC **20** 11:26:26.3±0.6,54.78S×31.23W,h0km,mb4.4/11, mbtmp4.4/11, Error ellipse: s-maj=26.4km s-min=15.0km az=71.0*
*NEIC **20** 11:26:29.0±1.0,54.9S±0.1×31.3W±0.2,h13km±5km, mb4.6/14, Error ellipse: s-maj=16.8km s-min=14.1km az=217.0*
ISC 20 11:26:27.7±0.5,54.81S±0.08×31.30W±0.10,h10km,n45, σ0s66/38,mb4.6/17,2C-1D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.07**	**278**		**Pn**	**11 27 15.4**	**-0.8**
VNA1	**Neumayer--Stat**	**18.86**	**156**	P	**Pn**	**11 30 48.1**	**0.0**
VNA3	**Neumayer Olymp**	**18.98**	**158**	P	**P**	**11 30 49.0**	**0.0**
VNA2	**Neumayer--Watz**	**19.25**	**156**	P	**P**	**11 30 51.9**	**0.0**
	baz=314,slow=12						
SNAA	**Sanae**	**20.85**	**155**	P	**P**	**11 31 09.4**	**0.0**
SNAA	**Sanae**	**20.85**	**155**	P	**P**	**11 31 09.5**	**+0.2**
	19nm,0.8s,baz=312,slow=9.6,SNR=37						
	19nm,0.8s						
SNAA	**Sanae**	**20.85**	**155**	P	**P**	**11 31 09.0**	**-0.3**
SNAA				IAmb	IAmb	11 31 13.7	
	comp=Z,24nm,0.9s						
TROLL	**Troll, Antarti**	**22.41**	**153**	P	**P**	**11 31 25.9**	**-0.3**
BELA	**Belgrano 2**	**23.20**	**182**	P	**P**	**11 31 34.6**	**+0.3**
MG05	**Puerto Natales**	**24.60**	**260**	P	**P**	**11 31 46.8**	**-1.0**
MG05				IAmb	IAmb	11 32 15.3	
	comp=Z,18nm,1.1s						
QSPA	**South Pole Qui**	**35.45**	**180**	P	**P**	**11 33 24.5**	**+0.7**
	comp=Z,10nm,0.8s,baz=212,slow=2.1,SNR=23						
	comp=Z,10nm,0.8s						
QSPA	**South Pole Qui**	**35.45**	**180**	P	**P**	**11 33 24.6**	**+0.7**
QSPA				IAmb	IAmb	11 33 27.8	
	comp=Z,12nm,0.8s						
BDFB	**Brasilia**	**41.18**	**335**	P	**P**	**11 34 13.3**	**+0.8**
	comp=Z,5.1nm,0.8s,baz=159,slow=6.9,SNR=5.3						
	comp=Z,5.1nm,0.8s						
MAW	**Mawson**	**42.52**	**146**	P	**P**	**11 34 23.1**	**+0.4**
	comp=Z,8.8nm,0.9s,baz=239,slow=7.7,SNR=16						
	comp=Z,6.8nm,0.9s						
MAW	**Mawson**	**42.52**	**146**	P	**P**	**11 34 23.1**	**+0.4**
LVC	**Limon Verde**	**42.65**	**304**	P	**P**	**11 34 25.7**	**+1.0**
LVC				IAmb	IAmb	11 34 30.2	
	comp=Z,8.9nm,0.9s						
PTLB	**Pontes e Lacer**	**44.80**	**320**	P	**P**	**11 34 42.0**	**+0.3**
PTLB				IAmb	IAmb	11 34 42.7	
	comp=Z,7.7nm,1.0s						
SIV	**San Ignacio**	**45.05**	**318**	P	**P**	**11 34 43.3**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=235,slow=6.3,SNR=4.2						
	comp=Z,1.3nm,0.8s						
SBA	**Scott Base**	**47.13**	**185**	P	**P**	**11 35 00.1**	**+0.8**
SBA				IAmb	IAmb	11 35 00.8	
	comp=Z,5.8nm,1.1s						
VNDA	**Vanda**	**47.68**	**184**	P	**P**	**11 35 04.1**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=182,slow=6.1,SNR=22						
	comp=Z,4.5nm,0.8s						
VNDA	**Vanda**	**47.68**	**184**	P	**P**	**11 35 04.0**	**+0.3**
VNDA				IAmb	IAmb	11 35 04.8	
	comp=Z,5.5nm,0.8s						
LPAZ	**La Paz**	**47.76**	**309**	P	**P**	**11 35 06.4**	**+0.8**
	comp=Z,5.2nm,0.6s,baz=184,slow=6.9,SNR=11						
	comp=Z,5.2nm,0.6s						
LPAZ	**La Paz**	**47.76**	**309**	P	**P**	**11 35 06.4**	**+0.8**
LPAZ				IAmb	IAmb	11 35 20.8	
	comp=Z,6.5nm,0.7s						
BOSA	**Boshof**	**48.01**	**81**	P	**P**	**11 35 05.5**	**-1.5**
H10N1	**ASCENSION HYDR**	**48.73**	**22**	T	T	12 27 50.8	
	baz=193						
H10N3	**ASCENSION HYDR**	**48.73**	**22**	T	T	12 27 51.6	
	baz=193						
H10N2	**ASCENSION HYDR**	**48.75**	**22**	T	T	12 27 50.4	
	baz=193						
TSUM	**Tsumeb**	**51.22**	**66**	P	**P**	**11 35 31.8**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=203,slow=13,SNR=1.8						
	comp=Z,1.0nm,0.6s						
LIC	**Lamto**	**64.64**	**29**	⇓*e*P	P	11 37 16.9	+11
	comp=Z,36nm,0.9s						
KIC	**Kosan Boka**	**64.85**	**29**	⇑*i*P	P	11 37 18.4	+12
	comp=Z,7.9nm,0.8s						
TIC	**Toumodi**	**65.05**	**29**	⇑*e*P	P	11 37 19.1	+11
	comp=Z,12nm,0.8s						
DBIC	**Dimbokro**	**65.11**	**29**	P	**P**	**11 37 08.4**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=190,slow=6.1,SNR=3.6						
	comp=Z,2.0nm,0.5s						
BIRV	**Birongo**	**71.38**	**323**	P	**P**	**11 37 48.7**	**+0.9**
SDV	**Santo Domingo**	**71.50**	**319**	P	**P**	**11 37 48.6**	**-0.2**
	comp=Z,4.6nm,0.4s,baz=270,slow=1.0,SNR=4.9						
	comp=Z,4.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**73.22**	**34**	P	**P**	**11 37 58.9**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=202,slow=6.2,SNR=10						
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.22**	**34**	P	**P**	**11 37 59.5**	**+0.7**
LTZ	**Lake Taylor**	**80.72**	**197**	P	**P**	**11 38 40.2**	**-0.7**
ASAR	**Alice Springs**	**100.82**	**166**	P	**Pdif**	**11 40 15.1**	**-1.7**
	comp=Z,2.3nm,0.6s,baz=178,slow=4.3,SNR=4.3						
FINES	**FINESS Array B**	**124.41**	**29**	PKP	**PKPdf**	**11 45 24.9**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=223,slow=2.3,SNR=4.7						
CMAR	**Chiang Mai Arr**	**127.70**	**114**	PKP	**PKiKP**	**11 45 33.6**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=193,slow=3.6,SNR=4.5						
ARCES	**ARCESS Array B**	**130.68**	**23**	PKP	**PKPdf**	**11 45 37.0**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=219,slow=1.6,SNR=9.3						
YKA	**Yellowknife Ar**	**133.70**	**320**	PKP	**PKPdf**	**11 45 42.5**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=113,slow=1.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**143.93**	**64**	PKP	PKPab	11 45 59.3	-0.1
	comp=Z,2.2nm,0.6s,baz=226,slow=5.7,SNR=6.7						
ILAR	**Eielson Array**	**147.55**	**314**	PKPbc	**PKPbc**	**11 46 10.2**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=127,slow=1.7,SNR=28						
SONM	**Songino Array**	**153.00**	**87**	PKPbc	**PKPbc**	**11 46 24.1**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=227,slow=3.0,SNR=11						

*BJI **20** 11:27:15.3±0.0,55.03S×32.11W,h10km,mB5.3/3, Ms5.3/7,Ms7 5.2/7*
*IDC **20** 11:27:17.1±0.4,54.81S×31.30W,h0km,mb4.7/18, mbtmp4.8/19,ML3.9/1,MS4.4/3, Error ellipse: s-maj=16.2km s-min=12.1km az=46.0*
*MOS **20** 11:27:18.7±1.2,54.92S×31.52W,h19km,mb5.4/12, Error ellipse: s-maj=20.2km s-min=12.7km az=112.8*
*NEIC **20** 11:27:19.1±1.6,54.87S±0.09×31.5W±0.1,h10km±1km, mb5.3/50, Error ellipse: s-maj=15.7km s-min=13.9km az=212.0*
*GCMT **20** 11:27:24.0±0.2,54.83S±0.01×31.11W±0.04,h12km, MW5.1/127, Moment Tensor Solution. s33,c36; s127,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.60±.10; $M_{\theta\theta}$=4.20±.10; $M_{\phi\phi}$=0.39±.10; $M_{r\theta}$=2.90±.42; $M_{r\phi}$=-0.40±.10; $M_{\theta\phi}$=-0.84±.52; Best double couple: M_o=5.35200×10^{16} NP1,φs=281.00000°,δ62.00000°, λ=-85.00000°. NP2:φs=91.00000°,δ28.00000°,λ=-99.00000°. Principal axes: T 5.1520, Plg17.0000°, Azm8.0000°; N 0.3960, Plg4.0000°, Azm99.0000°; P -5.5510, Plg72.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 11:27:18.4±0.3,54.84S±0.06×31.39W±0.06,h10km,n433, σ0s73/429,mb5.2/42,MS4.4/3,3C-3D,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.02**	**279**	Pn	**Pn**	**11 28 05.8**	**-0.5**
HOPE	**Hope Point**	**3.02**	**279**	P	**Pn**	**11 28 05.8**	**-0.5**
ORCD	**Orcadas**	**9.25**	**225**	Pn	**Pn**	**11 29 30.9**	**-0.8**
EFI	**East Falkland**	**16.23**	**270**	P	**P**	**11 31 10.5**	**+1.1**
EFI	**East Falkland**	**16.23**	**270**	*i* P	**Pn**	**11 31 04.9**	**-1.4**
EFI				pmax	pmax		
	comp=Z,47nm,1.0s						
VNA1	**Neumayer--Stat**	**18.84**	**156**	P	**Pn**	**11 31 40.3**	**+1.7**
VNA1	**Neumayer--Stat**	**18.84**	**156**	PcP	**PcP**	**11 36 04.8**	**+0.7**
PMSA	**Palmer Station**	**18.96**	**225**	P	**Pn**	**11 31 40.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=61,slow=4.9,SNR=4.6						
	comp=Z,17nm,0.9s						
PMSA	**Palmer Station**	**18.96**	**225**	*e*P	**P**	**11 31 38.8**	**-0.7**
VNA3	**Neumayer Olymp**	**18.96**	**158**	P	**Pn**	**11 31 41.5**	**+1.4**
VNA3	**Neumayer Olymp**	**18.96**	**158**	PcP	**PcP**	**11 36 04.5**	**+0.1**
VNA2	**Neumayer--Watz**	**19.24**	**156**	P	**Pn**	**11 31 43.9**	**+0.4**
	baz=317,slow=12						
VNA2	**Neumayer--Watz**	**19.24**	**156**	PcP	**PcP**	**11 36 04.7**	**-0.1**
	baz=326,slow=5.0						
SNAA	**Sanae**	**20.84**	**155**	P	**P**	**11 32 00.1**	**+0.2**
SNAA	**Sanae**	**20.84**	**155**	PcP	**PcP**	**11 36 07.8**	**-0.1**
SNAA	**Sanae**	**20.84**	**155**	P	**P**	**11 31 59.6**	**-0.3**
	comp=Z,70nm,0.9s,baz=314,slow=9.6,SNR=24						
SNAA				PcP	**PcP**	**11 36 08.2**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=189,slow=3.3,SNR=4.4						
SNAA				LR	LR	11 38 15.8	
	comp=Z,1μm,20.2s,baz=282,slow=32						
	comp=Z,70nm,0.9s						
SNAA	**Sanae**	**20.84**	**155**	P	**P**	**11 32 00.4**	**+0.5**
SNAA				IAmb	IAmb	11 32 15.7	
	comp=Z,311nm,1.4s						
SNAA	**Sanae**	**20.84**	**155**	P	**P**	**11 32 00.4**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,311nm,1.4s						
USHA	**Ushuaia**	**21.18**	**255**	P	**P**	**11 32 03.6**	**0.0**
	comp=Z,26nm,0.7s,baz=94,slow=9.6,SNR=5.1						
	comp=Z,26nm,0.7s						
SMAI	**San Martin Ant**	**21.21**	**217**	P	**P**	**11 32 05.2**	**+1.4**
TROLL	**Troll, Antarti**	**22.40**	**153**	P	**P**	**11 32 16.9**	**+0.1**
BELA	**Belgrano 2**	**23.16**	**182**	P	**P**	**11 32 24.5**	**0.0**
BELA				IAmb	IAmb	11 32 27.4	
	comp=Z,170nm,1.5s						
MG05	**Puerto Natales**	**24.54**	**260**	P	**P**	**11 32 37.0**	**-1.0**
MG05				IAmb	IAmb	11 33 05.9	
	comp=Z,86nm,1.4s						
NVL	**N'lazarevskaya**	**24.59**	**147**	*e*P	**P**	**11 32 36.9**	**-1.3**
NVL				pmax	pmax		
	comp=Z,95nm,1.2s						
PLTB	**Pedras Altas**	**27.94**	**317**	P	**P**	**11 33 09.4**	**+0.6**
PLTB	**Pedras Altas**	**27.94**	**317**	*e*P	**P**	**11 33 09.4**	**+0.6**
CPSB	**Cacapava Do Su**	**29.08**	**318**	*e*P	**P**	**11 33 20.3**	**+1.4**
PLCA	**Paso Flores**	**29.42**	**282**	P	**P**	**11 33 21.4**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=125,slow=6.2,SNR=5.4						
	comp=Z,2.9nm,0.8s						
PLCA	**Paso Flores**	**29.42**	**282**	P	**P**	**11 33 20.9**	**-1.1**
PLCA	**Paso Flores**	**29.42**	**282**	P	**P**	**11 33 20.9**	**-1.1**
PLCA				pmax	pmax		
	comp=Z,35nm,1.5s						
PLCA	**Paso Flores**	**29.42**	**282**	*e*P	**P**	**11 33 23.2**	**+1.2**
RODS	**Rosario do Sul**	**29.83**	**315**	*e*P	**P**	**11 33 26.0**	**+0.5**
ALGR	**Alto Alegre (B**	**30.37**	**320**	*e*P	**P**	**11 33 31.5**	**+1.1**
UNIS	**Unistalda (Bra**	**30.91**	**317**	*e*P	**P**	**11 33 36.3**	**+1.2**
CRSM	**Crissiumal (Br**	**31.92**	**320**	*e*P	**P**	**11 33 44.7**	**+0.7**
PET01	**Itanhaem-SP**	**32.72**	**332**	*e*P	**P**	**11 33 50.9**	**-0.1**
FRBT	**Francisco Belt**	**32.95**	**322**	*e*P	**P**	**11 33 55.0**	**+1.9**
MAN01	**Angra dos Reis**	**33.30**	**339**	*e*P	**P**	**11 33 57.6**	**+1.5**
PTGB	**Pitanga**	**33.76**	**325**	*e*P	**P**	**11 34 01.7**	**+1.4**
VAO	**Valinhos**	**33.87**	**334**	*e*P	**P**	**11 34 03.5**	**+2.3**
GO05	**Huala**	**34.24**	**288**	P	**P**	**11 34 03.7**	**-0.6**
GO05				IAmb	IAmb	11 34 17.3	
	comp=Z,109nm,1.9s						
CPUP	**Villa Florida**	**34.24**	**316**	P	**P**	**11 34 04.0**	**-0.3**
	comp=Z,3.8nm,0.5s,baz=158,slow=7.5,SNR=9.7						
	comp=Z,3.8nm,0.5s						
MT09	**Talagante**	**34.65**	**291**	P	**P**	**11 34 07.3**	**-0.7**
VA03	**San Esteban**	**35.19**	**293**	P	**P**	**11 34 14.5**	**+1.9**
VA03				IAmb	IAmb	11 34 32.8	
	comp=Z,36nm,0.9s						
BSCB	**Bom Sucesso**	**35.28**	**338**	*e*P	**P**	**11 34 13.8**	**+0.4**
QSPA	**South Pole Qui**	**35.41**	**180**	P	**P**	**11 34 15.5**	**+1.3**
	comp=Z,39nm,1.0s,baz=180,slow=4.0,SNR=21						
	comp=Z,39nm,1.0s						
QSPA	**South Pole Qui**	**35.41**	**180**	P	**P**	**11 34 14.3**	**+0.1**
VA06	**Catapilco**	**35.75**	**292**	P	**P**	**11 34 16.6**	**-0.7**
BB19B	**Bebedouro**	**36.13**	**332**	*e*P	**P**	**11 34 21.7**	**+1.1**
PCMB	**Pacaembu**	**36.41**	**328**	*e*P	**P**	**11 34 23.7**	**+0.8**
SJMB	**Sao Joao De Ma**	**36.85**	**344**	*e*P	**P**	**11 34 27.2**	**+0.5**
NAN01	**Guarapari, ES**	**37.54**	**346**	*e*P	**P**	**11 34 32.9**	**+0.3**
ANTJ	**Antonio Joao (**	**37.65**	**321**	*e*P	**P**	**11 34 32.9**	**-0.7**
DIAM	**Diamantina, MG**	**37.68**	**341**	*e*P	**P**	**11 34 34.9**	**+1.0**
ITRB	**Iturama**	**37.93**	**330**	*e*P	**P**	**11 34 37.7**	**+1.8**
PMNB	**Patos De Minas**	**38.03**	**336**	*e*P	**P**	**11 34 37.9**	**+1.1**
AQDB	**Aquidauana**	**38.93**	**322**	*e*P	**P**	**11 34 45.8**	**+1.5**
IPMB	**Ipameri, GO**	**38.99**	**334**	*e*P	**P**	**11 34 45.4**	**+0.5**
MC01	**Montes Claros**	**39.28**	**341**	*e*P	**P**	**11 34 47.6**	**+0.3**
C2SB	**Chapadao do Su**	**39.56**	**327**	*e*P	**P**	**11 34 50.5**	**+0.9**
JANB	**Januaria**

comp=Z,45nm,1.4s
SBA Scott Base 47.09 185 P P 11 35 50.5 +0.7
SBA pmax pmax
comp=Z,45nm,1.4s
VILB Vilhena 47.49 320 P P 11 35 53.3 -0.3
VILB IAmb IAmb 11 36 17.0
comp=Z,126nm,1.9s
VILB Vilhena 47.49 320 eP P 11 35 54.7 +1.1
PDRB Porto dos Gac 47.52 325 eP P 11 35 53.5 -0.3
VNDA Vanda 47.64 184 P P 11 35 54.8 +0.7
comp=Z,13nm,1.1s,baz=180,slow=7.1,SNR=13
comp=Z,13nm,1.1s
VNDA Vanda 47.64 184 P P 11 35 54.8 +0.7
VNDA IAmb IAmb 11 35 56.0
comp=Z,26nm,1.3s
VNDA Vanda 47.64 184 P P 11 35 54.8 +0.7
VNDA pmax pmax
comp=Z,27nm,1.3s
SMTB Santa Maria do 47.65 338 eP P 11 35 55.9 +1.2
H10S2 ASCENSION HYDR 47.67 23 T T 12 27 16.6
baz=193,slow=74,SNR=7.2
H10S3 ASCENSION HYDR 47.67 23 T T 12 27 16.6
baz=27,slow=74,SNR=8.4
LPAZ La Paz 47.74 309 P P 11 35 57.2 +1.0
comp=Z,15nm,0.7s,baz=130,slow=6.5,SNR=11
comp=Z,15nm,0.7s
LPAZ La Paz 47.74 309 P P 11 35 56.4 +0.2
LPAZ La Paz 47.74 309 P P 11 35 56.4 +0.2
LPAZ pmax pmax
comp=Z,232nm,1.9s
LPAZ La Paz 47.74 309 eP P 11 35 57.5 +1.3
CLDB Colider 47.91 327 eP P 11 35 56.7 -0.1
BOSA Boshof 48.07 81 P P 11 35 57.8 -0.3
comp=Z,5.3nm,0.8s,baz=216,slow=9.4,SNR=5.6
comp=Z,5.3nm,0.8s
H10N1 ASCENSION HYDR 48.78 23 T T 12 28 37.1
baz=192,slow=75,SNR=8.1
H10N3 ASCENSION HYDR 48.78 22 T T 12 28 40.4
baz=192,slow=75,SNR=17
H10N2 ASCENSION HYDR 48.80 23 T T 12 28 39.8
baz=192,slow=75,SNR=17
PRPB Parauapebas 50.75 336 eP P 11 36 19.4 +0.9
LBTB Lobatse 51.02 78 P P 11 36 19.5 -1.2
LBTB IAmb IAmb 11 36 32.8
comp=Z,39nm,1.1s
LBTB Lobatse 51.02 78 P P 11 36 19.5 -1.2
LBTB pmax pmax
comp=Z,39nm,1.1s
TSUM Tsumeb 51.28 66 P P 11 36 22.7 +0.1
comp=Z,3.5nm,0.6s,baz=188,slow=7.7,SNR=12
comp=Z,3.5nm,0.6s
TSUM Tsumeb 51.28 66 P P 11 36 22.8 +0.1
NPGB Novo Progresso 51.39 329 eP P 11 36 23.4 +0.1
ETMB Extrema 52.69 315 P P 11 36 32.7 -0.3
ETMB IAmb IAmb 11 36 57.8
comp=Z,43nm,1.6s
ETMB Extrema 52.69 315 eP P 11 36 33.6 +0.6
ROSB Rosrio 52.81 344 eP P 11 36 34.6 +0.7
ITTB Itaituba 54.05 329 eP P 11 36 42.9 0.0
MALB Monte Alegre 56.03 332 eP P 11 36 58.7 +1.5
MACA Manacapuru-AM 56.75 324 P P 11 37 01.3 -1.1
MACA IAmb IAmb 11 37 26.2
comp=Z,144nm,1.7s
MACA Manacapuru-AM 56.75 324 eP P 11 37 01.5 -0.9
MCPB Macapa, AP 56.89 335 eP P 11 37 04.0 +0.6
CZSB Cruzeiro do Su 57.35 309 P P 11 37 05.3 -1.4
CZSB IAmb IAmb 11 37 20.6
comp=Z,32nm,1.0s
CZSB Cruzeiro do Su 57.35 309 eP P 11 37 06.2 -0.5
LSZ Lusaka 60.25 73 P P 11 37 26.4 -0.6
LSZ IAmb IAmb 11 37 39.2
comp=Z,25nm,1.1s
LSZ Lusaka 60.25 73 P P 11 37 26.4 -0.6
LSZ pmax pmax
comp=Z,25nm,1.2s
ATAH Atahualpa 60.52 304 P P 11 37 31.1 +1.9
comp=Z,5.1nm,0.8s,baz=148,slow=3.7,SNR=6.1
comp=Z,5.1nm,0.8s
BOAV Boa Vista 61.91 327 P P 11 37 37.4 -0.6
BOAV IAmb IAmb 11 38 02.1
comp=Z,38nm,1.5s
BOAV Boa Vista 61.91 327 eP P 11 37 38.0 -0.1
BOSC San Juan Bosco 64.05 306 P P 11 37 51.8 -0.7
BOSC IAmb IAmb 11 38 18.2
comp=Z,42nm,1.5s
ARNL Arenillas 64.45 304 P P 11 37 53.6 -1.4
LIC Lamto 64.70 29⇓ eP P 11 37 55.8 -0.7
comp=Z,60nm,0.9s
KIC Kosan Boka 64.91 29⇑ iP P 11 37 57.5 -0.4
comp=Z,14nm,0.7s
TIC Toumodi 65.10 29⇓ eP P 11 37 58.6 -0.6
comp=Z,36nm,0.8s
DBIC Dimbokro 65.17 29 P P 11 37 59.4 -0.2
comp=Z,6.4nm,0.7s,baz=204,slow=6.7,SNR=5.9
comp=Z,6.4nm,0.7s
PORT Chimborazo Vol 65.66 306 P P 11 38 04.7 +1.1
CHSH Refugio Sur-Vo 65.68 306 P P 11 38 03.9 +0.2
CHSH IAmb IAmb 11 38 08.8
comp=Z,43nm,1.0s
SLOR San Lorenzo - 66.17 307 P P 11 38 07.6 +0.8
OTAV Otavalo 67.01 307 P P 11 38 13.3 +1.3
OTAV IAmb IAmb 11 38 18.1
comp=Z,28nm,1.2s
OTAV Otavalo 67.01 307 P P 11 38 13.3 +1.3
OTAV pmax pmax
comp=Z,28nm,1.2s
OTAV Otavalo 67.01 307 eP P 11 38 12.2 +0.2
TULM Tulcn-Chalpat 67.13 308 P P 11 38 13.2 +0.4
ROSC El Rosal 69.29 313 P P 11 38 26.1 -0.2
comp=Z,9.6nm,0.4s,baz=193,slow=7.5,SNR=5.7
comp=Z,9.6nm,0.4s
ROSC El Rosal 69.29 313 P P 11 38 26.0 -0.2
ROSC IAmb IAmb 11 38 30.7
comp=Z,28nm,1.0s
ROSC El Rosal 69.29 313 P P 11 38 26.0 -0.2
ROSC pmax pmax
comp=Z,28nm,1.0s
BAUV El Baul 70.58 321 P P 11 38 33.1 -0.6
BIRV Birongo 71.38 324 P P 11 38 39.3 +0.9
BIRV IAmb IAmb 11 39 02.1
comp=Z,50nm,1.3s
SDV Santo Domingo 71.49 319 P P 11 38 39.6 +0.2
comp=Z,21nm,0.7s,baz=204,slow=3.5,SNR=9.3
comp=Z,21nm,0.7s
SDV Santo Domingo 71.49 319 P P 11 38 39.0 -0.4
SDV Santo Domingo 71.49 319 eP P 11 38 39.4 0.0
KOWA Kowa 72.87 28 P P 11 38 47.8 +0.4
KOWA IAmb IAmb 11 39 12.2
comp=Z,52nm,1.6s
TOA0 Torodi Ar. Sit 73.28 34 P P 11 38 48.0 -1.8
TOA0 IAmb IAmb 11 39 24.3
comp=Z,67nm,1.8s
TORD Torodi Ar. Bea 73.28 34 P P 11 38 50.0 +0.2
comp=Z,3.5nm,0.6s,baz=196,slow=6.2,SNR=14
comp=Z,3.5nm,0.6s
TORD Torodi Ar. Bea 73.28 34 P P 11 38 48.3 -1.5
TORD IAmb IAmb 11 39 02.3
comp=Z,37nm,1.5s
MBAR Mbarara 73.80 67 P P 11 38 55.4 +2.1
MBAR Mbarara 73.80 67 iP P 11 38 55.1 +1.9
MBAR pmax pmax
comp=Z,18nm,1.5s
KMBO Kilima Mbogo 76.91 73 iP P 11 39 12.2 +1.0
SRBA San Rafael, Bu 77.19 307 P P 11 39 12.8 +0.3
SRBA IAmb IAmb 11 39 18.2
comp=Z,36nm,1.4s
RIMA Rio Macho 77.89 307 P P 11 39 16.3 -0.3
RIMA IAmb IAmb 11 39 29.7
comp=Z,36nm,1.5s
JTS Las Juntas de 78.86 306 P P 11 39 21.8 +0.1
JTS Las Juntas de 78.86 306 iP P 11 39 20.7 -1.0
JTS pmax pmax
comp=Z,61nm,1.8s
ACON Acoyapa 80.43 307 P P 11 39 29.2 -0.9
ACON IAmb IAmb 11 39 30.9
comp=Z,60nm,1.2s
MATN Matagalpa 81.62 307 P P 11 39 36.5 -0.1
ASAR Alice Springs 100.80 166 P Pdif 11 41 05.7 -1.7
comp=Z,0.6nm,0.7s,baz=187,slow=4.2,SNR=4.4
ASAR PP PP **11 45 10.8 -3.1**
comp=Z,2.4nm,0.9s,baz=188,slow=7.2,SNR=8.5
TXAR Lajitas Array 104.12 301 PKKPbc PKKPbc 11 57 09.4 +0.7
comp=Z,0.6nm,0.8s,baz=221,slow=1.0,SNR=6.7
WRA Warramunga Arr 104.52 166 PP **PKiKP 11 45 40.5 +0.6**
comp=Z,3.0nm,1.0s,baz=187,slow=6.6,SNR=8.4
BC3 Big Chuckawall 113.59 295 P PKiKP 11 45 57.2 +0.8
baz=141
IRM Iron Mountain 113.81 296 P PKiKP 11 45 58.0 +1.2
baz=141
EYMN Ely 114.21 320 P PKiKP 11 45 59.0 +1.9
baz=147
GMRC Granite Mounta 114.57 296 P PKiKP 11 45 59.5 +1.1
baz=141
O20A White River Ci 115.02 305 P PKiKP 11 46 00.1 +0.9
baz=142
FMP Fort Macarthur 115.13 293 P PKiKP 11 46 00.2 +0.9
baz=140
BFSC Mount Baldy Ra 115.20 294 P PKiKP 11 45 60.0 +0.4
baz=141
MVU Marysvale 115.69 301 PKiKP 11 46 00.9 +0.4
EDW2 Edwards Air Fo 115.87 294 P PKiKP 11 46 01.7 +1.0
baz=140
TCRU Three Creeks R 115.88 301 PKPdf 11 46 00.0 -0.9
GWY Greenwater Val 116.17 296 PKiKP 11 46 01.9 +0.4
SBC Santa Barbara 116.44 293 P PKiKP 11 46 02.7 +0.9
baz=140
MPMC Manual Prospec 116.50 295 P PKiKP 11 46 03.1 +0.9
baz=140
PSUT Pine Spring 116.53 300 PKiKP 11 46 02.5 +0.4
TPNV Topopah Spring 116.54 297 P PKiKP 11 46 03.1 +1.0
baz=140
KBZ Khabaz 116.64 51 *i* PKIKP **PKPdf 11 45 59.5 -2.3**
AKASG Malin Array Be 116.68 38 PKP **PKPdf 11 46 00.9 -0.7**
comp=Z,1.0nm,0.6s,baz=240,slow=0.9,SNR=4.2
AKBB Malin Array Si 116.68 38 *i* PKIKP **PKPdf 11 46 01.6 -0.1**
ISA Isabella, Lake 116.72 294 PKPdf **PKiKP 11 46 02.7 +0.3**
ISA Isabella, Lake 116.72 294 PKIKP **PKiKP 11 46 02.7 +0.3**
ISA Isabella, Lake 116.72 294 P PKiKP 11 46 03.0 +0.6
baz=140
KIV Kislovodsk 116.72 51 *e*PKIKP **PKPdf 11 46 02.2 +0.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s
CWC Cottonwood Cre 117.10 295 P PKiKP 11 46 04.2 +1.0
baz=140
SPR3 Spring Creek 3 117.12 300 PKPdf 11 46 03.0 -0.3
GRAC Grapevine Rang 117.15 296 P PKiKP 11 46 04.1 +0.9
baz=140
R11A Troy Canyon, C 117.26 298 P PKiKP 11 46 04.5 +1.1
baz=140
DUG Dugway, Tooele 117.28 302 P PKiKP 11 46 04.3 +0.8
baz=140
HWUT Hardware Ranch 117.75 303 PKPdf **PKiKP 11 46 04.5 +0.1**
NVAR Mina Array Bea 118.72 297 PKP **PKiKP 11 46 07.1 +0.8**
comp=Z,1.0nm,0.8s,baz=149,slow=2.8,SNR=6.7
NVAR PKKPab **PKKPab 11 56 22.6 -0.2**
comp=Z,0.4nm,0.7s,baz=290,slow=3.1,SNR=4.3
LOHW Long Hollow 118.82 305 PKPdf 11 46 06.1 -0.3
ELK Elko 118.90 300 PKPdf **PKPdf 11 46 06.7 +0.1**
ELK Elko 118.90 300 PKIKP **PKPdf 11 46 06.7 +0.1**
MOOW Moose Ponds 118.99 305 PKPdf 11 46 06.1 -0.6
FXWY Fox Creek 119.04 305 PKPdf 11 46 06.5 -0.3
RLMT Red Lodge 119.35 307 P PKiKP 11 46 07.6 +0.2
baz=140
NB2 NORSAR Subarra 120.36 22 PKPdf **PKPdf 11 46 07.9 -0.6**
comp=Z,5.5nm,1.7s,baz=202,slow=1.9
NOA NORSAR Array B 120.36 22 PKP **PKPdf 11 46 08.4 -0.1**
comp=Z,1.5nm,0.8s,baz=209,slow=2.1,SNR=6.4
HLID Hailey 120.61 303 P PKiKP 11 46 10.5 +0.7
baz=138
BOZ Bozeman (W) 120.80 306 P PKiKP 11 46 10.9 +0.8
baz=139
BEKR Beckworth 120.85 296 PKiKP 11 46 10.8 +0.4
EGMT Eagleton 121.76 309 P PKiKP 11 46 12.3 +0.5
baz=138
WVOR Wild Horse Val 121.86 299 PKiKP 11 46 12.4 +0.1
WVOR Wild Horse Val 121.86 299 PKIKP **PKiKP 11 46 12.4 +0.1**
MOD Modoc Plateau 122.32 298 PKiKP 11 46 13.2 0.0
J08A Circle Bar Ran 122.45 300 PKiKP 11 46 13.5 +0.1
MSO Missoula 122.79 306 PKPdf 11 46 13.7 0.0
MSO Missoula 122.79 306 P PKPdf 11 46 13.9 +0.2
baz=137
BMO Blue Mountains 122.97 302 PKPdf 11 46 14.2 +0.1
BMO Blue Mountains 122.97 302 PKIKP **PKPdf 11 46 14.2 +0.1**
L04D Klamath Falls 123.57 297 P PKPdf 11 46 15.2 -0.2
baz=136
K04D Chiloquin, OR 123.58 298 P PKPdf 11 46 15.4 -0.1
baz=136
J05D Fort Rock, OR 123.79 299 P PKPdf 11 46 15.6 -0.2
baz=136
G08A Pilot Rock 124.09 302 PKPdf **PKiKP 11 46 17.1 +0.5**
L02F Cave Junction 124.16 296 P PKiKP 11 46 17.1 +0.5
baz=136
J04D Umpqua Nationa 124.21 298 P PKPdf 11 46 16.7 0.0
baz=136
FINES FINESS Array B 124.47 29 PKP **PKPdf 11 46 15.7 -0.5**
comp=Z,4.0nm,0.6s,baz=159,slow=1.7,SNR=17
FINES FINESS Array B 124.47 29 PKPdf 11 46 15.8 -0.5
FINES FINESS Array B 124.47 29 PKIKP **PKPdf 11 46 15.8 -0.5**
FIA1 FINESS Array S 124.47 29 PKPdf **PKPdf 11 46 16.1 -0.2**
I05D Terrebonne, OR 124.60 299 P PKPdf 11 46 17.4 +0.2
baz=136
K02D Willamette Mer 124.62 296 P PKPdf 11 46 17.3 0.0
baz=136
CMAR Chiang Mai Arr 127.74 114 PKP **PKPdf 11 46 24.0 +0.1**
comp=Z,6.4nm,1.0s,baz=231,slow=3.6,SNR=13
KLMR Klimovskoe 128.22 36 *e*PKIKP **PKPdf 11 46 22.0 -1.4**
KLMR pmax pmax
comp=Z,7.0nm,0.9s
KLMR Klimovskoe 128.22 36 *e*PKPdf **PKPdf 11 46 22.1 -1.4**
KLMR AMP 11 46 35.8
comp=Z,7.0nm,0.9s
ABKAR Akbulak array 128.69 57 PKPdf **PKPdf 11 46 24.3 -0.5**
KKAR Karatay Array 130.00 69 PKPdf **PKPdf 11 46 27.6 +0.1**
KKAR Karatay Array 130.00 69 PKPdf 11 46 27.6 +0.1
KKAR Karatay Array 130.00 69 PKIKP **PKPdf 11 46 27.6 +0.1**
KIRV Kirov 130.28 43 *i* PKIKP **PKiKP 11 46 28.2 -0.1**
KSH Kashi 130.58 76 PKP **PKPdf 11 46 28.8 -0.1**
ARCES ARCESS Array B 130.73 23 PKP **PKPdf 11 46 28.1 0.0**
comp=Z,10nm,0.8s,baz=236,slow=1.3,SNR=24
ARCES ARCESS Array B 130.73 23 PKPdf **PKPdf 11 46 28.2 +0.1**
ARCES ARCESS Array B 130.73 23 PKIKP **PKPdf 11 46 28.2 +0.1**
PRGR Permogore 130.89 38 *e*PKIKP **PKPdf 11 46 28.0 -0.5**
PRGR *e* 11 46 39.6
LVZ Lovozero 131.77 28 PKPdf 11 46 30.1 0.0
LVZ Lovozero 131.77 28 PKIKP **PKPdf 11 46 30.1 0.0**
AAK Ala-Archa 131.86 72 *i* PKIKP **PKPdf 11 46 30.1 -1.2**
ARU Arti 132.69 49 *i* PKIKP **PKPdf 11 46 32.3 +0.2**
ARU 11 48 55.6
ARU SS SS 12 06 43.9 +5.9
YKA Yellowknife Ar 133.69 320 PKP **PKPdf 11 46 33.6 -0.2**
comp=Z,3.2nm,0.8s,baz=131,slow=2.2,SNR=8.3
YKA Yellowknife Ar 133.69 320 PKPdf 11 46 34.2 +0.4
YKA Yellowknife Ar 133.69 320 PKIKP **PKPdf 11 46 34.2 +0.4**
PZH PanZhiHua 135.76 110 PKP **PKiKP 11 46 40.0 -0.6**
BRVK Borovoye 136.14 59 *i* PKIKP **PKPdf 11 46 38.7 0.0**
DLBC Dease Lake 137.69 309 P PKPdf 11 46 41.7 +0.2
baz=122
TGTN Hyland Airport 138.52 314 P PKPdf 11 46 43.2 +0.3
baz=120
R33M Jennings River 138.60 310 P PKPdf 11 46 43.0 -0.2
baz=120
MK31 Makanchi Array 138.79 73 PKPdf **PKiKP 11 46 46.5 +0.5**
MK31 Makanchi Array 138.79 73 *i* PKIKP **PKPdf 11 46 44.9 +1.0**
MKAR Makanchi Array 138.79 73 PKhKP PKPpre 11 46 39.2
comp=Z,1.0nm,0.8s,baz=222,slow=1.6,SNR=5.3
MKAR Makanchi Array 138.79 73 PKPdf **PKiKP 11 46 46.8 +0.7**
MKAR Makanchi Array 138.79 73 PKIKP **PKiKP 11 46 46.8 +0.7**
KURK Kurchatov 139.07 66 *e*PKIKP **PKiKP 11 46 45.8 -0.6**
GOMU GeErMu 139.11 94 PKP **PKiKP 11 46 47.8 +0.3**
GOMU sPKP 11 46 50.9
WMQ Urumqi 140.03 80 *e*PKP **PKiKP 11 46 48.1 -0.6**
DGZ Jazzator, Alta 143.27 72 *i* PKIKP PKPbc 11 46 50.5 +1.4
INK Inuvik 143.37 322 PKhKP PKPpre 11 46 48.5
comp=Z,2.6nm,0.7s,baz=94,slow=1.8,SNR=3.7
ZAA0 Zalesovo Array 144.00 64 PKPab 11 46 50.7 +0.4
ZALV Zalesovo Beam 144.00 64 PKP **PKPab 11 46 50.3 0.0**
comp=Z,5.7nm,0.7s,baz=230,slow=4.3,SNR=11
ZALV Zalesovo Beam 144.00 64 PKPbc 11 46 50.7 -0.1
ZALV Zalesovo Beam 144.00 64 PKIKP PKPbc 11 46 50.7 -0.2
GRNC Granite Creek 144.04 308 PKPbc 11 46 51.2 +0.1
GTA Gaotai 144.19 95 ⇑PKP PKPbc 11 46 52.4 +0.3
LZH Lanzhou 144.19 103 ⇓PKP **PKPdf 11 46 53.8 -0.3**
DAWY Dawson 144.22 314 PKPab 11 46 51.0 +0.1
M27K Edge Creek, AK 144.69 311 PKPbc 11 46 53.0 0.0
M27K Edge Creek, AK 144.69 311 P PKPab 11 46 52.3 -0.6
baz=110,SNR=19
MCARA McCarthy VSAT 144.85 309 P PKPab 11 46 52.9 -0.4
baz=111
BCAR Beaver Creek A 144.89 312 PKPdf **PKPab 11 46 53.3 -0.2**
L27K Beaver Creek, 144.91 312 PKPab 11 46 53.5 -0.1
baz=110,SNR=19
L27K Beaver Creek, 144.91 312 P PKPab 11 46 52.8 -0.8
baz=110,SNR=19
KAIM Kayak Island 144.96 306 P PKPab 11 46 52.9 -0.8
baz=112
HMT Hamilton 145.04 307 PKPdf 11 46 54.4 -0.1
EGAK Eagle 145.18 315 PKPbc 11 46 53.8 -0.5
EGAK Eagle 145.18 315 P PKPbc 11 46 53.5 -0.8
baz=108
M26K Nabesna, AK 145.19 311 P PKPbc 11 46 53.9 -0.6
baz=110,SNR=7.2
GLB Gilahina Butte 145.23 309 PKPbc 11 46 54.7 +0.1
RAGM Ragged Mountai 145.25 307 PKPdf 11 46 55.2 +0.2
K27K Chicken 145.33 314 PKPdf 11 46 55.0 +0.1
K27K Chicken 145.33 314 P PKPbc 11 46 54.8 0.0
baz=108
BMRM Bremner River 145.42 308 P PKPdf 11 46 55.2 -0.1
baz=111,SNR=14
XAN Xi'an 145.50 111 PKPbc **PKPdf 11 46 56.3 +0.1**
L26K Log Cabin Wild 145.55 312 P PKPdf 11 46 55.2 -0.1
baz=109,SNR=13
WHN Wuhan 145.58 121 ⇑PKPbc **PKPdf 11 46 56.3 -0.1**
I27K Kandik River 145.60 316 P PKPdf 11 46 55.6 +0.1
baz=106
N25K Chitina, Valde 145.64 309 P PKPbc 11 46 56.0 0.0
baz=110,SNR=6.3
Q23K Middleton Isla 145.68 305 P PKPbc 11 46 55.9 -0.1
baz=112
H27K Steamboat Moun 145.74 317 P PKPdf 11 46 55.7 +0.1
baz=105
EYAK Cordova Ski Ar 145.80 307 PKPab 11 46 57.0 +0.2
EYAK Cordova Ski Ar 145.80 307 P PKPbc 11 46 56.4 +0.1
baz=110,SNR=8.7
G27K Doyon Strip 145.94 318 P PKPbc 11 46 56.5 -0.2
baz=104,SNR=12
J26L Joseph Creek 146.09 314 P PKPbc 11 46 57.2 -0.1
baz=106,SNR=10
SCRK Sand Creek 146.11 313 P PKPbc 11 46 57.6 +0.2
baz=107,SNR=8.7
I26K Coal Creek Min 146.14 316 P PKPbc 11 46 57.0 -0.3
baz=106
HARP HAARP 146.15 310 P PKPbc 11 46 57.4 -0.1
baz=108
KLU Klutina 146.20 308 P PKPbc 11 46 58.0 +0.3
baz=109,SNR=8.4
E27K Coleen River 146.23 321 P PKPbc 11 46 57.5 0.0
baz=102
P23K Montague Islan 146.38 305 P PKPbc 11 46 58.4 +0.3
baz=110
RIDG Independent Ri 146.41 312 P PKPbc 11 46 58.2 -0.1
baz=107,SNR=12
PAX Paxson 146.46 311 P PKPbc 11 46 58.1 -0.3
baz=107
M24K Tolsona, Glenn 146.51 309 PKPab 11 46 59.2 -0.4
M24K Tolsona, Glenn 146.51 309 P PKPbc 11 46 58.8 +0.2
baz=108,SNR=5.9
GLI Glacier Island 146.54 307 P PKPbc 11 46 58.6 0.0
baz=109,SNR=11
G26K Porcupine Rive 146.79 318 P PKPbc 11 46 59.0 -0.1
baz=103
K24K Donnelly Dome 146.83 312 P PKPbc 11 46 59.4 0.0
baz=106
J25K Salcha River, 146.87 314 P PKPbc 11 46 59.6 +0.1
baz=105,SNR=7.9
SCM Sheep Creek Mo 146.94 309 PKPbc 11 47 00.3 +0.5
SCM Sheep Creek Mo 146.94 309 PKP2 **PKPbc 11 47 00.3 +0.5**
SCM Sheep Creek Mo 146.94 309 P PKPbc 11 47 00.1 +0.2
baz=108,SNR=8.0
F26K Sheenjek River 147.08 320 P PKPbc 11 47 00.3 +0.3
baz=101
PWL Port Wells 147.10 307 PKPbc 11 47 00.3 +0.1
PWL Port Wells 147.10 307 P PKPbc 11 47 00.2 0.0
baz=108
M23K Glacier View 147.11 308 P PKPbc 11 47 00.1 -0.1
baz=108,SNR=7.3
PRP Porcupine Dome 147.15 315 P PKPbc 11 47 00.2 -0.2
baz=103
BMAR Burnt Mountain 147.19 319 PKPbc **PKPbc 11 47 00.8 +0.5**
C27K Jago River 147.25 323 P PKPbc 11 47 00.2 -0.1
baz=99
DHY Denali Highway 147.32 311 P PKPbc 11 47 01.0 +0.1
baz=106
KNK Knik Glacier 147.33 307 P PKPbc 11 47 00.0 -0.9
baz=108
WAT6 Susitna Watana 147.35 310 P PKPbc 11 47 01.1 0.0
baz=106,SNR=12
SEW Seward 147.39 305 P PKPbc 11 47 01.2 +0.2
baz=109,SNR=6.1
SML Sawmill 147.39 308 P PKPbc 11 47 00.6 -0.5
baz=107,SNR=7.7
H25K Birch Creek 147.44 317 P PKPbc 11 47 00.1 -0.9
baz=102
HDA Harding Lake 147.48 313 P PKPbc 11 47 00.4 -0.8
baz=104
IL31 147.54 314 PKPbc 11 47 01.0 -0.3
ILAR Eielson Array 147.54 314 PKPbc **PKPbc 11 47 01.2 -0.1**
comp=Z,12nm,0.8s,baz=128,slow=1.9,SNR=21
ILAR Eielson Array 147.54 314 PKPbc 11 47 00.8 -0.5
ILAR Eielson Array 147.54 314 PKP2 **PKPbc 11 47 00.8 -0.5**
F25K Christian Rive 147.62 319 P PKPbc 11 47 01.6 +0.1
baz=100
O22K Cooper Landing 147.64 305 P PKPbc 11 47 01.3 -0.4
baz=108
E25K Arctic Village 147.68 320 P PKPbc 11 47 01.6 0.0
baz=99,SNR=8.0
PMR Palmer 147.69 308 P PKPbc 11 47 01.5 -0.3
baz=107
WAT1 Susitna Watana 147.77 310 P PKPbc 11 47 01.8 -0.3
baz=105
LYN LuoYang 147.78 114 *e*PKPbc **PKPdf 11 47 00.1 +0.1**
LYN PKPab **PKiKP 11 47 04.9 0.0**
RC01 Rabbit Creek A 147.83 307 P PKPbc 11 47 02.1 -0.1
baz=107
POKR Poker Plat Res 147.84 314 P PKPbc 11 47 01.6 -0.5
baz=103
BRSE Bradley Lake S 147.89 304 P PKPbc 11 47 02.4 0.0
baz=109,SNR=8.4
COLA College 147.96 314 P PKPbc 11 47 01.7 -0.7
baz=103
TCOL CIGO, UAF Yank 147.97 314 P PKPbc 11 47 01.7 -0.7
baz=103
CNPM China Poot 148.06 303 PKPbc 11 47 03.5 +0.6
KDAK Kodiak Island 148.14 300 PKPbc 11 47 03.6 +0.5
KDAK Kodiak Island 148.14 300 PKP2 **PKPbc 11 47 03.6 +0.5**
KDAK Kodiak Island 148.14 300 P PKPbc 11 47 02.9 -0.2
baz=110
D25K Kavik River 148.14 322 P PKPbc 11 47 03.3 +0.4
baz=97
MCK McKinley 148.17 312 P PKPbc 11 47 02.6 -0.4
baz=104
G24K Hadweenzic Riv 148.17 317 P PKPbc 11 47 03.2 +0.2
baz=100
H24K Noodor Dome 148.17 316 P PKPbc 11 47 03.0 -0.1
baz=101,SNR=5.9
M22K Willow 148.19 308 P PKPbc 11 47 03.2 +0.1
baz=106,SNR=9.6
HOM Homer 148.29 303 P PKPbc 11 47 04.0 +0.5
baz=108
OHAK Old Harbor 148.30 299 PKPbc 11 47 04.1 +0.6
OHAK Old Harbor 148.30 299 P PKPbc 11 47 03.5 0.0
baz=111
Q20K Shuyak Island 148.33 301 P PKPbc 11 47 03.8 +0.2
baz=109
CAPN Captain Cook N 148.40 306 P PKiKP 11 47 04.7 -0.5
baz=107
SUA Susitna One 148.40 307 PKPbc 11 47 04.5 +0.7
SUA Susitna One 148.40 307 P PKPbc 11 47 04.0 +0.2
baz=106
NEA2 Nenana 148.41 313 P PKPbc 11 47 03.4 -0.3
baz=102
CUT Chulitna 148.43 309 P PKPbc 11 47 04.1 +0.4
baz=105
F24K Squaw Lake 148.46 319 P PKPbc 11 47 04.1 +0.4
baz=98,SNR=7.1
SII Sitkinak Islan 148.51 297 P PKPbc 11 47 04.1 -0.1
baz=112
I23K Minto, Yukon-K 148.65 314 P PKPbc 11 47 03.6 -0.6
baz=101
TRF Thorofare Moun 148.69 311 P PKPbc 11 47 04.4 -0.2
baz=103
E24K Your Creek 148.76 320 P PKPbc 11 47 04.3 -0.2
baz=97,SNR=7.4
H23K Yukon River 148.84 315 P PKPbc 11 47 04.5 -0.2
baz=100
CHIR Chirikof Islan 148.99 295 P PKPbc 11 47 05.5 +0.2
baz=112
D24K Happy Valley 148.99 322 P PKPbc 11 47 04.6 -0.3
baz=95

N20K	**Mount Spurr**	**149.01 306**	P		**PKPbc**	**11 47 04.9**	**-0.5**
	baz=105								
SPCR	**Spurr Chakacha**	**149.01 306**	P		**PKPbc**	**11 47 04.9**	**-0.5**
	baz=105								
Q19K	**Cape Douglas,**	**149.04 301**	P		**PKPbc**	**11 47 05.0**	**-0.4**
	baz=108								
P19K	**Oil Pt**	**149.06 303**	P		**PKPbc**	**11 47 05.2**	**-0.3**
	baz=107								
BPAW	**Bear Paw Mtn.**	**149.13 312**	P		**PKPbc**	**11 47 05.1**	**-0.4**
	baz=102								
G23K	**Bananza Creek**	**149.17 317**	P		**PKPbc**	**11 47 06.2**	**+0.6**
	baz=98								
MLY	**Manley**	**149.20 314**	P		**PKPbc**	**11 47 04.7**	**-1.0**
	baz=100								
TOLK	**Toolik Lake Re**	**149.22 321**			**PKPbc**	**11 47 06.1**	**+0.4**
TOLK	**Toolik Lake Re**	**149.22 321**	P		**PKPbc**	**11 47 05.8**	**+0.2**
	baz=95,SNR=13								
PPLA	**Purkeypile**	**149.41 309**	P		**PKPbc**	**11 47 06.2**	**-0.2**
	baz=103,SNR=7.3								
CAST	**Castle Rocks**	**149.47 310**	P		**PKPbc**	**11 47 06.2**	**-0.2**
	baz=102								
NRIK	**Noril'sk**	**149.54 38**	PKPbc		**PKPbc**	**11 47 06.2**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=250,slow=2.1,SNR=8.0								
H22K	**Ishtalitna Cre**	**149.60 315**	P		**PKPbc**	**11 47 06.8**	**+0.2**
	baz=98,SNR=8.4								
M20K	**Styx River**	**149.61 307**			**PKPbc**	**11 47 06.1**	**-0.7**
M20K	**Styx River**	**149.61 307**	P		**PKPbc**	**11 47 06.3**	**-0.6**
	baz=104								
D23K	**Nanushuk River**	**149.65 321**	P		**PKPbc**	**11 47 07.0**	**+0.4**
	baz=94								
C23K	**Itkillik River**	**149.66 323**	P		**PKPbc**	**11 47 07.1**	**+0.5**
	baz=92								
CHUM	**Lake Minchumin**	**149.66 311**	P		**PKPbc**	**11 47 06.8**	**+0.1**
	baz=101								
O19K	**Port Alsworth**	**149.74 304**	P		**PKPbc**	**11 47 06.4**	**-0.7**
	baz=106,SNR=5.3								
I21K	**Tanana**	**149.74 314**	P		**PKPbc**	**11 47 06.9**	**0.0**
	baz=99								
G22K	**Bettles**	**149.78 317**	P		**PKPbc**	**11 47 07.3**	**+0.4**
	baz=96								
P18K	**Big Mountain,**	**149.96 302**	P		**PKPbc**	**11 47 07.0**	**-0.7**
	baz=106								
N19K	**Bonanza Creek**	**149.98 305**	P		**PKPbc**	**11 47 07.1**	**-0.7**
	baz=104,SNR=8.5								
R17K	**Ugashik Creek**	**150.02 298**	P		**PKPbc**	**11 47 07.8**	**0.0**
	baz=109								
O18K	**Koktuh Hills**	**150.08 303**			**PKPbc**	**11 47 07.7**	**-0.3**
O18K	**Koktuh Hills**	**150.08 303**	P		**PKPbc**	**11 47 07.8**	**-0.1**
	baz=106								
L20K	**Farewell, AK**	**150.08 308**	P		**PKPbc**	**11 47 07.2**	**-0.7**
	baz=102								
F22K	**John River**	**150.10 318**	P		**PKPbc**	**11 47 08.1**	**+0.3**
	baz=95,SNR=11								
H21K	**Melozitna Rive**	**150.15 315**	P		**PKPbc**	**11 47 08.2**	**+0.3**
	baz=98,SNR=13								
M19K	**Big River Lodg**	**150.19 307**	P		**PKPbc**	**11 47 08.0**	**-0.2**
	baz=103								
K20K	**Telida**	**150.34 310**	P		**PKPbc**	**11 47 08.2**	**-0.3**
	baz=100,SNR=6.3								
L19K	**White Mountain**	**150.47 307**	P		**PKPbc**	**11 47 08.3**	**-0.5**
	baz=102								
Q16K	**King Salmon**	**150.47 300**	P		**PKPbc**	**11 47 08.3**	**-0.5**
	baz=107								
P17K	**Kvichak River**	**150.50 301**	P		**PKPbc**	**11 47 08.3**	**-0.6**
	baz=106								
J20K	**Nowinta River**	**150.51 312**	P		**PKPbc**	**11 47 08.5**	**-0.3**
	baz=99,SNR=5.3								
G21K	**Allakaket**	**150.53 316**	P		**PKPbc**	**11 47 09.2**	**+0.4**
	baz=95								
IMAR	**Indian Mountai**	**150.58 315**			**PKPbc**	**11 47 09.1**	**+0.1**
F21K	**Alatna River**	**150.58 318**	P		**PKPbc**	**11 47 08.9**	**0.0**
	baz=94,SNR=11								
N18K	**Kilae Creek**	**150.62 304**			**PKPbc**	**11 47 09.1**	**-0.1**
N18K	**Kilae Creek**	**150.62 304**	P		**PKPbc**	**11 47 08.7**	**-0.5**
	baz=104								
CHGN	**Chignik**	**150.62 295**			**PKPbc**	**11 47 09.0**	**-0.2**
CHGN	**Chignik**	**150.62 295**	P		**PKPbc**	**11 47 08.6**	**-0.6**
	baz=110								
CHNA	**Chernabura Isl**	**150.73 292**	P		**PKPbc**	**11 47 09.1**	**-0.5**
	baz=112								
BTO	**Baotou**	**150.82 103**	*e*PKPbc		**PKPbc**	**11 47 10.3**	**-0.1**
O17K	**Koliganek Bris**	**150.98 302**	P		**PKPbc**	**11 47 09.5**	**-0.5**
	baz=105								
TTA	**Tatalina**	**151.13 309**	P		**PKiKP**	**11 47 11.5**	**+0.5**
	baz=100								
S14K	**Fog Glacier**	**151.22 294**	P		**PKiKP**	**11 47 11.3**	**0.0**
	baz=109								
SDPT	**Sand Point**	**151.39 292**	P		**PKPbc**	**11 47 10.8**	**-0.3**
	baz=110								
O16K	**Kokwok River B**	**151.43 302**	P		**PKPbc**	**11 47 10.6**	**-0.4**
	baz=104								
MOY	**Mondy**	**151.77 77**	*e*PKIKP		**PKiKP**	**11 47 12.8**	**+0.1**
MOY			pmax		pmax				
	comp=Z,36nm,1.7s								
HHC	**Hu-ho-hao-te**	**151.85 104**	*e*PKPbc		**PKPdf**	**11 47 04.0**	**-2.4**
N16K	**Nishlik Lake**	**151.96 303**	P		**PKiKP**	**11 47 13.1**	**+0.5**
	baz=102								
ZAK	**Zakamensk**	**152.50 80**	*e*PKIKP		**PKPbc**	**11 47 10.7**	**-3.3**
ZAK			pmax		pmax				
	comp=Z,13nm,1.5s								
SONM	**Songino Array**	**153.05 87**	PKPbc		**PKPbc**	**11 47 15.1**	**-0.2**
	comp=Z,6.0nm,0.7s,baz=215,slow=3.5,SNR=17								
SONM			PKPab		**PKPab**	**11 47 26.8**	**-0.1**
	comp=Z,6.4nm,0.7s,baz=223,slow=4.1,SNR=4.3								
SONM	**Songino Array**	**153.05 87**	PKPdf		**PKPdf**	**11 47 08.2**	**+0.2**
SONM					**PKiKP**	**11 47 15.6**	**+0.1**
SONM			PKPab		**PKPab**	**11 47 27.2**	**+0.3**
SONM	**Songino Array**	**153.05 87**	PKP2		**PKPab**	**11 47 27.2**	**+0.3**
ULN	**Ulaanbaatar**	**153.45 88**	PKPdf		**PKPdf**	**11 47 09.6**	**+1.0**
ULN			PKPbc		**PKPbc**	**11 47 16.1**	**-0.1**
ULN					**PKPab**	**11 47 28.6**	**0.0**
ULN	**Ulaanbaatar**	**153.45 88**	PKIKP		**PKPdf**	**11 47 09.6**	**+1.0**
ULN						11 47 16.1			
ULN						11 47 28.6			
BJI	**Beijing**	**153.83 111**	PKPbc		**PKPdf**	**11 47 09.3**	**+0.2**
IRK	**Irkutsk**	**153.85 77**	*e*PKIKP		**PKiKP**	**11 47 20.0**	**+3.2**
IRK			pmax		pmax				
	comp=Z,30nm,1.8s								
UNV	**Unalaska Valle**	**154.15 286**	P		**PKPbc**	**11 47 16.3**	**-1.0**
	baz=111								
NIKH	**Nikolski High**	**155.15 283**	P		**PKPab**	**11 47 34.6**	**-0.9**
	baz=112								
KSAR	**Wonju Array Be**	**157.58 132**			**PKPdf**	**11 47 13.4**	**-0.8**
KSAR			PKPab		**PKPab**	**11 47 46.4**	**+0.1**
KSAR	**Wonju Array Be**	**157.58 132**	PKIKP		**PKPdf**	**11 47 13.4**	**-0.8**
KSRS	**Korea Array**	**157.61 132**	PKP		**PKPdf**	**11 47 13.7**	**-0.6**
	comp=Z,2.4nm,1.0s,baz=207,slow=0.3,SNR=7.2								
CN2	**Changchun**	**161.38 117**	*e*PKP		**PKPdf**	**11 47 17.9**	**-0.5**
MDJ	**Mudanjiang**	**164.05 122**	PKP		**PKPdf**	**11 47 20.5**	**-0.5**
MDJ			AMB		AMB				
	comp=Z,190nm,6.4s								
MDJ			LR		LR				
	comp=Z,90nm,10.4s								
MDJ			LR		LR				
	comp=Z,85nm,5.9s								
MDJ			LR		LR				
	comp=Z,260nm,14.7s								
KLR	**Kul'dur**	**168.21 112**	PKP		**PKPdf**	**11 47 23.9**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=193,slow=4.0,SNR=5.8								
KLR			PKPab		**PKPab**	**11 48 31.9**	**-0.8**
	comp=Z,4.9nm,0.9s,baz=232,slow=4.1,SNR=6.4								
YSS	**Yuzh-Sakhalins**	**171.28 153**	*e*PKIKP		**PKPdf**	**11 47 25.2**	**-0.8**

*NEIC **20** 11:31:48.7±1.2, 18°69N±0°.07×146°.0E±0°.3, h221km±12km, mb4.2/11, Error ellipse: s-maj=40.1km s-min=6.7km az=99.0*

*IDC **20** 11:32:23.9±20.0, 18°.19N×144°.89E, h594km±267km, mb2.8/5, mbtmp3.7/5, Error ellipse: s-maj=91.3km s-min=36.8km az=51.0*

ISC 20 11:31:47.3±0.8, 18°.9N±0°.1×145°.6E±0°.3, h200km, n19, σ1$85/19, mb4.1/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**5.29**	**187**			**Pn**	**11 33 07.5**	**+2.0**
MTN	**Manton Dam**	**34.58**	**205**	P		**P**	**11 38 15.2**	**-2.1**
KNRA	**Kununurra**	**38.11**	**207**	P		**P**	**11 38 45.7**	**-1.4**
WB0	**Warramunga Arr**	**39.93**	**197**	P		**P**	**11 39 00.9**	**-1.3**
WB0						IAmb	IAmb	11 39 06.0	
	comp=Z,9.4nm,1.4s								
WR0	**Warramunga Arr**	**40.08**	**196**	P		**P**	**11 39 02.3**	**-1.1**
WR0						IAmb	IAmb	11 39 46.2	
	comp=Z,14nm,1.5s								
WB2	**Warramunga Arr**	**40.11**	**197**	P		**P**	**11 39 02.4**	**-1.3**
WB2						IAmb	IAmb	11 39 03.6	
	comp=Z,4.7nm,0.6s								
WRA	**Warramunga Arr**	**40.12**	**197**	P		**P**	**11 39 02.7**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=22,slow=8.7,SNR=41								
	comp=Z,1.7nm,0.4s								
WRA	**Warramunga Ar**	**40.12**	**197**	P		**P**	**11 39 02.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**41.63**	**209**	P		**P**	**11 39 14.5**	**-1.6**
FITZ						IAmb	IAmb	11 39 36.8	
	comp=Z,14nm,1.4s								
ASAR	**Alice Springs**	**43.78**	**196**	P		**P**	**11 39 32.4**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=18,slow=7.3,SNR=8.7								
	comp=Z,0.6nm,0.6s								
ASAR	**Alice Springs**	**43.78**	**196**	P		**P**	**11 39 31.7**	**-1.7**
MBWA	**Marble Bar**	**47.15**	**214**	P		**P**	**11 39 58.8**	**-1.0**
MBWA						IAmb	IAmb	11 40 42.9	
	comp=Z,12nm,1.1s								
MK31	**Makanchi Array**	**58.26**	**314**	P		**P**	**11 41 23.1**	**+2.2**
MKAR	**Makanchi Array**	**58.26**	**314**	P		**P**	**11 41 22.8**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=87,slow=7.9,SNR=2.1								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**58.26**	**314**	P		**P**	**11 41 23.1**	**+2.2**
EGAK	**Eagle**	**65.97**	**27**	P		**P**	**11 42 10.6**	**-1.2**
EGAK						IAmb	IAmb	11 42 36.2	
	comp=Z,4.8nm,1.3s								
HYT	**Haines Junctio**	**67.34**	**31**	P		**P**	**11 42 18.3**	**-2.4**
HYT						IAmb	IAmb	11 42 22.9	
	comp=Z,5.0nm,0.9s								
NVAR	**Mina Array Bea**	**83.13**	**52**	P		**P**	**11 43 54.0**	**+2.7**
	comp=Z,0.4nm,0.8s,baz=267,slow=6.1,SNR=3.6								
	comp=Z,0.4nm,0.8s								
FINES	**FINESS Array B**	**86.68**	**335**	P		**P**	**11 44 06.5**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=73,slow=5.1,SNR=5.2								
	comp=Z,0.3nm,0.3s								

*IDC **20** 11:33:19.5±0.7, 40°.27N×143°.74E, h0km, mb3.9/13, mbtmp3.9/14, ML2.8/1, Error ellipse: s-maj=22.6km s-min=17.1km az=118.0*

*NEIC **20** 11:33:20.9±1.9, 40°.25N±0°.06×143°.9E±0°.1, h6km±5km, mb4.4/11, Error ellipse: s-maj=14.7km s-min=5.8km az=119.0*

*NIED **20** 11:33:20.8, 40°.38N×143°.66E, h9km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.00; $M_{\theta\theta}$0.27; $M_{\phi\phi}$-1.27; $M_{r\theta}$0.26; $M_{\theta\phi}$-0.35; $M_{r\phi}$0.05; Fault plane solution: $M_0$1.22000×10^{15} NP1: ϕ_s175.00000°, δ45.00000°, λ64.00000°. NP2:ϕ_s29.00000°, δ50.00000°, λ114.00000°.*

*JMA **20** 11:33:20.8±0.3, 40°.4N±0°.7×14°.4E±°, h9km±4km, MV4.0/34, FAR E OFF SANRIKU*

ISC 20 11:33:21.1±0.6, 40°.39N±0°.04×143°.74E±0°.05, h10km, n63, σ1$25/66, mb4.0/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTH	**Tanohata**	**1.50**	**253**	P		**Pn**	**11 33 47.2**	**-0.9**
JTH				*e*S		**Sn**	**11 34 06.0**	**-1.8**
JKEN	**Kujiedanarisaw**	**1.56**	**264**	P		**Pn**	**11 33 48.0**	**-0.9**
JKEN				*e*S		**Sn**	**11 34 07.3**	**-1.8**
MIYJ	**Miyakonagasawa**	**1.68**	**242**	P		**Pn**	**11 33 50.2**	**-0.3**
ERM	**Erimo**	**1.68**	**345**	Pn		**Pb**	**11 33 51.6**	**-0.6**
JEM	**Erimo**	**1.69**	**345**	P		**Pn**	**11 33 50.9**	**+0.3**
JEM				*e*S		**Sb**	**11 34 12.8**	**-0.7**
JANG	**Nango**	**1.70**	**270**	*i* P		**Pn**	**11 33 50.0**	**-0.7**
JANG				*e*S		**Sb**	**11 34 12.4**	**-1.4**
JNBK	**Urakawa-nobuka**	**2.03**	**339**	P		**Pn**	**11 33 56.2**	**+0.8**
JNBK				*e*S		**Sb**	**11 34 21.7**	**-1.7**
JTM	**Tenmabayashi**	**2.07**	**282**			**Pn**	**11 33 56.1**	**+0.2**
JTM	**Tenmabayashi**	**2.07**	**282**	P		**Pb**	**11 33 56.4**	**-2.4**
JTM				*e*S		**Sb**	**11 34 22.2**	**-2.4**
JOM	**Ohasama**	**2.09**	**245**	P		**Pn**	**11 33 56.3**	**+0.2**
JCH	**Churui**	**2.24**	**353**	P		**Pn**	**11 33 58.2**	**-0.1**
JCH				*e*S		**Sn**	**11 34 25.0**	**-1.0**
JOT	**Ohata**	**2.27**	**297**	P		**Pn**	**11 33 58.8**	**+0.1**
JOT				*e*S		**Sn**	**11 34 26.3**	**-0.3**
JMK	**Ichinoseki**	**2.41**	**234**	P		**Pn**	**11 34 00.6**	**-0.1**
JAK	**Akkeshi**	**2.71**	**15**	P		**Pn**	**11 34 04.2**	**-0.5**
JAK				S		**Sn**	**11 34 35.0**	**-2.4**
JAR	**Ashorobuto**	**2.91**	**0**	P		**Pn**	**11 34 06.8**	**-0.6**
JAR				S		**Sn**	**11 34 39.9**	**-2.5**
JYK	**Kaneyama**	**2.99**	**242**	P		**Pn**	**11 34 09.1**	**+0.6**
JEW	**Eniwo**	**2.99**	**326**			**Pn**	**11 34 10.3**	**+1.8**
JEW	**Eniwo**	**2.99**	**326**	*e*S		**Sn**	**11 34 46.0**	**+1.5**
NEM2	**Nemuro 2**	**3.33**	**26**	*i* P		**Pn**	**11 34 12.5**	**-0.7**
NEM2				S		**Sn**	**11 34 49.0**	**-3.8**
JMM	**Marumori**	**3.40**	**223**	Pn		**Pn**	**11 34 12.9**	**-1.3**
JSD	**Sado**	**4.86**	**243**			**Pn**	**11 34 34.6**	**+0.4**
JYT	**Yasato**	**5.00**	**215**	Pn		**Pn**	**11 34 35.2**	**-0.9**
MAJO	**Matsushiro**	**5.79**	**230**	Pn		**Pn**	**11 34 48.1**	**+1.0**
MJAR	**Matsushiro Arr**	**5.79**	**230**	Pn		**Pn**	**11 34 46.3**	**-0.8**
	0.2nm,0.3s,baz=39,slow=12,SNR=15								
	6.4nm,0.8s								
INU	**Inuyama**	**7.31**	**229**	Pn		**Pn**	**11 35 09.2**	**+1.2**
USRK	**Ussuriysk Ar.**	**9.50**	**297**	Pn		**Pn**	**11 35 42.0**	**+4.0**
	1.1nm,0.3s,baz=102,slow=15,SNR=9.3								
JHS	**Saijyo**	**9.98**	**241**	Pn		**Pn**	**11 35 46.0**	**+1.4**
KSRS	**Korea Array**	**12.66**	**262**	Pn		**Pn**	**11 36 27.2**	**+6.1**
	0.1nm,0.3s,baz=69,slow=12,SNR=2.3								
SEY	**Seymchan**	**23.16**	**10**	P		**P**	**11 38 26.6**	**-0.9**
	3.4nm,0.5s,baz=202,slow=5.9,SNR=8.2								
	3.4nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**28.58**	**129**	T		T	12 09 10.5		
	baz=322,slow=75,SNR=20								
H11N1	**WAKE ISLAND Hy**	**28.59**	**129**	T		T	12 09 14.0		
	baz=322,slow=75,SNR=17								
H11N3	**WAKE ISLAND Hy**	**28.60**	**129**	T		T	12 09 11.7		
	baz=322,slow=75,SNR=7.8								
H11S1	**WAKE ISLAND Hy**	**29.42**	**131**	T		T	12 10 24.8		
	baz=323,slow=76,SNR=6.2								
H11S3	**WAKE ISLAND Hy**	**29.43**	**131**	T		T	12 10 14.6		
	baz=323,slow=76,SNR=6.0								
H11S2	**WAKE ISLAND Hy**	**29.44**	**131**	T		T	12 10 21.2		
	baz=323,slow=76,SNR=5.4								
ZALV	**Zalesovo Beam**	**41.09**	**310**	P		**P**	**11 41 05.9**	**+1.1**
	1.2nm,0.5s,baz=92,slow=7.6,SNR=2.7								
	1.2nm,0.5s								
J20K	**Nowinta River**	**42.55**	**35**	P		**P**	**11 41 17.3**	**+0.7**
J20K						IAmb	IAmb	11 41 34.7	
	comp=Z,3.9nm,0.9s								
MKAR	**Makanchi Array**	**43.96**	**300**	P		**P**	**11 41 29.3**	**+1.1**
	comp=Z,2.5nm,1.0s,baz=82,slow=8.9,SNR=7.5								
	comp=Z,2.5nm,1.0s								
MKAR	**Makanchi Array**	**43.96**	**300**	P		**P**	**11 41 31.2**	**+3.0**
IL31		**45.70**	**34**	P		**P**	**11 41 42.6**	**+0.9**
IL31						IAmb	IAmb	11 41 59.3	
	comp=Z,6.9nm,1.3s								
ILAR	**Eielson Array**	**45.70**	**34**	P		**P**	**11 41 42.5**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=259,slow=6.1,SNR=9.5								
	comp=Z,1.1nm,0.7s								
ILAR	**Eielson Array**	**45.70**	**34**	P		**P**	**11 41 42.6**	**+0.8**
BMAR	**Burnt Mountain**	**46.52**	**30**	P		**P**	**11 41 50.2**	**+1.9**
SCRK	**Sand Creek**	**47.02**	**35**	P		**P**	**11 41 52.7**	**+0.4**
SCRK						IAmb	IAmb	11 41 59.0	
	comp=Z,5.5nm,1.3s								
DOT	**Dot Lake**	**47.02**	**36**	P		**P**	**11 41 52.7**	**+0.5**
DOT						IAmb	IAmb	11 42 14.1	
	comp=Z,4.5nm,1.5s								
INK	**Inuvik**	**50.58**	**29**	P		**P**	**11 42 20.8**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=253,slow=3.7,SNR=8.2								
	comp=Z,0.9nm,0.3s								
INK	**Inuvik**	**50.58**	**29**	P		**P**	**11 42 20.3**	**+0.9**
INK						IAmb	IAmb	11 42 34.4	
	comp=Z,6.2nm,1.4s								
ABKAR	**Akbulak array**	**57.20**	**309**	P		**P**	**11 43 08.9**	**+0.8**
WB0	**Warramunga Arr**	**60.47**	**190**	P		**P**	**11 43 30.6**	**-0.5**
WB0						IAmb	IAmb	11 43 40.3	
	comp=Z,4.3nm,1.1s								
WR0	**Warramunga Arr**	**60.64**	**190**	P		**P**	**11 43 31.4**	**-0.9**
WB2	**Warramunga Arr**	**60.65**	**190**	P		**P**	**11 43 31.4**	**-0.9**
WRA	**Warramunga Arr**	**60.65**	**190**	P		**P**	**11 43 30.8**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=7.4,slow=6.9,SNR=12								
	comp=Z,0.8nm,0.6s								
WRA	**Warramunga Arr**	**60.65**	**190**	P		**P**	**11 43 31.7**	**-0.7**
ASAR	**Alice Springs**	**64.38**	**190**	P		**P**	**11 43 56.5**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=3.2,slow=5.1,SNR=4.8								
	comp=Z,0.5nm,0.7s								
FINES	**FINESS Array B**	**66.69**	**332**	P		**P**	**11 44 12.1**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=46,slow=8.2,SNR=11								
	comp=Z,1.5nm,0.6s								
NVAR	**Mina Array Bea**	**71.55**	**55**	P		**P**	**11 44 43.7**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=288,slow=6.7,SNR=11								
	comp=Z,0.7nm,0.6s								
NB2	**NORSAR Subarra**	**71.79**	**338**	P		**P**	**11 44 43.9**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=38,slow=6.2								
NOA	**NORSAR Array B**	**71.79**	**338**	P		**P**	**11 44 43.8**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=37,slow=6.0,SNR=5.5								
	comp=Z,1.0nm,0.7s								
AKASG	**Malin Array Be**	**72.75**	**323**	P		**P**	**11 44 50.1**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=50,slow=2.9,SNR=5.5								
	comp=Z,0.8nm,0.5s								
BW06	**Boulder Array**	**74.04**	**47**	P		**P**	**11 44 56.9**	**-0.5**
BW06						IAmb	IAmb	11 44 58.3	
	comp=Z,1.1nm,0.7s								
PD31	**Pinedale Array**	**74.04**	**47**	P		**P**	**11 44 57.1**	**-0.2**
PDAR	**Pinedale Array**	**74.04**	**47**	P		**P**	**11 44 57.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=288,slow=1.8,SNR=11								
	comp=Z,0.8nm,0.6s								
TXAR	**Lajitas Array**	**86.66**	**54**	P		**P**	**11 46 06.3**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=315,slow=4.8,SNR=6.4								
	comp=Z,0.4nm,0.7s								

*IDC **20** 11:34:04.6±1.0, 54°.76S×31°.17W, h0km, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=42.9km s-min=21.2km az=72.0*

*NEIC **20** 11:34:05.4±1.3, 54°.7S±0°.1×31°.4W±0°.3, h13km±6km, mb4.2/8, Error ellipse: s-maj=28.8km s-min=13.2km az=55.0*

ISC 20 11:34:05.6±0.8, 54°.8S±0°.1×31°.5W±0°.1, h10km, n21, σ0$86/21, mb4.2/6, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**2.95**	**277**	Pn		**Pn**	**11 34 52.1**	**-0.4**
ESPZ	**Base Esperanza**	**15.60**	**226**	Pn		**Pn**	**11 37 44.5**	**-0.7**
VNA3	**Neumayer Olymp**	**19.06**	**158**	P		**Pn**	**11 38 27.7**	**-0.7**
VNA2	**Neumayer--Watz**	**19.34**	**156**	P		**Pn**	**11 38 33.2**	**+1.4**
	baz=314,slow=12								
SNAA	**Sanae**	**20.93**	**155**	P		**P**	**11 38 47.8**	**-0.3**
SNAA	**Sanae**	**20.93**	**155**	P		**P**	**11 38 47.6**	**-0.5**
	6.5nm,0.8s,baz=309,slow=10,SNR=18								
	6.5nm,0.8s								
SNAA	**Sanae**	**20.93**	**155**	P		**P**	**11 38 46.5**	**-1.6**
SNAA						IAmb	IAmb	11 38 52.0	
	comp=Z,8.8nm,0.9s								
SMAI	**San Martin Ant**	**21.23**	**217**	P		**P**	**11 38 52.3**	**+1.0**
TROLL	**Troll, Antarti**	**22.50**	**153**	P		**P**	**11 39 04.9**	**-0.1**
QSPA	**South Pole Qui**	**35.49**	**180**	P		**P**	**11 41 02.8**	**+0.7**
	comp=Z,6.4nm,1.0s,baz=185,slow=2.8,SNR=12								
	comp=Z,6.4nm,1.0s								
QSPA	**South Pole Qui**	**35.49**	**180**	P		**P**	**11 41 01.7**	**-0.4**
MAW	**Mawson**	**42.62**	**146**	P		**P**	**11 42 00.8**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=244,slow=11,SNR=6.4								
	comp=Z,2.7nm,0.9s								
MAW	**Mawson**	**42.62**	**146**	P		**P**	**11 42 00.9**	**-0.6**
SBA	**Scott Base**	**47.16**	**185**	P		**P**	**11 42 37.9**	**+0.4**
SBA						IAmb	IAmb	11 43 20.8	
	comp=Z,3.1nm,1.3s								
LPAZ	**La Paz**	**47.64**	**309**	P		**P**	**11 42 44.1**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=211,slow=13,SNR=6.4								
	comp=Z,1.8nm,0.5s								
LPAZ	**La Paz**	**47.64**	**309**	P		**P**	**11 42 41.5**	**-1.2**
LPAZ						IAmb	IAmb	11 42 52.7	
	comp=Z,2.6nm,0.8s								
VNDA	**Vanda**	**47.72**	**184**	P		**P**	**11 42 42.4**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=189,slow=5.1,SNR=11								
	comp=Z,1.5nm,0.7s								
VNDA	**Vanda**	**47.72**	**184**	P		**P**	**11 42 42.6**	**+0.8**
VNDA						IAmb	IAmb	11 42 43.8	
	comp=Z,2.1nm,0.8s								
TORD	**Torodi Ar. Bea**	**73.25**	**34**	P		**P**	**11 45 37.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=219,slow=7.9,SNR=2.7								
	comp=Z,0.6nm,0.8s								
ILAR	**Eielson Array**	**147.44**	**314**	PKPbc		**PKP

3µm66nm,0.6s
WR0 Warramunga Arr 32.55 262 P **P** **11 46 20.1 -0.7**
WB0 Warramunga Ar 32.70 262 P **P** **11 46 21.4 -0.7**
WB0 IAmb IAmb 11 46 22.3
comp=Z,15nm,0.5s
WB2 Warramunga Ar 32.73 262 P **P** **11 46 21.7 -0.7**
WRAB Tennant Creek 32.73 262 P **P** **11 46 22.7 +0.3**
BBOO Buckleboo 32.74 238 P **P** **11 46 22.9 +0.6**
WRA Warramunga Ar 32.74 262 P **P** **11 46 21.8 -0.7**
comp=Z,6.9nm,0.5s,baz=81,slow=6.0,SNR=151
WRA PcP **PcP** **11 49 02.9 -0.3**
comp=Z,1.3nm,0.6s,baz=100,slow=3.4,SNR=3.7
WRA S **S** **11 51 20.6 -3.7**
comp=Z,6.9nm,1.1s,baz=89,slow=16,SNR=15
comp=Z,6.9nm,0.5s
WRA Warramunga Ar 32.74 262 P **P** **11 46 21.5 -1.0**
AS31 Alice Springs 33.09 255 P **P** **11 46 25.3 -0.2**
ASAR Alice Springs 33.09 255 P **P** **11 46 25.4 -0.2**
comp=Z,53nm,0.5s,baz=83,slow=8.8,SNR=958
ASAR S **S** **11 51 26.7 -3.0**
comp=Z,2.8nm,0.9s,baz=81,slow=18,SNR=13
comp=Z,53nm,0.5s
ASAR Alice Springs 33.09 255 P **P** **11 46 24.9 -0.6**
MULG Mulgathing 33.76 243 P **P** **11 46 30.9 -0.2**
KDU Kakadu 35.65 274 P **P** **11 46 47.8 +0.3**
MCQ Macquarie Isla 36.63 190 P **P** **11 46 56.5 +1.3**
WRKA Warakurna 38.24 253 P **P** **11 47 09.8 +0.5**
KNRA Kununurra 38.54 268 P **P** **11 47 12.0 +0.2**
FITZ Fitzroy Crossi 41.12 264 P **P** **11 47 33.5 +0.5**
comp=Z,11nm,0.6s,baz=104,slow=5.5,SNR=44
comp=Z,11nm,0.6s
FITZ Fitzroy Crossi 41.12 264 P **P** **11 47 32.4 -0.6**
FITZ Fitzroy Crossi 41.12 264 P **P** **11 47 34.1 +1.1**
PSA00 Pilbara Seismi 46.14 258 P **P** **11 48 14.0 +1.0**
MBWA Marble Bar 46.29 258 P **P** **11 48 14.4 +0.2**
MBWA Marble Bar 46.29 258 P **P** **11 48 14.1 -0.1**
MBWA pP **pP** **11 48 56.2 +0.1**
MBWA sP **sP** **11 49 19.1 +1.2**
MEEK Meekatharra 46.97 251 P **P** **11 48 19.9 +0.4**
KLBR Kellerberrin 47.80 244 P **P** **11 48 25.2 -0.6**
DRV Dumont d'Urvil 51.57 194 P **P** **11 48 52.9 -0.7**
DRV pP **pP** **11 49 38.7 +2.0**
SBA Scott Base 59.27 181 P **P** **11 49 49.3 +1.0**
SBA IAmb IAmb 11 50 39.5
comp=Z,23nm,1.3s
SBA Scott Base 59.27 181 P **P** **11 49 48.7 +0.4**
SBA pP **PcP** **11 50 34.1 -0.2**
SBA pwP pP 11 50 43.5 +10
SBA sP **sP** **11 50 56.1 +0.5**
KSM Kuching 61.05 282 P **P** **11 50 01.2 -0.2**
KSM IAmb IAmb 11 50 02.7
comp=Z,25nm,1.2s
CCD Concordia, Ant 61.45 192 P **P** **11 50 02.8 -0.8**
CCD pP **pP** **11 50 48.5 -0.7**
CCD sP **sP** **11 51 11.7 +0.9**
YOJ Yonaguni jima 62.01 312 P **P** **11 50 08.5 +0.9**
JSU Suzuyama 62.09 323 P **P** **11 50 08.7 +0.7**
MJAR Matsushiro Arr 62.12 332 P **P** **11 50 08.6 +0.5**
comp=Z,9.0nm,0.9s,baz=163,slow=7.2,SNR=17
comp=Z,9.0nm,0.9s
MAJO Matsushiro 62.13 332 P **P** **11 50 08.2 +0.1**
MAJO IAmb IAmb 11 50 09.2
comp=Z,33nm,1.1s
MAJO Matsushiro 62.13 332 P **P** **11 50 08.8 +0.7**
TPUB Ta-pu 63.01 309 P **P** **11 50 13.2 -1.0**
TPUB Ta-pu 63.01 309 P **P** **11 50 14.0 -0.2**
SSLB Suanglung 63.07 310 P **P** **11 50 14.1 -0.6**
SSLB IAmb IAmb 11 50 14.9
comp=Z,21nm,0.8s
YHNB Yeheng 63.30 311 P **P** **11 50 16.5 +0.3**
YHNB Yeheng 63.30 311 P **P** **11 50 17.2 +1.0**
JSD Sado 63.35 333 P **P** **11 50 16.5 +0.4**
KSRS Korea Array 67.90 326 P **P** **11 50 46.1 +0.9**
comp=Z,2.5nm,1.0s,baz=155,slow=6.3,SNR=10.0
comp=Z,2.5nm,1.0s
YSS Yuzh-Sakhalins 69.44 341 P **P** **11 50 55.9 +1.4**
YSS IAmb IAmb 11 50 57.0
comp=Z,37nm,1.0s
YSS Yuzh-Sakhalins 69.44 341 P **P** **11 50 56.0 +1.4**
NJ2 Nanjing 69.64 316 *eP* **P** **11 50 57.0 +0.9**
NJ2 pmax pmax
comp=Z,14nm,0.5s
USRK Ussuriysk Ar. 71.11 333 P **P** **11 51 06.1 +1.4**
comp=Z,5.2nm,0.6s,baz=131,slow=5.3,SNR=14
comp=Z,5.2nm,0.6s
USRK Ussuriysk Ar. 71.11 333 P **P** **11 51 05.5 +0.8**
KIWB Kanaga Island 71.21 9 P **P** **11 51 05.3 +0.1**
ADK Adak 71.31 9 P **P** **11 51 05.6 -0.2**
ADK Adak 71.31 9 P **P** **11 51 05.0 -0.8**
QSPA South Pole Qui 71.42 180 P **P** **11 51 05.5 -1.0**
comp=Z,2.3nm,0.8s,baz=188,slow=0.5,SNR=16
comp=Z,2.3nm,0.8s
QSPA South Pole Qui 71.42 180 P **P** **11 51 05.8 -0.7**
QSPA South Pole Qui 71.42 180 P **P** **11 51 05.6 -1.0**
QSPA pP **pP** **11 51 54.7 +0.9**
QSPA pwP sP 11 52 02.3 -13
PET Petropavlovsk 71.92 353 P **P** **11 51 10.0 +0.6**
PET Petropavlovsk 71.92 353 P **P** **11 51 10.3 +1.0**
PET Petropavlovsk 71.92 353 P **P** **11 51 09.9 +0.6**
ATKA Atka Island 72.03 11 P **P** **11 51 10.6 +0.6**
PEA0B Petropavlovsk- 72.11 353 P **P** **11 51 11.6 +1.1**
PETK Petropavlovsk- 72.11 353 P **P** **11 51 11.1 +0.5**
comp=Z,33nm,0.8s,baz=170,slow=10,SNR=38
comp=Z,33nm,0.8s
PETK Petropavlovsk- 72.11 353 P **P** **11 51 10.5 0.0**
PSI Prapat 72.13 279 P **P** **11 51 11.0 -0.7**
comp=Z,8.2nm,0.9s,baz=135,slow=4.3,SNR=4.4
comp=Z,8.2nm,0.9s
MDJ Mudanjiang 72.50 332 P **P** **11 51 13.3 +0.3**
MDJ pP pP 11 51 58.6 -1.9
MDJ sP sP 11 52 20.9 -1.0
MDJ pmax pmax
comp=Z,27nm,1.2s
MDJ pmax pmax
comp=Z,210nm,8.0s
NIKH Nikolski High 73.83 14 P **P** **11 51 20.1 -0.5**
NIKH Nikolski High 73.83 14 P **P** **11 51 19.6 -1.0**
baz=202,SNR=9.3
CN2 Changchun 73.84 329 *eP* **P** **11 51 21.4 +0.5**
CN2 pmax pmax
comp=Z,30nm,1.0s
BNX BinXian 74.35 331 P **P** **11 51 23.9 +0.1**
BNX pmax pmax
comp=Z,17nm,0.8s
BNX pmax pmax
comp=Z,250nm,14.6s
UNV Unalaska Valle 75.19 15 P **P** **11 51 27.8 -0.5**
UNV IAmb IAmb 11 51 28.5
comp=Z,30nm,0.8s
UNV Unalaska Valle 75.19 15 P **P** **11 51 26.6 -1.7**
baz=204,SNR=6.2
LYN LuoYang 75.41 315 ⇑P **P** **11 51 30.0 -0.1**
LYN pmax pmax
comp=Z,20nm,0.7s
HNS HongShan 75.62 318 ⇑P **P** **11 51 32.1 +0.9**
HNS pmax pmax
comp=Z,15nm,1.0s
BJI Beijing 76.34 321 P **P** **11 51 35.9 +0.6**
BJI pmax pmax
comp=Z,19nm,0.9s
XAN Xi'an 77.56 312 ⇑P **P** **11 51 42.6 +0.3**
XAN pmax pmax
comp=Z,32nm,1.0s
XAN pmax pmax
comp=Z,190nm,5.8s
CRAI Chiangrai 77.59 296 P **P** **11 51 43.7 +1.0**
CRAI IAmb IAmb 11 51 44.8
comp=Z,15nm,1.0s
KMI Kunming 77.79 302 ⇓P **P** **11 51 45.8 +1.8**
KMI pmax pmax
comp=Z,35nm,1.1s
CMAR Chiang Mai Arr 78.08 294 P **P** **11 51 46.5 +1.1**
comp=Z,5.5nm,0.8s,baz=131,slow=4.2,SNR=30
comp=Z,5.5nm,0.8s
CMAR Chiang Mai Arr 78.08 294 P **P** **11 51 46.1 +0.7**
SDPT Sand Point 78.11 17 P **P** **11 51 43.3 -1.4**
baz=209
CHTO Chiang Mai 78.22 295 P **P** **11 51 47.4 +1.2**
CHTO IAmb IAmb 11 51 48.2
comp=Z,12nm,0.8s
MAW Mawson 78.92 202 P **P** **11 51 49.7 +0.6**
comp=Z,1.1nm,0.4s,baz=111,slow=6.3,SNR=18
comp=Z,1.1nm,0.4s
S14K Fog Glacier 79.18 17 P **P** **11 51 49.8 -0.9**
baz=210

PZH PanZhiHua 79.22 303 P **P** **11 51 50.8 -0.8**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,90nm,4.1s
MA2 Magadan 79.34 351 P **P** **11 51 51.3 -0.1**
comp=Z,16nm,0.9s,baz=121,slow=12,SNR=3.7
comp=Z,16nm,0.9s
CHGN Chignik 79.52 18 P **P** **11 51 51.8 -0.5**
CHGN Chignik 79.52 18 P **P** **11 51 51.6 -0.7**
baz=211
HHC Hu-ho-hao-te 79.63 319 *eP* **P** **11 51 54.6 +1.1**
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,220nm,5.5s
CD2 Chengdu 79.71 307 P **P** **11 51 54.6 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.8s
SII Sitkinak Islan 81.02 20 P **P** **11 52 00.4 0.0**
baz=215
SII Sitkinak Islan 81.02 20 P **P** **11 52 01.1 +0.7**
R17K Ugashik Creek 81.24 18 P **P** **11 52 01.3 -0.2**
baz=213,SNR=7.4
OHAK Old Harbor 81.85 20 P **P** **11 52 05.1 +0.4**
OHAK Old Harbor 81.85 20 P **P** **11 52 04.4 -0.3**
baz=216
P16K Nushagak River 81.97 17 P **P** **11 52 04.3 -1.0**
baz=211
Q16K King Salmon 82.04 17 P **P** **11 52 04.9 -0.8**
baz=213
LZH Lanzhou 82.18 312 ⇑P **P** **11 52 08.3 +1.1**
LZH sP sP 11 53 21.8 +5.0
LZH pmax pmax
comp=Z,30nm,1.4s
SEY Seymchan 82.34 352 P **P** **11 52 07.3 +0.1**
comp=Z,2.9nm,0.5s,baz=186,slow=4.8,SNR=3.7
comp=Z,2.9nm,0.5s
O16K Kovok River B 82.43 16 P **P** **11 52 06.4 -1.3**
baz=211
KDAK Kodiak Island 82.53 20 P **P** **11 52 08.5 +0.4**
KDAK Kodiak Island 82.53 20 P **P** **11 52 07.1 -1.1**
baz=216
P17K Kvichak River 82.54 17 P **P** **11 52 07.4 -0.8**
baz=213,SNR=6.9
O17K Koliganek Bris 82.85 17 P **P** **11 52 09.0 -0.8**
baz=212
N16K Nishlik Lake 83.01 15 P **P** **11 52 11.0 +0.3**
baz=210,SNR=9.3
P18K Big Mountain, 83.05 18 P **P** **11 52 10.3 -0.6**
P18K Big Mountain, 83.05 18 P **P** **11 52 10.3 -0.6**
baz=214,SNR=24
Q19K Cape Douglas, 83.13 18 P **P** **11 52 11.4 +0.1**
Q19K Cape Douglas, 83.13 18 P **P** **11 52 11.0 -0.4**
baz=215,SNR=10.0
Q20K Shuyak Island 83.25 19 P **P** **11 52 11.7 -0.2**
baz=216,SNR=6.7
O18K Koktuh Hills 83.44 17 P **P** **11 52 12.2 -0.7**
baz=214
P19K Oil Pt 83.84 18 P **P** **11 52 14.8 -0.2**
baz=216,SNR=6.3
N18K Kilae Creek 83.94 17 P **P** **11 52 15.2 -0.2**
baz=213,SNR=8.0
O19K Port Alsworth 83.97 17 P **P** **11 52 14.9 -0.6**
baz=215,SNR=11
HOM Homer 84.33 19 P **P** **11 52 17.4 +0.1**
baz=217
O20K Slope Mountain 84.37 18 P **P** **11 52 15.5 -2.2**
baz=216
N19K Bonanza Creek 84.44 17 P **P** **11 52 17.0 -1.0**
baz=214,SNR=7.1
SMAI San Martin Ant 84.47 162 P **P** **11 52 17.2 -0.8**
RSO Redoubt South 84.64 18 P **P** **11 52 19.3 +0.1**
BRLK Bradley Lake 84.64 19 P **P** **11 52 19.1 +0.1**
BRLK IAmb IAmb 11 52 19.9
comp=Z,31nm,1.1s
BRSE Bradley Lake S 84.67 19 P **P** **11 52 19.0 -0.1**
baz=218,SNR=5.8
M19K Big River Lodg 85.36 16 P **P** **11 52 22.8 +0.3**
M19K Big River Lodg 85.36 16 P **P** **11 52 22.7 +0.2**
baz=214
L19K White Mountain 85.47 16 P **P** **11 52 23.4 +0.4**
baz=214,SNR=10
O22K Cooper Landing 85.57 19 P **P** **11 52 24.3 +0.9**
baz=219
M20K Styx River 85.69 17 P **P** **11 52 24.6 +0.4**
baz=216
TTA Tatalina 85.80 15 P **P** **11 52 24.9 +0.2**
baz=213
L20K Farewell, AK 85.97 16 P **P** **11 52 24.6 -0.9**
baz=215,SNR=12
SUA Susitna One 86.03 18 P **P** **11 52 24.9 -1.1**
SUA IAmb IAmb 11 52 28.2
comp=Z,19nm,1.0s
SUA Susitna One 86.03 18 P **P** **11 52 24.8 -1.1**
baz=218
RC01 Rabbit Creek A 86.04 19 P **P** **11 52 25.0 -0.8**
baz=219
YAK Yakutsk 86.23 343 P **P** **11 52 26.8 +0.1**
comp=Z,7.2nm,0.3s,baz=81,slow=0.3,SNR=7.1
comp=Z,7.2nm,0.3s
ULN Ulaanbaatar 86.26 323 P **P** **11 52 27.7 +0.2**
ULN IAmb IAmb 11 52 28.8
comp=Z,25nm,1.0s
PWL Port Wells 86.30 19 P **P** **11 52 25.9 -1.2**
baz=220,SNR=12
BILL Bilibino 86.44 359 P **P** **11 52 27.5 -0.1**
M22K Willow 86.44 18 P **P** **11 52 27.2 -0.5**
baz=218,SNR=7.6
GTA Gaotai 86.57 313 ⇓P **P** **11 52 29.8 +0.7**
GTA pP pP 11 53 24.0 +5.8
GTA pmax pmax
comp=Z,15nm,1.4s
PMR Palmer 86.62 19 P **P** **11 52 27.9 -0.7**
baz=219
SONM Songino Array 86.62 323 P **P** **11 52 29.8 +0.7**
comp=Z,12nm,0.8s,baz=142,slow=5.5,SNR=42
comp=Z,12nm,0.8s
SONM Songino Array 86.62 323 P **P** **11 52 29.1 -0.1**
SONM IAmb IAmb 11 52 30.4
comp=Z,18nm,1.0s
K20K Telida 86.65 16 P **P** **11 52 28.5 -0.3**
K20K Telida 86.65 16 P **P** **11 52 28.4 -0.3**
baz=215
KNK Knik Glacier 86.68 19 P **P** **11 52 28.8 -0.2**
baz=220
GLI Glacier Island 86.70 20 P **P** **11 52 28.3 -0.7**
baz=221,SNR=5.5
ARVC Arvin 86.76 51 P **P** **11 52 28.0 -1.9**
baz=245
K02D Willamette Mer 86.83 43 P **P** **11 52 28.7 -1.5**
baz=241
VES Vestal, Richgr 86.87 51 P **P** **11 52 29.1 -1.3**
baz=244
J01E Myrtle Point 86.89 42 P **P** **11 52 29.1 -1.2**
baz=241
KAIM Kayak Island 86.89 21 P **P** **11 52 29.8 -0.2**
baz=224
EYAK Cordova Ski Ar 86.90 21 P **P** **11 52 29.9 0.0**
EYAK IAmb IAmb 11 52 30.6
comp=Z,9.7nm,0.9s
EYAK Cordova Ski Ar 86.90 21 P **P** **11 52 29.9 0.0**
baz=222
GCSA Galena City Sc 87.13 14 P **P** **11 52 30.5 -0.5**
baz=212
ISA Isabella, Lake 87.25 51 P **P** **11 52 32.5 +0.1**
ISA Isabella, Lake 87.25 51 P **P** **11 52 31.6 -0.8**
baz=245,SNR=6.7
HUMO Hull Mountain 87.25 43 P **P** **11 52 33.2 +1.1**
HUMO IAmb IAmb 11 52 33.9
comp=Z,16nm,1.0s
BFSC Mount Baldy Ra 87.26 53 P **P** **11 52 31.9 -0.6**
baz=245
EDW2 Edwards Air Fo 87.27 52 P **P** **11 52 32.3 -0.3**
baz=245
J20K Nowinta River 87.30 15 P **P** **11 52 31.7 -0.2**
J20K Nowinta River 87.30 15 P **P** **11 52 32.1 +0.3**
baz=215
MURC Murrieta 87.34 53 P **P** **11 52 31.9 -1.0**
baz=246
SCM Sheep Creek Mo 87.35 19 P **P** **11 52 31.7 -0.6**
SCM Sheep Creek Mo 87.35 19 P **P** **11 52 31.3 -1.0**
baz=221
L04D Klamath Falls 87.49 44 P **P** **11 52 33.0 -0.5**
baz=242
I03D Drain, OR 87.52 42 P **P** **11 52 33.1 -0.2**
baz=241

CHUM Lake Minchumin 87.53 16 P **P** **11 52 33.6 +0.7**
baz=216
KLU Klutina 87.54 20 P **P** **11 52 32.1 -1.0**
baz=222,SNR=5.9
BMRM Bremner River 87.59 21 P **P** **11 52 32.5 -0.9**
baz=223
MONP2 Monument Peak 87.65 54 P **P** **11 52 34.0 -0.5**
baz=246
MPK Martis Peak 87.70 47 P **P** **11 52 35.4 +0.7**
MPK IAmb IAmb 11 52 36.2
comp=Z,43nm,1.6s
TRF Thorofare Moun 87.73 17 P **P** **11 52 33.7 -0.5**
baz=218
WAT1 Susitna Watana 87.75 18 P **P** **11 52 34.2 +0.1**
baz=220
LRMC Laurel Mtn Rad 87.75 51 P **P** **11 52 33.5 -1.4**
baz=245
IKP In-Ko-Pah, Jac 87.79 55 P **P** **11 52 33.6 -1.4**
baz=246
WAT6 Susitna Watana 87.80 18 P **P** **11 52 34.2 -0.3**
baz=220
MLAC Mammoth, Mammo 87.82 49 P **P** **11 52 34.1 -1.2**
baz=244
BBRC Big Bear Solar 87.82 53 P **P** **11 52 34.3 -1.1**
baz=246
CWC Cottonwood Cre 87.86 50 P **P** **11 52 33.7 -1.7**
baz=245
K04D Chiloquin, OR 88.04 44 P **P** **11 52 35.1 -0.9**
baz=242
N25K Chitina, Valde 88.06 20 P **P** **11 52 34.9 -0.7**
baz=223
BPAW Bear Paw Mtn. 88.06 16 P **P** **11 52 34.0 -1.4**
baz=218
J04D Umpqua Nationa 88.09 43 P **P** **11 52 35.0 -1.4**
baz=242
RND Reindeer 88.11 18 P **P** **11 52 34.4 -1.4**
RND IAmb IAmb 11 52 36.5
comp=Z,12nm,0.8s
MPMC Manual Prospec 88.14 51 P **P** **11 52 35.8 -1.0**
baz=245,SNR=6.4
SWSC Sam W. Stewart 88.15 54 P **P** **11 52 34.7 -1.9**
baz=246
I04A Tendick Farm, 88.16 42 P **P** **11 52 34.9 -1.6**
baz=242
DHY Denali Highway 88.28 18 P **P** **11 52 37.2 +0.5**
baz=221
H04D Lebanon 88.30 42 P **P** **11 52 35.9 -1.1**
baz=242
GSC Goldstone, Bar 88.33 52 P **P** **11 52 36.1 -1.4**
baz=246
MCK McKinley 88.33 17 P **P** **11 52 35.7 -1.1**
baz=219
DSP Deep Springs 88.33 50 P **P** **11 52 37.7 +0.3**
BELC Belle Mtn. Jos 88.42 53 P **P** **11 52 37.4 -0.7**
baz=246,SNR=5.7
MCARA McCarthy VSAT 88.42 21 P **P** **11 52 36.4 -0.8**
baz=225
HARP HAARP 88.46 20 P **P** **11 52 36.7 -0.7**
baz=223
SIT Sitka 88.48 27 P **P** **11 52 36.4 -1.1**
baz=232
CRAG Craig 88.49 29 P **P** **11 52 36.8 -0.8**
baz=233
HEC Hector,Ludlow 88.50 53 P **P** **11 52 36.6 -1.7**
baz=246
PINM Pinnacle 88.50 23 P **P** **11 52 36.5 -1.2**
baz=227
PNL Peninsula 88.53 23 P **P** **11 52 36.6 -1.2**
baz=228
NVAR Mina Array Bea 88.54 49 P **P** **11 52 39.0 +0.4**
comp=Z,3.5nm,0.9s,baz=228,slow=8.3,SNR=22
comp=Z,3.5nm,0.9s
NVAR Mina Array Bea 88.54 49 P **P** **11 52 38.6 0.0**
GRAC Grapevine Rang 88.62 50 P **P** **11 52 37.7 -1.1**
baz=245,SNR=7.7
K05A Summer Lake 88.65 44 P **P** **11 52 40.0 +1.0**
K05A IAmb IAmb 11 52 40.5
comp=Z,28nm,1.2s
I21K Tanana 88.67 15 P **P** **11 52 38.0 -0.2**
baz=217
J05D Fort Rock, OR 88.68 43 P **P** **11 52 38.3 -0.7**
baz=243
BC3 Big Chuckawall 88.70 54 P **P** **11 52 37.7 -1.7**
baz=247
CTG Chitna Glacier 88.71 22 P **P** **11 52 37.0 -1.7**
baz=226,SNR=5.4
FURC Furnace Creek, 88.77 51 P **P** **11 52 38.2 -1.2**
baz=246,SNR=6.6
PAX Paxson 88.78 19 P **P** **11 52 37.5 -1.5**
baz=222
RDOG Red Dog Mine 88.83 10 P **P** **11 52 38.2 -0.9**
baz=206
H21K Melozitna Rive 88.85 15 P **P** **11 52 37.7 -1.4**
baz=216
MLY Manley 88.86 16 P **P** **11 52 38.5 -0.8**
baz=218
IMAR Indian Mountai 88.89 14 P **P** **11 52 38.9 -0.4**
GLA Glamis 88.94 55 P **P** **11 52 37.5 -2.9**
baz=247
NEA2 Nenana 88.97 17 P **P** **11 52 39.2 -0.5**
baz=219,SNR=5.7
SHOC Shoshone, Teco 88.97 52 P **P** **11 52 39.4 -1.0**
baz=246,SNR=5.7
O28M Mount Upton 88.99 22 P **P** **11 52 39.6 -0.7**
baz=227,SNR=6.4
TUQ Turquoise Moun 89.05 52 P **P** **11 52 39.3 -1.6**
baz=246
I05D Terrebonne, OR 89.10 42 P **P** **11 52 39.4 -1.5**
baz=243
V35K Ketchikan 89.10 29 P **P** **11 52 39.3 -1.1**
baz=235
TROLL Troll, Antarti 89.13 184 P **P** **11 52 39.3 -1.4**
TROLL Troll, Antarti 89.13 184 pP pP 11 53 29.7 -0.3
IRM Iron Mountain 89.13 54 P **P** **11 52 40.0 -1.2**
baz=247
P29M Windy Craggy 89.14 24 P **P** **11 52 39.9 -0.7**
baz=229
M26K Nabesna, AK 89.16 20 P **P** **11 52 40.0 -0.8**
baz=225,SNR=7.3
O29M Mount Kennedy 89.27 23 P **P** **11 52 39.5 -1.9**
baz=229
K24K Donnelly Dome 89.31 18 P **P** **11 52 39.7 -1.6**
baz=222
I23K Minto, Yukon-K 89.32 16 P **P** **11 52 41.2 -0.1**
baz=219
G21K Allakaket 89.38 14 P **P** **11 52 41.3 -0.4**
baz=215
H22K Ishtalitna Cre 89.39 15 P **P** **11 52 41.2 -0.5**
baz=217
WRAK Wrangell Islan 89.40 28 P **P** **11 52 40.9 -1.0**
baz=234
TPNV Topopah Spring 89.41 51 P **P** **11 52 40.7 -2.0**
baz=246,SNR=8.2
HDA Harding Lake 89.42 18 P **P** **11 52 40.7 -1.1**
baz=221,SNR=6.9
L26K Log Cabin Wild 89.49 20 P **P** **11 52 41.6 -0.6**
baz=224,SNR=7.6
M27K Edge Creek, AK 89.50 21 P **P** **11 52 41.5 -0.9**
baz=226
TCOL CIGO, UAF Yank 89.51 17 P **P** **11 52 40.8 -1.4**
TCOL IAmb IAmb 11 52 42.3
comp=Z,17nm,1.2s
TCOL CIGO, UAF Yank 89.51 17 P **P** **11 52 41.0 -1.2**
baz=220
COLA College 89.52 17 P **P** **11 52 40.8 -1.4**
COLA IAmb IAmb 11 52 42.3
comp=Z,15nm,1.1s
COLA College 89.52 17 P **P** **11 52 41.2 -1.1**
baz=220
B04A Port Angeles 89.52 38 P **P** **11 52 43.6 +1.0**
B04A IAmb IAmb 11 52 44.4
comp=Z,19nm,1.0s
G05D Wamic, OR 89.53 41 P **P** **11 52 41.0 -1.8**
baz=243
RIDG Independent Ri 89.54 19 P **P** **11 52 40.8 -1.7**
baz=223,SNR=8.4
PLBC Pleasant Camp 89.57 25 P **P** **11 52 41.3 -1.3**
baz=231,SNR=8.6
YUK3 Moose Creek 89.58 22 P **P** **11 52 41.6 -1.3**
baz=227,SNR=10.0
IL31 89.71 17 P **P** **11 52 41.7 -1.4**
ILAR Eielson Array 89.71 17 P **P** **11 52 41.7 -1.5**
comp=Z,4.1nm,0.7s,baz=237,slow=4.8,SNR=56
comp=Z,4.1nm,0.7s
DOT Dot Lake 89.71 19 P **P** **11 52 42.3 -1.0**
DOT IAmb IAmb 11 52 44.3
comp=Z,7.7nm,0.8s
P30M Million Dollar 89.76 24 P **P** **11 52 42.5 -1.1**

baz=230
SNAA **Sanae** 89.76 183 P P 11 52 41.8 -1.8
SNAA **Sanae** 89.76 183 pP pP 11 53 32.6 -0.3
SNAA **Sanae** 89.76 183 P P 11 52 41.7 -1.9
SNAA IAmb IAmb 11 53 34.2
comp=Z,23nm,1.6s
YUK6 **Outpost Mounta** 89.77 23 P P 11 52 42.1 -1.8
baz=229
H23K **Yukon River** 89.80 16 P P 11 52 43.6 0.0
baz=219
POKR **Poker Plat Res** 89.82 17 P P 11 52 42.7 -1.0
baz=221
BVCY **Beaver Creek** 89.88 21 P P 11 52 43.6 -0.5
baz=227
YUK4 **Talbot Arm** 89.93 22 P P 11 52 43.1 -1.4
baz=229,SNR=5.6
PDMCI **Parker Dam,Lak** 89.95 54 P P 11 52 43.3 -1.7
baz=247
F21K **Alatna River** 89.97 14 P P 11 52 43.3 -1.1
baz=215
SCRK **Sand Creek** 89.97 19 P P 11 52 44.2 -0.4
SCRK IAmb IAmb 11 52 45.7
comp=Z,7.9nm,0.8s
SCRK **Sand Creek** 89.97 19 P P 11 52 43.3 -1.3
baz=224,SNR=11
SKAG **Skagway** 89.98 25 P P 11 52 43.6 -0.9
baz=231,SNR=9.4
L27K **Beaver Creek,** 90.01 20 P P 11 52 43.5 -1.1
baz=226
HYT **Haines Junctio** 90.01 23 P P 11 52 43.9 -0.9
HYT **Haines Junctio** 90.01 23 P P 11 52 43.8 -0.9
baz=230
BCAR **Beaver Creek A** 90.02 20 P P 11 52 44.4 -0.3
J25K **Salcha River,** 90.03 18 P P 11 52 44.0 -0.7
J25K **Salcha River,** 90.03 18 P P 11 52 43.8 -0.9
baz=223,SNR=6.9
214A **Organ Pipe Nat** 90.10 56 P P 11 52 44.1 -1.7
baz=248
BMN **Battle Mountai** 90.14 47 P P 11 52 46.6 +0.6
BMN IAmb IAmb 11 52 47.3
comp=Z,15nm,1.1s
I07A **Izee** 90.16 43 P P 11 52 46.7 +0.8
I07A IAmb IAmb 11 52 47.4
comp=Z,18nm,0.9s
G22K **Bettles** 90.18 15 P P 11 52 44.5 -0.8
baz=217
VNA3 **Neumayer Olymp** 90.36 180 P P 11 52 44.2 -2.1
VNA3 **Neumayer Olymp** 90.36 180 pP pP 11 53 35.1 -0.5
G23K **Bananza Creek** 90.37 15 P P 11 52 46.2 -0.1
baz=218
R11A **Troy Canyon, C** 90.46 50 P P 11 52 46.1 -1.4
baz=246,SNR=6.2
J26L **Joseph Creek** 90.48 19 P P 11 52 46.5 -0.4
baz=224,SNR=9.9
F22K **John River** 90.50 14 P P 11 52 46.8 0.0
baz=216
O30N **Mendenhall** 90.51 24 P P 11 52 45.8 -1.2
baz=231,SNR=7.0
N30M **Aishikik Lake** 90.57 23 P P 11 52 46.0 -1.4
baz=230
K27K **Chicken** 90.60 19 P P 11 52 47.6 +0.3
K27K IAmb IAmb 11 52 48.8
comp=Z,5.1nm,0.8s
K27K **Chicken** 90.60 19 P P 11 52 46.3 -1.1
baz=226
VNA2 **Neumayer--Watz** 90.65 181 P P 11 52 46.1 -1.5
baz=176,slow=5.0
VNA2 **Neumayer--Watz** 90.65 181 pP pP 11 53 36.8 -0.2
T35M **Bob Quinn** 90.67 29 P P 11 52 47.1 -0.8
baz=236
P32M **Atlin** 90.71 25 P P 11 52 46.9 -1.1
baz=233,SNR=5.5
M29M **Somme Creek** 90.72 22 P P 11 52 47.3 -0.8
baz=229
LTY **Liberty** 90.84 40 P P 11 52 49.1 +0.2
LTY IAmb IAmb 11 52 49.8
comp=Z,11nm,1.0s
WHY **Whitehorse** 90.90 24 P P 11 52 48.5 -0.4
baz=232
VNA1 **Neumayer--Stat** 90.94 181 P P 11 52 47.3 -1.7
VNA1 **Neumayer--Stat** 90.94 181 pP pP 11 53 38.5 +0.1
G24K **Hadweenzic Riv** 91.01 16 P P 11 52 49.2 0.0
baz=221
N31M **Braeburn, Yuko** 91.08 23 P P 11 52 49.2 -0.4
baz=231,SNR=5.3
H25K **Birch Creek** 91.12 17 P P 11 52 49.2 -0.5
baz=222
I26K **Coal Creek Min** 91.18 18 P P 11 52 49.6 -0.4
baz=225
M30M **Minto, Yukon** 91.40 22 P P 11 52 50.1 -1.1
M30M IAmb IAmb 11 52 52.0
comp=Z,8.8nm,1.0s
M30M **Minto, Yukon** 91.40 22 P P 11 52 50.5 -0.6
baz=230,SNR=12
EGAK **Eagle** 91.41 19 P P 11 52 50.4 -0.6
EGAK IAmb IAmb 11 52 51.7
comp=Z,8.3nm,0.8s
EGAK **Eagle** 91.41 19 P P 11 52 50.5 -0.6
baz=226,SNR=14
P33M **Teslin, Yukon** 91.44 25 P P 11 52 51.0 -0.4
baz=234,SNR=8.3
DAWY **Dawson** 91.49 20 P P 11 52 51.0 -0.5
DAWY IAmb IAmb 11 52 52.7
comp=Z,16nm,1.6s
DAWY **Dawson** 91.49 20 P P 11 52 50.6 -0.9
baz=228,SNR=7.2
F24K **Squaw Lake** 91.53 15 P P 11 52 51.5 -0.2
baz=220
DLBC **Dease Lake** 91.59 27 P P 11 52 51.1 -1.1
baz=236,SNR=18
R33M **Jennings River** 91.73 26 P P 11 52 52.1 -0.8
baz=235,SNR=15
E24K **Your Creek** 91.81 15 P P 11 52 52.1 -0.9
baz=220
TUC **Tucson** 91.83 57 P P 11 52 52.5 -1.4
baz=249
I27K **Kandik River** 91.85 18 P P 11 52 52.7 -0.5
baz=226
N32M **Quiet Lake** 91.90 24 P P 11 52 52.2 -1.3
baz=233
TOLK **Toolik Lake Re** 92.00 14 P P 11 52 53.8 0.0
TOLK **Toolik Lake Re** 92.00 14 P P 11 52 53.3 -0.5
baz=219
D23K **Nanushuk River** 92.00 14 P P 11 52 53.0 -0.8
baz=218
M31M **Drury Creek, Y** 92.04 23 P P 11 52 52.9 -1.2
baz=232,SNR=5.5
U15A **North Rim** 92.15 52 P P 11 52 55.9 +0.4
U15A IAmb IAmb 11 52 57.1
comp=Z,9.3nm,0.9s
F25K **Christian Rive** 92.16 16 P P 11 52 53.8 -0.8
baz=222
G26K **Porcupine Rive** 92.18 17 P P 11 52 54.2 -0.3
baz=224
H27K **Steamboat Moun** 92.31 18 P P 11 52 54.2 -1.0
baz=226
BMAR **Burnt Mountain** 92.31 16 P P 11 52 55.2 0.0
MAYO **Mayo, Yukon** 92.36 22 P P 11 52 55.1 -0.4
baz=231
FARO **Faro, Yukon** 92.44 23 P P 11 52 54.8 -1.2
baz=233
WUAZ **Wupatki** 92.51 53 P P 11 52 55.8 -1.3
baz=249
D24K **Happy Valley** 92.57 14 P P 11 52 56.0 -0.3
baz=220
G27K **Doyon Strip** 92.68 17 P P 11 52 56.7 -0.2
baz=226
I29M **Ogilvie Camp,** 92.70 19 P P 11 52 56.1 -0.9
baz=229
C23K **Itkillik River** 92.71 13 P P 11 52 57.0 +0.1
baz=218
C24K **Franklin Bluff** 93.03 14 P P 11 52 58.9 +0.5
baz=220
D25K **Kavik River** 93.26 14 P P 11 52 59.5 -0.1
baz=222
HLID **Hailey** 93.31 45 P P 11 52 59.6 -0.9
baz=247,SNR=5.7
NEW **Newport** 93.43 40 P P 11 52 59.5 -1.4
baz=246
MMPY **Sheldon Lake,** 93.46 24 P P 11 52 59.7 -1.0
baz=235,SNR=7.3
E27K **Coleen River** 93.65 17 P P 11 53 01.1 -0.2
baz=226
EPYK **Eagle Plains** 93.85 19 P P 11 53 01.7 -0.7
baz=230
TGTN **Hyland Airport** 94.03 25 P P 11 53 03.0 -0.3
baz=238

C27K **Jago River** 94.13 15 P P 11 53 03.1 -0.4
baz=224
121A **Cookes Peak, D** 94.29 57 P P 11 53 03.6 -1.8
baz=251
BOZ **Bozeman (W)** 95.91 44 P P 11 53 11.5 -0.9
baz=249
MNTX **Cornudas Mount** 95.96 59 P P 11 53 11.5 -1.2
baz=252
INK **Inuvik** 96.03 18 P P 11 53 12.3 +0.2
baz=233
ANMO **Albuquerque** 96.11 55 P P 11 53 12.3 -1.3
baz=252
BW06 **Boulder Array** 96.34 47 P P 11 53 12.6 -1.9
baz=250
PDAR **Pinedale Array** 96.34 47 P P 11 53 13.4 -1.1
comp=Z,0.5nm,0.8s,baz=221,slow=3.4,SNR=5.6
comp=Z,0.5nm,0.8s
O20A **White River Ci** 96.42 50 P P 11 53 13.2 -1.7
baz=251
TXAR **Lajitas Array** 96.64 61 P P 11 53 16.4 +0.4
comp=Z,2.0nm,1.0s,baz=222,slow=6.2,SNR=18
comp=Z,2.0nm,1.0s
WMQ **Urumqi** 96.65 314 eP P 11 53 16.8 +1.1
S22A **4UR Ranch, Cre** 96.70 53 P P 11 53 14.4 -2.0
baz=252
WRGLY **Wrigley** 96.82 25 P P 11 53 14.5 -1.3
baz=242
RLMT **Red Lodge** 97.31 45 P P 11 53 17.1 -1.7
baz=251
T25A **Trinidad** 98.36 54 P P 11 53 21.4 -2.3
baz=253
C36M **Paulatuk** 99.49 19 P Pdif 11 53 26.5 -1.2
baz=242
YKA **Yellowknife Ar** 100.22 27 P Pdif 11 53 31.9 +0.9
comp=Z,7nm,0.6s,baz=253,slow=4.6,SNR=11
A36M **Sachs Harbour** 100.39 17 P Pdif 11 53 31.4 -0.2
baz=242
MKAR **Makanchi Array** 101.17 316 P Pdif 11 53 37.5 +1.8
comp=Z,1.4nm,0.5s,baz=87,slow=5.7,SNR=13
BOSA **Boshof** 121.42 218 PKP PKPdf 11 58 37.2 -1.3
comp=Z,1.0nm,0.4s,baz=217,slow=5.1,SNR=6.4
ARCES **ARCESS Array B** 124.43 345 PKP PKPdf 11 58 41.4 -1.4
comp=Z,3.2nm,0.4s,baz=74,slow=1.9,SNR=73
KLMR **Klimovskoe** 124.91 333 ePKPdf PKPdf 11 58 40.6 -3.3
KLMR AMP 11 58 43.3
comp=Z,6.0nm,0.9s
FINES **FINESS Array B** 129.95 338 PKhKP PKPpre 11 58 46.5
comp=Z,0.3nm,0.4s,baz=123,slow=6.8,SNR=4.6
FINES PKP PKPdf 11 58 52.0 -1.5
comp=Z,0.6nm,0.6s,baz=91,slow=5.6,SNR=5.0
FINES SKPbc SKPab 12 01 55.2 -1.9
comp=Z,5.7nm,0.8s,baz=66,slow=4.6,SNR=17
NB2 **NORSAR Subarra** 134.81 345 PKPdf PKPdf 11 59 02.0 -0.8
comp=Z,2.3nm,1.1s,baz=31,slow=1.9
NOA **NORSAR Array B** 134.81 345 PKP PKPdf 11 59 02.1 -0.7
comp=Z,0.4nm,0.5s,baz=35,slow=2.8,SNR=4.5
AKASG **Malin Array Be** 134.88 325 PKP PKPdf 11 59 01.9 -1.2
comp=Z,0.9nm,0.6s,baz=65,slow=2.1,SNR=4.3
AKASG SKPbc SKPbc 12 02 13.4 -1.3
comp=Z,2.8nm,0.8s,baz=46,slow=4.4,SNR=9.2
BRTR **Keskin Array B** 136.29 308 PKP PKPdf 11 59 03.9 -2.5
comp=Z,0.6nm,0.4s,baz=104,slow=3.5,SNR=3.1
MORC **Moravsky Berou** 141.44 330 ePKP PKPdf 11 59 10.7 -4.6
BRG **Berggiesshubel** 142.24 334 ePKP PKPdf 11 59 12.1 -4.6
BRG Amp 11 59 14.5
comp=Z,4.8nm,1.3s
CLL **Collm** 142.28 335 *i* (PKPdf) PKPdf 11 59 12.2 -4.5
PRU **Pruhonice** 142.65 333 ePKP PKPdf 11 59 15.5 -1.9
RONA **Rosalia, Austr** 143.47 329 *i* P PKPbc 11 59 17.0 +0.2
comp=Z,26nm,1.0s,SNR=11
CONA **Conrad Observa** 143.52 329 *i* P PKPbc 11 59 17.2 +0.2
comp=Z,14nm,0.7s,SNR=11
KOVH **Kovagotottos** 143.59 325 PKP PKPab 11 59 16.6 +0.4
CKRC **Cesky Krumlov** 143.61 332 ePKP PKPab 11 59 16.6 +0.4
KHC **Kasperske Hory** 143.71 333 ePKP PKPab 11 59 16.8 +0.2
GERES **GERESS Array B** 143.87 332 PKP PKPab 11 59 16.6 -0.7
comp=Z,9.2nm,0.9s,baz=42,slow=2.2,SNR=54
GERES SKPbc SKPbc 12 02 38.0 -1.5
comp=Z,0.9nm,0.6s,baz=86,slow=1.9,SNR=6.6
A252A **Venje** 144.14 325 *i* P PKPab 11 59 18.2 -0.2
ARSA **Arzberg** 144.16 329 *i* P PKPab 11 59 18.5 +0.1
SNR=15
MOA **Molln** 144.34 330 *i* P PKPbc 11 59 19.3 0.0
comp=Z,34nm,0.8s,SNR=16
KOGS **Kog** 144.34 327 ePKPbc PKPab 11 59 18.7 -0.3
RUDO **Rudo** 144.36 321 eP PKPab 11 59 18.9 -0.3
KALN **Kalnik** 144.44 327 *i* P PKPab 11 59 19.0 -0.5
MOSL **Moslavina** 144.62 326 *i* P PKPab 11 59 19.8 -0.4
LOBO **Lobor** 144.63 327 *i* P PKPab 11 59 19.4 -0.7
GROS **Grobnik** 144.71 328 *i* PKPbc PKPab 11 59 19.7 -0.9
BIOA **Bad Ischl, Aus** 144.74 331 *i* P PKPab 11 59 20.1 -0.5
comp=Z,33nm,1.1s,SNR=11
SOKA **Soboth** 144.80 328 *i* P PKPbc 11 59 20.2 -0.7
comp=Z,32nm,0.7s,SNR=30
UPM **Unac-Piva** 144.87 321 eP PKPbc 11 59 20.3 -1.1
A051A **Mrakovica** 144.93 325 eP PKPbc 11 59 21.0 -0.3
BLY **Banja Luka** 144.94 324 eP PKPbc 11 59 21.1 -0.2
OBKA **Obir** 145.15 329 eP PKPdf 11 59 21.4 -0.6
OBKA **Obir** 145.15 329 *i* P PKPdf 11 59 21.5 -0.6
comp=Z,29nm,1.0s,SNR=14
CRES **Cresnjev** 145.16 327 eP PKPdf 11 59 21.5 -0.4
MGRS **Mrkonjic Grad** 145.20 324 eP PKPab 11 59 22.8 +0.4
BRY **Bratogost** 145.26 321 eP PKPdf 11 59 21.7 -0.7
DRME **Dracevica, Mon** 145.27 319 eP PKPdf 11 59 21.6 -0.6
BTNL **Ternell** 145.33 341 *d*PKP PKPdf 11 59 21.7 -0.4
KBA **Koelnbreinsper** 145.33 330 *i* P PKPdf 11 59 21.7 -0.7
comp=Z,14nm,0.9s,SNR=9.6
MEM **Membach** 145.34 341 *d*PKP PKPdf 11 59 22.0 -0.1
SRKY **Kupres RS** 145.37 323 eP PKPdf 11 59 21.8 -0.7
A050A **Klekovaca** 145.47 324 eP PKPdf 11 59 22.3 -0.3
BOJS **Bojanci** 145.49 327 eP PKPbc 11 59 22.7 -0.2
LJU **Ljubljana** 145.49 328 *i* PKPbc PKPdf 11 59 22.4 -0.1
BSTI **Sart Tilman** 145.50 341 *d*PKP PKPab 11 59 23.4 +0.1
MYKA **Terra Mystica** 145.51 330 *i* P PKPdf 11 59 22.4 -0.2
comp=Z,15nm,0.6s,SNR=10
HCY **Herceg Novi** 145.55 320 eP PKPdf 11 59 22.3 -0.4
BHOU **Houvegnez** 145.57 341 *d*PKP PKPab 11 59 23.6 +0.1
CRNS **Crni Vrh** 145.59 328 ePKPbc PKPdf 11 59 22.4 -0.3
PLIT **Plitvice** 145.71 326 *i* P PKPdf 11 59 22.8 -0.2
BCLA **Clavier** 145.73 341 *d*PKP PKPab 11 59 24.2 0.0
RICI **Ricice** 145.74 322 *i* P PKPdf 11 59 22.8 -0.2
CEY **Cerknica** 145.75 328 eP PKPdf 11 59 23.1 +0.1
STON **Ston** 145.78 321 eP PKPdf 11 59 21.6 -1.4
STON **Ston** 145.78 321 *i* P PKPdf 11 59 21.4 -1.6
KIJV **Kijevo** 145.84 324 *i* P PKPdf 11 59 23.4 +0.2
UDBI **Udbina** 145.86 325 *i* P PKPdf 11 59 23.4 +0.2
MAKA **Makarska** 145.93 322 *i* P PKPdf 11 59 22.9 -0.3
WATA **Walderalm** 145.94 332 *i* P PKPbc 11 59 24.1 -0.3
comp=Z,11nm,0.8s,SNR=6.9
ABTA **Abfaltersbach** 145.96 331 *i* P PKPdf 11 59 23.6 +0.2
comp=Z,21nm,1.2s,SNR=13
WTTA **Wattenberg** 145.97 332 *i* P PKPdf 11 59 24.0 +0.5
comp=Z,18nm,1.1s,SNR=9.6
RCHB **Rochefort** 145.98 341 *d*PKP PKPdf 11 59 23.4 +0.3
BMRD **Maredsous** 145.99 342 *d*PKP PKPbc 11 59 23.9 -0.4
SKDS **Skadanscina** 146.09 328 eP PKPdf 11 59 24.1 +0.6
WLF **Walferdange** 146.12 340 *d*PKP PKPab 11 59 25.2 -0.4
MOTA **Moosalm** 146.14 333 *i* P PKPbc 11 59 24.5 -0.5
comp=Z,30nm,1.0s,SNR=11
RETA **Reutte** 146.18 333 *i* P PKPdf 11 59 24.3 +0.7
comp=Z,8.4nm,0.8s,SNR=6.5
SQTA **Sankt Quirin** 146.19 332 *i* P PKPdf 11 59 23.8 0.0
comp=Z,19nm,0.7s,SNR=14
DOU **Dourbes** 146.22 342 *d*PKP PKPbc 11 59 24.4 -0.6
RABC **Rab** 146.24 326 *i* P PKPdf 11 59 24.1 +0.4
NVLJ **Novalja** 146.32 326 *i* P PKPdf 11 59 24.3 +0.4
MORI **Morici** 146.32 324 *i* P PKPdf 11 59 24.6 +0.6
SMRN **Sveta Marina** 146.37 327 *i* P PKPbc 11 59 24.8 -0.7
VIRC **Vir** 146.40 325 *i* P PKPdf 11 59 24.8 +0.8
FETA **Feichten** 146.55 333 *i* P PKPbc 11 59 25.7 -0.5
comp=Z,14nm,0.7s,SNR=10.0
DUGI **Dugi Otok** 146.59 325 *i* P PKPdf 11 59 25.1 +0.7
BRJN **Brijuni** 146.67 327 *i* P PKPbc 11 59 25.5 -0.9
DAVA **Damuels** 146.71 334 *i* P PKPbc 11 59 26.3 -0.3
comp=Z,24nm,1.3s,SNR=11
KEST **Kesra** 155.25 318 PKPab PKPab 12 00 05.3 +1.3
comp=Z,4.5nm,0.6s,baz=281,slow=4.2,SNR=5.8
ESDC **Sonseca Array** 158.17 345 PKPab PKPab 12 00 16.5 +0.2
comp=Z,2.0nm,0.9s,baz=9.3,slow=4.2,SNR=8.3
TORD **Torodi Ar. Bea** 166.66 248 PKP PKPdf 11 59 49.0 -1.6
comp=Z,3.4nm,1.0s,baz=21,slow=1.5,SNR=11
TORD PKPab PKPab 12 00 53.6 -0.8
comp=Z,2.1nm,1.1s,baz=111,slow=3.8,SNR=4.4

IDC 20 11:49:05.2±2.5, 6°06'S×130°73'E, h0km, mb3.5/1, mbtmp3.4/4, ML3.1/3, MS3.5/2, Error ellipse: s-maj=100.6km s-min=30.2km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.19	6	LR	LR	11 52 33.9	
	comp=Z,183nm,20.6s,baz=290,slow=40						
FITZ	**Fitzroy Crossi**	12.95	202	Pn	Pn	11 52 11.4	+0.7
	0.1nm,0.3s,baz=24,slow=12,SNR=1.1						
FITZ				Sn	Sn	11 54 26.4	-9.2
	0.1nm,0.3s,baz=273,slow=18,SNR=2.6						
	1.6nm,0.9s						
WRA	**Warramunga Arr**	14.23	166	Pn	Pn	11 52 26.5	-1.7
	0.1nm,0.3s,baz=348,slow=14,SNR=1.6						
WRA				Sn	Sn	11 54 56.2	-11
	0.2nm,0.3s,baz=335,slow=24,SNR=6.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	17.77	170	P	P	11 53 14.8	-0.3
	0.1nm,0.3s,baz=346,slow=9.9,SNR=7.4						
	0.5nm,0.5s						
DZM	**Mont Dzumac**	37.98	118	LR	LR	12 11 56.5	
	comp=Z,218nm,20.5s,baz=202,slow=36						
MKAR	**Makanchi Array**	67.85	326	P	P	12 00 05.3	0.0
	0.4nm,0.7s,baz=108,slow=6.7,SNR=4.0						
	0.4nm,0.7s						

IDC 20 11:52:59.4±1.3, 55°59S×32°72W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=54.8km s-min=31.5km az=83.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	34.66	180	P	P	11 59 50.6	+0.3
	3.0nm,1.0s,baz=219,slow=2.8,SNR=7.7						
	3.0nm,1.0s						
LPAZ	**La Paz**	47.64	311	P	P	12 01 38.6	+0.8
	0.9nm,0.6s,baz=157,slow=6.2,SNR=4.1						
	0.9nm,0.6s						
TORD	**Torodi Ar. Bea**	74.32	35	P	P	12 04 38.9	+0.4
	0.6nm,0.6s,baz=209,slow=6.6,SNR=4.0						
	0.6nm,0.6s						
ILAR	**Eielson Array**	147.50	313	PKPbc	PKPdf	12 12 41.4	+0.2
	0.8nm,0.7s,baz=112,slow=0.9,SNR=5.3						
SONM	**Songino Array**	153.83	90	PKPbc	PKiKP	12 13 03.6	+3.9
	0.7nm,0.7s,baz=199,slow=3.1,SNR=3.9						

*IDC **20** 12:04:23.9±0.6, 54°.79S×31°.18W, h0km, mb4.4/8, mbtmp4.5/9, ML3.9/1, MS3.7/5, Error ellipse: s-maj=27.2km s-min=16.1km az=83.0*
*NEIC **20** 12:04:26.4±1.4, 54°.85S±0°.09×31°.3W±0°.2, h13km±3km, mb4.6/15, Error ellipse: s-maj=15.7km s-min=11.0km az=123.0*

ISC 20 12:04:25.4±0.6, 54°.84S±0°.08×31°.4W±0°.1, h10km, n45, σ0°98/37, mb4.5/11, MS3.7/5, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	3.03	279	Pn	Pn	12 05 12.2	-1.2
ORCD	**Orcadas**	9.25	225	Pn	Pn	12 06 35.5	-3.2
VNA1	**Neumayer--Stat**	18.84	156	P	Pn	12 08 45.7	+0.2
VNA3	**Neumayer Olymp**	18.96	158	P	Pn	12 08 46.9	-0.2
PMSA	**Palmer Station**	18.97	225	P	P	12 08 47.3	+0.9
	0.4nm,0.3s,baz=52,slow=9.9,SNR=5.7						
	14nm,1.0s						
PMSA	**Palmer Station**	18.97	225	P	Pn	12 08 47.7	+0.6
VNA2	**Neumayer--Watz**	19.24	156	P	P	12 08 49.8	+0.3
	baz=314,slow=11						
SNAA	**Sanae**	20.84	155	P	P	12 09 06.7	-0.1
SNAA	**Sanae**	20.84	155	P	P	12 09 06.6	-0.2
	24nm,0.8s,baz=308,slow=9.2,SNR=85						
SNAA				LR	LR	12 15 20.6	
	comp=Z,150nm,20.3s,baz=254,slow=32						
	24nm,0.8s						
SNAA	**Sanae**	20.84	155	P	P	12 09 06.8	-0.1
SNAA				IAmb	IAmb	12 09 08.7	
	comp=Z,28nm,0.9s						
SMAI	**San Martin Ant**	21.21	217	P	P	12 09 14.0	+3.2
SMAI				IAmb	IAmb	12 09 15.8	
	comp=Z,11nm,0.7s						
TROLL	**Troll, Antarti**	22.40	153	P	P	12 09 23.7	0.0
BELA	**Belgrano 2**	23.16	182	P	P	12 09 32.3	+0.8
BELA				IAmb	IAmb	12 09 33.3	
	comp=Z,6.1nm,0.9s						
QSPA	**South Pole Qui**	35.41	180	P	P	12 11 21.7	+0.5
	comp=Z,12nm,0.7s,baz=200,slow=3.0,SNR=85						
QSPA				LR	LR	12 24 07.3	
	comp=Z,84nm,19.0s,baz=231,slow=33						
	comp=Z,12nm,0.7s						
QSPA	**South Pole Qui**	35.41	180	P	P	12 11 21.6	+0.4
QSPA				IAmb	IAmb	12 11 25.7	
	comp=Z,14nm,0.7s						
BDFB	**Brasilia**	41.19	335	P	P	12 12 11.2	+1.0
	comp=Z,1.4nm,0.3s,baz=140,slow=10.0,SNR=3.0						
	comp=Z,1.4nm,0.3s						
MAW	**Mawson**	42.52	146	P	P	12 12 20.3	0.0
	comp=Z,6.2nm,0.8s,baz=228,slow=7.3,SNR=20						
	comp=Z,6.2nm,0.8s						
MAW	**Mawson**	42.52	146	P	P	12 12 20.4	0.0
PB01	**IPOC Station P**	44.25	304	P	P	12 12 34.9	-0.1
SBA	**Scott Base**	47.09	185	P	P	12 12 57.8	+1.1
SBA				IAmb	IAmb	12 13 00.2	
	comp=Z,8.9nm,1.2s						
VNDA	**Vanda**	47.64	184	P	P	12 13 01.5	+0.5
	comp=Z,5.7nm,0.8s,baz=179,slow=5.9,SNR=41						
	comp=Z,5.7nm,0.8s						
VNDA	**Vanda**	47.64	184	P	P	12 13 01.5	+0.5
VNDA				IAmb	IAmb	12 13 02.7	
	comp=Z,6.0nm,0.8s						
H10S2	**ASCENSION HYDR**	47.67	23	T	T	13 04 21.6	
	baz=193,slow=74,SNR=4.1						
H10S3	**ASCENSION HYDR**	47.67	23	T	T	13 04 21.8	
	baz=27,slow=74,SNR=11						
LPAZ	**La Paz**	47.74	309	P	P	12 13 03.6	+0.4
	comp=Z,2.4nm,0.6s,baz=200,slow=11,SNR=8.6						
	comp=Z,2.4nm,0.6s						
LPAZ	**La Paz**	47.74	309	P	P	12 13 04.0	+0.9
LPAZ				IAmb	IAmb	12 13 18.8	
	comp=Z,6.3nm,0.8s						
H10N1	**ASCENSION HYDR**	48.78	23	T	T	13 05 46.5	
	baz=192,slow=75,SNR=13						
H10N3	**ASCENSION HYDR**	48.78	22	T	T	13 05 46.4	
	baz=192,slow=75,SNR=36						
H10N2	**ASCENSION HYDR**	48.80	22	T	T	13 05 47.1	
	baz=192,slow=75,SNR=25						
RCBR	**Riachuelo**	49.01	354	LR	LR	12 29 32.6	
	comp=Z,83nm,20.2s,baz=356,slow=31						
MDP	**Montagnes des**	62.30	336	LR	LR	12 42 32.6	
	comp=Z,49nm,19.0s,baz=155,slow=37						
DBIC	**Dimbokro**	65.17	29	P	P	12 15 05.4	-1.1
	comp=Z,3.4nm,0.7s,baz=191,slow=5.2,SNR=2.7						
	comp=Z,3.4nm,0.7s						
DBIC	**Dimbokro**	65.17	29	P	P	12 15 06.0	-0.5
SDV	**Santo Domingo**	71.50	319	LR	LR	12 49 51.7	
	comp=Z,75nm,18.8s,baz=91,slow=38						
TOA0	**Torodi Ar. Sit**	73.28	34	P	P	12 15 57.2	+0.4
TOA0				IAmb	IAmb	12 16 30.6	
	comp=Z,5.3nm,1.1s						
TORD	**Torodi Ar. Bea**	73.28	34	P	P	12 15 56.8	0.0
	comp=Z,1.2nm,0.7s,baz=205,slow=6.6,SNR=8.3						
	comp=Z,1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	73.28	34	P	P	12 15 56.7	0.0
TORD				IAmb	IAmb	12 16 11.9	
	comp=Z,4.7nm,1.2s						
TAU	**Tasmania Unive**	82.61	179	P	P	12 16 47.9	-0.6
FINES	**FINESS Array B**	124.47	29	PKP	PKPdf	12 23 22.2	-1.0
	comp=Z,1.7nm,0.8s,baz=195,slow=2.2,SNR=9.1						
CMAR	**Chiang Mai Arr**	127.73	114	PKP	PKiKP	12 23 31.6	+0.2
	comp=Z,0.3nm,0.2s,baz=217,slow=4.7,SNR=4.4						
ARCES	**ARCESS Array B**	130.73	23	PKP	PKPdf	12 23 34.5	-0.6
	comp=Z,2.1nm,0.7s,baz=225,slow=0.9,SNR=11						
YKA	**Yellowknife Ar**	133.69	320	PKP	PKPdf	12 23 40.7	-0.1
	comp=Z,0.8nm,0.7s,baz=130,slow=3.4,SNR=3.0						
ZALV	**Zalesovo Beam**	143.99	64	PKP	PKPbc	12 23 57.4	-0.4
	comp=Z,1.4nm,0.6s,baz=249,slow=3.3,SNR=6.0						
ILAR	**Eielson Array**	147.54	314	PKPbc	PKPbc	12 24 07.5	-0.8
	comp=Z,2.2nm,0.7s,baz=126,slow=1.8,SNR=22						
SONM	**Songino Array**	153.05	87	PKPbc	PKPbc	12 24 21.4	-0.9
	comp=Z,2.0nm,0.6s,baz=232,slow=3.3,SNR=13						
SONM				PKPab	PKPab	12 24 33.8	-0.1
	comp=Z,1.1nm,0.7s,baz=202,slow=3.1,SNR=4.4						

*RSPR **20** 12:13:01.5, 19°.24N×67°.46W, h54km±4km, MD3.2/8*

*OSPL **20** 12:13:01.6±0.4, 19°.23N×67°.28W, h15km±3km, ML2.5*
*NEIC **20** 12:13:02.5±1.7, 19°.19N±0°.08×67°.37W±0°.05, h38km±38km, Error ellipse: s-maj=12.1km s-min=6.9km az=189.0*

ISC 20 12:13:02.1±1.5,**19°.15N**±0°.08×**67°.37W**±0°.03,**h27**km,**n45,** σ0s**71**/51,**7C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.72 160**		*eP*		**Pn**		**12 13 16.2**	**-0.3**
AGPR	**Aguadilla, PR**	**0.72 160**		*eS*		**Sn**		**12 13 27.6**	**+1.0**
AGPR	**Aguadilla, PR**	**0.72 160**				**Pn**		**12 13 16.2**	**-0.3**
AGPR						**Sn**		**12 13 27.6**	**+1.0**
AGPR	**Aguadilla, PR**	**0.72 160**		*i* P		**Pb**		**12 13 15.1**	**-0.9**
AGPR				*eS*		**Sb**		**12 13 25.6**	**0.0**
AGPR				IAML				12 13 28.3	
	comp=Z,151nm,0.3s								
IDE	**Isla Desecheo**	**0.77 188**		*eP*		**Pb**		**12 13 16.4**	**-0.4**
IDE	**Isla Desecheo**	**0.77 188**		*eS*		**Sn**		**12 13 28.4**	**+0.6**
PRSN	**Puerto Rico Se**	**0.95 167**				**Pn**		**12 13 19.1**	**-0.6**
AOPR	**Arecibo Observ**	**0.99 144**		*eP*		**Pb**		**12 13 19.9**	**-0.6**
AOPR	**Arecibo Observ**	**0.99 144**		*eS*		**Sb**		**12 13 34.4**	**+1.2**
AOPR	**Arecibo Observ**	**0.99 144**				**Pb**		**12 13 19.9**	**-0.6**
AOPR						**Sb**		**12 13 34.4**	**+1.2**
LSP	**Las Mesas**	**1.00 164**		*eS*		**Sb**		**12 13 34.4**	**+0.7**
EMPR	**Esperanza - Ma**	**1.04 130**		*eP*		**Pb**		**12 13 21.1**	**-0.3**
EMPR	**Esperanza - Ma**	**1.04 130**		*eS*		**Sb**		**12 13 35.3**	**+0.7**
EMPR	**Esperanza - Ma**	**1.04 130**				**Pb**		**12 13 21.1**	**-0.3**
EMPR						**Sb**		**12 13 35.3**	**+0.7**
EMPR	**Esperanza - Ma**	**1.04 130**		IAML				12 13 40.5	
	comp=N,118nm,0.8s								
PCDR	**Punta Cana, DR**	**1.15 237**		Pn		**Pb**		**12 13 22.4**	**-0.9**
PCDR				IAML				12 13 47.0	
	comp=E,92nm,2.0s								
PCDR				IAML				12 13 49.3	
	comp=N,110nm,0.8s								
PCDR	**Punta Cana, DR**	**1.15 237**		*i* P		**Pb**		**12 13 22.9**	**-0.4**
PCDR				*eS*		**Sb**		**12 13 38.8**	**+1.0**
PCDR				IAML				12 13 46.5	
	comp=Z,78nm,2.2s								
CRPR	**Cabo Rojo, PR**	**1.16 168**		*eP*		**Pn**		**12 13 22.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.16 168**		*eS*		**Sb**		**12 13 38.5**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.16 168**				**Pn**		**12 13 22.2**	**-0.3**
CRPR						**Sb**		**12 13 38.5**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.16 168**		IAML				12 13 40.0	
	comp=N,62nm,0.4s								
CRPR				IAML				12 13 41.6	
	comp=E,49nm,0.4s								
CRPR	**Cabo Rojo, PR**	**1.16 168**		*i* P		**Pb**		**12 13 22.7**	**-0.8**
CRPR				*eS*		**Sn**		**12 13 37.8**	**+0.3**
CRPR				IAML				12 13 40.1	
	comp=Z,85nm,0.6s								
MLPR	**Magueyes Islan**	**1.21 165**		*eP*		**Pn**		**12 13 22.1**	**-1.1**
MLPR	**Magueyes Islan**	**1.21 165**		*eS*		**Sn**		**12 13 39.2**	**+0.4**
MLPR	**Magueyes Islan**	**1.21 165**				**Pn**		**12 13 22.1**	**-1.1**
MLPR						**Sn**		**12 13 39.2**	**+0.4**
MLPR	**Magueyes Islan**	**1.21 165**		IAML				12 13 42.7	
	comp=E,46nm,0.6s								
CELP	**Cerrillos**	**1.30 145**		*eP*		**Pn**		**12 13 24.2**	**-0.3**
CELP	**Cerrillos**	**1.30 145**		*eS*		**Sn**		**12 13 41.5**	**+0.5**
CELP	**Cerrillos**	**1.30 145**				**Pn**		**12 13 24.2**	**-0.3**
CELP						**Sn**		**12 13 41.5**	**+0.5**
CELP	**Cerrillos**	**1.30 145**		IAML				12 13 42.2	
	comp=E,87nm,0.6s								
CELP				IAML				12 13 42.4	
	comp=N,82nm,0.3s								
OBIP	**Obispado Ponce**	**1.32 147**		*eP*		**Pn**		**12 13 23.5**	**-1.2**
OBIP	**Obispado Ponce**	**1.32 147**		*eS*		**Sn**		**12 13 41.3**	**-0.1**
OBIP	**Obispado Ponce**	**1.32 147**				**Pn**		**12 13 23.5**	**-1.2**
OBIP						**Sn**		**12 13 41.3**	**-0.1**
OBIP	**Obispado Ponce**	**1.32 147**		IAML				12 13 42.4	
	comp=N,87nm,0.3s								
GCPR	**Guaynabo City**	**1.48 124**		Pn		**Pb**		**12 13 28.3**	**-0.6**
SJG	**San Juan**	**1.55 132**		Pn		**Pn**		**12 13 28.0**	**+0.2**
SJG				IAML				12 13 57.6	
	comp=N,42nm,0.5s								
SJG				IAML				12 13 59.3	
	comp=N,48nm,0.3s								
CBYP	**Canovanas**	**1.68 121**		Pn		**Pn**		**12 13 28.9**	**-0.9**
IGPR	**InterUniversit**	**1.68 134**		*eP*		**Pn**		**12 13 29.2**	**-0.5**
IGPR	**InterUniversit**	**1.68 134**		*eS*		**Sn**		**12 13 51.3**	**+1.0**
IGPR	**InterUniversit**	**1.68 134**				**Sn**		**12 13 51.3**	**+1.0**
HUMP	**Col San Antoni**	**1.75 125**		*eP*		**Pn**		**12 13 30.5**	**-0.2**
HUMP	**Col San Antoni**	**1.75 125**		*eS*		**Sn**		**12 13 52.9**	**+0.7**
HUMP	**Col San Antoni**	**1.75 125**				**Pn**		**12 13 30.5**	**-0.2**
HUMP						**Sn**		**12 13 52.9**	**+0.7**
DR12	**Loma Pena Alta**	**1.94 260**		Pn		**Pn**		**12 13 33.3**	**0.0**
CUPR	**Culebra, Puert**	**2.15 113**		Pn		**Pn**		**12 13 35.0**	**-1.1**

IDC 20 12:13:12.2±1.9,**7°.27S**×**128°.23E, h0**km,**mb3.8**/2,
mbtmp3.5/5,**ML3.5**/3,**Error ellipse: s-maj=104.1km s-min=26.1km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.06 193**			Pn		Pn	12 15 52.0	+0.3
	0.2nm,0.3s,baz=21,slow=14,SNR=9.3								
FITZ					Sn		Sn	12 17 49.5	-6.8
	0.2nm,0.3s,baz=114,slow=20,SNR=2.5								
	1.3nm,0.7s								
WRA	**Warramunga Arr**	**13.93 155**			Pn		Pn	12 16 30.0	-1.0
	0.3nm,0.3s,baz=328,slow=14,SNR=22								
WRA					Sn		Sn	12 19 00.0	-6.4
	0.7nm,0.3s,baz=323,slow=22,SNR=8.6								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**17.19 162**		P			Pn	12 17 14.6	+0.6
	0.2nm,0.3s,baz=348,slow=12,SNR=3.4								
ASAR				S			Sn	12 20 20.7	-5.3
	0.4nm,0.6s,baz=320,slow=17,SNR=2.2								
	0.2nm,0.3s								
MKAR	**Makanchi Array**	**67.50 328**		P		P		12 24 10.5	+0.4
	0.5nm,0.5s,baz=118,slow=8.3,SNR=4.1								
	0.5nm,0.5s								
KURBB	**Kurchatov Arra**	**71.83 329**		P		P		12 24 36.4	-0.3
	0.8nm,0.8s,baz=128,slow=5.8,SNR=5.3								
	0.8nm,0.8s								

*IDC **20** 12:22:59.9±0.8, 54°.89S×31°.21W, h0km, mb3.8/5, mbtmp3.9/5, Error ellipse: s-maj=41.4km s-min=21.5km az=79.0*
*NEIC **20** 12:23:01.5±1.6, 54°.91S±0°.10×31°.5W±0°.2, h13km±5km, mb4.2/8, Error ellipse: s-maj=18.4km s-min=13.7km az=99.0.*

ISC 20 12:23:01.4±0.8,**54°.9S**±0°.1×**31°.6W**±0°.1,**h10**km,**n27,** σ1s**20**/22,**mb4.0/5, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.94 281**			Pn		**Pn**	**12 23 48.8**	**+0.7**
ORCD	**Orcadas**	**9.12 225**			Pn		**Pn**	**12 25 12.7**	**-0.1**
ESPZ	**Base Esperanza**	**15.46 227**			Pn		**Pn**	**12 26 37.1**	**-2.0**
VNA3	**Neumayer Olymp**	**18.93 158**			P		**P**	**12 27 22.2**	**+0.2**
VNA2	**Neumayer--Watz**	**19.21 156**			P		**P**	**12 27 23.5**	**-1.6**
	baz=316,slow=12								
SNAA	**Sanae**	**20.80 155**			P		**P**	**12 27 43.0**	**+0.4**
SNAA	**Sanae**	**20.80 155**			P		**P**	**12 27 42.5**	**0.0**
	2.3nm,0.8s,baz=317,slow=9.3,SNR=11								
	2.3nm,0.8s								
SNAA	**Sanae**	**20.80 155**			P		**P**	**12 27 41.7**	**-0.8**
SNAA					IAmb		IAmb	12 27 55.1	
	comp=Z,6.7nm,0.9s								
TROLL	**Troll, Antarti**	**22.38 153**			P		**P**	**12 28 01.3**	**+1.8**
BELA	**Belgrano 2**	**23.08 182**			P		**P**	**12 28 06.4**	**-0.2**
QSPA	**South Pole Qui**	**35.33 180**			P		**P**	**12 29 57.5**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=179,slow=2.0,SNR=11								
	comp=Z,1.8nm,0.9s								
QSPA	**South Pole Qui**	**35.33 180**			P		**P**	**12 29 57.4**	**+1.0**
SBA	**Scott Base**	**47.00 185**			P		**P**	**12 31 32.1**	**+0.1**
SBA					IAmb		IAmb	12 31 37.4	
	comp=Z,4.2nm,1.2s								
VNDA	**Vanda**	**47.55 184**			P		**P**	**12 31 35.6**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=198,slow=9.7,SNR=6.4								
	comp=Z,0.5nm,0.6s								
VNDA	**Vanda**	**47.55 184**			P		**P**	**12 31 37.0**	**+0.7**
LPAZ	**La Paz**	**47.72 309**			P		**P**	**12 31 40.3**	**+1.4**
	comp=Z,2.7nm,0.6s,baz=175,slow=5.5,SNR=9.7								
	comp=Z,2.7nm,0.6s								
LPAZ	**La Paz**	**47.72 309**			P		**P**	**12 31 37.4**	**-1.5**
LPAZ					IAmb		IAmb	12 31 41.8	
	comp=Z,3.4nm,0.8s								
H10S2	**ASCENSION HYDR**	**47.78**	**23**		T		T	13 22 57.5	
	baz=193,slow=74,SNR=9.3								
H10S3	**ASCENSION HYDR**	**47.78**	**23**		T		T	13 22 57.6	
	baz=27,slow=74,SNR=19								
H10N1	**ASCENSION HYDR**	**48.90**	**23**		T		T	13 24 21.2	
	baz=192,slow=75,SNR=28								
H10N3	**ASCENSION HYDR**	**48.90**	**23**		T		T	13 24 21.2	
	baz=192,slow=75,SNR=54								
H10N2	**ASCENSION HYDR**	**48.91**	**23**		T		T	13 24 22.3	
	baz=192,slow=75,SNR=46								
TORD	**Torodi Ar. Bea**	**73.40**	**34**		P		**P**	**12 34 33.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=195,slow=6.8,SNR=6.6								
	comp=Z,0.4nm,0.5s								
TORD	**Torodi Ar. Bea**	**73.40**	**34**		P		**P**	**12 34 32.7**	**-0.8**
TORD					IAmb		IAmb	12 34 47.3	
	comp=Z,2.4nm,1.3s								
FINES	**FINESS Array B**	**124.59**	**30**		PKP		**PKPdf**	**12 41 58.0**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=321,slow=2.7,SNR=4.9								
ILAR	**Eielson Array**	**147.52 314**			PKPbc		**PKPdf**	**12 42 44.0**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=130,slow=1.9,SNR=12								
SONM	**Songino Array**	**153.15**	**88**		PKPbc		**PKPbc**	**12 42 57.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=209,slow=3.8,SNR=4.9								

*JMA **20** 12:29:06.6±0.4, 23°.2N×122°.1E±0°.7, h38km, MV2.7/13, TAIWAN REGION*
*TAP **20** 12:29:08.1, 23°.40N×122°.06E, h40km±1km, ML3.0, D*

ISC 20 12:29:05.3±1.1,**23°.39N**±0°.02×**122°.15E**±0°.02,**h17**km±8km,
n96, σ1s**50**/159,**7C-13D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.64 300**		*i* P			**Pg**	**12 29 19.4**	**+1.4**
	baz=303								
TEGC				S			**Sg**	**12 29 28.1**	**+1.6**
	baz=303								
ECBN	**Changbin**	**0.65 264**		*i* P			**Pg**	**12 29 19.5**	**+1.5**
	baz=254								
ECBN				*eS*			**Sg**	**12 29 28.1**	**+1.5**
	baz=254								
HGSD	**Ruisui**	**0.67 279**		*i* P			**Pg**	**12 29 19.4**	**+0.8**
	baz=279								
HGSD				*i* S			**Sg**	**12 29 27.9**	**+0.3**
	baz=279								
TEYL	**Yanliau Villag**	**0.69 313**		P			**Pg**	**12 29 20.8**	**+1.8**
	baz=328								
TEYL				*eS*			**Sg**	**12 29 29.7**	**+1.5**
	baz=328								
EGFH	**Guangfu**	**0.72 293**		P			**Pg**	**12 29 20.2**	**+0.8**
	baz=303								
EGFH				*eS*			**Sg**	**12 29 29.9**	**+0.9**
	baz=303								
EYUL	**Yuli**	**0.76 267**		*i* P			**Pg**	**12 29 21.1**	**+0.8**
	baz=261								
EYUL				*eS*			**Sg**	**12 29 31.5**	**+1.1**
	baz=261								
EHY	**Hungye**	**0.77 279**		*i* P			**Pg**	**12 29 21.0**	**+0.7**
	baz=279								
EHY				*eS*			**Sg**	**12 29 30.8**	**+0.3**
	baz=279								
HWA	**Hwalien**	**0.77 320**		*eP*			**Pg**	**12 29 21.5**	**+1.2**
	baz=324								
CHKT	**Chengkung**	**0.78 248**		*i* P			**Pg**	**12 29 20.4**	**-0.1**
	baz=239								
CHKT				*eS*			**Sg**	**12 29 29.7**	**-1.1**
	baz=239								
ESL	**Shilin**	**0.78 303**		P			**Pg**	**12 29 20.8**	**+0.2**
	baz=306								
ESL				*eS*			**Sg**	**12 29 30.5**	**-0.5**
	baz=306								
YULB	**Yu-li**	**0.78 270**		P			**Pg**	**12 29 21.2**	**+0.6**
	baz=265								
YULB				*eS*			**Sg**	**12 29 32.1**	**+1.2**
	baz=265								
TWF1	**Yuli**	**0.78 267**		*i* P			**Pg**	**12 29 21.3**	**+0.6**
	baz=260								
TWF1				*eS*			**Sg**	**12 29 32.5**	**+1.5**
	baz=260								
FULB	**Fuli**	**0.81 257**		*i* P			**Pg**	**12 29 21.2**	**+0.1**
	baz=247								
FULB				*eS*			**Sg**	**12 29 31.3**	**-0.5**
	baz=247								
ETM	**Tongmen**	**0.83 314**		*eP*			**Pg**	**12 29 21.8**	**+0.3**
	baz=317								
ETM				*eS*			**Sg**	**12 29 32.4**	**-0.1**
	baz=317								
TWD	**Chiawan**	**0.85 324**		P			**Pg**	**12 29 22.3**	**+0.4**
	baz=328								
TWD				*eS*			**Sg**	**12 29 30.9**	**-2.4**
	baz=328								
EDH	**Donghe**	**0.88 242**		P			**Pg**	**12 29 22.3**	**-0.2**
	baz=235								
EDH				*eS*			**Sg**	**12 29 32.8**	**-1.3**
	baz=235								
ECS	**Chishang**	**0.90 251**		*eP*			**Pg**	**12 29 23.3**	**+0.4**
	baz=242								
ECS				*eS*			**Sg**	**12 29 36.0**	**+1.2**
	baz=242								
ETL	**Fush Village**	**0.91 328**		P			**Pg**	**12 29 23.1**	**+0.2**
	baz=332								
ETL				*eS*			**Sg**	**12 29 34.3**	**-0.6**
	baz=332								
NACB	**Ninganchiao**	**0.93 327**		*i* P			**Pg**	**12 29 23.4**	**-0.1**
	baz=331								
NACB				S			**Sg**	**12 29 34.8**	**-0.9**
	baz=331								
LDUT	**Ludao**	**0.95 221**		*eP*			**Pg**	**12 29 23.3**	**-0.4**
	baz=217								
LDUT				*eS*			**Sg**	**12 29 34.3**	**-1.9**
	baz=217								
VWDT	**VWDT**	**0.99 292**		P			**Pg**	**12 29 24.8**	**+0.2**
	baz=292								
VWDT				*eS*			**Sg**	**12 29 37.0**	**-0.6**
	baz=292								
ETLH	**Xiulin Townshi**	**1.02 323**		*eP*			**Pg**	**12 29 24.8**	**-0.3**
	baz=327								
ETLH				*eS*			**Sg**	**12 29 37.2**	**-1.3**
	baz=327								
LONT	**Longtian**	**1.05 243**		*eP*			**Pg**	**12 29 25.1**	**-0.7**
	baz=236								
LONT				*eS*			**Sg**	**12 29 38.3**	**-1.3**
	baz=236								
OWD	**Renai**	**1.05 302**		*i* P			**Pg**	**12 29 25.5**	**-0.3**
	baz=304								
OWD				*eS*			**Sg**	**12 29 37.6**	**-2.0**
	baz=304								
ELDTW	**Lidau**	**1.06 259**		*i* P			**Pg**	**12 29 25.0**	**-0.8**
	baz=249								
ELDTW				*eS*			**Sg**	**12 29 37.5**	**-2.3**
	baz=249								
ENA	**Nanau**	**1.10 340**		*eP*			**Pg**	**12 29 26.4**	**-0.2**
	baz=344								
ENA				*eS*			**Sg**	**12 29 40.1**	**-0.9**
	baz=344								
YUS	**Yu-Shan**	**1.10 275**		P			**Pg**	**12 29 26.7**	**-0.1**
	baz=275								
YUS				*eS*			**Sg**	**12 29 39.9**	**-1.4**
	baz=275								
EWUT	**Wuta**	**1.10 342**		*eP*			**Pg**	**12 29 25.5**	**-1.2**
	baz=338								
EWUT				*eS*			**Sg**	**12 29 39.1**	**-2.1**
	baz=338								
WHF	**Hehuan Shan**	**1.11 313**		P			**Pg**	**12 29 26.4**	**-0.5**
	baz=316								
WHF				*eS*			**Sg**	**12 29 39.5**	**-1.9**
	baz=316								
CHGB	**Renai**	**1.12 307**		*eP*			**Pg**	**12 29 26.7**	**-0.3**
	baz=309								
CHGB				*eS*			**Sg**	**12 29 39.9**	**-1.7**
	baz=309								
TTN	**Taitung**	**1.12 236**		*eP*			**Pg**	**12 29 27.6**	**+0.6**
	baz=232								
TTN				*eS*			**Sg**	**12 29 40.4**	**-1.2**
	baz=232								
WUSB	**Renai**	**1.12 303**		*eP*			**Pg**	**12 29 26.7**	**-0.3**
	baz=304								
WUSB				*eS*			**Sg**	**12 29 39.6**	**-2.1**
	baz=304								
TWGBT	**Beinan**	**1.14 240**		*eP*			**Pg**	**12 29 26.3**	**-1.0**
	baz=232								
TWGBT				*eS*			**Sg**	**12 29 40.1**	**-2.1**
	baz=232								
SSLB	**Suanglung**	**1.17 290**		*eP*			**Pg**	**12 29 27.1**	**-0.8**
	baz=291								
SSLB				*eS*			**Sg**	**12 29 40.6**	**-2.5**
	baz=291								
FUSS	**Fushou**	**1.19 316**		*eP*			**Pg**	**12 29 27.8**	**-0.5**
	baz=318								
FUSS				*eS*			**Sg**	**12 29 42.0**	**-2.0**
	baz=318								
WHYT	**Xinyi Township**	**1.23 285**		*eP*			**Pg**	**12 29 28.7**	**-0.3**
	baz=285								
TWT	**Tachien**	**1.24 314**		*eP*			**Pg**	**12 29 29.6**	**+0.3**
	baz=316								
TWT				*eS*			**Sg**	**12 29 43.0**	**-2.5**
	baz=316								
ALS	**Alishan**	**1.24 276**		*eP*			**Pg**	**12 29 29.1**	**-0.2**
	baz=275								
ALS				*eS*			**Sg**	**12 29 43.9**	**-1.7**
	baz=275								
TWC	**Suao**	**1.25 347**		*eP*			**Pg**	**12 29 29.0**	**-0.4**
TWC				*eS*			**Sg**	**12 29 44.2**	**-1.4**
SMLT	**Sun Moon Lake**	**1.25 293**		*eP*			**Pg**	**12 29 28.8**	**-0.7**
	baz=295								
NNSB	**Datong**	**1.25 326**		*eP*			**Pg**	**12 29 28.7**	**-0.8**
	baz=320								
NNSB				*eS*			**Sg**	**12 29 43.5**	**-2.3**
	baz=320								
NNSH	**Datong**	**1.25 326**		*eP*			**Pg**	**12 29 28.6**	**-0.8**
	baz=319								
NNSH				*eS*			**Sg**	**12 29 43.2**	**-2.6**
	baz=319								
TDCB	**Techi**	**1.25 314**		*eP*			**Pg**	**12 29 29.6**	**+0.1**
	baz=316								
TDCB				*eS*			**Sg**	**12 29 43.3**	**-2.6**
	baz=316								
NNS	**Nan Shan**	**1.27 326**		*eP*			Pg	12 29 27.8	-1.9
	baz=320								
NNS				*eS*			**Sg**	**12 29 42.8**	**-3.5**
	baz=320								
LATG	**Datong**	**1.27 334**		*eP*			**Pg**	**12 29 28.9**	**-1.0**
	baz=337								
LATG				*eS*			**Sg**	**12 29 44.2**	**-2.5**
	baz=337								
STYH	**Taoyuan**	**1.28 260**		*eP*			Pn	12 29 28.1	-0.4
	baz=254								
STYH				*eS*			**Sg**	**12 29 44.2**	**-2.5**
	baz=254								
JYNG	**Yonagunijimaku**	**1.28 34**			P		**Pn**	**12 29 30.1**	**+1.6**
JYNG					S		**Sg**	**12 29 45.6**	**-1.3**
NDS	**Dongshan**	**1.30 342**		*eP*			Pn	12 29 28.6	-0.1
	baz=339								
NDS				*eS*			**Sg**	**12 29 43.9**	**-3.6**
	baz=339								
WCS	**Beigang Elemen**	**1.31 301**		*eP*			**Pn**	**12 29 28.8**	**-0.1**
	baz=309								
WCS				*eS*			**Sg**	**12 29 45.2**	**-2.7**
	baz=309								
YOJ	**Yonaguni jima**	**1.33 36**		P			**Pn**	**12 29 30.5**	**+1.4**
	baz=48								
YOJ				*eS*			**Sb**	**12 29 46.9**	**+0.4**
	baz=48								
YOJ	**Yonaguni jima**	**1.33 36**		P			**Pn**	**12 29 30.6**	**+1.4**
YOJ					S		**Sb**	**12 29 47.0**	**+0.4**
NDT	**Datong Townshi**	**1.34 334**		*eP*			**Pn**	**12 29 30.0**	**+0.7**
	baz=337								
NDT				*eS*			**Sb**	**12 29 45.9**	**-1.0**
	baz=337								
ECL	**Taimali**	**1.35 235**		*eP*			Pn	12 29 29.0	-0.4
	baz=242								
ECL				*eS*			**Sb**	**12 29 44.0**	**-3.3**
	baz=242								
ENTT	**Nioudou**	**1.35 337**		*eP*			Pn	12 29 29.2	-0.2
	baz=340								
ENTT				*eS*			**Sb**	**12 29 45.8**	**-1.6**
	baz=340								
CHN5	**Tsauling**	**1.37 279**		*eP*			**Pn**	**12 29 30.4**	**+0.7**
	baz=279								
TWE	**Neicheng**	**1.40 342**		*eP*			**Pn**	**12 29 31.2**	**+1.1**
	baz=345								
TWE				*eS*			**Sb**	**12 29 48.3**	**-0.2**
	baz=345								
TPUB	**Ta-pu**	**1.40 267**		*eP*			**Pn**	**12 29 31.6**	**+1.4**
	baz=266								
TPUB				*eS*			**Sb**	**12 29 49.5**	**+0.9**
	baz=266								
WHP	**Taichung City**	**1.41 309**		*eP*			**Pn**	**12 29 33.0**	**+2.6**
	baz=311								
WTP	**Ta-pu**	**1.42 265**		*eP*			**Pn**	**12 29 31.8**	**+1.4**
	baz=263								
WTP				*eS*			**Sb**	**12 29 50.0**	**+0.8**
	baz=263								
CHN4	**Tsaushan**	**1.43 269**		*eP*			**Pn**	**12 29 31.2**	**+0.7**
	baz=268								
SLGT	**Liugui**	**1.44 254**		*eP*			**Pn**	**12 29 31.8**	**+1.2**
	baz=248								
FUSB	**Fushanzhiwuyua**	**1.46 339**		*eP*			**Pn**	**12 29 32.0**	**+1.0**
	baz=333								
YHNB	**Yeheng**	**1.46 331**		*eP*			**Pn**	**12 29 31.8**	**+0.9**
	baz=334								
YHNB				*eS*			**Sn**	**12 29 47.7**	**-2.1**
	baz=334								
EGS		**1.46 352**		*eP*			**Pn**	**12 29 32.9**	**+1.9**
	baz=5.0								
EGS				*eS*			**Sn**	**12 29 51.6**	**+1.9**
	baz=5.0								
NSK	**Sanguang**	**1.47 331**		*eP*			Pn	12 29 31.1	0.0
	baz=334								
NSK				*eS*			**Sn**	**12 29 48.1**	**-2.0**
	baz=334								
SGST	**Jiashian**	**1.47 258**		*eP*			**Pn**	**12 29 31.9**	**+0.8**
	baz=257								
WWF	**Wufeng**	**1.48 296**		*eP*			**Pn**	**12 29 32.6**	**+1.4**
	baz=297								
CHN1	**Nanshi**	**1.50 263**		*eP*			**Pn**	**12 29 33.4**	**+1.9**
	baz=261								
CHN1				*eS*			**Sn**	**12 29 52.9**	**+2.1**
	baz=261								
WDLH	**Douliu**	**1.51 282**		*eP*			**Pn**	**12 29 34.0**	**+2.4**
	baz=282								
SNST	**Tainan City**	**1.53 264**		*eP*			**Pn**	**12 29 33.8**	**+1.9**

JIJ				S		**Sn**	**12 30 04.7**	**+0.1**
JISG	**Ishigakijimahi**	**2.31**	**58**	P		**Pn**	**12 29 43.6**	**+1.1**
JTJ	**Tarama**	**2.65**	**61**	P		**Pn**	**12 29 48.8**	**+1.6**
JTJ				*e*S		**Sn**	**12 30 19.8**	**+0.8**
JIRB	**Irabujima**	**3.11**	**62**	P		**Pn**	**12 29 55.1**	**+1.4**
JMJ2	**Miyako jima3**	**3.20**	**65**	P		**Pn**	**12 29 56.7**	**+1.8**

*IDC **20** 12:29:21.9±0.9,54˚79S×31˚27W,h0km,mb4.1/6, mbtmp4.1/6,Error ellipse: s-maj=41.5km s-min=20.3km az=73.0*
*NEIC **20** 12:29:24.6±1.5,54˚86S±0˚10×31˚4W±0˚2,h13km±5km, mb4.1/8,Error ellipse: s-maj=17.5km s-min=11.2km az=54.0.*

ISC 20 12:29:23.7±0.8,54˚82S±0˚10×31˚4W±0˚1,h10km,n28, σ0§94/24,mb4.2/6,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.03**	**278**			**Pn**	**12 30 11.2**	**-0.4**
ORCD	**Orcadas**	**9.27**	**225**	Pn		**Pn**	**12 31 34.8**	**-2.4**
VNA1	**Neumayer--Stat**	**18.86**	**156**	P		**Pn**	**12 33 44.4**	**+0.4**
VNA3	**Neumayer Olymp**	**18.98**	**158**	P		**P**	**12 33 44.8**	**-0.1**
VNA2	**Neumayer--Watz**	**19.26**	**156**	P		**Pn**	**12 33 50.1**	**+1.2**
	baz=314,slow=12							
SNAA	**Sanae**	**20.86**	**155**	P		**P**	**12 34 05.0**	**-0.3**
SNAA	**Sanae**	**20.86**	**155**	P		**P**	**12 34 05.1**	**-0.2**
	8.4nm,0.9s,baz=314,slow=9.6,SNR=30 8.4nm,0.9s							
SNAA	**Sanae**	**20.86**	**155**	P		**P**	**12 34 05.1**	**-0.2**
SNAA				IAmb		IAmb	12 34 06.5	
	comp=Z,11nm,1.0s							
SMAI	**San Martin Ant**	**21.23**	**217**	P		**P**	**12 34 11.9**	**+2.6**
TROLL	**Troll, Antarti**	**22.42**	**153**	P		**P**	**12 34 21.8**	**-0.4**
BELA	**Belgrano 2**	**23.19**	**182**	P		**P**	**12 34 30.5**	**+0.5**
BELA				IAmb		IAmb	12 34 31.1	
	comp=Z,4.2nm,1.1s							
QSPA	**South Pole Qui**	**35.44**	**180**	P		**P**	**12 36 19.5**	**-0.1**
	comp=Z,5.5nm,0.9s,baz=201,slow=3.3,SNR=28 comp=Z,5.5nm,0.9s							
QSPA	**South Pole Qui**	**35.44**	**180**	P		**P**	**12 36 20.2**	**+0.5**
MAW	**Mawson**	**42.54**	**146**	P		**P**	**12 37 18.7**	**0.0**
	comp=Z,4.2nm,0.8s,baz=244,slow=9.2,SNR=13 comp=Z,4.2nm,0.8s							
MAW	**Mawson**	**42.54**	**146**	P		**P**	**12 37 18.9**	**+0.1**
VNDA	**Vanda**	**47.67**	**184**	P		**P**	**12 37 59.5**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=185,slow=6.5,SNR=14 comp=Z,2.6nm,0.9s							
VNDA	**Vanda**	**47.67**	**184**	P		**P**	**12 37 59.8**	**+0.4**
VNDA				IAmb		IAmb	12 38 00.4	
	comp=Z,2.7nm,0.8s							
LPAZ	**La Paz**	**47.73**	**309**	P		**P**	**12 38 01.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=87,slow=6.5,SNR=5.2 comp=Z,1.4nm,0.7s							
LPAZ	**La Paz**	**47.73**	**309**	P		**P**	**12 38 02.1**	**+0.8**
H10N1	**ASCENSION HYDR**	**48.76**	**23**	T		T	13 30 45.1	
	baz=192,slow=75,SNR=6.4							
H10N3	**ASCENSION HYDR**	**48.76**	**22**	T		T	13 30 46.3	
	baz=192,slow=75,SNR=13							
H10N2	**ASCENSION HYDR**	**48.77**	**22**	T		T	13 30 46.3	
	baz=192,slow=75,SNR=11							
TORD	**Torodi Ar. Bea**	**73.25**	**34**	P		**P**	**12 40 55.0**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=189,slow=7.6,SNR=3.1 comp=Z,0.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.25**	**34**	P		**P**	**12 40 54.5**	**-0.4**
TORD				IAmb		IAmb	12 41 09.9	
	comp=Z,2.6nm,1.2s							
FINES	**FINESS Array B**	**124.44**	**29**	PKP		**PKPdf**	**12 48 20.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=132,slow=2.8,SNR=6.0							
ZALV	**Zalesovo Beam**	**143.97**	**64**	PKhKP		PKPpre	12 48 54.3	
	comp=Z,0.7nm,0.4s,baz=188,slow=2.2,SNR=2.6							
ILAR	**Eielson Array**	**147.53**	**314**	PKPbc		**PKPbc**	**12 49 05.8**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=123,slow=1.8,SNR=10							
SONM	**Songino Array**	**153.04**	**87**	PKPbc		**PKPbc**	**12 49 19.5**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=230,slow=3.3,SNR=4.5							

*NEIC **20** 12:43:13.9±0.6, 19˚21N±0˚10×67˚41W±0˚05, h33km±15km, Error ellipse: s-maj=14.9km s-min=6.4km az=191.0*
*RSPR **20** 12:43:14.9, 19˚23N×67˚37W, h47km±4km, MD3.1/6*
*OSPL **20** 12:43:14.2±0.3, 19˚25N×67˚24W, h16km±2km, ML2.1*

ISC 20 12:43:10.4±2.0,19˚33N±0˚10×67˚33W±0˚04,h21km,n36, σ1§01/39,4C-2D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.88**	**166**	⇑*e*P		**Pn**	**12 43 28.0**	**+0.4**
AGPR	**Aguadilla, PR**	**0.88**	**166**	*e*S		**Sn**	**12 43 39.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.88**	**166**			**Pn**	**12 43 28.0**	**+0.4**
AGPR						**Sn**	**12 43 39.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.88**	**166**	IAML			12 43 40.7	
	comp=N,100nm,0.2s							
AGPR				IAML			12 43 40.9	
	comp=E,108nm,0.5s							
AGPR	**Aguadilla, PR**	**0.88**	**166**	*i* P		**Pn**	**12 43 28.1**	**+0.4**
AGPR				*e*S		**Sn**	**12 43 38.5**	**-1.3**
AGPR				IAML			12 43 41.3	
	comp=Z,70nm,0.2s							
IDE	**Isla Desecheo**	**0.95**	**188**	⇓*e*P		**Pn**	**12 43 29.3**	**+0.8**
IDE	**Isla Desecheo**	**0.95**	**188**	*e*S		**Sn**	**12 43 41.0**	**-0.4**
AOPR	**Arecibo Observ**	**1.12**	**151**	⇑*e*P		**Pb**	**12 43 32.3**	**+1.2**
AOPR	**Arecibo Observ**	**1.12**	**151**	*e*S		**Sn**	**12 43 45.7**	**0.0**
AOPR	**Arecibo Observ**	**1.12**	**151**			**Pb**	**12 43 32.3**	**+1.2**
AOPR						**Sn**	**12 43 45.7**	**0.0**
AOPR	**Arecibo Observ**	**1.12**	**151**	IAML			12 43 50.4	
	comp=N,75nm,0.2s							
PRSN	**Puerto Rico Se**	**1.12**	**171**	*e*S		**Sn**	**12 43 45.2**	**-0.5**
PRSN	**Puerto Rico Se**	**1.12**	**171**			**Sn**	**12 43 45.2**	**-0.5**
PRSN	**Puerto Rico Se**	**1.12**	**171**	Pn		**Pb**	**12 43 31.8**	**+0.8**
PRSN	**Puerto Rico Se**	**1.12**	**171**	IAML			12 43 48.7	
	comp=N,410nm,0.3s							
EMPR	**Esperanza - Ma**	**1.14**	**138**	Pn		**Pb**	**12 43 33.3**	**+2.0**
EMPR				IAML			12 43 41.7	
	comp=N,72nm,1.6s							
EMPR				IAML			12 44 01.6	
	comp=E,63nm,1.3s							
PCDR	**Punta Cana, DR**	**1.28**	**231**	Pn		**Pb**	**12 43 33.6**	**-0.2**
PCDR				IAML			12 43 54.1	
	comp=E,56nm,1.8s							
PCDR	**Punta Cana, DR**	**1.28**	**231**	*i* P		**Pb**	**12 43 36.1**	**+2.3**
PCDR				*e*S		**Sb**	**12 43 52.4**	**+2.5**
PCDR				IAML			12 43 55.0	
	comp=Z,91nm,2.5s							
CRPR	**Cabo Rojo, PR**	**1.33**	**171**	⇓*e*P		**Pb**	**12 43 35.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.33**	**171**			**Pb**	**12 43 35.0**	**+0.3**
CRPR						**Sb**	**12 43 50.1**	**-1.2**
CRPR	**Cabo Rojo, PR**	**1.33**	**171**	*i* P		**Pb**	**12 43 35.3**	**+0.6**
CRPR				*e*S		**Sb**	**12 43 50.8**	**-0.5**
CRPR				IAML			12 43 53.3	
	comp=Z,31nm,0.3s							
MLPR	**Magueyes Islan**	**1.38**	**169**	⇑*e*P		**Pb**	**12 43 35.0**	**-0.4**
MLPR	**Magueyes Islan**	**1.38**	**169**	*e*S		**Sb**	**12 43 51.4**	**-1.3**
MLPR	**Magueyes Islan**	**1.38**	**169**			**Pb**	**12 43 35.0**	**-0.4**
MLPR						**Sb**	**12 43 51.4**	**-1.3**
MLPR	**Magueyes Islan**	**1.38**	**169**	IAML			12 43 56.3	
	comp=E,28nm,0.6s							
CELP	**Cerrillos**	**1.44**	**150**	⇑*e*P		**Pb**	**12 43 36.7**	**+0.2**
CELP	**Cerrillos**	**1.44**	**150**	*e*S		**Sb**	**12 43 53.6**	**-0.7**
CELP	**Cerrillos**	**1.44**	**150**			**Pb**	**12 43 36.7**	**+0.2**
CELP						**Sb**	**12 43 53.6**	**-0.7**
CELP	**Cerrillos**	**1.44**	**150**	IAML			12 43 54.9	
	comp=E,46nm,0.8s							
CELP				IAML			12 43 55.3	
	comp=N,39nm,0.5s							
OBIP	**Obispado Ponce**	**1.45**	**152**	*e*S		**Sb**	**12 43 53.8**	**-1.0**
OBIP	**Obispado Ponce**	**1.45**	**152**			**Sb**	**12 43 53.8**	**-1.0**
OBIP	**Obispado Ponce**	**1.45**	**152**	Pn		**Pb**	**12 43 36.9**	**+0.2**
OBIP				IAML			12 43 53.9	
	comp=N,32nm,0.7s							
GCPR	**Guaynabo City**	**1.56**	**131**	Pn		**Pb**	**12 43 39.5**	**+0.9**
CBYP	**Canovanas**	**1.75**	**127**	Pn		**Pb**	**12 43 41.3**	**-0.5**
HUMP	**Col San Antoni**	**1.83**	**130**	Pn		**Pb**	**12 43 43.5**	**+0.2**
HUMP				IAML			12 44 14.8	
	comp=N,24nm,0.5s							
DR12	**Loma Pena Alta**	**2.01**	**255**	Pn		**Pb**	**12 43 44.3**	**-2.1**

*IDC **20** 13:12:30.9±1.4,40˚34N×144˚21E,h0km,mb3.7/8, mbtmp3.8/10,ML2.6/2,Error ellipse: s-maj=31.9km s-min=27.3km az=110.0*
*JMA **20** 13:12:33.4±0.3,40˚3N±0˚7×14˚4E±˚,h14km±4km, MV3.7/30,FAR E OFF SANRIKU*
*NIED **20** 13:12:33.4,40˚31N×143˚70E,h14km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.56; Mθθ1.95; Mϕϕ-5.50; Mrθ4.21; Mrϕ-2.72; Mθϕ3.07; Fault plane solution: M0 7.57000×10¹⁴ NP1: ϕs164.00000°,δ36.00000°,λ31.00000°. NP2:ϕs48.00000°, δ73.00000°,λ121.00000°.*

ISC 20 13:12:33.8±0.9,40˚30N±0˚05×143˚84E±0˚08,h16km,n31, σ1§35/34,mb3.9/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTH	**Tanohata**	**1.55**	**257**	P		**Pn**	**13 12 59.4**	**-1.3**
JTH				*e*S		**Sn**	**13 13 17.5**	**-3.1**
JKEN	**Kujiedanarisaw**	**1.63**	**268**	P		**Pn**	**13 13 00.6**	**-1.1**
MIYJ	**Miyakonagasawa**	**1.71**	**246**	P		**Pn**	**13 13 02.3**	**-0.6**
MIYJ				*e*S		**Sn**	**13 13 22.2**	**-2.1**
JANG	**Nango**	**1.77**	**273**	P		**Pn**	**13 13 02.7**	**-1.1**
JEM	**Erimo**	**1.79**	**344**	P		**Pn**	**13 13 03.8**	**-0.3**
JEM				S		**Sb**	**13 13 26.9**	**-1.5**
JOM	**Ohasama**	**2.12**	**248**	*i* P		**Pn**	**13 13 08.4**	**-0.2**
JOM				*e*S		**Sn**	**13 13 35.1**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.15**	**338**	P		**Pn**	**13 13 09.0**	**+0.2**
JNBK				S		**Sn**	**13 13 36.0**	**+0.9**
JTM	**Tenmabayashi**	**2.17**	**284**	P		**Pn**	**13 13 09.0**	**-0.1**
JTM				*e*S		**Sn**	**13 13 34.7**	**-0.9**
JCH	**Churui**	**2.34**	**351**	*e*P		**Pn**	**13 13 11.5**	**-0.2**
JCH				S		**Sn**	**13 13 39.6**	**-0.5**
JOT	**Ohata**	**2.38**	**298**	*e*P		**Pn**	**13 13 11.9**	**-0.2**
JMK	**Ichinoseki**	**2.42**	**237**	P		**Pn**	**13 13 12.4**	**-0.3**
JAK	**Akkeshi**	**2.78**	**13**	*e*P		**Pn**	**13 13 17.6**	**+0.1**
JAK				S		**Sn**	**13 13 50.0**	**-0.7**
JAR	**Ashorobuto**	**3.00**	**359**	P		**Pn**	**13 13 20.1**	**-0.5**
JAR				S		**Sn**	**13 13 54.3**	**-2.0**
JYK	**Kaneyama**	**3.02**	**244**	P		**Pn**	**13 13 21.0**	**+0.2**
MJAR	**Matsushiro Arr**	**5.79**	**231**	Pn		**Pn**	**13 13 59.8**	**+0.8**
	0.2nm,0.3s,baz=43,slow=11,SNR=13 3.8nm,0.7s							
USRK	**Ussuriysk Ar.**	**9.61**	**298**	Pn		**Pn**	**13 14 54.8**	**+3.4**
	0.5nm,0.3s,baz=102,slow=14,SNR=10 9.2nm,0.8s							
SONM	**Songino Array**	**27.72**	**298**	P		**P**	**13 18 23.2**	**+1.8**
	0.7nm,0.6s,baz=96,slow=9.1,SNR=4.1 0.7nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**28.46**	**129**	T		T	13 48 20.4	
	baz=322,slow=75,SNR=9.2							
H11N1	**WAKE ISLAND Hy**	**28.47**	**129**	T		T	13 48 19.5	
	baz=322,slow=75,SNR=10							
H11N3	**WAKE ISLAND Hy**	**28.48**	**129**	T		T	13 48 19.2	
	baz=322,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hy**	**29.31**	**131**	T		T	13 49 24.0	
	baz=323,slow=76,SNR=6.1							
H11S3	**WAKE ISLAND Hy**	**29.32**	**131**	T		T	13 49 19.7	
	baz=323,slow=76,SNR=7.6							
H11S2	**WAKE ISLAND Hy**	**29.32**	**131**	T		T	13 49 19.6	
	baz=323,slow=76,SNR=5.6							
ZALV	**Zalesovo Beam**	**41.21**	**310**	P		**P**	**13 20 18.4**	**+1.0**
	1.2nm,0.6s,baz=99,slow=7.7,SNR=5.2 1.2nm,0.6s							
MKAR	**Makanchi Array**	**44.07**	**300**	P		**P**	**13 20 41.7**	**+0.8**
	1.9nm,0.9s,baz=83,slow=9.9,SNR=10 1.9nm,0.9s							
ILAR	**Eielson Array**	**45.73**	**34**	P		**P**	**13 20 50.9**	**-3.0**
	0.2nm,0.6s,baz=252,slow=10,SNR=1.6 0.2nm,0.6s							
WRA	**Warramunga Arr**	**60.58**	**190**	P		**P**	**13 22 44.6**	**+1.1**
	0.4nm,0.9s,baz=9.5,slow=6.9,SNR=1.7 0.4nm,0.9s							
FINES	**FINESS Array B**	**66.81**	**332**	P		**P**	**13 23 25.0**	**+0.8**
	1.4nm,0.8s,baz=57,slow=7.0,SNR=7.4 1.4nm,0.8s							
NB2	**NORSAR Subarra**	**71.90**	**338**	P		**P**	**13 23 56.4**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=38,slow=6.2							
NOA	**NORSAR Array B**	**71.90**	**338**	P		**P**	**13 23 56.5**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=37,slow=6.0,SNR=4.6 comp=Z,0.8nm,0.8s							
AKASG	**Malin Array Be**	**72.87**	**323**	P		**P**	**13 24 02.1**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=46,slow=6.0,SNR=5.8 comp=Z,0.6nm,0.4s							

*TIF **20** 13:20:01.3,42˚20N×45˚70E,h22km±3km*
*MOS **20** 13:20:02.8±0.0,42˚22N×45˚72E,h28km,MPVA3.3*
*NORS **20** 13:20:03.2±0.0,42˚17N×45˚61E,h9km,MPVA3.6*
*DRS **20** 13:20:03.8±0.0,42˚21N×45˚57E,h18km*

ISC 20 13:20:03.3±1.5,42˚15N±0˚03×45˚68E±0˚02,h19km±4km, n27,σ0§81/52,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LGD	**Lagodekhi**	**0.53**	**127**	P		**Pb**	**13 20 12.8**	**-1.1**
LGD				S		**Sb**	**13 20 20.4**	**-0.8**
DGRG	**David-gareji**	**0.74**	**198**	P		**Pb**	**13 20 17.0**	**-0.6**
DDFL	**Dedoflistskaro**	**0.78**	**155**	P		**Pn**	**13 20 20.5**	**+1.1**
XNZR	**Khunzakh**	**0.85**	**62**	*e*Pg		**Pb**	**13 20 19.2**	**-0.5**
XNZR				*e*Sg		**Sg**	**13 20 31.5**	**+0.1**
DVE	**Vedeno**	**0.87**	**22**	*e*Pg		**Pb**	**13 20 20.1**	**+0.2**
DVE				*e*Sg		**Sb**	**13 20 30.9**	**-0.3**
PNSH	**Pansheti**	**0.93**	**302**	P		**Pb**	**13 20 19.2**	**-1.6**
PNSH				S		**Sb**	**13 20 31.6**	**-1.3**
GUDG	**Gudauri**	**0.95**	**290**	P		**Pb**	**13 20 19.5**	**-1.8**
GUDG				S		**Sb**	**13 20 32.6**	**-0.9**
UNCR	**Uncukul**	**1.00**	**55**	*i* Pg		**Pb**	**13 20 21.3**	**-0.7**
UNCR				*e*Sg		**Sb**	**13 20 34.9**	**+0.1**
GROC	**Groznyy**	**1.05**	**5**	*e*Pg		**Pb**	**13 20 23.0**	**0.0**
GROC				*e*Sg		**Sg**	**13 20 37.6**	**0.0**
KMKR	**Kumukh**	**1.05**	**91**	*e*Pg		**Pn**	**13 20 23.4**	**+0.1**
KMKR				*e*Sg		**Sg**	**13 20 39.0**	**+1.3**
ARKR	**Arakani**	**1.07**	**65**	*e*Pg		**Pb**	**13 20 23.0**	**-0.4**
ARKR				*e*Sg		**Sn**	**13 20 37.6**	**-0.3**
KMGR	**Komgaron**	**1.09**	**327**	*e*Pg		**Pb**	**13 20 23.7**	**+0.1**
KMGR				*e*Sg		**Sg**	**13 20 39.0**	**+0.3**
KRNR	**Karanay**	**1.13**	**53**	*e*Pg		**Pn**	**13 20 24.1**	**-0.2**
KRNR				*e*Sg		**Sn**	**13 20 39.6**	**+0.2**
DLMR	**Dylym**	**1.16**	**37**	*e*Pg		**Pn**	**13 20 23.2**	**-1.3**
DLMR				*e*Sg		**Sn**	**13 20 39.7**	**-0.2**
LACR	**Lac**	**1.23**	**304**	*e*Pg		**Pn**	**13 20 24.4**	**-1.2**
LACR				*e*Sg		**Sn**	**13 20 41.9**	**+0.1**
BUJR	**Buynaksk**	**1.25**	**57**	*e*Pg		**Pn**	**13 20 26.0**	**+0.2**
BUJR				*e*Sg		**Sn**	**13 20 43.1**	**+0.8**
TRLG	**Trialeti**	**1.33**	**243**	P		**Pn**	**13 20 27.3**	**-0.3**
TRLG				S		**Sb**	**13 20 44.9**	**+0.4**
DMNI	**Dmanisi**	**1.39**	**234**	P		**Pn**	**13 20 26.9**	**-0.8**
DMNI				S		**Sn**	**13 20 45.8**	**+0.1**
ARNR	**Ardon**	**1.46**	**315**	*e*Pg		**Pb**	**13 20 30.5**	**+0.7**
ARNR				*e*Sg		**Sg**	**13 20 49.8**	**-0.6**
BKRG	**Bakuriani**	**1.66**	**257**	P		**Pn**	**13 20 32.4**	**+0.8**
BKRG				S		**Sb**	**13 20 54.7**	**+0.7**
AKT	**Akhty**	**1.67**	**113**	*e*Pg		**Pb**	**13 20 33.4**	**-0.2**
AKT				*e*Sg		**Sg**	**13 20 57.3**	**0.0**
STDR	**Stavd-Durt**	**1.70**	**316**	*e*Pg		**Pb**	**13 20 33.7**	**-0.4**
STDR				*i* Sg		**Sg**	**13 20 57.2**	**-1.1**
ONI	**Oni**	**1.71**	**286**	P		**Pn**	**13 20 33.2**	**+1.0**
ONI				S		**Sb**	**13 20 56.0**	**+0.7**
ONI	**Oni**	**1.71**	**286**	*e*Pg		**Pb**	**13 20 33.5**	**-0.6**
ONI				*e*Sg		**Sb**	**13 20 57.0**	**+1.7**
LSNR	**Lesken**	**1.77**	**310**	*e*Pg		**Pb**	**13 20 35.7**	**+0.4**
LSNR				*e*Sg		**Sb**	**13 20 58.7**	**+1.6**
KBZ	**Khabaz**	**2.58**	**309**	*e*Pn		**Pb**	**13 20 49.2**	**+0.3**
KBZ				*e*Sn		**Sb**	**13 21 21.1**	**+0.8**
SHA1	**Shidzhatmaz**	**2.73**	**307**	*e*Pn		**Pb**	**13 20 52.4**	**+0.7**
SHA1				*i* Sn		**Sb**	**13 21 25.0**	**+0.2**

*NIED **20** 13:23:07.0,42˚18N×142˚21E,h31km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.20; Mθθ0.30; Mϕϕ-0.50; Mrθ0.66; Mrϕ1.43; Mθϕ-0.05; Fault plane solution: M0 1.64000×10¹⁵ NP1:ϕs7.00000°, δ66.00000°,λ175.00000°. NP2:ϕs99.00000°,δ85.00000°, λ25.00000°.*
*JMA **20** 13:23:07.0±0.1,42˚2N±0˚6×142˚2E±0˚6,h31km±1km, MD4.2/40,MV4.2/40,S OFF URAKAWA*
JMA Felt III J1 at S OFF URAKAWA .
*SKHL **20** 13:23:07.1±0.6,42˚10N×142˚20E,h61km±8km,mb4.8/3*
*MOS **20** 13:23:07.2±1.3,42˚21N×142˚14E,h48km,mb4.5/1,Error ellipse: s-maj=13.2km s-min=7.5km az=68.0*
*NEIC **20** 13:23:08.5±2.5,42˚29N±0˚05×142˚25E±0˚07,h43km±2km, mb4.4/14,Error ellipse: s-maj=8.3km s-min=6.4km az=223.0*
*IDC **20** 13:23:08.8±2.9,42˚25N×142˚22E,h42km±28km,mb3.7/15, mbtmp3.9/18,ML3.0/2,MS3.2/5,Error ellipse: s-maj=19.3km s-min=14.7km az=104.0*

ISC 20 13:23:08.1±0.7,42˚21N±0˚04×142˚20E±0˚03,h38km±1km, n106,σ1§52/97,mb4.1/22,8D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JSHD	**Hidakashinhida**	**0.28**	**43**	⇓P		**Pn**	**13 23 14.4**	**-1.9**
JSHD	**Hidakashinhida**	**0.28**	**43**	A		A	13 23 14.4	
	comp=E,75nm,0.9s,comp=E,80nm,1.2s							
JNBK	**Urakawa-nobuka**	**0.41**	**79**	⇓P		**Pn**	**13 23 15.8**	**-1.5**
JNBK				⇓*e*S		**Sn**	**13 23 23.1**	**-1.1**
JNBK	**Urakawa-nobuka**	**0.41**	**79**	A		A	13 23 15.8	
	comp=E,22nm,0.5s,comp=E,52nm,0.5s							
JIAM	**Iburiatsuma**	**0.47**	**333**	P		**Pn**	**13 23 17.4**	**-0.8**
JIAM				*e*S		**Sn**	**13 23 26.1**	**+0.8**
JIAM	**Iburiatsuma**	**0.47**	**333**	A		A	13 23 17.4	
	comp=E,98nm,0.8s,comp=E,66nm,0.6s							
JBT2	**Biratori 2**	**0.58**	**12**	*e*S		**Sn**	**13 23 27.7**	**-0.6**
JBT2	**Biratori 2**	**0.58**	**12**	A		A	13 23 27.7	
	comp=E,16nm,1.7s,comp=E,14nm,2.9s							
ERM	**Erimo**	**0.73**	**105**	Pn		**Pn**	**13 23 21.7**	**-0.2**
ERM	**Erimo**	**0.73**	**105**	PN		**Pn**	**13 23 21.7**	**-0.2**
JEM	**Erimo**	**0.73**	**105**	*e*P		**Pn**	**13 23 21.5**	**-0.4**
JEM	**Erimo**	**0.73**	**105**	A		A	13 23 21.5	
	comp=E,5.0nm,2.8s,comp=E,6.0nm,3.1s							
JEW	**Eniwo**	**0.84**	**319**	Pn		**Pn**	**13 23 22.8**	**-0.7**
JEW	**Eniwo**	**0.84**	**319**	P		**Pn**	**13 23 22.7**	**-0.7**
JEW				*e*S		**Sn**	**13 23 34.6**	**-0.1**
JEW	**Eniwo**	**0.84**	**319**	A		A	13 23 22.7	
	comp=E,25nm,1.1s,comp=E,17nm,0.9s							
JNB	**Noboribetsu**	**0.90**	**287**	P		**Pn**	**13 23 22.8**	**-1.4**
JNB				*e*S		**Sn**	**13 23 34.7**	**-1.3**
JNB	**Noboribetsu**	**0.90**	**287**	A		A	13 23 22.8	
	comp=E,6.0nm,0.4s,comp=E,15nm,0.3s							
JKB	**Kayabe**	**0.93**	**250**	⇓P		**Pn**	**13 23 24.1**	**-0.4**
JKB				⇓*e*S		**Sn**	**13 23 36.5**	**-0.1**
JKB	**Kayabe**	**0.93**	**250**	A		A	13 23 24.1	
	comp=E,6.0nm,0.5s,comp=E,13nm,0.5s							
JCH	**Churui**	**0.95**	**64**	⇓P		**Pn**	**13 23 24.0**	**-0.8**
JCH				⇓*e*S		**Sn**	**13 23 37.4**	**+0.2**
JCH	**Churui**	**0.95**	**64**	A		A	13 23 24.0	
	comp=E,5.0nm,0.4s,comp=E,6.0nm,0.4s							
JFR	**Furan**	**1.00**	**17**	P		**Pn**	**13 23 24.8**	**-0.8**
JFR				*e*S		**Sn**	**13 23 38.9**	**+0.5**
JFR	**Furan**	**1.00**	**17**	A		A	13 23 24.8	
	comp=E,12nm,1.0s,comp=E,8.0nm,1.8s							
JAHD	**Aomorihigashid**	**1.14**	**215**	A		A	13 23 26.9	
	comp=E,23nm,0.6s,comp=E,15nm,0.5s							
JOT	**Ohata**	**1.19**	**227**	⇓P		**Pn**	**13 23 28.1**	**-0.1**
JOT	**Ohata**	**1.19**	**227**	A		A	13 23 28.1	
	comp=E,3.0nm,1.0s,comp=E,4.0nm,0.5s							
JISS	**Ishikarishitsu**	**1.22**	**332**	P		**Pn**	**13 23 28.3**	**-0.2**
JISS				*e*S		**Sn**	**13 23 44.9**	**+1.1**
JISS	**Ishikarishitsu**	**1.22**	**332**	A		A	13 23 28.3	
	comp=E,12nm,0.5s,comp=E,10.0nm,1.1s							
JAB	**Ashibetsu**	**1.30**	**1**	P		**Pn**	**13 23 30.2**	**+0.6**
JAB	**Ashibetsu**	**1.30**	**1**	A		A	13 23 30.2	
	comp=E,13nm,3.0s,comp=E,11nm,0.8s							
JYM2	**Yakumo 2**	**1.37**	**267**	A		A	13 23 30.6	
	comp=E,4.0nm,0.5s,comp=E,7.0nm,3.1s							
JAR	**Ashorobuto**	**1.59**	**46**	A		A	13 23 34.0	
	comp=E,4.0nm,0.3s,comp=E,4.0nm,0.3s							
JTM	**Tenmabayashi**	**1.65**	**211**	Pn		**Pn**	**13 23 35.2**	**+0.7**
JHST	**Hiyamasetana**	**1.74**	**278**	A		A	13 23 36.2	
	comp=E,9.0nm,0.6s,comp=E,17nm,0.6s							
JANG	**Nango**	**1.90**	**196**	A		A	13 23 38.0	
	comp=E,3.0nm,1.3s,comp=E,3.0nm,1.6s							
JKEN	**

H11S1	**WAKE ISLAND Hy**	**31.49**	**131**	T	T	14 03 02.3	
	baz=323,slow=76,SNR=218						
H11S3	**WAKE ISLAND Hy**	**31.49**	**131**	T	T	14 02 59.8	
	baz=323,slow=76,SNR=126						
H11S2	**WAKE ISLAND Hy**	**31.50**	**131**	T	T	14 02 59.7	
	baz=323,slow=76,SNR=141						
GAMB	**Gambell**	**34.05**	**35**	P	**P**	**13 29 44.0**	**-4.1**
ZALV	**Zalesovo Beam**	**39.05**	**308**	P	**P**	**13 30 30.9**	**0.0**
	comp=Z,1.0nm,0.5s,baz=72,slow=9.5,SNR=4.4						
	comp=Z,1.0nm,0.5s						
IMAR	**Indian Mountai**	**41.95**	**33**	P	**P**	**13 30 54.6**	**-0.1**
MKAR	**Makanchi Array**	**42.08**	**297**	P	**P**	**13 30 56.2**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=82,slow=8.6,SNR=7.2						
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**42.08**	**297**	P	**P**	**13 30 55.6**	**-0.4**
H21K	**Melozitna Rive**	**42.33**	**34**	P	**P**	**13 30 56.6**	**-1.2**
KDAK	**Kodiak Island**	**42.94**	**46**	P	**P**	**13 31 03.2**	**+0.4**
KDAK				IAmb	IAmb	13 31 30.3	
	comp=Z,21nm,1.4s						
KDAK	**Kodiak Island**	**42.94**	**46**	P	**P**	**13 31 03.2**	**+0.4**
KURK	**Kurchatov**	**43.38**	**304**	P	**P**	**13 31 04.5**	**-2.0**
KURK	**Kurchatov**	**43.38**	**304**	P	**P**	**13 31 04.5**	**-2.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	**Kurchatov**	**43.38**	**304**	*eP*	**P**	**13 31 04.5**	**-2.0**
TOLK	**Toolik Lake Re**	**43.63**	**30**	P	**P**	**13 31 06.5**	**-1.9**
TOLK				IAmb	IAmb	13 31 19.4	
	comp=Z,11nm,1.4s						
ILAR	**Eielson Array**	**44.86**	**35**	P	**P**	**13 31 18.7**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=276,slow=7.6,SNR=12						
	comp=Z,1.5nm,0.9s						
SCRK	**Sand Creek**	**46.21**	**36**	P	**P**	**13 31 28.6**	**-0.4**
SCRK				IAmb	IAmb	13 31 42.3	
	comp=Z,2.5nm,0.6s						
K27K	**Chicken**	**47.03**	**36**	P	**P**	**13 31 36.0**	**+0.8**
K27K				IAmb	IAmb	13 31 52.2	
	comp=Z,7.9nm,1.2s						
L27K	**Beaver Creek,**	**47.32**	**37**	P	**P**	**13 31 35.6**	**-2.0**
L27K				IAmb	IAmb	13 31 40.9	
	comp=Z,3.0nm,0.9s						
BCAR	**Beaver Creek A**	**47.34**	**37**	P	**P**	**13 31 37.6**	**-0.2**
INK	**Inuvik**	**49.54**	**29**	P	**P**	**13 31 54.8**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=300,slow=8.8,SNR=11						
	comp=Z,1.2nm,0.4s						
INK	**Inuvik**	**49.54**	**29**	P	**P**	**13 31 54.7**	**+0.2**
INK				IAmb	IAmb	13 32 09.5	
	comp=Z,5.4nm,1.4s						
KSM	**Kuching**	**49.63**	**224**	P	**P**	**13 31 57.0**	**+1.2**
YKA	**Yellowknife Ar**	**59.06**	**32**	P	**P**	**13 33 02.4**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=308,slow=6.2,SNR=3.8						
	comp=Z,1.1nm,0.7s						
ARCES	**ARCESS Array B**	**59.39**	**339**	P	**P**	**13 33 06.1**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=34,slow=9.8,SNR=1.8						
	comp=Z,1.4nm,1.0s						
WR0	**Warramunga Arr**	**62.25**	**188**	P	**P**	**13 33 25.3**	**-0.7**
WB2	**Warramunga Arr**	**62.26**	**188**	P	**P**	**13 33 25.6**	**-0.4**
WB2				IAmb	IAmb	13 33 46.8	
	comp=Z,7.2nm,1.3s						
WRA	**Warramunga Arr**	**62.26**	**188**	P	**P**	**13 33 26.5**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=6.8,slow=6.9,SNR=18						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**62.26**	**188**	P	**P**	**13 33 25.7**	**-0.3**
FINES	**FINESS Array B**	**64.55**	**331**	P	**P**	**13 33 40.6**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=64,slow=8.7,SNR=13						
	comp=Z,4.3nm,0.7s						
FINES	**FINESS Array B**	**64.55**	**331**	P	**P**	**13 33 38.0**	**-2.8**
ASAR	**Alice Springs**	**65.99**	**188**	P	**P**	**13 33 51.0**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=360,slow=6.9,SNR=10.0						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**65.99**	**188**	P	**P**	**13 33 51.0**	**+0.5**
NB2	**NORSAR Subarra**	**69.67**	**337**	P	**P**	**13 34 12.9**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=37,slow=6.5						
NOA	**NORSAR Array B**	**69.67**	**337**	P	**P**	**13 34 13.1**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=37,slow=6.1,SNR=12						
NOA				LR	LR	14 08 16.9	
	comp=Z,27nm,19.6s,baz=45,slow=39						
	comp=Z,2.1nm,0.7s						
AKASG	**Malin Array Be**	**70.61**	**322**	P	**P**	**13 34 19.1**	**0.0**
	comp=Z,0.7nm,0.4s,baz=43,slow=6.1,SNR=9.3						
	comp=Z,0.7nm,0.4s						
PDAR	**Pinedale Array**	**73.65**	**47**	P	**P**	**13 34 37.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=345,slow=1.0,SNR=4.8						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**86.50**	**53**	P	**P**	**13 35 48.6**	**+1.4**
	comp=Z,0.1nm,0.5s,baz=289,slow=3.5,SNR=4.6						
	comp=Z,0.1nm,0.5s						

*JMA **20** 13:45:06.4±0.4,38°N±2°×13°4E±°, h488km±4km, MV3.2/59, SEA OF JAPAN*
*IDC **20** 13:45:07.6±1.3,38°.45N×133°.72E, h456km±16km, mb2.9/7, mbtmp3.7/10, Error ellipse: s-maj=30.1km s-min=14.4km az=63.0*
ISC 20 13:45:07.5±0.8,38°.46N±0°.08×133°.76E±0°.08, h450km, n27, σ1$67/31, mb3.4/7, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHG	**Hegura jima**	**2.56**	**103**	*eP*	**P**	**13 46 09.7**	**-1.8**
JKG	**Kaga**	**2.99**	**136**	*eP*	**P**	**13 46 16.1**	**+1.6**
JKY	**Yasaka**	**3.02**	**159**	*eP*	**P**	**13 46 16.1**	**+1.4**
JWT	**Wachi**	**3.43**	**157**	*eP*	**P**	**13 46 19.4**	**+1.0**
JSD	**Sado**	**3.56**	**95**	P	**P**	**13 46 21.1**	**+2.1**
JYTA	**Yamagatataniai**	**3.72**	**139**	P	**P**	**13 46 21.9**	**+1.6**
JNG	**Nsakai**	**4.01**	**119**	P	**P**	**13 46 24.7**	**+1.8**
MJAR	**Matsushiro Arr**	**4.02**	**117**	P	**P**	**13 46 23.1**	**+0.2**
	5.5nm,0.6s,baz=295,slow=8.8,SNR=30						
JIE	**Ise**	**4.70**	**149**	P	**P**	**13 46 30.5**	**+1.4**
KSRS	**Korea Array**	**4.72**	**260**	P	**P**	**13 46 29.9**	**+0.8**
	2.1nm,0.6s,baz=70,slow=8.9,SNR=17						
JFT	**Otama**	**5.28**	**98**	*eP*	**P**	**13 46 36.6**	**+2.0**
JOD2	**Odawara 2**	**5.33**	**125**	*eP*	**P**	**13 46 36.2**	**+1.1**
JRG	**Rokugo**	**5.44**	**78**	*eP*	**P**	**13 46 38.1**	**+2.0**
JRG				*eS*	**S**	**13 47 49.1**	**+0.6**
JMM	**Marumori**	**5.57**	**94**	P	**P**	**13 46 38.4**	**+1.0**
JMM				*eS*	**S**	**13 47 49.6**	**-1.3**
JMK	**Ichinoseki**	**5.85**	**83**	P	**P**	**13 46 41.8**	**+1.6**
JMK				*eS*	**S**	**13 47 54.8**	**-1.2**
JOT	**Ohata**	**6.32**	**60**	P	**P**	**13 46 47.2**	**+2.3**
JKB	**Kayabe**	**6.54**	**56**	*eP*	**P**	**13 46 49.4**	**+2.2**
BSO1	**Boso 1**	**6.94**	**121**	*eP*	**P**	**13 46 51.6**	**+0.7**
JCH	**Churui**	**8.40**	**57**	P	**P**	**13 47 08.7**	**+1.5**
JCH				*eS*	**S**	**13 48 41.0**	**-4.5**
KLR	**Kul'dur**	**10.87**	**353**	P	**P**	**13 47 35.2**	**+1.4**
	1.8nm,0.4s,baz=181,slow=11,SNR=6.4						
SONM	**Songino Array**	**21.96**	**304**	P	**P**	**13 49 27.4**	**+0.7**
	0.7nm,0.4s,baz=107,slow=11,SNR=4.1						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**38.19**	**300**	P	**P**	**13 51 45.6**	**-1.3**
	0.3nm,0.5s,baz=81,slow=11,SNR=5.1						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**40.30**	**306**	P	**P**	**13 52 02.6**	**-1.4**
	1.2nm,0.6s,baz=84,slow=8.0,SNR=9.4						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**58.09**	**179**	P	**P**	**13 54 16.2**	**-0.4**
	0.7nm,0.5s,baz=355,slow=7.5,SNR=7.6						
	0.7nm,0.5s						
ARCES	**ARCESS Array B**	**60.44**	**337**	P	**P**	**13 54 31.9**	**+0.1**
	0.6nm,0.7s,baz=70,slow=10,SNR=4.1						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**61.80**	**180**	P	**P**	**13 54 41.2**	**-0.1**
	0.5nm,0.8s,baz=15,slow=3.8,SNR=3.6						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**64.62**	**330**	P	**P**	**13 54 58.4**	**-0.7**
	0.6nm,0.4s,baz=71,slow=5.8,SNR=12						
	0.6nm,0.4s						

*IDC **20** 13:45:43.3±2.0,7°.48S×128°.59E, h142km±27km, mb3.0/1, mbtmp3.7/5, Error ellipse: s-maj=26.3km s-min=19.3km az=120.0*
ISC 20 13:45:42.5±1.0,7°.68S±0°.07×128°.77E±0°.10, h131km, n6, σ3$33/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.63**	**243**	P	**Pn**	**13 47 06.2**	**+2.0**
	100nm,0.4s,baz=110,slow=3.6,SNR=27						
BATI				S	**Sn**	**13 48 06.8**	**-1.1**
	16nm,0.4s,baz=58,slow=13,SNR=1.9						
SIJI	**Sorong**	**7.21**	**20**	P	**Pn**	**13 47 24.4**	**-1.0**
	6.1nm,0.2s,baz=53,slow=23,SNR=17						
FITZ	**Fitzroy Crossi**	**10.79**	**196**	P	**Pn**	**13 48 14.9**	**+1.5**
	1.1nm,0.3s,baz=22,slow=9.9,SNR=20						
FITZ				S	**Sn**	**13 50 08.8**	**-3.7**
	2.8nm,0.4s,baz=111,slow=22,SNR=6.9						

WRA	**Warramunga Arr**	**13.33**	**157**	P	**Pn**	**13 48 49.2**	**+2.5**
	0.3nm,0.6s,baz=337,slow=10,SNR=12						
WRA				S	**Sn**	**13 51 11.0**	**-2.9**
	0.8nm,0.4s,baz=329,slow=23,SNR=6.3						
ASAR	**Alice Springs**	**16.64**	**163**	P	**P**	**13 49 32.7**	**+4.4**
	1.5nm,0.6s,baz=339,slow=10,SNR=47						
ASAR				S	**Sn**	**13 52 29.5**	**-4.1**
	0.3nm,0.6s,baz=322,slow=17,SNR=1.9						
MKAR	**Makanchi Array**	**68.14**	**328**	P	**P**	**13 56 26.2**	**-2.3**
	0.1nm,0.4s,baz=119,slow=8.7,SNR=2.6						
	0.1nm,0.4s						

MEX 20 13:54:17.7±1.4, 16°.23N×97°.57W, h16km±32km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEIG	**Puerto Escondi**	**0.47**	**119**	*i* P	Pg	13 54 25.2	-1.9
PNIG	**Pinotepa**	**0.56**	**287**	*e*P	Pg	13 54 27.1	-1.7
YOIG	**Yosondua**	**0.62**	**2**	*e*P	Pg	13 54 29.0	-1.2
TXIG	**Tlaxiaco**	**1.04**	**350**	*e*P	Pb	13 54 35.6	-1.8
TXIG				*e*S	Sb	13 54 47.6	-3.3
MGIG	**Malinaltepec**	**1.43**	**315**	*e*P	Pn	13 54 40.0	-3.1
MGIG				*i* S	Sn	13 54 53.6	-8.0
HUIG	**Huatulco**	**1.48**	**108**	*e*P	Pn	13 54 41.8	-1.8
HLIG	**Huajuapan de L**	**1.61**	**352**	*e*P	Pn	13 54 42.1	-3.5
FTIG	**Fresnillo de T**	**1.75**	**342**	*e*P	Pn	13 54 48.0	+0.4
FTIG				*e*S	Sn	13 55 01.8	-7.9

*IDC **20** 13:59:11.1±1.4, 14°.20N×91°.84W, h0km, mb3.9/9, mbtmp3.9/10, ML3.6/1, MS3.2/10, Error ellipse: s-maj=57.6km s-min=23.2km az=53.0*
*GCG **20** 13:59:11.6±0.4, 14°.21N×92°.51W, h102km±14km, MD4.3*
*MEX **20** 13:59:15.8±0.4, 14°.17N×92°.34W, h77km±40km, MD4.4*
*SNET **20** 13:59:17.2±1.4, 13°.93N×92°.13W, h33km±131km, ML4.2*
*UCR **20** 13:59:17.1±1.4, 13°.93N×92°.13W, h33km±325km, ML4.0*
*NEIC **20** 13:59:17.7±1.8, 14°.15N±0°.04×92°.3W±0°.1, h38km±13km, mb4.4/8, Md4.4/12(MEX), Error ellipse: s-maj=18.1km s-min=3.2km az=76.0*
ISC 20 13:59:16.1±1.6, 14°.09N±0°.09×92°.37W±0°.07, h46km±16km, n68, σ1$53/58, mb4.0/11, MS3.1/9, 2C-2D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.79**	**56**		**Pn**	**13 59 29.9**	**-1.0**
RTAL	**Retalhuleu**	**0.79**	**56**	*i* P	**Pn**	**13 59 30.0**	**-1.0**
RTAL				*e*S	**Sn**	**13 59 42.3**	**+0.6**
THIG		**0.82**	**7**	*e*P	**Pn**	**13 59 30.2**	**-1.2**
STG3	**Santiaguito 3,**	**0.99**	**51**	*e*P	**Pn**	**13 59 33.4**	**-0.5**
PATR	**El Naranjo**	**1.03**	**7**	*e*P	**Pn**	**13 59 32.8**	**-1.7**
PATR				*e*S	**Sn**	**13 59 46.5**	**-1.4**
CHUJ	**Union Juarez**	**1.03**	**14**	*e*P	**Pn**	**13 59 33.0**	**-1.5**
CHUJ				*e*S	**Sn**	**13 59 46.5**	**-1.5**
PAVE	**Pavencul**	**1.12**	**10**	*e*P	**Pn**	**13 59 34.2**	**-1.4**
PAVE				*e*S	**Sn**	**13 59 48.1**	**-1.9**
HUEH	**Huehuetenango**	**1.49**	**34**	Pn	**Pn**	**13 59 40.8**	**+0.2**
FUG	**Fuego 3**	**1.53**	**76**	*i* eP	**Pn**	**13 59 40.3**	**-0.9**
PCG	**Pacaya**	**1.74**	**80**	*i* eP	**Pn**	**13 59 43.7**	**-0.5**
PCIG		**1.81**	**333**	*e*P	**Pn**	**13 59 43.0**	**-1.8**
NBG	**Las Nubes**	**2.03**	**76**	*e*P	**Pn**	**13 59 49.0**	**+0.9**
NBG				*e*S	**Sn**	**14 00 15.0**	**+2.6**
SLOZ	**Alcaldia de Sa**	**2.51**	**91**	*e*P	**Pn**	**13 59 53.1**	**-1.5**
NUBE	**Las Nubes**	**2.52**	**94**	*e*P	**Pn**	**13 59 52.8**	**-2.0**
NUBE	**Las Nubes**	**2.52**	**94**	*e*P	**Pn**	**13 59 52.8**	**-2.0**
CARR	**Arriaga**	**2.61**	**326**	*e*P	**Pn**	**13 59 54.8**	**-1.0**
CARR				*e*S	**Sn**	**14 00 25.6**	**-0.8**
CEVE	**Cerro Verde**	**2.68**	**95**	*e*P	**Pn**	**13 59 55.7**	**-1.3**
CEVE				IAML		14 00 34.5	
	comp=Z,2μm,0.4s						
CEVE	**Cerro Verde**	**2.68**	**95**	*e*P	**Pn**	**13 59 55.7**	**-1.3**
CEVE				IAML		14 00 34.5	
	comp=Z,2μm,0.4s						
TGIG		**2.77**	**345**	*e*P	**Pn**	**13 59 58.2**	**+0.1**
MRL	**Marmol**	**2.79**	**69**	*e*P	**Pn**	**13 59 59.4**	**+1.0**
JAYA	**Jayaque - finc**	**2.87**	**98**	*e*P	**Pn**	**13 59 57.8**	**-1.8**
JAYA				IAML		14 00 44.0	
	comp=Z,667nm,0.5s						
JAYA	**Jayaque - finc**	**2.87**	**98**	*e*P	**Pn**	**13 59 57.8**	**-1.8**
JAYA				IAML		14 00 44.0	
	comp=Z,667nm,0.5s						
ESQI	**Esquipulas**	**2.98**	**81**	Pn	**Pn**	**14 00 00.4**	**-0.6**
SCLA	**Alcaldia de Sa**	**3.56**	**96**	*e*P	**Pn**	**14 00 08.0**	**-1.0**
SCLA	**Alcaldia de Sa**	**3.56**	**96**	*e*P	**Pn**	**14 00 08.0**	**-1.0**
UXUV	**UXUV**	**3.64**	**332**	*e*P	**Pn**	**14 00 10.7**	**+0.7**
PETF	**Flores**	**3.71**	**40**		**Pn**	**14 00 14.3**	**+3.4**
CMIG	**Matias Romero**	**3.84**	**321**	Pn	**Pn**	**14 00 12.2**	**-0.6**
	comp=Z,6.6nm,0.3s,baz=169,slow=14,SNR=30						
CMIG				Sn	**Sn**	**14 01 00.6**	**+3.9**
	comp=Z,19nm,0.3s,baz=98,slow=14,SNR=7.7						
CMIG				LR	LR	14 01 51.1	
	comp=Z,145nm,21.7s,baz=142,slow=39						
CRIN	**San Cristobal**	**5.36**	**104**		**Pn**	**14 00 34.0**	**+0.3**
BOAB	**BOACO BROADBAN**	**6.73**	**103**	Pn	**Pn**	**14 00 54.1**	**+1.6**
TEIG	**Tepich**	**7.25**	**32**		**Pn**	**14 00 60.0**	**+0.4**
HZTE	**Horizontes, Gu**	**7.42**	**116**	Pn	**Pn**	**14 01 02.3**	**+0.4**
ORTG	**Ortega, Santa**	**7.71**	**118**	Pn	**Pn**	**14 01 06.5**	**+0.8**
DUNO	**Dulce Nombre,**	**7.82**	**120**	Pn	**Pn**	**14 01 07.6**	**+0.2**
RIMA	**Rio Macho**	**9.37**	**116**	Pn	**Pn**	**14 01 31.0**	**+2.2**
SRBA	**San Rafael, Bu**	**10.06**	**118**	Pn	**Pn**	**14 01 38.6**	**+0.4**
SOR	**Soroa**	**12.40**	**44**	Pn	**Pn**	**14 02 09.2**	**-0.9**
656A	**Willston**	**17.73**	**29**	P	**Pn**	**14 03 20.9**	**+1.2**
656A				IAmb	IAmb	14 03 23.5	
	comp=Z,23nm,0.8s						
TXAR	**Lajitas Array**	**18.43**	**327**	P	**Pn**	**14 03 31.0**	**+2.7**
	baz=155,slow=15,SNR=15						
	comp=Z,2.6nm,1.0s						
TXAR	**Lajitas Array**	**18.43**	**327**	P	**Pn**	**14 03 30.8**	**+2.5**
TX31	**Lajitas Ar. Si**	**18.43**	**327**	P	**Pn**	**14 03 28.0**	**-0.3**
TX31				IAmb	IAmb	14 03 35.5	
	comp=Z,15nm,1.2s						
X37A	**Clayton**	**20.59**	**353**	P	Pn	14 03 50.9	-3.1
GDL2	**Guadalupe Moun**	**21.10**	**331**	P	**P**	**14 03 57.4**	**+0.4**
MNTX	**Cornudas Mount**	**21.20**	**328**	P	**P**	**14 03 58.1**	**+0.2**
TKL	**Tuckaleechee C**	**22.83**	**18**	P	**P**	**14 04 13.8**	**-1.5**
	comp=Z,1.6nm,0.5s,baz=194,slow=12,SNR=4.4						
	comp=Z,1.6nm,0.5s						
ANMO	**Albuquerque**	**24.35**	**331**	P	**P**	**14 04 32.6**	**+2.5**
	comp=Z,1.0nm,0.5s,baz=141,slow=13,SNR=4.5						
	comp=Z,1.0nm,0.5s						
SJG	**San Juan**	**25.50**	**77**	LR	LR	14 15 03.5	
	comp=Z,55nm,19.8s,baz=240,slow=38						
MVCO	**Mesa Verde**	**27.15**	**331**	P	**P**	**14 04 55.1**	**-0.3**
MVCO				IAmb	IAmb	14 04 59.7	
	comp=Z,8.1nm,1.1s						
PFO	**Pinyon Flats O**	**29.25**	**316**	LR	LR	14 16 19.5	
	comp=Z,41nm,20.5s,baz=138,slow=35						
NNA	**Nana**	**30.13**	**149**	LR	LR	14 15 18.0	
	comp=Z,30nm,18.2s,baz=332,slow=32						
PDAR	**Pinedale Array**	**32.19**	**336**	P	P	14 05 43.4	+3.4
	comp=Z,0.2nm,0.5s,baz=146,slow=12,SNR=2.1						
PDAR				LR	LR	14 22 11.6	
	comp=Z,36nm,18.0s,baz=138,slow=43						
	comp=Z,0.2nm,0.5s						
SADO	**Sadowa**	**32.59**	**18**	LR	LR	14 19 39.1	
	comp=Z,51nm,18.6s,baz=354,slow=38						
NVAR	**Mina Array Bea**	**33.38**	**321**	P	P	14 05 54.2	+3.8
	comp=Z,1.1nm,0.7s,baz=134,slow=8.1,SNR=13						
	comp=Z,1.1nm,0.7s						
MCMT	**McKenzie Canyo**	**35.24**	**334**	P	P	14 06 09.5	+3.0
YBH	**Yreka Blue Hor**	**38.08**	**322**	LR	LR	14 24 33.7	
	comp=Z,61nm,19.4s,baz=153,slow=40						
SIV	**San Ignacio**	**43.01**	**133**	P	**P**	**14 07 10.7**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=295,slow=6.1,SNR=5.1						
	comp=Z,0.6nm,0.3s						
LVC	**Limon Verde**	**43.11**	**147**	LR	LR	14 22 16.6	
	comp=Z,23nm,18.6s,baz=308,slow=32						
SCHQ	**Schefferville**	**45.27**	**21**	LR	LR	14 28 30.1	
	comp=Z,65nm,18.2s,baz=180,slow=39						
GRNB	**Grenville Isla**	**49.43**	**332**	P	**P**	**14 08 00.6**	**-0.8**
RUBB	**Prince Rupert**	**49.86**	**332**	P	P	14 08 06.4	+1.8
YKA	**Yellowknife Ar**	**50.86**	**347**	P	**P**	**14 08 12.5**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=150,slow=7.7,SNR=8.2						
	comp=Z,2.7nm,0.7s						
DLBC	**Dease Lake**	**52.43**	**336**	P	P	14 08 27.0	+3.0
	comp=Z,2.7nm,0.8s,baz=143,slow=4.7,SNR=7.0						
	comp=Z,2.7nm,0.8s						
INK	**Inuvik**	**60.26**	**344**	P	P	14 09 20.4	+1.0
	comp=Z,1.7nm,0.7s,baz=91,slow=7.2,SNR=4.4						
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**62.62**	**337**	P	P	14 09 36.5	+1.1
	comp=Z,1.2nm,0.8s,baz=152,slow=5.8,SNR=10						
	comp=Z,1.2nm,0.8s						
BPAW	**Bear Paw Mtn.**	**63.95**	**335**	P	P	14 09 46.4	+2.1
BPAW				IAmb	IAmb	14 09 48.0	
	comp=Z,8.4nm,0.7s						
BBTS	**Babate**	**73.11**	**79**	LR	LR	14 39 29.4	
	comp=Z,22nm,21.9s,baz=121,slow=33						
PZH	**PanZhiHua**	**137.38**	**341**	PKP	**PKiKP**	**14 18 36.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**145.79**	**341**	PKPbc	**PKiKP**	**14 18 52.0**	**-2.7**
	comp=Z,3.3nm,0.9s,baz=337,slow=4.4,SNR=11						

NOU 20 14:03:23.2, 21°.17S×169°.81E, h0km, MLv4.1/13, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.69**	**259**	P	Pn	14 03 52.9	-1.1
PINNC	**Pines Island,**	**2.62**	**236**	P	Pn	14 04 06.5	-0.3
YATNC	**Mamie plateau,**	**2.86**	**251**	P	Pn	14 04 09.1	-1.0
OUENC	**Ouen Island, N**	**3.02**	**245**	P	Pn	14 04 12.6	+0.2
DZM	**Mont Dzumac**	**3.26**	**253**	P	Pn	14 04 16.2	+0.5
ONTNC	**Ouen Toro**	**3.32**	**249**	P	Pn	14 04 16.5	+0.1
NOUC	**Port Laguerre**	**3.39**	**254**	P	Pn	14 04 17.5	+0.1
RTV	**Rentapao**	**3.60**	**339**	P	Pn	14 04 21.5	+1.2
KOUNC	**Koumac, New Ca**	**5.20**	**276**	P	Pn	14 04 42.5	+0.2

*MEX **20** 14:10:46.0±1.0, 14°.30N×92°.41W, h88km±127km, MD3.9*
*GCG **20** 14:10:48.4±0.3, 14°.36N×92°.08W, h68km±7km, MD3.8*
ISC 20 14:10:45.1±2.5, 14°.13N±0°.10×92°.40W±0°.06, h34km±4km, n14, σ1$48/25, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.78**	**9**	*i* P	**Pn**	**14 11 00.0**	**+0.4**
THIG				*i* S	**Sn**	**14 11 11.8**	**+1.6**
STG3	**Santiaguito 3,**	**0.98**	**54**	*e*P	**Pn**	**14 11 02.9**	**+0.2**
PATR	**El Naranjo**	**0.99**	**9**	*e*P	**Pn**	**14 11 02.5**	**-0.2**
PATR				*e*S	**Sn**	**14 11 16.2**	**+0.5**
CHUJ	**Union Juarez**	**0.99**	**16**	*e*P	**Pn**	**14 11 02.2**	**-0.6**
CHUJ				*i* S	**Sn**	**14 11 15.3**	**-0.5**
PAVE	**Pavencul**	**1.08**	**11**	*e*P	**Pn**	**14 11 03.8**	**-0.1**
PAVE				*e*S	**Sn**	**14 11 17.4**	**-0.4**
FUG	**Fuego 3**	**1.54**	**78**	*e*P	**Pn**	**14 11 10.0**	**-0.3**
FUG				*e*S	**Sn**	**14 11 27.0**	**-2.2**
PCG	**Pacaya**	**1.75**	**81**	*e*P	**Pn**	**14 11 13.4**	**+0.2**
PCG				*e*S	**Sn**	**14 11 35.3**	**+0.8**
PCIG		**1.75**	**333**	*e*P	**Pn**	**14 11 12.9**	**-0.1**
PCIG				*i* S	**Sn**	**14 11 30.4**	**-3.8**
NBG	**Las Nubes**	**2.04**	**77**	*e*P	**Pn**	**14 11 18.7**	**+1.6**
CCIG	**Comitan**	**2.15**	**7**	*e*P	**Pb**	**14 11 22.8**	**-0.8**
CCIG				*i* S	**Sb**	**14 11 50.8**	**+0.8**
CARR	**Arriaga**	**2.56**	**325**	*e*P	**Pn**	**14 11 24.5**	**+0.3**
CARR				*i* S	**Sn**	**14 11 53.0**	**-1.1**
TGIG		**2.72**	**345**	*e*P	**Pn**	**14 11 27.7**	**+1.3**
TGIG				*i* S	**Sn**	**14 11 56.3**	**-1.9**
UXUV	**UXUV**	**3.59**	**332**	*e*P	**Pn**	**14 11 40.2**	**+1.9**
UXUV				*e*S	**Sn**	**14 12 22.3**	**+2.8**
CMIG	**Matias Romero**	**3.79**	**321**	*e*P	**Pn**	**14 11 41.7**	**+0.5**

IDC 20 14:14:02.1±2.1, 20°.23N×93°.25E, h0km, mb3.2/3, mbtmp3.2/4, ML3.8/1, Error ellipse: s-maj=82.2km s-min=28.6km az=55.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**5.65**	**107**	Pn

FRG					S		Sg	14 26 26.6	+1.2
NAM	**Namangan**	**2.07**	**318**		P		Pg	14 26 14.9	+1.1
NAM					S		Sg	14 26 43.2	+2.5
BTK	**Batken**	**2.14**	**287**		P		Pb	14 26 13.2	-0.4
BTK					S		Sg	14 26 43.0	0.0
GAR	**Garm**	**2.51**	**260**	⇓	*i* P		Pn	14 26 17.7	+1.8
	baz=60								
GAR				⇓	*i* S		Sn	14 26 48.4	+1.3
	baz=60								
CHDK	**Chadak**	**2.58**	**307**		P		Pb	14 26 19.8	-1.3
CHDK					S		Sg	14 26 56.3	-0.8
AML	**Almayashu**	**2.67**	**3**		P		Pb	14 26 23.4	+0.6
	SNR=27								
TRKS	**Terek-Say**	**2.73**	**320**	⇓	*i* P		Pn	14 26 20.9	+1.8
	baz=22								
TRKS				⇓	*i* S		Sn	14 26 53.4	+0.6
	baz=22								
UCH	**Uchtor**	**2.87**	**15**	⇑	*i* P		Pb	14 26 25.6	-0.7
	baz=18								
UCH				⇑	*i* S		Sb	14 27 01.7	-0.3
	baz=18								
EKS2	**Erkin-Say**	**3.21**	**4**		P		Pb	14 26 31.3	-0.4
	SNR=11								
EKS2	**Erkin-Say**	**3.21**	**4**	⇓	*i* P		Pb	14 26 29.8	-2.0
	baz=6.0								
EKS2				⇓	*i* S		Sb	14 27 08.9	-2.4
	baz=6.0								
AAK	**Ala-Archa**	**3.26**	**13**		P		Pb	14 26 34.2	+1.5
	SNR=18								
AAK	**Ala-Archa**	**3.26**	**13**	⇓	*i* P		Pb	14 26 30.9	-1.9
	baz=15								
AAK				⇓	*i* S		Sb	14 27 10.8	-2.2
	baz=15								
MRKS	**Merke**	**3.29**	**357**		*e*P		Pg	14 26 39.2	+2.1
	7.5nm,0.5s								
MRKS					*e*S		Sg	14 27 24.4	+4.7
	97nm,0.5s								
KBK	**Karagaybulak**	**3.38**	**19**		P		Pb	14 26 36.4	+1.6
	SNR=11								
KBK	**Karagaybulak**	**3.38**	**19**	⇓	*i* P		Pb	14 26 32.7	-2.0
	baz=21								
KBK				⇓	*i* S		Sb	14 27 13.8	-2.5
	baz=21								
CHGR	**Chuyangaron**	**3.47**	**258**	⇓	*i* P		Pn	14 26 31.1	+2.0
	baz=58								
CHGR				⇓	*i* S		Sn	14 27 11.4	+0.7
	baz=58								
ULHL	**Ulahol**	**3.48**	**36**	⇓	*i* P		Pb	14 26 34.4	-2.1
	baz=38								
ULHL				⇓	*i* S		Sb	14 27 17.0	-2.2
	baz=38								
CHMS	**Chumysh**	**3.66**	**15**		P		Pb	14 26 37.5	-1.9
	SNR=5.5								
CHMS	**Chumysh**	**3.66**	**15**	⇑	*i* P		Pb	14 26 36.3	-3.2
	baz=17								
CHMS				⇑	*i* S		Sb	14 27 20.2	-4.1
	baz=17								
TAS	**Tashkent**	**3.71**	**302**	⇑	*i* P		Pn	14 26 34.7	+2.4
	baz=3.0								
TAS				⇑	*i* S		Sn	14 27 17.6	+1.1
	baz=3.0								
IUG	**Iuzhnay**	**3.75**	**317**		*e*P		Pg	14 26 44.0	-2.0
	369nm,0.5s								
IUG					*e*S		Sg	14 27 33.4	-1.3
	110nm,0.9s								
IUG	**Iuzhnay**	**3.75**	**317**		Pg		Pg	14 26 44.0	-2.0
	369nm,0.5s								
IUG					Lg		Lg	14 27 33.4	
	110nm,0.9s								
TKM2	**Tokmak 2**	**3.81**	**24**		P		Pb	14 26 42.6	+0.6
	SNR=5.0								
TKM2	**Tokmak 2**	**3.81**	**24**	⇓	Pg		Pg	14 26 47.3	+0.3
	9.6nm,0.7s								
TKM2				⇑	Lg		Lg	14 27 38.0	
	21nm,0.5s								
TKM2	**Tokmak 2**	**3.81**	**24**	⇑	*i* P		Pb	14 26 38.7	-3.3
	baz=26								
TKM2				⇑	*i* S		Sb	14 27 24.4	-4.2
	baz=26								
USP	**Ospenovka**	**3.88**	**11**		P		Pb	14 26 39.7	-3.5
	SNR=6.4								
USP	**Ospenovka**	**3.88**	**11**	⇓	*i* P		Pb	14 26 39.1	-4.1
	baz=13								
USP				⇓	*i* S		Sb	14 27 25.2	-5.3
	baz=13								
KST	**Kastek**	**4.04**	**27**		*e*P		Pg	14 26 51.8	+0.4
	4.8nm,0.5s								
KST					*e*S		Sg	14 27 46.7	+3.0
	43nm,0.4s								
KST	**Kastek**	**4.04**	**27**		Pg		Pg	14 26 51.8	+0.4
	4.8nm,0.5s								
KST					Lg		Lg	14 27 46.7	
	43nm,0.4s								
SGDS	**Sogindy**	**4.08**	**12**		*e*P		Pg	14 26 50.6	-1.6
	6.0nm,0.6s								
SGDS					*e*S		Sg	14 27 44.2	-0.9
	14nm,0.6s								
DGS	**Degeres**	**4.15**	**24**		*e*P		Pg	14 26 53.5	-0.1
	12nm,1.2s								
DGS					*e*S		Sg	14 27 49.7	+2.4
	19nm,0.9s								
DGS	**Degeres**	**4.15**	**24**		Pg		Pg	14 26 53.5	-0.1
	12nm,1.2s								
DGS					Lg		Lg	14 27 49.7	
	19nm,0.9s								
KK31	**Karatay Array**	**4.28**	**329**		Pn		Pn	14 26 44.4	+4.2
	2.9nm,0.4s,baz=136,slow=13,SNR=57								
KK31				⇑	Pg		Pg	14 26 55.5	-0.5
	6.5nm,0.6s,baz=137,slow=14,SNR=5.4								
KK31				⇓	Lg		Lg	14 27 47.9	
	15nm,0.4s,baz=140,slow=30,SNR=3.2								
KKAR	**Karatay Array**	**4.28**	**329**	⇑	*i* P		Pn	14 26 43.4	+3.3
	baz=31								
KKAR				⇑	*i* S		Sn	14 27 32.5	+2.0
	baz=31								
MTBS	**Maitube**	**4.28**	**30**		*e*P		Pg	14 26 56.1	0.0
	6.4nm,0.5s								
MTBS					*e*S		Sg	14 27 53.9	+2.2
	19nm,0.6s								
MTBS	**Maitube**	**4.28**	**30**		Pg		Pg	14 26 56.1	0.0
	6.4nm,0.5s								
MTBS					Lg		Lg	14 27 53.9	
	19nm,0.6s								
KRBS	**Karabastau**	**4.54**	**20**		*e*P		Pg	14 26 59.6	-1.4
	9.1nm,0.6s								
KRBS					*e*S		Sg	14 27 59.7	-0.2
	17nm,0.6s								
KRBS	**Karabastau**	**4.54**	**20**		Pg		Pg	14 26 59.6	-1.4
	9.1nm,0.6s								
KRBS					Lg		Lg	14 28 00.5	
	17nm,0.6s								
MDOK	**Medeo**	**4.57**	**35**		*e*P		Pg	14 27 01.0	-0.6
	9.0nm,0.6s								
MDOK					*e*S		Sg	14 28 02.2	+1.5
	18nm,2.0s								
MDOK	**Medeo**	**4.57**	**35**		Pg		Pg	14 27 01.0	-0.6
	9.0nm,0.6s								
MDOK					Lg		Lg	14 28 02.3	
	18nm,2.0s								
KOTS	**Kotyrbulak**	**4.65**	**35**		*e*P		Pg	14 27 03.4	+0.2
	1.3nm,0.5s								
KOTS					*e*S		Sg	14 28 06.1	+2.6
	92nm,0.9s								
KOTS	**Kotyrbulak**	**4.65**	**35**		Pg		Pg	14 27 03.4	+0.2
	1.3nm,0.5s								
KOTS					Lg		Lg	14 28 06.1	
	92nm,0.9s								
KTBS	**Karatobe**	**4.88**	**28**		*e*P		Pg	14 27 06.4	-1.1
	2.3nm,0.5s								
KTBS					*e*S		Sg	14 28 11.7	+1.1
	20nm,0.3s								
KTBS	**Karatobe**	**4.88**	**28**		Pg		Pg	14 27 06.4	-1.1
	2.3nm,0.5s								
KTBS					Lg		Lg	14 28 11.7	
	20nm,0.3s								
KUU	**Kurty**	**4.92**	**25**		*e*P		Pg	14 27 06.9	-1.4
	2.5nm,0.5s								
KUU					*e*S		Sg	14 28 12.2	+0.3
	19nm,1.6s								
KUU	**Kurty**	**4.92**	**25**		Pg		Pg	14 27 06.9	-1.4
	2.5nm,0.5s								
KUU					Lg		Lg	14 28 12.2	
	19nm,1.6s								
SATY	**Saty**	**5.16**	**44**		*e*P		Pg	14 27 12.3	-0.6
	3.9nm,0.3s								
SATY					*e*S		Sg	14 28 21.1	+1.3
	27nm,1.4s								
UZB	**Uzunbulak**	**5.56**	**47**		*e*P		Pg	14 27 19.0	-1.6
	2.3nm,0.4s								
UZB					*e*S		Sg	14 28 32.7	+0.1
	7.6nm,1.4s								
UZB	**Uzunbulak**	**5.56**	**47**		Pg		Pg	14 27 19.0	-1.6
	2.3nm,0.4s								
UZB					Lg		Lg	14 28 32.7	
	7.6nm,1.4s								
KPKS	**Kokpek**	**5.59**	**43**		*e*P		Pg	14 27 19.8	-1.4
	3.3nm,0.4s								
KPKS					*e*S		Sg	14 28 34.3	+0.7
	15nm,0.7s								
KPKS	**Kokpek**	**5.59**	**43**		Pg		Pg	14 27 19.8	-1.4
	3.3nm,0.4s								
KPKS					Lg		Lg	14 28 34.3	
	15nm,0.7s								
ARXS	**Arharly**	**5.75**	**33**		*e*P		Pg	14 27 21.7	-2.5
	4.9nm,0.7s								
ARXS					*e*S		Sg	14 28 37.8	-0.8
	14nm,1.3s								
ARXS	**Arharly**	**5.75**	**33**		Pg		Pg	14 27 21.7	-2.5
	4.9nm,0.7s								
ARXS					Lg		Lg	14 28 37.8	
	14nm,1.3s								
SHLS	**Shalkode**	**5.82**	**49**		*e*P		Pg	14 27 29.6	+4.1
	3.8nm,0.1s								
SHLS					*e*S		Sg	14 28 51.2	+10
	9.5nm,1.3s								
SHLS	**Shalkode**	**5.82**	**49**		Pg		Pg	14 27 29.6	+4.1
	3.8nm,0.1s								
SHLS					Lg		Lg	14 28 51.2	
	9.5nm,1.3s								
AKTO	**Aktyubinsk**	**15.47**	**320**	⇑	P		P	14 29 19.2	+1.5
	0.5nm,0.4s								

IDC 20 14:31:51.9±2.6, 6°02S×129°41E, h0km, mb3.5/1, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=190.4km s-min=32.5km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.65**	**161**	Pn	Pn	14 35 19.9	-0.7
	baz=344,slow=13,SNR=1.7						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**18.07**	**167**	P	P	14 36 05.0	-0.1
	baz=338,slow=8.7,SNR=4.3						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**67.09**	**327**	P	P	14 42 47.3	0.0
	0.2nm,0.4s,baz=116,slow=6.0,SNR=4.9						
	0.2nm,0.4s						

MAN 20 14:33:38, 7°87N×126°35E, h144km, Ms2.8, 5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.92**	**186**	⇓ *e*P	Pn	14 34 02.4	+0.9
MATI				*e*S	Sn	14 34 20.6	+1.0
BUKP	**Musuan**	**1.28**	**270**	⇓ *e*P	Pn	14 34 05.9	+1.1
BUKP				*e*S	Sn	14 34 27.3	+2.0
BUTP	**Butuan**	**1.31**	**327**	⇓ *e*P	Pn	14 34 06.8	+1.6
BUTP				*e*S	Sn	14 34 26.7	+0.9
DDMP	**Don Marcelino,**	**1.86**	**200**	⇓ *e*P	Pn	14 34 11.8	+0.6
DDMP				*e*S	Sn	14 34 37.7	+1.0
GLSP	**General Luna,**	**1.91**	**353**	⇓ *e*P	Pn	14 34 11.8	+0.1
GLSP				*e*S	Sn	14 34 35.4	-2.4

*IDC **20** 14:37:11.8±0.8, 5°37S×106°58W, h0km, mb4.2/12, mbtmp4.2/12, MS3.6/30, Error ellipse: s-maj=30.6km s-min=16.1km az=55.0*
*NEIC **20** 14:37:13.1±1.6, 5°53S±0°04×106°4W±0°2, h10km±1km, mb4.6/42, Error ellipse: s-maj=26.9km s-min=7.7km az=267.0*

ISC 20 14:37:12.7±0.6, 5°44S±0°09×106°5W±0°1, h10km, n87, σ1°19/63, mb4.5/33, MS3.5/30, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**21.74**	**187**	LR	LR	14 48 21.4	
	comp=Z,314nm,20.4s,baz=5.0,slow=31						
RPN	**Rapa Nui**	**21.74**	**187**	P	**P**	**14 42 00.6**	**-3.8**
CMIG	**Matias Romero**	**25.15**	**27**	LR	LR	14 50 17.0	
	comp=Z,348nm,20.5s,baz=207,slow=31						
PORT	**Chimborazo Vol**	**27.95**	**83**	P	**P**	**14 43 03.6**	**-0.7**
PORT				IAmb	IAmb	14 43 08.6	
	comp=Z,9.9nm,0.7s						
ATAH	**Atahualpa**	**27.98**	**95**	LR	LR	14 51 47.2	
	comp=Z,113nm,19.7s,baz=289,slow=31						
LPIG	**La Paz**	**29.59**	**353**	LR	LR	14 52 15.2	
	comp=Z,85nm,20.5s,baz=169,slow=31						
NNA	**Nana**	**30.01**	**105**	LR	LR	14 52 06.3	
	comp=Z,103nm,20.8s,baz=268,slow=30						
TXAR	**Lajitas Array**	**34.67**	**4**	P	**P**	**14 44 04.0**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=192,slow=12,SNR=2.9						
TXAR				PcP	**PcP**	**14 46 37.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=190,slow=2.7,SNR=3.5						
TXAR				LR	LR	14 55 39.2	
	comp=Z,67nm,19.2s,baz=171,slow=32						
	comp=Z,0.4nm,0.8s						
H03N2	**Juan Fernandez**	**37.85**	**141**	T	T	15 24 45.5	
	baz=314,slow=77,SNR=138						
H03N1	**Juan Fernandez**	**37.87**	**141**	T	T	15 24 46.0	
	baz=314,slow=77,SNR=146						
H03N3	**Juan Fernandez**	**37.87**	**141**	T	T	15 24 45.4	
	baz=314,slow=77,SNR=166						
PB16	**IPOC Station P**	**38.30**	**113**	P	**P**	**14 44 32.6**	**-2.0**
SDV	**Santo Domingo**	**38.48**	**68**	P	**P**	**14 44 37.2**	**+1.5**
	comp=Z,9.5nm,0.8s,baz=253,slow=5.9,SNR=5.9						
SDV				LR	LR	14 58 26.2	
	comp=Z,65nm,20.7s,baz=256,slow=33						
	comp=Z,9.5nm,0.8s						
SDV	**Santo Domingo**	**38.48**	**68**	P	**P**	**14 44 35.4**	**-0.2**
SDV				IAmb	IAmb	14 44 38.2	
	comp=Z,11nm,0.8s						
LPAZ	**La Paz**	**39.12**	**109**	P	**P**	**14 44 43.1**	**+1.6**
	comp=Z,2.5nm,0.9s,baz=293,slow=5.9,SNR=5.5						
LPAZ				LR	LR	14 57 51.3	
	comp=Z,54nm,19.5s,baz=290,slow=32						
	comp=Z,2.5nm,0.9s						
PFO	**Pinyon Flats O**	**39.96**	**347**	LR	LR	14 59 03.4	
	comp=Z,44nm,18.9s,baz=174,slow=33						
LVC	**Limon Verde**	**40.10**	**119**	P	**P**	**14 44 51.5**	**+2.2**
	comp=Z,9.1nm,0.8s,baz=296,slow=4.5,SNR=4.6						
LVC				LR	LR	14 56 55.2	
	comp=Z,83nm,20.6s,baz=277,slow=29						
	comp=Z,9.1nm,0.8s						
ANMO	**Albuquerque**	**40.16**	**0**	LR	LR	14 58 51.5	
	comp=Z,65nm,19.7s,baz=188,slow=32						
BAUV	**El Baul**	**40.91**	**70**	P	**P**	**14 44 53.4**	**-2.3**
QSM	**Queen of Sheba**	**42.32**	**347**	P	**P**	**14 45 08.1**	**+1.2**
QSM				IAmb	IAmb	14 45 14.5	
	comp=Z,10nm,1.3s						
GWY	**Greenwater Val**	**42.49**	**348**	P	**P**	**14 45 09.2**	**+0.7**
SHPR	**Sheep Range**	**42.50**	**350**	P	**P**	**14 45 08.7**	**+0.2**
WHAR	**Wooly Hollow**	**42.66**	**17**	P	**P**	**14 45 08.2**	**-1.5**
WHAR				IAmb	IAmb	14 45 27.3	
	comp=Z,17nm,1.4s						
456A	**Hilliard**	**42.91**	**32**	P	**P**	**14 45 09.2**	**-2.6**
S22A	**4UR Ranch, Cre**	**42.96**	**360**	P	**P**	**14 45 12.8**	**+0.3**
PKCU	**Pink Cliffs**	**43.00**	**353**	P	**P**	**14 45 12.3**	**-0.5**
PKCU				IAmb	IAmb	14 45 21.1	
	comp=Z,15nm,1.4s						
SAML	**Samuel**	**43.09**	**97**	P	**P**	**14 45 12.2**	**-1.4**
SAML				IAmb	IAmb	14 45 15.9	
	comp=Z,6.9nm,0.9s						
TPNV	**Topopah Spring**	**43.14**	**349**	P	**P**	**14 45 14.3**	**+0.6**
PRN	**Pahroc Range**	**43.36**	**350**	P	**P**	**14 45 16.6**	**+1.2**
GRAC	**Grapevine Rang**	**43.41**	**347**	P	**P**	**14 45 15.9**	**+0.1**
GRAC				IAmb	IAmb	14 45 20.3	
	comp=Z,10nm,1.1s						
GMN	**Gold Mountain**	**43.69**	**348**	P	**P**	**14 45 19.0**	**+0.8**
LCAR	**Lake Charles**	**43.72**	**18**	P	**P**	**14 45 18.3**	**+0.1**
LCAR				IAmb	IAmb	14 45 24.7	
	comp=Z,22nm,1.5s						
PLAL	**Pickwick Lake**	**43.79**	**22**	P	**P**	**14 45 18.6**	**-0.2**
PLAL				IAmb	IAmb	14 45 25.0	
	comp=Z,19nm,1.4s						
PPT	**Papeete**	**43.79**	**250**	LR	LR	14 59 25.9	
	comp=Z,44nm,20.8s,baz=120,slow=30						
SPR3	**Spring Creek 3**	**44.80**	**351**	P	**P**	**14 45 27.5**	**+0.3**
SPR3				IAmb	IAmb	14 45 36.9	
	comp=Z,6.2nm,1.3s						
P17A	**Butcher Ranch,**	**44.85**	**355**	P	**P**	**14 45 27.8**	**+0.3**
P17A				IAmb	IAmb	14 45 34.9	
	comp=Z,7.9nm,1.1s						
LHV	**Little Huntoon**	**44.87**	**347**	P	**P**	**14 45 29.4**	**+2.0**
LHV				IAmb	IAmb	14 45 41.3	
	comp=Z,5.1nm,0.9s						
WVT	**Waverly**	**44.90**	**22**	P	**P**	**14 45 26.3**	**-1.4**
WVT				IAmb	IAmb	14 45 33.2	
	comp=Z,5.4nm,1.0s						
NVAR	**Mina Array Bea**	**45.00**	**347**	P	**P**	**14 45 29.9**	**+1.2**
	comp=Z,1.4nm,0.9s,baz=174,slow=11,SNR=9.7						
	comp=Z,1.4nm,0.9s						
O20A	**White River Ci**	**45.37**	**358**	P	**P**	**14 45 33.2**	**+1.6**
CCM	**Cathedral Cave**	**45.53**	**17**	P	**P**	**14 45 32.1**	**-0.6**
CCM				IAmb	IAmb	14 45 38.8	
	comp=Z,10nm,1.2s						
SIV	**San Ignacio**	**45.75**	**107**	LR	LR	15 02 55.5	
	comp=Z,51nm,20.4s,baz=114,slow=34						
DUG	**Dugway, Tooele**	**45.77**	**353**	P	**P**	**14 45 34.3**	**-0.5**
DUG				IAmb	IAmb	14 45 43.0	
	comp=Z,8.7nm,1.4s						
PNTR	**Pine Nut**	**45.93**	**346**	P	**P**	**14 45 36.4**	**+0.3**
PNTR				IAmb	IAmb	14 45 40.4	
	comp=Z,9.4nm,1.0s						
TKL	**Tuckaleechee C**	**46.12**	**26**	LR	LR	15 04 50.1	
	comp=Z,28nm,19.0s,baz=192,slow=36						
SJG	**San Juan**	**46.17**	**59**	LR	LR	15 01 28.8	
	comp=Z,45nm,19.4s,baz=131,slow=32						
PAHR	**Pah Rah Range**	**46.47**	**346**	P	**P**	**14 45 40.5**	**+0.3**
PAHR				IAmb	IAmb	14 45 42.7	
	comp=Z,3.9nm,0.9s						
ELK	**Elko**	**46.65**	**351**	LR	LR	15 01 41.1	
	comp=Z,88nm,18.6s,baz=168,slow=32						
TZTN	**Tazewell**	**46.96**	**25**	P	**P**	**14 45 43.8**	**-0.2**
HWUT	**Hardware Ranch**	**47.04**	**355**	P	**P**	**14 45 45.4**	**+0.7**
HWUT				IAmb	IAmb	14 45 60.0	
	comp=Z,5.2nm,1.1s						
PLCA	**Paso Flores**	**47.65**	**143**	P	**P**	**14 45 50.8**	**+1.4**
	comp=Z,1.8nm,1.0s,baz=10,slow=9.5,SNR=3.4						
PLCA				LR	LR	15 00 21.6	
	comp=Z,33nm,21.1s,baz=303,slow=29						
	comp=Z,1.8nm,1.0s						
PDAR	**Pinedale Array**	**48.05**	**357**	P	**P**	**14 45 52.9**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=172,slow=6.3,SNR=9.8						
PDAR				LR	LR	15 02 07.5	
	comp=Z,42nm,18.2s,baz=190,slow=31						
	comp=Z,0.9nm,0.7s						
FXWY	**Fox Creek**	**49.02**	**356**	P	**P**	**14 45 59.9**	**-0.2**
FXWY				IAmb	IAmb	14 46 08.1	
	comp=Z,6.0nm,1.1s						
YBH	**Yreka Blue Hor**	**49.22**	**344**	LR	LR	15 02 03.2	
	comp=Z,20nm,19.8s,baz=159,slow=30						
IMW	**Indian Meadow**	**49.27**	**356**	P	**P**	**14 46 02.0**	**0.0**
IMW				IAmb	IAmb	14 46 08.4	
	comp=Z,4.1nm,1.0s						
HLID	**Hailey**	**49.29**	**352**	P	**P**	**14 46 03.1**	**+1.0**
MFID	**Camas Ranch**	**49.35**	**351**	P	**P**	**14 46 02.6**	**+0.2**
MFID				IAmb	IAmb	14 46 09.9	
	comp=Z,8.9nm,0.9s						
FLWY	**Flagg Ranch**	**49.44**	**356**	P	**P**	**14 46 02.9**	**-0.3**
FLWY				IAmb	IAmb	14 46 09.9	
	comp=Z,11nm,1.1s						
P53A	**Whipple**	**50.35**	**25**	P	**P**	**14 46 10.0**	**0.0**
CPUP	**Villa Florida**	**51.27**	**119**	P	**P**	**14 46 17.9**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=315,slow=7.6,SNR=5.0						
	comp=Z,3.4nm,0.8s						
NEW	**Newport**	**54.28**	**351**	LR	LR	15 06 53.5	
	comp=Z,48nm,18.4s,baz=171,slow=33						
SADO	**Sadowa**	**55.68**	**23**	LR	LR	15 10 41.5	
	comp=Z,53nm,18.1s,baz=173,slow=36						
BDFB	**Brasilia**	**58.22**	**105**	P	**P**	**14 47 08.2**	**+0.2**
	comp=Z,6.2nm,0.9s,baz=271,slow=4.9,SNR=5.0						
	comp=Z,6.2nm,0.9s						
BATG	**Bathurst New B**	**63.45**	**30**	P	**P**	**14 47 42.9**	**+0.1**
PMSA	**Palmer Station**	**66.43**	**162**	LR	LR	15 09 55.7	
	comp=Z,46nm,19.7s,baz=189,slow=30						
YKA	**Yellowknife Ar**	**68.02**	**356**	P	**P**	**14 48 10.6**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=166,slow=6.4,SNR=5.5						
YKA				LR	LR	15 16 08.7	
	comp=Z,53nm,18.2s,baz=72,slow=34						
	comp=Z,1.9nm,0.8s						
SCHQ	**Schefferville**	**68.49**	**23**	LR	LR	15 16 43.1	
	comp=Z,37nm,21.4s,baz=144,slow=35						
M26K	**Nabesna, AK**	**73.17**	**343**	P	**P**	**14 48 44.0**	**+0.4**
M26K				IAmb	IAmb	14 48 44.4	
	comp=Z,6.5nm,1.4s						
BCAR	**Beaver Creek A**	**73.36**	**344**	P	**P**	**14 48 44.1**	**-0.5**
FRB	**Frobisher Bay**	**74.64**	**16**	LR	LR	15 19 35.0	
	comp=Z,50nm,19.5s,baz=175,slow=34						
URZ	**Urewera**	**75.97**	**232**	LR	LR	15 18 20.7	
	comp=Z,88nm,18.2s,baz=210,slow=32						
INK	**Inuvik**	**75.97**	**350**	LR	LR	15 19 29.4	
	comp=Z,28nm,19.2s,baz=188,slow=33						
ILAR	**Eielson Array**	**76.11**	**343**	P	**P**	**14 48 59.7**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=163,slow=5.3,SNR=16						
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**76.11**	**343**	P	**P**	**14 48 59.5**	**-0.9**
RES	**Resolute Bay**	**80.30**	**3**	LR	LR	15 24 09.1	
	comp=Z,58nm,18.4s,baz=16,slow=35						
SFJD	**Kangerlussuaq**	**82.36**	**19**	LR	LR	15 26 38.4	
	comp=Z,28nm,18.0s,baz=212,slow=36						
QSPA	**South Pole Qui**	**84.62**	**180**	P	**P**	**14 49 47.7**	**+1.3**
VNDA	**Vanda**	**85.09**	**193**	P	**P**	**14 49 49.8**	**+1.4**
	comp=Z,5.6nm,1.2s,baz=93,slow=2.7,SNR=7.2						
	comp=Z,5.6nm,1.2s						
VNDA	**Vanda**	**85.09**	**193**	P	**P**	**14 49 50.2**	**+1.7**
VNA2	**Neumayer--Watz**	**87.88**	**161**	P	**P**	**14 50 00.0**	**-2.2**
	baz=307,slow=38						
SNAA	**Sanae**	**89.15**	**162**	P	**P**	**14 50 07.5**	**-0.8**
BORG	**Borgarnes**	**92.81**	**25**	LR	LR	15 31 10.3	
	comp=Z,18nm,18.8s,baz=272,slow=35						
CLL	**Collm**	**112.39**	**36**	*e*PP	**PP**	**14 56 35.0**	**+0.5**
SONM	**Songino Array**	**129.25**	**332**	PKP	**PKPdf**	**14 56 21.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=107,slow=

NEM2	**Nemuro 2**	**3.33**	**25**	P	**Pn**	**14 57 38.9**	**+0.1**
NEM2				S	**Sn**	**14 58 15.3**	**-3.6**
MJAR	**Matsushiro Arr**	**5.82**	**231**	Pn	**Pn**	**14 58 12.6**	**-0.6**
	0.1nm,0.3s,baz=194,slow=26,SNR=28						
	5.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**9.56**	**297**	Pn	**Pn**	**14 59 07.5**	**+3.1**
	0.8nm,0.3s,baz=94,slow=14,SNR=8.6						
KLR	**Kul'dur**	**12.3**	**320**	LR	LR	15 04 48.7	
	comp=Z,16nm,20.6s,baz=138,slow=39						
KSRS	**Korea Array**	**12.71**	**262**	LR	LR	15 04 02.9	
	comp=Z,23nm,19.3s,baz=75,slow=34						
PETK	**Petropavlovsk-**	**15.87**	**32**	LR	LR	15 07 29.4	
	comp=Z,19nm,18.3s,baz=126,slow=40						
SONM	**Songino Array**	**27.68**	**298**	P	**P**	**15 02 36.2**	**+1.0**
	0.4nm,0.5s,baz=91,slow=10,SNR=3.4						
	0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.52**	**129**	T	T	15 32 49.5	
	baz=320,slow=74,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**28.53**	**129**	T	T	15 32 53.5	
	baz=320,slow=74,SNR=7.7						
H11N3	**WAKE ISLAND Hy**	**28.54**	**129**	T	T	15 32 48.4	
	baz=320,SNR=8.2						
H11S1	**WAKE ISLAND Hy**	**29.37**	**131**	T	T	15 33 55.9	
	baz=323,SNR=2.7						
H11S3	**WAKE ISLAND Hy**	**29.37**	**131**	T	T	15 33 51.7	
	baz=323						
H11S2	**WAKE ISLAND Hy**	**29.38**	**131**	T	T	15 33 53.4	
	baz=323						
ZALV	**Zalesovo Beam**	**41.15**	**310**	P	**P**	**15 04 31.9**	**+0.8**
	1.4nm,0.6s,baz=87,slow=7.6,SNR=5.7						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**44.02**	**300**	P	**P**	**15 04 55.0**	**+0.3**
	1.2nm,0.8s,baz=82,slow=8.9,SNR=11						
	1.2nm,0.8s						
ILAR	**Eielson Array**	**45.68**	**34**	P	**P**	**15 05 09.2**	**+1.6**
	0.3nm,0.6s,baz=260,slow=6.3,SNR=7.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**60.64**	**190**	P	**P**	**15 06 58.4**	**+0.2**
	0.2nm,0.6s,baz=9.9,slow=7.0,SNR=1.8						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**66.74**	**332**	P	**P**	**15 07 38.7**	**+0.7**
	1.7nm,0.8s,baz=46,slow=11,SNR=7.2						
	1.7nm,0.8s						
NB2	**NORSAR Subarra**	**71.83**	**338**	P	**P**	**15 08 09.9**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**71.83**	**338**	P	**P**	**15 08 09.7**	**0.0**
	comp=Z,0.7nm,0.7s,baz=38,slow=6.0,SNR=4.2						
	comp=Z,0.7nm,0.7s						
AKASG	**Malin Array Be**	**72.80**	**323**	P	**P**	**15 08 15.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=46,slow=4.8,SNR=4.7						
AKASG				LR	LR	15 45 33.6	
	comp=Z,19nm,18.2s,baz=2.5,slow=40						
	comp=Z,0.2nm,0.3s						

*IDC **20** 14:58:16.2±6.7, 18°.97S×169°.18E, h144km±48km, mb3.8/6, mbtmp4.2/7, Error ellipse: s-maj=60.7km s-min=28.9km az=26.0*
*NOU **20** 14:58:17.0, 19°.10S×169°.39E, h162km, MLv4.0/29, Vanuatu Islands*
*NEIC **20** 14:58:22.4±1.9, 19°.4S±0°.1×168°.92E±0°.08, h176km±14km, mb4.2/12, Error ellipse: s-maj=18.9km s-min=5.2km az=149.0*

ISC 20 14:58:16.8±1.2, **19°.12S**±0°.06×**169°.2E**±0°.1, **h147**km, **n51,** σ1§**40**/50, **mb4.1/8, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RTV	**Rentapao**	**1.53**	**329**	P		**Pn**	**14 58 48.7**	**+2.3**
DVP	**Devils Point**	**1.71**	**324**	P		**Pn**	**14 58 50.2**	**+2.1**
MARNC	**Mare, Loyalty**	**2.61**	**206**			**Pn**	**14 58 59.2**	**+0.0**
MARNC	**Mare, Loyalty**	**2.61**	**206**	P		**Pn**	**14 58 59.5**	**+0.3**
YATNC	**Mamie plateau,**	**3.67**	**217**	P		**Pn**	**14 59 15.6**	**+3.0**
PINNC	**Pines Island,**	**3.86**	**205**	Pn		**Pn**	**14 59 16.4**	**+1.2**
PINNC	**Pines Island,**	**3.86**	**205**	P		**Pn**	**14 59 17.0**	**+1.8**
DZM	**Mont Dzumac**	**3.94**	**221**	P		**Pn**	**14 59 17.3**	**+1.1**
	3.8nm,0.3s,baz=43,slow=7.6,SNR=63							
DZM				S		**Sn**	**15 00 03.2**	**+0.7**
	12nm,0.6s,baz=136,slow=20,SNR=5.1							
DZM	**Mont Dzumac**	**3.94**	**221**	Pn		**Pn**	**14 59 18.1**	**+1.8**
DZM	**Mont Dzumac**	**3.94**	**221**	P		**Pn**	**14 59 17.8**	**+1.5**
OUENC	**Ouen Island, N**	**3.98**	**214**	Pn		**Pn**	**14 59 19.0**	**+2.3**
OUENC	**Ouen Island, N**	**3.98**	**214**	P		**Pn**	**14 59 19.3**	**+2.6**
NOUC	**Port Laguerre**	**4.05**	**222**	P		**Pn**	**14 59 20.1**	**+2.5**
ONTNC	**Ouen Toro**	**4.11**	**219**	Pn		**Pn**	**14 59 19.2**	**+0.8**
ONTNC	**Ouen Toro**	**4.11**	**219**	P		**Pn**	**14 59 20.1**	**+1.7**
KOUNC	**Koumac, New Ca**	**4.88**	**252**	Pn		**Pn**	**14 59 30.2**	**+1.7**
KOUNC	**Koumac, New Ca**	**4.88**	**252**	P		**Pn**	**14 59 30.3**	**+1.7**
FUNA	**Funafuti**	**14.28**	**44**	Pn		P	15 01 41.4	+6.1
EIDS	**Eidsvold**	**17.92**	**246**	P		**P**	**15 02 14.4**	**-1.0**
URZ	**Urewera**	**20.27**	**162**	P		**P**	**15 02 42.5**	**+1.7**
	5.4nm,0.7s,baz=15,slow=12,SNR=2.3							
	5.4nm,0.7s							
URZ	**Urewera**	**20.27**	**162**	P		Pn	15 02 42.9	-1.4
URZ				IAmb		IAmb	15 02 59.4	
	comp=Z,18nm,1.2s							
CTA	**Charters Tower**	**21.68**	**264**	P		**P**	**15 02 56.9**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=88,slow=12,SNR=7.8							
	comp=Z,2.4nm,0.5s							
CTA	**Charters Tower**	**21.68**	**264**	P		**P**	**15 02 56.6**	**+0.6**
CTAO	**Charters Tower**	**21.68**	**264**	P		**P**	**15 02 55.8**	**-0.3**
CTAO				IAmb		IAmb	15 03 02.4	
	comp=Z,6.1nm,1.0s							
CTAO	**Charters Tower**	**21.68**	**264**	P		**P**	**15 02 56.7**	**+0.7**
MTSU	**Mount Surprise**	**23.64**	**268**	P		**P**	**15 03 15.8**	**+1.0**
CMSA	**Cobar Meteorol**	**24.56**	**235**	P		**P**	**15 03 23.5**	**+0.5**
STKA	**Stephens Creek**	**27.91**	**237**	P		**P**	**15 03 53.8**	**+0.6**
	comp=Z,3.4nm,1.1s,baz=94,slow=14,SNR=4.0							
	comp=Z,3.4nm,1.1s							
LCRK	**Leigh Creek**	**30.25**	**242**	P		**P**	**15 04 14.1**	**+0.2**
OOD	**Oodnadatta**	**31.89**	**248**	P		**P**	**15 04 28.7**	**+0.4**
WB2	**Warramunga Arr**	**32.86**	**263**	P		**P**	**15 04 34.8**	**-2.1**
WB2				IAmb		IAmb	15 04 38.1	
	comp=Z,5.3nm,1.1s							
WRAB	**Tennant Creek**	**32.86**	**263**	P		**P**	**15 04 35.3**	**-1.6**
WRA	**Warramunga Arr**	**32.87**	**263**	P		**P**	**15 04 35.3**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=91,slow=8.3,SNR=27							
	comp=Z,0.8nm,0.4s							
WRA	**Warramunga Arr**	**32.87**	**263**	P		**P**	**15 04 35.0**	**-2.0**
AS31	**Alice Springs**	**33.16**	**256**	P		**P**	**15 04 38.1**	**-1.4**
ASAR	**Alice Springs**	**33.16**	**256**	P		**P**	**15 04 38.7**	**-0.8**
	comp=Z,9.6nm,0.5s,baz=81,slow=8.6,SNR=425							
	comp=Z,9.6nm,0.5s							
ASAR	**Alice Springs**	**33.16**	**256**	P		**P**	**15 04 38.4**	**-1.1**
MULG	**Mulgathing**	**33.72**	**244**	P		**P**	**15 04 44.0**	**-0.2**
MTN	**Manton Dam**	**37.11**	**274**	P		**P**	**15 05 12.3**	**-1.0**
WRKA	**Warakurna**	**38.29**	**254**	P		**P**	**15 05 22.6**	**-0.7**
KNRA	**Kununurra**	**38.72**	**269**	P		**P**	**15 05 25.4**	**-1.4**
KNRA				IAmb		IAmb	15 05 25.5	
	comp=Z,7.7nm,1.1s							
KNRA	**Kununurra**	**38.72**	**269**	P		**P**	**15 05 25.8**	**-1.0**
FAKI	**Fak Fak**	**39.58**	**289**	P		**P**	**15 05 32.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**41.26**	**264**	P		**P**	**15 05 47.7**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=96,slow=5.6,SNR=10							
	comp=Z,2.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**41.26**	**264**	P		**P**	**15 05 47.5**	**-0.2**
FITZ				IAmb		IAmb	15 05 48.1	
	comp=Z,2.6nm,0.7s							
FITZ	**Fitzroy Crossi**	**41.26**	**264**	P		**P**	**15 05 47.9**	**+0.1**
PSA00	**Pilbara Seismi**	**46.23**	**258**	P		**P**	**15 06 26.5**	**-1.0**
MBWA	**Marble Bar**	**46.38**	**259**	P		**P**	**15 06 28.0**	**-0.7**
MBWA				IAmb		IAmb	15 06 28.6	
	comp=Z,9.0nm,0.9s							
MBWA	**Marble Bar**	**46.38**	**259**	P		**P**	**15 06 28.4**	**-0.3**
MEEK	**Meekatharra**	**47.00**	**251**	P		**P**	**15 06 33.0**	**-0.5**
GERES	**GERESS Array B**	**144.38**	**332**	PKP		**PKPab**	**15 17 33.0**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=46,slow=4.2,SNR=4.0							

*DDA **20** 15:15:45.9±0.0, 40°.84N×31°.69E, h11km±2km, ML2.2*
*ISK **20** 15:15:46.2, 40°.87N×31°.64E, h6km, ML2.5/12*

ISC 20 15:15:46.2±0.9, **40°.85N**±0°.03×**31°.67E**±0°.02, **h12**km±9km, **n27,** σ0§**39**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YIGI	**Dzce**	**0.21**	**304**	P		**Pg**	**15 15 51.0**	**+0.3**
YIGI				*i* AML		AML	15 15 54.0	
	comp=N,1μm,0.3s							
YIGI				*i* AML		AML	15 15 54.0	
	comp=E,2μm,0.2s							
YIGI				S		**Sg**	**15 15 54.2**	**+0.5**
BCAM	**Yenicaga**	**0.30**	**96**	P		**Pg**	**15 15 52.4**	**0.0**
BCAM				S		**Sg**	**15 15 56.2**	**-0.4**
BCAM				*i* AML		AML	15 15 57.0	
	comp=N,487nm,0.2s							
BCAM				*i* AML		AML	15 15 57.0	
	comp=E,359nm,0.5s							
DEVR	**Zonguldak/Devr**	**0.37**	**38**	P		**Pg**	**15 15 53.2**	**-0.4**
DEVR				S		**Sg**	**15 15 57.9**	**-0.7**
DEVR				*i* AML		AML	15 15 58.0	
	comp=N,181nm,0.4s							
YUVA	**Yuva-Kibriscik**	**0.46**	**179**	PG		**Pb**	**15 15 56.4**	**+0.2**
YUVA				SG		**Sb**	**15 16 03.1**	**+0.1**
KDZE	**Karadeniz Ereo**	**0.50**	**339**	PG		**Pg**	**15 15 55.9**	**0.0**
KDZE				SG		**Sg**	**15 16 02.8**	**+0.2**
MDUB	**Mudurnu**	**0.52**	**224**	PG		**Pg**	**15 15 56.2**	**-0.3**
BTAS	**Taskesti**	**0.58**	**242**	P		**Pg**	**15 15 57.5**	**0.0**
BTAS				S		**Sg**	**15 16 04.6**	**-0.7**
BTAS				*i* AML		AML	15 16 09.0	
	comp=E,155nm,0.3s							
SAHE	**Sakarya_HENDEK**	**0.62**	**271**	P		**Pb**	**15 15 58.5**	**-0.4**
SAHE				S		**Sg**	**15 16 06.4**	**-0.2**
SAHE				*i* AML		AML	15 16 08.0	
	comp=N,92nm,0.7s							
CMDR	**Camlidere-ANKA**	**0.70**	**120**	P		**Pg**	**15 15 59.8**	**-0.1**
CMDR				S		**Sg**	**15 16 09.2**	**+0.1**
CMDR				*i* AML		AML	15 16 17.0	
	comp=N,128nm,0.4s							
KBUK	**KARABUK-Merkez**	**0.82**	**61**	P		**Pg**	**15 16 01.5**	**-0.5**
GULT	**Gulveren**	**0.97**	**245**	PG		**Pb**	**15 16 05.1**	**+0.1**
KAYN	**Sakarya, Kayna**	**1.02**	**277**	P		**Pb**	**15 16 05.8**	**+0.1**
KAYN				S		**Sg**	**15 16 18.5**	**-0.5**
KAYN				*i* AML		AML	15 16 23.0	
	comp=N,48nm,0.4s							
KAYN				*i* AML		AML	15 16 23.0	
	comp=E,50nm,0.4s							
SAUV	**Serdivan-Sakar**	**1.03**	**264**	PG		**Pb**	**15 16 05.9**	**0.0**
GEYV	**SAKARYA_Geyve**	**1.11**	**251**	P		**Pg**	**15 16 07.1**	**-0.4**
GEYV				S		**Sb**	**15 16 21.9**	**+0.2**
GEYV				*i* AML		AML	15 16 26.0	
	comp=E,35nm,0.4s							
SRCK	**Saricakaya, Es**	**1.14**	**225**	PN		**Pn**	**15 16 08.1**	**+0.3**
KAND	**Kocaeli-Kandir**	**1.15**	**283**	P		**Pb**	**15 16 08.0**	**+0.1**
KURC	**Kurucasile-Bar**	**1.28**	**39**	PN		**Pg**	**15 16 11.0**	**+0.2**
PELI	**Kastamonı-Ara**	**1.32**	**69**	P		**Pn**	**15 16 10.8**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.41**	**185**	PN		**Pg**	**15 16 13.2**	**0.0**
HRT	**Hereke**	**1.52**	**270**	PN		**Pb**	**15 16 14.7**	**+0.4**
ADVT	**Abdulvahap**	**1.53**	**255**	PN		**Pb**	**15 16 14.4**	**0.0**
BILE	**Bilecik/Merkez**	**1.53**	**244**	P		**Pn**	**15 16 14.0**	**+0.6**
CAVI	**Cavuskoy**	**1.54**	**246**	PN		**Pb**	**15 16 14.9**	**+0.3**
YLV	**Yalova**	**1.77**	**262**	PN		**Pb**	**15 16 17.9**	**-0.7**
KURT	**Yalova, Merkez**	**1.89**	**263**	P		**Pb**	**15 16 19.9**	**-0.6**
KURT				S		**Sg**	**15 16 46.3**	**-0.7**
KURT				*i* AML		AML	15 16 52.0	
	comp=E,20nm,0.7s							
IGD	**Bursa**	**1.97**	**254**	P		**Pb**	**15 16 21.8**	**-0.2**
AVDN	**Avdancik/Bursa**	**1.99**	**255**	P		**Pb**	**15 16 21.9**	**-0.3**

*IDC **20** 15:22:03.0±1.0, 55°.11S×30°.27W, h0km, mb4.0/3, mbtmp4.0/3, MS3.1/3, Error ellipse: s-maj=41.5km s-min=32.4km az=80.0*
*NEIC **20** 15:22:04.7±1.0, 55°.2S±0°.1×30°.5W±0°.2, h10km±2km, mb4.2/6, Error ellipse: s-maj=23.7km s-min=13.8km az=149.0*

ISC 20 15:22:04.4±0.8, **55°.1S**±0°.1×**30°.3W**±0°.1, **h10**km, **n23,** σ1§**33**/18, **mb4.2/5, MS2.8/3, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.66**	**280**	Pn		**Pn**	**15 23 00.6**	**-0.3**
VNA1	**Neumayer--Stat**	**18.39**	**157**	P		**P**	**15 26 19.3**	**+0.2**
VNA3	**Neumayer Olymp**	**18.53**	**159**	P		**Pn**	**15 26 21.1**	**+0.3**
VNA2	**Neumayer--Watz**	**18.79**	**157**	P		**P**	**15 26 23.4**	**-0.1**
	baz=309,slow=12							
PMSA	**Palmer Station**	**19.24**	**226**	P		**Pn**	**15 26 32.5**	**+3.1**
	6.0nm,0.8s,baz=54,slow=8.7,SNR=5.6							
SNAA	**Sanae**	**20.38**	**155**	P		**P**	**15 26 40.0**	**-0.8**
SNAA	**Sanae**	**20.38**	**155**	LR		LR	15 32 40.0	
	comp=Z,32nm,20.2s,baz=337,slow=31							
SNAA	**Sanae**	**20.38**	**155**	P		**P**	**15 26 39.8**	**-1.1**
SNAA				IAmb		IAmb	15 26 46.8	
	comp=Z,6.5nm,0.8s							
TROLL	**Troll, Antarti**	**21.93**	**153**	P		**P**	**15 26 56.5**	**-1.1**
GO09	**Cerro Castillo**	**25.18**	**261**	P		**P**	**15 27 26.4**	**-3.2**
PLCA	**Paso Flores**	**30.06**	**282**	P		**P**	**15 28 13.8**	**+0.3**
PLCA				IAmb		IAmb	15 28 42.9	
	comp=Z,11nm,1.5s							
CPUP	**Villa Florida**	**34.83**	**315**	LR		LR	15 42 39.9	
	comp=Z,16nm,18.7s,baz=221,slow=35							
QSPA	**South Pole Qui**	**35.18**	**180**	P		**P**	**15 28 57.9**	**-0.4**
QSPA				IAmb		IAmb	15 29 05.2	
	comp=Z,7.4nm,1.2s							
MAW	**Mawson**	**41.99**	**145**	LR		LR	15 44 39.0	
	comp=Z,63nm,18.9s,baz=78,slow=32							
VNDA	**Vanda**	**47.46**	**184**	P		**P**	**15 30 38.5**	**0.0**
	comp=Z,1.6nm,0.8s,baz=192,slow=5.9,SNR=7.3							
	comp=Z,1.6nm,0.8s							
LPAZ	**La Paz**	**48.36**	**308**	P		**P**	**15 30 47.2**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=112,slow=5.4,SNR=4.9							
	comp=Z,1.1nm,0.6s							
H10N1	**ASCENSION HYDR**	**48.77**	**21**	T		T	16 23 54.9	
	baz=191							
H10N3	**ASCENSION HYDR**	**48.77**	**21**	T		T	16 23 53.8	
	baz=191,slow=74,SNR=7.2							
H10N2	**ASCENSION HYDR**	**48.78**	**21**	T		T	16 23 55.8	
	baz=191,slow=74,SNR=5.2							
TORD	**Torodi Ar. Bea**	**73.14**	**33**	P		**P**	**15 33 35.7**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=193,slow=6.4,SNR=5.5							
	comp=Z,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.14**	**33**	P		**P**	**15 33 36.1**	**+1.2**
TORD				IAmb		IAmb	15 33 38.2	
	comp=Z,1.4nm,0.9s							
ILAR	**Eielson Array**	**148.13**	**313**	PKPbc		**PKPbc**	**15 41 48.8**	**0.0**
	comp=Z,3.1nm,1.0s,baz=133,slow=1.9,SNR=23							
SONM	**Songino Array**	**152.46**	**87**	PKPbc		**PKPbc**	**15 42 00.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=241,slow=4.4,SNR=4.9							
SONM				PKPab		**PKPab**	**15 42 09.5**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=222,slow=2.5,SNR=6.2							

*IDC **20** 15:23:02.3±1.1, 35°.98N×71°.33E, h0km, mb3.6/6, mbtmp3.6/9, ML3.6/3, Error ellipse: s-maj=27.7km s-min=23.7km az=38.0*
*NNC **20** 15:23:15.9±5.8, 36°.88N×70°.82E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=49.7km s-min=34.2km az=162.0*

ISC 20 15:23:14.9±1.1, **36°.4N**±0°.1×**70°.95E**±0°.09, **h100**km, **n13,** σ2§**17**/15, **mb3.5/5, 5C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**6.70**	**357**	Pn		**Pn**	**15 24 51.1**	**+0.5**
	1.8nm,0.3s,baz=178,slow=13,SNR=96							
KK31				⇑Sn		**Sn**	**15 26 02.4**	**-3.0**
	3.5nm,0.5s,baz=180,slow=22							
TKM2	**Tokmak 2**	**7.43**	**27**	⇑Pn		**Pn**	**15 24 60.0**	**-0.7**
	1.7nm,0.5s							
TKM2				⇑Sn		**Sn**	**15 26 22.0**	**-1.4**
	1.4nm,0.7s							
GEYT	**Alibeck**	**10.36**	**282**	Pn		**Pn**	**15 25 39.0**	**-1.5**
	1.4nm,0.3s,baz=118,slow=8.0,SNR=15							
GEYT				Sn		**Sn**	**15 27 32.1**	**-2.4**
	0.7nm,0.3s,baz=177,slow=38,SNR=2.4							
	2.9nm,0.3s							
MKAR	**Makanchi Array**	**13.39**	**36**	Pn		Pn	15 26 15.2	-5.5
	0.1nm,0.3s,baz=192,slow=12,SNR=4.3							
	0.1nm,0.3s							
AB31	**Akbulak array**	**15.15**	**331**	⇑P		**Pn**	**15 26 43.0**	**-0.3**
	0.3nm,0.2s,baz=150,slow=16,SNR=40							
AKTO	**Aktyubinsk**	**16.84**	**330**	P		**P**	**15 27 06.3**	**+1.4**
	0.3nm,0.3s,baz=128,slow=13,SNR=7.2							
	2.2nm,0.6s							
AKTO	**Aktyubinsk**	**16.84**	**330**	⇑P		**P**	**15 27 06.8**	**+2.0**
	1.5nm,0.6s							
ZALV	**Zalesovo Beam**	**20.02**	**24**	P		**P**	**15 27 39.5**	**0.0**
	1.8nm,0.4s,baz=212,slow=9.7,SNR=12							
	1.8nm,0.4s							
FINES	**FINESS Array B**	**37.54**	**326**	P		**P**	**15 30 22.5**	**+3.6**
	0.3nm,0.3s,baz=122,slow=9.0,SNR=10							
	0.3nm,0.3s							
ARCES	**ARCESS Array B**	**41.22**	**338**	P		**P**	**15 30 52.9**	**+3.5**
	0.4nm,0.5s,baz=110,slow=9.2,SNR=11							
	0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P		**P**	**15 33 49.4**	**+0.5**
	0.9nm,0.8s,baz=52,slow=5.9,SNR=4.9							
	0.9nm,0.8s							
WRA	**Warramunga Arr**	**81.97**	**122**	P		**P**	**15 35 22.7**	**-1.1**
	0.3nm,0.9s,baz=331,slow=4.3,SNR=1.2							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**84.23**	**125**	P		**P**	**15 35 33.4**	**-2.0**
	0.2nm,0.9s,baz=303,slow=4.8,SNR=4.1							
	0.2nm,0.9s							

*IDC **20** 15:30:00.2±1.5, 40°.39N×143°.65E, h0km, mb3.7/7, mbtmp3.7/8, ML2.4/1, Error ellipse: s-maj=34.7km s-min=28.2km az=103.0*
*NIED **20** 15:30:01.5, 40°.41N×143°.65E, h18km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.28; $M_{\theta\theta}$1.33; $M_{\phi\phi}$-3.61; $M_{r\theta}$0.80; $M_{\theta\phi}$-0.93; $M_{r\phi}$0.88; Fault plane solution: $M_0$3.35000×10^{14} NP1: ϕ_s164.00000°, δ42.00000°, λ50.00000°. NP2:ϕ_s33.00000°, δ59.00000°, λ121.00000°.*
*JMA **20** 15:30:01.5±0.3, 40°.4N±0°.6×14°.4E±°, h18km±4km, MV3.6/34, FAR E OFF SANRIKU*

ISC 20 15:30:01.7±0.9, **40°.39N**±0°.05×**143°.78E**±0°.07, **h16**km, **n31,** σ1§**52**/35, **mb3.6/7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTH	**Tanohata**	**1.54**	**253**	P		**Pn**	**15 30 27.0**	**-1.4**
JTH				*e*S		**Sn**	**15 30 45.6**	**-2.5**
JKEN	**Kujiedanarisaw**	**1.59**	**264**	*e*P		**Pn**	**15 30 27.8**	**-1.5**
JKEN				*e*S		**Sn**	**15 30 46.1**	**-3.4**
JEM	**Erimo**	**1.69**	**344**	*e*P		**Pn**	**15 30 29.9**	**-0.6**
MIYJ	**Miyakonagasawa**	**1.71**	**242**	P		**Pn**	**15 30 30.2**	**-0.7**
MIYJ				*e*S		**Sn**	**15 30 50.2**	**-2.2**
JANG	**Nango**	**1.73**	**270**	P		**Pn**	**15 30 29.9**	**-1.2**
JNBK	**Urakawa-nobuka**	**2.04**	**338**	*e*P		**Pn**	**15 30 35.4**	**+0.1**
JTM	**Tenmabayashi**	**2.10**	**282**	P		**Pn**	**15 30 35.9**	**-0.3**
JOM	**Ohasama**	**2.12**	**245**	*e*P		**Pn**	**15 30 36.2**	**-0.3**
JCH	**Churui**	**2.24**	**352**	*e*P		**Pn**	**15 30 37.9**	**-0.3**
JCH				*e*S		**Sn**	**15 31 04.5**	**-1.1**
JOT	**Ohata**	**2.29**	**296**	*e*P		**Pn**	**15 30 38.6**	**-0.2**
JOT				*e*S		**Sn**	**15 31 05.3**	**-1.5**
JMK	**Ichinoseki**	**2.44**	**235**	*e*P		**Pn**	**15 30 40.6**	**-0.3**
JMK				*e*S		**Sn**	**15 31 09.0**	**-1.5**
JAK	**Akkeshi**	**2.69**	**14**	*e*P		**Pn**	**15 30 43.8**	**-0.5**
JAK				S		**Sn**	**15 31 14.6**	**-2.0**
JAR	**Ashorobuto**	**2.90**	**360**	*e*P		**Pn**	**15 30 45.9**	**-1.3**
JAR				*e*S		**Sn**	**15 31 18.9**	**-2.9**
JEW	**Eniwo**	**3.00**	**325**	*e*S		**Sn**	**15 31 25.3**	**+1.0**
JYK	**Kaneyama**	**3.02**	**242**	P		**Pn**	**15 30 49.1**	**+0.2**
JYK				*e*S		**Sn**	**15 31 23.4**	**-1.4**
NEM2	**Nemuro 2**	**3.31**	**26**	P		**Pn**	**15 30 51.9**	**-0.9**
NEM2				S		**Sn**	**15 31 29.1**	**-2.8**
MJAR	**Matsushiro Arr**	**5.82**	**230**	Pn		**Pn**	**15 31 27.9**	**+0.5**
	0.1nm,0.3s,baz=42,slow=11,SNR=16							
	3.0nm,0.6s							
USRK	**Ussuriysk Ar.**	**9.53**	**297**	Pn		**Pn**	**15 32 21.1**	**+2.9**
	0.5nm,0.3s,baz=96,slow=14,SNR=6.5							
SONM	**Songino Array**	**27.64**	**298**	P		**P**	**15 35 48.9**	**+0.3**
	0.5nm,0.5s,baz=106,slow=9.0,SNR=3.1							
	0.5nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.56**	**129**	T		T	16 05 44.5	
	baz=321,slow=75,SNR=6.2							
H11N1	**WAKE ISLAND Hy**	**28.57**	**129**	T		T	16 05 47.8	
	baz=321,slow=75,SNR=3.6							
H11N3	**WAKE ISLAND Hy**	**28.58**	**129**	T		T	16 05 49.5	
	baz=321,slow=75,SNR=4.8							
H11S1	**WAKE ISLAND Hy**	**29.40**	**131**	T		T	16 06 55.0	
	baz=323,slow=76,SNR=4.3							
H11S3	**WAKE ISLAND Hy**	**29.41**	**131**	T		T	16 06 58.0	

comp=Z,41nm,0.7s
CLL Collm 2.00 266 *e*Pn **Pn** **15 39 45.5 +1.3**
CLL *e*Pg **Pg** **15 39 49.3 +1.8**
OKC Ostrava-Krasne 2.08 142 *e*PG **Pg** **15 39 48.6 -0.5**
OKC *e*SG **Sb** **15 40 14.3 +0.1**
comp=Z,66nm,0.6s
OKC Ostrava-Krasne 2.08 142 *e*Pn **Pb** **15 39 48.5 +0.6**
VRAC Vranov 2.21 173 Pn **Pn** **15 39 48.0 +0.9**
comp=Z,4.4nm,0.3s,baz=341,slow=14,SNR=20
VRAC Lg Lg 15 40 18.7
comp=Z,8.8nm,0.3s,baz=278,slow=22,SNR=13
comp=Z,9.5nm,0.4s
VRAC Vranov 2.21 173 *e*Pn **Pn** **15 39 47.6 +0.5**
baz=355
VRAC *e*Sg **Sb** **15 40 17.6 -0.2**
comp=Z,63nm,0.8s,baz=355
VRAC Vranov 2.21 173 *e*PN **Pn** **15 39 47.6 +0.5**
VRAC *e*SG **Sb** **15 40 17.6 -0.2**
KRUC Moravsky 2.44 177 *e*Pn **Pn** **15 39 50.9 +0.6**
baz=359
KRUC *e*Sg **Sb** **15 40 25.0 +0.5**
comp=Z,62nm,0.8s,baz=359
KRUC Moravsky 2.44 177 *e*PN **Pn** **15 39 51.0 +0.6**
KRUC *e*SG **Sb** **15 40 25.1 +0.5**
TANN Tannenbergstha 2.59 247 *e*Pn **Pn** **15 39 53.9 +1.5**
OJC Ojcow 2.62 118 *e*Pg **Pg** **15 39 58.7 -0.9**
OJC *e*Sg **Sg** **15 40 33.2 -0.4**
OJC Ojcow 2.62 118 *e*Pg **Pg** **15 39 60.0 +0.4**
OJC *e*Sg **Sg** **15 40 34.1 +0.6**
WERD Werda 2.66 248 *e*Pn **Pn** **15 39 54.7 +1.3**
WERD *e*Sg **Sg** **15 40 36.2 +1.4**
JAVC Velka Javorina 2.81 159 *e*PN **Pn** **15 39 56.2 +0.8**
KHC Kasperske Hory 2.90 216 *e*PN **Pn** **15 39 57.4 +0.8**
KHC *e*PG **Pg** **15 40 03.7 -1.0**
KHC *e*SG **Sg** **15 40 40.5 -1.7**
comp=Z,25nm,0.4s
CKRC Cesky Krumlov 2.94 205 *e*PN **Pn** **15 39 58.7 +1.5**
CKRC *e*PG **Pg** **15 40 04.4 -1.1**
CKRC *e*SG **Sg** **15 40 42.4 -1.1**
comp=Z,43nm,0.4s
MOX Moxa 3.00 255 *e*Pn **Pn** **15 40 00.2 +2.2**
GEC2 GERESS Array S 3.09 212 *e*Pn **Pn** **15 40 01.1 +1.7**
GERES GERESS Array B 3.09 212 Pn **Pn** **15 40 01.1 +1.7**
comp=Z,1.3nm,0.3s,baz=33,slow=13,SNR=28
GERES Pg **Pg** **15 40 07.4 -1.2**
comp=Z,13nm,0.3s,baz=32,slow=21,SNR=77
GERES Lg Lg 15 40 46.6
comp=Z,12nm,0.3s,baz=32,slow=27,SNR=9.6
comp=Z,2.2nm,0.4s
LANS Liptovska Anna 3.15 137 *e*PN **Pn** **15 40 01.2 +1.0**
LANS *e*PG **Pg** **15 40 11.2 +1.5**
LANS *e*SG **Sg** **15 40 52.0 +1.5**
WET Wettzell 3.17 223 *e*Pn **Pn** **15 40 01.6 +1.3**
MODS Modra-Piesok 3.20 167 *e*PG **Pg** **15 40 10.5 -0.1**
MODS *e*SG **Sg** **15 40 51.0 -1.1**
ZST Bratislava 3.36 169 *e*PG **Pg** **15 40 13.3 -0.2**
VYHS Vyhne 3.46 149 *e*PN **Pn** **15 40 04.9 +0.6**
VYHS *e*PG **Pg** **15 40 16.2 +0.7**
VYHS *e*SG **Sg** **15 41 00.1 -0.2**
CONA Conrad Observa 3.58 183 Pn **Pn** **15 40 07.4 +1.3**
comp=Z,2.0nm,0.4s,SNR=6.3
CONA *e*Sg **Sg** **15 41 03.3 -0.8**
comp=Z,15nm,0.3s
GRF Grafenberg Arr 3.64 242 *e*Pn **Pn** **15 40 08.4 +1.6**
RONA Rosalia, Austr 3.80 179 *e*Pn **Pn** **15 40 10.3 +1.3**
comp=Z,0.3nm,0.1s
RONA *e*Sg **Sg** **15 41 11.9 +0.6**
comp=Z,9.4nm,0.4s
MOA Molln 3.85 200 *e*Pn **Pn** **15 40 11.0 +1.2**
comp=Z,5.2nm,0.3s
MOA *e*Sg **Sg** **15 41 12.3 -0.8**
comp=Z,19nm,0.4s
BIOA Bad Ischl, Aus 4.15 204 *e*Pn **Pn** **15 40 14.7 +0.8**
comp=Z,2.7nm,0.3s
BIOA *e*Sg **Sg** **15 41 22.2 -0.3**
comp=Z,18nm,0.3s
ARSA Arzberg 4.27 186 *e*Pn **Pn** **15 40 17.0 +1.5**
comp=Z,1.0nm,0.3s
ARSA *e*Sg **Sg** **15 41 27.4 +1.1**
comp=Z,7.2nm,0.5s
CRVS Cervenica-Dubn 4.27 125 *e*PG **Pg** **15 40 32.2 +1.1**
CRVS *e*SG **Sg** **15 41 30.5 +4.1**
LUNU Lund 4.45 340 *i* P **Pn** **15 40 18.0 0.0**
KOLS Kolonicke sedl 4.68 121 *e*PN **Pn** **15 40 22.0 +0.9**
KOLS *e*PG **Pg** **15 40 42.7 +3.8**
KBA Koelnbreinsper 4.79 204 *e*Pn **Pn** **15 40 24.5 +1.6**
comp=Z,4.3nm,0.5s
KBA *e*Sg **Sg** **15 41 44.8 +1.6**
comp=Z,18nm,0.7s
SOKA Soboth 4.88 189 *e*Pn **Pn** **15 40 25.6 +1.7**
comp=Z,0.4nm,0.3s
SOKA *e*Sg **Sg** **15 41 45.5 -0.5**
comp=Z,1.8nm,0.4s
BJUU Bjuv 4.96 339 *e*P **Pn** **15 40 25.4 +0.5**
OBKA Obir 5.10 193 *e*Pn **Pn** **15 40 29.1 +2.0**
comp=Z,1.7nm,0.4s
OBKA *e*Sg **Sg** **15 41 53.4 +0.2**
comp=Z,4.3nm,0.5s
WATA Walderalm 5.13 218 Pn **Pn** **15 40 29.7 +2.2**
comp=Z,2.3nm,0.2s,SNR=5.0
WATA *e*Sg **Sg** **15 41 54.2 +0.2**
comp=Z,7.7nm,0.4s
MYKA Terra Mystica 5.15 200 *e*Pn **Pn** **15 40 28.8 +1.2**
comp=Z,1.3nm,0.3s
MYKA *e*Sg **Sg** **15 41 56.6 +2.1**
comp=Z,6.3nm,0.5s
DEL Delary 5.17 346 *i* P **Pn** **15 40 28.0 +0.2**
DEL *e*S **Sn** **15 41 25.8 -2.3**
WTTA Wattenberg 5.17 217 *e*Pn **Pn** **15 40 29.9 +1.9**
comp=Z,0.7nm,0.2s
WTTA *e*Sn **Sn** **15 41 29.4 +1.0**
comp=Z,4.3nm,0.4s
MOTA Moosalm 5.31 221 *e*Pn **Pn** **15 40 31.1 +1.2**
comp=Z,0.2nm,0.1s
MOTA *e*Sg **Sg** **15 42 00.7 +0.8**
comp=Z,9.5nm,0.6s
ABTA Abfaltersbach 5.33 208 *e*Pn **Pn** **15 40 32.4 +2.3**
comp=Z,1.5nm,0.4s
ABTA *e*Sg **Sg** **15 41 59.7 -0.6**
comp=Z,15nm,0.8s
RETA Reutte 5.34 223 Pn **Pn** **15 40 31.1 +0.8**
comp=Z,3.1nm,0.4s,SNR=5.9
RETA *e*Sn **Sn** **15 41 32.9 +0.4**
comp=Z,6.1nm,0.6s
SQTA Sankt Quirin 5.37 219 *i* Pn **Pn** **15 40 33.2 +2.5**
comp=Z,2.2nm,0.2s,SNR=4.5
SQTA *e*Sg **Sg** **15 42 03.2 +1.5**
comp=Z,4.3nm,0.3s
FETA Feichten 5.72 221 *e*Pn **Pn** **15 40 37.2 +1.6**
comp=Z,0.5nm,0.3s
FETA *e*Sn **Sn** **15 41 42.1 0.0**
comp=Z,1.6nm,0.5s
FABU Falkenberg 5.88 341 *e*P **Pn** **15 40 37.9 +0.4**
FABU *e*S **Sn** **15 41 43.1 -2.4**
DAVA Damuels 5.88 227 *e*Pn **Pn** **15 40 38.6 +0.8**
comp=Z,1.2nm,0.3s
DAVA *e*Sn **Sn** **15 41 46.5 +0.5**
comp=Z,1.4nm,0.3s
DAVOX Davos/Dischmat 6.27 224 Pn **Pn** **15 40 44.6 +1.5**
comp=Z,0.4nm,0.3s,baz=30,slow=20,SNR=2.8
DAVOX Lg Lg 15 42 28.4
comp=Z,0.5nm,0.3s,baz=281,slow=23,SNR=3.9
comp=Z,1.1nm,0.4s
MI28 Mi28,Pidlybu 7.24 90 Pn **Pn** **15 40 56.7 +0.4**
MI28 pP **Pn** **15 40 58.6 +2.3**
AK18 Malin Array Si 8.15 90 Pn **Pn** **15 41 09.8 +1.1**
AK16 Malin Array Si 8.18 91 Pn **Pn** **15 41 10.9 +1.7**
AK16 pP **Pn** **15 41 12.0 +2.8**
AK01 Malin Array Si 8.25 91 Pn **Pn** **15 41 11.5 +1.5**
AK01 pP **Pn** **15 41 12.4 +2.4**
AK02 Malin Array Si 8.25 91 Pn **Pn** **15 41 11.6 +1.5**
AK02 pP **Pn** **15 41 12.5 +2.4**
AKASG Malin Array Be 8.25 90 Pn **Pn** **15 41 08.7 -1.5**
comp=Z,1.0nm,0.3s,baz=280,slow=12,SNR=4.9
AKASG Lg Lg 15 43 36.6
baz=274,slow=27
comp=Z,0.8nm,0.5s
AKBB Malin Array Si 8.25 90 Pn **Pn** **15 41 11.6 +1.5**
AKBB pP **Pn** **15 41 12.7 +2.6**
AK05 Malin Array Si 8.26 91 Pn **Pn** **15 41 11.1 +1.0**
HFS Hagfors 8.77 352 Pn **Pn** **15 41 17.6 +0.4**
comp=Z,0.2nm,0.3s,baz=166,slow=14,SNR=11
comp=Z,0.5nm,0.3s
NOA NORSAR Array B 9.96 346 Pn **Pn** **15 41 32.8 -0.6**
baz=160,slow=12,SNR=6.1
comp=Z,0.1nm,0.3s
FINES FINESS Array B 11.36 25 Pn **Pn** **15 41 51.3 -1.3**
comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=13
comp=Z,0.6nm,0.3s
EKA Eskdalemuir Ar 12.15 296 Pn **Pn** **15 42 00.8 -2.7**
baz=103,slow=13
ARCES ARCESS Array B 18.63 10 Pn **P** **15 43 25.8 -2.3**
comp=Z,0.3nm,0.3s,baz=191,slow=13,SNR=14
comp=Z,0.6nm,0.4s

*DDA **20** 15:39:38.9±0.0, 38°.71N×38°.14E, h7km±3km, ML2.4*
*ISK **20** 15:39:38.6, 38°.57N×38°.20E, h13km, ML2.5/7*
ISC 20 15:39:39.1±0.9, **38°.65N**±0°.03×**38°.16E**±0°.04, **h9km**, **n17**, **σ1s38**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARPR	**Arapgir-MALATY**	**0.46**	**17**	PG	**Pb**	**Pb**	**15 39 48.6**	**-1.0**
ARPR				SG	**Sb**	**Sb**	**15 39 57.9**	**+1.3**
DARE	**Darende-Malaty**	**0.54**	**262**	PG	**Pb**	**Pb**	**15 39 49.8**	**-1.0**
CUKAN	**kangal_SIVAS**	**0.86**	**321**	P	**Pg**	**Pg**	**15 39 54.4**	**-1.3**
ELBS	**KAHRAMANMARAS**	**0.87**	**248**	P	**Pg**	**Pg**	**15 39 55.4**	**-0.5**
ELBS				S	**Sn**	**Sn**	**15 40 09.5**	**-1.0**
ELBS				*i* AML	AML	AML	15 40 14.0	
	comp=E,118nm,0.4s							
ELBS				*i* AML	AML	AML	15 40 14.0	
	comp=N,101nm,0.5s							
PTK	**Pertek**	**0.99**	**75**	PG	**Pb**	**Pb**	**15 39 58.3**	**-0.3**
CUAYA	**Sivas-Altinyay**	**1.26**	**300**	P	**Pg**	**Pg**	**15 40 04.5**	**+1.1**
CUAYA				S	**Sn**	**Sn**	**15 40 21.6**	**+1.3**
URFA	**Urfa**	**1.31**	**156**	PN	**Pn**	**Pn**	**15 40 01.5**	**-2.2**
GZT	**Gaziantep**	**1.38**	**200**	P	**Pg**	**Pg**	**15 40 07.6**	**-2.1**
GZT				S	**Sg**	**Sg**	**15 40 26.7**	**+3.4**
GZT				*i* AML	AML	AML	15 40 28.0	
	comp=N,63nm,0.5s							
SARI	**SarD1z-Kayseri**	**1.39**	**261**	PN	**Pb**	**Pb**	**15 40 05.1**	**-0.2**
KAHM	**Kahramanmaras,**	**1.46**	**220**	P	**Pg**	**Pg**	**15 40 07.5**	**+0.3**
KMRS	**Kahramanmaras**	**1.52**	**221**	PN	**Pn**	**Pn**	**15 40 05.8**	**-0.7**
ERZN	**Erzincan**	**1.53**	**52**	PN	**Pn**	**Pn**	**15 40 06.6**	**-0.2**
SVSK	**Karacayir**	**1.56**	**325**	PN	**Pb**	**Pb**	**15 40 07.6**	**-0.5**
HCB	**Kahramanmara**	**1.64**	**218**	P	**Pg**	**Pg**	**15 40 10.4**	**-0.1**
SAIM	**ADANA**	**1.77**	**248**	P	**Pg**	**Pg**	**15 40 12.6**	**-0.5**
SURC	**SANLIURFA_SURC**	**1.80**	**168**	P	**Pb**	**Pb**	**15 40 10.7**	**-1.6**
KAMA	**Osmaniye**	**1.88**	**219**	P	**Pg**	**Pg**	**15 40 14.5**	**-0.6**

*IDC **20** 15:40:17.9±1.6, 40°.24N×143°.94E, h0km, mb3.5/5, mbtmp3.5/6, ML2.3/1, MS2.6/1, Error ellipse: s-maj=35.3km s-min=29.3km az=117.0*
*JMA **20** 15:40:19.8±0.3, 40°.4N±0°.6×14°.4E±°, h17km±3km, MV3.4/32, FAR E OFF SANRIKU*
ISC 20 15:40:19.1±2.5, **40°.45N**±0°.05×**143°.58E**±0°.07, **h4**km±14km, **n28**, **σ1s37**/32, **mb3.5**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.41**	**249**	P	**Pb**	**Pb**	**15 40 45.4**	**-0.6**
JTH				*e*S	**Sg**	**Sg**	**15 41 04.5**	**+0.1**
JKEN	**Kujiedanarisaw**	**1.45**	**261**	*e*P	**Pb**	**Pb**	**15 40 46.3**	**-0.3**
JKEN				*e*S	**Sg**	**Sg**	**15 41 05.5**	**-0.2**
JANG	**Nango**	**1.58**	**268**	P	**Pb**	**Pb**	**15 40 48.4**	**-0.5**
JANG				*e*S	**Sg**	**Sg**	**15 41 09.3**	**-0.5**
JEM	**Erimo**	**1.59**	**349**	*e*P	**Pb**	**Pb**	**15 40 49.0**	**0.0**
JEM				*e*S	**Sg**	**Sg**	**15 41 10.9**	**+0.6**
MIYJ	**Miyakonagasawa**	**1.61**	**238**	P	**Pb**	**Pb**	**15 40 48.4**	**-0.9**
MIYJ				*e*S	**Sn**	**Sn**	**15 41 08.1**	**-1.4**
JNBK	**Urakawa-nobuka**	**1.93**	**341**	*e*P	**Pb**	**Pb**	**15 40 54.5**	**-0.3**
JTM	**Tenmabayashi**	**1.94**	**281**	P	**Pb**	**Pb**	**15 40 54.4**	**-0.5**
JTM				*e*S	**Sb**	**Sb**	**15 41 19.2**	**-0.4**
JOM	**Ohasama**	**2.01**	**242**	P	**Pn**	**Pn**	**15 40 54.5**	**+0.7**
JOM				*e*S	**Sb**	**Sb**	**15 41 19.9**	**-1.7**
JOT	**Ohata**	**2.13**	**297**	*e*S	**Sb**	**Sb**	**15 41 23.5**	**-1.6**
JCH	**Churui**	**2.17**	**356**	P	**Pn**	**Pn**	**15 40 57.0**	**+1.1**
JCH				*e*S	**Sn**	**Sn**	**15 41 23.2**	**0.0**
JMK	**Ichinoseki**	**2.36**	**231**	*i* P	**Pn**	**Pn**	**15 40 58.9**	**+0.4**
JMK				*e*S	**Sn**	**Sn**	**15 41 27.3**	**-0.5**
JAK	**Akkeshi**	**2.68**	**18**	P	**Pn**	**Pn**	**15 41 02.6**	**-0.2**
JAK				S	**Sn**	**Sn**	**15 41 33.9**	**-1.8**
JAR	**Ashorobuto**	**2.85**	**3**	P	**Pn**	**Pn**	**15 41 05.1**	**-0.1**
JAR				S	**Sn**	**Sn**	**15 41 38.1**	**-1.8**
JEW	**Eniwo**	**2.87**	**327**	S	**Sb**	**Sb**	**15 41 44.0**	**-2.2**
JYK	**Kaneyama**	**2.92**	**239**	*e*P	**Pn**	**Pn**	**15 41 06.9**	**+0.6**
MJAR	**Matsushiro Arr**	**5.74**	**229**	Pn	**Pn**	**Pn**	**15 41 46.9**	**+1.8**
	0.1nm,0.3s,baz=35,slow=11,SNR=13							
	2.6nm,0.7s							
KLR	**Kul'dur**	**12.13**	**320**	LR	LR		15 48 21.4	
	comp=Z,26nm,18.6s,baz=172,slow=39							
SONM	**Songino Array**	**27.48**	**298**	P	**P**		**15 46 10.5**	**+4.2**
	0.4nm,0.5s,baz=91,slow=9.2,SNR=2.5							
	0.4nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.71**	**129**	T	T		16 16 05.7	
	baz=321,slow=75,SNR=8.5							
H11N1	**WAKE ISLAND Hy**	**28.72**	**129**	T	T		16 16 09.1	
	baz=321,slow=75,SNR=6.0							
H11N3	**WAKE ISLAND Hy**	**28.73**	**129**	T	T		16 16 07.6	
	baz=321,slow=75,SNR=8.1							
H11S1	**WAKE ISLAND Hy**	**29.55**	**131**	T	T		16 17 14.9	
	baz=323,slow=76,SNR=5.2							
H11S3	**WAKE ISLAND Hy**	**29.56**	**131**	T	T		16 17 14.9	
	baz=323,slow=76,SNR=4.6							
H11S2	**WAKE ISLAND Hy**	**29.57**	**131**	T	T		16 17 15.9	
	baz=323,slow=76,SNR=4.4							
ZALV	**Zalesovo Beam**	**40.96**	**310**	P	**P**		**15 48 03.9**	**+1.4**
	0.5nm,0.4s,baz=35,slow=5.3,SNR=1.7							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**43.83**	**300**	P	**P**		**15 48 27.2**	**+1.1**
	0.6nm,0.8s,baz=88,slow=6.2,SNR=5.3							
	0.6nm,0.8s							
ILAR	**Eielson Array**	**45.71**	**34**	P	**P**		**15 48 40.9**	**+0.1**
	0.4nm,0.6s,baz=261,slow=6.8,SNR=4.6							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**60.70**	**190**	P	**P**		**15 50 29.4**	**-2.1**
	0.3nm,0.7s,baz=8.5,slow=6.2,SNR=1.7							
	0.3nm,0.7s							

*BJI **20** 15:58:01.2±0.0, 40°.34N×143°.70E, h10km, mb5.7/85, mB6.2/82, Ms6.3/97, Ms7 6.2/91*
*IDC **20** 15:58:02.5±0.4, 40°.37N×143°.68E, h0km, mb5.2/32, mbtmp5.1/36, ML3.5/3, MS5.6/86, Error ellipse: s-maj=12.2km s-min=10.1km az=101.0*
*NIED **20** 15:58:03.3, 40°.37N×143°.69E, h12km, MW5.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^17^Nm; Mrr3.19; Mθθ4.04; Mϕϕ-7.23; Mrθ4.15; Mθϕ-1.75; Mϕr3.89; Fault plane solution: Mo8.57000×10^17^ NP1: ϕs149.00000°, δ41.00000°, λ21.00000°. NP2:ϕs43.00000°, δ76.00000°, λ129.00000°.*
*JMA **20** 15:58:03.3±0.2, 40°.4N±0°.6×14°.4E±°, h12km, MD6.2/37, MW5.9/37, FAR E OFF SANRIKU*
JMA Felt III J1 at FAR E OFF SANRIKU .
*KEA **20** 15:58:04.1, 40°.35N×143°.81E, h18km, MS5.7/4*
*NEIC **20** 15:58:04.6±1.8, 40°.31N±0°.05×143°.73E±0°.06, h11km±1km, mb5.6/203, Ms_20 5.7/406, Mwb5.9/142, Mww5.8, Error ellipse: s-maj=9.5km s-min=6.7km az=142.0*
*MOS **20** 15:58:04.1±0.9, 40°.42N×143°.58E, h19km, mb5.9/82, MS6.0/59, Error ellipse: s-maj=5.9km s-min=3.6km az=113.6*
*NEIC **20** 15:58:04.4, 40°.30N×143°.74E, h11km, Moment Tensor Solution. Moment tensor: Scale 10^18^Nm; Mrr0.35; Mθθ0.00; Mϕϕ-0.35; Mrθ0.34; Mθϕ-0.24; Mϕr0.85; Fault plane solution: Mo1.01000×10^18^ NP1:ϕs215.97000°, δ12.33000°, λ103.83000°. NP2:ϕs21.83000°, δ78.03000°, λ87.01000°. Principal axes: T 0.9433, Plg57.0000°, Azm288.0000°; N 0.1242, Plg3.0000°, Azm22.0000°; P -1.0675, Plg33.0000°, Azm114.0000°;*
*GCMT **20** 15:58:08.6±0.1, 40°.30N×143°.79E, h15km, MW5.9/166, Moment Tensor Solution. s146,c303; s166,c508; Duration: 2s2 Moment tensor: Scale 10^18^Nm; Mrr0.41±.00; Mθθ-0.04±.00; Mϕϕ-0.37±.00; Mrθ0.43±.01; Mθϕ-0.14±.00; Mϕr0.84±.01; Best double couple: Mo1.03700×10^18^ NP1:ϕs26.00000°, δ78.00000°, λ93.00000°. NP2:ϕs193.00000°, δ12.00000°, λ77.00000°. Principal axes: T 1.0310, Plg57.0000°, Azm300.0000°; N 0.0120, Plg3.0000°, Azm206.0000°; P -1.0430, Plg33.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 15:58:09, 40°.29N×143°.88E, h14km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^17^Nm; Mrr3.11; Mθθ-0.38; Mϕϕ-2.73; Mrθ2.50; Mθϕ-0.92; Mϕr6.08; Fault plane solution: Mo7.26000×10^17^ NP1: ϕs196.00000°, δ13.00000°, λ84.00000°. NP2:ϕs22.00000°, δ77.00000°, λ91.00000°. Principal axes: T 7.2911, Plg58.0000°, Azm294.0000°; N -0.0716, Plg1.0000°, Azm202.0000°; P -7.2196, Plg32.0000°, Azm111.0000°;*
ISC 20 15:58:04.3±0.4, **40°.34N**±0°.03×**143°.74E**±0°.02, **h14**km±1km, **h14**km:**pP-P, n1917**, **σ2s10**/2207, **mb5.6**/310, **MS5.7**/343, **138C-47D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.49**	**255**	*i* P	**Pn**	**Pn**	**15 58 29.5**	**-1.2**
JKEN	**Kujiedanarisaw**	**1.56**	**266**	*i* P	**Pn**	**Pn**	**15 58 30.2**	**-1.4**
JKEN				*e*S	**Sn**	**Sn**	**15 58 49.5**	**-2.1**
JKEN	**Kujiedanarisaw**	**1.56**	**266**	A	A		15 58 30.2	
	comp=E,323nm,1.6s,comp=E,357nm,1.5s							
MIYJ	**Miyakonagasawa**	**1.66**	**243**	P	**Pn**		**15 58 32.2**	**-0.8**
MIYJ	**Miyakonagasawa**	**1.66**	**243**	A	A		15 58 32.2	
	comp=E,424nm,4.4s,comp=E,272nm,8.5s							
JANG	**Nango**	**1.70**	**272**	*i* P	**Pn**		**15 58 32.6**	**-1.0**
JANG				*e*S	**Sn**		**15 58 53.4**	**-1.7**
JANG	**Nango**	**1.70**	**272**	A	A		15 58 32.6	
	comp=E,339nm,6.2s,comp=E,183nm,3.4s							
ERM	**Erimo**	**1.73**	**346**	Pn	**Pn**		**15 58 32.3**	**-1.6**
ERM				Sn	**Sn**		**15 58 55.5**	**-0.3**
ERM	**Erimo**	**1.73**	**346**	*e* *i* P	**Pn**		**15 58 32.9**	**-1.0**
ERM	**Erimo**	**1.73**	**346**	P	**Pb**		**15 58 35.6**	**-0.2**
JEM	**Erimo**	**1.73**	**346**	P	**Pn**		**15 58 33.2**	**-0.8**
JEM	**Erimo**	**1.73**	**346**	A	A		15 58 33.2	
	comp=E,219nm,5.4s,comp=E,179nm,5.8s							
JKZ	**Kuzumaki**	**1.88**	**260**	A	A		15 58 35.4	
	comp=E,263nm,5.7s,comp=E,243nm,4.1s							
JARK	**Aomorirokkasho**	**1.92**	**291**	A	A		15 58 35.8	
	comp=E,415nm,6.9s,comp=E,373nm,5.6s							
JTHR	**Tokachihiroo**	**1.97**	**351**	A	A		15 58 36.8	
	comp=E,244nm,6.9s,comp=E,136nm,7.3s							
OFUJ	**Ofunato**	**2.03**	**232**	A	A		15 58 37.9	
	comp=E,442nm,3.8s,comp=E,331nm,4.2s							
JAHD	**Aomorihigashid**	**2.04**	**298**	A	A		15 58 37.6	
	comp=E,295nm,1.6s,comp=E,259nm,5.6s							
JNBK	**Urakawa-nobuka**	**2.07**	**339**	P	**Pn**		**15 58 38.5**	**-0.2**
JNBK	**Urakawa-nobuka**	**2.07**	**339**	A	A		15 58 38.5	
	comp=E,248nm,2.9s,comp=E,203nm,7.6s							
JOM	**Ohasama**	**2.07**	**246**	*i* P	**Pn**		**15 58 38.6**	**-0.1**
JOM	**Ohasama**	**2.07**	**246**	A	A		15 58 38.6	
	comp=E,283nm,5.7s,comp=E,380nm,5.9s							
JTM	**Tenmabayashi**	**2.08**	**283**	Pn	**Pn**		**15 58 37.9**	**-1.0**
JTM	**Tenmabayashi**	**2.08**	**283**	P	**Pn**		**15 58 38.7**	**-0.1**
JTM	**Tenmabayashi**	**2.08**	**283**	A	A		15 58 38.7	
	comp=E,326nm,6.1s,comp=E,343nm,6.0s							
JSZI	**Iwateshizukuis**	**2.22**	**255**	A	A		15 58 40.4	
	comp=E,720nm,2.0s,comp=E,926nm,3.8s							
JSHD	**Hidakashinhida**	**2.27**	**336**	A	A		15 58 41.1	
	comp=E,407nm,6.4s,comp=E,392nm,3.8s							
JCH	**Churui**	**2.29**	**353**	P	**Pn**		**15 58 40.9**	**-0.8**
JCH				S	**Sn**		**15 59 09.0**	**-0.6**
JCH	**Churui**	**2.29**	**353**	A	A		15 58 40.9	
	comp=E,125nm,6.2s,comp=E,136nm,2.9s							
JOT	**Ohata**	**2.29**	**298**	P	**Pn**		**15 58 41.4**	**-0.3**
JOT	**Ohata**	**2.29**	**298**	A	A		15 58 41.4	
	comp=E,228nm,6.4s,comp=E,241nm,5.4s							
JKMT	**Kesennumamotoy**	**2.33**	**230**	A	A		15 58 42.1	
	comp=E,324nm,7.6s,comp=E,293nm,9.5s							
JAH	**Hinai**	**2.38**	**267**	*i* P	**Pn**		**15 58 43.2**	**+0.3**
JAH	**Hinai**	**2.38**	**267**	A	A		15 58 43.2	
	comp=E,277nm,6.9s,comp=E,241nm,4.7s							
JMK	**Ichinoseki**	**2.39**	**235**	*i* P	**Pn**		**15 58 42.9**	**-0.2**
JMK	**Ichinoseki**	**2.39**	**235**	A	A		15 58 42.9	
	comp=E,381nm,4.3s,comp=E,375nm,4.3s							
JOB	**Onbets**	**2.56**	**2**	A	A		15 58 45.4	
	comp=E,169nm,3.7s,comp=E,211nm,2.6s							
JKB	**Kayabe**	**2.56**	**308**	A	A		15 58 45.1	
	comp=E,132nm,6.4s,comp=E,137nm,5.8s							
JRG	**Rokugo**	**2.57**	**249**	A	A		15 58 45.5	
	comp=E,304nm,4.5s,comp=E,381nm,3.2s							
JRG	**Rokugo**	**2.57**	**249**	P	Pn		15 58 39.9	-5.6
JHHS	**Hirosakihyakuz**	**2.59**	**278**	A	A		15 58 45.6	
	comp=E,586nm,6.3s,comp=E,766nm,5.8s							
JSI2	**Shiura 2**	**2.63**	**287**	A	A		15 58 46.1	
	comp=E,385nm,7.0s,comp=E,199nm,5.1s							
JBT2	**Biratori 2**	**2.64**	**337**	A	A		15 58 46.4	
	comp=E,146nm,7.5s,comp=E,125nm,11.1s							
JIO	**Ouri**	**2.64**	**225**	A	A		15 58 46.7	
	comp=E,194nm,8.3s,comp=E,191nm,5.0s							
JIO	**Ouri**	**2.64**	**225**	P	Pn		15 58 39.0	-7.5
JIAM	**Iburiatsuma**	**2.65**	**330**	A	A		15 58 46.5	
	comp=E,444nm,6.8s,comp=E,478nm,7.8s							
JIKH	**Ishinomakikobu**	**2.69**	**222**	A	A		15 58 47.4	
	comp=E,248nm,2.8s,comp=E,146nm,9.1s							
JNTW	**Noshirotokiwa**	**2.73**	**270**	A	A		15 58 47.7	
	comp=E,913nm,1.8s,comp=E,1μm,5.4s							
JAK	**Akkeshi**	**2.75**	**15**	P	**Pn**		**15 58 47.0**	**-0.9**
JAK				*e*S	**Sn**		**15 59 18.3**	**-2.6**
JAK	**Akkeshi**	**2.75**	**15**	A	A		15 58 47.0	
	comp=E,110nm,4.1s,comp=E,99nm,4.9s							
JSR	**Shiriuchi**	**2.78**	**296**	A	A		15 58 48.2	
	comp=E,191nm,7.3s,comp=E,192nm,5.6s							
JOFO	**Osakifurukawao**	**2.79**	**232**	A	A		15 58 48.8	
	comp=E,2μm,3.0s,comp=E,2μm,2.4s							
JYW	**Yuwa**	**2.83**	**255**	A	A		15 58 49.1	
	comp=E,446nm,1.7s,comp=E,660nm,3.2s							
JIW	**Iwasaki**	**2.86**	**276**	A	A		15 58 49.4	
	comp=E,252nm,5.2s,comp=E,234nm,5.9s							
JKHN	**Kushirohamanak**	**2.94**	**21**	A	A		15 58 51.0	
	comp=E,115nm,8.9s,comp=E,86nm,7.0s							
JNB	**Noboribetsu**	**2.94**	**317**	A	A		15 58 50.5	
	comp=E,85nm,9.9s,comp=E,85nm,5.6s							
JFR	**Furan**	**2.94**	**343**	A	A		15 58 50.8	
	comp=E,87nm,2.6s,comp=E,71nm,8.9s							
JAR

	comp=E,54nm,7.3s,comp=E,40nm,6.5s							
JYAR	**Yonezawaarcadi**	**3.70 230**	A	A	15 59 01.8			
	comp=E,344nm,4.7s,comp=E,330nm,5.5s							
JHR	**Hokuryu**	**3.71 337**	A	A	15 59 01.6			
	comp=E,200nm,8.2s,comp=E,135nm,2.4s							
JFK	**Kawauchi**	**3.72 218**	A	A	15 59 02.1			
	comp=E,130nm,4.6s,comp=E,108nm,3.2s							
JRA	**Rausu**	**3.74 16**	A	A	15 59 02.3			
	comp=E,53nm,10.9s,comp=E,60nm,8.8s							
ASAJ	**Asahikawa**	**3.86 348**	A	A	15 59 03.9			
	comp=E,72nm,3.8s,comp=E,65nm,5.0s							
JSK	**Shakotan**	**3.87 322**	A	A	15 59 03.8			
	comp=E,90nm,4.3s,comp=E,71nm,9.8s							
JFT	**Otama**	**3.87 224**	A	A	15 59 04.2			
	comp=E,216nm,3.8s,comp=E,182nm,3.2s							
JFT	**Otama**	**3.87 224**	P	Pn	15 58 56.6	-6.9		
RUSJ	**Misakicho**	**3.92 16**	*e*P	**Pn**	**15 59 05.8**	**+1.7**		
RUSJ			*e*S	**Sn**	**15 59 50.7**	**+0.8**		
JAW	**Awa shima**	**3.96 243**	A	A	15 59 05.2			
	comp=E,312nm,4.0s,comp=E,261nm,4.9s							
ONAJ	**Iwakimizuishiy**	**3.97 216**	A	A	15 59 05.7			
	comp=E,113nm,5.7s,comp=E,114nm,9.6s							
YUK	**Yuzh-Kuril'sk**	**4.01 22**	*e*P	**Pn**	**15 59 04.6**	**-0.7**		
YUK			*e*S	**Sn**	**15 59 48.8**	**-3.3**		
YUK			smax	smax				
	comp=E,11μm,0.5s							
YUK			smax	smax				
	comp=N,14μm,0.4s							
YUK			MLR	MLR				
	comp=Z,53μm,14.0s							
YUK			MLR	MLR				
	comp=E,113μm,16.0s							
YUK			MLR	MLR				
	comp=N,47μm,12.0s							
JFFD	**Fukushimafurud**	**4.09 218**	A	A	15 59 07.4			
	comp=N,119nm,8.6s,comp=N,72nm,4.6s							
JNS	**Sasagawa**	**4.26 235**	A	A	15 59 09.7			
	comp=N,149nm,8.6s,comp=N,267nm,6.7s							
JSS	**Shosan**	**4.29 342**	A	A	15 59 09.8			
	comp=N,137nm,7.5s,comp=N,113nm,7.6s							
JFY	**Yanaizu**	**4.30 228**	A	A	15 59 10.2			
	comp=N,147nm,7.8s,comp=N,163nm,4.6s							
JYG	**Yagishiri**	**4.42 338**	A	A	15 59 11.7			
	comp=N,74nm,5.6s,comp=N,86nm,4.9s							
JHO	**Hitachi**	**4.48 215**	A	A	15 59 12.9			
	comp=N,77nm,7.5s,comp=N,67nm,7.4s							
JSB	**Shiboa**	**4.50 223**	A	A	15 59 13.1			
	comp=N,297nm,3.4s,comp=N,266nm,8.2s							
JHYU	**Hitachinakayam**	**4.70 213**	A	A	15 59 16.0			
	comp=N,86nm,2.6s,comp=N,72nm,8.4s							
JUON	**Uonuma**	**4.81 231**	A	A	15 59 17.4			
	comp=N,136nm,6.3s,comp=N,146nm,5.6s							
JIZZ	**Izumozaki**	**4.82 236**	A	A	15 59 17.5			
	comp=N,672nm,3.2s,comp=N,455nm,5.0s							
JSD	**Sado**	**4.84 243**	Pn	**Pn**	**15 59 16.9**	**+0.2**		
JSD	**Sado**	**4.84 243**	A	A	15 59 17.7			
	comp=N,91nm,8.1s,comp=N,165nm,3.9s							
JYT	**Yasato**	**4.96 215**	Pn	**Pn**	**15 59 16.4**	**-2.0**		
JYT	**Yasato**	**4.96 215**	A	A	15 59 19.7			
	comp=N,80nm,7.8s,comp=N,52nm,4.4s							
JKT	**Katashina**	**5.01 226**	A	A	15 59 20.3			
	comp=N,102nm,5.4s,comp=N,107nm,5.4s							
JIHU	**Itakohorinouch**	**5.05 211**	A	A	15 59 21.0			
	comp=N,468nm,4.6s,comp=N,445nm,3.0s							
JRR	**Rishiri**	**5.11 340**	A	A	15 59 21.4			
	comp=N,204nm,7.3s,comp=N,321nm,5.1s							
JWK2	**Keihoku**	**5.15 345**	A	A	15 59 21.9			
	comp=N,85nm,8.5s,comp=N,84nm,7.8s							
JAG	**Ashikaga**	**5.16 222**	A	A	15 59 22.4			
	comp=N,73nm,3.8s,comp=N,64nm,4.2s							
JAG	**Ashikaga**	**5.16 222**	P	Pn	15 59 14.3	-6.9		
JSMT	**Sammumatsuo**	**5.36 210**	A	A	15 59 25.4			
	comp=N,546nm,6.0s,comp=N,395nm,8.4s							
JJN	**Nakama**	**5.43 235**	A	A	15 59 26.0			
	comp=N,202nm,4.3s,comp=N,254nm,6.8s							
JRBN	**Rebuntou**	**5.44 340**	A	A	15 59 26.0			
	comp=N,34nm,9.7s,comp=N,23nm,11.6s							
JGK	**Kuni**	**5.50 228**	A	A	15 59 27.1			
	comp=N,144nm,3.8s,comp=N,191nm,5.9s							
TOK	**Tokyo**	**5.61 215**	A	A	15 59 28.8			
	comp=N,494nm,5.6s,comp=N,316nm,5.6s							
JCN	**Nagara**	**5.66 211**	A	A	15 59 29.4			
	comp=N,416nm,6.8s,comp=N,603nm,5.6s							
JHU	**Hanno**	**5.70 219**	A	A	15 59 29.9			
	comp=N,56nm,3.8s,comp=N,56nm,2.8s							
KUR	**Kuril'sk**	**5.75 31**	*e*P	**Pn**	**15 59 28.7**	**-0.6**		
KUR			*e*S	**Sn**	**16 00 33.0**	**-2.0**		
KUR			pmax	pmax				
	comp=Z,10μm,3.5s							
KUR			pmax	pmax				
	comp=Z,1μm,1.1s							
KUR			pmax	pmax				
	comp=E,556nm,0.5s							
KUR			pmax	pmax				
	comp=N,528nm,0.4s							
KUR			smax	smax				
	comp=N,3μm,0.6s							
KUR			smax	smax				
	comp=E,1μm,0.7s							
KUR			MLR	MLR				
	comp=Z,60μm,14.0s							
JRY	**Ryogami san**	**5.76 223**	A	A	15 59 30.7			
	comp=Z,73nm,4.5s,comp=Z,67nm,8.0s							
MAJO	**Matsushiro**	**5.76 231**	Pn	**Pn**	**15 59 30.3**	**+0.8**		
MAJO	**Matsushiro**	**5.76 231**	*c*P	**Pn**	**15 59 30.7**	**+1.2**		
MAJO	**Matsushiro**	**5.76 231**	P	**Pn**	**15 59 30.8**	**+1.2**		
MJAR	**Matsushiro Arr**	**5.76 231**	Pn	**Pn**	**15 59 29.4**	**-0.1**		
	comp=Z,0.3nm,0.3s,baz=40,slow=12,SNR=80							
MJAR			LR	LR	16 02 04.6			
	comp=Z,63μm,20.3s,baz=194,slow=42							
	comp=Z,508nm,0.9s							
JKUC	**kamogawauchiur**	**5.88 210**	A	A	15 59 32.7			
	comp=Z,201nm,4.9s,comp=Z,139nm,7.3s							
JNG	**Nsakai**	**5.92 230**	A	A	15 59 32.9			
	comp=Z,116nm,7.8s,comp=Z,115nm,4.9s							
JSGW	**Sagamiharawaka**	**5.93 218**	A	A	15 59 33.2			
	comp=Z,62nm,4.0s,comp=Z,63nm,8.6s							
JYO	**Yokosk**	**6.04 214**	A	A	15 59 34.8			
	comp=Z,223nm,3.9s,comp=Z,185nm,4.1s							
JTT	**Ttatey**	**6.26 235**	A	A	15 59 37.6			
	comp=Z,75nm,3.0s,comp=Z,128nm,6.9s							
JOD2	**Odawara 2**	**6.27 217**	A	A	15 59 37.9			
	comp=Z,62nm,3.6s,comp=Z,89nm,4.3s							
JNT	**Takato**	**6.28 226**	A	A	15 59 38.0			
	comp=Z,89nm,6.2s,comp=Z,103nm,9.0s							
YSS	**Yuzh-Sakhalins**	**6.65 354**	Pn	**Pn**	**15 59 40.9**	**-0.6**		
YSS	**Yuzh-Sakhalins**	**6.65 354**	*α i*P	**Pn**	**15 59 41.5**	**0.0**		
YSS			*e*S	**Sn**	**16 00 55.9**	**-1.1**		
YSS			pmax	pmax				
	comp=Z,6μm,9.4s							
YSS			pmax	pmax				
	comp=N,5μm,10.8s							
YSS			pmax	pmax				
	comp=Z,220nm,1.1s							
YSS			MLR	MLR				
	comp=Z,109μm,15.0s							
YSS			MLR	MLR				
	comp=N,99μm,18.0s							
YSS			MLR	MLR				
	comp=E,124μm,18.0s							
JGF	**Kuroka**	**6.91 229**	Pn	**Pn**	**15 59 46.3**	**+1.0**		
TEY	**Ternei**	**7.04 314**	⇑*e*P	**Pn**	**15 59 46.5**	**-0.5**		
TEY			pmax	pmax				
	comp=N,20nm,1.1s							
TEY			pmax	pmax				
	comp=E,60nm,1.1s							
TEY			pmax	pmax				
	comp=Z,60nm,1.1s							
TEY			pmax	pmax				
	comp=E,700nm,8.3s							
TEY			pmax	pmax				
	comp=N,600nm,8.4s							
TEY			pmax	pmax				
	comp=Z,800nm,8.0s							
INU	**Inuyama**	**7.29 229**	Pn	**Pn**	**15 59 50.2**	**-0.1**		
JHJ2	**Mitsune**	**7.87 205**	Pn	**Pn**	**15 59 57.4**	**-1.0**		
JHJ2	**Mitsune**	**7.87 205**	P	**Pn**	**15 59 58.1**	**-0.3**		
UGL	**Uglegorsk**	**8.81 353**	*e*P	**Pn**	**16 00 11.1**	**-0.1**		
UGL			*e*S	**Sn**	**16 01 44.2**	**-6.1**		
UGL			pmax	pmax				
	comp=Z,84nm,1.2s							
UGL			pmax	pmax				
	comp=Z,5μm,10.9s							
UGL			smax	smax				
	comp=N,10μm,9.4s							
UGL			smax	smax				
	comp=E,12μm,6.9s							
UGL			MLR	MLR				
	comp=Z,82μm,16.0s							
UGL			MLR	MLR				
	comp=N,71μm,15.0s							
UGL			MLR	MLR				
	comp=E,92μm,18.0s							
VLA	**Vladivostok**	**9.29 291**	*c i*P	**Pn**	**16 00 16.9**	**-0.8**		
USA0B	**Ussuriysk Arra**	**9.52 298**	Pn	**Pn**	**16 00 22.4**	**+1.4**		
USA0B	**Ussuriysk Arra**	**9.52 298**	P	**Pn**	**16 00 22.4**	**+1.4**		
USRK	**Ussuriysk Ar.**	**9.52 298**	Pn	**Pn**	**16 00 23.0**	**+2.0**		
	comp=E,12nm,0.3s,baz=95,slow=14,SNR=150							
USRK			LR	LR	16 03 51.9			
	comp=E,31μm,21.3s,baz=198,slow=37							
USRK	**Ussuriysk Ar.**	**9.52 298**	Pn	**Pn**	**16 00 23.3**	**+2.3**		
USRK	**Ussuriysk Ar.**	**9.52 298**	P	**Pn**	**16 00 23.3**	**+2.3**		
MSHR	**Mys Shultsa**	**9.71 287**	*ce*P	**Pn**	**16 00 24.1**	**+0.6**		
MSHR			pmax	pmax				
	comp=Z,295nm,1.0s							
JHS	**Saijyo**	**9.96 241**		**Pn**	**16 00 28.3**	**+1.2**		
JMN	**Monobe**	**10.28 233**	Pn	**Pn**	**16 00 31.5**	**+0.1**		
TYV	**Tymovskoe**	**10.55 356**	*e*P	**Pn**	**16 00 35.7**	**+0.7**		
TYV			*e*S	**Sn**	**16 02 37.2**	**+4.4**		
TYV			pmax	pmax				
	comp=Z,4μm,8.0s							
TYV			pmax	pmax				
	comp=Z,68nm,1.2s							
TYV			smax	smax				
	comp=N,5μm,11.0s							
TYV			smax	smax				
	comp=E,17μm,11.0s							
TYV			MLR	MLR				
	comp=Z,107μm,15.0s							
TYV			MLR	MLR				
	comp=N,75μm,14.0s							
TYV			MLR	MLR				
	comp=E,58μm,14.0s							
MDJ	**Mudanjiang**	**11.28 297**	Pn	**Pn**	**16 00 46.5**	**+1.4**		
MDJ	**Mudanjiang**	**11.28 297**	P	**Pn**	**16 00 46.4**	**+1.3**		
MDJ			pP		16 00 48.4			
MDJ			S	**Sn**	**16 02 51.3**	**+0.4**		
MDJ			pmax	pmax				
	comp=E,470nm,1.3s							
MDJ			pmax	pmax				
	comp=E,20μm,8.0s							
MDJ			LR	LR				
	comp=E,77μm,14.7s							
MDJ			LR	LR				
	comp=E,114μm,15.4s							
MDJ			LR	LR				
	comp=E,202μm,14.6s							
GRNR	**Gornyy**	**11.61 336**	⇑*e*P	**Pn**	**16 00 49.5**	**-0.1**		
GRNR			*e*S	**Sn**	**16 03 02.7**	**+3.8**		
GRNR			pmax	pmax				
	comp=E,20nm,1.0s							
GRNR			pmax	pmax				
	comp=N,20nm,0.9s							
GRNR			pmax	pmax				
	comp=Z,30nm,1.0s							
GRNR			smax	smax				
	comp=E,10.0nm,1.0s							
GRNR			MLR	MLR				
	comp=E,33μm,14.0s							
GRNR			MLR	MLR				
	comp=N,23μm,15.0s							
GRNR			MLR	MLR				
	comp=Z,46μm,14.0s							
SEHB	**SEOHWA**	**12.18 265**	Pn	**Pn**	**16 00 58.0**	**+0.6**		
KLR	**Kul'dur**	**12.29 320**	Pn	**Pn**	**16 00 59.6**	**+0.8**		
	comp=Z,0.8nm,0.3s,baz=131,slow=13,SNR=70							
KLR			LR	LR	16 06 17.4			
	comp=Z,32μm,18.7s,baz=134,slow=40							
	comp=Z,265nm,1.2s							
KLR	**Kul'dur**	**12.29 320**	*ce*P	**Pn**	**16 00 58.2**	**-0.7**		
KLR			pmax	pmax				
	comp=Z,318nm,1.3s							
HHU	**Hamhung**	**12.42 273**	P	**Pn**	**16 01 00.9**	**+0.4**		
HHU			sP	**P**	**16 01 09.6**	**-2.9**		
HHU			S	**Sn**	**16 03 22.5**	**+3.9**		
HHU			AMS	AMS				
	comp=N,70μm,13.0s							
HHU			AMS	AMS				
	comp=E,65μm,12.2s							
HHU			AMS	AMS				
	comp=Z,68μm,12.6s							
KSBUS	**Busan**	**12.63 251**		**Pn**	**16 01 04.0**	**+0.4**		
KSRS	**Korea Array**	**12.65 262**	Pn	**Pn**	**16 01 04.4**	**+0.6**		
	comp=Z,0.5nm,0.3s,baz=75,slow=13,SNR=39							
KSRS			LR	LR	16 05 36.9			
	comp=Z,73μm,18.3s,baz=70,slow=36							
	comp=Z,13nm,0.9s							
KS19	**Wonju Array Si**	**12.68 262**		**Pn**	**16 01 05.8**	**+1.5**		
KSAR	**Wonju Array Be**	**12.69 262**	Pn	**Pn**	**16 01 06.1**	**+1.8**		
KSAR	**Wonju Array Be**	**12.69 262**	P	**Pn**	**16 01 06.1**	**+1.8**		
KSCHJ	**Chungju**	**12.81 259**	Pn	**Pn**	**16 01 07.8**	**+1.9**		
BNX	**BinXian**	**13.10 300**	‖P	**Pn**	**16 01 10.8**	**+0.9**		
BNX			S	**Sn**	**16 03 39.1**	**+3.7**		
BNX			pmax	pmax				
	comp=Z,340nm,1.2s							
BNX			pmax	pmax				
	comp=Z,12μm,8.8s							
BNX			LR	LR				
	comp=Z,41μm,14.2s							
BNX			LR	LR				
	comp=Z,78μm,14.4s							
BNX			LR	LR				
	comp=Z,90μm,15.6s							
OKH	**Okha**	**13.22 358**	*c i*P	**Pn**	**16 01 12.6**	**+1.1**		
OKH			*i* S	**Sn**	**16 03 41.5**	**+3.3**		
OKH			pmax	pmax				
	comp=Z,2μm,14.0s							
OKH			smax	smax				
	comp=N,5μm,18.3s							
OKH			MLR	MLR				
	comp=E,106μm,19.0s							
OKH			MLR	MLR				
	comp=N,89μm,19.0s							
OKH			MLR	MLR				
	comp=Z,45μm,19.0s							
JCJ	**Chichijima**	**13.28 186**	Pn	**Pn**	**16 01 08.3**	**-4.2**		
	comp=Z,18nm,0.3s,baz=274,slow=19,SNR=2.4							
JCJ	**Chichijima**	**13.28 186**	P	**Pn**	**16 01 13.1**	**+0.7**		
	comp=Z,316nm,1.0s							
TJN	**Taejon**	**13.44 258**	Pn	**Pn**	**16 01 15.0**	**+0.3**		
TJN	**Taejon**	**13.44 258**	*ce*P	**Pn**	**16 01 15.3**	**+0.7**		
SKR	**Severo-Kuril's**	**13.48 36**	*e*P	**P**	**16 01 25.6**	**+1.3**		
SKR			pmax	pmax				
	comp=Z,27nm,0.7s							
SKR			pmax	pmax				
	comp=Z,100nm,3.2s							
SKR			MLR	MLR				
	comp=Z,36μm,15.0s							
INCN	**Inchon**	**13.62 263**	P	**Pn**	**16 01 17.3**	**+0.2**		
INCN			P	**Pn**	**16 01 17.3**	**+0.2**		
NAWB	**Namwon**	**13.81 254**	Pn	**Pn**	**16 01 20.9**	**+1.3**		
JSU	**Suzuyama**	**13.90 235**	Pn	**Pn**	**16 01 19.9**	**-1.0**		
PYAG	**Pyongyang**	**13.91 270**	P	**Pn**	**16 01 21.0**	**+0.1**		
PYAG			pP	P	16 01 23.7	-5.4		
PYAG			S	**Sn**	**16 03 55.0**	**-0.1**		
PYAG			AMS	AMS				
	comp=N,3μm,0.8s							
PYAG			AMS	AMS				
	comp=E,47μm,11.5s							
PYAG			AMS	AMS				
	comp=Z,50μm,12.1s							
CN2	**Changchun**	**14.02 290**	*e*P	**Pn**	**16 01 21.1**	**-1.3**		
CN2			*e*S	**Sn**	**16 03 57.6**	**-0.1**		
CN2			pmax	pmax				
	comp=Z,50nm,1.8s							
CN2			pmax	pmax				
	comp=Z,10μm,10.3s							
CN2			LR	LR				
	comp=Z,76μm,13.7s							
CN2			LR	LR				
	comp=Z,43μm,13.7s							
CN2			LR	LR				
	comp=Z,46μm,14.4s							
HJU	**Haeju**	**14.16 266**	P	**Pn**	**16 01 23.8**	**-0.6**		
HJU			pP	**P**	**16 01 28.2**	**-3.7**		
HJU			S	**Sn**	**16 04 03.1**	**+1.9**		
HJU			AMS	AMS				
	comp=N,191μm,12.1s							
HJU			AMS	AMS				
	comp=E,193μm,12.2s							
HJU			AMS	AMS				
	comp=Z,199μm,12.6s							
SUJ	**Sinuiju**	**14.71 275**	P	**Pn**	**16 01 30.8**	**-1.1**		
SUJ			pP	**P**	**16 01 34.9**	**-3.1**		
SUJ			S	**Sn**	**16 04 12.4**	**-2.1**		
SUJ			AMS	AMS				
	comp=N,81μm,12.1s							
SUJ			AMS	AMS				
	comp=E,79μm,11.7s							
SUJ			AMS	AMS				
	comp=Z,80μm,11.9s							
SNY	**Shenyang**	**15.28 282**	⇑P	**Pn**	**16 01 39.1**	**-0.4**		
SNY			pmax	pmax				
	comp=Z,240nm,1.2s							
SNY			pmax	pmax				
	comp=Z,18μm,11.0s							
SNY			LR	LR				
	comp=Z,30μm,16.1s							
SNY			LR	LR				
	comp=Z,58μm,14.3s							
SNY			LR	LR				
	comp=Z,79μm,14.3s							
PEA0B	**Petropavlovsk-**	**15.92 32**	Pn	**Pn**	**16 01 44.3**	**-3.4**		
PEA0B	**Petropavlovsk-**	**15.92 32**	*i* P	**Pn**	**16 01 44.4**	**-3.4**		
PETK	**Petropavlovsk-**	**15.92 32**	Pn	**Pn**	**16 01 45.1**	**-2.7**		
	comp=Z,0.3nm,0.3s,baz=212,slow=13,SNR=12							
PETK			LR	LR	16 07 44.1			
	comp=Z,18μm,19.2s,baz=216,slow=36							
PETK	**Petropavlovsk-**	**15.92 32**	Pn	**Pn**	**16 01 45.5**	**-2.3**		
PETK	**Petropavlovsk-**	**15.92 32**	P	**Pn**	**16 01 45.5**	**-2.3**		
PET	**Petropavlovsk**	**16.25 34**		**Pn**	**16 01 50.2**	**-1.8**		
PET	**Petropavlovsk**	**16.25 34**	*e*P	**P**	**16 01 55.1**	**0.0**		
PET			*e*S	**Sn**	**16 04 54.8**	**+2.8**		
PET			pmax	pmax				
	comp=Z,1μm,4.8s							
PET			pmax	pmax				
	comp=Z,1μm,7.8s							
PET			pmax	pmax				
	comp=Z,156nm,0.9s							
PET			MLR	MLR				
	comp=Z,34μm,16.0s							
PET			MLR	MLR				
	comp=Z,36μm,16.0s							
DL2	**Dalian**	**17.09 272**	P	**Pn**	**16 02 01.8**	**-1.0**		
DL2			S	**Sn**	**16 05 10.8**	**-1.8**		
DL2			pmax	pmax				
	comp=Z,320nm,1.5s							
DL2			pmax	pmax				
	comp=Z,10μm,7.4s							
DL2			LR	LR				
	comp=Z,22μm,12.3s							
DL2			LR	LR				
	comp=Z,27μm,12.7s							
DL2			LR	LR				
	comp=Z,23μm,13.1s							
ZEA	**Zeya**	**17.43 326**	*e*P	**Pn**	**16 02 03.7**	**-3.1**		
ZEA			pmax	pmax				
	comp=E,130nm,1.5s							
ZEA			pmax	pmax				
	comp=N,190nm,1.4s							
ZEA			pmax	pmax				
	comp=Z,320nm,1.4s							
ZEA			pmax	pmax				
	comp=E,4μm,12.9s							
ZEA			pmax	pmax				
	comp=N,4μm,13.1s							
ZEA			pmax	pmax				
	comp=Z,6μm,12.6s							
ZEA			MLR	MLR				
	comp=E,24μm,13.0s							
ZEA			MLR	MLR				
	comp=N,19μm,15.0s							
ZEA			MLR	MLR				
	comp=Z,26μm,14.0s							
JOW	**Kunigami**	**18.60 228**	P	**P**	**16 02 17.4**	**-3.8**		
JOW	**Kunigami**	**18.60 228**	P	**Pn**	**16 02 23.5**	**+2.0**		
HIA	**Hailar**	**19.16 306**	P	**P**	**16 02 25.5**	**-1.7**		
HIA			IAmb	IAmb	16 02 30.5			
	comp=Z,408nm,1.4s							
HIA	**Hailar**	**19.16 306**	P	**P**	**16 02 25.5**	**-1.7**		
HIA			pmax	pmax				
	comp=Z,408nm,1.4s							
MA2	**Magadan**	**19.75 11**	P	**P**	**16 02 33.2**	**-0.4**		
	comp=Z,24nm,0.7s,baz=190,slow=10,SNR=14							
MA2			S	**S**	**16 06 11.0**	**-4.7**		
	comp=Z,8.2nm,1.0s,baz=252,slow=20,SNR=1.1							
MA2			LR	LR	16 11 15.4			
	comp=Z,23μm,18.2s,baz=197,slow=40							
MA2	**Magadan**	**19.75 11**	P	**P**	**16 02 32.9**	**-0.7**		
MA2	**Magadan**	**19.75 11**	*c i*P	**P**	**16 02 31.1**	**-2.5**		
MA2			pmax	pmax				
	comp=Z,10.0nm,0.5s							
MA2			MLR	MLR				
	comp=Z,28μm,17.0s							
SSE	**Sheshan**	**20.46 250**	P	**P**	**16 02 40.1**	**-1.4**		
SSE			pP	**pP**	**16 02 44.3**	**-0.4**		
SSE			S	**S**	**16 06 30.3**	**+0.2**		
SSE			pmax	pmax				
	comp=Z,34nm,0.7s							
SSE			pmax	pmax				
	comp=Z,2μm,5.3s							
XLT	**XiLinHaoTe**	**20.78 289**	⇑*i*P	**P**	**16 02 42.6**	**-2.4**		
XLT			pP	Pn	16 02 46.5	-0.9		
XLT			sP	sP	16 02 50.5	+0.8		
XLT			S	**S**	**16 06 37.6**	**+1.1**		
XLT			sS	pS	16 06 46.4	+0.6		
XLT			SS	**SnSn**	**16 07 00.8**	**+4.5**		
XLT			pmax	pmax				
	comp=Z,200nm,2.2s							
XLT			LR	LR				
	comp=Z,27μm,15.0s							
XLT			LR	LR				
	comp=Z,32μm,14.1s							
BJI	**Beijing**	**21.03 278**	P	**P**	**16 02 44.8**	**-2.8**		
BJI			S	**S**	**16 06 38.8**	**-2.5**		
BJI			pmax	pmax				
	comp=Z,290nm,2.3s							
BJI			pmax	pmax				
	comp=Z,3μm,4.2s							
BJI			LR	LR				
	comp=Z,3μm,11.7s							
BJI			LR	LR				
	comp=Z,28μm,12.7s							
BJI			LR	LR				
	comp=Z,37μm,12.6s							
BJT	**Baijiatuau**	**21.04 278**	P	**P**	**16 02 46.1**	**-1.6**		
BJT			IAmb	IAmb	16 03 00.8			
	comp=Z,266nm,1.1s							
BJT	**Baijiatuau**	**21.04 278**	IAMs_20	IAMs_20	16 10 25.7			
	comp=Z,30μm,19.0s							
BJT	**Baijiatuau**	**21.04 278**	P	**P**	**16 02 46.1**	**-1.6**		
BJT			pmax	pmax				
	comp=Z,266nm,1.1s							
BJT			MLR	MLR				
	comp=Z,30μm,19.0s							
TIA	**Tai'an**	**21.26 267**	⇑P	**P**	**16 02 47.4**	**-2.8**		
TIA			S	**S**	**16 06 43.8**	**-2.3**		
TIA			pmax	pmax				
	comp=Z,200nm,1.0s							
TIA			pmax	pmax				
	comp=Z,7μm,11.7s							
TIA			LR	LR				
	comp=Z,37μm,12.3s							
TIA			LR	LR				
	comp=Z,48μm,13.7s							
TIA			LR	LR				
	comp=Z,63μm,13.9s							
NJ2	**Nanjing**	**21.67 255**	⇑*i*P	**P**	**16 02 52.0**	**-2.5**		
NJ2			pP	**pP**	**16 02 56.3**	**-1.4**		
NJ2			PP	**PnPn**	**16 03 14.8**	**-0.5**		
NJ2			pmax	pmax				
	comp=Z,200nm,1.2s							
NJ2			pmax	pmax				
	comp=Z,2μm,3.5s							
NJ2			LR	LR				
	comp=Z,40μm,16.1s							
NJ2			LR	LR				
	comp=Z,49μm,17.5s							
NJ2			LR	LR				
	comp=Z,63μm,17.1s							
JMJ	**Miyako jima 2**	**21.87 231**	P	**P**	**16 02 56.2**	**-0.5**		
HNS	**HongShan**	**22.75 272**	⇑P	**P**	**16 03 01.9**	**-4.1**		
HNS			PP	**PnPn**	**16 03 30.6**	**+0.6**		
HNS			S	**S**	**16 07 07.6**	**-6.7**		
HNS		

HNS LR LR
comp=Z,37µm,15.8s
HNS LR LR
comp=Z,37µm,16.3s
SEY Seymchan 23.21 10 P **P 16 03 09.8 -0.7**
comp=Z,49nm,0.6s,baz=188,slow=7.7,SNR=66
SEY S **S 16 07 17.4 -4.4**
comp=Z,8.3nm,1.0s,baz=41,slow=20,SNR=1.1
SEY LR LR 16 13 25.5
comp=Z,23µm,18.5s,baz=191,slow=40
comp=Z,49nm,0.6s
SEY Seymchan 23.21 10*ce*P **P 16 03 09.2 -1.3**
SEY pmax pmax
comp=Z,119nm,1.3s
SEY MLR MLR
comp=Z,32µm,17.0s
YAK Yakutsk 23.33 343 P **P 16 03 08.2 -3.6**
comp=Z,82nm,0.7s,baz=337,slow=3.6,SNR=32
YAK S **S 16 07 18.9 -4.9**
comp=Z,26nm,0.9s,baz=165,slow=20,SNR=1.7
YAK LR LR 16 13 14.3
comp=Z,21µm,18.5s,baz=148,slow=39
YAK Yakutsk 23.33 343 P **P 16 03 08.7 -3.1**
YAK IAmb IAmb 16 03 30.5
comp=Z,269nm,0.9s
YAK Yakutsk 23.33 343*c i*P **P 16 03 08.1 -3.7**
YAK *e*S **S 16 07 19.6 -4.2**
YAK *e*SSS SSS 16 08 09.7
YAK pmax pmax
comp=Z,173nm,0.9s
YAK pmax pmax
comp=N,70nm,1.0s
YAK pmax pmax
comp=E,32nm,1.0s
YAK pmax pmax
comp=Z,367nm,1.2s
YAK pmax pmax
comp=N,236nm,1.3s
YAK pmax pmax
comp=E,92nm,1.3s
YAK smax smax
comp=N,2µm,2.2s
YAK smax smax
comp=E,2µm,3.0s
YAK MLR MLR
comp=Z,41µm,15.0s
YAK MLR MLR
comp=N,20µm,14.0s
YAK MLR MLR
comp=E,13µm,14.0s
YOJ Yonaguni jima 23.51 234 P **P 16 03 10.7 -3.2**
YOJ IAmb IAmb 16 03 32.1
comp=Z,502nm,2.0s
YOJ Yonaguni jima 23.51 234 P **P 16 03 10.7 -3.2**
YOJ pmax pmax
comp=Z,502nm,2.0s
YOJ Yonaguni jima 23.51 234 P **P 16 03 12.0 -1.9**
CIT Chita 23.76 310 *e*P **P 16 03 13.4 -2.8**
CIT *e* 16 03 53.9
CIT *e*S **S 16 07 26.3 -4.7**
CIT pmax pmax
comp=Z,2µm,2.8s
SHEM Shemya Is, Ala 24.08 49 LR LR 16 12 15.2
comp=Z,4µm,21.7s,baz=258,slow=35
TATO Taipei 24.11 237 P **P 16 03 19.3 -0.3**
TATO Taipei 24.11 237 P **P 16 03 17.9 -1.7**
TATO P **P 16 03 17.9 -1.7**
TATO P **P 16 03 17.9 -1.7**
HHC Hu-ho-hao-te 24.37 282 *e*P **P 16 03 19.8 -2.2**
HHC pmax pmax
comp=Z,140nm,1.0s
HHC pmax pmax
comp=Z,10µm,8.4s
HHC LR LR
comp=Z,28µm,14.9s
HHC LR LR
comp=Z,60µm,15.7s
HHC LR LR
comp=Z,85µm,14.7s
YHNB Yeheng 24.39 237 P **P 16 03 19.9 -2.4**
YHNB Yeheng 24.39 237 P **P 16 03 20.9 -1.5**
TIY Taiyuan 24.40 274 *e*P **P 16 03 19.5 -2.8**
TIY S **S 16 07 43.4 +1.9**
TIY pmax pmax
comp=Z,71nm,1.8s
TIY pmax pmax
comp=Z,5µm,6.4s
TIY LR LR
comp=Z,21µm,13.2s
TIY LR LR
comp=Z,10µm,17.4s
TIY LR LR
comp=Z,18µm,13.6s
NACB Ninganchiao 24.61 236 P **P 16 03 21.4 -2.8**
NACB IAmb IAmb 16 03 29.8
comp=Z,130nm,1.0s
NACB IAMs_20 IAMs_20 16 13 58.3
comp=Z,17µm,19.0s
SSLB Suanglung 25.29 236 P **P 16 03 28.7 -1.7**
YULB Yu-li 25.36 235 P **P 16 03 28.3 -2.7**
YULB IAmb IAmb 16 03 44.2
comp=Z,141nm,0.9s
YULB IAMs_20 IAMs_20 16 13 49.2
comp=Z,24µm,21.0s
LYN LuoYang 25.41 267 ⇑P **P 16 03 27.8 -3.6**
LYN pP pP 16 03 30.9 -3.9
LYN S **S 16 07 56.3 -1.4**
LYN pmax pmax
comp=Z,190nm,1.7s
LYN pmax pmax
comp=Z,5µm,6.0s
LYN LR LR
comp=Z,24µm,12.2s
LYN LR LR
comp=Z,46µm,12.6s
LYN LR LR
comp=Z,62µm,13.1s
BTO Baotou 25.56 282 *e*P **P 16 03 32.5 -0.4**
BTO S **S 16 08 00.5 +0.2**
BTO LR LR
comp=Z,97µm,12.5s
BTO LR LR
comp=Z,124µm,14.9s
WHN Wuhan 25.76 257 ⇑P **P 16 03 33.8 -0.8**
WHN sP **sP 16 03 39.6 +0.4**
WHN S **S 16 08 01.8 -1.5**
WHN sS **pS 16 08 07.4 -0.2**
WHN pmax pmax
comp=Z,2µm,1.7s
WHN pmax pmax
comp=Z,9µm,3.7s
WHN LR LR
comp=Z,98µm,14.9s
WHN LR LR
comp=Z,127µm,16.1s
WHN LR LR
comp=Z,134µm,16.6s
TPUB Ta-pu 25.85 236 P **P 16 03 34.0 -1.5**
TPUB IAmb IAmb 16 03 44.5
comp=Z,182nm,0.9s
TPUB Ta-pu 25.85 236 P **P 16 03 36.5 +1.0**
BOD Bodaibo 25.85 323 *e*P **P 16 03 35.0 -0.2**
BOD pmax pmax
comp=Z,259nm,1.2s
QZH Quanzhou 26.03 242⇑*i*P **P 16 03 37.0 -0.1**
QZH S **S 16 08 07.4 -0.2**
QZH pmax pmax
comp=Z,220nm,2.0s
QZH pmax pmax
comp=Z,5µm,6.5s
QZH LR LR
comp=Z,16µm,17.8s
QZH LR LR
comp=Z,21µm,17.7s
QZH LR LR
comp=Z,22µm,13.3s
KNMB Chin-men Tao 26.49 241 IAMs_20 IAMs_20 16 15 44.3
comp=Z,17µm,18.0s
GUMO Guam 26.67 178 LR LR 16 14 40.8
comp=Z,8µm,19.4s,baz=5.5,slow=37
ULN Ulaanbaatar 27.19 298 P **P 16 03 47.5 -0.1**
ULN IAmb IAmb 16 03 50.2
comp=Z,244nm,1.4s
ULN Ulaanbaatar 27.19 298 P **P 16 03 47.5 -0.1**
ULN pmax pmax
comp=Z,244nm,1.4s

ULN MLR MLR
comp=Z,44µm,18.0s
ULN Ulaanbaatar 27.19 298 P **P 16 03 47.9 +0.3**
ULN P **P 16 03 47.9 +0.3**
SONM Songino Array 27.64 298 P **P 16 03 51.9 +0.4**
comp=Z,63nm,1.0s,baz=88,slow=7.9,SNR=142
SONM LR LR 16 15 41.1
comp=Z,40µm,18.1s,baz=91,slow=38
comp=Z,63nm,1.0s
SONM Songino Array 27.64 298 P **P 16 03 52.0 +0.4**
CNSH ChangSha 28.06 254 ⇑P **P 16 03 55.3 0.0**
CNSH S **S 16 08 35.3 -4.3**
CNSH pmax pmax
comp=Z,140nm,1.8s
CNSH LR LR
comp=Z,23µm,13.2s
CNSH LR LR
comp=Z,29µm,14.8s
CNSH LR LR
comp=Z,21µm,13.7s
XAN Xi'an 28.31 268 ⇑P **P 16 03 57.3 -0.3**
XAN pP sP 16 04 02.4 +0.2
XAN sP pwP 16 04 06.3 +2.0
XAN PP **PnPn 16 04 49.6 +3.5**
XAN S **S 16 08 44.4 +0.8**
XAN sS sS 16 08 54.0 +4.5
XAN pmax pmax
comp=Z,150nm,1.4s
XAN pmax pmax
comp=Z,7µm,8.2s
XAN LR LR
comp=Z,29µm,15.5s
XAN LR LR
comp=Z,36µm,15.8s
XAN LR LR
comp=Z,44µm,13.7s
H11N2 WAKE ISLAND Hy 28.55 129 T T 16 33 53.9
baz=321,slow=74,SNR=308
H11N1 WAKE ISLAND Hy 28.56 129 T T 16 33 57.3
baz=321,slow=74,SNR=280
H11N3 WAKE ISLAND Hy 28.57 129 T T 16 33 57.3
baz=321,slow=74,SNR=381
IRK Irkutsk 29.38 307 *e*P **P 16 04 06.6 -0.3**
IRK pmax pmax
comp=Z,660nm,1.4s
H11S1 WAKE ISLAND Hy 29.39 131 T T 16 35 00.9
baz=323,slow=76,SNR=117
H11S3 WAKE ISLAND Hy 29.40 131 T T 16 35 05.2
baz=323,slow=76,SNR=113
H11S2 WAKE ISLAND Hy 29.41 131 T T 16 35 00.8
baz=323,slow=76,SNR=117
ENH Enshi 29.54 261 P **P 16 04 07.2 -1.3**
ZAK Zakamensk 29.81 303 *e*P **P 16 04 10.3 -0.5**
ZAK pmax pmax
comp=Z,115nm,1.5s
BILL Bilibino 30.34 17 P **P 16 04 16.1 +0.9**
BILL Bilibino 30.34 17*d i*P **P 16 04 15.5 +0.3**
BILL *i* *SP **sP 16 04 19.5 -0.2**
BILL *e* 16 04 24.4
BILL *e* 16 05 12.2
BILL *e*PPP PPP 16 05 26.4
BILL *e* 16 07 18.2
BILL *i* S **S 16 09 13.7 -1.0**
BILL *i* *SS **sS 16 09 22.5 +2.5**
BILL *e*SSS SSS 16 11 09.5
BILL pmax pmax
comp=Z,150nm,1.7s
BILL MLR MLR
comp=Z,10µm,14.0s
GZH Guangzhou 30.85 245*i*P P 16 04 14.5 -5.6
GZH PP **PnPn 16 05 12.3 -8.1**
GZH S **S 16 09 14.8 -8.6**
GZH SS **ScP 16 10 49.3 -10**
GZH pmax pmax
comp=Z,3µm,5.1s
GZH LR LR
comp=Z,42µm,14.0s
GZH LR LR
comp=Z,35µm,12.4s
MOY Mondy 31.34 306 *e*P **P 16 04 24.0 -0.3**
MOY pmax pmax
comp=Z,1µm,1.5s
LZH Lanzhou 31.44 275 ⇑P **P 16 04 25.3 -0.2**
LZH sP pwP 16 04 36.3 +4.1
LZH PP **PP 16 05 30.0 -6.4**
LZH S **S 16 09 36.3 +3.3**
LZH SS **SnSn 16 11 21.5 +4.3**
LZH pmax pmax
comp=Z,100nm,1.5s
LZH pmax pmax
comp=Z,2µm,5.2s
LZH LR LR
comp=Z,22µm,13.1s
LZH LR LR
comp=Z,22µm,13.1s
LZH LR LR
comp=Z,26µm,13.4s
GULI GuiLin 31.59 252 ⇑P **P 16 04 26.6 0.0**
GULI PP **PP 16 05 34.3 -3.7**
GULI S **S 16 09 31.3 -3.8**
GULI SS **SnSn 16 11 26.3 +5.5**
GULI pmax pmax
comp=Z,110nm,1.0s
GULI LR LR
comp=Z,25µm,15.0s
GULI LR LR
comp=Z,27µm,14.8s
GULI LR LR
comp=Z,25µm,14.8s
TIXI Tiksi 32.26 351 P **P 16 04 31.2 -0.8**
comp=Z,35nm,1.0s,baz=91,slow=23,SNR=18
TIXI LR LR 16 19 39.6
comp=Z,16µm,18.6s,baz=181,slow=40
comp=Z,35nm,1.0s
TIXI Tiksi 32.26 351 P **P 16 04 31.2 -0.8**
TIXI IAmb IAmb 16 04 33.5
comp=Z,70nm,1.1s
TIXI IAMs_20 IAMs_20 16 19 28.7
comp=Z,18µm,19.0s
TIXI Tiksi 32.26 351*ce*P **P 16 04 31.1 -0.8**
TIXI pmax pmax
comp=Z,110nm,1.7s
TIXI MLR MLR
comp=Z,27µm,16.0s
GTA Gaotai 33.46 283 ⇑P **P 16 04 43.3 +0.2**
GTA pP sP 16 04 48.6 +0.9
GTA sP pwP 16 04 51.3 +1.5
GTA PP **PnPn 16 05 53.8 -0.3**
GTA S **S 16 10 03.9 -0.4**
GTA SS **SnSn 16 12 07.1 +1.0**
GTA pmax pmax
comp=Z,340nm,1.2s
GTA pmax pmax
comp=Z,4µm,8.2s
GTA LR LR
comp=Z,21µm,15.6s
GTA LR LR
comp=Z,36µm,16.4s
GTA LR LR
comp=Z,42µm,17.1s
KNGR Kungurtug, Tuv 33.49 304*c i*P **P 16 04 43.0 -0.2**
KNGR pmax pmax
comp=Z,92nm,1.3s
KNGR MLR MLR
comp=Z,22µm,14.0s
CD2 Chengdu 33.59 266 ⇑P **P 16 04 43.3 -0.9**
CD2 PP **PnPn 16 05 55.5 -0.2**
CD2 S **S 16 10 06.0 -0.3**
CD2 pmax pmax
comp=Z,90nm,1.0s
CD2 pmax pmax
comp=Z,4µm,8.6s
CD2 LR LR
comp=Z,70µm,12.7s
CD2 LR LR
comp=Z,28µm,13.9s
CD2 LR LR
comp=Z,40µm,14.9s
GYA Guiyang 33.65 257⇑*i*P **P 16 04 44.4 -0.4**
GYA sP pwP 16 04 54.0 +2.6
GYA S **S 16 10 05.4 -2.0**
GYA pmax pmax
comp=Z,270nm,1.7s
GYA pmax pmax
comp=Z,4µm,8.4s

GYA LR LR
comp=Z,36µm,14.2s
GYA LR LR
comp=Z,32µm,17.3s
GYA LR LR
comp=Z,54µm,16.8s
NIKH Nikolski High 34.27 52 P **P 16 04 50.1 +0.4**
baz=268
GAMB Gambell 34.95 33 P **P 16 04 54.8 -0.6**
baz=249
GAMB S **S 16 10 28.7 +2.4**
baz=249
UNV Unalaska Valle 35.71 51 P **P 16 04 59.8 -2.3**
baz=268
PATS Pohnpei 35.83 155 IAMs_20 IAMs_20 16 19 45.8
comp=Z,15µm,18.0s
QIZ Qiongzhong 35.98 244 IAMs_20 IAMs_20 16 19 07.1
comp=Z,10µm,21.0s
QIZ Qiongzhong 35.98 244 P **P 16 05 05.1 +0.2**
QIZ PP **PP 16 06 26.6 -0.1**
QIZ S **S 16 10 44.1 +0.9**
QIZ ScP **ScP 16 11 18.5 +1.3**
QIZ pmax pmax
comp=Z,46nm,2.0s
QIZ pmax pmax
comp=Z,2µm,8.5s
QIZ LR LR
comp=Z,17µm,15.0s
QIZ LR LR
comp=Z,21µm,14.4s
QIZ LR LR
comp=Z,25µm,14.4s
DAV Davao City (W) 36.90 211 LR LR 16 21 02.7
comp=Z,12µm,18.9s,baz=50,slow=37
DAV Davao City (W) 36.90 211 IAMs_20 IAMs_20 16 17 31.5
comp=Z,14µm,21.0s
TNA Tin City 37.08 31 P **P 16 05 12.8 -1.0**
baz=251
TNA S **S 16 11 02.2 +3.2**
baz=251
PZH PanZhiHua 37.32 261 ⇑P **P 16 05 16.4 0.0**
PZH sP **sP 16 05 21.3 +0.2**
PZH PP **PnPn 16 06 42.0 0.0**
PZH S **S 16 11 02.6 -1.2**
PZH PcS **PcS 16 11 22.6 -1.6**
PZH ScS **ScS 16 15 30.3 -0.1**
PZH pmax pmax
comp=Z,380nm,1.0s
PZH pmax pmax
comp=Z,4µm,6.4s
PZH LR LR
comp=Z,18µm,14.5s
PZH LR LR
comp=Z,26µm,14.2s
PZH LR LR
comp=Z,32µm,14.3s
KMI Kunming 37.33 259 ⇑P **P 16 05 16.6 0.0**
KMI pP sP 16 05 21.5 +0.3
KMI PP **PnPn 16 06 45.3 +3.1**
KMI S **S 16 11 04.3 +0.3**
KMI pmax pmax
comp=Z,230nm,2.0s
KMI pmax pmax
comp=Z,4µm,4.6s
KMI LR LR
comp=Z,40µm,15.2s
KMI LR LR
comp=Z,32µm,15.3s
KMI LR LR
comp=Z,46µm,16.5s
ANM Nome 37.83 33 P **P 16 05 19.0 -1.1**
baz=255
ANM S **S 16 11 13.8 +3.4**
baz=255
KWAJ Kwajalein Atol 37.93 139 IAMs_20 IAMs_20 16 17 59.4
comp=Z,12µm,20.0s
SDPT Sand Point 39.22 48 P **P 16 05 31.3 -0.5**
baz=271
S14K Fog Glacier 39.72 47 P **P 16 05 35.7 -0.4**
baz=271
CHNA Chernabura Isl 39.74 49 P **P 16 05 35.8 -0.4**
baz=273,SNR=6.8
CHNA S **S 16 11 36.2 -3.2**
baz=273
CNBA Chernabura Isl 39.74 49 P **P 16 05 35.5 -0.8**
DGZ Jazzator, Alta 40.03 303*c i*P **P 16 05 39.5 +0.6**
DGZ pmax pmax
comp=Z,345nm,1.2s
DGZ MLR MLR
comp=Z,56µm,15.0s
SGSI Sangihe 40.03 209 P **P 16 05 38.5 -0.5**
comp=Z,162nm,0.8s
N16K Nishlik Lake 40.22 40 P **P 16 05 40.4 +0.3**
baz=267,SNR=8.6
N16K S **S 16 11 48.5 +2.1**
baz=267
CHGN Chignik 40.35 47 P **P 16 05 40.6 -0.7**
baz=272
O16K Kokwok River B 40.52 42 P **P 16 05 42.9 +0.3**
baz=268
O16K S **S 16 11 53.6 +2.7**
baz=268
P16K Nushagak River 40.55 43 P **P 16 05 43.7 +0.8**
baz=269
P16K S **S 16 11 53.5 +2.0**
baz=269
O17K Koliganek Bris 41.03 41 P **P 16 05 48.8 +2.0**
baz=269,SNR=6.5
O17K S **S 16 12 01.8 +3.3**
baz=269
WMQ Urumqi 41.06 294⇑*i*P **P 16 05 48.3 +0.9**
WMQ pP pwP 16 05 55.3 +0.5
WMQ sP sP 16 05 59.3 +7.1
WMQ S **S 16 11 57.4 -2.2**
WMQ pmax pmax
comp=Z,210nm,1.1s
WMQ pmax pmax
comp=Z,4µm,4.9s
WMQ LR LR
comp=Z,17µm,12.9s
WMQ LR LR
comp=Z,31µm,17.5s
WMQ LR LR
comp=Z,18µm,20.9s
NRIK Noril'sk 41.08 333 P **P 16 05 46.8 -0.3**
comp=Z,68nm,1.2s,baz=111,slow=9.4,SNR=34
NRIK LR LR 16 24 11.4
comp=Z,23µm,19.9s,baz=102,slow=38
comp=Z,68nm,1.2s
NRIK Noril'sk 41.08 333 P **P 16 05 48.0 +1.0**
NRIK IAmb IAmb 16 05 51.2
comp=Z,162nm,1.4s
NRIK Noril'sk 41.08 333*ce*P **P 16 05 46.1 -1.0**
NRIK pmax pmax
comp=Z,131nm,1.4s
NRIK MLR MLR
comp=Z,22µm,19.0s
ZAA0 Zalesovo Array 41.12 310 P **P 16 05 47.5 -0.1**
ZAA0 IAmb IAmb 16 05 58.4
comp=Z,142nm,1.1s
ZALV Zalesovo Beam 41.12 310 P **P 16 05 47.5 -0.1**
comp=Z,64nm,0.9s,baz=88,slow=7.8,SNR=110
ZALV LR LR 16 23 51.6
comp=Z,16µm,20.0s,baz=86,slow=38
comp=Z,64nm,0.9s
ZALV Zalesovo Beam 41.12 310 P **P 16 05 47.2 -0.4**
Q16K King Salmon 41.25 43 S **S 16 12 04.9 +3.1**
baz=271
P17K Kvichak River 41.36 42 P **P 16 05 50.0 +0.5**
baz=270
P17K S **S 16 12 04.9 +1.5**
baz=270
R17K Ugashik Creek 41.41 45 P **P 16 05 48.7 -1.4**
baz=272
R17K S **S 16 12 02.3 -2.0**
baz=272
GCSA Galena City Sc 41.45 34 P **P 16 05 49.6 -0.6**
baz=264
GCSA S **S 16 12 05.3 +0.6**
baz=264
N18K Kilae Creek 41.64 40 P **P 16 05 53.9 +2.0**
N18K IAmb IAmb 16 06 09.7
comp=Z,166nm,1.6s
N18K IAMs_20 IAMs_20 16 21 51.2
comp=Z,7µm,20.0s
N18K Kilae Creek 41.64 40 P **P 16 05 52.9 +1.0**
baz=269,SNR=10

N18K S S 16 12 10.9 +3.2
baz=269
TTA Tatalina 41.68 37 P P 16 05 53.2 +1.0
baz=266
TTA S S 16 12 08.8 +0.5
baz=266
SVW2 Sparrevohn 41.80 39 P P 16 05 54.2 +1.0
CHIR Chirikof Isln 41.94 47 IAMs_20 IAMs_20 16 22 59.2
comp=Z,8µm,20.0s
CHIR Chirikof Isln 41.94 47 P P 16 05 54.8 +0.4
baz=275
CHIR S S 16 12 08.7 -3.4
baz=275
CRAI Chiangrai 41.97 255 P P 16 05 55.8 +0.7
CRAI IAmb IAmb 16 06 09.2
comp=Z,212nm,1.1s
P18K Big Mountain, 41.98 42 P P 16 05 56.1 +1.4
P18K IAmb IAmb 16 06 11.8
comp=Z,138nm,1.6s
P18K Big Mountain, 41.98 42 P P 16 05 55.6 +1.0
baz=271
P18K S S 16 12 13.7 +1.0
baz=271
O18K Koktuh Hills 41.98 41 P P 16 05 56.5 +1.9
O18K Koktuh Hills 41.98 41 P P 16 05 55.6 +1.0
baz=270
O18K S S 16 12 15.5 +2.8
baz=270
DIBR DIBRUGARH 42.02 268 eP P 16 05 55.4 +0.1
TNTI Ternate 42.11 205 IAMs_20 IAMs_20 16 24 41.5
comp=Z,7µm,18.0s
TNTI Ternate 42.11 205 P P 16 05 55.7 -0.4
comp=Z,2µmcomp=Z,3µmcomp=Z,106nm,1.3s
ZSN Zaisan 42.12 300 c iP P 16 05 56.0 +0.1
ZSN eS S 16 12 15.9 +0.9
ZSN pmax pmax
comp=Z,330nm,2.3s
ZSN Zaisan 42.12 300 ⇑ iP P 16 05 56.1 +0.1
comp=Z,330nm,2.3s,baz=300
ZSN eS S 16 12 15.9 +0.9
baz=300
KKM Kota Kinabalu 42.14 223 IAMs_20 IAMs_20 16 24 15.0
comp=Z,7µm,18.0s
L19K White Mountain 42.18 38 P P 16 05 58.0 +1.8
baz=268,SNR=10
L19K S S 16 12 15.4 -0.2
baz=268
N19K Bonanza Creek 42.34 40 P P 16 05 58.9 +1.2
N19K Bonanza Creek 42.34 40 P P 16 05 58.0 +0.4
baz=270
N19K S S 16 12 19.2 +1.1
baz=270
SMPI Sarmi 42.38 187 P P 16 06 00.5 +2.2
comp=Z,2µmcomp=Z,2µmcomp=Z,134nm,1.9s
M19K Big River Lodg 42.39 38 P P 16 05 59.7 +1.8
M19K Big River Lodg 42.39 38 P P 16 05 58.5 +0.5
baz=269
M19K S S 16 12 21.4 +2.7
baz=269
O19K Port Alsworth 42.42 41 P P 16 05 59.5 +1.3
baz=271
O19K S S 16 12 19.9 +0.8
baz=271
SWI Sorong 42.56 199 P P 16 05 59.1 -0.7
comp=Z,2µmcomp=Z,4µmcomp=Z,88nm,3.0s
SIJI Sorong 42.57 199 P P 16 06 00.3 +0.5
comp=Z,15nm,0.8s,baz=360,slow=11,SNR=8.5
SIJI LR LR 16 21 35.8
comp=Z,13µm,20.1s,baz=8.0,slow=33
comp=Z,15nm,0.8s
SRPI Serui, Papua 42.57 191 P P 16 06 01.8 +2.0
comp=Z,72nm,0.9s
K20K Telida 42.58 36 P P 16 06 00.6 +1.1
K20K Telida 42.58 36 P P 16 06 01.6 +2.1
baz=268,SNR=10
K20K S S 16 12 24.6 +3.2
baz=268
J20K Nowinta River 42.59 35 P P 16 06 01.1 +1.6
J20K IAmb IAmb 16 06 22.0
comp=Z,330nm,1.9s
J20K Nowinta River 42.59 35 P P 16 06 01.1 +1.6
baz=267
J20K S S 16 12 23.8 +2.4
baz=267
L20K Farewell, AK 42.64 37 P P 16 06 00.2 +0.2
baz=269,SNR=7.1
L20K S S 16 12 25.3 +2.9
baz=269
SII Sitkinak Islan 42.68 46 IAMs_20 IAMs_20 16 21 00.8
comp=Z,8µm,21.0s
SII Sitkinak Islan 42.68 46 P P 16 06 00.3 -0.1
baz=275
SII S S 16 12 22.0 -1.1
baz=275
A21K Barrow 42.70 24 IAMs_20 IAMs_20 16 26 21.7
comp=Z,7µm,19.0s
A21K Barrow 42.70 24 P P 16 06 01.9 +1.5
baz=256
A21K S S 16 12 19.7 -3.2
baz=256
ZIRO ZIRO 42.80 269 eP P 16 06 02.5 +0.6
ZIRO IAmb IAmb 16 06 05.7
comp=Z,275nm,1.1s
ZIRO i x S 16 12 25.9 +0.1
Q19K Cape Douglas, 42.81 43 P P 16 06 02.6 +1.2
baz=273
Q19K S S 16 12 22.2 -2.8
baz=273
GENI Genyem 42.85 185 P P 16 06 04.5 +2.4
comp=Z,3µmcomp=Z,3µmcomp=Z,132nm,1.0s
IMAR Indian Mountai 42.88 32 P P 16 06 03.6 +1.7
JORH JORHAT 42.89 267 eP P 16 06 03.0 +0.5
MOKO MOKOCHONG 42.91 267 eP P 16 06 03.5 +0.7
M20K Styx River 42.98 38 P P 16 06 05.9 +3.0
baz=270
M20K S S 16 12 30.5 +2.9
baz=270
P19K Oil Pt 42.98 42 P P 16 06 03.3 +0.4
baz=272
P19K S S 16 12 26.2 -1.4
baz=272
G21K Allakaket 43.03 31 P P 16 06 03.7 +0.6
baz=265,SNR=15
G21K S S 16 12 30.0 +2.0
baz=265
ITAN ITANAGAR 43.09 268 eP P 16 06 04.9 +0.8
F21K Alatna River 43.11 30 P P 16 06 04.6 +0.8
baz=264,SNR=6.3
F21K S S 16 12 29.8 +0.7
baz=264
OHAK Old Harbor 43.11 45 P P 16 06 03.3 -0.5
OHAK Old Harbor 43.11 45 P P 16 06 05.8 +1.9
baz=275,SNR=7.7
OHAK S S 16 12 26.3 -3.0
baz=275
H21K Melozitna Rive 43.25 33 P P 16 06 06.0 +1.1
H21K IAMs_20 IAMs_20 16 26 13.4
comp=Z,7µm,19.0s
H21K Melozitna Rive 43.25 33 P P 16 06 05.9 +1.1
baz=266,SNR=14
H21K S S 16 12 34.3 +3.1
baz=266
O20K Slope Mountain 43.27 41 P P 16 06 05.8 +0.6
baz=272
O20K S S 16 12 32.8 +1.0
baz=272
CHUM Lake Minchumin 43.38 35 P P 16 06 09.1 +3.2
baz=269
CHUM S S 16 12 37.1 +4.0
baz=269
LBMI Labuha 43.39 204 P P 16 06 07.5 +1.0
comp=Z,2µmcomp=Z,3µmcomp=Z,129nm,2.2s
PPLA Purkeypile 43.42 37 P P 16 06 08.4 +1.9
baz=270
PPLA S S 16 12 35.8 +1.7
baz=270
SPCR Spurr Chakacha 43.44 39 P P 16 06 09.5 +3.0
baz=272
SPCR S S 16 12 36.7 +2.5
baz=272
KDAK Kodiak Island 43.44 44 P P 16 06 06.5 0.0
KDAK IAmb IAmb 16 06 23.7
comp=Z,97nm,1.1s
KDAK Kodiak Island 43.44 44 IAMs_20 IAMs_20 16 24 09.9
comp=Z,7µm,20.0s
KDAK Kodiak Island 43.44 44 P P 16 06 06.5 0.0
KDAK pmax pmax
comp=Z,97nm,1.1s
KDAK MLR MLR
comp=Z,7µm,20.0s
KDAK Kodiak Island 43.44 44 P P 16 06 08.0 +1.5
baz=275
KDAK S S 16 12 31.2 -3.0
baz=275
KMSI Cibinong 43.47 209 P P 16 06 08.6 +1.4
comp=Z,3µmcomp=Z,258nm,0.8s
CAST Castle Rocks 43.48 36 P P 16 06 09.3 +2.6
baz=269
CAST S S 16 12 36.2 +1.6
baz=269
Q20K Shuyak Island 43.48 43 P P 16 06 07.7 +1.0
baz=274
Q20K S S 16 12 31.1 -3.5
baz=274
KOHI KOHIMA 43.54 266 eP P 16 06 07.7 -0.2
I21K Tanana 43.56 33 IAMs_20 IAMs_20 16 26 33.8
comp=Z,8µm,18.0s
I21K Tanana 43.56 33 P P 16 06 10.1 +2.7
baz=268
I21K S S 16 12 38.8 +3.0
baz=268
F22K John River 43.64 30 P P 16 06 09.4 +1.4
baz=265,SNR=24
F22K S S 16 12 38.4 +1.5
baz=265
SKT Skwentna 43.74 38 P P 16 06 10.4 +1.5
SKT Skwentna 43.74 38 P P 16 06 10.9 +2.0
baz=271
SKT S S 16 12 38.4 -0.1
baz=271
GTOI Gorontalo 43.79 211 P P 16 06 10.0 +0.3
comp=Z,2µmcomp=Z,2µmcomp=Z,54nm,1.7s
LSA Lhasa 43.79 273 P P 16 06 11.8 +1.6
LSA PP PcP 16 07 55.3 -1.5
LSA S S 16 12 45.8 +5.0
LSA pmax pmax
comp=Z,66nm,1.4s
LSA pmax pmax
comp=Z,2µm,6.3s
LSA LR LR
comp=Z,10µm,15.7s
LSA LR LR
comp=Z,9µm,14.2s
LSA LR LR
comp=Z,9µm,12.8s
LSA Lhasa 43.79 273 P P 16 06 11.2 +0.9
LSA P P 16 06 11.2 +0.9
LSA P P 16 06 11.2 +0.9
LSA Lhasa 43.79 273 P P 16 06 11.1 +0.9
HOM Homer 43.79 42 P P 16 06 09.7 +0.4
baz=274
E22K Anaktuvuk Pass 43.83 29 P P 16 06 10.4 +0.8
baz=265
H22K Ishtalitna Cre 43.85 32 P P 16 06 11.8 +2.1
baz=267
H22K S S 16 12 43.4 +3.4
baz=267
G22K Bettles 43.85 31 P P 16 06 11.6 +1.9
baz=266
G22K S S 16 12 41.8 +1.8
baz=266
CHTO Chiang Mai 43.91 254 P P 16 06 10.8 0.0
CHTO IAmb IAmb 16 06 16.5
comp=Z,106nm,1.1s
CHTO Chiang Mai 43.91 254 IAMs_20 IAMs_20 16 23 27.0
comp=Z,8µm,20.0s
CHTO Chiang Mai 43.91 254 P P 16 06 10.8 0.0
CHTO pmax pmax
comp=Z,105nm,1.1s
CHTO MLR MLR
comp=Z,8µm,20.0s
CHTO Chiang Mai 43.91 254 P P 16 06 10.7 0.0
CHTO P P 16 06 10.7 0.0
CHTO P P 16 06 10.7 0.0
CHTO Chiang Mai 43.91 254 P P 16 06 11.2 +0.5
BPAW Bear Paw Mtn. 43.97 35 P P 16 06 11.3 +0.6
BPAW Bear Paw Mtn. 43.97 35 P P 16 06 12.5 +1.8
baz=270
BPAW S S 16 12 43.6 +1.8
baz=270
CAPN Captain Cook N 43.97 40 IAMs_20 IAMs_20 16 26 27.6
comp=Z,7µm,18.0s
CAPN Captain Cook N 43.97 40 P P 16 06 12.7 +2.1
baz=273
MK31 Makanchi Array 43.98 300 P P 16 06 11.3 +0.3
MK31 Makanchi Array 43.98 300 i P P 16 06 10.7 -0.4
MK31 pmax pmax
comp=Z,286nm,1.1s
MKAR Makanchi Array 43.98 300 P P 16 06 10.8 -0.2
comp=Z,168nm,1.0s,baz=82,slow=8.6,SNR=261
MKAR S S 16 12 40.9 -1.6
comp=Z,3.4nm,1.0s,baz=54,slow=13,SNR=2.2
MKAR LR LR 16 25 38.2
comp=Z,16µm,19.0s,baz=90,slow=38
comp=Z,168nm,1.0s
MKAR Makanchi Array 43.98 300 P P 16 06 11.4 +0.3
MKAR Makanchi Array 43.98 300 P P 16 06 11.4 +0.3
KTH Kantishna Hill 44.00 36 P P 16 06 12.1 +1.0
KTH IAmb IAmb 16 06 43.9
comp=Z,186nm,1.3s
KTH IAMs_20 IAMs_20 16 24 03.3
comp=Z,6µm,18.0s
MLY Manley 44.09 34 IAMs_20 IAMs_20 16 27 01.5
comp=Z,6µm,19.0s
MLY Manley 44.09 34 P P 16 06 13.9 +2.3
baz=269,SNR=16
MLY S S 16 12 46.2 +2.6
baz=269
CMAR Chiang Mai Arr 44.13 254 P P 16 06 12.8 +0.3
comp=Z,27nm,0.9s,baz=44,slow=6.7,SNR=99
CMAR LR LR 16 25 39.5
comp=Z,8µm,18.2s,baz=55,slow=38
comp=Z,27nm,0.9s
CMAR Chiang Mai Arr 44.13 254 P P 16 06 12.8 +0.3
SUA Susitna One 44.13 39 P P 16 06 13.0 +0.8
SUA Susitna One 44.13 39 P P 16 06 13.3 +1.1
baz=273
SUA S S 16 12 43.6 -0.8
baz=273
BRLK Bradley Lake 44.16 41 P P 16 06 11.7 -0.6
MAKZ Makanchi 44.19 300 P P 16 06 12.8 +0.1
MAKZ Makanchi 44.19 300 P P 16 06 12.8 +0.1
MAKZ pmax pmax
comp=Z,254nm,1.1s
MAKZ MLR MLR
comp=Z,19µm,18.0s
BRSE Bradley Lake S 44.24 41 P P 16 06 14.1 +1.2
baz=274
BRSE S S 16 12 43.1 -2.8
baz=274
TOLI2 Tolitoli 44.27 214 IAMs_20 IAMs_20 16 22 01.7
comp=Z,9µm,22.0s
TRF Thorofare Moun 44.28 36 P P 16 06 15.5 +2.1
baz=271
TRF S S 16 12 48.4 +1.7
baz=271
CUT Chulitna 44.32 38 P P 16 06 13.5 0.0
baz=272
CUT S S 16 12 46.9 +0.1
baz=272
D23K Nanushuk River 44.32 28 P P 16 06 14.1 +0.6
baz=265
D23K S S 16 12 47.9 +1.1
baz=265
FAKI Fak Fak 44.32 197 P P 16 06 13.2 -0.7
FAKI IAMs_20 IAMs_20 16 22 10.4
comp=Z,11µm,20.0s
FAKI Fak Fak 44.32 197 P P 16 06 15.1 +1.1
comp=Z,2µmcomp=Z,4µmcomp=Z,144nm,1.8s
FAKI Fak Fak 44.32 197 P P 16 06 15.2 +1.2
MRSI Marisa 44.36 212 P P 16 06 15.9 +1.6
comp=Z,5µmcomp=Z,6µmcomp=Z,226nm,1.3s
M22K Willow 44.42 38 S S 16 12 46.3 -1.9
baz=273
G23K Bananza Creek 44.43 31 P P 16 06 16.8 +2.4
baz=268,SNR=17
G23K S S 16 12 50.0 +1.6
baz=268
C23K Itkillik River 44.43 27 P P 16 06 16.0 +1.7
baz=264,SNR=11
C23K S S 16 12 48.7 +0.4
baz=264
SEM Semipalatinsk 44.45 305 c iP P 16 06 13.8 -1.1
SEM eS S 16 12 49.4 -0.1
SEM pmax pmax
comp=Z,161nm,1.4s
SEM Semipalatinsk 44.45 305 ⇑ iP P 16 06 13.9 -1.1
comp=Z,161nm,1.4s,baz=305
SEM eS S 16 12 49.5 -0.1
baz=305
SEM LR LR 16 24 50.1
baz=305
H23K Yukon River 44.60 33 P P 16 06 17.4 +1.6
H23K IAmb IAmb 16 06 44.0
comp=Z,97nm,1.1s
H23K IAMs_20 IAMs_20 16 27 13.1
comp=Z,7µm,19.0s
H23K Yukon River 44.60 33 P P 16 06 18.8 +3.0
baz=269,SNR=24
H23K S S 16 12 55.0 +4.1
baz=269
RC01 Rabbit Creek A 44.64 39 P P 16 06 17.8 +1.7
RC01 IAmb IAmb 16 06 45.1
comp=Z,93nm,1.2s
RC01 IAMs_20 IAMs_20 16 27 30.4
comp=Z,6µm,19.0s
RC01 Rabbit Creek A 44.64 39 P P 16 06 17.5 +1.4
baz=274,SNR=8.1
RC01 S S 16 12 49.0 -2.6
baz=274
I23K Minto, Yukon-K 44.67 34 P P 16 06 18.1 +1.9
I23K IAmb IAmb 16 06 54.2
comp=Z,206nm,1.8s
I23K IAMs_20 IAMs_20 16 27 09.9
comp=Z,7µm,18.0s
I23K Minto, Yukon-K 44.67 34 P P 16 06 15.8 -0.5
baz=270
I23K S S 16 12 54.2 +2.3
baz=270
O22K Cooper Landing 44.69 40 IAMs_20 IAMs_20 16 26 08.7
comp=Z,6µm,19.0s
O22K Cooper Landing 44.69 40 P P 16 06 15.9 -0.6
baz=274
O22K S S 16 12 50.3 -2.0
baz=274
TOLK Toolik Lake Re 44.70 29 IAMs_20 IAMs_20 16 26 33.6
comp=Z,8µm,18.0s
TOLK Toolik Lake Re 44.70 29 P P 16 06 17.3 +0.8
baz=266,SNR=12
TOLK S S 16 12 51.8 -0.6
baz=266
NEA2 Nenana 44.80 34 P P 16 06 19.4 +2.0
NEA2 IAmb IAmb 16 07 10.7
comp=Z,78nm,1.2s
NEA2 Nenana 44.80 34 P P 16 06 18.1 +0.8
baz=271,SNR=12
NEA2 S S 16 12 56.1 +2.3
baz=271
SEW Seward 44.86 41 P P 16 06 18.8 +1.0
SEW IAmb IAmb 16 06 47.5
comp=Z,62nm,1.1s
SEW Seward 44.86 41 P P 16 06 17.7 -0.1
baz=275
SEW S S 16 12 52.5 -2.2
baz=275
MCK McKinley 44.88 36 IAMs_20 IAMs_20 16 25 37.6
comp=Z,6µm,19.0s
MCK McKinley 44.88 36 P P 16 06 19.8 +1.8
baz=272,SNR=8.0
MCK S S 16 12 55.0 -0.1
baz=272
PMR Palmer 44.90 39 P P 16 06 19.4 +1.3
baz=274
PMR S S 16 12 53.7 -1.5
baz=274
RND Reindeer 44.93 36 P P 16 06 19.5 +1.1
RND IAmb IAmb 16 06 56.1
comp=Z,113nm,1.2s
RND IAMs_20 IAMs_20 16 24 32.8
comp=Z,7µm,20.0s
RND Reindeer 44.93 36 P P 16 06 19.5 +1.1
RND pmax pmax
comp=Z,113nm,1.2s
RND MLR MLR
comp=Z,7µm,20.0s
GHO Glory Hole Cre 44.98 38 P P 16 06 19.6 +0.6
D24K Happy Valley 45.00 28 P P 16 06 18.4 -0.4
baz=266
D24K S S 16 12 56.9 +0.2
baz=266
E24K Your Creek 45.07 29 P P 16 06 20.0 +0.5
baz=268,SNR=22
E24K S S 16 12 59.2 +1.4
baz=268
KRVT Keravat (AS076 45.08 168 LR LR 16 25 05.5
comp=Z,3µm,18.9s,baz=131,slow=36
C24K Franklin Bluff 45.08 27 P P 16 06 20.1 +0.6
baz=266
C24K S S 16 12 58.9 +1.1
baz=266
WAT1 Susitna Watana 45.09 37 P P 16 06 19.1 -0.6
baz=273
WAT1 S S 16 12 56.6 -1.5
baz=273
GUWA GUWAHATI 45.13 268 eP P 16 06 19.5 -0.9
GUWA IAmb IAmb 16 06 50.9
comp=Z,123nm,1.1s
GUWA i x S 16 13 00.9 +1.4
MDM Murphy Dome 45.15 34 P P 16 06 21.3 +1.1
MDM IAmb IAmb 16 06 43.3
comp=Z,127nm,1.3s
MDM IAMs_20 IAMs_20 16 25 12.8
comp=Z,7µm,19.0s
SANI Sanana 45.21 205 P P 16 06 19.9 -1.1
comp=Z,3µmcomp=Z,4µmcomp=Z,168nm,1.7s
WRH Wood River Hil 45.23 35 IAMs_20 IAMs_20 16 25 04.7
comp=Z,6µm,19.0s
KNK Knik Glacier 45.23 39 P P 16 06 21.8 +1.0
KNK IAmb IAmb 16 06 45.0
comp=Z,124nm,1.2s
KNK Knik Glacier 45.23 39 P P 16 06 22.0 +1.2
baz=275,SNR=5.5
KNK S S 16 12 60.0 -0.2
baz=275
SML Sawmill 45.26 38 P P 16 06 22.3 +1.2
SML Sawmill 45.26 38 P P 16 06 22.4 +1.3
baz=274,SNR=12
SML S S 16 13 00.7 0.0
baz=274
F24K Squaw Lake 45.28 30 P P 16 06 22.0 +0.8
baz=269
F24K S S 16 13 03.2 +2.3
baz=269
H24K Noodor Dome 45.28 33 IAMs_20 IAMs_20 16 28 01.2
comp=Z,8µm,18.0s
H24K Noodor Dome 45.28 33 P P 16 06 22.5 +1.2
baz=271,SNR=9.5
H24K S S 16 13 03.6 +2.7
baz=271
TCOL CIGO, UAF Yank 45.31 34 P P 16 06 22.4 +1.0
baz=272
TCOL S S 16 13 02.9 +1.7
baz=272
COLA College 45.32 34 IAMs_20 IAMs_20 16 25 17.0
comp=Z,6µm,20.0s
COLA College 45.32 34 c iP P 16 06 23.1 +1.7
COLA pmax pmax
comp=Z,49nm,1.0s
COLA MLR MLR
comp=Z,6µm,17.0s
COLA College 45.32 34 P P 16 06 22.7 +1.3
baz=272
COLA S S 16 13 02.5 +1.2
baz=272
SHL Shillong 45.32 267 eP P 16 06 20.9 -1.2
PWL Port Wells 45.34 40 P P 16 06 23.1 +1.4
PWL IAmb IAmb 16 06 36.8
comp=Z,52nm,1.0s
PWL IAMs_20 IAMs_20 16 27 32.9
comp=Z,7µm,20.0s
PWL Port Wells 45.34 40 P P 16 06 21.3 -0.4
baz=275,SNR=13
PWL S S 16 13 00.8 -0.9
baz=275
MPSI Mapaga 45.34 215 P P 16 06 22.1 0.0
comp=Z,4µmcomp=Z,2µmcomp=Z,68nm,1.6s
CCB Clear Creek Bu 45.34 34 P P 16 06 23.3 +1.7
CCB IAmb IAmb 16 07 00.5
comp=Z,99nm,1.6s
KURK Kurchatov 45.40 306 P P 16 06 22.2 0.0
KURK Kurchatov 45.40 306 IAMs_20 IAMs_20 16 26 03.5

comp=Z,7µm,18.0s
KURK Kurchatov 45.40 306 *ce* P **P** **16 06 21.5 -0.7**
KURK pmax pmax
comp=Z,368nm,1.3s
KURK MLR MLR
comp=Z,18µm,14.0s
KURK Kurchatov 45.40 306 P **P** **16 06 21.5 -0.7**
KURK P **P** **16 06 21.5 -0.7**
LUWI Luwuk 45.42 210 P **P** **16 06 22.6 -0.2**
LUWI Luwuk 45.42 210 P **P** **16 06 21.3 -1.4**
comp=Z,4µmcomp=Z,3µmcomp=Z,137nm,1.5s
LUWI Luwuk 45.42 210 P **P** **16 06 23.6 +0.9**
G24K Hadweenzic Riv 45.44 31 P **P** **16 06 23.4 +1.0**
baz=270,SNR=9.0
G24K S **S** **16 13 06.2 +3.1**
baz=270
KURBB Kurchatov Arra 45.47 306 P **P** **16 06 22.7 -0.1**
comp=Z,190nm,0.9s,baz=79,slow=8.5,SNR=237
KURBB S **S** **16 13 01.8 -2.1**
comp=Z,1.0nm,0.7s,baz=31,slow=32,SNR=0.8
KURBB LR LR 16 25 30.3
comp=Z,4µm,19.4s,baz=59,slow=36
comp=Z,190nm,0.9s
KURBB Kurchatov Arra 45.47 306 P **P** **16 06 22.4 -0.4**
WAT6 Susitna Watana 45.48 37 P **P** **16 06 24.0 +1.0**
baz=274,SNR=14
WAT6 S **S** **16 13 04.2 +0.2**
baz=274
POKR Poker Plat Res 45.49 34 IAMs_20 IAMs_20 16 27 44.6
comp=Z,7µm,18.0s
POKR Poker Plat Res 45.49 34 P **P** **16 06 24.0 +1.3**
baz=272,SNR=16
POKR S **S** **16 13 05.2 +1.4**
baz=272
M23K Glacier View 45.55 38 P **P** **16 06 24.5 +1.2**
baz=275,SNR=8.5
M23K S **S** **16 13 04.8 0.0**
baz=275
DHY Denali Highway 45.61 36 P **P** **16 06 25.2 +1.2**
baz=274,SNR=9.8
DHY S **S** **16 13 05.3 -0.7**
baz=274
HDA Harding Lake 45.72 35 P **P** **16 06 25.5 +0.8**
HDA IAMs_20 IAMs_20 16 25 27.9
comp=Z,5µm,19.0s
HDA Harding Lake 45.72 35 P **P** **16 06 25.7 +1.0**
baz=273,SNR=16
HDA S **S** **16 13 06.6 -0.6**
baz=273
HDA S **S** **16 13 06.6 -0.6**
baz=273
IL31 45.73 34 P **P** **16 06 25.6 +1.0**
IL31 IAmb IAmb 16 06 46.3
comp=Z,90nm,1.0s
ILAR Eielson Array 45.73 34 P **P** **16 06 25.6 +0.9**
comp=Z,8.1nm,0.7s,baz=262,slow=6.4,SNR=67
comp=Z,8.1nm,0.7s
ILAR Eielson Array 45.73 34 P **P** **16 06 25.8 +1.1**
SCM Sheep Creek Mo 45.73 38 P **P** **16 06 25.7 +0.8**
SCM IAmb IAmb 16 06 55.5
comp=Z,63nm,1.0s
SCM Sheep Creek Mo 45.73 38 P **P** **16 06 25.7 +0.8**
SCM pmax pmax
comp=Z,63nm,1.0s
SCM MLR MLR
comp=Z,4µm,19.0s
SCM Sheep Creek Mo 45.73 38 P **P** **16 06 26.2 +1.4**
baz=275,SNR=15
SCM S **S** **16 13 08.9 +1.4**
baz=275
APSI Ampana 45.74 212 P **P** **16 06 25.3 0.0**
comp=Z,3µmcomp=Z,145nm,1.4s
D25K Kavik River 45.88 28 P **P** **16 06 26.7 +0.8**
baz=269,SNR=12
D25K S **S** **16 13 09.2 -0.2**
baz=269
P23K Montague Islan 45.89 41 P **P** **16 06 26.9 +0.9**
baz=277
P23K S **S** **16 13 10.6 +0.9**
baz=277
GLI Glacier Island 45.94 40 IAMs_20 IAMs_20 16 27 49.8
comp=Z,6µm,20.0s
GLI Glacier Island 45.94 40 P **P** **16 06 27.1 +0.7**
baz=276
GLI S **S** **16 13 10.5 +0.1**
baz=276
AAI Ambon 46.08 202 P **P** **16 06 29.2 +1.3**
comp=Z,3µmcomp=Z,184nm,1.5s
H25K Birch Creek 46.11 32 P **P** **16 06 29.3 +1.6**
baz=272
H25K S **S** **16 13 18.7 +6.0**
baz=272
F25K Christian Rive 46.15 30 P **P** **16 06 29.5 +1.5**
baz=271,SNR=17
F25K S **S** **16 13 17.2 +3.8**
baz=271
E25K Arctic Village 46.17 29 P **P** **16 06 29.9 +1.8**
baz=271
E25K S **S** **16 13 16.9 +3.3**
baz=271
M24K Tolsona, Glenn 46.25 38 P **P** **16 06 30.9 +2.0**
baz=276,SNR=10
M24K S **S** **16 13 17.5 +2.6**
baz=276
FID Port Fidalgo 46.26 40 P **P** **16 06 28.9 -0.1**
FID IAmb IAmb 16 06 59.1
comp=Z,56nm,1.0s
PRP Porcupine Dome 46.27 33 P **P** **16 06 29.9 +0.8**
baz=273
PRP S **S** **16 13 18.1 +2.8**
baz=273
K24K Donnelly Dome 46.28 35 P **P** **16 06 30.5 +1.4**
baz=274,SNR=15
K24K S **S** **16 13 14.1 -1.1**
baz=274
HIN Hinchinbrook I 46.29 40 P **P** **16 06 29.7 +0.5**
HIN IAmb IAmb 16 07 10.1
comp=Z,113nm,1.4s
HIN IAMs_20 IAMs_20 16 28 14.0
comp=Z,7µm,20.0s
J25K Salcha River, 46.39 34 P **P** **16 06 30.9 +0.9**
J25K IAMs_20 IAMs_20 16 28 42.6
comp=Z,5µm,19.0s
J25K Salcha River, 46.39 34 P **P** **16 06 30.6 +0.6**
baz=274
J25K S **S** **16 13 15.9 -1.0**
baz=274
C26K Camden Bay 46.40 27 P **P** **16 06 30.5 +0.6**
baz=269
C26K S **S** **16 13 17.4 +0.6**
baz=269
BNDI Bandanaira 46.42 199 P **P** **16 06 30.9 +0.3**
comp=Z,7µmcomp=Z,276nm,1.2s
KLU Klutina 46.44 39 P **P** **16 06 31.7 +1.3**
KLU IAmb IAmb 16 06 55.0
comp=Z,98nm,1.1s
KLU Klutina 46.44 39 P **P** **16 06 31.7 +1.3**
baz=277,SNR=23
KLU S **S** **16 13 20.3 +2.6**
baz=277
PAX Paxson 46.49 37 P **P** **16 06 33.4 +2.6**
baz=276,SNR=8.2
PAX S **S** **16 13 18.0 -0.4**
baz=276
Q23K Middleton Isla 46.49 41 IAMs_20 IAMs_20 16 23 18.6
comp=Z,5µm,18.0s
Q23K Middleton Isla 46.49 41 P **P** **16 06 33.0 +2.3**
baz=278
Q23K S **S** **16 13 20.8 +2.5**
baz=278
TURI Tura 46.51 268 *eP* **P** **16 06 28.0 -3.4**
BMAR Burnt Mountain 46.56 30 P **P** **16 06 33.4 +2.2**
EYAK Cordova Ski Ar 46.64 40 P **P** **16 06 34.1 +2.3**
baz=278,SNR=10
EYAK S **S** **16 13 22.3 +2.0**
baz=278
HARP HAARP 46.69 37 P **P** **16 06 34.3 +1.9**
baz=276
HARP S **S** **16 13 22.3 +1.1**
baz=276
RIDG Independent Ri 46.70 35 P **P** **16 06 33.5 +1.1**
baz=275
RIDG S **S** **16 13 20.1 -1.2**
baz=275
AGT Agartala 46.71 266 *eP* **P** **16 06 34.5 +1.6**
F26K Sheenjek River 46.72 30 P **P** **16 06 34.0 +1.5**
baz=272,SNR=19
F26K S **S** **16 13 25.7 +4.2**

baz=272
C27K Jago River 46.82 27 P **P** **16 06 33.8 +0.5**
baz=271
C27K S **S** **16 13 22.9 +0.1**
baz=271
G26K Porcupine Rive 46.89 31 P **P** **16 06 34.6 +0.8**
baz=273,SNR=11
G26K S **S** **16 13 27.9 +4.1**
baz=273
SHLS Shalkode 46.98 296 *c iP* **P** **16 06 32.4 -2.6**
SHLS pmax pmax
comp=Z,123nm,1.7s
SHLS Shalkode 46.98 296 ⇑ *iP* **P** **16 06 32.4 -2.6**
comp=Z,122nm,1.7s,baz=295
TARA Tarawa 46.98 138 IAMs_20 IAMs_20 16 28 39.5
comp=Z,8µm,18.0s
SCRK Sand Creek 47.05 35 P **P** **16 06 35.9 +0.6**
SCRK IAmb IAmb 16 07 12.2
comp=Z,84nm,1.2s
SCRK Sand Creek 47.05 35 P **P** **16 06 33.9 -1.3**
baz=276,SNR=25
SCRK S **S** **16 13 26.4 0.0**
baz=276
DOT Dot Lake 47.05 35 P **P** **16 06 36.3 +1.2**
DOT IAmb IAmb 16 06 48.2
comp=Z,72nm,1.5s
N25K Chitina, Valde 47.05 38 P **P** **16 06 34.5 -0.8**
baz=278
N25K S **S** **16 13 28.7 +2.2**
baz=278
TDK Taldyqorghan 47.09 298 *c iP* **P** **16 06 35.8 +0.1**
TDK *eS* **S** **16 13 27.8 +0.4**
TDK pmax pmax
comp=Z,142nm,1.0s
TDK MLR MLR
comp=Z,18µm,16.0s
TDK Taldyqorghan 47.09 298 ⇑ *iP* **P** **16 06 35.8 +0.1**
comp=Z,142nm,1.0s,baz=298
TDK *eS* **S** **16 13 27.8 +0.4**
baz=298
TDK LR LR 16 26 32.9
comp=Z,18µm,15.8s,baz=298
BMRM Bremner River 47.14 39 P **P** **16 06 35.6 -0.2**
baz=278,SNR=11
BMRM S **S** **16 13 30.7 +3.1**
baz=278
J26L Joseph Creek 47.18 34 P **P** **16 06 36.0 -0.2**
baz=276
J26L S **S** **16 13 27.9 -0.3**
baz=276
RAGM Ragged Mountai 47.19 40 IAMs_20 IAMs_20 16 29 30.7
comp=Z,7µm,19.0s
SMKI Samarinda 47.25 217 P **P** **16 06 38.2 +1.1**
comp=Z,7µmcomp=Z,123nm,1.0s
I26K Coal Creek Min 47.27 33 P **P** **16 06 38.0 +1.2**
I26K IAMs_20 IAMs_20 16 28 47.6
comp=Z,8µm,18.0s
I26K Coal Creek Min 47.27 33 P **P** **16 06 36.7 -0.1**
baz=275
I26K S **S** **16 13 30.0 +0.7**
baz=275
SBUM Sibu 47.28 225 IAMs_20 IAMs_20 16 27 54.5
comp=Z,8µm,19.0s
UZB Uzynbulak 47.29 296 *i P* **P** **16 06 37.0 -0.4**
UZB pmax pmax
comp=Z,101nm,2.4s
UZB Uzynbulak 47.29 296 *i P* **P** **16 06 37.0 -0.4**
comp=Z,101nm,2.4s,baz=296
KAIM Kayak Island 47.39 41 P **P** **16 06 37.3 -0.4**
baz=279
KAIM S **S** **16 13 35.4 +4.3**
baz=279
HMT Hamilton 47.40 40 IAMs_20 IAMs_20 16 29 46.3
comp=Z,7µm,19.0s
KPKS Kokpek 47.41 296 *c iP* **P** **16 06 37.9 -0.4**
KPKS *eS* **S** **16 13 33.0 +1.0**
KPKS pmax pmax
comp=Z,264nm,2.5s
KPKS Kokpek 47.41 296 ⇑ *iP* **P** **16 06 37.9 -0.4**
comp=Z,264nm,2.5s,baz=296
KPKS *eS* **S** **16 13 33.0 +1.0**
baz=296
L26K Log Cabin Wild 47.45 36 IAMs_20 IAMs_20 16 29 29.5
comp=Z,5µm,19.0s
L26K Log Cabin Wild 47.45 36 P **P** **16 06 37.8 -0.4**
baz=277,SNR=20
L26K S **S** **16 13 34.9 +3.0**
baz=277
TAPN Taplejung 47.58 272 *eP* **P** **16 06 39.4 -0.6**
comp=Z,654nm,1.6s
E27K Coleen River 47.65 29 P **P** **16 06 40.2 +0.4**
baz=274
E27K S **S** **16 13 37.4 +2.7**
baz=274
BERG Berg Lake 47.66 40 IAMs_20 IAMs_20 16 30 04.4
comp=Z,7µm,18.0s
ZHN Zhinishke 47.68 296 *eP* **P** **16 06 40.4 0.0**
ZHN Zhinishke 47.68 296 *eP* **P** **16 06 40.4 0.0**
baz=296
M26K Nabesna, AK 47.69 37 P **P** **16 06 40.7 +0.6**
baz=278,SNR=20
M26K S **S** **16 13 38.2 +2.7**
baz=278
SATY Saty 47.74 296 *c iP* **P** **16 06 40.8 -0.1**
SATY *e* 16 08 32.4
SATY pmax pmax
comp=Z,228nm,2.4s
SATY Saty 47.74 296 ⇑ *iP* **P** **16 06 40.9 -0.1**
comp=Z,228nm,2.4s,baz=296
SATY *ePP* **PP** **16 08 32.4 0.0**
baz=296
G27K Doyon Strip 47.74 31 P **P** **16 06 40.4 -0.1**
baz=275,SNR=8.6
G27K S **S** **16 13 39.5 +3.4**
baz=275
MCARA McCarthy VSAT 47.83 38 P **P** **16 06 43.1 +1.9**
MCARA IAmb IAmb 16 06 58.2
comp=Z,74nm,1.0s
MCARA McCarthy VSAT 47.83 38 P **P** **16 06 41.8 +0.6**
baz=279,SNR=8.9
MCARA S **S** **16 13 39.7 +2.3**
baz=279
H27K Steamboat Moun 47.85 32 P **P** **16 06 42.0 +0.6**
baz=276
H27K S **S** **16 13 43.0 +5.4**
baz=276
K27K Chicken 47.88 35 IAMs_20 IAMs_20 16 26 35.8
comp=Z,6µm,19.0s
K27K Chicken 47.88 35 P **P** **16 06 42.2 +0.7**
baz=278
K27K S **S** **16 13 40.1 +2.1**
baz=278
I27K Kandik River 47.88 33 P **P** **16 06 43.3 +1.7**
baz=276
I27K S **S** **16 13 40.1 +2.0**
baz=276
BGLC Bering Glacier 47.92 40 P **P** **16 06 43.0 +1.2**
baz=280
BGLC S **S** **16 13 41.7 +3.2**
baz=280
TGL Tana Glacier 48.03 39 IAMs_20 IAMs_20 16 26 41.0
comp=Z,6µm,21.0s
WAX Waxell Ridge 48.07 40 IAMs_20 IAMs_20 16 29 50.1
comp=Z,6µm,18.0s
ODAN Odare 48.07 272 *eP* **P** **16 06 41.8 -2.0**
SNH Sunshine Point 48.12 40 IAMs_20 IAMs_20 16 30 53.5
comp=Z,6µm,18.0s
L27K Beaver Creek, 48.13 36 P **P** **16 06 45.1 +1.6**
L27K Beaver Creek, 48.13 36 P **P** **16 06 44.4 +0.9**
baz=279,SNR=41
L27K S **S** **16 13 44.2 +2.6**
baz=279
BCAR Beaver Creek A 48.15 36 P **P** **16 06 45.0 +1.4**
EGAK Eagle 48.18 34 P **P** **16 06 44.1 +0.3**
EGAK Eagle 48.18 34 P **P** **16 06 45.4 +1.6**
baz=278,SNR=31
EGAK S **S** **16 13 43.3 +1.1**
baz=278
M27K Edge Creek, AK 48.21 37 IAMs_20 IAMs_20 16 27 14.8
comp=Z,6µm,20.0s
M27K Edge Creek, AK 48.21 37 P **P** **16 06 44.8 +0.5**
baz=279,SNR=18
M27K S **S** **16 13 46.3 +3.2**
baz=279
ISLE Juniper Island 48.29 39 P **P** **16 06 45.4 +0.5**
ISLE IAmb IAmb 16 07 03.2
comp=Z,75nm,1.0s

ISLE IAMs_20 IAMs_20 16 29 46.9
comp=Z,5µm,21.0s
TTSI Tana Toraja 48.42 213 P **P** **16 06 45.9 -0.3**
comp=Z,1µmcomp=Z,40nm,2.2s
MESA MESA 48.56 40 IAMs_20 IAMs_20 16 30 08.1
comp=Z,6µm,19.0s
MESA MESA 48.56 40 P **P** **16 06 47.7 +0.6**
baz=281
MESA S **S** **16 13 49.8 +1.7**
baz=281
JIRN Jiri 48.58 274 *eP* **P** **16 06 46.8 -1.1**
RAMN Ramite 48.63 272 *eP* **P** **16 06 46.6 -1.5**
comp=Z,560nm,1.1s
MDOK Medeo 48.63 296 *i P* **P** **16 06 47.9 +0.1**
MDOK *e* 16 08 41.0
MDOK *eS* **S** **16 13 50.0 +0.5**
MDOK MLR MLR
comp=Z,17µm,15.0s
MDOK Medeo 48.63 296 *i P* **P** **16 06 48.0 +0.1**
baz=296
MDOK *ePP* **PP** **16 08 41.1 +0.5**
baz=296
MDOK *eS* **S** **16 13 50.0 +0.5**
baz=296
MDOK LR LR 16 27 27.1
comp=Z,17µm,15.3s,baz=296
BVCY Beaver Creek 48.67 37 P **P** **16 06 48.5 +0.8**
baz=280
BVCY S **S** **16 13 52.0 +2.7**
baz=280
GUN Gumba 48.69 274 *eP* **P** **16 06 48.6 -0.1**
comp=Z,537nm,1.0s
CTG Chitna Glacier 48.71 39 P **P** **16 06 50.3 +2.2**
baz=281,SNR=8.8
CTG S **S** **16 13 52.3 +2.3**
baz=281
AAA Alma-Ata 48.71 297 *c iP* **P** **16 06 48.7 +0.4**
AAA pmax pmax
comp=Z,143nm,1.3s
AAA MLR MLR
comp=Z,20µm,16.0s
AAA Alma-Ata 48.71 297 ⇑ *iP* **P** **16 06 48.8 +0.4**
comp=Z,144nm,1.3s,baz=296
AAA LR LR 16 27 30.7
comp=Z,20µm,15.6s,baz=296
CTGM Chitina Glacie 48.71 39 IAMs_20 IAMs_20 16 30 44.9
comp=Z,5µm,18.0s
MTKI Muara Teweh, K 48.78 220 P **P** **16 06 50.5 +1.5**
comp=Z,3µmcomp=Z,3µmcomp=Z,99nm,1.2s
KUU Kurty 48.86 298 *c iP* **P** **16 06 48.7 -0.7**
KUU *eS* **S** **16 13 52.8 +0.4**
KUU pmax pmax
comp=Z,284nm,1.9s
KUU MLR MLR
comp=Z,7µm,12.0s
KUU Kurty 48.86 298 ⇑ *iP* **P** **16 06 48.8 -0.7**
comp=Z,284nm,1.9s,baz=298
KUU *eS* **S** **16 13 52.8 +0.4**
baz=298
KUU LR LR 16 28 13.1
comp=Z,7µm,12.0s,baz=298
YUK3 Moose Creek 48.97 38 P **P** **16 06 51.7 +1.5**
baz=281,SNR=14
DAWY Dawson 49.04 35 P **P** **16 06 52.4 +1.9**
baz=280
DAWY S **S** **16 13 57.1 +2.6**
baz=280
KSM Kuching 49.15 227 P **P** **16 06 52.7 +0.8**
KSM IAmb IAmb 16 06 55.7
comp=Z,120nm,1.2s
KKN Kakani 49.21 274 *eP* **P** **16 06 52.1 -0.4**
PKI Pulchoki 49.22 274 *eP* **P** **16 06 51.1 -1.6**
comp=Z,817nm,1.7s
PKIN Phulchoki 49.23 274 *eP* **P** **16 06 51.1 -1.6**
comp=Z,692nm,1.7s
BRZS Berezniki 49.26 306 *c iP* **P** **16 06 52.1 -0.2**
BRZS *eS* **S** **16 13 58.4 +0.6**
BRZS pmax pmax
comp=Z,204nm,2.4s
BRZS Berezniki 49.26 306 ⇑ *iP* **P** **16 06 52.2 -0.2**
comp=Z,204nm,2.4s,baz=306
BRZS *eS* **S** **16 13 58.5 +0.6**
baz=306
SPSI Sidrap Palu 49.27 212 P **P** **16 06 54.3 +1.6**
comp=Z,2µmcomp=Z,65nm,1.3s
I29M Ogilvie Camp, 49.28 33 P **P** **16 06 53.5 +1.1**
I29M IAmb IAmb 16 07 15.4
comp=Z,104nm,1.1s
I29M IAMs_20 IAMs_20 16 30 10.0
comp=Z,8µm,18.0s
I29M Ogilvie Camp, 49.28 33 P **P** **16 06 54.8 +2.4**
baz=280,SNR=22
O28M Mount Upton 49.30 39 P **P** **16 06 53.3 +0.5**
baz=282
O28M S **S** **16 13 59.5 +0.9**
baz=282
PINM Pinnacle 49.41 40 P **P** **16 06 53.9 +0.5**
baz=282
PINM S **S** **16 14 01.7 +1.9**
baz=282
DMN Daman 49.43 274 *eP* **P** **16 06 52.9 -1.4**
comp=Z,925nm,1.7s
J29M Klondike Camp 49.48 34 IAMs_20 IAMs_20 16 30 44.2
comp=Z,6µm,19.0s
J29M Klondike Camp 49.48 34 P **P** **16 06 54.2 +0.3**
baz=280
J29M S **S** **16 14 01.4 +0.7**
baz=280
ULHL Ulahol 49.52 296 P **P** **16 06 56.9 +2.1**
SNR=10.0
BBSI Bau Bau 49.59 208 P **P** **16 06 57.1 +1.9**
comp=Z,213nmcomp=Z,14nm,1.1s
GKN Gorkha 49.59 275 *eP* **P** **16 06 54.6 -0.8**
comp=Z,743nm,1.6s
STKI Sintang 49.68 224 P **P** **16 06 57.8 +1.9**
comp=Z,3µmcomp=Z,65nm,1.7s
TKM2 Tokmak 2 49.72 297 P **P** **16 06 56.5 +0.4**
SNR=214
TKM2 Tokmak 2 49.72 297 *i* P **P** **16 06 56.3 +0.1**
TKM2 pmax pmax
comp=Z,310nm,1.1s
BVA0 Borovoye Array 49.74 311 *i P* **P** **16 06 56.0 0.0**
BVAR Borovoye Array 49.74 311 LR LR 16 29 18.7
comp=Z,15µm,19.8s,baz=316,slow=38
EPYK Eagle Plains 49.76 31 P **P** **16 06 57.1 +1.1**
baz=280,SNR=11
EPYK S **S** **16 14 06.6 +2.2**
baz=280
M29M Somme Creek 49.76 37 P **P** **16 06 57.1 +1.0**
baz=282
M29M S **S** **16 14 07.1 +2.4**
baz=282
BRVK Borovoye 49.80 311 P **P** **16 06 56.6 +0.3**
BRVK Borovoye 49.80 311 *ceP* **P** **16 06 56.7 +0.3**
BRVK pmax pmax
comp=Z,168nm,1.0s
BRVK MLR MLR
comp=Z,17µm,16.0s
BRVK Borovoye 49.80 311 P **P** **16 06 56.5 +0.1**
BRVK P **P** **16 06 56.5 +0.1**
BRVK P **P** **16 06 56.5 +0.1**
YUK4 Talbot Arm 49.91 38 P **P** **16 06 58.4 +1.1**
baz=283
PNL Peninsula 49.93 40 P **P** **16 06 57.8 +0.5**
baz=283
PNL S **S** **16 14 08.8 +1.9**
baz=283
BTLS Baital 50.00 300 *c iP* **P** **16 06 57.4 -0.6**
BTLS *e* 16 08 53.4
BTLS *eS* **S** **16 14 08.9 +0.7**
BTLS pmax pmax
comp=Z,133nm,2.1s
BTLS Baital 50.00 300 ⇑ *iP* **P** **16 06 57.4 -0.6**
comp=Z,132nm,2.1s,baz=300
BTLS *ePP* **PP** **16 08 53.5 +0.7**
baz=300
BTLS *eS* **S** **16 14 09.0 +0.7**
baz=300
DANN Dangsing 50.08 276 *eP* **P** **16 06 59.2 -0.1**
comp=Z,630nm,1.0s
YUK6 Outpost Mounta 50.13 38 P **P** **16 06 59.7 +0.5**
baz=283,SNR=6.7
YUK6 S **S** **16 14 13.5 +3.3**
baz=283
SGDS Sogindy 50.18 298 *c iP* **P** **16 06 59.1 -0.4**
SGDS *eS* **S** **16 14 11.0 0.0**
SGDS pmax pmax

comp=Z,216nm,2.6s
SGDS Sogindy 50.18 298⇑ *i*P **P 16 06 59.2 -0.4**
comp=Z,216nm,2.6s,baz=298
SGDS *e*S **S 16 14 11.0 0.0**
baz=298
O29M Mount Kennedy 50.18 39 P **P 16 07 00.0 +0.7**
baz=284,SNR=8.6
O29M S **S 16 14 11.2 +0.5**
baz=284
KAPI Kappang 50.23 212 LR LR 16 30 13.1
comp=Z,2µm,18.2s,baz=22,slow=38
KAPI Kappang 50.23 212*c i*P **P 16 06 59.9 -0.1**
KAPI pmax pmax
comp=Z,165nm,1.9s
KAPI Kappang 50.23 212 P **P 16 07 00.5 +0.4**
KAPI P **P 16 07 00.5 +0.4**
KBK Karagaybulak 50.26 297 P **P 16 07 00.7 +0.5**
SNR=30
CHMS Chumysh 50.26 297 P **P 16 07 00.1 0.0**
SNR=24
CHMS Chumysh 50.26 297 *i*P **P 16 06 59.5 -0.6**
CHMS pmax pmax
comp=Z,123nm,1.3s
USP Ospenovka 50.33 297 P **P 16 07 01.0 +0.3**
SNR=21
BKSI Bulukumba 50.36 211 P **P 16 06 59.8 -1.2**
comp=Z,3µmcomp=Z,1µmcomp=Z,44nm,0.8s
M30M Minto, Yukon 50.49 36 P **P 16 07 03.3 +1.8**
M30M IAmb IAmb 16 07 27.0
comp=Z,70nm,1.4s
M30M IAMs_20 IAMs_20 16 31 28.9
comp=Z,6µm,18.0s
M30M Minto, Yukon 50.49 36 P **P 16 07 02.6 +1.1**
baz=283,SNR=17
M30M S **S 16 14 18.5 +3.7**
baz=283
VLK Valmikinagar 50.53 275 *e*P **P 16 07 01.5 -0.7**
HYT Haines Junctio 50.57 38 P **P 16 07 03.0 +0.7**
baz=284,SNR=54
HYT S **S 16 14 19.5 +3.5**
baz=284
AAK Ala-Archa 50.57 297 P **P 16 07 02.9 +0.3**
SNR=28
AAK Ala-Archa 50.57 297*ce*P **P 16 07 02.4 -0.2**
AAK pmax pmax
comp=Z,137nm,1.7s
AAK MLR MLR
comp=Z,17µm,18.0s
AAK Ala-Archa 50.57 297 P **P 16 07 02.1 -0.5**
AAK P **P 16 07 02.1 -0.5**
AAK Ala-Archa 50.57 297 *i*P **P 16 07 02.4 -0.2**
SNR=24
N30M Aishikik Lake 50.61 38 P **P 16 07 04.1 +1.5**
baz=284
N30M S **S 16 14 20.3 +3.8**
baz=284
INK Inuvik 50.61 29 P **P 16 07 03.9 +1.6**
comp=Z,11nm,0.8s,baz=289,slow=6.3,SNR=13
INK S **S 16 14 17.4 +1.3**
comp=Z,1.7nm,0.9s,baz=17,slow=20,SNR=1.5
INK LR LR 16 33 11.2
comp=Z,4µm,18.3s,baz=271,slow=42
comp=Z,11nm,0.8s
INK Inuvik 50.61 29 P **P 16 07 03.1 +0.8**
INK Inuvik 50.61 29 P **P 16 07 03.1 +0.8**
INK pmax pmax
comp=Z,37nm,0.9s
INK Inuvik 50.61 29 P **P 16 07 03.1 +0.8**
baz=281,SNR=8.5
INK S **S 16 14 18.5 +2.4**
baz=281
P29M Windy Craggy 50.75 40 IAMs_20 IAMs_20 16 31 05.0
comp=Z,5µm,20.0s
P29M Windy Craggy 50.75 40 P **P 16 07 06.0 +2.5**
baz=285,SNR=20
P29M S **S 16 14 23.2 +4.7**
baz=285
KSH Kashi 50.77 292 P **P 16 07 07.6 +3.5**
KSH PP **PP 16 09 06.9 +6.8**
KSH S **S 16 14 26.9 +7.5**
KSH pmax pmax
comp=Z,94nm,1.2s
KSH pmax pmax
comp=Z,3µm,7.3s
KSH LR LR
comp=Z,38µm,14.9s
KSH LR LR
comp=Z,33µm,14.9s
KSH LR LR
comp=Z,62µm,14.9s
BOK Bokaro 50.86 269 *e*P **P 16 07 04.3 -0.5**
BOK IAmb IAmb 16 07 07.7
comp=Z,163nm,1.4s
BBKI Banjar Baru 51.00 218 P **P 16 07 07.1 +1.2**
comp=Z,2µmcomp=Z,102nm,2.5s
P30M Million Dollar 51.01 39 P **P 16 07 07.6 +2.0**
baz=285
P30M S **S 16 14 27.3 +5.3**
baz=285
EKS2 Erkin-Say 51.05 297 P **P 16 07 06.5 +0.3**
SNR=50
N31M Braeburn, Yuko 51.22 37 P **P 16 07 09.7 +2.7**
baz=285,SNR=15
N31M S **S 16 14 30.7 +5.9**
baz=285
O30N Mendenhall 51.25 38 P **P 16 07 09.2 +1.9**
baz=285,SNR=9.8
O30N S **S 16 14 29.6 +4.2**
baz=285
AML Almayashu 51.31 296 P **P 16 07 08.9 +0.4**
SNR=117
PLBC Pleasant Camp 51.47 40 P **P 16 07 10.8 +1.9**
baz=286,SNR=5.6
PLBC S **S 16 14 31.3 +3.0**
baz=286
M31M Drury Creek, Y 51.66 36 IAMs_20 IAMs_20 16 29 07.0
comp=Z,5µm,19.0s
M31M Drury Creek, Y 51.66 36 P **P 16 07 11.7 +1.3**
baz=285,SNR=22
M31M S **S 16 14 35.9 +4.9**
baz=285
HNR Honiara 51.75 159 LR LR 16 30 38.3
comp=Z,3µm,18.4s,baz=332,slow=38
HNR Honiara 51.75 159 IAMs_20 IAMs_20 16 31 46.8
comp=Z,6µm,19.0s
WHY Whitehorse 51.86 38 P **P 16 07 14.3 +2.3**
baz=286,SNR=7.9
WHY S **S 16 14 38.2 +4.4**
baz=286
PBKI Pangkalan Bun 51.92 222 P **P 16 07 12.7 -0.1**
comp=Z,8µmcomp=Z,156nm,1.1s
SKAG Skagway 51.98 40 P **P 16 07 14.0 +1.3**
baz=287
SKAG S **S 16 14 40.0 +4.8**
baz=287
KULM Kulim 52.05 240 IAmb IAmb 16 07 16.7
comp=Z,145nm,1.2s
KULM IAMs_20 IAMs_20 16 30 20.7
comp=Z,7µm,20.0s
FARO Faro, Yukon 52.13 36 P **P 16 07 13.6 -0.2**
baz=286
FARO S **S 16 14 42.0 +4.7**
baz=286
BRCI Bahraich 52.14 276 *e*P **P 16 07 13.8 -0.5**
LGTI Lohaghat 52.20 279 *e*P **P 16 07 14.7 0.0**
VAR Varanasi 52.23 273 *e*P **P 16 07 14.7 -0.3**
IPM Ipoh 52.41 239 IAmb IAmb 16 07 18.7
comp=Z,136nm,1.2s
IPM IAMs_20 IAMs_20 16 28 49.2
comp=Z,8µm,21.0s
A36M Sachs Harbour 52.51 23 IAmb IAmb 16 07 30.6
comp=Z,122nm,1.1s
A36M Sachs Harbour 52.51 23 P **P 16 07 16.9 +0.5**
baz=286
A36M S **S 16 14 44.4 +2.2**
baz=286
N32M Quiet Lake 52.56 37 P **P 16 07 18.3 +1.3**
baz=287
N32M S **S 16 14 45.2 +1.9**
baz=287
DZA Taraz 52.62 298*ce*P **P 16 07 17.8 +0.1**
DZA Taraz 52.62 298⇑*e*P **P 16 07 17.9 +0.1**
baz=298
MMRI Maumere 52.63 207 P **P 16 07 18.8 +0.8**
comp=Z,3µmcomp=Z,5µmcomp=Z,160nm,1.1s
MYKOM Kota Tinggi 52.69 234 IAmb IAmb 16 07 21.5
comp=Z,115nm,1.3s
MYKOM IAMs_20 IAMs_20 16 30 21.5
comp=Z,4µm,18.0s
SIT Sitka 52.71 43 P **P 16 07 17.9 -0.2**
baz=288
SIT S **S 16 14 49.9 +4.7**
baz=288
P32M Atlin 52.73 39 P **P 16 07 18.5 +0.2**
baz=288
P32M S **S 16 14 49.6 +4.0**
baz=288
BWNR Bhubaneshwar 52.90 266 *e*P **P 16 07 20.9 +0.9**
EDFI Ende, Flores 52.93 208 P **P 16 07 20.1 -0.2**
comp=Z,2µmcomp=Z,2µmcomp=Z,87nm,1.8s
MMPY Sheldon Lake, 52.95 35 P **P 16 07 20.1 +0.2**
baz=287,SNR=9.5
MMPY S **S 16 14 52.1 +3.6**
baz=287
P33M Teslin, Yukon 52.97 38 IAmb IAmb 16 07 46.8
comp=Z,78nm,1.1s
P33M Teslin, Yukon 52.97 38 P **P 16 07 21.1 +0.9**
baz=288,SNR=12
P33M S **S 16 14 53.6 +4.7**
baz=288
PBA Port Blair 53.08 252 *e*P **P 16 07 20.4 -1.0**
KK31 Karatay Array 53.09 299 IAmb IAmb 16 07 50.6
comp=Z,130nm,1.2s
KK31 Karatay Array 53.09 299 *i*P **P 16 07 18.9 -2.3**
ALBI Allahabad 53.15 274 *e*P **P 16 07 20.4 -1.5**
DDI Dehra Dun 53.41 281 *e*P **P 16 07 23.2 -0.6**
JHSG JHARSUGUGA 53.61 269 *e*P **P 16 07 24.6 -0.6**
BATI Baumata 53.62 205 LR LR 16 29 01.1
comp=Z,6µm,21.2s,baz=9.0,slow=35
C36M Paulatuk 53.66 26 IAmb IAmb 16 07 38.5
comp=Z,65nm,1.1s
C36M Paulatuk 53.66 26 P **P 16 07 26.2 +1.2**
baz=288
C36M S **S 16 14 58.3 +0.4**
baz=288
SMLA Simla 53.68 282 *e*P **P 16 07 24.2 -1.5**
SMLA IAmb IAmb 16 07 27.7
comp=Z,158nm,0.7s
IUG Iuzhnay 53.80 298*c i*P **P 16 07 26.7 +0.1**
IUG *e*S **S 16 15 01.0 +0.2**
IUG Iuzhnay 53.80 298⇑*i*P **P 16 07 26.7 +0.1**
baz=298
IUG *e*S **S 16 15 01.1 +0.2**
baz=298
T33K Petersburg 54.02 42 P **P 16 07 27.5 -0.2**
baz=290
COEN Coen 54.02 181 IAmb IAmb 16 07 48.3
comp=Z,55nm,0.9s
DSRI Dabo 54.04 231 P **P 16 07 26.8 -1.6**
comp=Z,4µmcomp=Z,2µmcomp=Z,46nm,1.7s
BHK Bhakra 54.09 283 *e*P **P 16 07 28.4 -0.3**
TPI Tanjungpandan 54.11 227 P **P 16 07 31.2 +2.2**
comp=Z,1µmcomp=Z,53nm,1.7s
R33M Jennings River 54.12 39 P **P 16 07 29.5 +0.8**
baz=290,SNR=8.3
R33M S **S 16 15 07.9 +3.2**
baz=290
THN Thein Dam 54.12 285 *e*P **P 16 07 28.4 -0.4**
MTN Manton Dam 54.19 195 IAmb IAmb 16 07 46.8
comp=Z,77nm,0.9s
CRAG Craig 54.40 44 P **P 16 07 31.1 +0.5**
baz=291
CRAG S **S 16 15 13.2 +4.9**
baz=291
WRAK Wrangell Islan 54.47 43 P **P 16 07 31.0 0.0**
baz=291
WRAK S **S 16 15 13.2 +4.0**
baz=291
PPBI Pangkal Pinang 54.48 229 P **P 16 07 31.9 +0.3**
comp=Z,5µmcomp=Z,3µmcomp=Z,103nm,1.3s
JMU Jammu 54.59 285 *e*P **P 16 07 31.7 -0.5**
TGTN Hyland Airport 54.63 36 P **P 16 07 32.5 +0.2**
baz=290,SNR=7.8
TGTN S **S 16 15 13.9 +2.5**
baz=290
BLSP Bilaspur 54.65 270 *e*P **P 16 07 32.2 -0.7**
TSI Tuntungan 54.76 240 P **P 16 07 32.7 -1.0**
comp=Z,7µmcomp=Z,3µmcomp=Z,111nm,1.7s
TWSI Taliwang, Sumb 54.78 213 P **P 16 07 34.4 +0.7**
comp=Z,2µmcomp=Z,43nm,1.1s
SRBI Singaraja 54.91 215 P **P 16 07 36.6 +1.9**
comp=Z,4µmcomp=Z,5µmcomp=Z,122nm,1.4s
DLBC Dease Lake 54.91 40 LR LR 16 31 18.9
comp=Z,2µm,21.2s,baz=299,slow=36
DLBC Dease Lake 54.91 40 P **P 16 07 34.7 +0.4**
baz=291,SNR=9.0
DLBC S **S 16 15 20.0 +4.7**
baz=291
PSI Prapat 55.05 239 LR LR 16 32 44.9
comp=Z,5µm,18.3s,baz=38,slow=38
ARU Arti 55.12 318 S **S 16 15 15.8 -2.1**
comp=Z,1.3nm,0.5s,baz=162,slow=20,SNR=3.1
ARU LR LR 16 33 60.0
comp=Z,30µm,18.8s,baz=65,slow=39
ARU Arti 55.12 318 P **P 16 07 36.2 +0.4**
ARU Arti 55.12 318*c i*P **P 16 07 35.9 +0.1**
ARU 16 08 36.8
ARU 16 09 37.4
ARU PPP PPP 16 10 48.8
ARU S **S 16 15 20.0 +2.1**
ARU 16 17 21.3
ARU pmax pmax
comp=Z,327nm,1.3s
ARU pmax pmax
comp=Z,2µm,9.5s
ARU smax smax
comp=N,2µm,19.5s
ARU MLR MLR
comp=Z,43µm,16.0s
RPSI Rantau Prapat 55.13 239 IAMs_20 IAMs_20 16 30 25.6
comp=Z,5µm,20.0s
V35K Ketchikan 55.26 44 P **P 16 07 35.4 -1.3**
baz=292
RAGD RAYAGADA 55.30 266 *e*P **P 16 07 37.9 +0.3**
T35M Bob Quinn 55.34 42 P **P 16 07 38.4 +0.9**
baz=292,SNR=8.3
T35M S **S 16 15 24.9 +3.9**
baz=292
POHA Pohakuloa 55.34 93 IAMs_20 IAMs_20 16 32 32.4
comp=Z,4µm,18.0s
NIL Nilore 55.34 287 IAMs_20 IAMs_20 16 32 53.6
comp=Z,5µm,20.0s
JMBI JAMBI 55.52 231 P **P 16 07 40.1 +1.0**
comp=Z,2µmcomp=Z,50nm,0.4s
JHNI Jhansi 55.56 276 *e*P **P 16 07 36.9 -2.5**
BKNI Bangkinang 55.57 235 IAMs_20 IAMs_20 16 28 40.0
comp=Z,5µm,21.0s
BKNI Bangkinang 55.57 235 P **P 16 07 41.3 +1.7**
comp=Z,7µmcomp=Z,5µmcomp=Z,368nm,1.2s
JAGI Jajag, Banyuwa 55.73 216 P **P 16 07 40.8 +0.2**
PMBI Palembang 55.89 229 P **P 16 07 43.9 +2.1**
comp=Z,5µmcomp=Z,5µmcomp=Z,293nm,0.8s
NGJI Ngawi 56.03 220 P **P 16 07 44.3 +1.6**
comp=Z,5µmcomp=Z,139nm,1.2s
WRGLY Wrigley 56.08 33 P **P 16 07 42.9 +0.3**
baz=293
WRGLY S **S 16 15 32.9 +2.3**
baz=293
VIS Vishakhapatnam 56.30 265 *ex* **P 16 07 40.2 -4.6**
PWJI Pagerwojo 56.43 219 P **P 16 07 46.8 +1.2**
comp=Z,150nm,0.8s
PPI Padang Panjang 56.58 235 P **P 16 07 46.0 -0.8**
comp=Z,2µmcomp=Z,33nm,0.8s
GRNB Grenville Isla 56.73 45 P **P 16 07 48.4 +1.0**
UGM Wanagama 56.96 220 P **P 16 07 49.1 -0.3**
UGM Wanagama 56.96 220 P **P 16 07 51.3 +1.9**
comp=Z,306nm,1.6s
GSI Gunungsitoli 57.06 239 P **P 16 07 50.8 +0.7**
GSI Gunungsitoli 57.06 239 P **P 16 07 51.3 +1.1**
comp=Z,7µmcomp=Z,8µmcomp=Z,338nm,2.4s
GSI Gunungsitoli 57.06 239 P **P 16 07 51.6 +1.4**
KRJI Kerinci 57.20 233 P **P 16 07 52.3 +1.1**
comp=Z,12µmcomp=Z,580nm,1.8s
AB31 Akbulak array 57.23 309 *i*P **P 16 07 50.7 -0.3**
ABKAR Akbulak array 57.23 309 P **P 16 07 51.0 +0.1**
HOPEN Hopen 57.28 346 *e*P **P 16 07 51.5 +0.6**
HOPEN IVmBBB 16 07 53.3
comp=Z,2µm,1.5s
HOPEN IVmB_BB 16 08 04.0
comp=Z,2µm,2.1s
HOPEN *e*S **S 16 15 46.6 +0.5**
HOPEN IVMs_BB IVMs_BB 16 37 32.2
comp=Z,5µm,15.7s
FLDN Fort Liard 57.30 36 P **P 16 07 51.0 -0.2**
baz=295
KLI Kotabumi 57.41 228 P **P 16 07 54.2 +1.6**
comp=Z,7µmcomp=Z,272nm,0.7s
KNRA Kununurra 57.45 197 P **P 16 07 53.7 +1.0**
LEM Lembang 57.52 224 LR LR 16 33 41.8
comp=Z,4µm,19.5s,baz=10,slow=37
CBJI Citeko 57.59 225 P **P 16 07 54.7 +0.8**
comp=Z,6µmcomp=Z,67nm,1.2s
BHPL Bhopal 57.62 274 *e*P **P 16 07 52.0 -2.2**
BHPL IAmb IAmb 16 07 54.6
comp=Z,396nm,1.8s
SPA0 Spitsbergen Ar 57.63 349 *e*P **P 16 07 54.9 +1.4**
SPA0 IVmBBB 16 08 04.2
comp=Z,2µm,1.8s
SPA0 *e*S **S 16 15 51.4 +0.6**
SPA0 IVMs_BB IVMs_BB 16 35 31.6
comp=Z,4µm,17.9s
SPITS Spitsbergen Ar 57.63 349 LR LR 16 36 01.4
comp=Z,11µm,18.3s,baz=356,slow=40
SPITS Spitsbergen Ar 57.63 349 P **P 16 07 53.3 -0.1**
SPITS pmax pmax
comp=Z,123nm,1.4s
KBS Kingsbay 57.71 350 IAMs_20 IAMs_20 16 36 20.6
comp=Z,5µm,18.0s
KBS Kingsbay 57.71 350*ce*P **P 16 07 54.6 +0.6**
KBS pmax pmax
comp=Z,129nm,1.3s
KBS Kingsbay 57.71 350 *i*P **P 16 07 54.5 +0.6**
KBS Kingsbay 57.71 350 *e*P **P 16 07 54.3 +0.4**
KBS IVmB_BB 16 07 56.2
comp=Z,2µm,1.8s
KBS *e*ScP **ScP 16 12 48.5 +2.3**
KBS *e*S **S 16 15 53.6 +1.9**
KBS IVMs_BB IVMs_BB 16 38 57.9
comp=Z,3µm,13.1s
KSI Kapahiang 57.75 231 P **P 16 07 54.9 -0.2**
comp=Z,5µmcomp=Z,87nm,1.4s
AKTO Aktyubinsk 57.84 311 LR LR 16 34 15.9
comp=Z,8µm,19.9s,baz=62,slow=38
AKTO Aktyubinsk 57.84 311 P **P 16 07 54.9 -0.4**
NOR Nord 57.86 357 *i*P **P 16 07 55.0 +0.1**
NOR IAmb IAmb 16 08 01.2
comp=Z,51nm,1.2s
KBL Kabul 57.96 290 P **P 16 07 54.8 -1.8**
KBL Kabul 57.96 290 P **P 16 07 54.8 -1.8**
KBL pmax pmax
comp=Z,193nm,1.0s
KBL Kabul 57.96 290 P **P 16 07 56.0 -0.6**
SNR=69
KBL P **P 16 07 56.0 -0.6**
SNR=69
KBL P **P 16 07 56.0 -0.6**
SNR=69
AJM Ajmer 57.97 279 *e*P **P 16 07 55.3 -1.2**
SISI Saibi 58.08 236 P **P 16 07 59.5 +2.2**
comp=Z,64nm,1.1s
MNAI Manna 58.10 230 IAMs_20 IAMs_20 16 35 45.1
comp=Z,5µm,19.0s
KASI Kota Agung 58.16 228 P **P 16 07 56.8 -1.0**
comp=Z,67nm,1.2s
BBB Bella Bella 58.44 46 LR LR 16 30 12.6
comp=Z,2µm,21.7s,baz=304,slow=33
HSPB Hornsund (broa 58.59 348 *e*P **P 16 08 00.3 +0.2**
HSPB *e*S **S 16 16 03.8 +0.5**
HSPB Hornsund (broa 58.59 348 *e*P **P 16 08 00.4 +0.2**
HSPB IVmBBB 16 08 02.4
comp=Z,2µm,1.5s
KIRV Kirov 58.73 322 LR LR 16 35 44.3
comp=Z,8µm,18.4s,baz=52,slow=38
KIRV Kirov 58.73 322*c i*P **P 16 08 01.3 0.0**
RES Resolute Bay 58.94 15 LR LR 16 36 38.2
comp=Z,7µm,19.7s,baz=328,slow=39
PRGR Permogore 59.00 327⇓*i*P **P 16 08 04.0 +0.9**
PRGR *e* 16 08 14.1
PRGR *e* 16 08 49.9
PRGR *e* 16 10 12.9
PRGR pmax pmax
comp=Z,764nm,1.5s
VJD Vijayawada 59.06 266 *e*P **P 16 08 05.2 +1.0**
AKL Akola 59.38 272 *e*P **P 16 08 05.7 -0.7**
BJO1 Bjornoya 59.73 345 *e*P **P 16 08 07.8 -0.2**
BJO1 IVmB_BB 16 08 09.4
comp=Z,1µm,2.3s
BJO1 *e*PP **PP 16 10 25.9 +6.5**
BJO1 *e*S **S 16 16 18.1 0.0**
BJO1 IVMs_BB IVMs_BB 16 38 14.2
comp=Z,7µm,16.7s
LVZ Lovozero 59.85 336 P **P 16 08 08.4 -0.6**
LVZ IAmb IAmb 16 08 10.8
comp=Z,45nm,1.1s
LVZ Lovozero 59.85 336*ce*P **P 16 08 08.1 -0.9**
LVZ pmax pmax
comp=Z,53nm,1.3s
LVZ MLR MLR
comp=Z,10µm,19.0s
YKA Yellowknife Ar 60.04 32 P **P 16 08 11.4 +1.1**
comp=Z,4.5nm,0.7s,baz=301,slow=6.5,SNR=11
YKA LR LR 16 36 45.4
comp=Z,3µm,19.1s,baz=305,slow=39
comp=Z,4.5nm,0.7s
YKA Yellowknife Ar 60.04 32 *i*P **P 16 08 11.6 +1.3**
YKA pmax pmax
comp=Z,5.0nm,0.7s
HYBB Hyderabad (bro 60.12 268 *e*P **P 16 08 11.5 -0.1**
HYBB *e*PcP **PcP 16 08 57.1 -0.2**
HYBB *e*PP **PP 16 10 25.7 +1.5**
HYBB *e*S **S 16 16 23.6 -1.1**
HYBB *e*ScS SKSac 16 18 02.0 +0.1
CTA Charters Tower 60.16 177 P **P 16 08 12.6 +0.9**
CTAO Charters Tower 60.16 177 P **P 16 08 12.5 +0.9**
WB0 Warramunga Arr 60.43 190 P **P 16 08 13.3 -0.1**
FITZ Fitzroy Crossi 60.53 200 P **P 16 08 14.3 +0.2**
FITZ Fitzroy Crossi 60.53 200 P **P 16 08 14.9 +0.8**
JASL Jaisalmer 60.54 282 *e*P **P 16 08 14.2 -0.1**
WR0 Warramunga Arr 60.60 190 P **P 16 08 14.2 -0.4**
WR0 IAmb IAmb 16 08 46.4
comp=Z,55nm,0.9s
WRAB Tennant Creek 60.60 190 P **P 16 08 14.1 -0.5**
WRAB IAmb IAmb 16 08 46.3
comp=Z,59nm,0.9s
WRAB Tennant Creek 60.60 190*ce*P **P 16 08 13.4 -1.2**
WRAB pmax pmax
comp=Z,90nm,2.5s
WRAB MLR MLR
comp=Z,2µm,16.0s
WRAB Tennant Creek 60.60 190 P **P 16 08 14.6 0.0**
WB2 Warramunga Arr 60.61 190 P **P 16 08 14.3 -0.4**
WRA Warramunga Arr 60.61 190 P **P 16 08 14.3 -0.3**
comp=Z,10nm,0.8s,baz=7.3,slow=6.9,SNR=77
WRA S **S 16 16 27.6 -2.9**
comp=Z,1.3nm,1.1s,baz=0.0,slow=9.2,SNR=5.8
WRA LR LR 16 34 55.1
comp=Z,2µm,19.6s,baz=356,slow=36
WRA PKP2bc 16 37 46.6
comp=Z,1.0nm,0.9s,baz=202,slow=1.5,SNR=4.8
comp=Z,10nm,0.8s
WRA Warramunga Arr 60.61 190 P **P 16 08 13.8 -0.9**
QIS Mount Isa 60.71 184 P **P 16 08 15.6 +0.3**
KEV Kevo 61.00 339 P **P 16 08 16.8 +0.1**
KEV IAmb IAmb 16 08 19.2
comp=Z,60nm,1.1s
KEV Kevo 61.00 339 P **P 16 08 16.8 +0.1**
KEV pmax pmax
comp=Z,60nm,1.1s
KEV MLR MLR
comp=Z,12µm,20.0s
HAMF Hammerfest 61.29 341 *e*P **P 16 08 18.4 -0.4**
HAMF IVmB_BB 16 08 19.9
comp=Z,1µm,2.0s
HAMF *e*S **S 16 16 37.1 -1.0**
HAMF *e*ScS **ScS 16 18 11.3 +2.1**
HAMF IVMs_BB IVMs_BB 16 42 03.9
comp=Z,4µm,15.4s
MDRS Chennai 61.49 263 *e*P **P 16 08 20.3 -0.5**
ARA0 ARCESS Array S 61.54 339 *e*P **P 16 08 20.2 -0.3**
ARA0 IVmB_BB 16 08 22.2
comp=Z,2µm,4.3s
ARA0 *e*PP **PP 16 10 37.4 +2.0**
ARA0 *e*S **S 16 16 41.2 -0.2**
ARA0 *e*SS **SS 16 20 43.5 +1.9**
ARA0 IVMsBB 16 41 13.8
comp=Z,7µm,15.0s
ARCES ARCESS Array B 61.54 339 P **P 16 08 20.6 +0.1**
comp=Z,16nm,1.0s,baz=54,slow=6.2,SNR=31
ARCES LR LR 16 40 42.1

comp=Z,13µm,18.4s,baz=29,slow=42
comp=Z,16nm,1.0s
ARCES ARCESS Array B 61.54 339 P **P** **16 08 20.7 +0.2**
ARCES IAmb IAmb 16 08 59.1
comp=Z,108nm,1.5s
ARCES ARCESS Array B 61.54 339 P **P** **16 08 20.7 +0.2**
ARCES pmax pmax
comp=Z,108nm,1.5s
KLMR Klimovskoe 61.94 327 *e*P **P** **16 08 23.1 -0.1**
KLMR pmax pmax
comp=Z,207nm,1.3s
KLMR Klimovskoe 61.94 327 *e*P **P** **16 08 23.2 0.0**
KLMR AMP 16 08 26.2
comp=Z,207nm,1.3s
KLMR LQ LQ 16 31 24.9
KLMR LQ LQ 16 31 24.9
KLMR LR LR 16 33 57.4
KTK1 Kautokeino 62.50 340 *e*P **P** **16 08 26.6 -0.2**
KTK1 IVmBBB 16 08 28.4
comp=Z,826nm,2.0s
KTK1 *e*PP **PP** **16 10 40.7 -3.1**
KTK1 *e*S **S** **16 16 53.6 +0.2**
KTK1 IVMs_BB IVMs_BB 16 41 54.4
comp=Z,6µm,14.6s
DAG Danmarks Havn 62.63 356 *i* P **P** **16 08 27.7 +0.1**
DAG IAmb IAmb 16 08 29.6
comp=Z,83nm,1.4s
BELG Belogornoye 62.63 317 LR LR 16 38 13.9
comp=Z,20µm,18.3s,baz=58,slow=38
BELG Belogornoye 62.63 317*c i*P **P** **16 08 28.2 +0.2**
BELG pmax pmax
comp=Z,57nm,1.1s
BELG MLR MLR
comp=Z,5µm,17.0s
JETT Jettan, Norway 62.86 341 *e*P **P** **16 08 29.6 +0.3**
JETT IVmBBB 16 08 30.9
comp=Z,1µm,1.4s
JETT *e*S **S** **16 17 00.4 +2.4**
JETT IVMs_BB IVMs_BB 16 41 30.8
comp=Z,4µm,17.3s
POO Poona 63.06 272 *e*P **P** **16 08 30.7 -0.7**
TRO Tromso 63.17 341 *e*P **P** **16 08 31.5 +0.2**
TRO IVmBBB 16 08 32.7
comp=Z,1µm,1.7s
TRO *e*S **S** **16 17 01.6 -0.2**
TRO IVMs_BB IVMs_BB 16 43 13.8
comp=Z,5µm,15.8s
KAD Karad 63.53 271 *e*P **P** **16 08 33.1 -1.5**
GEYT Alibeck 63.84 299 P **P** **16 08 36.4 0.0**
comp=Z,59nm,1.0s,baz=36,slow=2.8,SNR=52
GEYT LR LR 16 38 40.8
comp=Z,10µm,19.4s,baz=78,slow=38
comp=Z,59nm,1.0s
GEYT Alibeck 63.84 299 P **P** **16 08 36.6 +0.3**
GYA0 ALIBECK ARRAY 63.84 299 P **P** **16 08 35.8 -0.5**
AS31 Alice Springs 64.33 190 P **P** **16 08 40.0 +0.4**
ASAR Alice Springs 64.34 190 P **P** **16 08 40.0 +0.4**
comp=Z,8.8nm,0.9s,baz=11,slow=5.2,SNR=52
ASAR LR LR 16 35 13.6
comp=Z,2µm,21.5s,baz=5.5,slow=35
ASAR PKP2bc 16 37 35.0
comp=Z,1.3nm,0.9s,baz=162,slow=3.1,SNR=5.7
comp=Z,8.8nm,0.9s
ASAR Alice Springs 64.34 190 P **P** **16 08 39.8 +0.3**
ASAR Alice Springs 64.34 190 P **P** **16 08 40.0 +0.4**
F04D Rainier, OR 64.35 50 P **P** **16 08 40.7 +1.1**
baz=302
F04D S **S** **16 17 21.5 +4.3**
baz=302
G03D McMinnville, O 64.67 51 S **S** **16 17 24.0 +2.9**
baz=302
PALK Pallekele 64.85 258 LR LR 16 37 46.6
comp=Z,5µm,21.6s,baz=158,slow=37
PALK Pallekele 64.85 258 IAMs_20 IAMs_20 16 37 36.1
comp=Z,5µm,21.0s
PALK Pallekele 64.85 258 P **P** **16 08 43.9 +0.6**
GOA Goa 64.90 269 *e*P **P** **16 08 43.0 -0.5**
GOA IAmb IAmb 16 08 58.2
comp=Z,136nm,1.2s
VALR Valaam 65.04 331 *i* P **P** **16 08 42.9 -0.8**
VALR pmax pmax
comp=Z,143nm,1.3s
VALR MLR MLR
comp=Z,9µm,14.0s
DBG Daneborg 65.13 355 *i* P **P** **16 08 43.7 -0.4**
DBG IAmb IAmb 16 08 54.2
comp=Z,336nm,2.6s
MBWA Marble Bar 65.15 205 IAMs_20 IAMs_20 16 37 24.1
comp=Z,3µm,20.0s
MBWA Marble Bar 65.15 205 P **P** **16 08 47.2 +2.4**
MBWA P **P** **16 08 47.2 +2.4**
B08A Colville Reser 65.23 47 P **P** **16 08 46.0 +0.8**
B08A IAmb IAmb 16 09 10.3
comp=Z,51nm,1.4s
STEI Steigen 65.34 341 *e*P **P** **16 08 45.3 -0.2**
STEI IVmBBB 16 08 46.9
comp=Z,948nm,2.3s
STEI *e*PP **PP** **16 11 08.4 -0.3**
STEI *e*S **S** **16 17 29.2 +0.6**
STEI IVMs_BB IVMs_BB 16 43 22.2
comp=Z,4µm,14.7s
H04D Lebanon 65.35 52 P **P** **16 08 48.0 +1.9**
H04D baz=303 S **S** **16 17 32.5 +2.9**
baz=303
J01E Myrtle Point 65.37 54 P **P** **16 08 47.1 +0.9**
J01E baz=303 S **S** **16 17 32.6 +2.9**
baz=303
I03D Drain, OR 65.43 53 P **P** **16 08 47.2 +0.6**
I03D baz=303 S **S** **16 17 33.1 +2.5**
baz=303
DZM Mont Dzumac 65.60 157 P **P** **16 08 49.9 +2.1**
comp=Z,8.8nm,0.8s,baz=352,slow=4.5,SNR=4.5
DZM LR LR 16 32 34.2
comp=Z,4µm,21.9s,baz=342,slow=32
comp=Z,8.8nm,0.8s
DZM Mont Dzumac 65.60 157 *e*P **P** **16 08 51.6 +3.7**
comp=Z,256nm,1.6s
DZM *e*S **S** **16 17 33.9 +0.9**
comp=Z,3µm,23.9s
DZM Mont Dzumac 65.60 157 *e*LR LR 16 28 26.2
comp=Z,7µm,22.4s
LOF Lofoten 65.60 342 *e*P **P** **16 08 47.1 -0.2**
LOF IVmB_BB 16 08 48.1
comp=Z,1µm,4.5s
LOF *e*PP **PP** **16 11 10.4 -0.6**
LOF *e*S **S** **16 17 31.1 -0.8**
LOF IVMs_BB IVMs_BB 16 44 53.6
comp=Z,4µm,15.0s
MOS Moscow 65.68 323 *e*P **P** **16 08 45.2 -2.7**
MOS *e* 16 09 16.3
MOS *e* 16 11 09.5
MOS *e*PPP PPP 16 12 44.7
MOS *e*S **S** **16 17 30.7 -2.5**
MOS *e* 16 18 34.9
MOS *e*SS **SS** **16 21 43.3 -3.2**
MOS pmax pmax
comp=Z,2µm,4.0s
MOS pmax pmax
comp=N,700nm,3.6s
MOS pmax pmax
comp=E,800nm,3.7s
MOS pmax pmax
comp=Z,226nm,1.3s
MOS pmax pmax
comp=N,113nm,1.3s
MOS pmax pmax
comp=E,91nm,1.3s
MOS smax smax
comp=N,900nm,4.3s
MOS smax smax
comp=E,1µm,4.7s
MOS MLR MLR
comp=N,14µm,15.0s
MOS MLR MLR
comp=E,11µm,15.0s
MOS MLR MLR
comp=Z,15µm,15.0s
MNGI Mangalore 65.70 266 *e*P **P** **16 08 48.2 -0.5**
EIDS Eidsvold 65.73 173 P **P** **16 08 48.6 +0.1**
FAUS Fauske 65.74 341 *e*P **P** **16 08 48.3 +0.1**
FAUS IVmB_BB 16 08 49.7
comp=Z,1µm,1.3s
FAUS *e*S **S** **16 17 33.4 -0.2**
FAUS IVMs_BB IVMs_BB 16 43 54.5
comp=Z,5µm,14.1s
K02D Willamette Mer 65.79 54 P **P** **16 08 49.8 +0.7**
baz=303
K02D S **S** **16 17 37.1 +2.0**
baz=303
G05D Wamic, OR 65.81 51 P **P** **16 08 50.6 +1.6**
baz=304
G05D S **S** **16 17 36.8 +1.6**
baz=304
I04A Tendick Farm, 65.95 52 P **P** **16 08 51.7 +1.7**
baz=303,SNR=7.8
I04A S **S** **16 17 39.1 +2.1**
baz=303
MSVF Nonsavu 66.02 144 LR LR 16 32 47.9
comp=Z,3µm,20.1s,baz=322,slow=32
MSVF Nonsavu 66.02 144 IAMs_20 IAMs_20 16 31 00.2
comp=Z,4µm,21.0s
PCHI Peechi 66.04 263⇑ *e*P **P** **16 08 50.9 0.0**
PCHI *e*S **S** **16 17 38.0 -0.8**
L02F Cave Junction 66.16 54 P **P** **16 08 51.9 +0.6**
baz=304
L02F S **S** **16 17 40.9 +1.4**
baz=304
PUL Pulkovo 66.26 330*c e*P **P** **16 08 51.8 +0.2**
PUL pmax pmax
comp=Z,81nm,0.6s
PUL MLR MLR
comp=Z,15µm,19.0s
HUMO Hull Mountain 66.27 54 P **P** **16 08 52.9 +0.9**
I05D Terrebonne, OR 66.29 51 P **P** **16 08 53.5 +1.3**
baz=304
I05D S **S** **16 17 42.2 +1.0**
baz=304
VRH Novokhopyorsk 66.35 318 *e*P **P** **16 08 52.1 -0.2**
VRH *e* 16 11 17.4
VRH *e*S **S** **16 17 37.9 -3.6**
VRH pmax pmax
comp=Z,140nm,1.1s
VRH smax smax
comp=E,3µm,15.6s
VRH MLR MLR
comp=Z,30µm,15.0s
J04D Umpqua Nationa 66.44 53 P **P** **16 08 55.5 +2.1**
baz=304,SNR=7.2
NEW Newport 66.51 46 LR LR 16 34 39.5
comp=Z,2µm,21.6s,baz=322,slow=33
NEW Newport 66.51 46 P **P** **16 08 54.2 +0.7**
NEW IAmb IAmb 16 09 10.2
comp=Z,35nm,1.2s
NEW Newport 66.51 46 P **P** **16 08 54.2 +0.7**
NEW pmax pmax
comp=Z,35nm,1.2s
NEW MLR MLR
comp=Z,3µm,20.0s
NEW Newport 66.51 46 P **P** **16 08 54.8 +1.3**
baz=305,SNR=16
NEW S **S** **16 17 43.5 -0.2**
baz=305
OBN Obninsk 66.54 323 LR LR 16 40 55.2
comp=Z,4µm,18.7s,baz=48,slow=39
OBN Obninsk 66.54 323*c i*P **P** **16 08 53.5 +0.1**
OBN *i* *PP **pP** **16 08 56.1 -0.9**
OBN *i* 16 09 03.4
OBN *i* 16 11 17.1
OBN *i* S **S** **16 17 41.6 -2.0**
OBN *i* 16 18 45.4
OBN pmax pmax
comp=Z,257nm,1.7s
OBN MLR MLR
comp=Z,16µm,16.0s
WRKA Warakurna 66.62 195 P **P** **16 08 54.7 +0.4**
FIA1 FINESS Array S 66.73 332 P **P** **16 08 54.8 +0.2**
FINES FINESS Array B 66.73 332 P **P** **16 08 54.7 +0.2**
comp=Z,38nm,0.9s,baz=51,slow=6.0,SNR=146
FINES LR LR 16 40 39.7
comp=Z,12µm,20.7s,baz=38,slow=38
comp=Z,38nm,0.9s
FINES FINESS Array B 66.73 332 P **P** **16 08 54.8 +0.2**
TRD Trivandrum 66.87 261 IAmb IAmb 16 09 03.1
comp=Z,37nm,1.1s
MOR8 Moi Rana 66.89 340 *e*P **P** **16 08 54.2 -1.4**
MOR8 IVmB_BB 16 08 55.8
comp=Z,1µm,1.3s
MOR8 *e*PP **PP** **16 11 21.9 -0.5**
MOR8 *e*S **S** **16 17 45.1 -2.5**
MOR8 IVMs_BB IVMs_BB 16 43 10.8
comp=Z,5µm,18.4s
L04D Klamath Falls 66.89 54 P **P** **16 08 55.8 -0.4**
baz=304,SNR=8.5
L04D S **S** **16 17 50.5 +1.9**
baz=304
YBH Yreka Blue Hor 66.91 54 LR LR 16 32 04.4
comp=Z,1µm,22.0s,baz=312,slow=30
LPSR Galich'ya Gora 66.93 320 *e*P **P** **16 08 56.2 +0.2**
LPSR *e* 16 11 21.2
LPSR *e*S **S** **16 17 45.5 -3.0**
LPSR pmax pmax
comp=Z,200nm,1.2s
LPSR smax smax
comp=E,1µm,10.7s
LPSR MLR MLR
comp=Z,17µm,14.0s
J05D Fort Rock, OR 66.94 52 P **P** **16 08 57.2 +0.7**
baz=304,SNR=11
J05D S **S** **16 17 52.7 +3.4**
baz=304
KONS Konsvik 66.97 341 *e*P **P** **16 08 56.3 +0.3**
K04D Chiloquin, OR 67.00 53 P **P** **16 08 55.4 -1.4**
baz=304
K04D S **S** **16 17 52.1 +2.2**
baz=304
STOK Stokkvaagen 67.13 341 *e*P **P** **16 08 57.1 0.0**
JMIC Jan Mayen 67.20 350 LR LR 16 38 09.0
comp=Z,898nm,21.6s,baz=38,slow=36
JMIC Jan Mayen 67.20 350 *e*P **P** **16 08 57.3 -0.1**
JMIC *e*PP **PP** **16 11 30.0 +5.2**
JMIC *e*S **S** **16 17 56.8 +5.7**
JMIC IVMs_BB IVMs_BB 16 42 05.1
comp=Z,2µm,15.8s
VORR Voronezh 67.35 319⇓ *i*P **P** **16 08 59.4 +0.7**
VORR *e* 16 11 27.8
VORR *e*S **S** **16 17 54.4 +0.9**
VORR SS **SS** **16 22 16.5 +4.0**
VORR pmax pmax
comp=Z,126nm,1.2s
VORR MLR MLR
comp=Z,18µm,15.0s
SUMG Summit 67.37 1 P **P** **16 09 00.3 +1.3**
SUMG Summit 67.37 1 P **P** **16 09 00.3 +1.3**
SUMG pmax pmax
comp=Z,90nm,1.1s
SUMG MLR MLR
comp=Z,9µm,21.0s
SUMG Summit 67.37 1 *i* P **P** **16 08 59.7 +0.7**
SUMG IAmb IAmb 16 09 02.0
comp=Z,94nm,1.1s
VSR Storozhevoye 67.64 319 *e*P **P** **16 09 00.6 0.0**
VSR *e* 16 11 27.8
VSR *e*S **S** **16 17 53.2 -3.9**
VSR pmax pmax
comp=Z,130nm,1.2s
VSR smax smax
comp=E,2µm,10.8s
VSR MLR MLR
comp=Z,16µm,16.0s
INKA Innaminka 67.79 183 P **P** **16 09 03.2 +1.6**
MAK Makhachkala 67.85 308 *e*P **P** **16 08 59.1 -2.9**
MAK *e* 16 11 28.1
MAK *e*S **S** **16 17 57.0 -2.9**
MAK *e*SS **SS** **16 22 14.8 -6.0**
MAK pmax pmax
comp=Z,216nm,1.1s
MAK MLR MLR
comp=Z,16µm,14.0s
AFI Afiamalu 67.95 133 LR LR 16 36 34.6
comp=Z,3µm,18.3s,baz=335,slow=34
AFI Afiamalu 67.95 133 IAMs_20 IAMs_20 16 36 05.2
comp=Z,4µm,19.0s
MEF Metsahovi 68.17 332 *e*P **P** **16 09 04.1 +0.4**
OOD Oodnadatta 68.20 188 P **P** **16 09 05.3 +1.1**
HOPS Hopland Field 68.22 57 IAMs_20 IAMs_20 16 38 15.9
comp=Z,3µm,19.0s
VSU Vasula 68.52 330 *e*P **P** **16 09 06.5 +0.6**
RAF Rauma 68.52 334 *e*P **P** **16 09 06.2 +0.3**
NGCH Negor - Chabah 68.67 286 P **P** **16 09 07.6 +0.2**
GROC Groznyy 68.74 309 *e*P **P** **16 09 07.9 +0.3**
GROC *e* 16 09 32.6
GROC *e*S **S** **16 18 10.0 -0.4**
GROC pmax pmax
comp=Z,82nm,0.6s
NSS Namsos 68.82 340 *e*P **P** **16 09 07.2 -0.5**
NSS *e*PP **PP** **16 11 39.6 +0.5**
NSS *e*S **S** **16 18 09.2 -1.4**
NSS IVmB_BB 16 44 57.3
comp=Z,6µm,16.8s
PLID Pearl Lake 68.98 48 P **P** **16 09 09.3 -0.1**
PLID IAmb IAmb 16 09 27.6
comp=Z,35nm,1.2s
SCO Scoresbysund 69.00 355 IAMs_20 IAMs_20 16 37 32.7
comp=Z,5µm,22.0s
SCO Scoresbysund 69.00 355 *i* P **P** **16 09 08.2 -0.5**
MSO Missoula 69.09 46 P **P** **16 09 09.6 -0.3**
baz=307,SNR=6.2
MSO S **S** **16 18 15.1 +0.3**
baz=307
GOF Gofitskoye 69.24 312⇓ *i*P **P** **16 09 11.4 +0.7**
GOF *e*S **S** **16 18 17.4 +1.0**
GOF pmax pmax
comp=Z,386nm,1.0s
PYA1 Pyatigorsk 69.81 311 *i* P **P** **16 09 14.7 +0.4**
NCK Nalchik 69.86 310*c i*P **P** **16 09 14.8 +0.2**
NCK pmax pmax
comp=Z,147nm,1.2s
ZEI Tsey 70.10 310 *e*P **P** **16 09 16.0 -0.3**
ZEI pmax pmax
comp=Z,92nm,0.9s
KIV Kislovodsk 70.11 311 P **P** **16 09 17.5 +1.3**
KIV Kislovodsk 70.11 311 *e*P **P** **16 09 16.9 +0.7**
KIV *e* 16 11 51.5
KIV *e*S **S** **16 18 28.2 +1.4**
KIV *e*SS **SS** **16 22 59.3 +3.6**
KIV pmax pmax
comp=Z,734nm,4.3s
KIV pmax pmax
comp=Z,413nm,1.1s
KIV Kislovodsk 70.11 311 P **P** **16 09 16.9 +0.7**
KIV P **P** **16 09 16.9 +0.7**
KIV P **P** **16 09 16.9 +0.7**
KIV Kislovodsk 70.11 311 *i* P **P** **16 09 17.0 +0.7**
SNR=83
KBZ Khabaz 70.12 311 P **P** **16 09 16.9 +0.8**
comp=Z,118nm,1.0s,baz=53,slow=5.9,SNR=100
KBZ PcP **PcP** **16 09 35.4 -2.7**
comp=Z,77nm,1.0s,baz=63,slow=3.2,SNR=7.4
KBZ S **S** **16 18 28.4 +1.7**
comp=Z,0.9nm,0.4s,baz=83,slow=8.1,SNR=1.3
KBZ LR LR 16 45 39.5
comp=Z,13µm,18.0s,baz=28,slow=41
comp=Z,118nm,1.0s
KBZ Khabaz 70.12 311*c i*P **P** **16 09 16.5 +0.4**
KBZ pmax pmax
comp=Z,192nm,1.1s
ILULI Ilulissat 70.21 6 *i* P **P** **16 09 16.3 +0.1**
ILULI IAmb IAmb 16 09 18.2
comp=Z,61nm,1.3s
SHA1 Shidzhatmaz 70.26 311*c i*P **P** **16 09 17.3 0.0**
TBLU Trondheim 70.30 340 *e*P **P** **16 09 14.5 -2.4**
TBLU *e*S **S** **16 18 24.3 -3.9**
TBLU IVMs_BB IVMs_BB 16 45 31.6
comp=Z,7µm,16.6s
CMB Columbia Colle 70.50 56 P **P** **16 09 19.5 +0.9**
CMB Columbia Colle 70.50 56 P **P** **16 09 19.5 +0.9**
CMB pmax pmax
comp=Z,32nm,1.3s
CMB MLR MLR
comp=Z,2µm,21.0s
LRM Limekiln Ridge 70.53 46 P **P** **16 09 19.6 +0.7**
EGMT Eagleton 70.60 43 IAMs_20 IAMs_20 16 44 36.8
comp=Z,3µm,18.0s
EGMT Eagleton 70.60 43 P **P** **16 09 18.3 -0.8**
baz=309,SNR=12
EGMT S **S** **16 18 32.0 -0.4**
baz=309
LCRK Leigh Creek 70.62 185 P **P** **16 09 20.5 +1.4**
YERR Yerington 70.66 55 P **P** **16 09 19.7 -0.1**
YERR IAmb IAmb 16 09 34.9
comp=Z,32nm,0.9s
ISAL Salakas 70.76 328 *e*P **P** **16 09 20.7 +0.9**
MNK Minsk 70.77 326 *i* P **P** **16 09 20.5 +0.7**
MNK *i* 16 11 53.6
MNK *i* PPP PPP 16 13 36.2
MNK *i* S **S** **16 18 32.3 -1.6**
MNK *i* 16 19 18.1
MNK *i* SS **SS** **16 23 07.6 +2.6**
MNK pmax pmax
comp=E,14nm,1.0s
MNK pmax pmax
comp=Z,204nm,1.0s
MNK MLR MLR
comp=Z,16µm,17.0s
MNK MLR MLR
comp=E,2µm,18.0s
MNK Minsk 70.77 326 *i* P **P** **16 09 20.5 +0.7**
comp=E,14nm,1.0s
MNK *i* P **P** **16 09 20.5 +0.7**
MNK *i* P **P** **16 09 20.5 +0.7**
comp=Z,204nm,1.0s,baz=47
MNK *i* PP **PP** **16 11 53.6 -2.5**
MNK *i* PPP PPP 16 13 36.2
MNK *i* S **S** **16 18 32.4 -1.6**
MNK *i* SS **SS** **16 23 07.6 +2.6**
MNK *i* SSS SSS 16 26 38.5
MNK *i* LQ LQ 16 35 27.8
MNK *i* LR LR 16 39 30.6
MNK *i* LRM MLR 16 44 37.5
MNK *i* LRM MLR 16 44 54.1
comp=Z,16µm,16.8s
MNK *i* LRM MLR 16 45 01.4
comp=E,2µm,17.6s
JASK Jask - Hormozg 70.77 288 P **P** **16 09 20.6 +0.2**
SLIT Slitere, Latvi 70.79 331 *e*P **P** **16 09 20.2 +0.3**
HLID Hailey 70.81 49 IAMs_20 IAMs_20 16 45 58.6
comp=Z,3µm,19.0s
HLID Hailey 70.81 49 P **P** **16 09 19.9 -0.7**
baz=308,SNR=23
HLID S **S** **16 18 35.6 +0.5**
baz=308
ICESG Greenland Ices 70.86 1 *i* P **P** **16 09 21.5 +0.9**
ICESG IAmb IAmb 16 09 23.4
comp=Z,107nm,1.1s
NACGM Naroch 70.95 327⇓ *i*P **P** **16 09 21.4 +0.4**
BMN Battle Mountai 71.04 53 P **P** **16 09 22.1 0.0**
BMN Battle Mountai 71.04 53 P **P** **16 09 22.1 0.0**
BOZ Bozeman (W) 71.12 46 P **P** **16 09 23.2 +0.8**
BOZ IAmb IAmb 16 09 33.6
comp=Z,31nm,0.8s
BOZ IAMs_20 IAMs_20 16 45 05.3
comp=Z,3µm,18.0s
BOZ Bozeman (W) 71.12 46 P **P** **16 09 23.2 +0.8**
BOZ pmax pmax
comp=Z,31nm,0.9s
BOZ MLR MLR
comp=Z,2µm,18.0s
BOZ Bozeman (W) 71.12 46 P **P** **16 09 21.2 -1.2**
baz=309,SNR=30
BOZ S **S** **16 18 39.3 +0.6**
baz=309
GNI Garni 71.18 307 LR LR 16 43 54.6
comp=Z,8µm,18.2s,baz=52,slow=39
GNI Garni 71.18 307*c i*P **P** **16 09 23.2 +0.3**
GNI pmax pmax
comp=Z,210nm,1.4s
GNI MLR MLR
comp=Z,7µm,18.0s
GNI Garni 71.18 307 P **P** **16 09 24.0 +1.1**
GNI Garni 71.18 307 P **P** **16 09 23.8 +0.9**
VSVD Vaisvydziai 71.35 329 *e*P **P** **16 09 23.9 +0.6**
MOL Molde 71.57 340 *e*P **P** **16 09 23.9 -0.7**
MOL IVmB_BB 16 09 25.3
comp=Z,1µm,3.6s
MOL *e*S **S** **16 18 43.2 +0.2**
MOL IVMs_BB IVMs_BB 16 45 40.1
comp=Z,4µm,18.8s
NVAR Mina Array Bea 71.58 55 P **P** **16 09 26.7 +1.3**
comp=Z,8.5nm,0.8s,baz=290,slow=6.3,SNR=45
NVAR LR LR 16 34 42.8
comp=Z,1µm,21.6s,baz=300,slow=31
comp=Z,8.5nm,0.8s
DOMB Dombas 71.61 339 *e*P **P** **16 09 24.9 0.0**
DOMB IVmB_BB 16 09 26.4

comp=Z,973nm,1.8s
DOMB e PP PP 16 12 04.1 +0.9
DOMB e S S 16 18 41.7 -1.8
DOMB IVMs_BB IVMs_BB 16 46 09.0
comp=Z,8µm,16.6s
NC405 NORSAR Array S 71.62 338 P P 16 09 25.0 0.0
NC303 NORSAR Array S 71.63 338 eP P 16 09 25.1 +0.1
PABE Paberze 71.67 329 eP P 16 09 25.6 +0.3
SOEG Soedalen 71.71 358 iP P 16 09 25.6 +0.3
SOEG IAmb IAmb 16 09 28.8
comp=Z,92nm,1.7s
MLAC Mammoth, Mammo 71.72 56 P P 16 09 25.8 -0.5
baz=307
MLAC S S 16 18 49.0 +2.9
baz=307
WSAR Wadi Sarin 71.76 285 LR LR 16 45 08.2
comp=Z,5µm,18.1s,baz=53,slow=39
NC204 NORSAR Array S 71.76 338 P P 16 09 25.9 0.0
NB201 NORSAR Array S 71.80 338 P P 16 09 26.0 -0.1
HFS Hagfors 71.81 336 LR LR 16 43 22.1
comp=Z,9µm,21.1s,baz=34,slow=38
NB2 NORSAR Subarra 71.83 338 P P 16 09 25.9 -0.3
comp=Z,189nm,1.4s,baz=35,slow=6.2
NB2 NORSAR Subarra 71.83 338 P P 16 09 25.9 -0.3
baz=35,slow=6.2
NOA NORSAR Array B 71.83 338 P P 16 09 26.1 -0.1
comp=Z,58nm,1.1s,baz=36,slow=6.0,SNR=99
NOA LR LR 16 47 35.3
comp=Z,7µm,18.7s,baz=40,slow=41
comp=Z,58nm,1.1s
WBK Wadi Bani Khal 71.89 284 P P 16 09 28.0 +0.8
SNR=9.4
WBK P P 16 09 28.0 +0.8
SNR=9.4
STKA Stephens Creek 71.89 182 P P 16 09 27.0 +0.3
comp=Z,6.8nm,0.8s,baz=332,slow=6.8,SNR=14
STKA LR LR 16 41 17.6
comp=Z,2µm,20.7s,baz=2.7,slow=36
comp=Z,6.8nm,0.8s
STKA Stephens Creek 71.89 182 P P 16 09 27.4 +0.7
SHME Shamm 71.91 289 P P 16 09 27.3 0.0
SNR=27
SHME P P 16 09 27.3 0.0
SNR=27
SHME Shamm 71.91 289 iP P 16 09 27.0 -0.3
SNR=28
BIDO Bidbid 71.97 286 P P 16 09 28.2 +0.5
SNR=13
BIDO P P 16 09 28.2 +0.5
SNR=13
NC602 NORSAR Array S 71.98 337 eP P 16 09 26.6 -0.5
NC602 IVmB_BB 16 09 28.2
comp=Z,1µm,3.1s
NC602 ePP PP 16 12 05.4 -0.9
NC602 eS S 16 18 46.4 -1.4
NC602 IVMs_BB IVMs_BB 16 48 50.9
comp=Z,4µm,13.5s
SOC Sochi 72.03 312 eP P 16 09 25.8 -1.9
SOC ePPP PPP 16 13 49.0
SOC eS S 16 18 48.5 -0.4
SOC e 16 19 35.7
SOC eSS SS 16 23 24.3 -0.7
SOC pmax pmax
comp=Z,116nm,1.3s
AKN Aaknes 72.04 340 eP P 16 09 28.3 +0.8
AKN IVmB_BB 16 09 29.3
comp=Z,1µm,3.6s
AKN eS S 16 18 49.6 +1.1
AKN IVMs_BB IVMs_BB 16 45 54.9
comp=Z,4µm,19.7s
ELK Elko 72.05 52 LR LR 16 40 35.3
comp=Z,1µm,19.7s,baz=323,slow=35
NAO01 NORSAR Array S 72.08 338 P P 16 09 27.6 -0.2
PBUR Paburge 72.09 330 eP P 16 09 28.5 +0.6
VOG Valley Oaks Go 72.16 57 P P 16 09 28.2 -0.4
baz=307
VOG S S 16 18 49.8 -0.8
baz=307
FORT Forrest 72.24 194 P P 16 09 29.0 +0.1
FORT IAmb IAmb 16 10 09.5
comp=Z,47nm,0.9s
FORT Forrest 72.24 194 P P 16 09 30.4 +1.5
BCA Borcka 72.27 309 ⇓P P 16 09 31.1 +1.9
SMDO Samad 72.30 285 P P 16 09 30.7 +0.9
SNR=14
SMDO P P 16 09 30.7 +0.9
SNR=14
MASF Masafi 72.30 288 P P 16 09 30.1 +0.4
SNR=18
MASF P P 16 09 30.1 +0.4
SNR=18
MASF P pP 16 09 32.0 -1.2
SNR=13
MASF P pP 16 09 32.0 -1.2
SNR=13
MSFE Esma-Masafi 72.31 288 iP P 16 09 29.4 -0.3
SNR=18
SMMC Simmler 72.37 59 P P 16 09 29.5 -0.5
baz=307
SFJD Kangerlussuaq 72.42 6 LR LR 16 43 25.9
comp=Z,4µm,20.3s,baz=348,slow=38
SFJD Kangerlussuaq 72.42 6 IAMs_20 IAMs_20 16 43 13.6
comp=Z,5µm,21.0s
SFJD Kangerlussuaq 72.42 6 iP P 16 09 29.8 +0.2
SFJD IAmb IAmb 16 09 31.7
comp=Z,51nm,1.2s
TIN Tinemaha, Big 72.45 56 P P 16 09 31.0 +0.5
baz=308
TIN S S 16 18 57.0 +2.7
baz=308
H17A Grant Village 72.46 46 P P 16 09 30.3 -0.3
baz=310
H17A S S 16 18 58.6 +4.3
baz=310
UOSS Minazif 72.52 288 P P 16 09 30.9 -0.1
UOSS IAmb IAmb 16 09 32.8
comp=Z,91nm,1.1s
UOSS Minazif 72.52 288 P P 16 09 31.2 +0.2
UOSS P P 16 09 31.2 +0.2
UOSS Minazif 72.52 288 iP P 16 09 30.6 -0.4
SNR=14
HOQ Hoqain 72.53 286 P P 16 09 31.7 +0.6
SNR=22
HOQ P P 16 09 31.7 +0.6
SNR=22
ANN Anapa 72.54 314 eP P 16 09 30.3 -0.4
ANN e 16 12 07.3
ANN ePPP PPP 16 13 57.1
ANN eS S 16 18 52.4 -2.2
ANN eSS SS 16 23 33.2 +0.6
ANN pmax pmax
comp=Z,171nm,1.3s
ANN MLR MLR
comp=N,11µm,15.0s
ANN MLR MLR
comp=Z,13µm,15.0s
ANN MLR MLR
comp=E,3µm,14.0s
UMQ Umm Al-Quwin 72.57 289 P P 16 09 32.2 +1.0
UMQ P P 16 09 32.2 +1.0
UMQ Umm Al-Quwin 72.57 289 P P 16 09 32.3 +1.0
VES Vestal, Richgr 72.64 58 P P 16 09 31.6 +0.1
baz=308
HATD Hatta, Dubai 72.65 288 P P 16 09 32.4 +0.6
SNR=34
HATD P P 16 09 32.4 +0.6
SNR=34
HATD Hatta, Dubai 72.65 288 iP P 16 09 31.5 -0.2
SNR=34
JMDO Jabal Madar 72.67 285 P P 16 09 32.4 +0.5
SNR=8.4
RLMT Red Lodge 72.71 45 IAMs_20 IAMs_20 16 46 35.3
comp=Z,3µm,18.0s
RLMT Red Lodge 72.71 45 P P 16 09 32.9 +0.8
baz=310,SNR=9.3
RLMT S S 16 18 57.0 -0.1
baz=310
PKM Mcpherson Peak 72.75 59 P P 16 09 31.7 -0.7
baz=307,SNR=7.9
PKM S S 16 19 00.6 +2.8
baz=307
AKASG Malin Array Be 72.78 323 P P 16 09 31.9 -0.2
comp=Z,89nm,1.1s,baz=43,slow=6.9,SNR=123
AKASG LR LR 16 45 57.3
comp=Z,8µm,18.9s,baz=45,slow=40
comp=Z,89nm,1.1s
AKASG Malin Array Be 72.78 323 P P 16 09 31.8 -0.2
AKBB Malin Array Si 72.78 323 iP P 16 09 31.4 -0.7
AKBB pmax pmax
comp=Z,208nm,1.3s
AKBB MLR MLR
comp=Z,14µm,17.0s
ASHO Ashiyiah 72.78 288 P P 16 09 33.0 +0.4
SNR=29
ASHO P P 16 09 33.0 +0.4
SNR=29
ASHO Ashiyiah 72.78 288 iP P 16 09 32.7 +0.1
SNR=29
TPAW Teton Pass 72.82 47 P P 16 09 32.7 -0.1
TPAW IAmb IAmb 16 10 09.9
comp=Z,89nm,1.6s
OSL Oslo 72.86 337 eP P 16 09 33.2 +0.9
OSL eS S 16 18 57.4 -0.4
NAZ Nazwa, Dubai 72.89 288 P P 16 09 34.7 +1.6
SNR=13
NAZ P P 16 09 34.7 +1.6
SNR=13
NAZ Nazwa, Dubai 72.89 288 iP P 16 09 32.4 -0.8
SNR=14
CWC Cottonwood Cre 72.92 57 P P 16 09 31.2 -2.2
baz=308
CWC S S 16 18 58.4 -1.3
baz=308
SKAR Skarslia 72.94 339 eP P 16 09 33.9 +0.9
SKAR IVmBBB 16 09 34.7
comp=Z,869nm,2.1s
SKAR eS S 16 19 00.9 +2.1
SKAR IVMs_BB IVMs_BB 16 47 20.4
comp=Z,6µm,15.5s
FOO Floro 73.03 341 eP P 16 09 33.5 +0.2
FOO IVmB_BB 16 09 43.0
comp=Z,1µm,3.9s
FOO ePP PP 16 12 15.0 -0.2
FOO eS S 16 19 01.0 +1.3
FOO IVMs_BB IVMs_BB 16 49 42.5
comp=Z,3µm,12.8s
GRAC Grapevine Rang 73.04 56 P P 16 09 35.1 +1.1
GRAC Grapevine Rang 73.04 56 P P 16 09 31.9 -2.1
baz=308,SNR=30
GRAC S S 16 19 03.1 +2.4
baz=308
SBC Santa Barbara 73.08 59 P P 16 09 32.7 -1.4
baz=308
SBC S S 16 19 01.7 +0.5
baz=308
FAQ Al Faqa, Dubai 73.09 288 P P 16 09 34.6 +0.3
SNR=12
FAQ P P 16 09 34.6 +0.3
SNR=12
FAQ Al Faqa, Dubai 73.09 288 iP P 16 09 33.6 -0.8
SNR=14
HYA Hoyanger 73.10 340 eP P 16 09 34.4 +0.6
HYA eS SKiKP 16 19 04.6 -0.8
BSY Bisya 73.11 286 P P 16 09 35.1 +0.6
SNR=16
BSY P P 16 09 35.1 +0.6
SNR=16
DGMT Dagmar 73.13 40 IAMs_20 IAMs_20 16 41 39.6
comp=Z,3µm,21.0s
DGMT Dagmar 73.13 40 P P 16 09 36.0 +1.7
baz=312
DGMT S S 16 19 00.6 -0.7
baz=312
DGMT Dagmar 73.13 40 P P 16 09 33.2 -1.0
baz=312
DGMT S S 16 18 59.8 -1.5
baz=312
FRB Frobisher Bay 73.13 14 LR LR 16 45 37.7
comp=Z,4µm,19.4s,baz=338,slow=39
ISA Isabella, Lake 73.15 57 P P 16 09 33.8 -0.8
baz=308
ISA S S 16 19 02.0 0.0
baz=308
DY2G Dye2 73.23 4 iP P 16 09 34.9 +0.2
DY2G IAmb IAmb 16 09 37.6
comp=Z,208nm,1.5s
ARVC Arvin 73.24 58 P P 16 09 32.9 -2.2
baz=308
ARVC S S 16 19 02.6 -0.4
baz=308
ARQ Araqi 73.25 287 P P 16 09 35.9 +0.6
SNR=13
ARQ P P 16 09 35.9 +0.6
SNR=13
LAO LASA Array 73.30 42 IAMs_20 IAMs_20 16 44 55.1
comp=Z,3µm,20.0s
LAO LASA Array 73.30 42 P P 16 09 36.8 +1.5
baz=312
LAO S S 16 19 04.2 +0.8
baz=312
LAO LASA Array 73.30 42 P P 16 09 34.5 -0.8
baz=312,SNR=15
LAO S S 16 19 03.6 +0.2
baz=312
R11A Troy Canyon, C 73.32 54 P P 16 09 34.0 -1.7
baz=308,SNR=22
R11A S SKiKP 16 19 05.7 -1.0
baz=308
ASUD Al Ashush, Dub 73.35 288 P P 16 09 36.4 +0.6
SNR=7.6
ASUD P P 16 09 36.4 +0.6
SNR=7.6
ASUD Al Ashush, Dub 73.35 288 iP P 16 09 35.7 -0.2
SNR=12
ALNE Al Ain 73.39 288 P P 16 09 37.5 +1.4
SNR=21
ALNE P P 16 09 37.5 +1.4
SNR=21
ALNE Al Ain 73.39 288 iP P 16 09 36.3 +0.2
SNR=11
SCZ2 Santa Cruz Isl 73.41 59 P P 16 09 35.1 -1.0
baz=308
SCZ2 S S 16 19 05.4 +0.4
baz=308
KONO Kongsberg 73.43 338 eP P 16 09 36.6 +0.9
KONO IVmB_BB 16 09 37.2
comp=Z,1µm,3.7s
KONO ePP PP 16 12 19.0 +0.3
KONO eS S 16 19 03.9 -0.4
KONO IVMs_BB IVMs_BB 16 47 54.9
comp=Z,6µm,16.7s
MPMC Manual Prospec 73.53 57 P P 16 09 35.6 -1.5
baz=308,SNR=16
MPMC S SKiKP 16 19 07.9 +0.9
baz=308
SUE Sulen 73.56 341 eP P 16 09 36.8 +0.3
SUE IVmB_BB 16 09 38.3
comp=Z,1µm,2.0s
SUE eS SKiKP 16 19 07.1 +1.1
SUE IVMs_BB IVMs_BB 16 47 42.5
comp=Z,4µm,14.2s
MHTO MHTO 73.60 284 P P 16 09 38.0 +0.6
SNR=21
MHTO P P 16 09 38.0 +0.6
SNR=21
OSI Osito Audit: C 73.62 58 P P 16 09 37.2 -0.2
baz=308
OSI S S 16 19 09.4 +1.9
baz=308
AJN Ajban 73.64 288 P P 16 09 38.4 +0.9
SNR=7.7
AJN P P 16 09 38.4 +0.9
SNR=7.7
AJN Ajban 73.64 288 iP P 16 09 37.2 -0.4
SNR=10
KTUT Trabzon 73.64 310 ⇓P P 16 09 39.2 +1.8
HWUT Hardware Ranch 73.67 49 P P 16 09 38.3 +0.6
FURC Furnace Creek, 73.68 56 P P 16 09 36.7 -0.9
baz=308,SNR=14
FURC S S 16 19 07.9 0.0
baz=308
MORW Morawa 73.70 205 P P 16 09 37.5 -0.1
MORW IAmb IAmb 16 10 21.9
comp=Z,68nm,1.5s
MORW Morawa 73.70 205 P P 16 09 38.5 +0.9
LRMC Laurel Mtn Rad 73.77 57 P P 16 09 37.0 -1.4
baz=308,SNR=5.5
LRMC S S 16 19 10.6 +1.4
baz=308
TPNV Topopah Spring 73.77 55 P P 16 09 36.7 -1.7
baz=308,SNR=26
TPNV S S 16 19 10.6 +1.3
baz=308
DUG Dugway, Tooele 73.84 51 P P 16 09 37.8 -0.9
baz=309,SNR=19
DUG S S 16 19 13.2 +3.3
baz=309
EDW2 Edwards Air Fo 73.94 58 P P 16 09 38.5 -0.8
baz=308,SNR=9.9
EDW2 S S 16 19 10.7 -0.3
baz=308
SNCC San Nicolas Is 73.94 60 P P 16 09 38.3 -0.9
baz=308
SNCC S S 16 19 13.0 +2.1
baz=308
ASK Askoy 73.94 340 eP P 16 09 39.8 +1.1
GWY Greenwater Val 73.98 56 P P 16 09 40.2 +0.6
BER Bergen 73.99 340 eP P 16 09 40.1 +1.1
BER eS S 16 19 12.3 +1.7
BER IVMs_BB IVMs_BB 16 47 43.8
comp=Z,6µm,14.9s
ODD1 Odda 74.05 339 eP P 16 09 40.3 +0.9
ODD1 eS S 16 19 14.2 +2.9
BW06 Boulder Array 74.07 47 IAMs_20 IAMs_20 16 48 44.8
comp=Z,2µm,18.0s
BW06 Boulder Array 74.07 47 P P 16 09 38.3 -1.8
baz=310,SNR=17
BW06 S S 16 19 12.7 +0.1
baz=310
PD31 Pinedale Array 74.07 47 P P 16 09 40.6 +0.5
PDAR Pinedale Array 74.07 47 P P 16 09 40.4 +0.3
comp=Z,7.3nm,0.8s,baz=271,slow=1.5,SNR=39
PDAR LR LR 16 42 30.2
comp=Z,898nm,19.9s,baz=342,slow=36
comp=Z,7.3nm,0.8s
PDAR Pinedale Array 74.07 47 P P 16 09 40.6 +0.5
DECC Green Verdugo 74.10 59 P P 16 09 37.9 -2.3
baz=308
DECC S S 16 19 14.0 +1.2
baz=308
PASC Pasadena Art C 74.25 59 IAMs_20 IAMs_20 16 35 09.2
comp=Z,4µm,21.0s
ANGG Ammassalik, Gr 74.37 1 iP P 16 09 39.8 -1.3
ANGG IAmb IAmb 16 09 43.2
comp=Z,24nm,1.0s
SHOC Shoshone, Teco 74.41 56 P P 16 09 41.2 -0.7
baz=309
SHOC S S 16 19 17.5 +1.4
baz=309
GSC Goldstone, Bar 74.44 57 P P 16 09 41.2 -1.1
baz=309,SNR=7.1
GSC S S 16 19 18.6 +1.9
baz=309
FMP Fort Macarthur 74.46 59 P P 16 09 41.1 -1.2
baz=308
FMP S S 16 19 17.9 +1.2
baz=308
BLS5 Blasjo 74.51 339 eP P 16 09 43.5 +1.4
BLS5 IVmB_BB 16 09 47.2
comp=Z,804nm,2.1s
BLS5 ePP PP 16 12 29.9 +2.1
BLS5 eS S 16 19 18.6 +2.2
BLS5 IVMs_BB IVMs_BB 16 48 17.2
comp=Z,5µm,16.3s
BFSC Mount Baldy Ra 74.55 58 P P 16 09 41.8 -1.1
baz=308,SNR=7.4
BFSC S S 16 19 17.9 -0.1
baz=308
DQM DQM 74.56 283 P P 16 09 44.7 +1.7
SNR=5.8
DQM P P 16 09 44.7 +1.7
SNR=5.8
CIS Catalina Islan 74.57 59 P P 16 09 42.5 -0.4
baz=308
CIS S S 16 19 19.0 +0.9
baz=308
RRX Edison Barstow 74.58 57 P P 16 09 43.3 +0.3
baz=309
RRX S S 16 19 17.7 -0.5
baz=309
BORG Borgarnes 74.59 353 LR LR 16 43 07.0
comp=Z,2µm,19.0s,baz=21,slow=36
UMZA Um Al Zommool 74.63 287 P P 16 09 42.8 -0.5
UMZA P P 16 09 42.8 -0.5
SCI2 San Clemente I 74.75 60 P P 16 09 44.0 +0.1
baz=308
SCI2 S S 16 19 21.8 +1.8
baz=308
HOMB Homborsund 74.89 337 eP P 16 09 44.1 -0.1
HOMB ePP PP 16 12 35.5 +4.4
HOMB eS S 16 19 21.7 +1.0
HOMB IVMs_BB IVMs_BB 16 48 48.4
comp=Z,5µm,15.8s
TUQ Turquoise Moun 74.92 56 P P 16 09 44.7 -0.3
baz=309,SNR=5.7
TUQ S S 16 19 23.2 +1.1
baz=309
MZWR Madinat Zayed 74.92 288 P P 16 09 45.4 +0.4
MZWR P P 16 09 45.4 +0.4
JRN Qarnain Island 74.95 290 P P 16 09 44.5 -0.7
JRN P P 16 09 44.5 -0.7
SORM Soroca 74.97 321 ⇑P P 16 09 44.4 -0.5
BBRC Big Bear Solar 75.01 58 P P 16 09 45.3 -0.4
baz=309
BBRC S S 16 19 23.3 -0.1
baz=309
KMY Karmoy 75.02 339 eP P 16 09 46.0 +1.1
KMY eS S 16 19 25.2 +3.2
HEC Hector,Ludlow 75.03 57 P P 16 09 44.1 -1.6
baz=309,SNR=8.8
HEC S S 16 19 23.9 +0.5
baz=309
NUUK Nuuk 75.10 7 iP P 16 09 45.8 +0.4
NUUK IAmb IAmb 16 09 48.6
comp=Z,42nm,1.0s
SNART Snartemo 75.21 338 eP P 16 09 47.2 +1.1
SNART ePP PP 16 12 39.0 +5.2
SNART eS S 16 19 30.0 +5.7
SNART IVMs_BB IVMs_BB 16 49 05.6
comp=Z,14µm,17.5s
MURC Murrieta 75.25 58 P P 16 09 44.6 -2.3
baz=309
MURC S S 16 19 26.0 +0.4
baz=309
CAN Canberra 75.45 176 IAMs_20 IAMs_20 16 47 41.6
comp=Z,4µm,18.0s
GMRC Granite Mounta 75.50 57 P P 16 09 47.8 -0.6
baz=309,SNR=12
GMRC S S 16 19 30.6 +2.0
baz=309
GHWR Ruwais 75.53 289 P P 16 09 49.2 +0.6
GHWR P P 16 09 49.2 +0.6
KIS Kishinev 75.54 320 ⇑iP P 16 09 48.0 -0.2
comp=Z,220nm,2.1s
KIS Kishinev 75.54 320 ePcP PcP 16 10 00.0 -1.2
KIS Kishinev 75.54 320 ePP PP 16 12 36.0 -0.9
KIS Kishinev 75.54 320 *c* iP P 16 09 48.0 -0.2
KIS *e* 16 10 00.0
KIS *e* 16 12 36.0
KIS ePPP PPP 16 14 26.0
KIS *i* S S 16 19 26.0 -2.3
KIS *e* 16 20 14.0
KIS pmax pmax
comp=Z,220nm,2.1s
KIS MLR MLR
comp=Z,6µm,16.0s
KIS MLR MLR
comp=N,3µm,15.5s
MILM Milestii Mici 75.60 320 ⇑iP P 16 09 48.0 -0.6
comp=N,2µm,7.6s
MILM Milestii Mici 75.60 320 ePcP PcP 16 09 58.0 -3.4
MILM Milestii Mici 75.60 320 ePP PP 16 12 33.0 -4.4
MILM Milestii Mici 75.60 320 *c* iP P 16 09 48.0 -0.6
MILM *e* 16 09 58.0
MILM *e* 16 12 33.0
MILM ePPP PPP 16 14 22.0
MILM eS S 16 19 27.0 -2.0
MILM pmax pmax
comp=Z,2µm,7.6s
MILM smax smax
comp=E,2µm,15.3s
MILM MLR MLR
comp=Z,10µm,15.0s
BEL Belsk 75.65 327 eP P 16 09 49.8 +1.0
BEL ePP PP 16 12 35.8 -2.0
BEL eS S 16 19 29.5 +0.1
MZR Muzera 75.68 288 P P 16 09 49.4 0.0
SNR=18
MZR P P 16 09 49.4 0.0
SNR=18

MZR Muzera 75.68 288 *i* P P 16 09 49.0 -0.5
SNR=14
GOET G??ttrup 75.70 336 *i* P P 16 09 49.6 +0.7
GOET IAmb IAmb 16 09 51.7
comp=Z,123nm,1.0s
PFO Pinyon Flats O 75.72 58 LR LR 16 36 28.0
comp=Z,3µm,21.9s,baz=301,slow=30
PFO Pinyon Flats O 75.72 58 IAMs_20 IAMs_20 16 36 47.1
comp=Z,3µm,20.0s
PFO Pinyon Flats O 75.72 58 P P 16 09 47.8 -1.9
baz=309,SNR=5.6
PFO S S 16 19 31.5 +0.4
baz=309
TPFO Pinon Flats 75.72 58 P P 16 09 48.6 -1.1
baz=309,SNR=5.6
TPFO S S 16 19 31.5 +0.4
baz=309
ULM Lac du Bonnet 75.75 35 P P 16 09 49.2 -0.2
comp=Z,9.1nm,0.7s,baz=317,slow=6.7,SNR=8.5
ULM LR LR 16 46 37.9
comp=Z,2µm,18.1s,baz=333,slow=38
comp=Z,9.1nm,0.7s
109C Camp Elliot, M 75.75 59 P P 16 09 48.8 -0.9
baz=309
109C S S 16 19 30.8 -0.4
baz=309
LVV L'vov 75.76 325 ⇓ *i* P P 16 09 49.7 +0.2
LVV *e* 16 12 38.6
LVV *i* S S 16 19 30.2 -0.5
LVV *e* 16 20 00.5
LVV *e* 16 20 25.1
LVV *e* 16 24 18.2
LVV pmax pmax
comp=Z,480nm,1.4s
LVV smax smax
comp=E,1µm,6.0s
LVV MLR MLR
comp=E,13µm,15.0s
LVV MLR MLR
comp=N,7µm,14.0s
LVV MLR MLR
comp=Z,12µm,16.0s
BELC Belle Mtn. Jos 75.77 57 P P 16 09 49.1 -0.9
baz=309
BELC S S 16 19 33.1 +1.4
baz=309
COP Copenhagen 75.77 334 *i* P P 16 09 50.0 +0.6
COP IAmb IAmb 16 09 51.8
comp=Z,158nm,0.9s
MDND Maddock 75.78 38 S S 16 19 31.0 0.0
baz=315
DIKM Dikmen 75.80 313 ⇓ P P 16 09 51.3 +1.5
K22A Casper 75.83 46 P P 16 09 51.1 +0.9
baz=312
K22A S S 16 19 30.3 -1.7
baz=312
K22A Casper 75.83 46 P P 16 09 48.5 -1.7
baz=312
K22A S S 16 19 31.4 -0.7
baz=312
KNB Kanab 75.86 53 IAmb IAmb 16 10 28.4
comp=Z,68nm,1.4s
SAKB Bahrain 75.96 292 P P 16 09 51.2 +0.2
GKP Gorka Klasztor 75.97 330 *e*P P 16 09 50.7 +0.2
GKP *e*PP PP 16 12 38.7 -1.6
E28A Huff 76.16 40 P P 16 09 53.1 +1.3
baz=315
E28A S S 16 19 32.6 -2.6
baz=315
RSSD Black Hills 76.16 43 P P 16 09 53.0 +0.8
RSSD Black Hills 76.16 43 P P 16 09 53.0 +0.8
RSSD pmax pmax
comp=Z,22nm,1.0s
RSSD MLR MLR
comp=Z,2µm,18.0s
RSSD Black Hills 76.16 43 P P 16 09 53.0 +0.8
baz=313
RSSD S S 16 19 35.3 -0.6
baz=313
RSSD Black Hills 76.16 43 P P 16 09 49.3 -2.8
baz=313
RSSD S S 16 19 34.2 -1.6
baz=313
NEE2 Needles Airpor 76.17 56 P P 16 09 50.9 -1.2
baz=310
NEE2 S S 16 19 37.2 +1.4
baz=310
MONP2 Monument Peak 76.19 59 P P 16 09 51.3 -1.2
baz=309
MONP2 S S 16 19 36.9 +0.4
baz=309
MUD Monsted U'grnd 76.20 336 *i* P P 16 09 52.2 +0.5
MUD IAmb IAmb 16 09 54.2
comp=Z,83nm,1.2s
IRM Iron Mountain 76.22 57 P P 16 09 50.9 -1.5
baz=310,SNR=11
IRM S S 16 19 37.6 +1.2
baz=310
BZK Bozkurt 76.29 314 ⇓ P P 16 09 52.5 -0.1
VASR Vaslui 76.29 320 ⇑ P P 16 09 52.8 +0.2
SLWR Sila 76.31 290 P P 16 09 53.4 +0.4
SLWR P P 16 09 53.4 +0.4
BC3 Big Chuckawall 76.34 57 P P 16 09 51.9 -1.3
baz=310,SNR=6.6
BC3 S S 16 19 38.7 +0.8
baz=310
KWP Kalwaria Pacla 76.48 325 *e*P P 16 09 54.5 +0.9
KWP *e*PP PP 16 12 45.3 +0.5
KWP *e*S S 16 19 38.0 -0.7
SMRA Abu-Samra 76.52 291 P P 16 09 54.3 +0.1
O20A White River Ci 76.54 49 P P 16 09 51.5 -2.8
baz=312
O20A S S 16 19 40.2 +0.2
baz=312
IKP In-Ko-Pah, Jac 76.55 59 S S 16 19 40.9 +0.7
baz=309
SWSC Sam W. Stewart 76.57 58 P P 16 09 51.9 -2.5
baz=310
SWSC S S 16 19 41.7 +1.6
baz=310
VLDR Vladesti 76.71 320 ⇓ P P 16 09 56.3 +1.4
PDMCI Parker Dam,Lak 76.77 56 P P 16 09 53.8 -1.7
baz=310
PDMCI S S 16 19 44.3 +2.1
baz=310
BUR08 Bucovina Ar. S 76.81 322 IAmb IAmb 16 10 08.7
comp=Z,64nm,1.0s
TLCR 76.81 319 ⇓ P P 16 09 56.4 +0.9
BUR01 Bucovina Ar. S 76.82 322 ⇓ P P 16 09 57.1 +1.4
BURAR Bucovina Array 76.82 322 P P 16 09 56.4 +0.7
BURAR IAmb IAmb 16 09 58.8
comp=Z,61nm,0.9s
SCTR Scanteiesti 76.88 320 ⇓ P P 16 09 56.9 +1.0
BIZ Bicaz 76.89 321 ⇓ P P 16 09 56.9 +0.9
TESR Tescani 76.94 321 ⇓ P P 16 09 56.7 +0.5
JURR Jurilovca 77.08 318 ⇑ P P 16 09 57.6 +0.6
GLA Glamis 77.13 58 P P 16 09 55.8 -1.8
baz=310
GLA S S 16 19 48.1 +1.8
baz=310
PANC Panciu 77.15 320 ⇑ P P 16 09 59.1 +1.7
CFR Carcaliu 77.16 319 ⇓ P P 16 09 57.4 0.0
SHAO Shalim 77.16 283 P P 16 09 58.1 +0.2
SHAO Shalim 77.16 283 P P 16 09 57.6 -0.3
AGMN Agassiz Nation 77.19 36 IAMs_20 IAMs_20 16 47 25.8
comp=Z,3µm,20.0s
AGMN Agassiz Nation 77.19 36 P P 16 09 58.1 +0.5
baz=318
AGMN S S 16 19 43.0 -3.4
baz=318
AGMN Agassiz Nation 77.19 36 P P 16 09 54.2 -3.3
baz=318
AGMN S S 16 19 44.5 -1.9
baz=318
KOLS Kolonicke sedl 77.19 325 *e*P P 16 09 58.3 +0.7
KOLS pmax pmax
comp=Z,60nm,1.1s
KOLS Kolonicke sedl 77.19 325 *e*P P 16 09 58.3 +0.7
TPGR Topolog 77.24 319 ⇑ P P 16 09 58.9 +1.0
OJC Ojcow 77.29 327 *e*P P 16 09 58.0 -0.1
OJC *e*PP PP 16 12 48.7 -2.8
OJC *e*S S 16 19 45.2 -2.2
N23A Red Feather La 77.33 47 P P 16 09 57.3 -1.6
baz=313,SNR=7.7
N23A S S 16 19 49.6 +0.8
baz=313

VRI Vrincioaia 77.36 320 ⇓ P P 16 09 60.0 +1.3
UZH Uzhgorod 77.41 325 *e*P P 16 09 59.6 +0.8
UZH *e* 16 10 06.6
UZH *e*S S 16 19 47.6 -1.1
UZH *e*PS PnS 16 20 46.0 +18
UZH MLR MLR
comp=N,2µm,17.5s
UZH MLR MLR
comp=E,4µm,17.5s
UZH MLR MLR
comp=Z,2µm,17.5s
PLOR Plostina 77.41 320 ⇑ P P 16 10 00.5 +1.5
TIRR Tirgusor 77.53 318 ⇑ P P 16 09 59.8 +0.3
TIRR Tirgusor 77.53 318 ⇑ P P 16 09 59.8 +0.3
CRVS Cervenica-Dubn 77.57 325 *e*P P 16 10 00.5 +0.8
CRVS pmax pmax
comp=Z,242nm,1.6s
CRVS Cervenica-Dubn 77.57 325 *e*P P 16 10 00.5 +0.8
CRVS *e*PP PP 16 12 54.2 +0.2
CRVS *e*S S 16 19 46.5 -4.1
CRVS *e*L L 16 49 01.0
BMR Baia Mare 77.58 323 ⇓ P P 16 10 01.3 +1.5
HARR Harsova 77.61 319 ⇓ P P 16 10 01.1 +1.2
ARCR ARCALIA 77.61 322 ⇑ P P 16 10 01.9 +1.9
COVR Voineasa-Covas 77.63 321 ⇑ P P 16 10 01.5 +1.3
TLBR Topalu 77.65 319 ⇓ P P 16 10 01.5 +1.3
OZUR 77.65 321 ⇓ P P 16 10 02.0 +1.7
NIE Niedzica 77.68 326 *e*P P 16 10 01.6 +1.3
NIE *e*PP PP 16 12 53.9 -1.0
NIE *e*S S 16 19 52.1 +0.2
WUAZ Wupatki 77.72 54 P P 16 10 00.6 -0.4
baz=311,SNR=11
WUAZ S S 16 19 55.6 +2.6
baz=311
DMTO DMTO 77.85 283 P P 16 10 01.7 -0.1
RAO Raoul Island 77.86 146 LR LR 16 40 19.1
comp=Z,3µm,20.0s,baz=354,slow=33
DOPR Dopca 77.94 321 ⇓ P P 16 10 02.8 +1.0
ISR Istrita 77.99 320 ⇓ P P 16 10 03.7 +1.5
BRTR Keskin Array B 78.00 312 P P 16 10 03.0 +0.5
comp=Z,34nm,1.1s,baz=48,slow=4.0,SNR=71
BRTR PP PP 16 12 57.8 -0.3
comp=Z,12nm,1.1s,baz=64,slow=5.6,SNR=4.4
BRTR LR LR 16 51 53.0
comp=Z,8µm,18.0s,baz=26,slow=41
comp=Z,34nm,1.1s
BRTR Keskin Array B 78.00 312 P P 16 10 02.4 0.0
BRTR Keskin Array B 78.00 312 *i* P P 16 10 03.0 +0.5
BRTR pmax pmax
comp=Z,34nm,1.1s
MLR Muntele Rosu 78.01 320 ⇑ P P 16 10 03.2 +0.7
MLR Muntele Rosu 78.01 320 LR LR 16 48 53.0
comp=Z,9µm,20.0s,baz=28,slow=39
MLR Muntele Rosu 78.01 320 P P 16 10 03.1 +0.7
MLR IAmb IAmb 16 10 06.0
comp=Z,87nm,1.3s
MLR Muntele Rosu 78.01 320 P P 16 10 03.1 +0.7
MLR pmax pmax
comp=Z,87nm,1.3s
MLR MLR MLR
comp=Z,10µm,22.0s
ICOR Ion Corvin 78.08 319 ⇑ P P 16 10 04.0 +1.4
B35A Bob, Littlefor 78.09 35 P P 16 10 02.1 -0.5
baz=319
B35A S S 16 19 53.7 -2.5
baz=319
MESR Meseseni 78.21 323 ⇓ P P 16 10 05.4 +2.0
CBBR Cluj-Babes-Bol 78.22 323 ⇑ P P 16 10 04.8 +1.5
KSP Ksiaz 78.22 329 *e*P P 16 10 04.2 +0.9
KSP *e*PP PP 16 12 57.5 -1.8
KSP *e*S S 16 19 57.0 -0.6
CJR Cluj-Napoca 78.24 323 ⇑ P P 16 10 05.7 +2.2
LANS Liptovska Anna 78.24 326 *e*P P 16 10 05.0 +1.5
LANS pmax pmax
comp=Z,72nm,1.4s
LANS Liptovska Anna 78.24 326 *e*P P 16 10 05.0 +1.5
ISCO Idaho Springs 78.26 47 IAMs_20 IAMs_20 16 46 41.7
comp=Z,3µm,20.0s
ISCO Idaho Springs 78.26 47 P P 16 10 05.6 +1.5
baz=313
ISCO S S 16 20 00.5 +1.5
baz=313
ISCO Idaho Springs 78.26 47 P P 16 10 03.0 -1.1
baz=313,SNR=8.8
ISCO S S 16 20 00.4 +1.4
baz=313
OKC Ostrava-Krasne 78.26 327 *e*P P 16 10 04.7 +1.2
OKC *e*S S 16 20 00.7 +2.7
OKC MLR MLR
comp=Z,13µm,17.1s
OKC Ostrava-Krasne 78.26 327 *e*P P 16 10 04.7 +1.2
OKC *e*S S 16 20 00.7 +2.7
OKC AMS AMS 16 48 10.0
comp=Z,13µm,17.1s
IVI Ivigtut 78.34 6 IAmb IAmb 16 10 40.9
comp=Z,58nm,1.3s
IVI Ivigtut 78.34 6 *i* P P 16 10 04.1 +0.4
IVI IAmb IAmb 16 10 05.9
comp=Z,30nm,1.0s
MVCO Mesa Verde 78.34 51 IAMs_20 IAMs_20 16 50 28.3
comp=Z,2µm,18.0s
MVCO Mesa Verde 78.34 51 P P 16 10 04.6 +0.1
baz=312
MVCO S S 16 20 01.3 +1.6
baz=312
ANTO Ankara 78.38 313 IAMs_20 IAMs_20 16 49 46.0
comp=Z,4µm,19.0s
ANTO Ankara 78.38 313 P P 16 10 02.1 -2.4
ANTO P P 16 10 02.1 -2.4
OSTC Ostas 78.48 329 *e*P P 16 10 05.8 +1.0
OSTC *e*S S 16 20 01.1 +0.8
OSTC AMS AMS 16 48 40.0
comp=Z,13µm,17.3s
VOIR 78.49 321 ⇓ P P 16 10 06.2 +1.2
CHVC Chvalec 78.52 329 *e*P P 16 10 05.9 +0.9
SUSD Miller 78.53 40 S S 16 19 57.8 -3.3
baz=316
SUSD Miller 78.53 40 P P 16 10 03.3 -1.8
baz=316
SUSD S S 16 19 58.5 -2.6
baz=316
RBK Rabkut 78.54 283 P P 16 10 05.3 -0.3
RBK P P 16 10 05.3 -0.3
MORC Moravsky Berou 78.56 328 ⇑ P P 16 10 06.5 +1.3
MORC Moravsky Berou 78.56 328 P P 16 10 05.9 +0.7
MORC Moravsky Berou 78.56 328 P P 16 10 05.9 +0.7
MORC pmax pmax
comp=Z,115nm,1.2s
MORC Moravsky Berou 78.56 328 *e*P P 16 10 06.0 +0.7
MORC *e*S S 16 20 01.4 +0.2
NRS Narsarsuaq 78.57 5 IAMs_20 IAMs_20 16 47 33.3
comp=Z,4µm,20.0s
NRS Narsarsuaq 78.57 5 *i* P P 16 10 05.0 0.0
DRGR 78.59 323 ⇓ P P 16 10 06.9 +1.4
UPC Upice 78.60 329 *e*P P 16 10 05.7 +0.3
UPC *e*S S 16 20 02.1 +0.5
UPC MLR MLR
comp=Z,15µm,16.6s
UPC Upice 78.60 329 *e*P P 16 10 05.7 +0.3
UPC *e*S S 16 20 02.1 +0.5
UPC AMS AMS 16 48 50.0
comp=Z,15µm,16.6s
DPC Dobruska-Polom 78.60 329 *e*P P 16 10 06.7 +1.2
DPC *e*S S 16 20 02.7 +1.0
DPC MLR MLR
comp=Z,15µm,14.7s
DPC Dobruska-Polom 78.60 329 *e*P P 16 10 06.7 +1.2
DPC *e*S S 16 20 02.7 +1.0
DPC AMS AMS 16 49 50.0
comp=Z,15µm,14.7s
WHFO Wadi Hawf 78.60 284 P P 16 10 05.0 -1.0
WHFO P P 16 10 05.0 -1.0
KRLC Kraliky 78.63 328 *e*P P 16 10 06.4 +0.8
KRLC *e* 16 10 16.7
KRLC *e*S S 16 20 02.2 +0.2
KRLC MLR MLR
comp=Z,11µm,15.5s
KRLC Kraliky 78.63 328 *e*P P 16 10 06.4 +0.8
KRLC *e*PCP PcP 16 10 16.7 +2.1
KRLC *e*S S 16 20 02.2 +0.2
KRLC AMS AMS 16 53 00.0
comp=Z,11µm,15.5s
ARR Arges 78.74 321 ⇓ P P 16 10 08.4 +2.1
F33A 5 Mile Ranch, 78.80 38 P P 16 10 07.2 +0.6
baz=318
F33A S S 16 20 01.3 -2.6
baz=318
PRD Provadia 78.94 318 P P 16 10 08.0 +0.7
S22A 4UR Ranch, Cre 78.96 50 P P 16 10 05.8 -2.1
baz=313,SNR=11
S22A S S 16 20 08.3 +1.8
baz=313
W18A Petrified Fore 78.99 53 P P 16 10 07.9 -0.2
baz=312
W18A S S 16 20 08.7 +2.1
baz=312
PSZ Piszkesteto 79.00 325 ⇓ P P 16 10 09.2 +1.5
PSZ Piszkesteto 79.00 325 P P 16 10 08.8 +1.0
VYHS Vyhne 79.01 326 *e*P P 16 10 08.8 +1.1
VYHS pmax pmax
comp=Z,115nm,1.4s
VYHS Vyhne 79.01 326 *e*P P 16 10 08.8 +1.1
VYHS *e*S S 16 20 00.9 -5.2
VYHS *e*L L 16 50 28.4
LOT Lotru 79.09 322 ⇑ P P 16 10 09.6 +1.2
Q24A Divide 79.09 48 P P 16 10 07.6 -1.1
baz=314
Q24A S S 16 20 07.7 -0.3
baz=314
BRG Berggiesshubel 79.11 330 *i* P P 16 10 08.9 +0.7
BRG Amp 16 10 11.6
comp=Z,102nm,1.4s
BRG *i* x x 16 10 18.1
BRG Amp 16 10 22.0
comp=Z,78nm,1.3s
BRG PP PP 16 13 02.5 -4.2
BRG Amp 16 13 09.4
comp=Z,26nm,1.2s
BRG Berggiesshubel 79.11 330 S S 16 20 09.0 +2.0
BRG Berggiesshubel 79.11 330 *i* P P 16 10 08.8 +0.7
BRG *i* 16 10 18.0
BRG 16 13 02.5
BRG S S 16 20 09.0 +2.0
BRG pmax pmax
comp=Z,102nm,1.4s
BRG pmax pmax
comp=Z,78nm,1.3s
BRG pmax pmax
comp=Z,27nm,1.3s
CLL Collm 79.11 331 IAmb IAmb 16 10 10.5
comp=Z,89nm,1.1s
CLL Collm 79.11 331 ⇑ *i* P P 16 10 08.2 0.0
CLL *e*S S 16 20 05.0 -1.9
CLL pmax pmax
comp=Z,115nm,1.2s
CLL MLR MLR
comp=Z,9µm,18.3s
CLL Collm 79.11 331 ⇑ *i* P P 16 10 08.2 0.0
comp=Z,115nm,1.2s
CLL *e*PcP **pwP** 16 10 16.0 +0.4
CLL *e*x x 16 12 53.0
CLL *e*PP PP 16 13 07.0 +0.3
CLL *e*x x 16 13 33.0
CLL *e*PPP PPP 16 14 53.0
CLL *e*S S 16 20 05.0 -1.9
CLL *e*PS PnS 16 20 48.0 -1.4
CLL *e*SS SS 16 25 12.0 +0.4
CLL *e*x x 16 29 42.0
CLL *e*SSSS 16 31 24.0
CLL *e*PKPPKPdf **P'P'df** 16 37 07.0 -2.7
CLL LmV 16 49 00.0
comp=Z,9µm,18.3s
CLL Lmax 16 50 00.0
RAZG Razgrad 79.13 319 ⇓ P P 16 10 09.6 +1.2
214A Organ Pipe Nat 79.13 57 P P 16 10 08.3 -0.4
baz=311
214A S S 16 20 10.2 +2.2
baz=311
PVCC Panska Ves 79.14 330 *e*P P 16 10 09.3 +0.9
PVCC *e* 16 13 07.8
PVCC *e*S S 16 20 07.1 -0.3
PVCC MLR MLR
comp=Z,13µm,13.8s
PVCC Panska Ves 79.14 330 *e*P P 16 10 09.3 +0.9
PVCC *e*PP PP 16 13 07.8 +0.8
PVCC *e*S S 16 20 07.1 -0.3
PVCC AMS AMS 16 51 10.0
comp=Z,13µm,13.8s
DEV Deva 79.18 322 ⇑ P P 16 10 10.1 +1.5
JAVC Velka Javorina 79.22 327 *e*P P 16 10 10.6 +1.7
ABTO Aybut 79.31 284 P P 16 10 09.3 -0.5
ABTO P P 16 10 09.3 -0.5
BSZH Besenyszg 79.31 325 P P 16 10 11.7 +2.4
VRAC Vranov 79.31 328 ⇑ P P 16 10 10.8 +1.4
VRAC Vranov 79.31 328 LR LR 16 48 57.2
comp=Z,9µm,18.5s,baz=24,slow=38
VRAC Vranov 79.31 328 *e*P P 16 10 10.2 +0.9
VRAC *e*S S 16 20 09.9 +0.7
EYMN Ely 79.38 34 IAMs_20 IAMs_20 16 51 56.6
comp=Z,3µm,18.0s
EYMN Ely 79.38 34 P P 16 10 10.5 +0.8
baz=320
EYMN S S 16 20 06.4 -3.6
baz=320
EYMN Ely 79.38 34 P P 16 10 08.2 -1.6
baz=320
EYMN S S 16 20 06.7 -3.3
baz=320
OGNE Ogallala 79.44 45 IAmb IAmb 16 10 21.0
comp=Z,65nm,1.1s
OGNE Ogallala 79.44 45 P P 16 10 11.4 +1.1
baz=315
OGNE S S 16 20 09.5 -1.5
baz=315
OGNE Ogallala 79.44 45 P P 16 10 09.4 -0.9
baz=315
OGNE S S 16 20 08.3 -2.7
baz=315
SIRR Siria 79.46 323 ⇑ P P 16 10 11.8 +1.6
KRUC Moravsky 79.58 328 *e*P P 16 10 11.5 +0.7
KRUC Moravsky 79.58 328 *e*S S 16 20 13.6 +1.5
PRU Pruhonice 79.59 329 *e*P P 16 10 11.7 +0.9
PRU *e* 16 10 19.6
PRU *e* 16 13 12.0
PRU *e*S S 16 20 12.9 +0.8
PRU MLR MLR
comp=Z,15µm,16.9s
PRU Pruhonice 79.59 329 *e*P P 16 10 11.7 +0.9
PRU *e*PCP PcP 16 10 19.6 +0.9
PRU *e*PP PP 16 13 12.0 +1.3
PRU *e*S S 16 20 12.9 +0.8
PRU AMS AMS 16 49 30.0
comp=Z,15µm,16.9s
SMOL Smolenice 79.59 327 *e*P P 16 10 12.4 +1.5
SMOL pmax pmax
comp=Z,59nm,1.3s
GZR Gura Zlata 79.60 322 ⇑ P P 16 10 11.8 +0.7
SZH Strazhica 79.63 319 P P 16 10 11.0 -0.2
BUD Budapest 79.71 325 P P 16 10 13.0 +1.5
SDCO Great Sand Dun 79.73 49 P P 16 10 13.6 +1.4
baz=314
SDCO S S 16 20 15.3 +0.6
baz=314
SDCO Great Sand Dun 79.73 49 P P 16 10 11.3 -0.8
baz=314,SNR=12
SDCO S S 16 20 15.2 +0.5
baz=314
MODS Modra-Piesok 79.76 327 *e*P P 16 10 13.0 +1.2
MODS pmax pmax
comp=Z,267nm,1.3s
MODS Modra-Piesok 79.76 327 *e*P P 16 10 13.0 +1.2
MODS *e*S S 16 20 10.4 -3.6
MODS *e*L L 16 55 10.8
TREC Trest 79.77 329 *e*P P 16 10 13.1 +1.3
TREC MLR MLR
comp=Z,10µm,16.3s
TREC Trest 79.77 329 *e*P P 16 10 13.1 +1.3
TREC AMS AMS 16 49 40.0
comp=Z,10µm,16.3s
VLAD Vladila 79.85 320 ⇓ P P 16 10 13.3 +1.0
JMB Yambol 79.88 318 P P 16 10 08.0 -4.5
BZS Buzias 79.97 323 ⇓ P P 16 10 14.0 +1.0
ZST Bratislava 79.97 327 *e*P P 16 10 14.0 +1.1
ZST pmax pmax
comp=Z,365nm,1.5s
ZST Bratislava 79.97 327 *e*P P 16 10 14.0 +1.1
ZST Bratislava 79.97 327 *e*S S 16 20 15.0 -1.2
F36A Milaca 80.07 37 P P 16 10 13.9 +0.4

	baz=319										
F36A					S	S		16 20 13.3	-4.0		
	baz=319										
CSKK	Cskako	80.13	326		P	P		16 10 15.1	+1.3		
HERR	Herculane	80.15	322	⇑	P	P		16 10 14.3	+0.4		
TUC	Tucson	80.19	56		P	P		16 10 14.8	+0.3		
	baz=312										
TUC					S	S		16 20 20.9	+1.6		
	baz=312										
ECSD	EROS Data Cent	80.20	40		IAMs_20	IAMs_20		16 45 48.7			
	comp=Z,3µm,20.0s										
ECSD	EROS Data Cent	80.20	40		P	P		16 10 15.1	+0.8		
	baz=318										
ECSD					S	S		16 20 15.6	-3.2		
	baz=318										
ECSD	EROS Data Cent	80.20	40		P	P		16 10 13.8	-0.5		
	baz=318,SNR=11										
ECSD					S	S		16 20 17.0	-1.9		
	baz=318										
DJES	Djerdap	80.26	322	⇑	P	P		16 10 15.2	+0.6		
E38A	The Farm, Brul	80.38	35		S	S		16 20 16.5	-4.1		
	baz=320										
KSCO	Kaye Shedlock'	80.47	46		S	S		16 20 21.8	-0.3		
	baz=315										
KSCO	Kaye Shedlock'	80.47	46		P	P		16 10 15.6	-0.4		
	baz=315										
KSCO					S	S		16 20 20.8	-1.2		
	baz=315										
EGYH	Egyhazaskeszo	80.49	326		P	P		16 10 17.0	+1.3		
MDVR	Moldovita	80.56	322	⇓	P	P		16 10 16.0	-0.2		
MPLH	Magyarpolny	80.59	326		P	P		16 10 17.1	+0.8		
EKA	Eskdalemuir Ar	80.60	342		LR	LR		16 51 50.9			
	comp=Z,7µm,18.6s,baz=35,slow=40										
SOP	Sopron	80.60	327		P	P		16 10 17.4	+1.1		
CKRC	Cesky Krumlov	80.61	329	*eP*		P		16 10 17.0	+0.6		
CKRC				*eS*		S		16 20 23.6	+0.6		
KHC	Kasperske Hory	80.65	329	*eP*		P		16 10 17.5	+0.9		
KHC				*e*				16 10 25.1			
KHC				*eS*		S		16 20 24.6	+1.2		
KHC					MLR	MLR					
	comp=Z,22µm,14.9s										
KHC	Kasperske Hory	80.65	329	*eP*		P		16 10 17.5	+0.9		
KHC				*ex*		x		16 10 25.1			
KHC				*eS*		S		16 20 24.6	+1.2		
KHC					AMS	AMS		16 51 00.0			
	comp=Z,22µm,14.9s										
RAR	Rarotonga	80.69	128		LR	LR		16 41 40.6			
	comp=Z,3µm,19.2s,baz=318,slow=32										
CONA	Conrad Observa	80.70	327	*i*	P	P		16 10 18.2	+1.2		
	comp=Z,29nm,1.1s,SNR=79										
RONA	Rosalia, Austr	80.70	327	*i*	P	P		16 10 18.2	+1.3		
	comp=Z,49nm,1.1s,SNR=79										
DGAR	Diego Garcia	80.76	252		IAMs_20	IAMs_20		16 44 47.7			
	comp=Z,4µm,21.0s										
T25A	Trinidad	80.77	49		P	P		16 10 16.7	-1.0		
	baz=314,SNR=9.1										
T25A					S	S		16 20 25.8	+0.3		
	baz=314										
GEC2	GERESS Array S	80.83	329		IAmb	IAmb		16 10 20.2			
	comp=Z,60nm,1.2s										
GERES	GERESS Array B	80.83	329		P	P		16 10 18.1	+0.5		
	comp=Z,17nm,1.0s,baz=29,slow=3.0,SNR=69										
GERES					PP	PP		16 13 18.6	-2.5		
	comp=Z,9.3nm,1.2s,baz=46,slow=8.4,SNR=4.2										
GERES					LR	LR		16 50 25.2			
	comp=Z,15µm,18.4s,baz=14,slow=39										
	comp=Z,17nm,1.0s										
MORH	Mrgy, Hungar	80.86	325	⇓	P	P		16 10 18.2	+0.5		
MORH	Mrgy, Hungar	80.86	325		P	P		16 10 17.6	0.0		
SPMN	Marine on St.	80.88	37		P	P		16 10 16.3	-1.5		
	baz=320										
SPMN					S	S		16 20 22.9	-3.0		
	baz=320										
BLKB	Belogradchik	80.97	321	⇓	P	P		16 10 18.7	+0.3		
PGB	Panagyurishte	81.04	319		P	P		16 10 18.0	-0.8		
RAYN	Ar Rayn	81.06	293		P	P		16 10 18.5	-0.7		
RAYN					IAmb	IAmb		16 10 21.4			
	comp=Z,127nm,1.4s										
RAYN	Ar Rayn	81.06	293		P	P		16 10 18.5	-0.7		
RAYN					pmax	pmax					
	comp=Z,127nm,1.4s										
RAYN					MLR	MLR					
	comp=Z,2µm,18.0s										
RAYN	Ar Rayn	81.06	293		P	P		16 10 19.1	-0.1		
ISP	Isparta	81.07	313		IAMs_20	IAMs_20		16 51 10.1			
	comp=Z,4µm,21.0s										
ANMO	Albuquerque	81.09	51		LR	LR		16 44 58.1			
	comp=Z,1µm,20.1s,baz=337,slow=35										
ANMO	Albuquerque	81.09	51		P	P		16 10 21.2	+1.8		
	baz=313										
ANMO					S	S		16 20 29.8	+1.0		
	baz=313										
ANMO	Albuquerque	81.09	51		P	P		16 10 18.7	-0.7		
	baz=313										
ANMO					S	S		16 20 30.7	+2.0		
	baz=313										
PLD	Plovdiv	81.10	319		P	P		16 10 19.0	-0.1		
BGNE	Belgrade	81.14	42		P	P		16 10 18.1	-1.3		
	baz=317										
ASF	Jabal al Asfar	81.14	305		LR	LR		16 50 00.5			
	comp=Z,2µm,18.4s,baz=41,slow=38										
FRGS	Fruska Gora	81.15	324	⇓	P	P		16 10 20.2	+0.9		
FRGS	Fruska Gora	81.15	324	⇑	P	P		16 10 19.8	+0.5		
KOVH	Kovagotottos	81.19	325		P	P		16 10 19.6	+0.1		
D41A	Chassel	81.31	33		S	S		16 20 26.6	-3.7		
	baz=322										
ARSA	Arzberg	81.38	327	*i*	P	P		16 10 21.6	+1.1		
	comp=Z,13nm,0.9s,SNR=30										
RDO	Rodhopi	81.38	318		P	P		16 10 22.3	+1.7		
Y22D	IRIS PASSCAL I	81.40	52		IAMs_20	IAMs_20		16 40 46.2			
	comp=Z,3µm,22.0s										
Y22D	IRIS PASSCAL I	81.40	52		S	S		16 20 34.1	+2.1		
	baz=313										
Y22D	IRIS PASSCAL I	81.40	52		P	P		16 10 22.2	+1.2		
	baz=313										
Y22D					S	S		16 20 35.3	+3.3		
	baz=313										
MOA	Molln	81.41	328	*i*	P	P		16 10 21.6	+1.0		
	comp=Z,3.3nm,0.5s,SNR=16										
BOVS	Bovan	81.43	322	⇑	P	P		16 10 20.4	-0.4		
CSS	Mathiatis	81.43	309		P	P		16 10 21.3	+0.3		
CSS					IAmb	IAmb		16 10 39.8			
	comp=Z,52nm,1.0s										
VTS	Vitosha	81.45	320	⇑	P	P		16 10 21.7	+0.5		
VTS	Vitosha	81.45	320		P	P		16 10 22.2	+1.1		
VTS	Vitosha	81.45	320		P	P		16 10 22.2	+1.1		
VTS					pmax	pmax					
	comp=Z,95nm,1.0s										
VTS	Vitosha	81.45	320		P	P		16 10 22.0	+0.9		
Y22A	Socorro	81.47	53		P	P		16 10 22.6	+1.2		
	baz=313										
Y22A					S	S		16 20 33.4	+0.7		
	baz=313										
I37B	Waseca	81.53	38		P	P		16 10 22.4	+1.1		
	baz=320										
I37B					S	S		16 20 30.9	-1.8		
	baz=320										
SCHQ	Schefferville	81.65	17		P	P		16 10 22.1	+0.2		
	comp=Z,6.9nm,0.8s,baz=283,slow=7.2,SNR=7.7										
SCHQ					LR	LR		16 51 53.3			
	comp=Z,3µm,18.1s,baz=348,slow=40										
	comp=Z,6.9nm,0.8s										
SCHQ	Schefferville	81.65	17		P	P		16 10 22.0	+0.2		
BIOA	Bad Ischl, Aus	81.79	329	*i*	P	P		16 10 23.6	+0.9		
	comp=Z,24nm,0.8s,SNR=36										
A252A	Venje	81.81	325	*i*	P	P		16 10 22.9	+0.1		
COWI	Conover	81.83	34		IAMs_20	IAMs_20		16 50 38.1			
	comp=Z,3µm,20.0s										
COWI	Conover	81.83	34		S	S		16 20 31.9	-3.8		
	baz=322										
KALN	Kalnik	81.87	326	*i*	P	P		16 10 23.1	-0.1		
DIVS	Divibare	81.88	323		P	P		16 10 23.4	+0.2		
DIVS					IAmb	IAmb		16 10 25.8			
	comp=Z,64nm,1.1s										
DIVS	Divibare	81.88	323	⇑	*i*	P		16 10 23.5	+0.2		
121A	Cookes Peak, D	81.92	54		P	P		16 10 25.7	+1.8		
	baz=313										
121A					S	S		16 20 40.0	+2.5		
	baz=313										
121A	Cookes Peak, D	81.92	54		P	P		16 10 23.2	-0.7		
	baz=313,SNR=9.0										
121A					S	S		16 20 40.4	+2.9		
	baz=313										
MMB	Musomiste	81.97	319		P	P		16 10 24.0	+0.2		
N33B	J Bar K, Exete	81.99	42		S	S		16 20 33.4	-4.2		
	baz=318										
GROS	Grobnik	82.01	327	*i*	P	P		16 10 24.2	+0.3		
GROS				*e*	PP	PP		16 13 33.8	+2.8		
GROS				*eS*		S		16 20 34.9	-2.8		
KAVA	Kavala	82.01	318		P	P		16 10 24.4	+0.5		
LOBO	Lobor	82.02	326	*i*	P	P		16 10 22.7	-1.2		
G40A	Rib Lake	82.02	35		P	P		16 10 24.0	+0.1		
	baz=322										
G40A					S	S		16 20 33.4	-4.3		
	baz=322										
SOKA	Soboth	82.03	327	*i*	P	P		16 10 25.0	+0.9		
	comp=Z,47nm,0.9s,SNR=113										
SOCY	Socotra	82.04	279		IAMs_20	IAMs_20		16 50 38.3			
	comp=Z,3µm,19.0s										
NVR	Nevrokopi	82.08	319		P	P		16 10 24.9	+0.6		
KKB	Krupnik	82.08	320		P	P		16 10 24.0	-0.3		
BEBN	Eben Emael	82.09	335	*dP*		P		16 10 24.4	+0.3		
	comp=Z,62nm,1.0s										
BTNL	Ternell	82.12	334	*dP*		P		16 10 24.7	+0.3		
	comp=Z,31nm,1.2s										
MEM	Membach	82.15	334	*dP*		P		16 10 25.4	+0.9		
	comp=Z,25nm,1.2s										
MOSL	Moslavina	82.15	326	*i*	P	P		16 10 24.2	-0.4		
CBKS	Cedar Bluff	82.19	45		P	P		16 10 25.0	0.0		
	baz=316										
PTJ	Puntijarka	82.25	326		P	P		16 10 25.0	-0.2		
ZAG	Zagreb	82.31	326		P	P		16 10 25.4	0.0		
BSTI	Sart Tilman	82.31	335	*dP*		P		16 10 26.2	+0.9		
BHOU	Houvegnez	82.36	334	*dP*		P		16 10 26.2	+0.6		
	comp=Z,25nm,1.1s										
OBKA	Obir	82.37	327	⇑	*i*	P		16 10 26.0	+0.2		
OBKA	Obir	82.37	327		*i*	P		16 10 26.4	+0.6		
	comp=Z,15nm,0.8s,SNR=25										
SRS	Serrai	82.39	319		P	P		16 10 26.1	+0.2		
KBA	Koelnbreinsper	82.40	328	*i*	P	P		16 10 26.8	+0.7		
	comp=Z,33nm,1.0s,SNR=62										
KOKK	Kokkinochori,	82.41	318		P	P		16 10 26.3	+0.3		
E43A	Lone Tree Farm	82.51	33		S	S		16 20 36.5	-6.2		
	baz=323										
RUDO	Rudo	82.53	323	⇑	*i*	P		16 10 26.7	+0.1		
CRES	Cresnjev	82.54	326	⇑	*i*	P		16 10 26.7	+0.1		
BCLA	Clavier	82.54	335	*bP*		P		16 10 26.7	+0.2		
	comp=Z,23nm,1.1s										
VNDS	Vrh nad Dolski	82.63	327	*eP*		P		16 10 27.1	0.0		
BLY	Banja Luka	82.64	325	⇑	*i*	P		16 10 27.4	+0.2		
MYKA	Tera Mystica	82.64	328	*i*	P	P		16 10 27.3	0.0		
	comp=Z,27nm,1.2s,SNR=32										
STIP	Stip	82.66	320	*i*	P	P		16 10 27.0	-0.3		
OZLJ	Ozalj	82.70	326	*i*	P	P		16 10 27.2	-0.2		
KNT	Kendrikon	82.70	319		P	P		16 10 27.9	+0.3		
PLE	Pljevlja	82.75	323	⇑	*i*	P		16 10 28.3	+0.4		
VAY	Valandovo	82.75	319	*i*	P	P		16 10 28.7	+0.9		
LJU	Ljubljana	82.75	327	*eP*		P		16 10 27.7	0.0		
LJU				*e*	PP	PP		16 13 38.6	+1.7		
LJU				*eS*		S		16 20 41.6	-3.5		
RCHB	Rochefort	82.79	335	*dP*		P		16 10 28.1	+0.3		
	comp=Z,33nm,1.2s										
SKO	Skopje	82.81	321	*i*	P	P		16 10 29.4	+1.2		
BMRD	Maesous	82.81	335	*dP*		P		16 10 28.3	+0.4		
	comp=Z,44nm,1.1s										
PRED	Cave del Predi	82.83	328		P	P		16 10 28.1	0.0		
PRED					IAmb	IAmb		16 10 41.9			
	comp=Z,40nm,1.0s										
IVA	Berane	82.86	322	⇑	*i*	P		16 10 28.7	+0.2		
K38A	Parkersburg	82.87	38		S	S		16 20 43.6	-2.9		
	baz=320										
BOJS	Bojanci	82.88	326	⇑	*i*	P		16 10 28.4	0.0		
WATA	Walderalm	82.89	329	*i*	P	P		16 10 29.3	+0.7		
	comp=Z,29nm,1.2s,SNR=41										
WLF	Walferdange	82.91	334	*dP*		P		16 10 29.7	+1.3		
I40A	Norwalk	82.91	36		P	P		16 10 29.3	+0.7		
	baz=321										
I40A					S	S		16 20 40.7	-6.2		
	baz=321										
WTTA	Wattenberg	82.92	329	*i*	P	P		16 10 29.3	+0.5		
	comp=Z,17nm,0.8s,SNR=33										
MGRS	Mrkonjic Grad	82.95	325	*eP*		P		16 10 29.7	+0.9		
ABTA	Abfaltersbach	83.00	329	*i*	P	P		16 10 28.8	-0.3		
	comp=Z,18nm,1.0s,SNR=30										
R32A	Long Quarter,	83.03	45		S	S		16 20 43.5	-4.8		
	baz=317										
CEY	Cerknica	83.04	327	⇑	*i*	P		16 10 29.0	-0.2		
PVY	Plav	83.05	322	⇑	*i*	P		16 10 29.9	+0.4		
DOU	Dourbes	83.05	335	*dP*		P		16 10 29.3	+0.1		
	comp=Z,14nm,1.1s										
KOME	Kolasin	83.06	322	⇑	*i*	P		16 10 29.5	0.0		
MOTA	Moosalm	83.06	330	*i*	P	P		16 10 30.3	+0.7		
	comp=Z,50nm,1.0s,SNR=52										
UPM	Unac-Piva	83.07	323	*eP*		P		16 10 29.8	+0.1		
UPM	Unac-Piva	83.07	323	⇑	*i*	P		16 10 29.5	-0.2		
RETA	Reutte	83.08	330	*i*	P	P		16 10 30.2	+0.8		
	comp=Z,12nm,0.7s,SNR=31										
SQTA	Sankt Quirin	83.13	330	*i*	P	P		16 10 30.3	+0.5		
	SNR=35										
SRKY	Kupres RS	83.19	324	*eP*		P		16 10 30.5	+0.4		
PLIT	Plitvice	83.22	326	*i*	P	P		16 10 30.1	-0.1		
SCIA	State Center	83.22	39		IAMs_20	IAMs_20		16 52 44.6			
	comp=Z,4µm,18.0s										
SCIA	State Center	83.22	39		P	P		16 10 28.7	-1.6		
	baz=320										
SCIA					S	S		16 20 46.7	-3.4		
	baz=320										
PAIG	Paliouri	83.23	318		P	P		16 10 30.5	+0.2		
EPT	El Paso	83.23	54		IAMs_20	IAMs_20		16 50 26.8			
	comp=Z,2µm,19.0s										
DSB	Dublin	83.27	342		IAMs_20	IAMs_20		16 52 55.8			
	comp=Z,4µm,18.0s										
BFO	Black Forest	83.28	332		P	P		16 10 30.7	+0.3		
BFO	Black Forest	83.28	332		P	P		16 10 30.7	+0.3		
BFO					pmax	pmax					
	comp=Z,117nm,1.4s										
BFO					MLR	MLR					
	comp=Z,6µm,18.0s										
RIY	Rijeka	83.35	327		P	P		16 10 30.2	-0.6		
SKDS	Skadanscina	83.36	327	⇑	*i*	P		16 10 30.3	-0.6		
NKME	Niksic	83.39	322	⇑	*i*	P		16 10 30.9	-0.2		
UDBI	Udbina	83.44	325	*i*	P	P		16 10 31.2	-0.2		
BRY	Bratogost	83.47	323	*eP*		P		16 10 31.7	0.0		
BRY	Bratogost	83.47	323	⇑	*i*	P		16 10 31.5	-0.2		
FETA	Feichten	83.48	330	*i*	P	P		16 10 32.4	+0.7		
	comp=Z,27nm,1.0s,SNR=34										
HIZ	Hauiti	83.49	156		IAMs_20	IAMs_20		16 43 25.6			
	comp=Z,3µm,18.0s										
PDG	Podgorica	83.50	322	⇑	P	P		16 10 32.2	+0.6		
TTG	Podgorica	83.50	322	⇑	*i*	P		16 10 32.0	+0.4		
PHP	Peshkopia	83.51	321		P	P		16 10 32.2	+0.4		
KIJV	Kijevo	83.57	325	*i*	P	P		16 10 31.5	-0.5		
CEME	Cevo	83.57	322	⇑	*i*	P		16 10 31.8	-0.3		
DAVA	Damuels	83.58	330	*i*	P	P		16 10 32.8	+0.6		
	comp=Z,19nm,1.1s,SNR=36										
E46A	Sault Ste Mari	83.61	31		IAmb	IAmb		16 10 59.8			
	comp=Z,81nm,1.8s										
E46A	Sault Ste Mari	83.61	31		S	S		16 20 47.8	-6.0		
	baz=325										
KSU1	Kansas State U	83.64	43		IAmb	IAmb		16 10 43.5			
	comp=Z,22nm,0.8s										
KSU1	Kansas State U	83.64	43		IAMs_20	IAMs_20		16 54 00.8			
	comp=Z,3µm,19.0s										
KSU1	Kansas State U	83.64	43		S	S		16 20 48.7	-5.7		
	baz=318										
KSU1	Kansas State U	83.64	43		P	P		16 10 31.9	-0.5		
	baz=318										
KSU1					S	S		16 20 49.7	-4.7		
	baz=318										
RICI	Ricice	83.65	324	*i*	P	P		16 10 31.8	-0.6		
I42A	Draeger Farm,	83.67	35		S	S		16 20 47.7	-6.8		
	baz=322										
RABC	Rab	83.68	326	*i*	P	P		16 10 31.9	-0.6		
TREB	Trebinje	83.70	323	*eP*		P		16 10 32.3	-0.4		
LIT	Litokhoron	83.71	319		P	P		16 10 32.3	-0.5		
H43A	Windswept, Lux	83.71	34		S	S		16 20 49.9	-5.0		
	baz=323										
SMRN	Sveta Marina	83.72	327	*i*	P	P		16 10 31.2	-1.5		
DRME	Dracevica, Mon	83.73	322	⇑	*i*	P		16 10 33.1	+0.2		
DRME	Dracevica, Mon	83.73	322	⇑	*i*	P		16 10 33.0	+0.2		
BUM	Brajici-Budva	83.77	322	⇑	*i*	P		16 10 33.0	-0.1		
OHR	Ohrid	83.78	320	*i*	P	P		16 10 33.9	+0.7		
NVLJ	Novalja	83.79	326	*i*	P	P		16 10 31.4	-1.6		
DBRK	Dubrovnik	83.83	323	*i*	P	P		16 10 31.3	-2.1		
JFWS	Jewell Farm	83.84	37		IAMs_20	IAMs_20		16 53 28.7			
	comp=Z,3µm,19.0s										
JFWS	Jewell Farm	83.84	37		P	P		16 10 32.6	-0.8		
	baz=322										
JFWS					S	S		16 20 52.7	-3.6		
	baz=322										
HCY	Herceg Novi	83.85	323	*eP*		P		16 10 32.8	-0.6		
HCY	Herceg Novi	83.85	323	⇑	*i*	P		16 10 33.1	-0.3		
MAKA	Makarska	83.86	324	*i*	P	P		16 10 32.5	-0.9		
ULC	Ulcinj	83.87	322	⇑	*i*	P		16 10 33.6	0.0		
STON	Ston	83.88	323	⇑	*i*	P		16 10 31.6	-1.9		
STON	Ston	83.88	323	*i*	P	P		16 10 31.4	-2.1		
PMOR	Pomariorio Ree	83.89	115	*eT*		T		17 43 00.2			
	comp=Z,10.0nm,0.2s										
XOR	Xorichti	83.90	318		P	P		16 10 33.2	-0.6		
AMTX	Amarillo	83.93	49		IAmb	IAmb		16 11 03.5			
	comp=Z,104nm,1.9s										
AMTX					IAMs_20	IAMs_20		16 51 18.9			
	comp=Z,2µm,19.0s										
AMTX	Amarillo	83.93	49		P	P		16 10 32.5	-1.6		
	baz=316										
AMTX					S	S		16 20 55.7	-2.0		
	baz=316										
VIRC	Vir	83.93	326	*i*	P	P		16 10 32.6	-1.1		
MSTX	Muleshoe	83.95	50		IAmb	IAmb		16 11 09.8			
	comp=Z,32nm,1.1s										
MSTX	Muleshoe	83.95	50		P	P		16 10 35.7	+1.4		
	baz=315										
MSTX	Muleshoe	83.95	50		P	P		16 10 33.6	-0.6		
	baz=315										
MSTX					S	S		16 20 58.8	+0.9		
	baz=315										
MNTX	Cornudas Mount	83.97	53		P	P		16 10 35.6	+1.3		
	baz=314										
MNTX	Cornudas Mount	83.97	53		P	P		16 10 33.0	-1.3		
	baz=314,SNR=6.2										
MNTX					S	S		16 20 59.8	+1.8		
	baz=314										
URZ	Urewera	83.98	154		P	P		16 10 33.7	-0.1		
	comp=Z,13nm,0.9s,baz=20,slow=3.7,SNR=4.6										
	comp=Z,13nm,0.9s										
MORI	Morici	83.99	325	*i*	P	P		16 10 33.5	-0.6		
BRJN	Brijuni	83.99	327	*i*	P	P		16 10 33.3	-0.8		
DAVOX	Davos/Dischmat	84.00	330		LR	LR		16 52 27.2			
	comp=Z,10µm,19.2s,baz=19,slow=39										
TIR	Tirane	84.05	321	⇑	P	P		16 10 35.3	+0.8		
EIL	Elat	84.07	304		LR	LR		16 53 03.3			
	comp=Z,4µm,18.9s,baz=26,slow=39										
KBN	Korca	84.16	320		P	P		16 10 35.3	+0.2		
DUGI	Dugi Otok	84.17	326	*i*	P	P		16 10 33.5	-1.5		
NEST	Nestorio	84.19	320		P	P		16 10 35.5	+0.2		
OK035	E0210 Rd and N	84.28	46		IAMs_20	IAMs_20		16 53 42.0			
	comp=Z,2µm,18.0s										
LSTV	Lastovo	84.33	324	*i*	P	P		16 10 35.1	-0.7		
ELIS	Ellis County	84.36	47		IAmb	IAmb		16 11 18.0			
	comp=Z,64nm,1.1s										
OK038	West end E0370	84.43	46		IAMs_20	IAMs_20		16 53 49.0			
	comp=Z,3µm,18.0s										
OK032	Salt Plains WL	84.48	45		IAMs_20	IAMs_20		16 53 52.3			
	comp=Z,3µm,18.0s										
ATAL	Atalanti	84.49	317		P	P		16 10 35.9	-0.9		
LKR	Lokris	84.54	317		P	P		16 10 35.9	-1.1		
PPT2	Papeete2	84.56	118	*eP*		P		16 10 37.6	+0.3		
	comp=Z,331nm,21.8s										
PPT2	Papeete2	84.56	118	*eS*		S		16 21 03.9	-0.1		
	comp=Z,924nm,25.0s										
PPT2				*e*	SS	SS		16 26 36.7	+1.1		
	comp=Z,869nm,23.2s										
PPT2	Papeete2	84.56	118	*e*	LR	LR		16 37 14.0			
	comp=Z,10µm,21.5s										
AGG	Agios Georgios	84.60	318		IAmb	IAmb		16 10 47.3			
	comp=Z,76nm,1.3s										
LSK	Leskovik	84.61	320		P	P		16 10 38.2	+0.7		
VLDQ	Val d'Or	84.65	26		IAmb	IAmb		16 10 59.2			
	comp=Z,31nm,0.9s										
GLMI	Grayling	84.74	32		IAMs_20	IAMs_20		16 55 05.4			
	comp=Z,4µm,19.0s										
GLMI	Grayling	84.74	32		P	P		16 10 36.6	-1.3		
	baz=325

	baz=317							
P43A	**Skaggs, Pawnee**	**86.75**	**38**	S	**S**	**16 21 22.2**	**-2.9**	
	baz=322							
PAOL	**Paolisi**	**86.76**	**324**	IAmb	IAmb	16 11 05.8		
	comp=Z,53nm,1.3s							
U38A	**Gravette**	**86.80**	**43**	P	**P**	**16 10 48.9**	**+0.5**	
	baz=320							
U38A				S	**S**	**16 21 24.0**	**-1.7**	
	baz=320							
SADO	**Sadowa**	**86.92**	**29**	LR	LR	16 51 31.7		
	comp=Z,3µm,21.5s,baz=359,slow=37							
OXZ	**Oxford**	**87.12**	**160**	IAMs_20	IAMs_20	16 51 17.7		
	comp=Z,3µm,20.0s							
HHAR	**Hobbs**	**87.15**	**43**	P	**P**	**16 10 50.4**	**+0.3**	
	baz=320							
CCM	**Cathedral Cave**	**87.16**	**40**	P	**P**	**16 10 49.8**	**-0.2**	
CCM				IAmb	IAmb	16 11 01.2		
	comp=Z,24nm,0.8s							
CCM	**Cathedral Cave**	**87.16**	**40**	IAMs_20	IAMs_20	16 53 53.4		
	comp=Z,3µm,18.0s							
CCM	**Cathedral Cave**	**87.16**	**40**	P	**P**	**16 10 49.8**	**-0.2**	
CCM				pmax	pmax			
	comp=Z,24nm,0.9s							
CCM				MLR	MLR			
	comp=Z,3µm,18.0s							
CCM	**Cathedral Cave**	**87.16**	**40**	P	**P**	**16 10 50.4**	**+0.4**	
	baz=321							
CCM				S	**S**	**16 21 26.8**	**-2.3**	
	baz=321							
CCM	**Cathedral Cave**	**87.16**	**40**	P	**P**	**16 10 50.0**	**0.0**	
	baz=321							
CCM				S	**S**	**16 21 27.7**	**-1.4**	
	baz=321							
L48A	**N Adams**	**87.18**	**34**	S	**S**	**16 21 26.3**	**-3.0**	
	baz=325							
L48A				S	**S**	**16 21 26.3**	**-3.0**	
	baz=325							
SLM	**Saint Louis**	**87.20**	**39**	S	**S**	**16 21 28.0**	**-1.5**	
	baz=322							
AAM	**Ann Arbor**	**87.22**	**33**	P	**P**	**16 10 48.6**	**-1.6**	
	baz=326							
AAM				S	**S**	**16 21 28.0**	**-1.5**	
	baz=326							
RPZ	**Rata Peaks**	**87.23**	**161**	LR	LR	16 45 06.2		
	comp=Z,2µm,20.7s,baz=334,slow=32							
TRQ	**Mont Tremblant**	**87.27**	**26**	IAmb	IAmb	16 11 49.3		
	comp=Z,45nm,1.3s							
SFIN	**Lafayette**	**87.28**	**36**	S	**S**	**16 21 26.8**	**-3.4**	
	baz=324							
SFIN	**Lafayette**	**87.28**	**36**	P	**P**	**16 10 47.2**	**-3.4**	
	baz=324							
SFIN				S	**S**	**16 21 27.5**	**-2.8**	
	baz=324							
N47A	**Urbana**	**87.51**	**35**	S	**S**	**16 21 28.9**	**-3.5**	
	baz=325							
N47A				S	**S**	**16 21 28.9**	**-3.5**	
	baz=325							
Q44A	**Meyer Farm, Va**	**87.57**	**38**	S	**S**	**16 21 30.8**	**-2.3**	
	baz=323							
FVM	**French Village**	**87.61**	**40**	S	**S**	**16 21 31.5**	**-2.0**	
	baz=322							
X37A	**Clayton**	**87.67**	**45**	S	**S**	**16 21 32.4**	**-1.7**	
	baz=319							
WKZ	**Wanaka**	**87.78**	**162**	IAMs_20	IAMs_20	16 44 00.0		
	comp=Z,4µm,21.0s							
P46A	**Rosedale**	**87.85**	**37**	S	**S**	**16 21 33.1**	**-2.6**	
	baz=324							
N49A	**Columbus Grove**	**88.13**	**34**	S	**S**	**16 21 34.9**	**-3.4**	
	baz=326							
N49A				S	**S**	**16 21 34.9**	**-3.4**	
	baz=326							
D62A	**Allapoint, All**	**88.19**	**22**	S	**S**	**16 21 35.0**	**-3.6**	
	baz=336							
D62A				S	**S**	**16 21 35.0**	**-3.6**	
	baz=336							
JCT	**Junction City**	**88.20**	**51**	IAmb	IAmb	16 11 30.2		
	comp=Z,72nm,1.8s							
JCT				IAMs_20	IAMs_20	16 44 59.1		
	comp=Z,2µm,20.0s							
JCT	**Junction City**	**88.20**	**51**	S	**S**	**16 21 36.6**	**-2.9**	
	baz=317							
JCT	**Junction City**	**88.20**	**51**	P	**P**	**16 10 51.8**	**-3.4**	
	baz=317							
JCT				S	**S**	**16 21 38.4**	**-1.0**	
	baz=317							
O48B	**Farmland**	**88.25**	**35**	P	**P**	**16 10 52.0**	**-3.2**	
	baz=325							
O48B				S	**S**	**16 21 36.7**	**-2.9**	
	baz=325							
CEL	**Celeste**	**88.37**	**322**	IAmb	IAmb	16 11 07.1		
	comp=Z,44nm,1.0s							
J54A	**Appleton**	**88.39**	**30**	S	**S**	**16 21 36.1**	**-4.6**	
	baz=329							
J54A				S	**S**	**16 21 36.1**	**-4.6**	
	baz=329							
S44A	**Carbondale**	**88.41**	**39**	P	**P**	**16 10 55.9**	**-0.1**	
	baz=322							
S44A				S	**S**	**16 21 39.4**	**-1.7**	
	baz=322							
WHTX	**Lake Whitney,**	**88.45**	**48**	P	**P**	**16 10 54.2**	**-2.1**	
	baz=318							
WHTX				S	**S**	**16 21 40.1**	**-1.6**	
	baz=318							
E62A	**Clayton Lake**	**88.47**	**22**	P	**P**	**16 10 55.8**	**-0.3**	
	baz=335							
E62A				P	**P**	**16 10 55.8**	**-0.3**	
	baz=335							
E62A				S	**S**	**16 21 36.9**	**-4.5**	
	baz=335							
E62A				S	**S**	**16 21 36.9**	**-4.5**	
	baz=335							
BMNY	**Brushton-Moira**	**88.50**	**26**	S	**S**	**16 21 36.6**	**-5.1**	
	baz=332							
MIAR	**Mount Ida**	**88.67**	**44**	IAMs_20	IAMs_20	16 53 34.9		
	comp=Z,3µm,19.0s							
MIAR	**Mount Ida**	**88.67**	**44**	P	**P**	**16 10 58.8**	**+1.5**	
	baz=320							
MIAR				S	**S**	**16 21 41.7**	**-1.9**	
	baz=320							
MIAR	**Mount Ida**	**88.67**	**44**	P	**P**	**16 10 56.0**	**-1.3**	
	baz=320							
MIAR				S	**S**	**16 21 43.2**	**-0.5**	
	baz=320							
O49A	**Covington**	**88.67**	**35**	S	**S**	**16 21 40.6**	**-2.9**	
	baz=325							
O49A				S	**S**	**16 21 40.6**	**-2.9**	
	baz=325							
LONY	**Lake Ozonia**	**88.67**	**26**	IAMs_20	IAMs_20	16 53 58.9		
	comp=Z,4µm,20.0s							
LONY	**Lake Ozonia**	**88.67**	**26**	P	**P**	**16 10 54.7**	**-2.4**	
	baz=332							
LONY				S	**S**	**16 21 40.3**	**-3.1**	
	baz=332							
J55A	**Hilton**	**88.71**	**29**	S	**S**	**16 21 38.6**	**-5.0**	
	baz=330							
J55A				S	**S**	**16 21 38.6**	**-5.0**	
	baz=330							
TBI	**Tubuai**	**88.71**	**122**	*e*P	**P**	**16 10 58.4**	**+1.0**	
	comp=Z,359nm,24.2s							
TBI	**Tubuai**	**88.71**	**122**	*e*S	**S**	**16 21 43.9**	**0.0**	
	comp=Z,1µm,28.5s							
TBI	**Tubuai**	**88.71**	**122**	*e*LR	LR	16 39 08.9		
	comp=Z,4µm,24.8s							
TBI	**Tubuai**	**88.71**	**122**	*e*T	T	17 49 00.3		
	comp=Z,11nm,0.3s							
LCAR	**Lake Charles**	**88.75**	**42**	S	**S**	**16 21 42.1**	**-2.2**	
	baz=321							
WHAR	**Wooly Hollow**	**88.77**	**43**	IAmb	IAmb	16 11 19.1		
	comp=Z,31nm,1.0s							
P48A	**Milroy**	**88.78**	**36**	S	**S**	**16 21 43.2**	**-1.4**	
	baz=325							
P48A				S	**S**	**16 21 43.2**	**-1.4**	
	baz=325							
M52A	**Chesterland**	**88.80**	**32**	S	**S**	**16 21 42.2**	**-2.5**	
	baz=327							
M52A				S	**S**	**16 21 42.2**	**-2.5**	
	baz=327							
ERPA	**Erie**	**88.86**	**31**	IAMs_20	IAMs_20	16 54 07.0		
	comp=Z,4µm,22.0s							
ERPA	**Erie**	**88.86**	**31**	S	**S**	**16 21 41.9**	**-3.3**	
	baz=328							
ERPA	**Erie**	**88.86**	**31**	P	**P**	**16 10 55.6**	**-2.4**	
	baz=328							
ERPA				S	**S**	**16 21 42.7**	**-2.5**	
	baz=328							
WCNY	**West Carthage**	**88.86**	**27**	S	**S**	**16 21 39.3**	**-5.8**	
	baz=331							
Z38A	**Mt. Pleasant**	**88.88**	**46**	S	**S**	**16 21 43.3**	**-2.4**	
	baz=319							
N51A	**Ashland**	**88.90**	**33**	S	**S**	**16 21 42.7**	**-3.0**	
	baz=327							
N51A				S	**S**	**16 21 42.7**	**-3.0**	
	baz=327							
E63A	**Oxbow**	**88.97**	**22**	P	**P**	**16 10 59.6**	**+1.2**	
	baz=336							
E63A				P	**P**	**16 10 59.6**	**+1.2**	
	baz=336							
E63A				S	**S**	**16 21 42.3**	**-3.8**	
	baz=336							
E63A				S	**S**	**16 21 42.3**	**-3.8**	
	baz=336							
P49A	**Miami Univ. Ec**	**89.04**	**35**	IAMs_20	IAMs_20	16 50 54.2		
	comp=Z,3µm,20.0s							
P49A	**Miami Univ. Ec**	**89.04**	**35**	S	**S**	**16 21 43.3**	**-3.6**	
	baz=325							
P49A	**Miami Univ. Ec**	**89.04**	**35**	P	**P**	**16 10 56.5**	**-2.4**	
	baz=325							
P49A				S	**S**	**16 21 45.0**	**-2.0**	
	baz=325							
J56A	**Wolcott**	**89.05**	**28**	S	**S**	**16 21 42.3**	**-4.6**	
	baz=330							
J56A				S	**S**	**16 21 42.3**	**-4.6**	
	baz=330							
WVNY	**West Valley, N**	**89.15**	**30**	P	**P**	**16 11 00.9**	**+1.5**	
	baz=329							
WVNY				S	**S**	**16 21 43.3**	**-4.7**	
	baz=329							
M53A	**WI Miller and**	**89.16**	**32**	IAMs_20	IAMs_20	16 57 17.0		
	comp=Z,3µm,19.0s							
M53A	**WI Miller and**	**89.16**	**32**	P	**P**	**16 10 56.0**	**-3.5**	
	baz=328							
M53A				S	**S**	**16 21 45.7**	**-2.4**	
	baz=328							
ALLY	**Alegheny Colle**	**89.19**	**31**	S	**S**	**16 21 46.1**	**-2.3**	
	baz=328							
ACSO	**Alum Creek Sta**	**89.21**	**34**	P	**P**	**16 10 56.8**	**-2.9**	
	baz=326							
ACSO				S	**S**	**16 21 46.9**	**-1.7**	
	baz=326							
J57A	**Williamstown**	**89.24**	**28**	S	**S**	**16 21 44.2**	**-4.5**	
	baz=331							
J57A				S	**S**	**16 21 44.2**	**-4.5**	
	baz=331							
435B	**Jarrell**	**89.27**	**49**	IAMs_20	IAMs_20	16 57 18.9		
	comp=Z,2µm,19.0s							
435B	**Jarrell**	**89.27**	**49**	P	**P**	**16 10 56.6**	**-3.6**	
	baz=318							
435B				S	**S**	**16 21 47.8**	**-1.6**	
	baz=318							
NCB	**Newcomb**	**89.37**	**26**	S	**S**	**16 21 45.8**	**-4.2**	
	baz=332							
237A	**Washetta, Mont**	**89.37**	**47**	S	**S**	**16 21 49.8**	**-0.6**	
	baz=319							
HBAR	**Harrisburg**	**89.40**	**42**	S	**S**	**16 21 49.8**	**-0.7**	
	baz=322							
F63A	**Nahmakanta, Br**	**89.43**	**22**	S	**S**	**16 21 47.6**	**-2.8**	
	baz=336							
F63A				S	**S**	**16 21 47.6**	**-2.8**	
	baz=336							
G62A	**West of Eustis**	**89.44**	**23**	IAmb	IAmb	16 11 30.9		
	comp=Z,48nm,1.4s							
G62A	**West of Eustis**	**89.44**	**23**	S	**S**	**16 21 47.1**	**-3.4**	
	baz=335							
G62A				S	**S**	**16 21 47.1**	**-3.4**	
	baz=335							
F64A	**Sherman**	**89.50**	**22**	S	**S**	**16 21 47.9**	**-3.1**	
	baz=336							
F64A				S	**S**	**16 21 47.9**	**-3.1**	
	baz=336							
VT1	**Waterbury**	**89.54**	**25**	IAMs_20	IAMs_20	16 58 45.0		
	comp=Z,4µm,18.0s							
J58A	**Remsen**	**89.54**	**27**	S	**S**	**16 21 47.1**	**-4.4**	
	baz=331							
J58A				S	**S**	**16 21 47.1**	**-4.4**	
	baz=331							
N53A	**Lisbon**	**89.63**	**32**	S	**S**	**16 21 50.7**	**-1.8**	
	baz=328							
N53A				S	**S**	**16 21 50.7**	**-1.8**	
	baz=328							
K57A	**Scipio Center**	**89.65**	**28**	S	**S**	**16 21 49.2**	**-3.4**	
	baz=330							
VAE	**Valguarnera**	**89.69**	**322**	LR	LR	16 57 45.3		
	comp=Z,4µm,18.1s,baz=10,slow=40							
J59A	**Piesco**	**89.72**	**27**	IAmb	IAmb	16 11 50.3		
	comp=Z,38nm,1.4s							
J59A	**Piesco**	**89.72**	**27**	S	**S**	**16 21 49.5**	**-3.8**	
	baz=332							
J59A				S	**S**	**16 21 49.5**	**-3.8**	
	baz=332							
PKME	**Peaks-Kenny Pk**	**89.77**	**23**	P	**P**	**16 10 59.0**	**-3.2**	
	baz=335							
PKME				S	**S**	**16 21 50.9**	**-2.6**	
	baz=335							
L56A	**Greenwood**	**89.78**	**29**	S	**S**	**16 21 50.3**	**-3.6**	
	baz=330							
L56A				S	**S**	**16 21 50.3**	**-3.6**	
	baz=330							
MCVT	**Middlebury Col**	**89.79**	**26**	S	**S**	**16 21 49.8**	**-4.1**	
	baz=333							
O52A	**Adamsville**	**89.80**	**33**	S	**S**	**16 21 51.0**	**-3.1**	
	baz=327							
O52A				S	**S**	**16 21 51.0**	**-3.1**	
	baz=327							
P51A	**Williamsport**	**89.80**	**34**	S	**S**	**16 21 50.5**	**-3.6**	
	baz=326							
P51A				S	**S**	**16 21 50.5**	**-3.6**	
	baz=326							
H62A	**Milan**	**89.83**	**24**	IAmb	IAmb	16 11 33.4		
	comp=Z,37nm,1.2s							
H62A	**Milan**	**89.83**	**24**	P	**P**	**16 11 04.7**	**+2.1**	
	baz=334							
H62A				P	**P**	**16 11 04.7**	**+2.1**	
	baz=334							
H62A				S	**S**	**16 21 51.5**	**-2.7**	
	baz=334							
H62A				S	**S**	**16 21 51.5**	**-2.7**	
	baz=334							
R49A	**Shelbyville**	**89.85**	**36**	S	**S**	**16 21 51.3**	**-3.3**	
	baz=325							
R49A				S	**S**	**16 21 51.3**	**-3.3**	
	baz=325							
LBNH	**Lisbon**	**89.89**	**25**	IAMs_20	IAMs_20	16 50 32.9		
	comp=Z,4µm,21.0s							
LBNH	**Lisbon**	**89.89**	**25**	S	**S**	**16 21 52.3**	**-2.4**	
	baz=334							
LBNH	**Lisbon**	**89.89**	**25**	P	**P**	**16 10 59.1**	**-3.7**	
	baz=334							
LBNH				S	**S**	**16 21 53.8**	**-0.9**	
	baz=334							
M55A	**Ridgway**	**89.89**	**31**	IAmb	IAmb	16 11 40.0		
	comp=Z,66nm,1.3s							
M55A	**Ridgway**	**89.89**	**31**	S	**S**	**16 21 51.4**	**-3.5**	
	baz=329							
M55A				S	**S**	**16 21 51.4**	**-3.5**	
	baz=329							
O53A	**New Philadelph**	**89.94**	**33**	IAmb	IAmb	16 11 31.5		
	comp=Z,41nm,1.4s							
O53A				IAMs_20	IAMs_20	16 58 07.8		
	comp=Z,4µm,18.0s							
O53A	**New Philadelph**	**89.94**	**33**	P	**P**	**16 10 60.0**	**-3.2**	
	baz=327							
O53A				S	**S**	**16 21 52.3**	**-3.1**	
	baz=327							
T47A	**Sharon Grove**	**90.01**	**38**	S	**S**	**16 21 52.6**	**-3.5**	
	baz=324							
833A	**Chaparral WMA,**	**90.01**	**52**	S	**S**	**16 21 49.8**	**-6.6**	
	baz=317							
833A	**Chaparral WMA,**	**90.01**	**52**	P	**P**	**16 10 59.8**	**-3.9**	
	baz=317							
833A				S	**S**	**16 21 55.8**	**-0.6**	
	baz=317							
Q51A	**Peebles**	**90.06**	**35**	S	**S**	**16 21 53.2**	**-3.3**	
	baz=326							
Q51A				S	**S**	**16 21 53.2**	**-3.3**	
	baz=326							
ACCN	**Adirondack Com**	**90.07**	**26**	S	**S**	**16 21 51.1**	**-5.4**	
	baz=332							
P52A	**Corning**	**90.07**	**34**	IAMs_20	IAMs_20	16 58 48.3		
	comp=Z,3µm,18.0s							
P52A	**Corning**	**90.07**	**34**	P	**P**	**16 10 59.5**	**-4.2**	
	baz=327							
P52A				S	**S**	**16 21 53.4**	**-3.2**	
	baz=327							
NATX	**Nacogdoches**	**90.19**	**47**	IAMs_20	IAMs_20	16 58 35.7		
	comp=Z,3µm,18.0s							
NATX	**Nacogdoches**	**90.19**	**47**	P	**P**	**16 11 00.8**	**-3.6**	
	baz=320							
UPAO	**U. Pittsburgh**	**90.23**	**32**	S	**S**	**16 21 54.5**	**-3.5**	
	baz=328							
R50A	**Paris**	**90.24**	**36**	S	**S**	**16 21 54.1**	**-4.1**	
	baz=325							
R50A				S	**S**	**16 21 54.1**	**-4.1**	
	baz=325							
BINY	**Binghamton**	**90.30**	**28**	IAmb	IAmb	16 11 43.2		
	comp=Z,51nm,1.4s							
BINY	**Binghamton**	**90.30**	**28**	P	**P**	**16 11 01.3**	**-3.5**	
	baz=331							
G65A	**Princeton**	**90.33**	**22**	S	**S**	**16 21 55.3**	**-3.3**	
	baz=337							
G65A				S	**S**	**16 21 55.3**	**-3.3**	
	baz=337							
O54A	**Avella**	**90.34**	**32**	S	**S**	**16 21 57.1**	**-2.0**	
	baz=328							
O54A				S	**S**	**16 21 57.1**	**-2.0**	
	baz=328							
WVT	**Waverly**	**90.35**	**39**	IAMs_20	IAMs_20	16 55 04.9		
	comp=Z,3µm,20.0s							
WVT	**Waverly**	**90.35**	**39**	S	**S**	**16 21 56.2**	**-3.0**	
	baz=323							
WVT	**Waverly**	**90.35**	**39**	P	**P**	**16 11 02.5**	**-2.6**	
	baz=323							
WVT				S	**S**	**16 21 58.6**	**-0.7**	
	baz=323							
I62A	**Tamworth**	**90.40**	**25**	S	**S**	**16 21 56.8**	**-2.7**	
	baz=334							
I62A				S	**S**	**16 21 56.8**	**-2.7**	
	baz=334							
HCNY	**Howe Caverns**	**90.43**	**27**	S	**S**	**16 21 55.9**	**-3.9**	
	baz=332							
W45A	**Hickory Valley**	**90.45**	**41**	S	**S**	**16 21 56.7**	**-3.5**	
	baz=322							
LMN	**Caledonia Moun**	**90.46**	**20**	P	**P**	**16 11 05.7**	**+0.3**	
LMN				IAmb	IAmb	16 11 28.7		
	comp=Z,52nm,1.6s							
I63A	**Otisfield**	**90.48**	**24**	S	**S**	**16 21 57.6**	**-2.5**	
	baz=334							
I63A				S	**S**	**16 21 57.6**	**-2.5**	
	baz=334							
J61A	**Chester**	**90.48**	**26**	S	**S**	**16 21 56.6**	**-3.6**	
	baz=333							
J61A				S	**S**	**16 21 56.6**	**-3.6**	
	baz=333							
P53A	**Whipple**	**90.51**	**33**	S	**S**	**16 21 56.9**	**-3.8**	
	baz=327							
P53A				S	**S**	**16 21 56.9**	**-3.8**	
	baz=327							
735A	**Kenedy**	**90.56**	**50**	S	**S**	**16 22 01.6**	**+0.1**	
	baz=318							
Q52A	**Bidwell**	**90.58**	**34**	S	**S**	**16 21 56.2**	**-5.1**	
	baz=327							
Q52A				S	**S**	**16 21 56.2**	**-5.1**	
	baz=327							
M57A	**Sunshine Farm,**	**90.63**	**30**	P	**P**	**16 11 07.1**	**+0.7**	
M57A				IAmb	IAmb	16 11 50.0		
	comp=Z,43nm,1.1s							
M57A	**Sunshine Farm,**	**90.63**	**30**	P	**P**	**16 11 07.0**	**+0.7**	
	baz=330							
M57A				P	**P**	**16 11 07.0**	**+0.7**	
	baz=330							
M57A				S	**S**	**16 21 57.4**	**-4.3**	
	baz=330							
M57A				S	**S**	**16 21 57.4**	**-4.3**	
	baz=330							
L59A	**Walton**	**90.65**	**28**	P	**P**	**16 11 06.9**	**+0.4**	
L59A				IAmb	IAmb	16 11 43.2		
	comp=Z,48nm,1.1s							
L59A	**Walton**	**90.65**	**28**	S	**S**	**16 21 58.5**	**-3.5**	
	baz=332							
L59A				S	**S**	**16 21 58.5**	**-3.5**	
	baz=332							
TRY	**Troy**	**90.65**	**27**	IAMs_20	IAMs_20	16 55 07.3		
	comp=Z,3µm,19.0s							
FFD	**Franklin Falls**	**90.66**	**25**	IAMs_20	IAMs_20	16 51 06.5		
	comp=Z,3µm,21.0s							
ATD	**Arta Tunnel**	**90.77**	**286**	LR	LR	16 55 40.7		
	comp=Z,2µm,19.4s,baz=35,slow=38							
ATD	**Arta Tunnel**	**90.77**	**286**	IAMs_20	IAMs_20	16 53 11.1		
	comp=Z,2µm,22.0s							
EMMW	**East Machias**	**90.81**	**22**	IAMs_20	IAMs_20	16 53 30.3		
	comp=Z,3µm,20.0s							
OXF	**Oxford**	**90.85**	**41**	IAMs_20	IAMs_20	16 58 28.7		
	comp=Z,2µm,19.0s							
OXF	**Oxford**	**90.85**	**41**	P	**P**	**16 11 04.3**	**-3.1**	
	baz=322							
HKT	**Hockley**	**90.90**	**48**	IAMs_20	IAMs_20	16 58 30.1		
	comp=Z,3µm,18.0s							
HKT	**Hockley**	**90.90**	**48**	S	**S**	**16 22 02.5**	**-1.9**	
	baz=319							
KSPA	**Keystone Colle**	**90.94**	**29**	S	**S**	**16 22 00.9**	**-3.7**	
	baz=331							
SSPA	**Standing Stone**	**90.94**	**30**	P	**P**	**16 11 04.1**	**-3.7**	
	baz=330							
SSPA				S	**S**	**16 22 01.7**	**-2.9**	
	baz=330							
MCWV	**Mont Chateau**	**91.00**	**32**	IAMs_20	IAMs_20	16 58 33.8		
	comp=Z,4µm,19.0s							
MCWV	**Mont Chateau**	**91.00**	**32**	S	**S**	**16 22 01.2**	**-4.0**	
	baz=328							
MCWV	**Mont Chateau**	**91.00**	**32**	P	**P**	**16 11 04.9**	**-3.2**	
	baz=328							
MCWV				S	**S**	**16 22 02.5**	**-2.7**	
	baz=328							
U49A	**Red Boiling Sp**	**91.02**	**38**	S	**S**	**16 22 00.8**	**-4.6**	
	baz=325							
T50A	**Nancy**	**91.04**	**37**	S	**S**	**16 22 01.4**	**-4.2**	
	baz=325							
T50A				S	**S**	**16 22 01.4**	**-4.2**	
	baz=325							
S51A	**Beattyville**	**91.09**	**36**	S	**S**	**16 22 00.1**	**-5.9**	
	baz=326							
S51A				S	**S**	**16 22 00.1**	**-5.9**	
	baz=326							
PLAL	**Pickwick Lake**	**91.14**	**40**	IAMs_20	IAMs_20	16 57 31.3		
	comp=Z,3µm,20.0s							
V48A	**Smith Brothers**	**91.15**	**39**	S	**S**	**16 22 00.4**	**-6.2**	
	baz=324							
Q54A	**Coxs Mills**	**91.17**	**33**	S	**S**	**16 22 02.0**	**-4.7**	
	baz=328							
Q54A				S	**S**	**16 22 02.0**	**-4.7**	
	baz=328							
K62A	**Royalston**	**91.19**	**26**	S	**S**	**16 22 02.0**	**-4.8**	
	baz=333							
K62A				S	**S**	**16 22 02.0**	**-4.8**	
	baz=333							
N58A	**Sunbury**	**91.21**	**29**	S	**S**	**16 22 02.7**	**-4.4**	
	baz=330							
N58A				S	**S**	**16 22 02.7**	**-4.4**	
	baz=330							
R53A	**Hurricane**	**91.24**	**34**	S	**S**	**16 22 01.3**	**-6.1**	
	baz=327							
R53A				S	**S**	**16 22 01.3**	**-6.1**	
	baz=327							
UNH	**University of**	**91.25**	**25**	S	**S**	**16 22 03.3**	**-4.0**	
	baz=334							
Y45A	**Yeager Farm, C**	**91.29**	**42**	S	**S**	**16 22 05.8**	**-2.2**	
	baz=322							
NPNY	**Mohonk Preserv**	**91.35**	**27**	S	**S**	**16 22 04.3**	**-3.9**	
	baz=332							
HRV	**Adam Dziewonsk**	**91.56**	**25**	IAMs_20	IAMs_20	16 59 55.2		
	comp=Z,4µm,18.0s							
HRV	**Adam Dziewonsk**	**91.56**	**25**	S	**S**	**16 22 08.3**	**-1.8**	
	baz=334							
HRV	**Adam Dziewonsk**	**91.56**	**25**	P	**P**	**16 11 07.9**	**-2.7**	
	baz=334							
HRV				S	**S**	**16 22 06.8**	**-3.2**	
	baz=334							
MSEY	**Mahe Island**	**91.66**	**265**	IAMs_20	IAMs_20	16 52 21.5		
	comp=Z,4µm,20.0s							
MSEY	**Mahe Island**	**91.66**	**265**	P	**P**	**16 11 11.1**	**-0.5**	
BRNY	**Black Rk. Fore**	**91.70**	**27**	S	**S**	**16 22 04.3**	**-7.0**	
	baz=332							
ODNJ	**Ogdensburg**	**91.78**	**28**	S	**S**	**16 22 06.3**	**-5.8**	
	baz=332							
Q56A	**Snyder Ridge,**	**91.80**	**32**	S	**S**	**16 22 05.9**	**-6.5**	
	baz=329							
Q56A				S	**S**	**16 22 05.9**	**-6.5**	
	baz=329							
P57A	**Homestead Farm**	**91.89**	**31**	S	**S**	**16 22 08.9**	**-4.3**	
	baz=330							
P57A				S	**S**	**16 22 08.9**	**-4.3**	
	baz=330							
S54A	**Dingess, Beckl**	**91.96**	**34**	S	**S**	**16 22 09.3**	**-4.7**	
	baz=327				

MAHO	Mahon	92.00	330	Pdif	P		16 11 10.6	-2.1	
TZTN	Tazewell	92.02	36	IAMs_20	IAMs_20		16 51 37.9		
	comp=Z,3µm,20.0s								
TZTN	Tazewell	92.02	36	S	S		16 22 09.6	-4.9	
	baz=326								
TZTN	Tazewell	92.02	36	P	P		16 11 09.9	-3.0	
	baz=326								
TZTN				S	S		16 22 10.1	-4.4	
	baz=326								
R55A	Marlinton	92.06	33	S	S		16 22 12.8	-2.1	
	baz=328								
R55A				S	S		16 22 12.8	-2.1	
	baz=328								
X48A	Hartselle	92.08	40	S	S		16 22 14.0	-1.0	
	baz=324								
VBMS	Vicksburg	92.08	44	IAMs_20	IAMs_20		16 51 58.4		
	comp=Z,2µm,20.0s								
VBMS	Vicksburg	92.08	44	S	S		16 22 17.7	+2.6	
	baz=322								
VBMS	Vicksburg	92.08	44	P	P		16 11 11.6	-1.6	
	baz=322								
VBMS				S	S		16 22 11.9	-3.2	
	baz=322								
BRYW	Bryant College	92.09	26	IAMs_20	IAMs_20		17 00 13.4		
	comp=Z,3µm,18.0s								
PAL	Palisades	92.09	28	IAMs_20	IAMs_20		16 56 43.5		
	comp=Z,3µm,20.0s								
PAL	Palisades	92.09	28	S	S		16 22 10.3	-4.6	
	baz=332								
PAL	Palisades	92.09	28	P	P		16 11 10.7	-2.4	
	baz=332								
BRNJ	Basking Ridge	92.14	28	S	S		16 22 10.5	-4.8	
	baz=332								
V51A	Loudon	92.26	37	S	S		16 22 13.3	-3.4	
	baz=325								
L64A	Middleborough	92.30	25	S	S		16 22 16.4	-0.4	
	baz=334								
L64A				S	S		16 22 16.4	-0.4	
	baz=334								
W50A	Signal Mountai	92.30	38	S	S		16 22 16.1	-1.1	
	baz=325								
PANJ	Princeton	92.36	28	S	S		16 22 12.1	-5.3	
	baz=332								
M63A	Gales Ferry	92.38	26	S	S		16 22 12.1	-5.4	
	baz=334								
M63A				S	S		16 22 12.1	-5.4	
	baz=334								
SDMD	Soldier's Deli	92.41	30	S	S		16 22 12.8	-5.0	
	baz=330								
146A	Union	92.51	42	S	S		16 22 21.2	+2.2	
	baz=323								
GEDE	Greenville	92.51	29	S	S		16 22 14.8	-3.9	
	baz=331								
V52A	Sevierville	92.58	37	S	S		16 22 16.3	-3.3	
	baz=326								
TKL	Tuckaleechee C	92.65	37	LR	LR		16 56 50.7		
	comp=Z,2µm,18.6s,baz=340,slow=38								
TKL	Tuckaleechee C	92.65	37	S	S		16 22 14.5	-5.6	
	baz=326								
BLA	Blacksburg	92.83	34	IAMs_20	IAMs_20		16 57 11.4		
	comp=Z,3µm,21.0s								
BLA	Blacksburg	92.83	34	S	S		16 22 16.9	-5.0	
	baz=328								
BLA	Blacksburg	92.83	34	P	P		16 11 13.9	-2.8	
	baz=328								
BLA				S	S		16 22 17.6	-4.2	
	baz=328								
Y49A	Blount Mountai	92.86	40	S	S		16 22 15.6	-6.6	
	baz=324								
V53A	Saluda	93.08	36	S	S		16 22 19.1	-5.0	
	baz=326								
V53A				S	S		16 22 19.1	-5.0	
	baz=326								
LRAL	Lakeview Retre	93.24	41	IAMs_20	IAMs_20		16 57 44.7		
	comp=Z,2µm,20.0s								
LRAL	Lakeview Retre	93.24	41	S	S		16 22 21.4	-4.0	
	baz=324								
LRAL	Lakeview Retre	93.24	41	P	P		16 11 17.4	-1.1	
	baz=324								
LRAL				S	S		16 22 22.4	-3.0	
	baz=324								
CBN	Corbin Frederi	93.24	31	IAMs_20	IAMs_20		16 57 55.0		
	comp=Z,4µm,20.0s								
CBN	Corbin Frederi	93.24	31	P	P		16 11 15.2	-3.2	
	baz=330								
KEST	Kesra	93.44	324	P	P		16 11 20.1	+0.6	
	comp=Z,18nm,1.0s,baz=317,slow=1.1,SNR=10								
KEST				LR	LR		16 59 06.2		
	comp=Z,5µm,18.1s,baz=319,slow=39								
	comp=Z,18nm,1.0s								
KEST	Kesra	93.44	324	IAmb	IAmb		16 11 21.5		
	comp=Z,25nm,1.1s								
V55A	Taylorsville	93.64	35	S	S		16 22 28.8	-0.1	
	baz=327								
V55A				S	S		16 22 28.8	-0.1	
	baz=327								
PBRG	Braganca	93.96	338	eP	P		16 11 23.6	+1.8	
	comp=Z,43nm,1.9s								
PBRG	Braganca	93.96	338	ePP	PP		16 15 08.0	+1.4	
Y52A	Lilburn	93.99	38	S	S		16 22 26.9	-5.1	
	baz=326								
Y52A				S	S		16 22 26.9	-5.1	
	baz=326								
KMSC	Kings Mountain	94.18	36	P	P		16 11 19.8	-3.0	
	baz=327								
PGAV	Gavieira, Arco	94.23	339	eP	P		16 11 26.6	+3.5	
PGAV	Gavieira, Arco	94.23	339	ePP	PP		16 15 10.8	+2.0	
PGAV				eS	S		16 22 36.8	+2.8	
PGAV				eSS	SS		16 28 54.5	+1.4	
PGAV	Gavieira, Arco	94.23	339	eLQ	LQ		16 43 12.7		
PGAV				eLR	LR		16 47 11.1		
T59A	Double "B" Far	94.23	32	S	S		16 22 28.9	-5.1	
	baz=330								
T59A				S	S		16 22 28.9	-5.1	
	baz=330								
UCM	Universidad Co	94.28	335	Pdif	P		16 11 24.7	+1.4	
UCM	Universidad Co	94.28	335	PP	PP		16 15 11.6	+2.4	
ANKE	Ethiopia-Afar	94.34	286	eP	P		16 11 13.2	-11	
ANKE				eS	SKSac		16 21 54.2	-5.7	
250A	Grady	94.45	41	S	S		16 22 30.1	-6.0	
	baz=324								
MVO	Moncorvo	94.63	338	eP	P		16 11 26.7	+1.8	
	comp=Z,46nm,2.0s								
MVO	Moncorvo	94.63	338	ePP	PP		16 15 12.7	+0.8	
MVO				eS	SKSac		16 22 07.7	+7.7	
MVO				eSS	SS		16 29 03.7	+4.9	
MVO	Moncorvo	94.63	338	eLQ	LQ		16 40 43.1		
MVO				eLR	LR		16 47 43.5		
	comp=Z,5µm,20.0s								
GOGA	Godfrey	94.64	38	IAMs_20	IAMs_20		17 00 51.8		
	comp=Z,3µm,18.0s								
GOGA	Godfrey	94.64	38	P	P		16 11 23.8	-1.2	
	baz=326								
GOGA				S	S		16 22 38.4	+0.7	
	baz=326								
POLO	Lamas de Olo	94.65	339	eP	P		16 11 25.8	+0.8	
	comp=Z,24nm,1.5s								
POLO	Lamas de Olo	94.65	339	ePP	PP		16 15 13.9	+1.8	
BRAL	Brewton	94.71	42	IAMs_20	IAMs_20		17 00 41.5		
	comp=Z,3µm,19.0s								
BRAL	Brewton	94.71	42	P	P		16 11 25.5	+0.2	
	baz=324								
ESDC	Sonseca Array	95.08	336	P	P		16 11 27.7	+0.7	
	comp=Z,5.6nm,1.1s,baz=15,slow=3.1,SNR=17								
ESDC				LR	LR		16 58 41.4		
	comp=Z,7µm,19.1s,baz=26,slow=38								
	comp=Z,5.6nm,1.1s								
MTE	Manteigas	95.48	338	eP	P		16 11 34.0	+5.2	
	comp=Z,39nm,2.0s								
MTE	Manteigas	95.48	338	ePP	PP		16 15 22.4	+3.8	
MTE				eS	SKSac		16 22 07.1	+2.5	
MTE				eSS	SS		16 29 12.8	+1.9	
MTE	Manteigas	95.48	338	eLQ	LQ		16 41 25.4		
MTE				eLR	LR		16 48 27.7		
	comp=Z,5µm,20.0s								
352A	Blakely	95.52	40	S	S		16 22 42.6	-2.8	
	baz=325								
HAW	Hawthorne Fire	95.55	37	S	S		16 22 38.6	-7.0	
	baz=327								
CNNC	Cliffs of the	95.58	33	IAMs_20	IAMs_20		16 57 48.1		
	comp=Z,3µm,21.0s								
CNNC	Cliffs of the	95.58	33	P	P		16 11 28.8	-0.4	
	baz=329								
COI	Coimbra	95.91	339	eP	P		16 11 37.1	+6.5	
	comp=Z,54nm,1.7s								
COI	Coimbra	95.91	339	ePP	PP		16 15 24.7	+3.0	
CART	Cartagena	95.97	333	Pdif	P		16 11 32.6	+1.6	
CART	Cartagena	95.97	333	PP	PP		16 15 25.1	+2.7	
PCAS	Casmilo, Conde	96.07	339	eP	P		16 11 33.6	+2.2	
PCAS	Casmilo, Conde	96.07	339	ePP	PP		16 15 28.6	+5.6	
TIGA	Tifton	96.21	39	P	P		16 11 31.0	-1.2	
	baz=326								
PMRV	Marv??o	96.34	338	eP	P		16 11 35.6	+2.9	
PMRV	Marv??o	96.34	338	ePP	PP		16 15 28.0	+2.9	
PMRV				eS	SKSac		16 22 14.5	+5.5	
PMRV				eSS	SS		16 29 24.8	+1.8	
PMRV	Marv??o	96.34	338	eLR	LR		16 48 32.1		
	comp=Z,4µm,20.0s								
PSBE	So Bento	96.66	339	eP	P		16 11 35.7	+1.6	
	comp=Z,73nm,1.8s								
PSBE	So Bento	96.66	339	ePP	PP		16 15 31.6	+4.0	
UNM	Universidad Na	96.69	58	IAMs_20	IAMs_20		16 54 46.5		
	comp=Z,2µm,19.0s								
PMTG	Montargil	96.91	338	eP	P		16 11 39.8	+4.6	
PMTG	Montargil	96.91	338	ePP	PP		16 15 34.6	+5.1	
PESTR	Estremoz	96.92	338	eP	P		16 11 36.7	+1.4	
	comp=Z,26nm,1.6s								
PESTR	Estremoz	96.92	338	ePP	PP		16 15 34.0	+4.4	
PMAFR	Mafra	97.31	339	eP	Pdif		16 11 41.1	+4.0	
	comp=Z,139nm,1.5s								
PMAFR	Mafra	97.31	339	ePP	PP		16 15 37.7	+5.1	
EVO	Evora	97.35	338	Pdif	Pdif		16 11 46.4	+9.1	
EVO	Evora	97.35	338	PP	PP		16 15 38.0	+5.1	
PBAR	Barrancos	97.40	337	eP	Pdif		16 11 39.7	+2.2	
	comp=Z,23nm,1.7s								
PBAR	Barrancos	97.40	337	ePP	PP		16 15 37.6	+4.3	
PMST	Lisbon--Monsan	97.49	339	eP	Pdif		16 11 45.5	+7.6	
PMST	Lisbon--Monsan	97.49	339	ePP	PP		16 15 38.3	+4.4	
LIS	Lisbon	97.50	339	ePP	PP		16 15 35.8	+1.8	
LIS				IAMs_20	IAMs_20		16 51 19.1		
	comp=E,12µm,27.6s								
EMAL	Malaga-Limoner	97.89	335	Pdif	P		16 11 38.2	-1.5	
EMAL	Malaga-Limoner	97.89	335	PP	PP		16 15 40.7	+3.6	
PNCL	Nicolau / Gran	97.89	338	eP	Pdif		16 11 43.1	+3.4	
	comp=E,47nm,1.7s								
PNCL	Nicolau / Gran	97.89	338	ePP	PP		16 15 41.9	+4.9	
MESJ	Messejana	98.06	338	eP	Pdif		16 11 41.1	+0.7	
MESJ				ePP	PP		16 15 40.1	+1.8	
MESJ				eSKSac	SKSac		16 22 18.8	+1.0	
MESJ				IAMs_20	IAMs_20		17 04 03.2		
	comp=E,6µm,14.3s								
MESJ	Messejana	98.06	338	eP	Pdif		16 11 41.1	+0.7	
MESJ				e			16 15 40.1		
MESJ				e			16 22 18.8		
MESJ	Messejana	98.06	338	eP	Pdif		16 11 45.8	+5.4	
	comp=Z,33nm,1.7s								
MESJ	Messejana	98.06	338	ePP	PP		16 15 43.9	+5.6	
PCVE	Castro Verde	98.20	338	eP	Pdif		16 11 48.2	+7.1	
PCVE	Castro Verde	98.20	338	ePP	PP		16 15 43.4	+4.0	
PVAQ	Vaqueiros	98.31	337	eP	Pdif		16 11 46.4	+4.8	
	comp=Z,34nm,1.7s								
PVAQ	Vaqueiros	98.31	337	ePP	PP		16 15 43.8	+3.5	
PVAQ	Vaqueiros	98.31	337	eLR	LR		16 48 52.9		
	comp=Z,8µm,18.0s								
PBDV	Barranco-do-Ve	98.53	337	eP	Pdif		16 11 46.2	+3.6	
	comp=Z,47nm,1.7s								
PBDV	Barranco-do-Ve	98.53	337	ePP	PP		16 15 46.7	+4.7	
CHAS	Isla Isabel II	98.64	333	Pdif	P		16 11 42.0	-1.1	
CHAS	Isla Isabel II	98.64	333	PP	PP		16 15 45.3	+2.5	
MORF	Marmelete	98.68	338	ePP	PP		16 15 44.9	+1.7	
MORF				eSKSac	SKSac		16 22 21.9	+0.8	
MORF				IAMs_20	IAMs_20		16 56 53.5		
	comp=E,8µm,22.1s								
MORF	Marmelete	98.68	338	ePP	PP		16 15 49.8	+6.7	
WMELI	Melilla	98.70	333	Pdif	P		16 11 41.3	-2.0	
WMELI	Melilla	98.70	333	PP	PP		16 15 45.9	+2.6	
PFVI	Vila Bisbo	98.89	338	eP	Pdif		16 11 46.9	+2.7	
PFVI	Vila Bisbo	98.89	338	ePP	PP		16 15 50.0	+5.3	
CEU	Ceuta	98.98	335	Pdif	Pdif		16 11 45.3	+0.7	
CEU	Ceuta	98.98	335	PP	PP		16 15 47.8	+2.4	
PVLZ	Peæn de	99.29	334	Pdif	Pdif		16 11 45.7	-0.3	
PVLZ	Peæn de	99.29	334	PP	PP		16 15 48.3	+0.5	
IFR	Ifrane	101.08	334	Pdif	Pdif		16 11 54.3	+0.1	
IFR	Ifrane	101.08	334	PP	PP		16 16 02.7	+1.1	
LODK	Lodwar	101.67	285	IAMs_20	IAMs_20		17 03 36.0		
	comp=Z,2µm,19.0s								
AVE	Averroes	102.02	336	Pdif	Pdif		16 11 58.1	-0.1	
AVE	Averroes	102.02	336	PP	PP		16 16 10.1	+1.6	
TEIG	Tepich	102.72	49	IAMs_20	IAMs_20		17 07 19.1		
	comp=Z,2µm,20.0s								
BBSR	BB Station	103.01	24	IAMs_20	IAMs_20		17 04 27.5		
	comp=Z,2µm,19.0s								
KMBO	Kilima Mbogo	103.26	280	Pdiff	Pdif		16 12 04.5	+0.2	
	comp=Z,4.8nm,0.9s,baz=45,slow=7.9,SNR=6.7								
KMBO				PP	PP		16 16 18.8	-0.7	
	comp=Z,3.3nm,0.8s,baz=32,slow=6.9,SNR=4.2								
KMBO	Kilima Mbogo	103.26	280	P	Pdif		16 12 04.5	+0.2	
KIBK	Kibwezi	103.45	278	IAMs_20	IAMs_20		17 07 53.9		
	comp=Z,3µm,18.0s								
PMPST	Porto Santo, M	104.65	343	eP	Pdif		16 12 19.4	+10	
PMPST	Porto Santo, M	104.65	343	ePP	PP		16 16 39.2	+11	
PMOZ	Porto Moniz, M	105.09	343	ePP	PP		16 16 38.6	+7.2	
PMOZ				eS	SKSac		16 22 54.1	+2.1	
PMOZ				eSS	SKKPdf		16 31 40.4	+5.4	
PMOZ	Porto Moniz, M	105.09	343	eLR	LR		16 53 32.4		
	comp=Z,3µm,18.0s								
PMAR	Madeira	105.12	343	ePP	PP		16 16 35.5	+3.7	
ABPO	Ambohimpanom	106.91	259	IAMs_20	IAMs_20		17 00 17.6		
	comp=Z,3µm,20.0s								
TGUH	Tegucigalpa,Un	108.12	53	IAMs_20	IAMs_20		17 05 29.0		
	comp=Z,2µm,21.0s								
VOI	Vohitsoka	108.97	257	IAMs_20	IAMs_20		17 01 39.7		
	comp=Z,2µm,20.0s								
MTDJ	Mount Denham	110.21	42	IAMs_20	IAMs_20		17 09 47.2		
	comp=Z,2µm,19.0s								
BOAB	BOAO BROADBAN	110.35	52	IAMs_20	IAMs_20		17 06 04.0		
	comp=Z,2µm,20.0s								
GRTK	Grand Turk	110.42	35	IAMs_20	IAMs_20		17 10 27.1		
	comp=Z,3µm,19.0s								
JTS	Las Juntas de	112.46	53	IAMs_20	IAMs_20		17 09 02.1		
	comp=Z,1µm,21.0s								
HDC	Heredia	113.20	53	IAMs_20	IAMs_20		17 15 11.1		
	comp=Z,2µm,20.0s								
SJG	San Juan	115.53	32	IAMs_20	IAMs_20		17 11 34.5		
	comp=Z,2µm,20.0s								
TORD	Torodi Ar. Bea	116.19	318	PKP	PKPdf		16 16 46.8	-0.8	
	comp=Z,1.7nm,0.8s,baz=1.6,slow=1.5,SNR=5.5								
TORD				PP	PP		16 17 49.7	-2.2	
	comp=Z,17nm,1.2s,baz=24,slow=6.5,SNR=3.6								
TORD				PKKP	PKKPdf		16 27 32.4	-8.1	
	comp=Z,1.9nm,0.9s,baz=211,slow=2.5,SNR=4.8								
BCIP	Isla Barro Col	116.40	49	IAMs_20	IAMs_20		17 14 16.2		
	comp=Z,1µm,20.0s								
SMRT	St. Maarten	116.77	29	IAMs_20	IAMs_20		17 10 07.0		
	comp=Z,2µm,20.0s								
PAYG	Puerto Ayora	117.16	65	IAMs_20	IAMs_20		17 06 18.6		
	comp=Z,2µm,19.0s								
ANWB	Willy Bob	117.58	28	IAMs_20	IAMs_20		17 08 07.7		
	comp=Z,2µm,21.0s								
VNDA	Vanda	118.12	176	PKP	PKiKP		16 16 49.8	+0.2	
	comp=Z,0.8nm,0.7s,baz=302,slow=3.1,SNR=7.0								
GDSD	La Dsirade Is	119.09	27	IAMs_20	IAMs_20		17 14 27.7		
	comp=Z,2µm,20.0s								
TDBA	Terre de Bas,	119.32	28	IAMs_20	IAMs_20		17 10 25.4		
	comp=Z,3µm,20.0s								
HATO	Hato, Curacao	119.59	37	IAMs_20	IAMs_20		17 13 27.3		
	comp=Z,2µm,20.0s								
SVN	Savane Anatole	120.42	28	IAMs_20	IAMs_20		17 15 09.8		
	comp=Z,2µm,20.0s								
FDF	Fort de France	120.52	28	IAMs_20	IAMs_20		17 15 12.6		
	comp=Z,2µm,21.0s								
ILAM	Ilet Lapin Mar	120.58	28	IAMs_20	IAMs_20		17 14 46.2		
	comp=Z,2µm,20.0s								
BIM	Bigot	120.75	28	IAMs_20	IAMs_20		17 15 29.6		
	comp=Z,2µm,20.0s								
MPOM	Morne Pois Mar	120.89	28	IAMs_20	IAMs_20		17 14 44.4		
	comp=Z,2µm,20.0s								
SDV	Santo Domingo	121.63	41	IAMs_20	IAMs_20		17 14 42.7		
	comp=Z,2µm,21.0s								
BBGH	Gun Hill	122.56	27	IAMs_20	IAMs_20		17 08 48.5		
	comp=Z,2µm,21.0s								
GRGR	Grenville	122.72	30	IAMs_20	IAMs_20		17 10 46.9		
	comp=Z,2µm,21.0s								
MAW	Mawson	123.31	207	PKP	PKiKP		16 17 01.0	+1.1	
	comp=Z,4.2nm,0.8s,baz=57,slow=2.3,SNR=11								
MAW	Mawson	123.31	207	PKPdf	PKiKP		16 17 01.6	+1.7	
MAW	Mawson	123.31	207	PKiKP	PKiKP		16 17 01.0	+1.1	
SACV	Santiago Islan	123.73	345	IAMs_20	IAMs_20		17 09 40.2		
	comp=Z,2µm,19.0s								
OTAV	Otavalo	124.31	54	IAMs_20	IAMs_20		17 21 39.2		
	comp=Z,1µm,19.0s								
DBIC	Dimbokro	125.00	321	PKP	PKPdf		16 17 02.8	-1.9	
	comp=Z,5.8nm,0.9s,baz=110,slow=1.0,SNR=3.4								
TSUM	Tsumeb	129.56	278	IAMs_20	IAMs_20		17 17 27.5		
	comp=Z,2µm,20.0s								
QSPA	South Pole Qui	130.08	180	PKPdf	PKPdf		16 17 12.2	-0.5	
MALB	Monte Alegre	138.35	28	eP	PKiKP		16 17 35.0	+3.1	
ITTB	Itaituba	140.11	31	eP	PKiKP		16 17 35.9	+0.4	
SAML	Samuel	140.62	45	IAMs_20	IAMs_20		17 28 09.3		
	comp=Z,2µm,21.0s								
TMAB	Tom-Au,PA,Br	140.71	19	eP	PKiKP		16 17 37.6	+0.9	
NVL	N'lazarevskaya	141.04	203	ePKIKP	PKPdf		16 17 33.8	+0.9	
NVL				pmax	pmax				
	comp=Z,19nm,1.0s								
ROSB	Rosrio	142.05	13	eP	PKiKP		16 17 41.8	+2.3	
BELA	Belgrano 2	142.35	181	PKPdf	PKPdf		16 17 30.1	-5.0	
TROLL	Troll, Antarti	142.94	199	PKKPdf	PKKPdf		16 26 45.2	-6.3	
TROLL	Troll, Antarti	142.94	199	PKPdf	PKPdf		16 17 33.5	-3.0	
LPAZ	La Paz	143.43	58	PKP	PKPbc		16 17 37.6	+0.8	
	comp=Z,1.8nm,0.5s,baz=334,slow=4.6,SNR=8.6								
LPAZ	La Paz	143.43	58	eP	PKiKP		16 17 42.2	-0.7	
PRPB	Parauapebas	143.87	23	eP	PKiKP		16 17 41.8	-1.4	
SNAA	Sanae	144.44	197	PKPdf	PKPab		16 17 37.2	-0.1	
SNAA	Sanae	144.44	197	PKPdf	PKPbc		16 17 37.7	+0.1	
SNAA				IAMs_20	IAMs_20		17 18 21.3		
	comp=Z,2µm,21.0s								
SNAA	Sanae	144.44	197	PKIKP	PKPbc		16 17 37.7	+0.1	
SNAA				MLR	MLR				
	comp=Z,2µm,21.0s								
VILB	Vilhena	145.55	44	PKPdf	PKPab		16 17 43.5	+0.6	
RCBR	Riachuelo	145.63	359	IAMs_20	IAMs_20		17 21 09.7		
	comp=Z,2µm,20.0s								
RCBR	Riachuelo	145.63	359	eP	PKPab		16 17 44.9	+1.6	
VNA2	Neumayer--Watz	146.00	196	PKKPdf	PKKPdf		16 26 39.3	-6.1	
VNA2	Neumayer--Watz	146.00	196	PKPdf	PKPbc		16 17 42.3	-0.2	
	baz=123,slow=2.0								
PB07	IPOC Station P	146.01	67	PKPbc	PKPab		16 17 45.8	+1.1	
VNA3	Neumayer Olymp	146.23	195	PKKPdf	PKKPdf		16 26 39.3	-5.6	
VNA3	Neumayer Olymp	146.23	195	PKPdf	PKPdf		16 17 42.2	+0.2	
VNA1	Neumayer--Stat	146.40	196	PKPdf	PKPab		16 17 44.2	-0.3	
LVC	Limon Verde	147.26	67	eP	PKiKP		16 17 50.8	+0.5	
SIV	San Ignacio	147.54	49	PKPbc	PKPdf		16 17 47.1	+1.2	
	comp=Z,7.8nm,0.6s,baz=259,slow=0.7,SNR=25								
PTLB	Pontes e Lacer	148.19	45	eP	PKiKP		16 17 51.5	-0.5	
NBRF	Rio Formoso -	148.45	358	eP	PKPbc		16 17 51.7	+0.8	
SNDB	Serra Nova Dou	148.79	29	eP	PKiKP		16 17 53.8	+0.6	
NBAN	Anadia - AL	149.45	0	eP	PKPbc		16 17 53.9	+0.4	
SALV	Santo Antonio	150.36	40	eP	PKiKP		16 17 56.4	0.0	
NBLA	Lagarto - SE	150.74	3	eP	PKPbc		16 17 56.3	-0.3	
PMSA	Palmer Station	150.74	156	eP	PKiKP		16 17 55.8	+0.1	
SDRA	SAO DESIDERIO	151.15	18	eP	PKiKP		16 17 58.4	+0.2	
PP1B	Ponte de Pedra	152.21	41	eP	PKPbc		16 17 59.3	-0.6	
GDU01	Guandu, BA	153.32	7	eP	PKPbc		16 17 59.0	-3.4	
BDFB	Brasilia	153.34	26	PKPbc	PKiKP		16 18 02.9	+0.2	
	comp=Z,4.8nm,0.8s,baz=354,slow=4.5,SNR=3.9								
BDFB	Brasilia	153.34	26	eP	PKPbc		16 18 00.5	-2.1	
RVDE	Rio Verde (Bra	153.38	43	eP	PKPbc		16 18 00.6	-1.9	
JANB	Januaria	153.85	18	eP	PKPbc		16 18 01.5	-2.1	
PLCA	Paso Flores	154.03	102	PKPbc	PKiKP		16 18 04.5	+1.1	
	comp=Z,4.1nm,0.9s,baz=257,slow=2.3,SNR=8.9								
PLCA	Paso Flores	154.03	102	eP	PKPbc		16 18 00.7	-2.6	
AQDB	Aquidauana	154.16	46	eP	PKPbc		16 18 02.3	-1.8	
C2SB	Chapadao do Su	154.20	38	eP	PKPbc		16 18 01.0	-3.2	
CMC01	Camacan, BA	154.95	7	eP	PKPbc		16 18 01.8	-4.1	
ANTJ	Antonio Joao (	155.20	48	eP	PKPdf		16 18 03.9	+6.5	
MC01	Montes Claros	155.52	18	eP	PKPdf		16 18 04.1	+6.1	
GUA01	Guaratinga, BA	156.12	8	eP	PKPdf		16 18 05.2	+6.5	
CPUP	Villa Florida	157.60	58	PKPab	PKPab		16 18 34.0	+1.6	
	comp=Z,3.4nm,0.9s,baz=351,slow=5.3,SNR=4.2								
CPUP	Villa Florida	157.60	58	PKP2	PKPab		16 18 34.0	+1.6	
TRCB	Terra Rica	157.69	43	eP	PKPdf		16 18 06.1	+5.4	
BB19B	Bebedouro	158.12

HMT	**Hamilton**	**47.45**	**40**	P	**P**	**16 17 21.4**	**+0.8**
BERG	**Berg Lake**	**47.72**	**40**	P	**P**	**16 17 23.4**	**+0.7**
BERG				IAmb	IAmb	16 17 27.4	
	comp=Z,7.6nm,0.4s						
M26K	**Nabesna, AK**	**47.75**	**37**	P	**P**	**16 17 23.6**	**+0.7**
MCARA	**McCarthy VSAT**	**47.89**	**38**	P	**P**	**16 17 21.2**	**-2.7**
MCARA				IAmb	IAmb	16 17 22.1	
	comp=Z,8.1nm,0.8s						
TGL	**Tana Glacier**	**48.08**	**39**	P	**P**	**16 17 24.6**	**-1.0**
TGL				IAmb	IAmb	16 17 26.9	
	comp=Z,7.7nm,1.1s						
M27K	**Edge Creek, AK**	**48.27**	**37**	P	**P**	**16 17 29.5**	**+2.5**
ISLE	**Juniper Island**	**48.35**	**39**	P	**P**	**16 17 28.9**	**+1.2**
ISLE				IAmb	IAmb	16 17 48.3	
	comp=Z,7.8nm,1.2s						
YAH	**Yahtse**	**48.68**	**40**	P	**P**	**16 17 32.0**	**+1.7**
YAH				IAmb	IAmb	16 17 34.7	
	comp=Z,5.3nm,0.8s						
ABKAR	**Akbulak array**	**57.25**	**309**	P	**P**	**16 18 33.7**	**+0.3**
ABKAR				IAmb	IAmb	16 18 50.2	
	comp=Z,2.6nm,0.8s						
AKTO	**Aktyubinsk**	**57.87**	**311**	P	**P**	**16 18 38.8**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=87,slow=15,SNR=2.6						
	comp=Z,1.9nm,0.8s						
WRA	**Warramunga Arr**	**60.55**	**190**	P	**P**	**16 18 56.0**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=7.3,slow=6.9,SNR=7.4						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**64.28**	**190**	P	**P**	**16 19 21.6**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=7.0,slow=8.4,SNR=3.3						
	comp=Z,1.0nm,1.0s						
FINES	**FINESS Array B**	**66.77**	**332**	P	**P**	**16 19 37.6**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=53,slow=7.5,SNR=13						
	comp=Z,1.3nm,0.5s						
KBZ	**Khabaz**	**70.14**	**311**	P	**P**	**16 19 59.8**	**+1.2**
	comp=Z,3.8nm,0.8s,baz=52,slow=7.4,SNR=5.1						
	comp=Z,3.8nm,0.8s						
HFS	**Hagfors**	**71.85**	**336**	P	**P**	**16 20 07.7**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=18,slow=5.2,SNR=6.9						
	comp=Z,1.3nm,0.6s						
NB2	**NORSAR Subarra**	**71.87**	**338**	P	**P**	**16 20 09.4**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**71.87**	**338**	P	**P**	**16 20 07.5**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=36,slow=6.0,SNR=6.2						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**72.81**	**323**	P	**P**	**16 20 13.2**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=45,slow=6.3,SNR=9.1						
	comp=Z,1.7nm,0.6s						
PDAR	**Pinedale Array**	**74.12**	**47**	P	**P**	**16 20 22.1**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=299,slow=3.7,SNR=4.3						
	comp=Z,0.2nm,0.4s						
CLL	**Collm**	**79.15**	**331**	*eP*	**P**	**16 20 51.0**	**+0.3**
GERES	**GERESS Array B**	**80.87**	**329**	P	**P**	**16 21 00.6**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=35,slow=3.6,SNR=3.5						
	comp=Z,0.2nm,0.4s						

IDC ***20*** *16:09:52.0±0.8, 40.79N×142.66E, h0km, mb4.1/21, mbtmp4.1/22, ML2.8/1, Error ellipse: s-maj=19.5km s-min=18.1km az=143.0*

ISC 20 16:09:55.8±0.8, 40.7N±0.1×142.8E±0.1, h26km, n27, σ1§40/25, mb4.2/22, 1C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**5.44**	**222**	Pn	**Pn**	**16 11 14.1**	**-1.0**
	0.3nm,0.3s,baz=37,slow=11,SNR=7.7						
	20nm,0.9s						
USRK	**Ussuriysk Ar.**	**8.70**	**297**	Pn	Pn	16 12 05.8	+5.9
	0.6nm,0.3s,baz=102,slow=14,SNR=9.8						
KLR	**Kul'dur**	**11.57**	**321**	Pn	**Pn**	**16 12 42.0**	**+2.9**
	0.1nm,0.3s,baz=126,slow=16,SNR=2.9						
KSRS	**Korea Array**	**11.96**	**259**	Pn	Pn	16 12 50.2	+5.7
	baz=80,slow=12						
YAK	**Yakutsk**	**22.81**	**344**	P	**P**	**16 14 54.0**	**-2.3**
	4.8nm,0.6s,baz=177,slow=3.0,SNR=1.6						
	4.8nm,0.6s						
SONM	**Songino Array**	**26.82**	**298**	P	**P**	**16 15 32.7**	**-1.2**
	2.6nm,0.9s,baz=97,slow=8.6,SNR=4.5						
	2.6nm,0.9s						
GTA	**Gaotai**	**32.66**	**282**	⇑P	**P**	**16 16 27.3**	**+1.6**
GTA				pP	pP	16 16 32.5	-0.5
GTA				sP	sP	16 16 35.3	-0.7
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
ZALV	**Zalesovo Beam**	**40.33**	**309**	P	**P**	**16 17 30.8**	**0.0**
	comp=Z,3.8nm,0.8s,baz=86,slow=7.6,SNR=4.8						
	comp=Z,3.8nm,0.8s						
MKAR	**Makanchi Array**	**43.17**	**299**	P	**P**	**16 17 54.2**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=80,slow=8.8,SNR=6.3						
	comp=Z,5.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**43.50**	**253**	P	**P**	**16 17 57.2**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=52,slow=7.3,SNR=4.9						
	comp=Z,1.0nm,0.8s						
KURBB	**Kurchatov Array**	**44.67**	**305**	P	**P**	**16 18 06.0**	**-0.1**
	comp=Z,5.5nm,0.5s,baz=78,slow=8.7,SNR=4.2						
	comp=Z,5.5nm,0.5s						
ILAR	**Eielson Array**	**45.89**	**34**	P	**P**	**16 18 16.1**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=275,slow=6.7,SNR=6.7						
	comp=Z,1.9nm,0.9s						
AKTO	**Aktyubinsk**	**57.06**	**311**	P	**P**	**16 19 40.1**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=62,slow=12,SNR=4.1						
	comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**60.80**	**189**	P	**P**	**16 20 07.4**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=9.2,slow=7.0,SNR=2.7						
	comp=Z,1.1nm,0.7s						
GEYT	**Alibeck**	**63.02**	**298**	P	**P**	**16 20 20.4**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=18,slow=9.6,SNR=4.3						
	comp=Z,2.9nm,0.7s						
ASAR	**Alice Springs**	**64.53**	**189**	P	**P**	**16 20 30.6**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=11,slow=6.1,SNR=4.1						
	comp=Z,1.1nm,1.0s						
FINES	**FINESS Array B**	**66.10**	**332**	P	**P**	**16 20 39.2**	**-0.9**
	comp=Z,4.7nm,1.1s,baz=60,slow=8.2,SNR=3.4						
	comp=Z,4.7nm,1.1s						
KBZ	**Khabaz**	**69.34**	**310**	P	**P**	**16 21 01.2**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=62,slow=5.0,SNR=5.0						
	comp=Z,3.8nm,0.8s						
HFS	**Hagfors**	**71.21**	**336**	P	**P**	**16 21 10.3**	**-1.7**
	comp=Z,2.0nm,0.7s,baz=46,slow=6.2,SNR=2.9						
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**71.24**	**337**	P	**P**	**16 21 10.5**	**-1.8**
	comp=Z,3.1nm,1.0s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**71.24**	**337**	P	**P**	**16 21 10.3**	**-1.9**
	comp=Z,1.9nm,0.9s,baz=37,slow=6.0,SNR=4.1						
	comp=Z,1.9nm,0.9s						
NVAR	**Mina Array Bea**	**72.01**	**55**	P	**P**	**16 21 16.8**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=301,slow=6.2,SNR=5.6						
	comp=Z,0.9nm,0.8s						
AKASG	**Malin Array Be**	**72.07**	**322**	P	**P**	**16 21 15.6**	**-1.8**
	comp=Z,2.5nm,0.8s,baz=46,slow=6.8,SNR=6.1						
	comp=Z,2.5nm,0.8s						
PDAR	**Pinedale Array**	**74.40**	**47**	P	**P**	**16 21 33.2**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=302,slow=2.8,SNR=5.5						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**77.22**	**312**	P	**P**	**16 21 46.6**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=104,slow=2.5,SNR=3.6						
	comp=Z,0.7nm,0.9s						
GERES	**GERESS Array B**	**80.17**	**329**	P	**P**	**16 22 02.8**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=35,slow=4.9,SNR=4.5						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**87.10**	**53**	P	**P**	**16 22 40.6**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=316,slow=3.8,SNR=3.9						
	comp=Z,0.7nm,0.9s						

IDC ***20*** *16:10:32.7±0.5, 40.44N×143.58E, h0km, mb4.9/45, mbtmp4.9/49, ML4.3/4, MS5.1/9, Error ellipse: s-maj=12.3km s-min=11.7km az=104.0*

MOS ***20*** *16:10:33.5±0.9, 40.47N×143.57E, h17km, mb5.6/70, MS5.3/8, Error ellipse: s-maj=6.3km s-min=3.8km az=115.7*

BJI ***20*** *16:10:33.4±0.0, 40.37N×143.32E, h10km, mb5.3/70, mB6.0/21, Ms5.7/18, Ms7 5.7/17*

NEIC ***20*** *16:10:34.7±1.8, 40.42N±0.05×143.63E±0.08, h10km±1km, mb5.3/76, Mww5.2, Error ellipse: s-maj=11.3km s-min=8.5km az=118.0*

JMA ***20*** *16:10:35.4±0.4, 40.4N±0.8×14.3E±, h11km±4km, MD5.5/29, MW5.3/29, FAR E OFF SANRIKU*

JMA Felt II J1 at FAR E OFF SANRIKU .

NIED ***20*** *16:10:35.4, 40.41N×143.50E, h11km, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁷Nm; Mrr0.37; Mθθ0.47; Mφφ -0.83; Mrθ0.57; Mθφ -0.20; Mφr0.63; Fault plane solution: M0 1.12000×10¹⁷ NP1: φs149.00000°, δ35.00000°, λ21.00000°. NP2:φs41.00000°, δ78.00000°, λ123.00000°.*

GCMT ***20*** *16:10:38.7±0.2, 40.38N±0.01×143.82E±0.02, h21km±1km, MW5.3/128, Moment Tensor Solution. s18,c18; s128,c224; Duration: 1§1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.53±.04; Mθθ -0.00±.02; Mφφ -0.52±.03; Mrθ0.52±.06; Mθφ -0.14±.01; Mφr0.85±.07; Best double couple: Mo1.13900×10¹⁷ NP1:φs29.00000°, δ76.00000°, λ98.00000°. NP2:φs179.00000°, δ16.00000°, λ61.00000°. Principal axes: T 1.1450, Plg58.0000°, Azm309.0000°; N -0.0120, Plg8.0000°, Azm207.0000°; P -1.1320, Plg31.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***20*** *16:10:38, 40.34N×143.82E, h18km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁶Nm; Mrr4.06; Mθθ-1.14; Mφφ -2.91; Mrθ3.60; Mθφ -0.61; Mφr5.80; Fault plane solution: M0 7.75000×10¹⁶ NP1: φs194.00000°, δ14.00000°, λ75.00000°. NP2:φs30.00000°, δ76.00000°, λ94.00000°. Principal axes: T 8.2262, Plg59.0000°, Azm305.0000°; N -1.0644, Plg4.0000°, Azm209.0000°; P -7.1618, Plg31.0000°, Azm117.0000°;*

ISC 20 16:10:35.0±0.5, 40.45N±0.03×143.67E±0.03, h17km±2km, h17km:pP-P, n800, σ1§66/774, mb5.3/191, MS5.3/11, 59C-20D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.47**	**250**	*eP*	**Pn**	**16 11 00.1**	**-0.6**
JTH				*eS*	**Sn**	**16 11 18.0**	**-1.6**
JTH	**Tanohata**	**1.47**	**250**	A	A	16 11 00.1	
	comp=E,93nm,4.1s,comp=E,97nm,5.8s						
JKEN	**Kujiedanarisaw**	**1.52**	**261**	*eP*	**Pn**	**16 11 00.5**	**-0.8**
JKEN				*eS*	**Sn**	**16 11 19.9**	**-0.8**
JKEN	**Kujiedanarisaw**	**1.52**	**261**	A	A	16 11 00.5	
	comp=E,201nm,1.6s,comp=E,151nm,1.7s						
ERM	**Erimo**	**1.61**	**346**	Pn	**Pn**	**16 11 02.8**	**+0.2**
ERM	**Erimo**	**1.61**	**346**	P	**Pn**	**16 11 02.8**	**+0.2**
JEM	**Erimo**	**1.61**	**346**	*eS*	**Sb**	**16 11 25.4**	**+1.1**
JEM	**Erimo**	**1.61**	**346**	A	A	16 11 25.4	
	comp=E,104nm,2.4s,comp=E,83nm,1.9s						
JANG	**Nango**	**1.65**	**268**	P	**Pn**	**16 11 02.7**	**-0.4**
JANG				*eS*	**Sn**	**16 11 21.8**	**-2.1**
JANG	**Nango**	**1.65**	**268**	A	A	16 11 02.7	
	comp=E,66nm,3.4s,comp=E,61nm,6.8s						
MIYJ	**Miyakonagasawa**	**1.67**	**239**	*eS*	**Sn**	**16 11 22.0**	**-2.4**
MIYJ	**Miyakonagasawa**	**1.67**	**239**	A	A	16 11 22.0	
	comp=E,86nm,1.3s,comp=E,84nm,2.9s						
JKZ	**Kuzumaki**	**1.85**	**256**	A	A	16 11 05.7	
	comp=E,55nm,2.9s,comp=E,55nm,2.5s						
JTHR	**Tokachihiroo**	**1.86**	**352**	A	A	16 11 08.2	
	comp=E,120nm,7.7s,comp=E,59nm,1.9s						
JAHD	**Aomorihigashid**	**1.95**	**296**	A	A	16 11 07.7	
	comp=E,150nm,1.7s,comp=E,152nm,1.1s						
JNBK	**Urakawa-nobuka**	**1.95**	**340**	*eS*	**Sb**	**16 11 35.7**	**+1.5**
JNBK	**Urakawa-nobuka**	**1.95**	**340**	A	A	16 11 35.7	
	comp=E,118nm,2.1s,comp=E,124nm,2.0s						
JTM	**Tenmabayashi**	**2.01**	**281**	Pn	**Pn**	**16 11 08.2**	**+0.2**
JTM					**Sn**	**16 11 32.2**	**-0.6**
JTM	**Tenmabayashi**	**2.01**	**281**	P	**Pn**	**16 11 08.3**	**+0.2**
JTM	**Tenmabayashi**	**2.01**	**281**	A	A	16 11 08.3	
	comp=E,106nm,2.0s,comp=E,77nm,1.9s						
OFUJ	**Ofunato**	**2.06**	**229**	A	A	16 11 08.9	
	comp=E,97nm,4.4s,comp=E,71nm,3.5s						
JOM	**Ohasama**	**2.07**	**243**	*eP*	**Pn**	**16 11 09.1**	**+0.2**
JOM				*eS*	**Sn**	**16 11 33.9**	**-0.4**
JOM	**Ohasama**	**2.07**	**243**	A	A	16 11 09.1	
	comp=E,69nm,1.2s,comp=E,67nm,2.1s						
JSHD	**Hidakashinhida**	**2.16**	**336**	A	A	16 11 12.0	
	comp=E,183nm,2.2s,comp=E,170nm,2.9s						
JCH	**Churui**	**2.17**	**354**	S	**Sn**	**16 11 37.2**	**+0.3**
JCH	**Churui**	**2.17**	**354**	A	A	16 11 37.2	
	comp=E,61nm,2.0s,comp=E,60nm,2.3s						
JOT	**Ohata**	**2.19**	**296**	*eP*	**Pn**	**16 11 11.1**	**+0.4**
JOT				*eS*	**Sn**	**16 11 37.6**	**+0.3**
JSZI	**Iwateshizukuis**	**2.20**	**252**	A	A	16 11 10.8	
	comp=E,277nm,1.8s,comp=E,275nm,2.3s						
JAH	**Hinai**	**2.33**	**265**	A	A	16 11 12.8	
	comp=E,154nm,0.9s,comp=E,98nm,1.4s						
JKMT	**Kesennumamotoy**	**2.35**	**227**	A	A	16 11 13.2	
	comp=E,77nm,2.8s,comp=E,57nm,9.7s						
JMK	**Ichinoseki**	**2.41**	**232**	S	**Sn**	**16 11 41.2**	**-1.5**
JMK	**Ichinoseki**	**2.41**	**232**	A	A	16 11 41.2	
	comp=E,79nm,2.7s,comp=E,69nm,3.0s						
JKB	**Kayabe**	**2.45**	**307**	A	A	16 11 15.4	
	comp=E,52nm,5.1s,comp=E,57nm,4.7s						
JOB	**Onbets**	**2.46**	**3**	A	A	16 11 17.2	
	comp=E,73nm,2.1s,comp=E,150nm,2.0s						
JBT2	**Biratori 2**	**2.52**	**338**	A	A	16 11 17.4	
	comp=E,61nm,2.1s,comp=E,58nm,2.0s						
JHHS	**Hirosakihyakuz**	**2.53**	**276**	A	A	16 11 15.7	
	comp=E,181nm,4.1s,comp=E,194nm,1.9s						
JIAM	**Iburiatsuma**	**2.54**	**329**	A	A	16 11 17.2	
	comp=E,157nm,2.5s,comp=E,205nm,1.4s						
JSI2	**Shiura 2**	**2.55**	**285**	A	A	16 11 16.2	
	comp=E,153nm,0.8s,comp=E,150nm,1.2s						
JRG	**Rokugo**	**2.56**	**247**	A	A	16 11 16.0	
	comp=E,84nm,1.2s,comp=E,96nm,3.8s						
JAK	**Akkeshi**	**2.66**	**17**	S	**Sn**	**16 11 47.3**	**-1.5**
JAK	**Akkeshi**	**2.66**	**17**	A	A	16 11 47.3	
	comp=E,61nm,3.5s,comp=E,42nm,3.2s						
JNTW	**Noshirotokiwa**	**2.69**	**267**	A	A	16 11 17.9	
	comp=E,387nm,2.3s,comp=E,348nm,2.4s						
JSR	**Shiriuchi**	**2.69**	**295**	A	A	16 11 18.4	
	comp=E,66nm,2.3s,comp=E,40nm,2.5s						
JIW	**Iwasaki**	**2.79**	**274**	A	A	16 11 19.5	
	comp=E,61nm,4.9s,comp=E,61nm,1.1s						
JYW	**Yuwa**	**2.81**	**252**	A	A	16 11 19.6	
	comp=E,144nm,1.6s,comp=E,197nm,2.0s						
JOFO	**Osakifurukawao**	**2.82**	**230**	A	A	16 11 19.8	
	comp=E,486nm,3.2s,comp=E,329nm,1.9s						
JNB	**Noboribetsu**	**2.82**	**316**	A	A	16 11 21.0	
	comp=E,31nm,1.4s,comp=E,27nm,4.3s						
JFR	**Furan**	**2.83**	**344**	A	A	16 11 22.0	
	comp=E,24nm,1.7s,comp=E,33nm,1.2s						
JAR	**Ashorobuto**	**2.85**	**2**	*eS*	**Sn**	**16 11 52.0**	**-1.5**
JAR	**Ashorobuto**	**2.85**	**2**	A	A	16 11 52.0	
	comp=E,44nm,2.1s,comp=E,51nm,1.8s						
JKHN	**Kushirohamanak**	**2.86**	**23**	A	A	16 11 23.5	
	comp=E,39nm,2.2s,comp=E,44nm,4.3s						
JEW	**Eniwo**	**2.91**	**326**	Pn	**Pn**	**16 11 18.9**	**-1.6**
JEW	**Eniwo**	**2.91**	**326**	A	A	16 11 22.5	
	comp=E,153nm,2.2s,comp=E,123nm,2.3s						
JYK	**Kaneyama**	**2.98**	**240**	P	**Pn**	**16 11 21.9**	**+0.5**
JYK				*eS*	**Sn**	**16 11 54.9**	**-1.8**
JYK	**Kaneyama**	**2.98**	**240**	A	A	16 11 21.9	
	comp=E,55nm,6.2s,comp=E,65nm,2.5s						
JYM2	**Yakumo 2**	**2.99**	**305**	A	A	16 11 23.0	
	comp=E,35nm,4.5s,comp=E,42nm,3.7s						
JOU	**Okura**	**3.12**	**229**	A	A	16 11 24.2	
	comp=E,65nm,2.1s,comp=E,74nm,2.6s						
JAB	**Ashibetsu**	**3.24**	**341**	A	A	16 11 27.7	
	comp=E,82nm,1.9s,comp=E,96nm,4.1s						
JISS	**Ishikarishitsu**	**3.29**	**330**	A	A	16 11 28.0	
	comp=E,136nm,3.2s,comp=E,136nm,4.0s						
NMR	**Nemuro--Hokkai**	**3.30**	**27**	*eP*	**Pn**	**16 11 25.7**	**-0.1**
NMR				*eS*	**Sn**	**16 12 01.4**	**-3.2**
JTB	**Tobi-shima**	**3.40**	**250**	A	A	16 11 28.1	
	comp=E,46nm,2.3s,comp=E,49nm,3.3s						
JMM	**Marumori**	**3.41**	**222**	Pn	**Pn**	**16 11 25.8**	**-1.6**
JMM	**Marumori**	**3.41**	**222**	A	A	16 11 28.4	
	comp=E,32nm,2.7s,comp=E,27nm,5.5s						
JHST	**Hiyamasetana**	**3.46**	**306**	A	A	16 11 29.7	
	comp=E,36nm,3.8s,comp=E,34nm,3.1s						
JMST	**Minamisoumatoc**	**3.48**	**219**	A	A	16 11 29.4	
	comp=E,32nm,2.4s,comp=E,30nm,2.0s						
JKK2	**Kamakawa 2**	**3.49**	**349**	A	A	16 11 31.5	
	comp=E,24nm,3.0s,comp=E,21nm,4.6s						
JTKR	**Abashiri--Toko**	**3.52**	**3**	A	A	16 11 32.4	
	comp=E,20nm,1.8s,comp=E,18nm,2.5s						
JOG3	**Oga3**	**3.55**	**263**	A	A	16 11 22.4	
	comp=E,79nm,2.3s,comp=E,91nm,4.3s						
JOSM	**Okushiri--Mats**	**3.56**	**299**	A	A	16 11 30.9	
	comp=E,27nm,4.4s,comp=E,20nm,4.0s						
JMP	**Maruseppu**	**3.56**	**356**	A	A	16 11 32.8	
	comp=E,29nm,3.4s,comp=E,23nm,2.3s						
JYS	**Shirataka**	**3.57**	**233**	A	A	16 11 30.5	
	comp=E,100nm,1.7s,comp=E,86nm,3.4s						
JYA	**Atsumi**	**3.58**	**240**	A	A	16 11 30.5	
	comp=E,80nm,2.2s,comp=E,76nm,1.4s						
JHR	**Hokuryu**	**3.59**	**337**	A	A	16 11 32.6	
	comp=E,81nm,7.5s,comp=E,63nm,5.9s						
JYAR	**Yonezawaarcadi**	**3.73**	**228**	A	A	16 11 32.8	
	comp=E,99nm,1.3s,comp=E,99nm,1.6s						

ASAJ	**Asahikawa**	**3.75**	**348**	A	A	16 11 35.2	
	comp=E,26nm,2.9s,comp=E,19nm,3.0s						
JSK	**Shakotan**	**3.75**	**322**	A	A	16 11 34.4	
	comp=E,25nm,3.3s,comp=E,23nm,4.5s						
RUSJ	**Misakicho**	**3.84**	**17**	*eP*	**Pn**	**16 11 34.2**	**+1.0**
RUSJ				*eS*	**Sn**	**16 12 16.3**	**-1.6**
JFT	**Otama**	**3.91**	**223**	A	A	16 11 35.5	
	comp=E,57nm,3.4s,comp=E,65nm,2.7s						
YUK	**Yuzh-Kuril'sk**	**3.94**	**24**	*eP*	**Pn**	**16 11 34.2**	**-0.4**
YUK				*eS*	**Sn**	**16 12 15.0**	**-5.3**
YUK				pmax	pmax		
	comp=Z,620nm,0.4s						
JNS	**Sasagawa**	**4.28**	**234**	A	A	16 11 40.6	
	comp=Z,25nm,8.0s,comp=Z,36nm,7.7s						
JSD	**Sado**	**4.84**	**242**	Pn	**Pn**	**16 11 46.7**	**-0.3**
JYT	**Yasato**	**5.02**	**214**	Pn	**Pn**	**16 11 47.9**	**-1.6**
KUR	**Kuril'sk**	**5.69**	**31**	*eP*	**Pn**	**16 11 59.3**	**+0.6**
KUR				*eS*	**Sn**	**16 13 02.7**	**-0.9**
KUR				pmax	pmax		
	comp=Z,738nm,0.9s						
KUR				pmax	pmax		
	comp=N,248nm,0.5s						
KUR				pmax	pmax		
	comp=E,300nm,0.5s						
KUR				smax	smax		
	comp=N,826nm,0.5s						
KUR				smax	smax		
	comp=E,966nm,0.5s						
MAJO	**Matsushiro**	**5.79**	**229**	Pn	**Pn**	**16 12 00.3**	**+0.2**
MAJO	**Matsushiro**	**5.79**	**229**	*i* P	**Pn**	**16 12 00.2**	**+0.1**
MJAR	**Matsushiro Arr**	**5.79**	**229**	Pn	**Pn**	**16 12 00.5**	**+0.3**
	comp=E,3.1nm,0.3s,baz=47,slow=11,SNR=21						
MJAR				LR	LR	16 14 44.6	
	comp=E,10μm,20.4s,baz=210,slow=44						
	comp=E,95nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.54**	**355**	Pn	**Pn**	**16 12 10.8**	**+0.5**
YSS	**Yuzh-Sakhalins**	**6.54**	**355**	*eP*	**Pn**	**16 12 10.9**	**+0.6**
YSS				pmax	pmax		
	comp=Z,100nm,1.0s						
JGF	**Kuroka**	**6.94**	**228**	Pn	**Pn**	**16 12 17.0**	**+1.0**
INU	**Inuyama**	**7.32**	**228**	Pn	**Pn**	**16 12 22.9**	**+1.8**
UGL	**Uglegorsk**	**8.70**	**353**	*eP*	Pn	16 12 48.5	+8.5
UGL				pmax	pmax		
	comp=Z,100nm,0.8s						
VLA	**Vladivostok**	**9.20**	**291**	*i* P	**Pn**	**16 12 46.8**	**0.0**
USA0B	**Ussuriysk Arra**	**9.43**	**297**		**Pn**	**16 12 53.0**	**+3.1**
USA0B	**Ussuriysk Arra**	**9.43**	**297**	P	**Pn**	**16 12 53.0**	**+3.1**
USRK	**Ussuriysk Ar.**	**9.43**	**297**	Pn	**Pn**	**16 12 52.4**	**+2.5**
	comp=Z,2.9nm,0.3s,baz=98,slow=14,SNR=34						
USRK				LR	LR	16 16 28.1	
	comp=Z,10μm,18.6s,baz=217,slow=38						
USRK	**Ussuriysk Ar.**	**9.43**	**297**	Pn	**Pn**	**16 12 52.1**	**+2.2**
USRK	**Ussuriysk Ar.**	**9.43**	**297**	P	**Pn**	**16 12 52.1**	**+2.2**
MSHR	**Mys Shultsa**	**9.62**	**287**	*i* P	**Pn**	**16 12 52.8**	**+0.2**
JHS	**Saijyo**	**9.97**	**240**	Pn	**Pn**	**16 12 58.8**	**+1.3**
JMN	**Monobe**	**10.30**	**232**	Pn	**Pn**	**16 13 02.4**	**+0.5**
MDJ	**Mudanjiang**	**11.19**	**296**	Pn	**Pn**	**16 13 15.7**	**+1.6**
MDJ	**Mudanjiang**	**11.19**	**296**	P	**Pn**	**16 13 15.0**	**+0.9**
MDJ				S	**Sn**	**16 15 21.1**	**+2.4**
MDJ				sS		16 15 25.3	
MDJ				pmax	pmax		
	comp=Z,290nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,15μm,11.8s						
MDJ				LR	LR		
	comp=Z,21μm,12.9s						
MDJ				LR	LR		
	comp=Z,17μm,14.0s						
GRNR	**Gornyy**	**11.49**	**336**	⇑*i*P	**Pn**	**16 13 18.9**	**+0.7**
GRNR				*eS*	**Sn**	**16 15 31.4**	**+5.3**
GRNR				pmax	pmax		
	comp=E,5.0nm,0.8s						
GRNR				pmax	pmax		
	comp=N,5.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GRNR				smax	smax		
	comp=N,4.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,8μm,15.0s						
GRNR				MLR	MLR		
	comp=N,9μm,12.0s						
GRNR				MLR	MLR		
	comp=Z,12μm,13.0s						
SEHB	**SEOHWA**	**12.13**	**265**

SEY comp=Z,35nm,0.9s,baz=192,slow=8.4,SNR=21 S **S** **16 19 45.9 -4.2**
SEY comp=Z,4.9nm,1.0s,baz=34,slow=22,SNR=6.3 LR LR 16 25 21.4
YAK comp=Z,3µm,21.1s,baz=188,slow=38 S **S** **16 19 44.4 -7.4**
YAK comp=Z,12nm,0.8s,baz=158,slow=22,SNR=6.8 LR LR 16 25 20.5
YAK **Yakutsk** **23.21 343** P **P** **16 15 38.2 -2.6**
YAK comp=Z,4µm,21.5s,baz=150,slow=38 IAmb IAmb 16 15 42.1
YAK **Yakutsk** **23.21 343** *e*P **P** **16 15 38.6 -2.2**
YAK comp=Z,66nm,0.8s 0.9s *e*S **S** **16 19 46.9 -4.9**
YAK comp=Z,125nm,0.9s pmax pmax
YAK comp=Z,129nm,0.9s pmax pmax
YAK comp=N,29nm,1.0s pmax pmax
YAK comp=E,9.0nm,0.8s smax smax
YAK comp=N,912nm,2.0s smax smax
YOJ **Yonaguni jima** **23.53 234** P **P** **16 15 39.9 -4.4**
YOJ comp=E,2µm,3.7s IAmb IAmb 16 15 59.2
YOJ **Yonaguni jima** **23.53 234** P **P** **16 15 39.9 -4.4**
YOJ comp=Z,76nm,1.2s pmax pmax
CIT **Chita** **23.65 309** *e*P **P** **16 15 43.7 -1.6**
CIT comp=Z,76nm,1.2s *e* 16 16 14.3
CIT *e* 16 16 26.7
CIT *e*S **S** **16 19 57.4 -1.8**
CIT *e* 16 26 48.2
CIT comp=Z,780nm,3.3s pmax pmax
HHC **Hu-ho-hao-te** **24.29 281** *e*P **P** **16 15 49.6 -1.9**
HHC comp=Z,99nm,1.0s pmax pmax
HHC comp=Z,8µm,5.5s pmax pmax
YHNB **Yeheng** **24.41 237** P **P** **16 15 48.6 -4.0**
YHNB comp=Z,74nm,1.1s IAmb IAmb 16 16 11.7
SSLB **Suanglung** **25.31 236** P **P** **16 15 57.6 -3.1**
LYN **LuoYang** **25.36 267** ⇑P **P** **16 16 00.0 -1.1**
LYN comp=Z,100nm,1.2s pmax pmax
YULB **Yu-li** **25.38 235** P **P** **16 15 59.2 -2.1**
YULB comp=Z,57nm,1.0s IAmb IAmb 16 16 27.4
BTO **Baotou** **25.49 281** *e*P **P** **16 16 02.6 +0.2**
WHN **Wuhan** **25.73 257** ⇑P **P** **16 16 04.3 -0.2**
WHN sP **pwP** **16 16 09.5 -2.4**
WHN comp=Z,470nm,1.5s pmax pmax
BOD **Bodaibo** **25.74 322** *e*P **P** **16 16 04.1 -0.2**
BOD comp=Z,329nm,1.2s pmax pmax
TWG **Pinlang** **25.94 234** P **P** **16 16 06.1 -0.3**
QZH **Quanzhou** **26.04 241** ⇑*i*P **P** **16 16 06.8 -0.5**
QZH comp=Z,69nm,1.5s pmax pmax
ULN **Ulaanbaatar** **27.10 298** P **P** **16 16 17.8 +0.9**
ULN comp=Z,91nm,1.3s IAmb IAmb 16 16 45.3
ULN **Ulaanbaatar** **27.10 298** *i* P **P** **16 16 16.9 0.0**
ULN comp=Z,181nm,3.5s pmax pmax
SONM **Songino Array** **27.54 298** P **P** **16 16 20.8 -0.1**
SONM comp=Z,15nm,0.8s,baz=89,slow=9.3,SNR=25 LR LR 16 27 13.8
SONM **Songino Array** **27.54 298** P **P** **16 16 22.0 +1.2**
SONM comp=Z,7µm,18.8s,baz=112,slow=36 IAmb IAmb 16 16 30.6
SONM **Songino Array** **27.54 298** P **P** **16 16 22.0 +1.2**
SONM comp=Z,15nm,0.8s pmax pmax
CNSH **ChangSha** **28.04 254** ⇑P **P** **16 16 25.1 -0.2**
CNSH comp=Z,49nm,1.2s pmax pmax
XAN **Xi'an** **28.26 268** P **P** **16 16 26.8 -0.5**
XAN comp=Z,56nm,1.1s pP sP 16 16 32.0 -1.5
XAN sP pwP 16 16 35.4 +0.6
XAN S **S** **16 21 13.3 +0.6**
XAN comp=Z,64nm,1.2s pmax pmax
XAN comp=Z,7µm,14.8s LR LR
XAN comp=Z,8µm,13.1s LR LR
H11N2 **WAKE ISLAND Hy** **28.66 129** T T 16 46 49.0
H11N1 **WAKE ISLAND Hy** **28.67 129** T T 16 46 52.8
H11N3 **WAKE ISLAND Hy** **28.68 129** T T 16 46 53.4
IRK **Irkutsk** **29.28 307** *e*P **P** **16 16 35.8 -0.3**
IRK comp=Z,14µm,13.4s pmax pmax
H11S1 **WAKE ISLAND Hy** **29.50 131** T T 16 48 03.1
ENH **Enshi** **29.51 261** P **P** **16 16 37.3 -1.1**
H11S3 **WAKE ISLAND Hy** **29.51 131** T T 16 47 59.2
H11S2 **WAKE ISLAND Hy** **29.52 131** T T 16 48 04.3
ZAK **Zakamensk** **29.71 303** *e*P **P** **16 16 39.8 -0.3**
ZAK comp=Z,295nm,2.2s pmax pmax
BILL **Bilibino** **30.26 17***d* *i*P **P** **16 16 44.8 +0.2**
BILL comp=Z,51nm,1.4s *i* *PP **pP** **16 16 48.0 -0.9**
BILL *i* *SP **pwP** **16 16 53.4 +0.8**
BILL SSS SSS 16 23 38.0
BILL comp=Z,49nm,1.2s pmax pmax
BILL comp=Z,3µm,14.0s MLR MLR
MOY **Mondy** **31.23 306** *e*P **P** **16 16 53.4 -0.2**
MOY comp=Z,133nm,1.8s pmax pmax
LZH **Lanzhou** **31.38 275** ⇓P **P** **16 16 55.5 +0.4**
LZH comp=Z,28nm,1.3s pP pwP 16 17 00.6 -1.9
LZH pmax pmax
TIXI **Tiksi** **32.15 351** P **P** **16 17 00.5 -0.7**
TIXI comp=Z,8.3nm,0.8s,baz=273,slow=24,SNR=4.0 LR LR 16 29 23.2
TIXI **Tiksi** **32.15 351** *i* P **P** **16 16 59.3 -1.9**
TIXI comp=Z,5µm,20.0s,baz=180,slow=35 pmax pmax
comp=Z,8.3nm,0.8s
comp=Z,42nm,1.6s
GTA **Gaotai** **33.39 283** ⇑P **P** **16 17 12.9 +0.3**
GTA pP sP 16 17 17.3 -1.4
GTA sP pwP 16 17 20.3 +0.2
GTA S **S** **16 22 34.0 +1.0**
GTA comp=Z,140nm,1.2s pmax pmax
KNGR **Kungurtug, Tuv** **33.39 303** *i* P **P** **16 17 12.2 -0.3**
KNGR comp=Z,35nm,1.1s pmax pmax
CD2 **Chengdu** **33.55 266** P **P** **16 17 13.1 -0.8**
CD2 comp=Z,70nm,0.9s pmax pmax
GYA **Guiyang** **33.62 257** ⇑*i*P **P** **16 17 13.8 -0.9**
GYA sP pwP 16 17 25.1 +2.9
GYA S **S** **16 22 36.5 -0.3**
GYA comp=Z,150nm,1.2s pmax pmax
QIZ **Qiongzhong** **35.98 244** P **P** **16 17 36.3 +1.3**
PZH **PanZhiHua** **37.28 261** ⇑P **P** **16 17 45.9 -0.3**
PZH comp=Z,160nm,1.2s pmax pmax
PZH comp=Z,460nm,4.3s pmax pmax
KMI **Kunming** **37.30 259** ⇑P **P** **16 17 46.5 +0.1**
KMI pP sP 16 17 50.3 -2.3
KMI pmax pmax
CHNA **Chernabura Isl** **39.72 49** P **P** **16 18 04.8 -1.3**
DGZ comp=Z,130nm,1.5s baz=273
DGZ **Jazzator, Alta** **39.93 303***c* *i*P **P** **16 18 09.4 +1.2**
DGZ comp=Z,110nm,1.0s pmax pmax
N16K **Nishlik Lake** **40.17 40** P **P** **16 18 11.9 +2.0**
O16K **Kokwok River B** **40.47 42** P **P** **16 18 14.7 +2.3**
baz=267
baz=268
NRIK **Noril'sk** **40.96 333** P **P** **16 18 16.3 0.0**
comp=Z,17nm,1.0s,baz=102,slow=11,SNR=9.1
NRIK **Noril'sk** **40.96 333** *i* P **P** **16 18 14.9 -1.4**
NRIK comp=Z,17nm,1.0s pmax pmax
comp=Z,62nm,1.5s
WMQ **Urumqi** **40.97 294** *e*P **P** **16 18 17.3 +0.5**
WMQ pP pwP 16 18 25.3 +0.9
WMQ pmax pmax
comp=Z,78nm,1.1s
O17K **Koliganek Bris** **40.98 42** P **P** **16 18 18.3 +1.7**
baz=269
ZAA0 **Zalesovo Array** **41.01 310** P **P** **16 18 17.2 +0.3**
ZAA0 IAmb IAmb 16 18 23.6
comp=Z,80nm,0.9s
ZALV **Zalesovo Beam** **41.01 310** P **P** **16 18 17.0 +0.1**
comp=Z,31nm,0.9s,baz=86,slow=7.9,SNR=24
comp=Z,31nm,0.9s
ZALV **Zalesovo Beam** **41.01 310** P **P** **16 18 16.9 0.0**
N18K **Kilae Creek** **41.60 40** P **P** **16 18 24.2 +2.5**
baz=269
MYLDM **Lahad Datu** **41.77 219** P **P** **16 18 22.9 -0.6**
O18K **Koktuh Hills** **41.94 41** P **P** **16 18 25.8 +1.3**
baz=271
CRAI **Chiangrai** **41.95 254** P **P** **16 18 25.7 +0.7**
CRAI IAmb IAmb 16 18 55.0
comp=Z,60nm,1.0s
ZSN **Zaisan** **42.02 300** *e*P **P** **16 18 25.0 -0.3**
ZSN comp=Z,186nm,2.5s pmax pmax
ZSN **Zaisan** **42.02 300** *e*P **P** **16 18 25.0 -0.3**
comp=Z,186nm,2.5s,baz=300
L19K **White Mountain** **42.13 38** P **P** **16 18 28.8 +2.8**
baz=268
N19K **Bonanza Creek** **42.29 40** P **P** **16 18 29.2 +1.8**
baz=270
M19K **Big River Lodg** **42.34 38** P **P** **16 18 28.2 +0.5**
baz=269
SMPI **Sarmi** **42.48 187** P **P** **16 18 31.2 +2.0**
comp=Z,2µmcomp=Z,26nm,1.1s
SMPI pP **pwP** **16 18 41.0 +4.0**
comp=Z,2µmcomp=Z,26nm,1.1s
K20K **Telida** **42.53 36** P **P** **16 18 31.1 +1.9**
K20K **Telida** **42.53 36** P **P** **16 18 31.8 +2.6**
baz=268
J20K **Nowinta River** **42.53 35** P **P** **16 18 31.6 +2.4**
baz=267
L20K **Farewell, AK** **42.59 37** P **P** **16 18 30.3 +0.5**
baz=269
IMAR **Indian Mountai** **42.82 32** P **P** **16 18 32.4 +0.9**
M20K **Styx River** **42.94 38** P **P** **16 18 33.9 +1.3**
baz=270
P19K **Oil Pt** **42.94 42** P **P** **16 18 34.2 +1.6**
baz=272
G21K **Allakaket** **42.97 32** P **P** **16 18 35.1 +2.4**
baz=265
F21K **Alatna River** **43.04 31** P **P** **16 18 34.9 +1.5**
baz=264
OHAK **Old Harbor** **43.08 45** P **P** **16 18 34.4 +0.7**
baz=275
H21K **Melozitna Rive** **43.19 33** P **P** **16 18 36.0 +1.4**
H21K **Melozitna Rive** **43.19 33** P **P** **16 18 36.6 +2.1**
baz=266
CHUM **Lake Minchumin** **43.33 35** P **P** **16 18 37.6 +2.0**
baz=269
PPLA **Purkeypile** **43.37 37** P **P** **16 18 39.5 +3.3**
baz=270
SPCR **Spurr Chakacha** **43.39 39** P **P** **16 18 38.2 +1.9**
baz=272
KDAK **Kodiak Island** **43.41 44** P **P** **16 18 36.4 +0.1**
KDAK comp=Z,70nm,1.3s IAmb IAmb 16 19 02.6
KDAK **Kodiak Island** **43.41 44** P **P** **16 18 36.4 +0.1**
KDAK comp=Z,70nm,1.3s pmax pmax
KDAK **Kodiak Island** **43.41 44** P **P** **16 18 37.1 +0.7**
baz=275
Q20K **Shuyak Island** **43.44 43** P **P** **16 18 35.4 -1.1**
baz=274
KMSI **Cibinong** **43.54 209** P **P** **16 18 40.2 +2.4**
comp=Z,2µmcomp=Z,108nm,1.1s
F22K **John River** **43.57 30** P **P** **16 18 40.9 +3.3**
baz=265
SKT **Skwentna** **43.69 38** P **P** **16 18 42.0 +3.4**
baz=271
LSA **Lhasa** **43.73 273** P **P** **16 18 41.4 +1.5**
E22K **Anaktuvuk Pass** **43.77 29** P **P** **16 18 42.8 +3.6**
baz=265
H22K **Ishtalitna Cre** **43.79 33** P **P** **16 18 42.0 +2.6**
baz=267
G22K **Bettles** **43.79 31** P **P** **16 18 41.8 +2.4**
baz=266
GTOI **Gorontalo** **43.85 211** P **P** **16 18 40.7 +0.3**
comp=Z,14nm,0.9s
CHTO **Chiang Mai** **43.88 254** P **P** **16 18 41.2 +0.5**
CHTO IAmb IAmb 16 19 07.9
comp=Z,27nm,0.8s
CHTO **Chiang Mai** **43.88 254** P **P** **16 18 41.2 +0.5**
CHTO pmax pmax
comp=Z,27nm,0.8s
MK31 **Makanchi Array** **43.88 300** P **P** **16 18 40.8 +0.4**
MK31 IAmb IAmb 16 18 41.8
comp=Z,69nm,1.0s
MK31 **Makanchi Array** **43.88 300** *i* P **P** **16 18 39.3 -1.1**
MK31 pmax pmax
comp=Z,93nm,0.9s
MKAR **Makanchi Array** **43.88 300** P **P** **16 18 40.4 0.0**
comp=Z,56nm,0.9s,baz=82,slow=8.9,SNR=35
comp=Z,56nm,0.9s
MKAR **Makanchi Array** **43.88 300** P **P** **16 18 41.1 +0.7**
MKAR **Makanchi Array** **43.88 300** P **P** **16 18 41.1 +0.7**
MLY **Manley** **44.03 34** P **P** **16 18 44.8 +3.4**
baz=269
SUA **Susitna One** **44.08 39** P **P** **16 18 44.0 +2.1**
baz=273
MAKZ **Makanchi** **44.09 300** P **P** **16 18 42.5 +0.5**
MAKZ **Makanchi** **44.09 300** P **P** **16 18 42.5 +0.5**
MAKZ pmax pmax
comp=Z,91nm,1.0s
CM31 **Chiang Mai Arr** **44.11 254** P **P** **16 18 42.4 -0.1**
CMAR **Chiang Mai Arr** **44.11 254** P **P** **16 18 42.6 +0.2**
comp=Z,4.4nm,0.7s,baz=46,slow=7.1,SNR=19
comp=Z,4.4nm,0.7s
BRSE **Bradley Lake S** **44.20 41** P **P** **16 18 45.5 +2.8**
baz=274
TRF **Thorofare Moun** **44.23 36** P **P** **16 18 46.8 +3.7**
baz=271
D23K **Nanushuk River** **44.25 28** P **P** **16 18 45.5 +2.5**
baz=265
SEM **Semipalatinsk** **44.34 305** *e*P **P** **16 18 43.0 -1.3**
SEM pmax pmax
comp=Z,59nm,1.2s
SEM **Semipalatinsk** **44.34 305** *e*P **P** **16 18 43.1 -1.3**
comp=Z,59nm,1.2s,baz=305
C23K **Itkillik River** **44.36 27** P **P** **16 18 46.1 +2.2**
baz=264
G23K **Bananza Creek** **44.37 31** P **P** **16 18 48.0 +3.9**
baz=268
MRSI **Marisa** **44.42 212** P **P** **16 18 45.6 +0.7**
comp=Z,54nm,1.9s
H23K **Yukon River** **44.54 33** P **P** **16 18 48.9 +3.5**
baz=269,SNR=7.4
I23K **Minto, Yukon-K** **44.61 34** P **P** **16 18 48.9 +3.0**
baz=270
TOLK **Toolik Lake Re** **44.63 29** P **P** **16 18 48.4 +2.3**
TOLK IAmb IAmb 16 19 00.2
comp=Z,59nm,1.4s
TOLK **Toolik Lake Re** **44.63 29** P **P** **16 18 48.2 +2.1**
baz=266
NEA2 **Nenana** **44.74 34** P **P** **16 18 49.9 +2.9**
baz=271
MCK **McKinley** **44.83 36** P **P** **16 18 50.3 +2.5**
baz=272
PMR **Palmer** **44.85 39** P **P** **16 18 49.5 +1.7**
baz=274
D24K **Happy Valley** **44.93 28** P **P** **16 18 50.4 +1.9**
baz=266
E24K **Your Creek** **45.01 29** P **P** **16 18 51.8 +2.6**
baz=268,SNR=9.2
C24K **Franklin Bluff** **45.01 27** P **P** **16 18 52.2 +3.1**
baz=266
WAT1 **Susitna Watana** **45.04 37** P **P** **16 18 53.3 +3.8**
baz=273
MDM **Murphy Dome** **45.10 34** P **P** **16 18 51.2 +1.4**
MDM IAmb IAmb 16 19 03.8
comp=Z,59nm,1.5s
KNK **Knik Glacier** **45.18 39** P **P** **16 18 52.4 +1.8**
baz=275
SML **Sawmill** **45.21 38** P **P** **16 18 50.8 0.0**
SML IAmb IAmb 16 19 03.4
comp=Z,67nm,1.3s
SML **Sawmill** **45.21 38** P **P** **16 18 52.6 +1.8**
baz=274
F24K **Squaw Lake** **45.22 30** P P 16 18 56.7 +5.9
baz=269
H24K **Noodor Dome** **45.23 33** P **P** **16 18 53.8 +2.9**
baz=271
COLA **College** **45.26 34** *i* P **P** **16 18 52.1 +1.0**
COLA pmax pmax
comp=Z,48nm,1.3s
SANI **Sanana** **45.28 205** P **P** **16 18 53.5 +1.7**
comp=Z,52nm,0.8s
KURK **Kurchatov** **45.29 306** P **P** **16 18 52.0 +0.5**
KURK **Kurchatov** **45.29 306***c* *i*P **P** **16 18 51.3 -0.2**
KURK pmax pmax
comp=Z,131nm,1.0s
PWL **Port Wells** **45.29 40** P **P** **16 18 53.3 +1.8**
baz=275
KURBB **Kurchatov Arra** **45.37 306** P **P** **16 18 52.2 +0.1**
comp=Z,72nm,0.8s,baz=81,slow=8.3,SNR=33
comp=Z,72nm,0.8s
KURBB **Kurchatov Arra** **45.37 306** P **P** **16 18 51.6 -0.5**
G24K **Hadweenzic Riv** **45.38 31** P **P** **16 18 56.0 +3.9**
baz=270
MPSI **Mapaga** **45.40 214** P **P** **16 18 53.2 +0.5**
comp=Z,22nm,1.6s
POKR **Poker Plat Res** **45.43 34** P **P** **16 18 55.2 +2.7**
baz=272,SNR=5.9
WAT6 **Susitna Watana** **45.43 37** P **P** **16 18 55.4 +2.6**
baz=274
DHY **Denali Highway** **45.56 37** P **P** **16 18 55.0 +1.3**
DHY **Denali Highway** **45.56 37** P **P** **16 18 56.4 +2.7**
baz=274
HDA **Harding Lake** **45.67 35** P **P** **16 18 57.3 +2.9**
baz=273
ILAR **Eielson Array** **45.68 34** P **P** **16 18 56.0 +1.6**
comp=Z,10nm,0.9s,baz=270,slow=5.9,SNR=14
comp=Z,10nm,0.9s
ILAR **Eielson Array** **45.68 34** P **P** **16 18 55.5 +1.1**
APSI **Ampana** **45.80 212** P **P** **16 18 55.7 -0.2**
comp=Z,58nm,1.2s
D25K **Kavik River** **45.81 28** P P 16 19 00.5 +5.0
baz=269
P23K **Montague Islan** **45.85 41** P **P** **16 18 55.6 -0.2**
baz=277
GLI **Glacier Island** **45.89 40** P **P** **16 18 59.0 +2.8**
baz=276
H25K **Birch Creek** **46.05 32** P **P** **16 19 00.3 +3.0**
baz=272
F25K **Christian Rive** **46.08 30** P **P** **16 19 01.6 +3.9**
baz=271
E25K **Arctic Village** **46.10 29** P **P** **16 18 59.8 +2.0**
baz=271
FID **Port Fidalgo** **46.21 40** P **P** **16 18 58.9 +0.2**
FID IAmb IAmb 16 19 11.7
comp=Z,49nm,1.3s
PRP **Porcupine Dome** **46.21 33** P **P** **16 19 02.5 +3.7**
baz=273
K24K **Donnelly Dome** **46.22 35** P **P** **16 19 03.6 +4.8**
baz=275
J25K **Salcha River,** **46.34 34** P **P** **16 19 01.5 +1.8**
baz=274
PAX **Paxson** **46.44 37** P **P** **16 19 03.3 +2.7**
baz=276
BMAR **Burnt Mountain** **46.50 30** P **P** **16 19 01.9 +1.0**
EYAK **Cordova Ski Ar** **46.59 40** P **P** **16 19 05.4 +3.8**
baz=278
HARP **HAARP** **46.64 37** P **P** **16 19 04.9 +2.8**
baz=276
F26K **Sheenjek River** **46.65 30** P **P** **16 19 05.4 +3.3**
baz=272,SNR=6.9
C27K **Jago River** **46.75 27** P **P** **16 19 06.9 +4.0**
baz=271
G26K **Porcupine Rive** **46.83 31** P **P** **16 19 06.4 +3.0**
baz=273
SHLS **Shalkode** **46.89 296** *e*P **P** **16 19 01.3 -3.1**
SHLS **Shalkode** **46.89 296** *e*P **P** **16 19 01.4 -3.1**
baz=295
SCRK **Sand Creek** **46.99 35** P **P** **16 19 07.6 +2.7**
baz=276
TDK **Taldyqorghan** **47.00 298** *e*P **P** **16 19 04.8 -0.3**
TDK pmax pmax
comp=Z,77nm,1.1s
TDK **Taldyqorghan** **47.00 298** *e*P **P** **16 19 04.9 -0.3**
comp=Z,77nm,1.1s,baz=298
BMRM **Bremner River** **47.09 39** P **P** **16 19 07.4 +1.7**
baz=278
J26L **Joseph Creek** **47.12 34** P **P** **16 19 07.7 +1.8**
baz=276
UZB **Uzynbulak** **47.19 296** *e*P **P** **16 19 05.7 -1.1**
UZB **Uzynbulak** **47.19 296** *e*P **P** **16 19 05.8 -1.1**
baz=296
I26K **Coal Creek Min** **47.22 33** P **P** **16 19 07.4 +0.9**
baz=275
KPKS **Kokpek** **47.32 296** *e*P **P** **16 19 07.1 -0.6**
KPKS pmax pmax
comp=Z,44nm,1.3s
KPKS **Kokpek** **47.32 296** *e*P **P** **16 19 07.2 -0.6**
comp=Z,44nm,1.3s,baz=296
SBUM **Sibu** **47.32 225** P **P** **16 19 07.5 -0.4**
KAIM **Kayak Island** **47.34 41** P **P** **16 19 09.3 +1.8**
baz=279
L26K **Log Cabin Wild** **47.39 36** P **P** **16 19 09.7 +1.8**
baz=277
TAPN **Taplejung** **47.52 272** *e*P **P** **16 19 10.0 +0.3**
comp=Z,211nm,1.3s
E27K **Coleen River** **47.59 29** P P 16 19 14.3 +4.9
baz=274
ZHN **Zhinishke** **47.59 296** *e*P **P** **16 19 08.7 -1.1**
ZHN **Zhinishke** **47.59 296** *e*P **P** **16 19 08.8 -1.1**
baz=296
M26K **Nabesna, AK** **47.64 37** P **P** **16 19 13.6 +3.7**
baz=278
SATY **Saty** **47.65 296** *e*P **P** **16 19 09.8 -0.5**
SATY pmax pmax
comp=Z,55nm,1.7s
SATY **Saty** **47.65 296** *e*P **P** **16 19 09.8 -0.5**
comp=Z,55nm,1.7s,baz=296
G27K **Doyon Strip** **47.68 31** P **P** **16 19 13.7 +3.6**
baz=275,SNR=5.1
MCARA **McCarthy VSAT** **47.78 39** P **P** **16 19 10.8 -0.2**
baz=279
H27K **Steamboat Moun** **47.79 32** P **P** **16 19 14.8 +3.8**
baz=276
K27K **Chicken** **47.83 35** P **P** **16 19 15.1 +3.8**
baz=278
ODAN **Odare** **48.02 272** *e*P **P** **16 19 12.9 -0.6**
comp=Z,152nm,1.9s
L27K **Beaver Creek,** **48.07 36** P **P** **16 19 15.8 +2.5**
baz=279,SNR=9.1
BCAR **Beaver Creek A** **48.09 36** P **P** **16 19 15.9 +2.5**
EGAK **Eagle** **48.12 34** P **P** **16 19 15.4 +1.9**
baz=278
M27K **Edge Creek, AK** **48.16 37** P **P** **16 19 16.6 +2.5**
baz=279,SNR=8.3
JIRN **Jiri** **48.52 273** *e*P **P** **16 19 17.6 0.0**
comp=Z,374nm,1.6s
MDOK **Medeo** **48.54 296** *e*P **P** **16 19 16.6 -0.6**
MDOK **Medeo** **48.54 296** *e*P **P** **16 19 16.7 -0.6**
baz=296
RAMN **Ramite** **48.57 272** *e*P **P** **16 19 17.7 -0.1**
comp=Z,260nm,1.1s
AAA **Alma-Ata** **48.62 296** *e*P **P** **16 19 17.3 -0.4**
AAA pmax pmax
comp=Z,54nm,1.1s
AAA **Alma-Ata** **48.62 296** *e*P **P** **16 19 17.4 -0.4**
comp=Z,54nm,1.1s,baz=296
BVCY **Beaver Creek** **48.62 37** P **P** **16 19 19.2 +1.8**
baz=280

GUN **Gumba** 48.63 274 *e*P P 16 19 18.4 0.0
comp=Z,146nm,0.9s
CTG **Chitna Glacier** 48.66 39 P P 16 19 19.5 +1.6
baz=281
KUU **Kurty** 48.77 297 *c e*P P 16 19 17.7 -1.1
KUU pmax pmax
comp=Z,89nm,1.1s
KUU **Kurty** 48.77 297⇑ *e*P P 16 19 17.8 -1.1
comp=Z,89nm,1.1s,baz=298
MTKI **Muara Teweh, K** 48.83 220 P P 16 19 20.9 +1.4
MTKI pP **pwP** 16 19 30.4 +2.9
KKN **Kakani** 49.15 274 *e*P P 16 19 21.7 -0.5
comp=Z,253nm,2.4s
BRZS **Berezniki** 49.15 306 *e*P P 16 19 21.2 -0.5
BRZS pmax pmax
comp=Z,46nm,1.1s
BRZS **Berezniki** 49.15 306 *e*P P 16 19 21.3 -0.5
comp=Z,46nm,1.1s,baz=306
PKI **Pulchoki** 49.16 274 *e*P P 16 19 21.9 -0.5
comp=Z,307nm,1.6s
PKIN **Phulchoki** 49.17 274 *e*P P 16 19 21.9 -0.5
comp=Z,296nm,1.7s
I29M **Ogilvie Camp,** 49.23 33 P P 16 19 24.8 +2.7
baz=280,SNR=13
O28M **Mount Upton** 49.25 39 P P 16 19 25.0 +2.4
baz=282
SPSI **Sidrap Palu** 49.33 212 P P 16 19 22.1 -1.2
comp=Z,21nm,1.1s
PINM **Pinnacle** 49.36 40 P P 16 19 24.9 +1.7
baz=282
DMN **Daman** 49.37 274 *e*P P 16 19 24.1 +0.1
J29M **Klondike Camp** 49.42 34 P P 16 19 21.4 -2.2
baz=280
GKN **Gorkha** 49.53 275 *e*P P 16 19 24.8 -0.2
comp=Z,357nm,1.6s
TKM2 **Tokmak 2** 49.62 297 P P 16 19 26.4 +0.7
SNR=25
TKM2 **Tokmak 2** 49.62 297 *i* P P 16 19 25.2 -0.4
TKM2 pmax pmax
comp=Z,114nm,1.0s
BVA0 **Borovoye Array** 49.63 311 *i* P P 16 19 24.9 -0.4
BBSI **Bau Bau** 49.66 208 P P 16 19 27.8 +2.0
comp=Z,102nmcomp=Z,9.2nm,1.1s
BRVK **Borovoye** 49.69 311 P P 16 19 27.0 +1.3
BRVK **Borovoye** 49.69 311 *c* iP P 16 19 25.8 +0.1
BRVK pmax pmax
comp=Z,103nm,1.3s
EPYK **Eagle Plains** 49.69 31 P P 16 19 29.0 +3.4
baz=280,SNR=5.6
M29M **Somme Creek** 49.71 37 P P 16 19 28.5 +2.6
baz=282
BTLS **Baital** 49.90 300 *e*P P 16 19 26.5 -0.9
BTLS **Baital** 49.90 300 *e*P P 16 19 26.6 -0.9
baz=300
DANN **Dangsing** 50.02 276 *e*P P 16 19 29.2 +0.3
comp=Z,182nm,0.8s
SGDS **Sogindy** 50.08 298 *e*P P 16 19 28.4 -0.5
SGDS pmax pmax
comp=Z,69nm,2.1s
SGDS **Sogindy** 50.08 298 *e*P P 16 19 28.4 -0.5
comp=Z,69nm,2.1s,baz=298
YUK6 **Outpost Mounta** 50.08 38 P P 16 19 32.3 +3.4
baz=283
O29M **Mount Kennedy** 50.13 39 P P 16 19 33.7 +4.5
baz=284
KBK **Karagaybulak** 50.16 296 P P 16 19 30.2 +0.6
SNR=20
CHMS **Chumysh** 50.17 297 P P 16 19 29.6 +0.1
SNR=7.7
CHMS **Chumysh** 50.17 297 *i* P P 16 19 28.5 -1.1
CHMS pmax pmax
comp=Z,45nm,1.3s
USP **Ospenovka** 50.24 297 P P 16 19 30.1 0.0
SNR=13
KAPI **Kappang** 50.29 212 P P 16 19 30.6 -0.1
KAPI IAmb IAmb 16 19 59.5
comp=Z,69nm,1.3s
KAPI **Kappang** 50.29 212 P P 16 19 30.6 -0.1
KAPI pmax pmax
comp=Z,69nm,1.3s
M30M **Minto, Yukon** 50.44 36 P P 16 19 34.5 +3.2
baz=283,SNR=6.8
AAK **Ala-Archa** 50.48 297 P P 16 19 32.4 +0.3
SNR=8.6
AAK **Ala-Archa** 50.48 297 *i* P P 16 19 31.8 -0.3
AAK pmax pmax
comp=Z,43nm,1.3s
AAK **Ala-Archa** 50.48 297 *i* P P 16 19 32.8 +0.7
SNR=8.7
HYT **Haines Junctio** 50.52 39 P P 16 19 33.8 +1.8
HYT IAmb IAmb 16 20 02.4
comp=Z,42nm,1.0s
HYT **Haines Junctio** 50.52 39 P P 16 19 35.2 +3.2
baz=284,SNR=9.5
INK **Inuvik** 50.55 29 P P 16 19 34.0 +2.1
comp=Z,5.5nm,0.7s,baz=270,slow=8.3,SNR=7.6
comp=Z,5.5nm,0.7s
INK **Inuvik** 50.55 29 P P 16 19 34.0 +2.1
INK **Inuvik** 50.55 29 P P 16 19 34.0 +2.1
INK pmax pmax
comp=Z,20nm,1.0s
INK **Inuvik** 50.55 29 P P 16 19 34.9 +3.0
baz=281
N30M **Aishikik Lake** 50.56 38 P P 16 19 35.0 +2.7
baz=284
KSH **Kashi** 50.68 292 P P 16 19 37.1 +3.5
KSH pmax pmax
comp=Z,36nm,1.1s
P29M **Windy Craggy** 50.71 40 P P 16 19 35.1 +1.7
baz=285
EKS2 **Erkin-Say** 50.96 297 P P 16 19 35.9 +0.2
SNR=14
P30M **Million Dollar** 50.96 39 P P 16 19 38.9 +3.6
baz=285
BBKI **Banjar Baru** 51.05 218 P P 16 19 35.6 -0.8
comp=Z,56nm,1.3s
N31M **Braeburn, Yuko** 51.16 37 P P 16 19 40.5 +3.7
baz=285
O30N **Mendenhall** 51.20 38 P P 16 19 41.8 +4.6
baz=285
AML **Almayashu** 51.22 296 P P 16 19 38.6 +0.7
SNR=22
PLBC **Pleasant Camp** 51.43 40 P P 16 19 41.4 +2.7
baz=286
M31M **Drury Creek, Y** 51.61 36 P P 16 19 41.9 +1.7
baz=285
WHY **Whitehorse** 51.81 38 P P 16 19 44.3 +2.6
baz=286
SKAG **Skagway** 51.93 40 P P 16 19 45.2 +2.7
baz=287
KULM **Kulim** 52.06 239 P P 16 19 43.1 -0.9
KULM IAmb IAmb 16 19 46.1
comp=Z,42nm,1.1s
FARO **Faro, Yukon** 52.08 36 P P 16 19 44.4 +0.8
FARO **Faro, Yukon** 52.08 36 P P 16 19 44.3 +0.8
baz=286
A36M **Sachs Harbour** 52.43 23 P P 16 19 51.1 +5.0
baz=286
N32M **Quiet Lake** 52.51 37 P P 16 19 50.5 +3.7
baz=287
DZA **Taraz** 52.52 298 *e*P P 16 19 46.8 -0.4
DZA pmax pmax
comp=Z,36nm,1.0s
DZA **Taraz** 52.52 298 *e*P P 16 19 46.9 -0.4
comp=Z,36nm,1.0s,baz=298
P32M **Atlin** 52.68 39 P P 16 19 48.8 +0.7
baz=288
MMRI **Maumere** 52.70 207 P P 16 19 47.6 -1.0
comp=Z,75nm,1.4s
MYKOM **Kota Tinggi** 52.70 234 P P 16 19 48.2 -0.5
MYKOM IAmb IAmb 16 19 50.8
comp=Z,56nm,1.4s
MMPY **Sheldon Lake,** 52.89 35 P P 16 19 52.9 +3.3
baz=288,SNR=7.6
P33M **Teslin, Yukon** 52.92 38 P P 16 19 52.9 +3.0
baz=288,SNR=8.1
KK31 **Karatay Array** 52.99 299 P P 16 19 51.5 +0.9
KK31 IAmb IAmb 16 19 57.1
comp=Z,41nm,1.1s
KK31 **Karatay Array** 52.99 299 *i* P P 16 19 50.2 -0.4
KKAR **Karatay Array** 52.99 299 P P 16 19 51.1 +0.5
KKAR IAmb IAmb 16 19 57.1
comp=Z,41nm,1.1s
KKAR **Karatay Array** 52.99 299 P P 16 19 50.4 -0.2
KKAR **Karatay Array** 52.99 299 P P 16 19 50.4 -0.2
KKAR 16 19 51.1
KKAR pmax pmax
comp=Z,41nm,1.1s
EDFI **Ende, Flores** 52.99 208 P P 16 19 48.7 -2.3
comp=Z,14nm,0.9s
C36M **Paulatuk** 53.59 26 P P 16 19 57.6 +3.0
baz=288
IUG **Iuzhnay** 53.70 298 *e*P P 16 19 55.3 -0.7
IUG **Iuzhnay** 53.70 298 *e*P P 16 19 55.3 -0.7
baz=298
R33M **Jennings River** 54.07 39 P P 16 20 03.9 +5.5
baz=290
TPI **Tanjungpandan** 54.15 226 P P 16 19 59.7 +0.4
comp=Z,31nm,1.3s
TGTN **Hyland Airport** 54.58 36 P P 16 20 03.7 +1.7
baz=290
DLBC **Dease Lake** 54.87 40 P P 16 20 03.8 -0.4
baz=291
GAR **Garm** 54.87 294 P P 16 20 05.4 +0.8
ARU **Arti** 55.00 317 P P 16 20 05.2 +0.1
comp=Z,32nm,0.9s,baz=52,slow=5.4,SNR=20
comp=Z,32nm,0.9s
ARU **Arti** 55.00 317 P P 16 20 06.2 +1.2
ARU **Arti** 55.00 317 *c* iP P 16 20 05.3 +0.2
ARU 16 22 08.3
ARU S S 16 27 51.2 +5.0
ARU SS SS 16 31 31.9 +2.6
ARU pmax pmax
comp=Z,113nm,1.3s
NIL **Nilore** 55.26 287 P P 16 20 08.2 +0.8
NIL **Nilore** 55.26 287 P P 16 20 08.2 +0.8
NIL pmax pmax
comp=Z,188nm,1.0s
T35M **Bob Quinn** 55.30 42 P P 16 20 08.9 +1.6
baz=292
BKNI **Bangkinang** 55.59 235 P P 16 20 11.6 +1.8
comp=Z,100nm,1.0s
CHGR **Chuyangaron** 55.83 294 P P 16 20 12.2 +0.8
CHGR **Chuyangaron** 55.83 294 P P 16 20 12.2 +0.8
CHGR pmax pmax
comp=Z,158nm,0.9s
PWJI **Pagerwojo** 56.48 219 P P 16 20 15.3 -0.8
comp=Z,76nm,0.9s
AB31 **Akbulak array** 57.12 309 *i* P P 16 20 19.5 -0.8
ABKAR **Akbulak array** 57.12 309 P P 16 20 20.9 +0.6
KLI **Kotabumi** 57.45 228 P P 16 20 23.8 +0.8
comp=Z,77nm,1.0s
SPITS **Spitsbergen Ar** 57.52 349 P P 16 20 23.9 +1.1
comp=Z,6.9nm,0.9s,baz=51,slow=10,SNR=2.1
comp=Z,6.9nm,0.9s
AKTO **Aktyubinsk** 57.73 311 P P 16 20 24.7 0.0
comp=Z,16nm,0.8s,baz=69,slow=13,SNR=14
comp=Z,16nm,0.8s
HSPB **Hornsund (broa** 58.48 348 *e*P P 16 20 30.1 +0.7
KIRV **Kirov** 58.61 322 P P 16 20 30.4 -0.2
comp=Z,41nm,0.9s,baz=52,slow=4.0,SNR=13
comp=Z,41nm,0.9s
KIRV **Kirov** 58.61 322 *c* iP P 16 20 31.2 +0.6
PRGR **Permogore** 58.88 326 *e*P P 16 20 32.5 +0.1
PRGR *e* 16 22 42.5
YKA **Yellowknife Ar** 59.98 32 P P 16 20 41.0 +1.0
comp=Z,7.0nm,1.1s,baz=295,slow=7.2,SNR=7.6
comp=Z,7.0nm,1.1s
YKA **Yellowknife Ar** 59.98 32 P P 16 20 41.0 +1.0
HYBB **Hyderabad (bro** 60.08 268 *e*P P 16 20 41.5 +0.1
HYBB *e*PP PP 16 22 54.1 +0.2
HYBB *e*S S 16 28 54.5 +0.6
APA **Apatity** 60.31 336⇓ *i* iP P 16 20 41.2 -1.0
APA *i* 16 23 04.0
APA *i* S S 16 28 50.0 -5.4
APA pmax pmax
comp=Z,13nm,1.1s
APA MLR MLR
comp=Z,5μm,14.0s
WB0 **Warramunga Arr** 60.52 190 P P 16 20 43.4 -0.8
WB0 IAmb IAmb 16 21 01.5
comp=Z,15nm,0.8s
FITZ **Fitzroy Crossi** 60.62 200 P P 16 20 44.7 -0.1
WRAB **Tennant Creek** 60.69 190 P P 16 20 44.4 -0.9
WRAB IAmb IAmb 16 21 02.1
comp=Z,39nm,1.4s
WRAB **Tennant Creek** 60.69 190 *i* P P 16 20 44.6 -0.8
WRAB pmax pmax
comp=Z,28nm,1.4s
WR0 **Warramunga Arr** 60.70 190 P P 16 20 44.4 -1.0
WR0 IAmb IAmb 16 21 01.4
comp=Z,32nm,1.4s
WB2 **Warramunga Arr** 60.70 190 P P 16 20 45.1 -0.4
WB2 IAmb IAmb 16 21 02.7
comp=Z,14nm,0.9s
WRA **Warramunga Arr** 60.70 190 P P 16 20 44.2 -1.3
comp=Z,3.4nm,0.6s,baz=5.8,slow=6.7,SNR=13
comp=Z,3.4nm,0.6s
WRA **Warramunga Arr** 60.70 190 P P 16 20 44.7 -0.8
WRA **Warramunga Arr** 60.70 190 P P 16 20 44.7 -0.8
WRA pmax pmax
comp=Z,2.0nm,1.4s
KEV **Kevo** 60.88 339 P P 16 20 46.9 +0.9
KEV IAmb IAmb 16 21 06.6
comp=Z,16nm,0.9s
KEV **Kevo** 60.88 339 P P 16 20 46.9 +0.9
KEV pmax pmax
comp=Z,16nm,0.9s
ARCES **ARCESS Array B** 61.43 339 P P 16 20 50.1 +0.3
comp=Z,5.1nm,0.9s,baz=58,slow=7.3,SNR=11
comp=Z,5.1nm,0.9s
ARCES **ARCESS Array B** 61.43 339 P P 16 20 50.5 +0.8
ARCES IAmb IAmb 16 21 03.6
comp=Z,29nm,1.4s
ARCES **ARCESS Array B** 61.43 339 P P 16 20 50.6 +0.8
ARCES pmax pmax
comp=Z,29nm,1.4s
KLMR **Klimovskoe** 61.82 327 *e*P P 16 20 50.5 -2.1
KLMR *e* 16 23 06.4
KLMR pmax pmax
comp=Z,90nm,1.3s
KLMR **Klimovskoe** 61.82 327 *e*P P 16 20 50.5 -2.1
KLMR AMP 16 20 59.6
comp=Z,90nm,1.3s
KLMR *e*PP PP 16 23 06.5 -1.7
BELG **Belogornoye** 62.52 317 P P 16 20 57.4 0.0
comp=Z,69nm,1.0s,baz=155,slow=2.4,SNR=10.0
comp=Z,69nm,1.0s
BELG **Belogornoye** 62.52 317 *c* iP P 16 20 57.6 +0.2
BELG pmax pmax
comp=Z,19nm,1.1s
GEYT **Alibeck** 63.74 298 P P 16 21 05.7 -0.1
comp=Z,20nm,0.9s,baz=40,slow=2.5,SNR=21
comp=Z,20nm,0.9s
GEYT **Alibeck** 63.74 298 P P 16 21 06.5 +0.7
GYA0 **ALIBECK ARRAY** 63.74 298 P P 16 21 05.3 -0.5
AS31 **Alice Springs** 64.43 190 P P 16 21 10.5 +0.2
ASAR **Alice Springs** 64.43 190 P P 16 21 10.4 +0.1
comp=Z,2.4nm,0.7s,baz=11,slow=6.7,SNR=12
comp=Z,2.4nm,0.7s
VALR **Valaam** 64.92 331 *i* P P 16 21 12.3 -0.7
VALR pmax pmax
comp=Z,44nm,1.1s
I03D **Drain, OR** 65.41 53 P P 16 21 13.3 -3.3
baz=303
MOS **Moscow** 65.56 323 *e*P P 16 21 14.7 -2.6
MOS *e* 16 21 47.9
MOS *e*S S 16 29 59.8 -1.7
MOS *e* 16 30 31.3
MOS pmax pmax
comp=Z,400nm,2.8s
MOS pmax pmax
comp=Z,67nm,1.5s
I04A **Tendick Farm,** 65.93 52 P P 16 21 18.6 -1.4
baz=304
MSVF **Nonsavu** 66.13 144 LR LR 16 47 12.9
comp=Z,2μm,18.4s,baz=304,slow=33
VRH **Novokhopyorsk** 66.24 318 *e*P P 16 21 21.6 -0.1
VRH pmax pmax
comp=Z,50nm,1.1s
J04D **Umpqua Nationa** 66.42 53 P P 16 21 21.7 -1.6
baz=304
OBN **Obninsk** 66.42 323 P P 16 21 22.5 -0.4
comp=Z,5.9nm,0.8s,baz=106,slow=2.3,SNR=11
comp=Z,5.9nm,0.8s
OBN **Obninsk** 66.42 323 *c* iP P 16 21 23.0 +0.2
OBN *e**PP pP 16 21 25.7 -1.8
OBN *e**SP sP 16 21 27.3 -1.9
OBN *i* 16 21 49.7
OBN *e* 16 23 48.3
OBN *e*S S 16 30 10.6 -1.4
OBN *e*PS PnS 16 30 43.3 +11
OBN pmax pmax
comp=Z,52nm,1.0s
OBN MLR MLR
comp=Z,3μm,14.0s
NEW **Newport** 66.47 46 P P 16 21 23.0 -0.4
baz=305
FIA1 **FINESS Array S** 66.61 332 P P 16 21 23.9 -0.1
FINES **FINESS Array B** 66.61 332 P P 16 21 24.1 0.0
comp=Z,20nm,0.8s,baz=49,slow=8.6,SNR=22
comp=Z,20nm,0.8s
FINES **FINESS Array B** 66.61 332 P P 16 21 24.0 0.0
LPSR **Galich'ya Gora** 66.81 320 *e*P P 16 21 25.7 +0.3
LPSR pmax pmax
comp=Z,60nm,1.0s
L04D **Klamath Falls** 66.87 54 P P 16 21 25.6 -0.6
baz=304
J05D **Fort Rock, OR** 66.92 52 P P 16 21 26.9 +0.4
baz=304
VORR **Voronezh** 67.23 319⇓ *i* P P 16 21 28.9 +0.8
VORR pmax pmax
comp=Z,80nm,2.0s
SUMG **Summit** 67.27 1 *i* P P 16 21 29.4 +0.9
SUMG IAmb IAmb 16 21 30.2
comp=Z,32nm,1.2s
VSR **Storozhevoye** 67.53 319 *e*P P 16 21 28.5 -1.5
VSR pmax pmax
comp=Z,20nm,1.0s
MEF **Metsahovi** 68.06 332 *e*P P 16 21 33.6 +0.5
VSU **Vasula** 68.40 330 *e*P P 16 21 35.9 +0.6
RAF **Rauma** 68.40 334 *e*P P 16 21 35.4 +0.1
GROC **Groznyy** 68.63 309 *e*P P 16 21 36.6 -0.4
GROC *e* 16 22 01.3
GROC pmax pmax
comp=Z,50nm,0.6s
MSO **Missoula** 69.06 46 P P 16 21 39.3 -0.5
baz=307
GOF **Gofitskoye** 69.14 312⇓ *i* P P 16 21 41.0 +0.8
GOF *e*S S 16 30 46.7 +1.8
GOF pmax pmax
comp=Z,147nm,1.0s
NCK **Nalchik** 69.75 310 *i* P P 16 21 44.9 +0.9
NCK pmax pmax
comp=Z,73nm,1.2s
KVAR **Kislovodsk Arr** 70.00 311 P P 16 21 46.8 +1.1
comp=Z,43nm,1.1s,baz=260,slow=18,SNR=8.5
comp=Z,43nm,1.1s
ZEI **Tsey** 70.00 309 *e*P P 16 21 45.0 -0.8
ZEI pmax pmax
comp=Z,40nm,1.0s
KIV **Kislovodsk** 70.00 311 *e*P P 16 21 46.2 +0.5
KIV *e*S S 16 30 56.8 +1.5
KIV pmax pmax
comp=Z,101nm,1.0s
KIV pmax pmax
comp=Z,65nm,4.4s
KIV **Kislovodsk** 70.00 311 *i* P P 16 21 47.3 +1.6
SNR=11
KBZ **Khabaz** 70.02 311 P P 16 21 46.0 +0.5
comp=Z,36nm,0.9s,baz=42,slow=3.6,SNR=27
comp=Z,36nm,0.9s
KBZ **Khabaz** 70.02 311 *c* iP P 16 21 46.4 +0.8
KBZ pmax pmax
comp=Z,64nm,1.0s
SHA1 **Shidzhatmaz** 70.15 311 *c* iP P 16 21 47.1 +0.4
EGMT **Eagleton** 70.56 43 P P 16 21 47.6 -1.4
baz=309
ISAL **Salakas** 70.64 328 *e*P P 16 21 50.6 +1.4
MNK **Minsk** 70.65 326 *i* P P 16 21 49.0 -0.2
MNK *i* 16 22 07.6
MNK *i* 16 24 23.3
MNK *i* S S 16 31 01.9 -0.4
MNK *i* 16 31 50.4
MNK *i* SS SS 16 35 32.8 -0.2
MNK pmax pmax
comp=E,6.0nm,0.9s
MNK pmax pmax
comp=Z,62nm,0.9s
MNK MLR MLR
comp=Z,4μm,17.0s
MNK MLR MLR
comp=E,539nm,17.0s
MNK **Minsk** 70.65 326 *i* P P 16 21 49.1 -0.2
comp=E,6.0nm,0.9s
MNK *i* P P 16 21 49.1 -0.2
MNK *i* P P 16 21 49.1 -0.2
comp=Z,62nm,0.9s,baz=47
MNK *i* PcP PcP 16 22 07.7 -2.6
MNK *i* PP PP 16 24 23.4 -1.9
MNK *i* PPP PPP 16 25 51.9
MNK *i* S S 16 31 02.0 -0.4
MNK *i* SS SS 16 35 32.9 -0.2
MNK *i* SSS SSS 16 39 12.0
MNK *i* LQ LQ 16 47 56.7
MNK *i* LR LR 16 51 15.2
MNK *i* LRM MLR 16 55 23.2
MNK *i* LRM MLR 16 56 33.9
MNK comp=Z,4μm,17.4s
MNK *i* LRM MLR 16 57 06.8
comp=E,539nm,17.4s
SLIT **Slitere, Latvi** 70.67 331 *e*P P 16 21 50.1 +0.8
ICESG **Greenland Ices** 70.75 1 *i* P P 16 21 50.8 +0.7
ICESG IAmb IAmb 16 21 52.1
comp=Z,30nm,1.0s
HLID **Hailey** 70.78 49 P P 16 21 49.0 -1.6
baz=308
NACGM **Naroch** 70.84 327 *i* P P 16 21 50.7 +0.3
baz=46
GNI **Garni** 71.08 307 P P 16 21 52.8 +0.4
comp=Z,16nm,1.0s,baz=183,slow=4.1,SNR=10
comp=Z,16nm,1.0s
GNI **Garni** 71.08 307 *c* iP P 16 21 52.4 0.0
GNI pmax pmax
comp=Z,62nm,1.3s
GNI **Garni** 71.08 307 P P 16 21 53.7 +1.3
BOZ **Bozeman (W)** 71.08 46 P P 16 21 53.8 +1.4
baz=309,SNR=7.6
VSVD **Vaisvydziai** 71.23 329 *e*P P 16 21 53.5 +0.8
PABE **Paberze** 71.56 329 *e*P P 16 21 55.6 +0.9
NVAR **Mina Aray Bea** 71.56 55 P P 16 21 56.3 +0.9
comp=Z,2.6nm,0.8s,baz=294,slow=6.1,SNR=10
comp=Z,2.6nm,0.8s
SOEG **Soedalen** 71.61 358 *e*P P 16 21 55.6 +0.7
WSAR **Wadi Sarin** 71.68 285 P P 16 21 57.3 +1.2
comp=Z,3.8nm,0.9s,baz=90,slow=7.1,SNR=1.8
comp=Z,3.8nm,0.9s
HFS **Hagfors** 71.69 336 P P 16 21 55.2 -0.3
comp=Z,15nm,0.8s,baz=47,slow=6.5,SNR=18
comp=Z,15nm,0.8s
NB2 **NORSAR Subarra** 71.71 338 P P 16 21 55.7 +0.1
comp=Z,45nm,1.1s,baz=36,slow=6.2
NB2 **NORSAR Subarra** 71.71 338 P P 16 21 55.7 +0.1
baz=36,slow=6.2
NOA **NORSAR Array B** 71.71 338 P P 16 21 55.8 +0.1
comp=Z,15nm,0.9s,baz=37,slow=6.0,SNR=24
comp=Z,15nm,0.9s
YHL **Hebgen Lake** 71.80 46 P P 16 21 57.2 +0.4
SHME **Shamm** 71.83 289 *i* P P 16 21 57.4 +0.5
SNR=12
PBUR **Paburge** 71.98 330 *e*P P 16 21 58.3 +1.0
STKA **Stephens Creek** 71.99 182 P P 16 21 57.7 +0.2
comp=Z,1.6nm,0.5s,baz=350,slow=6.4,SNR=8.4
comp=Z,1.6nm,0.5s
ELK **Elko** 72.03 52 P P 16 21 58.3 +0.1
ELK **Elko** 72.03 52 P P 16 21 58.3 +0.1
ELK pmax pmax
comp=Z,13nm,1.4s
BCA **Borcka** 72.16 309 ⇑P P 16 21 60.0 +1.3
MSFE **Esma-Masafi** 72.22 288 *i* P P 16 21 59.7 +0.3
SNR=7.1
H17A **Grant Village** 72.42 46 P P 16 22 01.8 +1.3
baz=310
ANN **Anapa** 72.43 314 *e*P P 16 21 58.6 -1.6
ANN pmax pmax
comp=Z,77nm,1.4s
UOSS **Minazif** 72.44 288 P P 16 22 01.3 +0.7
UOSS **Minazif** 72.44 288 *i* P P 16 22 00.6 0.0
SNR=12
HATD **Hatta, Dubai** 72.56 288 *i* P P 16 22 01.7 +0.4
SNR=12
AKASG **Malin Array Be** 72.67 323 P P 16 22 01.4 -0.1
comp=Z,27nm,0.9s,baz=44,slow=6.6,SNR=34
comp=Z,27nm,0.9s
AKBB **Malin Array Si** 72.67 323 P P 16 22 01.4 0.0
AKBB **Malin Array Si** 72.67 323 *c* iP P 16 22 01.1 -0.4
AKBB pmax pmax
comp=Z,67nm,1.0s
RLMT **Red Lodge** 72.67 45 P P 16 22 01.9 -0.1

RLMT **Red Lodge** 72.67 45 P P 16 22 02.3 +0.4
baz=310
ASHO **Ashiyiah** 72.70 288 *i* P P 16 22 02.2 -0.1
SNR=13
PKM **Mcpherson Peak** 72.74 59 P P 16 21 60.0 -2.5
baz=308
CWC **Cottonwood Cre** 72.91 57 P P 16 22 04.9 +1.4
baz=308
FAQ **Al Faqa, Dubai** 73.00 288 P P 16 22 04.2 +0.3
DGMT **Dagmar** 73.08 40 P P 16 22 04.7 +0.6
baz=312
DY2G **Dye2** 73.13 4 *i* P P 16 22 04.8 +0.5
DY2G IAmb IAmb 16 22 06.0
comp=Z,39nm,1.2s
ISA **Isabella, Lake** 73.13 57 P P 16 22 04.3 -0.4
baz=308
LAO **LASA Array** 73.25 42 P P 16 22 07.7 +2.6
baz=312
ASUD **Al Ashush, Dub** 73.27 288 *i* P P 16 22 07.0 +1.5
SNR=6.7
R11A **Troy Canyon, C** 73.30 54 P P 16 22 11.1 +5.3
baz=309
ALNE **Al Ain** 73.30 287 P P 16 22 06.2 +0.4
MPMC **Manual Prospec** 73.52 57 P P 16 22 07.5 +0.4
baz=308
FURC **Furnace Creek,** 73.67 56 P P 16 22 08.4 +0.7
baz=308
TPNV **Topopah Spring** 73.75 55 P P 16 22 08.9 +0.5
baz=309
LRMC **Laurel Mtn Rad** 73.75 57 P P 16 22 11.9 +3.5
baz=308
DUG **Dugway, Tooele** 73.81 51 P P 16 22 10.1 +1.5
baz=310
EDW2 **Edwards Air Fo** 73.92 58 P P 16 22 10.9 +1.6
baz=308
BW06 **Boulder Array** 74.04 47 P P 16 22 13.4 +3.3
baz=311
PDAR **Pinedale Array** 74.04 47 P P 16 22 10.9 +0.9
comp=Z,2.5nm,0.9s,baz=2.5,slow=0.9,SNR=13
comp=Z,2.5nm,0.9s
SIM **Simferopol'** 74.12 316 *eP* P 16 22 10.1 -0.1
SIM 16 22 32.0
SIM pmax pmax
comp=Z,43nm,1.0s
SIM MLR MLR
comp=Z,2μm,17.0s
GSC **Goldstone, Bar** 74.43 57 P P 16 22 13.8 +1.6
baz=309
SORM **Soroca** 74.86 321 ⇑P P 16 22 14.3 -0.1
TUQ **Turquoise Moun** 74.90 56 P P 16 22 14.6 -0.5
baz=309
NUUK **Nuuk** 75.00 7 *i* P P 16 22 15.9 +1.0
NUUK IAmb IAmb 16 22 16.8
comp=Z,17nm,1.0s
HEC **Hector,Ludlow** 75.02 57 P P 16 22 15.3 -0.4
baz=309
GMRC **Granite Mounta** 75.48 57 P P 16 22 20.0 +1.5
baz=309
MILM **Milestii Mici** 75.48 320 *eP* P 16 22 17.0 -1.0
comp=Z,60nm,1.3s
MILM **Milestii Mici** 75.48 320 *eP* P 16 22 17.0 -1.0
MILM pmax pmax
comp=Z,60nm,1.3s
BEL **Belsk** 75.54 327 *eP* P 16 22 18.5 +0.2
MZR **Muzera** 75.59 288 *i* P P 16 22 18.9 -0.2
SNR=10
LVV **L'vov** 75.64 324 *eP* P 16 22 19.4 +0.5
LVV pmax pmax
comp=Z,140nm,1.4s
DIKM **Dikmen** 75.69 313 ⇑P P 16 22 20.4 +1.1
ULM **Lac du Bonnet** 75.69 35 P P 16 22 19.6 +0.4
comp=Z,5.9nm,0.8s,baz=174,slow=6.4,SNR=6.0
comp=Z,5.9nm,0.8s
PFO **Pinyon Flats O** 75.71 58 P P 16 22 20.3 +0.6
baz=309
TPFO **Pinon Flats** 75.71 58 P P 16 22 23.3 +3.5
baz=309
VASR **Vaslui** 76.18 320 ⇑P P 16 22 22.0 0.0
IRM **Iron Mountain** 76.21 57 P P 16 22 22.2 -0.3
baz=310
BC3 **Big Chuckawall** 76.33 57 P P 16 22 25.8 +2.6
baz=310
KWP **Kalwaria Pacla** 76.37 325 *eP* P 16 22 24.2 +1.1
O20A **White River Ci** 76.51 49 P P 16 22 23.8 -0.6
baz=312
IKP **In-Ko-Pah, Jac** 76.54 59 P P 16 22 26.1 +1.6
baz=310
BUR08 **Bucovina Ar. S** 76.69 322 IAmb IAmb 16 22 37.2
comp=Z,26nm,0.9s
BURAR **Bucovina Array** 76.71 322 ⇑P P 16 22 25.7 +0.5
BURAR **Bucovina Array** 76.71 322 P P 16 22 25.6 +0.5
PDMCI **Parker Dam,Lak** 76.75 56 P P 16 22 27.2 +1.7
baz=310
BIZ **Bicaz** 76.78 321 ⇑P P 16 22 26.4 +1.0
TESR **Tescani** 76.82 321 ⇑P P 16 22 26.2 +0.5
CFR **Carcaliu** 77.04 319 ⇑P P 16 22 26.8 -0.1
CFR **Carcaliu** 77.04 319 P P 16 22 27.5 +0.6
KOLS **Kolonicke sedl** 77.08 325 *eP* P 16 22 28.1 +1.0
KOLS pmax pmax
comp=Z,22nm,1.1s
KOLS **Kolonicke sedl** 77.08 325 *eP* P 16 22 28.1 +1.0
TPGR **Topolog** 77.13 319 ⇑P P 16 22 28.2 +0.7
AGMN **Agassiz Nation** 77.14 36 P P 16 22 32.1 +4.7
baz=318
OJC **Ojcow** 77.17 327 *eP* P 16 22 27.0 -0.5
VRI **Vrincioaia** 77.25 320 ⇑P P 16 22 28.9 +0.8
UZH **Uzhgorod** 77.29 325 *eP* P 16 22 28.8 +0.6
UZH *e* 16 22 34.0
UZH *e* 16 22 41.4
CRVS **Cervenica-Dubn** 77.45 325 *eP* P 16 22 30.0 +0.8
CRVS pmax pmax
comp=Z,121nm,2.0s
CRVS **Cervenica-Dubn** 77.45 325 *eP* P 16 22 30.0 +0.8
HARR **Harsova** 77.49 319 ⇓P P 16 22 30.6 +1.1
HARR **Harsova** 77.49 319 P P 16 22 30.5 +1.1
COVR **Voineasa-Covas** 77.52 321 ⇑P P 16 22 29.9 +0.3
OZUR 77.54 321 ⇓P P 16 22 30.6 +0.9
NIE **Niedzica** 77.57 326 *eP* P 16 22 31.6 +1.7
WUAZ **Wupatki** 77.70 54 P P 16 22 33.5 +2.5
baz=311
BR131 **Keskin Array S** 77.89 312 IAmb IAmb 16 22 34.0
comp=Z,46nm,1.4s
BRTR **Keskin Array B** 77.89 312 P P 16 22 32.4 +0.4
comp=Z,8.1nm,1.1s,baz=70,slow=4.3,SNR=25
BRTR PP PP 16 25 26.3 -0.9
comp=Z,5.4nm,1.1s,baz=44,slow=8.5,SNR=3.6
comp=Z,8.1nm,1.1s
MLR **Muntele Rosu** 77.90 320 ⇑P P 16 22 33.2 +1.4
MLR **Muntele Rosu** 77.90 320 P P 16 22 32.6 +0.8
comp=Z,14nm,1.2s,baz=38,slow=5.5,SNR=8.1
comp=Z,14nm,1.2s
MLR **Muntele Rosu** 77.90 320 IAmb IAmb 16 22 40.4
comp=Z,50nm,1.5s
KSP **Ksiaz** 78.11 329 *eP* P 16 22 33.9 +1.1
LANS **Liptovska Anna** 78.12 326 *eP* P 16 22 34.9 +1.9
LANS pmax pmax
comp=Z,24nm,1.4s
LANS **Liptovska Anna** 78.12 326 *eP* P 16 22 34.9 +1.9
OKC **Ostrava-Krasne** 78.15 327 *eP* P 16 22 34.2 +1.2
OKC **Ostrava-Krasne** 78.15 327 *eP* P 16 22 34.2 +1.2
SECR 78.17 320 ⇑P P 16 22 34.4 +1.1
ISCO **Idaho Springs** 78.23 47 P P 16 22 37.3 +3.3
baz=313
MVCO **Mesa Verde** 78.31 51 P P 16 22 36.9 +2.4
baz=312
OSTC **Ostas** 78.36 329 *eP* P 16 22 35.3 +1.1
OSTC *ex* x 16 22 48.6
VOIR 78.37 321 ⇓P P 16 22 34.9 +0.4
MORC **Moravsky Berou** 78.44 328 ⇑P P 16 22 35.2 +0.4
MORC **Moravsky Berou** 78.44 328 IAmb IAmb 16 22 37.1
comp=Z,37nm,1.2s
MORC **Moravsky Berou** 78.44 328 *eP* P 16 22 35.5 +0.8
DRGR 78.47 323 ⇑P P 16 22 35.5 +0.5
UPC **Upice** 78.48 329 *eP* P 16 22 35.7 +0.8
UPC **Upice** 78.48 329 *eP* P 16 22 35.7 +0.8
DPC **Dobruska-Polom** 78.48 329 *eP* P 16 22 36.1 +1.2
DPC **Dobruska-Polom** 78.48 329 *eP* P 16 22 36.1 +1.2
SUSD **Miller** 78.49 40 P P 16 22 34.7 -0.3
baz=316
KRLC **Kraliky** 78.52 328 *eP* P 16 22 36.0 +0.9
KRLC **Kraliky** 78.52 328 *eP* P 16 22 36.0 +0.9
ARR **Arges** 78.62 321 ⇑P P 16 22 37.2 +1.3
PSZ **Piszkesteto** 78.88 325 ⇑P P 16 22 37.9 +0.7
PSZ **Piszkesteto** 78.88 325 P P 16 22 37.4 +0.2
VYHS **Vyhne** 78.90 326 *eP* P 16 22 38.1 +0.9
VYHS pmax pmax
comp=Z,33nm,1.3s
VYHS **Vyhne** 78.90 326 *eP* P 16 22 38.0 +0.9
S22A **4UR Ranch, Cre** 78.93 50 P P 16 22 42.2 +4.3
baz=313
LOT **Lotru** 78.97 322 ⇑P P 16 22 39.2 +1.4
BRG **Berggiesshubel** 78.99 330 *eP* P 16 22 38.3 +0.7
BRG Amp 16 22 41.5
comp=Z,19nm,1.2s
BRG PP PP 16 25 42.1 +6.2
BRG Amp 16 25 46.4
comp=Z,27nm,1.4s
BRG **Berggiesshubel** 78.99 330 *eP* P 16 22 38.3 +0.7
BRG 16 25 42.0
BRG pmax pmax
comp=Z,19nm,1.2s
BRG pmax pmax
comp=Z,27nm,1.5s
CLL **Collm** 78.99 331 ⇑*i* P P 16 22 38.0 +0.4
CLL *i* 16 22 42.9
CLL pmax pmax
comp=Z,34nm,1.1s
CLL **Collm** 78.99 331 ⇑*i* P P 16 22 38.0 +0.4
comp=Z,34nm,1.1s
CLL *i* (sP) sP 16 22 42.9 -1.2
CLL *i* sPcP 16 22 51.2
CLL *e*PP PP 16 25 37.0 +1.1
PVCC **Panska Ves** 79.03 330 *eP* P 16 22 38.9 +1.1
PVCC **Panska Ves** 79.03 330 *eP* P 16 22 38.9 +1.1
JAVC **Velka Javorina** 79.10 327 *eP* P 16 22 40.3 +1.9
VRAC **Vranov** 79.19 328 ⇑P P 16 22 40.1 +1.3
VRAC **Vranov** 79.19 328 P P 16 22 39.3 +0.5
comp=Z,18nm,1.1s,baz=45,slow=5.5,SNR=21
comp=Z,18nm,1.1s
VRAC **Vranov** 79.19 328 *eP* P 16 22 39.7 +0.9
EYMN **Ely** 79.32 34 P P 16 22 41.2 +1.7
baz=320
SIRR **Siria** 79.35 323 ⇑P P 16 22 39.4 -0.3
KRUC **Moravsky** 79.47 328 *eP* P 16 22 41.1 +0.8
PRU **Pruhonice** 79.47 329 *eP* P 16 22 40.8 +0.5
PRU *e* 16 22 52.5
PRU **Pruhonice** 79.47 329 *eP* P 16 22 40.8 +0.5
PRU *ex* x 16 22 52.5
SMOL **Smolenice** 79.47 327 *eP* P 16 22 41.7 +1.4
SMOL pmax pmax
comp=Z,28nm,1.6s
GZR **Gura Zlata** 79.48 322 ⇑P P 16 22 41.0 +0.4
BUD **Budapest** 79.59 325 P P 16 22 42.1 +1.2
MODS **Modra-Piesok** 79.64 327 *eP* P 16 22 42.7 +1.4
MODS pmax pmax
comp=Z,95nm,1.4s
MODS **Modra-Piesok** 79.64 327 *eP* P 16 22 42.7 +1.4
SDCO **Great Sand Dun** 79.70 49 P P 16 22 42.5 +0.3
baz=314
ZST **Bratislava** 79.86 327 *eP* P 16 22 44.3 +1.9
ZST pmax pmax
comp=Z,114nm,1.6s
ZST **Bratislava** 79.86 327 *eP* P 16 22 44.3 +1.9
BZS **Buzias** 79.86 323 ⇑P P 16 22 42.4 -0.1
CSKK **Cskako** 80.02 326 P P 16 22 43.7 +0.4
ECSD **EROS Data Cent** 80.16 40 P P 16 22 45.8 +1.7
baz=318
TUC **Tucson** 80.18 56 P P 16 22 44.2 -0.3
baz=312
EGYH **Egyhazaskeszo** 80.37 326 P P 16 22 46.8 +1.7
MPLH **Magyarpolny** 80.47 326 P P 16 22 46.7 +1.0
SOP **Sopron** 80.49 327 P P 16 22 47.1 +1.3
CKRC **Cesky Krumlov** 80.50 329 *eP* P 16 22 46.3 +0.4
KHC **Kasperske Hory** 80.53 329 *eP* P 16 22 46.8 +0.7
KHC **Kasperske Hory** 80.53 329 *eP* P 16 22 46.8 +0.7
KHC *ex* x 16 23 17.5
CONA **Conrad Observa** 80.58 327 *i* P P 16 22 47.8 +1.3
comp=Z,8.8nm,0.9s,SNR=14
RONA **Rosalia, Austr** 80.58 327 *i* P P 16 22 48.0 +1.6
comp=Z,15nm,0.9s,SNR=13
GERES **GERESS Array B** 80.72 329 P P 16 22 47.5 +0.4
comp=Z,4.7nm,0.9s,baz=29,slow=3.0,SNR=19
comp=Z,4.7nm,0.9s
MORH **Mrgy, Hungar** 80.74 325 ⇑P P 16 22 47.4 +0.2
MORH **Mrgy, Hungar** 80.74 325 P P 16 22 47.2 +0.1
KDZ **Kurdzhali** 80.96 318 P P 16 22 49.0 +0.5
RAYN **Ar Rayn** 80.97 293 P P 16 22 49.4 +0.5
RAYN IAmb IAmb 16 23 13.6
comp=Z,52nm,1.4s
RAYN **Ar Rayn** 80.97 293 P P 16 22 49.4 +0.5
RAYN pmax pmax
comp=Z,51nm,1.4s
RAYN **Ar Rayn** 80.97 293 *i* P P 16 22 48.9 0.0
SNR=13
FRGS **Fruska Gora** 81.03 324 ⇑P P 16 22 49.4 +0.6
FRGS **Fruska Gora** 81.03 324 ⇑*i* P P 16 22 49.2 +0.4
ASF **Jabal al Asfar** 81.04 305 P P 16 22 50.0 +0.8
comp=Z,7.7nm,0.9s,baz=179,slow=1.2,SNR=8.4
comp=Z,7.7nm,0.9s
ASF **Jabal al Asfar** 81.04 305 P P 16 22 50.0 +0.8
ANMO **Albuquerque** 81.06 51 P P 16 22 49.9 +0.5
baz=314
KOVH **Kovagototos** 81.08 325 P P 16 22 49.3 +0.3
ARSA **Arzberg** 81.26 327 *i* P P 16 22 51.0 +1.0
comp=Z,4.6nm,0.8s,SNR=8.3
MOA **Molln** 81.29 328 *eP* P 16 22 51.1 +1.0
comp=Z,0.7nm,0.4s
BOVS **Bovan** 81.31 321 ⇑P P 16 22 50.0 -0.3
VTS **Vitosha** 81.33 320 ⇓P P 16 22 51.4 +1.5
VTS **Vitosha** 81.33 320 P P 16 22 51.9 +1.2
VTS IAmb IAmb 16 22 53.2
comp=Z,31nm,1.0s
VTS **Vitosha** 81.33 320 P P 16 22 51.9 +1.2
VTS pmax pmax
comp=Z,31nm,1.0s
VTS **Vitosha** 81.33 320 P P 16 22 51.0 +0.4
MMAI **Mount Meron Ar** 81.40 306 P P 16 22 51.7 +0.6
comp=Z,28nm,1.0s,baz=30,slow=6.7,SNR=15
comp=Z,28nm,1.0s
SCHQ **Schefferville** 81.56 17 P P 16 22 51.6 +0.2
comp=Z,5.5nm,0.9s,baz=202,slow=7.1,SNR=4.2
comp=Z,5.5nm,0.9s
BIOA **Bad Ischl, Aus** 81.67 328 *i* P P 16 22 53.4 +1.2
comp=Z,5.8nm,0.7s,SNR=7.8
DIVS **Divibare** 81.76 323 ⇑*i* P P 16 22 52.9 +0.1
MMB **Musomiste** 81.86 319 P P 16 22 54.0 +0.7
PERS **Pernice** 81.92 327 *i* P P 16 22 54.0 +0.5
SOKA **Soboth** 81.92 327 *i* P P 16 22 54.0 +0.4
comp=Z,20nm,0.9s,SNR=16
BTNL **Ternell** 82.01 334 *dP* P 16 22 53.7 -0.2
comp=Z,12nm,1.2s
MEM **Membach** 82.03 334 *dP* P 16 22 54.2 +0.3
comp=Z,10nm,1.2s
BSTI **Sart Tilman** 82.19 335 *dP* P 16 22 56.2 +1.4
BHOU **Houvegnez** 82.25 334 *dP* P 16 22 56.0 +0.9
comp=Z,8.7nm,1.2s
OBKA **Obir** 82.25 327 *eP* P 16 22 55.4 +0.1
OBKA **Obir** 82.25 327 *i* P P 16 22 56.0 +0.6
baz=314
comp=Z,9.6nm,0.8s,SNR=6.4
KBA **Koelnbreinsper** 82.28 328 *i* P P 16 22 56.8 +1.2
comp=Z,7.6nm,0.8s,SNR=9.8
CRES **Cresnjev** 82.42 326 ⇑*i* P P 16 22 56.1 0.0
CRES **Cresnjev** 82.42 326 *i* P P 16 22 56.5 +0.4
BCLA **Clavier** 82.42 335 *dP* P 16 22 56.3 +0.3
comp=Z,10nm,1.2s
BLY **Banja Luka** 82.53 325 ⇑*i* P P 16 22 56.6 -0.1
MYKA **Terra Mystica** 82.53 328 *i* P P 16 22 56.9 +0.1
comp=Z,6.0nm,0.8s,SNR=7.6
RCHB **Rochefort** 82.67 335 *dP* P 16 22 57.5 +0.2
comp=Z,10nm,1.1s
BMRD **Maredsous** 82.70 335 *dP* P 16 22 58.2 +0.8
comp=Z,15nm,1.1s
BOJS **Bojanci** 82.76 326 ⇑*i* P P 16 22 56.7 -1.2
BOJS **Bojanci** 82.76 326 *i* P P 16 22 58.0 +0.1
WATA **Walderalm** 82.77 329 *i* P P 16 22 58.9 +0.8
comp=Z,3.4nm,0.4s,SNR=7.5
WTTA **Wattenberg** 82.81 329 *i* P P 16 22 59.1 +0.8
comp=Z,6.3nm,0.9s,SNR=6.8
MGRS **Mrkonjic Grad** 82.83 325 *eP* P 16 23 00.0 +1.7
ABTA **Abfaltersbach** 82.89 329 *i* P P 16 22 58.4 -0.2
comp=Z,2.3nm,0.6s,SNR=7.7
CEY **Cerknica** 82.92 327 *eP* P 16 22 53.8 -5.0
DOU **Dourbes** 82.93 335 *dP* P 16 22 59.2 +0.5
MOTA **Moosalm** 82.95 330 *i* P P 16 22 59.8 +0.7
comp=Z,16nm,0.9s,SNR=10
UPM **Unac-Piva** 82.95 323 *eP* P 16 22 58.8 -0.4
RETA **Reutte** 82.96 330 *i* P P 16 22 60.0 +1.0
comp=Z,1.3nm,0.3s,SNR=7.1
SQTA **Sankt Quirin** 83.01 330 *i* P P 16 23 00.0 +0.7
comp=Z,5.2nm,0.7s,SNR=7.2
SRKY **Kupres RS** 83.07 324 *eP* P 16 23 00.5 +0.9
BFO **Black Forest** 83.16 332 P P 16 22 59.8 -0.2
BFO IAmb IAmb 16 23 01.1
comp=Z,25nm,1.2s
BFO **Black Forest** 83.16 332 P P 16 22 59.8 -0.2
BFO pmax pmax
comp=Z,25nm,1.2s
SKDS **Skadanscina** 83.25 327 ⇑*i* P P 16 22 59.8 -0.6
BRY **Bratogost** 83.36 323 *eP* P 16 23 00.6 -0.6
FETA **Feichten** 83.36 330 *eP* P 16 23 02.1 +0.9
comp=Z,6.3nm,0.9s
PDG **Podgorica** 83.39 322 ⇓P P 16 23 01.2 0.0
DAVA **Damuels** 83.46 330 *i* P P 16 23 02.5 +0.8
comp=Z,11nm,0.9s,SNR=6.8
TREB **Trebinje** 83.59 323 *eP* P 16 23 00.0 -2.2
LIT **Litokhoron** 83.59 319 P P 16 23 02.8 +0.5
LIT **Litokhoron** 83.59 319 P P 16 23 02.8 +0.5
LIT pmax pmax
comp=Z,40nm,1.1s
DRME **Dracevica, Mon** 83.61 322 ⇑*i* P P 16 23 02.4 +0.1
HCY **Herceg Novi** 83.73 323 *eP* P 16 23 02.5 -0.5
STON **Ston** 83.77 323 ⇑*i* P P 16 23 00.9 -2.2
AMTX **Amarillo** 83.90 49 P P 16 23 05.7 +1.6
baz=316
MNTX **Cornudas Mount** 83.95 53 P P 16 23 07.0 +2.7
baz=314
EIL **Elat** 83.96 304 P P 16 23 04.2 -0.2
comp=Z,21nm,1.0s,baz=346,slow=1.5,SNR=17
comp=Z,21nm,1.0s
MATE **Matera** 85.97 322 ⇑P P 16 23 14.0 -0.3
BNI **Bardonecchia** 86.54 331 P P 16 23 17.8 +0.6
BNI IAmb IAmb 16 23 28.1
comp=Z,18nm,1.0s
BNI **Bardonecchia** 86.54 331 P P 16 23 17.8 +0.6
BNI pmax pmax
comp=Z,18nm,1.0s
TXAR **Lajitas Array** 86.66 54 P P 16 23 20.2 +2.2
comp=Z,4.7nm,1.1s,baz=290,slow=3.7,SNR=12
comp=Z,4.7nm,1.1s
TXAR **Lajitas Array** 86.66 54 P P 16 23 18.9 +0.9
TXAR **Lajitas Array** 86.66 54 P P 16 23 18.9 +0.9
ABTX **Abilene, Hawle** 86.70 49 P P 16 23 15.8 -2.2
baz=317
SSB **Saint Sauveur** 87.12 332 P P 16 23 19.9 0.0
SSB IAmb IAmb 16 23 41.5
comp=Z,18nm,1.2s
SSB **Saint Sauveur** 87.12 332 P P 16 23 19.9 0.0
SSB pmax pmax
comp=Z,18nm,1.2s
MIAR **Mount Ida** 88.63 44 P P 16 23 28.0 +0.8
baz=320
P49A **Miami Univ. Ec** 88.98 35 P P 16 23 27.6 -1.2
baz=325
M53A **WI Miller and** 89.10 32 P P 16 23 28.1 -1.2
baz=328
KEST **Kesra** 93.33 324 P P 16 23 48.6 -0.5
comp=Z,5.8nm,1.0s,baz=319,slow=3.0,SNR=5.5
comp=Z,5.8nm,1.0s
ESDC **Sonseca Array** 94.96 335 P P 16 23 56.2 -0.3
comp=Z,1.3nm,0.9s,baz=17,slow=4.0,SNR=6.3
comp=Z,1.3nm,0.9s
SDV **Santo Domingo** 121.59 41 *eP* PKPdf 16 29 28.4 0.0
MAW **Mawson** 123.38 207 PKP PKiKP 16 29 30.8 +0.7
comp=Z,3.3nm,0.8s,baz=113,slow=7.7,SNR=2.5
OTAV **Otavalo** 124.29 54 *eP* PKiKP 16 29 35.5 +1.3
CZSB **Cruzeiro do Su** 134.05 55 *eP* PKPdf 16 29 51.6 -0.2
ITTB **Itaituba** 140.05 31 *eP* PKPdf 16 30 03.0 0.0
TMAB **Tom-Au,PA,Br** 140.63 19 *eP* PKPdf 16 30 00.6 -3.4
NVL **N'lazarevskaya** 141.12 203 *e*PKIKP PKPdf 16 30 03.9 +0.8
TROLL **Troll, Antarti** 143.03 199 PKPdf PKPdf 16 30 05.1 -1.6
PRPB **Parauapebas** 143.79 23 *eP* PKPdf 16 30 09.6 -0.1
SNAA **Sanae** 144.53 198 PKPdf PKPab 16 30 08.1 +0.3
SNAA **Sanae** 144.53 198 PKP PKPab 16 30 08.0 +0.3
comp=Z,8.9nm,0.9s,baz=204,slow=5.2,SNR=20
VILB **Vilhena** 145.51 44 *eP* PKPdf 16 30 12.6 0.0
CLDB **Colider** 145.88 36 *eP* PKPdf 16 30 13.0 -0.3
VNA2 **Neumayer--Watz** 146.09 197 PKPdf PKPdf 16 30 12.6 +0.7
baz=125,slow=2.0
PDRB **Porto dos Gac** 146.11 38 *eP* PKPdf 16 30 13.4 -0.2
VNA3 **Neumayer Olymp** 146.32 195 PKPdf PKPdf 16 30 13.6 +1.3
SMTB **Santa Maria do** 146.99 21 *eP* PKPdf 16 30 15.3 +0.1
LVC **Limon Verde** 147.27 67 PKPbc PKPbc 16 30 18.5 +0.3
comp=Z,2.5nm,0.7s,baz=280,slow=6.1,SNR=1.8
LVC **Limon Verde** 147.27 67 *eP* PKPdf 16 30 15.3 -0.5
PTLB **Pontes e Lacer** 148.15 45 *eP* PKPdf 16 30 15.6 -1.4
NBRF **Rio Formoso -** 148.34 358 *eP* PKPdf 16 30 17.1 -0.3
SNDB **Serra Nova Dou** 148.72 29 *eP* PKPdf 16 30 17.7 -0.3
NBAN **Anadia - AL** 149.35 360 *eP* PKPdf 16 30 19.1 +0.1
SALV **Santo Antonio** 150.31 40 *eP* PKPdf 16 30 20.3 +0.1
NBLA **Lagarto - SE** 150.63 3 *eP* PKPdf 16 30 20.6 -0.4
PMSA **Palmer Station** 150.86 156 PKPbc PKPbc 16 30 25.1 -0.3
comp=Z,2.7nm,0.8s,baz=13,slow=3.3,SNR=2.1
PMSA **Palmer Station** 150.86 156 *eP* PKPdf 16 30 19.2 -0.5
SDBA **SAO DESIDERIO** 151.07 18 *eP* PKPdf 16 30 21.5 -0.2
GDU01 **Guandu, BA** 153.22 7 *eP* PKPdf 16 30 24.2 -0.6
BDFB **Brasilia** 153.27 26 PKPbc PKiKP 16 30 33.9 +1.2
comp=Z,0.9nm,0.3s,baz=225,slow=1.4,SNR=1.6
BDFB **Brasilia** 153.27 26 *eP* PKPdf 16 30 24.2 -0.8
PLCA **Paso Flores** 154.11 102 PKPbc PKiKP 16 30 34.6 +0.9
comp=Z,2.1nm,1.0s,baz=294,slow=9.0,SNR=2.0
PLCA **Paso Flores** 154.11 102 *eP* PKPdf 16 30 25.1 -0.4
C2SB **Chapadao do Su** 154.15 38 *eP* PKPdf 16 30 25.7 -0.3
CMC01 **Camacan, BA** 154.85 7 *eP* PKPdf 16 30 26.9 -0.2
PMNB **Patos De Minas** 156.49 25 *eP* PKPdf 16 30 29.9 +0.5
DIAM **Diamantina, MG** 157.03 18 *eP* PKPdf 16 30 29.6 -0.6
CPUP **Villa Florida** 157.59 58 *eP* PKPdf 16 30 30.8 +0.3
TRCB **Terra Rica** 157.65 43 *eP* PKPdf 16 30 29.3 -1.4
BB19B **Bebedouro** 158.06 32 *eP* PKPdf 16 30 30.9 -0.3
ITQB **Itaqui** 160.26 63 *eP* PKPdf 16 30 33.3 -0.2
VAO **Valinhos** 160.42 30 *eP* PKPdf 16 30 33.8 -0.2
PARB **Paraibuna** 161.23 27 *eP* PKPdf 16 30 34.5 -0.3

IDC ***20*** *16:13:38.6±0.7,3.°99N×78.°92W,h0km,mb4.2/12, mbtmp4.3/16,ML3.6/3,MS3.7/2,Error ellipse: s-maj=22.5km s-min=14.6km az=63.0*
NEIC ***20*** *16:13:41.2±2.8,3.°96N±0.°04×78.°81W±0.°08,h10km±1km, mb4.7/33,Error ellipse: s-maj=13.3km s-min=6.9km az=102.0*
RSNC ***20*** *16:13:41.7±0.8,3.°92N×78.°86W,h32km±7km,ML3.9, Mw3.9*

ISC 20 16:13:41.0±2.8,3.°99N±0.°03×78.°89W±0.°04,h17km±18km, n119,σ2≥18/169,mb4.7/25,7C-1D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
GR1C	**Gorgona, Isla**	1.22	144	⇑*i*	*e*P	Pn	16 14 00.4	-2.8
GR1C					*e*S	Sb	16 14 14.9	-4.1
MALC	**Bahia Malaga**	1.55	89	⇑*i*	*e*P	Pn	16 14 06.6	-1.2
MALC					*e*S	Sn	16 14 24.6	-3.0
MALC					*i*		16 14 26.9	
	comp=Z,2μm,0.3s							
PIZC	**Pizarro, Choco**	1.81	58	⇓*i*	P	Pn	16 14 09.3	-2.0
PIZC					*e*S	Sn	16 14 31.9	-2.0
PIZC					*i*		16 14 34.8	
	comp=Z,537nm,0.4s							
TUMC	**Tumaco**	2.16	176	*eP*		Pn	16 14 14.1	-2.1
TUMC					*e*S	Sn	16 14 38.7	-3.9
YOTC	**Yotoco, Valle**	2.54	90	⇑*i*	P	Pn	16 14 19.8	-1.7
YOTC					*e*S	Sn	16 14 49.1	-3.0
YOTC					*i*		16 14 49.8	
	comp=Z,1μm,0.4s							
BBAC	**Balboa, Cauca**	2.55	140	⇑*i*	P	Pn	16 14 19.6	-2.2
BBAC					*e*S	Sn	16 14 48.4	-4.2
BBAC					*i*		16 14 49.2	
	comp=Z,543nm,0.3s							
POPC	**Popayan, Colom**	2.64	123	⇑*i*	P	Pn	16 14 21.0	-2.0
POPC					*e*S	Sn	16 14 50.8	-3.9
POPC					*i*		16 14 54.3	
	comp=Z,290nm,0.6s							
MAPC	**Malpelo**	2.71	270	*eP*		Pn	16 14 22.5	-1.3
MAPC					*e*S	Sn	16 14 51.9	-4.4
MAPC					*i*		16 14 52.8	
	comp=Z,542nm,0.2s							
PLMC	**San Jos del P**	2.75	71	*eP*		Pn	16 14 22.3	-2.1
PLMC					*e*S	Sn	16 14 54.9	-2.4
PLMC					*i*		16 14 56.1	
	comp=Z,488nm,0.4s							
CRUC	**La Cruz**	3.09	141	*eP*		Pn	16 14 28.8	-0.5
CRUC					*e*S	Sn	16 15 02.4	-3.7
GCUF	**Volcan Galeras**	3.15	151	*eP*		Pn	16 14 30.1	-0.1
GCUF					*e*S	Sn	16 15 03.8	-3.9
GCUF					*i*		16 15 09.5	

	comp=Z,488nm,0.4s									
PTAC	**Punta Ardita,**	**3.31**	**19**	*eP*		**Pn**	**16 14 30.5**	**-1.6**
PTAC				*eS*		**Sn**	**16 15 04.3**	**-6.9**
CBOC	**Ciudad Bolivar**	**3.42**	**57**	*eP*		**Pn**	**16 14 31.7**	**-1.9**
CBOC				*eS*		**Sn**	**16 15 12.0**	**-1.9**
CBOC				*i*			16 15 26.3	
	comp=Z,131nm,0.5s							
ANIL	**Santa Ana**	**3.51**	**82**	*eP*		**Pn**	**16 14 35.0**	**-0.1**
ANIL				*eS*		**Sn**	**16 15 13.7**	**-2.8**
ANIL				*i*			16 15 19.7	
	comp=Z,930nm,0.4s							
BETC	**Betania**	**3.68**	**111**	*eP*		**Pn**	**16 14 38.6**	**+1.5**
BETC				*eS*		**Sn**	**16 15 20.6**	**+0.4**
BETC				*i*			16 15 24.3	
	comp=Z,507nm,0.6s							
CUSE	**Cuicocha Este**	**3.69**	**172**	*eP*		**Pn**	**16 14 35.6**	**-2.1**
CUSE				*eS*		**Sn**	**16 15 17.2**	**-3.9**
PAC1	**Pacto, Paraso**	**3.70**	**178**	*eP*		**Pn**	**16 14 35.2**	**-2.3**
PAC1				*eS*		**Sn**	**16 15 16.7**	**-4.2**
GUY2C	**Guyana, Caldas**	**3.72**	**71**	*eP*		**Pn**	**16 14 37.4**	**-0.7**
GUY2C				*eS*		**Sn**	**16 15 19.4**	**-2.4**
GUY2C				*i*			16 15 27.3	
	comp=Z,316nm,0.5s							
IMBA	**Imbabura, San**	**3.75**	**169**			**Pn**	**16 14 41.1**	**+2.5**
OTAV	**Otavalo**	**3.75**	**173**			**Pn**	**16 14 37.3**	**-1.2**
GARC	**Garzon, Huila**	**3.83**	**118**	*iP*		**Pn**	**16 14 40.4**	**+0.9**
GARC				*eS*		**Sn**	**16 15 23.6**	**-0.7**
GARC				*i*			16 15 25.1	
	comp=Z,374nm,0.3s							
CACAO	**El Cacao, Vera**	**3.87**	**330**	*eP*		**Pn**	**16 14 38.4**	**-1.3**
CACAO				*eS*		**Sn**	**16 15 20.2**	**-4.5**
CACAO	**El Cacao, Vera**	**3.87**	**330**	*eP*		**Pn**	**16 14 37.6**	**-2.1**
CACAO				*eS*		**Sn**	**16 15 19.8**	**-5.0**
PULU	**Pululahua**	**3.96**	**174**			**Pn**	**16 14 42.4**	**+1.0**
HELC	**Santa Helena**	**4.00**	**57**	*eP*		**Pn**	**16 14 40.9**	**-0.9**
HELC				*eS*		**Sn**	**16 15 26.4**	**-2.1**
HELC				*i*			16 15 34.0	
	comp=Z,82nm,0.5s							
PRAC	**Prado**	**4.00**	**94**	*iP*		**Pn**	**16 14 42.4**	**+0.8**
PRAC				*eS*		**Sn**	**16 15 24.6**	**-3.6**
PRAC				*i*			16 15 32.1	
	comp=Z,370nm,0.4s							
DBBC	**Dabeiba**	**4.02**	**41**	*eP*		**Pn**	**16 14 41.2**	**-0.7**
DBBC				*eS*		**Sn**	**16 15 26.6**	**-2.0**
AZU	**Azuero**	**4.02**	**340**	*eP*		**Pn**	**16 14 41.0**	**-0.8**
AZU				*eS*		**Sn**	**16 15 23.9**	**-4.6**
AZU	**Azuero**	**4.02**	**340**	*eP*		**Pn**	**16 14 40.2**	**-1.6**
AZU				*eS*		**Sn**	**16 15 23.9**	**-4.6**
FLOC	**Florencia**	**4.02**	**126**	*eP*		**Pn**	**16 14 42.2**	**+0.4**
FLOC				*eS*		**Sn**	**16 15 28.3**	**-0.4**
NORC	**Norcasia**	**4.30**	**69**	*eP*		**Pn**	**16 14 46.5**	**+0.8**
NORC				*eS*		**Sn**	**16 15 33.0**	**-2.6**
ROSC	**El Rosal**	**4.63**	**79**	Pn		**Pn**	**16 14 52.7**	**+2.1**
	comp=Z,31nm,0.3s,baz=5.4,slow=6.4,SNR=16							
ROSC				Sn		**Sn**	**16 15 44.4**	**+0.2**
	comp=Z,13nm,0.3s,baz=342,slow=20,SNR=1.4							
	comp=Z,87nm,0.4s							
ROSC	**El Rosal**	**4.63**	**79**	Pn		**Pn**	**16 14 52.6**	**+2.0**
ROSC	**El Rosal**	**4.63**	**79**	*eP*		**Pn**	**16 14 53.5**	**+2.9**
ROSC				*eS*		**Sn**	**16 15 41.4**	**-2.8**
SLOR	**San Lorenzo -**	**4.71**	**175**			**Pn**	**16 14 54.2**	**+2.5**
CAPC	**Capurgana**	**4.86**	**18**	*eP*		**Pn**	**16 14 52.2**	**-1.2**
CAPC				*eS*		**Sn**	**16 15 46.3**	**-3.0**
UPA	**Univ. de Panam**	**5.00**	**353**	*eP*		**Pn**	**16 14 54.4**	**-0.8**
UPA				*eS*		**Sn**	**16 15 52.0**	**-0.7**
UPA				*i*			16 15 55.9	
	comp=Z,34nm,0.5s							
UPA	**Univ. de Panam**	**5.00**	**353**	*eP*		**Pb**	**16 15 05.6**	**-2.5**
UPA				*eS*		**Sn**	**16 15 49.9**	**-2.8**
UREC	**San Jos de Ur**	**5.01**	**42**	*eP*		**Pn**	**16 14 57.1**	**+1.7**
UREC				*eS*		**Sn**	**16 15 51.0**	**-2.0**
UREC				*i*			16 16 08.5	
	comp=Z,37nm,0.5s							
SPBC	**San Pablo de B**	**5.08**	**71**	*eP*		**Pn**	**16 14 57.7**	**+1.3**
SPBC				*eS*		**Sn**	**16 15 54.1**	**-0.7**
PTBC	**PUERTO BERRIO,**	**5.09**	**60**	*eP*		**Pn**	**16 14 57.2**	**+0.6**
PTBC				*eS*		**Sn**	**16 15 54.7**	**-0.3**
PTBC				*i*			16 15 59.9	
	comp=Z,62nm,0.6s							
CHIC	**Chingaza**	**5.18**	**83**	*eP*		**Pn**	**16 15 00.3**	**+2.1**
CHIC				*eS*		**Sn**	**16 15 59.5**	**+1.7**
CHIC				*i*			16 16 01.5	
	comp=Z,66nm,0.4s							
VILC	**Villavicencio,**	**5.18**	**88**	*eP*		**Pn**	**16 14 59.9**	**+2.0**
VILC				*eS*		**Sn**	**16 15 58.3**	**+0.9**
VILC				*i*			16 16 02.5	
	comp=Z,329nm,0.5s							
BCIP	**Isla Barro Col**	**5.23**	**350**			**Pn**	**16 15 02.3**	**+3.9**
ZARC	**Zaragoza, Cauc**	**5.31**	**49**	*eP*		**Pn**	**16 15 01.8**	**+2.2**
ZARC				*eS*		**Sn**	**16 15 58.0**	**-2.3**
ZARC				*i*			16 16 03.5	
	comp=Z,46nm,0.4s							
MACC	**Macarena, Meta**	**5.36**	**110**	*eP*		**Pn**	**16 15 01.0**	**+0.8**
MACC				*eS*		**Sn**	**16 15 58.7**	**-2.9**
PORT	**Chimborazo Vol**	**5.42**	**179**			**Pn**	**16 15 03.5**	**+1.9**
LCBC	**Los crdobas,**	**5.45**	**27**	*eP*		**Pn**	**16 15 00.9**	**-0.5**
LCBC				*eS*		**Sn**	**16 16 01.8**	**-1.9**
PTLC	**Puerto Leguiza**	**5.58**	**133**	*eP*		**Pn**	**16 15 06.1**	**+2.8**
PTLC				*eS*		**Sb**	**16 16 26.2**	**+1.6**
PTLC				*i*			16 16 36.5	
	comp=Z,47nm,0.6s							
BRRC	**Barranca, Sant**	**6.01**	**59**	*eP*		**Pn**	**16 15 07.6**	**-1.6**
BRRC				*eS*		**Sn**	**16 16 14.7**	**-3.0**
BRRC				*i*			16 16 29.8	
	comp=Z,38nm,0.5s							
RUSC	**La Rusia**	**6.08**	**72**	*eP*		**Pn**	**16 15 13.5**	**+2.8**
RUSC				*eS*		**Sn**	**16 16 17.4**	**-2.8**
BARC	**Barichara**	**6.24**	**65**	*eP*		**Pn**	**16 15 11.7**	**-0.9**
BARC				*eS*		**Sn**	**16 16 20.9**	**-2.8**
SRBA	**San Rafael, Bu**	**6.84**	**320**			**Pn**	**16 15 21.9**	**+1.1**
SJCC	**San Jacinto, C**	**6.93**	**32**	*eP*		**Pn**	**16 15 22.1**	**+0.3**
SJCC				*eS*		**Sn**	**16 16 38.2**	**-2.2**
SJCC				*i*			16 16 44.5	
	comp=Z,6.8nm,0.5s							
OCAC	**Ocana**	**6.96**	**52**	*eP*		**Pn**	**16 15 24.9**	**+2.5**
OCAC				*eS*		**Sn**	**16 16 38.6**	**-2.7**
PAMC	**Pamplona, Colo**	**7.00**	**61**	*eP*		Pn	16 15 17.1	-6.1
PAMC				*eS*		**Sn**	**16 16 40.0**	**-2.7**
BOSC	**San Juan Bosco**	**7.11**	**177**	Pn		**Pn**	**16 15 27.9**	**+3.5**
TAMC	**Tame, Arauca**	**7.47**	**71**	*eP*		**Pn**	**16 15 28.4**	**-0.9**
TAMC				*eS*		**Sn**	**16 16 50.2**	**-3.6**
RIMA	**Rio Macho**	**7.57**	**320**			**Pn**	**16 15 32.0**	**+1.2**
CVTR	**Volcan Turrial**	**7.70**	**321**			**Pn**	**16 15 37.0**	**+4.2**
SOCV	**Socops**	**9.05**	**62**	*eP*		**Pn**	**16 15 49.4**	**-1.6**
SOCV				*eS*		**Sn**	**16 17 29.4**	**-3.3**
SDV	**Santo Domingo**	**9.54**	**59**	Pn		**Pn**	**16 15 58.7**	**+0.9**
	comp=Z,12nm,0.3s,baz=126,slow=5.7,SNR=16							
SDV				Sn		**Sn**	**16 17 42.7**	**-2.1**
	comp=Z,4.8nm,0.3s,baz=252,slow=20,SNR=4.0							
SDV				LR		LR	16 20 10.8	
	comp=Z,315nm,20.1s,baz=226,slow=41							
	comp=Z,27nm,0.4s							
SDV	**Santo Domingo**	**9.54**	**59**	Pn		**Pn**	**16 15 58.0**	**+0.2**
ATAH	**Atahualpa**	**11.06**	**177**	Pn		**Pn**	**16 16 20.1**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=19,slow=14,SNR=2.3							
ATAH				Sn		**Sn**	**16 18 20.4**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=78,slow=18,SNR=2.2							
ATAH				LR		LR	16 21 01.2	
	comp=Z,482nm,19.6s,baz=1.1,slow=40							
	comp=Z,2.6nm,0.4s							
BAUV	**El Baul**	**11.85**	**65**	Pn		**Pn**	**16 16 26.6**	**-2.7**
BIRV	**Birongo**	**14.07**	**62**			**Pn**	**16 16 56.9**	**-2.8**
NNA	**Nana**	**16.00**	**173**	Pn		**P**	**16 17 30.1**	**+1.1**
	comp=Z,8.4nm,0.3s,baz=351,slow=11,SNR=20							
SDDR	**Presa de Saban**	**16.65**	**26**	P		**P**	**16 17 36.5**	**+0.4**
DR12	**Loma Pena Alta**	**17.40**	**32**			**Pn**	**16 17 43.3**	**+0.2**
AOPR	**Arecibo Observ**	**18.56**	**39**	P		**P**	**16 17 56.3**	**-0.9**
SJG	**San Juan**	**18.77**	**41**	P		**Pn**	**16 18 00.6**	**+0.6**
	comp=Z,11nm,0.8s,baz=222,slow=13,SNR=3.4							
GCPR	**Guaynabo City**	**18.96**	**40**	P		**P**	**16 17 59.1**	**-2.4**
HUMP	**Col San Antoni**	**18.99**	**41**	P		**Pn**	**16 18 02.8**	**+0.2**
HUMP				IAmb		IAmb	16 18 11.4	
	comp=Z,50nm,0.8s							
CBYP	**Canovanas**	**19.08**	**41**	P		**Pn**	**16 18 04.8**	**+1.0**
MACA	**Manacapuru-AM**	**19.53**	**111**			**P**	**16 18 06.0**	**-1.8**
MACA				IAmb		IAmb	16 18 08.5	
	comp=Z,105nm,0.8s							
STVI	**Saint Thomas**	**19.74**	**43**	P		**P**	**16 18 09.5**	**-0.5**
STVI				IAmb		IAmb	16 18 19.2	
	comp=Z,30nm,0.9s							
SAML	**Samuel**	**20.26**	**129**	P		**P**	**16 18 14.2**	**-1.6**
SAML				IAmb		IAmb	16 18 17.4	
	comp=Z,80nm,1.5s							

CMIG	**Matias Romero**	**20.39**	**311**	P		**P**	**16 18 17.9**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=105,slow=12,SNR=3.3							
	comp=Z,1.0nm,0.4s							
GDHS	**Morne Mazeau,**	**20.78**	**53**	P		**P**	**16 18 21.4**	**-0.1**
LPAZ	**La Paz**	**22.79**	**152**	P		**P**	**16 18 43.5**	**-0.1**
	comp=Z,12nm,0.8s,baz=340,slow=14,SNR=6.9							
	comp=Z,12nm,0.8s							
MDP	**Montagnes des**	**26.19**	**87**	P		**P**	**16 19 15.9**	**+0.9**
	comp=Z,5.0nm,0.6s,baz=259,slow=9.8,SNR=7.0							
	comp=Z,5.0nm,0.6s							
SIV	**San Ignacio**	**26.55**	**139**	P		**P**	**16 19 18.6**	**+0.4**
	comp=Z,16nm,0.8s,baz=324,slow=8.7,SNR=2.0							
	comp=Z,16nm,0.8s							
LRAL	**Lakeview Retre**	**29.87**	**346**	P		**P**	**16 19 48.5**	**+0.8**
LRAL				IAmb		IAmb	16 19 50.2	
	comp=Z,11nm,0.8s							
BG3	**Lake Jocassee**	**31.08**	**354**	P		**P**	**16 19 59.6**	**+1.2**
BG3				IAmb		IAmb	16 20 01.1	
	comp=Z,7.4nm,0.8s							
W50A	**Signal Mountai**	**31.62**	**350**	P		**P**	**16 20 04.9**	**+1.8**
W50A				IAmb		IAmb	16 20 07.0	
	comp=Z,14nm,1.4s							
CPCT	**Cooper Cave**	**31.73**	**351**	P		**P**	**16 20 05.2**	**+1.0**
CPCT				IAmb		IAmb	16 20 06.9	
	comp=Z,7.9nm,0.8s							
TKL	**Tuckaleechee C**	**31.83**	**352**	P		**P**	**16 20 06.6**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=121,slow=4.4,SNR=3.9							
	comp=Z,2.4nm,0.8s							
WVT	**Waverly**	**33.03**	**347**	P		**P**	**16 20 14.8**	**-0.6**
WVT				IAmb		IAmb	16 20 16.2	
	comp=Z,5.5nm,0.7s							
TXAR	**Lajitas Array**	**34.45**	**320**	P		**P**	**16 20 29.7**	**+1.6**
	comp=Z,1.3nm,0.9s,baz=140,slow=9.9,SNR=6.9							
	comp=Z,1.3nm,0.9s							
FVM	**French Village**	**35.44**	**344**	P		**P**	**16 20 34.8**	**-1.6**
CCM	**Cathedral Cave**	**35.74**	**343**	P		**P**	**16 20 38.2**	**-0.6**
121A	**Cookes Peak, D**	**39.22**	**320**	P		**P**	**16 21 11.6**	**+2.9**
121A				IAmb		IAmb	16 21 17.3	
	comp=Z,18nm,0.8s							
J59A	**Piesco**	**39.50**	**5**	P		**P**	**16 21 12.3**	**+1.5**
ANMO	**Albuquerque**	**40.01**	**324**	P		**P**	**16 21 16.8**	**+1.5**
ECSD	**EROS Data Cent**	**42.57**	**341**	P		**P**	**16 21 34.6**	**-1.4**
PV15	**Paradox Valley**	**43.54**	**326**	P		**P**	**16 21 46.1**	**+1.9**
PV15				IAmb		IAmb	16 21 48.1	
	comp=Z,17nm,1.1s							
F36A	**Milaca**	**43.62**	**345**	P		**P**	**16 21 43.5**	**-1.0**
F36A				IAmb		IAmb	16 21 44.7	
	comp=Z,10nm,0.8s							
PLCA	**Paso Flores**	**45.16**	**171**	P		**P**	**16 21 57.8**	**+0.9**
	comp=Z,12nm,0.7s,baz=347,slow=8.9,SNR=37							
	comp=Z,12nm,0.7s							
PLCA	**Paso Flores**	**45.16**	**171**	P		**P**	**16 21 57.9**	**+1.0**
SRU	**San Rafael Swe**	**45.23**	**325**	P		**P**	**16 21 59.8**	**+2.1**
SRU				IAmb		IAmb	16 22 00.9	
	comp=Z,8.7nm,0.8s							
P18A	**Preston Nutter**	**45.43**	**326**	P		**P**	**16 22 00.9**	**+1.5**
P18A				IAmb		IAmb	16 22 37.3	
	comp=Z,9.8nm,1.1s							
RSSD	**Black Hills**	**45.71**	**335**	P		**P**	**16 22 03.4**	**+2.0**
YKA	**Yellowknife Ar**	**64.07**	**342**	P		**P**	**16 24 13.1**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=123,slow=6.5,SNR=6.0							
	comp=Z,2.6nm,0.9s							
DLBC	**Dease Lake**	**67.17**	**334**			**P**	**16 24 34.9**	**+0.9**
M30M	**Minto, Yukon**	**72.14**	**336**	P		**P**	**16 25 05.0**	**+0.5**
M30M				IAmb		IAmb	16 25 06.9	
	comp=Z,5.0nm,0.8s							
SUMG	**Summit**	**72.86**	**12**	P		**P**	**16 25 09.3**	**+0.2**
BCAR	**Beaver Creek A**	**74.42**	**335**	P		**P**	**16 25 20.0**	**+2.0**
L27K	**Beaver Creek,**	**74.44**	**335**	P		**P**	**16 25 20.1**	**+2.1**
L27K				IAmb		IAmb	16 25 20.9	
	comp=Z,6.6nm,0.8s							
DOT	**Dot Lake**	**75.59**	**335**	P		**P**	**16 25 25.8**	**+1.1**
DOT				IAmb		IAmb	16 25 27.1	
	comp=Z,8.1nm,0.8s							
SCRK	**Sand Creek**	**75.68**	**336**	P		**P**	**16 25 26.0**	**+0.7**
ILAR	**Eielson Array**	**77.14**	**336**	P		**P**	**16 25 33.4**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=108,slow=4.7,SNR=9.1							
	comp=Z,1.4nm,0.8s							
RND	**Reindeer**	**77.55**	**334**	P		**P**	**16 25 36.6**	**+0.7**
RND				IAmb		IAmb	16 25 38.0	
	comp=Z,7.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**79.94**	**77**	P		**P**	**16 25 49.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=273,slow=5.5,SNR=1.6							
	comp=Z,0.4nm,0.6s							
SNAA	**Sanae**	**89.40**	**162**	PKKPdf		**P**	**16 26 36.7**	**+0.2**
SNAA	**Sanae**	**89.40**	**162**	P		**P**	**16 26 36.5**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=268,slow=6.6,SNR=14							
	comp=Z,1.4nm,0.6s							
ARCES	**ARCESS Array B**	**91.29**	**20**	P		**P**	**16 26 44.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=290,slow=4.5,SNR=5.4							
	comp=Z,0.9nm,0.6s							
ASAR	**Alice Springs**	**142.80**	**235**	PKhKP	PKPpre		16 33 09.2	
	comp=Z,0.9nm,0.8s,baz=121,slow=3.7,SNR=11							
ASAR				PKP		**PKPdf**	**16 33 13.7**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=120,slow=3.8,SNR=4.8							
WRA	**Warramunga Arr**	**143.95**	**241**	PKhKP	PKPpre		16 33 13.7	
	comp=Z,5.0nm,1.0s,baz=108,slow=3.5,SNR=20							
CMAR	**Chiang Mai Arr**	**157.59**	**5**	PKPab		**PKPab**	**16 34 08.3**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=340,slow=5.1,SNR=5.4							

*IDC **20** 16:25:31.8±1.6, 40.33N×143.70E, h0km, mb3.4/4, mbtmp3.4/5, ML2.3/1, Error ellipse: s-maj=39.5km s-min=29.6km az=117.0*
*JMA **20** 16:25:35.1±0.3, 40.4N±0.6×144.4E±, h25km±4km, MV3.3/33, FAR E OFF SANRIKU*
ISC 20 16:25:33.8±1.0, 40.39N±0.05×143.79E±0.06, h16km, n21, σ0s99/36, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTH	**Tanohata**	**1.54**	**254**	P		**Pn**	**16 26 00.3**	**-0.3**
JTH				*eS*		**Sn**	**16 26 18.6**	**-1.7**
JKEN	**Kujiedanarisaw**	**1.60**	**264**	*eP*		**Pn**	**16 26 01.2**	**-0.2**
JKEN				*eS*		**Sn**	**16 26 19.7**	**-2.0**
JEM	**Erimo**	**1.69**	**344**	*eP*		**Pn**	**16 26 03.0**	**+0.4**
JEM				*eS*		**Sn**	**16 26 23.9**	**-0.2**
MIYJ	**Miyakonagasawa**	**1.72**	**242**	*eP*		**Pn**	**16 26 03.3**	**+0.3**
MIYJ				*eS*		**Sn**	**16 26 23.8**	**-0.7**
JANG	**Nango**	**1.74**	**270**	P		**Pn**	**16 26 03.2**	**-0.1**
JANG				*eS*		**Sn**	**16 26 23.9**	**-1.2**
JNBK	**Urakawa-nobuka**	**2.04**	**338**	*eP*		**Pn**	**16 26 08.9**	**+1.4**
JNBK				S		**Sb**	**16 26 34.5**	**-1.2**
JTM	**Tenmabayashi**	**2.11**	**282**	*eP*		**Pn**	**16 26 09.2**	**+0.8**
JTM				*eS*		**Sn**	**16 26 34.5**	**+0.2**
JOM	**Ohasama**	**2.13**	**245**	P		**Pn**	**16 26 09.4**	**+0.8**
JOM				*eS*		**Sn**	**16 26 35.1**	**+0.4**
JCH	**Churui**	**2.25**	**352**	P		**Pn**	**16 26 10.7**	**+0.4**
JCH				*eS*		**Sn**	**16 26 37.7**	**0.0**
JOT	**Ohata**	**2.30**	**296**	*eP*		**Pn**	**16 26 11.7**	**+0.7**
JOT				*eS*		**Sn**	**16 26 38.0**	**-1.0**
JMK	**Ichinoseki**	**2.45**	**235**	P		**Pn**	**16 26 13.8**	**+0.7**
JMK				*eS*		**Sn**	**16 26 41.9**	**-0.7**
JAK	**Akkeshi**	**2.69**	**14**	*eP*		**Pn**	**16 26 17.1**	**+0.7**
JAK				*eS*		**Sn**	**16 26 47.5**	**-1.2**
JAR	**Ashorobuto**	**2.91**	**360**	P		**Pn**	**16 26 19.4**	**+0.1**
JAR				*eS*		**Sn**	**16 26 52.4**	**-1.5**
JEW	**Eniwo**	**3.01**	**325**	*eS*		**Sn**	**16 26 58.0**	**+1.5**
JYK	**Kaneyama**	**3.03**	**242**	*eP*		**Pn**	**16 26 22.5**	**+1.4**
JYK				*eS*		**Sn**	**16 26 57.3**	**+0.3**
NEM2	**Nemuro 2**	**3.31**	**25**	P		**Pn**	**16 26 25.1**	**+0.2**
NEM2				*eS*		**Sn**	**16 27 02.1**	**-1.9**
MJAR	**Matsushiro Arr**	**5.82**	**231**	Pn		**Pn**	**16 26 59.5**	**0.0**
	0.1nm,0.3s,baz=42,slow=11,SNR=12							
	1.9nm,0.7s							
MKAR	**Manchi Array**	**43.99**	**300**	P		**P**	**16 33 39.6**	**-0.7**
	0.2nm,0.7s,baz=72,slow=4.7,SNR=2.8							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**45.48**	**306**	P		**P**	**16 33 52.5**	**+0.6**
	0.5nm,0.5s,baz=78,slow=8.7,SNR=4.9							
	0.5nm,0.5s							
ILAR	**Eielson Array**	**45.67**	**34**	P		**P**	**16 33 54.8**	**+1.4**
	0.3nm,0.7s,baz=256,slow=6.6,SNR=4.1							
	0.3nm,0.7s							
WRA	**Warramunga Arr**	**60.66**	**190**	P		**P**	**16 35 43.6**	**-0.5**
	0.5nm,0.9s,baz=7.6,slow=6.9,SNR=2.2							
	0.5nm,0.9s							

*NEIC **20** 16:26:10.4±1.2, 55.42S±0.10×28.2W±0.2, h10km±2km, mb4.3/5, Error ellipse: s-maj=24.3km s-min=12.6km az=57.0*
*IDC **20** 16:26:10.0±0.9, 55.24S×28.14W, h0km, mb4.2/5, mbtmp4.3/6, ML4.2/1, Error ellipse: s-maj=37.9km s-min=20.3km az=73.0*
ISC 20 16:26:10.5±0.8, 55.4S±0.1×28.1W±0.1, h10km, n18, σ1s51/15, mb4.3/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**4.96**	**279**	Pn		**Pn**	**16 27 24.4**	**-0.6**
ORCD	**Orcadas**	**10.30**	**232**	Pn		**Pn**	**16 28 37.7**	**-0.4**
VNA1	**Neumayer--Stat**	**17.61**	**158**	PKPdf		**Pn**	**16 30 14.3**	**-1.4**
SNAA	**Sanae**	**19.57**	**156**	P		**Pn**	**16 30 40.5**	**+1.0**
	0.7nm,0.3s,baz=286,slow=14,SNR=6.5							
	32nm,1.1s							
SNAA	**Sanae**	**19.57**	**156**	P		**P**	**16 30 34.6**	**-3.6**
SNAA				IAmb		IAmb	16 30 36.7	
	comp=Z,30nm,1.1s							
QSPA	**South Pole Qui**	**34.87**	**180**	P		**P**	**16 33 03.6**	**+2.0**
	comp=Z,2.3nm,0.6s,baz=14,slow=2.8,SNR=10.0							
	comp=Z,2.3nm,0.6s							
QSPA	**South Pole Qui**	**34.87**	**180**	P		**P**	**16 33 01.6**	**-0.1**
CPUP	**Villa Florida**	**35.97**	**312**	P		**P**	**16 33 10.8**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=137,slow=6.3,SNR=4.4							
	comp=Z,2.7nm,0.7s							
CPUP	**Villa Florida**	**35.97**	**312**	P		**P**	**16 33 10.3**	**-1.0**
CPUP				IAmb		IAmb	16 33 50.3	
	comp=Z,5.9nm,1.3s							
VNDA	**Vanda**	**47.22**	**183**	P		**P**	**16 34 45.0**	**+2.2**
	comp=Z,1.3nm,0.7s,baz=198,slow=6.9,SNR=7.2							
	comp=Z,1.3nm,0.7s							
H10N1	**ASCENSION HYDR**	**48.63**	**18**	T		T	17 27 12.1	
	baz=190							
H10N3	**ASCENSION HYDR**	**48.64**	**18**	T		T	17 27 12.2	
	baz=190,slow=74							
H10N2	**ASCENSION HYDR**	**48.65**	**18**	T		T	17 27 13.6	
	baz=190,slow=74							
LPAZ	**La Paz**	**49.56**	**306**	P		**P**	**16 35 02.8**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=171,slow=6.1,SNR=5.3							
	comp=Z,2.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**72.74**	**30**	P		**P**	**16 37 39.2**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=204,slow=6.6,SNR=8.5							
	comp=Z,1.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**72.74**	**30**	P		**P**	**16 37 38.7**	**0.0**
TORD				IAmb		IAmb	16 38 01.7	
	comp=Z,3.2nm,1.2s							
ILAR	**Eielson Array**	**149.28**	**313**	PKPbc		**PKiKP**	**16 45 58.8**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=135,slow=2.4,SNR=47							
SONM	**Songino Array**	**151.21**	**86**	PKPbc		**PKiKP**	**16 46 03.9**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=216,slow=3.4,SNR=6.5							

*IDC **20** 16:28:11.2±0.4, 40.30N×143.66E, h0km, mb4.9/31, mbtmp4.8/35, ML3.4/3, MS4.8/21, Error ellipse: s-maj=13.1km s-min=11.0km az=99.0*
*MOS **20** 16:28:11.3±1.1, 40.34N×143.61E, h11km, mb5.6/66, MS4.9/12, Error ellipse: s-maj=6.1km s-min=3.6km az=113.1*
*BJI **20** 16:28:12.7±0.0, 40.27N×143.25E, h10km, mb5.2/72, mB5.9/21, Ms5.5/22, Ms7 5.2/21*
*JMA **20** 16:28:12.1±0.4, 40.3N±0.6×144.4E±, h8km±4km, MD5.3/37, MW5.2/37, FAR E OFF SANRIKU*
JMA Felt I J1 at FAR E OFF SANRIKU .
*NIED **20** 16:28:12.1, 40.31N×143.65E, h8km, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr4.09; Mθθ1.

JOB Onbets 2.57 3 A A 16 28 55.5
comp=Z,43nm,3.7s,comp=Z,46nm,2.3s
JSI2 Shiura 2 2.59 287 A A 16 28 55.1
comp=Z,51nm,2.1s,comp=Z,38nm,1.7s
JBT2 Biratori 2 2.63 338 A A 16 28 56.1
comp=Z,30nm,4.1s,comp=Z,24nm,3.9s
JIAM Iburiatsuma 2.64 331 A A 16 28 56.1
comp=Z,69nm,6.0s,comp=Z,101nm,6.1s
JIKH Ishinomakikobu 2.65 221 A A 16 28 55.8
comp=Z,27nm,3.7s,comp=Z,24nm,13.3s
JNTW Noshirotokiwa 2.69 270 A A 16 28 56.5
comp=Z,168nm,1.8s,comp=Z,170nm,1.9s
JSR Shiriuchi 2.74 297 A A 16 28 57.5
comp=Z,24nm,2.8s,comp=Z,26nm,2.2s
JOFO Osakifurukawao 2.75 232 A A 16 28 57.1
comp=Z,272nm,3.5s,comp=Z,197nm,2.3s
JAK Akkeshi 2.77 16 A A 16 28 58.4
comp=Z,17nm,5.9s,comp=Z,22nm,3.0s
JYW Yuwa 2.78 255 A A 16 28 57.6
comp=Z,78nm,1.7s,comp=Z,100nm,1.6s
JIW Iwasaki 2.81 276 A A 16 28 58.3
comp=Z,33nm,7.4s,comp=Z,31nm,4.3s
JNB Noboribetsu 2.91 318 A A 16 29 00.1
comp=Z,13nm,1.7s,comp=Z,15nm,2.7s
JYK Kaneyama 2.92 242 *i* P **Pn 16 28 59.8 +0.5**
JYK Kaneyama 2.92 242 A A 16 28 59.8
comp=Z,34nm,4.8s,comp=Z,42nm,3.9s
JFR Furan 2.94 344 A A 16 29 00.7
comp=Z,16nm,2.0s,comp=Z,17nm,4.2s
JAR Ashorobuto 2.96 1 A A 16 29 01.1
comp=Z,23nm,2.9s,comp=Z,19nm,1.6s
JKHN Kushirohamanak 2.96 22 A A 16 29 01.1
comp=Z,20nm,2.1s,comp=Z,16nm,5.2s
JEW Eniwo 3.01 327 Pn **Pn 16 29 01.8 +1.3**
JEW Eniwo 3.01 327 A A 16 29 01.5
comp=Z,56nm,2.2s,comp=Z,58nm,3.7s
JOMM Oshimamsumae 3.02 294 A A 16 29 01.4
comp=Z,18nm,8.1s,comp=Z,20nm,3.1s
JOU Okura 3.05 231 A A 16 29 01.5
comp=Z,53nm,3.4s,comp=Z,61nm,2.4s
JYM2 Yakumo 2 3.07 307 A A 16 29 02.1
comp=Z,18nm,2.5s,comp=Z,18nm,5.8s
JYYZ Yamagatayuza 3.17 247 A A 16 29 03.3
comp=Z,71nm,2.9s,comp=Z,104nm,2.3s
JMM Marumori 3.33 223 Pn **Pn 16 29 03.2 -1.7**
JMM Marumori 3.33 223 A A 16 29 05.5
comp=Z,18nm,5.1s,comp=Z,14nm,1.9s
JNK Nakash 3.34 13 A A 16 29 06.5
comp=Z,8.0nm,8.5s,comp=Z,8.0nm,5.9s
JAB Ashibetsu 3.35 342 A A 16 29 06.5
comp=Z,31nm,3.9s,comp=Z,36nm,3.8s
JTB Tobi-shima 3.37 252 A A 16 29 06.2
comp=Z,30nm,4.4s,comp=Z,29nm,3.5s
JISS Ishikarishitsu 3.39 331 A A 16 29 06.8
comp=Z,53nm,2.6s,comp=Z,67nm,4.5s
JMST Minamisoumatoc 3.39 221 A A 16 29 06.3
comp=Z,17nm,2.7s,comp=Z,20nm,3.0s
NMR Nemuro--Hokkai 3.40 26 *e*P **Pn 16 29 05.7 -0.1**
NMR *e*S **Sn 16 29 42.1 -3.6**
NEM2 Nemuro 2 3.40 26 A A 16 29 07.3
comp=Z,15nm,0.9s,comp=Z,12nm,0.7s
JYS Shirataka 3.51 234 A A 16 29 08.0
comp=Z,52nm,1.7s,comp=Z,49nm,3.5s
JYA Atsumi 3.52 242 A A 16 29 08.3
comp=Z,42nm,1.1s,comp=Z,51nm,2.1s
JHST Hiyamasetana 3.54 307 A A 16 29 08.8
comp=Z,18nm,2.4s,comp=Z,20nm,2.6s
JOG3 Oga3 3.55 265 A A 16 29 00.8
comp=Z,51nm,2.5s,comp=Z,49nm,3.1s
JSH Shimam 3.57 311 A A 16 29 09.3
comp=Z,8.0nm,2.9s,comp=Z,10.0nm,5.3s
JNSB Nemuroshibetsu 3.58 16 A A 16 29 09.8
comp=Z,19nm,3.4s,comp=Z,20nm,3.8s
JKK2 Kamakawa 2 3.60 349 A A 16 29 10.1
comp=Z,13nm,4.4s,comp=Z,13nm,2.7s
JTKR Abashiri--Toko 3.64 3 A A 16 29 10.7
comp=Z,10.0nm,9.3s,comp=Z,7.0nm,6.8s
JYAR Yonezawaarcadi 3.66 230 A A 16 29 10.2
comp=Z,49nm,1.2s,comp=Z,40nm,1.4s
JMP Maruseppu 3.68 356 A A 16 29 11.2
comp=Z,11nm,2.9s,comp=Z,10.0nm,1.9s
JFK Kawauchi 3.68 217 A A 16 29 10.5
comp=Z,14nm,6.6s,comp=Z,13nm,2.9s
JHR Hokuryu 3.71 338 A A 16 29 11.5
comp=Z,41nm,2.6s,comp=Z,37nm,3.2s
JFT Otama 3.83 224 A A 16 29 12.6
comp=Z,29nm,4.4s,comp=Z,31nm,2.4s
JSK Shakotan 3.85 323 A A 16 29 13.3
comp=Z,12nm,3.4s,comp=Z,11nm,4.0s
ASAJ Asahikawa 3.87 348 A A 16 29 13.8
comp=Z,11nm,4.0s,comp=Z,10.0nm,3.0s
JAW Awa shima 3.91 243 A A 16 29 13.7
comp=Z,35nm,4.4s,comp=Z,31nm,6.1s
ONAJ Iwakiizushiy 3.93 210 A A 16 29 14.0
comp=Z,14nm,2.9s,comp=Z,13nm,3.6s
RUSJ Misakicho 3.95 17 *e*P **Pn 16 29 14.1 +0.8**
RUSJ *e*S **Sn 16 29 59.6 +0.4**
YUK Yuzh-Kuril'sk 4.04 23 *e*P **Pn 16 29 14.1 -0.5**
YUK *e*S **Sn 16 29 58.7 -2.8**
YUK pmax pmax
comp=N,428nm,0.4s
YUK pmax pmax
comp=E,489nm,0.4s
YUK pmax pmax
comp=Z,783nm,0.4s
YUK smax smax
comp=E,5μm,0.5s
YUK smax smax
comp=N,4μm,0.4s
JFFD Fukushimafurud 4.05 218 A A 16 29 15.7
comp=N,17nm,5.5s,comp=N,12nm,2.5s
JNS Sasagawa 4.22 235 A A 16 29 18.1
comp=N,18nm,5.7s,comp=N,28nm,6.5s
JFY Yanaizu 4.26 228 A A 16 29 18.6
comp=N,15nm,6.9s,comp=N,16nm,11.1s
JYG Yagishiri 4.42 339 A A 16 29 21.5
comp=N,14nm,5.0s,comp=N,10.0nm,3.7s
JSB Shiboa 4.46 222 A A 16 29 21.5
comp=N,28nm,2.4s,comp=N,26nm,5.4s
JHYU Hitachinakayam 4.67 212 A A 16 29 24.4
comp=N,14nm,5.3s,comp=N,10.0nm,3.9s
JSE Soyaes 4.69 350 A A 16 29 25.5
comp=N,9.0nm,5.2s,comp=N,7.0nm,3.2s
JUON Uonuma 4.77 231 A A 16 29 25.9
comp=N,12nm,4.4s,comp=N,12nm,7.7s
JIZZ Izumozaki 4.78 236 A A 16 29 25.9
comp=N,88nm,3.5s,comp=N,60nm,4.5s
JSD Sado 4.79 243 Pn **Pn 16 29 25.2 +0.2**
JSD Sado 4.79 243 A A 16 29 26.1
comp=N,11nm,3.9s,comp=N,17nm,3.7s
JYT Yasato 4.93 215 Pn **Pn 16 29 24.2 -2.6**
JKT Katashina 4.97 226 A A 16 29 28.6
comp=N,9.0nm,6.0s,comp=N,9.0nm,10.3s
JRR Rishiri 5.11 341 A A 16 29 31.2
comp=N,32nm,6.1s,comp=N,39nm,5.4s
JAG Ashikaga 5.12 222 A A 16 29 30.8
comp=N,8.0nm,6.4s,comp=N,8.0nm,9.3s
CHOJ Chosi 5.13 207 A A 16 29 30.9
comp=N,22nm,3.1s,comp=N,17nm,4.8s
JWK2 Keihoku 5.15 346 A A 16 29 31.9
comp=N,12nm,4.1s,comp=N,14nm,8.3s
JSMT Sanmumatsuo 5.33 210 A A 16 29 33.6
comp=N,64nm,4.8s,comp=N,48nm,4.3s
JJN Nakama 5.38 235 A A 16 29 34.5
comp=N,24nm,5.1s,comp=N,27nm,4.4s
JGK Kuni 5.46 228 A A 16 29 35.5
comp=N,11nm,2.3s,comp=N,17nm,5.2s
JRY Ryogami san 5.72 223 A A 16 29 39.1
comp=N,8.0nm,8.6s,comp=N,7.0nm,4.2s
MJAR Matsushiro Arr 5.72 230 Pn **Pn 16 29 37.0 -0.8**
comp=N,1.1nm,0.3s,baz=41,slow=11,SNR=116
MJAR LR LR 16 32 11.3
comp=N,8μm,20.6s,baz=184,slow=42
comp=N,256nm,1.0s
MJAR Matsushiro Arr 5.72 230 P **Pn 16 29 37.0 -0.8**
MAJO Matsushiro 5.72 230 Pn **Pn 16 29 38.5 +0.7**
MAJO Matsushiro 5.72 230 P **Pn 16 29 38.5 +0.7**
KUR Kuril'sk 5.79 31 *e*P **Pn 16 29 38.9 +0.3**
KUR *e*S **Sn 16 30 41.5 -3.0**
KUR pmax pmax
comp=Z,492nm,0.5s
KUR pmax pmax
comp=N,135nm,0.6s
KUR pmax pmax
comp=E,184nm,0.5s
KUR smax smax
comp=E,952nm,0.6s
KUR smax smax
comp=N,572nm,0.7s
JHG Hegura jima 5.81 247 A A 16 29 40.5
comp=N,6.0nm,4.9s,comp=N,6.0nm,9.3s
JNG Nsakai 5.88 230 A A 16 29 41.4
comp=N,12nm,7.2s,comp=N,11nm,4.9s
JYO Yokosk 6.01 213 A A 16 29 43.1
comp=N,31nm,2.6s,comp=N,25nm,5.5s
JTT Ttatey 6.21 235 A A 16 29 46.1
comp=N,10.0nm,2.6s,comp=N,12nm,6.9s
JOD2 Odawara 2 6.23 217 A A 16 29 46.2
comp=N,14nm,2.0s,comp=N,14nm,4.5s
JNT Takato 6.23 226 A A 16 29 46.4
comp=N,7.0nm,2.5s,comp=N,10.0nm,4.7s
JYN Shimob 6.30 222 A A 16 29 47.2
comp=N,16nm,9.6s,comp=N,12nm,4.4s
YSS Yuzh-Sakhalins 6.65 355 Pn **Pn 16 29 50.4 0.0**
YSS Yuzh-Sakhalins 6.65 355 *e*P **Pn 16 29 51.6 +1.1**
YSS *e*S **Sn 16 31 06.0 +0.1**
YSS pmax pmax
comp=Z,80nm,1.4s
YSS MLR MLR
comp=Z,15μm,13.0s
JGF Kuroka 6.87 229 **Pn 16 29 54.9 +1.4**
TEY Ternei 7.02 314⇑ *e*P **Pn 16 29 56.7 +1.2**
TEY pmax pmax
comp=N,40nm,1.1s
TEY pmax pmax
comp=Z,60nm,1.1s
TEY pmax pmax
comp=E,50nm,1.1s
TEY MLR MLR
comp=E,300nm,15.0s
TEY MLR MLR
comp=N,300nm,16.0s
TEY MLR MLR
comp=Z,500nm,14.0s
INU Inuyama 7.25 229 Pn **Pn 16 29 58.7 +0.1**
UGL Uglegorsk 8.82 353 *e*P **Pn 16 30 20.0 -0.2**
UGL pmax pmax
comp=Z,27nm,1.0s
UGL MLR MLR
comp=Z,9μm,14.0s
UGL MLR MLR
comp=N,7μm,12.0s
UGL MLR MLR
comp=E,11μm,14.0s
VLA Vladivostok 9.25 291 *i* P **Pn 16 30 26.4 +0.3**
USA0B Ussuriysk Arra 9.49 298 **Pn 16 30 32.0 +2.6**
USA0B Ussuriysk Arra 9.49 298 P **Pn 16 30 32.0 +2.6**
USRK Ussuriysk Ar. 9.49 298 Pn **Pn 16 30 31.9 +2.5**
comp=E,3.3nm,0.3s,baz=98,slow=11,SNR=193
USRK LR LR 16 33 34.8
comp=E,3μm,20.3s,baz=179,slow=34
USRK Ussuriysk Ar. 9.49 298 Pn **Pn 16 30 29.1 -0.3**
USRK Ussuriysk Ar. 9.49 298 P **Pn 16 30 29.1 -0.3**
MSHR Mys Shultsa 9.66 288 *i* P **Pn 16 30 30.6 -1.2**
JHS Saijyo 9.92 241 **Pn 16 30 37.0 +1.6**
JMN Monobe 10.23 233 **Pn 16 30 40.3 +0.7**
TYV Tymovskoe 10.56 356 *e*P **Pn 16 30 44.4 +0.4**
TYV *e*S **Sn 16 32 46.8 +5.1**
TYV pmax pmax
comp=Z,5μm,8.7s
TYV pmax pmax
comp=Z,28nm,1.4s
TYV smax smax
comp=N,800nm,9.1s
TYV smax smax
comp=E,2μm,9.1s
TYV MLR MLR
comp=N,11μm,13.0s
TYV MLR MLR
comp=Z,12μm,13.0s
GRNR Gornyy 11.60 337⇑ *i*P **Pn 16 30 59.1 +0.8**
GRNR *e*S **Sn 16 33 12.6 +5.2**
GRNR pmax pmax
comp=E,20nm,0.9s
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,5.0nm,0.7s
GRNR MLR MLR
comp=E,3μm,13.0s
GRNR MLR MLR
comp=N,5μm,15.0s
GRNR MLR MLR
comp=Z,5μm,16.0s
SEHB SEOHWA 12.13 265 **Pn 16 31 08.3 +2.8**
KLR Kul'dur 12.27 320 Pn **Pn 16 31 08.1 +0.7**
comp=Z,0.3nm,0.3s,baz=132,slow=12,SNR=77
KLR LR LR 16 36 34.3
comp=Z,5μm,18.5s,baz=138,slow=41
comp=Z,74nm,1.1s
KLR Kul'dur 12.27 320*ce*P **Pn 16 31 08.0 +0.6**
KLR pmax pmax
comp=Z,135nm,1.3s
KSRS Korea Array 12.61 262 Pn **Pn 16 31 13.9 +1.8**
comp=Z,0.1nm,0.3s,baz=78,slow=13,SNR=18
KSRS LR LR 16 35 44.7
comp=Z,7μm,18.1s,baz=80,slow=36
comp=Z,8.7nm,0.9s
BNX BinXian 13.07 300 ⇓P **Pn 16 31 19.8 +1.5**
BNX pmax pmax
comp=Z,110nm,1.2s
TJN Taejon 13.40 258*ce*P **Pn 16 31 22.8 0.0**
SKR Severo-Kuril's 13.52 36 *e*P **Pn 16 31 22.7 -1.7**
SKR *e*S **Sn 16 33 50.7 -3.4**
SKR pmax pmax
comp=Z,20nm,1.2s
SKR smax smax
comp=N,38nm,1.2s
SKR smax smax
comp=E,32nm,1.3s
SKR MLR MLR
comp=Z,3μm,12.0s
NAWB Namwon 13.76 254 **Pn 16 31 29.9 +2.1**
JSU Suzuyama 13.86 235 **Pn 16 31 28.7 -0.5**
CN2 Changchun 13.98 290 *e*P **Pn 16 31 30.6 -0.1**
CN2 pmax pmax
comp=Z,30nm,2.0s
SNY Shenyang 15.23 282 ⇓P **Pn 16 31 48.6 +0.8**
SNY pmax pmax
comp=Z,110nm,1.1s
SNY pmax pmax
comp=Z,1μm,3.5s
SNY LR LR
comp=Z,3μm,10.4s
SNY LR LR
comp=Z,8μm,13.5s
SNY LR LR
comp=Z,9μm,14.7s
PEA0B Petropavlovsk- 15.95 32 *i* P **Pn 16 31 55.0 -2.1**
PETK Petropavlovsk- 15.95 32 Pn **Pn 16 31 52.5 -4.6**
comp=Z,0.2nm,0.3s,baz=130,slow=16,SNR=6.8
PETK LR LR 16 37 44.0
comp=Z,4μm,18.3s,baz=167,slow=36
PETK Petropavlovsk- 15.95 32 **Pn 16 31 53.6 -3.5**
PETK Petropavlovsk- 15.95 32 P **Pn 16 31 53.6 -3.5**
PET Petropavlovsk 16.29 34 *e*P **P 16 32 05.3 +1.0**
PET *e*S **Sn 16 35 04.4 +2.9**
PET pmax pmax
comp=Z,41nm,1.1s
PET MLR MLR
comp=Z,5μm,15.0s
PET MLR MLR
comp=Z,4μm,13.0s
DL2 Dalian 17.05 272 P **Pn 16 32 10.3 -0.7**
DL2 pmax pmax
comp=Z,180nm,1.5s
ZEA Zeya 17.41 326 *e*P **Pn 16 32 13.4 -2.1**
ZEA pmax pmax
comp=N,60nm,1.3s
ZEA pmax pmax
comp=E,50nm,1.2s
ZEA pmax pmax
comp=Z,90nm,1.2s
HIA Hailar 19.12 306 *i* P **P 16 32 32.8 -2.9**
HIA pmax pmax
comp=Z,77nm,1.2s
MA2 Magadan 19.77 11 P **P 16 32 42.0 -0.6**
comp=Z,13nm,0.7s,baz=180,slow=11,SNR=8.7
MA2 LR LR 16 41 49.3
comp=Z,3μm,18.0s,baz=210,slow=41
MA2 Magadan 19.77 11 P **P 16 32 41.3 -1.3**
MA2 Magadan 19.77 11*ce*P **Pn 16 32 44.4 +0.2**
MA2 pmax pmax
comp=Z,87nm,2.5s
XLT XiLinHaoTe 20.74 289 *e*P **P 16 32 51.5 -1.9**
XLT pP Pn 16 32 56.5 +0.7
XLT sP sP 16 32 58.9 -0.3
XLT pmax pmax
comp=Z,66nm,1.7s
BJI Beijing 20.99 278 P **P 16 32 53.6 -2.3**
BJI pmax pmax
comp=Z,78nm,1.1s
TIA Tai'an 21.22 267 ⇑P **P 16 32 55.8 -2.7**
TIA pmax pmax
comp=Z,59nm,1.2s
NJ2 Nanjing 21.62 255⇑ *i*P **P 16 33 00.6 -2.2**
NJ2 sP **sP 16 33 08.8 +0.2**
NJ2 PP **PnPn 16 33 25.3 +1.8**
NJ2 pmax pmax
comp=Z,61nm,0.9s
HNS HongShan 22.70 272 ⇑P **P 16 33 10.6 -3.7**
HNS pmax pmax
comp=Z,41nm,1.0s
SEY Seymchan 23.23 10 P **P 16 33 18.7 -0.8**
comp=Z,41nm,1.0s,baz=186,slow=8.4,SNR=46
comp=Z,41nm,1.0s
SEY Seymchan 23.23 10*ce*P **P 16 33 17.5 -2.0**
SEY pmax pmax
comp=Z,134nm,1.7s
YAK Yakutsk 23.33 343 P **P 16 33 19.0 -1.6**
comp=Z,41nm,0.8s,baz=339,slow=7.2,SNR=32
YAK LR LR 16 43 48.6
comp=Z,4μm,18.1s,baz=150,slow=40
comp=Z,41nm,0.8s
YAK Yakutsk 23.33 343 P **P 16 33 17.7 -2.9**
YAK IAmb IAmb 16 33 21.8
comp=Z,94nm,0.9s
YAK Yakutsk 23.33 343 *e*P **P 16 33 18.6 -1.9**
YAK *e*S **S 16 37 27.6 -4.7**
YAK pmax pmax
comp=Z,120nm,1.0s
YAK pmax pmax
comp=N,36nm,0.9s
YAK pmax pmax
comp=E,9.0nm,0.8s
YAK smax smax
comp=N,504nm,2.1s
YAK smax smax
comp=E,268nm,2.2s
YAK MLR MLR
comp=Z,5μm,18.0s
YAK MLR MLR
comp=N,2μm,17.0s
YAK MLR MLR
comp=E,1μm,15.0s
YOJ Yonaguni jima 23.47 234 P **P 16 33 20.1 -2.2**
YOJ Yonaguni jima 23.47 234 P **P 16 33 20.1 -2.2**
YOJ pmax pmax
comp=Z,32nm,1.0s
CIT Chita 23.73 310 *e*P **P 16 33 23.0 -1.7**
CIT *e* 16 34 00.0
CIT *e*S **S 16 37 35.5 -3.6**
CIT pmax pmax
comp=Z,502nm,2.6s
TATO Taipei 24.06 237 P **P 16 33 27.8 -0.2**
HHC Hu-ho-hao-te 24.32 282 *e*P **P 16 33 30.3 -0.1**
HHC pmax pmax
comp=Z,57nm,1.3s
HHC pmax pmax
comp=Z,2μm,5.5s
YHNB Yeheng 24.35 237 P **P 16 33 27.1 -3.6**
YHNB IAmb IAmb 16 33 42.1
comp=Z,106nm,1.2s
YULB Yu-li 25.32 235 P **P 16 33 36.8 -2.6**
YULB IAmb IAmb 16 33 50.7
comp=Z,47nm,0.8s
LYN LuoYang 25.36 267 ⇑P **P 16 33 36.4 -3.3**
LYN pmax pmax
comp=Z,70nm,1.3s
LYN LR LR
comp=Z,3μm,12.2s
LYN LR LR
comp=Z,5μm,12.2s
LYN LR LR
comp=Z,7μm,13.3s
BTO Baotou 25.52 282 *e*P **P 16 33 41.1 -0.2**
BTO S **S 16 38 06.0 -2.1**
BTO LR LR
comp=Z,12μm,15.2s
BTO LR LR
comp=Z,16μm,14.0s
WHN Wuhan 25.71 257 ⇓P **P 16 33 43.5 +0.6**
WHN pmax pmax
comp=Z,310nm,1.1s
BOD Bodaibo 25.83 323 *e*P **P 16 33 44.3 +0.5**
BOD pmax pmax
comp=Z,218nm,1.3s
QZH Quanzhou 25.99 241⇑ *i*P **P 16 33 45.1 -0.4**
QZH pmax pmax
comp=Z,62nm,2.0s
ULN Ulaanbaatar 27.16 298 P **P 16 33 56.6 +0.6**
ULN IAmb IAmb 16 34 06.9
comp=Z,65nm,1.1s
ULN Ulaanbaatar 27.16 298*ce*P **P 16 33 55.4 -0.7**
ULN pmax pmax
comp=Z,88nm,1.7s
ULN Ulaanbaatar 27.16 298 P **P 16 33 57.2 +1.1**
SONM Songino Array 27.60 298 P **P 16 33 60.0 0.0**
comp=Z,30nm,1.1s,baz=98,slow=8.7,SNR=108
SONM LR LR 16 45 16.6
comp=Z,3μm,18.3s,baz=93,slow=37
comp=Z,30nm,1.1s
SONM Songino Array 27.60 298 P **P 16 34 00.8 +0.8**
SONM IAmb IAmb 16 34 02.5
comp=Z,78nm,1.4s
SONM Songino Array 27.60 298 P **P 16 34 00.8 +0.8**
SONM pmax pmax
comp=Z,78nm,1.4s
CNSH ChangSha 28.01 254 ⇑P **P 16 34 03.9 +0.3**
CNSH pmax pmax
comp=Z,51nm,1.2s
XAN Xi'an 28.27 268 P **P 16 34 05.5 -0.5**
XAN pP pP 16 34 10.0 -0.5
XAN sP pwP 16 34 13.8 +0.7
XAN S **S 16 38 51.8 +0.4**
XAN pmax pmax
comp=Z,67nm,1.4s
XAN LR LR
comp=Z,5μm,12.9s
XAN LR LR
comp=Z,3μm,12.9s
XAN LR LR
comp=Z,4μm,12.2s
H11N2 WAKE ISLAND Hy 28.58 129 T T 17 03 57.2
baz=321
H11N1 WAKE ISLAND Hy 28.59 129 T T 17 03 59.2
baz=321,slow=74
H11N3 WAKE ISLAND Hy 28.60 129 T T 17 04 01.1
baz=321,slow=74
IRK Irkutsk 29.35 307 *e*P **P 16 34 15.8 +0.4**
IRK pmax pmax
comp=Z,170nm,1.2s
H11S1 WAKE ISLAND Hy 29.42 131 T T 17 05 05.4
baz=323,slow=76
H11S3 WAKE ISLAND Hy 29.43 131 T T 17 05 06.1
baz=323,slow=76
H11S2 WAKE ISLAND Hy 29.44 131 T T 17 05 03.0
baz=323,slow=76
ZAK Zakamensk 29.78 303 *e*P **P 16 34 18.8 -0.5**
ZAK pmax pmax
comp=Z,48nm,1.3s
BILL Bilibino 30.37 17*d i*P **P 16 34 25.0 +0.8**
BILL *i* *PP **pP 16 34 28.0 -0.4**
BILL *i* *SP **sP 16 34 29.2 -0.9**
BILL SSS SSS 16 41 07.0
BILL pmax pmax
comp=Z,64nm,1.0s
BILL MLR MLR
comp=Z,2μm,14.0s
MOY Mondy 31.31 306 *e*P **P 16 34 33.5 +0.7**
MOY pmax pmax
comp=Z,64nm,1.2s
LZH Lanzhou 31.40 275 *e*P **P 16 34 35.0 +1.2**
LZH pP sP 16 34 39.6 -0.3
LZH sP pwP 16 34 42.5 +1.3
LZH pmax pmax
comp=Z,64nm,1.5s
TIXI Tiksi 32.27 351 P **P 16 34 40.7 -0.1**

TIXI comp=Z,17nm,1.0s,baz=92,slow=23,SNR=10 LR LR 16 50 14.7
comp=Z,3µm,18.7s,baz=181,slow=41
comp=Z,17nm,1.0s
TIXI Tiksi 32.27 351 *ce* P **P 16 34 39.8 -1.0**
TIXI pmax pmax
comp=Z,18nm,1.0s
GTA Gaotai 33.42 283 ⇑ P **P 16 34 52.4 +0.9**
GTA pP pP 16 34 56.0 +0.1
GTA sP pwP 16 34 58.4 -0.5
GTA PP **PP 16 36 02.9 -4.1**
GTA PcS **PcS 16 41 19.1 +0.7**
GTA pmax pmax
comp=Z,140nm,1.2s
KNGR Kungurtug, Tuv 33.46 304 *i* P **P 16 34 51.4 -0.3**
KNGR pmax pmax
comp=Z,46nm,1.6s
CD2 Chengdu 33.55 266 P **P 16 34 51.8 -0.7**
CD2 pmax pmax
comp=Z,40nm,0.9s
GYA Guiyang 33.60 257 ⇓ *i* P **P 16 34 53.6 +0.4**
GYA sP pwP 16 35 01.5 +1.2
GYA pmax pmax
comp=Z,150nm,1.2s
QIZ Qiongzhong 35.94 244 P **P 16 35 11.3 -1.9**
DAV Davao City (W) 36.87 211 LR LR 16 51 20.3
comp=Z,1µm,18.8s,baz=23,slow=38
PZH PanZhiHua 37.27 261 ⇑ P **P 16 35 25.1 +0.4**
PZH pmax pmax
comp=Z,150nm,1.1s
PZH pmax pmax
comp=Z,1µm,6.6s
KMI Kunming 37.28 259 ⇑ P **P 16 35 25.3 +0.4**
KMI pP pP 16 35 28.3 -1.2
KMI pmax pmax
comp=Z,100nm,1.5s
CHNA Chernabura Isl 39.79 49 P **P 16 35 44.0 -1.3**
baz=272
DGZ Jazzator, Alta 39.99 303 *c i* P **P 16 35 48.7 +1.3**
DGZ pmax pmax
comp=Z,151nm,1.1s
N16K Nishlik Lake 40.25 40 P **P 16 35 48.6 -0.6**
baz=266
O16K Kokwok River B 40.55 42 P **P 16 35 51.1 -0.5**
baz=268
P16K Nushagak River 40.59 43 P **P 16 35 51.3 -0.6**
baz=269
WMQ Urumqi 41.03 294 ⇑ *i* P **P 16 35 57.1 +1.2**
WMQ pP pwP 16 36 03.0 -0.8
WMQ pmax pmax
comp=Z,72nm,1.3s
WMQ LR LR
comp=Z,4µm,12.9s
WMQ LR LR
comp=Z,2µm,13.9s
WMQ LR LR
comp=Z,1µm,16.1s
O17K Koliganek Bris 41.06 41 P **P 16 35 55.6 -0.3**
baz=269
NRIK Noril'sk 41.07 333 P **P 16 35 56.0 +0.2**
comp=Z,22nm,1.2s,baz=128,slow=6.8,SNR=18
NRIK LR LR 16 54 42.3
comp=Z,3µm,18.2s,baz=106,slow=39
comp=Z,22nm,1.2s
NRIK Noril'sk 41.07 333 *ce* P **P 16 35 55.0 -0.8**
NRIK pmax pmax
comp=Z,41nm,1.4s
ZAA0 Zalesovo Array 41.09 310 P **P 16 35 56.5 +0.4**
ZAA0 IAmb IAmb 16 36 06.1
comp=Z,51nm,0.9s
ZALV Zalesovo Beam 41.09 310 P **P 16 35 56.7 +0.5**
comp=Z,30nm,0.8s,baz=87,slow=7.6,SNR=92
ZALV LR LR 16 52 40.4
comp=Z,842nm,18.3s,baz=91,slow=36
comp=Z,30nm,0.8s
ZALV Zalesovo Beam 41.09 310 P **P 16 35 57.0 +0.8**
P17K Kvichak River 41.40 42 P **P 16 35 58.0 -0.5**
baz=270
R17K Ugashik Creek 41.45 45 P **P 16 35 59.0 -0.1**
baz=272
N18K Kilae Creek 41.68 40 P **P 16 36 01.6 +0.6**
baz=269
CRAI Chiangrai 41.92 255 P **P 16 36 04.6 +1.2**
CRAI IAmb IAmb 16 36 09.5
comp=Z,60nm,1.1s
CHIR Chirikof Islan 41.98 47 P **P 16 36 04.1 +0.6**
baz=274
P18K Big Mountain, 42.02 42 P **P 16 36 04.1 +0.4**
baz=271
O18K Koktuh Hills 42.02 41 P **P 16 36 04.4 +0.7**
baz=270
ZSN Zaisan 42.08 300 *eP* **P 16 36 04.8 +0.4**
ZSN pmax pmax
comp=Z,77nm,1.3s
ZSN Zaisan 42.08 300 *eP* **P 16 36 04.9 +0.4**
comp=Z,77nm,1.3s,baz=300
L19K White Mountain 42.22 38 P **P 16 36 05.5 +0.2**
baz=268
SMPI Sarmi 42.36 187 P **P 16 36 08.3 +1.4**
comp=Z,37nm,1.3s
N19K Bonanza Creek 42.37 40 P **P 16 36 07.0 +0.3**
baz=270
M19K Big River Lodg 42.43 38 P **P 16 36 08.1 +1.1**
baz=269
O19K Port Alsworth 42.46 41 P **P 16 36 07.8 +0.5**
baz=271
SWI Sorong 42.54 199 P **P 16 36 08.6 +0.3**
comp=Z,34nm,0.9s
SIJI Sorong 42.54 199 P **P 16 36 09.5 +1.1**
comp=Z,14nm,0.9s,baz=21,slow=12,SNR=5.5
SIJI LR LR 16 51 52.3
comp=Z,1µm,19.0s,baz=6.5,slow=33
comp=Z,14nm,0.9s
SRPI Serui, Papua 42.55 191 P **P 16 36 08.3 -0.1**
K20K Telida 42.62 36 P **P 16 36 07.3 -1.2**
K20K Telida 42.62 36 P **P 16 36 10.3 +1.8**
baz=267
J20K Nowinta River 42.62 35 P **P 16 36 09.0 +0.4**
baz=266
L20K Farewell, AK 42.68 37 P **P 16 36 11.1 +2.0**
baz=268
GENI Genyem 42.84 185 P **P 16 36 12.3 +1.5**
comp=Z,42nm,1.5s
IMAR Indian Mountai 42.92 32 P **P 16 36 09.9 -1.0**
M20K Styx River 43.02 38 P **P 16 36 12.1 +0.1**
baz=270
G21K Allakaket 43.06 31 P **P 16 36 13.2 +1.1**
baz=264
F21K Alatna River 43.14 30 P **P 16 36 14.5 +1.7**
baz=264
OHAK Old Harbor 43.15 45 P **P 16 36 13.3 +0.4**
baz=275
H21K Melozitna Rive 43.28 33 P **P 16 36 15.5 +1.6**
baz=266
LBMI Labuha 43.36 204 P **P 16 36 15.9 +0.8**
comp=Z,30nm,2.2s
PPLA Purkeypile 43.46 37 P **P 16 36 17.6 +2.0**
baz=270,SNR=5.2
KDAK Kodiak Island 43.48 44 P **P 16 36 14.9 -0.7**
KDAK Kodiak Island 43.48 44 P **P 16 36 14.9 -0.7**
KDAK pmax pmax
comp=Z,33nm,1.0s
KDAK Kodiak Island 43.48 44 P **P 16 36 16.3 +0.7**
baz=275
Q20K Shuyak Island 43.52 43 P **P 16 36 14.7 -1.2**
baz=274
F22K John River 43.67 30 P **P 16 36 18.5 +1.5**
baz=265,SNR=12
LSA Lhasa 43.74 273 *i* P **P 16 36 19.9 +1.2**
SNR=11
GTOI Gorontalo 43.75 211 P **P 16 36 18.1 -0.1**
GTOI comp=Z,14nm,1.2s pP **pwP 16 36 27.6 +1.6**
comp=Z,14nm,1.2s
SKT Skwentna 43.78 38 P **P 16 36 19.6 +1.7**
baz=271
CHTO Chiang Mai 43.86 254 P **P 16 36 17.8 -1.3**
CHTO Chiang Mai 43.86 254 P **P 16 36 17.8 -1.3**
CHTO pmax pmax
comp=Z,28nm,1.0s
CHTO Chiang Mai 43.86 254 P **P 16 36 20.0 +0.9**
E22K Anaktuvuk Pass 43.86 29 P **P 16 36 20.3 +1.7**
baz=264
H22K Ishtalitna Cre 43.88 32 P **P 16 36 19.5 +0.7**
baz=267,SNR=8.3
G22K Bettles 43.89 31 P **P 16 36 19.6 +0.8**
baz=266
MK31 Makanchi Array 43.95 300 P **P 16 36 20.1 +0.6**
MK31 IAmb IAmb 16 36 21.4
comp=Z,68nm,1.1s
MK31 Makanchi Array 43.95 300 *i* P **P 16 36 19.8 +0.2**
MK31 pmax pmax
comp=Z,90nm,1.0s
MKAR Makanchi Array 43.95 300 P **P 16 36 20.0 +0.5**
comp=Z,52nm,1.0s,baz=81,slow=8.7,SNR=201
MKAR LR LR 16 55 05.0
comp=Z,1µm,20.3s,baz=60,slow=37
comp=Z,52nm,1.0s
MKAR Makanchi Array 43.95 300 P **P 16 36 19.9 +0.3**
BPAW Bear Paw Mtn. 44.01 35 P **P 16 36 17.8 -1.9**
baz=269
CMAR Chiang Mai Arr 44.08 254 P **P 16 36 21.8 +0.9**
comp=Z,6.5nm,0.9s,baz=49,slow=6.0,SNR=40
comp=Z,6.5nm,0.9s
MLY Manley 44.12 34 P **P 16 36 22.6 +1.9**
baz=269,SNR=12
MAKZ Makanchi 44.15 300 P **P 16 36 19.4 -1.8**
SUA Susitna One 44.17 39 P **P 16 36 21.6 +0.4**
baz=272
BRSE Bradley Lake S 44.28 41 P **P 16 36 21.5 -0.6**
baz=274
FAKI Fak Fak 44.30 196 P **P 16 36 22.7 +0.1**
comp=Z,76nm,1.6s
TRF Thorofare Moun 44.32 36 P **P 16 36 23.5 +1.0**
baz=271
MRSI Marisa 44.32 212 P **P 16 36 22.4 -0.4**
comp=Z,84nm,1.6s
D23K Nanushuk River 44.35 28 P **P 16 36 23.1 +0.6**
baz=265,SNR=7.9
CUT Chulitna 44.36 37 P **P 16 36 23.2 +0.6**
baz=272
SEM Semipalatinsk 44.42 305 *eP* **P 16 36 22.6 -0.9**
SEM pmax pmax
comp=Z,32nm,1.2s
SEM Semipalatinsk 44.42 305 *eP* **P 16 36 22.7 -0.9**
comp=Z,32nm,1.2s,baz=305
C23K Itkillik River 44.46 27 P **P 16 36 23.3 0.0**
baz=264,SNR=12
G23K Bananza Creek 44.46 31 P **P 16 36 24.5 +1.0**
baz=268
H23K Yukon River 44.63 33 P **P 16 36 26.1 +1.3**
baz=269,SNR=7.2
RC01 Rabbit Creek A 44.68 39 IAmb IAmb 16 36 37.3
comp=Z,37nm,1.0s
RC01 Rabbit Creek A 44.68 39 P **P 16 36 25.7 +0.5**
baz=274
I23K Minto, Yukon-K 44.71 34 P **P 16 36 26.9 +1.6**
baz=270
O22K Cooper Landing 44.73 40 P **P 16 36 27.3 +1.8**
baz=274
TOLK Toolik Lake Re 44.73 29 P **P 16 36 24.5 -1.1**
baz=266
NEA2 Nenana 44.84 34 P **P 16 36 26.1 -0.3**
baz=271,SNR=10
MCK McKinley 44.92 36 P **P 16 36 28.6 +1.6**
MCK McKinley 44.92 36 P **P 16 36 28.6 +1.6**
MCK pmax pmax
comp=Z,23nm,0.9s
MCK McKinley 44.92 36 P **P 16 36 27.0 -0.1**
baz=272
PMR Palmer 44.94 39 P **P 16 36 27.4 +0.2**
baz=274
RND Reindeer 44.97 36 IAmb IAmb 16 36 41.1
comp=Z,54nm,1.4s
D24K Happy Valley 45.03 28 P **P 16 36 28.5 +0.6**
baz=266
KRVT Keravat (AS076 45.08 168 LR LR 16 55 11.4
comp=Z,510nm,18.1s,baz=134,slow=36
E24K Your Creek 45.11 29 P **P 16 36 29.0 +0.5**
baz=268,SNR=15
C24K Franklin Bluff 45.11 27 P **P 16 36 29.1 +0.7**
baz=266
WAT1 Susitna Watana 45.13 37 P **P 16 36 29.6 +0.8**
baz=273
SANI Sanana 45.17 205 P **P 16 36 31.0 +1.5**
comp=Z,1µmcomp=Z,46nm,0.9s
KNK Knik Glacier 45.27 39 IAmb IAmb 16 36 44.7
comp=Z,66nm,1.3s
KNK Knik Glacier 45.27 39 P **P 16 36 30.7 +0.8**
baz=274
SML Sawmill 45.30 38 IAmb IAmb 16 36 45.0
comp=Z,74nm,1.4s
SML Sawmill 45.30 38 P **P 16 36 30.3 +0.1**
baz=274,SNR=8.0
MPSI Mapaga 45.31 215 P **P 16 36 32.3 +1.7**
comp=Z,20nm,1.7s
H24K Noodor Dome 45.32 33 IAmb IAmb 16 36 47.2
comp=Z,49nm,1.4s
H24K Noodor Dome 45.32 33 P **P 16 36 32.2 +1.9**
baz=270,SNR=11
COLA College 45.35 34 *i* P **P 16 36 30.9 +0.5**
COLA pmax pmax
comp=Z,29nm,1.1s
KURK Kurchatov 45.36 306 P **P 16 36 31.2 +0.4**
KURK Kurchatov 45.36 306 *ce* P **P 16 36 31.1 +0.4**
KURK pmax pmax
comp=Z,166nm,1.3s
KURK Kurchatov 45.36 306 P **P 16 36 31.6 +0.8**
PWL Port Wells 45.38 40 P **P 16 36 31.5 +0.8**
baz=275
LUWI Luwuk 45.38 210 P **P 16 36 30.2 -1.0**
comp=Z,3µmcomp=Z,42nm,1.5s
KURBB Kurchatov Arra 45.44 306 P **P 16 36 31.8 +0.5**
comp=Z,80nm,0.9s,baz=80,slow=8.4,SNR=323
comp=Z,80nm,0.9s
KURBB Kurchatov Arra 45.44 306 P **P 16 36 31.6 +0.3**
G24K Hadweenzic Riv 45.48 31 P **P 16 36 33.6 +2.2**
baz=270
WAT6 Susitna Watana 45.52 37 P **P 16 36 33.2 +1.2**
baz=274
POKR Poker Plat Res 45.52 34 P **P 16 36 33.6 +1.8**
baz=272
M23K Glacier View 45.59 38 P **P 16 36 34.0 +1.6**
baz=275
DHY Denali Highway 45.65 36 P **P 16 36 34.1 +1.0**
baz=274,SNR=5.9
APSI Ampana 45.70 212 P **P 16 36 35.6 +1.9**
comp=Z,43nm,1.4s
HDA Harding Lake 45.76 35 P **P 16 36 34.8 +1.1**
baz=273,SNR=11
ILAR Eielson Array 45.77 34 P **P 16 36 34.5 +0.7**
comp=Z,4.8nm,0.7s,baz=261,slow=6.2,SNR=50
comp=Z,4.8nm,0.7s
SCM Sheep Creek Mo 45.77 38 P **P 16 36 34.6 +0.7**
baz=275,SNR=10
D25K Kavik River 45.91 28 P **P 16 36 34.8 -0.1**
baz=268,SNR=7.2
P23K Montague Islan 45.93 41 P **P 16 36 36.4 +1.3**
baz=277
GLI Glacier Island 45.98 39 P **P 16 36 35.9 +0.4**
baz=276
AAI Ambon 46.05 202 P **P 16 36 37.9 +1.4**
comp=Z,64nm,1.2s
H25K Birch Creek 46.15 32 P **P 16 36 38.6 +1.9**
baz=272
F25K Christian River 46.18 30 P **P 16 36 37.1 +0.1**
baz=271
E25K Arctic Village 46.20 29 P **P 16 36 38.3 +1.1**
baz=270,SNR=6.6
M24K Tolsona, Glenn 46.29 38 P **P 16 36 39.5 +1.6**
baz=276
PRP Porcupine Dome 46.31 33 P **P 16 36 38.7 +0.5**
baz=273
K24K Donnelly Dome 46.31 35 P **P 16 36 40.0 +1.9**
baz=274,SNR=13
BNDI Bandanaira 46.39 199 P **P 16 36 39.4 +0.2**
comp=Z,203nm,1.1s
J25K Salcha River, 46.43 34 P **P 16 36 39.9 +0.9**
baz=274
KLU Klutina 46.48 39 P **P 16 36 40.2 +0.7**
baz=276,SNR=15
PAX Paxson 46.53 36 P **P 16 36 40.6 +0.7**
baz=275
EYAK Cordova Ski Ar 46.68 40 P **P 16 36 42.7 +1.7**
baz=277,SNR=6.0
HARP HAARP 46.73 37 P **P 16 36 42.7 +1.4**
baz=276
RIDG Independent Ri 46.73 35 IAmb IAmb 16 37 08.0
comp=Z,18nm,1.0s
RIDG Independent Ri 46.73 35 P **P 16 36 41.3 -0.1**
baz=275
F26K Sheenjek River 46.75 30 P **P 16 36 44.6 +3.1**
baz=272,SNR=7.2
C27K Jago River 46.85 27 P **P 16 36 44.2 +2.0**
baz=271
G26K Porcupine Rive 46.93 31 P **P 16 36 44.8 +2.0**
baz=273,SNR=7.8
SHLS Shalkode 46.94 296 *eP* **P 16 36 40.6 -2.8**
SHLS Shalkode 46.94 296 *eP* **P 16 36 40.6 -2.8**
baz=295
TDK Taldyqorghan 47.06 298 *eP* **P 16 36 44.3 +0.1**
TDK Taldyqorghan 47.06 298 *eP* **P 16 36 44.4 +0.1**
baz=298
SCRK Sand Creek 47.09 35 IAmb IAmb 16 36 55.6
comp=Z,21nm,0.9s
SCRK Sand Creek 47.09 35 P **P 16 36 45.4 +1.2**
baz=276,SNR=23
N25K Chitina, Valde 47.09 38 P **P 16 36 45.8 +1.5**
baz=277
BMRM Bremner River 47.17 39 P **P 16 36 47.4 +2.5**
baz=278,SNR=8.9
J26L Joseph Creek 47.22 34 P **P 16 36 44.4 -0.9**
baz=276
SBUM Sibu 47.24 225 P **P 16 36 45.3 -0.5**
SBUM IAmb IAmb 16 36 47.8
comp=Z,30nm,1.3s
UZB Uzynbulak 47.25 296 *eP* **P 16 36 45.3 -0.5**
UZB Uzynbulak 47.25 296 *eP* **P 16 36 45.4 -0.5**
baz=296
I26K Coal Creek Min 47.31 33 P **P 16 36 46.8 +1.0**
baz=275
KPKS Kokpek 47.37 296 *eP* **P 16 36 46.3 -0.4**
KPKS pmax pmax
comp=Z,42nm,1.2s
KPKS Kokpek 47.37 296 *eP* **P 16 36 46.3 -0.4**
comp=Z,42nm,1.2s,baz=296
KAIM Kayak Island 47.43 41 P **P 16 36 47.2 +0.4**
baz=279
HMT Hamilton 47.44 40 P **P 16 36 46.9 -0.1**
HMT IAmb IAmb 16 37 12.8
comp=Z,17nm,0.9s
L26K Log Cabin Wild 47.48 36 P **P 16 36 47.4 +0.2**
baz=277,SNR=12
TAPN Taplejung 47.53 272 *eP* **P 16 36 49.4 +1.0**
comp=Z,229nm,1.2s
ZHN Zhinishke 47.65 296 *eP* **P 16 36 48.2 -0.7**
ZHN Zhinishke 47.65 296 *eP* **P 16 36 48.2 -0.7**
baz=296
E27K Coleen River 47.68 29 P **P 16 36 50.1 +1.3**
baz=274
SATY Saty 47.70 296 *eP* **P 16 36 49.5 +0.1**
SATY pmax pmax
comp=Z,55nm,2.0s
SATY Saty 47.70 296 *eP* **P 16 36 49.5 +0.1**
comp=Z,55nm,2.0s,baz=296
M26K Nabesna, AK 47.73 37 P **P 16 36 51.6 +2.4**
baz=278,SNR=17
G27K Doyon Strip 47.78 31 P **P 16 36 50.2 +0.7**
baz=275
MCARA McCarthy VSAT 47.87 38 IAmb IAmb 16 37 03.2
comp=Z,30nm,1.0s
MCARA McCarthy VSAT 47.87 38 P **P 16 36 50.7 +0.4**
baz=276
H27K Steamboat Moun 47.89 32 P **P 16 36 52.4 +2.0**
baz=276
K27K Chicken 47.92 35 P **P 16 36 50.7 +0.2**
K27K IAmb IAmb 16 37 06.1
comp=Z,58nm,1.3s
K27K Chicken 47.92 35 P **P 16 36 52.6 +2.0**
baz=277
I27K Kandik River 47.92 33 P **P 16 36 53.7 +3.1**
baz=276
ODAN Odare 48.03 272 *eP* **P 16 36 51.9 -0.3**
comp=Z,45nm,1.7s
L27K Beaver Creek, 48.16 36 P **P 16 36 53.0 +0.4**
L27K IAmb IAmb 16 37 05.7
comp=Z,36nm,1.1s
L27K Beaver Creek, 48.16 36 P **P 16 36 55.0 +2.5**
baz=278,SNR=23
EGAK Eagle 48.21 34 P **P 16 36 55.9 +3.1**
baz=277,SNR=20
M27K Edge Creek, AK 48.25 37 P **P 16 36 55.8 +2.4**
baz=279,SNR=8.2
JIRN Jiri 48.53 273 *eP* **P 16 36 56.9 +0.6**
RAMN Ramite 48.59 272 *eP* **P 16 36 56.9 +0.4**
comp=Z,305nm,1.2s
MDOK Medeo 48.60 296 *eP* **P 16 36 55.9 -0.4**
MDOK Medeo 48.60 296 *eP* **P 16 36 55.9 -0.4**
baz=296
MESA MESA 48.60 40 P **P 16 36 57.4 +1.3**
baz=281
GUN Gumba 48.65 274 *eP* **P 16 36 57.5 +0.4**
AAA Alma-Ata 48.67 297 *eP* **P 16 36 56.8 0.0**
AAA pmax pmax
comp=Z,63nm,1.3s
AAA Alma-Ata 48.67 297 *eP* **P 16 36 56.8 0.0**
comp=Z,63nm,1.3s,baz=296
BVCY Beaver Creek 48.71 37 P **P 16 36 59.2 +2.4**
baz=280
CTG Chitna Glacier 48.75 39 P **P 16 36 59.2 +2.0**
baz=281,SNR=7.8
MTKI Muara Teweh, K 48.75 220 P **P 16 36 57.3 -0.2**
comp=Z,64nm,1.2s
KUU Kurty 48.83 298 *eP* **P 16 36 57.4 -0.5**
KUU pmax pmax
comp=Z,48nm,1.2s
KUU Kurty 48.83 298 *eP* **P 16 36 57.5 -0.5**
comp=Z,48nm,1.2s,baz=298
YUK3 Moose Creek 49.01 38 P **P 16 37 01.8 +2.5**
baz=281,SNR=16
KSM Kuching 49.10 227 P **P 16 36 59.6 -0.7**
KKN Kakani 49.16 274 *eP* **P 16 37 00.8 -0.1**
PKI Pulchoki 49.18 274 *eP* **P 16 37 01.0 -0.1**
comp=Z,251nm,1.5s
PKIN Phulchoki 49.18 274 *eP* **P 16 37 01.4 +0.3**
comp=Z,205nm,1.5s
BRZS Berezniki 49.23 306 *eP* **P 16 37 00.9 0.0**
BRZS pmax pmax
comp=Z,46nm,1.3s
BRZS Berezniki 49.23 306 *eP* **P 16 37 00.9 0.0**
comp=Z,46nm,1.3s,baz=306
SPSI Sidrap Palu 49.24 212 P **P 16 37 02.5 +1.3**
comp=Z,44nm,1.2s
I29M Ogilvie Camp, 49.32 33 P **P 16 37 03.7 +2.4**
baz=279,SNR=7.0
O28M Mount Upton 49.34 39 P **P 16 37 03.6 +1.7**
baz=282
DMN Daman 49.39 274 *eP* **P 16 37 03.3 +0.6**
GKN Gorkha 49.55 275 *eP* **P 16 37 04.0 +0.2**
comp=Z,296nm,1.6s
BBSI Bau Bau 49.56 208 P **P 16 37 05.6 +1.9**
comp=Z,237nmcomp=Z,8.3nm,1.1s
STKI Sintang 49.64 224 P **P 16 37 04.9 +0.6**
comp=Z,3µmcomp=Z,22nm,1.4s
TKM2 Tokmak 2 49.68 297 P **P 16 37 05.8 +1.2**
SNR=73
TKM2 Tokmak 2 49.68 297 *i* P **P 16 37 05.3 +0.6**
TKM2 pmax pmax
comp=Z,128nm,1.2s
BVA0 Borovoye Array 49.72 311 P **P 16 37 05.0 +0.5**
BRVK Borovoye 49.77 311 P **P 16 37 05.4 +0.5**
BRVK Borovoye 49.77 311 *ce* P **P 16 37 05.7 +0.8**
BRVK pmax pmax
comp=Z,74nm,1.3s
BRVK Borovoye 49.77 311 P **P 16 37 06.1 +1.2**
EPYK Eagle Plains 49.79 31 P **P 16 37 05.1 +0.1**
EPYK IAmb IAmb 16 37 20.8
comp=Z,59nm,1.1s
EPYK Eagle Plains 49.79 31 P **P 16 37 07.4 +2.4**
baz=280,SNR=9.5
M29M Somme Creek 49.80 37 P **P 16 37 06.9 +1.8**
baz=282
YUK4 Talbot Arm 49.95 38 P **P 16 37 08.0 +1.5**
baz=282
BTLS Baital 49.96 300 *eP* **P 16 37 05.9 -0.6**
BTLS pmax pmax
comp=Z,36nm,1.6s
BTLS Baital 49.96 300 *eP* **P 16 37 05.9 -0.6**
comp=Z,36nm,1.6s,baz=300
PNL Peninsula 49.97 40 P **P 16 37 08.1 +1.7**
baz=283
DANN Dangsing 50.04 276 *eP* **P 16 37 08.4 +0.7**
comp=Z,125nm,0.7s
SGDS Sogindy 50.14 298 *eP* **P 16 37 07.9 -0.1**
SGDS pmax pmax
comp=Z,44nm,1.7s
SGDS Sogindy 50.14 298 *eP* **P 16 37 07.9 -0.1**
comp=Z,44nm,1.7s,baz=298
YUK6 Outpost Mounta 50.17 38 P **P 16 37 10.3 +2.1**
baz=283
KAPI Kappang 50.20 212 LR LR 16 58 10.7
comp=Z,356nm,20.9s,baz=306,slow=36

KAPI **Kappang** 50.20 212 *i* P P 16 37 09.1 +0.6
KAPI **Kappang** 50.20 212 P P 16 37 11.6 +3.1
O29M **Mount Kennedy** 50.22 39 P P 16 37 10.9 +2.5
baz=283
KBK **Karagaybulak** 50.22 297 P P 16 37 09.7 +0.9
SNR=37
CHMS **Chumysh** 50.23 297 P P 16 37 08.9 +0.3
SNR=9.1
CHMS **Chumysh** 50.23 297 *i* P P 16 37 08.5 -0.1
CHMS pmax pmax
comp=Z,33nm,1.2s
USP **Ospenovka** 50.30 297 P P 16 37 09.8 +0.6
SNR=15
BKSI **Bulukumba** 50.33 211 P P 16 37 08.3 -1.2
comp=Z,22nm,1.1s
M30M **Minto, Yukon** 50.52 36 P P 16 37 13.3 +2.8
baz=283,SNR=10
AAK **Ala-Archa** 50.54 297 P P 16 37 11.9 +0.8
SNR=10.0
AAK **Ala-Archa** 50.54 297 P P 16 37 11.9 +0.8
AAK IAmb IAmb 16 37 34.4
comp=Z,32nm,1.0s
AAK **Ala-Archa** 50.54 297 *ce* P P 16 37 09.7 -1.4
AAK pmax pmax
comp=Z,52nm,1.7s
AAK **Ala-Archa** 50.54 297 P P 16 37 12.0 +0.8
AAK **Ala-Archa** 50.54 297 *i* P P 16 37 11.8 +0.7
SNR=11
HYT **Haines Junctio** 50.61 38 P P 16 37 14.2 +2.9
baz=284,SNR=45
INK **Inuvik** 50.65 28 P P 16 37 12.2 +0.9
comp=Z,3.3nm,0.5s,baz=288,slow=5.4,SNR=9.8
comp=Z,3.3nm,0.5s
INK **Inuvik** 50.65 28 P P 16 37 13.0 +1.7
INK **Inuvik** 50.65 28 P P 16 37 13.0 +1.7
INK pmax pmax
comp=Z,15nm,1.0s
INK **Inuvik** 50.65 28 P P 16 37 13.3 +2.0
baz=281,SNR=7.3
N30M **Aishikik Lake** 50.65 38 P P 16 37 14.2 +2.6
baz=284
KSH **Kashi** 50.73 292 P P 16 37 16.8 +4.2
KSH pmax pmax
comp=Z,31nm,1.2s
P29M **Windy Craggy** 50.79 40 P P 16 37 15.3 +2.7
baz=284,SNR=13
BBKI **Banjar Baru** 50.97 218 P P 16 37 15.4 +1.0
comp=Z,52nm,1.3s
EKS2 **Erkin-Say** 51.02 297 P P 16 37 15.4 +0.7
SNR=15
P30M **Million Dollar** 51.05 39 P P 16 37 16.8 +2.3
baz=285
N31M **Braeburn, Yuko** 51.25 37 P P 16 37 18.4 +2.3
baz=285,SNR=13
AML **Almayashu** 51.28 296 P P 16 37 18.1 +1.1
SNR=39
O30N **Mendenhall** 51.29 38 P P 16 37 18.3 +1.9
baz=285
PLBC **Pleasant Camp** 51.51 40 P P 16 37 19.0 +1.0
baz=286,SNR=5.3
M31M **Drury Creek, Y** 51.70 36 P P 16 37 20.2 +0.8
M31M IAmb IAmb 16 37 35.2
comp=Z,43nm,1.5s
M31M **Drury Creek, Y** 51.70 36 P P 16 37 20.8 +1.4
baz=285,SNR=15
WHY **Whitehorse** 51.90 38 P P 16 37 22.5 +1.5
baz=286
KULM **Kulim** 52.01 240 P P 16 37 21.3 -0.9
SKAG **Skagway** 52.02 40 P P 16 37 23.5 +1.8
baz=286
FARO **Faro, Yukon** 52.16 36 P P 16 37 24.2 +1.4
baz=286,SNR=14
A36M **Sachs Harbour** 52.54 23 P P 16 37 28.9 +3.5
baz=285
DZA **Taraz** 52.59 298 *eP* P 16 37 26.2 0.0
DZA pmax pmax
comp=Z,22nm,0.9s
DZA **Taraz** 52.59 298 *eP* P 16 37 26.2 0.0
comp=Z,22nm,0.9s,baz=298
MMRI **Maumere** 52.60 207 P P 16 37 26.2 -0.3
comp=Z,2µmcomp=Z,108nm,1.2s
N32M **Quiet Lake** 52.60 37 P P 16 37 26.4 +0.3
baz=287
P32M **Atlin** 52.77 39 P P 16 37 25.8 -1.6
baz=288
EDFI **Ende, Flores** 52.90 208 P P 16 37 27.0 -1.8
comp=Z,26nm,1.4s
MMPY **Sheldon Lake,** 52.98 35 P P 16 37 30.0 +1.0
baz=287,SNR=12
P33M **Teslin, Yukon** 53.01 38 P P 16 37 30.4 +1.2
baz=288,SNR=9.4
KK31 **Karatay Array** 53.05 299 P P 16 37 29.5 -0.2
KK31 IAmb IAmb 16 37 31.4
comp=Z,60nm,1.3s
KK31 **Karatay Array** 53.05 299 P P 16 37 29.5 -0.2
KK31 pmax pmax
comp=Z,60nm,1.3s
KKAR **Karatay Array** 53.05 299 P P 16 37 29.7 0.0
KKAR IAmb IAmb 16 37 31.4
comp=Z,60nm,1.3s
KKAR **Karatay Array** 53.05 299 P P 16 37 29.9 +0.2
KKAR **Karatay Array** 53.05 299 P P 16 37 29.7 0.0
KKAR pmax pmax
comp=Z,60nm,1.3s
BATI **Baumata** 53.59 205 P P 16 37 34.9 +1.1
comp=Z,29nm,1.3s
C36M **Paulatuk** 53.70 26 P P 16 37 34.6 +0.6
C36M IAmb IAmb 16 37 49.2
comp=Z,40nm,1.2s
C36M **Paulatuk** 53.70 26 P P 16 37 34.1 +0.2
baz=288
IUG **Iuzhnay** 53.77 298 *eP* P 16 37 34.8 -0.2
IUG **Iuzhnay** 53.77 298 *eP* P 16 37 34.9 -0.2
baz=298
DSRI **Dabo** 53.99 231 P P 16 37 36.8 0.0
comp=Z,11nm,1.4s
TPI **Tanjungpandan** 54.07 227 P P 16 37 37.2 -0.2
comp=Z,30nm,1.3s
R33M **Jennings River** 54.16 39 P P 16 37 39.1 +1.4
baz=290,SNR=6.5
MTN **Manton Dam** 54.17 195 P P 16 37 37.9 -0.1
MTN IAmb IAmb 16 37 39.1
comp=Z,61nm,1.3s
PPBI **Pangkal Pinang** 54.44 228 P P 16 37 40.7 +0.6
comp=Z,21µmcomp=Z,52nm,1.4s
CRAG **Craig** 54.44 44 P P 16 37 36.7 -2.9
baz=291
WRAK **Wrangell Islan** 54.51 43 P P 16 37 40.0 0.0
baz=291
TGTN **Hyland Airport** 54.67 36 P P 16 37 42.0 +0.7
baz=290
DLBC **Dease Lake** 54.95 40 P P 16 37 44.9 +1.5
baz=291
PSI **Prapat** 55.00 239 LR LR 17 02 44.2
comp=Z,863nm,18.4s,baz=18,slow=38
ARU **Arti** 55.09 318 LR LR 17 04 17.2
comp=Z,4µm,18.3s,baz=68,slow=39
ARU **Arti** 55.09 318 P P 16 37 45.3 +0.9
ARU **Arti** 55.09 318 *c i* P P 16 37 45.3 +0.9
ARU 16 38 44.9
ARU S S 16 45 30.0 +3.9
ARU SS SS 16 49 08.6 -0.8
ARU pmax pmax
comp=Z,149nm,1.4s
ARU MLR MLR
comp=Z,4µm,16.0s
NIL **Nilore** 55.30 287 P P 16 37 47.9 +1.6
NIL **Nilore** 55.30 287 P P 16 37 47.9 +1.6
NIL pmax pmax
comp=Z,187nm,1.1s
T35M **Bob Quinn** 55.38 42 P P 16 37 47.9 +1.5
baz=292
JMBI **JAMBI** 55.47 231 P P 16 37 49.5 +1.9
BKNI **Bangkinang** 55.53 235 P P 16 37 49.8 +1.8
CHGR **Chuyangaron** 55.89 294 P P 16 37 50.8 +0.3
CHGR **Chuyangaron** 55.89 294 P P 16 37 50.8 +0.3
CHGR pmax pmax
comp=Z,260nm,1.3s
AB31 **Akbulak array** 57.20 309 *i* P P 16 37 59.8 +0.3
ABKAR **Akbulak array** 57.20 309 P P 16 38 00.2 +0.7
KNRA **Kununurra** 57.42 197 P P 16 38 00.1 -1.2
KNRA IAmb IAmb 16 38 16.8
comp=Z,72nm,1.5s
SPITS **Spitsbergen Ar** 57.64 349 LR LR 17 06 09.3
comp=Z,974nm,18.1s,baz=359,slow=40
KBS **Kingsbay** 57.71 350 *ce* P P 16 38 02.9 +0.2
KBS pmax pmax
comp=Z,62nm,2.5s
AKTO **Aktyubinsk** 57.82 311 P P 16 38 03.4 -0.5
KBL **Kabul** 57.92 290 P P 16 38 05.1 0.0
SNR=26
KIRV **Kirov** 58.71 322 *ce* P P 16 38 09.7 -0.2
PRGR **Permogore** 58.98 327 ⇑ *i* P P 16 38 12.5 +0.7
PRGR *e* 16 40 21.8
LVZ **Lovozero** 59.84 336 *ce* P P 16 38 16.3 -1.4
LVZ pmax pmax
comp=Z,8.0nm,0.8s
YKA **Yellowknife Ar** 60.07 32 P P 16 38 20.0 +0.7
comp=Z,3.7nm,0.7s,baz=298,slow=7.5,SNR=10
comp=Z,3.7nm,0.7s
YKA **Yellowknife Ar** 60.07 32 *ce* P P 16 38 20.3 +1.0
YKA pmax pmax
comp=Z,4.0nm,0.8s
HYBB **Hyderabad (bro** 60.08 268 *eP* P 16 38 19.9 -0.1
HYBB *eP* PP 16 40 33.1 +0.6
HYBB *eS* cP S cP 16 43 06.8 +0.7
HYBB *eS* S 16 46 33.5 +1.0
WB0 **Warramunga Arr** 60.41 190 P P 16 38 21.5 -0.5
WB0 IAmb IAmb 16 38 35.2
comp=Z,23nm,1.0s
APA **Apatity** 60.42 336 ⇓ *i* P P 16 38 20.6 -1.0
APA *i* 16 38 29.5
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,1µm,15.0s
WRAB **Tennant Creek** 60.58 190 *ce* P P 16 38 21.8 -1.4
WRAB pmax pmax
comp=Z,53nm,2.5s
WR0 **Warramunga Arr** 60.58 190 P P 16 38 21.8 -1.4
WR0 IAmb IAmb 16 38 36.5
comp=Z,50nm,1.5s
WB2 **Warramunga Arr** 60.59 190 P P 16 38 23.2 -0.1
WB2 IAmb IAmb 16 38 36.6
comp=Z,41nm,1.4s
WRA **Warramunga Arr** 60.59 190 P P 16 38 21.7 -1.6
comp=Z,11nm,1.1s,baz=7.7,slow=6.9,SNR=23
comp=Z,11nm,1.1s
WRA **Warramunga Arr** 60.59 190 *i* P P 16 38 22.2 -1.1
WRA pmax pmax
comp=Z,11nm,1.1s
ARCES **ARCESS Array B** 61.54 339 P P 16 38 29.4 +0.2
comp=Z,8.9nm,1.0s,baz=67,slow=9.5,SNR=14
comp=Z,8.9nm,1.0s
ARCES **ARCESS Array B** 61.54 339 P P 16 38 30.1 +1.0
ARCES IAmb IAmb 16 38 31.4
comp=Z,25nm,1.3s
ARCES **ARCESS Array B** 61.54 339 P P 16 38 30.2 +1.0
ARCES pmax pmax
comp=Z,25nm,1.3s
KLMR **Klimovskoe** 61.92 327 *eP* P 16 38 30.2 -1.7
KLMR *e* 16 40 45.9
KLMR pmax pmax
comp=Z,94nm,1.3s
KLMR **Klimovskoe** 61.92 327 *eP* P 16 38 30.2 -1.7
KLMR AMP 16 38 33.9
comp=Z,94nm,1.3s
KLMR *ePP* PP 16 40 46.0 -1.7
BELG **Belogornoye** 62.61 317 *i* P P 16 38 37.0 +0.4
BELG pmax pmax
comp=Z,26nm,1.0s
GEYT **Alibeck** 63.80 299 P P 16 38 45.1 +0.3
comp=Z,29nm,1.0s,baz=59,slow=0.9,SNR=37
comp=Z,29nm,1.0s
GEYT **Alibeck** 63.80 299 P P 16 38 44.5 -0.4
GYA0 **ALIBECK ARRAY** 63.80 299 P P 16 38 44.8 -0.1
AS31 **Alice Springs** 64.31 190 P P 16 38 48.0 -0.2
ASAR **Alice Springs** 64.32 190 P P 16 38 47.5 -0.6
comp=Z,9.6nm,1.1s,baz=5.2,slow=5.1,SNR=20
comp=Z,9.6nm,1.1s
ASAR **Alice Springs** 64.32 190 P P 16 38 47.0 -1.1
VALR **Valaam** 65.02 331 *i* P P 16 38 51.2 -1.1
VALR pmax pmax
comp=Z,68nm,1.4s
H04D **Lebanon** 65.40 52 P P 16 38 53.8 -1.3
baz=303
J01E **Myrtle Point** 65.41 54 P P 16 38 55.2 0.0
baz=303
MOS **Moscow** 65.66 323 *eP* P 16 38 55.3 -1.3
MOS *e* 16 41 27.7
MOS *eS* S 16 47 38.8 -2.6
MOS pmax pmax
comp=Z,300nm,1.8s
MOS pmax pmax
comp=Z,118nm,1.3s
K02D **Willamette Mer** 65.83 54 P P 16 38 59.8 +1.8
baz=303
G05D **Wamic, OR** 65.85 50 P P 16 38 58.1 0.0
baz=303
I04A **Tendick Farm,** 65.99 52 P P 16 39 01.8 +2.8
baz=303
PCHI **Peechi** 66.00 263 *eP* P 16 38 59.9 +0.5
MSVF **Nonsavu** 66.03 144 LR LR 17 01 38.9
comp=Z,670nm,21.4s,baz=332,slow=30
MSVF **Nonsavu** 66.03 144 *i* P P 16 38 59.3 -0.2
MSVF pmax pmax
comp=Z,14nm,1.2s
L02F **Cave Junction** 66.20 54 P P 16 39 03.1 +2.8
baz=303
VRH **Novokhopyorsk** 66.33 318 *eP* P 16 39 00.9 0.0
VRH pmax pmax
comp=Z,70nm,1.2s
I05D **Terrebonne, OR** 66.34 51 P P 16 39 02.0 +0.8
baz=304
J04D **Umpqua Nationa** 66.48 53 P P 16 39 04.1 +1.7
baz=304
OBN **Obninsk** 66.52 323 *de* P P 16 39 02.2 +0.1
OBN *PP pP 16 39 06.0 -0.7
OBN *SP pwP 16 39 11.0 +1.0
OBN *e* 16 39 32.3
OBN *e* 16 41 30.2
OBN PPP PPP 16 43 09.0
OBN *eS* S 16 47 54.8 +3.0
OBN *eSS SS 16 52 08.0 0.0
OBN pmax pmax
comp=Z,91nm,1.3s
OBN MLR MLR
comp=Z,2µm,16.0s
NEW **Newport** 66.55 46 P P 16 39 04.2 +1.6
baz=304,SNR=7.8
FIA1 **FINESS Array S** 66.72 332 P P 16 39 03.7 +0.5
FINES **FINESS Array B** 66.72 332 P P 16 39 03.8 +0.5
comp=Z,27nm,0.9s,baz=46,slow=8.2,SNR=69
comp=Z,27nm,0.9s
FINES **FINESS Array B** 66.72 332 P P 16 39 04.0 +0.7
LPSR **Galich'ya Gora** 66.91 320 *eP* P 16 39 05.1 +0.5
LPSR pmax pmax
comp=Z,80nm,1.1s
L04D **Klamath Falls** 66.93 54 P P 16 39 06.6 +1.4
baz=304,SNR=5.7
J05D **Fort Rock, OR** 66.99 52 P P 16 39 06.6 +1.1
baz=304,SNR=6.3
VORR **Voronezh** 67.33 319 ⇓ *i* P P 16 39 08.5 +1.2
VORR pmax pmax
comp=Z,63nm,1.4s
SUMG **Summit** 67.38 1 P P 16 39 09.2 +1.4
SUMG **Summit** 67.38 1 P P 16 39 09.2 +1.4
SUMG pmax pmax
comp=Z,69nm,1.3s
SUMG **Summit** 67.38 1 *i* P P 16 39 09.3 +1.5
SUMG IAmb IAmb 16 39 10.3
comp=Z,67nm,1.3s
VSR **Storozhevoye** 67.62 319 *eP* P 16 39 08.8 -0.4
VSR pmax pmax
comp=Z,70nm,1.4s
AFI **Afiamalu** 67.97 133 LR LR 17 03 38.0
comp=Z,461nm,20.3s,baz=316,slow=31
MEF **Metsahovi** 68.16 332 *eP* P 16 39 13.3 +0.9
VSU **Vasula** 68.51 330 *c i* P P 16 39 14.6 0.0
VSU pmax pmax
comp=Z,196nm,1.4s
VSU **Vasula** 68.51 330 *eP* P 16 39 15.7 +1.2
RAF **Rauma** 68.51 334 *eP* P 16 39 15.4 +0.8
GROC **Groznyy** 68.71 309 *eP* P 16 39 16.5 +0.4
GROC pmax pmax
comp=Z,54nm,0.6s
PLID **Pearl Lake** 69.02 48 P P 16 39 17.9 -0.5
MSO **Missoula** 69.14 46 P P 16 39 20.6 +1.7
baz=307,SNR=6.7
GOF **Gofitskoye** 69.22 312 ⇓ *i* P P 16 39 20.2 +0.9
GOF pmax pmax
comp=Z,214nm,1.1s
BEKR **Beckworth** 69.48 55 P P 16 39 21.8 +0.6
NCK **Nalchik** 69.83 310 *i* P P 16 39 23.2 +0.1
NCK pmax pmax
comp=Z,68nm,1.0s
ZEI **Tsey** 70.07 309 *eP* P 16 39 24.5 -0.4
ZEI pmax pmax
comp=Z,32nm,0.9s
KIV **Kislovodsk** 70.08 311 ⇑ P P 16 39 26.2 +1.4
KIV **Kislovodsk** 70.08 311 P P 16 39 25.7 +0.9
KIV **Kislovodsk** 70.08 311 *eP* P 16 39 25.9 +1.1
KIV pmax pmax
comp=Z,158nm,1.1s
KIV **Kislovodsk** 70.08 311 P P 16 39 26.6 +1.8
KIV **Kislovodsk** 70.08 311 *i* P P 16 39 26.5 +1.7
SNR=28
KBZ **Khabaz** 70.10 311 P P 16 39 26.2 +1.5
comp=Z,48nm,1.0s,baz=70,slow=4.6,SNR=55
comp=Z,48nm,1.0s
KBZ **Khabaz** 70.10 311 *ce* P P 16 39 26.0 +1.3
KBZ pmax pmax
comp=Z,85nm,1.1s
SHA1 **Shidzhatmaz** 70.23 311 *c i* P P 16 39 26.6 +0.7
EGMT **Eagleton** 70.64 43 P P 16 39 29.4 +1.3
baz=309,SNR=6.1
ISAL **Salakas** 70.74 328 *eP* P 16 39 29.2 +0.7
MNK **Minsk** 70.75 326 *i* P P 16 39 28.4 0.0
MNK *i* 16 39 46.8
MNK *i* 16 42 02.6
MNK *i* PPP PPP 16 43 45.2
MNK *i* S S 16 48 41.4 -0.7
MNK *i* SSS SSS 16 56 14.6
MNK pmax pmax
comp=E,8.0nm,1.0s
MNK pmax pmax
comp=Z,88nm,1.0s
MNK MLR MLR
comp=Z,1µm,17.0s
MNK MLR MLR
comp=E,169nm,17.0s
MNK **Minsk** 70.75 326 *i* P P 16 39 28.5 0.0
comp=E,8.0nm,1.0s
MNK *i* P P 16 39 28.5 0.0
MNK *i* P P 16 39 28.5 0.0
comp=Z,88nm,1.0s,baz=47
MNK *i* PcP PcP 16 39 46.8 -2.5
MNK *i* PP PP 16 42 02.7 -2.1
MNK *i* PPP PPP 16 43 45.2
MNK *i* S S 16 48 41.4 -0.7
MNK *i* SS SS 16 53 04.5 -8.8
MNK *i* SSS SSS 16 56 14.6
MNK *i* LQ LQ 17 05 36.9
MNK *i* LR LR 17 08 17.7
MNK *i* LRM MLR 17 13 34.9
MNK *i* LRM MLR 17 13 35.2
comp=Z,1µm,16.8s
MNK *i* LRM MLR 17 13 40.0
comp=E,169nm,16.0s
SLIT **Slitere, Latvi** 70.78 331 *eP* P 16 39 29.7 +1.1
HLID **Hailey** 70.85 49 P P 16 39 30.7 +1.1
baz=308,SNR=8.5
ICESG **Greenland Ices** 70.87 1 *i* P P 16 39 30.9 +1.4
ICESG IAmb IAmb 16 39 31.6
comp=Z,71nm,1.3s
NACGM **Naroch** 70.94 327 *i* P P 16 39 30.7 +1.1
GNI **Garni** 71.15 307 *ce* P P 16 39 33.0 +1.6
GNI pmax pmax
comp=Z,80nm,1.3s
GNI **Garni** 71.15 307 P P 16 39 33.6 +2.1
GNI **Garni** 71.15 307 P P 16 39 33.5 +2.1
BOZ **Bozeman (W)** 71.16 46 P P 16 39 32.3 +0.9
baz=308,SNR=24
VSVD **Vaisvydziai** 71.33 329 *eP* P 16 39 33.5 +1.5
NC405 **NORSAR Array S** 71.61 338 P P 16 39 34.0 +0.4
NVAR **Mina Array Bea** 71.62 55 P P 16 39 36.6 +2.2
comp=Z,3.9nm,0.7s,baz=291,slow=6.2,SNR=36
comp=Z,3.9nm,0.7s
NC303 **NORSAR Array S** 71.62 338 P P 16 39 34.2 +0.5
NC303 IAmb IAmb 16 39 35.8
comp=Z,41nm,1.1s
PABE **Paberze** 71.66 329 *eP* P 16 39 35.1 +1.2
NC204 **NORSAR Array S** 71.76 338 P P 16 39 35.5 +0.9
NB2 **NORSAR Subarra** 71.82 338 P P 16 39 35.4 +0.5
comp=Z,70nm,1.2s,baz=37,slow=6.2
NB2 **NORSAR Subarra** 71.82 338 P P 16 39 35.4 +0.5
baz=37,slow=6.2
NOA **NORSAR Array B** 71.82 338 P P 16 39 35.5 +0.5
comp=Z,20nm,0.9s,baz=36,slow=6.0,SNR=63
comp=Z,20nm,0.9s
WBK **Wadi Bani Khal** 71.84 284 P P 16 39 37.3 +1.6
WBK P P 16 39 37.3 +1.6
SHME **Shamm** 71.87 289 P P 16 39 36.4 +0.7
SNR=5.5
SHME P P 16 39 36.4 +0.7
SNR=5.5
SHME **Shamm** 71.87 289 *i* P P 16 39 36.0 +0.2
SNR=8.9
STKA **Stephens Creek** 71.87 182 P P 16 39 35.6 +0.3
comp=Z,3.9nm,0.9s,baz=16,slow=8.3,SNR=4.9
comp=Z,3.9nm,0.9s
SOC **Sochi** 72.01 312 *eP* P 16 39 36.2 -0.1
SOC *eS* S 16 49 00.1 +3.1
SOC *eSS* SS 16 53 38.8 +5.7
SOC *i* SSS SSS 16 56 46.4
SOC pmax pmax
comp=Z,43nm,1.3s
SOC MLR MLR
comp=Z,1µm,16.0s
PBUR **Paburge** 72.08 330 *eP* P 16 39 37.8 +1.3
BCA **Borcka** 72.24 309 ⇑ P P 16 39 39.6 +1.8
SMDO **Samad** 72.26 285 P P 16 39 37.6 -0.7
MASF **Masafi** 72.26 288 P P 16 39 39.3 +1.1
SNR=5.9
MSFE **Esma-Masafi** 72.27 288 *i* P P 16 39 38.9 +0.7
SNR=7.3
UOSS **Minazif** 72.48 288 P P 16 39 40.3 +0.9
UOSS IAmb IAmb 16 39 41.0
comp=Z,48nm,1.1s
UOSS **Minazif** 72.48 288 P P 16 39 40.0 +0.6
UOSS **Minazif** 72.48 288 *i* P P 16 39 40.2 +0.7
SNR=13
HOQ **Hoqain** 72.49 286 P P 16 39 40.2 +0.7
SNR=6.1
HOQ P P 16 39 40.2 +0.7
SNR=6.1
H17A **Grant Village** 72.50 46 P P 16 39 41.9 +2.3
baz=309
ANN **Anapa** 72.51 314 *eP* P 16 39 38.8 -0.5
ANN pmax pmax
comp=Z,82nm,1.4s
HATD **Hatta, Dubai** 72.61 288 P P 16 39 41.1 +0.9
SNR=9.8
HATD P P 16 39 41.1 +0.9
SNR=9.8
HATD **Hatta, Dubai** 72.61 288 *i* P P 16 39 40.8 +0.6
SNR=14
IMW **Indian Meadow** 72.61 47 P P 16 39 41.8 +1.4
JMDO **Jabal Madar** 72.63 285 P P 16 39 41.2 +0.8
VES **Vestal, Richgr** 72.69 58 P P 16 39 41.1 +0.6
baz=307
ASHO **Ashiyiah** 72.74 288 P P 16 39 41.7 +0.6
SNR=11
ASHO **Ashiyiah** 72.74 288 *i* P P 16 39 42.0 +0.9
SNR=15
RLMT **Red Lodge** 72.75 45 P P 16 39 41.8 +0.8
baz=310,SNR=5.9
AKASG **Malin Array Be** 72.76 323 P P 16 39 40.9 +0.2
comp=Z,36nm,1.0s,baz=43,slow=6.8,SNR=136
comp=Z,36nm,1.0s
AKASG **Malin Array Be** 72.76 323 *ce* P P 16 39 41.0 +0.3
AKASG pmax pmax
comp=Z,34nm,1.0s
AKBB **Malin Array Si** 72.76 323 P P 16 39 40.5 -0.2
AKBB **Malin Array Si** 72.76 323 *ce* P P 16 39 41.0 +0.3
AKBB pmax pmax
comp=Z,99nm,1.3s
PKM **Mcpherson Peak** 72.79 59 P P 16 39 41.8 +0.4
baz=307
NAZ **Nazwa, Dubai** 72.85 288 P P 16 39 42.2 +0.6
CWC **Cottonwood Cre** 72.97 57 P P 16 39 42.8 +0.4
baz=308
FAQ **Al Faqa, Dubai** 73.05 288 P P 16 39 43.3 +0.5
FAQ P P 16 39 43.3 +0.5
FAQ **Al Faqa, Dubai** 73.05 288 P P 16 39 43.4 +0.5
BSY **Bisya** 73.07 286 P P 16 39 44.1 +1.1

SNR=6.6
GRAC Grapevine Rang 73.08 56 P P 16 39 43.5 +0.6
baz=308,SNR=13
DGMT Dagmar 73.17 40 P P 16 39 42.4 -0.8
baz=312
ISA Isabella, Lake 73.19 57 P P 16 39 43.5 -0.1
baz=308
ARQ Aragi 73.21 286 P P 16 39 44.8 +0.9
SNR=6.3
ARQ P P 16 39 44.8 +0.9
SNR=6.3
DY2G Dye2 73.25 4 *i* P P 16 39 44.6 +1.0
DY2G IAmb IAmb 16 39 45.4
comp=Z,121nm,1.5s
ASUD Al Ashush, Dub 73.31 288 P P 16 39 45.3 +0.9
ASUD P P 16 39 45.3 +0.9
ASUD Al Ashush, Dub 73.31 288 *i* P P 16 39 45.1 +0.7
SNR=6.1
LAO LASA Array 73.34 42 P P 16 39 46.3 +2.0
baz=311
ALNE Al Ain 73.34 288 P P 16 39 45.6 +1.0
R11A Troy Canyon, C 73.36 54 P P 16 39 45.5 +0.8
baz=308,SNR=21
MHTO MHTO 73.56 284 P P 16 39 47.0 +1.1
SNR=11
MPMC Manual Prospec 73.58 57 P P 16 39 46.8 +0.7
baz=308,SNR=16
FURC Furnace Creek, 73.73 56 P P 16 39 49.0 +2.4
baz=308,SNR=11
LRMC Laurel Mtn Rad 73.81 57 P P 16 39 49.1 +1.8
baz=308,SNR=6.1
TPNV Topopah Spring 73.81 55 P P 16 39 49.5 +2.2
baz=308,SNR=12
DUG Dugway, Tooele 73.88 51 P P 16 39 48.1 +0.4
DUG Dugway, Tooele 73.88 51 P P 16 39 48.1 +0.4
DUG pmax pmax
comp=Z,19nm,1.0s
DUG Dugway, Tooele 73.88 51 P P 16 39 50.2 +2.5
baz=309,SNR=12
EDW2 Edwards Air Fo 73.98 58 P P 16 39 49.1 +0.9
baz=308,SNR=7.1
GWY Greenwater Val 74.02 56 P P 16 39 48.9 +0.3
BW06 Boulder Array 74.11 47 P P 16 39 50.4 +1.3
baz=310,SNR=9.5
PDAR Pinedale Array 74.11 47 P P 16 39 49.6 +0.5
comp=Z,2.6nm,0.7s,baz=267,slow=2.1,SNR=32
comp=Z,2.6nm,0.7s
PDAR Pinedale Array 74.11 47 P P 16 39 49.5 +0.4
SIM Simferopol' 74.21 316 *e*P P 16 39 49.5 +0.2
SIM 16 40 04.0
SIM pmax pmax
comp=Z,106nm,1.4s
GSC Goldstone, Bar 74.48 57 P P 16 39 52.3 +1.1
baz=308
DQM DQM 74.52 283 P P 16 39 52.3 +0.8
DQM P P 16 39 52.3 +0.8
UMZA Um Al Zommool 74.58 287 P P 16 39 51.8 0.0
UMZA P P 16 39 51.8 0.0
BFSC Mount Baldy Ra 74.59 58 P P 16 39 52.7 +0.8
baz=308
CIS Catalina Islan 74.62 59 P P 16 39 53.9 +2.0
baz=308
MZWR Madinat Zayed 74.88 288 P P 16 39 53.6 +0.1
TUQ Turquoise Moun 74.96 56 P P 16 39 56.3 +2.2
baz=309,SNR=6.0
HEC Hector,Ludlow 75.08 57 P P 16 39 55.8 +1.1
baz=309
GMRC Granite Mounta 75.54 57 P P 16 40 00.8 +3.4
baz=308,SNR=7.1
MILM Milestii Mici 75.58 320 *e*P P 16 39 57.0 -0.2
comp=Z,60nm,1.1s
MILM Milestii Mici 75.58 320 *e*PP PP 16 42 55.0 +9.0
MILM Milestii Mici 75.58 320 *e*P P 16 39 57.0 -0.2
MILM *e* 16 42 55.0
MILM pmax pmax
comp=Z,60nm,1.1s
MZR Muzera 75.64 288 P P 16 39 58.4 +0.4
SNR=6.7
MZR Muzera 75.64 288 *i* P P 16 39 58.3 +0.4
SNR=14
BEL Belsk 75.64 327 *e*P P 16 39 59.4 +1.9
LVV L'vov 75.74 324 *e*P P 16 39 59.0 +0.9
LVV pmax pmax
comp=Z,190nm,1.2s
PFO Pinyon Flats O 75.76 58 *i* P P 16 39 59.3 +0.6
PFO pmax pmax
comp=Z,17nm,0.9s
PFO Pinyon Flats O 75.76 58 P P 16 39 60.0 +1.3
baz=309
DIKM Dikmen 75.77 313 ⇑P P 16 39 59.1 +0.8
TPFO Pinon Flats 75.77 58 P P 16 40 00.3 +1.6
baz=309
ULM Lac du Bonnet 75.78 35 P P 16 39 58.5 +0.1
comp=Z,3.0nm,0.5s,baz=340,slow=5.8,SNR=3.8
comp=Z,3.0nm,0.5s
BELC Belle Mtn. Jos 75.82 57 P P 16 40 00.3 +1.3
baz=309
K22A Casper 75.87 46 P P 16 39 59.7 +0.6
baz=312,SNR=5.5
GKP Gorka Klasztor 75.95 330 *e*P P 16 40 00.2 +1.0
MUD Monsted U'grnd 76.19 336 *e*P P 16 40 01.8 +1.4
MUD IAmb IAmb 16 40 02.4
comp=Z,50nm,1.3s
RSSD Black Hills 76.20 43 P P 16 40 00.4 -0.7
RSSD Black Hills 76.20 43 P P 16 40 00.4 -0.7
RSSD pmax pmax
comp=Z,10.0nm,0.9s
RSSD Black Hills 76.20 43 P P 16 40 00.7 -0.4
baz=313
MONP2 Monument Peak 76.24 59 P P 16 40 03.0 +1.5
baz=309
BZK Bozkurt 76.26 314 ⇑P P 16 40 01.7 +0.6
IRM Iron Mountain 76.27 57 P P 16 40 01.7 +0.3
baz=309,SNR=6.0
VASR Vaslui 76.27 320 ⇑P P 16 40 02.2 +1.0
BC3 Big Chuckawall 76.39 57 P P 16 40 03.1 +0.9
baz=309,SNR=5.6
KWP Kalwaria Pacla 76.47 325 *e*P P 16 40 04.1 +1.8
O20A White River Ci 76.58 49 P P 16 40 04.9 +1.6
baz=312
IKP In-Ko-Pah, Jac 76.60 59 P P 16 40 03.3 0.0
baz=309
BUR08 Bucovina Ar. S 76.79 322 P P 16 40 04.8 +0.6
BUR08 IAmb IAmb 16 40 16.9
comp=Z,34nm,0.9s
BURAR Bucovina Array 76.81 322 ⇑P P 16 40 05.6 +1.3
BURAR Bucovina Array 76.81 322 P P 16 40 04.8 +0.5
BURAR Bucovina Array 76.81 322 P P 16 40 05.6 +1.3
PDMCI Parker Dam,Lak 76.81 56 P P 16 40 04.8 +0.4
baz=310
BIZ Bicaz 76.87 321 ⇑P P 16 40 05.9 +1.3
TESR Tescani 76.92 321 ⇑P P 16 40 05.6 +0.8
CFR Carcaliu 77.14 319 ⇑P P 16 40 06.5 +0.5
GLA Glamis 77.17 58 P P 16 40 04.3 -2.2
baz=310
KOLS Kolonicke sedl 77.17 325 *e*P P 16 40 07.7 +1.5
KOLS pmax pmax
comp=Z,30nm,1.1s
KOLS Kolonicke sedl 77.17 325 *e*P P 16 40 07.7 +1.5
TPGR Topolog 77.22 319 ⇑P P 16 40 07.4 +0.9
AGMN Agassiz Nation 77.22 36 P P 16 40 05.2 -1.3
baz=317
OJC Ojcow 77.27 327 *e*P P 16 40 07.0 +0.3
VRI Vrincioaia 77.34 320 ⇑P P 16 40 09.3 +2.1
VRI Vrincioaia 77.34 320 P P 16 40 09.3 +2.1
N23A Red Feather La 77.37 47 P P 16 40 08.6 +0.8
baz=313,SNR=6.0
PLOR Plostina 77.39 320 ⇑P P 16 40 08.8 +1.3
PLOR Plostina 77.39 320 P P 16 40 08.8 +1.3
UZH Uzhgorod 77.39 325 *e*P P 16 40 07.2 -0.2
UZH *e* 16 40 11.8
UZH *e* 16 40 18.0
TIRR Tirgusor 77.50 318 ⇓P P 16 40 09.3 +1.2
TIRR Tirgusor 77.50 318 P P 16 40 09.3 +1.2
CRVS Cervenica-Dubn 77.55 325 *e*P P 16 40 09.7 +1.3
CRVS pmax pmax
comp=Z,90nm,1.6s
CRVS Cervenica-Dubn 77.55 325 *e*P P 16 40 09.7 +1.3
BMR Baia Mare 77.56 323 P P 16 40 10.0 +1.6
ARCR ARCALIA 77.59 322 ⇑P P 16 40 10.2 +1.6
COVR Voineasa-Covas 77.61 321 ⇑P P 16 40 10.3 +1.5
TLBR Topalu 77.63 319 ⇓P P 16 40 10.6 +1.8
OZUR 77.63 321 ⇑P P 16 40 10.6 +1.7
NIE Niedzica 77.67 326 *e*P P 16 40 10.9 +1.9
WUAZ Wupatki 77.76 54 P P 16 40 11.1 +1.2
baz=311,SNR=6.4
ISR Istrita 77.97 320 ⇑P P 16 40 12.1 +1.3
BR131 Keskin Array S 77.97 312 *c i*P P 16 40 11.5 +0.4
BRTR Keskin Array B 77.97 312 P P 16 40 11.9 +0.9
comp=Z,14nm,1.1s,baz=81,slow=3.9,SNR=46
BRTR PP PP 16 43 05.0 -1.6
comp=Z,5.2nm,1.1s,baz=79,slow=7.5,SNR=5.2
comp=Z,14nm,1.1s
BRTR Keskin Array B 77.97 312 P P 16 40 11.4 +0.4
BRTR Keskin Array B 77.97 312 *ce*P P 16 40 11.8 +0.8
BRTR pmax pmax
comp=Z,14nm,1.1s
MLR Muntele Rosu 77.99 320 ⇑P P 16 40 11.6 +0.6
MESR Meseseni 78.19 323 ⇑P P 16 40 13.7 +1.7
KSP Ksiaz 78.21 329 *e*P P 16 40 13.2 +1.3
LANS Liptovska Anna 78.22 326 *e*P P 16 40 14.4 +2.3
LANS pmax pmax
comp=Z,28nm,1.2s
LANS Liptovska Anna 78.22 326 *e*P P 16 40 14.4 +2.3
OKC Ostrava-Krasne 78.25 327 *e*P P 16 40 13.8 +1.6
OKC Ostrava-Krasne 78.25 327 *e*P P 16 40 13.8 +1.6
SECR 78.26 320 ⇓P P 16 40 14.2 +1.8
ISCO Idaho Springs 78.30 47 P P 16 40 12.8 -0.2
baz=313
MVCO Mesa Verde 78.38 51 P P 16 40 13.7 +0.2
baz=312
VOIR 78.47 321 ⇑P P 16 40 15.7 +2.2
OSTC Ostas 78.47 329 *e*P P 16 40 15.2 +1.8
RBK Rabkut 78.50 283 P P 16 40 14.2 +0.1
RBK P P 16 40 14.2 +0.1
CHVC Chvalec 78.50 329 *e*P P 16 40 15.0 +1.4
MORC Moravsky Berou 78.54 328 ⇑P P 16 40 15.4 +1.5
MORC Moravsky Berou 78.54 328 P P 16 40 14.8 +0.9
MORC Moravsky Berou 78.54 328 P P 16 40 14.8 +0.9
MORC pmax pmax
comp=Z,71nm,1.3s
MORC Moravsky Berou 78.54 328 *e*P P 16 40 15.1 +1.2
WHFO Wadi Hawf 78.56 284 P P 16 40 14.1 -0.4
DRGR 78.57 323 ⇑P P 16 40 15.4 +1.3
SUSD Miller 78.57 40 P P 16 40 14.0 -0.1
baz=316
DPC Dobruska-Polom 78.59 329 *e*P P 16 40 15.8 +1.7
DPC Dobruska-Polom 78.59 329 *e*P P 16 40 15.8 +1.7
KRLC Kraliky 78.62 328 *e*P P 16 40 15.6 +1.3
KRLC *e* 16 40 23.7
KRLC Kraliky 78.62 328 *e*P P 16 40 15.6 +1.3
KRLC *e*PCP PcP 16 40 23.7 +0.4
ARR Arges 78.72 321 ⇓P P 16 40 17.2 +2.2
PSZ Piszkesteto 78.98 325 ⇑P P 16 40 18.0 +1.6
PSZ Piszkesteto 78.98 325 P P 16 40 18.1 +1.7
VYHS Vyhne 79.00 326 *e*P P 16 40 17.9 +1.5
VYHS pmax pmax
comp=Z,54nm,1.4s
VYHS Vyhne 79.00 326 *e*P P 16 40 17.9 +1.5
S22A 4UR Ranch, Cre 79.00 50 P P 16 40 18.0 +1.0
baz=313
BRG Berggiesshubel 79.09 330 *e*P P 16 40 17.9 +1.0
BRG Amp 16 40 19.4
comp=Z,28nm,1.2s
BRG *ex* x 16 40 28.7
BRG Amp 16 40 30.1
comp=Z,29nm,1.4s
BRG *ex* x 16 40 42.1
BRG Amp 16 40 43.3
comp=Z,19nm,1.4s
BRG *ex* x 16 40 51.5
BRG Amp 16 40 55.7
comp=Z,21nm,1.3s
BRG PP PP 16 43 10.2 -5.2
BRG Amp 16 43 27.8
comp=Z,9.7nm,1.3s
BRG Amp 16 52 44.0
comp=Z,14nm,13.9s
BRG Amp 16 52 47.0
comp=N,5.6nm,14.2s
BRG Amp 16 52 47.0
comp=E,7.7nm,14.6s
BRG Berggiesshubel 79.09 330 *e*P P 16 40 17.8 +1.0
BRG *e* 16 40 28.7
BRG pmax pmax
comp=Z,28nm,1.2s
BRG pmax pmax
comp=Z,29nm,1.4s
BRG pmax pmax
comp=Z,19nm,1.4s
BRG pmax pmax
comp=Z,21nm,1.3s
BRG pmax pmax
comp=Z,10.0nm,1.3s
BRG MLR MLR
comp=Z,14μm,13.9s
BRG MLR MLR
comp=N,6μm,14.2s
BRG MLR MLR
comp=E,8μm,14.6s
CLL Collm 79.10 331 P P 16 40 16.4 -0.4
CLL IAmb IAmb 16 40 18.9
comp=Z,54nm,1.2s
CLL Collm 79.10 331 ⇑ *i*P P 16 40 17.2 +0.4
CLL pmax pmax
comp=Z,54nm,1.3s
CLL MLR MLR
comp=Z,1μm,18.7s
CLL Collm 79.10 331 ⇑ *i*P P 16 40 17.2 +0.4
comp=Z,54nm,1.3s
CLL *i* PcP pwP 16 40 24.8 0.0
CLL *e*PP PP 16 43 16.0 +0.7
CLL LmH 17 13 00.0
comp=N,1μm,21.0s
CLL LmH 17 13 00.0
comp=E,3μm,20.0s
CLL LmV 17 18 00.0
comp=Z,1μm,18.7s
PVCC Panska Ves 79.13 330 *e*P P 16 40 18.5 +1.5
PVCC Panska Ves 79.13 330 *e*P P 16 40 18.5 +1.5
Q24A Divide 79.14 48 P P 16 40 18.4 +0.7
baz=313
214A Organ Pipe Nat 79.18 57 P P 16 40 17.1 -0.6
baz=311
JAVC Velka Javorina 79.20 327 *e*P P 16 40 19.9 +2.4
ABTO Aybut 79.26 284 P P 16 40 18.5 +0.2
VRAC Vranov 79.30 328 ⇑P P 16 40 19.8 +1.8
VRAC Vranov 79.30 328 *e*P P 16 40 19.5 +1.5
EYMN Ely 79.41 34 P P 16 40 18.0 -0.6
baz=320
SIRR Siria 79.44 323 ⇑P P 16 40 20.2 +1.3
OGNE Ogallala 79.48 45 P P 16 40 19.0 -0.3
baz=315
KRUC Moravsky 79.57 328 *e*P P 16 40 20.8 +1.3
PRU Pruhonice 79.57 329 *e*P P 16 40 20.9 +1.4
PRU *e* 16 40 28.3
PRU *e* 16 40 28.5
PRU Pruhonice 79.57 329 *e*P P 16 40 20.9 +1.4
PRU *e*PCP PcP 16 40 28.3 +0.9
SMOL Smolenice 79.57 327 *e*P P 16 40 21.3 +1.8
SMOL pmax pmax
comp=Z,24nm,1.3s
GZR Gura Zlata 79.58 322 ⇑P P 16 40 20.6 +0.9
BUD Budapest 79.69 325 P P 16 40 21.8 +1.6
MODS Modra-Piesok 79.75 327 *e*P P 16 40 22.3 +1.8
MODS pmax pmax
comp=Z,115nm,1.3s
MODS Modra-Piesok 79.75 327 *e*P P 16 40 22.3 +1.8
SDCO Great Sand Dun 79.77 49 P P 16 40 20.3 -0.9
baz=313
BZS Buzias 79.95 323 ⇑P P 16 40 22.3 +0.7
ZST Bratislava 79.96 327 *e*P P 16 40 23.8 +2.2
ZST pmax pmax
comp=Z,115nm,1.3s
ZST Bratislava 79.96 327 *e*P P 16 40 23.8 +2.2
TUC Tucson 80.24 56 P P 16 40 23.2 -0.3
baz=312
ECSD EROS Data Cent 80.24 40 P P 16 40 22.8 -0.4
ECSD EROS Data Cent 80.24 40 P P 16 40 23.1 -0.1
baz=318,SNR=8.0
EGYH Egyhazaskeszo 80.47 326 P P 16 40 26.5 +2.1
MDVR Moldovita 80.54 322 ⇑P P 16 40 25.1 +0.3
MPLH Magyarpolny 80.58 326 P P 16 40 25.6 +0.7
SOP Sopron 80.59 327 P P 16 40 26.7 +1.7
CKRC Cesky Krumlov 80.60 329 *e*P P 16 40 26.5 +1.4
CKRC *ex* x 16 40 31.7
KHC Kasperske Hory 80.64 329 *e*P P 16 40 26.4 +1.1
KHC *e* 16 40 35.5
KHC Kasperske Hory 80.64 329 *e*P P 16 40 26.4 +1.1
KHC *e*PCP pwP 16 40 35.5 +2.2
CONA Conrad Observa 80.68 327 *i* P P 16 40 27.4 +1.8
comp=Z,16nm,1.2s,SNR=24
RONA Rosalia, Austr 80.68 327 *i* P P 16 40 27.4 +1.9
comp=Z,53nm,1.1s,SNR=35
T25A Trinidad 80.82 49 P P 16 40 27.8 +1.1
baz=314
GERES GERESS Array B 80.82 329 P P 16 40 27.1 +0.7
comp=Z,7.0nm,0.9s,baz=31,slow=3.1,SNR=48
comp=Z,7.0nm,0.9s
MORH Mrgy, Hungar 80.84 325 ⇑P P 16 40 26.8 +0.5
MORH Mrgy, Hungar 80.84 325 P P 16 40 26.2 -0.1
RAYN Ar Rayn 81.02 293 P P 16 40 28.1 +0.4
RAYN IAmb IAmb 16 40 29.7
comp=Z,54nm,1.4s
RAYN Ar Rayn 81.02 293 P P 16 40 28.2 +0.4
RAYN pmax pmax
comp=Z,53nm,1.4s
RAYN Ar Rayn 81.02 293 P P 16 40 28.4 +0.6
RAYN Ar Rayn 81.02 293 *i* P P 16 40 28.0 +0.3
SNR=19
ANMO Albuquerque 81.13 51 *ce*P P 16 40 29.9 +1.5
ANMO pmax pmax
comp=Z,29nm,2.5s
ANMO Albuquerque 81.13 51 P P 16 40 30.5 +2.1
baz=313
FRGS Fruska Gora 81.13 324 ⇑P P 16 40 29.0 +1.0
FRGS Fruska Gora 81.13 324 ⇑ *i*P P 16 40 28.5 +0.5
KOVH Kovagotottos 81.17 325 P P 16 40 28.8 +0.7
BGNE Belgrade 81.18 42 P P 16 40 29.4 +1.1
baz=317
RDO Rodhopi 81.36 318 P P 16 40 25.1 -4.1
ARSA Arzberg 81.36 327 *i* P P 16 40 30.5 +1.4
comp=Z,6.5nm,0.8s,SNR=12
RZN Rozhen 81.38 318 P P 16 40 30.0 +0.5
MOA Molln 81.39 328 *e*P P 16 40 30.9 +1.5
comp=Z,17nm,1.1s
CSS Mathiatis 81.40 309 P P 16 40 29.6 0.0
CSS IAmb IAmb 16 40 50.9
comp=Z,20nm,0.9s
BOVS Bovan 81.41 321 ⇓P P 16 40 30.2 +0.8
VTS Vitosha 81.43 320 ⇑P P 16 40 31.5 +1.7
VTS Vitosha 81.43 320 P P 16 40 31.0 +1.3
VTS IAmb IAmb 16 40 32.6
comp=Z,47nm,1.1s
VTS Vitosha 81.43 320 P P 16 40 31.0 +1.3
VTS pmax pmax
comp=Z,47nm,1.1s
VTS Vitosha 81.43 320 P P 16 40 31.0 +1.3
SCHQ Schefferville 81.67 17 P P 16 40 30.4 -0.2
comp=Z,5.3nm,0.9s,baz=20,slow=11,SNR=3.4
comp=Z,5.3nm,0.9s
BIOA Bad Ischl, Aus 81.77 328 *i* P P 16 40 32.8 +1.5
comp=Z,34nm,1.2s,SNR=14
DIVS Divibare 81.86 323 ⇑ *i*P P 16 40 32.4 +0.5
MMB Musomiste 81.95 319 P P 16 40 33.0 +0.6
121A Cookes Peak, D 81.97 54 P P 16 40 35.0 +2.1
baz=313
PERS Pernice 82.02 327 *i* P P 16 40 33.7 +1.0
SOKA Soboth 82.02 327 *i* P P 16 40 33.9 +1.2
comp=Z,72nm,1.2s,SNR=39
KKB Krupnik 82.06 320 P P 16 40 34.0 +1.1
BEBN Eben Emael 82.08 335 *d*P P 16 40 33.8 +1.0
BTNL Ternell 82.11 334 *d*P P 16 40 34.0 +0.9
comp=Z,13nm,1.2s
MEM Membach 82.14 334 *d*P P 16 40 33.9 +0.8
comp=Z,14nm,1.1s
OBKA Obir 82.35 327 ⇑ *i*P P 16 40 34.1 -0.4
OBKA Obir 82.35 327 *i* P P 16 40 35.2 +0.8
comp=Z,17nm,0.9s,SNR=7.8
BHOU Houvegnez 82.36 334 *d*P P 16 40 35.1 +0.8
SRS Serrai 82.37 319 P P 16 40 35.3 +0.7
KBA Koelnbreinsper 82.39 328 *i* P P 16 40 35.9 +1.2
comp=Z,50nm,1.4s,SNR=22
RUDO Rudo 82.52 323 ⇑ *i*P P 16 40 35.7 +0.4
CRES Cresnjev 82.52 326 ⇑ *i*P P 16 40 35.9 +0.7
CRES Cresnjev 82.52 326 *i* P P 16 40 36.0 +0.7
BCLA Clavier 82.53 335 *d*P P 16 40 36.1 +0.9
comp=Z,13nm,1.3s
BLY Banja Luka 82.62 325 ⇑ *i*P P 16 40 36.3 +0.5
MYKA Terra Mystica 82.63 328 *i* P P 16 40 36.4 +0.5
comp=Z,26nm,1.2s,SNR=13
STIP Stip 82.64 320 *i* P P 16 40 36.1 +0.2
KNT Kendrikon 82.68 319 P P 16 40 36.9 +0.7
VAY Valandovo 82.73 319 *i* P P 16 40 37.7 +1.3
PLE Pljevlja 82.73 323 ⇑ *i*P P 16 40 37.1 +0.6
LJU Ljubljana 82.74 327 *i* P P 16 40 36.8 +0.4
RCHB Rochefort 82.78 335 *d*P P 16 40 36.9 +0.4
comp=Z,14nm,1.1s
SKO Skopje 82.79 321 *i* P P 16 40 38.5 +1.8
BMRD Maredsous 82.81 335 *d*P P 16 40 37.7 +1.1
comp=Z,23nm,1.1s
IVA Berane 82.84 322 ⇑ *i*P P 16 40 37.2 +0.1
BOJS Bojanci 82.86 326 ⇑ *i*P P 16 40 37.5 +0.5
WATA Walderalm 82.88 329 *i* P P 16 40 38.2 +0.9
comp=Z,51nm,1.3s,SNR=16
WTTA Wattenberg 82.91 329 *i* P P 16 40 38.5 +1.0
comp=Z,30nm,1.2s,SNR=15
ABTA Abfaltersbach 82.99 329 *i* P P 16 40 38.1 +0.3
comp=Z,28nm,1.2s,SNR=12
CEY Cerknica 83.02 327 ⇑ *i*P P 16 40 38.0 +0.1
PVY Plav 83.03 322 ⇑ *i*P P 16 40 38.6 +0.5
KOME Kolasin 83.04 322 ⇑ *i*P P 16 40 38.5 +0.4
DOU Dourbes 83.04 335 *d*P P 16 40 38.6 +0.7
comp=Z,7.4nm,1.1s
UPM Unac-Piva 83.05 323 *e*P P 16 40 38.5 +0.2
UPM Unac-Piva 83.05 323 ⇑ *i*P P 16 40 38.5 +0.2
MOTA Moosalm 83.05 330 *i* P P 16 40 39.2 +1.1
comp=Z,50nm,1.1s,SNR=26
RETA Reutte 83.06 330 *i* P P 16 40 39.3 +1.2
comp=Z,42nm,1.3s,SNR=15
CLUD Cludinico 83.08 328 P P 16 40 37.5 -0.7
SQTA Sankt Quirin 83.11 330 *i* P P 16 40 39.7 +1.2
comp=Z,31nm,1.2s,SNR=18
A050A Klekovaca 83.12 325 ⇑ *i*P P 16 40 39.1 +0.6
SRKY Kupres RS 83.17 324 ⇑ *i*P P 16 40 39.6 +0.8
SCIA State Center 83.26 39 P P 16 40 39.7 +0.6
baz=320
BFO Black Forest 83.27 332 P P 16 40 39.9 +0.8
BFO Black Forest 83.27 332 P P 16 40 39.9 +0.8
BFO pmax pmax
comp=Z,59nm,1.5s
SKDS Skadanscina 83.35 327 ⇑ *i*P P 16 40 39.4 -0.2
NKME Niksic 83.37 322 ⇑ *i*P P 16 40 40.0 +0.3
BRY Bratogost 83.45 323 ⇑ *i*P P 16 40 40.3 0.0
BRY Bratogost 83.45 323 ⇑ *i*P P 16 40 40.5 +0.2
FETA Feichten 83.46 330 *i* P P 16 40 41.5 +1.2
comp=Z,38nm,1.1s,SNR=14
PDG Podgorica 83.48 322 ⇑P P 16 40 41.8 +1.5
TTG Podgorica 83.48 322 ⇑ *i*P P 16 40 41.0 +0.7
CEME Cevo 83.55 322 ⇑ *i*P P 16 40 41.0 +0.3
DAVA Damuels 83.57 330 *i* P P 16 40 42.2 +1.4
comp=Z,47nm,1.2s,SNR=14
DRME Dracevica, Mon 83.71 322 ⇑ *i*P P 16 40 42.0 +0.6
DRME Dracevica, Mon 83.71 322 ⇑ *i*P P 16 40 42.1 +0.6
BUM Brajici-Budva 83.75 322 ⇑ *i*P P 16 40 42.1 +0.3
OHR Ohrid 83.76 320 *i* P P 16 40 42.9 +1.1
HCY Herceg Novi 83.83 323 *e*P P 16 40 41.7 -0.4
HCY Herceg Novi 83.83 323 ⇑ *i*P P 16 40 42.2 +0.1
ULC Ulcinj 83.85 322 ⇑ *i*P P 16 40 42.8 +0.6
STON Ston 83.86 323 ⇑ *i*P P 16 40 40.6 -1.6
AMTX Amarillo 83.97 49 P P 16 40 44.4 +1.3
baz=316
MSTX Muleshoe 83.99 50 P P 16 40 44.1 +0.9
baz=315
MNTX Cornudas Mount 84.02 53 P P 16 40 45.6 +2.3
baz=314,SNR=7.5
KBN Korca 84.14 320 P P 16 40 44.5 +0.7
NEST Nestorio 84.17 320 P P 16 40 44.3 +0.3
LKR Lokris 84.51 317 P P 16 40 44.5 -1.1
LSK Leskovik 84.59 320 P P 16 40 47.2 +1.1
ANX Ano Chora 85.11 318 P P 16 40 48.1 -0.7
WMOK Wichita Mounta 85.72 47 P P 16 40 51.3 -0.5
baz=317
MATE Matera 86.07 322 ⇓P P 16 40 54.4 +1.1
HDIL Hopedale 86.17 38 P P 16 40 53.6 -0.3
baz=322
TUL1 Leonard 86.49 44 P P 16 40 55.8 +0.2
baz=319
BNI Bardonecchia 86.65 331 P P 16 40 57.1 +0.8
BNI IAmb IAmb 16 41 17.0
comp=Z,24nm,1.0s
BNI Bardonecchia 86.65 331 P P 16 40 57.1 +0.8
BNI pmax pmax

	comp=Z,24nm,1.0s							
TXAR	**Lajitas Array**	**86.73**	**54**	P		**P**	16 40 58.2	**+1.3**
	comp=Z,4.0nm,1.0s,baz=290,slow=3.7,SNR=30							
	comp=Z,4.0nm,1.0s							
TXAR	**Lajitas Array**	**86.73**	**54**	P		**P**	16 40 58.1	**+1.2**
TXAR	**Lajitas Array**	**86.73**	**54**	P		**P**	16 40 58.1	**+1.2**
ABTX	**Abilene, Hawke**	**86.78**	**49**	P		**P**	16 40 57.5	**+0.4**
	baz=317							
CCM	**Cathedral Cave**	**87.19**	**40**	P		**P**	16 40 58.6	**-0.3**
CCM				IAmb		IAmb	16 41 13.9	
	comp=Z,15nm,0.9s							
CCM	**Cathedral Cave**	**87.19**	**40**	P		**P**	16 40 58.6	**-0.3**
CCM				pmax		pmax		
	comp=Z,15nm,0.9s							
CCM	**Cathedral Cave**	**87.19**	**40**	P		**P**	16 40 59.7	**+0.8**
	baz=321							
O48B	**Farmland**	**88.29**	**35**	P		**P**	16 41 03.9	**-0.2**
	baz=325							
MIAR	**Mount Ida**	**88.71**	**44**	P		**P**	16 41 07.5	**+1.4**
	baz=320							
BATG	**Bathurst New B**	**88.84**	**20**	P		**P**	16 41 06.2	**-0.4**
M53A	**WI Miller and**	**89.19**	**32**	P		**P**	16 41 08.4	**+0.1**
	baz=328							
PKME	**Peaks-Kenny Pk**	**89.80**	**23**	P		**P**	16 41 11.8	**+0.8**
	baz=335							
O53A	**New Philadelph**	**89.98**	**33**	P		**P**	16 41 10.7	**-1.4**
	baz=327							
P52A	**Corning**	**90.11**	**34**	P		**P**	16 41 13.3	**+0.6**
	baz=327							
BINY	**Binghamton**	**90.33**	**28**	P		**P**	16 41 12.1	**-1.6**
	baz=331							
WVT	**Waverly**	**90.39**	**39**	P		**P**	16 41 13.7	**-0.3**
	baz=323							
SSPA	**Standing Stone**	**90.98**	**30**	P		**P**	16 41 16.5	**-0.2**
	baz=329							
KEST	**Kesra**	**93.43**	**324**	P		**P**	16 41 28.4	**+0.1**
	comp=Z,8.1nm,1.1s,baz=228,slow=23,SNR=5.1							
	comp=Z,8.1nm,1.1s							
ESDC	**Sonseca Array**	**95.07**	**335**	P		**P**	16 41 35.3	**-0.4**
	comp=Z,1.7nm,0.9s,baz=12,slow=3.8,SNR=9.1							
	comp=Z,1.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**116.16**	**318**	PKP		**PKPdf**	16 46 55.5	**-0.8**
	comp=Z,1.6nm,1.0s,baz=30,slow=2.3,SNR=4.4							
TORD				PP		**PP**	16 47 58.9	**-1.7**
	comp=Z,9.6nm,1.1s,baz=26,slow=7.4,SNR=12							
VNDA	**Vanda**	**118.12**	**176**	PKP		**PKPdf**	16 46 57.9	**-0.2**
	comp=Z,0.5nm,0.6s,baz=309,slow=5.3,SNR=2.7							
PAMC	**Pamplona, Colo**	**121.92**	**44**	*eP*		**PKiKP**	16 47 11.8	**+3.6**
SOCV	**Socops**	**122.07**	**41**	*eP*		PKPdf	16 46 57.6	-10
SOCV				*eS*		**PKiKP**	16 47 06.8	**-1.1**
SOCV				*i*		**PKiKP**	16 47 07.3	**-0.6**
	comp=Z,318nm,0.2s							
TAMC	**Tame, Arauca**	**123.16**	**44**	*eP*		**PKiKP**	16 47 12.8	**+2.7**
MAW	**Mawson**	**123.28**	**207**	PKP		**PKiKP**	16 47 08.4	**-0.1**
	comp=Z,3.4nm,1.0s,baz=270,slow=1.0,SNR=7.1							
QSPA	**South Pole Qui**	**130.07**	**180**	PKP		**PKPdf**	16 47 21.8	**+0.4**
	comp=Z,2.0nm,0.9s,baz=257,slow=2.4,SNR=4.8							
TROLL	**Troll, Antarti**	**142.92**	**199**	PKPdf		**PKPdf**	16 47 42.2	**-3.0**
LPAZ	**La Paz**	**143.47**	**58**	PKP		**PKPdf**	16 47 48.0	**-0.4**
	comp=Z,3.0nm,0.5s,baz=297,slow=3.9,SNR=6.5							
SNAA	**Sanae**	**144.42**	**197**	PKPdf		**PKPab**	16 47 45.3	**-0.6**
SNAA	**Sanae**	**144.42**	**197**	PKP		PKPbc	16 47 46.2	0.0
	comp=Z,23nm,1.2s,baz=105,slow=3.1,SNR=24							
SNAA	**Sanae**	**144.42**	**197**	PKPdf		PKPbc	16 47 46.4	+0.2
SNAA	**Sanae**	**144.42**	**197**	PKIKP		PKPbc	16 47 46.4	+0.2
VNA2	**Neumayer--Watz**	**145.98**	**197**	PKPdf		**PKPbc**	16 47 51.0	**-0.1**
	baz=132,slow=3.0							
VNA3	**Neumayer Olymp**	**146.21**	**195**	PKPdf		**PKPbc**	16 47 51.5	**-0.3**
VNA1	**Neumayer--Stat**	**146.37**	**196**	PKPdf		**PKPdf**	16 47 51.5	**+0.6**
LVC	**Limon Verde**	**147.31**	**67**	*eP*		**PKiKP**	16 47 59.1	**-0.1**
PTLB	**Pontes e Lacer**	**148.23**	**45**	*eP*		**PKiKP**	16 48 00.3	**-0.5**
NBRF	**Rio Formoso -**	**148.46**	**358**	*eP*		**PKPbc**	16 47 59.7	**0.0**
NBAN	**Anadia - AL**	**149.46**	**360**	*eP*		**PKPbc**	16 48 01.1	**-1.1**
AC05	**El Transito**	**149.96**	**78**	PKPdf		**PKiKP**	16 48 04.3	**+0.1**
SALV	**Santo Antonio**	**150.40**	**40**	*eP*		**PKiKP**	16 48 04.9	**-0.3**
PMSA	**Palmer Station**	**150.75**	**156**	PKPbc		**PKPbc**	16 48 03.9	**+0.2**
	comp=Z,5.4nm,0.9s,baz=245,slow=1.7,SNR=7.2							
PMSA	**Palmer Station**	**150.75**	**156**	*eP*		**PKPbc**	16 48 03.8	**0.0**
NBLA	**Lagarto - SE**	**150.75**	**3**	*eP*		**PKiKP**	16 48 06.1	**+0.1**
SDBA	**SAO DESIDERIO**	**151.18**	**18**	*eP*		**PKPbc**	16 48 05.8	**-0.6**
BO02	**Sierra Bellavi**	**152.25**	**90**			**PKiKP**	16 48 09.4	**+0.8**
PP1B	**Ponte de Pedra**	**152.25**	**41**	*eP*		**PKPbc**	16 48 08.4	**-0.3**
GDU01	**Guandu, BA**	**153.34**	**7**	*eP*		**PKPbc**	16 48 09.0	**-2.2**
BDFB	**Brasilia**	**153.37**	**26**	PKPbc		**PKiKP**	16 48 12.5	**+1.0**
	comp=Z,4.3nm,1.0s,baz=312,slow=2.4,SNR=3.2							
PLCA	**Paso Flores**	**154.07**	**102**	PKPbc		**PKiKP**	16 48 12.9	**+0.7**
	comp=Z,2.5nm,0.8s,baz=245,slow=5.9,SNR=7.4							
PLCA	**Paso Flores**	**154.07**	**102**			**PKiKP**	16 48 12.7	**+0.5**
PLCA	**Paso Flores**	**154.07**	**102**	PKIKP		**PKiKP**	16 48 12.7	**+0.5**
AQDB	**Aquidauana**	**154.20**	**46**	*eP*		**PKPbc**	16 48 11.3	**-1.6**
C2SB	**Chapadao do Su**	**154.24**	**38**	*eP*		**PKPbc**	16 48 10.2	**-2.9**
CMC01	**Camacan, BA**	**154.96**	**7**	*eP*		**PKPbc**	16 48 11.6	**-3.0**
VAS01	**Vassouras-RJ**	**161.02**	**21**	*eP*		**PKPdf**	16 48 19.2	**+6.0**
DUB01	**Friburgo-RJ**	**161.09**	**18**	*eP*		**PKPdf**	16 48 19.4	**+6.1**

TAP 20 16:53:55.1,24°.46N×121°.87E,h15km,ML1.2,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.08**	**258**	*i* P	Pg	16 53 57.7	-0.5
	baz=258						
EWUT				*i* S	Sg	16 54 00.9	+0.7
	baz=258						
ENA	**Nanau**	**0.12**	**254**	*i* P	Pb	16 53 58.9	-0.2
	baz=251						
ENA				*i* S	Sb	16 54 02.4	+0.6
	baz=251						
EHP	**Heping Village**	**0.19**	**217**	*eS*	Sb	16 54 04.1	+0.3
	baz=214						
NDS	**Dongshan**	**0.22**	**321**	*eP*	Pg	16 54 00.2	+0.1
	baz=321						
NDS				*eS*	Sb	16 54 04.8	+0.1
	baz=321						
TWE	**Neicheng**	**0.32**	**325**	*i* P	Pb	16 54 02.8	+0.3
	baz=326						
TWE				S	Sb	16 54 07.7	+0.3
	baz=326						
LATG	**Datong**	**0.32**	**283**	P	Pb	16 54 02.6	0.0
	baz=283						
ENTT	**Nioudou**	**0.33**	**303**	*i* P	Pg	16 54 02.1	+0.2
	baz=303						
NDT	**Datong Townshi**	**0.35**	**294**	P	Pb	16 54 03.8	+0.7
	baz=293						
NDT				*eS*	Sb	16 54 09.1	+0.6
	baz=293						
ETL	**Fush Village**	**0.38**	**216**	*eS*	Sb	16 54 09.8	+0.7
	baz=216						
NACB	**Ninganchiao**	**0.38**	**221**	P	Pb	16 54 03.6	0.0
	baz=220						
EGS		**0.39**	**9**	*i* P	Pb	16 54 04.3	+0.6
	baz=10.0						
EGS				*i* S	Sb	16 54 09.5	+0.1
	baz=10.0						
FUSB	**Fushanzhiwuyua**	**0.39**	**319**	P	Pb	16 54 04.3	+0.5
	baz=319						
NTC	**Toucheng**	**0.39**	**355**	*eP*	Pb	16 54 03.7	-0.1
	baz=355						
NTC				*eS*	Sb	16 54 10.2	+0.5
	baz=355						
ETLH	**Xiulin Townshi**	**0.43**	**234**	*eP*	Pb	16 54 04.8	+0.3
	baz=234						
ETLH				*eS*	Sb	16 54 11.4	+0.5
	baz=234						
NNSB	**Datong**	**0.44**	**266**	P	Pb	16 54 04.6	-0.1
	baz=265						
NNSB				S	Sb	16 54 11.5	+0.3
	baz=265						
NNS	**Nan Shan**	**0.45**	**267**	*eP*	Pg	16 54 04.5	+0.3
	baz=266						
NNS				*i* S	Sg	16 54 10.8	+0.4
	baz=266						
TWD	**Chiawan**	**0.45**	**213**	*i* P	Pg	16 54 04.3	+0.1
	baz=212						
TWD				S	Sb	16 54 12.1	+0.8
	baz=212						
YHNB	**Yeheng**	**0.49**	**295**	P	Pb	16 54 06.0	+0.5
	baz=294						
YHNB				*eS*	Sb	16 54 14.0	+1.4
	baz=294						
TIPB	**Shuangxi**	**0.51**	**356**	P	Pb	16 54 06.2	-0.4
	baz=355						
TIPB				S	Sb	16 54 13.4	+0.4
	baz=355						
NSK	**Sanguang**	**0.51**	**295**	P	Pb	16 54 06.0	+0.1
	baz=294						
NSK				S	Sb	16 54 12.9	-0.2
	baz=294						
HWA	**Hwalien**	**0.54**	**206**	*eP*	Pg	16 54 05.7	-0.1
	baz=205						
HWA				*eS*	Sb	16 54 14.3	+0.5
	baz=205						
TWB1	**Santiao Chiao**	**0.56**	**11**	*eP*	Pb	16 54 06.5	-0.1
	baz=12						
TWB1				*eS*	Sb	16 54 14.5	+0.2
	baz=12						
FUSS	**Fushou**	**0.61**	**250**	*eP*	Pb	16 54 07.7	+0.1
	baz=249						
FUSS				*eS*	Sb	16 54 16.6	+0.5
	baz=249						
SXI1	**Grass Mountain**	**0.63**	**1**	*eP*	Pn	16 54 08.8	-0.8
SXI1				*eS*	Sb	16 54 17.5	+1.0
WHF	**Hehuan Shan**	**0.63**	**240**	P	Pb	16 54 08.6	+0.4
	baz=239						
WHF				S	Sb	16 54 17.5	+0.5
	baz=239						
TAP	**Taipei**	**0.66**	**330**	*eP*	Pb	16 54 08.8	+0.4
	baz=330						
TAP				*eS*	Sb	16 54 17.9	+0.5
	baz=330						
TWT	**Tachien**	**0.66**	**252**	S	Sb	16 54 18.8	+1.1
	baz=251						
CHGB	**Renai**	**0.75**	**238**	*eP*	Pb	16 54 10.2	+0.2
	baz=237						
CHGB				*eS*	Sb	16 54 20.8	+0.7
	baz=237						
NTST	**Danshui**	**0.80**	**332**	*eS*	Sb	16 54 21.9	+0.7
	baz=331						
OWD	**Renai**	**0.81**	**231**	*eP*	Pg	16 54 10.6	-0.2
	baz=231						
OWD				*eS*	Sb	16 54 22.2	+0.4
	baz=231						
WUSB	**Renai**	**0.83**	**236**	*eP*	Pb	16 54 11.3	0.0
	baz=235						
WUSB				*eS*	Sb	16 54 22.9	+0.6
	baz=235						

*MOS **20** 17:21:29.8±0.0,40°.86N×48°.21E,h10km,MPVA3.5*
*DRS **20** 17:21:32.7±0.0,40°.70N×48°.42E,h23km*
ISC 20 17:21:31.9±4.2,40°.8N±0°.1×48°.3E±0°.1,h14km±23km,n10,
σ0s.75/20,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKT	**Akhty**	**0.77**	**328**	*i* Pg	**Pb**	**17 21 45.6**	**-1.6**
AKT				*eSg*	**Sb**	**17 21 56.5**	**-1.1**
KSMR	**Kasumkent**	**0.78**	**351**	*ePg*	**Pb**	**17 21 46.7**	**-0.6**
KSMR				*eSg*	**Sb**	**17 21 58.2**	**+0.3**
URKR	**Urkarakh**	**1.42**	**340**	*ePg*	**Pb**	**17 21 58.1**	**-0.2**
URKR				*eSg*	**Sb**	**17 22 17.4**	**+1.1**
KMKR	**Kumukh**	**1.58**	**326**	*ePg*	**Pn**	**17 21 59.6**	**0.0**
KMKR				*eSg*	**Sb**	**17 22 21.8**	**+0.9**
SGKR	**Sergokala**	**1.69**	**344**	*ePg*	**Pn**	**17 22 01.1**	**0.0**
SGKR				*eSg*	**Sb**	**17 22 24.6**	**+0.5**
DDFL	**Dedoflistskaro**	**1.75**	**291**	P	**Pb**	**17 22 03.4**	**-0.4**
DDFL				S	**Sg**	**17 22 28.8**	**+0.7**
LGD	**Lagodekhi**	**1.84**	**304**	P	**Pn**	**17 22 03.4**	**+0.3**
LGD				S	**Sg**	**17 22 31.0**	**+0.1**
XNZR	**Khunzakh**	**2.08**	**326**	*ePg*	**Pn**	**17 22 07.1**	**+0.6**
XNZR				*eSg*	**Sb**	**17 22 35.3**	**0.0**
UNCR	**Uncukul**	**2.19**	**330**	*ePg*	**Pn**	**17 22 08.6**	**+0.6**
UNCR				*eSg*	**Sb**	**17 22 38.0**	**-0.3**
KRNR	**Karanay**	**2.25**	**333**	*ePg*	**Pn**	**17 22 09.5**	**+0.7**
KRNR				*eSg*	**Sb**	**17 22 39.5**	**-0.6**

*IDC **20** 17:35:25.6±0.9,55°.11S×30°.90W,h0km,mb3.8/5,*
mbtmp3.8/5,Error ellipse: s-maj=44.4km s-min=23.0km
az=64.0
ISC 20 17:35:27.1±0.8,55°.1S±0°.2×30°.9W±0°.3,h10km,n14,
σ0s.94/14,mb4.0/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.51**	**156**	P	**Pn**	**17 39 44.9**	**+1.6**
VNA3	**Neumayer Olymp**	**18.64**	**159**	P	**Pn**	**17 39 45.9**	**+1.0**
SNAA	**Sanae**	**20.50**	**155**	P	**P**	**17 40 04.0**	**-0.9**
SNAA	**Sanae**	**20.50**	**155**	P	**P**	**17 40 05.1**	**+0.2**
	2.0nm,1.0s,baz=312,slow=14,SNR=8.7						
	2.0nm,1.0s						
TROLL	**Troll, Antarti**	**22.06**	**153**	P	**P**	**17 40 20.9**	**-0.9**
CPUP	**Villa Florida**	**34.61**	**315**	P	**P**	**17 42 16.0**	**-0.1**
	1.1nm,0.5s,baz=152,slow=6.8,SNR=3.7						
	1.1nm,0.5s						
QSPA	**South Pole Qui**	**35.18**	**180**	P	**P**	**17 42 20.3**	**-0.6**
	1.7nm,0.9s,baz=238,slow=4.3,SNR=5.6						
	1.7nm,0.9s						
LPAZ	**La Paz**	**48.11**	**309**	P	**P**	**17 44 08.7**	**+1.0**
	1.2nm,0.5s,baz=110,slow=6.7,SNR=5.4						
	1.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.31**	**33**	P	**P**	**17 46 58.9**	**+0.3**
	0.5nm,0.9s,baz=205,slow=7.1,SNR=2.0						
	0.5nm,0.9s						
FINES	**FINESS Array B**	**124.53**	**29**	PKP	**PKiKP**	**17 54 25.0**	**-0.3**
	0.9nm,0.9s,baz=193,slow=5.7,SNR=2.0						
ARCES	**ARCESS Array B**	**130.83**	**23**	PKP	**PKiKP**	**17 54 37.8**	**0.0**
	0.7nm,0.9s,baz=215,slow=1.1,SNR=3.5						
ZALV	**Zalesovo Beam**	**143.83**	**64**	PKP	**PKPdf**	**17 55 00.9**	**-0.3**
	0.5nm,0.4s,baz=270,slow=2.9,SNR=2.4						
ILAR	**Eielson Array**	**147.91**	**314**	PKPbc	**PKPbc**	**17 55 09.3**	**-1.6**
	1.0nm,0.8s,baz=122,slow=1.7,SNR=7.3						
SONM	**Songino Array**	**152.77**	**87**	PKPbc	**PKiKP**	**17 55 23.4**	**-0.1**
	0.7nm,0.6s,baz=230,slow=2.2,SNR=4.8						

*IDC **20** 17:47:40.0±1.7,40°.30N×143°.99E,h0km,mb3.8/8,*
mbtmp3.8/11,ML2.9/3,Error ellipse: s-maj=38.8km
s-min=27.8km az=91.0
*JMA **20** 17:47:44.1±0.2,40°.4N±0°.6×14°.4E±°,h22km,MV3.9/36,*
FAR E OFF SANRIKU
ISC 20 17:47:43.1±1.0,40°.34N±0°.05×143°.81E±0°.08,h16km,n34,
σ1s.18/39,mb3.8/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.55**	**256**	P	**Pn**	**17 48 09.0**	**-1.0**
JTH				*eS*	**Sn**	**17 48 26.8**	**-3.0**
JKEN	**Kujiedanarisaw**	**1.61**	**266**	P	**Pn**	**17 48 09.7**	**-1.2**
MIYJ	**Miyakonagasawa**	**1.71**	**244**	*i* P	**Pn**	**17 48 12.1**	**-0.2**
MIYJ				*eS*	**Sn**	**17 48 31.1**	**-2.6**
JEM	**Erimo**	**1.75**	**344**	*eP*	**Pn**	**17 48 12.4**	**-0.4**
JEM				*eS*	**Sn**	**17 48 33.4**	**-1.3**
JANG	**Nango**	**1.76**	**272**	P	**Pn**	**17 48 11.9**	**-1.0**
JNBK	**Urakawa-nobuka**	**2.10**	**338**	*eP*	**Pn**	**17 48 17.6**	**0.0**
JOM	**Ohasama**	**2.12**	**247**	*i* P	**Pn**	**17 48 18.2**	**+0.3**
JOM				*eS*	**Sn**	**17 48 43.0**	**-1.0**
JTM	**Tenmabayashi**	**2.14**	**283**	P	**Pn**	**17 48 17.9**	**-0.2**
JCH	**Churui**	**2.30**	**352**	P	**Pn**	**17 48 20.1**	**-0.2**
JCH				*eS*	**Sn**	**17 48 46.2**	**-2.0**
JOT	**Ohata**	**2.34**	**297**	P	**Pn**	**17 48 20.5**	**-0.4**
JOT				*eS*	**Sn**	**17 48 48.4**	**-0.9**
JMK	**Ichinoseki**	**2.43**	**236**	*i* P	**Pn**	**17 48 22.6**	**+0.4**
JMK				*eS*	**Sn**	**17 48 51.0**	**-0.6**
JAK	**Akkeshi**	**2.74**	**14**	*eP*	**Pn**	**17 48 26.4**	**+0.1**
JAK				S	**Sn**	**17 48 57.4**	**-1.7**
JAR	**Ashorobuto**	**2.96**	**359**	P	**Pn**	**17 48 28.8**	**-0.5**
JAR				*eS*	**Sn**	**17 49 02.0**	**-2.4**
JYK	**Kaneyama**	**3.02**	**243**	P	**Pn**	**17 48 31.0**	**+0.7**
JYK				*eS*	**Sn**	**17 49 05.5**	**-0.6**
JEW	**Eniwo**	**3.06**	**325**	*eP*	**Pn**	**17 48 31.9**	**+1.1**
JEW				*eS*	**Sn**	**17 49 07.3**	**+0.2**
JOMM	**Oshimamatsumae**	**3.12**	**294**	*eP*	**Pn**	**17 48 32.1**	**+0.6**
MJAR	**Matsushiro Arr**	**5.81**	**231**	Pn	**Pn**	**17 49 07.6**	**-0.9**
	0.2nm,0.3s,baz=39,slow=11,SNR=37						
	5.6nm,0.6s						
USRK	**Ussuriysk Ar.**	**9.57**	**298**	Pn	**Pn**	**17 50 01.4**	**+1.1**
	0.7nm,0.3s,baz=95,slow=15,SNR=8.5						
	4.5nm,0.5s						
KSRS	**Korea Array**	**12.71**	**262**	Pn	**Pn**	**17 50 45.3**	**+2.2**
	0.1nm,0.3s,baz=70,slow=14,SNR=3.3						
	0.6nm,0.6s						
SONM	**Songino Array**	**27.69**	**298**	P	**P**	**17 53 30.5**	**0.0**
	0.8nm,0.6s,baz=91,slow=9.1,SNR=6.3						
	0.8nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.50**	**129**	T	T	18 23 36.8	
	baz=321,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.52**	**129**	T	T	18 23 33.2	
	baz=321						
H11N3	**WAKE ISLAND Hy**	**28.52**	**129**	T	T	18 23 43.6	
	baz=321,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.35**	**131**	T	T	18 24 43.9	
	baz=323,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.35**	**131**	T	T	18 24 42.2	
	baz=323,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.36**	**131**	T	T	18 24 40.7	
	baz=323,slow=76						
ZALV	**Zalesovo Beam**	**41.16**	**310**	P	**P**	**17 55 26.6**	**+0.1**
	1.0nm,0.6s,baz=88,slow=8.3,SNR=5.2						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**44.04**	**300**	P	**P**	**17 55 50.5**	**+0.5**
	1.3nm,0.7s,baz=83,slow=9.9,SNR=11						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**60.62**	**190**	P	**P**	**17 57 52.5**	**-0.6**
	0.2nm,0.7s,baz=11,slow=6.7,SNR=1.9						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**66.76**	**332**	P	**P**	**17 58 33.1**	**-0.1**
	1.1nm,0.7s,baz=47,slow=8.4,SNR=7.8						
	1.1nm,0.7s						
KBZ	**Khabaz**	**70.17**	**311**	P	**P**	**17 58 56.3**	**+1.5**
	1.3nm,0.7s,baz=58,slow=1.6,SNR=3.7						
	1.3nm,0.7s						
NB2	**NORSAR Subarra**	**71.85**	**338**	P	**P**	**17 59 05.3**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**71.85**	**338**	P	**P**	**17 59 05.2**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=38,slow=6.0,SNR=4.5						
	comp=Z,0.5nm,0.7s						
AKASG	**Malin Array Be**	**72.82**	**323**	P	**P**	**17 59 10.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=42,slow=5.6,SNR=4.2						
	comp=Z,0.5nm,0.6s						

*JMA **20** 17:59:37.1±0.3,23°.1N±1°.7E×121°.7E±1°.0,h39km,MV3.1/12,*
TAIWAN REGION
*TAP **20** 17:59:37.3,22°.62N×121°.69E,h18km,ML3.4,C*
ISC 20 17:59:35.7±1.1,22°.64N±0°.02×121°.73E±0°.03,h18km±5km,
n91,σ1s.21/147,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.24**	**278**	*i* P	**Pg**	**17 59 42.7**	**+1.5**
	baz=286						
LDUT				*i* S	**Sg**	**17 59 46.6**	**+1.6**
	baz=286						
EDH	**Donghe**	**0.51**	**310**	*i* P	**Pn**	**17 59 47.0**	**-1.1**
	baz=304						
EDH				S	**Sb**	**17 59 54.0**	**+0.8**
	baz=304						
TTN	**Taitung**	**0.55**	**282**	*i* P	**Pn**	**17 59 47.6**	**-1.0**
	baz=286						
CHKT	**Chengkung**	**0.57**	**324**	*eP*	**Pb**	**17 59 47.4**	**+0.3**
	baz=339						
CHKT				*eS*	**Sb**	**17 59 54.8**	**0.0**
	baz=339						
LONT	**Longtian**	**0.61**	**296**	*eP*	**Pn**	**17 59 49.0**	**-0.5**
	baz=299						
LAY	**Lan-yu**	**0.62**	**195**	P	**Pb**	**17 59 48.0**	**-0.1**
	baz=182						
LAY				S	**Sb**	**17 59 56.2**	**-0.2**
	baz=182						
TWGBT	**Beinan**	**0.62**	**286**	*eP*	**Pn**	**17 59 48.4**	**-1.3**
	baz=299						
LYUB	**Lan-yu**	**0.65**	**192**	*eP*	**Pb**	**17 59 47.7**	**-0.8**
	baz=189						
ECS	**Chishang**	**0.65**	**314**	P	**Pn**	**17 59 49.6**	**-0.5**
	baz=317						
ECS				S	**Sn**	**17 59 59.2**	**-0.7**
	baz=317						
FULB	**Fuli**	**0.69**	**324**	*eP*	**Pb**	**17 59 49.5**	**+0.4**
	baz=328						
FULB				*eS*	**Sb**	**17 59 58.8**	**+0.6**
	baz=328						
ECL	**Taimali**	**0.72**	**267**	P	**Pn**	**17 59 49.7**	**-1.2**
	baz=268						
ECL				*eS*	**Sb**	**17 59 59.2**	**0.0**
	baz=268						
EYUL	**Yuli**	**0.80**	**332**	P	**Pn**	**17 59 51.9**	**-0.2**
	baz=334						
EYUL				*eS*	**Sb**	**18 00 02.5**	**+0.9**
	baz=334						
TAW	**Tawu**	**0.82**	**250**	*eP*	**Pn**	**17 59 51.5**	**-0.8**
	baz=261						
TAW				*eS*	**Sb**	**18 00 01.4**	**-0.8**
	baz=261						
TAWH	**Dawu Township**	**0.83**	**249**	*eP*	**Pb**	**17 59 50.8**	**-0.9**
	baz=260						
TAWH				*eS*	**Sb**	**18 00 00.7**	**-1.8**
	baz=260						
YULB	**Yu-li**	**0.85**	**332**	*eP*	**Pn**	**17 59 52.4**	**-0.4**
	baz=345						
YULB				*eS*	**Sb**	**18 00 03.6**	**+0.7**
	baz=345						
ELDTW	**Lidau**	**0.85**	**310**	P	**Pb**	**17 59 52.0**	**-0.1**
	baz=313						
ELDTW				*eS*	**Sb**	**18 00 02.8**	**-0.4**
	baz=313						
EAST	**Anshuo**	**0.85**	**253**	P	**Pn**	**17 59 52.0**	**-0.9**
	baz=262						
EAST				*eS*	**Sb**	**18 00 03.1**	**0.0**
	baz=262						
HGSD	**Ruisui**	**0.89**	**342**	*eP*	**Pb**	**17 59 52.6**	**0.0**
	baz=344						
EHY	**Hungye**	**0.94**	**337**	P	**Pn**	**17 59 54.0**	**0.0**
	baz=348						

	baz=335								
SNST	**Tainan City**	**1.27**	**297**	*eP*		**Pn**	**18 00 00.5**	**+1.9**
	baz=298								
SNST				*eS*		**Sn**	**18 00 18.6**	**+3.4**
	baz=298								
TWK	**Hsinying**	**1.30**	**299**	*eP*		**Pb**	**18 00 00.6**	**+0.9**
	baz=300								
TWK				*eS*		**Sn**	**18 00 19.4**	**+3.4**
	baz=300								
WHYT	**Xinyi Township**	**1.32**	**323**	*eP*		**Pg**	**18 00 01.0**	**-0.3**
	baz=333								
SHHT	**Tainan City**	**1.33**	**287**	*eP*		**Pg**	**18 00 02.2**	**+0.8**
	baz=289								
CHN3	**Shinhua**	**1.33**	**289**	*eP*		**Pg**	**18 00 03.2**	**+1.8**
	baz=291								
ETM	**Tongmen**	**1.34**	**351**	*eP*		**Pn**	**17 59 59.8**	**+0.3**
	baz=360								
ETM				*eS*		**Sb**	**18 00 16.5**	**-0.5**
	baz=360								
SSLB	**Suanglung**	**1.34**	**328**	*eP*		**Pg**	**18 00 00.8**	**-0.9**
	baz=341								
WSSB	**Gushan**	**1.35**	**270**	*eP*		**Pg**	**18 00 03.2**	**+1.4**
	baz=272								
CHN5	**Tsauling**	**1.36**	**315**	*eP*		**Pg**	**18 00 00.9**	**-1.0**
	baz=316								
OWD	**Renai**	**1.40**	**339**	*eP*		**Pb**	**18 00 01.3**	**-0.2**
	baz=352								
OWD				*eS*		**Sb**	**18 00 18.2**	**-0.9**
	baz=352								
TWD	**Chiawan**	**1.44**	**355**	*eP*		**Pb**	**18 00 01.7**	**-0.3**
	baz=7.0								
TWD				*eS*		**Sn**	**18 00 19.4**	**+0.1**
	baz=7.0								
SMLT	**Sun Moon Lake**	**1.45**	**328**	*eP*		**Pg**	**18 00 02.8**	**-0.9**
	baz=338								
WUSB	**Renai**	**1.46**	**337**	*eP*		**Pg**	**18 00 02.6**	**-1.2**
	baz=338								
WUSB				*eS*		**Sb**	**18 00 19.8**	**-0.8**
	baz=338								
CHY	**Chiayi**	**1.47**	**306**	*eP*		**Pg**	**18 00 04.0**	**-0.1**
	baz=306								
CHY				*eS*		**Sg**	**18 00 22.8**	**-0.6**
	baz=306								
WGK	**Gukeng**	**1.50**	**314**	*eP*		**Pg**	**18 00 04.7**	**+0.2**
	baz=315								
WGK				*eS*		**Sg**	**18 00 24.7**	**+0.7**
	baz=315								
CHGB	**Renai**	**1.50**	**340**	*eP*		**Pg**	**18 00 03.3**	**-1.4**
	baz=352								
CHGB				*eS*		**Sn**	**18 00 21.7**	**+0.5**
	baz=352								
WDLH	**Douliu**	**1.51**	**314**	*eP*		**Pg**	**18 00 04.7**	**-0.1**
	baz=314								
WDLH				*eS*		**Sg**	**18 00 24.6**	**0.0**
	baz=314								
ICHU	**Yijhu**	**1.52**	**298**	*eP*		**Pg**	**18 00 04.4**	**-0.6**
	baz=299								
ICHU				*eS*		**Sg**	**18 00 24.3**	**-0.4**
	baz=299								
NACB	**Ninganchiao**	**1.53**	**355**	*eP*		**Pn**	**18 00 02.6**	**+0.5**
	baz=5.0								
NACB				*eS*		**Sn**	**18 00 21.3**	**-0.3**
	baz=5.0								
WHF	**Hehuan Shan**	**1.56**	**344**	*eP*		**Pb**	**18 00 03.8**	**-0.4**
	baz=345								
WNT	**Mingjian**	**1.56**	**322**	*eP*		**Pg**	**18 00 05.4**	**-0.4**
	baz=323								
WNT				*eS*		**Sg**	**18 00 25.5**	**-0.7**
	baz=323								
DPDB	**Guoxing**	**1.57**	**332**	*eP*		**Pg**	**18 00 05.4**	**-0.6**
	baz=342								
DPDB				*eS*		**Sg**	**18 00 25.9**	**-0.5**
	baz=342								
ETLH	**Xiulin Townshi**	**1.57**	**352**	*eP*		**Pn**	**18 00 03.2**	**+0.3**
	baz=352								
WNT1	**Nantou City**	**1.59**	**323**	*eS*		**Sg**	**18 00 27.6**	**+0.6**
	baz=323								
WCS	**Beigang Elemen**	**1.60**	**332**	*eP*		**Pb**	**18 00 04.1**	**-0.6**
	baz=341								
WCS				*eS*		**Sn**	**18 00 23.4**	**+0.1**
	baz=341								
WTK	**Tuku**	**1.61**	**310**	*eP*		**Pg**	**18 00 05.4**	**-1.4**
	baz=311								
WTK				*eS*		**Sg**	**18 00 25.9**	**-1.9**
	baz=311								
WSL	**Shuilin Townsh**	**1.64**	**303**	*eP*		**Pg**	**18 00 06.0**	**-1.3**
	baz=304								
FUSS	**Fushou**	**1.66**	**345**	*eP*		**Pb**	**18 00 05.5**	**-0.4**
	baz=357								
TWT	**Tachien**	**1.68**	**343**	*eP*		**Pb**	**18 00 06.3**	**+0.1**
	baz=352								
WWF	**Wufeng**	**1.69**	**326**	*eP*		**Pg**	**18 00 06.4**	**-1.7**
	baz=326								
WWF				*eS*		**Sg**	**18 00 28.9**	**-1.2**
	baz=326								
WYL	**Yuanlin Townsh**	**1.69**	**321**	*eS*		**Sg**	**18 00 29.5**	**-0.6**
	baz=336								
TDCB	**Techi**	**1.69**	**342**	*eP*		**Pb**	**18 00 06.4**	**+0.1**
	baz=331								
WSF	**Szhu**	**1.71**	**306**	*eP*		**Pg**	**18 00 06.8**	**-1.7**
	baz=306								
WSF				*eS*		**Sg**	**18 00 28.3**	**-2.4**
	baz=306								
WRL	**Guolierlin Hig**	**1.77**	**316**	*eP*		**Pb**	**18 00 06.5**	**-1.0**
	baz=317								
ENA	**Nanau**	**1.78**	**0**	*eP*		**Pb**	**18 00 07.2**	**-0.6**
	baz=13								
ENA				*eS*		**Sn**	**18 00 28.6**	**+0.9**
	baz=13								
WHP	**Taichung City**	**1.78**	**336**	*eP*		**Pg**	**18 00 09.7**	**-0.3**
	baz=343								
TCU	**Taichung**	**1.78**	**327**	*eP*		**Pg**	**18 00 09.3**	**-0.8**
	baz=328								
TCU				*eS*		**Sg**	**18 00 32.1**	**-1.2**
	baz=328								
WCHH	**Zhanghua**	**1.79**	**323**	*eP*		**Pg**	**18 00 08.9**	**-1.2**
	baz=324								
NNSB	**Datong**	**1.81**	**350**	*eP*		**Pb**	**18 00 07.4**	**-0.9**
	baz=2.0								
LATG	**Datong**	**1.90**	**354**	*eP*		**Pb**	**18 00 08.5**	**+1.2**
	baz=354								
TWQ1	**Liyutan**	**1.91**	**333**	*eP*		**Pg**	**18 00 11.1**	**-1.4**
	baz=333								
TWQ1				*eS*		**Sg**	**18 00 35.3**	**-2.0**
	baz=333								
NSY	**Sanyi**	**1.98**	**333**	*eP*		**Pg**	**18 00 12.1**	**-1.6**
	baz=334								
NSY				*eS*		**Sg**	**18 00 37.3**	**-2.2**
	baz=334								
JYNG	**Yonagunijimaku**	**2.12**	**32**	*eP*		**Pn**	**18 00 11.3**	**+1.0**
JYNG				*eS*		**Sn**	**18 00 37.1**	**+1.0**
YOJ	**Yonaguni jima**	**2.16**	**33**	P		**Pn**	**18 00 12.1**	**+1.3**
YOJ				S		**Sn**	**18 00 39.0**	**+1.8**
IRIF	**Iriomote-Funau**	**2.49**	**47**	P		**Pn**	**18 00 16.9**	**+1.6**
IRIF				S		**Sn**	**18 00 46.1**	**+0.7**
JKRS	**Kuro-shima**	**2.63**	**52**	P		**Pn**	**18 00 19.0**	**+1.8**
JKRS				S		**Sn**	**18 00 49.3**	**+0.6**
JIJ	**Ishigaki jima**	**2.80**	**52**	P		**Pn**	**18 00 20.8**	**+1.2**
JIJ				S		**Sn**	**18 00 52.7**	**-0.2**
JTJ	**Tarama**	**3.38**	**53**	P		**Pn**	**18 00 29.0**	**+1.5**
JTJ				*eS*		**Sn**	**18 01 06.7**	**-0.4**
JIRB	**Irabujima**	**3.83**	**55**	*eP*		**Pn**	**18 00 35.4**	**+1.5**
JIRB				*eS*		**Sn**	**18 01 18.0**	**-0.4**
JMJ2	**Miyako jima3**	**3.91**	**57**	*eP*		**Pn**	**18 00 36.4**	**+1.6**
JIKM	**Ikemajima**	**3.94**	**54**	*eP*		**Pn**	**18 00 37.5**	**+2.2**
JIKM				*eS*		**Sn**	**18 01 21.4**	**+0.3**

*IDC **20** 18:12:44.4±1.1,55°.21S×28°.08W,h0km,mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=42.6km s-min=31.7km az=63.0*

*NEIC **20** 18:12:46.3±0.8,55°.26S±0°.09×28°.4W±0°.2,h10km±2km, mb4.1/7, Error ellipse: s-maj=20.2km s-min=13.7km az=64.0*

ISC 20 18:12:46.0±0.8,**55°.3S**±0°.1×**28°.5W**±0°.1,**h10**km,**n18, σ1°27/16, mb4.1/7, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**4.71**	**279**	Pn		**Pn**	**18 13 58.3**	**+1.3**
HOPE				Sn		**Sn**	**18 14 48.7**	**-3.0**
ORCD	**Orcadas**	**10.19**	**231**	Pn		**Pn**	**18 15 13.3**	**+1.2**
SNAA	**Sanae**	**19.78**	**156**	P		**P**	**18 17 14.3**	**-1.6**
BELA	**Belgrano 2**	**22.82**	**183**	P		**P**	**18 17 48.7**	**+0.1**
BELA				IAmb		IAmb	18 18 03.1	
	comp=Z,10nm,1.5s							

QSPA	**South Pole Qui**	**35.00**	**180**	P		**P**	**18 19 38.1**	**-0.1**
QSPA				IAmb		IAmb	18 19 39.9	
	comp=Z,1.5nm,0.8s							
CPUP	**Villa Florida**	**35.72**	**312**	P		**P**	**18 19 44.8**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=124,slow=3.6,SNR=2.9							
	comp=Z,1.9nm,0.7s							
VNDA	**Vanda**	**47.33**	**183**	P		**P**	**18 21 19.4**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=182,slow=10,SNR=3.8							
	comp=Z,0.8nm,0.9s							
VNDA	**Vanda**	**47.33**	**183**	P		**P**	**18 21 20.0**	**+0.8**
VNDA				IAmb		IAmb	18 21 33.7	
	comp=Z,1.4nm,0.9s							
H10N1	**ASCENSION HYDR**	**48.59**	**19**	T		T	19 12 05.7	
	baz=192,slow=75,SNR=4.5							
H10N3	**ASCENSION HYDR**	**48.59**	**19**	T		T	19 12 12.2	
	baz=192,slow=75,SNR=9.4							
H10N2	**ASCENSION HYDR**	**48.61**	**19**	T		T	19 12 07.8	
	baz=192,slow=75,SNR=6.4							
LPAZ	**La Paz**	**49.30**	**306**	P		**P**	**18 21 37.4**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=173,slow=8.1,SNR=5.3							
	comp=Z,1.5nm,0.7s							
LPAZ	**La Paz**	**49.30**	**306**	P		**P**	**18 21 36.0**	**+0.3**
TOA0	**Torodi Ar. Sit**	**72.75**	**31**	P		**P**	**18 24 14.2**	**0.0**
TOA0				IAmb		IAmb	18 24 18.0	
	comp=Z,3.1nm,1.1s							
TORD	**Torodi Ar. Bea**	**72.75**	**31**	P		**P**	**18 24 13.3**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=191,slow=6.9,SNR=5.5							
	comp=Z,1.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**72.75**	**31**	P		**P**	**18 24 14.0**	**-0.2**
TORD				IAmb		IAmb	18 24 18.1	
	comp=Z,2.3nm,1.1s							
ILAR	**Eielson Array**	**149.02**	**313**	PKPbc		**PKPbc**	**18 32 33.1**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=131,slow=2.4,SNR=20							
SONM	**Songino Array**	**151.43**	**86**	PKPbc		**PKPbc**	**18 32 37.9**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=198,slow=2.4,SNR=3.8							

ROM 20 18:36:41.4±0.1,**42°.886N**±0°.008×**12°.866E**±0°.010, **h15**km±1km,**Md1.3/2,1D,Error ellipse: s-maj=0.9km s-min=0.6km az=37.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CESI	**CESI - Serrava**	**0.12**	**13**	P		Pb	18 36 45.4	-0.1
CESI				S		Sg	18 36 47.7	+0.3
CESI				AML		AML		
	comp=E,41μm,0.7s							
CESI				AML		AML		
	comp=N,77μm,0.6s							
CESI				END				
NRCA	**Norcia**	**0.19**	**106**	P		Pg	18 36 46.1	+0.1
NRCA				S		Sb	18 36 49.7	-0.5
ASSB	**Assisi San Ben**	**0.22**	**316**	⇓P		Pg	18 36 46.8	+0.4
ASSB				S		Sg	18 36 50.3	+0.6
ASSB				END				
FDMO	**Fiordimonte**	**0.22**	**47**	P		Pb	18 36 46.9	-0.3
FDMO				S		Sb	18 36 50.5	-0.5
FDMO				AML		AML		
	comp=E,12μm,1.1s							
FDMO				AML		AML		
	comp=N,9μm,0.8s							

ROM 20 18:37:54.1±0.1,**38°.372N**±0°.005×**14°.893E**±0°.005, **h11**km,**ML1.9/3,1C,Error ellipse: s-maj=0.7km s-min=0.3km az=27.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VPL	**Vulcano Piano**	**0.07**	**84**	⇑P		Pg	18 37 56.6	+0.1
VPL				AML		AML		
	comp=E,1660μm,0.8s							
VPL				AML		AML		
	comp=N,1900μm,0.1s							
VPL	**Vulcano Piano**	**0.07**	**84**	P		Pg	18 37 56.6	+0.1
VPL				S		Sg	18 37 58.5	+0.2
LLI	**Lipari**	**0.09**	**31**	P		Pg	18 37 57.2	+0.5
LLI				S		Sg	18 37 59.4	+0.9
LLI				AML		AML		
	comp=N,14550μm,0.3s							
LLI				AML		AML		
	comp=E,14150μm,0.7s							
MILZ	**Milazzo**	**0.28**	**111**	P		Pg	18 38 00.2	+0.4
MILZ				S		Sg	18 38 04.7	+0.9
IFIL	**Filicudi I Eol**	**0.32**	**307**	P		Pg	18 38 00.9	+0.3
IFIL				S		Sg	18 38 05.8	+1.0
IFIL				AML		AML		
	comp=E,1115μm,1.0s							
IFIL				AML		AML		
	comp=E,1114μm,1.0s							
IFIL				AML		AML		
	comp=N,454μm,0.9s							
MSFR	**San Fratello**	**0.41**	**215**	P		Pg	18 38 02.7	+0.4
MSFR				S		Sg	18 38 08.6	+0.8
MPNC	**Port Mandanici**	**0.43**	**122**	P		Pg	18 38 02.8	+0.3
MPNC				AML		AML		
	comp=N,130μm,1.2s							
MPNC				AML		AML		
	comp=E,168μm,0.8s							
IACL	**Alicudi**	**0.45**	**291**	P		Pg	18 38 03.2	+0.3
IACL				S		Sb	18 38 10.0	-0.8
IACL				AML		AML		
	comp=E,242μm,0.2s							
IACL				AML		AML		
	comp=N,224μm,0.2s							
AIO	**Antillo**	**0.48**	**146**	P		Pg	18 38 04.0	+0.5
AIO				S		Sb	18 38 11.5	-0.3
MSRU	**Castanea**	**0.50**	**102**	P		Pg	18 38 04.1	+0.3
MSRU				S		Sb	18 38 11.3	-0.8

*TAP **20** 19:19:52.8,24°.77N×122°.41E,h15km±1km,ML2.5,C JMA **20** 19:19:54.0±0.1,25°.N±1°×122°.5E±0°.5,h39km±2km, MV1.8/9,NW OFF ISHIGAKIJIMA IS*

ISC 20 19:19:51.9±1.2,**24°.82N**±0°.05×**122°.45E**±0°.02,**h13**km±9km, **n46,σ0°70/76,2C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.46**	**294**	*i* P		**Pb**	**19 20 02.1**	**+0.4**
TWB1	baz=301			*eS*		**Sb**	**19 20 07.9**	**-0.5**
EGS	baz=301	**0.47**	**273**	*i* P		**Pb**	**19 20 02.1**	**+0.1**
EGS	baz=279			*eS*		**Sb**	**19 20 09.0**	**+0.2**
NTC	baz=279 **Toucheng**	**0.56**	**273**	P		**Pb**	**19 20 03.8**	**+0.3**
NTC	baz=278			*eS*		**Sb**	**19 20 12.0**	**+0.5**
TIPB	baz=278 **Shuangxi**	**0.58**	**285**	*i* P		**Pb**	**19 20 04.6**	**+0.6**
TIPB	baz=290			*eS*		**Sb**	**19 20 12.1**	**0.0**
TWC	baz=290 **Suao**	**0.58**	**249**	*i* P		**Pg**	**19 20 03.2**	**-0.1**
TWC	baz=259			*eS*		**Sb**	**19 20 12.1**	**+0.1**
SXI1	baz=259 **Grass Mountain**	**0.58**	**298**	⇑*i* P		**Pn**	**19 20 05.3**	**-0.6**
SXI1	baz=303			S		**Sb**	**19 20 12.5**	**+0.2**
JYNG	baz=303 **Yonagunijimaku**	**0.59**	**129**	P		**Pb**	**19 20 04.4**	**+0.5**
JYNG				S		**Sg**	**19 20 12.1**	**+0.9**
YOJ	**Yonaguni jima**	**0.63**	**125**	*i* P		**Pb**	**19 20 05.3**	**+0.7**
YOJ	baz=120			S		**Sg**	**19 20 13.2**	**+0.8**
YOJ	baz=120 **Yonaguni jima**	**0.63**	**125**	P		**Pb**	**19 20 05.5**	**+0.8**
YOJ				S		**Sg**	**19 20 13.2**	**+0.8**
NWF	**Wu-fen Shan**	**0.65**	**292**	*eP*		**Pn**	**19 20 06.7**	**-0.2**
NWF	baz=297			*eS*		**Sb**	**19 20 15.0**	**+0.9**
WFSB	baz=297 **Wu-fen Shan**	**0.65**	**292**	*eP*		**Pn**	**19 20 06.7**	**-0.1**
WFSB	baz=297			*eS*		**Sb**	**19 20 15.1**	**+1.0**
NDS	baz=297 **Dongshan**	**0.69**	**254**	*eP*		**Pg**	**19 20 04.4**	**-1.0**
NDS	baz=257			*eS*		**Sg**	**19 20 14.8**	**+0.4**
TNOU	baz=257 **National Taiwa**	**0.69**	**298**	*eP*		**Pn**	**19 20 07.0**	**-0.4**
EWUT	baz=303 **Wuta**	**0.71**	**238**	*eP*		**Pg**	**19 20 04.8**	**-1.0**
EWUT	baz=249			*eS*		**Sg**	**19 20 14.9**	**-0.3**
TWE	baz=249 **Neicheng**	**0.71**	**262**	P		**Pb**	**19 20 06.0**	**-0.2**
TWE	baz=265			*eS*		**Sb**	**19 20 16.1**	**+0.2**
ENA	baz=265 **Nanau**	**0.75**	**239**	*eP*		**Pg**	**19 20 06.3**	**-0.2**
ENA	baz=248			*eS*		**Sg**	**19 20 16.8**	**+0.4**
FUSB	baz=248 **Fushanzhiwuyua**	**0.78**	**266**	*eP*		**Pb**	**19 20 07.4**	**+0.1**
FUSB	baz=268			*eS*		**Sb**	**19 20 17.9**	**0.0**
TWA	baz=268 **Mucha**	**0.80**	**282**	*eP*		**Pn**	**19 20 09.1**	**+0.3**
ENTT	baz=285 **Nioudou**	**0.82**	**257**	*eP*		**Pg**	**19 20 07.0**	**-0.8**
ENTT	baz=246			*eS*		**Sg**	**19 20 18.6**	**0.0**
YM01	baz=246 **YM01**	**0.86**	**292**	*eP*		**Pn**	**19 20 09.6**	**0.0**
YM01	baz=295			*eS*		**Sn**	**19 20 21.1**	**-1.0**
NDT	baz=295 **Datong Townshi**	**0.88**	**256**	P		**Pb**	**19 20 09.0**	**+0.1**
NDT	baz=245			*eS*		**Sb**	**19 20 21.0**	**+0.4**
TATO	baz=245 **Taipei**	**0.88**	**280**	*eP*		**Pn**	**19 20 10.9**	**+1.0**
LATG	baz=283 **Datong**	**0.88**	**251**	*eP*		**Pb**	**19 20 09.0**	**-0.1**
LATG	baz=253			*eS*		**Sb**	**19 20 21.6**	**+0.7**
TWY	baz=253 **Chenhua**	**0.89**	**301**	*eP*		**Pn**	**19 20 10.1**	**+0.1**
TWY	baz=304			*eS*		**Sn**	**19 20 22.6**	**-0.2**
ANP	baz=304 **Anpu**	**0.92**	**294**	*eP*		**Pn**	**19 20 12.1**	**+1.6**
YHNB	baz=297 **Yeheng**	**0.98**	**261**	*eP*		**Pb**	**19 20 10.8**	**0.0**
YHNB	baz=263			*eS*		**Sb**	**19 20 24.3**	**+0.6**
NSK	baz=263 **Sanguang**	**1.00**	**262**	*eP*		**Pg**	**19 20 10.1**	**-1.1**
NSK	baz=263			*eS*		**Sg**	**19 20 22.6**	**-1.7**
NACB	baz=263 **Ninganchiao**	**1.01**	**230**	*eP*		**Pg**	**19 20 10.9**	**-0.5**
NACB	baz=240			*eS*		**Sg**	**19 20 24.0**	**-0.5**
NNSB	baz=240 **Datong**	**1.04**	**248**	*eP*		**Pg**	**19 20 11.8**	**-0.2**
NNSH	baz=250 **Datong**	**1.04**	**248**	*eP*		**Pg**	**19 20 11.8**	**-0.3**
NNSH	baz=249			*eS*		**Sg**	**19 20 25.8**	**+0.1**
NNS	baz=249 **Nan Shan**	**1.05**	**249**	*eP*		**Pg**	**19 20 11.8**	**-0.4**
NNS	baz=250			*eS*		**Sg**	**19 20 25.0**	**-0.9**
TWD	baz=250 **Chiawan**	**1.07**	**227**	*eP*		**Pb**	**19 20 12.8**	**+0.6**
ETLH	baz=234 **Xiulin Townshi**	**1.07**	**235**	*eP*		**Pg**	**19 20 12.2**	**-0.3**
NFF	baz=236 **Wufeng Townshi**	**1.22**	**261**	*eP*		**Pn**	**19 20 15.2**	**+0.5**
IRIF	baz=281 **Iriomote-Funau**	**1.27**	**112**	*eP*		**Pn**	**19 20 14.7**	**-0.5**
IRIF				*eS*		**Sg**	**19 20 30.9**	**-1.9**
WHF	**Hehuan Shan**	**1.27**	**238**	*eP*		**Pg**	**19 20 16.1**	**-0.3**
WHF	baz=248			*eS*		**Sg**	**19 20 32.6**	**-0.4**
TDCB	baz=248 **Techi**	**1.30**	**244**	*eP*		**Pb**	**19 20 16.8**	**+0.5**
LIOB	baz=245 **Emei**	**1.31**	**263**	*eP*		**Pg**	**19 20 17.9**	**+0.7**
NSTT	baz=264 **Nanjuang**	**1.33**	**262**	*eP*		**Pg**	**19 20 19.1**	**+1.7**
CHGB	baz=281 **Renai**	**1.39**	**237**	⇑*eP*		**Pg**	**19 20 18.6**	**0.0**
OWD	baz=222 **Renai**	**1.45**	**234**	*eP*		**Pb**	**19 20 19.3**	**+0.6**
HATJ	baz=218 **Hateruma jima**	**1.46**	**121**	*eP*		**Pn**	**19 20 17.5**	**-0.3**
WUSB	**Renai**	**1.47**	**236**	*eP*		**Pg**	**19 20 19.9**	**-0.2**
JKRS	baz=221 **Kuro-shima**	**1.54**	**112**	P		**Pn**	**19 20 18.9**	**0.0**
JKRS				*eS*		**Sn**	**19 20 38.3**	**-0.5**
NSY	**Sanyi**	**1.59**	**256**	*eP*		**Pg**	**19 20 24.1**	**+1.8**
JIJ	baz=273 **Ishigaki jima**	**1.61**	**106**	*eP*		**Pn**	**19 20 20.0**	**0.0**
JIJ				*eS*		**Sn**	**19 20 39.2**	**-1.4**

*IDC **20** 19:22:53.9±4.7,19°.28S×177°.60W,h583km±31km,mb3.0/4, mbtmp4.0/5,Error ellipse: s-maj=108.6km s-min=30.8km az=140.0*

*NEIC **20** 19:22:53.5±0.4,19°.3S±0°.1×177°.5W±0°.2,h587km±8km, mb4.1/14,Error ellipse: s-maj=27.8km s-min=14.3km az=128.0*

ISC 20 19:22:54.5±1.1,**19°.2S**±0°.2×**177°.7W**±0°.2,**h600**km,**n27, σ0°71/29,mb3.9/10,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.33**	**289**	P		**P**	**19 24 21.4**	**-1.1**
	15nm,0.4s,baz=135,slow=8.6,SNR=37							
MSVF	**Nonsavu**	**4.33**	**289**	P		**P**	**19 24 21.6**	**-0.9**
MARNC	**Mare, Loyalty**	**13.62**	**258**	P		**P**	**19 25 49.0**	**-0.8**
WHZ	**Wether Hill Ro**	**29.18**	**201**	P		**P**	**19 28 08.3**	**-0.6**
CTA	**Charters Tower**	**33.97**	**262**	P		**P**	**19 28 50.6**	**+0.6**
	1.6nm,0.7s,baz=78,slow=13,SNR=1.2							
	1.6nm,0.7s							
TOO	**Toolangi**	**36.95**	**232**	P		**P**	**19 29 14.7**	**+0.3**
STKA	**Stephens Creek**	**38.67**	**243**	P		**P**	**19 29 28.0**	**-0.4**
	2.3nm,0.9s,baz=69,slow=8.6,SNR=4.6							
	2.3nm,0.9s							
STKA	**Stephens Creek**	**38.67**	**243**	P		**P**	**19 29 28.9**	**+0.5**
STKA				IAmb		IAmb	19 29 33.6	
	comp=Z,2.2nm,1.4s							
BBOO	**Buckleboo**	**43.44**	**242**	P		**P**	**19 30 06.2**	**+0.2**
WR0	**Warramunga Arr**	**44.93**	**261**	P		**P**	**19 30 18.0**	**+0.3**
WR0				IAmb		IAmb	19 30 32.0	
	comp=Z,8.9nm,1.5s							
WRA	**Warramunga Arr**	**45.12**	**261**	P		**P**	**19 30 19.6**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=98,slow=7.7,SNR=40							
WRA				PcP		**PcP**	**19 31 47.8**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=94,slow=3.5,SNR=2.0							
	comp=Z,0.7nm,0.4s							
WRA	**Warramunga Arr**	**45.12**	**261**	P		**P**	**19 30 19.5**	**+0.4**
AS31	**Alice Springs**	**45.15**	**255**	P		**P**	**19 30 19.8**	**+0.4**
ASAR	**Alice Springs**	**45.15**	**255**	P		**P**	**19 30 20.1**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=87,slow=8.0,SNR=64							
ASAR				PcP		**PcP**	**19 31 47.9**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=104,slow=3.4,SNR=6.7							
	comp=Z,1.4nm,0.4s							
ASAR	**Alice Springs**	**45.15**	**255**	P		**P**	**19 30 19.1**	**-0.2**
MTN	**Manton Dam**	**49.49**	**269**	P		**P**	**19 30 52.8**	**+1.0**
MTN				IAmb		IAmb	19 31 06.5	
	comp=Z,16nm,1.2s							
FORT	**Forrest**	**50.12**	**246**	P		**P**	**19 30 56.1**	**-0.1**
FORT				IAmb		IAmb	19 31 16.0	
	comp=Z,27nm,1.2s							
KNRA	**Kununurra**	**51.09**	**265**	P		**P**	**19 31 03.9**	**+0.6**
KNRA				IAmb		IAmb	19 31 29.1	
	comp=Z,15nm,1.3s							
FITZ	**Fitzroy Crossi**	**53.54**	**261**	P		**P**	**19 31 21.7**	**+0.9**
PSA00	**Pilbara Seismi**	**58.29**	**256**	P		**P**	**19 31 53.9**	**+0.4**
PSA00				IAmb		IAmb	19 32 20.0	
	comp=Z,4.0nm,1.3s							
PSA00	**Pilbara Seismi**	**58.29

JMA 20 19:24:54.5±0.1, 32°.7N±0°.1×130°.0E±0°.2, h12km, MV1.1/32, NEAR UNZENDAKE, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGSJ	**Nagasakinomoza**	**0.17**	**258**	*i* P	Pg	19 24 58.4	0.0
NGSJ				*eS*	Sg	19 25 01.4	+0.3
JHD	**Hondo**	**0.23**	**149**	P	Pg	19 24 59.5	0.0
JUR	**Ureshino**	**0.43**	**355**	P	Pg	19 25 03.1	+0.1
JUR				*eS*	Sg	19 25 09.0	+0.3
JTA	**Tamana**	**0.54**	**57**	P	Pg	19 25 04.7	-0.5
JTA				*eS*	Sg	19 25 12.2	-0.1

*IDC **20** 19:25:06.5±1.9, 20°.52S×177°.99W, h566km±18km, mb3.1/8, mbtmp4.1/11, Error ellipse: s-maj=27.8km s-min=18.0km az=136.0*
*NEIC **20** 19:25:07.6±0.9, 20°.6S±0°.1×178°.1W±0°.2, h566km±13km, mb4.2/21, Error ellipse: s-maj=29.3km s-min=11.1km az=66.0*

ISC 20 19:25:03.0±0.7, 20°.4S±0°.1×177°.8W±0°.1, h534km, n38, σ1§18/42, mb4.0/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.70**	**303**	P	P	19 26 34.3	+4.8
	3.9nm,0.5s,baz=103,slow=24,SNR=6.2						
AFI	**Afiamalu**	**8.61**	**43**	S	**S**	**19 28 46.5**	**-1.4**
	8.7nm,0.5s,baz=240,slow=20,SNR=2.1						
DZM	**Mont Dzumac**	**14.79**	**261**	P	**P**	**19 28 12.7**	**+2.0**
	5.2nm,0.8s,baz=112,slow=19,SNR=1.8						
DZM	**Mont Dzumac**	**14.79**	**261**	P	**P**	**19 28 13.4**	**+2.7**
URZ	**Urewera**	**18.39**	**193**	P	**P**	**19 28 44.9**	**-0.1**
	2.4nm,0.3s,baz=28,slow=12,SNR=8.1						
URZ	**Urewera**	**18.39**	**193**	P	**P**	**19 28 44.6**	**-0.4**
CTA	**Charters Tower**	**33.69**	**264**	P	**P**	**19 31 00.1**	**+0.1**
	6.4nm,0.4s,baz=97,slow=9.5,SNR=30 6.4nm,0.4s						
CTAO	**Charters Tower**	**33.69**	**264**	P	**P**	**19 31 00.1**	**+0.1**
CTAO				IAmb	IAmb	19 31 37.0	
	comp=Z,12nm,1.2s						
COEN	**Coen**	**37.76**	**273**	P	**P**	**19 31 33.6**	**-0.1**
STKA	**Stephens Creek**	**38.02**	**244**	P	**P**	**19 31 35.7**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=103,slow=9.6,SNR=3.1 comp=Z,0.9nm,0.5s						
STKA	**Stephens Creek**	**38.02**	**244**	P	**P**	**19 31 35.5**	**-0.2**
BBOO	**Buckleboo**	**42.78**	**243**	P	**P**	**19 32 12.9**	**-0.7**
WR0	**Warramunga Arr**	**44.61**	**262**	P	**P**	**19 32 27.6**	**-0.5**
WR0				IAmb	IAmb	19 32 40.7	
	comp=Z,10.0nm,1.5s						
AS31	**Alice Springs**	**44.73**	**257**	P	**P**	**19 32 28.7**	**-0.3**
ASAR	**Alice Springs**	**44.73**	**257**	P	**P**	**19 32 28.3**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=99,slow=7.7,SNR=26						
ASAR				PcP	**PcP**	**19 33 59.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=104,slow=4.0,SNR=6.7						
ASAR				S	**S**	**19 38 23.3**	**-3.8**
	comp=Z,0.4nm,0.7s,baz=92,slow=17,SNR=3.3 comp=Z,4.3nm,0.8s						
ASAR	**Alice Springs**	**44.73**	**257**	P	**P**	**19 32 28.1**	**-0.9**
ASAR				PcP	**PcP**	**19 33 59.6**	**-0.2**
WB0	**Warramunga Arr**	**44.78**	**262**	P	**P**	**19 32 28.7**	**-0.7**
WB0				IAmb	IAmb	19 32 29.4	
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**44.80**	**262**	P	**P**	**19 32 28.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=97,slow=7.5,SNR=50						
WRA				PcP	**PcP**	**19 34 00.6**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=97,slow=3.7,SNR=2.2 comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**44.80**	**262**	P	**P**	**19 32 28.8**	**-0.8**
WRA				PcP	**PcP**	**19 34 00.2**	**0.0**
MTN	**Manton Dam**	**49.34**	**270**	P	**P**	**19 33 03.2**	**-0.6**
MTN				IAmb	IAmb	19 33 18.7	
	comp=Z,24nm,1.4s						
FORT	**Forrest**	**49.52**	**246**	P	**P**	**19 33 04.3**	**-0.6**
KNRA	**Kununurra**	**50.85**	**266**	P	**P**	**19 33 14.2**	**-0.6**
KNRA				IAmb	IAmb	19 33 20.7	
	comp=Z,21nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.23**	**262**	P	**P**	**19 33 31.8**	**-0.1**
FITZ				IAmb	IAmb	19 33 34.0	
	comp=Z,6.5nm,1.4s						
PSA00	**Pilbara Seismi**	**57.88**	**257**	P	**P**	**19 34 03.1**	**-1.1**
PSA00				IAmb	IAmb	19 34 08.1	
	comp=Z,22nm,1.3s						
PSA00	**Pilbara Seismi**	**57.88**	**257**	P	**P**	**19 34 03.0**	**-1.2**
PSA00				IAmb	IAmb	19 34 13.1	
	comp=Z,5.8nm,1.4s						
MBWA	**Marble Bar**	**58.06**	**257**	P	**P**	**19 34 04.6**	**-0.9**
MBWA				IAmb	IAmb	19 34 18.8	
	comp=Z,19nm,1.4s						
MORW	**Morawa**	**60.05**	**248**	P	**P**	**19 34 18.1**	**-0.6**
MORW				IAmb	IAmb	19 34 51.2	
	comp=Z,23nm,1.4s						
QSPA	**South Pole Qui**	**69.72**	**180**	P	**P**	**19 35 20.6**	**+1.6**
KKM	**Kota Kinabalu**	**69.90**	**285**	P	**P**	**19 35 21.1**	**+0.2**
MJAR	**Matsushiro Arr**	**70.19**	**324**	P	**P**	**19 35 22.7**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=162,slow=5.4,SNR=7.1 comp=Z,0.8nm,0.6s						
KSM	**Kuching**	**73.57**	**278**	P	**P**	**19 35 42.8**	**+0.5**
KSM				IAmb	IAmb	19 36 23.0	
	comp=Z,11nm,1.1s						
KSRS	**Korea Array**	**76.89**	**318**	P	**P**	**19 36 02.2**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=120,slow=5.5,SNR=2.3 comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**88.12**	**13**	P	**P**	**19 36 57.5**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=206,slow=6.0,SNR=2.2 comp=Z,0.2nm,0.6s						
SNAA	**Sanae**	**88.16**	**178**	P	**P**	**19 36 56.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**90.24**	**290**	P	**P**	**19 37 08.2**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=104,slow=2.0,SNR=5.0 comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**128.80**	**350**	PKP	**PKiKP**	**19 43 09.3**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=29,slow=2.1,SNR=6.4						
AKASG	**Malin Array Be**	**142.97**	**331**	PKP	**PKPdf**	**19 43 33.5**	**-2.2**
	comp=Z,1.3nm,0.5s,baz=43,slow=4.4,SNR=11						
BRTR	**Keskin Array B**	**146.87**	**313**	PKPbc	**PKiKP**	**19 43 46.0**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=134,slow=5.1,SNR=4.8						

JMA 20 19:25:10.8±0.0, 32°.5N±0°.1×130°.6E±0°.1, h9km, MV1.2/32, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.20**	**80**	S	Sg	19 25 18.4	+0.6
JIU3	**Izumi3**	**0.20**	**80**	S	Sg	19 25 18.4	+0.6
JZO	**Okuchi**	**0.37**	**177**	S	Pg	19 25 18.2	+0.1
JZO	**Okuchi**	**0.37**	**177**	P	Pg	19 25 18.1	+0.1
JZO				*eS*	Sg	19 25 23.6	+0.6
JHD	**Hondo**	**0.38**	**263**	P	Pg	19 25 18.2	+0.1
JHD				*eS*	Sg	19 25 23.9	+0.8
JTA	**Tamana**	**0.45**	**355**	P	Pg	19 25 19.7	+0.1
JTZ	**Takazaki**	**0.75**	**145**	*eS*	Sg	19 25 35.1	+0.2

*JMA **20** 19:25:12.9±0.3, 40°.4N±0°.6×14°.4E±°, h21km±4km, MV2.9/29, FAR E OFF SANRIKU*
*IDC **20** 19:25:15.9±3.0, 40°.18N×143°.46E, h0km, mb3.5/3, mbtmp3.3/4, ML1.9/1, Error ellipse: s-maj=69.2km s-min=34.7km az=145.0*

ISC 20 19:25:13.7±2.7, 40°.49N±0°.08×143°.5E±0°.1, h23km±20km, n23, σ0§90/20, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.39**	**247**	P	**Pn**	**19 25 37.0**	**-0.6**
JTH				*eS*	**Sn**	**19 25 54.0**	**-1.2**
JKEN	**Kujiedanarisaw**	**1.42**	**259**	P	**Pn**	**19 25 37.7**	**-0.3**
JANG	**Nango**	**1.54**	**266**	P	**Pn**	**19 25 39.9**	**+0.1**
JEM	**Erimo**	**1.55**	**350**	*eS*	**Sb**	**19 26 01.9**	**+1.0**
MIYJ	**Miyakonagasawa**	**1.60**	**236**	P	**Pn**	**19 25 40.1**	**-0.4**
JNBK	**Urakawa-nobuka**	**1.88**	**342**	P	**Pb**	**19 25 46.7**	**-0.6**
JNBK				*eS*	**Sb**	**19 26 11.6**	**+1.2**
JOM	**Ohasama**	**2.00**	**240**	P	**Pn**	**19 25 46.2**	**+0.2**
JOT	**Ohata**	**2.08**	**296**	*eS*	**Sb**	**19 26 15.4**	**-0.7**
JCH	**Churui**	**2.13**	**357**	*eP*	**Pn**	**19 25 48.5**	**+0.8**
JCH				*eS*	**Sn**	**19 26 14.8**	**+1.4**
JMK	**Ichinoseki**	**2.35**	**230**	P	**Pn**	**19 25 50.7**	**-0.2**
JAK	**Akkeshi**	**2.65**	**19**	*eP*	**Pn**	**19 25 54.3**	**-0.6**
JAK				*eS*	**Sn**	**19 26 25.7**	**-0.7**
JAR	**Ashorobuto**	**2.81**	**4**	P	**Pn**	**19 25 56.8**	**-0.4**
JAR				S	**Sn**	**19 26 29.3**	**-0.9**
JYK	**Kaneyama**	**2.91**	**238**	P	**Pn**	**19 25 59.3**	**+0.8**
JYK				*eS*	**Sn**	**19 26 33.3**	**+0.6**
MJAR	**Matsushiro Arr**	**5.74**	**228**	Pn	**Pn**	**19 26 38.8**	**+1.3**
	baz=39,slow=11,SNR=2.1 0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.77**	**129**	T	T	20 01 00.4	
	baz=322						
H11N1	**WAKE ISLAND Hy**	**28.78**	**129**	T	T	20 01 02.3	
	baz=322						
H11N3	**WAKE ISLAND Hy**	**28.78**	**129**	T	T	20 00 57.9	
	baz=322						
H11S1	**WAKE ISLAND Hy**	**29.61**	**131**	T	T	20 02 03.4	
	baz=323						
H11S3	**WAKE ISLAND Hy**	**29.61**	**131**	T	T	20 02 01.9	
	baz=323						
H11S2	**WAKE ISLAND Hy**	**29.62**	**131**	T	T	20 02 04.6	
	baz=323						
ZALV	**Zalesovo Beam**	**40.90**	**310**	P	P	19 33 01.3	+7.5
	0.4nm,0.3s,baz=81,slow=11,SNR=2.1 0.4nm,0.3s						
MKAR	**Makanchi Array**	**43.78**	**299**	P	P	19 33 23.4	+6.1
	0.5nm,0.8s,baz=90,slow=7.2,SNR=3.2 0.5nm,0.8s						
ILAR	**Eielson Array**	**45.70**	**34**	P	P	19 33 40.3	+7.9
	0.3nm,0.7s,baz=263,slow=7.2,SNR=2.7 0.3nm,0.7s						

*IDC **20** 19:28:32.4±4.9, 32°.26S×179°.24E, h583km±68km, mb2.8/4, mbtmp3.9/5, Error ellipse: s-maj=96.2km s-min=37.8km az=9.0*

ISC 20 19:28:33.3±2.6, 32°.4S±0°.2×179°.2E±0°.4, h600km, n6, σ0§93/7, mb3.5/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.09**	**196**	P	**P**	**19 30 15.6**	**+0.7**
	20nm,0.7s,baz=342,slow=19,SNR=9.8						
URZ				S	**S**	**19 31 37.3**	**-1.0**
	6.3nm,0.6s,baz=227,slow=10,SNR=1.5						
CTA	**Charters Tower**	**31.88**	**284**	P	**P**	**19 34 10.6**	**-0.6**
	3.4nm,0.9s,baz=90,slow=12,SNR=2.2 3.4nm,0.9s						
ASAR	**Alice Springs**	**40.69**	**271**	P	**P**	**19 35 23.2**	**-0.1**
	0.6nm,0.6s,baz=105,slow=7.2,SNR=14 0.6nm,0.6s						
WRA	**Warramunga Arr**	**41.87**	**276**	P	**P**	**19 35 32.6**	**0.0**
	0.7nm,0.5s,baz=116,slow=7.4,SNR=13 0.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**50.04**	**273**	P	**P**	**19 36 35.5**	**+1.1**
	1.6nm,1.1s,baz=113,slow=7.7,SNR=1.6 1.6nm,1.1s						
FINES	**FINESS Array B**	**146.14**	**337**	PKPbc	**PKPbc**	**19 47 05.8**	**-0.6**
	0.7nm,0.7s,baz=48,slow=2.1,SNR=5.5						

*IDC **20** 19:56:18.4±1.7, 43°.49N×105°.22W, h0km, mb3.5/1, mbtmp3.3/5, ML3.2/4, MS2.8/4, Error ellipse: s-maj=44.8km s-min=8.7km az=152.0*
*NEIC **20** 19:56:20.9±1.1, 43°.64N±0°.05×105°.19W±0°.06, h0km±2km, ML3.3/43, Error ellipse: s-maj=9.6km s-min=6.4km az=326.0*

ISC 20 19:56:19.7±1.0, 43°.63N±0°.05×105°.22W±0°.06, h0km, n38, σ1§45/35, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.99**	**60**		**Pg**	**19 56 38.7**	**0.0**
K22A	**Casper**	**1.36**	**225**		**Pg**	**19 56 44.9**	**-0.9**
K22A					IAML	19 57 09.1	
	comp=N,493nm,0.3s						
K22A					IAML	19 57 13.8	
	comp=E,450nm,0.4s						
PHWY	**Pilot Hill**	**2.33**	**184**		**Pn**	**19 57 00.6**	**+1.1**
PHWY					IAML	19 57 34.5	
	comp=E,237nm,0.5s						
PHWY					IAML	19 57 36.2	
	comp=E,193nm,0.4s						
RWWY	**Rawlins**	**2.43**	**218**		**Pn**	**19 57 02.8**	**+1.9**
N23A	**Red Feather La**	**2.78**	**191**	Pn	**Pn**	**19 57 07.0**	**+1.3**
LAO	**LASA Array**	**3.14**	**347**		**Pn**	**19 57 11.7**	**+1.2**
RLMT	**Red Lodge**	**3.26**	**299**	Pn	**Pn**	**19 57 13.1**	**+0.8**
RLMT					IAML	19 58 03.7	
	comp=E,68nm,0.8s						
RLMT					IAML	19 58 15.0	
	comp=E,62nm,0.4s						
BW06	**Boulder Array**	**3.28**	**256**		**Pn**	**19 57 13.9**	**+1.3**
BW06					IAML	19 58 06.3	
	comp=E,54nm,0.8s						
PD31	**Pinedale Array**	**3.28**	**256**		**Pn**	**19 57 13.5**	**+0.9**
PDAR	**Pinedale Array**	**3.28**	**256**	Pn	**Pn**	**19 57 13.3**	**+0.7**
	comp=E,2.9nm,0.3s,baz=80,slow=15,SNR=35						
PDAR				Lg	Lg	19 58 00.2	
	comp=E,27nm,0.3s,baz=76,slow=33,SNR=8.8 comp=E,3.3nm,0.3s						
OGNE	**Ogallala**	**3.57**	**137**		**Pn**	**19 57 18.0**	**+1.5**
ISCO	**Idaho Springs**	**3.83**	**185**		**Pn**	**19 57 21.6**	**+1.4**
ISCO					IAML	19 58 31.1	
	comp=E,56nm,1.0s						
ISCO					IAML	19 59 30.4	
	comp=E,34nm,3.7s						
GCMT	**Greycliff**	**3.84**	**306**		**Pn**	**19 57 21.3**	**+1.2**
LOHW	**Long Hollow**	**3.91**	**272**		**Pn**	**19 57 22.5**	**+1.3**
LOHW					IAML	19 58 40.4	
	comp=E,33nm,1.3s						
LOHW					IAML	19 58 55.9	
	comp=E,31nm,1.9s						
MOOW	**Moose Ponds**	**4.01**	**274**		**Pn**	**19 57 23.9**	**+1.4**
YNR	**Norris Junctio**	**4.07**	**287**		**Pn**	**19 57 26.6**	**+3.1**
YNR					IAML	19 58 49.1	
	comp=E,25nm,1.0s						
FXWY	**Fox Creek**	**4.21**	**272**		**Pn**	**19 57 26.9**	**+1.6**
E28A	**Huff**	**4.36**	**46**		**Pn**	**19 57 28.0**	**+0.9**
AHID	**Auburn Hatcher**	**4.38**	**261**		**Pn**	**19 57 30.0**	**+2.3**
AHID					IAML	19 58 46.9	
	comp=E,43nm,0.8s						
RDMU	**Red Mountain**	**4.45**	**228**		**Pn**	**19 57 30.1**	**+1.6**
RDMU					IAML	19 58 51.0	
	comp=N,48nm,1.1s						
Q24A	**Divide**	**4.66**	**179**		**Pn**	**19 57 32.2**	**+0.7**
DGMT	**Dagmar**	**4.90**	**8**		**Pn**	**19 57 36.6**	**+2.1**
BOZ	**Bozeman (W)**	**4.98**	**296**		**Pn**	**19 57 36.3**	**+0.4**
BOZ					IAML	19 59 09.5	
	comp=N,19nm,1.4s						
BOZ					IAML	19 59 09.9	
	comp=N,19nm,0.9s						
HWUT	**Hardware Ranch**	**5.10**	**249**	Pn	**Pn**	**19 57 38.1**	**+0.7**
HWUT					IAML	19 59 19.9	
	comp=N,30nm,1.3s						
EGMT	**Eagleton**	**5.42**	**326**	Pn	**Pn**	**19 57 42.7**	**+0.9**
LRM	**Limekiln Ridge**	**5.60**	**296**		**Pn**	**19 57 46.0**	**+1.6**
PV07	**Paradox Valley**	**5.79**	**208**		**Pn**	**19 57 49.0**	**+2.0**
SDCO	**Great Sand Dun**	**5.88**	**182**		**Pn**	**19 57 49.7**	**+1.4**
S22A	**4UR Ranch, Cre**	**6.00**	**192**		**Pn**	**19 57 51.1**	**+1.1**
ECSD	**EROS Data Cent**	**6.24**	**86**	Pn	**Pn**	**19 57 53.5**	**+0.4**
DUG	**Dugway, Tooele**	**6.62**	**241**	Pn	**Pn**	**19 57 58.5**	**+0.2**
ELK	**Elko**	**7.97**	**252**	Pn	**Pn**	**19 58 18.8**	**+1.8**
	comp=N,0.2nm,0.3s,baz=60,slow=16,SNR=2.4						
ELK				Lg	Lg	20 00 30.9	
	comp=N,0.1nm,0.3s,baz=178,slow=6.6,SNR=3.0						
ELK				LR	LR	20 00 52.3	
	comp=N,51nm,19.6s,baz=66,slow=34 comp=N,0.4nm,0.3s						
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**19 58 31.8**	**-1.8**
	comp=N,0.9nm,0.3s,baz=229,slow=13,SNR=5.6						
ULM				Lg	Lg	20 01 07.3	
	comp=N,0.7nm,0.3s,baz=255,slow=20,SNR=2.4						
ULM				LR	LR	20 02 09.9	
	comp=N,101nm,21.5s,baz=206,slow=38 comp=N,1.9nm,0.3s						
NEW	**Newport**	**9.50**	**303**	LR	LR	20 01 51.5	
	comp=N,16nm,20.5s,baz=344,slow=35						
I56US	**NEWPORT INFRAS**	**9.50**	**303**	*i*		20 50 10.0	
	comp=N,0.1nm,1.3s,baz=117,slow=315,SNR=12						
NVAR	**Mina Array Bea**	**11.16**	**247**	Pn	**Pn**	**19 59 00.7**	**+0.1**
	comp=N,0.1nm,0.3s,baz=68,slow=7.2,SNR=2.7 comp=N,0.2nm,0.5s						
TKL	**Tuckaleechee C**	**18.30**	**109**	LR	LR	20 07 47.3	
	comp=N,79nm,21.2s,baz=9.0,slow=38						
ARCES	**ARCESS Array B**	**61.51**	**18**	P	**P**	**20 06 36.5**	**-1.3**
	comp=N,0.3nm,0.5s,baz=338,slow=6.8,SNR=6.6 comp=N,0.3nm,0.5s						

KRSC 20 19:56:51.3±1.7, 50°.95N×157°.87E, h119km±23km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.84**	**308**	*eP*	Pn	19 57 12.9	+1.2
KDTR	**Khodutka, Kamc**	**0.87**	**9**	*eP*	Pn	19 57 14.7	+2.7
KDTR				*eS*	Sn	19 57 29.8	+2.2
SKR	**Severo-Kuril's**	**1.14**	**257**	*eP*	Pn	19 57 15.9	+1.3
SKR				*eS*	Sn	19 57 32.2	-0.1
RUS	**Russkaya**	**1.54**	**15**	*eP*	Pn	19 57 21.1	+2.0
RUS				*eS*	Sn	19 57 41.5	+1.3
MTVR	**Mutnovka**	**1.55**	**7**	*eP*	Pn	19 57 21.4	+2.1
MTVR				*eS*	Sn	19 57 42.8	+2.1
GRL	**Gorelyy**	**1.61**	**5**	*eP*	Pn	19 57 22.2	+2.2
KRMR	**Karymshinskiy**	**1.89**	**5**	*eP*	Pn	19 57 25.0	+1.7
APC	**Apacha**	**2.03**	**348**	*eP*	Pn	19 57 25.4	+0.4
PET	**Petropavlovsk**	**2.13**	**13**	*eP*	Pn	19 57 28.2	+1.9
PET				*eS*	Sn	19 57 54.5	+1.4
DALK	**Dalny**	**2.15**	**14**	*eP*	Pn	19 57 28.7	+2.1
DALK				*eS*	Sn	19 57 54.6	+1.0
AVH	**Avacha**	**2.38**	**13**	*eP*	Pn	19 57 32.3	+2.8
KOK	**Koryaka**	**2.39**	**11**	*eP*	Pn	19 57 32.3	+2.6
NLC	**Nalytchevo**	**2.40**	**22**	P	Pn	19 57 31.3	+1.6
NLC				S	Sn	19 57 58.5	-0.8
SDLR	**Sedlovina**	**2.41**	**15**	*eP*	Pn	19 57 32.2	+2.2
KRER	**Koryakskii**	**2.42**	**13**	*eP*	Pn	19 57 32.7	+2.5
KRX	**Arik**	**2.46**	**11**	*eP*	Pn	19 57 33.0	+2.4
SPN	**Mys Shipunski**	**2.53**	**31**	*eP*	Pn	19 57 34.2	+2.8
SPN				*eS*	Sn	19 58 03.4	+1.2
GNL	**Ganaly**	**2.75**	**1**	*eP*	Pn	19 57 35.2	+0.9
MKZ	**Mys Kozlova**	**4.31**	**32**	*eP*	Pn	19 57 56.5	+1.7
MKZ				*eS*	Sn	19 58 43.5	-0.6
BKI	**Bering**	**6.48**	**46**	*eP*	Pn	19 58 27.2	+3.2
BKI				*eS*	Sn	19 59 33.9	-2.6

*IDC **20** 20:11:40.5±0.8, 1°.12S×14°.05W, h0km, mb4.0/14, mbtmp4.1/16, ML4.5/2, MS3.5/30, Error ellipse: s-maj=21.7km s-min=17.7km az=113.0*
*NEIC **20** 20:11:43.8±1.0, 1°.1S±0°.1×13°.93W±0°.09, h10km±1km, mb4.6/12, Error ellipse: s-maj=22.3km s-min=7.0km az=143.0*

ISC 20 20:11:43.1±0.5, 1°.10S±0°.07×14°.0W±0°.1, h13km, n75, σ1§59/47, mb4.2/31, MS3.5/28, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.71**	**185**	Pn	**Pn**	**20 13 20.9**	**-0.2**
	baz=2.1,slow=13						
H10N2				T	T	20 20 16.9	
	baz=5.7,slow=74,SNR=88						
H10N3	**ASCENSION HYDR**	**6.72**	**185**	Pn	**Pn**	**20 13 21.0**	**-0.4**
	baz=2.1,slow=13						
H10N3				T	T	20 20 14.5	
	baz=5.7,slow=74,SNR=174						
H10N1	**ASCENSION HYDR**	**6.72**	**185**	Pn	**Pn**	**20 13 21.1**	**-0.3**
	baz=2.1,slow=13						
H10N1				T	T	20 20 13.6	
	baz=5.7,slow=74,SNR=134						
ASCN	**Ascension**	**6.80**	**183**	Pn	**Pn**	**20 13 21.9**	**-0.8**
H10S3	**ASCENSION HYDR**	**7.84**	**185**	Pn	**Pn**	**20 13 36.5**	**-0.2**
	baz=20,slow=74						
H10S3				T	T	20 21 35.2	
	baz=216,slow=74,SNR=81						
H10S2	**ASCENSION HYDR**	**7.84**	**185**	Pn	**Pn**	**20 13 37.4**	**+0.6**
	baz=200,slow=74						
H10S2				T	T	20 21 37.8	
	baz=4.0,slow=74,SNR=23						
DBIC	**Dimbokro**	**11.91**	**50**	Pn	**Pn**	**20 14 31.4**	**-1.4**
	2.8nm,0.3s,baz=244,slow=14,SNR=48						
DBIC				Sn	Sn	20 16 30.8	-15
	0.8nm,0.3s,baz=133,slow=9.6,SNR=1.0						
DBIC				LR	LR	20 17 44.4	
	comp=Z,207nm,20.8s,baz=241,slow=30 14nm,0.5s						
DBIC	**Dimbokro**	**11.91**	**50**		**Pn**	**20 14 30.9**	**-1.9**
BBTS	**Babate**	**15.86**	**351**	Pn	**Pn**	**20 15 24.1**	**-2.2**
	2.3nm,0.3s,baz=155,slow=19,SNR=1.3						
BBTS				Sn	Sn	20 18 07.4	-15
	3.8nm,0.3s,baz=149,slow=19,SNR=9.1						
BBTS				LR	LR	20 20 06.4	
	comp=Z,169nm,18.5s,baz=180,slow=32 14nm,0.7s						
KOWA	**Kowa**	**18.35**	**32**	P	**Pn**	**20 15 55.7**	**-1.8**
KOWA				IAmb	IAmb	20 16 02.5	
	comp=Z,29nm,0.8s						
TOA0	**Torodi Ar. Sit**	**21.00**	**47**	P	**P**	**20 16 26.7**	**+0.2**
TOA0				IAmb	IAmb	20 16 36.7	
	comp=Z,20nm,1.1s						
TORD	**Torodi Ar. Bea**	**21.00**	**47**	P	**P**	**20 16 26.3**	**-0.2**
	comp=Z,5.2nm,0.6s,baz=230,slow=11,SNR=39						
TORD				S	S	20 20 05.1	-15
	comp=Z,1.8nm,0.6s,baz=229,slow=24,SNR=2.5						
TORD				LR	LR	20 23 54.5	
	comp=Z,153nm,18.2s,baz=197,slow=35 comp=Z,5.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**21.00**	**47**		**P**	**20 16 26.6**	**0.0**
MDT	**Midelt**	**34.86**	**14**	LR	LR	20 31 23.2	
	comp=Z,66nm,19.0s,baz=207,slow=34						
MDP	**Montagnes des**	**39.14**	**279**	LR	LR	20 31 29.0	
	comp=Z,61nm,19.6s,baz=124,slow=30						
ESDC	**Sonseca Array**	**41.59**	**12**	PP	**PP**	**20 21 07.6**	**+0.4**
	comp=Z,1.0nm,1.1s,baz=200,slow=10,SNR=4.3						
KEST	**Kesra**	**42.60**	**28**	P	**P**	**20 19 39.9**	**+0.6**
	comp=Z,3.6nm,1.1s,baz=218,slow=18,SNR=2.9						
KEST				LR	LR	20 37 16.0	
	comp=Z,84nm,18.5s,baz=287,slow=36 comp=Z,3.6nm,1.1s						
LSZ	**Lusaka**	**43.90**	**111**	P	**P**	**20 19 50.9**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=280,slow=2.9,SNR=8.

	comp=Z,3.2nm,1.1s								
SOKA	**Soboth**	**53.95**	**24**	*e*P		P		20 21 12.5	+5.8
	comp=Z,2.4nm,1.1s								
MOA	**Molln**	**54.59**	**23**	*e*P		**P**		**20 21 14.2**	**+2.9**
	comp=Z,3.1nm,1.2s								
ARSA	**Arzberg**	**54.62**	**24**	*e*P		P		20 21 17.3	+5.8
	comp=Z,1.0nm,0.7s								
SJG	**San Juan**	**54.77**	**293**	LR		LR		20 38 42.0	
	comp=Z,31nm,21.4s,baz=114,slow=30								
GEC2	**GERESS Array S**	**55.20**	**22**	P		**P**		**20 21 16.1**	**+0.4**
GEC2				IAmb		IAmb		20 21 45.6	
	comp=Z,6.8nm,1.2s								
GERES	**GERESS Array B**	**55.20**	**22**	P		**P**		**20 21 17.1**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=217,slow=4.4,SNR=8.7								
GERES				PP		**PP**		**20 23 19.0**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=185,slow=10,SNR=2.5								
	comp=Z,1.6nm,0.9s								
GERES	**GERESS Array B**	**55.20**	**22**	P		**P**		**20 21 16.1**	**+0.4**
RONA	**Rosalia, Austr**	**55.29**	**24**	*e*P		P		20 21 22.1	+5.7
	comp=Z,2.8nm,0.7s								
LPAZ	**La Paz**	**55.44**	**251**	LR		LR		20 43 12.3	
	comp=Z,65nm,21.1s,baz=101,slow=34								
EIL	**Elat**	**55.76**	**52**	LR		LR		20 46 20.9	
	comp=Z,109nm,18.3s,baz=268,slow=37								
VRAC	**Vranov**	**56.69**	**23**	LR		LR		20 44 50.2	
	comp=Z,20nm,21.9s,baz=245,slow=35								
MLR	**Muntele Rosu**	**58.26**	**32**	LR		LR		20 48 41.9	
	comp=Z,37nm,19.6s,baz=272,slow=38								
BRTR	**Keskin Array B**	**59.47**	**41**	P		**P**		**20 21 45.5**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=228,slow=6.4,SNR=2.2								
	comp=Z,0.6nm,0.8s								
NNA	**Nana**	**63.28**	**257**	LR		LR		20 49 04.3	
	comp=Z,53nm,18.2s,baz=74,slow=36								
AKASG	**Malin Array Be**	**63.32**	**29**	LR		LR		20 51 00.6	
	comp=Z,25nm,18.9s,baz=196,slow=37								
ORCD	**Orcadas**	**63.99**	**196**	P		**P**		**20 22 15.6**	**-0.4**
HFS	**Hagfors**	**64.73**	**15**	LR		LR		20 51 57.4	
	comp=Z,31nm,18.8s,baz=226,slow=37								
NB2	**NORSAR Subarra**	**64.92**	**13**	P		**P**		**20 22 26.9**	**+4.7**
	comp=Z,2.1nm,0.9s,baz=209,slow=6.5								
NOA	**NORSAR Array B**	**64.92**	**13**	P		**P**		**20 22 21.1**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=210,slow=6.4,SNR=2.2								
NOA				LR		LR		20 50 39.6	
	comp=Z,15nm,20.8s,baz=195,slow=36								
	comp=Z,0.4nm,0.9s								
BORG	**Borgarnes**	**65.91**	**357**	LR		LR		20 46 40.4	
	comp=Z,23nm,18.9s,baz=150,slow=32								
FINES	**FINESS Array B**	**69.44**	**19**	P		**P**		**20 22 49.8**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=213,slow=4.8,SNR=5.5								
FINES				LR		LR		20 53 48.7	
	comp=Z,35nm,20.2s,baz=226,slow=36								
	comp=Z,1.2nm,0.9s								
VNA2	**Neumayer--Watz**	**69.85**	**178**	P		P		20 22 57.9	+4.8
	baz=345,slow=6.0								
SNAA	**Sanae**	**70.83**	**176**	P		**P**		**20 22 56.7**	**-2.5**
	comp=Z,1.2nm,1.1s,baz=312,slow=12,SNR=2.2								
	comp=Z,1.2nm,1.1s								
SNAA	**Sanae**	**70.83**	**176**	P		**P**		**20 23 01.3**	**+2.1**
TROLL	**Troll, Antarti**	**71.58**	**175**	P		P		20 23 10.6	+6.7
PMSA	**Palmer Station**	**73.02**	**200**	LR		LR		20 46 38.3	
	comp=Z,45nm,20.4s,baz=126,slow=29								
ARCES	**ARCESS Array B**	**75.30**	**13**	P		**P**		**20 23 25.7**	**0.0**
	comp=Z,0.9nm,0.7s,baz=211,slow=5.1,SNR=1.4								
ARCES				LR		LR		20 57 15.8	
	comp=Z,24nm,19.1s,baz=204,slow=36								
	comp=Z,0.9nm,0.7s								
ARU	**Arti**	**81.31**	**32**	LR		LR		21 02 03.8	
	comp=Z,27nm,19.0s,baz=100,slow=37								
QSPA	**South Pole Qui**	**88.98**	**180**			**P**		**20 24 39.2**	**+1.7**
QSPA				IAmb		IAmb		20 24 48.5	
	comp=Z,8.4nm,1.4s								
ANMO	**Albuquerque**	**92.68**	**305**	LR		LR		20 59 32.4	
	comp=Z,27nm,19.8s,baz=114,slow=31								
MKAR	**Makanchi Array**	**95.08**	**43**	LR		LR		21 11 53.4	
	comp=Z,9.1nm,20.3s,baz=276,slow=38								
ELK	**Elko**	**99.27**	**311**	LR		LR		21 06 15.2	
	comp=Z,22nm,21.0s,baz=86,slow=33								
ASAR	**Alice Springs**	**140.23**	**130**	PKhKP		PKPpre		20 31 09.0	
	comp=Z,0.4nm,0.9s,baz=232,slow=4.1,SNR=2.6								
WRA	**Warramunga Arr**	**142.53**	**126**	PKP		**PKPdf**		**20 31 15.7**	**-1.2**
	comp=Z,0.2nm,0.8s,baz=232,slow=2.6,SNR=1.6								

*KRNET **20** 20:18:00.8±0.1, 42.°09N×75.°05E, h14km, mb3.6*
*KNET **20** 20:18:00.4±0.6, 42.°11N×75.°04E, h0km, ml2.0, Error ellipse: s-maj=4.2km s-min=2.8km az=177.0*
*SOME **20** 20:18:01.7, 42.°12N×75.°00E, h10km*
*NNC **20** 20:18:04.3±1.3, 42.°26N×75.°05E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=8.9km s-min=5.5km az=12.0*

ISC 20 20:18:00.8±1.1, 42.°11N±0.°03×75.°02E±0.°02, h14km±9km, n52, σ1°47/94, 28C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBK	**Karagaybulak**	**0.55**	**354**	⇑P	**Pb**	**20 18 12.2**	**-0.1**
	51nm,0.1s,SNR=66						
KBK				⇑S	**Sb**	**20 18 19.9**	**-0.2**
	195nm,0.1s						
KBK	**Karagaybulak**	**0.55**	**354**	⇑*i*P	**Pg**	**20 18 11.6**	**-0.1**
	baz=52						
KBK				⇑*i*S	**Sb**	**20 18 19.9**	**-0.2**
	baz=52						
ARLS	**Aral**	**0.58**	**245**	⇓*i*P	**Pg**	**20 18 12.0**	**-0.2**
	baz=46						
ARLS				⇓*i*S	**Sg**	**20 18 20.3**	**+0.4**
	baz=46						
AAK	**Ala-Archa**	**0.66**	**323**	⇓P	**Pb**	**20 18 14.1**	**0.0**
	58nm,0.2s,SNR=27						
AAK				⇓S	**Sb**	**20 18 23.2**	**+0.1**
	10nm,0.1s						
AAK	**Ala-Archa**	**0.66**	**323**	⇓*i*P	**Pb**	**20 18 13.8**	**-0.3**
	baz=23						
AAK				⇓*i*S	**Sb**	**20 18 23.3**	**+0.1**
	baz=23						
BOOM	**Boomskoye usch**	**0.78**	**61**	⇑*i*P	**Pb**	**20 18 15.7**	**-0.5**
	baz=59						
BOOM				⇑*i*S	**Sb**	**20 18 26.2**	**-0.5**
	baz=59						
CHMS	**Chumysh**	**0.91**	**347**	P	**Pb**	**20 18 18.6**	**+0.1**
	22nm,0.1s,SNR=14						
CHMS				⇑S	**Sb**	**20 18 31.0**	**+0.6**
	33nm,0.1s						
CHMS	**Chumysh**	**0.91**	**347**	⇓P	**Pb**	**20 18 18.5**	**+0.1**
	3.4nm,0.2s						
CHMS				⇑S	**Sb**	**20 18 30.5**	**+0.1**
	21nm,0.4s						
CHMS	**Chumysh**	**0.91**	**347**	⇑*i*P	**Pb**	**20 18 18.4**	**0.0**
	baz=46						
CHMS				⇑*i*S	**Sb**	**20 18 31.0**	**+0.6**
	baz=46						
TKM2	**Tokmak 2**	**0.91**	**27**	⇓P	**Pb**	**20 18 18.4**	**-0.1**
	10nm,0.1s,SNR=88						
TKM2				⇑S	**Sb**	**20 18 30.6**	**0.0**
	79nm,0.1s						
TKM2	**Tokmak 2**	**0.91**	**27**	⇑P	**Pb**	**20 18 18.5**	**-0.1**
	1.4nm,0.2s						
TKM2				⇑S	**Sg**	**20 18 30.1**	**-0.5**
	10nm,0.2s						
TKM2	**Tokmak 2**	**0.91**	**27**	⇑*i*P	**Pb**	**20 18 18.3**	**-0.2**
	baz=26						
TKM2				⇑*i*S	**Sb**	**20 18 30.8**	**+0.2**
	baz=26						
ULHL	**Ulahol**	**0.92**	**81**	P	**Pb**	**20 18 17.9**	**-0.7**
	18nm,0.1s,SNR=181						
ULHL				⇑S	**Sb**	**20 18 30.0**	**-0.6**
	40nm,0.2s						
ULHL	**Ulahol**	**0.92**	**81**	⇑*i*P	**Pb**	**20 18 17.8**	**-0.7**
	baz=80						
ULHL				⇑*i*S	**Sb**	**20 18 30.3**	**-0.3**
	baz=80						
AML	**Almayashu**	**0.99**	**272**	P	**Pb**	**20 18 20.1**	**+0.2**
	13nm,0.2s,SNR=61						
AML				⇑S	**Sb**	**20 18 33.7**	**+0.7**
	47nm,0.3s						
EKS2	**Erkin-Say**	**1.07**	**301**	⇑P	**Pn**	**20 18 21.9**	**+0.4**
	11nm,0.1s,SNR=65						
EKS2				⇓S	**Sn**	**20 18 36.7**	**+0.4**
	30nm,0.3s						
EKS2	**Erkin-Say**	**1.07**	**301**	⇑*i*P	**Pn**	**20 18 21.7**	**+0.2**
	baz=1.0						
EKS2				⇑*i*S	**Sn**	**20 18 36.7**	**+0.4**
	baz=1.0						
KST	**Kastek**	**1.16**	**36**	*e*P	**Pn**	**20 18 22.8**	**0.0**
	7.1nm,0.2s						
KST				*e*S	**Sb**	**20 18 37.9**	**+0.2**
	25nm,0.3s						
KST	**Kastek**	**1.16**	**36**	P	**Pn**	**20 18 22.8**	**0.0**
	7.1nm,0.2s						
KST				S	**Sn**	**20 18 38.2**	**-0.3**
	25nm,0.3s						
USP	**Ospenovka**	**1.22**	**342**	⇓P	**Pg**	**20 18 24.2**	**-0.1**
	33nm,0.1s,SNR=13						
USP				⇑S	**Sn**	**20 18 40.6**	**+0.8**
	18nm,0.1s						
USP	**Ospenovka**	**1.22**	**342**	⇑*i*P	**Pg**	**20 18 23.9**	**-0.4**
	baz=41						
USP				⇑*i*S	**Sn**	**20 18 40.5**	**+0.8**
	baz=41						
SGDS	**Sogindy**	**1.37**	**348**	*e*P	**Pg**	**20 18 27.1**	**-0.1**
	5.7nm,0.1s						
SGDS				*e*S	**Sg**	**20 18 44.9**	**-0.1**
	21nm,0.1s						
SGDS	**Sogindy**	**1.37**	**348**	P	**Pg**	**20 18 27.0**	**-0.1**
	5.7nm,0.1s						
SGDS				S	**Sg**	**20 18 44.9**	**-0.1**
	21nm,0.1s						
MTBS	**Maitube**	**1.45**	**45**	*e*P	**Pg**	**20 18 28.7**	**-0.1**
	11nm,0.1s						
MTBS				*e*S	**Sg**	**20 18 47.7**	**0.0**
	24nm,0.3s						
MTBS	**Maitube**	**1.45**	**45**	P	**Pg**	**20 18 28.7**	**-0.1**
	11nm,0.1s						
MTBS				S	**Sg**	**20 18 47.7**	**0.0**
	24nm,0.3s						
MRKS	**Merke**	**1.48**	**296**	*e*P	**Pn**	**20 18 26.0**	**-1.0**
	1.1nm,0.2s						
MRKS				*e*S	**Sn**	**20 18 43.4**	**-2.7**
	6.1nm,0.2s						
KRBS	**Karabastau**	**1.66**	**17**	*e*P	**Pg**	**20 18 32.2**	**-0.4**
	2.5nm,0.2s						
KRBS				*e*S	**Sg**	**20 18 53.5**	**-0.6**
	63nm,0.3s						
KRBS	**Karabastau**	**1.66**	**17**	P	**Pg**	**20 18 32.2**	**-0.4**
	2.5nm,0.2s						
KRBS				S	**Sg**	**20 18 53.5**	**-0.6**
	63nm,0.3s						
KNDC	**Almaty**	**1.81**	**52**	⇑Pg	**Pg**	**20 18 36.2**	**+0.7**
	10.0nm,0.3s						
KNDC				⇑Lg	Lg	20 19 02.3	
	36nm,0.5s						
MDOK	**Medeo**	**1.83**	**54**	*e*P	**Pg**	**20 18 38.5**	**+2.6**
MDOK				*e*S	**Sg**	**20 19 04.8**	**+5.2**
MDOK	**Medeo**	**1.83**	**54**	Pg	**Pg**	**20 18 35.7**	**-0.2**
	7.1nm,0.5s						
MDOK				Lg	Lg	20 19 02.6	
	9.9nm,0.4s						
KTBS	**Karatobe**	**2.01**	**37**	*e*P	**Pg**	**20 18 38.0**	**-1.4**
	8.7nm,0.1s						
KTBS				*e*S	**Sg**	**20 19 03.9**	**-1.6**
	73nm,0.3s						
KTBS	**Karatobe**	**2.01**	**37**	Pg	**Pg**	**20 18 38.0**	**-1.4**
	8.7nm,0.1s						
KTBS				Lg	Lg	20 19 04.6	
	73nm,0.3s						
KUU	**Kurty**	**2.03**	**28**	*e*P	**Pg**	**20 18 38.5**	**-1.2**
	4.4nm,0.1s						
KUU				*e*S	**Sg**	**20 19 04.7**	**-1.3**
	50nm,0.4s						
KUU	**Kurty**	**2.03**	**28**	Pg	**Pg**	**20 18 38.5**	**-1.2**
	4.4nm,0.1s						
KUU				Lg	Lg	20 19 04.7	
	50nm,0.4s						
SATY	**Saty**	**2.67**	**68**	*e*P	**Pg**	**20 18 52.2**	**+0.3**
	5.3nm,0.3s						
SATY				*e*S	**Sg**	**20 19 28.3**	**+1.7**
	17nm,0.2s						
SATY	**Saty**	**2.67**	**68**	Pg	**Pg**	**20 18 52.2**	**+0.3**
	5.3nm,0.3s						
SATY				Lg	Lg	20 19 28.3	
	17nm,0.2s						
KURS	**Kuram**	**2.69**	**58**	*e*P	**Pb**	**20 18 49.8**	**+1.0**
	8.2nm,0.6s						
KURS				*e*S	**Sg**	**20 19 24.0**	**-3.3**
	7.6nm,0.5s						
KURS	**Kuram**	**2.69**	**58**	Pg	**Pb**	**20 18 49.8**	**+1.0**
	8.2nm,0.6s						
KURS				Lg	Lg	20 19 24.6	
	7.6nm,0.5s						
ZHN	**Zhinishke**	**2.73**	**66**	*e*P	**Pg**	**20 18 51.8**	**-1.3**
	14nm,0.2s						
ZHN				*e*S	**Sg**	**20 19 27.3**	**-1.2**
	28nm,0.2s						
ARXS	**Arharly**	**2.94**	**43**	*e*P	**Pg**	**20 18 54.7**	**-2.3**
	3.9nm,0.2s						
ARXS				*e*S	**Sg**	**20 19 32.4**	**-2.7**
	23nm,0.5s						
ARXS	**Arharly**	**2.94**	**43**	Pg	**Pg**	**20 18 54.7**	**-2.3**
	3.9nm,0.2s						
ARXS				Lg	Lg	20 19 32.4	
	23nm,0.5s						
BTLS	**Baital**	**3.01**	**347**	*e*P	**Pb**	**20 18 55.8**	**+1.6**
	3.5nm,0.3s						
BTLS				*e*S	**Sb**	**20 19 34.0**	**+3.2**
	12nm,0.2s						
KPKS	**Kokpek**	**3.02**	**62**	*e*P	**Pg**	**20 18 57.6**	**-1.0**
	7.6nm,0.3s						
KPKS				*e*S	**Sg**	**20 19 37.3**	**-0.3**
	23nm,0.4s						
KPKS	**Kokpek**	**3.02**	**62**	Pg	**Pg**	**20 18 57.6**	**-1.0**
	7.6nm,0.3s						
KPKS				Lg	Lg	20 19 37.3	
	23nm,0.4s						
UZB	**Uzynbulak**	**3.13**	**69**	*e*P	**Pg**	**20 18 58.4**	**-2.3**
	5.4nm,0.3s						
UZB				*e*S	**Sg**	**20 19 38.6**	**-2.6**
	11nm,0.7s						
SHLS	**Shalkode**	**3.44**	**71**	*e*P	**Pg**	**20 19 08.9**	**+2.3**
	1.6nm,0.3s						
SHLS				*e*S	**Sg**	**20 19 56.6**	**+5.4**
	7.3nm,0.6s						
KK31	**Karatay Array**	**3.48**	**288**	Pn	**Pb**	**20 19 04.0**	**+2.0**
	0.3nm,0.2s,baz=105,slow=17,SNR=29						
KK31				⇑Lg	Lg	20 19 49.9	
	2.4nm,0.4s,baz=101,slow=29,SNR=12						
IUG	**luzhnay**	**3.71**	**272**	*e*P	**Pg**	**20 19 10.3**	**-1.6**
	55nm,0.3s						
IUG				*e*S	**Sg**	**20 19 58.9**	**-1.1**
	25nm,0.4s						
TDK	**Taldyqorghan**	**3.79**	**39**	*e*P	**Pb**	**20 19 09.1**	**+1.6**
	16nm,0.4s						
TDK				*e*S	**Sb**	**20 19 56.9**	**+3.6**
	21nm,0.4s						
DJR	**Jarkent**	**4.13**	**56**	*e*P	**Pg**	**20 19 17.7**	**-2.2**
	3.6nm,0.5s						
DJR				*e*S	**Sg**	**20 20 11.5**	**-1.8**
	4.7nm,0.4s						
DJR	**Jarkent**	**4.13**	**56**	Pg	**Pg**	**20 19 17.7**	**-2.2**
	3.6nm,0.5s						
DJR				Lg	Lg	20 20 11.5	
	4.7nm,0.4s						

*IDC **20** 20:23:06.0±0.5, 55.°13S×30.°82W, h0km, mb4.5/12, mbtmp4.5/13, ML4.5/1, MS3.7/18, Error ellipse: s-maj=17.9km s-min=15.5km az=38.0*
*NEIC **20** 20:23:08.0±1.2, 55.°19S±0.°09×31.°1W±0.°1, h10km±1km, mb5.2/69, Error ellipse: s-maj=15.2km s-min=12.4km az=207.0*

ISC 20 20:23:07.5±0.3, 55.°18S±0.°06×31.°10W±0.°06, h10km, n313, σ0.°67/291, mb5.1/41, MS3.8/17, 1D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.25**	**284**	Pn	**Pn**	**20 23 58.6**	**+0.1**
HOPE				Sn	**Sn**	**20 24 33.7**	**-3.6**
ORCD	**Orcadas**	**9.13**	**227**	Pn	**Pn**	**20 25 17.3**	**-1.9**
VNA1	**Neumayer--Stat**	**18.46**	**156**	P	**Pn**	**20 27 24.0**	**+1.0**
VNA3	**Neumayer Olymp**	**18.59**	**158**	P	**Pn**	**20 27 24.7**	**+0.1**
PMSA	**Palmer Station**	**18.85**	**226**	P	**Pn**	**20 27 30.1**	**+2.3**
	1.5nm,0.3s,baz=78,slow=12,SNR=11						
PMSA				LR	LR	20 34 00.8	
	comp=Z,110nm,18.2s,baz=76,slow=34						
	15nm,0.8s						
PMSA	**Palmer Station**	**18.85**	**226**		**Pn**	**20 27 28.0**	**+0.3**
VNA2	**Neumayer--Watz**	**18.86**	**156**	P	**Pn**	**20 27 27.8**	**-0.2**
	baz=311,slow=13						
SNAA	**Sanae**	**20.46**	**155**	P	**P**	**20 27 45.2**	**+0.4**
	19nm,0.8s,baz=315,slow=12,SNR=31						
	19nm,0.8s						
SNAA	**Sanae**	**20.46**	**155**	P	**P**	**20 27 44.0**	**-0.9**
SMAI	**San Martin Ant**	**21.04**	**218**		**P**	**20 27 51.5**	**+0.4**
USHA	**Ushuaia**	**21.25**	**255**	P	**P**	**20 27 55.0**	**+1.6**
	15nm,0.7s,baz=101,slow=13,SNR=4.0						
	15nm,0.7s						
TROLL	**Troll, Antarti**	**22.02**	**153**	P	**P**	**20 28 01.0**	**-0.8**
MG02	**Cerro Sombrero**	**22.36**	**260**	P	**P**	**20 28 05.2**	**-0.3**
MG02				IAmb	IAmb	20 28 17.1	
	comp=Z,130nm,0.9s						
BELA	**Belgrano 2**	**22.83**	**182**	P	**P**	**20 28 11.0**	**+0.8**
MG04	**Isla Riesco**	**23.66**	**259**	P	**P**	**20 28 19.5**	**+0.8**
MG04				IAmb	IAmb	20 28 40.8	
	comp=Z,117nm,1.2s						
MG05	**Puerto Natales**	**24.65**	**261**	P	**P**	**20 28 28.0**	**0.0**
MG05				IAmb	IAmb	20 28 31.6	
	comp=Z,41nm,0.8s						
GO09	**Cerro Castillo**	**24.73**	**262**		**P**	**20 28 27.7**	**-1.0**
GO09				IAmb	IAmb	20 28 57.6	
	comp=Z,158nm,2.0s						
TRQA	**Tornquist**	**26.95**	**297**	P	**P**	**20 28 49.9**	**+1.0**
PLTB	**Pedras Altas**	**28.30**	**317**	P	**P**	**20 29 01.0**	**-0.1**
PLTB				IAmb	IAmb	20 29 47.8	
	comp=Z,100nm,1.8s						
CPSB	**Cacapava Do Su**	**29.45**	**318**	*e*P	**P**	**20 29 12.6**	**+1.3**
TER01	**Tubaro-SC**	**29.64**	**327**	*e*P	**P**	**20 29 13.9**	**+0.9**
PLCA	**Paso Flores**	**29.66**	**283**	P	**P**	**20 29 13.3**	**+0.2**
	comp=Z,3.9nm,1.2s,baz=145,slow=10.0,SNR=3.9						
PLCA				LR	LR	20 41 51.2	
	comp=Z,71nm,18.8s,baz=130,slow=38						
	comp=Z,3.9nm,1.2s						
PLCA	**Paso Flores**	**29.66**	**283**	P	**P**	**20 29 13.3**	**+0.2**
PLCA	**Paso Flores**	**29.66**	**283**	*e*P	**P**	**20 29 13.7**	**+0.5**
RODS	**Rosario do Sul**	**30.19**	**315**	*e*P	**P**	**20 29 19.4**	**+1.6**
ALGR	**Alto Alegre (B**	**30.73**	**320**	*e*P	**P**	**20 29 23.8**	**+1.1**
UNIS	**Unistalda (Bra**	**31.27**	**317**	*e*P	**P**	**20 29 27.9**	**+0.5**
ITQB	**Itaqui**	**31.36**	**314**	*e*P	**P**	**20 29 29.8**	**+1.7**
ITAB	**Concordia**	**31.84**	**323**	P	**P**	**20 29 32.6**	**+0.2**
ITAB	**Concordia**	**31.84**	**323**	*e*P	**P**	**20 29 33.7**	**+1.3**
CRSM	**Crissiumal (Br**	**32.29**	**320**	*e*P	**P**	**20 29 37.8**	**+1.4**
FRBT	**Francisco Belt**	**33.32**	**322**	*e*P	**P**	**20 29 46.3**	**+0.9**
MAN01	**Angra dos Reis**	**33.67**	**338**	*e*P	**P**	**20 29 49.3**	**+0.8**
PTGB	**Pitanga**	**34.14**	**325**	*e*P	**P**	**20 29 52.9**	**+0.3**
GO05	**Huala**	**34.51**	**289**	P	**P**	**20 29 55.8**	**+0.1**
GO05				IAmb	IAmb	20 31 00.2	
	comp=Z,56nm,1.6s						
CPUP	**Villa Florida**	**34.60**	**316**	P	**P**	**20 29 57.2**	**+0.7**
	comp=Z,22nm,0.8s,baz=152,slow=7.5,SNR=31						
CPUP				LR	LR	20 41 59.9	
	comp=Z,62nm,20.7s,baz=104,slow=33						
	comp=Z,22nm,0.8s						
CPUP	**Villa Florida**	**34.60**	**316**	P	**P**	**20 29 56.8**	**+0.3**
CPUP				IAmb	IAmb	20 29 57.8	
	comp=Z,37nm,1.1s						
CPUP	**Villa Florida**	**34.60**	**316**	*e*P	**P**	**20 29 57.0**	**+0.5**
MT09	**Talagante**	**34.93**	**291**	P	**P**	**20 29 59.1**	**-0.4**
MT09				IAmb	IAmb	20 30 20.5	
	comp=Z,75nm,1.9s						
MT01	**Popeta**	**35.01**	**291**	P	**P**	**20 29 59.6**	**-0.3**
MT01				IAmb	IAmb	20 30 30.5	
	comp=Z,88nm,1.9s						
QSPA	**South Pole Qui**	**35.07**	**180**	LR	LR	20 43 42.6	
	comp=Z,174nm,18.7s,baz=200,slow=35						
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**20 30 01.3**	**+0.9**
QSPA				IAmb	IAmb	20 30 05.9	
	comp=Z,66nm,1.9s						
PEL	**Peldehue**	**35.26**	**292**	P	**P**	**20 30 01.8**	**-0.4**
PEL				IAmb	IAmb	20 30 05.3	
	comp=Z,19nm,0.7s						
MT02	**Curacav**	**35.41**	**292**	P	**P**	**20 30 03.4**	**0.0**
ZON	**Zonda**	**35.46**	**296**	P	**P**	**20 30 03.7**	**-0.2**
VA03	**San Esteban**	**35.48**	**293**	P	**P**	**20 30 05.1**	**+1.0**
VA03				IAmb	IAmb	20 30 10.9	
	comp=Z,19nm,0.8s						
ROC1	**El Roble**	**35.56**	**292**	P	**P**	**20 30 06.1**	**+1.1**
ROC1				IAmb	IAmb	20 30 24.3	
	comp=Z,20nm,0.8s						
VA06	**Catapilco**	**36.03**	**292**	P	**P**	**20 30 09.1**	**+0.4**
BB19B	**Bebedouro**	**36.51**	**332**	*e*P	**P**	**20 30 13.7**	**+0.8**
PCMB	**Pacaembu**	**36.78**	**328**	*e*P	**P**	**20 30 15.1**	**-0.2**
CO02	**Combarbal**	**36.94**	**294**	P	**P**	**20 30 16.0**	**-0.7**
CO03	**El Pedregal**	**37.06**	**295**	P	**P**	**20 30 18.5**	**+0.8**
CO03				IAmb	IAmb	20 31 12.8	
	comp=Z,96nm,1.9s						
CO01	**Juntas del Tor**	**37.44**	**296**	P	**P**	**20 30 22.5**	**+1.5**
GO04	**Tololo Observa**	**37.65**	**295**	P	**P**	**20 30 22.8**	**0.0**
CO06	**Fray Jorge**	**37.69**	**294**	P	**P**	**20 30 22.8**	**-0.1**
NAN01	**Guarapari, ES**	**37.91**	**346**	*e*P	**P**	**20 30 25.5**	**+0.7**
ANTJ	**Antonio Joao (**	**38.01**	**321**	*e*P	**P**	**20 30 25.8**	**+0.1**
DIAM	**Diamantina, MG**	**38.05**	**340**	*e*P	**P**	**20 30 26.3**	**+0.2**
AQDB	**Aquidauana**	**39.30**	**322**	P	**P**	**20 30 35.6**	**-0.9**
IPMB	**Ipameri, GO**	**39.37**	**334**	*e*P	**P**	**20 30 37.9**	**+0.7**
C2SB	**Chapadao do Su**	**39.94**	**327**	*e*P	**P**	**20 30 43.6**	**+1.8**
AC01	**Pan de Azucar**	**40.82**	**299**	P	**P**	**20 30 49.0**	**-0.1**
AC01				IAmb	IAmb	20 31 22.6	
	comp=Z,83nm,1.4s						
GO02	**Mina Guanaco**	**41.13**	**301**	P	**P**	**20 30 53.2**	**+1.1**
BDFB	**Brasilia**	**41.57**	**335**	P	**P**	**20 30 55.6**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=153,slow=6.8,SNR=3.7						
	comp=Z,1.6nm,0.4s						
BDFB	**Brasilia**	**41.57**	**335**		**P**	**20 30 55.6**	**+0.2**
PB14	**IPOC Station P**	**41.98**	**300**	P	**P**	**20 30 59.1**	**+0.1**
PB14				IAmb	IAmb	20 31 02.7	
	comp=Z,48nm,1.2s						
MAW	**Mawson**	**42.15**

H10N1 ASCENSION HYDR 49.03 22 T T 21 24 46.8
baz=192,slow=75,SNR=16
H10N3 ASCENSION HYDR 49.03 22 T T 21 24 47.3
baz=192,slow=75,SNR=18
H10N2 ASCENSION HYDR 49.05 22 T T 21 24 48.3
baz=192,slow=75,SNR=23
RCBR Riachuelo 49.37 354 LR LR 20 50 20.7
comp=Z,45nm,18.2s,baz=318,slow=33
LBTB Lobatse 50.93 78 LR LR 20 50 13.6
comp=Z,30nm,19.7s,baz=238,slow=32
LBTB Lobatse 50.93 78 P **P** **20 32 08.4 -0.6**
NPGB Novo Progresso 51.77 329 *e*P **P** **20 32 15.5 +0.3**
POGA Pongola 52.59 85 P **P** **20 32 21.0 -0.3**
POGA IAmb IAmb 20 32 22.2
comp=Z,68nm,1.8s
ETMB Extrema 53.05 315 P **P** **20 32 24.6 -0.2**
ETMB IAmb IAmb 20 32 26.1
comp=Z,33nm,1.7s
ETMB Extrema 53.05 315 *e*P **P** **20 32 24.8 +0.1**
CASY Casey 55.44 162 P **P** **20 32 41.0 -0.5**
NNA Nana 55.90 302 P **P** **20 32 44.7 -0.8**
MALB Monte Alegre 56.41 332 *e*P **P** **20 32 50.6 +1.6**
MACA Manacapuru-AM 57.12 324 P **P** **20 32 52.9 -1.2**
MACA IAmb IAmb 20 32 53.7
comp=Z,15nm,0.7s
MACA Manacapuru-AM 57.12 324 *e*P **P** **20 32 53.1 -1.0**
MCPB Macapa, AP 57.27 335 *e*P **P** **20 32 56.6 +1.5**
CZSB Cruzeiro do Su 57.69 309 P **P** **20 32 57.9 -0.3**
CZSB IAmb IAmb 20 32 58.5
comp=Z,26nm,1.4s
LSZ Lusaka 60.18 73 LR LR 20 56 26.7
comp=Z,70nm,18.0s,baz=156,slow=33
LSZ Lusaka 60.18 73 P **P** **20 33 15.3 -0.3**
LSZ IAmb IAmb 20 33 16.4
comp=Z,29nm,1.7s
BOAV Boa Vista 62.28 326 P **P** **20 33 29.1 -0.5**
BOAV IAmb IAmb 20 33 30.0
comp=Z,11nm,1.0s
BOAV Boa Vista 62.28 326 *e*P **P** **20 33 29.0 -0.7**
MDP Montagnes des 62.68 336 LR LR 20 58 31.6
comp=Z,44nm,20.9s,baz=21,slow=34
ARNL Arenillas 64.78 304 P **P** **20 33 46.8 +0.6**
COHC Cochancay 65.34 305 P **P** **20 33 50.4 +0.6**
DBIC Dimbokro 65.39 29 P **P** **20 33 49.3 -0.8**
comp=Z,4.1nm,0.7s,baz=208,slow=10,SNR=4.7
comp=Z,4.1nm,0.7s
DBIC Dimbokro 65.39 29 P **P** **20 33 48.9 -1.1**
VOI Vohitsoka 65.44 93 P **P** **20 33 51.5 +0.9**
OTAV Otavalo 67.35 307 P **P** **20 34 03.6 +0.4**
OTAV IAmb IAmb 20 34 15.5
comp=Z,19nm,1.5s
BAUV El Baul 70.95 321 P **P** **20 34 24.9 -0.1**
BAUV IAmb IAmb 20 34 26.1
comp=Z,24nm,1.1s
BIRV Birongo 71.75 323 P **P** **20 34 30.1 +0.3**
SDV Santo Domingo 71.86 319 LR LR 21 06 15.3
comp=Z,78nm,20.6s,baz=172,slow=36
TOA0 Torodi Ar. Sit 73.47 33 P **P** **20 34 39.9 -0.1**
TOA0 IAmb IAmb 20 34 41.0
comp=Z,39nm,1.8s
TORD Torodi Ar. Bea 73.47 33 P **P** **20 34 40.0 0.0**
comp=Z,3.0nm,0.5s,baz=198,slow=6.5,SNR=33
comp=Z,3.0nm,0.5s
TORD Torodi Ar. Bea 73.47 33 P **P** **20 34 40.1 +0.1**
TORD IAmb IAmb 20 34 41.0
comp=Z,23nm,1.6s
MBAR Mbarara 73.78 67 LR LR 21 04 55.8
comp=Z,74nm,18.0s,baz=273,slow=34
KMBO Kilima Mbogo 76.84 73 LR LR 21 07 01.8
comp=Z,65nm,18.1s,baz=92,slow=34
MATN Matagalpa 81.95 306 P **P** **20 35 27.2 -0.2**
TAU Tasmania Unive 82.27 179 P **P** **20 35 28.1 -0.6**
TEIG Tepich 89.41 308 P **P** **20 36 04.7 +0.5**
CAN Canberra 89.86 180 P **P** **20 36 06.7 +0.3**
ATD Arta Tunnel 90.41 70 LR LR 21 15 31.4
comp=Z,46nm,18.0s,baz=356,slow=35
MDT Midelt 90.55 22 LR LR 21 10 50.6
comp=Z,76nm,21.1s,baz=212,slow=32
STKA Stephens Creek 93.06 174 LR LR 21 15 43.8
comp=Z,90nm,20.0s,baz=205,slow=34
ESDC Sonseca Array 97.29 21 LR LR 21 15 39.0
comp=Z,66nm,18.6s,baz=170,slow=32
ASAR Alice Springs 100.43 166 P **Pdif** **20 36 52.9 -1.9**
comp=Z,0.6nm,1.0s,baz=178,slow=4.0,SNR=4.2
ASAR PP **PP** **20 40 59.9 -0.3**
comp=Z,1.0nm,1.0s,baz=190,slow=6.3,SNR=4.9
WRA Warramunga Arr 104.15 166 Pdiff **Pdif** **20 37 13.1 +1.7**
comp=Z,0.4nm,0.9s,baz=202,slow=4.5,SNR=2.1
AKASG Malin Array Be 116.85 38 PKP **PKPdf** **20 41 49.4 -1.6**
comp=Z,0.5nm,0.6s,baz=270,slow=1.9,SNR=1.6
PDAR Pinedale Array 118.02 305 PKP **PKPdf** **20 41 53.0 -0.9**
comp=Z,0.2nm,0.6s,baz=156,slow=4.8,SNR=2.6
NVAR Mina Array Bea 119.02 296 PKP **PKiKP** **20 41 56.9 +0.9**
comp=Z,0.4nm,0.6s,baz=316,slow=3.1,SNR=2.7
MOOW Moose Ponds 119.33 305 PKPdf **PKiKP** **20 41 56.4 0.0**
NOA NORSAR Array B 120.61 22 PKP **PKPdf** **20 41 57.6 -0.4**
comp=Z,0.5nm,0.7s,baz=209,slow=2.0,SNR=3.2
BOZ Bozeman (W) 121.14 306 P **PKPdf** **20 41 59.4 -0.3**
baz=139
EGMT Eagleton 122.10 309 P **PKPdf** **20 42 01.5 +0.1**
baz=139
MSO Missoula 123.13 306 P **PKPdf** **20 42 03.5 +0.1**
baz=137
BMO Blue Mountains 123.29 302 **PKiKP** **20 42 04.0 0.0**
L04D Klamath Falls 123.88 297 P **PKPdf** **20 42 04.9 -0.2**
baz=136
J05D Fort Rock, OR 124.10 298 P **PKPdf** **20 42 05.4 -0.1**
baz=136
G08A Pilot Rock 124.41 301 PKPdf **PKiKP** **20 42 06.3 0.0**
L02F Cave Junction 124.46 296 P **PKPdf** **20 42 06.1 +0.1**
baz=136
J04D Umpqua Nationa 124.51 298 P **PKPdf** **20 42 06.2 -0.2**
baz=136
FINES FINESS Array B 124.68 29 PKP **PKPdf** **20 42 05.3 -0.4**
comp=Z,2.9nm,0.5s,baz=144,slow=1.2,SNR=18
I05D Terrebonne, OR 124.91 299 P **PKPdf** **20 42 06.6 -0.2**
baz=136
CMAR Chiang Mai Arr 127.44 114 PKP **PKPdf** **20 42 12.1 -0.4**
comp=Z,2.4nm,0.9s,baz=207,slow=1.8,SNR=9.9
CMAR Chiang Mai Arr 127.44 114 PKPdf **PKPdf** **20 42 11.3 -1.1**
ARCES ARCESS Array B 130.98 23 PKP **PKPdf** **20 42 17.1 -0.4**
comp=Z,5.6nm,0.8s,baz=222,slow=1.2,SNR=27
ARCES ARCESS Array B 130.98 23 PKPdf **PKPdf** **20 42 17.3 -0.4**
ARCES ARCESS Array B 130.98 23 P **PKPdf** **20 42 17.2 -0.4**
YKA Yellowknife Ar 134.06 320 PKP **PKPdf** **20 42 23.0 -0.6**
comp=Z,0.9nm,0.7s,baz=135,slow=2.2,SNR=6.2
PZH PanZhiHua 135.48 110 PKP **PKiKP** **20 42 30.3 +1.2**
WMQ Urumqi 139.92 80 *e*PKP **PKPdf** **20 42 35.5 +0.4**
INK Inuvik 143.74 322 PKP PKPbc 20 42 38.9 +0.2
comp=Z,6.3nm,0.9s,baz=123,slow=5.4,SNR=5.1
LZH Lanzhou 143.95 103 *e*PKP PKPab 20 42 39.9 -0.1
LZH pPKP PKiKP 20 42 51.0 +4.8
LZH sPKP 20 42 58.4
ZALV Zalesovo Beam 143.99 65 PKP PKPab 20 42 39.4 0.0
comp=Z,2.5nm,0.6s,baz=232,slow=3.5,SNR=6.0
GTA Gaotai 144.00 95 *e*PKP PKPbc 20 42 40.5 -0.1
GTA pPKP PKiKP 20 42 52.0 +5.8
GTA sPKP 20 42 56.5
LOGN Logan Glacier 144.08 308 PKPbc 20 42 40.8 +0.6
YUK3 Moose Creek 144.20 310 P PKPbc 20 42 40.5 -0.1
baz=112,SNR=16
YAH Yahtse 144.23 307 **PKPdf** **20 42 41.7 -0.7**
CTGM Chitina Glacie 144.28 308 PKPbc 20 42 41.3 +0.5
DAWY Dawson 144.58 314 **PKPab** **20 42 41.2 -0.1**
DAWY Dawson 144.58 314 P **PKPab** **20 42 41.3 -0.1**
baz=110
ISLE Juniper Island 144.59 307 PKPbc 20 42 41.8 0.0
BVCY Beaver Creek 144.62 311 P **PKPab** **20 42 41.6 +0.1**
baz=111,SNR=8.1
SNH Sunshine Point 144.66 307 **PKPdf** **20 42 42.8 -0.2**
WAX Waxell Ridge 144.77 307 PKPbc 20 42 42.5 +0.2
TGL Tana Glacier 144.88 308 **PKPab** **20 42 42.2 -0.4**
M27K Edge Creek, AK 145.04 310 **PKPbc** **20 42 42.4 -0.8**
M27K Edge Creek, AK 145.04 310 P **PKPbc** **20 42 43.1 -0.1**
baz=111,SNR=19
BERG Berg Lake 145.14 307 **PKPdf** **20 42 43.7 -0.1**
MCARA McCarthy VSAT 145.20 309 **PKPab** **20 42 43.7 0.0**
MCARA McCarthy VSAT 145.20 309 P **PKPab** **20 42 43.6 0.0**
baz=111
XAN Xi'an 145.22 111 PKPbc **PKPbc** **20 42 44.3 -0.2**
XAN pPKP PKiKP 20 42 53.3 +4.6
BCAR Beaver Creek A 145.24 312 **PKPbc** **20 42 43.6 -0.1**
L27K Beaver Creek, 145.26 312 **PKPbc** **20 42 43.3 -0.4**
L27K Beaver Creek, 145.26 312 P **PKPbc** **20 42 43.6 -0.1**
baz=110,SNR=20

HMT Hamilton 145.37 306 **PKPbc** **20 42 44.0 -0.2**
EGAK Eagle 145.53 315 P **PKPdf** **20 42 44.1 -0.2**
baz=108
M26K Nabesna, AK 145.54 310 **PKPdf** **20 42 44.2 -0.3**
M26K Nabesna, AK 145.54 310 P **PKPdf** **20 42 44.3 -0.2**
baz=110
GLB Gilahina Butte 145.57 308 PKPdf **PKPdf** **20 42 44.5 -0.1**
RAGM Ragged Mountai 145.58 306 **PKPbc** **20 42 44.7 -0.1**
K27K Chicken 145.68 313 **PKPdf** **20 42 44.7 +0.1**
K27K Chicken 145.68 313 P **PKPab** **20 42 45.4 +0.1**
baz=108
BMRM Bremner River 145.76 307 **PKPdf** **20 42 44.9 0.0**
BMRM Bremner River 145.76 307 P **PKPbc** **20 42 45.5 +0.1**
baz=111,SNR=8.0
L26K Log Cabin Wild 145.90 311 P **PKPbc** **20 42 45.6 -0.1**
baz=109
I27K Kandik River 145.96 316 P **PKPab** **20 42 46.2 -0.2**
baz=106
N25K Chitina, Valde 145.98 308 PKPdf **PKPdf** **20 42 45.5 +0.2**
N25K Chitina, Valde 145.98 308 P **PKPab** **20 42 46.6 -0.1**
baz=110,SNR=5.7
MENT Mentasta 146.03 311 **PKPdf** **20 42 45.5 +0.3**
H27K Steamboat Moun 146.10 317 P **PKPbc** **20 42 46.5 +0.2**
baz=106
EYAK Cordova Ski Ar 146.14 306 PKPdf **PKPbc** **20 42 46.5 +0.1**
EYAK Cordova Ski Ar 146.14 306 P **PKPbc** **20 42 46.7 +0.3**
baz=111,SNR=6.0
G27K Doyon Strip 146.30 318 P **PKPbc** **20 42 47.0 +0.2**
baz=105
J26L Joseph Creek 146.44 314 **PKPbc** **20 42 47.0 -0.5**
J26L Joseph Creek 146.44 314 P **PKPbc** **20 42 47.8 +0.4**
baz=107,SNR=18
SCRK Sand Creek 146.47 313 PKPdf **PKPbc** **20 42 47.2 -0.3**
SCRK Sand Creek 146.47 313 P **PKPbc** **20 42 47.6 +0.1**
baz=107,SNR=14
I26K Coal Creek Min 146.50 315 P **PKPbc** **20 42 47.7 +0.3**
baz=106
KLU Klutina 146.54 308 P **PKPbc** **20 42 48.1 +0.3**
baz=109,SNR=13
E27K Coleen River 146.60 321 P **PKPbc** **20 42 47.9 +0.1**
baz=103
P23K Montague Islan 146.72 305 P **PKPbc** **20 42 48.1 -0.1**
baz=111
RIDG Independent Ri 146.76 312 P **PKPbc** **20 42 48.5 +0.2**
baz=107,SNR=26
PAX Paxson 146.81 311 P **PKPbc** **20 42 48.3 -0.2**
baz=108
M24K Tolsona, Glenn 146.85 309 P **PKPbc** **20 42 49.2 +0.5**
baz=108,SNR=8.1
GLI Glacier Island 146.87 306 P **PKPbc** **20 42 48.7 +0.1**
baz=110,SNR=13
G26K Porcupine Rive 147.15 318 P **PKPbc** **20 42 49.4 +0.2**
baz=103
K24K Donnelly Dome 147.18 312 P **PKPbc** **20 42 49.5 +0.1**
baz=106
J25K Salcha River, 147.22 313 P **PKPbc** **20 42 49.9 +0.3**
baz=105,SNR=12
SCM Sheep Creek Mo 147.29 308 P **PKPbc** **20 42 50.1 +0.2**
baz=108,SNR=7.1
PWL Port Wells 147.44 306 **PKPbc** **20 42 49.7 -0.6**
PWL Port Wells 147.44 306 P **PKPbc** **20 42 50.3 +0.1**
baz=109,SNR=6.8
F26K Sheenjek River 147.44 319 P **PKPbc** **20 42 50.7 +0.6**
baz=101
M23K Glacier View 147.45 308 P **PKPbc** **20 42 50.6 +0.3**
baz=108
LYN LuoYang 147.49 114 *e*PKPbc **PKPdf** **20 42 49.6 +1.0**
LYN PKPab **pPKPbc** **20 42 52.8 -0.3**
LYN AMB AMB
comp=Z,180nm,5.1s
BMAR Burnt Mountain 147.56 319 **PKPbc** **20 42 50.9 +0.5**
C27K Jago River 147.62 323 P **PKPbc** **20 42 51.0 +0.5**
baz=99,SNR=5.9
DHY Denali Highway 147.67 310 P **PKPbc** **20 42 51.3 +0.3**
baz=106,SNR=12
KNK Knik Glacier 147.67 307 P **PKPbc** **20 42 50.9 0.0**
baz=108
WAT6 Susitna Watana 147.69 309 P **PKPbc** **20 42 51.1 +0.1**
baz=107,SNR=9.9
SEW Seward 147.72 304 P **PKPbc** **20 42 51.0 0.0**
baz=109
SML Sawmill 147.73 308 P **PKPbc** **20 42 50.9 -0.1**
baz=107,SNR=9.0
H25K Birch Creek 147.80 316 P **PKPbc** **20 42 51.0 0.0**
baz=102
HDA Harding Lake 147.83 313 P **PKPbc** **20 42 50.9 -0.3**
baz=104,SNR=5.8
IL31 147.90 313 **PKPdf** **20 42 49.5 +1.3**
ILAR Eielson Array 147.90 313 PKPbc **PKPbc** **20 42 51.2 -0.1**
comp=Z,11nm,0.8s,baz=116,slow=1.8,SNR=82
ILAR Eielson Array 147.90 313 **PKPdf** **20 42 49.1 +0.8**
F25K Christian Rive 147.99 319 P **PKPbc** **20 42 52.0 +0.4**
baz=100
GHO Glory Hole Cre 147.99 308 **PKPbc** **20 42 52.3 +0.5**
E25K Arctic Village 148.05 320 P **PKPbc** **20 42 51.9 +0.2**
baz=100,SNR=14
WAT1 Susitna Watana 148.12 310 P **PKPbc** **20 42 51.9 -0.1**
baz=106
RC01 Rabbit Creek A 148.16 306 P **PKPbc** **20 42 52.2 0.0**
baz=108
POKR Poker Plat Res 148.20 314 P **PKPbc** **20 42 52.4 +0.2**
baz=103
BRSE Bradley Lake S 148.22 303 P **PKPbc** **20 42 52.1 -0.2**
baz=109
COLA College 148.32 313 P **PKPbc** **20 42 52.8 +0.4**
baz=103
TCOL CIGO, UAF Yank 148.32 313 P **PKPbc** **20 42 52.8 +0.4**
baz=103
WRH Wood River Hil 148.33 313 **PKPbc** **20 42 52.5 0.0**
RND Reindeer 148.40 311 **PKPbc** **20 42 52.8 0.0**
KDAK Kodiak Island 148.45 299 **PKPbc** **20 42 53.1 +0.1**
KDAK Kodiak Island 148.45 299 P **PKPbc** **20 42 53.1 +0.1**
baz=111
MDM Murphy Dome 148.50 314 **PKPbc** **20 42 52.6 -0.3**
D25K Kavik River 148.51 322 P **PKPbc** **20 42 53.1 +0.2**
baz=97,SNR=11
MCK McKinley 148.52 311 **PKPbc** **20 42 53.2 +0.2**
MCK McKinley 148.52 311 P **PKPbc** **20 42 53.3 +0.3**
baz=104,SNR=10
M22K Willow 148.53 307 P **PKPbc** **20 42 53.4 +0.3**
baz=106
H24K Noodor Dome 148.53 315 **PKPbc** **20 42 53.0 0.0**
H24K Noodor Dome 148.53 315 P **PKPbc** **20 42 53.0 0.0**
baz=101
G24K Hadweenzic Riv 148.53 317 P **PKPbc** **20 42 53.4 +0.4**
baz=100,SNR=8.5
OHAK Old Harbor 148.60 298 **PKPbc** **20 42 53.6 +0.2**
OHAK Old Harbor 148.60 298 P **PKPbc** **20 42 53.8 +0.4**
baz=112
NEA2 Nenana 148.77 313 **PKPbc** **20 42 53.5 -0.2**
NEA2 Nenana 148.77 313 P **PKPbc** **20 42 53.5 -0.2**
baz=102,SNR=15
CUT Chulitna 148.77 308 **PKPbc** **20 42 53.9 +0.3**
CUT Chulitna 148.77 308 P **PKPbc** **20 42 53.9 +0.3**
baz=105
F24K Squaw Lake 148.83 318 P **PKPbc** **20 42 54.4 +0.7**
baz=99,SNR=8.2
BWN Browne 148.85 312 **PKPbc** **20 42 54.1 +0.3**
I23K Minto, Yukon-K 149.00 314 P **PKiKP** **20 42 54.8 -0.6**
baz=101
TRF Thorofare Moun 149.04 310 P **PKPbc** **20 42 54.7 +0.1**
baz=103
E24K Your Creek 149.13 319 P **PKPbc** **20 42 55.1 +0.6**
baz=97,SNR=10
H23K Yukon River 149.21 315 P **PKPbc** **20 42 54.6 -0.1**
baz=100
D24K Happy Valley 149.36 322 P **PKPbc** **20 42 55.2 +0.2**
baz=95
C24K Franklin Bluff 149.37 323 P **PKPbc** **20 42 55.2 +0.3**
baz=94
BPAW Bear Paw Mtn. 149.48 311 P **PKPbc** **20 42 55.6 +0.2**
baz=102,SNR=11
G23K Bananza Creek 149.54 317 P **PKiKP** **20 42 56.1 -0.5**
baz=98,SNR=13
MLY Manley 149.56 313 P **PKPbc** **20 42 55.1 -0.5**
baz=100,SNR=6.4
TOLK Toolik Lake Re 149.59 320 P **PKPbc** **20 42 56.0 +0.4**
baz=95,SNR=18
NRIK Noril'sk 149.71 38 PKPbc **PKPbc** **20 42 56.0 +0.2**
comp=Z,4.0nm,0.7s,baz=259,slow=5.2,SNR=4.8
NRIK Noril'sk 149.71 38 **PKPbc** **20 42 55.4 -0.3**
PPLA Purkeypile 149.75 309 P **PKPbc** **20 42 56.3 +0.1**
baz=103
M20K Styx River 149.95 307 P **PKPbc** **20 42 56.4 -0.3**
baz=104
H22K Ishtalitna Cre 149.96 315 P **PKPbc** **20 42 56.5 0.0**
baz=98

CHUM Lake Minchumin 150.01 311 P **PKPbc** **20 42 56.7 0.0**
baz=101
D23K Nanushuk River 150.01 321 P **PKPbc** **20 42 56.8 +0.2**
baz=94
C23K Itkillik River 150.04 323 P **PKPbc** **20 42 56.7 +0.1**
baz=92
O19K Port Alsworth 150.07 303 P **PKPbc** **20 42 56.6 -0.3**
baz=106
G22K Bettles 150.15 317 P **PKPbc** **20 42 57.0 +0.1**
baz=97,SNR=11
N19K Bonanza Creek 150.31 304 P **PKPbc** **20 42 57.1 -0.5**
baz=105
R17K Ugashik Creek 150.32 298 P **PKPbc** **20 42 57.5 -0.1**
baz=109
E22K Anaktuvuk Pass 150.38 319 P **PKPbc** **20 42 57.8 +0.3**
baz=94
O18K Koktuh Hills 150.40 302 P **PKPbc** **20 42 57.5 -0.3**
baz=106
L20K Farewell, AK 150.42 308 P **PKPbc** **20 42 58.0 +0.3**
baz=102
F22K John River 150.46 318 P **PKiKP** **20 42 58.5 0.0**
baz=95
H21K Melozitna Rive 150.51 314 P **PKPbc** **20 42 58.2 +0.3**
baz=98
M19K Big River Lodg 150.53 306 P **PKPbc** **20 42 57.8 -0.2**
baz=103
BTO Baotou 150.58 103 *e*PKPbc **PKPdf** **20 42 53.5 0.0**
K20K Telida 150.68 309 P **PKPbc** **20 42 58.0 -0.3**
baz=101
Q16K King Salmon 150.78 299 P **PKPbc** **20 42 58.4 -0.2**
baz=107
P17K Kvichak River 150.82 301 P **PKPbc** **20 42 58.3 -0.4**
baz=106
HNS HongShan 150.84 113 ⇓PKPbc **PKPbc** **20 42 59.4 -0.1**
G21K Allakaket 150.89 316 P **PKiKP** **20 42 59.3 0.0**
baz=96
IMAR Indian Mountai 150.94 315 **PKiKP** **20 42 59.2 -0.2**
F21K Alatna River 150.94 317 P **PKPbc** **20 42 59.1 +0.3**
baz=94
CHNA Chernabura Isl 151.01 291 P **PKPbc** **20 42 59.4 +0.2**
baz=112
O17K Koliganek Bris 151.30 302 P **PKPbc** **20 42 59.7 -0.1**
baz=105
HHC Hu-ho-hao-te 151.60 105 *e*PKPbc **PKPdf** **20 42 55.8 +0.7**
SONM Songino Array 152.90 88 PKP **PKPdf** **20 42 56.2 -0.6**
comp=Z,0.5nm,0.8s,baz=253,slow=1.5,SNR=3.6
SONM PKPbc **PKPbc** **20 43 03.5 -0.6**
comp=Z,5.0nm,0.8s,baz=218,slow=3.4,SNR=28
SONM Songino Array 152.90 88 PKPdf **PKPdf** **20 42 55.9 -0.9**
ULN Ulaanbaatar 153.29 88 **PKPdf** **20 42 57.8 +0.4**

MDD **20** *20:25:28.6±0.6,36.18N×11.51W,h29km±18km,Mb4.0/24, M_mb3.4/24,Error ellipse: s-maj=15.3km s-min=4.2km az=51.0*
IGIL **20** *20:25:30.7,36.20N×11.32W,h21km,ML2.3*
INMG **20** *20:25:31.2±1.2,36.16N×11.36W,h28km±30km,ML2.4, Error ellipse: s-maj=21.9km s-min=4.0km az=56.0*
CNRM **20** *20:25:35.4,36.03N×10.69W,h99km,ml3.0*
ISC 20 20:25:26.8±2.9,36.22N±0.05×11.06W±0.08,h6km±16km, n65,σ2.264/120,24C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.01**	**62**	P	**Pb**	**20 26 04.9**	**+1.2**
PFVI				S	**Sg**	**20 26 30.2**	**-1.2**
PFVI	**Vila Bisbo**	**2.01**	**62**	⇑*i*Pn	**Pb**	**20 26 04.8**	**+1.1**
PFVI				*e*Sn	**Sb**	**20 26 29.6**	**+0.6**
PFVI				A	A	20 26 30.5	
	26nm,0.3s						
MORF	**Marmelete**	**2.22**	**60**	*e*P	**Pb**	**20 26 07.6**	**+0.3**
MORF				*e*S	**Sb**	**20 26 34.3**	**-0.7**
MORF				IAML		20 26 36.3	
	comp=N,17nm,0.1s						
MORF	**Marmelete**	**2.22**	**60**	*e*Pn	**Pb**	**20 26 07.6**	**+0.3**
MORF				*e*Sn	**Sb**	**20 26 35.5**	**+0.5**
MORF				A	A	20 26 40.6	
	comp=N,13nm,0.1s						
PTEO	**Sao Teotonio**	**2.29**	**54**	*e*Pn	**Pb**	**20 26 08.6**	**+0.1**
PTEO				*e*Sn	**Sb**	**20 26 36.9**	**-0.2**
PTEO				A	A	20 26 41.3	
	comp=N,16nm,0.5s						
PBDV	**Barranco-do-Ve**	**2.71**	**67**	*e*Pn	**Pb**	**20 26 14.9**	**-0.8**
PBDV				*e*Sn	**Sb**	**20 26 47.0**	**-2.2**
PBDV				A	A	20 26 52.4	
	comp=N,7.9nm,0.7s						
PNCL	**Nicolau / Gran**	**2.77**	**46**	*e*Pn	**Pn**	**20 26 14.8**	**+3.2**
PNCL				*e*Sn	**Sn**	**20 26 47.7**	**+2.4**
PNCL				A	A	20 26 49.6	
	comp=N,9.7nm,0.1s						
MESJ	**Messejana**	**2.79**	**54**	*e*P	**Pb**	**20 26 15.2**	**-1.8**
MESJ				*e*S	**Sn**	**20 26 47.8**	**+1.9**
MESJ				IAML		20 26 51.6	
	comp=N,9.5nm,0.2s						
MESJ	**Messejana**	**2.79**	**54**	*e*Pn	**Pb**	**20 26 15.2**	**-1.8**
MESJ				*e*Sn	**Sb**	**20 26 48.3**	**-3.1**
MESJ				A	A	20 26 52.6	
	comp=N,6.6nm,0.2s						
PCVE	**Castro Verde**	**2.80**	**59**	*e*Pn	**Pb**	**20 26 15.8**	**-1.4**
PCVE				*e*Sn	**Sb**	**20 26 49.4**	**-2.3**
PCVE				A	A	20 26 54.0	
	comp=N,5.5nm,0.4s						
PMST	**Lisbon--Monsan**	**2.92**	**30**	*e*Sn	**Sn**	**20 26 50.7**	**+1.5**
PVAQ	**Vaqueiros**	**2.93**	**65**	P	**Pb**	**20 26 18.3**	**-1.1**
PVAQ				S	**Sb**	**20 26 52.6**	**-2.8**
PVAQ	**Vaqueiros**	**2.93**	**65**	*e*Pn	**Pb**	**20 26 17.7**	**-1.7**
PVAQ				*e*Sn	**Sb**	**20 26 52.4**	**-3.0**
PVAQ				A	A	20 26 54.4	
	comp=N,9.4nm,0.1s						
PMAFR	**Mafra**	**3.08**	**27**	*e*Pn	**Pn**	**20 26 17.9**	**+2.0**
PMAFR				*e*Sn	**Sn**	**20 26 53.4**	**+0.5**
PMAFR				A	A	20 26 58.9	
	comp=N,19nm,0.2s						
PACT	**Alcochete**	**3.10**	**34**	*e*Pn	**Pn**	**20 26 19.5**	**+3.3**
PACT				*e*Sn	**Sn**	**20 26 56.3**	**+2.8**
PBEJ	**Beja**	**3.12**	**54**	*e*Sn	**Sn**	**20 26 56.7**	**+2.5**
PBEJ				A	A	20 27 00.4	
	comp=N,6.5nm,0.1s						
EGRO	**El Granado**	**3.15**	**64**	P	**Pn**	**20 26 20.5**	**+3.6**
EGRO				⇑*i*Vmb_V		20 26 21.9	
	comp=N,143nm,SNR=1.5						
EGRO				S	**Sn**	**20 26 57.1**	**+2.3**
EVO	**Evora**	**3.35**	**45**	*e*Pn	**Pn**	**20 26 23.3**	**+3.7**
EVO				*e*Sn	**Sn**	**20 27 01.6**	**+1.9**
EVO				A	A	20 27 05.7	
	comp=N,12nm,0.1s						
PMTG	**Montargil**	**3.63**	**37**	*e*Pn	**Pn**	**20 26 26.4**	**+3.0**
PMTG				*e*Sn	**Sn**	**20 27 07.4**	**+0.9**
PMTG				A	A	20 27 08.8	
	comp=N,5.5nm,0.4s						
PSBE	**So Bento**	**3.75**	**28**	*e*Pn	**Pn**	**20 26 27.6**	**+2.5**
PSBE				*e*Sn	**Sn**	**20 27 10.2**	**+0.7**
PSBE				A	A	20 27 10.8	
	comp=N,5.3nm,0.5s						
PBAR	**Barrancos**	**3.76**	**57**	*e*Pn	**Pn**	**20 26 28.9**	**+3.7**
PBAR				*e*Sn	**Sn**	**20 27 11.9**	**+2.2**
PBAR				A	A	20 27 14.6	
	comp=N,5.1nm,0.4s						
PESTR	**Estremoz**	**3.82**	**45**	P	**Pn**	**20 26 29.7**	**+3.6**
PESTR				S	**Sn**	**20 27 13.6**	**+2.3**
PESTR	**Estremoz**	**3.82**	**45**	*e*Pn	**Pn**	**20 26 29.5**	**+3.4**
PESTR				*e*Sn	**Sn**	**20 27 12.6**	**+1.3**
PESTR				A	A	20 27 14.9	
	comp=N,2.1nm,0.2s						
EMIN	**Mina Concepcio**	**3.84**	**65**	P	**Pn**	**20 26 29.7**	**+3.4**
EMIN				⇑*i*Vmb_V		20 26 30.3	
	comp=N,128nm,SNR=1.7						
EMIN				S	**Sn**	**20 27 13.4**	**+1.7**
EBAD	**Badajoz**	**4.09**	**51**	P	**Pn**	**20 26 32.4**	**+2.5**
EBAD				⇑*i*Vmb_V		20 26 34.4	
	comp=N,196nm,SNR=2.7						
EBAD				S	**Sn**	**20 27 19.1**	**+1.0**
ESPR	**Espera**	**4.24**	**80**	P	**Pn**	**20 26 36.0**	**+4.2**
ESPR				⇑*i*Vmb_V		20 26 37.1	
	comp=N,272nm,SNR=3.4						
ESPR				S	**Sn**	**20 27 23.6**	**+2.0**
PMRV	**Marv??o**	**4.32**	**41**	*e*Pn	**Pn**	**20 26 35.4**	**+2.4**
PMRV				*e*Sn	**Sn**	**20 27 23.6**	**-0.1**
PMRV				A	A	20 27 27.3	
	comp=N,5.5nm,0.7s						
PCAS	**Casmilo, Conde**	**4.33**	**27**	*e*Pn	**Pn**	**20 26 35.5**	**+2.4**
PCAS				*e*Sn	**Sn**	**20 27 23.6**	**-0.2**
PCAS				A	A	20 27 26.0	
	comp=N,3.6nm,0.2s						

EJIF	**Jimena Fronter**	**4.52**	**85**	P		**Pn**	**20 26 40.1**	**+4.4**
ZHG	**ZHG**	**4.56**	**126**	P		**Pn**	**20 26 36.4**	**0.0**
ZHG				S		**Sn**	**20 27 26.3**	**-3.5**
PCBR	**Castelo Branco**	**4.59**	**37**	*e*Pn		**Pn**	**20 26 39.4**	**+2.7**
PCBR				*e*Sn		**Sn**	**20 27 30.0**	**-0.3**
PCBR				A		A	20 27 33.0	
	comp=N,2.9nm,0.3s							
SMIR	**Smir Dam**	**4.64**	**95**	P		**Pn**	**20 26 38.0**	**+0.7**
SMIR				S		**Sn**	**20 27 27.9**	**-3.5**
ECAB	**El Cabril**	**4.87**	**66**	P		**Pn**	**20 26 44.0**	**+3.4**
ECAB				⇑*i*Vmb_V			20 26 45.3	
	comp=N,89nm,SNR=1.4							
ECAB				S		**Sn**	**20 27 37.9**	**+0.6**
MTE	**Manteigas**	**5.01**	**32**	*e*Sn		**Sn**	**20 27 40.2**	**-0.4**
MTE				A		A	20 27 43.0	
	comp=N,4.8nm,0.3s							
EMIJ	**Mijas**	**5.08**	**84**	P		**Pn**	**20 26 46.9**	**+3.4**
EMIJ				⇑*i*Vmb_V			20 26 50.1	
	comp=N,66nm,SNR=0.6							
EMIJ				S		**Sn**	**20 27 43.1**	**+0.6**
PVIS	**Viseu**	**5.13**	**28**	*e*Sn		**Sn**	**20 27 42.7**	**-1.0**
PVIS				A		A	20 27 50.4	
	comp=N,4.6nm,0.2s							
EADA	**Adamuz**	**5.53**	**67**	P		**Pn**	**20 26 52.8**	**+3.2**
EADA				⇑*i*Vmb_V			20 26 53.9	
	comp=N,91nm,SNR=1.0							
EADA				S		**Sn**	**20 27 52.8**	**-0.6**
EGOR	**Sierra Gorda,**	**5.66**	**79**	P		**Pn**	**20 26 55.4**	**+4.0**
EGOR				S		**Sn**	**20 27 58.7**	**+1.9**
OUK	**Oukaimeden**	**5.66**	**151**	P		**Pn**	**20 26 53.2**	**+1.5**
OUK				S		**Sn**	**20 27 53.0**	**-4.2**
LCRM	**LCR**	**5.68**	**115**	P		**Pn**	**20 26 54.2**	**+2.4**
LCRM				S		**Sn**	**20 27 54.5**	**-3.0**
PVRL	**Vila Real**	**5.69**	**26**	*e*Sn		**Sn**	**20 27 56.0**	**-1.3**
POLO	**Lamas de Olo**	**5.74**	**25**	*e*Pn		**Pn**	**20 26 54.4**	**+1.8**
POLO				*e*Sn		**Sn**	**20 27 56.8**	**-2.1**
POLO				A		A	20 27 58.9	
	comp=N,0.8nm,0.1s							
MVO	**Moncorvo**	**5.86**	**31**	*e*Pn		**Pn**	**20 26 56.5**	**+2.3**
MVO				*e*Sn		**Sn**	**20 28 00.2**	**-1.4**
MVO				A		A	20 28 02.3	
	comp=N,3.5nm,0.8s							
CZD	**Col de Zad**	**5.89**	**121**	P		**Pn**	**20 26 57.7**	**+2.9**
CZD				S		**Sn**	**20 27 57.6**	**-5.2**
ELGU	**Los Guajares,**	**6.02**	**82**	P		**Pn**	**20 27 00.8**	**+4.5**
ELGU				⇑*i*Vmb_V			20 27 03.4	
	comp=N,85nm,SNR=0.6							
ELGU				S		**Sn**	**20 28 09.6**	**+4.0**
ELOB	**Lobios**	**6.10**	**22**	P		**Pn**	**20 26 58.6**	**+1.1**
ELOB				⇑*i*Vmb_V			20 27 02.0	
	comp=N,34nm,SNR=0.2							
ELOB				S		**Sn**	**20 28 04.2**	**-3.5**
PGAV	**Gavieira, Arco**	**6.13**	**20**	*e*Pn		**Pn**	**20 26 59.6**	**+1.6**
PGAV				*e*Sn		**Sn**	**20 28 06.0**	**-2.5**
PGAV				A		A	20 28 10.9	
	comp=N,3.0nm,0.9s							
MD31	**MD31**	**6.18**	**121**	P		**Pn**	**20 27 01.2**	**+2.6**
MD31				S		**Sn**	**20 28 05.7**	**-3.9**
EQUE	**Quentar**	**6.20**	**79**	P		**Pn**	**20 27 02.6**	**+3.7**
EQUE				⇑*i*Vmb_V			20 27 03.7	
	comp=N,64nm,SNR=1.1							
EZAM	**Zamans**	**6.20**	**16**	P		**Pn**	**20 26 59.0**	**+0.2**
EZAM				⇑*i*Vmb_V			20 27 00.0	
	comp=N,148nm,SNR=0.6							
EZAM				S		**Sn**	**20 28 05.7**	**-4.3**
PAB	**San Pablo**	**6.26**	**56**	P		**Pn**	**20 27 01.6**	**+1.9**
PAB				⇑*i*Vmb_V			20 27 04.0	
	comp=N,63nm,SNR=0.9							
PAB				S		**Sn**	**20 28 10.4**	**-1.1**
MDT	**Midelt**	**6.31**	**121**	P		**Pn**	**20 27 03.1**	**+2.7**
MDT				S		**Sn**	**20 28 08.0**	**-5.0**
ESDC	**Sonseca Array**	**6.58**	**56**	P		**Pn**	**20 27 06.7**	**+2.6**
ESDC				⇑*i*Vmb_V			20 27 09.0	
	comp=N,44nm,SNR=0.7							
ESDC				S		**Sn**	**20 28 19.6**	**+0.1**
EQES	**Quesada**	**6.58**	**74**	P		**Pn**	**20 27 07.4**	**+3.2**
EQES				⇑*i*Vmb_V			20 27 08.4	
	comp=N,21nm,SNR=0.3							
EQES				S		**Sn**	**20 28 19.2**	**-0.4**
ECAL	**Calabor**	**6.63**	**29**	P		**Pn**	**20 27 05.4**	**+0.7**
ECAL				⇑*i*Vmb_V			20 27 07.5	
	comp=N,81nm,SNR=0.5							
ECAL				S		**Sn**	**20 28 18.4**	**-2.2**
EMAZ	**Mazaricos**	**6.91**	**13**	⇑*i*Vmb_V			20 27 11.3	
	comp=N,163nm,SNR=0.5							
EMAZ				S		**Sn**	**20 28 21.0**	**-6.4**
EAGO	**Agolada(Pontev**	**6.96**	**18**	P		**Pn**	**20 27 10.2**	**+0.9**
EAGO				⇑*i*Vmb_V			20 27 12.5	
	comp=N,119nm,SNR=0.5							
EAGO				S		**Sn**	**20 28 24.1**	**-4.7**
GUD	**Guadarrama**	**6.99**	**49**	⇑*i*Vmb_V			20 27 15.6	
	comp=N,61nm,SNR=1.2							
GUD				S		**Sn**	**20 28 28.4**	**-1.2**
JBK	**JBK**	**7.19**	**103**	P		**Pn**	**20 27 11.8**	**-0.8**
JBK				S		**Sn**	**20 28 27.5**	**-7.2**
EZAR	**Zarzadilla de**	**7.67**	**75**	P		**Pn**	**20 27 22.0**	**+3.0**
EZAR				S		**Sn**	**20 28 47.5**	**+1.2**
EPON	**Pontenova**	**7.71**	**22**	P		**Pn**	**20 27 20.3**	**+0.7**
EPON				⇑*i*Vmb_V			20 27 23.5	
	comp=N,73nm,SNR=0.2							
EPON				S		**Sn**	**20 28 44.3**	**-2.8**
ETOB	**Tobarra**	**7.94**	**69**	P		**Pn**	**20 27 26.0**	**+3.2**
ETOB				⇑*i*Vmb_V			20 27 28.7	
	comp=N,54nm,SNR=0.7							
ETOB				S		**Sn**	**20 28 51.4**	**-1.6**
ETOR	**Torete**	**8.42**	**54**	P		**Pn**	**20 27 32.1**	**+2.8**
ETOR				⇑*i*Vmb_V			20 27 35.6	
	comp=N,55nm,SNR=0.5							
ETOR				S		**Sn**	**20 29 02.6**	**-2.1**
AFON	**Font Roja**	**8.71**	**71**	P		**Pn**	**20 27 36.1**	**+2.7**
AFON				⇑*i*Vmb_V			20 27 38.1	
	comp=N,71nm,SNR=0.5							
EMOS	**Mosqueruela**	**9.29**	**60**	P		**Pn**	**20 27 43.8**	**+2.4**
EMOS				⇑*i*Vmb_V			20 27 46.4	
	comp=N,24nm,SNR=0.3							
EMOS				S		**Sn**	**20 29 27.3**	**+1.0**

*IDC **20**20:31:31.4±1.2,15°.67N×43°.30E,h0km,mb3.7/9, mbtmp3.8/11,ML4.0/2,MS3.1/5,Error ellipse: s-maj=28.8km s-min=21.8km az=108.0*

ISC 20 20:31:32.9±0.8,15°.69N±0°.08×43°.3E±0°.2,h11km,n18, σ1s25/12,mb3.8/9,MS3.7/4,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**4.16**	**187**	Pn	**Pn**	**20 32 35.8**	**-0.6**
	9.8nm,0.3s,baz=22,slow=5.4,SNR=18						
ATD				Sn	**Sn**	**20 33 25.8**	**+0.6**
	7.5nm,0.3s,baz=138,slow=24,SNR=1.1						
ATD				LR	LR	20 33 40.4	
	comp=Z,32nm,19.8s,baz=13,slow=31 20nm,0.3s						
EIL	**Elat**	**15.91**	**332**	Lg	Lg	20 39 47.2	
	0.1nm,0.3s,baz=79,slow=20,SNR=1.6						
WSAR	**Wadi Sarin**	**16.26**	**60**	Pn	**Pn**	**20 35 19.9**	**-1.4**
	0.6nm,0.3s,baz=277,slow=10,SNR=13						
WSAR				Sn	Sn	20 38 10.2	-12
	0.3nm,0.3s,baz=19,slow=17,SNR=1.2 1.5nm,0.3s						
ASF	**Jabal al Asfar**	**17.42**	**341**	Lg	Lg	20 40 35.2	
	0.2nm,0.3s,baz=282,slow=4.2,SNR=3.9						
MMAI	**Mount Meron Ar**	**18.69**	**339**	LR	LR	20 42 56.3	
	comp=Z,55nm,18.9s,baz=82,slow=37						
BRTR	**Keskin Array B**	**25.40**	**342**	P	**P**	**20 37 02.5**	**+1.9**
	1.1nm,0.8s,baz=159,slow=12,SNR=7.4 1.1nm,0.8s						
MLR	**Muntele Rosu**	**33.11**	**337**	P	**P**	**20 38 09.8**	**+0.7**
	2.2nm,0.9s,baz=123,slow=12,SNR=4.3 2.2nm,0.9s						
AKASG	**Malin Array Be**	**36.73**	**345**	P	**P**	**20 38 39.7**	**-0.4**
	0.3nm,0.5s,baz=156,slow=7.1,SNR=2.7 0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**40.36**	**272**	P	**P**	**20 39 11.3**	**+0.2**
	1.2nm,0.6s,baz=86,slow=7.3,SNR=9.7 1.2nm,0.6s						
GERES	**GERESS Array B**	**40.99**	**330**	P	**P**	**20 39 15.3**	**-0.7**
	0.9nm,0.8s,baz=113,slow=7.6,SNR=9.4 0.9nm,0.8s						
BVAR	**Borovoye Array**	**42.92**	**24**	LR	LR	20 58 46.1	
	comp=Z,20nm,18.2s,baz=91,slow=38						
FINES	**FINESS Array B**	**47.34**	**349**	P	**P**	**20 40 06.1**	**-0.4**
	1.5nm,1.1s,baz=156,slow=11,SNR=2.0 1.5nm,1.1s						
ZALV	**Zalesovo Beam**	**49.97**	**31**	P	**P**	**20 40 28.3**	**+1.5**
	0.8nm,0.5s,baz=245,slow=7.6,SNR=2.6 0.8nm,0.5s						
ARCES	**ARCESS Array B**	**54.97**	**352**	P	**P**	**20 41 02.0**	**-1.7**
	0.7nm,0.8s,baz=161,slow=5.7,SNR=2.4 0.7nm,0.8s						
SONM	**Songino Array**	**60.49**	**44**	P	**P**	**20 41 44.3**	**+1.1**
	0.5nm,0.7s,baz=247,slow=7.4,SNR=3.9 0.5nm,0.7s						
KLR	**Kul'dur**	**77.27**	**42**	LR	LR	21 21 51.4	
	comp=Z,38nm,18.5s,baz=321,slow=39						
SCHQ	**Schefferville**	**88.45**	**327**	LR	LR	21 26 03.5	
	comp=Z,27nm,18.2s,baz=128,slow=37						
WRA	**Warramunga Arr**	**96.15**	**109**	LR	LR	21 22 31.5	
	comp=Z,96nm,18.1s,baz=72,slow=32						

*IDC **20**20:34:54.8±1.1,40°.79N×72°.78E,h0km,mb3.7/11, mbtmp3.7/17,ML3.2/6,MS2.9/3,Error ellipse: s-maj=19.6km s-min=12.0km az=162.0*

*MOS **20**20:34:57.1±1.6,40°.98N×72°.75E,h10km,mb4.1/4,Error ellipse: s-maj=6.8km s-min=3.9km az=71.4*

MOS Felt (IV) at Suzak, Kyumyush-Azis, (III) at Bazar-Korgon, Boston, Dzhar-Kyshtak, Aral, Massy, Kochkor-Ata, (II-III) at Taran-Bazar, Sary-Bulak, Kara-Cholok.

*ISU **20**20:34:58,40°.93N×72°.94E,h22km*

*NEIC **20**20:34:58.7±3.0,40°.92N±0°.04×72°.79E±0°.05,h10km±1km, mb4.0/8,Error ellipse: s-maj=9.2km s-min=4.2km az=137.0*

*KRNET **20**20:34:59.0±0.1,40°.95N×72°.86E,h23km,mb4.4*

*KNET **20**20:34:59.2±0.7,40°.94N×73°.09E,h10km±5km,ml4.0,Error ellipse: s-maj=10.9km s-min=3.0km az=84.0*

*SOME **20**20:34:59.0,41°.12N×72°.88E,h15km,MS3.4*

*NNC **20**20:35:01.2±0.9,41°.22N×72°.86E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=9.8km s-min=3.4km az=177.0*

ISC 20 20:34:57.9±0.5,41°.01N±0°.02×72°.77E±0°.02,h11km±3km, n200,σ2s17/279,mb3.6/15,47C-26D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANR	**Andizhan**	**0.40**	**231**	P	**Pn**	**20 35 18.8**	**-0.8**
ANR				S	**Sb**	**20 35 16.3**	**+3.2**
OHH	**Osh**	**0.48**	**179**	*i* PG	**Pg**	**20 35 07.7**	**+0.4**
OHH				*i* S	**Sg**	**20 35 13.8**	**0.0**
OHH	**Osh**	**0.48**	**179**	⇑*i*P	**Pg**	**20 35 07.7**	**+0.4**
	baz=87						
OHH				⇑*i*S	**Sg**	**20 35 13.8**	**0.0**
	baz=87						
OHH	**Osh**	**0.48**	**179**	P	**Pg**	**20 35 07.3**	**0.0**
OHH				S	**Sg**	**20 35 13.7**	**0.0**
TSTA	**Tashata**	**0.48**	**208**	P	**Pb**	**20 35 08.6**	**+0.2**
TSTA				S	**Sb**	**20 35 15.7**	**+0.2**
NAM	**Namangan**	**0.84**	**269**	P	**Pn**	**20 35 17.6**	**+1.9**
NAM				S	**Sn**	**20 35 31.5**	**+3.5**
FRG	**Fergana**	**0.98**	**230**	P	**Pn**	**20 35 18.6**	**+1.0**
FRG				S	**Sn**	**20 35 33.0**	**+1.6**
AML	**Almayashu**	**1.32**	**31**	⇑P	**Pg**	**20 35 23.9**	**+0.6**
	480nm,0.2s,SNR=1394						
AML				⇓S	**Sg**	**20 35 42.8**	**+2.3**
	2μm,0.3s						
AML	**Almayashu**	**1.32**	**31**	*i* PG	**Pg**	**20 35 23.8**	**+0.5**
AML				*i* S	**Sg**	**20 35 41.5**	**+1.0**
TRKS	**Terek-Say**	**1.34**	**294**	*i* PG	**Pg**	**20 35 24.3**	**+0.7**
TRKS				*i* S	**Sg**	**20 35 42.5**	**+1.5**
TRKS	**Terek-Say**	**1.34**	**294**	⇑*i*P	**Pg**	**20 35 24.3**	**+0.7**
	baz=93						
TRKS				⇑*i*S	**Sg**	**20 35 42.5**	**+1.5**
	baz=93						
ARLS	**Aral**	**1.45**	**53**	*i* PG	**Pb**	**20 35 25.1**	**+0.2**
ARLS				*i* S	**Sn**	**20 35 44.0**	**+0.9**
ARLS	**Aral**	**1.45**	**53**	⇑*i*P	**Pb**	**20 35 25.1**	**+0.2**
	baz=50						
ARLS				⇑*i*S	**Sn**	**20 35 44.0**	**+0.9**
	baz=50						
MINT	**Mingtut**	**1.47**	**249**	P	**Pg**	**20 35 27.8**	**+1.7**
MINT				S	**Sg**	**20 35 49.4**	**+4.3**
DRK	**Karamyk**	**1.70**	**206**	⇓*i*P	**Pb**	**20 35 29.4**	**+0.2**
	baz=9.0						
DRK				⇓*i*S	**Sg**	**20 35 51.4**	**-1.1**
	baz=9.0						
MRKS	**Merke**	**1.77**	**11**	*e*P	**Pg**	**20 35 32.6**	**+0.7**
	0.6nm,0.1s						
MRKS				*e*S	**Sg**	**20 35 56.6**	**+1.8**
	3μm,0.4s						
UCH	**Uchtor**	**1.79**	**46**	*i* PN	**Pb**	**20 35 31.1**	**+0.2**
UCH				*i* S	**Sb**	**20 35 54.2**	**+0.7**
UCH	**Uchtor**	**1.79**	**46**	⇑*i*P	**Pb**	**20 35 31.1**	**+0.2**
	baz=44						
UCH				⇑*i*S	**Sb**	**20 35 54.2**	**+0.7**
	baz=44						
EKS2	**Erkin-Say**	**1.82**	**24**	⇑P	**Pg**	**20 35 32.6**	**-0.2**
	300nm,0.4s,SNR=398						
EKS2				⇓S	**Sg**	**20 35 57.7**	**+1.4**
	569nm,0.3s						
EKS2	**Erkin-Say**	**1.82**	**24**	*i* PN	**Pb**	**20 35 31.7**	**+0.5**
EKS2				*i* S	**Sb**	**20 35 55.5**	**+1.5**
EKS2	**Erkin-Say**	**1.82**	**24**	⇑*i*P	**Pb**	**20 35 31.7**	**+0.5**
	baz=22						
EKS2				⇑*i*S	**Sb**	**20 35 55.5**	**+1.5**
	baz=22						
AAK	**Ala-Archa**	**2.08**	**38**	P	**Pb**	**20 35 36.2**	**+0.5**
	599nm,0.2s,SNR=292						
AAK				⇓S	**Sg**	**20 36 04.1**	**-0.5**
	994nm,0.3s						
AAK	**Ala-Archa**	**2.08**	**38**	Pn	**Pb**	**20 35 36.2**	**+0.5**
AAK					**Sg**	**20 36 04.3**	**-0.4**
AAK	**Ala-Archa**	**2.08**	**38**	*c i* PN	**Pb**	**20 35 36.2**	**+0.5**
AAK	**Ala-Archa**	**2.08**	**38**	⇓*i*P	**Pb**	**20 35 35.0**	**-0.7**
	baz=35						
AAK				⇓*i*S	**Sb**	**20 36 01.2**	**-0.3**
	baz=35						
CHMG	**Chimgan**	**2.15**	**286**	S	**Sg**	**20 36 09.0**	**+1.9**
DZA	**Taraz**	**2.17**	**331**	*e*PN	**Pb**	**20 35 37.0**	**-0.1**
DZA	**Taraz**	**2.17**	**331**	*e*P	**Pg**	**20 35 38.8**	**-0.7**
	234nm,0.3s						
DZA				*e*S	**Sg**	**20 36 07.5**	**-0.1**
	3μm,0.6s						
DZA	**Taraz**	**2.17**	**331**	*e*Pg	**Pb**	**20 35 37.1**	**-0.1**
	baz=333						
DZA				*e*Lg	Lg	20 36 09.8	
	baz=333						
DZA	**Taraz**	**2.17**	**331**	Pg	**Pg**	**20 35 38.8**	**-0.7**
	234nm,0.3s						
DZA				Lg	Lg	20 36 07.5	
	3μm,0.6s						
CHRV	**Charvak**	**2.22**	**288**	S	**Sg**	**20 36 10.8**	**+1.6**
KBK	**Karagaybulak**	**2.32**	**44**	⇑P	**Pb**	**20 35 39.9**	**+0.1**
	194nm,0.3s,SNR=156						
KBK				⇑S	**Sb**	**20 36 11.0**	**+2.6**
	2μm,0.3s						
KBK	**Karagaybulak**	**2.32**	**44**	*i* PN	**Pn**	**20 35 38.2**	**+2.1**
KBK				*i* S	**Sn**	**20 36 06.7**	**+2.1**
KBK	**Karagaybulak**	**2.32**	**44**	⇑*i*P	**Pn**	**20 35 38.2**	**+2.1**
	baz=42						
KBK				⇑*i*S	**Sn**	**20 36 06.7**	**+2.1**
	baz=42						
IUG	**Iuzhnay**	**2.35**	**300**	*e*PN	**Pb**	**20 35 39.6**	**-0.7**
IUG				*e*		20 35 44.0	
IUG	**Iuzhnay**	**2.35**	**300**	*e*P	**Pg**	**20 35 43.2**	**+0.2**
	5μm,0.4s						
IUG				*e*S	**Sg**	**20 36 14.9**	**+1.5**
	2μm,0.4s						
IUG	**Iuzhnay**	**2.35**	**300**	*e*Pb	**Pb**	**20 35 39.6**	**-0.7**
	baz=305						
IUG				*e*Pg	**Pg**	**20 35 44.0**	**+1.0**
	baz=305						
IUG				*e*Lg	Lg	20 36 15.2	
	baz=305						
IUG	**Iuzhnay**	**2.35**	**300**	Pg	**Pg**	**20 35 43.2**	**+0.2**
	5μm,0.4s						
IUG				Lg	Lg	20 36 14.9	
	2μm,0.4s						
YBZ	**Yangibazar**	**2.42**	**278**	P	**Pb**	**20 35 39.7**	**-1.8**
NRN	**Naryn**	**2.47**	**79**	Pn	**Pn**	**20 35 38.9**	**+0.5**
NRN	**Naryn**	**2.47**	**79**	PN	**Pn**	**20 35 38.9**	**+0.5**
CHMS	**Chumysh**	**2.48**	**36**	⇑P	**Pb**	**20 35 41.6**	**-0.8**
	208nm,0.3s,SNR=115						
CHMS				⇓S	**Sb**	**20 36 13.8**	**+0.9**
	370nm,0.3s						
CHMS	**Chumysh**	**2.48**	**36**	*i* PN	**Pb**	**20 35 41.5**	**-0.9**
CHMS				pmax	pmax		
	comp=Z,62nm,0.3s						
CHMS	**Chumysh**	**2.48**	**36**	⇓Pn	**Pb**	**20 35 41.6**	**-0.8**
	comp=Z,62nm,0.3s						
CHMS				⇑Lg	Lg	20 36 14.1	
	comp=Z,683nm,0.9s						
CHMS	**Chumysh**	**2.48**	**36**	⇓*i*P	**Pn**	**20 35 40.6**	**+2.4**
	baz=34						
CHMS				⇓*i*S	**Sn**	**20 36 10.8**	**+2.4**
	baz=34						
USP	**Ospenovka**	**2.60**	**29**	P	**Pb**	**20 35 43.0**	**-1.5**
	comp=Z,91nm,0.2s,SNR=139						
USP	**Ospenovka**	**2.60**	**29**	*i* PN	**Pn**	**20 35 42.4**	**+2.5**
USP				*i* S	**Sn**	**20 36 13.9**	**+2.5**
USP	**Ospenovka**	**2.60**	**29**	⇑*i*P	**Pn**	**20 35 42.4**	**+2.5**
	baz=27						
USP				⇑*i*S	**Sn**	**20 36 13.9**	**+2.5**
	baz=27						
KUMR	**Kumaryk**	**2.63**	**275**	S	**Sg**	**20 36 25.8**	**+3.4**
TAS	**Tashkent**	**2.65**	**278**	Pn	**Pn**	**20 35 42.1**	**+1.6**
TAS	**Tashkent**	**2.65**	**278**	PN	**Pn**	**20 35 42.1**	**+1.6**
TAS	**Tashkent**	**2.65**	**278**	⇑*i*P	**Pb**	**20 35 43.6**	**-1.6**
	baz=79						
TAS				⇑*i*S	**Sb**	**20 36 16.2**	**-1.5**
	baz=79						
KK31	**Karatay Array**	**2.69**	**322**	Pn	**Pb**	**20 35 43.9**	**-2.1**
KK31	**Karatay Array**	**2.69**	**322**	PN	**Pb**	**20 35 43.9**	**-2.1**
KK31	**Karatay Array**	**2.69**	**322**	⇓Pn	**Pb**	**20 35 43.7**	**-2.2**
	comp=Z,4.6nm,0.3s,baz=122,slow=12,SNR=1042						
KK31				⇑Pg	**Pg**	**20 35 49.1**	**-0.3**
	comp=Z,21nm,0.3s,baz=143,slow=17,SNR=18						
KK31				⇑Lg	Lg	20 36 24.3	
	comp=Z,185nm,0.3s,baz=141,slow=37,SNR=15						
KKAR	**Karatay Array**	**2.69**	**322**	Pn	**Pb**	**20 35 43.9**	**-2.1**
KKAR	**Karatay Array**	**2.69**	**322**		**Pb**	**20 35 43.8**	**-2.2**
KKAR	**Karatay Array**	**2.69**	**322**	PN	**Pb**	**20 35 43.8**	**-2.2**
KKAR	**Karatay Array**	**2.69**	**322**	⇑P	**Pb**	**20 35 44.1**	**-1.9**
	baz=22						
KKAR				⇑*i*S	**Sb**	**20 36 17.7**	**-1.3**
	baz=22						
GAR	**Garm**	**2.75**	**224**	Pn	**Pb**	**20 35 44.9**	**-2.2**
GAR	**Garm**	**2.75**	**224**	*i* PN	**Pn**	**20 35 44.0**	**+2.0**
GAR				*i* S	**Sn**	**20 36 17.3**	**+2.0**
GAR	**Garm**	**2.75**	**224**	⇑*i*P	**Pn**	**20 35 44.0**	**+2.0**
	baz=26						
GAR				⇑*i*S	**Sn**	**20 36 17.3**	**+2.0**
	baz=26						
SGDS	**Sogindy**	**2.81**	**29**	*c i* PN	**Pb**	**20 35 45.9**	**-2.1**
SGDS				*i*		20 35 50.4	
SGDS				*e*		20 36 21.2	
SGDS	**Sogindy**	**2.81**	**29**	*e*P	**Pb**	**20 35 45.9**	**-2.1**
	comp=Z,83nm,0.5s						
SGDS				*e*S	**Sn**	**20 36 19.9**	**+3.3**
	comp=Z,498nm,0.6s						
SGDS	**Sogindy**	**2.81**	**29**	⇑*i*Pn	**Pb**	**20 35 45.9**	**-2.1**
	baz=26						
SGDS				*i* Pg	**Pg**	**20 35 50.5**	**-1.2**
	baz=26						
SGDS				*e*Sn	**Sb**	**20 36 21.3**	**-1.2**
	baz=26						
SGDS	**Sogindy**	**2.81**	**29**	Pg	**Pb**	**20 35 45.9**	**-2.1**
	comp=Z,83nm,0.5s						
SGDS				Lg	Lg	20 36 20.5	
	comp=Z,498nm,0.6s						
TKM2	**Tokmak 2**	**2.85**	**47**	⇑P	**Pn**	**20 35 46.6**	**+3.2**
	comp=Z,176nm,0.3s,SNR=168						
TKM2	**Tokmak 2**	**2.85**	**47**	*i* PN	**Pn**	**20 35 46.4**	**+3.1**
TKM2				pmax	pmax		
	comp=Z,58nm,0.3s						
TKM2	**Tokmak 2**	**2.85**	**47**	⇑Pn	**Pn**	**20 35 46.5**	**+3.1**
	comp=Z,58nm,0.3s						
TKM2				⇑Lg	Lg	20 36 25.7	
	comp=Z,563nm,0.6s						
TKM2	**Tokmak 2**	**2.85**	**47**	⇓*i*P	**Pn**	**20 35 45.5**	**+2.1**
	baz=45						
TKM2				⇓*i*S	**Sn**	**20 36 19.4**	**+1.7**
	baz=45						
KSH	**Kashi**	**2.87**	**120**	Pn	**Pn**	**20 35 44.3**	**+0.7**
KSH				Sn	**Sn**	**20 36 13.8**	**-4.3**
KSH				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH				smax	smax		
	comp=N,400nm,0.6s						
KSH				smax	smax		
	comp=E,220nm,0.6s						
ULHL	**Ulahol**	**2.88**	**63**	⇓P	**Pn**	**20 35 45.6**	**+1.7**
	comp=E,18nm,0.2s,SNR=12						
ULHL	**Ulahol**	**2.88**	**63**	*i* PN	**Pn**	**20 35 45.6**	**+1.7**
ULHL				*i* S	**Sn**	**20 36 19.6**	**+1.0**
ULHL	**Ulahol**	**2.88**	**63**	⇓*i*P	**Pn**	**20 35 45.6**	**+1.7**
	baz=62						
ULHL				⇓*i*S	**Sn**	**20 36 19.6**	**+1.0**
	baz=62						
KST	**Kastek**	**3.13**	**48**	*e*P	**Pb**	**20 35 53.9**	**+0.3**
	comp=E,42nm,0.3s						
KST				*e*S	**Sb**	**20 36 33.7**	**+1.9**
	comp=E,313nm,0.7s						
KST	**Kastek**	**3.13**	**48**	Pg	**Pb**	**20 35 53.9**	**+0.3**
	comp=E,42nm,0.3s						
KST				Lg	Lg	20 36 34.3	
	comp=E,313nm,0.7s						
DGS	**Degeres**	**3.16**	**44**	*e*P	**Pb**	**20 35 56.2**	**+2.2**
	comp=E,41nm,0.4s						
DGS				*e*S	**Sg**	**20 36 37.2**	**-2.1**
	comp=E,382nm,0.6s						
KRBS	**Karabastau**	**3.44**	**38**	*e*P	**Pb**	**20 36 00.6**	**+1.8**
	comp=E,34nm,0.4s						
KRBS				*e*S	**Sg**	**20 36 45.5**	**-3.0**
	comp=E,209nm,0.6s						
KRBS	**Karabastau**	**3.44**	**38**	Pg

comp=E,157nm,0.6s
KUU Kurty 3.91 41 ⇑*i*Pn Pn 20 36 00.2 +2.3
baz=38
KUU *e*Pg **Pb 20 36 08.6 +1.8**
baz=38
KUU *e*Sn **Sn 20 36 45.6 +1.9**
baz=38
KUU *i* Sb **Sg 20 36 59.8 -3.6**
baz=38
KUU Kurty 3.91 41 Pg **Pb 20 36 09.0 +2.2**
comp=E,22nm,0.3s
KUU Lg Lg 20 36 59.6
comp=E,157nm,0.6s
KTBS Karatobe 3.96 46 *e*P **Pb 20 36 10.5 +2.8**
comp=E,24nm,0.4s
KTBS *e*S **Sg 20 37 02.3 -2.8**
comp=E,330nm,0.3s
KTBS Karatobe 3.96 46 Pg **Pb 20 36 10.5 +2.8**
comp=E,24nm,0.4s
KTBS Lg Lg 20 37 02.3
comp=E,330nm,0.3s
BTLS Baital 4.14 13 *i* PN **Pn 20 36 03.7 +2.8**
BTLS *e* 20 36 13.1
BTLS Baital 4.14 13 *e*P **Pb 20 36 13.7 +3.0**
comp=E,35nm,0.5s
BTLS *e*S **Sg 20 37 07.5 -3.3**
comp=E,40nm,0.7s
BTLS Baital 4.14 13 *i* Pn **Pn 20 36 03.8 +2.8**
baz=12
BTLS *e*Pg **Pb 20 36 13.2 +2.5**
baz=12
BTLS Baital 4.14 13 Pg **Pb 20 36 13.7 +3.0**
comp=E,35nm,0.5s
BTLS Lg Lg 20 37 07.5
comp=E,40nm,0.7s
SATY Saty 4.67 62 *e*P **Pb 20 36 22.8 +2.9**
comp=E,9.4nm,0.3s
SATY *e*S **Sb 20 37 22.8 +6.7**
comp=E,128nm,0.6s
SATY Saty 4.67 62 *e*Pg **Pb 20 36 22.4 +2.6**
baz=59
SATY *e*Pb **Pb 20 36 22.4 +2.6**
baz=59
SATY Saty 4.67 62 Pg **Pb 20 36 22.8 +2.9**
comp=E,9.4nm,0.3s
SATY Lg Lg 20 37 22.8
comp=E,128nm,0.6s
KURS Kuram 4.71 56 *e*P **Pb 20 36 23.7 +3.2**
comp=E,18nm,0.6s
KURS *e*S **Sg 20 37 24.9 -4.3**
comp=E,86nm,1.1s
KURS Kuram 4.71 56 Pg **Pb 20 36 23.7 +3.2**
comp=E,18nm,0.6s
KURS Lg Lg 20 37 24.9
comp=E,86nm,1.1s
ZHN Zhinishke 4.74 61 *e*P **Pb 20 36 24.6 +3.6**
comp=E,12nm,0.2s
ZHN *e*S **Sg 20 37 25.7 -4.2**
comp=E,103nm,0.3s
ZHN Zhinishke 4.74 61 *e*Pg **Pb 20 36 24.4 +3.5**
baz=58
ARXS Arharly 4.92 48 *e*PN **Pn 20 36 13.4 +1.7**
ARXS Arharly 4.92 48 *e*P **Pb 20 36 28.2 +4.2**
comp=E,21nm,0.5s
ARXS *e*S **Sg 20 37 32.2 -3.6**
comp=E,120nm,0.4s
ARXS Arharly 4.92 48 Pg **Pb 20 36 28.2 +4.2**
comp=E,21nm,0.5s
ARXS Lg Lg 20 37 32.2
comp=E,120nm,0.4s
KPKS Kokpek 5.03 59 *e*PN **Pn 20 36 15.6 +2.3**
KPKS *e* 20 36 28.3
KPKS Kokpek 5.03 59 *e*P **Pb 20 36 29.5 +3.5**
comp=E,16nm,0.3s
KPKS *e*S **Sg 20 37 34.6 -4.7**
comp=E,150nm,0.7s
KPKS Kokpek 5.03 59 *e*Pn **Pn 20 36 15.7 +2.3**
baz=56
KPKS *e*Pg **Pb 20 36 28.4 +2.4**
baz=56
KPKS Kokpek 5.03 59 Pg **Pb 20 36 29.5 +3.5**
comp=E,16nm,0.3s
KPKS Lg Lg 20 37 34.6
comp=E,150nm,0.7s
UZB Uzynbulak 5.12 63 *e*P **Pb 20 36 30.5 +3.0**
comp=E,9.3nm,0.5s
UZB *e*S **Sb 20 37 36.0 +7.0**
comp=E,78nm,0.5s
UZB Uzynbulak 5.12 63 *e*Pg **Pb 20 36 31.1 +3.6**
baz=60
UZB Uzynbulak 5.12 63 Pg **Pb 20 36 30.5 +3.0**
comp=E,9.3nm,0.5s
UZB Lg Lg 20 37 36.1
comp=E,78nm,0.5s
SHLS Shalkode 5.42 64 *e*P **Pg 20 36 41.6 -0.1**
comp=E,5.5nm,0.5s
SHLS *e*S **Sg 20 37 55.0 +3.1**
comp=E,88nm,0.5s
SHLS Shalkode 5.42 64 *e*Pg **Pg 20 36 40.4 -1.3**
baz=63
SHLS Shalkode 5.42 64 Pg **Pg 20 36 41.6 -0.1**
comp=E,5.5nm,0.5s
SHLS Lg Lg 20 37 55.0
comp=E,88nm,0.5s
TDK Taldyqorghan 5.75 44 *e*PN **Pn 20 36 23.5 +0.5**
TDK *e* 20 36 43.9
TDK Taldyqorghan 5.75 44 *e*P **Pb 20 36 42.3 +4.2**
comp=E,41nm,0.6s
TDK *e*S **Sg 20 37 56.1 -6.2**
comp=E,159nm,1.4s
TDK Taldyqorghan 5.75 44 *e*Pn **Pn 20 36 23.6 +0.5**
baz=42
TDK *e*Pg **Pg 20 36 44.0 -3.9**
baz=42
DJR Jarkent 6.15 55 *e*P **Pb 20 36 49.6 +4.6**
comp=E,10nm,1.0s
DJR *e*S **Sg 20 38 09.0 -6.2**
comp=E,36nm,0.6s
DJR Jarkent 6.15 55 Pg **Pb 20 36 49.6 +4.6**
comp=E,10nm,1.0s
DJR Lg Lg 20 38 09.0
comp=E,36nm,0.6s
KBL Kabul 7.10 206 Pn **Pn 20 36 42.9 +1.1**
KBL Kabul 7.10 206 PN **Pn 20 36 42.9 +1.1**
CEP Cherat 7.20 186 P Pb 20 36 53.1 -10
OTUK Ortayu 7.25 358 P **Pn 20 36 44.0 +0.4**
OTUK Ortayu 7.25 358 ⇑Pn **Pn 20 36 44.8 +1.2**
comp=E,3.8nm,0.8s
OTUK ⇑Lg Lg 20 38 46.7
comp=E,117nm,0.7s
NIL Nilore 7.35 177 Pn **Pn 20 36 45.2 +0.1**
NIL Nilore 7.35 177 P **Pn 20 36 45.2 +0.1**
THW Thamme Wali 8.24 186 P Pn 20 37 04.5 +7.2
MAKZ Makanchi 8.82 46 Pn **Pn 20 37 06.8 +1.7**
MAKZ Makanchi 8.82 46 P **Pn 20 37 06.9 +1.7**
MAKZ Makanchi 8.82 46 ⇑Pn **Pn 20 37 06.4 +1.2**
comp=E,6.5nm,1.4s
MAKZ ⇓Lg Lg 20 39 36.7
comp=E,7.8nm,0.8s
BRZS Berezniki 8.98 360 *e*P **Pn 20 37 08.7 +1.4**
BRZS Berezniki 8.98 360 *e*Pn **Pn 20 37 08.8 +1.4**
baz=360
MK31 Makanchi Array 8.98 47 Pn 20 37 09.3 +1.9
MK31 Makanchi Array 8.98 47 *i* P **Pn 20 37 08.0 +0.6**
MK31 Makanchi Array 8.98 47 Pn **Pn 20 37 08.7 +1.3**
comp=E,2.1nm,0.6s,baz=221,slow=12,SNR=19
MK31 ⇑Lg Lg 20 39 40.4
comp=E,5.5nm,0.7s,baz=235,slow=27,SNR=3.9
MKAR Makanchi Array 8.98 47 Pn **Pn 20 37 09.1 +1.6**
comp=E,0.5nm,0.3s,baz=228,slow=14,SNR=22
MKAR Lg Lg 20 39 36.2
comp=E,0.6nm,0.3s,baz=231,slow=30,SNR=3.6
comp=E,0.8nm,0.4s
KURBB Kurchatov Arra 10.42 21 Pn **Pn 20 37 26.5 -0.6**
comp=E,0.2nm,0.3s,baz=215,slow=12,SNR=27
KURBB Lg Lg 20 40 25.8
comp=E,0.3nm,0.3s,baz=206,slow=29,SNR=6.7
comp=E,0.6nm,0.3s
KURBB Kurchatov Arra 10.42 21 P **Pn 20 37 25.9 -1.2**
KURBB Kurchatov Arra 10.42 21 ⇑Pn **Pn 20 37 25.9 -1.2**
comp=E,4.2nm,0.7s
KURBB ⇓Lg Lg 20 40 19.7
comp=E,55nm,0.7s
KURK Kurchatov 10.53 21 Pn 20 37 28.4 -0.2
KURK Kurchatov 10.53 21 *i* P **Pn 20 37 28.1 -0.5**
SEM Semipalatinsk 10.75 27 *e*P **Pn 20 37 31.9 0.0**
SEM Semipalatinsk 10.75 27 *e*Pn **Pn 20 37 31.9 0.0**
baz=26
GEYT Alibeck 11.74 260 Pn **Pn 20 37 42.8 -2.4**
comp=E,0.1nm,0.3s,baz=15,slow=25,SNR=1.7
GEYT Sn **Sn 20 39 50.3 -5.9**
comp=E,0.2nm,0.3s,baz=58,slow=18,SNR=1.8
comp=E,0.7nm,0.4s
GEYT Alibeck 11.74 260 Pn **Pn 20 37 45.7 +0.4**
GYA0B ALIBECK ARRAY 11.74 260 Pn **Pn 20 37 45.9 +0.6**
BVA0 Borovoye Array 12.13 353 P **Pn 20 37 50.9 +0.4**
BVA0 Borovoye Array 12.13 353 ⇑Pn **Pn 20 37 50.1 -0.4**
comp=E,1.8nm,0.6s,baz=158,slow=12,SNR=6.2
BVA0 ⇑Lg Lg 20 41 24.4
comp=E,21nm,0.9s,baz=165,slow=26,SNR=5.2
BVAR Borovoye Array 12.13 353 LR LR 20 42 46.2
comp=E,66nm,20.1s,baz=47,slow=38
BRVK Borovoye 12.18 353 Pn **Pn 20 37 51.7 +0.6**
BRVK Borovoye 12.18 353 *i* P **Pn 20 37 52.5 +1.4**
BRVK Borovoye 12.18 353 ⇓Pn **Pn 20 37 51.6 +0.6**
comp=E,2.3nm,0.6s
BRVK ⇑Lg Lg 20 41 22.7
comp=E,15nm,1.0s
AB31 Akbulak array 12.24 317 P **Pn 20 37 51.5 -0.5**
AB31 Akbulak array 12.24 317 Pn **Pn 20 37 51.5 -0.5**
comp=E,3.0nm,0.5s,baz=127,slow=13,SNR=38
ABKAR Akbulak array 12.24 317 Pn 20 37 51.6 -0.3
ABKAR Akbulak array 12.24 317 Pn 20 37 51.7 -0.3
DGZ Jazzator, Alta 13.47 45 *i* P **Pn 20 38 07.4 -1.5**
AKTO Aktyubinsk 13.95 317 Pn **Pn 20 38 14.7 -0.6**
comp=E,0.2nm,0.3s,baz=126,slow=14,SNR=3.1
AKTO Sn **Sn 20 40 46.3 -3.7**
comp=E,0.2nm,0.3s,baz=162,slow=20,SNR=2.0
AKTO Lg Lg 20 42 26.8
comp=E,0.1nm,0.3s,baz=136,slow=14,SNR=2.7
AKTO LR LR 20 44 03.6
comp=E,58nm,18.6s,baz=119,slow=39
comp=E,0.7nm,0.3s
ZAA0 Zalesovo Array 15.27 28 Pn 20 38 34.1 +0.9
ZAA0 IAmb IAmb 20 38 38.9
comp=Z,3.4nm,0.7s
ZALV Zalesovo Beam 15.27 28 Pn **Pn 20 38 32.1 -1.0**
comp=Z,0.7nm,0.3s,baz=221,slow=15,SNR=11
ZALV Sn **Sn 20 41 25.8 +3.7**
comp=Z,0.1nm,0.3s,baz=232,slow=21,SNR=2.6
ZALV Lg Lg 20 42 59.7
comp=Z,0.1nm,0.3s,baz=206,slow=35,SNR=1.5
ZALV LR LR 20 44 46.7
comp=Z,39nm,20.1s,baz=251,slow=38
comp=Z,1.3nm,0.3s
ZALV Zalesovo Beam 15.27 28 Pn 20 38 34.6 +1.5
ZALV Zalesovo Beam 15.27 28 *i* P **Pn 20 38 34.7 +1.5**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 18.00 334 Pn **Pn 20 39 06.5 -1.3**
baz=114,slow=20,SNR=2.5
ARU Lg Lg 20 44 26.0
baz=357,slow=23,SNR=1.6
comp=Z,1.0nm,0.4s
ARU Arti 18.00 334 P **P 20 39 12.2 +3.9**
KNGR Kungurtug, Tuv 19.66 52 *i* P **P 20 39 27.1 +0.4**
KNGR pmax pmax
comp=Z,6.0nm,1.3s
GTA Gaotai 20.69 86 *e*P Pn 20 39 40.8 +0.5
GTA pP sP 20 39 45.0 +1.9
GTA sP pP 20 39 47.8 +6.3
GTA pmax pmax
comp=Z,2.0nm,1.1s
KIV Kislovodsk 22.33 288 *e*P **P 20 39 53.3 -2.2**
KIV pmax pmax
comp=Z,2.0nm,1.0s
HYBB Hyderabad (bro 24.03 166 *e*P **P 20 40 12.5 -0.3**
SONM Songino Array 24.82 63 P **P 20 40 20.2 +0.1**
comp=Z,0.7nm,1.0s,baz=263,slow=5.8,SNR=4.4
comp=Z,0.7nm,1.0s
OBN Obninsk 27.64 313 ⇑*e*P **P 20 40 45.4 +0.2**
OBN *PP **pP 20 40 49.0 +0.1**
OBN *SP **sP 20 40 50.0 -0.5**
OBN 20 44 01.0
OBN pmax pmax
comp=Z,4.0nm,1.0s
OBN MLR MLR
comp=Z,37nm,16.0s
BRTR Keskin Array B 29.68 281 P **P 20 41 03.5 -0.2**
comp=Z,0.8nm,0.7s,baz=80,slow=8.0,SNR=6.9
comp=Z,0.8nm,0.7s
AKASG Malin Array Be 31.43 303 P **P 20 41 17.6 -1.3**
comp=Z,0.4nm,0.4s,baz=83,slow=7.6,SNR=4.4
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 31.43 303 *i* P **P 20 41 20.7 +1.8**
BURAR Buconina Array 34.22 297 P **P 20 41 43.4 -0.1**
FIA1 FINESS Array S 34.65 322 P **P 20 41 47.0 +0.1**
FINES FINESS Array B 34.65 322 P **P 20 41 46.9 +0.1**
comp=Z,0.3nm,0.3s,baz=108,slow=9.7,SNR=9.1
comp=Z,0.3nm,0.3s
ARCES ARCESS Array B 37.58 335 P **P 20 42 11.8 -0.1**
comp=Z,0.7nm,0.6s,baz=102,slow=7.9,SNR=5.8
comp=Z,0.7nm,0.6s
ZEA Zeya 38.09 52 *e*P P 20 42 05.3 -11
GEC2 GERESS Array S 41.61 301 P **P 20 42 46.0 +0.2**
GERES GERESS Array B 41.61 301 P **P 20 42 46.1 +0.3**
comp=Z,0.6nm,0.6s,baz=72,slow=8.6,SNR=5.8
comp=Z,0.6nm,0.6s
GERES GERESS Array B 41.61 301 P **P 20 42 46.2 +0.4**
NC303 NORSAR Array S 41.64 320 P **P 20 42 45.7 -0.1**
NB2 NORSAR Subarra 41.72 320 P **P 20 42 45.8 -0.6**
comp=Z,0.5nm,0.6s,baz=90,slow=8.6
NOA NORSAR Array B 41.72 320 P **P 20 42 46.1 -0.3**
comp=Z,0.7nm,0.6s,baz=91,slow=8.2,SNR=6.5
comp=Z,0.7nm,0.6s
DAVOX Davos/Dischmat 44.62 299 P **P 20 43 09.8 -0.5**
comp=Z,1.3nm,0.5s,baz=70,slow=12,SNR=5.2
comp=Z,1.3nm,0.5s
BILL Bilibino 53.97 28 ⇓*e*P **P 20 44 22.4 +1.2**
BILL *e*PP **pP 20 44 24.3 -0.8**
BILL *SP **sP 20 44 26.0 -0.6**
BILL S **S 20 51 56.0 -0.3**
BILL pmax pmax
comp=Z,4.0nm,1.2s
ESDC Sonseca Array 56.66 296 P **P 20 44 40.5 -0.6**
comp=Z,0.4nm,0.7s,baz=51,slow=7.9,SNR=2.2
comp=Z,0.4nm,0.7s
TOA0 Torodi Ar. Sit 67.24 268 P **P 20 45 51.1 -1.4**
TOA0 IAmb IAmb 20 45 51.6
comp=Z,2.6nm,1.1s
TORD Torodi Ar. Bea 67.24 268 P **P 20 45 51.0 -1.5**
comp=Z,0.7nm,0.7s,baz=53,slow=5.7,SNR=6.9
comp=Z,0.7nm,0.7s
TORD Torodi Ar. Bea 67.24 268 P **P 20 45 51.3 -1.2**
TORD IAmb IAmb 20 45 51.5
comp=Z,0.7nm,0.8s
ASAR Alice Springs 85.75 126 P **P 20 47 34.6 -2.5**
comp=Z,0.4nm,0.8s,baz=314,slow=4.7,SNR=4.2
comp=Z,0.4nm,0.8s

IDC 20 20:41:01.4±1.4, 54°.96S×30°.72W, h0km, mb3.6/3, mbtmp3.6/3, MS3.2/1, Error ellipse: s-maj=57.8km s-min=38.1km az=86.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.55**	**184**	P	P	20 49 37.9	0.0
	0.5nm,0.7s,baz=157,slow=2.2,SNR=2.6						
	0.5nm,0.7s						
LPAZ	**La Paz**	**48.12**	**308**	P	P	20 49 43.8	+0.1
	0.6nm,0.5s,baz=134,slow=14,SNR=2.7						
	0.6nm,0.5s						
TSUM	**Tsumeb**	**50.98**	**65**	LR	LR	21 08 23.9	
	comp=Z,24nm,18.5s,baz=156,slow=32						
TORD	**Torodi Ar. Bea**	**73.17**	**33**	P	P	20 52 33.9	+0.2
	0.5nm,1.0s,baz=196,slow=6.7,SNR=1.5						
	0.5nm,1.0s						
ILAR	**Eielson Array**	**147.90**	**314**	PKPbc	PKPbc	21 00 45.8	-1.2
	0.5nm,0.8s,baz=108,slow=2.9,SNR=4.5						

*IDC **20** 20:57:26.1±0.5, 13°.83N×145°.01E, h109km±3km, mb3.5/12, mbtmp3.9/12, Error ellipse: s-maj=24.2km s-min=13.6km az=101.0*
*NEIC **20** 20:57:27.4±1.5, 13°.80N±0°.08×144°.9E±0°.1, h115km±5km, mb4.5/27, Error ellipse: s-maj=19.9km s-min=10.0km az=109.0*

ISC 20 20:57:27.7±0.5, 13°.77N±0°.09×145°.0E±0°.1, h125km, n57, σ0s93/52, mb4.2/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.20**	**204**	P	**Pn**	**20 57 43.8**	**-1.2**
	3μm,0.3s,baz=57,slow=1.5,SNR=975						
GUMO				S	**Sn**	**20 57 54.9**	**-3.0**
PATS	**Pohnpei**	**14.84**	**116**	Pn	**Pn**	**21 00 51.0**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**21.40**	**74**	T	T	21 24 15.8	
	baz=261						
H11S1	**WAKE ISLAND Hy**	**21.41**	**74**	T	T	21 24 16.4	
	baz=261						
H11S2	**WAKE ISLAND Hy**	**21.41**	**74**	T	T	21 24 17.3	
	baz=261						
H11N1	**WAKE ISLAND Hy**	**21.82**	**71**	T	T	21 25 13.0	
	baz=257,slow=75,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	**21.82**	**71**	T	T	21 25 20.1	
	baz=257,slow=75,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**21.83**	**71**	T	T	21 25 20.8	
	baz=257,slow=75,SNR=14						
WB0	**Warramunga Arr**	**34.91**	**198**	P	**P**	**21 04 07.3**	**-0.2**
WB0				IAmb	IAmb	21 04 10.9	
	comp=Z,5.1nm,1.2s						
WRA	**Warramunga Arr**	**35.09**	**198**	P	**P**	**21 04 09.0**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=24,slow=9.5,SNR=22						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**35.09**	**198**	P	**P**	**21 04 07.0**	**-2.2**
FITZ	**Fitzroy Crossi**	**36.95**	**212**	P	**P**	**21 04 25.4**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=47,slow=12,SNR=6.9						
	comp=Z,1.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**36.95**	**212**	P	**P**	**21 04 25.4**	**+0.4**
FITZ				IAmb	IAmb	21 04 41.3	
	comp=Z,8.8nm,1.4s						
AS31	**Alice Springs**	**38.74**	**196**	P	**P**	**21 04 40.0**	**0.0**
ASAR	**Alice Springs**	**38.74**	**196**	P	**P**	**21 04 39.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=18,slow=12,SNR=10						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**38.74**	**196**	P	**P**	**21 04 40.9**	**+0.9**
EIDS	**Eidsvold**	**39.36**	**171**	P	**P**	**21 04 45.3**	**+0.2**
EIDS				IAmb	IAmb	21 05 01.6	
	comp=Z,16nm,1.4s						
DZM	**Mont Dzumac**	**41.39**	**149**	P	**P**	**21 05 02.8**	**+0.8**
	comp=Z,3.8nm,0.7s,baz=330,slow=20,SNR=1.7						
	comp=Z,3.8nm,0.7s						
DZM	**Mont Dzumac**	**41.39**	**149**	P	**P**	**21 05 02.9**	**+1.0**
DZM				IAmb	IAmb	21 05 28.1	
	comp=Z,22nm,1.2s						
CMAR	**Chiang Mai Arr**	**44.36**	**282**	P	**P**	**21 05 26.2**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=101,slow=9.4,SNR=1.6						
CMAR				PcP	**PcP**	**21 07 09.9**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=151,slow=2.1,SNR=5.0						
	comp=Z,0.7nm,0.9s						
STKA	**Stephens Creek**	**45.50**	**184**	P	**P**	**21 05 34.5**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=8.0,slow=8.8,SNR=6.6						
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**45.50**	**184**	P	**P**	**21 05 34.3**	**-0.4**
BBOO	**Buckleboo**	**47.09**	**190**	P	**P**	**21 05 47.2**	**+0.1**
NWAO	**Narrogin (SRO)**	**53.46**	**209**	P	**P**	**21 06 35.9**	**+0.8**
	baz=45,slow=13,SNR=2.0						
UNV	**Unalaska Valle**	**55.13**	**33**	P	**P**	**21 06 46.1**	**-0.8**
MK31	**Makanchi Array**	**61.41**	**316**	P	**P**	**21 07 30.6**	**-0.2**
MKAR	**Makanchi Array**	**61.41**	**316**	P	**P**	**21 07 31.5**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=90,slow=9.2,SNR=6.4						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**61.41**	**316**	P	**P**	**21 07 30.5**	**-0.3**
MAKZ	**Makanchi**	**61.63**	**316**	P	**P**	**21 07 32.8**	**+0.5**
MAKZ				IAmb	IAmb	21 07 50.9	
	comp=Z,5.6nm,1.5s						
SII	**Sitkinak Islan**	**62.69**	**33**	P	**P**	**21 07 39.4**	**+0.3**
OHAK	**Old Harbor**	**63.35**	**32**	P	**P**	**21 07 44.0**	**+0.6**
KDAK	**Kodiak Island**	**63.87**	**32**	P	**P**	**21 07 46.9**	**0.0**
KDAK				IAmb	IAmb	21 07 49.5	
	comp=Z,5.3nm,0.8s						
CNPM	**China Poot**	**65.04**	**30**	P	**P**	**21 07 53.8**	**-0.7**
ILAR	**Eielson Array**	**68.37**	**25**	P	**P**	**21 08 13.4**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=252,slow=5.7,SNR=13						
	comp=Z,0.6nm,0.4s						
BMAR	**Burnt Mountain**	**69.90**	**23**	P	**P**	**21 08 25.0**	**0.0**
BCAR	**Beaver Creek A**	**70.25**	**28**	P	**P**	**21 08 26.8**	**-0.3**
HYT	**Haines Junctio**	**72.01**	**30**	P	**P**	**21 08 37.5**	**-0.4**
DLBC	**Dease Lake**	**75.79**	**33**	P	**P**	**21 09 00.0**	**+0.1**
DLBC				IAmb	IAmb	21 09 02.6	
	comp=Z,8.4nm,1.4s						
ABKAR	**Akbulak array**	**76.46**	**318**	P	**P**	**21 09 03.7**	**-0.1**
ABKAR	**Akbulak array**	**76.46**	**318**	P	**P**	**21 09 04.3**	**+0.5**
ABKAR				IAmb	IAmb	21 09 05.8	
	comp=Z,1.5nm,0.9s						
OZB	**Mount Ozzard**	**79.47**	**42**	P	**P**	**21 09 21.2**	**+0.7**
CLRS	**Cowichan Lake**	**80.37**	**42**	P	**P**	**21 09 26.9**	**+1.7**
CLRS				IAmb	IAmb	21 09 32.2	
	comp=Z,20nm,1.2s						
NLWA	**Neilton Lookou**	**80.80**	**43**	P	**P**	**21 09 28.6**	**+1.0**
NLWA				IAmb	IAmb	21 09 47.6	
	comp=Z,19nm,1.2s						
KCPM	**Cahto Peak**	**82.46**	**51**	P	**P**	**21 09 37.8**	**+1.1**
KCPM				IAmb	IAmb	21 09 38.7	
	comp=Z,6.4nm,0.7s						
YKA	**Yellowknife Ar**	**82.66**	**27**	P	**P**	**21 09 36.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=286,slow=5.2,SNR=5.9						
	comp=Z,1.0nm,0.6s						
PINE	**Pine Mountain**	**83.53**	**47**	P	**P**	**21 09 42.6**	**+0.4**
PINE				IAmb	IAmb	21 09 44.0	
	comp=Z,7.2nm,0.8s						
BEKR	**Beckworth**	**84.84**	**50**	P	**P**	**21 09 49.8**	**+0.9**
BEKR				IAmb	IAmb	21 09 50.5	
	comp=Z,3.1nm,0.7s						
BMO	**Blue Mountains**	**85.81**	**45**	P	**P**	**21 09 53.8**	**+0.3**
BMO				IAmb	IAmb	21 09 54.8	
	comp=Z,2.6nm,0.8s						
PLID	**Pearl Lake**	**86.64**	**44**	P	**P**	**21 09 57.3**	**-0.4**
PLID				IAmb	IAmb	21 09 58.6	
	comp=Z,3.2nm,0.8s						
NVAR	**Mina Array Bea**	**86.75**	**51**	P	**P**	**21 09 59.3**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=278,slow=6.3,SNR=8.6						
	comp=Z,0.5nm,0.4s						
NVAR	**Mina Array Bea**	**86.75**	**51**	P	**P**	**21 09 58.8**	**+0.5**
ARCES	**ARCESS Array B**	**86.94**	**342**	P	**P**	**21 09 58.9**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=42,slow=1.5,SNR=7.9						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**86.94**	**342**	P	**P**	**21 09 58.3**	**-0.1**
ARCES				IAmb	IAmb	21 10 19.4	
	comp=Z,5.3nm,1.4s						
FINES	**FINESS Array B**	**91.03**	**335**	P	**P**	**21 10 16.1**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=61,slow=4.7,SNR=9.9						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**134.83**	**305**	PKP	**PKPdf**	**21 16 32.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=66,slow=2.3,SNR=6.7						
DBIC	**Dimbokro**	**143.79**	**302**	PKP	PKPbc	21 16 47.6	+0.5
	comp=Z,2.4nm,0.8s,baz=51,slow=3.5,SNR=7.0						
LPAZ	**La Paz**	**147.97**	**99**	PKPbc	**PKPbc**	**21 17 00.8**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=272,slow=4.1,SNR=2.0						

IDC 20 21:06:55.6±4.5, 55°.14S×31°.98W, h0km, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=150.6km s-min=52.6km az=179.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**47.67**	**310**	P	P	21 15 34.2	-0.1
	1.7nm,0.6s,baz=170,slow=4.2,SNR=7.6						
	1.7nm,0.6s						
H10S2	**ASCENSION HYDR**	**48.08**	**23**	T	T	22 07 30.9	
	baz=193,slow=74,SNR=4.9						
H10S3	**ASCENSION HYDR**	**48.08**	**23**	T	T	22 07 32.0	
	baz=27,slow=74,SNR=14						
H10N1	**ASCENSION HYDR**	**49.19**	**23**	T	T	22 08 53.0	
	baz=193,slow=75,SNR=20						
H10N3	**ASCENSION HYDR**	**49.19**	**23**	T	T	22 08 53.0	
	baz=193,slow=75,SNR=25						
H10N2	**ASCENSION HYDR**	**49.21**	**23**	T	T	22 08 53.6	
	baz=193,slow=75,SNR=19						
TORD	**Torodi Ar. Bea**	**73.72**	**34**	P	P	21 18 31.2	0.0
	0.8nm,0.8s,baz=196,slow=5.6,SNR=3.5						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**147.50**	**314**	PKPbc	PKPbc	21 26 39.4	-0.7
	0.4nm,0.6s,baz=124,slow=2.4,SNR=4.7						

*IDC **20** 21:34:43.5±1.0, 55°.06S×31°.37W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=37.9km s-min=24.8km az=56.0*
*NEIC **20** 21:34:46.2±2.2, 55°.20S±0°.06×32°.0W±0°.2, h10km±1km, mb4.5/15, Error ellipse: s-maj=16.9km s-min=9.9km az=106.0*

ISC 20 21:34:45.4±0.7, 55°.16S±0°.10×31°.9W±0°.1, h10km, n34, σ1s10/29, mb4.5/11, South Georgia Island region

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

HOPE	**Hope Point**	**2.79**	**287**			**Pn**	**21 35 29.8**	**-0.2**
ORCD	**Orcadas**	**8.80**	**225**	Pn		**Pn**	**21 36 51.4**	**-1.1**
VNA1	**Neumayer--Stat**	**18.68**	**155**	P		**Pn**	**21 39 05.2**	**+1.5**
VNA3	**Neumayer Olymp**	**18.79**	**158**	P		**Pn**	**21 39 06.0**	**+1.0**
VNA2	**Neumayer--Watz**	**19.08**	**155**	P		**Pn**	**21 39 07.9**	**-0.6**
	baz=311,slow=11							
SNAA	**Sanae**	**20.68**	**154**	P		**P**	**21 39 24.4**	**-0.8**
	0.7nm,0.6s,baz=297,slow=14,SNR=6.7							
	0.7nm,0.6s							
SNAA	**Sanae**	**20.68**	**154**	P		**P**		
TROLL	**Troll, Antarti**	**22.27**	**152**	P		**P**	**21 39 42.5**	**+0.2**
TRQA	**Tornquist**	**26.51**	**298**	P		**P**	**21 40 23.7**	**+0.8**
TRQA				IAmb	IAmb		21 40 31.3	
	comp=Z,7.9nm,1.2s							
PLCA	**Paso Flores**	**29.18**	**283**	P		**P**	**21 40 50.0**	**+3.1**
	comp=Z,1.0nm,1.0s,baz=117,slow=11,SNR=1.9							
	comp=Z,1.0nm,1.0s							
LMEL	**Las Melosas**	**34.01**	**293**	P		**P**	**21 41 28.7**	**-0.7**
LMEL				IAmb	IAmb		21 41 56.7	
	comp=Z,11nm,1.4s							
MT09	**Talagante**	**34.48**	**292**	P		**P**	**21 41 31.9**	**-1.5**
MT01	**Popeta**	**34.55**	**292**	P		**P**	**21 41 33.2**	**-0.8**
MT02	**Curacav**	**34.95**	**292**	P		**P**	**21 41 38.1**	**+0.6**
MT02				IAmb	IAmb		21 42 06.2	
	comp=Z,22nm,1.3s							
QSPA	**South Pole Qui**	**35.09**	**180**	P		**P**	**21 41 39.1**	**+0.6**
	comp=Z,1.6nm,1.1s,baz=183,slow=4.5,SNR=2.0							
	comp=Z,1.6nm,1.1s							
QSPA	**South Pole Qui**	**35.09**	**180**	P		**P**	**21 41 38.8**	**+0.3**
QSPA				IAmb	IAmb		21 41 49.5	
	comp=Z,6.3nm,1.3s							
CO03	**El Pedregal**	**36.62**	**295**	P		**P**	**21 41 52.7**	**+0.9**
CO01	**Juntas del Tor**	**37.00**	**297**	P		**P**	**21 41 56.1**	**+0.8**
CO01				IAmb	IAmb		21 42 19.9	
	comp=Z,9.5nm,1.1s							
AC05	**El Transito**	**38.02**	**298**	P		**P**	**21 42 04.8**	**+1.1**
AC05				IAmb	IAmb		21 42 13.5	
	comp=Z,13nm,1.1s							
GO02	**Mina Guanaco**	**40.71**	**302**	P		**P**	**21 42 27.3**	**+0.8**
GO02				IAmb	IAmb		21 42 48.3	
	comp=Z,31nm,1.2s							
LPAZ	**La Paz**	**47.70**	**310**	P		**P**	**21 43 23.5**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=179,slow=6.4,SNR=9.9							
	comp=Z,2.0nm,0.7s							
LPAZ	**La Paz**	**47.70**	**310**	P		**P**	**21 43 23.6**	**+0.7**
LPAZ				IAmb	IAmb		21 43 25.6	
	comp=Z,2.7nm,0.8s							
H10S2	**ASCENSION HYDR**	**48.08**	**23**	T		T	22 35 30.1	
	baz=193,slow=74,SNR=6.2							
H10S3	**ASCENSION HYDR**	**48.09**	**23**	T		T	22 35 30.3	
	baz=27,slow=74,SNR=13							
H10N1	**ASCENSION HYDR**	**49.20**	**23**	T		T	22 36 58.0	
	baz=193,slow=75,SNR=21							
H10N3	**ASCENSION HYDR**	**49.20**	**23**	T		T	22 36 57.3	
	baz=193,slow=75,SNR=25							
H10N2	**ASCENSION HYDR**	**49.21**	**23**	T		T	22 36 57.7	
	baz=193,slow=75,SNR=23							
LBTB	**Lobatse**	**51.40**	**78**	P		**P**	**21 43 51.1**	**+0.7**
TOA0	**Torodi Ar. Sit**	**73.72**	**34**	P		**P**	**21 46 19.6**	**+0.2**
TOA0				IAmb	IAmb		21 46 22.3	
	comp=Z,6.9nm,1.4s							
TORD	**Torodi Ar. Bea**	**73.72**	**34**	P		**P**	**21 46 18.5**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=192,slow=6.6,SNR=4.2							
	comp=Z,0.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**73.72**	**34**	P		**P**	**21 46 18.5**	**-0.9**
ZALV	**Zalesovo Beam**	**144.41**	**65**	PKP		**PKPab**	**21 54 18.4**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=225,slow=3.9,SNR=3.6							
ILAR	**Eielson Array**	**147.53**	**314**	PKPbc		**PKPbc**	**21 54 27.1**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=123,slow=2.1,SNR=8.1							
SONM	**Songino Array**	**153.38**	**88**	PKPbc		**PKPbc**	**21 54 41.3**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=219,slow=2.6,SNR=6.5							

*IDC **20** 21:35:25.2±2.6,32.°64N×48.°49E,h0km,mb3.5/6, mbtmp3.5/6,MS2.5/1,Error ellipse: s-maj=56.1km s-min=32.2km az=157.0*
*TEH **20** 21:35:27.3,32.°74N×48.°55E,h8km,ML3.5*
*ISN **20** 21:35:27.5±1.1,32.°72N×48.°43E,h10km±999km,ML3.5*
ISC 20 21:35:27.9±0.7,32.°73N±0.°03×48.°55E±0.°04,h10km,n65, σ1°66/69,mb3.3/6,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.99**	**324**	*e*Pg		**Pg**	**21 35 46.5**	**-0.4**
IKFM				*e*			21 36 07.1	
	comp=Z,28μm,0.3s							
DHL1	**Dehloran**	**1.07**	**268**	*e*Pg		**Pg**	**21 35 48.1**	**-0.4**
IDOB	**Doab**	**1.10**	**344**	*e*Pg		**Pg**	**21 35 47.8**	**-1.3**
IDOB				*e*			21 36 10.1	
	comp=Z,8μm,0.5s							
AMIS	**Naft Sefid**	**1.23**	**149**	*e*Pg		**Pn**	**21 35 51.6**	**+0.4**
AMIS				*e*			21 36 13.4	
	comp=Z,14μm,0.2s							
AHWZ	**Ahwaz**	**1.40**	**177**	*e*Pg		**Pn**	**21 35 54.9**	**+1.5**
AHWZ				*e*Sg		**Sg**	**21 36 14.4**	**+1.5**
HSAM	**Samen**	**1.48**	**2**	*e*Pg		**Pn**	**21 35 54.7**	**-0.1**
HSAM				*e*			21 35 57.2	
	comp=Z,6μm,0.3s							
KHMZ	**Khomeyn**	**1.55**	**49**	*e*Pg		**Pn**	**21 35 56.7**	**+0.9**
IKOM	**Komasi**	**1.68**	**329**	*e*Pg		**Pn**	**21 35 59.3**	**+1.8**
IKOM				*e*			21 36 32.0	
	comp=Z,8μm,0.8s							
IBZA	**Bozab**	**1.83**	**342**	*e*Pn		**Pn**	**21 36 01.6**	**+2.0**
IBZA				*e*			21 36 33.5	
	comp=Z,3μm,0.6s							
IPIR	**Pirpir**	**1.98**	**91**	*e*Pn		**Pn**	**21 36 03.6**	**+1.9**
IPIR				*e*			21 36 33.3	
	comp=Z,2μm,0.4s							
KCHF	**Cheshme Sefid,**	**1.99**	**321**	*e*Pn		**Pn**	**21 36 03.0**	**+1.2**
KCHF				*e*			21 36 37.2	
	comp=Z,5μm,0.4s							
SHK1	**Shahrekord**	**2.01**	**101**	*e*Pn		**Pn**	**21 36 03.4**	**+1.3**
SHK1				*e*			21 36 37.9	
	comp=Z,2μm,0.8s							
KER	**Kermanshah**	**2.03**	**325**	*e*Pn		**Pn**	**21 36 03.7**	**+1.4**
HAGD	**Aghdareh**	**2.14**	**13**	*e*			21 36 41.8	
HAGD				*e*Pn		**Pn**	**21 36 05.6**	**+1.7**
ASAO	**Ashtian**	**2.19**	**34**	*e*Pn		**Pn**	**21 36 07.3**	**+2.7**
IBDR	**Badra**	**2.23**	**280**	*e*Pn		**Pn**	**21 36 06.0**	**+1.1**
IBDR				*e*Sn		**Sn**	**21 36 35.0**	**+2.4**
IBDR				AML		AML	21 36 56.1	
	comp=N,224nm,0.5s							
RAFI	**Al-Rafai**	**2.29**	**245**	*e*Pn		**Pn**	**21 36 08.0**	**+2.2**
RAFI				*e*Sn		**Sn**	**21 36 36.0**	**+1.9**
RAFI				AML		AML	21 36 46.3	
	comp=E,717nm,0.2s							
IGHG	**Ghaleghazi**	**2.30**	**315**	*e*			21 36 58.6	
	comp=Z,5μm,0.8s							
IGHG				*e*Pn		**Pb**	**21 36 09.3**	**-0.3**
IBRJ	**Brojen**	**2.44**	**109**	*e*Pn		**Pn**	**21 36 09.1**	**+1.1**
ILIN	**Lien**	**2.55**	**329**	*e*Pn		**Pn**	**21 36 10.8**	**+1.2**
ILIN				*e*			21 36 21.3	
	comp=Z,2μm,0.5s							
SNGE	**Sanandaj**	**2.56**	**337**	*e*Pn		**Pn**	**21 36 12.7**	**+3.1**
QAMS	**Qamsar**	**2.59**	**66**	*e*Pn		**Pn**	**21 36 12.0**	**+1.9**
QAMS				*e*			21 37 03.9	
	comp=Z,1μm,0.4s							
IKLH	**Kolahrood**	**2.61**	**76**	*e*Pn		**Pn**	**21 36 12.2**	**+1.8**
IKLH				*e*			21 36 55.5	
	comp=Z,1μm,0.6s							
IDHR	**Dehrash**	**2.67**	**318**	*e*Pn		**Pn**	**21 36 12.9**	**+1.8**
IDHR				*e*			21 36 56.1	
	comp=Z,2μm,0.4s							
GHVR	**GHOM**	**2.88**	**52**	*e*Pn		**Pn**	**21 36 16.7**	**+2.8**
IRAZ	**Razeghan**	**2.90**	**23**	*e*Pn		**Pn**	**21 36 16.5**	**+2.1**
IRAZ				*e*			21 36 44.0	
	comp=Z,1μm,0.8s							
IGAR	**Gharneh**	**2.97**	**95**	*e*Pn		**Pn**	**21 36 16.5**	**+1.3**
IGAR				*e*			21 36 55.5	
	comp=Z,875nm,0.2s							
IQOM	**Qom**	**2.98**	**44**	*e*Pn		**Pn**	**21 36 16.1**	**+0.7**
QABG	**Abgarm-Qazvin**	**3.09**	**16**	*e*Pn		**Pn**	**21 36 17.2**	**+0.2**
KLNJ	**Kolanjah**	**3.11**	**123**	*e*Pn		**Pn**	**21 36 18.6**	**+1.3**
KLNJ				*e*			21 37 09.0	
	comp=Z,916nm,0.6s							
IZEF	**Zefreh**	**3.19**	**86**	*e*Pn		**Pn**	**21 36 20.2**	**+1.9**
KRSH	**Karshahi**	**3.25**	**67**	*e*Pn		**Pn**	**21 36 20.5**	**+1.5**
KRSH				*e*			21 37 24.0	
	comp=Z,637nm,0.6s							
IRAM	**Ramesheh**	**3.37**	**105**	*e*Pn		**Pn**	**21 36 21.6**	**+0.8**
IVRN	**Varamin**	**3.48**	**49**	*e*Pn		**Pn**	**21 36 24.6**	**+2.5**
ISFB	**Sefidab**	**3.48**	**61**	*e*Pn		**Pn**	**21 36 23.7**	**+1.5**
IHSB	**Hasanabad**	**3.52**	**39**	*e*Pn		**Pn**	**21 36 24.8**	**+2.0**
BHD	**Baghdad**	**3.54**	**280**	*e*Pn		**Pn**	**21 36 24.0**	**+1.1**
BHD				*e*Sn		**Sn**	**21 37 06.0**	**+1.1**
BHD				AML		AML	21 37 10.8	
	comp=E,180nm,0.0s							
NASN	**Na'in**	**3.59**	**88**	*e*Pn		**Pn**	**21 36 25.7**	**+1.8**
CHTH	**Charan**	**3.82**	**33**	*e*Pn		**Pn**	**21 36 28.8**	**+1.8**
IGZV	**Ghazvin**	**3.90**	**20**	*e*Pn		**Pn**	**21 36 29.5**	**+1.4**
IGZV				*e*			21 37 38.7	
	comp=N,567nm,0.8s							
ZNJK	**Zanjan**	**3.93**	**2**	*e*Pn		**Pn**	**21 36 30.9**	**+2.4**
DAMV	**Damavand**	**4.05**	**43**	*e*Pn		**Pn**	**21 36 31.7**	**+1.5**
IDMV	**Damavand**	**4.05**	**45**	*e*Pn		**Pn**	**21 36 31.7**	**+1.5**
IDMV				*e*			21 36 53.1	
	comp=Z,449nm,0.5s							
QALM	**Alamut, Qazvin**	**4.08**	**25**	*e*Pn		**Pn**	**21 36 31.6**	**+1.1**
ILAS	**Lasjerd**	**4.52**	**53**	*e*Pn		**Pn**	**21 36 37.7**	**+1.1**
AHBU	**AHRAM**	**4.52**	**148**	*e*Pn		**Pn**	**21 36 37.2**	**+0.8**
IFIR	**Firoozkooh**	**4.54**	**49**	*e*Pn		**Pn**	**21 36 38.6**	**+1.7**
LHJ2	**Lahijan - Gila**	**4.60**	**15**	*e*Pn		**Pn**	**21 36 39.4**	**+2.0**
IPRN	**Peran**	**4.70**	**41**	*e*Pn		**Pn**	**21 36 41.2**	**+2.3**
ISHM	**Shahmirzad**	**4.98**	**51**	*e*Pn		**Pn**	**21 36 44.7**	**+1.7**
ISHM				*e*			21 37 09.1	
	comp=Z,323nm,0.3s							
YZKH	**Yazd**	**5.11**	**92**	*e*Pn		**Pn**	**21 36 45.7**	**+1.1**
ISRB	**Sarab**	**5.13**	**352**	*e*Pn		**Pn**	**21 36 46.3**	**+1.3**
IBST	**Bostanabad**	**5.14**	**345**	*e*Pn		**Pn**	**21 36 46.0**	**+0.9**
IAZR	**Azarshahr**	**5.37**	**338**	*e*Pn		**Pn**	**21 36 50.1**	**+1.9**
ISHB	**Shabestar**	**6.04**	**337**	*e*Pn		**Pn**	**21 36 58.3**	**+0.9**
GRMI	**Germi**	**6.09**	**355**	*e*Pn		**Pn**	**21 37 00.3**	**+2.3**
GRMI				*e*Pn		**Pn**	**21 37 00.4**	**+2.4**
SHRO	**Shahrood**	**6.97**	**60**	*e*Pn		**Pn**	**21 37 12.3**	**+2.1**
TABS	**Tabas**	**7.24**	**80**	*e*Pn		**Pn**	**21 37 15.3**	**+1.4**
GEYT	**Alibeck**	**9.38**	**54**	LR		LR	21 41 46.3	
	comp=Z,32nm,20.1s,baz=332,slow=40							
MKAR	**Makanchi Array**	**29.24**	**51**	P		**P**	**21 41 30.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=248,slow=7.3,SNR=3.0							
	comp=Z,0.3nm,0.6s							
GERES	**GERESS Array B**	**30.58**	**312**	P		**P**	**21 41 42.5**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=116,slow=8.8,SNR=2.2							
	comp=Z,0.3nm,0.7s							
FINES	**FINESS Array B**	**32.20**	**340**	P		**P**	**21 41 54.4**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=147,slow=8.3,SNR=3.6							
	comp=Z,1.1nm,0.9s							
NOA	**NORSAR Array B**	**37.23**	**331**	P		**P**	**21 42 37.6**	**-1.7**
	comp=Z,0.5nm,0.9s,baz=124,slow=8.6,SNR=3.3							
	comp=Z,0.5nm,0.9s							
ESDC	**Sonseca Array**	**42.43**	**295**	P		**P**	**21 43 22.0**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=74,slow=9.5,SNR=1.8							
	comp=Z,0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**46.91**	**257**	P		**P**	**21 43 56.5**	**-2.3**
	comp=Z,0.7nm,0.9s,baz=64,slow=11,SNR=3.2							
	comp=Z,0.7nm,0.9s							

*IDC **20** 21:46:56.0±0.5,55.°21S×30.°26W,h0km,mb4.5/16, mbtmp4.5/17,ML4.4/1,MS3.6/15,Error ellipse: s-maj=18.6km s-min=13.0km az=55.0*
*NEIC **20** 21:46:58.1±1.4,55.°29S±0.°09×30.°4W±0.°2,h10km±1km, mb5.0/52,Error ellipse: s-maj=15.6km s-min=14.4km az=54.0*
ISC 20 21:46:57.5±0.3,55.°27S±0.°06×30.°39W±0.°07,h10km,n292, σ0°63/267,mb4.9/32,MS3.6/14,1C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**3.67**	**283**	Pn		**Pn**	**21 47 54.0**	**-0.3**
ORCD	**Orcadas**	**9.37**	**228**	Pn		**Pn**	**21 49 09.5**	**-3.0**
VNA1	**Neumayer--Stat**	**18.22**	**156**	P		**P**	**21 51 12.1**	**+1.8**
VNA3	**Neumayer Olymp**	**18.36**	**159**	P		**P**	**21 51 12.9**	**+1.0**
VNA2	**Neumayer--Watz**	**18.62**	**156**	P		**Pn**	**21 51 15.3**	**+0.3**
	baz=315,slow=13							
PMSA	**Palmer Station**	**19.08**	**227**	P		**Pn**	**21 51 21.7**	**+1.1**
	1.1nm,0.3s,baz=72,slow=8.4,SNR=13							
PMSA				LR		LR	21 57 46.0	
	comp=Z,94nm,21.2s,baz=92,slow=34							
	9.9nm,0.6s							
PMSA	**Palmer Station**	**19.08**	**227**			**P**	**21 51 19.9**	**+0.1**
PMSA	**Palmer Station**	**19.08**	**227**	*e*P		**Pn**	**21 51 21.3**	**+0.7**
SNAA	**Sanae**	**20.21**	**155**	P		**P**	**21 51 31.6**	**-0.6**
	12nm,1.1s,baz=302,slow=11,SNR=20							
	12nm,1.1s							
SNAA	**Sanae**	**20.21**	**155**	P		**P**	**21 51 32.0**	**-0.2**
MG01	**Puerto William**	**21.15**	**255**	P		**P**	**21 51 41.5**	**-0.9**
MG01				IAmb		IAmb	21 51 57.0	
	comp=Z,72nm,1.2s							
SMAI	**San Martin Ant**	**21.22**	**218**	P		**P**	**21 51 44.4**	**+1.3**
USHA	**Ushuaia**	**21.63**	**255**	P		**P**	**21 51 47.8**	**+0.3**
	comp=Z,23nm,0.8s,baz=104,slow=11,SNR=5.2							
	comp=Z,23nm,0.8s							
TROLL	**Troll, Antarti**	**21.76**	**153**	P		**P**	**21 51 48.3**	**-0.7**
MG02	**Cerro Sombrero**	**22.75**	**260**	P		**P**	**21 51 59.0**	**-0.5**
BELA	**Belgrano 2**	**22.76**	**182**	P		**P**	**21 51 59.9**	**+0.5**
MG05	**Puerto Natales**	**25.04**	**261**	P		**P**	**21 52 21.3**	**-0.2**
TRQA	**Tornquist**	**27.35**	**296**	P		**P**	**21 52 43.4**	**+0.9**
PLTB	**Pedras Altas**	**28.65**	**316**	P		**P**	**21 52 54.8**	**+0.6**
PLCA	**Paso Flores**	**30.07**	**282**	P		**P**	**21 53 06.3**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=124,slow=7.3,SNR=4.0							
PLCA				LR		LR	22 04 49.4	
	comp=Z,115nm,21.1s,baz=130,slow=36							
	comp=Z,2.2nm,0.9s							
PLCA	**Paso Flores**	**30.07**	**282**	P		**P**	**21 53 06.6**	**-0.2**
ITQB	**Itaqui**	**31.72**	**313**	P		**P**	**21 53 21.2**	**-0.1**
GO05	**Huala**	**34.92**	**288**	P		**P**	**21 53 47.6**	**-1.6**
GO05				IAmb		IAmb	21 54 25.6	
	comp=Z,27nm,1.2s							
CPUP	**Villa Florida**	**34.95**	**315**	P		**P**	**21 53 49.0**	**-0.6**
	comp=Z,3.8nm,0.6s,baz=152,slow=6.5,SNR=8.0							
CPUP				LR		LR	22 08 08.3	
	comp=Z,67nm,18.8s,baz=194,slow=36							
	comp=Z,3.8nm,0.6s							
CPUP	**Villa Florida**	**34.95**	**315**	P		**P**	**21 53 49.6**	**+0.1**
CPUP				IAmb		IAmb	21 54 23.0	
	comp=Z,21nm,1.4s							
QSPA	**South Pole Qui**	**34.98**	**180**	P		**P**	**21 53 51.2**	**+1.6**
	comp=Z,16nm,0.9s,baz=201,slow=2.3,SNR=49							
QSPA				LR		LR	22 07 08.5	
	comp=Z,118nm,19.1s,baz=188,slow=35							
	comp=Z,16nm,0.9s							
QSPA	**South Pole Qui**	**34.98**	**180**	P		**P**	**21 53 51.3**	**+1.6**
QSPA				IAmb		IAmb	21 53 52.6	
	comp=Z,20nm,0.9s							
PEL	**Peldehue**	**35.67**	**291**	P		**P**	**21 53 55.4**	**-0.3**
PEL				IAmb		IAmb	21 53 56.6	
	comp=Z,32nm,0.9s							
VA03	**San Esteban**	**35.89**	**292**	P		**P**	**21 53 57.8**	**+0.1**
VA03				IAmb		IAmb	21 53 59.6	
	comp=Z,22nm,0.8s							
VA06	**Catapilco**	**36.44**	**291**	P		**P**	**21 54 02.4**	**+0.1**
CO01	**Juntas del Tor**	**37.84**	**295**	P		**P**	**21 54 15.8**	**+1.3**
CO01				IAmb		IAmb	21 54 17.2	
	comp=Z,19nm,0.8s							
GO02	**Mina Guanaco**	**41.53**	**300**	P		**P**	**21 54 45.6**	**+0.3**
GO02				IAmb		IAmb	21 54 47.1	
	comp=Z,29nm,0.6s							
BDFB	**Brasilia**	**41.82**	**334**	P		**P**	**21 54 46.7**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=143,slow=5.1,SNR=1.9							
	comp=Z,1.2nm,0.5s							
BDFB	**Brasilia**	**41.82**	**334**	P		**P**	**21 54 47.0**	**-0.5**
BDFB				IAmb		IAmb	21 56 08.2	
	comp=Z,44nm,1.9s							
MAW	**Mawson**	**41.84**	**145**	P		**P**	**21 54 46.2**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=229,slow=7.6,SNR=7.6							
	comp=Z,2.4nm,0.7s							
MAW	**Mawson**	**41.84**	**145**	P		**P**	**21 54 46.9**	**-0.1**
SUR	**Sutherland**	**42.23**	**79**	LR		LR	22 07 22.4	
	comp=Z,80nm,18.8s,baz=158,slow=29							
SUR	**Sutherland**	**42.23**	**79**	P		**P**	**21 54 50.7**	**-0.1**
SUR				IAmb		IAmb	21 54 54.2	
	comp=Z,70nm,1.6s							
LVC	**Limon Verde**	**43.35**	**303**	P		**P**	**21 55 01.2**	**+1.1**
	comp=Z,16nm,0.8s,baz=186,slow=5.7,SNR=9.8							
LVC				LR		LR	22 12 48.5	
	comp=Z,30nm,20.3s,baz=174,slow=36							
	comp=Z,16nm,0.8s							
LVC	**Limon Verde**	**43.35**	**303**	P		**P**	**21 55 00.7**	**+0.5**
LVC				IAmb		IAmb	21 55 03.0	
	comp=Z,17nm,0.8s							
LVC	**Limon Verde**	**43.35**	**303**	*e*P		**P**	**21 54 60.0**	**-0.2**
PB01	**IPOC Station P**	**44.96**	**304**	P		**P**	**21 55 13.5**	**+0.7**
PTLB	**Pontes e Lacer**	**45.50**	**319**	P		**P**	**21 55 17.2**	**+0.2**
PTLB				IAmb		IAmb	21 55 18.1	
	comp=Z,12nm,0.8s							
PTLB	**Pontes e Lacer**	**45.50**	**319**	*e*P		**P**	**21 55 17.5**	**+0.6**
SIV	**San Ignacio**	**45.74**	**317**	P		**P**	**21 55 18.4**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=146,slow=7.1,SNR=8.6							
	comp=Z,2.5nm,0.7s							
GO01	**Chusmiza**	**46.00**	**305**	P		**P**	**21 55 21.9**	**+0.4**
GO01				IAmb		IAmb	21 55 23.7	
	comp=Z,16nm,0.7s							
SBA	**Scott Base**	**46.72**	**185**	P		**P**	**21 55 27.2**	**+1.3**
VNDA	**Vanda**	**47.26**	**184**	P		**P**	**21 55 30.8**	**+0.7**
	comp=Z,3.6nm,0.8s,baz=194,slow=6.9,SNR=16							
	comp=Z,3.6nm,0.8s							
VNDA	**Vanda**	**47.26**	**184**	P		**P**	**21 55 30.9**	**+0.8**
BOSA	**Boshof**	**47.57**	**80**	P		**P**	**21 55 32.8**	**-0.5**
	comp=Z,3.8nm,0.9s,baz=207,slow=9.2,SNR=2.3							
	comp=Z,3.8nm,0.9s							
BOSA	**Boshof**	**47.57**	**80**	P		**P**	**21 55 33.2**	**-0.1**
BOSA				IAmb		IAmb	21 57 19.5	
	comp=Z,26nm,1.6s							
H10S2	**ASCENSION HYDR**	**47.85**	**21**	T		T	22 47 21.6	
	baz=28,slow=74,SNR=9.6							
H10S3	**ASCENSION HYDR**	**47.85**	**21**	T		T	22 47 16.9	
	baz=192,slow=74,SNR=17							
VILB	**Vilhena**	**48.19**	**319**	P		**P**	**21 55 37.5**	**-0.5**
VILB				IAmb		IAmb	21 55 38.8	
	comp=Z,16nm,0.9s							
VILB	**Vilhena**	**48.19**	**319**	*e*P		**P**	**21 55 38.2**	**+0.2**
PDRB	**Porto dos Gac**	**48.20**	**324**	*e*P		**P**	**21 55 37.8**	**-0.3**
LPAZ	**La Paz**	**48.46**	**308**	P		**P**	**21 55 41.8**	**+1.0**
	comp=Z,13nm,0.7s,baz=140,slow=5.2,SNR=56							
	comp=Z,13nm,0.7s							
LPAZ	**La Paz**	**48.46**	**308**	P		**P**	**21 55 41.0**	**+0.1**
LPAZ				IAmb		IAmb	21 55 43.0	
	comp=Z,16nm,0.8s							
LPAZ	**La Paz**	**48.46**	**308**	*e*P		**P**	**21 55 41.9**	**+1.0**
CLDB	**Colider**	**48.59**	**326**	*e*P		**P**	**21 55 40.7**	**-0.4**
H10N1	**ASCENSION HYDR**	**48.97**	**21**	T		T	22 48 43.1	
	baz=192,slow=75,SNR=16							
H10N3	**ASCENSION HYDR**	**48.97**	**21**	T		T	22 48 39.7	
	baz=192,slow=75,SNR=38							
H10N2	**ASCENSION HYDR**	**48.98**	**21**	T		T	22 48 40.8	
	baz=192,slow=75,SNR=30							
RCBR	**Riachuelo**	**49.50**	**353**	LR		LR	22 14 06.7	
	comp=Z,23nm,18.5s,baz=320,slow=33							
LBTB	**Lobatse**	**50.55**	**77**	P		**P**	**21 55 56.6**	**+0.4**
SAML	**Samuel**	**52.99**	**318**	P		**P**	**21 56 14.4**	**+0.2**
SAML				IAmb		IAmb	21 56 15.2	
	comp=Z,13nm,0.9s							
ETMB	**Extrema**	**53.40**	**314**	P		**P**	**21 56 16.1**	**-1.2**
ETMB				IAmb		IAmb	21 56 20.2	
	comp=Z,6.1nm,0.6s							
ETMB	**Extrema**	**53.40**	**314**	*e*P		**P**	**21 56 16.6**	**-0.7**
NNA	**Nana**	**56.29**	**302**	LR		LR	22 19 56.5	
	comp=Z,21nm,21.3s,baz=131,slow=35							
MALB	**Monte Alegre**	**56.68**	**331**	*e*P		**P**	**21 56 40.6**	**-0.3**
MACA	**Manacapuru-AM**	**57.43**	**323**	P		**P**	**21 56 45.4**	**-0.9**
MACA				IAmb		IAmb	21 56 46.2	
	comp=Z,15nm,0.6s							
MCPB	**Macapa, AP**	**57.52**	**334**	*e*P		**P**	**21 56 46.5**	**-0.4**
CZSB	**Cruzeiro do Su**	**58.07**	**308**	P		**P**	**21 56 50.0**	**-0.8**
CZSB				IAmb		IAmb	21 56 51.0	
	comp=Z,10nm,0.7s							
BOAV	**Boa Vista**	**62.58**	**326**	P		**P**	**21 57 21.1**	**-0.5**
BOAV				IAmb		IAmb	21 57 22.0	
	comp=Z,8.9nm,0.9s							
MDP	**Montagnes des**	**62.92**	**335**	P		**P**	**21 57 24.1**	**+0.

	baz=136							
K02D	**Willamette Mer**	**125.32**	**296**	P		**PKiKP**	**22 05 58.6**	**+0.5**
	baz=136							
I04A	**Tendick Farm,**	**125.46**	**297**	P		**PKiKP**	**22 05 58.2**	**-0.1**
	baz=136							
G03D	**McMinnville, O**	**126.90**	**298**	P		**PKPdf**	**22 06 00.4**	**-0.2**
	baz=135							
FAUS	**Fauske**	**126.98**	**20**	*e*PKPdf		**PKPdf**	**22 06 00.1**	**+0.1**
FAUS				IAmb		IAmb	22 06 00.4	
	comp=Z,2.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**127.04**	**113**	PKP		**PKPdf**	**22 06 01.6**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=235,slow=3.7,SNR=8.3							
STEI	**Steigen**	**127.44**	**20**	*e*PKPdf		**PKiKP**	**22 06 01.7**	**+0.3**
AKTO	**Aktyubinsk**	**128.33**	**55**	PKP		**PKPdf**	**22 06 02.6**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=212,slow=6.2,SNR=3.8							
TRO	**Tromso**	**129.61**	**20**	*e*PKPdf		**PKPdf**	**22 06 05.3**	**+0.3**
KTK1	**Kautokeino**	**129.99**	**22**	*e*PKPdf		**PKPdf**	**22 06 05.7**	**0.0**
ARA0	**ARCESS Array S**	**130.90**	**23**	*e*PKPdf		**PKPdf**	**22 06 07.5**	**+0.1**
ARA0				IAmb		IAmb	22 06 08.5	
	comp=Z,5.6nm,1.1s							
ARCES	**ARCESS Array B**	**130.90**	**23**	PKP		**PKPdf**	**22 06 07.5**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=197,slow=1.6,SNR=20							
YKA	**Yellowknife Ar**	**134.39**	**320**	PKP		**PKPdf**	**22 06 13.7**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=127,slow=1.8,SNR=7.2							
PZH	**PanZhiHua**	**135.07**	**110**	PKP		**PKiKP**	**22 06 17.9**	**-0.4**
SPA0	**Spitsbergen Ar**	**136.18**	**13**	*e*PKPdf		**PKiKP**	**22 06 18.0**	**-0.8**
MKAR	**Makanchi Array**	**138.37**	**73**	PKP		**PKPdf**	**22 06 19.4**	**-2.7**
	comp=Z,0.4nm,0.7s,baz=256,slow=3.6,SNR=2.1							
KURBB	**Kurchatov Arra**	**138.62**	**66**	PKPdf	PKP	PKPpre	22 06 17.4	
	comp=Z,0.3nm,0.2s,baz=255,slow=3.6,SNR=2.0							
R33M	**Jennings River**	**139.32**	**310**	P		**PKPdf**	**22 06 24.0**	**+0.4**
	baz=120							
WMQ	**Urumqi**	**139.53**	**80**	*e*PKP		**PKiKP**	**22 06 26.3**	**-0.5**
SIT	**Sitka**	**140.12**	**305**	P		**PKPdf**	**22 06 25.5**	**+0.6**
	baz=121							
GTA	**Gaotai**	**143.58**	**95**	*e*PKP		**PKPdf**	**22 06 31.3**	**-0.6**
ZALV	**Zalesovo Beam**	**143.66**	**64**	PKP		PKPbc	22 06 28.6	-0.3
	comp=Z,2.1nm,0.6s,baz=227,slow=3.7,SNR=10							
INK	**Inuvik**	**144.00**	**322**	PKP		**PKPab**	**22 06 29.0**	**-0.2**
	comp=Z,7.9nm,0.9s,baz=119,slow=3.3,SNR=7.1							
INK	**Inuvik**	**144.06**	**322**	PKPdf		PKPbc	22 06 29.5	-0.2
TABL	**Table Mountain**	**144.36**	**307**			PKPbc	22 06 31.4	+0.3
LOGN	**Logan Glacier**	**144.45**	**308**			PKPbc	22 06 31.4	+0.1
EPYK	**Eagle Plains**	**144.62**	**318**			PKPbc	22 06 31.8	+0.2
EPYK	**Eagle Plains**	**144.62**	**318**	P		PKPbc	22 06 31.9	+0.3
	baz=109,SNR=5.9							
MESA	**MESA**	**144.63**	**307**	P		PKPbc	22 06 32.4	+0.4
	baz=113							
CTG	**Chitna Glacier**	**144.66**	**308**	P		**PKPab**	**22 06 31.8**	**0.0**
	baz=113,SNR=12							
XAN	**Xi'an**	**144.81**	**110**	PKP		PKPbc	22 06 33.4	+0.2
I29M	**Ogilvie Camp,**	**144.92**	**316**	P		**PKPab**	**22 06 32.2**	**-0.4**
	baz=109,SNR=11							
DAWY	**Dawson**	**144.93**	**314**	P		**PKPab**	**22 06 32.4**	**-0.2**
	baz=110							
ISLE	**Juniper Island**	**144.97**	**307**	PKPdf		PKPbc	22 06 33.0	0.0
BVCY	**Beaver Creek**	**144.98**	**311**	P		PKPbc	22 06 32.8	-0.1
	baz=111							
WAX	**Waxell Ridge**	**145.15**	**307**			**PKPdf**	**22 06 33.9**	**0.0**
M27K	**Edge Creek, AK**	**145.41**	**310**	P		**PKPdf**	**22 06 34.0**	**-0.3**
	baz=110							
MCARA	**McCarthy VSAT**	**145.57**	**308**	P		**PKPdf**	**22 06 34.6**	**+0.1**
	baz=111							
BCAR	**Beaver Creek A**	**145.61**	**311**	PKPdf		**PKPbc**	**22 06 34.8**	**-0.1**
L27K	**Beaver Creek,**	**145.62**	**311**			**PKPdf**	**22 06 34.7**	**+0.1**
L27K	**Beaver Creek,**	**145.62**	**311**	P		**PKPbc**	**22 06 35.0**	**+0.1**
	baz=110							
KAIM	**Kayak Island**	**145.67**	**305**	P		**PKPbc**	**22 06 35.3**	**+0.2**
	baz=112							
EGAK	**Eagle**	**145.89**	**314**	P		**PKPab**	**22 06 36.0**	**-0.1**
	baz=108							
M26K	**Nabesna, AK**	**145.91**	**310**	P		**PKPbc**	**22 06 35.9**	**+0.1**
	baz=110							
GLB	**Gilahina Butte**	**145.94**	**308**	PKPdf		**PKPbc**	**22 06 36.0**	**+0.1**
K27K	**Chicken**	**146.04**	**313**	P		**PKPbc**	**22 06 36.4**	**+0.3**
	baz=108							
BMRM	**Bremner River**	**146.14**	**307**	P		**PKPbc**	**22 06 36.7**	**+0.1**
	baz=111,SNR=10.0							
L26K	**Log Cabin Wild**	**146.27**	**311**	P		**PKPbc**	**22 06 36.9**	**0.0**
	baz=108							
I27K	**Kandik River**	**146.31**	**316**	P		**PKPbc**	**22 06 37.3**	**+0.4**
	baz=106							
N25K	**Chitina, Valde**	**146.35**	**308**	P		**PKPbc**	**22 06 37.5**	**+0.2**
	baz=110							
H27K	**Steamboat Moun**	**146.44**	**317**	P		**PKPbc**	**22 06 37.1**	**-0.2**
	baz=105							
EYAK	**Cordova Ski Ar**	**146.52**	**306**	P		**PKPbc**	**22 06 37.5**	**-0.1**
	baz=110,SNR=5.3							
G27K	**Doyon Strip**	**146.64**	**318**	P		**PKPbc**	**22 06 37.9**	**0.0**
	baz=104,SNR=8.0							
J26L	**Joseph Creek**	**146.80**	**313**			**PKPbc**	**22 06 38.9**	**+0.5**
J26L	**Joseph Creek**	**146.80**	**313**	P		**PKPbc**	**22 06 38.5**	**0.0**
	baz=106							
SCRK	**Sand Creek**	**146.83**	**312**	P		**PKPbc**	**22 06 38.6**	**0.0**
	baz=107							
I26K	**Coal Creek Min**	**146.85**	**315**	P		**PKPbc**	**22 06 38.7**	**+0.2**
	baz=105							
KLU	**Klutina**	**146.92**	**308**	P		**PKPbc**	**22 06 39.2**	**+0.4**
	baz=109							
E27K	**Colleen River**	**146.93**	**320**	P		**PKPbc**	**22 06 38.6**	**-0.1**
	baz=102							
LYN	**LuoYang**	**147.09**	**113**	*e*PKPbc		**PKPbc**	**22 06 39.0**	**-1.0**
P23K	**Montague Islan**	**147.10**	**304**	P		**PKPbc**	**22 06 39.3**	**0.0**
	baz=110							
RIDG	**Independent Ri**	**147.12**	**312**			**PKPbc**	**22 06 39.8**	**+0.5**
RIDG	**Independent Ri**	**147.12**	**312**	P		**PKPbc**	**22 06 39.4**	**+0.1**
	baz=106							
PAX	**Paxson**	**147.17**	**310**			**PKPbc**	**22 06 39.7**	**+0.2**
PAX	**Paxson**	**147.17**	**310**	P		**PKPbc**	**22 06 39.4**	**-0.1**
	baz=107							
M24K	**Tolsona, Glenn**	**147.22**	**309**	P		**PKPbc**	**22 06 40.3**	**+0.6**
	baz=108							
GLI	**Glacier Island**	**147.25**	**306**	P		**PKPbc**	**22 06 39.8**	**0.0**
	baz=109,SNR=11							
G26K	**Porcupine Rive**	**147.49**	**318**	P		**PKPbc**	**22 06 40.2**	**0.0**
	baz=102,SNR=7.6							
K24K	**Donnelly Dome**	**147.54**	**312**	P		**PKPbc**	**22 06 40.5**	**0.0**
	baz=106							
J25K	**Salcha River,**	**147.58**	**313**	P		**PKPbc**	**22 06 40.9**	**+0.3**
	baz=105							
SCM	**Sheep Creek Mo**	**147.66**	**308**			**PKPbc**	**22 06 41.6**	**+0.7**
SCM	**Sheep Creek Mo**	**147.66**	**308**	P		**PKPbc**	**22 06 41.3**	**+0.4**
	baz=108							
F26K	**Sheenjek River**	**147.78**	**319**	P		**PKPbc**	**22 06 41.7**	**+0.7**
	baz=101,SNR=8.4							
PWL	**Port Wells**	**147.82**	**306**	P		**PKPbc**	**22 06 41.5**	**+0.2**
	baz=108,SNR=5.7							
M23K	**Glacier View**	**147.83**	**308**	P		**PKPbc**	**22 06 41.8**	**+0.6**
	baz=108							
PRP	**Porcupine Dome**	**147.86**	**315**	P		**PKPbc**	**22 06 41.4**	**0.0**
	baz=103							
BMAR	**Burnt Mountain**	**147.89**	**319**			**PKPbc**	**22 06 42.2**	**+0.9**
C27K	**Jago River**	**147.94**	**323**	P		**PKPbc**	**22 06 42.0**	**+0.7**
	baz=98							
DHY	**Denali Highway**	**148.04**	**310**			**PKPbc**	**22 06 42.8**	**+0.8**
DHY	**Denali Highway**	**148.04**	**310**	P		**PKPbc**	**22 06 42.2**	**+0.2**
	baz=106							
KNK	**Knik Glacier**	**148.05**	**307**	P		**PKPbc**	**22 06 42.1**	**+0.2**
	baz=108							
WAT6	**Susitna Watana**	**148.06**	**309**	P		**PKPbc**	**22 06 42.2**	**+0.2**
	baz=106							
SEW	**Seward**	**148.10**	**304**	P		**PKPbc**	**22 06 42.1**	**+0.2**
	baz=109							
SML	**Sawmill**	**148.11**	**307**			**PKPbc**	**22 06 42.3**	**+0.2**
SML	**Sawmill**	**148.11**	**307**	P		**PKPbc**	**22 06 42.2**	**+0.1**
	baz=107							
H25K	**Birch Creek**	**148.14**	**316**	P		**PKPbc**	**22 06 42.4**	**+0.5**
	baz=102							
HDA	**Harding Lake**	**148.19**	**313**	P		**PKPbc**	**22 06 42.0**	**-0.2**
	baz=104							
IL31		**148.25**	**313**			**PKPbc**	**22 06 42.4**	**+0.2**
ILAR	**Eielson Array**	**148.25**	**313**	PKPbc		**PKPbc**	**22 06 42.4**	**+0.1**
	comp=Z,19nm,0.8s,baz=126,slow=1.8,SNR=140							
F25K	**Christian Rive**	**148.32**	**319**	P		**PKPbc**	**22 06 42.8**	**+0.3**
	baz=100,SNR=10.0							
E25K	**Arctic Village**	**148.38**	**320**	P		**PKPbc**	**22 06 43.3**	**+0.8**
	baz=99,SNR=16							
C26K	**Camden Bay**	**148.39**	**323**	P		**PKiKP**	**22 06 43.3**	**-0.7**
	baz=97							
WAT1	**Susitna Watana**	**148.49**	**309**	P		**PKPbc**	**22 06 43.0**	**0.0**
	baz=105							
RC01	**Rabbit Creek A**	**148.54**	**306**	P		**PKPbc**	**22 06 43.4**	**+0.3**
	baz=107,SNR=5.2							
BRSE	**Bradley Lake S**	**148.60**	**303**	P		**PKPbc**	**22 06 43.3**	**-0.1**
	baz=109							
COLA	**College**	**148.68**	**313**	P		**PKPbc**	**22 06 42.9**	**-0.4**
	baz=102							
TCOL	**CIGO, UAF Yank**	**148.68**	**313**	P		**PKPbc**	**22 06 43.3**	**0.0**
	baz=102							
RND	**Reindeer**	**148.77**	**310**			**PKPbc**	**22 06 44.3**	**+0.5**
D25K	**Kavik River**	**148.83**	**322**	P		**PKPbc**	**22 06 43.5**	**-0.2**
	baz=96							
KDAK	**Kodiak Island**	**148.85**	**299**			**PKPbc**	**22 06 44.4**	**+0.4**
KDAK	**Kodiak Island**	**148.85**	**299**	P		**PKPbc**	**22 06 44.0**	**0.0**
	baz=111							
G24K	**Hadweenzic Riv**	**148.88**	**317**	P		**PKPbc**	**22 06 44.1**	**+0.3**
	baz=100,SNR=8.1							
H24K	**Noodor Dome**	**148.88**	**315**	P		**PKPbc**	**22 06 43.8**	**-0.2**
	baz=101							
MCK	**McKinley**	**148.88**	**311**	P		**PKPbc**	**22 06 44.1**	**+0.1**
	baz=104							
M22K	**Willow**	**148.91**	**307**	P		**PKPbc**	**22 06 44.5**	**+0.5**
	baz=106,SNR=6.0							
OHAK	**Old Harbor**	**149.01**	**298**			**PKPbc**	**22 06 45.0**	**+0.7**
OHAK	**Old Harbor**	**149.01**	**298**	P		**PKPbc**	**22 06 44.8**	**+0.5**
	baz=111							
Q20K	**Shuyak Island**	**149.04**	**300**	P		**PKPbc**	**22 06 44.9**	**+0.5**
	baz=110							
NEA2	**Nenana**	**149.13**	**312**			**PKPbc**	**22 06 44.2**	**-0.4**
NEA2	**Nenana**	**149.13**	**312**	P		**PKPbc**	**22 06 44.1**	**-0.4**
	baz=102							
F24K	**Squaw Lake**	**149.16**	**318**	P		**PKPbc**	**22 06 45.0**	**+0.4**
	baz=98,SNR=11							
SII	**Sitkinak Islan**	**149.22**	**296**	P		**PKPbc**	**22 06 44.9**	**-0.1**
	baz=112							
I23K	**Minto, Yukon-K**	**149.36**	**313**			**PKPbc**	**22 06 44.8**	**-0.2**
I23K	**Minto, Yukon-K**	**149.36**	**313**	P		**PKPbc**	**22 06 44.6**	**-0.4**
	baz=101							
TRF	**Thorofare Moun**	**149.41**	**310**	P		**PKPbc**	**22 06 45.3**	**-0.2**
	baz=103							
E24K	**Your Creek**	**149.46**	**319**	P		**PKPbc**	**22 06 45.4**	**0.0**
	baz=97							
NRIK	**Noril'sk**	**149.52**	**38**	PKPbc		**PKPbc**	**22 06 45.1**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=348,slow=2.8,SNR=2.2							
H23K	**Yukon River**	**149.55**	**315**	P		**PKPbc**	**22 06 46.0**	**+0.4**
C24K	**Franklin Bluff**	**149.68**	**323**	P		**PKPbc**	**22 06 46.1**	**+0.4**
	baz=94							
D24K	**Happy Valley**	**149.69**	**321**	P		**PKPbc**	**22 06 45.6**	**-0.1**
	baz=95							
Q19K	**Cape Douglas,**	**149.76**	**301**	P		**PKPbc**	**22 06 45.9**	**-0.4**
	baz=108							
P19K	**Oil Pt**	**149.78**	**302**	P		**PKPbc**	**22 06 46.3**	**0.0**
	baz=107							
BPAW	**Bear Paw Mtn.**	**149.85**	**311**			**PKPbc**	**22 06 46.3**	**-0.1**
BPAW	**Bear Paw Mtn.**	**149.85**	**311**	P		**PKPbc**	**22 06 46.5**	**+0.2**
	baz=102,SNR=8.9							
G23K	**Bananza Creek**	**149.88**	**316**	P		**PKPbc**	**22 06 46.7**	**+0.3**
	baz=98,SNR=17							
MLY	**Manley**	**149.91**	**313**	P		**PKPbc**	**22 06 46.1**	**-0.4**
	baz=100,SNR=8.2							
TOLK	**Toolik Lake Re**	**149.91**	**320**	P		**PKPbc**	**22 06 46.8**	**+0.4**
	baz=95							
PPLA	**Puneypile**	**150.12**	**309**	P		**PKPbc**	**22 06 46.8**	**-0.4**
	baz=103,SNR=5.1							
BTO	**Baotou**	**150.16**	**103**	*e*PKPbc		**PKPbc**	**22 06 48.3**	**+0.4**
CAST	**Castle Rocks**	**150.19**	**310**	P		**PKPbc**	**22 06 47.2**	**0.0**
	baz=102,SNR=9.0							
H22K	**Ishtalitna Cre**	**150.31**	**315**	P		**PKiKP**	**22 06 47.8**	**-0.3**
	baz=98,SNR=11							
M20K	**Styx River**	**150.32**	**306**	P		**PKPbc**	**22 06 47.4**	**-0.3**
	baz=104							
D23K	**Nanushuk River**	**150.34**	**321**	P		**PKPbc**	**22 06 47.3**	**0.0**
	baz=93							
C23K	**Itkillik River**	**150.35**	**323**	P		**PKiKP**	**22 06 47.8**	**-0.3**
	baz=92							
CHUM	**Lake Minchumin**	**150.38**	**311**	P		**PKPbc**	**22 06 47.5**	**-0.1**
	baz=101							
HNS	**HongShan**	**150.43**	**113**	⇑PKPbc		**PKPbc**	**22 06 48.4**	**-0.1**
O19K	**Port Alsworth**	**150.46**	**303**	P		**PKPbc**	**22 06 47.6**	**-0.3**
	baz=106							
G22K	**Bettles**	**150.49**	**317**	P		**PKPbc**	**22 06 47.9**	**+0.1**
	baz=96							
N19K	**Bonanza Creek**	**150.70**	**304**			**PKPbc**	**22 06 48.2**	**-0.4**
N19K	**Bonanza Creek**	**150.70**	**304**	P		**PKPbc**	**22 06 47.9**	**-0.6**
	baz=105							
E22K	**Anaktuvuk Pass**	**150.71**	**319**	P		**PKPbc**	**22 06 48.7**	**+0.4**
	baz=94							
R17K	**Ugashik Creek**	**150.72**	**297**	P		**PKPbc**	**22 06 48.9**	**+0.3**
	baz=109							
O18K	**Koktuh Hills**	**150.79**	**302**	P		**PKPbc**	**22 06 48.4**	**-0.3**
	baz=106							
L20K	**Farewell, AK**	**150.80**	**307**	P		**PKPbc**	**22 06 48.4**	**-0.2**
	baz=102							
F22K	**John River**	**150.80**	**318**	P		**PKPbc**	**22 06 48.7**	**+0.2**
	baz=94							
H21K	**Melozitna Rive**	**150.86**	**314**	P		**PKPbc**	**22 06 49.0**	**+0.3**
	baz=97,SNR=8.6							
M19K	**Big River Lodg**	**150.91**	**306**	P		**PKPbc**	**22 06 48.9**	**0.0**
	baz=103							
K20K	**Telida**	**151.05**	**309**	P		**PKPbc**	**22 06 49.3**	**+0.1**
	baz=100,SNR=6.5							
L19K	**White Mountain**	**151.18**	**307**	P		**PKPbc**	**22 06 49.6**	**0.0**
	baz=102							
HHC	**Hu-ho-hao-te**	**151.19**	**104**	*e*PKPbc		**PKPdf**	**22 06 41.3**	**-3.2**
P17K	**Kvichak River**	**151.22**	**300**	P		**PKPbc**	**22 06 49.4**	**-0.2**
	baz=106							
J20K	**Nowinta River**	**151.22**	**311**	P		**PKiKP**	**22 06 50.1**	**+0.1**
	baz=99							
G21K	**Allakaket**	**151.24**	**316**	P		**PKiKP**	**22 06 50.1**	**+0.1**
	baz=95							
F21K	**Alatna River**	**151.28**	**317**	P		**PKiKP**	**22 06 50.1**	**0.0**
	baz=94							
IMAR	**Indian Mountai**	**151.29**	**315**			**PKiKP**	**22 06 50.4**	**+0.2**
CHGN	**Chignik**	**151.33**	**294**	P		**PKPbc**	**22 06 50.0**	**0.0**
	baz=110							
N18K	**Kilae Creek**	**151.33**	**303**	P		**PKPbc**	**22 06 49.9**	**0.0**
	baz=104							
CNBA	**Chernabura Isl**	**151.41**	**290**			**PKPbc**	**22 06 50.1**	**-0.1**
CHNA	**Chernabura Isl**	**151.42**	**290**	P		**PKPbc**	**22 06 50.1**	**-0.1**
	baz=112							
O17K	**Koliganek Bris**	**151.69**	**301**	P		**PKPbc**	**22 06 50.3**	**-0.4**
	baz=105							
S14K	**Fog Glacier**	**151.92**	**293**	P		**PKPbc**	**22 06 51.0**	**-0.5**
	baz=110							
SDPT	**Sand Point**	**152.08**	**291**	P		**PKPbc**	**22 06 51.2**	**-0.5**
	baz=111							
O16K	**Kokwok River B**	**152.14**	**301**	P		**PKPbc**	**22 06 51.1**	**-0.6**
	baz=104							
SONM	**Songino Array**	**152.50**	**87**	PKPbc		**PKPbc**	**22 06 52.7**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=218,slow=3.6,SNR=28							
KSRS	**Korea Array**	**156.89**	**131**	PKPab		**PKPab**	**22 07 22.1**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=225,slow=4.0,SNR=7.4							

JMA 20 21:51:16.3±0.1, 37.4N±0.4×141.7E±0.8, h43km±2km, MV2.6/36, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.69**	**270**	P	Pn	21 51 29.7	0.0
JFK				S	Sn	21 51 39.0	-0.3
JMST	**Minamisoumatoc**	**0.76**	**298**	P	Pn	21 51 30.5	-0.1
JMST				S	Sn	21 51 40.6	-0.4
ONAJ	**Iwakimizuishiy**	**0.80**	**250**	P	Pn	21 51 31.2	0.0
ONAJ				S	Sn	21 51 41.4	-0.6
JMM	**Marumori**	**0.90**	**303**	P	Pn	21 51 32.5	+0.1
JMM				S	Sn	21 51 44.3	+0.1
JIKH	**Ishinomakikobu**	**0.96**	**347**	P	Pn	21 51 33.4	+0.1
JIKH				S	Sn	21 51 45.2	-0.6
JFFD	**Fukushimafurud**	**0.98**	**254**	*i* P	Pn	21 51 33.8	+0.2
JFFD				S	Sn	21 51 46.2	-0.1
JIO	**Ouri**	**1.12**	**344**	P	Pn	21 51 35.8	+0.3
JIO				S	Sn	21 51 49.2	-0.5
JFT	**Otama**	**1.12**	**278**	P	Pn	21 51 36.7	+1.1
JFT				S	Sn	21 51 50.8	+0.9
JHO	**Hitachi**	**1.21**	**231**	P	Pn	21 51 36.7	0.0
JOU	**Okura**	**1.30**	**320**	P	Pn	21 51 39.0	+1.0
JFY	**Yanaizu**	**1.62**	**272**	*e*P	Pn	21 51 43.8	+1.5
JMK	**Ichinoseki**	**1.63**	**346**	P	Pn	21 51 43.5	+1.0
JMK				*e*S	Sn	21 52 02.9	+0.8

*JMA **20** 21:51:45.8±0.4, 43.4N±1.0×147.7E±, h12km±3km, MV4.1/28, E OFF HOKKAIDO*
*NIED **20** 21:51:45.8, 43.44N×147.39E, h12km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.25; $M_{\theta\theta}$2.67; $M_{\phi\phi}$-2.41; $M_{r\theta}$1.74; $M_{\theta\phi}$0.51; $M_{\phi r}$2.16; Fault plane solution: $M_0$3.80000×10^{14} NP1: ϕ_s128.00000°, δ43.00000°, λ-4.00000°. NP2:ϕ_s221.00000°, δ87.00000°, λ-133.00000°.*

*SKHL **20** 21:51:46.1±0.6, 43.50N×147.70E, h62km±8km, mb4.7/3*
*MOS **20** 21:51:51.9±3.3, 44.24N×147.03E, h53km, mb4.3/1, Error ellipse: s-maj=17.1km s-min=13.6km az=85.1*
*IDC **20** 21:51:59.5±15.0, 44.77N×147.02E, h92km±138km, mb3.4/10, mbtmp3.7/10, MS2.8/4, Error ellipse: s-maj=32.5km s-min=20.5km az=88.0*

ISC 20 21:51:45.9±1.1, 43.51N±0.09×147.7E±0.1, h36km±3km, n47, σ1.02/41, mb3.8/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.40**	**265**	*e*P	**Pn**	**21 52 08.0**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**1.41**	**293**	*e*PN	**Pn**	**21 52 08.2**	**-0.7**
YUK				*e*S	**Sn**	**21 52 25.2**	**-0.9**
YUK				pmax	pmax		
	comp=Z,537nm,0.2s						
YUK				pmax	pmax		
	comp=E,304nm,0.1s						
YUK				smax	smax		
	comp=N,3μm,0.3s						
YUK				smax	smax		
	comp=E,4μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.41**	**293**	*e*P	**Pn**	**21 52 08.4**	**-0.5**
YUK				AMB	AMB	21 52 11.0	
	comp=E,440nm,0.3s						
YUK				*e*S	**Sn**	**21 52 25.1**	**-1.0**
YUK				A	A	21 52 25.9	
	comp=E,3μm,0.5s						
YUK				A	A	21 52 25.9	
	comp=E,4μm,0.5s						
NMR	**Nemuro--Hokkai**	**1.41**	**265**	*e*PN	**Pn**	**21 52 08.5**	**-0.5**
NMR				*e*S	**Sn**	**21 52 25.6**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.41**	**265**	*e*P	**Pn**	**21 52 08.5**	**-0.5**
NMR				AMB	AMB	21 52 12.1	
	comp=E,70nm,0.2s						
NMR				*e*S	**Sn**	**21 52 25.6**	**-0.7**
NMR				A	A	21 52 27.9	
	comp=E,490nm,0.3s						
NMR				A	A	21 52 27.9	
	comp=E,640nm,0.3s						
KUR	**Kuril'sk**	**1.73**	**5**	*e*PN	**Pn**	**21 52 13.3**	**-0.1**
KUR				pmax	pmax		
	comp=Z,288nm,0.3s						
KUR	**Kuril'sk**	**1.73**	**5**	*e*P	**Pn**	**21 52 13.3**	**-0.1**
KUR				AMB	AMB	21 52 16.8	
	comp=Z,230nm,0.3s						
KUR				*i* S	**Sn**	**21 52 33.7**	**-0.5**
KUR				A	A	21 52 36.4	
	comp=Z,470nm,0.2s						
KUR				A	A	21 52 36.4	
	comp=Z,220nm,0.2s						
RUSJ	**Misakicho**	**1.84**	**290**	*e*PN	**Pn**	**21 52 16.3**	**+1.4**
JKHN	**Kushirohamanak**	**1.87**	**258**	*e*P	**Pn**	**21 52 15.8**	**+0.5**
JRA	**Rausu**	**1.89**	**284**	*e*P	**Pn**	**21 52 15.9**	**+0.4**
JNSB	**Nemuroshibetsu**	**1.94**	**279**	*e*P	**Pn**	**21 52 16.6**	**+0.3**
JNK	**Nakash**	**2.14**	**273**	*e*P	**Pn**	**21 52 18.8**	**-0.1**
JNK				*e*S	**Sn**	**21 52 43.4**	**-0.8**
JAK	**Akkeshi**	**2.22**	**258**	*e*P	**Pn**	**21 52 20.4**	**+0.2**
JTKR	**Abashiri--Toko**	**2.76**	**281**	*e*P	**Pn**	**21 52 28.4**	**+1.0**
JAR	**Ashorobuto**	**2.84**	**267**	*e*P	**Pn**	**21 52 29.6**	**+1.0**
JAR				*e*S	**Sn**	**21 53 01.5**	**-0.1**
JMP	**Maruseppu**	**3.15**	**281**	*e*P	**Pn**	**21 52 35.2**	**+2.3**
JCH	**Churui**	**3.27**	**256**	*e*P	**Pn**	**21 52 34.9**	**+0.4**
JFR	**Furan**	**3.71**	**266**	*e*P	**Pn**	**21 52 42.3**	**+1.7**
JNBK	**Urakawa-nobuka**	**3.81**	**253**	*e*P	**Pn**	**21 52 43.3**	**+1.4**
YSS	**Yuzh-Sakhalins**	**4.89**	**317**	*e*PN	**Pn**	**21 52 58.3**	**+1.6**
YSS	**Yuzh-Sakhalins**	**4.89**	**317**	*e*P	**Pn**	**21 52 59.1**	**+2.4**
YSS				*e*S	**Sn**	**21 53 50.9**	**-1.1**
KLR	**Kul'dur**	**12.38**	**303**	LR	LR	21 59 21.6	
	comp=Z,37nm,19.9s,baz=142,slow=39						
KSRS	**Korea Array**	**16.17**	**255**	LR	LR	22 02 07.5	
	comp=Z,19nm,19.9s,baz=100,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.68**	**140**	T	T	22 28 30.6	
	baz=330,slow=75,SNR=154						
H11N1	**WAKE ISLAND Hy**	**28.69**	**140**	T	T	22 28 31.7	
	baz=330,slow=75,SNR=136						
H11N3	**WAKE ISLAND Hy**	**28.69**	**140**	T	T	22 28 31.9	
	baz=330,slow=75,SNR=165						
SONM	**Songino Array**	**28.91**	**293**	P	**P**	**21 57 41.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=74,slow=8.6,SNR=2.6						
	comp=Z,0.3nm,0.4s				

mbtmp4.0/5,Error ellipse: s-maj=48.8km s-min=23.4km az=78.0
NEIC 20 22:04:26.6±1.4,55°.3S±0°.1×30°.55W±0°.08,h10km±1km, mb4.3/8,Error ellipse: s-maj=20.4km s-min=7.4km az=173.0

ISC 20 22:04:26.5±0.7,**55°.18S**±0°.09×**30°.6W**±0°.1,**h10km**,**n23**, σ1.**72**/20,**mb4.2/4**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.56**	**282**	Pn	**Pn**	**22 05 22.5**	**+0.8**
ORCD	**Orcadas**	**9.36**	**228**	Pn	**Pn**	**22 06 40.1**	**-1.2**
VNA1	**Neumayer--Stat**	**18.34**	**156**	P	**P**	**22 08 42.5**	**+1.8**
VNA3	**Neumayer Olymp**	**18.47**	**159**	P	**P**	**22 08 39.9**	**-2.3**
VNA2	**Neumayer--Watz**	**18.74**	**156**	P	**Pn**	**22 08 50.0**	**+4.5**
	baz=291,slow=11						
PMSA	**Palmer Station**	**19.07**	**226**	P	**Pn**	**22 08 49.7**	**+0.2**
SNAA	**Sanae**	**20.33**	**155**	P	**P**	**22 08 59.8**	**-2.6**
	1.0nm,0.6s,baz=311,slow=10,SNR=3.9 1.0nm,0.6s						
SNAA	**Sanae**	**20.33**	**155**	P	**P**	**22 09 00.5**	**-2.0**
MG05	**Puerto Natales**	**24.96**	**261**	P	**P**	**22 09 50.4**	**+0.6**
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**22 11 19.3**	**-0.1**
	2.5nm,0.9s,baz=194,slow=8.1,SNR=9.2 2.5nm,0.9s						
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**22 11 18.9**	**-0.6**
QSPA				IAmb	IAmb	22 11 21.6	
	comp=Z,4.2nm,1.1s						
LPAZ	**La Paz**	**48.33**	**308**	P	**P**	**22 13 10.2**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=212,slow=4.4,SNR=2.5 comp=Z,0.9nm,0.5s						
LPAZ	**La Paz**	**48.33**	**308**	P	**P**	**22 13 08.4**	**-0.4**
LPAZ				IAmb	IAmb	22 13 17.1	
	comp=Z,2.6nm,1.1s						
H10N1	**ASCENSION HYDR**	**48.92**	**21**	T	T	23 04 20.6	
	baz=193,slow=75,SNR=3.5						
H10N3	**ASCENSION HYDR**	**48.92**	**21**	T	T	23 04 20.2	
	baz=193,slow=75,SNR=5.5						
H10N2	**ASCENSION HYDR**	**48.93**	**21**	T	T	23 04 21.5	
	baz=193,slow=75,SNR=5.5						
RCBR	**Riachuelo**	**49.40**	**353**	P	**P**	**22 13 15.1**	**-1.2**
	comp=Z,20nm,1.0s,baz=184,slow=7.5,SNR=3.7 comp=Z,20nm,1.0s						
LBTB	**Lobatse**	**50.63**	**77**	P	**P**	**22 13 26.3**	**+0.5**
TOA0	**Torodi Ar. Sit**	**73.30**	**33**	P	**P**	**22 15 58.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**73.30**	**33**	P	**P**	**22 15 57.9**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=189,slow=5.9,SNR=4.2 comp=Z,0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.30**	**33**	P	**P**	**22 15 58.2**	**+0.2**
ILAR	**Eielson Array**	**148.12**	**313**	PKPbc	**PKPbc**	**22 24 10.6**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=118,slow=1.5,SNR=11						
SONM	**Songino Array**	**152.59**	**87**	PKPbc	**PKPbc**	**22 24 20.4**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=213,slow=3.0,SNR=4.5						

IDC 20 22:04:51.0±0.7,29°.34S×61°.11E,h0km,mb3.9/11, mbtmp4.0/12,ML4.5/1,MS3.5/18,Error ellipse: s-maj=30.6km s-min=20.4km az=28.0
NEIC 20 22:04:53.4±1.1,29°.2S±0°.1×61°.0E±0°.2, h10km±1km, mb4.5/12,Error ellipse: s-maj=25.6km s-min=18.6km az=235.0

ISC 20 22:04:52.9±0.6,**29°.2S**±0°.1×**61°.0E**±0°.1,**h10km**,**n57**, σ0.**90**/35,**mb4.3**/16,**MS3.5**/18,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.35**	**328**		**Pn**	**22 07 05.0**	**-2.8**
FOMA	**Nahampoana Res**	**13.20**	**285**	Pn	**Pn**	**22 07 58.6**	**-1.9**
VOI	**Vohitsoka**	**14.76**	**296**		**Pn**	**22 08 21.7**	**-0.2**
ABPO	**Ambohimpanom**	**16.17**	**306**	Pn	**Pn**	**22 08 39.5**	**-0.9**
OPO	**Ambohidratompo**	**16.50**	**307**	Pn	**Pn**	**22 08 44.7**	**0.0**
	0.2nm,0.3s,baz=114,slow=14,SNR=9.7						
OPO				Sn	Sn	22 11 32.5	-15
	0.1nm,0.3s,baz=111,slow=21,SNR=2.3 4.4nm,0.7s						
H08S1	**Diego Carcia H**	**24.03**	**29**	T	T	22 35 21.2	
	baz=204,slow=76						
H08S2	**Diego Garcia H**	**24.04**	**29**	T	T	22 35 21.6	
	baz=204						
H08S3	**Diego Garcia H**	**24.05**	**29**	T	T	22 35 23.2	
	baz=204,slow=76						
BOSA	**Boshof**	**31.24**	**262**	P	**P**	**22 11 12.2**	**-0.7**
	6.7nm,1.1s,baz=84,slow=13,SNR=4.3						
BOSA				LR	LR	22 22 16.0	
	comp=Z,41nm,18.5s,baz=164,slow=33 6.7nm,1.1s						
LBTB	**Lobatse**	**31.73**	**269**	LR	LR	22 21 41.4	
	comp=Z,39nm,19.6s,baz=112,slow=32						
LSZ	**Lusaka**	**33.28**	**288**	P	**P**	**22 11 31.4**	**+0.5**
SUR	**Sutherland**	**34.54**	**254**	LR	LR	22 23 35.0	
	comp=Z,52nm,18.9s,baz=121,slow=32						
KMBO	**Kilima Mbogo**	**35.98**	**317**	LR	LR	22 23 17.4	
	comp=Z,89nm,19.1s,baz=97,slow=31						
MAW	**Mawson**	**38.41**	**179**	LR	LR	22 23 44.8	
	comp=Z,98nm,20.0s,baz=335,slow=30						
TSUM	**Tsumeb**	**40.66**	**274**	LR	LR	22 27 59.1	
	comp=Z,39nm,19.1s,baz=148,slow=34						
ATD	**Arta Tunnel**	**44.16**	**334**	LR	LR	22 28 34.1	
	comp=Z,93nm,20.6s,baz=152,slow=32						
H01W2	**Cape Leeuwin H**	**44.93**	**111**	T	T	23 01 07.8	
	baz=261,slow=75,SNR=16						
H01W3	**Cape Leeuwin H**	**44.94**	**111**	T	T	23 01 14.4	
	baz=261,slow=75,SNR=15						
H01W1	**Cape Leeuwin H**	**44.95**	**111**	T	T	23 01 16.0	
	baz=261,slow=75,SNR=16						
WSAR	**Wadi Sarin**	**52.22**	**357**	LR	LR	22 31 09.6	
	comp=Z,20nm,20.7s,baz=219,slow=30						
SNAA	**Sanae**	**54.35**	**200**	LR	LR	22 31 47.6	
	comp=Z,40nm,22.0s,baz=110,slow=30						
QSPA	**South Pole Qui**	**60.92**	**180**	P	**P**	**22 15 06.1**	**+0.3**
EIL	**Elat**	**63.64**	**335**	LR	LR	22 39 20.5	
	comp=Z,72nm,21.8s,baz=264,slow=32						
VNDA	**Vanda**	**63.99**	**166**	P	**P**	**22 15 24.3**	**-1.6**
	0.8nm,0.9s,baz=265,slow=7.3,SNR=3.0 0.8nm,0.9s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**22 15 29.1**	**-1.4**
	1.3nm,0.9s,baz=244,slow=5.9,SNR=10 1.3nm,0.9s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**22 15 30.1**	**-0.4**
LSA	**Lhasa**	**65.28**	**29**	P	**P**	**22 15 35.4**	**-0.1**
LSA				IAmb	IAmb	22 15 37.7	
	comp=Z,4.5nm,1.2s						
WRA	**Warramunga Arr**	**66.37**	**100**	P	**P**	**22 15 41.9**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=251,slow=5.8,SNR=5.0 comp=Z,1.0nm,0.9s						
GNI	**Garni**	**70.67**	**347**	LR	LR	22 45 26.6	
	comp=Z,55nm,20.4s,baz=170,slow=34						
TOA0	**Torodi Ar. Sit**	**71.06**	**298**	P	**P**	**22 16 11.9**	**+0.4**
TOA0				IAmb	IAmb	22 16 15.1	
	comp=Z,5.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**71.06**	**298**	P	**P**	**22 16 12.4**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=115,slow=5.3,SNR=5.9 comp=Z,1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.06**	**298**	P	**P**	**22 16 11.9**	**+0.3**
TORD				IAmb	IAmb	22 16 15.1	
	comp=Z,3.6nm,1.1s						
KK31	**Karatay Array**	**72.51**	**7**	P	**P**	**22 16 20.1**	**+0.5**
KK31				IAmb	IAmb	22 16 24.6	
	comp=Z,4.2nm,1.4s						
KKAR	**Karatay Array**	**72.51**	**7**	P	**P**	**22 16 20.0**	**+0.3**
BRTR	**Keskin Array B**	**73.19**	**338**	P	**P**	**22 16 24.4**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=140,slow=9.7,SNR=4.5 comp=Z,0.5nm,0.8s						
KBZ	**Khabaz**	**74.48**	**346**	LR	LR	22 47 03.9	
	comp=Z,51nm,21.6s,baz=173,slow=34						
MK31	**Makanchi Array**	**78.08**	**15**	P	**P**	**22 16 51.2**	**-0.4**
MKAR	**Makanchi Array**	**78.08**	**15**	P	**P**	**22 16 51.2**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=187,slow=4.9,SNR=8.2 comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**78.08**	**15**	P	**P**	**22 16 51.8**	**+0.2**
ABKAR	**Akbulak array**	**78.14**	**359**	P	**P**	**22 16 52.1**	**+0.2**
ABKAR	**Akbulak array**	**78.14**	**359**	P	**P**	**22 16 52.2**	**+0.4**
ABKAR				IAmb	IAmb	22 16 53.2	
	comp=Z,1.7nm,0.8s						
AKTO	**Aktyubinsk**	**79.36**	**358**	LR	LR	22 48 59.2	
	comp=Z,26nm,21.0s,baz=182,slow=33						
MLR	**Muntele Rosu**	**80.92**	**336**	LR	LR	22 51 44.2	
	comp=Z,18nm,19.6s,baz=116,slow=35						
KURBB	**Kurchatov Arra**	**81.00**	**11**	LR	LR	22 50 40.2	
	comp=Z,27nm,18.4s,baz=200,slow=34						
KURK	**Kurchatov**	**81.11**	**11**	P	**P**	**22 17 08.2**	**+0.2**
KURK				IAmb	IAmb	22 17 09.6	
	comp=Z,4.0nm,1.1s						
BELG	**Belogornoye**	**82.12**	**352**	LR	LR	22 52 51.1	
	comp=Z,14nm,21.2s,baz=148,slow=35						
BVAR	**Borovoye Array**	**82.32**	**6**	LR	LR	22 51 55.5	
	comp=Z,27nm,18.9s,baz=86,slow=34						
AKASG	**Malin Array Be**	**84.41**	**340**	P	**P**	**22 17 24.9**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=153,slow=3.8,SNR=4.5						
AKASG				LR	LR	22 54 04.4	
	comp=Z,21nm,19.5s,baz=180,slow=35 comp=Z,0.4nm,0.5s						
ARU	**Arti**	**85.35**	**359**	P	**P**	**22 17 30.3**	**+0.6**
ZAA0	**Zalesovo Array**	**85.37**	**14**	P	**P**	**22 17 29.3**	**-0.5**
ZAA0				IAmb	IAmb	22 17 33.4	
	comp=Z,4.8nm,1.1s						
ZALV	**Zalesovo Beam**	**85.37**	**14**	P	**P**	**22 17 29.9**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=218,slow=6.6,SNR=6.7 comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**86.87**	**29**	P	**P**	**22 17 38.1**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=191,slow=2.9,SNR=2.9 comp=Z,0.2nm,0.5s						
ESDC	**Sonseca Array**	**91.36**	**316**	P	**P**	**22 18 00.2**	**+1.3**
	comp=Z,2.2nm,1.3s,baz=116,slow=3.0,SNR=4.5 comp=Z,2.2nm,1.3s						
YKA	**Yellowknife Ar**	**146.61**	**356**	PKPbc	**PKPbc**	**22 24 33.9**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=352,slow=3.8,SNR=5.9						
PDAR	**Pinedale Array**	**164.51**	**333**	PKP	**PKPdf**	**22 24 57.4**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=114,slow=1.1,SNR=7.5						
TXAR	**Lajitas Array**	**166.63**	**274**	PKP	**PKPdf**	**22 25 00.1**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=116,slow=2.1,SNR=4.9						
NVAR	**Mina Array Bea**	**170.81**	**357**	PKP	**PKPdf**	**22 25 03.1**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=0.0,slow=3.6,SNR=4.5						

IDC 20 22:30:24.4±0.5,55°.13S×30°.85W,h0km,mb4.4/11, mbtmp4.4/12,ML3.4/1,MS3.6/18,Error ellipse: s-maj=20.7km s-min=15.0km az=56.0
NEIC 20 22:30:26.8±1.3,55°.2S±0°.1×30°.9W±0°.2,h10km±1km, mb4.7/34,Error ellipse: s-maj=19.4km s-min=15.0km az=206.0

ISC 20 22:30:26.1±0.4,**55°.16S**±0°.08×**30°.90W**±0°.08,**h10km**,**n165**, σ0.**51**/141,**mb4.7**/23,**MS3.7**/17,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.35**	**283**	Pn	**Pn**	**22 31 17.8**	**-0.7**
VNA1	**Neumayer--Stat**	**18.44**	**156**	P	**Pn**	**22 34 43.0**	**+1.6**
VNA3	**Neumayer Olymp**	**18.57**	**158**	P	**P**	**22 34 42.6**	**-0.2**
VNA2	**Neumayer--Watz**	**18.84**	**156**	P	**Pn**	**22 34 46.3**	**0.0**
	baz=308,slow=13						
PMSA	**Palmer Station**	**18.95**	**226**	P	**P**	**22 34 47.0**	**+0.2**
	0.1nm,0.3s,baz=72,slow=9.0,SNR=7.3						
PMSA				LR	LR	22 40 34.6	
	comp=Z,62nm,19.8s,baz=120,slow=32 6.5nm,0.9s						
PMSA	**Palmer Station**	**18.95**	**226**	P	**P**	**22 34 46.1**	**-0.7**
SNAA	**Sanae**	**20.44**	**155**	P	**P**	**22 35 02.9**	**-0.2**
	7.4nm,0.8s,baz=310,slow=9.2,SNR=29 7.4nm,0.8s						
SNAA	**Sanae**	**20.44**	**155**	P	**P**	**22 35 02.4**	**-0.8**
SNAA				IAmb	IAmb	22 35 14.7	
	comp=Z,28nm,1.0s						
SMAI	**San Martin Ant**	**21.13**	**218**	P	**P**	**22 35 11.4**	**+0.8**
TROLL	**Troll, Antarti**	**22.00**	**153**	P	**P**	**22 35 19.3**	**-0.8**
BELA	**Belgrano 2**	**22.86**	**182**	P	**P**	**22 35 28.2**	**-0.8**
MG05	**Puerto Natales**	**24.77**	**261**	P	**P**	**22 35 46.7**	**-0.9**
GO09	**Cerro Castillo**	**24.84**	**262**	P	**P**	**22 35 47.6**	**-0.8**
TRQA	**Tornquist**	**27.03**	**296**	P	**P**	**22 36 09.4**	**+1.1**
PLTB	**Pedras Altas**	**28.36**	**316**	P	**P**	**22 36 21.1**	**+1.0**
PLTB				IAmb	IAmb	22 37 00.1	
	comp=Z,29nm,1.4s						
PLCA	**Paso Flores**	**29.76**	**282**	LR	LR	22 48 19.2	
	comp=Z,96nm,19.5s,baz=168,slow=36						
CPUP	**Villa Florida**	**34.66**	**315**	P	**P**	**22 37 15.1**	**-0.5**
	comp=Z,11nm,0.8s,baz=151,slow=6.8,SNR=17						
CPUP				LR	LR	22 51 27.7	
	comp=Z,44nm,18.3s,baz=218,slow=36 comp=Z,11nm,0.8s						
CPUP	**Villa Florida**	**34.66**	**315**	P	**P**	**22 37 15.8**	**+0.2**
CPUP				IAmb	IAmb	22 37 16.6	
	comp=Z,12nm,0.8s						
MT09	**Talagante**	**35.02**	**291**	P	**P**	**22 37 19.4**	**+0.6**
QSPA	**South Pole Qui**	**35.10**	**180**	P	**P**	**22 37 19.4**	**+0.2**
	comp=Z,8.0nm,1.0s,baz=199,slow=2.7,SNR=16 comp=Z,8.0nm,1.0s						
QSPA	**South Pole Qui**	**35.10**	**180**	P	**P**	**22 37 19.6**	**+0.4**
QSPA				IAmb	IAmb	22 37 23.5	
	comp=Z,15nm,1.2s						
MT02	**Curacav**	**35.50**	**291**	P	**P**	**22 37 23.1**	**+0.3**
VA06	**Catapilco**	**36.12**	**292**	P	**P**	**22 37 28.4**	**+0.3**
CO02	**Combarbal**	**37.02**	**294**	P	**P**	**22 37 36.6**	**+0.7**
CO01	**Juntas del Tor**	**37.53**	**296**	P	**P**	**22 37 42.0**	**+1.6**
AC05	**El Transito**	**38.54**	**297**	P	**P**	**22 37 49.2**	**+0.5**
AC05				IAmb	IAmb	22 37 56.9	
	comp=Z,11nm,0.9s						
GO02	**Mina Guanaco**	**41.21**	**301**	P	**P**	**22 38 12.1**	**+0.9**
GO02				IAmb	IAmb	22 38 25.5	
	comp=Z,30nm,1.2s						
MAW	**Mawson**	**42.10**	**145**	P	**P**	**22 38 17.6**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=237,slow=9.7,SNR=4.4 comp=Z,2.6nm,0.8s						
MAW	**Mawson**	**42.10**	**145**	P	**P**	**22 38 18.1**	**+0.4**
SUR	**Sutherland**	**42.50**	**79**	P	**P**	**22 38 20.9**	**-0.6**
	comp=Z,10nm,1.1s,baz=201,slow=14,SNR=2.6 comp=Z,10nm,1.1s						
LVC	**Limon Verde**	**43.04**	**304**	P	**P**	**22 38 25.5**	**-0.7**
	comp=Z,8.9nm,0.9s,baz=135,slow=1.4,SNR=5.1 comp=Z,8.9nm,0.9s						
LVC	**Limon Verde**	**43.04**	**304**	P	**P**	**22 38 26.8**	**+0.6**
LVC				IAmb	IAmb	22 38 52.7	
	comp=Z,20nm,1.2s						
PB01	**IPOC Station P**	**44.65**	**304**	P	**P**	**22 38 39.5**	**+0.6**
PB01				IAmb	IAmb	22 38 40.8	
	comp=Z,11nm,0.8s						
PTLB	**Pontes e Lacer**	**45.22**	**320**	P	**P**	**22 38 43.6**	**+0.3**
PTLB				IAmb	IAmb	22 38 44.5	
	comp=Z,11nm,0.7s						
SIV	**San Ignacio**	**45.46**	**317**	P	**P**	**22 38 45.1**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=151,slow=9.1,SNR=8.1						
SIV				LR	LR	22 57 47.0	
	comp=Z,43nm,18.8s,baz=116,slow=36 comp=Z,1.9nm,0.7s						
GO01	**Chusmiza**	**45.69**	**305**	P	**P**	**22 38 48.1**	**+0.5**
GO01				IAmb	IAmb	22 38 49.8	
	comp=Z,6.9nm,0.8s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**22 38 59.5**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=206,slow=4.2,SNR=12 comp=Z,1.8nm,0.8s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**22 39 00.3**	**+0.9**
BOSA	**Boshof**	**47.84**	**80**	P	**P**	**22 39 04.0**	**+0.1**
	comp=Z,5.3nm,0.9s,baz=248,slow=9.4,SNR=5.3						
BOSA				LR	LR	22 55 15.8	
	comp=Z,31nm,20.0s,baz=178,slow=31 comp=Z,5.3nm,0.9s						
BOSA	**Boshof**	**47.84**	**80**	P	**P**	**22 39 03.6**	**-0.4**
H10S2	**ASCENSION HYDR**	**47.85**	**22**	T	T	23 30 50.6	
	baz=28,slow=74,SNR=8.0						
H10S3	**ASCENSION HYDR**	**47.85**	**22**	T	T	23 30 49.9	
	baz=192,slow=74,SNR=17						
VILB	**Vilhena**	**47.91**	**320**	P	**P**	**22 39 04.5**	**+0.1**
VILB				IAmb	IAmb	22 39 27.1	
	comp=Z,9.9nm,0.9s						
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**22 39 07.9**	**+0.9**
	comp=Z,4.8nm,0.4s,baz=133,slow=3.6,SNR=31 comp=Z,4.8nm,0.4s						
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**22 39 07.7**	**+0.7**
LPAZ				IAmb	IAmb	22 39 08.5	
	comp=Z,14nm,1.2s						
H10N1	**ASCENSION HYDR**	**48.97**	**22**	T	T	23 32 14.7	
	baz=192,slow=75,SNR=16						
H10N3	**ASCENSION HYDR**	**48.97**	**22**	T	T	23 32 05.8	
	baz=192,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**48.98**	**22**	T	T	23 32 16.9	
	baz=192,slow=75,SNR=25						
LBTB	**Lobatse**	**50.82**	**77**	LR	LR	22 57 43.2	
	comp=Z,14nm,19.5s,baz=185,slow=32						
LBTB	**Lobatse**	**50.82**	**77**	P	**P**	**22 39 26.6**	**-0.2**
LBTB				IAmb	IAmb	22 39 35.2	
	comp=Z,8.4nm,0.9s						
TSUM	**Tsumeb**	**51.16**	**65**	LR	LR	22 56 20.7	
	comp=Z,47nm,19.7s,baz=141,slow=30						
ETMB	**Extrema**	**53.11**	**315**	P	**P**	**22 39 43.9**	**+0.2**
ETMB				IAmb	IAmb	22 39 44.9	
	comp=Z,10nm,1.5s						
LSZ	**Lusaka**	**60.07**	**73**	LR	LR	23 05 02.8	
	comp=Z,68nm,18.1s,baz=186,slow=35						
LSZ	**Lusaka**	**60.07**	**73**	P	**P**	**22 40 33.7**	**+0.3**
LSZ				IAmb	IAmb	22 40 36.2	
	comp=Z,4.5nm,0.9s						
BOAV	**Boa Vista**	**62.32**	**326**	P	**P**	**22 40 48.2**	**-0.3**
BOAV				IAmb	IAmb	22 40 48.8	
	comp=Z,5.1nm,1.0s						
MDP	**Montagnes des**	**62.70**	**335**	LR	LR	23 07 05.3	
	comp=Z,27nm,19.6s,baz=216,slow=35						
DBIC	**Dimbokro**	**65.31**	**29**	LR	LR	23 04 20.7	
	comp=Z,32nm,19.8s,baz=161,slow=31						
OTAV	**Otavalo**	**67.42**	**307**	P	**P**	**22 41 22.3**	**+0.1**
OTAV				IAmb	IAmb	22 41 27.4	
	comp=Z,9.7nm,1.3s						
BBTS	**Babate**	**70.60**	**15**	LR	LR	23 05 28.0	
	comp=Z,45nm,20.7s,baz=158,slow=30						
SDV	**Santo Domingo**	**71.91**	**318**	LR	LR	23 17 36.2	
	comp=Z,63nm,18.1s,baz=130,slow=39						
TOA0	**Torodi Ar. Sit**	**73.39**	**33**	P	**P**	**22 41 58.1**	**0.0**
TOA0				IAmb	IAmb	22 42 07.8	
	comp=Z,4.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.39**	**33**	P	**P**	**22 41 58.1**	**0.0**
	comp=Z,3.2nm,0.9s,baz=204,slow=5.9,SNR=9.8 comp=Z,3.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.39**	**33**	P	**P**	**22 41 58.6**	**+0.6**
MBAR	**Mbarara**	**73.67**	**66**	LR	LR	23 12 55.5	
	comp=Z,45nm,18.2s,baz=216,slow=35						
KMBO	**Kilima Mbogo**	**76.73**	**72**	LR	LR	23 15 53.1	
	comp=Z,44nm,18.2s,baz=220,slow=36						
TEIG	**Tepich**	**89.47**	**308**	P	**P**	**22 43 23.5**	**+0.4**
ATD	**Arta Tunnel**	**90.30**	**70**	LR	LR	23 22 53.6	
	comp=Z,40nm,18.1s,baz=216,slow=35						
MDT	**Midelt**	**90.48**	**22**	LR	LR	23 19 01.3	
	comp=Z,44nm,18.2s,baz=234,slow=32						
KEST	**Kesra**	**96.88**	**32**	LR	LR	23 24 09.9	
	comp=Z,61nm,18.8s,baz=293,slow=33						
ESDC	**Sonseca Array**	**97.23**	**21**	LR	LR	23 20 13.9	
	comp=Z,35nm,19.7s,baz=173,slow=31						
PDAR	**Pinedale Array**	**118.09**	**305**	PKP	**PKPdf**	**22 49 10.4**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=146,slow=6.6,SNR=2.3						
NVAR	**Mina Array Bea**	**119.11**	**296**	PKP	**PKiKP**	**22 49 15.5**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=120,slow=3.2,SNR=3.5						
FINES	**FINESS Array B**	**124.60**	**29**	PKP	**PKPdf**	**22 49 23.4**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=197,slow=2.3,SNR=9.2						
CMAR	**Chiang Mai Arr**	**127.36**	**114**	PKP	**PKPdf**	**22 49 30.2**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=243,slow=4.4,SNR=6.2						
ARCES	**ARCESS Array B**	**130.91**	**23**	PKP	**PKPdf**	**22 49 35.5**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=225,slow=1.0,SNR=10						
YKA	**Yellowknife Ar**	**134.11**	**320**	PKP	**PKPdf**	**22 49 41.9**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=142,slow=2.2,SNR=3.3						
PZH	**PanZhiHua**	**135.39**	**110**	PKP	**PKPdf**	**22 49 46.0**	**0.0**
MKAR	**Makanchi Array**	**138.62**	**73**	PKhKP	PKPpre	22 49 46.0	
	comp=Z,0.4nm,0.7s,baz=249,slow=1.6,SNR=2.1						
INK	**Inuvik**	**143.79**	**322**	PKP	PKPab	22 49 56.9	+0.2
	comp=Z,3.6nm,0.9s,baz=147,slow=2.3,SNR=2.8						
ZALV	**Zalesovo Beam**	**143.88**	**65**	PKP	PKPab	22 49 57.6	+0.1
	comp=Z,2.8nm,0.8s,baz=229,slow=5.7,SNR=8.7						
GTA	**Gaotai**	**143.89**	**95**	*e*PKPbc	**PKPdf**	**22 50 00.6**	**-0.4**
GTA				pPKP	PKiKP	22 50 05.0	+0.5
GTA				sPKP		22 50 07.8	
CTG	**Chitna Glacier**	**144.35**	**308**	P	PKPbc	22 49 59.7	+0.1
	baz=113						
BVCY	**Beaver Creek**	**144.68**	**311**	P	PKPbc	22 50 00.5	+0.1
	baz=111						
M27K	**Edge Creek, AK**	**145.10**	**310**	P	**PKPab**	**22 50 02.0**	**0.0**
	baz=110						
MCARA	**McCarthy VSAT**	**145.26**	**308**	P	**PKPab**	**22 50 02.4**	**0.0**
	baz=111						
L27K	**Beaver Creek,**	**145.32**	**312**	P	**PKPbc**	**22 50 02.5**	**0.0**
	baz=110						
M26K	**Nabesna, AK**	**145.61**	**310**	P	**PKPdf**	**22 50 02.9**	**-0.2**
	baz=110						
K27K	**Chicken**	**145.74**	**313**	P	**PKPbc**	**22 50 03.8**	**+0.1**
	baz=108						
BMRM	**Bremner River**	**145.83**	**307**	P	**PKPbc**	**22 50 04.1**	**-0.1**
	baz=111,SNR=6.7						
L26K	**Log Cabin Wild**	**145.97**	**311**	P	**PKPbc**	**22 50 04.4**	**-0.1**
	baz=109						
I27K	**Kandik River**	**146.02**	**316**	P	**PKPbc**	**22 50 04.4**	**-0.2**
	baz=106						
N25K	**Chitina, Valde**	**146.05**	**308**	P	**PKPbc**	**22 50 04.6**	**-0.3**
	baz=110						
H27K	**Steamboat Moun**	**146.16**	**317**	P	**PKPbc**	**22 50 05.0**	**0.0**
	baz=105						
EYAK	**Cordova Ski Ar**	**146.21**	**306**	P	**PKPbc**	**22 50 05.4**	**+0.2**
	baz=110						
G27K	**Doyon Strip**	**146.35**	**318**	P	**PKPbc**	**22 50 05.4**	**-0.2**
	baz

baz=95
BPAW Bear Paw Mtn. 149.55 311 P **PKPbc** 22 50 14.1 -0.1
baz=102,SNR=10
G23K Bananza Creek 149.59 317 P **PKPbc** 22 50 14.6 +0.4
baz=98,SNR=11
NRIK Noril'sk 149.62 38 PKPbc **PKPbc** 22 50 14.2 +0.1
comp=Z,1.5nm,0.3s,baz=232,slow=1.4,SNR=4.2
MLY Manley 149.62 313 P **PKPbc** 22 50 14.7 +0.3
baz=100
TOLK Toolik Lake Re 149.64 321 P **PKPbc** 22 50 14.7 +0.4
baz=95,SNR=12
PPLA Purkeypile 149.82 309 P **PKPbc** 22 50 14.9 -0.1
baz=103
CAST Castle Rocks 149.89 310 P **PKPbc** 22 50 15.2 +0.2
baz=102
M20K Styx River 150.02 307 P **PKPbc** 22 50 15.7 +0.3
baz=104
H22K Ishtalitna Cre 150.02 315 P **PKPbc** 22 50 15.3 0.0
baz=98,SNR=9.2
D23K Nanushuk River 150.06 321 P **PKiKP** 22 50 15.8 -0.3
baz=93
CHUM Lake Minchumin 150.08 311 P **PKPbc** 22 50 15.4 0.0
baz=101
C23K Itkillik River 150.08 323 P **PKPbc** 22 50 15.4 +0.1
baz=92
O19K Port Alsworth 150.15 303 P **PKPbc** 22 50 15.9 +0.3
baz=106
G22K Bettles 150.20 317 P **PKiKP** 22 50 16.1 -0.3
baz=96
N19K Bonanza Creek 150.39 304 P **PKPbc** 22 50 16.4 +0.1
baz=105
R17K Ugashik Creek 150.41 298 P **PKPbc** 22 50 16.3 0.0
baz=109
E22K Anaktuvuk Pass 150.43 319 P **PKPbc** 22 50 16.5 +0.3
baz=94
F22K John River 150.52 318 P **PKPbc** 22 50 16.7 +0.3
baz=95
H21K Melozitna Rive 150.57 314 P **PKPbc** 22 50 16.7 +0.1
baz=97
M19K Big River Lodg 150.60 306 P **PKPbc** 22 50 17.0 +0.2
baz=103
K20K Telida 150.75 309 P **PKPbc** 22 50 16.4 -0.6
baz=100
P17K Kvichak River 150.90 301 P **PKPbc** 22 50 17.1 -0.4
baz=106
J20K Nowinta River 150.92 311 P **PKiKP** 22 50 17.8 -0.2
baz=99
G21K Allakaket 150.95 316 P **PKPbc** 22 50 17.5 +0.1
baz=95
R16K Pilot Point 150.99 297 P **PKPbc** 22 50 17.9 +0.2
baz=108
F21K Alatna River 151.00 317 P **PKiKP** 22 50 17.9 -0.2
baz=94
SONM Songino Array 152.79 88 PKPbc **PKPbc** 22 50 22.1 -0.3
comp=Z,4.1nm,0.7s,baz=215,slow=2.6,SNR=15

*MDD **20** 22:32:50.6±0.3, 37.91N×3.23W, h0km, mb_Lg3.1/12, Error ellipse: s-maj=2.5km s-min=2.3km az=106.0*
*LDG **20** 22:32:51.0±0.2, 37.85N×3.21W, h2km, Ml3.0/6, Error ellipse: s-maj=4.3km s-min=2.8km az=104.0*
*INMG **20** 22:33:07.3±1.8, 37.88N×3.21W, h15km±4km, ML3.0, Error ellipse: s-maj=3.5km s-min=3.1km az=122.0*
*SFS **20** 22:33:08.9, 37.91N×3.22W, ML3.1, PEAL DE BECERRO (JAEN)*
*CNRM **20** 22:33:11.5, 35.80N×4.10W, h114km, ml2.0*
ISC 20 22:32:49.4±1.1, 37.96N±0.02×3.20W±0.02, h4km±10km, n75, σ1s66/77, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EQES	**Quesada**	**0.19**	**146**	Pg		**Pg**	**22 32 53.4**	**+0.3**
EQES				Sg		**Sg**	**22 32 55.8**	**+0.3**
EQUE	**Quentar**	**0.78**	**194**	Pg		**Pg**	**22 33 03.8**	**-0.4**
EQUE				Sg		**Sg**	**22 33 13.0**	**-1.3**
EQUE				*i* Vmb_Lg			22 33 31.9	
EBER	**Berja**	**1.09**	**167**	Pg		**Pg**	**22 33 09.6**	**-0.6**
EBER				*i* Vmb_Lg			22 33 45.8	
EADA	**Adamuz**	**1.10**	**281**	Pg		**Pn**	**22 33 11.2**	**-0.5**
EADA				Sg		**Sb**	**22 33 25.9**	**0.0**
EGOR	**Sierra Gorda,**	**1.11**	**221**	Pg		**Pg**	**22 33 10.7**	**0.0**
EGOR				*i* Vmb_Lg			22 33 44.3	
ELGU	**Los Guajares,**	**1.14**	**197**	Pg		**Pg**	**22 33 10.7**	**-0.5**
ELGU				*i* Vmb_Lg			22 33 47.0	
EZAR	**Zarzadilla de**	**1.20**	**94**	Pg		**Pb**	**22 33 12.7**	**+0.1**
EZAR				Sg		**Sb**	**22 33 28.5**	**0.0**
ENIJ	**Nijar**	**1.26**	**141**	Pg		**Pn**	**22 33 14.1**	**+0.3**
ENIJ				Sg		**Sg**	**22 33 29.4**	**-0.5**
ENIJ				*i* Vmb_Lg			22 33 47.2	
ETOB	**Tobarra**	**1.47**	**62**	Pg		**Pg**	**22 33 17.6**	**+0.1**
ETOB				*i* Vmb_Lg			22 33 57.0	
EMAL	**Malaga-Limoner**	**1.54**	**220**	P		Pg	22 33 33.7	+15
EMAL				S		Sg	22 33 54.3	+15
EMUR	**La Murta**	**1.56**	**94**	Pg		**Pb**	**22 33 19.0**	**+0.2**
EMUR				*i* Vmb_Lg			22 33 58.3	
CART	**Cartagena**	**1.78**	**101**	P		Pg	22 33 40.2	+17
CART				S		Sg	22 34 00.4	+14
PAB	**San Pablo**	**1.82**	**331**	Pn		**Pg**	**22 33 23.9**	**-0.4**
PAB				*i* Vmb_Lg			22 34 10.2	
EMIJ	**Mijas**	**1.87**	**222**	Pg		**Pb**	**22 33 24.3**	**+0.2**
EMIJ				*i* Vmb_Lg			22 34 08.3	
UCM	**Universidad Co**	**2.35**	**359**	P		Pg	22 33 52.1	+18
UCM				S		Sg	22 34 23.1	+18
GOG	**Mont Gurugu**	**2.74**	**176**	S		Sn	22 33 50.7	-17
GOG	**Mont Gurugu**	**2.74**	**176**	P		**Pn**	**22 33 35.3**	**+1.2**
SMIR	**Smir Dam**	**2.87**	**218**	S		Sn	22 33 51.9	-19
SMIR	**Smir Dam**	**2.87**	**218**	P		**Pn**	**22 33 33.9**	**-1.9**
PBAR	**Barrancos**	**3.04**	**275**	*e*P		**Pn**	**22 33 38.9**	**+0.7**
PBAR	**Barrancos**	**3.04**	**275**	*e*Pn		Pg	22 33 53.6	+6.1
PBAR				*e*Sg		Sg	22 34 39.3	+12
PBAR				A		A	22 34 49.6	
	54nm,0.3s							
TAF	**Taforalt**	**3.20**	**168**	S		Sn	22 34 02.5	-17
TAF	**Taforalt**	**3.20**	**168**	P		**Pn**	**22 33 40.8**	**+0.3**
PESTR	**Estremoz**	**3.56**	**286**	P		Pg	22 34 12.7	+15
PESTR				S		Sg	22 34 59.5	+16
PESTR	**Estremoz**	**3.56**	**286**	*e*P		**Pn**	**22 33 46.5**	**+1.0**
PESTR	**Estremoz**	**3.56**	**286**	*e*Sg		Sg	22 34 57.5	+14
PESTR				A		A	22 35 01.8	
	45nm,0.6s							
PMRV	**Marv??o**	**3.59**	**295**	*e*P		**Pn**	**22 33 46.9**	**+1.1**
PMRV	**Marv??o**	**3.59**	**295**	*e*Sg		Sg	22 34 59.0	+14
PMRV				A		A	22 35 07.1	
	45nm,0.6s							
PVAQ	**Vaqueiros**	**3.62**	**263**	P		**Pg**	**22 34 02.4**	**+3.6**
PVAQ				S		**Sb**	**22 34 41.1**	**+2.9**
PVAQ	**Vaqueiros**	**3.62**	**263**	*e*P		**Pn**	**22 33 46.1**	**-0.2**
PVAQ	**Vaqueiros**	**3.62**	**263**	A		A	22 35 03.2	
	38nm,0.4s							
JBK	**JBK**	**3.65**	**172**	S		Sn	22 34 08.7	-22
JBK	**JBK**	**3.65**	**172**	P		**Pn**	**22 33 44.5**	**-2.4**
PBEJ	**Beja**	**3.69**	**272**	*e*P		**Pn**	**22 33 47.5**	**+0.4**
PBEJ	**Beja**	**3.69**	**272**	*e*Sg		Sg	22 34 59.0	+11
PBEJ				A		A	22 35 06.9	
	17nm,0.6s							
PBDV	**Barranco-do-Ve**	**3.82**	**261**	*e*Sg		Sg	22 35 04.0	+12
PBDV				A		A	22 35 10.7	
	23nm,0.5s							
PCBR	**Castelo Branco**	**3.83**	**301**	*e*Sn		**Sg**	**22 34 49.7**	**-2.6**
PCBR				*e*Sg		Sb	22 35 06.0	+22
PCBR				A		A	22 35 14.2	
	30nm,0.8s							
EVO	**Evora**	**3.83**	**280**	S		**Sg**	**22 34 48.9**	**-3.5**
EVO	**Evora**	**3.83**	**280**	*e*Sg		Sg	22 35 04.8	+12
EVO				A		A	22 35 18.9	
	28nm,0.4s							
PCVE	**Castro Verde**	**3.84**	**267**	*e*P		**Pn**	**22 33 49.2**	**-0.1**
PCVE	**Castro Verde**	**3.84**	**267**	*e*Sn		**Sb**	**22 34 47.3**	**+2.6**
PCVE				*e*Sg		Sg	22 35 04.1	+11
PCVE				A		A	22 35 11.6	
	26nm,0.5s							
MESJ	**Messejana**	**3.97**	**270**	*e*Sn		**Sb**	**22 34 50.8**	**+2.5**
MESJ				*e*Sg		Sg	22 35 08.2	+11
MESJ				A		A	22 35 12.7	
	19nm,0.3s							
PMTG	**Montargil**	**4.09**	**287**	*e*Pn		**Pg**	**22 34 07.6**	**-0.2**
PMTG				*e*Sn		**Sb**	**22 34 54.2**	**+2.4**
PMTG				*e*Sg		Sg	22 35 14.0	+13
PMTG				A		A	22 35 20.2	
	43nm,0.4s							
MTE	**Manteigas**	**4.16**	**307**	*e*Sn		**Sb**	**22 34 56.8**	**+2.9**
MTE				*e*Sg		Sg	22 35 15.0	+12
PNCL	**Nicolau / Gran**	**4.21**	**274**	*e*Pn		**Pg**	**22 34 10.4**	**+0.4**
PNCL				*e*Sn		**Sb**	**22 34 57.5**	**+2.4**
PNCL				*e*Sg		Sg	22 35 14.7	+10
PNCL				A		A	22 35 25.4	
	19nm,0.5s							
MVO	**Moncorvo**	**4.36**	**318**	*e*Pn		**Pg**	**22 34 13.2**	**+0.3**
MVO				*e*Sn		**Sb**	**22 35 01.9**	**+2.4**
MVO				A		A	22 35 34.4	
	19nm,0.4s							
MORF	**Marmelete**	**4.37**	**263**	*e*Sn		**Sb**	**22 35 01.1**	**+1.2**
MORF				*e*Sg		Sg	22 35 22.1	+12
PTEO	**Sao Teotonio**	**4.39**	**266**	*e*Sn		**Sb**	**22 35 01.6**	**+1.1**
PTEO				*e*Sg		Sg	22 35 22.4	+12
PTEO				A		A	22 35 30.0	
	27nm,0.6s							
PACT	**Alcochete**	**4.50**	**282**	*e*Sg		Sg	22 35 29.0	+15
PACT				A		A	22 35 34.3	
	35nm,0.6s							
PFVI	**Vila Bisbo**	**4.54**	**261**	*e*Sn		**Sb**	**22 35 04.5**	**-0.3**
PVIS	**Viseu**	**4.56**	**309**	*e*Pn		**Pg**	**22 34 15.2**	**-1.6**
PVIS				*e*Sn		**Sb**	**22 35 06.9**	**+1.6**
PVIS				A		A	22 35 40.1	
	14nm,0.3s							
PCAS	**Casmilo, Conde**	**4.62**	**299**	*e*Pn		**Pg**	**22 34 16.5**	**-1.5**
PCAS				*e*Sn		**Sb**	**22 35 08.8**	**+1.7**
PCAS				A		A	22 35 40.0	
	35nm,0.6s							
PSBE	**So Bento**	**4.64**	**291**	*e*Pn		**Pg**	**22 34 16.2**	**-2.1**
PSBE				*e*Sn		**Sb**	**22 35 09.0**	**+1.4**
PSBE				A		A	22 35 42.0	
	31nm,0.7s							
PBRG	**Braganca**	**4.71**	**326**	*e*Pn		**Pg**	**22 34 18.5**	**-1.1**
PBRG				A		A	22 35 54.0	
	8.8nm,0.4s							
PMAFR	**Mafra**	**4.88**	**284**	*e*Sn		**Sb**	**22 35 13.2**	**-1.1**
PMAFR				A		A	22 35 47.2	
	32nm,0.4s							
POLO	**Lamas de Olo**	**4.92**	**315**	*e*Pn		**Pg**	**22 34 20.4**	**-3.2**
POLO				A		A	22 35 51.3	
	5.2nm,0.5s							
MD31	**MD31**	**5.24**	**195**	S		Sn	22 34 33.0	-36
MD31	**MD31**	**5.24**	**195**	P		Pn	22 33 58.2	-10
MDT	**Midelt**	**5.26**	**193**	S		Sn	22 34 32.6	-37
MDT	**Midelt**	**5.26**	**193**	P		Pn	22 33 58.6	-10
ETSF	**Etsaut**	**5.33**	**21**	*e*Pn		**Pn**	**22 34 11.1**	**+1.3**
ETSF	**Etsaut**	**5.33**	**21**	*e*Pg		**Pg**	**22 34 29.5**	**-2.0**
ETSF				*e*Sn		**Sn**	**22 35 11.0**	**-0.7**
ETSF				*e*Sg		**Sg**	**22 35 42.0**	**+1.5**
	6.2nm,0.4s							
SJPF	**Ste Jean**	**5.37**	**16**	*e*Pn		**Pn**	**22 34 11.3**	**+1.1**
SJPF	**Ste Jean**	**5.37**	**16**	*e*Pg		**Pg**	**22 34 32.2**	**+0.1**
SJPF				*e*Sn		**Sn**	**22 35 11.6**	**-0.8**
SJPF				*e*Sg		**Sg**	**22 35 43.2**	**+1.6**
	6.2nm,0.3s							
PGAV	**Gavieira, Arco**	**5.58**	**317**	*e*Pn		**Pb**	**22 34 29.8**	**+2.4**
PGAV				A		A	22 36 18.5	
	10nm,0.7s							
EPF	**Esparros**	**5.74**	**27**	*e*Pn		**Pg**	**22 34 35.8**	**-3.5**
EPF				*e*Sn		**Sn**	**22 35 20.8**	**-0.9**
EPF				*e*Sg		**Sg**	**22 35 54.6**	**+0.9**
	6.4nm,0.4s							
MTLF	**Montolieu**	**6.77**	**36**	*e*Pn		**Pn**	**22 34 30.4**	**+0.9**
MTLF	**Montolieu**	**6.77**	**36**	*e*Pg		**Pg**	**22 34 57.9**	**-1.2**
MTLF				*e*Sg		**Sg**	**22 36 26.5**	**-0.3**
	2.5nm,0.5s							
LFF	**La Frestale**	**7.58**	**22**	*e*Pn		**Pn**	**22 34 41.6**	**+1.1**
LFF	**La Frestale**	**7.58**	**22**	*e*Pg		**Pg**	**22 35 13.2**	**-1.2**
LFF				*e*Sn		**Sn**	**22 36 04.4**	**-2.4**
	0.5nm,0.3s							
CAF	**Calviac**	**8.01**	**28**	*e*Pn		**Pn**	**22 34 46.8**	**+0.4**
CAF	**Calviac**	**8.01**	**28**	*e*Pg		**Pg**	**22 35 20.5**	**-2.1**
CAF				*e*Sn		**Sn**	**22 36 14.5**	**-2.9**
LASF	**Ste Croix**	**8.11**	**39**	*e*Pn		**Pn**	**22 34 49.4**	**+1.5**
RJF	**Les Rejaudoux**	**8.14**	**24**	*e*Pn		**Pn**	**22 34 49.2**	**+0.9**
RJF				*e*Sn		**Sn**	**22 36 17.9**	**-2.9**
	1.2nm,0.4s							
MFF	**Saint Martin d**	**8.93**	**14**	*e*Pn		**Pn**	**22 35 01.2**	**+2.1**

*IDC **20** 22:33:30.2±0.6, 22.77S×173.15E, h0km, mb4.2/16, mbtmp4.2/18, ML5.2/1, MS3.4/11, Error ellipse: s-maj=20.3km s-min=16.2km az=143.0*
*NEIC **20** 22:33:32.8±1.8, 22.95S±0.1×173.21E±0.09, h10km±1km, mb4.7/20, Error ellipse: s-maj=21.1km s-min=14.0km az=163.0*
ISC 20 22:33:37.1±0.4, 22.79S±0.08×173.14E±0.07, h49km, n106, σ1s90/98, mb4.4/23, MS3.5/10, 12C-4D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MARNC	**Mare, Loyalty**	**4.92**	**284**	Pn		**Pn**	**22 34 48.4**	**0.0**
PINNC	**Pines Island,**	**5.26**	**271**	Pn		**Pn**	**22 34 52.7**	**-0.5**
OUENC	**Ouen Island, N**	**5.83**	**272**	Pn		**Pn**	**22 35 00.6**	**-0.5**
DZM	**Mont Dzumac**	**6.24**	**275**	Pn		**Pn**	**22 35 05.3**	**-1.4**
	13nm,0.9s,baz=75,slow=16,SNR=12							
DZM						Sn	22 36 14.5	-2.3
	0.7nm,0.3s,baz=252,slow=23,SNR=1.8							
DZM	**Mont Dzumac**	**6.24**	**275**			**Pn**	**22 35 06.8**	**+0.1**
MSVF	**Nonsavu**	**6.82**	**43**	Pn		**Pn**	**22 35 13.3**	**-1.4**
	1.7nm,0.3s,baz=236,slow=11,SNR=3.3							
MSVF						Sn	**22 36 27.9**	**-3.1**
	baz=252,slow=23							
	13nm,0.7s							
MSVF	**Nonsavu**	**6.82**	**43**	Pn		**Pn**	**22 35 16.2**	**+1.6**
AFI	**Afiamalu**	**16.81**	**61**	LR		LR	22 43 30.5	
	comp=Z,55nm,19.3s,baz=204,slow=36							
BFZ	**Birch Farm**	**18.03**	**172**			**Pn**	**22 37 41.0**	**-3.1**
BFZ					IAmb	IAmb	22 37 57.3	
	comp=Z,61nm,1.4s							
TUWZ	**Tuamarina**	**18.60**	**178**			**Pn**	**22 37 49.6**	**-1.3**
EIDS	**Eidsvold**	**20.30**	**258**	P		**P**	**22 38 10.0**	**+1.0**
EIDS					IAmb	IAmb	22 38 15.1	
	comp=Z,26nm,1.1s							
CTA	**Charters Tower**	**25.16**	**271**	P		**P**	**22 38 58.3**	**+0.3**
	comp=Z,7.3nm,0.8s,baz=74,slow=8.8,SNR=5.7							
	comp=Z,7.3nm,0.8s							
CTAO	**Charters Tower**	**25.16**	**271**	P		**P**	**22 38 58.0**	**0.0**
CTAO					IAmb	IAmb	22 39 10.7	
	comp=Z,11nm,0.8s							
TOO	**Toolangi**	**27.95**	**232**	P		**P**	**22 39 24.7**	**+1.8**
TOO					IAmb	IAmb	22 39 40.8	
	comp=Z,14nm,1.1s							
BBOO	**Buckleboo**	**34.14**	**245**	P		**P**	**22 40 16.6**	**-0.9**
BBOO					IAmb	IAmb	22 40 28.4	
	comp=Z,15nm,0.8s							
AS31	**Alice Springs**	**35.99**	**261**	P		**P**	**22 40 33.5**	**-0.1**
WR0	**Warramunga Arr**	**35.99**	**267**	P		**P**	**22 40 32.9**	**-0.7**
ASAR	**Alice Springs**	**35.99**	**261**	P		**P**	**22 40 33.5**	**-0.1**
	comp=Z,9.8nm,0.9s,baz=85,slow=8.5,SNR=60							
ASAR					PcP	**PcP**	**22 43 00.3**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=102,slow=3.9,SNR=2.4							
	comp=Z,9.8nm,0.9s							
ASAR	**Alice Springs**	**35.99**	**261**	P		**P**	**22 40 33.3**	**-0.3**
WRA	**Warramunga Arr**	**36.18**	**267**	P		**P**	**22 40 34.2**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=98,slow=8.5,SNR=14							
WRA					PcP	**PcP**	**22 43 00.7**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=98,slow=3.0,SNR=2.0							
WRA					LR	LR	22 55 15.6	
	comp=Z,90nm,18.1s,baz=116,slow=36							
	comp=Z,2.2nm,0.8s							
WRA	**Warramunga Arr**	**36.18**	**267**	P		**P**	**22 40 34.3**	**-1.0**
FORT	**Forrest**	**40.81**	**249**	P		**P**	**22 41 13.1**	**-0.8**
FORT					IAmb	IAmb	22 41 25.6	
	comp=Z,18nm,0.8s							
MTN	**Manton Dam**	**41.08**	**277**	P		**P**	**22 41 15.8**	**-0.5**
MTN					IAmb	IAmb	22 41 26.4	
	comp=Z,17nm,1.1s							
H11S2	**WAKE ISLAND Hy**	**41.51**	**351**	T		T	23 26 00.0	
	baz=171,slow=76,SNR=6.1							
H11S3	**WAKE ISLAND Hy**	**41.51**	**351**	T		T	23 26 00.5	
	baz=171,slow=76,SNR=6.3							
H11S1	**WAKE ISLAND Hy**	**41.52**	**351**	T		T	23 26 01.9	
	baz=171,slow=76,SNR=5.4							
KNRA	**Kununurra**	**42.37**	**271**	P		**P**	**22 41 27.6**	**+0.8**
KNRA					IAmb	IAmb	22 41 38.1	
	comp=Z,8.8nm,0.9s							
FITZ	**Fitzroy Crossi**	**44.61**	**267**	P		**P**	**22 41 45.9**	**+1.0**
GUAM	**Guam**	**45.54**	**320**	LR		LR	22 58 21.1	
	comp=Z,60nm,21.7s,baz=126,slow=33							
PSA00	**Pilbara Seismi**	**49.14**	**261**	P		**P**	**22 42 20.4**	**+0.1**
MBWA	**Marble Bar**	**49.33**	**261**	P		**P**	**22 42 22.1**	**+0.4**
VNDA	**Vanda**	**55.06**	**183**	P		**P**	**22 43 05.2**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=354,slow=5.6,SNR=3.7							
VNDA					LR	LR	23 02 01.1	
	comp=Z,64nm,21.4s,baz=320,slow=31							
	comp=Z,0.8nm,0.8s							
VNDA	**Vanda**	**55.06**	**183**	P		**P**	**22 43 03.6**	**+0.2**
SBA	**Scott Base**	**55.20**	**182**	P		**P**	**22 43 04.7**	**+0.3**
QSPA	**South Pole Qui**	**67.28**	**180**	P		**P**	**22 44 26.4**	**-0.1**
	comp=Z,4.3nm,1.0s,baz=25,slow=1.7,SNR=7.9							
	comp=Z,4.3nm,1.0s							
QSPA	**South Pole Qui**	**67.28**	**180**	P		**P**	**22 44 26.0**	**-0.6**
QSPA					IAmb	IAmb	22 44 46.1	
	comp=Z,14nm,1.2s							
MJAR	**Matsushiro Arr**	**67.61**	**330**	P		**P**	**22 44 27.3**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=161,slow=6.8,SNR=2.8							
MJAR					LR	LR	23 08 20.9	
	comp=Z,19nm,22.0s,baz=132,slow=31							
	comp=Z,1.0nm,0.8s							
MAW	**Mawson**	**76.52**	**202**	P		**P**	**22 45 22.1**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=159,slow=8.2,SNR=2.9							
	comp=Z,1.3nm,0.7s							
PETK	**Petropavlovsk-**	**76.76**	**351**	P		**P**	**22 45 24.4**	**+1.4**
	comp=Z,1.3nm,0.4s,baz=185,slow=11,SNR=2.0							
PETK					LR	LR	23 12 41.0	
	comp=Z,37nm,20.0s,baz=137,slow=31							
	comp=Z,1.3nm,0.4s							
SMAI	**San Martin Ant**	**79.31**	**161**	P		**P**	**22 45 37.3**	**+0.2**
SMAI					IAmb	IAmb	22 45 52.2	
	comp=Z,4.6nm,1.0s							
CMAR	**Chiang Mai Arr**	**83.26**	**293**	P		**P**	**22 46 00.2**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=131,slow=3.9,SNR=6.2							
	comp=Z,1.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**83.26**	**293**	P		**P**	**22 46 01.1**	**+2.2**
MA2	**Magadan**	**84.10**	**349**	LR		LR	23 16 46.4	
	comp=Z,31nm,20.0s,baz=148,slow=31							
TROLL	**Troll, Antarti**	**85.23**	**183**	P		P	22 46 17.4	+9.2
TROLL	**Troll, Antarti**	**85.23**	**183**	P		**P**	**22 46 07.5**	**-0.7**
SNAA	**Sanae**	**85.75**	**181**	P		**P**	**22 46 09.2**	**-1.6**
	comp=Z,2.2nm,0.9s,baz=195,slow=6.0,SNR=7.9							
	comp=Z,2.2nm,0.9s							
SNAA	**Sanae**	**85.75**	**181**	P		**P**	**22 46 09.1**	**-1.6**
VNA3	**Neumayer Olymp**	**86.20**	**179**	P		P	22 46 22.2	+9.3
VNA3	**Neumayer Olymp**	**86.20**	**179**	P		**P**	**22 46 11.7**	**-1.2**
VNA2	**Neumayer--Watz**	**86.54**	**180**	P		P	22 46 23.7	+9.2
VNA2	**Neumayer--Watz**	**86.54**	**180**	P		**P**	**22 46 13.7**	**-0.9**
	baz=181,slow=5.0							
VNA1	**Neumayer--Stat**	**86.81**	**180**	P		P	22 46 24.9	+9.1
VNA1	**Neumayer--Stat**	**86.81**	**180**	P		**P**	**22 46 14.8**	**-1.0**
SEY	**Seymchan**	**87.00**	**351**	P		**P**	**22 46 16.0**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=108,slow=3.2,SNR=4.1							
	comp=Z,4.0nm,0.9s							
NVAR	**Mina Array Bea**	**88.47**	**47**	P		**P**	**22 46 25.8**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=227,slow=7.0,SNR=5.7							
	comp=Z,0.4nm,0.5s							
NVAR	**Mina Array Bea**	**88.47**	**47**	P		**P**	**22 46 25.6**	**+1.1**
BMN	**Battle Mountai**	**90.21**	**46**	P		**P**	**22 46 33.5**	**+1.0**
BMN					IAmb	IAmb	22 46 35.1	
	comp=Z,7.0nm,1.2s							
SONM	**Songino Array**	**92.24**	**322**	P		**P**	**22 46 41.5**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=126,slow=7.4,SNR=3.6							
SONM					LR	LR	23 27 55.7	
	comp=Z,16nm,18.7s,baz=78,slow=35							
	comp=Z,0.7nm,0.9s							
ILAR	**Eielson Array**	**92.57**	**16**	P		**P**	**22 46 42.3**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=235,slow=4.8,SNR=14							
ILAR					LR	LR	23 21 31.5	
	comp=Z,27nm,21.0s,baz=240,slow=31							
	comp=Z,1.0nm,0.6s							
PLCA	**Paso Flores**	**93.47**	**137**	LR		LR	23 21 45.2	
	comp=Z,11nm,18.4s,baz=200,slow=31							
TXAR	**Lajitas Array**	**95.29**	**61**	P		**P**	**22 46 57.0**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=243,slow=4.0,SNR=4.2							
	comp=Z,0.4nm,0.9s							
PDAR	**Pinedale Array**	**96.38**	**46**	P		**P**	**22 47 01.4**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=205,slow=4.0,SNR=1.8							
	comp=Z,0.1nm,0.4s							
INK	**Inuvik**	**98.78**	**18**	LR		LR	23 24 23.7	
	comp=Z,17nm,21.9s,baz=211,slow=31							
LMN	**Caledonia Moun**	**128.15**	**49**			**PKPdf**	**22 52 37.9**	**0.0**
ARCES	**ARCESS Array B**	**129.40**	**346**	PKP		**PKPdf**	**22 52 38.9**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=45,slow=2.7,SNR=8.0							
GHRR		**143.85**	**318**	⇑P		PKPbc	22 53 04.7	+0.1
TESR	**Tescani**	**144.09**	**319**	⇑P		**PKPab**	**22 53 05.2**	**+0.3**
BIZ	**Bicaz**	**144.20**	**320**	⇑P		**PKPdf**	**22 53 06.9**	**-0.5**
BURAR	**Bucovina Array**	**144.36**	**322**	⇓P		PKPbc	22 53 06.9	+0.6
VRI	**Vrincioaia**	**144.36**	**318**	⇓P		**PKPab**	**22 53 06.3**	**+0.3**
PLOR	**Plostina**	**144.42**	**318**	⇑P		**PKPab**	**22 53 05.9**	**-0.3**
MLR	**Muntele Rosu**	**145.02**	**318**	⇑P		**PKPab**	**22 53 08.8**	**+0.2**
BMR	**Baia Mare**	**145.29**	**323**	⇑P		**PKPbc**	**22 53 08.3**	**-0.9**
ARR	**Arges**	**145.88**	**319**	⇑P		**PKPab**	**22 53 12.1**	**+0.4**
LOT	**Lotru**	**146.36**	**320**	⇑P		**PKPdf**	**22 53 11.1**	**-0.3**
MORC	**Moravsky Berou**	**146.94**	**331**	*e*PKP		**PKPbc**	**

GAEA	**Gareloi East**	**1.39**	**57**		**Pn**	**22 45 56.3**	**+0.3**
GANE	**Gareloi Northe**	**1.39**	**55**		**Pn**	**22 45 56.2**	**+0.1**
TASE	**Tanaga Southea**	**1.80**	**63**		**Pn**	**22 46 02.1**	**+0.4**
TAFP	**Tanaga Falls P**	**1.86**	**61**		**Pn**	**22 46 02.7**	**+0.2**
TAFP					**Sn**	**22 46 26.7**	**+2.0**
TAPA	**Tanaga Point A**	**1.92**	**65**		**Pn**	**22 46 03.7**	**+0.4**
KIMD	**Kanaga Island**	**2.24**	**70**		**Pn**	**22 46 08.3**	**+0.7**
KIKV	**Kanaga Island**	**2.31**	**67**		**Pn**	**22 46 09.4**	**+0.7**
KIWB	**Kanaga Island**	**2.31**	**68**		**Pn**	**22 46 08.9**	**+0.1**
KINC	**Kanaga Island**	**2.36**	**66**		**Pn**	**22 46 10.4**	**+1.1**
ADK	**Adak**	**2.60**	**70**		**Pn**	**22 46 12.7**	**+0.1**
ADK					**Sn**	**22 46 44.1**	**+1.1**
GSCK	**Great Sitkin C**	**2.95**	**69**		**Pn**	**22 46 18.5**	**+1.0**
GSTD	**Great Sitkin T**	**2.97**	**68**		**Pn**	**22 46 18.2**	**+0.3**
GSTD					**Sn**	**22 46 54.2**	**+2.0**
GSTR	**Great Sitkin T**	**3.03**	**68**	Pn	**Pn**	**22 46 18.8**	**+0.1**
SHEM	**Shemya Is, Ala**	**3.69**	**299**	P	**Pn**	**22 46 29.9**	**+2.4**
	28nm,0.3s,baz=103,slow=2.5,SNR=11						
SHEM				S	**Sn**	**22 47 15.4**	**+5.7**
	28nm,0.4s,baz=291,slow=20,SNR=1.3						
SHEM				LR	LR	22 48 02.2	
	comp=Z,126nm,18.3s,baz=166,slow=39						
SMY	**Shemya**	**3.69**	**299**		**Pn**	**22 46 28.0**	**+0.4**
ATKA	**Atka Island**	**4.17**	**71**		**Pn**	**22 46 34.4**	**+0.3**
ATKA					**Sn**	**22 47 22.7**	**+1.1**
NIKH	**Nikolski High**	**7.51**	**71**	Pn	**Pn**	**22 47 21.1**	**+1.0**
SPIA	**Saint Paul Isl**	**8.65**	**41**	Pn	**Pn**	**22 47 37.8**	**+2.2**
UNV	**Unalaska Valle**	**9.06**	**66**	Pn	**Pn**	**22 47 42.3**	**+1.0**
CNBA	**Chernabura Isl**	**13.22**	**65**	Pn	**Pn**	**22 48 38.8**	**+0.6**
PETK	**Petropavlovsk-**	**13.49**	**287**	LR	LR	22 54 51.0	
	comp=Z,14nm,18.5s,baz=139,slow=41						
CHGN	**Chignik**	**14.14**	**60**	Pn	**Pn**	**22 48 50.2**	**-0.5**
N18K	**Kilae Creek**	**16.80**	**45**	Pn	**Pn**	**22 49 25.6**	**+0.2**
Q19K	**Cape Douglas,**	**17.28**	**52**	Pn	**Pn**	**22 49 30.8**	**-0.5**
Q19K				IAmb	IAmb	22 49 54.0	
	comp=Z,31nm,1.3s						
N19K	**Bonanza Creek**	**17.49**	**46**	P	**P**	**22 49 35.0**	**+0.1**
KDAK	**Kodiak Island**	**17.56**	**57**	Pn	**Pn**	**22 49 32.4**	**-2.5**
KDAK				IAmb	IAmb	22 49 33.7	
	comp=Z,17nm,1.4s						
L19K	**White Mountain**	**17.89**	**42**	P	**P**	**22 49 40.2**	**+0.8**
CNPM	**China Poot**	**18.63**	**52**	P	**P**	**22 49 47.1**	**-0.4**
CNPM				IAmb	IAmb	22 50 13.2	
	comp=Z,11nm,0.8s						
J20K	**Nowinta River**	**19.14**	**37**	P	**P**	**22 49 52.6**	**-0.4**
PPLA	**Purkeypile**	**19.32**	**41**	P	**P**	**22 49 54.6**	**-0.5**
PPLA				IAmb	IAmb	22 50 22.9	
	comp=Z,17nm,1.1s						
CUT	**Chulitna**	**19.95**	**44**	P	**Pn**	**22 50 02.5**	**-1.1**
KTH	**Kantishna Hill**	**20.11**	**40**		**P**	**22 50 04.1**	**+0.4**
KTH				IAmb	IAmb	22 50 18.0	
	comp=Z,22nm,1.0s						
IMAR	**Indian Mountai**	**20.27**	**32**	P	**P**	**22 50 05.3**	**+0.1**
PWL	**Port Wells**	**20.36**	**49**	P	**P**	**22 50 06.5**	**+0.2**
PWL				IAmb	IAmb	22 50 10.1	
	comp=Z,19nm,1.0s						
H21K	**Melozitna Rive**	**20.41**	**34**		**P**	**22 50 07.0**	**+0.2**
H21K				IAmb	IAmb	22 50 18.3	
	comp=Z,9.7nm,0.9s						
SML	**Sawmill**	**20.62**	**46**	P	**P**	**22 50 09.4**	**+0.2**
SML				IAmb	IAmb	22 50 13.3	
	comp=Z,18nm,1.0s						
SML	**Sawmill**	**20.62**	**46**	P	**P**	**22 50 09.2**	**0.0**
	baz=107						
MLY	**Manley**	**20.84**	**36**		**P**	**22 50 11.0**	**-0.5**
RND	**Reindeer**	**20.91**	**42**		**P**	**22 50 12.0**	**-0.3**
RND				IAmb	IAmb	22 50 12.9	
	comp=Z,15nm,0.9s						
BWN	**Browne**	**20.96**	**39**	P	**P**	**22 50 12.6**	**-0.1**
MCK	**McKinley**	**21.00**	**41**		**P**	**22 50 12.1**	**-1.1**
MCK				IAmb	IAmb	22 50 16.0	
	comp=Z,19nm,1.0s						
KLR	**Kul'dur**	**30.17**	**285**	P	**P**	**22 51 40.5**	**+0.8**
	baz=65,slow=4.5						
H11N2	**WAKE ISLAND Hy**	**32.77**	**202**	T	T	23 27 04.4	
	baz=19,slow=76,SNR=9.4						
H11N3	**WAKE ISLAND Hy**	**32.77**	**202**	T	T	23 27 12.7	
	baz=19,slow=76,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**32.78**	**202**	T	T	23 27 05.8	
	baz=19,slow=76,SNR=7.2						
YKA	**Yellowknife Ar**	**36.29**	**46**	P	**P**	**22 52 31.4**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=281,slow=7.5,SNR=2.3						
	comp=Z,0.6nm,0.6s						
BOZ	**Bozeman (W)**	**44.67**	**69**	P	**P**	**22 53 41.7**	**-0.7**
BOZ				IAmb	IAmb	22 53 56.7	
	comp=Z,3.1nm,1.4s						
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**22 53 52.2**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=58,slow=6.1,SNR=3.5						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**22 53 50.5**	**-0.6**
YPP	**Pitchstone Pla**	**45.89**	**70**	P	**P**	**22 53 50.4**	**-1.9**
PD31	**Pinedale Array**	**47.50**	**71**	P	**P**	**22 54 04.1**	**-0.7**
PDAR	**Pinedale Array**	**47.50**	**71**	P	**P**	**22 54 04.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=320,slow=3.5,SNR=12						
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	**47.50**	**71**	P	**P**	**22 54 04.3**	**-0.5**
ZALV	**Zalesovo Beam**	**53.43**	**313**	P	**P**	**22 54 48.2**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=60,slow=8.5,SNR=2.2						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**58.22**	**350**	P	**P**	**22 55 21.6**	**-1.6**
	comp=Z,1.0nm,0.9s,baz=24,slow=7.0,SNR=5.2						
	comp=Z,1.0nm,0.9s						
ARCES	**ARCESS Array B**	**58.22**	**350**	P	**P**	**22 55 21.8**	**-1.4**
ARCES				IAmb	IAmb	22 55 30.0	
	comp=Z,2.7nm,1.3s						
KURK	**Kurchatov**	**58.42**	**313**	P	**P**	**22 55 25.3**	**+0.4**
LVZ	**Lovozero**	**58.48**	**345**	P	**P**	**22 55 23.5**	**-1.6**
MK31	**Makanchi Array**	**59.34**	**308**	P	**P**	**22 55 31.2**	**-0.1**
MK31				IAmb	IAmb	22 55 56.5	
	comp=Z,2.9nm,1.4s						
MKAR	**Makanchi Array**	**59.34**	**308**	P	**P**	**22 55 31.1**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=46,slow=6.4,SNR=18						
	comp=Z,0.5nm,0.3s						
TXAR	**Lajitas Array**	**59.84**	**80**	P	**P**	**22 55 35.2**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=304,slow=5.3,SNR=4.3						
	comp=Z,0.1nm,0.4s						
BRVK	**Borovoye**	**60.42**	**319**	P	**P**	**22 55 39.4**	**+0.8**
FINES	**FINESS Array B**	**65.85**	**346**	P	**P**	**22 56 12.7**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=36,slow=7.4,SNR=5.8						
	comp=Z,0.2nm,0.3s						
ABKAR	**Akbulak array**	**67.51**	**322**	P	**P**	**22 56 24.9**	**-0.3**
ABKAR	**Akbulak array**	**67.51**	**322**	P	**P**	**22 56 25.2**	**0.0**
ABKAR				IAmb	IAmb	22 56 26.9	
	comp=Z,2.1nm,1.1s						
KKAR	**Karatay Array**	**67.76**	**312**	P	**P**	**22 56 27.6**	**+0.6**
KKAR	**Karatay Array**	**67.76**	**312**	P	**P**	**22 56 27.0**	**0.0**
KKAR				IAmb	IAmb	22 56 30.1	
	comp=Z,0.7nm,0.8s						
NB201	**NORSAR Array S**	**67.85**	**354**	P	**P**	**22 56 26.7**	**-0.6**
NB2	**NORSAR Subarra**	**67.87**	**354**	P	**P**	**22 56 26.6**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=7.6,slow=6.2						
NOA	**NORSAR Array B**	**67.87**	**354**	P	**P**	**22 56 26.6**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=2.7,slow=5.7,SNR=6.6						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**75.50**	**341**	P	**P**	**22 57 12.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=20,slow=6.0,SNR=3.5						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**80.99**	**222**	P	**P**	**22 57 43.7**	**-0.3**
	comp=Z,0.3nm,1.0s,baz=38,slow=5.9,SNR=1.7						
	comp=Z,0.3nm,1.0s						
BRTR	**Keskin Array B**	**84.77**	**334**	P	**P**	**22 58 04.0**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=29,slow=44,SNR=4.6						
	comp=Z,0.5nm,0.7s						

*KRNET **20** 23:09:59.5±0.1, 39.35N×73.23E, mb3.2*
*SOME **20** 23:10:01.7, 39.63N×73.27E, h10km*
*NNC **20** 23:10:03.2±3.2, 39.58N×73.41E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=23.9km s-min=10.8km az=175.0*
ISC 20 23:10:00.0±1.4, **39.54N**±0.07×**73.37E**±0.04, **h10**km, **n23, σ2s18**/38, **9C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.08**	**336**	⇑*i*P	**Pn**	**23 10 22.7**	**+1.4**
	baz=44						
OHH				⇑*i*S	**Sn**	**23 10 39.9**	**+3.5**
	baz=44						
ARLS	**Aral**	**2.43**	**17**	⇑*i*P	**Pb**	**23 10 45.6**	**+1.7**
	baz=18						
ARLS				⇑*i*S	**Sg**	**23 11 19.1**	**+1.0**
	baz=18						
GAR	**Garm**	**2.43**	**258**	⇑*i*P	**Pn**	**23 10 40.9**	**+1.0**
	baz=62						
GAR				⇑*i*S	**Sn**	**23 11 10.9**	**+1.2**
	baz=62						
UCH	**Uchtor**	**2.82**	**18**	⇑*i*P	**Pb**	**23 10 51.1**	**+0.4**
	baz=18						
UCH				⇑*i*S	**Sg**	**23 11 28.9**	**-1.8**
	baz=18						
MRKS	**Merke**	**3.20**	**358**	*e*P	**Pg**	**23 11 01.5**	**+0.1**
	1.0nm,0.1s						
MRKS				*e*S	**Sg**	**23 11 44.8**	**+1.9**
	8.6nm,0.3s						
IUG	**luzhnay**	**3.63**	**317**	*e*P	**Pb**	**23 11 06.0**	**+1.6**
	81nm,0.6s						
IUG				*e*S	**Sg**	**23 11 52.5**	**-4.1**
	21nm,0.9s						
IUG	**luzhnay**	**3.63**	**317**	Pg	**Pb**	**23 11 06.0**	**+1.6**
	81nm,0.6s						
IUG				Lg	Lg	23 11 52.5	
	21nm,0.9s						
TKM2	**Tokmak 2**	**3.77**	**26**	⇓Pg	**Pg**	**23 11 11.7**	**-0.5**
	1.8nm,0.5s						
TKM2				⇓Lg	Lg	23 12 01.1	
	3.0nm,0.6s						
KST	**Kastek**	**4.01**	**28**	*e*P	**Pg**	**23 11 15.7**	**-1.1**
	1.8nm,0.2s						
KST				*e*S	**Sg**	**23 12 09.4**	**+0.7**
	8.5nm,0.5s						
KST	**Kastek**	**4.01**	**28**	Pg	**Pg**	**23 11 15.7**	**-1.1**
	1.8nm,0.2s						
KST				Lg	Lg	23 12 09.4	
	8.5nm,0.5s						
SGDS	**Sogindy**	**4.02**	**13**	*e*P	**Pg**	**23 11 15.9**	**-1.1**
	1.5nm,0.5s						
SGDS				*e*S	**Sg**	**23 12 09.4**	**+0.3**
	2.1nm,0.5s						
SGDS	**Sogindy**	**4.02**	**13**	Pg	**Pg**	**23 11 15.9**	**-1.1**
	1.5nm,0.5s						
SGDS				Lg	Lg	23 12 09.4	
	2.1nm,0.5s						
KK31	**Karatay Array**	**4.16**	**330**	⇑Pn	**Pb**	**23 11 09.3**	**-4.0**
	0.3nm,0.3s,baz=145,slow=12,SNR=7.0						
KK31				⇓Pg	**Pg**	**23 11 20.0**	**+0.4**
	0.8nm,0.4s,baz=146,slow=15,SNR=6.0						
KK31				⇓Sn	**Sb**	**23 12 00.6**	**-3.0**
	1.4nm,0.3s						
KK31				⇓Lg	Lg	23 12 15.4	
	2.3nm,0.5s,baz=181,slow=39,SNR=5.5						
KRBS	**Karabastau**	**4.50**	**22**	*e*P	**Pb**	**23 11 22.6**	**+3.5**
	1.3nm,0.3s						
KRBS				*e*S	**Sg**	**23 12 21.0**	**-3.4**
	4.0nm,0.8s						
KRBS	**Karabastau**	**4.50**	**22**	Pg	**Pb**	**23 11 22.6**	**+3.5**
	1.3nm,0.3s						
KRBS				Lg	Lg	23 12 21.7	
	4.0nm,0.8s						
MDOK	**Medeo**	**4.56**	**36**	*e*P	**Pg**	**23 11 25.7**	**-1.6**
	2.0nm,0.6s						
MDOK				*e*S	**Sg**	**23 12 25.9**	**-0.4**
	4.1nm,0.6s						
MDOK	**Medeo**	**4.56**	**36**	Pg	**Pg**	**23 11 25.7**	**-1.6**
	2.0nm,0.6s						
MDOK				Lg	Lg	23 12 25.9	
	4.1nm,0.6s						
KTBS	**Karatobe**	**4.85**	**30**	*e*P	**Pg**	**23 11 30.6**	**-2.2**
	0.7nm,0.4s						
KTBS				*e*S	**Sg**	**23 12 35.1**	**-0.6**
	5.0nm,0.4s						
KTBS	**Karatobe**	**4.85**	**30**	Pg	**Pg**	**23 11 30.7**	**-2.2**
	0.7nm,0.4s						
KTBS				Lg	Lg	23 12 35.1	
	5.0nm,0.4s						
KUU	**Kurty**	**4.88**	**26**	*e*P	**Pg**	**23 11 31.0**	**-2.5**
	1.0nm,0.6s						
KUU				*e*S	**Sg**	**23 12 35.2**	**-1.6**
	7.6nm,0.6s						
KUU	**Kurty**	**4.88**	**26**	Pg	**Pg**	**23 11 31.0**	**-2.5**
	1.0nm,0.6s						
KUU				Lg	Lg	23 12 35.2	
	7.6nm,0.6s						
KPKS	**Kokpek**	**5.59**	**44**	*e*P	**Pg**	**23 11 44.3**	**-2.8**
	1.5nm,0.6s						
KPKS				*e*S	**Sg**	**23 12 58.0**	**-1.5**
	3.5nm,0.6s						
KPKS	**Kokpek**	**5.59**	**44**	Pg	**Pg**	**23 11 44.3**	**-2.8**
	1.5nm,0.6s						
KPKS				Lg	Lg	23 12 58.0	
	3.5nm,0.6s						

*IDC **20** 23:15:51.0±5.7, 17.08S×174.41E, h0km, mb3.8/4, mbtmp3.8/4, MS3.4/10, Error ellipse: s-maj=238.0km s-min=33.8km az=144.0*
ISC 20 23:15:49.7±3.3, **17.8S**±1.0×**174.9E**±0.6, **h10**km, **n19, σ1s01**/11, **mb3.9**/4, **MS3.4**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.02**	**241**	LR	LR	23 21 00.6	
	comp=Z,213nm,21.0s,baz=77,slow=34						
AFI	**Afiamalu**	**13.38**	**75**	LR	LR	23 23 37.0	
	comp=Z,117nm,20.8s,baz=290,slow=34						
CTA	**Charters Tower**	**27.19**	**261**	LR	LR	23 30 22.8	
	comp=Z,56nm,19.1s,baz=79,slow=32						
STKA	**Stephens Creek**	**33.17**	**239**	LR	LR	23 34 53.4	
	comp=Z,48nm,19.5s,baz=32,slow=34						
WRA	**Warramunga Arr**	**38.39**	**260**	P	**P**	**23 23 11.2**	**-0.3**
	0.5nm,0.8s,baz=91,slow=8.5,SNR=5.0						
WRA				LR	LR	23 37 03.1	
	comp=Z,42nm,18.0s,baz=140,slow=34						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**38.70**	**254**	P	**P**	**23 23 14.7**	**+0.6**
	1.3nm,0.8s,baz=81,slow=8.9,SNR=12						
ASAR				LR	LR	23 37 25.8	
	comp=Z,77nm,19.7s,baz=151,slow=34						
	1.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**46.76**	**262**	LR	LR	23 42 40.6	
	comp=Z,50nm,18.5s,baz=104,slow=35						
VNDA	**Vanda**	**60.08**	**183**	LR	LR	23 48 12.2	
	comp=Z,29nm,21.0s,baz=338,slow=32						
CMAR	**Chiang Mai Arr**	**82.92**	**292**	P	**P**	**23 28 15.0**	**-0.3**
	0.7nm,0.6s,baz=119,slow=3.2,SNR=1.0						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**87.37**	**15**	P	**P**	**23 28 36.6**	**+0.1**
	0.8nm,0.7s,baz=232,slow=5.5,SNR=11						
	0.8nm,0.7s						
ANMO	**Albuquerque**	**91.10**	**54**	LR	LR	00 07 58.5	
	comp=Z,14nm,18.4s,baz=201,slow=34						
TXAR	**Lajitas Array**	**91.38**	**60**	LR	LR	00 04 01.9	
	comp=Z,25nm,18.2s,baz=228,slow=32						
OBKA	**Obir**	**147.11**	**335**	*e*P	**PKPdf**	**23 35 29.9**	**-1.1**
	4.7nm,1.9s						
WATA	**Walderalm**	**147.54**	**339**	*e*P	**PKPbc**	**23 35 35.7**	**+1.3**
	3.9nm,1.4s						
WTTA	**Wattenberg**	**147.58**	**339**	*e*P	**PKPbc**	**23 35 35.8**	**+1.3**
	6.9nm,1.5s						
MOTA	**Moosalm**	**147.70**	**339**	*e*P	**PKPbc**	**23 35 36.2**	**+1.4**
	4.6nm,1.2s						
ABTA	**Abfaltersbach**	**147.71**	**337**	*e*P	**PKPdf**	**23 35 31.1**	**-0.9**
	5.4nm,1.4s						
SQTA	**Sankt Quirin**	**147.77**	**339**	*e*P	**PKPbc**	**23 35 35.4**	**+0.5**
	1.5nm,0.6s						
FETA	**Feichten**	**148.10**	**339**	*e*P	**PKPbc**	**23 35 35.4**	**-0.6**
	4.0nm,1.2s						

*SKO **20** 23:26:14.9, 41.24N×22.99E, h46km*
THE 20 23:25:54.9, 40.62N×20.64E, h0km±4km, **ML1.9/7, Error ellipse: s-maj=5.1km s-min=0.9km az=331.0, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.11**	**90**	P	Pg	23 25 57.2	+0.2
KBN				S	Sg	23 26 00.0	+1.5
	6μm,0.5s						
NEST	**Nestorio**	**0.38**	**124**	P	Pg	23 26 01.6	-0.5
NEST				S	Sg	23 26 07.1	+0.2
	218nm,0.2s						
LSK	**Leskovik**	**0.47**	**184**	P	Pg	23 26 03.5	-0.5
LSK				S	Sg	23 26 11.2	+1.1
	390nm,0.5s						
OHR	**Ohrid**	**0.50**	**14**	*i* Pg	Pg	23 26 04.1	-0.4
OHR				*i* Sg	Sg	23 26 12.0	+1.0
OHR				*e*Lg	Lg	23 26 12.1	
	comp=N,30nm,0.3s						
SRN	**Sarande**	**0.89**	**214**	P	Pg	23 26 11.4	-0.5
SRN				S	Sb	23 26 25.5	-0.1
	comp=N,102nm,0.5s						
KZN	**Kozani**	**0.92**	**110**	P	Pg	23 26 11.7	-0.8
KZN				S	Sb	23 26 26.2	-0.4
	comp=N,78nm,0.4s						
TIR	**Tirane**	**0.93**	**321**	*i* Pg	Pg	23 26 12.0	-0.8
TIR				*i* Sg	Sb	23 26 27.2	+0.3
KEK	**Kerkira**	**1.11**	**216**	P	Pg	23 26 15.8	-0.5
IGT	**Igoumenitsa**	**1.12**	**192**	P	Pg	23 26 16.5	+0.2
IGT				S	Sb	23 26 31.9	-0.2
	comp=N,38nm,0.5s						
GRG	**Griva**	**1.38**	**75**	*i* Pg	Pg	23 26 19.3	-2.0
THL	**Klokotos Trika**	**1.49**	**135**	P	Pn	23 26 21.9	-1.1
THL				S	Sn	23 26 44.1	+1.0
	comp=N,18nm,0.3s						
STIP	**Stip**	**1.58**	**47**	*i* Pn	Pg	23 26 26.9	+1.7
ULC	**Ulcinj**	**1.70**	**322**	*i* Pn	Pn	23 26 26.2	+0.3
KNT	**Kendrikon**	**1.79**	**72**	*i* Pn	Pn	23 26 25.9	-1.2
SOH	**Sokhos**	**2.07**	**84**	*i* Pn	Pn	23 26 29.9	-1.1
DBRK	**Dubrovnik**	**2.77**	**318**	*e*Pn	Pn	23 26 37.3	-3.3
STON	**Ston**	**3.14**	**317**	*e*Pn	Pn	23 26 41.3	-4.3
LSTV	**Lastovo**	**3.53**	**309**	*e*Pn	Pn	23 26 48.5	-2.4
LSTV				Sn	Sn	23 27 29.8	-3.7
MORI	**Morici**	**4.89**	**313**	*e*Pn	Pn	23 27 08.5	-1.2
DUGI	**Dugi Otok**	**5.33**	**311**	*e*Pn	Pn	23 27 13.6	-2.1
VIRC	**Vir**	**5.52**	**313**	*e*Pn	Pn	23 27 16.2	-2.1

*PAS **20** 23:44:37.9±1.6, 35.990N±0.010×117.92W±0.01, h4km±1km, ML3.1/147, ML2.6/76(NEIC), Error ellipse: s-maj=1.5km s-min=1.3km az=218.0*
*NCEDC **20** 23:44:37.7, 35.99N×117.93W, h4km*
*ANF **20** 23:44:37.3±0.1, 35.98N×117.93W, h8km±1km, ML3.0/27, ML3.0/27, Error ellipse: s-maj=1.0km s-min=0.9km az=121.0*
*NEIC **20** 23:44:37.8±1.6, 35.996N±0.004×117.93W±0.01, h4km±5km, Error ellipse: s-maj=1.4km s-min=0.4km az=105.0*
ISC 20 23:44:38.0±0.8, **35.99N**±0.01×**117.92W**±0.01, **h10**km±5km, **n115**, σ0s**75**/158, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRVM	**Rose V. Centra**	**0.03**	**53**		**Pg**	**23 44 40.1**	**+0.1**
WCSM	**Coso Springs S**	**0.13**	**74**		**Pg**	**23 44 40.7**	**-0.4**
WCSM					**Sg**	**23 44 42.7**	**-0.6**
MFS	**McCloud Flat S**	**0.14**	**22**		**Pg**	**23 44 40.8**	**-0.5**
MFS					**Sg**	**23 44 43.0**	**-0.6**
WNMM	**Nine Mile Cany**	**0.15**	**175**		**Pg**	**23 44 40.8**	**-0.4**
WNMM					**Sg**	**23 44 43.0**	**-0.5**
TOW	**Tower One**	**0.22**	**145**		**Pg**	**23 44 42.6**	**0.0**
TOW					**Sg**	**23 44 46.8**	**+1.2**
SRTC	**Snort**	**0.33**	**155**		**Pg**	**23 44 44.7**	**+0.1**
SRTC					**Sg**	**23 44 50.0**	**+1.1**
MPMC	**Manual Prospec**	**0.36**	**79**		**Pg**	**23 44 44.8**	**-0.3**
MPMC					**Sg**	**23 44 49.7**	**-0.2**
MPMC	**Manual Prospec**	**0.36**	**79**	P	**Pg**	**23 44 44.8**	**-0.3**
	baz=260,SNR=294						
MPMC				S	**Sg**	**23 44 49.7**	**-0.2**
	baz=260						
WLHM	**Little Horse**	**0.36**	**297**		**Pg**	**23 44 44.7**	**-0.5**
WLHM					**Sg**	**23 44 49.8**	**-0.2**
WORM	**Onyx Ranch**	**0.39**	**222**		**Pg**	**23 44 45.3**	**-0.5**
WORM					**Sg**	**23 44 50.7**	**-0.3**
WHFM	**Hanning Flat**	**0.46**	**230**		**Pg**	**23 44 46.6**	**-0.3**
WHFM					**Sg**	**23 44 52.8**	**-0.1**
CWC	**Cottonwood Cre**	**0.47**	**344**		**Pg**	**23 44 46.7**	**-0.4**
CWC					**Sg**	**23 44 53.2**	**-0.2**
CWC	**Cottonwood Cre**	**0.47**	**344**	P	**Pg**	**23 44 46.7**	**-0.4**
	baz=165						
CWC				S	**Sg**	**23 44 53.2**	**-0.2**
	baz=165						
WBSM	**Bird Springs**	**0.49**	**202**		**Pg**	**23 44 47.2**	**-0.3**
WBSM					**Sg**	**23 44 53.9**	**0.0**
LRMC	**Laurel Mtn Rad**	**0.55**	**159**		**Pg**	**23 44 48.2**	**-0.4**
LRMC					**Sg**	**23 44 55.6**	**-0.2**
LRMC	**Laurel Mtn Rad**	**0.55**	**159**	P	**Pg**	**23 44 48.2**	**-0.4**
	baz=338,SNR=35						
LRMC				S	**Sg**	**23 44 55.5**	**-0.3**
	baz=338						
ISA	**Isabella, Lake**	**0.56**	**234**	Pg	**Pg**	**23 44 48.4**	**-0.4**
ISA	**Isabella, Lake**	**0.56**	**234**		**Sg**	**23 44 55.9**	**-0.3**
ISA	**Isabella, Lake**	**0.56**	**234**	P	**Pg**	**23 44 48.5**	**-0.4**
	baz=53,SNR=169						
ISA				S	**Sg**	**23 44 55.9**	**-0.3**
	baz=53						
CGO	**Cerro Gordo**	**0.57**	**10**		**Pg**	**23 44 48.5**	**-0.6**
CGO					**Sg**	**23 44 57.0**	**+0.4**
WASM	**Alta Sierra Ca**	**0.57**	**244**		**Pg**	**23 44 48.8**	**-0.4**
WASM					**Sg**	**23 44 56.6**	**-0.2**
CCCA	**Chr Cany lake**	**0.65**	**136**		**Pg**	**23 44 50.4**	**-0.1**
CCCA					**Sg**	**23 44 59.8**	**+0.8**
SPG2	**Springville 2**	**0.72**	**287**		**Pg**	**23 44 51.1**	**-0.8**
SPG2					**Sg**	**23 45 00.2**	**-1.1**
DTP	**Desert Tortois**	**0.72**	**175**		**Pg**	**23 44 51.5**	**-0.5**
DTP					**Sg**	**23 45 01.1**	**-0.3**
WOFM	**Oak Flat**	**0.79**	**235**		**Pg**	**23 44 52.7**	**-0.5**
MCA	**Marble Canyon**	**0.83**	**38**		**Pg**	**23 44 53.3**	**-0.8**
CCAC	**Calif City Air**	**0.84**	**185**		**Pg**	**23 44 53.6**	**-0.5**

WCT	**Wildcat Mounta**	**1.32**	**52**		**Pn**	**23 45 02.2 -0.3**
SHOC	**Shoshone, Teco**	**1.34**	**93**	P	**Pn**	**23 45 03.1 +0.3**
	baz=274,SNR=66					
SHOC				S	**Sg**	**23 45 21.0 -0.1**
	baz=274					
RRX	**Edison Barstow**	**1.34**	**146**	P	**Pn**	**23 45 03.0 +0.1**
	baz=326					
RRX				S	**Sg**	**23 45 21.1 -0.1**
	baz=326					
DSP	**Deep Springs**	**1.38**	**358**		**Pn**	**23 45 03.2 -0.1**
DSP				IAML		23 45 26.2
	comp=E,63nm,0.9s					
AMDNV	**Amargosa**	**1.40**	**70**		**Pn**	**23 45 03.1 -0.5**
GMN	**Gold Mountain**	**1.41**	**22**		**Pn**	**23 45 04.1 +0.1**
GMN				IAML		23 45 25.2
	comp=E,57nm,0.4s					
GMN				IAML		23 45 29.9
	comp=N,62nm,0.6s					
MTUM	**Tungsten Hills**	**1.46**	**339**		**Pn**	**23 45 05.0 +0.4**
SCHCA	**Scheelite**	**1.50**	**336**		**Pn**	**23 45 05.7 +0.5**
OSI	**Osito Audit: C**	**1.52**	**206**	P	**Pn**	**23 45 05.6 +0.3**
	baz=25					
OSI				Sb	**Sg**	**23 45 26.9 0.0**
	baz=25					
JNH	**Juniper Hills**	**1.54**	**181**		**Pn**	**23 45 06.7 +1.0**
BCW	**Bitter Crk WRg**	**1.61**	**230**		**Pn**	**23 45 06.8 +0.3**
CRGC	**Crocker Grade**	**1.65**	**244**		**Pb**	**23 45 08.2 -0.3**
TPNV	**Topopah Spring**	**1.65**	**54**		**Pn**	**23 45 07.2 0.0**
TPNV				IAML		23 45 35.1
	comp=N,54nm,0.5s					
TPNV				IAML		23 45 35.5
	comp=N,47nm,0.6s					
TPNV	**Topopah Spring**	**1.65**	**54**	P	**Pn**	**23 45 06.8 -0.4**
	baz=235,SNR=52					
TPNV				Sb	**Sg**	**23 45 31.1 0.0**
	baz=235					
CHFC	**Chilao Flat St**	**1.66**	**183**		**Pb**	**23 45 09.0 +0.3**
CHFC					**Sn**	**23 45 29.7 +1.0**
TUQ	**Turquoise Moun**	**1.72**	**108**	P	**Pn**	**23 45 07.3 -0.8**
	baz=290,SNR=12					
TUQ				Sb	**Sg**	**23 45 32.8 -0.4**
	baz=290					
HEC	**Hector,Ludlow**	**1.74**	**131**	P	**Pn**	**23 45 07.3 -1.0**
	baz=312,SNR=8.5					
HEC				Sb	**Sb**	**23 45 33.1 +1.2**
	baz=312					
MZP	**Montezuma Peak**	**1.76**	**14**		**Pn**	**23 45 08.9 +0.1**
DECC	**Green Verdugo**	**1.77**	**191**	Pb	**Pb**	**23 45 10.2 -0.2**
	baz=10					
DECC				Sb	**Sb**	**23 45 33.4 +0.7**
	baz=10					
PKEM	**Kettleman Hill**	**1.78**	**273**		**Pb**	**23 45 10.6 0.0**
MLAC	**Mammoth, Mammo**	**1.79**	**336**		**Pb**	**23 45 11.3 +0.2**
MLAC	**Mammoth, Mammo**	**1.79**	**336**	Pb	**Pb**	**23 45 11.1 0.0**
	baz=156					
MLAC				Sb	**Sg**	**23 45 34.9 -0.8**
	baz=156					
SMMC	**Simmler**	**1.82**	**249**	Sb	**Sb**	**23 45 34.7 +0.4**
	baz=67					
OMMB	**Old Mammoth Mi**	**1.84**	**332**		**Pb**	**23 45 11.3 -0.6**
OMMB				IAML		23 45 37.3
	comp=E,52nm,0.4s					
OMMB				IAML		23 45 41.1
	comp=N,52nm,0.6s					
MCSM	**Casa Diablo Ho**	**1.84**	**335**		**Pb**	**23 45 12.0 +0.1**
MDPB	**Devils Postpil**	**1.89**	**331**		**Pb**	**23 45 12.1 -0.6**
MDPB				IAML		23 45 38.2
	comp=E,92nm,0.4s					
MDPB				IAML		23 45 41.8
	comp=N,66nm,0.8s					
PKM	**Mcpherson Peak**	**1.90**	**235**	Sb	**Sb**	**23 45 37.0 +0.3**
	baz=54					
PWMM	**Westland Maint**	**1.91**	**284**		**Pb**	**23 45 12.2 -0.6**
PAGB	**Antelope Grade**	**1.91**	**263**		**Pn**	**23 45 11.8 +1.1**
BCH	**Branch Mountai**	**1.94**	**246**		**Pn**	**23 45 12.5 +1.4**
MHDM	**Hidden Dam**	**1.95**	**306**		**Pn**	**23 45 12.4 +1.2**
PARM	**Anticline Ridg**	**1.98**	**278**		**Pb**	**23 45 13.4 -0.8**
MMIM	**Miami Mountain**	**2.05**	**315**		**Pb**	**23 45 14.9 -0.4**
TPH	**Tonopah**	**2.15**	**15**		**Pn**	**23 45 15.6 +1.4**
PSMM	**Smith Mountain**	**2.17**	**273**		**Pb**	**23 45 16.4 -1.0**
PJUM	**Juniper Ridge**	**2.18**	**277**		**Pn**	**23 45 16.1 +1.7**
GMRC	**Granite Mounta**	**2.20**	**122**		**Pn**	**23 45 13.4 -1.4**
GMRC	**Granite Mounta**	**2.20**	**122**	P	**Pn**	**23 45 13.3 -1.4**
	baz=304,SNR=16					
SHPR	**Sheep Range**	**2.29**	**76**		**Pn**	**23 45 16.9 +0.9**
LHV	**Little Huntoon**	**2.31**	**348**		**Pn**	**23 45 16.9 +0.9**
LHV				IAML		23 45 57.4
	comp=E,40nm,0.6s					
LHV				IAML		23 45 58.8
	comp=N,33nm,0.6s					
PMPB	**Monarch Peak**	**2.34**	**276**		**Pn**	**23 45 17.7 +1.1**
WTNK	**Soaring Height**	**2.37**	**84**		**Pn**	**23 45 16.8 -0.1**
WTNK				IAML		23 45 54.5
	comp=E,6.7nm,0.4s					
WTNK				IAML		23 46 00.7
	comp=N,7.2nm,3.8s					
ELS	**Elsinore Mount**	**2.37**	**170**	Pn	**Pn**	**23 45 17.1 +0.1**
ELS				IAML		23 45 53.5
	comp=E,40nm,0.3s					
ELS				IAML		23 45 54.3
	comp=N,35nm,0.7s					
BMSM	**Mercy Hot Spri**	**2.42**	**287**		**Pn**	**23 45 19.6 +2.0**
BRMM	**Rolling Bench**	**2.49**	**291**		**Pb**	**23 45 21.0 -1.8**
V12A	**Nelson**	**2.51**	**95**		**Pn**	**23 45 18.8 -0.2**
V12A				IAML		23 46 03.7
	comp=N,32nm,1.3s					
V12A				IAML		23 46 04.0
	comp=E,22nm,0.5s					
BELC	**Belle Mtn. Jos**	**2.54**	**141**	P	**Pn**	**23 45 18.7 -0.7**
	baz=322					
BBGB	**Big Mountain B**	**2.59**	**284**		**Pn**	**23 45 21.2 +1.2**
PFO	**Pinyon Flats O**	**2.66**	**153**		**Pn**	**23 45 20.6 -0.5**
PFO				IAML		23 46 04.3
	comp=E,19nm,0.4s					
PFO	**Pinyon Flats O**	**2.66**	**153**	P	**Pn**	**23 45 20.5 -0.5**
	baz=334					
PMD	**Palm Desert**	**2.66**	**151**		**Pn**	**23 45 20.3 -0.7**
PMD				IAML		23 46 03.6
	comp=N,13nm,0.4s					
PMD				IAML		23 46 05.1
	comp=E,21nm,0.7s					
TPFO	**Pinon Flats**	**2.67**	**153**	P	**Pn**	**23 45 20.7 -0.5**
	baz=334					
PRN	**Pahroc Range**	**2.71**	**58**		**Pn**	**23 45 22.1 +0.4**
PRN				IAML		23 46 12.4
	comp=E,30nm,0.8s					
PRN				IAML		23 46 12.8
	comp=N,24nm,1.1s					
SAO	**San Andreas Ge**	**2.95**	**286**		**Pn**	**23 45 26.2 +1.3**
NEE2	**Needles Airpor**	**2.96**	**113**	P	**Pn**	**23 45 24.0 -1.0**
	baz=295					
R11A	**Troy Canyon, C**	**3.00**	**38**		**Pn**	**23 45 27.2 +1.3**
KVN	**Kaiserville**	**3.06**	**357**		**Pn**	**23 45 27.2 +0.6**
PNTR	**Pine Nut**	**3.37**	**337**		**Pn**	**23 45 32.6 +1.7**
PNTR				IAML		23 46 38.3
	comp=N,14nm,1.2s					
PNTR				IAML		23 46 44.4
	comp=E,13nm,1.1s					
W13A	**Hualapai Mount**	**3.41**	**104**		**Pn**	**23 45 30.6 -0.8**
W13A				IAML		23 46 31.7
	comp=E,8.7nm,0.7s					
BAR	**Barrett**	**3.46**	**162**	Pn	**Pn**	**23 45 32.2 +0.2**
BAR				IAML		23 46 26.4
	comp=E,20nm,0.6s					
BAR				IAML		23 46 27.4
	comp=N,19nm,0.6s					
BLYC	**Blythe**	**3.58**	**128**		**Pn**	**23 45 32.5 -1.1**
BLYC				IAML		23 46 39.8
	comp=E,9.6nm,0.7s					
BLYC				IAML		23 46 40.9
	comp=N,9.6nm,2.0s					
KNB	**Kanab**	**4.23**	**74**		**Pn**	**23 45 45.0 +2.3**
KNB				IAML		23 47 04.1
	comp=E,4.7nm,3.2s					
KNB				IAML		23 47 06.4
	comp=N,6.0nm,3.8s					
Y14A	**Wickenburg**	**4.53**	**115**	Pn	**Pn**	**23 45 45.6 -1.0**
Y14A				IAML		23 47 09.2
	comp=N,8.5nm,0.9s					
Y14A				IAML		23 47 09.3
	comp=E,5.4nm,0.8s					
ELK	**Elko**	**5.19**	**23**		**Pn**	**23 45 55.6 -0.4**
ELK				IAML		23 47 26.7
	comp=E,2.2nm,2.9s					

MEX ***20*** *23:44:44.2±0.8, 14.22N×92.42W, h91km±27km, MD3.9*
GCG ***20*** *23:44:50.2±0.3, 14.38N×91.92W, h58km±66km, MD3.5*

ISC 20 23:44:43.3±2.6, 14.2N±0.2°×92.4W±0.1°, h83km±18km, n11, σ0.6°70/19, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.69**	**13**	*eP*	**Pn**	**23 44 58.2**	**-0.9**
THIG				*eS*	**Sn**	**23 45 11.4**	**+0.5**
PATR	**El Naranjo**	**0.90**	**12**	*i* P	**Pn**	**23 45 01.8**	**+0.1**
PATR				*eS*	**Sn**	**23 45 15.7**	**+0.3**
CHUJ	**Union Juarez**	**0.92**	**20**	*i* P	**Pn**	**23 45 02.0**	**+0.2**
CHUJ				*eS*	**Sn**	**23 45 16.0**	**+0.4**
STG3	**Santiaguito 3,**	**0.96**	**60**	*eP*	**Pn**	**23 45 02.5**	**+0.2**
PAVE	**Pavencul**	**0.99**	**14**	*i* P	**Pn**	**23 45 03.2**	**+0.6**
PAVE				*eS*	**Sn**	**23 45 16.8**	**-0.3**
FUG	**Fuego 3**	**1.55**	**82**	*eP*	**Pn**	**23 45 09.4**	**-0.2**
PCIG		**1.66**	**333**	*eP*	**Pn**	**23 45 10.9**	**+0.2**
PCIG				*eS*	**Sn**	**23 45 31.5**	**-0.1**
PCG	**Pacaya**	**1.77**	**84**	*eP*	**Pn**	**23 45 12.7**	**+0.2**
CCIG	**Comitan**	**2.06**	**8**	*eP*	**Pn**	**23 45 16.6**	**+0.4**
CCIG				*eS*	**Sn**	**23 45 40.0**	**-1.4**
TGIG		**2.62**	**345**	*eP*	**Pn**	**23 45 25.0**	**+1.3**
TGIG				*eS*	**Sn**	**23 45 53.6**	**-1.1**
UXUV	**UXUV**	**3.49**	**332**	*eP*	**Pn**	**23 45 34.8**	**-0.6**
UXUV				*eS*	**Sn**	**23 46 15.9**	**+0.4**

IDC ***20*** *23:57:17.5±1.4, 28.95S×61.38E, h0km, mb3.8/5, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=68.9km s-min=25.6km az=29.0*
NEIC ***20*** *23:57:19.2±2.2, 28.76S±0.04°×61.4E±0.1°, h10km±1km, mb4.4/8, Error ellipse: s-maj=21.6km s-min=5.2km az=105.0*

ISC 20 23:57:19.3±0.6, 28.8S±0.1°×61.3E±0.1°, h11km, n27, σ1°29/21, mb4.1/8, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.09**	**325**	Pn	**Pn**	**23 59 30.3**	**-0.3**
VOI	**Vohitsoka**	**14.77**	**294**	Pn	**Pn**	**00 00 45.8**	**-2.6**
ABPO	**Ambohimpanom**	**16.09**	**304**	Pn	**Pn**	**00 01 04.2**	**-1.6**
OPO	**Ambohidratompo**	**16.41**	**305**	Pn	**Pn**	**00 01 09.9**	**+0.1**
	0.1nm,0.3s,baz=122,slow=20,SNR=2.3						
OPO				Sn	Sn	00 04 01.1	-11
	baz=82,slow=15,SNR=1.5 1.3nm,0.3s						
H08S1	**Diego Carcia H**	**23.51**	**29**	T	T	00 27 15.9	
	baz=204,slow=76,SNR=18						
H08S2	**Diego Garcia H**	**23.52**	**29**	T	T	00 27 19.7	
	baz=204,slow=76,SNR=5.6						
H08S3	**Diego Garcia H**	**23.53**	**29**	T	T	00 27 17.3	
	baz=204,slow=76,SNR=17						
H01W2	**Cape Leeuwin H**	**44.89**	**112**	T	T	00 53 15.2	
	baz=261,slow=75,SNR=12						
H01W3	**Cape Leeuwin H**	**44.89**	**112**	T	T	00 53 15.5	
	baz=261,slow=75,SNR=21						
H01W1	**Cape Leeuwin H**	**44.91**	**112**	T	T	00 53 16.5	
	baz=261,slow=75,SNR=18						
SNAA	**Sanae**	**54.87**	**200**	P	**P**	**00 06 51.1**	**+1.6**
MMRI	**Maumere**	**60.47**	**83**	P	**P**	**00 07 29.2**	**-0.4**
QSPA	**South Pole Qui**	**61.38**	**180**	P	**P**	**00 07 36.3**	**+1.1**
QSPA				IAmb	IAmb	00 07 49.7	
	comp=Z,3.6nm,1.2s						
KNRA	**Kununurra**	**63.10**	**94**	P	**P**	**00 07 45.5**	**-1.8**
VNDA	**Vanda**	**64.39**	**166**		**P**	**00 07 53.9**	**-0.9**
VNDA				IAmb	IAmb	00 08 22.3	
	comp=Z,2.6nm,1.4s						
ASAR	**Alice Springs**	**64.43**	**104**	P	**P**	**00 07 55.1**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=246,slow=5.7,SNR=12 comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**64.43**	**104**	P	**P**	**00 07 54.5**	**-1.6**
WRA	**Warramunga Arr**	**66.23**	**100**	P	**P**	**00 08 06.9**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=247,slow=5.7,SNR=10 comp=Z,0.5nm,0.6s						
WR0	**Warramunga Arr**	**66.40**	**101**	P	**P**	**00 08 07.0**	**-1.8**
WR0				IAmb	IAmb	00 08 28.8	
	comp=Z,5.1nm,1.2s						
TORD	**Torodi Ar. Bea**	**71.05**	**297**	P	**P**	**00 08 39.1**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=122,slow=5.5,SNR=2.7 comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.05**	**297**	P	**P**	**00 08 38.0**	**+0.2**
TORD				IAmb	IAmb	00 08 50.9	
	comp=Z,4.4nm,1.4s						
MKAR	**Makanchi Array**	**77.57**	**15**	P	**P**	**00 09 16.2**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=215,slow=5.9,SNR=3.7 comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**77.57**	**15**	P	**P**	**00 09 14.9**	**-0.2**
ABKAR	**Akbulak array**	**77.68**	**359**	P	**P**	**00 09 17.0**	**+1.4**
ZALV	**Zalesovo Beam**	**84.86**	**14**	P	**P**	**00 09 54.4**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=182,slow=8.5,SNR=4.4 comp=Z,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**146.16**	**357**	PKPbc	**PKPbc**	**00 16 59.0**	**0.0**
	comp=Z,0.7nm,0.8s,baz=339,slow=3.4,SNR=4.1						
TXAR	**Lajitas Array**	**166.82**	**276**	PKP	**PKPdf**	**00 17 25.3**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=149,slow=2.6,SNR=3.5						

IDC ***21*** *00:03:04.9±0.9, 55.02S×31.01W, h0km, mb3.8/6, mbtmp3.9/7, ML3.7/1, MS3.2/8, Error ellipse: s-maj=34.3km s-min=20.9km az=73.0*
NEIC ***21*** *00:03:06.8±1.9, 55.2S±0.1°×31.2W±0.2, h10km±2km, mb4.5/14, Error ellipse: s-maj=20.0km s-min=16.7km az=57.0*

ISC 21 00:03:06.3±0.7, 55.09S±0.10°×31.2W±0.1°, h10km, n37, σ0.9°91/26, mb4.4/10, MS3.3/7, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.16**	**283**	Pn	**Pn**	**00 03 55.7**	**-0.3**
ORCD	**Orcadas**	**9.14**	**226**	Pn	**Pn**	**00 05 16.2**	**-1.8**
PMSA	**Palmer Station**	**18.86**	**226**	P	**P**	**00 07 26.4**	**+0.3**
	0.2nm,0.3s,baz=106,slow=19,SNR=2.5						
PMSA				LR	LR	00 14 09.5	
	comp=Z,95nm,18.6s,baz=97,slow=35 4.7nm,1.0s						
SNAA	**Sanae**	**20.57**	**155**	P	**P**	**00 07 45.0**	**+0.1**
	2.5nm,0.8s,baz=311,slow=9.1,SNR=9.8 2.5nm,0.8s						
SNAA	**Sanae**	**20.57**	**155**	P	**P**	**00 07 44.4**	**-0.5**
TRQA	**Tornquist**	**26.84**	**297**	P	**P**	**00 08 47.8**	**+1.1**
TRQA				IAmb	IAmb	00 09 09.9	
	comp=Z,10nm,1.2s						
PLCA	**Paso Flores**	**29.56**	**283**	LR	LR	00 20 36.1	
	comp=Z,31nm,20.7s,baz=173,slow=35						
ITQB	**Itaqui**	**31.24**	**314**	P	**P**	**00 09 23.9**	**-2.0**
ITQB				IAmb	IAmb	00 09 38.7	
	comp=Z,21nm,1.2s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**00 10 01.0**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=198,slow=3.7,SNR=6.3						
QSPA				LR	LR	00 24 28.1	
	comp=Z,70nm,18.3s,baz=196,slow=36 comp=Z,1.5nm,0.7s						
QSPA	**South Pole Qui**	**35.16**	**180**	P	**P**	**00 10 00.6**	**+0.6**
QSPA				IAmb	IAmb	00 10 04.8	
	comp=Z,2.7nm,0.9s						
MT02	**Curacav**	**35.30**	**292**	P	**P**	**00 10 02.1**	**+0.8**
VA06	**Catapilco**	**35.93**	**292**	P	**P**	**00 10 07.2**	**+0.6**
CO03	**El Pedregal**	**36.95**	**295**	P	**P**	**00 10 16.2**	**+0.7**
CO03				IAmb	IAmb	00 10 47.7	
	comp=Z,28nm,1.4s						
MAW	**Mawson**	**42.27**	**145**	P	**P**	**00 10 59.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=276,slow=11,SNR=2.1 comp=Z,1.0nm,0.5s						
PB01	**IPOC Station P**	**44.46**	**304**	P	**P**	**00 11 17.7**	**+0.2**
PB01				IAmb	IAmb	00 11 57.6	
	comp=Z,20nm,1.4s						
PB16	**IPOC Station P**	**46.80**	**306**	P	**P**	**00 11 37.8**	**+1.1**
VNDA	**Vanda**	**47.40**	**184**	P	**P**	**00 11 40.8**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=256,slow=11,SNR=2.1 comp=Z,0.5nm,0.8s						
VNDA	**Vanda**	**47.40**	**184**	P	**P**	**00 11 41.1**	**+1.1**
H10S2	**ASCENSION HYDR**	**47.86**	**22**	T	T	01 03 27.3	
	baz=192						
H10S3	**ASCENSION HYDR**	**47.87**	**22**	T	T	01 03 25.7	
	baz=28						
LPAZ	**La Paz**	**47.97**	**309**	P	**P**	**00 11 46.5**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=134,slow=6.2,SNR=18 comp=Z,2.4nm,0.5s						
LPAZ	**La Paz**	**47.97**	**309**	P	**P**	**00 11 47.0**	**+1.2**
LPAZ				IAmb	IAmb	00 11 48.0	
	comp=Z,3.5nm,0.7s						
H10N1	**ASCENSION HYDR**	**48.98**	**22**	T	T	01 04 52.0	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.98**	**22**	T	T	01 04 52.2	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**48.99**	**22**	T	T	01 04 45.3	
	baz=192,slow=74						
RCBR	**Riachuelo**	**49.27**	**354**	LR	LR	00 30 39.1	
	comp=Z,19nm,18.0s,baz=319,slow=34						
TSUM	**Tsumeb**	**51.30**	**66**	LR	LR	00 30 49.3	
	comp=Z,29nm,18.3s,baz=336,slow=32						
NNA	**Nana**	**55.78**	**302**	LR	LR	00 36 32.0	
	comp=Z,9.7nm,20.3s,baz=127,slow=36						
LSZ	**Lusaka**	**60.23**	**73**	LR	LR	00 37 13.9	
	comp=Z,36nm,18.4s,baz=184,slow=34						
MDP	**Montagnes des**	**62.56**	**336**	LR	LR	00 41 25.3	
	comp=Z,18nm,18.7s,baz=156,slow=37						
TOA0	**Torodi Ar. Sit**	**73.43**	**34**	P	**P**	**00 14 38.4**	**-0.1**
TOA0				IAmb	IAmb	00 15 10.8	
	comp=Z,4.3nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.43**	**34**	P	**P**	**00 14 37.8**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=196,slow=6.9,SNR=2.6 comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.43**	**34**	P	**P**	**00 14 38.5**	**-0.1**
TORD				IAmb	IAmb	00 14 49.6	
	comp=Z,3.8nm,1.4s						
FINES	**FINESS Array B**	**124.64**	**29**	PKP	**PKiKP**	**00 22 05.0**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=212,slow=4.9,SNR=1.9						
ZALV	**Zalesovo Beam**	**144.02**	**65**	PKP	**PKPdf**	**00 22 39.9**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=242,slow=3.1,SNR=2.6						
ILAR	**Eielson Array**	**147.78**	**314**	PKPbc	**PKPbc**	**00 22 49.9**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=131,slow=2.1,SNR=7.3						
SONM	**Songino Array**	**152.97**	**88**	PKPbc	**PKPbc**	**00 23 02.1**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=215,slow=1.8,SNR=1.5						

IDC 21 00:17:55.4±5.6, 32.58S×178.64W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=229.9km s-min=64.0km az=160.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.50**	**270**	P	P	00 25 53.1	+0.4
	0.3nm,0.5s,baz=109,slow=7.6,SNR=2.6 0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.68**	**275**	P	P	00 26 01.9	-0.5
	0.5nm,0.6s,baz=117,slow=8.1,SNR=17 0.5nm,0.6s						
H03S2	**Juan Fernandez**	**79.72**	**124**	T	T	01 58 30.4	
	baz=235						
H03S1	**Juan Fernandez**	**79.73**	**124**	T	T	01 58 32.1	
	baz=235						
H03S3	**Juan Fernandez**	**79.74**	**124**	T	T	01 58 32.6	
	baz=235						
FINES	**FINESS Array B**	**146.98**	**338**	PKPbc	PKPbc	00 37 38.4	-0.8
	0.9nm,0.7s,baz=64,slow=3.2,SNR=2.3						

FUNV ***21*** *00:19:15.2, 8.26N×72.11W, h5km, MW3.4*
RSNC ***21*** *00:19:15.7±1.2, 8.29N×72.16W, h0km±7km, ML2.6*

ISC 21 00:19:13.9±1.5, 8.28N±0.04°×72.07W±0.03°, h4km±11km, n21, σ1°26/39, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**0.48**	**211**	*eP*	**Pg**	**00 19 23.8**	**+0.6**
CAPV				*eS*	**Sg**	**00 19 30.1**	**+0.6**
PAMC	**Pamplona, Colo**	**1.12**	**214**	*eP*	**Pg**	**00 19 35.5**	**0.0**
PAMC				*eS*	**Sb**	**00 19 50.7**	**-0.7**
PAMC				*i*		00 19 57.1	
	comp=Z,156nm,0.3s						
SOCV	**Socops**	**1.20**	**90**	*eP*	**Pn**	**00 19 37.8**	**+0.3**
SOCV	**Socops**	**1.20**	**90**	*eP*	**Pn**	**00 19 37.7**	**+0.3**
SOCV				*eS*	**Sn**	**00 19 56.0**	**+1.8**
OCAC	**Ocana**	**1.24**	**268**	*eP*	**Pb**	**00 19 36.4**	**-1.6**
OCAC				*eS*	**Sb**	**00 19 51.7**	**-2.7**
OCAC				*i*		00 19 57.3	
	comp=Z,276nm,0.2s						
MCQV	**Machiques**	**1.82**	**345**	*eP*	**Pn**	**00 19 47.0**	**+1.0**
MCQV				*eS*	**Sn**	**00 20 10.4**	**+0.9**
TAMC	**Tame, Arauca**	**1.85**	**172**	*eP*	**Pb**	**00 19 48.3**	**-0.1**
TAMC				*eS*	**Sg**	**00 20 13.5**	**0.0**
TAMC				*i*		00 20 18.3	
	comp=Z,52nm,0.3s						
LL6C	**La Loma 6 Bece**	**1.87**	**321**	*eP*	**Pn**	**00 19 47.2**	**+0.4**
LL6C				*i*		00 20 12.9	
	comp=Z,52nm,0.3s						
BRRC	**Barranca, Sant**	**2.00**	**235**	*eP*	**Pb**	**00 19 51.0**	**+0.1**
BRRC				*eS*	**Sg**	**00 20 17.3**	**-1.1**
BRRC				*i*		00 20 19.4	
	comp=Z,28nm,0.2s						
BARC	**Barichara**	**2.01**	**214**	*eP*	**Pb**	**00 19 50.7**	**-0.5**
BARC				*eS*	**Sb**	**00 20 17.3**	**+0.7**
BARC				*i*		00 20 21.8	
	comp=Z,68nm,0.4s						
RUSC	**La Rusia**	**2.58**	**203**	*eP*	**Pn**	**00 19 58.5**	**+1.6**
RUSC				*eS*	**Sb**	**00 20 30.7**	**-2.5**
RUSC				*i*		00 20 38.8	
	comp=Z,14nm,0.7s						
CURV	**Curarigua**	**2.70**	**50**	*eS*	**Sn**	**00 20 31.6**	**+0.2**
CRJC	**Cerrejon, Guaj**	**2.84**	**344**	*eP*	**Pn**	**00 20 01.4**	**+1.2**
CRJC				*eS*	**Sn**	**00 20 37.7**	**+2.8**
CRJC				*i*		00 20 50.9	
	comp=Z,30nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.87**	**254**	*eP*	**Pn**	**00 20 01.9**	**+1.3**
ZARC				*eS*	**Sn**	**00 20 35.8**	**+0.2**
ZARC				*i*		00 20 44.0	
	comp=Z,20nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.93**	**234**	*eP*	**Pn**	**00 20 01.4**	**0.0**
PTBC				*eS*	**Sn**	**00 20 36.3**	**-0.8**
PTBC				*i*		00 20 49.0	
	comp=Z,13nm,0.2s						
DABV	**Dabajuro**	**2.98**	**28**	*eP*	**Pn**	**00 20 02.8**	**+0.8**
DABV				*eS*	**Sn**	**00 20 38.3**	**0.0**
SIQV	**Siquisique**	**3.24**	**43**	*eP*	**Pn**	**00 20 06.9**	**+1.3**
SIQV				*eS*	**Sn**	**00 20 44.6**	**-0.1**
MAPV	**Macapo**	**3.88**	**66**	*eP*	**Pn**	**00 20 15.2**	**+0.7**
MAPV				*eS*	**Sn**	**00 20 59.5**	**-1.0**
BAUV	**El Baul**	**4.

M_{rb}-0.42±.03; M_{blb}0.39±.01; M_{blr}0.56±.03; Best double couple: M_{rr}1.11400×10^{17} NP1:ϕ_{str}322.00000°,δ64.00000°, λ92.00000°. NP2:ϕ_{str}136.00000°,δ26.00000°,λ85.00000°. Principal axes: T 1.1390, Plg70.0000°, Azm237.0000°; N -0.0500, Plg2.0000°, Azm140.0000°; P -1.0890, Plg19.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

DJA ***21*** *00:42:52.6±0.6,4˚S±2˚×13˚1E±˚, h28km±6km, M5.0/55, mB5.5/31, mb5.1/55, MLv5.0/12, Mw(mB)5.0/31, MwMwp5.1/17, Mwp5.4/17*

ISC 21 00:42:51.5±0.3, 3.64S±0.03×131.44E±0.04, h24km, n461, σ1^{9}67/473, mb4.9/110, MS4.6/66, 14C-1D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**1.08**	**48**	Pn		**Pb**	**00 43 11.5**	**0.0**
FAKI	**Fak Fak**	**1.08**	**48**	P		**Pb**	**00 43 11.6**	**+0.1**
BNDI	**Bandanaira**	**1.77**	**240**	P		**Pn**	**00 43 21.1**	**+0.6**
MSAI	**Masohi**	**2.52**	**277**	P		**Pn**	**00 43 31.3**	**+0.3**
SIJI	**Sorong**	**2.76**	**356**	Pn		**Pn**	**00 43 33.8**	**-0.5**
	27nm,0.3s,baz=91,slow=23,SNR=25							
SIJI				Sn		**Sn**	**00 44 04.3**	**-2.6**
	baz=212,slow=19							
SIJI				LR		LR	00 44 53.1	
	comp=Z,13μm,19.5s,baz=200,slow=46							
	65nm,0.3s							
SWI	**Sorong**	**2.77**	**356**	P		**Pn**	**00 43 32.7**	**-1.6**
AAI	**Ambon**	**3.24**	**269**	P		**Pn**	**00 43 41.4**	**+0.6**
SAUI	**Saumlaki**	**4.32**	**182**	Pn		**Pn**	**00 43 55.5**	**-0.1**
NLAI	**Namlea**	**4.35**	**275**	P		**Pn**	**00 43 57.1**	**+1.0**
LBMI	**Labuha**	**4.94**	**307**	P		**Pn**	**00 44 03.4**	**-0.8**
SRPI	**Serui, Papua**	**5.11**	**70**	P		**Pn**	**00 44 07.9**	**+1.4**
	3.5nm13μm6μm448nm,0.5s							
BAKI	**Biak**	**5.26**	**63**	P		**Pn**	**00 44 10.8**	**+2.2**
	2.6nm8μm618nm,0.9s							
SANI	**Sanana**	**5.67**	**286**	P		**Pn**	**00 44 12.3**	**-2.0**
	1.2nm6μm3μm196nm,0.5s							
SMPI	**Sarmi**	**7.44**	**77**	P		**Pn**	**00 44 41.5**	**+2.9**
	0.3nm7μm2μm64nm,0.7s							
GENI	**Genyem**	**8.78**	**83**	P		**Pn**	**00 44 58.8**	**+1.8**
	12μm2μm246nm,1.0s							
BBSI	**Bau Bau**	**9.03**	**258**	P		**Pn**	**00 45 02.6**	**+2.2**
	365nm35nm,1.1s							
LUWI	**Luwuk**	**9.04**	**286**	Pn		**Pn**	**00 44 58.4**	**-2.1**
LUWI	**Luwuk**	**9.04**	**286**	P		**Pn**	**00 44 57.5**	**-3.0**
	6μm5μm126nm,1.0s							
KDU	**Kakadu**	**9.04**	**174**	P		**Pn**	**00 44 59.1**	**-1.6**
	baz=9.1,SNR=181							
MTN	**Manton Dam**	**9.15**	**182**	P		**Pn**	**00 45 01.3**	**-0.8**
	baz=9.2,SNR=437							
MTN	**Manton Dam**	**9.15**	**182**	Pn		**Pn**	**00 45 01.4**	**-0.7**
SOEI	**Soe**	**9.36**	**229**	Pn		**Pn**	**00 45 06.8**	**+1.8**
BATI	**Baumata**	**10.10**	**229**	Pn		**Pn**	**00 45 14.8**	**-0.4**
	27nm,0.3s,baz=147,slow=1.9,SNR=29							
BATI				Sn		**Sn**	**00 47 11.5**	**+3.6**
	1.4nm,0.3s,baz=28,slow=23,SNR=1.1							
BATI				LR		LR	00 50 11.2	
	comp=Z,6μm,18.7s,baz=64,slow=44							
	155nm,0.5s							
BATI	**Baumata**	**10.10**	**229**	P		**Pn**	**00 45 16.8**	**+1.6**
	3μm395nm,1.3s							
APSI	**Ampana**	**10.15**	**285**	P		**Pn**	**00 45 15.5**	**-0.3**
	3μm1μm161nm,1.0s							
MRSI	**Marisa**	**10.34**	**293**	P		**Pn**	**00 45 14.5**	**-3.9**
	1μm93nm,0.7s							
MMRI	**Maumere**	**10.41**	**241**	Pn		**Pn**	**00 45 20.8**	**+1.5**
MMRI	**Maumere**	**10.41**	**241**	P		**Pn**	**00 45 23.5**	**+4.2**
	9μm3μm104nm,1.0s							
EDFI	**Ende, Flores**	**10.94**	**242**	P		**Pn**	**00 45 30.2**	**+3.5**
	5μm955nm71nm,1.5s							
BSSI	**Bau Bau, Buton**	**11.19**	**257**	P		**Pn**	**00 45 33.0**	**+3.0**
	5μm1μm81nm,1.1s							
BKSI	**Bulukumba**	**11.41**	**261**	P		**Pn**	**00 45 34.3**	**+1.3**
	7μm1μm79nm,1.4s							
SPSI	**Sidrap Palu**	**11.65**	**268**	P		**Pn**	**00 45 37.6**	**+1.2**
	1μm34nm,0.7s							
KAPI	**Kappang**	**11.73**	**263**	Pn		**Pn**	**00 45 36.8**	**-0.7**
	0.9nm,0.3s,baz=106,slow=5.0,SNR=11							
	16nm,0.7s							
KAPI	**Kappang**	**11.73**	**263**	Pn		**Pn**	**00 45 38.8**	**+1.3**
KAPI	**Kappang**	**11.73**	**263**	*i* P		**Pn**	**00 45 38.8**	**+1.3**
KAPI	**Kappang**	**11.73**	**263**	P		**Pn**	**00 45 37.5**	**0.0**
KAPI				P		**Pn**	**00 45 37.5**	**0.0**
MPSI	**Mapaga**	**12.19**	**289**	P		**Pn**	**00 45 45.7**	**+1.9**
	540nm31nm,1.4s							
KNRA	**Kununurra**	**12.25**	**192**	P		**Pn**	**00 45 40.7**	**-3.8**
	baz=12,SNR=236							
KNRA	**Kununurra**	**12.25**	**192**	Pn		**Pn**	**00 45 41.2**	**-3.3**
KNRA	**Kununurra**	**12.25**	**192**	P		**Pn**	**00 45 41.1**	**-3.4**
	188nm,0.6s							
WBSI	**Waikabubak, Su**	**13.37**	**243**	P		**Pn**	**00 46 02.1**	**+2.2**
	84nm,1.0s							
PLAI	**Plampang**	**14.52**	**249**	P		**Pn**	**00 46 16.8**	**+1.1**
	4μm89nm,1.0s							
TWSI	**Taliwang, Sumb**	**15.33**	**250**	P		**Pn**	**00 46 27.9**	**+1.4**
	3μm657nm28nm,0.9s							
FITZ	**Fitzroy Crossi**	**15.45**	**201**	Pn		**Pn**	**00 46 21.9**	**-6.2**
	3.3nm,0.3s,baz=20,slow=9.1,SNR=86							
FITZ				Sn		Sn	00 49 07.3	-11
	2.6nm,0.3s,baz=116,slow=14,SNR=3.1							
FITZ				LR		LR	00 54 14.7	
	comp=Z,3μm,18.2s,baz=26,slow=44							
FITZ	**Fitzroy Crossi**	**15.45**	**201**	P		**Pn**	**00 46 21.8**	**-6.2**
	baz=16,SNR=124							
FITZ	**Fitzroy Crossi**	**15.45**	**201**	P		**Pn**	**00 46 22.0**	**-6.0**
	50nm,0.7s							
COEN	**Coen**	**15.46**	**132**	P		**Pn**	**00 46 27.2**	**-1.0**
	baz=16,SNR=19							
COEN	**Coen**	**15.46**	**132**			**Pn**	**00 46 26.4**	**-1.9**
COEN				IAmb		IAmb	00 46 34.9	
	comp=Z,92nm,1.5s							
MYLDM	**Lahad Datu**	**15.62**	**304**			**Pn**	**00 46 28.3**	**-1.8**
WRAB	**Tennant Creek**	**16.44**	**170**	*i* P		**Pn**	**00 46 35.2**	**-5.5**
WRA	**Warramunga Arr**	**16.45**	**170**	Pn		**Pn**	**00 46 35.8**	**-5.0**
	comp=Z,1.4nm,0.3s,baz=351,slow=13,SNR=24							
WRA				Sn		Sn	00 49 31.1	-12
	comp=Z,6.0nm,0.3s,baz=352,slow=24,SNR=6.6							
WRA	**Warramunga Arr**	**16.45**	**170**	Pn		**Pn**	**00 46 35.6**	**-5.2**
WRA	**Warramunga Arr**	**16.45**	**170**	P		**Pn**	**00 46 35.6**	**-5.2**
WRA				pmax		pmax		
	comp=Z,20nm,1.4s							
BBKI	**Banjar Baru**	**16.57**	**270**	P		**P**	**00 46 45.0**	**+0.2**
	comp=Z,5μmcomp=Z,62nm,0.9s							
SRBI	**Singaraja**	**16.73**	**254**	P		**P**	**00 46 46.4**	**-0.2**
	comp=Z,5μmcomp=Z,2μmcomp=Z,75nm,1.1s							
MTKI	**Muara Teweh, K**	**16.75**	**279**	P		**P**	**00 46 47.1**	**+0.4**
	comp=Z,114nm,0.4s							
ABJI	**Asem Bagus**	**17.61**	**256**	P		**Pn**	**00 46 54.9**	**-0.5**
	comp=Z,82nm,0.8s							
JAGI	**Jajag, Banyuwa**	**17.84**	**254**			**Pn**	**00 46 56.7**	**-1.7**
KKM	**Kota Kinabalu**	**17.99**	**302**			**Pn**	**00 46 58.7**	**-1.6**
KKM				IAmb		IAmb	00 47 06.2	
	comp=Z,144nm,1.1s							
BLJI	**Banyuglugur**	**18.22**	**256**	P		**P**	**00 47 03.6**	**+0.6**
	comp=Z,1μmcomp=Z,64nm,0.8s							
GMJI	**Gumukmas**	**18.48**	**255**	P		**Pn**	**00 47 09.4**	**+3.3**
	comp=Z,70nm,0.8s							
QIS	**Mount Isa**	**18.60**	**155**	P		**P**	**00 47 06.0**	**-1.1**
	baz=19,SNR=40							
QIS	**Mount Isa**	**18.60**	**155**	P		**P**	**00 47 06.1**	**-1.1**
	comp=Z,78nm,0.9s							
MTSU	**Mount Surprise**	**19.14**	**140**	P		**Pn**	**00 47 14.5**	**+0.3**
	baz=19,SNR=12							
MTSU	**Mount Surprise**	**19.14**	**140**	P		**Pn**	**00 47 15.3**	**+1.2**
	comp=Z,35nm,0.8s							
AS31	**Alice Springs**	**20.05**	**173**	P		**P**	**00 47 23.0**	**0.0**
AS31				IAmb		IAmb	00 47 30.3	
	comp=Z,48nm,0.4s							
ASAR	**Alice Springs**	**20.05**	**173**	P		Pn	00 47 25.1	+0.2
	comp=Z,45nm,0.4s,baz=351,slow=9.9,SNR=327							
ASAR				S		S	00 50 54.9	-13
	comp=Z,2.1nm,0.5s,baz=98,slow=30,SNR=1.9							
	comp=Z,45nm,0.4s							
ASAR	**Alice Springs**	**20.05**	**173**			**P**	**00 47 22.9**	**-0.1**
ASAR	**Alice Springs**	**20.05**	**173**	P		**P**	**00 47 23.0**	**-0.1**
SBUM	**Sibu**	**20.14**	**287**	P		**P**	**00 47 23.8**	**-0.3**
SBUM				IAmb		IAmb	00 47 31.5	
	comp=Z,49nm,0.9s							
STKI	**Sintang**	**20.29**	**280**	P		**P**	**00 47 26.3**	**+0.6**
	comp=Z,6μmcomp=Z,37nm,0.7s							
KRVT	**Keravat (AS076**	**20.55**	**93**	P		Pn	00 47 31.0	+0.2
	comp=Z,35nm,0.5s,baz=346,slow=16,SNR=2.9							
KRVT				LR		LR	00 56 56.8	
	comp=Z,3μm,18.8s,baz=47,slow=41							
	comp=Z,35nm,0.5s							
MBWA	**Marble Bar**	**20.81**	**212**			**P**	**00 47 29.2**	**-2.1**
MBWA	**Marble Bar**	**20.81**	**212**	P		**P**	**00 47 28.9**	**-2.3**
	comp=Z,31nm,0.8s							
PSA00	**Pilbara Seismi**	**21.09**	**211**	P		**P**	**00 47 32.3**	**-2.0**
PSA00	**Pilbara Seismi**	**21.09**	**211**	P		**P**	**00 47 31.4**	**-2.9**
PSA00				IAmb		IAmb	00 47 47.7	
	comp=Z,19nm,0.8s							
PSA00	**Pilbara Seismi**	**21.09**	**211**	P		**P**	**00 47 32.3**	**-2.0**
	comp=Z,76nm,0.5s							
UGM	**Wanagama**	**21.23**	**258**	P		**P**	**00 47 36.3**	**+0.3**
WRKA	**Warakurna**	**21.49**	**188**	P		**P**	**00 47 38.3**	**-0.2**
	baz=22,SNR=58							
WRKA	**Warakurna**	**21.49**	**188**	P		**P**	**00 47 38.4**	**-0.2**
	comp=Z,128nm,0.7s							
GUMO	**Guam**	**21.70**	**38**	LR		LR	00 56 39.3	
	comp=Z,2μm,19.2s,baz=214,slow=38							
KSM	**Kuching**	**21.72**	**283**	P		**P**	**00 47 40.5**	**-0.7**
KSM				IAmb		IAmb	00 47 55.3	
	comp=Z,90nm,1.0s							
CTA	**Charters Tower**	**21.81**	**140**	P		**P**	**00 47 43.6**	**+1.5**
	comp=Z,20nm,0.5s,baz=317,slow=10.0,SNR=52							
CTA				S		**S**	**00 51 46.6**	**+4.3**
	comp=Z,4.7nm,0.9s,baz=193,slow=18,SNR=1.7							
CTA				LR		LR	00 57 49.2	
	comp=Z,2μm,19.3s,baz=320,slow=41							
	comp=Z,20nm,0.5s							
CTA	**Charters Tower**	**21.81**	**140**	P		**P**	**00 47 43.9**	**+1.8**
	comp=Z,63nm,0.8s							
CTAO	**Charters Tower**	**21.81**	**140**	P		**P**	**00 47 43.4**	**+1.3**
CTAO				IAmb		IAmb	00 47 54.1	
	comp=Z,42nm,0.8s							
CTAO	**Charters Tower**	**21.81**	**140**	P		**P**	**00 47 43.4**	**+1.3**
CTAO				pmax		pmax		
	comp=Z,42nm,0.8s							
CTAO	**Charters Tower**	**21.81**	**140**	P		**P**	**00 47 43.8**	**+1.7**
	comp=Z,54nm,0.8s							
TPI	**Tanjungpandan**	**23.77**	**271**	P		**P**	**00 48 04.9**	**+2.5**
	comp=Z,26nm,0.8s							
LEM	**Lembang**	**23.93**	**261**	P		**P**	**00 48 02.4**	**-1.7**
	comp=Z,26nm,0.7s,baz=308,slow=18,SNR=4.1							
LEM				LR		LR	00 58 48.7	
	comp=Z,4μm,18.9s,baz=86,slow=40							
	comp=Z,26nm,0.7s							
OOD	**Oodnadatta**	**24.36**	**171**	P		**P**	**00 48 08.0**	**+0.3**
	comp=Z,110nm,0.9s							
GIRL	**Giralia**	**25.19**	**220**	P		**P**	**00 48 14.6**	**-0.8**
	baz=25,SNR=5.5							
GIRL	**Giralia**	**25.19**	**220**	P		**P**	**00 48 14.6**	**-0.8**
GIRL	**Giralia**	**25.19**	**220**	P		**P**	**00 48 14.6**	**-0.8**
	comp=Z,163nm,1.7s							
PPBI	**Pangkal Pinang**	**25.31**	**273**	P		**P**	**00 48 18.6**	**+2.0**
	comp=Z,10μmcomp=Z,35nm,1.0s							
INKA	**Innaminka**	**25.56**	**161**	P		**P**	**00 48 19.5**	**+0.9**
	comp=Z,144nm,0.8s							
QLP	**Quilpie**	**25.89**	**153**	P		**P**	**00 48 22.6**	**+0.9**
	baz=26,SNR=6.7							
MEEK	**Meekatharra**	**25.96**	**207**	P		**P**	**00 48 20.3**	**-2.0**
	baz=26,SNR=9.1							
MEEK	**Meekatharra**	**25.96**	**207**	P		**P**	**00 48 20.4**	**-2.0**
	comp=Z,38nm,0.9s							
MULG	**Mulgathing**	**26.61**	**175**	P		**P**	**00 48 29.3**	**+1.2**
	comp=Z,55nm,0.9s							
PMBI	**Palembang**	**26.63**	**271**	P		**P**	**00 48 28.9**	**+0.3**
RK1H	**Rockampton Ha**	**26.92**	**139**	P		**P**	**00 48 32.8**	**+1.8**
	comp=Z,34nm,0.8s							
FORT	**Forrest**	**27.18**	**186**	P		**P**	**00 48 33.4**	**+0.1**
	baz=27,SNR=33							
FORT	**Forrest**	**27.18**	**186**	P		**P**	**00 48 33.1**	**-0.2**
FORT	**Forrest**	**27.18**	**186**	P		**P**	**00 48 33.4**	**+0.1**
	comp=Z,121nm,0.8s							
LCRK	**Leigh Creek**	**27.42**	**167**	P		**P**	**00 48 36.4**	**+1.0**
	comp=Z,173nm,0.9s							
EIDS	**Eidsvold**	**28.69**	**141**	P		**P**	**00 48 47.7**	**+0.9**
	baz=29,SNR=3.3							
EIDS	**Eidsvold**	**28.69**	**141**	P		**P**	**00 48 47.4**	**+0.6**
EIDS				IAmb		IAmb	00 49 03.6	
	comp=Z,55nm,1.6s							
SSLB	**Suanglung**	**29.11**	**340**	P		**P**	**00 48 50.4**	**-0.3**
MORW	**Morawa**	**29.21**	**208**	P		**P**	**00 48 49.3**	**-2.1**
	baz=29,SNR=19							
MORW	**Morawa**	**29.21**	**208**	P		**P**	**00 48 49.7**	**-1.7**
MORW				IAmb		IAmb	00 49 06.7	
	comp=Z,69nm,1.7s							
MORW	**Morawa**	**29.21**	**208**	P		**P**	**00 48 49.9**	**-1.5**
	comp=Z,30nm,1.4s							
BBOO	**Buckleboo**	**29.34**	**172**	P		**P**	**00 48 52.7**	**+0.2**
	baz=30,SNR=12							
BBOO	**Buckleboo**	**29.34**	**172**	P		**P**	**00 48 52.3**	**-0.2**
BBOO	**Buckleboo**	**29.34**	**172**	P		**P**	**00 48 52.9**	**+0.4**
	comp=Z,23nm,1.5s							
STKA	**Stephens Creek**	**29.66**	**162**	P		**P**	**00 48 56.2**	**+0.8**
	comp=Z,16nm,0.7s,baz=329,slow=9.7,SNR=16							
STKA				LR		LR	01 02 36.7	
	comp=Z,3μm,19.2s,baz=336,slow=40							
	comp=Z,16nm,0.7s							
STKA	**Stephens Creek**	**29.66**	**162**	P		**P**	**00 48 56.2**	**+0.8**
	baz=30,SNR=24							
STKA	**Stephens Creek**	**29.66**	**162**	P		**P**	**00 48 56.1**	**+0.7**
STKA	**Stephens Creek**	**29.66**	**162**	*i* P		**P**	**00 48 53.6**	**-1.8**
STKA	**Stephens Creek**	**29.66**	**162**	P		**P**	**00 48 56.5**	**+1.1**
	comp=Z,8.3nm,1.0s							
KRJI	**Kerinci**	**29.98**	**272**	P		**P**	**00 48 59.2**	**+0.7**
	comp=Z,270nm,0.9s							
BLDU	**Ballidu**	**30.22**	**206**	P		**P**	**00 48 59.6**	**-0.8**
	baz=30,SNR=26							
BLDU	**Ballidu**	**30.22**	**206**	P		**P**	**00 48 59.3**	**-1.1**
	comp=Z,22nm,0.6s							
HTT	**Hallett**	**30.45**	**168**	P		**P**	**00 49 03.8**	**+1.4**
	baz=31,SNR=5.5							
HTT	**Hallett**	**30.45**	**168**	P		**P**	**00 49 03.4**	**+1.0**
	comp=Z,18nm,1.0s							
BKNI	**Bangkinang**	**30.64**	**277**	P		**P**	**00 49 03.0**	**-1.3**
KLBR	**Kelerberin**	**30.64**	**203**	P		**P**	**00 49 02.9**	**-1.2**
	baz=31,SNR=69							
KLBR	**Kellerberrin**	**30.64**	**203**	P		**P**	**00 49 02.9**	**-1.2**
	comp=Z,117nm,0.6s							
CMSA	**Cobar Meteorol**	**30.82**	**156**	P		**P**	**00 49 06.8**	**+1.2**
	baz=31,SNR=6.9							
CMSA	**Cobar Meteorol**	**30.82**	**156**	P		**P**	**00 49 07.0**	**+1.4**
	comp=Z,33nm,1.9s							
QIZ	**Qiongzhong**	**30.97**	**317**	P		**P**	**00 49 08.1**	**+1.0**
QIZ				S		**S**	**00 54 07.9**	**-2.7**
QIZ				LR		LR		
	comp=Z,880nm,15.1s							
QIZ				LR		LR		
	comp=Z,640nm,17.5s							
QIZ				LR		LR		
	comp=Z,790nm,18.3s							
PPI	**Padang Panjang**	**31.18**	**275**	P		**P**	**00 49 08.5**	**-0.5**
	comp=Z,64nm,1.0s							
IPM	**Ipoh**	**31.44**	**285**	P		**P**	**00 49 09.9**	**-1.5**
IPM				IAmb		IAmb	00 49 27.8	
	comp=Z,23nm,1.0s							
MUN	**Mundaring**	**31.61**	**205**	P		**P**	**00 49 11.6**	**-1.0**
	baz=32,SNR=10							
MUN	**Mundaring**	**31.61**	**205**	P		**P**	**00 49 11.1**	**-1.5**
	comp=Z,36nm,1.4s							
NWAO	**Narrogin (SRO)**	**32.03**	**203**	P		**P**	**00 49 15.1**	**-1.1**
NWAO	**Narrogin (SRO)**	**32.03**	**203**	P		**P**	**00 49 15.1**	**-1.1**
NWAO				pmax		pmax		
	comp=Z,99nm,1.8s							
NWAO	**Narrogin (SRO)**	**32.03**	**203**	P		**P**	**00 49 15.1**	**-1.1**
	comp=Z,28nm,1.2s							
JCJ	**Chichijima**	**32.27**	**18**	LR		LR	01 01 20.8	
	comp=Z,2μm,19.6s,baz=306,slow=34							
ARMA	**Armidale**	**32.76**	**147**	P		**P**	**00 49 20.9**	**-2.0**
	baz=33,SNR=4.4							
ARMA	**Armidale**	**32.76**	**147**	P		**P**	**00 49 22.8**	**0.0**
ARMA				IAmb		IAmb	00 50 29.3	
	comp=Z,35nm,1.4s							
RPSI	**Rantau Prapat**	**33.10**	**281**	P		**P**	**00 49 25.8**	**-0.2**
RPSI				IAmb		IAmb	00 49 42.8	
	comp=Z,22nm,1.0s							
PSI	**Prapat**	**33.12**	**281**	P		**P**	**00 49 25.8**	**-0.4**
PSI				pmax		pmax		
	comp=Z,21nm,1.0s							
RKGY	**Rocky Gully**	**33.62**	**202**	P		**P**	**00 49 30.6**	**+0.5**
	baz=34,SNR=7.2							
SRIT	**Nakonsritamara**	**34.00**	**291**	P		**P**	**00 49 32.6**	**-1.1**
SRIT				IAmb		IAmb	00 49 57.6	
	comp=Z,18nm,0.9s							
GSI	**Gunungsitoli**	**34.20**	**278**	P		**P**	**00 49 35.0**	**-0.5**
GSI	**Gunungsitoli**	**34.20**	**278**	P		**P**	**00 49 35.3**	**-0.2**
	comp=Z,36nm,1.2s							
ARPS	**Mount Arapiles**	**34.33**	**165**	P		**P**	**00 49 37.6**	**+1.4**
	baz=34,SNR=14							
CAN	**Canberra**	**35.47**	**155**	P		**P**	**00 49 47.3**	**+1.1**
CAN	**Canberra**	**35.47**	**155**	P		**P**	**00 49 47.3**	**+1.1**
CAN				pmax		pmax		
	comp=Z,161nm,1.9s							
SSE	**Sheshan**	**35.90**	**345**	P		**P**	**00 49 51.1**	**+1.3**
SSE				S		**S**	**00 55 27.4**	**+0.7**
SSE				pmax		pmax		
	comp=Z,23nm,0.7s							
SSE				pmax		pmax		
	comp=Z,84nm,6.5s							
SSE				LR		LR		
	comp=Z,270nm,17.9s							
SSE				LR		LR		
	comp=Z,430nm,20.7s							
TOO	**Toolangi**	**36.14**	**161**	P		**P**	**00 49 54.4**	**+2.5**
	baz=36,SNR=10							
TOO	**Toolangi**	**36.14**	**161**	P		**P**	**00 49 52.7**	**+0.8**
TOO				IAmb		IAmb	00 50 07.4	
	comp=Z,46nm,1.2s							
TOO	**Toolangi**	**36.14**	**161**	P		**P**	**00 49 52.7**	**+0.8**
TOO				pmax		pmax		
	comp=Z,46nm,1.2s							
NJ2	**Nanjing**	**37.46**	**342**	*e*P		**P**	**00 50 04.8**	**+1.7**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
NJ2				LR		LR		
	comp=Z,400nm,19.9s							
NJ2				LR		LR		
	comp=Z,730nm,20.6s							
NJ2				LR		LR		
	comp=Z,1μm,21.0s							
WHN	**Wuhan**	**37.71**	**336**	P		P	00 50 11.5	+6.2
GYA	**Guiyang**	**38.34**	**323**	⇑P		**P**	**00 50 12.3**	**+1.5**
GYA				PP		**PnPn**	**00 51 49.9**	**+9.3**
GYA				S		**S**	**00 56 03.6**	**-0.7**
GYA				SS		**SS**	**00 58 54.5**	**+1.0**
GYA				pmax		pmax		
	comp=Z,12nm,0.8s							
GYA				pmax		pmax		
	comp=Z,170nm,7.6s							
GYA				LR		LR		
	comp=Z,540nm,20.8s							
GYA				LR		LR		
	comp=Z,620nm,18.0s							
GYA				LR		LR		
	comp=Z,690nm,22.4s							
JHS	**Saijyo**	**38.47**	**2**	P		**P**	**00 50 11.2**	**-0.5**
CRAI	**Chiangrai**	**38.64**	**309**	P		**P**	**00 50 12.9**	**-0.4**
CM31	**Chiang Mai Arr**	**38.82**	**306**	P		**P**	**00 50 14.4**	**-0.4**
CM31				IAmb		IAmb	00 50 43.7	
	comp=Z,15nm,0.7s							
CMAR	**Chiang Mai Arr**	**38.82**	**306**	P		**P**	**00 50 14.5**	**-0.3**
	comp=Z,9.7nm,0.9s,baz=136,slow=7.5,SNR=31							
	comp=Z,9.7nm,0.9s							
CMAR	**Chiang Mai Arr**	**38.82**	**306**	P		**P**	**00 50 13.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**38.82**	**306**	*i* P		**P**	**00 50 14.8**	**-0.1**
CMAR				pmax		pmax		
	comp=Z,12nm,1.0s							
CHTO	**Chiang Mai**	**39.01**	**306**	P		**P**	**00 50 16.3**	**-0.1**
CHTO	**Chiang Mai**	**39.01**	**306**	P		**P**	**00 50 16.3**	**-0.1**
CHTO				pmax		pmax		
	comp=Z,25nm,1.1s							
CHTO	**Chiang Mai**	**39.01**	**306**	P		**P**	**00 50 16.8**	**+0.4**
ENH	**Enshi**	**39.72**	**330**	P		**P**	**00 50 21.6**	**-0.7**
KMI	**Kunming**	**39.92**	**317**	⇑P		**P**	**00 50 25.9**	**+1.7**
KMI				sP		sP	00 50 34.1	0.0
KMI				S		**S**	**00 56 33.0**	**+4.7**
KMI				pmax		pmax		
	comp=Z,13nm,0.7s							
KMI				pmax		pmax		
	comp=Z,140nm,4.8s							
KMI				LR		LR		
	comp=Z,580nm,15.7s							
KMI				LR		LR		
	comp=Z,390nm,20.1s							
KMI				LR		LR		
	comp=Z,810nm,22.3s							
TJN	**Taejon**	**39.99**	**355**	*i* P		**P**	**00 50 24.5**	**+0.2**
MJAR	**Matsushiro Arr**	**40.47**	**8**	P		**P**	**00 50 26.9**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=183,slow=8.5,SNR=5.7							
MJAR				LR		LR	01 05 33.0	
	comp=Z,1μm,21.3s,baz=192,slow=34							
	comp=Z,1.9nm,0.8s							
MAJO	**Matsushiro**	**40.47**	**8**	P		**P**	**00 50 27.1**	**-1.3**
MAJO	**Matsushiro**	**40.47**	**8**	*i* P		**P**	**00 50 25.2**	**-3.1**
MAJO				pmax		pmax		
	comp=Z,51nm,3.7s							
KSAR	**Wonju Array Be**	**41.01**	**356**	P		**P**	**00 50 31.6**	**-1.1**
KSAR	**Wonju Array Be**	**41.01**	**356**	P		**P**	**00 50 31.6**	**-1.1**
**KSR

BJI LR LR
comp=Z,390nm,20.0s
BJI LR LR
comp=Z,880nm,18.6s
LZH Lanzhou 47.20 329 ⇑P **P 00 51 24.8 +2.1**
LZH pP pP 00 51 30.6 +0.8
LZH sP sP 00 51 34.1 +1.5
LZH S **S 00 58 17.6 +3.2**
LZH pmax pmax
comp=Z,16nm,1.4s
LZH pmax pmax
comp=Z,92nm,5.2s
LZH LR LR
comp=Z,550nm,15.8s
LZH LR LR
comp=Z,390nm,17.2s
LZH LR LR
comp=Z,550nm,16.1s
USRK Ussuriysk Ar. 47.63 1 P **P 00 51 26.8 +1.2**
comp=Z,2.3nm,0.6s,baz=207,slow=11,SNR=2.0
USRK LR LR 01 10 12.9
comp=Z,302nm,21.4s,baz=230,slow=35
comp=Z,2.3nm,0.6s
MSVF Nonsavu 47.74 111 LR LR 01 11 40.4
comp=Z,896nm,21.2s,baz=294,slow=36
BNX BinXian 49.30 356 ⇑P **P 00 51 38.8 +0.4**
BNX S **S 00 58 45.4 +2.1**
BNX sS **sS 00 59 02.0 +7.0**
BNX pmax pmax
comp=Z,6.0nm,0.7s
BNX pmax pmax
comp=Z,120nm,4.5s
BNX LR LR
comp=Z,1μm,21.5s
BNX LR LR
comp=Z,460nm,18.5s
BNX LR LR
comp=Z,1μm,23.1s
XLT XiLinHaoTe 49.30 345 *e*P **P 00 51 40.5 +1.9**
XLT pP pP 00 51 45.0 -0.7
XLT S **S 00 58 42.5 -1.2**
XLT pmax pmax
comp=Z,7.0nm,0.7s
XLT pmax pmax
comp=Z,180nm,5.2s
XLT LR LR
comp=Z,600nm,21.8s
XLT LR LR
comp=Z,710nm,24.5s
LSA Lhasa 50.86 313 P **P 00 51 50.4 -0.8**
LSA Lhasa 50.86 313 P **P 00 51 51.5 +0.3**
LSA pmax pmax
comp=Z,4.0nm,0.5s
LSA Lhasa 50.86 313 P **P 00 51 50.4 -0.8**
LSA pmax pmax
comp=Z,9.0nm,0.9s
LSA Lhasa 50.86 313 P **P 00 51 49.1 -2.0**
YSS Yuzh-Sakhalins 51.36 10 *e*P P 00 51 47.9 -6.1
YSS *e*S S 00 59 02.4 -10
YSS pmax pmax
comp=Z,200nm,6.4s
YSS smax smax
comp=N,300nm,6.1s
YSS MLR MLR
comp=Z,900nm,16.0s
YSS MLR MLR
comp=N,600nm,18.0s
YSS MLR MLR
comp=E,400nm,20.0s
GTA Gaotai 51.80 329 *e*P **P 00 51 57.8 +0.2**
GTA S **S 00 59 21.3 +2.7**
GTA pmax pmax
comp=E,9.0nm,0.9s
GTA pmax pmax
comp=E,140nm,5.8s
GTA LR LR
comp=E,590nm,22.2s
GTA LR LR
comp=E,420nm,18.9s
GTA LR LR
comp=E,460nm,22.9s
TAPN Taplejung 52.22 309 *e*P **P 00 51 59.8 -1.4**
ODAN Odare 52.23 308 *e*P **P 00 52 00.4 -0.8**
comp=E,4.5nm,0.9s
KLR Kul'dur 52.66 0 LR LR 01 14 28.8
comp=E,415nm,19.5s,baz=166,slow=36
KLR Kul'dur 52.66 0*ce*P **P 00 52 02.0 -1.7**
KLR pmax pmax
comp=Z,7.0nm,1.3s
RAMN Ramite 52.90 308 *e*P **P 00 52 05.5 -0.7**
comp=Z,34nm,0.7s
RPZ Rata Peaks 53.06 145 LR LR 01 16 11.7
comp=Z,1μm,18.9s,baz=308,slow=38
TUWZ Tuamarina 53.50 141 P **P 00 52 10.4 +0.3**
JIRN Jiri 53.55 308 *e*P **P 00 52 09.8 -1.3**
HIA Hailar 53.67 351 *i*P **P 00 52 11.2 +0.1**
HIA pmax pmax
comp=Z,8.0nm,0.9s
GUN Gumba 53.91 309 *e*P **P 00 52 13.2 -0.6**
comp=Z,21nm,0.6s
BKZ Black Stump Fm 54.00 137 P **P 00 52 13.9 0.0**
PKI Pulchoki 54.12 308 *e*P **P 00 52 13.9 -1.4**
PKIN Phulchoki 54.14 308 *e*P **P 00 52 14.5 -0.8**
KKN Kakani 54.33 308 *e*P **P 00 52 16.4 -0.2**
DMN Daman 54.38 308 *e*P **P 00 52 16.1 -1.0**
GKN Gorkha 54.93 308 *e*P **P 00 52 19.9 -1.0**
ULN Ulaanbaatar 55.57 340 P **P 00 52 25.1 -0.1**
ULN IAmb IAmb 00 52 30.0
comp=Z,15nm,1.1s
ULN Ulaanbaatar 55.57 340*ce*P **P 00 52 24.7 -0.5**
ULN pmax pmax
comp=Z,17nm,1.3s
ULN Ulaanbaatar 55.57 340 P **P 00 52 26.7 +1.6**
ULN P **P 00 52 26.7 +1.6**
SONM Songino Array 55.77 340 P **P 00 52 26.5 0.0**
comp=Z,7.3nm,1.0s,baz=160,slow=7.2,SNR=22
SONM LR LR 01 20 56.5
comp=Z,363nm,18.4s,baz=158,slow=41
comp=Z,7.3nm,1.0s
SONM Songino Array 55.77 340 P **P 00 52 26.9 +0.4**
SONM Songino Array 55.77 340 P **P 00 52 26.9 +0.4**
SONM pmax pmax
comp=Z,7.0nm,1.0s
DANN Dangsing 55.78 308 *e*P **P 00 52 27.0 -0.2**
comp=Z,44nm,0.9s
HYBB Hyderabad (bro 56.21 294 *e*P **P 00 52 30.0 -0.1**
HYBB *e*S **S 01 00 21.6 +2.8**
PCHI Peechi 56.62 285 *e*P **P 00 52 31.9 -1.2**
PCHI *e*S **S 01 00 29.4 +5.1**
ZEA Zeya 57.28 357 *e*P **P 00 52 38.9 +1.9**
ZEA *e*S S 01 00 40.9 +9.3
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA pmax pmax
comp=Z,100nm,5.8s
ZEA smax smax
comp=E,100nm,14.3s
ZEA MLR MLR
comp=E,200nm,20.0s
ZEA MLR MLR
comp=N,300nm,21.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
ZAK Zakamensk 59.01 339 *e*P **P 00 52 49.0 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.5s
PEA0B Petropavlovsk- 60.71 18 P **P 00 53 01.9 +1.1**
PEA0B IAmb IAmb 00 54 22.7
comp=Z,27nm,1.2s
PEA0B Petropavlovsk- 60.71 18 P **P 00 53 01.9 +1.1**
PEA0B pmax pmax
comp=Z,27nm,1.3s
PETK Petropavlovsk- 60.71 18 P **P 00 53 01.5 +0.6**
comp=Z,4.6nm,0.8s,baz=206,slow=9.9,SNR=7.8
PETK LR LR 01 19 04.1
comp=Z,248nm,20.3s,baz=207,slow=36
comp=Z,4.6nm,0.8s
PETK Petropavlovsk- 60.71 18 P **P 00 53 01.3 +0.5**
PETK Petropavlovsk- 60.71 18 P **P 00 53 01.3 +0.5**
MOY Mondy 60.89 339 *e*P **P 00 53 05.1 +2.9**
MOY pmax pmax
comp=Z,76nm,2.0s
PET Petropavlovsk 60.93 18 *e*P **P 00 53 03.4 +1.1**
PET pmax pmax
comp=Z,200nm,15.1s
PET MLR MLR
comp=Z,500nm,18.0s
PET MLR MLR
comp=Z,500nm,16.0s
KNGR Kungurtug, Tuv 61.38 336 *i*P **P 00 53 03.7 -1.9**
KNGR pmax pmax
comp=Z,18nm,1.7s
WMQ Urumqi 61.42 325 *e*P **P 00 53 06.0 0.0**
WMQ S **S 01 01 27.9 +2.1**
WMQ pmax pmax
comp=Z,38nm,0.7s
WMQ LR LR
comp=Z,760nm,21.3s
WMQ LR LR
comp=Z,450nm,21.3s
WMQ LR LR
comp=Z,440nm,21.1s
BOD Bodaibo 62.85 350 *e*P **P 00 53 14.8 -0.4**
BOD pmax pmax
comp=Z,15nm,1.6s
MA2 Magadan 64.85 11 LR LR 01 18 31.0
comp=Z,359nm,21.7s,baz=200,slow=33
DGZ Jazzator, Alta 65.29 330 *i*P **P 00 53 31.3 -0.2**
DGZ pmax pmax
comp=Z,12nm,1.4s
YAK Yakutsk 65.50 359 LR LR 01 23 53.0
comp=Z,352nm,18.7s,baz=118,slow=38
YAK Yakutsk 65.50 359 P **P 00 53 32.6 +0.1**
YAK Yakutsk 65.50 359*ce*P **P 00 53 32.3 -0.1**
YAK pmax pmax
comp=Z,23nm,0.7s
NIL Nilore 66.17 309 P **P 00 53 37.0 -0.4**
NIL IAmb IAmb 00 53 49.0
comp=Z,16nm,1.2s
NIL Nilore 66.17 309 P **P 00 53 37.0 -0.4**
NIL pmax pmax
comp=Z,16nm,1.3s
MK31 Makanchi Array 66.26 325 P **P 00 53 37.6 -0.1**
MK31 IAmb IAmb 00 54 04.4
comp=Z,7.8nm,0.9s
MK31 Makanchi Array 66.26 325 *i*P **P 00 53 36.8 -0.9**
MK31 pmax pmax
comp=Z,11nm,1.0s
MKAR Makanchi Array 66.26 325 P **P 00 53 37.5 -0.2**
comp=Z,8.5nm,0.9s,baz=120,slow=7.8,SNR=27
MKAR LR LR 01 26 17.0
comp=Z,310nm,19.0s,baz=120,slow=39
comp=Z,8.5nm,0.9s
MKAR Makanchi Array 66.26 325 P **P 00 53 37.3 -0.4**
MKAR Makanchi Array 66.26 325 P **P 00 53 37.3 -0.4**
MAKZ Makanchi 66.44 325 P **P 00 53 38.9 0.0**
MAKZ IAmb IAmb 00 54 05.4
comp=Z,11nm,0.9s
MAKZ Makanchi 66.44 325 P **P 00 53 38.9 0.0**
MAKZ pmax pmax
comp=Z,11nm,1.0s
KSH Kashi 66.57 316 P **P 00 53 42.6 +2.6**
KSH S **S 01 02 35.0 +5.1**
KSH pmax pmax
comp=Z,6.0nm,0.9s
KSH LR LR
comp=Z,370nm,17.9s
KSH LR LR
comp=Z,260nm,15.1s
KSH LR LR
comp=Z,320nm,18.5s
SHEM Shemya Is, Ala 66.66 27 LR LR 01 20 27.6
comp=Z,369nm,20.1s,baz=258,slow=34
MDOK Medeo 67.53 320 P **P 00 53 45.9 -0.2**
SEY Seymchan 68.27 10*ce*P **P 00 53 48.6 -1.4**
SEY pmax pmax
comp=Z,25nm,1.4s
TKM2 Tokmak 2 68.36 319 *i*P **P 00 53 49.6 -1.7**
TKM2 pmax pmax
comp=Z,7.0nm,0.9s
RAR Rarotonga 68.92 111 LR LR 01 24 38.7
comp=Z,106nm,18.2s,baz=279,slow=36
AAK Ala-Archa 68.96 318 P **P 00 53 55.0 0.0**
AAK IAmb IAmb 00 54 32.8
comp=Z,9.0nm,1.1s
AAK Ala-Archa 68.96 318*ce*P **P 00 53 54.6 -0.4**
AAK pmax pmax
comp=Z,10.0nm,1.3s
AAK Ala-Archa 68.96 318 P **P 00 53 53.6 -1.4**
ZAA0 Zalesovo Array 69.25 333 P **P 00 53 55.0 -1.4**
ZAA0 IAmb IAmb 00 53 58.2
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 69.25 333 P **P 00 53 55.4 -1.0**
comp=Z,11nm,0.8s,baz=109,slow=5.0,SNR=34
ZALV LR LR 01 27 33.5
comp=Z,174nm,19.4s,baz=129,slow=39
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 69.25 333 P **P 00 53 55.2 -1.1**
KBL Kabul 69.75 309 P **P 00 53 59.4 -0.8**
KBL IAmb IAmb 00 54 08.6
comp=Z,8.4nm,0.8s
KBL Kabul 69.75 309 P **P 00 53 59.4 -0.8**
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL Kabul 69.75 309 P **P 00 54 00.6 +0.4**
KBL P **P 00 54 00.6 +0.4**
GAR Garm 70.37 314 P **P 00 54 03.4 -0.3**
KURBB Kurchatov Arra 70.44 327 P **P 00 54 03.2 -0.6**
KURK Kurchatov 70.44 327 P **P 00 54 03.0 -0.7**
KURK Kurchatov 70.44 327*ce*P **P 00 54 02.6 -1.2**
KURK pmax pmax
comp=Z,32nm,1.0s
KURK Kurchatov 70.44 327 P **P 00 54 04.9 +1.2**
KURK P **P 00 54 04.9 +1.2**
CHGR Chuyangaron 71.08 313 P **P 00 54 08.5 +0.4**
CHGR IAmb IAmb 00 54 36.6
comp=Z,20nm,1.0s
CHGR Chuyangaron 71.08 313 P **P 00 54 08.5 +0.4**
CHGR pmax pmax
comp=Z,20nm,1.0s
KK31 Karatay Array 71.81 318 P **P 00 54 12.2 -0.1**
KK31 Karatay Array 71.81 318 *i*P **P 00 54 13.3 +1.0**
KKAR Karatay Array 71.81 318 P **P 00 54 12.1 -0.1**
KKAR Karatay Array 71.81 318 P **P 00 54 12.4 +0.1**
KKAR IAmb IAmb 00 54 35.8
comp=Z,7.1nm,0.9s
KKAR Karatay Array 71.81 318 P **P 00 54 12.4 +0.1**
KKAR pmax pmax
comp=Z,7.0nm,1.0s
OTUK Ortayu 72.81 323 P **P 00 54 18.0 -0.1**
HRA Herat 75.07 307 P **P 00 54 31.7 -0.3**
TIXI Tiksi 75.17 359 LR LR 01 30 32.2
comp=Z,382nm,18.4s,baz=180,slow=38
TIXI Tiksi 75.17 359 P **P 00 54 31.4 0.0**
TIXI IAmb IAmb 00 54 34.0
comp=Z,11nm,0.6s
TIXI Tiksi 75.17 359 *i*P **P 00 54 30.0 -1.4**
TIXI pmax pmax
comp=Z,8.0nm,0.6s
WBK Wadi Bani Khal 75.31 294 P **P 00 54 33.7 +0.4**
BILL Bilibino 75.54 13 *e*P **P 00 54 32.5 -1.1**
BILL *e* 00 54 49.0
BILL *e* 00 57 22.9
BILL *e*PPP PPP 00 59 08.5
BILL pmax pmax
comp=Z,3.0nm,0.7s
VNDA Vanda 75.59 173 P **P 00 54 35.0 +1.2**
comp=Z,3.9nm,0.6s,baz=320,slow=7.0,SNR=37
VNDA LR LR 01 28 52.1
comp=Z,672nm,18.1s,baz=342,slow=36
comp=Z,3.9nm,0.6s
VNDA Vanda 75.59 173 P **P 00 54 34.5 +0.7**
VNDA IAmb IAmb 00 54 48.3
comp=Z,16nm,0.9s
VNDA Vanda 75.59 173 P **P 00 54 34.5 +0.7**
VNDA pmax pmax
comp=Z,16nm,1.0s
WSAR Wadi Sarin 75.73 295 LR LR 01 32 11.1
comp=Z,239nm,19.3s,baz=116,slow=39
MHTO MHTO 75.95 293 P **P 00 54 37.3 +0.4**
MHTO P **P 00 54 37.3 +0.4**
BVA0 Borovoye Array 76.03 327 P **P 00 54 36.2 -0.5**
BVAR Borovoye Array 76.03 327 LR LR 01 32 42.2
comp=Z,136nm,18.4s,baz=350,slow=39
JMDO Jabal Madar 76.05 294 P **P 00 54 38.4 +0.9**
JMDO P **P 00 54 38.4 +0.9**
BRVK Borovoye 76.10 327 P **P 00 54 36.9 -0.2**
BRVK IAmb IAmb 00 55 21.2
comp=Z,15nm,1.1s
BRVK Borovoye 76.10 327 *i*P **P 00 54 36.5 -0.6**
BRVK pmax pmax
comp=Z,11nm,1.2s
DQM DQM 76.17 291 P **P 00 54 38.7 +0.5**
SMDO Samad 76.22 295 P **P 00 54 38.5 -0.1**
SNR=6.1
SMDO P **P 00 54 38.5 -0.1**
SNR=6.1
BIDO Bidbid 76.23 295 P **P 00 54 39.1 +0.6**
SBA Scott Base 76.46 173 P **P 00 54 40.6 +1.9**
SBA IAmb IAmb 00 54 59.3
comp=Z,17nm,1.1s
SBA Scott Base 76.46 173 P **P 00 54 40.6 +1.9**
SBA pmax pmax
comp=Z,17nm,1.1s
UNV Unalaska Valle 76.92 33 P **P 00 54 42.6 +0.9**
BSY Bisya 76.94 294 P **P 00 54 42.4 -0.2**
BSY P **P 00 54 42.4 -0.2**
HOQ Hoqain 76.98 295 P **P 00 54 43.6 +0.8**
SNR=7.4
ARQ Araqi 77.65 295 P **P 00 54 47.2 +0.6**
ARQ P **P 00 54 47.2 +0.6**
UOSS Minazif 78.20 296 P **P 00 54 49.0 -0.6**
UOSS IAmb IAmb 00 54 51.4
comp=Z,12nm,0.8s
UOSS Minazif 78.20 296 P **P 00 54 49.6 +0.1**
UOSS P **P 00 54 49.6 +0.1**
UOSS Minazif 78.20 296 P **P 00 54 47.9 -1.7**
HATD Hatta, Dubai 78.25 296 P **P 00 54 50.3 +0.4**
HATD Hatta, Dubai 78.25 296 *i*P **P 00 54 50.5 +0.6**
SNR=6.6
ASHO Ashiyiah 78.29 296 P **P 00 54 51.1 +1.0**
SNR=5.0
ASHO P **P 00 54 51.1 +1.0**
SNR=5.0
MSFE Esma-Masafi 78.31 297 *i*P **P 00 54 51.1 +0.8**
SNR=8.5
MASF Masafi 78.32 297 P **P 00 54 51.0 +0.8**
SNR=9.2
MASF P **P 00 54 51.0 +0.8**
SNR=9.2
PPT2 Papeete2 78.41 107 *e*S **S 01 04 39.8 -6.2**
comp=Z,197nm,31.8s
PPT2 Papeete2 78.41 107 *e*LR LR 01 19 03.3
comp=Z,791nm,25.8s
PPT Papeete 78.41 107 LR LR 01 27 08.5
comp=Z,294nm,21.9s,baz=279,slow=34
SHME Shamm 78.45 297 P **P 00 54 51.7 +0.8**
SNR=9.0
SHME P **P 00 54 51.7 +0.8**
SNR=9.0
SHME Shamm 78.45 297 *i*P **P 00 54 51.4 +0.5**
SNR=9.1
ALNE Al Ain 78.47 295 P **P 00 54 50.6 -0.5**
TBI Tubuai 78.56 113 *e*S **S 01 04 41.4 -5.8**
comp=Z,184nm,35.2s
TBI Tubuai 78.56 113 *e*LR LR 01 19 06.5
comp=Z,631nm,30.0s
MAW Mawson 78.58 201 P **P 00 54 51.4 +0.7**
comp=Z,9.7nm,1.0s,baz=85,slow=5.5,SNR=27
comp=Z,9.7nm,1.0s
MAW Mawson 78.58 201 P **P 00 54 51.7 +1.0**
baz=79,SNR=17
MAW Mawson 78.58 201 P **P 00 54 51.5 +0.7**
MAW Mawson 78.58 201 P **P 00 54 51.5 +0.7**
MAW pmax pmax
comp=Z,4.0nm,1.1s
NRIK Noril'sk 78.68 345 P **P 00 54 50.8 -0.4**
comp=Z,13nm,0.9s,baz=124,slow=5.9,SNR=18
NRIK LR LR 01 31 37.5
comp=Z,700nm,19.9s,baz=141,slow=37
comp=Z,13nm,0.9s
NRIK Noril'sk 78.68 345 P **P 00 54 51.2 -0.1**
NRIK IAmb IAmb 00 54 53.9
comp=Z,11nm,0.8s
NRIK Noril'sk 78.68 345*ce*P **P 00 54 50.6 -0.6**
NRIK pmax pmax
comp=Z,12nm,0.9s
FAQ Al Faqa, Dubai 78.72 296 P **P 00 54 52.7 +0.3**
FAQ Al Faqa, Dubai 78.72 296 *i*P **P 00 54 54.1 +1.7**
SNR=8.3
ASUD Al Ashush, Dub 78.94 296 P **P 00 54 54.2 +0.6**
ASUD P **P 00 54 54.2 +0.6**
ASUD Al Ashush, Dub 78.94 296 *i*P **P 00 54 55.0 +1.4**
SNR=11
GEYT Alibeck 79.17 310 P **P 00 54 55.4 +0.7**
comp=Z,8.9nm,0.8s,baz=174,slow=1.5,SNR=18
comp=Z,8.9nm,0.8s
GEYT Alibeck 79.17 310 P **P 00 54 54.7 0.0**
GEYT IAmb IAmb 00 54 57.6
comp=Z,12nm,0.8s
GYA0B ALIBECK ARRAY 79.17 310 P **P 00 54 54.6 -0.1**
GYA0B IAmb IAmb 00 55 24.4
comp=Z,11nm,0.8s
WHFO Wadi Hawf 79.42 289 P **P 00 54 56.7 +0.3**
ABTO Aybut 79.80 288 P **P 00 54 59.2 +0.7**
MZR Muzera 80.37 294 P **P 00 55 02.0 +0.5**
MZR P **P 00 55 02.0 +0.5**
SDPT Sand Point 80.74 32 P **P 00 55 02.6 0.0**
baz=250
AB31 Akbulak array 80.80 321 *i*P **P 00 55 02.3 -0.9**
ABKAR Akbulak array 80.80 321 P **P 00 55 03.0 -0.1**
ABKAR Akbulak array 80.80 321 P **P 00 55 03.4 +0.2**
ABKAR IAmb IAmb 00 55 17.5
comp=Z,5.6nm,0.9s
SBV Sambava 80.92 257 P **P 00 55 04.7 +0.2**
GHWR Ruwais 81.05 295 P **P 00 55 05.9 +0.9**
GHWR P **P 00 55 05.9 +0.9**
JRN Qarnain Island 81.21 296 P **P 00 55 06.6 +0.8**
TNA Tin City 81.59 22 P **P 00 55 06.1 -0.9**
baz=242
AKTO Aktyubinsk 82.32 322 LR LR 01 36 20.7
comp=Z,266nm,19.1s,baz=105,slow=39
AKTO Aktyubinsk 82.32 322 P **P 00 55 12.2 +1.0**
SMRA Abu-Samra 83.01 295 P **P 00 55 16.1 +0.8**
O16K Kokwok River B 83.37 29 P **P 00 55 18.2 +1.8**
baz=251
ARU Arti 83.64 328 P **P 00 55 17.8 0.0**
ARU IAmb IAmb 00 55 57.0
comp=Z,12nm,1.1s
ARU Arti 83.64 328*c i*P **P 00 55 17.7 -0.2**
ARU 00 58 28.8
ARU S **S 01 05 40.1 +1.3**
ARU pmax pmax
comp=Z,5.0nm,0.9s
VOI Vohitsoka 83.69 248 P **P 00 55 19.5 +0.4**
VOI Vohitsoka 83.69 248 P **P 00 55 19.6 +0.5**
O17K Koliganek Bris 83.91 29 P **P 00 55 19.7 +0.5**
baz=252
P17K Kvichak River 84.05 30 P **P 00 55 21.0 +1.1**
baz=253
SII Sitkinak Islan 84.47 32 P **P 00 55 23.0 +0.9**
baz=255
OHAK Old Harbor 85.12 32 P **P 00 55 26.8 +1.4**
baz=256
TTA Tatalina 85.36 26 P **P 00 55 25.3 -1.3**
baz=253
N19K Bonanza Creek 85.46 28 P **P 00 55 25.5 -1.6**
baz=254
KDAK Kodiak Island 85.62 31 P **P 00 55 28.3 +0.5**
KDAK Kodiak Island 85.62 31 P **P 00 55 28.3 +0.5**
KDAK pmax pmax
comp=Z,71nm,2.0s
L19K White Mountain 85.66 27 P **P 00 55 28.8 +0.8**
L19K White Mountain 85.66 27 P **P 00 55 27.2 -0.8**
baz=254
M19K Big River Lodg 85.80 27 P **P 00 55 29.4 +0.8**
baz=254
L20K Farewell, AK 86.18 27 P **P 00 55 31.1 +0.5**
baz=255
QSPA South Pole Qui 86.31 180 LR LR 01 34 45.4
comp=Z,857nm,20.4s,baz=356,slow=36
QSPA South Pole Qui 86.31 180 P **P 00 55 31.5 +0.2**
K20K Telida 86.33 26 P **P 00 55 31.2 -0.1**
baz=254
M20K Styx River 86.36 27 P **P 00 55 32.0 +0.4**
baz=255
J20K Nowinta River 86.52 25 P **P 00 55 33.2 +1.0**
J20K IAmb IAmb 00 55 55.3
comp=Z,8.6nm,0.9s
J20K Nowinta River 86.52 25 P **P 00 55 33.0 +0.8**
baz=254
LKRN Lenkeran, Azer 86.53 309 P **P 00 55 34.3 +1.5**
IMAR Indian Mountai 87.17 23 P **P 00 55 36.0 +0.7**
CAST Castle Rocks 87.21 26 P **P 00 55 36.6 +1.0**
baz=256
CHUM Lake Minchumin 87.22 25 P **P 00 55 35.7 +0.2**
baz=256

H21K **Melozitna Rive** 87.46 24 P P 00 55 37.5 +0.8
baz=256
SEW **Seward** 87.72 29 P P 00 55 39.8 +1.8
baz=259
RAYN **Ar Rayn** 87.72 294 P P 00 55 38.6 -0.3
RAYN IAmb IAmb 00 55 41.6
comp=Z,12nm,0.9s
RAYN **Ar Rayn** 87.72 294 P P 00 55 38.6 -0.3
RAYN pmax pmax
comp=Z,12nm,0.9s
RAYN **Ar Rayn** 87.72 294 P P 00 55 39.4 +0.5
RAYN **Ar Rayn** 87.72 294 *i* P P 00 55 41.1 +2.1
SNR=16
TAOE **Nuku Hiva Isla** 87.88 99 *e*LR LR 01 23 26.6
comp=Z,354nm,24.0s
MAK **Makhachkala** 88.02 313 *e*P P 00 55 33.0 -6.9
MAK *e* 01 05 58.1
MAK *e*SS SS 01 12 11.3 +0.7
MAK pmax pmax
comp=Z,153nm,1.2s
SEKA **Sheki** 88.04 311 P P 00 55 41.1 +0.9
MNGR **Mingechevir, A** 88.08 311 P P 00 55 41.7 +1.5
MLY **Manley** 88.15 25 P P 00 55 41.5 +1.4
MLY IAmb IAmb 00 55 57.4
comp=Z,4.2nm,0.7s
MLY **Manley** 88.15 25 P P 00 55 40.1 0.0
baz=257
E22K **Anaktuvuk Pass** 88.44 21 P P 00 55 41.3 -0.1
baz=256
KNK **Knik Glacier** 88.44 28 P P 00 55 42.4 +0.9
baz=260
SML **Sawmill** 88.57 28 P P 00 55 42.6 +0.4
SML **Sawmill** 88.57 28 P P 00 55 42.8 +0.6
baz=260
RND **Reindeer** 88.63 26 P P 00 55 42.2 -0.2
RND IAmb IAmb 00 56 05.3
comp=Z,6.6nm,1.0s
RND **Reindeer** 88.63 26 P P 00 55 42.2 -0.2
RND pmax pmax
comp=Z,7.0nm,1.0s
GANJ **Ganja** 88.64 311 P P 00 55 44.3 +1.3
G23K **Bananza Creek** 88.80 23 P P 00 55 43.6 +0.5
baz=258
H23K **Yukon River** 88.81 24 P P 00 55 43.9 +0.7
baz=258
M23K **Glacier View** 88.85 28 P P 00 55 43.4 0.0
baz=260
GLI **Glacier Island** 89.00 29 P P 00 55 46.6 +2.4
baz=261
D23K **Nanushuk River** 89.04 21 P P 00 55 44.7 +0.6
baz=257
SCM **Sheep Creek Mo** 89.05 28 P P 00 55 44.8 +0.3
baz=260
BELG **Belogornoye** 89.08 322 LR LR 01 40 28.9
comp=Z,101nm,18.1s,baz=119,slow=39
BELG **Belogornoye** 89.08 322 *i* P P 00 55 44.9 +0.3
BELG pmax pmax
comp=Z,2.0nm,1.0s
NAX **Nakhchivan** 89.13 309 P P 00 55 46.7 +1.3
DHY **Denali Highway** 89.23 27 P P 00 55 46.7 +1.4
baz=260
C23K **Itkillik River** 89.25 20 P P 00 55 46.6 +1.5
baz=257
GROC **Groznyy** 89.29 313 *e*P P 00 55 46.4 +0.5
GROC pmax pmax
comp=Z,19nm,0.6s
ATD **Arta Tunnel** 89.34 282 LR LR 01 35 44.5
comp=Z,149nm,18.4s,baz=46,slow=36
H24K **Noodor Dome** 89.48 24 P P 00 55 47.7 +1.3
baz=260
HDA **Harding Lake** 89.63 25 P P 00 55 47.7 +0.7
baz=261
ILAR **Eielson Array** 89.72 25 P P 00 55 46.6 -0.8
comp=Z,2.0nm,0.9s,baz=274,slow=4.6,SNR=10.0
ILAR LR LR 01 32 21.5
comp=Z,128nm,21.1s,baz=256,slow=33
comp=Z,2.0nm,0.9s
ILAR **Eielson Array** 89.72 25 P P 00 55 47.0 -0.4
ILAR **Eielson Array** 89.72 25 P P 00 55 47.0 -0.4
F24K **Squaw Lake** 89.77 22 P P 00 55 49.7 +2.0
baz=260
GNI **Garni** 89.80 310 LR LR 01 42 23.1
comp=Z,88nm,20.8s,baz=92,slow=40
PAX **Paxson** 90.07 27 P P 00 55 48.2 -1.0
baz=262
J25K **Salcha River,** 90.34 25 P P 00 55 50.8 +0.4
baz=262
H25K **Birch Creek** 90.38 24 P P 00 55 52.3 +1.9
baz=262
RIDG **Independent Ri** 90.45 26 P P 00 55 52.2 +1.3
baz=263
ZEI **Tsey** 90.64 313 *e*P P 00 56 01.9 +9.4
ZEI pmax pmax
comp=Z,11nm,1.5s
SCRK **Sand Creek** 90.86 26 P P 00 55 53.2 +0.3
baz=264
BMAR **Burnt Mountain** 91.02 23 P P 00 55 53.9 +0.4
J26L **Joseph Creek** 91.10 26 P P 00 55 53.9 -0.1
baz=264
PRGR **Permogore** 91.18 332 *e*P P 00 55 51.4 -2.9
F26K **Sheenjek River** 91.22 22 P P 00 55 55.1 +0.7
baz=263
G26K **Porcupine Rive** 91.27 23 P P 00 55 54.4 -0.1
baz=264
I26K **Coal Creek Min** 91.36 25 P P 00 55 55.7 +0.7
baz=264
KVAR **Kislovodsk Arr** 91.60 314 LR LR 01 42 08.2
comp=Z,64nm,20.8s,baz=284,slow=39
KIV **Kislovodsk** 91.60 314 *e*P P 00 55 54.9 -1.9
KIV pmax pmax
comp=Z,6.0nm,1.1s
M27K **Edge Creek, AK** 91.65 28 P P 00 55 58.6 +2.0
baz=265
K27K **Chicken** 91.70 26 P P 00 55 57.7 +1.1
baz=265
L27K **Beaver Creek,** 91.73 27 P P 00 55 57.7 +0.8
baz=265
BCAR **Beaver Creek A** 91.75 27 P P 00 55 57.8 +0.8
GURO **Guroymak-BITLI** 91.78 308 P P 00 55 59.0 +1.2
CTG **Chitna Glacier** 91.80 29 P P 00 55 59.3 +1.9
baz=266
I27K **Kandik River** 92.02 25 P P 00 55 59.0 +0.8
baz=266
M29M **Somme Creek** 93.25 28 P P 00 56 04.8 +0.8
baz=268
I29M **Ogilvie Camp,** 93.39 25 P P 00 56 05.0 +0.5
I29M IAmb IAmb 00 56 24.0
comp=Z,9.7nm,1.3s
I29M **Ogilvie Camp,** 93.39 25 P P 00 56 04.3 -0.1
baz=269
L29M **L29M** 93.42 27 P P 00 56 05.8 +1.1
baz=269
SOC **Sochi** 93.74 313 *e*P P 00 56 03.7 -2.8
SOC *e* 00 59 51.9
SOC *e*S **SKSac** **01 06 38.2 -1.7**
SOC *e*SS **SS** **01 13 30.7 -2.4**
SOC *e*SSS SSS 01 17 11.8
SOC MLR MLR
comp=Z,128nm,22.0s
KLMR **Klimovskoe** 94.09 331 *e*P P 00 56 07.0 -0.7
KLMR pmax pmax
comp=Z,6.0nm,1.2s
KLMR **Klimovskoe** 94.09 331 *e*P P 00 56 07.0 -0.7
KLMR AMP 00 56 17.7
comp=Z,6.0nm,1.2s
KMBO **Kilima Mbogo** 94.11 269 P P 00 56 09.7 +0.5
comp=Z,1.9nm,0.8s,baz=52,slow=11,SNR=6.4
KMBO LR LR 01 35 06.8
comp=Z,621nm,21.4s,baz=89,slow=33
comp=Z,1.9nm,0.8s
KMBO **Kilima Mbogo** 94.11 269 P P 00 56 07.9 -1.3
KMBO IAmb IAmb 00 56 24.6
comp=Z,12nm,1.4s
KMBO **Kilima Mbogo** 94.11 269 P P 00 56 07.9 -1.3
KMBO pmax pmax
comp=Z,12nm,1.4s
INK **Inuvik** 95.23 22 LR LR 01 39 52.3
comp=Z,52nm,18.5s,baz=254,slow=36
OBN **Obninsk** 95.76 325 *e*P P 00 56 13.5 -1.9
OBN *e* 01 00 06.5
OBN *e*PPP PPP 01 02 09.2
OBN pmax pmax
comp=Z,2.0nm,0.9s
MMAI **Mount Meron Ar** 97.03 303 LR LR 01 46 19.9
comp=Z,161nm,20.6s,baz=253,slow=39
EIL **Elat** 97.43 299 LR LR 01 46 57.3
comp=Z,244nm,19.6s,baz=94,slow=40
DLBC **Dease Lake** 97.56 32 LR LR 01 35 31.6
comp=Z,412nm,21.9s,baz=286,slow=32
BRTR **Keskin Array B** 98.32 309 P P 00 56 26.1 -1.5
comp=Z,0.4nm,0.7s,baz=112,slow=7.5,SNR=3.3
comp=Z,0.4nm,0.7s
SPITS **Spitsbergen Ar** 98.56 349 LR LR 01 43 27.3
comp=Z,444nm,20.7s,baz=25,slow=37
ARCES **ARCESS Array B** 98.94 340 P P 00 56 28.5 -1.0
comp=Z,2.7nm,0.8s,baz=79,slow=6.3,SNR=13
ARCES LR LR 01 47 44.6
comp=Z,300nm,20.3s,baz=82,slow=39
comp=Z,2.7nm,0.8s
ARCES **ARCESS Array B** 98.94 340 P 00 56 28.6 -1.0
ARCES **ARCESS Array B** 98.94 340 P P 00 56 28.6 -1.0
ARCES pmax pmax
comp=Z,14nm,1.5s
SNAA **Sanae** 99.24 193 P Pdif 00 56 31.1 +0.1
comp=Z,0.8nm,0.7s,baz=66,slow=3.0,SNR=2.3
SNAA LR LR 01 41 57.9
comp=Z,590nm,20.3s,baz=110,slow=36
comp=Z,0.8nm,0.7s
BBB **Bella Bella** 99.27 38 LR LR 01 34 37.3
comp=Z,333nm,21.4s,baz=276,slow=31
FINES **FINESS Array B** 100.51 332 P Pdif 00 56 35.7 -1.0
comp=Z,0.5nm,0.6s,baz=101,slow=2.8,SNR=2.1
BOSA **Boshof** 102.39 240 P Pdif 00 56 45.0 -1.1
comp=Z,3.3nm,1.0s,baz=129,slow=1.9,SNR=5.4
NVAR **Mina Array Bea** 108.08 51 PKKPbc PKKPbc 01 12 31.3 +0.2
comp=Z,0.7nm,0.8s,baz=133,slow=8.2,SNR=4.1
CLL **Collm** 110.33 324 *e*PP PP 01 01 54.0 -2.3
CLL *e*PPP PPP 01 04 30.0
CLL *e*PS **PS** **01 11 18.0 -8.5**
CLL *e*SS SS 01 17 24.0 +2.0
CLL *ex* x 01 18 42.0
CLL *e*SSS SSS 01 21 30.0
CLL *e*SSSS 01 24 54.0
CLL LmV 02 00 00.0
comp=Z,300nm,19.8s
PDAR **Pinedale Array** 113.52 45 PKKPbc PKKPbc 01 12 12.2 -1.3
comp=Z,0.6nm,0.7s,baz=113,slow=6.1,SNR=6.8
TXAR **Lajitas Array** 121.95 58 PKP **PKiKP** **01 01 45.5 +0.6**
comp=Z,0.4nm,0.8s,baz=194,slow=2.6,SNR=5.2
TXAR PKKPab **PKKPab** **01 11 43.2 +0.4**
comp=Z,0.4nm,0.7s,baz=113,slow=6.3,SNR=5.6
TORD **Torodi Ar. Bea** 129.48 284 PKP **PKPdf** **01 01 59.2 -0.1**
comp=Z,4.5nm,0.7s,baz=48,slow=1.5,SNR=20
PLCA **Paso Flores** 131.47 158 PKP **PKiKP** **01 02 04.2 +0.7**
comp=Z,0.9nm,0.7s,baz=248,slow=3.1,SNR=4.0
LVC **Limon Verde** 147.20 144 PKPbc **PKPab** **01 02 35.2 -0.5**
comp=Z,4.7nm,0.6s,baz=223,slow=1.9,SNR=7.4
CPUP **Villa Florida** 149.02 165 PKPbc **PKPbc** **01 02 38.5 +0.2**
comp=Z,4.9nm,0.7s,baz=216,slow=1.1,SNR=11
LPAZ **La Paz** 152.31 136 PKPbc **PKiKP** **01 02 49.6 +2.2**
comp=Z,4.3nm,0.9s,baz=110,slow=2.6,SNR=9.3

*IDC **21** 00:55:25.2±0.8,55.°00S×31.°40W,h0km,mb3.9/9, mbtmp3.9/9,Error ellipse: s-maj=31.6km s-min=19.2km az=53.0*
*NEIC **21** 00:55:26.9±1.2,55.°0S±0.°1×31.°5W±0.°2,h10km±1km, mb4.4/15,Error ellipse: s-maj=18.3km s-min=16.4km az=55.0*
ISC 21 00:55:26.5±0.6,55.°03S±0.°08×31.°7W±0.°1,h10km,n35, σ0s82/30,mb4.3/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.91**	**283**	Pn	**Pn**	**00 56 11.6**	**-1.2**
ORCD	**Orcadas**	**9.01**	**225**	Pn	**Pn**	**00 57 34.6**	**-1.8**
SNAA	**Sanae**	**20.73**	**154**	P	**P**	**01 00 07.2**	**+0.4**
	1.7nm,0.9s,baz=284,slow=7.3,SNR=5.1						
	comp=Z,0.9ns						
SNAA	**Sanae**	**20.73**	**154**	P	**P**	**01 00 06.9**	**+0.1**
BELA	**Belgrano 2**	**22.97**	**182**	P	**P**	**01 00 31.8**	**+1.2**
ITAB	**Concordia**	**31.53**	**323**	P	**P**	**01 01 48.1**	**-0.5**
CPUP	**Villa Florida**	**34.28**	**316**	P	**P**	**01 02 12.7**	**+0.1**
	2.5nm,0.9s,baz=114,slow=8.0,SNR=3.2						
	2.5nm,0.9s						
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**01 02 21.1**	**+0.5**
	0.9nm,0.6s,baz=136,slow=24,SNR=1.0						
	0.9nm,0.6s						
QSPA	**South Pole Qui**	**35.22**	**180**	P	**P**	**01 02 21.0**	**+0.4**
QSPA				IAmb	IAmb	01 02 37.3	
	comp=Z,4.9nm,1.2s						
CO01	**Juntas del Tor**	**37.09**	**297**	P	**P**	**01 02 38.1**	**+1.0**
CO01				IAmb	IAmb	01 02 39.4	
	comp=Z,23nm,1.5s						
AC05	**El Transito**	**38.10**	**297**	P	**P**	**01 02 46.5**	**+1.0**
BDFB	**Brasilia**	**41.30**	**336**	P	**P**	**01 03 14.1**	**+1.9**
	comp=Z,1.9nm,0.6s,baz=140,slow=7.4,SNR=4.7						
	comp=Z,1.9nm,0.6s						
BDFB	**Brasilia**	**41.30**	**336**	P	**P**	**01 03 12.2**	**+0.1**
MAW	**Mawson**	**42.45**	**146**	P	**P**	**01 03 21.1**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=247,slow=8.1,SNR=2.3						
	comp=Z,1.3nm,0.9s						
PB01	**IPOC Station P**	**44.23**	**305**	P	**P**	**01 03 36.4**	**+0.5**
PB01				IAmb	IAmb	01 03 41.6	
	comp=Z,9.5nm,1.0s						
VNDA	**Vanda**	**47.44**	**184**	P	**P**	**01 04 00.8**	**+0.3**
VNDA				IAmb	IAmb	01 04 04.0	
	comp=Z,4.3nm,1.4s						
LPAZ	**La Paz**	**47.74**	**310**	P	**P**	**01 04 05.2**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=127,slow=5.1,SNR=1.3						
	comp=Z,2.0nm,0.6s						
LPAZ	**La Paz**	**47.74**	**310**	P	**P**	**01 04 05.0**	**+0.8**
LPAZ				IAmb	IAmb	01 04 12.3	
	comp=Z,4.6nm,1.1s						
H10S2	**ASCENSION HYDR**	**47.90**	**23**	T	T	01 56 13.2	
	baz=193						
H10S3	**ASCENSION HYDR**	**47.90**	**23**	T	T	01 56 15.8	
	baz=27						
BOSA	**Boshof**	**48.24**	**81**	P	**P**	**01 04 07.2**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=165,slow=7.2,SNR=4.6						
	comp=Z,1.5nm,0.7s						
BOSA	**Boshof**	**48.24**	**81**	P	**P**	**01 04 07.0**	**-0.5**
H10N1	**ASCENSION HYDR**	**49.02**	**23**	T	T	01 57 38.5	
	baz=193,slow=75,SNR=15						
H10N3	**ASCENSION HYDR**	**49.02**	**23**	T	T	01 57 36.1	
	baz=193,slow=75,SNR=18						
H10N2	**ASCENSION HYDR**	**49.03**	**23**	T	T	01 57 39.5	
	baz=193,slow=75,SNR=17						
LBTB	**Lobatse**	**51.21**	**78**	P	**P**	**01 04 28.8**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=119,slow=22,SNR=2.5						
	comp=Z,2.2nm,0.8s						
LBTB	**Lobatse**	**51.21**	**78**	P	**P**	**01 04 29.3**	**-0.8**
LBTB				IAmb	IAmb	01 04 34.7	
	comp=Z,14nm,1.4s						
BOAV	**Boa Vista**	**61.98**	**327**	P	**P**	**01 05 46.0**	**-0.6**
BOAV				IAmb	IAmb	01 05 47.6	
	comp=Z,1.8nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.52**	**34**	P	**P**	**01 06 58.8**	**-0.5**
TOA0				IAmb	IAmb	01 07 15.7	
	comp=Z,3.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.52**	**34**	P	**P**	**01 06 58.7**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=202,slow=6.1,SNR=2.4						
	comp=Z,0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.52**	**34**	P	**P**	**01 06 59.1**	**-0.1**
TORD				IAmb	IAmb	01 07 11.6	
	comp=Z,3.2nm,1.4s						
FINES	**FINESS Array B**	**124.71**	**30**	PKP	**PKPdf**	**01 14 24.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=221,slow=1.3,SNR=1.9						
ZALV	**Zalesovo Beam**	**144.21**	**65**	PKP	**PKPab**	**01 14 58.9**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=237,slow=2.9,SNR=4.1						
ILAR	**Eielson Array**	**147.56**	**314**	PKPbc	**PKPbc**	**01 15 09.2**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=115,slow=2.1,SNR=12						
SONM	**Songino Array**	**153.21**	**88**	PKPbc	**PKPbc**	**01 15 23.3**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=211,slow=3.6,SNR=3.1						

*IDC **21** 00:55:41.6±1.3,20.°66S×178.°45W,h565km±14km, mb3.2/13,mbtmp4.2/17,Error ellipse: s-maj=17.1km s-min=13.0km az=120.0*
*NEIC **21** 00:55:41.5±1.2,20.°6S±0.°1×178.°4W±0.°1,h566km±7km, mb4.3/31,Error ellipse: s-maj=17.5km s-min=14.2km az=53.0*
ISC 21 00:55:43.4±0.5,20.°7S±0.°1×178.°58W±0.°09,h587km,n84, σ0s86/81,mb4.1/30,6C-3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.33**	**312**	P	**P**	**00 57 08.6**	**-1.8**
	18nm,0.6s,baz=276,slow=23,SNR=16						
MSVF	**Nonsavu**	**4.33**	**312**	P	**P**	**00 57 09.9**	**-0.6**
AFI	**Afiamalu**	**9.35**	**45**	P	P	00 57 50.7	-4.9
	15nm,0.5s,baz=62,slow=1.7,SNR=6.3						
AFI				S	S	00 59 32.4	-12
	21nm,0.8s,baz=332,slow=19,SNR=2.5						
AFI	**Afiamalu**	**9.35**	**45**	P	**P**	00 57 50.6	-5.1
MARNC	**Mare, Loyalty**	**12.53**	**264**	P	**P**	**00 58 26.9**	**-0.6**
PINNC	**Pines Island,**	**13.14**	**259**	P	**P**	**00 58 34.2**	**+0.5**
DZM	**Mont Dzumac**	**14.02**	**262**	P	**P**	**00 58 42.5**	**-0.3**
	9.6nm,0.6s,baz=348,slow=23,SNR=4.6						
DZM	**Mont Dzumac**	**14.02**	**262**	P	**P**	**00 58 42.7**	**-0.1**
KOUNC	**Koumac, New Ca**	**16.04**	**267**	P	**P**	**00 59 02.7**	**+0.9**
URZ	**Urewera**	**17.92**	**191**	P	**P**	**00 59 16.2**	**-2.5**
	11nm,0.6s,baz=262,slow=1.0,SNR=14						
URZ	**Urewera**	**17.92**	**191**	P	**P**	**00 59 16.1**	**-2.5**
BFZ	**Birch Farm**	**20.43**	**191**	P	**P**	**00 59 39.2**	**-2.2**
EIDS	**Eidsvold**	**28.28**	**255**	P	**P**	**01 00 51.6**	**+0.6**
EIDS				IAmb	IAmb	01 01 16.3	
	comp=Z,5.4nm,1.1s						
CTAO	**Charters Tower**	**32.93**	**265**	P	**P**	**01 01 31.9**	**+1.0**
COEN	**Coen**	**37.05**	**274**	P	**P**	**01 02 05.7**	**+0.5**
COEN				IAmb	IAmb	01 02 07.3	
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	**37.22**	**244**	P	**P**	**01 02 06.4**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=74,slow=11,SNR=3.6						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**37.22**	**244**	P	**P**	**01 02 06.2**	**-0.1**
BBOO	**Buckleboo**	**41.98**	**244**	P	**P**	**01 02 44.7**	**+0.3**
WR0	**Warramunga Arr**	**43.85**	**262**	P	**P**	**01 02 59.1**	**0.0**
WR0				IAmb	IAmb	01 03 02.9	
	comp=Z,7.0nm,1.3s						
AS31	**Alice Springs**	**43.95**	**257**	P	**P**	**01 03 00.5**	**+0.7**
ASAR	**Alice Springs**	**43.95**	**257**	P	**P**	**01 03 00.3**	**+0.4**
	comp=Z,5.5nm,0.6s,baz=95,slow=7.5,SNR=72						
ASAR				PcP	**PcP**	**01 04 33.1**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=102,slow=3.6,SNR=5.7						
ASAR				ScP	**ScP**	**01 07 28.9**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=103,slow=4.2,SNR=2.3						
ASAR				S	**S**	**01 08 49.8**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=92,slow=21,SNR=4.3						
	comp=Z,5.5nm,0.6s						
ASAR	**Alice Springs**	**43.95**	**257**	P	**P**	**01 02 60.0**	**+0.1**
WRA	**Warramunga Arr**	**44.04**	**262**	P	**P**	**01 03 00.9**	**+0.4**
	comp=Z,2.2nm,0.3s,baz=97,slow=7.5,SNR=188						
WRA				S	**S**	**01 08 49.9**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=98,slow=12,SNR=2.0						
	comp=Z,2.2nm,0.3s						
WRA	**Warramunga Arr**	**44.04**	**262**	P	**P**	**01 03 00.2**	**-0.3**
MTN	**Manton Dam**	**48.62**	**271**	P	**P**	**01 03 35.4**	**+0.3**
MTN				IAmb	IAmb	01 03 36.1	
	comp=Z,13nm,1.0s						
FORT	**Forrest**	**48.73**	**247**	P	**P**	**01 03 36.0**	**+0.3**
KNRA	**Kununurra**	**50.10**	**267**	P	**P**	**01 03 46.4**	**+0.4**
KNRA				IAmb	IAmb	01 03 49.2	
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**57.10**	**257**	P	**P**	**01 04 35.3**	**0.0**
PSA00				IAmb	IAmb	01 04 57.6	
	comp=Z,37nm,1.5s						
MBWA	**Marble Bar**	**57.28**	**258**	P	**P**	**01 04 36.6**	**+0.1**
MBWA				IAmb	IAmb	01 04 46.8	
	comp=Z,32nm,1.4s						
SBA	**Scott Base**	**57.66**	**184**	P	**P**	**01 04 39.7**	**+1.6**
VNDA	**Vanda**	**57.69**	**185**	P	**P**	**01 04 39.0**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=4.2,slow=7.7,SNR=8.0						
	comp=Z,0.8nm,0.7s						
VNDA	**Vanda**	**57.69**	**185**	P	**P**	**01 04 39.2**	**+0.9**
MORW	**Morawa**	**59.26**	**248**	P	**P**	**01 04 49.6**	**-0.1**
MORW				IAmb	IAmb	01 04 49.7	
	comp=Z,15nm,1.2s						
QSPA	**South Pole Qui**	**69.39**	**180**	P	**P**	**01 05 53.7**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=6.0,slow=0.3,SNR=11						
	comp=Z,1.8nm,0.5s						
QSPA	**South Pole Qui**	**69.39**	**180**	P	**P**	**01 05 54.0**	**+0.9**
MJAR	**Matsushiro Arr**	**70.03**	**324**	P	**P**	**01 05 57.1**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=150,slow=7.2,SNR=2.0						
	comp=Z,0.9nm,0.5s						
TPUB	**Ta-pu**	**73.62**	**303**	P	**P**	**01 06 17.5**	**-0.8**
TPUB				IAmb	IAmb	01 06 18.6	
	comp=Z,10nm,0.7s						
PETK	**Petropavlovsk-**	**76.30**	**346**	P	**P**	**01 06 33.4**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=143,slow=8.9,SNR=4.3						
	comp=Z,1.6nm,0.6s						
KSRS	**Korea Array**	**76.66**	**319**	P	**P**	**01 06 35.2**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=118,slow=5.6,SNR=2.6						
	comp=Z,0.8nm,0.6s						
NVAR	**Mina Array Bea**	**81.53**	**44**	P	**P**	**01 07 01.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=221,slow=9.5,SNR=3.1						
	comp=Z,0.3nm,0.6s						
ILSW	**Iliamna Southw**	**83.01**	**13**	P	**P**	**01 07 07.1**	**-0.6**
ILSW				IAmb	IAmb	01 07 07.7	
	comp=Z,9.7nm,0.8s						
M19K	**Big River Lodg**	**84.54**	**11**	P	**P**	**01 07 15.1**	**+0.1**
M19K				IAmb	IAmb	01 07 43.3	
	comp=Z,14nm,1.4s						
GSI	**Gunungsitoli**	**84.70**	**273**	P	**P**	**01 07 18.1**	**+1.1**
SCM	**Sheep Creek Mo**	**85.94**	**14**	P	**P**	**01 07 21.8**	**-0.1**
SCM				IAmb	IAmb	01 07 49.4	
	comp=Z,13nm,1.4s						
N25K	**Chitina, Valde**	**86.40**	**16**	P	**P**	**01 07 24.0**	**0.0**
N25K				IAmb	IAmb	01 07 41.5	
	comp=Z,4.9nm,1.4s						
GLB	**Gilahina Butte**	**86.46**	**16**	P	**P**	**01 07 24.0**	**-0.2**
TXAR	**Lajitas Array**	**87.61**	**58**	P	**P**	**01 07 30.5**	**0.0**
	comp=Z,0.6nm,0.8s,baz=235,slow=4.4,SNR=5.5						
	comp=Z,0.6nm,0.8s						
H21K	**Melozitna Rive**	**88.28**	**10**	P	**P**	**01 07 32.8**	**+0.2**
H21K				IAmb	IAmb	01 07 35.5	
	comp=Z,3.4nm,1.5s						
CCB	**Clear Creek Bu**	**88.31**	**13**	P	**P**	**01 07 32.1**	**-0.6**
CCB				IAmb	IAmb	01 07 32.9	
	comp=Z,2.2nm,0.7s						
IMAR	**Indian Mountai**	**88.42**	**10**	P	**P**	**01 07 33.0**	**-0.3**
ILAR	**Eielson Array**	**88.61**	**13**	P	**P**	**01 07 33.6**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=217,slow=5.5,SNR=10						
	comp=Z,0.7nm,0.5s						
ILAR	**Eielson Array**	**88.61**	**13**	P	**P**	**01 07 33.0**	**-1.2**
J25K	**Salcha River,**	**88.80**	**14**	P	**P**	**01 07 35.3**	**+0.2**
J25K				IAmb	IAmb	01 07 44.0	
	comp=Z,3.2nm,1.4s						
M30M	**Minto, Yukon**	**89.30**	**18**	P	**P**	**01 07 37.9**	**+0.4**
M30M				IAmb	IAmb	01 07 39.3	
	comp=Z,2.2nm,0.9s						
PDAR	**Pinedale Array**	**89.46**	**43**	P	**P**	**01 07 37.9**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=209,slow=3.7,SNR=7.3						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**89.46**	**43**	P	**P**	**01 07 39.0**	**0.0**
CMAR	**Chiang Mai Arr**	**89.66**	**290**	P	**P**	**01 07 40.8**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=115,slow=3.4,SNR=5.6						
	comp=Z,1.7nm,0.3s						
MKAR	**Makanchi Array**	**110.92**	**313**	PKiKP	**PKiKP**	**01 13 10.6**	**0.0**
	comp=Z,0.2nm,0.4s,baz=106,slow=0.9,SNR=4.2						
ARCES	**ARCESS Array B**	**128.99**	**349**	PKP	**PKPdf**	**01 13 44.0**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=33,slow=1.6,SNR=10						
FINES	**FINESS Array B**	**135.78**	**343**	PKiKP	PKPpre	01 13 47.8	
	comp=Z,0.6nm,0.7s,baz=95,slow=4.7,SNR=1.6						
FINES				PKP	**PKPdf**	**01 13 58.2**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=90,slow=4.6,SNR=8.1						
AKASG	**Malin Array Be**	**142.90**	**331**	PKhKP	PKPpre	01 14 08.1	
	comp=Z,3.6nm,0.4s,baz=43,slow=4.4,SNR=35						
AKBB	**Malin Array Si**	**142.90**	**331**		**PKPdf**	**01 14 08.1**	**-2.6**
BNN	**Bunyan**	**145.32**	**309**		**PKPdf**	**01 14 16.1**	**+0.6**
BRTR	**Keskin Array B**	**146.55**	**312**	PKPbc	**PKPbc**	**01 14 20.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=142,slow=3.4,SNR=10						
BURAR	**Bucovina Array**	**146.94**	**330**	↑P	**PKiKP**	**01 14 22.1**	**-0.7**
BIZ	**Bicaz**	**147.00**	**328**	↑P	**PKiKP**	**01 14 22.2**	**-0.5**
TPGR	**Topolog**	**147.16**	**323**	↑P	**PKPbc**	**01 14 22.1**	**+0.6**
OSTC	**Ostas**	**147.97**	**342**	*e*PKP	**PKPbc**	**01 14 24.0**	**+0.6**
OSTC				AMS	AMS	01 52 50.0	
	comp=Z,300nm,20.4s						
OKC	**Ostrava-Krasne**	**148.01**	**339**	AMS	AMS	01 54 20.0	
	comp=Z,300nm,19.9s						
UPC	**Upice**	**148.07**	**342**	AMS	AMS	01 53 20.0	
	comp=Z,300nm,19.6s						
DPC	**Dobruska-Polom**	**148.13**	**342**	*e*PKP	**PKPbc**	**01 14 24.1**	**+0.3**
DPC				AMS	AMS	01 52 40.0	
	comp=Z,300nm,17.9s						
KRLC	**Kraliky**	**148.23**	**341**	*e*PKP	**PKPbc**	**01 14 24.7**	**+0.6**
KRLC				AMS	AMS	01 52 30.0	
	comp=Z,200nm,19.1s						
PVCC	**Panska Ves**	**148.45**	**344**	AMS	AMS	01 53 40.0	
	comp=Z,300nm,21.5s						
ARR	**Arges**	**148.83**	**328**

KHC					AMS	AMS	01 54 20.0	
	comp=Z,300nm,19.7s							
CKRC	**Cesky Krumlov**	**150.08**	**343**	*e*PKP	**PKPbc**		**01 14 28.9**	**+0.4**
BZS	**Buzias**	**150.09**	**331**	⇓P	**PKPbc**		**01 14 28.5**	**-0.1**
GERES	**GERESS Array B**	**150.22**	**344**	PKPbc	**PKPbc**		**01 14 29.0**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=29,slow=3.0,SNR=12							
HERR	**Herculane**	**150.27**	**329**	⇑P	**PKPbc**		**01 14 28.6**	**-0.4**
MORH	**Mrgy, Hungar**	**150.88**	**335**	⇑P	**PKPbc**		**01 14 30.7**	**+0.3**
VTS	**Vitosha**	**151.46**	**325**	⇓P	**PKPbc**		**01 14 29.3**	**-2.7**

*SNET **21** 00:57:55.6±1.2, 14.°52N×89.°15W, h6km±18km, ML2.5*
*GCG **21** 00:57:57.3±0.5, 15.°38N×89.°50W, h76km, MD3.0*
ISC 21 00:57:54.6±1.6, **14.°58N**±0.°06×**89.°10W**±0.°05, **h15**km±10km, **n19**, σ0**89**/**29**, **1C**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	**0.24**	**264**	⇑	*i*P		**Pb**	**00 57 59.6**	**-1.1**
ESQI					*e*S		**Sg**	**00 58 02.8**	**-0.6**
ESQI					IAML			00 58 03.4	
	comp=Z,3μm,0.3s								
P5NO	**Presa 5 de nov**	**0.68**	**151**	*e*P			**Pb**	**00 58 07.6**	**-0.6**
P5NO					*e*S		**Sb**	**00 58 17.0**	**-0.4**
MRL	**Marmol**	**0.75**	**311**	*e*P			**Pn**	**00 58 10.3**	**-0.6**
MRL					*e*S		**Sn**	**00 58 20.5**	**-1.7**
CEDA	**San Andres**	**0.83**	**200**	*e*S			**Sb**	**00 58 21.8**	**0.0**
RTR	**El Retiro**	**0.86**	**218**	*e*P			**Pb**	**00 58 11.1**	**-0.3**
SNJE	**San Jose**	**0.86**	**215**	*e*P			**Pb**	**00 58 10.8**	**-0.7**
SNJE					*e*S		**Sg**	**00 58 22.4**	**-0.5**
SLOZ	**Alcaldia de Sa**	**0.86**	**230**	*e*P			**Pb**	**00 58 10.5**	**-0.9**
SLOZ					*e*S		**Sg**	**00 58 21.8**	**-0.9**
SLOZ					IAML			00 58 31.9	
	comp=Z,129nm,0.6s								
UEES	**Universidad Ev**	**0.87**	**189**	*e*P			**Pb**	**00 58 10.6**	**-0.9**
PAVA	**Las Pavas**	**0.88**	**170**	*e*P			**Pb**	**00 58 11.3**	**-0.4**
PAVA					*e*S		**Sb**	**00 58 23.3**	**0.6**
SBLS	**San Blas**	**0.90**	**215**	*e*P			**Pb**	**00 58 11.4**	**-0.6**
CEVE	**Cerro Verde**	**0.91**	**214**	*e*S			**Sg**	**00 58 23.8**	**-0.4**
NUBE	**Las Nubes**	**0.95**	**224**	*e*P			**Pb**	**00 58 12.1**	**-0.7**
NUBE					*e*S		**Sg**	**00 58 24.5**	**-0.9**
NUBE					IAML			00 58 30.6	
	comp=Z,118nm,0.2s								
LFRS	**El Faro**	**0.95**	**178**	*e*P			**Pb**	**00 58 12.4**	**-0.5**
COEG	**Centro de Oper**	**0.98**	**167**	*e*P			**Pn**	**00 58 13.1**	**-0.9**
COEG					*e*S		**Sb**	**00 58 26.4**	**+0.2**
JAYA	**Jayaque - finc**	**0.98**	**200**	*e*P			**Pb**	**00 58 12.9**	**-0.6**
CAHU	**Cacacuatique**	**1.18**	**133**	*e*P			**Pn**	**00 58 17.4**	**+0.6**
NBG	**Las Nubes**	**1.21**	**270**	*e*P			**Pn**	**00 58 18.7**	**+1.5**
NBG					*e*S		**Sn**	**00 58 35.2**	**+1.7**
PACA	**Pacayal**	**1.34**	**146**	*e*P			**Pb**	**00 58 19.9**	**+0.3**
PCG	**Pacaya**	**1.47**	**263**	*e*P			**Pg**	**00 58 24.2**	**+1.2**
PCG					*e*S		**Sg**	**00 58 43.1**	**+0.9**

ROM 21 01:08:54.3±0.1, **43.°978N**±0.°003×**11.°749E**±0.°005, **h7**km±1km, **ML0.7**/3, **1C**, **Error ellipse: s-maj=0.4km s-min=0.2km az=254.0**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.10**	**136**	P			Pg	01 08 56.9	+0.3
SFI				S			Sg	01 08 58.8	+0.6
LMD	**Lutirano**	**0.10**	**343**	⇑P			Pg	01 08 56.9	+0.2
LMD				S			Sg	01 08 58.8	+0.5
LMD				AML			AML		
	comp=E,102μm,0.3s								
LMD				AML			AML		
	comp=N,100μm,0.1s								
ASQU	**Asqua**	**0.18**	**171**	P			Pg	01 08 58.6	+0.6
ASQU				S			Sg	01 09 01.8	+1.3
ASQU				AML			AML		
	comp=E,20μm,0.1s								
ASQU				AML			AML		
	comp=N,35μm,1.0s								
RUFI	**Rufina**	**0.22**	**232**	P			Pg	01 08 59.5	+0.8
RUFI				S			Sg	01 09 03.3	+1.7
BRIS	**BRISIGHELLA**	**0.24**	**315**	P			Pg	01 08 60.0	+0.8
BRIS				S			Sg	01 09 04.5	+2.1
SEI	**Scarperia**	**0.29**	**285**	P			Pg	01 09 00.7	+0.6
SEI				S			Sb	01 09 05.9	-1.2
SEI				AML			AML		
	comp=N,25μm,0.9s								
SEI				AML			AML		
	comp=E,17μm,0.3s								
SSFR	**Montelago di S**	**0.92**	**125**	AML			AML		
	comp=N,582μm,0.0s								
SSFR				AML			AML		
	comp=E,448μm,0.2s								

*NEIC **21** 01:11:09.8±2.7, 16.°09N±0.°09×98.°84W±0.°05, h18km±6km, mb4.0/15, Md4.4/70(MEX), Error ellipse: s-maj=13.3km s-min=5.4km az=202.0*
*IDC **21** 01:11:10.6±3.3, 16.°25N×98.°54W, h0km, mb3.8/4, mbtmp3.6/7, ML3.4/3, MS3.0/1, Error ellipse: s-maj=61.3km s-min=26.3km az=17.0*
*MEX **21** 01:11:11.0±0.6, 16.°04N×98.°86W, h10km±17km, MD4.4*
ISC 21 01:11:09.4±1.4, **16.°07N**±0.°05×**98.°83W**±0.°03, **h14**km±9km, **n80**, σ1**956**/123, **mb3.9**/10, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.72**	**337**				**Pg**	**01 11 23.3**	**-0.3**
CRIG							**Sg**	**01 11 33.1**	**-0.1**
CRIG	**Cruz Grande**	**0.72**	**337**	*i*	P		**Pg**	**01 11 23.3**	**-0.3**
CRIG					*e*S		**Sg**	**01 11 33.1**	**-0.1**
MGIG	**Malinaltepec**	**1.17**	**9**	*e*P			**Pb**	**01 11 30.4**	**-1.3**
MGIG					*e*S		**Sb**	**01 11 45.4**	**-1.5**
DAIG	**Los Arroyos**	**1.23**	**320**				**Pn**	**01 11 30.6**	**-1.7**
DAIG							**Sb**	**01 11 45.9**	**-2.5**
DAIG	**Los Arroyos**	**1.23**	**320**	*e*P			**Pn**	**01 11 30.6**	**-1.7**
DAIG					*e*S		**Sb**	**01 11 45.9**	**-2.5**
ACP2	**Acapulco**	**1.29**	**308**				**Pn**	**01 11 32.6**	**-0.5**
ACP2	**Acapulco**	**1.29**	**308**	*e*P			**Pn**	**01 11 32.6**	**-0.5**
YOIG	**Yosondua**	**1.46**	**57**	*e*P			**Pn**	**01 11 34.5**	**-1.1**
YOIG				*i*	S		**Sn**	**01 11 52.8**	**-2.0**
TLIG	**Tlapa**	**1.51**	**10**	*e*P			**Pn**	**01 11 35.4**	**-0.8**
TLIG					*e*S		**Sn**	**01 11 54.5**	**-1.2**
TXIG	**Tlaxiaco**	**1.56**	**41**	*i*	P		**Pn**	**01 11 36.0**	**-1.0**
TXIG					*e*S		**Sn**	**01 11 55.9**	**-1.3**
PEIG	**Puerto Escondi**	**1.62**	**92**	*e*P			**Pn**	**01 11 35.7**	**-1.9**
PEIG					*e*S		**Sn**	**01 11 58.2**	**-2.1**
CAIG	**El Cayaco**	**1.69**	**305**				**Pn**	**01 11 37.1**	**-1.5**
CAIG							**Sn**	**01 11 59.2**	**-0.8**
CAIG	**El Cayaco**	**1.69**	**305**	*e*P			**Pn**	**01 11 37.1**	**-1.5**
CAIG					*e*S		**Sn**	**01 11 59.2**	**-0.8**
FTIG	**Fresnillo de T**	**1.95**	**20**	*e*P			**Pn**	**01 11 41.9**	**-0.4**
FTIG					*e*S		**Sn**	**01 12 06.4**	**-0.2**
MEIG	**Mezcala**	**2.00**	**338**				**Pn**	**01 11 42.9**	**0.0**
MEIG							**Sn**	**01 12 06.3**	**-1.5**
MEIG	**Mezcala**	**2.00**	**338**	*e*P			**Pn**	**01 11 42.9**	**0.0**
MEIG					*e*S		**Sn**	**01 12 06.3**	**-1.5**
HLIG	**Huajuapan de L**	**2.01**	**29**	*e*P			**Pn**	**01 11 42.5**	**-0.6**
HLIG					*e*S		**Sn**	**01 12 08.0**	**-0.2**
VHO	**Vista Hermosa**	**2.25**	**63**	*e*P			**Pn**	**01 11 45.2**	**-1.2**
VHO					*e*S		**Sn**	**01 12 14.0**	**0.0**
PLIG	**Platanillo**	**2.40**	**345**				**Pn**	**01 11 49.0**	**+0.6**
PLIG							**Sn**	**01 12 17.8**	**+0.1**
PLIG	**Platanillo**	**2.40**	**345**	*e*P			**Pn**	**01 11 49.0**	**+0.6**
PLIG					*e*S		**Sn**	**01 12 17.8**	**+0.1**
TOIG	**Toxpalan**	**2.63**	**40**	*e*P			**Pn**	**01 11 50.7**	**-1.0**
TOIG					*e*S		**Sn**	**01 12 23.0**	**-0.5**
HUIG	**Huatulco**	**2.63**	**96**				**Pn**	**01 11 50.2**	**-1.4**
HUIG							**Sn**	**01 12 23.0**	**-0.4**
HUIG	**Huatulco**	**2.63**	**96**	*e*P			**Pn**	**01 11 50.2**	**-1.4**
HUIG					*e*S		**Sn**	**01 12 23.0**	**-0.4**
ARIG	**Puente Sto Nin**	**2.64**	**327**				**Pn**	**01 11 52.7**	**+1.1**
ARIG							**Sn**	**01 12 22.7**	**-0.8**
ARIG	**Puente Sto Nin**	**2.64**	**327**	*e*P			**Pn**	**01 11 52.7**	**+1.1**
ARIG					*e*S		**Sn**	**01 12 22.7**	**-0.8**
YAIG	**Yautepec**	**2.79**	**355**				**Pn**	**01 11 55.7**	**+1.9**
YAIG							**Pb**	**01 11 59.9**	**+0.7**
YAIG							**Sn**	**01 12 26.5**	**-0.9**
YAIG	**Yautepec**	**2.79**	**355**	*i*	P		**Pn**	**01 11 55.7**	**+1.9**
YAIG				*e*	P		**Pb**	**01 11 59.9**	**+0.7**
YAIG				*e*	S		**Sn**	**01 12 26.5**	**-0.9**
ZIIG	**Zihuatanejo**	**2.95**	**302**				**Sn**	**01 11 55.8**	**-0.1**
ZIIG							**Sn**	**01 12 31.6**	**+0.3**
ZIIG	**Zihuatanejo**	**2.95**	**302**	*e*P			**Pn**	**01 11 55.8**	**-0.1**
ZIIG					*e*S		**Sn**	**01 12 31.6**	**+0.3**

TLVM	**San Miguel Top**	**3.14**	**354**	*e*P		**Pn**	**01 11 58.0**	**-0.9**
TLVM				*e*S		**Sn**	**01 12 36.4**	**+0.1**
XCVM	**Xochimilco**	**3.18**	**355**	*e*P		**Pn**	**01 11 59.1**	**-0.3**
XCVM				*e*S		**Sn**	**01 12 36.3**	**-1.0**
AOVM	**Tlapan**	**3.22**	**352**	*e*P		**Pn**	**01 11 59.5**	**-0.6**
AOVM				*e*S		**Sn**	**01 12 38.5**	**0.0**
THVM	**De Xico**	**3.23**	**358**	*e*P		**Pn**	**01 11 57.8**	**-2.2**
THVM				*e*S		**Sn**	**01 12 37.7**	**-0.7**
INVM	**La Marquesa**	**3.25**	**351**	*e*P		Pn	01 11 55.3	-5.1
INVM				*e*S		**Sn**	**01 12 37.2**	**-1.9**
UNM	**Universidad Na**	**3.26**	**354**	Pn		**Pn**	**01 11 59.5**	**-1.0**
COVM	**Coyoacan**	**3.28**	**355**	*e*P		**Pn**	**01 11 59.3**	**-1.4**
COVM				*e*S		**Sn**	**01 12 39.4**	**-0.3**
CJVM	**Cuajimalpa**	**3.30**	**353**	*e*P		**Pn**	**01 12 02.8**	**+1.7**
CJVM				*e*S		**Sn**	**01 12 40.0**	**-0.3**
BJVM	**Benito Juarez**	**3.31**	**354**	*e*P		Pn	01 12 06.0	+5.0
BJVM				*e*S		**Sn**	**01 12 43.7**	**+3.4**
CTVM	**Cuauhtemoc**	**3.37**	**355**	*e*P		**Pn**	**01 12 00.9**	**-1.1**
CTVM				*e*S		**Sn**	**01 12 40.0**	**-2.0**
GMVM	**Gustavo A Made**	**3.42**	**356**	*e*P		**Pn**	**01 12 04.6**	**+1.9**
GMVM				*e*S		**Sn**	**01 12 41.4**	**-1.7**
APVM	**Azcapotzalco**	**3.42**	**354**	*e*P		**Pn**	**01 12 05.5**	**+2.9**
APVM				*e*S		**Sn**	**01 12 46.0**	**+2.8**
CMIG	**Matias Romero**	**3.92**	**74**	Pn		**Pn**	**01 12 08.3**	**-0.9**
	2.4nm,0.3s,baz=262,slow=16,SNR=41							
CMIG					Pg	**Pb**	**01 12 22.2**	**+3.8**
	8.8nm,0.3s,baz=260,slow=15,SNR=13							
CMIG					Sn	**Sn**	**01 12 52.1**	**-3.0**
	5.5nm,0.3s,baz=261,slow=11,SNR=2.3							
CMIG					Lg	Lg	01 13 12.0	
	15nm,0.3s,baz=243,slow=22,SNR=5.0							
CMIG					LR	LR	01 13 43.5	
	comp=Z,192nm,19.6s,baz=264,slow=42							
	10nm,0.5s							
CMIG	**Matias Romero**	**3.92**	**74**			**Pn**	**01 12 07.7**	**-1.6**
CMIG	**Matias Romero**	**3.92**	**74**			**Sn**	**01 12 55.2**	**+0.1**
CMIG	**Matias Romero**	**3.92**	**74**	*e*P		**Pn**	**01 12 07.7**	**-1.6**
CMIG				*e*S		**Sn**	**01 12 55.2**	**+0.1**
UXUV	**UXUV**	**4.66**	**74**	*i*P		**Pn**	**01 12 19.0**	**-0.5**
UXUV				*e*S		**Sn**	**01 13 12.1**	**-1.2**
MMIG	**Aquila**	**4.85**	**298**			**Pn**	**01 12 22.7**	**+0.6**
MMIG						**Sn**	**01 13 15.3**	**-2.7**
MMIG	**Aquila**	**4.85**	**298**	*e*P		**Pn**	**01 12 22.7**	**+0.6**
MMIG				*e*S		**Sn**	**01 13 15.3**	**-2.7**
PCIG		**5.41**	**93**			**Pn**	**01 12 28.8**	**-1.0**
PCIG						**Sn**	**01 13 28.4**	**-3.5**
PCIG		**5.41**	**93**	*e*P		**Pn**	**01 12 28.8**	**-1.0**
PCIG				*e*S		**Sn**	**01 13 28.4**	**-3.5**
TGIG		**5.52**	**82**			**Pn**	**01 12 32.3**	**+0.9**
TGIG						**Sn**	**01 13 36.2**	**+1.4**
TGIG		**5.52**	**82**	*e*P		**Pn**	**01 12 32.3**	**+0.9**
TGIG				*e*S		**Sn**	**01 13 36.2**	**+1.4**
PETF	**Flores**	**8.64**	**83**	Pn		**Pn**	**01 13 13.4**	**-0.8**
H06E1	**SOCORRO T-PHASE**	**1.86**	**285**	T		T	01 26 06.0	
	SNR=26							
TXAR	**Lajitas Array**	**13.93**	**342**	Pn		**Pn**	**01 14 29.5**	**+2.9**
	baz=162,slow=18,SNR=3.8							
TXAR					Lg	Lg	01 18 30.0	
	baz=163,slow=35							
	0.3nm,0.8s							
WHTX	**Lake Whitney,**	**15.90**	**4**	Pn		**Pn**	**01 14 51.1**	**-1.8**
MNTX	**Cornudas Mount**	**16.67**	**340**	Pn		**Pn**	**01 15 01.1**	**-1.6**
GDL2	**Guadalupe Moun**	**16.83**	**344**	Pn		**Pn**	**01 15 03.4**	**-1.5**
MSTX	**Muleshoe**	**18.18**	**349**			**Pn**	**01 15 19.5**	**-2.1**
Z47A	**Carrollton**	**19.64**	**28**	P		**P**	**01 15 36.4**	**-1.4**
Z47A				IAmb		IAmb	01 15 40.8	
	comp=Z,6.7nm,0.9s							
OK029	**Liberty Lake**	**19.69**	**3**	P		**P**	**01 15 34.6**	**-3.7**
352A	**Blakely**	**19.90**	**37**	P		**P**	**01 15 37.9**	**-2.7**
352A				IAmb		IAmb	01 15 42.7	
	comp=Z,12nm,1.2s							
OK034	**N. Norfolk Rd.**	**19.95**	**5**	P		**P**	**01 15 40.1**	**-1.0**
OK034				IAmb		IAmb	01 16 22.2	
	comp=Z,6.5nm,1.0s							
ANMO	**Albuquerque**	**20.00**	**341**	P		**P**	**01 15 44.4**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=153,slow=9.7,SNR=2.6							
	comp=Z,0.5nm,0.3s							
PLAL	**Pickwick Lake**	**21.16**	**25**	P		**P**	**01 15 52.6**	**-1.7**
PLAL				IAmb		IAmb	01 15 59.4	
	comp=Z,3.5nm,0.8s							
X16A	**Lo Mia Camp, P**	**21.50**	**330**	IAmb		IAmb	01 16 07.1	
	comp=Z,4.2nm,0.9s							
WVT	**Waverly**	**22.25**	**24**	P		**P**	**01 16 05.4**	**-0.7**
WVT				IAmb		IAmb	01 16 09.1	
	comp=Z,6.0nm,1.0s							
WUAZ	**Wupatki**	**22.38**	**332**	P		**P**	**01 16 06.6**	**-1.0**
WUAZ				IAmb		IAmb	01 16 14.1	
	comp=Z,7.1nm,1.0s							
MVCO	**Mesa Verde**	**22.73**	**340**	P		**P**	**01 16 11.8**	**+0.4**
S44A	**Carbondale**	**23.14**	**20**	P		**P**	**01 16 15.3**	**-0.1**
CPCT	**Cooper Cave**	**23.16**	**31**	P		**P**	**01 16 15.5**	**-0.1**
CPCT				IAmb		IAmb	01 16 17.4	
	comp=Z,5.4nm,1.0s							
SRU	**San Rafael Swe**	**25.14**	**338**	P		**P**	**01 16 35.3**	**+0.9**
SRU				IAmb		IAmb	01 16 46.1	
	comp=Z,2.8nm,0.8s							
NVAR	**Mina Array Bea**	**28.09**	**326**	P		**P**	**01 17 04.9**	**+3.8**
	comp=Z,0.5nm,0.8s,baz=156,slow=11,SNR=4.8							
	comp=Z,0.5nm,0.8s							
PDAR	**Pinedale Array**	**28.15**	**343**	P		**P**	**01 17 04.2**	**+2.7**
	comp=Z,1.0nm,0.9s,baz=142,slow=8.9,SNR=6.8							
	comp=Z,1.0nm,0.9s							
PDAR	**Pinedale Array**	**28.15**	**343**	P		**P**	**01 17 01.6**	**+0.1**
SCHQ	**Schefferville**	**45.88**	**25**	P		**P**	**01 19 31.6**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=228,slow=15,SNR=2.0							
	comp=Z,3.3nm,0.9s							
H03N2	**Juan Fernandez**	**52.77**	**159**	T		T	02 17 18.5	
	baz=337,slow=77,SNR=102							
H03N1	**Juan Fernandez**	**52.78**	**159**	T		T	02 17 19.7	
	baz=337,slow=77,SNR=77							
H03N3	**Juan Fernandez**	**52.78**	**159**	T		T	02 17 18.7	
	baz=337,slow=77,SNR=114							
ILAR	**Eielson Array**	**58.40**	**338**	P		**P**	**01 21 07.0**	**+2.6**
	comp=Z,1.0nm,1.0s,baz=158,slow=4.9,SNR=8.6							
	comp=Z,1.0nm,1.0s							

BUC 21 01:12:20.8±0.4, **45.°02N×22.°99E**, **h6**km±2km, **ml1.1**/3, **12C-14D**, **Error ellipse: s-maj=2.7km s-min=1.6km az=149.0**, **Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GZR	**Gura Zlata**	**0.40**	**338**	⇓	P		Pg	01 12 28.9	+0.3
GZR				⇓	S		Sg	01 12 34.6	+0.7
GZR	**Gura Zlata**	**0.40**	**338**	⇓	P		Pg	01 12 28.9	+0.3
GZR				⇓	S		Sg	01 12 34.6	+0.7
HERR	**Herculane**	**0.43**	**251**	⇑	P		Pg	01 12 29.2	+0.1
HERR				⇑	S		Sg	01 12 35.3	+0.5
HERR	**Herculane**	**0.43**	**251**	⇑	P		Pg	01 12 29.2	+0.1
HERR				⇑	S		Sg	01 12 35.3	+0.5
LOT	**Lotru**	**0.70**	**52**	⇓	P		Pg	01 12 34.5	+0.3
LOT				⇓	S		Sg	01 12 43.4	+0.1
LOT	**Lotru**	**0.70**	**52**	⇓	P		Pg	01 12 34.5	+0.3
LOT				⇓	S		Sg	01 12 43.4	+0.1
DEV	**Deva**	**0.86**	**356**	⇑	P		Pb	01 12 37.9	-0.3
DEV				⇓	S		Sb	01 12 49.6	-0.4
DEV	**Deva**	**0.86**	**356**	⇑	P		Pb	01 12 37.9	-0.3
DEV				⇓	S		Sb	01 12 49.6	-0.4
BZS	**Buzias**	**1.14**	**302**	⇓	P		Pg	01 12 42.2	-0.4
BZS				⇓	S		Sg	01 12 57.3	0.0
BZS	**Buzias**	**1.14**	**302**	⇓	P		Pg	01 12 42.2	-0.4
BZS				⇓	S		Sg	01 12 57.3	0.0
SIRR	**Siria**	**1.56**	**324**	⇓	P		Pn	01 12 49.0	0.0
SIRR				⇑	S		Sb	01 13 09.9	-0.1
SIRR	**Siria**	**1.56**	**324**	⇓	P		Pn	01 12 49.0	0.0
SIRR				⇑	S		Sb	01 13 09.9	-0.1
DRGR		**1.78**	**354**	⇓	S		Sb	01 13 16.7	+0.2
DRGR		**1.78**	**354**	⇓	S		Sb	01 13 16.7	+0.2

*IDC **21** 01:15:05.0±23.0, 40.°42N×143.°82E, h0km, mb3.4/2, mbtmp3.3/3, ML2.0/1, Error ellipse: s-maj=433.9km s-min=50.9km az=106.0*
*JMA **21** 01:15:07.7±0.3, 40.°4N±0.°6×14.°4E±°, h12km±3km, MV3.1/32, FAR E OFF SANRIKU*
ISC 21 01:15:05.1±3.8, **40.°40N**±0.°05×**143.°60E**±0.°08, **h1**km±24km, **n24**, σ1**87**/29, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.41**	**252**	P			**Pn**	**01 15 32.4**	**+0.5**
JTH				*e*S			**Sb**	**01 15 49.8**	**-0.9**

JKEN	**Kujiedanarisaw**	**1.46**	**263**	*e*P		**Pn**	**01 15 32.9**	**+0.3**
JANG	**Nango**	**1.59**	**270**	*e*P		**Pn**	**01 15 35.0**	**+0.5**
JANG				*e*S		**Sn**	**01 15 54.7**	**-1.1**
MIYJ	**Miyakonagasawa**	**1.59**	**240**	*e*P		**Pn**	**01 15 35.4**	**+0.9**
MIYJ				*e*S		**Sn**	**01 15 55.3**	**-0.5**
JEM	**Erimo**	**1.65**	**348**	*e*S		**Sn**	**01 15 57.2**	**0.0**
JTM	**Tenmabayashi**	**1.97**	**282**	*e*S		**Sb**	**01 16 05.1**	**-1.7**
JNBK	**Urakawa-nobuka**	**1.99**	**342**	*e*P		**Pn**	**01 15 41.8**	**+1.9**
JNBK				*e*S		**Sn**	**01 16 06.0**	**+0.6**
JOM	**Ohasama**	**2.00**	**243**	P		**Pn**	**01 15 41.9**	**+1.8**
JOM				*e*S		**Sn**	**01 16 06.0**	**+0.3**
JOT	**Ohata**	**2.17**	**298**	*e*P		**Pb**	**01 15 45.0**	**-0.2**
JCH	**Churui**	**2.22**	**355**	*e*P		**Pn**	**01 15 44.1**	**+1.0**
JCH				*e*S		**Sn**	**01 16 10.1**	**-1.2**
JMK	**Ichinoseki**	**2.34**	**233**	P		**Pn**	**01 15 46.1**	**+1.5**
JMK				*e*S		**Sn**	**01 16 14.1**	**+0.1**
JAK	**Akkeshi**	**2.72**	**17**	P		**Pn**	**01 15 51.2**	**+1.1**
JAK				*e*S		**Sn**	**01 16 21.5**	**-2.1**
JAR	**Ashorobuto**	**2.90**	**2**	*e*P		**Pn**	**01 15 53.9**	**+1.4**
JAR				*e*S		**Sn**	**01 16 25.3**	**-2.7**
JYK	**Kaneyama**	**2.91**	**240**	*e*P		**Pn**	**01 15 55.2**	**+2.6**
JYK				*e*S		**Sn**	**01 16 29.6**	**+1.5**
JEW	**Eniwo**	**2.93**	**327**	*e*S		**Sn**	**01 16 30.6**	**+1.9**
MJAR	**Matsushiro Arr**	**5.72**	**229**	Pn		**Pn**	**01 16 33.1**	**+1.8**
	baz=46,slow=11,SNR=4.8							
MJAR					Sn	**Sb**	**01 17 48.7**	**-6.1**
	baz=45,slow=15							
	1.1nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.67**	**129**	T		T	01 51 03.3	
	baz=321,slow=75,SNR=6.1							
H11N1	**WAKE ISLAND Hy**	**28.68**	**129**	T		T	01 51 00.4	
	baz=321,slow=75,SNR=5.0							
H11N3	**WAKE ISLAND Hy**	**28.68**	**129**	T		T	01 51 01.2	
	baz=321,slow=75,SNR=7.1							
H11S1	**WAKE ISLAND Hy**	**29.51**	**131**	T		T	01 52 05.4	
	baz=323,slow=76,SNR=5.2							
H11S3	**WAKE ISLAND Hy**	**29.51**	**131**	T		T	01 52 06.8	
	baz=323,slow=76,SNR=3.8							
H11S2	**WAKE ISLAND Hy**	**29.52**	**131**	T		T	01 52 07.2	
	baz=323,slow=76,SNR=3.3							
ZALV	**Zalesovo Beam**	**41.00**	**310**	P		**P**	**01 22 50.2**	**+0.7**
	0.3nm,0.3s,baz=93,slow=5.9,SNR=2.4							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**43.87**	**300**	P		**P**	**01 23 14.1**	**+1.1**
	0.3nm,0.7s,baz=81,slow=7.0,SNR=1.6							
	0.3nm,0.7s							

*IDC **21** 01:27:47.0±1.0, 22.°95S×66.°64W, h229km±13km, mb3.0/2, mbtmp3.8/7, Error ellipse: s-maj=21.3km s-min=16.3km az=128.0*
*VAO **21** 01:27:48.0±0.4, 22.°76S×66.°96W, h271km±4km, mb4.0*
*GUC **21** 01:27:48.7±0.6, 22.°92S×66.°86W, h252km±10km, ML3.7*
ISC 21 01:27:47.5±0.7, **22.°93S**±0.°06×**66.°78W**±0.°08, **h244**km±10km, **n49**, σ1**°04**/60, **7C**, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.99**	**279**	P			**Pn**	**01 28 30.8**	**+1.0**
	147nm,0.4s,baz=138,slow=4.6,SNR=319								
LVC				S			**S**	**01 29 02.2**	**-0.7**
	20nm,0.3s,baz=256,slow=20,SNR=11								
LVC	**Limon Verde**	**1.99**	**279**	*e*P			**Pn**	**01 28 30.6**	**+0.8**
LVC				*e*S			**S**	**01 29 02.4**	**-0.6**
LVC

TRQA	**Tornquist**	**26.85**	**297**	P	**P**	**02 18 19.3**	**-0.9**
TRQA				IAmb	IAmb	02 18 32.8	
	comp=Z,11nm,1.4s						
PLCA	**Paso Flores**	**29.54**	**283**	P	**P**	**02 18 45.7**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=148,slow=8.2,SNR=2.8						
	comp=Z,0.8nm,0.7s						
CPUP	**Villa Florida**	**34.53**	**316**	P	**P**	**02 19 28.4**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=149,slow=7.5,SNR=7.5						
	comp=Z,4.8nm,0.8s						
CPUP	**Villa Florida**	**34.53**	**316**	P	**P**	**02 19 27.3**	**-0.7**
CPUP				IAmb	IAmb	02 19 31.9	
	comp=Z,15nm,1.4s						
QSPA	**South Pole Qui**	**35.06**	**180**	P	**P**	**02 19 32.5**	**+0.1**
	comp=Z,3.2nm,1.1s,baz=238,slow=5.6,SNR=4.7						
	comp=Z,3.2nm,1.1s						
QSPA	**South Pole Qui**	**35.06**	**180**	P	**P**	**02 19 32.9**	**+0.4**
QSPA				IAmb	IAmb	02 19 33.8	
	comp=Z,12nm,1.4s						
VA06	**Catapilco**	**35.93**	**292**	P	**P**	**02 19 40.4**	**+0.4**
CO03	**El Pedregal**	**36.96**	**295**	P	**P**	**02 19 49.0**	**+0.1**
CO03				IAmb	IAmb	02 20 07.9	
	comp=Z,19nm,1.4s						
GO02	**Mina Guanaco**	**41.04**	**301**	P	**P**	**02 20 24.1**	**+0.7**
MAW	**Mawson**	**42.20**	**145**	P	**P**	**02 20 32.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=280,slow=6.1,SNR=2.3						
	comp=Z,0.9nm,0.6s						
LVC	**Limon Verde**	**42.87**	**304**	P	**P**	**02 20 37.8**	**-0.7**
LVC				IAmb	IAmb	02 20 49.6	
	comp=Z,10nm,1.1s						
PB01	**IPOC Station P**	**44.48**	**304**	P	**P**	**02 20 51.3**	**+0.2**
PTLB	**Pontes e Lacer**	**45.10**	**321**	P	**P**	**02 20 56.1**	**+0.2**
PTLB				IAmb	IAmb	02 20 56.9	
	comp=Z,7.1nm,0.8s						
GO01	**Chusmiza**	**45.53**	**306**	P	**P**	**02 20 59.7**	**-0.2**
GO01				IAmb	IAmb	02 21 01.9	
	comp=Z,7.5nm,0.8s						
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**02 21 13.3**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=172,slow=6.3,SNR=4.7						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**47.30**	**184**	P	**P**	**02 21 13.1**	**+0.5**
VILB	**Vilhena**	**47.79**	**320**	P	**P**	**02 21 17.0**	**-0.1**
VILB				IAmb	IAmb	02 21 17.8	
	comp=Z,8.2nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.97**	**22**	T	T	03 13 06.3	
	baz=192						
H10S3	**ASCENSION HYDR**	**47.98**	**22**	T	T	03 13 02.6	
	baz=28						
LPAZ	**La Paz**	**48.00**	**309**	P	**P**	**02 21 20.6**	**+1.1**
	comp=Z,4.5nm,0.6s,baz=120,slow=4.7,SNR=27						
	comp=Z,4.5nm,0.6s						
LPAZ	**La Paz**	**48.00**	**309**	P	**P**	**02 21 20.1**	**+0.7**
BOSA	**Boshof**	**48.08**	**80**	P	**P**	**02 21 17.9**	**-1.4**
	comp=Z,5.5nm,1.1s,baz=234,slow=3.3,SNR=3.0						
	comp=Z,5.5nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.09**	**22**	T	T	03 14 23.4	
	baz=194						
H10N3	**ASCENSION HYDR**	**49.09**	**22**	T	T	03 14 31.8	
	baz=194						
H10N2	**ASCENSION HYDR**	**49.10**	**22**	T	T	03 14 25.2	
	baz=194						
LBTB	**Lobatse**	**51.05**	**78**	P	**P**	**02 21 41.2**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=281,slow=3.4,SNR=1.5						
	comp=Z,1.4nm,0.8s						
LBTB	**Lobatse**	**51.05**	**78**	P	**P**	**02 21 44.1**	**+2.1**
LBTB				IAmb	IAmb	02 22 09.9	
	comp=Z,8.1nm,1.2s						
ETMB	**Extrema**	**52.97**	**315**	P	**P**	**02 21 56.5**	**+0.2**
ETMB				IAmb	IAmb	02 21 59.2	
	comp=Z,4.8nm,1.5s						
MATP	**Matopo**	**56.31**	**77**	P	**P**	**02 22 20.2**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=293,slow=7.7,SNR=2.7						
	comp=Z,1.5nm,0.7s						
TOA0	**Torodi Ar. Sit**	**73.54**	**34**	P	**P**	**02 24 13.8**	**+1.3**
TOA0				IAmb	IAmb	02 24 39.5	
	comp=Z,4.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.54**	**34**	P	**P**	**02 24 11.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=195,slow=6.6,SNR=8.2						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.54**	**34**	P	**P**	**02 24 13.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**88.17**	**154**	P	**P**	**02 25 30.6**	**0.0**
	baz=207,slow=2.3,SNR=1.8						
FINES	**FINESS Array B**	**124.75**	**30**	PKP	**PKPdf**	**02 31 37.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=253,slow=2.3,SNR=8.4						
ARCES	**ARCESS Array B**	**131.04**	**23**	PKP	**PKPdf**	**02 31 49.8**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=216,slow=0.8,SNR=5.7						
KURBB	**Kurchatov Arra**	**139.07**	**66**	PKP	**PKPdf**	**02 32 04.5**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=249,slow=1.8,SNR=1.8						
ZALV	**Zalesovo Beam**	**144.10**	**65**	PKP	**PKPab**	**02 32 12.3**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=218,slow=2.0,SNR=4.7						
ILAR	**Eielson Array**	**147.82**	**313**	PKPbc	**PKPbc**	**02 32 22.6**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=125,slow=1.9,SNR=21						
SONM	**Songino Array**	**153.02**	**88**	PKPbc	**PKPbc**	**02 32 35.6**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=243,slow=3.0,SNR=3.6						

*IDC **21** 02:13:20.0±0.9,29.°32S×61.°08E,h0km,mb3.7/6, mbtmp3.8/7, ML4.4/1, Error ellipse: s-maj=38.7km s-min=23.8km az=31.0*

ISC 21 02:13:22.2±0.9,29.°3S±0.°2×61.°0E±0.°2,h14km,n16, σ1♀00/10,mb3.9/6,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.55**	**307**	Pn	**Pn**	**02 17 13.4**	**-0.8**
	0.1nm,0.3s,baz=120,slow=14,SNR=8.4						
OPO				Sn	Sn	02 20 03.6	-14
	0.1nm,0.3s,baz=138,slow=20,SNR=2.6						
	2.3nm,0.3s						
H08S1	**Diego Carcia H**	**24.09**	**29**	T	T	02 43 20.8	
	baz=204,slow=75,SNR=13						
H08S2	**Diego Garcia H**	**24.10**	**29**	T	T	02 43 20.8	
	baz=204,slow=75,SNR=4.0						
H08S3	**Diego Garcia H**	**24.11**	**29**	T	T	02 43 21.0	
	baz=204,slow=75,SNR=13						
MATP	**Matopo**	**30.74**	**279**	P	**P**	**02 19 37.7**	**+0.4**
	1.2nm,0.9s,baz=62,slow=11,SNR=2.3						
	1.2nm,0.9s						
H01W2	**Cape Leeuwin H**	**44.89**	**111**	T	T	03 09 18.8	
	baz=261,slow=75,SNR=20						
H01W3	**Cape Leeuwin H**	**44.89**	**111**	T	T	03 09 17.3	
	baz=261,slow=75,SNR=22						
H01W1	**Cape Leeuwin H**	**44.91**	**111**	T	T	03 09 15.1	
	baz=261,slow=75,SNR=29						
QSPA	**South Pole Qui**	**60.85**	**180**	P	**P**	**02 23 34.0**	**0.0**
	0.9nm,0.8s,baz=180,slow=4.4,SNR=1.3						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**64.51**	**104**	P	**P**	**02 23 58.8**	**-0.2**
	0.7nm,0.7s,baz=243,slow=6.2,SNR=7.3						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**66.34**	**100**	P	**P**	**02 24 10.7**	**-0.2**
	1.0nm,0.8s,baz=247,slow=5.7,SNR=6.5						
	1.0nm,0.8s						
BRTR	**Keskin Array B**	**73.26**	**338**	P	**P**	**02 24 53.6**	**+0.6**
	0.3nm,0.7s,baz=132,slow=2.1,SNR=2.6						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**78.15**	**15**	P	**P**	**02 25 21.2**	**+0.5**
	0.4nm,0.7s,baz=182,slow=5.0,SNR=2.7						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**146.69**	**356**	PKPbc	**PKPbc**	**02 33 01.5**	**-1.3**
	0.2nm,0.4s,baz=348,slow=3.0,SNR=4.2						
PDAR	**Pinedale Array**	**164.58**	**333**	PKP	**PKPdf**	**02 33 24.5**	**-1.3**
	0.2nm,0.5s,baz=26,slow=4.3,SNR=3.5						
NVAR	**Mina Array Bea**	**170.89**	**357**	PKP	**PKPdf**	**02 33 31.8**	**+1.5**
	0.4nm,0.6s,baz=343,slow=0.9,SNR=3.1						

*IDC **21** 02:13:27.5±0.7,55.°12S×30.°82W,h0km,mb4.0/10, mbtmp4.1/10, Error ellipse: s-maj=23.6km s-min=18.9km az=41.0*

*NEIC **21** 02:13:29.4±1.4,55.°17S±0.°10×31.°0W±0.°2,h10km±1km, mb4.7/27, Error ellipse: s-maj=18.8km s-min=12.5km az=38.0*

ISC 21 02:13:28.9±0.5,55.°14S±0.°09×30.°94W±0.°09,h10km,n50, σ0♀70/45,mb4.6/21,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.33**	**283**	Pn	**Pn**	**02 14 20.5**	**-0.4**
ORCD	**Orcadas**	**9.23**	**227**	Pn	**Pn**	**02 15 41.5**	**-0.3**
SNAA	**Sanae**	**20.46**	**155**	P	**P**	**02 18 05.6**	**-0.7**
	2.5nm,0.9s,baz=281,slow=14,SNR=1.5						
	2.5nm,0.9s						
SNAA	**Sanae**	**20.46**	**155**	P	**P**	**02 18 06.5**	**+0.2**
BELA	**Belgrano 2**	**22.88**	**182**	P	**P**	**02 18 32.2**	**+0.2**
MG05	**Puerto Natales**	**24.75**	**261**	P	**P**	**02 18 48.6**	**-1.6**
GO09	**Cerro Castillo**	**24.82**	**262**	P	**P**	**02 18 51.6**	**+0.6**
TRQA	**Tornquist**	**27.00**	**296**	P	**P**	**02 19 12.3**	**+1.5**
TRQA				IAmb	IAmb	02 19 21.8	
	comp=Z,15nm,1.5s						
PLTB	**Pedras Altas**	**28.33**	**316**	P	**P**	**02 19 23.1**	**+0.4**
PLCA	**Paso Flores**	**29.73**	**282**	P	**P**	**02 19 35.9**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=312,slow=19,SNR=1.4						
	comp=Z,0.7nm,0.7s						
CPUP	**Villa Florida**	**34.63**	**315**	P	**P**	**02 20 18.3**	**+0.2**
	comp=Z,8.4nm,0.6s,baz=148,slow=7.1,SNR=15						
	comp=Z,8.4nm,0.6s						
CPUP	**Villa Florida**	**34.63**	**315**	P	**P**	**02 20 17.6**	**-0.5**
CPUP				IAmb	IAmb	02 20 19.1	
	comp=Z,8.3nm,0.7s						
QSPA	**South Pole Qui**	**35.12**	**180**	P	**P**	**02 20 22.8**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=197,slow=6.1,SNR=3.6						
	comp=Z,2.2nm,0.8s						
QSPA	**South Pole Qui**	**35.12**	**180**	P	**P**	**02 20 22.5**	**+0.4**
ZON	**Zonda**	**35.52**	**296**	P	**P**	**02 20 24.8**	**-1.0**
ZON				IAmb	IAmb	02 20 42.0	
	comp=Z,14nm,1.3s						
VA06	**Catapilco**	**36.09**	**292**	P	**P**	**02 20 30.6**	**0.0**
CO02	**Combarbal**	**37.00**	**294**	P	**P**	**02 20 38.8**	**+0.2**
CO03	**El Pedregal**	**37.12**	**294**	P	**P**	**02 20 39.3**	**-0.3**
CO03				IAmb	IAmb	02 20 39.8	
	comp=Z,28nm,1.4s						
CO01	**Juntas del Tor**	**37.50**	**296**	P	**P**	**02 20 42.7**	**-0.2**
AQDB	**Aquidauana**	**39.32**	**322**	P	**P**	**02 20 57.4**	**-0.6**
AQDB				IAmb	IAmb	02 21 01.6	
	comp=Z,14nm,1.4s						
GO02	**Mina Guanaco**	**41.18**	**301**	P	**P**	**02 21 14.1**	**+0.3**
GO02				IAmb	IAmb	02 21 33.2	
	comp=Z,35nm,1.2s						
LVC	**Limon Verde**	**43.01**	**304**	P	**P**	**02 21 29.3**	**+0.5**
LVC				IAmb	IAmb	02 21 37.2	
	comp=Z,9.1nm,1.2s						
PB01	**IPOC Station P**	**44.62**	**304**	P	**P**	**02 21 41.4**	**0.0**
PB01				IAmb	IAmb	02 21 44.5	
	comp=Z,14nm,1.1s						
PTLB	**Pontes e Lacer**	**45.19**	**320**	P	**P**	**02 21 45.8**	**0.0**
PTLB				IAmb	IAmb	02 21 47.0	
	comp=Z,8.2nm,0.7s						
GO01	**Chusmiza**	**45.66**	**305**	P	**P**	**02 21 50.2**	**+0.1**
GO01				IAmb	IAmb	02 21 52.1	
	comp=Z,8.9nm,0.8s						
PB16	**IPOC Station P**	**46.96**	**306**	P	**P**	**02 22 00.2**	**-0.3**
PB16				IAmb	IAmb	02 22 02.9	
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	**47.37**	**184**	P	**P**	**02 22 03.0**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=195,slow=5.3,SNR=6.6						
	comp=Z,1.2nm,0.8s						
VNDA	**Vanda**	**47.37**	**184**	P	**P**	**02 22 02.2**	**-0.1**
H10S2	**ASCENSION HYDR**	**47.84**	**22**	T	T	03 13 55.6	
	baz=192						
H10S3	**ASCENSION HYDR**	**47.84**	**22**	T	T	03 13 55.1	
	baz=28						
BOSA	**Boshof**	**47.86**	**80**	P	**P**	**02 22 06.2**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=228,slow=13,SNR=1.7						
	comp=Z,1.1nm,0.6s						
VILB	**Vilhena**	**47.88**	**320**	P	**P**	**02 22 05.8**	**-1.2**
VILB				IAmb	IAmb	02 22 07.4	
	comp=Z,15nm,1.2s						
LPAZ	**La Paz**	**48.12**	**309**	P	**P**	**02 22 10.7**	**+1.1**
	comp=Z,3.7nm,0.5s,baz=116,slow=5.1,SNR=11						
	comp=Z,3.7nm,0.5s						
LPAZ	**La Paz**	**48.12**	**309**	P	**P**	**02 22 10.1**	**+0.5**
LPAZ				IAmb	IAmb	02 22 13.1	
	comp=Z,5.5nm,0.8s						
H10N1	**ASCENSION HYDR**	**48.96**	**22**	T	T	03 15 17.5	
	baz=192,slow=75,SNR=9.7						
H10N3	**ASCENSION HYDR**	**48.96**	**22**	T	T	03 15 15.2	
	baz=192,slow=75,SNR=16						
H10N2	**ASCENSION HYDR**	**48.97**	**22**	T	T	03 15 17.4	
	baz=192,slow=75,SNR=13						
TSUM	**Tsumeb**	**51.17**	**65**	P	**P**	**02 22 33.3**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=180,slow=11,SNR=2.0						
	comp=Z,1.1nm,0.5s						
ETMB	**Extrema**	**53.08**	**315**	P	**P**	**02 22 45.1**	**-1.2**
ETMB				IAmb	IAmb	02 22 53.5	
	comp=Z,4.6nm,1.3s						
MATP	**Matopo**	**56.09**	**77**	P	**P**	**02 23 07.9**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=236,slow=9.7,SNR=2.2						
	comp=Z,1.5nm,0.7s						
TOA0	**Torodi Ar. Sit**	**73.38**	**33**	P	**P**	**02 25 02.0**	**+1.2**
TOA0				IAmb	IAmb	02 25 03.8	
	comp=Z,7.4nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P	**P**	**02 25 00.8**	**0.0**
	comp=Z,1.1nm,0.9s,baz=205,slow=5.6,SNR=2.3						
	comp=Z,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.38**	**33**	P	**P**	**02 25 00.8**	**0.0**
TORD				IAmb	IAmb	02 25 25.4	
	comp=Z,5.1nm,1.4s						
FINES	**FINESS Array B**	**124.60**	**29**	PKP	**PKPdf**	**02 32 26.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=208,slow=3.7,SNR=4.5						
CMAR	**Chiang Mai Arr**	**127.38**	**114**	PKP	**PKPdf**	**02 32 33.2**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=211,slow=1.6,SNR=1.3						
ARCES	**ARCESS Array B**	**130.90**	**23**	PKP	**PKPdf**	**02 32 38.0**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=130,slow=1.9,SNR=5.0						
YKA	**Yellowknife Ar**	**134.08**	**320**	PKP	**PKPdf**	**02 32 44.2**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=125,slow=2.8,SNR=4.7						
MKAR	**Makanchi Array**	**138.63**	**73**	PKP	**PKPdf**	**02 32 54.6**	**+0.7**
	comp=Z,1.4nm,1.1s,baz=211,slow=1.7,SNR=2.9						
ILAR	**Eielson Array**	**147.93**	**313**	PKPbc	**PKPbc**	**02 33 12.3**	**-0.5**
	comp=Z,7.3nm,1.0s,baz=124,slow=1.7,SNR=8.3						
SONM	**Songino Array**	**152.81**	**88**	PKPbc	**PKPbc**	**02 33 24.3**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=271,slow=2.7,SNR=7.0						

*IDC **21** 02:30:47.7±1.2,14.°72S×167.°25E,h80km±9km,mb4.8/24, mbtmp5.1/26,MS4.1/42, Error ellipse: s-maj=12.7km s-min=11.1km az=84.0*

*MOS **21** 02:30:48.1±1.1,14.°73S×167.°21E,h95km,mb5.3/39, MS6.0/6, Error ellipse: s-maj=8.1km s-min=6.4km az=120.0*

*NEIC **21** 02:30:49.8±1.7,14.°79S±0.°08×167.°21E±0.°08,h91km±4km, mb5.1/279, Error ellipse: s-maj=11.2km s-min=10.6km az=199.0*

*GCMT **21** 02:30:49.8±0.1,14.°80S±0.°01×167.°11E±0.°01,h100km, MW5.3/149, Moment Tensor Solution. s126,c210; s149,c246; Duration: 1♯1 Moment tensor: Scale 10^17 Nm; Mrr0.66±.02; Mθθ-0.79±.02; Mϕϕ0.12±.02; Mrθ0.73±.01; Mrϕ-0.59±.02; Mθϕ-0.33±.01; Best double couple: Mo1.23600×10^17 NP1:ϕ96.00000°,δ69.00000°, λ125.00000°. NP2:ϕ212.00000°,δ40.00000°,λ33.00000°. Principal axes: T 1.2370, Plg52.0000°, Azm47.0000°; N -0.0040, Plg33.0000°, Azm261.0000°; P -1.2340, Plg17.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **21** 02:30:50.2,14.°77S×167.°09E,h82km,mb5.4/97, Vanuatu Islands*

*BJI **21** 02:30:51.0±0.0,14.°21S×167.°01E,h97km,mb5.1/66, mB5.0/39*

ISC 21 02:30:49.6±0.3,14.°81S±0.°03×167.°23E±0.°04,h98km±2km, h98km:pP-P,n943,σ1♀47/891,mb5.2/243,54C-20D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.04**	**163**	P	**Pn**	**02 31 38.7**	**+2.8**
RTV	**Rentapao**	**3.18**	**159**	P	**Pn**	**02 31 39.6**	**+1.9**
KOUNC	**Koumac, New Ca**	**6.36**	**206**	Pn	**Pn**	**02 32 21.2**	**+0.4**
KOUNC	**Koumac, New Ca**	**6.36**	**206**	P	**Pn**	**02 32 21.7**	**+0.9**
MARNC	**Mare, Loyalty**	**6.67**	**174**	Pn	**Pn**	**02 32 24.5**	**-0.6**
MARNC	**Mare, Loyalty**	**6.67**	**174**	P	**Pn**	**02 32 24.2**	**-0.9**
YATNC	**Mamie plateau,**	**7.21**	**183**	P	**Pn**	**02 32 31.7**	**-0.8**
DZM	**Mont Dzumac**	**7.26**	**186**	P	**Pn**	**02 32 33.0**	**-0.2**
	240nm,0.4s,baz=24,slow=5.6,SNR=1375						
DZM				S	**Sn**	**02 33 50.8**	**-3.2**
	201nm,0.7s,baz=294,slow=23,SNR=2.0						
DZM	**Mont Dzumac**	**7.26**	**186**	*e*Pn	**Pn**	**02 32 32.0**	**-1.1**
	1μm,0.8s						
DZM				*e*Sn	**Sn**	**02 33 52.0**	**-2.0**
	3μm,1.4s						
DZM				*e*LR	LR	02 34 12.7	
	comp=Z,9μm,27.6s						
DZM	**Mont Dzumac**	**7.26**	**186**	Pn	**Pn**	**02 32 33.2**	**+0.1**
DZM	**Mont Dzumac**	**7.26**	**186**	P	**Pn**	**02 32 34.0**	**+0.9**
NOUC	**Port Laguerre**	**7.30**	**187**	P	**Pn**	**02 32 34.8**	**+1.1**
ONTNC	**Ouen Toro**	**7.49**	**186**	Pn	**Pn**	**02 32 36.8**	**+0.6**
ONTNC	**Ouen Toro**	**7.49**	**186**	P	**Pn**	**02 32 37.4**	**+1.2**
OUENC	**Ouen Island, N**	**7.57**	**183**	Pn	**Pn**	**02 32 38.1**	**+0.7**
OUENC	**Ouen Island, N**	**7.57**	**183**	P	**Pn**	**02 32 38.7**	**+1.4**
PINNC	**Pines Island,**	**7.76**	**179**	Pn	**Pn**	**02 32 40.3**	**+0.5**
PINNC	**Pines Island,**	**7.76**	**179**	P	**Pn**	**02 32 41.3**	**+1.4**
HNR	**Honiara**	**8.91**	**306**	P	**Pn**	**02 32 54.7**	**-0.9**
	686nm,0.6s,baz=210,slow=6.8,SNR=11						
HNR				S	**Sn**	**02 34 31.4**	**-2.8**
	413nm,0.5s,baz=131,slow=19,SNR=1.8						
HNR				LR	LR	02 36 12.3	
	comp=Z,2μm,21.4s,baz=136,slow=37						
HNR	**Honiara**	**8.91**	**306**		**Pn**	**02 32 55.4**	**-0.2**
HNR	**Honiara**	**8.91**	**306**	P	**Pn**	**02 32 55.4**	**-0.2**
HNR	**Honiara**	**8.91**	**306**	P	**Pn**	**02 32 54.6**	**-0.9**
MSVF	**Nonsavu**	**10.79**	**107**	P	**Pn**	**02 33 24.2**	**+3.0**
	13nm,0.9s,baz=280,slow=8.1,SNR=4.1						
MSVF				LR	LR	02 36 55.6	
	comp=Z,2μm,18.4s,baz=293,slow=34						
MSVF	**Nonsavu**	**10.79**	**107**	Pn	**Pn**	**02 33 24.3**	**+3.2**
MSVF	**Nonsavu**	**10.79**	**107**	*i* P	**Pn**	**02 33 20.7**	**-0.5**
MSVF	**Nonsavu**	**10.79**	**107**	P	Pn	02 33 26.2	+5.0
TAVE	**Taveuni**	**12.52**	**100**	P	**P**	**02 33 48.7**	**-3.4**
FUNA	**Funafuti**	**13.28**	**63**	Pn	**Pn**	**02 33 54.5**	**+0.1**
LKBA	**Tubou, Lakemba**	**13.80**	**106**	P	**P**	**02 34 05.2**	**-1.1**
NFK	**Norfolk Island**	**14.18**	**177**	P	**Pn**	**02 34 08.0**	**+2.0**
	baz=14,SNR=7.5						
NFK	**Norfolk Island**	**14.18**	**177**	P	**P**	**02 34 09.2**	**-1.2**
TARA	**Tarawa**	**17.02**	**20**		**Pn**	**02 34 40.8**	**-1.0**
TARA	**Tarawa**	**17.02**	**20**	P	**P**	**02 34 45.6**	**+3.6**
	189nm,1.1s						
RABL	**Rabaul**	**18.21**	**304**	P	**Pn**	**02 34 55.9**	**-0.3**
RABL				IAmb	IAmb	02 35 15.5	
	comp=Z,98nm,0.5s						
LHI	**Lord Howe Isla**	**18.23**	**203**	P	**Pn**	**02 34 55.9**	**-0.3**
KRVT	**Keravat (AS076**	**18.25**	**303**	LR	LR	02 42 40.6	
	comp=Z,342nm,18.8s,baz=264,slow=39						
EIDS	**Eidsvold**	**18.43**	**233**	P	**Pn**	**02 34 59.3**	**+0.6**
	baz=18,SNR=50						
EIDS	**Eidsvold**	**18.43**	**233**	P	**Pn**	**02 34 58.4**	**-0.3**
EIDS				IAmb	IAmb	02 35 01.1	
	comp=Z,88nm,0.7s						
EIDS	**Eidsvold**	**18.43**	**233**	P	**Pn**	**02 35 00.1**	**+1.4**
AFI	**Afiamalu**	**20.36**	**90**	P	**P**	**02 35 17.6**	**-1.0**
	comp=Z,101nm,1.3s,baz=284,slow=12,SNR=5.5						
AFI				LR	LR	02 42 25.8	
	comp=Z,262nm,18.5s,baz=242,slow=34						
	comp=Z,101nm,1.3s						
AFI	**Afiamalu**	**20.36**	**90**	P	**P**	**02 35 17.6**	**-1.0**
AFI				IAmb	IAmb	02 35 25.1	
	comp=Z,102nm,1.1s						
AFI	**Afiamalu**	**20.36**	**90**	P	Pn	02 35 23.1	+1.6
CTA	**Charters Tower**	**20.68**	**252**	P	**P**	**02 35 22.8**	**+0.8**
	comp=Z,26nm,0.7s,baz=87,slow=9.6,SNR=27						
CTA				LR	LR	02 42 22.4	
	comp=Z,372nm,19.5s,baz=78,slow=34						
	comp=Z,26nm,0.7s						
CTA	**Charters Tower**	**20.68**	**252**	P	Pn	02 35 24.0	-1.2
CTAO	**Charters Tower**	**20.68**	**252**	P	**P**	**02 35 22.5**	**+0.5**
CTAO	**Charters Tower**	**20.68**	**252**	P	**P**	**02 35 22.5**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**20.68**	**252**	P	**P**	**02 35 23.1**	**+1.1**
RMQ	**Roma**	**20.80**	**233**	P	**P**	**02 35 24.2**	**+1.1**
	baz=21,SNR=20						
RMQ	**Roma**	**20.80**	**233**	P	Pn	02 35 25.5	-1.0
OUZ	**Omahuta**	**21.11**	**165**	P	**P**	**02 35 27.2**	**+0.8**
ARMA	**Armidale**	**21.14**	**220**	P	**P**	**02 35 28.8**	**+1.9**
	baz=21,SNR=23						
ARMA	**Armidale**	**21.14**	**220**	P	**P**	**02 35 27.5**	**+0.6**
ARMA				IAmb	IAmb	02 35 30.3	
	comp=Z,181nm,1.2s						
ARMA	**Armidale**	**21.14**	**220**	P	**P**	**02 35 29.3**	**+2.4**
MTSU	**Mount Surprise**	**22.22**	**258**	P	**P**	**02 35 39.5**	**+1.1**
	baz=22,SNR=25						
MTSU	**Mount Surprise**	**22.22**	**258**	P	**P**	**02 35 40.1**	**+1.7**
NIUE	**Niue**	**22.25**	**104**	P	**P**	**02 35 40.5**	**+1.8**
NTLH	**Newcastle Hard**	**22.88**	**215**	P	**P**	**02 35 47.0**	**+2.0**
	comp=Z,189nm,1.0s						
PATS	**Pohnpei**	**23.26**	**337**	P	**P**	**02 35 48.9**	**+0.2**
	baz=23,SNR=13						
PATS	**Pohnpei**	**23.26**	**337**	P	**P**	**02 35 48.5**	**-0.2**
PATS	**Pohnpei**	**23.26**	**337**	P	**P**	**02 35 50.1**	**+1.4**
COEN	**Coen**	**23.32**	**269**	P	**P**	**02 35 49.6**	**+0.3**
MGCD	**Mangrove Creek**	**23.44**	**216**	P	**P**

ARPS	Mount Arapiles	31.46	221	P		P	02 37 03.7	+1.8
WR0	Warramunga Arr	31.58	256	P		P	02 37 02.4	-0.9
HTT	Hallett	31.64	229	P		P	02 37 04.8	+1.2
	baz=32,SNR=18							
HTT	Hallett	31.64	229	P		P	02 37 04.8	+1.2
WRAB	Tennant Creek	31.76	256	P		P	02 37 03.3	-1.4
WRAB	Tennant Creek	31.76	256	*i* P		P	02 37 01.3	-3.5
WRAB					pmax	pmax		
	comp=Z,27nm,2.0s							
WRAB	Tennant Creek	31.76	256	P		P	02 37 05.6	+0.8
WRAB	Tennant Creek	31.76	256	P		P	02 37 02.7	-2.1
WRAB				pP		pP	02 37 26.1	-0.4
WRAB				sP		sP	02 37 38.0	+0.3
WRA	Warramunga Arr	31.77	256	P		P	02 37 03.9	-1.0
	comp=Z,5.4nm,0.7s,baz=84,slow=9.1,SNR=82							
WRA				pP		pP	02 37 24.1	-2.5
	comp=Z,14nm,1.1s,baz=82,slow=7.2,SNR=8.2							
WRA				PcP		PcP	02 39 54.0	-0.2
	comp=Z,8.3nm,1.0s,baz=81,slow=3.3,SNR=7.5							
WRA				ScP		ScP	02 43 30.6	+1.9
	comp=Z,4.0nm,1.0s,baz=86,slow=3.6,SNR=8.1							
WRA				PKiKP		PKiKP	02 47 21.5	-1.4
	comp=Z,0.3nm,0.4s,baz=5.5,slow=2.5,SNR=14							
	comp=Z,5.4nm,0.7s							
WRA	Warramunga Arr	31.77	256	P		P	02 37 03.6	-1.3
RAR	Rarotonga	31.97	106	LR		LR	02 47 17.4	
	comp=Z,313nm,21.9s,baz=276,slow=31							
OOD	Oodnadatta	32.00	241	P		P	02 37 08.1	+1.4
WHYH	Whyalla	32.45	231	P		P	02 37 11.8	+1.2
	comp=Z,75nm,0.7s							
MOO	Moorlands	32.50	208	P		P	02 37 12.7	+1.7
	baz=33,SNR=4.7							
MOO	Moorlands	32.50	208	P		P	02 37 12.4	+1.4
AS31	Alice Springs	32.61	249	P		P	02 37 11.6	-0.7
ASAR	Alice Springs	32.61	249	P		P	02 37 11.3	-0.9
	comp=Z,8.5nm,0.5s,baz=77,slow=9.2,SNR=223							
ASAR				pP		pP	02 37 32.4	-2.2
	comp=Z,16nm,0.8s,baz=73,slow=9.7,SNR=7.0							
ASAR				PcP		PcP	02 39 55.5	-1.0
	comp=Z,4.9nm,0.8s,baz=80,slow=4.3,SNR=6.2							
ASAR				ScP		ScP	02 43 33.2	+1.6
	comp=Z,17nm,1.0s,baz=89,slow=3.4,SNR=31							
ASAR				PKiKP		PKiKP	02 47 22.2	-1.3
	comp=Z,0.2nm,0.4s,baz=113,slow=1.4,SNR=4.8							
ASAR				LR		LR	02 50 14.4	
	comp=Z,350nm,18.2s,baz=92,slow=36							
	comp=Z,8.5nm,0.5s							
ASAR	Alice Springs	32.61	249	P		P	02 37 11.1	-1.1
TWOA	Tennyson Woods	32.68	227	P		P	02 37 14.2	+1.6
	comp=Z,38nm,1.0s							
TAU	Tasmania Unive	32.81	208	P		P	02 37 14.0	+0.4
TAU	Tasmania Unive	32.81	208	P		P	02 37 14.0	+0.4
TAU				pmax		pmax		
	comp=Z,74nm,1.1s							
BBOO	Buckleboo	33.50	232	P		P	02 37 21.0	+1.2
	baz=34,SNR=39							
BBOO	Buckleboo	33.50	232	P		P	02 37 20.1	+0.2
BBOO	Buckleboo	33.50	232	P		P	02 37 21.0	+1.2
KDU	Kakadu	33.81	269	P		P	02 37 22.4	-0.3
	baz=34,SNR=4.3							
MULG	Mulgathing	34.13	238	P		P	02 37 26.0	+0.7
MTN	Manton Dam	35.09	269	P		P	02 37 32.7	-1.0
	baz=35,SNR=3.2							
GUMO	Guam	35.87	321	LR		LR	02 51 59.9	
	comp=Z,120nm,20.7s,baz=128,slow=36							
KNRA	Kununurra	37.09	264	P		P	02 37 50.2	-0.5
	baz=37,SNR=12							
KNRA	Kununurra	37.09	264	P		P	02 37 50.3	-0.5
KNRA				IAmb		IAmb	02 37 51.1	
	comp=Z,50nm,1.1s							
KNRA	Kununurra	37.09	264	P		P	02 37 51.8	+1.0
WRKA	Warakurna	37.87	248	P		P	02 37 56.8	-0.5
	baz=38,SNR=104							
WRKA	Warakurna	37.87	248	P		P	02 37 57.7	+0.3
SWI	Sorong	38.14	288	P		P	02 38 00.2	+0.5
	comp=Z,44nm,0.8s							
XMAS	Kiritimati	38.77	67	P		P	02 38 06.0	+1.0
FORT	Forrest	39.22	239	P		P	02 38 09.0	+0.5
	baz=39,SNR=45							
FORT	Forrest	39.22	239	P		P	02 38 08.2	-0.3
FORT	Forrest	39.22	239	P		P	02 38 09.9	+1.4
FITZ	Fitzroy Crossi	39.96	259	LR		LR	02 53 58.4	
	comp=Z,402nm,21.1s,baz=85,slow=35							
FITZ	Fitzroy Crossi	39.96	259	P		P	02 38 14.6	-0.2
	baz=40,SNR=24							
FITZ	Fitzroy Crossi	39.96	259	P		P	02 38 14.7	-0.2
FITZ	Fitzroy Crossi	39.96	259	P		P	02 38 15.5	+0.7
NLAI	Namlea	41.19	282	P		P	02 38 26.6	+1.6
	comp=Z,49nm,1.4s							
PAE	Paea	41.50	100	*e*P		P	02 38 27.8	+0.3
	comp=Z,33nm,1.2s							
PPT2	Papeete2	41.51	100	*e*P		P	02 38 28.5	+0.9
	comp=Z,112nm,1.2s							
PPT2	Papeete2	41.51	100	*e*LR		LR	02 50 05.5	
	comp=Z,712nm,29.0s							
PPT	Papeete	41.51	100	P		P	02 38 28.5	+0.9
	comp=Z,73nm,1.0s,baz=344,slow=2.0,SNR=4.8							
PPT				LR		LR	02 52 36.2	
	comp=Z,156nm,19.2s,baz=266,slow=32							
	comp=Z,73nm,1.0s							
PPTF	Pamatai, Papee	41.52	100	P		P	02 38 27.4	-0.3
PPTF	Pamatai, Papee	41.52	100	P		P	02 38 30.4	+2.7
	comp=Z,122nm,1.2s							
PPTF	Pamatai, Papee	41.52	100	P		P	02 38 28.7	+1.0
PPTF				sP		sP	02 39 02.6	+1.8
TBI	Tubuai	41.67	109	*e*S		S	02 44 40.0	+1.5
	comp=Z,83nm,26.8s							
TBI				*e*LR		LR	02 50 09.2	
	comp=Z,610nm,29.8s							
SOEI	Soe	42.23	272	IAmb		IAmb	02 38 38.9	
	comp=Z,38nm,1.0s							
SOEI	Soe	42.23	272	P		P	02 38 35.2	+1.6
SANI	Sanana	42.62	283	P		P	02 38 37.2	+0.5
	comp=Z,720nmcomp=Z,60nm,1.0s							
SANI	Sanana	42.62	283	P		P	02 38 37.5	+0.8
	comp=Z,60nm,1.0s							
BATI	Baumata	42.73	271	P		P	02 38 39.2	+1.6
	comp=Z,55nm,1.2s							
MEH	Mehetia	42.93	100	*e*P		P	02 38 40.3	+1.2
	comp=Z,84nm,1.3s							
PMOR	Pomariorio Ree	43.31	96	*e*P		P	02 38 43.4	+1.3
	comp=Z,357nm,1.2s							
VAH	Vaihoa	43.54	97	*e*P		P	02 38 45.0	+1.0
	comp=Z,170nm,1.2s							
MMRI	Maumere	44.42	273	P		P	02 38 50.6	-0.5
MMRI				IAmb		IAmb	02 38 54.4	
	comp=Z,54nm,0.9s							
MMRI	Maumere	44.42	273	P		P	02 38 51.8	+0.7
	comp=Z,70nm,1.2s							
EDFI	Ende, Flores	44.93	272	P		P	02 38 54.2	-1.1
	comp=Z,26nm,1.0s							
PSA00	Pilbara Seismi	45.38	254	P		P	02 38 58.2	-0.5
MBWA	Marble Bar	45.49	255	P		P	02 38 58.9	-0.6
MBWA				IAmb		IAmb	02 39 02.8	
	comp=Z,26nm,1.0s							
MBWA	Marble Bar	45.49	255	P		P	02 38 59.3	-0.2
MBWA				pP		pP	02 39 21.2	-1.6
MBWA				sP		sP	02 39 33.6	-0.4
LUWI	Luwuk	45.99	283	P		P	02 39 03.9	+0.3
LUWI	Luwuk	45.99	283	P		P	02 39 04.1	+0.6
	comp=Z,7µmcomp=Z,72nm,0.5s							
DAV	Davao City (W)	46.67	295	LR		LR	02 56 52.0	
	comp=Z,125nm,20.7s,baz=162,slow=34							
MEEK	Meekatharra	46.72	247	P		P	02 39 09.6	+0.5
	baz=47,SNR=44							
MEEK	Meekatharra	46.72	247	P		P	02 39 07.8	-1.3
WBSI	Waikabubak, Su	46.97	271	P		P	02 39 11.3	+0.1
	comp=Z,70nm,0.9s							
APSI	Ampana	47.09	283	P		P	02 39 13.0	+0.9
	comp=Z,41nm,0.9s							
BKSI	Bulukumba	47.24	276	P		P	02 39 13.2	-0.1
	comp=Z,15nm,1.0s							
KAPI	Kappang	47.68	277	P		P	02 39 17.1	+0.3
KAPI				IAmb		IAmb	02 39 19.9	
	comp=Z,63nm,1.2s							
KAPI	Kappang	47.68	277	*c i* P		P	02 39 16.3	-0.4
KAPI				pmax		pmax		
	comp=Z,61nm,1.1s							
KAPI	Kappang	47.68	277	P		P	02 39 18.4	+1.7
KAPI	Kappang	47.68	277	P		P	02 39 16.0	-0.7
KAPI				pP		pP	02 39 39.2	-0.4
SPSI	Sidrap Palu	47.95	278	P		P	02 39 17.8	-1.0
	comp=Z,928nmcomp=Z,23nm,1.1s							
KLBR	Kellerberrin	48.03	241	P		P	02 39 19.0	-0.2
	baz=48,SNR=12							
TTSI	Tana Toraja	48.16	279	P		P	02 39 21.1	+0.7
	comp=Z,22nm,1.1s							
TOLI2	Tolitoli	48.60	285	IAmb		IAmb	02 39 27.0	
	comp=Z,23nm,0.9s							
TOLI2	Tolitoli	48.60	285	P		P	02 39 25.0	+1.2
NWAO	Narrogin (SRO)	48.67	239	P		P	02 39 24.2	+0.1
NWAO	Narrogin (SRO)	48.67	239	P		P	02 39 24.2	+0.1
NWAO				pmax		pmax		
	comp=Z,54nm,1.2s							
NWAO	Narrogin (SRO)	48.67	239	P		P	02 39 23.8	-0.3
NWAO				pP		pP	02 39 46.8	-0.8
NWAO				sP		sP	02 39 59.8	+1.2
PLAI	Plampang	48.69	271	P		P	02 39 25.8	+1.3
BLDU	Ballidu	48.79	242	P		P	02 39 24.8	-0.2
	baz=49,SNR=6.8							
MPSI	Mapaga	49.16	284	P		P	02 39 28.5	+0.5
	comp=Z,59nm,0.9s							
MORW	Morawa	49.20	244	P		P	02 39 28.2	0.0
	baz=49,SNR=16							
MORW	Morawa	49.20	244	P		P	02 39 27.7	-0.5
MORW				IAmb		IAmb	02 39 30.9	
	comp=Z,34nm,1.0s							
MORW	Morawa	49.20	244	P		P	02 39 30.0	+1.8
MUN	Mundaring	49.39	240	P		P	02 39 29.9	+0.3
	baz=49,SNR=4.4							
TWSI	Taliwang, Sumb	49.58	271	P		P	02 39 31.8	+0.6
	comp=Z,1µmcomp=Z,82nm,1.1s							
KIP	Kipapa	49.60	44	P		P	02 39 31.6	+0.4
KIP	Kipapa	49.60	44	*ce*P		P	02 39 31.2	0.0
KIP				pmax		pmax		
	comp=Z,332nm,2.5s							
KIP	Kipapa	49.60	44	P		P	02 39 33.3	+2.1
	comp=Z,165nm,1.2s							
KIP	Kipapa	49.60	44	P		P	02 39 32.5	+1.2
HMH	Humu'ula Sheep	50.15	48	P		P	02 39 36.3	+0.5
HPAH	Hawaii Prepara	50.28	47	P		P	02 39 36.7	+0.2
HLK	Haleakala	50.36	46	P		P	02 39 37.4	0.0
TAOE	Nuku Hiva Isla	51.75	90	*e*LR		LR	02 54 49.2	
	comp=Z,740nm,30.9s							
KKM	Kota Kinabalu	54.65	289	P		P	02 40 08.6	-0.4
KKM	Kota Kinabalu	54.65	289	P		P	02 40 10.5	+1.5
	comp=Z,97nm,1.3s							
DRV	Dumont d'Urvil	54.85	193	P		P	02 40 09.5	+0.1
DRV				pP		pP	02 40 33.6	+0.2
DRV				sP		sP	02 40 45.5	+1.1
JOW	Kunigami	56.09	317	P		P	02 40 19.4	+0.5
JOW	Kunigami	56.09	317	P		P	02 40 20.2	+1.3
	comp=Z,90nm,0.9s							
SBUM	Sibu	57.09	283	IAmb		IAmb	02 40 28.4	
	comp=Z,17nm,1.0s							
INU	Inuyama	57.53	331	P		P	02 40 30.5	+1.6
	comp=Z,58nm,1.2s							
INU	Inuyama	57.53	331	P		P	02 40 28.6	-0.3
JMN	Monobe	57.80	327	P		P	02 40 29.9	-1.0
MJAR	Matsushiro Arr	57.96	333	P		P	02 40 29.2	-2.8
	comp=Z,24nm,0.9s,baz=163,slow=8.2,SNR=47							
MJAR				LR		LR	03 03 44.0	
	comp=Z,67nm,21.8s,baz=132,slow=34							
	comp=Z,24nm,0.9s							
MAJO	Matsushiro	57.97	333	P		P	02 40 31.4	-0.5
MAJO	Matsushiro	57.97	333	*i* P		P	02 40 30.1	-1.9
MAJO				pmax		pmax		
	comp=Z,52nm,0.8s							
MAJO	Matsushiro	57.97	333	P		P	02 40 31.5	-0.5
	comp=Z,75nm,1.1s							
MAJO	Matsushiro	57.97	333	P		P	02 40 31.0	-1.0
JMM	Marumori	57.99	335	P		P	02 40 31.8	-0.3
YOJ	Yonaguni jima	58.20	312	P		P	02 40 34.5	+0.7
	comp=Z,86nm,1.0s							
KSM	Kuching	58.59	281	P		P	02 40 36.4	-0.4
KSM	Kuching	58.59	281	P		P	02 40 37.8	+1.0
	comp=Z,38nm,1.3s							
YULB	Yu-li	58.82	309	IAmb		IAmb	02 40 43.8	
	comp=Z,30nm,1.0s							
LEM	Lembang	58.95	271	LR		LR	03 07 40.6	
	comp=Z,114nm,18.1s,baz=172,slow=38							
TPUB	Tau	59.27	309	P		P	02 40 40.1	-1.2
TPUB	Ta-pu	59.27	309	P		P	02 40 40.6	-0.7
	comp=Z,66nm,1.1s							
SSLB	Suanglung	59.31	310	P		P	02 40 41.1	-0.5
	comp=Z,47nm,1.1s							
YHNB	Yeheng	59.51	311	P		P	02 40 43.0	0.0
	comp=Z,135nm,1.0s							
TATO	Taipei	59.61	311	P		P	02 40 42.9	-0.7
KUR	Kuril'sk	62.29	345	*i* P		P	02 41 00.7	-0.6
KUR				pmax		pmax		
	comp=Z,213nm,1.1s							
VNDA	Vanda	62.78	181	P		P	02 41 04.3	+0.2
	comp=Z,5.5nm,0.6s,baz=357,slow=8.4,SNR=90							
VNDA				LR		LR	03 04 17.3	
	comp=Z,91nm,21.3s,baz=358,slow=32							
	comp=Z,5.5nm,0.6s							
VNDA	Vanda	62.78	181	P		P	02 41 04.4	+0.2
VNDA				IAmb		IAmb	02 41 06.5	
	comp=Z,19nm,1.2s							
VNDA	Vanda	62.78	181	P		P	02 41 04.6	+0.5
SBA	Scott Base	63.05	180	P		P	02 41 07.3	+1.3
SBA				IAmb		IAmb	02 41 09.1	
	comp=Z,41nm,1.1s							
SBA	Scott Base	63.05	180	P		P	02 41 07.3	+1.3
SBA				pmax		pmax		
	comp=Z,41nm,1.1s							
SBA	Scott Base	63.05	180	P		P	02 41 07.5	+1.5
TJN	Taejon	63.32	325	*ce*P		P	02 41 08.4	+0.1
TJN	Taejon	63.32	325	P		P	02 41 10.4	+2.1
	comp=Z,122nm,0.9s							
KSRS	Korea Array	63.79	326	P		P	02 41 11.6	+0.2
	comp=Z,12nm,0.9s,baz=140,slow=7.2,SNR=49							
	comp=Z,12nm,0.9s							
KSAR	Wonju Array Be	63.80	326	P		P	02 41 10.9	-0.6
KSAR	Wonju Array Be	63.80	326	P		P	02 41 10.9	-0.6
KS19	Wonju Array Si	63.85	326	IAmb		IAmb	02 41 13.2	
	comp=Z,21nm,0.9s							
DLV	T Lat	63.97	291	P		P	02 41 16.2	+2.9
	comp=Z,38nm,1.3s							
INCN	Inchon	64.52	325	P		P	02 41 16.2	0.0
INCN				IAmb		IAmb	02 41 18.9	
	comp=Z,42nm,1.2s							
INCN	Inchon	64.52	325	P		P	02 41 16.2	0.0
INCN				pmax		pmax		
	comp=Z,42nm,1.3s							
INCN	Inchon	64.52	325	P		P	02 41 18.8	+2.6
	comp=Z,17nm,0.6s							
CCD	Concordia, Ant	64.81	191	P		P	02 41 18.4	+0.3
CCD				pP		pP	02 41 44.4	+1.8
YSS	Yuzh-Sakhalins	65.30	342	P		P	02 41 21.4	+0.4
YSS	Yuzh-Sakhalins	65.30	342	*i* P		P	02 41 21.8	+0.8
YSS				*e*S		S	02 49 58.0	+1.1
YSS				pmax		pmax		
	comp=Z,500nm,3.8s							
YSS				pmax		pmax		
	comp=Z,180nm,1.0s							
YSS				MLR		MLR		
	comp=Z,200nm,1.0s							
YSS				MLR		MLR		
	comp=N,200nm,18.0s							
YSS	Yuzh-Sakhalins	65.30	342	P		P	02 41 22.7	+1.7
	comp=N,199nm,1.2s							
YSS	Yuzh-Sakhalins	65.30	342	P		P	02 41 22.8	+1.7
NJ2	Nanjing	65.71	316	⇓P		P	02 41 24.6	+0.6
NJ2				pmax		pmax		
	comp=N,26nm,0.8s							
TEY	Ternei	65.74	337	*de*P		P	02 41 22.8	-1.1
TEY				pmax		pmax		
	comp=Z,100nm,2.1s							
QIZ	Qiongzhong	65.75	299	P		P	02 41 25.1	+0.6
QIZ				IAmb		IAmb	02 41 26.6	
	comp=Z,32nm,1.1s							
QIZ	Qiongzhong	65.75	299	P		P	02 41 25.9	+1.4
QIZ				S		S	02 50 07.6	+4.1
QIZ				pmax		pmax		
	comp=Z,27nm,0.9s							
QIZ	Qiongzhong	65.75	299	P		P	02 41 26.3	+1.8
	comp=Z,27nm,1.5s							
QIZ	Qiongzhong	65.75	299	P		P	02 41 25.6	+1.1
MSHR	Mys Shultsa	66.04	332	*ce*P		P	02 41 26.5	+0.6
MSHR				pmax		pmax		
	comp=Z,94nm,2.5s							
VLA	Vladivostok	66.13	332	*i* P		P	02 41 25.7	-0.8
VLA				pmax		pmax		
	comp=Z,65nm,1.2s							
USA0B	Ussuriysk Arra	66.94	333	IAmb		IAmb	02 41 34.8	
	comp=Z,53nm,1.4s							
USRK	Ussuriysk Ar.	66.94	333	P		P	02 41 31.7	+0.1
	comp=Z,40nm,1.1s,baz=139,slow=5.4,SNR=47							
	comp=Z,40nm,1.1s							
USRK	Ussuriysk Ar.	66.94	333	P		P	02 41 31.8	+0.2
BKNI	Bangkinang	67.11	277	P		P	02 41 33.9	+0.5
BKNI	Bangkinang	67.11	277	P		P	02 41 36.4	+3.1
	comp=Z,130nm,1.2s							
UGL	Uglegorsk	67.41	342	*e*P		P	02 41 35.8	+1.4
UGL				pmax		pmax		
	comp=Z,100nm,1.0s							
SHEM	Shemya Is, Ala	67.53	5	LR		LR	03 04 32.1	
	comp=Z,355nm,21.7s,baz=144,slow=30							
PET	Petropavlovsk	67.96	354	P		P	02 41 38.4	+0.5
PET	Petropavlovsk	67.96	354	*e*P		P	02 41 38.0	+0.2
PET				*e*S		S	02 50 29.2	+0.4
PET				pmax		pmax		
	comp=Z,140nm,1.2s							
PET				pmax		pmax		
	comp=Z,200nm,15.9s							
PET	Petropavlovsk	67.96	354	P		P	02 41 39.8	+2.0
	comp=Z,466nm,1.2s							
PET	Petropavlovsk	67.96	354	P		P	02 41 38.3	+0.5
WHN	Wuhan	67.97	312	⇑P		P	02 41 37.8	-0.6
WHN				pmax		pmax		
	comp=Z,48nm,0.9s							
PEA0B	Petropavlovsk-	68.14	354	*ce*P		P	02 41 38.4	-0.6
PETK	Petropavlovsk-	68.14	354	P		P	02 41 39.1	+0.1
	comp=Z,73nm,1.0s,baz=148,slow=6.8,SNR=71							
PETK				LR		LR	03 06 58.0	
	comp=Z,122nm,19.8s,baz=154,slow=32							
	comp=Z,73nm,1.0s							
PETK	Petropavlovsk-	68.14	354	P		P	02 41 38.5	-0.5
GULI	GuiLin	68.25	305	⇑P		P	02 41 41.0	+0.8
GULI				S		S	02 50 36.8	+3.4
GULI				pmax		pmax		
	comp=Z,50nm,1.0s							
GULI				LR		LR		
	comp=Z,190nm,19.0s							
GULI				LR		LR		
	comp=Z,140nm,19.5s							
GULI				LR		LR		
	comp=Z,120nm,19.6s							
IPM	Ipoh	68.33	281	P		P	02 41 41.2	+0.2
IPM	Ipoh	68.33	281	P		P	02 41 41.8	+0.8
	comp=Z,56nm,1.3s							
MDJ	Mudanjiang	68.34	332	P		P	02 41 41.0	+0.6
MDJ	Mudanjiang	68.34	332	P		P	02 41 41.6	+1.2
	comp=Z,85nm,1.1s							
MDJ	Mudanjiang	68.34	332	P		P	02 41 41.9	+1.6
TYV	Tymovskoe	68.85	344	*e*P		P	02 41 44.3	+0.9
TYV				*e*S		S	02 50 41.5	+2.0
TYV				pmax		pmax		
	comp=Z,200nm,1.8s							
TYV				pmax		pmax		
	comp=Z,45nm,1.2s							
TYV				smax		smax		
	comp=N,300nm,9.9s							
KULM	Kulim	68.93	282	P		P	02 41 44.5	-0.3
KULM				IAmb		IAmb	02 41 48.0	
	comp=Z,38nm,1.0s							
TIA	Tai'an	69.38	318	⇑P		P	02 41 46.4	-0.6
TIA				pmax		pmax		
	comp=Z,25nm,0.9s							
CN2	Changchun	69.70	329	*e*P		P	02 41 48.8	0.0
CN2				*e*PP		PP	02 44 26.3	+1.9
CN2				*e*S		S	02 50 48.9	-0.9
CN2				*e*sS		sS	02 51 31.8	+1.4
CN2				pmax		pmax		
	comp=Z,30nm,1.2s							
CN2				pmax		pmax		
	comp=Z,180nm,5.0s							
CN2				LR		LR		
	comp=Z,150nm,18.0s							
CN2				LR		LR		
	comp=Z,170nm,18.0s							
CN2				LR		LR		
	comp=Z,250nm,20.0s							
RPSI	Rantau Prapat	69.80	279	IAmb		IAmb	02 41 52.7	
	comp=Z,53nm,1.1s							
PSI	Prapat	69.83	279	P		P	02 41 49.6	-0.9
	comp=Z,30nm,0.9s,baz=170,slow=4.6,SNR=12							
PSI				LR		LR	03 13 28.5	
	comp=Z,59nm,20.8s,baz=128,slow=37							
	comp=Z,30nm,0.9s							
GRNR	Gornyy	70.66	340	⇑*i* P		P	02 41 55.4	+0.9
GRNR				pmax		pmax		
	comp=Z,70nm,1.1s							
GSI	Gunungsitoli	70.71	277	P		P	02 41 55.4	-0.3
GSI	Gunungsitoli	70.71	277	P		P	02 41 55.7	0.0
	comp=Z,86nm,1.0s							
GSI	Gunungsitoli	70.71	277	P		P	02 41 56.7	+1.0
	comp=Z,86nm,1.0s							
KLR	Kul'dur	71.07	336	LR		LR	03 08 29.3	
	comp=Z,75nm,21.8s,baz=138,slow=32							
KLR	Kul'dur	71.07	336	*ce*P		P	02 41 57.2	+0.1
KLR				pmax		pmax		
	comp=Z,52nm,1.4s							
KCSI	Kotacane, Aceh	71.14	279	P		P	02 41 57.3	-1.0
	comp=Z,23nm,0.9s							
ENH	Enshi	71.39	309	P		P	02 41 58.6	-0.9
ENH	Enshi	71.39	309	P		P	02 41 59.5	0.0
LYN	LuoYang	71.51	315	⇑*i* P		P	02 41 59.5	-0.5
LYN				PP		PP	02 44 42.4	+2.2
LYN				S		S	02 51 10.8	-0.4
LYN				sS		sS	02 51 51.0	-0.1
LYN				SS		SS	02 55 46.3	-2.2
LYN				pmax		pmax		
	comp=Z,30nm,0.9s							
LYN				pmax		pmax		
	comp=Z,120nm,5.0s							
HNS	HongShan	71.64	318	⇑P		P	02 42 01.1	+0.4
HNS				pP		pP	02 42 26.8	+1.4
HNS				S		S	02 51 13.6	+1.0
HNS				pmax		pmax		
	comp=Z,28nm,1.2s							
HNS				LR		LR		
	comp=Z,170nm,17.9s							
HNS				LR		LR		
	comp=Z,250nm,19.4s							
GYA	Guiyang	71.73	305	⇓*i* P		P	02 42 02.5	+0.8
GYA				S		S	02 51 19.0	+4.6
GYA				SKS		SKSac	02 51 48.8	-8.1
GYA				sS		ScS	02 51 59.6	+0.8
GYA				pmax		pmax		

CHTO	**Chiang Mai**	**75.08**	**294**		P		**P**	**02 42 21.9**	**+0.6**
CHTO					IAmb		IAmb	02 42 24.5	
	comp=Z,28nm,1.0s								
CHTO	**Chiang Mai**	**75.08**	**294**		P		**P**	**02 42 22.0**	**+0.6**
CHTO					pmax		pmax		
	comp=Z,28nm,1.0s								
CHTO	**Chiang Mai**	**75.08**	**294**		P		**P**	**02 42 22.3**	**+0.9**
	comp=Z,18nm,1.1s								
QSPA	**South Pole Qui**	**75.21**	**180**		LR		LR	03 12 44.7	
	comp=Z,173nm,19.7s,baz=32,slow=33								
QSPA	**South Pole Qui**	**75.21**	**180**		P		**P**	**02 42 21.5**	**+0.1**
QSPA					IAmb		IAmb	02 42 24.2	
	comp=Z,42nm,0.9s								
MA2	**Magadan**	**75.33**	**351**		LR		LR	03 10 45.9	
	comp=Z,178nm,21.6s,baz=150,slow=32								
MA2	**Magadan**	**75.33**	**351**		P		**P**	**02 42 21.7**	**-0.2**
MA2	**Magadan**	**75.33**	**351**	*ce*	P		**P**	**02 42 20.6**	**-1.3**
MA2					pmax		pmax		
	comp=Z,146nm,2.5s								
MA2	**Magadan**	**75.33**	**351**		P		**P**	**02 42 22.0**	**+0.1**
	comp=Z,69nm,1.2s								
PZH	**PanZhiHua**	**75.71**	**303**		P		**P**	**02 42 25.4**	**+0.4**
PZH					S		**S**	**02 52 00.4**	**+1.2**
PZH					pmax		pmax		
	comp=Z,20nm,0.9s								
PZH					pmax		pmax		
	comp=Z,140nm,5.6s								
CD2	**Chengdu**	**76.03**	**308**		P		**P**	**02 42 26.8**	**+0.2**
CD2					S		**S**	**02 52 03.0**	**+0.6**
CD2					ScS		**ScS**	**02 52 32.8**	**-0.1**
CD2					pmax		pmax		
	comp=Z,30nm,0.8s								
HIA	**Hailar**	**76.34**	**330**		P		**P**	**02 42 28.1**	**+0.1**
HIA					IAmb		IAmb	02 42 30.1	
	comp=Z,35nm,1.2s								
HIA	**Hailar**	**76.34**	**330**	*i*	P		**P**	**02 42 27.6**	**-0.3**
HIA					pmax		pmax		
	comp=Z,49nm,1.7s								
ZEA	**Zeya**	**76.36**	**337**	*ce*	P		**P**	**02 42 28.6**	**+0.7**
ZEA				*e*	S		**S**	**02 52 07.6**	**+2.8**
ZEA				*e*				02 53 13.6	
ZEA					pmax		pmax		
	comp=E,10.0nm,0.5s								
ZEA					pmax		pmax		
	comp=N,20nm,1.0s								
ZEA					pmax		pmax		
	comp=Z,40nm,1.0s								
ZEA					smax		smax		
	comp=E,100nm,8.2s								
ZEA					smax		smax		
	comp=N,100nm,9.4s								
CHGN	**Chignik**	**76.46**	**19**		P		**P**	**02 42 27.4**	**-0.9**
	baz=214								
BTO	**Baotou**	**76.46**	**319**	*e*	P		**P**	**02 42 30.4**	**+1.5**
BTO					S		**S**	**02 52 04.3**	**-2.5**
BTO					LR		LR		
	comp=N,660nm,18.4s								
BTO					LR		LR		
	comp=N,460nm,17.1s								
RPN	**Rapa Nui**	**77.66**	**115**		LR		LR	03 12 18.8	
	comp=N,73nm,19.7s,baz=317,slow=32								
SII	**Sitkinak Islan**	**78.05**	**21**		P		**P**	**02 42 36.3**	**-1.1**
	baz=218								
R17K	**Ugashik Creek**	**78.20**	**19**		P		**P**	**02 42 36.9**	**-1.1**
	baz=216								
LZH	**Lanzhou**	**78.35**	**312**	⇑	P		**P**	**02 42 41.0**	**+1.4**
LZH					pP		sP	02 43 10.4	-4.6
LZH					S		**S**	**02 52 27.1**	**-0.4**
LZH					pmax		pmax		
	comp=N,47nm,1.4s								
LZH					pmax		pmax		
	comp=N,170nm,5.5s								
SEY	**Seymchan**	**78.36**	**353**	*c*	*i* P		**P**	**02 42 38.1**	**-0.7**
SEY					pmax		pmax		
	comp=Z,101nm,1.1s								
OHAK	**Old Harbor**	**78.88**	**21**		P		**P**	**02 42 40.8**	**-1.0**
	baz=219								
Q16K	**King Salmon**	**78.96**	**18**		P		**P**	**02 42 41.4**	**-0.7**
	baz=216								
O16K	**Kokwok River B**	**79.29**	**17**		P		**P**	**02 42 43.0**	**-1.0**
	baz=214								
P17K	**Kvichak River**	**79.45**	**18**		P		**P**	**02 42 44.1**	**-0.8**
	baz=216								
KDAK	**Kodiak Island**	**79.56**	**21**		P		**P**	**02 42 44.3**	**-1.2**
	baz=219								
O17K	**Koliganek Bris**	**79.72**	**17**		P		**P**	**02 42 44.9**	**-1.4**
	baz=215								
N16K	**Nishlik Lake**	**79.84**	**16**		P		**P**	**02 42 46.3**	**-0.7**
	baz=213								
P18K	**Big Mountain,**	**79.97**	**18**		IAmb		IAmb	02 42 48.2	
	comp=Z,36nm,1.1s								
P18K	**Big Mountain,**	**79.97**	**18**		P		**P**	**02 42 46.8**	**-1.0**
	baz=217								
Q19K	**Cape Douglas,**	**80.10**	**19**		IAmb		IAmb	02 42 49.2	
	comp=Z,36nm,1.0s								
Q19K	**Cape Douglas,**	**80.10**	**19**		P		**P**	**02 42 48.0**	**-0.4**
	baz=218								
Q20K	**Shuyak Island**	**80.26**	**20**		P		**P**	**02 42 48.3**	**-0.9**
	baz=220								
P19K	**Oil Pt**	**80.80**	**19**		P		**P**	**02 42 50.7**	**-1.5**
	baz=219								
O19K	**Port Alsworth**	**80.89**	**18**		P		**P**	**02 42 51.3**	**-1.3**
	baz=218								
CIT	**Chita**	**81.13**	**330**	*e*	P		**P**	**02 42 54.1**	**0.0**
CIT				*e*				02 43 20.5	
CIT				*e*				02 43 31.7	
CIT					pmax		pmax		
	comp=Z,162nm,1.4s								
SVW2	**Sparrevohn**	**81.24**	**17**		P		**P**	**02 42 55.2**	**+0.8**
HOM	**Homer**	**81.32**	**20**		P		**P**	**02 42 54.0**	**-0.9**
	baz=220								
N19K	**Bonanza Creek**	**81.33**	**18**		P		**P**	**02 42 54.1**	**-1.0**
	baz=217								
BRSE	**Bradley Lake S**	**81.68**	**20**		P		**P**	**02 42 55.8**	**-1.0**
	baz=221								
MAW	**Mawson**	**81.79**	**202**		P		**P**	**02 42 57.9**	**+0.5**
	comp=Z,7.0nm,0.9s,baz=116,slow=6.4,SNR=11								
MAW					LR		LR	03 14 37.4	
	comp=Z,235nm,20.3s,baz=105,slow=32								
	comp=Z,7.0nm,0.9s								
MAW	**Mawson**	**81.79**	**202**		P		**P**	**02 42 58.3**	**+0.8**
	baz=82,SNR=7.8								
MAW	**Mawson**	**81.79**	**202**		P		**P**	**02 42 58.2**	**+0.8**
MAW	**Mawson**	**81.79**	**202**		P		**P**	**02 42 58.2**	**+0.8**
MAW					pmax		pmax		
	comp=Z,3.0nm,1.2s								
YAK	**Yakutsk**	**82.10**	**343**		LR		LR	03 19 57.4	
	comp=Z,99nm,18.4s,baz=92,slow=36								
YAK	**Yakutsk**	**82.10**	**343**		P		**P**	**02 42 59.2**	**+0.3**
YAK	**Yakutsk**	**82.10**	**343**	*e*	P		**P**	**02 42 58.8**	**-0.1**
YAK				*e*				02 46 13.3	
YAK				*e*	S		**S**	**02 53 04.3**	**-1.0**
YAK				*e*	SS		**sS**	**02 53 50.1**	**+2.0**
YAK				*e*	SS		**SS**	**02 58 34.8**	**+7.6**
YAK				*e*	SSS		SSS	03 01 58.6	
YAK					pmax		pmax		
	comp=Z,263nm,1.1s								
YAK					pmax		pmax		
	comp=N,75nm,1.3s								
YAK					pmax		pmax		
	comp=E,36nm,1.3s								
YAK					pmax		pmax		
	comp=Z,8.0nm,0.4s								
YAK					smax		smax		
	comp=N,43nm,2.0s								
ULN	**Ulaanbaatar**	**82.18**	**324**		P		**P**	**02 43 00.2**	**+0.2**
ULN	**Ulaanbaatar**	**82.18**	**324**	*ce*	P		**P**	**02 42 59.9**	**0.0**
ULN					pmax		pmax		
	comp=Z,79nm,1.7s								
M19K	**Big River Lodg**	**82.23**	**17**		P		**P**	**02 42 59.0**	**-0.7**
	baz=217								
L19K	**White Mountain**	**82.32**	**17**		P		**P**	**02 43 00.2**	**+0.1**
L19K	**White Mountain**	**82.32**	**17**		P		**P**	**02 42 59.7**	**-0.5**
	baz=217								
SEW	**Seward**	**82.38**	**20**		P		**P**	**02 42 59.2**	**-1.2**
	baz=222								
SONM	**Songino Array**	**82.54**	**324**		P		**P**	**02 43 01.6**	**-0.1**
	comp=Z,5.7nm,0.5s,baz=139,slow=5.1,SNR=35								
SONM					LR		LR	03 17 03.9	
	comp=Z,76nm,21.6s,baz=120,slow=34								
	comp=Z,5.7nm,0.5s								
SONM	**Songino Array**	**82.54**	**324**		P		**P**	**02 43 01.6**	**-0.1**
SONM					IAmb		IAmb	02 43 04.5	
	comp=Z,70nm,1.5s								
O22K	**Cooper Landing**	**82.57**	**20**		P		**P**	**02 43 01.2**	**-0.2**
	baz=222								
M20K	**Styx River**	**82.58**	**18**		P		**P**	**02 43 00.7**	**-0.9**
	baz=218								
TTA	**Tatalina**	**82.61**	**16**		P		**P**	**02 43 01.3**	**-0.4**
	baz=216								
BILL	**Bilibino**	**82.63**	**360**		P		**P**	**02 43 01.5**	**-0.1**
BILL	**Bilibino**	**82.63**	**360**	*ce*	P		**P**	**02 43 01.0**	**-0.6**
BILL				*e*	*PP		**pP**	**02 43 27.6**	**+1.0**
BILL				*e*	*SP		**sP**	**02 43 34.5**	**-2.4**
BILL				*e*				02 46 19.4	
BILL					pmax		pmax		
	comp=Z,160nm,1.7s								
GTA	**Gaotai**	**82.70**	**314**	⇑	P		**P**	**02 43 03.4**	**+0.6**
GTA					pP		sP	02 43 33.5	-4.8
GTA					S		**S**	**02 53 16.5**	**+3.8**
GTA					sS		sS	02 53 55.4	+0.4
GTA					pmax		pmax		
	comp=Z,16nm,1.2s								
GTA					pmax		pmax		
	comp=Z,150nm,9.1s								
GTA					LR		LR		
	comp=Z,100nm,19.3s								
GTA					LR		LR		
	comp=Z,79nm,19.6s								
GTA					LR		LR		
	comp=Z,150nm,21.4s								
L20K	**Farewell, AK**	**82.84**	**17**		P		**P**	**02 43 02.6**	**-0.3**
	baz=218								
P23K	**Montague Islan**	**83.00**	**21**		P		**P**	**02 43 02.6**	**-1.1**
	baz=224								
RC01	**Rabbit Creek A**	**83.02**	**20**		IAmb		IAmb	02 43 04.0	
	comp=Z,49nm,1.1s								
RC01	**Rabbit Creek A**	**83.02**	**20**		P		**P**	**02 43 02.6**	**-1.2**
	baz=222,SNR=12								
PWL	**Port Wells**	**83.31**	**20**		P		**P**	**02 43 04.1**	**-1.2**
	baz=223,SNR=15								
M22K	**Willow**	**83.40**	**19**		P		**P**	**02 43 04.6**	**-1.0**
	baz=221,SNR=8.1								
K20K	**Telida**	**83.48**	**16**		IAmb		IAmb	02 43 09.5	
	comp=Z,43nm,1.4s								
K20K	**Telida**	**83.48**	**16**		P		**P**	**02 43 05.6**	**-0.5**
	baz=218,SNR=11								
PMR	**Palmer**	**83.59**	**19**		IAmb		IAmb	02 43 08.7	
	comp=Z,47nm,1.2s								
PMR	**Palmer**	**83.59**	**19**		P		**P**	**02 43 05.0**	**-1.6**
	baz=222,SNR=21								
HIN	**Hinchinbrook I**	**83.60**	**21**		IAmb		IAmb	02 43 06.9	
	comp=Z,42nm,1.1s								
PPLA	**Purkeypile**	**83.65**	**17**		P		**P**	**02 43 06.9**	**-0.3**
PPLA					IAmb		IAmb	02 43 08.8	
	comp=Z,28nm,1.2s								
PPLA	**Purkeypile**	**83.65**	**17**		P		**P**	**02 43 05.0**	**-2.1**
	baz=219								
KNK	**Knik Glacier**	**83.68**	**20**		IAmb		IAmb	02 43 09.9	
	comp=Z,35nm,1.1s								
KNK	**Knik Glacier**	**83.68**	**20**		P		**P**	**02 43 05.6**	**-1.6**
	baz=223,SNR=7.1								
GLI	**Glacier Island**	**83.74**	**21**		IAmb		IAmb	02 43 07.4	
	comp=Z,30nm,1.0s								
GLI	**Glacier Island**	**83.74**	**21**		P		**P**	**02 43 05.9**	**-1.6**
	baz=224,SNR=9.4								
GHO	**Glory Hole Cre**	**83.79**	**19**		IAmb		IAmb	02 43 08.7	
	comp=Z,38nm,1.1s								
CUT	**Chulitna**	**83.84**	**18**		P		**P**	**02 43 06.2**	**-1.7**
	baz=221								
FID	**Port Fidalgo**	**83.86**	**21**		IAmb		IAmb	02 43 08.4	
	comp=Z,31nm,1.0s								
EYAK	**Cordova Ski Ar**	**83.97**	**21**		P		**P**	**02 43 07.3**	**-1.3**
	baz=225								
KMPM	**Mount Pierce**	**83.99**	**46**		IAmb		IAmb	02 43 10.8	
	comp=Z,64nm,1.6s								
SML	**Sawmill**	**84.01**	**20**		IAmb		IAmb	02 43 11.8	
	comp=Z,53nm,1.3s								
SML	**Sawmill**	**84.01**	**20**		P		**P**	**02 43 07.6**	**-1.3**
	baz=223,SNR=14								
KAIM	**Kayak Island**	**84.02**	**22**		P		**P**	**02 43 08.3**	**-0.6**
	baz=227								
KCPM	**Cahto Peak**	**84.05**	**46**		IAmb		IAmb	02 43 10.8	
	comp=Z,25nm,1.0s								
CAST	**Castle Rocks**	**84.09**	**17**		P		**P**	**02 43 07.3**	**-1.9**
CAST	**Castle Rocks**	**84.09**	**17**		P		**P**	**02 43 07.4**	**-1.9**
	baz=219,SNR=50								
J20K	**Nowinta River**	**84.11**	**16**		IAmb		IAmb	02 43 10.3	
	comp=Z,23nm,1.1s								
J20K	**Nowinta River**	**84.11**	**16**		P		**P**	**02 43 08.7**	**-0.6**
	baz=217,SNR=13								
HOPS	**Hopland Field**	**84.13**	**47**		IAmb		IAmb	02 43 11.6	
	comp=Z,26nm,1.4s								
KMRM	**Mail Ridge**	**84.19**	**46**		IAmb		IAmb	02 43 28.6	
	comp=Z,36nm,1.4s								
M23K	**Glacier View**	**84.19**	**20**		P		**P**	**02 43 08.4**	**-1.4**
	baz=224								
RAGM	**Ragged Mountai**	**84.24**	**22**		IAmb		IAmb	02 43 10.3	
	comp=Z,19nm,1.1s								
SCM	**Sheep Creek Mo**	**84.36**	**20**		IAmb		IAmb	02 43 11.4	
	comp=Z,24nm,0.9s								
SCM	**Sheep Creek Mo**	**84.36**	**20**		P		**P**	**02 43 09.3**	**-1.3**
	baz=224,SNR=8.7								
HMT	**Hamilton**	**84.36**	**22**		IAmb		IAmb	02 43 10.9	
	comp=Z,21nm,0.9s								
DIV	**Divide**	**84.38**	**21**		IAmb		IAmb	02 43 11.3	
	comp=Z,23nm,1.1s								
CHUM	**Lake Minchumin**	**84.38**	**17**		P		**P**	**02 43 09.1**	**-1.5**
	baz=219,SNR=7.8								
SAO	**San Andreas Ge**	**84.41**	**50**		P		**P**	**02 43 11.6**	**+0.2**
SAO	**San Andreas Ge**	**84.41**	**50**		P		**P**	**02 43 11.6**	**+0.2**
SAO					pmax		pmax		
	comp=Z,10.0nm,1.1s								
KTH	**Kantishna Hill**	**84.52**	**17**		IAmb		IAmb	02 43 11.7	
	comp=Z,36nm,1.0s								
BOD	**Bodaibo**	**84.54**	**334**	*e*	P		**P**	**02 43 10.9**	**-0.6**
BOD					pmax		pmax		
	comp=Z,74nm,1.5s								
KLU	**Klutina**	**84.58**	**21**		P		**P**	**02 43 10.5**	**-1.3**
	baz=225,SNR=6.8								
BERG	**Berg Lake**	**84.60**	**22**		IAmb		IAmb	02 43 12.7	
	comp=Z,35nm,0.9s								
TRF	**Thorofare Moun**	**84.63**	**18**		IAmb		IAmb	02 43 11.5	
	comp=Z,29nm,1.0s								
TRF	**Thorofare Moun**	**84.63**	**18**		P		**P**	**02 43 09.9**	**-2.2**
	baz=221,SNR=14								
BBGB	**Big Mountain B**	**84.64**	**50**		IAmb		IAmb	02 43 14.2	
	comp=Z,26nm,1.2s								
BMRM	**Bremner River**	**84.67**	**21**		IAmb		IAmb	02 43 20.0	
	comp=Z,18nm,1.2s								
BMRM	**Bremner River**	**84.67**	**21**		P		**P**	**02 43 10.8**	**-1.4**
	baz=226								
WAT1	**Susitna Watana**	**84.69**	**19**		P		**P**	**02 43 11.0**	**-1.3**
	baz=223								
WAT6	**Susitna Watana**	**84.77**	**19**		P		**P**	**02 43 11.4**	**-1.4**
	baz=223,SNR=13								
BPAW	**Bear Paw Mtn.**	**84.92**	**17**		IAmb		IAmb	02 43 15.0	
	comp=Z,21nm,1.2s								
BPAW	**Bear Paw Mtn.**	**84.92**	**17**		P		**P**	**02 43 11.3**	**-2.1**
	baz=220,SNR=12								
PKM	**Mcpherson Peak**	**84.93**	**52**		P		**P**	**02 43 12.2**	**-2.2**
	baz=248								
M24K	**Tolsona, Glenn**	**84.93**	**20**		P		**P**	**02 43 14.1**	**+0.6**
M24K					IAmb		IAmb	02 43 16.8	
	comp=Z,30nm,1.1s								
M24K	**Tolsona, Glenn**	**84.93**	**20**		P		**P**	**02 43 12.1**	**-1.4**
	baz=225								
WAX	**Waxell Ridge**	**84.95**	**22**		IAmb		IAmb	02 43 14.5	
	comp=Z,20nm,0.8s								
RND	**Reindeer**	**85.03**	**18**		IAmb		IAmb	02 43 14.5	
	comp=Z,31nm,1.0s								
L02F	**Cave Junction**	**85.08**	**44**		P		**P**	**02 43 13.1**	**-1.6**
	baz=245								
MESA	**MESA**	**85.10**	**23**		P		**P**	**02 43 12.8**	**-1.8**
	baz=229								
N25K	**Chitina, Valde**	**85.11**	**21**		IAmb		IAmb	02 43 14.8	
	comp=Z,14nm,0.9s								
N25K	**Chitina, Valde**	**85.11**	**21**		P		**P**	**02 43 13.1**	**-1.4**
	baz=226,SNR=11								
DHY	**Denali Highway**	**85.24**	**19**		IAmb		IAmb	02 43 19.2	
	comp=Z,16nm,1.1s								
DHY	**Denali Highway**	**85.24**	**19**		P		**P**	**02 43 13.7**	**-1.4**
	baz=224,SNR=8.5								
ISLE	**Juniper Island**	**85.24**	**22**		IAmb		IAmb	02 43 23.9	
	comp=Z,15nm,0.8s								
MCK	**McKinley**	**85.24**	**18**		P		**P**	**02 43 13.3**	**-1.7**
	baz=222,SNR=24								
K02D	**Willamette Mer**	**85.26**	**44**		P		**P**	**02 43 15.2**	**-0.4**
	baz=245,SNR=5.4								
I21K	**Tanana**	**85.48**	**16**		P		**P**	**02 43 15.3**	**-0.8**
	baz=219,SNR=42								
YBH	**Yreka Blue Hor**	**85.50**	**45**		LR		LR	03 13 26.8	
	comp=Z,147nm,21.6s,baz=252,slow=30								
MCARA	**McCarthy VSAT**	**85.52**	**22**		P		**P**	**02 43 15.0**	**-1.4**
	baz=228								
LSA	**Lhasa**	**85.58**	**302**		P		**P**	**02 43 17.7**	**-0.3**
LSA					IAmb		IAmb	02 43 20.6	
	comp=Z,23nm,1.1s								
LSA	**Lhasa**	**85.58**	**302**		P		**P**	**02 43 18.6**	**+0.6**
LSA					pmax		pmax		
	comp=Z,15nm,1.0s								
LSA	**Lhasa**	**85.58**	**302**		P		**P**	**02 43 17.7**	**-0.3**
LSA					pmax		pmax		
	comp=Z,23nm,1.1s								
ZAK	**Zakamensk**	**85.60**	**325**	*e*	P		**P**	**02 43 16.4**	**-0.8**
ZAK				*e*				02 43 43.8	
ZAK					pmax		pmax		
	comp=Z,37nm,1.4s								
ZAK					pmax		pmax		
	comp=Z,17nm,1.5s								
H21K	**Melozitna Rive**	**85.64**	**15**		IAmb		IAmb	02 43 19.5	
	comp=Z,44nm,1.4s								
H21K	**Melozitna Rive**	**85.64**	**15**		P		**P**	**02 43 16.8**	**-0.1**
	baz=219,SNR=23								
PINM	**Pinnacle**	**85.70**	**23**		P		**P**	**02 43 16.1**	**-1.3**
	baz=230								
MLY	**Manley**	**85.70**	**17**		IAmb		IAmb	02 43 19.7	
	comp=Z,25nm,1.3s								
MLY	**Manley**	**85.70**	**17**		P		**P**	**02 43 16.3**	**-1.0**
	baz=220,SNR=15								
DBO	**Dodson Butte**	**85.72**	**43**		IAmb		IAmb	02 43 18.2	
	comp=Z,48nm,1.6s								
NEA2	**Nenana**	**85.85**	**17**		IAmb		IAmb	02 43 19.9	
	comp=Z,34nm,1.3s								
NEA2	**Nenana**	**85.85**	**17**		P		**P**	**02 43 16.6**	**-1.3**
	baz=222,SNR=17								
CTG	**Chitna Glacier**	**85.85**	**22**		P		**P**	**02 43 16.4**	**-1.8**
	baz=229,SNR=8.6								
CTGM	**Chitina Glacie**	**85.85**	**22**		IAmb		IAmb	02 43 18.5	
	comp=Z,24nm,1.1s								
LOGN	**Logan Glacier**	**85.88**	**23**		P		**P**	**02 43 17.9**	**-0.5**
LOGN					IAmb		IAmb	02 43 18.5	
	comp=Z,16nm,1.1s								
L04D	**Klamath Falls**	**85.98**	**45**		IAmb		IAmb	02 43 20.0	
	comp=Z,14nm,0.9s								
L04D	**Klamath Falls**	**85.98**	**45**		P		**P**	**02 43 17.8**	**-1.5**
	baz=246,SNR=6.1								
IRK	**Irkutsk**	**85.99**	**327**	*e*	P		**P**	**02 43 18.1**	**-0.8**
IRK					pmax		pmax		
	comp=Z,53nm,1.8s								
WRH	**Wood River Hil**	**86.04**	**18**		IAmb		IAmb	02 43 20.9	
	comp=Z,25nm,1.2s								
G21K	**Allakaket**	**86.14**	**15**		P		**P**	**02 43 18.2**	**-1.2**
	baz=218,SNR=12								
O28M	**Mount Upton**	**86.15**	**23**		P		**P**	**02 43 18.5**	**-1.4**
	baz=230								
H22K	**Ishtalitna Cre**	**86.19**	**16**		P		**P**	**02 43 18.9**	**-0.8**
	baz=220,SNR=23								
M26K	**Nabesna, AK**	**86.21**	**21**		IAmb		IAmb	02 43 20.7	
	comp=Z,14nm,0.9s								
M26K	**Nabesna, AK**	**86.21**	**21**		P		**P**	**02 43 18.4**	**-1.5**
	baz=228,SNR=15								
ISA	**Isabella, Lake**	**86.23**	**52**		IAmb		IAmb	02 43 21.6	
	comp=Z,14nm,1.1s								
ISA	**Isabella, Lake**	**86.23**	**52**		P		**P**	**02 43 19.2**	**-1.5**
	baz=249,SNR=6.2								
CCB	**Clear Creek Bu**	**86.25**	**18**		IAmb		IAmb	02 43 21.8	
	comp=Z,11nm,0.8s								
K24K	**Donnelly Dome**	**86.27**	**19**		P		**P**	**02 43 19.1**	**-1.0**
	baz=225,SNR=10								
EDW2	**Edwards Air Fo**	**86.32**	**53**		P		**P**	**02 43 19.0**	**-2.0**
	baz=249,SNR=6.8								
HDA	**Harding Lake**	**86.34**	**18**		IAmb		IAmb	02 43 21.0	
	comp=Z,28nm,0.9s								
HDA	**Harding Lake**	**86.34**	**18**		P		**P**	**02 43 19.1**	**-1.3**
	baz=224,SNR=24								
BFSC	**Mount Baldy Ra**	**86.35**	**53**		P		**P**	**02 43 18.8**	**-2.5**
	baz=249								
MDM	**Murphy Dome**	**86.36**	**17**		IAmb		IAmb	02 43 23.0	
	comp=Z,30nm,1.3s								
P29M	**Windy Craggy**	**86.40**	**25**		P		**P**	**02 43 19.6**	**-1.2**
	baz=233								
TCOL	**CIGO, UAF Yank**	**86.40**	**18**		P		**P**	**02 43 18.4**	**-2.2**
	baz=223								
COLA	**College**	**86.41**	**18**		P		**P**	**02 43 20.2**	**-0.4**
COLA					IAmb		IAmb	02 43 20.4	
	comp=Z,18nm,0.8s								
COLA	**College**	**86.41**	**18**	*i*	P		**P**	**02 43 19.4**	**-1.2**
COLA					pmax		pmax		
	comp=Z,16nm,0.9s								
COLA	**College**	**86.41**	**18**		P		**P**	**02 43 18.5**	**-2.1**
	baz=223								
MDPB	**Devils Postpil**	**86.49**	**50**		IAmb		IAmb	02 43 22.9	
	comp=Z,15nm,1.1s								
L26K	**Log Cabin Wild**	**86.52**	**20**		P		**P**	**02 43 20.1**	**-1.2**
	baz=227,SNR=7.7								
RIDG	**Independent Ri**	**86.52**	**19**		IAmb		IAmb	02 43 22.1	
	comp=Z,20nm,1.0s								
RIDG	**Independent Ri**	**86.52**	**19**		P		**P**	**02 43 20.2**	**-1.1**
	baz=226,SNR=11								
I04A	**Tendick Farm,**	**86.55**	**43**		P		**P**	**02 43 20.6**	**-1.4**
	baz=246								
M27K	**Edge Creek, AK**	**86.57**	**21**		P		**P**	**02 43 21.1**	**-0.7**
	baz=229,SNR=9.7								
G03D	**McMinnville, O**	**86.58**	**42**		P		**P**	**02 43 20.8**	**-1.1**
	baz=245								
ILAR	**Eielson Array**	**86.62**	**18**		P		**P**	**02 43 19.7**	**-2.0**
	comp=Z,14nm,0.8s,baz=234,slow=5.4,SNR=97								
ILAR					LR		LR	03 16 55.6	
	comp=Z,325nm,20.7s,baz=223,slow=32								
	comp=Z,14nm,0.8s								
ILAR	**Eielson Array**	**86.62**	**18**		P		**P**	**02 43 20.2**	**-1.5**
ILAR	**Eielson Array**	**86.62**	**18**		P		**P**

TPFO **Pinon Flats** 87.08 54 P P 02 43 22.5 -2.3
baz=250
YUK4 **Talbot Arm** 87.10 23 P P 02 43 24.2 -0.2
baz=232
H24K **Noodor Dome** 87.11 17 P P 02 43 23.9 -0.2
baz=223
F04D **Rainier, OR** 87.11 41 P P 02 43 24.1 -0.5
baz=245
MPMC **Manual Prospec** 87.12 52 P P 02 43 23.7 -1.4
baz=249,SNR=7.5
J05D **Fort Rock, OR** 87.13 44 P P 02 43 24.0 -0.9
baz=247,SNR=9.9
K05A **Summer Lake** 87.14 45 IAmb IAmb 02 43 26.1
comp=Z,18nm,1.0s
PMD **Palm Desert** 87.15 54 IAmb IAmb 02 43 25.9
comp=Z,14nm,1.1s
G23K **Bananza Creek** 87.17 16 P P 02 43 24.2 -0.3
baz=221,SNR=18
HYT **Haines Junctio** 87.22 24 P P 02 43 24.8 -0.1
baz=233
DSP **Deep Springs** 87.22 50 IAmb IAmb 02 43 26.5
comp=Z,14nm,1.0s
F22K **John River** 87.24 15 P P 02 43 24.6 -0.1
baz=219
NVAR **Mina Array Bea** 87.35 49 P P 02 43 25.8 -0.4
comp=Z,4.4nm,0.9s,baz=231,slow=8.0,SNR=31
NVAR PKPPKP **P'P'df** 03 09 24.9 +1.4
comp=Z,0.6nm,0.8s,baz=94,slow=4.7,SNR=4.7
NVAR LR LR 03 14 49.8
comp=Z,264nm,21.1s,baz=272,slow=30
comp=Z,4.4nm,0.9s
NVAR **Mina Array Bea** 87.35 49 P P 02 43 25.4 -0.8
SWSC **Sam W. Stewart** 87.37 55 P P 02 43 25.1 -1.0
baz=251
GSC **Goldstone, Bar** 87.38 53 IAmb IAmb 02 43 27.3
comp=Z,30nm,1.7s
GSC **Goldstone, Bar** 87.38 53 P P 02 43 25.4 -0.9
baz=250
J26L **Joseph Creek** 87.45 19 P P 02 43 25.6 -0.3
baz=227,SNR=5.3
I05D **Terrebonne, OR** 87.47 43 P P 02 43 26.4 -0.1
baz=247
MOY **Mondy** 87.48 325 *e*P P 02 43 26.3 -0.1
MOY pmax pmax
comp=Z,31nm,2.3s
PINE **Pine Mountain** 87.52 44 IAmb IAmb 02 43 28.0
comp=Z,12nm,0.9s
GRAC **Grapevine Rang** 87.54 51 IAmb IAmb 02 43 28.0
comp=Z,13nm,1.1s
GRAC **Grapevine Rang** 87.54 51 P P 02 43 26.1 -0.8
baz=250
PRP **Porcupine Dome** 87.56 18 P P 02 43 26.4 0.0
baz=225
BELC **Belle Mtn. Jos** 87.57 54 P P 02 43 26.3 -0.9
baz=250,SNR=12
HEC **Hector,Ludlow** 87.58 53 P P 02 43 26.4 -0.8
baz=250
K27K **Chicken** 87.61 20 P P 02 43 26.2 -0.3
baz=228
HOOD **Mount Hood Mea** 87.66 42 IAmb IAmb 02 43 28.0
comp=Z,17nm,0.8s
TAPN **Taplejung** 87.69 299 *e*P P 02 43 28.0 -0.1
comp=Z,64nm,1.0s
KVN **Kaiserville** 87.72 49 P P 02 43 27.7 -0.2
KVN **Kaiserville** 87.72 49 P P 02 43 27.7 -0.2
KVN pmax pmax
comp=Z,17nm,1.5s
FURC **Furnace Creek,** 87.73 51 P P 02 43 26.8 -0.9
baz=250
O30N **Mendenhall** 87.74 24 P P 02 43 26.1 -1.2
baz=234
N30M **Aishikik Lake** 87.76 23 P P 02 43 27.4 0.0
baz=233
ODAN **Odare** 87.81 298 *e*P P 02 43 28.4 -0.3
E22K **Anaktuvuk Pass** 87.82 14 P P 02 43 27.1 -0.4
baz=219
G05D **Wamic, OR** 87.85 42 P P 02 43 27.2 -0.9
baz=247
G24K **Hadweenzic Riv** 87.85 16 P P 02 43 26.9 -0.7
baz=224
M29M **Somme Creek** 87.85 22 P P 02 43 27.9 +0.1
baz=232
BC3 **Big Chuckawall** 87.88 55 P P 02 43 28.2 -0.5
baz=251,SNR=7.3
PGC **Sidney** 87.92 38 IAmb IAmb 02 43 29.1
comp=Z,26nm,1.1s
SHOC **Shoshone, Teco** 87.99 52 P P 02 43 27.7 -1.3
baz=250
P32M **Atlin** 88.04 26 P P 02 43 28.0 -0.7
baz=236
GMRC **Granite Mounta** 88.09 53 P P 02 43 28.8 -0.9
baz=251,SNR=6.1
TUQ **Turquoise Moun** 88.10 53 P P 02 43 28.9 -0.8
baz=250
I26K **Coal Creek Min** 88.13 19 IAmb IAmb 02 43 31.8
comp=Z,23nm,1.2s
I26K **Coal Creek Min** 88.13 19 P P 02 43 28.6 -0.3
baz=228
GLA **Glamis** 88.18 55 P P 02 43 29.5 -0.6
baz=251
D05A **Enumclaw** 88.20 40 IAmb IAmb 02 43 31.1
comp=Z,39nm,1.2s
N31M **Braeburn, Yuko** 88.28 24 P P 02 43 30.1 +0.2
baz=234
IRM **Iron Mountain** 88.29 54 P P 02 43 29.6 -0.9
baz=251,SNR=11
F24K **Squaw Lake** 88.34 16 P P 02 43 30.6 +0.6
baz=223,SNR=5.6
TPNV **Topopah Spring** 88.36 51 P P 02 43 30.6 -0.4
TPNV IAmb IAmb 02 43 31.4
comp=Z,13nm,1.2s
TPNV **Topopah Spring** 88.36 51 P P 02 43 30.6 -0.4
TPNV pmax pmax
comp=Z,13nm,1.2s
TPNV **Topopah Spring** 88.36 51 P P 02 43 31.1 +0.2
baz=250,SNR=8.5
EGAK **Eagle** 88.41 20 P P 02 43 28.3 -2.0
baz=229,SNR=6.5
RAMN **Ramite** 88.51 298 *e*P P 02 43 31.7 -0.3
comp=Z,22nm,0.5s
DAWY **Dawson** 88.54 21 P P 02 43 28.9 -2.1
baz=231
M30M **Minto, Yukon** 88.55 23 P P 02 43 28.7 -2.4
baz=233
WVOR **Wild Horse Val** 88.57 45 IAmb IAmb 02 43 32.9
comp=Z,32nm,1.6s
E24K **Your Creek** 88.59 15 P P 02 43 30.1 -1.0
baz=222
I07A **Izee** 88.59 44 IAmb IAmb 02 43 32.9
comp=Z,15nm,1.1s
SMAI **San Martin Ant** 88.61 162 P P 02 43 32.0 +0.7
SMAI IAmb IAmb 02 43 33.6
comp=Z,30nm,2.0s
BLYC **Blythe** 88.64 55 IAmb IAmb 02 43 33.5
comp=Z,17nm,1.1s
D23K **Nanushuk River** 88.73 14 P P 02 43 31.6 -0.1
baz=220,SNR=9.9
TOLK **Toolik Lake Re** 88.75 15 P P 02 43 31.1 -0.8
baz=222
I27K **Kandik River** 88.81 19 P P 02 43 31.0 -1.2
baz=229
BMN **Battle Mountai** 88.85 48 IAmb IAmb 02 43 34.2
comp=Z,15nm,1.2s
S11A **Rachel** 88.97 51 IAmb IAmb 02 43 34.7
comp=Z,22nm,1.3s
KNGR **Kungurtug, Tuv** 88.98 323 *i* P P 02 43 33.3 -0.2
KNGR pmax pmax
comp=Z,15nm,0.9s
F25K **Christian Rive** 88.99 16 P P 02 43 32.8 -0.3
baz=225
J08A **Circle Bar Ran** 89.02 45 IAmb IAmb 02 43 34.7
comp=Z,21nm,1.1s
V12A **Nelson** 89.02 53 P P 02 43 33.9 -0.1
V12A IAmb IAmb 02 43 35.2
comp=Z,12nm,1.2s
DLBC **Dease Lake** 89.03 28 LR LR 03 14 29.1
comp=Z,140nm,21.7s,baz=268,slow=30
DLBC **Dease Lake** 89.03 28 P P 02 43 31.7 -1.8
baz=239
SHPR **Sheep Range** 89.04 52 IAmb IAmb 02 43 35.6
comp=Z,19nm,1.2s
G26K **Porcupine Rive** 89.06 17 P P 02 43 32.4 -0.8
baz=227,SNR=14
JIRN **Jiri** 89.07 299 *e*P P 02 43 34.9 +0.2
comp=Z,31nm,0.3s
R33M **Jennings River** 89.11 27 P P 02 43 32.2 -1.7
baz=238
PDMCI **Parker Dam,Lak** 89.12 54 P P 02 43 33.2 -1.2
baz=252
H27K **Steamboat Moun** 89.25 18 P P 02 43 33.3 -1.0
baz=229
LPIG **La Paz** 89.27 65 LR LR 03 13 25.8
comp=Z,88nm,21.9s,baz=250,slow=29
D24K **Happy Valley** 89.31 14 P P 02 43 33.1 -1.3
baz=222
R11A **Troy Canyon, C** 89.33 50 P P 02 43 33.2 -2.3
baz=251,SNR=11
A21K **Barrow** 89.36 11 P P 02 43 33.6 -1.0
baz=215
E25K **Arctic Village** 89.38 16 P P 02 43 33.1 -1.7
baz=225
G08A **Pilot Rock** 89.40 43 IAmb IAmb 02 43 36.4
comp=Z,22nm,1.1s
GUN **Gumba** 89.41 299 *e*P P 02 43 36.4 +0.1
comp=Z,102nm,1.0s
C23K **Itkillik River** 89.41 13 P P 02 43 34.1 -0.8
baz=220,SNR=7.4
PRN **Pahroc Range** 89.42 51 IAmb IAmb 02 43 37.2
comp=Z,24nm,1.1s
HAWA **Hanford** 89.44 42 IAmb IAmb 02 43 36.6
comp=Z,20nm,1.1s
214A **Organ Pipe Nat** 89.45 57 IAmb IAmb 02 43 37.6
comp=Z,11nm,1.1s
214A **Organ Pipe Nat** 89.45 57 P P 02 43 33.5 -2.6
baz=252
F26K **Sheenjek River** 89.47 17 P P 02 43 34.7 -0.6
baz=227
W13A **Hualapai Mount** 89.57 54 IAmb IAmb 02 43 38.0
comp=Z,12nm,1.1s
G27K **Doyon Strip** 89.59 18 P P 02 43 36.3 +0.4
baz=229
LLLB **Lillooet** 89.66 37 IAmb IAmb 02 43 37.3
comp=Z,16nm,1.1s
PKI **Pulchoki** 89.71 299 *e*P P 02 43 36.8 -0.9
comp=Z,44nm,0.9s
PKIN **Phulchoki** 89.72 299 *e*P P 02 43 37.1 -0.6
comp=Z,45nm,0.8s
C24K **Franklin Bluff** 89.76 14 P P 02 43 37.2 +0.7
baz=222
KKN **Kakani** 89.88 299 *e*P P 02 43 37.9 -0.4
DMN **Daman** 89.97 298 *e*P P 02 43 39.0 +0.2
comp=Z,108nm,1.0s
D25K **Kavik River** 90.03 15 P P 02 43 38.4 +0.5
baz=224
TIXI **Tiksi** 90.05 349 LR LR 03 22 34.5
comp=Z,80nm,19.3s,baz=180,slow=34
TIXI **Tiksi** 90.05 349 P P 02 43 37.8 0.0
TIXI **Tiksi** 90.05 349 *ce*P P 02 43 36.7 -1.1
TIXI pmax pmax
comp=Z,43nm,1.3s
D08A **Wollman Farm,** 90.08 41 IAmb IAmb 02 43 39.4
comp=Z,13nm,1.1s
B08A **Colville Reser** 90.31 40 IAmb IAmb 02 43 40.0
comp=Z,17nm,1.1s
BMO **Blue Mountains** 90.34 44 IAmb IAmb 02 43 40.5
comp=Z,14nm,1.1s
ELK **Elko** 90.37 48 LR LR 03 15 60.0
comp=Z,162nm,21.6s,baz=252,slow=30
E09A **Wood Farm, Sta** 90.38 42 IAmb IAmb 02 43 40.6
comp=Z,18nm,1.2s
GKN **Gorkha** 90.48 299 *e*P P 02 43 40.2 -0.9
E27K **Coleen River** 90.52 17 P P 02 43 40.0 -0.2
baz=229
LCMT **Little Creek M** 90.66 52 P P 02 43 42.0 +0.3
LCMT IAmb IAmb 02 43 42.9
comp=Z,10nm,1.1s
CCUT **Cedar City** 90.74 51 IAmb IAmb 02 43 43.6
comp=Z,8.9nm,1.1s
C09A **Chrisman Ranch** 90.76 41 IAmb IAmb 02 43 42.2
comp=Z,18nm,1.6s
C26K **Camden Bay** 90.82 15 P P 02 43 43.2 +1.8
baz=226
MFID **Camas Ranch** 90.84 45 IAmb IAmb 02 43 43.1
comp=Z,11nm,1.1s
EPYK **Eagle Plains** 90.85 20 P P 02 43 42.5 +0.8
baz=233
C27K **Jago River** 90.92 15 P P 02 43 42.9 +0.9
baz=227
SZCU **Shurtz Canyon** 90.96 51 IAmb IAmb 02 43 44.5
comp=Z,13nm,1.4s
KNB **Kanab** 90.98 52 IAmb IAmb 02 43 44.7
comp=Z,16nm,1.3s
TUC **Tucson** 91.20 57 P P 02 43 44.4 +0.2
TUC IAmb IAmb 02 43 45.7
comp=Z,11nm,1.1s
TUC **Tucson** 91.20 57 P P 02 43 44.4 +0.2
TUC pmax pmax
comp=Z,11nm,1.2s
TUC **Tucson** 91.20 57 P P 02 43 44.2 0.0
baz=253
U15A **North Rim** 91.21 53 IAmb IAmb 02 43 45.9
comp=Z,12nm,1.1s
X16A **Lo Mia Camp, P** 91.28 55 IAmb IAmb 02 43 49.2
comp=Z,11nm,1.2s
PLID **Pearl Lake** 91.29 44 IAmb IAmb 02 43 44.7
comp=Z,11nm,1.1s
DANN **Dangsing** 91.32 299 *e*P P 02 43 44.8 -0.4
comp=Z,31nm,0.7s
PKCU **Pink Cliffs** 91.50 52 IAmb IAmb 02 43 47.2
comp=Z,12nm,1.2s
NEW **Newport** 91.65 40 LR LR 03 25 04.5
comp=Z,66nm,18.1s,baz=179,slow=36
NEW **Newport** 91.65 40 IAmb IAmb 02 43 46.2
comp=Z,10nm,1.1s
NEW **Newport** 91.65 40 P P 02 43 45.9 0.0
baz=250
WUAZ **Wupatki** 91.66 54 IAmb IAmb 02 43 47.7
comp=Z,7.9nm,1.1s
WUAZ **Wupatki** 91.66 54 P P 02 43 46.0 -0.4
baz=253
MTPU **Mount Pierson** 91.78 51 IAmb IAmb 02 43 48.9
comp=Z,8.0nm,1.1s
HLID **Hailey** 91.86 45 P P 02 43 47.3 +0.1
HLID **Hailey** 91.86 45 P P 02 43 46.9 -0.3
baz=251
DUG **Dugway, Tooele** 91.95 49 P P 02 43 47.4 -0.2
baz=252
319A **Douglas** 92.17 58 IAmb IAmb 02 43 50.2
comp=Z,13nm,1.1s
X18A **Snflake** 92.50 55 IAmb IAmb 02 43 53.1
comp=Z,12nm,1.3s
WMQ **Urumqi** 92.76 315 *e*P P 02 43 51.8 +0.6
WMQ pmax pmax
comp=Z,24nm,0.7s
WMQ LR LR
comp=Z,150nm,20.9s
TROLL **Troll, Antarti** 92.78 185 P P 02 43 50.4 -0.4
Q16A **Castle Valley** 92.79 51 IAmb IAmb 02 43 53.0
comp=Z,30nm,2.0s
NVL **N'lazarevskaya** 92.96 188 *e*P P 02 43 50.0 -1.5
NVL pmax pmax
comp=Z,21nm,0.9s
INK **Inuvik** 92.98 19 LR LR 03 20 33.8
comp=Z,178nm,20.6s,baz=188,slow=32
SNAA **Sanae** 93.46 183 P P 02 43 53.7 -0.2
SNAA IAmb IAmb 02 43 55.8
comp=Z,14nm,0.9s
SNAA **Sanae** 93.46 183 P P 02 43 53.7 -0.2
SNAA pmax pmax
comp=Z,14nm,0.9s
VNA3 **Neumayer Olymp** 94.13 181 P P 02 43 55.7 -1.2
BOZ **Bozeman (W)** 94.38 44 IAmb IAmb 02 43 58.6
comp=Z,14nm,1.8s
BOZ **Bozeman (W)** 94.38 44 P P 02 43 58.5 -0.2
baz=253
VNA2 **Neumayer--Watz** 94.39 182 P P 02 43 57.2 -0.9
baz=168,slow=4.0
VNA1 **Neumayer--Stat** 94.69 182 P P 02 43 58.6 -0.9
DGZ **Jazzator, Alta** 94.70 320 *c* *i*P P 02 43 59.1 -1.0
DGZ pmax pmax
comp=Z,11nm,0.9s
PDAR **Pinedale Array** 95.03 47 P P 02 44 00.9 -0.9
comp=Z,0.2nm,0.3s,baz=232,slow=4.4,SNR=4.4
PDAR PP PP 02 47 51.5 -1.1
comp=Z,1.4nm,1.1s,baz=254,slow=6.5,SNR=4.0
PDAR PKKPbc **PKKPbc** 03 00 56.4 -1.6
comp=Z,0.1nm,0.5s,baz=84,slow=8.3,SNR=4.1
PDAR LR LR 03 18 39.6
comp=Z,88nm,21.9s,baz=266,slow=30
comp=Z,0.2nm,0.3s
O20A **White River Ci** 95.30 50 P P 02 44 03.0 -0.1
baz=255
ANMO **Albuquerque** 95.38 55 LR LR 03 20 26.5
comp=Z,134nm,19.8s,baz=262,slow=31
ANMO **Albuquerque** 95.38 55 P P 02 44 02.8 -0.8
ANMO **Albuquerque** 95.38 55 *ce*P P 02 44 01.7 -1.9
ANMO pmax pmax
comp=Z,3.0nm,1.1s
ANMO **Albuquerque** 95.38 55 P P 02 44 03.2 -0.4
baz=256
MNTX **Cornudas Mount** 95.47 59 P P 02 44 03.6 -0.2
baz=256
S22A **4UR Ranch, Cre** 95.77 53 P P 02 44 04.9 -0.5
baz=256
TXAR **Lajitas Array** 96.35 61 P P 02 44 07.7 -0.3
comp=Z,0.8nm,0.9s,baz=228,slow=6.0,SNR=6.9
TXAR PP PP 02 48 02.2 -0.8
comp=Z,3.0nm,1.2s,baz=246,slow=6.8,SNR=10.0
TXAR PKKPbc **PKKPbc** 03 00 53.0 -0.7
comp=Z,0.3nm,0.6s,baz=98,slow=4.6,SNR=2.6
TXAR LR LR 03 22 16.0
comp=Z,50nm,18.6s,baz=254,slow=32
comp=Z,0.8nm,0.9s
TXAR **Lajitas Array** 96.35 61 P P 02 44 07.2 -0.8
ISCO **Idaho Springs** 97.18 51 P P 02 44 11.3 -0.5
baz=257
N23A **Red Feather La** 97.19 50 P P 02 44 11.2 -0.5
baz=257
MK31 **Makanchi Array** 97.24 316 P Pdif 02 44 11.9 +0.4
MK31 IAmb IAmb 02 44 13.6
comp=Z,10.0nm,0.9s
MK31 **Makanchi Array** 97.24 316 *d* *i*P P 02 44 11.1 -0.4
MKAR **Makanchi Array** 97.24 316 P P 02 44 11.3 -0.1
comp=Z,9.7nm,0.7s,baz=100,slow=5.2,SNR=60
MKAR PKiKP **PKiKP** 02 48 46.3 -0.1
comp=Z,0.4nm,0.5s,baz=227,slow=0.8,SNR=4.3
MKAR LR LR 03 27 08.6
comp=Z,87nm,21.9s,baz=72,slow=35
comp=Z,9.7nm,0.7s
ZAA0 **Zalesovo Array** 97.44 324 P P 02 44 10.8 -1.3
ZALV **Zalesovo Beam** 97.44 324 P P 02 44 11.1 -1.1
comp=Z,11nm,0.8s,baz=110,slow=4.4,SNR=25
ZALV LR LR 03 26 42.4
comp=Z,64nm,21.8s,baz=92,slow=34
comp=Z,11nm,0.8s
MAKZ **Makanchi** 97.45 316 P P 02 44 11.9 -0.5
MAKZ IAmb IAmb 02 44 14.6
comp=Z,8.4nm,0.9s
MAKZ **Makanchi** 97.45 316 P P 02 44 11.9 -0.5
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
YKA **Yellowknife Ar** 97.64 27 P P 02 44 11.2 -1.6
comp=Z,6.0nm,1.1s,baz=252,slow=4.8,SNR=12
comp=Z,6.0nm,1.1s
NRIK **Noril'sk** 100.14 339 P Pdif 02 44 23.6 -0.3
comp=Z,13nm,1.0s,baz=112,slow=3.2,SNR=22
ARU **Arti** 112.54 325 *i* PKIKP **PKiKP** 02 49 14.1 -0.1
ARU 02 50 07.5
ARU 02 56 16.8
ARU SS SS 03 05 35.3 -0.1
KIRV **Kirov** 116.93 329 *i* PKIKP **PKiKP** 02 49 23.0 +0.5
PRGR **Permogore** 117.73 333 *e*PKIKP **PKPdf** 02 49 21.7 -2.3
LVZ **Lovozero** 118.87 341 *c* *i*PKIKP **PKPdf** 02 49 25.0 -1.1
LVZ pmax pmax
comp=Z,25nm,1.7s
BELG **Belogornoye** 119.58 322 *i* PKIKP **PKPdf** 02 49 27.2 -0.6
KEV **Kevo** 119.80 345 PKPdf **PKPdf** 02 49 27.1 -0.7
KEV **Kevo** 119.80 345 PKIKP **PKPdf** 02 49 27.1 -0.7
HAMF **Hammerfest** 119.93 347 *e*P **PKPdf** 02 49 27.7 -0.3
HAMF IAmb IAmb 02 49 28.8
comp=Z,11nm,0.6s
LONY **Lake Ozonia** 120.27 47 P **PKPdf** 02 49 29.0 -0.5
baz=279
SUMG **Summit** 120.32 9 PKPdf **PKPdf** 02 49 28.6 -0.6
SUMG **Summit** 120.32 9 PKIKP **PKPdf** 02 49 28.6 -0.6
SUMG **Summit** 120.32 9 *i*P **PKPdf** 02 49 28.0 -1.3
ARA0 **ARCESS Array S** 120.32 345 *e*P **PKPdf** 02 49 28.5 -0.3
ARA0 IAmb IAmb 02 49 29.6
comp=Z,17nm,0.5s
ARCES **ARCESS Array B** 120.32 345 PKP **PKPdf** 02 49 28.3 -0.5
comp=Z,10nm,0.4s,baz=54,slow=1.6,SNR=303
ARCES PKKPbc **PKKPab** 02 59 35.6 -1.1
comp=Z,1.4nm,0.9s,baz=202,slow=1.3,SNR=4.2
ARCES **ARCESS Array B** 120.32 345 PKIKP **PKPdf** 02 49 28.2 -0.6
ILULI **Ilulissat** 120.54 15 PKPdf **PKPdf** 02 49 28.5 -0.7
ILULI **Ilulissat** 120.54 15 PKIKP **PKPdf** 02 49 28.5 -0.7
KLMR **Klimovskoe** 120.74 333 *e*PKIKP **PKPdf** 02 49 26.3 -3.5
KLMR pmax pmax
comp=Z,43nm,1.2s
KLMR **Klimovskoe** 120.74 333 *e*PKPdf **PKPdf** 02 49 26.4 -3.4
KLMR AMP 02 49 31.5
comp=Z,43nm,1.2s
KTK1 **Kautokeino** 121.26 346 *e*P **PKPdf** 02 49 30.2 -0.5
KTK1 IAmb IAmb 02 49 30.8
comp=Z,8.2nm,0.6s
TRO **Tromso** 121.74 348 *e*P **PKPdf** 02 49 31.1 -0.4
TRO IAmb IAmb 02 49 31.5
comp=Z,31nm,1.2s
SCHQ **Schefferville** 122.39 34 PKKPbc PKKPbc 02 59 28.9 -1.5
comp=Z,1.6nm,0.6s,baz=144,slow=2.8,SNR=1.7
ICESG **Greenland Ices** 123.15 11 *i*P **PKPdf** 02 49 31.4 -3.3
BOSA **Boshof** 123.29 220 PKP **PKiKP** 02 49 36.2 0.0
comp=Z,9.6nm,0.9s,baz=138,slow=2.5,SNR=9.7
BOSA **Boshof** 123.29 220 PKPdf **PKPdf** 02 49 35.2 -0.8
VRH **Novokhopyorsk** 123.43 322 *e*PKIKP **PKPdf** 02 49 33.6 -1.7
VRH pmax pmax
comp=Z,20nm,0.6s
DY2G **Dye2** 123.81 15 *i*P **PKPdf** 02 49 34.4 -1.5
PKME **Peaks-Kenny Pk** 123.82 45 P **PKPdf** 02 49 35.6 -0.6
baz=284
F63A **Nahmakanta, Br** 123.85 45 **PKPdf** 02 49 35.2 -1.1
STEI **Steigen** 123.91 348 *e*P **PKPdf** 02 49 35.5 -0.2
STEI IAmb IAmb 02 49 36.0
comp=Z,37nm,1.1s
MOS **Moscow** 123.94 328 *i*PKIKP **PKPdf** 02 49 34.2 -1.9
MOS pmax pmax
comp=Z,45nm,1.2s
LOF **Lofoten** 124.08 348 *e*P **PKPdf** 02 49 35.4 -0.6
LOF IAmb IAmb 02 49 36.2
comp=Z,31nm,1.2s
GNI **Garni** 124.15 309 PKPdf **PKiKP** 02 49 38.1 +0.5
GNI **Garni** 124.15 309 *c* *i*PKIKP **PKiKP** 02 49 38.0 +0.5
GNI pmax pmax
comp=Z,5.0nm,0.7s
ZEI **Tsey** 124.28 312 *i*PKIKP **PKiKP** 02 49 38.0 +0.2
ZEI pmax pmax
comp=Z,7.0nm,0.9s
NCK **Nalchik** 124.34 313 *i*PKIKP **PKPdf** 02 49 37.0 -0.3
FAUS **Fauske** 124.36 347 *e*P **PKPdf** 02 49 36.6 0.0
FAUS IAmb IAmb 02 49 36.7
comp=Z,13nm,1.1s
LPSR **Galich'ya Gora** 124.54 324 *e*PKIKP **PKPdf** 02 49 35.4 -2.0
LPSR pmax pmax
comp=Z,50nm,1.2s
RAYN **Ar Rayn** 124.59 288 PKPdf **PKPdf** 02 49 37.6 -0.8
RAYN **Ar Rayn** 124.59 288 PKIKP **PKPdf** 02 49 37.6 -0.8
ONI **Oni** 124.64 312 PKPdf **PKiKP** 02 49 38.2 -0.1
ONI **Oni** 124.64 312 PKIKP **PKiKP** 02 49 38.2 -0.1
VORR **Voronezh** 124.74 323 *e*PKIKP **PKPdf** 02 49 37.2 -0.6
VORR pmax pmax
comp=Z,59nm,1.4s
OBN **Obninsk** 124.75 328 **PKPdf** 02 49 37.2 -0.5
OBN **Obninsk** 124.75 328 *e*PKIKP **PKPdf** 02 49 37.0 -0.7
OBN *e* 02 50 06.6
OBN *e*PPP PPP 02 54 07.8
OBN pmax pmax
comp=Z,23nm,1.1s
KBZ **Khabaz** 124.78 313 PKP **PKiKP** 02 49 39.1 +0.6
comp=Z,4.1nm,1.1s,baz=139,slow=1.5,SNR=5.3
KBZ **Khabaz** 124.78 313 *i*PKIKP **PKPdf** 02 49 37.3 -0.8
KIV **Kislovodsk** 124.88 314 *i*PKIKP **PKPdf** 02 49 38.6 +0.2
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,50nm,22.0s
VSR **Storozhevoye** 124.93 323 *e*PKIKP **PKPdf** 02 49 36.9 -1.3
VSR pmax pmax
comp=Z,30nm,1.3s
SHA1 **Shidzhatmaz** 124.95 313 *i*PKIKP **PKPdf** 02 49 38.5 -0.3
PTLB **Pontes e Lacer** 125.19 121 **PKPdf** 02 49 38.9 -0.8
BATG **Bathurst New B** 125.43 42 **PKPdf** 02 49 38.9 -0.4
MOR8 **Moi Rana** 125.56 347 *e*P **PKPdf** 02 49 38.5 -0.5
MOR8 IAmb IAmb 02 49 38.5
comp=Z,20nm,1.3s
KONS **Konsvik** 125.57 348 *e*P **PKiKP** 02 49 39.3 0.0
FINES **FINESS Array B** 125.79 338 PKP **PKPdf** 02 49 39.5 0.0
comp=Z,5.0nm,0.3s,baz=45,slow=2.2,SNR=63
FINES **FINESS Array B** 125.79 338 PKPdf **PKPdf** 02 49 39.0 -0.6
FINES **FINESS Array B** 125.79 338 *c* *i*PKIKP **PKPdf** 02 49 38.9 -0.6
FINES pmax pmax
comp=Z,5.0nm,0.3s

BCA	**Borcka**	**126.22 311**	⇑P	**PKiKP**	**02 49 42.1**	**+0.6**
SOC	**Sochi**	**127.05 314**	*i* PKIKP	**PKPdf**	**02 49 40.1**	**-2.4**
SOC			*e*		02 51 38.0	
SOC			*e*PPP	PPP	02 54 22.4	
SOC			*e*PS	**PS**	**03 01 43.0**	**-5.1**
SOC			*e*SS	SS	03 08 38.2	-4.3
SOC			*e*SSS	SSS	03 13 20.4	
MEF	**Metsahovi**	**127.22 338**	*e*P	**PKPdf**	**02 49 41.5**	**-0.7**
VSU	**Vasula**	**127.47 335**	*e*P	**PKPdf**	**02 49 41.5**	**-1.2**
NSS	**Namsos**	**127.51 347**	*e*P	**PKPdf**	**02 49 42.6**	**-0.1**
NSS			IAmb	IAmb	02 49 43.6	
	comp=Z,25nm,1.1s					
RAF	**Rauma**	**127.58 340**	*e*P	**PKPdf**	**02 49 41.9**	**-1.0**
MARD	**Mardin**	**127.70 306**	PKPdf	**PKPdf**	**02 49 43.8**	**-0.3**
KMBO	**Kilima Mbogo**	**128.05 257**	PKP	**PKiKP**	**02 49 46.6**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=117,slow=5.4,SNR=5.2					
KMBO	**Kilima Mbogo**	**128.05 257**	PKPdf	**PKPdf**	**02 49 45.7**	**+0.1**
KMBO	**Kilima Mbogo**	**128.05 257**	PKIKP	**PKPdf**	**02 49 45.7**	**+0.1**
ANN	**Anapa**	**128.26 316**	*i* PKIKP	**PKPdf**	**02 49 43.1**	**-1.6**
ANN			*e*		02 50 10.4	
ANN			*e*		02 56 39.9	
ANN			pmax	pmax		
	comp=Z,38nm,1.1s					
GBN	**Guysborough**	**129.02 43**		**PKPdf**	**02 49 45.3**	**-0.8**
MNK	**Minsk**	**129.37 331**	*i* PKIKP	**PKPdf**	**02 49 46.7**	**+0.2**
MNK			*i*		02 50 11.5	
MNK			*i*		02 51 55.8	
MNK			*i* PPP	PPP	02 54 46.1	
MNK			*i*		02 56 48.9	
MNK			*i* SS	SS	03 09 11.1	+1.0
MNK			pmax	pmax		
	comp=Z,18nm,1.1s					
MNK			pmax	pmax		
	comp=E,1.0nm,1.1s					
MNK			MLR	MLR		
	comp=E,9.0nm,17.0s					
MNK			MLR	MLR		
	comp=Z,59nm,17.0s					
MNK	**Minsk**	**129.37 331**	*i* PKP	**PKPdf**	**02 49 46.8**	**+0.2**
	comp=E,1.0nm,1.1s					
MNK			*i* PKP	**PKPdf**	**02 49 46.8**	**+0.2**
MNK			*i* PKP	**PKPdf**	**02 49 46.8**	**+0.2**
	comp=Z,18nm,1.1s,baz=54					
MNK			*i* pPKP	**pPKPdf**	**02 50 11.6**	**-1.5**
MNK			*i* PP	**PP**	**02 51 55.9**	**-0.7**
MNK			*i* PPP	PPP	02 54 46.2	
MNK			*i* SKS	**SKSdf**	**02 56 49.0**	**-0.2**
MNK			*i* SS	**SS**	**03 09 11.1**	**+1.0**
MNK			*i* SSS	SSS	03 13 49.3	
MNK			*i* LQ	LQ	03 34 56.5	
MNK			*i* LR	LR	03 46 05.1	
MNK			*i* LRM	MLR	03 45 19.4	
	comp=E,9.0nm,16.6s					
MNK			*i* LRM	MLR	03 45 22.0	
	comp=Z,59nm,16.6s					
IIGN	**Ignalina**	**129.64 332**	*e*P	**PKPdf**	**02 49 46.5**	**-0.5**
NACGM	**Naroch**	**129.65 331**	*i* PKP	**PKPdf**	**02 49 46.9**	**-0.1**
LSZ	**Lusaka**	**129.67 235**		**PKPdf**	**02 49 47.5**	**-1.0**
LSZ	**Lusaka**	**129.67 235**	PKIKP	**PKPdf**	**02 49 47.5**	**-1.0**
VSVD	**Vaisvydziai**	**130.24 334**	*e*P	**PKiKP**	**02 49 49.6**	**+0.7**
DOMB	**Dombas**	**130.33 347**	*e*P	**PKiKP**	**02 49 49.1**	**+0.1**
DOMB			IAmb	IAmb	02 49 49.2	
	comp=Z,21nm,1.2s					
NC303	**NORSAR Array S**	**130.50 345**	*e*P	**PKiKP**	**02 49 49.5**	**+0.1**
NC303			IAmb	IAmb	02 49 50.1	
	comp=Z,15nm,0.9s					
PABE	**Paberze**	**130.54 333**	*e*P	**PKPdf**	**02 49 47.7**	**-1.0**
AKN	**Aaknes**	**130.65 348**	*e*PKPdf	**PKiKP**	**02 49 50.8**	**+1.1**
AKN			IAmb	IAmb	02 49 50.9	
	comp=Z,21nm,1.0s					
NB2	**NORSAR Subarra**	**130.70 345**	PKPdf	**PKPdf**	**02 49 48.1**	**-0.9**
	comp=Z,20nm,1.4s,baz=31,slow=1.9					
NB2	**NORSAR Subarra**	**130.70 345**	PKPdf	**PKPdf**	**02 49 48.1**	**-0.9**
	baz=31,slow=1.9					
NOA	**NORSAR Array B**	**130.70 345**	PKP	**PKPdf**	**02 49 49.0**	**+0.1**
	comp=Z,6.1nm,0.9s,baz=35,slow=2.0,SNR=16					
NOA			PP	**PP**	**02 52 07.3**	**+2.5**
	comp=Z,2.6nm,1.0s,baz=31,slow=5.2,SNR=5.0					
NOA			SKPbc	**SKPab**	**02 53 05.3**	**+1.1**
	comp=Z,7.7nm,1.0s,baz=30,slow=3.2,SNR=17					
AKASG	**Malin Array Be**	**130.78 326**	PKP	**PKPdf**	**02 49 49.5**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=50,slow=2.5,SNR=29					
AKASG			SKPbc	**SKPab**	**02 53 05.6**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=45,slow=4.8,SNR=14					
AKASG	**Malin Array Be**	**130.78 326***c*	*i* PKIKP	**PKPdf**	**02 49 49.0**	**-0.3**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.3s					
AKBB	**Malin Array Si**	**130.78 326**	PKPdf	**PKPdf**	**02 49 49.1**	**-0.2**
AKBB	**Malin Array Si**	**130.78 326**	*i* PKIKP	**PKPdf**	**02 49 49.1**	**-0.2**
PBUR	**Paburge**	**131.05 335**	*e*P	**PKiKP**	**02 49 50.7**	**+0.1**
BOAV	**Boa Vista**	**131.32 100**	PKPdf	**PKPdf**	**02 49 49.8**	**-1.7**
SKAR	**Skarslia**	**131.71 346**	*e*P	**PKiKP**	**02 49 52.8**	**+0.9**
BRTR	**Keskin Array B**	**132.54 311**	PKP	**PKPdf**	**02 49 53.7**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=136,slow=3.2,SNR=14					
BRTR			PP	**PP**	**02 52 17.2**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=110,slow=5.0,SNR=5.3					
BRTR			SKPbc	**SKPab**	**02 53 12.9**	**0.0**
	comp=Z,2.0nm,0.8s,baz=123,slow=4.8,SNR=7.9					
SORM	**Soroca**	**132.59 323**	⇓P	**PKPdf**	**02 49 52.2**	**-0.6**
SORM	**Soroca**	**132.59 323**	⇓PKIKP	**PKPdf**	**02 49 52.2**	**-0.6**
MILM	**Milestii Mici**	**132.92 322**	⇓P	**PKPdf**	**02 49 52.9**	**-0.6**
MILM	**Milestii Mici**	**132.92 322**	⇓PKIKP	**PKPdf**	**02 49 52.9**	**-0.6**
BDFB	**Brasilia**	**133.86 130**	SKPbc	**SKPbc**	**02 53 17.9**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=271,slow=7.9,SNR=4.9					
CSS	**Mathiatis**	**134.09 305**		**PKPdf**	**02 49 55.4**	**-0.8**
CFR	**Carcaliu**	**134.16 320**	⇑P	**PKPdf**	**02 49 56.1**	**+0.2**
CFR	**Carcaliu**	**134.16 320**	⇑PKIKP	**PKPdf**	**02 49 56.1**	**+0.2**
TESR	**Tescani**	**134.41 322**	⇑P	**PKPdf**	**02 49 55.6**	**-0.7**
BIZ	**Bicaz**	**134.51 323**	⇑P	**PKPdf**	**02 49 54.3**	**-2.2**
BURAR	**Bucovina Array**	**134.66 324**	⇑P	**PKiKP**	**02 49 58.2**	**-0.1**
BURAR	**Bucovina Array**	**134.66 324**	PKPdf	**PKiKP**	**02 49 57.9**	**-0.5**
BURAR	**Bucovina Array**	**134.66 324**	⇑PKIKP	**PKiKP**	**02 49 58.2**	**-0.1**
TSUM	**Tsumeb**	**134.88 222**		**PKPdf**	**02 49 57.2**	**-1.0**
MUD	**Monsted U'grnd**	**135.19 343**	*e*P	**PKPdf**	**02 49 57.3**	**-0.1**
MLR	**Muntele Rosu**	**135.35 321**	⇑P	**PKPdf**	**02 49 58.0**	**-0.3**
MLR	**Muntele Rosu**	**135.35 321**	⇑PKIKP	**PKPdf**	**02 49 58.0**	**-0.3**
UZH	**Uzhgorod**	**135.67 327**	*e*PKHKP	PKPpre	02 49 39.1	
UZH			*i*		02 49 58.0	
CRVS	**Cervenica-Dubn**	**135.94 328**	*e*PKIKP	**PKiKP**	**02 50 00.3**	**-0.5**
CRVS	**Cervenica-Dubn**	**135.94 328**	*e*PKP	**PKiKP**	**02 50 00.3**	**-0.5**
CJR	**Cluj-Napoca**	**136.08 324**	⇑P	**PKPdf**	**02 49 59.1**	**-0.4**
CJR	**Cluj-Napoca**	**136.08 324**	⇑PKIKP	**PKPdf**	**02 49 59.1**	**-0.4**
MESR	**Meseseni**	**136.19 325**	⇓P	**PKiKP**	**02 50 01.1**	**-0.3**
ARR	**Arges**	**136.21 322**	⇑P	**PKPdf**	**02 49 58.6**	**-1.3**
DRGR		**136.53 325**	⇑P	**PKPdf**	**02 49 59.5**	**-0.9**
DRGR		**136.53 325**	⇑PKIKP	**PKPdf**	**02 49 59.5**	**-0.9**
LTVH	**Ltavrtes, Hu**	**136.63 326**	PKP	**PKiKP**	**02 50 03.4**	**+1.2**
LANS	**Liptovska Anna**	**136.78 329**	*e*PKIKP	**PKiKP**	**02 50 02.4**	**-0.1**
LANS	**Liptovska Anna**	**136.78 329**	*e*PKP	**PKiKP**	**02 50 02.4**	**-0.1**
MORC	**Moravsky Berou**	**137.29 331**	⇑P	**PKPdf**	**02 50 01.9**	**+0.3**
MORC	**Moravsky Berou**	**137.29 331**	*e*PKP	**PKPdf**	**02 50 01.5**	**-0.2**
GZR	**Gura Zlata**	**137.29 323**	⇑P	**PKPdf**	**02 49 60.0**	**-1.8**
GZR	**Gura Zlata**	**137.29 323**	⇑PKIKP	**PKPdf**	**02 50 00.0**	**-1.8**
OSTC	**Ostas**	**137.34 333**	*e*PKPpre	PKPpre	02 49 53.1	
OSTC			*e*PKPDF	**PKPdf**	**02 50 02.4**	**+0.7**
PSZ	**Piszkesteto**	**137.37 328**	⇑P	**PKiKP**	**02 50 03.7**	**-0.1**
PSZ	**Piszkesteto**	**137.37 328**	PKP	**PKiKP**	**02 50 03.3**	**-0.5**
PSZ	**Piszkesteto**	**137.37 328**	PKP	**PKiKP**	**02 50 03.3**	**-0.5**
KRLC	**Kraliky**	**137.43 332**	*e*PKIKP	**PKPdf**	**02 49 55.3**	**-6.6**
KRLC	**Kraliky**	**137.43 332**	*e*PKPpre	PKPpre	02 49 55.3	
KRLC			*e*PKPDF	**PKPdf**	**02 50 02.5**	**+0.6**
SIRR	**Siria**	**137.43 325**	⇑P	**PKPdf**	**02 50 02.0**	**0.0**
DPC	**Dobruska-Polom**	**137.44 333**	*e*PKHKP	PKPpre	02 49 51.2	
DPC			*e*		02 50 02.3	
DPC			MLR	MLR		
	comp=Z,3μm,21.1s					
DPC	**Dobruska-Polom**	**137.44 333**	*e*PKPpre	PKPpre	02 49 51.2	
DPC			*e*PKPDF	**PKPdf**	**02 50 02.3**	**+0.4**
VYHS	**Vyhne**	**137.53 329**	*e*PKIKP	**PKPdf**	**02 50 02.8**	**+0.7**
VYHS	**Vyhne**	**137.53 329**	*e*PKP	**PKPdf**	**02 50 02.8**	**+0.7**
BSZH	**Besenyszg**	**137.56 327**	PKP	**PKPdf**	**02 49 57.6**	**-4.5**
HERR	**Herculane**	**137.79 322**	⇓P	**PKPdf**	**02 50 00.0**	**-2.7**
BZS	**Buzias**	**137.83 324**	⇑P	**PKPdf**	**02 50 01.5**	**-1.3**
JAVC	**Velka Javorina**	**137.86 330**	*e*PKP	**PKPdf**	**02 50 02.8**	**0.0**
VRAC	**Vranov**	**138.06 331**	*e*PKP	**PKPdf**	**02 50 03.4**	**+0.3**
PVCC	**Panska Ves**	**138.07 334**	*e*PKIKP	**PKPdf**	**02 50 03.9**	**+0.9**
PVCC			MLR	MLR		
	comp=Z,6μm,20.5s					
PVCC	**Panska Ves**	**138.07 334**	*e*PKPDF	**PKPdf**	**02 50 03.9**	**+0.9**
BRG	**Berggiesshubel**	**138.07 335**	*e*PKP	PKPdf	02 49 54.2	-8.8
BRG			Amp		02 49 57.6	
	comp=Z,4.1nm,1.0s					
BRG			*ex*	x	02 50 04.1	
BRG			Amp		02 50 06.7	
	comp=Z,17nm,1.0s					
BRG	**Berggiesshubel**	**138.07 335**	*e*PKHKP	PKPpre	02 49 54.2	
BRG			*e*		02 50 04.1	
BRG			pmax	pmax		
	comp=Z,4.0nm,1.0s					
BRG			pmax	pmax		
	comp=Z,17nm,1.0s					
CLL	**Collm**	**138.12 336**	*i* PKIKP	**PKPdf**	**02 50 03.2**	**+0.1**
CLL			pmax	pmax		
	comp=Z,26nm,1.4s					
CLL	**Collm**	**138.12 336**	*e*PKPpre	PKPpre	02 49 54.0	
CLL			*i* PKPdf	**PKPdf**	**02 50 03.2**	**+0.1**
	comp=Z,26nm,1.4s					
CLL			*i* x	x	02 50 12.9	
	comp=Z,9.0nm,1.1s					
CLL			*e*PP	**PP**	**02 52 53.0**	**+1.0**
CLL			*e*PKSbc	**PKSbc**	**02 53 38.0**	**-0.4**
CLL			*e*PPS	PPS	03 05 18.0	
CLL			*e*SS	SS	03 10 48.0	-7.2
CLL			*e*SSS	SSS	03 16 06.0	
SMOL	**Smolenice**	**138.21 330**	*e*PKIKP	**PKPdf**	**02 50 04.1**	**+0.7**
MDVR	**Moldovita**	**138.26 323**	⇓P	**PKPdf**	**02 50 03.4**	**-0.2**
BLKB	**Belogradchik**	**138.32 321**	⇑P	**PKPdf**	**02 50 03.0**	**-0.7**
KRUC	**Moravsky**	**138.32 331**	*e*PKP	**PKPdf**	**02 50 03.1**	**-0.4**
MODS	**Modra-Piesok**	**138.38 330**	*e*PKIKP	**PKPdf**	**02 50 03.5**	**-0.2**
MODS	**Modra-Piesok**	**138.38 330**	*e*PKP	**PKPdf**	**02 50 03.4**	**-0.2**
PRU	**Pruhonice**	**138.48 333**	*e*PKIKP	**PKPdf**	**02 50 00.6**	**-3.2**
PRU			MLR	MLR		
	comp=Z,6μm,20.0s					
PRU	**Pruhonice**	**138.48 333**	*e*PKPpre	PKPpre	02 50 00.6	
PRU			*e*PKPDF	**PKPdf**	**02 50 04.4**	**+0.6**
VTS	**Vitosha**	**138.50 319**	⇓P	**PKPdf**	**02 50 04.7**	**+0.4**
ZST	**Bratislava**	**138.59 330**	*e*PKIKP	**PKPdf**	**02 50 04.6**	**+0.6**
ZST	**Bratislava**	**138.59 330**	*e*PKP	**PKPdf**	**02 50 04.6**	**+0.6**
BOVS	**Bovan**	**138.91 321**	⇑P	**PKPdf**	**02 50 04.2**	**-0.6**
MPLH	**Magyarpolny**	**139.06 328**	PKP	**PKPdf**	**02 50 06.0**	**+1.1**
MORH	**Mrgy, Hungar**	**139.11 326**	⇑P	**PKiKP**	**02 50 06.2**	**-1.1**
MORH	**Mrgy, Hungar**	**139.11 326**	PKP	**PKPdf**	**02 50 01.0**	**-4.0**
FRGS	**Fruska Gora**	**139.13 324**	⇑P	**PKPdf**	**02 50 05.1**	**-0.1**
SOP	**Sopron**	**139.21 330**	PKP	**PKiKP**	**02 50 06.6**	**-0.8**
RONA	**Rosalia, Austr**	**139.32 330**	*e*P	**PKPdf**	**02 50 01.0**	**-4.5**
	comp=Z,18nm,1.5s					
CONA	**Conrad Observa**	**139.37 330**	*e*P	**PKPdf**	**02 50 00.7**	**-4.9**
	comp=Z,20nm,1.6s,SNR=9.7					
CKRC	**Cesky Krumlov**	**139.45 332**	*e*PKPpre	PKPpre	02 49 58.6	
CKRC			*e*PKPDF	**PKPdf**	**02 50 06.2**	**+0.6**
KOVH	**Kovagotottos**	**139.48 327**	PKP	**PKPdf**	**02 49 59.5**	**-6.2**
KHC	**Kasperske Hory**	**139.54 333**	*e*PKIKP	**PKPdf**	**02 50 00.1**	**-5.7**
KHC			*e*		02 53 02.0	
KHC			*e*		03 03 16.0	
KHC			MLR	MLR		
	comp=Z,6μm,21.4s					
KHC	**Kasperske Hory**	**139.54 333**	*e*PKPpre	PKPpre	02 50 00.1	
KHC			*e*PKPDF	**PKPdf**	**02 50 06.7**	**+0.9**
KHC			*ex*	x	02 53 02.0	
GEC2	**GERESS Array S**	**139.70 333**	PKPdf	**PKPdf**	**02 50 06.0**	**-0.2**
GERES	**GERESS Array B**	**139.70 333**	PKhKP	PKPpre	02 49 58.5	
	comp=Z,0.6nm,0.4s,baz=41,slow=3.9,SNR=14					
GERES			PKP	**PKPdf**	**02 50 06.2**	**0.0**
	comp=Z,4.4nm,0.8s,baz=58,slow=6.1,SNR=15					
GERES			SKPbc	**SKPbc**	**02 53 33.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=134,slow=5.8,SNR=4.2					
GERES			SKPab	**SKPab**	**02 53 42.8**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=107,slow=1.4,SNR=4.3					
MOA	**Molln**	**140.18 331**	*e*P	**PKPdf**	**02 50 02.0**	**-5.0**
	comp=Z,7.8nm,1.2s					
KALN	**Kalnik**	**140.32 328**	*i* P	**PKPdf**	**02 50 06.3**	**-0.9**
MOSL	**Moslavina**	**140.51 327**	*i* P	**PKPdf**	**02 50 07.3**	**-0.4**
BIOA	**Bad Ischl, Aus**	**140.59 332**	*e*P	**PKPdf**	**02 50 03.1**	**-4.7**
	comp=Z,12nm,1.3s					
SOKA	**Soboth**	**140.65 330**	*e*P	**PKPdf**	**02 50 03.6**	**-4.4**
	comp=Z,12nm,1.2s					
KBA	**Koelnbreinsper**	**141.17 331**	*e*P	**PKPdf**	**02 50 04.5**	**-4.5**
	comp=Z,12nm,0.9s					
BTNL	**Ternell**	**141.18 341**	*d*PKiKP	**PKiKP**	**02 50 11.8**	**+0.4**
LJU	**Ljubljana**	**141.35 329**	*e*PKPdf	**PKPdf**	**02 50 05.0**	**-4.2**
BSTI	**Sart Tilman**	**141.35 341**	*d*PKiKP	**PKiKP**	**02 50 10.8**	**-0.9**
MYKA	**Terra Mystica**	**141.36 331**	*e*P	**PKPdf**	**02 50 05.1**	**-4.1**
	comp=Z,13nm,1.5s					
BOJS	**Bojanci**	**141.36 328**	*i* PKPdf	**PKPdf**	**02 50 05.2**	**-4.0**
BHOU	**Houvegnez**	**141.42 341**	*d*PKPdf	**PKPdf**	**02 50 09.9**	**+0.8**
STU	**Stuttgart**	**141.62 337**		**PKPdf**	**02 50 08.8**	**-0.7**
STU	**Stuttgart**	**141.62 337**	PKIKP	**PKPdf**	**02 50 08.8**	**-0.7**
RICI	**Ricice**	**141.67 324**	*i* P	**PKPdf**	**02 50 05.2**	**-4.6**
STON	**Ston**	**141.73 323**	*i* P	**PKPdf**	**02 50 04.1**	**-5.7**
UDBI	**Udbina**	**141.75 327**	*i* P	**PKPdf**	**02 50 04.8**	**-5.2**
WATA	**Walderalm**	**141.78 333**	*e*P	**PKPdf**	**02 50 05.6**	**-4.5**
	comp=Z,16nm,1.3s,SNR=9.2					
ABTA	**Abfaltersbach**	**141.80 332**	*e*P	**PKPdf**	**02 50 05.4**	**-4.6**
	comp=Z,31nm,1.2s					
WTTA	**Wattenberg**	**141.81 333**	*e*P	**PKPdf**	**02 50 05.5**	**-4.6**
	comp=Z,29nm,1.5s,SNR=9.9					
RCHB	**Rochefort**	**141.84 341**	*d*PKPdf	**PKPdf**	**02 50 10.2**	**+0.4**
RCHB			*d*PKiKP	**PKiKP**	**02 50 12.9**	**+0.2**
BMRD	**Maredsous**	**141.85 342**	*d*PKPdf	**PKPdf**	**02 50 10.1**	**+0.3**
MOTA	**Moosalm**	**141.97 333**	*e*P	**PKPdf**	**02 50 06.3**	**-4.1**
	comp=Z,37nm,1.3s,SNR=16					
RETA	**Reutte**	**142.01 334**	*e*P	**PKPdf**	**02 50 06.3**	**-4.0**
	comp=Z,27nm,1.3s,SNR=7.7					
SQTA	**Sankt Quirin**	**142.03 333**	*e*P	**PKPdf**	**02 50 06.4**	**-4.0**
	comp=Z,35nm,1.3s,SNR=16					
DOU	**Dourbes**	**142.08 342**	*d*PKPdf	**PKPdf**	**02 50 09.7**	**-0.5**
MORI	**Morici**	**142.22 326**	*i* P	**PKPdf**	**02 50 05.7**	**-5.0**
BFO	**Black Forest**	**142.32 337**	PKPdf	**PKPdf**	**02 50 08.3**	**-2.5**
BFO	**Black Forest**	**142.32 337**	PKIKP	**PKPdf**	**02 50 08.3**	**-2.5**
FETA	**Feichten**	**142.39 333**	*e*P	**PKPdf**	**02 50 07.4**	**-3.8**
	comp=Z,35nm,1.2s,SNR=18					
DAVA	**Damuels**	**142.54 334**	*e*P	**PKPdf**	**02 50 08.2**	**-3.2**
	comp=Z,22nm,1.0s,SNR=12					
FUORN	**Ofenpass-Fuorn**	**142.90 333**	PKPdf	**PKPdf**	**02 50 10.4**	**-1.8**
MATE	**Matera**	**143.66 321**	⇑P	PKPbc	02 50 11.2	+0.2
PRMA	**PARMA**	**144.31 331**		**PKPdf**	**02 50 14.0**	**-0.4**
TIP	**Timpagrande**	**144.49 319**	PKPdf	PKPbc	02 50 13.9	+0.2
LATE	**Laterza**	**145.16 328**		**PKPbc**	**02 50 15.4**	**-0.3**
CEL	**Celeste**	**145.57 318**	PKPbc	**PKPbc**	**02 50 17.2**	**0.0**
SSB	**Saint Sauveur**	**146.29 338**	PKPbc	**PKPab**	**02 50 20.0**	**0.0**
SSB	**Saint Sauveur**	**146.29 338**	PKP2	**PKPab**	**02 50 20.0**	**0.0**
RAFF	**Raffo Rosso**	**147.16 318**		**PKPbc**	**02 50 22.3**	**+0.4**
KEST	**Kesra**	**151.25 320**	PKPbc	**PKPbc**	**02 50 32.5**	**+0.2**
	comp=Z,21nm,0.4s,baz=151,slow=7.7,SNR=146					
PBRG	**Braganca**	**152.60 350**	*e*PKPbc	**PKiKP**	**02 50 35.4**	**+0.1**
PBRG	**Braganca**	**152.60 350**	*e*PKPab	**PKPab**	**02 50 46.7**	**+0.9**
PGAV	**Gavieira, Arco**	**152.67 353**	*e*PKPbc	**PKiKP**	**02 50 35.8**	**+0.3**
POLO	**Lamas de Olo**	**153.19 352**	*e*PKPbc	**PKiKP**	**02 50 36.9**	**+0.3**
POLO	**Lamas de Olo**	**153.19 352**	*e*PKPab	**PKPab**	**02 50 49.5**	**+1.2**
PVRL	**Vila Real**	**153.27 352**	*e*PKPbc	**PKiKP**	**02 50 37.2**	**+0.5**
PVRL	**Vila Real**	**153.27 352**	*e*PKPab	**PKPab**	**02 50 49.6**	**+1.0**
MVO	**Moncorvo**	**153.28 350**	*e*PKPbc	**PKiKP**	**02 50 37.5**	**+0.8**
PTO	**Porto**	**153.52 353**	*e*PKPbc	**PKiKP**	**02 50 37.8**	**+0.7**
PVIS	**Viseu**	**153.85 352**	*e*PKPbc	**PKiKP**	**02 50 38.3**	**+0.4**
PVIS	**Viseu**	**153.85 352**	*e*PKPab	**PKPab**	**02 50 52.4**	**+1.3**
ESDC	**Sonseca Array**	**154.06 344**	PKP	**PKPdf**	**02 50 30.2**	**0.0**
	comp=Z,2.2nm,1.1s,baz=344,slow=4.9,SNR=7.4					
ESDC			PKPbc	**PKiKP**	**02 50 39.0**	**+0.6**
	comp=Z,6.5nm,1.1s,baz=5.2,slow=2.6,SNR=18					
ESDC			PKPab	**PKPab**	**02 50 52.6**	**+0.6**
	comp=Z,16nm,1.0s,baz=4.0,slow=5.4,SNR=22					
ESDC			PP	**PP**	**02 54 22.2**	**-3.8**
	comp=Z,4.3nm,1.1s,baz=12,slow=6.3,SNR=7.5					
MTE	**Manteigas**	**154.10 351**		**PKPdf**	**02 50 29.0**	**-1.2**
MTE	**Manteigas**	**154.10 351**	*e*PKPbc	**PKiKP**	**02 50 39.0**	**+0.6**
MTE	**Manteigas**	**154.10 351**	*e*PKPab	**PKPab**	**02 50 53.2**	**+1.0**
COI	**Coimbra**	**154.41 352**	*e*PKPab	**PKPab**	**02 50 54.5**	**+1.1**
PCAS	**Casmilo, Conde**	**154.58 352**	*e*PKPab	**PKPab**	**02 50 55.0**	**+0.9**
PCBR	**Castelo Branco**	**154.64 350**	*e*PKPbc	**PKiKP**	**02 50 40.1**	**+0.6**
PCBR	**Castelo Branco**	**154.64 350**	*e*PKPab	**PKPab**	**02 50 55.3**	**+0.9**
PMRV	**Marv??o**	**155.03 350**	*e*PKPbc	PKPdf	02 50 40.9	+9.4
PSBE	**So Bento**	**155.15 353**	*e*PKPab	**PKPab**	**02 50 58.0**	**+1.4**
PMTG	**Montargil**	**155.51 351**	*e*PKPab	**PKPab**	**02 50 57.9**	**-0.2**
PESTR	**Estremoz**	**155.61 350**	*e*PKPab	**PKPab**	**02 50 59.1**	**+0.5**
EVO	**Evora**	**156.00 351**	*e*PKPab	**PKPab**	**02 51 01.0**	**+0.8**
PBAR	**Barrancos**	**156.19 349**	*e*PKPab	**PKPab**	**02 51 01.9**	**+0.9**
PBEJ	**Beja**	**156.47 350**	*e*PKPab	**PKPab**	**02 51 03.6**	**+1.3**
PNCL	**Nicolau / Gran**	**156.49 352**	*e*PKPab	**PKPab**	**02 51 03.8**	**+1.5**
MESJ	**Messejana**	**156.71 351**	*e*PKPab	**PKPab**	**02 51 04.4**	**+1.1**
PCVE	**Castro Verde**	**156.89 350**	*e*PKPab	**PKPab**	**02 51 05.3**	**+1.2**
PVAQ	**Vaqueiros**	**157.06 350**	PKPdf	**PKPdf**	**02 50 33.8**	**-0.4**
PVAQ				**PKPab**	**02 51 04.3**	**-0.5**
PVAQ	**Vaqueiros**	**157.06 350**	*e*PKPab	**PKPab**	**02 51 05.4**	**+0.6**
PTEO	**Sao Teotonio**	**157.08 352**	*e*PKPab	**PKPab**	**02 51 06.4**	**+1.5**
MORF	**Marmelete**	**157.30 351**	*e*PKPab	**PKPab**	**02 51 06.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**165.87 265**	PKP	**PKPdf**	**02 50 43.7**	**-0.3**
	comp=Z,5.3nm,1.0s,baz=22,slow=1.3,SNR=18					
TORD			PKPab	**PKPab**	**02 51 44.1**	**-0.1**
	comp=Z,9.1nm,0.9s,baz=86,slow=3.0,SNR=14					
DBIC	**Dimbokro**	**168.78 225**	PKP	**PKPdf**	**02 50 45.5**	**-0.7**
	comp=Z,5.2nm,0.7s,baz=236,slow=3.6,SNR=10					

IDC 21 *02:40:16.8±1.6,* **55°.51S×32°.09W,h0km,mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=84.0km s-min=31.6km az=62.0, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**34.45**	**317**	P	P	02 47 05.2	-0.8
	1.4nm,0.6s,baz=143,slow=5.1,SNR=2.2						
	1.4nm,0.6s						
VNDA	**Vanda**	**46.95**	**184**	P	P	02 48 48.4	-0.2
	0.4nm,0.8s,baz=204,slow=4.8,SNR=2.1						
	0.4nm,0.8s						
LPAZ	**La Paz**	**47.86**	**310**	P	P	02 48 57.4	+0.3
	1.6nm,0.6s,baz=149,slow=6.6,SNR=9.0						
	1.6nm,0.6s						
H10S2	**ASCENSION HYDR**	**48.44**	**23**	T	T	03 41 04.2	
	baz=195						
H10S3	**ASCENSION HYDR**	**48.44**	**23**	T	T	03 41 04.0	
	baz=25						
H10N3	**ASCENSION HYDR**	**49.56**	**23**	T	T	03 42 31.4	
	baz=192,slow=74						
H10N1	**ASCENSION HYDR**	**49.56**	**23**	T	T	03 42 33.1	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**49.57**	**23**	T	T	03 42 32.5	
	baz=192						
**

comp=Z,2.1nm,0.9s
CPUP Villa Florida 34.72 315 P **P** 02 54 53.4 -0.1
comp=Z,17nm,0.9s,baz=151,slow=7.3,SNR=14
comp=Z,17nm,0.9s
CPUP Villa Florida 34.72 315 P **P** 02 54 53.3 -0.3
CPUP IAmb IAmb 02 54 55.0
comp=Z,38nm,1.4s
QSPA South Pole Qui 35.02 180 P **P** 02 54 58.2 +2.1
comp=Z,12nm,0.9s,baz=191,slow=3.6,SNR=11
comp=Z,12nm,0.9s
QSPA South Pole Qui 35.02 180 P **P** 02 54 56.6 +0.5
QSPA IAmb IAmb 02 55 00.0
comp=Z,17nm,1.0s
VA06 Catapilco 36.15 292 P **P** 02 55 06.1 +0.3
CO03 El Pedregal 37.18 294 P **P** 02 55 15.4 +0.7
GO02 Mina Guanaco 41.25 301 P **P** 02 55 49.5 +0.5
GO02 IAmb IAmb 02 55 50.8
comp=Z,20nm,0.7s
LVC Limon Verde 43.08 304 P **P** 02 56 04.5 +0.4
LVC IAmb IAmb 02 56 06.1
comp=Z,31nm,1.4s
PB01 IPOC Station P 44.69 304 P **P** 02 56 16.4 -0.2
PB01 IAmb IAmb 02 56 20.5
comp=Z,22nm,1.0s
PTLB Pontes e Lacer 45.28 320 P **P** 02 56 21.6 +0.3
PTLB IAmb IAmb 02 56 22.1
comp=Z,16nm,0.9s
VNDA Vanda 47.27 184 P **P** 02 56 38.0 +1.7
comp=Z,4.0nm,0.9s,baz=196,slow=8.2,SNR=12
comp=Z,4.0nm,0.9s
VNDA Vanda 47.27 184 P **P** 02 56 37.1 +0.8
BOSA Boshof 47.87 80 P **P** 02 56 40.4 -1.3
comp=Z,7.3nm,1.1s,baz=213,slow=8.1,SNR=5.0
comp=Z,7.3nm,1.1s
H10S2 ASCENSION HYDR 47.93 22 T T 03 48 28.3
baz=28,slow=74,SNR=14
H10S3 ASCENSION HYDR 47.93 22 T T 03 48 31.8
baz=192,slow=74,SNR=33
VILB Vilhena 47.96 320 P **P** 02 56 42.4 0.0
VILB IAmb IAmb 02 56 43.0
comp=Z,20nm,0.9s
LPAZ La Paz 48.20 309 P **P** 02 56 46.0 +1.1
comp=Z,9.3nm,0.6s,baz=122,slow=3.6,SNR=20
comp=Z,9.3nm,0.6s
LPAZ La Paz 48.20 309 P **P** 02 56 45.6 +0.7
H10N1 ASCENSION HYDR 49.05 22 T T 03 49 50.0
baz=192,slow=75,SNR=38
H10N3 ASCENSION HYDR 49.05 22 T T 03 49 51.8
baz=192,slow=75,SNR=62
H10N2 ASCENSION HYDR 49.06 22 T T 03 49 45.7
baz=192,slow=75,SNR=70
LBTB Lobatse 50.84 77 P **P** 02 57 03.8 -0.6
comp=Z,4.7nm,0.9s,baz=193,slow=5.4,SNR=3.7
comp=Z,4.7nm,0.9s
ETMB Extrema 53.16 315 P **P** 02 57 20.8 -0.9
ETMB IAmb IAmb 02 57 23.2
comp=Z,20nm,1.5s
MACA Manacapuru-AM 57.22 324 P **P** 02 57 49.8 -1.1
MACA IAmb IAmb 02 57 50.5
comp=Z,30nm,1.4s
ATAH Atahualpa 60.97 303 P **P** 02 58 18.4 +1.0
comp=Z,6.7nm,1.0s,baz=139,slow=9.8,SNR=1.9
comp=Z,6.7nm,1.0s
BOAV Boa Vista 62.38 326 P **P** 02 58 26.1 -0.4
BOAV IAmb IAmb 02 58 26.4
comp=Z,9.2nm,1.0s
ARNL Arenillas 64.89 304 P **P** 02 58 43.9 +0.9
COHC Cochancay 65.45 305 P **P** 02 58 47.3 +0.7
CHSH Refugio Sur-Vo 66.13 306 P **P** 02 58 51.7 0.0
CHSH IAmb IAmb 02 58 54.0
comp=Z,15nm,1.2s
OTAV Otavalo 67.46 307 P **P** 02 59 01.0 +0.9
OTAV IAmb IAmb 02 59 03.8
comp=Z,10nm,1.2s
BAUV El Baul 71.06 321 P **P** 02 59 21.1 -0.7
SDV Santo Domingo 71.97 318 P **P** 02 59 27.3 -0.1
SDV IAmb IAmb 02 59 31.0
comp=Z,7.6nm,0.7s
TOA0 Torodi Ar. Sit 73.46 33 P **P** 02 59 37.1 +1.1
TOA0 IAmb IAmb 02 59 55.8
comp=Z,11nm,1.4s
TORD Torodi Ar. Bea 73.46 33 P **P** 02 59 35.7 -0.3
comp=Z,3.3nm,0.8s,baz=203,slow=6.2,SNR=7.0
comp=Z,3.3nm,0.8s
TORD Torodi Ar. Bea 73.46 33 P **P** 02 59 35.8 -0.3
NVAR Mina Array Bea 119.14 296 PKP **PKiKP** 03 06 53.2 +0.9
comp=Z,0.3nm,0.6s,baz=164,slow=3.6,SNR=2.8
BMO Blue Mountains 123.40 302 **PKPdf** 03 06 59.9 -0.2
G08A Pilot Rock 124.53 301 **PKPdf** 03 07 02.4 +0.1
FINES FINESS Array B 124.68 29 PKPdf **PKPdf** 03 07 01.4 -0.5
comp=Z,0.8nm,0.5s,baz=207,slow=0.6,SNR=4.9
FINES FINESS Array B 124.68 29 PKPdf **PKiKP** 03 07 03.5 +1.4
CMAR Chiang Mai Arr 127.33 114 PKP **PKPdf** 03 07 08.2 -0.1
comp=Z,1.7nm,0.3s,baz=228,slow=4.1,SNR=4.2
ABKAR Akbulak array 128.67 57 PKPdf **PKPdf** 03 07 09.6 -0.3
ARCES ARCESS Array B 130.99 23 PKP **PKPdf** 03 07 13.4 -0.3
comp=Z,1.3nm,0.8s,baz=208,slow=3.7,SNR=5.1
YKA Yellowknife Ar 134.17 320 PKP **PKPdf** 03 07 18.5 -1.3
comp=Z,0.7nm,0.7s,baz=128,slow=3.3,SNR=3.6
ZALV Zalesovo Beam 143.92 65 PKP PKPbc 03 07 35.8 +0.1
comp=Z,0.9nm,0.5s,baz=238,slow=4.9,SNR=3.9
CTGM Chitina Glacie 144.39 308 PKPdf PKPbc 03 07 37.8 +0.5
TGL Tana Glacier 144.99 307 **PKPdf** 03 07 39.9 +0.2
M27K Edge Creek, AK 145.15 310 **PKPbc** 03 07 39.8 +0.1
L27K Beaver Creek, 145.37 312 **PKPbc** 03 07 39.9 -0.3
BMRM Bremner River 145.88 307 **PKPbc** 03 07 41.9 +0.1
PAX Paxson 146.92 310 PKPbc **PKPbc** 03 07 44.5 -0.4
DHY Denali Highway 147.78 310 PKPbc **PKPbc** 03 07 48.3 +0.9
IL31 148.01 313 PKPbc **PKPbc** 03 07 47.4 -0.3
ILAR Eielson Array 148.01 313 PKPbc **PKPbc** 03 07 47.5 -0.2
comp=Z,8.2nm,0.9s,baz=122,slow=1.6,SNR=10
TCOL CIGO, UAF Yank 148.44 311 PKPbc **PKPbc** 03 07 48.6 -0.2
MCK McKinley 148.63 311 **PKPbc** 03 07 49.7 +0.3
SKT Skwentna 149.35 307 PKPbc **PKPbc** 03 07 51.9 +0.7
BPAW Bear Paw Mtn. 149.59 311 PKPbc **PKPbc** 03 07 52.3 +0.5
H21K Melozitna Rive 150.62 314 **PKiKP** 03 07 54.9 0.0
IMAR Indian Mountai 151.05 315 **PKPbc** 03 07 55.7 +0.5
SONM Songino Array 152.80 88 PKPbc **PKPbc** 03 07 59.3 -0.6
comp=Z,1.7nm,0.6s,baz=226,slow=2.5,SNR=6.9

NNC 21 02:52:04.5±2.7, 36°.68N×69°.88E, h185km±25km, mb2.8, mpv3.7, 1C-3D, Error ellipse: s-maj=23.7km s-min=18.7km az=21.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.43**	**4**	⇑P	Pn	02 53 37.3	+0.2
	3.0nm,0.5s,baz=187,slow=13,SNR=41						
KK31				⇓S	Sn	02 54 50.8	+0.4
	5.8nm,0.9s,baz=183,slow=27,SNR=3.9						
MK31	**Makanchi Array**	**13.69**	**39**	P	Pn	02 55 10.5	-0.5
	0.6nm,0.5s,baz=219,slow=9.0,SNR=5.3						
AB31	**Akbulak array**	**14.50**	**333**	⇓P	Pn	02 55 20.3	-0.7
	0.4nm,0.3s,baz=146,slow=12,SNR=18						
AKTO	**Aktyubinsk**	**16.19**	**332**	⇓P	P	02 55 41.4	+0.1
	1.6nm,0.8s						
BVA0	**Borovoye Array**	**16.35**	**1**	P	Pn	02 55 43.7	+0.2
	1.4nm,0.7s,baz=159,slow=11,SNR=4.2						

*IDC **21** 02:56:12.7±1.6, 40°.19N×144°.22E, h0km, mb3.4/5, mbtmp3.5/7, ML2.1/2, MS3.6/8, Error ellipse: s-maj=32.5km s-min=29.8km az=88.0*
*JMA **21** 02:56:18.1±0.2, 40°.2N±0°.6×14°.4E±°, h25km, MV3.3/34, FAR E OFF SANRIKU*

ISC 21 02:56:13.6±3.7, 40°.16N±0°.05×144°.01E±0°.07, h6km±23km, n37, σ1°.40/34, mb3.6/6, MS3.6/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.66**	**263**	P	**Pn**	02 56 43.4	+0.1
JTH				S	**Sn**	02 57 02.4	-2.5
JKEN	**Kujiedanarisaw**	**1.76**	**272**	P	**Pn**	02 56 44.8	+0.1
JKEN				*e*S	**Sn**	02 57 05.1	-2.3
MIYJ	**Miyakonagasawa**	**1.79**	**252**	P	**Pn**	02 56 45.8	+0.9
JANG	**Nango**	**1.92**	**277**	P	**Pn**	02 56 47.2	+0.3
JEM	**Erimo**	**1.96**	**341**	*e*S	**Sn**	02 57 11.7	-0.6
JOM	**Ohasama**	**2.21**	**253**	*i* P	**Pn**	02 56 52.1	+1.4
JOM				*e*S	**Sn**	02 57 17.9	-0.4
JNBK	**Urakawa-nobuka**	**2.32**	**336**	*e*P	**Pb**	02 56 54.2	-1.6
JNBK				*e*S	**Sn**	02 57 21.3	+0.2
JMK	**Ichinoseki**	**2.47**	**242**	P	**Pn**	02 56 55.6	+1.2
JMK				*e*S	**Sn**	02 57 23.9	-1.1
JCH	**Churui**	**2.50**	**349**	*e*P	**Pn**	02 56 56.2	+1.4
JCH				*e*S	**Sn**	02 57 25.3	-0.3
JOT	**Ohata**	**2.56**	**299**	P	**Pn**	02 56 56.6	+1.0
JOT				*e*S	**Sn**	02 57 25.2	-1.9
JAK	**Akkeshi**	**2.88**	**10**	P	**Pn**	02 57 01.0	+1.0
JAK				*e*S	**Sn**	02 57 33.3	-1.6
JYK	**Kaneyama**	**3.09**	**247**	*e*P	**Pn**	02 57 04.7	+1.8
JAR	**Ashorobuto**	**3.14**	**357**	P	**Pn**	02 57 03.9	+0.4
JAR				*e*S	**Sn**	02 57 39.8	-1.5
JEW	**Eniwo**	**3.30**	**325**	*e*P	**Pn**	02 57 08.2	+2.5
JEW				S	**Sn**	02 57 46.2	+0.9
NEM2	**Nemuro 2**	**3.45**	**21**	P	**Pn**	02 57 08.6	+0.7
NEM2				*e*S	**Sn**	02 57 46.8	-2.2
MJAR	**Matsushiro Arr**	**5.82**	**233**	Pn	**Pn**	02 57 41.0	+0.6
	0.1nm,0.3s,baz=48,slow=13,SNR=7.6						
	2.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**9.79**	**298**	Pn	**Pn**	02 58 36.8	+1.9
	0.1nm,0.3s,baz=101,slow=14,SNR=7.6						
	4.5nm,0.9s						
SONM	**Songino Array**	**27.91**	**299**	P	**P**	03 02 05.0	+0.6
	0.5nm,0.5s,baz=91,slow=9.2,SNR=2.6						
	0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.27**	**129**	T	T	03 31 46.2	
	baz=322,slow=75,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**28.29**	**129**	T	T	03 31 53.0	
	baz=322,slow=75,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	**28.29**	**129**	T	T	03 31 47.5	
	baz=322,slow=75,SNR=8.8						
H11S1	**WAKE ISLAND Hy**	**29.12**	**131**	T	T	03 32 52.0	
	baz=323,slow=76,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**29.12**	**131**	T	T	03 32 50.8	
	baz=323,slow=76,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.13**	**131**	T	T	03 32 52.0	
	baz=323,slow=76,SNR=4.5						
ZALV	**Zalesovo Beam**	**41.40**	**310**	P	**P**	03 04 01.1	+0.7
	0.4nm,0.3s,baz=95,slow=8.6,SNR=1.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**44.26**	**300**	P	**P**	03 04 24.3	+0.6
	1.0nm,1.0s,baz=93,slow=5.8,SNR=3.8						
	1.0nm,1.0s						
KURBB	**Kurchatov Arra**	**45.75**	**306**	P	**P**	03 04 37.1	+1.6
	1.9nm,0.2s,baz=78,slow=8.4,SNR=6.1						
ILAR	**Eielson Array**	**45.77**	**34**	P	**P**	03 04 34.1	-1.3
	0.1nm,0.6s,baz=276,slow=8.0,SNR=1.1						
	0.1nm,0.6s						
BVAR	**Borovoye Array**	**50.02**	**311**	LR	LR	03 29 29.8	
	comp=Z,61nm,20.4s,baz=318,slow=40						
SPITS	**Spitsbergen Ar**	**57.85**	**349**	LR	LR	03 34 48.2	
	comp=Z,23nm,18.7s,baz=355,slow=40						
WRA	**Warramunga Arr**	**60.47**	**190**	P	**P**	03 06 24.9	+0.7
	0.1nm,0.6s,baz=7.1,slow=6.8,SNR=1.8						
	0.1nm,0.6s						
ARCES	**ARCESS Array B**	**61.79**	**339**	LR	LR	03 38 58.2	
	comp=Z,40nm,18.1s,baz=26,slow=42						
FINES	**FINESS Array B**	**66.99**	**333**	LR	LR	03 41 59.1	
	comp=Z,51nm,19.1s,baz=44,slow=41						
JMIC	**Jan Mayen**	**67.41**	**351**	LR	LR	03 38 06.4	
	comp=Z,41nm,20.9s,baz=52,slow=37						
HFS	**Hagfors**	**72.06**	**336**	LR	LR	03 42 54.3	
	comp=Z,49nm,21.2s,baz=24,slow=39						
NOA	**NORSAR Array B**	**72.07**	**338**	LR	LR	03 44 41.0	
	comp=Z,38nm,20.6s,baz=20,slow=40						
BORG	**Borgarnes**	**74.79**	**354**	LR	LR	03 41 09.8	
	comp=Z,54nm,20.7s,baz=344,slow=36						

IDC 21 03:07:53.0±3.9, 6°.70S×154°.32E, h0km, mb3.3/2, mbtmp3.3/2, MS3.9/1, Error ellipse: s-maj=188.5km s-min=54.6km az=129.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.44**	**234**	P	P	03 13 04.7	+0.6
	0.9nm,0.8s,baz=58,slow=9.9,SNR=6.2						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**25.87**	**227**	P	P	03 13 25.8	-0.9
	0.3nm,0.8s,baz=61,slow=9.3,SNR=2.6						
	0.3nm,0.8s						
RPZ	**Rata Peaks**	**39.69**	**161**	LR	LR	03 31 43.1	
	comp=Z,140nm,18.1s,baz=245,slow=36						
TORD	**Torodi Ar. Bea**	**152.30**	**286**	PKPbc	PKPbc	03 27 52.0	+0.1
	0.3nm,0.6s,baz=76,slow=2.2,SNR=1.4						

*IDC **21** 03:25:57.5±1.6, 1°.47N×126°.01E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=167.1km s-min=21.6km az=66.0*
*DJA **21** 03:26:01.1±0.3, 2°.N±3°×12°.6E±°, h10km, M3.8/9, mb4.4/1, Mjma3.7/9, ML4.0/9, MLv3.8/9, Ms(BB)3.3/7*

ISC 21 03:26:03.5±0.9, 1°.70N±0°.07×126°.6E±0°.1, h47km, n11, σ0°.69/12, mb4.0/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.24**	**332**	P	**Pn**	03 26 37.7	-0.5
SGSI				S	**Sn**	03 27 05.5	+0.8
LBMI	**Labuha**	**2.49**	**158**	P	**Pn**	03 26 42.3	+0.7
KMSI	**Cibinong**	**2.83**	**247**	P	**Pn**	03 26 46.0	-0.3
GTOI	**Gorontalo**	**3.73**	**254**	P	**Pn**	03 26 58.2	-0.4
SANI	**Sanana**	**3.77**	**189**	P	**Pn**	03 26 58.4	-0.8
APSI	**Ampana**	**5.57**	**242**	P	**Pn**	03 27 24.9	+0.9
WRA	**Warramunga Arr**	**22.81**	**161**	P	**P**	03 31 01.6	-0.9
	4.1nm,0.7s,baz=338,slow=11,SNR=29						
	4.1nm,0.7s						
ASAR	**Alice Springs**	**26.20**	**165**	P	**P**	03 31 33.9	-0.1
	1.5nm,0.7s,baz=347,slow=8.1,SNR=22						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	03 35 59.2	-0.3
	1.1nm,0.6s,baz=121,slow=8.1,SNR=11						
	1.1nm,0.6s						
VNDA	**Vanda**	**81.44**	**173**	P	**P**	03 38 15.1	0.0
	0.2nm,0.5s,baz=328,slow=7.1,SNR=1.4						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**93.54**	**332**	P	**P**	03 39 14.7	+0.4
	0.6nm,0.7s,baz=68,slow=7.7,SNR=3.6						
	0.6nm,0.7s						

IDC 21 03:34:38.4±2.6, 4°.23S×129°.62E, h0km, mb3.6/1, mbtmp3.3/3, ML2.7/2, Error ellipse: s-maj=167.0km s-min=32.0km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.28**	**164**	Pn	Pn	03 38 26.8	-1.8
	baz=347,slow=12,SNR=1.4						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**19.76**	**168**	P	Pn	03 39 11.0	-0.6
	0.1nm,0.3s,baz=351,slow=11,SNR=5.9						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**65.72**	**326**	P	P	03 45 25.0	-0.1
	0.2nm,0.3s,baz=122,slow=9.0,SNR=2.7						
	0.2nm,0.3s						

*BJI **21** 03:45:20.2±0.0, 55°.20S×31°.75W, h10km, mB6.1/66, Ms6.0/80, Ms7 6.0/77*
*NEIC **21** 03:45:23.5, 55°.31S×31°.76W, h23km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr=0.78; Mθθ=-0.71; Mφφ=-0.07; Mrθ=-0.43; Mθφ=0.59; Mφr=0.72; Fault plane solution: M0=1.27000×10^18 NP1: φs=96.28000°, δ30.19000°, λ48.83000°. NP2: φs=321.62000°, δ67.76000°, λ110.96000°. Principal axes: T 1.1993, Plg62.0000°, Azm264.0000°; N 0.1325, Plg19.0000°, Azm133.0000°; P -1.3317, Plg20.0000°, Azm36.0000°;*
*NEIC **21** 03:45:23.8±1.6, 55°.31S±0°.08×31°.8W±0°.1, h12km±1km, mb6.4/247, Ms_20 5.9/447, Mwb6.0/43, Mww6.1 Error ellipse: s-maj=12.9km s-min=12.3km az=195.0*
*MOS **21** 03:45:23.1±0.9, 55°.33S×31°.76W, h16km, mb6.3/25, MS5.8/30, Error ellipse: s-maj=15.1km s-min=8.5km az=102.0*
*NEIC **21** 03:45:25, 55°.18S×31°.75W, h26km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10^18 Nm; Mrr=0.85; Mθθ=-0.38; Mφφ=-0.47; Mrθ=-0.58; Mθφ=0.73; Mφr=1.23; Fault plane solution: M0=1.71000×10^18 NP1: φs=115.00000°, δ22.00000°, λ54.00000°. NP2: φs=333.00000°, δ73.00000°, λ103.00000°. Principal axes: T 1.5966, Plg60.0000°, Azm261.0000°; N 0.2159, Plg12.0000°, Azm149.0000°; P -1.8125, Plg27.0000°, Azm52.0000°;*
*IDC **21** 03:45:26.2±0.9, 55°.32S×31°.66W, h29km±5km, mb5.6/28, mbtmp5.7/29, ML5.3/1, MS5.8/40 Error ellipse: s-maj=7.9km s-min=6.8km az=25.0*
*GCMT **21** 03:45:27.8±0.1, 55°.23S×31°.59W, h23km, MW6.1/163, Moment Tensor Solution. s160,c346; s163,c563; Duration: 2s7 Moment tensor: Scale 10^18 Nm; Mrr=1.12±.01; Mθθ=0.78±.01; Mφφ=-0.33±.01; Mrθ=-0.53±.01; Mθφ=0.84±.01; Mφr=1.12±.02; Best double couple: M0=1.79400×10^18 NP1: φs=328.00000°, δ68.00000°, λ109.00000°. NP2: φs=105.00000°, δ28.00000°, λ51.00000°. Principal axes: T 1.7290, Plg62.0000°, Azm267.0000°; N 0.1300, Plg17.0000°, Azm140.0000°; P -1.8580, Plg21.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 21 03:45:25.3±0.5, 55°.30S±0°.03×31°.72W±0°.03, h25km±2km, h25km: pP-P, n1737, σ1°.67/1695, mb6.3/198, MS5.9/321, 135C-35D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.94**	**288**	Pn	**Pn**	03 46 10.3	0.0
HOPE	**Hope Point**	**2.94**	**288**	P	**Pn**	03 46 10.3	0.0
HOPE	**Hope Point**	**2.94**	**288**	⇑P	**Pn**	03 46 10.2	-0.2
ORCD	**Orcadas**	**8.79**	**226**		**Pn**	03 47 27.9	-2.7
VNA1	**Neumayer--Stat**	**18.51**	**155**	P	**Pn**	03 49 40.7	+1.2
VNA1	**Neumayer--Stat**	**18.51**	**155**	ScP	**ScP**	03 57 40.8	-0.5
PMSA	**Palmer Station**	**18.51**	**226**	P	**Pn**	03 49 40.9	+1.3
	10nm,0.3s,baz=65,slow=9.1,SNR=117						
PMSA				S	**S**	03 53 07.9	-0.8
	8.9nm,0.9s,baz=279,slow=5.1,SNR=1.2						
PMSA				PcP	**PcP**	03 54 08.9	+1.0
	48nm,0.9s,baz=107,slow=2.8,SNR=9.9						
PMSA				LR	LR	03 56 16.0	
	comp=Z,41μm,18.3s,baz=66,slow=35						
PMSA				ScP	**ScP**	03 57 39.8	-1.6
	12nm,1.1s,baz=32,slow=4.6,SNR=4.0						
	720nm,0.9s						
PMSA	**Palmer Station**	**18.51**	**226**	P	**Pn**	03 49 40.9	+1.3
PMSA				IAmb	IAmb	03 49 50.0	
	comp=Z,2μm,1.3s						
PMSA	**Palmer Station**	**18.51**	**226**	⇑P	**Pn**	03 49 42.0	+2.4
PMSA	**Palmer Station**	**18.51**	**226**	*e*P	**Pn**	03 49 42.3	+2.8
VNA3	**Neumayer Olymp**	**18.61**	**158**	P	**Pn**	03 49 41.5	+0.7
VNA3	**Neumayer Olymp**	**18.61**	**158**	ScP	**ScP**	03 57 40.8	-0.8
VNA2	**Neumayer--Watz**	**18.91**	**155**	P	**Pn**	03 49 44.6	+0.3
	baz=317,slow=14						
VNA2	**Neumayer--Watz**	**18.91**	**155**	ScP	**ScP**	03 57 41.6	-0.7
MG01	**Puerto William**	**20.41**	**256**	P	**P**	03 50 01.1	+1.0
SNAA	**Sanae**	**20.51**	**154**	P	**P**	03 50 01.1	-0.1
	comp=Z,186nm,1.0s,baz=308,slow=8.4,SNR=280						
SNAA				S	**S**	03 53 50.0	+0.9
	comp=Z,20nm,1.2s,baz=192,slow=22,SNR=1.4						
SNAA				ScP	**ScP**	03 57 44.8	-1.3
	comp=Z,31nm,1.0s,baz=315,slow=2.2,SNR=7.8						
	comp=Z,186nm,1.0s						
SNAA	**Sanae**	**20.51**	**154**	P	**P**	03 50 01.8	+0.6
SNAA	**Sanae**	**20.51**	**154**	*i* P	**P**	03 50 01.9	+0.7
SMAI	**San Martin Ant**	**20.73**	**218**	P	Pn	03 50 05.2	-0.7
USHA	**Ushuaia**	**20.88**	**256**	P	**P**	03 50 05.1	-0.1
	comp=Z,459nm,1.0s,baz=99,slow=11,SNR=46						
USHA				S	**S**	03 53 57.5	+1.0
	comp=Z,4.6nm,0.3s,baz=314,slow=5.7,SNR=1.1						
	comp=Z,459nm,1.0s						
MG02	**Cerro Sombrero**	**21.99**	**261**	P	**P**	03 50 16.2	-1.0
TROLL	**Troll, Antarti**	**22.09**	**152**	P	**P**	03 50 18.1	-0.1
TROLL	**Troll, Antarti**	**22.09**	**152**	ScP	**ScP**	03 57 49.4	-0.7
TRIS	**Tristan da Cun**	**22.51**	**44**	P	**P**	03 50 23.2	+0.4
TRIS				IAmb	IAmb	03 50 31.3	
	comp=Z,2μm,1.9s						
BELA	**Belgrano 2**	**22.70**	**182**	P	**P**	03 50 24.2	-0.4
BELA				IAmb	IAmb	03 50 39.3	
	comp=Z,3μm,1.5s						
GO10	**Punta Arenas**	**22.89**	**259**	P	**P**	03 50 26.0	-0.7
GO10				IAmb	IAmb	03 50 29.7	
	comp=Z,2μm,1.1s						
MG04	**Isla Riesco**	**23.29**	**259**	P	**P**	03 50 30.3	-0.4
MG05	**Puerto Natales**	**24.28**	**262**	P	**P**	03 50 40.4	+0.2
MG05				IAmb	IAmb	03 50 42.4	
	comp=Z,1μm,0.9s						
NVL	**N'lazarevskaya**	**24.31**	**146**	*e*P	**P**	03 50 39.3	-1.0
NVL				*e*S	**S**	03 55 02.6	+5.1
NVL				pmax	pmax		
	comp=Z,818nm,1.8s						
NVL				MLR	MLR		
	comp=Z,11μm,17.0s						
GO09	**Cerro Castillo**	**24.36**	**263**	P	**P**	03 50 40.0	-0.9
GO09				IAmb	IAmb	03 50 56.4	
	comp=Z,2μm,1.6s						
COYC	**Coyhaique**	**27.13**	**274**	P	**P**	03 51 05.9	-0.1
COYC	**Coyhaique**	**27.13**	**274**	IAMs_20	IAMs_20	04 02 12.6	
	comp=Z,24μm,18.0s						
COYC	**Coyhaique**	**27.13**	**274**	⇑P	**P**	03 51 07.1	+1.1
LPA	**La Plata**	**27.25**	**308**	*i* P	**P**	03 51 00.4	-6.8
LPA				pP	**pP**	03 51 12.5	-1.2
LPA				sP	**pwP**	03 51 19.3	+1.4
LPA				PP	**PnPn**	03 51 53.4	+2.3
LPA				PPP	PPP	03 52 07.1	
LPA				PcP	PcP	03 54 14.8	-12
LPA				S	**S**	03 55 39.0	-5.7
LPA				sS	**pS**	03 55 49.5	-2.0
LPA				PS		03 55 54.1	
LPA				PPS	PPS	03 56 01.9	
LPA				SS	**SnSn**	03 56 58.3	+4.8
LPA				SSS	SSS	03 57 15.9	
LPA				SCS	ScS	04 01 42.3	-14
LPA				PKIKP	**PKiKP**	04 02 05.1	+1.6
LPA				SKIKP		04 05 27.8	
LPA				PKIKS		04 05 38.0	
LPA				SKIKS		04 09 09.8	
AY01	**Puyuhuapi**	**28.14**	**275**	P	**P**	03 51 15.0	-0.1
AY01				IAmb	IAmb	03 51 17.0	
	comp=Z,2μm,1.8s						
PLTB	**Pedras Altas**	**28.14**	**318**	P	**P**	03 51 15.2	0.0
PLTB	**Pedras Altas**	**28.14**	**318**	*e*P	**P**	03 51 16.4	+1.2
LL02	**Futaleuf**	**28.45**	**278**	P	**P**	03 51 17.9	+0.1
LL01	**San Ignacio de**	**29.29**	**279**	P	**P**	03 51 25.2	-0.1
CPSB	**Cacapava Do Su**	**29.29**	**319**	*e*P	**P**	03 51 26.5	+1.1
PLCA	**Paso Flores**	**29.34**	**283**	P	**P**	03 51 25.9	0.0
	comp=Z,198nm,1.1s,baz=140,slow=8.5,SNR=115						
PLCA				S	**S**	03 56 18.8	+1.2
	comp=Z,11nm,1.2s,baz=13,slow=14,SNR=1.1						
PLCA				ScP	**ScP**	03 58 09.8	-1.6
	comp=Z,19nm,1.2s,baz=107,slow=2.6,SNR=5.0						
PLCA				ScS	**ScS**	04 02 04.6	-1.2
	comp=Z,3.2nm,1.1s,baz=319,slow=21,SNR=3.6						
PLCA				LR	LR	04 03 06.7	
	comp=Z,35μm,20.7s,baz=135,slow=36						
	comp=Z,198nm,1.1s						
PLCA	**Paso Flores**	**29.34**	**283**	P	**P**	03 51 25.7	-0.

VAS01 Vassouras-RJ 34.12 340 *e*P P **03 52 10.2 +2.3**
LMEL Las Melosas 34.17 293 IAmb IAmb 03 52 12.4
comp=Z,381nm,1.3s
VAO Valinhos 34.19 334 *e*P P **03 52 10.7 +2.1**
CAM01 Campos-RJ 34.24 343 *e*P P **03 52 10.4 +1.5**
CPUP Villa Florida 34.44 317 P P **03 52 10.9 +0.3**
comp=Z,116nm,0.9s,baz=152,slow=7.9,SNR=101
CPUP PcP **PcP** **03 54 45.9 +0.3**
comp=Z,42nm,1.1s,baz=144,slow=2.7,SNR=4.3
CPUP S **S** **03 57 36.1 -1.1**
comp=Z,5.1nm,1.1s,baz=333,slow=20,SNR=1.3
CPUP ScP **ScP** **03 58 28.6 -0.2**
comp=Z,19nm,1.1s,baz=137,slow=3.3,SNR=4.8
CPUP ScS **ScS** **04 02 30.1 -1.5**
comp=Z,1.2nm,0.7s,baz=68,slow=20,SNR=0.8
CPUP LR LR 04 04 48.4
comp=Z,9μm,21.9s,baz=160,slow=34
comp=Z,116nm,0.9s
CPUP Villa Florida 34.44 317 P P **03 52 09.9 -0.7**
CPUP IAmb IAmb 03 52 12.6
comp=Z,721nm,1.4s
CPUP Villa Florida 34.44 317 ⇑P P **03 52 10.8 +0.3**
CPUP Villa Florida 34.44 317 *e*P P **03 52 11.0 +0.3**
MT03 Universidad Ad 34.61 293 IAmb IAmb 03 52 15.1
comp=Z,431nm,1.0s
MT09 Talagante 34.64 292 IAmb IAmb 03 52 13.6
comp=Z,433nm,0.8s
MT01 Popeta 34.71 292 IAmb IAmb 03 52 14.0
comp=Z,377nm,0.9s
MT05 Renca 34.80 293 IAmb IAmb 03 52 16.7
comp=Z,944nm,1.2s
RCLB Rio Claro- Sao 34.89 334 *e*P P **03 52 15.6 +1.0**
MCR1 Marechal Candi 34.93 323 *e*P P **03 52 15.1 +0.3**
QSPA South Pole Qui 34.95 180 PKiKP **PKiKP** **04 02 07.6 -0.4**
comp=Z,7.6nm,1.0s,baz=237,slow=1.6,SNR=4.8
QSPA ScS ScS 04 02 28.5 -5.0
comp=Z,2.0nm,1.0s,baz=212,slow=24,SNR=0.9
QSPA LR LR 04 06 01.7
comp=Z,20μm,18.9s,baz=186,slow=35
QSPA South Pole Qui 34.95 180 P P **03 52 16.8 +1.8**
QSPA South Pole Qui 34.95 180 IAMs_20 IAMs_20 04 05 40.9
comp=Z,19μm,20.0s
QSPA South Pole Qui 34.95 180 ⇑P P **03 52 16.7 +1.8**
PEL Peldehue 34.97 293 ⇑P P **03 52 15.6 +0.3**
MT02 Curacav 35.12 292 IAmb IAmb 03 52 19.5
comp=Z,447nm,1.1s
ZON Zonda 35.19 297 IAmb IAmb 03 52 18.9
comp=Z,679nm,1.3s
ROC1 El Roble 35.27 293 IAmb IAmb 03 52 33.6
comp=Z,517nm,0.9s
ALF01 Guarapari-ES 35.29 345 *e*P P **03 52 20.1 +2.1**
BSCB Bom Sucesso 35.63 339 *e*P P **03 52 22.4 +1.4**
TRCB Terra Rica 36.00 326 P P **03 52 23.5 -0.7**
TRCB IAmb IAmb 03 52 26.3
comp=Z,704nm,1.3s
TRCB Terra Rica 36.00 326 *e*P P **03 52 24.5 +0.3**
BB19B Bebedouro 36.44 333 *e*P P **03 52 29.7 +1.8**
RIB01 Linhares ES 36.52 346 *e*P P **03 52 29.7 +1.1**
PCMB Pacaembu 36.69 329 *e*P P **03 52 31.0 +1.0**
CO03 El Pedregal 36.79 295 IAmb IAmb 03 52 33.6
comp=Z,1μm,1.6s
CO01 Juntas del Tor 37.17 297 IAmb IAmb 03 52 38.0
comp=Z,1μm,1.2s
SJMB Sao Joao De Ma 37.23 345 *e*P P **03 52 34.4 -0.3**
GO04 Tololo Observa 37.38 296 IAmb IAmb 03 52 38.3
comp=Z,1μm,1.3s
CO06 Fray Jorge 37.41 294 IAmb IAmb 03 52 38.4
comp=Z,2μm,1.7s
ANTJ Antonio Joao (37.88 322 *e*P P **03 52 39.3 -0.8**
NAN01 Guarapari, ES 37.93 347 *e*P P **03 52 40.8 +0.3**
DIAM Diamantina, MG 38.04 341 *e*P P **03 52 42.4 +0.8**
ITRB Iturama 38.23 331 *e*P P **03 52 43.7 +0.6**
LCO Las Campanas 38.26 297 P P **03 52 43.4 -0.1**
LCO IAmb IAmb 03 52 45.8
comp=Z,749nm,1.1s
LCO Las Campanas 38.26 297 P P **03 52 43.4 -0.1**
LCO pmax pmax
comp=Z,749nm,1.1s
LCO Las Campanas 38.26 297 ⇑P P **03 52 42.8 -0.8**
PMNB Patos De Minas 38.37 337 ⇑P P **03 52 45.4 +1.2**
PMNB Patos De Minas 38.37 337 *e*P P **03 52 45.5 +1.2**
GUA01 Guaratinga, BA 39.14 348 *e*P P **03 52 51.0 +0.3**
GO03 Copiap 39.18 299 IAmb IAmb 03 52 53.2
comp=Z,601nm,1.3s
GO03 Copiap 39.18 299 ⇑P P **03 52 51.4 +0.3**
AC02 Maricunga 39.26 301 IAmb IAmb 03 52 55.7
comp=Z,1μm,1.6s
IPMB Ipameri, GO 39.32 335 *e*P P **03 52 53.1 +0.8**
AC06 Mina Casimiro 39.44 299 IAmb IAmb 03 52 55.3
comp=Z,1μm,1.6s
MC01 Montes Claros 39.64 341 *e*P P **03 52 55.1 +0.2**
C2SB Chapadao do Su 39.84 328 *e*P P **03 52 57.7 +1.2**
CMC01 Camacan, BA 40.31 348 *e*P P **03 53 02.1 +1.8**
AC01 Pan de Azucar 40.56 300 P P **03 53 03.1 +0.7**
ELIM Elim 40.75 81 *e*P P **03 53 03.1 -0.8**
ELIM IAmb IAmb 03 53 11.3
comp=Z,364nm,1.3s
GO02 Mina Guanaco 40.89 302 P P **03 53 06.1 +0.6**
JANB Januaria 41.32 341 *e*P P **03 53 09.7 +0.9**
CER Ceres 41.40 80 ⇓*i*P P **03 52 58.7 -11**
CER IAmb IAmb 03 53 03.8
comp=Z,3μm,2.9s
BDFB Brasilia 41.53 336 P P **03 53 11.7 +1.2**
comp=Z,201nm,1.1s,baz=151,slow=7.4,SNR=113
BDFB S **S** **03 59 25.1 +0.3**
comp=Z,9.5nm,1.2s,baz=311,slow=21,SNR=1.7
comp=Z,201nm,1.1s
BDFB Brasilia 41.53 336 P P **03 53 11.6 +1.1**
BDFB IAmb IAmb 03 53 13.5
comp=Z,538nm,1.3s
BDFB Brasilia 41.53 336 *e*P P **03 53 11.2 +0.7**
PB14 IPOC Station P 41.74 301 IAmb IAmb 03 53 14.3
comp=Z,548nm,1.2s
GDU01 Guandu, BA 41.94 349 *e*P P **03 53 14.4 +0.6**
AF01 San Pedro de A 42.09 305 P P **03 53 16.2 +0.8**
MATJ Matjiesfontein 42.20 81 ⇓*i*P P **03 53 16.0 +0.1**
MATJ IAmb IAmb 03 53 23.1
comp=Z,378nm,1.3s
MAW Mawson 42.25 145 P P **03 53 16.5 +0.7**
comp=Z,208nm,0.9s,baz=233,slow=8.6,SNR=238
MAW S **S** **03 59 34.0 -0.3**
comp=Z,8.6nm,1.1s,baz=303,slow=16,SNR=2.5
MAW LR LR 04 11 13.1
comp=Z,9μm,18.3s,baz=244,slow=37
comp=Z,208nm,0.9s
MAW Mawson 42.25 145 P P **03 53 16.5 +0.7**
baz=42,SNR=160
MAW Mawson 42.25 145 P P **03 53 16.8 +1.0**
MAW Mawson 42.25 145 ⇑P P **03 53 16.4 +0.7**
LVC Limon Verde 42.73 305 P P **03 53 22.1 +1.5**
comp=Z,390nm,1.1s,baz=153,slow=6.8,SNR=88
LVC PP **PP** **03 55 01.2 +1.4**
comp=Z,42nm,1.1s,baz=165,slow=9.9,SNR=1.1
LVC PcP **PcP** **03 55 12.7 +0.7**
comp=Z,183nm,1.0s,baz=165,slow=3.7,SNR=5.3
LVC ScP **ScP** **03 59 00.6 -0.3**
comp=Z,25nm,1.2s,baz=148,slow=7.7,SNR=3.7
LVC S **S** **03 59 42.2 -0.8**
comp=Z,4.4nm,0.9s,baz=217,slow=18,SNR=1.3
LVC LR LR 04 12 53.4
comp=Z,10μm,19.3s,baz=166,slow=38
comp=Z,390nm,1.1s
LVC Limon Verde 42.73 305 P P **03 53 21.2 +0.6**
LVC IAmb IAmb 03 53 23.8
comp=Z,792nm,1.4s
LVC Limon Verde 42.73 305 *e*P P **03 53 22.2 +1.5**
SUR Sutherland 42.98 80 P P **03 53 22.2 -0.2**
comp=Z,79nm,0.9s,baz=217,slow=9.1,SNR=39
SUR PcP **PcP** **03 55 13.9 +1.4**
comp=Z,36nm,1.1s,baz=224,slow=5.1,SNR=2.5
SUR ScP **ScP** **03 59 01.8 +0.2**
comp=Z,47nm,1.1s,baz=229,slow=4.2,SNR=6.1
SUR S **S** **03 59 45.7 -0.5**
comp=Z,7.9nm,1.1s,baz=64,slow=7.7,SNR=1.3
SUR LR LR 04 09 23.3
comp=Z,10μm,18.1s,baz=218,slow=34
comp=Z,79nm,0.9s
SUR Sutherland 42.98 80 P P **03 53 23.3 +0.8**
SUR Sutherland 42.98 80 ⇓P P **03 53 23.2 +0.8**
CVNA Calvinia 43.06 78 *e*P P **03 53 23.1 +0.1**
CVNA IAmb IAmb 03 53 31.0
comp=Z,572nm,1.5s
KOMG Komaggas 43.08 74 *e*P P **03 53 24.3 +1.3**
KOMG IAmb IAmb 03 53 30.9
comp=Z,108nm,1.6s
MERW Merweville 43.16 81 ⇓*i*P P **03 53 23.9 +0.1**
MERW IAmb IAmb 03 53 30.8
comp=Z,686nm,1.8s
SALV Santo Antonio 43.43 325 *e*P P **03 53 26.6 +0.6**
PB04 IPOC Station P 43.55 303 IAmb IAmb 03 53 29.5
comp=Z,1μm,1.5s
FRAZ Fraserburg 43.65 80 *e*P P **03 53 28.4 +0.7**
FRAZ IAmb IAmb 03 53 35.7
comp=Z,1μm,2.0s
GRAN Grantham 43.81 81 *e*P P **03 53 29.4 +0.4**
GRAN IAmb IAmb 03 53 36.8
comp=Z,207nm,1.5s
ROSN Rosenhof 43.83 85 *e*P P **03 53 29.9 +0.9**
ROSN IAmb IAmb 03 53 36.0
comp=Z,558nm,1.3s
KROM Kromhout 43.85 85 *e*P P **03 53 29.9 +0.8**
KROM IAmb IAmb 03 53 36.6
comp=Z,750nm,1.2s
PB07 IPOC Station P 43.95 304 IAmb IAmb 03 53 32.9
comp=Z,1μm,1.5s
SDBA SAO DESIDERIO 44.02 341 *e*P P **03 53 31.2 +0.6**
SHEL Horse Pasture 44.05 37 P P **03 53 31.4 +0.4**
SHEL IAmb IAmb 03 53 43.1
comp=Z,920nm,1.2s
SHEL Horse Pasture 44.05 37 IAMs_20 IAMs_20 04 06 59.4
comp=Z,18μm,20.0s
SHEL Horse Pasture 44.05 37 P P **03 53 31.4 +0.4**
SHEL pmax pmax
comp=Z,920nm,1.3s
SHEL Horse Pasture 44.05 37 ⇓P P **03 53 31.8 +0.8**
SHEL ⇓S S **04 00 04.9 +3.1**
ROOI Rooidraai Farm 44.45 83 *e*P P **03 53 33.1 -1.0**
ROOI IAmb IAmb 03 53 39.5
comp=Z,2μm,2.6s
BRAK Brakfontein 44.60 81 *e*P P **03 53 35.8 +0.5**
BRAK IAmb IAmb 03 53 42.8
comp=Z,3μm,2.9s
PTLB Pontes e Lacer 45.03 321 IAmb IAmb 03 53 40.8
comp=Z,797nm,1.4s
PTLB Pontes e Lacer 45.03 321 *e*P P **03 53 38.5 -0.2**
BFON Badsfontein, M 45.04 82 *e*P P **03 53 39.0 +0.1**
BFON IAmb IAmb 03 53 44.0
comp=Z,2μm,2.7s
TA01 Diego Aracena 45.08 305 IAmb IAmb 03 53 41.8
comp=Z,653nm,1.4s
GRAF Camdeboo Natio 45.14 83 *e*P P **03 53 39.6 0.0**
GRAF IAmb IAmb 03 53 47.2
comp=Z,784nm,1.4s
SIV San Ignacio 45.25 318 P P **03 53 40.6 0.0**
comp=Z,87nm,1.0s,baz=163,slow=7.3,SNR=142
SIV PcP **PcP** **03 55 21.2 +1.0**
comp=Z,77nm,1.0s,baz=145,slow=3.7,SNR=7.1
SIV ScP **ScP** **03 59 11.3 +0.5**
comp=Z,21nm,1.2s,baz=188,slow=3.0,SNR=3.7
SIV S **S** **04 00 16.6 -2.5**
comp=Z,3.3nm,1.0s,baz=260,slow=16,SNR=1.3
SIV LR LR 04 13 36.9
comp=Z,3μm,19.3s,baz=174,slow=37
comp=Z,87nm,1.0s
TA02 Huaiquique 45.31 305 IAmb IAmb 03 53 43.5
comp=Z,1μm,1.6s
SOE Somerset East 45.43 85 P P **03 53 41.7 -0.1**
SOE IAmb IAmb 03 53 49.0
comp=Z,852nm,1.5s
SOE Somerset East 45.43 85 *e*P P **03 53 42.7 +0.8**
SOE IAmb IAmb 03 53 48.6
comp=Z,824nm,1.5s
SOE Somerset East 45.43 85 ⇑P P **03 53 41.8 -0.1**
AUGR Augrabies 45.59 76 *e*P P **03 53 43.6 +0.5**
AUGR IAmb IAmb 03 53 50.2
comp=Z,475nm,1.6s
NBAN Anadia - AL 45.66 354 *e*P P **03 53 43.7 0.0**
KEIM Keimoes 45.85 77 *e*P P **03 53 45.6 +0.3**
KEIM IAmb IAmb 03 53 52.8
comp=Z,428nm,1.5s
SNDB Serra Nova Dou 45.86 333 *e*P P **03 53 45.8 +0.5**
PKA Prieska 46.12 79 *e*P P **03 53 50.5 +3.1**
PKA IAmb IAmb 03 53 57.4
comp=Z,195nm,2.2s
UPI Upington 46.28 77 *e*P P **03 53 47.9 -0.7**
UPI IAmb IAmb 03 53 55.6
comp=Z,200nm,1.4s
NBRF Rio Formoso - 46.57 355 *e*P P **03 53 50.7 -0.1**
SBA Scott Base 46.62 185 P P **03 53 52.2 +1.6**
SBA Scott Base 46.62 185 P P **03 53 52.2 +1.6**
SBA pmax pmax
comp=Z,185nm,1.3s
SBA MLR MLR
comp=Z,7μm,18.0s
PB16 IPOC Station P 46.70 307 IAmb IAmb 03 55 28.4
comp=Z,237nm,1.2s
HVD Gariep Dam 46.96 83 *e*P P **03 53 52.8 -1.3**
HVD IAmb IAmb 03 54 01.5
comp=Z,951nm,1.8s
VNDA Vanda 47.18 184 P P **03 53 56.5 +1.6**
comp=Z,59nm,0.8s,baz=181,slow=6.4,SNR=274
VNDA PP **PP** **03 55 47.0 +1.4**
comp=Z,19nm,1.1s,baz=196,slow=8.9,SNR=1.8
VNDA ScS ScS 04 03 47.0 +0.5
comp=Z,0.8nm,0.9s,baz=276,slow=24,SNR=1.5
VNDA LR LR 04 14 17.2
comp=Z,7μm,18.5s,baz=161,slow=37
comp=Z,59nm,0.8s
VNDA Vanda 47.18 184 P P **03 53 56.0 +1.0**
VILB Vilhena 47.72 321 P P **03 53 59.7 -0.2**
VILB IAmb IAmb 03 54 01.7
comp=Z,852nm,1.4s
VILB Vilhena 47.72 321 *e*P P **03 54 00.1 +0.2**
PDRB Porto dos Gac 47.79 326 *e*P P **03 53 59.6 -0.8**
LPAZ La Paz 47.88 310 P P **03 54 03.2 +1.4**
comp=Z,205nm,0.9s,baz=145,slow=5.7,SNR=478
LPAZ ScP **ScP** **03 59 22.4 -0.2**
comp=Z,32nm,1.3s,baz=148,slow=2.5,SNR=4.3
LPAZ S **S** **04 00 57.3 -0.6**
comp=Z,8.3nm,1.0s,baz=18,slow=24,SNR=6.6
LPAZ ScS **ScS** **04 03 53.2 -0.8**
comp=Z,3.2nm,1.2s,baz=262,slow=24,SNR=1.5
LPAZ LR LR 04 14 33.0
comp=Z,4μm,21.2s,baz=170,slow=36
LPAZ PKPPKP **P'P'df** **04 25 10.2 +0.3**
comp=Z,1.5nm,1.0s,baz=313,slow=2.5,SNR=2.9
comp=Z,205nm,0.9s
LPAZ La Paz 47.88 310 ⇑P P **03 54 03.2 +1.4**
LPAZ La Paz 47.88 310 *e*P P **03 54 03.5 +1.6**
SMTB Santa Maria do 48.00 339 *e*P P **03 54 03.2 +1.2**
H10S2 ASCENSION HYDR 48.16 23 T T 04 46 09.7
baz=27,slow=74,SNR=94
H10S3 ASCENSION HYDR 48.16 23 T T 04 46 09.3
baz=193,slow=74,SNR=126
CLDB Colider 48.19 327 *e*P P **03 54 03.2 -0.3**
BOSA Boshof 48.33 81 P P **03 54 04.3 -0.4**
comp=Z,80nm,0.9s,baz=220,slow=8.5,SNR=64
BOSA ScP **ScP** **03 59 22.8 -1.0**
comp=Z,46nm,1.1s,baz=209,slow=4.7,SNR=11
BOSA S **S** **04 01 02.6 -0.6**
comp=Z,2.3nm,1.0s,baz=356,slow=17,SNR=1.3
BOSA ScS **ScS** **04 03 54.6 -1.2**
comp=Z,3.1nm,1.0s,baz=18,slow=15,SNR=2.4
BOSA LR LR 04 10 03.3
comp=Z,9μm,21.5s,baz=228,slow=31
comp=Z,80nm,0.9s
BOSA Boshof 48.33 81 P P **03 54 04.3 -0.4**
BOSA IAmb IAmb 03 54 11.4
comp=Z,509nm,1.4s
BOSA Boshof 48.33 81 ⇓*i*P P **03 54 04.2 -0.4**
BOSA IAmb IAmb 03 54 11.0
comp=Z,552nm,1.4s
BOSA Boshof 48.33 81 *i*P P **03 54 06.2 +1.5**
BOSA Boshof 48.33 81 *i*P P **03 54 06.2 +1.5**
BOSA Boshof 48.33 81 ⇓P P **03 54 04.2 -0.4**
BOSA ⇑S **ScP** **03 59 23.5 -0.2**
KSTD Kokstad 49.12 86 *e*P P **03 54 11.6 +0.8**
KSTD IAmb IAmb 03 54 18.9
comp=Z,2μm,1.8s
ASCN Ascension 49.22 23 P P **03 54 11.9 +0.5**
ASCN IAmb IAmb 03 54 23.5
comp=Z,638nm,1.6s
ASCN IAMs_20 IAMs_20 04 09 23.2
comp=Z,10μm,20.0s
H10N1 ASCENSION HYDR 49.28 23 T T 04 47 32.4
baz=192,slow=75,SNR=210
H10N3 ASCENSION HYDR 49.28 23 T T 04 47 32.3
baz=192,slow=75,SNR=189
H10N2 ASCENSION HYDR 49.29 23 T T 04 47 34.1
baz=192,slow=75,SNR=186
RCBR Riachuelo 49.44 355 P P **03 54 12.4 -0.7**
comp=Z,27nm,1.2s,baz=316,slow=8.6,SNR=2.3
RCBR PcP **PcP** **03 55 36.0 +0.9**
comp=Z,39nm,1.1s,baz=9.3,slow=2.6,SNR=3.9
RCBR ScP **ScP** **03 59 30.0 +1.6**
comp=Z,7.1nm,0.9s,baz=307,slow=8.0,SNR=3.6
RCBR S **S** **04 01 20.3 +1.5**
comp=Z,15nm,1.2s,baz=58,slow=19,SNR=1.6
RCBR LR LR 04 11 16.6
comp=Z,9μm,19.6s,baz=322,slow=31
comp=Z,27nm,1.2s
RCBR Riachuelo 49.44 355 P P **03 54 12.7 -0.4**
RCBR Riachuelo 49.44 355 *e*P P **03 54 12.3 -0.8**
SWZ Schweizer 49.47 80 *e*P P **03 54 13.3 -0.1**
SWZ IAmb IAmb 03 54 19.5
comp=Z,693nm,1.6s
SNKL Senekal, Frees 50.01 83 ⇓*i*P P **03 54 17.8 +0.2**
SNKL IAmb IAmb 03 54 24.5
comp=Z,3μm,1.8s
PRYS Parys 50.81 81 ⇓*i*P P **03 54 23.0 -0.6**
PRYS IAmb IAmb 03 54 29.9
comp=Z,1μm,1.8s
PRPB Parauapebas 51.09 337 *e*P P **03 54 26.3 +0.8**
WDLM Western Deep L 51.23 81 *e*P P **03 54 25.9 -0.9**
WDLM IAmb IAmb 03 54 33.2
comp=Z,1μm,2.3s
LBTB Lobatse 51.31 78 LR LR 04 12 16.2
comp=Z,4μm,21.4s,baz=212,slow=31
LBTB Lobatse 51.31 78 P P **03 54 27.1 -0.2**
LBTB Lobatse 51.31 78 P P **03 54 27.1 -0.2**
LBTB pmax pmax
comp=Z,2μm,2.0s
LBTB Lobatse 51.31 78 ⇓*i*P P **03 54 25.8 -1.5**
LBTB IAmb IAmb 03 54 33.7
comp=Z,2μm,1.9s
LBTB Lobatse 51.31 78 *i*P P **03 54 27.2 -0.1**
LBTB Lobatse 51.31 78 *i*P P **03 54 27.2 -0.1**
LBTB Lobatse 51.31 78 ⇓P P **03 54 27.0 -0.2**
KSR Koster 51.38 80 *e*P P **03 54 26.9 -1.0**
KSR IAmb IAmb 03 54 34.9
comp=Z,2μm,1.9s
NWCL Newcastle 51.63 84 *e*P P **03 54 30.1 +0.4**
NWCL IAmb IAmb 03 54 36.4
comp=Z,1μm,1.6s
TSUM Tsumeb 51.64 66 P P **03 54 29.9 +0.1**
comp=Z,71nm,0.8s,baz=200,slow=7.3,SNR=67
TSUM S **S** **04 01 46.7 -2.8**
comp=Z,1.3nm,0.3s,baz=109,slow=20,SNR=2.1
TSUM LR LR 04 11 30.5
comp=Z,7μm,21.3s,baz=216,slow=30
TSUM PKPPKP **P'P'df** **04 25 06.8 +0.7**
comp=Z,4.3nm,1.0s,baz=296,slow=5.6,SNR=2.9
comp=Z,71nm,0.8s
TSUM Tsumeb 51.64 66 P P **03 54 29.9 +0.1**
TSUM Tsumeb 51.64 66 ⇓*i*P P **03 54 30.2 +0.4**
TSUM IAmb IAmb 03 54 35.4
comp=Z,2μm,2.5s
TSUM Tsumeb 51.64 66 ⇓P P **03 54 29.7 -0.1**
NPGB Novo Progresso 51.69 330 *e*P P **03 54 30.0 -0.1**
HRAO HartRAO 51.80 81 *i*P P **03 54 30.1 -0.9**
SLR Silverton 52.25 81 ⇓*i*P P **03 54 33.2 -1.2**
SLR IAmb IAmb 03 54 40.5
comp=Z,1μm,1.8s
ETMB Extrema 52.88 316 IAmb IAmb 03 54 40.9
comp=Z,640nm,1.3s
ETMB Extrema 52.88 316 *e*P P **03 54 39.3 +0.4**
POGA Pongola 52.96 85 IAmb IAmb 03 54 46.5
comp=Z,995nm,1.7s
POGA Pongola 52.96 85 *e*P P **03 54 38.5 -1.0**
POGA IAmb IAmb 03 54 46.1
comp=Z,989nm,1.7s
POGA Pongola 52.96 85 ⇓P P **03 54 39.2 -0.2**
CRLN Carolina, Mapu 53.04 83 ⇓*i*P P **03 54 39.9 -0.4**
CRLN IAmb IAmb 03 54 46.5
comp=Z,596nm,1.8s
ROSB Rosrio 53.20 344 *e*P P **03 54 42.2 +1.0**
LEPH Lephalale, Lim 53.45 79 *e*P P **03 54 42.0 -1.1**
LEPH IAmb IAmb 03 54 50.0
comp=Z,1μm,1.9s
ITTB Itaituba 54.34 330 *e*P P **03 54 49.7 +0.1**
TMAB Tom-Au,PA,Br 54.41 340 *e*P P **03 54 51.5 +1.4**
CASY Casey 55.44 162 P P **03 54 58.0 +1.0**
CASY IAmb IAmb 03 54 59.4
comp=Z,206nm,0.9s
CASY Casey 55.44 162 ⇑P P **03 54 58.0 +1.0**
NNA Nana 55.66 303 P P **03 55 00.2 +0.9**
comp=Z,426nm,1.0s,baz=169,slow=6.8,SNR=69
NNA S **S** **04 02 44.8 +1.0**
comp=Z,3.0nm,0.3s,baz=82,slow=20,SNR=1.2
NNA LR LR 04 21 33.2
comp=Z,6μm,18.0s,baz=148,slow=39
comp=Z,426nm,1.0s
NNA Nana 55.66 303 P P **03 54 59.1 -0.1**
NNA Nana 55.66 303 IAMs_20 IAMs_20 04 21 38.4
comp=Z,7μm,18.0s
NNA Nana 55.66 303 *c i*P P **03 54 59.7 +0.5**
NNA pmax pmax
comp=Z,1μm,1.1s
NNA MLR MLR
comp=Z,11μm,18.0s
NNA Nana 55.66 303 ⇑P P **03 55 00.1 +0.9**
MOPA Mopani 55.75 82 ⇓*i*P P **03 54 59.3 -0.4**
MOPA IAmb IAmb 03 55 06.6
comp=Z,834nm,1.8s
MOPA Mopani 55.75 82 *i*P P **03 55 01.6 +1.9**
MOPA Mopani 55.75 82 *i*P P **03 55 01.6 +1.9**
MUSN Musina, Limpop 55.84 80 ⇓*i*P P **03 55 00.5 0.0**
MUSN IAmb IAmb 03 55 06.4
comp=Z,336nm,1.2s
MUSN Musina, Limpop 55.84 80 *i*P P **03 55 00.7 +0.2**
MUSN Musina, Limpop 55.84 80 *i*P P **03 55 00.7 +0.2**
MALB Monte Alegre 56.34 333 *e*P P **03 55 04.8 +0.8**
MATP Matopo 56.56 77 LR LR 04 15 58.2
comp=Z,5μm,21.5s,baz=222,slow=32
MATP Matopo 56.56 77 ⇓*i*P P **03 55 05.4 -0.4**
MATP IAmb IAmb 03 55 11.2
comp=Z,726nm,1.1s
MATP Matopo 56.56 77 *i*P P **03 55 05.6 -0.2**
MATP Matopo 56.56 77 *i*P P **03 55 05.6 -0.2**
BLWY Bulawayo 56.85 77 ⇓*i*P P **03 55 06.2 -1.7**
BLWY IAmb IAmb 03 55 13.9
comp=Z,2μm,1.2s
BLWY Bulawayo 56.85 77 *i*P P **03 55 07.3 -0.6**
BLWY Bulawayo 56.85 77 *i*P P **03 55 07.3 -0.6**
MACA Manacapuru-AM 57.01 325 P P **03 55 08.1 -0.6**
MACA IAmb IAmb 03 55 09.6
comp=Z,1μm,1.5s
MACA Manacapuru-AM 57.01 325 *e*P P **03 55 08.2 -0.6**
MCPB Macapa, AP 57.22 336 *e*P P **03 55 11.6 +1.3**
CZSB Cruzeiro do Su 57.49 310 IAmb IAmb 03 55 13.3
comp=Z,1μm,1.5s
CZSB Cruzeiro do Su 57.49 310 *e*P P **03 55 11.6 -0.6**
LSZ Lusaka 60.56 74 LR LR 04 18 19.2
comp=Z,15μm,19.6s,baz=218,slow=33
LSZ Lusaka 60.56 74 P P **03 55 32.8 -0.8**
LSZ IAmb IAmb 03 55 40.7
comp=Z,382nm,1.4s
LSZ Lusaka 60.56 74 P P **03 55 32.8 -0.8**
LSZ pmax pmax
comp=Z,382nm,1.4s
ATAH Atahualpa 60.62 304 LR LR 04 24 20.7
comp=Z,4μm,18.9s,baz=162,slow=38
ATAH PKPPKP 04 24 55.3
comp=Z,8.6nm,1.1s,baz=216,slow=6.0,SNR=2.7
RPN Rapa Nui 61.23 263 P P **03 55 39.0 +1.1**
comp=Z,174nm,0.9s,baz=203,slow=4.4,SNR=3.9
RPN LR LR 04 18 10.8
comp=Z,6μm,19.4s,baz=134,slow=32
comp=Z,174nm,0.9s
RPN Rapa Nui 61.23 263 P P **03 55 38.9 +1.1**
BOAV Boa Vista 62.18 327 P P **03 55 43.8 -0.6**
BOAV IAmb IAmb 03 55 45.5
comp=Z,518nm,1.3s
BOAV Boa Vista 62.18 327 *e*P P **03 55 44.3 -0.1**
MDP Montagnes des 62.64 336 P P **03 55 47.4 0.0**
comp=Z,156nm,1.1s,baz=173,slow=6.7,SNR=55
MDP S **S** **04 04 11.5 -2.4**
comp=Z,4.2nm,1.1s,baz=282,slow=19,SNR=1.0
MDP LR LR 04 21 23.9
comp=Z,4μm,20.0s,baz=148,slow=34
comp=Z,156nm,1.1s
FOMA Nahampoana Res 63.50 96 IAmb IAmb 03 56 00.1
comp=Z,258nm,1.4s
LIC Lamto 65.19 29 *e*P P **03 56 03.4 -0.8**
comp=Z,375nm,1.0s
KIC Kosan Boka 65.40 30 *e*P P **03 56 04.3 -1.3**
comp=Z,57nm,0.8s

PTLC **Puerto Leguiza** 65.46 311 *e*P P 03 56 02.4 -3.6
TIC **Toumodi** 65.59 29 *e*P P 03 56 05.9 -0.9
comp=Z,294nm,1.1s
DBIC **Dimbokro** 65.66 30 P P 03 56 07.0 -0.2
comp=Z,40nm,0.8s,baz=193,slow=6.9,SNR=47
DBIC S S 04 04 48.9 -2.5
comp=Z,2.6nm,0.9s,baz=201,slow=22,SNR=1.2
DBIC ScS SKSac 04 06 00.9 -0.1
comp=Z,3.1nm,1.0s,baz=18,slow=20,SNR=1.7
DBIC LR LR 04 18 09.5
comp=Z,7µm,20.4s,baz=223,slow=30
DBIC PKPPKP P'P'df 04 24 45.1 +4.5
comp=Z,18nm,1.1s,baz=28,slow=2.3,SNR=6.8
comp=Z,40nm,0.8s
DBIC **Dimbokro** 65.66 30 P P 03 56 07.2 0.0
DBIC IAmb IAmb 03 56 14.3
comp=Z,282nm,1.4s
DBIC **Dimbokro** 65.66 30 P P 03 56 07.2 0.0
DBIC pmax pmax
comp=Z,282nm,1.4s
DBIC **Dimbokro** 65.66 30 *e*P P 03 56 07.0 -0.2
DBIC **Dimbokro** 65.66 30 ⇑P P 03 56 06.8 -0.5
PORT **Chimborazo Vol** 65.78 307 IAmb IAmb 03 56 27.7
comp=Z,473nm,1.2s
VOI **Vohitsoka** 65.79 94 P P 03 56 09.0 +0.7
VOI IAmb IAmb 03 56 16.2
comp=Z,463nm,1.7s
VOI **Vohitsoka** 65.79 94 P P 03 56 11.8 +3.5
CHSH **Refugio Sur-Vo** 65.79 307 IAmb IAmb 03 56 12.1
comp=Z,832nm,1.2s
SLOR **San Lorenzo -** 66.30 307 IAmb IAmb 03 56 15.7
comp=Z,458nm,1.4s
MACC **Macarena, Meta** 66.84 313 *e*P P 03 56 14.5 -0.3
FLOC **Florencia** 67.10 311 *e*P P 03 56 16.2 -0.3
OTAV **Otavalo** 67.13 308 P P 03 56 18.6 +1.3
OTAV **Otavalo** 67.13 308 P P 03 56 18.6 +1.3
OTAV pmax pmax
comp=Z,1µm,1.5s
OTAV MLR MLR
comp=Z,5µm,20.0s
OTAV **Otavalo** 67.13 308 *e*P P 03 56 18.4 +1.2
OTAV **Otavalo** 67.13 308 ⇑P P 03 56 18.5 +1.3
OTAV **Otavalo** 67.13 308 *e*P P 03 56 18.6 +1.3
CUSE **Cuicocha Este** 67.17 308 *e*P P 03 56 18.7 +1.2
CUSE *e*P pP 03 56 19.7 -4.7
PAC1 **Pacto, Paraso** 67.31 307 *e*P P 03 56 18.8 +0.7
GCUF **Volcan Galeras** 67.52 309 *e*P P 03 56 21.2 +1.4
GARC **Garzon, Huila** 67.57 312 *e*P P 03 56 19.7 0.0
BETC **Betania** 67.99 312 *e*P P 03 56 22.9 +0.7
PTGC **Puerto Gaitan,** 68.00 316 *e*P P 03 56 20.5 -1.7
BBAC **Balboa, Cauca** 68.18 310 *e*P P 03 56 23.9 +0.3
EKNA **AfricaArray -** 68.28 45 *e*P P 03 56 25.7 +1.7
ABPO **Ambohimpanom** 68.32 92 P P 03 56 26.5 +2.1
ABPO IAmb IAmb 03 56 32.6
comp=Z,401nm,1.6s
ABPO **Ambohimpanom** 68.32 92 P P 03 56 26.5 +2.1
ABPO pmax pmax
comp=Z,401nm,1.7s
ABPO **Ambohimpanom** 68.32 92 ⇑P P 03 56 26.6 +2.1
PTGL **Punta Galera** 68.33 307 *e*P P 03 56 25.6 +1.3
POPC **Popayan, Colom** 68.40 311 *e*P P 03 56 27.8 +2.8
OPO **Ambohidratompo** 68.65 92 LR LR 04 21 09.5
comp=Z,10µm,20.9s,baz=340,slow=31
TUMC **Tumaco** 68.66 308 *e*P P 03 56 27.1 +0.7
PRAC **Prado** 68.69 313 *e*P P 03 56 26.9 +0.3
CHIC **Chingaza** 69.04 314 *e*P P 03 56 28.8 -0.4
GR1C **Gorgona, Isla** 69.46 309 *e*P P 03 56 31.7 +0.4
ROSC **El Rosal** 69.47 314 P P 03 56 32.6 +0.8
comp=Z,227nm,1.1s,baz=162,slow=3.2,SNR=131
ROSC S S 04 05 38.5 +0.6
comp=Z,2.3nm,0.3s,baz=224,slow=21,SNR=1.2
ROSC LR LR 04 30 47.2
comp=Z,5µm,18.0s,baz=174,slow=39
comp=Z,227nm,1.1s
ROSC **El Rosal** 69.47 314 P P 03 56 31.9 +0.1
ROSC IAmb IAmb 03 56 34.3
comp=Z,555nm,1.2s
ROSC **El Rosal** 69.47 314 *e*P P 03 56 31.8 0.0
YOTC **Yotoco, Valle** 69.55 312 *e*P P 03 56 31.2 -0.8
ANIL **Santa Ana** 69.60 313 *e*P P 03 56 31.9 -0.6
TAMC **Tame, Arauca** 69.91 317 *e*P P 03 56 34.0 -0.1
RUSC **La Rusia** 69.92 316 *e*P P 03 56 33.1 -1.5
MALC **Bahia Malaga** 70.00 311 *e*P P 03 56 35.2 +0.6
SPBC **San Pablo de B** 70.10 315 *e*P P 03 56 33.5 -1.8
GUY2C **Guyana, Caldas** 70.25 313 *e*P P 03 56 35.9 -0.7
PLMC **San Jos del P** 70.35 312 *e*P P 03 56 36.5 -0.4
NORC **Norcasia** 70.35 314 *e*P P 03 56 34.9 -1.9
BARC **Barichara** 70.60 316 *e*P P 03 56 34.8 -3.7
TOSP **Speyside** 70.62 330 *e*P P 03 56 35.0 -3.3
BAUV **El Baul** 70.82 322 P P 03 56 39.4 -0.1
BBTS **Babate** 70.86 16 P P 03 56 41.3 +1.6
comp=Z,46nm,1.0s,baz=317,slow=2.7,SNR=4.0
BBTS S S 04 05 53.1 0.0
comp=Z,13nm,0.9s,baz=333,slow=23,SNR=1.6
BBTS LR LR 04 23 01.3
comp=Z,7µm,18.6s,baz=216,slow=32
comp=Z,46nm,1.0s
PIZC **Pizarro, Choco** 70.86 311 *e*P P 03 56 40.5 +0.7
PTBC **PUERTO BERRIO,** 71.06 315 *e*P P 03 56 38.8 -2.2
PAMC **Pamplona, Colo** 71.09 317 *e*P P 03 56 40.2 -1.6
CBOC **Ciudad Bolivar** 71.10 313 *e*P P 03 56 39.9 -1.6
HELC **Santa Helena** 71.19 313 *e*P P 03 56 40.3 -2.0
SOCV **Socops** 71.24 319 *e*P P 03 56 42.2 +0.1
BRRC **Barranca, Sant** 71.28 315 *e*P P 03 56 39.8 -2.6
RER **Riviere de l'E** 71.46 100 P P 03 56 44.5 +0.9
RER IAmb IAmb 03 56 51.5
comp=Z,516nm,1.5s
RER IAMs_20 IAMs_20 04 20 41.2
comp=Z,6µm,20.0s
RER **Riviere de l'E** 71.46 100 ⇑P P 03 56 46.0 +2.3
BIRV **Birongo** 71.63 324 IAmb IAmb 03 56 46.9
comp=Z,579nm,1.3s
SDV **Santo Domingo** 71.71 319 LR LR 04 29 48.1
comp=Z,12µm,19.3s,baz=144,slow=37
SDV **Santo Domingo** 71.71 319 P P 03 56 45.6 +0.4
SDV IAmb IAmb 03 56 47.1
comp=Z,361nm,1.2s
SDV **Santo Domingo** 71.71 319 *e*P P 03 56 45.4 +0.2
GRGR **Grenville** 71.74 329 P P 03 56 44.7 -0.4
GRGR IAMs_20 IAMs_20 04 29 12.3
comp=Z,6µm,20.0s
GRGR **Grenville** 71.74 329 *e*P P 03 56 43.3 -1.8
GRGR **Grenville** 71.74 329 ⇑P P 03 56 45.5 +0.4
MAPC **Malpelo** 71.90 307 *e*P P 03 56 46.5 +0.4
GCMP **Grenada, Carri** 72.01 329 *e*P P 03 56 44.7 -1.9
PAYG **Puerto Ayora** 72.07 296 P P 03 56 48.6 +1.4
PAYG IAmb IAmb 03 56 49.6
comp=Z,241nm,1.2s
ZARC **Zaragoza, Cauc** 72.09 315 *e*P P 03 56 45.2 -2.0
BBGH **Gun Hill** 72.10 331 *e*P P 03 56 48.7 +1.5
OCAC **Ocana** 72.15 316 *e*P P 03 56 45.2 -2.5
DBBC **Dabeiba** 72.22 313 *e*P P 03 56 47.7 -0.4
UREC **San Jos de Ur** 72.60 314 *e*P P 03 56 49.1 -1.2
SVB **Belmont** 72.70 330 *e*P P 03 56 49.0 -1.8
PTAC **Punta Ardita,** 73.01 312 *e*P P 03 56 52.3 -0.4
MCLT **Moule a Chique** 73.03 330 P P 03 56 53.1 +0.3
MCLT IAmb IAmb 03 56 54.7
comp=Z,362nm,1.2s
MCLT **Moule a Chique** 73.03 330 *e*P P 03 56 50.5 -2.2
KOWA **Kowa** 73.36 28 P P 03 56 55.1 +0.4
KOWA IAmb IAmb 03 57 02.6
comp=Z,240nm,1.2s
KOWA **Kowa** 73.36 28 P P 03 56 57.8 +3.1
MPOM **Morne Pois Mar** 73.70 331 IAmb IAmb 03 57 04.8
comp=Z,347nm,1.5s
MPOM **Morne Pois Mar** 73.70 331 *e*P P 03 56 53.8 -2.9
TOA0 **Torodi Ar. Sit** 73.76 34 IAmb IAmb 03 57 04.7
comp=Z,252nm,1.2s
TORD **Torodi Ar. Bea** 73.76 34 P P 03 56 57.3 +0.2
comp=Z,48nm,0.8s,baz=198,slow=6.3,SNR=166
TORD S SKiKP 04 06 25.1 +0.6
comp=Z,1.5nm,1.2s,baz=203,slow=4.4,SNR=1.9
TORD LR LR 04 22 58.9
comp=Z,16µm,20.2s,baz=191,slow=30
TORD PKPPKP P'P'df 04 24 31.4 +4.3
comp=Z,3.0nm,1.1s,baz=268,slow=2.0,SNR=5.3
comp=Z,48nm,0.8s
TORD **Torodi Ar. Bea** 73.76 34 P P 03 56 57.2 +0.2
TORD IAmb IAmb 03 57 04.7
comp=Z,238nm,1.2s
BIM **Bigot** 73.83 330 P P 03 56 57.6 +0.1
BIM IAmb IAmb 03 56 59.5
comp=Z,681nm,1.3s
BIM **Bigot** 73.83 330 *e*P P 03 56 57.7 +0.1

ARGC **Ariguani, Magd** 73.99 316 *e*P P 03 56 58.2 -0.3
ILAM **Ilet Lapin Mar** 74.02 331 *e*P P 03 56 58.6 0.0
FDF **Fort de France** 74.06 330 IAmb IAmb 03 57 01.2
comp=Z,337nm,1.2s
FDF **Fort de France** 74.06 330 *e*P P 03 56 59.5 +0.6
FDF **Fort de France** 74.06 330 ⇑P P 03 56 59.5 +0.6
MBAR **Mbarara** 74.16 67 LR LR 04 26 10.6
comp=Z,13µm,19.3s,baz=193,slow=33
MBAR **Mbarara** 74.16 67 P P 03 57 01.3 +1.5
MBAR IAmb IAmb 03 57 09.9
comp=Z,319nm,1.4s
MBAR **Mbarara** 74.16 67 *d* P P 03 57 02.3 +2.5
MBAR pmax pmax
comp=Z,123nm,1.3s
MBAR **Mbarara** 74.16 67 ⇓P P 03 57 02.5 +2.7
SJCC **San Jacinto, C** 74.40 315 *e*P P 03 57 00.7 -0.2
CRJC **Cerrejon, Guaj** 74.52 318 *e*P P 03 56 58.9 -2.7
AZU **Azuero** 74.66 310 *e*P P 03 57 01.9 -0.5
DLPL **La Plaine** 74.66 330 *e*P P 03 57 01.2 -1.1
MDN **Morne-Daniel** 74.69 330 *e*P P 03 57 03.3 +0.9
URIC **Uribia, Colomb** 74.81 319 *e*P P 03 57 00.3 -2.8
DSLB **Salisbury** 74.81 330 *e*P P 03 57 03.6 +0.4
SMRC **Santa Marta, M** 75.17 317 *e*P P 03 57 04.9 -0.4
MAGL **Barre de l'Ile** 75.25 331 *e*P P 03 57 05.3 -0.4
TDBA **Terre de Bas,** 75.26 330 IAmb IAmb 03 57 08.5
comp=Z,725nm,1.4s
TDBA **Terre de Bas,** 75.26 330 *e*P P 03 57 05.6 -0.2
UPA **Univ. de Panam** 75.39 311 *e*P P 03 57 06.3 -0.3
CBE **Ff, Capester** 75.46 330 IAmb IAmb 03 57 09.4
comp=Z,387nm,1.2s
CBE **Ff, Capester** 75.46 330 *e*P P 03 57 06.8 -0.1
GDSD **La Dsirade Is** 75.54 331 IAmb IAmb 03 57 09.6
comp=Z,424nm,1.5s
BCIP **Isla Barro Col** 75.69 311 IAmb IAmb 03 57 09.8
comp=Z,366nm,1.2s
BCIP **Isla Barro Col** 75.69 311 *e*P P 03 57 08.0 -0.3
BCIP **Isla Barro Col** 75.69 311 ⇑P P 03 57 08.9 +0.6
ABD **La Joyeuse, An** 75.81 331 *e*P P 03 57 08.7 -0.1
MLYT **Lee's Yard** 76.25 330 *e*P P 03 57 11.3 -0.1
MBFL **Flemmings, Mon** 76.28 330 *e*P P 03 57 11.8 +0.3
ANBD **Bethesda, Anti** 76.44 330 *e*P P 03 57 12.1 -0.3
BRU2 **Volcan** 76.62 308 IAmb IAmb 03 57 23.6
comp=Z,512nm,1.3s
KIBK **Kibwezi** 76.65 74 P P 03 57 15.2 +1.3
KIBK IAmb IAmb 03 57 24.4
comp=Z,374nm,1.5s
ROCAM **Rodrigues Isla** 76.83 106 IAMs_20 IAMs_20 04 22 10.6
comp=Z,7µm,21.0s
SKI **Saint Kitts** 76.98 330 *e*P P 03 57 14.1 -1.5
SKI **Saint Kitts** 76.98 330 *e* S 04 06 55.5 -6.6
ANWB **Willy Bob** 77.03 331 IAmb IAmb 03 57 17.5
comp=Z,380nm,1.2s
ANWB **Willy Bob** 77.03 331 *e*P P 03 57 15.0 -0.8
KMBO **Kilima Mbogo** 77.22 73 P P 03 57 19.0 +1.6
comp=Z,8.8nm,1.2s,baz=198,slow=4.5,SNR=9.2
KMBO S S 04 07 05.2 -0.4
comp=Z,0.4nm,0.4s,baz=23,slow=20,SNR=1.6
KMBO LR LR 04 28 36.2
comp=Z,16µm,19.1s,baz=201,slow=34
KMBO **Kilima Mbogo** 77.22 73 P P 03 57 20.2 +2.8
DRK0 **Durika** 77.29 308 *i* P P 03 57 19.5 +1.9
SRBA **San Rafael, Bu** 77.31 307 IAmb IAmb 03 57 20.4
comp=Z,684nm,1.4s
PEZE **Perez Zeledon,** 77.59 307 ⇑ *i* P P 03 57 20.4 +1.2
SMRT **St. Maarten** 77.76 330 IAmb IAmb 03 57 21.1
comp=Z,336nm,1.4s
SMRT **St. Maarten** 77.76 330 *e*P P 03 57 16.4 -3.4
CDM **Cerro de Muert** 77.78 307 ⇑ *i* P P 03 57 21.6 +0.9
CDVI **St. Croix** 77.98 328 IAmb IAmb 03 57 22.7
comp=Z,385nm,1.4s
RIMA **Rio Macho** 78.01 307 IAmb IAmb 03 57 24.4
comp=Z,786nm,1.5s
RIMA **Rio Macho** 78.01 307 *i* P P 03 57 22.1 +0.4
LCR2 **La Lucha 2** 78.06 307 ⇑ *i* P P 03 57 22.7 +0.8
BATAN **Batan** 78.08 308 IAmb IAmb 03 57 24.0
comp=Z,606nm,1.3s
VTCV **VTCV, Calle Va** 78.14 308 ⇑ *i* P P 03 57 23.3 +1.0
RAFA **San Farael, Vo** 78.16 307 *i* P P 03 57 23.5 +0.9
OCM **Ochomogo** 78.17 307 *i* P P 03 57 23.5 +0.9
VTRT **Volcan Turrial** 78.19 307 ⇑ *i* P P 03 57 24.2 +1.4
CVTR **Volcan Turrial** 78.19 307 P P 03 57 23.2 +0.3
CVTR IAmb IAmb 03 57 25.3
comp=Z,550nm,1.3s
CVTR **Volcan Turrial** 78.19 307 *i* P P 03 57 23.7 +0.8
VTUN **Crater Central** 78.19 307 ⇑ *i* P P 03 57 24.6 +1.7
ODZ **Otahua Downs** 78.25 196 ⇓ P P 03 57 23.3 +0.9
HDC3 **Heredia 3** 78.33 307 *i* P P 03 57 24.7 +1.4
HDC **Heredia** 78.33 307 *i* P P 03 57 24.7 +1.4
RIFO **Rio Frio, Sara** 78.53 307 *i* P P 03 57 24.9 +0.7
LAFE **Finca La Fe, P** 78.53 306 *i* P P 03 57 25.4 +1.2
CRPO **Crater poas** 78.56 307 *i* P P 03 57 26.2 +1.4
SRA1 **San Ramn** 78.58 307 *i* P P 03 57 25.9 +1.3
STVI **Saint Thomas** 78.60 328 IAmb IAmb 03 57 25.9
comp=Z,289nm,1.2s
ICMP **Isla Caja de M** 78.65 326 IAmb IAmb 03 57 25.6
comp=Z,297nm,1.4s
HUMP **Col San Antoni** 78.68 327 IAmb IAmb 03 57 26.0
comp=Z,251nm,1.2s
SJG **San Juan** 78.75 327 LR LR 04 32 52.8
comp=Z,3µm,20.5s,baz=157,slow=36
SJG **San Juan** 78.75 327 P P 03 57 24.5 -0.8
SJG **San Juan** 78.75 327 P P 03 57 24.5 -0.8
SJG pmax pmax
comp=Z,190nm,1.3s
SJG MLR MLR
comp=Z,4µm,20.0s
SJG **San Juan** 78.75 327 ⇑P P 03 57 24.3 -1.0
CBYP **Canovanas** 78.81 327 IAmb IAmb 03 57 26.8
comp=Z,458nm,1.4s
INDI **Punta indio, G** 78.85 306 *i* P P 03 57 27.1 +1.0
MLPR **Magueyes Islan** 78.90 326 IAmb IAmb 03 57 25.8
comp=Z,419nm,1.3s
CRPR **Cabo Rojo, PR** 78.95 326 IAmb IAmb 03 57 27.7
comp=Z,410nm,1.1s
LBZ **Lake Benmore** 78.97 196 IAmb IAmb 03 57 28.4
comp=Z,325nm,1.5s
JTS **Las Juntas de** 78.97 307 P P 03 57 27.6 +0.9
JTS **Las Juntas de** 78.97 307 *c* *i* P P 03 57 27.8 +1.0
JTS pmax pmax
comp=Z,375nm,1.2s
JTS MLR MLR
comp=Z,2µm,18.0s
JTS **Las Juntas de** 78.97 307 ⇑ *i* P P 03 57 27.7 +0.9
JTS **Las Juntas de** 78.97 307 ⇑P P 03 57 27.7 +1.0
FORC **Fortuna** 79.00 307 ⇑ *e* P P 03 57 27.6 +0.8
CASO **Castillo** 79.00 307 ⇑ *i* P P 03 57 27.6 +0.7
CEDE **Laguna Cedeo** 79.03 307 *i* P P 03 57 27.8 +0.7
CEDE ⇑ *e* P P 03 57 27.8 +0.7
NICO **Nicoya** 79.06 306 *i* P P 03 57 28.4 +1.2
COVE **Coope Vega, Sa** 79.10 307 ⇑ *i* P P 03 57 28.8 +0.4
SAJU **San Juanillo,** 79.13 306 *i* P P 03 57 27.9 +0.4
PRSN **Puerto Rico Se** 79.16 326 IAmb IAmb 03 57 28.1
comp=Z,445nm,1.6s
GUAI **GUAI** 79.21 306 ⇑ *e* P P 03 57 28.7 +0.7
ORTG **Ortega, Santa** 79.27 306 IAmb IAmb 03 57 31.0
comp=Z,772nm,1.4s
ORTG **Ortega, Santa** 79.27 306 ⇑ *i* P P 03 57 29.3 +0.9
ACAL **Aguas Claras** 79.31 307 ⇑ *i* P P 03 57 29.0 +0.4
CUI **Cuipilapa** 79.39 307 ⇑ *i* P P 03 57 29.5 +0.4
COLC **Colonia** 79.42 307 ⇑ *i* P P 03 57 29.3 +0.1
VERA **Finca Concepci** 79.43 307 ⇑ *e* P P 03 57 29.3 +0.1
HORNC **Hornillas** 79.45 307 ⇑ *e* P P 03 57 29.5 +0.1
GUAB **Guayabo de Bag** 79.47 307 ⇑ *e* P P 03 57 29.6 +0.2
RPZ **Rata Peaks** 79.48 197 P P 03 57 29.9 +0.6
comp=Z,168nm,1.0s,baz=194,slow=5.5,SNR=24
RPZ LR LR 04 28 19.0
comp=Z,5µm,20.9s,baz=168,slow=32
comp=Z,168nm,1.0s
RPZ **Rata Peaks** 79.48 197 P P 03 57 29.8 +0.6
RPZ IAmb IAmb 03 57 31.1
comp=Z,237nm,1.1s
RPZ IAMs_20 IAMs_20 04 27 46.1
comp=Z,6µm,21.0s
VMAR **Armenia, Volca** 79.51 307 *i* P P 03 57 30.0 +0.4
GPS2 **Hotel Rincn d** 79.56 306 ⇑ *e* P P 03 57 30.1 +0.1
VRLE **La Escondida,** 79.60 306 *i* P P 03 57 30.3 +0.1
BUEV **Buena Vista** 79.63 306 ⇑ *i* P P 03 57 30.4 0.0
HZTE **Horizontes, Gu** 79.64 306 *i* P P 03 57 30.8 +0.5
GB1A **Borinquen Arri** 79.64 306 ⇑ *e* P P 03 57 30.4 -0.1
OXZ **Oxford** 79.70 197 IAMs_20 IAMs_20 04 31 36.7
comp=Z,7µm,19.0s
KHZ **Kahutara** 80.31 199 IAMs_20 IAMs_20 04 30 53.1
comp=Z,4µm,19.0s
KHZ **Kahutara** 80.31 199 ⇓P P 03 57 33.9 +0.2

ESPN **Las Esperanzas** 80.35 308 *e*P P 03 57 33.8 -0.4
ACON **Acoyapa** 80.55 307 ⇑ *i* P P 03 57 35.1 -0.1
JAKH **Jacmel** 81.01 321 IAmb IAmb 03 57 40.0
comp=Z,638nm,1.2s
THZ **Tophouse** 81.06 198 IAMs_20 IAMs_20 04 33 53.9
comp=Z,5µm,18.0s
SNZO **South Karori** 81.16 200 P P 03 57 39.1 +0.9
SNZO IAmb IAmb 03 57 40.1
comp=Z,378nm,1.2s
BOAB **BOACO BROADBAN** 81.20 307 IAMs_20 IAMs_20 04 36 45.3
comp=Z,6µm,18.0s
SDDR **Presa de Saban** 81.26 322 IAMs_20 IAMs_20 04 31 54.3
comp=Z,5µm,21.0s
SDDR **Presa de Saban** 81.26 322 ⇑P P 03 57 38.8 -0.2
SC01 **Santiago de Io** 81.48 323 IAmb IAmb 03 57 42.0
comp=Z,372nm,1.2s
NNZ **Nelson** 81.50 199 IAMs_20 IAMs_20 04 30 54.6
comp=Z,6µm,20.0s
MATN **Matagalpa** 81.74 307 IAmb IAmb 03 57 43.4
comp=Z,423nm,1.2s
QRZ **Quartz Range** 82.04 198 IAMs_20 IAMs_20 04 34 50.7
comp=Z,6µm,18.0s
CRIN **San Cristobal** 82.05 306 IAmb IAmb 03 58 17.6
comp=Z,310nm,1.4s
CRIN **San Cristobal** 82.05 306 ⇑ *e* P P 03 57 41.9 -1.4
TAU **Tasmania Unive** 82.16 179 P P 03 57 43.3 -0.2
TAU IAmb IAmb 03 57 44.6
comp=Z,434nm,1.0s
TAU **Tasmania Unive** 82.16 179 P P 03 57 43.3 -0.2
TAU pmax pmax
comp=Z,434nm,1.0s
TAU MLR MLR
comp=Z,9µm,19.0s
TAU **Tasmania Unive** 82.16 179 ⇑P P 03 57 43.2 -0.4
MOO **Moorlands** 82.63 179 P P 03 57 46.0 0.0
baz=82,SNR=16
MTDJ **Mount Denham** 82.89 317 IAmb IAmb 03 57 50.8
comp=Z,668nm,1.6s
MTDJ IAMs_20 IAMs_20 04 36 47.3
comp=Z,5µm,19.0s
TGUH **Tegucigalpa,Un** 83.34 306 ⇑P P 03 57 50.2 +0.2
GRTK **Grand Turk** 83.55 323 IAmb IAmb 03 57 53.1
comp=Z,438nm,1.4s
GRTK IAMs_20 IAMs_20 04 35 31.0
comp=Z,4µm,20.0s
URZ **Urewera** 83.60 202 P P 03 57 51.4 +0.3
comp=Z,58nm,0.9s,baz=196,slow=1.5,SNR=24
URZ LR LR 04 31 00.2
comp=Z,4µm,20.0s,baz=178,slow=33
comp=Z,58nm,0.9s
URZ **Urewera** 83.60 202 IAMs_20 IAMs_20 04 34 29.2
comp=Z,6µm,18.0s
URZ **Urewera** 83.60 202 ⇑P P 03 57 51.4 +0.3
HIZ **Hauiti** 83.83 201 IAMs_20 IAMs_20 04 35 34.2
comp=Z,6µm,19.0s
SNET **Serv Nac Est T** 83.93 304 IAmb IAmb 03 58 04.2
comp=Z,271nm,1.2s
TAM **Tamanrasset** 84.02 34 ⇑P P 03 57 49.7 -3.7
TBI **Tubuai** 85.49 235 *e*P P 03 58 02.0 +1.2
comp=Z,2µm,1.5s
TBI **Tubuai** 85.49 235 *e*PP PP 04 01 19.0 +0.2
comp=Z,436nm,28.0s
TBI *e*S S 04 08 32.2 +1.6
comp=Z,2µm,25.5s
TBI *e*SS SS 04 14 09.4 +4.2
comp=Z,1µm,25.5s
TBI **Tubuai** 85.49 235 *e*LR LR 04 24 59.8
comp=Z,11µm,28.0s
TBI **Tubuai** 85.49 235 *e*T T 05 32 33.0
comp=Z,4.2nm,0.3s
OUZ **Omahuta** 87.27 201 P P 03 58 09.4 0.0
OUZ IAmb IAmb 03 58 10.6
comp=Z,241nm,1.1s
OUZ IAMs_20 IAMs_20 04 37 52.2
comp=Z,6µm,18.0s
OUZ **Omahuta** 87.27 201 ⇑P P 03 58 09.3 -0.1
TOO **Toolangi** 87.47 178 P P 03 58 10.0 -0.4
baz=87,SNR=20
TOO **Toolangi** 87.47 178 P P 03 58 10.0 -0.4
TOO **Toolangi** 87.47 178 P P 03 58 10.0 -0.4
TOO pmax pmax
comp=Z,84nm,1.0s
TOO **Toolangi** 87.47 178 ⇑P P 03 58 09.9 -0.5
ANKE **Ethiopia-Afar** 87.50 69 *e*P P 03 58 19.1 +7.9
ANKE *e*S S 04 08 48.5 -2.5
CCIG **Comitan** 87.56 303 ⇑P P 03 58 11.0 -0.1
TTIG **Tnine Tigouga,** 87.80 20 P P 03 58 16.0 +4.1
MILA **Mila** 88.01 181 P P 03 58 13.5 +0.5
baz=88,SNR=9.8
MILA **Mila** 88.01 181 ⇑P P 03 58 13.2 +0.1
ARPS **Mount Arapiles** 88.13 175 P P 03 58 12.9 -0.7
baz=88,SNR=13
NWAO **Narrogin (SRO)** 88.18 154 P P 03 58 13.8 -0.1
NWAO **Narrogin (SRO)** 88.18 154 IAMs_20 IAMs_20 04 35 55.4
comp=Z,4µm,19.0s
NWAO **Narrogin (SRO)** 88.18 154 P P 03 58 13.8 -0.1
NWAO pmax pmax
comp=Z,122nm,1.5s
NWAO MLR MLR
comp=Z,4µm,19.0s
FUL **Funchal** 88.51 12 A A 03 58 31.1
comp=Z,300nm,1.7s
OUK **Oukaimeden** 88.56 20 P P 03 58 19.0 +3.3
PMAR **Madeira** 88.58 12 A A 03 58 26.3
comp=Z,193nm,1.4s
PMOZ **Porto Moniz, M** 88.65 12 A A 03 58 31.3
comp=Z,208nm,2.4s
PMOZ **Porto Moniz, M** 88.65 12 *e*SKSac S 04 08 52.0 -8.5
PMOZ **Porto Moniz, M** 88.65 12 *e*LR LR 04 29 29.8
comp=Z,2µm,18.0s
MUN **Mundaring** 88.83 153 P P 03 58 15.9 -1.0
baz=89,SNR=7.2
PMPS **Porto Santo** 88.98 13 *e*P P 03 58 20.2 +3.0
comp=Z,506nm,1.8s
PMPST **Porto Santo, M** 89.01 13 *e*P P 03 58 20.4 +3.1
comp=Z,505nm,1.9s
TEIG **Tepich** 89.19 308 P P 03 58 19.1 +0.6
TEIG **Tepich** 89.19 308 ⇑P P 03 58 18.6 +0.1
CMIG **Matias Romero** 89.58 301 LR LR 04 33 02.9
comp=Z,2µm,21.1s,baz=144,slow=32
KLBR **Kellerberrin** 89.58 154 P P 03 58 20.1 -0.4
baz=89,SNR=12
CAN **Canberra** 89.74 181 P P 03 58 20.7 -0.5
CAN IAmb IAmb 03 58 22.8
comp=Z,243nm,1.2s
CAN IAMs_20 IAMs_20 04 35 42.3
comp=Z,5µm,20.0s
CAN **Canberra** 89.74 181 P P 03 58 20.7 -0.5
CAN pmax pmax
comp=Z,243nm,1.2s
CNB **Canberra Magne** 89.75 181 P P 03 58 21.4 +0.1
baz=90,SNR=23
SRHM **Skhour des Reh** 89.77 20 P P 03 58 24.0 +2.9
TVO **Taravao** 90.17 238 *e*P P 03 58 24.4 +1.0
comp=Z,179nm,1.2s
TVO **Taravao** 90.17 238 *e*T T 05 38 25.8
comp=Z,5.1nm,0.3s
TIAR **Tiarei** 90.40 238 *e*T T 05 38 31.8
comp=Z,1.6nm,0.3s
PAE **Paea** 90.43 237 *e*T T 05 38 35.1
comp=Z,2.1nm,0.3s
PPT2 **Papeete2** 90.49 237 *e*P P 03 58 27.3 +2.4
comp=Z,834nm,24.2s
PPT2 **Papeete2** 90.49 237 *e*PP PP 04 01 59.2 +0.1
comp=Z,927nm,24.8s
PPT2 **Papeete2** 90.49 237 *e*LR LR 04 27 18.5
comp=Z,7µm,22.0s
PPT2 **Papeete2** 90.49 237 *e*T T 05 38 31.2
comp=Z,3.4nm,0.3s
PPT **Papeete** 90.50 238 LR LR 04 30 16.5
comp=Z,5µm,21.2s,baz=174,slow=30
AVE **Averroes** 90.67 20 IAmb IAmb 03 58 34.4
comp=Z,383nm,1.6s
ATD **Arta Tunnel** 90.79 71 LR LR 04 35 28.6
comp=Z,12µm,21.8s,baz=200,slow=33
MDT **Midelt** 90.79 23 P P 03 58 27.8 +2.0
comp=Z,36nm,1.1s,baz=263,slow=2.6,SNR=30
MDT LR LR 04 33 26.6
comp=Z,12µm,20.9s,baz=196,slow=32
comp=Z,36nm,1.1s
MDT **Midelt** 90.79 23 P P 03 58 28.6 +2.8
CZD **Col de Zad** 90.90 22 P P 03 58 30.0 +3.4
FIGM **Figuig** 90.92 25 P P 03 58 29.0 +2.6
RAO **Raoul Island** 90.94 209 LR LR 04 34 53.0
comp=Z,1µm,18.5s,baz=144,slow=33
ZHG **ZHG** 90.97 21 P P 03 58 29.0 +2.4
061Z **Ochoppi** 91.10 317 P P 03 58 29.2 +2.0

061Z baz=154 S **S** **04 09 22.9 -0.3**

HTT baz=154 **Hallett** **91.26 172** P **P** **03 58 28.0 -0.3**
baz=91,SNR=4.6

HTT **Hallett** **91.26 172** ⇑P **P** **03 58 28.1 -0.3**
IFR **Ifrane** **91.35 22** P P 03 58 33.6 +5.1
IFR S **SKSac** **04 09 01.4 +2.6**

MORW **Morawa** **91.55 152** P **P** **03 58 28.1 -1.5**
LCRM **LCR** **91.57 22** P **P** **03 58 33.0 +3.5**
BBOO **Buckleboo** **91.62 170** P **P** **03 58 29.5 -0.4**
baz=91,SNR=6.0

BBOO **Buckleboo** **91.62 170** P **P** **03 58 29.6 -0.4**
BBOO IAmb IAmb 03 58 30.8
comp=Z,196nm,1.8s

BBSR **BB Station** **91.78 333** P **P** **03 58 30.1 -0.1**
BBSR **BB Station** **91.78 333** P **P** **03 58 31.0 +0.7**
baz=162

BBSR S **S** **04 09 28.8 -0.4**
baz=162

TLIG **Tlapa** **91.81 299** ⇑P **P** **03 58 31.9 +1.1**
TLIG ⇑P **P** **03 58 32.0 +1.1**

MGCD **Mangrove Creek** **91.82 182** P **P** **03 58 31.3 +0.5**
baz=92,SNR=10

PMOR **Pomariorio Ree** **91.88 240** *e*T T 05 40 35.0
comp=Z,2.6nm,0.3s

DGAR **Diego Garcia** **91.93 106** IAMs_20 IAMs_20 04 29 53.6
comp=Z,5µm,20.0s

060A **Indiantown** **91.94 318** S **S** **04 09 32.9 +2.1**
baz=155

RAR **Rarotonga** **91.94 227** P **P** **03 58 31.6 0.0**
comp=Z,69nm,0.9s,baz=229,slow=7.1,SNR=10

RAR LR LR 04 32 30.0
comp=Z,3µm,20.5s,baz=196,slow=31
comp=Z,69nm,0.9s

RAR **Rarotonga** **91.94 227** P **P** **03 58 31.5 0.0**
RAR IAmb IAmb 03 58 33.0
comp=Z,132nm,1.1s

PSMA **Santa Maria** **92.10 5** *e*P **P** **03 58 31.9 +0.3**
comp=Z,218nm,1.8s

PSMN **Pico do Norte,** **92.11 5** *e*P **P** **03 58 32.2 +0.5**
comp=Z,288nm,1.9s

FORT **Forrest** **92.53 163** P **P** **03 58 34.2 +0.1**
baz=92,SNR=9.9

FORT **Forrest** **92.53 163** P **P** **03 58 33.8 -0.3**
FORT IAmb IAmb 03 58 35.2
comp=Z,101nm,0.9s

FORT **Forrest** **92.53 163** ⇑P **P** **03 58 33.8 -0.3**
JBK **JBK** **92.71 24** P **P** **03 58 37.3 +2.5**
PDA **Ponta Delgada** **92.82 5** *e*P **P** **03 58 35.4 +0.5**
comp=Z,176nm,1.9s

CHEFC **Chefchaouen** **92.84 21** P **P** **03 58 39.0 +3.7**
CMLA **Cha da Macela** **92.85 5** *e*P **P** **03 58 36.1 +1.0**
comp=Z,88nm,2.2s

PGRON **Lagoa das Cont** **92.86 5** *e*P **P** **03 58 35.1 -0.1**
BART **Pico Bartolome** **92.88 5** *e*P **P** **03 58 35.6 +0.3**
comp=Z,563nm,1.2s

PCALD **Caldeiras da R** **92.88 5** *e*P **P** **03 58 35.2 0.0**
PSET **Sete Cidades** **92.90 5** *e*P **P** **03 58 35.7 +0.4**
comp=Z,218nm,1.1s

STKA **Stephens Creek** **92.99 174** P **P** **03 58 35.8 -0.5**
comp=Z,35nm,1.0s,baz=164,slow=5.9,SNR=32

STKA LR LR 04 38 16.3
comp=Z,12µm,20.2s,baz=177,slow=34
comp=Z,35nm,1.0s

STKA **Stephens Creek** **92.99 174** P **P** **03 58 35.9 -0.5**
baz=93,SNR=22

STKA **Stephens Creek** **92.99 174** P **P** **03 58 35.8 -0.5**
STKA **Stephens Creek** **92.99 174** *i* P **P** **03 58 35.6 -0.7**
TAOE **Nuku Hiva Isla** **93.05 250** *e*P **P** **03 58 37.8 +0.9**
comp=Z,520nm,24.0s

TAOE **Nuku Hiva Isla** **93.05 250** *e*PP **PP** **04 02 19.6 0.0**
comp=Z,700nm,24.5s

TAOE **Nuku Hiva Isla** **93.05 250** *e*LR LR 04 28 28.6
comp=Z,9µm,27.7s

PVLZ **Pæen de** **93.13 22** P **P** **03 58 38.5 +2.1**
PVLZ S **SKSac** **04 09 08.9 +0.7**
TAF **Taforalt** **93.20 24** P **P** **03 58 40.0 +3.1**
DWPF **Disney Wildern** **93.31 318** P **P** **03 58 37.7 +0.3**
DWPF IAmb IAmb 03 58 40.2
comp=Z,244nm,1.4s

DWPF **Disney Wildern** **93.31 318** IAMs_20 IAMs_20 04 40 20.6
comp=Z,4µm,20.0s

DWPF **Disney Wildern** **93.31 318** P **P** **03 58 38.9 +1.4**
baz=154

DWPF **Disney Wildern** **93.31 318** P **P** **03 58 38.4 +1.0**
baz=154

DWPF S **S** **04 09 46.1 +3.0**
baz=154

DWPF **Disney Wildern** **93.31 318** ⇑P **P** **03 58 38.5 +1.0**
SMIR **Smir Dam** **93.39 21** P **P** **03 58 41.1 +3.5**
PID **Ribeirinha** **93.42 3** *e*P **P** **03 58 37.8 +0.1**
comp=Z,135nm,1.9s

PCAN **Candelaria** **93.43 3** *e*P **P** **03 58 37.8 0.0**
comp=Z,251nm,1.8s

PPNO **Prainha do Nor** **93.45 3** *e*P **P** **03 58 37.5 -0.4**
comp=Z,212nm,1.2s

PICO **Pico** **93.47 3** *e*P **P** **03 58 37.6 -0.4**
comp=Z,240nm,1.3s

CMSA **Cobar Meteorol** **93.49 178** P **P** **03 58 38.1 -0.5**
baz=93,SNR=6.2

HOR **Horta** **93.49 2** *e*P **P** **03 58 38.5 +0.5**
comp=Z,274nm,1.3s

CALA **Caldeira** **93.55 2** *e*P **P** **03 58 38.5 +0.1**
comp=Z,366nm,1.5s

CHAS **Isla Isabel II** **93.55 24** P **P** **03 58 42.5 +4.1**
CHAS S **SKSac** **04 09 12.7 +2.1**
WMELI **Melilla** **93.56 23** P P 03 58 52.4 +14
WMELI S **SKSac** **04 09 11.6 +0.9**

PCED **Cedros** **93.59 2** *e*P **P** **03 58 37.7 -0.8**
comp=Z,232nm,1.6s

CEU **Ceuta** **93.60 21** P P 03 58 43.5 +4.9
CEU S **SKSac** **04 09 14.6 +3.8**

UNM **Universidad Na** **93.61 299** P **P** **03 58 40.1 +0.7**
UNM IAmb IAmb 04 00 44.1
comp=Z,101nm,0.5s

UNM IAMs_20 IAMs_20 04 42 08.3
comp=Z,4µm,18.0s

UNM **Universidad Na** **93.61 299** P **P** **03 58 40.1 +0.7**
UNM pmax pmax
comp=Z,101nm,0.5s

UNM MLR MLR
comp=Z,4µm,18.0s

PMAN **Manadas** **93.61 3** *e*P **P** **03 58 38.9 +0.3**
comp=Z,206nm,1.3s

ADH **Angra Heroismo** **93.66 4** *e*P **P** **03 58 39.0 +0.2**
comp=Z,204nm,2.1s

ROSA **Rosais** **93.70 3** *e*P **P** **03 58 38.9 -0.1**
comp=Z,149nm,1.4s

PSCM **Serra do Cume** **93.71 4** *e*P **P** **03 58 39.3 +0.2**
comp=Z,177nm,0.9s

PAGU **Agualva, Azore** **93.78 4** *e*P **P** **03 58 39.5 +0.2**
comp=Z,203nm,1.5s

PGRA **Graciosa** **94.01 3** *e*P **P** **03 58 39.1 -1.3**
comp=Z,183nm,1.7s

PFVI **Vila Bisbo** **94.13 18** A A 03 58 56.5
comp=Z,208nm,1.7s

MORF **Marmelete** **94.33 18** *e*P **P** **03 58 42.5 +0.5**
MORF *e*SKSac **SKSac** **04 09 18.4 +3.5**
MORF IAMs_20 IAMs_20 04 36 26.9
comp=N,4µm,18.4s

MORF **Marmelete** **94.33 18** *e*P **P** **03 58 42.4 +0.5**
MORF *e* 04 09 18.3
MORF **Marmelete** **94.33 18** *e*P **P** **03 58 44.6 +2.6**
comp=N,144nm,1.5s

PBDV **Barranco-do-Ve** **94.40 19** *e*P **P** **03 58 44.2 +1.9**
comp=N,139nm,1.6s

PTEO **Sao Teotonio** **94.55 18** *e*P **P** **03 58 45.1 +2.2**
comp=N,195nm,1.6s

ARMA **Armidale** **94.58 183** P **P** **03 58 43.3 -0.4**
baz=94,SNR=9.6

ARMA **Armidale** **94.58 183** P **P** **03 58 42.7 -1.1**
PVAQ **Vaqueiros** **94.60 19** IAmb IAmb 03 58 52.6
comp=Z,122nm,1.4s

PVAQ **Vaqueiros** **94.60 19** A A 03 58 53.4
comp=Z,168nm,1.6s

PVAQ **Vaqueiros** **94.60 19** *e*SKSac **SKSac** **04 09 23.8 +7.6**
PVAQ **Vaqueiros** **94.60 19** *e*LR LR 04 29 51.9
comp=Z,3µm,20.0s

EMAL **Malaga-Limoner** **94.63 22** P **P** **03 58 46.1 +2.8**
EMAL S **SKSac** **04 09 10.3 -6.0**

PCVE **Castro Verde** **94.76 19** *e*P **P** **03 58 45.5 +1.6**
comp=Z,123nm,1.6s

656A **Willston** **94.87 317** IAmb IAmb 03 58 46.9
comp=Z,152nm,1.2s

656A **Willston** **94.87 317** P **P** **03 58 45.4 +0.8**
baz=154

MESJ **Messejana** **94.93 18** *e*P **P** **03 58 45.1 +0.5**
MESJ *e*SKSac **SKSac** **04 09 21.4 +3.5**
MESJ IAMs_20 IAMs_20 04 36 54.6
comp=N,4µm,16.2s

MESJ **Messejana** **94.93 18** *e*P **P** **03 58 45.1 +0.5**
MESJ *e* 04 09 21.4
MESJ **Messejana** **94.93 18** *e*P **P** **03 58 46.6 +2.0**
comp=N,148nm,1.5s

PNCL **Nicolau / Gran** **95.14 18** *e*P **P** **03 58 47.7 +2.1**
comp=N,117nm,1.7s

PBEJ **Beja** **95.17 19** *e*P **P** **03 58 48.0 +2.2**
comp=N,132nm,1.7s

PBAR **Barrancos** **95.47 19** *e*P **P** **03 58 49.6 +2.5**
comp=N,127nm,1.6s

LIS **Lisbon** **95.62 18** *e*SKSac **SKSac** **04 09 25.1 +3.6**
LIS IAMs_20 IAMs_20 04 38 05.9
comp=Z,5µm,17.4s

EVO **Evora** **95.64 18** *e*P **P** **03 58 50.2 +2.3**
comp=Z,85nm,1.6s

456A **Hilliard** **95.88 318** IAmb IAmb 03 58 51.8
comp=Z,204nm,1.6s

PESTR **Estremoz** **96.04 19** *e*P **P** **03 58 52.7 +3.0**
comp=Z,138nm,1.6s

PMTG **Montargil** **96.12 18** *e*P **P** **03 58 52.8 +2.7**
comp=Z,109nm,1.9s

CART **Cartagena** **96.18 24** P **P** **03 58 51.5 +1.2**
CART S **SKSac** **04 09 25.5 +0.9**
CART **Cartagena** **96.18 24** IAMs_20 IAMs_20 04 38 30.7
comp=Z,3µm,18.0s

553A **Crawfordville** **96.34 316** P **P** **03 58 52.8 +1.6**
baz=153

PSBE **So Bento** **96.45 18** *e*P **P** **03 58 53.7 +2.1**
PMRV **Marv??o** **96.62 19** *e*P **P** **03 58 54.6 +2.2**
comp=Z,90nm,1.9s

PMRV **Marv??o** **96.62 19** *e*SKSac **SKSac** **04 09 30.7 +3.8**
PMRV **Marv??o** **96.62 19** *e*LR LR 04 30 40.6
comp=Z,4µm,20.0s

PCAS **Casmilo, Conde** **97.03 18** A A 03 59 04.6
comp=Z,116nm,1.6s

TIGA **Tifton** **97.12 317** IAmb IAmb 03 58 57.1
comp=Z,271nm,1.8s

TIGA **Tifton** **97.12 317** P Pdif 03 58 55.2 +0.4
baz=153

TIGA **Tifton** **97.12 317** P Pdif 03 58 55.4 +0.5
baz=153

TIGA S **S** **04 10 16.9 +0.9**
baz=153

255A **Hazlehurst** **97.13 318** IAmb IAmb 03 58 57.2
comp=Z,106nm,1.4s

255A **Hazlehurst** **97.13 318** P Pdif 03 58 55.9 +1.0
baz=154

255A S **S** **04 10 15.1 -0.9**
baz=154

451A **Vernon** **97.24 315** P Pdif 03 58 55.8 +0.4
baz=152

KEST **Kesra** **97.25 33** P Pdif 03 58 57.4 +2.0
comp=Z,3.8nm,0.9s,baz=206,slow=6.2,SNR=3.9

KEST PP **PP** **04 02 50.9 -1.6**
comp=Z,18nm,1.3s,baz=176,slow=11,SNR=4.7

KEST S **SKSac** **04 09 30.8 +0.4**
comp=Z,0.6nm,0.6s,baz=354,slow=22,SNR=0.9

KEST PKKPbc **PKKPbc** **04 15 32.7 -0.5**
comp=Z,4.9nm,0.9s,baz=353,slow=4.1,SNR=4.1

KEST LR LR 04 38 37.0
comp=Z,18µm,19.5s,baz=144,slow=33
comp=Z,3.8nm,0.9s

PAB **San Pablo** **97.33 21** P Pdif 03 58 57.2 +1.5
PAB **San Pablo** **97.33 21** P Pdif 03 58 57.2 +1.5
PAB pmax pmax
comp=Z,50nm,1.4s

PAB **San Pablo** **97.33 21** ⇓P Pdif 03 58 58.0 +2.3
NHSC **New Hope** **97.33 321** IAmb IAmb 03 58 58.7
comp=Z,118nm,1.2s

NHSC **New Hope** **97.33 321** P Pdif 03 58 57.4 +1.7
baz=154

NHSC S **S** **04 10 19.5 +1.8**
baz=154

NHSC **New Hope** **97.33 321** P Pdif 03 58 56.9 +1.1
baz=154

NHSC S **S** **04 10 22.2 +4.6**
baz=154

ESDC **Sonseca Array** **97.53 21** P Pdif 03 58 57.9 +1.4
comp=Z,7.1nm,1.0s,baz=189,slow=4.5,SNR=26

ESDC S **SKSac** **04 09 30.5 -1.1**
comp=Z,1.2nm,1.1s,baz=255,slow=20,SNR=1.8

ESDC PKKPbc **PKKPbc** **04 15 33.1 +0.4**
comp=Z,4.1nm,1.0s,baz=18,slow=2.8,SNR=11

ESDC LR LR 04 38 15.0
comp=Z,8µm,19.9s,baz=183,slow=32
comp=Z,7.1nm,1.0s

MTE **Manteigas** **97.54 18** IAMs_20 IAMs_20 04 37 54.4
comp=Z,4µm,20.0s

MTE **Manteigas** **97.54 18** A A 03 59 06.1
comp=Z,60nm,1.8s

MTE **Manteigas** **97.54 18** *e*SKSac **SKSac** **04 09 36.0 +4.4**
MTE **Manteigas** **97.54 18** *e*LR LR 04 33 11.8
comp=Z,4µm,18.0s

Y59A **Loris** **97.66 322** P Pdif 03 58 59.1 +1.9
baz=155

Y59A P Pdif 03 58 59.1 +1.9
baz=155

352A **Blakely** **97.68 316** P Pdif 03 58 57.9 +0.5
baz=153

Y58A **Scranton** **97.87 321** P Pdif 03 58 59.9 +1.7
baz=155

Y58A P Pdif 03 58 59.9 +1.7
baz=155

Y58A S **S** **04 10 22.7 +0.5**
baz=155

Y58A S **S** **04 10 22.7 +0.5**
baz=155

154A **Montrose** **97.98 318** IAmb IAmb 04 02 58.1
comp=Z,198nm,1.7s

154A **Montrose** **97.98 318** P Pdif 03 58 59.5 +0.8
baz=153

HAW **Hawthorne Fire** **98.08 320** S **S** **04 10 23.4 -0.7**
baz=154

WRKA **Warakurna** **98.18 162** P Pdif 03 59 00.1 0.0
baz=98,SNR=4.2

WRKA **Warakurna** **98.18 162** ⇑P **P** **03 58 60.0 -0.1**
ZAIG **Zacatecas** **98.19 298** ⇑P Pdif 03 59 01.2 +1.0
ZAIG ⇑P **PcP** **03 59 01.6 +1.4**

BRAL **Brewton** **98.26 315** IAmb IAmb 03 59 02.6
comp=Z,152nm,1.4s

BRAL IAMs_20 IAMs_20 04 46 56.6
comp=Z,3µm,18.0s

BRAL **Brewton** **98.26 315** P Pdif 03 59 01.3 +1.4
baz=152

BRAL **Brewton** **98.26 315** Pdiff Pdif 03 59 00.6 +0.7
baz=152

BRAL S **S** **04 10 24.8 -0.9**
baz=152

UCM **Universidad Co** **98.29 22** P Pdif 03 59 04.0 +4.1
UCM S **SKSac** **04 09 38.0 +2.6**
X58A **Rowland** **98.34 322** IAmb IAmb 03 59 03.0
comp=Z,89nm,1.4s

X58A **Rowland** **98.34 322** P Pdif 03 59 01.4 +1.2
baz=155

X58A P Pdif 03 59 01.4 +1.2
baz=155

X58A S **S** **04 10 25.6 -0.6**
baz=155

X58A S **S** **04 10 25.6 -0.6**
baz=155

MVO **Moncorvo** **98.37 19** A A 03 59 10.5
comp=Z,51nm,1.7s

MVO **Moncorvo** **98.37 19** *e*SKSac **SKSac** **04 09 42.3 +6.4**
MVO **Moncorvo** **98.37 19** *e*LR LR 04 34 13.7
comp=Z,6µm,20.0s

QLP **Quilpie** **98.38 176** P **P** **03 59 00.4 -0.4**
baz=98,SNR=12

QLP **Quilpie** **98.38 176** ⇑P **P** **03 59 00.3 -0.6**
CNNC **Cliffs of the** **98.45 323** Pdiff Pdif 03 59 01.4 +0.7
baz=155

RMQ **Roma** **98.55 180** P Pdif 03 59 01.7 +0.1
baz=98,SNR=33

152A **Waverly Hall** **98.65 317** P Pdif 03 59 01.7 +0.1
baz=153

250A **Grady** **98.65 316** IAmb IAmb 03 59 03.9
comp=Z,181nm,1.4s

250A **Grady** **98.65 316** P Pdif 03 59 02.2 +0.5
baz=152

JSC **Jenkinsville** **98.78 320** P Pdif 03 59 02.3 +0.1
JSC **Jenkinsville** **98.78 320** P Pdif 03 59 02.3 +0.1
JSC pmax pmax
comp=Z,81nm,1.7s

JSC **Jenkinsville** **98.78 320** P **P** **03 59 01.8 -0.4**
baz=154

BIRD **Birdtown, Kers** **98.82 321** P Pdif 03 59 03.6 +1.2
baz=154

GOGA **Godfrey** **98.83 318** IAMs_20 IAMs_20 04 42 37.6
comp=Z,4µm,22.0s

GOGA **Godfrey** **98.83 318** P Pdif 03 59 02.9 +0.5
baz=153

GOGA **Godfrey** **98.83 318** Pdiff Pdif 03 59 02.9 +0.5
baz=153

GOGA S **S** **04 10 30.3 -0.1**
baz=153

PGAV **Gavieira, Arco** **98.93 17** *e*SKSac **SKSac** **04 09 43.3 +4.6**
PGAV **Gavieira, Arco** **98.93 17** *e*LR LR 04 34 14.7
comp=Z,4µm,20.0s

HODGE **Hodges** **99.10 320** P **Pdif** **03 59 04.7 +1.0**
baz=154

V58A **Windy Hill, Pi** **99.38 323** IAmb IAmb 04 00 39.9
comp=Z,36nm,0.3s

U59A **Littleton** **99.43 324** P **Pdif** **03 59 06.5 +1.5**
baz=155

U59A P **Pdif** **03 59 06.5 +1.5**
baz=155

Y52A **Lilburn** **99.45 318** P **Pdif** **03 59 05.9 +0.7**
baz=153

Y52A P **Pdif** **03 59 05.9 +0.7**
baz=153

PAULI **Pauline** **99.47 320** P **Pdif** **03 59 06.4 +1.1**
baz=154

KMSC **Kings Mountain** **99.58 321** P **Pdif** **03 59 06.7 +1.0**
baz=154

KMSC **Kings Mountain** **99.58 321** Pdiff **Pdif** **03 59 06.6 +0.9**
baz=154

EIDS **Eidsvold** **99.63 183** P **Pdif** **03 59 05.9 -0.6**
baz=99,SNR=9.5

EIDS **Eidsvold** **99.63 183** **Pdif** **03 59 05.9 -0.6**
EIDS **Eidsvold** **99.63 183** ⇑P **Pdif** **03 59 05.4 -1.0**
MAHO **Mahon** **99.67 27** P **Pdif** **03 59 02.8 -3.2**
MAHO S **SKSac** **04 09 36.8 -5.4**

LRAL **Lakeview Retre** **99.87 316** IAMs_20 IAMs_20 04 47 25.4
comp=Z,4µm,20.0s

LRAL **Lakeview Retre** **99.87 316** P **Pdif** **03 59 07.3 +0.2**
baz=152

LRAL **Lakeview Retre** **99.87 316** Pdiff **Pdif** **03 59 07.6 +0.5**
baz=152

T59A **Double "B" Far** **99.91 324** Pdif **Pdif** **03 59 07.9 +0.8**
T59A IAmb IAmb 04 03 11.7
comp=Z,113nm,1.8s

T59A **Double "B" Far** **99.91 324** P **Pdif** **03 59 08.3 +1.1**
baz=156

T59A P **Pdif** **03 59 08.3 +1.1**
baz=156

BG3 **Lake Jocassee** **100.03 319** Pdif **Pdif** **03 59 08.2 +0.4**
CASEE **Lake Jocassee** **100.03 319** P **Pdif** **03 59 08.6 +0.8**
baz=153

344A **Westbrook Farm** **100.04 312** P **Pdif** **03 59 09.7 +1.8**
baz=150

MBWA **Marble Bar** **100.05 153** IAMs_20 IAMs_20 04 38 25.6
comp=Z,4µm,20.0s

COCO **West Island** **100.16 129** IAMs_20 IAMs_20 04 35 57.8
comp=Z,5µm,20.0s

V55A **Taylorsville** **100.17 321** P **Pdif** **03 59 09.1 +0.8**
baz=154

V55A P **Pdif** **03 59 09.1 +0.8**
baz=154

U56A **King** **100.32 322** P **Pdif** **03 59 11.1 +2.1**
baz=154

U56A P **Pdif** **03 59 11.1 +2.1**
baz=154

Y49A **Blount Mountai** **100.36 316** Pdif **Pdif** **03 59 08.2 -1.0**
146A **Union** **100.36 314** P **Pdif** **03 59 11.0 +1.7**
baz=151

X51A **Calhoun** **100.38 318** P **Pdif** **03 59 09.8 +0.5**
baz=152

X51A P **Pdif** **03 59 09.8 +0.5**
baz=152

ASAR **Alice Springs** **100.40 167** P **Pdif** **03 59 08.8 -1.2**
comp=Z,9.8nm,0.9s,baz=188,slow=3.6,SNR=55

ASAR PP **PP** **04 03 13.4 -2.0**
comp=Z,14nm,1.0s,baz=180,slow=6.3,SNR=6.9

ASAR PKKPbc **PKKPbc** **04 15 23.7 +0.4**
comp=Z,2.6nm,1.0s,baz=356,slow=2.7,SNR=8.9

ASAR PKPPKP P'P'df 04 23 36.0 -12
comp=Z,1.9nm,1.1s,baz=49,slow=1.9,SNR=6.1

Z47A **Carrollton** **100.45 315** Pdif **Pdif** **03 59 10.2 +0.6**
W52A **Murphy** **100.49 319** P **Pdif** **03 59 10.1 +0.3**
baz=153

VBMS **Vicksburg** **100.61 312** Pdiff **Pdif** **03 59 11.3 +0.9**
baz=150

342A **Flagon Creek P** **100.66 311** Pdif **Pdif** **03 59 11.7 +1.1**
342B **Flagon Creek P** **100.66 311** P **Pdif** **03 59 12.3 +1.7**
baz=150

TKL **Tuckaleechee C** **100.94 319** Pdif **Pdif** **03 59 11.3 -0.5**
TKL **Tuckaleechee C** **100.94 319** P **Pdif** **03 59 11.3 -0.5**
CBN **Corbin Frederi** **100.97 325** Pdiff **Pdif** **03 59 12.4 +0.6**
baz=156

735A **Kenedy** **100.98 305** P **Pdif** **03 59 13.7 +1.6**
baz=148

HKT **Hockley** **101.00 307** P **Pdif** **03 59 13.4 +1.3**
baz=148

S57A **Dark Hollow, R** **101.10 324** P **Pdif** **03 59 13.6 +1.2**
baz=155

S57A P **Pdif** **03 59 13.6 +1.2**
baz=155

BLA **Blacksburg** **101.11 322** Pdiff **Pdif** **03 59 13.4 +0.9**
baz=154

W50A **Signal Mountai** **101.11 318** P **Pdif** **03 59 13.2 +0.6**
baz=152

X48A **Hartselle** **101.13 316** P **Pdif** **03 59 12.8 +0.1**
baz=152

833A **Chaparral WMA,** **101.28 304** P **Pdif** **03 59 13.5 0.0**
baz=148

833A **Chaparral WMA,** **101.28 304** Pdiff **Pdif** **03 59 14.1 +0.6**
baz=148

DZM **Mont Dzumac** **101.40 197** *e*P **Pdif** **03 59 16.3 +1.8**
comp=Z,238nm,23.9s

DZM **Mont Dzumac** **101.40 197** *e*PP **PP** **04 03 24.3 +1.2**
comp=Z,615nm,25.6s

DZM **Mont Dzumac** **101.40 197** *e*LR LR 04 32 22.3
comp=Z,14µm,24.2s

Y45A **Yeager Farm, C** **101.63 314** P **Pdif** **03 59 15.7 +0.9**
baz=150

TZTN **Tazewell** **101.64 320** IAMs_20 IAMs_20 04 45 46.1
comp=Z,3µm,21.0s

TZTN **Tazewell** **101.64 320** Pdiff **Pdif** **03 59 15.2 +0.3**
baz=153

CEL **Celeste** **101.67 36** IAMs_20 IAMs_20 04 45 36.3
comp=Z,4µm,19.0s

EIL **Elat** **101.94 55** S **SKSac** **04 09 53.1 -0.7**
comp=Z,2.3nm,0.4s,baz=135,slow=14,SNR=1.8

S54A **Dingess, Beckl** **101.95 322** P **Pdif** **03 59 17.1 +0.8**
baz=154

S54A P **Pdif** **03 59 17.1 +0.8**
baz=154

WUPA **West Chester U** **101.98 327** Pdif **Pdif** **03 59 17.5 +1.3**
NATX **Nacogdoches** **102.01 309** Pdiff **Pdif** **03 59 17.4 +0.8**
baz=149

OXF **Oxford** **102.14 314** Pdiff **Pdif** **03 59 16.8 -0.3**
baz=150

V48A **Smith Brothers** **102.17 317** P **Pdif** **03 59 17.1 -0.2**
baz=151

IDI **Anoyia** **102.37 44** P **Pdif** **03 59 17.8 -0.5**
comp=Z,9.8nm,1.0s,baz=272,slow=6.7,SNR=2.2

IDI S **SKSac** **04 09 54.9 -0.8**
comp=Z,4.3nm,0.9s,baz=108,slow=21,SNR=1.0

PAL **Palisades** **102.44 329** Pdiff **Pdif** **03 59 18.2 -0.1**
baz=157

435B **Jarrell** **102.50 306** Pdif **Pdif** **03 59 19.6 +0.7**
435B **Jarrell** **102.50 306** P **Pdif** **03 59 20.3 +1.4**
baz=148

435B **Jarrell** **102.50 306** Pdiff **Pdif** **03 59 19.8 +0.9**
baz=148

T50A **Nancy** **102.54 319** P **Pdif** **03 59 19.7 +0.8**
baz=152

T50A P **Pdif** **03 59 19.7 +0.8**
baz=152

W45A **Hickory Valley** **102.60 315** P **Pdif** **03 59 19.3 +0.1**
baz=150

237A **Washetta, Mont** **102.73 308** P **Pdif** **03 59 21.4 +1.6**
baz=148

TIP **Timpagrande** **102.80 37** IAMs_20 IAMs_20 04 41 25.0
comp=Z,4µm,20.0s

WVT **Waverly** **102.91 316** IAMs_20 IAMs_20 04 45 40.7
comp=Z,4µm,22.0s

WVT **Waverly** **102.91 316** P **Pdif** **03 59 19.7 -0.8**
baz=151

WVT **Waverly** **102.91 316** Pdiff **Pdif** **03 59 20.0 -0.5**
baz=151

MCWV	Mont Chateau	103.11	324		Pdiff	Pdif	03 59 21.9	+0.6		
	baz=154									
HRV	Adam Dziewonsk	103.15	331		Pdiff	Pdif	03 59 22.1	+0.7		
	baz=158									
QUA2	Belchertown	103.16	330		IAMs_20	IAMs_20	04 43 27.6			
	comp=Z,3µm,20.0s									
JCT	Junction City	103.28	305		Pdif	Pdif	03 59 22.5	+0.1		
JCT	Junction City	103.28	305		P	Pdif	03 59 22.5	+0.1		
JCT	Junction City	103.28	305		P	Pdif	03 59 22.8	+0.4		
	baz=147									
JCT	Junction City	103.28	305		Pdiff	Pdif	03 59 22.6	+0.1		
	baz=147									
JCT	Junction City	103.28	305	⇑	P	Pdif	03 59 22.7	+0.4		
AFI	Afiamalu	103.29	220		IAMs_20	IAMs_20	04 45 26.9			
	comp=Z,4µm,18.0s									
Q52A	Bidwell	103.32	322		P	Pdif	03 59 22.9	+0.6		
	baz=153									
Q52A					P	Pdif	03 59 22.9	+0.6		
	baz=153									
SSPA	Standing Stone	103.34	326		Pdiff	Pdif	03 59 22.5	+0.2		
	baz=155									
Z38A	Mt. Pleasant	103.43	310		P	Pdif	03 59 24.5	+1.6		
	baz=148									
WHTX	Lake Whitney,	103.46	307		P	Pdif	03 59 23.9	+0.8		
	baz=148									
WHTX	Lake Whitney,	103.46	307		Pdiff	Pdif	03 59 23.4	+0.3		
	baz=148									
KARP	Karpathos	103.52	46		IAMs_20	IAMs_20	04 44 02.2			
	comp=Z,5µm,22.0s									
P52A	Corning	103.87	322		Pdiff	Pdif	03 59 25.1	+0.3		
	baz=153									
MIAR	Mount Ida	103.91	311		P	Pdif	03 59 25.3	+0.3		
	baz=149									
MIAR	Mount Ida	103.91	311		Pdiff	Pdif	03 59 25.3	+0.3		
	baz=149									
FFD	Franklin Falls	104.07	331		IAMs_20	IAMs_20	04 44 01.9			
	comp=Z,3µm,20.0s									
O53A	New Philadelph	104.10	323		Pdiff	Pdif	03 59 26.2	+0.5		
	baz=154									
WRA	Warramunga Arr	104.12	166		Pdiff	Pdif	03 59 25.0	-1.6		
	comp=Z,5.8nm,1.1s,baz=189,slow=3.7,SNR=12									
WRA					PP	PP	04 03 40.0	-3.5		
	comp=Z,8.0nm,1.0s,baz=189,slow=7.2,SNR=7.5									
WRA					PKKPbc	PKKPbc	04 15 14.3	+1.9		
	comp=Z,4.9nm,1.1s,baz=353,slow=2.9,SNR=12									
BINY	Binghamton	104.16	328		Pdiff	Pdif	03 59 26.2	+0.2		
	baz=156									
TXAR	Lajitas Array	104.19	301		Pdiff	Pdif	03 59 26.5	0.0		
	comp=Z,2.8nm,1.0s,baz=126,slow=6.5,SNR=21									
TXAR					PP	PKiKP	04 03 43.2	-0.1		
	comp=Z,2.9nm,0.9s,baz=146,slow=5.5,SNR=6.4									
TXAR					PKKPbc	PKKPbc	04 15 14.6	+1.7		
	comp=Z,1.4nm,0.8s,baz=263,slow=2.3,SNR=8.7									
TXAR					PKKPab	PKKPab	04 15 32.2	+1.4		
	comp=Z,3.0nm,1.0s,baz=289,slow=3.8,SNR=7.4									
TX31	Lajitas Ar. Si	104.19	301		P	Pdif	03 59 26.8	+0.3		
	baz=146									
TX32	Lajitas Array	104.19	301		Pdif	Pdif	03 59 26.5	0.0		
LCAR	Lake Charles	104.20	314		P	Pdif	03 59 26.2	0.0		
	baz=150									
FITZ	Fitzroy Crossi	104.40	158		PP	PKiKP	04 03 45.3	+1.3		
	comp=Z,2.8nm,1.0s,baz=180,slow=10,SNR=3.6									
Z35A	Perchaven, San	104.50	308		P	Pdif	03 59 29.1	+1.4		
	baz=148									
ACSO	Alum Creek Sta	104.70	322		Pdiff	Pdif	03 59 29.0	+0.6		
	baz=153									
P49A	Miami Univ. Ec	104.71	320		Pdiff	Pdif	03 59 28.6	+0.2		
	baz=152									
SSB	Saint Sauveur	104.79	26		IAMs_20	IAMs_20	04 43 50.7			
	comp=Z,4µm,18.0s									
S44A	Carbondale	104.83	316		P	PKiKP	04 03 43.2	-0.8		
	baz=150									
LBNH	Lisbon	104.86	331		IAMs_20	IAMs_20	04 44 34.4			
	comp=Z,3µm,20.0s									
LBNH	Lisbon	104.86	331		P	PP	04 03 48.4	-1.5		
	baz=158									
LBNH	Lisbon	104.86	331		Pdiff	Pdif	03 59 30.1	+1.1		
	baz=158									
J59A	Piesco	104.88	329		P	PP	04 03 49.5	-0.6		
	baz=156									
J59A					P	PP	04 03 49.5	-0.6		
	baz=156									
CTA	Charters Tower	104.90	178		Pdiff	Pdif	03 59 28.1	-1.9		
	comp=Z,12nm,1.1s,baz=164,slow=4.1,SNR=4.1									
CTA					PP	PP	04 03 47.6	-1.5		
	comp=Z,6.6nm,0.9s,baz=217,slow=6.6,SNR=4.7									
ASF	Jabal al Asfar	104.94	55		PP	PP	04 03 53.5	+2.7		
	comp=Z,1.9nm,0.6s,baz=240,slow=4.0,SNR=7.5									
ASF					PKKPab	PKKPab	04 15 29.2	+2.0		
	comp=Z,2.9nm,0.9s,baz=83,slow=2.7,SNR=4.6									
MMAI	Mount Meron Ar	104.95	53		PKKPab	PKKPab	04 15 29.6	+2.6		
	comp=Z,5.3nm,0.9s,baz=352,slow=2.5,SNR=4.6									
M53A	WI Miller and	104.98	324		Pdiff	Pdif	03 59 29.5	-0.1		
	baz=154									
ABTX	Abilene, Hawle	105.00	306		P	Pdif	03 59 30.9	+1.0		
	baz=147									
ABTX	Abilene, Hawle	105.00	306		Pdiff	Pdif	03 59 30.2	+0.3		
	baz=147									
PKME	Peaks-Kenny Pk	105.11	334		Pdiff	Pdif	03 59 29.7	-0.3		
	baz=159									
VLC	Villacollemand	105.31	30		IAMs_20	IAMs_20	04 42 22.5			
	comp=Z,4µm,20.0s									
ERPA	Erie	105.36	325		Pdiff	Pdif	03 59 31.0	-0.3		
	baz=154									
O48B	Farmland	105.50	320		Pdiff	Pdif	03 59 32.0	0.0		
	baz=152									
HHAR	Hobbs	105.54	312		Pdif	Pdif	03 59 32.0	-0.2		
HHAR	Hobbs	105.54	312		P	Pdif	03 59 32.5	+0.3		
	baz=148									
FVM	French Village	105.55	316		P	Pdif	03 59 32.7	+0.5		
	baz=150									
Q44A	Meyer Farm, Va	105.78	317		P	Pdif	03 59 33.9	+0.7		
	baz=150									
TIR	Tirane	105.80	38		IAMs_20	IAMs_20	04 44 43.5			
	comp=Z,4µm,20.0s									
U38A	Gravette	105.86	312		P	Pdif	03 59 34.0	+0.3		
	baz=148									
CCM	Cathedral Cave	105.94	315		P	Pdif	03 59 33.0	-1.0		
	baz=149									
CCM	Cathedral Cave	105.94	315		Pdiff	Pdif	03 59 34.0	+0.1		
	baz=149									
LONY	Lake Ozonia	105.95	330		Pdiff	Pdif	03 59 33.6	-0.3		
	baz=156									
TUL1	Leonard	106.02	311		Pdiff	Pdif	03 59 34.7	+0.3		
	baz=148									
LSTV	Lastovo	106.06	35	*i*	P	PP	04 03 55.0	-3.7		
SFIN	Lafayette	106.33	319		Pdiff	Pdif	03 59 36.0	+0.4		
	baz=151									
WMOK	Wichita Mounta	106.36	308		P	Pdif	03 59 36.5	+0.5		
	baz=147									
WMOK	Wichita Mounta	106.36	308		Pdiff	Pdif	03 59 36.5	+0.5		
	baz=147									
WMOK	Wichita Mounta	106.36	308	⇑	P	Pdif	03 59 36.5	+0.5		
DBRK	Dubrovnik	106.38	36	*i*	P	PP	04 03 58.7	-2.5		
STON	Ston	106.42	36	*i*	P	PP	04 03 58.2	-3.2		
OK025	Westminster Rd	106.42	309		Pdif	Pdif	03 59 37.8	+1.6		
S39A	Bolivar	106.48	313		P	Pdif	03 59 36.8	+0.4		
	baz=148									
PDG	Podgorica	106.55	37		IAMs_20	IAMs_20	04 44 52.3			
	comp=Z,3µm,20.0s									
AAM	Ann Arbor	106.77	322		IAMs_20	IAMs_20	04 46 11.9			
	comp=Z,4µm,22.0s									
RICI	Ricice	106.78	35	*i*	P	PP	04 04 01.0	-3.1		
CLF	Chambon-Foret	106.84	23		IAMs_20	IAMs_20	04 45 09.7			
	comp=Z,4µm,19.0s									
ISP	Isparta	106.86	47		IAMs_20	IAMs_20	04 51 40.9			
	comp=Z,3µm,20.0s									
MNTX	Cornudas Mount	106.97	301		IAMs_20	IAMs_20	04 46 21.9			
	comp=Z,3µm,18.0s									
MNTX	Cornudas Mount	106.97	301		Pdiff	Pdif	03 59 38.0	-0.7		
	baz=145									
T35B	Sooner Cattle	107.18	311		P	Pdif	03 59 39.8	+0.2		
	baz=147									
UDBI	Udbina	107.27	34	*i*	P	PP	04 04 04.6	-3.2		
HDIL	Hopedale	107.32	318		Pdiff	Pdif	03 59 39.8	-0.2		
	baz=150									
CROK	Carrier	107.48	309		Pdif	Pdif	03 59 41.7	+0.8		
P40A	Paris	107.52	315		P	Pdif	03 59 41.6	+0.6		
	baz=149									
PLIT	Plitvice	107.54	33	*i*	P	PP	04 04 07.9	-1.7		
MSTX	Muleshoe	107.57	304		P	Pdif	03 59 42.3	+0.8		
	baz=146									
MSTX	Muleshoe	107.57	304		Pdiff	Pdif	03 59 41.3	-0.2		
	baz=146									
DAVOX	Davos/Dischmat	107.58	29		Pdiff	Pdif	03 59 49.5	+8.3		
	comp=Z,1.2nm,0.7s,baz=187,slow=12,SNR=2.5									
DAVOX					PKKPbc	PKKPbc	04 15 04.9	+1.7		
	comp=Z,3.9nm,0.9s,baz=79,slow=5.2,SNR=7.0									
DAVOX					PKKP	PKKPdf	04 15 17.3	+0.2		
	comp=Z,5.4nm,1.0s,baz=11,slow=10,SNR=5.6									
EPT	El Paso	107.58	300		IAMs_20	IAMs_20	04 46 18.5			
	comp=Z,3µm,18.0s									
OK038	West end E0370	107.80	309		IAMs_20	IAMs_20	04 50 53.4			
	comp=Z,3µm,20.0s									
AMTX	Amarillo	107.81	306		P	Pdif	03 59 43.7	+1.2		
	baz=146									
AMTX	Amarillo	107.81	306		Pdiff	Pdif	03 59 42.8	+0.3		
	baz=146									
BOJS	Bojanci	107.98	33	*e*	PP	PP	04 04 11.2	-1.7		
BOJS				*e*	SP	SP	04 13 36.6	+4.2		
BOJS				*e*			04 14 23.3			
FETA	Feichten	108.03	29	*e*	P	PKKPbc	04 15 03.2	+1.5		
	comp=Z,6.7nm,1.1s									
DAVA	Damuels	108.04	28	*i*	P	PKKPbc	04 15 03.1	+1.4		
	comp=Z,8.1nm,1.1s									
VTS	Vitosha	108.12	39	⇑	P	PKiKP	04 03 47.8	-2.4		
ECH	Echery	108.19	26		IAMs_20	IAMs_20	04 45 38.4			
	comp=Z,4µm,19.0s									
L44A	Lake County Fo	108.19	319		IAMs_20	IAMs_20	04 51 23.7			
	comp=Z,3µm,19.0s									
L44A	Lake County Fo	108.19	319		PKiKP	PKiKP	04 03 50.0	-0.1		
	baz=150									
LJU	Ljubljana	108.25	32	*e*	PP	PP	04 04 13.4	-1.4		
LJU				*e*	SP	SP	04 13 37.5	+2.5		
ABTA	Abfaltersbach	108.29	30	*e*	P	PKKPbc	04 15 01.1	+0.4		
	comp=Z,7.0nm,1.2s									
SQTA	Sankt Quirin	108.35	29	*e*	P	PKKPbc	04 15 01.3	+0.7		
	comp=Z,2.1nm,1.2s									
MOTA	Moosalm	108.43	29	*e*	P	PKKPbc	04 15 01.2	+0.8		
	comp=Z,6.2nm,1.2s									
BOVS	Bovan	108.46	38	⇑	P	PKiKP	04 03 50.9	+0.3		
RETA	Reutte	108.47	29	*e*	P	PKKPbc	04 15 02.0	+1.8		
	comp=Z,5.0nm,1.1s									
WTTA	Wattenberg	108.51	30	*e*	P	PKKPbc	04 15 00.9	+0.7		
	comp=Z,4.6nm,1.0s									
MYKA	Terra Mystica	108.51	31	*i*	P	PKKPbc	04 15 00.4	+0.4		
	comp=Z,5.7nm,1.0s									
MOSL	Moslavina	108.55	34	*i*	P	PP	04 04 15.7	-1.3		
WATA	Walderalm	108.56	29	*e*	P	PKKPbc	04 15 00.8	+0.8		
	comp=Z,5.8nm,1.1s									
BFO	Black Forest	108.59	27		IAMs_20	IAMs_20	04 45 49.1			
	comp=Z,4µm,20.0s									
PALK	Pallekele	108.64	105		IAMs_20	IAMs_20	04 44 27.0			
	comp=Z,4µm,19.0s									
OBKA	Obir	108.67	32	*i*	P	PKKPbc	04 15 00.1	+0.6		
	comp=Z,6.4nm,1.2s									
121A	Cookes Peak, D	108.83	300		PKiKP	PKiKP	04 03 51.7	-0.2		
	baz=144									
SOKA	Soboth	108.97	32	*e*	P	PKKPbc	04 14 59.0	+0.5		
	comp=Z,6.9nm,1.1s									
KSU1	Kansas State U	109.05	312		IAMs_20	IAMs_20	04 50 38.8			
	comp=Z,4µm,20.0s									
KSU1	Kansas State U	109.05	312		PKiKP	PKiKP	04 03 51.8	-0.1		
	baz=147									
FRGS	Fruska Gora	109.15	36	⇑	P	PP	04 04 00.8	-21		
ANTO	Ankara	109.53	47		IAMs_20	IAMs_20	04 50 09.5			
	comp=Z,3µm,20.0s									
UGM	Wanagama	109.62	140		IAMs_20	IAMs_20	04 42 31.9			
	comp=Z,4µm,20.0s									
ARSA	Arzberg	109.63	32	*e*	P	PKKPbc	04 14 57.3	+1.0		
	comp=Z,8.5nm,1.3s									
Y22D	IRIS PASSCAL I	109.65	302		IAMs_20	IAMs_20	04 51 25.9			
	comp=Z,3µm,18.0s									
Y22D	IRIS PASSCAL I	109.65	302		PKiKP	PKiKP	04 03 53.6	+0.2		
	baz=144									
JFWS	Jewell Farm	109.71	318		PKiKP	PKiKP	04 03 53.8	+0.8		
	baz=149									
BRTR	Keskin Array B	109.77	48		Pdiff	Pdif	03 59 56.5	+5.4		
	comp=Z,0.1nm,0.3s,baz=131,slow=4.7,SNR=1.3									
BRTR					PKiKP	PKiKP	04 03 55.0	+1.6		
	comp=Z,2.4nm,1.1s,baz=223,slow=2.8,SNR=3.6									
BRTR					PP	PP	04 04 27.6	+1.4		
	comp=Z,11nm,1.1s,baz=205,slow=6.4,SNR=8.0									
BRTR					PKKPbc	PKKPbc	04 14 56.9	+1.1		
	comp=Z,13nm,0.9s,baz=106,slow=1.9,SNR=38									
MOA	Molln	109.80	31	*e*	P	PKKPbc	04 14 56.8	+1.0		
	comp=Z,9.0nm,1.1s									
SCIA	State Center	110.01	316		IAMs_20	IAMs_20	04 51 47.6			
	comp=Z,3µm,20.0s									
SCIA	State Center	110.01	316		PKiKP	PKiKP	04 03 53.8	+0.2		
	baz=148									
ANMO	Albuquerque	110.13	302		Pdif	Pdif	03 59 53.7	+0.8		
ANMO	Albuquerque	110.13	302		IAMs_20	IAMs_20	04 49 20.6			
	comp=Z,3µm,18.0s									
ANMO	Albuquerque	110.13	302	*i*	PKiKP	PKiKP	04 03 53.9	-0.4		
ANMO					MLR	MLR				
	comp=Z,4µm,16.0s									
ANMO	Albuquerque	110.13	302		P	Pdif	03 59 53.6	+0.7		
	baz=144									
ANMO	Albuquerque	110.13	302		PKiKP	PKiKP	04 03 51.9	-2.4		
	baz=144									
TUC	Tucson	110.15	298		PKiKP	PKiKP	04 03 53.6	-0.7		
	baz=143									
BZS	Buzias	110.16	37	⇑	P	PKiKP	04 03 49.2	-4.5		
BZS	Buzias	110.16	37	⇑	PKiKP	PKiKP	04 03 49.2	-4.5		
CBKS	Cedar Bluff	110.17	309		PKiKP	PKiKP	04 03 53.7	-0.3		
	baz=146									
DSB	Dublin	110.18	16		IAMs_20	IAMs_20	04 49 32.0			
	comp=Z,3µm,21.0s									
RONA	Rosalia, Austr	110.27	32	*e*	P	PKKPbc	04 14 55.6	+1.3		
	comp=Z,3.7nm,1.0s									
CONA	Conrad Observa	110.34	32	*e*	P	PKKPbc	04 14 55.3	+1.2		
	comp=Z,6.3nm,1.0s									
GZR	Gura Zlata	110.37	38	⇑	P	PKiKP	04 03 43.1	-11		
GERES	GERESS Array B	110.53	30		Pdiff	Pdif	04 00 03.1	+8.9		
	comp=Z,0.2nm,0.8s,baz=36,slow=18,SNR=1.7									
GERES					PKiKP	PKiKP	04 03 54.5	0.0		
	comp=Z,2.1nm,0.9s,baz=243,slow=3.2,SNR=9.3									
GERES					PKKPbc	PKKPbc	04 14 54.7	+1.1		
	comp=Z,2.2nm,0.9s,baz=346,slow=2.0,SNR=9.5									
GERES					PKKPab	PKKPab	04 15 04.3	+2.9		
	comp=Z,2.6nm,1.0s,baz=2.9,slow=2.7,SNR=8.0									
GRFO	Grafenberg	110.60	28		IAMs_20	IAMs_20	04 44 51.4			
	comp=Z,4µm,21.0s									
GRA1	Grafenberg Arr	110.60	28		IAMs_20	IAMs_20	04 44 40.5			
	comp=Z,4µm,22.0s									
CKRC	Cesky Krumlov	110.68	31	*e*	PKiKP	PKiKP	04 03 53.8	-0.8		
CKRC				*e*	PP	PP	04 04 24.0	-8.4		
CKRC				*e*	SKS	SKSac	04 10 24.7	-6.9		
CKRC				*e*	PKKP	PKKPbc	04 14 52.1	-0.9		
CKRC				*ex*		x	04 15 03.7			
KHC	Kasperske Hory	110.75	30	*ex*		x	04 00 11.5			
KHC				*ex*		x	04 03 16.0			
KHC				*e*	PKiKP	PKiKP	04 03 55.6	+0.8		
KHC				*e*	PP	PP	04 04 25.3	-7.7		
KHC				*e*	SKS	SKSac	04 10 25.3	-6.7		
KHC				*e*	PKKP	PKKPbc	04 14 52.7	-0.1		
KHC				*ex*		x	04 15 03.5			
KHC					AMS	AMS	04 45 30.0			
	comp=Z,6µm,21.4s									
LOT	Lotru	110.77	38	⇓	P	PKiKP	04 03 54.9	-0.2		
214A	Organ Pipe Nat	110.90	296		PKiKP	PKiKP	04 03 55.5	-0.1		
	baz=143									
T25A	Trinidad	110.93	305		PKiKP	PKiKP	04 03 55.3	-0.5		
	baz=144									
ARR	Arges	111.00	39	⇑	P	PKiKP	04 03 58.0	+2.5		
VOIR		111.21	39	⇓	P	PKiKP	04 03 50.7	-5.1		
VOIR		111.21	39	⇓	PKiKP	PKiKP	04 03 50.7	-5.1		
L34A	Svendsen Farm,	111.34	314		Pdif	Pdif	03 59 57.5	-0.4		
TREC	Trest	111.45	31	*e*	PP	PP	04 04 26.6	-11		
TREC				*e*	SKS	SKSac	04 10 28.5	-6.3		
TREC					AMS	AMS	04 43 00.0			
	comp=Z,4µm,24.5s									
KRUC	Moravsky	111.52	32	*e*	PKiKP	PKiKP	04 03 55.7	-0.5		
KRUC				*e*	SKS	SKSac	04 10 35.8	+0.8		
KRUC				*e*	SP	SP	04 14 08.6	+2.0		
KRUC				*e*	PKKP	PKKPbc	04 14 50.7	+0.5		
KRUC				*e*	SS	SS	04 20 28.8	+17		
DRGR		111.56	37	⇑	P	PKiKP	04 03 51.7	-4.7		
DRGR		111.56	37	⇑	PKiKP	PKiKP	04 03 51.7	-4.7		
MLR	Muntele Rosu	111.59	40	⇑	P	PKiKP	04 03 53.7	-2.9		
MLR	Muntele Rosu	111.59	40		Pdiff	Pdif	04 00 00.2	+1.1		
	comp=Z,1.4nm,0.9s,baz=43,slow=20,SNR=2.4									
MLR					PKiKP	PKiKP	04 03 56.7	+0.1		
	comp=Z,4.3nm,1.0s,baz=243,slow=2.3,SNR=4.7									
MLR					PKKPbc	PKKPbc	04 14 49.0	-1.0		
	comp=Z,3.1nm,0.9s,baz=264,slow=5.5,SNR=3.5									
MLR	Muntele Rosu	111.59	40		IAMs_20	IAMs_20	04 46 40.6			
	comp=Z,4µm,22.0s									
MLR	Muntele Rosu	111.59	40	⇑	PKiKP	PKiKP	04 03 53.7	-2.9		
PSZ	Piszkesteto	111.60	35		IAMs_20	IAMs_20	04 48 52.9			
	comp=Z,3µm,19.0s									
BGNE	Belgrade	111.62	312		PKiKP	PKiKP	04 03 55.2	-1.5		
	baz=146									
KSCO	Kaye Shedlock'	111.63	308		PKiKP	PKiKP	04 03 55.9	-1.0		
	baz=145									
JAVC	Velka Javorina	111.72	33	*e*	PKiKP	PKiKP	04 03 57.6	+0.9		
JAVC				*e*	SKS	SKSac	04 10 39.8	+3.8		
JAVC				*e*	SP	SP	04 14 10.1	+1.5		
JAVC				*e*	PKKP	PKKPbc	04 14 51.5	+1.9		
JAVC				*e*	SS	SS	04 20 30.0	+16		
VYHS	Vyhne	111.77	34	*e*	PKiKP	PKiKP	04 03 56.9	+0.2		
VYHS				*e*			04 04 42.0			
VYHS	Vyhne	111.77	34	*e*	PKP	PKiKP	04 03 56.9	+0.2		
VYHS				*e*	PP	PP	04 04 42.0	+1.8		
VYHS				*e*			04 14 50.5			
VRAC	Vranov	111.79	32	⇑	P	PKiKP	04 03 57.5	+0.8		
VRAC	Vranov	111.79	32		PKiKP	PKiKP	04 03 58.1	+1.4		
	comp=Z,0.8nm,0.4s,baz=218,slow=4.7,SNR=4.8									
VRAC					PKKPbc	PKKPbc	04 14 49.4	+0.1		
	comp=Z,3.3nm,0.9s,baz=32,slow=15,SNR=3.5									
VRAC					PKKPab	PKKPab	04 14 57.0	+1.3		
	comp=Z,5.0nm,1.1s,baz=36,slow=3.8,SNR=5.3									
VRAC	Vranov	111.79	32	⇑	PKiKP	PKiKP	04 03 57.5	+0.8		
VRAC	Vranov	111.79	32	*e*	PKiKP	PKiKP	04 03 57.3	+0.6		
VRAC				*e*	SKS	SKSac	04 10 38.4	+2.3		
VRAC				*e*	SP	SP	04 14 11.3	+2.1		
VRAC				*e*	PKKP	PKKPbc	04 14 50.6	+1.3		
VRAC				*e*	SS	SS	04 20 31.9	+17		
PRU	Pruhonice	111.80	30	*e*	PP	PP	04 04 17.7	-23		
PRU				*e*	SKS	SKSac	04 10 28.5	-7.6		
PRU				*e*	PKKP	PKKPbc	04 14 49.6	+0.3		
PRU				*ex*		x	04 14 58.3			
PRU					AMS	AMS	04 46 30.0			
	comp=Z,6µm,20.0s									
W18A	Petrified Fore	111.87	300		PKiKP	PKiKP	04 03 54.9	-2.7		
	baz=143									
PMBI	Palembang	111.88	132		IAMs_20	IAMs_20	04 44 24.2			
	comp=Z,3µm,19.0s									
SDCO	Great Sand Dun	111.93	305		PKiKP	PKiKP	04 03 56.8	-0.9		
	baz=144									
VRI	Vrincioaia	112.19	40	⇑	P	PKiKP	04 03 55.3	-2.3		
VRI				⇓	P	PKiKP	04 03 56.8	-0.8		
VRI	Vrincioaia	112.19	40	⇓	PKiKP	PKiKP	04 03 56.8	-0.8		
PVCC	Panska Ves	112.29	30	*e*	SKS	SKSac	04 10 32.4	-5.6		
PVCC				*e*	PKKP		04 14 48.5			
PVCC				*ex*		x	04 14 55.8			
PVCC					AMS	AMS	04 46 40.0			
	comp=Z,6µm,20.5s									
GSI	Gunungsitoli	112.37	123		IAMs_20	IAMs_20	04 42 21.2			
	comp=Z,3µm,20.0s									
BRG	Berggiesshubel	112.42	29	*e*	PKP	PKiKP	04 03 46.2	-12		
BRG					Amp		04 03 50.1			
	comp=Z,9.3nm,1.3s									
BRG					PP	PP	04 04 48.4	+3.5		
BRG					Amp		04 04 50.5			
	comp=Z,36nm,1.7s									
BRG	Berggiesshubel	112.42	29		SP	SP	04 14 20.0	+5.1		
BRG					PKKP		04 14 48.9			
BRG					Amp		04 14 50.8			
	comp=Z,13nm,1.2s									
BRG				*ex*		x	04 14 56.5			
BRG					Amp		04 14 57.5

OSTC AMS AMS 04 48 00.0
comp=Z,4µm,18.7s
GLA Glamis 112.81 295 PKiKP **PKiKP** **04 03 57.9 -1.4**
baz=142
BIZ Bicaz 112.88 39 ⇑P **PKiKP** **04 03 55.3 -3.5**
ECSD EROS Data Cent 112.91 315 IAMs_20 IAMs_20 04 54 48.3
comp=Z,3µm,19.0s
ECSD EROS Data Cent 112.91 315 P **Pdif** **04 00 06.2 +1.4**
baz=146
ECSD EROS Data Cent 112.91 315 PKiKP **PKiKP** **04 03 57.6 -1.4**
baz=146
MVCO Mesa Verde 112.93 302 PKiKP **PKiKP** **04 03 58.3 -1.3**
baz=143
OGNE Ogallala 112.93 309 Pdif **Pdif** **04 00 07.5 +2.4**
OGNE IAMs_20 IAMs_20 04 53 20.9
comp=Z,3µm,20.0s
OGNE Ogallala 112.93 309 PKiKP **PKiKP** **04 03 58.6 -0.7**
baz=144
CRVS Cervenica-Dubn 112.97 35 *e*PP **PP** **04 04 54.4 +5.6**
CRVS *e* 04 14 46.7
WUAZ Wupatki 113.00 299 IAMs_20 IAMs_20 04 52 09.5
comp=Z,3µm,18.0s
WUAZ Wupatki 113.00 299 PKiKP **PKiKP** **04 03 59.9 +0.3**
baz=142
UZH Uzhgorod 113.01 36 *e*PKiKP **PKiKP** **04 04 02.9 +3.9**
UZH *e* 04 04 10.0
UZH *i* 04 04 55.0
UZH *e*SS SS 04 20 50.8 +20
NIE Niedzica 113.04 34 *e*Pdif **Pdif** **04 00 08.1 +2.8**
NIE *e*PP **PP** **04 04 46.4 -3.0**
NIE *e*SP SP 04 14 33.8 +13
NIE *e*SS SS 04 20 44.6 +13
NIE *e*L L 04 48 27.4
comp=Z,6µm,20.3s
KSP Ksiaz 113.07 31 *e*PKiKP **PKiKP** **04 04 04.0 +4.9**
KSP *e*PP **PP** **04 04 44.3 -5.2**
KSP *e*SKSac **SKSac** **04 10 39.9 -1.2**
KSP *e*SKKSac **SKKSac** **04 11 50.8 +2.4**
KSP *e*SP **SP** **04 14 25.4 +4.6**
KSP *e*SS SS 04 20 53.5 +22
KSP *e*L L 04 48 19.9
comp=Z,5µm,20.0s
BKNI Bangkinang 113.14 127 IAMs_20 IAMs_20 04 42 55.5
comp=Z,3µm,20.0s
BUR01 Bucovina Ar. S 113.14 38 ⇑P **PKiKP** **04 03 60.0 +0.5**
IKP In-Ko-Pah, Jac 113.16 294 PKiKP **PKiKP** **04 04 00.4 +0.4**
baz=142
SWSC Sam W. Stewart 113.23 294 PKiKP **PKiKP** **04 04 00.3 +0.4**
baz=142
PDMCI Parker Dam,Lak 113.44 297 PKiKP **PKiKP** **04 04 00.8 +0.4**
baz=142
SCHQ Schefferville 113.48 339 PKiKP **PKiKP** **04 03 59.1 -0.6**
comp=Z,9.4nm,0.9s,baz=256,slow=0.9,SNR=8.1
SCHQ PP **PP** **04 04 51.7 -0.7**
comp=Z,27nm,1.2s,baz=144,slow=8.5,SNR=6.6
MONP2 Monument Peak 113.51 294 PKiKP **PKiKP** **04 04 01.4 +0.6**
baz=142
OJC Ojcow 113.58 33 *e*PKiKP **PKiKP** **04 03 59.0 -1.1**
OJC *e*PP **PP** **04 04 52.1 -1.0**
OJC *e*SKSac **SKSac** **04 10 42.6 -0.6**
OJC *e*SKKSac **SKKSac** **04 11 51.2 -0.7**
OJC *e*SP **SP** **04 14 27.6 +2.0**
OJC *e*SS SS 04 20 50.8 +12
OJC *e*L L 04 48 31.9
comp=Z,3µm,20.4s
BC3 Big Chuckawall 113.61 295 PKiKP **PKiKP** **04 04 00.5 -0.3**
baz=142
ISCO Idaho Springs 113.63 306 Pdif **Pdif** **04 00 09.8 +1.3**
ISCO Idaho Springs 113.63 306 P **Pdif** **04 00 09.8 +1.3**
ISCO Idaho Springs 113.63 306 P **Pdif** **04 00 09.8 +1.3**
baz=143
ISCO Idaho Springs 113.63 306 PKiKP **PKiKP** **04 04 00.6 -0.3**
baz=143
IRM Iron Mountain 113.84 296 PKiKP **PKiKP** **04 04 01.3 +0.2**
baz=142
MILM Milestii Mici 113.85 41 *e*PKP PKiKP 04 04 52.4 +52
MILM *e*SKS SKSdf 04 10 42.5 -28
MILM *e*SKKS 04 14 31.0
MILM LQM 04 47 54.3
comp=Z,1µm,22.0s
MILM LRM MLR 04 54 23.8
comp=Z,2µm,17.5s
109C Camp Elliot, M 113.87 293 IAMs_20 IAMs_20 04 48 50.9
comp=Z,3µm,19.0s
109C Camp Elliot, M 113.87 293 PKiKP **PKiKP** **04 04 01.6 +0.4**
baz=142
KIS Kishinev 113.92 41 *e*PKP **PKiKP** **04 04 01.0 +0.2**
KIS Kishinev 113.92 41 *e*PP PP 04 05 05.0 +9.4
comp=Z,300nm,5.2s
KIS *e*SKS **SKSac** **04 10 44.0 -0.6**
KIS *e*SKKS 04 14 10.5
KIS LRM MLR 04 50 15.5
comp=Z,300nm,20.7s
KIS Kishinev 113.92 41 *e*PKIKP **PKiKP** **04 04 01.0 +0.2**
KIS *e* 04 05 04.8
KIS *e* 04 10 43.6
KIS pmax pmax
comp=N,300nm,5.2s
KIS MLR MLR
comp=Z,300nm,20.7s
KWP Kalwaria Pacla 114.01 35 *e*PKiKP **PKiKP** **04 04 00.9 0.0**
KWP *e*PP **PP** **04 04 58.0 +1.8**
KWP *e*SKSac **SKSac** **04 10 45.2 +0.3**
KWP *e*SKKSac **SKKSac** **04 11 54.1 -0.8**
KWP *e*SP **SP** **04 14 35.4 +5.9**
KWP *e*SS SS 04 21 01.4 +17
KWP *e*L L 04 49 44.4
comp=Z,5µm,20.6s
NEE2 Needles Airpor 114.05 297 PKiKP PKPdf 04 04 01.4 -0.1
baz=142
TPFO Pinon Flats 114.09 294 PKiKP PKPdf 04 04 01.6 -0.1
baz=142
PFO Pinyon Flats O 114.09 294 PKP **PKiKP** **04 04 02.8 +1.0**
comp=Z,9.1nm,1.0s,baz=155,slow=0.9,SNR=6.8
PFO PP **PP** **04 04 56.6 -0.6**
comp=Z,7.3nm,1.1s,baz=116,slow=7.8,SNR=6.4
PFO Pinyon Flats O 114.09 294 *i* PKIKP **PKiKP** **04 04 01.9 +0.1**
PFO Pinyon Flats O 114.09 294 PKiKP **PKiKP** **04 04 02.2 +0.4**
baz=142
BELC Belle Mtn. Jos 114.16 295 PKiKP PKPdf 04 04 01.2 -0.7
baz=142
SIM Simferopol' 114.29 45 *i* PKIKP **PKiKP** **04 04 08.7 +7.1**
SIM *e* 04 05 01.0
SIM *e*PPP PPP 04 07 27.9
SIM pmax pmax
comp=Z,700nm,4.5s
EYMN Ely 114.44 320 PKiKP **PKiKP** **04 04 02.6 +0.8**
baz=147
SUSD Miller 114.45 313 PKiKP PKPdf 04 04 00.8 -1.2
baz=145
MURC Murrieta 114.47 294 PKiKP PKPdf 04 04 02.0 -0.4
baz=141
F33A 5 Mile Ranch, 114.51 316 P **PKiKP** **04 04 02.2 +0.2**
baz=146
GMRC Granite Mounta 114.59 296 PKiKP **PKiKP** **04 04 02.8 +0.1**
baz=141
LVV L'vov 114.61 36 *i* PKIKP **PKiKP** **04 04 05.8 +3.7**
LVV *e* 04 05 07.1
LVV *e* 04 10 44.6
LVV *e*PS **PKKPab** **04 14 41.7 -1.7**
LVV *e*SS SS 04 21 10.3 +18
LVV MLR MLR
comp=N,2µm,19.0s
LVV MLR MLR
comp=E,3µm,19.0s
LVV MLR MLR
comp=Z,3µm,19.0s
N23A Red Feather La 114.65 307 PKiKP PKPdf 04 04 02.8 0.0
baz=143
BCA Borcka 114.69 52 ⇑P **PKiKP** **04 04 09.6 +7.1**
SORM Soroca 114.70 40 ⇑P PKPdf 04 03 59.3 -2.9
SORM Soroca 114.70 40 ⇑PKIKP PKPdf 04 03 59.3 -2.9
PHWY Pilot Hill 114.75 307 IAMs_20 IAMs_20 04 54 53.5
comp=Z,3µm,19.0s
BBRC Big Bear Solar 114.84 295 PKiKP **PKiKP** **04 04 04.0 +0.7**
baz=141
CIS Catalina Islan 114.95 293 PKiKP **PKiKP** **04 04 04.2 +0.9**
baz=141
HEC Hector,Ludlow 114.98 295 PKiKP **PKiKP** **04 04 03.7 +0.3**
baz=141
GNI Garni 115.10 55 PKKPbc PKKPbc 04 14 38.3 +0.3
comp=Z,13nm,1.0s,baz=331,slow=4.1,SNR=3.7
GNI Garni 115.10 55 IAMs_20 IAMs_20 04 54 49.7
comp=Z,3µm,20.0s
GNI Garni 115.10 55 *i* PKIKP **PKiKP** **04 04 04.1 +0.6**
GNI MLR MLR
comp=Z,4µm,20.0s
O20A White River Ci 115.12 305 PKiKP **PKPdf** **04 04 03.1 -0.5**
baz=142
FMP Fort Macarthur 115.13 293 PKiKP **PKiKP** **04 04 04.4 +0.8**
baz=141
BFSC Mount Baldy Ra 115.21 294 PKiKP **PKPdf** **04 04 03.4 -0.5**
baz=141
TUQ Turquoise Moun 115.23 296 PKiKP **PKiKP** **04 04 04.0 +0.1**
baz=141
RRX Edison Barstow 115.36 295 PKiKP **PKiKP** **04 04 04.0 0.0**
baz=141
WTNK Soaring Height 115.36 297 **PKiKP** **04 04 04.7 +0.6**
SNCC San Nicolas Is 115.42 292 PKiKP **PKPdf** **04 04 04.2 0.0**
baz=141
KAPI Kappang 115.43 148 PKP **PKiKP** **04 04 03.4 -1.4**
comp=Z,4.8nm,0.8s,baz=71,slow=1.5,SNR=4.9
KAPI Kappang 115.43 148 **PKPdf** **04 04 05.1 +0.2**
KAPI Kappang 115.43 148 PKiKP **PKPdf** **04 04 05.1 +0.2**
BHV Bhavnagar 115.44 88 *e*P **PKiKP** **04 04 05.1 +0.6**
GKP Gorka Klasztor 115.49 30 *e*PKiKP **PKiKP** **04 04 03.8 +0.2**
GKP *e*PP **PP** **04 05 08.8 +2.3**
GKP *e*SKSac **SKSac** **04 10 51.1 +0.8**
GKP *e*SKKSac **SKKSac** **04 12 04.8 +0.2**
GKP *e*SP **SP** **04 14 44.9 +2.1**
GKP *e*L L 04 48 32.4
comp=Z,5µm,21.1s
ANN Anapa 115.54 48 *e*P **Pdif** **04 00 15.9 -0.5**
ANN *i* 04 04 02.7
ANN *e* 04 04 07.4
ANN *e* 04 05 05.1
ANN *e* 04 10 50.0
ANN pmax pmax
comp=Z,24nm,0.8s
ANN pmax pmax
comp=Z,36nm,1.1s
SOC Sochi 115.55 50 *i* PKIKP **PKiKP** **04 04 04.6 +0.6**
SOC *e* 04 05 04.9
SOC *e*PPP PPP 04 07 32.1
SOC *e*PS **PS** **04 14 51.6 +4.9**
SOC *e*SS SS 04 21 23.6 +19
SOC *e*SSS SSS 04 25 25.8
SOC MLR MLR
comp=Z,2µm,20.0s
RGN Rugen 115.55 27 IAMs_20 IAMs_20 04 52 08.2
comp=Z,4µm,20.0s
DECC Green Verdugo 115.57 294 PKiKP **PKiKP** **04 04 04.5 0.0**
baz=141
GSC Goldstone, Bar 115.59 295 PKiKP **PKiKP** **04 04 04.7 +0.1**
baz=141
B35A Bob, Littlefor 115.61 319 PKPdf **PKPdf** **04 04 03.1 -0.9**
B35A Bob, Littlefor 115.61 319 P **PKPdf** **04 04 02.5 -1.6**
baz=146
HYBB Hyderabad (bro 115.67 96 *e*PKiKP **PKiKP** **04 04 05.8 +0.6**
HYBB *e*PP **PP** **04 05 08.5 +0.4**
HYBB *e*PP **PP** **04 05 09.7 +1.6**
HYBB *e*SKSac **SKSac** **04 10 53.2 +0.3**
HYBB *e*SKKSac **SKKSac** **04 12 03.0 -4.6**
HYBB IVMs_BB IVMs_BB 04 48 00.0
comp=Z,697nm,19.0s
MYKOM Kota Tinggi 115.70 129 IAMs_20 IAMs_20 04 45 29.1
comp=Z,3µm,20.0s
SHOC Shoshone, Teco 115.78 296 PKiKP **PKiKP** **04 04 04.8 0.0**
baz=141
RWWY Rawlins 115.86 306 IAMs_20 IAMs_20 04 55 43.9
comp=Z,2µm,18.0s
EDW2 Edwards Air Fo 115.88 294 PKiKP **PKPdf** **04 04 05.0 0.0**
baz=141
TMUT Trail Mountain 115.88 302 **PKiKP** **04 04 05.5 +0.3**
LKRN Lenkeran, Azer 115.92 59 PKIKP **PKiKP** **04 04 06.2 +1.3**
OSI Osito Audit: C 116.05 294 PKiKP **PKPdf** **04 04 05.4 0.0**
baz=141
LRMC Laurel Mtn Rad 116.18 295 PKiKP **PKiKP** **04 04 06.0 +0.2**
baz=141
GANJ Ganja 116.24 56 PKIKP **PKiKP** **04 04 06.7 +1.1**
MUD Monsted U'grnd 116.25 24 *i* P **PP** **04 05 11.3 -0.5**
K22A Casper 116.31 307 P **PKPdf** **04 04 05.6 -0.2**
baz=142
K22A Casper 116.31 307 PKiKP **PKPdf** **04 04 05.0 -0.8**
baz=142
COP Copenhagen 116.34 26 *e*P **PP** **04 05 10.3 -2.2**
RSSD Black Hills 116.36 310 **PKPdf** **04 04 05.6 -0.3**
RSSD Black Hills 116.36 310 PKIKP **PKPdf** **04 04 05.6 -0.3**
RSSD MLR MLR
comp=Z,4µm,20.0s
RSSD Black Hills 116.36 310 P **PKPdf** **04 04 05.4 -0.5**
baz=143
RSSD Black Hills 116.36 310 PKiKP **PKPdf** **04 04 05.1 -0.8**
baz=143
AGMN Agassiz Nation 116.36 318 IAMs_20 IAMs_20 04 53 20.2
comp=Z,2µm,20.0s
AGMN Agassiz Nation 116.36 318 P **PKPdf** **04 04 04.5 -1.0**
baz=145
AGMN Agassiz Nation 116.36 318 PKiKP **PKPdf** **04 04 04.4 -1.0**
baz=145
SBC Santa Barbara 116.44 293 PKiKP **PKiKP** **04 04 06.1 0.0**
baz=140
FURC Furnace Creek, 116.51 296 PKiKP **PKiKP** **04 04 06.8 +0.7**
baz=141
MPMC Manual Prospec 116.52 295 PKiKP **PKiKP** **04 04 06.7 +0.2**
baz=140
TPNV Topopah Spring 116.57 297 PKiKP **PKiKP** **04 04 06.9 +0.5**
baz=141
NRS Narsarsuaq 116.62 353 IAMs_20 IAMs_20 04 54 40.0
comp=Z,2µm,18.0s
MNGR Mingechevir, A 116.70 57 PKIKP **PKiKP** **04 04 07.6 +1.2**
ISA Isabella, Lake 116.73 294 **PKiKP** **04 04 07.3 +0.6**
ISA Isabella, Lake 116.73 294 PKIKP **PKiKP** **04 04 07.3 +0.6**
ISA Isabella, Lake 116.73 294 PKiKP **PKiKP** **04 04 07.2 +0.6**
baz=140
IPM Ipoh 116.78 125 P **PKPdf** **04 04 07.0 -0.5**
ZEI Tsey 116.79 53 *i* PKIKP **PKiKP** **04 04 07.0 +0.2**
ZEI *e* 04 05 18.4
ZEI pmax pmax
comp=Z,7.0nm,1.3s
GOET G??ttrup 116.79 24 *e*P **PP** **04 05 17.2 +1.7**
PKM Mcpherson Peak 116.84 293 PKiKP **PKiKP** **04 04 07.8 +0.7**
baz=140
E28A Huff 116.89 314 P **PKPdf** **04 04 05.9 -0.7**
baz=143
JRMM Jerantut 116.94 127 P **PKPdf** **04 04 06.0 -1.7**
SHA1 Shidzhatmaz 116.97 52 *i* PKIKP **PKPdf** **04 04 07.0 -0.1**
KBZ Khabaz 117.07 52 PKP **PKPdf** **04 04 05.6 -1.3**
comp=Z,2.7nm,0.9s,baz=300,slow=1.3,SNR=6.7
KBZ PP **PP** **04 05 17.4 -0.3**
comp=Z,14nm,1.2s,baz=290,slow=2.6,SNR=4.9
KBZ PKKPbc **PKKPab** **04 14 32.1 -1.2**
comp=Z,3.4nm,0.9s,baz=342,slow=3.2,SNR=4.7
KBZ Khabaz 117.07 52 *i* PKIKP **PKPdf** **04 04 05.8 -1.1**
KBZ MLR MLR
comp=Z,3µm,19.0s
SEKA Sheki 117.09 56 PKIKP **PKiKP** **04 04 08.2 +1.0**
CWC Cottonwood Cre 117.12 295 PKiKP **PKiKP** **04 04 08.0 +0.4**
baz=140
KIV Kislovodsk 117.15 51 ⇓P **PKPdf** **04 04 05.9 -1.4**
KIV Kislovodsk 117.15 51 **PKiKP** **04 04 07.3 0.0**
KIV Kislovodsk 117.15 51 *e*P **Pdif** **04 00 24.0 +0.2**
KIV *i* 04 04 07.3
KIV *e* 04 05 18.1
KIV *e*PPP PPP 04 07 48.0
KIV *e* 04 10 58.0
KIV *e*PS **PS** **04 15 02.1 +0.6**
KIV *e*SS SS 04 21 29.0 +3.0
KIV *e*SSS SSS 04 25 48.6
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,1µm,22.0s
AKASG Malin Array Be 117.16 39 PKP **PKPdf** **04 04 06.7 -0.2**
comp=Z,4.7nm,0.9s,baz=252,slow=1.4,SNR=18
AKASG PP **PP** **04 05 15.7 -2.6**
comp=Z,1.6nm,0.8s,baz=221,slow=6.3,SNR=5.5
AKASG SKP 04 07 39.9
comp=Z,4.6nm,1.1s,baz=238,slow=0.8,SNR=5.8
AKASG PKKPbc **PKKPbc** **04 14 30.5 -0.3**
comp=Z,7.5nm,1.1s,baz=36,slow=5.4,SNR=13
AKASG SKKPbc SKKPbc 04 18 19.1 +1.9
comp=Z,2.2nm,1.0s,baz=34,slow=5.2,SNR=5.2
AKASG Malin Array Be 117.16 39 PKPdf **PKPdf** **04 04 06.2 -0.7**
AKBB Malin Array Si 117.16 39*c* PKIKP **PKPdf** **04 04 06.2 -0.7**
AKBB MLR MLR
comp=Z,3µm,19.0s
GRAC Grapevine Rang 117.18 296 PKiKP **PKiKP** **04 04 07.5 0.0**
baz=140
VES Vestal, Richgr 117.18 294 PKiKP **PKPdf** **04 04 07.0 -0.5**
baz=140
NCK Nalchik 117.20 52 *i* PKIKP **PKiKP** **04 04 07.7 +0.4**
NCK MLR MLR
comp=Z,3µm,19.0s
SMMC Simmler 117.26 293 PKiKP **PKiKP** **04 04 07.9 +0.1**
baz=140
R11A Troy Canyon, C 117.31 298 PKiKP **PKPdf** **04 04 07.8 -0.1**
baz=140
KULM Kulim 117.32 124 **PKPdf** **04 04 07.7 -0.8**
KULM Kulim 117.32 124 P **PKPdf** **04 04 08.0 -0.4**
DUG Dugway, Tooele 117.36 302 IAMs_20 IAMs_20 04 52 04.4
comp=Z,4µm,20.0s
DUG Dugway, Tooele 117.36 302 PKiKP **PKPdf** **04 04 07.7 -0.1**
baz=141
MDND Maddock 117.47 315 P **PKPdf** **04 04 07.3 -0.4**
baz=143
MDND Maddock 117.47 315 PKiKP **PKPdf** **04 04 06.9 -0.7**
baz=143
TIN Tinemaha, Big 117.67 296 PKiKP **PKiKP** **04 04 08.9 +0.3**
baz=140
VOG Valley Oaks Go 117.71 294 PKiKP **PKPdf** **04 04 08.0 -0.5**
baz=140
HOMB Homborsund 117.75 23 *e*PKPdf **PKPdf** **04 04 04.2 -3.6**
HOMB *e*SKSac **SKSac** **04 11 01.2 +2.8**
HOMB *e*PS **PS** **04 15 08.4 +2.1**
HOMB *e*SS **SS** **04 21 36.8 +3.7**
HOMB IVMs_BB IVMs_BB 04 47 29.6
comp=Z,1µm,28.4s
BW06 Boulder Array 117.79 306 IAMs_20 IAMs_20 04 55 31.0
comp=Z,3µm,18.0s
BW06 Boulder Array 117.79 306 PKiKP **PKPdf** **04 04 08.0 -0.7**
baz=141
PDAR Pinedale Array 117.79 306 Pdiff **Pdif** **04 00 27.1 +0.3**
comp=Z,0.4nm,0.8s,baz=150,slow=3.8,SNR=5.5
PDAR PKP **PKPdf** **04 04 07.8 -1.0**
comp=Z,8.5nm,0.9s,baz=132,slow=2.2,SNR=42
PDAR PP **PP** **04 05 22.6 -0.5**
comp=Z,4.0nm,1.1s,baz=146,slow=5.5,SNR=6.3
PDAR PKKPbc **PKKPbc** **04 14 28.2 -0.5**
comp=Z,1.3nm,0.9s,baz=11,slow=0.9,SNR=6.2
PDAR Pinedale Array 117.79 306 PKPdf **PKPdf** **04 04 08.1 -0.6**
ULM Lac du Bonnet 117.96 319 PKP **PKPdf** **04 04 07.8 -0.6**
comp=Z,25nm,1.1s,baz=94,slow=1.4,SNR=13
ULM PP **PP** **04 05 21.8 -2.1**
comp=Z,37nm,1.2s,baz=143,slow=8.2,SNR=9.5
ULM PKKPbc **PKKPbc** **04 14 27.1 -0.8**
comp=Z,7.3nm,1.0s,baz=282,slow=2.3,SNR=3.9
GROC Groznyy 117.98 54 *i* PKIKP **PKiKP** **04 04 09.8 +1.0**
GROC *e* 04 05 23.3
GROC *e* 04 10 58.9
GROC *e* 04 11 22.6
GROC *e*PS **PS** **04 15 10.5 +1.7**
GROC pmax pmax
comp=Z,64nm,0.8s
GROC MLR MLR
comp=Z,447nm,12.0s
BKB Balikpapan 118.05 144 IAMs_20 IAMs_20 04 47 58.4
comp=Z,3µm,20.0s
KSM Kuching 118.14 136 PKPdf **PKPdf** **04 04 08.4 -1.7**
KSM Kuching 118.14 136 P **PKPdf** **04 04 09.0 -1.1**
BLS5 Blasjo 118.37 21 *e*PKPdf **PKPdf** **04 04 06.8 -2.3**
BLS5 *e*PP **PP** **04 05 26.2 -0.4**
BLS5 *e*SKSac **SKSac** **04 11 04.3 +3.5**
BLS5 IVMs_BB IVMs_BB 04 50 38.8
comp=Z,1µm,22.4s
MLAC Mammoth, Mammo 118.42 296 PKiKP **PKiKP** **04 04 10.8 +0.7**
baz=140
AHID Auburn Hatcher 118.51 305 IAMs_20 IAMs_20 04 57 58.1
comp=Z,2µm,20.0s
MAK Makhachkala 118.59 55 *e*P **Pdif** **04 00 26.8 -3.2**
MAK *e* 04 10 59.7
MAK *e*PS **PS** **04 15 13.8 -0.5**
MAK *e*SS SS 04 21 43.9 -0.5
MAK *e*SSS SSS 04 26 14.6
MAK pmax pmax
comp=Z,260nm,1.3s
VIS Vishakhapatnam 118.62 100 *e*P **PKPdf** **04 04 04.7 -6.0**
NV11 Mina Array Sit 118.68 297 **PKPdf** **04 04 10.3 -0.2**
NVAR Mina Array Bea 118.75 297 PKP **PKiKP** **04 04 11.7 +0.9**
comp=Z,19nm,1.0s,baz=152,slow=2.6,SNR=66
NVAR PP **PP** **04 05 30.3 +0.5**
comp=Z,4.0nm,1.1s,baz=151,slow=5.7,SNR=3.6
NVAR SKP 04 07 44.5
comp=Z,1.3nm,1.0s,baz=142,slow=2.7,SNR=3.6
NVAR PKKPab **PKKPab** **04 14 27.3 +0.3**
comp=Z,4.1nm,0.9s,baz=281,slow=2.4,SNR=16
NVAR SKKPbc SKKPbc 04 18 08.8 -2.2
comp=Z,1.2nm,0.9s,baz=305,slow=3.2,SNR=3.8
NVAR PKKPKP **P'P'df** **04 23 10.0 +3.7**
comp=Z,1.0nm,1.0s,baz=284,slow=2.0,SNR=5.5
REDW Red Top Meadow 118.86 305 IAMs_20 IAMs_20 04 54 18.1
comp=Z,3µm,19.0s
SNOW Snow King Moun 118.89 305 IAMs_20 IAMs_20 04 54 38.8
comp=Z,3µm,19.0s
NGP Nagpur 118.92 94 *e*P **PKPdf** **04 04 09.9 -1.4**
NGP *i* x **PP** **04 05 33.3 +2.6**
LOHW Long Hollow 118.93 305 IAMs_20 IAMs_20 04 54 51.1
comp=Z,3µm,19.0s
ELK Elko 118.97 300 IAMs_20 IAMs_20 04 53 15.0
comp=Z,3µm,21.0s
TPAW Teton Pass 119.00 305 IAMs_20 IAMs_20 04 55 45.9
comp=Z,2µm,20.0s
BER Bergen 119.03 20 *e*PP **PP** **04 05 25.7 -5.3**
BER *e*PS **PS** **04 15 20.5 +2.7**
MOOW Moose Ponds 119.10 305 IAMs_20 IAMs_20 04 57 48.8
comp=Z,3µm,19.0s
FXWY Fox Creek 119.15 305 IAMs_20 IAMs_20 04 56 00.0
comp=Z,2µm,20.0s
PBUR Paburge 119.24 31 *e*P **PKiKP** **04 04 11.2 +0.4**
KONO Kongsberg 119.25 23 IAMs_20 IAMs_20 04 57 10.9
comp=Z,2µm,18.0s
KONO Kongsberg 119.25 23 *e*PKPdf **PKPdf** **04 04 10.4 -0.2**
KONO *e*PP **PP** **04 05 30.0 -2.6**
KONO *e* 04 10 54.8
KONO *e*SP SP 04 15 20.3 +3.7
KONO *e*SS **SS** **04 21 52.8 +0.4**
KONO IVMs_BB IVMs_BB 04 48 27.0
comp=Z,1µm,23.6s
IMW Indian Meadow 119.31 305 IAMs_20 IAMs_20 04 57 55.0
comp=Z,3µm,20.0s
LAO LASA Array 119.33 310 **PKiKP** **04 04 11.4 -0.1**
LAO IAMs_20 IAMs_20 04 55 15.6
comp=Z,3µm,20.0s
LAO LASA Array 119.33 310 P **PKiKP** **04 04 11.3 -0.1**
baz=141
LAO LASA Array 119.33 310 PKiKP **PKPdf** **04 04 11.0 -0.3**
baz=141
PABE Paberze 119.42 33 IAMs_20 IAMs_20 04 56 06.7
comp=Z,3µm,19.0s
PABE Paberze 119.42 33 *e*P **PKiKP** **04 04 11.2 0.0**
RLMT Red Lodge 119.47 307 PKiKP **PKPdf** **04 04 11.3 -0.6**
baz=140
H17A Grant Village 119.52 306 PKiKP **PKiKP** **04 04 12.8 +0.7**
baz=140
SUE Sulen 119.54 19 *e*PKPdf **PKPdf** **04 04 11.1 -0.1**
SUE *e*PP **PP** **04 05 34.6 0.0**
SUE *e*SKSac **SKSac** **04 11 08.5 +3.8**
SUE *e* 04 15 30.4
SUE *e*SS **SS** **04 21 55.8 -0.3**
HRA Herat 119.59 72 **PKPdf** **04 04 11.9 -0.5**
BHPL Bhopal 119.63 92 *e*P **PKPdf** **04 04 09.5 -3.1**
BHPL *i* x **PP** **04 05 32.4 -3.3**
YUF Upper Falls 119.73 306 PKPdf **PKiKP** **04 04 12.9 +0.4**
OSL Oslo 119.75 23 *e*PKPdf **PKiKP** **04 04 12.5 +0.9**
OSL *e*PP **PP** **04 05 35.8 -0.3**
OSL *e*SKSac **SKSac** **04 11 04.8 -0.7**
OSL *e*SS **SS** **04 21 58.7 -0.2**
OSL IVMs_BB IVMs_BB 04 53 52.1
comp=Z,1µm,18.2s
SBUM Sibu 119.78 137 P **PKPdf** **04 04 13.0 -0.2**
NACGM Naroch 119.81 35 *i* PKP **PKPdf** **04 04 11.7 -0.1**
MNK Minsk 119.84 35 *i* PKIKP **PKPdf** **04 04 11.1 -0.8**
MNK *i* 04 05 36.6
MNK *i* PPP PPP 04 08 09.0
MNK *i* 04 11 07.0
MNK *i* PS **PS** **04 15 25.5 +0.2**
MNK *i* SS SS 04 22 03.3 +3.1
MNK *i* SSS SSS 04 26 37.6
MNK pmax pmax
comp=E,1.0nm,1.0s
MNK pmax pmax
comp=Z,32nm,1.0s
MNK Minsk 119.84 35 *i* PKP **PKPdf** **04 04 11.2 -0.8**
comp=E,1.0nm,1.0s
MNK *i* PKP **PKPdf** **04 04 11.2 -0.8**

MNK *i* PKP **PKPdf** 04 04 11.2 -0.8
comp=Z,32nm,1.0s,baz=215
MNK *i* PP **PP** 04 05 36.7 -0.1
MNK *i* PPP PPP 04 08 09.0
MNK *i* SKS **SKSac** 04 11 07.0 +0.9
MNK *i* PS **PS** 04 15 25.5 +0.2
MNK *i* SS **SKKSdf** 04 22 03.3 -0.4
MNK *i* SSS SSS 04 26 37.6
MNK *i* LQ LQ 04 38 27.6
MNK *i* LR LR 04 44 50.2
MNK *i* LRM MLR 04 51 41.0
comp=E,236nm,17.0s
MNK *i* LRM MLR 04 51 53.9
comp=Z,2μm,18.3s
DGMT Dagmar 119.85 313 IAMs_20 IAMs_20 04 54 45.3
comp=Z,4μm,22.0s
DGMT Dagmar 119.85 313 PKiKP **PKPdf** 04 04 11.8 -0.4
baz=141
SKAR Skarslia 119.90 21 *e*PKPdf **PKiKP** 04 04 13.0 +0.9
SKAR *e*PP **PP** 04 05 37.0 -0.2
SKAR *e*SKSac **SKSac** 04 11 08.6 +2.4
SKAR *e*SP **SP** 04 15 25.8 +3.3
SKAR *e*SS **SS** 04 21 57.2 -3.8
SKAR IVMs_BB IVMs_BB 04 49 38.4
comp=Z,1μm,21.0s
HYA Hoyanger 119.92 20 *e*PKPdf **PKiKP** 04 04 12.6 +0.7
BORG Borgarnes 119.98 5 PKP **PKiKP** 04 04 13.0 +1.0
comp=Z,12nm,0.9s,baz=75,slow=6.0,SNR=3.7
IIGN Ignalina 120.00 34 *e*P **PKiKP** 04 04 12.7 +0.4
GEYT Alibeck 120.06 66 PKP **PKiKP** 04 04 13.7 +0.6
comp=Z,13nm,1.1s,baz=262,slow=7.0,SNR=12
GEYT PP **PP** 04 05 36.0 -2.5
comp=Z,2.3nm,0.5s,baz=222,slow=2.0,SNR=3.9
GEYT PKKPab **PKKPab** 04 14 20.7 -0.6
comp=Z,20nm,1.1s,baz=7.1,slow=4.8,SNR=15
GEYT Alibeck 120.06 66 **PKiKP** 04 04 13.5 +0.5
FOO Floro 120.09 19 *e*PKPdf **PKiKP** 04 04 12.6 +0.4
FOO *e*PP **PP** 04 05 38.2 -0.1
FOO *e*PS **PS** 04 15 34.7 +7.3
FOO *e*SS SS 04 22 13.0 +10
NUUK Nuuk 120.14 350 *i* P **PKiKP** 04 04 15.4 +3.2
ISAL Salakas 120.15 34 *e*P **PKiKP** 04 04 13.3 +0.7
FAKI Fak Fak 120.50 161 IAMs_20 IAMs_20 05 06 05.5
comp=Z,2μm,19.0s
AJM Ajmer 120.54 87 *i* P **PKPdf** 04 04 13.1 -1.2
AJM *i* x **PP** 04 05 42.2 +0.2
HFS Hagfors 120.61 24 PKP **PKPdf** 04 04 12.5 -0.8
comp=Z,6.6nm,0.9s,baz=145,slow=3.6,SNR=13
HFS PP PP 04 05 34.1 -7.9
comp=Z,7.0nm,0.8s,baz=190,slow=6.9,SNR=6.3
HFS PKKPbc **PKKPbc** 04 14 18.7 +0.3
comp=Z,4.0nm,0.9s,baz=64,slow=3.4,SNR=6.0
NC602 NORSAR Array S 120.65 23 *e*PP **PP** 04 05 38.7 -3.6
NC602 *e*SKSac **SKSac** 04 11 09.8 +1.2
NC602 *e* 04 21 54.3
ANGG Ammassalik, Gr 120.67 357 IAMs_20 IAMs_20 04 56 36.2
comp=Z,2μm,18.0s
ANGG Ammassalik, Gr 120.67 357 *i* P **PKiKP** 04 04 13.5 +0.2
HLID Hailey 120.69 303 PKiKP **PKiKP** 04 04 14.7 +0.4
baz=139
NB2 NORSAR Subarra 120.85 23 PKPdf **PKPdf** 04 04 13.5 -0.3
comp=Z,47nm,1.4s,baz=208,slow=1.8
NB2 NORSAR Subarra 120.85 23 PKPdf **PKPdf** 04 04 13.5 -0.3
baz=208,slow=1.8
NOA NORSAR Array B 120.85 23 PKP **PKiKP** 04 04 13.8 0.0
comp=Z,9.4nm,1.0s,baz=206,slow=1.8,SNR=26
NOA PKKPbc **PKKPbc** 04 14 17.2 -0.3
comp=Z,5.5nm,1.0s,baz=27,slow=4.0,SNR=15
MCCM Marconi Confer 120.91 293 **PKiKP** 04 04 15.2 +0.5
BOZ Bozeman (W) 120.92 306 IAMs_20 IAMs_20 04 58 46.7
comp=Z,3μm,19.0s
BOZ Bozeman (W) 120.92 306 PKiKP **PKPdf** 04 04 14.6 0.0
baz=139
AKN Aaknes 121.00 20 *e*PKPdf **PKiKP** 04 04 15.3 +1.2
AKN *e*PP **PP** 04 05 43.4 -1.2
AKN *e*PS **PS** 04 15 37.4 +1.8
AKN *e*SS SS 04 22 24.8 +10
ORV Oroville 121.24 295 IAMs_20 IAMs_20 04 51 24.1
comp=Z,2μm,19.0s
MFID Camas Ranch 121.27 302 IAMs_20 IAMs_20 04 55 51.8
comp=Z,3μm,20.0s
DOMB Dombas 121.29 21 *e*PKPdf **PKiKP** 04 04 15.6 +0.9
DOMB *e*PP **PP** 04 05 46.1 -0.5
DOMB *e*SKSac **SKSac** 04 11 14.2 +3.3
DOMB *e*PS **PS** 04 15 40.4 +2.2
DOMB IVMs_BB IVMs_BB 04 53 15.6
comp=Z,2μm,18.6s
VSR Storozhevoye 121.33 44 *e*PKIKP **PKPdf** 04 04 13.1 -1.8
VSR *e* 04 05 47.1
VSR *e*PS **PS** 04 15 45.7 +7.0
VSR pmax pmax
comp=Z,20nm,1.4s
BLSP Bilaspur 121.44 96 *e*P **PKPdf** 04 04 15.7 -0.4
MOL Molde 121.47 20 *e*PP **PP** 04 05 47.2 -0.6
MOL *e*PS **PS** 04 15 41.5 +1.9
HOPS Hopland Field 121.64 294 IAMs_20 IAMs_20 04 50 43.7
comp=Z,3μm,19.0s
VORR Voronezh 121.70 44 *e*PKIKP **PKPdf** 04 04 15.6 0.0
VORR *e* 04 05 46.6
VORR pmax pmax
comp=Z,46nm,1.7s
EGMT Eagleton 121.90 309 PKiKP **PKiKP** 04 04 16.5 0.0
baz=139
WVOR Wild Horse Val 121.92 299 **PKiKP** 04 04 17.3 +0.6
WVOR IAMs_20 IAMs_20 05 00 22.1
comp=Z,3μm,18.0s
WVOR Wild Horse Val 121.92 299 PKIKP **PKiKP** 04 04 17.3 +0.6
DY2G Dye2 121.94 353 *i* P **PKPdf** 04 04 15.4 -0.5
JHNI Jhansi 121.99 91 *e*P **PKPdf** 04 04 16.5 -0.6
BWNR Bhubaneshwar 122.07 101 *e*P **PKPdf** 04 04 16.5 -0.8
FRB Frobisher Bay 122.08 342 PKP **PKiKP** 04 04 16.5 +0.4
comp=Z,32nm,0.9s,baz=127,slow=4.4,SNR=6.3
JHSG JHARSUGUGA 122.08 98 *e*P **PKPdf** 04 04 17.1 -0.3
SIJI Sorong 122.31 160 PKP **PKPdf** 04 04 16.4 -1.7
comp=Z,14nm,0.8s,baz=141,slow=20,SNR=3.5
LPSR Galich'ya Gora 122.31 43 *e*PKIKP **PKPdf** 04 04 13.8 -2.9
LPSR *e*PS **PS** 04 15 50.4 +3.0
LPSR pmax pmax
comp=Z,30nm,1.0s
VRH Novokhopyorsk 122.35 46 *e*PKIKP **PKPdf** 04 04 16.2 -0.7
VRH *e*PS **PS** 04 15 50.4 +2.6
VRH pmax pmax
comp=Z,50nm,1.6s
TBLU Trondheim 122.63 21 *e*PKPdf **PKPdf** 04 04 16.7 -0.3
VSU Vasula 122.72 32 *i* PKIKP **PKPdf** 04 04 17.3 0.0
VSU MLR MLR
comp=Z,10μm,19.0s
VSU Vasula 122.72 32 *e*P **PKiKP** 04 04 17.8 +0.3
SFJD Kangerlussuaq 122.80 351 PKP **PKiKP** 04 04 17.6 +0.1
comp=Z,63nm,1.2s,baz=173,slow=2.5,SNR=19
SFJD Kangerlussuaq 122.80 351 *i* P **PKPdf** 04 04 16.4 -0.8
KUDL Kundal 122.87 87 *e*P **PKPdf** 04 04 17.8 -0.8
MSO Missoula 122.91 306 PKiKP **PKPdf** 04 04 18.4 +0.1
baz=138
BMO Blue Mountains 123.05 302 IAMs_20 IAMs_20 04 59 40.9
comp=Z,3μm,19.0s
SOEG Soedalen 123.19 0 *e*P **PKPdf** 04 04 17.4 -0.5
SONA Sohna 123.29 88 *e*P **PKPdf** 04 04 18.5 -0.9
OBN Obninsk 123.36 40 ||P **PKPdf** 04 04 18.2 -0.4
OBN Obninsk 123.36 40 PKP **PKPdf** 04 04 18.7 +0.1
comp=Z,4.2nm,0.7s,baz=185,slow=1.9,SNR=14
OBN SKP 04 07 51.5
comp=Z,3.0nm,0.4s,baz=65,slow=4.9,SNR=6.2
OBN Obninsk 123.36 40 **PKiKP** 04 04 19.0 +0.1
OBN IAMs_20 IAMs_20 04 55 21.1
comp=Z,2μm,21.0s
OBN Obninsk 123.36 40 *ce*PKIKP **PKPdf** 04 04 18.4 -0.2
OBN *e*PPP PPP 04 08 43.3
OBN *e* 04 11 12.6
OBN *e*SS SS 04 23 12.5 +27
OBN pmax pmax
comp=Z,78nm,1.6s
RAF Rauma 123.42 28 *e*P **PKiKP** 04 04 19.2 +0.4
KBL Kabul 123.45 76 **PKiKP** 04 04 20.3 +0.2
KBL Kabul 123.45 76 PKIKP **PKiKP** 04 04 20.3 +0.2
SPMM Sapulut 123.45 141 P **PKPdf** 04 04 20.0 -0.3
YBH Yreka Blue Hor 123.46 296 PKP **PKPdf** 04 04 19.5 0.0
comp=Z,46nm,1.2s,baz=134,slow=4.1,SNR=20
MEF Metsahovi 123.48 30 *e*P **PKiKP** 04 04 19.1 +0.1
JCC Jacoby Creek, 123.48 295 IAMs_20 IAMs_20 04 51 44.4
comp=Z,3μm,19.0s
AYAN Aya Nagar 123.49 87 *e*P **PKPdf** 04 04 17.3 -2.5
L04D Klamath Falls 123.61 297 PKiKP **PKPdf** 04 04 19.6 -0.2
baz=137
K04D Chiloquin, OR 123.62 298 PKiKP **PKiKP** 04 04 20.2 +0.2
baz=137
ALBI Allahabad 123.74 94 *e*P **PKPdf** 04 04 19.6 -0.8
J05D Fort Rock, OR 123.84 298 PKiKP **PKiKP** 04 04 21.8 +1.3
baz=137
NSS Namsos 124.11 21 *e*P **PKPdf** 04 04 19.5 -0.3
NSS IVmB_BB 04 04 27.7
comp=Z,468nm,2.6s
NSS IVMs_BB IVMs_BB 04 54 30.2
comp=Z,1μm,20.5s
L02F Cave Junction 124.19 296 PKiKP **PKiKP** 04 04 21.3 +0.3
baz=136
ICESG Greenland Ices 124.21 357 *i* P **PKPdf** 04 04 18.4 -1.9
MOS Moscow 124.22 40 *i* PKIKP **PKPdf** 04 04 19.4 -0.9
MOS *e* 04 06 04.9
MOS *e* 04 11 18.7
MOS *e*PS **PS** 04 16 03.4 -0.9
MOS pmax pmax
comp=Z,47nm,1.3s
J04D Umpqua Nationa 124.25 298 IAMs_20 IAMs_20 04 53 43.8
comp=Z,2μm,18.0s
J04D Umpqua Nationa 124.25 298 PKiKP **PKiKP** 04 04 21.4 0.0
baz=136
KKM Kota Kinabalu 124.60 140 IAMs_20 IAMs_20 04 50 04.1
comp=Z,3μm,22.0s
MYLDM Lahad Datu 124.61 143 IAMs_20 IAMs_20 04 51 12.1
comp=Z,3μm,21.0s
K02D Willamette Mer 124.65 296 PKiKP **PKiKP** 04 04 22.8 +0.8
baz=136
I05D Terrebonne, OR 124.66 299 PKiKP **PKiKP** 04 04 22.7 +0.7
baz=136
DBO Dodson Butte 124.74 297 PKPdf **PKPdf** 04 04 22.0 +0.1
I04A Tendick Farm, 124.80 298 PKiKP **PKPdf** 04 04 21.8 -0.1
baz=136
BOK Bokaro 124.88 98 *i* P **PKPdf** 04 04 21.0 -1.7
BOK *i* x **PP** 04 06 09.0 -2.2
FINES FINESS Array B 124.96 30 PKP **PKPdf** 04 04 21.3 -0.2
comp=Z,25nm,0.8s,baz=132,slow=2.8,SNR=81
FINES SKP 04 07 55.0
comp=Z,14nm,1.1s,baz=150,slow=4.2,SNR=6.4
ILULI Ilulissat 125.01 352 IAMs_20 IAMs_20 04 55 23.7
comp=Z,2μm,19.0s
ILULI Ilulissat 125.01 352 *i* P **PKPdf** 04 04 21.4 0.0
J01E Myrtle Point 125.12 297 IAMs_20 IAMs_20 05 03 44.8
comp=Z,2μm,20.0s
J01E Myrtle Point 125.12 297 PKiKP **PKiKP** 04 04 23.5 +0.7
baz=136
NIL Nilore 125.15 80 **PKiKP** 04 04 23.0 -0.2
NIL Nilore 125.15 80 IAMs_20 IAMs_20 04 57 25.1
comp=Z,3μm,20.0s
NIL Nilore 125.15 80 PKIKP **PKiKP** 04 04 23.0 -0.2
NIL MLR MLR
comp=Z,3μm,20.0s
I03D Drain, OR 125.21 297 PKiKP **PKiKP** 04 04 23.2 +0.2
baz=136
BHK Bhakra 125.29 84 *e*P **PKPdf** 04 04 23.3 +0.1
G05D Wamic, OR 125.29 300 PKiKP **PKiKP** 04 04 23.3 +0.1
baz=136
JMU Jammu 125.39 82 *e*P **PKPdf** 04 04 19.3 -4.0
JMU *i* x PP 04 06 22.6 +8.0
DDI Dehra Dun 125.41 87 *i* P **PKPdf** 04 04 23.6 0.0
NEW Newport 125.43 305 PKiKP **PKPdf** 04 04 22.3 -0.7
baz=136
H04D Lebanon 125.49 299 PKiKP **PKiKP** 04 04 23.6 +0.1
baz=136
SMLA Simla 125.50 85 *e*P **PKPdf** 04 04 23.6 0.0
THN Thein Dam 125.64 83⇑ *i*P **PKPdf** 04 04 23.8 0.0
THN *i* x **PP** 04 06 22.6 +6.3
SCO Scoresbysund 125.67 4 IAMs_20 IAMs_20 04 57 23.5
comp=Z,2μm,18.0s
SCO Scoresbysund 125.67 4 *e*P **PKiKP** 04 04 24.4 +1.4
BELG Belogornoye 125.69 48 PKP **PKiKP** 04 04 23.4 -0.2
comp=Z,42nm,1.0s,baz=180,slow=1.0,SNR=15
I02E Swisshome, OR 125.75 297 IAMs_20 IAMs_20 04 56 41.5
comp=Z,2μm,19.0s
I02E Swisshome, OR 125.75 297 PKiKP **PKiKP** 04 04 24.6 +0.6
baz=135
COR Corvallis 125.81 298 **PKiKP** 04 04 24.3 +0.2
COR Corvallis 125.81 298 IAMs_20 IAMs_20 04 54 55.2
comp=Z,2μm,20.0s
COR Corvallis 125.81 298 PKiKP **PKiKP** 04 04 24.3 +0.2
LGTI Lohaghat 126.00 89 *e*P **PKPdf** 04 04 24.4 -0.1
MOR8 Moi Rana 126.06 21 *e*PKPdf **PKiKP** 04 04 24.1 +0.1
MOR8 IVmB_BB 04 04 24.6
comp=Z,669nm,4.1s
MOR8 *e*PP **PP** 04 06 20.1 +1.5
MOR8 *e*PS **PS** 04 16 23.4 +3.1
MOR8 *e*SS SS 04 23 19.6 +0.7
MOR8 IVMs_BB IVMs_BB 04 53 31.9
comp=Z,1μm,22.2s
PTH Pithoragarh 126.06 89 *e*P **PKPdf** 04 04 24.5 -0.4
PTH *i* x **PP** 04 06 19.6 +0.3
KONS Konsvik 126.08 20 *e*PKPdf **PKiKP** 04 04 24.9 +0.9
G03D McMinnville, O 126.24 299 PKiKP **PKiKP** 04 04 25.1 +0.1
baz=135
VLK Valmikinagar 126.46 94 *e*P **PKPdf** 04 04 25.4 -0.1
F04D Rainier, OR 126.72 300 PKiKP **PKiKP** 04 04 26.9 +1.0
baz=135
D05A Enumclaw 127.00 301 **PKiKP** 04 04 26.3 -0.1
JMIC Jan Mayen 127.07 9 *e*PKPdf **PKiKP** 04 04 27.7 +1.8
JMIC *e*SS SS 04 23 34.5 +3.3
DANN Dangsing 127.18 93 *e*P **PKPdf** 04 04 26.5 -0.8
comp=Z,698nm,1.1s
FAUS Fauske 127.27 21 *e*PKPdf **PKiKP** 04 04 26.1 -0.2
FAUS IVmBBB 04 04 27.5
comp=Z,569nm,1.3s
FAUS *e*PP **PP** 04 06 27.7 +1.1
FAUS *e*SKSac **SKSac** 04 11 30.5 +0.8
FAUS *e*SS **SS** 04 23 35.5 +1.6
FAUS IVMs_BB IVMs_BB 04 53 05.3
comp=Z,1μm,25.0s
DMN Daman 127.39 95 *e*P **PKPdf** 04 04 26.7 -1.0
GKN Gorkha 127.42 94 *e*P **PKPdf** 04 04 26.3 -1.3
comp=Z,506nm,1.1s
PKIN Phulchoki 127.53 95 *e*P **PKPdf** 04 04 26.8 -1.2
PKI Pulchoki 127.53 95 *e*P **PKPdf** 04 04 26.7 -1.3
comp=Z,459nm,1.2s
LOF Lofoten 127.57 20 *e*PKPdf **PKPdf** 04 04 26.4 +0.1
LOF *e*PP **PP** 04 06 29.1 +0.5
LOF *e*SKSac **SKSac** 04 11 29.7 -0.8
LOF *e*SS **SS** 04 23 36.9 -0.7
KKN Kakani 127.62 95 *e*P **PKPdf** 04 04 25.9 -2.2
SUMG Summit 127.67 357 **PKPdf** 04 04 27.0 0.0
SUMG IAMs_20 IAMs_20 04 59 48.0
comp=Z,2μm,18.0s
SUMG Summit 127.67 357 PKiKP **PKPdf** 04 04 27.0 0.0
SUMG MLR MLR
comp=Z,2μm,18.0s
SUMG Summit 127.67 357 *i* P **PKPdf** 04 04 26.0 -1.0
SUMG *i* 04 07 42.8
CMAR Chiang Mai Arr 127.72 114 PKP **PKPdf** 04 04 28.4 +0.1
comp=Z,56nm,0.9s,baz=234,slow=3.7,SNR=130
CMAR PKKP **PKKPdf** 04 14 38.0 +1.0
comp=Z,1.0nm,0.3s,baz=302,slow=2.0,SNR=5.5
CMAR SKKPbc SKKPbc 04 17 33.0 -5.2
comp=Z,1.8nm,0.4s,baz=10.0,slow=5.7,SNR=5.9
CMAR Chiang Mai Arr 127.72 114 **PKPdf** 04 04 27.7 -0.6
RAMN Ramite 127.73 97 *e*P **PKPdf** 04 04 27.7 -0.6
STEI Steigen 127.73 20 *e*PKPdf **PKPdf** 04 04 26.4 -0.2
STEI IVmB_BB 04 04 33.8
comp=Z,1μm,2.8s
STEI *e*SS SS 04 23 42.1 +2.5
CHTO Chiang Mai 128.02 114 **PKPdf** 04 04 28.8 0.0
CHTO Chiang Mai 128.02 114 IAMs_20 IAMs_20 04 49 11.0
comp=Z,3μm,22.0s
CHTO Chiang Mai 128.02 114 PKiKP **PKPdf** 04 04 28.8 0.0
JIRN Jiri 128.04 96 *e*P **PKPdf** 04 04 27.7 -1.4
GUN Gumba 128.06 95 *e*P **PKPdf** 04 04 28.1 -1.0
NLWA Neilton Lookou 128.06 300 IAMs_20 IAMs_20 04 56 38.7
comp=Z,2μm,21.0s
ODAN Odare 128.11 97 *e*P **PKPdf** 04 04 27.4 -1.6
TAS Tashkent 128.46 71 PKPdf **PKiKP** 04 04 30.3 +0.7
TAS Tashkent 128.46 71 PKIKP **PKiKP** 04 04 30.3 +0.7
TAPN Taplejung 128.67 97 *e*P **PKPdf** 04 04 28.3 -1.9
KLMR Klimovskoe 128.70 36 *e*PKIKP **PKPdf** 04 04 26.7 -2.0
KLMR *e* 04 11 32.8
KLMR pmax pmax
comp=Z,132nm,1.5s
KLMR MLR MLR
comp=Z,4μm,19.0s
KLMR Klimovskoe 128.70 36 *e*PKPdf **PKPdf** 04 04 26.7 -2.0
KLMR AMP 04 04 39.4
comp=Z,132nm,1.5s
KLMR *e*PP **PP** 04 06 31.2 -4.9
KLMR *e* 04 07 45.5
KLMR *e*SKSac **SKSac** 04 11 32.8 -1.4
KLMR *e*SKSac **SKSac** 04 11 32.8 -1.4
KLMR *e*SKKSac **SKKSac** 04 13 30.4 +0.4
KLMR *e*SKKSac **SKKSac** 04 13 30.4 +0.4
KLMR *e*PKKP **PKKPdf** 04 14 34.7 -1.8
KLMR *e*SKKPbc **SKKPbc** 04 17 35.8 -3.1
KLMR LQ LQ 04 51 19.1
KLMR LQ LQ 04 51 19.1
KLMR LR LR 04 55 55.4
KLMR AMP 04 58 13.8
comp=Z,4μm,19.1s
UPNV Upernavik 128.90 351 *e*P **PKiKP** 04 04 29.4 -0.1
UPNV *i* 04 07 46.8
AKTO Aktyubinsk 128.97 55 PKP **PKPdf** 04 04 29.6 0.0
comp=Z,33nm,1.1s,baz=200,slow=2.0,SNR=79
AKTO PP **PP** 04 06 40.6 +2.5
comp=Z,2.9nm,0.9s,baz=217,slow=7.4,SNR=3.5
AKTO SKPbc SKPbc 04 07 47.3
comp=Z,27nm,1.2s,baz=213,slow=4.2,SNR=7.2
AB31 Akbulak array 129.09 58 *i* PKIKP **PKPdf** 04 04 27.5 -2.3
ABKAR Akbulak array 129.09 58 PKPdf **PKiKP** 04 04 30.4 -0.1
IUG luzhnay 129.42 70*c* *i*PKIKP **PKPdf** 04 04 31.0 +0.1
IUG *e* 04 06 43.6
IUG luzhnay 129.42 70⇑ *i*PKP **PKPdf** 04 04 31.1 +0.1
baz=71
IUG *e*PP **PP** 04 06 43.6 +2.3
baz=71
DBG Daneborg 129.56 4 *i* P **PKPdf** 04 04 29.4 -0.6
DBG *i* 04 07 50.7
SHL Shillong 129.64 102 *e*P **PKPdf** 04 04 31.0 -1.0
TRO Tromso 129.90 21 *e*P **PKPdf** 04 04 30.7 0.0
TRO IVmB_BB 04 04 37.7
comp=Z,1μm,2.6s
TRO *e*SKSac **SKSac** 04 11 36.9 -0.3
TRO *e*PS **PS** 04 16 55.1 +1.5
TRO *e*SS **SS** 04 24 08.7 +2.4
JETT Jettan, Norway 130.14 21 *e*PKPdf **PKPdf** 04 04 31.5 +0.2
JETT IVmBBB 04 04 32.3
comp=Z,1μm,2.4s
KTK1 Kautokeino 130.31 23 *e*PKPdf **PKPdf** 04 04 31.3 -0.2
KTK1 IVmB_BB 04 04 38.5
comp=Z,2μm,2.1s
KTK1 *e*PP **PP** 04 06 46.3 -0.2
KTK1 *e*SKSac **SKSac** 04 11 37.3 -1.2
KTK1 *e* 04 16 43.5
KTK1 *e*SS **SS** 04 24 11.1 -0.3
KK31 Karatay Array 130.34 70 PKPdf **PKiKP** 04 04 33.6 +0.3
KK31 Karatay Array 130.34 70 *i* PKIKP **PKPdf** 04 04 31.9 -0.6
KKAR Karatay Array 130.34 70 PKPdf **PKPdf** 04 04 32.2 -0.2
KKAR Karatay Array 130.34 70 PKIKP **PKPdf** 04 04 32.3 -0.2
DZA Taraz 130.63 71 *i* PKIKP **PKPdf** 04 04 32.9 -0.2
DZA Taraz 130.63 71 *i* PKP **PKPdf** 04 04 32.9 -0.2
baz=71
KIRV Kirov 130.74 43 PKP **PKPdf** 04 04 33.0 +0.4
comp=Z,19nm,0.7s,baz=359,slow=1.3,SNR=28
KIRV SKPbc **SKPbc** 04 07 54.2 -0.4
comp=Z,22nm,0.8s,baz=243,slow=3.5,SNR=13
KSH Kashi 130.87 77 PKP **PKPdf** 04 04 33.6 -0.1
KSH SKS **SKSdf** 04 11 40.9 -2.4
KSH SKKS **SKKSac** 04 13 41.3 -3.5
KSH AMB AMB
comp=Z,770nm,6.2s
KSH LR LR
comp=Z,2μm,20.0s
KSH LR LR
comp=Z,2μm,20.9s
KSH LR LR
comp=Z,3μm,20.7s
PATS Pohnpei 131.01 193 PKPdf **PKiKP** 04 04 36.9 +1.4
ARA0 ARCESS Array S 131.23 23 *e*PKPdf **PKPdf** 04 04 33.5 +0.1
ARA0 IVmBBB 04 04 34.2
comp=Z,2μm,1.4s
ARA0 *e*PP **PP** 04 06 54.1 +1.7
ARA0 *e*SKSac **SKSac** 04 11 44.0 +3.0
ARA0 *e*PS **PS** 04 17 09.3 +4.0
ARA0 *e*SS **SS** 04 24 19.9 -2.8
ARCES ARCESS Array B 131.23 23 PKhKP PKPpre 04 04 17.9
comp=Z,1.8nm,0.9s,baz=207,slow=3.0,SNR=3.6
ARCES PKP **PKPdf** 04 04 33.4 0.0
comp=Z,51nm,1.0s,baz=245,slow=2.6,SNR=63
ARCES SKPbc **SKPbc** 04 07 56.0 -0.1
comp=Z,26nm,1.1s,baz=242,slow=1.9,SNR=9.4
ARCES PKKP **PKKPdf** 04 14 31.8 0.0
comp=Z,4.5nm,1.1s,baz=46,slow=2.6,SNR=4.3
PRGR Permogore 131.37 38⇑ *i*PKIKP **PKiKP** 04 04 34.3 -0.4
PRGR *e* 04 04 40.1
PRGR *e* 04 06 56.4
AML Almayashu 131.40 73 P **PKPdf** 04 04 34.2 -0.9
SNR=34
HAMF Hammerfest 131.69 22 *e*PKPdf **PKPdf** 04 04 34.5 +0.4
HAMF IVmB_BB 04 04 35.1
comp=Z,2μm,1.8s
HAMF *e*PP **PP** 04 06 57.2 +1.8
HAMF *e*SKSac **SKSac** 04 11 41.8 -0.4
HAMF *e*SS **SS** 04 24 29.3 +1.1
HAMF IVMs_BB IVMs_BB 04 56 03.0
comp=Z,962nm,25.3s
KEV Kevo 131.74 23 **PKPdf** 04 04 34.5 +0.3
KEV IAMs_20 IAMs_20 05 00 00.0
comp=Z,3μm,20.0s
KEV Kevo 131.74 23 PKIKP **PKPdf** 04 04 34.5 +0.3
KEV MLR MLR
comp=Z,3μm,20.0s
EKS2 Erkin-Say 131.81 72 P **PKiKP** 04 04 36.1 -0.3
SNR=18
EKS2 Erkin-Say 131.81 72 P **SKPbc** 04 07 59.3 0.0
SNR=5.1
DAG Danmarks Havn 132.06 4 *i* P **PKPdf** 04 04 34.4 -0.3
DAG *i* 04 07 58.7
AAK Ala-Archa 132.18 73 P **PKPdf** 04 04 36.6 +0.4
SNR=18
AAK Ala-Archa 132.18 73 PKPdf **PKiKP** 04 04 38.1 +0.9
AAK Ala-Archa 132.18 73 *i* PKIKP **PKPdf** 04 04 34.8 -1.4
AAK MLR MLR
comp=Z,3μm,20.0s
LVZ Lovozero 132.26 28 **PKiKP** 04 04 36.1 -0.3
LVZ IAMs_20 IAMs_20 05 02 50.3
comp=Z,2μm,20.0s
LVZ Lovozero 132.26 28 ⇑PKIKP **PKPdf** 04 04 35.2 -0.2
LSA Lhasa 132.41 98 **PKPdf** 04 04 36.0 -1.4
LSA IAMs_20 IAMs_20 04 58 46.0
comp=Z,2μm,20.0s
LSA Lhasa 132.41 98 PKP **PKPdf** 04 04 36.9 -0.5
LSA Lhasa 132.41 98 PKIKP **PKPdf** 04 04 36.0 -1.4
KBK Karagaybulak 132.44 73 P **PKiKP** 04 04 37.3 -0.5
SNR=9.4
KBK Karagaybulak 132.44 73 P **SKPbc** 04 08 01.6 +0.1
SNR=11
CHMS Chumysh 132.56 73 P **PKPdf** 04 04 36.8 +0.1
SNR=10
CHMS Chumysh 132.56 73 P **SKPbc** 04 08 01.5 -0.3
SNR=21
USP Ospenovka 132.60 72 P **PKPdf** 04 04 36.9 +0.1
SNR=18
USP Ospenovka 132.60 72 P **SKPbc** 04 08 01.6 -0.4
SNR=20
SGDS Sogindy 132.80 72*c* *i*PKIKP **PKPdf** 04 04 36.9 -0.2
SGDS Sogindy 132.80 72⇑ *i*PKP **PKPdf** 04 04 37.0 -0.2
baz=72
ULHL Ulahol 132.88 75 P **PKiKP** 04 04 38.5 -0.2
SNR=7.1
ULHL Ulahol 132.88 75 P **SKPbc** 04 08 03.1 0.0
SNR=12
TKM2 Tokmak 2 132.97 73 P **PKPdf** 04 04 37.6 -0.2
SNR=16
TKM2 Tokmak 2 132.97 73 P **SKPbc** 04 08 02.9 -0.6
SNR=9.4
ARU Arti 133.13 50 PKP **PKPdf** 04 04 35.8 -1.4
comp=Z,50nm,1.1s,baz=220,slow=2.0,SNR=51
ARU PP **PP** 04 07 06.3 +1.4
comp=Z,5.3nm,0.7s,baz=237,slow=7.7,SNR=5.1
ARU SKPbc **SKPbc** 04 08 02.0 -1.2
comp=Z,6.3nm,0.7s,baz=196,slow=5.1,SNR=4.8
ARU Arti 133.13 50 PKPdf **PKiKP** 04 04 38.3 -0.1
ARU IAMs_20 IAMs_20 05 07 33.7
comp=Z,3μm,19.0s
ARU Arti 133.13 50 *i* PKIKP **PKPdf** 04 04 37.5 +0.2
ARU SP SP 04 17 17.5 -1.2
ARU MLR MLR
comp=Z,3μm,21.0s
BTLS Baital 133.53 70*c* *i*PKIKP **PKPdf** 04 04 38.3 -0.1
BTLS *e* 04 07 09.1
BTLS Baital 133.53 70⇑ *i*PKP **PKPdf** 04 04 38.3 -0.1
baz=70
BTLS *e*PP **PP** 04 07 09.2 +1.5

baz=70
QIZ Qiongzhong 133.60 126 PKP PKPdf 04 04 38.8 -0.6
QIZ PP **PP** **04 07 05.3 -2.5**
QIZ PKS **PKSdf** **04 08 10.6 -5.3**
QIZ AMB AMB
comp=Z,430nm,8.8s
QIZ LR LR
comp=Z,2μm,22.3s
QIZ LR LR
comp=Z,1μm,21.5s
QIZ LR LR
comp=Z,3μm,20.7s
TULEG Thule 133.68 349 *e*P **PKPdf 04 04 30.4 -7.3**
BJO1 Bjornoya 133.85 17 *e*PKPdf **PKPdf 04 04 37.6 -0.5**
BJO1 *e*SKPdf **SKPbc 04 08 05.8 +0.8**
BJO1 *e*SS **SS** **04 24 58.9 +4.6**
AAA Alma-Ata 133.89 74 *i* PKIKP **PKPdf 04 04 39.3 +0.1**
AAA *i* 04 07 11.2
AAA Alma-Ata 133.89 74 *i* PKP **PKPdf 04 04 39.3 +0.1**
baz=74
AAA *i* PP **PP** **04 07 11.3 +1.2**
baz=74
YKA Yellowknife Ar 133.92 320 SKPbc **SKPbc 04 08 04.5 -1.1**
comp=Z,18nm,1.0s,baz=132,slow=2.6,SNR=10
MDOK Medeo 133.93 74 *i* PKIKP **PKPdf 04 04 39.3 -0.1**
MDOK Medeo 133.93 74 *i* PKP **PKPdf 04 04 39.3 -0.1**
baz=74
MDOK LR LR 05 07 21.0
comp=Z,777nm,16.0s,baz=74
KUU Kurty 134.02 73*c* *i*PKIKP **PKPdf 04 04 38.8 -0.6**
KUU Kurty 134.02 73⇑*i*PKP **PKPdf 04 04 38.8 -0.6**
baz=73
KUU LR LR 05 06 04.2
comp=Z,1μm,17.4s,baz=73
ZHN Zhinishke 134.70 75 *e*PKIKP **PKPdf 04 04 40.4 -0.4**
ZHN Zhinishke 134.70 75 *e*PKP **PKPdf 04 04 40.5 -0.4**
baz=75
UZB Uzynbulak 135.01 75 *e*PKIKP **PKPdf 04 04 41.1 -0.3**
UZB Uzynbulak 135.01 75 *e*PKP **PKPdf 04 04 41.2 -0.3**
baz=76
KPKS Kokpek 135.03 75*c* *i*PKIKP **PKPdf 04 04 40.8 -0.6**
KPKS *i* 04 07 19.5
KPKS Kokpek 135.03 75⇑*i*PKP **PKPdf 04 04 40.9 -0.6**
baz=75
KPKS *i* PP **PP** **04 07 19.5 +2.2**
baz=75
ARXS Arharly 135.04 74 *e*PKHKP PKPpre 04 04 26.9
KMI Kunming 135.19 113 ⇑PKP **PKPdf** **04 04 41.9 -0.6**
KMI sPKP 04 04 49.4
KMI PP **PP** **04 07 19.9 +1.6**
KMI PKS PKSdf 04 08 11.1 -8.0
KMI SKKS 04 14 09.3
KMI SS **SS** **04 25 09.6 -2.1**
KMI AMB AMB
comp=Z,760nm,5.6s
KMI LR LR
comp=Z,2μm,22.8s
KMI LR LR
comp=Z,670nm,17.5s
KMI LR LR
comp=Z,3μm,29.0s
SHLS Shalkode 135.26 76*c* *i*PKIKP **PKPdf 04 04 42.0 +0.1**
SHLS Shalkode 135.26 76⇑*i*PKP **PKPdf 04 04 42.1 +0.1**
baz=76
HSPB Hornsund (broa 135.33 14 *e*PKPdf **PKiKP 04 04 42.8 +0.5**
HSPB *e*PP PP 04 07 33.8 +15
HSPB *e*SS SS 04 25 40.1 +28
PZH PanZhiHua 135.78 111 PKP **PKPdf 04 04 41.9 -1.5**
PZH PP **PP** **04 07 22.8 +0.9**
PZH SKS **SKSdf** **04 11 53.3 +0.7**
PZH SKKS **SKKSac** **04 14 10.6 -4.5**
PZH SS **SS** **04 25 16.5 -2.1**
PZH AMB AMB
comp=Z,1μm,5.7s
PZH LR LR
comp=Z,1μm,19.0s
PZH LR LR
comp=Z,1μm,18.4s
PZH LR LR
comp=Z,2μm,24.5s
BRZS Berezniki 135.91 64*c* *i*PKIKP **PKPdf 04 04 42.5 -0.2**
BRZS Berezniki 135.91 64⇑*i*PKP **PKPdf 04 04 42.6 -0.2**
baz=64
H02S1 DAWSON INLET TI 136.01 302 PKP **PKPdf 04 04 43.4 +0.7**
SNR=18
FLDN Fort Liard 136.03 314 PKiKP **PKiKP 04 04 43.5 -0.7**
baz=125
RES Resolute Bay 136.24 340 PKP **PKPdf 04 04 43.1 +0.6**
comp=Z,36nm,1.0s,baz=64,slow=0.9,SNR=15
RES Resolute Bay 136.24 340 PKPdf 04 04 43.3 +0.7
HOPEN Hopen 136.36 17 *e*PKPdf **PKPdf 04 04 36.2 -6.6**
SPA0 Spitsbergen Ar 136.38 13 *e*P **PKPdf 04 04 43.6 +0.8**
SPA0 IVmB_BB 04 04 46.0
comp=Z,1μm,1.8s
SPA0 *e*SKPdf **SKPdf** **04 08 14.6 -1.2**
SPITS Spitsbergen Ar 136.38 13 PKP **PKPdf 04 04 43.4 +0.6**
comp=Z,55nm,1.1s,baz=219,slow=3.9,SNR=7.1
SPITS SKPbc **SKPbc** **04 08 13.7 +0.7**
comp=Z,81nm,1.3s,baz=165,slow=16,SNR=6.9
KBS Kingsbay 136.46 11 **PKiKP 04 04 44.3 -0.3**
KBS Kingsbay 136.46 11 IAMs_20 IAMs_20 04 55 58.5
comp=Z,2μm,20.0s
KBS Kingsbay 136.46 11 *i* PKIKP **PKPdf 04 04 43.7 +0.8**
KBS Kingsbay 136.46 11 *e*P **PKPdf 04 04 42.4 -0.6**
KBS *i* 04 08 13.7
KBS Kingsbay 136.46 11 *e*PKPdf **PKPdf 04 04 40.4 -2.5**
KBS *e*SKPdf **SKPab** **04 08 19.7 +0.6**
KBS *e* 04 25 14.6
BRVK Borovoye 136.54 59 PKPdf **PKPdf 04 04 44.4 +0.7**
BRVK Borovoye 136.54 59 *i* PKIKP **PKPdf 04 04 44.4 +0.7**
BRVK MLR MLR
comp=Z,3μm,24.0s
BVA0 Borovoye Array 136.57 59 *i* PKHKP PKPpre 04 04 35.8
V35K Ketchikan 136.83 305 PKiKP **PKPdf 04 04 44.8 +0.6**
baz=125
NOR Nord 136.90 3 *i* P **PKPdf 04 04 40.4 -3.3**
NOR *i* 04 08 14.7
T35M Bob Quinn 137.13 307 PKiKP **PKiKP 04 04 45.9 -0.8**
baz=124
CRAG Craig 137.62 304 PKiKP **PKPdf 04 04 46.4 +0.8**
baz=124
WRGLY Wrigley 137.67 318 PKiKP **PKPdf 04 04 45.7 +0.2**
baz=122
WRAK Wrangell Islan 137.78 306 IAMs_20 IAMs_20 05 03 31.0
comp=Z,2μm,20.0s
WRAK Wrangell Islan 137.78 306 PKiKP **PKPdf 04 04 46.5 +0.6**
baz=123
DLBC Dease Lake 137.83 309 PKPdf **PKPdf 04 04 46.5 +0.4**
DLBC Dease Lake 137.83 309 PKiKP **PKPdf 04 04 46.8 +0.7**
baz=123
T33K Petersburg 138.28 306 PKiKP **PKPdf 04 04 47.3 +0.5**
baz=123
GYA Guiyang 138.31 116 ⇑PKP **PKPdf 04 04 47.3 -0.8**
GYA PP **PP** **04 07 38.4 +0.7**
GYA SKKS 04 14 26.0
GYA SS **SS** **04 25 47.9 -0.7**
GYA AMB AMB
comp=Z,540nm,7.5s
GYA LR LR
comp=Z,920nm,19.5s
GYA LR LR
comp=Z,920nm,19.5s
GYA LR LR
comp=Z,2μm,18.7s
TGTN Hyland Airport 138.70 314 PKiKP **PKPdf 04 04 48.5 +0.9**
baz=121
R33M Jennings River 138.75 310 PKiKP **PKPdf 04 04 48.6 +0.8**
baz=121
MAKZ Makanchi 138.94 73 PKPdf **PKPdf 04 04 48.1 -0.4**
MAKZ IAMs_20 IAMs_20 05 05 19.6
comp=Z,3μm,22.0s
MAKZ Makanchi 138.94 73 PKiKP **PKPdf 04 04 48.1 -0.4**
MAKZ MLR MLR
comp=Z,3μm,22.0s
MK31 Makanchi Array 139.11 73 PKPdf **PKPdf 04 04 48.4 -0.4**
MK31 Makanchi Array 139.11 73 PKiKP **PKPdf 04 04 48.4 -0.4**
MKAR Makanchi Array 139.11 73 PKhKP PKPpre 04 04 40.5
comp=Z,14nm,1.0s,baz=250,slow=2.5,SNR=46
MKAR PKP **PKPdf** **04 04 49.3 +0.5**
comp=Z,20nm,1.0s,baz=232,slow=2.0,SNR=13
MKAR PP **PP** **04 07 44.7 +2.0**
comp=Z,2.6nm,0.8s,baz=232,slow=7.1,SNR=3.5
MKAR SKPbc **SKPbc** **04 08 20.4 -1.4**
comp=Z,28nm,1.2s,baz=264,slow=1.2,SNR=6.8
KURBB Kurchatov Arra 139.33 66 PKhKP PKPpre 04 04 41.4
KURBB PP **PP** **04 07 43.9 -0.1**
comp=Z,2.4nm,0.2s,baz=238,slow=6.4,SNR=7.4
KURBB SKPbc **SKPbc** **04 08 21.9 -0.4**
comp=Z,18nm,1.0s,baz=242,slow=3.6,SNR=11
KURBB Kurchatov Arra 139.33 66 PKHKP PKPpre 04 04 40.8
KURK Kurchatov 139.43 66 PKPdf **PKPdf** **04 04 49.2 +0.1**
KURK Kurchatov 139.43 66 PKIKP **PKPdf** **04 04 49.2 +0.1**
KURK MLR MLR
comp=Z,4μm,20.0s
SIT Sitka 139.51 305 PKiKP **PKPdf 04 04 49.2 +0.2**
baz=121
P33M Teslin, Yukon 139.97 310 IAMs_20 IAMs_20 05 06 05.7
comp=Z,2μm,20.0s
P33M Teslin, Yukon 139.97 310 PKiKP **PKPdf 04 04 50.1 +0.2**
baz=119
P32M Atlin 140.06 309 PKiKP **PKPdf 04 04 50.5 +0.4**
baz=119
SEM Semipalatinsk 140.11 68 *e*PKIKP **PKPdf 04 04 50.1 -0.6**
SEM Semipalatinsk 140.11 68 *e*PKP **PKPdf 04 04 50.2 -0.6**
baz=68
WMQ Urumqi 140.29 81 *e*PKP **PKPdf 04 04 46.4 -4.7**
WMQ PP **PP** **04 07 52.4 +2.3**
WMQ PKS **PKSdf** **04 08 29.1 +2.1**
WMQ SKKS 04 14 41.8
WMQ AMB AMB
comp=Z,1μm,4.9s
WMQ LR LR
comp=Z,1μm,17.7s
WMQ LR LR
comp=Z,1μm,17.1s
WMQ LR LR
comp=Z,2μm,18.1s
CD2 Chengdu 140.33 109 PKP **PKPdf 04 04 43.8 -7.7**
CD2 PP **PP** **04 07 47.8 -2.4**
CD2 SKKS 04 14 36.0
CD2 SS **SS** **04 26 09.3 -3.1**
CD2 AMB AMB
comp=Z,990nm,6.3s
CD2 LR LR
comp=Z,1μm,24.5s
CD2 LR LR
comp=Z,1μm,22.6s
CD2 LR LR
comp=Z,2μm,22.6s
MMPY Sheldon Lake, 140.46 314 PKiKP **PKPdf 04 04 50.8 0.0**
baz=118
N32M Quiet Lake 140.54 312 PKiKP **PKPdf 04 04 51.4 +0.5**
baz=118
SKAG Skagway 140.72 308 PKiKP **PKPdf 04 04 51.7 +0.5**
baz=119
C36M Paulatuk 140.83 326 **PKPdf 04 04 51.8 +0.8**
C36M IAMs_20 IAMs_20 05 08 28.3
comp=Z,2μm,18.0s
C36M Paulatuk 140.83 326 PKiKP **PKPdf 04 04 50.5 -0.6**
baz=115
ZSN Zaisan 140.91 74*c* *i*PKIKP **PKPdf 04 04 51.6 -0.4**
ZSN Zaisan 140.91 74⇑*i*PKP **PKPdf 04 04 51.7 -0.4**
baz=74
WHY Whitehorse 141.08 310 PKiKP **PKPdf 04 04 52.0 0.0**
baz=118
FARO Faro, Yukon 141.15 313 PKiKP **PKPdf 04 04 52.0 0.0**
baz=117
PLBC Pleasant Camp 141.18 308 PKiKP **PKPdf 04 04 52.4 +0.3**
baz=118
M31M Drury Creek, Y 141.57 313 IAMs_20 IAMs_20 05 08 51.8
comp=Z,3μm,19.0s
M31M Drury Creek, Y 141.57 313 PKiKP **PKPdf 04 04 52.2 -0.5**
baz=116
O30N Mendenhall 141.66 310 PKiKP **PKPdf 04 04 53.6 +0.7**
baz=117
P30M Million Dollar 141.75 309 PKiKP **PKPdf 04 04 54.1 +0.9**
baz=117
TWG Pinlang 141.78 137 **PKPdf 04 04 54.4 +0.1**
P29M Windy Craggy 141.88 308 IAMs_20 IAMs_20 05 10 24.0
comp=Z,2μm,20.0s
TPUB Ta-pu 142.04 136 IAMs_20 IAMs_20 05 15 29.8
comp=Z,2μm,20.0s
KNMB Chin-men Tao 142.15 132 IAMs_20 IAMs_20 05 13 18.2
comp=Z,2μm,20.0s
A36M Sachs Harbour 142.24 330 IAMs_20 IAMs_20 05 08 43.1
comp=Z,2μm,19.0s
YULB Yu-li 142.38 137 IAMs_20 IAMs_20 05 11 19.9
comp=Z,2μm,20.0s
SSLB Suanglung 142.60 136 IAMs_20 IAMs_20 05 08 12.8
comp=Z,2μm,20.0s
QZH Quanzhou 142.66 132 *i* PKP **PKPdf 04 04 49.8 -6.0**
QZH PP **PP** **04 08 03.4 -0.5**
QZH SS SS 04 26 37.4 -1.4
QZH LR LR
comp=Z,1μm,18.5s
QZH LR LR
comp=Z,490nm,18.5s
QZH LR LR
comp=Z,2μm,18.0s
M30M Minto, Yukon 142.75 312 IAMs_20 IAMs_20 05 07 32.8
comp=Z,2μm,21.0s
ENH Enshi 142.85 116 PKPdf **PKPdf 04 04 52.8 -3.2**
ENH IAMs_20 IAMs_20 05 07 06.0
comp=Z,2μm,20.0s
CNSH ChangSha 142.86 122 ⇑PKP **PKPdf 04 04 48.3 -7.8**
CNSH AMB AMB
comp=Z,460nm,14.2s
CNSH LR LR
comp=Z,2μm,20.8s
CNSH LR LR
comp=Z,2μm,21.6s
CNSH LR LR
comp=Z,3μm,20.9s
BCPM Bancas Point 142.88 307 IAMs_20 IAMs_20 05 22 29.6
comp=Z,2μm,18.0s
NACB Ninganchiao 143.20 137 IAMs_20 IAMs_20 05 02 07.7
comp=Z,2μm,20.0s
MIDW Midway 143.37 237 PKPdf PKPbc 04 04 54.9 +0.7
MIDW IAMs_20 IAMs_20 05 04 06.9
comp=Z,2μm,19.0s
YHNB Yeheng 143.56 136 IAMs_20 IAMs_20 05 12 54.2
comp=Z,2μm,20.0s
DGZ Jazzator, Alta 143.59 73*c* *i*PKIKP PKPbc 04 04 54.2 -0.2
DGZ MLR MLR
comp=Z,4μm,20.0s
INK Inuvik 143.61 322 PKP PKPbc 04 04 53.8 +0.1
comp=Z,211nm,1.1s,baz=100,slow=4.3,SNR=112
TABL Table Mountain 143.77 308 IAMs_20 IAMs_20 05 06 01.1
comp=Z,2μm,20.0s
LOGN Logan Glacier 143.87 308 IAMs_20 IAMs_20 05 11 53.5
comp=Z,2μm,20.0s
TATO Taipei 143.88 136 IAMs_20 IAMs_20 05 14 02.4
comp=Z,2μm,20.0s
YAH Yahtse 144.01 307 IAMs_20 IAMs_20 05 05 56.5
comp=Z,2μm,20.0s
MESA MESA 144.03 307 IAMs_20 IAMs_20 05 07 16.9
comp=Z,2μm,20.0s
J29M Klondike Camp 144.06 315 IAMs_20 IAMs_20 05 09 15.5
comp=Z,3μm,21.0s
CTGM Chitina Glacie 144.07 308 IAMs_20 IAMs_20 05 11 06.0
comp=Z,2μm,20.0s
EPYK Eagle Plains 144.13 318 PKPdf PKPbc 04 04 56.2 +0.9
LZH Lanzhou 144.27 104 ⇑PKP PKPbc 04 04 57.1 +0.2
LZH PP **PP** **04 08 17.0 +2.8**
LZH SS SS 04 26 58.8 +0.4
LZH AMB AMB
comp=Z,760nm,4.8s
LZH LR LR
comp=Z,990nm,19.6s
LZH LR LR
comp=Z,650nm,19.9s
LZH LR LR
comp=Z,2μm,19.2s
GTA Gaotai 144.34 96 ⇑PKP PKPbc 04 04 57.1 +0.2
GTA PP **PP** **04 08 13.3 -1.3**
GTA SKKS 04 15 02.8
GTA SS **SS** **04 26 59.5 +0.3**
GTA AMB AMB
comp=Z,560nm,6.5s
GTA LR LR
comp=Z,1μm,22.9s
GTA LR LR
comp=Z,2μm,21.1s
GTA LR LR
comp=Z,2μm,23.3s
ZAA0 Zalesovo Array 144.36 65 PKPbc 04 04 56.3 0.0
ZALV Zalesovo Beam 144.36 65 PKP PKPbc 04 04 56.3 -0.1
comp=Z,48nm,0.7s,baz=249,slow=4.1,SNR=195
ZALV PP **PP** **04 08 14.0 -0.5**
comp=Z,3.6nm,0.8s,baz=257,slow=5.8,SNR=3.0
ISLE Juniper Island 144.38 308 IAMs_20 IAMs_20 05 05 30.1
comp=Z,2μm,22.0s
I29M Ogilvie Camp, 144.41 316 IAMs_20 IAMs_20 05 14 21.7
comp=Z,2μm,18.0s
SNH Sunshine Point 144.44 307 IAMs_20 IAMs_20 05 09 43.7
comp=Z,2μm,19.0s
WAX Waxell Ridge 144.55 307 IAMs_20 IAMs_20 05 05 07.7
comp=Z,2μm,22.0s
BGLC Bering Glacier 144.62 306 PKPbc **PKPdf** **04 04 58.0 0.0**
baz=113
TGL Tana Glacier 144.66 308 IAMs_20 IAMs_20 05 07 37.5
comp=Z,2μm,22.0s
M27K Edge Creek, AK 144.84 311 IAMs_20 IAMs_20 05 08 55.2
comp=Z,2μm,21.0s
M27K Edge Creek, AK 144.84 311 PKPbc **PKPab** **04 04 57.8 0.0**
baz=111
BERG Berg Lake 144.92 307 IAMs_20 IAMs_20 05 16 49.4
comp=Z,2μm,19.0s
MCARA McCarthy VSAT 144.99 309 IAMs_20 IAMs_20 05 08 34.2
comp=Z,3μm,21.0s
MCARA McCarthy VSAT 144.99 309 PKPbc **PKPab** **04 04 58.4 +0.2**
baz=112
BCAR Beaver Creek A 145.05 312 **PKPdf** **04 04 58.8 -0.1**
KAIM Kayak Island 145.07 306 IAMs_20 IAMs_20 05 12 54.3
comp=Z,3μm,19.0s
KAIM Kayak Island 145.07 306 PKPbc **PKPdf** **04 04 59.3 +0.4**
baz=113
L27K Beaver Creek, 145.07 312 IAMs_20 IAMs_20 05 14 05.3
comp=Z,2μm,19.0s
L27K Beaver Creek, 145.07 312 PKPbc **PKPdf** **04 04 59.0 +0.1**
baz=110
M26K Nabesna, AK 145.34 310 IAMs_20 IAMs_20 05 07 18.5
comp=Z,3μm,21.0s
M26K Nabesna, AK 145.34 310 PKPbc **PKPdf** **04 04 59.4 0.0**
baz=110
EGAK Eagle 145.36 315 PKPbc **PKPab** **04 04 59.5 +0.1**
EGAK IAMs_20 IAMs_20 05 07 18.9
comp=Z,2μm,21.0s
EGAK Eagle 145.36 315 PKPbc **PKPdf** **04 04 59.3 0.0**
baz=108
GLB Gilahina Butte 145.36 308 IAMs_20 IAMs_20 05 08 46.1
comp=Z,2μm,22.0s
K27K Chicken 145.50 313 PKPbc **PKPab** **04 05 00.7 +0.7**
baz=109
WHN Wuhan 145.51 122 ⇑PKPbc **PKPdf** **04 04 59.8 -0.8**
WHN PP **PP** **04 08 24.8 +3.7**
WHN AMB AMB
comp=Z,2μm,4.5s
WHN LR LR
comp=Z,1μm,16.3s
WHN LR LR
comp=Z,4μm,21.5s
WHN LR LR
comp=Z,5μm,22.7s
XAN Xi'an 145.51 112 ⇑PKPbc **PKPdf** **04 04 59.8 -0.8**
XAN PP **PP** **04 08 25.3 +3.9**
XAN SKKS 04 15 05.9
XAN SS **SS** **04 27 10.8 -1.4**
XAN AMB AMB
comp=Z,840nm,8.6s
XAN LR LR
comp=Z,1μm,21.0s
XAN LR LR
comp=Z,810nm,20.3s
XAN LR LR
comp=Z,2μm,20.3s
BMRM Bremner River 145.55 307 PKPbc **PKPab** **04 05 00.7 +0.3**
baz=111
L26K Log Cabin Wild 145.71 311 IAMs_20 IAMs_20 05 07 01.2
comp=Z,3μm,21.0s
L26K Log Cabin Wild 145.71 311 PKPbc **PKPab** **04 05 00.8 0.0**
baz=109
N25K Chitina, Valde 145.77 308 IAMs_20 IAMs_20 05 10 01.9
comp=Z,2μm,21.0s
N25K Chitina, Valde 145.77 308 PKPbc **PKPab** **04 05 01.4 +0.3**
baz=110
Q23K Middleton Isla 145.78 304 IAMs_20 IAMs_20 05 12 41.1
comp=Z,2μm,20.0s
Q23K Middleton Isla 145.78 304 PKPbc **PKPab** **04 05 01.4 +0.3**
baz=112
I27K Kandik River 145.80 316 PKPbc **PKPab** **04 05 01.4 +0.3**
baz=107
EYAK Cordova Ski Ar 145.92 306 PKPbc **PKPab** **04 05 02.0 +0.4**
baz=111
H27K Steamboat Moun 145.94 317 PKPbc **PKPab** **04 05 01.8 +0.2**
baz=106
G27K Doyon Strip 146.15 318 PKPbc **PKPab** **04 05 02.4 0.0**
baz=105
HIN Hinchinbrook I 146.21 306 IAMs_20 IAMs_20 05 07 13.6
comp=Z,3μm,21.0s
J26L Joseph Creek 146.26 314 IAMs_20 IAMs_20 05 08 11.8
comp=Z,2μm,21.0s
J26L Joseph Creek 146.26 314 PKPbc **PKPab** **04 05 02.9 -0.1**
baz=107
SCRK Sand Creek 146.28 313 IAMs_20 IAMs_20 05 10 41.4
comp=Z,3μm,20.0s
SCRK Sand Creek 146.28 313 PKPbc **PKPab** **04 05 02.9 -0.2**
baz=108
HARP HAARP 146.29 310 PKPbc **PKPab** **04 05 02.8 -0.3**
baz=109
FID Port Fidalgo 146.33 306 IAMs_20 IAMs_20 05 15 01.8
comp=Z,2μm,19.0s
I26K Coal Creek Min 146.33 315 IAMs_20 IAMs_20 05 12 52.3
comp=Z,2μm,19.0s
I26K Coal Creek Min 146.33 315 PKPbc **PKPab** **04 05 02.7 -0.4**
baz=106
KLU Klutina 146.33 308 PKPbc **PKPab** **04 05 03.4 +0.1**
KLU IAMs_20 IAMs_20 05 11 54.6
comp=Z,2μm,20.0s
KLU Klutina 146.33 308 PKPbc **PKPab** **04 05 03.2 -0.1**
baz=110
E27K Coleen River 146.47 320 PKPbc **PKPab** **04 05 03.3 -0.3**
baz=103
P23K Montague Islan 146.49 305 PKPbc **PKPbc** **04 05 03.2 +0.4**
baz=111
RIDG Independent Ri 146.57 312 IAMs_20 IAMs_20 05 08 52.1
comp=Z,3μm,21.0s
RIDG Independent Ri 146.57 312 PKPbc **PKPab** **04 05 04.0 -0.2**
baz=107
PAX Paxson 146.61 311 PKPbc **PKPbc** **04 05 03.7 +0.5**
baz=108
M24K Tolsona, Glenn 146.65 309 PKPbc **PKPab** **04 05 04.5 0.0**
baz=109
GLI Glacier Island 146.66 306 IAMs_20 IAMs_20 05 14 19.3
comp=Z,2μm,19.0s
GLI Glacier Island 146.66 306 PKPbc **PKPab** **04 05 03.9 -0.6**
baz=110
K24K Donnelly Dome 146.99 312 PKPbc **PKPbc** **04 05 04.9 +0.7**
baz=107
G26K Porcupine Rive 147.00 318 PKPbc **PKPbc** **04 05 04.7 +0.7**
baz=103
J25K Salcha River, 147.04 313 IAMs_20 IAMs_20 05 11 24.4
comp=Z,2μm,20.0s
J25K Salcha River, 147.04 313 PKPbc **PKPbc** **04 05 05.0 +0.6**
baz=106
SCM Sheep Creek Mo 147.07 308 IAMs_20 IAMs_20 05 10 55.4
comp=Z,2μm,22.0s
SCM Sheep Creek Mo 147.07 308 PKPbc **PKPab** **04 05 05.5 -0.7**
baz=108
PWL Port Wells 147.22 306 IAMs_20 IAMs_20 05 14 47.2
comp=Z,2μm,20.0s
PWL Port Wells 147.22 306 PKPbc **PKPbc** **04 05 05.5 +0.6**
baz=109
M23K Glacier View 147.24 308 PKPbc **PKPab** **04 05 05.9 -0.9**
baz=108
F26K Sheenjek River 147.30 319 PKPbc **PKPab** **04 05 06.1 -0.8**
baz=102
PRP Porcupine Dome 147.34 315 IAMs_20 IAMs_20 05 15 57.2
comp=Z,2μm,19.0s
PRP Porcupine Dome 147.34 315 PKPbc **PKPbc** **04 05 05.9 +0.7**
baz=104
BMAR Burnt Mountain 147.41 319 PKPdf **PKPdf** **04 05 01.8 -0.9**
BMAR PKPbc **PKPab** **04 05 06.3 -1.0**
KNK Knik Glacier 147.46 307 IAMs_20 IAMs_20 05 09 55.4
comp=Z,3μm,22.0s
KNK Knik Glacier 147.46 307 PKPbc **PKPbc** **04 05 06.3 +0.7**
baz=108
FYU Fort Yukon 147.47 317 IAMs_20 IAMs_20 05 14 30.6
comp=Z,2μm,19.0s
DHY Denali Highway 147.47 310 IAMs_20 IAMs_20 05 11 42.8
comp=Z,2μm,19.0s
DHY Denali Highway 147.47 310 PKPbc **PKPbc** **04 05 06.7 +1.0**
baz=106
WAT6 Susitna Watana 147.49 309 PKPbc **PKPbc** **04 05 06.4 +0.6**
baz=107
SEW Seward 147.49 304 PKPbc **PKPbc** **04 05 06.3 +0.8**
baz=110
C27K Jago River 147.50 323 PKPbc **PKPbc** **04 05 06.3 +0.9**
baz=99
SML Sawmill 147.52 308 PKPbc **PKPbc** **04 05 06.5 +0.7**

baz=108
H25K Birch Creek 147.63 316 PKPbc **PKPbc** **04 05 06.8 +0.9**
baz=103
HDA Harding Lake 147.65 313 IAMs_20 IAMs_20 05 11 33.4
comp=Z,2µm,20.0s
HDA Harding Lake 147.65 313 PKPbc **PKPbc** **04 05 06.2 +0.2**
baz=105
ILAR Eielson Array 147.72 313 PKPbc **PKPbc** **04 05 06.3 +0.2**
comp=Z,612nm,1.1s,baz=121,slow=1.1,SNR=236
ILAR PP **PP** **04 08 32.6 -1.5**
comp=Z,13nm,1.2s,baz=112,slow=4.0,SNR=3.4
O22K Cooper Landing 147.74 305 PKPbc **PKPbc** **04 05 07.0 +0.8**
baz=109
LYN LuoYang 147.77 115⇑*i*PKPbc **PKPdf** **04 05 03.0 -1.3**
LYN SKS **SKSdf** **04 12 11.3 +0.4**
LYN SS **SS** **04 27 39.8 +2.2**
LYN AMB AMB
comp=Z,640nm,9.7s
LYN LR LR
comp=Z,2µm,22.7s
LYN LR LR
comp=Z,1µm,22.7s
LYN LR LR
comp=Z,3µm,23.5s
GHO Glory Hole Cre 147.78 308 IAMs_20 IAMs_20 05 14 48.9
comp=Z,2µm,19.0s
PMR Palmer 147.82 307 PKPbc **PKPbc** **04 05 07.1 +0.7**
baz=108
F25K Christian Rive 147.84 319 PKPbc **PKiKP** **04 05 07.5 -0.8**
baz=101
E25K Arctic Village 147.91 320 PKPbc **PKiKP** **04 05 07.5 -0.9**
baz=100
WAT1 Susitna Watana 147.92 310 PKPbc **PKPbc** **04 05 07.2 +0.4**
baz=106
RC01 Rabbit Creek A 147.94 306 IAMs_20 IAMs_20 05 14 19.3
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 147.94 306 PKPbc **PKPbc** **04 05 07.7 +0.8**
baz=108
C26K Camden Bay 147.96 323 PKPbc **PKiKP** **04 05 07.8 -0.6**
baz=98
BRSE Bradley Lake S 147.98 303 PKPbc **PKPbc** **04 05 07.6 +0.7**
baz=109
POKR Poker Plat Res 148.02 314 PKPbc **PKPbc** **04 05 07.2 +0.3**
baz=103
CCB Clear Creek Bu 148.07 313 IAMs_20 IAMs_20 05 15 48.5
comp=Z,2µm,19.0s
COLA College 148.14 313 **PKPdf** **04 05 02.3 -1.6**
COLA College 148.14 313 IAMs_20 IAMs_20 05 14 12.5
comp=Z,2µm,18.0s
COLA College 148.14 313 PKHKP PKPpre 04 05 02.3
COLA MLR MLR
comp=Z,2µm,18.0s
COLA College 148.14 313 PKPbc **PKPbc** **04 05 07.5 +0.3**
baz=103
TCOL CIGO, UAF Yank 148.14 313 IAMs_20 IAMs_20 05 14 11.5
comp=Z,2µm,18.0s
TCOL CIGO, UAF Yank 148.14 313 PKPbc **PKPbc** **04 05 07.4 +0.2**
baz=103
WRH Wood River Hil 148.14 313 IAMs_20 IAMs_20 05 08 57.5
comp=Z,2µm,22.0s
FIS Fire Island 148.18 306 IAMs_20 IAMs_20 05 14 35.6
comp=Z,3µm,20.0s
KDAK Kodiak Island 148.20 299 **PKPdf** **04 05 02.7 -1.5**
KDAK Kodiak Island 148.20 299 PKHKP PKPpre 04 05 02.7
KDAK Kodiak Island 148.20 299 PKPbc **PKPbc** **04 05 08.2 +0.7**
baz=111
RND Reindeer 148.20 311 IAMs_20 IAMs_20 05 15 31.2
comp=Z,2µm,19.0s
M22K Willow 148.32 307 IAMs_20 IAMs_20 05 09 09.1
comp=Z,2µm,20.0s
M22K Willow 148.32 307 PKPbc **PKiKP** **04 05 08.5 -0.8**
baz=107
MDM Murphy Dome 148.32 314 IAMs_20 IAMs_20 05 14 43.1
comp=Z,2µm,19.0s
MCK McKinley 148.32 311 IAMs_20 IAMs_20 05 09 58.3
comp=Z,2µm,22.0s
MCK McKinley 148.32 311 PKPbc **PKPbc** **04 05 08.3 +0.5**
baz=104
OHAK Old Harbor 148.34 298 PKPbc **PKPbc** **04 05 08.6 +0.7**
baz=112
H24K Noodor Dome 148.36 315 IAMs_20 IAMs_20 05 14 15.2
comp=Z,2µm,19.0s
H24K Noodor Dome 148.36 315 PKPbc **PKPbc** **04 05 08.4 +0.5**
baz=102
G24K Hadwenzic Riv 148.37 317 PKPbc **PKiKP** **04 05 08.8 -0.6**
baz=101
D25K Kavik River 148.38 322 PKPbc **PKPbc** **04 05 08.2 +0.4**
baz=98
HOM Homer 148.38 303 IAMs_20 IAMs_20 05 14 01.1
comp=Z,2µm,20.0s
HOM Homer 148.38 303 PKPbc **PKiKP** **04 05 08.9 -0.6**
baz=109
Q20K Shuyak Island 148.40 301 PKPbc **PKiKP** **04 05 09.0 -0.6**
baz=110
CAPN Captain Cook N 148.50 305 IAMs_20 IAMs_20 05 17 05.1
comp=Z,2µm,19.0s
CAPN Captain Cook N 148.50 305 PKPbc **PKiKP** **04 05 09.9 +0.2**
baz=108
SII Sitkinak Islan 148.55 296 IAMs_20 IAMs_20 05 05 28.5
comp=Z,2µm,19.0s
SII Sitkinak Islan 148.55 296 PKPbc **PKPbc** **04 05 09.2 +0.6**
baz=112
CUT Chulitna 148.56 308 IAMs_20 IAMs_20 05 19 17.6
comp=Z,2µm,18.0s
CUT Chulitna 148.56 308 PKPbc **PKiKP** **04 05 09.2 -0.7**
baz=106
NEA2 Nenana 148.59 313 IAMs_20 IAMs_20 05 09 07.2
comp=Z,2µm,22.0s
NEA2 Nenana 148.59 313 PKPbc **PKPbc** **04 05 08.7 +0.3**
baz=103
BWN Browne 148.66 312 IAMs_20 IAMs_20 05 15 06.2
comp=Z,2µm,21.0s
F24K Squaw Lake 148.68 318 PKPbc **PKiKP** **04 05 09.7 -0.4**
baz=99
TRF Thorofare Moun 148.84 310 PKPbc **PKPbc** **04 05 09.9 +0.6**
baz=104
NJ2 Nanjing 148.89 126⇑*i*PKPbc **PKPdf** **04 05 05.4 -0.8**
NJ2 PKPab **sPKPdf** **04 05 15.9 -0.4**
NJ2 PP **PP** **04 08 42.6 +1.6**
NJ2 SKKS 04 15 25.5
NJ2 SS **SS** **04 27 55.6 +5.7**
NJ2 AMB AMB
comp=Z,700nm,6.7s
NJ2 LR LR
comp=Z,2µm,20.6s
NJ2 LR LR
comp=Z,910nm,18.8s
NJ2 LR LR
comp=Z,3µm,19.8s
E24K Your Creek 148.98 319 PKPbc **PKiKP** **04 05 10.2 -0.4**
baz=98
O20K Slope Mountain 148.99 303 PKPbc **PKPbc** **04 05 10.0 +0.3**
baz=108
CHIR Chirikof Islan 149.01 295 PKPbc **PKPbc** **04 05 10.3 +0.6**
baz=113
SKT Skwentna 149.02 307 PKPbc **PKPbc** **04 05 10.1 +0.5**
baz=105
H23K Yukon River 149.03 315 IAMs_20 IAMs_20 05 16 45.0
comp=Z,2µm,18.0s
H23K Yukon River 149.03 315 PKPbc **PKPbc** **04 05 10.1 +0.5**
baz=101
Q19K Cape Douglas, 149.12 301 IAMs_20 IAMs_20 05 13 56.4
comp=Z,2µm,21.0s
Q19K Cape Douglas, 149.12 301 PKPbc **PKPbc** **04 05 10.3 +0.3**
baz=109
SPCR Spurr Chakacha 149.12 306 PKPbc **PKPbc** **04 05 10.2 +0.2**
baz=106
SSE Sheshan 149.13 130 PKPbc **PKPdf** **04 05 05.3 -1.3**
SSE PP **PP** **04 08 43.0 +0.7**
SSE SS SS 04 27 54.0 +1.6
SSE AMB AMB
comp=Z,360nm,5.8s
SSE LR LR
comp=Z,930nm,19.9s
SSE LR LR
comp=Z,760nm,20.3s
P19K Oil Pt 149.15 302 IAMs_20 IAMs_20 05 14 06.2
comp=Z,2µm,21.0s
P19K Oil Pt 149.15 302 PKPbc **PKPbc** **04 05 10.3 +0.3**
baz=108
D24K Happy Valley 149.23 321 PKPbc **PKiKP** **04 05 10.5 -0.5**
baz=96
C24K Franklin Bluff 149.24 323 PKPbc **PKiKP** **04 05 10.7 -0.3**
baz=95
BPAW Bear Paw Mtn. 149.29 311 IAMs_20 IAMs_20 05 10 11.9
comp=Z,2µm,21.0s
BPAW Bear Paw Mtn. 149.29 311 PKPbc **PKPbc** **04 05 10.7 +0.5**
baz=102

G23K Bananza Creek 149.37 317 PKPbc **PKiKP** **04 05 11.8 +0.3**
baz=99
MLY Manley 149.38 313 PKPbc **PKPbc** **04 05 10.3 -0.2**
baz=101
TOLK Toolik Lake Re 149.45 320 IAMs_20 IAMs_20 05 13 50.9
comp=Z,2µm,20.0s
TOLK Toolik Lake Re 149.45 320 PKPbc **PKiKP** **04 05 11.3 -0.3**
baz=96
PPLA Purkeypile 149.55 309 PKPbc **PKiKP** **04 05 11.6 -0.5**
baz=104
CAST Castle Rocks 149.62 310 IAMs_20 IAMs_20 05 10 51.6
comp=Z,3µm,21.0s
CAST Castle Rocks 149.62 310 PKPbc **PKPbc** **04 05 11.2 +0.1**
baz=103
M20K Styx River 149.73 307 IAMs_20 IAMs_20 05 10 13.3
comp=Z,2µm,22.0s
M20K Styx River 149.73 307 PKPbc **PKPbc** **04 05 11.6 +0.2**
baz=104
H22K Ishtalitna Cre 149.79 315 PKPbc **PKiKP** **04 05 12.3 -0.1**
baz=99
CHUM Lake Minchumin 149.82 311 PKPbc **PKPbc** **04 05 11.9 +0.4**
baz=102
O19K Port Alsworth 149.83 303 IAMs_20 IAMs_20 05 16 07.3
comp=Z,2µm,21.0s
O19K Port Alsworth 149.83 303 PKPbc **PKPbc** **04 05 11.6 0.0**
baz=106
D23K Nanushuk River 149.88 321 PKPbc **PKiKP** **04 05 12.7 +0.3**
baz=94
C23K Itkillik River 149.91 323 PKPbc **PKiKP** **04 05 12.7 +0.2**
baz=93
I21K Tanana 149.92 313 IAMs_20 IAMs_20 05 07 53.4
comp=Z,2µm,21.0s
I21K Tanana 149.92 313 PKPbc **PKPbc** **04 05 12.1 +0.4**
baz=100
G22K Bettles 149.99 317 PKPbc **PKiKP** **04 05 13.0 +0.3**
baz=97
NRIK Noril'sk 150.02 38 PKPbc **PKiKP** **04 05 12.3 -0.3**
comp=Z,58nm,1.0s,baz=213,slow=0.5,SNR=28
NRIK Noril'sk 150.02 38 **PKPdf** **04 05 07.3 +0.5**
NRIK Noril'sk 150.02 38 PKIKP **PKPdf** **04 05 07.3 +0.5**
P18K Big Mountain, 150.04 301 IAMs_20 IAMs_20 05 13 35.6
comp=Z,2µm,20.0s
P18K Big Mountain, 150.04 301 PKPbc **PKPbc** **04 05 12.4 +0.2**
baz=107
R17K Ugashik Creek 150.06 298 PKPbc **PKiKP** **04 05 13.0 -0.1**
baz=110
N19K Bonanza Creek 150.08 304 PKPbc **PKPbc** **04 05 12.2 -0.2**
baz=105
TIY Taiyuan 150.15 111 *e*PKPbc **PKPdf** **04 05 07.4 -0.8**
TIY PP **PP** **04 08 46.1 -2.5**
TIY SKKS 04 15 33.0
TIY SS **SS** **04 28 01.8 -2.7**
TIY AMB AMB
comp=Z,730nm,6.3s
TIY LR LR
comp=Z,1µm,17.4s
TIY LR LR
comp=Z,790nm,17.7s
TIY LR LR
comp=Z,2µm,21.1s
L20K Farewell, AK 150.21 308 PKPbc **PKPbc** **04 05 12.6 +0.1**
baz=103
E22K Anaktuvuk Pass 150.23 319 PKPbc **PKiKP** **04 05 13.2 -0.1**
baz=95
F22K John River 150.31 318 PKPbc **PKiKP** **04 05 13.7 +0.3**
baz=96
M19K Big River Lodg 150.31 306 IAMs_20 IAMs_20 05 09 56.9
comp=Z,2µm,21.0s
M19K Big River Lodg 150.31 306 PKPbc **PKPbc** **04 05 13.1 +0.3**
baz=104
H21K Melozitna Rive 150.33 314 PKPbc **PKiKP** **04 05 13.5 0.0**
baz=98
K20K Telida 150.48 309 IAMs_20 IAMs_20 05 18 56.3
comp=Z,2µm,19.0s
K20K Telida 150.48 309 PKPbc **PKPbc** **04 05 13.4 +0.3**
baz=101
Q16K King Salmon 150.53 299 PKPbc **PKiKP** **04 05 13.6 -0.4**
baz=108
P17K Kvichak River 150.57 301 PKPbc **PKPbc** **04 05 13.7 +0.3**
baz=107
L19K White Mountain 150.59 307 IAMs_20 IAMs_20 05 12 04.2
comp=Z,2µm,21.0s
L19K White Mountain 150.59 307 PKPbc **PKiKP** **04 05 13.9 -0.2**
baz=103
R16K Pilot Point 150.64 297 PKPbc **PKiKP** **04 05 14.2 0.0**
baz=109
CHGN Chignik 150.64 294 PKPbc **PKPbc** **04 05 13.3 -0.3**
baz=111
J20K Nowinta River 150.66 311 IAMs_20 IAMs_20 05 22 40.2
comp=Z,2µm,18.0s
J20K Nowinta River 150.66 311 PKPbc **PKPbc** **04 05 13.8 +0.3**
baz=100
N18K Kilae Creek 150.71 304 IAMs_20 IAMs_20 05 15 22.6
comp=Z,2µm,22.0s
N18K Kilae Creek 150.71 304 PKPbc **PKiKP** **04 05 14.1 -0.3**
baz=105
CHNA Chernabura Isl 150.72 291 PKPbc **PKPbc** **04 05 13.9 +0.1**
baz=113
G21K Allakaket 150.73 316 PKPbc **PKiKP** **04 05 14.4 +0.2**
baz=96
F21K Alatna River 150.79 317 PKPbc **PKiKP** **04 05 14.7 +0.4**
baz=95
BTO Baotou 150.90 104 *e*PKPbc **PKPdf** **04 05 08.5 -0.8**
BTO LR LR
comp=Z,3µm,19.4s
BTO LR LR
comp=Z,4µm,19.8s
O17K Koliganek Bris 151.06 302 PKPbc **PKPbc** **04 05 14.6 +0.1**
baz=106
HNS HongShan 151.12 114⇑PKPbc **PKPdf** **04 05 08.8 -0.7**
HNS PP **PP** **04 08 53.3 -0.7**
HNS SKKS 04 15 38.9
HNS SS **SS** **04 28 19.1 +4.2**
HNS AMB AMB
comp=Z,670nm,6.8s
HNS LR LR
comp=Z,660nm,18.9s
HNS LR LR
comp=Z,2µm,20.4s
HNS LR LR
comp=Z,2µm,23.3s
S14K Fog Glacier 151.23 294 PKPbc **PKiKP** **04 05 15.6 -0.1**
baz=110
TTA Tatalina 151.26 308 PKPbc **PKiKP** **04 05 16.0 +0.4**
baz=101
P16K Nushagak River 151.29 300 PKPbc **PKPbc** **04 05 14.9 -0.1**
baz=106
SDPT Sand Point 151.38 292 PKPbc **PKPbc** **04 05 15.3 -0.1**
baz=111
TIA Tai'an 151.44 119⇑PKPbc **PKPdf** **04 05 09.3 -0.8**
TIA AMB AMB
comp=Z,510nm,10.8s
TIA LR LR
comp=Z,1µm,24.5s
TIA LR LR
comp=Z,1µm,25.5s
TIA LR LR
comp=Z,3µm,24.5s
O16K Kokwok River B 151.50 301 PKPbc **PKPbc** **04 05 15.4 -0.2**
baz=105
A21K Barrow 151.88 326 IAMs_20 IAMs_20 05 17 51.1
comp=Z,2µm,20.0s
A21K Barrow 151.88 326 PKPbc **PKiKP** **04 05 16.9 +0.4**
baz=84
GCSA Galena City Sc 151.92 312 PKPbc **PKiKP** **04 05 17.7 +1.0**
baz=97
N16K Nishlik Lake 152.04 303 PKPbc **PKiKP** **04 05 18.3 +1.2**
baz=103
MOY Mondy 152.06 78 *e*PKIKP **PKPdf** **04 05 10.2 -0.5**
MOY pmax pmax
comp=Z,617nm,1.8s
ZAK Zakamensk 152.76 81 *e*PKIKP **PKPdf** **04 05 10.7 -1.0**
ZAK pmax pmax
comp=Z,51nm,1.4s
SONM Songino Array 153.26 89 PKP **PKPdf** **04 05 11.9 -0.6**
comp=Z,18nm,1.0s,baz=203,slow=2.6,SNR=90
SONM PKPbc **PKPbc** **04 05 20.0 -0.1**
comp=Z,134nm,1.0s,baz=219,slow=3.1,SNR=80
SONM Songino Array 153.26 89 **PKPdf** **04 05 11.8 -0.8**
SONM PKPbc **PKiKP** **04 05 20.6 +0.4**
ULN Ulaanbaatar 153.65 89 **PKPdf** **04 05 12.3 -0.9**
ULN Ulaanbaatar 153.65 89 PKIKP **PKPdf** **04 05 12.3 -0.9**
BJT Baijiatuau 153.82 112 **PKPdf** **04 05 12.9 -0.5**
BJT Baijiatuau 153.82 112 IAMs_20 IAMs_20 05 17 38.6
comp=Z,2µm,21.0s
BJT Baijiatuau 153.82 112 PKIKP **PKPdf** **04 05 13.0 -0.5**
BJI Beijing 153.84 112 PKPbc **PKPdf** **04 05 12.6 -0.9**

BJI pPKP **pPKPdf** **04 05 15.8 -5.2**
BJI PP **PP** **04 09 11.8 +2.3**
BJI SS SS 04 28 49.5 +4.6
BJI AMB AMB
comp=Z,750nm,7.5s
BJI LR LR
comp=Z,350nm,20.8s
BJI LR LR
comp=Z,650nm,22.1s
BJI LR LR
comp=Z,2µm,21.0s
IRK Irkutsk 154.14 78 *e*PKIKP **PKPdf** **04 05 12.5 -1.0**
IRK pmax pmax
comp=Z,357nm,1.9s
RDOG Red Dog Mine 154.39 319 IAMs_20 IAMs_20 05 23 31.4
comp=Z,2µm,21.0s
ANM Nome 155.56 311 IAMs_20 IAMs_20 05 29 31.5
comp=Z,2µm,20.0s
DL2 Dalian 155.77 121 PKP **PKPdf** **04 05 14.9 -1.3**
DL2 PP **PP** **04 09 22.0 +1.8**
DL2 SS SS 04 29 06.4 +0.8
DL2 AMB AMB
comp=Z,680nm,5.8s
DL2 LR LR
comp=Z,1µm,19.8s
DL2 LR LR
comp=Z,690nm,20.0s
DL2 LR LR
comp=Z,2µm,22.5s
XLT XiLinHaoTe 156.44 105⇑*i*PKP **PKPdf** **04 05 16.8 -0.2**
XLT PKPab **PKPab** **04 05 45.9 +0.1**
XLT PP **PP** **04 09 26.1 +1.9**
XLT SKKS 04 16 09.0
XLT SS **SS** **04 29 11.4 -2.0**
XLT AMB AMB
comp=Z,710nm,8.8s
XLT LR LR
comp=Z,2µm,20.4s
XLT LR LR
comp=Z,2µm,21.6s
INCN Inchon 156.92 132 **PKPdf** **04 05 16.6 -1.2**
INCN Inchon 156.92 132 PKIKP **PKPdf** **04 05 16.6 -1.2**
HJU Haeju 156.99 129 PKPbc **PKPdf** **04 05 16.8 -1.0**
HJU PP **PP** **04 09 28.9 +2.2**
HJU AmB
comp=Z,0.7nm,0.1s
HJU AMS AMS
comp=N,315nm,2.5s
HJU AMS AMS
comp=E,370nm,2.9s
HJU AMS AMS
comp=Z,367nm,2.9s
KSAR Wonju Array Be 157.41 134 **PKPdf** **04 05 17.3 -1.0**
KSAR PKPab **PKPab** **04 05 50.1 +0.2**
KSAR Wonju Array Be 157.41 134 PKIKP **PKPdf** **04 05 17.3 -1.0**
KSRS Korea Array 157.44 134 PKP **PKPdf** **04 05 17.4 -0.9**
comp=Z,13nm,1.0s,baz=207,slow=1.5,SNR=52
KSRS PKPab **PKPab** **04 05 49.6 -0.4**
comp=Z,21nm,0.9s,baz=215,slow=4.8,SNR=17
KSRS PP **PP** **04 09 28.2 -0.9**
comp=Z,2.3nm,1.1s,baz=184,slow=1.9,SNR=3.2
KSRS SKKPbc 04 15 40.4
comp=Z,3.3nm,1.0s,baz=40,slow=2.1,SNR=3.4
SUJ Sinuiju 158.09 124 PKPbc **PKPdf** **04 05 18.1 -1.0**
SUJ PP **PP** **04 09 37.4 +4.6**
SUJ AmB
comp=Z,4.2nm,0.3s
SUJ AMS AMS
comp=N,9µm,9.3s
SUJ AMS AMS
comp=E,2µm,2.0s
SUJ AMS AMS
comp=Z,14µm,15.6s
SNY Shenyang 158.96 120⇑PKP **PKPdf** **04 05 19.0 -1.1**
SNY SKKS 04 16 21.1
SNY SS **SS** **04 29 39.3 -0.5**
SNY AMB AMB
comp=Z,1µm,8.8s
SNY LR LR
comp=Z,1µm,19.7s
SNY LR LR
comp=Z,1µm,18.5s
SNY LR LR
comp=Z,2µm,21.3s
ADK Adak 159.06 275 **PKPdf** **04 05 19.2 -0.6**
ADK **PKPab** **04 05 56.3 -0.5**
ADK Adak 159.06 275 PKP2 **PKPab** **04 05 56.3 -0.5**
ADK 05 05 19.2
CIT Chita 159.29 85 *e*PKIKP **PKPdf** **04 05 19.8 -0.4**
CIT *e* 04 05 25.8
CIT pmax pmax
comp=Z,807nm,1.8s
HHU Hamhung 159.34 129 PKPbc **PKPdf** **04 05 19.3 -1.3**
HHU PP **PP** **04 09 39.1 -0.5**
HHU AMS AMS
comp=N,526nm,2.0s
HHU AMS AMS
comp=E,526nm,2.0s
HHU AMS AMS
comp=Z,2µm,8.6s
MAJO Matsushiro 160.01 156 IAMs_20 IAMs_20 05 16 36.8
comp=Z,2µm,20.0s
MJAR Matsushiro Arr 160.01 156 PKP **PKPdf** **04 05 20.4 -1.1**
comp=Z,0.7nm,0.3s,baz=32,slow=33,SNR=14
MJAR PKPab **PKPab** **04 06 00.0 -1.3**
comp=Z,10nm,1.0s,baz=179,slow=5.7,SNR=6.7
MJAR PP **PP** **04 09 40.9 -2.1**
comp=Z,2.5nm,0.9s,baz=184,slow=6.7,SNR=4.2
BOD Bodaibo 161.06 68 *e*PKIKP **PKPdf** **04 05 19.7 -2.2**
BOD pmax pmax
comp=Z,159nm,1.5s
CN2 Changchun 161.34 119 *e*PKP **PKPdf** **04 05 20.8 -1.9**
CN2 *e*PP **PP** **04 09 51.5 +0.9**
CN2 SKS **SKSdf** **04 12 24.4 -1.2**
CN2 SKKS **SKKSac** **04 16 38.5 +1.9**
CN2 *e*SS **SS** **04 30 05.8 +0.9**
CN2 AMB AMB
comp=Z,630nm,6.5s
CN2 LR LR
comp=Z,1µm,20.0s
CN2 LR LR
comp=Z,1µm,20.0s
CN2 LR LR
comp=Z,3µm,21.0s
HIA Hailar 161.61 97 **PKPdf** **04 05 22.6 -0.2**
HIA **PKPab** **04 06 08.9 +0.8**
HIA Hailar 161.61 97 PKIKP **PKPdf** **04 05 22.6 -0.2**
TIXI Tiksi 161.61 19 PP **PP** **04 09 50.4 -1.1**
comp=Z,4.8nm,0.6s,baz=88,slow=22,SNR=3.0
BNX BinXian 163.70 117⇑PKP **PKPdf** **04 05 22.6 -2.3**
BNX PP **PP** **04 10 01.6 -1.6**
BNX AMB AMB
comp=Z,680nm,6.8s
BNX LR LR
comp=Z,1µm,20.1s
BNX LR LR
comp=Z,1µm,23.2s
BNX LR LR
comp=Z,2µm,21.7s
MDJ Mudanjiang 163.97 124 **PKPdf** **04 05 24.5 -0.8**
MDJ PKPab **PKPab** **04 06 18.0 -0.4**
BILL Bilibino 164.73 334*d*/*i*PKIKP **PKPdf** **04 05 21.0 -4.2**
BILL *i* 04 10 05.3
BILL *e*SS SS 04 30 34.5 -4.5
BILL pmax pmax
comp=Z,58nm,1.3s
USRK Ussuriysk Ar. 164.74 130 PKP **PKPdf** **04 05 25.0 -0.9**
comp=Z,5.0nm,1.0s,baz=236,slow=2.1,SNR=12
USRK PKPab **PKPab** **04 06 20.4 -1.4**
comp=Z,12nm,1.1s,baz=207,slow=3.8,SNR=6.7
USRK PP **PP** **04 10 04.7 -3.7**
comp=Z,3.4nm,1.0s,baz=201,slow=1.6,SNR=4.3
USRK Ussuriysk Ar. 164.74 130 **PKPdf** **04 05 24.4 -1.6**
USRK **PKPab** **04 06 20.4 -1.4**
TEY Ternei 167.31 139‖*e*PKIKP **PKPdf** **04 05 27.2 -0.7**
TEY pmax pmax
comp=Z,20nm,1.3s
TEY pmax pmax
comp=Z,200nm,5.6s
ZEA Zeya 167.69 89 *i* PKIKP **PKPdf** **04 05 27.0 -0.9**
ZEA *e* 04 06 35.4
ZEA *e* 04 10 26.9
ZEA *e* 04 31 06.9
ZEA pmax pmax
comp=N,20nm,1.2s

ZEA				pmax	pmax			
	comp=Z,30nm,1.2s							
ZEA				pmax	pmax			
	comp=N,200nm,9.2s							
ZEA				pmax	pmax			
	comp=Z,600nm,5.0s							
ZEA				pmax	pmax			
	comp=E,100nm,4.0s							
ZEA				pmax	pmax			
	comp=N,200nm,6.2s							
ZEA				pmax	pmax			
	comp=Z,500nm,5.4s							
KLR	**Kul'dur**	**168.21**	**114**	PKP	**PKPdf**	**04 05 27.8**	**-0.7**	
	comp=Z,33nm,1.1s,baz=303,slow=1.6,SNR=61							
KLR				PKPab	**PKPab**	**04 06 36.1**	**-0.9**	
	comp=Z,42nm,1.0s,baz=266,slow=4.8,SNR=16							
YAK	**Yakutsk**	**168.23**	**47**	PKP	**PKPdf**	**04 05 26.1**	**-1.9**	
	baz=352,slow=1.9							
YAK				PKPab	**PKPab**	**04 06 37.2**	**+0.4**	
	comp=Z,13nm,0.4s,baz=295,slow=1.6,SNR=1.7							
YAK	**Yakutsk**	**168.23**	**47**	*c i* PKIKP	**PKPdf**	**04 05 25.7**	**-2.3**	
YAK				*e*		04 10 23.6		
YAK				*e* PPP	PPP	04 14 24.0		
YAK				pmax	pmax			
	comp=Z,79nm,1.3s							
YAK				pmax	pmax			
	comp=N,13nm,1.1s							
YAK				pmax	pmax			
	comp=E,13nm,1.4s							
YAK				pmax	pmax			
	comp=Z,643nm,2.9s							
YAK				pmax	pmax			
	comp=N,120nm,2.8s							
YAK				pmax	pmax			
	comp=E,259nm,3.2s							
YSS	**Yuzh-Sakhalins**	**170.96**	**155**		**PKPdf**	**04 05 29.1**	**-1.1**	
YSS	**Yuzh-Sakhalins**	**170.96**	**155**	*α i* PKIKP	**PKPdf**	**04 05 30.0**	**-0.1**	
YSS				*e*		04 06 47.2		
YSS				*e*		04 10 35.0		
YSS				*e*SS	SS	04 31 43.0	+1.5	
YSS				pmax	pmax			
	comp=Z,100nm,1.5s							
YSS				pmax	pmax			
	comp=Z,2μm,3.8s							
GRNR	**Gornyy**	**171.54**	**118**	*e* PKIKP	**PKPdf**	**04 05 30.0**	**-0.4**	
GRNR				*e*		04 06 49.8		
SEY	**Seymchan**	**172.06**	**346**	PKPab	**PKPab**	**04 06 54.5**	**+0.8**	
	comp=Z,10nm,1.0s,baz=80,slow=3.5,SNR=5.3							
UGL	**Uglegorsk**	**172.70**	**146**	*e* PKIKP	**PKPdf**	**04 05 27.9**	**-3.0**	
UGL				pmax	pmax			
	comp=Z,130nm,1.7s							
PET	**Petropavlovsk**	**173.50**	**254**	*i* PKIKP	**PKPdf**	**04 05 28.7**	**-2.4**	
PET				*e*		04 10 54.7		
PET				*e* PPS	PPS	04 24 55.3		
PET				*e*SS	SS	04 32 03.3	-4.3	
PET				pmax	pmax			
	comp=Z,103nm,1.4s							
PET				pmax	pmax			
	comp=Z,2μm,20.7s							
PET				pmax	pmax			
	comp=Z,4μm,20.2s							
PETK	**Petropavlovsk-**	**174.05**	**252**	PKP	**PKPdf**	**04 05 29.1**	**-2.2**	
	comp=Z,34nm,1.0s,baz=83,slow=6.1,SNR=40							
PETK				PKPab	**PKPab**	**04 07 01.7**	**-1.2**	
	comp=Z,4.1nm,0.8s,baz=258,slow=21,SNR=6.1							
PETK				PP	**PP**	**04 10 54.5**	**-1.2**	
	comp=Z,14nm,1.1s,baz=103,slow=9.4,SNR=8.5							
TYV	**Tymovskoe**	**174.41**	**140**	*e* PKIKP	**PKPdf**	**04 05 31.0**	**-0.5**	
TYV				pmax	pmax			
	comp=Z,61nm,1.7s							
TYV				pmax	pmax			
	comp=Z,2μm,5.1s							

DJA ***21*** *03:51:19.9±0.7,4°S×3°×13°1E±°, h86km±15km, M3.7/7, mb4.1/1, MLv3.6/7, Ms(BB)3.5/6*
IDC ***21*** *03:51:22.5±2.3,4.38S×130.72E, h0km, mb3.6/1, mbtmp3.5/4, ML3.4/3, MS4.1/1, Error ellipse: s-maj=89.2km s-min=27.6km az=79.0*
ISC 21 03:51:16.4±0.9,3.84S±0.06×131.30E±0.07, h29km, n10, σ2.960/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.32**	**46**	P	**Pb**	**03 51 39.3**	**-1.2**
FAKI				S	**Sn**	**03 51 55.3**	**-0.1**
BNDI	**Bandanaire**	**1.55**	**244**	P	Pb	03 51 51.3	+7.0
MSAI	**Masohi**	**2.41**	**282**	P	**Pb**	**03 51 57.4**	**-1.7**
SWI	**Sorong**	**2.95**	**359**	P	**Pn**	**03 52 02.3**	**+1.0**
SWI				S	**Sn**	**03 52 33.4**	**-2.4**
LBMI	**Labuha**	**4.95**	**310**	P	**Pn**	**03 52 31.8**	**+3.0**
FITZ	**Fitzroy Crossi**	**15.22**	**201**	Pn	**Pn**	**03 54 49.4**	**0.0**
	0.2nm,0.3s,baz=23,slow=9.4,SNR=17						
FITZ				Sn	**Sn**	**03 57 33.7**	**-3.4**
	0.1nm,0.3s,baz=177,slow=10.0,SNR=1.2						
	2.2nm,1.1s						
WRA	**Warramunga Arr**	**16.28**	**170**	Pn	**P**	**03 55 05.2**	**-0.7**
	0.1nm,0.3s,baz=349,slow=13,SNR=1.9						
WRA				Sn	**Sn**	**03 58 00.6**	**-2.4**
	baz=358,slow=22,SNR=1.5						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**19.88**	**173**	P	**Pn**	**03 55 51.2**	**+4.0**
	0.2nm,0.3s,baz=353,slow=12,SNR=15						
	1.5nm,0.6s						
JCJ	**Chichijima**	**32.50**	**18**	LR	LR	04 08 52.1	
	comp=Z,33nm,19.7s,baz=110,slow=32						
MKAR	**Makanchi Array**	**66.33**	**326**	P	P	04 02 13.8	+11
	0.4nm,0.7s,baz=107,slow=9.8,SNR=4.2						
	0.4nm,0.7s						

IDC ***21*** *03:51:57.5±0.9,55.03S×31.04W, h0km, mb4.2/5, mbtmp4.2/6, ML3.6/1, Error ellipse: s-maj=33.6km s-min=22.9km az=75.0*
NEIC ***21*** *03:51:58.4±0.7,55.08S±0.08×31.2W±0.2, h10km±2km, mb4.6/8, Error ellipse: s-maj=23.7km s-min=10.1km az=61.0*
ISC 21 03:51:58.6±0.8,55.1S±0.1×31.2W±0.1, h10km, n20, σ0.989/19, mb4.5/6, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.15**	**282**	Pn	**Pn**	**03 52 47.9**	**-0.3**
ORCD	**Orcadas**	**9.15**	**226**	Pn	**Pn**	**03 54 10.0**	**-0.4**
ESPZ	**Base Esperanza**	**15.49**	**227**	Pn	**Pn**	**03 55 36.6**	**-0.2**
PMSA	**Palmer Station**	**18.86**	**226**	P	**Pn**	**03 56 20.1**	**+1.1**
	0.2nm,0.3s,baz=18,slow=9.6,SNR=2.2						
	4.5nm,0.8s						
PMSA	**Palmer Station**	**18.86**	**226**	P	**Pn**	**03 56 19.8**	**+0.7**
PMSA				IAmb	IAmb	03 56 44.0	
	comp=Z,16nm,1.2s						
SNAA	**Sanae**	**20.59**	**155**	P	**P**	**03 56 37.4**	**-0.1**
	comp=Z,14nm,1.2s,baz=285,slow=12,SNR=2.8						
	comp=Z,14nm,1.2s						
SNAA	**Sanae**	**20.59**	**155**	P	**P**	**03 56 35.5**	**-2.0**
SNAA				IAmb	IAmb	03 56 41.7	
	comp=Z,14nm,1.1s						
LL04	**Puerto Octay**	**30.48**	**280**	P	**P**	**03 58 11.6**	**+0.1**
LR03	**Panguipulli**	**31.30**	**282**	P	**P**	**03 58 17.0**	**-1.8**
CPUP	**Villa Florida**	**34.47**	**316**	P	**P**	**03 58 46.2**	**-0.2**
	comp=Z,5.5nm,1.0s,baz=115,slow=14,SNR=1.5						
	comp=Z,5.5nm,1.0s						
ZON	**Zonda**	**35.33**	**296**	P	**P**	**03 58 53.5**	**-0.4**
ZON				IAmb	IAmb	03 59 07.0	
	comp=Z,32nm,1.4s						
VNDA	**Vanda**	**47.42**	**184**	P	**P**	**04 00 33.4**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=155,slow=2.8,SNR=10						
	comp=Z,0.6nm,0.3s						
LPAZ	**La Paz**	**47.95**	**309**	P	**P**	**04 00 39.5**	**+1.5**
	comp=Z,5.6nm,0.9s,baz=104,slow=4.2,SNR=8.9						
	comp=Z,5.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.42**	**34**	P	**P**	**04 03 31.1**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=197,slow=6.1,SNR=5.3						
	comp=Z,1.4nm,0.8s						
STVI	**Saint Thomas**	**78.56**	**327**	P	**P**	**04 03 59.6**	**-0.4**
STVI				IAmb	IAmb	04 04 05.6	
	comp=Z,20nm,0.9s						
FINES	**FINESS Array B**	**124.63**	**29**	PKP	**PKiKP**	**04 10 56.9**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=171,slow=3.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**144.02**	**65**	PKP	PKPbc	04 11 31.6	+0.5
	comp=Z,1.0nm,0.5s,baz=273,slow=4.0,SNR=2.6						
DIV	**Divide**	**146.22**	**307**	PKPbc	**PKPab**	**04 11 39.1**	**+0.4**
ILAR	**Eielson Array**	**147.76**	**314**	PKPbc	**PKPbc**	**04 11 42.1**	**0.0**
	comp=Z,2.2nm,0.7s,baz=118,slow=1.4,SNR=8.6						
SONM	**Songino Array**	**152.98**	**88**	PKPbc	**PKiKP**	**04 11 55.7**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=238,slow=4.3,SNR=1.3						

ROM 21 03:56:48.8±0.1,43.357N±0.003×12.758E±0.004, h13km, ML0.5/2, 3D, Error ellipse: s-maj=0.3km s-min=0.1km az=299.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOSV	**Fossato di Vic**	**0.06**	**178**	P	Pg	03 56 51.6	+0.1
FOSV				S	Sg	03 56 53.6	+0.2
SSFR	**Montelago di S**	**0.08**	**13**	P	Pg	03 56 52.2	+0.5
SSFR				S	Sg	03 56 54.2	+0.4
ATFO	**Monte Foce - G**	**0.14**	**274**	⇓P	Pg	03 56 52.8	+0.4
ATFO				S	Sg	03 56 55.3	+0.4
ATFO				AML	AML		
	comp=N,21μm,0.5s						
ATFO				AML	AML		
	comp=E,22μm,1.6s						
FRON	**Frontone**	**0.16**	**352**	P	Pg	03 56 53.1	+0.3
FRON				S	Sg	03 56 56.1	+0.7
ATCC	**AVT- Casa Cast**	**0.19**	**207**	⇓P	Pg	03 56 53.6	+0.5
ATCC				S	Sb	03 56 57.2	-0.7
ARVD	**Arcevia**	**0.20**	**43**	⇓P	Pg	03 56 53.6	+0.4
ARVD				S	Sg	03 56 57.1	+0.8
PIEI	**Pieia**	**0.24**	**318**	P	Pg	03 56 54.3	+0.3
PIEI				S	Sb	03 56 58.5	-0.9
PIEI				AML	AML		
	comp=E,24μm,0.1s						
PIEI				AML	AML		
	comp=N,23μm,0.1s						
ATVO	**AVT- Monte Val**	**0.26**	**276**	P	Pg	03 56 54.7	+0.4
ATVO				S	Sb	03 56 59.0	-0.8
NARO	**Abbazia di Nar**	**0.28**	**333**	P	Pg	03 56 55.0	+0.3
NARO				S	Sb	03 56 59.8	-0.8

IDC ***21*** *04:01:14.6±2.0,6.01S×151.78E, h0km, mb3.8/4, mbtmp3.8/4, MS4.4/1, Error ellipse: s-maj=79.0km s-min=19.0km az=116.0*
ISC 21 04:01:19.1±1.9,6.1S±0.2×151.9E±0.4, h36km, n6, σ1.949/7, mb3.7/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.79**	**4**	Pn	**Pn**	**04 01 45.8**	**-1.7**
	21nm,0.3s,baz=243,slow=9.9,SNR=2.2						
KRVT				Sn	**Sn**	**04 02 11.0**	**+1.9**
	84nm,0.3s,baz=43,slow=21,SNR=14						
WRA	**Warramunga Arr**	**21.91**	**229**	P	**P**	**04 06 10.1**	**+0.6**
	0.7nm,0.6s,baz=54,slow=10,SNR=8.5						
WRA				LR	LR	04 14 26.2	
	comp=Z,1μm,20.8s,baz=94,slow=36						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**24.58**	**223**	P	**P**	**04 06 37.0**	**+1.0**
	1.5nm,0.8s,baz=55,slow=8.7,SNR=11						
	1.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.25**	**243**	P	**P**	**04 07 08.4**	**-0.7**
	6.9nm,1.2s,baz=47,slow=6.6,SNR=2.8						
	6.9nm,1.2s						
ILAR	**Eielson Array**	**83.70**	**22**	P	**P**	**04 13 44.2**	**+0.3**
	0.7nm,0.8s,baz=246,slow=6.8,SNR=2.4						
	0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**149.82**	**286**	PKPbc	**PKPbc**	**04 21 07.0**	**+0.5**
	1.4nm,0.9s,baz=94,slow=1.2,SNR=5.2						

SNET ***21*** *04:01:24.2±1.1,13.20N×90.29W, h20km±6km, ML3.3*
GCG ***21*** *04:01:26.5±0.6,13.29N×90.46W, h50km±96km, MD3.4*
ISC 21 04:01:23.3±2.4,13.2N±0.1×90.31W±0.06, h16km±11km, n19, σ0.929/26, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.84**	**38**	*e* P	**Pg**	**04 01 40.1**	**+0.3**
CEVE	**Cerro Verde**	**0.89**	**48**	*i* P	**Pn**	**04 01 41.4**	**-0.1**
CEVE				IAML		04 01 60.0	
	comp=Z,882nm,0.4s						
SBLS	**San Blas**	**0.90**	**48**	*e* P	**Pn**	**04 01 41.4**	**-0.2**
LOAL	**Lomas de Alarc**	**0.92**	**34**	*e*S	**Sn**	**04 01 55.0**	**+0.4**
RTR	**El Retiro**	**0.92**	**44**	*e* P	**Pn**	**04 01 41.9**	**0.0**
SNJE	**San Jose**	**0.93**	**47**	*e* P	**Pn**	**04 01 41.8**	**-0.2**
JAYA	**Jayaque - finc**	**0.94**	**63**	⇓*i* P	**Pg**	**04 01 41.5**	**-0.1**
JAYA				*e*S	**Sn**	**04 01 55.3**	**+0.1**
SLOZ	**Alcaldia de Sa**	**0.94**	**33**	*e* P	**Pn**	**04 01 41.8**	**-0.2**
SLOZ				*e*S	**Sn**	**04 01 55.3**	**+0.2**
UNIC	**Universidad Ca**	**1.05**	**45**	*e* P	**Pb**	**04 01 43.2**	**0.0**
UNIC				*e*S	**Sg**	**04 01 57.6**	**+0.1**
CEDA	**San Andres**	**1.05**	**57**	*e* P	**Pn**	**04 01 43.3**	**-0.2**
CEDA				*e*S	**Sn**	**04 01 57.6**	**-0.3**
CEDA				IAML		04 02 10.7	
	comp=Z,706nm,0.4s						
PCG	**Pacaya**	**1.19**	**346**	*e* P	**Pg**	**04 01 46.5**	**+0.1**
LFRS	**El Faro**	**1.27**	**72**	*e* P	**Pn**	**04 01 46.1**	**-0.5**
FUG	**Fuego 3**	**1.31**	**337**	*e* P	**Pn**	**04 01 47.3**	**0.0**
FUG				*e*S	**Sn**	**04 02 04.3**	**-0.2**
NBG	**Las Nubes**	**1.35**	**358**	*e* P	**Pg**	**04 01 49.6**	**+0.2**
NBG				*e*S	**Sg**	**04 02 06.7**	**-0.3**
PAVA	**Las Pavas**	**1.42**	**70**	*e* P	**Pb**	**04 01 49.3**	**-0.2**
COEG	**Centro de Oper**	**1.44**	**74**	*e* P	**Pn**	**04 01 49.2**	**+0.3**
COEG				*e*S	**Sb**	**04 02 08.7**	**+0.6**
ESQI	**Esquipulas**	**1.62**	**35**	*e* P	**Pb**	**04 01 52.4**	**-0.6**
P5NO	**Presa 5 de nov**	**1.68**	**63**	*i* P	**Pn**	**04 01 52.3**	**+0.1**
STG3	**Santiaguito 3,**	**1.91**	**320**	*e* P	**Pn**	**04 01 55.7**	**+0.2**

IDC ***21*** *04:08:28.6±22.0,23.35S×177.37W, h195km±153km, mb3.3/5, mbtmp3.8/6, Error ellipse: s-maj=251.1km s-min=26.8km az=139.0*
ISC 21 04:08:28.4±1.8,23.3S±0.2×177.3W±0.2, h200km, n8, σ0.993/8, mb3.4/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.08**	**321**	P	**Pn**	**04 10 09.8**	**-0.1**
	5.0nm,0.5s,baz=138,slow=16,SNR=3.7						
CTA	**Charters Tower**	**33.99**	**268**	P	**P**	**04 14 54.4**	**+0.9**
	1.7nm,0.3s,baz=100,slow=9.3,SNR=8.2						
	1.7nm,0.3s						
ASAR	**Alice Springs**	**44.61**	**259**	P	**P**	**04 16 19.9**	**-1.3**
	0.4nm,0.5s,baz=91,slow=8.0,SNR=5.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.95**	**265**	P	**P**	**04 16 22.8**	**-1.2**
	0.5nm,0.4s,baz=96,slow=8.2,SNR=38						
	0.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**53.38**	**264**	P	**P**	**04 17 28.2**	**+0.5**
	1.4nm,0.9s,baz=105,slow=8.9,SNR=1.7						
	1.4nm,0.9s						
ILAR	**Eielson Array**	**90.90**	**13**	P	**P**	**04 21 08.7**	**-0.1**
	0.2nm,0.5s,baz=210,slow=5.9,SNR=4.4						
	0.2nm,0.5s						
AKASG	**Malin Array Be**	**145.79**	**330**	PKPbc	**PKPab**	**04 27 44.5**	**0.0**
	1.2nm,0.3s,baz=43,slow=4.7,SNR=11						
BRTR	**Keskin Array B**	**149.19**	**309**	PKPbc	**PKPbc**	**04 27 53.9**	**+0.3**
	0.2nm,0.4s,baz=20,slow=4.6,SNR=2.0						

INMG ***21*** *04:16:14.6±2.8,35.42N×4.67W, h74km±13km, ML1.6, Error ellipse: s-maj=9.6km s-min=7.4km az=13.0*
MDD ***21*** *04:16:15.4±0.5,35.40N×4.66W, h68km±10km, Mb2.5/13, Error ellipse: s-maj=3.7km s-min=3.5km az=163.0*
CNRM ***21*** *04:16:19.8,34.92N×4.17W, h41km, ml0.9*
ISC 21 04:16:12.7±1.3,35.35N±0.03×4.64W±0.04, h80km±12km, n28, σ1.995/41, 12C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.59**	**103**	P	**Pn**	**04 16 29.1**	**+1.8**
PALE				S	**Sn**	**04 16 35.5**	**-2.7**
ECEU	**Ceuta**	**0.81**	**312**	P	**Pn**	**04 16 31.2**	**+1.5**
ECEU				⇑*i* Vmb_V		04 16 31.4	
	270nm,SNR=1.9						
ECEU				S	**Sn**	**04 16 43.4**	**+1.2**
EMIJ	**Mijas**	**1.21**	**355**	P	**Pn**	**04 16 34.3**	**-0.2**
EMIJ				⇑*i* Vmb_V		04 16 34.9	
	96nm,SNR=0.8						
EMIJ				S	**Sn**	**04 16 48.2**	**-2.5**
GOG	**Mont Gurugu**	**1.35**	**95**	P	**Pn**	**04 16 37.0**	**+0.9**
GOG				S	**Sn**	**04 16 51.0**	**-2.8**
ELGU	**Los Guajares,**	**1.72**	**28**	P	**Pn**	**04 16 40.8**	**-0.2**
ELGU				⇑*i* Vmb_V		04 16 41.3	
	174nm,SNR=0.7						
ELGU				S	**Sn**	**04 17 00.5**	**-1.9**
EGOR	**Sierra Gorda,**	**1.80**	**13**	P	**Pn**	**04 16 43.6**	**+1.4**
EGOR				⇑*i* Vmb_V		04 16 45.1	
	25nm,SNR=0.2						
EGOR				S	**Sn**	**04 17 05.2**	**+0.7**
ESPR	**Espera**	**1.81**	**327**	⇑*i* Vmb_V		04 16 43.9	
	101nm,SNR=0.9						
ESPR				S	**Sn**	**04 17 05.4**	**+1.1**
EBER	**Berja**	**2.09**	**42**	P	**Pn**	**04 16 46.1**	**+0.1**
EBER				⇑*i* Vmb_V		04 16 46.5	
	93nm,SNR=0.3						
EBER				S	**Sn**	**04 17 11.3**	**-0.1**
CZD	**Col de Zad**	**2.34**	**188**	P	**Pn**	**04 16 51.5**	**+2.0**
CZD				S	**Sn**	**04 17 15.8**	**-1.7**
MD31	**MD31**	**2.48**	**182**	P	**Pn**	**04 16 53.2**	**+2.0**
MD31				S	**Sn**	**04 17 18.4**	**-2.2**
MDT	**Midelt**	**2.53**	**179**	P	**Pn**	**04 16 53.8**	**+1.9**
MDT				S	**Sn**	**04 17 19.4**	**-2.5**
EQES	**Quesada**	**2.75**	**27**	P	**Pn**	**04 16 57.8**	**+3.0**
EQES				⇑*i* Vmb_V		04 16 58.3	
	27nm,SNR=0.2						
EQES				S	**Sn**	**04 17 30.9**	**+3.8**
ECAB	**El Cabril**	**2.79**	**347**	P	**Pn**	**04 16 56.2**	**+1.0**
ECAB				⇑*i* Vmb_V		04 16 58.2	
	68nm,SNR=0.9						
ECAB				S	**Sn**	**04 17 25.6**	**-2.3**
EADA	**Adamuz**	**2.81**	**1**	P	**Pn**	**04 16 56.8**	**+1.2**
EADA				⇑*i* Vmb_V		04 16 58.3	
	50nm,SNR=0.7						
EADA				S	**Sn**	**04 17 27.5**	**-0.9**
EMIN	**Mina Concepcio**	**2.91**	**326**	⇑*i* Vmb_V		04 17 00.6	
	22nm,SNR=0.3						
EMIN				S	**Sn**	**04 17 28.9**	**-2.0**
EGRO	**El Granado**	**3.16**	**314**	⇑*i* Vmb_V		04 17 03.1	
	56nm,SNR=0.4						
EGRO				S	**Sn**	**04 17 35.3**	**-1.6**
PVAQ	**Vaqueiros**	**3.22**	**310**	*e*S	**Sn**	**04 17 37.0**	**-1.3**
PVAQ				A	A	04 17 37.2	
	2.3nm,0.2s						
PBAR	**Barrancos**	**3.41**	**326**	*e*S	**Sn**	**04 17 41.4**	**-1.6**
PBAR				A	A	04 17 42.5	
	1.0nm,0.2s						
PCVE	**Castro Verde**	**3.56**	**311**	*e*S	**Sn**	**04 17 45.6**	**-1.0**
MESJ	**Messejana**	**3.80**	**312**	*e*S	**Sn**	**04 17 51.2**	**-1.3**
EBAD	**Badajoz**	**3.89**	**331**	⇑*i* Vmb_V		04 17 12.9	
	58nm,SNR=0.7						
EBAD				S	**Sn**	**04 17 52.6**	**-2.0**
PTEO	**Sao Teotonio**	**3.96**	**305**	*e*S	**Sn**	**04 17 55.0**	**-1.2**
PNCL	**Nicolau / Gran**	**4.17**	**313**	*e*S	**Sn**	**04 17 59.5**	**-1.8**
EVO	**Evora**	**4.17**	**321**	*e*S	**Sn**	**04 18 00.1**	**-1.3**
EVO				A	A	04 18 01.0	
	1.6nm,0.1s						
PAB	**San Pablo**	**4.19**	**3**	S	**Sn**	**04 17 58.9**	**-3.2**
PESTR	**Estremoz**	**4.23**	**327**	*e*S	**Sn**	**04 18 00.7**	**-2.2**
PMRV	**Marv??o**	**4.62**	**332**	*e*S	**Sn**	**04 18 09.8**	**-2.7**
AFON	**Font Roja**	**4.65**	**44**	S	**Sn**	**04 18 12.6**	**-0.8**

IDC ***21*** *04:21:57.7±3.9,2.81S×141.26E, h0km, mb3.6/3, mbtmp3.8/4, ML4.1/1, MS4.5/1, Error ellipse: s-maj=121.2km s-min=29.1km az=94.0*
ISC 21 04:22:05.7±2.5,3.1S±0.2×140.6E±0.4, h35km, n11, σ3.959/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.86**	**199**	P	**P**	**04 26 14.0**	**+2.0**
	0.6nm,0.3s,baz=21,slow=12,SNR=45						
WRA				S	**Sn**	**04 29 26.0**	**-3.8**
	0.7nm,0.9s,baz=24,slow=20,SNR=2.8						
	2.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.93**	**223**	P	Pn	04 26 48.5	+0.3
	2.5nm,0.9s,baz=45,slow=13,SNR=6.9						
FITZ				S	**S**	**04 30 38.9**	**+1.8**
	2.2nm,1.0s,baz=292,slow=19,SNR=1.8						
	2.5nm,0.9s						
ASAR	**Alice Springs**	**21.49**	**197**	P	**P**	**04 26 53.2**	**+1.7**
	0.9nm,0.5s,baz=30,slow=11,SNR=13						
	0.9nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**33.46**	**49**	T	T	05 03 08.9	
	baz=232,slow=75,SNR=323						
H11S2	**WAKE ISLAND Hy**	**33.47**	**49**	T	T	05 03 13.0	
	baz=232,slow=75,SNR=360						
H11S1	**WAKE ISLAND Hy**	**33.48**	**49**	T	T	05 03 06.3	
	baz=232,slow=75,SNR=244						
H11N1	**WAKE ISLAND Hy**	**34.35**	**48**	T	T	05 04 20.1	
	baz=229,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**34.37**	**48**	T	T	05 04 21.5	
	baz=229,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**34.37**	**48**	T	T	05 04 21.5	
	baz=229,slow=76,SNR=13						
CMAR	**Chiang Mai Arr**	**46.23**	**299**	LR	LR	04 49 47.6	
	comp=Z,643nm,21.7s,baz=215,slow=36						
MKAR	**Makanchi Array**	**71.20**	**322**	P	**P**	**04 33 20.1**	**-1.1**
	0.9nm,0.8s,baz=101,slow=7.6,SNR=5.3						
	0.9nm,0.8s						

IDC ***21*** *04:28:57.4±0.5,55.06S×31.38W, h0km, mb4.5/19, mbtmp4.5/20, ML3.7/1, MS4.7/12, Error ellipse: s-maj=17.1km s-min=12.8km az=50.0*
NEIC ***21*** *04:28:59.4±1.4,55.09S±0.09×31.5W±0.2, h10km±1km, mb5.0/54, Error ellipse: s-maj=15.9km s-min=14.2km az=219.0*
GCMT ***21*** *04:29:05.4±0.4,54.94S±0.03×31.67W±0.05, h20km±1km, MW5.2/90, Moment Tensor Solution. s17,c20; s90,c113; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.67±.07; Mθθ-0.50±.04; Mφφ-0.16±.04; Mrθ-0.53±.08; Mθφ0.32±.02; Mφr-0.06±.07; Best double couple: M0.86300×10^17 NP1:φ≈281.00000°, δ64.00000°, λ71.00000°. NP2:φ≈138.00000°, δ32.00000°, λ123.00000°. Principal axes: T 0.9010, Plg66.0000°, Azm157.0000°; N -0.0760, Plg17.0000°, Azm289.0000°; P -0.8250, Plg17.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 04:28:58.9±0.3,55.07S±0.06×31.45W±0.07, h10km, n250, σ0.981/231, mb4.9/37, MS4.6/11, 2C-1D, South Georgia Island region

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

CPUP Villa Florida 34.38 316 P P 04 35 45.6 -0.4
comp=Z,9.8nm,0.8s,baz=156,slow=7.3,SNR=23
comp=Z,9.8nm,0.8s
CPUP Villa Florida 34.38 316 P P 04 35 44.8 -1.1
CPUP IAmb IAmb 04 35 46.4
comp=Z,18nm,0.9s
CPUP Villa Florida 34.38 316 eP P 04 35 45.5 -0.4
MT09 Talagante 34.70 291 P P 04 35 48.4 -0.5
MT09 IAmb IAmb 04 35 49.5
comp=Z,27nm,0.9s
MT01 Popeta 34.77 291 P P 04 35 48.5 -0.8
MT01 IAmb IAmb 04 35 49.4
comp=Z,36nm,1.1s
PEL Peldehue 35.02 292 P P 04 35 51.1 -0.4
VA05 Santo Domingo 35.12 291 P P 04 35 51.5 -0.8
MT02 Curacav 35.17 292 P P 04 35 52.7 -0.1
QSPA South Pole Qui 35.18 180 P P 04 35 53.3 +0.6
comp=Z,9.9nm,0.9s,baz=237,slow=1.4,SNR=16
QSPA LR LR 04 50 01.3
comp=Z,1µm,18.0s,baz=190,slow=36
comp=Z,9.9nm,0.9s
QSPA South Pole Qui 35.18 180 P P 04 35 52.7 0.0
QSPA IAmb IAmb 04 36 07.4
comp=Z,16nm,1.0s
ZON Zonda 35.22 296 P P 04 35 53.0 -0.3
ZON IAmb IAmb 04 35 55.3
comp=Z,18nm,1.0s
VA03 San Esteban 35.24 293 P P 04 35 53.3 -0.2
VA03 IAmb IAmb 04 36 04.5
comp=Z,29nm,1.0s
ROC1 El Roble 35.33 292 P P 04 35 55.4 +1.0
VA06 Catapilco 35.80 292 P P 04 35 57.3 -0.8
LCO Las Campanas 38.29 297 P P 04 36 19.4 -0.3
LCO IAmb IAmb 04 36 40.5
comp=Z,85nm,1.8s
AC02 Maricunga 39.28 300 P P 04 36 28.2 0.0
C2SB Chapadao do Su 39.73 327 eP P 04 36 31.7 +0.2
GO02 Mina Guanaco 40.90 301 P P 04 36 40.9 -0.6
GO02 IAmb IAmb 04 36 42.9
comp=Z,50nm,1.1s
BDFB Brasilia 41.38 335 P P 04 36 46.1 +0.9
comp=Z,3.1nm,0.6s,baz=137,slow=6.2,SNR=8.8
comp=Z,3.1nm,0.6s
BDFB Brasilia 41.38 335 P P 04 36 44.7 -0.5
BDFB IAmb IAmb 04 36 52.8
comp=Z,32nm,1.6s
MAW Mawson 42.36 145 P P 04 36 52.5 0.0
comp=Z,3.6nm,0.9s,baz=218,slow=13,SNR=4.1
comp=Z,3.6nm,0.9s
MAW Mawson 42.36 145 P P 04 36 52.9 +0.3
LVC Limon Verde 42.73 304 P P 04 36 57.1 +0.6
comp=Z,15nm,0.9s,baz=161,slow=6.1,SNR=9.4
comp=Z,15nm,0.9s
LVC Limon Verde 42.73 304 P P 04 36 56.6 +0.2
LVC IAmb IAmb 04 37 03.2
comp=Z,23nm,1.0s
LVC Limon Verde 42.73 304 eP P 04 36 56.7 +0.2
SUR Sutherland 42.79 80 P P 04 36 58.0 +1.3
comp=Z,4.3nm,0.9s,baz=280,slow=8.5,SNR=1.5
SUR LR LR 04 51 51.0
comp=Z,803nm,18.8s,baz=276,slow=32
comp=Z,4.3nm,0.9s
SALV Santo Antonio 43.33 325 eP P 04 37 00.9 -0.1
PB01 IPOC Station P 44.34 305 P P 04 37 09.1 -0.1
PB01 IAmb IAmb 04 37 16.1
comp=Z,34nm,1.0s
PTLB Pontes e Lacer 44.95 321 P P 04 37 13.9 -0.1
PTLB IAmb IAmb 04 37 14.7
comp=Z,17nm,0.9s
PTLB Pontes e Lacer 44.95 321 eP P 04 37 14.2 +0.2
SIV San Ignacio 45.18 318 P P 04 37 15.5 -0.4
comp=Z,4.1nm,0.9s,baz=156,slow=7.5,SNR=11
comp=Z,4.1nm,0.9s
GO01 Chusmiza 45.39 306 IAmb IAmb 04 37 19.8
comp=Z,29nm,1.0s
SBA Scott Base 46.86 185 P P 04 37 29.4 +0.9
VNDA Vanda 47.41 184 P P 04 37 33.0 +0.2
comp=Z,1.9nm,0.7s,baz=200,slow=5.0,SNR=9.3
VNDA LR LR 04 58 08.8
comp=Z,447nm,18.2s,baz=190,slow=37
comp=Z,1.9nm,0.7s
VNDA Vanda 47.41 184 P P 04 37 32.9 +0.2
VILB Vilhena 47.64 321 P P 04 37 34.1 -1.0
VILB IAmb IAmb 04 37 35.5
comp=Z,16nm,0.9s
VILB Vilhena 47.64 321 eP P 04 37 34.6 -0.6
PDRB Porto dos Gac 47.69 326 eP P 04 37 34.8 -0.8
SMTB Santa Maria do 47.84 338 eP P 04 37 37.3 +0.6
LPAZ La Paz 47.85 309 P P 04 37 38.1 +0.6
comp=Z,14nm,0.5s,baz=120,slow=5.0,SNR=103
comp=Z,14nm,0.5s
LPAZ La Paz 47.85 309 eP P 04 37 38.1 +0.6
H10S2 ASCENSION HYDR 47.89 23 T T 05 29 13.1
baz=193,slow=74
H10S3 ASCENSION HYDR 47.90 23 T T 05 29 16.7
baz=27,slow=74
CLDB Colider 48.08 327 eP P 04 37 37.7 -0.9
BOSA Boshof 48.14 81 P P 04 37 38.8 -0.3
comp=Z,3.2nm,0.9s,baz=222,slow=7.2,SNR=5.4
comp=Z,3.2nm,0.9s
BOSA Boshof 48.14 81 P P 04 37 40.2 +1.1
BOSA IAmb IAmb 04 37 49.2
comp=Z,14nm,1.2s
H10N1 ASCENSION HYDR 49.01 23 T T 05 30 38.6
baz=192,slow=75
H10N3 ASCENSION HYDR 49.01 23 T T 05 30 38.5
baz=192,slow=75
H10N2 ASCENSION HYDR 49.02 23 T T 05 30 42.0
baz=192,slow=75
RCBR Riachuelo 49.23 354 LR LR 04 55 27.4
comp=Z,572nm,19.9s,baz=58,slow=32
PRPB Parauapebas 50.94 336 eP P 04 38 01.0 +0.7
LBTB Lobatse 51.11 78 P P 04 38 01.8 +0.1
LBTB IAmb IAmb 04 38 12.2
comp=Z,19nm,1.1s
TSUM Tsumeb 51.41 66 P P 04 38 03.7 -0.3
NPGB Novo Progresso 51.57 329 eP P 04 38 06.7 +1.6
ETMB Extrema 52.82 315 IAmb IAmb 04 38 15.2
comp=Z,34nm,1.6s
ETMB Extrema 52.82 315 eP P 04 38 14.1 -0.3
ITTB Itaituba 54.22 330 eP P 04 38 22.0 -2.7
MALB Monte Alegre 56.21 332 eP P 04 38 39.5 +0.5
MACA Manacapuru-AM 56.91 324 P P 04 38 42.6 -1.4
MACA IAmb IAmb 04 38 44.5
comp=Z,32nm,0.6s
MACA Manacapuru-AM 56.91 324 eP P 04 38 43.3 -0.6
MCPB Macapa, AP 57.08 335 eP P 04 38 44.9 -0.3
CZSB Cruzeiro do Su 57.46 309 IAmb IAmb 04 38 48.4
comp=Z,16nm,0.7s
CZSB Cruzeiro do Su 57.46 309 eP P 04 38 47.9 0.0
LSZ Lusaka 60.35 73 P P 04 39 08.9 +0.7
ATAH Atahualpa 60.62 304 P P 04 39 11.3 +1.0
comp=Z,14nm,1.1s,baz=152,slow=5.0,SNR=6.4
comp=Z,14nm,1.1s
BOAV Boa Vista 62.07 327 P P 04 39 18.7 -1.0
BOAV IAmb IAmb 04 39 25.6
comp=Z,13nm,0.9s
MDP Montagnes des 62.49 336 P P 04 39 22.6 +0.2
comp=Z,5.3nm,0.9s,baz=138,slow=7.7,SNR=2.1
MDP LR LR 05 04 36.0
comp=Z,334nm,20.3s,baz=130,slow=34
comp=Z,5.3nm,0.9s
BOSC San Juan Bosco 64.15 306 IAmb IAmb 04 39 34.0
comp=Z,21nm,1.4s
DBIC Dimbokro 65.39 29 P P 04 39 41.6 +0.2
comp=Z,3.7nm,1.0s,baz=233,slow=14,SNR=1.8
comp=Z,3.7nm,1.0s
OTAV Otavalo 67.11 307 P P 04 39 53.6 +0.4
OTAV Otavalo 67.11 307 eP P 04 39 53.2 +0.1
ROSC El Rosal 69.42 314 P P 04 40 08.3 +0.9
comp=Z,2.6nm,0.3s,baz=131,slow=17,SNR=3.7
comp=Z,2.6nm,0.3s
ROSC El Rosal 69.42 314 P P 04 40 07.5 +0.1
ROSC IAmb IAmb 04 40 22.7
comp=Z,20nm,1.1s
BAUV El Baul 70.73 321 P P 04 40 14.4 -0.7
SDV Santo Domingo 71.64 319 LR LR 05 16 00.8
comp=Z,506nm,18.0s,baz=132,slow=39
SDV Santo Domingo 71.64 319 P P 04 40 21.0 +0.3
SDV IAmb IAmb 04 40 42.7
comp=Z,16nm,1.0s
SDV Santo Domingo 71.64 319 eP P 04 40 21.3 +0.6
TOA0 Torodi Ar. Sit 73.49 34 P P 04 40 32.0 +0.5
TORD Torodi Ar. Bea 73.49 34 P P 04 40 30.9 -0.6
comp=Z,2.6nm,0.8s,baz=199,slow=4.8,SNR=10.0
comp=Z,2.6nm,0.8s

TORD Torodi Ar. Bea 73.49 34 P P 04 40 31.2 -0.2
MBAR Mbarara 73.93 67 LR LR 05 09 06.4
comp=Z,661nm,18.7s,baz=318,slow=33
KMBO Kilima Mbogo 77.01 73 LR LR 05 13 35.1
comp=Z,1µm,18.1s,baz=286,slow=35
MDT Midelt 90.52 22 LR LR 05 16 39.7
comp=Z,691nm,20.3s,baz=126,slow=32
ATD Arta Tunnel 90.57 71 LR LR 05 21 28.2
comp=Z,760nm,18.2s,baz=260,slow=35
CART Cartagena 95.91 24 P P 04 42 23.3 -1.8
ESDC Sonseca Array 97.26 21 P Pdif 04 42 31.8 +0.3
comp=Z,0.4nm,0.9s,baz=340,slow=36,SNR=2.2
comp=Z,0.4nm,0.9s
ASAR Alice Springs 100.59 166 P Pdif 04 42 45.2 -1.7
comp=Z,0.5nm,0.7s,baz=182,slow=3.8,SNR=6.1
ASAR PP PP 04 46 53.0 +0.3
comp=Z,1.7nm,1.1s,baz=186,slow=7.5,SNR=3.3
TXAR Lajitas Array 104.20 301 PP PP 04 47 25.2 +4.0
comp=Z,0.2nm,0.7s,baz=158,slow=7.5,SNR=1.5
WRA Warramunga Arr 104.31 166 Pdiff Pdif 04 43 01.7 -1.7
comp=Z,0.5nm,0.9s,baz=187,slow=4.3,SNR=2.3
PDAR Pinedale Array 117.78 305 PKP PKPdf 04 47 43.6 -1.2
comp=Z,0.1nm,0.5s,baz=206,slow=16,SNR=1.9
NVAR Mina Array Bea 118.78 297 PKP PKiKP 04 47 47.0 +0.1
comp=Z,0.1nm,0.5s,baz=83,slow=14,SNR=2.2
FXWY Fox Creek 119.14 305 PKiKP 04 47 47.9 +0.4
NOA NORSAR Array B 120.58 23 PKP PKPdf 04 47 48.1 -1.3
comp=Z,0.5nm,0.8s,baz=204,slow=1.8,SNR=3.1
MSO Missoula 122.89 306 PKiKP 04 47 54.9 +0.3
G08A Pilot Rock 124.18 302 PKPdf PKiKP 04 47 57.2 0.0
FINES FINESS Array B 124.68 30 PKP PKiKP 04 47 57.5 0.0
comp=Z,2.2nm,0.7s,baz=174,slow=2.9,SNR=13
B08A Colville Reser 126.53 304 PKPdf 04 48 00.7 -0.5
CMAR Chiang Mai Arr 127.68 114 PKP PKPdf 04 48 03.7 -0.6
comp=Z,1.2nm,0.3s,baz=225,slow=4.2,SNR=4.5
ARCES ARCESS Array B 130.96 23 PKP PKPdf 04 48 08.1 -0.8
comp=Z,2.3nm,0.8s,baz=284,slow=4.9,SNR=11
ARCES ARCESS Array B 130.96 23 PKPdf 04 48 09.3 +0.3
AAK Ala-Archa 131.97 73 PKPdf PKiKP 04 48 14.1 +1.1
ARU Arti 132.87 49 PKPdf PKiKP 04 48 15.5 +1.4
YKA Yellowknife Ar 133.84 320 PKP PKPdf 04 48 13.3 -1.2
comp=Z,1.3nm,0.7s,baz=131,slow=2.6,SNR=7.4
PZH PanZhiHua 135.72 111 PKP PKPdf 04 48 19.4 0.0
R33M Jennings River 138.72 310 P PKPdf 04 48 24.0 +0.1
baz=121
MKAR Makanchi Array 138.90 73 PKhKP PKPpre 04 48 16.6
MKAR PKP PKPdf 04 48 24.8 +0.3
comp=Z,0.4nm,0.6s,baz=260,slow=3.7,SNR=4.1
SIT Sitka 139.51 305 P PKPdf 04 48 25.6 +0.5
baz=121
P33M Teslin, Yukon 139.94 310 P PKPdf 04 48 26.2 +0.2
baz=119
WMQ Urumqi 140.10 80 eP PKPdf 04 48 28.1 +1.2
CD2 Chengdu 140.26 109 PKP PKPdf 04 48 27.8 +0.3
FARO Faro, Yukon 141.10 313 P PKPdf 04 48 28.2 +0.1
baz=116
CTG Chitna Glacier 144.05 309 P PKPdf 04 48 33.2 -0.3
baz=113
EPYK Eagle Plains 144.06 319 P PKPdf 04 48 33.9 +0.7
baz=109
ZAA0 Zalesovo Array 144.13 65 PKPdf PKPdf 04 48 32.9 -0.7
ZALV Zalesovo Beam 144.13 65 PKP PKPbc 04 48 32.0 +0.3
comp=Z,3.0nm,0.5s,baz=226,slow=4.0,SNR=13
ZALV Zalesovo Beam 144.13 65 PKPdf PKPbc 04 48 31.8 +0.1
LZH Lanzhou 144.18 103 ePKP PKPab 04 48 30.6 -1.7
LZH pPKP PKiKP 04 48 43.5 +5.4
LZH sPKP 04 48 48.1
GTA Gaotai 144.21 95 ePKPbc PKPbc 04 48 33.5 +0.9
I29M Ogilvie Camp, 144.35 316 PKPdf PKPbc 04 48 32.4 +0.2
I29M Ogilvie Camp, 144.35 316 P PKPbc 04 48 32.7 +0.5
baz=109,SNR=8.9
DAWY Dawson 144.35 314 P PKPab 04 48 32.0 +0.1
baz=110
BVCY Beaver Creek 144.39 311 P PKPbc 04 48 32.4 0.0
baz=111,SNR=11
M27K Edge Creek, AK 144.81 311 P PKPab 04 48 33.5 -0.2
baz=111,SNR=12
L27K Beaver Creek, 145.03 312 P PKPbc 04 48 34.2 -0.2
baz=110,SNR=19
EGAK Eagle 145.31 315 P PKPbc 04 48 34.6 -0.6
baz=108,SNR=8.1
M26K Nabesna, AK 145.31 310 P PKPbc 04 48 34.9 -0.4
baz=110,SNR=5.5
K27K Chicken 145.45 313 PKPdf 04 48 34.9 -0.7
K27K Chicken 145.45 313 P PKPab 04 48 36.4 +0.5
baz=108
XAN Xi'an 145.45 111 ⇑PKPbc PKPdf 04 48 36.1 -0.5
BMRM Bremner River 145.53 308 P PKPab 04 48 36.4 0.0
baz=111,SNR=6.8
L26K Log Cabin Wild 145.67 311 P PKPdf 04 48 35.8 -0.2
baz=109
I27K Kandik River 145.74 316 P PKPbc 04 48 36.6 0.0
baz=106
N25K Chitina, Valde 145.75 309 P PKPbc 04 48 36.9 +0.1
baz=110
H27K Steamboat Moun 145.88 317 P PKPbc 04 48 37.3 +0.3
baz=106
EYAK Cordova Ski Ar 145.91 307 P PKPab 04 48 37.8 +0.1
baz=111,SNR=6.1
G27K Gypon Strip 146.08 318 P PKPbc 04 48 37.6 0.0
baz=105,SNR=9.1
J26L Joseph Creek 146.22 314 P PKPab 04 48 39.1 +0.2
baz=107,SNR=15
SCRK Sand Creek 146.24 313 PKPbc 04 48 38.3 +0.1
SCRK Sand Creek 146.24 313 P PKPbc 04 48 38.1 -0.1
baz=107,SNR=11
HARP HAARP 146.26 310 P PKPbc 04 48 38.4 +0.2
baz=108
I26K Coal Creek Min 146.27 315 P PKPab 04 48 38.7 -0.2
baz=106
KLU Klutina 146.31 308 P PKPbc 04 48 38.9 +0.4
baz=109
E27K Coleen River 146.38 321 P PKPab 04 48 39.0 -0.3
baz=103
P23K Montague Islan 146.48 305 P PKPbc 04 48 39.1 +0.2
baz=110
RIDG Independent Ri 146.53 312 P PKPbc 04 48 39.1 0.0
baz=107,SNR=17
PAX Paxson 146.58 311 P PKPbc 04 48 39.2 0.0
baz=108,SNR=8.2
M24K Tolsona, Glenn 146.62 309 P PKPab 04 48 40.0 -0.5
baz=108
GLI Glacier Island 146.64 307 P PKPbc 04 48 39.6 +0.2
baz=109
G26K Porcupine Rive 146.93 318 P PKPbc 04 48 40.3 +0.3
baz=103
K24K Donnelly Dome 146.95 312 P PKPbc 04 48 39.8 -0.5
baz=106
J25K Salcha River, 147.00 314 P PKPbc 04 48 40.6 +0.3
baz=105,SNR=6.3
PWL Port Wells 147.21 306 P PKPbc 04 48 40.9 -0.1
baz=109
M23K Glacier View 147.22 308 P PKPbc 04 48 41.1 +0.1
baz=108
F26K Sheenjek River 147.22 319 P PKPbc 04 48 41.5 +0.6
baz=101,SNR=5.2
C27K Jago River 147.41 323 P PKPbc 04 48 42.1 +0.8
baz=99
DHY Denali Highway 147.44 310 P PKPbc 04 48 42.1 +0.4
baz=106,SNR=9.4
WAT6 Susitna Watana 147.46 309 P PKPbc 04 48 42.2 +0.4
baz=106,SNR=7.9
SEW Seward 147.49 305 P PKPbc 04 48 41.8 +0.1
baz=109
SML Sawmill 147.50 308 P PKPbc 04 48 42.5 +0.7
baz=107
H25K Birch Creek 147.57 317 P PKPbc 04 48 41.9 +0.1
baz=102
HDA Harding Lake 147.60 313 P PKPbc 04 48 41.6 -0.3
baz=104
ILAR Eielson Array 147.67 314 PKPbc PKPbc 04 48 41.5 -0.7
comp=Z,16nm,1.1s,baz=119,slow=1.5,SNR=45
LYN LuoYang 147.73 114 ⇓ePKPbc PKPdf 04 48 41.8 +1.4
LYN PP PP 04 52 23.9 +14
LYN SKS SKSdf 04 55 43.1 -5.6
LYN AMB AMB
comp=Z,360nm,12.6s
F25K Christian Rive 147.77 319 P PKPbc 04 48 42.6 +0.2
baz=100,SNR=5.6
PMR Palmer 147.80 307 P PKPbc 04 48 42.5 0.0
baz=107
E25K Arctic Village 147.83 320 P PKPbc 04 48 43.1 +0.6
baz=100,SNR=7.5
WAT1 Susitna Watana 147.89 310 P PKPbc 04 48 42.5 -0.3
baz=106
RC01 Rabbit Creek A 147.93 306 P PKPbc 04 48 42.7 -0.2
baz=107
POKR Poker Plat Res 147.97 314 P PKPbc 04 48 42.8 -0.1
baz=103
BRSE Bradley Lake S 147.98 304 P PKPbc 04 48 43.4 +0.3
baz=109
COLA College 148.09 314 PKPbc PKPbc 04 48 43.0 -0.2
COLA College 148.09 314 P PKPbc 04 48 42.4 -0.8
baz=103
TCOL CIGO, UAF Yank 148.10 314 P PKPbc 04 48 42.5 -0.7
baz=103
KDAK Kodiak Island 148.22 299 P PKPbc 04 48 43.1 -0.7
baz=111
MCK McKinley 148.29 311 P PKPbc 04 48 43.6 -0.2
baz=104
D25K Kavik River 148.30 322 P PKPbc 04 48 44.2 +0.5
baz=97
M22K Willow 148.30 307 P PKPbc 04 48 43.9 +0.1
baz=106
H24K Noodor Dome 148.31 315 P PKPbc 04 48 43.8 -0.1
baz=101,SNR=5.4
G24K Hadweenzic Riv 148.31 317 P PKPbc 04 48 43.6 -0.2
baz=100,SNR=7.9
OHAK Old Harbor 148.37 298 P PKPbc 04 48 44.2 +0.1
baz=111
CAPN Captain Cook N 148.49 305 P PKPbc 04 48 44.0 -0.4
baz=107
NEA2 Nenana 148.54 313 P PKPbc 04 48 44.2 -0.3
baz=102
CUT Chulitna 148.54 309 P PKPbc 04 48 44.3 -0.2
baz=105
SII Sitkinak Islan 148.58 297 PKPbc 04 48 45.1 +0.3
SII Sitkinak Islan 148.58 297 P PKPbc 04 48 45.0 +0.3
baz=112
F24K Squaw Lake 148.60 319 P PKPbc 04 48 45.0 +0.5
baz=99
E24K Your Creek 148.91 320 P PKPbc 04 48 45.8 +0.4
baz=97
H23K Yukon River 148.98 315 P PKiKP 04 48 46.4 -0.4
baz=100
Q19K Cape Douglas, 149.13 301 P PKPbc 04 48 46.7 +0.6
baz=108
D24K Happy Valley 149.15 322 P PKPbc 04 48 45.7 -0.1
baz=95
C24K Franklin Bluff 149.15 323 P PKPbc 04 48 45.9 +0.1
baz=94
P19K Oil Pt 149.15 303 P PKPbc 04 48 45.5 -0.7
baz=108
BPAW Bear Paw Mtn. 149.25 312 P PKPbc 04 48 46.2 -0.1
baz=102,SNR=14
G23K Bananza Creek 149.31 317 P PKPbc 04 48 46.9 +0.5
baz=98,SNR=14
MLY Manley 149.33 313 P PKPbc 04 48 46.0 -0.5
baz=100
TOLK Toolik Lake Re 149.37 321 PKPbc 04 48 46.5 0.0
TOLK PKPab sPKPab 04 48 55.1 +1.4
TOLK Toolik Lake Re 149.37 321 P PKPbc 04 48 46.8 +0.4
baz=95,SNR=15
PPLA Purkeypile 149.52 309 P PKiKP 04 48 47.8 -0.4
baz=103,SNR=7.0
CAST Castle Rocks 149.59 310 P PKPbc 04 48 46.8 -0.3
baz=102,SNR=7.1
M20K Styx River 149.71 307 P PKPbc 04 48 47.3 -0.3
baz=104
H22K Ishtalitna Cre 149.73 315 P PKPbc 04 48 47.6 +0.3
baz=98,SNR=8.9
NRIK Noril'sk 149.74 38 PKPbc PKPbc 04 48 47.4 +0.1
comp=Z,2.4nm,0.4s,baz=289,slow=8.9,SNR=5.4
NRIK Noril'sk 149.74 38 PKPbc PKiKP 04 48 48.4 +0.1
CHUM Lake Minchumin 149.78 311 P PKPbc 04 48 47.3 -0.2
baz=101
D23K Nanushuk River 149.80 321 P PKiKP 04 48 48.2 -0.2
baz=94
C23K Itkillik River 149.82 323 P PKPbc 04 48 47.8 +0.3
baz=92,SNR=6.5
O19K Port Alsworth 149.83 303 P PKPbc 04 48 46.9 -0.8
baz=106
I21K Tanana 149.87 314 P PKPbc 04 48 47.3 -0.4
baz=99
G22K Bettles 149.92 317 P PKPbc 04 48 48.1 +0.4
baz=97
P18K Big Mountain, 150.05 302 P PKPbc 04 48 48.0 -0.3
baz=107
N19K Bonanza Creek 150.08 305 P PKPbc 04 48 47.9 -0.5
baz=105
R17K Ugashik Creek 150.09 298 P PKPbc 04 48 48.4 0.0
baz=109
E22K Anaktuvuk Pass 150.15 319 P PKPbc 04 48 48.7 +0.4
baz=94
L20K Farewell, AK 150.19 308 P PKPbc 04 48 48.2 -0.4
baz=102
F22K John River 150.24 318 P PKiKP 04 48 49.4 +0.1
baz=95
H21K Melozitna Rive 150.28 314 P PKiKP 04 48 49.3 -0.2
baz=98,SNR=11
K20K Telida 150.45 310 P PKPbc 04 48 49.0 -0.2
baz=101
L19K White Mountain 150.57 307 P PKiKP 04 48 50.1 -0.1
baz=102
P17K Kvichak River 150.59 301 P PKiKP 04 48 50.0 -0.3
baz=106
J20K Nowinta River 150.63 311 P PKPbc 04 48 49.4 -0.2
baz=99
G21K Allakaket 150.67 316 P PKPbc 04 48 49.8 +0.2
baz=96,SNR=5.2
R16K Pilot Point 150.67 297 P PKiKP 04 48 50.4 0.0
baz=108
F21K Alatna River 150.72 318 P PKPbc 04 48 49.7 0.0
baz=94,SNR=9.8
CHNA Chernabura Isl 150.78 291 P PKPbc 04 48 49.1 -1.0
baz=112
BTO Baotou 150.80 104 ePKPbc PKPdf 04 48 47.8 +2.6
O17K Koliganek Bris 151.07 302 P PKPbc 04 48 50.1 -0.5
baz=105
HNS HongShan 151.07 114 ⇓PKPbc PKPbc 04 48 51.4 0.0
SONM Songino Array 153.10 88 PKPbc PKPbc 04 48 55.1 -0.7
comp=Z,2.2nm,0.5s,baz=216,slow=3.6,SNR=14

*IDC **21** 04:33:56.0±0.9, 54°.98S×31°.49W, h0km, mb3.9/6, mbtmp4.0/6, Error ellipse: s-maj=35.5km s-min=23.7km az=63.0*

ISC 21 04:33:57.4±0.9, 55°.0S±0°.2×31°.5W±0°.2, h10km, n15, σ0s55/10, mb4.0/5, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	20.74	155	P	P	04 38 38.4	+0.5
	3.7nm,0.7s,baz=311,slow=8.5,SNR=7.0						
	3.7nm,0.7s						
MAW	Mawson	42.45	146	P	P	04 41 52.0	+0.2
	0.5nm,0.4s,baz=214,slow=20,SNR=1.7						
	0.5nm,0.4s						
SUR	Sutherland	42.82	80	P	P	04 41 54.8	-0.8
	5.4nm,1.1s,baz=75,slow=20,SNR=1.3						
	5.4nm,1.1s						
VNDA	Vanda	47.49	184	P	P	04 42 31.2	-0.6
	0.9nm,0.9s,baz=82,slow=1.1,SNR=2.9						
	0.9nm,0.9s						
LPAZ	La Paz	47.77	309	P	P	04 42 35.0	-0.3
	1.4nm,0.6s,baz=102,slow=9.2,SNR=6.3						
	1.4nm,0.6s						
H10S2	ASCENSION HYDR	47.83	23	T	T	05 34 11.4	
	baz=194						
H10S3	ASCENSION HYDR	47.84	23	T	T	05 34 07.0	
	baz=26						
H10N1	ASCENSION HYDR	48.95	23	T	T	05 35 29.7	
	baz=195						
H10N3	ASCENSION HYDR	48.95	23	T	T	05 35 29.7	
	baz=195						
H10N2	ASCENSION HYDR	48.97	23	T	T	05 35 30.9	
	baz=195						
TORD	Torodi Ar. Bea	73.45	34	P	P	04 45 30.0	+0.3
	1.1nm,0.8s,baz=185,slow=6.2,SNR=5.4						
	1.1nm,0.8s						
FINES	FINESS Array B	124.64	30	PKP	PKPdf	04 52 55.7	+0.1
	1.0nm,0.9s,baz=222,slow=1.9,SNR=4.6						
ZALV	Zalesovo Beam	144.13	65	PKP	PKPab	04 53 30.3	+0.5
	0.7nm,0.4s,baz=249,slow=3.6,SNR=3.1						
ILAR	Eielson Array	147.58	314	PKPbc	PKPbc	04 53 41.0	+0.7
	1.1nm,0.9s,baz=127,slow=1.9,SNR=6.2						
SONM	Songino Array	153.14	88	PKPbc	PKPbc	04 53 54.6	+0.2
	0.3nm,0.4s,baz=193,slow=5.8,SNR=2.2						

*IDC **21** 04:40:55.4±0.7, 54°.94S×31°.21W, h0km, mb4.0/11, mbtmp4.0/12, ML3.7/1, MS4.1/1, Error ellipse: s-maj=23.6km s-min=15.7km az=61.0*

ISC 21 04:40:56.8±0.6, 54°9S±0.1′×31°2W±0.1′, h10km, n26, σ0$\frac{64}{20}$, mb3.9/10, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.72**	**156**	P	**P**	**04 45 15.7**	**+0.5**
VNA3	**Neumayer Olymp**	**18.85**	**158**	P	**P**	**04 45 17.0**	**+0.5**
PMSA	**Palmer Station**	**18.98**	**226**	P	**Pn**	**04 45 19.6**	**+0.9**
	0.2nm,0.3s,baz=87,slow=11,SNR=6.4						
PMSA				LR	LR	04 52 27.7	
	comp=Z,552nm,18.8s,baz=88,slow=36 10.0nm,0.9s						
VNA2	**Neumayer--Watz**	**19.12**	**156**	P	**P**	**04 45 18.8**	**-0.8**
	baz=313,slow=11						
SNAA	**Sanae**	**20.71**	**155**	P	**P**	**04 45 36.9**	**-0.1**
	4.3nm,0.8s,baz=302,slow=12,SNR=14 4.3nm,0.8s						
TROLL	**Troll, Antarti**	**22.28**	**153**	P	**P**	**04 45 53.6**	**-0.2**
PLCA	**Paso Flores**	**29.54**	**282**	P	**P**	**04 47 02.0**	**+0.6**
	1.5nm,0.9s,baz=205,slow=6.1,SNR=3.3 1.5nm,0.9s						
CPUP	**Villa Florida**	**34.38**	**316**	P	**P**	**04 47 43.7**	**-0.2**
	3.2nm,0.9s,baz=152,slow=8.4,SNR=5.6 3.2nm,0.9s						
QSPA	**South Pole Qui**	**35.33**	**180**	P	**P**	**04 47 51.5**	**-0.4**
	3.3nm,1.1s,baz=306,slow=0.9,SNR=7.9 3.3nm,1.1s						
BDFB	**Brasilia**	**41.31**	**335**	P	**P**	**04 48 41.6**	**-1.0**
	1.9nm,0.8s,baz=30,slow=27,SNR=2.4 1.9nm,0.8s						
MAW	**Mawson**	**42.39**	**145**	P	**P**	**04 48 50.4**	**-0.4**
	0.7nm,0.5s,baz=280,slow=18,SNR=2.5 0.7nm,0.5s						
SIV	**San Ignacio**	**45.17**	**318**	P	**P**	**04 49 13.1**	**-0.6**
	1.0nm,0.7s,baz=174,slow=5.1,SNR=2.9 1.0nm,0.7s						
VNDA	**Vanda**	**47.56**	**184**	P	**P**	**04 49 31.3**	**-0.5**
	0.7nm,0.8s,baz=166,slow=5.4,SNR=4.3 0.7nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.71**	**22**	T	T	05 41 11.4	
	baz=191						
H10S3	**ASCENSION HYDR**	**47.71**	**22**	T	T	05 41 13.2	
	baz=29						
LPAZ	**La Paz**	**47.88**	**309**	P	**P**	**04 49 36.0**	**+0.4**
	2.3nm,0.4s,baz=122,slow=5.9,SNR=17 2.3nm,0.4s						
BOSA	**Boshof**	**47.98**	**81**	P	**P**	**04 49 36.4**	**+0.6**
	2.3nm,1.0s,baz=181,slow=10,SNR=1.8 2.3nm,1.0s						
H10N1	**ASCENSION HYDR**	**48.82**	**22**	T	T	05 42 35.9	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.82**	**22**	T	T	05 42 35.0	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**48.84**	**22**	T	T	05 42 35.8	
	baz=192,slow=74						
TORD	**Torodi Ar. Bea**	**73.29**	**34**	P	**P**	**04 52 28.9**	**+0.6**
	1.0nm,0.7s,baz=199,slow=6.2,SNR=9.2 1.0nm,0.7s						
ASAR	**Alice Springs**	**100.69**	**166**	P	**Pdif**	**04 54 44.3**	**-0.9**
	0.3nm,0.7s,baz=164,slow=3.5,SNR=2.1						
FINES	**FINESS Array B**	**124.49**	**29**	PKP	**PKiKP**	**04 59 55.6**	**+0.6**
	2.4nm,1.0s,baz=242,slow=3.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**143.94**	**64**	PKP	PKPbc	05 00 29.8	+0.7
	0.8nm,0.5s,baz=297,slow=1.0,SNR=4.2						
ILAR	**Eielson Array**	**147.67**	**314**	PKPbc	**PKPbc**	**05 00 39.4**	**-0.6**
	5.0nm,1.1s,baz=130,slow=1.9,SNR=18						
SONM	**Songino Array**	**152.95**	**87**	PKPbc	**PKPbc**	**05 00 53.8**	**+0.4**
	0.9nm,0.5s,baz=218,slow=3.7,SNR=5.2						

*IDC **21** 04:47:03.5±0.8, 54°96S×31°18W, h0km, mb3.8/8, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=33.1km s-min=17.2km az=66.0*

ISC 21 04:47:05.0±0.7, 55°0S±0.1′×31°3W±0.2′, h10km, n22, σ0$\frac{67}{16}$, mb3.8/8, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.70**	**156**	P	**P**	**04 51 22.5**	**-0.6**
VNA3	**Neumayer Olymp**	**18.82**	**158**	P	**Pn**	**04 51 25.0**	**0.0**
PMSA	**Palmer Station**	**18.92**	**226**	P	**Pn**	**04 51 26.2**	**0.0**
	0.1nm,0.3s,baz=140,slow=10.0,SNR=2.5 3.6nm,0.8s						
VNA2	**Neumayer--Watz**	**19.10**	**156**	P	**Pn**	**04 51 29.4**	**+1.0**
	baz=312,slow=10.0						
SNAA	**Sanae**	**20.69**	**155**	P	**P**	**04 51 44.9**	**0.0**
	2.6nm,0.8s,baz=320,slow=10,SNR=12 2.6nm,0.8s						
CPUP	**Villa Florida**	**34.38**	**316**	P	**P**	**04 53 50.9**	**-1.2**
	1.3nm,0.8s,baz=187,slow=15,SNR=1.8 1.3nm,0.8s						
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**04 53 59.9**	**+0.2**
	0.8nm,0.7s,baz=164,slow=1.4,SNR=2.0 0.8nm,0.7s						
BDFB	**Brasilia**	**41.34**	**335**	P	**P**	**04 54 51.5**	**+0.5**
	1.0nm,0.5s,baz=204,slow=26,SNR=2.0 1.0nm,0.5s						
MAW	**Mawson**	**42.38**	**145**	P	**P**	**04 54 58.6**	**-0.2**
	1.1nm,0.8s,baz=57,slow=20,SNR=1.8 1.1nm,0.8s						
VNDA	**Vanda**	**47.52**	**184**	P	**P**	**04 55 39.6**	**0.0**
	0.6nm,0.8s,baz=188,slow=6.0,SNR=3.8 0.6nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.77**	**22**	T	T	05 47 15.3	
	baz=190						
H10S3	**ASCENSION HYDR**	**47.77**	**22**	T	T	05 47 15.9	
	baz=30						
LPAZ	**La Paz**	**47.87**	**309**	P	**P**	**04 55 44.0**	**+0.3**
	1.6nm,0.5s,baz=132,slow=4.2,SNR=12 1.6nm,0.5s						
H10N1	**ASCENSION HYDR**	**48.88**	**22**	T	T	05 48 43.5	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.88**	**22**	T	T	05 48 43.7	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**48.90**	**22**	T	T	05 48 43.7	
	baz=192,slow=74						
ROSC	**El Rosal**	**69.42**	**313**	P	**P**	**04 58 14.7**	**+1.1**
	5.8nm,0.3s,baz=323,slow=20,SNR=5.4						
TORD	**Torodi Ar. Bea**	**73.35**	**34**	P	**P**	**04 58 37.3**	**+0.4**
	0.6nm,0.9s,baz=176,slow=9.5,SNR=2.1 0.6nm,0.9s						
FINES	**FINESS Array B**	**124.55**	**29**	PKP	**PKiKP**	**05 06 02.7**	**-0.7**
	0.8nm,0.9s,baz=317,slow=5.7,SNR=1.6						
ZALV	**Zalesovo Beam**	**144.00**	**65**	PKP	PKPbc	05 06 37.1	-0.4
	0.6nm,0.4s,baz=202,slow=1.6,SNR=2.2						
ILAR	**Eielson Array**	**147.67**	**314**	PKPbc	**PKPbc**	**05 06 47.5**	**-0.7**
	2.3nm,1.0s,baz=118,slow=2.1,SNR=9.2						
SONM	**Songino Array**	**153.00**	**88**	PKPbc	**PKPbc**	**05 07 01.2**	**-0.6**
	0.6nm,0.6s,baz=270,slow=2.4,SNR=3.6						

*DDA **21** 04:52:36.6±0.0, 35°67N×28°09E, h30km±2km, ML3.5*
*IDC **21** 04:52:36.5±1.0, 35°76N×28°29E, h0km, mb3.6/7, mbtmp3.6/16, ML3.6/9, Error ellipse: s-maj=19.1km s-min=13.9km az=179.0*
*NIC **21** 04:52:36.8±0.0, 35°76N×28°15E, h8km±1km, Ml3.9/5*
*ATH **21** 04:52:37.6, 35°89N×28°25E, h42km±3km, ML3.4/8, Error ellipse: s-maj=5.5km s-min=1.6km az=114.0*
*ISK **21** 04:52:38.1, 35°86N×28°19E, h6km, ML3.5/26*
*THE **21** 04:52:40.2, 35°88N×28°07E, h4km±1km, ML3.3/6, Error ellipse: s-maj=2.2km s-min=0.7km az=118.0*

ISC 21 04:52:37.9±1.1, 35°81N±0.02′×28°20E±0.02′, h10km±8km, n95, σ1$\frac{64}{127}$, mb3.5/7, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.41**	**352**	P	**Pb**	**04 52 46.4**	**-0.9**
ARG				S	**Sb**	**04 52 52.8**	**-0.7**
	3μm,0.6s						
ARG	**Arkhangelos**	**0.41**	**352**	P	**Pb**	**04 52 46.3**	**-0.9**
ARG				S	**Sb**	**04 52 53.2**	**-0.4**
ARG	**Arkhangelos**	**0.41**	**352**	P	**Pb**	**04 52 46.4**	**-0.9**
ARG				S	**Sb**	**04 52 53.1**	**-0.4**
ARG				AML	AML	04 52 58.8	
	comp=N,5980μm,0.7s						
ARG				AML	AML	04 52 59.2	
	comp=E,6656μm,0.4s						
KARP	**Karpathos**	**0.88**	**253**	P	**Pb**	**04 52 55.8**	**+0.4**
KARP				S	**Sb**	**04 53 07.8**	**+0.6**
	comp=E,4μm,0.5s						
KARP	**Karpathos**	**0.88**	**253**	PG	**Pb**	**04 52 55.7**	**+0.4**
KARP				SG	**Sn**	**04 53 08.6**	**-0.7**
KARP	**Karpathos**	**0.88**	**253**	P	**Pg**	**04 52 53.9**	**-1.0**
KARP				S	**Sg**	**04 53 05.2**	**-1.2**
KARP				AML	AML	04 53 16.1	
	comp=E,9.5nm,0.7s						
KARP				AML	AML	04 53 16.1	
	comp=E,9.5nm,0.7s						
KARP				AML	AML	04 53 18.6	
	comp=E,6.3nm,0.6s						
KARP				AML	AML	04 53 18.6	
	comp=E,6.3nm,0.6s						
KARP	**Karpathos**	**0.88**	**253**	P	**Pb**	**04 52 55.5**	**+0.1**
KARP				S	**Sn**	**04 53 08.5**	**-0.8**
KARP				AML	AML	04 53 16.4	
	comp=N,8296μm,0.4s						
KARP				AML	AML	04 53 19.0	
	comp=E,6333μm,0.6s						
TURN	**Turunc**	**0.96**	**2**	PG	**Pn**	**04 52 56.2**	**-1.3**
DAT	**Datca**	**1.04**	**332**	P	**Pn**	**04 52 58.0**	**-0.7**
DAT				S	**Sb**	**04 53 11.3**	**-0.6**
DAT	**Datca**	**1.04**	**332**	PG	**Pn**	**04 52 57.7**	**-1.0**
DAT	**Datca**	**1.04**	**332**	P	**Pn**	**04 52 57.8**	**-1.0**
DAT				S	**Sn**	**04 53 13.2**	**-0.2**
DALY	**Dalyan (Mula)**	**1.07**	**20**	PG	**Pn**	**04 52 58.2**	**-0.7**
DALY				SG	**Sn**	**04 53 12.9**	**-0.9**
FETY	**Fethiye**	**1.09**	**41**	PG	**Pn**	**04 52 58.6**	**-0.7**
NIS1	**Nisyros Isl.**	**1.14**	**314**	P	**Pn**	**04 52 59.6**	**-0.4**
NIS1				S	**Sn**	**04 53 14.6**	**-1.1**
	comp=E,5μm,0.7s						
NIS1	**Nisyros Isl.**	**1.14**	**314**	PN	**Pn**	**04 52 59.7**	**-0.3**
NISR	**Nisiros**	**1.18**	**313**	P	**Pn**	**04 52 59.9**	**-0.5**
NISR				S	**Sn**	**04 53 15.1**	**-1.4**
	comp=E,2μm,0.8s						
NISR	**Nisiros**	**1.18**	**313**	P	**Pg**	**04 52 59.4**	**-1.1**
NISR				AML	AML	04 53 23.3	
	comp=N,3940μm,0.7s						
NISR				AML	AML	04 53 26.7	
	comp=E,4183μm,0.9s						
AKAS	**Kas**	**1.22**	**69**	PN	**Pn**	**04 53 00.9**	**-0.2**
YER	**Yerkesik**	**1.32**	**3**	P	**Pg**	**04 53 03.3**	**0.0**
YER				S	**Sn**	**04 53 20.0**	**-0.2**
YER	**Yerkesik**	**1.32**	**3**	PN	**Pg**	**04 53 02.9**	**-0.4**
KOSK	**Kos Island**	**1.36**	**314**	PN	**Pg**	**04 53 03.6**	**-0.4**
KOSK	**Kos Island**	**1.36**	**314**	P	**Pn**	**04 53 02.1**	**-0.8**
BODT	**Bodrum**	**1.44**	**330**	P	**Pb**	**04 53 03.8**	**-1.0**
BODT				S	**Sn**	**04 53 21.9**	**-1.1**
BODT	**Bodrum**	**1.44**	**330**	PN	**Pb**	**04 53 03.7**	**-1.0**
BODT				SN	**Sg**	**04 53 24.1**	**-0.1**
CAME	**Cameli-Denizli**	**1.44**	**38**	PN	**Pg**	**04 53 04.7**	**-0.8**
MULA	**Mugla, Merkez-**	**1.45**	**4**	P	**Pg**	**04 53 05.7**	**0.0**
MULA				S	**Sg**	**04 53 28.4**	**+4.0**
MULA				*i* AML	AML	04 53 34.0	
	comp=E,521nm,0.6s						
DEMR	**Demre-Antalya**	**1.45**	**72**	PN	**Pb**	**04 53 04.6**	**-0.3**
CAEL	**Denizli, Camel**	**1.59**	**34**	P	**Pg**	**04 53 08.1**	**-0.4**
CAEL				S	**Sg**	**04 53 30.8**	**+1.7**
CAEL				*i* AML	AML	04 53 46.0	
	comp=E,586nm,0.9s						
CAEL				*i* AML	AML	04 53 51.0	
	comp=E,475nm,0.8s						
ELL	**Elmali**	**1.67**	**55**	PN	**Pg**	**04 53 09.1**	**-0.8**
ELL	**Elmali**	**1.67**	**55**	S	**Sg**	**04 53 30.6**	**-0.9**
TAVA	**DENIZLI_Tavas**	**1.75**	**19**	P	**Pg**	**04 53 10.3**	**-1.1**
TAVA				S	**Sg**	**04 53 40.8**	**+6.7**
ZKR	**Zakros**	**1.76**	**247**	P	**Pn**	**04 53 08.8**	**+0.4**
ZKR				S	**Sn**	**04 53 31.0**	**+0.1**
	comp=E,705nm,0.9s						
ZKR	**Zakros**	**1.76**	**247**	PN	**Pb**	**04 53 10.1**	**-0.2**
ZKR	**Zakros**	**1.76**	**247**	P	**Pn**	**04 53 06.4**	**-2.1**
ZKR				S	**Sn**	**04 53 30.2**	**-0.7**
ZKR	**Zakros**	**1.76**	**247**	P	**Pb**	**04 53 10.1**	**-0.2**
ZKR				AML	AML	04 53 44.0	
	comp=E,1997μm,0.9s						
ZKR				AML	AML	04 53 45.6	
	comp=N,820μm,0.9s						
AKUM	**Antalya-Kumluc**	**1.81**	**73**	P	**Pb**	**04 53 10.0**	**-1.1**
AKUM				S	**Sb**	**04 53 34.5**	**+0.6**
DDIM	**Aydin, Didim**	**1.81**	**335**	P	**Pb**	**04 53 10.0**	**-1.2**
DDIM				S	**Sg**	**04 53 34.8**	**-1.4**
DDIM				*i* AML	AML	04 53 45.0	
	comp=N,421nm,0.6s						
DDIM				*i* AML	AML	04 53 48.0	
	comp=N,388nm,0.7s						
STIA	**Sitia Lasithi**	**1.82**	**251**	P	**Pn**	**04 53 10.1**	**+0.8**
STIA				S	**Sn**	**04 53 32.8**	**+0.4**
STIA	**Sitia Lasithi**	**1.82**	**251**	P	**Pb**	**04 53 11.3**	**0.0**
STIA				AML	AML	04 53 45.4	
	comp=N,1889μm,0.7s						
STIA				AML	AML	04 53 48.7	
	comp=E,1525μm,1.1s						
APMY	**Acipayam-Deniz**	**1.88**	**28**	PN	**Pb**	**04 53 11.8**	**-0.6**
GCAM	**G?zelcami?**	**2.04**	**338**	PN	**Pb**	**04 53 13.1**	**-1.9**
KORT	**Korkueli**	**2.10**	**55**	PN	**Pb**	**04 53 15.5**	**-0.7**
AMGA	**Amorgos Island**	**2.12**	**299**	P	**Pb**	**04 53 15.3**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**2.15**	**354**	PN	**Pb**	**04 53 15.1**	**-1.8**
FRMA	**Ierapetra Chan**	**2.16**	**249**	P	**Pn**	**04 53 15.3**	**+1.4**
FRMA				AML	AML	04 53 56.0	
	comp=E,1406μm,0.7s						
FRMA				AML	AML	04 54 00.1	
	comp=N,1626μm,0.6s						
SMG	**Samos**	**2.19**	**330**	P	**Pn**	**04 53 14.8**	**+0.5**
SMG				S	**Sn**	**04 53 40.4**	**-1.0**
	comp=N,355nm,0.5s						
SMG	**Samos**	**2.19**	**330**	P	**Pn**	**04 53 15.0**	**+0.6**
SMG				AML	AML	04 53 47.4	
	comp=E,731μm,0.5s						
SMG				AML	AML	04 53 53.2	
	comp=N,692μm,0.5s						
ANTB	**Antalya**	**2.26**	**61**	PN	**Pb**	**04 53 17.0**	**-1.8**
SANT	**Santorini**	**2.29**	**285**	PN	**Pb**	**04 53 17.4**	**-1.9**
SANT	**Santorini**	**2.29**	**285**	P	**Pb**	**04 53 17.4**	**-1.9**
BRDR	**BURDUR-Merkez**	**2.40**	**38**	P	**Pb**	**04 53 19.4**	**-1.9**
DGB	**zmir**	**2.47**	**335**	P	**Pn**	**04 53 18.8**	**+0.6**
DGB				S	**Sb**	**04 53 50.5**	**-2.3**
APE	**Apeiranthos**	**2.49**	**301**	PN	**Pn**	**04 53 19.5**	**+1.0**
APE	**Apeiranthos**	**2.49**	**301**	P	**Pb**	**04 53 20.6**	**-2.2**
BCK	**Bucak**	**2.53**	**49**	PN	**Pb**	**04 53 21.2**	**-2.3**
HRKL	**Herakleio**	**2.57**	**260**	PN	**Pn**	**04 53 21.5**	**+1.9**
BASM	**Basmaki-Afyon**	**2.58**	**35**	PN	**Pn**	**04 53 20.9**	**+1.2**
KSTL	**Kastelli Herak**	**2.60**	**260**	P	**Pn**	**04 53 20.7**	**+0.7**
KSTL				AML	AML	04 54 05.9	
	comp=E,303μm,0.5s						
KSTL				AML	AML	04 54 11.0	
	comp=N,725μm,0.5s						
MANT	**Manisa**	**2.69**	**6**	P	**Pb**	**04 53 24.6**	**-1.6**
MANT				S	**Sb**	**04 53 58.3**	**-1.1**
KULA	**Kula-Manisa**	**2.72**	**8**	PN	**Pn**	**04 53 23.1**	**+1.3**
BLCB	**Balcova**	**2.73**	**341**	PN	**Pn**	**04 53 23.0**	**+1.2**
ISP	**Isparta**	**2.74**	**42**	PN	**Pn**	**04 53 23.7**	**+1.7**
IDI	**Anoyia**	**2.75**	**260**	Pn	**Pn**	**04 53 23.0**	**+0.9**
	comp=N,7.4nm,0.3s,baz=73,slow=15,SNR=32						
IDI				Sn	**Sn**	**04 53 57.2**	**+1.8**
	comp=N,10nm,0.3s,baz=109,slow=23,SNR=4.9 comp=N,16nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**2.78**	**331**	P	**Pn**	**04 53 23.1**	**+0.7**
SUTC	**Sutluce-Ispart**	**2.80**	**53**	PN	**Pn**	**04 53 24.4**	**+1.5**
URLA	**Izmir**	**2.85**	**334**	PN	**Pn**	**04 53 24.7**	**+1.3**
OSC1	**CSNet OBS 1**	**3.43**	**131**	P	**Pn**	**04 53 30.8**	**-0.6**
OSC1				S	**Sn**	**04 54 12.3**	**+0.2**
AKMS	**Akamas**	**3.47**	**102**	P	**Pn**	**04 53 31.9**	**0.0**
AKMS				AML	AML	04 54 14.3	
	comp=N,0.5nm,0.6s						
AKMS				AML	AML	04 54 17.9	
	comp=N,0.8nm,0.4s						
ALFC	**Alefka**	**3.65**	**99**	P	**Pn**	**04 53 34.3**	**-0.2**
ALFC				AML	AML	04 54 23.4	
	comp=N,0.6nm,0.6s						
ALFC				AML	AML	04 54 29.8	
	comp=N,0.6nm,0.6s						
SZAC	**Souni**	**3.98**	**104**	P	**Pn**	**04 53 39.0**	**+0.1**
SZAC				AML	AML	04 54 29.5	
	comp=N,0.8nm,0.6s						
SZAC				AML	AML	04 54 36.3	
	comp=N,0.7nm,0.5s						
ASGA	**Asgata**	**4.26**	**102**	P	**Pn**	**04 53 42.5**	**-0.3**
ASGA				AML	AML	04 54 33.9	
	comp=N,0.4nm,0.4s						
ASGA				AML	AML	04 54 40.3	
	comp=N,0.4nm,0.6s						
CSS	**Mathiatis**	**4.28**	**100**	P	**Pn**	**04 53 42.9**	**-0.2**
MVOU	**Mavrovouni**	**4.51**	**99**	P	**Pn**	**04 53 45.8**	**-0.4**
PARAL	**Paralimni**	**4.84**	**98**	P	**Pn**	**04 53 51.2**	**+0.4**
BRTR	**Keskin Array B**	**5.82**	**46**	Pn	**Pn**	**04 54 04.8**	**+0.4**
	comp=N,0.4nm,0.3s,baz=220,slow=14,SNR=14						
BRTR				Sn	**Sn**	**04 55 12.7**	**+1.5**
	comp=N,0.5nm,0.3s,baz=212,slow=27,SNR=7.9 comp=N,2.2nm,0.6s						
MMAI	**Mount Meron Ar**	**6.58**	**113**	Pn	**Pn**	**04 54 13.3**	**-1.5**
	comp=N,3.2nm,0.3s,baz=327,slow=10,SNR=8.9						
MMAI				Sn	**Sn**	**04 55 27.1**	**-2.7**
	comp=N,4.5nm,0.3s,baz=309,slow=21,SNR=6.0 comp=N,2.2nm,0.3s						
ASF	**Jabal al Asfar**	**8.09**	**114**	Pn	**Pn**	**04 54 35.6**	**+0.1**
	comp=N,0.6nm,0.3s,baz=288,slow=22,SNR=2.9						
ASF				Sn	**Sn**	**04 56 03.0**	**-3.9**
	comp=N,0.6nm,0.3s,baz=18,slow=16,SNR=1.8 comp=N,2.0nm,0.4s						
EIL	**Elat**	**8.36**	**135**	Pn	**Pn**	**04 54 37.8**	**-1.4**
	comp=N,0.9nm,0.3s,baz=7.0,slow=8.6,SNR=2.8						
EIL				Sn	**Sn**	**04 56 08.6**	**-4.9**
	comp=N,1.3nm,0.3s,baz=7.6,slow=18,SNR=4.6 comp=N,2.9nm,0.4s						
MLR	**Muntele Rosu**	**9.82**	**351**	Pn	**Pn**	**04 54 59.5**	**+0.3**
	comp=N,0.2nm,0.3s,baz=332,slow=22,SNR=2.0 comp=N,0.7nm,0.5s						
KEST	**Kesra**	**15.31**	**275**	Pn	**P**	**04 56 16.9**	**-2.1**
	baz=15,slow=14,SNR=1.4 comp=N,1.9nm,0.7s						
VRAC	**Vranov**	**15.94**	**331**	Pn	**P**	**04 56 24.9**	**-0.9**
	comp=N,0.2nm,0.3s,baz=150,slow=20,SNR=1.7 comp=N,1.1nm,0.6s						
GERES	**GERESS Array B**	**16.83**	**325**	Pn	**P**	**04 56 36.8**	**+1.0**
	comp=N,0.1nm,0.3s,baz=172,slow=15,SNR=1.8 comp=N,0.1nm,0.3s						
WTTA	**Wattenberg**	**16.83**	**318**	*e*P	**P**	**04 56 41.7**	**+5.8**
	comp=N,2.6nm,0.9s						
DPC	**Dobruska-Polom**	**16.89**	**333**	*e*P	**P**	**04 56 38.7**	**+2.3**
WATA	**Walderalm**	**16.91**	**318**	*e*P	**P**	**04 56 41.6**	**+4.9**
	comp=N,4.2nm,1.2s						
KHC	**Kasperske Hory**	**17.09**	**326**	*e*P	**P**	**04 56 39.4**	**+0.8**
KHC				*ex*	x	04 56 47.1	
MOTA	**Moosalm**	**17.17**	**317**	*e*P	**P**	**04 56 44.1**	**+4.5**
	comp=N,1.0nm,0.7s						
FETA	**Feichten**	**17.19**	**316**	*e*P	**P**	**04 56 43.6**	**+3.7**
	comp=N,3.5nm,1.0s						
ESDC	**Sonseca Array**	**25.65**	**288**	P	**P**	**04 58 08.1**	**+0.4**
	comp=N,0.7nm,0.9s,baz=78,slow=10.0,SNR=6.7 comp=N,0.7nm,0.9s						
FINES	**FINESS Array B**	**25.69**	**358**	P	**P**	**04 58 09.7**	**+1.9**
	comp=N,0.4nm,0.6s,baz=152,slow=15,SNR=4.0 comp=N,0.4nm,0.6s						
AKTO	**Aktyubinsk**	**26.00**	**47**	P	**P**	**04 58 10.3**	**-0.4**
	comp=N,0.7nm,0.4s,baz=248,slow=11,SNR=2.2 comp=N,0.7nm,0.4s						
HFS	**Hagfors**	**26.08**	**343**	P	**P**	**04 58 12.3**	**+0.9**
	comp=N,1.1nm,0.9s,baz=164,slow=11,SNR=1.6 comp=N,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**32.84**	**233**	P	**P**	**04 59 11.7**	**-0.1**
	comp=N,0.8nm,0.8s,baz=39,slow=7.9,SNR=2.4 comp=N,0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**38.78**	**52**	P	**P**	**05 00 02.6**	**+0.1**
	comp=N,0.4nm,0.6s,baz=277,slow=9.0,SNR=3.5 comp=N,0.4nm,0.6s						
MKAR	**Makanchi Array**	**41.34**	**57**	P	**P**	**05 00 23.9**	**+0.1**
	comp=N,1.0nm,0.7s,baz=287,slow=5.2,SNR=8.4 comp=N,1.0nm,0.7s						

*VAO **21** 04:56:56.1±0.3, 19°07S×69°22W, h10km, mb4.3*
*SJA **21** 04:56:56.4±0.7, 19°34S×69°77W, h77km±3km, ML4.4, MW4.2*
*GUC **21** 04:56:57.4±0.6, 19°29S×69°65W, h82km±4km, ML4.5*
*NEIC **21** 04:56:57.6±2.3, 19°28S±0.03′×69°6W±0.1′, h72km±11km, mb4.2/6, ML4.5(GUC), Error ellipse: s-maj=13.9km s-min=4.5km az=95.0*
*IDC **21** 04:56:59.4±1.7, 19°32S×69°40W, h104km±16km, mb3.7/9, mbtmp4.1/13, Error ellipse: s-maj=21.4km s-min=11.9km az=107.0*

ISC 21 04:56:56.8±0.7, 19°30S±0.03′×69°64W±0.05′, h79km±6km, n101, σ1$\frac{55}{105}$, mb4.0/9, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO01	**Chusmiza**	**0.56**	**132**		**Pn**	**04 57 12.6**	**+0.9**
GO01	**Chusmiza**	**0.56**	**132**	*i*P	**Pn**	**04 57 12.4**	**+0.9**
GO01				*e*S	**Sn**	**04 57 24.4**	**+1.9**
GO01	**Chusmiza**	**0.56**	**132**	*e*P	**Pn**	**04 57 12.5**	**+0.9**
GO01				*e*S	**Sn**	**04 57 24.6**	**+2.2**
PB12	**IPOC Station P**	**0.94**	**316**	Pn	**Pn**	**04 57 15.2**	**0.0**
PB12	**IPOC Station P**	**0.94**	**316**	*i*P	**Pn**	**04 57 15.4**	**+0.2**
PB12				*i* S	**Sn**	**04 57 29.1**	**+0.2**
PB12				IAML		04 57 30.2	
	comp=E,10μm,0.2s						
PB12	**IPOC Station P**	**0.94**	**316**	*e*P	**Pn**	**04 57 15.0**	**-0.2**
PB12				IAML		04 57 31.8	
	comp=Z,7μm,0.4s						
PB16	**IPOC Station P**	**0.96**	**7**		**Pn**	**04 57 17.0**	**+1.1**
PB16	**IPOC Station P**	**0.96**	**7**	*i*P	**Pn**	**04 57 17.1**	**+1.1**
PB16				*e*S	**Sn**	**04 57 31.9**	**+1.8**
PB16	**IPOC Station P**	**0.96**	**7**	*e*P	**Pn**	**04 57 17.0**	**+1.1**
PB16				IAML		04 57 34.8	
	comp=Z,5μm,0.6s						
TA02	**Huaiquique**	**1.07**	**205**		**Pn**	**04 57 16.5**	**-0.2**
TA02	**Huaiquique**	**1.07**	**205**	*e*P	**Pn**	**04 57 16.4**	**-0.2**
TA02				*e*S	**Sn**	**04 57 32.0**	**+0.4**
TA02	**Huaiquique**	**1.07**	**205**	*e*P	**Pn**	**04 57 16.0**	**-0.7**
TA02				IAML		04 57 36.1	
	comp=Z,5μm,0.3s						
AP01	**Chacalluta**	**1.14**	**324**	Pn	**Pn**	**04 57 17.2**	**-0.2**
AP01	**Chacalluta**	**1.14**	**324**	*e*P	**Pn**	**04 57 17.6**	**+0.2**
AP01				*e*S	**Sn**	**04 57 33.5**	**+0.6**
AP01	**Chacalluta**	**1.14**	**324**	*e*P	**Pn**	**04 57 18.0**	**+0.6**
AP01				IAML		04 57 36.2	
	comp=Z,6μm,0.3s						
TA01	**Diego Aracena**	**1.36**	**202**	Pn	**Pn**	**04 57 20.2**	**-0.

AF01	**San Pedro de A**	**3.88**	**160**			**Pn**	**04 57 56.7**	**+2.3**
PB15	**IPOC Station P**	**3.90**	**178**			**Pn**	**04 57 55.2**	**+0.7**
PB15	**IPOC Station P**	**3.90**	**178**	*eP*		**Pn**	**04 57 55.0**	**+0.5**
PB15	**IPOC Station P**	**3.90**	**178**	*eP*		**Pn**	**04 57 55.0**	**+0.5**
PB15				IAML			04 59 04.5	
	comp=Z,963nm,0.5s							
YJA	**Yavi**	**4.81**	**127**	*eP*		**Pn**	**04 58 11.0**	**+3.9**
PB14	**IPOC Station P**	**5.35**	**187**	Pn		**Pn**	**04 58 15.4**	**+0.9**
PB14	**IPOC Station P**	**5.35**	**187**	*eP*		**Pn**	**04 58 13.0**	**-1.4**
PB14				IAML			04 59 39.6	
	comp=Z,170nm,0.6s							
GO02	**Mina Guanaco**	**5.84**	**180**	Pn		**Pn**	**04 58 21.0**	**-0.1**
AC01	**Pan de Azucar**	**6.88**	**187**	Pn		**Pn**	**04 58 34.2**	**-0.8**
GO03	**Copiap**	**8.28**	**184**	Pn		**Pn**	**04 58 55.4**	**+1.2**
SIV	**San Ignacio**	**8.80**	**69**	P		**Pn**	**04 58 59.8**	**-1.6**
	comp=Z,17nm,0.6s,baz=254,slow=11,SNR=50							
SIV				S		**Sn**	**05 00 37.6**	**-1.4**
	comp=Z,3.0nm,0.5s,baz=176,slow=22,SNR=1.5							
ETMB	**Extrema**	**9.99**	**20**	*eP*		**Pn**	**04 59 16.2**	**-1.3**
CO05	**La Serena**	**10.68**	**188**	Pn		**Pn**	**04 59 26.0**	**-0.8**
PTLB	**Pontes e Lacer**	**10.73**	**71**	*eP*		**Pn**	**04 59 24.0**	**-3.6**
VILB	**Vilhena**	**11.04**	**57**	*eP*		**Pn**	**04 59 28.1**	**-3.9**
CZSB	**Cruzeiro do Su**	**11.88**	**345**	*eP*		**Pn**	**04 59 44.7**	**+1.5**
ANTJ	**Antonio Joao (**	**13.04**	**104**	*eP*		**Pn**	**04 59 57.3**	**-1.7**
CPUP	**Villa Florida**	**13.33**	**124**	P		**Pn**	**05 00 02.1**	**-0.6**
	comp=Z,3.1nm,0.7s,baz=309,slow=13,SNR=8.2							
SALV	**Santo Antonio**	**13.72**	**78**	*eP*		**Pn**	**05 00 05.9**	**-2.0**
MT03	**Universidad Ad**	**14.16**	**183**	Pn		**Pn**	**05 00 13.5**	**-0.2**
PDRB	**Porto dos Gac**	**14.59**	**60**	*eP*		**Pn**	**05 00 15.9**	**-3.4**
MCR1	**Marechal Candi**	**15.36**	**112**	*eP*		**Pn**	**05 00 29.6**	**+0.5**
BO02	**Sierra Bellavi**	**15.47**	**184**	Pn		**Pn**	**05 00 31.2**	**+0.7**
BO02				IAmb		IAmb	05 00 35.8	
	comp=Z,18nm,0.9s							
CLDB	**Colider**	**15.76**	**60**	*eP*		**Pn**	**05 00 33.4**	**-0.9**
TRCB	**Terra Rica**	**16.25**	**105**	*eP*		**Pn**	**05 00 39.3**	**-1.0**
H03N1	**Juan Fernandez**	**16.34**	**209**	T		T	05 17 11.9	
	baz=32,slow=73,SNR=179							
H03N2	**Juan Fernandez**	**16.35**	**209**	T		T	05 17 11.7	
	baz=32,slow=73,SNR=179							
H03N3	**Juan Fernandez**	**16.36**	**209**	T		T	05 17 10.7	
	baz=32,slow=73,SNR=168							
PTGB	**Pitanga**	**17.16**	**111**	*eP*		**P**	**05 00 53.8**	**+1.7**
ITRB	**Iturama**	**18.18**	**94**	*eP*		**P**	**05 01 03.6**	**+0.3**
NPGB	**Novo Progresso**	**18.46**	**51**	*eP*		**P**	**05 01 04.6**	**-1.8**
PORT	**Chimborazo Vol**	**19.85**	**332**	P		**Pn**	**05 01 25.0**	**+0.6**
PORT				IAmb		IAmb	05 02 03.8	
	comp=Z,10nm,1.1s							
CHSH	**Refugio Sur-Vo**	**19.87**	**332**	P		**Pn**	**05 01 24.3**	**-0.3**
CHSH				IAmb		IAmb	05 01 37.3	
	comp=Z,12nm,0.8s							
GO06	**Curarrehue**	**20.28**	**184**	P		Pn	05 01 27.9	-0.9
GO06				IAmb		IAmb	05 01 29.5	
	comp=Z,16nm,1.5s							
SLOR	**San Lorenzo -**	**20.39**	**334**	P		Pn	05 01 29.8	-0.8
BDFB	**Brasilia**	**20.94**	**83**	P		**P**	**05 01 33.6**	**+0.1**
	comp=Z,3.4nm,0.5s,baz=259,slow=11,SNR=11							
	comp=Z,3.4nm,0.5s							
BDFB	**Brasilia**	**20.94**	**83**	*eP*		**P**	**05 01 34.7**	**+1.2**
OTAV	**Otavalo**	**21.25**	**335**	*eP*		**P**	**05 01 41.6**	**+4.5**
PLCA	**Paso Flores**	**21.38**	**182**	P		**P**	**05 01 37.1**	**-0.8**
	comp=Z,2.9nm,1.0s,baz=355,slow=12,SNR=6.0							
	comp=Z,2.9nm,1.0s							
MALB	**Monte Alegre**	**22.96**	**43**	*eP*		**P**	**05 01 56.1**	**+1.4**
ROSC	**El Rosal**	**24.42**	**349**	P		**P**	**05 02 13.6**	**+5.1**
ROSC				IAmb		IAmb	05 02 53.3	
	comp=Z,4.3nm,0.5s							
MDP	**Montagnes des**	**29.46**	**36**	P		**P**	**05 02 51.2**	**-2.1**
	comp=Z,2.9nm,0.9s,baz=211,slow=8.3,SNR=1.7							
	comp=Z,2.9nm,0.9s							
DBIC	**Dimbokro**	**68.79**	**75**	P		**P**	**05 07 51.7**	**-1.3**
	comp=Z,6.0nm,1.1s,baz=281,slow=14,SNR=2.4							
	comp=Z,6.0nm,1.1s							
PDAR	**Pinedale Array**	**71.87**	**330**	P		**P**	**05 08 14.1**	**+2.7**
	comp=Z,0.1nm,0.4s,baz=157,slow=4.9,SNR=1.8							
	comp=Z,0.1nm,0.4s							
NVAR	**Mina Array Bea**	**73.34**	**322**	P		**P**	**05 08 21.1**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=155,slow=5.9,SNR=6.7							
	comp=Z,0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**77.28**	**71**	P		**P**	**05 08 40.5**	**-2.6**
	comp=Z,1.0nm,0.5s,baz=256,slow=5.1,SNR=3.3							
	comp=Z,1.0nm,0.5s							
MAW	**Mawson**	**86.63**	**164**	P		**P**	**05 09 32.1**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=150,slow=10,SNR=1.7							
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**88.89**	**341**	P		**P**	**05 09 41.4**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=132,slow=4.8,SNR=9.3							
	comp=Z,1.8nm,0.6s							
H11S2	**WAKE ISLAND Hyl**	**26.89**	**279**	T		T	07 35 08.3	
	baz=101,slow=74,SNR=145							
H11S1	**WAKE ISLAND Hyl**	**26.90**	**279**	T		T	07 35 14.9	
	baz=101,slow=74,SNR=182							
H11S3	**WAKE ISLAND Hyl**	**26.91**	**279**	T		T	07 35 12.3	
	baz=101,slow=74,SNR=114							
H11N3	**WAKE ISLAND Hyl**	**26.92**	**281**	T		T	07 35 15.7	
	baz=101,slow=74,SNR=91							
H11N2	**WAKE ISLAND Hyl**	**26.93**	**281**	T		T	07 35 18.4	
	baz=101,slow=74,SNR=66							
H11N1	**WAKE ISLAND Hyl**	**26.93**	**281**	T		T	07 35 16.9	
	baz=101,slow=74,SNR=83							
WRA	**Warramunga Arr**	**134.47**	**212**	PKP		**PKPdf**	**05 16 05.7**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=140,slow=2.1,SNR=5.8							
ZALV	**Zalesovo Beam**	**140.24**	**23**	PKP		**PKPdf**	**05 16 16.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=318,slow=6.0,SNR=1.8							
MKAR	**Makanchi Array**	**144.22**	**34**	PKP		**PKPab**	**05 16 21.3**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=323,slow=2.2,SNR=1.8							
SONM	**Songino Array**	**151.35**	**6**	PKPbc		**PKPbc**	**05 16 40.7**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=259,slow=0.5,SNR=4.5							

*NEIC **21** 05:13:52.1±0.6, 55.3°S×0.1°×30.5°W±0.2, h10km±2km, mb4.4/9, Error ellipse: s-maj=29.9km s-min=9.6km az=39.0*

*IDC **21** 05:13:53.2±4.2, 55.16°S×30.71°W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=145.5km s-min=56.0km az=177.0*

ISC 21 05:13:51.9±0.7, 55.4°S±0.1°×30.5°W±0.1, h10km, n13, σ1s25/13, mb4.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.62**	**285**	Pn	**Pn**	**05 14 47.5**	**-0.4**
SNAA	**Sanae**	**20.16**	**155**	P	**P**	**05 18 26.3**	**+0.3**
TRQA	**Tornquist**	**27.32**	**296**	P	**P**	**05 19 36.3**	**-0.3**
TRQA				IAmb	IAmb	05 19 52.1	
	comp=Z,5.6nm,1.1s						
QSPA	**South Pole Qui**	**34.89**	**180**	P	**P**	**05 20 44.8**	**+1.5**
QSPA				IAmb	IAmb	05 20 53.8	
	comp=Z,5.9nm,1.3s						
MAW	**Mawson**	**41.81**	**145**	P	**P**	**05 21 38.9**	**-2.1**
LPAZ	**La Paz**	**48.46**	**308**	P	**P**	**05 22 36.2**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=154,slow=4.9,SNR=4.4						
	comp=Z,1.4nm,0.7s						
LPAZ	**La Paz**	**48.46**	**308**	P	**P**	**05 22 34.8**	**-0.3**
LPAZ				IAmb	IAmb	05 22 37.9	
	comp=Z,3.1nm,1.1s						
RCBR	**Riachuelo**	**49.58**	**353**	P	**P**	**05 22 42.2**	**-0.8**
LBTB	**Lobatse**	**50.65**	**77**	P	**P**	**05 22 50.8**	**-0.4**
LBTB				IAmb	IAmb	05 23 33.6	
	comp=Z,10nm,1.4s						
SDV	**Santo Domingo**	**72.21**	**318**	P	**P**	**05 25 16.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**73.43**	**33**	P	**P**	**05 25 26.5**	**+2.4**
	comp=Z,0.7nm,0.9s,baz=207,slow=5.0,SNR=1.9						
	comp=Z,0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.43**	**33**	P	**P**	**05 25 24.8**	**+0.6**
TORD				IAmb	IAmb	05 26 02.6	
	comp=Z,5.6nm,1.5s						
ILAR	**Eielson Array**	**148.26**	**313**	PKPbc	**PKiKP**	**05 33 38.5**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=107,slow=1.4,SNR=7.8						

*SFS **21** 05:56:02.0, 35.55°N×3.85°W, ML1.8, ALBORAN SUR CNRM **21** 05:56:02.5, 35.66°N×3.66°W, h8km, ml2.5*

*MDD **21** 05:56:02.1±0.5, 35.56°N×3.86°W, h0km, mb_Lg1.8/4, Error ellipse: s-maj=4.8km s-min=3.5km az=34.0*

ISC 21 05:56:02.2±1.0, 35.64°N±0.02°×3.73°W±0.03, h14km±10km, n17, σ1s27/32, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.46**	**202**	P	**Pg**	**05 56 10.9**	**-0.4**
PALE				S	**Sb**	**05 56 19.2**	**+0.5**
WMELI	**Melilla**	**0.71**	**117**	P	**Pb**	**05 56 16.7**	**+0.3**
WMELI				S	**Sb**	**05 56 26.1**	**+0.1**
EMEL	**Melilla**	**0.72**	**118**	Pg	**Pb**	**05 56 17.0**	**+0.5**
EMEL				Sg	**Sb**	**05 56 26.1**	**-0.1**
GOG	**Mont Gurugu**	**0.73**	**125**	P	**Pb**	**05 56 17.0**	**+0.2**
GOG				S	**Sg**	**05 56 26.0**	**-0.2**
CHAS	**Isla Isabel II**	**1.16**	**113**	P	**Pb**	**05 56 23.2**	**-0.8**
CHAS				S	**Sb**	**05 56 37.3**	**-1.5**
ELGU	**Los Guajares,**	**1.23**	**4**	Pn	**Pg**	**05 56 26.3**	**+0.4**
ELGU				Sn	**Sn**	**05 56 43.7**	**+2.2**
ELGU				*i* Vmb_Lg		05 56 45.3	
EMIJ	**Mijas**	**1.25**	**318**	Pg	**Pg**	**05 56 25.4**	**-0.9**
EMIJ				Sg	**Sn**	**05 56 41.6**	**-0.3**
EMIJ				*i* Vmb_Lg		05 56 43.9	
ECEU	**Ceuta**	**1.36**	**281**	Pg	**Pn**	**05 56 25.6**	**-1.1**
ECEU				*i* Vmb_Lg		05 56 41.6	
CHEFC	**Chefchaouen**	**1.42**	**248**	P	**Pg**	**05 56 30.0**	**+0.5**
CHEFC				S	**Sg**	**05 56 50.1**	**+2.2**
EBER	**Berja**	**1.43**	**28**	Pn	**Pg**	**05 56 29.3**	**-0.4**
EBER				Sn	**Sg**	**05 56 50.6**	**+2.3**
EGOR	**Sierra Gorda,**	**1.50**	**348**	Pn	**Pg**	**05 56 31.3**	**+0.3**
EGOR				Sn	**Sg**	**05 56 50.1**	**-0.4**
EGOR				*i* Vmb_Lg		05 56 59.7	
JBK	**JBK**	**1.62**	**143**	P	**Pn**	**05 56 29.6**	**-0.9**
JBK				S	**Sb**	**05 56 52.6**	**+0.4**
LCRM	**LCR**	**2.16**	**206**	P	**Pb**	**05 56 41.6**	**+0.4**
LCRM				S	**Sg**	**05 57 11.1**	**-0.6**
EQES	**Quesada**	**2.22**	**14**	Sn	**Sg**	**05 57 12.2**	**-1.5**
ECAB	**El Cabril**	**2.78**	**331**	Pn	**Pn**	**05 56 46.5**	**+0.2**
ECAB				Sn	**Sb**	**05 57 24.4**	**-1.3**
CZD	**Col de Zad**	**2.82**	**203**	P	**Pn**	**05 56 49.1**	**+2.0**
CZD				S	**Sb**	**05 57 24.2**	**-2.8**
MD31	**MD31**	**2.90**	**197**	P	**Pn**	**05 56 48.4**	**+0.4**
MD31				S	**Sb**	**05 57 26.6**	**-2.4**

*SOME **21** 06:06:44.0, 39.37°N×73.92°E, h10km*
*ISU **21** 06:06:45, 39.66°N×73.90°E, h16km*
*KRNET **21** 06:06:48.7±0.1, 39.53°N×73.62°E, mb2.9*

ISC 21 06:06:41.8±2.1, 39.37°N±0.09°×73.97°E±0.06, h9km±14km, n12, σ1s33/22, 8C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.47**	**322**	↑ *iP*	**Pg**	**06 07 11.1**	**+1.0**
	baz=27						
OHH				↑ *iS*	**Sn**	**06 07 27.5**	**-0.7**
	baz=27						
TSTA	**Tashata**	**1.67**	**317**	S	**Sb**	**06 07 33.2**	**-0.8**
ANR	**Andizhan**	**1.86**	**319**	S	**Sg**	**06 07 40.8**	**-0.8**
FRG	**Fergana**	**1.96**	**302**	P	**Pb**	**06 07 16.8**	**-1.0**
FRG				S	**Sn**	**06 07 40.7**	**+0.6**
ARLS	**Aral**	**2.51**	**6**	↑ *iP*	**Pg**	**06 07 30.7**	**+0.8**
	baz=13						
ARLS				↑ *iS*	**Sg**	**06 08 01.5**	**-0.9**
	baz=13						
BTK	**Batken**	**2.53**	**287**	P	**Pb**	**06 07 27.5**	**0.0**
BTK				S	**Sb**	**06 07 59.8**	**+1.1**
GAR	**Garm**	**2.86**	**264**	↑ *iP*	**Pb**	**06 07 34.1**	**+0.9**
	baz=59						
GAR				↑ *iS*	**Sb**	**06 08 07.2**	**-1.2**
	baz=59						
UCH	**Uchtor**	**2.89**	**8**	↑ *iP*	**Pg**	**06 07 36.5**	**-0.7**
	baz=14						
UCH				↑ *iS*	**Sb**	**06 08 11.2**	**+1.7**
	baz=14						
DGS	**Degeres**	**4.10**	**19**	*eP*	**Pg**	**06 08 01.0**	**+0.5**
	1.8nm,0.7s						
DGS				*eS*	**Sg**	**06 08 56.5**	**+2.9**
	3.6nm,0.8s						
KRBS	**Karabastau**	**4.51**	**16**	*eP*	**Pg**	**06 08 07.1**	**-1.2**
	0.7nm,0.2s						
KRBS				*eS*	**Sg**	**06 09 06.7**	**0.0**
	0.9nm,0.6s						
KUU	**Kurty**	**4.86**	**21**	*eP*	**Pg**	**06 08 12.7**	**-2.2**
	2.0nm,0.1s						
KUU				*eS*	**Sg**	**06 09 16.6**	**-1.2**
	3.3nm,0.7s						
ARXS	**Arharly**	**5.64**	**29**	*eP*	**Pg**	**06 08 28.9**	**-0.9**
	1.7nm,0.6s						
ARXS				*eS*	**Sg**	**06 09 44.2**	**+1.5**
	3.1nm,0.5s						

*IDC **21** 06:08:59.8±1.0, 3.80°S×131.12°E, h0km, mb3.8/6, mbtmp3.8/10, ML3.8/4, Error ellipse: s-maj=57.0km s-min=16.8km az=73.0*

*DJA **21** 06:09:03.0±0.4, 4°S±3°×13°2E±°, h94km±8km, M4.8/10, mb4.5/7, mB5.3/2, mBc6.5/2, MLv4.0/7, Ms(BB)4.0/10, Mw(mB)4.7/2, MwmBc5.8/2, MwMwp5.1/1, Mwp5.3/1*

ISC 21 06:09:03.5±0.7, 3.70°S±0.07°×131.48°E±0.06, h24km, n17, σ2s36/20, mb3.9/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.09**	**45**	P	**Pn**	**06 09 23.9**	**+0.7**
FAKI				S	**Sn**	**06 09 38.7**	**+1.2**
BNDI	**Bandanaira**	**1.78**	**242**	P	**Pb**	**06 09 36.0**	**+0.6**
BNDI				S	**Sb**	**06 10 01.9**	**+4.7**
SIJI	**Sorong**	**2.82**	**356**	Pn	**Pn**	**06 09 45.7**	**-1.4**
	3.8nm,0.3s,baz=248,slow=21,SNR=2.0						
SIJI				Sn	**Sn**	**06 10 17.2**	**-3.2**
	32nm,0.3s,baz=240,slow=23,SNR=5.2						
	14nm,0.2s						
LBMI	**Labuha**	**5.01**	**307**	P	**Pn**	**06 10 17.3**	**+0.1**
	0.2nm1µm56nm,0.5s						
SANI	**Sanana**	**5.73**	**286**	P	**Pn**	**06 10 26.2**	**-0.9**
	0.2nm34nm,0.4s						
GTOI	**Gorontalo**	**9.50**	**297**	P	**Pn**	**06 11 21.4**	**+2.5**
	6.5nm,0.6s						
APSI	**Ampana**	**10.21**	**285**	P	**Pn**	**06 11 29.3**	**+0.7**
	30nm,0.8s						
TWSI	**Taliwang, Sumb**	**15.35**	**250**	P	**P**	**06 12 43.4**	**+0.1**
	4µm3µm70nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.41**	**201**	Pn	**Pn**	**06 12 34.1**	**-5.4**
	0.5nm,0.3s,baz=16,slow=9.5,SNR=17						
	1.9nm,0.5s						
WRA	**Warramunga Arr**	**16.39**	**170**	Pn	**Pn**	**06 12 48.7**	**-3.3**
	0.3nm,0.3s,baz=347,slow=14,SNR=26						
WRA				Sn	Sn	06 15 44.3	-9.0
	0.3nm,0.3s,baz=354,slow=24,SNR=5.6						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**19.99**	**173**	P	**P**	**06 13 33.4**	**-1.1**
	0.8nm,0.3s,baz=348,slow=8.9,SNR=71						
	2.9nm,0.5s						
CTA	**Charters Tower**	**21.74**	**140**	P	**P**	**06 13 55.5**	**+2.1**
	4.0nm,0.6s,baz=320,slow=12,SNR=7.8						
	4.0nm,0.6s						
STKA	**Stephens Creek**	**29.60**	**162**	P	**P**	**06 15 07.6**	**+0.7**
	1.7nm,0.7s,baz=322,slow=10,SNR=3.5						
	1.7nm,0.7s						
SONM	**Songino Array**	**55.84**	**340**	P	**P**	**06 18 37.1**	**-1.9**
	0.4nm,0.5s,baz=165,slow=6.0,SNR=2.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**66.33**	**325**	P	**P**	**06 19 51.0**	**+0.8**
	0.2nm,0.4s,baz=110,slow=9.4,SNR=4.6						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**69.32**	**333**	P	**P**	**06 20 09.4**	**+0.6**
	0.5nm,0.4s,baz=102,slow=12,SNR=2.0						
	0.5nm,0.4s						
VNDA	**Vanda**	**75.53**	**173**	P	**P**	**06 20 44.8**	**-0.7**
	0.8nm,0.9s,baz=326,slow=6.2,SNR=5.3						
	0.8nm,0.9s						

*IDC **21** 06:12:08.6±1.0, 3.82°S×131.20°E, h0km, mb3.9/5, mbtmp3.9/9, ML4.0/3, Error ellipse: s-maj=50.2km s-min=17.6km az=80.0*

*DJA **21** 06:12:10.6±0.7, 4°S±5°×13°2E±°, h110km±10km, M4.0/5, mb4.3/2, mB5.1/1, MLv3.9/5, Mw(mB)4.5/1*

ISC 21 06:12:12.4±0.7, 3.76°S±0.06°×131.46°E±0.07, h35km, n12, σ3s71/16, mb3.9/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.15**	**43**	P	**Pn**	**06 12 31.9**	**-0.1**
FAKI				S	**Sn**	**06 12 46.5**	**0.0**
BNDI	**Bandanaira**	**1.72**	**244**	P	**Pn**	**06 12 43.4**	**+3.5**
SIJI	**Sorong**	**2.88**	**356**	Pn	**Pn**	**06 12 54.3**	**-1.6**
	10nm,0.2s,baz=180,slow=19						
SIJI				Sn	**Sn**	**06 13 25.5**	**-3.8**
	baz=253,slow=19						
SANI	**Sanana**	**5.72**	**287**	P	**Pn**	**06 13 34.1**	**-0.8**
	0.2nm33nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.35**	**201**	Pn	**Pn**	**06 15 44.4**	**-2.0**
	0.5nm,0.3s,baz=13,slow=10,SNR=9.9						
FITZ				Sn	**Sn**	**06 18 26.1**	**-9.3**
	0.1nm,0.3s,baz=273,slow=16,SNR=1.3						
	1.8nm,0.4s						

WRA	**Warramunga Arr**	**16.33**	**170**	Pn		**Pn**	**06 15 57.9**	**-1.2**
	0.5nm,0.3s,baz=358,slow=13,SNR=7.1							
WRA				Sn		**Sn**	**06 18 53.3**	**-6.0**
	0.3nm,0.3s,baz=344,slow=20,SNR=3.1							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**19.93**	**173**	P		**Pn**	**06 16 43.4**	**+0.2**
	0.8nm,0.3s,baz=347,slow=8.5,SNR=18							
	2.7nm,0.6s							
CTA	**Charters Tower**	**21.71**	**140**	P		**P**	**06 17 02.0**	**+1.4**
	5.6nm,0.7s,baz=318,slow=9.3,SNR=10							
	5.6nm,0.7s							
STKA	**Stephens Creek**	**29.55**	**162**	P		**P**	**06 18 15.1**	**+1.2**
	1.8nm,0.8s,baz=12,slow=13,SNR=3.3							
	1.8nm,0.8s							
PETK	**Petropavlovsk-**	**60.82**	**18**	P		**P**	**06 22 24.6**	**+3.7**
	0.6nm,0.5s,baz=92,slow=10,SNR=4.9							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**66.36**	**325**	P		**P**	**06 22 58.5**	**+0.8**
	0.2nm,0.4s,baz=118,slow=9.3,SNR=5.1							
	0.2nm,0.4s							
VNDA	**Vanda**	**75.47**	**173**	P		**P**	**06 23 53.9**	**+1.4**
	0.8nm,0.8s,baz=317,slow=6.7,SNR=5.5							
	0.8nm,0.8s							

IDC 21 06:29:34.7±4.3, 54.93°S×30.50°W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=150.0km s-min=57.7km az=175.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**48.19**	**308**	P	P	06 38 17.4	-0.2
	0.8nm,0.7s,baz=180,slow=10,SNR=1.6						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.07**	**33**	P	P	06 41 06.5	0.0
	0.3nm,0.8s,baz=200,slow=5.8,SNR=2.3						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**147.97**	**314**	PKPbc	PKPbc	06 49 19.8	-0.7
	0.6nm,0.7s,baz=92,slow=1.2,SNR=7.7						

*REN **21** 07:03:25.9±2.1, 37.62°N±0.02°×118.90°W±0.02, h3km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=198.0*

*NCEDC **21** 07:03:26.3±1.7, 37.62°N±0.02°×118.89°W±0.02, h1km±4km, Md3.0/86, ML2.5/14(REN), ML2.3/60(NEIC), Error ellipse: s-maj=2.7km s-min=2.1km az=190.0*

NEIC 21 07:03:27±1.9, 37.62°N±0.02°×118.90°W±0.02, h1km±5km, Error ellipse: s-maj=2.5km s-min=2.2km az=207.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGPM	**Gravel Pit**	**0.01**	**340**		Pg	07 03 27.2	-0.5
MLCM	**Laurel Creek C**	**0.01**	**241**		Pg	07 03 27.3	-0.5
MCBM	**Casa Benchmark**	**0.03**	**4**		Pg	07 03 27.3	-0.5
MCSM	**Casa Diablo Ho**	**0.04**	**352**		Pg	07 03 27.5	-0.3
MLAC	**Mammoth, Mammo**	**0.05**	**78**		Pg	07 03 27.8	-0.4
MEMM	**East Mammoth H**	**0.06**	**325**		Pg	07 03 28.0	-0.3
MCVM	**Convict Lake**	**0.06**	**118**		Pg	07 03 27.9	-0.5
OMMB	**Old Mammoth Mi**	**0.08**	**266**	Sg	Sg	07 03 29.7	-0.2
MLIM	**Lincoln Peak**	**0.10**	**281**		Pg	07 03 29.0	0.1
MDYM	**Dry Creek**	**0.10**	**293**		Pg	07 03 28.9	-0.1
MMPM	**Mammoth Pass**	**0.10**	**265**		Pg	07 03 28.9	-0.2
MMSM	**Mammoth Summit**	**0.11**	**276**		Pg	07 03 29.1	-0.1
MRDM	**Red Cones**	**0.13**	**261**		Pg	07 03 29.4	-0.2
MDPB	**Devils Postpil**	**0.14**	**275**		Pg	07 03 29.6	-0.3
MDPB					Sg	07 03 29.6	-2.2
MDPB				IAML		07 03 32.1	
	comp=E,2µm,0.2s						
MDCM	**Deadman Creek**	**0.14**	**309**		Pg	07 03 29.5	-0.4
RCCR	**Rock Creek Can**	**0.19**	**133**		Pg	07 03 30.3	-0.5
ORC	**Owens River**	**0.19**	**85**		Pg	07 03 30.4	-0.4
BENR	**Benton**	**0.28**	**70**		Pg	07 03 31.9	-0.5
SCHCA	**Scheelite**	**0.31**	**147**		Pg	07 03 32.4	-0.5
MRCM	**Red Rock Canyo**	**0.32**	**80**		Pg	07 03 32.8	-0.3
MCDM	**Chidago Canyon**	**0.37**	**101**		Pg	07 03 34.1	0.0
MTUM	**Tungsten Hills**	**0.38**	**135**		Pg	07 03 33.9	-0.4
MFBM	**Five Bridges**	**0.42**	**117**		Pg	07 03 35.0	0.0
MLNR	**Milner Canyon**	**0.44**	**93**		Pg	07 03 35.3	-0.2
KCC	**Kaiser Creek**	**0.45**	**229**		Pg	07 03

ISA	**Isabella, Lake**	**1.98**	**170**		Pn	07 04 02.7	+1.0
ISA	**Isabella, Lake**	**1.98**	**170**	Pn	Pn	07 04 00.9	-0.8
WCT	**Wildcat Mounta**	**1.99**	**114**		Pn	07 04 01.1	-0.8
WCT				IAML		07 04 34.5	
	comp=E,19nm,0.7s						
WCT				IAML		07 04 36.2	
	comp=N,17nm,0.5s						
BBGB	**Big Mountain B**	**2.00**	**239**		Pn	07 04 01.6	-0.4
CTM	**Castle Mountai**	**2.04**	**215**		Pn	07 04 03.4	+0.8
VPK	**Verdi Peak**	**2.06**	**335**		Pn	07 04 05.0	-0.3
DONR	**Donner Summit**	**2.06**	**328**		Pb	07 04 04.6	-0.7
PSMM	**Smith Mountain**	**2.06**	**222**		Pn	07 04 03.1	+0.3
BBNM	**San Benito**	**2.06**	**238**		Pn	07 04 03.9	+1.1
CMMM	**Mount Mocho**	**2.07**	**266**		Pn	07 04 03.2	+0.3
PMPB	**Monarch Peak**	**2.07**	**228**		Pn	07 04 01.7	-1.2
LRV	**Little Rabbit**	**2.07**	**236**		Pn	07 04 03.8	+0.8
PSRM	**Scobie Ranch**	**2.08**	**213**		Pn	07 04 03.7	+0.7
HFEM	**San Felipe**	**2.09**	**253**		Pn	07 04 03.8	+0.6
GHS	**Gilroy Hot Spr**	**2.10**	**256**		Pn	07 04 03.8	+0.6
PPTM	**Peach Tree Val**	**2.10**	**225**		Pn	07 04 04.0	+0.7
BVL	**Bear Valley**	**2.11**	**241**		Pn	07 04 03.5	+0.1
PHFM	**Heflinger Ranc**	**2.11**	**215**		Pn	07 04 03.9	+0.4
PAHR	**Pah Rah Range**	**2.12**	**350**		Pn	07 04 02.5	-1.2
PMRM	**Maxey Ranch**	**2.12**	**211**		Pn	07 04 04.2	+0.6
PSTM	**Stockdale Moun**	**2.12**	**218**		Pn	07 04 03.9	+0.3
PKD	**Bear Valley Ra**	**2.13**	**219**		Pn	07 04 04.0	+0.4
PHPM	**Hope Ranch**	**2.13**	**220**		Pn	07 04 04.2	+0.4
BPIM	**Pinnacles**	**2.14**	**239**		Pn	07 04 04.6	+0.9
PVCM	**Vineyard Canyo**	**2.14**	**218**		Pn	07 04 04.6	+0.7
PSNM	**Stone Corral**	**2.14**	**212**		Pn	07 04 04.2	+0.3
HSPM	**Sheep**	**2.15**	**257**		Pn	07 04 04.3	+0.3
PEAR	**Peavine Mounta**	**2.15**	**338**		Pb	07 04 06.2	-0.7
BJOM	**Mount Johnson**	**2.17**	**244**		Pn	07 04 05.0	+0.9
THIS	**South End of C**	**2.17**	**210**		Pn	07 04 04.8	+0.6
PAGB	**Antelope Grade**	**2.17**	**210**		Pn	07 04 03.3	-1.0
PAGB				IAML		07 04 50.3	
	comp=N,34nm,0.8s						
PKLM	**Kerr Lake**	**2.18**	**213**		Pn	07 04 04.6	+0.3
MHC	**Mount Hamilton**	**2.20**	**264**		Pn	07 04 05.6	+0.8
TPNV	**Topopah Spring**	**2.22**	**107**	Pn	Pn	07 04 03.6	-1.4
TPNV				IAML		07 04 46.4	
	comp=N,20nm,1.0s						
TPNV				IAML		07 04 48.4	
	comp=N,15nm,0.9s						
PWKM	**Work Ranch**	**2.22**	**216**		Pn	07 04 05.3	+0.4
PTRM	**Twissleman Ran**	**2.23**	**209**		Pn	07 04 05.7	+0.6
PPO	**Portuguese Can**	**2.23**	**219**		Pn	07 04 05.5	+0.5
TRAM	**Private Proper**	**2.23**	**210**		Pn	07 04 04.9	-0.2
BSGM	**Shirttail Gulc**	**2.24**	**238**		Pn	07 04 05.8	+0.7
SCZ	**Santa Cruz**	**2.25**	**244**		Pn	07 04 05.7	+0.4
BJCM	**Johnson Can.**	**2.26**	**243**		Pn	07 04 05.8	+0.3
SDH	**Striped Hills**	**2.27**	**115**		Pn	07 04 05.7	+0.1
TCHL	**Shandon**	**2.27**	**213**		Pn	07 04 06.4	+0.7
GWY	**Greenwater Val**	**2.29**	**128**	Pn	Pn	07 04 04.9	-1.1
LOY	**Loyalton**	**2.29**	**333**		Pb	07 04 08.5	-0.7
QSM	**Queen of Sheba**	**2.32**	**135**		Pn	07 04 05.3	-1.0
CPY	**CP-1**	**2.37**	**106**		Pn	07 04 07.4	+0.4
BSMM	**Soledad Missio**	**2.37**	**239**		Pn	07 04 07.9	+0.8
PCCM	**Crazy Canyon**	**2.37**	**231**		Pn	07 04 07.9	+0.9
TSCN	**Private Proper**	**2.38**	**210**		Pn	07 04 07.9	+0.8
AMDNV	**Amargosa**	**2.40**	**118**		Pn	07 04 08.9	+1.6
HAST	**Hastings Reser**	**2.45**	**241**		Pn	07 04 08.3	+0.2
BCWM	**Chews Ridge**	**2.51**	**239**		Pn	07 04 09.6	+0.7
BCH	**Branch Mountai**	**2.61**	**202**		Pn	07 04 10.9	+0.6

NOU 21 *07:07:48.0*, **14°.95S×167°.13E, h15km, MLv4.6/**14,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.94**	**160**	P	Pn	07 08 34.4	+0.2
RTV	**Rentapao**	**3.09**	**156**	P	Pn	07 08 37.0	+0.8
KOUNC	**Koumac, New Ca**	**6.19**	**206**	P	Pn	07 09 19.4	+0.4
MARNC	**Mare, Loyalty**	**6.55**	**173**	P	Pn	07 09 22.9	-1.0
YATNC	**Mamie plateau,**	**7.08**	**182**	P	Pn	07 09 29.4	-1.7
DZM	**Mont Dzumac**	**7.11**	**185**	P	Pn	07 09 31.2	-0.5
NOUC	**Port Laguerre**	**7.16**	**186**	P	Pn	07 09 32.1	-0.1
ONTNC	**Ouen Toro**	**7.35**	**185**	P	Pn	07 09 35.3	+0.5
OUENC	**Ouen Island, N**	**7.43**	**182**	P	Pn	07 09 36.0	0.0

*VAO **21** 07:13:59.6±0.3, 16°.08S×73°.98W, h35km, mb4.5*
*NEIC **21** 07:14:00.6±2.3, 16°.19S±0°.07×74°.06W±0°.09, h35km±2km, mb4.6/24, ML4.8(ARE), Error ellipse: s-maj=15.7km s-min=10.3km az=242.0*
*GUC **21** 07:14:01.2±0.8, 16°.44S×74°.06W, h20km±11km, ML4.7*
*ARE **21** 07:14:01±3.2, 16°.20S±0°.07×73°.86W±0°.09, h36km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=147.0*
*IDC **21** 07:14:02.2±0.7, 15°.98S×73°.73W, h57km±5km, mb3.8/9, mbtmp4.2/12, MS3.3/5, Error ellipse: s-maj=23.6km s-min=15.7km az=36.0*

ISC 21 07:14:01.5±0.4, 16°.17S±0°.06×73°.89W±0°.07, h54km, n133, σ1°.19/127, mb4.5/18, MS3.4/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**4.18**	**126**	Pn	**Pn**	**07 15 03.1**	**+0.2**
PB12	**IPOC Station P**	**4.18**	**126**	*eP*	**Pn**	**07 15 03.2**	**+0.3**
PB16	**IPOC Station P**	**4.71**	**118**		**Pn**	**07 15 12.0**	**+1.4**
PB16	**IPOC Station P**	**4.71**	**118**	*eP*	**Pn**	**07 15 12.7**	**+2.2**
NNA	**Nana**	**5.05**	**325**	P	**Pn**	**07 15 15.2**	**+0.4**
	7.8nm,0.3s,baz=182,slow=11,SNR=12						
NNA				S	Sn	07 16 21.0	+9.1
	130nm,0.6s,baz=242,slow=22,SNR=2.2						
NNA				LR	LR	07 17 09.0	
	comp=Z,133nm,19.7s,baz=147,slow=37						
NNA	**Nana**	**5.05**	**325**	Pn	**Pn**	**07 15 12.1**	**-2.8**
TA02	**Huaiquique**	**5.42**	**139**	Pn	**Pn**	**07 15 20.2**	**+0.4**
TA02				Sn	**Sn**	**07 16 15.9**	**-5.1**
LPAZ	**La Paz**	**5.53**	**92**	P	**Pn**	**07 15 24.8**	**+2.9**
	32nm,0.4s,baz=276,slow=10.0,SNR=146						
LPAZ				LR	LR	07 17 46.0	
	comp=Z,206nm,20.0s,baz=292,slow=42						
LPAZ	**La Paz**	**5.53**	**92**	Pn	Pn	07 15 27.5	+5.6
TA01	**Diego Aracena**	**5.61**	**142**		**Pn**	**07 15 22.6**	**+0.1**
GO01	**Chusmiza**	**5.66**	**129**	Pn	**Pn**	**07 15 25.8**	**+2.1**
GO01	**Chusmiza**	**5.66**	**129**	*eP*	**Pn**	**07 15 24.8**	**+1.2**
PB02	**IPOC Station P**	**6.37**	**144**		**Pn**	**07 15 33.5**	**+0.6**
PB01	**IPOC Station P**	**6.40**	**140**		**Pn**	**07 15 34.3**	**+1.0**
PB07	**IPOC Station P**	**6.70**	**146**		**Pn**	**07 15 37.9**	**+0.4**
PB04	**IPOC Station P**	**7.08**	**151**		**Pn**	**07 15 42.7**	**0.0**
PB09	**IPOC Station P**	**7.12**	**143**		**Pn**	**07 15 45.0**	**+1.7**
PB06	**IPOC Station P**	**7.67**	**149**	Pn	**Pn**	**07 15 51.0**	**+0.1**
LVC	**Limon Verde**	**7.94**	**145**	P	**Pn**	**07 15 56.8**	**+2.1**
	11nm,0.2s,baz=339,slow=9.0,SNR=49						
LVC				S	**Sn**	**07 17 21.0**	**-2.4**
	84nm,0.5s,baz=63,slow=20,SNR=23						
LVC	**Limon Verde**	**7.94**	**145**		**Pn**	**07 15 56.7**	**+2.0**
LVC	**Limon Verde**	**7.94**	**145**	*eP*	**Pn**	**07 15 55.2**	**+0.4**
CZSB	**Cruzeiro do Su**	**8.46**	**8**	Pn	**Pn**	**07 16 02.5**	**+0.8**
CZSB	**Cruzeiro do Su**	**8.46**	**8**	*eP*	**Pn**	**07 15 59.8**	**-1.9**
AF01	**San Pedro de A**	**8.63**	**142**	Pn	**Pn**	**07 16 03.2**	**-0.8**
PB14	**IPOC Station P**	**9.03**	**159**	Pn	**Pn**	**07 16 08.8**	**-0.8**
ETMB	**Extrema**	**9.78**	**51**	Pn	**Pn**	**07 16 19.7**	**0.0**
ETMB	**Extrema**	**9.78**	**51**	*eP*	**Pn**	**07 16 19.3**	**-0.4**
GO02	**Mina Guanaco**	**9.81**	**157**		**Pn**	**07 16 20.7**	**+0.4**
AC02	**Maricunga**	**11.50**	**158**	Pn	**Pn**	**07 16 44.3**	**+0.8**
AC06	**Mina Casimiro**	**11.61**	**164**		**Pn**	**07 16 44.0**	**-0.6**
GO03	**Copiap**	**11.86**	**164**	Pn	**Pn**	**07 16 49.0**	**+0.9**
SIV	**San Ignacio**	**12.32**	**91**	P	**Pn**	**07 16 53.2**	**-1.1**
	3.4nm,0.4s,baz=287,slow=9.0,SNR=16						
AC05	**El Transito**	**13.04**	**166**	Pn	**Pn**	**07 17 03.1**	**-1.1**
VILB	**Vilhena**	**13.63**	**78**	Pn	**Pn**	**07 17 12.5**	**+0.3**
VILB	**Vilhena**	**13.63**	**78**	*eP*	**Pn**	**07 17 11.6**	**-0.6**
BOSC	**San Juan Bosco**	**13.71**	**340**		**Pn**	**07 17 12.4**	**-1.1**
PTLB	**Pontes e Lacer**	**14.21**	**89**		**Pn**	**07 17 19.7**	**-0.3**
PTLB	**Pontes e Lacer**	**14.21**	**89**	*eP*	**Pn**	**07 17 20.1**	**0.0**
PDRB	**Porto dos Gac**	**17.26**	**77**	*eP*	**P**	**07 17 59.9**	**+0.1**
SALV	**Santo Antonio**	**17.49**	**92**	*eP*	**Pn**	**07 18 01.7**	**-0.1**
H03N1	**Juan Fernandez**	**17.79**	**194**	T	T	07 36 30.0	
	baz=16,slow=74,SNR=5468						
H03N2	**Juan Fernandez**	**17.79**	**194**	T	T	07 36 37.9	
	baz=16,slow=74,SNR=3916						
H03N3	**Juan Fernandez**	**17.80**	**194**	T	T	07 36 31.2	
	baz=16,slow=74,SNR=5677						
ANTJ	**Antonio Joao (**	**17.86**	**112**	*eP*	**P**	**07 18 07.6**	**+1.2**
MACA	**Manacapuru-AM**	**18.32**	**47**		**Pn**	**07 18 13.1**	**+1.1**
MACA				IAmb	IAmb	07 18 28.2	
	comp=Z,17nm,0.8s						
MACA	**Manacapuru-AM**	**18.32**	**47**	*eP*	**Pn**	**07 18 11.5**	**-0.4**
CLDB	**Colider**	**18.35**	**76**	*eP*	**P**	**07 18 11.8**	**-0.1**
CPUP	**Villa Florida**	**18.43**	**126**	*eP*	**P**	**07 18 13.2**	**+0.6**
BO02	**Sierra Bellavi**	**18.75**	**172**	P	**Pn**	**07 18 17.9**	**+0.7**
NPGB	**Novo Progresso**	**20.27**	**66**	*eP*	**P**	**07 18 31.6**	**-1.2**
MCR1	**Marechal Candi**	**20.34**	**117**	*eP*	Pn	07 18 35.3	-0.7
ITQB	**Itaqui**	**20.78**	**133**	*eP*	**P**	**07 18 39.3**	**+1.1**
ROSC	**El Rosal**	**20.88**	**359**	P	**P**	**07 18 40.5**	**+0.8**
ROSC				IAmb	IAmb	07 19 09.0	
	comp=Z,20nm,0.9s						
TRCB	**Terra Rica**	**21.08**	**112**	P	**P**	**07 18 41.0**	**-0.6**
TRCB				IAmb	IAmb	07 18 48.9	
	comp=Z,18nm,0.5s						
TRCB	**Terra Rica**	**21.08**	**112**	*eP*	**P**	**07 18 42.4**	**+0.9**
ITTB	**Itaituba**	**21.34**	**59**	*eP*	**P**	**07 18 43.8**	**-0.5**
UNIS	**Unistalda (Bra**	**21.56**	**130**	*eP*	**P**	**07 18 48.0**	**+1.4**
CRSM	**Crissiumal (Br**	**21.56**	**125**	*eP*	**P**	**07 18 47.0**	**+0.4**
FRBT	**Francisco Belt**	**21.72**	**120**	*eP*	**P**	**07 18 48.9**	**+0.6**
PCMB	**Pacaembu**	**22.07**	**108**	*eP*	**P**	**07 18 52.5**	**+0.4**
PTGB	**Pitanga**	**22.12**	**116**	*eP*	**P**	**07 18 54.6**	**+1.9**
RODS	**Rosario do Sul**	**22.18**	**133**	*eP*	**P**	**07 18 53.4**	**+0.2**
SNDB	**Serra Nova Dou**	**22.30**	**82**	*eP*	**P**	**07 18 54.1**	**-0.6**
BOAV	**Boa Vista**	**22.69**	**37**	P	**P**	**07 18 58.6**	**-0.1**
BOAV				IAmb	IAmb	07 19 07.4	
	comp=Z,6.0nm,0.9s						
BOAV	**Boa Vista**	**22.69**	**37**	*eP*	**P**	**07 18 58.6**	**-0.1**
ITAB	**Concordia**	**22.98**	**122**	*eP*	**P**	**07 19 03.7**	**+2.0**
LR03	**Panguipulli**	**23.42**	**177**	P	**P**	**07 19 04.6**	**-1.2**
MALB	**Monte Alegre**	**24.00**	**56**	*eP*	**P**	**07 19 11.7**	**+0.3**
PLTB	**Pedras Altas**	**24.11**	**134**	*eP*	**P**	**07 19 13.3**	**+0.9**
BB19B	**Bebedouro**	**24.51**	**105**	*eP*	**P**	**07 19 17.1**	**+1.0**
IPMB	**Ipameri, GO**	**24.60**	**98**	*eP*	**P**	**07 19 17.3**	**+0.2**
PLCA	**Paso Flores**	**24.65**	**174**	P	**P**	**07 19 17.8**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=320,slow=11,SNR=4.0						
	comp=Z,1.5nm,0.8s						
PLCA	**Paso Flores**	**24.65**	**174**	P	**P**	**07 19 18.3**	**+1.1**
PLCA	**Paso Flores**	**24.65**	**174**	*eP*	**P**	**07 19 18.1**	**+0.9**
BDFB	**Brasilia**	**24.88**	**92**	P	**P**	**07 19 19.0**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=279,slow=8.6,SNR=5.0						
	comp=Z,3.6nm,0.8s						
BDFB	**Brasilia**	**24.88**	**92**	P	**P**	**07 19 17.9**	**-1.7**
BDFB	**Brasilia**	**24.88**	**92**	*eP*	**P**	**07 19 19.5**	**-0.1**
SDV	**Santo Domingo**	**25.10**	**8**	LR	LR	07 30 15.5	
	comp=Z,90nm,18.7s,baz=96,slow=39						
BAUV	**El Baul**	**25.61**	**13**	P	**P**	**07 19 22.9**	**-3.1**
RCLB	**Rio Claro- Sao**	**25.62**	**108**	*eP*	**P**	**07 19 28.2**	**+2.0**
VAO	**Valinhos**	**26.23**	**109**	*eP*	**P**	**07 19 32.8**	**+1.0**
PMNB	**Patos De Minas**	**26.30**	**99**	*eP*	**P**	**07 19 33.8**	**+1.4**
MCPB	**Macapa, AP**	**26.65**	**56**	*eP*	**P**	**07 19 35.9**	**+0.4**
SMTB	**Santa Maria do**	**26.66**	**77**	*eP*	**P**	**07 19 35.2**	**-0.4**
BIRV	**Birongo**	**27.52**	**16**	P	**P**	**07 19 43.7**	**+0.4**
BIRV				IAmb	IAmb	07 19 48.4	
	comp=Z,21nm,1.3s						
BSCB	**Bom Sucesso**	**27.99**	**104**	*eP*	**P**	**07 19 49.6**	**+2.0**
SDBA	**SAO DESIDERIO**	**28.32**	**86**	*eP*	**P**	**07 19 50.9**	**+0.3**
JANB	**Januaria**	**28.50**	**92**	*eP*	**P**	**07 19 53.0**	**+0.9**
DIAM	**Diamantina, MG**	**28.92**	**99**	*eP*	**P**	**07 19 57.1**	**+1.2**
VAS01	**Vassouras-RJ**	**29.35**	**107**	*eP*	**P**	**07 20 01.4**	**+1.8**
MDP	**Montagnes des**	**29.81**	**47**	P	**P**	**07 20 00.7**	**-2.9**
	comp=Z,3.5nm,0.7s,baz=198,slow=6.4,SNR=2.0						
MDP				LR	LR	07 32 55.1	
	comp=Z,149nm,18.3s,baz=170,slow=38						
	comp=Z,3.5nm,0.7s						
RIB01	**Linhares ES**	**32.02**	**101**	*eP*	**P**	**07 20 23.3**	**+0.1**
ROSB	**Rosario**	**32.11**	**69**	*eP*	**P**	**07 20 23.8**	**-0.2**
NAN01	**Guarapari, ES**	**32.30**	**98**	*eP*	**P**	**07 20 26.2**	**+0.6**
GUA01	**Guaratinga, BA**	**32.68**	**96**	*eP*	**P**	**07 20 29.5**	**+0.6**
GDU01	**Guandu, BA**	**33.22**	**90**	*eP*	**P**	**07 20 34.2**	**+0.6**
NBAN	**Anadia - AL**	**37.18**	**85**	*eP*	**P**	**07 21 08.0**	**+0.2**
KVTX	**Kingsville**	**49.30**	**332**	P	**P**	**07 22 44.1**	**-1.1**
BIRD	**Birdtown, Kers**	**50.92**	**353**	P	**P**	**07 22 57.7**	**+0.3**
BIRD				IAmb	IAmb	07 22 58.4	
	comp=Z,7.0nm,0.9s						
V52A	**Sevierville**	**52.54**	**350**	P	**P**	**07 23 09.0**	**-0.4**
V52A				IAmb	IAmb	07 23 31.5	
	comp=Z,11nm,1.2s						
U56A	**King**	**52.59**	**353**	P	**P**	**07 23 10.1**	**+0.3**
WLAR	**White Oak Lake**	**52.86**	**340**	P	**P**	**07 23 13.2**	**+1.3**
T59A	**Double "B" Far**	**52.97**	**356**	P	**P**	**07 23 12.6**	**0.0**
T59A				IAmb	IAmb	07 23 16.9	
	comp=Z,11nm,1.4s						
TXAR	**Lajitas Array**	**53.60**	**327**	P	**P**	**07 23 16.6**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=147,slow=8.6,SNR=7.3						
TXAR				pP	**pP**	**07 23 32.6**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=151,slow=8.3,SNR=5.4						
TXAR				LR	LR	07 46 06.1	
	comp=Z,32nm,18.5s,baz=142,slow=36						
	comp=Z,0.6nm,0.6s						
SDCO	**Great Sand Dun**	**61.31**	**332**	P	**P**	**07 24 11.9**	**0.0**
SDCO				IAmb	IAmb	07 24 28.3	
	comp=Z,2.2nm,0.8s						
F33A	**5 Mile Ranch,**	**64.97**	**343**	P	**P**	**07 24 35.1**	**-0.5**
F33A				IAmb	IAmb	07 24 36.2	
	comp=Z,5.0nm,0.8s						
NVAR	**Mina Array Bea**	**68.42**	**324**	P	**P**	**07 24 56.2**	**-1.8**
	comp=Z,0.2nm,0.8s,baz=178,slow=3.3,SNR=3.5						
	comp=Z,0.2nm,0.8s						
SNAA	**Sanae**	**68.82**	**161**	P	**P**	**07 25 01.8**	**+1.9**
SNAA				IAmb	IAmb	07 25 02.2	
	comp=Z,2.4nm,0.7s						
DBIC	**Dimbokro**	**71.96**	**77**	P	**P**	**07 25 18.9**	**-1.0**
	comp=Z,3.9nm,0.5s,baz=261,slow=6.1,SNR=12						
	comp=Z,3.9nm,0.5s						
TOA0	**Torodi Ar. Sit**	**80.18**	**73**	P	**P**	**07 26 07.0**	**+0.3**
TOA0				IAmb	IAmb	07 26 07.8	
	comp=Z,7.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**80.18**	**73**	P	**P**	**07 26 06.1**	**-0.7**
	comp=Z,6.3nm,0.8s,baz=257,slow=4.8,SNR=28						
	comp=Z,6.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.18**	**73**	P	**P**	**07 26 07.0**	**+0.3**
TORD				IAmb	IAmb	07 26 07.8	
	comp=Z,6.0nm,0.8s						
YKA	**Yellowknife Ar**	**84.66**	**342**	P	**P**	**07 26 28.7**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=142,slow=5.3,SNR=7.0						
	comp=Z,2.4nm,0.9s						
ESDC	**Sonsca Array**	**85.49**	**47**	P	**P**	**07 26 33.5**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=251,slow=6.9,SNR=6.9						
ESDC				pP	**pP**	**07 26 48.5**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=264,slow=5.2,SNR=5.5						
	comp=Z,1.4nm,0.9s						
P33M	**Teslin, Yukon**	**89.55**	**335**	P	**P**	**07 26 54.1**	**+1.2**
SUMG	**Summit**	**91.60**	**10**	P	**P**	**07 27 03.7**	**+1.1**
SUMG	**Summit**	**91.60**	**10**	*i* P	**P**	**07 27 03.0**	**+0.4**
H11N3	**WAKE ISLAND Hyd**	**22.31**	**283**	T	T	09 46 56.7	
	baz=98,slow=74,SNR=5.7						
H11N2	**WAKE ISLAND Hyd**	**22.33**	**283**	T	T	09 47 11.6	
	baz=98,slow=74,SNR=7.6						
H11N1	**WAKE ISLAND Hyd**	**22.33**	**283**	T	T	09 46 50.3	
	baz=98,slow=74,SNR=4.2						
H11S2	**WAKE ISLAND Hyd**	**22.35**	**282**	T	T	09 46 58.7	
	baz=99,slow=75,SNR=53						
H11S1	**WAKE ISLAND Hyd**	**22.35**	**282**	T	T	09 46 53.3	
	baz=99,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hyd**	**22.36**	**282**	T	T	09 47 01.8	
	baz=99,slow=75,SNR=36						
ASAR	**Alice Springs**	**131.99**	**215**	PKP	**PKPdf**	**07 33 10.4**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=128,slow=2.0,SNR=6.6						
ASAR				pPKP	**pPKPdf**	**07 33 26.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=135,slow=1.5,SNR=2.8						
WRA	**Warramunga Arr**	**134.64**	**219**	PKP	**PKiKP**	**07 33 16.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=136,slow=2.1,SNR=15						
WRA				pPKP	**pPKPdf**	**07 33 33.0**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=135,slow=2.0,SNR=3.2						
ZALV	**Zalesovo Beam**	**138.80**	**19**	PKP	**PKPdf**	**07 33 22.1**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=208,slow=2.9,SNR=5.1						
MKAR	**Makanchi Array**	**143.62**	**28**	PKP	PKPbc	07 33 27.9	0.0
	comp=Z,0.6nm,0.8s,baz=9.5,slow=3.0,SNR=4.4						
MKAR				pPKP	pPKPdf	07 33 45.2	-1.5
	comp=Z,0.8nm,0.8s,baz=336,slow=2.7,SNR=4.0						
USRK	**Ussuriysk Ar.**	**144.50**	**327**	PKP	**PKPab**	**07 33 30.6**	**+0.2**
	comp=Z,4.4nm,1.0s,baz=47,slow=3.7,SNR=6.9						
KSH	**Kashi**	**144.91**	**42**	PKP	**PKPdf**	**07 33 33.9**	**+0.8**
MJAR	**Matsushiro Arr**	**145.05**	**312**	PKPbc	**PKPbc**	**07 33 32.9**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=106,slow=5.4,SNR=6.4						
SONM	**Songino Array**	**148.42**	**360**	PKPbc	**PKiKP**	**07 33 43.3**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=343,slow=2.0,SNR=9.0						
SONM				pPKPbc	**pPKPbc**	**07 33 59.4**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=294,slow=1.3,SNR=5.3						
KSRS	**Korea Array**	**151.35**	**322**	PKPbc	**PKiKP**	**07 33 50.0**	**0.0**
	comp=Z,2.8nm,0.9s,baz=357,slow=1.1,SNR=9.7						
PZH	**PanZhiHua**	**168.94**	**21**	PKP	**PKPdf**	**07 34 03.5**	**+0.1**

NNC 21 07:19:18.0±0.3, 50°.01N×78°.66E, h0km, mb3.5, mpv3.3, 24C-9D, Error ellipse: s-maj=3.5km s-min=1.7km

az=74.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.58**	**351**	⇑P	Pg	07 19 29.5	+0.3
KUR07				⇑S	Sb	07 19 38.4	-1.5
KUR06	**Kurchatov Arra**	**0.60**	**352**	⇓P	Pg	07 19 30.1	+0.5
KUR06				⇓S	Sg	07 19 38.4	+1.0
KUR14	**Kurchatov Arra**	**0.61**	**356**	⇑P	Pg	07 19 29.8	+0.1
KUR14				⇑S	Sg	07 19 38.7	+1.1
KUR15	**Kurchatov Arra**	**0.62**	**354**	⇓P	Pg	07 19 30.0	+0.2
KUR15				⇓S	Sg	07 19 38.9	+1.1
KURBB	**Kurchatov Arra**	**0.62**	**353**	⇑P	Pg	07 19 30.1	+0.2
KURBB				⇑S	Sg	07 19 39.4	+1.4
	96nm,0.4s						
KUR16	**Kurchatov Arra**	**0.63**	**351**	⇑P	Pg	07 19 30.2	+0.2
KUR16				⇑S	Sg	07 19 39.3	+1.0
KUR17	**Kurchatov Arra**	**0.64**	**349**	⇑P	Pg	07 19 30.4	+0.2
KUR17				⇑S	Sg	07 19 39.3	+0.9
KUR05	**Kurchatov Arra**	**0.64**	**353**	⇑P	Pg	07 19 30.3	0.0
KUR05				⇓S	Sg	07 19 39.4	+0.8
KUR04	**Kurchatov Arra**	**0.66**	**354**	⇓P	Pg	07 19 30.8	+0.1
KUR04				⇑S	Sg	07 19 39.8	+0.6
KURK	**Kurchatov**	**0.71**	**358**	⇑P	Pg	07 19 31.5	0.0
	12nm,0.3s						
KURK				⇑S	Sg	07 19 41.7	+0.9
	17nm,0.4s						
SEM	**Semipalatinsk**	**1.10**	**68**	P	Pg	07 19 38.2	-0.9
	5.2nm,0.1s						
SEM				S	Sg	07 19 53.9	+0.6
	44nm,0.2s						
BRZS	**Berezniki**	**3.86**	**272**	Pg	Pg	07 20 29.5	-2.4
	8.6nm,0.3s						
BRZS				Lg	Lg	07 21 21.7	
	18nm,0.5s						
MAKZ	**Makanchi**	**3.89**	**144**	⇑Pn	Pn	07 20 19.4	+0.4
	1.7nm,0.7s						
MAKZ				⇑Pg	Pb	07 20 28.1	+0.7
	3.6nm,0.8s						
MAKZ				⇑Lg	Lg	07 21 21.3	
	11nm,0.6s						
MK31	**Makanchi Array**	**4.02**	**142**	⇑Pn	Pn	07 20 21.8	+1.0
	0.2nm,0.2s,baz=10,slow=3.8,SN

MJAR	**Matsushiro Arr**	**58.76**	**332**	P	**P**	07 50 23.9	**-0.4**
	comp=Z,3.7nm,0.9s,baz=164,slow=8.7,SNR=11						
	comp=Z,3.7nm,0.9s						
VNDA	**Vanda**	**62.19**	**181**	P	**P**	07 50 47.0	**0.0**
VNDA				IAmb	IAmb	07 50 55.0	
	comp=Z,4.3nm,1.5s						
KSRS	**Korea Array**	**64.61**	**326**	P	**P**	07 51 03.0	**-0.4**
	comp=Z,1.1nm,0.8s,baz=144,slow=7.1,SNR=5.8						
	comp=Z,1.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**67.74**	**333**	P	**P**	07 51 24.6	**+1.3**
	comp=Z,6.5nm,0.7s,baz=136,slow=6.1,SNR=18						
	comp=Z,6.5nm,0.7s						
KLR	**Kul'dur**	**71.85**	**336**	P	**P**	07 51 49.5	**+1.3**
	comp=Z,4.0nm,0.7s,baz=138,slow=5.0,SNR=11						
	comp=Z,4.0nm,0.7s						
QSPA	**South Pole Qui**	**74.61**	**180**	P	**P**	07 52 04.5	**+0.1**
CMAR	**Chiang Mai Arr**	**75.72**	**294**	P	**P**	07 52 12.3	**+0.8**
	comp=Z,1.0nm,0.3s,baz=122,slow=5.3,SNR=6.7						
	comp=Z,1.0nm,0.3s						
ULN	**Ulaanbaatar**	**83.01**	**324**	P	**P**	07 52 51.6	**+1.0**
SONM	**Songino Array**	**83.37**	**323**	P	**P**	07 52 53.0	**+0.6**
	comp=Z,6.1nm,0.9s,baz=139,slow=5.4,SNR=18						
	comp=Z,6.1nm,0.9s						
SONM	**Songino Array**	**83.37**	**323**	P	**P**	07 52 53.0	**+0.6**
SONM				IAmb	IAmb	07 52 53.9	
	comp=Z,8.3nm,1.0s						
J20K	**Nowinta River**	**84.54**	**16**	P	**P**	07 52 58.7	**+0.9**
J20K				IAmb	IAmb	07 53 17.0	
	comp=Z,8.3nm,1.4s						
ISLE	**Juniper Island**	**85.58**	**22**	P	**P**	07 53 04.1	**+0.9**
ISLE				IAmb	IAmb	07 53 04.2	
	comp=Z,7.7nm,0.7s						
ILAR	**Eielson Array**	**87.02**	**18**	P	**P**	07 53 08.7	**-1.3**
	comp=Z,0.6nm,0.6s,baz=235,slow=5.1,SNR=13						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**98.07**	**316**	P	**P**	07 54 01.3	**-0.1**
	comp=Z,0.8nm,0.7s,baz=89,slow=4.3,SNR=4.7						
	comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**98.26**	**324**	P	**P**	07 54 01.5	**-0.6**
	comp=Z,1.7nm,0.6s,baz=133,slow=6.3,SNR=4.1						
	comp=Z,1.7nm,0.6s						
AKTO	**Aktyubinsk**	**114.34**	**319**	PKP	PKPdf	07 59 03.1	-0.6
	comp=Z,0.4nm,0.5s,baz=84,slow=3.8,SNR=4.0						
ARCES	**ARCESS Array B**	**121.05**	**345**	PKP	**PKPdf**	07 59 15.9	**-0.3**
	comp=Z,2.4nm,0.6s,baz=54,slow=1.5,SNR=20						
FINES	**FINESS Array B**	**126.56**	**338**	PKP	**PKPdf**	07 59 25.9	**-1.0**
	comp=Z,0.6nm,0.5s,baz=85,slow=4.0,SNR=6.3						
NB2	**NORSAR Subarra**	**131.43**	**345**	PKPdf	**PKPdf**	07 59 36.3	**+0.1**
	comp=Z,0.5nm,0.6s,baz=29,slow=1.9						
NOA	**NORSAR Array B**	**131.43**	**345**	PKP	**PKPdf**	07 59 36.1	**-0.1**
	comp=Z,0.6nm,0.7s,baz=31,slow=2.0,SNR=5.4						
HFS	**Hagfors**	**131.54**	**343**	PKP	**PKPdf**	07 59 36.5	**+0.1**
	comp=Z,1.4nm,0.8s,baz=131,slow=4.0,SNR=2.5						
BRTR	**Keskin Array B**	**133.36**	**310**	PKP	**PKPdf**	07 59 41.3	**+0.6**
	comp=Z,0.9nm,0.7s,baz=138,slow=6.8,SNR=5.0						
GERES	**GERESS Array B**	**140.50**	**333**	PKP	**PKPdf**	07 59 53.3	**-0.3**
	comp=Z,0.2nm,0.6s,baz=119,slow=1.7,SNR=5.8						
KEST	**Kesra**	**152.08**	**320**	PKPbc	**PKPbc**	08 00 20.7	**+0.6**
	comp=Z,7.4nm,0.8s,baz=326,slow=1.0,SNR=8.4						
ESDC	**Sonseca Array**	**154.79**	**345**	PKPab	**PKPab**	08 00 40.9	**-0.4**
	comp=Z,1.3nm,0.9s,baz=4.8,slow=3.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**166.37**	**262**	PKPab	**PKPab**	08 01 30.8	**-1.8**
	comp=Z,1.2nm,0.9s,baz=112,slow=2.1,SNR=5.1						

*MOS **21** 07:43:01.2±1.0,27°.01N×54°.49E,h19km,mb4.7/26,Error ellipse: s-maj=7.2km s-min=4.7km az=102.8*
*TEH **21** 07:43:02.8,27°.16N×54°.45E,h13km,ML4.8*
*NEIC **21** 07:43:03.2±1.6,27°.22N±0°.06×54°.44E±0°.08,h10km±1km, Error ellipse: s-maj=11.9km s-min=10.5km az=88.0*
*OMAN **21** 07:43:03.1±0.1,27°.20N×54°.26E,h13km±1km,mb6.4/9, ml4.7/23,Error ellipse: s-maj=1.2km s-min=0.8km az=7.0*
*GII **21** 07:43:04.1±0.0,27°.24N×54°.51E,h10km*
*DSN **21** 07:43:04.5±1.9,27°.16N×54°.45E,h15km,ML4.4/14,Error ellipse: s-maj=22.8km s-min=6.4km az=0.0*
*IDC **21** 07:43:04.9±2.6,27°.09N×54°.42E,h31km±18km,mb4.1/26, mbtmp4.3/33,ML4.1/6,MS3.5/27,Error ellipse: s-maj=14.1km s-min=11.4km az=11.0*
ISC 21 07:43:03.1±0.7,27°.13N±0°.03×54°.43E±0°.03,h13km±4km, n394,σ1s54/393,mb4.5/85,MS3.5/29,22C-20D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.54**	**355**	*e*Pg	**Pg**	**07 43 12.6**	**-1.1**
LAR1				*e*Sg	**Sg**	**07 43 20.8**	**-0.1**
LAR1				*e*		07 43 26.4	
	comp=Z,1771μm,0.4s						
LMD1	**Lamerd**	**1.15**	**281**	*e*Pg	**Pg**	**07 43 25.3**	**+0.1**
LMD1				*e*		07 43 49.7	
	comp=Z,77μm,0.6s						
JHRM	**Jahrom**	**1.57**	**331**	*e*Pn	**Pb**	**07 43 31.5**	**-0.5**
JHRM				*e*		07 43 33.8	
	comp=Z,17μm,0.4s						
GENO	**Geno**	**1.57**	**80**	*e*Pg	**Pn**	**07 43 31.5**	**+0.6**
GENO				*e*		07 44 05.9	
	comp=Z,66μm,0.7s						
QIR1	**Qir**	**1.82**	**318**	*e*Pn	**Pb**	**07 43 35.8**	**-0.5**
QIR1				*e*		07 44 05.7	
	comp=Z,28μm,0.6s						
SHME	**Shamm**	**1.87**	**125**	*e*Pn	**Pn**	**07 43 35.7**	**+0.9**
SHME	**Shamm**	**1.87**	**125**	P	**Pb**	**07 43 36.2**	**-0.9**
SHME	**Shamm**	**1.87**	**125**	*e*P	**Pn**	**07 43 35.7**	**+0.9**
	SNR=51						
SHME				*e*P	**Pn**	**07 43 35.7**	**+0.9**
	SNR=49						
SHME				S	**Sb**	**07 43 60.0**	**-0.5**
IBND	**Bandar-abas**	**1.90**	**80**	*e*Pn	**Pn**	**07 43 36.4**	**+1.1**
IBND				*e*		07 44 13.4	
	comp=Z,28μm,0.9s						
ESRB	**Sir Abu**	**1.91**	**185**	*e*Pn	**Pb**	**07 43 37.4**	**-0.4**
UMQ	**Umm Al-Quwin**	**1.94**	**145**	*e*Pn	**Pg**	**07 43 40.0**	**-0.4**
UMQ	**Umm Al-Quwin**	**1.94**	**145**	P	**Pb**	**07 43 37.8**	**-0.5**
	SNR=23						
UMQ				S	**Sg**	**07 44 05.3**	**-0.2**
MASF	**Masafi**	**2.34**	**138**	P	**Pb**	**07 43 43.5**	**-1.6**
	SNR=23						
MASF				S	**Sb**	**07 44 14.6**	**+0.6**
MSFE	**Esma-Masafi**	**2.35**	**138**	*e*Pn	**Pb**	**07 43 43.5**	**-1.8**
MSFE	**Esma-Masafi**	**2.35**	**138**	*e*P	**Pb**	**07 43 43.5**	**-1.8**
	SNR=23						
NAZ	**Nazwa, Dubai**	**2.40**	**152**	*e*Pn	**Pb**	**07 43 45.0**	**-1.2**
NAZ	**Nazwa, Dubai**	**2.40**	**152**	P	**Pn**	**07 43 43.9**	**+1.7**
	SNR=21						
NAZ				S	**Sb**	**07 44 16.3**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.40**	**152**	*e*P	**Pb**	**07 43 44.6**	**-1.6**
	SNR=22						
MDH	**Madha**	**2.48**	**137**	*e*Pn	**Pn**	**07 43 45.0**	**+1.8**
MDH	**Madha**	**2.48**	**137**	P	**Pn**	**07 43 44.8**	**+1.7**
	SNR=61						
MDH				S	**Sb**	**07 44 18.2**	**+0.3**
MDH	**Madha**	**2.48**	**137**	*e*P	**Pn**	**07 43 44.6**	**+1.4**
	SNR=31						
FAQ	**Al Faqa, Dubai**	**2.59**	**156**	*e*Pn	**Pb**	**07 43 47.5**	**-2.0**
FAQ	**Al Faqa, Dubai**	**2.59**	**156**	P	**Pb**	**07 43 48.0**	**-1.5**
	SNR=32						
FAQ	**Al Faqa, Dubai**	**2.59**	**156**	*e*P	**Pn**	**07 43 46.2**	**+1.4**
	SNR=20						
JRN	**Qarnain Island**	**2.60**	**214**	*e*Pn	**Pn**	**07 43 47.1**	**+2.2**
JRN	**Qarnain Island**	**2.60**	**214**	P	**Pn**	**07 43 45.2**	**+0.3**
	SNR=24						
AJN	**Ajban**	**2.60**	**169**	*e*Pn	**Pb**	**07 43 48.0**	**-1.7**
AJN	**Ajban**	**2.60**	**169**	P	**Pn**	**07 43 47.1**	**+2.2**
	SNR=7.4						
AJN				S	**Sb**	**07 44 20.0**	**-1.6**
AJN	**Ajban**	**2.60**	**169**	*e*P	**Pb**	**07 43 47.4**	**-2.2**
	SNR=7.2						
ASUD	**Al Ashush, Dub**	**2.62**	**162**	*e*Pn	**Pb**	**07 43 48.6**	**-1.3**
ASUD	**Al Ashush, Dub**	**2.62**	**162**	P	**Pb**	**07 43 48.0**	**-2.0**
	SNR=48						
ASUD	**Al Ashush, Dub**	**2.62**	**162**	*e*P	**Pb**	**07 43 48.2**	**-1.7**
	SNR=48						
UOSS	**Minazif**	**2.70**	**143**		**Pn**	**07 43 47.6**	**+1.3**
UOSS	**Minazif**	**2.70**	**143**	*e*Pn	**Pn**	**07 43 48.1**	**+1.9**
UOSS	**Minazif**	**2.70**	**143**	P	**Pn**	**07 43 48.5**	**+2.2**
UOSS				S	**Sb**	**07 44 24.2**	**0.0**
UOSS	**Minazif**	**2.70**	**143**	*e*P	**Pn**	**07 43 47.8**	**+1.6**
	SNR=28						
HATD	**Hatta, Dubai**	**2.76**	**146**	*e*Pn	**Pn**	**07 43 49.2**	**+2.1**
HATD	**Hatta, Dubai**	**2.76**	**146**	P	**Pn**	**07 43 49.2**	**+2.1**
	SNR=14						
HATD				S	**Sb**	**07 44 25.6**	**-0.5**
HATD	**Hatta, Dubai**	**2.76**	**146**	*e*P	**Pn**	**07 43 48.8**	**+1.7**
	SNR=32						
ASHO	**Ashiyiah**	**2.84**	**149**	*e*Pn	**Pn**	**07 43 50.1**	**+1.8**
ASHO	**Ashiyiah**	**2.84**	**149**	P	**Pn**	**07 43 50.3**	**+2.0**
	SNR=54						
ASHO				S	**Sb**	**07 44 26.4**	**-2.1**
ASHO	**Ashiyiah**	**2.84**	**149**	*e*P	**Pn**	**07 43 49.8**	**+1.5**
	SNR=68						
KHNJ	**Kahnooj**	**3.02**	**74**	*e*Pn	**Pn**	**07 43 51.3**	**+0.6**
SHI	**Shiraz**	**3.02**	**326**	*e*Pn	**Pn**	**07 43 52.1**	**+1.3**
SHI				*e*		07 45 01.6	
	comp=Z,14μm,1.3s						
NGRK	**Negar Kerman**	**3.22**	**38**	*e*Pn	**Pn**	**07 43 54.5**	**+0.7**
NGRK				*e*		07 44 39.1	
	comp=Z,11μm,0.3s						
AHBU	**AHRAM**	**3.27**	**303**	*e*Pn	**Pn**	**07 43 54.4**	**+0.4**
AHBU				*e*		07 45 08.7	
	comp=Z,99nm,1.2s						
ALNE	**Al Ain**	**3.28**	**158**	*e*Pn	**Pn**	**07 43 57.0**	**+2.7**
ALNE	**Al Ain**	**3.28**	**158**	P	**Pn**	**07 43 57.0**	**+2.7**
	SNR=13						
ALNE	**Al Ain**	**3.28**	**158**	*i* P	**Pn**	**07 43 56.4**	**+2.1**
	SNR=13						
JASK	**Jask - Hormozg**	**3.33**	**111**	*e*Pn	**Pn**	**07 43 55.6**	**+0.8**
JASK				*e*		07 44 15.4	
	comp=Z,15μm,0.8s						
JASK	**Jask - Hormozg**	**3.33**	**111**	P	**Pn**	**07 43 55.7**	**+0.8**
MZWR	**Madinat Zayed**	**3.39**	**189**	*e*Pn	**Pn**	**07 43 58.4**	**+2.7**
MZWR	**Madinat Zayed**	**3.39**	**189**	P	**Pn**	**07 43 58.0**	**+2.2**
MZWR				S	**Sn**	**07 44 38.8**	**+3.0**
GHWR	**Ruwais**	**3.45**	**204**	*e*Pn	**Pn**	**07 43 58.3**	**+1.7**
GHWR	**Ruwais**	**3.45**	**204**	P	**Pn**	**07 43 57.1**	**+0.6**
KAZ1	**Kazerun**	**3.50**	**316**	*e*	Sg	07 45 08.6	+13
	comp=N,24μm,0.6s						
KRBR	**Kerman**	**3.50**	**35**	*e*Pn	**Pn**	**07 43 59.4**	**+1.8**
TVBK	**TV Kerman**	**3.51**	**35**	*e*Pn	**Pn**	**07 43 59.3**	**+1.6**
TVBK				*e*	Sg	07 45 09.8	+14
	comp=Z,16μm,0.5s						
SOHO	**SOHO**	**3.54**	**147**	*e*Pn	**Pn**	**07 43 59.1**	**+1.4**
SOHO	**SOHO**	**3.54**	**147**	P	**Pn**	**07 43 59.9**	**+2.1**
SOHO	**SOHO**	**3.54**	**147**	*i* P	**Pn**	**07 43 58.7**	**+0.9**
	SNR=16						
SAKB	**Bahrain**	**3.67**	**253**	*e*Pn	**Pn**	**07 44 01.9**	**+2.3**
SAKB	**Bahrain**	**3.67**	**253**	P	**Pn**	**07 43 57.7**	**-1.9**
KHGB	**Koh Gabri**	**3.70**	**29**	*e*Pn	**Pn**	**07 44 01.5**	**+1.3**
KHGB				*e*		07 44 49.1	
	comp=Z,9μm,0.4s						
CHMN	**Cheshme madani**	**3.86**	**44**	*e*Pn	**Pn**	**07 44 03.6**	**+1.1**
CHMN				*e*		07 44 54.7	
	comp=Z,17μm,0.6s						
SLWR	**Sila**	**3.92**	**220**	*e*Pn	**Pn**	**07 44 04.4**	**+1.3**
SLWR	**Sila**	**3.92**	**220**	P	**Pn**	**07 44 02.7**	**-0.4**
SMRA	**Abu-Samra**	**4.02**	**235**	P	**Pn**	**07 44 03.2**	**-1.2**
KBAM	**BAM**	**4.08**	**60**	*e*		07 44 12.6	
	comp=Z,9μm,0.4s						
KBAM				*e*Pn	**Pn**	**07 44 06.7**	**+1.4**
MZR	**Muzera**	**4.20**	**192**	*e*Pn	**Pn**	**07 44 08.4**	**+1.5**
MZR	**Muzera**	**4.20**	**192**	P	**Pn**	**07 44 08.2**	**+1.3**
	SNR=32						
MZR	**Muzera**	**4.20**	**192**	*i* P	**Pn**	**07 44 08.3**	**+1.5**
	SNR=8.3						
ARQ	**Araqi**	**4.22**	**153**	P	**Pn**	**07 44 09.1**	**+1.9**
	SNR=71						
ARQ				S	**Sn**	**07 44 59.9**	**+3.4**
IMEH	**Mehriz**	**4.25**	**2**	*e*Pn	**Pn**	**07 44 08.8**	**+1.0**
HOQ	**Hoqain**	**4.39**	**143**	*e*Pn	**Pn**	**07 44 11.0**	**+1.5**
HOQ	**Hoqain**	**4.39**	**143**	P	**Pn**	**07 44 09.6**	**+0.1**
	SNR=13						
HOQ				S	**Sn**	**07 45 04.3**	**+3.8**
UMZA	**Um Al Zommool**	**4.45**	**171**	*e*Pn	**Pn**	**07 44 12.2**	**+1.9**
UMZA	**Um Al Zommool**	**4.45**	**171**	P	**Pn**	**07 44 11.6**	**+1.3**
UMZA				S	**Sn**	**07 45 05.4**	**+3.5**
IBAF	**Bafgh**	**4.55**	**12**	*e*Pn	**Pn**	**07 44 13.3**	**+1.4**
KLNJ	**Kolanjah**	**4.59**	**328**	*e*Pn	**Pn**	**07 44 12.7**	**+0.1**
KLNJ				*e*		07 45 40.7	
	comp=Z,5μm,0.6s						
ISAD	**Sadrabad**	**4.81**	**352**	*e*Pn	**Pn**	**07 44 17.4**	**+1.8**
BIDO	**Bidbid**	**4.91**	**136**	*e*Pn	**Pn**	**07 44 18.1**	**+1.5**
BIDO	**Bidbid**	**4.91**	**136**	P	**Pn**	**07 44 18.9**	**+2.2**
IRAM	**Ramesheh**	**4.99**	**340**	*e*Pn	**Pn**	**07 44 19.1**	**+1.1**
BSY	**Bisya**	**5.04**	**149**	P	**Pn**	**07 44 20.5**	**+2.1**
	SNR=13						
SMDO	**Samad**	**5.21**	**140**	P	**Pn**	**07 44 23.1**	**+2.2**
	SNR=50						
SMDO				S	**Sn**	**07 45 24.6**	**+3.6**
YZKH	**Yazd**	**5.25**	**1**	*e*Pn	**Pn**	**07 44 23.3**	**+2.0**
WSAR	**Wadi Sarin**	**5.43**	**135**	Pn	**Pn**	**07 44 24.5**	**+0.7**
	comp=Z,15nm,0.3s,baz=315,slow=10,SNR=64						
WSAR				Sn	**Sn**	**07 45 23.3**	**-2.9**
	comp=Z,9.1nm,0.3s,baz=44,slow=5.8,SNR=2.8						
WSAR				LR	LR	07 47 03.8	
	comp=Z,599nm,21.4s,baz=342,slow=44						
	comp=Z,67nm,0.5s						
IBRJ	**Brojen**	**5.51**	**331**	*e*Pn	**Pn**	**07 44 25.5**	**+0.4**
CHBR	**Chabahar**	**5.64**	**104**	*e*Pn	**Pn**	**07 44 27.7**	**+1.0**
IGAR	**Ghareh**	**5.65**	**339**	*e*Pn	**Pn**	**07 44 28.2**	**+1.1**
JMDO	**Jabal Madar**	**5.79**	**144**	P	**Pn**	**07 44 30.1**	**+1.2**
	SNR=42						
NASN	**Na'in**	**5.82**	**346**	*e*Pn	**Pn**	**07 44 30.2**	**+0.7**
IZEF	**Zefreh**	**6.03**	**343**	*e*Pn	**Pn**	**07 44 31.8**	**-0.5**
SHK1	**Shahrekord**	**6.03**	**330**	*e*Pn	**Pn**	**07 44 32.1**	**-0.1**
ZHDN	**Zahedan**	**6.06**	**67**	*e*Pn	**Pn**	**07 44 34.0**	**+1.4**
WBK	**Wadi Bani Khal**	**6.10**	**137**	*e*Pn	**Pn**	**07 44 33.6**	**+0.5**
WBK	**Wadi Bani Khal**	**6.10**	**137**	P	**Pn**	**07 44 34.0**	**+0.9**
	SNR=92						
ZHSF	**Zahedan**	**6.11**	**65**	*e*Pn	**Pn**	**07 44 34.6**	**+1.3**
TPRV	**Parvadeh(Tabas**	**6.20**	**18**	*e*Pn	**Pn**	**07 44 36.2**	**+1.8**
BSRN	**Basiran**	**6.32**	**39**	*e*Pn	**Pn**	**07 44 37.2**	**+1.0**
IPIR	**Pirpir**	**6.33**	**332**	*e*Pn	**Pn**	**07 44 36.4**	**-0.1**
AMIS	**Naft Sefid**	**6.37**	**316**	*e*Pn	**Pn**	**07 44 36.4**	**-0.3**
NHDN	**Nehbandan**	**6.49**	**48**	*e*Pn	**Pn**	**07 44 39.8**	**+1.3**
IKOO	**Kooshah**	**6.61**	**36**	*e*Pn	**Pn**	**07 44 41.6**	**+1.4**
IKLH	**Kolahrood**	**6.64**	**339**	*e*Pn	**Pn**	**07 44 41.8**	**+1.1**
JLN	**Jalan Bani Buh**	**6.71**	**137**	P	**Pn**	**07 44 41.6**	**+0.1**
	SNR=12						
TKDS	**Koohdasht(Taba**	**6.87**	**19**	*e*Pn	**Pn**	**07 44 44.9**	**+1.2**
TABS	**Tabas**	**6.90**	**19**	*e*Pn	**Pn**	**07 44 45.5**	**+1.4**
MHTO	**MHTO**	**6.92**	**151**	P	**Pn**	**07 44 45.1**	**+0.9**
	SNR=168						
TNSJ	**Nastanj**	**7.07**	**15**	*e*Pn	**Pn**	**07 44 46.6**	**+0.2**
QAMS	**Qamsar**	**7.09**	**339**	*e*Pn	**Pn**	**07 44 43.4**	**-3.4**
SRVN	**Saravan**	**7.10**	**86**	*e*Pn	**Pn**	**07 44 47.9**	**+1.1**
KRSH	**Karshahi**	**7.10**	**344**	*e*Pn	**Pn**	**07 44 47.6**	**+0.7**
AFRZ	**Afriz**	**7.42**	**31**	Pn	**Pn**	**07 44 52.5**	**+1.2**
AFRZ	**Afriz**	**7.42**	**31**	*e*Pn	**Pn**	**07 44 52.5**	**+1.2**
ISFB	**Sefidab**	**7.44**	**346**	*e*Pn	**Pn**	**07 44 51.9**	**+0.4**
KHMZ	**Khomeyn**	**7.63**	**331**	*e*Pn	**Pn**	**07 44 54.4**	**+0.1**
DQM	**DQM**	**7.71**	**158**	P	**Pn**	**07 44 55.1**	**-0.1**
	SNR=56						
GHVR	**GHOM**	**7.81**	**341**	*e*Pn	**Pn**	**07 44 59.7**	**+3.2**
IVRN	**Varamin**	**8.18**	**344**	*e*Pn	**Pn**	**07 45 01.5**	**-0.1**
IQOM	**Qom**	**8.21**	**340**	*e*Pn	**Pn**	**07 45 02.5**	**+0.3**
SHRT	**Shahrakht**	**8.23**	**36**	*e*Pn	**Pn**	**07 45 04.1**	**+1.8**
ASAO	**Ashtian**	**8.31**	**334**	*e*Pn	**Pn**	**07 45 04.4**	**+0.9**
IKFM	**Kafar-mosalman**	**8.54**	**320**	*e*Pn	**Pn**	**07 45 06.1**	**-0.4**
IDOB	**Doab**	**8.55**	**322**	*e*Pn	**Pn**	**07 45 07.2**	**+0.3**
HSAM	**Samen**	**8.66**	**326**	*e*Pn	**Pn**	**07 45 07.5**	**-0.9**
IDMV	**Damavand**	**8.67**	**347**	*e*Pn	**Pn**	**07 45 10.1**	**+1.6**
ISHM	**Shahmirzad**	**8.71**	**354**	*e*Pn	**Pn**	**07 45 09.7**	**+0.7**
DAMV	**Damavand**	**8.73**	**347**	*e*Pn	**Pn**	**07 45 10.3**	**+0.9**
RAYN	**Ar Rayn**	**8.84**	**248**		**Pn**	**07 45 10.2**	**-0.5**
RAYN	**Ar Rayn**	**8.84**	**248**	P	**Pn**	**07 45 10.2**	**-0.5**
RAYN	**Ar Rayn**	**8.84**	**248**	P	**Pn**	**07 45 09.0**	**-1.7**
HAGD	**Aghdareh**	**8.91**	**331**	*e*Pn	**Pn**	**07 45 10.9**	**-0.9**
IRAZ	**Razeghan**	**9.10**	**336**	*e*Pn	**Pn**	**07 45 13.7**	**-0.7**
SHAO	**Shalim**	**9.13**	**173**	P	**Pn**	**07 45 14.4**	**-0.2**
	SNR=27						
SHAO	**Shalim**	**9.13**	**173**	*i* P	**Pn**	**07 45 14.4**	**-0.2**
	SNR=27						
WHFO	**Wadi Hawf**	**9.19**	**184**	P	**Pn**	**07 45 15.0**	**-0.5**
	SNR=142						
CHTH	**Charan**	**9.19**	**343**	*e*Pn	**Pn**	**07 45 18.3**	**+2.6**
IKOM	**Komasi**	**9.21**	**321**	*e*Pn	**Pn**	**07 45 13.9**	**-1.9**
IPRN	**Peran**	**9.26**	**349**	*e*Pn	**Pn**	**07 45 18.1**	**+1.6**
IGLO	**Ghaloghah**	**9.36**	**357**	*e*Pn	**Pn**	**07 45 20.4**	**+2.5**
DMTO	**DMTO**	**9.38**	**177**	P	**Pn**	**07 45 17.9**	**-0.2**
	SNR=18						
QABG	**Abgarm-Qazvin**	**9.50**	**335**	*e*Pn	**Pn**	**07 45 16.9**	**-3.0**
TBJM	**Torbat-e-JAM**	**9.55**	**30**	*e*Pn	**Pn**	**07 45 22.4**	**+1.8**
RBK	**Rabkut**	**9.58**	**181**	P	**Pn**	**07 45 21.9**	**+1.0**
	SNR=8.8						
ABTO	**Aybut**	**9.79**	**186**	P	**Pn**	**07 45 23.1**	**-0.6**
	SNR=58						
QALM	**Alamut, Qazvin**	**9.82**	**342**	*e*Pn	**Pn**	**07 45 24.1**	**-0.1**
HRA	**Herat**	**9.87**	**41**	Pn	**Pn**	**07 45 25.4**	**+0.5**
GIDE	**GILAN DEYLAMAN**	**10.49**	**340**	*e*Pn	**Pn**	**07 45 37.1**	**+3.7**
MRVT	**Maraveh tapeh**	**10.59**	**7**	*e*Pn	**Pn**	**07 45 37.1**	**+2.4**
ZNJK	**Zanjan**	**10.69**	**334**	*e*Pn	**Pn**	**07 45 40.1**	**+3.9**
BJRD	**Bojnurd**	**10.84**	**13**	*e*Pn	**Pn**	**07 45 42.1**	**+4.0**
GEYT	**Alibeck**	**11.21**	**15**	Pn	**Pn**	**07 45 44.7**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=196,slow=15,SNR=2.0						
	comp=Z,1.2nm,0.4s						
GEYT	**Alibeck**	**11.21**	**15**	Pn	**Pn**	**07 45 41.2**	**-1.9**
GYA0B	**ALIBECK ARRAY**	**11.21**	**15**	Pn	**Pn**	**07 45 41.5**	**-1.6**
GRMI	**Germi**	**12.87**	**336**	*e*Pn	**Pn**	**07 46 09.4**	**+3.5**
KBL	**Kabul**	**14.56**	**56**	Pn	**Pn**	**07 46 28.0**	**-1.1**
KBL	**Kabul**	**14.56**	**56**	P	**Pn**	**07 46 28.0**	**-1.1**
MAKU	**Maku**	**14.65**	**329**	*e*Pn	**P**	**07 46 33.7**	**-2.9**
GEVA	**Gevas**	**14.68**	**322**		**Pn**	**07 46 30.1**	**-0.6**
GNI	**Garni**	**15.27**	**331**	Pn	**P**	**07 46 41.5**	**-2.0**
	comp=Z,8.7nm,0.5s,baz=270,slow=2.3,SNR=9.9						
GNI	**Garni**	**15.27**	**331**		**Pn**	**07 46 35.9**	**-2.8**
GNI				IAmb	IAmb	07 47 04.0	
	comp=Z,31nm,0.8s						
GNI	**Garni**	**15.27**	**331**	*e*P	**P**	**07 46 41.6**	**-1.9**
GNI				pmax	pmax		
	comp=Z,38nm,1.0s						
MARD	**Mardin**	**15.37**	**315**	Pn	**Pn**	**07 46 37.2**	**-2.6**
GURO	**Guroymak-BITLI**	**15.42**	**321**		**Pn**	**07 46 40.2**	**-0.3**
GURO				IAmb	IAmb	07 46 51.9	
	comp=Z,25nm,0.8s						
ASF	**Jabal al Asfar**	**16.05**	**292**	Pn	**Pn**	**07 46 48.5**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=107,slow=14,SNR=6.8						
	comp=Z,2.8nm,0.4s						
KARS	**Kars**	**16.41**	**328**		**Pn**	**07 46 52.3**	**-1.0**
KARS	**Kars**	**16.41**	**328**	P	**Pn**	**07 46 52.3**	**-1.0**
KARS				pmax	pmax		
	comp=Z,123nm,1.1s						
CHGR	**Chuyangaron**	**16.86**	**43**		**Pn**	**07 46 56.4**	**-2.5**
CHGR	**Chuyangaron**	**16.86**	**43**	P	**Pn**	**07 46 56.4**	**-2.5**
CHGR				pmax	pmax		
	comp=Z,11nm,0.7s						
HMDT	**Nahal Hemdat**	**17.20**	**292**	Pn	**Pn**	**07 47 03.8**	**+0.7**
HRFI	**Mount Harif**	**17.28**	**284**	Pn	**P**	**07 47 05.5**	**-0.1**
KOPT	**Kop Dagi**	**17.29**	**322**	P	**Pn**	**07 47 04.6**	**0.0**
KOPT				IAmb	IAmb	07 47 18.4	
	comp=Z,31nm,0.9s						
MMLI	**Mount Malkishu**	**17.32**	**292**	Pn	**P**	**07 47 06.8**	**+0.7**
EIL	**Elat**	**17.33**	**283**	P	**Pn**	**07 47

HYBB	**Hyderabad (bro**	**24.28**	**108**	*e*P		**P**	**07 48 19.0**	**-1.4**
HYBB				*ep*P		**pP**	**07 48 23.1**	**-1.3**
HYBB				*e*S		**S**	**07 52 38.5**	**-0.7**
BELG	**Belogornoye**	**25.75**	**350**	P		**P**	**07 48 32.9**	**-0.3**
	comp=Z,13nm,0.6s,baz=341,slow=3.0,SNR=8.8							
	comp=Z,13nm,0.6s							
BELG	**Belogornoye**	**25.75**	**350**	*c i*P		**P**	**07 48 33.0**	**-0.3**
BELG				pmax	pmax			
	comp=Z,5.0nm,0.9s							
VRH	**Novokhopyorsk**	**25.91**	**342**	*e*P		**P**	**07 48 35.4**	**+0.7**
VRH				pmax	pmax			
	comp=Z,20nm,0.6s							
DANN	**Dangsing**	**25.96**	**80**	*e*P		**P**	**07 48 37.5**	**+1.6**
IDI	**Anoyia**	**26.47**	**295**	⇓P		**P**	**07 48 41.0**	**+0.9**
IDI	**Anoyia**	**26.47**	**295**	P		**P**	**07 48 40.4**	**+0.2**
	comp=Z,10nm,0.5s,baz=85,slow=14,SNR=14							
	comp=Z,10nm,0.5s							
IDI	**Anoyia**	**26.47**	**295**	P		**P**	**07 48 40.8**	**+0.7**
VSR	**Storozhevoye**	**26.70**	**338**	*e*P		**P**	**07 48 43.6**	**+1.7**
VSR				pmax	pmax			
	comp=Z,8.0nm,1.0s							
VORR	**Voronezh**	**27.08**	**339**	*e*P		**P**	**07 48 44.8**	**-0.5**
VORR				pmax	pmax			
	comp=Z,50nm,0.4s							
DMN	**Daman**	**27.21**	**82**	*e*P		**P**	**07 48 48.2**	**+1.1**
	comp=Z,6.0nm,0.3s							
TPGR	**Topolog**	**27.31**	**317**	⇑P		**P**	**07 48 53.6**	**+6.0**
KKN	**Kakani**	**27.35**	**81**	*e*P		**P**	**07 48 49.3**	**+1.0**
PKIN	**Phulchoki**	**27.47**	**82**	*e*P		**P**	**07 48 50.4**	**+0.9**
	comp=Z,46nm,1.1s							
PKI	**Pulchoki**	**27.48**	**82**	*e*P		**P**	**07 48 50.2**	**+0.6**
	comp=Z,40nm,1.1s							
GUN	**Gumba**	**27.86**	**81**	*e*P		**P**	**07 48 54.0**	**+0.9**
	comp=Z,59nm,0.9s							
JIRN	**Jiri**	**28.16**	**82**	*e*P		**P**	**07 48 56.2**	**+0.4**
	comp=Z,20nm,0.5s							
BRVK	**Borovoye**	**28.47**	**20**	P		**P**	**07 48 57.7**	**0.0**
BRVK	**Borovoye**	**28.47**	**20**	⇑*e*P		**P**	**07 48 57.8**	**0.0**
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BVA0	**Borovoye Array**	**28.47**	**20**	*i* P		**P**	**07 48 56.8**	**-1.0**
BVAR	**Borovoye Array**	**28.47**	**20**	LR		LR	08 02 08.7	
	comp=Z,142nm,21.2s,baz=92,slow=40							
RAMN	**Ramite**	**28.61**	**83**	*e*P		**P**	**07 48 59.8**	**+0.2**
	comp=Z,13nm,0.6s							
MLR	**Muntele Rosu**	**29.14**	**316**	⇑P		P	07 49 10.4	+6.4
COVR	**Voineasa-Covas**	**29.16**	**317**	⇓P		P	07 49 09.7	+5.6
ITM	**Ithomi**	**29.16**	**298**	P		**P**	**07 49 03.7**	**-0.4**
TESR	**Tescani**	**29.24**	**319**	⇑P		P	07 49 10.8	+6.1
ARU	**Arti**	**29.43**	**5**	LR		LR	08 01 26.1	
	comp=Z,66nm,18.1s,baz=195,slow=37							
ARU	**Arti**	**29.43**	**5**	*d i*P		**P**	**07 49 07.5**	**+1.3**
ARU							07 49 59.1	
ARU				S		**S**	**07 54 04.1**	**+4.3**
ARU				SS		**SnSn**	**07 55 27.5**	**+0.8**
ARU				pmax	pmax			
	comp=Z,5.0nm,1.5s							
MK31	**Makanchi Array**	**29.43**	**41**	P		**P**	**07 49 06.0**	**-0.5**
MK31	**Makanchi Array**	**29.43**	**41**	*ce*P		**P**	**07 49 06.2**	**-0.3**
MKAR	**Makanchi Array**	**29.43**	**41**	P		**P**	**07 49 06.3**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=227,slow=10,SNR=13							
MKAR				LR		LR	08 01 06.1	
	comp=Z,109nm,19.8s,baz=246,slow=37							
	comp=Z,1.1nm,0.5s							
MKAR	**Makanchi Array**	**29.43**	**41**	P		**P**	**07 49 05.7**	**-0.7**
KURBB	**Kurchatov Arra**	**29.79**	**32**	P		**P**	**07 49 09.0**	**-0.5**
	comp=Z,3.3nm,0.2s,baz=233,slow=8.7,SNR=4.4							
	comp=Z,3.3nm,0.2s							
LODK	**Lodwar**	**29.80**	**221**	P		**P**	**07 49 10.0**	**0.0**
KURK	**Kurchatov**	**29.89**	**32**	⇓*e*P		**P**	**07 49 12.0**	**+1.6**
KURK				pmax	pmax			
	comp=Z,8.0nm,0.6s							
ARR	**Arges**	**29.90**	**315**	⇑P		**P**	**07 49 10.2**	**-0.4**
AKASG	**Malin Array Be**	**30.36**	**328**	P		**P**	**07 49 13.3**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=134,slow=7.8,SNR=5.4							
	comp=Z,0.5nm,0.4s							
AKASG	**Malin Array Be**	**30.36**	**328**	*ce*P		**P**	**07 49 16.2**	**+1.6**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKBB	**Malin Array Si**	**30.36**	**328**	P		**P**	**07 49 13.6**	**-1.0**
AKBB				IAmb	IAmb		07 49 34.9	
	comp=Z,4.9nm,0.8s							
AKBB	**Malin Array Si**	**30.36**	**328**	⇓*i*P		**P**	**07 49 16.3**	**+1.7**
AKBB				pmax	pmax			
	comp=Z,4.0nm,1.0s							
BURAR	**Bucovina Array**	**30.65**	**320**	⇓P		**P**	**07 49 21.5**	**+4.2**
BURAR	**Bucovina Array**	**30.65**	**320**	P		**P**	**07 49 17.4**	**+0.1**
OBN	**Obninsk**	**30.84**	**340**	⇓*e*P		**P**	**07 49 19.5**	**+0.8**
OBN				*e*			07 50 21.7	
OBN				*e*PPP		PPP	07 50 30.1	
OBN				*e*			07 52 16.1	
OBN				pmax	pmax			
	comp=Z,11nm,0.6s							
OBN				MLR	MLR			
	comp=Z,31nm,19.0s							
GZR	**Gura Zlata**	**31.09**	**314**	⇑P		**P**	**07 49 18.8**	**-2.3**
WMQ	**Urumqi**	**31.53**	**49**	*e*P		**P**	**07 49 28.3**	**+3.2**
KIRV	**Kirov**	**31.64**	**355**	P		**P**	**07 49 25.5**	**-0.2**
	comp=Z,12nm,0.5s,baz=56,slow=6.0,SNR=4.9							
	comp=Z,12nm,0.5s							
KIRV	**Kirov**	**31.64**	**355**	⇑*e*P		**P**	**07 49 25.8**	**+0.1**
DRGR		**31.74**	**317**	⇓P		**P**	**07 49 27.3**	**+0.5**
BZS	**Buzias**	**31.92**	**314**	⇓P		**P**	**07 49 28.5**	**+0.1**
SIRR	**Siria**	**32.16**	**315**	⇑P		**P**	**07 49 33.9**	**+3.4**
PDG	**Podgorica**	**32.41**	**307**	P		**P**	**07 49 32.9**	**+0.2**
PDG				IAmb	IAmb		07 49 35.8	
	comp=Z,3.7nm,0.8s							
KMBO	**Kilima Mbogo**	**32.60**	**213**	⇓*e*P		**P**	**07 49 37.4**	**+2.5**
UZH	**Uzhgorod**	**32.86**	**319**	*e*P		**P**	**07 49 34.6**	**-1.9**
UZH				*e*			07 49 43.2	
CRVS	**Cervenica-Dubn**	**33.47**	**319**	*e*P		P	07 49 47.0	+5.1
CRVS	**Cervenica-Dubn**	**33.47**	**319**	*e*P		P	07 49 47.0	+5.1
DGZ	**Jazzator, Alta**	**33.87**	**39**	⇑*e*P		**P**	**07 49 45.8**	**+0.2**
DGZ				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MORH	**Mrgy, Hungar**	**34.07**	**314**	⇑P		**P**	**07 49 49.5**	**+2.4**
NACGM	**Naroch**	**34.29**	**332**	⇓*e*P		**P**	**07 49 52.3**	**+3.4**
	baz=132							
CUC	**Castrocucco**	**34.38**	**302**	P		**P**	**07 49 49.6**	**-0.3**
CUC				IAmb	IAmb		07 49 56.1	
	comp=Z,6.3nm,0.7s							
LANS	**Liptovska Anna**	**34.75**	**319**	*e*P		**P**	**07 49 54.7**	**+1.6**
LANS	**Liptovska Anna**	**34.75**	**319**	*e*P		**P**	**07 49 54.7**	**+1.6**
VYHS	**Vyhne**	**34.84**	**317**	*e*P		**P**	**07 49 57.9**	**+4.1**
VYHS	**Vyhne**	**34.84**	**317**	*e*P		**P**	**07 49 57.9**	**+4.1**
ZAA0	**Zalesovo Array**	**34.89**	**32**	P		**P**	**07 49 52.9**	**-1.2**
ZALV	**Zalesovo Beam**	**34.89**	**32**	P		**P**	**07 49 53.4**	**-0.8**
	comp=Z,5.1nm,0.5s,baz=234,slow=9.1,SNR=16							
ZALV				LR		LR	08 04 45.4	
	comp=Z,51nm,20.0s,baz=248,slow=37							
	comp=Z,5.1nm,0.5s							
ZALV	**Zalesovo Beam**	**34.89**	**32**	P		**P**	**07 49 52.9**	**-1.2**
OJC	**Ojcow**	**35.05**	**321**	P		**P**	**07 49 55.5**	**-0.1**
OJC				IAmb	IAmb		07 50 02.8	
	comp=Z,6.6nm,0.9s							
OJC	**Ojcow**	**35.05**	**321**	P		**P**	**07 49 55.5**	**-0.1**
OJC				pmax	pmax			
	comp=Z,7.0nm,0.9s							
KLMR	**Klimovskoe**	**35.20**	**347**	*e*P		**P**	**07 49 55.4**	**-1.3**
KLMR				pmax	pmax			
	comp=Z,13nm,0.8s							
KLMR	**Klimovskoe**	**35.20**	**347**	*e*P		**P**	**07 49 55.5**	**-1.3**
KLMR				AMP			07 50 07.4	
	comp=Z,13nm,0.8s							
MBAR	**Mbarara**	**35.77**	**223**	LR		LR	08 04 53.7	
	comp=Z,104nm,18.6s,baz=14,slow=37							
MORC	**Moravsky Berou**	**36.15**	**319**	P		**P**	**07 50 04.6**	**-0.5**
MORC	**Moravsky Berou**	**36.15**	**319**	P		**P**	**07 50 04.6**	**-0.5**
MORC				pmax	pmax			
	comp=Z,5.0nm,1.1s							
KRLC	**Kraliky**	**36.72**	**319**	*e*P		**P**	**07 50 12.3**	**+2.3**
KRLC	**Kraliky**	**36.72**	**319**	*e*P		**P**	**07 50 12.3**	**+2.3**
VSU	**Vasula**	**36.81**	**336**	⇓*e*P		**P**	**07 50 09.8**	**-0.7**
VSU				pmax	pmax			
	comp=Z,15nm,0.7s							
NRCA	**Norcia**	**36.90**	**306**	P		**P**	**07 50 11.8**	**+0.1**
NRCA				IAmb	IAmb		07 50 17.0	
	comp=Z,9.4nm,0.8s							
DPC	**Dobruska-Polom**	**37.11**	**319**	*e*P		**P**	**07 50 13.7**	**+0.4**
DPC	**Dobruska-Polom**	**37.11**	**319**	*e*P		**P**	**07 50 13.7**	**+0.4**
OSTC	**Ostas**	**37.25**	**319**	*e*P		P	07 50 19.9	+5.4
MURB	**Monte Urbino**	**37.41**	**307**	P		**P**	**07 50 16.4**	**+0.4**
MURB				IAmb	IAmb		07 50 36.7	
	comp=Z,16nm,1.1s							
LATE	**Laterza**	**37.81**	**305**	P		**P**	**07 50 19.3**	**0.0**
LATE				IAmb	IAmb		07 50 36.3	
	comp=Z,14nm,1.1s							
CLUD	**Cludinico**	**37.92**	**312**	P		**P**	**07 50 19.9**	**-0.3**
CLUD				IAmb	IAmb		07 50 27.0	
	comp=Z,6.5nm,1.0s							
STAL	**STALIGIAL**	**37.98**	**311**	IAmb	IAmb		07 50 35.1	
	comp=Z,9.3nm,1.2s							
GERES	**GERESS Array B**	**38.13**	**316**	P		**P**	**07 50 20.9**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=90,slow=8.0,SNR=5.9							
GERES				ScP		**ScP**	**07 56 20.8**	**-3.6**
	comp=Z,0.5nm,0.7s,baz=129,slow=2.7,SNR=4.6							
	comp=Z,0.6nm,0.6s							
GERES	**GERESS Array B**	**38.13**	**316**	P		**P**	**07 50 22.4**	**+0.5**
CIMO	**Cimolais**	**38.18**	**311**	P		**P**	**07 50 21.9**	**-0.5**
CIMO				IAmb	IAmb		07 50 26.2	
	comp=Z,4.5nm,1.0s							
ABTA	**Abfaltersbach**	**38.25**	**312**	P		**P**	**07 50 21.4**	**-1.6**
	comp=Z,5.1nm,1.1s							
ABTA	**Abfaltersbach**	**38.25**	**312**	*e*P		**PKiKP**	**07 59 53.3**	**+1.4**
	comp=Z,1.1nm,0.6s							
KHC	**Kasperske Hory**	**38.30**	**316**	P		**P**	**07 50 22.7**	**-0.7**
KHC	**Kasperske Hory**	**38.30**	**316**	*e*P		**P**	**07 50 22.6**	**-0.7**
KHC				*e*			07 50 33.5	
KHC	**Kasperske Hory**	**38.30**	**316**	*e*P		**P**	**07 50 22.6**	**-0.7**
KHC				*ex*		x	07 50 33.5	
WTTA	**Wattenberg**	**38.97**	**313**	*e*P		**P**	**07 50 28.1**	**-1.1**
	comp=Z,6.8nm,1.0s							
WATA	**Walderalm**	**39.02**	**313**	*e*P		**P**	**07 50 28.9**	**-0.7**
	comp=Z,4.0nm,0.7s							
VLC	**Villacollemand**	**39.11**	**308**	P		**P**	**07 50 30.3**	**+0.1**
VLC				IAmb	IAmb		07 50 35.9	
	comp=Z,18nm,1.3s							
FIA1	**FINESS Array S**	**39.23**	**339**	P		**P**	**07 50 29.9**	**-0.9**
FIA1				IAmb	IAmb		07 51 04.1	
	comp=Z,10nm,1.2s							
FINES	**FINESS Array B**	**39.23**	**339**	P		**P**	**07 50 30.0**	**-0.9**
	comp=Z,3.0nm,0.4s,baz=143,slow=10,SNR=23							
	comp=Z,3.0nm,0.4s							
FINES	**FINESS Array B**	**39.23**	**339**	P		**P**	**07 50 30.2**	**-0.6**
FINES	**FINESS Array B**	**39.23**	**339**	*i* P		**P**	**07 50 30.0**	**-0.9**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.4s							
SQTA	**Sankt Quirin**	**39.24**	**312**	*e*P		**P**	**07 50 29.7**	**-1.6**
	comp=Z,2.7nm,0.5s							
MOTA	**Moosalm**	**39.34**	**313**	P		**P**	**07 50 29.5**	**-2.7**
	comp=Z,7.8nm,1.2s							
CLL	**Collm**	**39.42**	**319**	*e*P		**P**	**07 50 33.0**	**+0.4**
CLL				*e*			07 50 39.0	
CLL	**Collm**	**39.42**	**319**	*e*P		**P**	**07 50 33.0**	**+0.4**
CLL				*ex*		x	07 50 39.0	
	comp=Z,5.0nm,1.1s							
CLL				Lm		MLR	08 08 00.0	
	comp=Z,100nm,20.1s							
GTA	**Gaotai**	**39.49**	**60**	⇓P		**P**	**07 50 34.3**	**+0.7**
GTA				sP		sP	07 50 42.4	+3.1
GTA				pmax	pmax			
	comp=Z,9.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,81nm,6.9s							
GTA				LR		LR		
	comp=N,100nm,15.3s							
GTA				LR		LR		
	comp=E,120nm,16.0s							
GTA				LR		LR		
	comp=Z,120nm,14.9s							
FETA	**Feichten**	**39.50**	**312**	P		**P**	**07 50 32.5**	**-1.1**
	comp=Z,5.5nm,0.7s							
FETA	**Feichten**	**39.50**	**312**	*i* P		**PKiKP**	**07 59 56.3**	**+3.2**
	comp=Z,4.3nm,0.8s							
RETA	**Reutte**	**39.60**	**313**	*e*P		**P**	**07 50 32.0**	**-2.3**
	comp=Z,3.1nm,1.1s							
DAVA	**Damuels**	**40.13**	**312**	*e*P		**P**	**07 50 37.7**	**-1.1**
	comp=Z,7.9nm,0.4s							
DAVA	**Damuels**	**40.13**	**312**	*i* P		**PKiKP**	**07 59 56.7**	**+3.2**
	comp=Z,1.4nm,0.5s							
CMAR	**Chiang Mai Arr**	**41.76**	**92**	P		**P**	**07 50 51.6**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=287,slow=9.1,SNR=8.0							
CMAR				LR		LR	08 13 02.3	
	comp=Z,19nm,18.2s,baz=275,slow=43							
	comp=Z,1.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**41.76**	**92**	*ce*P		**P**	**07 50 53.7**	**+1.3**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BNI	**Bardonecchia**	**41.87**	**308**	P		**P**	**07 50 52.8**	**-0.4**
BNI				IAmb	IAmb		07 51 08.9	
	comp=Z,5.8nm,0.7s							
BNI	**Bardonecchia**	**41.87**	**308**	P		**P**	**07 50 52.8**	**-0.4**
BNI				pmax	pmax			
	comp=Z,6.0nm,0.7s							
PZH	**PanZhiHua**	**42.03**	**80**	P		**P**	**07 50 56.3**	**+1.6**
PZH				pmax	pmax			
	comp=Z,20nm,0.6s							
PZH				pmax	pmax			
	comp=Z,90nm,5.7s							
LZH	**Lanzhou**	**42.64**	**65**	*e*P		**P**	**07 51 00.6**	**+1.0**
LZH				sP		sP	07 51 07.5	+2.2
LZH				pmax	pmax			
	comp=Z,17nm,1.3s							
HFS	**Hagfors**	**43.06**	**331**	LR		LR	08 11 20.9	
	comp=Z,40nm,18.9s,baz=127,slow=39							
KMI	**Kunming**	**43.21**	**81**	⇓P		**P**	**07 51 06.3**	**+1.9**
KMI				pmax	pmax			
	comp=Z,15nm,0.6s							
NC405	**NORSAR Array S**	**44.40**	**332**	P		**P**	**07 51 11.7**	**-1.5**
NC405				IAmb	IAmb		07 51 25.2	
	comp=Z,11nm,0.9s							
NB2	**NORSAR Subarra**	**44.58**	**332**	P		**P**	**07 51 12.7**	**-2.0**
	comp=Z,0.7nm,0.5s,baz=118,slow=8.6							
NB2	**NORSAR Subarra**	**44.58**	**332**	P		**P**	**07 51 12.7**	**-2.0**
	baz=118,slow=8.6							
NOA	**NORSAR Array B**	**44.58**	**332**	P		**P**	**07 51 13.0**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=119,slow=7.4,SNR=9.5							
NOA				LR		LR	08 11 34.4	
	comp=Z,32nm,19.7s,baz=115,slow=38							
	comp=Z,1.1nm,0.6s							
SONM	**Songino Array**	**45.16**	**48**	P		**P**	**07 51 19.0**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=254,slow=7.7,SNR=8.7							
SONM				LR		LR	08 11 14.5	
	comp=Z,88nm,19.2s,baz=254,slow=37							
	comp=Z,2.2nm,0.9s							
ULN	**Ulaanbaatar**	**45.60**	**48**	⇑*e*P		**P**	**07 51 22.9**	**-0.3**
ULN				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ARA0	**ARCESS Array S**	**45.66**	**346**	*e*P		**P**	**07 51 22.9**	**-0.3**
ARCES	**ARCESS Array B**	**45.66**	**346**	P		**P**	**07 51 22.4**	**-0.8**
	comp=Z,2.6nm,0.8s,baz=147,slow=9.2,SNR=14							
ARCES				LR		LR	08 14 49.7	
	comp=Z,57nm,18.5s,baz=134,slow=42							
	comp=Z,2.6nm,0.8s							
KTK1	**Kautokeino**	**45.75**	**345**	*e*P		**P**	**07 51 23.6**	**-0.3**
KTK1				IAmb	IAmb		07 51 26.9	
	comp=Z,16nm,1.1s							
NRIK	**Noril'sk**	**46.45**	**16**	⇑*e*P		**P**	**07 51 30.0**	**+0.6**
NRIK				pmax	pmax			
	comp=Z,6.0nm,1.3s							
FAUS	**Fauske**	**46.72**	**340**	*e*P		**P**	**07 51 30.8**	**-0.6**
STOK	**Stokkvaagen**	**46.78**	**339**	*e*P		**P**	**07 51 32.4**	**+0.4**
JETT	**Jettan, Norway**	**46.83**	**344**	*e*P		**P**	**07 51 32.9**	**+0.5**
JETT				IAmb	IAmb		07 51 36.3	
	comp=Z,12nm,0.9s							
STEI	**Steigen**	**47.08**	**341**	*e*P		**P**	**07 51 33.9**	**-0.4**
ESDC	**Sonseca Array**	**49.54**	**300**	P		**P**	**07 51 53.1**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=62,slow=7.5,SNR=11							
ESDC				LR		LR	08 15 41.5	
	comp=Z,26nm,20.5s,baz=168,slow=40							
	comp=Z,1.9nm,0.5s							
PAB	**San Pablo**	**49.85**	**300**	P		**P**	**07 51 55.2**	**-1.0**
PAB	**San Pablo**	**49.85**	**300**	P		**P**	**07 51 55.2**	**-1.0**
PAB				pmax	pmax			
	comp=Z,28nm,1.5s							
TOA0	**Torodi Ar. Sit**	**51.09**	**265**	P		**P**	**07 52 04.8**	**-1.0**
TOA0				IAmb	IAmb		07 52 28.8	
	comp=Z,5.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**51.09**	**265**	P		**P**	**07 52 04.9**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=68,slow=8.3,SNR=15							
	comp=Z,2.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**51.09**	**265**	P		**P**	**07 52 04.9**	**-0.8**
TORD				IAmb	IAmb		07 52 28.2	
	comp=Z,10nm,1.4s							
XLT	**XiLinHaoTe**	**51.73**	**54**	*e*P		**P**	**07 52 10.6**	**+0.3**
XLT				pmax	pmax			
	comp=Z,15nm,0.8s							
XLT				pmax	pmax			
	comp=Z,87nm,5.5s							
PBAR	**Barrancos**	**52.07**	**299**	*ep*P		pP	07 52 15.9	-1.1
PMRV	**Marv??o**	**52.20**	**300**	*ep*P		pP	07 52 16.9	-1.1
PVRL	**Vila Real**	**52.27**	**303**	*ep*P		pP	07 52 17.9	-0.6
POLO	**Lamas de Olo**	**52.32**	**303**	*ep*P		pP	07 52 18.2	-0.7
PVIS	**Viseu**	**52.46**	**302**	*ep*P		pP	07 52 19.5	-0.4
KOWA	**Kowa**	**55.63**	**269**	P		**P**	**07 52 38.5**	**-0.6**
TSUM	**Tsumeb**	**58.28**	**222**	LR		LR	08 21 36.1	
	comp=Z,47nm,18.2s,baz=145,slow=40							
	comp=Z,104nm,18.8s,baz=264,slow=39							
YAK	**Yakutsk**	**59.54**	**32**	LR		LR	08 21 27.0	
	comp=Z,104nm,18.8s,baz=264,slow=39							
YAK	**Yakutsk**	**59.54**	**32**	⇓*e*P		**P**	**07 53 06.8**	**+0.9**
YAK				pmax	pmax			
	comp=Z,8.0nm,0.5s							
TIXI	**Tiksi**	**59.60**	**21**	LR		LR	08 21 22.6	
	comp=Z,61nm,19.5s,baz=356,slow=38							
DBIC	**Dimbokro**	**59.70**	**262**	P		**P**	**07 53 07.0**	**-0.8**
	comp=Z,6.5nm,0.7s,baz=66,slow=4.6,SNR=10							
DBIC				LR		LR	08 21 31.7	
	comp=Z,30nm,20.0s,baz=118,slow=39							
	comp=Z,6.5nm,0.7s							
KIC	**Kosan Boka**	**59.74**	**261**	⇑*e*P		**P**	**07 53 07.1**	**-1.0**
	comp=Z,4.6nm,0.5s							
BORG	**Borgarnes**	**59.75**	**331**	LR		LR	08 19 10.5	
	comp=Z,30nm,20.5s,baz=169,slow=36							
TIC	**Toumodi**	**59.86**	**262**	⇑*e*P		**P**	**07 53 08.3**	**-0.7**
	comp=Z,6.9nm,0.6s							
LIC	**Lamto**	**60.06**	**261**	⇑*e*P		**P**	**07 53 09.5**	**-0.8**
	comp=Z,18nm,0.6s							
KSRS	**Korea Array**	**61.56**	**60**	P		**P**	**07 53 19.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=281,slow=6.2,SNR=4.9							
KSRS				LR		LR	08 21 35.3	
	comp=Z,26nm,20.0s,baz=295,slow=38							
	comp=Z,1.0nm,0.7s							
KLR	**Kul'dur**	**61.91**	**46**	LR		LR	08 23 26.7	
	comp=Z,63nm,19.6s,baz=250,slow=39							
KLR	**Kul'dur**	**61.91**	**46**	⇓*e*P		**P**	**07 53 22.2**	**-0.2**
KLR				pmax	pmax			
	comp=Z,3.0nm,1.0s							
BOSA	**Boshof**	**62.09**	**209**	P		**P**	**07 53 22.4**	**-1.4**
	comp=Z,4.4nm,0.9s,baz=29,slow=7.2,SNR=8.2							
BOSA				LR		LR	08 22 22.1	
	comp=Z,48nm,18.2s,baz=17,slow=38							
	comp=Z,4.4nm,0.9s							
USRK	**Ussuriysk Ar.**	**63.05**	**52**	P		**P**	**07 53 29.2**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=238,slow=4.9,SNR=2.6							
	comp=Z,0.8nm,0.5s							
SUMG	**Summit**	**65.23**	**341**	*i* P		**P**	**07 53 47.0**	**+2.6**
SOE	**Somerset East**	**65.54**	**207**	P		**P**	**07 53 46.7**	**+0.2**
YSS	**Yuzh-Sakhalins**	**69.62**	**47**	⇑*e*P		**P**	**07 54 12.0**	**-0.1**
YSS				pmax	pmax			
	comp=Z,25nm,1.3s							
SEY	**Seymchan**	**69.70**	**29**	⇓*e*P		**P**	**07 54 13.1**	**+0.8**
SEY				pmax	pmax			
	comp=Z,3.0nm,0.6s							
MA2	**Magadan**	**70.10**	**33**	LR		LR	08 26 26.5	
	comp=Z,28nm,19.3s,baz=51,slow=37							
BILL	**Bilibino**	**72.81**	**21**	*e*P		**P**	**07 54 32.1**	**+1.0**
BILL				*e*			07 54 43.8	
BILL				*e*			07 57 14.7	
BILL				*e*PPP		PPP	07 59 00.4	
BILL				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BILL				MLR	MLR			
	comp=Z,71nm,20.0s							
PETK	**Petropavlovsk-**	**76.20**	**37**	LR		LR	08 28 28.5	
	comp=Z,47nm,18.4s,baz=97,slow=36							
SCHQ	**Schefferville**	**84.13**	**330**	P		**P**	**07 55 32.7**	**-1.1**
	comp=Z,3.4nm,1.0s,baz=50,slow=17,SNR=1.3							
	comp=Z,3.4nm,1.0s							
ILAR	**Eielson Array**	**86.91**	**9**	P		**P**	**07 55 45.8**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=319,slow=4.0,SNR=2.8							
	comp=Z,0.3nm,0.8s							
YKA	**Yellowknife Ar**	**90.26**	**355**	P		**P**	**07 56 02.1**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=360,slow=3.9,SNR=2.7							
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**90.39**	**112**	P		**P**	**07 56 03.3**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=312,slow=4.0,SNR=16							
	com

PB01				*e*S		**Sn**	07 44 19.0	+2.2
PB01				IAML			07 44 27.3	
	comp=E,2µm,0.3s							
PB01	**IPOC Station P**	**1.99**	**1**	*e*P		**Pn**	**07 43 55.3**	**+2.5**
PB01				*e*S		**Sn**	**07 44 20.6**	**+3.8**
PB01				IAML			07 44 22.5	
	comp=Z,1µm,0.6s							
GO02	**Mina Guanaco**	**2.11**	**182**	Pn		**Pn**	**07 43 56.0**	**+1.3**
GO02	**Mina Guanaco**	**2.11**	**182**	⇑*i*P		**Pn**	**07 43 55.9**	**+1.3**
GO02				*i*S		**Sn**	**07 44 22.8**	**+2.7**
GO02				IAML			07 44 29.3	
	comp=E,1µm,0.1s							
GO02	**Mina Guanaco**	**2.11**	**182**	*e*P		**Pn**	**07 43 56.1**	**+1.5**
GO02				*e*S		**Sn**	**07 44 25.2**	**+5.1**
TA01	**Diego Aracena**	**2.54**	**346**	Pn		**Pn**	**07 44 00.9**	**+0.8**
TA01	**Diego Aracena**	**2.54**	**346**	⇑*i*P		**Pn**	**07 44 00.8**	**+0.7**
TA01				*i*S		**Sn**	**07 44 35.5**	**+5.5**
TA01				IAML			07 44 43.0	
	comp=N,734nm,0.3s							
TA02	**Huaiquique**	**2.81**	**348**			**Pn**	**07 44 06.0**	**+2.1**
TA02	**Huaiquique**	**2.81**	**348**	IAML			07 44 51.1	
	comp=N,851nm,0.4s							
AC01	**Pan de Azucar**	**3.24**	**197**	Pn		**Pn**	**07 44 09.0**	**-0.7**
GO01	**Chusmiza**	**3.37**	**5**	Pn		**Pn**	**07 44 14.1**	**+2.2**
GO01	**Chusmiza**	**3.37**	**5**	⇑*i*P		**Pn**	**07 44 13.9**	**+2.0**
GO01				*i*S		**Sn**	**07 44 54.6**	**+3.6**
HJA	**Humahuaca**	**3.79**	**93**	*e*P		**Pn**	**07 44 21.0**	**+3.4**
AC02	**Maricunga**	**3.80**	**175**	Pn		**Pn**	**07 44 19.5**	**+1.8**
AC02	**Maricunga**	**3.80**	**175**	⇑*i*P		**Pn**	**07 44 19.7**	**+2.0**
AC02				*i*S		**Sn**	**07 45 05.1**	**+3.7**
AC02	**Maricunga**	**3.80**	**175**	*e*P		**Pn**	**07 44 20.0**	**+2.3**
AC02				*e*S		**Sn**	**07 45 02.1**	**+0.7**
AC02				IAML			07 45 16.3	
	comp=Z,149nm,0.4s							
YJA	**Yavi**	**3.81**	**78**	*e*P		**Pn**	**07 44 22.4**	**+4.6**
SLA	**San Lorenzo**	**4.04**	**115**	*e*P		**Pn**	**07 44 25.5**	**+4.7**
AC06	**Mina Casimiro**	**4.36**	**190**			**Pn**	**07 44 23.6**	**-1.4**
PB12	**IPOC Station P**	**4.47**	**350**	Pn		**Pn**	**07 44 27.1**	**+0.5**
GO03	**Cogiap**	**4.58**	**188**			**Pn**	**07 44 27.1**	**-0.9**
PB16	**IPOC Station P**	**4.68**	**0**			Pn	07 44 35.4	+5.5
AC04	**Llanos de Chal**	**5.33**	**195**	Pn		**Pn**	**07 44 34.9**	**-3.3**
AC05	**El Transito**	**5.81**	**186**	Pn		**Pn**	**07 44 43.9**	**-1.0**
LCO	**Las Campanas**	**6.04**	**190**	Pn		**Pn**	**07 44 46.2**	**-1.9**
LPAZ	**La Paz**	**6.84**	**11**	P		**Pn**	**07 44 58.4**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=180,slow=14,SNR=6.8							
LPAZ	**La Paz**	**6.84**	**11**			**Pn**	**07 44 58.6**	**-0.9**
GO04	**Tololo Observa**	**7.19**	**189**	Pn		**Pn**	**07 45 01.1**	**-2.8**
CO06	**Fray Jorge**	**7.83**	**193**	Pn		**Pn**	**07 45 09.2**	**-3.2**
CO02	**Combarbal**	**8.24**	**189**	Pn		**Pn**	**07 45 14.4**	**-3.6**
SIV	**San Ignacio**	**10.61**	**50**	P		**Pn**	**07 45 49.6**	**-0.9**
	comp=Z,5.5nm,0.5s,baz=223,slow=7.6,SNR=3.0							
SIV				S		**Sn**	**07 47 43.8**	**-4.0**
	comp=Z,1.1nm,0.3s,baz=278,slow=23,SNR=3.3							
BO01	**Tunca**	**11.39**	**187**	Pn		**Pn**	**07 46 00.8**	**-0.2**
CPUP	**Villa Florida**	**11.56**	**109**	P		**Pn**	**07 46 04.0**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=271,slow=11,SNR=4.2							
CPUP	**Villa Florida**	**11.56**	**109**	Pn		**Pn**	**07 46 04.6**	**+1.2**
PTLB	**Pontes e Lacer**	**12.38**	**54**	Pn		**Pn**	**07 46 14.9**	**+0.4**
H03N1	**Juan Fernandez**	**13.25**	**217**	T		T	07 59 20.8	
	baz=40,slow=72,SNR=10							
H03N2	**Juan Fernandez**	**13.26**	**217**	T		T	07 59 24.8	
	baz=40,slow=72,SNR=9.8							
H03N3	**Juan Fernandez**	**13.27**	**217**	T		T	07 59 23.7	
	baz=40,slow=72,SNR=9.6							
ETMB	**Extrema**	**13.53**	**14**	Pn		**Pn**	**07 46 27.8**	**-2.2**
MACA	**Manacapuru-AM**	**21.54**	**25**	P		**P**	**07 48 05.4**	**+0.6**
MACA				IAmb		IAmb	07 48 10.7	
	comp=Z,5.9nm,0.6s							
SNAA	**Sanae**	**61.02**	**161**	P		**P**	**07 53 25.9**	**-1.2**
SUR	**Sutherland**	**78.30**	**120**	LR		LR	08 24 19.3	
	comp=Z,51nm,20.8s,baz=329,slow=31							
TORD	**Torodi Ar. Bea**	**78.41**	**70**	P		**P**	**07 55 13.8**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=250,slow=5.0,SNR=8.2							
	comp=Z,0.7nm,0.5s							
H11S2	**WAKE ISLAND Hy**	**27.49**	**276**	T		T	10 22 20.7	
	baz=105,slow=74,SNR=19							
H11S1	**WAKE ISLAND Hy**	**27.50**	**276**	T		T	10 22 19.7	
	baz=105,slow=74,SNR=18							
H11S3	**WAKE ISLAND Hy**	**27.51**	**276**	T		T	10 22 20.0	
	baz=105,slow=74,SNR=14							
H11N3	**WAKE ISLAND Hy**	**27.61**	**278**	T		T	10 22 36.1	
	baz=103,slow=74,SNR=9.2							
H11N1	**WAKE ISLAND Hy**	**27.63**	**278**	T		T	10 22 36.2	
	baz=103							
H11N2	**WAKE ISLAND Hy**	**27.63**	**278**	T		T	10 22 33.6	
	baz=103,slow=74,SNR=7.2							

IDC ***21*** *07:48:56.4±1.0,21°.12S×66°.68W,h255km±21km,mb3.2/1, mbtmp3.6/5,Error ellipse: s-maj=32.9km s-min=15.1km az=103.0*

SCB ***21*** *07:48:56.9±1.0,21°.10S×66°.50W,h256km±8km,ML3.4/4, Error ellipse: s-maj=6.6km s-min=2.8km az=0.0*

ISC 21 07:48:56.0±1.0,**21°.13S**±0'.06×**66°.54W**±0'.06,**h243**km,**n17,** σ1**s37**/23,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**0.85**	**98**	P	**Pn**	**07 49 31.2**	**+1.2**
YJA	**Yavi**	**1.41**	**138**	P	**Pn**	**07 49 35.2**	**+1.7**
YJA				S	**S**	**07 50 02.0**	**-0.9**
YJA				IAML		07 50 03.6	
	40nm,0.2s						
AOVT	**TarijaAcel**	**1.76**	**104**	P	**Pn**	**07 49 36.8**	**+0.8**
LVC	**Limon Verde**	**2.65**	**236**	P	**Pn**	**07 49 44.9**	**+0.3**
	9.1nm,0.3s,baz=39,slow=5.0,SNR=8.4						
LVC				S	**S**	**07 50 23.3**	**+0.4**
	6.1nm,0.3s,baz=221,slow=14,SNR=2.4						
LVC	**Limon Verde**	**2.65**	**236**	P	**Pn**	**07 49 46.5**	**+1.9**
GO01	**Chusmiza**	**2.88**	**300**	P	**Pn**	**07 49 49.2**	**+1.9**
PB02	**IPOC Station P**	**3.14**	**266**	P	**Pn**	**07 49 51.1**	**+1.5**
PB02				S	**S**	**07 50 30.3**	**-1.7**
PB02				IAML		07 50 32.9	
	80nm,0.5s						
PB06	**IPOC Station P**	**3.22**	**240**	P	**Pn**	**07 49 51.9**	**+1.3**
TA01	**Diego Aracena**	**3.45**	**279**	P	**Pn**	**07 49 54.2**	**+1.1**
TA01				S	**S**	**07 50 36.1**	**-2.1**
TA01				IAML		07 50 39.2	
	77nm,0.4s						
TA02	**Huaiquique**	**3.47**	**284**	P	**Pn**	**07 49 54.5**	**+1.2**
PB04	**IPOC Station P**	**3.56**	**250**	P	**Pn**	**07 49 55.8**	**+1.3**
PB04				S	**S**	**07 50 58.6**	**-2.2**
PB04				IAML		07 50 43.2	
	71nm,0.3s						
GO02	**Mina Guanaco**	**4.90**	**214**	P	**Pn**	**07 50 12.0**	**+1.4**
LPAZ	**La Paz**	**5.05**	**342**	P	**Pn**	**07 50 13.6**	**+0.8**
	0.6nm,0.3s,baz=158,slow=7.1,SNR=7.2						
LPAZ				S	**S**	**07 51 14.6**	**+0.7**
	3.3nm,0.9s,baz=86,slow=11,SNR=6.2						
SIV	**San Ignacio**	**7.28**	**46**	P	**Pn**	**07 50 40.0**	**-0.3**
	3.8nm,0.5s,baz=237,slow=6.4,SNR=15						
SIV	**San Ignacio**	**7.28**	**46**	P		**Pn**	**07 50 40.3**	**0.0**
BDFB	**Brasilia**	**18.41**	**76**	P		**Pn**	**07 52 56.3**	**-0.6**
	1.7nm,0.4s,baz=221,slow=8.1,SNR=6.1							
TORD	**Torodi Ar. Bea**	**75.16**	**69**	P		**P**	**08 00 11.7**	**-0.5**
	0.4nm,0.4s,baz=250,slow=5.9,SNR=8.6							
	0.4nm,0.4s							

KRNET ***21*** *07:52:10.1±0.1,39°.42N×73°.50E,mb3.0*

SOME ***21*** *07:52:12.0,39°.45N×73°.70E,h0km*

ISU ***21*** *07:52:15,39°.59N×73°.32E,h25km*

NNC ***21*** *07:52:16.1±2.7,39°.56N×73°.56E,h3km±12km,mb3.6, mpv3.2,Error ellipse: s-maj=20.5km s-min=11.3km az=163.0*

ISC 21 07:52:15.4±1.7,**39°.48N**±0'.07×**73°.11E**±0'.04,**h10**km±11km, **n31,** σ2**s12**/50,**10C-4D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.07**	**347**	⇑*i*P	**Pg**	**07 52 33.6**	**-2.4**
	baz=34						
OHH				⇑*i*S	**Sn**	**07 52 50.9**	**-0.6**
	baz=34						
TSTA	**Tashata**	**1.20**	**336**	S	**Sn**	**07 52 55.0**	**+0.4**
FRG	**Fergana**	**1.35**	**312**	P	**Pg**	**07 52 42.1**	**+0.7**
FRG				S	**Sg**	**07 53 02.1**	**+3.7**
BTK	**Batken**	**1.85**	**289**	P	**Pg**	**07 52 51.3**	**+0.3**
BTK				S	**Sg**	**07 53 18.2**	**+3.1**
GAR	**Garm**	**2.22**	**258**	⇑*i*P	**Pb**	**07 52 54.3**	**-1.4**
	baz=61						
GAR				⇑*i*S	**Sg**	**07 53 26.7**	**-0.1**
	baz=61						
CHDK	**Chadak**	**2.34**	**310**	P	**Pg**	**07 52 58.9**	**-1.4**
CHDK				S	**Sg**	**07 53 31.4**	**+0.8**
ARK	**Arkit**	**2.47**	**340**	⇑*i*P	**Pn**	**07 52 56.4**	**+0.5**
	baz=34						
ARK				⇑*i*S	**Sb**	**07 53 29.9**	**-0.7**
	baz=34						
ARLS	**Aral**	**2.55**	**21**	⇑*i*P	**Pn**	**07 52 54.2**	**-2.8**
	baz=14						
ARLS				⇑*i*S	**Sn**	**07 53 26.5**	**-1.7**
	baz=14						
UCH	**Uchtor**	**2.94**	**21**	⇓*e*P	**Pn**	**07 52 59.9**	**-2.8**
	baz=15						
UCH				⇓*i*S	**Sn**	**07 53 36.4**	**-1.9**
	baz=15						
MRKS	**Merke**	**3.26**	**2**	*e*P	**Pg**	**07 53 16.9**	**-1.0**
	1.8nm,0.3s						
MRKS				*e*S	**Sg**	**07 54 03.3**	**+3.1**
	8.4nm,0.4s						
MRKS	**Merke**	**3.26**	**2**	Pg	**Pg**	**07 53 17.8**	**-0.1**
	1.8nm,0.3s						
MRKS				Lg	Lg	07 54 02.8	
	8.4nm,0.4s						
IUG	**Iuzhnay**	**3.54**	**320**	*e*P	**Pg**	**07 53 25.3**	**+2.0**
	255nm,0.6s						
IUG				*e*S	Sg	07 54 18.0	+8.9
	22nm,0.8s						
IUG	**Iuzhnay**	**3.54**	**320**	Pg	**Pg**	**07 53 22.4**	**-0.9**
	255nm,0.6s						
IUG				Lg	Lg	07 54 10.5	
	22nm,0.6s						
TKM2	**Tokmak 2**	**3.92**	**28**	Pg	**Pb**	**07 53 22.0**	**-2.7**
TKM2				Lg	Lg	07 54 12.2	
KK31	**Karatay Array**	**4.11**	**332**	⇓Pn	**Pn**	**07 53 19.9**	**+1.6**
	0.2nm,0.3s,baz=142,slow=11,SNR=5.5						
KK31				⇑Pg	**Pg**	**07 53 31.5**	**-2.7**
	0.9nm,0.5s,baz=143,slow=14,SNR=5.6						
KK31				⇓Sn	**Sb**	**07 54 12.6**	**-5.0**
	0.8nm,0.3s,baz=145,slow=26,SNR=4.3						
KK31				⇑Lg	Lg	07 54 28.3	
	1.2nm,0.3s,baz=142,slow=25						
KST	**Kastek**	**4.16**	**30**	*e*P	**Pb**	**07 53 26.4**	**-2.4**
	1.7nm,0.5s						
KST				*e*S	**Sb**	**07 54 20.2**	**+1.1**
	6.9nm,0.5s						
KST	**Kastek**	**4.16**	**30**	Pg	**Pb**	**07 53 27.9**	**-0.9**
	1.7nm,0.5s						
KST				Lg	Lg	07 54 19.9	
	6.9nm,0.5s						
DGS	**Degeres**	**4.26**	**27**	*e*P	**Pb**	**07 53 28.4**	**-2.0**
	2.5nm,0.6s						
DGS				*e*S	**Sb**	**07 54 23.7**	**+1.7**
	8.8nm,0.9s						
DGS	**Degeres**	**4.26**	**27**	Pg	**Pb**	**07 53 30.0**	**-0.4**
	2.5nm,0.6s						
DGS				Lg	Lg	07 54 24.2	
	8.8nm,0.9s						
KRBS	**Karabastau**	**4.63**	**24**	*e*P	**Pb**	**07 53 35.0**	**-1.7**
	1.6nm,0.4s						
KRBS				*e*S	**Sb**	**07 54 34.9**	**+2.3**
	2.6nm,0.5s						
KRBS	**Karabastau**	**4.63**	**24**	Pg	**Pb**	**07 53 36.7**	**0.0**
	1.6nm,0.4s						
KRBS				Lg	Lg	07 54 34.9	
	2.6nm,0.5s						
MDOK	**Medeo**	**4.72**	**38**	*e*P	**Pb**	**07 53 37.8**	**-0.6**
	2.9nm,0.3s						
MDOK				*e*S	**Sb**	**07 54 39.6**	**+4.2**
	5.1nm,0.4s						
MDOK	**Medeo**	**4.72**	**38**	Pg	**Pb**	**07 53 39.1**	**+0.7**
	2.9nm,0.3s						
MDOK				Lg	Lg	07 54 39.2	
	5.1nm,0.4s						
KOTS	**Kotyrbulak**	**4.81**	**38**	*e*P	**Pb**	**07 53 38.4**	**-1.5**
	0.4nm,0.3s						
KOTS				*e*S	**Sb**	**07 54 40.4**	**+2.6**
	10nm,0.6s						
KOTS	**Kotyrbulak**	**4.81**	**38**	Pg	**Pb**	**07 53 39.6**	**-0.3**
	0.4nm,0.3s						
KOTS				Lg	Lg	07 54 40.1	
	10nm,0.6s						
KTBS	**Karatobe**	**5.00**	**31**	*e*P	**Pb**	**07 53 41.8**	**-1.3**
	1.4nm,0.3s						
KTBS				*e*S	**Sb**	**07 54 46.5**	**+3.1**
	3.8nm,0.4s						
KTBS	**Karatobe**	**5.00**	**31**	Pg	**Pb**	**07 53 42.6**	**-0.5**
	1.5nm,0.4s						
KTBS				Lg	Lg	07 54 45.2	
	3.8nm,0.4s						
KUU	**Kurty**	**5.03**	**28**	*e*P	**Pb**	**07 53 42.6**	**-0.9**
	0.9nm,0.2s						
KUU				*e*S	**Sb**	**07 54 47.6**	**+3.6**
	4.6nm,0.5s						
KUU	**Kurty**	**5.03**	**28**	Pg	**Pb**	**07 53 44.1**	**+0.6**
	0.9nm,0.2s						
KUU				Lg	Lg	07 54 47.8	
	4.6nm,0.5s						
ARXS	**Arharly**	**5.90**	**35**	*e*P	**Pb**	**07 53 57.2**	**-1.1**
	2.0nm,0.4s						
ARXS				*e*S	**Sb**	**07 55 12.8**	**+3.8**
	3.7nm,0.7s						
ARXS	**Arharly**	**5.90**	**35**	Pg	**Pb**	**07 53 58.5**	**+0.1**
	2.0nm,0.4s						
ARXS				Lg	Lg	07 55 13.5	
	3.7nm,0.7s						

NEIC ***21*** *07:55:01.7±0.4,51°.9N±0°.3×178°.3E±0°.2,h113km±24km, Error ellipse: s-maj=44.1km s-min=12.4km az=194.0*

AEIC 21 07:55:02±0.2,**51°.9N**±0°.1×**178°.35E**±0°.09,**h118**km±8km, **ML2.5,Error ellipse: s-maj=18.1km s-min=8.0km az=172.0,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.79**	**131**	Pn	Pn	07 55 21.4	-0.5
AMKA				Sn	Sn	07 55 36.3	-0.5
SMY	**Shemya**	**2.74**	**289**	Pn	Pn	07 55 43.8	-0.9
SMY	**Shemya**	**2.74**	**289**	P	Pn	07 55 43.8	-0.9
KIWB	**Kanaga Island**	**2.79**	**89**	Pn	Pn	07 55 45.0	-0.4
ADK	**Adak**	**3.08**	**88**	Pn	Pn	07 55 49.0	-0.2
ADK	**Adak**	**3.08**	**88**	P	Pn	07 55 49.0	-0.2

IDC ***21*** *08:08:49.2±2.4,37°.35N×142°.19E,h0km,mb3.4/2, mbtmp3.4/5,ML2.5/3,MS2.8/2,Error ellipse: s-maj=45.8km s-min=29.4km az=48.0*

JMA ***21*** *08:08:55.8±0.1,37°.4N±0°.4×141°.7E±0°.8,h44km±2km, MV3.7/40,E OFF FUKUSHIMA PREF*

ISC 21 08:08:54.0±2.2,**37°.32N**±0°.05×**141°.83E**±0°.09,**h23**km±14km, **n25,** σ1**s31**/32,**16D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.76**	**274**	⇓*i*P	**Pb**	**08 09 09.1**	**+0.5**
JFK				⇓S	**Sb**	**08 09 18.1**	**-0.5**
JMST	**Minamisoumatoc**	**0.85**	**298**	⇓*i*P	**Pb**	**08 09 09.9**	**-0.1**
JMST				⇓S	**Sb**	**08 09 20.0**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.85**	**255**	*i*P	**Pb**	**08 09 10.5**	**+0.4**
ONAJ				S	**Sb**	**08 09 20.8**	**-0.4**
JMM	**Marumori**	**0.99**	**304**	⇓*i*P	**Pn**	**08 09 12.0**	**-0.4**
JMM				⇓*e*S	**Sb**	**08 09 23.6**	**-1.3**
JIKH	**Ishinomakikobu**	**1.03**	**344**	*i*P	**Pn**	**08 09 12.9**	**0.0**
JIKH				*e*S	**Sb**	**08 09 25.1**	**-1.1**
JFFD	**Fukushimafurud**	**1.04**	**257**	⇓*i*P	**Pn**	**08 09 13.1**	**-0.1**
JFFD				⇓S	**Sb**	**08 09 25.1**	**-1.4**
JIO	**Ouri**	**1.19**	**342**	⇓*i*P	**Pn**	**08 09 15.3**	**+0.1**
JIO				⇓S	**Sn**	**08 09 28.7**	**-2.1**
JFT	**Otama**	**1.21**	**280**	⇓*i*P	**Pn**	**08 09 16.0**	**+0.5**
JFT				⇓S	**Sn**	**08 09 30.2**	**-0.9**
JHO	**Hitachi**	**1.23**	**235**	⇓P	**Pn**	**08 09 15.7**	**-0.1**
JHO				⇓S	**Sn**	**08 09 30.1**	**-1.8**
JOU	**Okura**	**1.39**	**319**	P	**Pn**	**08 09 18.5**	**+0.5**
JOU				S	**Sn**	**08 09 35.4**	**-0.3**
JYS	**Shirataka**	**1.66**	**303**	P	**Pn**	**08 09 22.3**	**+0.6**
JYS				S	**Sn**	**08 09 42.5**	**+0.2**
JFY	**Yanaizu**	**1.69**	**273**	P	**Pn**	**08 09 22.8**	**+0.6**
JFY				S	**Sn**	**08 09 42.9**	**-0.3**
JMK	**Ichinoseki**	**1.69**	**344**	⇓P	**Pn**	**08 09 22.9**	**+0.7**
JMK				⇓S	**Sn**	**08 09 42.5**	**-0.6**
MJAR	**Matsushiro Arr**	**3.00**	**256**	Pn	**Pn**	**08 09 41.6**	**+1.4**
	0.7nm,0.3s,baz=78,slow=15,SNR=26						
MJAR				Sn	**Sb**	**08 10 20.6**	**-2.4**
	0.9nm,0.3s,baz=265,slow=32,SNR=4.8						
MJAR				LR	LR	08 11 00.1	
	comp=Z,113nm,18.2s,baz=84,slow=40						
	3.7nm,0.3s						
USRK	**Ussuriysk Ar.**	**10.14**	**316**	Pn	**Pn**	**08 11 20.4**	**+2.4**
	0.1nm,0.3s,baz=134,slow=10,SNR=2.3						
	1.2nm,0.6s						
KSRS	**Korea Array**	**11.07**	**275**	Pn	**Pn**	**08 11 34.8**	**+4.0**
	0.1nm,0.3s,baz=82,slow=15,SNR=4.7						
	1.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.01**	**122**	T	T	08 44 21.5	
	baz=314,slow=75,SNR=40						
H11N1	**WAKE ISLAND Hy**	**28.02**	**122**	T	T	08 44 17.2	
	baz=314,slow=75,SNR=28						
H11N3	**WAKE ISLAND Hy**	**28.03**	**122**	T	T	08 44 18.2	
	baz=314,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**28.74**	**124**	T	T	08 45 20.5	
	baz=316,slow=75,SNR=27						
H11S3	**WAKE ISLAND Hy**	**28.74**	**124**	T	T	08 45 16.5	
	baz=316,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**28.76**	**124**	T	T	08 45 22.0	
	baz=316,slow=75,SNR=20						
MKAR	**Makanchi Array**	**44.25**	**302**	P	**P**	**08 17 00.6**	**-0.9**
	0.5nm,0.7s,baz=86,slow=7.8,SNR=3.9						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**57.39**	**188**	P	**P**	**08 18 40.1**	**-0.6**
	0.2nm,0.5s,baz=5.7,slow=7.1,SNR=7.3						
	0.2nm,0.5s						
NOA	**NORSAR Array B**	**74.05**	**337**	LR	LR	08 56 24.1	
	comp=Z,7.5nm,20.4s,baz=60,slow=38						

IDC ***21*** *08:28:54.5±0.7,23°.94S×82°.40E,h0km,mb4.0/10, mbtmp4.0/10,MS3.1/2,Error ellipse: s-maj=24.0km s-min=20.1km az=37.0*

ISC 21 08:28:56.2±0.7,**23°.9S**±0°.2×**82°.4E**±0°.2,**h10**km,**n20,** σ0**s55**/12,**mb4.1**/10,**South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**18.79**	**328**	T	T	08 52 29.7	
	baz=152,slow=74,SNR=70						
H08S1	**Diego Garcia H**	**18.80**	**328**	T	T	08 52 28.5	
	baz=152,slow=74,SNR=76						
H08S3	**Diego Garcia H**	**18.81**	**328**	T	T	08 52 31.1	
	baz=152,slow=74,SNR=94						
H01W3	**Cape Leeuwin H**	**29.59**	**119**	T	T	09 05 49.3	
	baz=284,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**29.59**	**119**	T	T	09 05 48.1	
	baz=284,slow=75,SNR=16						
H01W1	**Cape Leeuwin H**	**29.61**	**119**	T	T	09 05 51.3	
	baz=284,slow=75,SNR=14						
PALK	**Pallekele**	**31.07**	**357**	LR	LR	08 44 48.2	
	comp=Z,34nm,21.7s,baz=253,slow=31						
ASAR	**Alice Springs**	**46.89**	**101**	P	**P**	**08 37 26.8**	**-0.2**
	3.0nm,0.7s,baz=266,slow=7.3,SNR=47						
	3.0nm,0.7s						
WRA	**Warramunga Arr**	**48.11**	**96**	P	**P**	**08 37 36.5**	**-0.1**
	3.2nm,0.7s,baz=262,slow=8.1,SNR=39						
	3.2nm,0.7s						
BOSA	**Boshof**	**51.06**	**252**	P	**P**	**08 37 58.8**	**-0.3**
	3.3nm,0.7s,baz=77,slow=6.7,SNR=7.2						
	3.3nm,0.7s						
STKA	**Stephens Creek**	**52.35**	**113**	P	**P**	**08 38 08.8**	**+0.3**
	0.9nm,0.5s,baz=298,slow=8.5,SNR=3.0						
	0.9nm,0.5s						
VNDA	**Vanda**	**64.51**	**166**	P	**P**	**08 39 33.1**	**+0.4**
	0.4nm,0.8s,baz=279,slow=8.5,SNR=2.4						
	0.4nm,0.8s						
QSPA	**South Pole Qui**	**66.17**	**180**	P	**P**	**08 39 43.5**	**-0.3**
	1.2nm,0.6s,baz=278,slow=0.9,SNR=11						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**70.40**	**360**	P	**P**	**08 40 10.2**	**-0.1**
	0.8nm,0.8s,baz=176,slow=5.8,SNR=6.2						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**77.59**	**1**	P	**P**	**08 40 51.6**	**-0.4**
	1.6nm,0.6s,baz=160,slow=4.7,SNR=6.3						
	1.6nm,0.6s						
BRTR	**Keskin Array B**	**77.98**	**324**	P	**P**	**08 40 55.2**	**+0.4**
	0.8nm,0.7s,baz=161,slow=6.2,SNR=5.9						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**86.99**	**286**	P	**P**	**08 41 42.7**	**+0.5**
	0.6nm,0.8s,baz=142,slow=2.8,SNR=2.9						
	0.6nm,0.8s						
VRAC	**Vranov**	**93.43**	**323**	LR	LR	09 25 28.2	
	comp=Z,9.0nm,18.1s,baz=250,slow=36						
ILAR	**Eielson Array**	**128.34**	**24**	PKP	**PKPdf**	**08 48 01.3**	**-1.1**
	0.4nm,0.8s,baz=316,slow=3.8,SNR=3.5						
NVAR	**Mina Array Bea**	**157.21**	**46**	PKPab	**PKPab**	**08 49 24.2**	**+0.6**
	0.7nm,0.7s,baz=280,slow=4.5,SNR=8.3						

IDC 21 08:45:02.2±1.4,**54°.96S×30°.71W,h0**km,**mb3.7**/3, **mbtmp3.7**/3,**Error ellipse: s-maj=53.9km s-min=34.6km az=82.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.56**	**184**	P	P	08 53 38.7	0.0
	0.8nm,0.8s,baz=162,slow=3.2,SNR=5.0						
	0.8nm,0.8s						
LPAZ	**La Paz**	**48.11**	**308**	P	P	08 53 44.5	+0.1
	0.8nm,0.5s,baz

KULA	Kula-Manisa	2.69	8	PN	Pb	09 13 37.0	-2.6
URLA	Izmir	2.81	334	PN	Pn	09 13 37.8	+1.6
OSC1	CSNet OBS 1	3.46	132	P	Pn	09 13 44.9	-0.1
AKMS	Akamas	3.48	102	P	Pn	09 13 46.2	+0.8
AKMS				AML	AML	09 14 28.3	
	0.2nm,0.8s						
AKMS				AML	AML	09 14 29.5	
	0.1nm,0.8s						
ALFC	Alefka	3.66	100	P	Pn	09 13 48.1	+0.3
ALFC				AML	AML	09 14 35.0	
	0.1nm,0.3s						
ALFC				AML	AML	09 14 37.8	
	0.1nm,0.3s						
SZAC	Souni	3.99	104	P	Pn	09 13 53.2	+0.9
SZAC				AML	AML	09 14 43.1	
	0.1nm,0.5s						
SZAC				AML	AML	09 14 43.5	
	0.1nm,0.8s						
ASGA	Asgata	4.27	103	P	Pn	09 13 57.1	+1.0
OSC2	CSNet OBS 4	4.36	128	P	Pn	09 13 58.5	+1.2
MVOU	Mavrovouni	4.52	99	P	Pn	09 14 00.3	+0.7

IDC 21 09:13:36.8±684.0, 31°91N×32°78E, h0km, Error ellipse: s-maj=326.1km s-min=91.5km az=167.0, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	KESRA INFRASON	19.85	288	*i*		11 19 00.0	
	baz=97,slow=317,SNR=0.5						
I26DE	FREYUNG INFRAS	22.20	325	*i*		11 30 00.0	
	baz=131,slow=326,SNR=2.4						
I37NO	I37NO	38.08	352	*i*		13 04 40.0	
	baz=160,slow=325,SNR=1.1						

IDC 21 09:14:51.8±1.3, 55°10S×30°33W, h0km, mb3.8/3, mbtmp3.8/3, MS3.3/3, Error ellipse: s-maj=51.6km s-min=36.8km az=87.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	Villa Florida	34.86	315	LR	LR	09 34 22.1	
	comp=Z,17nm,19.9s,baz=202,slow=34						
QSPA	South Pole Qui	35.15	180	LR	LR	09 36 06.1	
	comp=Z,79nm,18.0s,baz=206,slow=36						
VNDA	Vanda	47.43	184	P	P	09 23 27.3	0.0
	0.7nm,0.8s,baz=199,slow=3.9,SNR=3.1						
	0.7nm,0.8s						
LPAZ	La Paz	48.38	308	P	P	09 23 36.1	+0.1
	1.4nm,0.7s,baz=135,slow=5.3,SNR=5.2						
	1.4nm,0.7s						
H10N1	ASCENSION HYDR	48.80	21	T	T	10 16 15.0	
	baz=194						
H10N3	ASCENSION HYDR	48.80	21	T	T	10 16 18.1	
	baz=194						
H10N2	ASCENSION HYDR	48.81	21	T	T	10 16 15.3	
	baz=194,SNR=4.3						
SDV	Santo Domingo	72.09	318	LR	LR	10 00 19.4	
	comp=Z,28nm,18.8s,baz=106,slow=38						
TORD	Torodi Ar. Bea	73.16	33	P	P	09 26 24.2	+0.2
	1.0nm,0.7s,baz=203,slow=7.0,SNR=5.0						
	1.0nm,0.7s						
ILAR	Eielson Array	148.16	313	PKPbc	PKPbc	09 34 37.0	-1.0
	1.1nm,0.6s,baz=121,slow=1.8,SNR=17						

*IDC **21** 09:38:01.8±5.6, 59°34N×153°21W, h71km±57km, mb3.4/3, mbtmp3.7/7, ML3.9/4, MS2.5/1, Error ellipse: s-maj=60.2km s-min=28.9km az=10.0*

*NEIC **21** 09:38:04.8±0.9, 59°55N±0°03×153°07W±0°06, h103km±3km, Error ellipse: s-maj=4.5km s-min=4.2km az=73.0*

*AEIC **21** 09:38:05±1.1, 59°54N±0°03×153°06W±0°06, h98km±3km, ML3.6, ML3.7/122(NEIC), Error ellipse: s-maj=4.7km s-min=4.1km az=135.0*

ISC 21 09:38:04.8±0.8, 59°54N±0°04×153°00W±0°04, h104km±5km, n320, σ0°67/319, mb3.5/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	Oil Pt	0.17	314		Pn	09 38 19.2	-0.3
P19K					Sn	09 38 30.0	-0.5
P19K	Oil Pt	0.17	314	P	Pn	09 38 19.2	-0.3
	baz=142						
P19K				S	Sn	09 38 30.0	-0.5
	baz=142						
OPT	Oil Point	0.17	315		Pn	09 38 19.2	-0.3
OPT	Oil Point	0.17	315	P	Pn	09 38 19.2	-0.3
	baz=142						
AU22	Augustine Moun	0.25	228		Pn	09 38 19.4	-0.3
AU22					Sn	09 38 30.2	-0.6
AUL	Augustine Lava	0.27	235		Pn	09 38 19.6	-0.2
AUL					Sn	09 38 30.7	-0.3
AUQ	Augustine Qik'	0.28	229		Pn	09 38 19.7	-0.2
AUH	Augustine H	0.28	233		Pn	09 38 19.7	-0.2
AUCH	Augustine Cone	0.29	233		Pn	09 38 19.7	-0.3
ILS	Iliamna Low So	0.42	355		Pn	09 38 20.2	-0.5
ILS					Sn	09 38 31.9	-0.7
ILSW	Iliamna Southw	0.45	351		Pn	09 38 20.5	-0.4
ILSW				IAML		09 38 21.1	
	comp=N,931nm,0.2s						
ILSW	Iliamna Southw	0.45	351		Sn	09 38 32.1	-0.9
IVE	Iliamna Volcan	0.48	359		Pn	09 38 20.6	-0.5
IVE					Sn	09 38 32.6	-0.6
O20K	Slope Mountain	0.58	19		Pn	09 38 21.6	-0.1
O20K					Sn	09 38 33.6	-0.7
O20K	Slope Mountain	0.58	19	P	Pn	09 38 21.6	-0.1
	baz=202						
O20K				S	Sn	09 38 33.7	-0.7
	baz=202						
Q19K	Cape Douglas,	0.69	209	Pn	Pn	09 38 22.4	-0.3
Q19K				IAML		09 38 35.8	
	comp=E,3μm,0.6s						
Q19K				IAML		09 38 39.7	
	comp=N,3μm,0.6s						
Q19K	Cape Douglas,	0.69	209		Sn	09 38 35.4	-0.6
Q19K	Cape Douglas,	0.69	209	P	Pn	09 38 22.3	-0.3
	baz=26						
Q19K				S	Sn	09 38 35.4	-0.6
	baz=26						
HOM	Homer	0.70	79		Pn	09 38 23.0	+0.4
HOM					Sn	09 38 37.0	+1.1
HOM	Homer	0.70	79	P	Pn	09 38 23.0	+0.4
	baz=261						
HOM				S	Sn	09 38 37.0	+1.1
	baz=261						
RED	Redoubt Volcan	0.89	7		Pn	09 38 24.2	-0.4
RED					Sn	09 38 38.6	-0.7
CNPM	China Poot	0.90	90		Pn	09 38 24.5	0.0
CNPM					Sn	09 38 39.5	+0.1
CNPM	China Poot	0.90	90	IAML		09 38 40.5	
	comp=E,4μm,0.5s						
RDSO	Redoubt South	0.93	8		Pn	09 38 24.5	-0.5
RSO	Redoubt South	0.94	7		Pn	09 38 24.8	-0.3
O19K	Port Alsworth	0.94	315		Pn	09 38 24.3	-0.6
O19K	Port Alsworth	0.94	315	IAML		09 38 40.0	
	comp=N,5μm,0.5s						
O19K	Port Alsworth	0.94	315	P	Pn	09 38 24.3	-0.6
	baz=135						
RDWB	Redoubt West	0.96	5		Pn	09 38 24.9	-0.3
SYI	Shuyak Island	0.98	161		Pn	09 38 25.4	+0.1
SYI					Sn	09 38 41.1	+0.3
NCT	North Crescent	1.03	2		Pn	09 38 25.7	-0.3
RDJH	Redoubt Jeurge	1.06	5		Pn	09 38 26.2	-0.2
RDJH					Sn	09 38 42.2	-0.4
DFR	Drift River	1.07	8		Pn	09 38 26.3	-0.1
BRLK	Bradley Lake	1.10	77		Pn	09 38 26.4	-0.2
BRLK	Bradley Lake	1.10	77	IAML		09 38 43.3	
	comp=N,2μm,0.2s						
BRLK				IAML		09 38 45.0	
	comp=E,3μm,0.4s						
P18K	Big Mountain,	1.15	264		Pn	09 38 26.4	-0.8
P18K	Big Mountain,	1.15	264	P	Pn	09 38 26.4	-0.8
	baz=81						
O18K	Koktuh Hills	1.16	287		Pn	09 38 26.8	-0.6
O18K	Koktuh Hills	1.16	287	IAML		09 38 43.7	
	comp=E,1μm,0.9s						
O18K	Koktuh Hills	1.16	287	P	Pn	09 38 26.8	-0.6
	baz=105						
BRSE	Bradley Lake S	1.17	79		Pn	09 38 27.1	-0.3
BRSE	Bradley Lake S	1.17	79	P	Pn	09 38 27.1	-0.3
	baz=261						
KAPH	Katmai Pasha	1.17	217		Pn	09 38 27.7	+0.1
KAHC	Katmai Hardscr	1.37	230		Pn	09 38 29.7	-0.1
KAHC	Katmai Hardscr	1.37	230	P	Pn	09 38 29.7	-0.1
	baz=47						
N19K	Bonanza Creek	1.48	331		Pn	09 38 30.9	-0.3
N19K					Sn	09 38 50.2	-0.9
N19K	Bonanza Creek	1.48	331	IAML		09 38 51.2	
	comp=E,548nm,0.9s						
N19K	Bonanza Creek	1.48	331	P	Pn	09 38 30.9	-0.3
	baz=150						
N19K				S	Sn	09 38 50.2	-0.9
	baz=150						
KAWH	Katmai	1.49	220		Pn	09 38 31.2	0.0
CAPN	Captain Cook N	1.54	36	Pn	Pn	09 38 33.4	+1.7
CAPN				IAML		09 39 31.9	
	comp=E,2μm,0.9s						
CAPN	Captain Cook N	1.54	36	P	Pn	09 38 33.5	+1.7
	baz=218						
KAKN	Katmai Knife C	1.64	222		Pn	09 38 33.0	-0.1
KAKN					Sn	09 38 53.8	-0.8
KCG	Knife Ck. Glac	1.65	223		Pn	09 38 33.2	+0.1
CKL	Chakachamna La	1.70	11		Pn	09 38 33.9	+0.1
SLKM	Skilak Lake	1.70	54		Pn	09 38 34.1	+0.3
N20K	Mount Spurr	1.71	13	P	Pn	09 38 34.1	+0.1
	baz=195						
SPCR	Spurr Chakacha	1.71	13		Pn	09 38 34.1	+0.1
SPCR	Spurr Chakacha	1.71	13	P	Pn	09 38 34.1	+0.1
	baz=195						
SPU	Mount Spurr	1.72	15		Pn	09 38 34.2	+0.2
SPCN	Chakachatna No	1.74	13		Pn	09 38 34.6	+0.3
KDAK	Kodiak Island	1.77	173		Pn	09 38 34.0	-0.7
KDAK	Kodiak Island	1.77	173	IAML		09 38 58.0	
	comp=E,913nm,0.5s						
KDAK				IAML		09 38 58.0	
	comp=E,722nm,0.3s						
P17K	Kvichak River	1.79	260		Pn	09 38 34.9	0.0
KELA	Mount Kelaz	1.80	233		Pn	09 38 34.9	-0.2
SPNN	North Nagishla	1.84	5		Pn	09 38 35.9	+0.2
N18K	Kilae Creek	1.85	310		Pn	09 38 35.0	-0.6
N18K	Kilae Creek	1.85	310	P	Pn	09 38 35.0	-0.6
	baz=128						
SEW	Seward	1.88	71		Pn	09 38 35.8	-0.1
SEW	Seward	1.88	71	P	Pn	09 38 35.8	-0.1
	baz=254						
O22K	Cooper Landing	1.90	59		Pn	09 38 36.5	+0.3
O22K	Cooper Landing	1.90	59	P	Pn	09 38 36.5	+0.3
	baz=242						
SVW2	Sparrevohn	2.02	322		Pn	09 38 37.3	-0.6
STLK	Strandline Lak	2.05	16		Pn	09 38 38.4	+0.1
Q16K	King Salmon	2.07	247		Pn	09 38 38.7	+0.3
O17K	Koliganek Bris	2.09	278		Pn	09 38 38.4	-0.3
FIS	Fire Island	2.12	39		Pn	09 38 39.9	+0.8
FIS	Fire Island	2.12	39	IAML		09 39 13.3	
	comp=N,608nm,0.3s						
FIS				IAML		09 39 45.9	
	comp=E,591nm,1.1s						
SUA	Susitna One	2.23	29		Pn	09 38 41.2	+0.6
SUA	Susitna One	2.23	29	IAML		09 39 10.9	
	comp=E,562nm,0.8s						
SUA				IAML		09 39 13.6	
	comp=N,369nm,0.5s						
SUA	Susitna One	2.23	29	P	Pn	09 38 41.2	+0.6
	baz=212						
RC01	Rabbit Creek A	2.25	45		Pn	09 38 40.8	+0.1
RC01	Rabbit Creek A	2.25	45	IAML		09 39 09.9	
	comp=N,475nm,0.4s						
RC01				IAML		09 39 10.6	
	comp=E,688nm,0.2s						
RC01	Rabbit Creek A	2.25	45	P	Pn	09 38 40.8	+0.1
	baz=228						
OHAK	Old Harbor	2.33	184		Pn	09 38 40.3	-1.4
OHAK				IAML		09 39 09.7	
	comp=N,198nm,0.3s						
OHAK	Old Harbor	2.33	184	P	Pn	09 38 40.7	-1.0
	baz=2.9						
M20K	Styx River	2.35	358		Pn	09 38 42.5	+0.3
M20K	Styx River	2.35	358	P	Pn	09 38 42.5	+0.3
	baz=179						
M19K	Big River Lodg	2.47	345		Pn	09 38 43.5	-0.1
M19K	Big River Lodg	2.47	345	P	Pn	09 38 43.5	-0.1
	baz=164						
O16K	Kokwok River B	2.59	273		Pn	09 38 45.0	-0.2
R17K	Ugashik Creek	2.60	224		Pn	09 38 45.6	+0.3
P16K	Nushagak River	2.61	261		Pn	09 38 45.7	+0.3
M22K	Willow	2.64	31		Pn	09 38 46.7	+0.9
M22K	Willow	2.64	31	P	Pn	09 38 46.7	+0.9
	baz=214						
PWL	Port Wells	2.68	58		Pn	09 38 45.9	-0.5
L19K	White Mountain	2.80	342		Pn	09 38 47.9	-0.2
L19K	White Mountain	2.80	342	P	Pn	09 38 47.9	-0.2
	baz=161						
PMR	Palmer	2.81	41		Pn	09 38 48.0	-0.1
PMR	Palmer	2.81	41	IAML		09 39 22.7	
	comp=N,164nm,0.4s						
PMR				IAML		09 39 24.3	
	comp=E,319nm,0.4s						
PMR	Palmer	2.81	41	P	Pn	09 38 48.0	-0.1
	baz=225						
P23K	Montague Islan	2.87	78		Pn	09 38 49.1	+0.2
KNK	Knik Glacier	2.93	48		Pn	09 38 49.5	-0.2
KNK	Knik Glacier	2.93	48	IAML		09 39 25.8	
	comp=E,444nm,0.5s						
KNK				IAML		09 39 26.0	
	comp=N,368nm,0.5s						
KNK	Knik Glacier	2.93	48	P	Pn	09 38 49.5	-0.2
	baz=232						
L20K	Farewell, AK	2.98	352		Pn	09 38 50.6	+0.2
L20K	Farewell, AK	2.98	352	P	Pn	09 38 50.6	+0.2
	baz=172						
GHO	Glory Hole Cre	3.01	40	Pn	Pn	09 38 51.2	+0.4
GHO				IAML		09 39 27.1	
	comp=N,314nm,0.5s						
N16K	Nishlik Lake	3.05	290		Pn	09 38 51.4	+0.1
SII	Sitkinak Islan	3.05	192	Pn	Pn	09 38 49.6	-1.7
SII				IAML		09 39 28.2	
	comp=E,97nm,0.5s						
SII				IAML		09 39 37.4	
	comp=N,118nm,1.0s						
SII	Sitkinak Islan	3.05	192	P	Pn	09 38 50.5	-0.8
	baz=11						
CUT	Chulitna	3.17	24		Pn	09 38 54.3	+1.4
CUT				IAML		09 39 34.5	
	comp=N,284nm,0.4s						
CUT				IAML		09 39 35.9	
	comp=E,324nm,0.4s						
CUT	Chulitna	3.17	24	P	Pn	09 38 53.4	+0.5
	baz=207						
SML	Sawmill	3.23	43		Pn	09 38 53.6	-0.2
SML	Sawmill	3.23	43	IAML		09 39 30.4	
	comp=E,156nm,0.3s						
SML				IAML		09 39 32.2	
	comp=N,175nm,0.6s						
SML	Sawmill	3.23	43	P	Pn	09 38 53.6	-0.2
	baz=228						
GLI	Glacier Island	3.24	63		Pn	09 38 52.8	-1.0
GLI	Glacier Island	3.24	63	P	Pn	09 38 52.8	-1.0
	baz=248						
HIN	Hinchinbrook I	3.38	72		Pn	09 38 55.2	-0.4
HIN	Hinchinbrook I	3.38	72	IAML		09 39 35.4	
	comp=N,373nm,0.6s						
HIN				IAML		09 39 37.1	
	comp=E,346nm,0.7s						
PPLA	Purkeypile	3.39	6	Pn	Pn	09 38 57.1	+1.2
PPLA	Purkeypile	3.39	6	P	Pn	09 38 56.8	+0.8
	baz=188						
Q23K	Middleton Isla	3.39	89	Pn	Pn	09 38 55.6	-0.2
Q23K				IAML		09 39 37.2	
	comp=N,264nm,0.6s						
Q23K				IAML		09 39 37.8	
	comp=E,261nm,0.9s						
Q23K	Middleton Isla	3.39	89	P	Pn	09 38 55.8	0.0
	baz=275						
MID	Middleton Isla	3.40	89	Pn	Pn	09 38 55.8	-0.1
MID				IAML		09 39 37.2	
	comp=E,312nm,1.0s						
MID				IAML		09 39 37.2	
	comp=N,189nm,0.6s						
M23K	Glacier View	3.44	47		Pn	09 38 56.2	-0.3
FID	Port Fidalgo	3.48	67		Pn	09 38 56.0	-1.0
JPK	Jack Peak	3.53	62		Pn	09 38 57.6	-0.1
SCM	Sheep Creek Mo	3.62	48		Pn	09 38 58.9	0.0
SCM				IAML		09 39 42.6	
	comp=E,211nm,0.5s						
SCM				IAML		09 39 45.0	
	comp=N,187nm,0.5s						
VMT	TAPS Tl Valdez	3.65	62		Pn	09 38 59.4	+0.2
TT01	Tatalina	3.68	338		Pn	09 38 59.4	-0.4
TTA	Tatalina	3.70	338		Pn	09 38 59.4	-0.7
TTA	Tatalina	3.70	338	P	Pn	09 38 59.4	-0.7
	baz=156						
EYAK	Cordova Ski Ar	3.77	71	Pn	Pn	09 39 00.6	-0.4
EYAK	Cordova Ski Ar	3.77	71	P	Pn	09 39 00.1	-0.8
	baz=258						
K20K	Telida	3.87	353		Pn	09 39 02.2	0.0
K20K	Telida	3.87	353	P	Pn	09 39 02.2	0.0
	baz=172						
WAT7	Susitna Watana	3.87	30		Pn	09 39 02.6	+0.3
CAST	Castle Rocks	3.92	6		Pn	09 39 03.0	0.0
CAST	Castle Rocks	3.92	6	P	Pn	09 39 03.0	0.0
	baz=187						
DIV	Divide	3.93	63		Pn	09 39 03.2	+0.1
WAT1	Susitna Watana	3.94	31		Pn	09 39 03.1	-0.1
WAT1	Susitna Watana	3.94	31	P	Pn	09 39 03.1	-0.1
	baz=215						
WAT6	Susitna Watana	3.98	38		Pn	09 39 03.7	-0.2
WAT6	Susitna Watana	3.98	38	P	Pn	09 39 03.7	-0.2
	baz=223						
CHIR	Chirikof Islan	3.98	202	Pn	Pn	09 39 01.7	-2.1
CHIR				IAML		09 40 07.8	
	comp=N,77nm,1.8s						
CHIR				IAML		09 40 24.6	
	comp=E,58nm,1.5s						
KLU	Klutina	4.01	58		Pn	09 39 03.8	-0.4
KLU	Klutina	4.01	58	IAML		09 39 54.2	
	comp=E,160nm,0.5s						
KLU	Klutina	4.01	58	P	Pn	09 39 03.8	-0.4
	baz=244						
TRF	Thorofare Moun	4.14	17		Pn	09 39 06.6	+0.7
TRF	Thorofare Moun	4.14	17	IAML		09 40 00.5	
	comp=E,48nm,0.5s						
TRF				IAML		09 40 05.2	
	comp=N,52nm,0.6s						
TRF	Thorofare Moun	4.14	17	P	Pn	09 39 06.6	+0.7
	baz=200						
KTH	Kantishna Hill	4.15	13	Pn	Pn	09 39 07.6	+1.6
KTH				IAML		09 40 20.7	
	comp=E,46nm,1.1s						
KTH				IAML		09 40 30.4	
	comp=N,48nm,0.8s						
M24K	Tolsona, Glenn	4.22	49		Pn	09 39 07.0	0.0
M24K	Tolsona, Glenn	4.22	49	IAML		09 40 03.9	
	comp=E,139nm,0.7s						
M24K				IAML		09 40 09.4	
	comp=N,140nm,0.9s						
M24K	Tolsona, Glenn	4.22	49	P	Pn	09 39 07.0	0.0
	baz=236						
RAGM	Ragged Mountai	4.27	75		Pn	09 39 07.5	-0.2
GOAT	Goat Mountain	4.28	72		Pn	09 39 07.5	-0.3
PS12	TAPS Pump St12	4.34	60		Pn	09 39 09.0	+0.4
KAIM	Kayak Island	4.36	81		Pn	09 39 09.3	+0.4
KAIM	Kayak Island	4.36	81	P	Pn	09 39 09.3	+0.4
	baz=269						
RND	Reindeer	4.36	25		Pn	09 39 09.5	+0.6
RND	Reindeer	4.36	25	IAML		09 40 15.9	
	comp=N,31nm,0.7s						
CHUM	Lake Minchumin	4.37	4		Pn	09 39 08.8	-0.2
CHUM	Lake Minchumin	4.37	4	P	Pn	09 39 08.8	-0.2
	baz=185						
BMRM	Bremner River	4.42	67		Pn	09 39 10.0	+0.3
BMRM	Bremner River	4.42	67	P	Pn	09 39 09.5	-0.2
	baz=255						
DHY	Denali Highway	4.47	35		Pn	09 39 10.3	-0.1
DHY	Denali Highway	4.47	35	IAML		09 40 02.5	
	comp=N,106nm,0.5s						
DHY				IAML		09 40 03.1	
	comp=E,97nm,0.5s						
DHY	Denali Highway	4.47	35	P	Pn	09 39 10.3	-0.1
	baz=220						
HMT	Hamilton	4.47	76		Pn	09 39 10.3	0.0
NICHA	Nichawak Mount	4.60	77		Pn	09 39 12.5	+0.3
MCK	McKinley	4.63	23		Pn	09 39 12.7	+0.1
MCK	McKinley	4.63	23	IAML		09 40 10.9	
	comp=E,32nm,0.5s						
MCK				IAML		09 40 13.1	
	comp=N,34nm,0.5s						
MCK	McKinley	4.63	23	P	Pn	09 39 12.7	+0.1
	baz=207						
N25K	Chitina, Valde	4.63	60	Pn	Pn	09 39 12.6	0.0
N25K				IAML		09 40 07.6	
	comp=E,65nm,0.5s						
N25K				IAML		09 40 09.1	
	comp=N,85nm,0.5s						
N25K	Chitina, Valde	4.63	60	P	Pn	09 39 13.1	+0.5
	baz=247						
BPAW	Bear Paw Mtn.	4.68	11		Pn	09 39 13.6	+0.4
BPAW	Bear Paw Mtn.	4.68	11	P	Pn	09 39 13.5	+0.4
	baz=193						
J20K	Nowinta River	4.69	354		Pn	09 39 13.2	0.0
J20K	Nowinta River	4.69	354	P	Pn	09 39 13.2	0.0
	baz=173						
SUCK	Suckling Hills	4.69	79		Pn	09 39 13.5	+0.2
SUCK	Suckling Hills	4.69	79	IAML		09 40 08.8	
	comp=N,86nm,0.4s						
SUCK				IAML		09 40 16.7	
	comp=E,76nm,0.6s						
BERG	Berg Lake	4.75	76		Pn	09 39 14.0	-0.2
HARP	HAARP	4.78	50		Pn	09 39 14.9	+0.4
HARP	HAARP	4.78	50	P	Pn	09 39 14.9	+0.4
	baz=237						
GLB	Gilahina Butte	4.93	63	Pn	Pn	09 39 16.9	+0.4
GLB				IAML		09 40 14.4	
	comp=E,80nm,0.5s						
GLB				IAML		09 40 14.7	
	comp=N,78nm,0.5s						
GRIN	Grindle Hills	4.93	77		Pn	09 39 16.9	+0.3
BGLC	Bering Glacier	4.94	79		Pn	09 39 17.3	+0.7
BGLC	Bering Glacier	4.94	79	P	Pn	09 39 17.3	+0.7
	baz=268						
BWN	Browne	4.94	18	Pn	Pn	09 39 17.1	+0.4
BWN				IAML		09 41 00.8	
	comp=N,50nm,1.6s						
BWN				IAML		09 41 14.9	
	comp=E,48nm,1.3s						
WASW	Wrangell South	4.95	57		Pn	09 39 17.1	+0.1
KHIT	Khitrov Hills	4.98	75		Pn	09 39 17.1	-0.1
PAX	Paxson	5.01	43		Pn	09 39 18.1	+0.5
PAX	Paxson	5.01	43	P	Pn	09 39 18.1	+0.5
	baz=230						
SNH	Sunshine Point	5.16	78		Pn	09 39 20.7	+1.0
WAX	Waxell Ridge	5.18	75		Pn	09 39 19.8	-0.2
TGL	Tana Glacier	5.23	72		Pn	09 39 20.8	+0.1
TGL	Tana Glacier	5.23	72	IAML		09 40 19.3	
	comp=E,90nm,0.4s						
TGL				IAML		09 40 21.0	
	comp=N,84nm,0.7s						
MCARA	McCarthy VSAT	5.27	65		Pn	09 39 21.4	+0.2
MCARA	McCarthy VSAT	5.27	65	P	Pn	09 39 21.4	+0.2
	baz=254						
BARK	Barkley Ridge	5.35	76		Pn	09 39 22.6	+0.3
NEA2	Nenana	5.40	18		Pn	09 39 22.3	-0.6
NEA2	Nenana	5.40	18	P	Pn	09 39 22.3	-0.6
	baz=202						
ISLE	Juniper Island	5.45	74		Pn	09 39 23.6	-0.1
WRH	Wood River Hil	5.46	23		Pn	09 39 23.3	-0.4
PTPK	Patty Peak	5.49	68		Pn	09 39 24.8	+0.6
GCSA	Galena City Sc	5.54	342		Pn	09 39 24.3	-0.3
GCSA	Galena City Sc	5.54	342	P	Pn	09 39 24.3	-0.3
	baz=159						
BAGL	Bagley Icefiel	5.56	75		Pn	09 39 25.7	+0.7
MESA	MESA	5.61	79		Pn	09 39 26.1	+0.3
MESA	MESA	5.61	79	P	Pn	09 39 26.1	+0.3
	baz=268						
MLY	Manley	5.61	10		Pn	09 39 25.6	-0.2
ML

TCOL	CIGO, UAF Yank	5.87	22			Pn	09 39 27.8	-1.4	
TCOL	CIGO, UAF Yank	5.87	22	P		Pn	09 39 29.3	+0.1	
	baz=207								
COLA	College	5.87	22			Pn	09 39 28.2	-1.0	
MDM	Murphy Dome	5.88	20			Pn	09 39 29.1	-0.3	
DOT	Dot Lake	5.93	42			Pn	09 39 30.2	+0.1	
CTG	Chitna Glacier	5.98	71	P		Pn	09 39 31.4	+0.5	
	baz=261								
IL31		5.98	26			Pn	09 39 30.8	+0.2	
ILAR	Eielson Array	5.98	26	P		Pn	09 39 30.1	-0.6	
	comp=N,0.8nm,0.3s,baz=216,slow=14,SNR=30								
ILAR				S		Sn	09 40 33.3	-4.4	
	comp=N,1.7nm,0.3s,baz=205,slow=20,SNR=7.3								
ILAR				LR		LR	09 41 41.4		
	comp=N,40nm,18.3s,baz=230,slow=35								
	comp=N,1.7nm,0.4s								
ILAR	Eielson Array	5.98	26			Pn	09 39 30.8	+0.1	
CTGM	Chitina Glacie	5.98	71			Pn	09 39 31.4	+0.5	
TABL	Table Mountain	6.02	76			Pn	09 39 31.7	+0.2	
CHX	Chaix Hills	6.02	80			Pn	09 39 32.3	+0.9	
M27K	Edge Creek, AK	6.11	58			Pn	09 39 32.7	+0.1	
M27K	Edge Creek, AK	6.11	58	P		Pn	09 39 32.7	+0.1	
	baz=248								
LOGN	Logan Glacier	6.12	73			Pn	09 39 33.2	+0.4	
H21K	Melozitna Rive	6.14	1			Pn	09 39 32.2	-0.7	
H21K	Melozitna Rive	6.14	1	P		Pn	09 39 32.2	-0.7	
	baz=181								
POKR	Poker Plat Res	6.17	22	Pn		Pn	09 39 34.2	+1.0	
SCRK	Sand Creek	6.17	40			Pn	09 39 33.6	+0.2	
SCRK	Sand Creek	6.17	40	P		Pn	09 39 33.6	+0.2	
	baz=228								
SAMH	Samovar Hills	6.19	79			Pn	09 39 33.2	-0.5	
J25K	Salcha River,	6.22	32			Pn	09 39 34.4	+0.3	
J25K	Salcha River,	6.22	32	P		Pn	09 39 33.9	-0.2	
	baz=219								
YUK2	White River	6.39	64			Pn	09 39 37.2	+0.9	
H22K	Ishtalitna Cre	6.42	6			Pn	09 39 36.9	+0.1	
L27K	Beaver Creek,	6.44	52			Pn	09 39 38.0	+1.1	
L27K	Beaver Creek,	6.44	52	P		Pn	09 39 38.0	+1.1	
	baz=242								
PCA	Pinnacle	6.45	80			Pn	09 39 37.9	+0.6	
BC03		6.46	52			Pn	09 39 38.0	+0.9	
BCAR	Beaver Creek A	6.46	52	Pn		Pn	09 39 38.1	+0.8	
PINM	Pinnacle	6.46	80	P		Pn	09 39 37.7	+0.4	
	baz=271								
IM03		6.48	357			Pn	09 39 37.9	+0.5	
IMAR	Indian Mountai	6.48	357	Pn		Pn	09 39 37.8	+0.3	
H23K	Yukon River	6.51	13			Pn	09 39 37.6	-0.3	
H23K	Yukon River	6.51	13	P		Pn	09 39 37.6	-0.3	
	baz=196								
O28M	Mount Upton	6.51	74			Pn	09 39 39.0	+0.7	
YUK3	Moose Creek	6.56	65			Pn	09 39 39.5	+0.8	
YUK3	Moose Creek	6.56	65	P		Pn	09 39 39.5	+0.8	
	baz=256								
J26L	Joseph Creek	6.67	38			Pn	09 39 40.1	-0.1	
J26L	Joseph Creek	6.67	38	P		Pn	09 39 40.1	-0.1	
	baz=226								
H24K	Noodor Dome	6.75	18	Pn		Pn	09 39 41.0	-0.1	
BCPM	Bancas Point	6.77	81			Pn	09 39 41.8	+0.4	
K27K	Chicken	6.86	44			Pn	09 39 43.5	+0.8	
PNL	Peninsula	6.91	83			Pn	09 39 43.2	-0.1	
PRP	Porcupine Dome	6.92	27			Pn	09 39 44.5	+0.9	
PRP	Porcupine Dome	6.92	27	P		Pn	09 39 44.5	+0.9	
	baz=214								
O29M	Mount Kennedy	7.29	78			Pn	09 39 48.5	-0.2	
G23K	Bananza Creek	7.33	9			Pn	09 39 49.6	+0.7	
YUK4	Talbot Arm	7.33	70	P		Pn	09 39 50.4	+1.2	
	baz=262								
I26K	Coal Creek Min	7.37	34			Pn	09 39 50.6	+1.1	
YUK6	Outpost Mounta	7.42	73			Pn	09 39 51.9	+1.4	
YUK6	Outpost Mounta	7.42	73	P		Pn	09 39 51.9	+1.4	
	baz=266								
H25K	Birch Creek	7.50	23			Pn	09 39 52.4	+1.0	
EGAK	Eagle	7.63	41			Pn	09 39 53.9	+0.8	
M29M	Somme Creek	7.64	61			Pn	09 39 54.0	+0.7	
YUK5	Granite Creek	7.68	71			Pn	09 39 54.3	+0.3	
ANM	Nome	7.69	316	Pn		Pn	09 39 54.5	+0.6	
F21K	Alatna River	7.72	359			Pn	09 39 54.8	+0.5	
P29M	Windy Craggy	7.75	83			Pn	09 39 54.3	-0.5	
HYT	Haines Junctio	7.83	74			Pn	09 39 56.0	0.0	
HYT	Haines Junctio	7.83	74	P		Pn	09 39 56.0	0.0	
	baz=267								
DAWY	Dawson	7.88	49			Pn	09 39 56.9	+0.4	
DAWY	Dawson	7.88	49	P		Pn	09 39 56.9	+0.4	
	baz=241								
FYU	Fort Yukon	7.88	23	Pn		Pn	09 39 56.9	+0.5	
N30M	Aishikik Lake	8.09	69			Pn	09 39 58.8	-0.6	
P30M	Million Dollar	8.10	79			Pn	09 39 59.2	-0.4	
M30M	Minto, Yukon	8.43	62			Pn	09 40 04.3	+0.4	
PLBC	Pleasant Camp	8.46	83			Pn	09 40 04.3	-0.1	
PLBC	Pleasant Camp	8.46	83	P		Pn	09 40 04.3	-0.1	
	baz=278								
O30N	Mendenhall	8.52	74			Pn	09 40 04.7	-0.6	
N31M	Braeburn, Yuko	8.71	70			Pn	09 40 08.2	+0.3	
BM03	Burnt Mountain	8.75	22			Pn	09 40 07.2	-1.1	
BMAR	Burnt Mountain	8.76	22	Pn		Pn	09 40 08.3	-0.2	
BM01	Burnt Mountain	8.79	22			Pn	09 40 08.0	-0.9	
I29M	Ogilvie Camp,	8.95	43			Pn	09 40 12.4	+1.3	
SKAG	Skagway	8.99	83			Pn	09 40 11.9	+0.4	
WHY	Whitehorse	9.12	75			Pn	09 40 12.9	-0.5	
WHY	Whitehorse	9.12	75	P		Pn	09 40 12.9	-0.5	
	baz=271								
TOLK	Toolik Lake Re	9.26	8	Pn		Pn	09 40 16.1	+0.8	
BESE	Bessie Mountai	9.39	88	Pn		Pn	09 40 16.9	-0.3	
M31M	Drury Creek, Y	9.45	66	Pn		Pn	09 40 18.9	+1.1	
SIT	Sitka	9.63	97	Pn		Pn	09 40 20.3	+0.1	
JIS	Juneau Island	9.71	89			Pn	09 40 23.1	+1.8	
P32M	Atlin	9.78	81			Pn	09 40 20.7	-1.7	
FARO	Faro, Yukon	9.94	66			Pn	09 40 24.9	+0.4	
P33M	Teslin, Yukon	10.16	78			Pn	09 40 25.3	-2.2	
WRAK	Wrangell Islan	11.39	97	Pn		Pn	09 40 44.9	+0.9	
CRAG	Craig	11.43	102	Pn		Pn	09 40 44.6	+0.1	
DLBC	Dease Lake	11.89	85	P		Pn	09 40 51.9	+1.2	
	comp=N,2.2nm,0.3s,baz=267,slow=8.5,SNR=34								
DLBC				S		Sn	09 43 00.9	-0.4	
	comp=N,1.8nm,0.6s,baz=266,slow=27,SNR=6.9								
	comp=N,5.2nm,0.4s								
DLBC	Dease Lake	11.89	85	Pn		Pn	09 40 52.7	+1.9	
INK	Inuvik	12.21	36	P		Pn	09 40 56.4	+1.6	
	comp=N,0.1nm,0.3s,baz=240,slow=13,SNR=1.7								
	comp=N,1.6nm,1.0s								
YKA	Yellowknife Ar	18.65	64	P		P	09 42 14.8	+0.7	
	comp=N,0.2nm,0.3s,baz=275,slow=9.7,SNR=11								
	comp=N,0.5nm,0.5s								
PETK	Petropavlovsk-	27.52	278	P		P	09 43 41.0	-0.2	
	comp=N,0.9nm,0.7s,baz=77,slow=13,SNR=2.1								
	comp=N,0.9nm,0.7s								
KSRS	Korea Array	53.28	283	P		P	09 47 12.6	0.0	
	comp=N,0.3nm,0.5s,baz=38,slow=7.9,SNR=2.1								
	comp=N,0.3nm,0.5s								
SONM	Songino Array	55.06	306	P		P	09 47 26.0	+0.5	
	comp=N,1.1nm,0.8s,baz=45,slow=7.3,SNR=5.5								
	comp=N,1.1nm,0.8s								

*JMA **21** 09:52:49.1±0.2,38°N±2°×13°4E±°, h454km, MV3.3/60, SEA OF JAPAN*
*IDC **21** 09:52:51.2±1.2,38°18N×133°82E, h434km±14km, mb3.0/7, mbtmp3.8/11, Error ellipse: s-maj=21.9km s-min=17.9km az=100.0*

ISC 21 09:52:51.3±0.7,**38°07N**±0°08×**134°15E**±0°07,**h459**km,**n34**, σ1**80**/41,**mb3.6/7**,**Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOI	OKI	1.91	202	P	P	09 53 49.2	-3.1
JKG	Kaga	2.50	135	P	P	09 53 54.4	-1.3
JKG				S	S	09 54 46.0	-1.7
JKSM	Kasumi	2.51	170	P	P	09 53 53.7	-2.0
JKY	Yasaka	2.55	162	P	P	09 53 54.4	-1.7
JWT	Wachi	2.96	160	P	P	09 53 57.7	-1.1
JHS	Saijyo	3.17	195	P	P	09 53 58.0	-2.4
JYTA	Yamagatataniai	3.23	139	P	P	09 53 59.9	-0.9
JSD	Sado	3.25	89	P	P	09 54 00.1	-0.8
JNG	Nsakai	3.56	116	P	P	09 54 03.7	+0.2
MJAR	Matsushiro Arr	3.58	114	P	P	09 54 03.2	-0.3
	0.8nm,0.4s,baz=295,slow=11,SNR=4.5						
JAW	Awa shima	4.04	83	eP	P	09 54 05.5	-1.7
JTNC	Tanabenakahech	4.40	164	P	P	09 54 09.5	-1.2
JFT	Otama	4.93	94	P	P	09 54 15.6	+0.1
JFT				S	S	09 55 23.7	-0.4
KSRS	Korea Array	4.97	265	P	P	09 54 12.8	-3.0
	10nm,0.7s,baz=78,slow=9.8,SNR=62						

JIW	Iwasaki	5.20	59	P		P	09 54 18.0	+0.1	
JRG	Rokugo	5.24	73	P		P	09 54 18.2	-0.2	
JMM	Marumori	5.26	90	P		P	09 54 18.2	-0.3	
JMM				eS		S	09 55 27.3	-2.4	
JFK	Kawauchi	5.38	95	P		P	09 54 19.1	-0.7	
JFK				S		S	09 55 27.9	-4.1	
JMK	Ichinoseki	5.62	79	P		P	09 54 22.1	0.0	
JMK				S		S	09 55 33.6	-2.6	
JOSM	Okushiri--Mats	5.73	44	P		P	09 54 23.2	+0.1	
JOT	Ohata	6.27	56	P		P	09 54 29.6	+1.1	
USRK	Ussuriysk Ar.	6.34	346	P		P	09 54 27.2	-2.0	
	13nm,0.5s,baz=167,slow=10.0,SNR=52								
BSO1	Boso 1	6.48	120	P		P	09 54 30.2	-0.1	
BSO1				S		S	09 55 50.1	-1.2	
JKB	Kayabe	6.52	52	eP		P	09 54 31.9	+0.8	
JCH	Churui	8.38	54	P		P	09 54 51.3	+0.6	
JCH				S		S	09 56 24.1	-4.7	
KLR	Kul'dur	11.29	352	P		P	09 55 20.9	-1.3	
	2.7nm,0.5s,baz=179,slow=6.8,SNR=6.6								
CMAR	Chiang Mai Arr	36.35	247	P		P	09 59 15.8	+0.5	
	1.0nm,0.4s,baz=42,slow=7.9,SNR=4.4								
	1.0nm,0.4s								
ILAR	Eielson Array	51.72	32	P		P	10 01 17.0	+2.7	
	0.4nm,0.7s,baz=289,slow=8.8,SNR=6.5								
	0.4nm,0.7s								
ARCES	ARCESS Array B	60.92	338	P		P	10 02 18.9	+0.9	
	2.1nm,0.9s,baz=46,slow=8.7,SNR=4.2								
	2.1nm,0.9s								
FINES	FINESS Array B	65.11	330	P		P	10 02 45.3	+0.1	
	1.3nm,0.6s,baz=108,slow=6.2,SNR=4.6								
	1.3nm,0.6s								
AKASG	Malin Array Be	69.84	319	P		P	10 03 13.8	-0.6	
	0.3nm,0.4s,baz=46,slow=8.2,SNR=4.8								
	0.3nm,0.4s								
STKA	Stephens Creek	69.93	173	P		P	10 03 18.2	+3.1	
	0.6nm,0.4s,baz=333,slow=9.0,SNR=4.3								
	0.6nm,0.4s								
NB2	NORSAR Subarra	70.88	334	P		P	10 03 20.7	+0.1	
	comp=Z,0.6nm,0.6s,baz=44,slow=5.9								
NOA	NORSAR Array B	70.88	334	P		P	10 03 21.2	+0.6	
	comp=Z,0.4nm,0.6s,baz=47,slow=5.9,SNR=4.7								
	comp=Z,0.4nm,0.6s								

*IDC **21** 09:53:43.3±0.8,55°04S×30°36W, h0km, mb4.0/7, mbtmp4.0/8, ML4.1/1, Error ellipse: s-maj=30.5km s-min=18.5km az=74.0*
*NEIC **21** 09:53:46.0±2.1,55°34S±0°10×31°02W±0°07, h10km±2km, mb4.9/12, Error ellipse: s-maj=16.7km s-min=5.9km az=344.0*

ISC 21 09:53:44.9±0.7,**55°1S**±0°1×**30°5W**±0°1,**h10**km,**n30**, σ1**11**/28,**mb4.2/7**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.57	281	Pn	Pn	09 54 40.2	-0.1
ORCD	Orcadas	9.42	228	Pn	Pn	09 55 54.5	-5.9
VNA1	Neumayer--Stat	18.38	156	P	P	09 57 60.0	+0.6
VNA3	Neumayer Olymp	18.52	159	P	P	09 58 00.5	-0.5
VNA2	Neumayer--Watz	18.78	156	P	Pn	09 58 04.1	-0.2
	baz=319,slow=13						
PMSA	Palmer Station	19.13	226	P	Pn	09 58 10.1	+1.6
	0.6nm,0.3s,baz=61,slow=8.0,SNR=7.5						
	4.5nm,0.6s						
SNAA	Sanae	20.37	155	P	Pn	09 58 23.0	-0.3
	5.8nm,0.8s,baz=288,slow=11,SNR=19						
	5.8nm,0.8s						
SNAA	Sanae	20.37	155	P	P	09 58 20.1	-1.1
TROLL	Troll, Antarti	21.92	153	P	P	09 58 36.2	-1.8
CPUP	Villa Florida	34.80	315	P	P	10 00 35.6	+0.1
	1.9nm,0.7s,baz=93,slow=7.4,SNR=3.9						
	1.9nm,0.7s						
CPUP	Villa Florida	34.80	315	P	P	10 00 35.5	-0.1
CPUP				IAmb	IAmb	10 01 08.5	
	comp=Z,29nm,1.4s						
QSPA	South Pole Qui	35.13	180	P	P	10 00 38.0	-0.2
	comp=Z,2.8nm,0.8s,baz=187,slow=2.4,SNR=8.2						
	comp=Z,2.8nm,0.8s						
QSPA	South Pole Qui	35.13	180	P	P	10 00 38.1	-0.2
MT09	Talagante	35.23	290	P	P	10 00 37.9	-1.5
CO01	Juntas del Tor	37.72	295	P	P	10 01 00.8	0.0
CO01				IAmb	IAmb	10 01 40.7	
	comp=Z,22nm,1.3s						
AC05	El Transito	38.73	296	P	P	10 01 09.5	+0.3
SIV	San Ignacio	45.59	317	P	P	10 02 04.8	-0.3
	comp=Z,0.5nm,0.2s,baz=110,slow=20,SNR=6.4						
	comp=Z,0.5nm,0.2s						
VNDA	Vanda	47.40	184	P	P	10 02 19.0	+0.5
	comp=Z,1.0nm,0.9s,baz=213,slow=5.5,SNR=4.6						
	comp=Z,1.0nm,0.9s						
VNDA	Vanda	47.40	184	P	P	10 02 19.6	+1.0
LPAZ	La Paz	48.31	308	P	P	10 02 26.8	-0.3
	comp=Z,1.3nm,0.5s,baz=118,slow=3.7,SNR=5.9						
	comp=Z,1.3nm,0.5s						
LPAZ	La Paz	48.31	308	P	P	10 02 27.1	+0.1
ETMB	Extrema	53.25	314	P	P	10 03 02.5	-1.0
TOA0	Torodi Ar. Sit	73.23	33	P	P	10 05 18.8	+2.8
TORD	Torodi Ar. Bea	73.23	33	P	P	10 05 15.8	-0.2
	comp=Z,0.5nm,0.6s,baz=199,slow=6.3,SNR=8.4						
	comp=Z,0.5nm,0.6s						
TORD	Torodi Ar. Bea	73.23	33	P	P	10 05 18.8	+2.8
LTZ	Lake Taylor	80.56	197	P	P	10 05 57.3	+0.2
FINES	FINESS Array B	124.46	29	PKP	PKPdf	10 12 42.2	-0.5
	comp=Z,1.3nm,0.8s,baz=187,slow=31,SNR=2.0						
ARCES	ARCESS Array B	130.79	23	PKP	PKiKP	10 12 55.1	-0.4
	comp=Z,1.4nm,0.9s,baz=93,slow=4.9,SNR=5.8						
ILAR	Eielson Array	148.10	313	PKPbc	PKPbc	10 13 28.6	-0.6
	comp=Z,1.2nm,0.5s,baz=124,slow=2.1,SNR=14						
SONM	Songino Array	152.56	87	PKPbc	PKPbc	10 13 39.2	-1.4
	comp=Z,0.5nm,0.5s,baz=268,slow=6.1,SNR=3.0						

*IDC **21** 09:54:04.0±0.6,54°97S×30°14W, h0km, mb4.4/13, mbtmp4.5/14, ML3.9/1, Error ellipse: s-maj=18.0km s-min=15.5km az=62.0*
*NEIC **21** 09:54:06.1±1.1,55°00S±0°08×30°4W±0°2, h10km±1km, mb4.9/17, Error ellipse: s-maj=19.0km s-min=9.2km az=49.0*

ISC 21 09:54:05.4±0.5,**54°96S**±0°08×**30°24W**±0°09,**h10**km,**n46**, σ0**81**/40,**mb4.6/17**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.69	278	Pn	Pn	09 55 03.1	+0.6
ORCD	Orcadas	9.64	227	Pn	Pn	09 56 23.9	-0.1
PMSA	Palmer Station	19.35	226	P	Pn	09 58 32.2	+0.5
	0.4nm,0.3s,baz=83,slow=9.8,SNR=7.7						
	29nm,0.8s						
SNAA	Sanae	20.45	155	P	Pn	09 58 43.9	-0.9
	9.3nm,0.9s,baz=313,slow=9.2,SNR=12						
	9.3nm,0.9s						
SNAA	Sanae	20.45	155	P	P	09 58 43.5	+0.8
USHA	Ushuaia	21.79	255	P	P	09 58 58.0	+1.0
	19nm,0.8s,baz=37,slow=4.6,SNR=4.4						
	19nm,0.8s						
BELA	Belgrano 2	23.07	182	P	P	09 59 10.3	-0.2
MG05	Puerto Natales	25.17	260	P	P	09 59 29.4	-1.2
TRQA	Tornquist	27.29	295	P	P	09 59 50.2	+0.3
TRQA				IAmb	IAmb	10 00 15.2	
	comp=Z,16nm,1.3s						
CPUP	Villa Florida	34.80	314	P	P	10 00 55.1	-0.9
	comp=Z,5.2nm,0.9s,baz=116,slow=4.4,SNR=5.4						
	comp=Z,5.2nm,0.9s						
QSPA	South Pole Qui	35.29	180	P	P	10 00 59.7	-0.4
	comp=Z,14nm,0.9s,baz=197,slow=5.6,SNR=17						
	comp=Z,14nm,0.9s						
QSPA	South Pole Qui	35.29	180	P	P	10 01 00.4	+0.2
QSPA				IAmb	IAmb	10 01 06.7	
	comp=Z,39nm,1.3s						
MT09	Talagante	35.31	290	P	P	10 00 59.3	-1.3
VA06	Catapilco	36.41	291	P	P	10 01 09.6	-0.2
MAW	Mawson	42.05	145	P	P	10 01 56.6	+0.1
	comp=Z,2.4nm,0.9s,baz=123,slow=2.6,SNR=4.1						
	comp=Z,2.4nm,0.9s						
MAW	Mawson	42.05	145	P	P	10 01 56.8	+0.2
LVC	Limon Verde	43.25	303	P	P	10 02 08.5	+1.3
	comp=Z,3.8nm,0.3s,baz=170,slow=8.0,SNR=3.8						
	comp=Z,3.8nm,0.3s						
PTLB	Pontes e Lacer	45.32	319	P	P	10 02 23.7	+0.4
PTLB				IAmb	IAmb	10 02 24.5	
	comp=Z,8.9nm,0.9s						
SIV	San Ignacio	45.58	316	P	P	10 02 26.0	+0.5
	comp=Z,0.5nm,0.3s,baz=149,slow=4.0,SNR=4.2						
	comp=Z,0.5nm,0.3s						
GO01	Chusmiza	45.90	304	P	P	10 02 26.4	-2.1

BOSA	Boshof	47.44	80	P		P	10 02 39.6	-0.5	
	comp=Z,2.0nm,0.7s,baz=206,slow=11,SNR=3.9								
	comp=Z,2.0nm,0.7s								
H10S2	ASCENSION HYDR	47.53	21	T		T	10 54 01.4		
	baz=192,slow=74,SNR=7.2								
H10S3	ASCENSION HYDR	47.53	21	T		T	10 54 02.8		
	baz=28,slow=74,SNR=12								
VNDA	Vanda	47.57	184	P		P	10 02 40.2	-0.2	
	comp=Z,3.0nm,0.8s,baz=178,slow=4.1,SNR=10								
	comp=Z,3.0nm,0.8s								
VNDA	Vanda	47.57	184	P		P	10 02 41.2	+0.8	
LPAZ	La Paz	48.33	308	P		P	10 02 48.5	+0.8	
	comp=Z,8.6nm,0.7s,baz=151,slow=8.5,SNR=20								
	comp=Z,8.6nm,0.7s								
LPAZ	La Paz	48.33	308	P		P	10 02 48.8	+1.1	
LPAZ				IAmb	IAmb	10 02 49.5			
	comp=Z,12nm,0.9s								
H10N1	ASCENSION HYDR	48.65	21	T		T	10 55 27.2		
	baz=192,slow=75,SNR=12								
H10N3	ASCENSION HYDR	48.65	21	T		T	10 55 25.2		
	baz=192,slow=75,SNR=20								
H10N2	ASCENSION HYDR	48.66	21	T		T	10 55 29.7		
	baz=192,slow=75,SNR=21								
LBTB	Lobatse	50.41	77	P		P	10 03 02.2	-0.7	
	comp=Z,3.9nm,0.8s,baz=229,slow=8.2,SNR=4.1								
	comp=Z,3.9nm,0.8s								
ETMB	Extrema	53.25	314	P		P	10 03 24.1	+0.1	
ETMB				IAmb	IAmb	10 03 24.7			
	comp=Z,9.7nm,1.4s								
BOAV	Boa Vista	62.38	325	P		P	10 04 27.8	-0.4	
BOAV				IAmb	IAmb	10 04 28.4			
	comp=Z,8.8nm,1.1s								
DBIC	Dimbokro	64.96	28	P		P	10 04 46.0	+0.8	
	comp=Z,6.2nm,0.8s,baz=206,slow=9.7,SNR=4.7								
	comp=Z,6.2nm,0.8s								
DBIC	Dimbokro	64.96	28	P		P	10 04 45.9	+0.8	
DBIC				IAmb	IAmb	10 06 26.8			
	comp=Z,35nm,1.6s								
BAUV	El Baul	71.09	320	P		P	10 05 23.5	-0.2	
BAUV				IAmb	IAmb	10 05 24.7			
	comp=Z,12nm,0.9s								
TOA0	Torodi Ar. Sit	73.02	33	P		P	10 05 36.4	+1.2	
TOA0				IAmb	IAmb	10 05 37.4			
	comp=Z,11nm,0.9s								
TORD	Torodi Ar. Bea	73.02	33	P		P	10 05 36.0	+0.8	
	comp=Z,7.7nm,0.8s,baz=200,slow=6.6,SNR=25								
	comp=Z,7.7nm,0.8s								
TORD	Torodi Ar. Bea	73.02	33	P		P	10 05 36.3	+1.1	
TORD				IAmb	IAmb	10 05 37.4			
	comp=Z,7.7nm,0.8s								
NOA	NORSAR Array B	120.22	22	PKP		PKiKP	10 12 55.5	+0.2	
	comp=Z,0.5nm,0.8s,baz=206,slow=1.9,SNR=3.7								
FINES	FINESS Array B	124.25	29	PKP		PKPdf	10 13 02.9	+0.1	
	comp=Z,3.1nm,0.7s,baz=132,slow=2.8,SNR=9.4								
ARCES	ARCESS Array B	130.59	23	PKP		PKPdf	10 13 14.2	-0.5	
	comp=Z,4.5nm,0.8s,baz=264,slow=1.2,SNR=10								
YKA	Yellowknife Ar	134.21	320	PKP		PKPdf	10 13 20.5	-1.2	
	comp=Z,0.5nm,0.6s,baz=95,slow=16,SNR=4.4								
MKAR	Makanchi Array	138.20	72	PKP		PKPdf	10 13 29.6	-0.2	
	comp=Z,1.3nm,1.2s,baz=327,slow=2.0,SNR=3.6								
ILAR	Eielson Array	148.10	314	PKPbc		PKPbc	10 13 49.5	-0.2	
	comp=Z,5.6nm,0.6s,baz=128,slow=1.9,SNR=24								
SONM	Songino Array	152.40	87	PKPbc		PKPbc	10 13 59.7	-1.1	
	comp=Z,1.8nm,0.7s,baz=227,slow=3.0,SNR=8.5								

*HVO **21** 10:07:35.0±0.8, 19°23N±0°03×155°47W±0°02, h38km±2km, ML2.6/19, ML2.6/51(NEIC), Error ellipse: s-maj=4.0km s-min=2.6km az=167.0*

NEIC 21 10:07:33.7±0.9,**19°25N**±0°03×**155°48W**±0°02,**h41**km±2km, **Error ellipse: s-maj=3.8km s-min=2.0km az=166.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	Hot Caves	0.07	96		Pn	10 07 40.9	+0.4
AIN	Ainahou	0.13	8		Pn	10 07 41.4	+0.5
AIN				IAML		10 07 41.8	
	comp=E,1μm,0.2s						
KHU	Kahuku	0.13	271		Pn	10 07 41.3	+0.3
HLP	Hilina Pali	0.17	72		Pn	10 07 41.5	+0.5
HPO	Honuapo	0.17	205		P

comp=N,1μm,0.5s

JCUZ				IAML		10 07 49.5	
	comp=E,825nm,0.4s						
CPH	**Captain Cook**	**0.48**	**300**		**Pn**	10 07 44.2	-0.1
CPH					Sn	10 07 51.1	-0.8
JOKA	**Jonika Flow**	**0.48**	**67**		**Pn**	10 07 44.0	-0.3
JOKA					Sn	10 07 50.6	-1.3
POHA	**Pohakuloa**	**0.51**	**354**		**Pn**	10 07 45.0	0.0
POHA	**Pohakuloa**	**0.51**	**354**		Sn	10 07 52.3	-0.5
POHA	**Pohakuloa**	**0.51**	**354**	IAML		10 07 52.8	
	comp=E,1μm,0.2s						
POHA				IAML		10 07 53.3	
	comp=E,836nm,0.1s						
KHLU	**Kahalu`u**	**0.52**	**311**		**Pn**	10 07 45.0	0.0
KHLU				IAML		10 07 52.4	
	comp=E,756nm,0.3s						
KHLU	**Kahalu`u**	**0.52**	**311**		Sn	10 07 52.1	-0.8
HUH	**Hualalai**	**0.55**	**322**		Pn	10 07 45.9	+0.3
HUH				IAML		10 07 54.2	
	comp=E,516nm,0.4s						
HUH				IAML		10 07 59.3	
	comp=N,596nm,0.2s						
HPAH	**Hawaii Prepara**	**0.81**	**345**		Pn	10 07 48.5	-0.3
HPAH	**Hawaii Prepara**	**0.81**	**345**		Sn	10 07 58.0	-1.7
MHA	**Mahukona**	**1.02**	**337**	Pn	Pn	10 07 51.6	0.0
HLK	**Haleakala**	**1.67**	**334**	Pn	Pn	10 08 00.2	-0.6
KHLH	**Kahului Airpor**	**1.87**	**332**	Pn	Pn	10 08 04.0	+0.8
KIP	**Kipapa**	**3.22**	**313**	Pn	Pn	10 08 23.8	+1.9

*JMA **21** 10:08:36.3±0.1, 23°.9N±0°.8×122°.1E±0°.4, h28km±2km, MV2.7/9, TAIWAN REGION*
*TAP **21** 10:08:37.3, 24°.12N×122°.09E, h38km, ML3.4, C*
ISC 21 10:08:37.1±1.0, **24°.08N**±0°.02×**122°.10E**±0°.02, **h31**km±9km, **n114**, σ0°**73**/221, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.44**	**281**	P		**Pn**	**10 08 47.0**	**-0.4**
	baz=266							
ETL				*e*S		**Sn**	**10 08 54.8**	**+0.4**
	baz=266							
TWD	**Chiawan**	**0.46**	**271**	P		**Pb**	**10 08 47.0**	**0.0**
	baz=257							
TWD				*e*S		**Sn**	**10 08 55.0**	**+0.2**
	baz=257							
HWA	**Hwalien**	**0.46**	**258**	P		**Pn**	**10 08 47.6**	**-0.1**
	baz=252							
HWA				S		**Sn**	**10 08 55.5**	**+0.6**
	baz=252							
EWUT	**Wuta**	**0.47**	**321**	P		**Pb**	**10 08 46.3**	**-0.9**
	baz=321							
EWUT				S		**Sb**	**10 08 54.0**	**0.0**
	baz=321							
NACB	**Ninganchiao**	**0.47**	**282**	P		**Pb**	**10 08 47.1**	**0.0**
	baz=268							
NACB				S		**Sb**	**10 08 54.2**	**+0.2**
	baz=268							
ENA	**Nanau**	**0.48**	**317**	P		**Pb**	**10 08 47.5**	**+0.2**
	baz=317							
ENA				S		**Sn**	**10 08 55.6**	**+0.3**
	baz=317							
TWC	**Suao**	**0.58**	**337**	P		**Pb**	**10 08 48.8**	**-0.1**
	baz=344							
TWC				S		**Sb**	**10 08 56.7**	**-0.2**
	baz=344							
ETLH	**Xiulin Townshi**	**0.58**	**283**	P		**Pb**	**10 08 49.0**	**+0.1**
	baz=279							
ETLH				S		**Sn**	**10 08 57.5**	**-0.4**
	baz=279							
NDS	**Dongshan**	**0.66**	**328**	P		**Pb**	**10 08 49.4**	**-0.8**
	baz=331							
NDS				S		**Sb**	**10 08 59.0**	**-0.1**
	baz=331							
ESL	**Shilin**	**0.66**	**247**	P		**Pb**	**10 08 49.9**	**-0.4**
	baz=234							
ESL				S		**Sn**	**10 08 59.8**	**0.0**
	baz=234							
LATG	**Datong**	**0.70**	**311**	P		**Pb**	**10 08 50.7**	**-0.2**
	baz=309							
LATG				*e*S		**Sn**	**10 09 00.8**	**+0.1**
	baz=309							
EGFH	**Guangfu**	**0.74**	**237**	*e*P		**Pn**	**10 08 51.6**	**+0.2**
	baz=226							
EGFH				*e*S		**Sn**	**10 09 02.5**	**+0.9**
	baz=226							
NNSB	**Datong**	**0.74**	**298**	P		**Pb**	**10 08 51.5**	**-0.1**
	baz=289							
NNSB				S		**Sb**	**10 09 01.7**	**+0.1**
	baz=289							
ENTT	**Nioudou**	**0.74**	**319**	P		**Pb**	**10 08 50.8**	**-0.9**
	baz=317							
ENTT				S		**Sb**	**10 09 01.7**	**+0.2**
	baz=317							
NDT	**Datong Townshi**	**0.75**	**315**	P		**Pn**	**10 08 51.7**	**+0.1**
	baz=312							
NDT				*e*S		**Sb**	**10 09 01.6**	**-0.1**
	baz=312							
TWE	**Neicheng**	**0.76**	**329**	P		**Pn**	**10 08 52.0**	**+0.4**
	baz=328							
TWE				*e*S		**Sb**	**10 09 01.6**	**-0.2**
	baz=328							
NNS	**Nan Shan**	**0.76**	**299**	P		**Pb**	**10 08 50.9**	**-1.0**
	baz=290							
NNS				S		**Sb**	**10 09 01.6**	**-0.4**
	baz=290							
WHF	**Hehuan Shan**	**0.77**	**275**	P		**Pb**	**10 08 51.9**	**-0.3**
	baz=272							
WHF				S		**Sb**	**10 09 02.6**	**0.0**
	baz=272							
EGS		**0.78**	**349**	P		**Pb**	**10 08 52.0**	**-0.2**
	baz=358							
EGS				*e*S		**Sb**	**10 09 02.5**	**-0.1**
	baz=358							
FUSS	**Fushou**	**0.80**	**283**	P		**Pb**	**10 08 52.5**	**-0.2**
	baz=279							
FUSS				S		**Sn**	**10 09 03.5**	**0.0**
	baz=279							
NTC	**Toucheng**	**0.81**	**342**	*e*P		**Pb**	**10 08 52.4**	**-0.4**
	baz=353							
NTC				*e*S		**Sb**	**10 09 03.4**	**-0.1**
	baz=353							
FUSB	**Fushanzhiwuyua**	**0.83**	**326**	P		**Pn**	**10 08 52.9**	**+0.2**
	baz=324							
FUSB				S		**Sb**	**10 09 03.8**	**-0.2**
	baz=324							
CHGB	**Renai**	**0.85**	**269**	P		**Pn**	**10 08 53.2**	**+0.1**
	baz=256							
CHGB				S		**Sb**	**10 09 04.4**	**-0.2**
	baz=256							
HGSD	**Ruisui**	**0.85**	**227**	*e*P		**Pb**	**10 08 52.9**	**-0.4**
	baz=217							
HGSD				*e*S		**Sn**	**10 09 06.6**	**+2.2**
	baz=217							
OWD	**Renai**	**0.85**	**262**	P		**Pb**	**10 08 53.1**	**-0.4**
	baz=259							
OWD				S		**Sn**	**10 09 05.2**	**+0.5**
	baz=259							
JYNG	**Yonagunijimaku**	**0.86**	**64**	P		**Pb**	**10 08 53.0**	**-0.5**
JYNG				S		**Sn**	**10 09 05.3**	**+0.7**
TWT	**Tachien**	**0.86**	**282**	P		**Pn**	**10 08 53.9**	**+0.6**
	baz=272							
TWT				*e*S		**Sn**	**10 09 05.5**	**+0.6**
	baz=272							
TDCB	**Techi**	**0.88**	**282**	*e*P		**Pn**	**10 08 53.8**	**+0.3**
	baz=269							
TDCB				*e*S		**Sb**	**10 09 05.3**	**-0.1**
	baz=269							
YHNB	**Yeheng**	**0.89**	**312**	P		**Pn**	**10 08 53.8**	**+0.3**
	baz=310							
YHNB				*e*S		**Sb**	**10 09 05.2**	**-0.4**
	baz=310							
NSK	**Sanguang**	**0.90**	**312**	*e*P		**Pn**	**10 08 53.0**	**-0.8**
	baz=299							
NSK				*e*S		**Sb**	**10 09 05.1**	**-1.0**
	baz=299							
WUSB	**Renai**	**0.90**	**265**	P		**Pb**	**10 08 54.0**	**-0.3**
	baz=262							
WUSB				S		**Sn**	**10 09 06.3**	**+0.5**
	baz=262							
EHY	**Hungye**	**0.91**	**232**	*e*P		**Pb**	**10 08 54.4**	**0.0**
	baz=228							
EHY				*e*S		**Sn**	**10 09 06.7**	**+0.7**
	baz=228							
YOJ	**Yonaguni jima**	**0.92**	**65**	P		**Pn**	**10 08 53.9**	**0.0**
	baz=67							
YOJ				*e*S		**Sn**	**10 09 06.6**	**+0.6**
	baz=67							
YOJ	**Yonaguni jima**	**0.92**	**65**	P		**Pn**	**10 08 53.9**	**0.0**
YOJ				S		**Sn**	**10 09 06.6**	**+0.6**
TIPB	**Shuangxi**	**0.93**	**344**	*e*P		**Pb**	**10 08 54.7**	**0.0**
	baz=349							
TIPB				*e*S		**Sb**	**10 09 06.1**	**-0.7**
	baz=349							
VWDT	**VWDT**	**0.93**	**250**	P		**Pb**	**10 08 54.7**	**-0.1**
	baz=237							
VWDT				S		**Sn**	**10 09 06.8**	**+0.4**
	baz=237							
TWB1	**Santiao Chiao**	**0.94**	**354**	*e*P		**Pn**	**10 08 54.1**	**0.0**
	baz=354							
TWB1				*e*S		**Sb**	**10 09 05.8**	**-1.0**
	baz=354							
YULB	**Yu-li**	**1.00**	**227**	*e*P		**Pn**	**10 08 54.7**	**-0.4**
	baz=238							
YULB				*e*S		**Sn**	**10 09 08.5**	**+0.3**
	baz=238							
TWA	**Mucha**	**1.02**	**333**	*e*P		**Pn**	**10 08 55.4**	**+0.1**
	baz=332							
TWA				*e*S		**Sb**	**10 09 08.3**	**-0.9**
	baz=332							
EYUL	**Yuli**	**1.02**	**225**	*e*P		**Pn**	**10 08 55.5**	**+0.2**
	baz=235							
EYUL				*e*S		**Sn**	**10 09 09.0**	**+0.4**
	baz=235							
NHDH	**Xindian Distri**	**1.03**	**329**	*e*P		**Pn**	**10 08 55.7**	**+0.3**
	baz=315							
NHDH				*e*S		**Sn**	**10 09 09.1**	**+0.3**
	baz=315							
NWF	**Wu-fen Shan**	**1.03**	**344**	*e*P		**Pb**	**10 08 56.6**	**+0.1**
	baz=358							
NWF				*e*S		**Sb**	**10 09 09.2**	**-0.6**
	baz=358							
SXI1	**Grass Mountain**	**1.03**	**349**	P		**Pn**	**10 08 55.9**	**+0.3**
	baz=1.0							
SXI1				*e*S		**Sn**	**10 09 09.2**	**+0.1**
	baz=1.0							
NFF	**Wufeng Townshi**	**1.05**	**302**	*e*P		**Pn**	**10 08 55.9**	**0.0**
	baz=300							
NFF				*e*S		**Sn**	**10 09 09.5**	**0.0**
	baz=300							
WHP	**Taichung City**	**1.07**	**281**	*e*P		**Pb**	**10 08 57.2**	**0.0**
	baz=270							
WHP				*e*S		**Sb**	**10 09 10.6**	**-0.4**
	baz=270							
SSLB	**Suanglung**	**1.09**	**255**	P		**Pn**	**10 08 56.5**	**+0.2**
	baz=252							
SSLB				*e*S		**Sn**	**10 09 10.5**	**+0.2**
	baz=252							
WCS	**Beigang Elemen**	**1.09**	**269**	*e*P		**Pn**	**10 08 56.0**	**-0.2**
	baz=261							
WCS				*e*S		**Sb**	**10 09 10.8**	**-0.4**
	baz=261							
SMLT	**Sun Moon Lake**	**1.11**	**260**	P		**Pb**	**10 08 57.4**	**-0.5**
	baz=257							
SMLT				*e*S		**Sn**	**10 09 11.4**	**+0.3**
	baz=257							
LIOB	**Emei**	**1.14**	**300**	*e*P		**Pb**	**10 08 58.7**	**+0.4**
	baz=298							
LIOB				*e*S		**Sn**	**10 09 11.6**	**0.0**
	baz=298							
FULB	**Fuli**	**1.14**	**220**	*e*P		**Pn**	**10 08 57.1**	**0.0**
	baz=207							
FULB				*e*S		**Sb**	**10 09 12.7**	**-0.1**
	baz=207							
NSTT	**Nanjuang**	**1.15**	**299**	*e*P		**Pb**	**10 08 58.2**	**-0.2**
	baz=297							
NSTT				*e*S		**Sn**	**10 09 11.8**	**+0.1**
	baz=297							
YM01	**YM01**	**1.17**	**336**	*e*P		**Pn**	**10 08 57.7**	**+0.2**
	baz=335							
YM01				*e*S		**Sn**	**10 09 12.1**	**-0.3**
	baz=335							
TWS1	**Kuangyinshan**	**1.20**	**329**	*e*P		**Pn**	**10 08 57.7**	**0.0**
	baz=328							
TWS1				*e*S		**Sn**	**10 09 12.6**	**-0.3**
	baz=328							
WHYT	**Xinyi Township**	**1.20**	**252**	*e*P		**Pb**	**10 08 58.5**	**-0.8**
	baz=241							
WHYT				*e*S		**Sn**	**10 09 13.7**	**+0.6**
	baz=241							
YUS	**Yu-Shan**	**1.20**	**241**	P		**Pn**	**10 08 58.8**	**+0.5**
	baz=238							
YUS				S		**Sn**	**10 09 14.0**	**+0.2**
	baz=238							
NTST	**Danshui**	**1.24**	**331**	*e*P		**Pn**	**10 08 58.4**	**+0.1**
	baz=344							
NTST				*e*S		**Sn**	**10 09 14.0**	**+0.1**
	baz=344							
TWQ1	**Liyutan**	**1.24**	**283**	*e*P		**Pb**	**10 08 59.4**	**-0.5**
	baz=280							
TWQ1				*e*S		**Sb**	**10 09 15.8**	**+0.2**
	baz=280							
HSN	**Hsinchu**	**1.26**	**305**	*e*P		**Pn**	**10 08 58.8**	**+0.2**
	baz=306							
HSN				*e*S		**Sn**	**10 09 14.8**	**+0.3**
	baz=306							
NSY	**Sanyi**	**1.27**	**286**	*e*P		**Pb**	**10 09 00.3**	**-0.1**
	baz=284							
NSY				*e*S		**Sb**	**10 09 16.5**	**+0.1**
	baz=284							
NMLH	**Miaoli**	**1.28**	**291**	*e*P		**Pb**	**10 09 00.2**	**-0.4**
	baz=289							
NMLH				*e*S		**Sb**	**10 09 17.1**	**+0.4**
	baz=289							
TCU	**Taichung**	**1.30**	**273**	*e*P		**Pn**	**10 08 59.4**	**+0.2**
	baz=271							
TCU				*e*S		**Sn**	**10 09 16.4**	**+0.8**
	baz=271							
WNT	**Mingjian**	**1.31**	**262**	*e*P		**Pb**	**10 09 00.5**	**-0.6**
	baz=259							
WNT				*e*S		**Sb**	**10 09 17.4**	**-0.2**
	baz=259							
ALS	**Alishan**	**1.31**	**245**	*e*P		**Pn**	**10 09 00.2**	**+0.6**
	baz=232							
ALS				*e*S		**Sn**	**10 09 16.5**	**+0.3**
	baz=232							
EDH	**Donghe**	**1.32**	**214**	*e*P		**Pn**	**10 08 59.0**	**-0.5**
	baz=203							
EDH				*e*S		**Sn**	**10 09 15.1**	**-0.8**
	baz=203							
ELDTW	**Lidau**	**1.33**	**229**	*e*P		**Pn**	**10 09 00.1**	**+0.5**
	baz=226							
ELDTW				*e*S		**Sn**	**10 09 16.9**	**+0.5**
	baz=226							
WCHH	**Zhanghua**	**1.41**	**270**	*e*P		**Pn**	**10 09 01.6**	**+1.0**
	baz=268							
WCHH				*e*S		**Sn**	**10 09 18.4**	**+0.2**
	baz=268							
LONT	**Longtian**	**1.47**	**218**	*e*P		**Pn**	**10 09 01.3**	**-0.1**
	baz=216							
LONT				*e*S		**Sn**	**10 09 19.4**	**-0.2**
	baz=216							
WDLH	**Douliu**	**1.48**	**255**	*e*P		**Pn**	**10 09 02.7**	**+1.1**
	baz=240							
WDLH				*e*S		**Sn**	**10 09 20.9**	**+0.9**
	baz=240							
IRIF	**Iriomote-Funau**	**1.51**	**80**	P		**Pn**	**10 09 02.4**	**+0.3**
IRIF				S		**Sn**	**10 09 21.4**	**+0.8**
LDUT	**Ludao**	**1.51**	**203**	*e*P		**Pn**	**10 09 02.8**	**+0.8**
	baz=201							
LDUT				*e*S		**Sn**	**10 09 21.7**	**+1.0**
	baz=201							
STYH	**Taoyuan**	**1.51**	**234**	*e*P		**Pn**	**10 09 02.7**	**+0.6**
	baz=224							
STYH				*e*S		**Sb**	**10 09 22.4**	**-1.0**
	baz=224							
TPUB	**Ta-pu**	**1.55**	**241**	*e*P		**Pn**	**10 09 03.5**	**+0.8**
	baz=238							
TPUB				*e*S		**Sb**	**10 09 23.4**	**-1.2**
	baz=238							
CHN4	**Tsaushan**	**1.56**	**243**	*e*P		**Pb**	**10 09 04.8**	**-0.5**
	baz=229							
CHN4				*e*S		**Sb**	**10 09 24.7**	**0.0**
	baz=229							
HATJ	**Hateruma jima**	**1.56**	**90**	P		**Pn**	**10 09 02.7**	**0.0**
HATJ				S		**Sn**	**10 09 22.1**	**+0.2**
TWGBT	**Beinan**	**1.56**	**217**	*e*P		**Pn**	**10 09 03.2**	**+0.4**
	baz=215							
TWGBT				*e*S		**Sn**	**10 09 22.3**	**+0.2**
	baz=215							
CHN2	**Minshiung**	**1.58**	**250**	*e*P		**Pb**	**10 09 04.9**	**-0.9**
	baz=248							
CHN2				*e*S		**Sb**	**10 09 24.2**	**-1.2**
	baz=248							
WRL	**Guolierlin Hig**	**1.59**	**264**	*e*P		**Pn**	**10 09 04.3**	**+1.2**
	baz=262							
WRL				*e*S		**Sb**	**10 09 25.2**	**-0.3**
	baz=262							
WTP	**Ta-pu**	**1.59**	**239**	*e*P		**Pn**	**10 09 03.1**	**-0.1**
	baz=237							
WTP				*e*S		**Sn**	**10 09 24.1**	**+1.2**
	baz=237							
WTK	**Tuku**	**1.61**	**257**	*e*P		**Pb**	**10 09 05.6**	**-0.7**
	baz=243							
WTK				*e*S		**Sb**	**10 09 26.6**	**+0.4**
	baz=243							
CHY	**Chiayi**	**1.64**	**250**	*e*P		**Pn**	**10 09 05.2**	**+1.4**
	baz=247							
CHY				*e*S		**Sn**	**10 09 25.0**	**+1.1**
	baz=247							
TWK	**Hsinying**	**1.68**	**242**	*e*P		**Pb**	**10 09 06.5**	**-1.0**
	baz=239							
TWK				*e*S		**Sb**	**10 09 27.4**	**-0.9**
	baz=239							
CHN1	**Nanshi**	**1.69**	**239**	*e*P		**Pb**	**10 09 06.7**	**-0.9**
	baz=236							
CHN1				*e*S		**Sb**	**10 09 28.2**	**-0.3**
	baz=236							
SNST	**Tainan City**	**1.70**	**240**	*e*P		**Pb**	**10 09 06.6**	**-1.1**
	baz=238							
SNST				*e*S		**Sb**	**10 09 28.1**	**-0.6**
	baz=238							
SGST	**Jiashian**	**1.71**	**235**	*e*P		**Pn**	**10 09 05.4**	**+0.6**
	baz=232							
SGST				*e*S		**Sb**	**10 09 27.6**	**-1.3**
	baz=232							
JKRS	**Kuro-shima**	**1.75**	**84**	P		**Pn**	**10 09 06.4**	**+1.1**
JKRS				S		**Sn**	**10 09 27.9**	**+1.3**
WSF	**Szhu**	**1.77**	**256**	*e*S		**Sn**	**10 09 28.4**	**+1.2**
	baz=268							
WSL	**Shuilin Townsh**	**1.80**	**253**	*e*P		**Pn**	**10 09 06.3**	**+0.2**
	baz=250							
WSL				*e*S		**Sn**	**10 09 29.4**	**+1.6**
	baz=250							
ECL	**Taimali**	**1.81**	**216**	*e*P		**Pb**	**10 09 05.3**	**-0.9**
	baz=214							
ECL				*e*S		**Sn**	**10 09 26.9**	**-1.1**
	baz=214							
JIJ	**Ishigaki jima**	**1.89**	**81**	P		**Pn**	**10 09 07.4**	**+0.2**
JIJ				S		**Sn**	**10 09 30.6**	**+0.7**
SSD	**Sandimen**	**1.89**	**226**	*e*P		**Pn**	**10 09 08.3**	**+1.0**
	baz=224							
SSD				*e*S		**Sn**	**10 09 31.4**	**+1.3**
	baz=224							
SCST	**Cishan**	**1.89**	**232**	*e*P		**Pb**	**10 09 10.2**	**-0.8**
	baz=242							
SCST				*e*S		**Sb**	**10 09 33.1**	**-1.1**
	baz=242							
TSMG	**Majia**	**1.91**	**225**	*e*P		**Pb**	**10 09 09.6**	**-1.7**
	baz=223							
TSMG				*e*S		**Sn**	**10 09 31.7**	**+1.1**
	baz=223							
SHHT	**Tainan City**	**1.92**	**237**	*e*S		**Sb**	**10 09 35.2**	**+0.1**
	baz=235							
TWM1	**Shoushan**	**1.98**	**231**	*e*S		**Sb**	**10 09 36.9**	**0.0**
	baz=240							
MASBT	**Mashibuluo**	**1.98**	**223**	*e*P		**Pn**	**10 09 09.7**	**+1.1**
	baz=221							
MASBT				*e*S		**Sn**	**10 09 34.2**	**+1.8**
	baz=221							
EAST	**Anshuo**	**2.04**	**215**	*e*P		**Pn**	**10 09 09.8**	**+0.4**
	baz=204							
EAST				*e*S		**Sn**	**10 09 33.1**	**-0.8**
	baz=204							
LAY	**Lan-yu**	**2.09**	**194**	*e*P		**Pn**	**10 09 09.4**	**-0.7**
	baz=193							
LAY				*e*S		**Sn**	**10 09 34.8**	**-0.2**
	baz=193							
LYUB	**Lan-yu**	**2.12**	**193**	*e*P		**Pn**	**10 09 11.6**	**+1.1**
	baz=192							
LYUB				*e*S		**Sn**	**10 09 35.6**	**-0.1**
	baz=192							
SSPT	**Xinbi**	**2.12**	**222**	*e*P		**Pn**	**10 09 11.7**	**+1.2**
	baz=220							
SSPT				*e*S		**Sn**	**10 09 37.0**	**+1.2**
	baz=220							
SCZT	**Fangliau**	**2.17**	**219**	*e*P		**Pn**	**10 09 11.9**	**+0.8**
	baz=227							
SCZT				*e*S		**Sb**	**10 09 40.5**	**-1.9**
	baz=227							
SLIU	**Shizi**	**2.20**	**213**	*e*P		**Pn**	**10 09 12.8**	**+1.1**
	baz=204							
SLIU				*e*S		**Sn**	**10 09 39.0**	**+1.1**
	baz=204							
WDGT	**Dungji**	**2.38**	**251**	*e*P		**Pn**	**10 09 14.8**	**+0.8**
	baz=238							
WDGT				*e*S		**Sn**	**10 09 43.8**	**+1.7**
	baz=238							
PHUB	**P'eng-hu**	**2.38**	**257**	*e*P		**Pn**	**10 09 14.7**	**+0.7**
	baz=270							
PHUB				*e*S		**Sn**	**10 09 42.3**	**+0.1**
	baz=270							
PNG	**Penghu**	**2.38**	**258**	*e*P		**Pn**	**10 09 14.4**	**+0.3**
	baz=256							
PNG				*e*S		**Sn**	**10 09 41.8**	**-0.4**
	baz=256							
TWKBT	**Hengchun**	**2.43**	**209**	*e*S		**Sn**	**10 09 44.6**	**+1.1**
	baz=200							
VWUC	**VWUC**	**2.58**	**291**	*e*P		**Pn**	**10 09 17.1**	**+0.3**
	baz=290							
VWUC				*e*S		**Sn**	**10 09 46.3**	**-0.8**
	baz=290							
VCHM	**Qimei**	**2.60**	**251**	*e*P		**Pn**	**10 09 17.9**	**+0.9**
	baz=238							
VCHM				*e*S		**Sn**	**10 09 48.1**	**+0.6**
	baz=238							
MATB	**Ma-tsu**	**2.84**	**317**	*e*S		**Sn**	**10 09 52.4**	**-1.2**
	baz=316							
PTMZ	**Houxiangcun**	**2.88**	**290**	*e*S		**Sn**	**10 09 55.0**	**+0.6**
	baz=289							
KNM	**Kinmen**	**3.37**	**277**	*e*P		**Pn**	**10 09 30.2**	**+2.7**
	baz=274							
KNM				*e*S		**Sn**	**10 10 09.1**	**+2.6**
	baz=274							
KNMB	**Chin-men Tao**	**3.41**	**277**	*e*P		**Pn**	**10 09 28.9**	**+0.8**
	baz=275							
KNMB				*e*S		**Sn**	**10 10 06.9**	**-0.7**
	baz=275							
MHZQ	**Yeshan**	**3.44**	**307**	*e*S		**Sn**	**10 10 08.7**	**+0.4**
	baz=306							
AXDP	**Jialang**	**3.85**	**283**	*e*P		**Pn**	**10 09 34.9**	**+0.6**
	baz=270							
AXDP				*e*S		**Sn**	**10 10 17.5**	**-1.0**
	baz=270							
ZPLA	**Ao Xicun**	**3.98**	**269**	*e*P		**Pn**	**10 09 37.1**	**+1.0**
	baz=266							
ZPLA				*e*S		**Sn**	**10 10 20.5**	**-1.2**
	baz=266							

IDC 21 10:09:39.1±1.4, **55°.02S**×**31°.11W**, **h0**km, **mb3.7**/3, **mbtmp3.8**/3, **Error ellipse: s-maj=58.9km s-min=31.9km az=53.0**, **South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.61**	**155**	P	P	10 14 19.6	+0.1
	1.2nm,0.8s,baz=297,slow=7.0,SNR=5.5						
	1.2nm,0.8s						
LPAZ	**La Paz**	**47.98**	**309**	P	P	10 18 20.3	0.0
	1.9nm,0.4s,baz=108,slow=3.2,SNR=23						
	1.9nm,0.4s						
TORD	**Torodi Ar. Bea**	**73.34**	**33**	P	P	10 21 12.5	+0.1
	0.5nm,0.7s,baz=207,slow=4.7,SNR=1.3						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**147.78**	**314**	PKPbc	PKPbc	10 29 23.4	-1.0
	0.7nm,0.8s,baz=112,slow=1.5,SNR=7.1						

*JMA **21** 10:13:32.5±0.1, 24°.8N±0°.3×122°.0E±0°.3, h65km±1km, MV3.3/9, TAIWAN REGION*
*TAP **21** 10:13:33.2, 24°.74N×122°.01E, h59km, ML3.8, B*
ISC 21 10:13:33.1±1.2, **24°.75N**±0°.02×**122°.04E**±0°.02, **h62**km±5km, **n125**, σ0°**67**/249, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
EGS		**0.13**	**313**	P	**Pn**	**10 13 42.8**	**+0.3**
	baz=328						
EGS				*e*S	**Sn**	**10 13 49.2**	**0.0**
	baz=328						
**NTC

NTC	baz=304			S	Sn	10 13 49.8	-0.1
TWC	**Suao** baz=226	**0.22**	**230**	*i* P	**Pn**	**10 13 42.8**	**-0.1**
TWC	baz=226			S	Sn	10 13 49.7	-0.3
TWB1	**Santiao Chiao** baz=357	**0.26**	**350**	*i* P	**Pn**	**10 13 43.3**	**+0.1**
TWB1	baz=357			S	Sn	10 13 50.6	+0.2
ILA	**Ilan** baz=275	**0.26**	**273**	P	**Pn**	**10 13 43.3**	**+0.2**
ILA	baz=275			S	Sn	10 13 51.1	+0.6
TIPB	**Shuangxi** baz=323	**0.29**	**318**	*i* P	**Pn**	**10 13 43.6**	**+0.2**
TIPB	baz=323			S	Sn	10 13 50.8	-0.1
NDS	**Dongshan** baz=248	**0.32**	**248**	P	**Pn**	**10 13 42.8**	**-0.8**
NDS	baz=248			S	Sn	10 13 50.1	-1.0
TWE	**Neicheng** baz=265	**0.34**	**265**	*i* P	**Pn**	**10 13 43.9**	**+0.2**
TWE	baz=265			S	Sn	10 13 51.4	0.0
SXI1	**Grass Mountain** baz=340	**0.37**	**337**	P	**Pn**	**10 13 44.2**	**+0.1**
SXI1	baz=340			S	Sn	10 13 52.5	+0.4
EWUT	**Wuta** baz=215	**0.39**	**218**	P	**Pn**	**10 13 43.3**	**-0.9**
EWUT	baz=215			S	Sn	10 13 51.4	-0.7
NWF	**Wu-fen Shan** baz=327	**0.39**	**324**	P	**Pn**	**10 13 44.5**	**+0.2**
NWF	baz=327			S	Sn	10 13 52.5	+0.1
FUSB	**Fushanzhiwuyua** baz=273	**0.41**	**271**	*i* P	**Pn**	**10 13 44.5**	**+0.1**
FUSB	baz=273			S	Sn	10 13 52.2	-0.4
ENA	**Nanau** baz=217	**0.42**	**220**	P	**Pn**	**10 13 44.7**	**+0.2**
ENA	baz=217			S	Sn	10 13 53.0	+0.3
ENTT	**Nioudou** baz=255	**0.44**	**255**	P	**Pn**	**10 13 44.2**	**-0.5**
ENTT	baz=255			S	Sn	10 13 52.7	-0.4
TWA	**Mucha** baz=301	**0.47**	**299**	P	**Pn**	**10 13 45.1**	**+0.2**
TWA	baz=301			S	Sn	10 13 53.3	-0.2
NDT	**Datong Townshi** baz=253	**0.50**	**253**	*i* P	**Pn**	**10 13 46.1**	**+0.8**
NDT	baz=253			*e*S	Sn	10 13 54.3	+0.2
NHDH	**Xindian Distri** baz=296	**0.51**	**294**	P	**Pn**	**10 13 45.5**	**+0.1**
NHDH	baz=296			S	Sn	10 13 54.0	-0.2
LATG	**Datong** baz=245	**0.51**	**245**	P	**Pn**	**10 13 46.2**	**+0.7**
LATG	baz=245			*e*S	Sn	10 13 54.2	-0.3
TAP	**Taipei** baz=303	**0.56**	**301**	*e*P	**Pn**	**10 13 46.2**	**+0.4**
TAP	baz=303			S	Sn	10 13 55.1	-0.1
YM01	**YM01** baz=315	**0.58**	**313**	P	**Pn**	**10 13 46.2**	**+0.1**
YM01	baz=315			S	Sn	10 13 55.4	-0.2
YHNB	**Yeheng** baz=263	**0.61**	**262**	P	**Pn**	**10 13 46.9**	**+0.4**
YHNB	baz=263			S	Sn	10 13 56.9	+0.7
NSK	**Sanguang** baz=263	**0.62**	**263**	P	**Pn**	**10 13 46.0**	**-0.7**
NSK	baz=263			S	Sn	10 13 56.0	-0.6
ANP	**Anpu** baz=315	**0.64**	**313**	*e*P	**Pn**	**10 13 47.0**	**+0.1**
ANP	baz=315			*e*S	Sn	10 13 56.8	-0.1
TWS1	**Kuangyinshan** baz=304	**0.66**	**302**	P	**Pn**	**10 13 47.3**	**+0.2**
TWS1	baz=304			S	Sn	10 13 57.5	+0.3
NTST	**Danshui** baz=309	**0.67**	**308**	P	**Pn**	**10 13 47.4**	**+0.3**
NTST	baz=309			S	Sn	10 13 57.7	+0.3
NNSB	**Datong** baz=241	**0.68**	**242**	P	**Pn**	**10 13 47.8**	**+0.5**
NNSB	baz=241			*e*S	Sn	10 13 58.5	+0.8
NNS	**Nan Shan** baz=242	**0.68**	**243**	P	**Pn**	**10 13 46.9**	**-0.5**
NNS	baz=242			S	Sn	10 13 57.6	-0.2
ETL	**Fush Village** baz=211	**0.70**	**213**	*e*P	**Pn**	**10 13 47.3**	**-0.2**
ETL	baz=211			*e*S	Sn	10 13 58.0	-0.1
NACB	**Ninganchiao** baz=214	**0.70**	**215**	P	**Pn**	**10 13 47.0**	**-0.6**
NACB	baz=214			*e*S	Sn	10 13 58.2	+0.1
ETLH	**Xiulin Townshi** baz=222	**0.74**	**223**	*e*P	**Pn**	**10 13 48.0**	**-0.1**
ETLH	baz=222			*e*S	Sn	10 13 59.1	0.0
TWD	**Chiawan** baz=209	**0.78**	**211**	P	**Pn**	**10 13 48.1**	**-0.4**
TWD	baz=209			*e*S	Sn	10 14 00.1	+0.4
NCU	**National Centr** baz=286	**0.80**	**286**	*e*P	**Pn**	**10 13 49.3**	**+0.6**
NCU	baz=286			*e*S	Sn	10 14 00.5	+0.3
NCUH	**Zhongli** baz=286	**0.80**	**286**	*e*P	**Pn**	**10 13 49.1**	**+0.3**
NCUH	baz=286			*e*S	Sn	10 14 00.7	+0.4
NFF	**Wufeng Townshi** baz=262	**0.85**	**262**	*e*P	**Pn**	**10 13 48.7**	**-0.6**
NFF	baz=262			*e*S	Sn	10 14 01.1	-0.2
HWA	**Hwalien** baz=205	**0.87**	**207**	*e*P	**Pn**	**10 13 49.7**	**+0.1**
HWA	baz=205			*e*S	Sn	10 14 02.1	+0.5
PCYT	**Pengchaiyu** baz=3.0	**0.87**	**2**	*e*P	**Pn**	**10 13 50.0**	**+0.4**
PCYT	baz=3.0			*e*S	Sn	10 14 03.1	+1.3
JYNG	**Yonagunijimaku**	**0.88**	**110**	P	**Pn**	**10 13 49.5**	**-0.1**
JYNG				*e*S	Sn	10 14 02.1	+0.2
FUSS	**Fushou** baz=235	**0.88**	**235**	P	**Pn**	**10 13 50.2**	**+0.3**
FUSS	baz=235			S	Sn	10 14 02.4	0.0
WHF	**Hehuan Shan** baz=228	**0.93**	**229**	P	**Pn**	**10 13 50.8**	**0.0**
WHF	baz=228			*e*S	Sn	10 14 03.3	-0.4
TWT	**Tachien** baz=237	**0.93**	**238**	P	**Pn**	**10 13 51.3**	**+0.8**
TWT	baz=237			S	Sn	10 14 04.3	+0.9
YOJ	**Yonaguni jima** baz=106	**0.93**	**108**	P	**Pn**	**10 13 50.0**	**-0.4**
YOJ	baz=106			*e*S	Sn	10 14 03.4	+0.3
YOJ	**Yonaguni jima**	**0.93**	**108**	P	**Pn**	**10 13 50.1**	**-0.2**
YOJ				S	Sn	10 14 03.2	+0.1
LIOB	**Emei** baz=264	**0.94**	**264**	P	**Pn**	**10 13 50.8**	**+0.3**
LIOB	baz=264			S	Sn	10 14 03.5	+0.2
TDCB	**Techi** baz=238	**0.94**	**238**	P	**Pn**	**10 13 51.4**	**+0.7**
TDCB	baz=238			S	Sn	10 14 04.2	+0.6
NSTT	**Nanjuang** baz=263	**0.95**	**263**	P	**Pn**	**10 13 51.2**	**+0.6**
NSTT	baz=263			*e*S	Sn	10 14 03.6	+0.1
SBCB	**Hsinchu** baz=273	**0.96**	**273**	P	**Pn**	**10 13 51.2**	**+0.5**
SBCB	baz=273			*e*S	Sn	10 14 04.1	+0.4
HSN	**Hsinchu** baz=275	**0.97**	**273**	*e*P	**Pn**	**10 13 50.9**	**0.0**
HSN	baz=275			*e*S	Sn	10 14 03.6	-0.4
CHGB	**Renai** baz=228	**1.05**	**229**	P	**Pn**	**10 13 52.2**	**+0.1**
CHGB	baz=228			*e*S	Sn	10 14 05.9	-0.2
ESL	**Shilin** baz=209	**1.09**	**211**	*e*P	**Pn**	**10 13 50.8**	**-1.6**
ESL	baz=209			*e*S	Sn	10 14 05.4	-1.3
WHP	**Taichung City** baz=244	**1.10**	**245**	P	**Pn**	**10 13 53.6**	**+0.9**
WHP	baz=244			*e*S	Sn	10 14 08.3	+1.1
OWD	**Renai** baz=224	**1.12**	**225**	P	**Pn**	**10 13 52.6**	**-0.3**
OWD	baz=224			*e*S	Sn	10 14 07.1	-0.6
WUSB	**Renai** baz=227	**1.13**	**228**	P	**Pn**	**10 13 53.2**	**+0.1**
WUSB	baz=227			*e*S	Sn	10 14 08.0	0.0
NMLH	**Miaoli** baz=259	**1.16**	**260**	*e*P	**Pn**	**10 13 53.5**	**+0.3**
NMLH	baz=259			*e*S	Sn	10 14 08.8	+0.5
NSY	**Sanyi** baz=254	**1.21**	**254**	P	**Pn**	**10 13 54.9**	**+0.9**
NSY	baz=254			S	Sn	10 14 10.8	+1.1
EGFH	**Guangfu** baz=206	**1.22**	**207**	*e*P	**Pn**	**10 13 53.1**	**-1.0**
EGFH	baz=206			*e*S	Sn	10 14 08.8	-0.9
TWQ1	**Liyutan** baz=250	**1.22**	**251**	*e*P	**Pn**	**10 13 54.6**	**+0.5**
TWQ1	baz=250			*e*S	Sn	10 14 10.2	+0.4
WCS	**Beigang Elemen** baz=235	**1.24**	**236**	P	**Pn**	**10 13 54.5**	**+0.1**
WCS	baz=235			*e*S	Sn	10 14 10.3	0.0
VWDT	**VWDT** baz=219	**1.29**	**220**	P	**Pn**	**10 13 55.2**	**+0.2**
VWDT	baz=219			S	Sn	10 14 11.3	-0.1
WDJ	**Dajia District** baz=252	**1.33**	**253**	*e*P	**Pn**	**10 13 56.2**	**+0.5**
WDJ	baz=252			*e*S	Sn	10 14 13.0	+0.5
SMLT	**Sun Moon Lake** baz=229	**1.35**	**230**	P	**Pn**	**10 13 56.6**	**+0.6**
SMLT	baz=229			*e*S	Sn	10 14 14.6	+1.5
HGSD	**Ruisui** baz=203	**1.38**	**204**	*e*P	**Pn**	**10 13 55.4**	**-0.8**
HGSD	baz=203			S	Sn	10 14 14.2	+0.7
SSLB	**Suanglung** baz=225	**1.38**	**226**	*e*P	**Pn**	**10 13 56.9**	**+0.6**
SSLB	baz=225			*e*S	Sn	10 14 14.2	+0.5
TCU	**Taichung** baz=243	**1.38**	**244**	*e*P	**Pn**	**10 13 56.8**	**+0.5**
TCU	baz=243			*e*S	Sn	10 14 13.5	-0.1
EHY	**Hungye** baz=206	**1.40**	**208**	*e*P	**Pn**	**10 13 57.0**	**+0.4**
EHY	baz=206			*e*S	Sn	10 14 14.5	+0.3
WCHH	**Zhanghua** baz=243	**1.51**	**244**	*e*P	**Pn**	**10 13 58.6**	**+0.7**
WCHH	baz=243			*e*S	Sn	10 14 17.3	+0.7
WHYT	**Xinyi Township** baz=225	**1.51**	**226**	*e*P	**Pn**	**10 13 59.1**	**+1.0**
WHYT	baz=225			*e*S	Sn	10 14 18.2	+1.4
WNT	**Mingjian** baz=234	**1.51**	**235**	*e*P	**Pn**	**10 13 59.1**	**+1.1**
WNT	baz=234			*e*S	Sn	10 14 17.1	+0.3
WJS	**Zhushan** baz=232	**1.51**	**232**	*e*P	**Pn**	**10 13 58.9**	**+0.8**
WJS	baz=232			*e*S	Sn	10 14 17.5	+0.6
YULB	**Yu-li** baz=205	**1.52**	**207**	*e*P	**Pn**	**10 13 58.0**	**-0.2**
YULB	baz=205			*e*S	Sn	10 14 17.4	+0.5
EYUL	**Yuli** baz=204	**1.55**	**205**	*e*P	**Pn**	**10 13 58.4**	**-0.1**
EYUL	baz=204			*e*S	Sn	10 14 17.6	0.0
IRIF	**Iriomote-Funau**	**1.60**	**105**	P	**Pn**	**10 13 58.8**	**-0.3**
IRIF				S	Sn	10 14 18.9	+0.1
YUS	**Yu-Shan** baz=217	**1.60**	**218**	*e*P	**Pn**	**10 13 59.8**	**+0.1**
YUS	baz=217			*e*S	Sn	10 14 19.2	-0.5
ALS	**Alishan** baz=221	**1.67**	**223**	*e*P	**Pn**	**10 14 01.2**	**+0.7**
ALS	baz=221			*e*S	Sn	10 14 21.3	+0.2
FULB	**Fuli** baz=203	**1.69**	**204**	*e*P	**Pn**	**10 13 59.7**	**-0.8**
FULB	baz=203			*e*S	Sn	10 14 20.9	-0.3
CHN5	**Tsauling** baz=226	**1.69**	**227**	*e*P	**Pn**	**10 14 01.1**	**+0.6**
CHN5	baz=226			*e*S	Sn	10 14 21.9	+0.6
WDLH	**Douliu** baz=232	**1.73**	**233**	*e*P	**Pn**	**10 14 01.7**	**+0.7**
WDLH	baz=232			*e*S	Sn	10 14 22.3	+0.2
WRL	**Guolierlin Hig** baz=240	**1.74**	**241**	*e*P	**Pn**	**10 14 00.7**	**-0.3**
WRL	baz=240			*e*S	Sn	10 14 21.4	-0.8
HATJ	**Hateruma jima**	**1.75**	**113**	P	**Pn**	**10 14 01.6**	**+0.3**
HATJ				S	Sn	10 14 23.3	+0.7
ELDTW	**Lidau** baz=210	**1.82**	**211**	*e*P	**Pn**	**10 14 01.6**	**-0.6**
ELDTW	baz=210			*e*S	Sn	10 14 23.5	-0.8
WTK	**Tuku** baz=234	**1.84**	**235**	*e*P	**Pn**	**10 14 02.3**	**-0.2**
WTK	baz=234			*e*S	Sn	10 14 24.7	-0.1
JKRS	**Kuro-shima**	**1.87**	**106**	P	**Pn**	**10 14 02.9**	**+0.1**
JKRS				S	Sn	10 14 25.8	+0.4
CHN2	**Minshiung** baz=229	**1.88**	**230**	*e*P	**Pn**	**10 14 03.9**	**+1.0**
CHN2	baz=229			*e*S	Sn	10 14 26.1	+0.6
EDH	**Donghe** baz=200	**1.90**	**201**	*e*P	**Pn**	**10 14 02.0**	**-1.2**
EDH	baz=200			*e*S	Sn	10 14 26.1	+0.1
CHN4	**Tsaushan** baz=223	**1.92**	**224**	*e*P	**Pn**	**10 14 04.2**	**+0.6**
CHN4	baz=223			*e*S	Sn	10 14 26.9	+0.2
CHY	**Chiayi** baz=229	**1.93**	**230**	*e*P	**Pn**	**10 14 04.2**	**+0.5**
CHY	baz=229			*e*S	Sn	10 14 27.1	+0.1
TPUB	**Ta-pu** baz=221	**1.94**	**222**	*e*P	**Pn**	**10 14 04.7**	**+0.8**
TPUB	baz=221			*e*S	Sn	10 14 27.3	+0.2
STYH	**Taoyuan** baz=215	**1.95**	**216**	*e*P	**Pn**	**10 14 04.0**	**0.0**
STYH	baz=215			*e*S	Sn	10 14 27.6	+0.2
JIJ	**Ishigaki jima**	**1.96**	**101**	P	**Pn**	**10 14 04.0**	**0.0**
JIJ				S	Sn	10 14 27.3	-0.2
WTP	**Ta-pu** baz=220	**1.99**	**221**	*e*P	**Pn**	**10 14 05.5**	**+1.0**
WTP	baz=220			*e*S	Sn	10 14 29.1	+0.8
WSF	**Szhu** baz=235	**2.00**	**237**	*e*P	**Pn**	**10 14 05.2**	**+0.6**
WSF	baz=235			*e*S	Sn	10 14 28.5	0.0
LONT	**Longtian** baz=203	**2.02**	**205**	*e*P	**Pn**	**10 14 05.6**	**+0.7**
LONT	baz=203			*e*S	Sn	10 14 29.3	+0.2
TWK	**Hsinying** baz=223	**2.05**	**224**	*e*P	**Pn**	**10 14 06.2**	**+0.8**
TWK	baz=223			*e*S	Sn	10 14 29.9	0.0
WSL	**Shuilin Townsh** baz=233	**2.06**	**234**	*e*P	**Pn**	**10 14 05.8**	**+0.4**
WSL	baz=233			*e*S	Sn	10 14 30.0	0.0
SNST	**Tainan City** baz=222	**2.08**	**223**	*e*P	**Pn**	**10 14 06.5**	**+0.8**
SNST	baz=222			*e*S	Sn	10 14 31.6	+1.1
CHN1	**Nanshi** baz=221	**2.08**	**222**	*e*P	**Pn**	**10 14 06.3**	**+0.5**
CHN1	baz=221			*e*S	Sn	10 14 30.7	0.0
TWGBT	**Beinan** baz=204	**2.12**	**205**	*e*P	**Pn**	**10 14 06.9**	**+0.6**
TWGBT	baz=204			*e*S	Sn	10 14 31.4	-0.1
ICHU	**Yijhu** baz=229	**2.12**	**230**	*e*P	**Pn**	**10 14 07.3**	**+1.0**
ICHU	baz=229			*e*S	Sn	10 14 32.6	+1.0
SGST	**Jiashian** baz=218	**2.13**	**219**	*e*P	**Pn**	**10 14 06.9**	**+0.4**
SGST	baz=218			*e*S	Sn	10 14 32.1	+0.3
LDUT	**Ludao** baz=193	**2.13**	**194**	*e*P	**Pn**	**10 14 07.0**	**+0.5**
LDUT	baz=193			*e*S	Sn	10 14 32.1	+0.2
SCST	**Cishan** baz=216	**2.34**	**218**	*e*P	**Pn**	**10 14 09.9**	**+0.7**
SCST	baz=216			*e*S	Sn	10 14 38.1	+1.3
MATB	**Ma-tsu** baz=306	**2.35**	**307**	*e*P	**Pn**	**10 14 09.5**	**+0.1**
MATB	baz=306			*e*S	Sn	10 14 37.0	-0.1
VWUC	**VWUC** baz=276	**2.36**	**276**	*e*P	**Pn**	**10 14 10.2**	**+0.6**
VWUC	baz=276			*e*S	Sn	10 14 36.2	-1.3
ECL	**Taimali** baz=204	**2.37**	**205**	*e*P	**Pn**	**10 14 10.0**	**+0.4**
ECL	baz=204			*e*S	Sn	10 14 37.0	-0.5
SSD	**Sandimen** baz=212	**2.38**	**213**	*e*P	**Pn**	**10 14 10.7**	**+0.9**
SSD	baz=212			*e*S	Sn	10 14 38.2	+0.3
TSMG	**Majia** baz=211	**2.41**	**212**	*e*P	**Pn**	**10 14 11.1**	**+0.9**
TSMG	baz=211			*e*S	Sn	10 14 38.9	+0.4
MASBT	**Mashibuluo** baz=210	**2.49**	**211**	*e*P	**Pn**	**10 14 11.8**	**+0.5**
MASBT	baz=210			*e*S	Sn	10 14 40.8	+0.2
PNG	**Penghu** baz=242	**2.56**	**243**	*e*P	**Pn**	**10 14 12.8**	**+0.5**
PNG	baz=242			*e*S	Sn	10 14 40.6	-1.5
PHUB	**P'eng-hu** baz=241	**2.57**	**242**	*e*P	**Pn**	**10 14 12.9**	**+0.6**
PHUB	baz=241			*e*S	Sn	10 14 41.7	-0.7
EAST	**Anshuo** baz=204	**2.60**	**205**	*e*P	**Pn**	**10 14 13.8**	**+1.0**
EAST	baz=204			*e*S	Sn	10 14 42.9	-0.4
TAW	**Tawu** baz=203	**2.60**	**204**	*e*P	**Pn**	**10 14 13.5**	**+0.7**
TAW	baz=203			*e*S	Sn	10 14 43.4	+0.1
TAWH	**Dawu Township** baz=203	**2.62**	**204**	*e*P	**Pn**	**10 14 13.7**	**+0.6**
TAWH	baz=203			*e*S	Sn	10 14 43.6	-0.2
SSPT	**Xinbi** baz=210	**2.63**	**211**	*e*P	**Pn**	**10 14 14.3**	**+1.1**
SSPT	baz=210			*e*S	Sn	10 14 44.0	0.0
WDGT	**Dungji** baz=235	**2.63**	**236**	*e*P	**Pn**	**10 14 14.0**	**+0.8**
WDGT	baz=235			*e*S	Sn	10 14 43.4	-0.6
PTMZ	**Houxiangcun** baz=276	**2.67**	**277**	*e*P	**Pn**	**10 14 14.3**	**+0.7**
PTMZ	baz=276			*e*S	Sn	10 14 44.6	-0.2
SCZT	**Fangliau** baz=208	**2.70**	**209**	*e*P	**Pn**	**10 14 15.0**	**+0.8**
SCZT	baz=208			*e*S	Sn	10 14 45.3	-0.5
XPSS	**Dashiqiu** baz=323	**2.73**	**323**	*e*P	**Pn**	**10 14 13.7**	**-0.9**
XPSS	baz=323			*e*S	Sn	10 14 45.2	-1.3
SLIU	**Shizi** baz=203	**2.77**	**204**	*e*P	**Pn**	**10 14 16.0**	**+0.9**
SLIU	baz=203			*e*S	Sn	10 14 46.4	-1.0
LYUB	**Lan-yu** baz=188	**2.77**	**189**	*e*P	**Pn**	**10 14 15.2**	**+0.1**
LYUB	baz=188			*e*S	Sn	10 14 46.9	-0.5
VCHM	**Qimei** baz=237	**2.84**	**238**	*e*P	**Pn**	**10 14 15.1**	**-0.9**
VCHM	baz=237			*e*S	Sn	10 14 47.5	-1.6
MHZQ	**Yeshan** baz=296	**3.03**	**297**	*e*S	**Sn**	**10 14 53.4**	**-0.4**
KNM	**Kinmen** baz=264	**3.30**	**265**	*e*P	**Pn**	**10 14 24.3**	**+1.9**
KNM	baz=264			*e*S	Sn	10 15 00.8	+0.5
KNMB	**Chin-men Tao** baz=265	**3.33**	**266**	*e*P	**Pn**	**10 14 22.3**	**-0.5**
KNMB	baz=265			*e*S	Sn	10 14 59.2	-2.0
AXDP	**Jialang** baz=272	**3.70**	**273**	*e*P	**Pn**	**10 14 28.4**	**+0.6**
AXDP	baz=272			*e*S	Sn	10 15 08.1	-2.1
ZPLA	**Ao Xicun** baz=258	**4.00**	**259**	*e*P	**Pn**	**10 14 32.5**	**+0.6**
ZPLA	baz=258			*e*S	Sn	10 15 14.5	-3.0
DSXP	**Dongshan** baz=256	**4.34**	**257**	*e*P	**Pn**	**10 14 37.6**	**+1.0**
DSXP	baz=256			*e*S	Sn	10 15 23.7	-2.1

IDC ***21*** *10:16:38.2±1.6, 1°.20S×129°.03E, h0km, mb3.7/3, mbtmp3.7/5, ML3.9/2, MS3.0/6, Error ellipse: s-maj=28.9km s-min=26.8km az=79.0*

DJA ***21*** *10:16:40.0±0.3, 1°S±3°×12°9E±°, h10km, M3.9/8, mb4.3/1, MLv3.8/8*

ISC 21 10:16:42.7±1.0**, 1°.07S**±0°.06×**129°.11E**±0°.05**, h35km, n17, σ2s.77**/16**, mb3.7**/3**, MS2.6**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.66**	**285**	P	**Pn**	**10 17 08.8**	**-0.6**
LBMI				S	**Sn**	**10 17 30.7**	**+1.2**
SWI	**Sorong**	**2.16**	**85**	P	**Pn**	**10 17 16.6**	**+0.4**
SWI				S	**Sn**	**10 17 44.1**	**+2.3**
SIJI	**Sorong** 54nm,0.3s,baz=270,slow=20,SNR=87	**2.17**	**85**	Pn	**Pn**	**10 17 16.9**	**+0.6**
SIJI	34nm,0.3s,baz=156,slow=21,SNR=22 143nm,0.3s			Sn	**Sn**	**10 17 44.8**	**+2.8**
MSAI	**Masohi**	**2.27**	**185**	P	**Pn**	**10 17 18.7**	**+0.9**
MSAI				S	**Sn**	**10 17 48.1**	**+3.5**

AAI	**Ambon**	**2.76**	**199**	P	**Pn**	**10 17 26.4**	**+1.9**
NLAI	**Namlea**	**2.95**	**223**	P	**Pn**	**10 17 27.2**	**+0.1**
FAKI	**Fak Fak**	**3.64**	**120**	P	**Pn**	**10 17 34.6**	**-2.0**
DAV	**Davao City (W)**	**8.81**	**336**	LR	LR	10 22 55.3	
	comp=Z,161nm,19.1s,baz=10.0,slow=42						
KAPI	**Kappang**	**10.13**	**247**	LR	LR	10 22 46.2	
	comp=Z,47nm,21.0s,baz=57,slow=37						
BATI	**Baumata**	**10.57**	**211**	LR	LR	10 22 58.9	
	comp=Z,76nm,19.4s,baz=7.0,slow=37						
WRA	**Warramunga Arr**	**19.45**	**165**	P	**P**	**10 21 04.5**	**-2.0**
	0.3nm,0.3s,baz=343,slow=13,SNR=16						
WRA				S	S	10 24 30.4	-14
	1.6nm,0.7s,baz=353,slow=23,SNR=6.3						
	0.8nm,0.6s						
GUMO	**Guam**	**21.36**	**46**	LR	LR	10 30 24.1	
	comp=Z,20nm,18.8s,baz=183,slow=38						
ASAR	**Alice Springs**	**22.94**	**169**	P	**P**	**10 21 43.2**	**-0.9**
	1.5nm,0.6s,baz=349,slow=10,SNR=25						
ASAR				S	**S**	**10 25 44.4**	**-7.6**
	0.8nm,0.9s,baz=349,slow=19,SNR=4.5						
	1.5nm,0.6s						
STKA	**Stephens Creek**	**32.84**	**160**	P	**P**	**10 23 13.7**	**+0.5**
	1.9nm,1.1s,baz=346,slow=12,SNR=2.4						
	1.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**35.44**	**305**	LR	LR	10 38 13.0	
	comp=Z,11nm,20.9s,baz=145,slow=36						
MKAR	**Makanchi Array**	**62.83**	**326**	P	**P**	**10 27 06.1**	**+1.1**
	0.4nm,0.7s,baz=111,slow=11,SNR=2.9						
	0.4nm,0.7s						
KIRV	**Kirov**	**85.53**	**329**	LR	LR	11 11 14.3	
	comp=Z,55nm,18.5s,baz=287,slow=38						

IDC 21 10:20:28.5±2.1, 15°80S×167°30E, h0km, mb3.8/2, mbtmp3.9/3, ML3.5/1, MS3.3/7, Error ellipse: s-maj=66.9km s-min=38.1km az=102.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.29**	**187**	Pn	Pn	10 22 03.0	+0.4
	1.2nm,0.3s,baz=231,slow=3.2,SNR=12						
DZM				Sn	Sn	10 23 11.7	-3.6
	2.9nm,0.3s,baz=150,slow=24,SNR=7.6						
	8.7nm,0.4s						
HNR	**Honiara**	**9.57**	**311**	LR	LR	10 25 59.2	
	comp=Z,92nm,20.0s,baz=150,slow=35						
MSVF	**Nonsavu**	**10.47**	**102**	LR	LR	10 26 14.8	
	comp=Z,164nm,18.6s,baz=142,slow=33						
ASAR	**Alice Springs**	**32.34**	**251**	P	P	10 26 59.5	-0.3
	1.0nm,0.8s,baz=76,slow=9.1,SNR=6.2						
	1.0nm,0.8s						
SONM	**Songino Array**	**83.38**	**324**	P	P	10 32 58.4	+0.7
	0.6nm,0.5s,baz=129,slow=4.6,SNR=3.6						
	0.6nm,0.5s						
YBH	**Yreka Blue Hor**	**86.15**	**45**	LR	LR	11 03 19.5	
	comp=Z,17nm,21.4s,baz=144,slow=30						
ELK	**Elko**	**90.98**	**48**	LR	LR	11 11 18.3	
	comp=Z,18nm,18.4s,baz=196,slow=34						
NEW	**Newport**	**92.36**	**40**	LR	LR	11 08 37.3	
	comp=Z,16nm,21.1s,baz=122,slow=31						
INK	**Inuvik**	**93.89**	**19**	LR	LR	11 16 29.4	
	comp=Z,14nm,18.2s,baz=170,slow=36						
ZALV	**Zalesovo Beam**	**98.27**	**324**	LR	LR	11 21 57.9	
	comp=Z,23nm,18.1s,baz=66,slow=38						
ARCES	**ARCESS Array B**	**121.29**	**345**	PKP	PKPdf	10 39 22.3	-0.8
	2.0nm,0.8s,baz=27,slow=4.1,SNR=5.5						

IDC 21 10:37:20.2±1.5, 54°80S×30°57W, h0km, mb3.7/2, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=57.5km s-min=37.3km az=139.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**19.33**	**226**	P	Pn	10 41 47.5	-0.1
	0.3nm,0.3s,baz=53,slow=6.8,SNR=5.5						
	3.4nm,0.7s						
LPAZ	**La Paz**	**48.09**	**308**	P	P	10 46 02.2	0.0
	1.0nm,0.6s,baz=127,slow=5.1,SNR=2.6						
	1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.99**	**33**	P	P	10 48 52.5	+1.0
	0.5nm,0.8s,baz=212,slow=7.5,SNR=2.4						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**147.85**	**314**	PKPbc	PKPdf	10 57 04.0	+1.4
	0.6nm,0.8s,baz=103,slow=1.7,SNR=8.0						
SONM	**Songino Array**	**152.58**	**87**	PKPbc	PKPbc	10 57 17.0	-0.7
	0.5nm,0.5s,baz=221,slow=3.7,SNR=2.6						

*IDC **21** 10:48:12.3±1.0, 19°66N×122°45E, h0km, mb3.5/7, mbtmp3.5/8, ML3.4/1, MS3.0/3, Error ellipse: s-maj=31.2km s-min=18.6km az=80.0*
*MAN **21** 10:48:15, 19°76N×122°40E, h17km, Ms3.5*
*JMA **21** 10:48:18.5±0.2, 20°3N±0°9×122°3E±0°9, h186km, MV3.9/19, PHILIPPINE ISL REGION*

ISC 21 10:48:17.0±0.7, 19°82N±0°05×122°59E±0°10, h36km, n38, σ1ᵍ67/48, mb3.5/7, 6C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGCP	**Gonzaga**	**1.65**	**198**	*eP*	**Pn**	**10 48 41.4**	**-2.1**
SGCP				*i*	**Sn**	**10 49 01.7**	**-1.9**
APYP	**Conner**	**2.33**	**213**	⇑*iP*	**Pn**	**10 48 51.2**	**-1.6**
APYP				*i*	**Sn**	**10 49 17.7**	**-2.5**
SIPP	**Brgy, Tapao**	**2.76**	**227**	⇓*eP*	**Pn**	**10 48 59.9**	**+1.1**
SIPP				eS	Sn	10 49 42.4	+12
SAMP	**Sagada Mountai**	**3.16**	**211**	⇑*eP*	**Pn**	**10 49 04.1**	**-0.2**
SAMP				eS	**Sn**	**10 49 39.1**	**-1.6**
SMPP	**San Manuel, Pa**	**4.08**	**207**	⇓*eP*	**Pn**	**10 49 17.1**	**+0.2**
SMPP				eS	**Sn**	**10 49 59.6**	**-3.8**
BALP	**Baler**	**4.17**	**193**	⇑*eP*	**Pn**	**10 49 18.1**	**0.0**
BALP				eS	**Sn**	**10 50 05.9**	**+0.2**
BOLP	**Bolinao**	**4.26**	**217**	⇑*eP*	**Pn**	**10 49 19.2**	**-0.3**
BOLP				eS	**Sn**	**10 50 07.2**	**-0.8**
HATJ	**Hateruma jima**	**4.36**	**15**	P	**Pn**	**10 49 20.6**	**-0.2**
HATJ				S	**Sn**	**10 50 08.8**	**-1.6**
PCPH	**Palayan**	**4.47**	**199**	⇑*eP*	**Pn**	**10 49 23.4**	**+1.1**
JKRS	**Kuro-shima**	**4.59**	**16**	P	**Pn**	**10 49 23.9**	**0.0**
JKRS				S	**Sn**	**10 50 14.5**	**-1.4**
IRIF	**Iriomote-Funau**	**4.62**	**13**	P	**Pn**	**10 49 23.6**	**-0.6**
IRIF				S	**Sn**	**10 50 14.1**	**-2.5**
JYNG	**Yonagunijimaku**	**4.62**	**4**	*eP*	**Pn**	**10 49 23.1**	**-1.2**
JYNG				S	**Sn**	**10 50 13.2**	**-3.5**
YOJ	**Yonaguni jima**	**4.63**	**5**	P	**Pn**	**10 49 23.5**	**-1.0**
YOJ				S	**Sn**	**10 50 13.9**	**-3.2**
JIJ	**Ishigaki jima**	**4.74**	**17**	P	**Pn**	**10 49 25.4**	**-0.6**
JIJ				S	**Sn**	**10 50 17.5**	**-2.3**
JISG	**Ishigakijimahi**	**5.00**	**18**	S	**Sn**	**10 50 23.6**	**-2.6**
JTJ	**Tarama**	**5.18**	**22**	P	**Pn**	**10 49 31.7**	**-0.4**
JTJ				S	**Sn**	**10 50 28.8**	**-1.7**
JMJ2	**Miyako jima3**	**5.51**	**27**	*eP*	**Pn**	**10 49 36.5**	**-0.1**
JMJ2				S	**Sn**	**10 50 37.5**	**-1.3**
JIRB	**Irabujima**	**5.53**	**25**	P	**Pn**	**10 49 36.5**	**-0.3**
JIRB				S	**Sn**	**10 50 37.3**	**-1.8**
JOGS	**Gusukube**	**5.56**	**27**	P	**Pn**	**10 49 37.4**	**+0.1**
JOGS				S	**Sn**	**10 50 38.6**	**-1.4**
LQP	**Lukban**	**5.77**	**190**	⇑*eP*	**Pn**	**10 49 40.0**	**-0.3**
JJT3	**Tamagusuku3**	**7.91**	**36**	P	**Pn**	**10 50 09.2**	**-0.2**
JNTH	**Nagotoyohara**	**8.33**	**36**	P	**Pn**	**10 50 14.7**	**-0.6**
JNTH				S	**Sn**	**10 51 45.6**	**-2.5**
JIH	**Iheya**	**8.71**	**34**	P	**Pn**	**10 50 19.6**	**-0.9**
KSRS	**Korea Array**	**18.18**	**14**	P	**P**	**10 52 28.2**	**+1.8**
	0.1nm,0.3s,baz=199,slow=11,SNR=5.7						
KSRS				LR	LR	10 59 18.9	
	comp=Z,35nm,21.6s,baz=185,slow=36						
	1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**21.56**	**36**	P	**P**	**10 53 07.0**	**+3.6**
	0.2nm,0.4s,baz=220,slow=9.0,SNR=1.3						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**22.38**	**270**	P	**P**	**10 53 12.4**	**+0.1**
	0.5nm,0.5s,baz=68,slow=9.8,SNR=1.4						
	0.5nm,0.5s						
KLR	**Kul'dur**	**30.25**	**12**	P	**P**	**10 54 26.3**	**+2.0**
	1.2nm,0.6s,baz=222,slow=11,SNR=3.5						
KLR				LR	LR	11 06 24.8	
	comp=Z,39nm,20.5s,baz=155,slow=36						
	1.2nm,0.6s						
SONM	**Songino Array**	**30.88**	**339**	P	**P**	**10 54 30.8**	**+0.7**
	0.4nm,0.6s,baz=179,slow=6.6,SNR=2.4						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**41.16**	**163**	P	**P**	**10 55 57.2**	**-0.9**
	0.8nm,0.7s,baz=342,slow=9.2,SNR=7.6						
	0.8nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**41.59**	**84**	T	T	11 41 06.5	
	baz=280,slow=75,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**41.60**	**82**	T	T	11 40 57.5	
	baz=282,slow=74,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**41.60**	**84**	T	T	11 41 04.2	
	baz=280,slow=75,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**41.60**	**82**	T	T	11 41 00.2	
	baz=282,slow=74,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	**41.61**	**84**	T	T	11 40 59.1	
	baz=280,slow=75,SNR=6.2						
H11N3	**WAKE ISLAND Hy**	**41.62**	**82**	T	T	11 41 00.2	
	baz=282						
MKAR	**Makanchi Array**	**42.41**	**319**	P	**P**	**10 56 08.2**	**0.0**
	0.6nm,0.5s,baz=116,slow=9.4,SNR=6.5						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**44.61**	**165**	P	**P**	**10 56 25.6**	**-0.4**
	0.6nm,0.7s,baz=342,slow=6.5,SNR=12						
	0.6nm,0.7s						
NOA	**NORSAR Array B**	**82.67**	**333**	LR	LR	11 41 11.3	
	comp=Z,10nm,20.3s,baz=180,slow=38						

NOU 21 11:27:56.0, 19°76S×170°19E, h0km, MLv3.9/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.65**	**229**	P	Pn	11 28 39.1	-0.9
PINNC	**Pines Island,**	**3.82**	**222**	P	Pn	11 28 56.1	0.0
YATNC	**Mamie plateau,**	**3.84**	**233**	P	Pn	11 28 56.5	+0.1
OUENC	**Ouen Island, N**	**4.09**	**229**	P	Pn	11 28 59.5	-0.4
DZM	**Mont Dzumac**	**4.19**	**236**	P	Pn	11 29 00.7	-0.6
ONTNC	**Ouen Toro**	**4.31**	**233**	P	Pn	11 29 03.6	+0.7
KOUNC	**Koumac, New Ca**	**5.60**	**261**	P	Pn	11 29 20.8	+0.2

*MOS **21** 12:46:54.5±0.9, 28°49N×141°57E, h55km, mb5.3/51, MS5.3/5, Error ellipse: s-maj=8.5km s-min=4.0km az=114.0*
*BJI **21** 12:46:55.0±0.0, 28°44N×141°92E, h84km, mb4.8/55, mB4.8/29, Ms5.2/30, Ms7 5.0/29*
*IDC **21** 12:46:56.2±1.0, 28°49N×141°62E, h57km±10km, mb4.6/36, mbtmp4.9/39, Error ellipse: s-maj=13.5km s-min=7.4km az=72.0*
*GCMT **21** 12:46:57.9±0.4, 28°53N±0°03×141°80E±0°03, h80km±3km, MW5.0/67, Moment Tensor Solution. s41,c42; s67,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.30±.19; $M_{\theta\theta}$=0.41±.20; $M_{\phi\phi}$=2.90±.20; $M_{r\theta}$=-1.01±.13; $M_{\theta\phi}$=-1.33±.13; $M_{\phi r}$=1.50±.14; Best double couple: M_o=3.82700×10^{16} NP1:ϕs=358.00000°, δ57.00000°, λ=-65.00000°. NP2: ϕs=137.00000°, δ40.00000°, λ=-123.00000°. Principal axes: T 3.6270, Plg9.0000°, Azm70.0000°; N 0.4080, Plg21.0000°, Azm163.0000°; P -4.0280, Plg67.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*JMA **21** 12:46:58.2±0.2, 28°N±1°×14°2E±°, h48km, MD5.0/30, MV5.3/30, NEAR CHICHIJIMA ISLAND*
JMA Felt I J1 at NEAR CHICHIJIMA ISLAND .
*NEIC **21** 12:46:58.2±2.5, 28°55N±0°06×141°8E±0°1, h63km±5km, mb5.1/155, Error ellipse: s-maj=14.3km s-min=8.9km az=79.0*

ISC 21 12:46:57.4±0.3, 28°58N±0°03×141°80E±0°05, h59km±2km, h59km:pP-P, n851, σ1ᵍ42/872, mb5.1/199, MS5.1/15, 39C-32D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.51**	**167**	P	**Pn**	**12 47 22.4**	**+0.2**
CBIJ				*eS*	**Sn**	**12 47 39.8**	**-1.2**
CBIJ	**Chichi jima**	**1.51**	**167**	A	A	12 47 22.4	
	comp=E,45nm,3.0s,comp=E,44nm,1.5s						
JCJ	**Chichijima**	**1.51**	**167**	P	**Pn**	**12 47 22.1**	**-0.1**
	4μm,0.4s,baz=15,slow=16,SNR=615						
JCJ				S	**Sn**	**12 47 38.8**	**-2.2**
	7μm,0.3s,baz=293,slow=21,SNR=20						
JCJ	**Chichijima**	**1.51**	**167**		**Pn**	**12 47 22.5**	**+0.2**
JHH2	**Haha-jima-NKT2**	**1.96**	**170**	P	**Pn**	**12 47 28.8**	**+0.4**
JHH2				*eS*	**Sn**	**12 47 51.0**	**-0.9**
JHH2	**Haha-jima-NKT2**	**1.96**	**170**	A	A	12 47 28.8	
	comp=E,41nm,0.4s,comp=E,20nm,1.6s						
JAOM	**Aogashimamukai**	**4.25**	**336**	S	**Sn**	**12 48 50.2**	**+2.2**
JHCJ	**Hachijojimakas**	**4.80**	**339**	*eS*	**Sn**	**12 49 00.3**	**-1.2**
JHJ2	**Mitsune**	**4.83**	**340**	Pn	**Pn**	**12 48 08.0**	**+0.5**
JHJ2	**Mitsune**	**4.83**	**340**	P	**Pn**	**12 48 10.9**	**+3.4**
JHJ2				*eS*	**Sn**	**12 49 01.6**	**-0.5**
JMKN	**Mikurajimanish**	**5.63**	**341**	P	**Pn**	**12 48 20.5**	**+2.1**
JMKN				S	**Sn**	**12 49 20.6**	**-1.2**
BSO1	**Boso 1**	**6.10**	**354**	P	**Pn**	**12 48 26.2**	**+1.8**
BSO1				*eS*	**Sn**	**12 49 32.3**	**-0.3**
JOD2	**Odawara 2**	**7.05**	**342**	P	**Pn**	**12 48 39.6**	**+1.5**
JOD2				eS	**Sn**	**12 49 55.2**	**-1.6**
JIE	**Ise**	**7.25**	**324**	*eP*	**Pn**	**12 48 43.0**	**+2.4**
JIE				eS	**Sn**	**12 50 06.0**	**+4.5**
JTNC	**Tanabenakahech**	**7.44**	**316**	P	**Pn**	**12 48 46.2**	**+2.9**
JYT	**Yasato**	**7.75**	**350**	Pn	**Pn**	**12 48 48.6**	**+1.1**
JRY	**Ryogami san**	**7.81**	**342**	P	**Pn**	**12 48 49.8**	**+1.3**
JRY				*eS*	**Sn**	**12 50 15.8**	**+0.4**
INU	**Inuyama**	**7.88**	**330**	Pn	**Pn**	**12 48 51.8**	**+2.5**
JGF	**Kuroka**	**7.95**	**333**	Pn	**Pn**	**12 48 52.5**	**+2.2**
MJAR	**Matsushiro Arr**	**8.50**	**340**	P	**Pn**	**12 48 56.8**	**-1.1**
	17nm,0.7s,baz=163,slow=11,SNR=49						
MAJO	**Matsushiro**	**8.50**	**340**	Pn	**Pn**	**12 48 59.7**	**+1.8**
MAJO	**Matsushiro**	**8.50**	**340**	*iP*	**Pn**	**12 48 59.6**	**+1.8**
JMN	**Monobe**	**8.51**	**309**	Pn	**Pn**	**12 49 01.8**	**+3.9**
JMM	**Marumori**	**9.30**	**355**	Pn	**Pn**	**12 49 08.6**	**-0.2**
JHS	**Saijyo**	**9.77**	**313**	Pn	**Pn**	**12 49 18.1**	**+2.8**
JHS	**Saijyo**	**9.77**	**313**	P	**Pn**	**12 49 18.1**	**+2.8**
JMZ	**Minamidaito 2**	**9.81**	**256**	*eP*	**Pn**	**12 49 18.3**	**+2.6**
JSD	**Sado**	**9.89**	**344**	Pn	**Pn**	**12 49 16.0**	**-0.7**
JMK	**Ichinoseki**	**10.36**	**357**	P	**Pn**	**12 49 24.2**	**+1.0**
JOI	**OKI**	**10.55**	**319**	*eS*	**Sn**	**12 51 28.6**	**+6.2**
JSJ	**Shimokoshiki**	**10.91**	**289**	*eP*	**Pn**	**12 49 33.1**	**+2.3**
JAMN	**Amaminishikomi**	**11.12**	**271**	P	Pn	12 49 38.5	+4.8
JAMN				S	**Sn**	**12 51 44.1**	**+7.7**
JOW	**Kunigami**	**12.11**	**265**		**Pn**	**12 49 50.9**	**+3.7**
NAWB	**Namwon**	**13.99**	**303**	Pn	**Pn**	**12 50 14.9**	**+2.3**
KSCHJ	**Chungju**	**14.27**	**309**	P	**Pn**	**12 50 18.4**	**+2.2**
TJN	**Taejon**	**14.45**	**306**	P	**P**	**12 50 23.7**	**-0.1**
TJN	**Taejon**	**14.45**	**306**	P	**P**	**12 50 23.7**	**-0.1**
KSRS	**Korea Array**	**14.61**	**311**	P	**Pn**	**12 50 20.6**	**-0.2**
	3.5nm,0.8s,baz=117,slow=14,SNR=17						
KSAR	**Wonju Array Be**	**14.63**	**311**	P	**Pn**	**12 50 22.1**	**+1.1**
KSAR	**Wonju Array Be**	**14.63**	**311**	P	**Pn**	**12 50 22.1**	**+1.1**
KS19	**Wonju Array Si**	**14.68**	**311**	P	**P**	**12 50 26.2**	**-0.2**
SEHB	**SEOHWA**	**14.86**	**314**	P	**Pn**	**12 50 27.1**	**+3.1**
INCN	**Inchon**	**15.50**	**309**	P	**P**	**12 50 35.9**	**+0.4**
INCN	**Inchon**	**15.50**	**309**	P	**P**	**12 50 35.9**	**+0.4**
VLA	**Vladivostok**	**16.57**	**334**	*cP*	**Pn**	**12 50 46.1**	**+0.4**
VLA				pmax	pmax		
	comp=Z,139nm,0.9s						
KUR	**Kuril'sk**	**17.31**	**15**	P	Pn	12 50 47.5	-7.3
KUR				S	Sn	12 53 58.2	-8.4
USA0B	**Ussuriysk Arra**	**17.46**	**336**	P	**Pn**	**12 50 54.9**	**-1.8**
USA0B	**Ussuriysk Arra**	**17.46**	**336**	P	**Pn**	**12 50 54.9**	**-1.8**
USA0B				pmax	pmax		
	comp=Z,17nm,0.7s						
USRK	**Ussuriysk Ar.**	**17.46**	**336**	P	**Pn**	**12 50 53.9**	**-2.8**
	comp=Z,19nm,0.8s,baz=145,slow=10,SNR=29						
USRK	**Ussuriysk Ar.**	**17.46**	**336**	P	**Pn**	**12 50 54.3**	**-2.4**
USRK	**Ussuriysk Ar.**	**17.46**	**336**	P	**Pn**	**12 50 54.3**	**-2.4**
YHNB	**Yeheng**	**18.67**	**263**	P	**P**	**12 51 11.8**	**+1.1**
MDJ	**Mudanjiang**	**18.74**	**332**	P	**P**	**12 51 10.7**	**-0.5**
YULB	**Yu-li**	**19.13**	**259**	P	**P**	**12 51 16.7**	**+0.9**
SSLB	**Suanglung**	**19.30**	**260**	P	**P**	**12 51 18.9**	**+1.3**
TPUB	**Ta-pu**	**19.74**	**259**	P	**P**	**12 51 24.1**	**+1.8**
CN2	**Changchun**	**20.07**	**324**	*eP*	**P**	**12 51 26.0**	**+0.2**
CN2				*ePP*	**PnPn**	**12 51 48.3**	**+4.1**
CN2				*eS*	**S**	**12 55 01.6**	**-6.4**
CN2				*es*S	sS	12 55 24.4	-3.2
CN2				LR	LR		
	comp=Z,4μm,15.0s						
CN2				LR	LR		
	comp=Z,6μm,15.0s						
CN2				LR	LR		
	comp=Z,7μm,16.0s						
NJ2	**Nanjing**	**20.10**	**286**	⇑P	**P**	**12 51 25.8**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,56nm,0.8s						
NJ2				LR	LR		
	comp=Z,3μm,20.8s						
NJ2				LR	LR		
	comp=Z,2μm,19.2s						
NJ2				LR	LR		
	comp=Z,1μm,19.1s						
BNX	**BinXian**	**20.56**	**330**	⇑P	**P**	**12 51 28.9**	**-2.2**
BNX				pmax	pmax		
	comp=Z,17nm,0.7s						
BNX				pmax	pmax		
	comp=Z,140nm,5.2s						
KLR	**Kul'dur**	**22.02**	**342**	P	**P**	**12 51 45.1**	**-1.5**
	comp=Z,59nm,0.8s,baz=135,slow=10,SNR=40						
	comp=Z,59nm,0.8s						
KLR	**Kul'dur**	**22.02**	**342**	*diP*	**P**	**12 51 45.7**	**-1.0**
KLR				pmax	pmax		
	comp=Z,70nm,0.8s						
WHN	**Wuhan**	**23.94**	**281**	⇑P	**P**	**12 52 04.9**	**-1.1**
WHN				pmax	pmax		
	comp=Z,32nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**24.50**	**105**	T	T	13 17 51.4	
	baz=296,slow=75,SNR=165						
H11N1	**WAKE ISLAND Hy**	**24.50**	**106**	T	T	13 17 43.8	
	baz=296,slow=75,SNR=145						
H11N3	**WAKE ISLAND Hy**	**24.51**	**106**	T	T	13 17 43.6	
	baz=296,slow=75,SNR=173						
H11S3	**WAKE ISLAND Hy**	**24.88**	**108**	T	T	13 17 50.7	
	baz=294,slow=79,SNR=39						
H11S1	**WAKE ISLAND Hy**	**24.89**	**108**	T	T	13 17 52.0	
	baz=294,slow=79,SNR=21						
H11S2	**WAKE ISLAND Hy**	**24.90**	**108**	T	T	13 18 01.1	
	baz=294,slow=79,SNR=23						
HIA	**Hailar**	**26.68**	**327**	P	**P**	**12 52 30.5**	**-0.3**
HIA	**Hailar**	**26.68**	**327**	P	**P**	**12 52 30.5**	**-0.3**
HIA				pmax	pmax		
	comp=Z,30nm,0.9s						
PETK	**Petropavlovsk-**	**27.18**	**21**	P	**P**	**12 52 34.0**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=251,slow=9.0,SNR=1.4						
ZEA	**Zeya**	**27.31**	**341**	*eP*	**P**	**12 52 36.8**	**+0.5**
ZEA				pmax	pmax		
	comp=E,20nm,0.6s						
ZEA				pmax	pmax		
	comp=N,50nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,90nm,0.8s						
ENH	**Enshi**	**28.15**	**281**	P	**P**	**12 52 41.8**	**-2.4**
ENH				IAmb	IAmb	12 52 43.7	
	comp=Z,26nm,0.7s						
ENH	**Enshi**	**28.15**	**281**	P	**P**	**12 52 41.7**	**-2.4**
XAN	**Xi'an**	**28.54**	**289**	⇑P	P	12 52 44.6	-2.9
XAN				pP	sP	12 53 05.5	-2.0
XAN				sP	pwP	12 53 11.1	+4.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BTO	**Baotou**	**28.63**	**303**	*eP*	**P**	**12 52 50.0**	**+1.7**
BTO				S	**S**	**12 57 39.0**	**+6.2**
BTO				LR	LR		
	comp=Z,6μm,14.9s						
BTO				LR	LR		
	comp=Z,13μm,17.0s						
QIZ	**Qiongzhong**	**30.66**	**259**	P	**P**	**12 53 06.9**	**+0.5**
QIZ				S	S	12 57 57.5	-7.4
QIZ				LR	LR		
	comp=Z,1μm,16.7s						
QIZ				LR	LR		
	comp=Z,730nm,21.2s						
QIZ				LR	LR		
	comp=Z,570nm,22.7s						
GYA	**Guiyang**	**31.17**	**275**	⇑P	**P**	**12 53 09.4**	**-1.6**
GYA				pP	sP	12 53 28.9	-2.0
GYA				sP	pwP	12 53 37.8	+8.0
GYA				PP	**PnPn**	**12 54 17.8**	**+3.2**
GYA				S	**S**	**12 58 09.5**	**-3.4**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GYA				LR	LR		
	comp=Z,2μm,22.2s						
GYA				LR	LR		
	comp=Z,1μm,21.9s						
GYA				LR	LR		
	comp=Z,1μm,22.9s						
CIT	**Chita**	**31.47**	**326**	*eP*	**P**	**12 53 13.3**	**0.0**
CIT				*e*		12 53 22.9	
MA2	**Magadan**	**31.60**	**9**	P	**P**	**12 53 13.6**	**-0.6**
	comp=Z,14nm,0.9s,baz=171,slow=9.3,SNR=6.3						
	comp=Z,14nm,0.9s						
MA2	**Magadan**	**31.60**	**9**	⇓*eP*	**P**	**12 53 14.7**	**+0.5**
MA2				pmax	pmax		
	comp=Z,31nm,1.7s						
MA2	**Magadan**	**31.60**	**9**	P	P	**12 53 14.6**	**+0.5**
MA2				pP	**pwP**	**12 53 32.2**	**+0.8**
FAKI	**Fak Fak**	**32.63**	**198**	P	**P**	**12 53 23.6**	**-0.1**
	comp=Z,34nm,1.0s						
CD2	**Chengdu**	**33.01**	**284**	P	**P**	**12 53 25.1**	**-1.9**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
ULN	**Ulaanbaatar**	**33.03**	**315**	*cP*	**P**	**12 53 26.3**	**-0.7**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	**Ulaanbaatar**	**33.03**	**315**	P	**P**	**12 53 26.4**	**-0.7**
ULN				pP	**pP**	**12 53 42.0**	**+1.3**
GTOI	**Gorontalo**	**33.09**	**216**	P	**P**	**12 53 26.5**	**-1.2**
	comp=Z

CHTO pP **pP** 12 54 43.8 +1.3
CMAR Chiang Mai Arr 40.38 265 P P 12 54 26.5 -3.3
comp=Z,0.6nm,0.3s,baz=55,slow=7.1,SNR=13
CMAR Chiang Mai Arr 40.38 265 P **P** 12 54 28.7 -1.1
CMAR Chiang Mai Arr 40.38 265 *i* P **P** 12 54 28.7 -1.1
CMAR pmax pmax
comp=Z,1.0nm,0.3s
EDFI Ende, Flores 41.88 211 P **P** 12 54 40.0 -2.1
comp=Z,20nm,0.8s
BILL Bilibino 42.10 13⇓ *i* P **P** 12 54 44.0 +0.8
BILL *e* 12 56 23.7
BILL *e* 12 56 35.4
BILL *e* PPP PPP 12 56 53.8
BILL pmax pmax
comp=Z,27nm,1.5s
BILL MLR MLR
comp=Z,1µm,16.0s
BATI Baumata 42.35 207 P **P** 12 54 44.9 -1.0
comp=Z,17nm,0.7s
MTN Manton Dam 42.45 196 P **P** 12 54 45.1 -1.5
MTN IAmb IAmb 12 54 48.4
comp=Z,30nm,1.1s
TIXI Tiksi 43.71 354 P **P** 12 54 54.7 -1.4
comp=Z,28nm,0.9s,baz=273,slow=23,SNR=6.4
comp=Z,28nm,0.9s
TIXI Tiksi 43.71 354 P **P** 12 54 55.6 -0.5
TIXI IAmb IAmb 12 55 00.1
comp=Z,24nm,0.8s
TIXI Tiksi 43.71 354 *d i* P **P** 12 54 55.9 -0.2
TIXI pmax pmax
comp=Z,32nm,1.0s
TIXI Tiksi 43.71 354 P **P** 12 54 56.0 -0.1
TIXI pP **pwP** 12 55 13.7 -0.1
PLAI Plampang 43.83 216 P **P** 12 54 55.8 -2.0
comp=Z,27nm,0.8s
SPIA Saint Paul Isl 43.95 36 P **P** 12 54 58.6 +0.3
baz=250
TWSI Taliwang, Sumb 44.22 217 P **P** 12 54 59.1 -1.8
comp=Z,16nm,1.0s
UNV Unalaska Valle 45.06 41 P **P** 12 55 07.1 -0.1
baz=257
KULM Kulim 45.33 247 P **P** 12 55 09.2 -0.6
WMQ Urumqi 45.45 305 *eP* **P** 12 55 12.3 +1.8
WMQ LR LR
comp=Z,3µm,12.1s
WMQ LR LR
comp=Z,1µm,12.9s
WMQ LR LR
comp=Z,990nm,15.9s
IPM Ipoh 45.49 246 P **P** 12 55 10.1 -1.1
KNRA Kununurra 45.76 198 P **P** 12 55 12.1 -1.0
KNRA IAmb IAmb 12 56 55.0
comp=Z,79nm,1.9s
GAMB Gambell 45.95 27 P **P** 12 55 14.7 +0.7
baz=242
ZSN Zaisan 47.53 310 *eP* **P** 12 55 25.1 -1.6
ZSN Zaisan 47.53 310 *eP* **P** 12 55 25.1 -1.6
baz=310
ZAA0 Zalesovo Array 48.16 318 P **P** 12 55 30.2 -1.2
ZALV Zalesovo Beam 48.16 318 P **P** 12 55 30.1 -1.3
comp=Z,3.5nm,0.5s,baz=99,slow=7.3,SNR=18
comp=Z,3.5nm,0.5s
ZALV Zalesovo Beam 48.16 318 P **P** 12 55 30.4 -1.0
PSI Prapat 48.17 246 P **P** 12 55 30.9 -1.3
PSI pmax pmax
comp=Z,11nm,0.7s
TNA Tin City 48.20 25 P **P** 12 55 32.6 +1.1
baz=245
RPSI Rantau Prapat 48.23 246 P **P** 12 55 30.9 -1.6
RPSI IAmb IAmb 12 55 32.4
comp=Z,11nm,0.7s
RAMN Ramite 48.50 282 *eP* **P** 12 55 32.8 -2.0
WB0 Warramunga Arr 48.59 189 P **P** 12 55 33.4 -1.6
WB0 IAmb IAmb 12 55 42.0
comp=Z,27nm,0.8s
JIRN Jiri 48.67 283 *eP* **P** 12 55 35.2 -1.0
comp=Z,66nm,0.8s
WR0 Warramunga Arr 48.76 189 P **P** 12 55 34.5 -1.8
WR0 IAmb IAmb 12 55 43.4
comp=Z,17nm,0.8s
WRAB Tennant Creek 48.76 189 P **P** 12 55 34.5 -1.8
WRAB IAmb IAmb 12 55 43.7
comp=Z,26nm,0.8s
WRAB Tennant Creek 48.76 189⇓ *i* P **P** 12 55 34.0 -2.4
WRAB pmax pmax
comp=Z,19nm,0.9s
WRAB Tennant Creek 48.76 189 P **P** 12 55 33.9 -2.4
WRAB pP **pwP** 12 55 52.7 -3.2
WRAB sP **sP** 12 56 01.2 +4.4
WB2 Warramunga Arr 48.77 189 P **P** 12 55 34.6 -1.9
WB2 IAmb IAmb 12 55 43.8
comp=Z,28nm,0.8s
WRA Warramunga Arr 48.77 189 P **P** 12 55 34.2 -2.2
comp=Z,15nm,0.8s,baz=7.2,slow=7.9,SNR=99
WRA S S 13 02 27.5 -7.7
comp=Z,0.8nm,0.6s,baz=7.7,slow=14,SNR=5.2
comp=Z,15nm,0.8s
WRA Warramunga Arr 48.77 189 P **P** 12 55 34.4 -2.1
SDPT Sand Point 48.79 40 P **P** 12 55 36.9 +0.7
baz=261
ANM Nome 48.80 27 P **P** 12 55 38.0 +1.8
ANM Nome 48.80 27 P **P** 12 55 38.0 +1.8
ANM pmax pmax
comp=Z,211nm,1.9s
ANM Nome 48.80 27 P **P** 12 55 36.9 +0.6
baz=249
GUN Gumba 48.87 283 *eP* **P** 12 55 36.8 -0.9
FITZ Fitzroy Crossi 48.96 201 P **P** 12 55 36.8 -1.1
MK31 Makanchi Array 49.28 309 P **P** 12 55 38.8 -1.4
MK31 Makanchi Array 49.28 309 *de* P **P** 12 55 38.1 -2.1
MKAR Makanchi Array 49.28 309 P **P** 12 55 38.5 -1.7
comp=Z,3.6nm,0.4s,baz=92,slow=9.4,SNR=50
MKAR PcP **PcP** 12 57 01.3 -1.0
comp=Z,16nm,0.8s,baz=83,slow=5.3,SNR=22
MKAR ScP **ScP** 13 00 49.0 -3.5
comp=Z,1.8nm,0.6s,baz=87,slow=4.8,SNR=4.0
comp=Z,3.6nm,0.4s
MKAR Makanchi Array 49.28 309 P **P** 12 55 38.8 -1.4
PKI Pulchoki 49.36 283 *eP* **P** 12 55 39.8 -1.7
comp=Z,16nm,0.8s
PKIN Phulchoki 49.37 283 *eP* **P** 12 55 39.9 -1.6
comp=Z,11nm,0.7s
MAKZ Makanchi 49.49 309 P **P** 12 55 40.6 -1.2
MAKZ Makanchi 49.49 309 P **P** 12 55 40.6 -1.2
MAKZ pmax pmax
comp=Z,84nm,1.0s
MAKZ Makanchi 49.49 309 P **P** 12 55 40.0 -1.9
GKN Gorkha 49.91 284 *eP* **P** 12 55 43.8 -1.6
comp=Z,53nm,1.1s
CHGN Chignik 50.08 39 P **P** 12 55 45.7 -0.3
baz=262
GSI Gunungsitoli 50.14 245 P **P** 12 55 46.0 -1.1
DANN Dangsing 50.57 285 *eP* **P** 12 55 49.5 -1.1
comp=Z,52nm,0.8s
N16K Nishlik Lake 50.59 34 P **P** 12 55 49.9 0.0
baz=258
SEM Semipalatinsk 50.67 313 *eP* P 12 55 48.1 -2.8
SEM pmax pmax
comp=Z,6.0nm,0.8s
SEM Semipalatinsk 50.67 313 *eP* P 12 55 48.1 -2.8
comp=Z,6.3nm,0.8s,baz=313
P16K Nushagak River 50.71 35 P **P** 12 55 51.0 +0.3
baz=260
O16K Kokwok River B 50.76 35 P **P** 12 55 51.6 +0.5
baz=260
NRIK Noril'sk 51.15 338 P **P** 12 55 53.9 0.0
comp=Z,56nm,0.9s,baz=110,slow=8.8,SNR=92
comp=Z,56nm,0.9s
NRIK Noril'sk 51.15 338 P **P** 12 55 53.4 -0.5
NRIK Noril'sk 51.15 338 *d i* P **P** 12 55 53.6 -0.3
NRIK pmax pmax
comp=Z,86nm,0.9s
O17K Koliganek Bris 51.28 35 P **P** 12 55 55.8 +0.7
baz=261
Q16K King Salmon 51.34 36 P **P** 12 55 56.1 +0.6
baz=262
R17K Ugashik Creek 51.35 37 P **P** 12 55 56.0 +0.4
baz=263
SHLS Shalkode 51.46 304 *eP* P 12 55 51.8 -5.0
SHLS Shalkode 51.46 304 *eP* P 12 55 51.9 -5.0
baz=304
P17K Kvichak River 51.53 35 P **P** 12 55 57.4 +0.5
baz=262
CHIR Chirikof Islan 51.58 40 P **P** 12 55 58.1 +0.7
baz=265
KURK Kurchatov 51.71 314 P **P** 12 55 57.5 -1.0
KURK Kurchatov 51.71 314 *d i* P **P** 12 55 56.6 -1.8
KURK pmax pmax
comp=Z,29nm,1.0s
KURK Kurchatov 51.71 314 P **P** 12 55 56.8 -1.6
KURK pP **sP** 12 56 15.5 -3.5
KURK sP **pwP** 12 56 23.4 +5.4
KURBB Kurchatov Arra 51.77 314 P **P** 12 55 56.9 -1.9
comp=Z,14nm,0.8s,baz=89,slow=7.6,SNR=99
comp=Z,14nm,0.8s
UZB Uzynbulak 51.78 304 *eP* P 12 55 56.5 -2.8
UZB Uzynbulak 51.78 304 *eP* P 12 55 56.6 -2.7
baz=304
KPKS Kokpek 51.99 304 *eP* **P** 12 55 58.5 -2.3
KPKS Kokpek 51.99 304 *eP* **P** 12 55 58.5 -2.3
baz=305
N18K Kilae Creek 52.02 34 P **P** 12 56 01.0 +0.4
baz=261
TDK Taldyqorghan 52.06 306 *eP* **P** 12 55 59.4 -1.8
TDK Taldyqorghan 52.06 306 *eP* **P** 12 55 59.4 -1.8
baz=306
P18K Big Mountain, 52.17 35 P **P** 12 56 01.6 -0.1
P18K IAmb IAmb 12 57 17.0
comp=Z,23nm,1.1s
P18K Big Mountain, 52.17 35 P **P** 12 56 01.8 0.0
baz=263
SATY Saty 52.23 304 *eP* **P** 12 56 00.6 -2.0
SATY Saty 52.23 304 *eP* **P** 12 56 00.7 -2.0
baz=304
O18K Koktuh Hills 52.24 35 P **P** 12 56 02.6 +0.4
baz=262
TTA Tatalina 52.35 31 P **P** 12 56 03.7 +0.6
baz=259
AS31 Alice Springs 52.49 189 P **P** 12 56 03.1 -1.3
ASAR Alice Springs 52.49 189 P **P** 12 56 02.2 -2.2
comp=Z,1.4nm,0.6s,baz=11,slow=7.2,SNR=19
comp=Z,1.4nm,0.6s
ASAR Alice Springs 52.49 189 P **P** 12 56 03.1 -1.4
ASAR Alice Springs 52.49 189 P **P** 12 56 03.1 -1.4
N19K Bonanza Creek 52.72 34 P **P** 12 56 06.6 +0.7
baz=262
O19K Port Alsworth 52.73 34 P **P** 12 56 05.3 -0.4
O19K IAmb IAmb 12 57 19.8
comp=Z,23nm,1.1s
O19K Port Alsworth 52.73 34 P **P** 12 56 07.1 +1.4
baz=263
M19K Big River Lodg 52.92 32 P **P** 12 56 07.8 +0.5
baz=262
Q19K Cape Douglas, 52.93 36 P **P** 12 56 07.3 -0.1
OHAK Old Harbor 52.98 38 P **P** 12 56 07.4 -0.3
OHAK IAmb IAmb 12 57 40.5
comp=Z,18nm,0.9s
OHAK Old Harbor 52.98 38 P **P** 12 56 08.1 +0.4
baz=266
P19K Oil Pt 53.21 35 P **P** 12 56 09.8 +0.4
baz=264
MDOK Medeo 53.21 304 *eP* **P** 12 56 08.2 -1.6
MDOK Medeo 53.21 304 *eP* **P** 12 56 08.2 -1.6
baz=304
L20K Farewell, AK 53.24 32 P **P** 12 56 09.7 +0.1
baz=262
K20K Telida 53.29 30 P **P** 12 56 11.6 +1.6
K20K IAmb IAmb 12 57 18.6
comp=Z,21nm,0.9s
K20K Telida 53.29 30 P **P** 12 56 10.4 +0.4
baz=261,SNR=9.8
AAA Alma-Ata 53.30 304 *eP* **P** 12 56 09.1 -1.3
AAA pmax pmax
comp=Z,26nm,1.1s
AAA Alma-Ata 53.30 304 *eP* **P** 12 56 09.2 -1.3
comp=Z,26nm,1.1s,baz=304
J20K Nowinta River 53.39 29 P **P** 12 56 11.8 +1.2
J20K IAmb IAmb 12 56 13.3
comp=Z,22nm,0.8s
J20K Nowinta River 53.39 29 P **P** 12 56 11.5 +0.8
baz=260,SNR=14
KDAK Kodiak Island 53.39 37 P **P** 12 56 10.9 +0.2
KDAK Kodiak Island 53.39 37 P **P** 12 56 10.9 +0.2
KDAK pmax pmax
comp=Z,54nm,1.3s
KDAK Kodiak Island 53.39 37 P **P** 12 56 11.2 +0.5
baz=266
KDAK Kodiak Island 53.39 37 P **P** 12 56 11.2 +0.5
M20K Styx River 53.51 32 P **P** 12 56 12.1 +0.4
baz=263
Q20K Shuyak Island 53.55 36 P **P** 12 56 12.3 +0.4
baz=266
KUU Kurty 53.64 305 *eP* **P** 12 56 10.5 -2.3
KUU pmax pmax
comp=Z,17nm,0.8s
KUU Kurty 53.64 305 *eP* **P** 12 56 10.6 -2.3
comp=Z,16nm,0.8s,baz=305
SPCR Spirt Chakacha 53.87 33 P **P** 12 56 14.7 +0.4
baz=264
IMAR Indian Mountai 53.88 27 P **P** 12 56 15.2 +1.0
HOM Homer 54.01 35 P **P** 12 56 16.2 +0.9
baz=266
PPLA Purkeypile 54.07 31 P **P** 12 56 16.3 +0.5
baz=263
G21K Allakaket 54.08 27 P **P** 12 56 16.6 +0.9
baz=259
CHUM Lake Minchumin 54.15 30 P **P** 12 56 16.7 +0.6
baz=262
CAST Castle Rocks 54.19 30 P **P** 12 56 17.5 +1.0
CAST IAmb IAmb 12 57 29.0
comp=Z,28nm,0.9s
CAST Castle Rocks 54.19 30 P **P** 12 56 16.9 +0.4
baz=263,SNR=11
H21K Melozitna Rive 54.21 28 P **P** 12 56 17.9 +1.3
H21K IAmb IAmb 12 56 19.3
comp=Z,19nm,1.0s
H21K Melozitna Rive 54.21 28 P **P** 12 56 16.9 +0.3
baz=260,SNR=17
CNPM China Poot 54.21 35 P **P** 12 56 16.4 -0.3
CNPM IAmb IAmb 12 57 30.1
comp=Z,23nm,1.0s
NRN Naryn 54.21 302 P **P** 12 56 16.4 -1.0
NRN Naryn 54.21 302 P **P** 12 56 16.4 -1.0
NRN pmax pmax
comp=Z,9.0nm,0.9s
F21K Alatna River 54.23 26 P **P** 12 56 17.5 +0.8
baz=258
SKT Skwentna 54.27 32 P **P** 12 56 17.4 +0.3
SKT IAmb IAmb 12 56 19.1
comp=Z,17nm,1.1s
SKT Skwentna 54.27 32 P **P** 12 56 17.5 +0.4
baz=264
I21K Tanana 54.47 28 P **P** 12 56 19.8 +1.3
I21K IAmb IAmb 12 56 21.3
comp=Z,22nm,1.1s
I21K Tanana 54.47 28 P **P** 12 56 18.6 +0.1
baz=261,SNR=9.8
BRSE Bradley Lake S 54.48 35 P **P** 12 56 19.0 +0.3
baz=266
KSH Kashi 54.54 300 P **P** 12 56 21.3 +1.7
KSH pP sP 12 56 38.0 -2.3
KSH pmax pmax
comp=Z,17nm,0.8s
SUA Susitna One 54.60 33 P **P** 12 56 19.7 +0.1
baz=265
BPAW Bear Paw Mtn. 54.75 30 P **P** 12 56 21.2 +0.6
baz=263
F22K John River 54.78 25 P **P** 12 56 21.6 +0.9
baz=260,SNR=5.8
H22K Ishtalitna Cre 54.83 28 P **P** 12 56 22.0 +0.9
baz=262,SNR=13
CUT Chulitna 54.90 32 P **P** 12 56 22.0 +0.3
baz=265
M22K Willow 54.92 33 P **P** 12 56 22.6 +0.9
baz=266
SGDS Sogindy 54.93 305 *eP* **P** 12 56 19.9 -2.3
SGDS Sogindy 54.93 305 *eP* **P** 12 56 20.0 -2.3
baz=305
G22K Bettles 54.94 26 P **P** 12 56 22.4 +0.6
baz=261
MLY Manley 54.98 29 P **P** 12 56 23.7 +1.4
MLY IAmb IAmb 12 57 33.1
comp=Z,15nm,0.9s
MLY Manley 54.98 29 P **P** 12 56 22.8 +0.6
baz=263,SNR=13
TRF Thorofare Moun 54.99 31 P **P** 12 56 22.8 +0.3
TRF IAmb IAmb 12 57 40.1
comp=Z,13nm,0.9s
TRF Thorofare Moun 54.99 31 P **P** 12 56 22.8 +0.3
baz=264
O22K Cooper Landing 55.03 34 P **P** 12 56 23.4 +0.9
baz=267
E22K Anaktuvuk Pass 55.03 25 P **P** 12 56 23.1 +0.5
baz=260,SNR=8.4
RC01 Rabbit Creek A 55.06 33 P **P** 12 56 22.9 +0.1
baz=266
BTLS Baital 55.13 307 *eP* **P** 12 56 21.5 -2.1
BTLS pmax pmax
comp=Z,8.0nm,1.0s
BTLS Baital 55.13 307 *eP* **P** 12 56 21.6 -2.1
comp=Z,7.7nm,1.0s,baz=307
AAK Ala-Archa 55.14 304 P **P** 12 56 22.9 -1.1
AAK Ala-Archa 55.14 304 *c i* P **P** 12 56 22.7 -1.2
AAK pmax pmax
comp=Z,5.0nm,0.7s
AAK Ala-Archa 55.14 304 P **P** 12 56 22.5 -1.5
AAK Ala-Archa 55.14 304 P **P** 12 56 22.5 -1.5
SEW Seward 55.14 35 P **P** 12 56 23.2 -0.2
baz=267
PMR Palmer 55.38 33 P **P** 12 56 24.9 -0.1
PMR IAmb IAmb 12 57 36.6
comp=Z,24nm,1.0s
PMR Palmer 55.38 33 P **P** 12 56 24.9 -0.1
PMR pmax pmax
comp=Z,24nm,1.0s
PMR Palmer 55.38 33 P P 12 56 25.1 +0.1
baz=267,SNR=10
BWN Browne 55.42 30 P **P** 12 56 26.7 +1.3
G23K Bananza Creek 55.49 27 P **P** 12 56 26.7 +0.8
baz=262,SNR=16
BRZS Berezniki 55.55 313 *eP* **P** 12 56 24.7 -1.8
BRZS pmax pmax
comp=Z,16nm,1.2s
BRZS Berezniki 55.55 313 *eP* **P** 12 56 24.7 -1.8
comp=Z,16nm,1.2s,baz=313
H23K Yukon River 55.57 28 P **P** 12 56 27.7 +1.2
H23K IAmb IAmb 12 57 54.3
comp=Z,32nm,1.1s
H23K Yukon River 55.57 28 P **P** 12 56 27.2 +0.7
baz=263,SNR=14
D23K Nanushuk River 55.59 24 P **P** 12 56 27.6 +1.1
baz=260,SNR=12
MCK McKinley 55.62 30 P **P** 12 56 27.6 +0.7
MCK IAmb IAmb 12 57 39.7
comp=Z,28nm,1.0s
MCK McKinley 55.62 30 P **P** 12 56 27.6 +0.7
MCK pmax pmax
comp=Z,28nm,1.0s
MCK McKinley 55.62 30 P **P** 12 56 27.2 +0.4
baz=265,SNR=7.9
RND Reindeer 55.63 31 P **P** 12 56 27.1 +0.1
RND IAmb IAmb 12 57 39.4
comp=Z,34nm,1.1s
RND Reindeer 55.63 31 P **P** 12 56 27.1 +0.1
RND pmax pmax
comp=Z,34nm,1.1s
NEA2 Nenana 55.64 29 P **P** 12 56 28.3 +1.4
NEA2 IAmb IAmb 12 56 29.0
comp=Z,25nm,0.9s
NEA2 Nenana 55.64 29 P **P** 12 56 27.9 +1.0
baz=265,SNR=9.5
KNK Knik Glacier 55.69 33 P **P** 12 56 28.1 +0.7
KNK IAmb IAmb 12 57 42.2
comp=Z,17nm,0.8s
KNK Knik Glacier 55.69 33 P P 12 56 27.7 +0.3
baz=267
WAT1 Susitna Watana 55.73 31 P **P** 12 56 27.7 +0.1
baz=266
PWL Port Wells 55.73 34 P **P** 12 56 27.9 +0.2
PWL IAmb IAmb 12 57 43.6
comp=Z,30nm,1.0s
PWL Port Wells 55.73 34 P **P** 12 56 27.1 -0.6
baz=268
C23K Itkillik River 55.77 23 P **P** 12 56 28.3 +0.6
baz=260,SNR=5.4
SML Sawmill 55.77 33 P **P** 12 56 28.4 +0.4
SML Sawmill 55.77 33 P **P** 12 56 28.1 +0.1
baz=267,SNR=7.4
TOLK Toolik Lake Re 55.93 24 P **P** 12 56 30.7 +1.6
TOLK IAmb IAmb 12 56 31.4
comp=Z,24nm,1.1s
TOLK Toolik Lake Re 55.93 24 P **P** 12 56 30.0 +1.0
baz=261,SNR=7.6
MDM Murphy Dome 56.03 29 P **P** 12 56 30.5 +0.8
MDM IAmb IAmb 12 57 41.0
comp=Z,38nm,1.4s
M23K Glacier View 56.06 33 P **P** 12 56 29.8 -0.2
baz=268
WAT6 Susitna Watana 56.09 32 P **P** 12 56 30.3 -0.1
baz=267,SNR=8.4
P23K Montague Islan 56.17 35 P **P** 12 56 31.3 +0.6
baz=269
TCOL CIGO, IAF Yank 56.18 29 P **P** 12 56 30.9 +0.2
baz=266
COLA College 56.18 29 *c i* P **P** 12 56 32.0 +1.2
COLA pmax pmax
comp=Z,14nm,1.2s
COLA College 56.18 29 P **P** 12 56 31.3 +0.5
baz=266
COLA College 56.18 29 P **P** 12 56 32.1 +1.4
CCB Clear Creek Bu 56.18 29 P **P** 12 56 30.6 -0.2
CCB IAmb IAmb 12 57 41.6
comp=Z,16nm,1.0s
SCM Sheep Creek Mo 56.25 33 P **P** 12 56 31.6 +0.2
SCM Sheep Creek Mo 56.25 33 P **P** 12 56 31.6 +0.2
SCM pmax pmax
comp=Z,31nm,1.0s
SCM Sheep Creek Mo 56.25 33 P **P** 12 56 31.1 -0.3
baz=268,SNR=9.7
H24K Noodor Dome 56.25 28 P **P** 12 56 32.3 +1.0
H24K IAmb IAmb 12 58 17.7
comp=Z,26nm,1.1s
H24K Noodor Dome 56.25 28 P **P** 12 56 32.4 +1.0
baz=265,SNR=15
E24K Your Creek 56.25 25 P **P** 12 56 31.9 +0.6
baz=263,SNR=10
D24K Happy Valley 56.28 24 P **P** 12 56 31.8 +0.4
baz=262,SNR=12
DHY Denali Highway 56.28 31 P **P** 12 56 31.9 +0.2
baz=267
GLI Glacier Island 56.33 34 P **P** 12 56 32.7 +0.8
baz=269
POKR Poker Plat Res 56.38 29 P **P** 12 56 32.6 +0.4
baz=266
C24K Franklin Bluff 56.40 23 P **P** 12 56 32.6 +0.4
baz=262
F24K Squaw Lake 56.41 26 P **P** 12 56 32.1 -0.4
baz=264,SNR=7.8
G24K Hadweenzic Riv 56.49 27 P **P** 12 56 33.9 +0.9
baz=265,SNR=14
HDA Harding Lake 56.54 30 P **P** 12 56 33.1 -0.2
HDA Harding Lake 56.54 30 P **P** 12 56 32.6 -0.8
baz=267,SNR=8.6
IL31 56.59 29 P **P** 12 56 33.8 +0.2
IL31 IAmb IAmb 12 57 57.4
comp=Z,27nm,1.1s
ILAR Eielson Array 56.59 29 P P 12 56 33.5 -0.2
comp=Z,12nm,1.0s,baz=264,slow=5.7,SNR=69
comp=Z,12nm,1.0s
ILAR Eielson Array 56.59 29 P **P** 12 56 33.3 -0.4
FID Port Fidalgo 56.63 34 P **P** 12 56 34.5 +0.4
FID IAmb IAmb 12 57 49.7
comp=Z,30nm,1.2s
Q23K Middleton Isla 56.70 36 P **P** 12 56 33.6 -1.0
baz=270
BRVK Borovoye 56.79 317 P **P** 12 56 35.1 -0.2
BRVK Borovoye 56.79 317 *d i* P **P** 12 56 34.0 -1.3
BRVK pmax pmax
comp=Z,25nm,0.8s
BRVK Borovoye 56.79 317 P **P** 12 56 34.2 -1.1
M24K Tolsona, Glenn 56.80 32 P **P** 12 56 34.6 -0.8
baz=269
KLU Klutina 56.91 33 P **P** 12 56 37.0 +0.9
KLU IAmb IAmb 12 57 51.6
comp=Z,20nm,0.8s
KLU Klutina 56.91 33 P **P** 12 56 35.9 -0.2
baz=270,SNR=6.1
EYAK Cordova Ski Ar 56.99 34 P **P** 12 56 36.5 -0.1
baz=270
K24K Donnelly Dome 57.02 30 P **P** 12 56 35.6 -1.3
baz=268
H25K Birch Creek 57.12 27 P **P** 12 56 37.7 +0.3
baz=266
PAX Paxson 57.14 31 P **P** 12 56 37.4 -0.3
baz=269,SNR=6.3
D25K Kavik River 57.16 24 P **P** 12 56 37.9 +0.1
baz=264,SNR=5.5
PRP Porcupine Dome 57.20 28 P **P** 12 56 37.7 -0.5
baz=267

J25K	Salcha River,	57.23	29	P		P		12 56 38.0	-0.3		
J25K	Salcha River, baz=268	57.23	29	P		P		12 56 37.5	-0.9		
F25K	Christian Rive baz=266,SNR=23	57.28	26	P		P		12 56 38.6	0.0		
HARP	HAARP baz=270	57.28	32	P		P		12 56 38.8	+0.2		
E25K	Arctic Village baz=266,SNR=17	57.35	25	P		P		12 56 39.5	+0.5		
FYU	Fort Yukon	57.37	27	P		P		12 56 40.9	+1.7		
DZA	Taraz	57.40	305	eP		P		12 56 37.9	-1.9		
DZA	Taraz baz=305	57.40	305	eP		P		12 56 38.0	-1.9		
RIDG	Independent Ri	57.44	30	P		P		12 56 40.4	+0.6		
RIDG	comp=Z,20nm,1.1s			IAmb		IAmb		12 58 34.5			
RIDG	Independent Ri baz=269	57.44	30	P		P		12 56 40.1	+0.3		
N25K	Chitina, Valde baz=271	57.55	33	P		P		12 56 41.0	+0.4		
BMRM	Bremner River	57.55	34	P		P		12 56 41.0	+0.4		
BMRM	comp=Z,23nm,1.0s			IAmb		IAmb		12 58 00.2			
BMRM	Bremner River baz=271	57.55	34	P		P		12 56 40.6	0.0		
BMAR	Burnt Mountain	57.68	26	P		P		12 56 43.3	+1.9		
C26K	Camden Bay baz=265	57.73	23	P		P		12 56 42.7	+1.0		
DOT	Dot Lake	57.78	30	P		P		12 56 42.7	+0.5		
DOT	comp=Z,36nm,1.4s			IAmb		IAmb		12 56 43.8			
SCRK	Sand Creek	57.82	30	P		P		12 56 43.1	+0.5		
SCRK	comp=Z,23nm,1.0s			IAmb		IAmb		12 56 44.1			
SCRK	Sand Creek baz=270,SNR=24	57.82	30	P		P		12 56 42.6	+0.1		
F26K	Sheenjek River baz=267,SNR=21	57.86	26	P		P		12 56 42.8	+0.1		
GLB	Gilahina Butte	57.93	33	P		P		12 56 43.7	+0.4		
MENT	Mentasta	57.94	31	P		P		12 56 44.2	+0.9		
NIL	Nilore	57.94	294	P		P		12 56 43.0	-0.8		
KK31	Karatay Array	57.95	305	P		P		12 56 42.6	-1.1		
KK31	Karatay Array	57.95	305	P		P		12 56 42.6	-1.1		
KK31	comp=Z,39nm,0.8s			pmax		pmax					
KKAR	Karatay Array	57.95	305	P		P		12 56 42.9	-0.8		
KKAR	Karatay Array	57.95	305	P		P		12 56 42.9	-0.8		
G26K	Porcupine Rive baz=268,SNR=13	57.97	27	P		P		12 56 43.4	+0.1		
J26L	Joseph Creek	58.01	29	P		P		12 56 43.9	0.0		
J26L	Joseph Creek baz=270,SNR=50	58.01	29	P		P		12 56 44.0	+0.2		
L26K	Log Cabin Wild baz=271,SNR=7.0	58.11	31	P		P		12 56 45.2	+0.7		
C27K	Jago River baz=266,SNR=6.5	58.12	23	P		P		12 56 43.9	-0.5		
I26K	Coal Creek Min	58.19	29	P		P		12 56 44.3	-0.7		
I26K	comp=Z,11nm,1.1s			IAmb		IAmb		12 58 29.6			
I26K	Coal Creek Min baz=270	58.19	29	P		P		12 56 45.1	+0.1		
M26K	Nabesna, AK baz=272	58.29	32	P		P		12 56 45.8	0.0		
MCARA	McCarthy VSAT	58.30	33	P		P		12 56 46.3	+0.5		
MCARA	McCarthy VSAT baz=272	58.30	33	P		P		12 56 45.8	-0.1		
IUG	luzhnay	58.48	304	eP		P		12 56 46.0	-1.5		
IUG	luzhnay baz=304	58.48	304	eP		P		12 56 46.1	-1.5		
K27K	Chicken	58.66	30	P		P		12 56 49.6	+1.3		
K27K	comp=Z,24nm,0.9s			IAmb		IAmb		12 58 01.9			
K27K	Chicken baz=271,SNR=17	58.66	30	P		P		12 56 48.7	+0.4		
HYBB	Hyderabad (bro	58.70	274	eP		P		12 56 49.2	-0.1		
HYBB				ePcP		PcP		12 57 38.1	-0.6		
L27K	Beaver Creek,	58.80	31	P		P		12 56 50.3	+1.0		
L27K	Beaver Creek, baz=272,SNR=11	58.80	31	P		P		12 56 49.7	+0.4		
G27K	Doyon Strip baz=270,SNR=6.4	58.80	27	P		P		12 56 50.1	+0.9		
M27K	Edge Creek, AK	58.81	32	P		P		12 56 50.3	+0.8		
M27K	comp=Z,23nm,1.1s			IAmb		IAmb		12 58 03.6			
M27K	Edge Creek, AK baz=272	58.81	32	P		P		12 56 50.4	+0.9		
BCAR	Beaver Creek A	58.82	31	P		P		12 56 50.3	+0.8		
I27K	Kandik River baz=271	58.83	28	P		P		12 56 49.9	+0.4		
E27K	Coleen River baz=269,SNR=11	58.84	25	P		P		12 56 50.7	+1.2		
H27K	Steamboat Moun baz=270	58.86	27	P		P		12 56 51.0	+1.3		
MESA	MESA baz=274	58.89	35	P		P		12 56 51.1	+0.9		
GAR	Garm	58.94	300	P		P		12 56 49.8	-1.0		
EGAK	Eagle	59.04	29	P		P		12 56 51.3	+0.4		
EGAK	comp=Z,13nm,0.9s			IAmb		IAmb		12 58 22.9			
EGAK	Eagle baz=272,SNR=9.0	59.04	29	P		P		12 56 51.0	+0.1		
CTG	Chitna Glacier baz=274	59.14	34	P		P		12 56 52.3	+0.4		
BVCY	Beaver Creek baz=273	59.28	32	P		P		12 56 52.9	+0.2		
YUK3	Moose Creek baz=274	59.51	33	P		P		12 56 54.7	+0.2		
O28M	Mount Upton baz=275	59.72	34	P		P		12 56 56.1	+0.1		
PINM	Pinnacle baz=275	59.75	35	P		P		12 56 56.0	0.0		
DAWY	Dawson	59.84	30	P		P		12 56 57.6	+1.1		
DAWY	comp=Z,21nm,1.1s			IAmb		IAmb		12 56 58.8			
DAWY	Dawson baz=274,SNR=17	59.84	30	P		P		12 56 56.5	0.0		
CHGR	Chuyangaron	59.90	300	P		P		12 56 56.0	-1.4		
CHGR	Chuyangaron	59.90	300	P		P		12 56 56.0	-1.4		
CHGR	comp=Z,148nm,0.9s			pmax		pmax					
STKA	Stephens Creek comp=Z,4.3nm,1.1s,baz=304,slow=22,SNR=4.6 comp=Z,4.3nm,1.1s	60.12	180	P		P		12 56 56.5	-2.1		
I29M	Ogilvie Camp, baz=274,SNR=17	60.22	28	P		P		12 56 59.5	+0.5		
M29M	Somme Creek baz=275	60.39	32	P		P		12 57 01.0	+0.7		
YUK4	Talbot Arm baz=276,SNR=15	60.41	33	P		P		12 57 01.5	+0.9		
O29M	Mount Kennedy baz=276,SNR=10	60.56	34	P		P		12 57 02.4	+0.9		
YUK6	Outpost Mounta baz=276	60.59	33	P		P		12 57 02.4	+0.5		
EPYK	Eagle Plains	60.79	27	P		P		12 57 04.2	+1.3		
EPYK	Eagle Plains baz=275,SNR=41	60.79	27	P		P		12 57 03.9	+0.9		
HYT	Haines Junctio baz=277,SNR=10	61.02	34	P		P		12 57 06.2	+1.5		
P29M	Windy Craggy	61.06	35	P		P		12 57 06.1	+1.3		
P29M	Windy Craggy baz=278	61.06	35	P		P		12 57 05.4	+0.5		
N30M	Aishikik Lake baz=277,SNR=7.1	61.14	33	P		P		12 57 06.6	+1.2		
M30M	Minto, Yukon	61.14	32	P		P		12 57 06.8	+1.4		
M30M	comp=Z,14nm,1.0s			IAmb		IAmb		12 58 21.2			
M30M	Minto, Yukon baz=277,SNR=11	61.14	32	P		P		12 57 06.6	+1.2		
P30M	Million Dollar baz=278	61.38	34	P		P		12 57 08.0	+0.9		
MAYO	Mayo, Yukon	61.43	30	P		P		12 57 09.1	+1.8		
MAYO	Mayo, Yukon baz=277	61.43	30	P		P		12 57 08.3	+1.0		
O30N	Mendenhall baz=278,SNR=6.4	61.72	34	P		P		12 57 09.8	+0.5		
N31M	Braeburn, Yuko	61.76	33	P		P		12 57 11.1	+1.5		
N31M	Braeburn, Yuko baz=278,SNR=11	61.76	33	P		P		12 57 10.6	+1.1		
PLBC	Pleasant Camp baz=279,SNR=7.6	61.78	35	P		P		12 57 10.9	+1.2		
INK	Inuvik comp=Z,7.7nm,0.9s,baz=272,slow=3.7,SNR=10 comp=Z,7.7nm,0.9s	61.83	25	P		P		12 57 09.6	-0.2		
INK	Inuvik	61.83	25	P		P		12 57 10.7	+0.9		
INK	comp=Z,18nm,0.9s			IAmb		IAmb		12 58 21.3			
INK	Inuvik comp=Z,18nm,0.9s	61.83	25	P		P		12 57 10.7	+0.9		
INK				pmax		pmax					
INK	comp=Z,16nm,0.8s			IAmb		IAmb		12 57 15.3			
M31M	Drury Creek, Y baz=279,SNR=16	62.30	32	P		P		12 57 14.1	+1.0		
WHY	Whitehorse baz=279,SNR=6.8	62.32	34	P		P		12 57 14.6	+1.2		
FARO	Faro, Yukon	62.78	32	P		P		12 57 17.4	+1.1		
FARO	comp=Z,14nm,0.9s			IAmb		IAmb		12 57 18.4			
FARO	Faro, Yukon baz=280,SNR=18	62.78	32	P		P		12 57 17.5	+1.1		
JIS	Juneau Island	63.00	36	P		P		12 57 19.1	+1.4		
JIS	comp=Z,25nm,1.2s			IAmb		IAmb		12 59 02.4			
ARU	Arti comp=Z,78nm,0.7s,baz=71,slow=1.8,SNR=24 comp=Z,78nm,0.7s	63.05	322	P		P		12 57 17.0	-1.2		
ARU	Arti	63.05	322	P		P		12 57 17.5	-0.7		
ARU	Arti	63.05	322	d iP		P		12 57 17.4	-0.8		
ARU				*PP		sP		12 57 36.1	-3.1		
ARU								12 57 53.4			
ARU								12 59 35.3			
ARU				S		S		13 05 44.8	+0.6		
ARU								13 06 58.9			
ARU				SS		SS		13 09 52.6	+2.4		
ARU	comp=Z,122nm,0.8s			pmax		pmax					
ARU	Arti	63.05	322	P		P		12 57 17.4	-0.8		
P32M	Atlin baz=281,SNR=6.2	63.09	35	P		P		12 57 19.2	+0.8		
N32M	Quiet Lake baz=281	63.10	33	P		P		12 57 19.1	+0.6		
P33M	Teslin, Yukon	63.41	34	P		P		12 57 21.4	+0.9		
P33M	Teslin, Yukon baz=281,SNR=9.2	63.41	34	P		P		12 57 21.6	+0.9		
MMPY	Sheldon Lake, baz=281,SNR=8.4	63.66	31	P		P		12 57 23.6	+1.4		
ABKAR	Akbulak array	63.83	314	P		P		12 57 22.3	-1.1		
ABKAR	Akbulak array	63.83	314	P		P		12 57 22.5	-0.9		
ABKAR	comp=Z,32nm,0.8s			IAmb		IAmb		12 59 09.5			
A36M	Sachs Harbour baz=282	64.02	20	P		P		12 57 24.9	+0.7		
R33M	Jennings River baz=283	64.50	34	P		P		12 57 28.9	+1.1		
AKTO	Aktyubinsk comp=Z,26nm,0.7s,baz=79,slow=14 comp=Z,26nm,0.7s	64.74	315	P		P		12 57 28.1	-1.3		
V35K	Ketchikan baz=285	65.14	39	P		P		12 57 31.9	0.0		
DLBC	Dease Lake	65.20	35	P		P		12 57 33.5	+1.2		
DLBC	Dease Lake baz=285,SNR=6.3	65.20	35	P		P		12 57 33.2	+0.8		
TGTN	Hyland Airport baz=284,SNR=10	65.28	32	P		P		12 57 33.5	+0.8		
T35M	Bob Quinn baz=285	65.46	37	P		P		12 57 34.8	+0.9		
HRA	Herat	66.46	297	P		P		12 57 40.1	-1.0		
KIRV	Kirov comp=Z,53nm,0.7s,baz=86,slow=4.0,SNR=29 comp=Z,53nm,0.7s	67.28	325	P		P		12 57 45.2	-0.3		
KIRV	Kirov	67.28	325	d iP		P		12 57 45.1	-0.4		
PRGR	Permogore	68.10	329	⇑iP		P		12 57 50.7	+0.1		
PRGR				e*PP		sP		12 58 08.1	-3.6		
GEYT	Alibeck comp=Z,7.7nm,0.8s,baz=107,slow=1.5,SNR=14 comp=Z,7.7nm,0.8s	68.42	302	P		P		12 57 52.2	-0.9		
GEYT	Alibeck	68.42	302	P		P		12 57 52.2	-0.9		
GEYT	comp=Z,29nm,0.9s			IAmb		IAmb		12 59 45.2			
GYA0B	ALIBECK ARRAY	68.42	302	P		P		12 57 52.3	-0.8		
KBS	Kingsbay	69.03	351	deP		P		12 57 56.4	+0.2		
KBS	comp=Z,18nm,1.3s			pmax		pmax					
KBS	Kingsbay	69.03	351	P		P		12 57 53.8	-2.4		
KBS				sP		PcP		12 58 21.2	+1.3		
LVZ	Lovozero	69.98	337	⇑eP		P		12 58 02.0	-0.3		
LVZ	comp=Z,72nm,1.8s			pmax		pmax					
LVZ	Lovozero	69.98	337	P		P		12 58 01.9	-0.3		
LVZ				pP		sP		12 58 21.4	-2.1		
LVZ				sP		PcP		12 58 28.4	+4.2		
BELG	Belogornoye comp=Z,142nm,0.9s,baz=20,slow=0.9,SNR=10	70.32	320	P		P		12 58 04.0	-0.5		
BELG	Belogornoye	70.32	320	d iP		P		12 58 03.5	-1.0		
YKA	Yellowknife Ar comp=Z,5.5nm,0.9s,baz=204,slow=12,SNR=18 comp=Z,5.5nm,0.9s	71.01	29	P		P		12 58 08.2	-0.3		
KLMR	Klimovskoe	71.14	330	eP		P		12 58 06.8	-2.5		
KLMR	comp=Z,23nm,1.2s			pmax		pmax					
KLMR	Klimovskoe	71.14	330	eP		P		12 58 06.8	-2.5		
KLMR	comp=Z,23nm,1.2s			AMP				12 58 09.7			
KEV	Kevo	71.48	341	P		P		12 58 11.6	+0.4		
KEV	comp=Z,29nm,1.0s			IAmb		IAmb		12 58 12.3			
KEV	Kevo	71.48	341	P		P		12 58 11.6	+0.4		
KEV	comp=Z,29nm,1.0s			pmax		pmax					
KEV	Kevo	71.48	341	P		P		12 58 10.5	-0.7		
ARA0	ARCESS Array S	72.04	341	eP		P		12 58 15.2	+0.5		
ARA0	comp=Z,25nm,0.9s			IAmb		IAmb		12 58 15.5			
ARCES	ARCESS Array B comp=Z,19nm,0.9s,baz=62,slow=7.4,SNR=25 comp=Z,19nm,0.9s	72.04	341	P		P		12 58 14.5	-0.1		
ARCES	ARCESS Array B	72.04	341	P		P		12 58 14.9	+0.3		
ARCES	comp=Z,26nm,1.0s			IAmb		IAmb		12 58 15.8			
LLLB	Lillooet	72.24	42	P		P		12 58 16.1	-0.2		
KTK1	Kautokeino	73.00	341	eP		P		12 58 20.4	+0.1		
KTK1	comp=Z,17nm,1.0s			IAmb		IAmb		12 58 20.5			
JETT	Jettan, Norway	73.47	342	eP		P		12 58 23.1	0.0		
JETT	comp=Z,26nm,0.9s			IAmb		IAmb		12 58 23.9			
TRO	Tromso	73.82	342	eP		P		12 58 24.3	-0.8		
TRO	comp=Z,12nm,0.8s			IAmb		IAmb		12 58 25.1			
J01E	Myrtle Point baz=294	73.95	49	P		P		12 58 27.4	+1.0		
I03D	Drain, OR baz=294	74.12	49	P		P		12 58 28.3	+0.9		
VRH	Novokhopyorsk	74.15	320	eP		P		12 58 25.9	-1.5		
VRH	comp=Z,80nm,0.8s			pmax		pmax					
VRH	comp=Z,2µm,16.0s			MLR		MLR					
H04D	Lebanon baz=294	74.18	48	P		P		12 58 28.1	+0.3		
MOS	Moscow	74.30	325	eP		P		12 58 26.2	-2.0		
MOS				e				12 58 39.6			
MOS	comp=Z,39nm,0.9s			pmax		pmax					
K02D	Willamette Mer baz=294	74.32	50	P		P		12 58 29.0	+0.3		
SHME	Shamm SNR=11	74.47	291	i P		P		12 58 29.0	-0.7		
H04A	Detroit Lake	74.47	47	P		P		12 58 29.8	+0.4		
H04A	comp=Z,18nm,1.1s			IAmb		IAmb		12 58 31.2			
VALR	Valaam	74.59	332	c iP		P		12 58 29.6	-0.1		
VALR	comp=Z,72nm,0.9s			pmax		pmax					
L02F	Cave Junction baz=295	74.62	50	P		P		12 58 29.8	-0.6		
B08A	Colville Reser	74.69	43	P		P		12 58 31.1	+0.4		
I04A	Tendick Farm, baz=295	74.70	48	P		P		12 58 30.2	-0.7		
MSFE	Esma-Masafi SNR=7.9	74.74	291	i P		P		12 58 30.8	-0.5		
G05D	Wamic, OR baz=295	74.80	47	P		P		12 58 30.6	-0.7		
UOSS	Minazif SNR=9.9	74.88	290	i P		P		12 58 30.6	-1.6		
SOHO	SOHO SNR=11	74.94	289	i P		P		12 58 31.0	-1.5		
HATD	Hatta, Dubai SNR=9.1	74.99	290	i P		P		12 58 31.5	-1.3		
LPSR	Galich'ya Gora	75.07	322	eP		P		12 58 31.7	-1.0		
LPSR	comp=Z,40nm,0.9s			pmax		pmax					
LPSR	comp=Z,460nm,13.0s			MLR		MLR					
ASHO	Ashiyiah SNR=5.9	75.11	290	i P		P		12 58 32.2	-1.2		
OBN	Obninsk	75.12	325	d iP		P		12 58 31.3	-1.6		
OBN				e				12 58 42.8			
OBN				ePPP		PPP		13 03 05.2			
OBN	comp=Z,71nm,1.7s			pmax		pmax					
OBN	comp=Z,1µm,17.0s			MLR		MLR					
J04D	Umpqua Nationa	75.13	49	P		P		12 58 34.8	+1.2		
J04D	comp=Z,20nm,1.1s			IAmb		IAmb		13 00 13.9			
J04D	Umpqua Nationa baz=295	75.13	49	P		P		12 58 33.4	-0.2		
I05D	Terrebonne, OR baz=295	75.17	47	P		P		12 58 33.2	-0.3		
NAZ	Nazwa, Dubai	75.31	291	P		P		12 58 33.1	-1.5		
VORR	Voronezh	75.35	321	eP		P		12 58 33.7	-0.6		
VORR	comp=Z,50nm,0.4s			pmax		pmax					
YBH	Yreka Blue Hor	75.37	50	P		P		12 58 35.7	+0.9		
YBH	Yreka Blue Hor	75.37	50	P		P		12 58 35.7	+0.9		
YBH	comp=Z,10.0nm,1.1s			pmax		pmax					
L04D	Klamath Falls	75.44	50	P		P		12 58 35.6	+0.4		
L04D	comp=Z,28nm,1.2s			IAmb		IAmb		13 00 17.3			
L04D	Klamath Falls baz=295	75.44	50	P		P		12 58 34.7	-0.6		
FAQ	Al Faqa, Dubai	75.46	290	P		P		12 58 33.8	-1.7		
VSR	Storozhevoye	75.58	321	eP		P		12 58 34.7	-1.0		
VSR	comp=Z,40nm,0.7s			pmax		pmax					
VSR	comp=Z,2µm,16.0s			MLR		MLR					
K04D	Chiloquin, OR baz=296	75.63	49	P		P		12 58 35.7	-0.7		
KCPM	Cahto Peak	75.64	53	P		P		12 58 37.6	+1.2		
KCPM	comp=Z,24nm,1.1s			IAmb		IAmb		12 58 38.4			
PINE	Pine Mountain	75.66	48	P		P		12 58 37.8	+1.3		
PINE	comp=Z,19nm,0.9s			IAmb		IAmb		12 58 38.8			
J05D	Fort Rock, OR baz=296	75.69	48	P		P		12 58 36.0	-0.7		
EDM	Edmonton	75.84	37	P		P		12 58 37.8	+0.6		
EDM	comp=Z,25nm,1.2s			IAmb		IAmb		13 00 09.2			
EDM	Edmonton	75.84	37	P		P		12 58 37.8	+0.6		
EDM	comp=Z,25nm,1.2s			pmax		pmax					
STEI	Steigen	75.96	342	eP		P		12 58 37.1	-0.4		
STEI	comp=Z,26nm,1.0s			IAmb		IAmb		12 58 38.0			
NEW	Newport	76.05	43	P		P		12 58 39.3	+0.8		
NEW	Newport	76.05	43	P		P		12 58 39.3	+0.8		
NEW	comp=Z,11nm,1.0s			pmax		pmax					
NEW	Newport baz=297	76.05	43	P		P		12 58 38.4	-0.1		
FAUS	Fauske	76.33	341	eP		P		12 58 39.1	-0.5		
FAUS	comp=Z,33nm,1.0s			IAmb		IAmb		12 58 40.1			
NCK	Nalchik	76.41	312	⇓eP		P		12 58 40.6	0.0		
NCK	comp=Z,17nm,0.6s			pmax		pmax					
FIA1	FINESS Array S	76.47	334	P		P		12 58 40.3	-0.2		
FINES	FINESS Array B comp=Z,15nm,0.4s,baz=72,slow=4.8,SNR=123 comp=Z,15nm,0.4s	76.47	334	P		P		12 58 39.9	-0.7		
FINES	FINESS Array B	76.47	334	P		P		12 58 40.1	-0.4		
ZEI	Tsey	76.52	311	eP		P		12 58 38.4	-3.1		
ZEI	comp=Z,11nm,0.6s			pmax		pmax					
KBZ	Khabaz comp=Z,27nm,0.7s,baz=98,slow=2.9,SNR=49 comp=Z,27nm,0.7s	76.76	313	P		P		12 58 42.2	-0.3		
KBZ	Khabaz	76.76	313	d iP		P		12 58 42.0	-0.5		
KBZ	comp=Z,45nm,0.9s			pmax		pmax					
KIV	Kislovodsk	76.79	313	eP		P		12 58 42.2	-0.6		
KIV	comp=Z,48nm,1.1s			pmax		pmax					
KIV	Kislovodsk SNR=7.1	76.79	313	i P		P		12 58 43.5	+0.7		
ONI	Oni	76.91	311	P		P		12 58 43.8	+0.3		
ONI	Oni	76.91	311	P		P		12 58 43.8	+0.3		
ONI	comp=Z,26nm,1.0s			pmax		pmax					
GNI	Garni	77.13	309	d iP		P		12 58 44.5	-0.4		
GNI	comp=Z,39nm,1.7s			pmax		pmax					
MOR8	Moi Rana	77.41	341	eP		P		12 58 44.2	-1.5		
MOR8	comp=Z,22nm,1.0s			IAmb		IAmb		12 58 44.3			
BMO	Blue Mountains	77.51	46	P		P		12 58 47.5	+0.6		
BMO	Blue Mountains	77.51	46	P		P		12 58 47.5	+0.6		
BMO	comp=Z,10.0nm,1.0s			pmax		pmax					
WALA	Waterton Lakes	77.55	41	P		P		12 58 47.6	+0.5		
WALA	comp=Z,14nm,0.9s			IAmb		IAmb		12 58 48.8			
BEKR	Beckworth	77.79	51	P		P		12 58 49.0	+0.3		
BEKR	comp=Z,15nm,1.0s			IAmb		IAmb		12 58 49.9			
MEF	Metsahovi	77.87	333	eP		P		12 58 48.1	-0.2		
VSU	Vasula	77.94	331	d iP		P		12 58 48.1	-0.7		
VSU	comp=Z,168nm,1.1s			pmax		pmax					
VSU	Vasula	77.94	331	eP		P		12 58 48.6	-0.2		
JTMT	Jette	77.97	42	P		P		12 58 50.5	+1.0		
JTMT	comp=Z,17nm,1.0s			IAmb		IAmb		12 58 51.2			
MPK	Martis Peak	78.28	52	P		P		12 58 52.4	+0.9		
MPK	comp=Z,24nm,1.2s			IAmb		IAmb		13 00 36.8			
RAF	Rauma	78.39	335	eP		P		12 58 51.2	-0.1		
MSO	Missoula baz=300	78.63	43	P		P		12 58 53.0	0.0		
SOC	Sochi	78.87	314	eP		P		12 58 52.5	-1.7		
SOC				e				13 01 47.6			
SOC				ePPP		PPP		13 03 36.8			
SOC				eS		S		13 08 46.1	-1.7		
SOC				eSS		SS		13 13 49.9	-3.1		
SUMG	Summit	79.12	0	P		P		12 58 56.0	+0.4		
SUMG	Summit	79.12	0	P		P		12 58 56.0	+0.4		
SUMG	comp=Z,28nm,1.0s			pmax		pmax					
MFID	Camas Ranch	79.13	46	P		P		12 58 56.6	+0.7		
NSS	Namsos	79.31	340	eP		P		12 58 55.1	-1.1		
NSS	comp=Z,8.5nm,0.9s			IAmb		IAmb		12 58 55.9			
BMN	Battle Mountai	79.66	50	P		P		12 58 59.8	+1.0		
BMN	Battle Mountai	79.66	50	P		P		12 58 59.8	+1.0		
BMN	comp=Z,7.0nm,0.9s			pmax		pmax					
ANN	Anapa	79.70	315	eP		P		12 58 56.7	-2.0		
ANN				e				12 59 03.6			
ANN				e*PP		pP		12 59 15.6	+1.6		
ANN				eS		S		13 08 54.2	-2.4		
ANN	comp=Z,78nm,1.0s			pmax		pmax					
ANN	comp=N,1µm,15.0s			MLR		MLR					
ANN	comp=Z,1µm,16.0s			MLR		MLR					
ANN	comp=E,436nm,14.0s			MLR		MLR					
MNK	Minsk	79.72	327	i P		P		12 58 58.3	-0.3		
MNK				i *PP		sP		12 59 17.3	-2.8		
MNK				i				13 01 57.4			
MNK				i PPP		PPP		13 03 48.8			
MNK				i S		S		13 08 55.2	-1.2		
MNK				i SS		SS		13 14 06.5	+1.5		
MNK	comp=E,4.0nm,1.1s			pmax		pmax					
MNK	comp=Z,82nm,1.1s			pmax		pmax					

MNK MLR MLR
comp=E,46nm,17.0s
MNK MLR MLR
comp=Z,828nm,17.0s
MNK Minsk 79.72 327 *i* P **P** **12 58 58.3 -0.3**
comp=E,4.0nm,1.1s
MNK *i* P **P** **12 58 58.3 -0.3**
MNK *i* P **P** **12 58 58.3 -0.3**
comp=Z,82nm,1.1s,baz=55
MNK *i* pP **sP** **12 59 17.3 -2.8**
MNK *i* sP pwP 12 59 25.3 +6.4
MNK *i* PP **PP** **13 01 57.4 -2.2**
MNK *i* PPP PPP 13 03 48.8
MNK *i* S **S** **13 08 55.3 -1.2**
MNK *i* SS **SS** **13 14 06.5 +1.5**
MNK *i* SSS SSS 13 16 46.1
MNK *i* LQ LQ 13 27 31.3
MNK *i* LR LR 13 30 52.4
MNK *i* LRM MLR 13 35 30.2
comp=E,46nm,16.8s
MNK *i* LRM MLR 13 35 37.9
comp=Z,828nm,16.8s
NVAR Mina Array Bea 79.88 52 P **P** **12 59 00.6 +0.5**
comp=Z,5.0nm,0.8s,baz=279,slow=5.5,SNR=47
comp=Z,5.0nm,0.8s
NVAR Mina Array Bea 79.88 52 P **P** **12 59 00.4 +0.3**
MLAC Mammoth, Mammo 79.88 53 P **P** **12 59 00.6 +0.4**
baz=298
ISAL Salakas 79.91 329 *eP* **P** **12 58 59.7 +0.1**
HRY Holter Researc 79.94 42 P **P** **12 59 00.8 +0.6**
HLID Hailey 79.96 46 P **P** **12 59 00.2 -0.2**
baz=300,SNR=7.7
NV11 Mina Array Sit 79.98 52 P **P** **12 59 00.9 +0.3**
NACGM Naroch 80.00 328⇑ *eP* **P** **12 59 00.3 +0.1**
baz=54
LRM Limekiln Ridge 80.03 43 P **P** **12 59 01.2 +0.4**
SLIT Slitere, Latvi 80.33 332 *eP* **P** **12 59 01.5 -0.3**
EGMT Eagleton 80.45 40 P **P** **12 59 03.0 +0.1**
baz=302
PKM Mcpherson Peak 80.47 56 P **P** **12 59 03.2 -0.1**
baz=298
VES Vestal, Richgr 80.55 54 P **P** **12 59 03.8 +0.2**
baz=298
TIN Tinemaha, Big 80.58 53 P **P** **12 59 03.5 -0.3**
baz=299
BOZ Bozeman (W) 80.64 43 P **P** **12 59 03.6 -0.4**
baz=301,SNR=9.7
VSVD Vaisvydziai 80.65 330 *eP* **P** **12 59 03.6 0.0**
SBC Santa Barbara 80.76 56 P **P** **12 59 04.8 +0.1**
baz=298
PABE Paberze 80.93 329 P **P** **12 59 04.8 -0.3**
PABE Paberze 80.93 329 *eP* **P** **12 59 05.0 0.0**
CWC Cottonwood Cre 80.98 53 P **P** **12 59 06.2 +0.2**
baz=299
SCZ2 Santa Cruz Isl 81.03 56 P **P** **12 59 05.9 -0.3**
baz=298
ARVC Arvin 81.07 55 P **P** **12 59 06.5 +0.2**
baz=299
ISA Isabella, Lake 81.07 54 P **P** **12 59 06.0 -0.4**
baz=299
GRAC Grapevine Rang 81.21 53 P **P** **12 59 07.2 +0.1**
baz=299
AKASG Malin Array Be 81.23 324 P **P** **12 59 05.6 -1.2**
comp=Z,10nm,0.5s,baz=48,slow=6.5,SNR=80
comp=Z,10nm,0.5s
AKASG Malin Array Be 81.23 324 P **P** **12 59 05.8 -1.0**
AKASG Malin Array Be 81.23 324 P **P** **12 59 05.8 -1.0**
AKASG pmax pmax
comp=Z,10.0nm,1.0s
AKBB Malin Array Si 81.23 324 P **P** **12 59 05.6 -1.2**
AKBB Malin Array Si 81.23 324 *d iP* **P** **12 59 05.3 -1.5**
AKBB pmax pmax
comp=Z,28nm,0.7s
YHL Hebgen Lake 81.30 43 P **P** **12 59 08.9 +1.2**
PBUR Paburge 81.50 331 *eP* **P** **12 59 07.6 -0.5**
MPMC Manual Prospec 81.58 54 P **P** **12 59 09.7 +0.4**
baz=299,SNR=6.4
GCMT Greycliff 81.70 42 P **P** **12 59 10.5 +0.8**
LRMC Laurel Mtn Rad 81.73 54 P **P** **12 59 10.4 +0.5**
baz=299
R11A Troy Canyon, C 81.78 51 P **P** **12 59 10.5 +0.3**
baz=300,SNR=16
EDW2 Edwards Air Fo 81.79 55 P **P** **12 59 10.7 +0.5**
baz=299
FURC Furnace Creek, 81.82 53 P **P** **12 59 10.8 +0.6**
baz=300
H17A Grant Village 81.90 44 P **P** **12 59 11.5 +0.7**
baz=302,SNR=5.7
NC303 NORSAR Array S 81.93 338 *eP* **P** **12 59 09.7 -0.7**
NC303 lAmb lAmb 12 59 10.2
comp=Z,15nm,0.9s
HFS Hagfors 81.94 337 P **P** **12 59 09.1 -1.2**
comp=Z,15nm,0.8s,baz=104,slow=1.2,SNR=58
comp=Z,15nm,0.8s
TPNV Topopah Spring 82.02 52 P **P** **12 59 11.8 +0.3**
baz=300,SNR=7.0
DOMB Dombas 82.05 340 *eP* **P** **12 59 10.1 -0.8**
MOL Molde 82.10 340 *eP* **P** **12 59 09.8 -1.3**
MOL lAmb lAmb 12 59 10.4
comp=Z,18nm,1.0s
NB2 NORSAR Subarra 82.11 338 P **P** **12 59 10.0 -1.4**
comp=Z,23nm,1.0s,baz=41,slow=5.1
NB2 NORSAR Subarra 82.11 338 P **P** **12 59 10.0 -1.4**
baz=41,slow=5.1
NOA NORSAR Array B 82.11 338 P **P** **12 59 10.2 -1.2**
comp=Z,15nm,0.9s,baz=41,slow=5.2,SNR=58
comp=Z,15nm,0.9s
CIS Catalina Islan 82.20 56 P **P** **12 59 12.6 +0.3**
baz=299
RLMT Red Lodge 82.30 43 P **P** **12 59 13.1 +0.2**
baz=303,SNR=8.3
BFSC Mount Baldy Ra 82.35 55 P **P** **12 59 13.1 -0.1**
baz=299
NAO01 NORSAR Array S 82.37 338 *eP* **P** **12 59 11.5 -1.2**
NAO01 lAmb lAmb 12 59 12.2
comp=Z,11nm,1.0s
GSC Goldstone, Bar 82.44 54 P **P** **12 59 13.9 +0.3**
baz=300
SHOC Shoshone, Teco 82.52 53 P **P** **12 59 14.6 +0.6**
baz=300
DUG Dugway, Tooele 82.70 48 P **P** **12 59 14.6 -0.4**
baz=301,SNR=12
MURC Murrieta 83.00 56 P **P** **12 59 16.4 -0.1**
baz=300
TUQ Turquoise Moun 83.00 54 P **P** **12 59 16.1 -0.5**
baz=300
HEC Hector,Ludlow 83.01 54 P **P** **12 59 16.4 -0.1**
baz=300
OSL Oslo 83.10 338 *eP* **P** **12 59 16.1 -0.3**
SORM Soroca 83.17 322 ⇓P **P** **12 59 15.1 -1.9**
LAO LASA Array 83.19 40 P **P** **12 59 17.6 +0.4**
LAO lAmb lAmb 12 59 18.9
comp=Z,19nm,1.1s
LAO LASA Array 83.19 40 P **P** **12 59 18.4 +1.1**
baz=305
LAO LASA Array 83.19 40 P **P** **12 59 17.2 0.0**
baz=305
DGMT Dagmar 83.28 38 P **P** **12 59 17.5 -0.1**
baz=306
NLU North Lily Min 83.31 48 P **P** **12 59 18.8 +0.6**
BW06 Boulder Array 83.40 45 P **P** **12 59 18.9 +0.3**
BW06 Boulder Array 83.40 45 P **P** **12 59 18.4 -0.3**
baz=303,SNR=6.2
PD31 Pinedale Array 83.40 45 P **P** **12 59 19.0 +0.3**
PDAR Pinedale Array 83.40 45 P **P** **12 59 18.7 0.0**
comp=Z,2.9nm,0.9s,baz=276,slow=4.0,SNR=17
comp=Z,2.9nm,0.9s
PDAR Pinedale Array 83.40 45 P **P** **12 59 18.4 -0.3**
GMRC Granite Mounta 83.51 54 P **P** **12 59 19.4 +0.2**
baz=300,SNR=5.5
PFO Pinyon Flats O 83.52 55⇑ *eP* **P** **12 59 19.1 -0.2**
PFO pmax pmax
comp=Z,8.0nm,0.9s
PFO Pinyon Flats O 83.52 55 P **P** **12 59 19.2 -0.1**
baz=300
TPFO Pinon Flats 83.53 55 P **P** **12 59 19.7 +0.4**
baz=300
HYA Hoyanger 83.60 340 *eP* **P** **12 59 18.5 -0.4**
BELC Belle Mtn. Jos 83.66 55 P **P** **12 59 20.4 +0.3**
baz=300
BNN Bunyan 83.77 311 P **P** **12 59 19.6 -0.9**
MONP2 Monument Peak 83.91 56 P **P** **12 59 21.5 +0.1**
baz=300
MVU Marysvale 83.98 49 P **P** **12 59 22.6 +0.9**
MVU lAmb lAmb 12 59 23.5
comp=Z,38nm,1.2s

IAS Iasi 84.16 321 ⇓P **P** **12 59 21.5 -0.6**
IRM Iron Mountain 84.19 54 P **P** **12 59 22.8 +0.2**
baz=301
BC3 Big Chuckawall 84.23 55 P **P** **12 59 23.1 +0.2**
baz=300
RAYN Ar Rayn 84.24 294 P **P** **12 59 22.0 -1.0**
RAYN Ar Rayn 84.24 294 P **P** **12 59 22.0 -1.0**
RAYN pmax pmax
comp=Z,35nm,0.9s
RAYN Ar Rayn 84.24 294 *i* P **P** **12 59 22.1 -1.0**
SNR=30
IKP In-Ko-Pah, Jac 84.26 56 P **P** **12 59 22.8 -0.2**
baz=300
SFJD Kangerlussuaq 84.26 5 P **P** **12 59 22.7 +0.5**
comp=Z,7.2nm,0.7s,baz=33,slow=1.8,SNR=4.7
comp=Z,7.2nm,0.7s
KNB Kanab 84.34 51 P **P** **12 59 24.5 +1.0**
KNB lAmb lAmb 12 59 25.3
comp=Z,18nm,1.0s
KNB Kanab 84.34 51 P **P** **12 59 24.5 +1.0**
KNB pmax pmax
comp=Z,18nm,1.0s
VASR Vaslui 84.36 321 ⇑P **P** **12 59 23.0 -0.1**
LVV L'vov 84.43 325 *eP* **P** **12 59 22.1 -1.3**
W13A Hualapai Mount 84.60 53 P **P** **12 59 25.5 +0.6**
TLCR 84.63 319 ⇑P **P** **12 59 24.3 -0.2**
VLDR Vladesti 84.67 320 ⇑P **P** **12 59 24.9 +0.2**
BEL Belsk 84.72 328 *eP* **P** **12 59 24.4 -0.4**
BR131 Keskin Array S 84.75 313 P **P** **12 59 24.6 -0.8**
BR131 Keskin Array S 84.75 313 *deP* **P** **12 59 24.4 -1.1**
BRTR Keskin Array B 84.75 313 P **P** **12 59 24.4 -1.1**
comp=Z,5.8nm,0.7s,baz=110,slow=3.3,SNR=36
comp=Z,5.8nm,0.7s
VARL Varlezi 84.76 320 ⇑P **P** **12 59 25.3 +0.1**
SRU San Rafael Swe 84.77 48 P **P** **12 59 25.7 +0.1**
SRU lAmb lAmb 12 59 26.7
comp=Z,9.8nm,0.8s
SRU San Rafael Swe 84.77 48 P **P** **12 59 25.7 +0.1**
SRU pmax pmax
comp=Z,10.0nm,0.8s
PDMCI Parker Dam,Lak 84.83 54 P **P** **12 59 26.2 +0.4**
baz=301
BLS5 Blasjo 84.89 339 *eP* **P** **12 59 25.0 -0.6**
GLA Glamis 84.98 55 P **P** **12 59 26.6 0.0**
baz=301
CFR Carcaliu 85.03 319 ⇓P **P** **12 59 25.4 -1.1**
TPGR Topolog 85.05 319 ⇑P **P** **12 59 26.7 0.0**
TESR Tescani 85.07 321 ⇑P **P** **12 59 26.1 -0.6**
BIZ Bicaz 85.11 322 ⇑P **P** **12 59 26.5 -0.4**
BUR08 Bucovina Ar. S 85.17 323 P **P** **12 59 27.0 -0.4**
BURAR Bucovina Array 85.17 323 ⇑P **P** **12 59 26.4 -0.9**
BURAR Bucovina Array 85.17 323 P **P** **12 59 26.5 -0.9**
KWP Kalwaria Pacla 85.21 325 *eP* **P** **12 59 26.8 -0.6**
K22A Casper 85.32 43 P **P** **12 59 28.6 +0.3**
baz=305
K22A Casper 85.32 43 P **P** **12 59 28.3 0.0**
baz=305
VRI Vrincioaia 85.41 321 ⇑P **P** **12 59 27.3 -1.2**
HARR Harsova 85.43 319 ⇓P **P** **12 59 27.1 -1.4**
PLOR Plostina 85.47 321 ⇑P **P** **12 59 29.1 +0.3**
O20A White River Ci 85.68 46 P **P** **12 59 29.6 -0.6**
baz=304
OZUR 85.80 321 ⇓P **P** **12 59 29.5 -0.9**
Y14A Wickenburg 85.83 54 P **P** **12 59 30.5 -0.3**
RSSD Black Hills 85.94 41 P **P** **12 59 31.4 0.0**
baz=306
RSSD Black Hills 85.94 41 P **P** **12 59 30.6 -0.7**
baz=306
BMR Baia Mare 86.05 323 ⇑P **P** **12 59 30.8 -0.8**
UZH Uzhgorod 86.06 325 *eP* P 12 59 28.1 -3.5
UZH *eS* S 13 09 52.4 -8.7
UZH MLR MLR
comp=Z,150nm,16.0s
MLR Muntele Rosu 86.08 321 ⇑P **P** **12 59 32.2 +0.3**
MLR Muntele Rosu 86.08 321 P **P** **12 59 31.4 -0.5**
comp=Z,1.8nm,0.4s,baz=340,slow=12,SNR=5.6
comp=Z,1.8nm,0.4s
DOPR Dopca 86.09 321 ⇑P **P** **12 59 31.4 -0.4**
WUAZ Wupatki 86.13 52 P **P** **12 59 33.1 +0.7**
WUAZ Wupatki 86.13 52 P **P** **12 59 32.2 -0.2**
baz=302
OJC Ojcow 86.26 327 *eP* P 12 59 30.1 -2.5
OJC Ojcow 86.26 327 P **P** **12 59 31.0 -1.6**
OJC Ojcow 86.26 327 P **P** **12 59 31.0 -1.6**
OJC pmax pmax
comp=Z,30nm,1.1s
CRVS Cervenica-Dubn 86.31 325 *eP* **P** **12 59 32.5 -0.3**
CRVS pmax pmax
comp=Z,38nm,1.3s
CRVS Cervenica-Dubn 86.31 325 *eP* **P** **12 59 32.5 -0.3**
NIE Niedzica 86.55 326 *eP* **P** **12 59 32.2 -1.9**
VOIR 86.61 321 ⇑P **P** **12 59 33.4 -1.1**
N23A Red Feather La 86.69 45 P **P** **12 59 35.2 0.0**
baz=305
ARR Arges 86.88 321 ⇑P **P** **12 59 35.1 -0.7**
214A Organ Pipe Nat 87.01 55 P **P** **12 59 36.4 -0.3**
baz=302
DRGR 87.02 323 ⇑P **P** **12 59 35.4 -1.1**
SMCO Snowmass 87.03 47 P **P** **12 59 37.3 +0.2**
LANS Liptovska Anna 87.13 326 *eP* **P** **12 59 36.9 0.0**
LANS Liptovska Anna 87.13 326 *eP* **P** **12 59 36.9 0.0**
MVCO Mesa Verde 87.15 49 P **P** **12 59 37.0 -0.5**
baz=304
OKC Ostrava-Krasne 87.30 327 *eP* **P** **12 59 36.6 -1.0**
OKC Ostrava-Krasne 87.30 327 *ePCP* **P** **12 59 36.6 -1.0**
KSP Ksiaz 87.47 329 *eP* **P** **12 59 37.3 -1.2**
W18A Petrified Fore 87.47 51 P **P** **12 59 39.0 0.0**
baz=303
ISCO Idaho Springs 87.53 45 P **P** **12 59 39.7 +0.4**
baz=306
ISCO Idaho Springs 87.53 45 P **P** **12 59 38.9 -0.4**
baz=306
MORC Moravsky Berou 87.63 328 ⇑P **P** **12 59 38.6 -0.7**
MORC Moravsky Berou 87.63 328 P **P** **12 59 38.5 -0.7**
MORC Moravsky Berou 87.63 328 P **P** **12 59 38.5 -0.8**
MORC pmax pmax
comp=Z,17nm,1.0s
MORC Moravsky Berou 87.63 328 *eP* **P** **12 59 38.3 -1.0**
AGMN Agassiz Nation 87.70 34 P **P** **12 59 39.5 -0.1**
baz=312
AGMN Agassiz Nation 87.70 34 P **P** **12 59 38.9 -0.7**
baz=312
OSTC Ostas 87.71 329 *ePCP* **P** **12 59 38.9 -0.7**
PSZ Piszkesteto 87.74 325 ⇓P **P** **12 59 39.7 -0.2**
PSZ Piszkesteto 87.74 325 P **P** **12 59 39.3 -0.6**
KRLC Kraliky 87.78 328 *eP* **P** **12 59 38.7 -1.3**
KRLC Kraliky 87.78 328 *ePCP* **P** **12 59 38.7 -1.3**
DPC Dobruska-Polom 87.80 329 *eP* **P** **12 59 39.0 -1.1**
DPC Dobruska-Polom 87.80 329 *ePCP* **P** **12 59 39.0 -1.1**
UPC Upice 87.83 329 *eP* **P** **12 59 39.5 -0.7**
UPC Upice 87.83 329 *ePCP* **P** **12 59 39.5 -0.7**
VYHS Vyhne 87.88 326 *eP* **P** **12 59 39.9 -0.6**
VYHS pmax pmax
comp=Z,18nm,1.0s
VYHS Vyhne 87.88 326 *eP* **P** **12 59 39.9 -0.6**
SIRR Siria 87.92 323 ⇓P **P** **12 59 40.2 -0.5**
S22A 4UR Ranch, Cre 87.94 48 P **P** **12 59 41.3 0.0**
baz=305
JAVC Velka Javorina 88.20 327 *eP* **P** **12 59 42.3 +0.3**
TUC Tucson 88.27 54 P **P** **12 59 42.4 -0.4**
baz=303
Q24A Divide 88.31 46 P **P** **12 59 42.4 -0.7**
baz=306
BZS Buzias 88.36 323 ⇑P **P** **12 59 41.2 -1.6**
VRAC Vranov 88.40 328 ⇑P **P** **12 59 42.5 -0.4**
VRAC Vranov 88.40 328 P **P** **12 59 42.4 -0.4**
comp=Z,8.5nm,0.8s,baz=46,slow=6.6,SNR=14
comp=Z,8.5nm,0.8s
VRAC Vranov 88.40 328 *eP* **P** **12 59 42.2 -0.7**
BRG Berggiesshubel 88.50 330 *eP* **P** **12 59 42.4 -1.0**
BRG Amp 12 59 44.8
comp=Z,8.9nm,1.1s
BRG Berggiesshubel 88.50 330 *eP* **P** **12 59 42.3 -1.0**
BRG pmax pmax
comp=Z,9.0nm,1.1s
SMOL Smolenice 88.55 327 *eP* **P** **12 59 43.6 0.0**
SMOL pmax pmax
comp=Z,17nm,1.3s
CLL Collm 88.59 331 *i* P **P** **12 59 41.8 -1.9**
CLL *e* 13 00 01.0
CLL pmax pmax
comp=Z,16nm,1.2s
CLL Collm 88.59 331 *i* P **P** **12 59 41.8 -1.9**
comp=Z,16nm,1.2s

CLL *epP* **pP** **13 00 01.0 +1.7**
CLL *ePP* **PP** **13 03 11.0 -1.0**
KRUC Moravsky 88.67 328 *eP* **P** **12 59 43.2 -0.9**
MODS Modra-Piesok 88.72 327 *eP* **P** **12 59 44.1 -0.4**
MODS pmax pmax
comp=Z,28nm,1.2s
MODS Modra-Piesok 88.72 327 *eP* **P** **12 59 44.1 -0.4**
SDCO Great Sand Dun 88.80 47 P **P** **12 59 45.4 +0.1**
baz=306
SDCO Great Sand Dun 88.80 47 P **P** **12 59 44.8 -0.6**
baz=306
MDVR Moldovita 88.85 322 ⇓P **P** **12 59 43.7 -1.5**
PRU Pruhonice 88.87 329 *eP* **P** **12 59 44.3 -0.8**
PRU Pruhonice 88.87 329 *ePCP* **P** **12 59 44.3 -0.8**
TREC Trest 88.93 328 *eP* **P** **12 59 44.1 -1.3**
TREC Trest 88.93 328 *ePCP* **P** **12 59 44.1 -1.3**
VTS Vitosha 89.39 320 ⇑P **P** **12 59 47.1 -0.7**
VTS Vitosha 89.39 320 P **P** **12 59 46.8 -1.1**
VTS Vitosha 89.39 320 P **P** **12 59 46.8 -1.1**
VTS pmax pmax
comp=Z,18nm,0.8s
MPLH Magyarpolny 89.42 326 P **P** **12 59 46.2 -1.6**
MORH Mrgy, Hungar 89.52 324 ⇑P **P** **12 59 47.0 -1.2**
FRGS Fruska Gora 89.62 323 ⇓P **P** **12 59 47.7 -1.0**
RONA Rosalia, Austr 89.67 327 *eP* **P** **12 59 48.0 -0.9**
comp=Z,9.9nm,0.9s,SNR=6.1
CONA Conrad Observa 89.71 327 *eP* **P** **12 59 48.1 -1.1**
comp=Z,12nm,1.0s,SNR=8.6
ANMO Albuquerque 89.79 50⇑ *iP* **P** **12 59 50.6 +0.6**
ANMO pmax pmax
comp=Z,5.0nm,2.5s
ANMO Albuquerque 89.79 50 P **P** **12 59 50.1 +0.2**
baz=305
ANMO Albuquerque 89.79 50 P **P** **12 59 50.0 0.0**
baz=305
CKRC Cesky Krumlov 89.81 328 *ePCP* **P** **12 59 48.5 -1.0**
CKRC *ex* x 12 59 55.3
T25A Trinidad 89.86 47 P **P** **12 59 50.0 -0.3**
baz=306
KOVH Kovagotottos 89.88 325 P **P** **12 59 48.2 -1.7**
KHC Kasperske Hory 89.92 329 *eP* **P** **12 59 48.5 -1.6**
KHC Kasperske Hory 89.92 329 *ePCP* **P** **12 59 48.5 -1.6**
KHC *ex* x 12 59 55.8
Y22A Socorro 90.03 51 P **P** **12 59 50.6 -0.4**
baz=305
GEC2 GERESS Array S 90.07 329 P **P** **12 59 49.8 -1.1**
GEC2 lAmb lAmb 12 59 50.5
comp=Z,8.0nm,1.0s
GERES GERESS Array B 90.07 329 P **P** **12 59 49.0 -1.8**
comp=Z,5.1nm,0.9s,baz=49,slow=4.1,SNR=33
comp=Z,5.1nm,0.9s
121A Cookes Peak, D 90.26 52 P **P** **12 59 51.6 -0.5**
baz=305
ECSD EROS Data Cent 90.35 38 P **P** **12 59 51.5 -0.7**
baz=312
ARSA Arzberg 90.35 327 *eP* **P** **12 59 50.7 -1.4**
comp=Z,8.2nm,1.0s,SNR=8.9
MOA Molln 90.53 328 *eP* **P** **12 59 51.7 -1.2**
comp=Z,7.7nm,1.0s,SNR=7.5
BIOA Bad Ischl, Aus 90.94 328 *eP* **P** **12 59 53.6 -1.2**
comp=Z,18nm,1.0s,SNR=9.5
PERS Pernice 90.99 326 *i* P **P** **12 59 53.9 -1.2**
SOKA Soboth 91.00 327 *eP* **P** **12 59 53.6 -1.5**
comp=Z,15nm,1.1s,SNR=17
BGNE Belgrade 91.02 41 P **P** **12 59 54.5 -0.8**
baz=310
EKA Eskdalemuir Ar 91.20 341 P **P** **12 59 54.7 -1.1**
comp=Z,4.6nm,1.0s,baz=70,slow=3.6,SNR=5.6
comp=Z,4.6nm,1.0s
SPMN Marine on St. 91.34 35 P **P** **12 59 56.2 -0.5**
baz=314
OBKA Obir 91.35 327 *eP* **P** **12 59 54.9 -1.9**
comp=Z,6.8nm,1.1s
LJU Ljubljana 91.69 326 *i* P **P** **12 59 57.0 -1.3**
MYKA Terra Mystica 91.70 327 *eP* **P** **12 59 56.5 -1.9**
comp=Z,3.1nm,0.4s
BOJS Bojanci 91.72 326 *eP* **P** **12 59 57.2 -1.2**
PDG Podgorica 91.74 321 ⇓P **P** **12 59 57.6 -1.0**
CBKS Cedar Bluff 91.75 43 P **P** **12 59 57.8 -1.0**
baz=309
ABTA Abfaltersbach 92.15 328 *eP* P 12 59 58.1 -2.4
comp=Z,17nm,1.0s,SNR=8.7
WATA Walderalm 92.15 329 *eP* **P** **12 59 58.7 -1.9**
comp=Z,6.4nm,1.2s
WTTA Wattenberg 92.17 329 *eP* **P** **12 59 59.5 -1.3**
comp=Z,10nm,1.1s
MOTA Moosalm 92.36 329 *eP* **P** **12 59 59.8 -1.7**
comp=Z,5.8nm,1.0s
SQTA Sankt Quirin 92.40 329 *eP* **P** **13 00 00.0 -1.7**
comp=Z,11nm,1.4s
MNTX Cornudas Mount 92.40 52 P **P** **13 00 01.9 0.0**
baz=306
MNTX Cornudas Mount 92.40 52 P **P** **13 00 01.3 -0.6**
baz=306
RETA Reutte 92.41 329 *eP* **P** **13 00 00.2 -1.5**
comp=Z,10nm,1.2s,SNR=8.7
FETA Feichten 92.77 329 *eP* **P** **13 00 01.6 -1.9**
comp=Z,8.8nm,1.2s,SNR=7.9
MSTX Muleshoe 92.82 49 P **P** **13 00 04.2 +0.3**
baz=307
MSTX Muleshoe 92.82 49 P **P** **13 00 03.0 -1.0**
baz=307
BFO Black Forest 92.83 331 P **P** **13 00 03.5 -0.1**
BFO lAmb lAmb 13 00 03.9
comp=Z,13nm,1.0s
BFO Black Forest 92.83 331 P **P** **13 00 03.5 -0.1**
BFO pmax pmax
comp=Z,13nm,1.0s
DAVA Damuels 92.95 330 *eP* **P** **13 00 03.2 -1.1**
comp=Z,22nm,1.1s,SNR=6.7
AMTX Amarillo 92.98 47 P **P** **13 00 04.7 +0.1**
AMTX Amarillo 92.98 47 P **P** **13 00 05.3 +0.7**
baz=308
AMTX Amarillo 92.98 47 P **P** **13 00 03.4 -1.2**
baz=308
DAVOX Davos/Dischmat 93.33 329 P **P** **13 00 05.1 -1.1**
comp=Z,9.5nm,1.0s,baz=315,slow=1.8,SNR=15
comp=Z,9.5nm,1.0s
KSU1 Kansas State U 93.42 42 P **P** **13 00 06.0 -0.4**
baz=311
KSU1 Kansas State U 93.42 42 P **P** **13 00 05.3 -1.1**
baz=311
TX31 Lajitas Ar. Si 94.99 53 P **P** **13 00 14.1 +0.1**
baz=307
TXAR Lajitas Array 94.99 53 P **P** **13 00 14.1 +0.1**
comp=Z,1.8nm,0.8s,baz=304,slow=2.9,SNR=16
comp=Z,1.8nm,0.8s
ABTX Abilene, Hawle 95.71 48 P **P** **13 00 16.5 -0.6**
baz=309
TORD Torodi Ar. Bea 123.35 312 PKP **PKPdf** **13 05 47.0 -1.4**
comp=Z,3.4nm,0.8s,baz=52,slow=1.3,SNR=43
TORD PP PP **13 07 25.6 -3.4**
comp=Z,1.3nm,0.8s,baz=32,slow=7.2,SNR=3.6
TORD Torodi Ar. Bea 123.35 312 PKPdf **PKPdf** **13 05 47.2 -1.3**
BOSA Boshof 124.91 254 PKP **PKPdf** **13 05 50.3 -0.9**
comp=Z,1.8nm,0.9s,baz=64,slow=2.5,SNR=3.6
TROLL Troll, Antarti 131.25 196 PKPdf **PKPdf** **13 06 00.8 -1.2**
SDV Santo Domingo 131.34 45 *eP* **PKPdf** **13 06 05.7 +1.7**
OTAV Otavalo 132.01 60 *eP* **PKPdf** **13 06 08.1 +2.5**
DBIC Dimbokro 132.45 312 PKP **PKPdf** **13 06 04.7 -1.1**
comp=Z,1.7nm,0.4s,baz=256,slow=6.1,SNR=3.3
DBIC SKPbc **SKPbc** **13 09 25.2 -2.5**
comp=Z,6.7nm,0.9s,baz=86,slow=4.9,SNR=3.7
SNAA Sanae 132.71 194 PKPdf **PKPdf** **13 06 03.2 -1.5**
SNAA Sanae 132.71 194 PKPdf **PKPdf** **13 06 04.1 -0.6**
SNAA Sanae 132.71 194 PKIKP **PKPdf** **13 06 04.1 -0.6**
VNA2 Neumayer--Watz 134.25 194 PKPdf **PKPdf** **13 06 05.0 -2.5**
baz=91,slow=1.0
VNA3 Neumayer Olymp 134.44 192 PKPdf **PKPdf** **13 06 07.5 -0.4**
VNA1 Neumayer--Stat 134.64 194 PKPdf **PKPdf** **13 06 07.1 -1.1**
PMSA Palmer Station 140.28 163 *eP* **PKiKP** **13 06 22.7 +1.5**
H03N2 Juan Fernandez 144.91 108 T T 15 48 20.1
baz=278,slow=74,SNR=20
H03N3 Juan Fernandez 144.92 108 T T 15 48 26.1
baz=278,slow=74,SNR=21
H03N1 Juan Fernandez 144.93 108 T T 15 48 25.8
baz=278,slow=74,SNR=24
MACA Manacapuru-AM 146.88 44 *eP* **PKPdf** **13 06 32.3 +0.4**
ETMB Extrema 147.76 60 **PKPdf** **13 06 32.9 -0.4**
ETMB Extrema 147.76 60 *eP* **PKPdf** **13 06 34.7 +1.4**
MCPB Macapa, AP 148.97 28 *eP* **PKPdf** **13 06 38.1 +2.8**
MALB Monte Alegre 149.32 33 *eP* **PKPdf** **13 06 39.1 +3.2**
LPAZ La Paz 149.84 73 PKP **PKPdf** **13 06 37.6 +0.2**
comp=Z,6.1nm,0.5s,baz=31,slow=4.3,SNR=5.8
LPAZ PKPbc **PKPbc** **13 06 42.0 -0.3**
comp=Z,5.5nm,0.5s,baz=3.1,slow=6.6,SNR=21

LPAZ	La Paz	149.84	73	*e*P	PKPdf	13 06 40.4	+3.0
ITTB	Itaituba	150.72	38	*e*P	PKPdf	13 06 41.1	+3.0
PLCA	Paso Flores	150.92	123	PKPbc	PKPbc	13 06 42.8	-0.7
	comp=Z,8.7nm,0.8s,baz=246,slow=3.1,SNR=21						
PLCA	Paso Flores	150.92	123	*e*P	PKPdf	13 06 42.0	+4.3
ROC1	El Roble	151.53	107		PKPdf	13 06 43.9	+4.8
BO02	Sierra Bellavi	151.67	111		PKPbc	13 06 45.4	0.0
LVC	Limon Verde	151.72	85	*e*P	PKPdf	13 06 43.0	+3.1
TMAB	Tom-Au,PA,Br	152.28	22	*e*P	PKPdf	13 06 43.2	+2.7
NPGB	Novo Progresso	153.14	40	*e*P	PKPdf	13 06 44.8	+3.0
ROSB	Rosrio	153.85	14	*e*P	PKPdf	13 06 45.6	+2.8
VILB	Vilhena	154.29	57	*e*P	PKPdf	13 06 46.9	+3.5
PRPB	Parauapebas	155.15	26	*e*P	PKPdf	13 06 47.6	+3.0
PDRB	Porto dos Gac	155.82	49	*e*P	PKPdf	13 06 49.0	+3.6
CLDB	Colider	155.88	47	*e*P	PKPdf	13 06 48.6	+3.1
PTLB	Pontes e Lacer	156.65	60	*e*P	PKPdf	13 06 50.0	+3.6
RCBR	Riachuelo	157.27	354	*e*P	PKPdf	13 06 50.3	+2.9
SMTB	Santa Maria do	158.49	26	*e*P	PKPdf	13 06 52.2	+3.3
SNDB	Serra Nova Dou	159.45	39	*e*P	PKPdf	13 06 53.9	+3.9
SDBA	SAO DESIDERIO	162.74	23	*e*P	PKPdf	13 06 57.2	+3.7
CRSM	Crissiumal (Br	165.97	89	*e*P	PKPdf	13 07 01.3	+5.3
PLTB	Pedras Altas	166.30	107	*e*P	PKPdf	13 07 01.0	+4.9
FRBT	Francisco Belt	166.53	82	*e*P	PKPdf	13 07 00.9	+4.4
CPSB	Cacapava Do Su	166.60	102	*e*P	PKPdf	13 07 01.7	+5.3
CMC01	Camacan, BA	166.79	6	*e*P	PKPdf	13 07 00.9	+4.0
ALGR	Alto Alegre (B	166.98	95	*e*P	PKPdf	13 07 02.2	+5.4
MC01	Montes Claros	167.06	25	*e*P	PKPdf	13 07 01.4	+4.2
DIAM	Diamantina, MG	168.61	27	*e*P	PKPdf	13 07 02.6	+4.3

MOS ***21*** *12:49:11.7±0.8,40.˚79N×143.˚59E,h12km,mb5.4/70, MS4.5/25,Error ellipse: s-maj=6.4km s-min=4.3km az=112.3*

IDC ***21*** *12:49:11.6±0.7,40.˚75N×143.˚62E,h0km,mb4.8/39, mbtmp4.8/44,ML3.3/4,MS4.6/40,Error ellipse: s-maj=16.1km s-min=12.9km az=145.0*

BJI ***21*** *12:49:12.8±0.0,40.˚56N×143.˚25E,h11km,mb5.2/79, mB5.2/64,Ms5.3/88,Ms7 5.1/81*

NIED ***21*** *12:49:12.7,40.˚65N×143.˚69E,h22km,MW5.2,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr2.63; Mθθ3.06; Mϕϕ-5.69; Mrθ3.49; Mθϕ-1.46; Mrϕ3.49; Fault plane solution: M₀7.06000×10¹⁶ NP1: ϕs151.00000°,δ38.00000°,λ23.00000°. NP2:ϕs42.00000°, δ76.00000°,λ126.00000°*

JMA ***21*** *12:49:12.7±0.2,40.˚6N±0.˚7×14.˚4E±.˚,h22km,MD5.2/38, MW5.3/38,FAR E OFF SANRIKU*

JMA Felt II J1 at FAR E OFF SANRIKU .

NEIC ***21*** *12:49:13.6±2.2,40.˚68N±0.˚02×143.˚8E±0.˚1,h10km±1km, mb5.2/130,Mww5.2,Error ellipse: s-maj=14.2km s-min=4.0km az=89.0*

GCMT ***21*** *12:49:17.6±0.2,40.˚70N±0.˚01×143.˚82E±0.˚01,h22km, MW5.2/136,Moment Tensor Solution. s77,c112; s136,c215; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.69±.16; Mθθ-0.64±.09; Mϕϕ-4.06±.11; Mrθ2.73±.18; Mθϕ-0.71±.06; Mrϕ4.64±.20; Best double couple: M₀6.96700×10¹⁶ NP1:ϕs25.00000°,δ70.00000°, λ98.00000°. NP2:ϕs182.00000°,δ21.00000°,λ68.00000°. Principal axes: T 7.3310, Plg64.0000°, Azm308.0000°; N -0.7340, Plg8.0000°, Azm203.0000°; P -6.6020, Plg25.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***21*** *12:49:18,40.˚69N×143.˚89E,h18km,Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁶Nm; Mrr3.26; Mθθ-0.26; Mϕϕ-3.00; Mrθ2.49; Mθϕ-1.05; Mrϕ5.62; Fault plane solution: M₀6.98000×10¹⁶ NP1: ϕs194.00000°,δ14.00000°,λ81.00000°. NP2:ϕs23.00000°, δ76.00000°,λ92.00000°. Principal axes: T 6.9430, Plg59.0000°, Azm296.0000°; N 0.0788, Plg2.0000°, Azm203.0000°; P -7.0218, Plg31.0000°, Azm111.0000°;*

ISC 21 12:49:14.0±0.5,40.72N±0.˚03×143.˚70E±0.˚03,h17km±2km, h17km:pP-P,n860,σ1s55/842,mb5.1/203,MS5.0/85, 82C-29D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERM	Erimo	1.36	343	Pn	Pn	12 49 37.8	-0.3
ERM	Erimo	1.36	343	*c* *i*P	Pn	12 49 37.9	-0.3
JEM	Erimo	1.36	343	P	Pn	12 49 37.8	-0.3
JEM	Erimo	1.36	343	A	A	12 49 37.8	
	comp=E,52nm,4.1s,comp=E,39nm,1.1s						
JKEN	Kujiedanarisaw	1.60	252	P	Pn	12 49 39.6	-1.8
JKEN	Kujiedanarisaw	1.60	252	A	A	12 49 39.6	
	comp=E,42nm,3.9s,comp=E,51nm,2.3s						
JTHR	Tokachihiroo	1.60	349	P	Pn	12 49 41.2	-0.2
JTHR				*e*S	Sn	12 50 02.0	+0.3
JTHR	Tokachihiroo	1.60	349	A	A	12 49 41.2	
	comp=E,39nm,5.7s,comp=E,27nm,1.6s						
JTH	Tanohata	1.60	242	*e*P	Pn	12 49 40.0	-1.5
JTH	Tanohata	1.60	242	A	A	12 49 40.0	
	comp=E,45nm,3.1s,comp=E,44nm,3.0s						
JANG	Nango	1.70	259	P	Pn	12 49 41.4	-1.4
JANG	Nango	1.70	259	A	A	12 49 41.4	
	comp=E,24nm,9.4s,comp=E,25nm,1.2s						
JNBK	Urakawa-nobuka	1.71	336	P	Pn	12 49 43.3	+0.3
JNBK	Urakawa-nobuka	1.71	336	A	A	12 49 43.3	
	comp=E,54nm,1.4s,comp=E,70nm,4.5s						
JARK	Aomorirokkasho	1.79	280	A	A	12 49 43.3	
	comp=E,34nm,1.3s,comp=E,26nm,3.0s						
MIYJ	Miyakonagasawa	1.84	232	A	A	12 49 43.1	
	comp=E,25nm,4.8s,comp=E,21nm,3.1s						
JAHD	Aomorihigashid	1.87	288	A	A	12 49 44.5	
	comp=E,61nm,1.0s,comp=E,64nm,1.2s						
JCH	Churui	1.91	353	P	Pn	12 49 45.4	-0.3
JCH				*e*S	Sn	12 50 09.4	0.0
JCH	Churui	1.91	353	A	A	12 49 45.4	
	comp=E,34nm,6.4s,comp=E,28nm,5.3s						
JSHD	Hidakashinhida	1.93	332	A	A	12 49 46.0	
	comp=E,61nm,1.0s,comp=E,72nm,4.1s						
JKZ	Kuzumaki	1.95	249	A	A	12 49 45.0	
	comp=E,27nm,3.3s,comp=E,44nm,3.0s						
JTM	Tenmabayashi	2.00	273	Pn	Pn	12 49 47.1	+0.1
JTM	Tenmabayashi	2.00	273	A	A	12 49 46.2	
	comp=E,32nm,4.0s,comp=E,31nm,0.7s						
JOT	Ohata	2.11	289	P	Pn	12 49 48.2	-0.3
JOT	Ohata	2.11	289	A	A	12 49 48.2	
	comp=E,24nm,1.2s,comp=E,22nm,1.2s						
JOB	Onbets	2.19	3	A	A	12 49 49.9	
	comp=E,40nm,3.4s,comp=E,53nm,5.1s						
JOM	Ohasama	2.22	237	P	Pn	12 49 49.6	-0.4
JOM	Ohasama	2.22	237	A	A	12 49 49.6	
	comp=E,28nm,4.1s,comp=E,31nm,4.6s						
OFUJ	Ofunato	2.26	224	A	A	12 49 49.1	
	comp=E,24nm,8.2s,comp=E,20nm,2.6s						
JBT2	Biratori 2	2.29	335	A	A	12 49 51.3	
	comp=E,27nm,4.8s,comp=E,26nm,4.6s						
JSZI	Iwateshizukuis	2.32	246	A	A	12 49 50.2	
	comp=E,80nm,2.8s,comp=E,106nm,2.9s						
JIAM	Iburiatsuma	2.32	326	A	A	12 49 51.6	
	comp=E,66nm,2.5s,comp=E,81nm,5.1s						
JKB	Kayabe	2.32	301	A	A	12 49 51.4	
	comp=E,21nm,3.8s,comp=E,20nm,2.6s						
JAH	Hinai	2.40	258	A	A	12 49 51.6	
	comp=E,50nm,0.6s,comp=E,43nm,3.5s						
JAK	Akkeshi	2.40	18	*e*P	Pn	12 49 52.1	-0.3
JAK				*e*S	Sn	12 50 19.9	-1.4
JAK	Akkeshi	2.40	18	A	A	12 49 52.1	
	comp=E,28nm,4.0s,comp=E,23nm,2.0s						
JSI2	Shiura 2	2.51	279	A	A	12 49 53.7	
	comp=E,53nm,1.1s,comp=E,38nm,0.9s						
JHHS	Hirosakihyakuz	2.54	270	A	A	12 49 53.9	
	comp=E,78nm,4.0s,comp=E,79nm,3.1s						
JKMT	Kesennumamotoy	2.56	223	A	A	12 49 53.4	
	comp=E,23nm,7.7s,comp=E,19nm,4.7s						
JAR	Ashorobuto	2.58	1	*e*P	Pn	12 49 54.0	-0.9
JAR				S	Sn	12 50 23.9	-1.9
JAR	Ashorobuto	2.58	1	A	A	12 49 54.0	
	comp=E,30nm,6.0s,comp=E,21nm,1.8s						
JFR	Furan	2.58	342	A	A	12 49 55.5	
	comp=E,18nm,2.8s,comp=E,15nm,4.7s						
JMK	Ichinoseki	2.60	228	*e*P	Pn	12 49 54.8	-0.4
JMK				*e*S	Sn	12 50 25.6	-0.7
JMK	Ichinoseki	2.60	228	A	A	12 49 54.8	
	comp=E,24nm,6.7s,comp=E,20nm,3.5s						
JKHN	Kushirohamanak	2.60	24	A	A	12 49 55.8	
	comp=E,23nm,4.2s,comp=E,19nm,4.6s						
JSR	Shiriuchi	2.61	289	A	A	12 49 55.2	
	comp=E,24nm,2.3s,comp=E,18nm,2.8s						
JNB	Noboribetsu	2.65	312	A	A	12 49 56.2	
	comp=E,13nm,6.8s,comp=E,12nm,4.0s						
JRG	Rokugo	2.70	242	A	A	12 49 55.6	
	comp=E,29nm,0.9s,comp=E,46nm,3.9s						
JEW	Eniwo	2.71	322	Pn	Pn	12 49 56.5	-0.1
JEW	Eniwo	2.71	322	P	Pn	12 49 57.5	+0.8
JEW	Eniwo	2.71	322	A	A	12 49 57.5	
	comp=E,56nm,3.4s,comp=E,53nm,4.4s						
JNTW	Noshirotokiwa	2.73	262	A	A	12 49 56.5	
	comp=E,125nm,3.0s,comp=E,114nm,5.2s						
JIW	Iwasaki	2.81	269	A	A	12 49 57.7	
	comp=E,24nm,2.7s,comp=E,27nm,4.5s						
JYM2	Yakumo 2	2.87	300	A	A	12 49 59.1	
	comp=E,12nm,1.3s,comp=E,13nm,2.9s						
JIO	Ouri	2.90	220	A	A	12 49 58.2	
	comp=E,18nm,4.0s,comp=E,13nm,5.1s						
JOMM	Oshimamatsumae	2.90	287	P	Pn	12 49 59.2	-0.1
JYW	Yuwa	2.92	247	A	A	12 49 58.9	
	comp=E,42nm,3.5s,comp=E,91nm,4.1s						
JNK	Nakash	2.96	15	A	A	12 50 01.0	
	comp=E,10.0nm,5.7s,comp=E,9.0nm,5.4s						
JAB	Ashibetsu	2.99	339	A	A	12 50 01.4	
	comp=E,33nm,2.6s,comp=E,41nm,3.2s						
JOFO	Osakifurukawao	3.02	226	A	A	12 49 59.9	
	comp=E,124nm,3.4s,comp=E,132nm,2.6s						
NMR	Nemuro--Hokkai	3.05	29	*e*P	Pn	12 50 01.3	-0.1
NMR				*e*S	Sn	12 50 34.6	-2.9
NEM2	Nemuro 2	3.05	29	*e*P	Pn	12 50 00.6	-0.8
NEM2				S	Sn	12 50 33.5	-4.0
NEM2	Nemuro 2	3.05	29	A	A	12 50 00.6	
	comp=E,10.0nm,2.6s,comp=E,7.0nm,4.9s						
JISS	Ishikarishitsu	3.07	327	A	A	12 50 02.3	
	comp=E,45nm,4.0s,comp=E,57nm,5.2s						
JYK	Kaneyama	3.14	236	P	Pn	12 50 02.5	-0.1
JYK	Kaneyama	3.14	236	A	A	12 50 02.5	
	comp=E,13nm,5.5s,comp=E,19nm,5.1s						
JNSB	Nemuroshibetsu	3.21	17	A	A	12 50 04.4	
	comp=E,25nm,5.5s,comp=E,22nm,4.1s						
JKK2	Kamakawa 2	3.23	348	P	Pn	12 50 04.0	+0.1
JKK2	Kamakawa 2	3.23	348	A	A	12 50 04.0	
	comp=E,9.0nm,3.9s,comp=E,13nm,6.2s						
JTKR	Abashiri--Toko	3.25	3	*e*P	Pn	12 50 03.8	-0.3
JTKR				*e*S	Sn	12 50 41.2	-1.3
JTKR	Abashiri--Toko	3.25	3	A	A	12 50 03.8	
	comp=E,10.0nm,1.3s,comp=E,9.0nm,4.0s						
JOU	Okura	3.32	226	A	A	12 50 04.3	
	comp=E,23nm,4.6s,comp=E,23nm,4.0s						
JHST	Hiyamasetana	3.33	302	A	A	12 50 05.7	
	comp=E,12nm,4.5s,comp=E,15nm,4.6s						
JSH	Shimam	3.34	306	A	A	12 50 06.0	
	comp=E,10.0nm,3.8s,comp=E,7.0nm,6.7s						
JHR	Hokuryu	3.36	335	P	Pn	12 50 07.2	+1.6
JHR	Hokuryu	3.36	335	A	A	12 50 07.2	
	comp=E,35nm,3.0s,comp=E,34nm,3.7s						
JYYZ	Yamagatayuza	3.36	241	A	A	12 50 05.1	
	comp=E,37nm,2.5s,comp=E,49nm,3.6s						
JRA	Rausu	3.39	18	*e*P	Pn	12 50 05.8	-0.1
JRA				*e*S	Sn	12 50 43.6	-2.2
JRA	Rausu	3.39	18	A	A	12 50 05.8	
	comp=E,10.0nm,7.0s,comp=E,8.0nm,4.6s						
JOSM	Okushiri--Mats	3.46	295	*e*P	Pn	12 50 06.4	-0.5
ASAJ	Asahikawa	3.49	347	A	A	12 50 08.5	
	comp=E,11nm,3.2s,comp=E,7.0nm,4.2s						
JTB	Tobi-shima	3.53	246	A	A	12 50 07.5	
	comp=E,21nm,5.0s,comp=E,20nm,3.1s						
JSK	Shakotan	3.56	319	A	A	12 50 09.2	
	comp=E,12nm,3.1s,comp=E,11nm,4.0s						
RUSJ	Misakicho	3.57	18	*e*P	Pn	12 50 09.3	+0.7
RUSJ				*e*S	Sn	12 50 49.1	-1.3
JOG3	Oga3	3.62	259	A	A	12 50 01.3	
	comp=E,39nm,2.7s,comp=E,25nm,3.2s						
JMM	Marumori	3.63	219	Pn	Pn	12 50 08.7	-0.7
JMM	Marumori	3.63	219	A	A	12 50 08.6	
	comp=E,16nm,3.8s,comp=E,15nm,5.0s						
YUK	Yuzh-Kuril'sk	3.68	25	*e*P	Pn	12 50 10.1	0.0
YUK				*e*S	Sn	12 50 51.0	-2.0
YUK				pmax	pmax		
	comp=Z,947nm,0.2s						
YUK				pmax	pmax		
	comp=E,267nm,0.3s						
YUK				pmax	pmax		
	comp=N,332nm,0.2s						
YUK				smax	smax		
	comp=N,4μm,0.4s						
YUK				smax	smax		
	comp=E,5μm,0.5s						
YUK				smax	smax		
	comp=E,12μm,1.0s						
YUK				smax	smax		
	comp=N,9μm,1.1s						
YUK				MLR	MLR		
	comp=Z,7μm,14.0s						
YUK				MLR	MLR		
	comp=E,15μm,15.0s						
YUK				MLR	MLR		
	comp=N,14μm,14.0s						
JMST	Minamisoumatoc	3.70	217	A	A	12 50 09.6	
	comp=N,9.0nm,5.3s,comp=N,9.0nm,7.2s						
JYA	Atsumi	3.74	237	A	A	12 50 10.3	
	comp=N,24nm,2.8s,comp=N,21nm,0.9s						
JYS	Shirataka	3.76	230	A	A	12 50 10.5	
	comp=N,25nm,6.1s,comp=N,32nm,2.9s						
JSS	Shosan	3.92	340	A	A	12 50 14.6	
	comp=N,16nm,4.9s,comp=N,15nm,5.5s						
JYAR	Yonezawaarcadi	3.93	226	A	A	12 50 12.9	
	comp=N,34nm,1.2s,comp=N,33nm,4.6s						
JFK	Kawauchi	4.00	214	A	A	12 50 13.8	
	comp=N,14nm,5.6s,comp=N,6.0nm,7.6s						
JYG	Yagishiri	4.07	336	A	A	12 50 16.6	
	comp=N,9.0nm,5.9s,comp=N,6.0nm,6.7s						
JAW	Awa shima	4.11	238	A	A	12 50 15.7	
	comp=N,13nm,3.7s,comp=N,13nm,8.4s						
JFT	Otama	4.13	220	A	A	12 50 15.6	
	comp=N,16nm,5.3s,comp=N,20nm,6.3s						
ONAJ	Iwakimizuishiy	4.26	213	A	A	12 50 17.4	
	comp=N,12nm,6.8s,comp=N,9.0nm,4.9s						
JFFD	Fukushimafurud	4.37	215	A	A	12 50 19.0	
	comp=N,9.0nm,5.6s,comp=N,8.0nm,7.9s						
JFY	Yanaizu	4.54	224	A	A	12 50 21.4	
	comp=N,10.0nm,6.0s,comp=N,10.0nm,4.3s						
JRR	Rishiri	4.75	339	A	A	12 50 26.2	
	comp=N,28nm,5.3s,comp=N,45nm,5.7s						
JSB	Shiboa	4.76	219	A	A	12 50 24.6	
	comp=N,19nm,3.3s,comp=N,20nm,6.9s						
JWK2	Keihoku	4.78	345	A	A	12 50 26.6	
	comp=N,11nm,4.1s,comp=N,8.0nm,6.4s						
JSD	Sado	4.99	239	Pn	Pn	12 50 28.3	+0.2
JSD	Sado	4.99	239	A	A	12 50 28.0	
	comp=N,4.0nm,2.9s,comp=N,5.0nm,4.4s						
JIZZ	Izumozaki	5.02	232	A	A	12 50 28.3	
	comp=N,33nm,4.3s,comp=N,28nm,3.8s						
JUON	Uonuma	5.04	227	A	A	12 50 28.5	
	comp=N,6.0nm,4.7s,comp=N,8.0nm,4.9s						
JAG	Ashikaga	5.42	219	A	A	12 50 33.8	
	comp=N,6.0nm,6.7s,comp=N,6.0nm,5.4s						
KUR	Kuril'sk	5.45	33	*e*P	Pn	12 50 34.4	0.0
KUR				*i* S	Sn	12 51 34.9	-1.7
KUR				pmax	pmax		
	comp=Z,668nm,0.8s						
KUR				pmax	pmax		
	comp=N,321nm,0.5s						
KUR				pmax	pmax		
	comp=E,512nm,0.6s						
KUR				smax	smax		
	comp=E,1μm,0.7s						
KUR				smax	smax		
	comp=N,1μm,0.9s						
KUR				MLR	MLR		
	comp=Z,9μm,15.0s						
JJN	Nakama	5.63	232	A	A	12 50 36.8	
	comp=Z,12nm,5.0s,comp=Z,13nm,7.6s						
JGK	Kuni	5.73	225	A	A	12 50 38.2	
	comp=Z,10.0nm,9.6s,comp=Z,15nm,5.9s						
JHU	Hanno	5.97	217	A	A	12 50 41.4	
	comp=Z,6.0nm,3.4s,comp=Z,5.0nm,3.4s						
MJAR	Matsushiro Arr	5.99	228	Pn	Pn	12 50 42.2	+0.5
	comp=Z,1.0nm,0.3s,baz=39,slow=14,SNR=3.1						
MJAR				LR	LR	12 53 19.9	
	comp=Z,6μm,19.5s,baz=112,slow=42 comp=Z,36nm,0.7s						
JNG	Nsakai	6.14	227	A	A	12 50 44.0	
	comp=Z,4.0nm,7.0s,comp=Z,5.0nm,4.0s						
JKUC	kamogawauchiur	6.20	208	A	A	12 50 44.5	
	comp=Z,15nm,4.3s,comp=Z,11nm,7.2s						
YSS	Yuzh-Sakhalins	6.27	354	Pn	Pn	12 50 46.0	+0.4
YSS	Yuzh-Sakhalins	6.27	354	*e*P	Pn	12 50 46.0	+0.4
YSS				*e*S	Sn	12 51 56.0	-0.8
YSS				pmax	pmax		
	comp=Z,700nm,7.2s						
YSS				pmax	pmax		
	comp=N,600nm,8.3s						
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
YSS				smax	smax		
	comp=Z,130nm,0.9s						
YSS				MLR	MLR		
	comp=Z,12μm,15.0s						
YSS				MLR	MLR		
	comp=N,10μm,16.0s						
JYO	Yokosk	6.34	211	A	A	12 50 46.6	
	comp=N,15nm,4.4s,comp=N,15nm,4.1s						
TEY	Ternei	6.76	312	*e*P	Pn	12 50 50.1	-2.3
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
TEY				MLR	MLR		
	comp=N,400nm,14.0s						
TEY				MLR	MLR		
	comp=E,100nm,14.0s						
TEY				MLR	MLR		
	comp=Z,600nm,13.0s						
JHJ2	Mitsune	8.20	203	Pn	Pn	12 51 11.0	-1.2
UGL	Uglegorsk	8.44	353	*e*P	Pn	12 51 15.3	0.0
UGL				S	Sn	12 52 41.2	-8.9
UGL				pmax	pmax		
	comp=Z,68nm,0.8s						
UGL				MLR	MLR		
	comp=Z,9μm,14.0s						
UGL				MLR	MLR		
	comp=N,6μm,17.0s						
UGL				MLR	MLR		
	comp=E,5μm,14.0s						
VLA	Vladivostok	9.13	289	*c* *i*P	Pn	12 51 24.9	+0.1
VLA				pmax	pmax		
	comp=Z,230nm,0.9s						
USRK	Ussuriysk Ar.	9.33	296	Pn	Pn	12 51 27.8	+0.3
	comp=Z,4.0nm,0.3s,baz=94,slow=16,SNR=46						
USRK				LR	LR	12 55 04.1	
	comp=Z,6μm,18.1s,baz=205,slow=38 comp=Z,156nm,0.8s						
MSHR	Mys Shultsa	9.57	285	*c* *i*P	Pn	12 51 32.7	+1.8
MSHR				pmax	pmax		
	comp=Z,102nm,0.9s						
JHS	Saijyo	10.12	239	Pn	Pn	12 51 40.0	+1.4
TYV	Tymovskoe	10.17	356	*e*P	Pn	12 51 40.3	+1.2
TYV				*e*S	Sn	12 53 37.6	+4.9
TYV				pmax	pmax		
	comp=Z,21nm,1.2s						
TYV				pmax	pmax		
	comp=Z,500nm,5.2s						
TYV				smax	smax		
	comp=N,1μm,9.8s						
TYV				smax	smax		
	comp=E,2μm,9.8s						
TYV				MLR	MLR		
	comp=N,4μm,15.0s						
TYV				MLR	MLR		
	comp=Z,7μm,15.0s						
JMN	Monobe	10.48	231	Pn	Pn	12 51 44.0	+0.6
MDJ	Mudanjiang	11.09	295	Pn	Pn	12 51 53.9	+2.1
GRNR	Gornyy	11.26	336	||*i*P	Pn	12 51 52.9	-1.1
GRNR				*e*S	Sn	12 54 00.7	+1.4
GRNR				pmax	pmax		
	comp=E,4.0nm,0.8s						
GRNR				pmax	pmax		
	comp=N,5.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GRNR				smax	smax		
	comp=N,7.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,3μm,16.0s						
GRNR				MLR	MLR		
	comp=N,4μm,18.0s						
GRNR				MLR	MLR		
	comp=Z,4μm,16.0s						
KLR	Kul'dur	11.99	319	LR	LR	12 57 01.4	
	comp=Z,5μm,18.1s,baz=135,slow=39						
KLR	Kul'dur	11.99	319	*c* *i*P	Pn	12 52 04.6	+0.7
KLR				pmax	pmax		
	comp=Z,54nm,1.0s						
SEHB	SEOHWA	12.18	263	Pn	Pn	12 52 07.9	+1.2
KSRS	Korea Array	12.68	260	Pn	Pn	12 52 14.7	+1.2
	comp=Z,0.3nm,0.3s,baz=70,slow=13,SNR=16						
KSRS				Sn	Sn	12 54 32.2	-2.0
	baz=67,slow=25						
KSRS				LR	LR	12 56 55.5	
	comp=Z,7μm,18.0s,baz=65,slow=37 comp=Z,13nm,0.8s						
KS19	Wonju Array Si	12.71	260	Pn	Pn	12 52 16.0	+2.2
KSAR	Wonju Array Be	12.71	260	Pn	Pn	12 52 14.6	+0.7
KSAR	Wonju Array Be	12.71	260	P	Pn	12 52 14.6	+0.7
OKH	Okha	12.85	358	*c* *i*P	Pn	12 52 17.1	+1.5
OKH				*i* S	Sn	12 54 35.1	-3.0
OKH				pmax	pmax		
	comp=Z,200nm,12.0s						
OKH				smax	smax		
	comp=N,400nm,21.9s						
OKH				MLR	MLR		
	comp=N,10μm,20.0s						
OKH				MLR	MLR		
	comp=E,13μm,19.0s						
OKH				MLR	MLR		
	comp=Z,4μm,19.0s						
KSCHJ	Chungju	12.85	258	Pn	Pn	12 52 19.2	+3.4
BNX	BinXian	12.89	298	⇑P	Pn	12 52 15.9	-0.4
BNX				pP	P	12 52 17.8	-9.2
BNX				sP		12 52 19.3	
BNX				PP	PnPn	12 52 25.4	+1.4
BNX				S	Sn	12 54 42.0	+2.7
BNX				sS		12 54 48.5	
BNX				pmax	pmax		
	comp=Z,120nm,1.0s						
BNX				pmax	pmax		
	comp=Z,1μm,9.3s						
BNX				LR	LR		
	comp=Z,2μm,11.4s						
BNX				LR	LR		
	comp=Z,5μm,13.3s						
BNX				LR	LR		
	comp=Z,6μm,14.0s						
SKR	Severo-Kuril's	13.20	37	*e*P	Pn	12 52 16.8	-3.6
SKR				*e*S	Sn	12 54 39.3	-7.4
SKR				pmax	pmax		
	comp=Z,18nm,1.0s						
SKR				MLR	MLR		
	comp=Z,3μm,15.0s						

	comp=Z,0.2nm,0.3s,baz=190,slow=7.5,SNR=6.0								
	comp=Z,6.6nm,0.8s								
PETK	**Petropavlovsk-**	**15.62**	**33**	P	**Pn**	**12 52 51.2**	**-2.0**		
DL2	**Dalian**	**17.05**	**271**	P	**Pn**	**12 53 10.6**	**-0.9**		
DL2				pmax	pmax				
	comp=Z,190nm,1.1s								
DL2				pmax	pmax				
	comp=Z,780nm,8.1s								
DL2				LR	LR				
	comp=Z,2μm,13.5s								
DL2				LR	LR				
	comp=Z,2μm,14.6s								
DL2				LR	LR				
	comp=Z,3μm,15.3s								
ZEA	**Zeya**	**17.10**	**325**	*e*P	**Pn**	**12 53 10.1**	**-1.9**		
ZEA				pmax	pmax				
	comp=E,60nm,0.9s								
ZEA				pmax	pmax				
	comp=N,70nm,1.0s								
ZEA				pmax	pmax				
	comp=Z,120nm,1.0s								
ZEA				MLR	MLR				
	comp=E,3μm,15.0s								
ZEA				MLR	MLR				
	comp=N,2μm,16.0s								
ZEA				MLR	MLR				
	comp=Z,3μm,17.0s								
HIA	**Hailar**	**18.91**	**305**	P	**P**	**12 53 32.3**	**-1.4**		
HIA	**Hailar**	**18.91**	**305**	*ce*P	**P**	**12 53 30.9**	**-2.8**		
HIA				pmax	pmax				
	comp=Z,48nm,0.8s								
MA2	**Magadan**	**19.39**	**11**	P	**P**	**12 53 38.0**	**-0.9**		
	comp=Z,6.8nm,0.6s,baz=200,slow=14,SNR=4.6								
MA2				LR	LR	13 02 34.1			
	comp=Z,1μm,18.8s,baz=196,slow=41								
MA2	**Magadan**	**19.39**	**11**	P	**P**	**12 53 38.0**	**-0.9**		
SSE	**Sheshan**	**20.56**	**249**	P	**P**	**12 53 49.6**	**-2.1**		
SSE				S	**S**	**12 57 36.8**	**-4.2**		
SSE				pmax	pmax				
	comp=Z,16nm,0.7s								
SSE				pmax	pmax				
	comp=Z,140nm,6.3s								
SSE				LR	LR				
	comp=Z,960nm,15.3s								
SSE				LR	LR				
	comp=Z,1μm,14.7s								
XLT	**XiLinHaoTe**	**20.63**	**288**	⇑*i*P	**P**	**12 53 49.8**	**-2.8**		
XLT				pP	Pn	12 53 55.0	+0.1		
XLT				sP	pP	12 53 56.3	-0.5		
XLT				S	S	12 57 30.4	-12		
XLT				sS	Sn	12 57 42.3	-4.9		
XLT				pmax	pmax				
	comp=Z,32nm,1.4s								
XLT				LR	LR				
	comp=Z,2μm,15.9s								
XLT				LR	LR				
	comp=Z,3μm,15.9s								
BJI	**Beijing**	**20.95**	**277**	P	**P**	**12 53 53.4**	**-2.5**		
BJI				pmax	pmax				
	comp=Z,37nm,0.9s								
BJI				pmax	pmax				
	comp=Z,350nm,3.5s								
BJI				LR	LR				
	comp=Z,3μm,16.2s								
BJI				LR	LR				
	comp=Z,4μm,15.5s								
BJT	**Baijiatuau**	**20.96**	**277**	P	**P**	**12 53 53.6**	**-2.4**		
BJT	**Baijiatuau**	**20.96**	**277**	P	**P**	**12 53 53.6**	**-2.4**		
BJT				pmax	pmax				
	comp=Z,442nm,2.0s								
TIA	**Tai'an**	**21.25**	**266**	⇑P	**P**	**12 53 56.6**	**-2.6**		
TIA				S	S	12 57 42.5	-12		
TIA				pmax	pmax				
	comp=Z,120nm,1.1s								
TIA				pmax	pmax				
	comp=Z,630nm,5.9s								
TIA				LR	LR				
	comp=Z,2μm,12.9s								
TIA				LR	LR				
	comp=Z,3μm,14.9s								
TIA				LR	LR				
	comp=Z,4μm,15.2s								
NJ2	**Nanjing**	**21.74**	**254**	⇓*i*P	**P**	**12 54 02.0**	**-2.4**		
NJ2				pP	**pP**	**12 54 07.9**	**-0.7**		
NJ2				sP	**pwP**	**12 54 12.5**	**+0.9**		
NJ2				S	**S**	**12 58 04.6**	**+0.3**		
NJ2				sS	**sS**	**12 58 09.6**	**-1.4**		
NJ2				pmax	pmax				
	comp=Z,64nm,1.0s								
NJ2				pmax	pmax				
	comp=Z,290nm,5.5s								
NJ2				LR	LR				
	comp=Z,3μm,13.8s								
NJ2				LR	LR				
	comp=Z,6μm,16.0s								
NJ2				LR	LR				
	comp=Z,6μm,17.3s								
HNS	**HongShan**	**22.71**	**271**	⇑P	**P**	**12 54 10.9**	**-3.9**		
HNS				PP	**PnPn**	**12 54 41.3**	**+2.6**		
HNS				S	**S**	**12 58 22.4**	**0.0**		
HNS				pmax	pmax				
	comp=Z,38nm,1.1s								
HNS				LR	LR				
	comp=Z,1μm,13.7s								
HNS				LR	LR				
	comp=Z,2μm,12.4s								
HNS				LR	LR				
	comp=Z,2μm,16.7s								
SEY	**Seymchan**	**22.84**	**10**	P	**P**	**12 54 14.1**	**-1.9**		
	comp=Z,35nm,0.9s,baz=196,slow=7.9,SNR=20								
	comp=Z,35nm,0.9s								
SEY	**Seymchan**	**22.84**	**10**	*d*iP	**P**	**12 54 14.4**	**-1.6**		
SEY				pmax	pmax				
	comp=Z,35nm,0.9s								
YAK	**Yakutsk**	**22.96**	**343**	P	**P**	**12 54 15.3**	**-2.0**		
	comp=Z,27nm,0.6s,baz=333,slow=4.3,SNR=11								
YAK				LR	LR	13 04 31.6			
	comp=Z,4μm,18.2s,baz=124,slow=40								
	comp=Z,27nm,0.6s								
YAK	**Yakutsk**	**22.96**	**343**	P	**P**	**12 54 15.2**	**-2.0**		
YAK				IAmb	IAmb	12 54 17.6			
	comp=Z,89nm,0.9s								
YAK	**Yakutsk**	**22.96**	**343**	*e*P	**P**	**12 54 13.1**	**-4.1**		
YAK				*e*PPP	PPP	12 54 44.1			
YAK				*e*S	**S**	**12 58 16.8**	**-10**		
YAK				*e*SSS	SSS	12 58 59.1			
YAK				pmax	pmax				
	comp=Z,37nm,1.0s								
YAK				pmax	pmax				
	comp=N,18nm,1.0s								
YAK				pmax	pmax				
	comp=E,3.0nm,0.9s								
YAK				pmax	pmax				
	comp=Z,60nm,0.9s								
YAK				pmax	pmax				
	comp=E,8.0nm,0.7s								
YAK				pmax	pmax				
	comp=N,44nm,1.1s								
YAK				smax	smax				
	comp=N,74nm,1.3s								
YAK				smax	smax				
	comp=E,203nm,2.2s								
YAK				MLR	MLR				
	comp=Z,4μm,14.0s								
YAK				MLR	MLR				
	comp=N,2μm,18.0s								
YAK				MLR	MLR				
	comp=E,3μm,16.0s								
CIT	**Chita**	**23.50**	**309**	*e*P	**P**	**12 54 20.5**	**-2.3**		
CIT				*e*		12 54 29.8			
CIT				*e*		12 54 52.6			
CIT				*e*		12 55 08.6			
CIT				pmax	pmax				
	comp=Z,218nm,2.6s								
TATO	**Taipei**	**24.28**	**237**	P	**P**	**12 54 29.7**	**-0.7**		
TATO				IAmb	IAmb	12 54 33.0			
	comp=Z,157nm,1.4s								
TATO	**Taipei**	**24.28**	**237**	P	**P**	**12 54 30.2**	**-0.2**		
TIY	**Taiyuan**	**24.34**	**273**	*e*P	**P**	**12 54 28.5**	**-2.5**		
TIY				PP	**PnPn**	**12 55 02.6**	**+1.5**		
TIY				pmax	pmax				
	comp=Z,390nm,8.3s								
TIY				LR	LR				
	comp=Z,1μm,15.6s								
TIY				LR	LR				
	comp=Z,1μm,13.5s								
TIY				LR	LR				
	comp=Z,2μm,14.7s								
YHNB	**Yeheng**	**24.57**	**236**	P	**P**	**12 54 30.9**	**-2.2**		
YHNB				IAmb	IAmb	12 54 47.7			
	comp=Z,54nm,1.0s								
NACB	**Ninganchiao**	**24.80**	**235**	P	**P**	**12 54 33.7**	**-1.3**		
LYN	**LuoYang**	**25.40**	**266**	⇑*i*P	**P**	**12 54 39.5**	**-1.0**		
LYN				S	**S**	**12 59 02.8**	**-3.6**		
LYN				pmax	pmax				
	comp=Z,50nm,0.9s								
LYN				pmax	pmax				
	comp=Z,530nm,6.8s								
LYN				LR	LR				
	comp=Z,2μm,15.6s								
LYN				LR	LR				
	comp=Z,3μm,16.4s								
LYN				LR	LR				
	comp=Z,4μm,12.6s								
BTO	**Baotou**	**25.46**	**281**	*e*P	**P**	**12 54 40.1**	**-1.0**		
BTO				S	**S**	**12 59 07.4**	**0.0**		
BTO				LR	LR				
	comp=Z,6μm,15.3s								
BTO				LR	LR				
	comp=Z,13μm,16.5s								
BOD	**Bodaibo**	**25.54**	**322**	*e*P	**P**	**12 54 40.7**	**-0.8**		
BOD				pmax	pmax				
	comp=Z,187nm,0.9s								
YULB	**Yu-li**	**25.55**	**234**	P	**P**	**12 54 41.5**	**-0.4**		
YULB				IAmb	IAmb	12 55 04.8			
	comp=Z,33nm,0.9s								
WHN	**Wuhan**	**25.82**	**256**	⇓P	**P**	**12 54 44.4**	**+0.2**		
WHN				S	**S**	**12 59 12.0**	**-1.0**		
WHN				sS	**pS**	**12 59 17.6**	**-0.8**		
WHN				pmax	pmax				
	comp=Z,60nm,0.8s								
WHN				LR	LR				
	comp=Z,7μm,14.7s								
WHN				LR	LR				
	comp=Z,11μm,13.5s								
WHN				LR	LR				
	comp=Z,17μm,14.6s								
TPUB	**Ta-pu**	**26.03**	**235**	P	**P**	**12 54 46.5**	**+0.2**		
TPUB				IAmb	IAmb	12 54 54.9			
	comp=Z,40nm,0.9s								
TWG	**Pinlang**	**26.11**	**234**	P	**P**	**12 54 46.7**	**-0.3**		
QZH	**Quanzhou**	**26.19**	**241**	⇑*i*P	**P**	**12 54 41.5**	**-6.1**		
QZH				S	**S**	**12 59 11.4**	**-7.5**		
QZH				pmax	pmax				
	comp=Z,570nm,3.6s								
QZH				LR	LR				
	comp=Z,680nm,13.3s								
QZH				LR	LR				
	comp=Z,2μm,13.3s								
QZH				LR	LR				
	comp=Z,2μm,14.2s								
ULN	**Ulaanbaatar**	**26.99**	**298**	P	**P**	**12 54 55.2**	**+0.3**		
ULN	**Ulaanbaatar**	**26.99**	**298**	*c*iP	**P**	**12 54 54.3**	**-0.6**		
ULN				pmax	pmax				
	comp=Z,100nm,1.4s								
ULN	**Ulaanbaatar**	**26.99**	**298**	P	**P**	**12 54 55.1**	**+0.2**		
GUMO	**Guam**	**27.05**	**177**	LR	LR	13 03 59.1			
	comp=Z,401nm,21.9s,baz=7.0,slow=33								
SONM	**Songino Array**	**27.43**	**298**	P	**P**	**12 54 59.1**	**+0.2**		
	comp=Z,38nm,0.9s,baz=78,slow=9.5,SNR=26								
	comp=Z,38nm,0.9s								
SONM	**Songino Array**	**27.43**	**298**	P	**P**	**12 55 00.0**	**+1.2**		
SONM				IAmb	IAmb	12 55 03.5			
	comp=Z,50nm,1.0s								
CNSH	**ChangSha**	**28.13**	**253**	⇑P	**P**	**12 55 04.4**	**-0.7**		
CNSH				S	**S**	**12 59 45.8**	**-3.8**		
CNSH				pmax	pmax				
	comp=Z,7.0nm,0.4s								
CNSH				LR	LR				
	comp=Z,3μm,14.5s								
CNSH				LR	LR				
	comp=Z,2μm,16.3s								
CNSH				LR	LR				
	comp=Z,2μm,13.3s								
XAN	**Xi'an**	**28.30**	**268**	⇑P	**P**	**12 55 06.1**	**-0.5**		
XAN				pP	pwP	12 55 15.3	+1.0		
XAN				sP	sP	12 55 19.0	+6.1		
XAN				pmax	pmax				
	comp=Z,18nm,1.3s								
XAN				pmax	pmax				
	comp=Z,510nm,8.6s								
XAN				LR	LR				
	comp=Z,2μm,14.6s								
XAN				LR	LR				
	comp=Z,3μm,13.3s								
XAN				LR	LR				
	comp=Z,4μm,13.0s								
H11N2	**WAKE ISLAND Hy**	**28.81**	**130**	T	T	13 25 33.8			
	baz=318,slow=74,SNR=180								
H11N1	**WAKE ISLAND Hy**	**28.82**	**130**	T	T	13 25 33.8			
	baz=318,slow=74,SNR=228								
H11N3	**WAKE ISLAND Hy**	**28.83**	**130**	T	T	13 25 33.8			
	baz=318,slow=74,SNR=233								
IRK	**Irkutsk**	**29.14**	**307**	*e*P	**P**	**12 55 13.6**	**-0.2**		
IRK				pmax	pmax				
	comp=Z,148nm,2.8s								
ENH	**Enshi**	**29.57**	**260**	P	**P**	**12 55 16.9**	**-1.0**		
ZAK	**Zakamensk**	**29.58**	**303**	*e*P	**P**	**12 55 17.3**	**-0.6**		
ZAK				pmax	pmax				
	comp=Z,38nm,1.1s								
H11S1	**WAKE ISLAND Hy**	**29.66**	**131**	T	T	13 26 38.1			
	baz=316,SNR=69								
H11S3	**WAKE ISLAND Hy**	**29.67**	**132**	T	T	13 26 39.7			
	baz=316,slow=74,SNR=47								
H11S2	**WAKE ISLAND Hy**	**29.68**	**131**	T	T	13 26 39.7			
	baz=316,slow=74,SNR=78								
BILL	**Bilibino**	**29.99**	**17**	P	**P**	**12 55 22.3**	**+1.1**		
BILL				IAmb	IAmb	12 55 32.7			
	comp=Z,78nm,1.3s								
BILL	**Bilibino**	**29.99**	**17**	*c*iP	**P**	**12 55 21.0**	**-0.2**		
BILL				*e*		12 56 21.1			
BILL				*e*PPP	PPP	12 56 28.5			
BILL				*e*		12 58 23.9			
BILL				pmax	pmax				
	comp=Z,48nm,1.2s								
BILL				MLR	MLR				
	comp=Z,1μm,20.0s								
GZH	**Guangzhou**	**30.98**	**245**	P	P	12 55 24.3	-6.1		
GZH				S	**S**	**13 00 26.3**	**-8.0**		
GZH				LR	LR				
	comp=Z,2μm,13.4s								
GZH				LR	LR				
	comp=Z,3μm,13.7s								
MOY	**Mondy**	**31.10**	**305**	*e*P	**P**	**12 55 31.6**	**+0.3**		
MOY				pmax	pmax				
	comp=Z,74nm,1.4s								
LZH	**Lanzhou**	**31.38**	**275**	⇑P	**P**	**12 55 33.8**	**-0.2**		
LZH				sP	pwP	12 55 43.0	+1.2		
LZH				S	**S**	**13 00 43.0**	**+2.2**		
LZH				pmax	pmax				
	comp=Z,22nm,1.4s								
LZH				pmax	pmax				
	comp=Z,190nm,4.8s								
LZH				LR	LR				
	comp=Z,2μm,12.4s								
LZH				LR	LR				
	comp=Z,2μm,13.1s								
LZH				LR	LR				
	comp=Z,2μm,13.4s								
GULI	**GuiLin**	**31.68**	**251**	⇑P	**P**	**12 55 36.1**	**-0.5**		
GULI				PP	**PnPn**	**12 56 39.3**	**-1.2**		
GULI				S	**S**	**13 00 38.9**	**-6.4**		
GULI				pmax	pmax				
	comp=Z,30nm,1.0s								
GULI				LR	LR				
	comp=Z,2μm,15.2s								
GULI				LR	LR				
	comp=Z,15μm,14.6s								
GULI				LR	LR				
	comp=Z,3μm,14.7s								
TIXI	**Tiksi**	**31.89**	**351**	P	**P**	**12 55 36.2**	**-1.6**		
	comp=Z,14nm,0.9s,baz=270,slow=23,SNR=3.1								
TIXI				LR	LR	13 11 22.1			
	comp=Z,2μm,18.4s,baz=181,slow=42								
	comp=Z,14nm,0.9s								
TIXI	**Tiksi**	**31.89**	**351**	*c*iP	**P**	**12 55 36.9**	**-1.0**		
TIXI				pmax	pmax				
	comp=Z,18nm,0.9s								
KNGR	**Kungurtug, Tuv**	**33.26**	**303**	⇓*e*P	**P**	**12 55 50.7**	**+0.4**		
KNGR				pmax	pmax				
	comp=Z,41nm,1.0s								
GTA	**Gaotai**	**33.35**	**282**	⇑P	**P**	**12 55 50.8**	**-0.4**		
GTA				pP	pwP	12 56 00.0	+1.0		
GTA				sP	sP	12 56 04.5	+6.9		
GTA				PP	**PP**	**12 57 06.0**	**-0.6**		
GTA				PcP	**PcP**	**12 58 32.9**	**+0.1**		
GTA				S	**S**	**13 01 11.4**	**0.0**		
GTA				pmax	pmax				
	comp=Z,48nm,1.1s								
GTA				pmax	pmax				
	comp=Z,290nm,8.0s								
GTA				LR	LR				
	comp=Z,2μm,17.8s								
GTA				LR	LR				
	comp=Z,4μm,17.5s								
GTA				LR	LR				
	comp=Z,4μm,17.8s								
CD2	**Chengdu**	**33.59**	**266**	P	**P**	**12 55 52.8**	**-0.5**		
CD2				pP	pP	12 55 56.8	-0.9		
CD2				PP	**PnPn**	**12 57 04.0**	**-0.9**		
CD2				S	**S**	**13 01 19.4**	**+4.4**		
CD2				sS	sS	13 01 21.8	-0.7		
CD2				pmax	pmax				
	comp=Z,60nm,0.9s								
CD2				pmax	pmax				
	comp=Z,140nm,5.0s								
CD2				LR	LR				
	comp=Z,2μm,13.7s								
CD2				LR	LR				
	comp=Z,2μm,16.6s								
CD2				LR	LR				
	comp=Z,3μm,14.7s								
GYA	**Guiyang**	**33.70**	**257**	⇑*i*P	**P**	**12 55 53.8**	**-0.6**		
GYA				sP	pwP	12 56 03.0	+0.8		
GYA				PP	**PnPn**	**12 57 06.1**	**-0.4**		
GYA				S	**S**	**13 01 15.3**	**-1.7**		
GYA				pmax	pmax				
	comp=Z,130nm,0.9s								
GYA				LR	LR				
	comp=Z,3μm,14.0s								
GYA				LR	LR				
	comp=Z,4μm,14.1s								
GYA				LR	LR				
	comp=Z,6μm,14.6s								
QIZ	**Qiongzhong**	**36.12**	**243**	P	**P**	**12 56 16.0**	**+0.8**		
QIZ				S	**S**	**13 01 58.4**	**+4.3**		
QIZ				pmax	pmax				
	comp=Z,14nm,0.9s								
QIZ				pmax	pmax				
	comp=Z,180nm,7.6s								
QIZ				LR	LR				
	comp=Z,2μm,13.5s								
QIZ				LR	LR				
	comp=Z,1μm,14.3s								
QIZ				LR	LR				
	comp=Z,2μm,12.7s								
DAV	**Davao City (W)**	**37.21**	**211**	LR	LR	13 11 44.0			
	comp=Z,572nm,19.5s,baz=36,slow=36								
PZH	**PanZhiHua**	**37.35**	**261**	P	**P**	**12 56 25.6**	**-0.1**		
PZH				sP	**pwP**	**12 56 34.3**	**+0.8**		
PZH				PP	**PnPn**	**12 57 53.6**	**+2.0**		
PZH				S	**S**	**13 02 12.3**	**-0.7**		
PZH				sS	**sS**	**13 02 23.3**	**+2.8**		
PZH				SS	**SnSn**	**13 04 40.0**	**-9.5**		
PZH				pmax	pmax				
	comp=Z,70nm,1.0s								
PZH				pmax	pmax				
	comp=Z,350nm,4.5s								
PZH				LR	LR				
	comp=Z,1μm,13.3s								
PZH				LR	LR				
	comp=Z,1μm,13.1s								
PZH				LR	LR				
	comp=Z,1μm,14.3s								
KMI	**Kunming**	**37.37**	**258**	⇑P	**P**	**12 56 25.9**	**-0.2**		
KMI				sP	pwP	12 56 35.3	+1.5		
KMI				PP	**PP**	**12 57 50.9**	**-0.4**		
KMI				S	**S**	**13 02 13.8**	**+0.3**		
KMI				pmax	pmax				
	comp=Z,88nm,1.1s								
KMI				pmax	pmax				
	comp=Z,430nm,4.4s								
KMI				LR	LR				
	comp=Z,3μm,16.0s								
KMI				LR	LR				
	comp=Z,2μm,16.8s								
KMI				LR	LR				
	comp=Z,3μm,17.4s								
GOMU	**GeErMu**	**38.15**	**279**	P	**P**	**12 56 30.6**	**-2.1**		
GOMU				pP	pP	12 56 33.4	-3.8		
GOMU				PP	**PP**	**12 57 57.0**	**-2.9**		
GOMU				S	**S**	**13 02 25.6**	**+0.1**		
GOMU				pmax	pmax				
	comp=Z,84nm,0.9s								
GOMU				pmax	pmax				
	comp=Z,320nm,4.2s								
GOMU				LR	LR				
	comp=Z,1μm,15.3s								
GOMU				LR	LR				
	comp=Z,1μm,15.1s								
GOMU				LR	LR				
	comp=Z,2μm,15.3s								
N16K	**Nishlik Lake**	**39.95**	**41**	P	**P**	**12 56 48.7**	**+1.6**		
	baz=267								
O16K	**Kokwok River B**	**40.26**	**42**	P	**P**	**12 56 50.0**	**+0.4**		
	baz=269								
NRIK	**Noril'sk**	**40.73**	**333**	P	**P**	**12 56 53.2**	**-0.2**		
	comp=Z,21nm,1.1s,baz=123,slow=6.4,SNR=3.6								
NRIK				LR	LR	13 15 19.6			
	comp=Z,3μm,19.8s,baz=102,slow=38								
	comp=Z,21nm,1.1s								
O17K	**Koliganek Bris**	**40.77**	**42**	P	**P**	**12 56 55.7**	**+1.9**		
	baz=269								
ZAA0	**Zalesovo Array**	**40.85**	**309**	P	**P**	**12 56 55.1**	**+0.5**		
ZAA0				IAmb	IAmb	12 56 55.8			
	comp=Z,79nm,0.9s								
ZALV	**Zalesovo Beam**	**40.85**	**309**	P	**P**	**12 56 54.6**	**0.0**		
	comp=Z,71nm,0.8s,baz=86,slow=7.7,SNR=69								
	comp=Z,71nm,0.8s								
WMQ	**Urumqi**	**40.89**	**294**	*e*P	**P**	**12 56 56.3**	**+1.2**		
WMQ				pP	sP	12 57 01.3	-0.2		
WMQ				sP	pwP	12 57 04.4	+1.5		
WMQ				PP	**PnPn**	**12 58 32.8**	**-0.7**		
WMQ				S	**S**	**13 03 11.5**	**+5.7**		
WMQ				pmax	pmax				
	comp=Z,63nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,470nm,4.5s								
WMQ				LR	LR				
	comp=Z,2μm,13.3s								
WMQ				LR	LR				
	comp=Z,4μm,11.5s								
WMQ				LR	LR				
	comp=Z,2μm,13.3s								
N18K	**Kilae Creek**	**41.38**	**40**	P	**P**	**12 56 59.2**	**+0.4**		
N18K	**Kilae Creek**	**41.38**	**40**	P	**P**	**12 56 57.7**	**-1.1**		
	baz=269								
UBPT	**Khong Chiam**	**41.72**	**244**	P	**P**	**12 57 02.4**	**+0.3**		
O18K	**Koktuh Hills**	**41.72**	**42**	P	**P**	**12 57 02.4**	**+0.7**		
	baz=271								
ZSN	**Zaisan**	**41.91**	**300**	*c*iP	**P**	**12 57 03.3**	**0.0**		
ZSN				pmax	pmax				
	comp=Z,35nm,1.4s								
ZSN	**Zaisan**	**41.91**	**300**	⇑*i*P	**P**	**12 57 03.3**	**0.0**		
	comp=Z,36nm,1.4s,baz=300								
CRAI	**Chiangrai**	**42.04**	**254**	P	**P**	**12 57 05.5**	**+0.7**		
CRAI				IAmb	IAmb	12 57 10.5			
	comp=Z,43nm,0.8s								
N19K	**Bonanza Creek**	**42.07**	**40**	P	**P**	**12 57 05.8**	**+1.2**		
	baz=270								
M19K	**Big River Lodg**	**42.11**	**39**	P	**P**	**12 57 04.7**	**-0.2**		
	baz=269								
K20K	**Telida**	**42.30**	**36**	P	**P**	**12 57 08.3**	**+1.9**		
	baz=268								
J20K	**Nowinta River**	**42.30**	**35**	P	**P**	**12 57 08.6**	**+2.3**		
J20K	**Nowinta River**	**42.30**	**35**	P	**P**	**12 57 08.1**	**+1.8**		
	baz=267								
L20K	**Farewell, AK**	**42.36**	**38**	P	**P**	**12 57 09.0**	**+2.1**		
	baz=269								
IMAR	**Indian Mountai**	**42.58**	**32**	P	**P**	**12 57 10.7**	**+2.1**		
M20K	**Styx River**	**42.71**	**39**	P	**P**	**12 57 11.2**	**+1.4**		
	baz=270								
G21K	**Allakaket**	**42.73**	**32**	P	**P**	**12 57 11.2**	**+1.4**		
	baz=265								
SMPI	**Sarmi**	**42.75**	**187**	P	**P**	**12 57 12.0**	**+1.6**		
	comp=Z,22nm,1.3s								
F21K	**Alatna River**	**42.80**	**31**	P	**P**	**12 57 11.6**	**+1.2**		
	baz=264								

OHAK Old Harbor 42.87 45 P P 12 57 12.3 +1.3
baz=275
RSO Redoubt South 42.93 41 P P 12 57 13.7 +2.0
H21K Melozitna Rive 42.95 33 P P 12 57 12.8 +1.2
baz=267
CHUM Lake Minchumin 43.09 36 P P 12 57 14.5 +1.8
baz=269
PPLA Purkeypile 43.14 37 P P 12 57 14.9 +1.6
baz=270
SPCR Spurr Chakacha 43.17 40 P P 12 57 14.7 +1.2
baz=272
CAST Castle Rocks 43.19 36 P P 12 57 15.1 +1.5
baz=270
Q20K Shuyak Island 43.23 43 P P 12 57 15.3 +1.5
baz=275
I21K Tanana 43.27 34 P P 12 57 16.9 +2.7
baz=268
F22K John River 43.33 30 P P 12 57 16.1 +1.4
baz=265
E22K Anaktuvuk Pass 43.52 29 P P 12 57 17.2 +1.0
baz=265
G22K Bettles 43.55 31 P P 12 57 17.2 +0.9
baz=266
H22K Ishtalitna Cre 43.55 33 P P 12 57 17.1 +0.6
baz=268
BPAW Bear Paw Mtn. 43.68 35 P P 12 57 19.7 +2.2
BPAW Bear Paw Mtn. 43.68 35 P P 12 57 16.8 -0.8
baz=270
KTH Kantishna Hill 43.71 36 P 12 57 18.7 +0.9
KTH IAmb IAmb 12 57 33.6
comp=Z,50nm,1.0s
LSA Lhasa 43.74 273 P P 12 57 20.2 +1.2
LSA IAmb IAmb 12 57 50.4
comp=Z,98nm,1.4s
LSA Lhasa 43.74 273 P P 12 57 19.4 +0.4
LSA pmax pmax
comp=Z,12nm,0.9s
LSA Lhasa 43.74 273 P P 12 57 20.2 +1.2
LSA pmax pmax
comp=Z,99nm,1.4s
MK31 Makanchi Array 43.77 299 P P 12 57 18.8 +0.3
MK31 IAmb IAmb 12 57 20.0
comp=Z,52nm,0.8s
MK31 Makanchi Array 43.77 299*c i*P P 12 57 18.3 -0.2
MKAR Makanchi Array 43.77 299 P P 12 57 18.8 +0.3
comp=Z,50nm,0.8s,baz=81,slow=10.0,SNR=38
comp=Z,50nm,0.8s
MKAR Makanchi Array 43.77 299 P P 12 57 18.6 +0.1
MLY Manley 43.79 34 P P 12 57 20.5 +2.0
baz=269
SUA Susitna One 43.86 39 P P 12 57 21.8 +2.7
baz=273
MAKZ Makanchi 43.98 299 P P 12 57 19.9 -0.2
MAKZ Makanchi 43.98 299 P P 12 57 19.9 -0.2
MAKZ pmax pmax
comp=Z,84nm,1.0s
CHTO Chiang Mai 43.98 254 P P 12 57 20.5 +0.1
CHTO IAmb IAmb 12 57 21.8
comp=Z,31nm,0.9s
CHTO Chiang Mai 43.98 254 P P 12 57 20.5 +0.1
CHTO pmax pmax
comp=Z,31nm,1.0s
CHTO Chiang Mai 43.98 254 P P 12 57 21.0 +0.6
BRSE Bradley Lake S 43.98 42 P P 12 57 23.5 +3.5
baz=275
TRF Thorofare Moun 44.00 36 P P 12 57 21.4 +1.1
baz=271
CUT Chulitna 44.04 38 P P 12 57 21.6 +1.2
baz=272
GTOI Gorontalo 44.09 211 P P 12 57 20.8 -0.5
comp=Z,190nmcomp=Z,11nm,1.1s
C23K Itkillik River 44.11 27 P P 12 57 21.9 +1.1
baz=264
G23K Bananza Creek 44.12 32 P P 12 57 23.2 +2.1
baz=268
CMAR Chiang Mai Arr 44.21 253 P P 12 57 22.7 +0.4
comp=Z,8.5nm,0.9s,baz=50,slow=6.5,SNR=24
CMAR LR LR 13 16 42.6
comp=Z,949nm,18.3s,baz=55,slow=37
comp=Z,8.5nm,0.9s
CMAR Chiang Mai Arr 44.21 253 P P 12 57 22.2 0.0
CMAR Chiang Mai Arr 44.21 253 *i* P P 12 57 22.7 +0.4
CMAR pmax pmax
comp=Z,8.0nm,0.9s
SEM Semipalatinsk 44.21 305 *eP* P 12 57 21.2 -1.0
SEM pmax pmax
comp=Z,33nm,0.8s
SEM Semipalatinsk 44.21 305 *eP* P 12 57 21.3 -1.0
comp=Z,33nm,0.8s,baz=305
H23K Yukon River 44.30 33 P P 12 57 24.0 +1.5
baz=270
RC01 Rabbit Creek A 44.37 40 P P 12 57 22.8 -0.2
baz=274
TOLK Toolik Lake Re 44.39 29 P P 12 57 24.9 +1.7
baz=267
O22K Cooper Landing 44.43 40 P P 12 57 26.5 +3.0
baz=275
NEA2 Nenana 44.51 35 P P 12 57 27.0 +2.8
baz=271
MCK McKinley 44.59 36 P P 12 57 25.2 +0.3
baz=272
PMR Palmer 44.62 39 P P 12 57 25.2 +0.2
baz=274
MRSI Marisa 44.66 212 P P 12 57 27.3 +1.5
comp=Z,53nm,1.1s
FAKI Fak Fak 44.67 196 P P 12 57 25.9 0.0
comp=Z,29nm,1.2s
D24K Happy Valley 44.69 28 P P 12 57 26.7 +1.2
baz=267
E24K Your Creek 44.76 30 P P 12 57 27.7 +1.5
baz=268
C24K Franklin Bluff 44.76 27 P P 12 57 26.9 +0.9
baz=266
F24K Squaw Lake 44.98 30 P P 12 57 29.4 +1.5
baz=269
H24K Noodor Dome 44.99 33 P P 12 57 28.9 +0.9
baz=271
TCOL CIGO, UAF Yank 45.02 34 P P 12 57 30.7 +2.5
baz=272
COLA College 45.02 34 P P 12 57 31.3 +3.1
COLA IAmb IAmb 12 58 37.4
comp=Z,32nm,1.1s
COLA College 45.02 34*c i*P P 12 57 29.9 +1.7
COLA pmax pmax
comp=Z,18nm,0.8s
PWL Port Wells 45.07 40 P P 12 57 29.9 +1.2
baz=276
G24K Hadweenzic Riv 45.14 32 P P 12 57 31.2 +2.1
baz=270
KURK Kurchatov 45.15 306 P P 12 57 29.4 0.0
KURK Kurchatov 45.15 306*c i*P P 12 57 29.0 -0.4
KURK pmax pmax
comp=Z,143nm,0.9s
KURK Kurchatov 45.15 306 P P 12 57 29.6 +0.2
POKR Poker Plat Res 45.19 34 P P 12 57 30.3 +0.7
baz=272
WAT6 Susitna Watana 45.20 37 P P 12 57 30.0 +0.1
baz=274
KURBB Kurchatov Arra 45.23 305 P P 12 57 30.0 0.0
comp=Z,121nm,0.9s,baz=79,slow=8.6,SNR=70
comp=Z,121nm,0.9s
KURBB Kurchatov Arra 45.23 305 P P 12 57 29.1 -0.9
M23K Glacier View 45.28 38 P P 12 57 32.5 +2.2
baz=275
DHY Denali Highway 45.33 37 P P 12 57 28.9 -1.9
baz=274
HDA Harding Lake 45.44 35 P P 12 57 33.2 +1.7
HDA IAmb IAmb 12 57 45.3
comp=Z,34nm,1.1s
HDA Harding Lake 45.44 35 P P 12 57 32.4 +0.9
baz=273
ILAR Eielson Array 45.44 34 P P 12 57 32.1 +0.6
comp=Z,5.0nm,0.7s,baz=260,slow=6.0,SNR=12
comp=Z,5.0nm,0.7s
KRVT Keravat (AS076 45.45 168 LR LR 13 16 33.4
comp=Z,193nm,18.1s,baz=135,slow=36
SCM Sheep Creek Mo 45.46 38 P P 12 57 32.8 +1.0
baz=276
SANI Sanana 45.53 205 P P 12 57 32.2 -0.5
comp=Z,42nm,1.0s
D25K Kavik River 45.56 28 P P 12 57 32.3 -0.2
baz=269
P23K Montague Islan 45.63 41 P P 12 57 34.3 +1.2
baz=277
MPSI Mapaga 45.63 214 P P 12 57 34.2 +0.6
comp=Z,23nm,1.2s
GLI Glacier Island 45.67 40 P P 12 57 33.7 +0.3
baz=277
LUWI Luwuk 45.73 210 P P 12 57 32.4 -1.9
comp=Z,2µmcomp=Z,54nm,1.0s
H25K Birch Creek 45.81 32 P P 12 57 37.3 +2.9
baz=272
F25K Christian Rive 45.84 30 P P 12 57 36.6 +1.8
baz=271
E25K Arctic Village 45.86 30 P P 12 57 35.0 +0.2
baz=271
PRP Porcupine Dome 45.97 33 P P 12 57 37.0 +1.1
baz=273
K24K Donnelly Dome 45.99 36 P P 12 57 37.7 +1.8
baz=275
FYU Fort Yukon 46.04 32 P P 12 57 36.8 +0.7
APSI Ampana 46.04 211 P P 12 57 37.3 +0.5
comp=Z,49nm,1.1s
J25K Salcha River, 46.10 34 P P 12 57 36.9 +0.1
baz=274
KLU Klutina 46.16 39 P P 12 57 38.3 +0.9
baz=277
PAX Paxson 46.21 37 P P 12 57 39.8 +2.1
baz=276
BMAR Burnt Mountain 46.25 30 P P 12 57 40.3 +2.3
EYAK Cordova Ski Ar 46.37 40 P P 12 57 40.3 +1.4
baz=278
F26K Sheenjek River 46.41 30 P P 12 57 41.4 +2.2
baz=273
RIDG Independent Ri 46.41 36 P P 12 57 38.7 -0.5
baz=276
HARP HAARP 46.41 37 P P 12 57 40.5 +1.2
baz=277
C27K Jago River 46.50 27 P P 12 57 40.8 +1.0
baz=271
G26K Porcupine Rive 46.59 31 P P 12 57 41.7 +1.2
baz=274
SCRK Sand Creek 46.76 35 P P 12 57 42.6 +0.5
baz=276
SHLS Shalkode 46.79 295*c i*P P 12 57 39.7 -2.9
SHLS pmax pmax
comp=Z,21nm,1.8s
SHLS Shalkode 46.79 295⇑ *i*P P 12 57 39.7 -2.9
comp=Z,21nm,1.8s,baz=295
BMRM Bremner River 46.87 39 P P 12 57 43.1 +0.2
baz=278
TDK Taldyqorghan 46.89 298*c i*P P 12 57 43.4 +0.2
TDK MLR MLR
comp=Z,2µm,15.0s
TDK Taldyqorghan 46.89 298⇑ *i*P P 12 57 43.5 +0.2
baz=298
TDK LR LR 13 17 32.1
comp=Z,2µm,14.6s,baz=298
I26K Coal Creek Min 46.98 33 P P 12 57 45.3 +1.7
baz=276
UZB Uzynbulak 47.10 295 *eP* P 12 57 44.1 -0.9
UZB Uzynbulak 47.10 295 *eP* P 12 57 44.2 -0.8
baz=295
L26K Log Cabin Wild 47.16 36 P P 12 57 47.1 +1.9
baz=278
KPKS Kokpek 47.22 296*c i*P P 12 57 45.7 -0.2
KPKS pmax pmax
comp=Z,19nm,1.0s
KPKS Kokpek 47.22 296⇑ *i*P P 12 57 45.8 -0.2
comp=Z,19nm,1.0s,baz=296
E27K Coleen River 47.34 29 P P 12 57 47.3 +0.9
baz=274
BERG Berg Lake 47.40 40 P P 12 57 48.5 +1.6
M26K Nabesna, AK 47.41 37 P P 12 57 48.2 +1.1
M26K IAmb IAmb 12 58 00.2
comp=Z,29nm,1.2s
M26K Nabesna, AK 47.41 37 P P 12 57 49.2 +2.1
baz=278
ZHN Zhinishke 47.49 296 *eP* P 12 57 47.2 -0.8
ZHN Zhinishke 47.49 296 *eP* P 12 57 47.3 -0.8
baz=296
H27K Steamboat Moun 47.55 32 P P 12 57 49.1 +1.0
baz=276
SATY Saty 47.55 296*c i*P P 12 57 48.1 -0.4
SATY pmax pmax
comp=Z,8.0nm,0.8s
SATY Saty 47.55 296⇑ *i*P P 12 57 48.2 -0.4
comp=Z,8.0nm,0.8s,baz=295
MCARA McCarthy VSAT 47.56 39 P P 12 57 49.9 +1.8
baz=279
I27K Kandik River 47.59 33 P P 12 57 51.5 +3.1
baz=277
K27K Chicken 47.59 35 P P 12 57 51.4 +2.9
baz=278
L27K Beaver Creek, 47.84 36 P P 12 57 52.0 +1.5
baz=279
BCAR Beaver Creek A 47.86 36 P P 12 57 53.4 +2.9
M27K Edge Creek, AK 47.93 37 P P 12 57 51.5 +0.3
baz=280
ODAN Odare 48.03 272 *eP* P 12 57 52.0 -0.6
MESA MESA 48.30 40 P P 12 57 55.4 +1.3
baz=281
CTG Chitna Glacier 48.44 39 P P 12 57 56.1 +1.0
baz=281
MDOK Medeo 48.44 296 *i* P P 12 57 55.6 +0.1
MDOK MLR MLR
comp=Z,1µm,16.0s
MDOK Medeo 48.44 296 *i* P P 12 57 55.6 +0.1
baz=296
MDOK LR LR 13 17 52.9
comp=Z,1µm,15.8s,baz=296
AAA Alma-Ata 48.52 296 *eP* P 12 57 55.7 -0.2
AAA Alma-Ata 48.52 296 *eP* P 12 57 55.7 -0.2
baz=296
JIRN Jiri 48.53 273 *eP* P 12 57 56.7 +0.1
RAMN Ramite 48.59 272 *eP* P 12 57 56.8 -0.1
GUN Gumba 48.63 274 *eP* P 12 57 57.5 +0.1
KUU Kurty 48.66 297*c i*P P 12 57 56.3 -0.7
KUU Kurty 48.66 297⇑ *i*P P 12 57 56.4 -0.7
baz=297
I29M Ogilvie Camp, 48.99 33 P P 12 58 01.5 +2.3
baz=280
BRZS Berezniki 49.01 306*c i*P P 12 57 59.4 -0.2
BRZS pmax pmax
comp=Z,27nm,0.9s
BRZS Berezniki 49.01 306⇑ *i*P P 12 57 59.5 -0.2
comp=Z,27nm,0.9s,baz=306
O28M Mount Upton 49.03 39 P P 12 58 01.4 +1.6
baz=282
KKN Kakani 49.15 274 *eP* P 12 58 00.5 -0.7
PKI Pulchoki 49.17 274 *eP* P 12 58 01.1 -0.3
PKIN Phulchoki 49.17 274 *eP* P 12 58 00.9 -0.5
ULHL Ulahol 49.33 295 P P 12 58 02.4 0.0
SNR=12
DMN Daman 49.38 274 *eP* P 12 58 03.0 0.0
BOOM Boomskoye usch 49.45 296 P P 12 58 03.8 +0.6
BOOM Boomskoye usch 49.45 296 P P 12 58 03.8 +0.6
EPYK Eagle Plains 49.45 31 P P 12 58 04.5 +1.7
baz=280
BVA0 Borovoye Array 49.48 310 P P 12 58 02.3 -0.8
L29M L29M 49.49 36 P P 12 58 05.7 +2.6
baz=282
TKM2 Tokmak 2 49.52 296 P P 12 58 04.4 +0.6
SNR=60
TKM2 Tokmak 2 49.52 296 *i* P P 12 58 02.9 -0.9
TKM2 pmax pmax
comp=Z,95nm,0.8s
BRVK Borovoye 49.53 310 P P 12 58 04.0 +0.6
BRVK Borovoye 49.53 310*c i*P P 12 58 03.8 +0.3
BRVK pmax pmax
comp=Z,61nm,0.8s
BRVK Borovoye 49.53 310 P P 12 58 04.1 +0.6
GKN Gorkha 49.53 274 *eP* P 12 58 03.6 -0.4
BTLS Baital 49.78 299*c i*P P 12 58 04.9 -0.6
BTLS pmax pmax
comp=Z,12nm,1.0s
BTLS Baital 49.78 299⇑ *i*P P 12 58 04.1 -1.4
comp=Z,12nm,1.0s,baz=299
NRN Naryn 49.81 294 P P 12 58 06.8 +0.6
NRN IAmb IAmb 12 59 01.1
comp=Z,15nm,0.9s
NRN Naryn 49.81 294 P P 12 58 06.8 +0.6
NRN pmax pmax
comp=Z,15nm,0.9s
BBSI Bau Bau 49.90 208 P P 12 58 07.0 +0.3
comp=Z,7.3nm,1.0s
O29M Mount Kennedy 49.91 39 P P 12 58 08.7 +2.3
baz=284
SGDS Sogindy 49.98 297*c i*P P 12 58 07.0 -0.1
SGDS pmax pmax
comp=Z,13nm,0.9s
SGDS Sogindy 49.98 297⇑ *i*P P 12 58 07.0 -0.1
comp=Z,13nm,0.9s,baz=297
DANN Dangsing 50.02 275 *eP* P 12 58 07.7 -0.2
KBK Karagaybulak 50.06 296 P P 12 58 08.3 +0.4
SNR=33
CHMS Chumysh 50.07 297 P P 12 58 07.4 -0.4
SNR=5.3
USP Ospenovka 50.13 297 P P 12 58 08.4 +0.1
SNR=16
M30M Minto, Yukon 50.20 36 P P 12 58 08.9 +0.3
baz=283
HYT Haines Junctio 50.30 39 P P 12 58 11.7 +2.3
INK Inuvik 50.30 29 P P 12 58 11.2 +2.1
comp=Z,5.8nm,0.4s,baz=269,slow=4.9,SNR=12
comp=Z,5.8nm,0.4s
INK Inuvik 50.30 29 P P 12 58 10.0 +0.9
baz=281
AAK Ala-Archa 50.38 296 P P 12 58 10.4 +0.1
SNR=9.2
AAK Ala-Archa 50.38 296 P P 12 58 10.4 +0.1
AAK IAmb IAmb 12 58 11.3
comp=Z,22nm,0.9s
AAK Ala-Archa 50.38 296*c i*P P 12 58 10.2 -0.1
AAK pmax pmax
comp=Z,23nm,0.9s
AAK Ala-Archa 50.38 296 P P 12 58 10.3 -0.1
SRIT Nakonsritamara 50.48 243 P P 12 58 12.6 +1.5
SRIT IAmb IAmb 12 58 13.5
comp=Z,44nm,0.8s
P29M Windy Craggy 50.49 40 P P 12 58 13.9 +3.2
P29M IAmb IAmb 12 58 26.5
comp=Z,44nm,1.1s
P29M Windy Craggy 50.49 40 P P 12 58 13.5 +2.8
baz=285
KAPI Kappang 50.53 212 LR LR 13 21 12.5
comp=Z,200nm,18.6s,baz=23,slow=38
KSH Kashi 50.60 292 P P 12 58 15.5 +3.5
KSH PP PP 13 00 13.0 +5.3
KSH S S 13 05 31.8 +5.9
KSH pmax pmax
comp=Z,29nm,0.9s
KSH pmax pmax
comp=Z,280nm,7.5s
KSH LR LR
comp=Z,2µm,16.2s
KSH LR LR
comp=Z,2µm,17.2s
KSH LR LR
comp=Z,4µm,14.4s
P30M Million Dollar 50.74 39 P P 12 58 14.2 +1.6
baz=285
EKS2 Erkin-Say 50.86 297 P P 12 58 13.7 -0.2
SNR=18
N31M Braeburn, Yuko 50.94 38 P P 12 58 14.8 +0.7
baz=285
O30N Mendenhall 50.98 39 P P 12 58 15.3 +0.8
baz=285
AML Almayashu 51.12 296 P P 12 58 16.9 +0.7
SNR=18
M31M Drury Creek, Y 51.38 36 P P 12 58 16.8 -0.6
baz=286
WHY Whitehorse 51.58 38 P P 12 58 19.6 +0.6
baz=286
HNR Honiara 52.11 160 LR LR 13 17 42.8
comp=Z,317nm,21.8s,baz=306,slow=33
KULM Kulim 52.22 239 P P 12 58 24.9 +0.8
KULM IAmb IAmb 12 58 26.0
comp=Z,37nm,1.0s
DZA Taraz 52.42 298 *eP* P 12 58 25.2 -0.2
DZA Taraz 52.42 298 *eP* P 12 58 25.3 -0.2
baz=298
IPM Ipoh 52.59 238 P P 12 58 26.6 -0.3
IPM IAmb IAmb 12 58 28.0
comp=Z,26nm,1.1s
P33M Teslin, Yukon 52.69 39 P P 12 58 29.8 +2.6
P33M IAmb IAmb 12 58 57.2
comp=Z,26nm,1.0s
P33M Teslin, Yukon 52.69 39 P P 12 58 29.1 +1.9
baz=288
KK31 Karatay Array 52.88 298 P P 12 58 28.6 -0.2
KK31 IAmb IAmb 12 58 29.5
comp=Z,39nm,0.8s
KK31 Karatay Array 52.88 298 *i* P P 12 58 27.9 -0.9
KKAR Karatay Array 52.88 298 P P 12 58 28.6 -0.2
KKAR IAmb IAmb 12 58 29.5
comp=Z,39nm,0.8s
KKAR Karatay Array 52.88 298 P P 12 58 28.6 -0.2
KKAR pmax pmax
comp=Z,39nm,0.8s
EDFI Ende, Flores 53.24 208 P P 12 58 32.8 +1.0
comp=Z,8.9nm,0.8s
Q32M Nakina River 53.37 40 P P 12 58 33.5 +1.2
baz=290
IUG Iuzhnay 53.60 298*c i*P P 12 58 34.2 0.0
IUG Iuzhnay 53.60 298⇑ *i*P P 12 58 34.3 0.0
baz=298
R33M Jennings River 53.85 39 P P 12 58 36.5 +0.7
baz=290
BATI Baumata 53.95 205 LR LR 13 20 29.9
comp=Z,367nm,21.9s,baz=8.0,slow=35
BATI Baumata 53.95 205 P P 12 58 35.9 -0.9
comp=Z,24nm,1.1s
DLBC Dease Lake 54.65 40 LR LR 13 24 18.8
comp=Z,388nm,19.1s,baz=298,slow=38
DLBC Dease Lake 54.65 40 P P 12 58 43.0 +1.5
baz=292
PPBI Pangkal Pinang 54.71 228 P P 12 58 42.8 +0.4
comp=Z,24nm,1.2s
GAR Garm 54.78 294 P P 12 58 42.9 -0.1
ARU Arti 54.82 317 P P 12 58 42.4 -0.3
comp=Z,32nm,0.8s,baz=69,slow=4.5,SNR=8.0
comp=Z,32nm,0.8s
ARU Arti 54.82 317 P P 12 58 43.3 +0.6
ARU Arti 54.82 317*c i*P P 12 58 42.5 -0.3
ARU 12 59 40.7
ARU 13 00 43.1
ARU S S 13 06 24.7 +2.0
ARU pmax pmax
comp=Z,88nm,1.3s
ARU MLR MLR
comp=Z,3µm,17.0s
NIL Nilore 55.21 287 P P 12 58 46.3 +0.4
NIL Nilore 55.21 287 P P 12 58 46.3 +0.4
NIL pmax pmax
comp=Z,171nm,0.9s
PSI Prapat 55.22 239 LR LR 13 23 12.6
comp=Z,265nm,20.3s,baz=39,slow=37
PSI Prapat 55.22 239 P P 12 58 46.6 +0.4
PSI pmax pmax
comp=Z,18nm,0.9s
RPSI Rantau Prapat 55.30 239 P P 12 58 46.6 0.0
RPSI IAmb IAmb 12 58 47.4
comp=Z,18nm,0.9s
CHGR Chuyangaron 55.74 294 P P 12 58 49.9 +0.1
CHGR Chuyangaron 55.74 294 P P 12 58 49.9 +0.1
CHGR pmax pmax
comp=Z,148nm,0.9s
BKNI Bangkinang 55.76 235 P P 12 58 51.6 +1.5
AB31 Akbulak array 56.97 309 *i* P P 12 58 58.2 0.0
GSI Gunungsitoli 57.22 239 P P 12 59 01.6 +1.2
SPITS Spitsbergen Ar 57.26 349 P P 12 58 59.8 -0.2
comp=Z,10nm,0.8s,baz=106,slow=9.0,SNR=3.9
SPITS LR LR 13 26 50.0
comp=Z,886nm,18.3s,baz=358,slow=40
comp=Z,10nm,0.8s
KBS Kingsbay 57.34 350 P P 12 59 02.0 +1.6
KBS IAmb IAmb 12 59 02.7
comp=Z,42nm,0.9s
KBS Kingsbay 57.34 350 P P 12 59 02.0 +1.6
KBS pmax pmax
comp=Z,42nm,1.0s
AKTO Aktyubinsk 57.58 311 P P 12 59 02.6 +0.1
comp=Z,17nm,0.8s,baz=65,slow=12,SNR=6.1
comp=Z,17nm,0.8s
LEM Lembang 57.77 224 LR LR 13 25 00.5
comp=Z,201nm,20.3s,baz=26,slow=37
KBL Kabul 57.80 290 P P 12 59 04.1 -0.6
KBL Kabul 57.80 290 P P 12 59 04.1 -0.6
KBL pmax pmax
comp=Z,52nm,0.9s
KBL Kabul 57.80 290 P P 12 59 03.7 -0.9
SNR=13
KIRV Kirov 58.41 322 P P 12 59 08.4 +0.2
comp=Z,50nm,0.8s,baz=9.9,slow=2.1,SNR=8.8
comp=Z,50nm,0.8s
KIRV Kirov 58.41 322*c i*P P 12 59 08.3 +0.1
RES Resolute Bay 58.59 15 LR LR 13 27 18.2
comp=Z,423nm,19.6s,baz=294,slow=39

PRGR **Permogore** 58.67 326 *e*P **P** 12 59 09.5 -0.4
PRGR *e**SP **sP** 12 59 16.5 +0.2
PRGR *e* 12 59 59.7
YKA Yellowknife Ar 59.74 32 P **P** 12 59 18.6 +1.2
comp=Z,2.2nm,0.9s,baz=293,slow=6.3,SNR=1.6
comp=Z,2.2nm,0.9s
HYBB Hyderabad (bro 60.11 268 *e*P **P** 12 59 20.7 +0.1
HYBB *e*S **S** 13 07 35.8 +2.6
HYBB *e*ScS **ScS** 13 09 11.8 +1.0
WB0 Warramunga Arr 60.79 190 P **P** 12 59 24.5 -0.5
WB0 IAmb IAmb 13 00 09.0
comp=Z,15nm,0.9s
WRAB Tennant Creek 60.96 190 P **P** 12 59 26.4 +0.2
WRAB IAmb IAmb 12 59 48.4
comp=Z,17nm,1.1s
WRAB Tennant Creek 60.96 190⇓ *e*P **P** 12 59 26.4 +0.2
WRAB pmax pmax
comp=Z,15nm,1.4s
WR0 Warramunga Arr 60.96 190 P **P** 12 59 26.4 +0.2
WB2 Warramunga Arr 60.97 190 P **P** 12 59 26.8 +0.6
WB2 IAmb IAmb 12 59 48.5
comp=Z,15nm,1.1s
WRA Warramunga Arr 60.97 190 P **P** 12 59 25.0 -1.2
comp=Z,3.4nm,0.8s,baz=6.5,slow=6.9,SNR=5.4
WRA LR LR 13 26 05.5
comp=Z,196nm,19.9s,baz=20,slow=36
comp=Z,3.4nm,0.8s
WRA Warramunga Arr 60.97 190 P **P** 12 59 26.5 +0.2
WRA Warramunga Arr 60.97 190 *i* P **P** 12 59 28.5 +2.3
WRA pmax pmax
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 61.18 339 P **P** 12 59 25.6 -1.6
comp=Z,8.7nm,1.0s,baz=47,slow=12,SNR=4.6
ARCES LR LR 13 30 52.7
comp=Z,2μm,18.8s,baz=32,slow=41
comp=Z,8.7nm,1.0s
KLMR Klimovskoe 61.61 327 *e*P **P** 12 59 28.8 -1.3
KLMR *e* 13 01 42.0
KLMR *e*S **S** 13 07 49.4 -1.7
KLMR pmax pmax
comp=Z,48nm,1.2s
KLMR MLR MLR
comp=Z,1μm,16.0s
KLMR Klimovskoe 61.61 327 *e*P **P** 12 59 28.9 -1.2
KLMR AMP 12 59 31.3
comp=Z,48nm,1.2s
KLMR *e*PP **PP** 13 01 42.0 -3.3
KLMR *e*S **S** 13 07 49.4 -1.7
KLMR *e*S **S** 13 07 49.4 -1.7
KLMR LQ LQ 13 21 20.6
KLMR LQ LQ 13 21 20.6
KLMR LR LR 13 24 53.5
KLMR AMP 13 29 12.5
comp=Z,1μm,16.4s
BELG Belogornoye 62.34 317 *c i*P **P** 12 59 35.5 +0.4
BELG pmax pmax
comp=Z,7.0nm,0.9s
HRA Herat 62.69 293 P **P** 12 59 38.6 +0.4
HRA IAmb IAmb 12 59 39.5
comp=Z,24nm,0.8s
GEYT Alibeck 63.63 298 P **P** 12 59 42.9 -1.2
comp=Z,21nm,0.9s,baz=38,slow=2.6,SNR=20
comp=Z,21nm,0.9s
GEYT Alibeck 63.63 298 P **P** 12 59 44.4 +0.3
GYA0B ALIBECK ARRAY 63.63 298 P **P** 12 59 44.5 +0.4
GYA0B IAmb IAmb 13 00 03.8
comp=Z,27nm,0.9s
ASAR Alice Springs 64.70 190 P **P** 12 59 50.7 -0.3
comp=Z,2.2nm,0.8s,baz=16,slow=6.7,SNR=6.7
ASAR LR LR 13 28 10.7
comp=Z,191nm,20.4s,baz=7.5,slow=36
comp=Z,2.2nm,0.8s
ASAR Alice Springs 64.70 190 P **P** 12 59 51.5 +0.5
ASAR Alice Springs 64.70 190 P **P** 12 59 51.5 +0.5
PALK Pallekele 64.91 257 P **P** 12 59 52.8 +0.1
I03D Drain, OR 65.23 53 P **P** 12 59 52.6 -1.8
baz=303
MOS Moscow 65.36 323 *e*P **P** 12 59 53.1 -1.9
MOS *e* 13 00 24.3
MOS *e* 13 02 15.3
MOS *e*S **S** 13 08 35.5 -2.5
MOS *e* 13 09 45.4
MOS pmax pmax
comp=Z,33nm,0.8s
MOS MLR MLR
comp=Z,1μm,16.0s
K02D Willamette Mer 65.59 54 P **P** 12 59 56.5 -0.4
baz=304
I04A Tendick Farm, 65.75 52 P **P** 12 59 55.0 -2.8
baz=304
DZM Mont Dzumac 65.95 157 LR LR 13 27 03.0
comp=Z,280nm,20.0s,baz=7.5,slow=34
DZM Mont Dzumac 65.95 157 *e*S **S** 13 08 47.4 +1.3
comp=Z,232nm,24.2s
DZM Mont Dzumac 65.95 157 *e*LR LR 13 19 46.5
comp=Z,528nm,22.1s
VRH Novokhopyorsk 66.05 318 *e*P **P** 12 59 58.7 -0.8
VRH pmax pmax
comp=Z,30nm,0.7s
I05D Terrebonne, OR 66.08 51 P **P** 13 00 00.2 +0.2
baz=304
OBN Obninsk 66.22 323 *c i*P **P** 13 00 00.1 -0.4
OBN *e* 13 00 32.1
OBN *e* 13 02 24.0
OBN pmax pmax
comp=Z,39nm,1.6s
OBN MLR MLR
comp=Z,1μm,17.0s
J04D Umpqua Nationa 66.24 53 P **P** 13 00 00.8 -0.4
baz=304
MSVF Nonsavu 66.34 144 LR LR 13 22 51.1
comp=Z,354nm,21.5s,baz=357,slow=30
FIA1 FINESS Array S 66.39 332 P **P** 13 00 01.4 -0.1
FINES FINESS Array B 66.39 332 P **P** 13 00 01.4 -0.1
comp=Z,17nm,0.7s,baz=46,slow=8.2,SNR=14
FINES LR LR 13 31 38.1
comp=Z,3μm,20.2s,baz=39,slow=38
comp=Z,17nm,0.7s
LPSR Galich'ya Gora 66.62 320 *e*P **P** 13 00 02.2 -1.0
LPSR pmax pmax
comp=Z,30nm,0.8s
L04D Klamath Falls 66.69 54 P **P** 13 00 05.1 +1.0
baz=304
J05D Fort Rock, OR 66.74 52 P **P** 13 00 05.0 +0.6
baz=305
SUMG Summit 67.00 1 P **P** 13 00 06.6 +0.9
SUMG IAmb IAmb 13 00 17.4
comp=Z,28nm,1.0s
SUMG Summit 67.00 1 P **P** 13 00 06.6 +0.9
SUMG pmax pmax
comp=Z,28nm,1.0s
VORR Voronezh 67.04 319 *e*P **P** 13 00 05.0 -0.9
VORR pmax pmax
comp=Z,30nm,0.3s
VSR Storozhevoye 67.34 319 *e*P **P** 13 00 07.5 -0.3
VSR pmax pmax
comp=Z,30nm,0.8s
MAK Makhachkala 67.60 308 *e*P P 13 00 02.5 -7.0
MAK pmax pmax
comp=Z,242nm,1.1s
VSU Vasula 68.18 330 *c i*P **P** 13 00 12.9 0.0
VSU pmax pmax
comp=Z,55nm,0.9s
AFI Afiamalu 68.22 133 LR LR 13 24 46.8
comp=Z,228nm,20.2s,baz=322,slow=31
GROC Groznyy 68.48 309 *e*P **P** 13 00 15.9 +0.8
GROC *e* 13 00 41.4
GROC pmax pmax
comp=Z,104nm,0.4s
NCK Nalchik 69.59 310⇓ *i*P **P** 13 00 23.0 +1.0
NCK pmax pmax
comp=Z,122nm,3.1s
KIV Kislovodsk 69.84 311 ⇑P **P** 13 00 25.3 +1.7
KIV Kislovodsk 69.84 311 P **P** 13 00 24.6 +0.9
KIV Kislovodsk 69.84 311 *e*P **P** 13 00 24.3 +0.7
KIV *e* 13 02 57.2
KIV *e*S **S** 13 09 34.0 +1.6
KIV pmax pmax
comp=Z,76nm,1.0s
KIV pmax pmax
comp=Z,71nm,4.1s
KIV Kislovodsk 69.84 311 P **P** 13 00 25.0 +1.3
ZEI Tsey 69.84 309 *e*P **P** 13 00 22.4 -1.4
ZEI pmax pmax
comp=Z,19nm,1.0s

KBZ Khabaz 69.86 311 P **P** 13 00 24.9 +1.3
comp=Z,27nm,0.9s,baz=52,slow=5.8,SNR=12
comp=Z,27nm,0.9s
KBZ Khabaz 69.86 311 *c i*P **P** 13 00 24.0 +0.4
KBZ pmax pmax
comp=Z,40nm,1.0s
ONI Oni 70.22 309 P **P** 13 00 27.1 +1.1
ONI IAmb IAmb 13 00 28.4
comp=Z,26nm,1.0s
ONI Oni 70.22 309 P **P** 13 00 27.1 +1.1
ONI pmax pmax
comp=Z,26nm,1.0s
CMB Columbia Colle 70.32 57 P **P** 13 00 27.8 +1.2
CMB Columbia Colle 70.32 57 P **P** 13 00 27.8 +1.2
CMB pmax pmax
comp=Z,21nm,1.8s
MNK Minsk 70.44 326 *i* P **P** 13 00 26.9 -0.1
MNK *i* 13 00 48.8
MNK *i* 13 03 02.8
MNK *i* PPP PPP 13 04 44.5
MNK *i* S **S** 13 09 40.1 +1.3
MNK *i* SS **SS** 13 14 11.5 +2.7
MNK *i* SSS SSS 13 17 09.2
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK pmax pmax
comp=Z,49nm,0.9s
MNK MLR MLR
comp=E,179nm,18.0s
MNK MLR MLR
comp=Z,2μm,18.0s
MNK Minsk 70.44 326 *i* P **P** 13 00 26.9 -0.1
comp=E,5.0nm,0.9s
MNK *i* P **P** 13 00 26.9 -0.1
MNK *i* P **P** 13 00 26.9 -0.1
comp=Z,49nm,0.9s,baz=47
MNK *i* PcP **PcP** 13 00 48.9 +0.5
MNK *i* PP **PP** 13 03 02.9 +0.5
MNK *i* PPP PPP 13 04 44.5
MNK *i* S **S** 13 09 40.1 +1.3
MNK *i* SS **SS** 13 14 11.5 +2.7
MNK *i* SSS SSS 13 17 09.3
MNK *i* LQ LQ 13 24 35.0
MNK *i* LR LR 13 29 08.2
MNK *i* LRM MLR 13 34 42.4
comp=E,179nm,18.0s
MNK *i* LRM MLR 13 34 45.6
comp=Z,2μm,18.0s
NACGM Naroch 70.62 327⇓ *e*P **P** 13 00 28.7 +0.6
baz=46
BMN Battle Mountai 70.84 53 P **P** 13 00 31.3 +1.4
BMN Battle Mountai 70.84 53 P **P** 13 00 31.3 +1.4
BMN pmax pmax
comp=Z,7.0nm,0.9s
BOZ Bozeman (W) 70.88 46 P **P** 13 00 31.6 +1.5
BOZ Bozeman (W) 70.88 46 P **P** 13 00 31.6 +1.5
BOZ pmax pmax
comp=Z,8.0nm,0.8s
GNI Garni 70.93 307 P **P** 13 00 30.7 +0.2
comp=Z,7.1nm,0.7s,baz=178,slow=6.3,SNR=4.5
comp=Z,7.1nm,0.7s
GNI Garni 70.93 307 *c i*P **P** 13 00 31.8 +1.3
GNI pmax pmax
comp=Z,31nm,1.4s
RYN Ryan 71.13 55 P **P** 13 00 33.4 +1.7
RYN IAmb IAmb 13 00 43.7
comp=Z,22nm,1.6s
KVN Kaiserville 71.14 55 P **P** 13 00 33.6 +1.8
KVN IAmb IAmb 13 00 44.9
comp=Z,16nm,1.2s
KVN Kaiserville 71.14 55 P **P** 13 00 33.6 +1.8
KVN pmax pmax
comp=Z,16nm,1.2s
NVAR Mina Array Bea 71.39 55 P **P** 13 00 35.0 +1.6
comp=Z,4.4nm,1.0s,baz=295,slow=6.1,SNR=5.8
comp=Z,4.4nm,1.0s
NVAR Mina Array Bea 71.39 55 P **P** 13 00 34.9 +1.6
NB201 NORSAR Array S 71.44 338 P **P** 13 00 33.5 +0.5
HFS Hagfors 71.46 336 P **P** 13 00 32.9 -0.1
comp=Z,10nm,0.7s,baz=69,slow=5.4,SNR=6.5
comp=Z,10nm,0.7s
NB2 NORSAR Subarra 71.47 338 P **P** 13 00 32.8 -0.4
comp=Z,18nm,0.9s,baz=36,slow=6.2
NB2 NORSAR Subarra 71.47 338 P **P** 13 00 32.8 -0.4
baz=36,slow=6.2
NOA NORSAR Array B 71.47 338 P **P** 13 00 33.1 -0.1
comp=Z,8.7nm,0.8s,baz=37,slow=6.0,SNR=18
NOA LR LR 13 36 00.1
comp=Z,1μm,19.6s,baz=25,slow=39
comp=Z,8.7nm,0.8s
SHME Shamm 71.76 289 P **P** 13 00 35.6 +0.1
SNR=13
SOC Sochi 71.76 312 *c i*P **P** 13 00 34.9 -0.3
SOC *e* 13 03 09.1
SOC *e*PP PPP 13 04 57.8
SOC *e*S **S** 13 09 56.8 +2.3
SOC *e*SS **SS** 13 14 27.9 -1.7
SOC pmax pmax
comp=Z,13nm,0.6s
WBK Wadi Bani Khal 71.76 284 P **P** 13 00 36.5 +1.0
PAGB Antelope Grade 71.78 58 P **P** 13 00 36.7 +1.2
PAGB IAmb IAmb 13 00 47.4
comp=Z,25nm,1.4s
BIDO Bidbid 71.83 286 P **P** 13 00 36.4 +0.4
BCA Borcka 72.00 309 ⇑P **P** 13 00 37.9 +1.1
SFJD Kangerlussuaq 72.06 6 LR LR 13 34 33.7
comp=Z,674nm,19.5s,baz=348,slow=38
MDH Madha 72.10 288 P **P** 13 00 38.2 +0.6
MASF Masafi 72.15 288 P **P** 13 00 38.5 +0.6
SNR=7.9
SMDO Samad 72.17 285 P **P** 13 00 38.9 +0.8
H17A Grant Village 72.22 46 P **P** 13 00 40.6 +2.3
H17A IAmb IAmb 13 00 52.3
comp=Z,17nm,1.0s
H17A Grant Village 72.22 46 P **P** 13 00 39.3 +1.0
baz=310
ANN Anapa 72.25 314 *e*P **P** 13 00 35.6 -2.5
ANN *e**PP **pP** 13 00 38.4 -4.6
ANN *e*PPP PPP 13 04 59.6
ANN *e*S **S** 13 09 58.0 -2.1
ANN pmax pmax
comp=Z,25nm,0.9s
ANN MLR MLR
comp=N,1μm,15.0s
UOSS Minazif 72.38 288 P **P** 13 00 39.3 +0.1
UOSS IAmb IAmb 13 00 40.0
comp=Z,30nm,0.9s
UOSS Minazif 72.38 288 P **P** 13 00 39.2 0.0
HOQ Hoqain 72.39 286 P **P** 13 00 39.5 +0.1
MZP Montezuma Peak 72.41 55 P **P** 13 00 41.1 +1.6
UMQ Umm Al-Quwin 72.42 289 P **P** 13 00 41.2 +1.8
FXWY Fox Creek 72.45 47 P **P** 13 00 40.7 +1.1
AKASG Malin Array Be 72.47 323 P **P** 13 00 39.0 -0.2
comp=Z,21nm,0.8s,baz=44,slow=6.7,SNR=28
comp=Z,21nm,0.8s
AKASG Malin Array Be 72.47 323 P **P** 13 00 39.5 +0.2
AKBB Malin Array Si 72.47 323 P **P** 13 00 39.5 +0.2
AKBB Malin Array Si 72.47 323 *c i*P **P** 13 00 39.0 -0.3
AKBB pmax pmax
comp=Z,39nm,0.9s
VES Vestal, Richgr 72.47 58 P **P** 13 00 40.1 +0.5
baz=308
HATD Hatta, Dubai 72.50 288 P **P** 13 00 40.3 +0.4
SNR=7.7
MOOW Moose Ponds 72.54 47 P **P** 13 00 42.4 +2.3
JMDO Jabal Madar 72.55 285 P **P** 13 00 40.5 +0.2
PKM Mcpherson Peak 72.58 59 P **P** 13 00 40.2 -0.3
baz=308
SOHO SOHO 72.63 287 P **P** 13 00 40.6 -0.1
ASHO Ashiyiah 72.64 288 P **P** 13 00 41.1 +0.3
SNR=9.0
CWC Cottonwood Cre 72.74 57 P **P** 13 00 41.5 +0.1
baz=308
FRB Frobisher Bay 72.78 14 LR LR 13 37 56.2
comp=Z,609nm,18.1s,baz=336,slow=40
GRAC Grapevine Rang 72.85 56 P **P** 13 00 43.1 +1.2
baz=308
FAQ Al Faqa, Dubai 72.94 288 P **P** 13 00 42.5 -0.1
ISA Isabella, Lake 72.97 58 P **P** 13 00 43.2 +0.6
baz=308
BSY Bisya 72.98 286 P **P** 13 00 42.9 0.0
ARVC Arvin 73.07 58 P **P** 13 00 43.7 +0.5
baz=308
ARQ Araqi 73.12 286 P **P** 13 00 44.0 +0.4
R11A Troy Canyon, C 73.12 54 P **P** 13 00 44.6 +1.0
baz=309
ASUD Al Ashush, Dub 73.20 288 P **P** 13 00 44.5 +0.4
ALNE Al Ain 73.24 287 P **P** 13 00 44.3 -0.1
MPMC Manual Prospec 73.36 57 P **P** 13 00 45.5 +0.4
baz=308
HWUT Hardware Ranch 73.45 49 P **P** 13 00 47.9 +2.3
HWUT IAmb IAmb 13 00 59.4
comp=Z,19nm,1.2s
MHTO MHTO 73.48 284 P **P** 13 00 46.1 +0.3
SNR=13
FURC Furnace Creek, 73.50 56 P **P** 13 00 46.1 +0.5
baz=309
GURO Guroymak-BITLI 73.57 307 P **P** 13 00 47.3 +1.0
GURO IAmb IAmb 13 00 48.6
comp=Z,22nm,0.9s
TPNV Topopah Spring 73.58 55 P **P** 13 00 47.5 +1.2
TPNV IAmb IAmb 13 00 58.2
comp=Z,22nm,1.3s
TPNV Topopah Spring 73.58 55 P **P** 13 00 47.6 +1.2
TPNV pmax pmax
comp=Z,22nm,1.3s
DUG Dugway, Tooele 73.62 51 P **P** 13 00 48.7 +2.2
DUG Dugway, Tooele 73.62 51 P **P** 13 00 48.7 +2.2
DUG pmax pmax
comp=Z,12nm,1.1s
EDW2 Edwards Air Fo 73.76 58 P **P** 13 00 47.5 +0.2
baz=308
QSM Queen of Sheba 73.81 56 P **P** 13 00 49.1 +1.6
QSM IAmb IAmb 13 01 00.4
comp=Z,20nm,1.2s
BW06 Boulder Array 73.84 47 P **P** 13 00 49.4 +1.5
PD31 Pinedale Array 73.84 47 P **P** 13 00 49.8 +1.9
PDAR Pinedale Array 73.84 47 P **P** 13 00 49.2 +1.4
comp=Z,1.2nm,0.6s,baz=269,slow=2.1,SNR=6.7
comp=Z,1.2nm,0.6s
PDAR Pinedale Array 73.84 47 P **P** 13 00 48.9 +1.0
BORG Borgarnes 74.22 353 P **P** 13 00 50.2 +0.9
comp=Z,10nm,0.9s,baz=302,slow=3.8,SNR=3.7
comp=Z,10nm,0.9s
SHOC Shoshone, Teco 74.22 56 P **P** 13 00 50.8 +0.8
baz=309
GSC Goldstone, Bar 74.26 57 P **P** 13 00 51.0 +0.7
baz=309
BFSC Mount Baldy Ra 74.38 58 P **P** 13 00 51.9 +0.9
baz=309
MPU Maple Canyon 74.43 50 P **P** 13 00 53.4 +2.1
DQM DQM 74.45 283 P **P** 13 00 52.0 +0.6
SORM Soroca 74.66 321 ⇓P **P** 13 00 51.5 -0.7
TUQ Turquoise Moun 74.74 56 P **P** 13 00 54.2 +1.1
baz=309
JRN Qarnain Island 74.79 290 P **P** 13 00 52.5 -0.9
HEC Hector,Ludlow 74.86 57 P **P** 13 00 53.9 +0.2
baz=309
MARD Mardin 75.12 306 P **P** 13 00 56.1 +0.8
MARD IAmb IAmb 13 00 57.4
comp=Z,37nm,0.9s
RDMU Red Mountain 75.27 49 P **P** 13 00 58.2 +2.0
RDMU IAmb IAmb 13 01 09.8
comp=Z,25nm,1.0s
MILM Milestii Mici 75.29 320 *e*P **P** 13 00 58.2 +2.3
MILM LRM MLR 13 37 10.8
comp=Z,1μm,17.0s
MILM Milestii Mici 75.29 320 *e*P **P** 13 00 58.2 +2.3
MILM MLR MLR
comp=E,1μm,17.0s
MILM MLR MLR
comp=Z,1μm,19.0s
GMRC Granite Mounta 75.32 57 P **P** 13 00 57.1 +0.7
baz=310
BEL Belsk 75.32 327 *e*P **P** 13 00 56.5 +0.6
BEL *e*PcP **pwP** 13 01 06.5 +2.8
LVV L'vov 75.44 324 *e*P P 13 01 06.5 +10
LVV MLR MLR
comp=N,800nm,15.0s
LVV MLR MLR
comp=E,1μm,15.0s
LVV MLR MLR
comp=Z,700nm,15.0s
MZR Muzera 75.53 288 P **P** 13 00 57.4 -0.3
PFO Pinyon Flats O 75.55 58⇓ *e*P **P** 13 00 57.9 +0.1
PFO pmax pmax
comp=Z,19nm,1.5s
PFO Pinyon Flats O 75.55 58 P **P** 13 00 57.7 0.0
baz=309
SHMA Al-Shehemyia 75.57 292 P **P** 13 00 57.6 -0.2
K22A Casper 75.59 46 P **P** 13 00 58.7 +0.8
baz=312
BELC Belle Mtn. Jos 75.60 58 P **P** 13 00 58.2 +0.1
baz=310
SRU San Rafael Swe 75.67 51 P **P** 13 01 00.2 +1.7
SRU San Rafael Swe 75.67 51 P **P** 13 01 00.2 +1.7
SRU pmax pmax
comp=Z,12nm,1.0s
SAKB Bahrain 75.80 292 P **P** 13 00 59.0 -0.1
RSSD Black Hills 75.91 43 P **P** 13 01 01.1 +1.2
RSSD Black Hills 75.91 43 P **P** 13 01 01.1 +1.2
RSSD pmax pmax
comp=Z,9.0nm,0.9s
VASR Vaslui 75.99 320 ⇑P **P** 13 01 01.1 +1.2
IRM Iron Mountain 76.04 57 P **P** 13 01 01.3 +0.8
baz=310
KWP Kalwaria Pacla 76.16 325 *e*P **P** 13 01 01.1 +0.3
KWP *e*PcP **PcP** 13 01 11.4 -1.5
KWP Kalwaria Pacla 76.16 325 P **P** 13 01 02.2 +1.3
KWP Kalwaria Pacla 76.16 325 P **P** 13 01 02.2 +1.3
KWP pmax pmax
comp=Z,347nm,0.9s
SLWR Sila 76.16 290 P **P** 13 01 00.5 -0.7
BC3 Big Chuckawall 76.17 58 P **P** 13 01 02.2 +0.9
baz=310
O20A White River Ci 76.32 49 P **P** 13 01 03.1 +0.9
baz=312
SMRA Abu-Samra 76.36 291 P **P** 13 01 02.0 -0.3
U15A North Rim 76.36 54 P **P** 13 01 03.8 +1.2
IKP In-Ko-Pah, Jac 76.38 59 P **P** 13 01 02.9 +0.4
baz=310
BUR08 Bucovina Ar. S 76.50 322 P **P** 13 01 03.8 +0.9
BUR08 IAmb IAmb 13 01 04.5
comp=Z,16nm,0.8s
BURAR Bucovina Array 76.51 322 P **P** 13 01 03.5 +0.5
BURAR IAmb IAmb 13 01 04.9
comp=Z,22nm,0.8s
BURAR Bucovina Array 76.51 322 ⇓P **P** 13 01 03.3 +0.3
TLCR 76.51 319 ⇓P **P** 13 01 03.4 +0.5
BIZ Bicaz 76.58 321 ⇓P **P** 13 01 03.5 +0.2
PDMCI Parker Dam,Lak 76.59 56 P **P** 13 01 05.2 +1.6
baz=310
TESR Tescani 76.63 321 ⇓P **P** 13 01 04.3 +0.8
ILGA Ilgaz 76.78 313 P **P** 13 01 06.3 +1.5
CFR Carcaliu 76.86 319 ⇑P **P** 13 01 05.0 +0.1
TPGR Topolog 76.94 319 ⇓P **P** 13 01 06.2 +0.8
GLA Glamis 76.95 58 P **P** 13 01 06.1 +0.4
baz=310
OJC Ojcow 76.96 327 *e*P **P** 13 01 05.1 -0.2
OJC *e*PcP **pwP** 13 01 14.6 +1.6
OJC *e*S **S** 13 10 47.7 -4.9
OJC Ojcow 76.96 327 P **P** 13 01 05.1 -0.2
OJC IAmb IAmb 13 01 18.1
comp=Z,30nm,1.1s
OJC Ojcow 76.96 327 P **P** 13 01 05.1 -0.2
OJC pmax pmax
comp=Z,30nm,1.1s
VRI Vrincioaia 77.06 320 ⇑P **P** 13 01 08.1 +2.1
UZH Uzhgorod 77.09 324 *e*P **P** 13 01 04.4 -1.7
UZH *i* 13 01 06.4
UZH *e* 13 01 13.5
N23A Red Feather La 77.10 47 P **P** 13 01 07.8 +1.2
baz=313
PLOR Plostina 77.11 320 ⇑P **P** 13 01 07.1 +0.8
CRVS Cervenica-Dubn 77.25 325 *e*P **P** 13 01 07.6 +0.6
CRVS pmax pmax
comp=Z,19nm,1.2s
CRVS Cervenica-Dubn 77.25 325 *e*P **P** 13 01 07.6 +0.6
BMR Baia Mare 77.26 323 ⇓P **P** 13 01 06.9 -0.1
HARR Harsova 77.30 319 ⇓P **P** 13 01 07.3 0.0
COVR Voineasa-Covas 77.32 321 ⇑P **P** 13 01 09.1 +1.6
OZUR 77.34 321 ⇓P **P** 13 01 09.2 +1.6
NIE Niedzica 77.36 326 *e*P **P** 13 01 08.4 +0.8
NIE *e*PcP **PcP** 13 01 17.8 -0.3
WUAZ Wupatki 77.52 54 P **P** 13 01 10.7 +1.7
WUAZ IAmb IAmb 13 01 22.3
comp=Z,14nm,1.1s
DOPR Dopca 77.63 321 ⇑P **P** 13 01 09.0 -0.2
MLR Muntele Rosu 77.71 320 P **P** 13 01 10.3 +0.5
comp=Z,10nm,1.1s,baz=55,slow=1.9,SNR=5.0

	comp=Z,10nm,1.1s							
MLR	**Muntele Rosu**	**77.71**	**320**	⇓P		**P**	**13 01 10.2**	**+0.5**
BR131	**Keskin Array S**	**77.72**	**312**	*c iP*		**P**	**13 01 10.3**	**+0.3**
BRTR	**Keskin Array B**	**77.72**	**312**	P		**P**	**13 01 10.3**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=57,slow=4.6,SNR=4.5							
BRTR				PP		**PP**	**13 04 03.1**	**-1.7**
	comp=Z,3.8nm,0.9s,baz=62,slow=5.6,SNR=5.5							
	comp=Z,2.8nm,0.8s							
DMTO	**DMTO**	**77.74**	**283**	P		**P**	**13 01 09.7**	**-0.5**
ICOR	**Ion Corvin**	**77.78**	**318**	⇓P		**P**	**13 01 10.9**	**+0.9**
KSP	**Ksiaz**	**77.89**	**329**	*e*P		**P**	**13 01 11.2**	**+0.6**
KSP				*e*S		**S**	**13 11 01.8**	**-0.9**
LANS	**Liptovska Anna**	**77.91**	**326**	*e*P		**P**	**13 01 12.9**	**+2.1**
LANS				pmax	pmax			
	comp=Z,9.0nm,1.1s							
LANS	**Liptovska Anna**	**77.91**	**326**	*e*P		**P**	**13 01 12.9**	**+2.1**
OKC	**Ostrava-Krasne**	**77.93**	**327**	*e*P		**P**	**13 01 11.1**	**+0.3**
OKC				*e*			13 01 19.4	
OKC				MLR	MLR			
	comp=Z,2μm,16.5s							
OKC	**Ostrava-Krasne**	**77.93**	**327**	*e*P		**P**	**13 01 11.1**	**+0.3**
OKC				*ex*	x		13 01 19.4	
OKC				AMS	AMS		13 39 00.0	
	comp=Z,2μm,16.5s							
OSTC	**Ostas**	**78.14**	**329**	*e*P		**P**	**13 01 12.4**	**+0.4**
OSTC				*e*S	S		13 10 55.7	-10
OSTC				AMS	AMS		13 39 20.0	
	comp=Z,2μm,17.2s							
VOIR		**78.18**	**321**	⇑P		**P**	**13 01 13.8**	**+1.5**
CHVC	**Chvalec**	**78.18**	**329**	AMS	AMS		13 39 20.0	
	comp=Z,100nm,16.1s							
MORC	**Moravsky Berou**	**78.23**	**328**	P		**P**	**13 01 13.3**	**+0.8**
MORC				IAmb	IAmb		13 01 23.7	
	comp=Z,17nm,1.0s							
MORC	**Moravsky Berou**	**78.23**	**328**	P		**P**	**13 01 13.3**	**+0.8**
MORC				pmax	pmax			
	comp=Z,17nm,1.0s							
MORC	**Moravsky Berou**	**78.23**	**328**	*e*P		**P**	**13 01 13.1**	**+0.6**
MORC	**Moravsky Berou**	**78.23**	**328**	⇑P		**P**	**13 01 13.5**	**+1.0**
UPC	**Upice**	**78.26**	**329**	*e*P		**P**	**13 01 13.0**	**+0.4**
UPC				MLR	MLR			
	comp=Z,2μm,17.3s							
UPC	**Upice**	**78.26**	**329**	*e*P		**P**	**13 01 13.0**	**+0.4**
UPC				*e*S	S		13 10 54.0	-13
UPC				AMS	AMS		13 39 20.0	
	comp=Z,2μm,17.3s							
DPC	**Dobruska-Polom**	**78.27**	**329**	*e*P		**P**	**13 01 13.2**	**+0.5**
DPC				*e*			13 01 20.3	
DPC				*e*S		**S**	**13 11 00.9**	**-5.9**
DPC				MLR	MLR			
	comp=Z,2μm,15.2s							
DPC	**Dobruska-Polom**	**78.27**	**329**	*e*P		**P**	**13 01 13.2**	**+0.5**
DPC				*e*pP		**pwP**	**13 01 20.3**	**-0.6**
DPC				*e*S		**S**	**13 11 00.9**	**-5.9**
DPC				AMS	AMS		13 39 10.0	
	comp=Z,2μm,15.2s							
DRGR		**78.27**	**323**	⇓P		**P**	**13 01 13.0**	**+0.1**
KRLC	**Kraliky**	**78.30**	**328**	*e*P		**P**	**13 01 13.3**	**+0.4**
KRLC				MLR	MLR			
	comp=Z,1μm,17.2s							
KRLC	**Kraliky**	**78.30**	**328**	*e*P		**P**	**13 01 13.3**	**+0.4**
KRLC				*e*S	S		13 10 52.2	-15
KRLC				AMS	AMS		13 39 00.0	
	comp=Z,1μm,17.2s							
ARR	**Arges**	**78.43**	**321**	⇓P		**P**	**13 01 15.8**	**+2.1**
WHFO	**Wadi Hawf**	**78.48**	**284**	P		**P**	**13 01 13.7**	**-0.7**
MDUB	**Mudurnu**	**78.57**	**314**	P		**P**	**13 01 15.1**	**+0.4**
PRD	**Provadia**	**78.64**	**318**	P		**P**	**13 01 15.0**	**+0.2**
PSZ	**Piszkesteto**	**78.67**	**325**	P		**P**	**13 01 15.8**	**+0.8**
PSZ				IAmb	IAmb		13 01 17.2	
	comp=Z,19nm,1.0s							
PSZ	**Piszkesteto**	**78.67**	**325**	P		**P**	**13 01 15.8**	**+0.8**
PSZ				pmax	pmax			
	comp=Z,19nm,1.0s							
PSZ	**Piszkesteto**	**78.67**	**325**	⇑P		**P**	**13 01 16.0**	**+0.9**
VYHS	**Vyhne**	**78.69**	**326**	*e*P		**P**	**13 01 15.7**	**+0.7**
VYHS				pmax	pmax			
	comp=Z,14nm,1.2s							
VYHS	**Vyhne**	**78.69**	**326**	*e*P		**P**	**13 01 15.7**	**+0.7**
S22A	**4UR Ranch, Cre**	**78.74**	**50**	P		**P**	**13 01 16.7**	**+0.8**
	baz=313							
BRG	**Berggiesshubel**	**78.77**	**330**	*e*P		**P**	**13 01 16.1**	**+0.7**
BRG				Amp			13 01 18.3	
	comp=Z,8.3nm,1.0s							
BRG				*ex*	x		13 01 25.9	
BRG				Amp			13 01 27.3	
	comp=Z,7.3nm,1.0s							
BRG	**Berggiesshubel**	**78.77**	**330**	S		**S**	**13 11 12.0**	**-0.1**
BRG				Amp			13 43 01.0	
	comp=Z,1.2nm,14.1s							
BRG				Amp			13 43 05.0	
	comp=N,0.6nm,13.2s							
BRG				Amp			13 43 05.0	
	comp=E,0.6nm,13.8s							
BRG	**Berggiesshubel**	**78.77**	**330**	*e*P		**P**	**13 01 16.1**	**+0.7**
BRG				*e*			13 01 25.9	
BRG				S		**S**	**13 11 12.0**	**-0.1**
BRG				pmax	pmax			
	comp=Z,8.0nm,1.0s							
BRG				pmax	pmax			
	comp=Z,7.0nm,1.0s							
BRG				smax	smax			
	comp=Z,1μm,14.1s							
CLL	**Collm**	**78.77**	**331**	P		**P**	**13 01 15.4**	**0.0**
CLL				IAmb	IAmb		13 01 16.6	
	comp=Z,18nm,0.8s							
CLL	**Collm**	**78.77**	**331**	⇑ *iP*		**P**	**13 01 15.4**	**0.0**
CLL				*i*			13 01 24.6	
CLL				*e*S		**S**	**13 11 15.0**	**+3.0**
CLL				pmax	pmax			
	comp=Z,19nm,0.8s							
CLL				MLR	MLR			
	comp=Z,1μm,20.7s							
CLL	**Collm**	**78.77**	**331**	⇑ *iP*		**P**	**13 01 15.4**	**0.0**
	comp=Z,19nm,0.8s							
CLL				*i* PcP		**PcP**	**13 01 24.6**	**+0.4**
CLL				*i* x	x		13 01 27.1	
CLL				*e*PP		**PP**	**13 04 14.0**	**+1.0**
CLL				*e*PPP	PPP		13 06 00.0	
CLL				*e*S		**S**	**13 11 15.0**	**+3.0**
CLL				*e*PS		**PnS**	**13 11 54.0**	**-0.3**
CLL				*e*SS	SS		13 16 36.0	+21
CLL				*ex*	x		13 20 54.0	
CLL				LmH			13 34 00.0	
	comp=N,2μm,18.7s							
CLL				LmH			13 34 00.0	
	comp=E,2μm,20.5s							
CLL				LmV			13 38 00.0	
	comp=Z,1μm,20.7s							
PVCC	**Panska Ves**	**78.81**	**330**	AMS	AMS		13 41 20.0	
	comp=Z,1μm,15.6s							
Q24A	**Divide**	**78.86**	**48**	P		**P**	**13 01 16.4**	**-0.2**
	baz=314							
JAVC	**Velka Javorina**	**78.89**	**327**	*e*P		**P**	**13 01 17.6**	**+1.4**
214A	**Organ Pipe Nat**	**78.96**	**57**	P		**P**	**13 01 18.6**	**+1.8**
	baz=311							
VRAC	**Vranov**	**78.98**	**328**	P		**P**	**13 01 16.5**	**-0.1**
	comp=Z,10nm,1.0s,baz=36,slow=6.9,SNR=11							
	comp=Z,10nm,1.0s							
VRAC	**Vranov**	**78.98**	**328**	*e*P		**P**	**13 01 17.5**	**+0.9**
VRAC	**Vranov**	**78.98**	**328**	⇑P		**P**	**13 01 17.8**	**+1.2**
SIRR	**Siria**	**79.14**	**323**	⇓P		**P**	**13 01 18.5**	**+0.9**
ABTO	**Aybut**	**79.19**	**284**	P		**P**	**13 01 18.5**	**+0.1**
PRU	**Pruhonice**	**79.25**	**329**	*e*P		**P**	**13 01 18.2**	**+0.2**
PRU				*e*			13 01 28.5	
PRU				*e*S		**S**	**13 11 14.8**	**-2.4**
PRU				MLR	MLR			
	comp=Z,1μm,13.6s							
PRU	**Pruhonice**	**79.25**	**329**	*e*P		**P**	**13 01 18.2**	**+0.2**
PRU				*e*PCP		**PcP**	**13 01 28.5**	**+2.2**
PRU				*e*S		**S**	**13 11 14.8**	**-2.4**
PRU				AMS	AMS		13 41 20.0	
	comp=Z,1μm,13.6s							
KRUC	**Moravsky**	**79.25**	**328**	*e*P		**P**	**13 01 18.8**	**+0.7**
SMOL	**Smolenice**	**79.26**	**327**	*e*P		**P**	**13 01 19.6**	**+1.5**
SZH	**Strazhica**	**79.33**	**319**	P		**P**	**13 01 18.0**	**-0.6**
BORA	**Eskisehir**	**79.39**	**314**	P		**P**	**13 01 20.0**	**+0.9**
MODS	**Modra-Piesok**	**79.43**	**327**	*e*P		**P**	**13 01 20.3**	**+1.2**
MODS				pmax	pmax			
	comp=Z,27nm,1.0s							
MODS	**Modra-Piesok**	**79.43**	**327**	*e*P		**P**	**13 01 20.3**	**+1.2**
TREC	**Trest**	**79.43**	**328**	*e*P		**P**	**13 01 19.5**	**+0.4**
TREC				MLR	MLR			
	comp=Z,1μm,16.2s							
TREC	**Trest**	**79.43**	**328**	*e*P		**P**	**13 01 19.5**	**+0.4**
TREC				AMS	AMS		13 39 40.0	
	comp=Z,1μm,16.2s							
ZST	**Bratislava**	**79.64**	**327**	*e*P		**P**	**13 01 20.8**	**+0.6**
ZST	**Bratislava**	**79.64**	**327**	*e*P		**P**	**13 01 20.8**	**+0.6**
BZS	**Buzias**	**79.66**	**323**	⇑P		**P**	**13 01 20.7**	**+0.3**
ECSD	**EROS Data Cent**	**79.94**	**40**	P		**P**	**13 01 23.1**	**+1.2**
TUC	**Tucson**	**80.01**	**56**	P		**P**	**13 01 23.5**	**+0.9**
TUC	**Tucson**	**80.01**	**56**	P		**P**	**13 01 23.5**	**+0.9**
TUC				pmax	pmax			
	comp=Z,9.0nm,1.3s							
EKA	**Eskdalemuir Ar**	**80.23**	**342**	P		**P**	**13 01 23.4**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=32,slow=5.3,SNR=8.8							
EKA				LR	LR		13 43 07.8	
	comp=Z,755nm,18.0s,baz=36,slow=40							
	comp=Z,4.5nm,0.8s							
MDVR	**Moldovita**	**80.24**	**322**	⇓P		**P**	**13 01 24.0**	**+0.4**
CKRC	**Cesky Krumlov**	**80.28**	**329**	*e*P		**P**	**13 01 24.1**	**+0.4**
CKRC				*e*S		**S**	**13 11 28.7**	**+0.5**
KHC	**Kasperske Hory**	**80.31**	**329**	P		**P**	**13 01 23.8**	**-0.1**
KHC				IAmb	IAmb		13 01 25.8	
	comp=Z,17nm,1.0s							
KHC	**Kasperske Hory**	**80.31**	**329**	*e*P		**P**	**13 01 24.0**	**+0.1**
KHC				*e*			13 01 33.2	
KHC				*e*S		**S**	**13 11 25.3**	**-3.3**
KHC				MLR	MLR			
	comp=Z,1μm,14.3s							
KHC	**Kasperske Hory**	**80.31**	**329**	*e*P		**P**	**13 01 24.0**	**+0.1**
KHC				*e*PCP		**pwP**	**13 01 33.2**	**+1.1**
KHC				*e*S		**S**	**13 11 25.3**	**-3.3**
KHC				AMS	AMS		13 43 30.0	
	comp=Z,1μm,14.3s							
CONA	**Conrad Observa**	**80.37**	**327**	*e*P		**P**	**13 01 25.2**	**+0.9**
	comp=Z,12nm,1.0s,SNR=7.1							
RONA	**Rosalia, Austr**	**80.37**	**327**	*e*P		**P**	**13 01 25.3**	**+1.1**
	comp=Z,17nm,1.0s,SNR=8.4							
GEC2	**GERESS Array S**	**80.50**	**329**	P		**P**	**13 01 25.5**	**+0.5**
GERES	**GERESS Array B**	**80.50**	**329**	P		**P**	**13 01 24.6**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=28,slow=3.8,SNR=11							
GERES				PP		**PP**	**13 04 29.0**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=52,slow=8.6,SNR=3.6							
	comp=Z,4.0nm,0.9s							
GERES	**GERESS Array B**	**80.50**	**329**	P		**P**	**13 01 25.1**	**+0.2**
GERES	**GERESS Array B**	**80.50**	**329**	P		**P**	**13 01 25.1**	**+0.2**
MORH	**Mrgy, Hungar**	**80.53**	**325**	⇑P		**P**	**13 01 25.1**	**+0.1**
T25A	**Trinidad**	**80.55**	**49**	P		**P**	**13 01 26.1**	**+0.5**
	baz=314							
GRFO	**Grafenberg**	**80.75**	**331**	P		**P**	**13 01 27.2**	**+1.0**
GRFO				IAmb	IAmb		13 01 28.2	
	comp=Z,22nm,0.9s							
GRFO	**Grafenberg**	**80.75**	**331**	P		**P**	**13 01 27.2**	**+1.0**
GRFO				pmax	pmax			
	comp=Z,22nm,0.9s							
ISP	**Isparta**	**80.80**	**312**	P		**P**	**13 01 27.4**	**+0.6**
ISP	**Isparta**	**80.80**	**312**	P		**P**	**13 01 27.4**	**+0.6**
ISP				pmax	pmax			
	comp=Z,9.0nm,0.8s							
FRGS	**Fruska Gora**	**80.83**	**323**	⇑P		**P**	**13 01 26.9**	**+0.2**
ANMO	**Albuquerque**	**80.88**	**52**	P		**P**	**13 01 29.0**	**+1.6**
ANMO	**Albuquerque**	**80.88**	**52**	*ce*P		**P**	**13 01 28.8**	**+1.4**
ANMO				pmax	pmax			
	comp=Z,4.0nm,1.2s							
RAYN	**Ar Rayn**	**80.88**	**293**	P		**P**	**13 01 27.7**	**+0.3**
RAYN				IAmb	IAmb		13 01 28.6	
	comp=Z,33nm,1.5s							
RAYN	**Ar Rayn**	**80.88**	**293**	P		**P**	**13 01 27.7**	**+0.3**
RAYN				pmax	pmax			
	comp=Z,33nm,1.5s							
RAYN	**Ar Rayn**	**80.88**	**293**	P		**P**	**13 01 27.7**	**+0.3**
RAR	**Rarotonga**	**80.94**	**128**	LR	LR		13 35 42.6	
	comp=Z,223nm,19.2s,baz=314,slow=34							
ARSA	**Arzberg**	**81.04**	**327**	*e*P		**P**	**13 01 27.9**	**+0.1**
	comp=Z,7.2nm,0.9s,SNR=6.0							
RDO	**Rodhopi**	**81.08**	**318**	P		**P**	**13 01 29.2**	**+1.2**
RDO				IAmb	IAmb		13 01 30.0	
	comp=Z,28nm,1.0s							
RZN	**Rozhen**	**81.10**	**318**	P		**P**	**13 01 29.0**	**+0.6**
VTS	**Vitosha**	**81.14**	**320**	⇑P		**P**	**13 01 29.8**	**+1.2**
SCHQ	**Schefferville**	**81.30**	**17**	P		**P**	**13 01 29.4**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=357,slow=5.7,SNR=3.6							
SCHQ				LR	LR		13 42 58.4	
	comp=Z,238nm,18.2s,baz=352,slow=40							
	comp=Z,4.3nm,0.7s							
BIOA	**Bad Ischl, Aus**	**81.45**	**328**	*e*P		**P**	**13 01 30.4**	**+0.4**
	comp=Z,13nm,1.0s,SNR=7.1							
DIVS	**Divibare**	**81.56**	**323**	P		**P**	**13 01 30.9**	**+0.2**
MMB	**Musomiste**	**81.67**	**319**	P		**P**	**13 01 31.0**	**-0.3**
PERS	**Pernice**	**81.70**	**327**	*e*P		**P**	**13 01 31.7**	**+0.3**
SOKA	**Sooth**	**81.70**	**327**	*e*P		**P**	**13 01 31.8**	**+0.4**
	comp=Z,20nm,0.9s,SNR=15							
121A	**Cookes Peak, D**	**81.73**	**54**	P		**P**	**13 01 33.7**	**+1.8**
121A	**Cookes Peak, D**	**81.73**	**54**	P		**P**	**13 01 33.5**	**+1.5**
	baz=313							
BTNL	**Ternell**	**81.78**	**334**	*d*P		**P**	**13 01 31.9**	**+0.3**
	comp=Z,7.9nm,1.0s							
KKB	**Krupnik**	**81.78**	**319**	P		**P**	**13 01 32.0**	**+0.2**
MEM	**Membach**	**81.80**	**334**	*d*P		**P**	**13 01 31.4**	**-0.3**
	comp=Z,10nm,0.9s							
OBKA	**Obir**	**82.04**	**327**	*e*P		**P**	**13 01 33.3**	**+0.1**
	comp=Z,7.9nm,0.8s							
RCHB	**Rochefort**	**82.44**	**335**	*d*P		**P**	**13 01 35.5**	**+0.4**
	comp=Z,8.1nm,0.9s							
BMRD	**Maredsous**	**82.46**	**335**	*d*P		**P**	**13 01 35.2**	**+0.1**
	comp=Z,11nm,0.9s							
WATA	**Walderalm**	**82.55**	**329**	*e*P		**P**	**13 01 36.4**	**+0.4**
	comp=Z,9.2nm,0.9s							
WTTA	**Wattenberg**	**82.59**	**329**	*e*P		**P**	**13 01 36.7**	**+0.5**
	comp=Z,5.4nm,0.7s,SNR=5.2							
ABTA	**Abfaltersbach**	**82.67**	**329**	*e*P		**P**	**13 01 35.7**	**-0.8**
	comp=Z,6.2nm,1.3s							
MOTA	**Moosalm**	**82.73**	**330**	*e*P		**P**	**13 01 37.3**	**+0.4**
	comp=Z,19nm,0.9s,SNR=8.9							
RETA	**Reutte**	**82.74**	**330**	*e*P		**P**	**13 01 37.3**	**+0.5**
	comp=Z,14nm,0.9s							
CLUD	**Cludinico**	**82.76**	**328**	P		**P**	**13 01 36.6**	**-0.3**
CLUD				IAmb	IAmb		13 02 07.6	
	comp=Z,24nm,1.0s							
SQTA	**Sankt Quirin**	**82.79**	**330**	*e*P		**P**	**13 01 37.4**	**+0.2**
	comp=Z,12nm,0.9s,SNR=6.9							
FETA	**Feichten**	**83.14**	**330**	*e*P		**P**	**13 01 39.4**	**+0.4**
	comp=Z,9.5nm,0.9s							
PDG	**Podgorica**	**83.19**	**322**	P		**P**	**13 01 38.8**	**-0.3**
PDG	**Podgorica**	**83.19**	**322**	⇑P		**P**	**13 01 39.2**	**+0.1**
DAVA	**Damuels**	**83.24**	**330**	*e*P		**P**	**13 01 39.8**	**+0.3**
	comp=Z,11nm,0.9s							
LIT	**Litokhoron**	**83.41**	**319**	P		**P**	**13 01 40.4**	**+0.1**
LIT	**Litokhoron**	**83.41**	**319**	P		**P**	**13 01 40.4**	**+0.1**
DAVOX	**Davos/Dischmat**	**83.66**	**330**	P		**P**	**13 01 41.8**	**0.0**
	comp=Z,4.0nm,0.8s,baz=237,slow=3.1,SNR=3.8							
	comp=Z,4.0nm,0.8s							
MSTX	**Muleshoe**	**83.73**	**50**	P		**P**	**13 01 43.8**	**+1.6**
	baz=316							
KBN	**Korca**	**83.85**	**320**	P		**P**	**13 01 43.2**	**+0.5**
KBN	**Korca**	**83.85**	**320**	P		**P**	**13 01 43.2**	**+0.5**
KBN				pmax	pmax			
	comp=Z,44nm,0.9s							
URZ	**Urewera**	**84.33**	**154**	LR	LR		13 35 43.7	
	comp=Z,249nm,19.3s,baz=30,slow=33							
PPT	**Papeete**	**84.75**	**118**	LR	LR		13 34 02.6	
	comp=Z,664nm,19.3s,baz=304,slow=32							
PPT2	**Papeete2**	**84.76**	**118**	*e*P		**P**	**13 01 49.5**	**+2.0**
	comp=Z,43nm,24.0s							
PPT2	**Papeete2**	**84.76**	**118**	*e*S		**S**	**13 12 14.7**	**-0.1**
	comp=Z,85nm,25.0s							
PPT2	**Papeete2**	**84.76**	**118**	*e*LR	LR		13 28 28.3	
	comp=Z,873nm,21.2s							
SENIN	**Lac Senin/Sane**	**84.97**	**331**	P		**P**	**13 01 48.4**	**0.0**
SENIN				IAmb	IAmb		13 02 19.7	
	comp=Z,14nm,1.1s							
TAOE	**Nuku Hiva Isla**	**85.39**	**106**	*e*S		**S**	**13 12 21.5**	**+0.2**
	comp=Z,161nm,27.0s							
TAOE	**Nuku Hiva Isla**	**85.39**	**106**	*e*LR	LR		13 28 47.0	
	comp=Z,732nm,21.1s							
MURB	**Monte Urbino**	**85.51**	**327**	P		**P**	**13 01 52.4**	**+1.4**
MURB				IAmb	IAmb		13 02 05.0	
	comp=Z,28nm,1.0s							
NRCA	**Norcia**	**85.61**	**326**	P		**P**	**13 01 51.8**	**+0.3**
NRCA				IAmb	IAmb		13 01 53.1	
	comp=Z,23nm,0.9s							
IDI	**Anoyia**	**85.75**	**314**	P		**P**	**13 01 52.5**	**+0.2**
	comp=Z,18nm,1.1s,baz=124,slow=14,SNR=3.3							
	comp=Z,18nm,1.1s							
MATE	**Matera**	**85.77**	**322**	⇓P		**P**	**13 01 52.7**	**+0.5**
TX31	**Lajitas Ar. Si**	**86.49**	**54**	P		**P**	**13 01 55.8**	**-0.3**
TX31				IAmb	IAmb		13 02 09.3	
	comp=Z,34nm,1.2s							
TXAR	**Lajitas Array**	**86.49**	**54**	P		**P**	**13 01 56.9**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=293,slow=3.4,SNR=6.7							
	comp=Z,1.4nm,0.8s							
ABTX	**Abilene, Hawle**	**86.51**	**49**	P		**P**	**13 01 56.0**	**0.0**
	baz=317							
CCM	**Cathedral Cave**	**86.89**	**40**	P		**P**	**13 01 57.9**	**+0.1**
CCM				IAmb	IAmb		13 02 09.7	
	comp=Z,26nm,1.5s							
CCM	**Cathedral Cave**	**86.89**	**40**	P		**P**	**13 01 57.9**	**+0.1**
CCM				pmax	pmax			
	comp=Z,26nm,1.5s							
RPZ	**Rata Peaks**	**87.59**	**161**	LR	LR		13 41 29.9	
	comp=Z,115nm,18.0s,baz=335,slow=36							
TBI	**Tubuai**	**88.93**	**122**	*e*P		**P**	**13 02 08.8**	**+1.3**
	comp=Z,38nm,25.5s							
TBI	**Tubuai**	**88.93**	**122**	*e*S		**S**	**13 12 54.7**	**-0.1**
	comp=Z,99nm,29.0s							
TBI	**Tubuai**	**88.93**	**122**	*e*LR	LR		13 30 24.0	
	comp=Z,370nm,23.2s							
ATD	**Arta Tunnel**	**90.64**	**286**	LR	LR		13 46 07.4	
	comp=Z,138nm,20.8s,baz=24,slow=38							
TKL	**Tuckaleechee C**	**92.37**	**37**	LR	LR		13 47 24.7	
	comp=Z,178nm,19.2s,baz=346,slow=38							
KEST	**Kesra**	**93.12**	**324**	LR	LR		13 49 24.9	
	comp=Z,1μm,18.9s,baz=331,slow=39							
ESDC	**Sonseca Array**	**94.73**	**336**	P		**P**	**13 02 33.4**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=7.1,slow=3.4,SNR=5.7							
ESDC				LR	LR		13 49 40.6	
	comp=Z,754nm,19.5s,baz=26,slow=38							
	comp=Z,0.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**115.89**	**318**	PP		**PP**	**13 08 57.8**	**-1.2**
	comp=Z,4.7nm,1.2s,baz=38,slow=6.9,SNR=4.8							
ROSB	**Rosrio**	**141.69**	**13**	*e*P		**PKPdf**	**13 08 45.0**	**+0.1**
NPGB	**Novo Progresso**	**142.40**	**32**	*e*P		**PKPdf**	**13 08 46.9**	**+0.7**
BELA	**Belgrano 2**	**142.73**	**181**			**PKPdf**	**13 08 45.2**	**+0.4**
LPAZ	**La Paz**	**143.26**	**58**	*e*P		**PKPdf**	**13 08 47.6**	**-0.7**
TROLL	**Troll, Antarti**	**143.29**	**199**	PKPdf		PKPbc	13 08 43.0	-0.3
SNAA	**Sanae**	**144.79**	**198**	PKPdf		**PKPab**	**13 08 46.7**	**-1.0**
SNAA	**Sanae**	**144.79**	**198**			**PKPab**	**13 08 47.7**	**0.0**
SNAA	**Sanae**	**144.79**	**198**	PKIKP		**PKPab**	**13 08 47.7**	**0.0**
RCBR	**Riachuelo**	**145.26**	**359**	*e*P		**PKPbc**	**13 08 50.0**	**-0.9**
H03N2	**Juan Fernandez**	**145.49**	**92**	T		T	15 51 39.8	
	baz=298,slow=76,SNR=5.5							
H03N3	**Juan Fernandez**	**145.50**	**92**	T		T	15 51 53.4	
	baz=298,slow=76,SNR=5.3							
H03N1	**Juan Fernandez**	**145.51**	**92**	T		T	15 51 51.3	
	baz=298,slow=76,SNR=6.6							
CLDB	**Colider**	**145.65**	**36**	*e*P		**PKPdf**	**13 08 51.7**	**-0.2**
PDRB	**Porto dos Gac**	**145.88**	**38**	*e*P		**PKPdf**	**13 08 52.1**	**-0.1**
VNA2	**Neumayer--Watz**	**146.35**	**197**	PKPdf		**PKPbc**	**13 08 52.8**	**+0.2**
	baz=121,slow=2.0							
VNA3	**Neumayer Olymp**	**146.58**	**195**	PKPdf		**PKPbc**	**13 08 52.6**	**-0.6**
SMTB	**Santa Maria do**	**146.73**	**21**	*e*P		**PKPdf**	**13 08 54.1**	**+0.4**
VNA1	**Neumayer--Stat**	**146.75**	**197**	PKPdf		**PKPbc**	**13 08 53.3**	**-0.4**
LVC	**Limon Verde**	**147.15**	**67**	*e*P		**PKPdf**	**13 08 54.5**	**0.0**
SMAI	**San Martin Ant**	**147.90**	**159**			**PKPdf**	**13 08 54.3**	**+0.4**
PTLB	**Pontes e Lacer**	**147.95**	**45**	*e*P		**PKPdf**	**13 08 55.6**	**+0.1**
NBRF	**Rio Formoso -**	**148.08**	**358**	*e*P		**PKPdf**	**13 08 56.3**	**+0.4**
SALV	**Santo Antonio**	**150.09**	**40**	*e*P		**PKPdf**	**13 08 59.8**	**+0.7**
SDBA	**SAO DESIDERIO**	**150.80**	**17**	*e*P		**PKPdf**	**13 09 01.4**	**+1.1**
PLCA	**Paso Flores**	**154.14**	**101**	*e*P		**PKPdf**	**13 09 05.3**	**+0.8**
CMC01	**Camacan, BA**	**154.58**	**7**	*e*P		**PKPdf**	**13 09 06.1**	**+0.4**
MC01	**Montes Claros**	**155.18**	**18**	*e*P		**PKPdf**	**13 09 07.0**	**+0.4**
RIB01	**Linhares ES**	**158.38**	**11**	*e*P		**PKPdf**	**13 09 11.8**	**+1.3**
PARB	**Paraibuna**	**160.98**	**27**	*e*P		**PKPdf**	**13 09 14.5**	**+1.0**

IDC ***21*** *12:59:59.1±3.7, 67.88N×25.86E, h0km, Error ellipse: s-maj=30.6km s-min=15.2km az=114.0*
HEL ***21*** *13:00:00.9±0.1, 67.94N×25.89E, h0km, ML1.8, ML1.8(UPP), Explosion*
UPP ***21*** *13:00:02.6±0.9, 67.88N×25.50E, h0km

SJUU	Sjulsmark	2.95	216	eP	Pn	13 00 49.0 +1.4
TRO	Tromso	3.03	307	eSB	Sb	13 01 32.3 +0.6
LVZ	Lovozero	3.34	87	eS	Sn	13 01 33.8 +0.5
LILU	Lilltraesk	3.57	225	P	Pn	13 00 56.7 +0.7
LILU	Lilltraesk	3.57	225	eP	Pn	13 00 56.7 +0.7
OUF	Merijarvi	3.61	188	eP	Pn	13 00 58.9 +2.3
I43RU	DUBNA INFRASON	2.40	150	i		14 16 20.0
	baz=345,slow=318,SNR=0.7					

*NNC **21** 13:13:26.9±0.4, 44.°91N×80.°82E, h0km, mb4.2, mpv4.0,*
Error ellipse: s-maj=5.8km s-min=2.2km az=129.0
*SOME **21** 13:13:27.1, 44.°85N×80.°85E, h15km*
ISC 21 13:13:25.8±1.3, 44.°85N±0.°03×80.°79E±0.°04, h9km±11km, n54, σ1s39/85, 14C-5D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
DJR	**Jarkent**	**0.89**	**234**	⇑eP		**Pn**	**13 13 44.9**	**+0.5**
	56nm,0.2s							
DJR				eS		**Sn**	**13 13 58.2**	**+0.7**
	274nm,0.4s							
DJR	**Jarkent**	**0.89**	**234**	P		**Pn**	**13 13 45.0**	**+0.5**
	56nm,0.2s							
DJR				S		**Sn**	**13 13 58.2**	**+0.7**
	274nm,0.4s							
KNOS	**Konyrlen**	**1.25**	**247**	eP		**Pg**	**13 13 51.4**	**+1.6**
	128nm,0.2s							
KNOS				eS		**Sg**	**13 14 09.4**	**+3.3**
	114nm,0.2s							
TDK	**Taldyqorghan**	**1.70**	**276**	eP		**Pg**	**13 13 59.4**	**+1.0**
	628nm,0.3s							
TDK				eS		**Sg**	**13 14 22.4**	**+1.9**
	463nm,0.3s							
TDK	**Taldyqorghan**	**1.70**	**276**	P		**Pg**	**13 13 59.4**	**+1.0**
	628nm,0.3s							
TDK				S		**Sg**	**13 14 22.4**	**+1.9**
	463nm,0.3s							
PDGK	**Podgornoye**	**1.79**	**212**	P		**Pg**	**13 14 00.7**	**+0.6**
	20nm,0.2s							
PDGK				S		**Sg**	**13 14 24.9**	**+1.6**
	277nm,0.4s							
BLB	**Baldybastay**	**1.82**	**246**	eP		**Pg**	**13 14 01.5**	**+0.8**
	280nm,0.2s							
BLB				eS		**Sg**	**13 14 26.5**	**+2.2**
	329nm,0.3s							
BLB	**Baldybastay**	**1.82**	**246**	P		**Pg**	**13 14 01.5**	**+0.8**
	280nm,0.2s							
BLB				S		**Sg**	**13 14 26.5**	**+2.2**
	329nm,0.3s							
SHLS	**Shalkode**	**1.95**	**210**	eP		**Pb**	**13 14 00.9**	**-0.6**
	69nm,0.2s							
SHLS				eS		**Sb**	**13 14 25.5**	**-0.4**
	273nm,0.3s							
SHLS	**Shalkode**	**1.95**	**210**	P		**Pb**	**13 14 00.9**	**-0.6**
	69nm,0.2s							
SHLS				S		**Sb**	**13 14 25.5**	**-0.4**
	273nm,0.3s							
KPKS	**Kokpek**	**2.06**	**228**	eP		**Pg**	**13 14 04.8**	**-0.4**
	59nm,0.2s							
KPKS				eS		**Sg**	**13 14 31.8**	**0.0**
	582nm,0.3s							
KPKS	**Kokpek**	**2.06**	**228**	Pg		**Pg**	**13 14 04.8**	**-0.4**
	59nm,0.2s							
KPKS				Lg		Lg	13 14 31.8	
	582nm,0.3s							
MAKZ	**Makanchi**	**2.12**	**23**	⇑Pn		**Pb**	**13 14 03.2**	**-1.2**
	4.3nm,0.3s							
MAKZ				Sn		**Sb**	**13 14 29.9**	**-0.9**
UZB	**Uzynbulak**	**2.13**	**217**	eP		**Pg**	**13 14 05.7**	**-0.9**
	13nm,0.2s							
UZB				eS		**Sg**	**13 14 33.3**	**-0.9**
	395nm,0.3s							
UZB	**Uzynbulak**	**2.13**	**217**	Pg		**Pg**	**13 14 05.7**	**-0.9**
	13nm,0.2s							
UZB				Lg		Lg	13 14 33.3	
	395nm,0.3s							
MK31	**Makanchi Array**	**2.21**	**28**	⇑Pn		**Pb**	**13 14 04.1**	**-1.7**
	2.2nm,0.2s,baz=246,slow=4.3,SNR=351							
MK31				⇑Sn		**Sb**	**13 14 31.8**	**-1.4**
	14nm,0.2s,baz=211,slow=32,SNR=4.3							
ARXS	**Arharly**	**2.21**	**254**	eP		**Pg**	**13 14 07.9**	**-0.3**
	107nm,0.4s							
ARXS				eS		**Sg**	**13 14 37.4**	**+0.5**
	201nm,0.2s							
ARXS	**Arharly**	**2.21**	**254**	Pg		**Pg**	**13 14 07.9**	**-0.3**
	107nm,0.4s							
ARXS				Lg		Lg	13 14 37.4	
	201nm,0.2s							
KURS	**Kuram**	**2.33**	**235**	eP		**Pg**	**13 14 10.8**	**+0.4**
	19nm,0.2s							
KURS				eS		**Sg**	**13 14 42.2**	**+1.6**
	82nm,0.4s							
KURS	**Kuram**	**2.33**	**235**	Pg		**Pg**	**13 14 10.8**	**+0.4**
	19nm,0.2s							
KURS				Lg		Lg	13 14 42.2	
	82nm,0.4s							
ZHN	**Zhinishke**	**2.39**	**226**	eP		**Pg**	**13 14 10.9**	**-0.7**
	37nm,0.2s							
ZHN				eS		**Sg**	**13 14 42.2**	**-0.5**
	630nm,0.2s							
ZHN	**Zhinishke**	**2.39**	**226**	Pg		**Pg**	**13 14 10.9**	**-0.7**
	37nm,0.2s							
ZHN				Lg		Lg	13 14 42.2	
	630nm,0.2s							
SATY	**Saty**	**2.49**	**225**	eP		**Pg**	**13 14 13.3**	**-0.2**
	22nm,0.2s							
SATY				eS		**Sg**	**13 14 46.4**	**+0.8**
	306nm,0.1s							
SATY	**Saty**	**2.49**	**225**	Pg		**Pg**	**13 14 13.3**	**-0.2**
	22nm,0.2s							
SATY				Lg		Lg	13 14 46.4	
	306nm,0.1s							
KOTS	**Kotyrbulak**	**3.11**	**240**	eP		**Pg**	**13 14 23.6**	**-1.7**
	2.2nm,0.3s							
KOTS				eS		**Sg**	**13 15 04.2**	**-1.4**
	89nm,0.4s							
KOTS	**Kotyrbulak**	**3.11**	**240**	Pg		**Pg**	**13 14 23.6**	**-1.7**
	2.2nm,0.3s							
KOTS				Lg		Lg	13 15 04.2	
	89nm,0.4s							
KTBS	**Karatobe**	**3.16**	**250**	eP		**Pg**	**13 14 25.3**	**-1.0**
	15nm,0.2s							
KTBS				eS		**Sg**	**13 15 07.1**	**-0.3**
	165nm,0.3s							
KTBS	**Karatobe**	**3.16**	**250**	Pg		**Pg**	**13 14 25.3**	**-1.0**
	15nm,0.2s							
KTBS				Lg		Lg	13 15 07.1	
	165nm,0.3s							
MDOK	**Medeo**	**3.19**	**239**	eP		**Pg**	**13 14 25.1**	**-1.7**
	28nm,0.5s							
MDOK				eS		**Sg**	**13 15 06.7**	**-1.4**
	57nm,0.7s							
MDOK	**Medeo**	**3.19**	**239**	⇑Pn		**Pb**	**13 14 20.6**	**-2.1**
	4.6nm,0.3s							
MDOK				Pg		**Pg**	**13 14 25.1**	**-1.7**
	28nm,0.5s							
MDOK				⇓Pg		Pn	13 14 27.2	+11
	25nm,0.6s							
MDOK				Lg		Lg	13 15 06.7	
	57nm,0.7s							
MDOK				⇑Lg		Lg	13 15 10.0	
	34nm,0.4s							
KNDC	**Almaty**	**3.21**	**241**	⇓Pg		**Pg**	**13 14 26.0**	**-1.2**
	38nm,0.5s							
KNDC				⇓Lg		Lg	13 15 09.6	
	104nm,0.4s							
AAA	**Alma-Ata**	**3.24**	**241**	eP		**Pg**	**13 14 26.7**	**-1.2**
	52nm,0.1s							
AAA				eS		**Sg**	**13 15 09.2**	**-0.7**
	116nm,0.4s							
AAA	**Alma-Ata**	**3.24**	**241**	Pg		**Pg**	**13 14 26.7**	**-1.2**
	52nm,0.1s							
AAA				Lg		Lg	13 15 09.2	
	116nm,0.4s							
KUU	**Kurty**	**3.33**	**255**	eP		**Pg**	**13 14 28.0**	**-1.6**
	21nm,0.4s							
KUU				eS		**Sg**	**13 15 11.8**	**-1.1**
	55nm,0.3s							
KUU	**Kurty**	**3.33**	**255**	Pg		**Pg**	**13 14 28.0**	**-1.6**
	21nm,0.4s							
KUU				Lg		Lg	13 15 11.7	
	55nm,0.3s							
MTBS	**Maitube**	**3.59**	**243**	eP		**Pg**	**13 14 32.2**	**-2.3**
	13nm,0.3s							
MTBS				eS		**Sg**	**13 15 19.0**	**-2.0**
	73nm,0.2s							
MTBS	**Maitube**	**3.59**	**243**	Pg		**Pg**	**13 14 32.3**	**-2.3**
	13nm,0.3s							
MTBS				Lg		Lg	13 15 19.0	
	73nm,0.2s							
ZSN	**Zaisan**	**3.84**	**46**	eP		**Pb**	**13 14 33.7**	**0.0**
	9.8nm,0.3s							
ZSN				eS		**Sb**	**13 15 21.2**	**+0.9**
	60nm,0.5s							
ZSN	**Zaisan**	**3.84**	**46**	Pg		**Pb**	**13 14 34.1**	**+0.4**
	9.8nm,0.3s							
ZSN				Lg		Lg	13 15 21.9	
	60nm,0.5s							
KRBS	**Karabastau**	**3.85**	**254**	eP		**Pg**	**13 14 38.4**	**-1.2**
	8.9nm,0.4s							
KRBS				eS		**Sg**	**13 15 29.4**	**0.0**
	14nm,0.3s							
KRBS	**Karabastau**	**3.85**	**254**	Pg		**Pg**	**13 14 38.4**	**-1.2**
	8.9nm,0.4s							
KRBS				Lg		Lg	13 15 29.4	
	14nm,0.3s							
KST	**Kastek**	**3.93**	**244**	eP		**Pg**	**13 14 39.6**	**-1.4**
	22nm,0.3s							
KST				eS		**Sg**	**13 15 31.6**	**-0.3**
	31nm,0.3s							
KST	**Kastek**	**3.93**	**244**	Pg		**Pg**	**13 14 39.6**	**-1.4**
	22nm,0.3s							
KST				Lg		Lg	13 15 31.6	
	31nm,0.3s							
DGS	**Degeres**	**3.96**	**248**	eP		**Pg**	**13 14 40.5**	**-1.2**
	26nm,0.4s							
DGS				eS		**Sg**	**13 15 33.1**	**+0.2**
	92nm,0.5s							
DGS	**Degeres**	**3.96**	**248**	Pg		**Pg**	**13 14 40.5**	**-1.2**
	26nm,0.4s							
DGS				Lg		Lg	13 15 33.1	
	92nm,0.5s							
TKM2	**Tokmak 2**	**4.22**	**245**	⇑Pg		**Pg**	**13 14 44.9**	**-1.7**
	7.8nm,0.5s							
TKM2				⇑Lg		Lg	13 15 42.0	
	26nm,0.6s							
SGDS	**Sogindy**	**4.65**	**255**	eP		**Pg**	**13 14 54.4**	**-0.5**
	6.7nm,0.2s							
SGDS				eS		**Sg**	**13 15 56.6**	**+1.6**
	20nm,0.7s							
SGDS	**Sogindy**	**4.65**	**255**	Pg		**Pg**	**13 14 54.4**	**-0.5**
	6.7nm,0.2s							
SGDS				Lg		Lg	13 15 56.6	
	20nm,0.7s							
CHMS	**Chumysh**	**4.74**	**249**	⇑Pn		**Pn**	**13 14 41.2**	**+3.7**
	1.1nm,0.3s							
CHMS				⇓Pg		**Pg**	**13 14 53.4**	**-3.2**
	8.6nm,0.6s							
CHMS				⇑Lg		Lg	13 15 58.6	
	14nm,0.5s							
BTLS	**Baital**	**4.79**	**275**	eP		**Pg**	**13 14 55.0**	**-2.5**
	5.2nm,0.4s							
BTLS				eS		**Sg**	**13 15 58.8**	**-0.8**
	3.7nm,0.5s							
BTLS	**Baital**	**4.79**	**275**	Pg		**Pg**	**13 14 55.0**	**-2.5**
	5.2nm,0.4s							
BTLS				Lg		Lg	13 15 58.7	
	3.7nm,0.5s							
KURK	**Kurchatov**	**6.04**	**347**	⇑Pn		**Pn**	**13 14 55.7**	**+0.4**
	3.6nm,1.1s							
KURK				⇑Sn		**Sn**	**13 16 05.2**	**+0.7**
	5.1nm,1.0s							
KURK				⇓Lg		Lg	13 16 36.6	
	15nm,0.6s							
OTUK	**Ortayu**	**6.74**	**303**	⇑Lg		Lg	13 16 59.8	
	29nm,1.0s							
KK31	**Karatay Array**	**7.62**	**260**	⇑Lg		Lg	13 17 28.0	
	1.5nm,0.3s,baz=67,slow=29,SNR=5.2							

*NNC **21** 13:16:50.1±0.5, 50.°04N×78.°73E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=10.6km s-min=3.0km az=76.0,
Suspected Mining explosion.
*IDC **21** 13:16:52.8±4.5, 49.°95N×79.°00E, h0km, mbtmp3.2/2,*
ML2.6/2, Error ellipse: s-maj=55.0km s-min=18.8km
az=91.0
ISC 21 13:16:49.5±1.0, 49.°95N±0.°03×78.°52E±0.°07, h0km, n23, σ1s21/33, 11C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.64**	**360**	⇑P		**Pg**	**13 17 01.0**	**-0.6**
KUR07				⇓S		**Sg**	**13 17 09.9**	**0.0**
KUR06	**Kurchatov Arra**	**0.66**	**0**	⇑P		**Pg**	**13 17 01.3**	**-0.7**
KUR06				⇓S		**Sg**	**13 17 10.0**	**-0.6**
KUR14	**Kurchatov Arra**	**0.67**	**4**	⇓P		**Pg**	**13 17 01.3**	**-1.0**
KUR14				⇑S		**Sg**	**13 17 10.0**	**-1.0**
KUR15	**Kurchatov Arra**	**0.67**	**2**	⇑P		**Pg**	**13 17 01.5**	**-0.9**
KUR15				⇓S		**Sg**	**13 17 10.5**	**-0.6**
KURBB	**Kurchatov Arra**	**0.68**	**1**	⇑P		**Pg**	**13 17 01.7**	**-0.7**
KURBB				⇑S		**Sg**	**13 17 10.9**	**-0.3**
KUR16	**Kurchatov Arra**	**0.68**	**359**	⇓P		**Pg**	**13 17 01.9**	**-0.7**
KUR16				⇓S		**Sg**	**13 17 10.8**	**-0.6**
KUR17	**Kurchatov Arra**	**0.69**	**357**	⇓P		**Pg**	**13 17 02.0**	**-0.6**
KUR17				⇓S		**Sg**	**13 17 10.6**	**-1.0**
KUR05	**Kurchatov Arra**	**0.70**	**1**	⇑P		**Pg**	**13 17 01.9**	**-0.9**
KUR05				⇑S		**Sg**	**13 17 10.8**	**-1.1**
KUR04	**Kurchatov Arra**	**0.72**	**1**	⇓P		**Pg**	**13 17 02.4**	**-0.8**
KUR04				⇓S		**Sg**	**13 17 11.1**	**-1.4**
KURK	**Kurchatov**	**0.77**	**5**	⇑P		**Pg**	**13 17 03.0**	**-1.3**
	12nm,0.4s							
KURK				⇑S		**Sg**	**13 17 12.9**	**-1.4**
	32nm,0.7s							
BRZS	**Berezniki**	**3.77**	**273**	Pg		**Pg**	**13 18 02.9**	**+1.2**
	8.8nm,0.3s							
BRZS				Lg		Lg	13 18 53.7	
	8.4nm,0.7s							
MAKZ	**Makanchi**	**3.90**	**142**	⇓Pg		**Pb**	**13 17 59.3**	**+0.3**
	2.4nm,0.5s							
MAKZ				⇓Lg		Lg	13 18 52.3	
	10nm,0.6s							
MK31	**Makanchi Array**	**4.03**	**140**	Pn		**Pn**	**13 17 52.2**	**-0.2**
	0.1nm,0.1s,baz=66,slow=25,SNR=4.4							
MK31				⇓Pg		**Pb**	**13 18 02.3**	**+1.0**
	0.4nm,0.2s,baz=326,slow=14,SNR=5.2							
MK31				⇑Lg		Lg	13 18 56.6	
	7.6nm,0.5s,baz=328,slow=26,SNR=8.5							
MKAR	**Makanchi Array**	**4.03**	**140**	Pn		**Pn**	**13 17 53.7**	**+1.2**
	0.4nm,0.3s,baz=334,slow=13,SNR=2.0							
MKAR				Pg		**Pb**	**13 18 00.2**	**-1.2**
	0.7nm,0.3s,baz=327,slow=15,SNR=3.0							
MKAR				Lg		Lg	13 18 54.0	
	1.5nm,0.3s,baz=334,slow=22,SNR=10							
	0.7nm,0.3s							
ZSN	**Zaisan**	**4.89**	**118**	Pg		**Pb**	**13 18 19.0**	**+3.1**
	4.3nm,0.2s							
ZSN				Lg		Lg	13 19 19.8	
	8.1nm,0.6s							
I46RU	**ZALESOVO INFRA**	**5.59**	**42**	i			13 50 50.0	
	baz=226,slow=331,SNR=7.0							
ZALV	**Zalesovo Beam**	**5.59**	**42**	Pn		**Pn**	**13 18 14.4**	**+0.7**
	1.0nm,0.3s,baz=229,slow=14,SNR=11							
ZALV				Lg		Lg	13 19 43.2	
	0.4nm,0.3s,baz=219,slow=22,SNR=1.8							
	2.4nm,0.2s							
DJR	**Jarkent**	**5.68**	**171**	Pg		**Pg**	**13 18 39.2**	**+0.9**
	0.5nm,0.1s							
DJR				Lg		Lg	13 19 54.4	
	6.7nm,0.7s							
ARXS	**Arharly**	**5.75**	**185**	Pg		**Pg**	**13 18 37.5**	**-2.2**
	2.0nm,0.4s							
ARXS				Lg		Lg	13 19 51.4	
	8.7nm,0.5s							
BLB	**Baldybastay**	**5.85**	**180**	Pg		**Pg**	**13 18 40.2**	**-1.4**
	3.7nm,0.3s							
BLB				Lg		Lg	13 19 56.0	
	16nm,0.8s							
KUU	**Kurty**	**6.24**	**195**	Pg		**Pg**	**13 18 46.7**	**-2.2**
	0.7nm,0.2s							
KUU				Lg		Lg	13 20 07.2	
	6.6nm,0.6s							
KRBS	**Karabastau**	**6.55**	**198**	Pg		**Pg**	**13 18 54.0**	**-0.9**
	0.8nm,0.2s							
KRBS				Lg		Lg	13 20 19.6	
	2.1nm,0.4s							
I31KZ	**AKTYUBINSK INF**	**13.14**	**280**	i			14 36 00.0	
	baz=85,slow=313,SNR=1.4							

*TAP **21** 13:48:40.3, 24.°42N×122.°31E, h63km±1km, ML2.5, B*
*JMA **21** 13:48:40.1±0.3, 25.°2N±0.°9×122.°7E±0.°9, h11km±3km,*
MV1.9/7, NW OFF ISHIGAKIJIMA IS

ISC 21 13:48:41.0±1.4, 24.°42N±0.°04×122.°31E±0.°03, h62km±10km, n51, σ0s53/99, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TWC	**Suao**	**0.46**	**294**	i P		**Pn**	**13 48 52.6**	**-0.1**
	baz=294							
TWC				i S		**Sn**	**13 49 01.3**	**+0.1**
	baz=294							
EWUT	**Wuta**	**0.49**	**273**	P		**Pn**	**13 48 52.0**	**-1.0**
	baz=272							
EWUT				S		**Sn**	**13 49 01.4**	**-0.3**
	baz=272							
ENA	**Nanau**	**0.52**	**271**	P		**Pn**	**13 48 53.4**	**+0.1**
	baz=270							
ENA				S		**Sn**	**13 49 03.0**	**+0.7**
	baz=270							
EGS		**0.55**	**321**	P		**Pn**	**13 48 53.6**	**0.0**
	baz=321							
EGS				S		**Sn**	**13 49 03.2**	**+0.4**
	baz=321							
JYNG	**Yonagunijimaku**	**0.58**	**87**	P		**Pn**	**13 48 54.2**	**+0.2**
JYNG				S		**Sn**	**13 49 04.0**	**+0.7**
NDS	**Dongshan**	**0.58**	**291**	P		**Pn**	**13 48 53.3**	**-0.8**
	baz=291							
NTC	**Toucheng**	**0.61**	**315**	P		**Pn**	**13 48 54.1**	**-0.2**
	baz=314							
NTC				S		**Sn**	**13 49 04.0**	**-0.1**
	baz=314							
YOJ	**Yonaguni jima**	**0.64**	**86**	P		**Pn**	**13 48 54.9**	**+0.2**
	baz=85							
YOJ				S		**Sn**	**13 49 05.1**	**+0.5**
	baz=85							
TWB1	**Santiao Chiao**	**0.65**	**333**	i P		**Pn**	**13 48 54.7**	**-0.2**
	baz=334							
TWB1				S		**Sn**	**13 49 04.7**	**-0.3**
	baz=334							
TWE	**Neicheng**	**0.66**	**297**	P		**Pn**	**13 48 55.0**	**+0.1**
	baz=297							
TWE				S		**Sn**	**13 49 05.4**	**+0.3**
	baz=297							
ETL	**Fush Village**	**0.68**	**248**	i P		**Pn**	**13 48 55.0**	**-0.2**
	baz=247							
ETL				S		**Sn**	**13 49 06.1**	**+0.5**
	baz=247							
NACB	**Ninganchiao**	**0.70**	**250**	P		**Pn**	**13 48 54.9**	**-0.4**
	baz=249							
NACB				S		**Sn**	**13 49 06.0**	**+0.1**
	baz=249							
TIPB	**Shuangxi**	**0.70**	**321**	P		**Pn**	**13 48 55.1**	**-0.4**
	baz=321							
TIPB				S		**Sn**	**13 49 05.7**	**-0.4**
	baz=321							
LATG	**Datong**	**0.72**	**279**	P		**Pn**	**13 48 56.0**	**+0.2**
	baz=279							
LATG				S		**Sn**	**13 49 07.3**	**+0.6**
	baz=279							
TWD	**Chiawan**	**0.74**	**243**	P		**Pn**	**13 48 55.4**	**-0.4**
	baz=242							
TWD				i S		**Sn**	**13 49 06.9**	**+0.2**
	baz=242							
FUSB	**Fushanzhiwuyua**	**0.74**	**297**	P		**Pn**	**13 48 56.1**	**+0.2**
	baz=297							
FUSB				S		**Sn**	**13 49 07.7**	**+0.8**
	baz=297							
NDT	**Datong Townshi**	**0.75**	**284**	P		**Pn**	**13 48 56.5**	**+0.5**
	baz=284							
NDT				S		**Sn**	**13 49 07.7**	**+0.7**
	baz=284							
SXI1	**Grass Mountain**	**0.78**	**329**	P		**Pn**	**13 48 56.1**	**-0.3**
	baz=329							
ETLH	**Xiulin Townshi**	**0.79**	**254**	i P		**Pn**	**13 48 56.3**	**-0.2**
	baz=254							
ETLH				i S		**Sn**	**13 49 08.0**	**0.0**
	baz=254							
NWF	**Wu-fen Shan**	**0.81**	**323**	i P		**Pn**	**13 48 56.6**	**-0.1**
	baz=323							
NWF				S		**Sn**	**13 49 08.3**	**0.0**
	baz=323							
WFSB	**Wu-fen Shan**	**0.81**	**323**	i P		**Pn**	**13 48 56.7**	**0.0**
	baz=323							
WFSB				S		**Sn**	**13 49 08.4**	**+0.2**
	baz=323							
NNSB	**Datong**	**0.85**	**271**	i P		**Pn**	**13 48 57.2**	**-0.1**
	baz=270							
NNSB				i S		**Sn**	**13 49 09.4**	**+0.1**
	baz=270							
NNSH	**Datong**	**0.85**	**271**	i P		**Pn**	**13 48 57.1**	**-0.2**
	baz=270							
NNSH				S		**Sn**	**13 49 09.1**	**-0.2**
	baz=270							
NNS	**Nan Shan**	**0.86**	**271**	P		**Pn**	**13 48 56.6**	**-0.8**
	baz=271							
NNS				S		**Sn**	**13 49 09.7**	**+0.1**
	baz=271							
ETM	**Tongmen**	**0.88**	**239**	P		**Pn**	**13 48 57.1**	**-0.5**
	baz=238							
ETM				S		**Sn**	**13 49 09.8**	**0.0**
	baz=238							
YHNB	**Yeheng**	**0.89**	**286**	P		**Pn**	**13 48 58.1**	**+0.3**
	baz=286							
YHNB				S		**Sn**	**13 49 10.6**	**+0.5**
	baz=286							
NSK	**Sanguang**	**0.91**	**286**	P		**Pn**	**13 48 57.2**	**-0.8**
	baz=286							
NSK				S		**Sn**	**13 49 09.9**	**-0.6**
	baz=286							
YM01	**YM01**	**0.99**	**317**	P		**Pn**	**13 48 58.6**	**-0.4**
	baz=317							
YM01				S		**Sn**	**13 49 11.9**	**-0.4**
	baz=317							
FUSS	**Fushou**	**0.99**	**260**	P		**Pn**	**13 48 59.6**	**+0.4**
	baz=259							
FUSS				S		**Sn**	**13 49 13.1**	**+0.4**
	baz=259							
WHF	**Hehuan Shan**	**0.99**	**254**	P		**Pn**	**13 48 59.5**	**0.0**
	baz=253							
WHF				S		**Sn**	**13 49 13.1**	**0.0**
	baz=253							
ESL	**Shilin**	**1.01**	**233**	P		**Pn**	**13 48 58.6**	**-0.6**
	baz=232							
ESL				S		**Sn**	**13 49 12.1**	**-0.6**
	baz=232							
YM08	**YM08**	**1.01**	**319**	P		**Pn**	**13 48 58.4**	**-0.8**
	baz=319							
YM08				eS		**Sn**	**13 49 11.5**	**-1.2**
	baz=319							
TWT	**Tachien**	**1.05**	**261**	P		**Pn**	**13 49 00.8**	**+0.8**
	baz=260							
TWT				S		**Sn**	**13 49 14.6**	**+0.6**
	baz=260							
TDCB	**Techi**	**1.07**	**261**	P		**Pn**	**13 49 00.6**	**+0.5**
	baz=260							
TDCB				i S		**Sn**	**13 49 14.3**	**0.0**
	baz=260							
CHGB	**Renai**	**1.10**	**251**	P		**Pn**	**13 49 00.9**	**+0.3**
	baz=250							
CHGB				S		**Sn**	**13 49 15.0**	**-0.2**
	baz=250							
NFF	**Wufeng Townshi**	**1.11**	**281**	P		**Pn**	**13 49 00.2**	**-0.4**
	baz=281							
NFF				eS		**Sn**	**13 49 14.5**	**-0.7**
	baz=281							
OWD	**Renai**	**1.14**	**246**	i P		**Pn**	**13 49 00.9**	**-0.1**
	baz=245							
OWD				S		**Sn**	**13 49 15.3**	**-0.6**
	baz=245							
WUSB	**Renai**	**1.17**	**249**	P		**Pn**	**13 49 01.7**	**+0.2**
	baz=248							
WUSB				S		**Sn**	**13 49 16.6**	**-0.1**
	baz=248							
LIOB	**Emei**	**1.20**	**281**	P		**Pn**	**13 49 02.3**	**+0.6**
	baz=280							
LIOB				S		**Sn**	**13 49 18.2**	**

YULB	**Yu-li**	**1.38**	**222**	P		**Pn**	**13 49 03.6**	**-0.6**
	baz=222							
YULB				*e*S		**Sn**	**13 49 20.3**	**-1.3**
	baz=222							
SSLB	**Suanglung**	**1.39**	**243**	P		**Pn**	**13 49 04.7**	**+0.4**
	baz=242							
SSLB				S		**Sn**	**13 49 21.6**	**-0.3**
	baz=242							
JKRS	**Kuro-shima**	**1.56**	**96**	P		**Pn**	**13 49 06.8**	**+0.4**
JKRS				S		**Sn**	**13 49 26.7**	**+0.9**
ALS	**Alishan**	**1.65**	**237**	*e*P		**Pn**	**13 49 09.3**	**+1.3**
	baz=236							
ALS				*e*S		**Sn**	**13 49 29.5**	**+1.0**
	baz=236							
JIJ	**Ishigaki jima**	**1.67**	**92**	P		**Pn**	**13 49 07.8**	**-0.2**
JIJ				S		**Sn**	**13 49 27.2**	**-1.3**
ELDTW	**Lidau**	**1.71**	**224**	P		**Pn**	**13 49 08.7**	**+0.1**
	baz=223							
ELDTW				S		**Sn**	**13 49 28.6**	**-1.0**
	baz=223							
TWK	**Hsinying**	**2.03**	**236**	P		**Pn**	**13 49 13.5**	**+0.6**
	baz=235							
TWK				S		**Sn**	**13 49 37.9**	**+0.7**
	baz=235							
CHN1	**Nanshi**	**2.05**	**233**	S		**Sn**	**13 49 37.2**	**-0.4**
	baz=232							

*IDC **21** 14:03:28.6±2.8,29°.64N×141°.89E,h53km±27km,mb3.1/4, mbtmp3.4/7,ML2.9/3,MS2.9/1,Error ellipse: s-maj=44.4km s-min=18.9km az=83.0*

ISC 21 14:03:25.7±1.0,29°.50N±0°.09×141°.9E±0°.2,h30km,n8, σ0s96/8,mb3.5/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.41**	**175**	P			**Pb**	**14 04 07.9**	**-0.5**
	4.5nm,0.3s,baz=289,slow=23,SNR=1.3								
JCJ				S			**Sn**	**14 04 31.1**	**-0.5**
	38nm,0.3s,baz=278,slow=22,SNR=2.3 43nm,0.6s								
MJAR	**Matsushiro Arr**	**7.68**	**337**	P			**Pn**	**14 05 15.9**	**+0.3**
	0.2nm,0.3s,baz=159,slow=17,SNR=13 1.1nm,0.3s								
KSRS	**Korea Array**	**14.11**	**308**	P			**Pn**	**14 06 43.1**	**-0.5**
	baz=121,slow=12,SNR=2.2 0.6nm,0.8s								
CMAR	**Chiang Mai Arr**	**40.58**	**264**	LR			LR	14 29 05.0	
	comp=Z,13nm,18.3s,baz=300,slow=38								
MKAR	**Makanchi Array**	**48.80**	**308**	P			**P**	**14 12 07.8**	**-0.2**
	0.2nm,0.4s,baz=93,slow=12,SNR=1.9 0.2nm,0.4s								
WRA	**Warramunga Arr**	**49.70**	**189**	P			**P**	**14 12 16.7**	**+1.7**
	0.5nm,0.5s,baz=4.8,slow=7.7,SNR=8.0 0.5nm,0.5s								
ASAR	**Alice Springs**	**53.42**	**189**	P			**P**	**14 12 43.7**	**+0.8**
	0.2nm,0.4s,baz=7.6,slow=6.2,SNR=12 0.2nm,0.4s								
ILAR	**Eielson Array**	**55.72**	**29**	P			**P**	**14 12 58.5**	**-0.6**
	0.3nm,0.7s,baz=263,slow=6.5,SNR=4.1 0.3nm,0.7s								

*JMA **21** 14:08:44.4±0.1,23°.9N±0°.4×121°.7E±0°.3,h33km,MV2.4/9, TAIWAN REGION*
*TAP **21** 14:08:44.3,23°.91N×121°.64E,h39km,ML2.9,B*

ISC 21 14:08:45.1±0.9,23°.91N±0°.02×121°.66E±0°.02,h33km±2km, n93,σ0s68/181,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.07**	**237**	P			**Pb**	**14 08 51.3**	**+0.5**
	baz=253								
TEYL				S			**Sb**	**14 08 56.4**	**+1.8**
	baz=253								
HWA	**Hwalien**	**0.09**	**325**	P			**Pb**	**14 08 51.4**	**+0.6**
	baz=337								
HWA				*e*S			**Sb**	**14 08 57.1**	**+2.3**
	baz=337								
TWD	**Chiawan**	**0.18**	**341**	*i* P			**Pb**	**14 08 51.5**	**-0.1**
	baz=348								
TWD				S			**Sb**	**14 08 56.4**	**+0.4**
	baz=348								
ESL	**Shilin**	**0.23**	**246**	P			**Pn**	**14 08 51.8**	**+0.2**
	baz=240								
ESL				*e*S			**Sb**	**14 08 57.1**	**+0.3**
	baz=240								
ETL	**Fush Village**	**0.25**	**352**	*e*P			**Pn**	**14 08 52.5**	**+0.3**
	baz=356								
ETL				S			**Sb**	**14 08 58.5**	**+1.1**
	baz=356								
NACB	**Ninganchiao**	**0.27**	**347**	P			**Pn**	**14 08 52.2**	**-0.4**
	baz=350								
NACB				*e*S			**Sb**	**14 08 58.0**	**+0.3**
	baz=350								
EGFH	**Guangfu**	**0.32**	**222**	P			**Pb**	**14 08 52.7**	**-0.5**
	baz=218								
EGFH				*e*S			**Sb**	**14 08 59.4**	**+0.9**
	baz=218								
ETLH	**Xiulin Townshi**	**0.34**	**332**	P			**Pb**	**14 08 53.2**	**-0.4**
	baz=333								
ETLH				S			**Sn**	**14 08 58.9**	**-0.3**
	baz=333								
WHF	**Hehuan Shan**	**0.43**	**303**	P			**Pb**	**14 08 54.6**	**-0.5**
	baz=304								
WHF				S			**Sb**	**14 09 01.6**	**-0.3**
	baz=304								
OWD	**Renai**	**0.45**	**276**	*i* P			**Pb**	**14 08 54.6**	**-0.4**
	baz=275								
OWD				S			**Sb**	**14 09 01.6**	**-0.3**
	baz=275								
HGSD	**Ruisui**	**0.47**	**208**	P			**Pb**	**14 08 55.2**	**0.0**
	baz=205								
HGSD				S			**Sn**	**14 09 04.0**	**+1.4**
	baz=205								
CHGB	**Renai**	**0.47**	**289**	*i* P			**Pb**	**14 08 55.3**	**-0.2**
	baz=288								
CHGB				S			**Sb**	**14 09 02.7**	**+0.2**
	baz=288								
VWDT	**VWDT**	**0.50**	**252**	P			**Pb**	**14 08 55.5**	**-0.2**
	baz=250								
VWDT				S			**Sb**	**14 09 03.4**	**+0.4**
	baz=250								
EHY	**Hungye**	**0.50**	**218**	P			**Pb**	**14 08 54.5**	**-1.3**
	baz=214								
EHY				S			**Sb**	**14 09 01.7**	**-1.4**
	baz=214								
WUSB	**Renai**	**0.50**	**280**	P			**Pb**	**14 08 55.7**	**-0.2**
	baz=279								
WUSB				S			**Sb**	**14 09 03.4**	**0.0**
	baz=279								
FUSS	**Fushou**	**0.51**	**312**	P			**Pb**	**14 08 55.7**	**-0.4**
	baz=312								
FUSS				S			**Sb**	**14 09 03.3**	**-0.4**
	baz=312								
ENA	**Nanau**	**0.53**	**8**	*e*P			**Pb**	**14 08 55.9**	**-0.2**
	baz=10.0								
ENA				*e*S			**Sb**	**14 09 03.9**	**+0.2**
	baz=10.0								
EWUT	**Wuta**	**0.55**	**11**	*e*P			**Pn**	**14 08 55.5**	**-1.1**
	baz=13								
EWUT				*e*S			**Sb**	**14 09 03.9**	**-0.4**
	baz=13								
TDCB	**Techi**	**0.57**	**307**	*e*P			**Pn**	**14 08 56.5**	**-0.5**
	baz=307								
TDCB				*e*S			**Sb**	**14 09 05.1**	**-0.1**
	baz=307								
NNSB	**Datong**	**0.58**	**334**	P			**Pn**	**14 08 56.5**	**-0.6**
	baz=335								
NNSB				S			**Sb**	**14 09 05.1**	**-0.2**
	baz=335								
NNS	**Nan Shan**	**0.59**	**334**	P			**Pn**	**14 08 55.8**	**-1.4**
	baz=335								
NNS				S			**Sb**	**14 09 04.3**	**-1.4**
	baz=335								
YULB	**Yu-li**	**0.61**	**213**	P			**Pn**	**14 08 55.9**	**-1.5**
	baz=211								
YULB				S			**Sn**	**14 09 04.5**	**-1.5**
	baz=211								
EYUL	**Yuli**	**0.64**	**209**	*e*P			**Pn**	**14 08 56.8**	**-1.0**
	baz=207								
EYUL				*e*S			**Sn**	**14 09 06.3**	**-0.4**
	baz=207								
LATG	**Datong**	**0.64**	**349**	P			**Pn**	**14 08 57.2**	**-0.7**
	baz=350								
LATG				S			**Sn**	**14 09 07.0**	**0.0**
	baz=350								
SSLB	**Suanglung**	**0.66**	**260**	P			**Pn**	**14 08 57.5**	**-0.6**
	baz=258								
SSLB				S			**Sn**	**14 09 06.8**	**-0.5**
	baz=258								
SMLT	**Sun Moon Lake**	**0.70**	**268**	P			**Pn**	**14 08 58.4**	**-0.3**
	baz=267								
SMLT				*e*S			**Sn**	**14 09 07.9**	**-0.5**
	baz=267								
WCS	**Beigang Elemen**	**0.70**	**283**	*e*P			**Pn**	**14 08 57.7**	**-1.0**
	baz=282								
WCS				*e*S			**Sn**	**14 09 08.4**	**+0.1**
	baz=282								
NDT	**Datong Townshi**	**0.71**	**349**	P			**Pn**	**14 08 58.3**	**-0.5**
	baz=350								
NDT				*e*S			**Sn**	**14 09 08.4**	**-0.1**
	baz=350								
TWC	**Suao**	**0.72**	**14**	*e*P			**Pn**	**14 08 59.0**	**0.0**
	baz=16								
TWC				*e*S			**Sb**	**14 09 09.7**	**+0.6**
	baz=16								
NDS	**Dongshan**	**0.73**	**4**	*e*P			**Pn**	**14 08 58.5**	**-0.6**
	baz=5.0								
NDS				*e*S			**Sn**	**14 09 09.3**	**+0.2**
	baz=5.0								
WHP	**Taichung City**	**0.75**	**300**	*e*P			**Pn**	**14 08 59.1**	**-0.4**
	baz=299								
WHP				*e*S			**Sn**	**14 09 09.9**	**+0.2**
	baz=299								
WHYT	**Xinyi Township**	**0.77**	**254**	*e*P			**Pn**	**14 08 59.9**	**+0.3**
	baz=253								
WHYT				*e*S			**Sb**	**14 09 11.1**	**+0.8**
	baz=253								
YUS	**Yu-Shan**	**0.77**	**238**	P			**Pn**	**14 08 59.8**	**-0.3**
	baz=235								
YUS				S			**Sn**	**14 09 09.8**	**-1.0**
	baz=235								
FULB	**Fuli**	**0.78**	**206**	*e*P			**Pn**	**14 08 59.7**	**-0.1**
	baz=204								
FULB				*e*S			**Sn**	**14 09 10.5**	**+0.2**
	baz=204								
YHNB	**Yeheng**	**0.80**	**341**	P			**Pn**	**14 08 59.8**	**-0.4**
	baz=342								
YHNB				S			**Sn**	**14 09 10.8**	**-0.2**
	baz=342								
TWE	**Neicheng**	**0.81**	**0**	*e*P			**Pn**	**14 08 59.9**	**-0.4**
	baz=2.0								
TWE				*e*S			**Sn**	**14 09 11.4**	**+0.3**
	baz=2.0								
NSK	**Sanguang**	**0.81**	**340**	P			**Pn**	**14 08 59.3**	**-1.1**
	baz=341								
NSK				*e*S			**Sn**	**14 09 10.3**	**-0.9**
	baz=341								
FUSB	**Fushanzhiwuyua**	**0.85**	**356**	*e*P			**Pn**	**14 09 00.3**	**-0.5**
	baz=356								
FUSB				*e*S			**Sn**	**14 09 12.5**	**+0.3**
	baz=356								
NFF	**Wufeng Townshi**	**0.88**	**326**	*e*P			**Pn**	**14 09 00.4**	**-0.8**
	baz=326								
NFF				*e*S			**Sn**	**14 09 12.5**	**-0.3**
	baz=326								
ALS	**Alishan**	**0.88**	**244**	*e*P			**Pn**	**14 09 01.5**	**+0.2**
	baz=241								
ALS				*e*S			**Sn**	**14 09 12.9**	**-0.2**
	baz=241								
WNT	**Mingjian**	**0.89**	**268**	*e*P			**Pn**	**14 09 02.1**	**+0.8**
	baz=267								
WNT				*e*S			**Sb**	**14 09 14.8**	**+1.0**
	baz=267								
TWQ1	**Liyutan**	**0.92**	**299**	*e*P			**Pn**	**14 09 02.3**	**+0.5**
	baz=298								
TWQ1				*e*S			**Sn**	**14 09 14.6**	**+0.8**
	baz=298								
ELDTW	**Lidau**	**0.93**	**220**	P			**Pn**	**14 09 00.7**	**-1.2**
	baz=217								
ELDTW				*e*S			**Sn**	**14 09 13.7**	**-0.4**
	baz=217								
TCU	**Taichung**	**0.93**	**285**	*e*P			**Pn**	**14 09 01.2**	**-0.7**
	baz=284								
TCU				*e*S			**Sn**	**14 09 13.4**	**-0.7**
	baz=284								
NSTT	**Nanjuang**	**0.94**	**320**	*e*P			**Pn**	**14 09 02.8**	**+0.8**
	baz=320								
NSTT				*e*S			**Sn**	**14 09 14.4**	**+0.2**
	baz=320								
LIOB	**Emei**	**0.94**	**322**	*e*P			**Pn**	**14 09 02.4**	**+0.3**
	baz=321								
LIOB				*e*S			**Sb**	**14 09 16.2**	**+0.9**
	baz=321								
CHN5	**Tsauling**	**0.95**	**251**	*e*P			**Pn**	**14 09 01.7**	**-0.5**
	baz=250								
CHN5				*e*S			**Sn**	**14 09 14.0**	**-0.6**
	baz=250								
NTC	**Toucheng**	**0.96**	**9**	*e*P			**Pn**	**14 09 02.0**	**-0.2**
	baz=10.0								
NTC				*e*S			**Sb**	**14 09 15.7**	**+0.1**
	baz=10.0								
NSY	**Sanyi**	**0.97**	**302**	*e*S			**Sn**	**14 09 14.6**	**-0.3**
	baz=302								
EGS		**0.97**	**15**	*e*P			**Pn**	**14 09 02.7**	**+0.4**
	baz=16								
EGS				*e*S			**Sb**	**14 09 16.6**	**+0.6**
	baz=16								
EDH	**Donghe**	**0.98**	**199**	*e*P			**Pn**	**14 09 01.6**	**-1.0**
	baz=198								
EDH				*e*S			**Sn**	**14 09 14.7**	**-0.6**
	baz=198								
NMLH	**Miaoli**	**1.01**	**309**	*e*P			**Pn**	**14 09 02.5**	**-0.5**
	baz=308								
NMLH				*e*S			**Sn**	**14 09 16.1**	**0.0**
	baz=308								
WCHH	**Zhanghua**	**1.02**	**280**	*e*P			**Pn**	**14 09 02.5**	**-0.5**
	baz=279								
WCHH				*e*S			**Sn**	**14 09 16.2**	**0.0**
	baz=279								
WDJ	**Dajia District**	**1.03**	**295**	*e*S			**Sn**	**14 09 16.7**	**+0.2**
	baz=295								
WDLH	**Douliu**	**1.05**	**258**	*e*P			**Pn**	**14 09 04.1**	**+0.6**
	baz=257								
WDLH				*e*S			**Sb**	**14 09 18.4**	**+0.1**
	baz=257								
TIPB	**Shuangxi**	**1.07**	**8**	*e*P			**Pb**	**14 09 05.0**	**-0.2**
	baz=9.0								
TIPB				*e*S			**Sn**	**14 09 17.9**	**+0.3**
	baz=9.0								
TWA	**Mucha**	**1.07**	**356**	*e*P			**Pn**	**14 09 03.8**	**0.0**
	baz=357								
TWA				*e*S			**Sn**	**14 09 17.9**	**+0.4**
	baz=357								
STYH	**Taoyuan**	**1.09**	**228**	*e*P			**Pn**	**14 09 03.4**	**-0.7**
	baz=227								
STYH				*e*S			**Sn**	**14 09 17.8**	**-0.2**
	baz=227								
LONT	**Longtian**	**1.11**	**206**	*e*P			**Pn**	**14 09 04.0**	**-0.3**
	baz=205								
LONT				*e*S			**Sn**	**14 09 19.0**	**+0.6**
	baz=205								
TPUB	**Ta-pu**	**1.12**	**238**	*e*P			**Pn**	**14 09 05.0**	**+0.5**
	baz=236								
TPUB				*e*S			**Sn**	**14 09 19.5**	**+0.7**
	baz=236								
TWB1	**Santiao Chiao**	**1.14**	**15**	*e*P			**Pn**	**14 09 04.9**	**+0.2**
	baz=16								
TWB1				*e*S			**Sn**	**14 09 19.8**	**+0.7**
	baz=16								
WTP	**Ta-pu**	**1.16**	**236**	*e*P			**Pn**	**14 09 05.8**	**+0.7**
	baz=234								
WTP				*e*S			**Sn**	**14 09 20.2**	**+0.3**
	baz=234								
NWF	**Wu-fen Shan**	**1.17**	**5**	*e*P			**Pn**	**14 09 06.1**	**+0.9**
	baz=6.0								
NWF				*e*S			**Sb**	**14 09 21.5**	**-0.2**
	baz=6.0								
WRL	**Guolierlin Hig**	**1.17**	**270**	*e*P			**Pn**	**14 09 05.0**	**-0.2**
	baz=269								
WRL				*e*S			**Sn**	**14 09 19.4**	**-0.6**
	baz=269								
WTK	**Tuku**	**1.19**	**260**	*e*P			**Pn**	**14 09 05.9**	**+0.5**
	baz=258								
WTK				*e*S			**Sn**	**14 09 21.4**	**+1.1**
	baz=258								
SXI1	**Grass Mountain**	**1.20**	**9**	*e*P			**Pn**	**14 09 06.2**	**+0.6**
	baz=10.0								
SXI1				*e*S			**Sn**	**14 09 20.9**	**0.0**
	baz=10.0								
CHY	**Chiayi**	**1.20**	**251**	*e*S			**Sn**	**14 09 21.3**	**+0.5**
	baz=249								
TWGBT	**Beinan**	**1.21**	**206**	*e*P			**Pn**	**14 09 04.9**	**-0.7**
	baz=205								
TWGBT				*e*S			**Sn**	**14 09 21.0**	**+0.1**
	baz=205								
YM01	**YM01**	**1.24**	**356**	*e*P			**Pn**	**14 09 05.2**	**-0.9**
	baz=356								
YM01				*e*S			**Sn**	**14 09 21.9**	**+0.2**
	baz=356								
LDUT	**Ludao**	**1.24**	**188**	*e*P			**Pn**	**14 09 05.2**	**-0.9**
	baz=187								
LDUT				*e*S			**Sn**	**14 09 21.3**	**-0.4**
	baz=187								
TWK	**Hsinying**	**1.25**	**240**	*e*P			**Pn**	**14 09 06.6**	**+0.3**
	baz=238								
TWK				*e*S			**Sn**	**14 09 23.3**	**+1.3**
	baz=238								
CHN1	**Nanshi**	**1.26**	**236**	*e*P			**Pn**	**14 09 07.2**	**+0.8**
	baz=234								
CHN1				*e*S			**Sb**	**14 09 23.9**	**-0.5**
	baz=234								
SNST	**Tainan City**	**1.27**	**238**	*e*P			**Pn**	**14 09 06.0**	**-0.5**
	baz=236								
SNST				*e*S			**Sn**	**14 09 22.4**	**0.0**
	baz=236								
SGST	**Jiashian**	**1.28**	**231**	*e*P			**Pn**	**14 09 07.2**	**+0.5**
	baz=229								
SGST				*e*S			**Sb**	**14 09 24.4**	**-0.6**
	baz=229								
JYNG	**Yonaguni jima**	**1.29**	**65**	P			**Pn**	**14 09 06.6**	**-0.2**
JYNG				S			**Sn**	**14 09 22.6**	**-0.3**
WSF	**Szhu**	**1.34**	**259**	*e*S			**Sn**	**14 09 24.3**	**+0.1**
	baz=257								
YOJ	**Yonaguni jima**	**1.35**	**66**	*e*P			**Pn**	**14 09 07.5**	**-0.1**
	baz=66								
YOJ				*e*S			**Sn**	**14 09 25.0**	**+0.6**
	baz=66								
YOJ	**Yonaguni jima**	**1.35**	**66**	P			**Pn**	**14 09 07.6**	**-0.1**
YOJ				S			**Sn**	**14 09 24.2**	**-0.3**
WSL	**Shuilin Townsh**	**1.37**	**254**	*e*P			**Pn**	**14 09 08.7**	**+0.8**
	baz=253								
WSL				*e*S			**Sn**	**14 09 25.5**	**+0.7**
	baz=253								
ICHU	**Yijhu**	**1.38**	**247**	*e*P			**Pn**	**14 09 09.2**	**+1.2**
	baz=246								
ICHU				*e*S			**Sb**	**14 09 27.0**	**-0.6**
	baz=246								
SCST	**Cishan**	**1.48**	**227**	*e*P			**Pn**	**14 09 09.4**	**0.0**
	baz=225								
SCST				*e*S			**Sn**	**14 09 28.0**	**+0.5**
	baz=225								
SSD	**Sandimen**	**1.49**	**220**	*e*P			**Pn**	**14 09 10.6**	**+1.0**
	baz=218								
SSD				*e*S			**Sn**	**14 09 29.2**	**+1.3**
	baz=218								
TSMG	**Majia**	**1.52**	**218**	*e*P			**Pn**	**14 09 11.1**	**+1.1**
	baz=217								
TSMG				*e*S			**Sn**	**14 09 30.3**	**+1.8**
	baz=217								
MASBT	**Mashibuluo**	**1.60**	**216**	*e*P			**Pn**	**14 09 12.8**	**+1.7**
	baz=215								
MASBT				*e*S			**Sn**	**14 09 31.0**	**+0.5**
	baz=215								
EAST	**Anshuo**	**1.69**	**206**	*e*P			**Pn**	**14 09 13.6**	**+1.3**
	baz=205								
EAST				*e*S			**Sn**	**14 09 33.2**	**+0.3**
	baz=205								
TAWH	**Dawu Township**	**1.71**	**205**	*e*P			**Pn**	**14 09 12.6**	**0.0**
	baz=203								
TAWH				*e*S			**Sn**	**14 09 32.8**	**-0.6**
	baz=203								
SCZT	**Fangliau**	**1.80**	**212**	*e*P			**Pn**	**14 09 14.6**	**+0.8**
	baz=211								
SCZT				*e*S			**Sn**	**14 09 35.1**	**-0.4**
	baz=211								
LYUB	**Lan-yu**	**1.90**	**182**	*e*S			**Sn**	**14 09 37.5**	**-0.3**
	baz=181								
IRIF	**Iriomote-Funau**	**1.94**	**77**	P			**Pn**	**14 09 15.6**	**-0.1**
IRIF				S			**Sn**	**14 09 38.8**	**-0.2**
HATJ	**Hateruma jima**	**1.97**	**85**	P			**Pn**	**14 09 16.2**	**+0.1**
HATJ				S			**Sn**	**14 09 39.4**	**-0.3**
JKRS	**Kuro-shima**	**2.17**	**81**	P			**Pn**	**14 09 19.4**	**+0.5**
JKRS				S			**Sn**	**14 09 44.5**	**-0.2**
JIJ	**Ishigaki jima**	**2.31**	**78**	P			**Pn**	**14 09 20.6**	**-0.3**
JIJ				S			**Sn**	**14 09 46.8**	**-1.4**
JTJ	**Tarama**	**2.87**	**75**	P			**Pn**	**14 09 28.5**	**-0.1**
JTJ				S			**Sn**	**14 10 02.0**	**0.0**

*JMA **21** 14:13:05.9±0.1,26°.5N±0°.6×128°.5E±0°.9,h36km±1km, MV3.0/10,NEAR OKINAWAJIMA ISLAND*
*IDC **21** 14:13:11.7±4.6,25°.15N×128°.99E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=359.0km s-min=33.4km az=96.0*

ISC 21 14:13:05.6±1.5,26°.49N±0°.07×128°.51E±0°.08,h32km±9km, n11,σ0s33/18,mb3.3/3,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.40**	**329**	P			**Pb**	**14 13 15.0**	**+0.2**
JOW				S			**Sb**	**14 13 21.3**	**+0.4**
JNTH	**Nagotoyohara**	**0.44**	**274**	*i* P			**Pb**	**14 13 15.0**	**-0.2**
JNTH				*e*S			**Sb**	**14 13 21.5**	**-0.3**
JYRO	**Yoronjima**	**0.54**	**355**	*i* P			**Pb**	**14 13 16.7**	**-0.1**
JYRO				*e*S			**Sb**	**14 13 24.1**	**-0.3**
JIH	**Iheya**	**0.73**	**319**	P			**Pn**	**14 13 19.6**	**-0.1**
JIH				S			**Sn**	**14 13 29.2**	**-0.5**
JJT3	**Tamagusuku3**	**0.73**	**242**	*i* P			**Pn**	**14 13 19.8**	**+0.1**
JJT3				*e*S			**Sn**	**14 13 29.4**	**-0.5**
JOKE	**Okinoerabujima**	**0.87**	**4**	*i* P			**Pn**	**14 13 21.6**	**0.0**
JOKE				*e*S			**Sn**	**14 13 33.2**	**0.0**
JAGN	**Aguni-jima**	**1.14**	**275**	P			**Pn**	**14 13 25.7**	**+0.4**
JAGN				*e*S			**Sn**	**14 13 40.2**	**+0.4**
JTK	**Tokunoshima**	**1.35**	**17**	P			**Pn**	**14 13 28.4**	**+0.1**
JTK				*e*S			**Sn**	**14 13 45.2**	**+0.1**
WRA	**Warramunga Arr**	**46.50**	**172**	P			**P**	**14 21 29.7**	**-0.3**
	0.2nm,0.5s,baz=353,slow=8.4,SNR=5.0 0.2nm,0.5s								
ASAR	**Alice Springs**	**50.13**	**174**	P			**P**	**14 21 58.4**	**+0.4**
	0.2nm,0.8s,baz=4.4,slow=14,SNR=6.5 0.2nm,0.8s								
YKA	**Yellowknife Ar**	**78.19**	**25**	P			P	14 25 18.5	+17
	1.2nm,0.8s,baz=312,slow=5.8,SNR=3.8 1.2nm,0.8s								

*NEIC **21** 14:13:26.9±1.5,54°.8S±0°.2×31°.4W±0°.4,h13km±7km, mb4.4/6,Error ellipse: s-maj=35.5km s-min=14.6km az=52.0*
*IDC **21** 14:13:26.4±1.4,54°.70S×31°.08W,h0km,mb3.9/5, mbtmp3.9/5,MS3.7/8,Error ellipse: s-maj=47.3km s-min=31.8km az=60.0*

ISC 21 14:13:27.0±0.9,54°.8S±0°.1×31°.4W±0°.2,h10km,n23, σ1s29/13,mb4.4/7,MS3.8/8,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.03**	**278**	Pn			**Pn**	**14 14 14.4**	**-0.5**
SNAA	**Sanae**	**20.85**	**155**	P			**P**	**14 18 07.2**	**-1.4**
SNAA				IAmb			IAmb	14 18 18.4	
	comp=Z,11nm,1.3s								
CPUP	**Villa Florida**	**34.24**	**316**	P			**P**	**14 20 13.4**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=158,slow=7.1,SNR=2.3								
CPUP				LR			LR	14 35 45.7	
	comp=Z,126nm,18.1s,baz=51,slow=39 comp=Z,1.6nm,0.7s								
QSPA	**South Pole Qui**	**35.43**	**180**	LR			LR	14 33 29.4	
	comp=Z,86nm,21.6s,baz=210,slow=34								
QSPA	**South Pole Qui**	**35.43**	**180**	P			**P**	**14 20 23

baz=192,slow=75,SNR=7.8
H10N2 ASCENSION HYDR 48.77 22 T T 15 14 51.8
baz=192,slow=75,SNR=6.6
BOAV Boa Vista 61.89 327 P **P** **14 23 45.5 -1.0**
BOAV IAmb IAmb 14 23 58.5
comp=Z,2.8nm,1.0s
DBIC Dimbokro 65.15 29 LR LR 14 46 32.9
comp=Z,53nm,19.9s,baz=169,slow=31
SDV Santo Domingo 71.48 319 LR LR 15 00 01.8
comp=Z,41nm,18.1s,baz=170,slow=39
TORD Torodi Ar. Bea 73.25 34 P **P** **14 24 58.4 +0.2**
comp=Z,0.4nm,0.7s,baz=192,slow=5.7,SNR=2.4
comp=Z,0.4nm,0.7s
MBAR Mbarara 73.79 67 LR LR 14 54 26.1
comp=Z,53nm,18.8s,baz=156,slow=33
MDT Midelt 90.27 22 LR LR 15 01 46.4
comp=Z,43nm,18.6s,baz=196,slow=32
ESDC Sonseca Array 97.01 21 LR LR 15 06 24.2
comp=Z,43nm,18.0s,baz=169,slow=33
ILAR Eielson Array 147.53 314 PKPbc **PKPbc** **14 33 09.5 -0.3**
comp=Z,0.9nm,0.9s,baz=129,slow=1.5,SNR=8.0

*IDC **21** 14:31:28.9±2.2, 55.°81S×31.°50W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=94.4km s-min=45.9km az=15.0*
*NEIC **21** 14:31:31.2±1.8, 55.°47S±0.°10×31.°5W±0.°2, h10km±2km, mb4.4/6, Error ellipse: s-maj=21.2km s-min=12.6km az=131.0*
ISC 21 14:31:31.3±1.0, 55.°5S±0.°1×31.°6W±0.°1, h10km, n12, σ0s75/12, mb4.2/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.06**	**291**	Pn	**Pn**	**14 32 19.2**	**-0.5**
ORCD	**Orcadas**	**8.71**	**227**	Pn	**Pn**	**14 33 37.5**	**+0.4**
EFI	**East Falkland**	**16.12**	**273**	P	**P**	**14 35 20.3**	**-0.6**
EFI				IAmb	IAmb	14 35 39.8	
	comp=Z,31nm,1.1s						
SNAA	**Sanae**	**20.31**	**154**		**P**	**14 36 06.5**	**-0.5**
VA06	**Catapilco**	**35.87**	**293**	P	**P**	**14 38 31.0**	**-0.1**
CO02	**Combarbal**	**36.79**	**295**	P	**P**	**14 38 40.0**	**+0.8**
CO02				IAmb	IAmb	14 38 52.2	
	comp=Z,12nm,1.1s						
PB01	**IPOC Station P**	**44.50**	**305**	P	**P**	**14 39 42.9**	**0.0**
PB01				IAmb	IAmb	14 39 56.4	
	comp=Z,2.3nm,0.8s						
LPAZ	**La Paz**	**48.05**	**310**	P	**P**	**14 40 12.1**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=140,slow=5.9,SNR=10						
	comp=Z,2.0nm,0.6s						
LPAZ	**La Paz**	**48.05**	**310**	P	**P**	**14 40 11.9**	**+0.5**
LPAZ				IAmb	IAmb	14 40 12.7	
	comp=Z,1.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.89**	**34**	P	**P**	**14 43 07.0**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=181,slow=4.6,SNR=1.1						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**147.89**	**313**	PKPbc	**PKPbc**	**14 51 15.1**	**0.0**
	comp=Z,0.6nm,0.7s,baz=110,slow=1.6,SNR=9.1						
SONM	**Songino Array**	**153.21**	**89**	PKPbc	**PKPbc**	**14 51 27.1**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=224,slow=3.3,SNR=4.0						

*IDC **21** 14:40:19.1±2.1, 7.°80S×129.°64E, h0km, mb3.4/1, mbtmp3.7/5, ML3.7/4, MS3.2/2, Error ellipse: s-maj=50.2km s-min=28.9km az=78.0*
*DJA **21** 14:41:00.8±0.4, 8.°5S±4.°×12.°7E±.°, h10km, M4.3/13, mB5.0/6, mb4.6/5, MLv4.2/13, Mw(mB)4.3/6*
ISC 21 14:40:25.5±1.3, 8.°17S±0.°10×129.°42E±0.°10, h35km, n12, σ2s43/13, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.03**	**250**	Pn	**Pn**	**14 41 54.8**	**+2.5**
	3.4nm,0.3s,baz=41,slow=5.5,SNR=3.2						
BATI				Sn	**Sn**	**14 43 00.9**	**+0.6**
	2.7nm,0.3s,baz=78,slow=21,SNR=1.5						
	11nm,0.4s						
BATI	**Baumata**	**6.03**	**250**	P	**Pn**	**14 41 56.0**	**+3.7**
MMRI	**Maumere**	**7.12**	**266**	P	**Pn**	**14 42 06.8**	**-0.5**
BBSI	**Bau Bau**	**7.31**	**291**	P	**Pn**	**14 42 10.7**	**+0.9**
EDFI	**Ende, Flores**	**7.67**	**265**	P	**Pn**	**14 42 15.9**	**+1.0**
BKSI	**Bulukumba**	**9.66**	**286**	P	**Pn**	**14 42 43.3**	**+1.2**
	0.1nm385nm7.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.53**	**200**	Pn	**Pn**	**14 42 56.0**	**+2.0**
	0.5nm,0.3s,baz=25,slow=9.1,SNR=22						
FITZ				Sn	**Sn**	**14 44 46.0**	**-4.7**
	1.4nm,0.3s,baz=97,slow=15,SNR=4.7						
	1.2nm,0.3s						
WRA	**Warramunga Arr**	**12.63**	**158**	Pn	**Pn**	**14 43 24.4**	**+1.6**
	0.4nm,0.3s,baz=343,slow=13,SNR=28						
WRA				Sn	**Sn**	**14 45 43.3**	**+1.0**
	1.0nm,0.3s,baz=330,slow=23,SNR=8.9						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**15.99**	**165**	Pn	**P**	**14 44 10.2**	**-0.9**
	0.2nm,0.3s,baz=344,slow=9.6,SNR=19						
	0.4nm,0.4s						
LEM	**Lembang**	**21.66**	**272**	LR	LR	14 54 26.2	
	comp=Z,24nm,18.9s,baz=209,slow=39						
MKAR	**Makanchi Array**	**68.89**	**327**	P	**P**	**14 51 24.6**	**-2.2**
	0.3nm,0.7s,baz=135,slow=7.7,SNR=4.6						
	0.3nm,0.7s						
YAK	**Yakutsk**	**69.99**	**0**	LR	LR	15 22 42.6	
	comp=Z,34nm,20.2s,baz=200,slow=36						

*IDC **21** 14:41:46.4±1.4, 4.°29S×127.°26E, h0km, mb3.5/5, mbtmp3.8/7, ML4.3/2, MS3.3/4, Error ellipse: s-maj=29.5km s-min=23.2km az=152.0*
ISC 21 14:41:50.8±1.1, 4.°4S±0.°1×127.°33E±0.°06, h35km, n16, σ1s80/14, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.11**	**51**	S	**Sn**	**14 42 24.7**	**+0.8**
AAI	**Ambon**	**1.11**	**51**	P	**Pn**	**14 42 07.8**	**-2.0**
MSAI	**Masohi**	**1.90**	**57**	P	**Pn**	**14 42 17.1**	**-3.6**
	0.1nm554nm24nm,0.5s						
SANI	**Sanana**	**2.68**	**330**	P	**Pn**	**14 42 28.9**	**-2.6**
	0.9nm4µm61nm,0.5s						
LBMI	**Labuha**	**3.73**	**3**	P	**Pn**	**14 42 47.6**	**+1.7**
SIJI	**Sorong**	**5.26**	**48**	Pn	**Pn**	**14 43 08.0**	**+1.0**
	10nm,0.3s,baz=219,slow=11,SNR=27						
SIJI				Sn	**Sn**	**14 44 07.2**	**+0.8**
	3.5nm,0.3s,baz=264,slow=23,SNR=10						
	23nm,0.3s						
BATI	**Baumata**	**6.83**	**212**	LR	LR	14 46 06.4	
	comp=Z,170nm,20.4s,baz=28,slow=38						
KAPI	**Kappang**	**7.58**	**265**	Pn	**Pn**	**14 43 39.2**	**+0.4**
	4.4nm,0.3s,baz=107,slow=4.6,SNR=31						
KAPI				Sn	**Sn**	**14 45 03.6**	**0.0**
	1.8nm,0.3s,baz=295,slow=23,SNR=1.9						
	43nm,0.6s						
DAV	**Davao City (W)**	**11.52**	**351**	LR	LR	14 50 19.0	
	comp=Z,46nm,18.1s,baz=180,slow=45						
ASAR	**Alice Springs**	**20.19**	**162**	P	**P**	**14 46 24.2**	**+1.6**
	2.1nm,0.7s,baz=344,slow=11,SNR=7.8						
	2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.03**	**310**	P	**P**	**14 48 48.9**	**-0.1**
	0.3nm,0.4s,baz=133,slow=7.5,SNR=2.1						
	0.3nm,0.4s						
KSRS	**Korea Array**	**41.63**	**1**	P	**P**	**14 49 37.0**	**+1.4**
	0.4nm,0.6s,baz=182,slow=9.2,SNR=2.6						
	0.4nm,0.6s						
PETK	**Petropavlovsk-**	**62.74**	**20**	P	**P**	**14 52 11.6**	**-0.6**
	0.9nm,1.0s,baz=239,slow=8.2,SNR=1.3						
	0.9nm,1.0s						
MKAR	**Makanchi Array**	**64.61**	**327**	P	**P**	**14 52 23.6**	**-1.2**
	0.3nm,0.6s,baz=113,slow=6.9,SNR=2.2						
	0.3nm,0.6s						
MA2	**Magadan**	**66.41**	**13**	LR	LR	15 18 33.8	
	comp=Z,20nm,22.0s,baz=179,slow=33						
SHEM	**Shemya Is, Ala**	**69.21**	**28**	LR	LR	15 18 27.8	
	comp=Z,87nm,19.6s,baz=281,slow=32						

IDC 21 14:46:25.7±3.2, 32.°80S×178.°44W, h0km, mb3.4/2, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=76.1km s-min=47.3km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.54**	**212**	Pn	Pn	14 48 02.5	-0.7
	1.0nm,0.3s,baz=26,slow=18,SNR=7.9						
URZ				Sn	Sn	14 49 14.3	-4.3
	0.6nm,0.3s,baz=60,slow=4.8,SNR=1.9						
	4.7nm,0.5s						
ASAR	**Alice Springs**	**42.66**	**270**	P	P	14 54 24.4	0.0
	0.3nm,0.9s,baz=107,slow=7.1,SNR=1.7						
	0.3nm,0.9s						
WRA	**Warramunga Arr**	**43.87**	**275**	P	P	14 54 34.1	0.0
	0.5nm,0.6s,baz=114,slow=7.9,SNR=8.3						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**147.25**	**338**	PKPbc	PKPbc	15 06 09.5	-0.8
	1.3nm,0.8s,baz=57,slow=5.3,SNR=4.0						

DJA 21 14:51:07.8±0.5, 10.°S±5.°×12.°0E±.°, h23km±6km, M3.9/13, mb4.4/1, MLv3.6/13, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.54**	**274**	P	Pn	14 51 19.6	-0.6
WBSI				S	Sn	14 51 28.2	-0.4
BASI	**Baing, Sumba**	**0.82**	**130**	P	Pn	14 51 24.1	+0.1
EDFI	**Ende, Flores**	**1.96**	**62**	P	Pn	14 51 38.7	-1.1
PLAI	**Plampang**	**2.30**	**291**	P	Pn	14 51 43.6	-0.7
MMRI	**Maumere**	**2.50**	**66**	P	Pn	14 51 47.3	+0.3
TWSI	**Taliwang, Sumb**	**3.16**	**287**	P	Pn	14 51 56.4	+0.2
BSSI	**Bau Bau, Buton**	**3.56**	**9**	P	Pn	14 52 02.1	+0.5
BATI	**Baumata**	**3.71**	**98**	P	Pn	14 52 03.8	+0.1
BKSI	**Bulukumba**	**4.33**	**2**	P	Pn	14 52 13.3	+1.0
JAGI	**Jajag, Banyuwa**	**5.84**	**281**	P	Pn	14 52 33.0	-0.1

*IDC **21** 14:51:58.7±1.0, 73.°04N×5.°86E, h0km, mb3.6/7, mbtmp3.6/13, ML2.9/6, MS3.1/7, Error ellipse: s-maj=22.2km s-min=14.6km az=70.0*
*BER **21** 14:52:02.8±1.5, 73.°18N×6.°41E, h10km, Confirmed Earthquake*
ISC 21 14:52:00.1±0.8, 73.°13N±0.°07×6.°1E±0.°1, h11km, n27, σ0s86/25, mb3.6/7, MS3.1/4, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**3.86**	**63**	*e*P	**Pn**	**14 52 58.5**	**-0.7**
HSPB	**Hornsund (broa**	**4.59**	**28**	*e*P	**Pn**	**14 53 08.5**	**-0.7**
TRO	**Tromso**	**5.39**	**124**	*e*P	**Pn**	**14 53 20.2**	**-0.1**
TRO				IAML		14 54 23.6	
	comp=Z,2.4nm,0.5s						
LOF	**Lofoten**	**5.59**	**150**	*e*P	**Pn**	**14 53 23.8**	**+0.8**
LOF				IAML		14 54 25.2	
	comp=Z,3.4nm,0.4s						
SPA0	**Spitsbergen Ar**	**5.67**	**22**	*e*P	**Pn**	**14 53 24.1**	**0.0**
SPITS	**Spitsbergen Ar**	**5.67**	**22**	Pn	**Pn**	**14 53 23.8**	**-0.3**
	baz=204,slow=16						
	comp=Z,1.7nm,0.3s						
JETT	**Jettan, Norway**	**5.81**	**121**	*e*P	**Pn**	**14 53 26.8**	**+0.7**
STEI	**Steigen**	**6.04**	**145**	*e*P	**Pn**	**14 53 29.1**	**-0.1**
STEI				IAML		14 54 38.5	
	comp=Z,1.3nm,0.5s						
KIF	**Kilpisjarvi**	**6.31**	**124**	*e*P	**Pn**	**14 53 32.4**	**-0.4**
KONS	**Konsvik**	**7.08**	**157**	*e*P	**Pn**	**14 53 42.5**	**-1.0**
KONS				IAML		14 55 01.2	
	comp=Z,2.2nm,0.5s						
SALU	**Saltoluokta**	**7.12**	**138**	*e*P	**Pn**	**14 53 43.8**	**-0.2**
ARCES	**ARCESS Array B**	**7.17**	**111**	Pn	**Pn**	**14 53 44.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=318,slow=11,SNR=21						
	comp=Z,1.1nm,0.6s						
KEV	**Kevo**	**7.45**	**107**	*e*P	**Pn**	**14 53 47.4**	**-1.0**
MOR8	**Moi Rana**	**7.56**	**153**	*e*P	**Pn**	**14 53 50.3**	**+0.3**
MOR8				*e*S	Sn	14 55 05.3	-10
NOA	**NORSAR Array B**	**12.29**	**168**	Pn	**Pn**	**14 54 54.5**	**-0.4**
	baz=184,slow=15,SNR=2.1						
NOA				LR	LR	14 59 11.1	
	comp=Z,38nm,20.9s,baz=0.0,slow=35						
	comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**13.37**	**163**	Pn	**Pn**	**14 55 08.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=353,slow=10,SNR=7.9						
HFS				LR	LR	15 00 04.9	
	comp=Z,50nm,18.6s,baz=340,slow=36						
	comp=Z,2.2nm,0.9s						
FINES	**FINESS Array B**	**13.91**	**137**	Pn	**Pn**	**14 55 15.9**	**-0.9**
	baz=332,slow=12,SNR=3.8						
FINES				LR	LR	15 00 17.5	
	comp=Z,71nm,19.7s,baz=12,slow=36						
	comp=Z,0.8nm,0.7s						
EKA	**Eskdalemuir Ar**	**18.27**	**197**	Pn	**Pn**	**14 56 11.9**	**-1.3**
	baz=24,slow=12						
	comp=Z,3.5nm,1.1s						
NRIK	**Noril'sk**	**24.55**	**58**	P	**P**	**14 57 19.9**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=347,slow=14,SNR=2.3						
	comp=Z,1.5nm,0.5s						
GERES	**GERESS Array B**	**24.60**	**168**	P	**P**	**14 57 20.7**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=10,slow=8.1,SNR=6.3						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**24.64**	**143**	P	**P**	**14 57 19.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=344,slow=9.8,SNR=6.5						
AKASG				LR	LR	15 06 43.5	
	comp=Z,52nm,19.5s,baz=36,slow=36						
	comp=Z,0.9nm,0.6s						
MLR	**Muntele Rosu**	**29.18**	**151**	LR	LR	15 10 11.4	
	comp=Z,56nm,18.5s,baz=262,slow=38						
AKTO	**Aktyubinsk**	**31.73**	**107**	LR	LR	15 10 16.2	
	comp=Z,18nm,18.6s,baz=306,slow=34						
BRTR	**Keskin Array B**	**36.05**	**143**	P	**P**	**14 59 02.6**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=358,slow=7.5,SNR=4.0						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**41.19**	**343**	P	**P**	**14 59 45.8**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=358,slow=6.3,SNR=2.9						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**56.37**	**307**	P	**P**	**15 01 40.5**	**-0.4**
	comp=Z,1.5nm,1.0s,baz=60,slow=8.8,SNR=6.0						
	comp=Z,1.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**60.01**	**185**	P	**P**	**15 02 06.0**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=353,slow=5.1,SNR=3.1						
TORD				LR	LR	15 28 34.7	
	comp=Z,28nm,18.0s,baz=230,slow=37						
	comp=Z,0.6nm,0.8s						

*BJI **21** 14:55:10.9±0.0, 18.°22N×146.°21E, h200km, mb4.6/66, mB4.6/39*
*NEIC **21** 14:55:17.8±1.4, 18.°46N±0.°05×145.°57E±0.°06, h207km±4km, mb5.1/307, Error ellipse: s-maj=9.0km s-min=6.6km az=114.0*
*IDC **21** 14:55:18.0±0.4, 18.°49N×145.°52E, h215km±3km, mb4.4/40, mbtmp4.9/43, Error ellipse: s-maj=8.5km s-min=6.0km az=92.0*
*MOS **21** 14:55:17.2±0.9, 18.°47N×145.°48E, h222km, mb4.8/51, Error ellipse: s-maj=7.4km s-min=4.6km az=105.3*
*DJA **21** 14:55:19.7±0.9, 18.°N±4.°×14.°6E±.°, h226km±8km, M5.2/97, mb5.4/97, mB5.6/49, mBc6.2/46, MLv5.6/1, Mw(mB)5.1/49, MwmBc5.4/46, MwMwp6.1/2, Mwp6.1/2*
*GCMT **21** 14:55:19.8±0.2, 18.°49N±0.°01×145.°75E±0.°01, h204km±1km, MW5.2/135, Moment Tensor Solution. s84,c108; s135,c218; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.89±.14; $M_{\theta\theta}$1.96±.14; $M_{\phi\phi}$-5.84±.13; $M_{r\theta}$-5.07±.11; $M_{\theta\phi}$0.27±.14; $M_{\theta f}$2.12±.13; Best double couple: $M_0$7.39500×10^{16} NP1:ϕ_s322.00000°, δ70.00000°, λ53.00000°. NP2:ϕ_s207.00000°, δ41.00000°, λ148.00000°. Principal axes: T 8.2400, Plg51.0000°, Azm190.0000°; N -1.6800, Plg34.0000°, Azm336.0000°; P -6.5500, Plg17.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **21** 14:55:19, 18.°43N×145.°94E, h244km, mb5.5*
ISC 21 14:55:17.5±0.2, 18.°52N±0.°03×145.°68E±0.°03, h213km±1km, h213km:pP-P, n1076, σ1s37/1188, mb5.0/312, 21C-16D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.96**	**189**	P	**Pn**	**14 56 31.6**	**-0.2**
	220nm,0.6s,baz=306,slow=9.0,SNR=24						
GUMO				S	**S**	**14 57 27.2**	**-3.1**
	378nm,0.4s,baz=340,slow=22,SNR=4.3						
GUMO	**Guam**	**4.96**	**189**		**Pn**	**14 56 31.0**	**-0.8**
GUMO	**Guam**	**4.96**	**189**	P	**Pn**	**14 56 31.0**	**-0.8**
GUMO	**Guam**	**4.96**	**189**	P	**Pn**	**14 56 32.8**	**+1.0**
JCJ	**Chichijima**	**9.12**	**340**	P	**Pn**	**14 57 24.4**	**-0.7**
	59nm,0.4s,baz=293,slow=23,SNR=5.5						
JCJ				S	**S**	**14 59 02.5**	**-5.3**
	159nm,0.5s,baz=267,slow=23,SNR=7.2						
JCJ	**Chichijima**	**9.12**	**340**	Pn	**Pn**	**14 57 24.3**	**-0.8**
JCJ	**Chichijima**	**9.12**	**340**	P	**Pn**	**14 57 26.8**	**+1.6**
PATS	**Pohnpei**	**16.92**	**132**	Pn	**Pn**	**14 59 02.8**	**+0.5**
PATS	**Pohnpei**	**16.92**	**132**	P	**Pn**	**14 59 02.3**	**0.0**
JOW	**Kunigami**	**18.05**	**300**		**Pn**	**14 59 15.0**	**-0.4**
JOW	**Kunigami**	**18.05**	**300**	P	**Pn**	**14 59 15.6**	**+0.1**

JYT	**Yasato**	**18.29**	**346**	P	**P**	**14 59 16.2**	**+0.7**
INU	**Inuyama**	**18.44**	**337**	P	**Pn**	**14 59 18.6**	**-1.3**
INU	**Inuyama**	**18.44**	**337**	P	**Pn**	**14 59 20.2**	**+0.3**
JMN	**Monobe**	**18.46**	**327**	P	**P**	**14 59 18.2**	**+0.8**
JGF	**Kuroka**	**18.54**	**338**		**P**	**14 59 18.6**	**+0.3**
JSU	**Suzuyama**	**18.88**	**316**	P	**P**	**14 59 22.0**	**0.0**
MJAR	**Matsushiro Arr**	**19.12**	**341**	P	**P**	**14 59 24.1**	**-0.4**
	16nm,0.7s,baz=170,slow=11,SNR=37						
MJAR				S	**S**	**15 02 42.2**	**-7.6**
	3.6nm,0.6s,baz=148,slow=10,SNR=2.6						
MAJO	**Matsushiro**	**19.12**	**341**		**P**	**14 59 25.0**	**+0.5**
MAJO	**Matsushiro**	**19.12**	**341**	*c*	*i*P	**14 59 25.2**	**+0.7**
MAJO	**Matsushiro**	**19.12**	**341**	P	**P**	**14 59 26.1**	**+1.6**
JMM	**Marumori**	**19.74**	**348**	P	**P**	**14 59 32.4**	**+1.2**
JHS	**Saijyo**	**19.85**	**328**	P	**P**	**14 59 32.7**	**+0.4**
WAKE	**Wake Island**	**19.86**	**84**	P	**Pn**	**14 59 35.5**	**-1.5**
H11S3	**WAKE ISLAND Hy**	**19.93**	**87**	P	**Pn**	**14 59 37.0**	**-0.6**
	baz=263,slow=7.5,SNR=2.9						
H11S3				T	T	15 20 56.6	
	baz=275,slow=74,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**19.94**	**87**	P	**Pn**	**14 59 35.8**	**-2.0**
	baz=263,slow=7.5,SNR=3.2						
H11S1				T	T	15 20 45.6	
	baz=275,slow=74,SNR=8.3						
JMJ	**Miyako jima 2**	**19.94**	**292**	P	**P**	**14 59 35.2**	**+1.8**
H11S2	**WAKE ISLAND Hy**	**19.94**	**87**	P	**Pn**	**14 59 36.8**	**-1.0**
	baz=263,slow=7.5,SNR=2.7						
H11S2				T	T	15 21 04.6	
	baz=275,slow=74,SNR=8.4						
H11N1	**WAKE ISLAND Hy**	**20.08**	**83**	P	Pn	14 59 38.0	-1.5
	baz=255,slow=14,SNR=11						
H11N1				T	T	15 21 11.6	
	baz=267,slow=74,SNR=7.6						
H11N2	**WAKE ISLAND Hy**	**20.09**	**83**	P	**P**	**14 59 37.1**	**+2.3**
	baz=255,slow=14,SNR=6.3						
H11N2				T	T	15 21 13.6	
	baz=267,slow=74,SNR=2.0						
H11N3	**WAKE ISLAND Hy**	**20.10**	**83**	P	**P**	**14 59 31.0**	**-3.9**
	baz=255,slow=14,SNR=9.2						
H11N3				T	T	15 21 14.1	
	baz=267,slow=74,SNR=6.2						
JSD	**Sado**	**20.50**	**343**	P	**P**	**14 59 40.4**	**+1.2**
MANU	**Manus Island**	**20.50**	**175**	P	**P**	**14 59 39.2**	**-0.2**
SMPI	**Sarmi**	**21.50**	**199**	P	**P**	**14 59 50.2**	**+0.3**
	2µm4µm234nm,1.4s						
GENI	**Genyem**	**21.67**	**195**	P	**P**	**14 59 51.9**	**+0.4**
	7µm794nm,1.0s						
GENI	**Genyem**	**21.67**	**195**	P	**P**	**14 59 51.4**	**-0.1**
BAKI	**Biak**	**21.73**	**207**	P	**P**	**14 59 53.5**	**+1.4**
	6µm616nm,1.5s						
YOJ	**Yonaguni jima**	**21.89**	**290**	P	**P**	**14 59 52.7**	**-0.9**
YOJ	**Yonaguni jima**	**21.89**	**290**	P	**P**	**14 59 52.7**	**-0.9**
KSBUS	**Busan**	**22.21**	**322**	P	**P**	**14 59 56.0**	**-0.6**
SRPI	**Serui, Papua**	**22.29**	**206**	P	**P**	**14 59 58.4**	**+1.0**
	6µm657nm,1.1s						
JTM	**Tenmabayashi**	**22.54**	**351**	P	**P**	**15 00 00.3**	**+0.9**
NACB	**Ninganchiao**	**23.11**	**288**	P	**P**	**15 00 04.4**	**-0.4**
YULB	**Yu-li**	**23.27**	**286**	P	**P**	**15 00 06.1**	**-0.1**
TATO	**Taipei**	**23.35**	**290**	P	**P**	**15 00 09.1**	**+2.1**
NAWB	**Namwon**	**23.36**	**320**	P	**P**	**15 00 07.0**	**+0.1**
YHNB	**Yeheng**	**23.39**	**289**	P	**P**	**15 00 07.5**	**+0.1**
YHNB	**Yeheng**	**23.39**	**289**	P	**P**	**15 00 08.7**	**+1.3**
TWG	**Pinlang**	**23.40**	**285**	P	**P**	**15 00 06.8**	**-0.7**
RABL	**Rabaul**	**23.46**	**164**	P	**P**	**15 00 07.0**	**-1.0**
RABL	**Rabaul**	**23.46**	**164**	P	**P**	**15 00 07.4**	**-0.6**
ERM	**Erimo**	**23.52**	**355**	P	**P**	**15 00 09.4**	**+1.2**
ERM	**Erimo**	**23.52**	**355**	*e*P	**P**	**15 00 10.3**	**+2.1**
ERM	**Erimo**	**23.52**	**355**	P	**P**	**15 00 12.2**	**+4.0**
KRVT	**Karvat (AS076**	**23.53**	**164**	P	**P**	**15 00 08.4**	**-0.3**
	108nm,0.9s,baz=283,slow=20,SNR=6.6						
	108nm,0.9s						
SSLB	**Suanglung**	**23.63**	**287**	P	**P**	**15 00 09.7**	**+0.1**
SSLB	**Suanglung**	**23.63**	**287**	P	**P**	**15 00 11.1**	**+1.5**
TPUB	**Ta-pu**	**23.86**	**286**	P	**P**	**15 00 10.8**	**-0.8**
TPUB	**Ta-pu**	**23.86**	**286**	P	**P**	**15 00 11.7**	**0.0**
SWI	**Sorong**	**23.91**	**218**	P	**P**	**15 00 12.5**	**+0.3**
	2µm144nm,0.9s						
SIJI	**Sorong**	**23.92**	**218**	P	**P**	**15 00 12.7**	**+0.4**
	105nm,0.8s,baz=22,slow=9.6,SNR=45						
	105nm,0.8s						
KSCHJ	**Chungju**	**24.01**	**323**	P	**P**	**15 00 12.1**	**-0.7**
TJN	**Taejon**	**24.02**	**321**	*e*P	**P**	**15 00 12.8**	**-0.1**
KSRS	**Korea Array**	**24.45**	**324**	P	**P**	**15 00 16.8**	**0.0**
	12nm,0.9s,baz=148,slow=9.2,SNR=39						
KSRS				pP	**pP**	**15 00 58.4**	**+2.1**
	50nm,1.0s,baz=144,slow=9.5,SNR=5.9						
KSRS				ScP	**ScP**	**15 07 05.0**	**-3.2**
	2.9nm,0.9s,baz=126,slow=3.0,SNR=8.3						
	12nm,0.9s						
KSAR	**Wonju Array Be**	**24.46**	**324**	P	**P**	**15 00 16.9**	**0.0**
KSAR	**Wonju Array Be**	**24.46**	**324**	P	**P**	**15 00 16.9**	**0.0**
JEW	**Eniwo**	**24.51**	**352**	P	**P**	**15 00 17.5**	**+0.3**
KS19	**Wonju Array Si**	**24.51**	**324**	P	**P**	**15 00 16.9**	**-0.5**
KS19				pP	**pP**	**15 00 57.1**	**0.0**
FAKI	**Fak Fak**	**25.07**	**213**	P	**P**	**15 00 21.8**	**-0.8**
FAKI	**Fak Fak**	**25.07**	**213**	P	**P**	**15 00 22.5**	**-0.2**
	1µm146nm,0.8s						
**FAKI

LUWI Luwuk 29.75 232 P **P** **15 01 03.3 -1.0**
LUWI Luwuk 29.75 232 P **P** **15 01 03.6 -0.7**
comp=Z,2µmcomp=Z,188nm,1.0s
LUWI Luwuk 29.75 232 P **P** **15 01 03.7 -0.6**
TOLI2 Tolitoli 29.93 238 P **P** **15 01 05.3 -0.7**
TOLI2 Tolitoli 29.93 238 P **P** **15 01 06.6 +0.7**
APSI Ampana 30.51 233 P **P** **15 01 10.8 -0.2**
comp=Z,755nmcomp=Z,48nm,1.2s
UGL Uglegorsk 30.62 355 *e*P **P** **15 01 13.7 +2.2**
UGL pmax pmax
comp=Z,150nm,0.8s
BNX BinXian 31.09 335 ⇑P **P** **15 01 17.3 +1.6**
BNX pmax pmax
comp=Z,13nm,0.6s
BNX pmax pmax
comp=Z,98nm,3.5s
MPSI Mapaga 31.10 237 P **P** **15 01 16.7 +0.5**
comp=Z,799nmcomp=Z,88nm,0.9s
KKM Kota Kinabalu 31.28 250 P **P** **15 01 17.7 -0.2**
KKM Kota Kinabalu 31.28 250 P **P** **15 01 18.9 +1.0**
SPMM Sapulut 31.66 248 P **P** **15 01 22.0 +0.8**
TYV Tymovskoe 32.36 356 *e*P **P** **15 01 27.9 +1.2**
TYV *e*S **S** **15 06 27.1 +2.4**
TYV pmax pmax
comp=Z,52nm,0.9s
TYV pmax pmax
comp=Z,100nm,2.3s
TYV smax smax
comp=N,20nm,1.9s
TYV smax smax
comp=N,300nm,2.9s
TYV smax smax
comp=E,200nm,2.9s
COEN Coen 32.37 185 P **P** **15 01 26.3 -0.8**
COEN Coen 32.37 185 P **P** **15 01 27.2 0.0**
KLR Kul'dur 32.63 343 P **P** **15 01 29.4 +0.3**
comp=E,21nm,0.6s,baz=144,slow=6.5,SNR=27
KLR pP **pP** **15 02 14.2 +2.0**
comp=E,17nm,0.7s,baz=142,slow=9.6,SNR=3.4
comp=E,21nm,0.6s
KLR Kul'dur 32.63 343*c i*P **P** **15 01 29.4 +0.3**
KLR pmax pmax
comp=Z,22nm,0.8s
HNS HongShan 32.98 311 ⇑P **P** **15 01 34.3 +2.0**
HNS pmax pmax
comp=Z,17nm,0.9s
BBSI Bau Bau 32.99 226 P **P** **15 01 34.2 +1.6**
comp=Z,17nm,0.9s
GRNR Gornyy 33.01 349 *e*P **P** **15 01 33.4 +1.0**
SKR Severo-Kuril's 33.15 12 *e*P **P** **15 01 35.5 +1.9**
SKR *e*S **S** **15 06 34.8 -2.1**
SKR pmax pmax
comp=Z,39nm,0.9s
SKR MLR MLR
comp=Z,100nm,15.0s
BJI Beijing 33.25 316 P **P** **15 01 35.8 +1.2**
BJI pP **pP** **15 02 15.0 -2.0**
BJI sP **sP** **15 02 37.4 -3.7**
BJI pmax pmax
comp=Z,12nm,0.7s
BJI LR LR
comp=Z,39nm,15.3s
BJI LR LR
comp=Z,200nm,14.5s
BJI LR LR
comp=Z,140nm,15.0s
TTSI Tana Toraja 33.28 233 P **P** **15 01 36.4 +1.2**
comp=Z,3µmcomp=Z,436nm,0.8s
GULI GuiLin 33.38 288 ⇑P **P** **15 01 37.3 +1.4**
GULI S **S** **15 06 45.4 +4.3**
GULI pmax pmax
comp=Z,50nm,0.9s
GULI LR LR
comp=Z,140nm,16.3s
GULI LR LR
comp=Z,140nm,15.2s
GULI LR LR
comp=Z,150nm,14.6s
LYN LuoYang 33.54 305⇑ *e*P P 15 01 42.4 +5.2
LYN S **S** **15 06 48.1 +4.8**
LYN SS **SS** **15 09 13.8 +1.2**
LYN pmax pmax
comp=Z,10.0nm,0.4s
LYN pmax pmax
comp=Z,90nm,7.0s
KDU Kakadu 33.63 204 P **P** **15 01 37.8 -0.3**
SMKI Samarinda 33.73 239 P **P** **15 01 41.9 +2.8**
comp=Z,4µmcomp=Z,442nm,1.1s
QIZ Qiongzhong 33.90 277 P **P** **15 01 41.0 +0.5**
QIZ Qiongzhong 33.90 277 P **P** **15 01 41.8 +1.3**
QIZ pP **pP** **15 02 22.5 -0.3**
QIZ S **S** **15 06 50.9 +1.7**
QIZ sS **sS** **15 08 06.5 +1.2**
QIZ pmax pmax
comp=Z,10.0nm,1.3s
QIZ LR LR
comp=Z,300nm,12.7s
QIZ LR LR
comp=Z,180nm,17.5s
QIZ LR LR
comp=Z,310nm,9.6s
SPSI Sidrap Palu 33.92 231 P **P** **15 01 40.8 +0.1**
comp=Z,2µmcomp=Z,226nm,1.0s
MTN Manton Dam 34.31 206 P **P** **15 01 43.4 -0.5**
MTN Manton Dam 34.31 206 P **P** **15 01 43.9 0.0**
BKSI Bulukumba 34.58 229 P **P** **15 01 46.9 +0.5**
comp=Z,1µmcomp=Z,117nm,1.0s
KAPI Kappang 34.64 230 P **P** **15 01 46.9 +0.1**
KAPI Kappang 34.64 230*c i*P **P** **15 01 47.4 +0.6**
KAPI pmax pmax
comp=Z,118nm,0.9s
KAPI Kappang 34.64 230 P **P** **15 01 47.4 +0.6**
KAPI Kappang 34.64 230 P **P** **15 01 47.5 +0.6**
KAPI Kappang 34.64 230 P **P** **15 01 47.5 +0.6**
KAPI pP **pP** **15 02 31.8 +2.5**
KAPI sP **sP** **15 02 55.3 +2.0**
ENH Enshi 34.83 297 P **P** **15 01 48.8 +0.4**
BSSI Bau Bau, Buton 34.89 228 P **P** **15 01 49.5 +0.5**
comp=Z,2µmcomp=Z,226nm,0.9s
XLT XiLinHaoTe 35.45 322 *e*P **P** **15 01 55.6 +2.0**
XLT pP pwP 15 02 40.8 -0.2
XLT sP sP 15 03 01.8 +1.4
XLT pmax pmax
comp=Z,17nm,0.8s
XLT pmax pmax
comp=Z,59nm,3.5s
MMRI Maumere 35.54 223 P **P** **15 01 53.5 -1.0**
MMRI Maumere 35.54 223 P **P** **15 01 53.7 -0.8**
comp=Z,2µmcomp=Z,196nm,1.2s
PEA0B Petropavlovsk- 35.77 12 P **P** **15 01 58.1 +2.1**
PEA0B IAmb IAmb 15 01 59.3
comp=Z,31nm,0.8s
PEA0B Petropavlovsk- 35.77 12*d i*P **P** **15 01 57.7 +1.7**
PETK Petropavlovsk- 35.77 12 P **P** **15 01 57.8 +1.7**
comp=Z,21nm,0.7s,baz=181,slow=7.3,SNR=50
PETK PcP **PcP** **15 04 18.4 -0.5**
comp=Z,7.3nm,0.9s,baz=151,slow=4.6,SNR=4.1
comp=Z,21nm,0.7s
PETK Petropavlovsk- 35.77 12 P **P** **15 01 57.3 +1.3**
PETK Petropavlovsk- 35.77 12 P **P** **15 01 57.3 +1.3**
BATI Baumata 35.87 219 P **P** **15 01 55.5 -1.8**
comp=Z,1µmcomp=Z,142nm,0.9s
PET Petropavlovsk 35.89 13 P **P** **15 01 59.2 +2.2**
PET IAmb IAmb 15 02 00.3
comp=Z,44nm,0.9s
PET Petropavlovsk 35.89 13 *e*P **P** **15 01 59.6 +2.6**
PET *e*S **S** **15 07 22.3 +3.5**
PET pmax pmax
comp=Z,74nm,1.0s
PET MLR MLR
comp=Z,100nm,16.0s
PET Petropavlovsk 35.89 13 P **P** **15 01 59.9 +2.9**
MTKI Muara Teweh, K 35.91 241 P **P** **15 01 58.4 +0.7**
comp=Z,116nm,1.0s
EDFI Ende, Flores 35.98 223 P **P** **15 01 57.2 -1.2**
comp=Z,573nmcomp=Z,30nm,0.7s
XAN Xi'an 36.18 303 ⇑P **P** **15 02 02.3 +2.5**
XAN pP pwP 15 02 45.3 -2.3
XAN pmax pmax
comp=Z,8.0nm,1.0s
XAN pmax pmax
comp=Z,120nm,5.9s
XAN LR LR
comp=Z,460nm,16.8s
XAN LR LR
comp=Z,220nm,18.7s
XAN LR LR
comp=Z,290nm,17.1s
MTSU Mount Surprise 36.45 182 P **P** **15 02 02.2 0.0**
SBUM Sibu 36.45 248 P **P** **15 02 02.9 +0.6**
SBUM Sibu 36.45 248 P **P** **15 02 04.0 +1.7**
GYA Guiyang 36.79 290 ⇓P **P** **15 02 06.8 +1.6**
GYA pP pP 15 02 50.0 +1.9
GYA S **S** **15 07 33.8 +0.3**
GYA sS sS 15 08 48.4 -1.9
GYA pmax pmax
comp=Z,19nm,1.0s
HIA Hailar 37.11 332 P **P** **15 02 06.6 -0.8**
HIA Hailar 37.11 332 P **P** **15 02 06.6 -0.8**
HIA pmax pmax
comp=Z,18nm,0.7s
BBKI Banjar Baru 37.41 237 P **P** **15 02 10.4 0.0**
comp=Z,53nm,1.2s
BASI Baing, Sumba 37.80 223 P **P** **15 02 11.6 -2.0**
comp=Z,2µmcomp=Z,190nm,1.3s
KNRA Kununurra 37.84 207 P **P** **15 02 13.7 -0.2**
KNRA Kununurra 37.84 207 P **P** **15 02 14.2 +0.3**
ZEA Zeya 37.93 342 *e*P **P** **15 02 15.7 +1.5**
ZEA *e* 15 02 58.7
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
WBSI Waikabubak, Su 38.16 225 P **P** **15 02 14.2 -2.4**
comp=Z,2µmcomp=Z,246nm,0.8s
STKI Sintang 38.27 245 P **P** **15 02 17.9 +0.4**
comp=Z,76nm,0.8s
CTA Charters Tower 38.37 179 P **P** **15 02 18.2 -0.1**
comp=Z,23nm,0.7s,baz=8.0,slow=7.3,SNR=29
comp=Z,23nm,0.7s
CTA Charters Tower 38.37 179 P **P** **15 02 18.4 +0.1**
CTAO Charters Tower 38.37 179 P **P** **15 02 17.6 -0.7**
CTAO IAmb IAmb 15 02 19.1
comp=Z,36nm,0.9s
CTAO Charters Tower 38.37 179 P **P** **15 02 17.6 -0.7**
CTAO pmax pmax
comp=Z,36nm,0.9s
CTAO Charters Tower 38.37 179 P **P** **15 02 18.4 +0.1**
CTAO Charters Tower 38.37 179 P **P** **15 02 17.7 -0.7**
UBPT Khong Chiam 38.55 271 P **P** **15 02 20.1 +0.2**
UBPT IAmb IAmb 15 02 22.9
comp=Z,44nm,1.2s
PLAI Plampang 38.68 228 P **P** **15 02 21.2 +0.2**
comp=Z,1µmcomp=Z,156nm,1.2s
PLAI Plampang 38.68 228 P **P** **15 02 20.2 -0.8**
TWSI Taliwang, Sumb 39.25 229 P **P** **15 02 25.3 -0.4**
comp=Z,2µmcomp=Z,281nm,0.9s
QIS Mount Isa 39.29 189 P **P** **15 02 25.9 0.0**
PBKI Pangkalan Bun 39.56 241 P **P** **15 02 29.4 +1.1**
comp=Z,9µmcomp=Z,483nm,1.0s
WB0 Warramunga Arr 39.63 197 P **P** **15 02 28.2 -0.5**
WRAB Tennant Creek 39.80 197 P **P** **15 02 29.5 -0.6**
WRAB Tennant Creek 39.80 197*c i*P **P** **15 02 30.2 +0.1**
WRAB pmax pmax
comp=Z,369nm,1.2s
WRAB Tennant Creek 39.80 197 P **P** **15 02 30.1 0.0**
WRAB Tennant Creek 39.80 197 P **P** **15 02 30.2 +0.1**
CD2 Chengdu 39.81 296 P **P** **15 02 29.3 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
WB2 Warramunga Arr 39.81 197 P **P** **15 02 29.7 -0.4**
WRA Warramunga Arr 39.81 197 P **P** **15 02 30.1 0.0**
comp=Z,153nm,1.0s,baz=16,slow=9.0,SNR=116
WRA PcP **PcP** **15 04 31.4 -0.6**
comp=Z,6.2nm,0.7s,baz=17,slow=3.7,SNR=3.0
WRA Warramunga Arr 39.81 197 P **P** **15 02 30.0 -0.2**
WRA IAmb IAmb 15 02 31.7
comp=Z,42nm,1.1s
WRA Warramunga Arr 39.81 197 *i* P **P** **15 02 28.7 -1.5**
WRA pmax pmax
comp=Z,153nm,1.0s
SRBI Singaraja 40.03 231 P **P** **15 02 33.1 +1.0**
comp=Z,2µmcomp=Z,170nm,0.9s
KMI Kunming 40.27 287 ⇑P **P** **15 02 38.8 +4.5**
KMI pP pwP 15 03 23.0 +0.2
KMI sP sP 15 03 45.4 +3.8
KMI S **S** **15 08 28.1 +2.3**
KMI sS sS 15 09 45.4 +1.9
KMI SS **SS** **15 11 35.0 +1.6**
KMI pmax pmax
comp=Z,16nm,0.9s
KMI pmax pmax
comp=Z,63nm,6.7s
KMI LR LR
comp=Z,310nm,16.1s
KMI LR LR
comp=Z,110nm,20.2s
KMI LR LR
comp=Z,150nm,18.0s
KMMI Kalianget 40.30 234 P **P** **15 02 35.4 +1.1**
comp=Z,177nm,1.2s
DNP Denpasar 40.42 231 P **P** **15 02 35.5 +0.2**
comp=Z,631nm,1.0s
SHEM Shemya Is, Ala 40.70 26 P **P** **15 02 39.4 +2.3**
comp=Z,39nm,0.6s,baz=351,slow=3.2,SNR=7.1
comp=Z,39nm,0.6s
SMY Shemya 40.70 26 P **P** **15 02 38.1 +1.0**
SMY Shemya 40.70 26 P **P** **15 02 38.1 +1.0**
SMY pmax pmax
comp=Z,159nm,1.3s
LZH Lanzhou 40.73 304 ⇓P **P** **15 02 41.0 +3.2**
LZH pP pP 15 03 21.3 -0.2
LZH sS sS 15 09 48.4 -1.7
LZH pmax pmax
comp=Z,36nm,1.4s
LZH pmax pmax
comp=Z,130nm,5.5s
LZH LR LR
comp=Z,380nm,14.1s
LZH LR LR
comp=Z,210nm,14.8s
LZH LR LR
comp=Z,260nm,14.4s
BLJI Banyuglugur 41.02 233 P **P** **15 02 41.4 +1.2**
comp=Z,1µmcomp=Z,158nm,1.4s
JAGI Jajag, Banyuwa 41.07 232 P **P** **15 02 38.6 -2.0**
JAGI Jajag, Banyuwa 41.07 232 P **P** **15 02 39.8 -0.8**
comp=Z,186nm,1.1s
MA2 Magadan 41.17 4 P **P** **15 02 42.8 +2.0**
comp=Z,18nm,0.9s,baz=184,slow=8.7,SNR=12
comp=Z,18nm,0.9s
MA2 Magadan 41.17 4 P **P** **15 02 41.6 +0.8**
MA2 IAmb IAmb 15 03 29.6
comp=Z,110nm,1.7s
MA2 Magadan 41.17 4*d i*P **P** **15 02 42.1 +1.3**
MA2 pmax pmax
comp=Z,23nm,1.0s
MA2 Magadan 41.17 4 P **P** **15 02 42.2 +1.3**
MA2 ScP **ScP** **15 08 03.2 -2.0**
PZH PanZhiHua 41.20 289 P **P** **15 02 43.4 +1.7**
PZH S **S** **15 08 37.8 -1.5**
PZH sS **sS** **15 09 57.0 -0.3**
PZH SS **SS** **15 11 48.6 -2.8**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,100nm,6.7s
FITZ Fitzroy Crossi 41.38 210 P **P** **15 02 43.0 0.0**
FITZ Fitzroy Crossi 41.38 210 P **P** **15 02 43.3 +0.3**
GMJI Gumukmas 41.48 233 P **P** **15 02 44.1 +0.2**
comp=Z,2µmcomp=Z,97nm,0.9s
RK1H Rockhampton Ha 41.92 173 P **P** **15 02 46.6 -0.7**
AMKA Amchitka 42.17 31 P **P** **15 02 51.3 +2.3**
NGJI Ngawi 42.44 236 P **P** **15 02 54.1 +2.4**
comp=Z,126nm,1.4s
PWJI Pagerwojo 42.57 235 P **P** **15 02 52.3 -0.5**
comp=Z,3µmcomp=Z,309nm,0.9s
CRAI Chiangrai 42.67 280 P **P** **15 02 54.4 +0.8**
ULN Ulaanbaatar 42.90 322 P **P** **15 02 55.2 0.0**
ULN Ulaanbaatar 42.90 322*d i*P **P** **15 02 57.0 +1.8**
ULN pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 42.90 322 P **P** **15 02 55.7 +0.5**
ULN Ulaanbaatar 42.90 322 P **P** **15 02 57.2 +2.0**
ULN ScP **ScP** **15 08 10.3 -2.3**
KOUNC Koumac, New Ca 42.90 154 P **P** **15 02 55.9 +0.6**
KOUNC Koumac, New Ca 42.90 154 P **P** **15 02 55.6 +0.3**
SMRI Semarang 43.05 237 P **P** **15 02 55.9 -0.8**
SMRI Semarang 43.05 237 P **P** **15 02 57.7 +1.1**
comp=Z,199nm,1.3s
PCJI Pacitan 43.16 235 P **P** **15 02 57.9 +0.4**
comp=Z,259nm,1.1s
SONM Songino Array 43.27 322 P **P** **15 02 58.5 +0.4**
comp=Z,5.5nm,0.5s,baz=136,slow=9.0,SNR=29
SONM pP **pP** **15 03 43.7 +1.2**
comp=Z,2.9nm,0.7s,baz=124,slow=8.4,SNR=1.7
SONM ScP **ScP** **15 08 10.8 -3.4**
comp=Z,2.4nm,1.0s,baz=121,slow=3.5,SNR=4.1
comp=Z,5.5nm,0.5s
SONM Songino Array 43.27 322 P **P** **15 02 57.6 -0.5**
SONM Songino Array 43.27 322 P **P** **15 02 57.6 -0.5**
SONM pmax pmax
comp=Z,7.0nm,0.6s
AS31 Alice Springs 43.47 196 P **P** **15 02 59.3 -0.6**
ASAR Alice Springs 43.48 196 P **P** **15 02 59.6 -0.2**
comp=Z,25nm,0.7s,baz=16,slow=7.0,SNR=167
ASAR PcP **PcP** **15 04 43.0 -1.1**
comp=Z,6.6nm,0.8s,baz=23,slow=4.5,SNR=4.8
ASAR ScP **ScP** **15 08 12.6 -2.5**
comp=Z,2.0nm,0.7s,baz=18,slow=3.4,SNR=4.9
comp=Z,25nm,0.7s
ASAR Alice Springs 43.48 196 P **P** **15 02 59.2 -0.7**
ASAR Alice Springs 43.48 196 P **P** **15 02 59.2 -0.7**
UGM Wanagama 43.50 236 P **P** **15 02 59.1 -1.1**
UGM Wanagama 43.50 236 P **P** **15 03 00.6 +0.3**
comp=Z,367nm,1.1s
UGM Wanagama 43.50 236 P **P** **15 03 00.4 +0.1**
EIDS Eidsvold 43.94 173 P **P** **15 03 02.6 -0.9**
EIDS Eidsvold 43.94 173 P **P** **15 03 02.9 -0.6**
TPRI Tanjung Pinang 43.99 251 P **P** **15 03 06.2 +2.0**
comp=Z,137nm,0.8s
PPBI Pangkal Pinang 44.00 246 P **P** **15 03 04.0 -0.2**
comp=Z,33nm,0.9s
CHTO Chiang Mai 44.17 278 P **P** **15 03 04.8 -0.8**
CHTO Chiang Mai 44.17 278 P **P** **15 03 04.8 -0.8**
CHTO pmax pmax
comp=Z,30nm,1.6s
CHTO Chiang Mai 44.17 278 P **P** **15 03 06.8 +1.2**
CHTO Chiang Mai 44.17 278 P **P** **15 03 06.3 +0.7**
CHTO pP **pP** **15 03 47.0 -2.8**
CHTO sP **sP** **15 04 12.6 -0.7**
CMAR Chiang Mai Arr 44.22 278 P **P** **15 03 06.6 +0.6**
comp=Z,9.3nm,0.7s,baz=68,slow=7.2,SNR=48
CMAR ScP **ScP** **15 08 16.9 -1.5**
comp=Z,0.4nm,0.4s,baz=162,slow=0.9,SNR=4.1
comp=Z,9.3nm,0.7s
CMAR Chiang Mai Arr 44.22 278 P **P** **15 03 06.2 +0.3**
CMAR Chiang Mai Arr 44.22 278 *i* P **P** **15 03 06.5 +0.6**
CMAR pmax pmax
comp=Z,10.0nm,0.7s
CM31 Chiang Mai Arr 44.22 278 P **P** **15 03 05.7 -0.3**
CM31 IAmb IAmb 15 03 08.8
comp=Z,105nm,1.9s
KIWB Kanaga Island 44.23 33 P **P** **15 03 07.2 +1.8**
MYKOM Kota Tinggi 44.23 253 P **P** **15 03 07.3 +1.2**
MYKOM Kota Tinggi 44.23 253 P **P** **15 03 08.0 +1.9**
ADK Adak 44.48 33 P **P** **15 03 09.5 +2.0**
ADK IAmb IAmb 15 03 11.1
comp=Z,100nm,0.9s
ADK Adak 44.48 33 P **P** **15 03 09.5 +2.0**
ADK pmax pmax
comp=Z,101nm,1.0s
ADK Adak 44.48 33 P **P** **15 03 10.0 +2.5**
ADK Adak 44.48 33 P **P** **15 03 09.9 +2.4**
ADK pP **pP** **15 03 47.6 -4.2**
ADK sP **sP** **15 04 13.9 -1.4**
DSRI Dabo 44.57 249 P **P** **15 03 09.4 +0.7**
comp=Z,4µmcomp=Z,53nm,1.6s
SEY Seymchan 44.62 4 P **P** **15 03 10.2 +1.8**
comp=Z,9.7nm,0.7s,baz=182,slow=6.0,SNR=15
comp=Z,9.7nm,0.7s
SEY Seymchan 44.62 4*de*P **P** **15 03 10.2 +1.8**
SEY pmax pmax
comp=Z,15nm,1.0s
GTA Gaotai 44.64 308 *e*P **P** **15 03 10.3 +1.2**
GTA pP pP 15 03 54.1 +0.6
GTA sP sP 15 04 21.4 +4.5
GTA PcP **PcP** **15 04 48.8 +0.8**
GTA ScP **ScP** **15 08 19.4 -0.6**
GTA S **S** **15 09 27.9 -1.2**
GTA ScS **ScS** **15 12 43.1 -1.0**
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA pmax pmax
comp=Z,98nm,6.2s
GTA LR LR
comp=Z,350nm,19.6s
GTA LR LR
comp=Z,150nm,21.8s
GTA LR LR
comp=Z,110nm,18.5s
JRMM Jerantut 44.65 256 P **P** **15 03 12.0 +2.6**
RMQ Roma 44.84 176 P **P** **15 03 10.1 -0.5**
QLP Quilpie 44.85 182 P **P** **15 03 09.4 -1.3**
YAK Yakutsk 44.89 349 P **P** **15 03 10.4 -0.1**
comp=Z,30nm,0.7s,baz=145,slow=0.9,SNR=28
YAK pP **pP** **15 03 55.6 +0.2**
comp=Z,13nm,0.7s,baz=114,slow=2.9,SNR=2.8
YAK ScP **ScP** **15 08 16.6 -3.6**
comp=Z,1.9nm,0.4s,baz=180,slow=3.1,SNR=4.2
comp=Z,30nm,0.7s
YAK Yakutsk 44.89 349 P **P** **15 03 09.9 -0.6**
YAK IAmb IAmb 15 03 12.8
comp=Z,50nm,0.8s
YAK Yakutsk 44.89 349 *e*P **P** **15 03 10.1 -0.4**
YAK *e**PP **pP** **15 03 54.8 -0.7**
YAK *e*S **S** **15 09 28.3 -3.4**
YAK *e* 15 12 39.8
YAK *e*SS **SS** **15 12 56.3 -0.9**
YAK pmax pmax
comp=Z,61nm,0.9s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=N,14nm,1.1s
YAK smax smax
comp=N,36nm,2.0s
YAK smax smax
comp=E,25nm,1.9s
YAK Yakutsk 44.89 349 P **P** **15 03 10.5 0.0**
YAK pP **pP** **15 03 54.8 -0.7**
YAK ScP **ScP** **15 08 16.0 -4.2**
GSTR Great Sitkin T 44.92 33 P **P** **15 03 12.3 +1.3**
NOUC Port Laguerre 45.13 153 P **P** **15 03 14.1 +1.1**
NOUC Port Laguerre 45.13 153 P **P** **15 03 13.6 +0.6**
DZM Mont Dzumac 45.17 152 *e*P **P** **15 03 13.0 -0.4**
comp=E,416nm,1.1s
DZM Mont Dzumac 45.17 152 *e*LR LR 15 16 12.0
comp=E,132nm,26.9s
DZM Mont Dzumac 45.17 152 P **P** **15 03 13.9 +0.5**
DZM Mont Dzumac 45.17 152 P **P** **15 03 14.6 +1.2**
DZM Mont Dzumac 45.17 152 P **P** **15 03 14.3 +1.0**
LEM Lembang 45.20 240 P **P** **15 03 14.1 +0.2**
comp=E,98nm,0.8s,baz=322,slow=23,SNR=23
comp=E,98nm,0.8s
LEM Lembang 45.20 240 P **P** **15 03 14.2 +0.3**
comp=E,85nm,0.8s
YATNC Mamie plateau, 45.36 152 P **P** **15 03 16.7 +2.0**
ONTNC Ouen Toro 45.38 153 P **P** **15 03 15.3 +0.4**
ONTNC Ouen Toro 45.38 153 P **P** **15 03 15.9 +1.0**
MARNC Mare, Loyalty 45.38 150 P **P** **15 03 15.3 +0.3**
OUENC Ouen Island, N 45.65 152 P **P** **15 03 17.4 +0.4**
OUENC Ouen Island, N 45.65 152 P **P** **15 03 18.3 +1.3**
IPM Ipoh 45.77 258 P **P** **15 03 19.1 +0.9**
IPM Ipoh 45.77 258 P **P** **15 03 20.0 +1.7**
IPM Ipoh 45.77 258 P **P** **15 03 19.9 +1.7**
KULM Kulim 45.84 259 P **P** **15 03 20.0 +1.3**
KULM Kulim 45.84 259 P **P** **15 03 21.0 +2.3**
JMBI JAMBI 45.93 249 P **P** **15 03 22.0 +2.6**
comp=E,177nm,1.4s
ATKA Atka Island 45.95 33 P **P** **15 03 21.2 +2.2**
PINNC Pines Island, 46.09 152 P **P** **15 03 21.3 +0.8**
PINNC IAmb IAmb 15 03 26.3
comp=Z,110nm,0.9s
PINNC Pines Island, 46.09 152 P **P** **15 03 21.7 +1.3**
INKA Innaminka 46.23 186 P **P** **15 03 20.8 -0.7**
ZAK Zakamensk 46.28 323 *e*P **P** **15 03 21.2 -0.6**
ZAK *e* 15 04 05.4
ZAK pmax pmax
comp=Z,7.0nm,1.0s
ZAK pmax pmax
comp=Z,9.0nm,1.2s
BLSI Bandar Lampung 46.39 243 P **P** **15 03 23.3 +0.3**
comp=Z,4µmcomp=Z,516nm,1.0s
WRKA Warakurna 46.48 202 P **P** **15 03 23.8 +0.2**

MBWA Marble Bar 46.91 214 P **P** 15 03 26.8 -0.1
MBWA IAmb IAmb 15 03 28.1
comp=Z,67nm,0.8s
MBWA Marble Bar 46.91 214 P **P** 15 03 27.0 +0.1
MBWA Marble Bar 46.91 214 P **P** 15 03 27.2 +0.3
MBWA Marble Bar 46.91 214 P **P** 15 03 27.0 +0.1
OOD Oodnadatta 47.05 192 P **P** 15 03 27.7 -0.1
KASI Kota Agung 47.10 243 P **P** 15 03 27.5 -1.0
comp=Z,220nm,1.0s
PSA00 Pilbara Seismi 47.19 214 P **P** 15 03 29.1 0.0
PSA00 IAmb IAmb 15 03 30.5
comp=Z,122nm,1.1s
PSA00 Pilbara Seismi 47.19 214 P **P** 15 03 29.0 0.0
PSA00 IAmb IAmb 15 03 30.4
comp=Z,64nm,1.1s
PSA00 Pilbara Seismi 47.19 214 P **P** 15 03 29.2 +0.2
LWLI Liwa 47.22 244 P **P** 15 03 29.8 +0.3
comp=Z,4µmcomp=Z,194nm,0.8s
BKNI Bangkinang 47.39 253 P **P** 15 03 30.2 -0.6
BKNI IAmb IAmb 15 03 33.1
comp=Z,110nm,0.9s
BKNI Bangkinang 47.39 253 P **P** 15 03 31.9 +1.1
comp=Z,1µmcomp=Z,134nm,0.8s
KSI Kapahiang 47.81 247 P **P** 15 03 33.6 -0.4
comp=Z,304nm,0.9s
MNAI Manna 47.84 246 P **P** 15 03 33.0 -1.2
MASI Maura Aman, Be 47.87 248 P **P** 15 03 34.7 +0.2
comp=Z,385µmcomp=Z,7µmcomp=Z,393nm,1.2s
GOMU GeErMu 47.93 302 P **P** 15 03 38.0 +2.9
GOMU PcP **PcP** 15 05 01.0 +1.0
GOMU pmax pmax
comp=Z,27nm,0.9s
GOMU pmax pmax
comp=Z,65nm,4.6s
MSVF Nonsavu 48.07 137 P **P** 15 03 37.0 +1.1
MSVF IAmb IAmb 15 03 39.1
comp=Z,98nm,1.4s
MSVF Nonsavu 48.07 137 P **P** 15 03 37.0 +1.1
MSVF pmax pmax
comp=Z,98nm,1.5s
MSVF Nonsavu 48.07 137 P **P** 15 03 38.2 +2.3
MSVF Nonsavu 48.07 137 P **P** 15 03 36.9 +0.9
MSVF pP **pP** 15 04 18.1 -3.0
KRJI Kerinci 48.07 250 P **P** 15 03 36.7 +0.6
comp=Z,507nm,0.9s
PSI Prapat 48.34 257 P **P** 15 03 39.2 +1.0
comp=Z,106nm,0.9s,baz=59,slow=3.1,SNR=65
comp=Z,106nm,0.9s
PSI Prapat 48.34 257 P **P** 15 03 38.8 +0.6
PSI pmax pmax
comp=Z,137nm,1.0s
PSI Prapat 48.34 257 P **P** 15 03 40.1 +1.9
RPSI Rantau Prapat 48.38 257 P **P** 15 03 38.8 +0.4
XMIS Christmas Isla 48.88 237 P **P** 15 03 40.7 -1.4
ARMA Armidale 48.99 173 P **P** 15 03 42.0 -0.8
ARMA Armidale 48.99 173 P **P** 15 03 42.7 -0.1
KCSI Kotacane, Aceh 49.14 258 P **P** 15 03 44.7 +0.5
comp=Z,74nm,1.1s
NIKH Nikolski High 49.16 35 P **P** 15 03 45.2 +1.5
NIKH Nikolski High 49.16 35 P **P** 15 03 45.0 +1.3
baz=243
LCRK Leigh Creek 49.21 189 P **P** 15 03 44.1 -0.2
KNGR Kungurtug, Tuv 49.71 322⇓ *eP* **P** 15 03 49.2 +1.1
KNGR pmax pmax
comp=Z,6.0nm,1.3s
CMSA Cobar Meteorol 49.77 180 P **P** 15 03 48.2 -0.3
MULG Mulgathing 49.79 193 P **P** 15 03 48.6 -0.1
SISI Saibi 49.86 252 P **P** 15 03 49.3 -0.2
comp=Z,163nm,0.7s
GSI Gunungsitoli 50.16 256 P **P** 15 03 51.2 -0.6
GSI Gunungsitoli 50.16 256 P **P** 15 03 52.5 +0.7
comp=Z,4µmcomp=Z,460nm,0.9s
GSI Gunungsitoli 50.16 256 P **P** 15 03 52.8 +1.0
STKA Stephens Creek 50.26 185 P **P** 15 03 51.6 -0.5
comp=Z,25nm,0.9s,baz=349,slow=8.8,SNR=33
comp=Z,25nm,0.9s
STKA Stephens Creek 50.26 185 P **P** 15 03 51.3 -1.0
STKA Stephens Creek 50.26 185⇑ *iP* **P** 15 03 51.2 -1.0
STKA Stephens Creek 50.26 185 P **P** 15 03 51.7 -0.5
SPIA Saint Paul Isl 50.50 29 P **P** 15 03 55.7 +2.0
LSA Lhasa 50.60 294 P **P** 15 03 58.2 +2.8
UNV Unalaska Valle 50.81 35 P **P** 15 03 57.4 +1.3
UNV IAmb IAmb 15 03 59.1
comp=Z,88nm,0.9s
UNV Unalaska Valle 50.81 35 P **P** 15 03 57.5 +1.5
baz=245,SNR=5.5
GIRL Giralia 51.17 218 P **P** 15 04 00.3 +1.2
GIRL Giralia 51.17 218 P **P** 15 04 00.5 +1.4
comp=Z,109nm,0.8s
BILL Bilibino 51.20 10 P **P** 15 04 00.7 +2.0
BILL IAmb IAmb 15 04 03.4
comp=Z,46nm,1.0s
BILL Bilibino 51.20 10 *c iP* **P** 15 04 00.2 +1.5
BILL *e**PP **pwP** 15 04 46.8 -1.2
BILL *e**SP **PcP** 15 05 10.4 -0.5
BILL *e* 15 05 55.8
BILL *e*PPP PPP 15 07 06.1
BILL pmax pmax
comp=Z,45nm,1.0s
BILL Bilibino 51.20 10 P **P** 15 04 00.7 +2.0
BILL pP **pP** 15 04 45.1 +0.2
AKUT Akutan 51.33 34 P **P** 15 04 01.6 +1.8
FORT Forrest 51.86 199 P **P** 15 04 04.0 -0.1
FORT Forrest 51.86 199 P **P** 15 04 04.7 +0.6
BBOO Buckleboo 51.86 190 P **P** 15 04 03.3 -0.8
BBOO IAmb IAmb 15 04 09.1
comp=Z,60nm,0.8s
BBOO Buckleboo 51.86 190 P **P** 15 04 04.1 0.0
MEEK Meekatharra 52.01 211 P **P** 15 04 05.4 +0.1
HTT Hallett 52.06 187 P **P** 15 04 05.8 +0.2
KIP Kipapa 52.77 77 P **P** 15 04 10.7 -0.3
KIP Kipapa 52.77 77 P **P** 15 04 10.7 -0.3
KIP pmax pmax
comp=Z,265nm,1.7s
AFI Afiamalu 52.89 125 P **P** 15 04 12.9 +0.9
AFI Afiamalu 52.89 125 P **P** 15 04 12.9 +0.9
AFI pmax pmax
comp=Z,143nm,1.5s
CAN Canberra 53.64 177 P **P** 15 04 17.9 +0.8
CAN Canberra 53.64 177 P **P** 15 04 17.3 +0.2
CNB Canberra Magne 53.65 176 P **P** 15 04 17.8 +0.6
ODAN Odare 54.02 290 *eP* **P** 15 04 22.1 +1.7
WMQ Urumqi 54.41 311 *eP* **P** 15 04 25.9 +3.2
WMQ pP pP 15 05 11.3 +2.3
WMQ pmax pmax
comp=Z,33nm,1.1s
HLK Haleakala 54.49 77 P **P** 15 04 24.2 +0.3
SDPT Sand Point 54.63 34 P **P** 15 04 25.5 +1.6
SDPT Sand Point 54.63 34 P **P** 15 04 25.4 +1.5
baz=250
CHNA Chernabura Isl 54.94 35 P **P** 15 04 28.0 +1.9
baz=251
KHLU Kahalu`u 55.00 79 P **P** 15 04 29.2 +1.8
JIRN Jiri 55.03 291 *eP* **P** 15 04 28.7 +0.9
comp=Z,62nm,0.9s
ARPS Mount Arapiles 55.11 184 P **P** 15 04 27.7 +0.1
GUN Gumba 55.29 291 *eP* **P** 15 04 30.8 +1.2
MORW Morawa 55.29 212 P **P** 15 04 28.9 -0.2
MORW IAmb IAmb 15 04 29.5
comp=Z,40nm,0.8s
MORW Morawa 55.29 212 P **P** 15 04 29.2 +0.1
KHU Kahuku 55.31 79 P **P** 15 04 31.4 +1.7
KHU Kahuku 55.31 79 P **P** 15 04 31.5 +1.7
KHU pmax pmax
comp=Z,95nm,1.0s
S14K Fog Glacier 55.44 34 P **P** 15 04 31.4 +1.6
baz=250
PKI Pulchoki 55.73 291 *eP* **P** 15 04 34.0 +1.3
comp=Z,29nm,0.9s
PKIN Phulchoki 55.74 291 *eP* **P** 15 04 33.6 +0.9
TOO Toolangi 55.79 180 P **P** 15 04 32.4 -0.1
TOO IAmb IAmb 15 04 33.8
comp=Z,29nm,0.8s
TOO Toolangi 55.79 180 P **P** 15 04 32.4 -0.1
TOO pmax pmax
comp=Z,29nm,0.9s
TOO Toolangi 55.79 180 P **P** 15 04 33.3 +0.8
KKN Kakani 55.83 291 *eP* **P** 15 04 34.8 +1.5
TNA Tin City 55.99 21 P **P** 15 04 35.8 +2.4
baz=236
DMN Daman 55.99 291 *eP* **P** 15 04 35.9 +1.4
CHGN Chignik 56.04 34 P **P** 15 04 35.3 +1.4
CHGN IAmb IAmb 15 04 36.3
comp=Z,72nm,1.1s

CHGN Chignik 56.04 34 P **P** 15 04 35.4 +1.4
baz=251
BLDU Ballidu 56.24 210 P **P** 15 04 35.9 +0.1
ANM Nome 56.37 23 P **P** 15 04 38.3 +2.1
ANM Nome 56.37 23 P **P** 15 04 38.3 +2.1
ANM pmax pmax
comp=Z,164nm,1.8s
ANM Nome 56.37 23 P **P** 15 04 38.3 +2.1
baz=239
GKN Gorkha 56.38 292 *eP* **P** 15 04 38.2 +1.1
comp=Z,46nm,0.8s
KLBR Kellerberrin 56.57 209 P **P** 15 04 38.7 +0.6
ZSN Zaisan 56.91 315 *eP* **P** 15 04 40.1 -0.2
ZSN Zaisan 56.91 315 *eP* **P** 15 04 40.2 -0.2
baz=315
DANN Dangsing 57.12 292 *eP* **P** 15 04 44.1 +1.6
P16K Nushagak River 57.16 31 P **P** 15 04 43.9 +2.1
baz=250
N16K Nishlik Lake 57.31 29 P **P** 15 04 45.1 +2.1
baz=248,SNR=7.6
O16K Kokwok River B 57.31 30 P **P** 15 04 44.4 +1.5
baz=250,SNR=6.8
CHIR Chirikof Islan 57.40 35 P **P** 15 04 46.0 +2.4
CHIR Chirikof Islan 57.40 35 P **P** 15 04 45.7 +2.2
baz=254
MUN Mundaring 57.61 210 P **P** 15 04 45.3 0.0
O17K Koliganek Bris 57.85 30 P **P** 15 04 48.1 +1.5
baz=250,SNR=12
NWAO Narrogin (SRO) 57.94 208 P **P** 15 04 47.5 0.0
NWAO Narrogin (SRO) 57.94 208 P **P** 15 04 48.1 +0.5
NWAO Narrogin (SRO) 57.94 208 P **P** 15 04 47.3 -0.3
NWAO pP **PcP** 15 05 37.8 +0.5
NWAO sP **sP** 15 06 00.8 +3.6
ZAA0 Zalesovo Array 58.14 323 P **P** 15 04 47.4 -1.4
ZALV Zalesovo Beam 58.14 323 P **P** 15 04 47.9 -0.9
comp=Z,12nm,0.7s,baz=100,slow=5.8,SNR=32
ZALV pP **pP** 15 05 36.1 +0.3
comp=Z,5.2nm,0.6s,baz=107,slow=7.8,SNR=3.2
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 58.14 323 P **P** 15 04 47.3 -1.5
SII Sitkinak Islan 58.37 34 P **P** 15 04 50.6 +0.3
SII Sitkinak Islan 58.37 34 P **P** 15 04 51.5 +1.2
baz=255
MK31 Makanchi Array 58.57 314 P **P** 15 04 51.5 -0.5
MK31 Makanchi Array 58.57 314 *c iP* **P** 15 04 51.1 -0.8
MKAR Makanchi Array 58.57 314 P **P** 15 04 51.9 0.0
comp=Z,4.9nm,0.5s,baz=89,slow=8.2,SNR=42
MKAR pP **pP** 15 05 38.9 0.0
comp=Z,3.5nm,0.7s,baz=81,slow=7.6,SNR=2.9
comp=Z,4.9nm,0.5s
MKAR Makanchi Array 58.57 314 P **P** 15 04 51.5 -0.5
MKAR Makanchi Array 58.57 314 P **P** 15 04 51.5 -0.5
P18K Big Mountain, 58.62 31 P **P** 15 04 53.2 +1.1
baz=252
N18K Kilae Creek 58.71 29 P **P** 15 04 54.5 +1.9
N18K IAmb IAmb 15 04 56.2
comp=Z,39nm,1.4s
N18K Kilae Creek 58.71 29 P **P** 15 04 54.4 +1.7
baz=251
O18K Koktuh Hills 58.78 30 P **P** 15 04 55.3 +2.2
O18K IAmb IAmb 15 04 57.1
comp=Z,84nm,1.6s
O18K Koktuh Hills 58.78 30 P **P** 15 04 54.6 +1.5
baz=252,SNR=7.2
MAKZ Makanchi 58.79 314 P **P** 15 04 53.2 -0.2
MAKZ Makanchi 58.79 314 P **P** 15 04 53.2 -0.2
MAKZ pmax pmax
comp=Z,22nm,1.0s
MAKZ Makanchi 58.79 314 P **P** 15 04 53.4 0.0
MAKZ pP **pP** 15 05 40.1 -0.4
MAKZ pwP **pwP** 15 05 46.8 +1.5
SVW2 Sparrevohn 58.99 29 P **P** 15 04 56.4 +1.8
OHAK Old Harbor 59.01 34 P **P** 15 04 55.0 +0.3
OHAK IAmb IAmb 15 04 57.8
comp=Z,41nm,1.0s
OHAK Old Harbor 59.01 34 P **P** 15 04 56.5 +1.8
baz=256,SNR=5.9
Q19K Cape Douglas, 59.27 32 P **P** 15 04 56.6 +0.1
Q19K IAmb IAmb 15 06 01.8
comp=Z,67nm,1.2s
O19K Port Alsworth 59.30 30 P **P** 15 04 58.4 +1.8
baz=253
N19K Bonanza Creek 59.41 29 P **P** 15 04 58.5 +1.0
N19K IAmb IAmb 15 05 03.7
comp=Z,36nm,1.1s
N19K Bonanza Creek 59.41 29 P **P** 15 04 59.2 +1.7
baz=252,SNR=12
KDAK Kodiak Island 59.52 33 P **P** 15 04 58.9 +0.8
KDAK IAmb IAmb 15 05 03.8
comp=Z,23nm,0.8s
KDAK Kodiak Island 59.52 33 P **P** 15 04 58.9 +0.8
KDAK pmax pmax
comp=Z,23nm,0.9s
KDAK Kodiak Island 59.52 33 P **P** 15 04 59.8 +1.7
baz=256
KDAK Kodiak Island 59.52 33 P **P** 15 04 59.5 +1.3
KDAK pP **PcP** 15 05 44.1 +0.8
OUZ Omahuta 59.66 154 P **P** 15 05 01.3 +2.0
L19K White Mountain 59.67 28 P **P** 15 04 58.5 -0.6
L19K White Mountain 59.67 28 P **P** 15 05 01.1 +1.9
baz=251
P19K Oil Pt 59.67 31 P **P** 15 04 59.6 +0.3
P19K IAmb IAmb 15 06 52.6
comp=Z,70nm,1.1s
P19K Oil Pt 59.67 31 P **P** 15 05 00.6 +1.4
baz=254
M19K Big River Lodg 59.79 28 P **P** 15 05 01.7 +1.7
baz=252
Q20K Shuyak Island 59.82 32 P **P** 15 05 01.6 +1.4
baz=256
RSO Redoubt South 60.13 30 P **P** 15 05 02.2 -0.3
L20K Farewell, AK 60.20 28 P **P** 15 05 03.9 +1.2
baz=252
SHLS Shalkode 60.32 310 *eP* **P** 15 05 01.8 -2.2
SHLS *eS* **S** 15 12 57.6 -3.9
SHLS Shalkode 60.32 310 *eP* **P** 15 05 01.9 -2.2
baz=310
SHLS *eS* **S** 15 12 57.7 -3.9
baz=310
SEM Semipalatinsk 60.32 318 *eP* **P** 15 05 03.9 -0.2
SEM Semipalatinsk 60.32 318 *eP* **P** 15 05 03.9 -0.2
baz=318
M20K Styx River 60.35 29 P **P** 15 05 03.8 -0.1
M20K Styx River 60.35 29 P **P** 15 05 06.1 +2.2
baz=253,SNR=6.7
K20K Telida 60.39 27 P **P** 15 05 06.3 +2.3
baz=251,SNR=10
CNPM China Poot 60.62 31 P **P** 15 05 06.9 +1.2
CNPM IAmb IAmb 15 05 09.0
comp=Z,42nm,1.1s
J20K Nowinta River 60.63 26 P **P** 15 05 07.0 +1.4
J20K Nowinta River 60.63 26 P **P** 15 05 08.2 +2.6
baz=251,SNR=15
UZB Uzunbulak 60.64 310 *eP* **P** 15 05 05.7 -0.5
UZB *eS* **S** 15 13 06.1 +0.4
UZB Uzunbulak 60.64 310 *eP* **P** 15 05 05.8 -0.5
baz=310
UZB *eS* **S** 15 13 06.2 +0.4
baz=310
BRLK Bradley Lake 60.85 31 P **P** 15 05 08.0 +0.8
BRLK IAmb IAmb 15 05 59.5
comp=Z,95nm,1.7s
KPKS Kokpek 60.89 310 *eP* **P** 15 05 07.6 -0.3
KPKS Kokpek 60.89 310 *eP* **P** 15 05 07.6 -0.3
baz=310
BRSE Bradley Lake S 60.92 31 P **P** 15 05 09.1 +1.4
baz=256
PPLA Purkeypile 61.07 28 P **P** 15 05 09.9 +1.2
PPLA Purkeypile 61.07 28 P **P** 15 05 10.6 +1.8
baz=254
SATY Satty 61.09 309 *eP* **P** 15 05 09.6 +0.4
SATY Satty 61.09 309 *eP* **P** 15 05 09.7 +0.4
baz=310
SKT Skwentna 61.11 29 P **P** 15 05 10.0 +1.2
baz=255
TAU Tasmania Unive 61.14 179 P **P** 15 05 08.8 -0.4
TAU Tasmania Unive 61.14 179 P **P** 15 05 08.8 -0.4
TAU pmax pmax
comp=Z,200nm,1.9s
TAU Tasmania Unive 61.14 179 P **P** 15 05 09.3 +0.1
TDK Taldyqorghan 61.14 312 *eP* **P** 15 05 09.2 -0.2
TDK *eS* **S** 15 13 12.0 +0.3
TDK pmax pmax
comp=Z,18nm,1.1s
TDK Taldyqorghan 61.14 312 *eP* **P** 15 05 09.3 -0.2
comp=Z,18nm,1.1s,baz=312
TDK *eS* **S** 15 13 12.1 +0.3
baz=312
CAST Castle Rocks 61.26 27 P **P** 15 05 10.8 +0.9
CAST IAmb IAmb 15 05 15.4
comp=Z,28nm,0.8s
CAST Castle Rocks 61.26 27 P **P** 15 05 11.9 +2.0
baz=253,SNR=10
CHUM Lake Minchumin 61.30 26 P **P** 15 05 12.2 +2.1
baz=253
SUA Susitna One 61.33 29 P **P** 15 05 12.7 +2.2
baz=256
IMAR Indian Mountai 61.39 24 P **P** 15 05 11.7 +1.0
KURK Kurchatov 61.39 318 P **P** 15 05 09.3 -1.6
KURK IAmb IAmb 15 06 05.5
comp=Z,41nm,1.1s
KURK Kurchatov 61.39 318⇓ *eP* **P** 15 05 10.3 -0.6
KURK pmax pmax
comp=Z,27nm,1.7s
KURK Kurchatov 61.39 318 P **P** 15 05 10.8 -0.1
KURK Kurchatov 61.39 318 P **P** 15 05 11.9 +0.9
KURK pP **pP** 15 05 57.6 -0.8
KURK sP **sP** 15 06 18.7 -2.5
O22K Cooper Landing 61.59 31 P **P** 15 05 11.0 -1.0
O22K Cooper Landing 61.59 31 P **P** 15 05 13.4 +1.3
baz=257,SNR=9.2
SEW Seward 61.63 31 P **P** 15 05 11.7 -0.7
SEW IAmb IAmb 15 05 19.9
comp=Z,24nm,0.9s
SEW Seward 61.63 31 P **P** 15 05 13.7 +1.4
baz=258
H21K Melozitna Rive 61.65 24 P **P** 15 05 13.9 +1.5
H21K IAmb IAmb 15 05 17.7
comp=Z,28nm,1.1s
H21K Melozitna Rive 61.65 24 P **P** 15 05 14.4 +1.9
baz=251,SNR=22
G21K Allakaket 61.66 23 P **P** 15 05 14.5 +2.0
baz=250,SNR=16
M22K Willow 61.70 29 P **P** 15 05 13.8 +1.0
M22K Willow 61.70 29 P **P** 15 05 13.8 +1.0
baz=256
RC01 Rabbit Creek A 61.72 30 P **P** 15 05 14.0 +1.0
RC01 IAmb IAmb 15 05 18.5
comp=Z,48nm,1.2s
RC01 Rabbit Creek A 61.72 30 P **P** 15 05 13.7 +0.8
baz=257
NRIK Noril'sk 61.77 340 P **P** 15 05 12.6 -0.6
comp=Z,30nm,0.6s,baz=112,slow=8.2,SNR=47
comp=Z,30nm,0.6s
NRIK Noril'sk 61.77 340 P **P** 15 05 12.3 -0.8
NRIK IAmb IAmb 15 05 15.3
comp=Z,34nm,0.7s
NRIK Noril'sk 61.77 340 *c iP* **P** 15 05 12.6 -0.6
NRIK pmax pmax
comp=Z,37nm,0.8s
CUT Chulitna 61.79 28 P **P** 15 05 14.5 +1.1
CUT IAmb IAmb 15 05 16.9
comp=Z,33nm,1.1s
CUT Chulitna 61.79 28 P **P** 15 05 15.0 +1.6
baz=256
KTH Kantishna Hill 61.80 27 P **P** 15 05 14.7 +1.1
KTH IAmb IAmb 15 05 18.7
comp=Z,35nm,1.0s
I21K Tanana 61.83 25 P **P** 15 05 15.4 +1.8
I21K IAmb IAmb 15 05 20.3
comp=Z,24nm,0.9s
I21K Tanana 61.83 25 P **P** 15 05 15.9 +2.3
baz=252,SNR=18
F21K Alatna River 61.91 23 P **P** 15 05 16.0 +1.8
baz=250,SNR=12
BPAW Bear Paw Mtn. 61.92 26 P **P** 15 05 15.5 +1.2
BPAW IAmb IAmb 15 05 19.2
comp=Z,38nm,1.0s
BPAW Bear Paw Mtn. 61.92 26 P **P** 15 05 16.0 +1.7
baz=254,SNR=17
TRF Thorofare Moun 62.05 27 P **P** 15 05 15.7 +0.4
TRF IAmb IAmb 15 05 24.3
comp=Z,26nm,0.9s
TRF Thorofare Moun 62.05 27 P **P** 15 05 16.3 +1.0
baz=255,SNR=6.1
MDOK Medeo 62.08 310 *eP* **P** 15 05 16.0 +0.1
MDOK *eS* **S** 15 13 24.3 +0.4
MDOK Medeo 62.08 310 *eP* **P** 15 05 16.0 +0.1
baz=310
MDOK *eS* **S** 15 13 24.4 +0.4
baz=310
PMR Palmer 62.12 29 P **P** 15 05 15.9 +0.3
PMR IAmb IAmb 15 05 19.7
comp=Z,26nm,1.2s
PMR Palmer 62.12 29 P **P** 15 05 15.9 +0.3
PMR pmax pmax
comp=Z,26nm,1.2s
PMR Palmer 62.12 29 P **P** 15 05 16.5 +0.9
baz=257
AAA Alma-Ata 62.18 310 *eP* **P** 15 05 17.1 +0.6
AAA pmax pmax
comp=Z,20nm,0.8s
AAA Alma-Ata 62.18 310 *eP* **P** 15 05 17.1 +0.6
comp=Z,20nm,0.8s,baz=310
GHO Glory Hole Cre 62.25 29 P **P** 15 05 17.4 +0.8
GHO IAmb IAmb 15 05 20.9
comp=Z,22nm,0.7s
H22K Ishtalitna Cre 62.28 24 P **P** 15 05 18.7 +2.1
baz=253,SNR=6.5
MLY Manley 62.29 25 P **P** 15 05 18.0 +1.2
MLY IAmb IAmb 15 05 21.7
comp=Z,22nm,0.9s
MLY Manley 62.29 25 P **P** 15 05 18.4 +1.6
baz=254,SNR=31
PWL Port Wells 62.34 30 P **P** 15 05 18.2 +1.2
PWL Port Wells 62.34 30 P **P** 15 05 18.6 +1.5
baz=258,SNR=15
KNK Knik Glacier 62.39 30 P **P** 15 05 18.7 +1.2
KNK IAmb IAmb 15 05 23.0
comp=Z,32nm,0.9s
KNK Knik Glacier 62.39 30 P **P** 15 05 18.9 +1.4
baz=258,SNR=10
F22K John River 62.48 23 P **P** 15 05 20.2 +2.2
baz=251,SNR=27
SML Sawmill 62.54 29 P **P** 15 05 19.3 +0.8
SML Sawmill 62.54 29 P **P** 15 05 19.9 +1.5
baz=258,SNR=22
G22K Bettles 62.55 23 P **P** 15 05 20.0 +1.6
baz=252
BWN Browne 62.59 27 P **P** 15 05 20.0 +1.3
BWN IAmb IAmb 15 05 24.0
comp=Z,48nm,1.0s
KUU Kurty 62.60 310 *eP* **P** 15 05 18.9 -0.3
KUU pmax pmax
comp=Z,18nm,0.7s
KUU Kurty 62.60 310 *eP* **P** 15 05 18.9 -0.3
comp=Z,18nm,0.7s,baz=310
P23K Montague Islan 62.62 31 P **P** 15 05 20.1 +1.2
baz=260
RND Reindeer 62.66 27 P **P** 15 05 19.9 +0.6
RND Reindeer 62.66 27 P **P** 15 05 19.9 +0.6
RND pmax pmax
comp=Z,15nm,0.8s
WAT1 Susitna Watana 62.66 28 P **P** 15 05 20.2 +1.0
baz=257
MCK McKinley 62.70 27 P **P** 15 05 20.4 +0.9
MCK McKinley 62.70 27 P **P** 15 05 20.4 +0.9
MCK pmax pmax
comp=Z,14nm,0.9s
MCK McKinley 62.70 27 P **P** 15 05 20.4 +0.9
baz=256,SNR=6.2
M23K Glacier View 62.81 29 P **P** 15 05 21.7 +1.5
baz=258,SNR=10
E22K Anaktuvuk Pass 62.82 22 P **P** 15 05 21.9 +1.7
baz=251,SNR=20
NEA2 Nenana 62.86 26 P **P** 15 05 21.2 +0.7
NEA2 IAmb IAmb 15 05 25.2
comp=Z,26nm,1.0s
NEA2 Nenana 62.86 26 P **P** 15 05 22.2 +1.7
baz=256,SNR=19
GLI Glacier Island 62.93 30 P **P** 15 05 21.8 +0.7
GLI IAmb IAmb 15 05 37.2
comp=Z,20nm,0.8s
GLI Glacier Island 62.93 30 P **P** 15 05 22.3 +1.3
baz=259
KSH Kashi 62.95 305 P **P** 15 05 25.4 +3.7
KSH ScS **SKSac** 15 14 53.6 -0.1
KSH pmax pmax
comp=Z,8.0nm,1.0s
WAT6 Susitna Watana 62.97 28 P **P** 15 05 22.7 +1.2
baz=258,SNR=16

H23K Yukon River 62.99 25 P **P** **15 05 23.2 +1.9**
H23K IAmb IAmb 15 05 26.5
comp=Z,20nm,0.9s
H23K Yukon River 62.99 25 P **P** **15 05 23.2 +1.9**
baz=254,SNR=23
HIZ Hauiti 62.99 155 P **P** **15 05 21.1 -0.5**
SCM Sheep Creek Mo 63.01 29 P **P** **15 05 23.2 +1.6**
SCM Sheep Creek Mo 63.01 29 P **P** **15 05 23.2 +1.6**
SCM pmax pmax
comp=Z,48nm,0.8s
SCM Sheep Creek Mo 63.01 29 P **P** **15 05 23.2 +1.6**
baz=259,SNR=17
G23K Bananza Creek 63.04 24 P **P** **15 05 23.6 +1.9**
baz=254,SNR=13
HIN Hinchinbrook I 63.13 31 P **P** **15 05 23.6 +1.2**
HIN IAmb IAmb 15 05 44.0
comp=Z,37nm,1.1s
FID Port Fidalgo 63.21 31 P **P** **15 05 23.9 +1.1**
FID IAmb IAmb 15 05 28.0
comp=Z,27nm,0.9s
DHY Denali Highway 63.24 28 P **P** **15 05 24.1 +1.0**
DHY Denali Highway 63.24 28 P **P** **15 05 24.8 +1.6**
baz=258,SNR=8.5
WRH Wood River Hil 63.24 26 P **P** **15 05 23.7 +0.7**
WRH IAmb IAmb 15 05 26.7
comp=Z,22nm,1.0s
MDM Murphy Dome 63.30 26 P **P** **15 05 24.1 +0.7**
MDM IAmb IAmb 15 05 28.8
comp=Z,17nm,0.9s
CCB Clear Creek Bu 63.40 26 P **P** **15 05 24.5 +0.5**
TCOL CIGO, UAF Yank 63.43 26 P **P** **15 05 25.9 +1.8**
baz=257,SNR=8.9
COLA College 63.43 26 *ce*P **P** **15 05 25.8 +1.6**
COLA pmax pmax
comp=Z,14nm,0.8s
COLA College 63.43 26 P **P** **15 05 26.1 +1.9**
baz=257
COLA College 63.43 26 P **P** **15 05 25.2 +1.0**
COLA pP **pP** **15 06 12.9 +0.8**
D23K Nanushuk River 63.48 21 P **P** **15 05 26.9 +2.4**
baz=252,SNR=8.6
HYBB Hyderabad (bro 63.51 281 *e*P **P** **15 05 25.4 -0.2**
HYBB *e*S **S** **15 13 43.6 +1.6**
EYAK Cordova Ski Ar 63.53 31 P **P** **15 05 26.3 +1.4**
EYAK IAmb IAmb 15 06 14.4
comp=Z,18nm,0.9s
EYAK Cordova Ski Ar 63.53 31 P **P** **15 05 26.7 +1.8**
baz=261
M24K Tolsona, Glenn 63.59 29 P **P** **15 05 26.8 +1.4**
M24K IAmb IAmb 15 06 18.6
comp=Z,36nm,1.1s
M24K Tolsona, Glenn 63.59 29 P **P** **15 05 27.1 +1.7**
baz=260
KLU Klutina 63.60 30 P **P** **15 05 26.8 +1.3**
KLU IAmb IAmb 15 05 31.0
comp=Z,27nm,1.0s
KLU Klutina 63.60 30 P **P** **15 05 27.2 +1.7**
baz=260,SNR=13
DIV Divide 63.61 30 P **P** **15 05 27.4 +1.9**
DIV IAmb IAmb 15 05 31.6
comp=Z,21nm,0.9s
H24K Noodor Dome 63.65 25 P **P** **15 05 27.0 +1.3**
H24K Noodor Dome 63.65 25 P **P** **15 05 27.6 +1.9**
baz=256,SNR=16
POKR Poker Plat Res 63.66 26 P **P** **15 05 26.6 +0.8**
baz=257
HDA Harding Lake 63.71 27 P **P** **15 05 26.4 +0.4**
HDA Harding Lake 63.71 27 P **P** **15 05 26.5 +0.4**
baz=258,SNR=12
URZ Urewera 63.73 153 P **P** **15 05 25.4 -1.0**
URZ IAmb IAmb 15 05 29.6
comp=Z,22nm,0.8s
URZ Urewera 63.73 153 P **P** **15 05 26.7 +0.3**
TOLK Toolik Lake Re 63.77 22 P **P** **15 05 28.1 +1.8**
TOLK IAmb IAmb 15 05 31.1
comp=Z,22nm,1.1s
TOLK Toolik Lake Re 63.77 22 P **P** **15 05 28.2 +1.8**
baz=253,SNR=11
C23K Itkillik River 63.78 20 P **P** **15 05 28.5 +2.2**
baz=252,SNR=7.5
IL31 63.81 26 P **P** **15 05 26.6 -0.1**
IL31 IAmb IAmb 15 05 30.0
comp=Z,31nm,1.1s
ILAR Eielson Array 63.81 26 P **P** **15 05 26.8 0.0**
comp=Z,19nm,0.9s,baz=248,slow=5.2,SNR=163
ILAR pP **pP** **15 06 13.3 -1.4**
comp=Z,5.6nm,0.9s,baz=254,slow=5.3,SNR=2.5
comp=Z,19nm,0.9s
ILAR Eielson Array 63.81 26 P **P** **15 05 26.6 -0.1**
ILAR Eielson Array 63.81 26 P **P** **15 05 26.6 -0.1**
SGDS Sogindy 63.84 310 *e*P **P** **15 05 27.3 -0.1**
SGDS Sogindy 63.84 310 *e*P **P** **15 05 27.4 -0.1**
baz=310
AAK Ala-Archa 63.97 309 P **P** **15 05 27.9 -0.4**
AAK Ala-Archa 63.97 309 *e*P **P** **15 05 29.2 +0.9**
AAK pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 63.97 309 P **P** **15 05 29.5 +1.1**
AAK Ala-Archa 63.97 309 P **P** **15 05 29.0 +0.6**
E24K Your Creek 63.99 22 P **P** **15 05 29.6 +1.7**
baz=254,SNR=14
G24K Hadweenzic Riv 64.02 24 P **P** **15 05 30.0 +2.0**
baz=256,SNR=24
RAGM Ragged Mountai 64.03 31 P **P** **15 05 29.6 +1.3**
RAGM IAmb IAmb 15 06 07.1
comp=Z,16nm,0.8s
F24K Squaw Lake 64.07 23 P **P** **15 05 30.6 +2.3**
baz=255,SNR=12
PAX Paxson 64.07 28 P **P** **15 05 29.9 +1.3**
PAX Paxson 64.07 28 P **P** **15 05 29.9 +1.3**
PAX pmax pmax
comp=Z,15nm,1.0s
PAX Paxson 64.07 28 P **P** **15 05 30.1 +1.6**
baz=260,SNR=18
K24K Donnelly Dome 64.09 27 P **P** **15 05 30.1 +1.5**
baz=259
KAIM Kayak Island 64.09 32 P **P** **15 05 30.2 +1.6**
KAIM IAmb IAmb 15 07 05.7
comp=Z,50nm,1.0s
KAIM Kayak Island 64.09 32 P **P** **15 05 30.9 +2.3**
baz=262
QRZ Quartz Range 64.10 158 P **P** **15 05 29.0 +0.2**
QRZ Quartz Range 64.10 158 P **P** **15 05 29.9 +1.1**
HARP HAARP 64.11 29 P **P** **15 05 30.7 +2.0**
baz=260,SNR=10
BMRM Bremner River 64.15 31 P **P** **15 05 29.8 +0.8**
BMRM IAmb IAmb 15 05 34.7
comp=Z,28nm,1.0s
BMRM Bremner River 64.15 31 P **P** **15 05 30.9 +1.9**
baz=262,SNR=9.8
D24K Happy Valley 64.17 21 P **P** **15 05 31.1 +2.1**
baz=254
BKZ Black Stump Fm 64.22 154 P **P** **15 05 28.8 -0.9**
BKZ Black Stump Fm 64.22 154 P **P** **15 05 29.6 -0.1**
HMT Hamilton 64.22 31 P **P** **15 05 30.6 +1.1**
HMT IAmb IAmb 15 05 34.7
comp=Z,18nm,0.9s
BTLS Baital 64.24 312 *e*P **P** **15 05 30.1 +0.3**
BTLS Baital 64.24 312 *e*P **P** **15 05 30.1 +0.3**
baz=312
N25K Chitina, Valde 64.25 30 P **P** **15 05 31.6 +1.9**
N25K Chitina, Valde 64.25 30 P **P** **15 05 31.6 +1.9**
baz=261,SNR=8.2
C24K Franklin Bluff 64.38 21 P **P** **15 05 31.8 +1.5**
baz=254
J25K Salcha River, 64.42 26 P **P** **15 05 30.9 +0.1**
J25K Salcha River, 64.42 26 P **P** **15 05 31.1 +0.3**
baz=259,SNR=13
SUCK Suckling Hills 64.43 32 P **P** **15 05 32.1 +1.2**
SUCK IAmb IAmb 15 05 47.2
comp=Z,37nm,1.2s
RIDG Independent Ri 64.48 27 P **P** **15 05 32.1 +0.9**
RIDG IAmb IAmb 15 05 35.5
comp=Z,44nm,1.0s
RIDG Independent Ri 64.48 27 P **P** **15 05 32.0 +0.9**
baz=260,SNR=24
BERG Berg Lake 64.51 31 P **P** **15 05 32.6 +1.3**
BERG IAmb IAmb 15 05 36.6
comp=Z,42nm,1.1s
PRP Porcupine Dome 64.53 25 P **P** **15 05 31.2 -0.3**
baz=258
H25K Birch Creek 64.57 25 P **P** **15 05 32.9 +1.4**
baz=258
GLB Gilahina Butte 64.60 30 P **P** **15 05 33.4 +1.5**
GLB IAmb IAmb 15 05 37.0
comp=Z,27nm,1.0s

NNZ Nelson 64.75 157 P **P** **15 05 33.2 +0.1**
DOT Dot Lake 64.81 28 P **P** **15 05 34.1 +0.8**
DOT IAmb IAmb 15 05 37.5
comp=Z,25nm,0.8s
FYU Fort Yukon 64.86 24 P **P** **15 05 34.8 +1.4**
FYU IAmb IAmb 15 05 38.8
comp=Z,59nm,1.2s
SCRK Sand Creek 64.90 27 P **P** **15 05 35.1 +1.1**
SCRK IAmb IAmb 15 05 38.2
comp=Z,44nm,1.2s
SCRK Sand Creek 64.90 27 P **P** **15 05 34.9 +1.0**
baz=261,SNR=34
SNH Sunshine Point 64.91 32 P **P** **15 05 35.0 +1.1**
SNH IAmb IAmb 15 05 39.6
comp=Z,44nm,1.0s
F25K Christian Rive 64.92 23 P **P** **15 05 35.8 +1.9**
baz=258
WAX Waxell Ridge 64.93 31 P **P** **15 05 35.5 +1.4**
WAX IAmb IAmb 15 05 39.4
comp=Z,26nm,1.0s
MCARA McCarthy VSAT 64.96 30 P **P** **15 05 35.7 +1.5**
MCARA IAmb IAmb 15 05 39.7
comp=Z,28nm,0.8s
MCARA McCarthy VSAT 64.96 30 P **P** **15 05 35.8 +1.5**
baz=263,SNR=9.2
L26K Log Cabin Wild 65.04 28 P **P** **15 05 36.3 +1.5**
baz=262,SNR=14
THZ Tophouse 65.06 158 P **P** **15 05 35.3 +0.2**
D25K Kavik River 65.06 21 P **P** **15 05 36.5 +1.7**
baz=255,SNR=15
E25K Arctic Village 65.07 23 P **P** **15 05 37.2 +2.4**
baz=257,SNR=11
M26K Nabesna, AK 65.11 29 P **P** **15 05 37.0 +1.8**
baz=262
TUWZ Tuamarina 65.15 157 P **P** **15 05 34.2 -1.4**
BRZS Berezniki 65.15 317 *e*P **P** **15 05 36.3 +0.6**
BRZS Berezniki 65.15 317 *e*P **P** **15 05 36.3 +0.6**
baz=317
J26L Joseph Creek 65.17 27 P **P** **15 05 36.0 +0.4**
J26L IAmb IAmb 15 05 39.9
comp=Z,28nm,0.9s
J26L Joseph Creek 65.17 27 P **P** **15 05 37.3 +1.7**
baz=261,SNR=29
ISLE Juniper Island 65.20 31 P **P** **15 05 36.0 +0.1**
ISLE IAmb IAmb 15 05 47.3
comp=Z,20nm,0.9s
BMAR Burnt Mountain 65.29 23 P **P** **15 05 38.3 +2.0**
SNZO South Karori 65.33 156 P **P** **15 05 36.2 -0.5**
SNZO South Karori 65.33 156 P **P** **15 05 37.8 +1.1**
MESA MESA 65.35 32 P **P** **15 05 38.4 +1.4**
baz=264
BFZ Birch Farm 65.40 155 P **P** **15 05 37.2 0.0**
BFZ Birch Farm 65.40 155 P **P** **15 05 36.6 -0.6**
I26K Coal Creek Min 65.47 26 P **P** **15 05 38.1 +0.7**
baz=261
YAH Yahtse 65.47 31 P **P** **15 05 38.4 +0.6**
YAH IAmb IAmb 15 05 43.1
comp=Z,20nm,0.8s
G26K Porcupine Rive 65.50 24 P **P** **15 05 39.5 +1.9**
baz=260,SNR=19
F26K Sheenjek River 65.50 23 P **P** **15 05 40.0 +2.3**
baz=259,SNR=27
NIL Nilore 65.60 299 P **P** **15 05 39.8 +0.9**
NIL pP **pP** **15 06 27.4 +0.7**
M27K Edge Creek, AK 65.62 29 P **P** **15 05 40.4 +1.7**
M27K Edge Creek, AK 65.62 29 P **P** **15 05 40.3 +1.7**
baz=263,SNR=11
MSWZ Moikau Station 65.63 156 P **P** **15 05 38.1 -0.6**
C26K Camden Bay 65.70 21 P **P** **15 05 40.4 +1.6**
baz=257
CTG Chitna Glacier 65.73 31 P **P** **15 05 41.0 +1.7**
baz=264,SNR=13
L27K Beaver Creek, 65.73 28 P **P** **15 05 40.2 +1.1**
L27K Beaver Creek, 65.73 28 P **P** **15 05 40.9 +1.8**
baz=263,SNR=19
CTGM Chitina Glacie 65.73 31 P **P** **15 05 41.0 +1.6**
CTGM IAmb IAmb 15 05 44.5
comp=Z,24nm,0.9s
LTZ Lake Taylor 65.73 159 P **P** **15 05 38.5 -0.9**
LTZ IAmb IAmb 15 05 40.0
comp=Z,36nm,0.8s
K27K Chicken 65.74 27 P **P** **15 05 41.4 +2.3**
baz=262
BCAR Beaver Creek A 65.75 28 P **P** **15 05 40.6 +1.3**
PLWZ Beaver Creek 65.76 156 P **P** **15 05 38.5 -1.1**
TABL Table Mountain 65.78 31 P **P** **15 05 41.5 +1.8**
TABL IAmb IAmb 15 05 44.8
comp=Z,41nm,1.0s
KHZ Kahutara 65.86 158 P **P** **15 05 38.7 -1.4**
LOGN Logan Glacier 65.88 31 P **P** **15 05 41.3 +1.0**
LOGN IAmb IAmb 15 05 45.5
comp=Z,35nm,1.1s
C27K Jago River 66.04 21 P **P** **15 05 42.9 +1.9**
baz=258
BVCY Beaver Creek 66.10 29 P **P** **15 05 43.3 +1.8**
baz=264
OXZ Oxford 66.14 159 P **P** **15 05 40.6 -1.3**
OXZ IAmb IAmb 15 05 41.3
comp=Z,38nm,0.8s
I27K Kandik River 66.15 26 P **P** **15 05 43.5 +1.6**
baz=262
RPZ Rata Peaks 66.16 160 P **P** **15 05 40.9 -1.1**
RPZ Rata Peaks 66.16 160 P **P** **15 05 41.1 -0.9**
PINM Pinnacle 66.19 32 P **P** **15 05 44.3 +2.1**
baz=266
YUK3 Moose Creek 66.23 30 P **P** **15 05 44.3 +1.7**
baz=265,SNR=22
EGAK Eagle 66.23 27 P **P** **15 05 43.2 +0.9**
EGAK Eagle 66.23 27 P **P** **15 05 44.3 +2.0**
baz=263,SNR=6.0
O28M Mount Upton 66.27 31 P **P** **15 05 44.3 +1.4**
baz=266,SNR=16
H27K Steamboat Moun 66.27 25 P **P** **15 05 44.4 +1.9**
baz=262
DZA Taraz 66.28 309 *e*P **P** **15 05 43.8 +0.8**
DZA Taraz 66.28 309 *e*P **P** **15 05 43.8 +0.8**
baz=309
G27K Doyon Strip 66.31 24 P **P** **15 05 45.0 +2.3**
baz=262
LBZ Lake Benmore 66.49 161 P **P** **15 05 43.2 -0.9**
E27K Coleen River 66.54 23 P **P** **15 05 46.2 +2.0**
baz=261
PNL Peninsula 66.59 32 P **P** **15 05 46.2 +1.5**
baz=267
DCZ Deep Cove 66.61 164 P **P** **15 05 44.3 -0.4**
BRVK Borovoye 66.66 320 P **P** **15 05 44.0 -1.2**
BRVK IAmb IAmb 15 06 38.9
comp=Z,52nm,1.4s
BRVK Borovoye 66.66 320 *di*P **P** **15 05 44.9 -0.3**
BRVK pmax pmax
comp=Z,15nm,0.8s
BRVK Borovoye 66.66 320 P **P** **15 05 44.8 -0.3**
BRVK Borovoye 66.66 320 P **P** **15 05 44.8 -0.5**
BRVK pP **pP** **15 06 31.0 -2.5**
BRVK pwP **pwP** **15 06 38.0 -0.1**
KK31 Karatay Array 66.86 310 P **P** **15 05 46.9 +0.1**
KK31 IAmb IAmb 15 06 42.2
comp=Z,38nm,1.2s
KK31 Karatay Array 66.86 310 P **P** **15 05 46.9 +0.1**
KKAR Karatay Array 66.86 310 P **P** **15 05 46.7 0.0**
KKAR Karatay Array 66.86 310 pP pP 15 06 34.0 -1.0
DAWY Dawson 66.92 27 P **P** **15 05 48.2 +1.5**
DAWY Dawson 66.92 27 P **P** **15 05 48.0 +1.3**
baz=265,SNR=12
O29M Mount Kennedy 67.04 32 P **P** **15 05 50.0 +2.3**
baz=267,SNR=12
YUK4 Talbot Arm 67.06 30 P **P** **15 05 48.9 +1.0**
baz=267,SNR=7.7
YUK6 Outpost Mounta 67.17 31 P **P** **15 05 49.4 +0.8**
baz=267,SNR=5.2
M29M Somme Creek 67.21 29 P **P** **15 05 50.3 +1.6**
baz=266
WHZ Wether Hill Ro 67.21 163 P **P** **15 05 47.8 -0.9**
IUG luzhnay 67.29 309 *e*P **P** **15 05 49.6 +0.1**
IUG luzhnay 67.29 309 *e*P **P** **15 05 49.6 +0.1**
baz=309
GAR Garm 67.37 305 P **P** **15 05 49.8 -0.3**
GAR IAmb IAmb 15 05 56.5
comp=Z,21nm,0.8s
P29M Windy Craggy 67.43 32 P **P** **15 05 51.8 +1.8**
baz=268
I29M Ogilvie Camp, 67.50 26 P **P** **15 05 51.4 +1.1**
I29M Ogilvie Camp, 67.50 26 P **P** **15 05 52.3 +2.0**
baz=265,SNR=8.0
HYT Haines Junctio 67.59 31 P **P** **15 05 53.3 +2.2**

HYT IAmb IAmb 15 05 56.8
comp=Z,51nm,1.1s
HYT Haines Junctio 67.59 31 P **P** **15 05 53.2 +2.2**
baz=268,SNR=25
N30M Aishikik Lake 67.81 30 P **P** **15 05 54.3 +1.9**
baz=268,SNR=20
P30M Million Dollar 67.84 32 P **P** **15 05 54.3 +1.8**
baz=269
M30M Minto, Yukon 67.99 29 P **P** **15 05 54.9 +1.5**
M30M Minto, Yukon 67.99 29 P **P** **15 05 55.4 +1.9**
baz=268,SNR=11
PLBC Pleasant Camp 68.13 33 P **P** **15 05 56.5 +2.2**
baz=270,SNR=6.1
EPYK Eagle Plains 68.22 25 P **P** **15 05 55.1 +0.3**
baz=266
O30N Mendenhall 68.28 31 P **P** **15 05 56.0 +0.7**
baz=269
CHGR Chuyangaron 68.31 305 P **P** **15 05 55.4 -0.5**
CHGR IAmb IAmb 15 05 57.6
comp=Z,49nm,0.8s
CHGR Chuyangaron 68.31 305 P **P** **15 05 55.4 -0.5**
CHGR pmax pmax
comp=Z,49nm,0.8s
MAYO Mayo, Yukon 68.44 28 P **P** **15 05 57.5 +1.4**
N31M Braeburn, Yuko 68.44 30 P **P** **15 05 57.1 +0.9**
N31M IAmb IAmb 15 06 01.8
comp=Z,35nm,1.1s
N31M Braeburn, Yuko 68.44 30 P **P** **15 05 57.8 +1.6**
baz=269,SNR=16
SKAG Skagway 68.66 33 P **P** **15 05 59.6 +2.1**
baz=270
SIT Sitka 68.69 35 P **P** **15 06 00.1 +2.4**
baz=271
WHY Whitehorse 68.88 31 P **P** **15 06 00.2 +1.2**
WHY Whitehorse 68.88 31 P **P** **15 06 00.8 +1.8**
baz=270,SNR=5.7
BESE Bessie Mountai 68.91 34 P **P** **15 06 00.6 +1.4**
KBL Kabul 68.94 301 P **P** **15 05 59.8 -0.3**
KBL IAmb IAmb 15 06 03.2
comp=Z,26nm,0.8s
KBL Kabul 68.94 301 P **P** **15 05 59.8 -0.3**
KBL pmax pmax
comp=Z,26nm,0.9s
KBL Kabul 68.94 301 P **P** **15 06 00.5 +0.4**
SNR=10
M31M Drury Creek, Y 69.11 30 P **P** **15 06 01.8 +1.5**
M31M Drury Creek, Y 69.11 30 P **P** **15 06 02.1 +1.8**
baz=270,SNR=12
P32M Atlin 69.48 32 P **P** **15 06 04.4 +1.7**
baz=272
INK Inuvik 69.54 23 P **P** **15 06 04.0 +1.2**
comp=Z,24nm,1.0s,baz=287,slow=4.1,SNR=16
INK pP **pP** **15 06 50.0 -1.7**
comp=Z,10nm,0.9s,baz=244,slow=12,SNR=3.0
comp=Z,24nm,1.0s
INK Inuvik 69.54 23 P **P** **15 06 03.7 +0.9**
INK Inuvik 69.54 23 P **P** **15 06 03.7 +0.9**
INK pmax pmax
comp=Z,15nm,0.8s
INK Inuvik 69.54 23 P **P** **15 06 04.0 +1.2**
baz=269,SNR=8.6
FARO Faro, Yukon 69.59 30 P **P** **15 06 04.8 +1.5**
FARO Faro, Yukon 69.59 30 P **P** **15 06 05.0 +1.7**
baz=271,SNR=11
N32M Quiet Lake 69.75 31 P **P** **15 06 06.1 +1.8**
baz=272
P33M Teslin, Yukon 69.91 32 P **P** **15 06 06.5 +1.2**
P33M Teslin, Yukon 69.91 32 P **P** **15 06 06.3 +1.0**
baz=272,SNR=6.7
WRAK Wrangell Islan 70.36 36 P **P** **15 06 09.1 +1.2**
baz=274
MMPY Sheldon Lake, 70.55 29 P **P** **15 06 11.2 +2.0**
baz=273
R33M Jennings River 70.89 33 P **P** **15 06 13.0 +1.7**
baz=274
DLBC Dease Lake 71.45 34 P **P** **15 06 17.6 +2.9**
comp=Z,12nm,0.8s,baz=285,slow=4.5,SNR=15
DLBC pP **pP** **15 07 05.0 +1.3**
comp=Z,20nm,0.8s,baz=302,slow=6.3,SNR=6.6
comp=Z,12nm,0.8s
DLBC Dease Lake 71.45 34 P **P** **15 06 16.1 +1.5**
DLBC IAmb IAmb 15 07 10.7
comp=Z,20nm,0.8s
DLBC Dease Lake 71.45 34 P **P** **15 06 16.5 +1.9**
baz=275
T35M Bob Quinn 71.47 35 P **P** **15 06 17.1 +2.4**
baz=276
GRNB Grenville Isla 71.97 38 P **P** **15 06 18.5 +0.8**
GRNB IAmb IAmb 15 07 12.2
comp=Z,25nm,1.0s
TGTN Hyland Airport 72.04 30 P **P** **15 06 20.3 +2.3**
baz=276,SNR=7.7
A36M Sachs Harbour 72.25 19 P **P** **15 06 20.1 +1.0**
A36M IAmb IAmb 15 06 22.9
comp=Z,49nm,0.9s
A36M Sachs Harbour 72.25 19 P **P** **15 06 21.6 +2.6**
baz=275
C36M Paulatuk 72.92 22 P **P** **15 06 23.8 +0.8**
C36M IAmb IAmb 15 06 27.0
comp=Z,32nm,0.9s
C36M Paulatuk 72.92 22 P **P** **15 06 24.7 +1.7**
baz=277
PPT2 Papeete2 73.07 116 *e*LR LR 15 29 10.5
ARU Arti 73.20 325 P **P** **15 06 24.2 -0.7**
comp=Z,6.8nm,0.4s,baz=72,slow=3.5,SNR=12
ARU pP **pP** **15 07 14.9 +0.8**
comp=Z,6.0nm,0.6s,baz=93,slow=4.5,SNR=2.4
comp=Z,6.8nm,0.4s
ARU Arti 73.20 325 P **P** **15 06 24.1 -0.7**
ARU Arti 73.20 325 *di*P **P** **15 06 24.2 -0.7**
ARU *PP **pP** **15 07 14.8 +0.8**
ARU S **S** **15 15 37.4 +2.3**
ARU pmax pmax
comp=Z,9.0nm,0.6s
KAAM Kaadhehdhoo 73.43 265 P **P** **15 06 29.7 +2.7**
ABKAR Akbulak array 73.45 317 P **P** **15 06 25.2 -1.4**
ABKAR Akbulak array 73.45 317 P **P** **15 06 25.4 -1.1**
ABKAR IAmb IAmb 15 07 20.8
comp=Z,8.7nm,0.8s
HOLB Holberg 73.53 41 P **P** **15 06 27.4 +0.4**
WRGLY Wrigley 74.04 28 P **P** **15 06 30.9 +1.3**
baz=279
HRA Herat 74.50 302 P **P** **15 06 32.6 -0.5**
DGAR Diego Garcia 76.64 257 P **P** **15 06 44.1 -1.1**
NLWA Neilton Lookou 76.91 44 P **P** **15 06 47.1 +0.7**
NLWA IAmb IAmb 15 07 42.3
comp=Z,58nm,1.2s
GEYT Alibeck 76.98 306 P **P** **15 06 47.2 +0.3**
comp=Z,12nm,0.9s,baz=50,slow=2.3,SNR=15
comp=Z,12nm,0.9s
GEYT Alibeck 76.98 306 P **P** **15 06 46.9 -0.1**
GYA0B ALIBECK ARRAY 76.98 306 P **P** **15 06 46.7 -0.3**
KIRV Kirov 77.60 328 P **P** **15 06 50.0 +0.2**
comp=Z,20nm,0.7s,baz=98,slow=2.7,SNR=5.7
comp=Z,20nm,0.7s
KIRV Kirov 77.60 328 *ce*P **P** **15 06 49.8 0.0**
KEBM Edson Butte 77.63 49 P **P** **15 06 53.4 +2.9**
KEBM IAmb IAmb 15 07 46.6
comp=Z,63nm,1.0s
I02E Swisshome, OR 77.68 48 P **P** **15 06 53.0 +2.4**
J01E Myrtle Point 77.85 48 P **P** **15 06 52.5 +0.9**
J01E IAmb IAmb 15 07 47.6
comp=Z,45nm,1.0s
J01E Myrtle Point 77.85 48 P **P** **15 06 53.8 +2.2**
baz=284
EUNU Eureka 77.90 8 P **P** **15 06 52.8 +1.5**
I03D Drain, OR 78.13 48 P **P** **15 06 54.4 +1.3**
baz=284
K02D Willamette Mer 78.15 49 P **P** **15 06 54.8 +1.4**
baz=284
YKA Yellowknife Ar 78.16 28 P **P** **15 06 54.0 +1.2**
comp=Z,12nm,0.9s,baz=290,slow=5.5,SNR=18
YKA pP **pP** **15 07 43.3 +0.5**
comp=Z,13nm,0.9s,baz=289,slow=5.8,SNR=5.3
comp=Z,12nm,0.9s
BUCK Buck Mountain 78.26 47 P **P** **15 06 55.1 +1.2**
H04D Lebanon 78.36 47 P **P** **15 06 55.8 +1.5**
baz=284
L02F Cave Junction 78.36 49 P **P** **15 06 55.2 +0.7**
baz=284
PRGR Permogore 78.56 331 *e*P **P** **15 06 53.9 -1.2**
PRGR *e*PP **pP** **15 07 44.5 -0.3**
PRGR *e*S **S** **15 16 31.9 -1.6**
HUMO Hull Mountain 78.68 49 P **P** **15 06 57.4 +1.1**
H04A Detroit Lake 78.70 47 P **P** **15 06 56.6 +0.4**
H04A IAmb IAmb 15 07 52.2

comp=Z,41nm,1.0s
I04A Tendick Farm, 78.77 48 P P 15 06 59.1 +2.4
baz=285
KCPM Cahto Peak 78.97 52 P P 15 07 00.2 +2.3
KCPM IAmb IAmb 15 07 54.1
comp=Z,55nm,0.9s
LTY Liberty 79.05 44 P P 15 06 59.5 +1.3
LTY IAmb IAmb 15 07 53.4
comp=Z,34nm,1.1s
YBH Yreka Blue Hor 79.08 50 P P 15 07 01.7 +3.2
comp=Z,11nm,1.0s,baz=286,slow=2.6,SNR=12
J04D Umpqua Nationa 79.12 48 P P 15 07 00.2 +1.4
baz=285
L04D Klamath Falls 79.25 49 P P 15 07 01.0 +1.5
L04D IAmb IAmb 15 07 55.1
comp=Z,32nm,0.9s
L04D Klamath Falls 79.25 49 P P 15 07 01.1 +1.6
baz=285
SPB2 Spitsbergen Ar 79.34 351 P P 15 06 59.8 +0.7
SPB2 IAmb IAmb 15 07 38.2
comp=Z,54nm,1.5s
SPITS Spitsbergen Ar 79.34 351 P P 15 06 59.0 -0.1
comp=Z,2.3nm,0.5s,baz=142,slow=4.2,SNR=1.9
comp=Z,2.3nm,0.5s
KBS Kingsbay 79.46 352 P P 15 06 59.8 +0.1
KBS Kingsbay 79.46 352 P P 15 06 59.8 +0.1
KBS pmax pmax
comp=Z,21nm,1.0s
K04D Chiloquin, OR 79.53 49 P P 15 07 01.2 +0.2
baz=286
B08A Colville Reser 79.62 42 P P 15 07 02.5 +1.3
B08A IAmb IAmb 15 07 57.1
comp=Z,29nm,0.9s
J05D Fort Rock, OR 79.73 48 P P 15 07 01.9 -0.1
baz=286
HAWA Hanford 80.04 44 P P 15 07 05.3 +1.9
HAWA IAmb IAmb 15 07 59.1
comp=Z,41nm,1.1s
K05A Summer Lake 80.12 48 P P 15 07 05.8 +1.6
WBK Wadi Bani Khal 80.15 291 P P 15 07 05.8 +1.3
JASK Jask - Hormozg 80.23 294 P P 15 07 05.9 +1.1
D08A Wollman Farm, 80.25 44 P P 15 07 06.1 +1.6
D08A IAmb IAmb 15 08 00.1
comp=Z,45nm,1.1s
BELG Belogornoye 80.33 322 P P 15 07 04.9 +0.2
comp=Z,21nm,0.6s,baz=175,slow=3.7,SNR=4.7
BELG pP **pP 15 07 57.1 +2.3**
comp=Z,32nm,0.8s,baz=331,slow=1.9,SNR=3.7
comp=Z,21nm,0.6s
BELG Belogornoye 80.33 322 *de*P **P 15 07 04.9 +0.2**
BELG pmax pmax
comp=Z,9.0nm,1.6s
BIDO Bidbid 80.65 292 P P 15 07 07.9 +0.9
MOD Modoc Plateau 80.77 49 P P 15 07 08.6 +0.9
MOD IAmb IAmb 15 08 03.3
comp=Z,31nm,1.1s
SMDO Samad 80.84 291 P P 15 07 09.1 +0.9
JMDO Jabal Madar 80.99 291 P P 15 07 09.0 +0.1
NEW Newport 81.06 42 P P 15 07 09.9 +1.1
NEW pP **pP 15 07 58.2 -0.8**
NEW IAmb IAmb 15 08 04.9
comp=Z,22nm,0.9s
NEW Newport 81.06 42 P P 15 07 09.9 +1.1
NEW pmax pmax
comp=Z,22nm,0.9s
NEW Newport 81.06 42 P P 15 07 10.0 +1.1
baz=288
BEKR Beckworth 81.31 51 P P 15 07 11.3 +0.8
BEKR IAmb IAmb 15 08 06.1
comp=Z,29nm,0.9s
HOQ Hoqain 81.35 292 P P 15 07 11.4 +0.5
MHTO MHTO 81.50 289 P P 15 07 12.0 +0.5
SNR=6.9
KLMR Klimovskoe 81.60 332 *e*P **P 15 07 09.2 -2.1**
KLMR pmax pmax
comp=Z,10.0nm,0.8s
KLMR Klimovskoe 81.60 332 *e*P **P 15 07 09.2 -2.1**
KLMR AMP 15 07 13.4
comp=Z,10.0nm,0.8s
KLMR *e*pP **pP 15 07 57.2 -4.3**
J08A Circle Bar Ran 81.64 47 P P 15 07 13.9 +1.9
J08A IAmb IAmb 15 08 07.9
comp=Z,44nm,1.0s
SHME Shamm 81.67 295 P P 15 07 14.0 +1.6
SNR=13
SHME Shamm 81.67 295 *i* P **P 15 07 12.7 +0.2**
SNR=13
BSY Bisya 81.68 291 P P 15 07 13.2 +0.6
MPK Martis Peak 81.72 51 P P 15 07 14.0 +1.2
MPK IAmb IAmb 15 08 08.8
comp=Z,46nm,1.0s
MDH Madha 81.75 294 P P 15 07 13.3 +0.4
MDH Madha 81.75 294 P P 15 07 12.8 0.0
WVOR Wild Horse Val 81.80 48 P P 15 07 13.9 +1.0
WVOR IAmb IAmb 15 08 08.8
comp=Z,36nm,1.0s
WVOR Wild Horse Val 81.80 48 P P 15 07 14.0 +1.0
WVOR pmax pmax
comp=Z,36nm,1.0s
MASF Masafi 81.85 294 P P 15 07 14.3 +0.8
SNR=13
MSFE Esma-Masafi 81.85 294 *i* P **P 15 07 13.9 +0.4**
SNR=13
SOHO SOHO 81.88 293 P P 15 07 14.0 +0.5
SOHO SOHO 81.88 293 *i* P **P 15 07 13.3 -0.2**
SNR=19
UOSS Minazif 81.93 294 P P 15 07 14.2 +0.4
UOSS Minazif 81.93 294 *i* P **P 15 07 13.1 -0.7**
SNR=16
BMO Blue Mountains 81.98 45 P P 15 07 14.7 +0.8
BMO IAmb IAmb 15 08 09.5
comp=Z,36nm,1.1s
BMO Blue Mountains 81.98 45 P P 15 07 14.7 +0.8
BMO pmax pmax
comp=Z,36nm,1.1s
VCNR Virginia City 82.00 51 P P 15 07 15.7 +1.6
HATD Hatta, Dubai 82.03 293 P P 15 07 14.8 +0.5
SNR=5.6
HATD Hatta, Dubai 82.03 293 *i* P **P 15 07 14.5 +0.2**
SNR=16
PAHR Pah Rah Range 82.08 51 P P 15 07 14.9 +0.4
PAHR IAmb IAmb 15 08 10.2
comp=Z,27nm,1.1s
KEV Kevo 82.09 342 P P 15 07 13.2 -0.6
KEV IAmb IAmb 15 09 01.0
comp=Z,94nm,1.9s
KEV Kevo 82.09 342 P P 15 07 13.2 -0.6
KEV pmax pmax
comp=Z,94nm,1.9s
ARQ Araqi 82.11 292 P P 15 07 16.1 +1.3
SNR=5.3
ASHO Ashiyiah 82.13 293 P P 15 07 15.6 +0.7
SNR=8.3
ASHO Ashiyiah 82.13 293 *i* P **P 15 07 15.0 +0.1**
SNR=24
DQM DQM 82.18 288 P P 15 07 15.9 +0.7
NAZ Nazwa, Dubai 82.39 294 P P 15 07 15.7 -0.5
YERR Yerington 82.40 52 P P 15 07 17.6 +1.3
YERR IAmb IAmb 15 08 12.2
comp=Z,35nm,0.9s
FAQ Al Faqa, Dubai 82.52 294 P P 15 07 17.1 +0.3
FAQ Al Faqa, Dubai 82.52 294 P P 15 07 17.1 +0.3
ALNE Al Ain 82.58 293 P P 15 07 18.1 +0.8
ARA0 ARCESS Array S 82.66 342 *e*P **P 15 07 17.0 +0.3**
ARA0 IAmb IAmb 15 07 20.8
comp=Z,200nm,2.8s
ARCES ARCESS Array B 82.66 342 P P 15 07 15.9 -0.8
comp=Z,5.4nm,0.7s,baz=82,slow=8.2,SNR=33
ARCES pP **pP 15 08 07.1 -0.3**
comp=Z,13nm,1.0s,baz=33,slow=7.3,SNR=3.5
comp=Z,5.4nm,0.7s
ARCES ARCESS Array B 82.66 342 P P 15 07 15.6 -1.1
ARCES pP **pP 15 08 06.2 -1.3**
ARCES IAmb IAmb 15 08 07.0
comp=Z,58nm,1.8s
ASUD Al Ashush, Dub 82.78 293 P P 15 07 19.6 +1.3
ASUD Al Ashush, Dub 82.78 293 P P 15 07 18.8 +0.6
PLID Pearl Lake 82.79 45 P P 15 07 19.1 +0.9
WALA Waterton Lakes 82.82 41 P P 15 07 19.9 +1.8
WALA IAmb IAmb 15 08 14.2
comp=Z,34nm,1.4s
OMMB Old Mammoth Mi 82.99 53 P P 15 07 20.7 +1.2
JTMT Jette 83.03 42 P P 15 07 20.5 +1.3
RYN Ryan 83.04 52 P P 15 07 20.3 +0.8
RYN IAmb IAmb 15 08 15.6

comp=Z,32nm,0.9s
LHV Little Huntoon 83.17 52 P P 15 07 21.6 +1.6
LHV IAmb IAmb 15 08 16.5
comp=Z,32nm,1.0s
PKM Mcpherson Peak 83.20 56 P P 15 07 22.5 +2.1
baz=288
KVN Kaiserville 83.22 51 P P 15 07 21.7 +1.2
KVN IAmb IAmb 15 08 16.4
comp=Z,31nm,0.8s
KVN Kaiserville 83.22 51 P P 15 07 21.7 +1.2
KVN pmax pmax
comp=Z,31nm,0.8s
NVAR Mina Array Bea 83.27 52 P P 15 07 22.7 +2.0
comp=Z,9.0nm,0.6s,baz=271,slow=5.9,SNR=76
NVAR pP **pP 15 08 12.4 +1.2**
comp=Z,30nm,0.8s,baz=263,slow=6.3,SNR=13
comp=Z,9.0nm,0.6s
NVAR Mina Array Bea 83.27 52 P P 15 07 21.9 +1.2
NV11 Mina Array Sit 83.38 52 P P 15 07 22.1 +0.9
NV11 IAmb IAmb 15 08 17.3
comp=Z,31nm,0.9s
MFID Camas Ranch 83.45 47 P P 15 07 22.6 +1.1
MFID IAmb IAmb 15 08 17.4
comp=Z,48nm,1.1s
MSO Missoula 83.56 43 P P 15 07 23.1 +1.2
MSO Missoula 83.56 43 P P 15 07 23.3 +1.4
baz=290
TIN Tinemaha, Big 83.75 53 P P 15 07 25.0 +1.9
baz=288
DSP Deep Springs 83.85 53 P P 15 07 25.1 +1.7
DSP IAmb IAmb 15 08 19.9
comp=Z,31nm,1.2s
ISA Isabella, Lake 84.00 55 P P 15 07 25.7 +1.4
baz=288
CWC Cottonwood Cre 84.06 54 P P 15 07 26.0 +1.2
baz=289
JETT Jettan, Norway 84.08 343 *e*P **P 15 07 23.9 -0.2**
JETT IAmb IAmb 15 07 24.0
comp=Z,16nm,0.6s
LCH Last Change Ra 84.14 53 P P 15 07 26.4 +1.3
MZP Montezuma Peak 84.19 52 P P 15 07 26.7 +1.2
TPH Tonopah 84.19 52 P P 15 07 27.0 +1.6
TPH Tonopah 84.19 52 P P 15 07 27.0 +1.6
TPH pmax pmax
comp=Z,105nm,0.9s
HLID Hailey 84.37 46 P P 15 07 27.5 +1.3
HLID Hailey 84.37 46 P P 15 07 27.0 +0.8
baz=290,SNR=9.2
GMN Gold Mountain 84.41 53 P P 15 07 28.2 +1.6
TRO Tromso 84.43 344 *e*P **P 15 07 24.9 -0.8**
TRO IAmb IAmb 15 07 25.3
comp=Z,10nm,0.6s
EDW2 Edwards Air Fo 84.62 55 P P 15 07 27.9 +0.5
baz=289
MPMC Manual Prospec 84.63 54 P P 15 07 27.8 +0.1
baz=289,SNR=15
LRMC Laurel Mtn Rad 84.67 55 P P 15 07 28.1 +0.4
baz=289
ELK Elko 84.75 49 P P 15 07 29.9 +1.7
ELK IAmb IAmb 15 08 24.3
comp=Z,32nm,0.9s
ELK Elko 84.75 49 P P 15 07 29.9 +1.7
ELK pmax pmax
comp=Z,32nm,1.0s
CIS Catalina Islan 84.76 57 P P 15 07 28.9 +0.8
baz=289
LRM Limekiln Ridge 84.88 43 P P 15 07 30.1 +1.3
MZR Muzera 84.89 292 *i* P **P 15 07 29.2 +0.3**
SNR=5.7
HRY Holter Researc 84.96 42 P P 15 07 30.2 +1.2
FURC Furnace Creek, 84.98 53 P P 15 07 29.5 +0.4
baz=289,SNR=8.0
MCMT McKenzie Canyo 84.98 44 P P 15 07 30.7 +1.4
WCT Wildcat Mounta 85.05 53 P P 15 07 31.0 +1.4
WCT IAmb IAmb 15 08 25.6
comp=Z,28nm,0.9s
BFSC Mount Baldy Ra 85.09 56 P P 15 07 30.2 +0.4
baz=289
GHWR Ruwais 85.12 294 P P 15 07 30.5 +0.5
VALR Valaam 85.13 334 *de*P **P 15 07 26.5 -2.8**
VALR pmax pmax
comp=Z,32nm,0.9s
QSM Queen of Sheba 85.14 54 P P 15 07 30.4 +0.4
QSM IAmb IAmb 15 08 25.9
comp=Z,22nm,1.0s
GWY Greenwater Val 85.22 54 P P 15 07 31.1 +0.6
GWY IAmb IAmb 15 08 26.4
comp=Z,22nm,1.0s
TPNV Topopah Spring 85.28 53 P P 15 07 31.8 +0.9
TPNV IAmb IAmb 15 08 26.9
comp=Z,29nm,0.8s
TPNV Topopah Spring 85.28 53 P P 15 07 31.8 +0.9
TPNV pmax pmax
comp=Z,29nm,0.9s
TPNV Topopah Spring 85.28 53 P P 15 07 31.6 +0.8
baz=290,SNR=18
R11A Troy Canyon, C 85.31 51 P P 15 07 32.3 +1.3
R11A IAmb IAmb 15 08 27.2
comp=Z,33nm,1.3s
R11A Troy Canyon, C 85.31 51 P P 15 07 31.7 +0.7
baz=290,SNR=14
GSC Goldstone, Bar 85.41 54 P P 15 07 31.0 -0.3
baz=289,SNR=6.9
OBN Obninsk 85.41 327 *e*P **P 15 07 30.8 0.0**
OBN *e**PP **pP 15 08 23.4 +2.0**
OBN *e**SP **sP 15 08 46.2 +2.8**
OBN *e* 15 10 53.8
OBN *e*S **SKSac 15 17 30.5 -4.9**
OBN pmax pmax
comp=Z,5.0nm,1.0s
VORR Voronezh 85.44 323 *e*P **P 15 07 30.1 -0.9**
VORR pmax pmax
comp=Z,40nm,0.5s
BOZ Bozeman (W) 85.50 43 P P 15 07 33.0 +1.3
BOZ Bozeman (W) 85.50 43 P P 15 07 33.0 +1.3
BOZ pmax pmax
comp=Z,17nm,1.1s
BOZ Bozeman (W) 85.50 43 P P 15 07 32.5 +0.8
baz=292,SNR=13
EGMT Eagleton 85.77 41 P P 15 07 34.3 +1.4
EGMT Eagleton 85.77 41 P P 15 07 33.1 +0.2
baz=293
ZEI Tsey 85.92 314 *e*P **P 15 07 34.1 +0.2**
ZEI pmax pmax
comp=Z,8.0nm,0.6s
RBK Rabkut 85.92 287 P P 15 07 34.2 +0.1
SPR3 Spring Creek 3 86.01 50 P P 15 07 35.5 +1.0
SPR3 IAmb IAmb 15 08 31.1
comp=Z,40nm,1.3s
PRN Pahroc Range 86.03 52 P P 15 07 35.6 +1.2
PRN IAmb IAmb 15 08 30.9
comp=Z,27nm,1.0s
YHL Hebgen Lake 86.07 44 P P 15 07 36.2 +1.5
YHL IAmb IAmb 15 08 31.4
comp=Z,38nm,1.0s
HVU Hansel Valley 86.13 47 P P 15 07 36.3 +1.4
HVU IAmb IAmb 15 08 31.4
comp=Z,50nm,1.2s
HVU Hansel Valley 86.13 47 P P 15 07 36.3 +1.4
HVU pmax pmax
comp=Z,50nm,1.2s
PFO Pinyon Flats O 86.24 56‖ *e*P **P 15 07 38.2 +2.7**
PFO pmax pmax
comp=Z,8.0nm,1.0s
PFO Pinyon Flats O 86.24 56 P P 15 07 36.3 +0.8
baz=290
TPFO Pinon Flats 86.24 56 P P 15 07 36.1 +0.5
baz=290
KBZ Khabaz 86.25 315 P P 15 07 37.1 +1.9
comp=Z,6.3nm,0.9s,baz=136,slow=2.8,SNR=8.2
comp=Z,6.3nm,0.9s
KBZ Khabaz 86.25 315 *de*P **P 15 07 37.4 +2.2**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
SHPR Sheep Range 86.26 53 P P 15 07 36.9 +1.2
SHPR IAmb IAmb 15 08 32.2
comp=Z,19nm,1.0s
BGU Big Grassy Mou 86.26 48 P P 15 07 36.9 +1.4
PMD Palm Desert 86.29 56 P P 15 07 36.8 +1.1
PMD IAmb IAmb 15 08 31.5
comp=Z,32nm,1.1s
ONI Oni 86.30 314 P P 15 07 35.5 -0.1
ONI Oni 86.30 314 P P 15 07 35.5 -0.1
ONI pmax pmax
comp=Z,10.0nm,1.0s
KIV Kislovodsk 86.31 315 *e*P **P 15 07 34.8 -0.8**

KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,26nm,20.0s
GMRC Granite Mounta 86.47 55 P P 15 07 37.4 +0.8
baz=290,SNR=5.5
BELC Belle Mtn. Jos 86.47 55 P P 15 07 37.6 +0.9
baz=290
MONP2 Monument Peak 86.51 57 P P 15 07 37.4 +0.4
baz=290
PSUT Pine Spring 86.52 51 P P 15 07 38.1 +1.1
PSUT IAmb IAmb 15 08 33.1
comp=Z,29nm,1.0s
STEI Steigen 86.58 343 *e*P **P 15 07 35.5 -0.8**
STEI IAmb IAmb 15 07 36.0
comp=Z,22nm,0.7s
DUG Dugway, Tooele 86.68 49 P P 15 07 39.2 +1.6
DUG IAmb IAmb 15 08 33.7
comp=Z,29nm,1.0s
DUG Dugway, Tooele 86.68 49 P P 15 07 39.2 +1.6
DUG pmax pmax
comp=Z,29nm,1.0s
DUG Dugway, Tooele 86.68 49 P P 15 07 37.9 +0.3
baz=292,SNR=11
GCMT Greycliff 86.70 43 P P 15 07 39.0 +1.5
TPAW Teton Pass 86.74 45 P P 15 07 38.6 +0.7
TPAW IAmb IAmb 15 08 33.5
comp=Z,24nm,1.1s
MOOW Moose Ponds 86.78 45 P P 15 07 39.2 +1.1
ABTO Aybut 86.79 287 P P 15 07 38.9 +0.5
IKP In-Ko-Pah, Jac 86.84 57 P P 15 07 39.8 +1.4
baz=290
LOHW Long Hollow 86.93 45 P P 15 07 39.7 +0.8
FAUS Fauske 86.94 343 *e*P **P 15 07 37.6 -0.5**
FAUS IAmb IAmb 15 07 41.5
comp=Z,21nm,1.4s
SWSC Sam W. Stewart 86.98 56 P P 15 07 39.5 +0.5
baz=290
BC3 Big Chuckawall 87.01 56 P P 15 07 39.6 +0.3
baz=290
HWUT Hardware Ranch 87.03 47 P P 15 07 40.1 +0.8
HWUT IAmb IAmb 15 08 35.4
comp=Z,40nm,1.0s
FIA1 FINESS Array S 87.04 335 P P 15 07 36.1 -2.5
FIA1 IAmb IAmb 15 08 34.0
comp=Z,32nm,1.6s
FINES FINESS Array B 87.04 335 P P 15 07 37.0 -1.6
comp=Z,3.7nm,0.4s,baz=61,slow=4.7,SNR=49
FINES pP **pP 15 08 31.5 +1.9**
comp=Z,3.2nm,0.5s,baz=72,slow=4.9,SNR=3.0
comp=Z,3.7nm,0.4s
FINES FINESS Array B 87.04 335 P P 15 07 35.9 -2.7
FINES FINESS Array B 87.04 335 P P 15 07 35.9 -2.7
IRM Iron Mountain 87.08 55 P P 15 07 39.8 +0.3
baz=290
RLMT Red Lodge 87.22 43 P P 15 07 41.7 +1.6
RLMT pP **pP 15 08 29.9 -1.2**
RLMT IAmb IAmb 15 08 37.8
comp=Z,20nm,0.8s
RLMT Red Lodge 87.22 43 P P 15 07 40.0 -0.2
baz=294,SNR=9.1
CCUT Cedar City 87.24 51 P P 15 07 42.1 +1.7
CCUT pP **pP 15 08 30.4 -0.9**
CCUT IAmb IAmb 15 08 37.1
comp=Z,29nm,1.1s
NEE2 Needles Airpor 87.28 54 P P 15 07 40.7 +0.3
baz=291
NLU North Lily Min 87.29 49 P P 15 07 40.9 +0.2
NLU IAmb IAmb 15 08 36.8
comp=Z,25nm,1.0s
JLU Jordanelle 87.50 48 pP 15 08 30.5 -2.0
LCMT Little Creek M 87.52 52 P P 15 07 42.1 +0.5
LCMT IAmb IAmb 15 08 38.3
comp=Z,32nm,1.2s
GLA Glamis 87.71 56 P P 15 07 42.8 +0.2
baz=291
MVU Marysvale 87.73 50 P P 15 07 43.2 +0.5
MVU **pP 15 08 32.3 -1.3**
MSU Marysvale 87.75 50 P P 15 07 43.4 +0.6
MSU Marysvale 87.75 50 P P 15 07 43.4 +0.6
PDMCI Parker Dam,Lak 87.81 55 P P 15 07 42.6 -0.3
baz=291
KNB Kanab 87.83 52 P P 15 07 44.6 +1.4
KNB Kanab 87.83 52 P P 15 07 44.6 +1.4
KNB pmax pmax
comp=Z,62nm,1.1s
BW06 Boulder Array 87.96 45 P P 15 07 44.0 +0.2
BW06 Boulder Array 87.96 45 P P 15 07 43.2 -0.6
baz=294
PD31 Pinedale Array 87.96 45 P P 15 07 43.9 +0.1
PDAR Pinedale Array 87.96 45 P P 15 07 44.9 +1.1
comp=Z,1.0nm,0.4s,baz=118,slow=0.6,SNR=17
PDAR pP **pwP 15 08 38.5 -0.8**
comp=Z,3.1nm,0.8s,baz=262,slow=3.0,SNR=7.1
comp=Z,1.0nm,0.4s
PDAR Pinedale Array 87.96 45 P P 15 07 43.9 +0.1
Q16A Castle Valley 88.33 49 P P 15 07 45.4 -0.2
P17A Butcher Ranch, 88.43 49 P P 15 07 46.2 +0.3
P17A IAmb IAmb 15 08 43.0
comp=Z,47nm,1.3s
SOC Sochi 88.44 316 *e*P **P 15 07 44.0 -1.6**
SOC *e* 15 11 13.3
SOC *e*PPP PPP 15 13 10.6
SOC *e*S **SKSac 15 17 51.7 -2.7**
SOC *e*SS **SS 15 24 09.1 +1.5**
SOC *e*SSS SSS 15 27 42.1
VSU Vasula 88.44 333‖ *e*P **P 15 07 45.0 -0.3**
VSU pmax pmax
comp=Z,27nm,0.9s
LAO LASA Array 88.51 41 P P 15 07 46.9 +0.9
LAO IAmb IAmb 15 08 43.1
comp=Z,31nm,1.0s
LAO LASA Array 88.51 41 P P 15 07 46.4 +0.4
baz=296
CASY Casey 88.56 193 P P 15 07 45.7 +0.2
P18A Preston Nutter 88.72 49 P P 15 07 48.0 +0.5
P18A IAmb IAmb 15 08 43.8
comp=Z,15nm,1.0s
SRU San Rafael Swe 88.72 49 P P 15 07 48.2 +0.8
SRU IAmb IAmb 15 08 43.5
comp=Z,35nm,1.0s
SRU San Rafael Swe 88.72 49 P P 15 07 48.2 +0.8
SRU pmax pmax
comp=Z,35nm,1.0s
RDMU Red Mountain 88.83 47 P P 15 07 48.4 +0.5
SUMG Summit 89.09 1 P P 15 07 48.7 +0.1
SUMG Summit 89.09 1 P P 15 07 48.7 +0.1
SUMG pmax pmax
comp=Z,8.0nm,1.0s
SUMG Summit 89.09 1 *i* P **P 15 07 49.0 +0.4**
WUAZ Wupatki 89.48 53 P P 15 07 51.0 +0.1
baz=292
214A Organ Pipe Nat 89.69 56 P P 15 07 52.5 +0.7
214A Organ Pipe Nat 89.69 56 P P 15 07 53.1 +1.3
baz=292
O20A White River Ci 89.93 47 P P 15 07 54.2 +1.2
baz=294
K22A Casper 90.05 45 P P 15 07 54.4 +0.9
baz=296
MNK Minsk 90.09 329 *i* P **P 15 07 52.0 -1.1**
MNK *i **PP **pP 15 08 42.0 -2.2**
MNK *i* 15 11 28.6
MNK *i* PPP PPP 15 13 28.3
MNK *i* S **SKSac 15 18 02.1 -1.5**
MNK *i* SP **SP 15 19 34.3 -0.4**
MNK *i* PS **PS 15 20 02.8 +0.5**
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,20nm,0.9s
MNK MLR MLR
comp=Z,65nm,19.0s
MNK MLR MLR
comp=E,12nm,19.0s
MNK Minsk 90.09 329 *i* P **P 15 07 52.1 -1.1**
comp=E,2.0nm,0.8s
MNK *i* P **P 15 07 52.1 -1.1**
MNK *i* P **P 15 07 52.1 -1.1**
comp=Z,20nm,0.8s,baz=57
MNK *i* pP **pP 15 08 42.0 -2.2**
MNK *i* PP **PP 15 11 28.6 -0.4**
MNK *i* PPP PPP 15 13 28.4
MNK *i* S **SKSac 15 18 02.2 -1.5**
MNK *i* sS **pS 15 19 37.7 +4.7**
MNK *i* PS **PS 15 20 02.8 +0.5**

MNK *i* SS SS 15 23 48.8 -42
MNK *i* SSS SSS 15 28 00.8
MNK *i* LR LR 15 47 16.7
MNK *i* LRM MLR 15 51 13.2
comp=Z,65nm,18.7s
MNK *i* LRM MLR 15 51 15.2
comp=E,12nm,18.7s
NACGM Naroch 90.40 330⇑ *e*P **P 15 07 51.7 -2.9**
baz=56
MVCO Mesa Verde 90.94 50 P **P 15 07 58.4 +0.6**
MVCO Mesa Verde 90.94 50 P **P 15 07 59.1 +1.3**
baz=294
RSSD Black Hills 91.03 43 P **P 15 07 57.2 -0.8**
baz=297
TUC Tucson 91.16 55 P **P 15 07 59.0 +0.3**
TUC IAmb IAmb 15 08 56.6
comp=Z,46nm,1.4s
TUC Tucson 91.16 55 P **P 15 07 59.0 +0.3**
TUC pmax pmax
comp=Z,46nm,1.4s
TUC Tucson 91.16 55 P **P 15 07 59.7 +1.0**
baz=293
N23A Red Feather La 91.20 46 P **P 15 07 59.5 +0.6**
N23A Red Feather La 91.20 46 P **P 15 07 59.9 +0.9**
baz=296
AKASG Malin Array Be 91.44 325 P **P 15 07 57.8 -1.7**
comp=Z,0.5nm,0.5s,baz=349,slow=40,SNR=2.3
AKASG pP **pP 15 08 51.9 +1.3**
comp=Z,0.2nm,0.3s,baz=46,slow=5.0,SNR=1.9
comp=Z,0.5nm,0.5s
RAYN Ar Rayn 91.64 295 P **P 15 07 59.7 -1.3**
RAYN Ar Rayn 91.64 295 P **P 15 07 59.7 -1.3**
RAYN pmax pmax
comp=Z,10.0nm,0.9s
RAYN Ar Rayn 91.64 295 *i* P **P 15 07 60.0 -1.0**
SNR=6.0
ISCO Idaho Springs 91.90 47 P **P 15 08 02.5 +0.3**
baz=296
S22A 4UR Ranch, Cre 91.93 49 P **P 15 08 03.2 +0.7**
baz=295
Q24A Divide 92.59 47 P **P 15 08 06.5 +1.0**
baz=296
NB2 NORSAR Subarra 92.73 340 P **P 15 08 02.9 -2.4**
comp=Z,1.4nm,1.0s,baz=42,slow=4.6
NB2 NORSAR Subarra 92.73 340 P **P 15 08 02.9 -2.4**
baz=42,slow=4.6
NOA NORSAR Array B 92.73 340 P **P 15 08 03.6 -1.7**
comp=Z,1.0nm,0.8s,baz=44,slow=4.8,SNR=5.5
NOA PP **PP 15 11 50.5 +1.0**
comp=Z,1.0nm,0.9s,baz=62,slow=5.2,SNR=4.0
comp=Z,1.0nm,0.8s
ULM Lac du Bonnet 92.76 34 P **P 15 08 05.8 +0.3**
comp=Z,7.6nm,0.9s,baz=297,slow=8.5,SNR=7.0
ULM pP **pwP 15 09 00.1 -1.0**
comp=Z,15nm,0.8s,baz=288,slow=3.6,SNR=10
comp=Z,7.6nm,0.9s
ULM Lac du Bonnet 92.76 34 P **P 15 08 05.9 +0.3**
ULM pP **pP 15 08 56.3 -0.6**
ULM pwP **pwP 15 09 00.6 -0.5**
ULM IAmb IAmb 15 09 01.3
comp=Z,16nm,0.8s
SDCO Great Sand Dun 92.88 49 P **P 15 08 08.4 +1.6**
baz=296
ANMO Albuquerque 93.39 52 *de*P **P 15 08 10.9 +1.8**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO Albuquerque 93.39 52 P **P 15 08 10.5 +1.5**
baz=295
121A Cookes Peak, D 93.39 54 P **P 15 08 10.0 +0.8**
baz=294
AGMN Agassiz Nation 93.84 36 P **P 15 08 11.6 +1.0**
baz=303
T25A Trinidad 93.92 49 P **P 15 08 12.0 +0.5**
baz=297
BR131 Keskin Array S 94.22 314 P **P 15 08 11.1 -1.7**
BR131 Keskin Array S 94.22 314⇓ *e*P **P 15 08 12.0 -0.7**
BRTR Keskin Array B 94.22 314 P **P 15 08 10.7 -2.0**
comp=Z,1.7nm,0.7s,baz=100,slow=3.0,SNR=9.6
comp=Z,1.7nm,0.7s
BRTR Keskin Array B 94.22 314 *i* P **P 15 08 12.1 -0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
MNTX Cornudas Mount 95.59 54 P **P 15 08 19.6 +0.7**
baz=296
ECSD EROS Data Cent 95.87 40 P **P 15 08 19.8 -0.2**
ECSD IAmb IAmb 15 09 16.1
comp=Z,26nm,1.9s
ECSD EROS Data Cent 95.87 40 P **P 15 08 19.9 -0.1**
baz=302
VNDA Vanda 96.31 177 P **P 15 08 21.0 -0.1**
comp=Z,1.1nm,0.9s,baz=315,slow=5.7,SNR=5.4
comp=Z,1.1nm,0.9s
TXAR Lajitas Array 97.95 56 P Pdif 15 08 31.6 +1.8
comp=Z,0.1nm,0.3s,baz=225,slow=23,SNR=1.3
TXAR pP pP 15 09 21.7 +0.6
comp=Z,1.0nm,0.9s,baz=259,slow=2.6,SNR=2.9
TXAR PKKP **PKKPbc 15 25 03.2 +0.3**
comp=Z,0.2nm,0.7s,baz=141,slow=6.1,SNR=3.5
comp=Z,0.1nm,0.3s
CLL Collm 99.09 332 *e*PP **PP 15 12 40.0 +1.4**
GERES GERESS Array B 100.50 330 P Pdif **15 08 38.9 -1.8**
comp=Z,0.3nm,0.7s,baz=74,slow=4.9,SNR=5.4
GERES PP **PP 15 12 49.8 +0.3**
comp=Z,0.7nm,0.9s,baz=14,slow=5.9,SNR=3.7
GERES PKKPbc **PKKPbc 15 24 54.6 -2.0**
comp=Z,0.8nm,0.7s,baz=216,slow=4.3,SNR=7.2
ESDC Sonseca Array 115.54 334 PP **PP 15 14 37.9 -0.7**
comp=Z,1.0nm,0.8s,baz=21,slow=7.1,SNR=7.4
ESDC PKKPab **PKKPab 15 24 15.5 -0.8**
comp=Z,2.4nm,0.9s,baz=214,slow=4.8,SNR=12
TROLL Troll, Antarti 122.41 193 PKPdf **PKPdf 15 13 46.0 -0.8**
VNA2 Neumayer--Watz 125.19 190 PKPdf **PKPdf 15 13 50.7 -1.2**
baz=69,slow=1.0
VNA3 Neumayer Olymp 125.29 190 PKPdf **PKPdf 15 13 51.2 -0.9**
VNA1 Neumayer--Stat 125.58 190 PKPdf **PKPdf 15 13 52.1 -0.6**
SMAI San Martin Ant 126.27 165 PKPdf **PKPdf 15 13 53.7 -0.3**
TORD Torodi Ar. Bea 132.55 309 PKP **PKPdf 15 14 05.5 -2.0**
comp=Z,0.4nm,0.5s,baz=339,slow=1.3,SNR=2.5
TORD SKPbc **SKPbc 15 17 10.5 -4.1**
comp=Z,3.7nm,0.9s,baz=31,slow=2.8,SNR=8.9
SDV Santo Domingo 135.00 56 PKPdf **PKPdf 15 14 11.5 -1.0**
SDV Santo Domingo 135.00 56 *e*P **PKPdf 15 14 12.5 +0.1**
BAUV El Baul 136.97 53 PKPdf **PKPdf 15 14 14.9 -1.0**
DBIC Dimbokro 141.64 308 PKhKP PKPpre 15 14 18.6
comp=Z,1.7nm,0.5s,baz=69,slow=3.1,SNR=1.7
DBIC SKPbc **SKPbc 15 17 36.8 -4.7**
comp=Z,4.7nm,0.8s,baz=73,slow=4.9,SNR=4.8
PLCA Paso Flores 141.90 133 PKhKP PKPpre 15 14 19.5
comp=Z,3.7nm,0.7s,baz=233,slow=4.7,SNR=11
PLCA Paso Flores 141.90 133 PKPdf PKPdf 15 14 24.6 +0.5
PLCA Paso Flores 141.90 133 PKIKP **PKPdf 15 14 24.6 +0.5**
BO01 Tunca 143.72 123 PKPbc 15 14 25.6 0.0
MT01 Popeta 143.73 122 PKPbc 15 14 25.7 0.0
BO02 Sierra Bellavi 143.84 124 PKPbc 15 14 26.2 +0.1
MT09 Talagante 143.97 122 PKPdf PKPbc 15 14 26.7 +0.1
MT02 Curacav 143.98 121 PKPbc 15 14 26.5 0.0
VA06 Catapilco 144.02 120 PKPdf PKPbc 15 14 26.4 -0.2
CO06 Fray Jorge 144.14 117 PKPbc 15 14 26.8 -0.2
ROC1 El Roble 144.15 121 PKPbc 15 14 27.1 -0.2
MT05 Renca 144.27 122 PKPdf PKPbc 15 14 27.7 +0.3
PEL Peldehue 144.38 121 PKPdf PKPbc 15 14 27.9 +0.2
PEL Peldehue 144.38 121 PKIKP PKPbc 15 14 27.9 +0.2
GO04 Tololo Observa 144.95 116 PKPbc 15 14 29.8 0.0
AC05 El Transito 145.63 114 PKPbc **PKPab 15 14 32.1 -0.3**
AC06 Mina Casimiro 145.77 112 PKPab 15 14 33.4 +0.5
GO03 Copiap 145.85 112 PKPbc 15 14 32.6 +0.2
PB12 IPOC Station P 145.90 96 PKPdf **PKPdf 15 14 30.9 -0.8**
PB14 IPOC Station P 145.97 107 PKPbc **PKPbc 15 14 33.0 -0.2**
ZON Zonda 146.43 119 PKPbc **PKPbc 15 14 33.8 -0.2**
ZON Zonda 146.43 119 PKP2 **PKPbc 15 14 33.8 -0.2**
PB02 IPOC Station P 146.48 101 PKPbc 15 14 33.7 -0.8
PB07 IPOC Station P 146.50 102 PKPbc 15 14 33.8 -0.8
GO02 Mina Guanaco 146.67 108 PKPbc **PKPbc 15 14 35.4 +0.3**
PB06 IPOC Station P 146.79 103 PKPbc 15 14 34.5 -0.9
BOAV Boa Vista 146.88 54 PKPbc 15 14 35.4 -0.3
BOAV Boa Vista 146.88 54 *e*P **PKPdf 15 14 33.7 +0.2**
GO01 Chusmiza 147.06 98 PKPdf 15 14 35.2 +1.0
LVC Limon Verde 147.41 103 PKPdf **PKPdf 15 14 34.4 -0.2**
LVC Limon Verde 147.41 103 PKIKP **PKPdf 15 14 34.4 -0.2**
LVC Limon Verde 147.41 103 *e*P **PKPdf 15 14 33.9 -0.7**
LPAZ La Paz 147.69 91 PKPbc **PKPdf 15 14 36.3 +0.8**
comp=Z,38nm,0.9s,baz=324,slow=2.2,SNR=61
LPAZ La Paz 147.69 91 PKPdf **PKPdf 15 14 35.5 0.0**
LPAZ La Paz 147.69 91 PKIKP **PKPdf 15 14 35.5 0.0**
ETMB Extrema 147.94 79 PKPdf **PKPdf 15 14 34.2 -0.9**
ETMB PKPbc **PKPbc 15 14 37.5 -1.0**
ETMB Extrema 147.94 79 *e*P **PKPdf 15 14 35.1 -0.1**
AF01 San Pedro de A 148.07 104 PKiKP 15 14 40.5 -0.1
MACA Manacapuru-AM 150.02 63 *e*P **PKPdf 15 14 38.7 +0.1**
PTLB Pontes e Lacer 156.08 86 *e*P **PKPdf 15 14 47.1 0.0**
CPUP Villa Florida 157.38 114 PKPab **PKPab 15 15 22.8 +1.6**
comp=Z,16nm,0.9s,baz=270,slow=4.9,SNR=16
CLDB Colider 157.90 73 *e*P **PKPdf 15 14 49.1 -0.4**
BDFB Brasilia 166.60 80 PKP **PKPdf 15 14 58.2 -0.1**
comp=Z,2.3nm,0.7s,baz=21,slow=7.5,SNR=5.2
BDFB PKPab **PKPab 15 16 03.4 +1.4**
comp=Z,5.7nm,1.1s,baz=150,slow=8.3,SNR=5.1

*NNC **21** 15:15:21.3±0.4,41.60N×62.81E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=6.0km s-min=3.2km az=127.0*
*ISU **21** 15:15:23,40.98N×61.88E,h10km*
ISC 21 15:15:22.6±0.8,41.55N±0.05×62.82E±0.06,h10km,n8,
σ1§80/15,9C-2D,Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GZLY	**Gazly**	**1.50**	**161**	P	**P**	**Pg**	**15 15 51.0**	**-0.4**
GZLY				S		**Sg**	**15 16 10.3**	**-0.6**
BUXR	**Bukhara**	**2.15**	**147**	P	**Pb**		**15 16 00.4**	**-1.3**
BUXR				S		**Sb**	**15 16 28.6**	**+0.2**
AGL	**Agalyk**	**3.71**	**122**	P	**Pb**		**15 16 29.1**	**+0.9**
AGL				S		**Sb**	**15 17 14.2**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**5.12**	**227**	⇑Pn	**Pn**		**15 16 39.8**	**+0.5**
GYA0B				⇑Sn		**Sn**	**15 17 40.6**	**+2.0**
GYA0B				⇑Lg	Lg		15 18 06.5	
KK31	**Karatay Array**	**5.91**	**72**	⇑Pn	**Pn**		**15 16 50.3**	**+0.1**
	0.4nm,0.2s,baz=244,slow=17,SNR=26							
KK31				⇓Pg		**Pb**	**15 17 08.5**	**+2.8**
	0.8nm,0.3s,baz=262,slow=15,SNR=6.6							
KK31				⇑Lg	Lg		15 18 26.8	
	5.8nm,0.6s,baz=253,slow=29,SNR=3.5							
AB31	**Akbulak array**	**7.96**	**346**	Pn	**Pn**		**15 17 17.5**	**-0.9**
	0.2nm,0.2s,baz=155,slow=14,SNR=21							
AB31				⇑Lg	Lg		15 19 31.7	
	1.8nm,0.4s,baz=158,slow=28,SNR=3.6							
AKTO	**Aktyubinsk**	**9.49**	**341**	⇑Pn	**Pn**		**15 17 38.8**	**-0.4**
AKTO				⇑Sn		**Sn**	**15 19 26.2**	**+0.3**
	1.7nm,0.7s							
AKTO				⇓Lg	Lg		15 20 22.4	
	7.5nm,0.9s							
BVA0	**Borovoye Array**	**12.56**	**21**	⇑Pn	**Pn**		**15 18 20.9**	**-0.4**
	1.2nm,0.8s							
BVA0				Sn	**Sn**		**15 20 36.6**	**-4.7**
	2.2nm,0.8s,baz=211,slow=19,SNR=7.8							

*IDC **21** 15:28:37.5±1.1,3.84S×101.66E,h0km,mb4.0/13, mbtmp4.0/13,MS2.7/2,Error ellipse: s-maj=41.0km s-min=14.8km az=56.0*
*DJA **21** 15:28:46.0±0.5,4.3S×103.2E±°,h31km±5km,M4.1/13, MLv4.1/13*
*NEIC **21** 15:28:46.2±1.7,3.81S±0.07×101.82E±0.07,h60km±8km, mb4.4/17,Error ellipse: s-maj=11.3km s-min=9.5km az=214.0*
ISC 21 15:28:45.5±0.5,3.81S±0.05×101.85E±0.05,h58km,n59,
σ0§78/60,mb4.2/20,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.76**	**78**	P	**Pn**		**15 29 00.4**	**-0.1**
KSI				S		**Sn**	**15 29 11.6**	**+0.2**
MASI	**Maura Aman, Be**	**0.77**	**31**	P	**Pn**		**15 29 00.6**	**0.0**
MASI				S		**Sn**	**15 29 12.3**	**+0.8**
MNAI	**Manna**	**1.23**	**117**	P	**Pn**		**15 29 06.6**	**-0.1**
MNAI	**Manna**	**1.23**	**117**	P	**Pn**		**15 29 07.2**	**+0.6**
MNAI				S	**Sn**		**15 29 22.9**	**+0.5**
KRJI	**Kerinci**	**1.75**	**347**	P	**Pn**		**15 29 14.7**	**+1.0**
KRJI				S	**Sn**		**15 29 37.0**	**+2.1**
PPSI	**Pulau Pagai**	**2.11**	**299**	P	**Pn**		**15 29 19.8**	**+1.3**
LWLI	**Liwa**	**2.51**	**119**	P	**Pn**		**15 29 25.2**	**+1.1**
JMBI	**JAMBI**	**2.80**	**40**	P	**Pn**		**15 29 29.2**	**+1.2**
PMBI	**Palembang**	**3.04**	**73**	P	**Pn**		**15 29 31.2**	**-0.1**
KASI	**Kota Agung**	**3.14**	**123**	P	**Pn**		**15 29 33.8**	**+1.2**
KLI	**Kotabumi**	**3.18**	**109**	P	**Pn**		**15 29 33.7**	**+0.6**
SISI	**Saibi**	**3.70**	**312**	P	**Pn**		**15 29 41.2**	**+1.0**
DSRI	**Dabo**	**4.28**	**40**	P	**Pn**		**15 29 49.8**	**+1.5**
MYKOM	**Kota Tinggi**	**5.91**	**20**		**Pn**		**15 30 12.0**	**+1.5**
LEM	**Lembang**	**6.48**	**118**	LR	LR		15 33 16.7	
	comp=Z,58nm,19.1s,baz=258,slow=42							
GSI	**Gunungsitoli**	**6.63**	**320**		**Pn**		**15 30 20.4**	**0.0**
GSI	**Gunungsitoli**	**6.63**	**320**	P	**Pn**		**15 30 20.8**	**+0.3**
KULM	**Kulim**	**9.11**	**352**	Pn	**Pn**		**15 30 54.8**	**+0.3**
COCO	**West Island**	**9.70**	**210**	Pn	**Pn**		**15 31 02.8**	**+0.4**
JAGI	**Jajag, Banyuwa**	**13.08**	**111**	Pn	**Pn**		**15 31 48.2**	**-0.4**
UBPT	**Khong Chiam**	**19.30**	**11**	P	**P**		**15 33 05.8**	**0.0**
CMAR	**Chiang Mai Arr**	**22.31**	**353**	P	**P**		**15 33 37.5**	**-0.9**
	0.7nm,0.5s,baz=184,slow=8.8,SNR=6.9							
CMAR				LR	LR		15 42 14.2	
	comp=Z,20nm,18.5s,baz=310,slow=37							
	0.7nm,0.5s							
FITZ	**Fitzroy Crossi**	**27.28**	**123**	P	**P**		**15 34 25.1**	**+0.4**
	0.6nm,0.5s,baz=310,slow=7.9,SNR=1.3							
	0.6nm,0.5s							
H08S2	**Diego Garcia H**	**29.45**	**261**	T	T		16 04 53.8	
	baz=84,slow=76,SNR=19							
H08S3	**Diego Garcia H**	**29.46**	**261**	T	T		16 04 54.8	
	baz=84,slow=76,SNR=19							
H08S1	**Diego Garcia H**	**29.47**	**261**	T	T		16 04 52.1	
	baz=84,slow=76,SNR=20							
WB0	**Warramunga Arr**	**35.48**	**119**	P	**P**		**15 35 36.6**	**-0.2**
WB0				IAmb	IAmb		15 36 12.2	
	comp=Z,4.9nm,1.2s							
WRA	**Warramunga Arr**	**35.50**	**120**	P	**P**		**15 35 37.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=303,slow=8.8,SNR=22							
	comp=Z,0.4nm,0.5s							
WRA	**Warramunga Arr**	**35.50**	**120**	P	**P**		**15 35 36.7**	**-0.3**
WRAB	**Tennant Creek**	**35.50**	**119**	P	**P**		**15 35 37.1**	**+0.1**
WRAB				IAmb	IAmb		15 35 56.5	
	comp=Z,9.9nm,1.4s							
WB2	**Warramunga Arr**	**35.51**	**120**	P	**P**		**15 35 36.8**	**-0.3**
WB2				IAmb	IAmb		15 36 13.9	
	comp=Z,8.2nm,1.4s							
WR0	**Warramunga Arr**	**35.68**	**119**	P	**P**		**15 35 37.9**	**-0.6**
WR0				IAmb	IAmb		15 35 40.9	
	comp=Z,3.7nm,1.1s							
ASAR	**Alice Springs**	**36.70**	**125**	P	**P**		**15 35 47.5**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=297,slow=8.4,SNR=8.1							
ASAR				PcP	**PcP**		**15 38 09.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=296,slow=2.6,SNR=2.7							
	comp=Z,0.4nm,0.4s							
ASAR	**Alice Springs**	**36.70**	**125**	P	**P**		**15 35 47.3**	**-0.1**
AS31	**Alice Springs**	**36.71**	**125**	P	**P**		**15 35 47.2**	**-0.2**
BBOO	**Buckleboo**	**43.08**	**136**	P	**P**		**15 36 40.6**	**+0.5**
BBOO				IAmb	IAmb		15 37 21.9	
	comp=Z,16nm,1.4s							
JNU	**Nakatsue**	**45.87**	**35**	P	**P**		**15 37 03.5**	**+1.2**
STKA	**Stephens Creek**	**46.58**	**132**	P	**P**		**15 37 08.7**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=314,slow=9.8,SNR=7.6							
	comp=Z,1.4nm,0.6s							
STKA	**Stephens Creek**	**46.58**	**132**	P	**P**		**15 37 09.0**	**+1.1**
KSRS	**Korea Array**	**47.67**	**28**	P	**P**		**15 37 16.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=212,slow=9.6,SNR=5.2							
	comp=Z,0.7nm,0.8s							
SONM	**Songino Array**	**51.58**	**4**	P	**P**		**15 37 46.3**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=183,slow=9.5,SNR=14							
	comp=Z,2.5nm,0.7s							
SONM	**Songino Array**	**51.58**	**4**	P	**P**		**15 37 46.6**	**+0.6**
SONM				IAmb	IAmb		15 37 47.6	
	comp=Z,2.0nm,0.8s							
MK31	**Makanchi Array**	**53.27**	**343**	P	**P**		**15 37 57.8**	**-0.6**
MK31				IAmb	IAmb		15 37 58.6	
	comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**53.27**	**343**	P	**P**		**15 37 58.1**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=152,slow=8.9,SNR=28							
	comp=Z,2.3nm,0.5s							
MKAR	**Makanchi Array**	**53.27**	**343**	P	**P**		**15 37 57.4**	**-1.0**
USRK	**Ussuriysk Ar.**	**54.91**	**26**	P	**P**		**15 38 10.2**	**-0.2**
	comp=Z,3.2nm,0.5s,baz=215,slow=4.3,SNR=16							
	comp=Z,3.2nm,0.5s							
USRK	**Ussuriysk Ar.**	**54.91**	**26**	P	**P**		**15 38 10.0**	**-0.3**
ZAA0	**Zalesovo Array**	**59.28**	**348**	P	**P**		**15 38 39.9**	**-1.2**
ZALV	**Zalesovo Beam**	**59.28**	**348**	P	**P**		**15 38 40.3**	**-0.8**
	comp=Z,5.2nm,0.5s,baz=171,slow=5.7,SNR=24							
	comp=Z,5.2nm,0.5s							
ZALV	**Zalesovo Beam**	**59.28**	**348**	P	**P**		**15 38 39.9**	**-1.2**
ABKAR	**Akbulak array**	**64.10**	**331**	P	**P**		**15 39 12.4**	**-1.2**
ABKAR	**Akbulak array**	**64.10**	**331**	P	**P**		**15 39 12.3**	**-1.3**
ABKAR				IAmb	IAmb		15 39 13.6	
	comp=Z,1.8nm,0.7s							
PET	**Petropavlovsk**	**73.89**	**32**	P	**P**		**15 40 13.7**	**-0.6**
BRTR	**Keskin Array B**	**75.90**	**312**	P	**P**		**15 40 26.1**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=142,slow=7.4,SNR=5.6							
	comp=Z,0.7nm,0.5s							
BRTR	**Keskin Array B**	**75.90**	**312**	P	**P**		**15 40 25.9**	**-0.5**
FINES	**FINESS Array B**	**86.56**	**332**	P	**P**		**15 41 21.4**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=130,slow=8.4,SNR=4.1							
	comp=Z,1.4nm,0.8s							
FINES	**FINESS Array B**	**86.56**	**332**	P	**P**		**15 41 21.8**	**-0.4**
ARCES	**ARCESS Array B**	**88.79**	**340**	P	**P**		**15 41 32.4**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=108,slow=4.0,SNR=5.0							
	comp=Z,2.2nm,0.9s							
TXAR	**Lajitas Array**	**144.93**	**41**	PKPbc	**PKPdf**		**15 48 16.7**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=240,slow=1.3,SNR=12							

*NOU **21** 15:32:57.3,17.72S×178.41W,h537km,mb5.1/76,Fiji Islands Region*
*NEIC **21** 15:32:57.0±1.9,17.7S±0.1×178.6W±0.1,h520km±6km, mb4.5/238,Error ellipse: s-maj=16.4km s-min=13.6km az=146.0*
*IDC **21** 15:33:00.0±0.8,17.76S×178.68W,h548km±8km,mb4.1/26, mbtmp5.0/27,Error ellipse: s-maj=14.3km s-min=8.2km az=150.0*
ISC 21 15:32:58.5±0.3,17.87S±0.05×178.45W±0.05,h550km,
n661,σ1§39/678,mb4.5/183,2C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.51**	**224**	P	**P**		**15 34 01.7**	**-2.1**
TAVE	**Taveuni**	**1.81**	**309**	P	**P**		**15 34 05.4**	**-2.1**
MSVF	**Nonsavu**	**3.34**	**272**	P	**P**		**15 34 14.8**	**-1.0**
	510nm,0.7s,baz=111,slow=5.0,SNR=241							
MSVF				S		**S**	**15 35 18.9**	**+0.2**
	33nm,0.9s,baz=55,slow=23,SNR=11							
MSVF	**Nonsavu**	**3.34**	**272**	P	**P**		**15 34 14.4**	**-1.4**
MSVF	**Nonsavu**	**3.34**	**272**	P	**P**		**15 34 14.8**	**-1.0**
AFI	**Afiamalu**	**7.53**	**59**	P	**P**		**15 34 48.1**	**-3.7**
	130nm,0.6s,baz=248,slow=1.1,SNR=12							
AFI				S		**S**	**15 36 17.0**	**-7.4**
	29nm,0.5s,baz=11,slow=22,SNR=1.5							
AFI	**Afiamalu**	**7.53**	**59**	P	**P**		**15 34 47.7**	**-4.0**
AFI	**Afiamalu**	**7.53**	**59**	P	**P**		**15 34 48.1**	**-3.7**
NIUE	**Niue**	**8.17**	**100**	P	**P**		**15 34 57.5**	**-0.5**
	baz=8.3							
NIUE	**Niue**	**8.17**	**100**	P	**P**		**15 34 57.2**	**-0.7**
NIUE	**Niue**	**8.17**	**100**	P	**P**		**15 34 57.8**	**-0.2**
FUNA	**Funafuti**	**9.56**	**346**	P	**P**		**15 35 09.1**	**-3.0**
FUNA	**Funafuti**	**9.56**	**346**	P	**P**		**15 35 10.6**	**-1.5**
	262nm,1.1s							
RAO	**Raoul Island**	**11.34**	**178**	S	**S**		**15 37 32.4**	**-2.5**
	173nm,0.3s,baz=108,slow=22,SNR=2.1							
GLKZ	**Green Lake**	**11.35**	**178**	P	P		15 35 24.6	-5.6
GLKZ				S	**S**		**15 37 33.4**	**-1.7**
RTV	**Rentapao**	**12.50**	**268**	P	**P**		**15 35 40.9**	**-1.4**
DVP	**Devils Point**	**12.73**	**269**	P	**P**		**15 35 44.3**	**-0.4**
MARNC	**Mare, Loyalty**	**13.23**	**252**	P	**P**		**15 35 46.6**	**-3.2**
MARNC	**Mare, Loyalty**	**13.23**	**252**	P	**P**		**15 35 48.7**	**-1.1**
PINNC	**Pines Island,**	**14.05**	**248**	P	**P**		**15 35 56.8**	**-1.5**
PINNC	**Pines Island,**	**14.05**	**248**	P	**P**		**15 35 57.5**	**-0.7**
YATNC	**Mamie plateau,**	**14.40**	**251**	P	**P**		**15 36 01.0**	**-0.8**
OUENC	**Ouen Island, N**	**14.54**	**249**	P	**P**		**15 36 01.2**	**-1.9**
OUENC	**Ouen Island, N**	**14.54**	**249**	P	**P**		**15 36 02.2**	**-1.0**
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**		**15 36 03.2**	**-2.9**
	13nm,0.5s,baz=115,slow=22,SNR=21							
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**		**15 36 03.7**	**-2.4**
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**		**15 36 04.7**	**-1.4**
ONTNC	**Ouen Toro**	**14.85**	**250**	P	**P**		**15 36 03.8**	**-2.7**
ONTNC	**Ouen Toro**	**14.85**	**250**	P	**P**		**15 36 05.4**	**-1.1**
	52nm,1.0s							
NOUC	**Port Laguerre**	**14.94**	**251**	P	**P**		**15 36 06.1**	**-1.3**
KOUNC	**Koumac, New Ca**	**16.53**	**258**	P	**P**		**15 36 21.6**	**-1.4**
KOUNC	**Koumac, New Ca**	**16.53**	**258**	P	**P**		**15 36 22.6**	**-0.4**
OUZ	**Omahuta**	**18.68**	**201**	P	**P**		**15 36 44.6**	**+2.3**
OUZ	**Omahuta**	**18.68**	**201**	P	**P**		**15 36 44.7**	**+2.3**
WCZ	**Waipu Caves**	**19.10**	**198**	P	**P**		**15 36 49.1**	**+2.8**
KUZ	**Kuaotunu**	**19.50**	**194**	P	**P**		**15 36 51.6**	**+1.8**
MBAZ	**Motutapu North**	**19.72**	**196**	P	**P**		**15 36 54.0**	**+2.1**
HAZ	**Te Kaha**	**20.09**	**189**	P	**P**		**15 36 54.7**	**-0.5**
HAZ				S	**S**		**15 40 01.8**	**-5.2**
PKGZ	**Pakihiroa**	**20.18**	**188**	P	**P**		**15 36 55.2**	**-0.9**
RUGZ	**Raukumara Rang**	**20.31**	**189**	P	**P**		**15 36 56.8**	**-0.5**
RUGZ				S	**S**		**15 40 07.2**	**-3.6**
TGRZ	**Tauranga**	**20.32**	**192**	P	**P**		**15 36 59.1**	**+1.7**
TWGZ	**Tauwhareparae**	**20.48**	**188**	P	**P**		**15 36 58.9**	**+0.2**
TWGZ				S	**S**		**15 40 10.9**	**-2.4**
TOZ	**Tahuroa Road**	**20.49**	**194**	P	**P**		**15 37 01.2**	**+2.4**
KMRZ	**Kaimai**	**20.50**	**193**	P	**P**		**15 37 01.0**	**+2.0**
URZ	**Urewera**	**20.69**	**190**	P	**P**		**15 36 58.8**	**-1.8**
	17nm,0.7s,baz=256,slow=4.6,SNR=16							
URZ				S	**S**		**15 40 11.5**	**-5.0**
	10nm,0.8s,baz=237,slow=17,SNR=1.9							
URZ	**Urewera**	**20.69**	**190**	P	**P**		**15 36 59.0**	**-1.6**
URZ	**Urewera**	**20.69**	**190**	P	**P**		**15 36 59.0**	**-1.6**
URZ				S	**S**		**15 40 12.0**	**-4.5**
MWZ	**Matawai**	**20.69**	**189**	P	**P**		**15 36 59.2**	**-1.6**
MWZ				S	**S**		**15 40 11.7**	**-5.1**
TKGZ	**Te Karaka**	**20.75**	**188**	P	**P**		**15 37 01.5**	**+0.4**
MUGZ	**Murupara**	**20.96**	**191**	P	**P**		**15 37 02.3**	**-0.8**
HIZ	**Hauiti**	**21.39**	**195**	P	**P**

64nm,0.6s,baz=89,slow=9.9,SNR=268
64nm,0.6s
STKA Stephens Creek 38.62 241 P P 15 39 35.6 +0.5
baz=39,SNR=254
STKA Stephens Creek 38.62 241 P P 15 39 35.6 +0.5
STKA IAmb IAmb 15 39 36.5
comp=Z,24nm,1.1s
STKA Stephens Creek 38.62 241 P P 15 39 35.7 +0.7
INKA Innaminka 38.73 248 P P 15 39 36.9 +0.9
QIS Mount Isa 39.63 259 P P 15 39 42.0 -1.3
baz=40,SNR=11
QIS Mount Isa 39.63 259 P P 15 39 42.4 -1.0
ARPS Mount Arapiles 39.65 234 P P 15 39 43.7 +0.4
baz=40,SNR=17
ARPS Mount Arapiles 39.65 234 P P 15 39 43.6 +0.4
HTT Hallett 41.13 239 P P 15 39 55.7 +0.5
baz=41,SNR=112
HTT Hallett 41.13 239 P P 15 39 56.1 +0.9
LCRK Leigh Creek 41.24 244 P P 15 39 56.5 +0.5
TWOA Tennyson Woods 41.75 237 P P 15 39 59.8 -0.2
comp=Z,70nm,0.8s
WHYH Whyalla 42.17 240 P P 15 40 03.4 +0.1
comp=Z,120nm,0.8s
OOD Oodnadatta 43.20 248 P P 15 40 12.2 +0.7
KHLU Kahalu`u 43.32 32 P P 15 40 13.1 +0.6
GENI Genyem 43.32 286 P P 15 40 12.5 -0.1
comp=Z,3µmcomp=Z,193nm,1.1s
BBOO Buckleboo 43.39 241 P P 15 40 13.1 +0.1
baz=43,SNR=160
BBOO Buckleboo 43.39 241 P P 15 40 12.9 0.0
BBOO Buckleboo 43.39 241 P P 15 40 13.2 +0.3
MLH Mauna Loa 43.49 32 P P 15 40 14.0 -0.1
HMH Humu'ula Sheep 43.53 32 P P 15 40 15.5 +1.0
KEKH Kekaha 43.65 26 P P 15 40 15.6 +0.7
HPAH Hawaii Prepara 43.78 32 P P 15 40 17.1 +1.0
MHA Mahukona 43.81 31 P P 15 40 17.7 +1.5
KIP Kipapa 43.88 28 P P 15 40 16.9 +0.2
HLK Haleakala 44.13 31 P P 15 40 19.6 +0.6
KHLH Kahului Airpor 44.16 30 P P 15 40 20.0 +1.1
WR0 Warramunga Arr 44.41 259 P P 15 40 19.6 -1.4
WB0 Warramunga Arr 44.57 260 P P 15 40 20.8 -1.4
WB2 Warramunga Arr 44.59 259 P P 15 40 21.1 -1.3
WRAB Tennant Creek 44.59 260 P P 15 40 20.9 -1.4
WRAB Tennant Creek 44.59 260 P P 15 40 21.3 -1.1
WRA Warramunga Arr 44.60 259 P P 15 40 21.0 -1.5
comp=Z,27nm,0.6s,baz=96,slow=7.2,SNR=484
WRA PcP PcP 15 41 54.7 +1.2
comp=Z,2.7nm,0.7s,baz=86,slow=3.8,SNR=2.6
WRA ScP ScP 15 44 56.9 +3.4
comp=Z,0.8nm,0.8s,baz=86,slow=3.0,SNR=2.8
comp=Z,27nm,0.6s
AS31 Alice Springs 44.77 254 P P 15 40 23.2 -0.5
ASAR Alice Springs 44.77 254 P P 15 40 23.2 -0.5
comp=Z,306nm,0.6s,baz=88,slow=8.2,SNR=5206
ASAR PcP PcP 15 41 55.0 +1.0
comp=Z,4.1nm,0.7s,baz=101,slow=4.0,SNR=3.3
ASAR ScP ScP 15 44 57.5 +3.3
comp=Z,1.9nm,0.8s,baz=118,slow=5.0,SNR=4.4
ASAR S S 15 46 19.9 -1.3
comp=Z,1.6nm,0.9s,baz=88,slow=15,SNR=6.1
ASAR Alice Springs 44.77 254 P P 15 40 23.4 -0.3
MULG Mulgathing 44.80 245 P P 15 40 23.8 0.0
SMPI Sarmi 44.90 286 P P 15 40 24.5 -0.2
comp=Z,46nm,0.8s
KDU Kakadu 47.52 269 P P 15 40 43.8 -0.8
baz=47,SNR=61
KDU Kakadu 47.52 269 P P 15 40 44.2 -0.4
GUMO Guam 47.82 308 P P 15 40 46.7 -0.1
comp=Z,75nm,0.7s,baz=198,slow=8.6,SNR=5.9
comp=Z,75nm,0.7s
GUMO Guam 47.82 308 P P 15 40 43.8 -3.1
MTN Manton Dam 48.76 268 P P 15 40 52.9 -1.0
baz=49,SNR=12
MTN Manton Dam 48.76 268 P P 15 40 52.8 -1.1
WRKA Warakurna 49.82 252 P P 15 41 01.4 -0.3
baz=50,SNR=263
WRKA Warakurna 49.82 252 P P 15 41 01.8 +0.1
FORT Forrest 49.99 245 P P 15 41 02.2 -0.5
baz=50,SNR=147
FORT Forrest 49.99 245 P P 15 41 01.7 -1.0
FORT Forrest 49.99 245 P P 15 41 02.7 0.0
KNRA Kununurra 50.46 264 P P 15 41 05.6 -0.7
baz=50,SNR=42
KNRA Kununurra 50.46 264 P P 15 41 05.2 -1.1
KNRA Kununurra 50.46 264 P P 15 41 06.2 -0.1
FAKI Fak Fak 50.53 281 P P 15 41 05.9 -1.1
FAKI Fak Fak 50.53 281 P P 15 41 06.5 -0.5
comp=Z,28nm,1.3s
FAKI Fak Fak 50.53 281 P P 15 41 07.0 +0.1
SIJI Sorong 52.19 283 P P 15 41 18.9 -0.1
comp=Z,142nm,0.8s,baz=116,slow=4.3,SNR=52
comp=Z,142nm,0.8s
BNDI Bandanaira 52.19 278 P P 15 41 18.3 -0.6
comp=Z,116nm,0.8s
SWI Sorong 52.20 283 P P 15 41 19.1 +0.1
comp=Z,2µmcomp=Z,183nm,0.8s
FITZ Fitzroy Crossi 53.00 261 P P 15 41 24.4 -0.2
comp=Z,111nm,0.5s,baz=95,slow=4.7,SNR=88
comp=Z,111nm,0.5s
FITZ Fitzroy Crossi 53.00 261 P P 15 41 24.6 0.0
baz=53,SNR=20
FITZ Fitzroy Crossi 53.00 261 P P 15 41 24.2 -0.4
FITZ IAmb IAmb 15 41 25.2
comp=Z,16nm,0.7s
FITZ Fitzroy Crossi 53.00 261 P P 15 41 25.1 +0.5
MSAI Masohi 53.50 279 P P 15 41 27.9 -0.3
comp=Z,11nm,0.6s
AAI Ambon 54.08 279 P P 15 41 32.0 -0.3
comp=Z,73nm,0.5s
NLAI Namlea 55.26 279 P P 15 41 40.4 -0.2
comp=Z,6µmcomp=Z,66nm,1.2s
LBMI Labuha 55.78 282 P P 15 41 44.6 +0.4
comp=Z,58nm,0.9s
BATI Baumata 56.49 269 P P 15 41 50.6 +1.5
comp=Z,45nm,0.7s,baz=158,slow=2.1,SNR=15
comp=Z,45nm,0.7s
BATI Baumata 56.49 269 P P 15 41 50.0 +0.8
comp=Z,34nm,0.8s
SANI Sanana 56.70 280 P P 15 41 50.3 -0.2
comp=Z,71nm,0.8s
SANI Sanana 56.70 280 P P 15 41 51.0 +0.5
PSA00 Pilbara Seismi 57.88 255 P P 15 41 57.9 -0.6
PSA00 Pilbara Seismi 57.88 255 P P 15 41 57.8 -0.8
PSA00 IAmb IAmb 15 41 59.1
comp=Z,27nm,0.8s
PSA00 Pilbara Seismi 57.88 255 P P 15 41 58.2 -0.3
MBWA Marble Bar 58.05 256 P P 15 41 59.1 -0.5
MBWA IAmb IAmb 15 42 00.1
comp=Z,26nm,0.7s
MBWA Marble Bar 58.05 256 P P 15 41 59.7 +0.1
MMRI Maumere 58.26 271 P P 15 41 59.9 -1.3
MMRI Maumere 58.26 271 P P 15 42 01.6 +0.4
MEEK Meekatharra 58.41 249 P P 15 42 01.5 -0.6
baz=58,SNR=18
MEEK Meekatharra 58.41 249 P P 15 42 01.8 -0.3
EDFI Ende, Flores 58.75 270 P P 15 42 04.0 -0.6
comp=Z,367nmcomp=Z,30nm,1.4s
KLBR Kellerberrin 58.81 244 P P 15 42 04.6 -0.1
baz=59,SNR=13
KLBR Kellerberrin 58.81 244 P P 15 42 04.7 0.0
NWAO Narrogin (SRO) 59.20 242 P P 15 42 07.6 +0.4
BLDU Ballidu 59.77 245 P P 15 42 10.8 -0.2
baz=60,SNR=21
BLDU Ballidu 59.77 245 P P 15 42 10.3 -0.7
LUWI Luwuk 60.06 279 P P 15 42 12.0 -1.3
LUWI Luwuk 60.06 279 P P 15 42 13.9 +0.7
comp=Z,73nm,1.4s
LUWI Luwuk 60.06 279 P P 15 42 13.0 -0.2
MUN Mundaring 60.11 243 P P 15 42 13.4 +0.2
baz=60,SNR=5.7
MUN Mundaring 60.11 243 P P 15 42 13.7 +0.4
GTOI Gorontalo 60.42 281 P P 15 42 17.3 +1.7
comp=Z,18nm,0.9s
SBA Scott Base 60.46 184 P P 15 42 18.1 +3.3
MORW Morawa 60.46 246 P P 15 42 15.6 -0.1
baz=60,SNR=19
MORW Morawa 60.46 246 P P 15 42 15.1 -0.6
MORW Morawa 60.46 246 P P 15 42 15.9 +0.2
VNDA Vanda 60.48 185 P P 15 42 17.1 +2.2
comp=Z,2.6nm,0.8s,baz=352,slow=6.9,SNR=13
comp=Z,2.6nm,0.8s
VNDA Vanda 60.48 185 P P 15 42 16.9 +1.9
APSI Ampana 61.16 279 P P 15 42 21.3 +0.8
comp=Z,739nmcomp=Z,75nm,1.0s
MRSI Marisa 61.37 281 P P 15 42 22.0 +0.2
comp=Z,37nm,0.9s

KAPI Kappang 61.65 274 P P 15 42 23.2 -0.5
comp=Z,10nm,0.6s,baz=64,slow=1.7,SNR=5.7
comp=Z,10nm,0.6s
KAPI Kappang 61.65 274 P P 15 42 22.5 -1.2
SPSI Sidrap Palu 61.95 275 P P 15 42 24.8 -0.9
comp=Z,32nm,0.8s
PLAI Plampang 62.46 269 P P 15 42 28.8 -0.1
comp=Z,57nm,0.8s
PLAI Plampang 62.46 269 P P 15 42 29.2 +0.3
GIRL Giralia 62.87 253 P P 15 42 30.5 -0.9
baz=63,SNR=6.1
GIRL Giralia 62.87 253 P P 15 42 32.1 +0.7
comp=Z,157nm,1.2s
MPSI Mapaga 63.23 280 P P 15 42 33.4 -0.5
comp=Z,350nmcomp=Z,44nm,0.9s
TWSI Taliwang, Sumb 63.33 269 P P 15 42 34.5 0.0
comp=Z,566nmcomp=Z,58nm,0.9s
JAGI Jajag, Banyuwa 66.00 269 P P 15 42 48.3 -3.1
JAGI Jajag, Banyuwa 66.00 269 P P 15 42 50.4 -1.0
comp=Z,88nm,0.8s
CASY Casey 66.16 205 P P 15 42 52.2 +0.8
CASY IAmb IAmb 15 42 53.6
comp=Z,16nm,1.1s
MYLDM Lahad Datu 66.27 284 P P 15 42 52.5 -0.5
KMMI Kalianget 66.57 270 P P 15 42 55.3 +0.4
comp=Z,61nm,1.2s
GMJI Gumukmas 66.73 269 P P 15 42 55.4 -0.5
comp=Z,34nm,0.8s
BBKI Banjar Baru 66.79 274 P P 15 43 02.1 +5.8
MTKI Mura Teweh, K 67.52 277 P P 15 43 00.3 -0.5
comp=Z,2µmcomp=Z,8.8nm,0.4s
MJAR Matsushiro Arr 67.85 323 P P 15 43 02.5 +0.2
comp=Z,1.8nm,0.7s,baz=108,slow=12,SNR=11
comp=Z,1.8nm,0.7s
PWJI Pagerwojo 68.36 268 P P 15 43 05.6 -0.3
comp=Z,55nm,0.7s
PCJI Pacitan 68.91 268 P P 15 43 09.6 +0.4
comp=Z,159nm,0.8s
UGM Wanagama 69.61 268 P P 15 43 13.5 +0.1
comp=Z,103nm,0.6s
QSPA South Pole Qui 72.19 180 P P 15 43 29.1 +1.4
QSPA IAmb IAmb 15 43 30.7
comp=Z,16nm,0.8s
TPUB Ta-pu 72.21 302 P P 15 43 26.2 -2.3
LEM Lembang 72.68 268 P P 15 43 32.3 +0.7
PET Petropavlovsk 73.33 346 P P 15 43 34.0 -0.2
PET IAmb IAmb 15 44 04.7
comp=Z,26nm,1.2s
PEA0B Petropavlovsk- 73.63 345 P P 15 43 36.2 +0.3
PEA0B IAmb IAmb 15 43 49.4
comp=Z,15nm,1.2s
PETK Petropavlovsk- 73.63 345 P P 15 43 36.4 +0.5
comp=Z,6.5nm,0.8s,baz=148,slow=8.6,SNR=12
comp=Z,6.5nm,0.8s
KSRS Korea Array 74.65 318 P P 15 43 43.2 +1.2
comp=Z,1.1nm,0.7s,baz=122,slow=5.5,SNR=7.2
CHGN Chignik 75.78 11 P P 15 43 48.0 +0.1
CHGN Chignik 75.78 11 P P 15 43 47.9 0.0
baz=200
MCCM Marconi Confer 76.29 42 P P 15 43 50.1 -0.9
MCCM IAmb IAmb 15 44 18.1
comp=Z,16nm,1.0s
SBC Santa Barbara 76.30 47 P P 15 43 53.1 +1.8
baz=237
SAO San Andreas Ge 76.42 44 P P 15 43 53.7 +1.8
SAO IAmb IAmb 15 43 55.1
comp=Z,16nm,0.8s
PKM Mcpherson Peak 76.47 46 P P 15 43 54.6 +2.2
baz=237
PMPB Monarch Peak 76.54 45 P P 15 43 54.6 +2.0
PMPB IAmb IAmb 15 43 56.0
comp=Z,22nm,1.2s
SMMC Simmler 76.58 46 P P 15 43 54.9 +2.0
baz=237
BBGB Big Mountain B 76.58 44 P P 15 43 54.4 +1.5
BBGB IAmb IAmb 15 43 58.0
comp=Z,11nm,0.8s
PAGB Antelope Grade 76.64 45 P P 15 43 54.7 +1.5
HOPS Hopland Field 76.67 41 P P 15 43 54.4 +1.2
HOPS IAmb IAmb 15 43 57.0
comp=Z,17nm,1.3s
KCPM Cahto Peak 76.76 40 P P 15 43 53.6 -0.3
KCPM IAmb IAmb 15 43 57.2
comp=Z,18nm,1.2s
SII Sitkinak Islan 76.89 14 P P 15 43 55.0 +1.0
KMRM Mail Ridge 77.01 40 P P 15 43 57.3 +2.2
DECC Green Verdugo 77.16 47 P P 15 43 57.9 +1.9
baz=238
ARVC Arvin 77.28 46 P P 15 43 58.5 +1.8
baz=238
109C Camp Elliot, M 77.32 49 P P 15 43 58.8 +1.9
baz=239
KHMM Horse Mountain 77.39 39 P P 15 43 59.3 +2.0
KHMM IAmb IAmb 15 44 00.7
comp=Z,13nm,1.0s
ELS Elsinore Mount 77.48 48 P P 15 43 59.4 +1.5
VES Vestal, Richgr 77.49 46 P P 15 43 59.8 +2.1
baz=237
VOG Valley Oaks Go 77.55 45 P P 15 43 59.8 +1.8
baz=237
MURC Murrieta 77.62 49 P P 15 44 00.4 +1.9
baz=239
BFSC Mount Baldy Ra 77.63 48 P P 15 44 00.3 +1.6
baz=238
OHAK Old Harbor 77.70 14 P P 15 43 59.0 +0.7
OHAK IAmb IAmb 15 44 00.0
comp=Z,17nm,0.8s
OHAK Old Harbor 77.70 14 P P 15 43 59.2 +0.9
baz=205
EDW2 Edwards Air Fo 77.73 47 P P 15 44 01.5 +2.3
baz=238,SNR=12
ISA Isabella, Lake 77.81 46 P P 15 44 01.3 +1.7
ISA IAmb IAmb 15 44 02.8
comp=Z,17nm,0.9s
ISA Isabella, Lake 77.81 46 P P 15 44 01.5 +1.9
baz=238,SNR=12
MONP2 Monument Peak 77.82 49 P P 15 44 02.2 +2.4
baz=240,SNR=9.7
MNAI Manna 77.83 269 P P 15 44 00.2 +0.1
CMB Columbia Colle 77.83 43 P P 15 44 01.1 +1.5
CMB IAmb IAmb 15 44 02.5
comp=Z,12nm,0.9s
KSXB Camp Six Broad 77.88 39 P P 15 44 01.7 +1.9
KBO Bosley Butte 77.91 38 P P 15 44 01.0 +1.0
KBO IAmb IAmb 15 44 34.5
comp=Z,44nm,1.3s
RMX La Rumorosa 77.92 50 P P 15 44 00.8 +0.5
RMX IAmb IAmb 15 44 03.8
comp=Z,19nm,1.0s
IKP In-Ko-Pah, Jac 77.92 50 P P 15 44 02.4 +2.1
baz=240,SNR=6.9
ORV Oroville 77.98 41 P P 15 44 01.4 +1.0
YUH Yuha Desert 78.06 50 P P 15 44 00.7 -0.2
YUH IAmb IAmb 15 44 04.2
comp=Z,18nm,1.2s
PFO Pinyon Flats O 78.16 49 P P 15 44 03.6 +2.1
baz=239
TPFO Pinon Flats 78.16 49 P P 15 44 03.6 +2.1
baz=239
L02F Cave Junction 78.24 38 P P 15 44 03.9 +2.3
baz=233
LRMC Laurel Mtn Rad 78.26 47 P P 15 44 04.1 +2.0
baz=238
SWSC Sam W. Stewart 78.29 50 P P 15 44 04.4 +2.2
baz=240
KDAK Kodiak Island 78.37 14 P P 15 44 02.7 +0.8
KDAK IAmb IAmb 15 44 04.6
comp=Z,19nm,0.9s
KDAK Kodiak Island 78.37 14 P P 15 44 03.8 +1.9
baz=205
MDPB Devils Postpil 78.47 44 P P 15 44 04.8 +1.4
MDPB IAmb IAmb 15 44 06.4
comp=Z,15nm,0.8s
CWC Cottonwood Cre 78.50 46 P P 15 44 05.2 +1.8
baz=238
OMMB Old Mammoth Mi 78.51 44 P P 15 44 05.3 +1.6
YBH Yreka Blue Hor 78.52 39 P P 15 44 05.6 +2.4
comp=Z,11nm,1.0s,baz=242,slow=0.4,SNR=23
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 78.52 39 P P 15 44 05.0 +1.7
K02D Willamette Mer 78.53 38 P P 15 44 05.3 +2.0
baz=233
SLBS Sierra La Lagu 78.57 60 P P 15 44 06.4 +2.5
BELC Belle Mtn. Jos 78.68 49 P P 15 44 06.7 +2.4
baz=240,SNR=5.6
MPMC Manual Prospec 78.70 46 P P 15 44 06.5 +2.0
baz=238,SNR=11

MPK Martis Peak 78.77 42 P P 15 44 06.5 +1.6
MPK IAmb IAmb 15 44 08.0
comp=Z,21nm,0.7s
GSC Goldstone, Bar 78.78 47 P P 15 44 07.0 +2.2
baz=239
MYKOM Kota Tinggi 78.86 276 P P 15 44 05.7 +0.2
MYKOM IAmb IAmb 15 44 07.3
comp=Z,27nm,1.2s
HEC Hector,Ludlow 78.87 48 P P 15 44 06.9 +1.7
baz=239
P17K Kvichak River 78.87 11 P P 15 44 04.8 +0.3
baz=202
BEKR Beckworth 78.89 42 P P 15 44 06.8 +1.4
BEKR IAmb IAmb 15 44 08.2
comp=Z,15nm,1.2s
BC3 Big Chuckawall 78.90 49 P P 15 44 07.3 +1.8
baz=240
PNTR Pine Nut 78.94 43 P P 15 44 07.4 +1.7
PNTR IAmb IAmb 15 44 08.9
comp=Z,26nm,0.9s
VCNR Virginia City 79.02 43 P P 15 44 07.1 +1.0
DBO Dodson Butte 79.03 38 P P 15 44 07.0 +1.1
L04D Klamath Falls 79.05 39 P P 15 44 07.5 +1.4
L04D IAmb IAmb 15 44 09.0
comp=Z,15nm,0.8s
L04D Klamath Falls 79.05 39 P P 15 44 08.0 +1.9
baz=234
GLA Glamis 79.06 50 P P 15 44 08.3 +2.1
GLA IAmb IAmb 15 44 10.0
comp=Z,14nm,0.9s
GLA Glamis 79.06 50 P P 15 44 08.9 +2.6
baz=240
DSP Deep Springs 79.07 45 P P 15 44 08.2 +2.0
DSP IAmb IAmb 15 44 09.6
comp=Z,14nm,1.0s
QSM Queen of Sheba 79.08 47 P P 15 44 07.9 +1.6
YERR Yerington 79.11 43 P P 15 44 07.6 +1.0
YERR IAmb IAmb 15 44 09.5
comp=Z,18nm,0.9s
Q19K Cape Douglas, 79.18 13 P P 15 44 07.2 +0.9
LHV Little Huntoon 79.19 44 P P 15 44 07.2 +0.5
LHV IAmb IAmb 15 44 10.3
comp=Z,20nm,1.0s
LCH Last Change Ra 79.22 45 P P 15 44 08.9 +1.8
GRAC Grapevine Rang 79.28 45 P P 15 44 09.2 +1.9
GRAC IAmb IAmb 15 44 10.7
comp=Z,28nm,1.3s
GRAC Grapevine Rang 79.28 45 P P 15 44 09.8 +2.5
baz=238,SNR=6.9
I02E Swisshome, OR 79.29 37 P P 15 44 09.6 +2.5
I02E IAmb IAmb 15 44 31.4
comp=Z,29nm,1.1s
P18K Big Mountain, 79.29 12 P P 15 44 07.0 +0.1
P18K Big Mountain, 79.29 12 P P 15 44 08.7 +1.9
baz=203
I03D Drain, OR 79.32 37 P P 15 44 09.3 +2.0
baz=233
GMRC Granite Mounta 79.32 48 P P 15 44 09.3 +1.6
baz=240
GWY Greenwater Val 79.33 46 P P 15 44 08.7 +0.9
FURC Furnace Creek, 79.35 46 P P 15 44 09.4 +1.8
baz=239,SNR=5.3
IRM Iron Mountain 79.37 49 P P 15 44 10.1 +2.2
baz=240,SNR=5.7
RYN Ryan 79.38 44 P P 15 44 09.4 +1.4
PAHR Pah Rah Range 79.42 42 P P 15 44 09.6 +1.4
NVAR Mina Array Bea 79.42 44 P P 15 44 10.3 +2.0
comp=Z,8.2nm,0.8s,baz=225,slow=8.7,SNR=64
comp=Z,8.2nm,0.8s
NVAR Mina Array Bea 79.42 44 P P 15 44 09.9 +1.6
SHOC Shoshone, Teco 79.46 47 P P 15 44 10.3 +2.0
baz=239
TUQ Turquoise Moun 79.47 47 P P 15 44 10.3 +1.8
baz=239
GMN Gold Mountain 79.51 45 P P 15 44 10.3 +1.5
NV11 Mina Array Sit 79.52 44 P P 15 44 10.3 +1.6
NV11 IAmb IAmb 15 44 11.8
comp=Z,18nm,1.1s
BLYC Blythe 79.62 50 P P 15 44 09.6 +0.4
N16K Nishlik Lake 79.67 10 P P 15 44 09.8 +1.0
baz=199
WCT Wildcat Mounta 79.68 46 P P 15 44 10.9 +1.4
113A Mohawk Valley, 79.69 51 P P 15 44 11.1 +1.5
113A IAmb IAmb 15 44 13.1
comp=Z,20nm,1.5s
O18K Koktuh Hills 79.72 12 P P 15 44 09.4 +0.3
O18K Koktuh Hills 79.72 12 P P 15 44 09.2 +0.1
baz=203
J04D Umpqua Nationa 79.77 38 P P 15 44 11.4 +1.4
J04D Umpqua Nationa 79.77 38 P P 15 44 11.6 +1.6
baz=234
BUCK Buck Mountain 79.83 37 P P 15 44 12.0 +1.9
BUCK IAmb IAmb 15 44 13.9
comp=Z,40nm,1.5s
KVN Kaiserville 79.89 43 P P 15 44 12.3 +1.6
I04A Tendick Farm, 79.92 38 P P 15 44 11.7 +1.1
baz=234
P19K Oil Pt 79.93 13 P P 15 44 11.4 +1.2
TPH Tonopah 79.95 45 P P 15 44 12.1 +1.1
214A Organ Pipe Nat 80.02 52 P P 15 44 13.3 +1.9
214A IAmb IAmb 15 44 15.3
comp=Z,19nm,1.4s
214A Organ Pipe Nat 80.02 52 P P 15 44 13.8 +2.5
baz=242
TPNV Topopah Spring 80.02 46 P P 15 44 13.3 +2.0
baz=239,SNR=5.5
MOD Modoc Plateau 80.08 40 P P 15 44 13.0 +1.5
MOD IAmb IAmb 15 44 14.4
comp=Z,13nm,0.7s
PDMCI Parker Dam,Lak 80.17 49 P P 15 44 14.2 +2.3
baz=241
H04D Lebanon 80.17 37 P P 15 44 13.2 +1.5
baz=233
K05A Summer Lake 80.19 39 P P 15 44 13.7 +1.6
K05A IAmb IAmb 15 44 15.4
comp=Z,18nm,0.9s
O19K Port Alsworth 80.21 12 P P 15 44 11.3 -0.2
O19K Port Alsworth 80.21 12 P P 15 44 11.5 -0.1
baz=203,SNR=6.1
CNPM China Poot 80.25 14 P P 15 44 12.7 +0.9
CNPM IAmb IAmb 15 44 13.6
comp=Z,22nm,1.1s
ILSW Iliamna Southw 80.25 13 P P 15 44 10.7 -1.3
ILSW IAmb IAmb 15 44 13.0
comp=Z,21nm,0.8s
G03D McMinnville, O 80.29 36 P P 15 44 13.8 +1.5
baz=233
J05D Fort Rock, OR 80.31 39 P P 15 44 14.9 +2.1
baz=234
N18K Kilae Creek 80.36 11 P P 15 44 12.9 +0.5
N18K IAmb IAmb 15 44 55.3
comp=Z,19nm,1.4s
N18K Kilae Creek 80.36 11 P P 15 44 13.2 +0.8
baz=202
V12A Nelson 80.37 48 P P 15 44 13.3 +0.1
SHPR Sheep Range 80.54 47 P P 15 44 15.3 +1.1
BRSE Bradley Lake S 80.56 14 P P 15 44 14.5 +1.1
baz=207
H04A Detroit Lake 80.58 37 P P 15 44 15.2 +1.3
H04A IAmb IAmb 15 44 16.3
comp=Z,7.2nm,0.7s
N19K Bonanza Creek 80.75 12 P P 15 44 14.3 -0.2
N19K Bonanza Creek 80.75 12 P P 15 44 14.8 +0.3
baz=203
RSO Redoubt South 80.77 13 P P 15 44 14.5 -0.2
Y14A Wickenburg 80.82 50 P P 15 44 15.9 +0.4
I05D Terrebonne, OR 80.87 38 P P 15 44 16.9 +1.5
baz=234
PRN Pahroc Range 81.07 46 P P 15 44 18.0 +1.2
PRN IAmb IAmb 15 44 20.4
comp=Z,16nm,0.9s
SEW Seward 81.18 14 P P 15 44 17.7 +1.1
baz=208
R11A Troy Canyon, C 81.19 45 P P 15 44 18.6 +1.2
R11A Troy Canyon, C 81.19 45 P P 15 44 18.6 +1.2
baz=239,SNR=7.0
F04A Amboy 81.20 36 P P 15 44 17.9 +0.9
F04A IAmb IAmb 15 44 19.8
comp=Z,21nm,1.4s
BMN Battle Mountai 81.20 43 P P 15 44 18.1 +0.6
BMN IAmb IAmb 15 44 20.5
comp=Z,14nm,1.0s
HOLB Holberg 81.25 30 P P 15 44 17.8 +0.5
NLWA Neilton Lookou 81.30 34 P P 15 44 18.8 +1.2
NLWA IAmb IAmb 15 44 20.6
comp=Z,16nm,1.1s

WVOR Wild Horse Val 81.40 40 P P 15 44 20.0 +1.7
WVOR IAmb IAmb 15 44 21.5
comp=Z,21nm,1.1s

G05D Wamic, OR 81.41 37 P P 15 44 19.4 +1.2
baz=234

O22K Cooper Landing 81.45 14 P P 15 44 18.1 +0.2
O22K Cooper Landing 81.45 14 P P 15 44 18.7 +0.7
baz=208

GAMB Gambell 81.55 3 P P 15 44 19.5 +1.1
baz=187

N20K Mount Spurr 81.56 12 P P 15 44 17.9 -0.7
baz=205

SPCR Spurr Chakacha 81.56 12 P P 15 44 18.4 -0.2
baz=205

P23K Montague Islan 81.58 15 P P 15 44 19.8 +1.1
baz=210

TUC Tucson 81.70 52 P P 15 44 20.2 +0.1
TUC IAmb IAmb 15 44 24.3
comp=Z,10nm,0.9s

TUC Tucson 81.70 52 P P 15 44 22.8 +2.8
baz=243

M19K Big River Lodg 81.77 11 P P 15 44 19.8 +0.1
M19K Big River Lodg 81.77 11 P P 15 44 20.1 +0.4
baz=203

I07A Izee 81.80 39 P P 15 44 22.0 +1.7
I07A IAmb IAmb 15 44 23.4
comp=Z,14nm,0.8s

L19K White Mountain 81.94 11 P P 15 44 21.6 +1.0
L19K White Mountain 81.94 11 P P 15 44 21.5 +1.0
baz=203

M20K Styx River 81.99 12 P P 15 44 20.3 -0.6
M20K Styx River 81.99 12 P P 15 44 21.4 +0.5
baz=204

J08A Circle Bar Ran 82.01 40 P P 15 44 22.9 +1.4
J08A IAmb IAmb 15 44 24.4
comp=Z,17nm,1.0s

SUA Susitna One 82.10 13 P P 15 44 21.5 +0.1
baz=207

PWL Port Wells 82.11 14 P P 15 44 21.7 +0.4
PWL IAmb IAmb 15 44 22.6
comp=Z,22nm,0.9s

PWL Port Wells 82.11 14 P P 15 44 21.8 +0.4
baz=209

LCMT Little Creek M 82.13 47 P P 15 44 23.5 +1.3
LCMT IAmb IAmb 15 44 25.5
comp=Z,8.8nm,0.9s

HIN Hinchinbrook I 82.15 15 P P 15 44 22.0 +0.4
HIN IAmb IAmb 15 44 42.1
comp=Z,20nm,1.1s

X16A Lo Mia Camp, P 82.19 50 P P 15 44 24.1 +1.5
X16A IAmb IAmb 15 44 26.5
comp=Z,12nm,0.9s

BELA Belgrano 2 82.21 173 P P 15 44 23.0 +1.2
BELA IAmb IAmb 15 44 24.0
comp=Z,11nm,0.8s

PGC Sidney 82.30 33 P P 15 44 23.3 +0.8
PGC IAmb IAmb 15 44 27.2
comp=Z,22nm,1.1s

CCUT Cedar City 82.31 47 P P 15 44 23.8 +0.6
CCUT IAmb IAmb 15 44 26.9
comp=Z,9.1nm,0.9s

SPR3 Spring Creek 3 82.37 45 P P 15 44 24.5 +0.9
SPR3 IAmb IAmb 15 44 26.2
comp=Z,10nm,1.1s

IPM Ipoh 82.38 277 P P 15 44 23.8 -0.1
L20K Farewell, AK 82.40 11 P P 15 44 22.9 0.0
baz=204

SKT Skwentna 82.40 12 P P 15 44 23.0 +0.1
baz=206

GLI Glacier Island 82.42 15 P P 15 44 23.2 +0.2
GLI Glacier Island 82.42 15 P P 15 44 22.5 -0.5
baz=210

KNB Kanab 82.43 47 P P 15 44 25.5 +1.7
KNB IAmb IAmb 15 44 27.3
comp=Z,10nm,1.0s

PSUT Pine Spring 82.46 46 P P 15 44 25.6 +1.7
M22K Willow 82.50 13 P P 15 44 23.0 -0.2
baz=207,SNR=5.8

U15A North Rim 82.52 48 P P 15 44 26.5 +2.2
U15A IAmb IAmb 15 44 28.1
comp=Z,19nm,0.9s

SZCU Shurtz Canyon 82.52 47 P P 15 44 26.3 +2.0
SZCU IAmb IAmb 15 44 27.8
comp=Z,14nm,1.3s

KNK Knik Glacier 82.57 14 P P 15 44 24.0 +0.3
KNK IAmb IAmb 15 44 25.1
comp=Z,13nm,0.8s

KNK Knik Glacier 82.57 14 P P 15 44 23.5 -0.2
baz=209

PMR Palmer 82.57 14 P P 15 44 23.8 +0.2
PMR IAmb IAmb 15 44 24.5
comp=Z,6.4nm,0.6s

PMR Palmer 82.57 14 P P 15 44 24.2 +0.6
baz=208

ELK Elko 82.65 43 P P 15 44 26.6 +1.7
comp=Z,7.6nm,0.9s,baz=240,slow=5.5,SNR=30
comp=Z,7.6nm,0.9s

ELK Elko 82.65 43 P P 15 44 26.4 +1.5
ELK IAmb IAmb 15 44 27.9
comp=Z,9.8nm,0.9s

HMT Hamilton 82.69 16 P P 15 44 24.9 +0.6
HMT IAmb IAmb 15 44 26.0
comp=Z,8.8nm,0.9s

WUAZ Wupatki 82.75 49 P P 15 44 27.3 +1.9
baz=242

BGLC Bering Glacier 82.77 17 P P 15 44 26.0 +1.4
baz=214

GHO Glory Hole Cre 82.78 14 P P 15 44 25.2 +0.4
G08A Pilot Rock 82.80 38 P P 15 44 26.7 +1.3
G08A IAmb IAmb 15 44 28.2
comp=Z,21nm,1.3s

SIT Sitka 82.85 22 P P 15 44 26.7 +1.6
baz=221

SML Sawmill 82.94 14 P P 15 44 25.1 -0.5
SML Sawmill 82.94 14 P P 15 44 26.5 +0.9
baz=209

SNH Sunshine Point 82.94 17 P P 15 44 26.4 +0.8
SNH IAmb IAmb 15 44 30.2
comp=Z,28nm,1.1s

LTY Liberty 82.95 35 P P 15 44 26.8 +0.7
DIV Divide 82.97 15 P P 15 44 25.6 -0.2
DIV IAmb IAmb 15 44 27.2
comp=Z,15nm,0.8s

KULM Kulim 82.99 278 P P 15 44 27.1 +0.2
KULM IAmb IAmb 15 44 28.9
comp=Z,14nm,1.0s

CUT Chulitna 83.05 13 P P 15 44 26.0 0.0
CUT Chulitna 83.05 13 P P 15 44 26.5 +0.5
baz=207

M23K Glacier View 83.07 14 P P 15 44 26.2 0.0
baz=210

HAWA Hanford 83.09 37 P P 15 44 27.4 +0.7
HAWA IAmb IAmb 15 44 29.5
comp=Z,13nm,0.9s

PPLA Purkeypile 83.10 12 P P 15 44 26.1 -0.4
PPLA IAmb IAmb 15 45 07.7
comp=Z,18nm,1.4s

BMRM Bremner River 83.13 16 P P 15 44 27.1 +0.6
BMRM IAmb IAmb 15 44 27.7
comp=Z,11nm,0.7s

BMRM Bremner River 83.13 16 P P 15 44 26.9 +0.3
baz=212

K20K Telida 83.17 11 P P 15 44 27.2 +0.5
K20K IAmb IAmb 15 44 28.4
comp=Z,16nm,0.8s

K20K Telida 83.17 11 P P 15 44 27.4 +0.7
baz=204,SNR=10

MESA MESA 83.19 17 P P 15 44 28.1 +1.0
MESA MESA 83.19 17 P P 15 44 27.5 +0.4
baz=215

SCM Sheep Creek Mo 83.20 14 P P 15 44 27.3 +0.4
SCM Sheep Creek Mo 83.20 14 P P 15 44 27.3 +0.4
baz=210,SNR=10

KLU Klutina 83.24 15 P P 15 44 27.4 +0.3
KLU Klutina 83.24 15 P P 15 44 27.8 +0.7
baz=211

YAH Yahtse 83.40 17 P P 15 44 29.0 +0.8
YAH IAmb IAmb 15 44 30.3
comp=Z,16nm,0.8s

ISLE Juniper Island 83.43 17 P P 15 44 28.6 +0.4
ISLE IAmb IAmb 15 44 29.9
comp=Z,16nm,0.9s

WRAK Wrangell Islan 83.49 24 P P 15 44 29.3 +1.0
baz=224

BMO Blue Mountains 83.53 39 P P 15 44 30.0 +1.0
PNL Peninsula 83.53 19 P P 15 44 28.5 -0.1
baz=217

CAST Castle Rocks 83.60 12 P P 15 44 27.7 -1.1
CAST IAmb IAmb 15 44 29.5
comp=Z,16nm,0.8s

CAST Castle Rocks 83.60 12 P P 15 44 28.1 -0.7
baz=205,SNR=19

PINM Pinnacle 83.62 18 P P 15 44 29.5 +0.4
baz=216

TABL Table Mountain 83.64 18 P P 15 44 29.8 +0.5
TABL IAmb IAmb 15 44 31.1
comp=Z,16nm,0.8s

N25K Chitina, Valde 83.67 16 P P 15 44 29.6 +0.3
N25K IAmb IAmb 15 44 31.0
comp=Z,16nm,0.7s

N25K Chitina, Valde 83.67 16 P P 15 44 29.6 +0.3
baz=212,SNR=12

M24K Tolsona, Glenn 83.71 15 P P 15 44 30.1 +0.7
M24K Tolsona, Glenn 83.71 15 P P 15 44 30.6 +1.1
baz=211,SNR=5.0

BJI Beijing 83.73 315 P P 15 44 30.8 +0.9
BJI S S 15 54 12.8 +5.4
BJI pmax pmax
comp=Z,7.0nm,1.1s

GLB Gilahina Butte 83.74 16 P P 15 44 29.9 +0.3
GLB IAmb IAmb 15 44 31.1
comp=Z,10nm,0.6s

WAT6 Susitna Watana 83.76 14 P P 15 44 30.0 +0.2
baz=209,SNR=9.7

WAT1 Susitna Watana 83.79 13 P P 15 44 30.2 +0.4
baz=209

RPSI Rantau Prapat 83.81 275 P P 15 44 30.0 -1.0
RPSI IAmb IAmb 15 44 32.0
comp=Z,16nm,0.8s

D08A Wollman Farm, 83.82 36 P P 15 44 31.6 +1.4
D08A IAmb IAmb 15 44 33.0
comp=Z,9.5nm,0.9s

MAW Mawson 83.89 200 P P 15 44 32.0 +1.8
comp=Z,5.6nm,0.8s,baz=130,slow=6.6,SNR=13
comp=Z,5.6nm,0.8s

MAW Mawson 83.89 200 P P 15 44 32.0 +1.8
baz=84,SNR=7.7

MAW Mawson 83.89 200 P P 15 44 31.3 +1.0
MCARA McCarthy VSAT 83.90 16 P P 15 44 31.1 +0.8
MCARA IAmb IAmb 15 44 32.1
comp=Z,19nm,1.3s

MCARA McCarthy VSAT 83.90 16 P P 15 44 30.8 +0.5
baz=214

J20K Nowinta River 83.92 10 P P 15 44 30.6 +0.3
J20K IAmb IAmb 15 44 32.1
comp=Z,7.2nm,0.8s

J20K Nowinta River 83.92 10 P P 15 44 30.8 +0.5
baz=203,SNR=6.0

CHUM Lake Minchumin 83.97 11 P P 15 44 30.5 -0.1
baz=205

DUG Dugway, Tooele 83.98 45 P P 15 44 32.6 +1.3
DUG Dugway, Tooele 83.98 45 P P 15 44 32.7 +1.3
baz=241

TRF Thorofare Moun 83.98 12 P P 15 44 30.4 -0.5
TRF Thorofare Moun 83.98 12 P P 15 44 30.3 -0.6
baz=207,SNR=7.3

LOGN Logan Glacier 83.99 17 P P 15 44 31.5 +0.5
LOGN IAmb IAmb 15 44 32.8
comp=Z,11nm,1.0s

CTG Chitna Glacier 84.01 17 P P 15 44 31.8 +0.8
baz=215

CTGM Chitina Glacie 84.01 17 P P 15 44 31.5 +0.4
CTGM IAmb IAmb 15 44 32.9
comp=Z,8.6nm,0.8s

P29M Windy Craggy 84.02 19 P P 15 44 31.9 +1.0
P29M IAmb IAmb 15 44 33.5
comp=Z,12nm,0.9s

P29M Windy Craggy 84.02 19 P P 15 44 32.1 +1.1
baz=219

BESE Bessie Mountai 84.17 21 P P 15 44 32.9 +1.1
BESE IAmb IAmb 15 44 34.4
comp=Z,11nm,1.0s

O28M Mount Upton 84.18 18 P P 15 44 32.9 +0.8
baz=216,SNR=6.7

HARP HAARP 84.21 15 P P 15 44 32.5 +0.7
baz=212

ENH Enshi 84.22 304 P P 15 44 33.0 +0.4
RND Reindeer 84.24 13 P P 15 44 32.3 +0.3
DHY Denali Highway 84.27 14 P P 15 44 32.4 +0.1
DHY Denali Highway 84.27 14 P P 15 44 32.5 +0.2
baz=210

O29M Mount Kennedy 84.29 19 P P 15 44 33.4 +1.0
baz=218

LLLB Lillooet 84.30 32 P P 15 44 33.1 +0.5
B08A Colville Reser 84.33 35 P P 15 44 33.4 +0.6
B08A IAmb IAmb 15 44 34.8
comp=Z,7.5nm,0.8s

PLBC Pleasant Camp 84.33 20 P P 15 44 33.6 +1.2
baz=220

BPAW Bear Paw Mtn. 84.42 12 P P 15 44 33.6 +0.7
baz=206

PLID Pearl Lake 84.44 39 P P 15 44 34.7 +1.0
PLID IAmb IAmb 15 44 37.2
comp=Z,14nm,1.4s

Q16A Castle Valley 84.48 46 P P 15 44 35.2 +1.2
MCK McKinley 84.51 13 P P 15 44 33.4 +0.1
baz=208,SNR=6.0

PAX Paxson 84.62 14 P P 15 44 33.6 -0.3
PAX Paxson 84.62 14 P P 15 44 34.7 +0.7
baz=212

HLID Hailey 84.62 41 P P 15 44 36.1 +1.6
HLID IAmb IAmb 15 44 37.8
comp=Z,7.9nm,0.9s

HLID Hailey 84.62 41 P P 15 44 36.6 +2.1
baz=239,SNR=18

P30M Million Dollar 84.65 19 P P 15 44 35.9 +1.8
baz=220

SKAG Skagway 84.67 21 P P 15 44 35.9 +1.8
baz=221

T35M Bob Quinn 84.70 24 P P 15 44 35.5 +1.1
baz=226

M26K Nabesna, AK 84.75 16 P P 15 44 35.1 +0.5
baz=214,SNR=14

BWN Browne 84.79 12 P P 15 44 34.3 -0.3
BWN IAmb IAmb 15 44 36.3
comp=Z,12nm,0.9s

YUK6 Outpost Mounta 84.86 18 P P 15 44 35.4 +0.1
baz=218

YUK3 Moose Creek 84.92 17 P P 15 44 36.6 +1.0
baz=216,SNR=6.3

M27K Edge Creek, AK 85.01 16 P P 15 44 36.5 +0.6
M27K IAmb IAmb 15 44 38.2
comp=Z,15nm,1.1s

M27K Edge Creek, AK 85.01 16 P P 15 44 36.9 +1.0
baz=215,SNR=11

MENT Mentasta 85.02 15 P P 15 44 36.2 +0.4
MENT IAmb IAmb 15 44 37.7
comp=Z,9.3nm,1.0s

HYT Haines Junctio 85.03 19 P P 15 44 36.2 +0.2
HYT Haines Junctio 85.03 19 P P 15 44 37.4 +1.4
baz=219

YUK4 Talbot Arm 85.09 18 P P 15 44 38.0 +1.6
baz=218

L26K Log Cabin Wild 85.19 15 P P 15 44 37.3 +0.7
baz=214

I21K Tanana 85.22 11 P P 15 44 36.9 +0.3
I21K Tanana 85.22 11 P P 15 44 37.1 +0.4
baz=205

NEA2 Nenana 85.24 12 P P 15 44 37.7 +0.8
baz=208

K24K Donnelly Dome 85.26 14 P P 15 44 37.9 +0.9
baz=211

MLY Manley 85.31 11 P P 15 44 37.3 +0.1
MLY IAmb IAmb 15 44 39.6
comp=Z,11nm,1.4s

MLY Manley 85.31 11 P P 15 44 38.6 +1.5
baz=206

P32M Atlin 85.32 21 P P 15 44 38.9 +1.6
baz=222

BVCY Beaver Creek 85.33 17 P P 15 44 38.5 +1.2
baz=216

WRH Wood River Hil 85.34 13 P P 15 44 36.8 -0.4
WRH IAmb IAmb 15 44 38.5
comp=Z,25nm,1.3s

RIDG Independent Ri 85.43 14 P P 15 44 37.8 0.0
RIDG IAmb IAmb 15 44 39.4
comp=Z,9.6nm,0.9s

RIDG Independent Ri 85.43 14 P P 15 44 38.4 +0.7
baz=212,SNR=5.2

O30N Mendenhall 85.43 19 P P 15 44 39.1 +1.3
baz=220

HWUT Hardware Ranch 85.49 44 P P 15 44 39.2 +0.4

NEW Newport 85.50 36 P P 15 44 39.6 +1.2
comp=Z,3.8nm,0.6s,baz=231,slow=3.7,SNR=12
comp=Z,3.8nm,0.6s

NEW Newport 85.50 36 P P 15 44 38.8 +0.3
NEW Newport 85.50 36 P P 15 44 39.4 +0.9
baz=237,SNR=6.5

H21K Melozitna Rive 85.51 10 P P 15 44 38.7 +0.7
H21K Melozitna Rive 85.51 10 P P 15 44 39.4 +1.4
baz=205

HDA Harding Lake 85.53 13 P P 15 44 38.5 +0.3
HDA IAmb IAmb 15 44 39.4
comp=Z,7.9nm,0.8s

HDA Harding Lake 85.53 13 P P 15 44 38.2 0.0
baz=210,SNR=8.7

DOT Dot Lake 85.53 15 P P 15 44 39.0 +0.7
DOT IAmb IAmb 15 44 39.9
comp=Z,8.2nm,0.8s

CCB Clear Creek Bu 85.55 13 P P 15 44 37.8 -0.4
CCB IAmb IAmb 15 44 39.2
comp=Z,9.5nm,1.1s

MVCO Mesa Verde 85.58 49 P P 15 44 40.5 +1.1
baz=244

MNTX Cornudas Mount 85.58 55 P P 15 44 40.6 +1.4
MNTX IAmb IAmb 15 44 42.9
comp=Z,8.6nm,1.3s

MNTX Cornudas Mount 85.58 55 P P 15 44 41.4 +2.2
baz=246

L27K Beaver Creek, 85.60 16 P P 15 44 38.9 +0.3
L27K Beaver Creek, 85.60 16 P P 15 44 39.8 +1.2
baz=215

BCAR Beaver Creek A 85.62 16 P P 15 44 39.5 +0.8
IMAR Indian Mountai 85.65 10 P P 15 44 39.1 +0.4
N30M Aishikik Lake 85.65 19 P P 15 44 39.6 +0.7
baz=219

WHY Whitehorse 85.73 20 P P 15 44 40.1 +0.7
baz=221

MDM Murphy Dome 85.74 12 P P 15 44 38.2 -1.0
MDM IAmb IAmb 15 44 40.1
comp=Z,7.7nm,1.1s

TCOL CIGO, UAF Yank 85.74 13 P P 15 44 39.0 -0.1
baz=209

COLA College 85.74 13 P P 15 44 39.6 +0.4
baz=209

DLBC Dease Lake 85.81 23 P P 15 44 41.8 +2.0
comp=Z,3.1nm,0.7s,baz=253,slow=7.7,SNR=8.1
comp=Z,3.1nm,0.7s

DLBC Dease Lake 85.81 23 P P 15 44 41.2 +1.5
DLBC Dease Lake 85.81 23 P P 15 44 41.0 +1.2
baz=226

SCRK Sand Creek 85.83 14 P P 15 44 40.8 +1.0
baz=213,SNR=5.5

IL31 85.86 13 P P 15 44 39.3 -0.4
ILAR Eielson Array 85.86 13 P P 15 44 39.9 +0.1
comp=Z,2.2nm,0.6s,baz=224,slow=5.3,SNR=38
comp=Z,2.2nm,0.6s

ILAR Eielson Array 85.86 13 P P 15 44 39.3 -0.4
H22K Ishtalitna Cre 85.97 11 P P 15 44 40.9 +0.6
baz=206

TXAR Lajitas Array 86.00 58 P P 15 44 44.7 +3.3
comp=Z,6.6nm,0.8s,baz=218,slow=6.1,SNR=46
comp=Z,6.6nm,0.8s

M29M Somme Creek 86.02 17 P P 15 44 41.7 +1.0
baz=218

J25K Salcha River, 86.05 14 P P 15 44 40.8 +0.1
J25K IAmb IAmb 15 44 42.4
comp=Z,11nm,1.4s

J25K Salcha River, 86.05 14 P P 15 44 41.3 +0.5
baz=213,SNR=8.6

N31M Braeburn, Yuko 86.07 19 P P 15 44 42.6 +1.7
baz=220

P33M Teslin, Yukon 86.08 21 P P 15 44 42.5 +1.5
baz=223

ANMO Albuquerque 86.10 52 P P 15 44 44.2 +2.3
comp=Z,3.6nm,1.0s,baz=212,slow=5.7,SNR=7.5
comp=Z,3.6nm,1.0s

ANMO Albuquerque 86.10 52 P P 15 44 42.0 +0.1
ANMO Albuquerque 86.10 52 P P 15 44 43.1 +1.3
baz=245

R33M Jennings River 86.14 22 P P 15 44 42.8 +1.4
baz=225

G21K Allakaket 86.18 10 P P 15 44 42.2 +1.0
baz=204

XAN Xi'an 86.21 307 ⇑P P 15 44 44.1 +1.9
XAN pmax pmax
comp=Z,16nm,1.0s

MCMT McKenzie Canyo 86.23 40 P P 15 44 44.0 +1.7
H23K Yukon River 86.25 12 P P 15 44 42.2 +0.6
K27K Chicken 86.34 15 P P 15 44 42.9 +0.8
baz=215

AHID Auburn Hatcher 86.34 43 P P 15 44 44.2 +1.4
AHID IAmb IAmb 15 44 46.0
comp=Z,7.1nm,1.1s

J26L Joseph Creek 86.37 14 P P 15 44 43.1 +0.8
J26L Joseph Creek 86.37 14 P P 15 44 43.6 +1.3
baz=213,SNR=11

MSO Missoula 86.58 38 P P 15 44 44.3 +0.6
baz=240

M30M Minto, Yukon 86.61 18 P P 15 44 44.0 +0.6
M30M IAmb IAmb 15 44 45.4
comp=Z,6.3nm,0.8s

M30M Minto, Yukon 86.61 18 P P 15 44 44.5 +1.1
baz=220,SNR=7.1

TPAW Teton Pass 86.78 42 P P 15 44 45.4 +0.4
TPAW IAmb IAmb 15 44 47.2
comp=Z,6.7nm,1.0s

REDW Red Top Meadow 86.78 42 P P 15 44 46.3 +1.4
REDW IAmb IAmb 15 44 48.1
comp=Z,12nm,1.1s

FXWY Fox Creek 86.80 42 P P 15 44 45.9 +0.9
F21K Alatna River 86.83 9 P P 15 44 44.9 +0.6
baz=204

G22K Bettles 86.88 10 P P 15 44 45.9 +1.4
baz=206

G23K Bananza Creek 86.95 11 P P 15 44 45.9 +1.0
baz=207

S22A 4UR Ranch, Cre 87.01 49 P P 15 44 48.2 +2.0
baz=245

MOOW Moose Ponds 87.03 42 P P 15 44 46.0 -0.1
M31M Drury Creek, Y 87.05 19 P P 15 44 46.6 +1.2
baz=222

O20A White River Ci 87.05 46 P P 15 44 47.5 +1.3
baz=244

DAWY Dawson 87.06 16 P P 15 44 47.0 +1.6
baz=217

LOHW Long Hollow 87.06 42 P P 15 44 47.2 +1.0
LOHW IAmb IAmb 15 44 49.2
comp=Z,14nm,1.5s

QLMT Earthquake Lak 87.11 41 P P 15 44 47.0 +0.6
I26K Coal Creek Min 87.14 14 P P 15 44 46.4 +0.6
baz=214

EGAK Eagle 87.18 15 P P 15 44 46.5 +0.5
EGAK IAmb IAmb 15 44 47.8
comp=Z,9.4nm,1.4s

EGAK Eagle 87.18 15 P P 15 44 46.6 +0.6
baz=215

FLWY Flagg Ranch 87.22 42 P P 15 44 47.4 +0.4
FLWY IAmb IAmb 15 44 50.5
comp=Z,10nm,0.9s

F22K John River 87.30 10 P P 15 44 47.2 +0.7
baz=205

BW06 Boulder Array 87.35 43 P P 15 44 47.6 0.0
BW06 IAmb IAmb 15 44 50.0
comp=Z,14nm,1.4s

BW06 Boulder Array 87.35 43 P P 15 44 48.8 +1.2
baz=243

PD31 Pinedale Array 87.35 43 P P 15 44 47.9 +0.3
PD31 IAmb IAmb 15 44 50.0
comp=Z,12nm,1.4s

PDAR Pinedale Array 87.35 43 P P 15 44 49.4 +1.8
comp=Z,2.6nm,0.6s,baz=223,slow=3.7,SNR=25
PDAR PP PP 15 48 21.2 -1.3
comp=Z,1.0nm,1.0s,baz=245,slow=9.0,SNR=5.8
comp=Z,2.6nm,0.6s

PDAR Pinedale Array 87.35 43 P P 15 44 48.0 +0.3
BOZ Bozeman (W) 87.36 40 P P 15 44 49.1 +1.7
baz=241,SNR=6.6

H25K Birch Creek 87.38 13 P P 15 44 47.9 +1.1
baz=211

FARO Faro, Yukon 87.39 19 P P 15 44 48.1 +1.0
baz=223

G24K Hadweenzic Riv 87.42 12 P P 15 44 48.0 +1.0
baz=210

H17A Grant Village 87.44 42 P P 15 44 51.3 +3.3
baz=242

WALA Waterton Lakes 87.73 36 P P 15 44 49.8 +0.7
WALA IAmb IAmb 15 44 54.3
comp=Z,7.3nm,1.2s

I27K	**Kandik River**	**87.75**	**14**	P	**P**	**15 44 49.5**	**+0.8**	
	baz=215							
FYU	**Fort Yukon**	**87.75**	**13**	P	**P**	**15 44 49.0**	**+0.4**	
FYU				lAmb	lAmb	15 44 57.4		
	comp=Z,15nm,1.3s							
KMI	**Kunming**	**87.78**	**297**	⇑P	**P**	**15 44 52.3**	**+2.3**	
KMI				pmax	pmax			
	comp=Z,12nm,0.9s							
E22K	**Anaktuvuk Pass**	**87.93**	**10**	P	**P**	**15 44 50.1**	**+0.7**	
	baz=205							
SDCO	**Great Sand Dun**	**87.96**	**49**	P	**P**	**15 44 52.3**	**+1.6**	
	baz=246							
F24K	**Squaw Lake**	**88.06**	**11**	P	**P**	**15 44 50.8**	**+0.7**	
	baz=209							
H27K	**Steamboat Moun**	**88.29**	**14**	P	**P**	**15 44 52.1**	**+0.8**	
	baz=215							
MMPY	**Sheldon Lake,**	**88.35**	**20**	P	**P**	**15 44 52.8**	**+1.3**	
	baz=224,SNR=7.7							
I29M	**Ogilvie Camp,**	**88.38**	**16**	P	**P**	**15 44 52.0**	**+0.4**	
	baz=218							
G26K	**Porcupine Rive**	**88.39**	**13**	P	**P**	**15 44 52.7**	**+1.2**	
	baz=213							
E24K	**Your Creek**	**88.44**	**11**	P	**P**	**15 44 52.9**	**+1.0**	
	baz=209							
MSTX	**Muleshoe**	**88.50**	**54**	P	**P**	**15 44 53.2**	**+0.2**	
MSTX				lAmb	lAmb	15 44 55.8		
	comp=Z,9.2nm,1.1s							
MSTX	**Muleshoe**	**88.50**	**54**	P	**P**	**15 44 53.9**	**+0.9**	
	baz=248							
T25A	**Trinidad**	**88.51**	**50**	P	**P**	**15 44 54.3**	**+1.1**	
	baz=246							
F25K	**Christian Rive**	**88.55**	**12**	P	**P**	**15 44 53.7**	**+1.3**	
	baz=211							
TGTN	**Hyland Airport**	**88.59**	**22**	P	**P**	**15 44 54.5**	**+1.8**	
	baz=227							
RLMT	**Red Lodge**	**88.61**	**41**	P	**P**	**15 44 54.8**	**+1.4**	
RLMT				lAmb	lAmb	15 44 57.3		
	comp=Z,6.3nm,1.1s							
RLMT	**Red Lodge**	**88.61**	**41**	P	**P**	**15 44 55.0**	**+1.5**	
	baz=243							
BMAR	**Burnt Mountain**	**88.63**	**12**	P	**P**	**15 44 53.8**	**+1.0**	
ISCO	**Idaho Springs**	**88.73**	**47**	P	**P**	**15 44 55.3**	**+1.1**	
	baz=246							
G27K	**Doyon Strip**	**88.74**	**14**	P	**P**	**15 44 54.7**	**+1.4**	
	baz=215							
TOLK	**Toolik Lake Re**	**88.75**	**10**	P	**P**	**15 44 54.6**	**+1.3**	
	baz=208							
CMAR	**Chiang Mai Arr**	**88.84**	**290**	P	**P**	**15 44 56.5**	**+1.7**	
	comp=Z,5.1nm,0.9s,baz=112,slow=2.8,SNR=28							
CMAR				PP	**PP**	**15 48 36.2**	**+1.7**	
	comp=Z,0.6nm,0.8s,baz=100,slow=5.9,SNR=4.2							
	comp=Z,5.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**88.84**	**290**	P	**P**	**15 44 54.8**	**0.0**	
D23K	**Nanushuk River**	**88.86**	**10**	P	**P**	**15 44 55.4**	**+1.6**	
	baz=206							
N23A	**Red Feather La**	**88.96**	**46**	P	**P**	**15 44 57.2**	**+2.0**	
	baz=245							
PZH	**PanZhiHua**	**89.11**	**298**	P	**P**	**15 44 56.3**	**+0.3**	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
PZH				pmax	pmax			
	comp=Z,130nm,5.7s							
D24K	**Happy Valley**	**89.33**	**10**	P	**P**	**15 44 57.1**	**+1.1**	
	baz=208							
PHWY	**Pilot Hill**	**89.46**	**46**	P	**P**	**15 44 58.5**	**+0.9**	
PHWY				lAmb	lAmb	15 45 00.2		
	comp=Z,4.2nm,0.9s							
EPYK	**Eagle Plains**	**89.57**	**16**	P	**P**	**15 44 57.9**	**+0.7**	
	baz=220							
EGMT	**Eagleton**	**89.64**	**39**	P	**P**	**15 44 59.2**	**+1.2**	
	baz=243							
LR04	**Corral**	**89.72**	**132**	P	**P**	**15 44 59.5**	**+0.9**	
AIS	**Amsterdam Isla**	**89.78**	**230**	P	**P**	**15 44 59.2**	**+0.4**	
TROLL	**Troll, Antarti**	**90.35**	**180**	P	**P**	**15 45 02.0**	**+1.0**	
ABTX	**Abilene, Hawle**	**90.43**	**56**	P	**P**	**15 45 03.5**	**+1.6**	
	baz=249							
SNAA	**Sanae**	**90.64**	**179**	P	**P**	**15 45 02.9**	**+0.7**	
SNAA				lAmb	lAmb	15 45 03.5		
	comp=Z,5.4nm,1.0s							
VNA3	**Neumayer Olymp**	**90.78**	**176**	P	**P**	**15 45 04.1**	**+1.3**	
LAO	**LASA Array**	**91.20**	**41**	P	**P**	**15 45 07.1**	**+1.9**	
	baz=245							
VNA2	**Neumayer--Watz**	**91.22**	**177**	P	**P**	**15 45 06.2**	**+1.4**	
	baz=175,slow=2.0							
VNA1	**Neumayer--Stat**	**91.45**	**177**	P	**P**	**15 45 07.8**	**+2.0**	
INK	**Inuvik**	**91.86**	**15**	P	**P**	**15 45 08.1**	**+0.6**	
	comp=Z,5.0nm,1.0s,baz=201,slow=7.6,SNR=4.1							
	comp=Z,5.0nm,1.0s							
INK	**Inuvik**	**91.86**	**15**	P	**P**	**15 45 08.2**	**+0.7**	
	baz=222							
YKA	**Yellowknife Ar**	**94.31**	**25**	P	**P**	**15 45 19.9**	**+1.0**	
	comp=Z,2.1nm,0.8s,baz=253,slow=4.8,SNR=7.0							
	comp=Z,2.1nm,0.8s							
BNN	**Bunyan**	**143.60**	**312**	PKPdf	**PKPdf**	**15 51 30.4**	**-1.0**	
LODK	**Lodwar**	**143.90**	**251**	PKPdf	**PKiKP**	**15 51 33.0**	**-3.3**	
BURAR	**Bucovina Array**	**144.56**	**332**		**PKPab**	**15 51 32.8**	**-0.7**	
BR131	**Keskin Array S**	**144.73**	**315**	PKPdf	**PKPab**	**15 51 33.4**	**-1.1**	
BRTR	**Keskin Array B**	**144.73**	**315**	PKP	**PKiKP**	**15 51 34.2**	**-3.1**	
	comp=Z,5.5nm,0.9s,baz=141,slow=3.5,SNR=28							
BRTR	**Keskin Array B**	**144.73**	**315**	PKPdf	**PKPab**	**15 51 33.3**	**-1.1**	
OSTC	**Ostas**	**145.34**	**344**	*e*PKP	**PKiKP**	**15 51 36.5**	**-1.6**	
CLL	**Collm**	**145.42**	**347**	*i* PKPbc	**PKiKP**	**15 51 36.4**	**-1.7**	
	comp=Z,10.0nm,1.4s							
CLL				*i* PKiKP	**PKPab**	**15 51 38.6**	**+2.1**	
	comp=Z,6.0nm,0.8s							
CLL				*ep*PKPdf	pPKPbc	15 53 39.0	-2.4	
CLL				*ep*PKiKP	**pPKiKP**	**15 53 43.0**	**-3.4**	
DPC	**Dobruska-Polom**	**145.50**	**343**	*e*PKP	**PKiKP**	**15 51 36.6**	**-1.8**	
PRU	**Pruhonice**	**146.30**	**345**	*e*PKP	**PKiKP**	**15 51 41.2**	**+1.2**	
VYHS	**Vyhne**	**146.37**	**359**	*e*PKP	**PKiKP**	**15 51 39.5**	**-0.7**	
MODS	**Modra-Piesok**	**146.98**	**341**	*e*PKP	**PKPab**	**15 51 41.7**	**-1.2**	
CSS	**Mathiatis**	**147.03**	**307**	PKPbc	**PKiKP**	**15 51 40.1**	**-1.9**	
CSS					**PKPab**	**15 51 43.7**	**+0.2**	
KHC	**Kasperske Hory**	**147.33**	**345**	*e*PKP	**PKPab**	**15 51 41.3**	**-2.9**	
KHC				*ex*	x	15 51 45.5		
CKRC	**Cesky Krumlov**	**147.43**	**344**	*e*PKP	**PKPab**	**15 51 42.1**	**-2.6**	
GERES	**GERESS Array B**	**147.56**	**345**	PKPbc	**PKPab**	**15 51 42.2**	**-3.1**	
	comp=Z,1.0nm,0.5s,baz=10.0,slow=2.0,SNR=15							
CONA	**Conrad Observa**	**147.81**	**342**	*e*P	**PKPab**	**15 51 43.3**	**-3.0**	
	comp=Z,3.4nm,0.9s							
RONA	**Rosalia, Austr**	**147.89**	**341**	*e*P	**PKPab**	**15 51 43.8**	**-2.8**	
	comp=Z,3.5nm,0.7s							
SOKA	**Soboth**	**149.19**	**342**	*e*P	**PKiKP**	**15 51 45.9**	**-0.3**	
	comp=Z,2.5nm,1.0s							
WATA	**Walderalm**	**149.48**	**347**	*e*P	**PKiKP**	**15 51 47.2**	**+0.4**	
	comp=Z,2.7nm,0.7s							
RETA	**Reutte**	**149.51**	**348**	*e*P	**PKPab**	**15 51 48.2**	**-5.1**	
	comp=Z,5.2nm,1.4s							
WTTA	**Wattenberg**	**149.53**	**346**	*e*P	**PKiKP**	**15 51 47.5**	**+0.5**	
	comp=Z,2.6nm,0.5s							
DIVS	**Divibare**	**149.59**	**333**		**PKiKP**	**15 51 46.6**	**-0.6**	
MYKA	**Terra Mystica**	**149.62**	**343**	*e*P	**PKiKP**	**15 51 46.9**	**-0.2**	
	comp=Z,1.1nm,0.4s							
SQTA	**Sankt Quirin**	**149.67**	**347**	*e*P	**PKiKP**	**15 51 47.7**	**+0.4**	
	comp=Z,2.9nm,0.6s							
ABTA	**Abfaltersbach**	**149.81**	**345**	*e*P	**PKiKP**	**15 51 47.4**	**-0.1**	
	comp=Z,6.0nm,1.1s							
CRES	**Cresnjev**	**149.82**	**340**	*i* PKPdf	**PKiKP**	**15 51 47.5**	**+0.1**	
CEY	**Cerknica**	**150.21**	**342**	*i* PKPbc	**PKiKP**	**15 51 48.5**	**+0.3**	
CIMO	**Cimolais**	**150.24**	**345**		**PKiKP**	**15 51 47.4**	**-0.9**	
PDG	**Podgorica**	**151.25**	**332**		**PKiKP**	**15 51 49.8**	**-0.6**	
LIT	**Litokhoron**	**151.39**	**325**		**PKiKP**	**15 51 50.3**	**-0.6**	
ESDC	**Sonseca Array**	**157.75**	**11**	PKPab	**PKPab**	**15 52 29.2**	**+0.5**	
	comp=Z,0.7nm,0.8s,baz=338,slow=3.2,SNR=5.2							
TORD	**Torodi Ar. Bea**	**175.31**	**182**	PKPab	**PKPab**	**15 53 47.5**	**+1.0**	
	comp=Z,1.0nm,0.9s,baz=188,slow=4.2,SNR=3.9							

IDC 21 15:33:12.7±3.3, 6°15S×151°70E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=116.4km s-min=19.9km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.86**	**10**	Pn	Pn	15 33 46.5	+0.7
	11nm,0.3s,baz=228,slow=5.1,SNR=20						
KRVT				Sn	Sn	15 34 09.9	-0.1
	26nm,0.3s,baz=336,slow=22,SNR=16						
WRA	**Warramunga Arr**	**21.74**	**229**	P	P	15 38 05.6	-0.3
	0.5nm,0.9s,baz=54,slow=10.0,SNR=2.4						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**24.42**	**223**	P	P	15 38 32.9	-0.3
	0.8nm,0.7s,baz=54,slow=9.2,SNR=15						
	0.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**28.06**	**243**	P	P	15 39 07.4	+1.3
	0.4nm,0.4s,baz=45,slow=10.0,SNR=1.5						
	0.4nm,0.4s						

TORD	**Torodi Ar. Bea**	**149.64**	**285**	PKPbc	PKPbc	15 53 04.1	-1.4	
	0.3nm,0.7s,baz=100,slow=4.4,SNR=2.0							

*NOU **21** 15:53:19.7, 40°39S×173°11E, h199km, MLv4.0/9, Cook Strait, New Zealand*
*WEL **21** 15:53:24.2±0.8, 41°S±4°×17°3E±°, h151km±6km, M3.4/30, MLv3.4/30, Error ellipse: s-maj=0.0km s-min=0.0km az=94.2*

ISC 21 15:53:19.4±1.7, 40°49S±0°05×173°21E±0°06, h191km±9km, n128, σ1§46/135, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKNZ	**Takaka Hill**	**0.58**	**199**	P	**Pn**	**15 53 46.7**	**+0.9**
TKNZ				S	**Sn**	**15 54 04.5**	**-1.9**
QRZ	**Quartz Range**	**0.62**	**236**	P	**Pn**	**15 53 47.2**	**+1.3**
QRZ				S	**Sn**	**15 54 04.5**	**-2.0**
QRZ	**Quartz Range**	**0.62**	**236**	P	**Pn**	**15 53 47.2**	**+1.3**
DUWZ	**D'Urville Isla**	**0.63**	**120**	P	**Pn**	**15 53 47.1**	**+1.1**
DUWZ				S	**Sn**	**15 54 04.4**	**-2.3**
NNZ	**Nelson**	**0.74**	**170**	P	**Pn**	**15 53 47.8**	**+1.3**
NNZ				S	**Sn**	**15 54 05.9**	**-1.8**
MRNZ	**Matariki Terra**	**0.97**	**200**	P	**Pn**	**15 53 49.2**	**+1.2**
TCW	**Tory Channel**	**1.09**	**132**	P	**Pn**	**15 53 50.8**	**+2.0**
TCW				S	**Sn**	**15 54 09.3**	**-2.3**
TUWZ	**Tuamarina**	**1.10**	**150**	P	**Pn**	**15 53 50.3**	**+1.5**
TUWZ				S	**Sn**	**15 54 09.7**	**-2.1**
NMEZ	**Namu Road**	**1.19**	**26**	P	**Pn**	**15 53 51.3**	**+1.7**
NMEZ				S	**Sn**	**15 54 10.2**	**+0.3**
THZ	**Tophouse**	**1.30**	**190**	P	**Pn**	**15 53 51.9**	**+1.4**
NBEZ	**Newall Road No**	**1.32**	**23**	P	**Pn**	**15 53 52.5**	**+1.8**
BSWZ	**Blackbirch Sta**	**1.33**	**158**	P	**Pn**	**15 53 52.6**	**+1.8**
KHEZ	**Kahui Hut**	**1.34**	**28**	P	**Pn**	**15 53 52.7**	**+1.7**
KIW	**Kapiti Island**	**1.35**	**107**	P	**Pn**	**15 53 52.4**	**+1.5**
PREZ	**Palmer Road**	**1.36**	**33**	P	**Pn**	**15 53 52.8**	**+1.7**
LREZ	**Lake Rotokare**	**1.38**	**42**	P	**Pn**	**15 53 52.9**	**+1.7**
NEZ	**North Egmont**	**1.39**	**30**	P	**Pn**	**15 53 52.8**	**+1.4**
SNZO	**South Karori**	**1.40**	**126**	P	**Pn**	**15 53 54.1**	**+2.8**
PKE	**Pukeiti**	**1.42**	**25**	P	**Pn**	**15 53 53.3**	**+1.7**
WEL	**Wellington**	**1.43**	**125**	P	**Pn**	**15 53 53.5**	**+1.9**
CMWZ	**Cape Campbell**	**1.47**	**149**	P	**Pn**	**15 53 54.3**	**+2.3**
DREZ	**Durham Road**	**1.50**	**31**	P	**Pn**	**15 53 54.1**	**+1.8**
OGWZ	**Otaki Gorge**	**1.53**	**103**	P	**Pn**	**15 53 54.2**	**+1.7**
CAW	**Cannon Point**	**1.54**	**114**	P	**Pn**	**15 53 54.3**	**+1.6**
WAZ	**Wanganui**	**1.55**	**62**	P	**Pn**	**15 53 54.6**	**+1.8**
OHWZ	**Ohakea**	**1.64**	**81**	P	**Pn**	**15 53 55.5**	**+2.0**
DSZ	**Dennisten Nort**	**1.65**	**220**	P	**Pn**	**15 53 55.4**	**+1.7**
MHEZ	**Mangahewa**	**1.65**	**32**	P	**Pn**	**15 53 55.7**	**+2.0**
HOWZ	**Holdsworth Sta**	**1.80**	**104**	P	**Pn**	**15 53 56.7**	**+1.6**
MSWZ	**Moikau Station**	**1.81**	**122**	P	**Pn**	**15 53 56.8**	**+1.6**
VRZ	**Vera Road**	**1.81**	**42**	P	**Pn**	**15 53 56.4**	**+1.2**
MRZ	**Mangatainoka R**	**1.81**	**96**	P	**Pn**	**15 53 56.8**	**+1.5**
MTW	**Mount Morrison**	**1.87**	**112**	P	**Pn**	**15 53 57.4**	**+1.6**
PLWZ	**Palliser**	**1.89**	**126**	P	**Pn**	**15 53 57.6**	**+1.5**
PAWZ	**Paruwai Farm**	**1.91**	**119**	P	**Pn**	**15 53 58.0**	**+1.7**
KHZ	**Kahutara**	**1.94**	**173**	P	**Pn**	**15 53 58.4**	**+1.8**
KHZ	**Kahutara**	**1.94**	**173**	P	**Pn**	**15 53 58.3**	**+1.8**
POWZ	**Post Office Ro**	**1.96**	**88**	P	**Pn**	**15 53 58.3**	**+1.5**
PKVZ	**Pokaka**	**2.03**	**55**	P	**Pn**	**15 53 59.1**	**+1.4**
MTVZ	**Mangateitei**	**2.06**	**58**	P	**Pn**	**15 53 59.6**	**+1.7**
TIWZ	**Tintock**	**2.06**	**99**	P	**Pn**	**15 53 59.6**	**+1.7**
TRWZ	**Traveller**	**2.09**	**117**	P	**Pn**	**15 54 00.0**	**+1.9**
PRWZ	**Pori Road**	**2.11**	**93**	P	**Pn**	**15 54 00.3**	**+1.9**
TMWZ	**Te Maipa**	**2.13**	**108**	P	**Pn**	**15 54 00.3**	**+1.7**
TSZ	**Takapari Road**	**2.15**	**79**	P	**Pn**	**15 54 00.2**	**+1.4**
TRVZ	**Turoa**	**2.15**	**57**	P	**Pn**	**15 54 00.8**	**+1.6**
WNVZ	**Wahianoa**	**2.17**	**59**	P	**Pn**	**15 54 00.4**	**+1.1**
DRZ	**Dome Shelter**	**2.18**	**57**	P	**Pn**	**15 54 01.7**	**+2.2**
FWVZ	**Far West T-bar**	**2.18**	**57**	P	**Pn**	**15 54 00.8**	**+1.4**
WHVZ	**Whangaehu Hut**	**2.19**	**58**	P	**Pn**	**15 54 01.0**	**+1.5**
TWVZ	**Taurewa**	**2.23**	**51**	P	**Pn**	**15 54 00.7**	**+0.9**
MOVZ	**Moawhango**	**2.23**	**62**	P	**Pn**	**15 54 00.7**	**+0.9**
TUVZ	**Tukino**	**2.24**	**58**	P	**Pn**	**15 54 01.2**	**+1.2**
NGZ	**Ngauruhoe**	**2.26**	**55**	P	**Pn**	**15 54 01.5**	**+1.3**
DVHZ	**Dannevirke**	**2.27**	**86**	P	**Pn**	**15 54 01.5**	**+1.3**
SNVZ	**South Ngauruho**	**2.28**	**56**	P	**Pn**	**15 54 01.6**	**+1.2**
WTVZ	**West Tongariro**	**2.29**	**54**	P	**Pn**	**15 54 01.7**	**+1.2**
NNVZ	**North Ngauruho**	**2.29**	**55**	P	**Pn**	**15 54 01.7**	**+1.1**
OTVZ	**Oturere**	**2.31**	**56**	P	**Pn**	**15 54 01.9**	**+1.1**
BFZ	**Birch Farm**	**2.32**	**96**	P	**Pn**	**15 54 02.3**	**+1.7**
BFZ	**Birch Farm**	**2.32**	**96**	P	**Pn**	**15 54 02.4**	**+1.7**
KRVZ	**Karewarewa**	**2.33**	**54**	P	**Pn**	**15 54 02.7**	**+1.1**
HIZ	**Hauiti**	**2.35**	**33**	P	**Pn**	**15 54 02.4**	**+1.4**
HIZ	**Hauiti**	**2.35**	**33**	P	**Pn**	**15 54 02.4**	**+1.4**
ETVZ	**East Tongariro**	**2.35**	**56**	P	**Pn**	**15 54 02.5**	**+1.3**
NTVZ	**North Tongarir**	**2.35**	**55**	P	**Pn**	**15 54 02.5**	**+1.3**
TMVZ	**Te Maari**	**2.36**	**55**	P	**Pn**	**15 54 02.8**	**+1.5**
PNHZ	**Pukenui**	**2.36**	**77**	P	**Pn**	**15 54 02.5**	**+1.3**
LTZ	**Lake Taylor**	**2.40**	**197**	P	**Pn**	**15 54 03.2**	**+1.6**
BHHZ	**Black Hill Sta**	**2.41**	**67**	P	**Pn**	**15 54 02.5**	**+0.8**
KATZ	**Kakaramea**	**2.44**	**53**	P	**Pn**	**15 54 03.5**	**+1.3**
GVZ	**Greta Valley S**	**2.48**	**183**	P	**Pn**	**15 54 04.1**	**+1.7**
ANWZ	**Angora Road**	**2.49**	**90**	P	**Pn**	**15 54 04.4**	**+1.8**
WPHZ	**Waipukurau**	**2.51**	**81**	P	**Pn**	**15 54 04.4**	**+1.6**
RITZ	**Rihia Road**	**2.54**	**54**	P	**Pn**	**15 54 04.8**	**+1.6**
RATZ	**Rangitukua**	**2.56**	**52**	P	**Pn**	**15 54 05.0**	**+1.6**
KRHZ	**Kereru**	**2.57**	**72**	P	**Pn**	**15 54 04.7**	**+1.1**
INZ	**Inchbonnie**	**2.60**	**210**	P	**Pn**	**15 54 05.4**	**+1.6**
PRHZ	**Porangahau**	**2.63**	**86**	P	**Pn**	**15 54 05.9**	**+1.8**
WATZ	**Wairara**	**2.64**	**49**	P	**Pn**	**15 54 06.2**	**+1.8**
KWHZ	**Kawakea Forest**	**2.69**	**68**	P	**Pn**	**15 54 06.4**	**+1.5**
AMCZ	**Amberley**	**2.72**	**189**	P	**Pn**	**15 54 06.8**	**+1.6**
WHTZ	**Whakaora**	**2.80**	**50**	P	**Pn**	**15 54 08.1**	**+1.8**
TLZ	**Tolley Road**	**2.81**	**41**	P	**Pn**	**15 54 07.4**	**+1.0**
KUTZ	**Kaahu Road**	**2.84**	**46**	P	**Pn**	**15 54 08.4**	**+1.7**
BKZ	**Black Stump Fm**	**2.85**	**64**	P	**Pn**	**15 54 07.6**	**+0.7**
BKZ	**Black Stump Fm**	**2.85**	**64**	P	**Pn**	**15 54 07.6**	**+0.7**
KAHZ	**Kahuranaki**	**2.90**	**77**	P	**Pn**	**15 54 09.1**	**+1.7**
OXZ	**Oxford**	**2.97**	**197**	P	**Pn**	**15 54 09.1**	**+0.9**
MRHZ	**Matea Rd**	**2.98**	**57**	P	**Pn**	**15 54 08.7**	**+0.4**
WPRZ	**Whakapapataran**	**3.01**	**50**	P	**Pn**	**15 54 10.3**	**+1.5**
ALRZ	**Allen Road**	**3.09**	**53**	P	**Pn**	**15 54 10.4**	**+0.7**
NMHZ	**Naumai**	**3.10**	**65**	P	**Pn**	**15 54 11.5**	**+1.6**
ARHZ	**Aropaoanui**	**3.16**	**69**	P	**Pn**	**15 54 11.7**	**+1.3**
OKCZ	**Okains Bay**	**3.24**	**182**	P	**Pn**	**15 54 12.4**	**+1.0**
MTHZ	**Maungataniwha**	**3.24**	**61**	P	**Pn**	**15 54 12.1**	**+0.6**
MQZ	**McQueen's Vall**	**3.25**	**187**	P	**Pn**	**15 54 11.9**	**+0.5**
TOZ	**Tahuna Road**	**3.28**	**34**	P	**Pn**	**15 54 11.7**	**+1.2**
RACZ	**Rakaia**	**3.34**	**193**	P	**Pn**	**15 54 13.5**	**+1.0**
RRRZ	**Republican Roa**	**3.34**	**51**	P	**Pn**	**15 54 13.5**	**+0.8**
RAHZ	**Arahi**	**3.38**	**64**	P	**Pn**	**15 54 14.1**	**+1.0**
AKCZ	**Akaroa Harbour**	**3.39**	**184**	P	**Pn**	**15 54 14.4**	**+1.2**
WHHZ	**Waihua**	**3.41**	**67**	P	**Pn**	**15 54 14.8**	**+1.3**
MUGZ	**Murupara**	**3.41**	**55**	P	**Pn**	**15 54 13.6**	**+0.1**
WACZ	**Wakanui South**	**3.60**	**196**	P	**Pn**	**15 54 17.1**	**+1.3**
RPZ	**Rata Peaks**	**3.60**	**206**	P	**Pn**	**15 54 17.2**	**+1.4**
RPZ	**Rata Peaks**	**3.60**	**206**	P	**Pn**	**15 54 17.3**	**+1.4**
SNGZ	**Shannon Statio**	**3.62**	**63**	P	**Pn**	**15 54 17.0**	**+0.9**
KNZ	**Kokohu**	**3.74**	**68**	P	**Pn**	**15 54 18.2**	**+0.6**
URZ	**Urewera**	**3.75**	**55**	P	**Pn**	**15 54 17.6**	**-0.2**
URZ	**Urewera**	**3.75**	**55**	P	**Pn**	**15 54 17.5**	**-0.3**
ARCZ	**Arundel**	**3.77**	**203**	P	**Pn**	**15 54 19.2**	**+1.2**
RAGZ	**Rawiri**	**3.81**	**60**	P	**Pn**	**15 54 19.3**	**+0.7**
MHGZ	**Mahia Peninsul**	**3.86**	**71**	P	**Pn**	**15 54 20.3**	**+1.3**
PRGZ	**Paritu Road**	**3.93**	**68**	P	**Pn**	**15 54 20.7**	**+0.7**
RIGZ	**Rimuhau**	**3.94**	**65**	P	**Pn**	**15 54 20.8**	**+0.7**
MWZ	**Matawai**	**3.98**	**59**	P	**Pn**	**15 54 20.7**	**0.0**
TKGZ	**Te Karaka**	**4.13**	**62**	P	**Pn**	**15 54 23.1**	**+0.6**
TMZ	**Timaru**	**4.22**	**202**	P	**Pn**	**15 54 24.9**	**+1.3**
RUGZ	**Raukumara Rang**	**4.29**	**55**	P	**Pn**	**15 54 24.0**	**-0.6**
CNGZ	**Carnagh Statio**	**4.35**	**64**	P	**Pn**	**15 54 26.2**	**+0.8**
TWGZ	**Tauwhareparae**	**4.36**	**60**	P	**Pn**	**15 54 26.1**	**+0.6**
HAZ	**Te Kaha**	**4.48**	**54**	P	**Pn**	**15 54 26.2**	**-0.7**
PKGZ	**Pakihiroa**	**4.59**	**57**	P	**Pn**	**15 54 28.6**	**+0.2**
WMGZ	**Waiomatatini S**	**4.84**	**58**	P	**Pn**	**15 54 31.5**	**-0.1**
JCZ	**Jackson Bay**	**4.86**	**221**	P	**Pn**	**15 54 33.5**	**+1.7**
ODZ	**Otahua Downs**	**4.93**	**202**	P	**Pn**	**15 54 34.0**	**+1.4**
ODZ	**Otahua Downs**	**4.93**	**202**	P	**Pn**	**15 54 33.9**	**+1.3**

*SKHL **21** 16:04:51.9±0.5, 44°80N×149°60E, h89km±9km, mb4.7/5, msha5.4/4*
*MOS **21** 16:04:51.5±1.2, 44°95N×149°51E, h85km, mb4.1/9, Error ellipse: s-maj=10.2km s-min=7.5km az=89.5*
*JMA **21** 16:04:53.3±0.8, 45°N±3°×14°9E±°, h30km, MV4.5/15, SE OFF ETOROFU*
*NEIC **21** 16:04:53.5±2.0, 45°3N±0°2×149°5E±0°1, h74km±9km, mb4.5/18, Error ellipse: s-maj=28.2km s-min=9.0km az=198.0*
*IDC **21** 16:04:54.0±3.1, 45°00N×149°34E, h88km±27km, mb3.7/20, mbtmp4.0/24, MS2.7/3, Error ellipse: s-maj=15.8km s-min=13.9km az=141.0*

ISC 21 16:04:50.0±0.5, 44.78N±0°05×149°65E±0°06, h60km, n117, σ1§83/123, mb4.1/29, 4C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.34**	**290**	*ce*PN	**Pn**	**16 05 14.3**	**+1.8**
KUR	**Kuril'sk**	**1.34**	**290**	*e*P	**Pn**	**16 05 14.3**	**+1.8**
KUR				AMB	AMB	16 05 14.6	
	500nm,0.2s						
KUR				*e*S	**Sn**	**16 05 30.9**	**+1.6**
KUR				A	A	16 05 31.3	
	10μm,0.7s						
KUR				A	A	16 05 31.3	
	4μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**2.81**	**256**	*e*PN	**Pn**	**16 05 34.6**	**+2.1**
YUK				*e*S	**Sn**	**16 06 06.8**	**+1.6**
YUK				pmax	pmax		
	comp=N,87nm,0.2s						
YUK				pmax	pmax		
	comp=Z,223nm,0.2s						
YUK				smax	smax		
	comp=N,498nm,0.5s						
YUK				smax	smax		
	comp=E,593nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.81**	**256**	*e*P	**Pn**	**16 05 34.6**	**+2.1**
YUK				AMB	AMB	16 05 36.8	
	comp=E,360nm,0.5s						
YUK				*e*S	**Sn**	**16 06 06.8**	**+1.6**
YUK				A	A	16 06 10.3	
	comp=E,340nm,0.5s						
YUK				A	A	16 06 10.3	
	comp=E,600nm,0.5s						
NEM2	**Nemuro 2**	**3.15**	**245**	*e*P	**Pn**	**16 05 38.9**	**+1.8**
NEM2				*e*S	**Sn**	**16 06 12.5**	**-0.9**
NMR	**Nemuro--Hokkai**	**3.16**	**245**	*e*PN	**Pn**	**16 05 38.8**	**+1.6**
NMR				*e*S	**Sn**	**16 06 14.0**	**+0.4**
NMR	**Nemuro--Hokkai**	**3.16**	**245**	*e*P	**Pn**	**16 05 38.9**	**+1.7**
NMR				*e*S	**Sn**	**16 06 14.0**	**+0.4**
JRA	**Rausu**	**3.35**	**257**	*e*P	**Pn**	**16 05 43.1**	**+3.3**
JNK	**Nakash**	**3.74**	**253**	*e*P	**Pn**	**16

CMAR	**Chiang Mai Arr**	**49.53**	**255**	LR	LR	16 35 23.9			
	comp=Z,10nm,18.1s,baz=330,slow=37								
BOOM	**Boomskoye usch**	**51.67**	**295**	P	**P**	**16 13 51.0**	**+0.2**		
BOOM	**Boomskoye usch**	**51.67**	**295**	P	**P**	**16 13 51.0**	**+0.2**		
YKA	**Yellowknife Ar**	**53.94**	**35**	P	**P**	**16 14 09.4**	**+2.5**		
	comp=Z,1.1nm,0.6s,baz=301,slow=7.2,SNR=6.1								
	comp=Z,1.1nm,0.6s								
KK31	**Karatay Array**	**54.81**	**298**	P	**P**	**16 14 13.3**	**-0.4**		
KK31				IAmb	IAmb	16 14 13.7			
	comp=Z,1.8nm,0.7s								
KK31	**Karatay Array**	**54.81**	**298**	P	**P**	**16 14 13.3**	**-0.4**		
KK31				pmax	pmax				
	comp=Z,2.0nm,0.7s								
KKAR	**Karatay Array**	**54.81**	**298**	P	**P**	**16 14 13.3**	**-0.4**		
KKAR	**Karatay Array**	**54.81**	**298**	P	**P**	**16 14 13.3**	**-0.4**		
ABKAR	**Akbulak array**	**57.81**	**309**	P	**P**	**16 14 33.3**	**-1.5**		
AKTO	**Aktyubinsk**	**58.21**	**311**	P	**P**	**16 14 37.8**	**+0.1**		
	comp=Z,0.7nm,0.6s,baz=63,slow=9.0,SNR=2.4								
	comp=Z,0.7nm,0.6s								
FIA1	**FINESS Array S**	**64.75**	**334**	P	**P**	**16 15 19.1**	**-2.4**		
FIA1				IAmb	IAmb	16 15 53.2			
	comp=Z,10nm,1.3s								
FINES	**FINESS Array B**	**64.75**	**334**	P	**P**	**16 15 19.6**	**-2.0**		
	comp=Z,2.8nm,0.5s,baz=36,slow=8.2,SNR=26								
	comp=Z,2.8nm,0.5s								
FINES	**FINESS Array B**	**64.75**	**334**	P	**P**	**16 15 19.0**	**-2.5**		
FINES	**FINESS Array B**	**64.75**	**334**	*i* P	**P**	**16 15 19.2**	**-2.3**		
FINES				pmax	pmax				
	comp=Z,3.0nm,0.5s								
NVAR	**Mina Array Bea**	**65.51**	**60**	P	**P**	**16 15 28.6**	**+1.4**		
	comp=Z,0.5nm,0.6s,baz=299,slow=6.0,SNR=5.3								
	comp=Z,0.5nm,0.6s								
OBN	**Obninsk**	**65.53**	**324**	*e*P	**P**	**16 15 25.7**	**-0.9**		
OBN				*e**PP	**sP**	**16 15 49.0**	**-0.3**		
OBN				*e*		16 15 58.1			
OBN				*e*		16 17 50.0			
OBN				pmax	pmax				
	comp=Z,3.0nm,0.9s								
OBN	**Obninsk**	**65.53**	**324**	*e*P	**P**	**16 15 25.7**	**-0.9**		
WRA	**Warramunga Arr**	**65.91**	**196**	P	**P**	**16 15 30.8**	**+1.3**		
	comp=Z,1.5nm,0.8s,baz=16,slow=7.0,SNR=13								
	comp=Z,1.5nm,0.8s								
WRA	**Warramunga Arr**	**65.91**	**196**	*i* P	**P**	**16 15 30.5**	**+1.0**		
WRA				pmax	pmax				
	comp=Z,1.0nm,0.7s								
PDAR	**Pinedale Array**	**67.87**	**51**	P	**P**	**16 15 42.9**	**+0.7**		
	comp=Z,0.5nm,0.7s,baz=285,slow=1.4,SNR=6.3								
	comp=Z,0.5nm,0.7s								
NC303	**NORSAR Array S**	**69.07**	**340**	P	**P**	**16 15 47.4**	**-1.6**		
NC303				IAmb	IAmb	16 16 16.3			
	comp=Z,15nm,1.4s								
NC405	**NORSAR Array S**	**69.08**	**340**	P	**P**	**16 15 47.3**	**-1.7**		
NC405				IAmb	IAmb	16 16 30.0			
	comp=Z,8.0nm,1.1s								
NC204	**NORSAR Array S**	**69.17**	**340**	P	**P**	**16 15 48.0**	**-1.7**		
NB201	**NORSAR Array S**	**69.24**	**340**	P	**P**	**16 15 48.3**	**-1.8**		
NB2	**NORSAR Subarra**	**69.27**	**340**	P	**P**	**16 15 48.4**	**-1.8**		
	comp=Z,0.6nm,0.3s,baz=30,slow=6.5								
NOA	**NORSAR Array B**	**69.27**	**340**	P	**P**	**16 15 48.1**	**-2.2**		
	comp=Z,0.6nm,0.5s,baz=30,slow=6.6,SNR=15								
	comp=Z,0.6nm,0.5s								
NOA	**NORSAR Array B**	**69.27**	**340**	*e*P	**P**	**16 15 48.5**	**-1.8**		
NOA				pmax	pmax				
	comp=Z,1.0nm,0.5s								
HFS	**Hagfors**	**69.41**	**338**	P	**P**	**16 15 49.0**	**-2.1**		
	comp=Z,1.3nm,0.3s,baz=52,slow=5.7,SNR=24								
	comp=Z,1.3nm,0.3s								
NC602	**NORSAR Array S**	**69.45**	**339**	P	**P**	**16 15 49.2**	**-2.2**		
NC602				IAmb	IAmb	16 15 55.2			
	comp=Z,12nm,1.1s								
ASAR	**Alice Springs**	**69.62**	**195**	P	**P**	**16 15 54.5**	**+1.8**		
	comp=Z,1.0nm,0.8s,baz=12,slow=6.6,SNR=21								
	comp=Z,1.0nm,0.8s								
KBZ	**Khabaz**	**70.44**	**313**	P	**P**	**16 15 58.7**	**+1.0**		
	comp=Z,2.3nm,0.5s,baz=140,slow=3.0,SNR=5.2								
	comp=Z,2.3nm,0.5s								
KBZ	**Khabaz**	**70.44**	**313**	*e*P	**P**	**16 15 58.3**	**+0.6**		
KBZ				pmax	pmax				
	comp=Z,2.0nm,0.5s								
KBZ	**Khabaz**	**70.44**	**313**	*e*P	**P**	**16 15 58.3**	**+0.6**		
AKASG	**Malin Array Be**	**71.79**	**325**	P	**P**	**16 16 04.3**	**-1.4**		
	comp=Z,0.4nm,0.3s,baz=36,slow=6.3,SNR=6.4								
	comp=Z,0.4nm,0.3s								
BUR08	**Bucovina Ar. S**	**75.83**	**325**	P	**P**	**16 16 28.9**	**-0.7**		
BUR08				IAmb	IAmb	16 16 30.0			
	comp=Z,2.3nm,0.7s								
BURAR	**Bucovina Array**	**75.84**	**325**	P	**P**	**16 16 28.9**	**-0.7**		
EKA	**Eskdalemuir Ar**	**77.63**	**344**	P	**P**	**16 16 38.7**	**-0.7**		
	comp=Z,0.5nm,0.5s,baz=28,slow=5.0,SNR=4.5								
	comp=Z,0.5nm,0.5s								
BRTR	**Keskin Array B**	**78.11**	**315**	P	**P**	**16 16 42.9**	**+0.3**		
	comp=Z,1.5nm,0.8s,baz=74,slow=4.4,SNR=8.7								
	comp=Z,1.5nm,0.8s								
BRTR	**Keskin Array B**	**78.11**	**315**	*e*P	**P**	**16 16 43.2**	**+0.6**		
BRTR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
KHC	**Kasperske Hory**	**78.90**	**332**	P	**P**	**16 16 45.9**	**-0.8**		
KHC	**Kasperske Hory**	**78.90**	**332**	*e*P	**P**	**16 16 45.3**	**-1.3**		
KHC	**Kasperske Hory**	**78.90**	**332**	*e*P	**P**	**16 16 45.3**	**-1.3**		
GEC2	**GERESS Array S**	**79.11**	**332**	P	**P**	**16 16 47.3**	**-0.6**		
GEC2				IAmb	IAmb	16 16 48.1			
	comp=Z,1.5nm,0.6s								
GERES	**GERESS Array B**	**79.11**	**332**	P	**P**	**16 16 47.5**	**-0.3**		
	comp=Z,0.7nm,0.4s,baz=42,slow=5.9,SNR=14								
	comp=Z,0.7nm,0.4s								
GERES	**GERESS Array B**	**79.11**	**332**	P	**P**	**16 16 47.1**	**-0.7**		
TX31	**Lajitas Ar. Si**	**80.58**	**58**	P	**P**	**16 16 57.3**	**+1.1**		
TX31				IAmb	IAmb	16 17 33.2			
	comp=Z,6.1nm,1.4s								
TXAR	**Lajitas Array**	**80.58**	**58**	P	**P**	**16 16 57.3**	**+1.2**		
	comp=Z,1.2nm,0.7s,baz=312,slow=4.5,SNR=11								
	comp=Z,1.2nm,0.7s								
TXAR	**Lajitas Array**	**80.58**	**58**	P	**P**	**16 16 57.1**	**+1.0**		
TXAR	**Lajitas Array**	**80.58**	**58**	P	**P**	**16 16 57.1**	**+1.0**		
ITM	**Ithomi**	**85.73**	**321**	P	**P**	**16 17 21.9**	**-0.5**		
IDI	**Anoyia**	**85.89**	**318**	P	**P**	**16 17 23.4**	**0.0**		
TIP	**Timpagrande**	**86.27**	**325**	P	**P**	**16 17 25.6**	**+0.5**		
TIP				IAmb	IAmb	16 17 33.7			
	comp=Z,5.2nm,1.1s								
H03N2	**Juan Fernandez**	**141.17**	**90**	T	T	19 02 02.7			
	baz=305,slow=77,SNR=22								
H03N3	**Juan Fernandez**	**141.18**	**90**	T	T	19 02 03.6			
	baz=305,slow=77,SNR=21								
H03N1	**Juan Fernandez**	**141.18**	**90**	T	T	19 02 02.4			
	baz=305,slow=77,SNR=24								
PLCA	**Paso Flores**	**150.42**	**96**	PKPbc	**PKPbc**	**16 24 34.5**	**+0.2**		
	comp=Z,1.6nm,0.7s,baz=228,slow=2.5,SNR=3.4								

*ATH **21** 16:12:53.0,35˚.47N×22˚.51E,h59km±13km,ML3.4/6,Error ellipse: s-maj=15.6km s-min=1.7km az=55.0*
*BEO **21** 16:12:53.2±0.9,35˚.75N×22˚.37E,h0km,ML3.5/6*
*THE **21** 16:12:56.0,35˚.53N×22˚.59E,h65km±4km,ML3.2/10,Error ellipse: s-maj=5.4km s-min=0.7km az=49.0*

ISC 21 16:12:52.6±1.6,35˚.55N±0˚.08×22˚.55E±0˚.09,h100km±12km, n62,σ1s58/84,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.69**	**63**	P	**Pn**	**16 13 10.5**	**+0.5**
ANKY				S	**Sn**	**16 13 20.7**	**-2.3**
	3µm,0.4s						
ANKY	**Antikythira Is**	**0.69**	**63**	P	**Pn**	**16 13 09.7**	**-0.3**
ANKY				S	**Sn**	**16 13 20.4**	**-2.5**
ANKY				AML	AML	16 13 22.2	
	comp=N,8819µm,0.3s						
ANKY				AML	AML	16 13 23.2	
	comp=E,4179µm,0.4s						
KTHR	**Kythira**	**0.80**	**27**	P	**Pn**	**16 13 11.9**	**+0.9**
KTHR				S	**Sn**	**16 13 23.3**	**-1.5**
	comp=E,1µm,0.3s						
KTHR	**Kythira**	**0.80**	**27**	P	**Pn**	**16 13 11.3**	**+0.3**
KTHR				S	**Sn**	**16 13 23.6**	**-1.3**
KTHR				AML	AML	16 13 24.8	
	comp=E,9447µm,0.3s						
KTHR				AML	AML	16 13 25.7	
	comp=N,7178µm,0.2s						
KTHA	**Kythira Island**	**0.82**	**30**	P	**Pn**	**16 13 12.3**	**+1.1**
KTHA				S	**Sn**	**16 13 23.7**	**-1.5**
	comp=N,1µm,0.3s						
KTHA	**Kythira Island**	**0.82**	**30**	P	**Pn**	**16 13 12.2**	**+0.9**
KTHA				S	**Sn**	**16 13 24.2**	**-0.9**
KTHA				AML	AML	16 13 25.2	
	comp=N,2022µm,0.3s						
KTHA				AML	AML	16 13 26.1	
	comp=E,3662µm,0.4s						

IMMV	**Iera Moni Meta**	**1.17**	**94**	P	**Pn**	**16 13 15.8**	**+0.8**		
IMMV				S	**Sn**	**16 13 30.9**	**-1.0**		
	comp=E,1µm,0.3s								
IMMV	**Iera Moni Meta**	**1.17**	**94**	P	**Pn**	**16 13 15.7**	**+0.8**		
MNVA	**Monemvasia**	**1.20**	**19**	P	**Pn**	**16 13 17.3**	**+2.0**		
MNVA				S	**Sn**	**16 13 33.1**	**+0.7**		
MNVA				AML	AML	16 13 33.4			
	comp=E,848µm,0.5s								
MNVA				AML	AML	16 13 33.6			
	comp=N,928µm,0.6s								
VLI	**Veliai**	**1.21**	**15**	P	**Pn**	**16 13 17.5**	**+2.1**		
VLI				S	**Sn**	**16 13 33.6**	**+1.0**		
	comp=N,598nm,0.3s								
VLI	**Veliai**	**1.21**	**15**	P	**Pn**	**16 13 17.4**	**+2.0**		
VLI				S	**Sn**	**16 13 34.5**	**+1.9**		
VLI				AML	AML	16 13 35.5			
	comp=E,1126µm,0.4s								
VLI				AML	AML	16 13 36.2			
	comp=N,1408µm,0.4s								
CHAN	**Chania**	**1.22**	**91**	P	**Pn**	**16 13 16.6**	**+1.1**		
GVD	**Gavdhos**	**1.45**	**119**	P	**Pn**	**16 13 19.5**	**+1.2**		
GVD				S	**Sn**	**16 13 37.2**	**-0.5**		
	comp=N,2µm,0.4s								
GVD	**Gavdhos**	**1.45**	**119**	P	**Pn**	**16 13 19.4**	**+1.1**		
GVD				S	**Sn**	**16 13 38.2**	**+0.5**		
GVD				AML	AML	16 13 39.0			
	comp=N,4111µm,0.3s								
GVD				AML	AML	16 13 39.2			
	comp=E,3372µm,0.4s								
GVDS	**Gavdos**	**1.45**	**119**	P	**Pn**	**16 13 19.2**	**+1.0**		
GVDS				S	**Sn**	**16 13 37.0**	**-0.7**		
	comp=E,1µm,0.3s								
PYL	**PYLOS**	**1.49**	**334**	P	**Pn**	**16 13 20.8**	**+2.0**		
PYL				S	**Sn**	**16 13 39.6**	**+0.9**		
PYL	**PYLOS**	**1.49**	**334**	P	**Pn**	**16 13 20.8**	**+2.0**		
PRNS	**Prines Rethymn**	**1.60**	**96**	P	**Pn**	**16 13 20.7**	**+0.5**		
PRNS				S	**Sn**	**16 13 39.7**	**-1.4**		
	comp=E,125nm,0.3s								
ITM	**Ithomi**	**1.70**	**343**	P	**Pn**	**16 13 24.0**	**+2.5**		
ITM				S	**Sn**	**16 13 44.9**	**+1.6**		
	comp=E,158nm,0.5s								
ITM	**Ithomi**	**1.70**	**343**	P	**Pn**	**16 13 23.9**	**+2.5**		
KRND	**KRANIDI**	**1.89**	**15**	P	**Pn**	**16 13 25.6**	**+1.8**		
IDI	**Anoyia**	**1.93**	**97**	P	**Pn**	**16 13 26.0**	**+1.6**		
IDI				S	**Sn**	**16 13 49.4**	**+0.8**		
	comp=E,230nm,0.5s								
EPID	**Epidavros**	**2.11**	**12**	P	**Pn**	**16 13 29.0**	**+2.3**		
KLV	**Kalavryta, Ach**	**2.51**	**353**	P	**Pn**	**16 13 35.0**	**+3.1**		
RLS	**Riolos of Patr**	**2.65**	**341**	P	**Pn**	**16 13 37.4**	**+3.7**		
LAKA	**Lakka**	**2.72**	**350**	P	**Pn**	**16 13 37.9**	**+3.2**		
IGT	**Igoumenitsa**	**4.35**	**337**	*e*Pn	**Pn**	**16 13 58.5**	**+2.0**		
IGT				*e*Sn	**Sn**	**16 14 44.9**	**-1.1**		
SRS	**Serrai**	**5.62**	**8**	*e*Pn	**Pn**	**16 14 14.2**	**+0.5**		
SRS				*e*Sn	**Sn**	**16 15 17.0**	**+0.2**		
PRVS	**Prvonek**	**6.96**	**357**	*e*Pn	**Pn**	**16 14 33.1**	**+1.2**		
DRME	**Dracevica, Mon**	**7.12**	**339**	*e*Pn	**Pn**	**16 14 34.2**	**0.0**		
BARS	**Barje**	**7.28**	**356**	*e*Pn	**Pn**	**16 14 37.9**	**+1.7**		
BARS				*e*Sn	**Sn**	**16 14 54.9**	**-2.3**		
PDG	**Podgorica**	**7.33**	**341**	*e*Pn	**Pn**	**16 14 37.8**	**+0.9**		
PDG				*e*Sn	**Sn**	**16 15 56.1**	**-2.4**		
HCY	**Herceg Novi**	**7.57**	**337**	*e*Pn	**Pn**	**16 14 38.3**	**-2.0**		
SELS	**Selova**	**7.74**	**352**	*e*Pn	**Pn**	**16 14 42.0**	**-0.5**		
DBRK	**Dubrovnik**	**7.89**	**336**	*e*Pn	**Pn**	**16 14 43.6**	**-0.9**		
SJES	**Sjenica**	**7.95**	**346**	*e*Pn	**Pn**	**16 14 46.3**	**+0.8**		
BRY	**Bratogost**	**7.97**	**338**	*e*Pn	**Pn**	**16 14 45.0**	**-0.8**		
UPM	**Unac-Piva**	**8.14**	**341**	*e*Pn	**Pn**	**16 14 48.7**	**+0.5**		
STON	**Ston**	**8.22**	**334**	*e*Pn	**Pn**	**16 14 47.4**	**-1.6**		
STON	**Ston**	**8.22**	**334**	*e*Pn	**Pn**	**16 14 47.2**	**-1.8**		
STON	**Ston**	**8.22**	**334**	*e*Pn	**Pn**	**16 14 47.8**	**-1.2**		
IVAS	**Ivanjica**	**8.22**	**348**	*e*Pn	**Pn**	**16 14 48.9**	**-0.3**		
LSTV	**Lastovo**	**8.44**	**330**	*e*Pn	**Pn**	**16 14 51.6**	**-0.3**		
BBLS	**Lazići**	**8.65**	**345**	*e*Pn	**Pn**	**16 14 55.8**	**+0.9**		
BBLS				*e*Sn	**Sn**	**16 16 26.8**	**-3.9**		
DIVS	**Divibare**	**8.76**	**348**	*e*Pn	**Pn**	**16 14 56.3**	**-0.1**		
DIVS	**Divibare**	**8.76**	**348**	*e*Pn	**Pn**	**16 14 56.1**	**-0.3**		
DIVS				*e*Sn	**Sn**	**16 16 29.7**	**-3.7**		
MAKA	**Makarska**	**8.83**	**333**	*e*Pn	**Pn**	**16 14 57.3**	**0.0**		
RICI	**Ricice**	**8.97**	**334**	*e*Pn	**Pn**	**16 14 58.5**	**-0.7**		
SRKY	**Kupres RS**	**9.46**	**336**	*e*Pn	**Pn**	**16 15 07.1**	**+1.5**		
KIJV	**Kijevo**	**9.67**	**333**	*e*Pn	**Pn**	**16 15 09.7**	**+0.9**		
FRGS	**Fruska Gora**	**9.82**	**349**	*e*Pn	Pn	16 15 07.1	-3.7		
MORI	**Morici**	**9.83**	**330**	*e*Pn	**Pn**	**16 15 11.6**	**+0.6**		
A050A	**Klekovaca**	**10.04**	**334**	*e*Pn	**Pn**	**16 15 14.4**	**+0.6**		
BLY	**Banja Luka**	**10.06**	**338**	*e*Pn	**Pn**	**16 15 15.4**	**+1.4**		
DUGI	**Dugi Otok**	**10.21**	**328**	*e*Pn	**Pn**	**16 15 16.8**	**+0.7**		
UDBI	**Udbina**	**10.36**	**332**	*e*Pn	**Pn**	**16 15 20.1**	**+1.9**		
A051A	**Mrakovica**	**10.38**	**337**	*e*Pn	**Pn**	**16 15 18.3**	**-0.2**		
VIRC	**Vir**	**10.45**	**329**	*e*Pn	**Pn**	**16 15 20.4**	**+1.1**		
NVLJ	**Novalja**	**10.75**	**329**	*e*Pn	**Pn**	**16 15 25.1**	**+1.7**		
CEY	**Cerknica**	**11.89**	**331**	*e*Pn	**Pn**	**16 15 38.9**	**+0.1**		
SKDS	**Skadanscina**	**11.90**	**330**	*e*Pn	**Pn**	**16 15 38.8**	**-0.1**		
OBKA	**Obir**	**12.49**	**334**	*e*Pn	**Pn**	**16 15 47.2**	**+0.4**		

*IDC **21** 16:16:52.6±0.8,54˚.92S×31˚.75W,h0km,mb4.1/6, mbtmp4.1/6,MS3.5/14,Error ellipse: s-maj=35.8km s-min=21.6km az=66.0*
*NEIC **21** 16:16:53.1±2.9,55˚.1S±0˚.1×31˚.9W±0˚.1,h10km±1km, mb4.7/14,Error ellipse: s-maj=18.0km s-min=9.6km az=13.0*

ISC 21 16:16:53.7±0.6,55˚.04S±0˚.09×32˚.0W±0˚.1,h10km,n47, σ0s93/30,mb4.6/11,MS3.4/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.70**	**285**	Pn	**Pn**	**16 17 36.4**	**-0.6**
ORCD	**Orcadas**	**8.85**	**225**	Pn	**Pn**	**16 18 59.2**	**-2.2**
PMSA	**Palmer Station**	**18.56**	**226**	LR	LR	16 26 41.7	
	comp=Z,178nm,20.5s,baz=73,slow=31						
VNA3	**Neumayer Olymp**	**18.92**	**158**	P	**Pn**	**16 21 16.1**	**+1.2**
SNAA	**Sanae**	**20.82**	**154**	P	**P**	**16 21 36.2**	**+1.3**
	2.1nm,0.8s,baz=321,slow=15,SNR=8.3						
	2.1nm,0.8s						
SNAA	**Sanae**	**20.82**	**154**	P	**P**	**16 21 35.0**	**+0.1**
TROLL	**Troll, Antarti**	**22.40**	**152**	P	**P**	**16 21 52.2**	**+0.2**
BELA	**Belgrano 2**	**22.95**	**181**	P	**P**	**16 21 58.3**	**+0.6**
MG05	**Puerto Natales**	**24.14**	**261**	P	**P**	**16 22 10.2**	**+0.7**
PLCA	**Paso Flores**	**29.10**	**283**	LR	LR	16 34 32.1	
	comp=Z,75nm,19.1s,baz=184,slow=36						
GO05	**Huala**	**33.95**	**289**	P	**P**	**16 23 38.6**	**+1.6**
GO05				IAmb	IAmb	16 23 56.7	
	comp=Z,25nm,1.3s						
CPUP	**Villa Florida**	**34.13**	**317**	P	**P**	**16 23 39.6**	**+1.0**
	comp=Z,3.9nm,0.8s,baz=155,slow=7.3,SNR=6.5						
	comp=Z,3.9nm,0.8s						
MT09	**Talagante**	**34.38**	**292**	P	**P**	**16 23 40.0**	**-0.9**
MT01	**Popeta**	**34.45**	**292**	P	**P**	**16 23 40.9**	**-0.4**
MT01				IAmb	IAmb	16 24 02.9	
	comp=Z,23nm,1.2s						
QSPA	**South Pole Qui**	**35.21**	**180**	P	**P**	**16 23 48.6**	**+0.8**
QSPA				LR	LR	16 37 30.5	
	comp=Z,2.1nm,0.8s,baz=221,slow=4.5,SNR=5.1						
	comp=Z,53nm,18.9s,baz=192,slow=35						
	comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**35.21**	**180**	P	**P**	**16 23 47.0**	**-0.8**
QSPA				IAmb	IAmb	16 24 19.3	
	comp=Z,8.6nm,1.3s						
AC05	**El Transito**	**37.91**	**298**	P	**P**	**16 24 11.6**	**+0.6**
AC05				IAmb	IAmb	16 24 33.0	
	comp=Z,35nm,1.3s						
GO02	**Mina Guanaco**	**40.60**	**302**	P	**P**	**16 24 34.5**	**+0.7**
GO02				IAmb	IAmb	16 25 01.9	
	comp=Z,13nm,0.9s						
PB01	**IPOC Station P**	**44.05**	**305**	P	**P**	**16 25 01.9**	**+0.2**
PB01				IAmb	IAmb	16 25 07.0	
	comp=Z,14nm,1.1s						
PTLB	**Pontes e Lacer**	**44.72**	**321**	P	**P**	**16 25 06.5**	**-0.4**
PTLB				IAmb	IAmb	16 25 08.9	
	comp=Z,6.4nm,0.9s						
SIV	**San Ignacio**	**44.94**	**319**	LR	LR	16 44 08.9	
	comp=Z,38nm,21.3s,baz=112,slow=36						
VNDA	**Vanda**	**47.42**	**184**	LR	LR	16 43 45.5	
	comp=Z,40nm,18.1s,baz=178,slow=34						
LPAZ	**La Paz**	**47.58**	**310**	P	**P**	**16 25 30.9**	**+0.7**
	comp=Z,2.3nm,0.5s,baz=123,slow=4.6,SNR=11						
	comp=Z,2.3nm,0.5s						
LPAZ	**La Paz**	**47.58**	**310**	P	**P**	**16 25 31.0**	**+0.8**
LPAZ				IAmb	IAmb	16 25 33.0	
	comp=Z,4.2nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.00**	**23**	T	T	17 17 32.2	
	baz=27,slow=74,SNR=5.7						
H10S3	**ASCENSION HYDR**	**48.00**	**23**	T	T	17 17 40.5	
	baz=193,slow=74,SNR=15						
BOSA	**Boshof**	**48.47**	**81**	LR	LR	16 42 16.7	
	comp=Z,33nm,18.6s,baz=194,slow=32						
H10N1	**ASCENSION HYDR**	**49.11**	**23**	T	T	17 18 57.2	
	baz=193,slow=75,SNR=17						
H10N3	**ASCENSION HYDR**	**49.11**	**23**	T	T	17 19 00.9	
	baz=193,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**49.12**	**23**	T	T	17 19 00.0	
	baz=193,slow=75,SNR=21						
RCBR	**Riachuelo**	**49.17**	**355**	LR	LR	16 42 16.0	
	comp=Z,28nm,20.2s,baz=318,slow=31						
TSUM	**Tsumeb**	**51.70**	**67**	LR	LR	16 42 46.3	
	comp=Z,29nm,21.6s,baz=174,slow=30						
LSZ	**Lusaka**	**60.66**	**74**	LR	LR	16 51 29.3	
	comp=Z,55nm,18.5s,baz=164,slow=34						
MDP	**Montagnes des**	**62.33**	**337**	LR	LR	16 54 22.7	
	comp=Z,24nm,18.2s,baz=221,slow=36						
DBIC	**Dimbokro**	**65.53**	**30**	P	**P**	**16 27 36.1**	**-1.1**
	comp=Z,3.6nm,0.9s,baz=187,slow=9.1,SNR=3.6						
DBIC				LR	LR	16 50 00.8	
	comp=Z,32nm,20.6s,baz=162,slow=30						
	comp=Z,3.6nm,0.9s						
DBIC	**Dimbokro**	**65.53**	**30**	P	**P**	**16 27 36.0**	**-1.1**
TORD	**Torodi Ar. Bea**	**73.65**	**34**	P	**P**	**16 28 26.7**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=205,slow=6.4,SNR=5.1						
	comp=Z,1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.65**	**34**	P	**P**	**16 28 26.2**	**-1.1**
ATD	**Arta Tunnel**	**90.87**	**71**	LR	LR	17 08 52.4	
	comp=Z,22nm,18.9s,baz=12,slow=34						
STKA	**Stephens Creek**	**93.26**	**175**	LR	LR	17 10 14.8	
	comp=Z,43nm,19.0s,baz=204,slow=34						
ESDC	**Sonseca Array**	**97.35**	**21**	LR	LR	17 10 04.2	
	comp=Z,30nm,18.0s,baz=171,slow=33						
CMAR	**Chiang Mai Arr**	**128.00**	**115**	PKP	**PKiKP**	**16 36 01.0**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=228,slow=4.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**144.42**	**65**	PKP	**PKPab**	**16 36 27.4**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=215,slow=4.9,SNR=6.7						
BCAR	**Beaver Creek A**	**144.75**	**312**		**PKPab**	**16 36 27.6**	**-0.6**
L27K	**Beaver Creek,**	**144.76**	**312**		**PKPab**	**16 36 27.1**	**-1.1**
ILAR	**Eielson Array**	**147.41**	**314**	PKPbc	**PKPbc**	**16 36 36.0**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=128,slow=2.0,SNR=16						
SONM	**Songino Array**	**153.43**	**88**	PKPbc	**PKiKP**	**16 36 51.9**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=235,slow=2.8,SNR=2.9						

*BEO **21** 16:22:12.9±0.6,39˚.96N×19˚.62E,h33km±4km,ML2.4/5*
*TIR **21** 16:22:13.0,40˚.09N×19˚.86E,h26km±1km,Md3.0,Ml2.9*
*ATH **21** 16:22:13.9,40˚.09N×19˚.86E,h14km±4km,ML2.6/6,Error ellipse: s-maj=5.8km s-min=1.7km az=196.0*
*THE **21** 16:22:13.5,40˚.13N×19˚.86E,h0km±2km,ML2.6/10,Error ellipse: s-maj=2.0km s-min=0.7km az=288.0*

ISC 21 16:22:13.4±0.9,40˚.10N±0˚.02×19˚.83E±0˚.02,h15km±7km, n58,σ1s22/87,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.25**	**149**	P	**Pg**	**16 22 18.6**	**-0.3**
SRN				S	**Sg**	**16 22 23.1**	**+0.4**
	1µm,0.3s						
SRN	**Sarande**	**0.25**	**149**	P	**Pg**	**16 22 18.1**	**-0.9**
	baz=152

MAKR	Makrakomi, Fth	2.08	121	P	Pb	16 22 50.8	-0.2
AGG	Agios Georgios	2.21	118	P	Pb	16 22 52.2	-0.9
ANX	Ano Chora	2.21	132	P	Pb	16 22 52.2	-0.9
BCI	Bajram Curri baz=3.0	2.27	4	P	Pn	16 22 52.4	+1.9
EFP	Efpalio	2.32	135	P	Pb	16 22 53.4	-1.5
PDG	Podgorica	2.37	350	*e*Pn	Pn	16 22 51.9	+0.2
STIP	Stip	2.39	47	*i* Pn	Pb	16 22 56.8	+0.6
SERG	Sergoula	2.41	134	P	Pb	16 22 55.2	-1.3
VAY	Valandovo	2.41	59	*i* Pn	Pb	16 22 55.0	-1.5
DBRK	Dubrovnik	2.86	334	*e*Pn	Pn	16 22 56.4	-2.1
DBRK				Sn	Sn	16 23 29.2	-3.5
PRVS	Prvonek	2.94	34	*e*Pn	Pn	16 23 00.4	+0.8
PRVS				*e*Sn	Sn	16 23 36.0	+1.3
SRS	Serrai	3.04	69	*e*Pn	Pn	16 23 02.6	+1.6
SRS				*e*Sn	Sn	16 23 37.7	+0.6
BARS	Barje	3.10	28	*e*Pn	Pn	16 23 01.9	+0.1
BARS				*e*Sn	Sn	16 23 40.9	+2.4
BOSS	Bosilegrad	3.12	39	*e*Pn	Pn	16 23 02.9	+0.9
SJES	Sjenica	3.16	2	*e*Pn	Pn	16 23 03.8	+1.1
STON	Ston	3.20	331	*e*Pn	Pn	16 23 01.0	-2.1
STON				Sn	Sn	16 23 36.9	-4.0
STON	Ston	3.20	331	*e*Pn	Pn	16 23 01.3	-1.8
LSTV	Lastovo	3.46	321	*e*Pn	Pn	16 23 05.5	-1.2
LSTV				Sn	Sn	16 23 44.7	-2.7
ZAPS	Zavoj	3.80	33	*e*Pn	Pn	16 23 11.4	-0.1
ZAPS				*e*Sn	Sn	16 23 56.5	+0.5
MAKA	Makarska	3.82	327	*e*Pn	Pn	16 23 10.5	-1.1
ZAGS	Zajecar	4.12	25	*e*Pn	Pn	16 23 15.8	0.0
KIJV	Kijevo	4.66	328	*e*Pn	Pn	16 23 22.9	-0.3
MORI	Morici	4.86	322	*i* Pn	Pn	16 23 25.9	-0.1
DUGI	Dugi Otok	5.27	319	*e*Pn	Pn	16 23 31.5	-0.1
UDBI	Udbina	5.36	327	*e*Pn	Pn	16 23 33.6	+0.8
BRJN	Brijuni	6.58	319	*e*Pn	Pn	16 23 49.1	-0.4

TRN ***21*** *16:25:50.4, 10°.81N×62°.32W, h73km, MD3.4*
FUNV ***21*** *16:25:52.0, 10°.84N×62°.28W, h24km, MW3.6*

ISC 21 16:25:50.1±1.5, 10°.80N±0°.06×62°.29W±0°.05, h83km±16km, n16, σ1°.31/26, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.88	100	*e*P	Pn	16 26 08.8	+0.8
TRN				*e*S	Sn	16 26 21.2	-0.1
CRUV	Carupano	0.94	262	⇓*i*P	Pn	16 26 09.0	+0.4
CRUV				*e*S	Sn	16 26 21.8	-0.7
TPP	Pointe-a-Pierr	0.95	120	*e*P	Pn	16 26 08.8	+0.1
GRFF	Grenada Fort F	1.35	23	*e*P	Pn	16 26 13.6	-0.1
GRFF				*e*S	Sn	16 26 30.5	-0.9
GRGR	Grenville	1.46	25	*e*P	Pn	16 26 14.9	-0.2
GRGR				*e*S	Sn	16 26 33.6	-0.3
TOSP	Speyside	1.79	74	*e*P	Pn	16 26 19.9	+0.6
TOSP				*e*S	Sn	16 26 41.2	-0.2
GCMP	Grenada, Carri	1.87	27	*e*P	Pn	16 26 20.9	+0.5
GCMP				*e*S	Sn	16 26 43.3	-0.2
PCRV	Puerto La Cruz	2.39	255	*e*P	Pn	16 26 29.5	+2.1
PCRV				*e*S	Sn	16 26 56.2	+0.2
SVB	Belmont	2.66	22	*e*S	Sn	16 27 02.0	-0.2
MCLT	Moule a Chique	3.17	24	*e*P	Pn	16 26 38.8	+0.9
MCLT				*e*S	Sn	16 27 13.6	-1.1
BIRV	Birongo	3.93	266	*e*P	Pn	16 26 50.2	+2.1
BIRV				*e*S	Sn	16 27 33.5	+0.4
CACV	CAICARA DEL OR	5.29	233	*e*P	Pn	16 27 02.2	-4.5
CACV				*e*S	Sn	16 27 55.7	-11
BENV	Beln	5.29	261	*e*P	Pn	16 27 08.1	+1.3
BENV				*e*S	Sn	16 28 05.2	-1.4
BAUV	El Baul	5.96	252	*e*P	Pn	16 27 16.0	+0.1
BAUV	El Baul	5.96	252	*e*S	Sn	16 28 19.4	-3.4
BAUV	El Baul	5.96	252	*e*P	Pn	16 27 16.3	+0.4
BAUV				*e*S	Sn	16 28 20.0	-2.8

IDC ***21*** *16:35:35.5±1.9, 23°.87S×67°.00W, h174km±25km, mb3.4/1, mbtmp4.0/6, Error ellipse: s-maj=32.7km s-min=22.3km az=129.0*
GUC ***21*** *16:35:35.5±0.6, 23°.99S×67°.31W, h206km±6km, ML3.8*
NEIC ***21*** *16:35:36.4±1.7, 23°.96S±0°.07×67°.3W±0°.1, h184km±12km, mb4.2/5, ML3.9(GUC), Error ellipse: s-maj=15.9km s-min=9.9km az=103.0*

ISC 21 16:35:35.5±0.7, 23°.95S±0°.04×67°.30W±0°.08, h194km±9km, n60, σ1°.29/78, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.28	321		Pn	16 36 07.1	-0.1
AF01	San Pedro de A	1.28	321	*e*P	Pn	16 36 07.8	+0.6
AF01				*i* S	Sn	16 36 33.1	+1.5
AF01				IAML		16 36 40.1	
	comp=N,435nm,0.2s						
LVC	Limon Verde	1.99	312	P	Pn	16 36 14.8	+0.9
	comp=N,60nm,0.4s,baz=128,slow=4.9,SNR=65						
LVC				S	Sn	16 36 44.5	+0.7
	comp=N,102nm,0.3s,baz=265,slow=21,SNR=54						
LVC	Limon Verde	1.99	312		Pn	16 36 14.6	+0.7
LVC	Limon Verde	1.99	312	*e*P	Pn	16 36 14.8	+0.9
LVC				*i* S	Sn	16 36 44.2	+0.5
PB15	IPOC Station P	2.12	290		Pn	16 36 15.8	+0.7
PB15	IPOC Station P	2.12	290	*e*P	Pn	16 36 16.3	+1.1
PB15				*i* S	Sn	16 36 47.0	+1.1
GO02	Mina Guanaco	2.41	239		Pn	16 36 18.8	+0.4
GO02	Mina Guanaco	2.41	239	*e*P	Pn	16 36 19.1	+0.7
GO02				*i* S	Sn	16 36 52.1	+0.4
PB06	IPOC Station P	2.43	300		Pn	16 36 19.0	+0.6
PB06	IPOC Station P	2.43	300	*e*P	Pn	16 36 19.6	+1.2
PB06				*i* S	Sn	16 36 52.5	+0.7
PB06				IAML		16 36 54.5	
	comp=E,590nm,0.3s						
PB09	IPOC Station P	2.79	320		Pn	16 36 23.5	+0.9
PB09	IPOC Station P	2.79	320	*e*P	Pn	16 36 24.0	+1.4
PB09				*i* S	Sn	16 37 00.4	+1.0
PB09				IAML		16 37 03.2	
	comp=N,159nm,0.7s						
PB14	IPOC Station P	2.91	256	Pn	Pn	16 36 24.4	+0.3
PB10	IPOC Station P	3.01	278		Pn	16 36 25.9	+0.9
PB10	IPOC Station P	3.01	278	*e*P	Pn	16 36 26.2	+1.2
PB10				*i* S	Sn	16 37 04.4	+0.7
PB10				IAML		16 37 07.0	
	comp=E,87nm,0.3s						
PB04	IPOC Station P	3.08	301		Pn	16 36 26.6	+0.6
PB04	IPOC Station P	3.08	301	*e*P	Pn	16 36 26.6	+0.6
PB04				*i* S	Sn	16 37 04.8	-0.5
PB07	IPOC Station P	3.25	312		Pn	16 36 28.4	+0.3
PB07	IPOC Station P	3.25	312	*e*P	Pn	16 36 28.8	+0.7
PB07				*i* S	Sn	16 37 08.4	-0.8
AC02	Maricunga	3.32	210	Pn	Pn	16 36 29.2	+0.1
AC02	Maricunga	3.32	210	⇓*e*P	Pn	16 36 29.5	+0.4
AC02				*e*S	Sn	16 37 11.0	-0.1
PB01	IPOC Station P	3.53	325		Pn	16 36 31.4	0.0
PB01	IPOC Station P	3.53	325	*e*P	Pn	16 36 31.6	+0.2
PB01				*i* S	Sn	16 37 13.6	-1.5
PB02	IPOC Station P	3.55	317		Pn	16 36 31.6	0.0
PB02	IPOC Station P	3.55	317	*e*P	Pn	16 36 31.9	+0.3
PB02				*i* S	Sn	16 37 14.0	-1.5
AC01	Pan de Azucar	3.71	233	Pn	Pn	16 36 32.8	-0.6
AC01	Pan de Azucar	3.71	233	*e*P	Pn	16 36 33.1	-0.3
AC01				*i* S	Sn	16 37 16.8	-2.1
TA01	Diego Aracena	4.30	321	Pn	Pn	16 36 41.4	+0.6
TA01	Diego Aracena	4.30	321	*e*P	Pn	16 36 41.5	+0.6
TA01				*e*S	Sn	16 37 30.1	-2.1
AC06	Mina Casimiro	4.37	218	Pn	Pn	16 36 40.7	-1.1
AC06	Mina Casimiro	4.37	218	*e*P	Pn	16 36 40.7	-1.1
AC06				*e*S	Sn	16 37 30.2	-3.7
GO03	Copiap	4.49	215	Pn	Pn	16 36 42.2	-1.1
GO03	Copiap	4.49	215	*e*P	Pn	16 36 42.2	-1.1
GO03				*e*S	Sn	16 37 33.9	-2.8
GO01	Chusmiza	4.61	337	Pn	Pn	16 36 45.6	+0.3
AC04	Llanos de Chal	5.43	218	Pn	Pn	16 36 53.4	-1.9
AC05	El Transito	5.55	208	Pn	Pn	16 36 55.6	-1.3
LCO	Las Campanas	5.89	210	Pn	Pn	16 36 59.3	-2.1
PB16	IPOC Station P	5.95	339		Pn	16 37 02.5	-0.2
PB12	IPOC Station P	6.01	331	Pn	Pn	16 37 02.0	-1.0
CO01	Juntas del Tor	6.50	202	Pn	Pn	16 37 08.8	-0.6
GO04	Tololo Observa	6.94	206	Pn	Pn	16 37 12.1	-3.0
LPAZ	La Paz	7.66	354	P	Pn	16 37 25.6	+0.6
	comp=E,4.4nm,0.5s,baz=152,slow=10,SNR=28						
LPAZ				S	Sn	16 38 49.1	-2.7
	comp=E,2.1nm,0.8s,baz=346,slow=19,SNR=2.5						
LPAZ	La Paz	7.66	354	Pn	Pn	16 37 25.0	0.0
CO02	Combarbal	7.94	204	Pn	Pn	16 37 26.6	-1.4
SIV	San Ignacio	9.85	38	P	Pn	16 37 49.4	-3.5
	comp=E,3.2nm,0.4s,baz=226,slow=13,SNR=15						
MT01	Popeta	10.47	198	Pn	Pn	16 37 59.5	-1.3
BO02	Sierra Bellavi	11.22	195	Pn	Pn	16 38 11.9	+1.3
PTLB	Pontes e Lacer	11.42	44		Pn	16 38 14.7	+1.5
TRCB	Terra Rica	13.52	88	Pn	P	16 38 41.2	-1.2
PLTB	Pedras Altas	14.39	126	P	P	16 38 53.2	+1.2
GO06	Curarrehue	15.98	192	P	Pn	16 39 10.1	+0.2
GO06				IAmb	IAmb	16 39 11.5	
	comp=Z,13nm,1.1s						
PLCA	Paso Flores	16.96	188	P	Pn	16 39 21.9	+0.4
	comp=Z,1.4nm,0.7s,baz=354,slow=9.4,SNR=2.2						
PLCA	Paso Flores	16.96	188	P	Pn	16 39 21.7	+0.2
LL04	Puerto Octay	17.45	193	P	Pn	16 39 26.6	-0.5
LL04				IAmb	IAmb	16 39 28.6	
	comp=Z,8.1nm,0.8s						
BDFB	Brasilia	19.92	69	P	P	16 39 51.9	-0.8
	comp=Z,13nm,0.6s,baz=238,slow=10,SNR=15						
BDFB	Brasilia	19.92	69	P	P	16 39 51.3	-1.4
QSPA	South Pole Qui	66.25	180	P	P	16 46 05.1	+2.6
QSPA				IAmb	IAmb	16 46 11.7	
	comp=Z,6.6nm,1.4s						
TORD	Torodi Ar. Bea	76.81	69	P	P	16 47 06.5	+0.3
	comp=Z,0.6nm,0.5s,baz=258,slow=6.1,SNR=6.3						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	146.66	39	PKPbc	PKiKP	16 54 56.0	-0.8
	comp=Z,0.3nm,0.5s,baz=328,slow=1.9,SNR=2.2						

IDC 21 16:42:52.4±1.3, 54°.83S×31°.08W, h0km, mb3.9/2, mbtmp4.0/2, Error ellipse: s-maj=114.7km s-min=30.1km az=51.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	20.77	155	P	P	16 47 34.4	-0.1
	1.9nm,0.8s,baz=315,slow=9.6,SNR=8.8						
	1.9nm,0.8s						
LPAZ	La Paz	47.87	309	P	P	16 51 32.4	-0.3
	2.7nm,0.6s,baz=139,slow=5.6,SNR=12						
	2.7nm,0.6s						
ILAR	Eielson Array	147.66	314	PKPbc	PKPbc	17 02 36.9	-0.4
	1.6nm,0.9s,baz=112,slow=1.9,SNR=11						
SONM	Songino Array	152.87	87	PKPbc	PKPbc	17 02 50.3	-0.2
	0.4nm,0.8s,baz=237,slow=2.9,SNR=4.3						

IDC ***21*** *16:48:27.1±5.0, 44°.86N×152°.57E, h0km, mb3.8/6, mbtmp3.7/7, ML2.3/1, MS2.8/2, Error ellipse: s-maj=121.5km s-min=43.2km az=158.0*
NEIC ***21*** *16:48:34.0±1.1, 45°.5N±0°.3×152°.3E±0°.3, h23km±14km, mb4.4/7, Error ellipse: s-maj=48.4km s-min=14.3km az=146.0*

ISC 21 16:48:37.1±2.9, 45°.7N±0°.4×152°.5E±0°.3, h35km, n25, σ0°.72/20, mb3.9/9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEA0B	Petropavlovsk-	8.20	23	Pn	Pn	16 50 33.8	+0.4
PETK	Petropavlovsk-	8.20	23	Pn	Pn	16 50 38.2	+4.7
	0.2nm,0.3s,baz=203,slow=14,SNR=7.0						
	1.2nm,0.6s						
PETK	Petropavlovsk-	8.20	23	Pn	Pn	16 50 34.0	+0.5
MA2	Magadan	13.98	356	LR	LR	16 57 51.9	
	comp=Z,10nm,18.2s,baz=164,slow=38						
IMAR	Indian Mountai	34.92	35	P	P	16 55 24.0	-1.0
IL31		37.68	38	P	P	16 55 48.3	-0.2
IL31				IAmb	IAmb	16 56 15.0	
	comp=Z,3.6nm,1.3s						
ILAR	Eielson Array	37.68	38	P	P	16 55 48.4	-0.2
	comp=Z,0.3nm,0.7s,baz=257,slow=7.2,SNR=5.0						
	comp=Z,0.3nm,0.7s						
L27K	Beaver Creek,	40.00	40	P	P	16 56 08.5	+0.4
BCAR	Beaver Creek A	40.02	40	P	P	16 56 08.8	+0.5
LUWI	Luwuk	53.40	218	P	P	16 57 59.8	+6.5
	comp=Z,21nm,0.9s						
SUMG	Summit	61.82	4	P	P	16 58 51.6	-0.8
SUMG				IAmb	IAmb	16 58 52.8	
	comp=Z,4.5nm,0.8s						
FIA1	FINESS Array S	64.84	335	P	P	16 59 11.0	-0.9
FINES	FINESS Array B	64.84	335	P	P	16 59 11.2	-0.7
	comp=Z,1.7nm,0.4s,baz=31,slow=7.8,SNR=20						
	comp=Z,1.7nm,0.4s						
FINES	FINESS Array B	64.84	335	P	P	16 59 10.9	-1.0
NC303	NORSAR Array S	68.92	341	P	P	16 59 38.5	+0.6
NB201	NORSAR Array S	69.09	341	P	P	16 59 38.8	-0.3
NB2	NORSAR Subarra	69.12	341	P	P	16 59 39.1	-0.1
	comp=Z,0.2nm,0.3s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.12	341	P	P	16 59 38.8	-0.4
	comp=Z,0.3nm,0.5s,baz=30,slow=6.6,SNR=5.3						
	comp=Z,0.3nm,0.5s						
AKASG	Malin Array Be	72.20	326	P	P	16 59 59.0	+0.9
	comp=Z,0.6nm,0.5s,baz=36,slow=6.3,SNR=4.1						
	comp=Z,0.6nm,0.5s						
OSTC	Ostas	76.95	333	*e*P	P	17 00 38.4	+13
EKA	Eskdalemuir Ar	77.29	346	P	P	17 00 27.0	-0.5
	comp=Z,0.5nm,0.5s,baz=24,slow=5.4,SNR=4.8						
	comp=Z,0.5nm,0.5s						
KHC	Kasperske Hory	79.03	334	*e*P	P	17 00 38.7	+1.4
GERES	GERESS Array B	79.24	334	P	P	17 00 39.1	+0.6
	comp=Z,0.5nm,0.6s,baz=28,slow=6.0,SNR=5.8						
	comp=Z,0.5nm,0.6s						
GERES	GERESS Array B	79.24	334	P	P	17 00 38.4	-0.1
KEST	Kesra	92.41	331	LR	LR	17 48 21.3	
	comp=Z,14nm,19.6s,baz=294,slow=39						

IDC ***21*** *17:02:42.7±1.1, 73°.01N×5°.73E, h0km, mb3.7/4, mbtmp3.6/9, ML2.8/4, MS3.1/14, Error ellipse: s-maj=26.6km s-min=16.8km az=62.0*
NAO ***21*** *17:02:42.9±3.0, 73°.09N×5°.98E, ML3.1*
BER ***21*** *17:02:46.8±1.9, 73°.21N×6°.23E, h10km, ML3.1(NAO), Confirmed Earthquake*

ISC 21 17:02:44.2±0.8, 73°.15N±0°.08×6°.15E±0°.08, h11km, n47, σ1°.55/44, mb3.8/5, MS3.1/9, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.84	63	Pn	Pn	17 03 43.5	+0.4
BJO1	Bjornoya	3.84	63	*e*P	Pn	17 03 43.5	+0.4
HSPB	Hornsund (broa	4.56	28	Pn	Pn	17 03 52.7	-0.2
HSPB	Hornsund (broa	4.56	28	*e*P	Pn	17 03 53.0	+0.1
JMIC	Jan Mayen	5.02	251	LR	LR	17 05 28.4	
	comp=Z,56nm,20.8s,baz=136,slow=34						
LOF	Lofoten	5.61	150	*e*P	Pn	17 04 07.8	+0.4
LOF				IAML		17 05 05.6	
	comp=Z,8.6nm,0.5s						
SPA0	Spitsbergen Ar	5.64	22	Pn	Pn	17 04 08.5	+0.7
	baz=212,slow=18						
SPA0	Spitsbergen Ar	5.64	22	Pn	Pn	17 04 08.5	+0.7
	baz=212,slow=18						
SPITS	Spitsbergen Ar	5.64	22	Pn	Pn	17 04 08.3	+0.4
	comp=Z,2.6nm,0.3s,baz=203,slow=17,SNR=29						
JETT	Jettan, Norway	5.82	121	Pn	Pn	17 04 11.7	+1.4
KBS	Kingsbay	5.97	11	*e*P	Pn	17 04 12.3	0.0
HAMF	Hammerfest	6.01	106	Pn	Pn	17 04 12.4	-0.4
HAMF	Hammerfest	6.01	106	*e*P	Pn	17 04 13.9	+1.1
HAMF				IAML		17 05 22.8	
	comp=Z,5.0nm,0.6s						
STEI	Steigen	6.05	145	*e*P	Pn	17 04 14.0	+0.6
STEI				IAML		17 05 21.8	
	comp=Z,4.1nm,0.4s						
KIF	Kilpisjarvi	6.31	124	Pn	Pn	17 04 17.6	+0.5
KIF				Sn	Sn	17 05 26.3	-2.7
KIF	Kilpisjarvi	6.31	124	Pn	Pn	17 04 17.6	+0.5
KIF				*e*P	Pb	17 04 17.6	-16
KIF				Sn	Sn	17 05 26.3	-2.7
KONS	Konsvik	7.10	157	*e*P	Pn	17 04 27.9	+0.1
KONS				IAML		17 05 45.3	
	comp=Z,4.0nm,0.4s						
ARCES	ARCESS Array B	7.17	111	Pn	Pn	17 04 28.8	+0.1
	comp=Z,0.2nm,0.3s,baz=319,slow=9.4,SNR=20						
ARCES				Sn	Sn	17 05 45.6	-4.4
	comp=Z,0.1nm,0.3s,baz=324,slow=21,SNR=1.8						
	comp=Z,1.3nm,0.5s						
ARA0	ARCESS Array S	7.17	111	Pn	Pn	17 04 29.1	+0.4
	baz=320,slow=12						
ARA0				Sn	Sn	17 05 46.7	-3.3
	baz=316,slow=22						
ARA0	ARCESS Array S	7.17	111	Pn	Pn	17 04 29.1	+0.4
	baz=320,slow=12						
ARA0				Sn	Sn	17 05 46.7	-3.3
	baz=316,slow=22						
MOR8	Moi Rana	7.58	154	*e*P	Pn	17 04 35.4	+1.0
MOR8				IAML		17 05 56.4	
	comp=Z,5.3nm,0.4s						
SCO	Scoresbysund	9.12	267	*i* P	Pn	17 04 53.0	-2.5
APA0	Apatity Array	10.51	108	Pn	Pn	17 05 13.7	-0.8
APA0	Apatity Array	10.51	108	Pn	Pn	17 05 13.7	-0.8
NB2	NORSAR Subarra	12.32	168	Pn	Pn	17 05 38.8	-0.5
	baz=345,slow=14						
NB2	NORSAR Subarra	12.32	168	Pn	Pn	17 05 38.8	-0.5
	baz=345,slow=14						
NOA	NORSAR Array B	12.32	168	Pn	Pn	17 05 37.6	-1.6
	baz=274,slow=5.3,SNR=5.2						
NOA				LR	LR	17 10 07.0	
	comp=Z,31nm,19.1s,baz=345,slow=36						
	comp=Z,0.3nm,0.5s						
HFS	Hagfors	13.39	164	Pn	Pn	17 05 51.9	-2.0
	comp=Z,0.3nm,0.3s,baz=357,slow=12,SNR=13						
HFS				LR	LR	17 10 30.6	
	comp=Z,45nm,21.5s,baz=352,slow=35						
	comp=Z,1.6nm,0.6s						
HFS	Hagfors	13.39	164	Pn	Pn	17 05 53.1	-0.7
	baz=355,slow=14						
HFS	Hagfors	13.39	164	Pn	Pn	17 05 53.1	-0.7
	baz=355,slow=14						
FIA0	FINESS Array S	13.93	137	Pn	Pn	17 06 00.8	-0.4
	baz=347,slow=14						
FIA0	FINESS Array S	13.93	137	Pn	Pn	17 06 00.8	-0.4
	baz=347,slow=14						
FINES	FINESS Array B	13.93	137	Pn	Pn	17 05 59.7	-1.4
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=6.5						
FINES				LR	LR	17 11 03.7	
	comp=Z,50nm,19.6s,baz=332,slow=36						
	comp=Z,1.6nm,0.7s						
KLMR	Klimovskoe	17.58	117	*e*Pn	Pn	17 06 50.7	+2.0
KLMR				AMP		17 06 54.9	
	comp=Z,10.0nm,1.3s						
SFJD	Kangerlussuaq	19.55	281	LR	LR	17 13 44.6	
	comp=Z,48nm,18.0s,baz=16,slow=34						
GERES	GERESS Array B	24.62	168	P	P	17 08 04.8	+0.5
	comp=Z,0.7nm,0.9s,baz=3.2,slow=7.2,SNR=6.1						
	comp=Z,0.7nm,0.9s						
AKASG	Malin Array Be	24.66	143	P	P	17 08 04.9	+0.5
	comp=Z,1.0nm,0.5s,baz=343,slow=9.3,SNR=5.3						
AKASG				LR	LR	17 17 28.1	
	comp=Z,63nm,19.9s,baz=0.5,slow=36						
	comp=Z,1.0nm,0.5s						
BELG	Belogornoye	27.16	117	LR	LR	17 19 25.1	
	comp=Z,30nm,18.5s,baz=205,slow=37						
MLR	Muntele Rosu	29.20	151	LR	LR	17 20 48.0	
	comp=Z,54nm,18.8s,baz=326,slow=37						
AKTO	Aktyubinsk	31.73	107	LR	LR	17 22 04.1	
	comp=Z,17nm,18.4s,baz=349,slow=36						
BRTR	Keskin Array B	36.06	143	P	P	17 09 48.1	+2.7
	comp=Z,0.8nm,0.7s,baz=346,slow=6.3,SNR=4.8						
GNI	Garni	37.90	129	LR	LR	17 24 56.5	
	comp=Z,23nm,19.4s,baz=322,slow=35						
GEYT	Alibeck	43.32	115	P	P	17 10 48.0	+2.3
	comp=Z,1.2nm,0.4s,baz=8.9,slow=10,SNR=3.7						
GEYT				LR	LR	17 30 54.5	
	comp=Z,40nm,19.4s,baz=336,slow=39						
	comp=Z,1.2nm,0.4s						
DLBC	Dease Lake	45.34	329	LR	LR	17 30 58.5	
	comp=Z,43nm,18.9s,baz=218,slow=37						
PDAR	Pinedale Array	56.36	307	P	P	17 12 25.4	+0.3
	comp=Z,0.7nm,0.8s,baz=33,slow=3.5,SNR=5.3						
PDAR				LR	LR	17 36 11.9	
	comp=Z,15nm,18.3s,baz=102,slow=36						
	comp=Z,0.7nm,0.8s						
YBH	Yreka Blue Hor	60.17	318	LR	LR	17 39 46.1	
	comp=Z,39nm,18.6s,baz=242,slow=37						
ASAR	Alice Springs	123.06	60	PKP	PKPdf	17 21 39.4	-0.6
	comp=Z,0.6nm,0.9s,baz=325,slow=1.6,SNR=10						

IDC ***21*** *17:22:56.7±0.9, 39°.20N×73°.44E, h0km, mb3.7/13, mbtmp3.7/18, ML2.8/5, MS2.7/3, Error ellipse: s-maj=19.4km s-min=15.4km az=176.0*
SOME ***21*** *17:22:58.7, 39°.62N×73°.37E, h5km*
KRNET ***21*** *17:22:58.2±0.1, 39°.46N×73°.49E, mb4.1*
MOS ***21*** *17:22:59.6±0.9, 39°.39N×73°.42E, h18km, mb4.1/5, Error ellipse: s-maj=7.8km s-min=4.3km az=81.3*
MOS Felt (II-III) at Bordobo, Kara-Kindik.
NNC ***21*** *17:23:01.6±1.0, 39°.68N×73°.34E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=8.4km s-min=4.6km az=171.0*

ISC 21 17:22:57.2±0.9, 39°.25N±0°.04×73°.39E±0°.02, h3km±5km, n149, σ2°.11/203, mb3.8/18, 41C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	1.25	281	⇑*i*P	Pn	17 23 23.0	+1.1
	baz=71						
DRK				⇑*i*S	Sn	17 23 41.1	+1.7
	baz=71						
OHH	Osh	1.35	340	*i* PG	Pn	17 23 20.6	-2.5
OHH				*i* S	Sg	17 23 37.1	-3.6
OHH	Osh	1.35	340	⇓*i*P	Pn	17 23 20.6	-2.5
	baz=33						
OHH				⇓*i*S	Sg	17 23 37.1	-3.6
	baz=33

BOOM	**Boomskoye usch**	**3.77**	**30**	⇑*i*	P		**Pn**	**17 23 56.5**	**+0.1**
	baz=31								
BOOM				⇑*i*	S		**Sn**	**17 24 39.0**	**-2.4**
	baz=31								
CHMS	**Chumysh**	**3.88**	**15**		P		**Pn**	**17 23 59.3**	**+1.4**
	SNR=25								
CHMS	**Chumysh**	**3.88**	**15**	*e*	PN		**Pn**	**17 23 57.8**	**-0.1**
CHMS	**Chumysh**	**3.88**	**15**	⇓	Pn		**Pn**	**17 23 58.0**	**+0.1**
	comp=E,16nm,0.5s								
CHMS				⇑	Pg		**Pb**	**17 24 05.7**	**-0.6**
	comp=E,21nm,0.5s								
CHMS				⇑	Lg		Lg	17 24 52.9	
	comp=E,42nm,0.7s								
CHMS	**Chumysh**	**3.88**	**15**	⇑*i*	P		**Pn**	**17 23 57.8**	**-0.1**
	baz=15								
CHMS				⇑*i*	S		**Sn**	**17 24 41.5**	**-2.5**
	baz=15								
DZA	**Taraz**	**3.95**	**338**	*e*	PN		**Pn**	**17 24 00.1**	**+1.3**
DZA				*e*			17 24 45.2		
DZA	**Taraz**	**3.95**	**338**	*e*	P		**Pn**	**17 24 03.0**	**+4.1**
	comp=E,47nm,0.1s								
DZA				*e*	S		**Sn**	**17 24 49.4**	**+3.6**
	comp=E,178nm,0.4s								
DZA	**Taraz**	**3.95**	**338**	*e*	Pn		**Pn**	**17 24 00.2**	**+1.3**
	baz=337								
DZA				*e*	Sn		**Sn**	**17 24 45.2**	**-0.5**
	baz=337								
DZA				*e*	Lg		Lg	17 25 03.2	
	baz=337								
DZA	**Taraz**	**3.95**	**338**		Pg		**Pn**	**17 24 03.0**	**+4.1**
DZA					Lg		Lg	17 24 49.6	
TKM2	**Tokmak 2**	**4.03**	**24**		P		**Pn**	**17 24 01.0**	**+1.0**
	SNR=12								
TKM2	**Tokmak 2**	**4.03**	**24**	*e*	PN		**Pn**	**17 24 00.0**	**0.0**
TKM2	**Tokmak 2**	**4.03**	**24**	⇓	Pn		**Pn**	**17 24 00.8**	**+0.8**
TKM2				⇑	Pg		**Pb**	**17 24 09.2**	**+0.3**
	comp=E,19nm,0.5s								
TKM2				⇓	Lg		Lg	17 24 58.1	
	comp=E,90nm,0.8s								
TKM2	**Tokmak 2**	**4.03**	**24**	⇑*i*	P		**Pn**	**17 24 00.0**	**0.0**
	baz=24								
TKM2				⇑*i*	S		**Sn**	**17 24 45.3**	**-2.5**
	baz=24								
USP	**Ospenovka**	**4.10**	**11**		P		**Pn**	**17 24 02.1**	**+1.3**
	SNR=9.9								
USP	**Ospenovka**	**4.10**	**11**	*e*	PN		**Pn**	**17 24 00.9**	**+0.1**
USP	**Ospenovka**	**4.10**	**11**	⇑*i*	P		**Pn**	**17 24 00.9**	**+0.1**
	baz=11								
USP				⇑*i*	S		**Sn**	**17 24 46.6**	**-2.7**
	baz=11								
KST	**Kastek**	**4.26**	**26**	*e*	P		**Pb**	**17 24 12.3**	**-0.5**
	comp=E,24nm,0.5s								
KST				*e*	S		**Sb**	**17 25 05.7**	**+1.0**
	comp=E,190nm,0.7s								
KST	**Kastek**	**4.26**	**26**		Pg		**Pb**	**17 24 12.3**	**-0.5**
	comp=E,24nm,0.5s								
KST					Lg		Lg	17 25 05.7	
	comp=E,190nm,0.7s								
SGDS	**Sogindy**	**4.30**	**12**	*e*	PN		**Pn**	**17 24 04.3**	**+0.7**
SGDS	**Sogindy**	**4.30**	**12**	*e*	P		**Pb**	**17 24 12.6**	**-0.9**
	comp=E,20nm,0.5s								
SGDS				*e*	S		**Sb**	**17 25 06.6**	**+0.8**
	comp=E,60nm,0.6s								
SGDS	**Sogindy**	**4.30**	**12**	*e*	Pn		**Pn**	**17 24 04.3**	**+0.7**
	baz=13								
SGDS	**Sogindy**	**4.30**	**12**		Pg		**Pb**	**17 24 12.6**	**-0.9**
	comp=E,20nm,0.5s								
SGDS					Lg		Lg	17 25 06.6	
	comp=E,60nm,0.6s								
DGS	**Degeres**	**4.37**	**24**	*e*	P		**Pb**	**17 24 15.2**	**+0.4**
	comp=E,33nm,0.7s								
DGS				*e*	S		**Sb**	**17 25 10.5**	**+2.6**
	comp=E,68nm,0.7s								
DGS	**Degeres**	**4.37**	**24**		Pg		**Pb**	**17 24 15.2**	**+0.4**
	comp=E,33nm,0.7s								
DGS					Lg		Lg	17 25 10.5	
	comp=E,68nm,0.7s								
KK31	**Karatay Array**	**4.42**	**332**		PN		**Pn**	**17 24 05.9**	**+0.7**
KK31	**Karatay Array**	**4.42**	**332**	⇑	Pn		**Pn**	**17 24 05.9**	**+0.7**
	comp=E,2.6nm,0.3s,baz=138,slow=11,SNR=96								
KK31				⇑	Pg		**Pb**	**17 24 15.8**	**+0.4**
	comp=E,17nm,0.6s,baz=142,slow=17,SNR=16								
KK31				⇑	Sn		**Sn**	**17 24 54.5**	**-2.7**
	comp=E,16nm,0.4s,baz=140,slow=22,SNR=5.7								
KK31				⇑	Lg		Lg	17 25 10.4	
	comp=E,24nm,0.5s								
KKAR	**Karatay Array**	**4.42**	**332**	*i*	PN		**Pn**	**17 24 06.3**	**+1.1**
KKAR				*i*	S		**Sn**	**17 24 56.2**	**-0.9**
KKAR	**Karatay Array**	**4.42**	**332**	⇑*i*	P		**Pn**	**17 24 06.3**	**+1.1**
	baz=29								
KKAR				⇑*i*	S		**Sn**	**17 24 56.2**	**-0.9**
	baz=29								
MTBS	**Maitube**	**4.50**	**30**	*e*	P		**Pb**	**17 24 17.1**	**+0.2**
	comp=E,24nm,0.7s								
MTBS				*e*	S		**Sb**	**17 25 13.7**	**+2.0**
	comp=E,58nm,0.5s								
MTBS	**Maitube**	**4.50**	**30**		Pg		**Pb**	**17 24 17.1**	**+0.2**
	comp=E,24nm,0.7s								
MTBS					Lg		Lg	17 25 13.7	
	comp=E,58nm,0.5s								
KRBS	**Karabastau**	**4.76**	**20**	*e*	P		**Pb**	**17 24 21.5**	**+0.2**
	comp=E,21nm,0.5s								
KRBS				*e*	S		**Sb**	**17 25 22.1**	**+3.0**
	comp=E,54nm,0.7s								
KRBS	**Karabastau**	**4.76**	**20**		Pg		**Pb**	**17 24 21.5**	**+0.2**
	comp=E,21nm,0.5s								
KRBS					Lg		Lg	17 25 22.1	
	comp=E,54nm,0.7s								
AAA	**Alma-Ata**	**4.76**	**33**	*e*	PN		**Pn**	**17 24 11.8**	**+1.8**
AAA	**Alma-Ata**	**4.76**	**33**	*e*	P		**Pb**	**17 24 22.6**	**+1.2**
	comp=E,25nm,0.4s								
AAA				*e*	S		**Sb**	**17 25 24.0**	**+4.8**
	comp=E,119nm,0.9s								
AAA	**Alma-Ata**	**4.76**	**33**	*e*	Pn		**Pn**	**17 24 11.9**	**+1.8**
	baz=34								
AAA	**Alma-Ata**	**4.76**	**33**		Pg		**Pb**	**17 24 22.6**	**+1.2**
	comp=E,25nm,0.4s								
AAA					Lg		Lg	17 25 24.0	
	comp=E,119nm,0.9s								
MDOK	**Medeo**	**4.78**	**34**	*e*	PN		**Pn**	**17 24 12.1**	**+1.8**
MDOK	**Medeo**	**4.78**	**34**	*e*	P		**Pb**	**17 24 22.2**	**+0.4**
	comp=E,26nm,0.6s								
MDOK				*e*	S		**Sb**	**17 25 23.2**	**+3.4**
	comp=E,64nm,1.1s								
MDOK	**Medeo**	**4.78**	**34**	*e*	Pn		**Pn**	**17 24 12.2**	**+1.8**
	baz=36								
MDOK	**Medeo**	**4.78**	**34**	⇑	Pn		**Pn**	**17 24 12.0**	**+1.6**
	comp=E,7.1nm,0.9s								
MDOK					Pg		**Pb**	**17 24 22.2**	**+0.4**
	comp=E,26nm,0.6s								
MDOK				⇑	Pg		**Pb**	**17 24 22.4**	**+0.6**
	comp=E,23nm,0.6s								
MDOK				⇑	Lg		Lg	17 25 22.9	
	comp=E,98nm,0.9s								
MDOK					Lg		Lg	17 25 23.6	
	comp=E,64nm,1.1s								
KNDC	**Almaty**	**4.79**	**33**	⇑	Pg		**Pb**	**17 24 23.1**	**+1.2**
	comp=E,68nm,0.6s								
KNDC				⇑	Lg		Lg	17 25 24.1	
	comp=E,215nm,0.8s								
KOTS	**Kotyrbulak**	**4.87**	**34**	*e*	P		**Pb**	**17 24 24.1**	**+0.8**
	comp=E,4.2nm,0.6s								
KOTS				*e*	S		**Sb**	**17 25 26.2**	**+4.0**
	comp=E,162nm,0.8s								
KOTS	**Kotyrbulak**	**4.87**	**34**		Pg		**Pb**	**17 24 24.1**	**+0.8**
	comp=E,4.2nm,0.6s								
KOTS					Lg		Lg	17 25 26.7	
	comp=E,162nm,0.8s								
KTBS	**Karatobe**	**5.10**	**28**	*e*	P		**Pb**	**17 24 27.3**	**+0.2**
	comp=E,14nm,0.6s								
KTBS				*e*	S		**Sb**	**17 25 31.6**	**+2.9**
	comp=E,36nm,0.4s								
KTBS	**Karatobe**	**5.10**	**28**		Pg		**Pb**	**17 24 27.3**	**+0.2**
	comp=E,14nm,0.6s								
KTBS					Lg		Lg	17 25 31.6	
	comp=E,36nm,0.4s								
KUU	**Kurty**	**5.14**	**25**	*e*	PN		**Pn**	**17 24 14.8**	**-0.3**
KUU	**Kurty**	**5.14**	**25**	*e*	P		**Pb**	**17 24 29.0**	**+1.3**
	comp=E,10nm,0.6s								
KUU				*e*	S		**Sb**	**17 25 34.0**	**+4.2**
	comp=E,56nm,0.7s								
KUU	**Kurty**	**5.14**	**25**	*e*	Pn		**Pn**	**17 24 14.8**	**-0.3**
	baz=26								
KUU	**Kurty**	**5.14**	**25**		Pg		**Pb**	**17 24 29.0**	**+1.3**
	comp=E,10nm,0.6s								
KUU					Lg		Lg	17 25 34.0	
	comp=E,56nm,0.7s								
SATY	**Saty**	**5.37**	**43**	*e*	PN		**Pn**	**17 24 20.0**	**+1.7**
SATY	**Saty**	**5.37**	**43**	*e*	P		**Pb**	**17 24 32.8**	**+1.1**
	comp=E,16nm,0.6s								
SATY				*e*	S		**Sb**	**17 25 41.3**	**+4.7**
	comp=E,57nm,1.3s								
SATY	**Saty**	**5.37**	**43**	*e*	Pn		**Pn**	**17 24 20.1**	**+1.7**
	baz=45								
SATY	**Saty**	**5.37**	**43**		Pg		**Pb**	**17 24 32.8**	**+1.1**
	comp=E,16nm,0.6s								
SATY					Lg		Lg	17 25 41.3	
	comp=E,57nm,1.3s								
ZHN	**Zhinishke**	**5.46**	**43**	*e*	PN		**Pn**	**17 24 21.4**	**+1.9**
ZHN	**Zhinishke**	**5.46**	**43**	*e*	P		**Pb**	**17 24 33.9**	**+0.7**
	comp=E,9.0nm,0.2s								
ZHN				*e*	S		**Sb**	**17 25 42.5**	**+3.3**
	comp=E,37nm,0.2s								
ZHN	**Zhinishke**	**5.46**	**43**	*e*	Pn		**Pn**	**17 24 21.5**	**+1.9**
	baz=44								
ZHN	**Zhinishke**	**5.46**	**43**		Pg		**Pb**	**17 24 33.9**	**+0.7**
ZHN					Lg		Lg	17 25 42.5	
KURS	**Kuram**	**5.55**	**39**	*e*	P		**Pb**	**17 24 38.7**	**+3.8**
	comp=E,19nm,0.9s								
KURS				*e*	S		**Sg**	**17 25 50.7**	**-4.9**
	comp=E,21nm,1.0s								
KURS	**Kuram**	**5.55**	**39**		Pg		**Pb**	**17 24 38.7**	**+3.8**
	comp=E,19nm,0.9s								
KURS					Lg		Lg	17 25 50.7	
	comp=E,21nm,1.0s								
UZB	**Uzynbulak**	**5.76**	**46**	*e*	PN		**Pn**	**17 24 25.7**	**+1.9**
UZB	**Uzynbulak**	**5.76**	**46**	*e*	P		**Pb**	**17 24 40.9**	**+2.4**
UZB				*e*	S		**Sb**	**17 25 54.3**	**+6.4**
UZB	**Uzynbulak**	**5.76**	**46**	*e*	Pn		**Pn**	**17 24 25.7**	**+1.9**
	baz=47								
UZB	**Uzynbulak**	**5.76**	**46**		Pg		**Pb**	**17 24 40.9**	**+2.4**
UZB					Lg		Lg	17 25 54.3	
KPKS	**Kokpek**	**5.80**	**42**	*e*	PN		**Pn**	**17 24 24.9**	**+0.7**
KPKS	**Kokpek**	**5.80**	**42**	*e*	P		**Pb**	**17 24 39.5**	**+0.4**
	comp=E,14nm,0.8s								
KPKS				*e*	S		**Sb**	**17 25 52.5**	**+3.6**
	comp=E,27nm,0.6s								
KPKS	**Kokpek**	**5.80**	**42**	*e*	Pn		**Pn**	**17 24 25.0**	**+0.7**
	baz=43								
KPKS	**Kokpek**	**5.80**	**42**		Pg		**Pb**	**17 24 39.5**	**+0.4**
	comp=E,14nm,0.8s								
KPKS					Lg		Lg	17 25 52.5	
	comp=E,27nm,0.6s								
BTLS	**Baital**	**5.80**	**5**	*e*	PN		**Pn**	**17 24 24.2**	**0.0**
BTLS	**Baital**	**5.80**	**5**	*e*	P		**Pb**	**17 24 40.3**	**+1.2**
	comp=E,10.0nm,0.6s								
BTLS				*e*	S		**Sb**	**17 25 53.7**	**+4.7**
	comp=E,15nm,0.4s								
BTLS	**Baital**	**5.80**	**5**	*e*	Pn		**Pn**	**17 24 24.2**	**0.0**
	baz=5.1								
BTLS	**Baital**	**5.80**	**5**		Pg		**Pb**	**17 24 39.9**	**+0.8**
BTLS					Lg		Lg	17 25 53.7	
ARXS	**Arharly**	**5.97**	**32**	*e*	P		**Pb**	**17 24 43.5**	**+1.6**
	comp=E,31nm,0.7s								
ARXS				*e*	S		**Sb**	**17 25 59.4**	**+5.7**
	comp=E,49nm,0.7s								
ARXS	**Arharly**	**5.97**	**32**		Pg		**Pb**	**17 24 43.5**	**+1.6**
	comp=E,31nm,0.7s								
ARXS					Lg		Lg	17 25 59.4	
	comp=E,49nm,0.7s								
SHLS	**Shalkode**	**6.02**	**48**	*e*	PN		Pn	17 24 33.1	+5.8
SHLS	**Shalkode**	**6.02**	**48**	*e*	P		**Pg**	**17 24 50.6**	**-1.9**
	comp=E,5.1nm,0.3s								
SHLS				*e*	S		**Sg**	**17 26 11.1**	**+0.7**
	comp=E,14nm,0.8s								
SHLS	**Shalkode**	**6.02**	**48**	*e*	Pn		Pn	17 24 33.1	+5.9
	baz=51								
SHLS	**Shalkode**	**6.02**	**48**		Pg		**Pg**	**17 24 50.6**	**-1.9**
SHLS					Lg		Lg	17 26 11.1	
BLB	**Baldybastay**	**6.16**	**37**	*e*	P		**Pb**	**17 24 47.4**	**+2.2**
	comp=E,29nm,0.6s								
BLB				*e*	S		**Sb**	**17 26 06.5**	**+7.1**
	comp=E,40nm,0.8s								
BLB	**Baldybastay**	**6.16**	**37**		Pg		**Pb**	**17 24 47.4**	**+2.2**
	comp=E,29nm,0.6s								
BLB					Lg		Lg	17 26 06.5	
	comp=E,40nm,0.8s								
KNOS	**Konyrlen**	**6.69**	**38**		Pg		**Pb**	**17 24 57.0**	**+2.7**
	comp=E,8.1nm,0.8s								
KNOS					Lg		Lg	17 26 22.1	
	comp=E,18nm,0.7s								
DJR	**Jarkent**	**6.97**	**41**		Pg		Pg	17 25 05.6	-5.1
	comp=E,5.8nm,0.5s								
DJR					Lg		Lg	17 26 37.2	
	comp=E,17nm,1.0s								
OTUK	**Ortayu**	**9.02**	**356**	⇑	Pn		**Pn**	**17 25 07.4**	**-1.0**
	comp=E,2.4nm,0.5s								
OTUK				⇑	Lg		Lg	17 27 35.3	
	comp=E,24nm,0.9s								
MKAR	**Makanchi Array**	**9.96**	**38**		Pn		**Pn**	**17 25 24.3**	**+3.0**
	comp=E,0.1nm,0.3s,baz=225,slow=16,SNR=4.5								
MKAR					Lg		Lg	17 28 09.0	
	comp=E,0.1nm,0.3s,baz=239,slow=27,SNR=3.5								
MKAR					LR		LR	17 29 31.3	
	comp=E,20nm,18.5s,baz=208,slow=40								
	comp=E,0.6nm,0.7s								
BRZS	**Berezniki**	**10.74**	**358**	*e*	P		**Pn**	**17 25 32.9**	**+1.0**
BRZS	**Berezniki**	**10.74**	**358**	*e*	Pn		**Pn**	**17 25 33.0**	**+1.0**
	baz=358								
KURBB	**Kurchatov Arra**	**11.94**	**16**		Pn		**Pn**	**17 25 46.3**	**-1.9**
	baz=210,slow=12,SNR=4.1								
	comp=E,0.2nm,0.4s								
KURK	**Kurchatov**	**12.04**	**16**		P		**Pn**	**17 25 46.3**	**-3.4**
AB31	**Akbulak array**	**13.87**	**321**		Pn		**Pn**	**17 26 12.9**	**-1.6**
	comp=E,1.3nm,0.6s,baz=127,slow=12,SNR=19								
AB31					Sn		**Sn**	**17 28 42.9**	**-6.0**
	comp=E,3.1nm,0.7s,baz=130,slow=24,SNR=7.1								
BVA0	**Borovoye Array**	**13.93**	**352**		Pn		**Pn**	**17 26 13.0**	**-2.5**
	comp=E,2.3nm,0.8s,baz=165,slow=14,SNR=16								
AKTO	**Aktyubinsk**	**15.58**	**321**		Pn		**Pn**	**17 26 36.4**	**-1.3**
	comp=E,0.2nm,0.3s,baz=113,slow=13,SNR=2.2								
	comp=E,0.6nm,0.4s								
AKTO	**Aktyubinsk**	**15.58**	**321**	⇑	Pn		**Pn**	**17 26 38.8**	**+1.1**
	comp=E,6.6nm,0.9s								
AKTO				⇑	Sn		**Sn**	**17 29 25.0**	**-5.7**
	comp=E,2.9nm,0.8s								
ZALV	**Zalesovo Beam**	**16.63**	**24**		Pn		**Pn**	**17 26 50.6**	**-0.6**
	comp=E,0.2nm,0.3s,baz=213,slow=11,SNR=6.7								
	comp=E,1.8nm,0.5s								
ZALV	**Zalesovo Beam**	**16.63**	**24**	*e*	P		**P**	**17 26 53.4**	**-0.3**
ARU	**Arti**	**19.78**	**335**		P		**Pn**	**17 27 30.1**	**+0.2**
	baz=144,slow=14,SNR=3.5								
	comp=E,5.4nm,1.0s								
ARU	**Arti**	**19.78**	**335**	*c*	*i*P		**Pn**	**17 27 30.3**	**+0.4**
ARU					S		**Sn**	**17 31 15.0**	**+2.6**
ARU					pmax		pmax		
	comp=E,4.0nm,1.0s								
KNGR	**Kungurtug, Tuv**	**20.41**	**48**	⇓	eP		Pn	17 27 39.0	+1.5
KNGR					pmax		pmax		
	comp=E,3.0nm,1.0s								
GTA	**Gaotai**	**20.42**	**81**	*e*	P		Pn	17 27 37.6	-0.1
GTA					pP		sP	17 27 45.3	+6.7
GTA					sP		pP	17 27 50.1	+12
GTA					pmax		pmax		
	comp=E,4.0nm,0.6s								
BELG	**Belogornoye**	**22.10**	**315**	⇓	eP		**P**	**17 27 55.4**	**+1.9**
BELG					pmax		pmax		
	comp=E,3.0nm,1.1s								
NCK	**Nalchik**	**22.69**	**290**	⇓	eP		**P**	**17 28 01.6**	**+1.7**
NCK					pmax		pmax		
	comp=E,14nm,0.4s								
SONM	**Songino Array**	**25.26**	**59**		P		**P**	**17 28 24.8**	**+0.1**
	comp=E,0.5nm,0.6s,baz=273,slow=10.0,SNR=3.8								
	comp=E,0.5nm,0.6s								
ANN	**Anapa**	**27.12**	**294**	*e*	P		**P**	**17 28 40.5**	**-0.9**
ANN				*e*	*PP		**sP**	**17 28 45.6**	**+1.2**
ANN				*e*				17 32 00.9	
ANN				*e*	S		**S**	**17 33 18.6**	**-1.7**
ANN					pmax		pmax		
	comp=E,33nm,0.9s								
OBN	**Obninsk**	**29.20**	**315**	*e*	P		**P**	**17 29 01.0**	**+1.2**
OBN				*e*				17 29 54.7	
OBN				*e*				17 32 07.4	
OBN					pmax		pmax		
	comp=E,6.0nm,0.5s								
BR131	**Keskin Array S**	**30.51**	**284**	⇓	eP		**P**	**17 29 13.9**	**+2.2**
BRTR	**Keskin Array B**	**30.51**	**284**		P		**P**	**17 29 13.2**	**+1.5**
	comp=E,1.7nm,0.7s,baz=91,slow=8.0,SNR=12								
	comp=E,1.7nm,0.7s								
AKASG	**Malin Array Be**	**32.80**	**305**		P		**P**	**17 29 31.9**	**+0.4**
	comp=E,0.2nm,0.3s,baz=79,slow=7.4,SNR=6.0								
AKASG					LR		LR	17 43 47.1	
	comp=E,15nm,19.4s,baz=18,slow=38								
	comp=E,0.2nm,0.3s								
AKASG	**Malin Array Be**	**32.80**	**305**	*e*	P		**P**	**17 29 31.6**	**0.0**
AKASG					pmax		pmax		
	comp=E,1.0nm,0.5s								
AKBB	**Malin Array Si**	**32.80**	**305**	⇓	eP		**P**	**17 29 34.3**	**+2.7**
AKBB					pmax		pmax		
	comp=E,4.0nm,1.0s								
FINES	**FINESS Array B**	**36.33**	**323**		P		**P**	**17 30 02.0**	**+0.1**
	comp=E,0.9nm,0.4s,baz=115,slow=10,SNR=16								
	comp=E,0.9nm,0.4s								
FINES	**FINESS Array B**	**36.33**	**323**	*i*	P		**P**	**17 30 02.5**	**+0.5**
FINES					pmax		pmax		
	comp=E,1.0nm,0.4s								
ARCES	**ARCESS Array B**	**39.37**	**336**		P		**P**	**17 30 27.4**	**-0.2**
	comp=E,1.1nm,0.8s,baz=108,slow=8.6,SNR=1.1								
	comp=E,1.1nm,0.8s								
GERES	**GERESS Array B**	**42.95**	**303**		P		**P**	**17 30 58.7**	**+1.3**
	comp=E,0.3nm,0.5s,baz=28,slow=3.2,SNR=5.5								
	comp=E,0.3nm,0.5s								
NB2	**NORSAR Subarra**	**43.37**	**321**		P		**P**	**17 31 00.4**	**-0.2**
	comp=E,0.6nm,0.4s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**43.37**	**321**		P		**P**	**17 31 00.5**	**-0.2**
	comp=E,0.8nm,0.5s,baz=91,slow=7.9,SNR=10								
NOA					LR		LR	17 49 46.8	
	comp=E,10nm,18.8s,baz=190,slow=37								
	comp=E,0.8nm,0.5s								
NOA	**NORSAR Array B**	**43.37**	**321**	*e*	P		**P**	**17 31 00.2**	**-0.4**
NOA					pmax		pmax		
	comp=E,1.0nm,0.5s								
ESDC	**Sonseca Array**	**57.86**	**297**		P		**P**	**17 32 50.7**	**+0.3**
	comp=E,0.6nm,0.6s,baz=57,slow=7.3,SNR=11								
	comp=E,0.6nm,0.6s								
TORD	**Torodi Ar. Bea**	**67.67**	**269**		P		**P**	**17 33 55.8**	**-0.2**
	comp=E,0.5nm,0.5s,baz=66,slow=6.5,SNR=4.9								
	comp=E,0.5nm,0.5s								
ILAR	**Eielson Array**	**71.61**	**17**		P		**P**	**17 34 18.2**	**-1.3**
	comp=E,0.4nm,0.8s,baz=316,slow=6.0,SNR=5.1								
	comp=E,0.4nm,0.8s								
YKA	**Yellowknife Ar**	**78.40**	**4**		P		**P**	**17 34 58.7**	**0.0**
	comp=E,0.6nm,0.6s,baz=348,slow=5.3,SNR=4.5								
	comp=E,0.6nm,0.6s								
YKA	**Yellowknife Ar**	**78.40**	**4**	*e*	P		**P**	**17 34 59.3**	**+0.6**
WRA	**Warramunga Arr**	**81.89**	**124**		P		**P**	**17 35 18.0**	**-0.2**
	comp=E,0.5nm,0.8s,baz=327,slow=4.8,SNR=11								
	comp=E,0.5nm,0.8s								
WRA	**Warramunga Arr**	**81.89**	**124**	*i*	P		**P**	**17 35 18.2**	**0.0**
ASAR	**Alice Springs**	**84.33**	**127**		P		**P**	**17 35 30.4**	**-0.4**
	comp=E,0.2nm,0.7s,baz=315,slow=4.6,SNR=4.4								
	comp=E,0.2nm,0.7s								

*IDC **21** 17:58:01.4±1.7, 32.°94S×178.°28W, h0km, mb4.3/2, mbtmp4.3/3, ML4.4/1, MS3.6/11, Error ellipse: s-maj=57.0km s-min=30.0km az=135.0*
*NEIC **21** 17:58:03.5±2.1, 33.°11S±0.°10×177.°53W±0.°08, h54km±9km, mb4.5/9, Error ellipse: s-maj=17.3km s-min=2.4km az=143.0*

ISC 21 17:58:06.7±1.5, 32.°9S±0.°1×178.°4W±0.°3, h35km, n35, σ0.°75/22, mb4.5/7, MS3.5/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.68**	**6**	Pn		**Pn**	**17 59 00.2**	**-0.9**
MXZ	**Matakaoa Point**	**5.36**	**209**	Pn		**Pn**	**17 59 23.2**	**-0.9**
URZ	**Urewera**	**6.46**	**213**	Pn		**Pn**	**17 59 39.7**	**+0.4**
	7.3nm,0.3s,baz=295,slow=2.9,SNR=32							
URZ				Sn		**Sn**	**18 00 51.9**	**+0.1**
	10nm,0.3s,baz=250,slow=6.5,SNR=7.7							
	16nm,0.3s							
URZ	**Urewera**	**6.46**	**213**	Pn		**Pn**	**17 59 39.4**	**+0.1**
OUZ	**Omahuta**	**7.03**	**249**	Pn		Pn	17 59 52.1	+5.1
BKZ	**Black Stump Fm**	**7.48**	**212**	Pn		**Pn**	**17 59 54.1**	**+0.8**
DZM	**Mont Dzumac**	**17.23**	**305**	LR		LR	18 08 00.6	
	comp=Z,422nm,18.0s,baz=193,slow=35							
DZM	**Mont Dzumac**	**17.23**	**305**	*e*LR		LR	18 06 04.7	
	comp=Z,268nm,22.6s							
RAR	**Rarotonga**	**20.24**	**59**	LR		LR	18 10 20.8	
	comp=Z,81nm,18.6s,baz=252,slow=37							
TBI	**Tubuai**	**27.16**	**77**	*e*LR		LR	18 10 22.7	
	comp=Z,84nm,22.8s							
PPT2	**Papeete2**	**30.08**	**67**	*e*LR		LR	18 11 40.9	
	comp=Z,71nm,21.0s							
PPT	**Papeete**	**30.09**	**67**	LR		LR	18 17 15.8	
	comp=Z,79nm,18.3s,baz=220,slow=38							
STKA	**Stephens Creek

1.0nm,0.5s,baz=225,slow=12,SNR=5.5
ARCES **ARCESS Array B** **40.50 337** P **P** **18 07 59.0 +1.2**
1.5nm,0.8s,baz=125,slow=8.9,SNR=1.3
1.5nm,0.8s
NB2 **NORSAR Subarra** **43.80 323** P **P** **18 08 24.1 -0.4**
comp=Z,0.4nm,0.5s,baz=95,slow=7.9
NOA **NORSAR Array B** **43.80 323** P **P** **18 08 24.5 0.0**
comp=Z,0.4nm,0.5s,baz=96,slow=7.7,SNR=5.0
comp=Z,0.4nm,0.5s
ASAR **Alice Springs** **84.70 125** P P 18 12 42.4 -7.9
comp=Z,0.2nm,0.7s,baz=302,slow=4.2,SNR=5.4
comp=Z,0.2nm,0.7s

IDC 21 18:31:42.2±1.6, 1°25S×129°07E, h0km, mb3.2/2, mbtmp3.3/5, ML3.3/3, MS2.7/1, Error ellipse: s-maj=28.7km s-min=27.1km az=123.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.23**	**80**	Pn	Pn	18 32 20.7	+0.3
	9.2nm,0.3s,baz=112,slow=4.7,SNR=113						
SIJI				Sn	Sn	18 32 48.8	+0.2
	10nm,0.3s,baz=104,slow=21,SNR=16						
	25nm,0.2s						
DAV	**Davao City (W)**	**8.97**	**337**	LR	LR	18 37 58.5	
	comp=Z,46nm,18.8s,baz=126,slow=42						
FITZ	**Fitzroy Crossi**	**17.08**	**191**	P	Pn	18 35 43.4	+0.9
	baz=41,slow=11,SNR=1.7						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**19.28**	**165**	P	P	18 36 08.2	-0.5
	0.1nm,0.3s,baz=346,slow=12,SNR=8.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**22.77**	**168**	P	P	18 36 46.8	+0.4
	0.4nm,0.6s,baz=349,slow=10,SNR=3.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**62.96**	**326**	P	P	18 42 10.5	-0.2
	0.2nm,0.3s,baz=116,slow=8.1,SNR=1.5						
	0.2nm,0.3s						

TAP 21 18:37:21.3, 24°42N×120°99E, h4km, ML2.0, 1C-2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHP	**Taichung City**	**0.15**	**196**	P	Pg	18 37 25.4	+1.1
	baz=196						
WHP				S	Sg	18 37 28.0	+1.6
	baz=196						
NSTT	**Nanjuang**	**0.21**	**2**	↑*i* P	Pg	18 37 26.3	+1.0
	baz=3.0						
NSTT				*i* S	Sg	18 37 29.5	+1.4
	baz=3.0						
NSY	**Sanyi**	**0.21**	**268**	↓*i* P	Pg	18 37 26.2	+0.8
	baz=267						
NSY				*i* S	Sg	18 37 30.0	+1.8
	baz=267						
TWQ1	**Liyutan**	**0.21**	**249**	*i* P	Pg	18 37 26.0	+0.6
	baz=248						
TWQ1				*i* S	Sg	18 37 29.5	+1.2
	baz=248						
NMLH	**Miaoli**	**0.22**	**302**	P	Pg	18 37 26.4	+0.9
	baz=301						
NMLH				S	Sg	18 37 29.9	+1.5
	baz=301						
LIOB	**Emei**	**0.22**	**5**	*i* P	Pg	18 37 26.8	+1.1
	baz=5.0						
LIOB				*i* S	Sg	18 37 30.8	+2.2
	baz=5.0						
TDCB	**Techi**	**0.23**	**138**	↓P	Pg	18 37 27.3	+1.6
	baz=138						
TDCB				S	Sg	18 37 30.8	+2.1
	baz=138						
NFF	**Wufeng Townshi**	**0.24**	**29**	P	Pg	18 37 26.2	+0.3
	baz=28						
NFF				S	Sg	18 37 30.3	+1.3
	baz=28						
TWT	**Tachien**	**0.24**	**136**	*i* P	Pg	18 37 27.5	+1.6
	baz=138						
TWT				*i* S	Sg	18 37 31.2	+2.1
	baz=138						
NJN	**Zhunan**	**0.28**	**337**	*i* P	Pb	18 37 28.2	-0.7
	baz=336						
NJN				*i* S	Sb	18 37 32.9	-1.2
	baz=336						
FUSS	**Fushou**	**0.29**	**127**	*i* P	Pb	18 37 28.9	-0.3
	baz=127						
FUSS				*i* S	Sb	18 37 33.2	-1.2
	baz=127						
WDJ	**Dajia District**	**0.33**	**257**	P	Pb	18 37 29.4	-0.4
	baz=256						
WDJ				S	Sb	18 37 34.3	-1.1
	baz=256						
NNS	**Nan Shan**	**0.35**	**87**	*i* P	Pb	18 37 29.3	-0.8
	baz=87						
NNS				*i* S	Sb	18 37 34.4	-1.6
	baz=87						
HSN1	**Hsinchu**	**0.35**	**4**	*i* P	Pb	18 37 30.0	-0.1
	baz=3.0						
HSN1				S	Sb	18 37 36.0	-0.1
	baz=3.0						
NNSB	**Datong**	**0.35**	**89**	P	Pb	18 37 30.1	-0.2
	baz=89						
NNSB				S	Sb	18 37 34.9	-1.4
	baz=89						
SBCB	**Hsinchu**	**0.37**	**359**	P	Pb	18 37 30.0	-0.4
	baz=358						
WCS	**Beigang Elemen**	**0.37**	**192**	*i* P	Pg	18 37 28.9	+0.4
	baz=191						
WCS				*i* S	Sg	18 37 34.5	+1.1
	baz=191						
WHF	**Hehuan Shan**	**0.37**	**138**	*i* P	Pb	18 37 30.8	0.0
	baz=137						
WHF				*i* S	Sb	18 37 37.0	0.0
	baz=137						
HSN	**Hsinchu**	**0.38**	**357**	P	Pg	18 37 29.5	+0.9
	baz=2.0						
HSN				S	Sb	18 37 38.1	+1.3
	baz=2.0						
CHGB	**Renai**	**0.40**	**155**	P	Pb	18 37 30.8	-0.2
	baz=155						
CHGB				S	Sb	18 37 36.4	-1.2
	baz=155						
TCU	**Taichung**	**0.40**	**226**	*i* P	Pb	18 37 31.0	0.0
	baz=225						
TCU				S	Sb	18 37 37.1	-0.3
	baz=225						
NSK	**Sanguang**	**0.42**	**53**	*i* P	Pg	18 37 29.7	+0.3
	baz=53						
NSK				*i* S	Sb	18 37 36.6	-1.4
	baz=53						
YHNB	**Yeheng**	**0.43**	**55**	P	Pb	18 37 30.6	-0.8
	baz=54						
YHNB				S	Sb	18 37 37.0	-1.3
	baz=54						
WUSB	**Renai**	**0.45**	**165**	P	Pb	18 37 31.4	-0.3
	baz=165						
WUSB				S	Sg	18 37 37.1	+1.4
	baz=165						
ETLH	**Xiulin Townshi**	**0.50**	**116**	P	Pb	18 37 33.0	+0.4
	baz=115						
ETLH				S	Sb	18 37 40.5	+0.2
	baz=115						
OWD	**Renai**	**0.50**	**160**	*i* P	Pb	18 37 32.6	0.0
	baz=160						
OWD				*i* S	Sb	18 37 39.0	-1.4
	baz=160						
LATG	**Datong**	**0.50**	**77**	P	Pb	18 37 32.7	0.0
	baz=77						
LATG				S	Sb	18 37 40.2	-0.2
	baz=77						
NDT	**Datong Townshi**	**0.51**	**69**	P	Pb	18 37 32.8	+0.1
	baz=69						
NDT				S	Sb	18 37 39.9	-0.6
	baz=69						
WCHH	**Zhanghua**	**0.52**	**229**	P	Pb	18 37 33.3	+0.3
	baz=229						
WCHH				S	Sb	18 37 42.6	+1.6
	baz=229						
SMLT	**Sun Moon Lake**	**0.55**	**189**	*i* P	Pb	18 37 33.2	-0.3
	baz=188						
ENTT	**Nioudou**	**0.56**	**67**	*i* P	Pb	18 37 33.0	-0.8
	baz=68						
ENTT				*i* S	Sb	18 37 40.9	-1.3
	baz=68						
NACB	**Ninganchiao**	**0.60**	**114**	P	Pb	18 37 35.1	+0.7
	baz=114						
NACB				S	Sb	18 37 43.4	+0.1
	baz=114						
WNT	**Mingjian**	**0.61**	**208**	*i* P	Pb	18 37 35.2	+0.6
	baz=206						
WNT				S	Sb	18 37 45.1	+1.5
	baz=206						
SSLB	**Suanglung**	**0.64**	**183**	P	Pb	18 37 34.6	-0.3
	baz=183						
FUSB	**Fushanzhiwuyua**	**0.64**	**58**	P	Pb	18 37 35.1	+0.1
	baz=58						
FUSB				S	Sb	18 37 44.8	+0.5
	baz=58						
TWD	**Chiawan**	**0.65**	**122**	*i* P	Pb	18 37 35.6	+0.4
	baz=121						
TWD				S	Sb	18 37 45.2	+0.7
	baz=121						
TWE	**Neicheng**	**0.68**	**64**	*i* P	Pb	18 37 36.0	+0.3
	baz=65						
VWDT	**VWDT**	**0.68**	**168**	P	Pb	18 37 35.6	-0.1
	baz=168						
EWUT	**Wuta**	**0.72**	**88**	*e*P	Pb	18 37 36.0	-0.3
	baz=88						
EWUT				*e*S	Sb	18 37 45.5	-1.0
	baz=88						
ESL	**Shilin**	**0.73**	**146**	P	Pb	18 37 37.3	+0.7
	baz=146						
ESL				S	Sb	18 37 46.5	-0.4
	baz=146						
WHYT	**Xinyi Township**	**0.74**	**190**	*e*P	Pb	18 37 37.3	+0.6
	baz=190						
WHYT				*e*S	Sb	18 37 47.9	+0.8
	baz=190						
WRL	**Guolierlin Hig**	**0.77**	**227**	*e*S	Sn	18 37 50.0	-0.9
	baz=227						
TWA	**Mucha**	**0.77**	**44**	*i* P	Pn	18 37 38.5	-0.5
	baz=44						
TWA				S	Sn	18 37 51.1	0.0
	baz=44						
TWS1	**Kuangyinshan**	**0.78**	**30**	*i* P	Pn	18 37 38.9	-0.2
	baz=30						
TWS1				*i* S	Sn	18 37 50.7	-0.4
	baz=30						
WDLH	**Douliu**	**0.84**	**210**	*e*P	Pb	18 37 39.0	+0.6
	baz=209						
WDLH				*e*S	Sb	18 37 51.0	+0.9
	baz=209						
NTST	**Danshui**	**0.85**	**29**	*e*P	Pn	18 37 40.0	0.0
	baz=29						
NTST				*e*S	Sn	18 37 52.5	-0.4
	baz=29						
EGFH	**Guangfu**	**0.85**	**152**	*e*P	Pg	18 37 37.3	-0.3
	baz=152						
EGFH				*e*S	Sb	18 37 50.5	+0.1
	baz=152						
YM01	**YM01**	**0.89**	**36**	P	Pn	18 37 40.3	-0.4
	baz=36						
YM01				S	Sn	18 37 54.3	+0.3
	baz=36						
ANP	**Anpu**	**0.90**	**32**	P	Pn	18 37 41.0	+0.2
	baz=32						
ANP				*e*S	Sn	18 37 53.2	-1.0
	baz=32						
WTK	**Tuku**	**0.92**	**217**	*e*P	Pb	18 37 40.2	+0.4
	baz=216						
WTK				*e*S	Sn	18 37 53.5	-1.1
	baz=216						
ALS	**Alishan**	**0.93**	**191**	*i* P	Pn	18 37 40.9	-0.4
	baz=190						
ALS				*i* S	Sn	18 37 54.3	-0.9
	baz=190						
YUS	**Yu-Shan**	**0.93**	**182**	P	Pn	18 37 41.2	-0.4
	baz=181						
YUS				S	Sb	18 37 54.3	+1.1
	baz=181						
TIPB	**Shuangxi**	**0.93**	**54**	P	Pn	18 37 40.9	-0.3
	baz=54						
EGS		**0.95**	**64**	*e*P	Pn	18 37 41.2	-0.2
	baz=64						
EHY	**Hungye**	**0.96**	**162**	P	Pn	18 37 42.4	+0.8
	baz=161						
EHY				S	Sn	18 37 55.2	-0.5
	baz=161						
HGSD	**Ruisui**	**1.01**	**157**	*e*P	Pb	18 37 41.2	-0.1
	baz=156						
SXI1	**Grass Mountain**	**1.04**	**50**	P	Pn	18 37 43.4	+0.6
	baz=50						
SXI1				*e*S	Sb	18 37 56.2	+0.1
	baz=50						
WSF	**Szhu**	**1.05**	**222**	P	Pg	18 37 40.9	-0.6
	baz=221						
WSF				S	Sb	18 37 56.9	+0.7
	baz=221						
YULB	**Yu-li**	**1.06**	**165**	*e*P	Pn	18 37 42.8	-0.2
	baz=164						
YULB				S	Sn	18 37 58.3	+0.1
	baz=164						
TWB1	**Santiao Chiao**	**1.08**	**57**	*i* P	Pn	18 37 44.6	+1.4
	baz=57						
TWB1				S	Sn	18 37 58.8	+0.3
	baz=57						
EYUL	**Yuli**	**1.11**	**164**	*e*P	Pb	18 37 43.2	+0.1
	baz=164						
EYUL				*e*S	Sb	18 37 57.9	-0.1
	baz=164						
CHN4	**Tsaushan**	**1.13**	**199**	P	Pg	18 37 43.0	0.0
	baz=198						
CHN4				S	Sn	18 37 59.5	-0.4
	baz=198						
WSL	**Shuilin Townsh**	**1.14**	**218**	*e*P	Pb	18 37 43.8	+0.2
	baz=217						
WSL				*e*S	Sn	18 37 59.9	-0.1
	baz=217						
TPUB	**Ta-pu**	**1.17**	**197**	P	Pg	18 37 43.3	-0.4
	baz=196						
TPUB				*e*S	Sn	18 38 00.6	-0.2
	baz=196						
WTP	**Ta-pu**	**1.22**	**197**	P	Pb	18 37 45.0	0.0
	baz=196						
WTP				S	Sn	18 38 02.6	+0.4
	baz=196						
ELDTW	**Lidau**	**1.23**	**179**	P	Pn	18 37 46.0	+0.6
	baz=178						
ELDTW				S	Sn	18 38 03.7	+1.2
	baz=178						
TWK	**Hsinying**	**1.24**	**202**	P	Pn	18 37 45.7	+0.2
	baz=201						
TWK				S	Sn	18 38 03.7	+1.0
	baz=201						
FULB	**Fuli**	**1.25**	**167**	*e*P	Pg	18 37 45.2	0.0
	baz=167						

JMA 21 18:37:34.1±0.3, 25°N±3°×123°1E±0°9, h145km, MV1.5/9, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.54**	**185**	*e*P	Pn	18 37 55.2	+0.1
JYNG	**Yonagunijimaku**	**0.56**	**191**	*e*P	Pn	18 37 55.2	0.0
JYNG				*e*S	Sn	18 38 11.7	+0.5
IRIF	**Iriomote-Funau**	**0.90**	**138**	P	Pn	18 37 57.6	+0.1
IRIF				*e*S	Sn	18 38 16.0	+0.6
JKRS	**Kuro-shima**	**1.15**	**131**	P	Pn	18 38 00.2	+0.5
JKRS				S	Sn	18 38 20.0	+0.7
JIJ	**Ishigaki jima**	**1.17**	**123**	P	Pn	18 37 59.9	-0.1
JIJ				S	Sn	18 38 19.1	-0.5
JISG	**Ishigakijimahi**	**1.21**	**110**	S	Sn	18 38 20.4	+0.2
JTJ	**Tarama**	**1.53**	**103**	*e*P	Pn	18 38 04.2	+0.6
JTJ				S	Sn	18 38 26.7	+0.6

*ARE **21** 18:37:58±6.3, 13°3S±0°1×76°2W±0°2, h96km±9km, Error ellipse: s-maj=0.0km s-min=0.0km az=152.0*
NEIC 21 18:37:59.8±2.5, 13°00S±0°08×75°8W±0°2, h92km±23km, mb4.2/2, ML4.3(ARE), Error ellipse: s-maj=22.3km s-min=9.9km az=70.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.47**	**313**	Pn	Pn	18 38 25.2	-0.2
NNA				Sn	Sn	18 38 43.7	-0.9
CZSB	**Cruzeiro do Su**	**6.04**	**30**	Pn	Pn	18 39 27.1	+0.5
PB16	**IPOC Station P**	**8.02**	**132**	Pn	Pn	18 39 54.9	+0.8
LPAZ	**La Paz**	**8.07**	**115**		Pn	18 39 53.3	-1.5
GO01	**Chusmiza**	**9.14**	**137**	Pn	Pn	18 40 08.0	-1.3
ETMB	**Extrema**	**9.87**	**72**	Pn	Pn	18 40 19.4	+0.5
PB02	**IPOC Station P**	**9.98**	**147**	Pn	Pn	18 40 20.5	0.0
BOSC	**San Juan Bosco**	**10.16**	**344**	Pn	Pn	18 40 21.8	-1.2
PB07	**IPOC Station P**	**10.32**	**148**	Pn	Pn	18 40 24.9	-0.3
ROSC	**El Rosal**	**17.79**	**5**	P	P	18 41 59.7	-1.7
ROSC				IAmb	IAmb	18 42 04.1	
	comp=Z,19nm,0.3s						
BOAV	**Boa Vista**	**21.51**	**46**	P	P	18 42 43.2	+1.7
BOAV				IAmb	IAmb	18 42 49.5	
	comp=Z,3.4nm,1.1s						

*IDC **21** 18:53:29.9±1.3, 4°65S×149°74E, h560km±15km, mb3.1/9, mbtmp4.1/12, Error ellipse: s-maj=19.2km s-min=15.1km az=99.0*
*NEIC **21** 18:53:30.3±1.4, 4°7S±0°1×149°7E±0°1, h568km±14km, mb4.1/23, Error ellipse: s-maj=19.2km s-min=10.7km az=130.0*
ISC 21 18:53:30.5±0.7, 4°68S±0°08×149°7E±0°1, h577km, n67, σ1§16/71, mb4.0/21, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.33**	**81**	P	**P**	**18 54 42.3**	**-2.0**
	31nm,0.4s,baz=190,slow=4.5,SNR=5.9						
RABL	**Rabaul**	**2.49**	**79**	P	**P**	**18 54 43.0**	**-2.0**
RABL	**Rabaul**	**2.49**	**79**	P	**P**	**18 54 42.8**	**-2.2**
MANU	**Manus Island**	**3.51**	**318**	P	**P**	**18 54 49.6**	**-1.4**
COEN	**Coen**	**11.25**	**215**	P	**P**	**18 56 02.1**	**+0.5**
COEN	**Coen**	**11.25**	**215**	P	**P**	**18 56 01.8**	**+0.2**
MTSU	**Mount Surprise**	**14.38**	**201**	P	**P**	**18 56 34.7**	**+1.2**
CTA	**Charters Tower**	**15.69**	**192**	P	**P**	**18 56 46.8**	**+0.8**
	5.8nm,0.7s,baz=2.1,slow=12,SNR=8.9						
CTA	**Charters Tower**	**15.69**	**192**	P	**P**	**18 56 47.2**	**+1.2**
CTAO	**Charters Tower**	**15.69**	**192**	P	**P**	**18 56 45.7**	**-0.3**
CTAO				IAmb	IAmb	18 56 48.5	
	comp=Z,5.8nm,0.7s						
CTAO	**Charters Tower**	**15.69**	**192**	P	**P**	**18 56 47.1**	**+1.1**
FAKI	**Fak Fak**	**17.52**	**275**	P	**P**	**18 57 02.5**	**-0.4**
FAKI	**Fak Fak**	**17.52**	**275**	P	**P**	**18 57 00.5**	**-2.4**
QIS	**Mount Isa**	**18.60**	**211**	P	**P**	**18 57 14.1**	**+1.4**
RK1H	**Rockhampton Ha**	**18.62**	**178**	P	**P**	**18 57 14.2**	**+1.4**
KDU	**Kakadu**	**18.80**	**244**	P	**P**	**18 57 14.5**	**-0.1**
SIJI	**Sorong**	**18.81**	**281**	P	**P**	**18 57 14.4**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=290,slow=23,SNR=5.4						
MTN	**Manton Dam**	**20.07**	**245**	P	**P**	**18 57 24.4**	**-1.7**
MTN				IAmb	IAmb	18 57 27.4	
	comp=Z,5.9nm,0.9s						
WB0	**Warramunga Arr**	**21.16**	**224**	P	**P**	**18 57 35.9**	**0.0**
WR0	**Warramunga Arr**	**21.20**	**223**	P	**P**	**18 57 36.2**	**0.0**
WR0				IAmb	IAmb	18 57 37.9	
	comp=Z,4.2nm,0.8s						
WRAB	**Tennant Creek**	**21.31**	**223**	P	**P**	**18 57 34.5**	**-2.7**
WRAB				IAmb	IAmb	18 57 38.4	
	comp=Z,3.5nm,1.1s						
WRAB	**Tennant Creek**	**21.31**	**223**	P	**P**	**18 57 37.9**	**+0.7**
WB2	**Warramunga Arr**	**21.31**	**223**	P	**P**	**18 57 37.2**	**-0.1**
WB2				IAmb	IAmb	18 57 39.2	
	comp=Z,3.6nm,0.6s						
WRA	**Warramunga Arr**	**21.32**	**223**	P	**P**	**18 57 37.6**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=47,slow=9.3,SNR=73						
WRA				S	**S**	**19 00 55.4**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=44,slow=17,SNR=12						
WRA				PcP	**PcP**	**19 01 18.2**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=42,slow=2.1,SNR=5.9						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**21.32**	**223**	P	**P**	**18 57 36.1**	**-1.2**
RMQ	**Roma**	**21.71**	**182**	P	**P**	**18 57 41.4**	**+0.7**
KNRA	**Kununurra**	**23.31**	**241**	P	**P**	**18 57 53.8**	**-1.3**
KNRA				IAmb	IAmb	18 57 59.4	
	comp=Z,8.4nm,1.1s						
KNRA	**Kununurra**	**23.31**	**241**	P	**P**	**18 57 54.8**	**-0.3**
AS31	**Alice Springs**	**24.27**	**217**	P	**P**	**18 58 03.4**	**-0.1**
AS31				IAmb	IAmb	18 58 04.9	
	comp=Z,1.9nm,0.5s						
ASAR	**Alice Springs**	**24.27**	**217**	P	**P**	**18 58 03.8**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=49,slow=8.2,SNR=131						
ASAR				PcP	**PcP**	**19 01 24.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=49,slow=2.4,SNR=6.3						
ASAR				S	**S**	**19 01 41.1**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=47,slow=13,SNR=5.5						
	comp=Z,2.8nm,0.4s						
ASAR	**Alice Springs**	**24.27**	**217**	P	**P**	**18 58 02.7**	**-0.9**
INKA	**Innaminka**	**24.48**	**199**	P	**P**	**18 58 06.1**	**+0.8**
ARMA	**Armidale**	**25.67**	**176**	P	**P**	**18 58 16.4**	**+0.5**
ARMA				IAmb	IAmb	18 58 18.7	
	comp=Z,3.7nm,0.9s						
ARMA	**Armidale**	**25.67**	**176**	P	**P**	**18 58 17.5**	**+1.6**
BATI	**Baumata**	**26.40**	**256**	P	**P**	**18 58 23.6**	**+1.1**
	comp=Z,3.8nm,0.4s,baz=69,slow=3.4,SNR=4.7						
	comp=Z,3.8nm,0.4s						
OOD	**Oodnadatta**	**26.59**	**209**	P	**P**	**18 58 24.2**	**+0.3**
CMSA	**Cobar Meteorol**	**26.99**	**188**	P	**P**	**18 58 28.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**27.06**	**239**	P	**P**	**18 58 27.3**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=38,slow=4.8,SNR=20						
	comp=Z,1.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**27.06**	**239**	P	**P**	**18 58 27.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**27.06**	**239**	P	**P**	**18 58 27.8**	**-0.3**
LCRK	**Leigh Creek**	**27.84**	**202**	P	**P**	**18 58 35.3**	**+0.5**
STKA	**Stephens Creek**	**28.11**	**195**	P	**P**	**18 58 37.8**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=344,slow=10.0,SNR=4.7						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**28.11**	**195**	P	**P**	**18 58 36.9**	**-0.2**
WRKA	**Warakurna**	**28.86**	**223**	P	**P**	**18 58 43.6**	**-0.2**
MULG	**Mulgathing**	**29.45**	**208**	P	**P**	**18 58 48.6**	**-0.1**
HTT	**Hallett**	**30.33**	**198**	P	**P**	**18 58 56.8**	**+0.5**
CAN	**Canberra**	**30.50**	**181**	P	**P**	**18 58 57.8**	**0.0**
CAN				IAmb	IAmb	18 59 02.5	
	comp=Z,9.1nm,1.1s						
BBOO	**Buckleboo**	**30.76**	**203**	P	**P**	**18 58 58.0**	**-2.0**
BBOO	**Buckleboo**	**30.76**	**203**	P	**P**	**18 58 59.9**	**-0.1**
PLAI	**Plampang**	**31.98**	**261**	P	**P**	**18 59 09.3**	**-1.3**
ARPS	**Mount Arapiles**	**32.75**	**192**	P	**P**	**18 59 17.3**	**+0.5**
	comp=Z,7.0nm,0.9s						
TOO	**Toolangi**	**32.97**	**186**	P	**P**	**18 59 19.6**	**+0.9**
TOO				IAmb	IAmb	18 59 32.8	
	comp=Z,4.0nm,1.0s						
FORT	**Forrest**	**33.02**	**216**	P	**P**	**18 59 17.9**	**-1.3**
FORT	**Forrest**	**33.02**	**216**	P	**P**	**18 59 19.2**	**0.0**
YULB	**Yu-li**	**39.34**	**316**	P	**P**	**19 00 11.1**	**-0.2**
YULB				IAmb	IAmb	19 00 26.5	
	comp=Z,5.0nm,1.0s						
NACB	**Ninganchiao**	**39.66**	**318**	P	**P**	**19 00 13.5**	**-0.3**
SSLB	**Suanglung**	**39.83**	**317**	P	**P**	**19 00 14.2**	**-1.1**
SSLB				IAmb	IAmb	19 00 30.4	
	comp=Z,7.5nm,1.1s						
YHNB	**Yeheng**	**40.14**	**318**	P	**P**	**19 00 17.2**	**-0.6**
YHNB				IAmb	IAmb	19 00 19.3	
	comp=Z,8.1nm,0.9s						
PBKT	**Sadao Pong**	**52.60**	**295**	P	**P**	**19 01 55.9**	**+4.0**
CMAR	**Chiang Mai Arr**	**55.05**	**296**	P	**P**	**19 02 10.5**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=123,slow=5.9,SNR=9.3						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**64.61**	**329**	P	**P**	**19 03 13.4**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=142,slow=4.9,SNR=3.0						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	**73.08**	**177**	P	**P**	**19 04 03.6**	**+1.3**
	comp=Z,1.3nm,0.5s,baz=341,slow=6.7,SNR=17						
	comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**73.08**	**177**	P	**P**	**19 04 03.3**	**+1.1**
ILAR	**Eielson Array**	**83.22**	**23**	P	**P**	**19 04 55.8**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=250,slow=4.9,SNR=8.9						
	comp=Z,0.3nm,0.6s						
MAW	**Mawson**	**84.50**	**203**	P	**P**	**19 05 03.3**	**+0.4**
QSPA	**South Pole Qui**	**85.28**	**180**	P	**P**	**19 05 06.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**147.34**	**287**	PKPbc	**PKPbc**	**19 12 11.3**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=95,slow=2.6,SNR=15						

*IDC **21** 19:07:02.5±1.6, 3°89N×126°65E, h0km, mb3.6/5, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=71.6km s

0.1nm,0.3s
STKA Stephens Creek 38.27 159 P P 19 14 24.8 +0.1
1.9nm,0.7s,baz=322,slow=9.0,SNR=7.4
1.9nm,0.7s
MKAR Makanchi Array 57.43 325 P P 19 16 52.8 0.0
0.3nm,0.5s,baz=126,slow=8.5,SNR=5.9
0.3nm,0.5s

*ATH **21** 19:28:41.7, 36°.08N×21°.68E, h14km±5km, ML3.7/7, Error ellipse: s-maj=6.8km s-min=1.5km az=267.0*
*THE **21** 19:28:42.9, 36°.12N×21°.75E, h14km±1km, ML3.5/8, Error ellipse: s-maj=2.2km s-min=0.7km az=248.0*
*IDC **21** 19:28:44.7±2.6, 36°.30N×21°.92E, h46km±28km, mb3.7/10, mbtmp3.8/13, ML3.3/3, MS3.1/17, Error ellipse: s-maj=24.3km s-min=19.8km az=35.0*
*ISK **21** 19:28:45.9, 36°.39N×22°.24E, h79km, ML3.6/14*
*MOS **21** 19:28:46.7±1.2, 36°.52N×21°.90E, h65km, mb4.3/10, Error ellipse: s-maj=11.4km s-min=6.2km az=68.3*
*BEO **21** 19:28:46.4±0.8, 36°.58N×21°.38E, h0km, ML3.8/7*
ISC 21 19:28:43.8±0.9, 36°.22N±0°.05×21°.74E±0°.04, h37km±1km, n158, σ1§96/172, mb3.9/16, MS3.1/13, 13C-15D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PYL	**PYLOS**	**0.67**	**0**	P		**Pn**	**19 28 57.9**	**+1.0**
PYL				S		**Sn**	**19 29 09.0**	**+2.9**
PYL	**PYLOS**	**0.67**	**0**	P		**Pn**	**19 28 57.6**	**+0.7**
PYL				S		**Sn**	**19 29 09.0**	**+2.9**
PYL				AML		AML	19 29 09.4	
	comp=N,9857μm,1.2s							
PYL				AML		AML	19 29 16.7	
	comp=E,9715μm,0.7s							
ITM	**Ithomi**	**0.97**	**9**	P		**Pn**	**19 29 02.4**	**+1.6**
ITM				S		**Sn**	**19 29 18.0**	**+4.6**
	comp=E,3μm,0.6s							
ITM	**Ithomi**	**0.97**	**9**	P		**Pn**	**19 29 01.9**	**+1.1**
ITM				S		**Sn**	**19 29 16.8**	**+3.4**
ITM				AML		AML	19 29 24.1	
	comp=E,5282μm,0.4s							
ITM				AML		AML	19 29 25.6	
	comp=N,6417μm,0.7s							
KTHR	**Kythira**	**1.03**	**88**	P		**Pn**	**19 29 02.0**	**+0.4**
KTHR				S		**Sn**	**19 29 16.0**	**+1.3**
	comp=N,2μm,0.5s							
KTHR	**Kythira**	**1.03**	**88**	P		**Pn**	**19 29 01.8**	**+0.2**
KTHR				S		**Sn**	**19 29 15.5**	**+0.8**
KTHR				AML		AML	19 29 23.4	
	comp=N,14968μm,0.4s							
KTHR				AML		AML	19 29 24.8	
	comp=E,11314μm,0.6s							
KTHA	**Kythira Island**	**1.07**	**88**	P		**Pn**	**19 29 02.7**	**+0.4**
KTHA				S		**Sn**	**19 29 18.4**	**+2.5**
	comp=E,4μm,0.8s							
KTHA	**Kythira Island**	**1.07**	**88**	P		**Pn**	**19 29 02.7**	**+0.4**
KTHA				S		**Sn**	**19 29 18.0**	**+2.1**
KTHA				AML		AML	19 29 24.9	
	comp=N,5199μm,0.9s							
KTHA				AML		AML	19 29 25.6	
	comp=E,12499μm,0.6s							
VLI	**Veliai**	**1.09**	**63**	P		**Pn**	**19 29 03.0**	**+0.6**
VLI				S		**Sn**	**19 29 19.5**	**+3.3**
	comp=E,4μm,0.8s							
VLI	**Veliai**	**1.09**	**63**	P		**Pn**	**19 29 02.6**	**+0.2**
VLI				S		**Sn**	**19 29 19.3**	**+3.1**
VLI				AML		AML	19 29 24.8	
	comp=N,5131μm,0.7s							
VLI				AML		AML	19 29 27.5	
	comp=E,10416μm,0.8s							
MNVA	**Monemvasia**	**1.15**	**66**	P		**Pn**	**19 29 04.3**	**+1.1**
MNVA				S		**Sn**	**19 29 21.4**	**+3.7**
MNVA				AML		AML	19 29 26.4	
	comp=N,2733μm,1.0s							
MNVA				AML		AML	19 29 28.3	
	comp=E,2637μm,1.3s							
ANKY	**Antikythira Is**	**1.32**	**105**	P		**Pn**	**19 29 06.3**	**+0.7**
ANKY				S		**Sn**	**19 29 23.3**	**+1.4**
	comp=E,2μm,0.6s							
ANKY	**Antikythira Is**	**1.32**	**105**	P		**Pn**	**19 29 06.0**	**+0.4**
ANKY				S		**Sn**	**19 29 23.1**	**+1.2**
ANKY				AML		AML	19 29 31.6	
	comp=E,4464μm,0.6s							
ANKY				AML		AML	19 29 31.7	
	comp=N,2431μm,0.7s							
KRND	**KRANIDI**	**1.62**	**44**	P		**Pn**	**19 29 10.6**	**+0.8**
KRND				S		**Sn**	**19 29 34.2**	**+4.8**
	comp=N,1μm,0.8s							
IMMV	**Iera Moni Meta**	**1.98**	**112**	P		**Pn**	**19 29 14.8**	**+0.1**
IMMV				S		**Sn**	**19 29 39.2**	**+1.0**
	comp=N,1μm,1.1s							
IMMV	**Iera Moni Meta**	**1.98**	**112**	PN		**Pn**	**19 29 14.9**	**+0.2**
IMMV				SN		**Sn**	**19 29 35.9**	**-2.3**
PRNS	**Prines Rethymn**	**2.41**	**110**	P		**Pn**	**19 29 19.9**	**-0.7**
PRNS				S		**Sn**	**19 29 48.4**	**-0.3**
IDI	**Anoyia**	**2.73**	**109**	P		**Pn**	**19 29 24.9**	**-0.2**
	comp=N,0.9nm,0.3s,baz=300,slow=12,SNR=11							
	comp=N,2.7nm,0.3s							
IDI	**Anoyia**	**2.73**	**109**	P		**Pn**	**19 29 25.1**	**0.0**
IDI				S		**Sn**	**19 29 58.8**	**+1.9**
	comp=N,242nm,0.9s							
IDI	**Anoyia**	**2.73**	**109**	PN		**Pn**	**19 29 24.7**	**-0.4**
HRKL	**Herakleio**	**2.88**	**107**	PN		**Pn**	**19 29 26.8**	**-0.3**
SANT	**Santorini**	**3.01**	**86**	PN		**Pn**	**19 29 27.4**	**-1.5**
SANT				SN		**Sn**	**19 29 57.8**	**-6.0**
APE	**Apeiranthos**	**3.17**	**73**	PN		**Pn**	**19 29 29.3**	**-1.8**
APE				SN		**Sn**	**19 30 00.8**	**-6.8**
APE	**Apeiranthos**	**3.17**	**73**	↑*e*P		**Pn**	**19 29 34.1**	**+3.0**
AOS	**Alonnisos**	**3.40**	**29**	PN		**Pn**	**19 29 33.8**	**-0.4**
IGT	**Igoumenitsa**	**3.48**	**342**	*e*Pn		**Pn**	**19 29 37.1**	**+1.7**
ZKR	**Zakros**	**3.81**	**106**	PN		**Pn**	**19 29 39.6**	**-0.3**
CHOS	**Chios island**	**4.06**	**57**	PN		**Pn**	**19 29 41.7**	**-1.7**
SIGR	**SIGRI**	**4.42**	**46**	PN		**Pn**	**19 29 46.7**	**-1.6**
URLA	**Izmir**	**4.42**	**60**	PN		**Pn**	**19 29 46.7**	**-1.6**
KARP	**Karpathos**	**4.46**	**97**	PN		**Pn**	**19 29 47.2**	**-1.0**
HORT	**Hortiatis**	**4.50**	**13**	PN		**Pn**	**19 29 50.1**	**+0.7**
BODT	**Bodrum**	**4.56**	**78**	PN		**Pn**	**19 29 48.5**	**-1.7**
TIP	**Timpagrande**	**4.93**	**308**	↑P		**Pn**	**19 29 58.4**	**+3.1**
OHR	**Ohrid**	**4.94**	**352**	*i* Pn		**Pn**	**19 29 58.0**	**+2.6**
KNT	**Kendrikon**	**5.01**	**10**	PN		**Pn**	**19 29 57.4**	**+1.0**
VAY	**Valandovo**	**5.13**	**7**	*i* Pn		**Pn**	**19 29 59.9**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**5.21**	**69**	PN		**Pn**	**19 29 56.9**	**-2.4**
TIR	**Tirane**	**5.32**	**345**	↑P		**Pn**	**19 30 01.7**	**+1.1**
TIR	**Tirane**	**5.32**	**345**	↑P		**Pn**	**19 30 01.7**	**+1.1**
TIR	**Tirane**	**5.32**	**345**	*e*Pn		**Pn**	**19 30 02.5**	**+1.9**
TIR				*e*Sn		**Sn**	**19 30 57.5**	**-3.1**
STIP	**Stip**	**5.47**	**4**	*i* Pn		**Pn**	**19 30 05.3**	**+2.6**
GELI	**Tayfur-Gelibol**	**5.59**	**40**	PN		**Pn**	**19 30 02.8**	**-1.5**
VAE	**Valguarnera**	**6.00**	**284**	S		**Sn**	**19 31 18.6**	**+1.0**
	comp=N,14nm,0.7s,baz=237,slow=17,SNR=2.4							
DRME	**Dracevica, Mon**	**6.28**	**342**	*e*Pn		**Pn**	**19 30 13.9**	**+0.2**
PRVS	**Prvonek**	**6.28**	**2**	*e*Pn		**Pn**	**19 30 15.3**	**+1.4**
BOSS	**Bosilegrad**	**6.29**	**5**	*e*Pn		**Pn**	**19 30 15.9**	**+1.9**
PDG	**Podgorica**	**6.49**	**344**	||P		**Pn**	**19 30 16.8**	**+0.1**
PDG	**Podgorica**	**6.49**	**344**	*e*Pn		**Pn**	**19 30 16.8**	**+0.1**
PDG				*e*Sn		**Sn**	**19 31 24.2**	**-5.2**
VTS	**Vitosha**	**6.49**	**10**	↑P		**Pn**	**19 30 18.0**	**+1.2**
VTS	**Vitosha**	**6.49**	**10**	↑P		**Pn**	**19 30 18.0**	**+1.2**
BARS	**Barje**	**6.58**	**1**	*e*Pn		**Pn**	**19 30 18.6**	**+0.6**
BARS				*e*Sn		**Sn**	**19 31 29.0**	**-2.8**
HCY	**Herceg Novi**	**6.70**	**339**	*e*Pn		**Pn**	**19 30 18.1**	**-1.5**
DBRK	**Dubrovnik**	**7.01**	**338**	*e*Pn		**Pn**	**19 30 22.3**	**-1.5**
ZAPS	**Zavoj**	**7.08**	**5**	*e*Pn		**Pn**	**19 30 26.5**	**+1.8**
BRY	**Bratogost**	**7.11**	**341**	*e*Pn		**Pn**	**19 30 23.9**	**-1.4**
SJES	**Sjenica**	**7.16**	**350**	*e*Pn		**Pn**	**19 30 26.4**	**+0.4**
SJES				*e*Sn		**Sn**	**19 31 41.8**	**-4.2**
UPM	**Unac-Piva**	**7.30**	**343**	*e*Pn		**Pn**	**19 30 28.4**	**+0.4**
STON	**Ston**	**7.33**	**336**	*e*Pn		**Pn**	**19 30 25.6**	**-2.6**
STON	**Ston**	**7.33**	**336**	*e*Pn		**Pn**	**19 30 26.4**	**-1.8**
BOVS	**Bovan**	**7.40**	**360**	↑P		**Pn**	**19 30 28.9**	**-0.3**
BLKB	**Belogradchik**	**7.42**	**5**	↑P		**Pn**	**19 30 31.7**	**+2.2**
IVAS	**Ivanjica**	**7.44**	**351**	*e*Pn		**Pn**	**19 30 28.8**	**-1.0**
IVAS				*e*Sn		**Sn**	**19 31 48.0**	**-5.0**
LSTV	**Lastovo**	**7.53**	**332**	*e*Pn		**Pn**	**19 30 30.8**	**-0.1**
ZAGS	**Zajecar**	**7.59**	**3**	*e*Pn		**Pn**	**19 30 32.0**	**+0.3**
RUDO	**Rudo**	**7.61**	**347**	*e*Pn		**Pn**	**19 30 30.4**	**-1.6**
GRUS	**Gruza**	**7.70**	**354**	*e*Pn		**Pn**	**19 30 32.8**	**-0.4**
BBLS	**Lazići**	**7.84**	**348**	*e*Pn		**Pn**	**19 30 34.4**	**-0.9**
BBLS				*e*Sn		**Sn**	**19 31 56.4**	**-6.3**
MAKA	**Makarska**	**7.93**	**334**	*e*Pn		**Pn**	**19 30 35.8**	**-0.7**
DIVS	**Divibare**	**7.98**	**351**	*e*Pn		**Pn**	**19 30 36.0**	**-1.2**
DIVS	**Divibare**	**7.98**	**351**	*e*Pn		**Pn**	**19 30 36.3**	**-0.9**
DIVS				*e*Sn		**Sn**	**19 31 59.4**	**-6.7**
RICI	**Ricice**	**8.08**	**335**	*e*Pn		**Pn**	**19 30 37.9**	**-0.6**
SRKY	**Kupres RS**	**8.58**	**337**	*e*Pn		**Pn**	**19 30 45.5**	**+0.1**
HUMR	**Humele**	**8.66**	**16**	||P		**Pn**	**19 30 47.6**	**+1.2**
KIJV	**Kijevo**	**8.78**	**334**	*e*Pn		**Pn**	**19 30 48.0**	**0.0**
MGRS	**Mrkonjic Grad**	**8.92**	**338**	*e*Pn		**Pn**	**19 30 52.9**	**+2.9**
MORI	**Morici**	**8.92**	**331**	*e*Pn		**Pn**	**19 30 49.8**	**-0.2**
FRGS	**Fruska Gora**	**9.04**	**351**	↑P		**Pn**	**19 30 50.5**	**-1.2**
FRGS	**Fruska Gora**	**9.04**	**351**	*e*Pn		**Pn**	**19 30 48.1**	**-3.6**
FRGS	**Fruska Gora**	**9.04**	**351**	*e*Pn		**Pn**	**19 30 50.3**	**-1.4**
A050A	**Klekovaca**	**9.15**	**336**	*e*Pn		**Pn**	**19 30 52.6**	**-0.7**
BLY	**Banja Luka**	**9.19**	**339**	*e*Pn		**Pn**	**19 30 53.0**	**-0.7**
GZR	**Gura Zlata**	**9.20**	**5**	||P		**Pn**	**19 30 54.9**	**+1.1**
GZR	**Gura Zlata**	**9.20**	**5**	||P		**Pn**	**19 30 54.9**	**+1.1**
DUGI	**Dugi Otok**	**9.29**	**329**	*e*Pn		**Pn**	**19 30 55.8**	**+0.7**
ARR	**Arges**	**9.39**	**13**	||P		**Pn**	**19 30 57.2**	**+0.6**
UDBI	**Udbina**	**9.46**	**333**	*e*Pn		**Pn**	**19 30 58.1**	**+0.7**
A051A	**Mrakovica**	**9.51**	**339**	*e*Pn		**Pn**	**19 30 56.1**	**-2.1**
VIRC	**Vir**	**9.54**	**330**	*e*Pn		**Pn**	**19 30 59.2**	**+0.7**
MLR	**Muntele Rosu**	**9.79**	**18**	||P		Pn	19 31 07.9	+5.9
MLR	**Muntele Rosu**	**9.79**	**18**	P		**Pn**	**19 31 04.6**	**+2.6**
	comp=N,3.3nm,0.9s,baz=167,slow=18,SNR=3.3							
MLR	**Muntele Rosu**	**9.79**	**18**	||P		Pn	19 31 07.9	+5.9
BR131	**Keskin Array S**	**10.03**	**66**	↑*e*P		**Pn**	**19 31 07.4**	**+2.1**
BRTR	**Keskin Array B**	**10.03**	**66**	P		**Pn**	**19 31 06.9**	**+1.6**
	comp=N,1.3nm,0.8s,baz=252,slow=14,SNR=8.1							
BRTR				LR		LR	19 35 37.4	
	comp=N,127nm,19.1s,baz=272,slow=42							
MORH	**Mrgy, Hungar**	**10.25**	**348**	||P		**Pn**	**19 31 06.0**	**-2.2**
PLOR	**Plostina**	**10.31**	**20**	||P		Pn	19 31 15.5	+6.5
PLOR	**Plostina**	**10.31**	**20**	||P		Pn	19 31 15.5	+6.5
CEY	**Cerknica**	**10.99**	**332**	*e*Pn		**Pn**	**19 31 16.9**	**-1.4**
SOKA	**Soboth**	**11.59**	**336**	*e*Pn		**Pn**	**19 31 25.7**	**-0.9**
	comp=N,1.6nm,0.5s							
OBKA	**Obir**	**11.60**	**335**	*e*Pn		**Pn**	**19 31 28.0**	**+1.2**
OBKA	**Obir**	**11.60**	**335**	*e*Pn		**Pn**	**19 31 28.2**	**+1.4**
	comp=N,1.2nm,0.3s							
OBKA				*e*Sn		Sn	19 33 27.2	-7.8
	comp=N,5.5nm,0.6s							
VYHS	**Vyhne**	**12.45**	**351**	*e*P		**Pn**	**19 31 38.6**	**+0.4**
VYHS				*e*			19 33 51.1	
VYHS	**Vyhne**	**12.45**	**351**	*e*PN		**Pn**	**19 31 38.6**	**+0.4**
VYHS	**Vyhne**	**12.45**	**351**	*e*SN		**Sn**	**19 33 51.1**	**-4.4**
ABTA	**Abfaltersbach**	**12.57**	**330**	*e*Sn		Sn	19 33 50.5	-8.2
	comp=N,9.0nm,1.0s							
MOA	**Molln**	**12.87**	**337**	*e*Pn		**Pn**	**19 31 44.6**	**+0.7**
	comp=N,1.3nm,0.5s							
MOA				*e*Sn		Sn	19 33 57.5	-8.3
	comp=N,4.0nm,1.1s							
VRAC	**Vranov**	**13.61**	**346**	LR		LR	19 38 34.2	
	comp=N,74nm,18.1s,baz=164,slow=43							
DAVOX	**Davos/Dischmat**	**13.77**	**324**	S		Sn	19 34 19.4	-8.7
	comp=N,1.1nm,0.6s,baz=197,slow=15,SNR=2.2							
GERES	**GERESS Array B**	**13.92**	**337**	P		**Pn**	**19 31 57.2**	**-1.2**
	comp=N,0.1nm,0.3s,baz=148,slow=14,SNR=3.5							
GERES				S		Sn	19 34 23.9	-7.7
	comp=N,0.5nm,0.5s,baz=163,slow=20,SNR=3.6							
	comp=N,0.4nm,0.5s							
KHC	**Kasperske Hory**	**14.21**	**338**	*e*P		**P**	**19 32 10.3**	**+1.1**
KHC	**Kasperske Hory**	**14.21**	**338**	*e*P		**P**	**19 32 10.3**	**+1.1**
KHC				*ex*		x	19 32 26.5	
KRLC	**Kraliky**	**14.30**	**347**	*e*P		**P**	**19 32 12.0**	**+1.8**
KRLC	**Kraliky**	**14.30**	**347**	*e*P		**P**	**19 32 12.0**	**+1.8**
DPC	**Dobruska-Polom**	**14.65**	**346**	*e*P		**P**	**19 32 16.7**	**+2.6**
DPC	**Dobruska-Polom**	**14.65**	**346**	*e*P		**P**	**19 32 16.7**	**+2.6**
ANN	**Anapa**	**14.68**	**49**	*e*P		**Pn**	**19 32 05.5**	**-3.1**
ANN				*e*S		**Sn**	**19 34 49.3**	**-0.6**
ANN				pmax		pmax		
	comp=Z,45nm,0.9s							
OSTC	**Ostas**	**14.87**	**346**	*e*P		**P**	**19 32 18.1**	**+1.6**
AKASG	**Malin Array Be**	**15.45**	**18**	P		**P**	**19 32 21.6**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=220,slow=12,SNR=4.6							
AKASG				LR		LR	19 38 35.5	
	comp=Z,39nm,19.0s,baz=180,slow=38							
KIV	**Kislovodsk**	**17.76**	**58**	*e*P		**P**	**19 32 49.3**	**+0.7**
KIV				pmax		pmax		
	comp=Z,12nm,1.0s							
KIV				MLR		MLR		
	comp=Z,18nm,14.0s							
KBZ	**Khabaz**	**17.84**	**59**	P		**Pn**	**19 32 48.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=265,slow=5.1,SNR=6.3							
KBZ				LR		LR	19 41 08.7	
	comp=Z,33nm,21.1s,baz=292,slow=42							
	comp=Z,4.2nm,0.9s							
NCK	**Nalchik**	**18.26**	**60**	||*e*P		**Pn**	**19 32 54.6**	**+0.5**
NCK				pmax		pmax		
	comp=Z,5.0nm,0.4s							
GNI	**Garni**	**18.49**	**71**	LR		LR	19 41 31.6	
	comp=Z,57nm,19.1s,baz=280,slow=42							
NACGM	**Narooch**	**19.00**	**9**	*e*P		**P**	**19 33 00.8**	**-1.2**
	baz=193							
VSR	**Storozhevoye**	**19.50**	**34**	*e*P		**P**	**19 33 05.7**	**-1.8**
VSR				pmax		pmax		
	comp=Z,5.0nm,0.6s							
LPSR	**Galich'ya Gora**	**20.38**	**31**	*e*P		**P**	**19 33 15.5**	**-1.6**
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.6s							
VRH	**Novokhopyorsk**	**20.71**	**37**	*e*P		**P**	**19 33 19.1**	**-1.5**
VRH				pmax		pmax		
	comp=Z,40nm,1.8s							
OBN	**Obninsk**	**21.46**	**24**	*e*P		**P**	**19 33 29.4**	**+0.7**
OBN				*e*			19 33 50.4	
OBN				*e*PPP		PPP	19 33 57.5	
OBN				*e*			19 37 28.0	
	comp=Z,9.0nm,0.9s			pmax		pmax		
OBN				MLR		MLR		
	comp=Z,36nm,20.0s							
VSU	**Vasula**	**22.49**	**7**	||*e*P		**P**	**19 33 39.1**	**-0.6**
BELG	**Belogornoye**	**24.39**	**40**	P		**P**	**19 33 57.0**	**-1.3**
	comp=Z,18nm,0.9s,baz=319,slow=23,SNR=5.1							
BELG				LR		LR	19 45 06.0	
	comp=Z,30nm,18.0s,baz=161,slow=40							
	comp=Z,18nm,0.9s							
BELG	**Belogornoye**	**24.39**	**40**	*de*P		**P**	**19 33 57.1**	**-1.3**
BELG				pmax		pmax		
	comp=Z,4.0nm,1.0s							
HFS	**Hagfors**	**24.48**	**350**	P		**P**	**19 33 58.6**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=154,slow=11,SNR=11							
HFS				LR		LR	19 45 31.7	
	comp=Z,27nm,19.3s,baz=154,slow=41							
	comp=Z,1.3nm,0.6s							
FINES	**FINESS Array B**	**25.39**	**5**	P		**P**	**19 34 06.7**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=146,slow=14,SNR=5.7							
FINES				LR		LR	19 45 15.4	
	comp=Z,52nm,18.0s,baz=234,slow=39							
	comp=Z,3.0nm,0.9s							
EKA	**Eskdalemuir Ar**	**25.59**	**326**	P		**P**	**19 34 10.2**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=131,slow=8.9,SNR=4.1							
	comp=Z,1.5nm,0.9s							
NB2	**NORSAR Subarra**	**25.72**	**348**	P		**P**	**19 34 10.0**	**-0.4**
	comp=Z,3.4nm,1.0s,baz=156,slow=9.3							
NOA	**NORSAR Array B**	**25.72**	**348**	P		**P**	**19 34 09.7**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=160,slow=10,SNR=4.7							
NOA				LR		LR	19 46 44.3	
	comp=Z,20nm,19.9s,baz=165,slow=42							
	comp=Z,0.9nm,0.9s							
NOA	**NORSAR Array B**	**25.72**	**348**	*e*P		**P**	**19 34 10.7**	**+0.3**
NOA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
KLMR	**Klimovskoe**	**27.13**	**19**	*e*P		**P**	**19 34 23.8**	**+0.8**
KLMR				pmax		pmax		
	comp=Z,9.0nm,1.3s							
KLMR	**Klimovskoe**	**27.13**	**19**	*e*P		**P**	**19 34 23.8**	**+0.8**
KLMR				AMP			19 34 29.5	
	comp=Z,9.0nm,1.3s							
TORD	**Torodi Ar. Bea**	**29.20**	**223**	P		**P**	**19 34 43.2**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=33,slow=8.1,SNR=2.6							
	comp=Z,0.7nm,0.8s							
AKTO	**Aktyubinsk**	**29.64**	**50**	LR		LR	19 49 28.9	
	comp=Z,24nm,18.1s,baz=253,slow=42							
ARU	**Arti**	**31.92**	**39**	LR		LR	19 48 23.3	
	comp=Z,19nm,21.6s,baz=220,slow=37							
ARU	**Arti**	**31.92**	**39**	*d i*P		**P**	**19 35 04.2**	**-1.3**
ARU							19 36 06.8	
ARU							19 37 52.9	
ARU				S		**S**	**19 40 17.9**	**+4.0**
ARU				SS		**SnSn**	**19 42 04.6**	**+0.5**
ARU				pmax		pmax		
	comp=Z,7.0nm,1.4s							
ARCES	**ARCESS Array B**	**33.43**	**2**	P		**P**	**19 35 18.7**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=180,slow=8.1,SNR=9.6							
ARCES				LR		LR	19 50 05.5	
	comp=Z,41nm,19.3s,baz=43,slow=38							
	comp=Z,0.9nm,0.5s							
MBAR	**Mbarara**	**37.58**	**165**	LR		LR	19 54 46.8	
	comp=Z,55nm,18.2s,baz=352,slow=42							
BRVK	**Borovoye**	**37.61**	**48**	*ce*P		**P**	**19 35 53.9**	**-0.7**
BRVK				pmax		pmax		
	comp=Z,3.0nm,1.4s							
AAK	**Ala-Archa**	**40.70**	**64**	||*e*P		**P**	**19 36 20.8**	**0.0**
AAK				pmax		pmax		
	comp=Z,2.0nm,1.1s							
MK31	**Makanchi Array**	**45.52**	**57**	↑*e*P		**P**	**19 36 57.7**	**-1.9**
MKAR	**Makanchi Array**	**45.52**	**57**	P		**P**	**19 36 58.1**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=271,slow=7.6,SNR=13							
	comp=Z,0.5nm,0.3s							
MKAR	**Makanchi Array**	**45.52**	**57**	*e*P		**P**	**19 36 57.9**	**-1.7**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**46.30**	**47**	P		**P**	**19 37 03.3**	**-2.2**
	comp=Z,1.4nm,0.6s,baz=266,slow=8.7,SNR=6.4							
	comp=Z,1.4nm,0.6s							
ZALV	**Zalesovo Beam**	**46.30**	**47**	*e*P		**P**	**19 37 03.6**	**-1.9**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.6s							
NRIK	**Noril'sk**	**48.12**	**26**	LR		LR	19 59 21.1	
	comp=Z,31nm,20.0s,baz=180,slow=38							
NRIK	**Noril'sk**	**48.12**	**26**	↑*e*P		**P**	**19 37 19.6**	**+0.1**
NRIK				pmax		pmax		
	comp=Z,8.0nm,2.0s							
SFJD	**Kangerlussuaq**	**50.41**	**331**	LR		LR	20 01 23.1	
	comp=Z,24nm,18.4s,baz=109,slow=39							
SUR	**Sutherland**	**68.25**	**181**	LR		LR	20 14 10.1	
	comp=Z,38nm,20.2s,baz=178,slow=40							
CMAR	**Chiang Mai Arr**	**69.20**	**82**	P		**P**	**19 39 45.9**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=317,slow=8.2,SNR=4.1							
	comp=Z,0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**69.20**	**82**	*e*P		**P**	**19 39 46.0**	**-1.0**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
ANMO	**Albuquerque**	**94.31**	**320**	LR		LR	20 28 39.7	
	comp=Z,16nm,18.0s,baz=221,slow=38							

IDC 21 19:29:38.3±4.5, 55°.03S×31°.23W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=152.9km s-min=54.9km az=178.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LPAZ	**La Paz**	**47.93**	**309**	P		P	19 38 18.9	-0.1
	0.8nm,0.5s,baz=135,slow=8.6,SNR=5.5							
	0.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**73.38**	**34**	P		P	19 41 12.0	0.0
	0.3nm,0.7s,baz=197,slow=8.2,SNR=1.4							
	0.3nm,0.7s							
ILAR	**Eielson Array**	**147.73**	**314**	PKPbc		PKPbc	19 49 22.7	-0.7
	0.5nm,0.8s,baz=123,slow=2.0,SNR=4.8							

KRSC 21 19:41:59.2±2.1, 49°.69N×159°.09E, h46km±50km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**2.15**	**299**	P		Pn	19 42 33.5	+0.9
SKR				S		Sn	19 42 59.1	+1.0
KDTR	**Khodutka, Kamc**	**2.22**	**343**	P		Pn	19 42 35.9	+2.4
KDTR				S		Sn	19 43 02.6	+3.0
PAU	**Pauzhetka**	**2.30**	**322**	S		Sn	19 43 05.8	+4.2
RUS	**Russkaya**	**2.77**	**353**	P		Pn	19 42 43.8	+2.8
RUS				S		Sn	19 43 16.0	+2.8
MTVR	**Mutnovka**	**2.85**	**349**	P		Pn	19 42 45.8	+3.4
MTVR			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.14**	**288**	Pn	**Pn**	**19 48 00.0**	**-0.3**
ORCD	**Orcadas**	**8.88**	**227**	Pn	**Pn**	**19 49 19.2**	**+0.1**
VNA3	**Neumayer Olymp**	**18.48**	**158**	P	Pn	19 51 40.4	+14
SNAA	**Sanae**	**20.37**	**154**	P	Pn	19 51 52.9	+3.5
SNAA	**Sanae**	**20.37**	**154**	P	**P**	**19 51 48.3**	**+1.0**
SNAA	comp=Z,4.2nm,1.1s			IAmb	IAmb	19 51 59.9	
SMAI	**San Martin Ant**	**20.79**	**218**	P	**P**	**19 51 50.9**	**-0.9**
CPUP	**Villa Florida**	**34.62**	**316**	LR	LR	20 05 48.2	
QSPA	comp=Z,34nm,20.0s,baz=210,slow=32 **South Pole Qui**	**34.89**	**180**	P	**P**	**19 54 01.6**	**-0.6**
QSPA	comp=Z,8.0nm,1.4s			IAmb	IAmb	19 54 15.1	
MAW	**Mawson**	**42.09**	**145**	LR	LR	20 10 32.4	
LPAZ	comp=Z,58nm,18.2s,baz=233,slow=33 **La Paz**	**48.07**	**309**	P	**P**	**19 55 51.8**	**+0.6**
LPAZ	comp=Z,1.3nm,0.5s,baz=174,slow=7.8,SNR=5.5 **La Paz**	**48.07**	**309**	P	**P**	**19 55 50.7**	**-0.4**
LPAZ	comp=Z,1.3nm,0.5s			IAmb	IAmb	19 55 53.8	
H10N1	comp=Z,1.9nm,0.6s **ASCENSION HYDR**	**49.27**	**22**	T	T	20 48 53.0	
H10N3	baz=192,SNR=4.4 **ASCENSION HYDR**	**49.27**	**22**	T	T	20 48 53.9	
H10N2	baz=192,slow=74,SNR=5.5 **ASCENSION HYDR**	**49.28**	**22**	T	T	20 48 54.4	
LBTB	baz=192,slow=74,SNR=7.7 **Lobatse**	**51.14**	**78**	P	**P**	**19 56 12.3**	**-1.6**
LSZ	**Lusaka**	**60.40**	**73**	LR	LR	20 20 00.9	
TORD	comp=Z,29nm,18.6s,baz=170,slow=33 **Torodi Ar. Bea**	**73.72**	**34**	P	**P**	**19 58 45.4**	**+0.6**
TORD	comp=Z,0.8nm,0.8s,baz=196,slow=5.8,SNR=4.1 **Torodi Ar. Bea**	**73.72**	**34**	P	**P**	**19 58 44.8**	**0.0**
TORD	comp=Z,0.8nm,0.8s			IAmb	IAmb	19 59 13.7	
MBAR	comp=Z,2.8nm,1.4s **Mbarara**	**74.01**	**67**	LR	LR	20 28 03.4	
STKA	comp=Z,45nm,18.3s,baz=234,slow=33 **Stephens Creek**	**92.90**	**174**	LR	LR	20 41 45.3	
ZALV	comp=Z,34nm,18.0s,baz=209,slow=35 **Zalesovo Beam**	**144.22**	**65**	PKP	PKPbc	20 06 46.7	+2.7
ILAR	comp=Z,0.5nm,0.5s,baz=266,slow=5.9,SNR=3.8 **Eielson Array**	**147.90**	**313**	PKPbc	**PKPbc**	**20 06 55.8**	**+1.1**
SONM	comp=Z,0.7nm,0.8s,baz=126,slow=3.0,SNR=5.3 **Songino Array**	**153.07**	**88**	PKPbc	**PKPbc**	**20 07 09.6**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=219,slow=4.5,SNR=3.9						

IDC 21 19:59:29.5±1.0, 55°.17S×32°.46W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=33.0km s-min=29.6km az=69.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**35.09**	**180**	P	P	20 06 24.0	0.0
LPAZ	1.0nm,0.7s,baz=135,slow=5.7,SNR=8.4 **La Paz**	**47.48**	**311**	P	P	20 08 06.9	+0.1
BOSA	1.0nm,0.8s,baz=135,slow=7.1,SNR=3.9 **Boshof**	**48.73**	**81**	P	P	20 08 16.1	+0.4
TORD	4.2nm,1.0s,baz=218,slow=6.9,SNR=6.7 **Torodi Ar. Bea**	**73.89**	**35**	P	P	20 11 05.9	-0.2
ZALV	4.2nm,1.0s **Zalesovo Beam**	**144.69**	**65**	PKP	PKPab	20 19 05.3	-0.4
ILAR	1.3nm,0.7s,baz=201,slow=6.8,SNR=9.4 **Eielson Array**	**147.32**	**314**	PKPbc	PKPbc	20 19 12.8	-0.7
	1.3nm,0.7s 1.0nm,0.4s,baz=236,slow=4.6,SNR=5.0 1.0nm,0.7s,baz=122,slow=1.9,SNR=9.4						

*IDC **21** 20:03:21.1±0.7, 13°.93N×120°.60E, h129km±13km, mb3.4/7, mbtmp3.8/7, Error ellipse: s-maj=49.1km s-min=16.4km az=50.0*

ISC 21 20:03:20.7±0.8, 14°.08N±0°.04×120°.44E±0°.07, h132km±6km, n21, σ1s06/34, mb3.8/8, 8C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACP	**Maragondon, Ca**	**0.33**	**56**	*e*P	**Pn**	**20 03 38.9**	**-0.2**
MACP				*e*S	**Sn**	**20 03 52.1**	**-1.0**
LUBP	**Lubang**	**0.39**	**209**	*i*P	**Pn**	**20 03 39.9**	**+0.5**
LUBP				*i*S	**Sn**	**20 03 53.0**	**-0.7**
TGY	**Tagaytay City**	**0.48**	**87**	P	**Pn**	**20 03 40.7**	**+0.8**
TGY	baz=90,slow=5.7			S	**Sn**	**20 03 54.8**	**+0.3**
TGY	baz=90,slow=20 **Tagaytay City**	**0.48**	**87**	*e*P	**Pn**	**20 03 40.1**	**+0.2**
TGY				*e*S	**Sn**	**20 03 54.6**	**+0.1**
PGP	**Puerto Galera**	**0.76**	**139**	*e*P	**Pn**	**20 03 41.2**	**-0.6**
PGP				*i*S	**Sn**	**20 03 56.6**	**-1.2**
LQP	**Lukban**	**1.07**	**88**	*i*P	**Pn**	**20 03 45.2**	**+0.6**
LQP				*i*S	**Sn**	**20 04 04.0**	**+1.2**
BOAC	**Boac**	**1.50**	**114**	*e*P	**Pn**	**20 03 49.5**	**+0.6**
BOAC				*e*S	**Sn**	**20 04 10.5**	**+0.2**
PCPH	**Palayan**	**1.60**	**23**	*e*P	**Pn**	**20 03 49.7**	**-0.4**
PCPH				*e*S	**Sn**	**20 04 11.3**	**-1.3**
BALP	**Baler**	**1.98**	**33**	*e*P	**Pn**	**20 03 55.0**	**+0.5**
BALP				*e*S	**Sn**	**20 04 19.6**	**-0.9**
SMPP	**San Manuel, Pa**	**2.07**	**6**	*e*P	**Pn**	**20 03 55.5**	**-0.1**
SMPP				*e*S	**Sn**	**20 04 21.7**	**-0.8**
BUSP	**Coron**	**2.08**	**187**	*e*P	**Pn**	**20 03 55.7**	**0.0**
BUSP				*e*S	**Sn**	**20 04 21.6**	**-0.9**
BOLP	**Bolinao**	**2.34**	**348**	*e*P	**Pn**	**20 03 59.2**	**+0.2**
BOLP				*e*S	**Sn**	**20 04 26.8**	**-1.7**
SAMP	**Sagada Mountai**	**3.02**	**8**	*e*P	**Pn**	**20 04 07.2**	**-0.4**
SAMP				*e*S	**Sn**	**20 04 43.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**21.09**	**285**	P	**P**	**20 07 57.9**	**+3.2**
	1.5nm,0.8s,baz=96,slow=7.0,SNR=14 1.5nm,0.8s						
BATI	**Baumata**	**24.34**	**172**	P	**P**	**20 08 25.9**	**-0.5**
	23nm,0.5s,baz=270,slow=4.0,SNR=15						
FITZ	**Fitzroy Crossi**	**32.38**	**171**	P	**P**	**20 09 36.7**	**-1.2**
	1.1nm,0.9s,baz=358,slow=10,SNR=5.6 1.1nm,0.9s						
WRA	**Warramunga Arr**	**36.47**	**158**	P	**P**	**20 10 11.2**	**-2.0**
	1.4nm,0.7s,baz=332,slow=9.9,SNR=36 1.4nm,0.7s						
ASAR	**Alice Springs**	**39.76**	**161**	P	**P**	**20 10 39.9**	**-0.8**
	2.3nm,0.6s,baz=337,slow=6.8,SNR=63 2.3nm,0.6s						
CTA	**Charters Tower**	**42.40**	**143**	P	**P**	**20 11 02.3**	**0.0**
	2.1nm,0.5s,baz=348,slow=9.3,SNR=2.1 2.1nm,0.5s						
MKAR	**Makanchi Array**	**45.58**	**324**	P	**P**	**20 11 29.1**	**+1.7**
	0.1nm,0.3s,baz=119,slow=8.0,SNR=4.1 0.1nm,0.3s						
STKA	**Stephens Creek**	**49.99**	**156**	P	**P**	**20 12 01.0**	**-0.6**
	0.5nm,0.3s,baz=316,slow=16,SNR=2.8 0.5nm,0.3s						

*IDC **21** 20:05:49.6±7.4, 20°.04S×177°.60W, h409km±78km, mb3.1/8, mbtmp4.0/9, Error ellipse: s-maj=31.6km s-min=28.8km az=106.0*

ISC 21 20:05:48.8±1.2, 20°.0S±0°.2×177°.6W±0°.2, h400km, n9, σ0s78/9, mb3.4/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.08**	**259**	P	**P**	**20 09 03.0**	**+0.7**
CTA	13nm,0.7s,baz=84,slow=18,SNR=11 **Charters Tower**	**33.96**	**264**	P	**P**	**20 11 56.5**	**-0.3**
STKA	1.9nm,0.6s,baz=104,slow=12,SNR=1.5 1.9nm,0.6s **Stephens Creek**	**38.37**	**244**	P	**P**	**20 12 33.1**	**-0.5**
ASAR	1.0nm,0.4s,baz=89,slow=11,SNR=6.0 1.0nm,0.4s **Alice Springs**	**45.04**	**256**	P	**P**	**20 13 26.6**	**-0.5**
	2.4nm,0.6s,baz=99,slow=8.2,SNR=72 2.4nm,0.6s						
WRA	**Warramunga Arr**	**45.08**	**261**	P	**P**	**20 13 26.1**	**-1.3**
	0.3nm,0.4s,baz=97,slow=7.6,SNR=15 0.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**53.51**	**262**	P	**P**	**20 14 31.2**	**+0.9**
	0.8nm,0.6s,baz=68,slow=5.4,SNR=6.4 0.8nm,0.6s						
VNDA	**Vanda**	**58.42**	**185**	P	**P**	**20 15 03.8**	**+0.1**
	0.5nm,0.5s,baz=1.3,slow=7.1,SNR=3.9 0.5nm,0.5s						
MJAR	**Matsushiro Arr**	**70.08**	**323**	P	**P**	**20 16 19.1**	**+0.1**
	0.8nm,0.5s,baz=161,slow=5.9,SNR=5.0 0.8nm,0.5s						
NVAR	**Mina Array Bea**	**80.39**	**43**	P	**P**	**20 17 17.3**	**-0.1**
	0.4nm,0.6s,baz=222,slow=8.6,SNR=4.7 0.4nm,0.6s						

*NEIC **21** 20:07:19.9±1.2, 18°.74N±0°.10×145°.6E±0°.2, h203km±10km, mb4.2/15, Error ellipse: s-maj=27.6km s-min=13.6km az=79.0*
*IDC **21** 20:07:20.5±2.6, 18°.87N×145°.75E, h228km±25km, mb3.5/10, mbtmp4.1/12, Error ellipse: s-maj=30.0km s-min=11.2km az=83.0*

ISC 21 20:07:19.3±0.7, 18°.81N±0°.07×145°.7E±0°.2, h214km, n29, σ1s05/30, mb4.0/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.25**	**189**	P	**Pn**	**20 08 38.9**	**+1.7**
GUMO	39nm,0.3s,baz=152,slow=8.2,SNR=12			S	**S**	**20 09 35.4**	**-3.2**
GUMO	29nm,0.3s,baz=342,slow=19,SNR=1.6 **Guam**	**5.25**	**189**	Pn	**Pn**	**20 08 38.8**	**+1.6**
MJAR	**Matsushiro Arr**	**18.85**	**341**	P	**P**	**20 11 23.7**	**+0.4**
JMM	1.0nm,0.5s,baz=168,slow=13,SNR=6.3 **Marumori**	**19.46**	**348**	P	**Pn**	**20 11 33.5**	**-0.2**
JSD	**Sado**	**20.22**	**343**	P	**P**	**20 11 39.6**	**+1.6**
JSD	comp=Z,4.6nm,0.4s			IAmb	IAmb	20 11 42.9	
YULB	**Yu-li**	**23.18**	**286**	P	**P**	**20 12 07.9**	**+0.7**
YULB	comp=Z,6.1nm,1.1s			IAmb	IAmb	20 12 23.0	
SSLB	**Suanglung**	**23.54**	**286**	P	**P**	**20 12 09.8**	**-0.7**
SSLB	comp=Z,3.9nm,0.9s			IAmb	IAmb	20 12 14.3	
COEN	**Coen**	**32.65**	**184**	P	**P**	**20 13 31.4**	**+0.1**
COEN	comp=Z,5.4nm,1.1s			IAmb	IAmb	20 13 44.7	
MTN	**Manton Dam**	**34.56**	**206**	P	**P**	**20 13 47.4**	**-0.5**
KNRA	**Kununurra**	**38.09**	**207**	P	**P**	**20 14 17.9**	**+0.2**
WB0	**Warramunga Arr**	**39.90**	**197**	P	**P**	**20 14 33.5**	**+0.9**
WB0	comp=Z,6.6nm,0.6s			IAmb	IAmb	20 14 34.6	
WR0	**Warramunga Arr**	**40.04**	**196**	P	**P**	**20 14 34.4**	**+0.6**
WRAB	**Tennant Creek**	**40.07**	**197**	P	**P**	**20 14 34.9**	**+0.9**
WRAB	comp=Z,11nm,1.1s			IAmb	IAmb	20 14 35.5	
WB2	**Warramunga Arr**	**40.08**	**197**	P	**P**	**20 14 34.8**	**+0.7**
WB2	comp=Z,9.5nm,0.9s			IAmb	IAmb	20 14 35.6	
WRA	**Warramunga Arr**	**40.08**	**197**	P	**P**	**20 14 34.8**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=24,slow=8.8,SNR=63 comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**40.08**	**197**	P	**P**	**20 14 33.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**41.62**	**209**	P	**P**	**20 14 47.5**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=34,slow=8.6,SNR=20 comp=Z,1.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.62**	**209**	P	**P**	**20 14 47.4**	**+0.8**
FITZ	comp=Z,4.0nm,0.8s			IAmb	IAmb	20 14 48.2	
AS31	**Alice Springs**	**43.75**	**196**	P	**P**	**20 15 04.2**	**+0.5**
ASAR	**Alice Springs**	**43.75**	**196**	P	**P**	**20 15 04.2**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=9.9,slow=6.6,SNR=19 comp=Z,0.8nm,0.4s						
ASAR	**Alice Springs**	**43.75**	**196**	P	**P**	**20 15 03.9**	**+0.1**
DZM	**Mont Dzumac**	**45.43**	**152**	P	**P**	**20 15 17.6**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=225,slow=2.9,SNR=7.2 comp=Z,4.2nm,0.6s						
DZM	**Mont Dzumac**	**45.43**	**152**	P	**P**	**20 15 17.5**	**+0.4**
DZM	comp=Z,6.1nm,0.8s			IAmb	IAmb	20 15 19.0	
STKA	**Stephens Creek**	**50.55**	**184**	P	**P**	**20 15 55.6**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=358,slow=8.9,SNR=4.5 comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**57.91**	**322**	P	**P**	**20 16 48.2**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=118,slow=7.2,SNR=4.1 comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**58.37**	**314**	P	**P**	**20 16 52.7**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=88,slow=8.4,SNR=15 comp=Z,1.0nm,0.5s						
NRIK	**Noril'sk**	**61.50**	**340**	P	**P**	**20 17 12.8**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=134,slow=8.8,SNR=3.8 comp=Z,2.1nm,0.5s						
ILAR	**Eielson Array**	**63.56**	**26**	P	**P**	**20 17 26.3**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=282,slow=4.5,SNR=2.8 comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**86.77**	**335**	P	**P**	**20 19 37.2**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=71,slow=5.0,SNR=14 comp=Z,0.9nm,0.4s						

*ANF **21** 20:09:17.0±0.2, 33°.15N×115°.66W, h14km±2km, ML3.2/26, Error ellipse: s-maj=1.9km s-min=1.2km az=144.0*
*PAS **21** 20:09:17.8±2.2, 33°.16N±0°.01×115°.64W±0°.02, h6km±4km, ML3.1/103, ML3.0/51(NEIC), Error ellipse: s-maj=2.3km s-min=1.5km az=67.0*
*NEIC **21** 20:09:17.8±1.5, 33°.169N±0°.008×115°.67W±0°.02, h13km±3km, Error ellipse: s-maj=2.1km s-min=1.1km az=94.0*

ISC 21 20:09:17.2±0.7, 33°.16N±0°.01×115°.66W±0°.01, h14km, n98, σ0s78/136, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.14**	**151**		**Pg**	**20 09 21.1**	**+0.3**
WEMD					**Sb**	**20 09 24.4**	**0.0**
ERRC	**Elmore Ranch**	**0.14**	**252**		**Pb**	**20 09 25.4**	**+3.8**
FRK	**Frink**	**0.24**	**5**		**Pg**	**20 09 22.9**	**+0.5**
SWSC	**Sam W. Stewart**	**0.24**	**208**	P	**Pg**	**20 09 22.9**	**+0.4**
SWSC	baz=32,SNR=837			S	**Sg**	**20 09 25.1**	**-1.0**
SUP	baz=32 **Superstition M**	**0.25**	**213**		**Pg**	**20 09 23.0**	**+0.5**
SUP					**Sg**	**20 09 26.9**	**+0.8**
IMPE	**Imperial**	**0.27**	**162**		**Pb**	**20 09 23.8**	**-0.1**
IMPE					**Sb**	**20 09 28.9**	**+0.5**
SALN	**Salton City**	**0.30**	**294**		**Sb**	**20 09 29.7**	**+0.7**
COK2	**Cook Ranch 2**	**0.32**	**190**		**Pb**	**20 09 24.6**	**+0.1**
COK2					**Sb**	**20 09 30.1**	**+0.6**
SNR	**Schaffner Ranc**	**0.35**	**148**		**Pg**	**20 09 24.9**	**+0.6**
CRR	**Carrizo Plain**	**0.38**	**223**		**Pb**	**20 09 25.4**	**-0.2**
CRR					**Sb**	**20 09 31.5**	**+0.2**
DREC	**Desert Rsrch C**	**0.40**	**153**		**Pb**	**20 09 26.1**	**+0.1**
DREC					**Sb**	**20 09 33.1**	**+1.2**
WESC	**Westside Schoo**	**0.41**	**188**		**Pb**	**20 09 26.1**	**0.0**
WESC					**Sg**	**20 09 31.7**	**+0.9**
SLH	**Sleepy Hollow**	**0.50**	**274**		**Pb**	**20 09 27.9**	**+0.2**
SGL	**Mount Signal**	**0.51**	**186**		**Pg**	**20 09 27.5**	**+0.2**
SGL					**Sg**	**20 09 34.8**	**+0.7**
BC3	**Big Chuckawall**	**0.52**	**19**		**Pg**	**20 09 28.0**	**+0.4**
BC3					**Sb**	**20 09 35.5**	**-0.2**
BC3	**Big Chuckawall** baz=197,SNR=552	**0.52**	**19**	P	**Pg**	**20 09 27.9**	**+0.4**
BC3	baz=197			S	**Sb**	**20 09 35.3**	**-0.4**
COA	**Coachella**	**0.54**	**123**		**Pg**	**20 09 28.0**	**+0.2**
COA					**Sb**	**20 09 36.5**	**+0.4**
CTW	**Cottonwood Mou**	**0.54**	**341**		**Pb**	**20 09 28.5**	**0.0**
CTW					**Sb**	**20 09 36.6**	**+0.4**
HAY	**Hayfield**	**0.55**	**358**		**Pb**	**20 09 28.6**	**+0.1**
HAY					**Sb**	**20 09 37.0**	**+0.7**
YUH	**Yuha Desert**	**0.56**	**203**	Pg	**Pg**	**20 09 28.2**	**+0.1**
YUH	**Yuha Desert**	**0.56**	**203**		**Sg**	**20 09 35.9**	**+0.3**
YUH	**Yuha Desert** comp=E,432nm,0.3s	**0.56**	**203**	IAML		20 09 37.0	
YUH	comp=N,492nm,0.8s			IAML		20 09 42.7	
UABX	**UABC, Campus M**	**0.56**	**160**	Pg	**Pb**	**20 09 28.8**	**0.0**
UABX				Sg	**Sb**	**20 09 37.4**	**+0.8**
CTCC	**Cactus City**	**0.56**	**331**		**Pb**	**20 09 28.9**	**0.0**
CTCC					**Sb**	**20 09 37.8**	**+1.0**
RUN	**Ruthven**	**0.61**	**108**		**Pg**	**20 09 28.9**	**-0.2**
RUN					**Sg**	**20 09 37.1**	**0.0**
IKP	**In-Ko-Pah, Jac**	**0.63**	**217**		**Pb**	**20 09 30.1**	**+0.1**
IKP					**Sb**	**20 09 38.6**	**-0.2**
IKP	**In-Ko-Pah, Jac** baz=38,SNR=104	**0.63**	**217**	P	**Pg**	**20 09 29.9**	**+0.3**
IKP	baz=38			S	**Sg**	**20 09 38.5**	**+0.5**
BORC	**Borrego Spring**	**0.64**	**280**		**Pb**	**20 09 30.2**	**0.0**
BORC					**Sb**	**20 09 39.3**	**+0.3**
RMX	**La Rumorosa**	**0.66**	**212**		**Pb**	**20 09 30.7**	**+0.1**
RMX					**Sb**	**20 09 39.7**	**+0.1**
RMX	**La Rumorosa** comp=E,797nm,0.5s	**0.66**	**212**	IAML		20 09 40.6	
RMX	comp=N,659nm,0.6s			IAML		20 09 40.9	
MONP2	**Monument Peak**	**0.69**	**247**		**Pb**	**20 09 31.2**	**0.0**
MONP2					**Sb**	**20 09 40.6**	**0.0**
MONP2	**Monument Peak** baz=68,SNR=105	**0.69**	**247**	P	**Pb**	**20 09 31.1**	**0.0**
MONP2	baz=68			S	**Sg**	**20 09 40.2**	**+0.2**
EMSC	**East Mesa**	**0.71**	**126**		**Pg**	**20 09 30.7**	**-0.3**
GLA	**Glamis**	**0.71**	**99**		**Pg**	**20 09 30.4**	**-0.6**
GLA	**Glamis**	**0.71**	**99**		**Sg**	**20 09 40.1**	**-0.3**
GLA	**Glamis** comp=E,1µm,0.6s	**0.71**	**99**	IAML		20 09 42.6	
GLA	comp=N,910nm,0.7s			IAML		20 09 48.2	
GLA	**Glamis** baz=279,SNR=109	**0.71**	**99**	P	**Pg**	**20 09 30.6**	**-0.4**
GLA	baz=279			S	**Sg**	**20 09 40.5**	**+0.1**
PMD	**Palm Desert**	**0.77**	**309**		**Pg**	**20 09 32.0**	**-0.1**
PMD	comp=N,709nm,0.6s			IAML		20 09 43.7	
PMD	comp=E,497nm,0.5s			IAML		20 09 43.7	
PMD	**Palm Desert**	**0.77**	**309**		**Sn**	**20 09 42.6**	**-2.4**
JUEM	**Julian Eagle M**	**0.79**	**264**		**Pb**	**20 09 32.9**	**+0.1**
JUEM					**Sb**	**20 09 44.2**	**+0.9**
CPBX	**Cerro Prieto**	**0.80**	**158**		**Pg**	**20 09 31.9**	**-0.8**
XPFO	**Pion Flat**	**0.80**	**304**		**Pg**	**20 09 32.9**	**+0.1**
XPFO					**Sb**	**20 09 43.8**	**+0.1**
PFO	**Pinyon Flats O**	**0.80**	**304**		**Pg**	**20 09 32.6**	**-0.2**
PFO	comp=E,579nm,0.8s			IAML		20 09 44.9	
PFO	**Pinyon Flats O**	**0.80**	**304**		**Pg**	**20 09 33.0**	**+0.1**
PFO					**Sn**	**20 09 44.1**	**-1.9**
PFO	**Pinyon Flats O** baz=123,SNR=164	**0.80**	**304**	P	**Pg**	**20 09 32.9**	**+0.1**
PFO	baz=123			S	**Sb**	**20 09 44.3**	**+0.4**
MATG	**Mataguay Scout**	**0.83**	**273**		**Pg**	**20 09 33.2**	**0.0**
MATG					**Sn**	**20 09 44.8**	**-1.8**
FRD	**Ford Ranch, An**	**0.85**	**293**		**Pg**	**20 09 33.9**	**+0.1**
FRD					**Sb**	**20 09 46.3**	**+1.0**
FRD	**Ford Ranch, An**	**0.85**	**293**		**Pg**	**20 09 33.8**	**+0.1**
FRD					**Sb**	**20 09 46.3**	**+1.0**
BELC	**Belle Mtn. Jos**	**0.88**	**342**		**Pg**	**20 09 34.2**	**-0.2**
BELC					**Sb**	**20 09 46.7**	**+0.6**
BELC	**Belle Mtn. Jos** baz=160,SNR=128	**0.88**	**342**	P	**Pg**	**20 09 34.1**	**-0.2**
BELC	baz=160			S	**Sb**	**20 09 46.7**	**+0.6**
SNDA	**J Saunders Pla**	**0.89**	**296**		**Pg**	**20 09 34.5**	**+0.1**
SNDA					**Sn**	**20 09 47.9**	**-0.2**
BZNA	**Buzz No.'s Pla**	**0.90**	**292**		**Pg**	**20 09 34.6**	**-0.1**
BZNA					**Sn**	**20 09 47.8**	**-0.7**
BAR	**Barrett**	**0.98**	**241**		**Pb**	**20 09 35.4**	**-0.5**
BAR	comp=N,446nm,0.3s			IAML		20 09 50.8	
BAR	**Barrett**	**0.98**	**241**		**Pb**	**20 09 35.5**	**-0.4**
BAR	**Barrett**	**0.98**	**241**		**Sg**	**20 09 48.9**	**+0.1**
CRY	**Cary Ranch**	**0.99**	**294**		**Pg**	**20 09 35.7**	**-0.4**
CRY					**Sg**	**20 09 49.6**	**+0.5**
TKX	**Tecate**	**0.99**	**234**		**Pb**	**20 09 36.2**	**+0.1**
TKX	comp=E,399nm,0.2s			IAML		20 09 50.8	
IRM	**Iron Mountain**	**1.08**	**23**		**Pb**	**20 09 38.0**	**+0.2**
IRM	**Iron Mountain** baz=202	**1.08**	**23**	P	**Pb**	**20 09 37.9**	**+0.2**
IRM	baz=202			S	**Sn**	**20 09 53.2**	**+0.3**
BLYC	**Blythe**	**1.12**	**58**	Pg	**Pb**	**20 09 38.1**	**-0.2**
CBX	**Cerro Bola**	**1.20**	**225**		**Pn**	**20 09 39.4**	**-0.2**
CBX	comp=N,257nm,0.4s			IAML		20 09 57.1	
109C	**Camp Elliot, M**	**1.24**	**258**	Pg	**Pn**	**20 09 39.2**	**-0.9**
109C	comp=E,261nm,0.4s			IAML		20 09 58.2	
109C	comp=N,294nm,0.2s			IAML		20 09 59.0	
109C	**Camp Elliot, M** baz=77,SNR=34	**1.24**	**258**	P	**Pn**	**20 09 39.4**	**-0.7**
109C	baz=77			S	**Sn**	**20 09 56.8**	**+0.1**
GORC	**Green Oak Ranc**	**1.31**	**270**		**Pb**	**20 09 42.2**	**+0.6**
TJX	**Tijuana**	**1.34**	**241**		**Pg**	**20 09 42.7**	**-0.2**
MURC	**Murrieta** baz=108	**1.35**	**289**	P	**Pn**	**20 09 41.2**	**-0.5**
BBRC	**Big Bear Solar** baz=136	**1.52**	**317**	Sb	**Sg**	**20 10 06.0**	**-0.2**
ELS	**Elsinore Mount**	**1.55**	**289**	Pn	**Pn**	**20 09 44.0**	**-0.5**
GMRC	**Granite Mounta** baz=179	**1.62**	**0**	P	**Pn**	**20 09 44.9**	**-0.5**
GMRC	baz=179			Sb	**Sg**	**20 10 09.5**	**+0.1**
113A	**Mohawk Valley,**	**1.64**	**103**	Pn	**Pn**	**20 09 45.5**	**-0.1**
PDMCI	**Parker Dam,Lak** baz=228	**1.70**	**48**	Pg	**Pg**	**20 09 49.4**	**-0.5**
PDMCI	baz=228			Sb	**Sb**	**20 10 10.7**	**+1.1**
HEC	**Hector,Ludlow** baz=161	**1.75**	**342**	Pg	**Pg**	**20 09 51.4**	**+0.5**
HEC	baz=161			Sb	**Sg**	**20 10 13.0**	**-0.7**
NEE2	**Needles Airpor** baz=208	**1.82**	**28**	Pb	**Pb**	**20 09 50.5**	**+0.2**
NEE2	baz=208			Sb	**Sg**	**20 10 15.8**	**-0.1**
BFSC	**Mount Baldy Ra** baz=122	**1.98**	**303**	Sb	**Sg**	**20 10 20.2**	**-0.7**
RRX	**Edison Barstow** baz=146	**2.04**	**327**	Sb	**Sg**	**20 10 22.3**	**-0.4**
FMP	**Fort Macarthur** baz=138	**2.27**	**285**	Pg	**Pg**	**20 10 00.9**	**+0.2**
GSC	**Goldstone, Bar** baz=155	**2.34**	**336**	Pg	**Pg**	**20 10 02.2**	**+0.2**
Y14A	**Wickenburg**	**2.35**	**70**		**Pn**	**20 09 56.4**	**+0.9**
DECC	**Green Verdugo** baz=115	**2.48**	**297**	Sb	**Sg**	**20 10 35.8**	**-1.0**
EDW2	**Edwards Air Fo** baz=131	**2.59**	**312**	Sb	**Sg**	**20 10 38.4**	**-2.0**
V12A	**Nelson**	**2.65**	**14**	Pn	**Pn**	**20 10 02.1**	**+2.5**
V12A	comp=E,77nm,1.0s			IAML		20 10 49.0	
214A	**Organ Pipe Nat**	**2.69**	**116**		**Pn**	**20 10 00.9**	**+0.8**
214A	comp=E,63nm,0.5s			IAML		20 10 54.0	
214A	comp=N,64nm,1.0s			IAML		20 10 57.7	
214A	**Organ Pipe Nat** baz=298	**2.69**	**116**	P	**Pn**	**20 09 58.7**	**-1.4**
SHPR	**Sheep Range**	**3.36**	**7**	Pn	**Pn**	**20 10 09.8**	**+0.4**
ISA	**Isabella, Lake** baz=136	**3.41**	**318**	Pg	**Pg**	**20 10 23.5**	**+0.9**
X16A	**Lo Mia Camp, P**	**3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.99**	**272**	P	Pn	20 57 19.5	-0.1
	0.7nm,0.3s,baz=122,slow=12,SNR=12						
DZM				S	Sn	20 58 27.6	+0.7
	7.7nm,0.6s,baz=150,slow=20,SNR=3.4						
	6.3nm,0.8s						
STKA	**Stephens Creek**	**29.33**	**244**	P	P	21 01 51.4	+0.3
	1.2nm,0.7s,baz=87,slow=12,SNR=3.1						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**35.84**	**260**	P	P	21 02 47.9	-0.3
	1.1nm,0.9s,baz=85,slow=9.0,SNR=12						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**35.98**	**267**	P	P	21 02 48.7	-0.6
	0.4nm,0.5s,baz=97,slow=8.6,SNR=11						
	0.4nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**41.07**	**351**	T	T	21 47 49.5	
	baz=171,slow=76,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	**41.08**	**351**	T	T	21 47 48.2	
	baz=171,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**41.09**	**351**	T	T	21 47 49.8	
	baz=171,slow=76,SNR=6.7						
FITZ	**Fitzroy Crossi**	**44.41**	**267**	P	P	21 03 59.7	+0.5
	2.1nm,0.8s,baz=131,slow=9.3,SNR=5.7						
	2.1nm,0.8s						

IDC 21 20:58:31.6±9.9, 22°21S×171°.83E, h104km±60km, mb3.4/4, mbtmp3.7/5, Error ellipse: s-maj=111.3km s-min=72.9km az=9.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.00**	**271**	P	Pn	20 59 44.7	+0.3
	8.2nm,0.8s,baz=114,slow=20,SNR=0.9						
DZM				S	Sn	21 00 41.5	+0.4
	3.2nm,0.4s,baz=68,slow=19,SNR=1.4						
STKA	**Stephens Creek**	**28.52**	**244**	P	P	21 04 16.5	-1.0
	1.2nm,0.8s,baz=93,slow=13,SNR=3.7						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**34.90**	**260**	P	P	21 05 13.6	+0.1
	1.0nm,0.9s,baz=82,slow=8.4,SNR=5.6						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**35.00**	**267**	P	P	21 05 14.1	-0.3
	0.5nm,0.6s,baz=96,slow=8.5,SNR=8.8						
	0.5nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**40.76**	**353**	T	T	21 50 15.8	
	baz=171,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**40.76**	**353**	T	T	21 50 15.3	
	baz=171,slow=75,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**40.77**	**353**	T	T	21 50 17.3	
	baz=171,slow=75,SNR=7.4						
FITZ	**Fitzroy Crossi**	**43.43**	**267**	P	P	21 06 25.2	+0.7
	0.8nm,0.6s,baz=90,slow=9.1,SNR=1.5						
	0.8nm,0.6s						

IDC 21 21:09:30.9±59.0, 16°54S×174°24W, h564km±144km, mb3.2/3, mbtmp4.3/4, Error ellipse: s-maj=883.1km s-min=122.0km az=77.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.46**	**260**	P	P	21 11 23.9	0.0
	39nm,0.7s,baz=129,slow=9.1,SNR=17						
STKA	**Stephens Creek**	**42.77**	**241**	P	P	21 16 39.4	-0.1
	1.0nm,0.4s,baz=92,slow=13,SNR=7.0						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**48.80**	**258**	P	P	21 17 25.1	-0.4
	0.6nm,0.5s,baz=95,slow=6.8,SNR=24						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**49.00**	**253**	P	P	21 17 26.9	0.0
	4.5nm,0.4s,baz=89,slow=8.1,SNR=138						
	4.5nm,0.4s						

*RSNC **21** 21:17:56.2±1.0, 3°.86N×77°.46W, h70km±5km, ML3.6, Mw3.7, Fault plane solution: NP1:φs149.00000°, δ48.00000°, λ158.00000°.*

*IDC **21** 21:17:57.7±7.6, 3°.74N×77°.40W, h82km±46km, mb3.8/4, mbtmp4.1/5, ML2.4/1, MS2.7/2, Error ellipse: s-maj=81.1km s-min=43.0km az=102.0*

*NEIC **21** 21:17:57.4±1.7, 3°.87N±0°.06×77°.39W±0°.10, h76km±16km, mb4.4/6, Mwr3.7(RSNC), Error ellipse: s-maj=14.5km s-min=9.3km az=96.0*

ISC 21 21:17:55.8±0.8, 3°.88N±0°.02×77°.52W±0°.03, h66km±7km, n73, σ1s51/106, mb3.8/4, 5C-11D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**0.23**	**55**	⇑*iP*	**Pn**	**21 18 06.5**	**+0.4**
MALC				*eS*	**Sn**	**21 18 14.7**	**+1.1**
GR1C	**Gorgona, Isla**	**1.08**	**216**	⇓*iP*	**Pn**	**21 18 15.4**	**+0.2**
GR1C				*eS*	**Sn**	**21 18 30.2**	**+0.6**
PIZC	**Pizarro, Choco**	**1.09**	**9**	⇓*iP*	**Pn**	**21 18 16.0**	**+0.8**
PIZC				*i*		21 18 34.7	
	comp=Z,820nm,0.3s						
YOTC	**Yotoco, Valle**	**1.18**	**85**	⇑*iP*	**Pn**	**21 18 15.0**	**-1.6**
YOTC				*eS*	**Sn**	**21 18 29.0**	**-3.0**
YOTC				*i*		21 18 29.4	
	comp=Z,979nm,0.2s						
POPC	**Popayan, Colom**	**1.58**	**148**	⇓*iP*	**Pn**	**21 18 21.5**	**-0.4**
POPC				*eS*	**Sn**	**21 18 40.0**	**-1.6**
POPC				*i*		21 18 41.2	
	comp=Z,800nm,0.5s						
PLMC	**San Jos del P**	**1.60**	**51**	⇓*eP*	**Pn**	**21 18 20.9**	**-1.1**
PLMC				*eS*	**Sn**	**21 18 39.9**	**-2.0**
PLMC				*i*		21 18 45.6	
	comp=Z,946nm,0.2s						
BBAC	**Balboa, Cauca**	**1.87**	**172**	⇓*iP*	**Pn**	**21 18 25.6**	**-0.2**
BBAC				*eS*	**Sn**	**21 18 47.7**	**-0.9**
BBAC				*i*		21 18 55.0	
	comp=Z,776nm,0.3s						
ANIL	**Santa Ana**	**2.20**	**74**	*eP*	**Pn**	**21 18 30.6**	**+0.3**
ANIL				*eS*	**Sn**	**21 18 57.1**	**+0.4**
ANIL				*i*		21 19 00.0	
	comp=Z,957nm,0.3s						
SOLC	**Bahia Solano**	**2.33**	**3**	*eP*	**Pn**	**21 18 32.1**	**+0.2**
SOLC				*eS*	**Sn**	**21 18 59.3**	**-0.2**
CRUC	**La Cruz**	**2.37**	**166**	⇓*eP*	**Pn**	**21 18 33.9**	**+1.1**
TUMC	**Tumaco**	**2.37**	**211**	*eP*	**Pn**	**21 18 33.0**	**+0.6**
TUMC				*eS*	**Sn**	**21 19 00.8**	**+0.4**
TUMC				*i*		21 19 04.6	
	comp=Z,183nm,0.3s						
BETC	**Betania**	**2.40**	**120**	*eP*	**Pn**	**21 18 34.3**	**+1.5**
BETC				*eS*	**Sn**	**21 19 03.9**	**+2.8**
BETC				*i*		21 19 07.2	
	comp=Z,358nm,0.5s						
CBOC	**Ciudad Bolivar**	**2.48**	**37**	⇓*eP*	**Pn**	**21 18 33.4**	**-0.6**
CBOC				*eS*	**Sn**	**21 19 02.4**	**-0.9**
CBOC				*i*		21 19 11.6	
	comp=Z,115nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.53**	**58**	⇓*eP*	**Pn**	**21 18 35.9**	**+0.8**
GUY2C				*eS*	**Sn**	**21 19 06.2**	**+1.2**
GUY2C				*i*		21 19 07.6	
	comp=Z,225nm,0.5s						
GARC	**Garzon, Huila**	**2.63**	**130**	⇑*iP*	**Pn**	**21 18 37.4**	**+1.1**
GARC				*eS*	**Sn**	**21 19 08.8**	**+1.6**
GARC				*i*		21 19 11.2	
	comp=Z,269nm,0.3s						
PRAC	**Prado**	**2.64**	**94**	*eP*	**Pn**	**21 18 34.9**	**-1.2**
PRAC				*eS*	**Sn**	**21 19 05.3**	**-1.6**
PRAC				*i*		21 19 07.5	
	comp=Z,360nm,0.3s						
GCUF	**Volcan Galeras**	**2.64**	**176**	*eP*	**Pn**	**21 18 37.9**	**+1.3**
GCUF				*eS*	**Sn**	**21 19 07.6**	**-0.2**
GCUF				*i*		21 19 13.4	
	comp=Z,202nm,0.3s						
FLOC	**Florencia**	**2.95**	**141**	⇑*iP*	**Pn**	**21 18 41.8**	**+1.4**
FLOC				*eS*	**Sn**	**21 19 14.4**	**-0.3**
FLOC				*i*		21 19 18.5	
	comp=Z,114nm,0.4s						
HELC	**Santa Helena**	**3.03**	**41**	*eP*	**Pn**	**21 18 42.5**	**+0.7**
HELC				*eS*	**Sn**	**21 19 16.0**	**-1.2**
HELC				*i*		21 19 27.7	
	comp=Z,55nm,0.7s						
NORC	**Norcasia**	**3.13**	**58**	*eP*	**Pn**	**21 18 45.0**	**+2.2**
NORC				*eS*	**Sn**	**21 19 21.5**	**+2.4**
NORC				*i*		21 19 23.2	
	comp=Z,106nm,0.4s						
PTAC	**Punta Ardita,**	**3.26**	**355**	*eP*	**Pn**	**21 18 45.1**	**+0.6**
PTAC				*eS*	**Sn**	**21 19 19.8**	**-2.4**
PTAC				*i*		21 19 24.0	
	comp=Z,429nm,0.2s						
ROSC	**El Rosal**	**3.33**	**73**	P	**Pn**	**21 18 47.2**	**+1.3**
	comp=Z,8.6nm,0.3s,baz=153,slow=11,SNR=6.6						
	comp=Z,23nm,0.3s						
ROSC	**El Rosal**	**3.33**	**73**	Pn	**Pn**	**21 18 45.9**	**0.0**
ROSC	**El Rosal**	**3.33**	**73**	*eP*	**Pn**	**21 18 47.0**	**+1.1**
ROSC				*eS*	**Sn**	**21 19 24.7**	**+0.2**
ROSC				*i*		21 19 31.9	
	comp=Z,64nm,0.5s						
DBBC	**Dabeiba**	**3.38**	**23**	*eP*	**Pn**	**21 18 47.0**	**+0.8**
IMBA	**Imbabura, San**	**3.64**	**191**	Pn	**Pn**	**21 18 52.0**	**+1.8**
IMBA				Sn	**Sn**	**21 19 32.5**	**+0.3**
CUSE	**Cuicocha Este**	**3.66**	**194**	*eP*	**Pn**	**21 18 50.9**	**+0.5**
OTAV	**Otavalo**	**3.74**	**194**	Pn	**Pn**	**21 18 51.7**	**+0.2**
OTAV	**Otavalo**	**3.74**	**194**	⇓*eP*	**Pn**	**21 18 51.7**	**+0.2**
PAC1	**Pacto, Paraso**	**3.81**	**199**	*eP*	**Pn**	**21 18 51.3**	**-0.9**
PAC1				*i*		21 19 36.9	
	comp=Z,348nm,0.3s						
VILC	**Villavicencio,**	**3.83**	**86**	*eP*	**Pn**	**21 18 55.1**	**+2.7**
VILC				*eS*	**Sn**	**21 19 38.4**	**+2.1**
VILC				*i*		21 19 45.1	
	comp=Z,186nm,0.4s						
CHIC	**Chingaza**	**3.85**	**79**	*eP*	**Pn**	**21 18 55.2**	**+2.2**
CHIC				*eS*	**Sn**	**21 19 38.9**	**+1.6**
CHIC				*i*		21 19 46.2	
	comp=Z,71nm,0.4s						
SPBC	**San Pablo de B**	**3.86**	**63**	*eP*	**Pn**	**21 18 54.8**	**+2.0**
SPBC				*eS*	**Sn**	**21 19 36.9**	**-0.2**
PULU	**Pululahua**	**3.96**	**194**	Pn	**Pn**	**21 18 55.5**	**+1.0**
PTBC	**PUERTO BERRIO,**	**4.04**	**49**	*eP*	**Pn**	**21 18 56.5**	**+1.3**
PTBC				*eS*	**Sn**	**21 19 42.1**	**+0.9**
PTBC				*i*		21 19 49.3	
	comp=Z,34nm,0.6s						
MACC	**Macarena, Meta**	**4.05**	**115**	⇑*iP*	**Pn**	**21 18 56.0**	**+0.6**
MACC				*eS*	**Sn**	**21 19 41.8**	**+0.1**
MACC				*i*		21 20 05.3	
	comp=Z,59nm,0.6s						
MAPC	**Malpelo**	**4.08**	**272**	*eP*	**Pn**	**21 18 56.8**	**+1.1**
MAPC				*eS*	**Sn**	**21 19 41.6**	**-0.7**
MAPC				*i*		21 19 45.4	
	comp=Z,156nm,0.4s						
UREC	**San Jos de Ur**	**4.32**	**27**	*eP*	**Pn**	**21 19 01.4**	**+2.3**
ZARC	**Zaragoza, Cauc**	**4.46**	**36**	*eP*	**Pn**	**21 19 02.4**	**+1.4**
ZARC				*eS*	**Sn**	**21 19 50.6**	**-1.0**
ZARC				*i*		21 20 02.1	
	comp=Z,24nm,0.4s						
SLOR	**San Lorenzo -**	**4.68**	**192**	Pn	**Pn**	**21 19 06.8**	**+2.3**
CAPC	**Capurgana**	**4.73**	**2**	*eP*	**Pn**	**21 19 09.2**	**+4.5**
AZU	**Azuero**	**4.75**	**325**	*eP*	**Pn**	**21 19 06.3**	**+1.3**
AZU				*eS*	**Sn**	**21 19 59.2**	**+0.4**
CACAO	**El Cacao, Vera**	**4.78**	**316**	*eP*	**Pn**	**21 19 06.1**	**+0.7**
CACAO				*eS*	**Sn**	**21 19 59.6**	**+0.1**
CACAO				*i*		21 20 03.2	
	comp=Z,57nm,0.1s						
CACAO	**El Cacao, Vera**	**4.78**	**316**	*eS*	**Sn**	**21 19 58.4**	**-1.2**
CACAO	**El Cacao, Vera**	**4.78**	**316**	*eS*	**Sn**	**21 19 58.4**	**-1.2**
RUSC	**La Rusia**	**4.85**	**66**	*eP*	**Pn**	**21 19 10.1**	**+3.4**
RUSC				*eS*	**Sn**	**21 20 05.1**	**+3.2**
RUSC				*i*		21 20 09.0	
	comp=Z,16nm,0.7s						
BRRC	**Barranca, Sant**	**4.96**	**50**	*eP*	**Pn**	**21 19 08.8**	**+0.9**
CHIT3	**Chitre**	**4.97**	**325**	*eS*	**Sn**	**21 20 05.1**	**+1.0**
CHIT3	**Chitre**	**4.97**	**325**	*eS*	**Sn**	**21 20 05.1**	**+1.0**
BARC	**Barichara**	**5.09**	**58**	*eP*	**Pn**	**21 19 12.0**	**+2.1**
BARC				*i*		21 20 18.9	
	comp=Z,40nm,0.6s						
UPA	**Univ. de Panam**	**5.45**	**339**	*eS*	**Sn**	**21 20 17.1**	**+1.3**
PORT	**Chimborazo Vol**	**5.45**	**193**	Pn	**Pn**	**21 19 15.8**	**+0.7**
CHSH	**Refugio Sur-Vo**	**5.51**	**194**	Pn	**Pn**	**21 19 18.0**	**+2.2**
BCIP	**Isla Barro Col**	**5.73**	**336**	Pn	**Pn**	**21 19 20.6**	**+2.2**
BCIP	**Isla Barro Col**	**5.73**	**336**	*eP*	**Pn**	**21 19 20.7**	**+2.4**
BCIP				*eS*	**Sn**	**21 20 23.0**	**+0.2**
BCIP				*i*		21 20 33.5	
	comp=Z,24nm,0.3s						
BCIP	**Isla Barro Col**	**5.73**	**336**	⇓*iP*	**Pn**	**21 19 20.8**	**+2.4**
	baz=180						
BCIP				*eP*	**Pn**	**21 19 20.8**	**+2.4**
BCIP				*eS*	**Sn**	**21 20 25.0**	**+2.2**
BCIP	**Isla Barro Col**	**5.73**	**336**	⇓*iP*	**Pn**	**21 19 20.8**	**+2.4**
	baz=180						
BCIP				*eP*	**Pn**	**21 19 20.8**	**+2.4**
BCIP				*eS*	**Sn**	**21 20 25.0**	**+2.2**
BOSC	**San Juan Bosco**	**7.05**	**188**	Pn	**Pn**	**21 19 37.8**	**+1.2**
SOCV	**Socops**	**7.94**	**56**	*eP*	**Pn**	**21 19 49.0**	**+0.4**
BAUV	**El Baul**	**10.68**	**61**	Pn	**Pn**	**21 20 24.6**	**-1.4**
ATAH	**Atahualpa**	**10.98**	**185**	LR	LR	21 24 44.0	
	comp=Z,55nm,20.1s,baz=224,slow=38						
BIRV	**Birongo**	**12.94**	**59**	Pn	**Pn**	**21 20 56.8**	**-0.2**
MTDJ	**Mount Denham**	**14.26**	**360**	Pn	**Pn**	**21 21 15.8**	**+1.2**
BOAV	**Boa Vista**	**17.04**	**94**	P	**Pn**	**21 21 48.1**	**-1.7**
BOAV				IAmb	IAmb	21 21 53.8	
	comp=Z,7.9nm,1.1s						
SJG	**San Juan**	**18.00**	**37**	LR	LR	21 30 52.6	
	comp=Z,20nm,18.9s,baz=157,slow=43						
TOSP	**Speyside**	**18.37**	**65**		**P**	**21 22 05.2**	**-0.2**
TOSP				IAmb	IAmb	21 22 46.4	
	comp=Z,38nm,1.1s						
MCLT	**Moule a Chique**	**19.06**	**58**	P	**P**	**21 22 13.1**	**+0.2**
SAML	**Samuel**	**19.15**	**132**	P	**P**	**21 22 14.0**	**0.0**
SAML				IAmb	IAmb	21 22 15.5	
	comp=Z,6.0nm,0.5s						
MDP	**Montagnes des**	**24.83**	**86**	P	**P**	**21 23 11.0**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=275,slow=11,SNR=5.6						
	comp=Z,2.0nm,0.5s						
SIV	**San Ignacio**	**25.59**	**141**	P	**P**	**21 23 17.8**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=334,slow=10,SNR=5.8						
	comp=Z,1.0nm,0.5s						
DBIC	**Dimbokro**	**72.36**	**84**	P	**P**	**21 29 15.2**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=282,slow=8.0,SNR=8.5						
	comp=Z,3.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.64**	**77**	P	**P**	**21 29 51.1**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=284,slow=6.4,SNR=16						
	comp=Z,0.6nm,0.4s						
ASAR	**Alice Springs**	**143.85**	**234**	PKP	PKPbc	21 37 23.2	+0.9
	comp=Z,0.2nm,0.5s,baz=107,slow=3.8,SNR=6.1						

IDC 21 21:36:53.1±4.2, 55°12S×30°.87W, h0km, mb3.9/2, mbtmp3.9/2, MS3.8/7, Error ellipse: s-maj=144.6km s-min=55.0km az=178.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.46**	**155**	LR	LR	21 48 03.1	
	comp=Z,34nm,18.6s,baz=14,slow=33						
CPUP	**Villa Florida**	**34.65**	**315**	LR	LR	22 00 11.4	
	comp=Z,71nm,18.1s,baz=216,slow=40						
QSPA	**South Pole Qui**	**35.13**	**180**	LR	LR	21 57 31.7	
	comp=Z,104nm,18.4s,baz=192,slow=35						
LPAZ	**La Paz**	**48.15**	**309**	P	P	21 45 35.4	-0.2
	1.4nm,0.6s,baz=157,slow=3.6,SNR=5.5						
	1.4nm,0.6s						
RCBR	**Riachuelo**	**49.32**	**353**	LR	LR	22 04 24.3	
	comp=Z,64nm,18.1s,baz=330,slow=34						
RPN	**Rapa Nui**	**61.73**	**263**	LR	LR	22 07 09.4	
	comp=Z,389nm,21.7s,baz=3.0,slow=29						
SDV	**Santo Domingo**	**71.90**	**318**	LR	LR	22 23 25.9	
	comp=Z,140nm,18.1s,baz=166,slow=39						
TORD	**Torodi Ar. Bea**	**73.35**	**33**	P	P	21 48 26.5	0.0
	0.6nm,0.8s,baz=196,slow=5.9,SNR=2.4						
	0.6nm,0.8s						
ESDC	**Sonseca Array**	**97.19**	**21**	LR	LR	22 30 33.2	
	comp=Z,53nm,18.3s,baz=192,slow=33						
ILAR	**Eielson Array**	**147.95**	**313**	PKPbc	PKPbc	21 56 38.0	-0.7
	0.8nm,0.6s,baz=118,slow=1.1,SNR=7.7						

*ECX **21** 21:47:46.9±0.3, 27°.33N×112°.04W, h8km±15km, MD3.5, ML3.7*

*MEX **21** 21:47:46.9±0.4, 27°.15N×112°.16W, h5km, MD3.2*

ISC 21 21:47:47.0±1.2, 27°34N±0°.06×112°09W±0°.08, h13km±10km, n11, σ0s51/15, 1C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.14**	**261**	*eP*	**Pg**	**21 47 50.3**	**-0.1**
SRIG				*i* S	**Sg**	**21 47 52.9**	**0.1**
SRIG	**Santa Rosalia**	**0.14**	**261**	*eP*	**Pg**	**21 47 50.4**	**-0.1**
SRIG				*eS*	**Sg**	**21 47 53.1**	**+0.2**
SRIG				⇓*e*		21 47 55.2	
SRIG				IAML		21 47 55.2	
	comp=N,36μm,0.4s						
SRIG				⇑*e*		21 47 55.8	
SRIG				IAML		21 47 55.8	
	comp=E,40μm,0.5s						
HSIG		**1.95**	**31**	*eP*	**Pn**	**21 48 19.9**	**+0.1**
HSIG				*eS*	**Sb**	**21 48 46.5**	**-0.2**
HSIG		**1.95**	**31**	⇓*iPg*	**Pn**	**21 48 20.1**	**+0.3**
BAHB	**Baha de los**	**2.06**	**321**	*eP*	**Pn**	**21 48 20.9**	**-0.4**
BAHB				*eS*	**Sb**	**21 48 49.8**	**0.0**
BAHB	**Baha de los**	**2.06**	**321**	*eP*	**Pn**	**21 48 22.0**	**+0.7**
BAHB				*eS*	**Sg**	**21 48 52.5**	**-0.7**
BAHB				IAML		21 49 27.7	
	comp=N,176nm,2.4s						
BAHB				⇓*e*		21 49 27.7	
LAPR	**La Primavera**	**3.15**	**356**	*eP*	Pn	21 48 30.5	-5.8
LPIG	**La Paz**	**3.60**	**153**	*eP*	**Pn**	**21 48 42.8**	**+0.3**
SLBS	**Sierra La Lagu**	**4.12**	**152**	*eP*	**Pn**	**21 48 49.3**	**-0.5**
214A	**Organ Pipe Nat**	**4.64**	**352**	*eP*	**Pn**	**21 48 57.9**	**+1.0**
NE79	**San Jose del V**	**4.70**	**153**	*eP*	**Pn**	**21 48 58.0**	**+0.4**

*NCEDC **21** 21:47:48.3±1.4, 37°.62N±0°.03×118°.89W±0°.04, h2km±5km, Mwr3.5/4, ML3.2/100(NEIC), Mwr3.4(REN), Error ellipse: s-maj=5.5km s-min=4.0km az=217.0*

*REN **21** 21:47:48.5±1.3, 37°.62N±0°.03×118°.90W±0°.03, h3km±5km, Error ellipse: s-maj=5.1km s-min=2.8km az=170.0*

*NEIC **21** 21:47:48.3, 37°.62N×118°.89W, h2km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr-1.18; Mθθ-0.99; Mφφ2.17; Mrθ-0.88; Mrφ0.28; Mθφ-1.35; Fault plane solution: M0 2.49000×10^14 NP1:φs123.28000°, δ69.48000°, λ-143.38000°. NP2:φs18.67000°, δ56.03000°, λ-25.01000°. Principal axes: T 2.7505, Plg8.0000°, Azm248.0000°; N -0.6492, Plg49.0000°, Azm149.0000°; P -2.1013, Plg40.0000°, Azm345.0000°;*

*NEIC **21** 21:47:50,37°.62N×118°.90W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr-0.38; Mθθ-0.84; Mφφ 1.23; Mrθ-0.78; Mrφ-1.11; Mθφ-0.38; Fault plane solution: M0 1.78000×10^14 NP1:φs17.00000°, δ70.00000°, λ-24.00000°. NP2:φs116.00000°, δ68.00000°, λ-158.00000°. Principal axes: T 1.7101, Plg1.0000°, Azm67.0000°; N 0.1314, Plg59.0000°, Azm159.0000°; P -1.8415, Plg31.0000°, Azm336.0000°;*

NEIC 21 21:47:48.8±1.4, 37°.64N±0°.04×118°.89W±0°.03, h3km±8km Error ellipse: s-maj=5.5km s-min=2.7km az=167.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCBM	**Casa Benchmark**	**0.01**	**318**		**Pg**	**21 47 50.1**	**+0.4**
MGPM	**Gravel Pit**	**0.02**	**216**		**Pg**	**21 47 49.2**	**-0.5**
MCSM	**Casa Diablo Ho**	**0.02**	**323**		**Pg**	**21 47 49.5**	**-0.3**
MLCM	**Laurel Creek C**	**0.03**	**216**		**Pg**	**21 47 49.3**	**-0.5**
MDRNC	**Doe Ridge**	**0.04**	**92**		**Pg**	**21 47 49.8**	**-0.1**
MLAC	**Mammoth, Mammo**	**0.04**	**102**		**Pg**	**21 47 51.1**	**+1.2**
MEMM	**East Mammoth H**	**0.05**	**305**		**Pg**	**21 47 50.0**	**-0.1**
MCVM	**Convict Lake**	**0.07**	**135**		**Pg**	**21 47 49.9**	**-0.5**
MMLB	**Mammoth Lakes**	**0.07**	**286**		**Pg**	**21 47 51.8**	**+1.4**
OMMB	**Old Mammoth Mi**	**0.09**	**253**		**Pg**	**21 47 51.7**	**+1.0**
MDYM	**Dry Creek**	**0.10**	**281**		**Pg**	**21 47 50.9**	**0.0**
MDYM					Sg	**21 47 52.9**	**+0.7**
MLIM	**Lincoln Peak**	**0.10**	**269**		**Pg**	**21 47 51.0**	**+0.1**
MMSM	**Mammoth Summit**	**0.11**	**266**		**Pg**	**21 47 51.1**	**-0.1**
MMPM	**Mammoth Pass**	**0.11**	**255**		**Pg**	**21 47 50.8**	**-0.3**
MDCM	**Deadman Creek**	**0.14**	**300**		**Pg**	**21 47 51.5**	**-0.2**
MRDM	**Red Cones**	**0.14**	**253**		**Pg**	**21 47 51.3**	**-0.3**
MDPB	**Devils Postpil**	**0.15**	**267**		**Pg**	**21 47 51.6**	**-0.2**
MDPB					Sg	**21 47 53.8**	**0.0**
MDPB	**Devils Postpil**	**0.15**	**267**	IAML		21 47 54.1	
	comp=E,22μm,0.2s						
ORC	**Owens River**	**0.19**	**91**		**Pg**	**21 47 52.4**	**0.0**
RCCR	**Rock Creek Can**	**0.20**	**139**		**Pg**	**21 47 52.3**	**-0.5**
MGNR	**McGee Canyon**	**0.23**	**42**		**Pg**	**21 47 53.6**	**+0.3**
BENR	**Benton**	**0.26**	**73**		**Pg**	**21 47 53.8**	**-0.1**
WMD		**0.28**	**135**		**Pg**	**21 47 53.9**	**-0.3**
MCCR	**Mono Craters**	**0.30**	**339**		**Pg**	**21 47 55.1**	**+0.4**
MCCR	**Mono Craters**	**0.30**	**339**		**Sg**	**21 48 00.4**	**+1.8**
MRCM	**Red Rock Canyo**	**0.31**	**83**		**Pg**	**21 47 54.8**	**0.0**
SCHCA	**Scheelite**	**0.32**	**150**		**Pg**	**21 47 54.5**	**-0.6**
MCDM	**Chidago Canyon**	**0.37**	**104**		**Pg**	**21 47 56.0**	**+0.1**
ANTCA	**Antelope Range**	**0.38**	**43**		**Pg**	**21 47 56.3**	**+0.1**
ANTCA	**Antelope Range**	**0.38**	**43**		**Sg**	**21 48 02.1**	**+0.9**
MTUM	**Tungsten Hills**	**0.39**	**138**		**Pg**	**21 47 55.9**	**-0.4**
BCKR	**Birch Creek**	**0.42**	**82**		**Pg**	**21 47 57.0**	**+0.2**
MFBM	**Five Bridges**	**0.42**	**120**		**Pg**	**21 47 57.0**	**+0.1**
MLNR	**Milner Canyon**	**0.44**	**96**		**Pg**	**21 47 57.3**	**+0.1**
KCC	**Kaiser Creek**	**0.46**	**227**		**Pg**	**21 47 57.1**	**-0.6**
KCC					Sg	**21 48 03.1**	**-0.6**
LUL	**Lundy Lake**	**0.47**	**331**		**Pg**	**21 47 57.8**	**-0.1**
HCK	**Huntoon Valley**	**0.50**	**28**		**Pg**	**21 47 58.7**	**+0.4**
POCCA	**Poleta Canyon**	**0.56**	**119**		**Pg**	**21 47 59.1**	**-0.4**
BONR	**Boundary Peak**	**0.56**	**56**		**Pn**	**21 48 04.4**	**+0.4**
LHV	**Little Huntoon**	**0.68**	**26**		**Pg**	**21 48 02.1

comp=E,191nm,0.7s
PDRM Domengine Ranc 1.76 223 Pn 21 48 20.6 +0.4
SCKWR San Luis Creek 1.79 256 Pb 21 48 21.7 -0.6
Q09A Carvers 1.80 48 Pn Pn 21 48 20.3 -0.6
VES Vestal, Richgr 1.80 185 Pn 21 48 21.2 +0.4
BMSM Mercy Hot Spri 1.81 238 Pn 21 48 21.3 +0.3
PARM Anticline Ridg 1.81 220 Pn 21 48 21.4 +0.5
WCSM Coso Springs S 1.84 150 Pb 21 48 22.4 -0.9
PKEM Kettleman Hill 1.85 212 Pn 21 48 22.4 +0.9
WCHM Chimney Peak 1.87 159 Pg 21 48 28.4 +3.8
MPK Martis Peak 1.88 332 Pn 21 48 21.8 -0.4
MPK IAML 21 48 58.4
comp=N,216nm,0.9s
MPK IAML 21 48 59.6
comp=E,200nm,0.8s
WASM Alta Sierra Ca 1.92 172 Pn 21 48 23.4 +0.8
TNK Tinkers Knob 1.94 327 Pb 21 48 24.9 0.0
SLD San Luis Dam 1.94 254 Pn 21 48 23.2 +0.5
CMPM Mikes Peak 1.95 262 Pn 21 48 23.3 +0.4
WNMM Nine Mile Cany 1.96 156 Pb 21 48 24.1 -1.0
PJUM Juniper Ridge 1.96 225 Pn 21 48 23.5 +0.4
BAVM Antelope Valle 1.98 241 Pn 21 48 23.8 +0.6
COSM Mount Oso 1.98 267 Pn 21 48 23.9 +0.6
HPCM Pacheco Lake 1.99 254 Pn 21 48 23.9 +0.6
WCT Wildcat Mounta 2.00 114 Pn 21 48 23.1 -0.4
WCT IAML 21 48 57.3
comp=E,122nm,0.7s
ISA Isabella, Lake 2.00 170 Pn 21 48 24.7 +1.1
WORM Onyx Ranch 2.01 165 Pn 21 48 24.8 +1.1
PACP Pacheco Peak 2.01 252 Pn 21 48 24.3 +0.5
BBGB Big Mountain B 2.02 239 Pn 21 48 24.8 +0.9
VPK Verdi Peak 2.04 334 Pb 21 48 26.7 -0.1
DONR Donner Summit 2.04 327 Pb 21 48 25.6 -1.2
CTM Castle Mountai 2.06 215 Pn 21 48 25.4 +0.9
CMMM Mount Mocho 2.08 266 Pn 21 48 25.2 +0.5
PSMM Smith Mountain 2.08 222 Pn 21 48 25.1 +0.4
BBNM San Benito 2.08 238 Pn 21 48 25.4 +0.8
PMPB Monarch Peak 2.09 228 Pn 21 48 25.3 +0.5
HJSM John Smith Roa 2.09 248 Pn 21 48 25.8 +1.0
LRV Little Rabbit 2.09 235 Pn 21 48 25.7 +1.0
PSRM Scobie Ranch 2.10 213 Pn 21 48 25.4 +0.5
PAHR Pah Rah Range 2.10 350 Pn 21 48 25.7 +0.6
WOFM Oak Flat 2.10 176 Pn 21 48 26.1 +1.0
HFEM San Felipe 2.11 253 Pn 21 48 25.7 +0.7
GHS Gilroy Hot Spr 2.11 256 Pn 21 48 25.8 +0.7
PPTM Peach Tree Val 2.12 224 Pn 21 48 25.4 +0.2
ARN Arnold Ranch 2.12 263 Pn 21 48 25.8 +0.6
BVL Bear Valley 2.12 241 Pn 21 48 25.9 +0.7
PHFM Heflinger Ranc 2.13 215 Pn 21 48 25.7 +0.3
PEAR Peavine Mounta 2.14 337 Pn 21 48 26.4 +0.7
PMRM Maxey Ranch 2.14 211 Pn 21 48 25.8 +0.3
BSLM Silva Ranch 2.14 247 Pn 21 48 26.5 +1.0
PSTM Stockdale Moun 2.15 218 Pn 21 48 25.8 +0.3
PKD Bear Valley Ra 2.15 219 Pn 21 48 25.8 +0.2
BPIM Pinnacles 2.15 238 Pn 21 48 26.2 +0.6
PHPM Hope Ranch 2.15 220 Pn 21 48 26.0 +0.4
CDC Canada Road 2.16 254 Pn 21 48 26.8 +1.2
HSPM Sheep 2.16 257 Pn 21 48 25.8 +0.1
PVCM Vineyard Canyo 2.16 218 Pn 21 48 26.1 +0.3
PSNM Stone Corral 2.17 212 Pn 21 48 26.0 +0.2
PHAM Harlan Ranch 2.17 214 Pn 21 48 26.1 +0.3
BABR Babbit Peak 2.18 334 Pb 21 48 28.9 -0.2
BJOM Mount Johnson 2.18 243 Pn 21 48 26.6 +0.6
CBSNC Byron Hot Spri 2.19 276 Pn 21 48 26.6 +0.5
THIS South End of C 2.19 210 Pn 21 48 26.6 +0.4
PAGB Antelope Grade 2.20 210 Pn 21 48 26.4 +0.2
PKLM Kerr Lake 2.20 212 Pn 21 48 26.6 +0.4
CMLM Mount Lewis 2.20 267 Pn 21 48 27.5 +1.2
PCMM Cholame Hills 2.20 214 Pn 21 48 26.6 +0.3
MHC Mount Hamilton 2.21 263 Pn 21 48 27.2 +0.7
TPNV Topopah Spring 2.22 107 Pn 21 48 26.2 -0.5
TPNV IAML 21 49 10.4
comp=E,134nm,0.7s
TPNV IAML 21 49 13.2
comp=E,128nm,0.7s
SAO San Andreas Ge 2.22 248 Pn 21 48 27.3 +0.7
CADM Anderson Res. 2.23 259 Pb 21 48 28.3 -1.4
PWKM Work Ranch 2.24 216 Pn 21 48 27.2 +0.3
HSFM Saint Francis 2.24 249 Pn 21 48 28.0 +1.1
CCOB Coe Ranch Numb 2.25 261 Pn 21 48 28.1 +1.2
PPO Portuguese Can 2.25 219 Pn 21 48 27.4 +0.4
PMCM McMillan Canyo 2.25 212 Pn 21 48 27.4 +0.4
TRAM Private Proper 2.25 210 Pn 21 48 27.6 +0.5
BSGM Shirttail Gulc 2.25 238 Pn 21 48 27.8 +0.9
CSR Chase Ranch 2.25 253 Pn 21 48 25.9 -1.1
FRP Fremont Peak 2.26 248 Pn 21 48 27.5 +0.4
SCZ Santa Cruz 2.26 243 Pn 21 48 27.5 +0.4
HBTM San Juan Bauti 2.26 250 Pn 21 48 28.2 +1.1
PSAM San Ardo 2.27 225 Pn 21 48 28.0 +0.8
LOY Loyalton 2.27 333 Pb 21 48 30.3 -0.4
WENL Wente Vineyard 2.28 270 Pb 21 48 29.0 -1.5
BJCM Johnson Can. 2.28 242 Pn 21 48 27.7 +0.4
ANZ Anzar Road 2.28 252 Pn 21 48 28.4 +1.0
TCHL Shandon 2.29 212 Pn 21 48 28.4 +0.8
GWY Greenwater Val 2.30 128 Pn 21 48 26.6 -1.1
CMOB Morgan Territo 2.31 275 Pn 21 48 29.0 +1.1
JLAB Laurel Hill 2.32 259 Pn 21 48 28.5 +0.7
CALM Calaveras Res. 2.32 266 Pn 21 48 29.0 +1.1
QSM Queen of Sheba 2.33 135 Pn 21 48 27.6 -0.4
QSM IAML 21 49 05.4
comp=N,81nm,0.6s
CVLM Vallecito 2.34 271 Pn 21 48 29.6 +1.4
HTUM Tustin Road 2.34 251 Pn 21 48 28.3 +0.1
YEG Yeguas Mountai 2.36 202 Pn 21 48 29.2 +0.7
BDM Black Diamond 2.38 279 Pn 21 48 29.6 +0.9
BSMM Soledad Missio 2.39 239 Pn 21 48 29.6 +0.7
PCCM Crazy Canyon 2.39 230 Pn 21 48 29.8 +0.9
TSCN Private Proper 2.40 210 Pn 21 48 30.0 +1.0
AMC Almaden 2.40 259 Pn 21 48 29.9 +0.9
JHLM Holstrom Ranch 2.40 258 Pn 21 48 29.7 +0.6
TEJ El Tejon 2.41 176 Pb 21 48 31.4 -1.5
TCAS Cass Winery, P 2.43 214 Pn 21 48 30.0 +0.6
BPCNC Pine Canyon 2.43 245 Pn 21 48 30.1 +0.6
CCCA Chr Cany lake 2.44 149 Pb 21 48 33.7 +0.3
JELB Ellicott, Sant 2.45 254 Pn 21 48 29.6 0.0
PANM San Antonio Re 2.46 222 Pn 21 48 30.6 +0.7
HAST Hastings Reser 2.47 240 Pn 21 48 30.4 +0.4
CRGC Crocker Grade 2.48 196 Pn 21 48 31.8 +1.5
JJOM Saint Joseph's 2.50 261 Pn 21 48 31.1 +0.7
S11A Rachel 2.50 89 Pn 21 48 30.8 +0.3
S11A IAML 21 49 20.9
comp=E,165nm,1.3s
S11A IAML 21 49 21.6
comp=N,182nm,1.1s
BEKR Beckworth 2.50 333 Pb 21 48 32.9 -1.6
BEKR Beckworth 2.50 333 IAML 21 49 10.8
comp=E,143nm,0.4s
BEKR IAML 21 49 12.5
comp=N,74nm,0.5s
ARVC Arvin 2.51 179 Pb 21 48 32.9 -1.6
PHSB Hesperia Broad 2.51 224 Pn 21 48 31.0 +0.4
CLCB Lake Chabot 2.52 273 Pn 21 48 31.4 +0.7
BCWM Chews Ridge 2.52 239 Pn 21 48 31.2 +0.4
JSGM Saratoga Golf 2.54 263 Pn 21 48 31.9 +1.0
CCAC Calif City Air 2.58 164 Pn 21 48 31.2 -0.3
JSFB Stanford Teles 2.62 266 Pn 21 48 32.6 +0.6
NLHM Lake Herman 2.62 282 Pn 21 48 29.5 -2.6
PAPM Alder Peak 2.63 230 Pn 21 48 32.6 +0.4
BCH Branch Mountai 2.63 202 Pn 21 48 32.6 +0.3
HMOM Monterey 2.63 248 Pn 21 48 32.9 +0.7
JFP Foothills Park 2.64 265 Pn 21 48 32.8 +0.5
OHCM Honcut 2.65 311 Pb 21 48 35.3 -1.5
JJRM Joaquin Road 2.65 265 Pn 21 48 31.8 -0.7
CVPM Vollmer Peak 2.65 276 Pn 21 48 33.5 +1.0
BLDC Black Mountain 2.66 218 Pn 21 48 33.0 +0.5
BLDC Black Mountain 2.66 218 Pn 21 48 33.0 +0.5
CPIM Pinole Ridge 2.66 279 Pn 21 48 34.1 +1.6
BKS Berkeley--Byer 2.66 276 Pn 21 48 33.7 +1.1
PHCM Hearst Castle 2.67 224 Pn 21 48 33.3 +0.6
JRSC Jasper Ridge 2.67 266 Pn 21 48 33.2 +0.5
VAK Adit at Lawren 2.67 276 Pn 21 48 33.8 +1.0
PTAM Tassajara Cree 2.68 214 Pn 21 48 33.2 +0.3
BPOM Post Ranch 2.70 239 Pn 21 48 33.7 +0.5
R11A Troy Canyon, C 2.71 74 Pn 21 48 33.4 0.0
JHPM Huddart Park 2.72 267 Pn 21 48 34.3 +0.9
OWYM Wyandotte 2.73 312 Pb 21 48 36.6 -1.5
BCW Bitter Crk WRg 2.73 189 Pn 21 48 34.6 +1.0
PCBM Cambria 2.74 220 Pn 21 48 34.3 +0.5
ARDC Alexander Ranc 2.75 218 Pn 21 48 34.3 +0.5
BGH Bear Gulch 2.76 265 Pn 21 48 34.6 +0.7
NAPC Atlas Peak 2.77 288 Pn 21 48 36.4 +2.2
SUTB Sutter Butte 2.77 306 Pb 21 48 37.8 -1.3
ORV Oroville 2.80 314 Pb 21 48 37.7 -1.8
ORV Oroville 2.80 314 IAML 21 49 16.3
comp=N,92nm,0.7s
ORV IAML 21 49 16.4
comp=E,125nm,0.7s
LSDC Los Osos Digit 2.82 215 Pn 21 48 35.6 +0.9
OSUM Sutter Buttes 2.84 306 Pb 21 48 39.9 -0.2
DPD Davis Peak 2.84 213 Pn 21 48 35.9 +0.7
GSC Goldstone, Bar 2.88 144 Pn 21 48 35.0 -0.6
GSC IAML 21 49 27.5
comp=N,52nm,0.9s
GSC IAML 21 49 32.8
comp=E,61nm,0.8s
GSC Goldstone, Bar 2.88 144 Pb 21 48 41.5 +0.7
VPDC Valencia Peak 2.88 214 Pn 21 48 36.3 +0.7
MNRC McLaughlin Min 3.06 295 Pn 21 48 40.4 +2.3
PRN Pahroc Range 3.06 93 Pn Pn 21 48 38.2 0.0
BMN Battle Mountai 3.08 24 Pn 21 48 38.4 0.0
SHPR Sheep Range 3.19 110 Pn Pn 21 48 40.5 +0.4
GDXM Geysers 3.29 292 Pn 21 48 40.9 -0.4
PASC Pasadena Art C 3.51 170 Pn Pn 21 48 43.5 -0.7
PASC IAML 21 49 40.8
comp=E,79nm,1.0s
PASC IAML 21 49 43.5
comp=N,79nm,0.8s
HOPS Hopland Field 3.56 294 Pn 21 48 45.1 +0.2
V12A Nelson 3.77 119 Pn 21 48 47.7 -0.2
PSUT Pine Spring 4.07 76 Pn 21 48 51.4 -0.8
ELS Elsinore Mount 4.16 163 Pn Pn 21 48 53.2 -0.1
ELS IAML 21 50 02.9
comp=E,30nm,0.7s
ELS IAML 21 50 05.0
comp=N,33nm,1.3s
ELK Elko 4.20 41 Pn Pn 21 48 53.8 -0.2
ELK IAML 21 50 03.3
comp=N,17nm,0.5s
CCUT Cedar City 4.39 89 Pn Pn 21 48 56.5 -0.1
MOD Modoc Plateau 4.39 346 Pn Pn 21 48 57.7 +1.1
MOD IAML 21 50 25.5
comp=N,16nm,0.8s
MOD IAML 21 50 35.0
comp=E,15nm,1.0s
PMD Palm Desert 4.48 152 Pn Pn 21 48 58.5 +0.9
PMD IAML 21 50 22.2
comp=E,15nm,1.2s
PMD IAML 21 50 26.0
comp=N,15nm,0.7s
PFO Pinyon Flats O 4.48 153 Pn Pn 21 48 58.9 +1.1
LCMT Little Creek M 4.54 96 Pn 21 48 58.6 0.0
KMRM Mail Ridge 4.56 306 Pn Pn 21 48 57.5 -1.2
SZCU Shurtz Canyon 4.61 89 Pn Pn 21 49 00.6 +1.0
W13A Hualapai Mount 4.77 121 Pn Pn 21 49 02.4 +0.7
MSU Marysvale 5.37 79 Pn Pn 21 49 09.6 -0.5
TMUT Trail Mountain 6.25 72 Pn Pn 21 49 20.7 -1.6
HLID Hailey 6.83 29 Pn Pn 21 49 28.9 -1.1
P18A Preston Nutter 7.05 71 Pn Pn 21 49 32.8 -0.5

*INET **21** 22:01:50.7±0.6, 13°.26N×89°.60W, h26km±7km, MW3.7*
*GCG **21** 22:01:51.1±0.7, 13°.35N×89°.66W, h93km±54km, MD3.7*
ISC 21 22:01:50.3±1.9, 13°21N±0°.09×89°58W±0°.05, h26km±14km, n38, σ0°68/48, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.58**	**35**	*e*P	**Pb**	**22 02 02.0**	**+0.1**
BOQS	**Boqueron**	**0.59**	**29**	*e*P	**Pb**	**22 02 02.4**	**+0.1**
BOQS	**Boqueron**	**0.59**	**29**	*e*P	**Pb**	**22 02 02.4**	**+0.1**
UEES	**Universidad Ev**	**0.60**	**33**	*e*P	**Pb**	**22 02 02.2**	**-0.1**
UEES	**Universidad Ev**	**0.60**	**33**	*e*P	**Pb**	**22 02 02.2**	**-0.1**
CEDA	**San Andres**	**0.61**	**17**	*e*P	**Pb**	**22 02 02.5**	**0.0**
CEDA	**San Andres**	**0.61**	**17**	*e*P	**Pb**	**22 02 02.5**	**0.0**
CEVE	**Cerro Verde**	**0.61**	**356**	*e*P	**Pb**	**22 02 02.8**	**+0.1**
CEVE	**Cerro Verde**	**0.61**	**356**	*e*P	**Pb**	**22 02 02.8**	**+0.1**
AEIL	**Aeropuerto Ilo**	**0.66**	**43**	*e*P	**Pb**	**22 02 03.5**	**+0.2**
AEIL	**Aeropuerto Ilo**	**0.66**	**43**	*e*P	**Pb**	**22 02 03.5**	**+0.2**
LFU	**La Fuente**	**0.70**	**40**	*e*P	**Pb**	**22 02 03.7**	**-0.2**
LFU	**La Fuente**	**0.70**	**40**	*e*P	**Pb**	**22 02 03.7**	**-0.2**
NUBE	**Las Nubes**	**0.71**	**344**	*e*P	**Pb**	**22 02 03.6**	**-0.7**
NUBE				*e*S	**Sb**	**22 02 13.8**	**+0.1**
NUBE	**Las Nubes**	**0.71**	**344**	*e*P	**Pb**	**22 02 03.6**	**-0.7**
NUBE				*e*S	**Sb**	**22 02 13.8**	**+0.1**
COEG	**Centro de Oper**	**0.79**	**59**	*e*P	**Pb**	**22 02 05.0**	**-0.5**
COEG				*e*S	**Sb**	**22 02 16.4**	**+0.6**
COEG	**Centro de Oper**	**0.79**	**59**	*e*P	**Pb**	**22 02 05.0**	**-0.5**
COEG				*e*S	**Sb**	**22 02 16.4**	**+0.6**
PAVA	**Las Pavas**	**0.80**	**51**	*e*P	**Pb**	**22 02 05.4**	**-0.2**
PAVA	**Las Pavas**	**0.80**	**51**	*e*P	**Pb**	**22 02 05.4**	**-0.2**
SLOZ	**Alcaldia de Sa**	**0.83**	**346**	*e*P	**Pb**	**22 02 05.5**	**-0.7**
SLOZ				*e*S	**Sb**	**22 02 17.4**	**+0.3**
P5NO	**Presa 5 de nov**	**1.11**	**46**	*e*P	**Pn**	**22 02 08.7**	**-1.4**
PACA	**Pacayal**	**1.25**	**78**	*e*P	**Pn**	**22 02 12.0**	**-0.2**
PACA	**Pacayal**	**1.25**	**78**	*e*P	**Pn**	**22 02 12.0**	**-0.2**
PACA	**Pacayal**	**1.25**	**78**	*e*P	**Pn**	**22 02 11.8**	**-0.4**
PACA				*e*S	**Sn**	**22 02 28.6**	**+0.4**
CAHU	**Cacacuatique**	**1.44**	**67**	*e*P	**Pn**	**22 02 13.9**	**-1.0**
CAHU	**Cacacuatique**	**1.44**	**67**	*e*P	**Pn**	**22 02 13.9**	**-1.0**
NBG	**Las Nubes**	**1.56**	**331**	*e*P	**Pn**	**22 02 16.8**	**+0.2**
NBG				*e*S	**Sn**	**22 02 37.4**	**+1.2**
LCND	**La Caada**	**1.64**	**86**	*e*P	**Pn**	**22 02 16.8**	**-0.8**
LCND	**La Caada**	**1.64**	**86**	*e*P	**Pn**	**22 02 16.8**	**-0.8**
CNCH	**Conchagua**	**1.70**	**88**	*e*P	**Pn**	**22 02 17.6**	**-0.8**
CNCH	**Conchagua**	**1.70**	**88**	*e*P	**Pn**	**22 02 17.6**	**-0.8**
FUG	**Fuego 3**	**1.74**	**315**	*e*P	**Pn**	**22 02 19.0**	**0.0**
FUG				*e*S	**Sn**	**22 02 40.0**	**-0.4**
MRL	**Marmol**	**1.86**	**357**	*e*P	**Pn**	**22 02 20.7**	**-0.1**
CSGN	**Cosiguina Volc**	**1.98**	**97**	*e*P	**Pn**	**22 02 21.5**	**-0.7**
STG3	**Santiaguito 3,**	**2.44**	**308**	*e*P	**Pn**	**22 02 28.5**	**-0.2**
CRIN	**San Cristobal**	**2.51**	**101**	*e*P	**Pn**	**22 02 30.1**	**+0.6**
CRIN				*e*S	**Sn**	**22 03 01.9**	**+2.4**
MOMN	**Momotombo**	**3.07**	**105**	*e*P	**Pn**	**22 02 37.0**	**-0.1**
MOMN				*e*S	**Sn**	**22 03 11.8**	**-1.3**
COPN	**Copaltepe**	**3.09**	**109**	*e*P	**Pn**	**22 02 37.3**	**-0.2**

NOU 21 22:11:31.2, 14°79S×167°58E, h120km, mb3.8/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.98**	**169**	P	Pn	22 12 17.8	+0.6
YATNC	**Mamie plateau,**	**7.26**	**185**	P	Pn	22 13 13.4	-1.3
DZM	**Mont Dzumac**	**7.32**	**188**	P	Pn	22 13 14.9	-0.7
NOUC	**Port Laguerre**	**7.37**	**189**	P	Pn	22 13 17.1	+0.9
ONTNC	**Ouen Toro**	**7.55**	**188**	P	P	22 13 19.3	+0.7

*NEIC **21** 22:20:50.6±1.1, 18°.6S±0°.2×177°.5W±0°.2, h573km±14km, mb4.5/18, Error ellipse: s-maj=26.4km s-min=22.8km az=55.0*
*NOU **21** 22:20:53.1, 18°.84S×177°.28W, h641km, ML3.4/10, Fiji Islands Region*
*IDC **21** 22:20:56.9±2.0, 19°.04S×177°.75W, h647km±26km, mb3.4/12, mbtmp4.5/13, Error ellipse: s-maj=23.5km s-min=11.8km az=157.0*
ISC 21 22:20:53.1±0.6, 18°7S±0°.1×177°8W±0°.1, h600km, n73, σ1s47/74, mb4.3/20, 7C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**1.08**	**293**	P	P	22 22 09.1	+4.6
KOUNC	**Koumac, New Ca**	**17.02**	**261**	P	**P**	**22 24 20.3**	**+0.5**
KOUNC				IAmb	IAmb	22 24 23.1	
comp=Z,17nm,1.1s							
OUZ	**Omahuta**	**18.19**	**203**	P	**P**	**22 24 33.2**	**+3.0**
URZ	**Urewera**	**20.03**	**192**	P	**P**	**22 24 44.2**	**-2.8**
comp=Z,9.6nm,0.4s,baz=284,slow=2.2,SNR=12							
URZ	**Urewera**	**20.03**	**192**	P	**P**	**22 24 44.4**	**-2.5**
BFZ	**Birch Farm**	**22.54**	**192**	P	**P**	**22 25 08.1**	**-1.3**
THZ	**Tophouse**	**24.36**	**197**	P	**P**	**22 25 25.2**	**-0.4**
THZ				IAmb	IAmb	22 25 27.7	
comp=Z,27nm,1.2s							
KHZ	**Kahutara**	**24.81**	**195**	P	**P**	**22 25 28.2**	**-1.2**
FOZ	**Fox Glacier**	**26.92**	**200**	P	**P**	**22 25 48.6**	**+0.7**
ARMA	**Armidale**	**30.10**	**241**	P	**P**	**22 26 17.3**	**+1.4**
CTA	**Charters Tower**	**33.93**	**262**	P	**P**	**22 26 49.3**	**+1.0**
comp=Z,12nm,0.6s,baz=91,slow=9.5,SNR=24							
comp=Z,12nm,0.6s							
CTA	**Charters Tower**	**33.93**	**262**	P	**P**	**22 26 49.5**	**+1.1**
CTAO	**Charters Tower**	**33.93**	**262**	P	**P**	**22 26 49.3**	**+1.0**
CTAO				IAmb	IAmb	22 26 50.1	
comp=Z,12nm,0.7s							
CTAO	**Charters Tower**	**33.93**	**262**	P	**P**	**22 26 49.4**	**+1.1**
CMSA	**Cobar Meteorol**	**35.32**	**242**	P	**P**	**22 27 01.0**	**+1.3**
MTSU	**Mount Surprise**	**35.94**	**265**	P	**P**	**22 27 05.8**	**+0.8**
TOO	**Toolangi**	**37.18**	**232**	P	**P**	**22 27 16.3**	**+1.5**
COEN	**Coen**	**37.73**	**271**	P	**P**	**22 27 21.0**	**+1.4**
STKA	**Stephens Creek**	**38.81**	**242**	P	**P**	**22 27 29.6**	**+1.5**
comp=Z,4.3nm,0.7s,baz=97,slow=9.3,SNR=12							
comp=Z,4.3nm,0.7s							
STKA	**Stephens Creek**	**38.81**	**242**	P	**P**	**22 27 28.2**	**+0.1**
BBOO	**Buckleboo**	**43.58**	**242**	P	**P**	**22 28 06.2**	**+0.5**
BBOO				IAmb	IAmb	22 28 06.6	
comp=Z,5.9nm,0.7s							
WR0	**Warramunga Arr**	**44.91**	**260**	P	**P**	**22 28 15.9**	**-0.2**
WR0				IAmb	IAmb	22 28 17.2	
comp=Z,5.5nm,0.5s							
WB0	**Warramunga Arr**	**45.07**	**260**	P	**P**	**22 28 17.7**	**+0.3**
WB2	**Warramunga Arr**	**45.09**	**260**	P	**P**	**22 28 17.5**	**0.0**
WB2				IAmb	IAmb	22 28 17.9	
comp=Z,11nm,0.6s							
WRAB	**Tennant Creek**	**45.09**	**260**	P	**P**	**22 28 17.4**	**0.0**
WRAB				IAmb	IAmb	22 28 18.2	
comp=Z,18nm,1.1s							
WRA	**Warramunga Arr**	**45.10**	**260**	P	**P**	**22 28 17.7**	**+0.2**
comp=Z,10nm,0.6s,baz=99,slow=6.2,SNR=336							
WRA				S	**S**	**22 34 10.8**	**-3.6**
comp=Z,0.6nm,0.8s,baz=93,slow=13,SNR=5.5							
comp=Z,10nm,0.6s							
WRA	**Warramunga Arr**	**45.10**	**260**	P	**P**	**22 28 16.2**	**-1.3**
AS31	**Alice Springs**	**45.18**	**255**	P	**P**	**22 28 18.2**	**0.0**
ASAR	**Alice Springs**	**45.18**	**255**	P	**P**	**22 28 18.6**	**+0.5**
comp=Z,13nm,0.7s,baz=87,slow=8.1,SNR=126							
ASAR				PcP	**PcP**	**22 29 45.2**	**-0.2**
comp=Z,1.4nm,0.5s,baz=101,slow=3.9,SNR=7.5							
ASAR				S	**S**	**22 34 13.1**	**-2.4**
comp=Z,1.9nm,0.8s,baz=90,slow=16,SNR=17							
comp=Z,13nm,0.7s							
MTN	**Manton Dam**	**49.39**	**269**	P	**P**	**22 28 49.5**	**-0.2**
MTN				IAmb	IAmb	22 28 50.1	
comp=Z,8.8nm,0.7s							
SIJI	**Sorong**	**53.00**	**283**	P	**P**	**22 29 16.8**	**+1.0**
comp=Z,43nm,0.8s,baz=85,slow=6.1,SNR=11							
comp=Z,43nm,0.8s							
FITZ	**Fitzroy Crossi**	**53.51**	**261**	P	**P**	**22 29 19.8**	**+0.5**
comp=Z,2.2nm,0.5s,baz=86,slow=4.4,SNR=6.7							
comp=Z,2.2nm,0.5s							
JHS	**Saijyo**	**70.86**	**319**	P	**P**	**22 31 10.6**	**-0.3**
JHS				IAmb	IAmb	22 31 13.9	
comp=Z,7.5nm,0.8s							
QSPA	**South Pole Qui**	**71.40**	**180**	P	**P**	**22 31 14.3**	**+0.7**
SSLB	**Suanglung**	**73.16**	**303**	P	**P**	**22 31 24.1**	**-0.2**
SSLB				IAmb	IAmb	22 31 24.6	
comp=Z,12nm,1.1s							
PETK	**Petropavlovsk-**	**74.56**	**345**	P	**P**	**22 31 32.0**	**+0.4**
comp=Z,1.3nm,0.6s,baz=105,slow=7.8,SNR=3.8							
comp=Z,1.3nm,0.6s							
USRK	**Ussuriysk Ar.**	**77.58**	**326**	P	**P**	**22 31 50.5**	**+2.3**
comp=Z,0.6nm,0.4s,baz=169,slow=5.5,SNR=4.9							
comp=Z,0.6nm,0.4s							
NVAR	**Mina Array Bea**	**79.54**	**43**	P	**P**	**22 32 00.6**	**+1.4**
comp=Z,0.2nm,0.3s,baz=220,slow=9.1,SNR=3.6							
comp=Z,0.2nm,0.3s							
TXAR	**Lajitas Array**	**85.88**	**57**	P	**P**	**22 32 32.8**	**+1.8**
comp=Z,1.1nm,0.8s,baz=219,slow=6.8,SNR=10							
comp=Z,1.1nm,0.8s							
ILAR	**Eielson Array**	**86.48**	**13**	P	**P**	**22 32 32.4**	**-0.5**
comp=Z,0.4nm,0.4s,baz=226,slow=5.0,SNR=12							
comp=Z,0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**89.71**	**289**	P	**P**	**22 32 50.6**	**+1.7**
comp=Z,0.8nm,0.3s,baz=126,slow=2.9,SNR=8.3							
comp=Z,0.8nm,0.3s							
MKAR	**Makanchi Array**	**110.09**	**314**	PKiKP	**PKiKP**	**22 38 15.9**	**-1.6**
comp=Z,0.3nm,0.5s,baz=108,slow=0.8,SNR=9.4							
ARCES	**ARCESS Array B**	**127.16**	**350**	PKP	**PKiKP**	**22 38 49.3**	**-0.9**
comp=Z,0.6nm,0.4s,baz=343,slow=1.2,SNR=13							
FINES	**FINESS Array B**	**134.07**	**344**	PKP	**PKiKP**	**22 39 02.9**	**-1.4**
comp=Z,1.4nm,0.8s,baz=33,slow=2.7,SNR=7.5							
NB2	**NORSAR Subarra**	**137.19**	**354**	PKP	**PKiKP**	**22 39 10.0**	**-0.7**
comp=Z,0.2nm,0.6s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**137.19**	**354**	PKP	**PKiKP**	**22 39 09.1**	**-1.6**
comp=Z,0.2nm,0.5s,baz=14,slow=3.9,SNR=1.9							
AKASG	**Malin Array Be**	**141.51**	**332**	PKhKP	PKPpre	22 39 11.3	
comp=Z,0.7nm,0.4s,baz=40,slow=4.2,SNR=8.1							
BIZ	**Bicaz**	**145.66**	**331**	⇑P	**PKiKP**	**22 39 26.4**	**-2.0**
BRTR	**Keskin Array B**	**145.74**	**314**	PKPbc	**PKPab**	**22 39 26.1**	**-2.2**
comp=Z,1.7nm,0.8s,baz=144,slow=4.2,SNR=11							
OSTC	**Ostas**	**146.28**	**344**	*e*PKP	**PKPab**	**22 39 27.8**	**-2.1**
CLL	**Collm**	**146.32**	**348**	*i* PKPbc	**PKiKP**	**22 39 27.1**	**-2.6**
comp=Z,8.0nm,0.6s							
DPC	**Dobruska-Polom**	**146.44**	**344**	*e*PKP	**PKiKP**	**22 39 27.0**	**-3.0**
KRLC	**Kraliky**	**146.56**	**343**	*e*PKP	**PKiKP**	**22 39 27.5**	**-2.8**
PRU	**Pruhonice**	**147.22**	**345**	*e*PKP	**PKiKP**	**22 39 29.7**	**-1.9**
ARR	**Arges**	**147.51**	**330**	⇑P	**PKPab**	**22 39 31.8**	**-3.3**
KHC	**Kasperske Hory**	**148.25**	**346**	*e*PKP	**PKiKP**	**22 39 32.5**	**-1.3**
GZR	**Gura Zlata**	**148.34**	**332**	⇑P	**PKiKP**	**22 39 32.8**	**-1.3**
CKRC	**Cesky Krumlov**	**148.37**	**345**	*e*PKP	**PKiKP**	**22 39 33.1**	**-0.9**
GERES	**GERESS Array B**	**148.49**	**345**	PKPbc	**PKiKP**	**22 39 33.4**	**-0.9**
comp=Z,1.0nm,0.7s,baz=22,slow=1.4,SNR=10							
BZS	**Buzias**	**148.68**	**333**	⇑P	**PKiKP**	**22 39 33.7**	**-1.0**
CONA	**Conrad Observa**	**148.76**	**342**	*e*P	**PKiKP**	**22 39 34.4**	**-0.5**
comp=Z,2.3nm,0.6s							
RONA	**Rosalia, Austr**	**148.84**	**342**	*e*P	**PKiKP**	**22 39 34.5**	**-0.5**
comp=Z,3.9nm,0.6s							
FRGS	**Fruska Gora**	**149.79**	**335**	⇑P	**PKiKP**	**22 39 36.7**	**-0.4**
BOVS	**Bovan**	**150.19**	**331**	⇑P	**PKiKP**	**22 39 36.2**	**-1.7**
VTS	**Vitosha**	**150.21**	**328**	⇑P	**PKiKP**	**22 39 37.8**	**-0.4**
WATA	**Walderalm**	**150.39**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.42**	**10**	P	**Pn**	**23 07 24.4**	**+0.4**
	93nm,0.4s,baz=279,slow=16						
JCJ				S	**Sn**	**23 07 51.6**	**-0.7**
	112nm,0.3s,baz=279,slow=22,SNR=1.6						
MJAR	**Matsushiro Arr**	**12.17**	**347**	P	**Pn**	**23 09 38.7**	**+0.8**
	0.7nm,0.3s,baz=134,slow=17,SNR=1.3						
H11N1	**WAKE ISLAND Hy**	**23.82**	**97**	T	T	23 37 48.7	
	baz=294						
H11N2	**WAKE ISLAND Hy**	**23.82**	**97**	T	T	23 37 42.8	
	baz=294						
H11N3	**WAKE ISLAND Hy**	**23.84**	**97**	T	T	23 37 46.0	
	baz=294						
H11S3	**WAKE ISLAND Hy**	**24.02**	**100**	T	T	23 37 32.2	
	baz=289						
H11S1	**WAKE ISLAND Hy**	**24.02**	**100**	T	T	23 37 31.8	
	baz=289						
H11S2	**WAKE ISLAND Hy**	**24.03**	**100**	T	T	23 37 32.1	
	baz=289						
WRA	**Warramunga Arr**	**44.96**	**190**	P	P	23 15 04.4	+5.6
	0.3nm,0.4s,baz=8.8,slow=8.6,SNR=7.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**54.42**	**316**	P	**P**	**23 16 09.8**	**-0.7**
	0.2nm,0.4s,baz=91,slow=8.3						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**60.01**	**28**	P	**P**	**23 16 49.4**	**-0.4**
	0.6nm,0.8s,baz=263,slow=4.5,SNR=4.3						
	0.6nm,0.8s						
ARU	**Arti**	**66.05**	**323**	P	**P**	**23 17 30.8**	**+0.7**
	1.6nm,0.4s,baz=118,slow=16,SNR=4.1						
	1.6nm,0.4s						
YKA	**Yellowknife Ar**	**74.44**	**28**	P	**P**	**23 18 20.9**	**-0.3**
	0.4nm,0.6s,baz=294,slow=6.0,SNR=3.1						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**79.89**	**334**	P	**P**	**23 18 51.1**	**-0.8**
	0.6nm,0.4s,baz=79,slow=4.8,SNR=16						
	0.6nm,0.4s						
NVAR	**Mina Array Bea**	**82.33**	**51**	P	**P**	**23 19 06.4**	**+0.8**
	0.1nm,0.3s,baz=292,slow=5.7,SNR=2.0						
	0.1nm,0.3s						
HFS	**Hagfors**	**85.44**	**337**	P	**P**	**23 19 20.0**	**-0.7**
	1.5nm,0.9s,baz=58,slow=11,SNR=2.1						
	1.5nm,0.9s						
NB2	**NORSAR Subarra**	**85.66**	**338**	P	**P**	**23 19 21.2**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=52,slow=5.3						
NOA	**NORSAR Array B**	**85.66**	**338**	P	**P**	**23 19 21.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=54,slow=6.6,SNR=4.5						
	comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**87.30**	**313**	P	**P**	**23 19 30.8**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=44,slow=11,SNR=2.2						
	comp=Z,0.4nm,0.8s						

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*IDC **21** 23:13:06.7±0.4,39.˚73N×143.˚61E,h0km,mb4.8/48, mbtmp4.8/53,ML3.3/5,MS4.7/79,Error ellipse: s-maj=11.4km s-min=9.4km az=97.0*

*NIED **21** 23:13:07.8,39.˚87N×143.˚75E,h18km,MW5.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}5.52; $M_{\theta\theta}$2.85; $M_{\phi\phi}$-8.37; $M_{r\theta}$2.99; $M_{\theta\phi}$-2.46; $M_{\phi r}$3.10; Fault plane solution: M_o8.67000×10^{16} NP1: ϕ_s163.00000°,δ39.00000°,λ45.00000°. NP2:ϕ_s36.00000°, δ64.00000°,λ120.00000°.*

*JMA **21** 23:13:07.8±0.2,39.˚9N±0.˚7×14˚4E±˚,h18km,MD5.4/34, MW5.3/34,FAR E OFF SANRIKU*

JMA Felt II J1 at FAR E OFF SANRIKU .

*MOS **21** 23:13:09.5±1.0,39.˚89N×143.˚46E,h19km,mb5.3/55, MS5.3/25,Error ellipse: s-maj=5.3km s-min=3.6km az=106.5*

*NEIC **21** 23:13:09.6±1.4,39.˚76N±0.˚05×143.˚64E±0.˚07,h6km±3km, mb5.1/450,Mww5.3,Error ellipse: s-maj=9.4km s-min=5.9km az=130.0*

*BJI **21** 23:13:09.9±0.0,39.˚76N×143.˚38E,h18km,mb5.2/84, mB5.4/66,Ms5.4/95,Ms7 5.3/86*

*GCMT **21** 23:13:12.6±0.1,39.˚78N±0.˚01×143.˚80E±0.˚01,h14km, MW5.3/155,Moment Tensor Solution. s100,c167; s155,c307; Duration: 1ŝ1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.71±.02; $M_{\theta\theta}$-0.05±.01; $M_{\phi\phi}$-0.65±.01; $M_{r\theta}$0.28±.02; $M_{\theta\phi}$-0.19±.01; $M_{\phi r}$0.71±.03; Best double couple: M_o1.04300×10^{17} NP1:ϕ_s20.00000°,δ69.00000°, λ93.00000°. NP2:ϕ_s192.00000°,δ22.00000°,λ82.00000°. Principal axes: T 1.0420, Plg66.0000°, Azm295.0000°; N 0.0020, Plg3.0000°, Azm199.0000°; P -1.0440, Plg24.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 23:13:17,39.˚87N×143.˚71E,h12km,Moment Tensor Solution. Duration: 12ŝ0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.53; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-0.47; $M_{r\theta}$-0.15; $M_{\theta\phi}$-0.26; $M_{\phi r}$1.10; Fault plane solution: M_o1.25000×10^{17} NP1: ϕ_s226.00000°,δ18.00000°,λ138.00000°. NP2: ϕ_s357.00000°,δ78.00000°,λ76.00000°. Principal axes: T 1.2944, Plg55.0000°, Azm250.0000°; N -0.0948, Plg13.0000°, Azm360.0000°; P -1.1996, Plg32.0000°, Azm98.0000°;*

ISC 21 23:13:10.8±0.3,39.˚84N±0.˚03×143.˚62E±0.˚03,h21km±3km, h21km:pP-P,n1318,σ1ŝ59/1292,mb5.1/372,MS5.0/131, 54C-39D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.35**	**275**	*i* P	**Pn**	**23 13 33.3**	**-1.1**
JTH				S	**Sb**	**23 13 52.5**	**+0.3**
JTH	**Tanohata**	**1.35**	**275**	A	A	23 13 33.3	
	comp=E,82nm,1.1s,comp=E,39nm,2.0s						
MIYJ	**Miyakonagasawa**	**1.41**	**260**	*i* P	**Pn**	**23 13 34.6**	**-0.6**
MIYJ				S	**Sn**	**23 13 53.7**	**+0.5**
MIYJ	**Miyakonagasawa**	**1.41**	**260**	A	A	23 13 34.6	
	comp=E,63nm,3.3s,comp=E,57nm,9.8s						
JKEN	**Kujiedanarisaw**	**1.51**	**285**	P	**Pn**	**23 13 35.4**	**-1.2**
JKEN				S	**Sn**	**23 13 55.4**	**-0.2**
JKEN	**Kujiedanarisaw**	**1.51**	**285**	A	A	23 13 35.4	
	comp=E,91nm,1.2s,comp=E,81nm,1.1s						
OFUJ	**Ofunato**	**1.69**	**244**	A	A	23 13 38.5	
	comp=E,36nm,4.3s,comp=E,54nm,3.7s						
JANG	**Nango**	**1.70**	**289**	*i* P	**Pn**	**23 13 38.3**	**-0.9**
JANG	**Nango**	**1.70**	**289**	A	A	23 13 38.3	
	comp=E,36nm,6.4s,comp=E,31nm,9.4s						
JKZ	**Kuzumaki**	**1.76**	**275**	A	A	23 13 39.6	
	comp=E,51nm,6.1s,comp=E,33nm,7.1s						
JOM	**Ohasama**	**1.83**	**259**	*i* P	**Pn**	**23 13 41.1**	**+0.1**
JOM				S	**Sb**	**23 14 05.1**	**-0.9**
JOM	**Ohasama**	**1.83**	**259**	A	A	23 13 41.1	
	comp=E,46nm,1.3s,comp=E,58nm,1.6s						
JKMT	**Kesennumamotoy**	**1.95**	**239**	A	A	23 13 42.4	
	comp=E,39nm,6.4s,comp=E,43nm,3.4s						
JSZI	**Iwateshizukuis**	**2.05**	**268**	A	A	23 13 43.8	
	comp=E,208nm,3.5s,comp=E,157nm,2.6s						
JMK	**Ichinoseki**	**2.06**	**245**	*i* P	**Pn**	**23 13 43.5**	**-0.6**
JMK				S	**Sn**	**23 14 09.9**	**+0.8**
JMK	**Ichinoseki**	**2.06**	**245**	A	A	23 13 43.5	
	comp=E,34nm,9.3s,comp=E,38nm,5.5s						
JARK	**Aomorirokkasho**	**2.08**	**305**	A	A	23 13 43.6	
	comp=E,41nm,5.2s,comp=E,40nm,4.2s						
JTM	**Tenmabayashi**	**2.17**	**297**	Pn	**Pn**	**23 13 45.7**	**0.0**
JTM	**Tenmabayashi**	**2.17**	**297**	A	A	23 13 45.1	
	comp=E,32nm,4.6s,comp=E,47nm,3.2s						
ERM	**Erimo**	**2.20**	**351**	Pn	**Pn**	**23 13 46.7**	**+0.5**
ERM	**Erimo**	**2.20**	**351**	*c* P	**Pn**	**23 13 46.2**	**+0.1**
ERM				pmax	pmax		
	comp=Z,561nm,1.3s						
JEM	**Erimo**	**2.20**	**351**	A	A	23 13 44.3	
	comp=Z,26nm,4.4s,comp=Z,17nm,3.9s						
JIO	**Ouri**	**2.24**	**233**	A	A	23 13 46.5	
	comp=Z,30nm,6.6s,comp=Z,41nm,3.3s						
JAHD	**Aomorihigashid**	**2.25**	**310**	A	A	23 13 45.9	
	comp=Z,94nm,1.4s,comp=Z,78nm,1.2s						
JIKH	**Ishinomakikobu**	**2.26**	**228**	A	A	23 13 46.8	
	comp=Z,47nm,3.8s,comp=Z,45nm,3.6s						
JAH	**Hinai**	**2.31**	**280**	A	A	23 13 47.5	
	comp=Z,55nm,1.6s,comp=Z,51nm,1.6s						
JRG	**Rokugo**	**2.34**	**260**	A	A	23 13 48.1	
	comp=Z,98nm,2.2s,comp=Z,100nm,1.8s						
JOFO	**Osakifurukawao**	**2.44**	**240**	A	A	23 13 49.3	
	comp=Z,248nm,5.0s,comp=Z,244nm,4.9s						
JTHR	**Tokachihiroo**	**2.46**	**355**	A	A	23 13 47.9	
	comp=Z,30nm,5.2s,comp=Z,15nm,4.7s						
JOT	**Ohata**	**2.49**	**309**	P	**Pn**	**23 13 50.2**	**+0.1**
JOT				S	**Sn**	**23 14 21.0**	**+1.2**
JOT	**Ohata**	**2.49**	**309**	A	A	23 13 50.2	
	comp=Z,26nm,2.4s,comp=Z,25nm,6.2s						
JNBK	**Urakawa-nobuka**	**2.52**	**345**	P	**Pn**	**23 13 49.9**	**-0.7**
JNBK	**Urakawa-nobuka**	**2.52**	**345**	A	A	23 13 49.9	
	comp=Z,26nm,6.3s,comp=Z,40nm,5.6s						
JHHS	**Hirosakihyakuz**	**2.62**	**289**	A	A	23 13 51.7	
	comp=Z,107nm,4.2s,comp=Z,148nm,4.0s						
JYW	**Yuwa**	**2.65**	**265**	A	A	23 13 52.3	
	comp=Z,166nm,1.4s,comp=Z,149nm,7.0s						
JNTW	**Noshirotokiwa**	**2.69**	**280**	A	A	23 13 52.7	
	comp=Z,145nm,4.5s,comp=Z,193nm,3.8s						
JYK	**Kaneyama**	**2.69**	**251**	*i* P	**Pn**	**23 13 52.9**	**+0.1**
JYK	**Kaneyama**	**2.69**	**251**	A	A	23 13 52.9	
	comp=Z,53nm,4.7s,comp=Z,64nm,3.6s						
JSHD	**Hidakashinhida**	**2.71**	**342**	A	A	23 13 51.8	
	comp=Z,72nm,4.9s,comp=Z,58nm,3.7s						
JOU	**Okura**	**2.73**	**238**	A	A	23 13 53.5	
	comp=Z,43nm,8.7s,comp=Z,62nm,4.5s						
JSI2	**Shiura 2**	**2.73**	**298**	A	A	23 13 53.2	
	comp=Z,65nm,1.4s,comp=Z,43nm,2.4s						
JCH	**Churui**	**2.78**	**356**	S	**Sn**	**23 14 23.9**	**-3.1**
JCH	**Churui**	**2.78**	**356**	A	A	23 14 23.9	
	comp=Z,27nm,5.6s,comp=Z,18nm,12.0s						
JKB	**Kayabe**	**2.83**	**317**	A	A	23 13 54.2	
	comp=Z,25nm,1.7s,comp=Z,19nm,4.5s						
JIW	**Iwasaki**	**2.86**	**286**	A	A	23 13 55.2	
	comp=Z,30nm,4.7s,comp=Z,34nm,9.2s						
JMM	**Marumori**	**2.96**	**229**	Pn	**Pn**	**23 13 54.8**	**-1.7**
JMM	**Marumori**	**2.96**	**229**	A	A	23 13 56.7	
	comp=Z,24nm,6.4s,comp=Z,22nm,6.9s						
JSR	**Shiriuchi**	**2.96**	**306**	A	A	23 13 56.3	
	comp=Z,20nm,5.8s,comp=Z,25nm,5.5s						
JYYZ	**Yamagatayuza**	**2.97**	**255**	A	A	23 13 57.0	
	comp=Z,117nm,3.0s,comp=Z,154nm,4.0s						
JMST	**Minamisoumatoc**	**3.00**	**226**	A	A	23 13 57.3	
	comp=Z,24nm,8.4s,comp=Z,23nm,4.1s						
JIAM	**Iburiatsuma**	**3.06**	**336**	A	A	23 13 56.9	
	comp=Z,52nm,5.6s,comp=Z,78nm,5.8s						
JOB	**Onbets**	**3.07**	**3**	A	A	23 13 56.3	
	comp=Z,20nm,6.8s,comp=Z,21nm,1.9s						
JBT2	**Biratori 2**	**3.08**	**343**	A	A	23 13 57.1	
	comp=Z,25nm,4.9s,comp=Z,23nm,4.3s						
JYS	**Shirataka**	**3.20**	**241**	A	A	23 14 00.3	
	comp=Z,62nm,2.6s,comp=Z,63nm,3.2s						
JTB	**Tobi-shima**	**3.20**	**260**	A	A	23 14 00.3	
	comp=Z,41nm,2.8s,comp=Z,47nm,3.7s						
JOMM	**Oshimamatsumae**	**3.22**	**303**	A	A	23 14 00.0	
	comp=Z,18nm,10.0s,comp=Z,23nm,3.9s						
JAK	**Akkeshi**	**3.26**	**14**	P	**Pn**	**23 13 58.8**	**-1.8**
JAK				S	**Sn**	**23 14 36.2**	**-2.6**
JAK	**Akkeshi**	**3.26**	**14**	A	A	23 13 58.8	
	comp=Z,14nm,5.3s,comp=Z,18nm,6.7s						
JNB	**Noboribetsu**	**3.27**	**324**	A	A	23 14 00.2	
	comp=Z,13nm,10.7s,comp=Z,9.0nm,9.9s						
JFK	**Kawauchi**	**3.27**	**222**	A	A	23 14 01.1	
	comp=Z,30nm,5.9s,comp=Z,19nm,6.1s						
JYA	**Atsumi**	**3.27**	**249**	A	A	23 14 01.4	
	comp=Z,57nm,1.7s,comp=Z,58nm,1.6s						
JYAR	**Yonezawaarcadi**	**3.32**	**236**	A	A	23 14 01.9	
	comp=Z,45nm,1.2s,comp=Z,43nm,1.1s						
JYM2	**Yakumo 2**	**3.35**	**314**	A	A	23 14 01.6	
	comp=Z,21nm,5.6s,comp=Z,17nm,2.4s						
JFR	**Furan**	**3.41**	**347**	A	A	23 14 01.6	
	comp=Z,11nm,12.7s,comp=Z,10.0nm,4.3s						
JEW	**Eniwo**	**3.41**	**332**	Pn	**Pn**	**23 14 03.5**	**+0.7**
JEW	**Eniwo**	**3.41**	**332**	*e* P	**Pn**	**23 14 02.3**	**-0.5**
JEW				S	**Sn**	**23 14 45.6**	**+3.0**
JEW	**Eniwo**	**3.41**	**332**	A	A	23 14 02.3	
	comp=Z,44nm,7.3s,comp=Z,37nm,2.1s						
JKHN	**Kushirohamanak**	**3.44**	**19**	A	A	23 14 01.3	
	comp=Z,25nm,2.5s,comp=Z,17nm,2.2s						
JFT	**Otama**	**3.46**	**229**	P	**Pn**	**23 14 02.4**	**-1.1**
JFT				*e* S	**Sn**	**23 14 43.7**	**0.0**
JFT	**Otama**	**3.46**	**229**	A	A	23 14 02.4	
	comp=Z,36nm,4.3s,comp=Z,51nm,3.2s						
JAR	**Ashorobuto**	**3.46**	**2**	P	**Pn**	**23 14 01.7**	**-1.7**
JAR				S	**Sn**	**23 14 41.4**	**-2.3**
JAR	**Ashorobuto**	**3.46**	**2**	A	A	23 14 01.7	
	comp=Z,13nm,1.9s,comp=Z,13nm,1.2s						
JOG3	**Oga3**	**3.49**	**273**	A	A	23 13 56.3	
	comp=Z,71nm,1.7s,comp=Z,69nm,2.8s						
ONAJ	**Iwakimizuishiy**	**3.51**	**220**	A	A	23 14 04.5	
	comp=Z,17nm,6.7s,comp=Z,14nm,3.9s						
JFFD	**Fukushimafurud**	**3.64**	**222**	A	A	23 14 06.4	
	comp=Z,15nm,8.1s,comp=Z,12nm,8.1s						
JAW	**Awa shima**	**3.66**	**249**	A	A	23 14 06.9	
	comp=Z,41nm,9.5s,comp=Z,43nm,4.8s						
JAB	**Ashibetsu**	**3.81**	**345**	A	A	23 14 07.3	
	comp=Z,28nm,3.6s,comp=Z,26nm,5.2s						
JISS	**Ishikarishitsu**	**3.81**	**335**	A	A	23 14 07.5	
	comp=Z,32nm,3.4s,comp=Z,44nm,5.7s						
JHST	**Hiyamasetana**	**3.83**	**314**	A	A	23 14 08.3	
	comp=Z,19nm,10.6s,comp=Z,14nm,6.7s						
JOSM	**Okushiri--Mats**	**3.85**	**307**	A	A	23 14 08.9	
	comp=Z,12nm,4.9s,comp=Z,15nm,5.8s						
NEM2	**Nemuro 2**	**3.87**	**24**	A	A	23 14 07.2	
	comp=Z,9.0nm,2.2s,comp=Z,8.0nm,1.9s						
NMR	**Nemuro--Hokkai**	**3.87**	**23**	*e* P	**Pn**	**23 14 06.5**	**-2.5**
NMR				*e* S	**Sn**	**23 14 50.0**	**-3.8**
JSH	**Shimam**	**3.88**	**317**	A	A	23 14 09.1	
	comp=Z,9.0nm,6.6s,comp=Z,11nm,8.3s						
JFY	**Yanaizu**	**3.91**	**233**	A	A	23 14 10.2	
	comp=Z,17nm,8.6s,comp=Z,18nm,6.6s						
JNS	**Sasagawa**	**3.92**	**240**	A	A	23 14 10.4	
	comp=Z,16nm,6.1s,comp=Z,24nm,5.3s						
JHO	**Hitachi**	**4.02**	**218**	A	A	23 14 11.6	
	comp=Z,11nm,7.2s,comp=Z,10.0nm,3.2s						
JNSB	**Nemuroshibetsu**	**4.07**	**14**	A	A	23 14 10.2	
	comp=Z,18nm,3.8s,comp=Z,18nm,3.5s						
JSB	**Shiboa**	**4.08**	**227**	A	A	23 14 12.6	
	comp=Z,38nm,4.2s,comp=Z,42nm,5.4s						
JKK2	**Kamakawa 2**	**4.08**	**351**	A	A	23 14 11.0	
	comp=Z,8.0nm,5.3s,comp=Z,7.0nm,7.9s						
JTKR	**Abashiri--Toko**	**4.13**	**3**	A	A	23 14 11.5	
	comp=Z,9.0nm,1.5s,comp=Z,7.0nm,6.8s						
JHR	**Hokuryu**	**4.15**	**341**	A	A	23 14 12.2	
	comp=Z,23nm,5.9s,comp=Z,29nm,4.9s						
JMP	**Maruseppu**	**4.17**	**357**	A	A	23 14 12.1	
	comp=Z,10.0nm,4.4s,comp=Z,8.0nm,8.7s						
JSK	**Shakotan**	**4.23**	**327**	A	A	23 14 13.7	
	comp=Z,10.0nm,7.4s,comp=Z,10.0nm,7.8s						
JHYU	**Hitachinakayam**	**4.23**	**215**	A	A	23 14 14.6	
	comp=Z,15nm,3.8s,comp=Z,12nm,6.9s						
ASAJ	**Asahikawa**	**4.34**	**350**	A	A	23 14 14.7	
	comp=Z,9.0nm,7.4s,comp=Z,10.0nm,4.9s						
RUSJ	**Misakicho**	**4.43**	**15**	*e* P	**Pn**	**23 14 16.0**	**-0.8**
RUSJ				*e* S	**Sn**	**23 15 07.9**	**+0.2**
JUON	**Uonuma**	**4.43**	**235**	A	A	23 14 17.7	
	comp=Z,14nm,7.8s,comp=Z,18nm,6.8s						
JIZZ	**Izumozaki**	**4.48**	**241**	A	A	23 14 18.3	
	comp=Z,67nm,6.6s,comp=Z,54nm,4.7s						
JYT	**Yasato**	**4.50**	**218**	Pn	**Pn**	**23 14 15.5**	**-2.2**
JYT	**Yasato**	**4.50**	**218**	A	A	23 14 18.4	
	comp=Z,14nm,4.3s,comp=Z,11nm,6.6s						
YUK	**Yuzh-Kuril'sk**	**4.51**	**21**	*e* P	**Pn**	**23 14 16.0**	**-1.9**
YUK				*e* S	**Sn**	**23 15 07.6**	**-2.2**
YUK				pmax	pmax		
	comp=N,138nm,0.2s						
YUK				pmax	pmax		
	comp=Z,677nm,0.2s						
YUK				pmax	pmax		
	comp=E,381nm,0.3s						
YUK				smax	smax		
	comp=N,5μm,0.5s						
YUK				smax	smax		
	comp=E,4μm,0.6s						
YUK				smax	smax		
	comp=N,14μm,1.2s						
YUK				smax	smax		
	comp=E,11μm,1.0s						
YUK				MLR	MLR		
	comp=E,4μm,8.0s						
YUK				MLR	MLR		
	comp=Z,4μm,8.0s						
YUK				MLR	MLR		
	comp=N,4μm,6.0s						
JSD	**Sado**	**4.55**	**248**	Pn	**Pn**	**23 14 17.9**	**-0.5**
JSD	**Sado**	**4.55**	**248**	A	A	23 14 19.3	
	comp=N,12nm,8.1s,comp=N,19nm,6.7s						
JIHU	**Itakohorinouch**	**4.57**	**213**	A	A	23 14 19.3	
	comp=N,82nm,3.9s,comp=N,74nm,5.6s						
JKT	**Katashina**	**4.60**	**230**	A	A	23 14 20.0	
	comp=N,10.0nm,6.1s,comp=N,19nm,8.4s						
CHOJ	**Chosi**	**4.67**	**209**	A	A	23 14 20.6	
	comp=N,25nm,5.5s,comp=N,15nm,4.9s						
JAG	**Ashikaga**	**4.73**	**225**	A	A	23 14 21.7	
	comp=N,11nm,8.3s,comp=N,10.0nm,5.6s						
JSS	**Shosan**	**4.74**	**345**	A	A	23 14 20.5	
	comp=N,18nm,5.5s,comp=N,20nm,5.1s						
JYG	**Yagishiri**	**4.87**	**341**	A	A	23 14 22.3	
	comp=N,12nm,6.6s,comp=N,10.0nm,5.8s						
JJN	**Nakama**	**5.08**	**239**	A	A	23 14 26.7	
	comp=N,20nm,4.2s,comp=N,21nm,4.6s						
JGK	**Kuni**	**5.10**	**232**	A	A	23 14 27.0	
	comp=N,14nm,3.8s,comp=N,15nm,3.1s						
JHU	**Hanno**	**5.25**	**222**	A	A	23 14 29.0	
	comp=N,9.0nm,7.1s,comp=N,7.0nm,8.8s						
JRY	**Ryugami san**	**5.33**	**226**	A	A	23 14 30.2	
	comp=N,7.0nm,5.3s,comp=N,12nm,4.5s						
MJAR	**Matsushiro Arr**	**5.38**	**234**	Pn	**Pn**	**23 14 28.4**	**-1.5**
	comp=N,1.6nm,0.3s,baz=51,slow=11,SNR=120						
MJAR				Sn	**Sn**	**23 15 31.2**	**0.0**
	baz=70,slow=27						
MJAR				LR	LR	23 16 35.1	
	comp=N,7μm,19.7s,baz=135,slow=39 comp=N,180nm,0.9s						
MJAR	**Matsushiro Arr**	**5.38**	**234**	P	**Pn**	**23 14 28.4**	**-1.5**
MJAR						23 15 31.2	
MAJO	**Matsushiro**	**5.38**	**234**	Pn	**Pn**	**23 14 30.0**	**+0.1**
MAJO	**Matsushiro**	**5.38**	**234**	*c* *i* P	**Pn**	**23 14 30.4**	**+0.5**
JKUC	**kamogawauchiur**	**5.40**	**211**	A	A	23 14 30.9	
	comp=N,21nm,6.1s,comp=N,20nm,6.0s						
JSZ	**Suzu**	**5.44**	**246**	A	A	23 14 31.9	
	comp=N,8.0nm,4.8s,comp=N,9.0nm,12.8s						
JSGW	**Sagamiharawaka**	**5.48**	**221**	A	A	23 14 32.2	
	comp=N,10.0nm,5.4s,comp=N,11nm,6.4s						
JNG	**Nsakai**	**5.54**	**233**	A	A	23 14 33.1	
	comp=N,10.0nm,5.5s,comp=N,11nm,5.7s						
JRR	**Rishiri**	**5.56**	**343**	A	A	23 14 32.0	
	comp=N,48nm,5.8s,comp=N,55nm,6.3s						
JHG	**Hegura jima**	**5.59**	**251**	A	A	23 14 33.9	
	comp=N,9.0nm,5.2s,comp=N,9.0nm,4.3s						
JWK2	**Keihoku**	**5.62**	**348**	A	A	23 14 32.7	
	comp=N,14nm,7.6s,comp=N,14nm,6.0s						
JOD2	**Odawara 2**	**5.81**	**220**	A	A	23 14 36.8	
	comp=N,10.0nm,3.3s,comp=N,12nm,2.5s						
JNT	**Takato**	**5.87**	**229**	A	A	23 14 37.7	
	comp=N,6.0nm,6.1s,comp=N,11nm,9.0s						
JTT	**Ttatey**	**5.91**	**239**	A	A	23 14 38.3	
	comp=N,9.0nm,2.9s,comp=N,11nm,10.6s						
JJH	**Hakui**	**6.11**	**244**	A	A	23 14 41.1	
	comp=N,7.0nm,6.9s,comp=N,16nm,4.2s						
KUR	**Kuril'sk**	**6.24**	**29**	*e* P	**Pn**	**23 14 40.8**	**-0.8**
KUR				*e* S	**Sn**	**23 15 46.9**	**-5.3**
KUR				pmax	pmax		
	comp=Z,316nm,0.4s						
KUR				smax	smax		
	comp=E,947nm,0.5s						
KUR				smax	smax		
	comp=N,736nm,0.4s						
KUR				MLR	MLR		
	comp=Z,8μm,14.0s						
JGF	**Kuroka**	**6.52**	**231**	Pn	**Pn**	**23 14 45.1**	**-0.4**
INU	**Inuyama**	**6.89**	**232**	Pn	**Pn**	**23 14 50.2**	**-0.4**
YSS	**Yuzh-Sakhalins**	**7.14**	**355**	Pn	**Pn**	**23 14 54.7**	**+0.7**
YSS	**Yuzh-Sakhalins**	**7.14**	**355**	*c* *i* P	**Pn**	**23 14 53.8**	**-0.2**
YSS				*e* S	**Sn**	**23 16 13.8**	**-0.6**
YSS				pmax	pmax		
	comp=Z,700nm,8.4s						
YSS				pmax	pmax		
	comp=N,400nm,7.5s						
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				MLR	MLR		
	comp=Z,12μm,12.0s						
YSS				MLR	MLR		
	comp=N,7μm,14.0s						
YSS				MLR	MLR		
	comp=E,6μm,16.0s						
TEY	**Ternei**	**7.34**	**317**	*c* *e* P	**Pn**	**23 14 56.8**	**+0.1**
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				pmax	pmax		
	comp=N,100nm,7.7s						
TEY				pmax	pmax		
	comp=E,100nm,7.7s						
TEY				pmax	pmax		
	comp=Z,100nm,7.6s						
JHJ2	**Mitsune**	**7.38**	**206**	Pn	**Pn**	**23 14 55.9**	**-1.4**
UGL	**Uglegorsk**	**9.30**	**354**	*e* P	**Pn**	**23 15 25.1**	**+1.5**
UGL				S	**Sn**	**23 17 06.8**	**-0.8**
UGL				pmax	pmax		
	comp=Z,79nm,0.7s						
UGL				smax	smax		
	comp=E,1μm,5.0s						
UGL				smax	smax		
	comp=N,1μm,3.7s						
UGL				MLR	MLR		
	comp=Z,7μm,20.0s						
UGL				MLR	MLR		
	comp=N,5μm,15.0s						
UGL				MLR	MLR		
	comp=E,19μm,18.0s						
VLA	**Vladivostok**	**9.39**	**294**	*d* *i* P	**Pn**	**23 15 26.1**	**+1.2**
VLA				pmax

JCJ	**Chichijima**	**12.77**	**186**	Pn	Pn	23 16 04.8	-6.3		
	comp=Z,9.7nm,0.3s,baz=308,slow=23,SNR=2.4								
JCJ				Sn	Sn	23 18 15.4	-17		
	comp=Z,15nm,0.3s,baz=313,slow=19,SNR=5.6								
JCJ	**Chichijima**	**12.77**	**186**	Pn	**Pn**	**23 16 09.0**	**-2.1**		
TJN	**Taejon**	**13.26**	**260**	Pn	**Pn**	**23 16 18.2**	**+0.5**		
TJN	**Taejon**	**13.26**	**260**	⇓*e*P	**Pn**	**23 16 19.2**	**+1.5**		
BNX	**BinXian**	**13.28**	**302**	⇑P	**Pn**	**23 16 18.4**	**+0.4**		
BNX				pP	**P**	**23 16 25.9**	**-1.7**		
BNX				sP		23 16 33.6			
BNX				S	**Sn**	**23 18 42.5**	**-2.4**		
BNX				sS	S	23 18 55.3	-14		
BNX				pmax	pmax				
	comp=Z,130nm,1.2s								
BNX				pmax	pmax				
	comp=Z,1μm,7.9s								
BNX				LR	LR				
	comp=Z,8μm,12.6s								
BNX				LR	LR				
	comp=Z,5μm,14.6s								
BNX				LR	LR				
	comp=Z,11μm,13.6s								
INCN	**Inchon**	**13.48**	**265**	Pn	**Pn**	**23 16 21.5**	**+0.7**		
INCN	**Inchon**	**13.48**	**265**	P	**Pn**	**23 16 21.5**	**+0.7**		
JSU	**Suzuyama**	**13.54**	**236**		**Pn**	**23 16 20.0**	**-1.6**		
NAWB	**Namwon**	**13.59**	**256**	Pn	**Pn**	**23 16 22.6**	**+0.3**		
OKH	**Okha**	**13.72**	**358***c*	*i*P	**Pn**	**23 16 22.6**	**-1.4**		
OKH				pmax	pmax				
	comp=Z,300nm,10.5s								
OKH				MLR	MLR				
	comp=N,10μm,17.0s								
OKH				MLR	MLR				
	comp=E,16μm,18.0s								
OKH				MLR	MLR				
	comp=Z,7μm,17.0s								
SKR	**Severo-Kuril's**	**13.95**	**35**	*e*P	**P**	**23 16 34.6**	**-0.4**		
SKR				*e*S	**Sn**	**23 18 58.2**	**-2.9**		
SKR				pmax	pmax				
	comp=Z,23nm,0.7s								
SKR				MLR	MLR				
	comp=Z,1μm,19.0s								
CN2	**Changchun**	**14.11**	**292**	*e*P	**Pn**	**23 16 28.0**	**-1.4**		
CN2				PP	**PnPn**	**23 16 40.0**	**+2.8**		
CN2				S	**Sn**	**23 19 02.8**	**-2.5**		
CN2				sS	S	23 19 16.0	-10		
CN2				pmax	pmax				
	comp=Z,20nm,1.3s								
CN2				pmax	pmax				
	comp=Z,1μm,9.0s								
CN2				LR	LR				
	comp=Z,9μm,14.0s								
CN2				LR	LR				
	comp=Z,5μm,14.0s								
CN2				LR	LR				
	comp=Z,5μm,15.0s								
SNY	**Shenyang**	**15.30**	**284**	⇓P	**Pn**	**23 16 46.3**	**+0.9**		
SNY				S	**Sn**	**23 19 32.3**	**-1.8**		
SNY				pmax	pmax				
	comp=Z,71nm,1.1s								
SNY				LR	LR				
	comp=Z,5μm,15.4s								
SNY				LR	LR				
	comp=Z,6μm,14.2s								
SNY				LR	LR				
	comp=Z,8μm,12.6s								
PEA0B	**Petropavlovsk-**	**16.40**	**31**	P	**P**	**23 17 01.6**	**-0.7**		
PEA0B	**Petropavlovsk-**	**16.40**	**31**	⇓*e*P	**P**	**23 17 01.3**	**-0.9**		
PETK	**Petropavlovsk-**	**16.40**	**31**	Pn	**Pn**	**23 17 00.2**	**+0.7**		
	comp=Z,0.2nm,0.3s,baz=172,slow=3.0,SNR=16								
PETK				Sn	**Sn**	**23 20 06.6**	**+5.9**		
	comp=Z,0.8nm,0.3s,baz=317,slow=27,SNR=7.5								
PETK				LR	LR	23 22 57.4			
	comp=Z,2μm,19.2s,baz=218,slow=36								
	comp=Z,14nm,1.1s								
PETK	**Petropavlovsk-**	**16.40**	**31**	P	**P**	**23 17 02.4**	**+0.2**		
PETK	**Petropavlovsk-**	**16.40**	**31**	P	**Pn**	**23 17 00.2**	**+0.7**		
PET	**Petropavlovsk**	**16.73**	**33**		**P**	**23 17 05.6**	**-0.2**		
PET	**Petropavlovsk**	**16.73**	**33**	⇑*i*P	**P**	**23 17 06.8**	**+1.0**		
PET				*e*S	**Sn**	**23 20 12.6**	**+3.9**		
PET				pmax	pmax				
	comp=Z,100nm,1.2s								
PET				pmax	pmax				
	comp=Z,200nm,13.9s								
PET				MLR	MLR				
	comp=Z,7μm,14.0s								
PET				MLR	MLR				
	comp=Z,7μm,14.0s								
DL2	**Dalian**	**17.02**	**274**	P	**Pn**	**23 17 06.6**	**-0.9**		
DL2				S	**Sn**	**23 20 19.8**	**+3.7**		
DL2				pmax	pmax				
	comp=Z,220nm,1.1s								
DL2				pmax	pmax				
	comp=Z,1μm,11.9s								
DL2				LR	LR				
	comp=Z,4μm,13.0s								
DL2				LR	LR				
	comp=Z,3μm,14.5s								
DL2				LR	LR				
	comp=Z,4μm,16.2s								
JMZ	**Minamidaito 2**	**17.41**	**220**	Pn	**Pn**	**23 17 10.4**	**-2.0**		
ZEA	**Zeya**	**17.79**	**327**	*e*P	**Pn**	**23 17 14.9**	**-2.1**		
ZEA				*e*S	Sn	23 20 21.0	-14		
ZEA				pmax	pmax				
	comp=N,60nm,1.1s								
ZEA				pmax	pmax				
	comp=E,40nm,1.1s								
ZEA				pmax	pmax				
	comp=Z,90nm,1.1s								
ZEA				pmax	pmax				
	comp=Z,400nm,5.8s								
ZEA				smax	smax				
	comp=N,200nm,12.4s								
ZEA				smax	smax				
	comp=E,200nm,9.7s								
ZEA				MLR	MLR				
	comp=E,5μm,16.0s								
ZEA				MLR	MLR				
	comp=N,2μm,13.0s								
ZEA				MLR	MLR				
	comp=Z,5μm,14.0s								
JOW	**Kunigami**	**18.20**	**229**	P	**Pn**	**23 17 21.6**	**-0.6**		
HIA	**Hailar**	**19.38**	**307**	P	**P**	**23 17 33.6**	**-1.5**		
HIA				IAmb	IAmb	23 17 44.3			
	comp=Z,99nm,1.1s								
HIA	**Hailar**	**19.38**	**307**	P	**P**	**23 17 33.6**	**-1.5**		
HIA				pmax	pmax				
	comp=Z,99nm,1.1s								
SSE	**Sheshan**	**20.20**	**251**	P	**P**	**23 17 42.0**	**-2.2**		
SSE				S	Sn	23 21 33.0	0.0		
SSE				pmax	pmax				
	comp=Z,10.0nm,0.5s								
SSE				pmax	pmax				
	comp=Z,310nm,7.3s								
SSE				LR	LR				
	comp=Z,3μm,12.2s								
SSE				LR	LR				
	comp=Z,2μm,12.7s								
MA2	**Magadan**	**20.27**	**11**	P	**P**	**23 17 44.9**	**+0.2**		
	comp=Z,43nm,0.9s,baz=189,slow=9.1,SNR=22								
MA2				S	**S**	**23 21 30.6**	**-0.3**		
	comp=Z,2.3nm,0.5s,baz=113,slow=18,SNR=1.0								
MA2				LR	LR	23 26 24.9			
	comp=Z,3μm,19.3s,baz=201,slow=39								
	comp=Z,43nm,0.9s								
MA2	**Magadan**	**20.27**	**11**	P	**P**	**23 17 45.4**	**+0.7**		
MA2	**Magadan**	**20.27**	**11**	*d*iP	**P**	**23 17 45.8**	**+1.1**		
MA2				pmax	pmax				
	comp=Z,64nm,1.0s								
XLT	**XiLinHaoTe**	**20.86**	**290**	⇑*i*P	**P**	**23 17 50.0**	**-1.4**		
XLT				sP	pP	23 17 57.4	+0.7		
XLT				SS	Sn	23 22 12.1	+23		
XLT				pmax	pmax				
	comp=Z,210nm,1.3s								
XLT				LR	LR				
	comp=Z,340nm,14.3s								
XLT				LR	LR				
	comp=Z,3μm,15.5s								
XLT				LR	LR				
	comp=Z,4μm,15.7s								
BJI	**Beijing**	**21.01**	**279**	P	**P**	**23 17 50.1**	**-2.8**		
BJI				S	**S**	**23 21 46.0**	**0.0**		
BJI				pmax	pmax				
	comp=Z,18nm,1.1s								
BJI				pmax	pmax				
	comp=Z,360nm,3.5s								
BJI				LR	LR				
	comp=Z,790nm,13.7s								
BJI				LR	LR				
	comp=Z,4μm,15.2s								
BJI				LR	LR				
	comp=Z,5μm,13.7s								
BJT	**Baijiatuau**	**21.02**	**279**	IAmb	IAmb	23 18 10.8			
	comp=Z,101nm,1.2s								
TIA	**Tai'an**	**21.15**	**269**	⇓P	**P**	**23 17 52.4**	**-2.1**		
TIA				S	Sn	23 21 53.5	-2.3		
TIA				pmax	pmax				
	comp=Z,160nm,1.1s								
TIA				pmax	pmax				
	comp=Z,760nm,11.8s								
TIA				LR	LR				
	comp=Z,5μm,12.6s								
TIA				LR	LR				
	comp=Z,7μm,13.7s								
TIA				LR	LR				
	comp=Z,11μm,13.5s								
NJ2	**Nanjing**	**21.45**	**256**	⇑P	**P**	**23 17 55.4**	**-2.3**		
NJ2				pP	**sP**	**23 18 04.6**	**-0.9**		
NJ2				sP	**pwP**	**23 18 09.3**	**+3.5**		
NJ2				pmax	pmax				
	comp=Z,53nm,1.1s								
NJ2				pmax	pmax				
	comp=Z,330nm,3.5s								
NJ2				LR	LR				
	comp=Z,6μm,18.5s								
NJ2				LR	LR				
	comp=Z,4μm,16.1s								
NJ2				LR	LR				
	comp=Z,5μm,17.3s								
HNS	**HongShan**	**22.68**	**273**	⇑P	**P**	**23 18 06.9**	**-3.9**		
HNS				S	**S**	**23 22 08.9**	**-9.0**		
HNS				pmax	pmax				
	comp=Z,40nm,1.1s								
HNS				LR	LR				
	comp=Z,2μm,13.5s								
HNS				LR	LR				
	comp=Z,7μm,13.9s								
HNS				LR	LR				
	comp=Z,9μm,13.5s								
YOJ	**Yonaguni jima**	**23.14**	**235**	P	**P**	**23 18 12.6**	**-3.1**		
YOJ	**Yonaguni jima**	**23.14**	**235**	P	**P**	**23 18 12.6**	**-3.1**		
YOJ				pmax	pmax				
	comp=Z,32nm,0.8s								
SEY	**Seymchan**	**23.72**	**10**	P	**P**	**23 18 20.9**	**-0.2**		
	comp=Z,79nm,1.1s,baz=196,slow=6.4,SNR=40								
SEY				S	**S**	**23 22 33.6**	**-1.2**		
	comp=Z,1.7nm,0.2s,baz=221,slow=19,SNR=1.3								
	comp=Z,79nm,1.1s								
SEY	**Seymchan**	**23.72**	**10**	⇓*e*P	**P**	**23 18 21.3**	**+0.2**		
SEY				pmax	pmax				
	comp=Z,97nm,1.0s								
TATO	**Taipei**	**23.76**	**238**	P	**P**	**23 18 20.0**	**-1.7**		
TATO	**Taipei**	**23.76**	**238**	P	**P**	**23 18 19.6**	**-2.2**		
TATO				P	**P**	**23 18 19.6**	**-2.2**		
YAK	**Yakutsk**	**23.79**	**344**	P	**P**	**23 18 20.3**	**-1.4**		
	comp=Z,76nm,1.0s,baz=160,slow=1.6,SNR=15								
YAK				S	**S**	**23 22 29.7**	**-6.2**		
	comp=Z,6.8nm,0.4s,baz=160,slow=18,SNR=1.2								
YAK				LR	LR	23 28 14.2			
	comp=Z,2μm,18.2s,baz=99,slow=38								
	comp=Z,76nm,1.0s								
YAK	**Yakutsk**	**23.79**	**344**	P	**P**	**23 18 20.8**	**-1.0**		
YAK	**Yakutsk**	**23.79**	**344**	*e*P	**P**	**23 18 20.5**	**-1.2**		
YAK				*e**PP	**pwP**	**23 18 31.1**	**+1.4**		
YAK				*e*PPP	PPP	23 19 01.8			
YAK				*e*S	**S**	**23 22 34.1**	**-1.8**		
YAK				*e*SSS	SSS	23 23 37.5			
YAK				pmax	pmax				
	comp=Z,103nm,0.9s								
YAK				pmax	pmax				
	comp=E,6.0nm,0.9s								
YAK				pmax	pmax				
	comp=N,41nm,1.1s								
YAK				pmax	pmax				
	comp=Z,109nm,1.0s								
YAK				pmax	pmax				
	comp=E,19nm,0.8s								
YAK				pmax	pmax				
	comp=N,126nm,1.8s								
YAK				smax	smax				
	comp=E,157nm,2.0s								
YAK				smax	smax				
	comp=N,371nm,1.9s								
CIT	**Chita**	**24.01**	**310**	*e*P	**P**	**23 18 22.2**	**-1.8**		
CIT				*e*		23 18 32.0			
CIT				*e*		23 18 52.2			
CIT				*e*		23 19 12.8			
CIT				pmax	pmax				
	comp=Z,404nm,1.4s								
YHNB	**Yeheng**	**24.04**	**238**	IAmb	IAmb	23 18 42.6			
	comp=Z,45nm,1.0s								
NACB	**Ninganchiao**	**24.25**	**236**	P	**P**	**23 18 23.3**	**-3.1**		
NACB				IAmb	IAmb	23 18 25.6			
	comp=Z,53nm,1.0s								
TIY	**Taiyuan**	**24.34**	**275**	⇓P	**P**	**23 18 29.8**	**+2.6**		
TIY				sP	**sP**	**23 18 36.5**	**+1.1**		
TIY				S	**S**	**23 22 51.8**	**+6.3**		
TIY				pmax	pmax				
	comp=Z,27nm,0.5s								
TIY				pmax	pmax				
	comp=Z,800nm,7.7s								
TIY				LR	LR				
	comp=N,4μm,16.1s								
TIY				LR	LR				
	comp=E,1μm,13.1s								
TIY				LR	LR				
	comp=Z,3μm,13.7s								
TIY	**Taiyuan**	**24.34**	**275**	*e*P	**P**	**23 18 29.0**	**+1.8**		
TIY				PP	**PnPn**	**23 18 59.0**	**+1.5**		
TIY				S	**S**	**23 22 48.6**	**+3.1**		
TIY				pmax	pmax				
	comp=Z,37nm,0.8s								
TIY				pmax	pmax				
	comp=Z,810nm,9.0s								
TIY				LR	LR				
	comp=Z,4μm,15.8s								
TIY				LR	LR				
	comp=Z,1μm,13.7s								
TIY				LR	LR				
	comp=Z,3μm,16.2s								
SHEM	**Shemya Is, Ala**	**24.49**	**48**	S	**S**	**23 22 47.4**	**+0.1**		
	comp=Z,22nm,0.8s,baz=240,slow=10,SNR=1.8								
SHEM				LR	LR	23 27 05.8			
	comp=Z,252nm,21.6s,baz=270,slow=34								
SSLB	**Suanglung**	**24.93**	**237**	P	**P**	**23 18 29.8**	**-2.8**		
YULB	**Yu-li**	**25.00**	**236**	P	**P**	**23 18 29.9**	**-3.2**		
YULB				IAmb	IAmb	23 18 58.7			
	comp=Z,70nm,1.0s								
LYN	**LuoYang**	**25.29**	**268**	⇑*i*P	**P**	**23 18 32.1**	**-3.7**		
LYN				S	**S**	**23 23 02.0**	**+1.4**		
LYN				pmax	pmax				
	comp=Z,20nm,0.9s								
LYN				pmax	pmax				
	comp=Z,980nm,8.2s								
LYN				LR	LR				
	comp=Z,5μm,13.5s								
LYN				LR	LR				
	comp=Z,10μm,14.7s								
LYN				LR	LR				
	comp=Z,11μm,13.9s								
TPUB	**Ta-pu**	**25.49**	**237**	P	**P**	**23 18 35.0**	**-2.7**		
TWG	**Pinlang**	**25.55**	**235**	P	**P**	**23 18 36.3**	**-1.9**		
WHN	**Wuhan**	**25.56**	**258**	⇑*i*P	**P**	**23 18 38.1**	**-0.1**		
WHN				sP	**pwP**	**23 18 47.3**	**+0.7**		
WHN				S	**S**	**23 23 08.9**	**+4.1**		
WHN				pmax	pmax				
	comp=Z,560nm,1.1s								
WHN				LR	LR				
	comp=Z,22μm,16.6s								
WHN				LR	LR				
	comp=Z,12μm,16.7s								
WHN				LR	LR				
	comp=Z,10μm,15.9s								
BTO	**Baotou**	**25.58**	**283**	*e*P	**P**	**23 18 38.0**	**-0.4**		
BTO				S	**S**	**23 23 09.8**	**+4.5**		
BTO				LR	LR				
	comp=Z,13μm,13.1s								
BTO				LR	LR				
	comp=Z,15μm,15.1s								
QZH	**Quanzhou**	**25.71**	**242**	⇑*i*P	**P**	**23 18 38.8**	**-0.8**		
QZH				S	**S**	**23 23 05.9**	**-1.4**		
QZH				pmax	pmax				
	comp=Z,53nm,1.8s								
QZH				pmax	pmax				
	comp=Z,990nm,3.0s								
QZH				LR	LR				
	comp=Z,3μm,16.6s								
QZH				LR	LR				
	comp=Z,2μm,16.6s								
QZH				LR	LR				
	comp=Z,3μm,12.8s								
KNMB	**Chin-men Tao**	**26.17**	**242**	P	**P**	**23 18 44.0**	**+0.3**		
GUMO	**Guam**	**26.17**	**177**	LR	LR	23 29 29.7			
	comp=Z,1μm,18.9s,baz=4.0,slow=38								
BOD	**Bodaibo**	**26.20**	**323**	*e*P	**P**	**23 18 43.5**	**-0.3**		
BOD				pmax	pmax				
	comp=Z,105nm,1.4s								
ULN	**Ulaanbaatar**	**27.35**	**299**	P	**P**	**23 18 54.9**	**+0.4**		
ULN	**Ulaanbaatar**	**27.35**	**299**	*c* iP	**P**	**23 18 54.9**	**+0.4**		
ULN				pmax	pmax				
	comp=Z,121nm,1.3s								
ULN	**Ulaanbaatar**	**27.35**	**299**	P	**P**	**23 18 55.5**	**+1.0**		
SONM	**Songino Array**	**27.80**	**299**	P	**P**	**23 18 58.6**	**+0.2**		
	comp=Z,24nm,0.9s,baz=105,slow=8.3,SNR=102								
SONM				LR	LR	23 30 10.1			
	comp=Z,1μm,18.5s,baz=104,slow=37								
	comp=Z,24nm,0.9s								
SONM	**Songino Array**	**27.80**	**299**	P	**P**	**23 18 59.0**	**+0.6**		
SONM	**Songino Array**	**27.80**	**299**	P	**P**	**23 18 58.6**	**+0.2**		
CNSH	**ChangSha**	**27.83**	**255**	⇑P	**P**	**23 18 58.6**	**-0.1**		
CNSH				S	**S**	**23 23 42.1**	**+1.3**		
CNSH				pmax	pmax				
	comp=Z,79nm,1.2s								
CNSH				LR	LR				
	comp=Z,3μm,14.4s								
CNSH				LR	LR				
	comp=Z,3μm,13.5s								
CNSH				LR	LR				
	comp=Z,4μm,13.3s								
XAN	**Xi'an**	**28.21**	**269**	⇑P	**P**	**23 19 01.8**	**-0.3**		
XAN				pP	pP	23 19 06.4	-1.5		
XAN				sP	pwP	23 19 09.0	-1.1		
XAN				S	**S**	**23 23 46.6**	**-0.2**		
XAN				sS	sS	23 23 59.8	+3.1		
XAN				pmax	pmax				
	comp=Z,31nm,1.1s								
XAN				pmax	pmax				
	comp=Z,730nm,5.6s								
XAN				LR	LR				
	comp=Z,5μm,14.6s								
XAN				LR	LR				
	comp=Z,6μm,15.2s								
XAN				LR	LR				
	comp=Z,6μm,14.3s								
H11N2	**WAKE ISLAND Hy**	**28.31**	**128**	T	T	23 48 34.6			
	baz=321								
H11N1	**WAKE ISLAND Hy**	**28.32**	**128**	T	T	23 48 30.8			
	baz=321								
H11N3	**WAKE ISLAND Hy**	**28.33**	**128**	T	T	23 48 32.2			
	baz=321								
H11S1	**WAKE ISLAND Hy**	**29.14**	**130**	T	T	23 49 39.7			
	baz=322								
H11S3	**WAKE ISLAND Hy**	**29.14**	**130**	T	T	23 49 36.0			
	baz=322								
H11S2	**WAKE ISLAND Hy**	**29.15**	**130**	T	T	23 49 30.7			
	baz=322								
IRK	**Irkutsk**	**29.62**	**308**	*e*P	**P**	**23 19 14.9**	**+0.5**		
IRK				pmax	pmax				
	comp=Z,111nm,1.4s								
ZAK	**Zakamensk**	**30.01**	**304**	*e*P	**P**	**23 19 18.3**	**+0.3**		
ZAK				*e*		23 20 18.0			
ZAK				pmax	pmax				
	comp=Z,49nm,1.3s								
ZAK				pmax	pmax				
	comp=Z,27nm,1.3s								
HKPS	**Hong Kong Po S**	**30.53**	**244**	P	**P**	**23 19 23.8**	**+1.1**		
GZH	**Guangzhou**	**30.55**	**246**	P	**P**	**23 19 19.9**	**-3.0**		
GZH				S	**S**	**23 24 18.3**	**-5.3**		
GZH				LR	LR				
	comp=Z,4μm,21.3s								
GZH				LR	LR				
	comp=Z,3μm,20.1s								
BILL	**Bilibino**	**30.85**	**16**	P	**P**	**23 19 26.5**	**+1.3**		
BILL				IAmb	IAmb	23 19 48.0			
	comp=Z,22nm,0.9s								
BILL	**Bilibino**	**30.85**	**16**	*c* iP	**P**	**23 19 26.3**	**+1.2**		
BILL				*e**PP	**pP**	**23 19 29.7**	**-1.0**		
BILL				*e*		23 20 28.2			
BILL				*e*		23 22 21.8			
BILL				*e*SS	SS	23 26 11.7	-28		
BILL				pmax	pmax				
	comp=Z,23nm,1.0s								
BILL				MLR	MLR				
	comp=Z,1μm,16.0s								
GULI	**GuiLin**	**31.35**	**253**	⇑P	**P**	**23 19 29.4**	**-0.5**		
GULI				S	**S**	**23 24 33.4**	**-2.7**		
GULI				pmax	pmax				
	comp=Z,40nm,1.3s								
GULI				LR	LR				
	comp=Z,3μm,16.3s								
GULI				LR	LR				
	comp=Z,3μm,14.1s								
GULI				LR	LR				
	comp=Z,2μm,14.1s								
LZH	**Lanzhou**	**31.40**	**276**	⇓P	**P**	**23 19 28.6**	**-1.9**		
LZH				sP	sP	23 19 41.3	+2.7		
LZH				PP	**PnPn**	**23 20 28.8**	**-4.5**		
LZH				S	**S**	**23 24 41.0**	**+4.0**		
LZH				pmax	pmax				
	comp=Z,35nm,1.5s								
LZH				pmax	pmax				
	comp=Z,220nm,5.8s								
LZH				LR	LR				
	comp=Z,3μm,12.0s								
LZH				LR	LR				
	comp=Z,6μm,13.4s								
LZH				LR	LR				
	comp=Z,7μm,13.4s								
TIXI	**Tiksi**	**32.75**	**351**	P	**P**	**23 19 42.1**	**+0.4**		
	comp=Z,4.8nm,0.7s,baz=90,slow=23,SNR=1.8								
TIXI				S	**S**	**23 24 55.6**	**-1.3**		
	comp=Z,7.8nm,1.0s,baz=92,slow=23,SNR=1.6								
TIXI				LR	LR	23 34 40.1			
	comp=Z,2μm,18.5s,baz=181,slow=39								
TIXI	**Tiksi**	**32.75**	**351**	P	**P**	**23 19 43.0**	**+1.4**		
TIXI	**Tiksi**	**32.75**	**351**	*c* iP	**P**	**23 19 42.0**	**+0.4**		
TIXI				pmax	pmax				
	comp=Z,17nm,1.1s								
GYA	**Guiyang**	**33.45**	**258**	⇑*i*P	**P**	**23 19 48.0**	**-0.5**		
GYA				pP	pP	23 19 54.6	+0.5		
GYA				PP	**PP**	**23 21 04.4**	**+0.2**		
GYA				S	**S**	**23 25 08.5**	**-0.5**		
GYA				pmax	pmax				
	comp=Z,85nm,1.0s								
GYA				LR	LR				
	comp=Z,4μm,14.0s								
GYA				LR	LR				
	comp=Z,2μm,12.5s								
GYA				LR	LR				
	comp=Z,3μm,16.6s								
CD2	**Chengdu**	**33.47**	**267**	P	**P**	**23 19 48.0**	**-0.6**		
CD2				pP	pP	23 19 54.0	-0.3		
CD2				S	**S**	**23 25 09.6**	**+0.5**		
CD2				sS	sS	23 25 17.8	-1.3		
CD2				LR	LR				
	comp=Z,7μm,15.3s								
CD2				LR	LR				
	comp=Z,4μm,14.5s								
CD2				LR	LR				
	comp=Z,7μm,14.9s								
GTA	**Gaotai**	**33.49**	**284**	⇑P	**P**	**23 19 49.4**	**+0.7**		
GTA				pP	pwP	23 19 57.6	+0.8		
GTA				sP	sP	23 20 02.3	+5.5		
GTA				PP	**PnPn**	**23 21 00.9**	**+0.9**		
GTA				S	**S**	**23 25 08.3**	**-1.1**		
GTA				sS	sS	23 25 23.8	+4.4		
GTA				pmax	pmax				
	comp=Z,56nm,1.0s								
GTA				pmax	pmax				
	comp=Z,550nm,7.6s								
GTA				LR	LR				
	comp=Z,1μm,14.9s								
GTA				LR	LR				
	comp=Z,5μm,16.0s								
GTA				LR	LR				
	comp=Z,5μm,16.0s								
KNGR	**Kungurtug, Tuv**	**33.70**	**304**	⇓*e*P	**P**	**23 19 51.1**	**+0.7**		
KNGR				pmax	pmax				
	comp=Z,50nm,1.3s								

QIZ	**Qiongzhong**	**35.68**	**244**	P	**P**	**23 20 08.3 +0.6**					
QIZ				PP	**PP**	**23 21 29.5 +0.7**					
QIZ				S	**S**	**23 25 45.1 +1.8**					
QIZ				pmax	pmax						
	comp=Z,370nm,6.0s										
QIZ				LR	LR						
	comp=Z,3μm,15.9s										
QIZ				LR	LR						
	comp=Z,3μm,17.5s										
QIZ				LR	LR						
	comp=Z,3μm,20.7s										
DAV	**Davao City (W)**	**36.42**	**211**	LR	LR	23 35 32.5					
	comp=Z,1μm,18.6s,baz=56,slow=37										
KMI	**Kunming**	**37.14**	**259**	⇑P	**P**	**23 20 20.3 -0.1**					
KMI				pP	pP	23 20 26.0 0.0					
KMI				sP	pwP	23 20 29.3 +0.4					
KMI				PP	**PP**	**23 21 43.8 -1.3**					
KMI				S	**S**	**23 26 06.9 +1.0**					
KMI				SS	**SnSn**	**23 28 34.5 -6.3**					
KMI				pmax	pmax						
	comp=Z,56nm,1.1s										
KMI				pmax	pmax						
	comp=Z,550nm,3.6s										
KMI				LR	LR						
	comp=Z,4μm,16.5s										
KMI				LR	LR						
	comp=Z,2μm,17.3s										
KMI				LR	LR						
	comp=Z,3μm,13.2s										
PZH	**PanZhiHua**	**37.16**	**262**	P	**P**	**23 20 20.8 +0.4**					
PZH				sP	**sP**	**23 20 27.9 -0.5**					
PZH				PP	**PP**	**23 21 45.4 +0.2**					
PZH				S	**S**	**23 26 06.9 +0.9**					
PZH				sS	**sS**	**23 26 16.9 +1.0**					
PZH				ScS	**ScS**	**23 30 33.0 -1.0**					
PZH				pmax	pmax						
	comp=Z,70nm,1.2s										
PZH				pmax	pmax						
	comp=Z,510nm,6.8s										
PZH				LR	LR						
	comp=Z,3μm,14.1s										
PZH				LR	LR						
	comp=Z,2μm,13.3s										
PZH				LR	LR						
	comp=Z,4μm,13.7s										
WMQ	**Urumqi**	**41.19**	**294**	⇓P	**P**	**23 20 55.3 +1.4**					
WMQ				sP	pwP	23 21 03.0 +0.5					
WMQ				PP	**PnPn**	**23 22 34.8 +1.4**					
WMQ				S	**S**	**23 27 10.5 +4.3**					
WMQ				pmax	pmax						
	comp=Z,81nm,1.1s										
WMQ				pmax	pmax						
	comp=Z,650nm,5.7s										
WMQ				LR	LR						
	comp=Z,2μm,14.1s										
WMQ				LR	LR						
	comp=Z,3μm,11.9s										
WMQ				LR	LR						
	comp=Z,1μm,14.1s										
MYLDM	**Lahad Datu**	**41.27**	**220**	P	**P**	**23 20 54.4 -0.3**					
MYLDM				lAmb	lAmb	23 21 02.3					
	comp=Z,67nm,1.1s										
UBPT	**Khong Chiam**	**41.28**	**245**	P	**P**	**23 20 54.7 0.0**					
UBPT				lAmb	lAmb	23 20 57.3					
	comp=Z,100nm,1.9s										
ZAA0	**Zalesovo Array**	**41.37**	**310**	P	**P**	**23 20 54.7 -0.4**					
ZAA0				lAmb	lAmb	23 21 04.3					
	comp=Z,50nm,1.1s										
ZALV	**Zalesovo Beam**	**41.37**	**310**	P	**P**	**23 20 54.9 -0.2**					
	comp=Z,13nm,0.8s,baz=88,slow=6.7,SNR=40										
ZALV				PcP	**PcP**	**23 22 52.3 -0.7**					
	comp=Z,8.0nm,0.8s,baz=56,slow=2.7,SNR=2.2										
ZALV				LR	LR	23 38 57.1					
	comp=Z,2μm,19.6s,baz=85,slow=37										
	comp=Z,13nm,0.8s										
ZALV	**Zalesovo Beam**	**41.37**	**310**	P	**P**	**23 20 54.9 -0.2**					
ZALV						23 22 52.3					
NRIK	**Noril'sk**	**41.49**	**334**	P	**P**	**23 20 55.8 -0.1**					
	comp=Z,16nm,1.1s,baz=106,slow=11,SNR=12										
NRIK				S	**S**	**23 27 09.2 -0.7**					
	comp=Z,0.8nm,0.3s,baz=43,slow=19,SNR=1.3										
NRIK				LR	LR	23 40 06.5					
	comp=Z,2μm,18.0s,baz=100,slow=39										
	comp=Z,16nm,1.1s										
NRIK	**Noril'sk**	**41.49**	**334**	P	**P**	**23 20 56.4 +0.6**					
NRIK				lAmb	lAmb	23 21 10.3					
	comp=Z,50nm,1.2s										
NRIK	**Noril'sk**	**41.49**	**334**	*ce*P	**P**	**23 20 55.5 -0.4**					
NRIK				pmax	pmax						
	comp=Z,33nm,1.4s										
CRAI	**Chiangrai**	**41.75**	**255**	P	**P**	**23 20 59.1 +0.5**					
CRAI				lAmb	lAmb	23 21 06.4					
	comp=Z,46nm,0.9s										
MANU	**Manus Island**	**41.82**	**174**	P	**P**	**23 20 58.0 -1.1**					
R17K	**Ugashik Creek**	**41.84**	**44**	P	**P**	**23 20 59.6 +0.6**					
	baz=272										
SMPI	**Sarmi**	**41.87**	**187**	P	**P**	**23 20 58.9 -0.6**					
SWI	**Sorong**	**42.05**	**199**	P	**P**	**23 21 01.3 +0.2**					
SIJI	**Sorong**	**42.06**	**199**	P	**P**	**23 20 59.3 -1.9**					
	comp=Z,42nm,0.3s,baz=90,slow=6.1,SNR=40										
SIJI				LR	LR	23 36 25.0					
	comp=Z,1μm,19.6s,baz=48,slow=33										
	comp=Z,42nm,0.3s										
TTA	**Tatalina**	**42.14**	**36**	P	**P**	**23 21 03.7 +2.3**					
TTA	**Tatalina**	**42.14**	**36**	P	**P**	**23 21 03.7 +2.3**					
TTA				pmax	pmax						
	comp=Z,14nm,0.8s										
SVW2	**Sparrevohn**	**42.25**	**39**	P	**P**	**23 21 02.6 +0.4**					
ZSN	**Zaisan**	**42.29**	**300**	*e*P	**P**	**23 21 02.7 -0.1**					
ZSN				*e*S	**S**	**23 27 23.1 +0.7**					
ZSN				pmax	pmax						
	comp=Z,44nm,1.5s										
ZSN	**Zaisan**	**42.29**	**300**	*e*P	**P**	**23 21 02.7 -0.1**					
	comp=Z,44nm,1.5s,baz=300										
ZSN				*e*S	**S**	**23 27 23.2 +0.8**					
	baz=300										
K20K	**Telida**	**43.04**	**36**	P	**P**	**23 21 10.8 +2.1**					
	baz=267										
J20K	**Nowinta River**	**43.05**	**35**	P	**P**	**23 21 10.6 +1.8**					
J20K	**Nowinta River**	**43.05**	**35**	P	**P**	**23 21 10.4 +1.7**					
	baz=266										
SII	**Sitkinak Islan**	**43.10**	**46**	P	**P**	**23 21 10.3 +1.1**					
GTOI	**Gorontalo**	**43.31**	**211**	P	**P**	**23 21 11.2 0.0**					
	comp=Z,334nmcomp=Z,15nm,0.9s										
IMAR	**Indian Mountai**	**43.36**	**32**	P	**P**	**23 21 13.5 +2.3**					
G21K	**Allakaket**	**43.51**	**31**	P	**P**	**23 21 14.3 +1.9**					
	baz=264										
F21K	**Alatna River**	**43.59**	**30**	P	**P**	**23 21 14.5 +1.5**					
	baz=264,SNR=10										
RSO	**Redoubt South**	**43.64**	**40**	P	**P**	**23 21 15.7 +1.9**					
CHTO	**Chiang Mai**	**43.68**	**255**	P	**P**	**23 21 14.4 +0.2**					
CHTO				lAmb	lAmb	23 21 24.8					
	comp=Z,29nm,1.0s										
CHTO	**Chiang Mai**	**43.68**	**255**	P	**P**	**23 21 14.5 +0.2**					
CHTO				pmax	pmax						
	comp=Z,29nm,1.0s										
CHTO	**Chiang Mai**	**43.68**	**255**	P	**P**	**23 21 14.9 +0.6**					
H21K	**Melozitna Rive**	**43.72**	**32**	P	**P**	**23 21 14.8 +0.7**					
H21K	**Melozitna Rive**	**43.72**	**32**	P	**P**	**23 21 14.7 +0.5**					
	baz=266										
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**23 21 15.8 +0.7**					
LSA				lAmb	lAmb	23 21 49.0					
	comp=Z,53nm,1.3s										
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**23 21 15.6 +0.5**					
LSA				S	**S**	**23 27 48.5 +3.9**					
LSA				LR	LR						
	comp=Z,2μm,15.3s										
LSA				LR	LR						
	comp=Z,2μm,17.8s										
LSA				LR	LR						
	comp=Z,1μm,17.1s										
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**23 21 15.8 +0.7**					
LSA				pmax	pmax						
	comp=Z,53nm,1.3s										
LSA	**Lhasa**	**43.72**	**273**	P	**P**	**23 21 16.2 +1.0**					
CHUM	**Lake Minchumin**	**43.85**	**35**	P	**P**	**23 21 16.3 +1.2**					
	baz=268										
KDAK	**Kodiak Island**	**43.87**	**44**	P	**P**	**23 21 16.5 +1.1**					
	baz=274										
MRSI	**Marisa**	**43.88**	**212**	P	**P**	**23 21 16.5 +0.6**					
	comp=Z,1μmcomp=Z,26nm,0.8s										
PPLA	**Purkeypile**	**43.88**	**37**	P	**P**	**23 21 17.1 +1.5**					
PPLA				lAmb	lAmb	23 21 46.4					
	comp=Z,52nm,1.4s										
PPLA	**Purkeypile**	**43.88**	**37**	P	**P**	**23 21 16.5 +0.9**					
	baz=269										

SPCR	**Spurr Chakacha**	**43.89**	**39**	P	**P**	**23 21 17.0 +1.4**					
	baz=271										
CM31	**Chiang Mai Arr**	**43.90**	**254**	P	**P**	**23 21 16.1 0.0**					
CMAR	**Chiang Mai Arr**	**43.90**	**254**	P	**P**	**23 21 16.1 0.0**					
	comp=Z,6.9nm,0.8s,baz=48,slow=6.7,SNR=36										
CMAR				S	**S**	**23 27 43.5 -3.0**					
	comp=Z,0.8nm,0.3s,baz=128,slow=7.3,SNR=1.4										
CMAR				LR	LR	23 41 36.0					
	comp=Z,1μm,19.2s,baz=60,slow=39										
	comp=Z,6.9nm,0.8s										
CMAR	**Chiang Mai Arr**	**43.90**	**254**	*i* P	**P**	**23 21 16.5 +0.4**					
CMAR				pmax	pmax						
	comp=Z,6.0nm,0.8s										
Q20K	**Shuyak Island**	**43.91**	**43**	P	**P**	**23 21 16.5 +0.8**					
	baz=274										
CAST	**Castle Rocks**	**43.94**	**36**		**P**	**23 21 17.5 +1.6**					
CAST	**Castle Rocks**	**43.94**	**36**	P	**P**	**23 21 16.6 +0.7**					
	baz=269										
SPU	**Mount Spurr**	**43.96**	**39**	P	**P**	**23 21 18.3 +2.1**					
I21K	**Tanana**	**44.04**	**33**	P	**P**	**23 21 18.4 +1.7**					
I21K	**Tanana**	**44.04**	**33**	P	**P**	**23 21 17.6 +1.0**					
	baz=267										
F22K	**John River**	**44.12**	**30**	P	**P**	**23 21 19.3 +2.0**					
	baz=265										
MK31	**Makanchi Array**	**44.15**	**300**	lAmb	lAmb	23 21 28.5					
	comp=Z,52nm,1.1s										
MK31	**Makanchi Array**	**44.15**	**300**	*c i* P	**P**	**23 21 17.9 +0.1**					
MKAR	**Makanchi Array**	**44.15**	**300**	P	**P**	**23 21 17.7 -0.2**					
	comp=Z,29nm,0.9s,baz=81,slow=7.2,SNR=75										
MKAR				S	**S**	**23 27 48.1 -1.6**					
	comp=Z,0.7nm,0.8s,baz=73,slow=8.4,SNR=1.7										
MKAR				LR	LR	23 39 06.5					
	comp=Z,850nm,20.1s,baz=82,slow=35										
	comp=Z,29nm,0.9s										
MKAR	**Makanchi Array**	**44.15**	**300**	P	**P**	**23 21 18.7 +0.9**					
MKAR	**Makanchi Array**	**44.15**	**300**	*i* P	**P**	**23 21 17.8 -0.1**					
MKAR				pmax	pmax						
	comp=Z,29nm,0.9s										
SKT	**Skwentna**	**44.20**	**38**	P	**P**	**23 21 20.2 +2.2**					
	baz=271										
E22K	**Anaktuvuk Pass**	**44.32**	**29**	P	**P**	**23 21 20.8 +1.9**					
	baz=264										
H22K	**Ishtalitna Cre**	**44.33**	**32**	P	**P**	**23 21 20.9 +2.0**					
	baz=267										
G22K	**Bettles**	**44.33**	**31**	P	**P**	**23 21 21.6 +2.7**					
	baz=266										
MAKZ	**Makanchi**	**44.36**	**300**	P	**P**	**23 21 19.7 +0.2**					
MAKZ	**Makanchi**	**44.36**	**300**	P	**P**	**23 21 19.7 +0.2**					
MAKZ				pmax	pmax						
	comp=Z,97nm,1.2s										
BPAW	**Bear Paw Mtn.**	**44.44**	**35**	P	**P**	**23 21 21.8 +1.9**					
	baz=269										
KTH	**Kantishna Hill**	**44.46**	**36**	P	**P**	**23 21 22.3 +2.1**					
KTH				lAmb	lAmb	23 21 42.9					
	comp=Z,41nm,1.2s										
MLY	**Manley**	**44.56**	**33**	P	**P**	**23 21 22.9 +2.0**					
MLY	**Manley**	**44.56**	**33**	P	**P**	**23 21 23.5 +2.6**					
	baz=269,SNR=6.1										
SANI	**Sanana**	**44.71**	**205**	P	**P**	**23 21 23.0 +0.5**					
	comp=Z,60nm,1.0s										
D23K	**Nanushuk River**	**44.81**	**28**	P	**P**	**23 21 25.4 +2.6**					
	baz=265										
MPSI	**Mapaga**	**44.87**	**215**	P	**P**	**23 21 23.5 -0.3**					
	comp=Z,614nmcomp=Z,16nm,1.6s										
G23K	**Bananza Creek**	**44.91**	**31**	P	**P**	**23 21 25.0 +1.4**					
	baz=268,SNR=5.8										
C23K	**Itkillik River**	**44.92**	**27**	P	**P**	**23 21 25.2 +1.6**					
	baz=264										
LUWI	**Luwik**	**44.93**	**210**	P	**P**	**23 21 23.5 -0.8**					
	comp=Z,7μmcomp=Z,48nm,0.5s										
H23K	**Yukon River**	**45.08**	**32**	P	**P**	**23 21 26.6 +1.7**					
H23K				lAmb	lAmb	23 22 26.4					
	comp=Z,20nm,1.1s										
H23K	**Yukon River**	**45.08**	**32**	P	**P**	**23 21 25.9 +0.9**					
	baz=269,SNR=9.6										
BWN	**Browne**	**45.10**	**35**	P	**P**	**23 21 28.8 +3.7**					
I23K	**Minto, Yukon-K**	**45.15**	**33**	P	**P**	**23 21 27.5 +2.0**					
I23K				lAmb	lAmb	23 22 31.9					
	comp=Z,35nm,1.5s										
I23K	**Minto, Yukon-K**	**45.15**	**33**	P	**P**	**23 21 27.1 +1.7**					
	baz=270										
TOLK	**Toolik Lake Re**	**45.19**	**28**	P	**P**	**23 21 28.2 +2.4**					
TOLK				lAmb	lAmb	23 21 46.7					
	comp=Z,29nm,1.1s										
TOLK	**Toolik Lake Re**	**45.19**	**28**	P	**P**	**23 21 27.0 +1.2**					
	baz=266										
APSI	**Ampana**	**45.26**	**212**	P	**P**	**23 21 26.2 -0.7**					
	comp=Z,809nmcomp=Z,26nm,1.1s										
NEA2	**Nenana**	**45.27**	**34**	P	**P**	**23 21 28.3 +1.8**					
NEA2				lAmb	lAmb	23 21 47.2					
	comp=Z,15nm,0.9s										
NEA2	**Nenana**	**45.27**	**34**	P	**P**	**23 21 28.7 +2.2**					
	baz=270										
MCK	**McKinley**	**45.35**	**35**	P	**P**	**23 21 28.5 +1.4**					
MCK				lAmb	lAmb	23 21 48.6					
	comp=Z,22nm,1.2s										
MCK	**McKinley**	**45.35**	**35**	P	**P**	**23 21 28.5 +1.4**					
MCK				pmax	pmax						
	comp=Z,22nm,1.2s										
MCK	**McKinley**	**45.35**	**35**	P	**P**	**23 21 28.6 +1.4**					
	baz=272										
PMR	**Palmer**	**45.35**	**38**		**P**	**23 21 26.6 -0.5**					
PMR				lAmb	lAmb	23 22 18.1					
	comp=Z,36nm,1.7s										
PMR	**Palmer**	**45.35**	**38**	P	**P**	**23 21 26.6 -0.5**					
PMR				pmax	pmax						
	comp=Z,36nm,1.7s										
PMR	**Palmer**	**45.35**	**38**	P	**P**	**23 21 28.5 +1.4**					
	baz=273										
RND	**Reindeer**	**45.39**	**36**	P	**P**	**23 21 28.6 +1.0**					
RND				lAmb	lAmb	23 22 17.3					
	comp=Z,25nm,1.2s										
RND	**Reindeer**	**45.39**	**36**	P	**P**	**23 21 28.6 +1.0**					
RND				pmax	pmax						
	comp=Z,25nm,1.2s										
GHO	**Glory Hole Cre**	**45.44**	**38**	P	**P**	**23 21 29.3 +1.4**					
GHO				lAmb	lAmb	23 22 10.6					
	comp=Z,23nm,1.0s										
D24K	**Happy Valley**	**45.49**	**28**	P	**P**	**23 21 28.9 +0.8**					
	baz=266										
WAT1	**Susitna Watana**	**45.55**	**37**	P	**P**	**23 21 29.6 +0.9**					
	baz=273										
E24K	**Your Creek**	**45.56**	**29**	P	**P**	**23 21 30.2 +1.4**					
	baz=268										
C24K	**Franklin Bluff**	**45.58**	**27**	P	**P**	**23 21 29.7 +0.9**					
	baz=266										
KURK	**Kurchatov**	**45.62**	**306**	P	**P**	**23 21 29.5 +0.1**					
KURK	**Kurchatov**	**45.62**	**306**	*c i* P	**P**	**23 21 29.2 -0.2**					
KURK				pmax	pmax						
	comp=Z,116nm,1.3s										
KURK	**Kurchatov**	**45.62**	**306**	P	**P**	**23 21 29.8 +0.4**					
KURK				P	**P**	**23 21 29.8 +0.4**					
MDM	**Murphy Dome**	**45.63**	**34**	P	**P**	**23 21 31.1 +1.8**					
MDM				lAmb	lAmb	23 22 29.8					
	comp=Z,20nm,1.0s										
KNK	**Knik Glacier**	**45.69**	**39**	P	**P**	**23 21 30.6 +0.8**					
KNK				lAmb	lAmb	23 22 04.5					
	comp=Z,21nm,1.0s										
KNK	**Knik Glacier**	**45.69**	**39**	P	**P**	**23 21 30.7 +0.8**					
	baz=274										
KURBB	**Kurchatov Arra**	**45.69**	**306**	P	**P**	**23 21 29.6 -0.4**					
	comp=Z,59nm,1.0s,baz=81,slow=8.4,SNR=147										
KURBB				S	**S**	**23 28 12.2 +0.4**					
	comp=Z,0.4nm,0.8s,baz=150,slow=16,SNR=4.9										
	comp=Z,59nm,1.0s										
WRH	**Wood River Hil**	**45.70**	**34**	P	**P**	**23 21 32.5 +2.7**					
WRH				lAmb	lAmb	23 21 52.0					
	comp=Z,51nm,1.8s										
SML	**Sawmill**	**45.72**	**38**	lAmb	lAmb	23 22 17.2					
	comp=Z,23nm,1.0s										
SML	**Sawmill**	**45.72**	**38**	P	**P**	**23 21 31.3 +1.2**					
	baz=274										
H24K	**Noodor Dome**	**45.76**	**32**	lAmb	lAmb	23 22 33.1					
	comp=Z,24nm,1.2s										
H24K	**Noodor Dome**	**45.76**	**32**	P	**P**	**23 21 32.0 +1.6**					
	baz=270										
F24K	**Squaw Lake**	**45.77**	**30**	P	**P**	**23 21 33.0 +2.5**					
	baz=269										
TCOL	**CIGO, UAF Yank**	**45.78**	**34**	P	**P**	**23 21 32.7 +2.2**					
TCOL				lAmb	lAmb	23 21 51.4					
	comp=Z,15nm,0.8s										
TCOL	**CIGO, UAF Yank**	**45.78**	**34**	P	**P**	**23 21 31.5 +1.0**					
	baz=271										
COLA	**College**	**45.79**	**34**	P	**P**	**23 21 33.1 +2.6**					
COLA				lAmb	lAmb	23 21 51.4					
	comp=Z,14nm,0.8s										
COLA	**College**	**45.79**	**34**	⇑*e*P	**P**	**23 21 32.5 +2.0**					

COLA				pmax	pmax						
	comp=Z,22nm,2.7s										
COLA	**College**	**45.79**	**34**	P	**P**	**23 21 32.1 +1.6**					
	baz=271										
PWL	**Port Wells**	**45.79**	**39**	P	**P**	**23 21 30.5 -0.1**					
	baz=275										
CCB	**Clear Creek Bu**	**45.81**	**34**	P	**P**	**23 21 32.1 +1.3**					
G24K	**Hadweenzic Riv**	**45.92**	**31**	P	**P**	**23 21 31.6 0.0**					
	baz=270,SNR=7.3										
WAT6	**Susitna Watana**	**45.94**	**37**	P	**P**	**23 21 32.7 +0.7**					
	baz=274										
POKR	**Poker Plat Res**	**45.96**	**33**	P	**P**	**23 21 33.9 +2.0**					
POKR	**Poker Plat Res**	**45.96**	**33**	P	**P**	**23 21 31.5 -0.5**					
	baz=272										
M23K	**Glacier View**	**46.01**	**38**	P	**P**	**23 21 32.3 -0.1**					
	baz=274										
DHY	**Denali Highway**	**46.08**	**36**	P	**P**	**23 21 35.2 +2.2**					
DHY				lAmb	lAmb	23 22 40.0					
	comp=Z,23nm,1.1s										
DHY	**Denali Highway**	**46.08**	**36**	P	**P**	**23 21 33.3 +0.2**					
	baz=274										
SCM	**Sheep Creek Mo**	**46.19**	**38**	P	**P**	**23 21 36.0 +2.1**					
SCM				lAmb	lAmb	23 21 57.1					
	comp=Z,21nm,1.0s										
SCM	**Sheep Creek Mo**	**46.19**	**38**	P	**P**	**23 21 36.0 +2.1**					
SCM				pmax	pmax						
	comp=Z,21nm,1.0s										
SCM	**Sheep Creek Mo**	**46.19**	**38**	P	**P**	**23 21 34.2 +0.3**					
	baz=275										
HDA	**Harding Lake**	**46.19**	**34**	P	**P**	**23 21 35.6 +1.8**					
HDA				lAmb	lAmb	23 21 55.2					
	comp=Z,22nm,1.1s										
HDA	**Harding Lake**	**46.19**	**34**	P	**P**	**23 21 34.1 +0.3**					
	baz=273										
IL31		**46.20**	**34**	lAmb	lAmb	23 21 47.0					
	comp=Z,16nm,0.9s										
ILAR	**Eielson Array**	**46.20**	**34**	P	**P**	**23 21 34.1 +0.3**					
	comp=Z,2.6nm,0.8s,baz=268,slow=6.1,SNR=20										
ILAR				S	**S**	**23 28 18.4 -0.4**					
	comp=Z,0.1nm,0.5s,baz=303,slow=24,SNR=0.9										
ILAR				LR	LR	23 40 55.6					
	comp=Z,586nm,21.6s,baz=268,slow=36										
	comp=Z,2.6nm,0.8s										
ILAR	**Eielson Array**	**46.20**	**34**	P	**P**	**23 21 34.6 +0.7**					
ILAR	**Eielson Array**	**46.20**	**34**	P	**P**	**23 21 34.2 +0.3**					
D25K	**Kavik River**	**46.37**	**27**	P	**P**	**23 21 36.1 +0.9**					
	baz=268										
H25K	**Birch Creek**	**46.59**	**32**	P	**P**	**23 21 37.8 +1.0**					
	baz=272										
F25K	**Christian Rive**	**46.63**	**30**	P	**P**	**23 21 38.0 +0.8**					
	baz=271										
E25K	**Arctic Village**	**46.66**	**29**	P	**P**	**23 21 38.5 +1.1**					
	baz=270										
M24K	**Tolsona, Glenn**	**46.71**	**37**	P	**P**	**23 21 38.7 +0.8**					
	baz=275										
K24K	**Donnelly Dome**	**46.74**	**35**	P	**P**	**23 21 39.1 +0.9**					
	baz=274										
PRP	**Porcupine Dome**	**46.75**	**33**	P	**P**	**23 21 40.2 +2.0**					
PRP				lAmb	lAmb	23 22 09.5					
	comp=Z,14nm,0.8s										
PRP	**Porcupine Dome**	**46.75**	**33**	P	**P**	**23 21 38.8 +0.5**					
	baz=273										
FYU	**Fort Yukon**	**46.82**	**31**	P	**P**	**23 21 41.2 +2.6**					
SBUM	**Sibu**	**46.86**	**225**	P	**P**	**23 21 39.9 +0.4**					
SBUM				lAmb	lAmb	23 21 41.7					
	comp=Z,18nm,1.2s										
J25K	**Salcha River,**	**46.86**	**34**	P	**P**	**23 21 42.1 +3.0**					
J25K	**Salcha River,**	**46.86**	**34**	P	**P**	**23 21 39.6 +0.5**					
	baz=274										
KLU	**Klutina**	**46.89**	**38**	P	**P**	**23 21 40.9 +1.5**					
KLU				lAmb	lAmb	23 22 06.0					
	comp=Z,18nm,1.1s										
KLU	**Klutina**	**46.89**	**38**	P	**P**	**23 21 39.7 +0.3**					
	baz=276										
C26K	**Camden Bay**	**46.90**	**27**	P	**P**	**23 21 40.4 +1.2**					
	baz=269										
Q23K	**Middleton Isla**	**46.94**	**41**	P	**P**	**23 21 40.4 +0.8**					
	baz=278										
PAX	**Paxson**	**46.95**	**36**	P	**P**	**23 21 41.8 +2.0**					
PAX				lAmb	lAmb	23 22 31.7					
	comp=Z,19nm,1.6s										
PAX	**Paxson**	**46.95**	**36**	P	**P**	**23 21 41.8 +2.0**					
PAX				pmax	pmax						
	comp=Z,19nm,1.6s										
PAX

ARXS Arharly 47.90 298 *e*P P **23 21 47.3 -0.1**
GLB Gilahina Butte 47.90 38 P P **23 21 48.8 +1.5**
L26K Log Cabin Wild 47.91 36 P P **23 21 49.2 +2.0**
L26K IAmb IAmb 23 22 37.1
comp=Z,20nm,1.0s
L26K Log Cabin Wild 47.91 36 P P **23 21 47.6 +0.3**
baz=277
ODAN Odare 48.00 272 *e*P P **23 21 47.9 -0.7**
BERG Berg Lake 48.11 40 P P **23 21 50.8 +2.0**
BERG IAmb IAmb 23 22 26.0
comp=Z,26nm,1.0s
E27K Coleen River 48.14 29 P P **23 21 49.3 +0.4**
baz=274
M26K Nabesna, AK 48.15 37 P P **23 21 50.5 +1.4**
M26K IAmb IAmb 23 22 30.8
comp=Z,24nm,1.2s
M26K Nabesna, AK 48.15 37 P P **23 21 49.5 +0.4**
baz=278
G27K Doyon Strip 48.22 31 P P **23 21 50.0 +0.4**
baz=275
MCARA McCarthy VSAT 48.29 38 P P **23 21 52.0 +1.9**
MCARA IAmb IAmb 23 22 53.3
comp=Z,21nm,1.1s
MCARA McCarthy VSAT 48.29 38 P P **23 21 50.3 +0.2**
baz=279
H27K Steamboat Moun 48.33 32 P P **23 21 50.9 +0.5**
baz=276
K27K Chicken 48.35 35 IAmb IAmb 23 22 13.5
comp=Z,30nm,1.3s
K27K Chicken 48.35 35 P P **23 21 51.1 +0.5**
baz=277
I27K Kandik River 48.36 32 P P **23 21 50.8 +0.1**
baz=276
TGL Tana Glacier 48.48 39 P P **23 21 53.4 +1.6**
JIRN Jiri 48.52 274 *e*P P **23 21 53.2 +0.4**
comp=Z,256nm,1.2s
WAX Waxell Ridge 48.52 39 P P **23 21 53.8 +1.8**
WAX IAmb IAmb 23 23 02.6
comp=Z,27nm,1.2s
RAMN Ramite 48.56 273 *e*P P **23 21 52.9 -0.1**
comp=Z,267nm,1.0s
SNH Sunshine Point 48.57 40 P P **23 21 54.1 +1.7**
L27K Beaver Creek, 48.59 36 IAmb IAmb 23 22 16.0
comp=Z,22nm,1.1s
L27K Beaver Creek, 48.59 36 P P **23 21 53.8 +1.3**
baz=278
GUN Gumba 48.63 274 *e*P P **23 21 53.9 +0.2**
comp=Z,350nm,1.0s
EGAK Eagle 48.65 33 P P **23 21 53.9 +1.1**
EGAK IAmb IAmb 23 22 14.1
comp=Z,16nm,0.9s
EGAK Eagle 48.65 33 P P **23 21 53.9 +1.1**
baz=277
M27K Edge Creek, AK 48.67 37 P P **23 21 54.6 +1.4**
M27K IAmb IAmb 23 22 50.2
comp=Z,14nm,0.9s
M27K Edge Creek, AK 48.67 37 P P **23 21 53.9 +0.6**
baz=279
ISLE Juniper Island 48.74 39 P P **23 21 53.9 +0.1**
ISLE IAmb IAmb 23 22 24.9
comp=Z,33nm,1.4s
MDOK Medeo 48.78 297 *e*P P **23 21 53.7 -0.6**
MDOK *e*S S **23 28 56.6 +0.4**
MDOK MLR MLR
comp=Z,1μm,14.0s
MDOK Medeo 48.78 297 *e*P P **23 21 53.8 -0.6**
baz=297
MDOK *e*S S **23 28 56.6 +0.4**
baz=297
MDOK LR LR 23 43 10.4
comp=Z,1μm,14.0s,baz=297
SPSI Sidrap Palu 48.80 212 P P **23 21 55.4 +0.9**
comp=Z,4μmcomp=Z,17nm,1.1s
AAA Alma-Ata 48.85 297 *e*P P **23 21 55.0 +0.2**
AAA pmax pmax
comp=Z,26nm,1.1s
AAA MLR MLR
comp=Z,2μm,16.0s
AAA Alma-Ata 48.85 297 *e*P P **23 21 55.1 +0.2**
comp=Z,26nm,1.1s,baz=297
AAA LR LR 23 43 20.8
comp=Z,2μm,15.6s,baz=297
SAUI Saumlaki 48.93 196 P P **23 21 54.0 -1.5**
MESA MESA 49.01 40 P P **23 21 56.6 +0.7**
baz=281
KUU Kurty 49.01 298 *e*P P **23 21 54.9 -1.1**
KUU MLR MLR
comp=Z,1μm,14.0s
KUU Kurty 49.01 298 *e*P P **23 21 54.9 -1.1**
baz=298
KUU LR LR 23 43 19.2
comp=Z,1μm,14.0s,baz=298
YAH Yahtse 49.08 39 P P **23 21 57.1 +0.7**
YAH IAmb IAmb 23 22 35.0
comp=Z,16nm,1.1s
KKN Kakani 49.15 275 *e*P P **23 21 57.1 -0.4**
comp=Z,27nm,1.1s
CTG Chitna Glacier 49.16 39 P P **23 21 56.9 -0.1**
baz=280
CTGM Chitina Glacie 49.16 39 P P **23 21 58.5 +1.4**
PKI Pulchoki 49.16 274 *e*P P **23 21 57.6 -0.1**
comp=Z,146nm,1.2s
PKIN Phulchoki 49.17 274 *e*P P **23 21 57.6 -0.1**
comp=Z,179nm,1.2s
LOGN Logan Glacier 49.35 39 P P **23 21 60.0 +1.5**
DMN Daman 49.38 274 *e*P P **23 21 59.6 +0.3**
YUK3 Moose Creek 49.43 37 P P **23 21 59.3 +0.2**
baz=280
BRZS Berezniki 49.48 307 *e*P P **23 21 58.7 -0.8**
BRZS *e*S S **23 29 06.5 +0.8**
BRZS pmax pmax
comp=Z,28nm,1.3s
BRZS Berezniki 49.48 307 *e*P P **23 21 58.7 -0.8**
comp=Z,28nm,1.3s,baz=307
BRZS *e*S S **23 29 06.5 +0.8**
baz=307
DAWY Dawson 49.51 34 P P **23 22 02.0 +2.5**
DAWY Dawson 49.51 34 P P **23 22 00.1 +0.5**
baz=279
GKN Gorkha 49.54 275 *e*P P **23 22 00.4 0.0**
comp=Z,229nm,1.2s
O28M Mount Upton 49.75 39 P P **23 22 02.1 +0.4**
baz=282
KAPI Kappang 49.75 212 P P **23 22 00.6 -1.2**
comp=Z,5.3nm,0.6s,baz=15,slow=4.1,SNR=1.9
KAPI LR LR 23 44 41.8
comp=Z,292nm,18.4s,baz=24,slow=38
comp=Z,5.3nm,0.6s
KAPI Kappang 49.75 212 P P **23 22 02.5 +0.7**
KAPI Kappang 49.75 212 P P **23 22 00.6 -1.2**
I29M Ogilvie Camp, 49.76 33 P P **23 22 03.2 +1.9**
I29M IAmb IAmb 23 22 33.4
comp=Z,18nm,1.0s
BOOM Boomskoye usch 49.78 296 P P **23 22 02.5 +0.5**
BOOM Boomskoye usch 49.78 296 P P **23 22 02.5 +0.5**
TKM2 Tokmak 2 49.86 297 P P **23 22 03.5 +0.8**
SNR=57
BVAR Borovoye Array 50.00 311 LR LR 23 44 24.6
comp=Z,1μm,19.4s,baz=313,slow=38
SRIT Nakonsritamara 50.03 244 P P **23 22 04.7 +0.7**
DANN Dangsing 50.04 276 *e*P P **23 22 04.9 +0.6**
comp=Z,280nm,0.9s
BRVK Borovoye 50.05 311 P P **23 22 04.3 +0.6**
BRVK IAmb IAmb 23 22 20.4
comp=Z,34nm,0.9s
BRVK Borovoye 50.05 311 *c i*P P **23 22 03.9 +0.2**
BRVK pmax pmax
comp=Z,49nm,1.7s
BRVK Borovoye 50.05 311 P P **23 22 04.7 +1.0**
BRVK P P **23 22 04.7 +1.0**
NRN Naryn 50.12 295 P P **23 22 05.2 +0.3**
NRN IAmb IAmb 23 22 33.2
comp=Z,25nm,1.1s
NRN Naryn 50.12 295 P P **23 22 05.2 +0.3**
NRN pmax pmax
comp=Z,25nm,1.1s
BTLS Baital 50.17 300 *e*P P **23 22 03.9 -0.8**
BTLS pmax pmax
comp=Z,25nm,1.7s
BTLS Baital 50.17 300 *e*P P **23 22 03.9 -0.8**
comp=Z,25nm,1.7s,baz=300
EPYK Eagle Plains 50.24 31 P P **23 22 07.0 +2.0**
EPYK IAmb IAmb 23 22 18.3
comp=Z,33nm,1.1s
EPYK Eagle Plains 50.24 31 P P **23 22 06.1 +1.1**
baz=280

SGDS Sogindy 50.33 298 *e*P P **23 22 05.5 -0.5**
SGDS pmax pmax
comp=Z,35nm,2.1s
SGDS Sogindy 50.33 298 *e*P P **23 22 05.6 -0.5**
comp=Z,35nm,2.1s,baz=298
YUK4 Talbot Arm 50.37 38 P P **23 22 06.8 +0.6**
baz=282
KBK Karagaybulak 50.40 297 P P **23 22 07.4 +0.6**
SNR=40
CHMS Chumysh 50.41 297 P P **23 22 06.8 +0.1**
SNR=12
USP Ospenovka 50.48 298 P P **23 22 07.5 +0.3**
SNR=21
YUK6 Outpost Mounta 50.59 38 P P **23 22 07.5 -0.4**
baz=283
O29M Mount Kennedy 50.63 39 P P **23 22 07.7 -0.4**
baz=283
AAK Ala-Archa 50.72 297 P P **23 22 09.5 +0.3**
SNR=9.5
AAK Ala-Archa 50.72 297 P P **23 22 09.4 +0.3**
AAK Ala-Archa 50.72 297 *c i*P P **23 22 09.2 +0.1**
AAK pmax pmax
comp=Z,40nm,1.7s
AAK Ala-Archa 50.72 297 P P **23 22 09.4 +0.3**
AAK P P **23 22 09.4 +0.3**
AAK Ala-Archa 50.72 297 *i*P P **23 22 09.8 +0.7**
SNR=7.4
KSH Kashi 50.88 293 P P **23 22 14.4 +4.1**
KSH pP pwP 23 22 18.9 -0.2
KSH sP sP 23 22 23.4 +4.9
KSH PP **PP** **23 24 11.0 +4.5**
KSH S S **23 29 27.1 +1.5**
KSH pmax pmax
comp=Z,21nm,1.0s
KSH pmax pmax
comp=Z,340nm,10.5s
KSH LR LR
comp=Z,2μm,14.1s
KSH LR LR
comp=Z,2μm,15.1s
KSH LR LR
comp=Z,3μm,15.5s
M30M Minto, Yukon 50.95 36 P P **23 22 12.1 +1.7**
M30M IAmb IAmb 23 23 48.5
comp=Z,40nm,1.9s
M30M Minto, Yukon 50.95 36 P P **23 22 10.6 +0.1**
baz=283
HYT Haines Junctio 51.02 38 IAmb IAmb 23 22 49.9
comp=Z,28nm,1.0s
HYT Haines Junctio 51.02 38 P P **23 22 11.6 +0.5**
baz=284,SNR=8.4
INK Inuvik 51.10 28 P P **23 22 12.4 +1.0**
comp=Z,5.1nm,0.4s,baz=277,slow=6.0,SNR=31
INK S S **23 29 25.5 -2.2**
comp=Z,1.0nm,0.8s,baz=344,slow=15,SNR=1.1
INK LR LR 23 47 11.8
comp=Z,693nm,19.1s,baz=274,slow=40
comp=Z,5.1nm,0.4s
INK Inuvik 51.10 28 IAmb IAmb 23 23 02.8
comp=Z,19nm,1.1s
INK Inuvik 51.10 28 P P **23 22 12.4 +1.0**
INK Inuvik 51.10 28 P P **23 22 12.1 +0.7**
baz=281,SNR=6.0
EKS2 Erkin-Say 51.20 297 P P **23 22 13.0 +0.3**
SNR=18
P29M Windy Craggy 51.20 40 P P **23 22 14.4 +2.0**
P29M IAmb IAmb 23 23 02.8
comp=Z,21nm,0.9s
P29M Windy Craggy 51.20 40 P P **23 22 12.7 +0.3**
baz=284
AML Almayashu 51.46 297 P P **23 22 15.6 +0.6**
SNR=32
P30M Million Dollar 51.46 39 P P **23 22 14.6 +0.3**
baz=284
N31M Braeburn, Yuko 51.67 37 P P **23 22 17.9 +2.1**
N31M IAmb IAmb 23 23 16.3
comp=Z,37nm,1.2s
N31M Braeburn, Yuko 51.67 37 P P **23 22 16.7 +0.8**
baz=284
O30N Mendenhall 51.71 38 P P **23 22 16.6 +0.4**
baz=285
KULM Kulim 51.72 240 P P **23 22 16.3 -0.4**
KULM IAmb IAmb 23 22 27.4
comp=Z,27nm,1.1s
PLBC Pleasant Camp 51.92 40 P P **23 22 17.8 +0.2**
baz=286
IPM Ipoh 52.07 239 P P **23 22 18.9 -0.5**
IPM IAmb IAmb 23 22 29.4
comp=Z,26nm,1.0s
M31M Drury Creek, Y 52.13 36 P P **23 22 20.2 +0.9**
baz=285
MMRI Maumere 52.14 207 P P **23 22 19.9 +0.2**
MMRI Maumere 52.14 207 P P **23 22 19.9 +0.2**
comp=Z,49nm,0.9s
WHY Whitehorse 52.31 38 P P **23 22 23.0 +2.2**
WHY Whitehorse 52.31 38 P P **23 22 21.2 +0.5**
baz=286
EDFI Ende, Flores 52.44 208 P P **23 22 20.7 -1.4**
comp=Z,16nm,0.9s
SOEI Soe 52.50 204 P P **23 22 22.6 0.0**
FARO Faro, Yukon 52.59 36 P P **23 22 23.7 +1.0**
baz=286
DZA Taraz 52.78 298 *e*P P **23 22 23.6 -0.7**
DZA Taraz 52.78 298 *e*P P **23 22 23.6 -0.7**
baz=298
BATI Baumata 53.12 205 P P **23 22 25.2 -1.9**
comp=Z,14nm,0.3s,baz=27,slow=2.3,SNR=4.0
BATI LR LR 23 44 11.1
comp=Z,676nm,20.9s,baz=26,slow=35
comp=Z,14nm,0.3s
BATI Baumata 53.12 205 P P **23 22 25.9 -1.1**
comp=Z,21nm,1.1s
SIT Sitka 53.15 42 P P **23 22 27.8 +1.1**
baz=288
P32M Atlin 53.18 39 P P **23 22 27.9 +0.8**
baz=287
MMPY Sheldon Lake, 53.41 35 P P **23 22 28.7 0.0**
baz=287
P33M Teslin, Yukon 53.42 38 P P **23 22 31.2 +2.3**
P33M Teslin, Yukon 53.42 38 P P **23 22 29.8 +0.9**
baz=288
COEN Coen 53.52 181 P P **23 22 29.9 0.0**
DSRI Dabo 53.65 231 P P **23 22 30.8 -0.2**
comp=Z,16nm,1.2s
MTN Manton Dam 53.68 195 P P **23 22 30.7 -0.4**
MTN IAmb IAmb 23 22 41.0
comp=Z,30nm,1.1s
DRK Karamyk 53.84 294 P P **23 22 33.0 +0.5**
IUG Iuzhnay 53.95 298 *e*P P **23 22 32.6 -0.5**
IUG Iuzhnay 53.95 298 *e*P P **23 22 32.6 -0.5**
baz=298
C36M Paulatuk 54.16 26 P P **23 22 34.7 +0.7**
baz=288
TWSI Taliwang, Sumb 54.30 213 P P **23 22 36.4 +0.7**
comp=Z,18nm,1.1s
R33M Jennings River 54.57 39 P P **23 22 37.4 0.0**
baz=290
PSI Prapat 54.71 239 LR LR 23 47 56.5
comp=Z,685nm,18.7s,baz=36,slow=38
PSI Prapat 54.71 239 P P **23 22 38.6 -0.3**
PSI pmax pmax
comp=Z,15nm,1.0s
RPSI Rantau Prapat 54.79 239 P P **23 22 38.6 -0.7**
RPSI IAmb IAmb 23 22 48.9
comp=Z,15nm,1.0s
WRAK Wrangell Islan 54.91 42 P P **23 22 40.3 +0.7**
baz=291
TGTN Hyland Airport 55.10 36 P P **23 22 41.2 +0.1**
baz=290
BKNI Bangkinang 55.21 235 P P **23 22 42.5 +0.1**
BKNI Bangkinang 55.21 235 P P **23 22 43.3 +1.0**
comp=Z,2μmcomp=Z,84nm,1.1s
DLBC Dease Lake 55.36 40 P P **23 22 43.2 +0.2**
comp=Z,0.8nm,0.5s,baz=262,slow=17,SNR=2.1
comp=Z,0.8nm,0.5s
DLBC Dease Lake 55.36 40 P P **23 22 44.0 +1.0**
DLBC Dease Lake 55.36 40 P P **23 22 43.3 +0.3**
baz=291
NIL Nilore 55.41 287 P P **23 22 44.4 +0.8**
NIL Nilore 55.41 287 P P **23 22 44.4 +0.8**
NIL pmax pmax
comp=Z,111nm,1.1s
ARU Arti 55.43 318 P P **23 22 43.0 -0.4**
comp=Z,29nm,0.9s,baz=62,slow=5.6,SNR=43
ARU S S **23 30 26.6 -0.2**
comp=Z,0.5nm,0.3s,baz=138,slow=23,SNR=1.1
ARU LR LR 23 49 06.8
comp=Z,3μm,18.1s,baz=64,slow=39
comp=Z,29nm,0.9s
ARU Arti 55.43 318 P P **23 22 43.0 -0.4**
ARU Arti 55.43 318 *c i*P P **23 22 43.6 +0.2**
ARU **23 23 43.3**
ARU **23 24 46.0**
ARU PPP PPP **23 25 55.8**
ARU S S **23 30 29.2 +2.4**
ARU **23 32 29.6**
ARU pmax pmax
comp=Z,89nm,1.3s
ARU MLR MLR
comp=Z,6μm,15.0s
SMRI Semarang 55.81 221 P P **23 22 46.3 -0.3**
SMRI Semarang 55.81 221 P P **23 22 46.9 +0.3**
comp=Z,57nm,1.3s
PWJI Pagerwojo 55.98 219 P P **23 22 46.4 -1.4**
comp=Z,46nm,0.8s
PCJI Pacitan 56.43 220 P P **23 22 52.0 +1.0**
comp=Z,69nm,1.6s
UGM Wanagama 56.51 220 P P **23 22 51.8 +0.2**
comp=Z,115nm,2.2s
GSI Gunungsitoli 56.72 239 P P **23 22 53.9 +0.8**
comp=Z,58nm,1.6s
KNRA Kununurra 56.94 197 P P **23 22 54.8 +0.3**
KNRA IAmb IAmb 23 23 18.5
comp=Z,32nm,1.1s
LEM Lembang 57.10 224 LR LR 23 48 20.2
comp=Z,419nm,19.9s,baz=16,slow=37
LEM Lembang 57.10 224 P P **23 22 55.0 -1.0**
comp=Z,27nm,1.2s
MASI Maura Aman, Be 57.17 232 P P **23 22 56.7 +0.4**
comp=Z,76μmcomp=Z,50nm,0.8s
KBL Kabul 58.05 290 P P **23 23 02.1 -0.5**
KBL Kabul 58.05 290 P P **23 23 02.1 -0.5**
KBL pmax pmax
comp=Z,45nm,1.0s
KBL Kabul 58.05 290 P P **23 23 02.8 +0.2**
AKTO Aktyubinsk 58.11 311 P P **23 23 02.7 +0.2**
comp=Z,18nm,1.0s,baz=70,slow=6.7,SNR=26
AKTO PP **PP** **23 25 12.4 +1.5**
comp=Z,8.9nm,1.0s,baz=52,slow=7.4,SNR=2.2
AKTO S S **23 31 02.4 +0.1**
comp=Z,0.3nm,0.3s,baz=30,slow=20,SNR=1.5
AKTO LR LR 23 50 15.6
comp=Z,1μm,18.6s,baz=57,slow=38
comp=Z,18nm,1.0s
AKTO Aktyubinsk 58.11 311 P P **23 23 02.7 +0.2**
SPITS Spitsbergen Ar 58.11 349 LR LR 23 51 39.3
comp=Z,1μm,18.8s,baz=356,slow=40
BBB Bella Bella 58.86 46 LR LR 23 45 24.4
comp=Z,153nm,21.6s,baz=322,slow=33
KIRV Kirov 59.07 322 P P **23 23 08.8 -0.2**
comp=Z,28nm,0.9s,baz=72,slow=16,SNR=19
KIRV S S **23 31 10.9 -3.6**
comp=Z,2.6nm,0.5s,baz=90,slow=20,SNR=1.7
comp=Z,28nm,0.9s
KIRV Kirov 59.07 322 *c i*P P **23 23 09.0 0.0**
PRGR Permogore 59.37 327 *e*P P **23 23 11.5 +0.4**
PRGR *e**SP **pwP** **23 23 20.0 +0.2**
RES Resolute Bay 59.45 15 P P **23 23 11.7 +0.2**
comp=Z,13nm,0.8s,baz=330,slow=8.1,SNR=1.6
RES LR LR 23 52 06.5
comp=Z,663nm,19.8s,baz=340,slow=39
comp=Z,13nm,0.8s
RES Resolute Bay 59.45 15 P P **23 23 11.7 +0.2**
CTA Charters Tower 59.66 177 LR LR 23 48 24.6
comp=Z,345nm,20.5s,baz=344,slow=36
WB0 Warramunga Arr 59.92 190 IAmb IAmb 23 24 07.2
comp=Z,26nm,1.1s
HYBB Hyderabad (bro 60.01 268 *e*P P **23 23 16.8 +0.5**
HYBB *ep*P **pP** **23 23 19.1 -3.1**
HYBB *e*S S **23 31 31.3 +3.3**
HYBB *e*ScS **ScS** **23 33 07.9 +2.0**
FITZ Fitzroy Crossi 60.03 200 P P **23 23 16.1 0.0**
FITZ IAmb IAmb 23 23 31.8
comp=Z,24nm,1.1s
WRAB Tennant Creek 60.09 190 P P **23 23 14.0 -2.5**
WRAB IAmb IAmb 23 23 29.4
comp=Z,22nm,1.1s
WRAB Tennant Creek 60.09 190 *de*P P **23 23 15.2 -1.3**
WRAB pmax pmax
comp=Z,12nm,0.8s
WR0 Warramunga Arr 60.09 190 IAmb IAmb 23 24 08.5
comp=Z,20nm,1.1s
WB2 Warramunga Arr 60.09 190 P P **23 23 14.9 -1.7**
WB2 IAmb IAmb 23 24 08.4
comp=Z,21nm,1.1s
WRA Warramunga Arr 60.10 190 P P **23 23 14.4 -2.1**
comp=Z,9.4nm,0.7s,baz=7.8,slow=6.9,SNR=126
WRA LR LR 23 49 44.1
comp=Z,169nm,20.0s,baz=1.5,slow=37
comp=Z,9.4nm,0.7s
WRA Warramunga Ar 60.10 190 P P **23 23 14.4 -2.1**
YKA Yellowknife Ar 60.52 31 P P **23 23 19.4 +0.5**
comp=Z,4.9nm,1.1s,baz=298,slow=6.7,SNR=9.9
YKA LR LR 23 51 27.8
comp=Z,284nm,18.8s,baz=305,slow=38
comp=Z,4.9nm,1.1s
YKA Yellowknife Ar 60.52 31 P P **23 23 20.6 +1.6**
YKA Yellowknife Ar 60.52 31 *i*P P **23 23 20.1 +1.1**
YKA pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 61.98 339 P P **23 23 28.7 -0.1**
comp=Z,5.1nm,0.8s,baz=41,slow=8.1,SNR=6.0
ARCES S S **23 31 47.9 -3.7**
comp=Z,4.0nm,1.0s,baz=28,slow=17,SNR=1.2
ARCES LR LR 23 53 38.1
comp=Z,1μm,20.5s,baz=33,slow=39
comp=Z,5.1nm,0.8s
ARCES ARCESS Array B 61.98 339 P P **23 23 28.7 -0.1**
KLMR Klimovskoe 62.32 328 *e*P P **23 23 30.0 -1.1**
KLMR *e* **23 25 46.4**
KLMR *e*S S **23 31 55.3 -0.7**
KLMR *e*SS SS **23 36 02.3 +3.6**
KLMR pmax pmax
comp=Z,51nm,1.4s
KLMR MLR MLR
comp=Z,2μm,17.0s
KLMR Klimovskoe 62.32 328 *e*P P **23 23 30.0 -1.1**
KLMR AMP **23 23 33.6**
comp=Z,51nm,1.4s
KLMR *e*PP PP **23 25 46.5 -1.3**
KLMR *e*S S **23 31 55.3 -0.7**
KLMR *e*S S **23 31 55.3 -0.7**
KLMR *e*SS SS **23 36 02.3 +3.6**
KLMR *e*SS SS **23 36 02.3 +3.6**
KLMR LQ LQ 23 45 59.7
KLMR LQ LQ 23 45 59.7
KLMR LR LR 23 50 24.5
KLMR AMP 23 53 23.9
comp=Z,2μm,16.8s
BELG Belogornoye 62.94 317 P P **23 23 35.3 -0.1**
comp=Z,82nm,0.9s,baz=39,slow=1.7,SNR=13
BELG LR LR 23 53 20.1
comp=Z,1μm,18.3s,baz=50,slow=38
comp=Z,82nm,0.9s
BELG Belogornoye 62.94 317 *ce*P P **23 23 35.7 +0.3**
BELG pmax pmax
comp=Z,18nm,0.9s
HRA Herat 62.98 293 P P **23 23 37.1 +0.8**
LLLB Lillooet 63.05 45 P P **23 23 38.1 +1.9**
DAG Danmarks Havn 63.13 355 *i*P P **23 23 36.0 -0.3**
DAG IAmb IAmb 23 23 46.5
comp=Z,29nm,1.1s
AS31 Alice Springs 63.82 190 P P **23 23 41.1 -0.4**
ASAR Alice Springs 63.82 190 P P **23 23 40.2 -1.4**
comp=Z,5.0nm,0.7s,baz=9.8,slow=6.3,SNR=46
ASAR LR LR 23 50 03.6
comp=Z,216nm,21.9s,baz=6.5,slow=35
comp=Z,5.0nm,0.7s
ASAR Alice Springs 63.82 190 P P **23 23 40.3 -1.2**
ASAR Alice Springs 63.82 190 P P **23 23 40.3 -1.2**
GEYT Alibeck 64.00 299 P P **23 23 42.3 -0.5**
comp=Z,18nm,1.0s,baz=2.3,slow=3.7,SNR=24
GEYT S S **23 32 16.1 -1.8**
comp=Z,0.8nm,0.5s,baz=72,slow=4.7,SNR=1.5
GEYT LR LR 23 52 37.8
comp=Z,574nm,18.4s,baz=64,slow=37
comp=Z,18nm,1.0s
GYA0B ALIBECK ARRAY 64.00 299 IAmb IAmb 23 23 54.3
comp=Z,24nm,1.1s
PALK Pallekele 64.66 258 LR LR 23 52 55.6
comp=Z,608nm,20.4s,baz=148,slow=37
D05A Enumclaw 64.76 49 P P **23 23 49.6 +2.1**
G03D McMinnville, O 65.06 51 P P **23 23 49.9 +0.4**

baz=302
DZM Mont Dzumac 65.17 157 P **P** **23 23 48.7 -1.8**
comp=Z,12nm,1.2s,baz=12,slow=12,SNR=2.3
DZM LR LR 23 53 58.8
comp=Z,504nm,18.0s,baz=32,slow=38
comp=Z,12nm,1.2s
DZM Mont Dzumac 65.17 157 *e*S **S** **23 32 33.3 +0.9**
comp=Z,461nm,26.7s
DZM Mont Dzumac 65.17 157 *e*LR LR 23 43 21.5
comp=Z,740nm,22.6s
EIDS Eidsvold 65.24 173 P **P** **23 23 50.1 -0.7**
EIDS IAmb IAmb 23 23 52.4
comp=Z,8.4nm,0.8s
I02E Swisshome, OR 65.29 52 P **P** **23 23 51.0 0.0**
baz=302
VALR Valaam 65.43 331 *de*P **P** **23 23 52.1 +0.5**
VALR pmax pmax
comp=Z,20nm,0.9s
LTY Liberty 65.48 48 P **P** **23 23 53.5 +1.1**
DBG Daneborg 65.62 355 *e*P **P** **23 23 56.4 +3.7**
B08A Colville Reser 65.64 47 P **P** **23 23 54.0 +0.6**
B08A IAmb IAmb 23 23 56.6
comp=Z,12nm,1.4s
MSVF Nonsavu 65.67 144 LR LR 23 51 29.8
comp=Z,258nm,18.2s,baz=3.9,slow=35
H04D Lebanon 65.74 52 P **P** **23 23 54.3 +0.4**
baz=303
J01E Myrtle Point 65.75 53 P **P** **23 23 54.5 +0.5**
baz=302
I03D Drain, OR 65.81 53 P **P** **23 23 54.6 +0.2**
baz=303
PCHI Peechi 65.89 264 *e*P **P** **23 23 53.9 -1.4**
PCHI *e*S **S** **23 32 45.0 +3.5**
HOOD Mount Hood Mea 65.96 50 P **P** **23 23 56.5 +1.0**
HOOD IAmb IAmb 23 24 09.2
comp=Z,19nm,0.8s
H04A Detroit Lake 65.99 51 P **P** **23 23 57.5 +1.9**
H04A IAmb IAmb 23 24 02.9
comp=Z,23nm,1.1s
MOS Moscow 66.03 323 *e*P **P** **23 23 56.0 +0.4**
MOS *e*S **S** **23 32 39.1 -3.0**
MOS *e*SS **SS** **23 36 52.1 -4.6**
MOS pmax pmax
comp=Z,200nm,2.0s
MOS pmax pmax
comp=Z,55nm,1.2s
MOS MLR MLR
comp=N,1μm,13.0s
MOS MLR MLR
comp=E,2μm,13.0s
MOS MLR MLR
comp=Z,3μm,13.0s
K02D Willamette Mer 66.16 54 P **P** **23 23 56.9 +0.1**
baz=303
I04A Tendick Farm, 66.33 52 P **P** **23 23 57.6 -0.3**
baz=303
KSXB Camp Six Broad 66.50 55 P **P** **23 24 00.2 +1.2**
KSXB IAmb IAmb 23 24 13.4
comp=Z,17nm,1.1s
L02F Cave Junction 66.53 54 P **P** **23 23 59.7 +0.6**
baz=303
C09A Chrisman Ranch 66.55 47 P **P** **23 24 00.6 +1.5**
C09A IAmb IAmb 23 24 08.4
comp=Z,7.5nm,0.8s
D08A Wollman Farm, 66.59 48 P **P** **23 24 00.5 +1.1**
D08A IAmb IAmb 23 24 08.7
comp=Z,8.4nm,0.9s
HAWA Hanford 66.61 48 P **P** **23 24 00.4 +0.9**
F07A Phinny Hill Vi 66.66 49 P **P** **23 24 01.9 +2.2**
F07A IAmb IAmb 23 25 22.1
comp=Z,17nm,1.0s
VRH Novokhopyorsk 66.66 318 *e*P **P** **23 23 59.4 -0.3**
VRH pmax pmax
comp=Z,40nm,1.1s
VRH MLR MLR
comp=Z,5μm,15.0s
I05D Terrebonne, OR 66.68 51 P **P** **23 24 00.8 +0.7**
baz=303
J04D Umpqua Nationa 66.82 52 P **P** **23 24 01.4 +0.3**
J04D Umpqua Nationa 66.82 52 P **P** **23 24 01.6 +0.4**
baz=303
E08A Dider Farm, El 66.83 48 P **P** **23 24 02.8 +1.9**
OBN Obninsk 66.89 323 P **P** **23 24 01.6 +0.6**
OBN Obninsk 66.89 323 *c* *i*P **P** **23 24 00.9 -0.1**
OBN *e**PP **pP** **23 24 07.0 0.0**
OBN *e**SP **pwP** **23 24 10.9 +1.1**
OBN *e* 23 24 27.9
OBN *e* 23 26 30.3
OBN *e*S **S** **23 32 53.2 +0.7**
OBN *e*SS **SS** **23 37 05.7 -4.2**
OBN pmax pmax
comp=Z,49nm,1.7s
OBN MLR MLR
comp=Z,3μm,16.0s
NEW Newport 66.93 46 S **S** **23 32 53.9 +0.5**
comp=Z,0.8nm,0.4s,baz=345,slow=17,SNR=1.2
NEW LR LR 23 52 47.3
comp=Z,169nm,20.4s,baz=333,slow=36
NEW Newport 66.93 46 P **P** **23 24 03.0 +1.5**
NEW Newport 66.93 46 P **P** **23 24 03.0 +1.5**
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 66.93 46 P **P** **23 24 01.5 0.0**
baz=304
KHMM Horse Mountain 67.11 55 P **P** **23 24 05.0 +2.0**
KMPM Mount Pierce 67.12 56 P **P** **23 24 04.3 +1.3**
KMPM IAmb IAmb 23 24 08.6
comp=Z,16nm,1.1s
FIA1 FINESS Array S 67.13 332 P **P** **23 24 02.7 +0.1**
FIA0 FINESS Array S 67.14 332 P **P** **23 24 02.5 -0.1**
FIA0 FINESS Array S 67.14 332 P **P** **23 24 02.5 -0.1**
FINES FINESS Array B 67.14 332 P **P** **23 24 01.5 -1.1**
comp=Z,11nm,0.8s,baz=81,slow=4.0,SNR=30
FINES S **S** **23 32 53.0 -2.3**
comp=Z,1.4nm,0.8s,baz=344,slow=4.6,SNR=1.6
FINES LR LR 23 56 36.2
comp=Z,3μm,18.2s,baz=34,slow=39
comp=Z,11nm,0.8s
FINES FINESS Array B 67.14 332 *i* P **P** **23 24 02.5 -0.1**
FINES pmax pmax
comp=Z,11nm,0.8s
PINE Pine Mountain 67.22 51 P **P** **23 24 04.2 +0.5**
LPSR Galich'ya Gora 67.26 320 *e*P **P** **23 24 02.4 -1.1**
LPSR pmax pmax
comp=Z,20nm,1.0s
LPSR MLR MLR
comp=Z,3μm,14.0s
L04D Klamath Falls 67.26 53 P **P** **23 24 03.6 -0.3**
baz=304,SNR=13
YBH Yreka Blue Hor 67.28 54 S **S** **23 32 58.1 +0.1**
comp=Z,0.4nm,0.4s,baz=18,slow=16,SNR=1.8
YBH LR LR 23 46 51.3
comp=Z,156nm,21.5s,baz=318,slow=30
YBH Yreka Blue Hor 67.28 54 P **P** **23 24 05.8 +1.8**
YBH IAmb IAmb 23 24 20.6
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 67.28 54 P **P** **23 24 05.8 +1.8**
YBH pmax pmax
comp=Z,11nm,1.2s
J05D Fort Rock, OR 67.33 52 P **P** **23 24 04.3 -0.1**
baz=304
E09A Wood Farm, Sta 67.34 48 P **P** **23 24 05.6 +1.5**
E09A IAmb IAmb 23 24 07.6
comp=Z,24nm,1.3s
G08A Pilot Rock 67.56 49 P **P** **23 24 07.0 +1.3**
VORR Voronezh 67.67 319 *e*P **P** **23 24 06.7 +0.6**
VORR pmax pmax
comp=Z,35nm,1.5s
AFI Afiamalu 67.67 133 LR LR 23 53 43.6
comp=Z,384nm,18.2s,baz=339,slow=36
JMIC Jan Mayen 67.68 350 LR LR 23 53 36.6
comp=Z,279nm,20.1s,baz=60,slow=36
K05A Summer Lake 67.85 52 P **P** **23 24 08.9 +1.3**
KCPM Cahto Peak 67.86 56 P **P** **23 24 08.9 +1.1**
KCPM IAmb IAmb 23 24 12.4
comp=Z,19nm,1.1s
SUMG Summit 67.88 1 P **P** **23 24 08.2 +0.6**
SUMG IAmb IAmb 23 24 29.7
comp=Z,23nm,1.0s
SUMG Summit 67.88 1 P **P** **23 24 08.2 +0.6**
SUMG pmax pmax
comp=Z,23nm,1.0s
SUMG Summit 67.88 1 *i* P **P** **23 24 08.0 +0.4**
SUMG IAmb IAmb 23 24 10.2
comp=Z,25nm,1.2s
I07A Izee 67.92 51 P **P** **23 24 09.6 +1.5**

VSR Storozhevoye 67.96 319 *e*P **P** **23 24 07.9 0.0**
VSR pmax pmax
comp=Z,40nm,1.6s
VSR MLR MLR
comp=Z,2μm,14.0s
MAK Makhachkala 68.09 308 *e*P P 23 24 03.4 -5.5
MAK *e* 23 26 34.8
MAK *e*S S 23 32 58.5 -8.9
MAK *e*SS **SS** **23 37 27.6 -1.6**
MAK pmax pmax
comp=Z,221nm,1.3s
MAK MLR MLR
comp=Z,2μm,13.0s
WALA Waterton Lakes 68.21 44 P **P** **23 24 11.4 +1.7**
WALA IAmb IAmb 23 25 10.9
comp=Z,19nm,1.4s
MEF Metsahovi 68.58 332 *e*P **P** **23 24 12.2 +0.6**
HOPS Hopland Field 68.58 57 P **P** **23 24 12.8 +0.7**
MOD Modoc Plateau 68.67 53 P **P** **23 24 14.4 +1.6**
MOD IAmb IAmb 23 24 29.0
comp=Z,15nm,1.3s
GDXM Geysers 68.86 57 P **P** **23 24 14.8 +0.9**
GDXM IAmb IAmb 23 24 18.0
comp=Z,24nm,1.6s
VSU Vasula 68.91 330 *c* *i*P **P** **23 24 13.7 0.0**
VSU Vasula 68.91 330 *e*P **P** **23 24 14.2 +0.5**
RAF Rauma 68.93 334 *e*P **P** **23 24 15.0 +1.2**
J08A Circle Bar Ran 68.95 51 P **P** **23 24 16.1 +1.7**
J08A IAmb IAmb 23 24 28.6
comp=Z,14nm,1.0s
GROC Groznyy 68.98 309 *e*P **P** **23 24 11.5 -3.0**
GROC *e* 23 24 34.8
GROC *e*S **S** **23 33 18.5 +0.5**
GROC pmax pmax
comp=Z,56nm,0.8s
ORV Oroville 69.27 55 P **P** **23 24 17.4 +1.0**
ORV IAmb IAmb 23 24 19.4
comp=Z,34nm,1.8s
ORV Oroville 69.27 55 P **P** **23 24 17.4 +1.0**
ORV pmax pmax
comp=Z,34nm,1.8s
WVOR Wild Horse Val 69.38 52 IAmb IAmb 23 24 20.8
comp=Z,26nm,1.6s
GOF Gofitskoye 69.51 312 ||*i*P **P** **23 24 18.3 +0.6**
GOF *e*S **S** **23 33 27.6 +3.4**
GOF pmax pmax
comp=Z,129nm,0.9s
MSO Missoula 69.51 46 P **P** **23 24 19.1 +1.2**
MSO Missoula 69.51 46 P **P** **23 24 18.2 +0.3**
baz=307
NCK Nalchik 70.11 310 ||*i*P **P** **23 24 22.5 +1.0**
NCK pmax pmax
comp=Z,51nm,1.2s
ARMA Armidale 70.30 173 P **P** **23 24 22.8 +0.2**
ARMA IAmb IAmb 23 26 21.3
comp=Z,54nm,2.0s
ZEI Tsey 70.35 310 *e*P **P** **23 24 22.1 -1.1**
ZEI pmax pmax
comp=Z,36nm,1.4s
KVAR Kislovodsk Arr 70.37 311 P **P** **23 24 24.4 +1.2**
comp=Z,30nm,1.0s,baz=9.5,slow=6.1,SNR=10
KVAR S **S** **23 33 32.0 -2.5**
comp=Z,5.0nm,0.9s,baz=321,slow=17,SNR=1.8
comp=Z,30nm,1.0s
KIV Kislovodsk 70.37 311 P **P** **23 24 24.7 +1.5**
KIV Kislovodsk 70.37 311 *e*P **P** **23 24 23.8 +0.6**
KIV *e* 23 26 59.5
KIV *e*S **S** **23 33 37.9 +3.4**
KIV pmax pmax
comp=Z,115nm,1.0s
KIV pmax pmax
comp=Z,114nm,4.2s
KIV Kislovodsk 70.37 311 P **P** **23 24 25.5 +2.3**
KIV Kislovodsk 70.37 311 *i* P **P** **23 24 24.7 +1.5**
SNR=24
KBZ Khabaz 70.38 311 P **P** **23 24 23.1 0.0**
comp=Z,37nm,0.9s,baz=68,slow=1.2,SNR=49
KBZ S **S** **23 33 35.9 +1.5**
comp=Z,1.2nm,0.7s,baz=25,slow=17,SNR=2.0
KBZ LR LR 23 59 27.8
comp=Z,498nm,18.1s,baz=18,slow=40
comp=Z,37nm,0.9s
KBZ Khabaz 70.38 311 P **P** **23 24 23.1 0.0**
KBZ S **S** **23 33 35.9 +1.5**
EMB Emerald Bay 70.49 55 P **P** **23 24 25.8 +1.7**
EMB IAmb IAmb 23 24 29.8
comp=Z,15nm,0.8s
PAHR Pah Rah Range 70.51 54 IAmb IAmb 23 24 27.7
comp=Z,32nm,1.7s
VCNR Virginia City 70.58 55 P **P** **23 24 25.9 +1.2**
VCNR IAmb IAmb 23 24 34.3
comp=Z,14nm,1.1s
ONI Oni 70.73 310 P **P** **23 24 26.8 +1.4**
ONI Oni 70.73 310 P **P** **23 24 26.8 +1.4**
ONI pmax pmax
comp=Z,47nm,1.1s
PNTR Pine Nut 70.74 55 P **P** **23 24 27.1 +1.4**
PNTR IAmb IAmb 23 24 45.3
comp=Z,11nm,0.8s
HRY Holter Researc 70.74 45 P **P** **23 24 27.3 +1.9**
SAO San Andreas Ge 70.91 58 P **P** **23 24 27.8 +1.3**
SAO San Andreas Ge 70.91 58 P **P** **23 24 27.8 +1.3**
SAO pmax pmax
comp=Z,5.0nm,0.9s
YERR Yerington 71.03 55 P **P** **23 24 29.0 +1.6**
YERR IAmb IAmb 23 24 59.7
comp=Z,15nm,0.5s
EGMT Eagleton 71.03 43 P **P** **23 24 28.1 +1.0**
EGMT IAmb IAmb 23 24 36.8
comp=Z,17nm,0.9s
EGMT Eagleton 71.03 43 P **P** **23 24 26.9 -0.2**
baz=309
MNK Minsk 71.14 326 *i* P **P** **23 24 27.5 0.0**
MNK *i* 23 24 47.4
MNK *i* 23 27 05.8
MNK *i* PPP PPP 23 28 46.8
MNK *i* S **S** **23 33 44.4 +1.6**
MNK *i* SS **SS** **23 38 22.8 +7.4**
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=Z,58nm,1.0s
MNK MLR MLR
comp=E,251nm,15.0s
MNK MLR MLR
comp=Z,2μm,13.0s
MNK Minsk 71.14 326 *i* P **P** **23 24 27.5 0.0**
comp=E,4.0nm,1.0s
MNK *i* P **P** **23 24 27.5 0.0**
MNK *i* P **P** **23 24 27.5 0.0**
comp=Z,58nm,1.0s,baz=47
MNK *i* PcP **PcP** **23 24 47.5 0.0**
MNK *i* PP **PP** **23 27 05.9 +1.2**
MNK *i* PPP PPP 23 28 46.8
MNK *i* S **S** **23 33 44.4 +1.6**
MNK *i* SS **SS** **23 38 22.8 +7.4**
MNK *i* SSS SSS 23 41 37.7
MNK *i* LQ LQ 23 52 01.2
MNK *i* LR LR 23 55 13.5
MNK *i* LRM MLR 23 58 50.1
comp=E,251nm,14.7s
MNK *i* LRM MLR 23 58 50.7
comp=Z,2μm,12.8s
ISAL Salakas 71.14 328 *e*P **P** **23 24 29.2 +1.8**
SLIT Siitere, Latvi 71.18 331 *e*P **P** **23 24 28.8 +1.1**
HLID Hailey 71.21 49 P **P** **23 24 29.2 +0.8**
HLID Hailey 71.21 49 P **P** **23 24 27.8 -0.6**
baz=307,SNR=10
BBGB Big Mountain B 71.28 58 P **P** **23 24 30.1 +1.2**
BBGB IAmb IAmb 23 24 44.5
comp=Z,30nm,1.1s
NACGM Naroch 71.33 327 ||*e*P **P** **23 24 29.9 +1.3**
baz=47
MCMT McKenzie Canyo 71.33 47 P **P** **23 24 30.8 +1.5**
ICESG Greenland Ices 71.36 1 *i* P **P** **23 24 30.2 +1.2**
ICESG IAmb IAmb 23 24 32.9
comp=Z,23nm,0.9s
STKA Stephens Creek 71.38 182 P **P** **23 24 26.8 -2.2**
comp=Z,2.6nm,0.5s,baz=350,slow=6.5,SNR=11
STKA S **S** **23 33 42.5 -3.4**
comp=Z,0.3nm,0.3s,baz=9.0,slow=8.9,SNR=1.7
comp=Z,2.6nm,0.5s
STKA Stephens Creek 71.38 182 ||*e*P **P** **23 24 28.0 -1.0**
GNI Garni 71.41 307 P **P** **23 24 29.5 -0.2**
comp=Z,11nm,1.0s,baz=11,slow=10,SNR=8.8

GNI S **S** **23 33 47.6 +0.8**
comp=Z,2.5nm,0.9s,baz=144,slow=21,SNR=1.6
GNI LR LR 23 58 42.9
comp=Z,544nm,19.2s,baz=56,slow=38
comp=Z,11nm,1.0s
GNI Garni 71.41 307 P **P** **23 24 31.4 +1.7**
GNI Garni 71.41 307 *c* *i*P **P** **23 24 30.8 +1.2**
GNI pmax pmax
comp=Z,63nm,1.7s
GNI Garni 71.41 307 P **P** **23 24 31.5 +1.9**
GNI Garni 71.41 307 P **P** **23 24 30.8 +1.2**
BMN Battle Mountai 71.42 53 IAmb IAmb 23 24 34.3
comp=Z,17nm,1.2s
BOZ Bozeman (W) 71.54 46 IAmb IAmb 23 24 39.7
comp=Z,12nm,0.8s
BOZ Bozeman (W) 71.54 46 P **P** **23 24 29.9 -0.4**
baz=308,SNR=18
PMPB Monarch Peak 71.65 58 P **P** **23 24 31.5 +0.4**
PMPB IAmb IAmb 23 24 40.7
comp=Z,16nm,1.2s
KVN Kaiserville 71.70 54 IAmb IAmb 23 24 35.8
comp=Z,16nm,1.1s
VSVD Vaisvydziai 71.73 329 *e*P **P** **23 24 31.8 +0.7**
WSAR Wadi Sarin 71.80 285 LR LR 00 00 11.0
comp=Z,331nm,18.5s,baz=84,slow=39
WBK Wadi Bani Khal 71.92 285 P **P** **23 24 33.3 +0.5**
LHV Little Huntoon 71.92 55 P **P** **23 24 33.8 +1.3**
LHV IAmb IAmb 23 24 49.3
comp=Z,24nm,1.1s
NVAR Mina Array Bea 71.94 55 P **P** **23 24 33.4 +0.4**
comp=Z,7.4nm,0.9s,baz=292,slow=5.1,SNR=19
NVAR LR LR 23 56 43.0
comp=Z,164nm,18.3s,baz=298,slow=36
comp=Z,7.4nm,0.9s
SHME Shamm 71.99 289 P **P** **23 24 34.1 +1.0**
SNR=7.1
SHME Shamm 71.99 289 *i* P **P** **23 24 33.8 +0.6**
SNR=7.0
BIDO Bidbid 72.01 286 P **P** **23 24 35.0 +1.7**
NV11 Mina Array Sit 72.04 55 IAmb IAmb 23 24 37.1
comp=Z,24nm,1.6s
PABE Paberze 72.06 329 P **P** **23 24 32.3 -0.7**
PABE Paberze 72.06 329 *e*P **P** **23 24 33.8 +0.8**
NC303 NORSAR Array S 72.06 338 IAmb IAmb 23 24 57.7
comp=Z,28nm,1.1s
QLMT Earthquake Lak 72.12 46 P **P** **23 24 35.0 +1.0**
KARS Kars 72.14 308 P **P** **23 24 36.0 +2.1**
KARS Kars 72.14 308 P **P** **23 24 36.1 +2.1**
HFS Hagfors 72.23 336 P **P** **23 24 33.2 -0.8**
comp=Z,20nm,1.0s,baz=39,slow=5.7,SNR=22
HFS LR LR 23 59 53.5
comp=Z,2μm,18.1s,baz=30,slow=39
comp=Z,20nm,1.0s
HFS Hagfors 72.23 336 P **P** **23 24 33.2 -0.8**
YHL Hebgen Lake 72.25 46 P **P** **23 24 36.3 +1.5**
YHL IAmb IAmb 23 24 47.1
comp=Z,15nm,1.2s
NB2 NORSAR Subarra 72.26 338 P **P** **23 24 33.8 -0.4**
comp=Z,44nm,1.2s,baz=36,slow=6.2
NB2 NORSAR Subarra 72.26 338 P **P** **23 24 33.8 -0.4**
baz=36,slow=6.2
NOA NORSAR Array B 72.26 338 P **P** **23 24 33.6 -0.6**
comp=Z,14nm,1.0s,baz=36,slow=5.9,SNR=35
NOA LR LR 00 00 34.3
comp=Z,1μm,18.1s,baz=25,slow=39
comp=Z,14nm,1.0s
NOA NORSAR Array B 72.26 338 P **P** **23 24 33.6 -0.6**
PAGB Antelope Grade 72.30 58 P **P** **23 24 35.9 +1.0**
SOC Sochi 72.31 312 *e*P **P** **23 24 33.2 -1.5**
SOC *e* 23 27 09.9
SOC *e*S **S** **23 33 55.9 -0.8**
SOC *e*SS **SS** **23 38 33.0 -0.9**
SOC pmax pmax
comp=Z,34nm,1.0s
SMDO Samad 72.34 285 P **P** **23 24 36.9 +1.5**
MASF Masafi 72.37 289 P **P** **23 24 36.9 +1.4**
MSFE Esma-Masafi 72.38 288 P **P** **23 24 36.0 +0.5**
NC602 NORSAR Array S 72.41 338 P **P** **23 24 35.3 +0.3**
ELK Elko 72.44 51 S **S** **23 33 57.6 -1.2**
comp=Z,0.2nm,0.2s,baz=0.0,slow=20,SNR=0.5
ELK LR LR 23 50 30.4
comp=Z,169nm,21.7s,baz=326,slow=31
ELK Elko 72.44 51 P **P** **23 24 36.8 +0.9**
ELK Elko 72.44 51 P **P** **23 24 36.8 +0.9**
ELK pmax pmax
comp=Z,10.0nm,1.4s
PBUR Paburge 72.48 330 *e*P **P** **23 24 37.1 +1.5**
YMR Madison River 72.48 46 P **P** **23 24 37.0 +0.9**
YMR IAmb IAmb 23 24 44.9
comp=Z,9.1nm,0.8s
GCMT Greycliff 72.49 45 P **P** **23 24 37.4 +1.4**
NAO01 NORSAR Array S 72.51 338 P **P** **23 24 36.1 +0.4**
HOQ Hoqain 72.58 286 P **P** **23 24 36.8 +0.1**
UOSS Minazif 72.59 288 P **P** **23 24 37.4 +0.6**
UOSS Minazif 72.59 288 P **P** **23 24 37.2 +0.5**
UOSS Minazif 72.59 288 P **P** **23 24 37.1 +0.3**
YNR Norris Junctio 72.61 46 P **P** **23 24 37.7 +0.8**
JMDO Jabal Madar 72.71 285 P **P** **23 24 37.6 +0.1**
HATD Hatta, Dubai 72.71 288 P **P** **23 24 39.0 +1.5**
SNR=7.6
HATD Hatta, Dubai 72.71 288 *i* P **P** **23 24 38.3 +0.8**
SNR=7.6
DSP Deep Springs 72.79 56 IAmb IAmb 23 24 47.8
comp=Z,16nm,1.1s
ANN Anapa 72.82 314 *e*P **P** **23 24 34.1 -3.7**
ANN *e**PP **pP** **23 24 38.9 -4.9**
ANN *e* 23 27 18.4
ANN *e*S **S** **23 33 58.9 -3.6**
ANN pmax pmax
comp=Z,47nm,1.0s
ASHO Ashiyiah 72.85 288 P **P** **23 24 39.6 +1.3**
ASHO Ashiyiah 72.85 288 P **P** **23 24 39.0 +0.6**
H17A Grant Village 72.87 46 P **P** **23 24 40.8 +2.4**
H17A IAmb IAmb 23 24 51.1
comp=Z,12nm,0.9s
SFJD Kangerlussuaq 72.94 6 P **P** **23 24 37.2 -0.9**
comp=Z,11nm,0.9s,baz=41,slow=4.5,SNR=2.6
SFJD S **S** **23 34 01.7 -1.4**
comp=Z,2.4nm,0.3s,baz=75,slow=14,SNR=1.6
SFJD LR LR 23 59 46.1
comp=Z,1μm,19.5s,baz=349,slow=38
comp=Z,11nm,0.9s
SFJD Kangerlussuaq 72.94 6 P **P** **23 24 38.5 +0.5**
SFJD IAmb IAmb 23 24 57.4
comp=Z,16nm,1.0s
SFJD Kangerlussuaq 72.94 6 P **P** **23 24 38.5 +0.5**
SFJD pmax pmax
comp=Z,16nm,1.0s
NAZ Nazwa, Dubai 72.96 288 P **P** **23 24 39.5 +0.5**
MZP Montezuma Peak 72.96 55 P **P** **23 24 40.6 +1.5**
IMW Indian Meadow 72.98 47 P **P** **23 24 40.6 +1.5**
IMW IAmb IAmb 23 24 50.1
comp=Z,12nm,1.0s
VES Vestal, Richgr 72.99 57 P **P** **23 24 38.1 -0.9**
baz=307
FLWY Flagg Ranch 73.00 47 P **P** **23 24 41.3 +2.1**
FLWY IAmb IAmb 23 25 29.9
comp=Z,21nm,1.3s
PKM Mcpherson Peak 73.09 59 P **P** **23 24 39.3 -0.5**
baz=307
FXWY Fox Creek 73.10 47 P **P** **23 24 41.0 +1.2**
FXWY IAmb IAmb 23 24 54.8
comp=Z,11nm,1.0s
AKASG Malin Array Be 73.13 323 P **P** **23 24 38.6 -0.9**
comp=Z,4.2nm,0.5s,baz=44,slow=6.5,SNR=53
AKASG S **S** **23 34 03.8 -2.0**
comp=Z,0.2nm,0.3s,baz=76,slow=13,SNR=1.7
AKASG LR LR 23 58 43.1
comp=Z,937nm,18.5s,baz=46,slow=37
comp=Z,4.2nm,0.5s
AKASG Malin Array Be 73.13 323 IAmb IAmb 23 24 41.8
comp=Z,18nm,1.4s
AKASG Malin Array Be 73.13 323 *i* P **P** **23 24 39.2 -0.3**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 73.13 323 IAmb IAmb 23 24 40.9
comp=Z,25nm,0.9s
AKBB Malin Array Si 73.13 323 *c* *i*P **P** **23 24 39.3 -0.2**
AKBB pmax pmax
comp=Z,29nm,1.0s
RLMT Red Lodge 73.13 45 P **P** **23 24 39.6 -0.3**
baz=310
FAQ Al Faqa, Dubai 73.16 288 P **P** **23 24 40.4 +0.3**
FAQ Al Faqa, Dubai 73.16 288 P **P** **23 24 40.2 +0.1**
BSY Bisya 73.16 286 P **P** **23 24 41.0 +0.9**

MOOW **Moose Ponds** 73.19 47 P P 23 24 41.8 +1.5
TPAW **Teton Pass** 73.23 47 IAmb IAmb 23 24 43.9
comp=Z,26nm,1.6s
CWC **Cottonwood Cre** 73.28 56 P P 23 24 40.7 -0.2
baz=307
GMN **Gold Mountain** 73.28 55 P P 23 24 42.3 +1.4
GMN IAmb IAmb 23 24 44.8
comp=Z,23nm,1.7s
ARQ **Araqi** 73.31 287 P P 23 24 42.4 +1.4
BCW **Bitter Crk WRg** 73.32 58 P P 23 24 42.0 +0.9
BCW IAmb IAmb 23 25 01.3
comp=Z,12nm,0.9s
LOHW **Long Hollow** 73.35 47 P P 23 24 42.8 +1.5
SNOW **Snow King Moun** 73.36 47 P P 23 24 43.1 +1.8
GRAC **Grapevine Rang** 73.40 56 P P 23 24 43.0 +1.6
ASUD **Al Ashush, Dub** 73.42 288 P P 23 24 42.6 +0.9
ASUD **Al Ashush, Dub** 73.42 288 P P 23 24 41.4 -0.2
ALNE **Al Ain** 73.45 288 P P 23 24 42.4 +0.5
ALNE **Al Ain** 73.45 288 *i* P P 23 24 42.3 +0.5
SNR=6.0
ISA **Isabella, Lake** 73.50 57 P P 23 24 42.2 +0.2
baz=307
GEVA **Gevas** 73.56 306 P P 23 24 43.1 +0.6
GEVA IAmb IAmb 23 24 45.7
comp=Z,39nm,1.3s
DGMT **Dagmar** 73.58 40 P P 23 24 43.9 +1.6
DGMT IAmb IAmb 23 26 17.9
comp=Z,11nm,0.7s
DGMT **Dagmar** 73.58 40 P P 23 24 42.5 +0.3
baz=312
ARVC **Arvin** 73.59 58 P P 23 24 42.8 +0.3
baz=307
AHID **Auburn Hatcher** 73.61 48 P P 23 24 44.3 +1.6
MHTO **MHTO** 73.63 284 P P 23 24 44.0 +1.1
SNR=11
BGU **Big Grassy Mou** 73.64 50 P P 23 24 44.5 +1.6
FRB **Frobisher Bay** 73.64 14 LR LR 00 00 28.3
comp=Z,686nm,19.4s,baz=352,slow=38
R11A **Troy Canyon, C** 73.69 54 IAmb IAmb 23 24 47.0
comp=Z,22nm,1.6s
R11A **Troy Canyon, C** 73.69 54 P P 23 24 43.1 -0.2
baz=308,SNR=20
LAO **LASA Array** 73.73 42 P P 23 24 44.6 +1.4
LAO IAmb IAmb 23 24 52.8
comp=Z,12nm,0.9s
LAO **LASA Array** 73.73 42 P P 23 24 43.1 -0.1
baz=311
SCZ2 **Santa Cruz Isl** 73.74 59 P P 23 24 43.2 -0.2
baz=307
DY2G **Dye2** 73.75 4 *i* P P 23 24 43.2 +0.1
DY2G IAmb IAmb 23 24 45.9
comp=Z,15nm,0.9s
MPMC **Manual Prospec** 73.89 56 P P 23 24 44.3 -0.2
baz=308,SNR=12
S11A **Rachel** 74.02 54 P P 23 24 46.0 +0.8
S11A IAmb IAmb 23 24 58.8
comp=Z,23nm,0.9s
FURC **Furnace Creek,** 74.04 56 P P 23 24 45.4 +0.3
baz=308
GURO **Guroymak-BITLI** 74.05 307 P P 23 24 46.5 +1.2
GURO IAmb IAmb 23 24 48.7
comp=Z,32nm,1.0s
SPR3 **Spring Creek 3** 74.06 52 IAmb IAmb 23 24 54.4
comp=Z,11nm,1.2s
KOPT **Kop Dagi** 74.07 309 P P 23 24 46.4 +0.8
KOPT IAmb IAmb 23 24 49.5
comp=Z,38nm,1.2s
CCAC **Calif City Air** 74.10 57 P P 23 24 47.0 +1.4
CCAC IAmb IAmb 23 25 00.7
comp=Z,16nm,1.1s
TPNV **Topopah Spring** 74.14 55 IAmb IAmb 23 24 59.6
comp=Z,20nm,1.1s
TPNV **Topopah Spring** 74.14 55 P P 23 24 46.3 +0.4
baz=308
DUG **Dugway, Tooele** 74.23 51 IAmb IAmb 23 25 02.9
comp=Z,37nm,1.7s
DUG **Dugway, Tooele** 74.23 51 P P 23 24 46.6 +0.3
baz=309,SNR=15
SNCC **San Nicolas Is** 74.27 60 P P 23 24 47.2 +0.7
baz=308
EDW2 **Edwards Air Fo** 74.28 58 P P 23 24 46.8 +0.1
baz=308
GWY **Greenwater Val** 74.34 56 IAmb IAmb 23 24 54.0
comp=Z,14nm,1.1s
QSM **Queen of Sheba** 74.35 56 IAmb IAmb 23 25 03.6
comp=Z,26nm,1.2s
TCUT **Toone Canyon** 74.47 49 P P 23 24 49.4 +1.5
TCUT IAmb IAmb 23 25 05.1
comp=Z,23nm,1.2s
BW06 **Boulder Array** 74.48 47 P P 23 24 47.9 0.0
baz=310
PDAR **Pinedale Array** 74.48 47 P P 23 24 47.9 0.0
comp=Z,2.6nm,0.8s,baz=288,slow=2.3,SNR=17
PDAR S S 23 34 20.1 -1.8
comp=Z,0.1nm,0.4s,baz=250,slow=16,SNR=1.3
PDAR LR LR 23 59 35.8
comp=Z,92nm,19.3s,baz=343,slow=37
comp=Z,2.6nm,0.8s
CTU **Camp Tracy** 74.54 50 P P 23 24 49.0 +0.8
PASC **Pasadena Art C** 74.59 58 P P 23 24 49.4 +1.0
PASC IAmb IAmb 23 25 10.4
comp=Z,33nm,1.4s
PRN **Pahroc Range** 74.61 54 P P 23 24 49.0 +0.4
PRN IAmb IAmb 23 24 58.3
comp=Z,20nm,1.4s
PSUT **Pine Spring** 74.64 53 P P 23 24 49.9 +1.0
UMZA **Um Al Zommool** 74.68 287 P P 23 24 48.7 -0.3
JLU **Jordanelle** 74.78 50 P P 23 24 51.0 +1.3
GSC **Goldstone, Bar** 74.80 57 P P 23 24 51.1 +1.5
GSC **Goldstone, Bar** 74.80 57 P P 23 24 51.2 +1.5
GSC pmax pmax
comp=Z,8.0nm,1.1s
GSC **Goldstone, Bar** 74.80 57 P P 23 24 50.0 +0.4
baz=308,SNR=6.8
NLU **North Lily Min** 74.82 51 P P 23 24 50.5 +0.6
ANGG **Ammassalik, Gr** 74.88 1 P P 23 24 49.5 +0.1
ANGG IAmb IAmb 23 24 51.1
comp=Z,18nm,1.1s
ANGG **Ammassalik, Gr** 74.88 1 *e*P P 23 24 49.2 -0.2
ANGG IAmb IAmb 23 24 50.7
comp=Z,18nm,1.1s
BFSC **Mount Baldy Ra** 74.89 58 P P 23 24 50.6 +0.3
baz=308
MPU **Maple Canyon** 75.04 50 P P 23 24 52.6 +1.5
BORG **Borgarnes** 75.08 353 P P 23 24 51.7 +1.1
comp=Z,13nm,1.1s,baz=286,slow=8.3,SNR=3.2
BORG S S 23 34 28.3 +1.0
comp=Z,6.9nm,0.9s,baz=32,slow=17,SNR=2.0
BORG LR LR 23 58 56.2
comp=Z,170nm,19.4s,baz=22,slow=37
comp=Z,13nm,1.1s
BORG **Borgarnes** 75.08 353 P P 23 24 51.7 +1.1
SHPR **Sheep Range** 75.10 55 P P 23 24 52.5 +1.0
TUQ **Turquoise Moun** 75.28 56 P P 23 24 52.9 +0.4
baz=306
HEC **Hector,Ludlow** 75.39 57 P P 23 24 53.7 +0.6
baz=308
ELS **Elsinore Mount** 75.41 58 P P 23 24 53.9 +0.6
ELS IAmb IAmb 23 24 58.9
comp=Z,17nm,1.4s
CCUT **Cedar City** 75.56 53 P P 23 24 55.0 +0.8
MURC **Murrieta** 75.59 58 P P 23 24 54.5 +0.3
baz=308
MVU **Marysvale** 75.66 52 P P 23 24 56.2 +1.4
MSU **Marysvale** 75.67 52 P P 23 24 56.2 +1.4
MSU **Marysvale** 75.67 52 P P 23 24 56.3 +1.4
SZCU **Shurtz Canyon** 75.70 53 P P 23 24 56.4 +1.4
MZR **Muzera** 75.74 288 P P 23 24 55.4 +0.2
MZR **Muzera** 75.74 288 *i* P P 23 24 55.2 0.0
SNR=15
TMUT **Trail Mountain** 75.75 51 P P 23 24 56.7 +1.3
V12A **Nelson** 75.78 55 P P 23 24 57.0 +1.6
V12A IAmb IAmb 23 25 11.5
comp=Z,18nm,1.3s
GMRC **Granite Mounta** 75.85 57 P P 23 24 55.9 +0.1
baz=309
RDMU **Red Mountain** 75.89 49 P P 23 24 57.2 +1.2
RDMU IAmb IAmb 23 25 09.9
comp=Z,23nm,1.0s
P17A **Butcher Ranch,** 75.92 50 IAmb IAmb 23 24 59.9
comp=Z,31nm,1.5s
MTPU **Mount Pierson** 75.97 52 P P 23 24 57.9 +1.2
MTPU IAmb IAmb 23 25 01.0
comp=Z,27nm,1.6s
LCMT **Little Creek M** 75.97 53 P P 23 24 58.1 +1.6
Q16A **Castle Valley** 76.02 51 P P 23 24 58.5 +1.7
Q16A IAmb IAmb 23 25 00.7
comp=Z,34nm,1.7s
BEL **Belsk** 76.03 328 *e*P P 23 24 57.9 +1.6
BEL *e*L L 00 02 27.4
comp=Z,2µm,17.3s
PFO **Pinyon Flats O** 76.06 58 LR LR 23 52 15.5
comp=Z,158nm,19.0s,baz=303,slow=31
PFO **Pinyon Flats O** 76.06 58 P P 23 24 58.0 +1.0
PFO **Pinyon Flats O** 76.06 58 P P 23 24 58.0 +1.0
PFO pmax pmax
comp=Z,14nm,1.3s
PFO **Pinyon Flats O** 76.06 58 P P 23 24 56.9 -0.1
baz=309
DIKM **Dikmen** 76.07 313 ⇑P P 23 24 58.4 +1.7
TPFO **Pinon Flats** 76.07 58 P P 23 24 56.9 -0.1
baz=309
109C **Camp Elliot, M** 76.09 59 P P 23 24 57.5 +0.5
baz=308
PMD **Palm Desert** 76.10 58 P P 23 24 57.6 +0.6
PMD IAmb IAmb 23 25 03.0
comp=Z,6.0nm,1.0s
P18A **Preston Nutter** 76.11 50 IAmb IAmb 23 25 07.9
comp=Z,14nm,1.2s
LVV **L'vov** 76.12 325 *e*P P 23 24 57.8 +0.9
LVV MLR MLR
comp=N,900nm,15.0s
LVV MLR MLR
comp=E,900nm,15.0s
LVV MLR MLR
comp=Z,500nm,15.0s
BELC **Belle Mtn. Jos** 76.12 57 P P 23 24 57.7 +0.3
baz=309
ULM **Lac du Bonnet** 76.22 35 P P 23 24 56.9 -0.5
comp=Z,5.1nm,1.0s,baz=335,slow=3.4,SNR=3.5
ULM S S 23 34 30.8 -10
comp=Z,0.8nm,0.4s,baz=238,slow=9.5,SNR=1.4
comp=Z,5.1nm,1.0s
ULM **Lac du Bonnet** 76.22 35 IAmb IAmb 23 26 21.9
comp=Z,32nm,1.8s
ULM **Lac du Bonnet** 76.22 35⇑ *e*P P 23 24 58.5 +1.1
KNB **Kanab** 76.23 53 P P 23 24 59.8 +1.8
KNB IAmb IAmb 23 25 02.2
comp=Z,34nm,1.5s
KNB **Kanab** 76.23 53 P P 23 24 59.8 +1.8
KNB pmax pmax
comp=Z,34nm,1.5s
MDND **Maddock** 76.24 38 P P 23 24 58.4 +0.8
MDND IAmb IAmb 23 25 00.7
comp=Z,23nm,1.0s
MDND **Maddock** 76.24 38 P P 23 24 55.1 -2.5
baz=315
TOKA **Tokat** 76.24 311 P P 23 24 58.2 +0.4
TOKA IAmb IAmb 23 25 01.0
comp=Z,25nm,1.3s
K22A **Casper** 76.25 46 P P 23 24 59.5 +1.6
K22A IAmb IAmb 23 25 50.8
comp=Z,14nm,1.1s
K22A **Casper** 76.25 46 P P 23 24 59.0 +1.1
baz=312
K22A **Casper** 76.25 46 P P 23 24 54.5 -3.5
baz=312
PKCU **Pink Cliffs** 76.27 53 P P 23 24 59.8 +1.4
PKCU IAmb IAmb 23 25 57.6
comp=Z,15nm,1.2s
SRU **San Rafael Swe** 76.28 50 IAmb IAmb 23 25 11.8
comp=Z,11nm,0.9s
GKP **Gorka Klasztor** 76.36 330 *e*P P 23 24 58.6 +0.5
GKP *e*S S 23 34 41.5 -0.2
GKP *e*L L 00 02 00.4
comp=Z,2µm,18.4s
RWWY **Rawlins** 76.50 47 P P 23 25 00.3 +0.8
NEE2 **Needles Airpor** 76.53 56 P P 23 24 59.0 -0.5
baz=309
MONP2 **Monument Peak** 76.54 58 P P 23 24 59.4 -0.4
baz=309
IRM **Iron Mountain** 76.58 57 P P 23 25 00.1 +0.3
baz=309
RSSD **Black Hills** 76.60 43 P P 23 25 01.3 +1.3
RSSD **Black Hills** 76.60 43 P P 23 25 01.3 +1.3
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD **Black Hills** 76.60 43 P P 23 25 01.9 +1.9
baz=313
RSSD **Black Hills** 76.60 43 P P 23 25 00.3 +0.3
baz=313
BC3 **Big Chuckawall** 76.69 57 P P 23 25 01.6 +1.1
baz=309
W13A **Hualapai Mount** 76.79 55 P P 23 25 01.7 +0.5
KWP **Kalwaria Pacla** 76.84 325 *e*P P 23 25 01.8 +0.8
KWP *e*S S 23 34 48.9 +1.6
KWP *e*L L 00 02 28.6
IKP **In-Ko-Pah, Jac** 76.89 58 P P 23 25 02.5 +0.8
baz=309
U15A **North Rim** 76.94 53 P P 23 25 03.3 +1.2
U15A IAmb IAmb 23 25 16.9
comp=Z,15nm,1.1s
O20A **White River Ci** 76.95 48 IAmb IAmb 23 25 15.3
comp=Z,12nm,0.9s
O20A **White River Ci** 76.95 48 P P 23 25 02.6 +0.6
baz=311
PDMCI **Parker Dam,Lak** 77.13 56 P P 23 25 03.4 +0.5
baz=310
BUR08 **Bucovina Ar. S** 77.15 322 IAmb IAmb 23 25 11.5
comp=Z,13nm,0.8s
BURAR **Bucovina Array** 77.17 322 ⇓P P 23 25 04.0 +1.0
BURAR **Bucovina Array** 77.17 322 IAmb IAmb 23 25 05.4
comp=Z,18nm,0.9s
BIZ **Bicaz** 77.23 321 ⇑P P 23 25 04.2 +1.0
BLYC **Blythe** 77.23 57 IAmb IAmb 23 25 17.3
comp=Z,14nm,1.2s
TESR **Tescani** 77.27 321 ⇑P P 23 25 03.9 +0.4
ILGA **Ilgaz** 77.33 313 P P 23 25 04.9 +0.8
CFR **Carcaliu** 77.48 319 ⇑P P 23 25 05.5 +0.9
GLA **Glamis** 77.48 57 P P 23 25 05.2 +0.3
baz=309
RAO **Raoul Island** 77.49 146 LR LR 23 55 17.5
comp=Z,268nm,18.8s,baz=1.5,slow=33
TPGR **Topolog** 77.56 319 ⇓P P 23 25 06.0 +0.9
AGMN **Agassiz Nation** 77.65 36 IAmb IAmb 23 25 11.3
comp=Z,15nm,1.4s
OJC **Ojcow** 77.66 327 *e*P P 23 25 05.3 -0.2
OJC *e*S S 23 34 54.5 -1.6
OJC *e*L L 00 02 50.9
PHWY **Pilot Hill** 77.74 46 P P 23 25 07.4 +0.8
N23A **Red Feather La** 77.74 47 P P 23 25 08.0 +1.4
N23A IAmb IAmb 23 25 17.8
comp=Z,12nm,1.0s
N23A **Red Feather La** 77.74 47 P P 23 25 07.2 +0.6
baz=312
UZH **Uzhgorod** 77.77 325 *e*P P 23 25 05.2 -0.9
UZH *i* 23 25 06.9
UZH *i* 23 25 15.6
UZH *i* S S 23 34 52.5 -4.7
UZH MLR MLR
comp=Z,400nm,14.0s
TIRR **Tirgusor** 77.84 318 P P 23 25 06.7 +0.1
TIRR **Tirgusor** 77.84 318 P P 23 25 06.7 +0.1
TIRR pmax pmax
comp=Z,160nm,1.6s
COVR **Voineasa-Covas** 77.96 321 ⇓P P 23 25 09.3 +1.9
OZUR 77.99 321 ⇓P P 23 25 08.5 +1.1
NIE **Niedzica** 78.05 326 *e*P P 23 25 08.8 +1.1
Y14A **Wickenburg** 78.08 56 P P 23 25 09.8 +1.5
WUAZ **Wupatki** 78.09 54 P P 23 25 09.6 +1.1
WUAZ IAmb IAmb 23 25 22.6
comp=Z,21nm,1.1s
WUAZ **Wupatki** 78.09 54 P P 23 25 09.5 +1.1
baz=311,SNR=5.6
BR131 **Keskin Array S** 78.27 312 P P 23 25 09.4 +0.1
BR131 IAmb IAmb 23 25 12.0
comp=Z,23nm,1.2s
BR131 **Keskin Array S** 78.27 312 *c i*P P 23 25 09.7 +0.3
BRTR **Keskin Array B** 78.27 312 P P 23 25 09.7 +0.3
comp=Z,8.4nm,1.1s,baz=90,slow=3.7,SNR=30
BRTR PP PP 23 28 05.3 -0.4
comp=Z,3.9nm,1.1s,baz=60,slow=4.8,SNR=4.0
BRTR LR LR 00 06 43.0
comp=Z,593nm,18.5s,baz=14,slow=41
comp=Z,8.4nm,1.1s
BRTR **Keskin Array B** 78.27 312 *i* P P 23 25 09.6 +0.3
BRTR pmax pmax
comp=Z,9.0nm,1.1s
DOPR **Dopca** 78.27 321 ⇑P P 23 25 11.0 +2.0
SMCO **Snowmass** 78.31 48 P P 23 25 10.7 +0.8
MLR **Muntele Rosu** 78.34 320 P P 23 25 09.0 -0.6
comp=Z,6.8nm,1.1s,baz=342,slow=1.8,SNR=6.2
MLR LR LR 00 02 37.5
comp=Z,945nm,18.6s,baz=25,slow=38
comp=Z,6.8nm,1.1s
MLR **Muntele Rosu** 78.34 320 IAmb IAmb 23 25 53.5
comp=Z,29nm,1.4s
MLR **Muntele Rosu** 78.34 320 P P 23 25 09.0 -0.6
113A **Mohawk Valley,** 78.35 57 P P 23 25 11.0 +1.3
ICOR **Ion Corvin** 78.39 319 ⇑P P 23 25 11.4 +1.7
B35A **Bob, Littlefor** 78.56 35 P P 23 25 11.9 +1.3
B35A IAmb IAmb 23 25 34.7
comp=Z,20nm,1.4s
MESR **Meseseni** 78.56 323 ⇓P P 23 25 12.5 +1.9
LANS **Liptovska Anna** 78.61 326 *e*P P 23 25 12.6 +1.7
LANS pmax pmax
comp=Z,11nm,1.1s
LANS **Liptovska Anna** 78.61 326 *e*P P 23 25 12.6 +1.7
KSP **Ksiaz** 78.61 329 *e*P P 23 25 11.6 +0.8
KSP *e*S S 23 35 07.3 +1.0
KSP *e*L L 00 03 12.2
comp=Z,1µm,19.2s
WHFO **Wadi Hawf** 78.63 284 P P 23 25 10.7 -0.7
OKC **Ostrava-Krasne** 78.64 327 *e*P P 23 25 11.9 +0.9
OKC *e*S S 23 35 03.2 -3.4
OKC MLR MLR
comp=Z,1µm,16.9s
OKC **Ostrava-Krasne** 78.64 327 *e*P P 23 25 11.9 +0.9
OKC *e*S S 23 35 03.2 -3.4
OKC AMS AMS 00 03 10.0
comp=Z,1µm,16.9s
ANTO **Ankara** 78.65 313 ⇑P P 23 25 12.3 +0.9
ANTO **Ankara** 78.65 313 P P 23 25 12.4 +1.1
ANTO IAmb IAmb 23 25 28.8
comp=Z,26nm,0.9s
ANTO **Ankara** 78.65 313 P P 23 25 12.4 +1.1
ANTO pmax pmax
comp=Z,26nm,1.0s
ANTO **Ankara** 78.65 313 P P 23 25 12.2 +0.9
ISCO **Idaho Springs** 78.67 47 P P 23 25 13.4 +1.6
ISCO **Idaho Springs** 78.67 47 P P 23 25 13.4 +1.6
ISCO pmax pmax
comp=Z,8.0nm,1.2s
ISCO **Idaho Springs** 78.67 47 P P 23 25 12.1 +0.3
baz=313
BR231 **Keskin MP Arra** 78.68 313 IAmb IAmb 23 25 14.4
comp=Z,32nm,1.1s
MVCO **Mesa Verde** 78.73 51 P P 23 25 13.3 +1.3
MVCO IAmb IAmb 23 26 06.0
comp=Z,21nm,1.4s
MVCO **Mesa Verde** 78.73 51 P P 23 25 12.2 +0.2
baz=312
VOIR 78.82 321 ⇑P P 23 25 13.4 +1.3
OSTC **Ostas** 78.86 329 *e*P P 23 25 13.0 +0.8
OSTC *e*S S 23 35 06.2 -2.9
OSTC AMS AMS 00 05 20.0
comp=Z,3µm,14.3s
MORC **Moravsky Berou** 78.94 328 ⇑P P 23 25 14.2 +1.5
MORC **Moravsky Berou** 78.94 328 IAmb IAmb 23 25 15.7
comp=Z,32nm,1.2s
MORC **Moravsky Berou** 78.94 328 *e*P P 23 25 13.1 +0.4
DRGR 78.94 323 ⇑P P 23 25 13.5 +0.7
SUSD **Miller** 78.98 40 P P 23 25 13.7 +0.8
SUSD IAmb IAmb 23 25 21.6
comp=Z,26nm,1.0s
SUSD **Miller** 78.98 40 P P 23 25 13.9 +0.9
baz=316
DPC **Dobruska-Polom** 78.98 329 *e*P P 23 25 13.5 +0.6
DPC *e*S S 23 35 04.8 -5.6
DPC MLR MLR
comp=Z,2µm,15.7s
DPC **Dobruska-Polom** 78.98 329 *e*P P 23 25 13.5 +0.6
DPC *e*S S 23 35 04.8 -5.6
DPC AMS AMS 00 05 10.0
comp=Z,2µm,15.7s
UPC **Upice** 78.98 329 *e*P P 23 25 14.4 +1.5
UPC *e*S S 23 35 05.8 -4.5
UPC MLR MLR
comp=Z,3µm,14.6s
UPC **Upice** 78.98 329 *e*P P 23 25 14.4 +1.5
UPC *e*S S 23 35 05.8 -4.5
UPC AMS AMS 00 05 20.0
comp=Z,3µm,14.6s
KRLC **Kraliky** 79.01 328 *e*P P 23 25 13.0 -0.1
KRLC MLR MLR
comp=Z,2µm,15.0s
KRLC **Kraliky** 79.01 328 *e*P P 23 25 13.0 -0.1
KRLC AMS AMS 00 05 30.0
comp=Z,2µm,15.0s
ARR **Arges** 79.07 321 ⇓P P 23 25 14.9 +1.3
NRS **Narsarsuaq** 79.08 4 P P 23 25 11.1 -2.0
NRS **Narsarsuaq** 79.08 4 P P 23 25 11.1 -2.0
NRS pmax pmax
comp=Z,73nm,0.9s
PRD **Provadia** 79.25 318 P P 23 25 14.0 -0.4
F33A **5 Mile Ranch,** 79.26 38 P P 23 25 15.6 +1.2
baz=317
ABTO **Aybut** 79.33 284 P P 23 25 15.2 -0.2
S22A **4UR Ranch, Cre** 79.36 49 P P 23 25 17.0 +1.5
S22A **4UR Ranch, Cre** 79.36 49 P P 23 25 15.5 -0.1
baz=312,SNR=11
PSZ **Piszkesteto** 79.36 325 ⇓P P 23 25 16.3 +1.2
PSZ **Piszkesteto** 79.36 325 IAmb IAmb 23 25 18.2
comp=Z,31nm,1.2s
PSZ **Piszkesteto** 79.36 325 P P 23 25 16.2 +1.2
W18A **Petrified Fore** 79.36 53 P P 23 25 16.9 +1.4
W18A **Petrified Fore** 79.36 53 P P 23 25 16.0 +0.5
baz=311
VYHS **Vyhne** 79.38 326 *e*P P 23 25 16.1 +1.0
VYHS pmax pmax
comp=Z,16nm,1.1s
VYHS **Vyhne** 79.38 326 *e*P P 23 25 16.1 +1.0
LOT **Lotru** 79.43 322 ⇓P P 23 25 15.6 +0.1
214A **Organ Pipe Nat** 79.49 57 P P 23 25 16.4 +0.4
214A **Organ Pipe Nat** 79.49 57 P P 23 25 16.8 +0.8
baz=310
BRG **Berggiesshubel** 79.50 330 *e*P P 23 25 16.5 +0.8
BRG Amp 23 25 18.3
comp=Z,11nm,1.1s
BRG *ex* x 23 25 25.5
BRG Amp 23 25 26.9
comp=Z,9.0nm,1.0s
BRG PP PP 23 28 07.8 -7.6
BRG Amp 23 28 22.9
comp=Z,12nm,1.4s
BRG **Berggiesshubel** 79.50 330 S S 23 35 19.0 +3.2
BRG Amp 00 06 39.0
comp=Z,1.9nm,14.9s
BRG Amp 00 06 43.0
comp=E,0.9nm,14.6s
BRG Amp 00 06 43.0
comp=N,1.0nm,14.4s
BRG **Berggiesshubel** 79.50 330 *e*P P 23 25 16.4 +0.8
BRG *e* 23 25 25.5
BRG S S 23 35 19.0 +3.2
BRG pmax pmax
comp=Z,11nm,1.1s
BRG pmax pmax
comp=Z,9.0nm,1.0s
BRG pmax pmax
comp=Z,12nm,1.5s
BRG smax smax
comp=Z,2µm,14.9s
Q24A **Divide** 79.50 48 P P 23 25 17.9 +1.6
Q24A **Divide** 79.50 48 P P 23 25 16.3 0.0
baz=313
CLL **Collm** 79.51 331 IAmb IAmb 23 25 26.4
comp=Z,16nm,0.9s
CLL **Collm** 79.51 331 *i* P P 23 25 15.8 +0.1
CLL *i* 23 25 24.8
CLL *i* *PP pwP 23 25 28.6 +4.1
CLL *e*S S 23 35 18.0 +2.2
CLL pmax pmax
comp=Z,29nm,1.4s
CLL MLR MLR
comp=Z,1µm,19.0s
CLL **Collm** 79.51 331 *i* P P 23 25 15.8 +0.1
comp=Z,29nm,1.4s
CLL *i* PcP pwP 23 25 24.8 +0.3
CLL *i* x x 23 25 28.6
CLL *i* x x 23 25 33.2
CLL *ex* x 23 27 58.0
CLL *e*PP PP 23 28 16.0 +0.6
CLL *e*PPP PPP 23 30 08.0
CLL *e*S S 23 35 18.0 +2.2
CLL *e*PS PnS 23 36 06.0 +6.0

CLL *e*PPS PPS 23 36 21.0
CLL *e*(SS) 23 40 18.0
CLL *e*SSS SSS 23 43 54.0
CLL *e*SSSS 23 46 24.0
CLL LmH 23 59 00.0
comp=N,2µm,19.2s
CLL LmH 23 59 00.0
comp=E,2µm,21.2s
CLL LmV 00 06 00.0
comp=Z,1µm,19.0s
PVCC Panska Ves 79.53 330 *e*P **P 23 25 16.9 +1.1**
PVCC *e*S **S 23 35 09.5 -6.6**
PVCC MLR MLR
comp=Z,2µm,16.1s
PVCC Panska Ves 79.53 330 *e*P **P 23 25 16.9 +1.1**
PVCC *e*S **S 23 35 09.5 -6.6**
PVCC AMS AMS 00 03 50.0
comp=Z,2µm,16.1s
JAVC Velka Javorina 79.59 327 *e*P **P 23 25 17.8 +1.5**
X18A Snowflake 79.62 54 P **P 23 25 17.8 +1.0**
VRAC Vranov 79.69 328 ⇓P **P 23 25 18.3 +1.5**
VRAC Vranov 79.69 328 P **P 23 25 16.6 -0.1**
comp=Z,16nm,1.0s,baz=56,slow=4.9,SNR=23
VRAC LR LR 00 04 08.3
comp=Z,825nm,18.4s,baz=14,slow=38
comp=Z,16nm,1.0s
VRAC Vranov 79.69 328 P **P 23 25 16.6 -0.1**
VRAC Vranov 79.69 328 *e*P **P 23 25 17.5 +0.8**
EYMN Ely 79.85 34 P **P 23 25 18.4 +0.7**
EYMN IAmb IAmb 23 25 27.7
comp=Z,21nm,1.4s
EYMN Ely 79.85 34 P **P 23 25 18.0 +0.4**
baz=320
OGNE Ogallala 79.86 45 P **P 23 25 19.6 +1.7**
OGNE IAmb IAmb 23 25 21.0
comp=Z,47nm,1.4s
OGNE Ogallala 79.86 45 P **P 23 25 19.6 +1.7**
baz=315
OGNE Ogallala 79.86 45 P **P 23 25 19.2 +1.3**
baz=315
GZR Gura Zlata 79.94 322 ⇓P **P 23 25 19.0 +0.8**
SMOL Smolenice 79.96 327 *e*P **P 23 25 19.6 +1.4**
SMOL pmax pmax
comp=Z,12nm,1.2s
KRUC Moravsky 79.96 328 *e*P **P 23 25 18.7 +0.5**
PRU Pruhonice 79.97 329 *e*P **P 23 25 19.1 +0.9**
PRU *e*S **S 23 35 17.7 -3.1**
PRU MLR MLR
comp=Z,2µm,16.3s
PRU Pruhonice 79.97 329 *e*P **P 23 25 19.1 +0.9**
PRU *e*S **S 23 35 17.7 -3.1**
PRU AMS AMS 00 04 00.0
comp=Z,2µm,16.3s
SDCO Great Sand Dun 80.13 49 P **P 23 25 20.9 +1.2**
SDCO Great Sand Dun 80.13 49 P **P 23 25 20.9 +1.2**
baz=313
SDCO Great Sand Dun 80.13 49 P **P 23 25 20.7 +1.0**
baz=313
MODS Modra-Piesok 80.13 327 *e*P **P 23 25 21.1 +1.9**
MODS pmax pmax
comp=Z,40nm,1.2s
MODS Modra-Piesok 80.13 327 *e*P **P 23 25 21.1 +1.9**
TREC Trest 80.15 328 *e*P **P 23 25 19.9 +0.7**
TREC MLR MLR
comp=Z,2µm,14.4s
TREC Trest 80.15 328 *e*P **P 23 25 19.9 +0.7**
TREC AMS AMS 00 06 10.0
comp=Z,2µm,14.4s
BZS Buzias 80.32 323 ⇓P **P 23 25 20.9 +0.7**
ZST Bratislava 80.34 327 *e*P **P 23 25 22.9 +2.6**
ZST Bratislava 80.34 327 *e*P **P 23 25 22.9 +2.6**
RAR Rarotonga 80.45 128 LR LR 23 57 22.1
comp=Z,386nm,18.7s,baz=299,slow=33
HERR Herculane 80.49 322 ⇓P **P 23 25 21.9 +0.8**
TUC Tucson 80.56 56 P **P 23 25 22.3 +0.5**
TUC Tucson 80.56 56 P **P 23 25 22.3 +0.5**
TUC pmax pmax
comp=Z,6.0nm,1.2s
TUC Tucson 80.56 56 P **P 23 25 23.2 +1.3**
baz=311
ECSD EROS Data Cent 80.65 40 P **P 23 25 20.8 -1.3**
baz=317
ECSD EROS Data Cent 80.65 40 P **P 23 25 22.7 +0.6**
baz=317,SNR=6.9
E38A The Farm, Brul 80.85 35 P **P 23 25 24.3 +1.3**
E38A IAmb IAmb 23 25 36.2
comp=Z,28nm,1.4s
EGYH Egyhazaskeszo 80.86 326 P **P 23 25 24.1 +1.1**
KSCO Kaye Shedlock' **80.89 46** P **P 23 25 25.1 +1.6**
KSCO IAmb IAmb 23 26 18.5
comp=Z,26nm,1.4s
KSCO Kaye Shedlock' **80.89 46** P **P 23 25 25.1 +1.6**
baz=314
MDVR Moldovita 80.90 322 ⇑P **P 23 25 24.2 +0.8**
MPLH Magyarpolny 80.96 326 P **P 23 25 23.9 +0.3**
SOP Sopron 80.97 327 P **P 23 25 25.4 +1.7**
CKRC Cesky Krumlov 81.00 329 *e*P **P 23 25 24.1 +0.3**
CKRC *e*S S 23 35 21.3 -10
KHC Kasperske Hory 81.04 329 IAmb IAmb 23 25 26.3
comp=Z,12nm,0.9s
KHC Kasperske Hory 81.04 329 *e*P **P 23 25 24.4 +0.4**
KHC *e* 23 25 33.0
KHC *e*S **S 23 35 26.7 -5.4**
KHC MLR MLR
comp=Z,2µm,17.1s
KHC Kasperske Hory 81.04 329 *e*P **P 23 25 24.4 +0.4**
KHC *e*PCP **sP 23 25 33.0 +0.6**
KHC *e*S **S 23 35 26.7 -5.4**
KHC AMS AMS 00 04 50.0
comp=Z,2µm,17.1s
EKA Eskdalemuir Ar 81.05 342 P **P 23 25 23.0 -0.9**
comp=Z,3.3nm,0.8s,baz=26,slow=6.0,SNR=5.1
EKA LR LR 00 05 34.8
comp=Z,557nm,18.5s,baz=34,slow=39
comp=Z,3.3nm,0.8s
EKA Eskdalemuir Ar 81.05 342 P **P 23 25 23.0 -0.9**
RONA Rosalia, Austr 81.07 327 *e*P **P 23 25 25.3 +1.0**
comp=Z,15nm,1.0s,SNR=8.3
CONA Conrad Observa 81.07 327 *e*P **P 23 25 25.3 +1.0**
comp=Z,9.4nm,1.0s
RAYN Ar Rayn 81.17 293 P **P 23 25 25.2 0.0**
RAYN IAmb IAmb 23 25 27.4
comp=Z,23nm,1.2s
RAYN Ar Rayn 81.17 293 P **P 23 25 25.2 0.0**
RAYN pmax pmax
comp=Z,23nm,1.2s
RAYN Ar Rayn 81.17 293 P **P 23 25 25.2 0.0**
RAYN Ar Rayn 81.17 293 *i* P **P 23 25 25.2 0.0**
SNR=19
T25A Trinidad 81.18 49 P **P 23 25 26.0 +0.7**
T25A Trinidad 81.18 49 P **P 23 25 26.2 +1.0**
baz=314
MORH Mrgy, Hungar 81.21 325 P **P 23 25 24.8 -0.1**
GERES GERESS Array B 81.22 329 P **P 23 25 24.2 -0.9**
comp=Z,2.9nm,0.8s,baz=29,slow=3.0,SNR=22
GERES S **S 23 35 32.4 -1.7**
comp=Z,0.1nm,0.3s,baz=12,slow=19,SNR=1.1
GERES LR LR 00 05 30.8
comp=Z,1µm,18.1s,baz=18,slow=39
comp=Z,2.9nm,0.8s
GERES GERESS Array B 81.22 329 P **P 23 25 24.2 -0.9**
SPMN Marine on St. 81.35 37 P **P 23 25 26.9 +1.2**
SPMN IAmb IAmb 23 25 31.8
comp=Z,34nm,1.9s
SPMN Marine on St. 81.35 37 P **P 23 25 27.2 +1.5**
baz=320
KDZ Kurdzhali 81.38 318 P **P 23 25 25.0 -1.0**
ANMO Albuquerque 81.47 51 LR LR 23 56 02.8
comp=Z,131nm,21.9s,baz=340,slow=32
ANMO Albuquerque 81.47 51 P **P 23 25 27.9 +1.1**
ANMO Albuquerque 81.47 51 *d* **P 23 25 28.6 +1.8**
ANMO pmax pmax
comp=Z,12nm,1.2s
ANMO Albuquerque 81.47 51 P **P 23 25 28.9 +2.1**
baz=313
ANMO Albuquerque 81.47 51 P **P 23 25 27.3 +0.5**
baz=313
GRFO Grafenberg 81.48 331 P **P 23 25 28.1 +1.7**
GRFO IAmb IAmb 23 25 49.7
comp=Z,35nm,1.1s
GRFO Grafenberg 81.48 331 P **P 23 25 28.1 +1.7**
GRFO pmax pmax
comp=Z,35nm,1.1s
FRGS Fruska Gora 81.50 324 ⇑P **P 23 25 27.9 +1.3**
KOVH Kovagotottos 81.55 325 P **P 23 25 26.5 -0.3**

BGNE Belgrade 81.58 42 P **P 23 25 28.1 +1.1**
BGNE Belgrade 81.58 42 P **P 23 25 26.9 -0.2**
baz=317
ALN Alexandroupoli 81.60 317 IAmb IAmb 23 26 05.1
comp=Z,17nm,1.2s
CSS Mathiatis 81.68 309 IAmb IAmb 23 25 55.4
comp=Z,22nm,1.0s
RDO Rodhopi 81.69 318 IAmb IAmb 23 25 30.4
comp=Z,31nm,1.2s
MMAI Mount Meron Ar 81.73 306 LR LR 00 05 25.3
comp=Z,426nm,18.9s,baz=201,slow=38
ARSA Arzberg 81.75 327 *e*P **P 23 25 28.2 +0.4**
comp=Z,4.9nm,1.0s
VTS Vitosha 81.78 320 ⇓P **P 23 25 29.7 +1.5**
VTS Vitosha 81.78 320 IAmb IAmb 23 25 40.9
comp=Z,18nm,0.8s
VTS Vitosha 81.78 320 P **P 23 25 29.0 +0.8**
MOA Molln 81.79 328 *e*P **P 23 25 29.2 +1.1**
comp=Z,13nm,1.6s
I37A Lemond, Waseca 81.99 38 IAmb IAmb 23 25 31.6
comp=Z,36nm,1.3s
SCHQ Schefferville 82.16 17 P **P 23 25 31.6 +1.8**
comp=Z,2.7nm,0.8s,baz=328,slow=13,SNR=2.1
SCHQ S **S 23 35 40.5 -2.9**
comp=Z,1.1nm,0.7s,baz=242,slow=17,SNR=1.3
SCHQ LR LR 00 07 37.6
comp=Z,546nm,18.0s,baz=358,slow=40
comp=Z,2.7nm,0.8s
BIOA Bad Ischl, Aus 82.17 328 *e*P **P 23 25 30.6 +0.5**
comp=Z,9.1nm,1.0s
DIVS Divibare 82.22 323 IAmb IAmb 23 25 42.3
comp=Z,14nm,1.0s
MMB Musomiste 82.29 319 P **P 23 25 31.0 +0.2**
121A Cookes Peak, D 82.30 54 P **P 23 25 32.0 +0.8**
121A IAmb IAmb 23 25 38.8
comp=Z,20nm,1.4s
121A Cookes Peak, D 82.30 54 P **P 23 25 32.6 +1.5**
baz=313,SNR=6.4
GROS Grobnik 82.38 327 *e*P **P 23 25 31.3 +0.1**
PERS Pernice 82.41 327 *i* P **P 23 25 31.5 +0.2**
KKB Krupnik 82.41 320 P **P 23 25 31.0 -0.4**
SOKA Soboth 82.41 327 *e*P **P 23 25 31.6 +0.2**
comp=Z,19nm,1.0s,SNR=7.2
BTNL Ternell 82.54 334 *d*P **P 23 25 32.7 +0.8**
comp=Z,7.9nm,1.0s
MEM Membach 82.56 334 *d*P **P 23 25 32.6 +0.6**
comp=Z,6.7nm,1.0s
CBKS Cedar Bluff 82.62 45 P **P 23 25 32.7 +0.2**
CBKS IAmb IAmb 23 25 35.2
comp=Z,15nm,0.8s
CBKS Cedar Bluff 82.62 45 P **P 23 25 32.7 +0.2**
CBKS pmax pmax
comp=Z,15nm,0.9s
OBKA Obir 82.74 327 *e*P **P 23 25 33.2 0.0**
comp=Z,6.9nm,0.8s
GHAJ Ghor Haditha 82.78 305 P **P 23 25 34.2 +0.8**
BHOU Houvegnez 82.78 334 *d*P **P 23 25 33.8 +0.7**
BCLA Clavier 82.96 335 *d*P **P 23 25 34.7 +0.7**
AKAS Kas 82.98 312 P **P 23 25 34.8 +0.2**
STIP Stip 82.98 320 *i* P **P 23 25 33.5 -0.9**
STU Stuttgart 82.99 332 P **P 23 25 35.0 +0.7**
STU IAmb IAmb 23 25 47.0
comp=Z,15nm,1.0s
STU Stuttgart 82.99 332 P **P 23 25 35.0 +0.7**
STU pmax pmax
comp=Z,15nm,1.0s
VAY Valandovo 83.07 319 *i* P **P 23 25 35.3 +0.5**
SKO Skopje 83.14 321 *i* P **P 23 25 36.5 +1.3**
PRED Cave del Predi 83.20 328 IAmb IAmb 23 26 08.4
comp=Z,16nm,1.1s
RCHB Rochefort 83.21 335 *d*P **P 23 25 35.6 +0.3**
BMRD Maredsous 83.23 335 *d*P **P 23 25 35.2 -0.2**
WATA Walderalm 83.28 329 *e*P **P 23 25 36.2 +0.3**
comp=Z,8.3nm,1.0s
WTTA Wattenberg 83.31 329 *e*P **P 23 25 36.5 +0.3**
comp=Z,7.8nm,1.0s
ABTA Abfaltersbach 83.39 329 *e*P **P 23 25 36.7 +0.3**
comp=Z,7.6nm,1.0s
MOTA Moosalm 83.45 330 *e*P **P 23 25 37.2 +0.3**
comp=Z,19nm,1.0s,SNR=8.2
DOU Dourbes 83.47 335 *d*P **P 23 25 36.4 -0.3**
RETA Reutte 83.47 330 *e*P **P 23 25 38.3 +1.4**
comp=Z,20nm,1.1s,SNR=6.6
SQTA Sankt Quirin 83.52 330 *e*P **P 23 25 36.9 -0.2**
comp=Z,6.3nm,0.8s
BFO Black Forest 83.68 332 P **P 23 25 38.1 +0.3**
BFO Black Forest 83.68 332 P **P 23 25 38.1 +0.3**
BFO pmax pmax
comp=Z,54nm,1.7s
STAL STALIGIAL 83.70 328 P **P 23 25 37.7 -0.3**
CIMO Cimolais 83.77 328 P **P 23 25 39.8 +1.4**
CIMO IAmb IAmb 23 26 21.6
comp=Z,24nm,1.5s
PDG Podgorica 83.84 322 ⇑P **P 23 25 38.9 +0.2**
FETA Feichten 83.86 330 *i* P **P 23 25 39.3 +0.3**
comp=Z,7.5nm,1.0s
DAVA Damuels 83.97 330 *e*P **P 23 25 39.5 0.0**
comp=Z,12nm,1.0s
KSU1 Kansas State U 84.07 43 P **P 23 25 41.3 +1.3**
baz=318
OHR Ohrid 84.11 320 *i* P **P 23 25 40.7 +0.5**
I42A Draeger Farm, 84.14 35 P **P 23 25 41.4 +1.2**
I42A IAmb IAmb 23 26 36.1
comp=Z,33nm,1.5s
ECH Echery 84.20 332 IAmb IAmb 23 25 51.3
comp=Z,17nm,1.1s
EIL Elat 84.27 304 LR LR 00 07 17.9
comp=Z,490nm,19.2s,baz=32,slow=39
JFWS Jewell Farm 84.30 37 P **P 23 25 41.6 +0.5**
baz=321
AMTX Amarillo 84.33 49 P **P 23 25 41.5 0.0**
AMTX IAmb IAmb 23 25 44.4
comp=Z,22nm,1.2s
MSTX Muleshoe 84.34 50 P **P 23 25 43.1 +1.5**
MSTX IAmb IAmb 23 25 44.0
comp=Z,9.2nm,0.9s
MSTX Muleshoe 84.34 50 P **P 23 25 43.7 +2.1**
baz=315
MSTX Muleshoe 84.34 50 P **P 23 25 41.5 -0.1**
baz=315,SNR=5.4
MNTX Cornudas Mount 84.35 53 P **P 23 25 42.7 +1.1**
MNTX IAmb IAmb 23 25 44.9
comp=Z,12nm,1.4s
MNTX Cornudas Mount 84.35 53 P **P 23 25 43.7 +2.1**
baz=314
MNTX Cornudas Mount 84.35 53 P **P 23 25 42.1 +0.6**
baz=314,SNR=5.3
TIR Tirane 84.38 321 ⇓P **P 23 25 42.1 +0.6**
PPT Papeete 84.39 118 LR LR 23 55 14.8
comp=Z,486nm,21.3s,baz=340,slow=30
DAVOX Davos/Dischmat 84.39 330 P **P 23 25 41.2 -0.4**
comp=Z,7.7nm,0.9s,baz=31,slow=4.8,SNR=15
DAVOX LR LR 00 07 23.7
comp=Z,2µm,19.1s,baz=24,slow=38
comp=Z,7.7nm,0.9s
DAVOX Davos/Dischmat 84.39 330 P **P 23 25 41.3 -0.4**
PPT2 Papeete2 84.40 118 *e*P **P 23 25 44.4 +2.5**
comp=Z,27nm,20.0s
PPT2 Papeete2 84.40 118 *e*S **S 23 36 08.4 +1.3**
comp=Z,93nm,25.8s
PPT2 *e*SS **SS 23 41 39.8 +1.8**
comp=Z,132nm,24.0s
PPT2 Papeete2 84.40 118 *e*LR LR 23 52 18.0
comp=Z,961nm,22.8s
PPT2 Papeete2 84.40 118 *e*T T 00 58 20.4
comp=Z,2.5nm,0.3s
L40A Anamosa 84.51 38 P **P 23 25 42.3 +0.2**
L40A IAmb IAmb 23 25 47.9
comp=Z,18nm,1.1s
N38A Joes South For 84.51 40 P **P 23 25 43.1 +0.9**
N38A IAmb IAmb 23 25 44.9
comp=Z,21nm,0.9s
GDL2 Guadalupe Moun 84.63 52 P **P 23 25 44.5 +1.4**
NOKA Waynoka 84.63 46 P **P 23 25 44.6 +1.7**
NOKA IAmb IAmb 23 28 31.9
comp=Z,27nm,0.5s
KAN12 Harper NE Stat 84.66 45 P **P 23 25 43.2 +0.2**
KAN16 Harper SW Stat 84.67 45 P **P 23 25 43.6 +0.5**
ELIS Ellis County 84.77 46 P **P 23 25 45.3 +1.6**
ELIS IAmb IAmb 23 25 47.2
comp=Z,46nm,1.3s
U32A Winter Ranch, 84.78 46 P **P 23 25 44.5 +0.8**
CLN7 Carlsbad 7 84.82 52 P **P 23 25 45.1 +1.1**
OK038 West end E0370 84.85 46 P **P 23 25 44.0 0.0**
TEOL Teolo 84.86 328 P **P 23 25 44.1 +0.3**
TEOL IAmb IAmb 23 25 55.5

comp=Z,18nm,0.9s
HTMS Hat Mesa 84.88 52 P **P 23 25 45.7 +1.3**
KAN01 Argonia South 84.89 45 P **P 23 25 45.6 +1.4**
OK032 Salt Plains WL 84.90 45 P **P 23 25 45.5 +1.3**
AGG Agios Georgios 84.91 318 IAmb IAmb 23 26 31.7
comp=Z,10.0nm,0.9s
KAN13 South Haven SW 85.15 45 P **P 23 25 46.8 +1.3**
KAN13 IAmb IAmb 23 26 23.2
comp=Z,17nm,1.0s
TAOE Nuku Hiva Isla 85.21 106 *e*LR LR 23 52 40.0
comp=Z,911nm,20.5s
CROK Carrier 85.25 45 P **P 23 25 46.7 +0.7**
CROK IAmb IAmb 23 25 49.0
comp=Z,21nm,1.2s
P38A Dawn 85.25 41 IAmb IAmb 23 25 48.2
comp=Z,11nm,0.9s
P38A Dawn 85.25 41 P **P 23 25 46.9 +1.0**
baz=320
SENIN Lac Senin/Sane 85.71 331 IAmb IAmb 23 26 43.6
comp=Z,20nm,1.4s
T35A Sooner Cattle 85.74 44 P **P 23 25 49.6 +1.1**
T35A IAmb IAmb 23 25 51.5
comp=Z,13nm,1.1s
P40A Paris 86.06 40 IAmb IAmb 23 25 52.9
comp=Z,13nm,0.9s
P40A Paris 86.06 40 P **P 23 25 51.3 +1.4**
baz=320
WMOK Wichita Mounta 86.09 47 P **P 23 25 50.9 +0.7**
baz=317
NRCA Norcia 86.31 326 IAmb IAmb 23 26 29.5
comp=Z,23nm,1.1s
LPIG La Paz 86.32 62 LR LR 00 02 16.9
comp=Z,189nm,18.1s,baz=309,slow=34
IDI Anoyia 86.32 314 LR LR 00 09 34.5
comp=Z,298nm,18.1s,baz=358,slow=39
MATE Matera 86.43 322 ⇑P **P 23 25 52.0 +0.3**
HDIL Hopedale 86.59 38 P **P 23 25 53.3 +0.8**
baz=322
RPZ Rata Peaks 86.78 160 LR LR 00 00 27.9
comp=Z,225nm,22.0s,baz=328,slow=33
TUL1 Leonard 86.88 44 P **P 23 25 54.7 +0.7**
baz=318
R40A Maddies Statio 86.91 41 IAmb IAmb 23 26 04.1
comp=Z,10nm,1.1s
TX31 Lajitas Ar. Si 87.06 54 P **P 23 25 56.5 +1.4**
TX31 Lajitas Ar. Si 87.06 54 P **P 23 25 56.8 +1.7**
baz=315
TX32 Lajitas Array 87.06 54 P **P 23 25 56.8 +1.7**
TXAR Lajitas Array 87.06 54 P **P 23 25 54.8 -0.4**
comp=Z,1.4nm,0.7s,baz=297,slow=3.9,SNR=13
TXAR S **SKSac 23 36 22.9 +1.3**
comp=Z,0.1nm,0.3s,baz=23,slow=13,SNR=1.2
TXAR LR LR 00 05 37.5
comp=Z,131nm,18.0s,baz=334,slow=36
comp=Z,1.4nm,0.7s
TXAR Lajitas Array 87.06 54 P **P 23 25 56.5 +1.4**
TXAR Lajitas Array 87.06 54 P **P 23 25 54.8 -0.4**
ABTX Abilene, Hawle 87.13 49 IAmb IAmb 23 25 57.9
comp=Z,20nm,1.4s
ABTX Abilene, Hawle 87.13 49 P **P 23 25 57.2 +1.9**
baz=317
ABTX Abilene, Hawle 87.13 49 P **P 23 25 55.7 +0.4**
baz=317
SADO Sadowa 87.41 29 LR LR 00 09 39.0
comp=Z,352nm,18.7s,baz=356,slow=39
CCM Cathedral Cave 87.60 40 P **P 23 25 58.6 +1.1**
CCM IAmb IAmb 23 26 07.7
comp=Z,16nm,0.9s
CCM Cathedral Cave 87.60 40 P **P 23 25 58.6 +1.1**
CCM pmax pmax
comp=Z,16nm,0.9s
CCM Cathedral Cave 87.60 40 P **P 23 25 58.9 +1.4**
baz=321
CCM Cathedral Cave 87.60 40 P **P 23 25 57.4 -0.1**
baz=321
MGMO Mountain Grove 87.78 41 P **P 23 25 59.6 +1.2**
Q44A Meyer Farm, Va 88.03 38 P **P 23 26 00.6 +1.1**
FVM French Village 88.06 40 P **P 23 26 00.8 +1.1**
FVM IAmb IAmb 23 26 01.9
comp=Z,15nm,1.2s
FVM French Village 88.06 40 P **P 23 26 00.8 +1.1**
FVM pmax pmax
comp=Z,15nm,1.3s
TBI Tubuai 88.52 122 *e*S **S 23 36 47.1 +0.4**
comp=Z,168nm,28.8s
TBI Tubuai 88.52 122 *e*LR LR 23 54 11.1
comp=Z,415nm,26.0s
TBI Tubuai 88.52 122 *e*T T 01 03 27.7
comp=Z,7.8nm,0.3s
JCT Junction City 88.59 51 P **P 23 26 02.2 -0.2**
baz=316
OLIL Olney 88.60 38 P **P 23 26 03.7 +1.5**
OLIL IAmb IAmb 23 26 08.7
comp=Z,16nm,1.1s
O48B Farmland 88.72 35 P **P 23 26 02.8 0.0**
baz=325
FCAR Ozark Folk Cen 88.83 42 P **P 23 26 03.8 +0.5**
FCAR IAmb IAmb 23 26 05.6
comp=Z,9.2nm,1.0s
WHTX Lake Whitney, 88.86 48 P **P 23 26 03.9 +0.4**
baz=318
S44A Carbondale 88.86 39 P **P 23 26 04.7 +1.2**
S44A Carbondale 88.86 39 P **P 23 26 04.0 +0.5**
baz=322
SIUC Southern Illin 88.87 39 P **P 23 26 04.7 +1.2**
MIAR Mount Ida 89.09 44 P **P 23 26 05.8 +1.2**
MIAR IAmb IAmb 23 26 07.6
comp=Z,11nm,1.2s
MIAR Mount Ida 89.09 44 P **P 23 26 05.8 +1.2**
MIAR pmax pmax
comp=Z,11nm,1.2s
MIAR Mount Ida 89.09 44 P **P 23 26 06.3 +1.7**
baz=320
MIAR Mount Ida 89.09 44 P **P 23 26 04.4 -0.2**
baz=320,SNR=7.1
LCAR Lake Charles 89.19 41 P **P 23 26 06.5 +1.5**
WHAR Wooly Hollow 89.20 43 P **P 23 26 06.0 +0.9**
WHAR IAmb IAmb 23 26 15.2
comp=Z,12nm,1.0s
P49A Miami Univ. Ec 89.50 35 P **P 23 26 07.4 +1.0**
P49A IAmb IAmb 23 26 16.7
comp=Z,14nm,1.1s
P49A Miami Univ. Ec 89.50 35 P **P 23 26 07.0 +0.6**
baz=325
ACSO Alum Creek Sta 89.69 34 P **P 23 26 07.6 +0.3**
baz=326
VAE Valguarnera 90.03 322 LR LR 00 09 28.2
comp=Z,689nm,18.2s,baz=79,slow=38
O53A New Philadelph 90.42 33 P **P 23 26 10.3 -0.4**
baz=327
T47A Sharon Grove 90.46 38 P **P 23 26 11.3 +0.3**
T47A IAmb IAmb 23 26 13.4
comp=Z,8.2nm,1.0s
T47A Sharon Grove 90.46 38 P **P 23 26 12.4 +1.4**
baz=324
BINY Binghamton 90.79 28 P **P 23 26 13.1 +0.6**
baz=331
WVT Waverly 90.80 39 P **P 23 26 13.4 +0.9**
WVT Waverly 90.80 39 P **P 23 26 13.5 +0.9**
WVT pmax pmax
comp=Z,5.0nm,1.0s
WVT Waverly 90.80 39 P **P 23 26 13.8 +1.2**
baz=323
WVT Waverly 90.80 39 P **P 23 26 13.5 +0.9**
baz=323
ATD Arta Tunnel 90.82 286 LR LR 00 12 12.7
comp=Z,166nm,19.0s,baz=334,slow=39
M57A Sunshine Farm, 91.11 29 P **P 23 26 14.7 +0.8**
M57A IAmb IAmb 23 26 20.8
comp=Z,16nm,1.1s
L59A Walton 91.14 28 P **P 23 26 14.9 +0.9**
OXF Oxford 91.29 41 P **P 23 26 15.4 +0.5**
OXF Oxford 91.29 41 P **P 23 26 15.4 +0.5**
OXF pmax pmax
comp=Z,24nm,1.1s
OXF Oxford 91.29 41 P **P 23 26 15.2 +0.3**
baz=322
U49A Red Boiling Sp 91.47 38 P **P 23 26 15.9 +0.2**
HRV Adam Dziewonsk 92.05 25 P **P 23 26 18.2 -0.1**
baz=334
SWET Sewanee 92.45 39 P **P 23 26 20.8 +0.5**
SWET IAmb IAmb 23 26 30.0
comp=Z,6.9nm,1.0s
TZTN Tazewell 92.48 36 P **P 23 26 20.2 -0.2**
baz=326
TKL Tuckaleechee C 93.11 37 LR LR 00 09 35.0
comp=Z,229nm,20.6s,baz=333,slow=36

BLA	**Blacksburg** baz=328	**93.31**	**34**	P	**P**	**23 26 25.2**	**+1.0**
KEST	**Kesra** comp=Z,1µm,19.4s,baz=340,slow=39	**93.80**	**324**	LR	LR	00 13 54.4	
GOGA	**Godfrey** baz=326	**95.10**	**38**	P	**P**	**23 26 33.6**	**+1.2**
ESDC	**Sonseca Array** comp=Z,1.0nm,1.0s,baz=352,slow=3.7,SNR=5.3	**95.50**	**335**	P	**P**	**23 26 32.5**	**-1.8**
ESDC	comp=Z,0.2nm,0.8s,baz=338,slow=12,SNR=1.7			S	**SKSac**	**23 37 06.8**	**-2.4**
ESDC	comp=Z,476nm,18.3s,baz=22,slow=39 comp=Z,1.0nm,1.0s			LR	LR	00 15 21.8	
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,1.0s,baz=347,slow=1.0,SNR=4.5	**116.50**	**318**	PKP	**PKPdf**	**23 31 53.3**	**-0.3**
TORD	comp=Z,6.6nm,1.2s,baz=29,slow=6.2,SNR=10			PP	**PP**	**23 32 57.7**	**-1.9**
VNDA	**Vanda** comp=Z,0.8nm,1.0s,baz=308,slow=3.2,SNR=3.9	**117.63**	**176**	PKP	**PKPdf**	**23 31 52.7**	**-1.1**
VNDA	**Vanda**	**117.63**	**176**	PKIKP	**PKPdf**	**23 31 52.7**	**-1.1**
MAW	**Mawson** comp=Z,1.1nm,0.6s,baz=337,slow=8.2,SNR=2.3	**122.81**	**207**	PKP	**PKPdf**	**23 32 01.5**	**-2.5**
MAW	**Mawson**	**122.81**	**207**	PKIKP	**PKPdf**	**23 32 01.5**	**-2.5**
LBTB	**Lobatse** comp=Z,4.6nm,0.9s,baz=8.9,slow=6.7,SNR=4.2	**126.62**	**266**	PKP	**PKPdf**	**23 32 13.0**	**+0.2**
LBTB	**Lobatse**	**126.62**	**266**	PKIKP	**PKPdf**	**23 32 13.0**	**+0.2**
QSPA	**South Pole Qui** comp=Z,2.2nm,1.0s,baz=284,slow=1.1,SNR=8.7	**129.58**	**180**	PKP	**PKPdf**	**23 32 15.8**	**-1.3**
CZSB	**Cruzeiro do Su**	**134.43**	**55**	PKPdf	**PKPdf**	**23 32 27.4**	**-0.5**
LPAZ	**La Paz** comp=Z,1.4nm,0.7s,baz=336,slow=6.8,SNR=3.9	**143.77**	**59**	PKIKP	PKPab	23 32 42.6	+0.2
LPAZ	**La Paz**	**143.77**	**59**	*eP*	**PKiKP**	**23 32 55.2**	**+6.3**
SNAA	**Sanae**	**143.93**	**197**	PKPdf	PKPab	23 32 40.1	-0.6
SNAA	**Sanae** comp=Z,7.5nm,1.0s,baz=168,slow=4.1,SNR=16	**143.93**	**197**	PKP	PKPab	23 32 40.2	-0.5
SNAA	**Sanae**	**143.93**	**197**		PKPpre	23 32 40.4	
SNAA	**Sanae**	**143.93**	**197**	PKIKP	PKPab	23 32 40.2	-0.5
VNA2	**Neumayer--Watz** baz=108,slow=4.0	**145.49**	**196**	PKPdf	**PKPdf**	**23 32 46.0**	**-0.1**
VNA3	**Neumayer Olymp**	**145.72**	**195**	PKPdf	**PKPdf**	**23 32 46.1**	**-0.4**
VNA1	**Neumayer--Stat**	**145.89**	**196**	PKPdf	**PKPab**	**23 32 48.5**	**+0.6**
CLDB	**Colider**	**146.40**	**36**	*eP*	**PKiKP**	**23 32 59.4**	**+5.8**
SMAI	**San Martin Ant**	**147.10**	**159**		**PKPab**	**23 32 52.2**	**-0.4**
LVC	**Limon Verde**	**147.54**	**68**	*eP*	**PKiKP**	**23 33 01.8**	**+5.5**
SMTB	**Santa Maria do**	**147.57**	**21**	*eP*	**PKiKP**	**23 33 00.6**	**+4.5**
PTLB	**Pontes e Lacer**	**148.61**	**46**	*eP*	**PKPab**	**23 33 03.9**	**+3.8**
NBRF	**Rio Formoso -**	**148.95**	**358**	*eP*	**PKPab**	**23 33 01.8**	**+0.2**
PMSA	**Palmer Station**	**150.31**	**156**	*eP*	**PKPab**	**23 33 05.0**	**-0.7**
BDFB	**Brasilia** comp=Z,3.9nm,1.0s,baz=270,slow=8.1,SNR=3.6	**153.84**	**26**	PKIKP	**PKiKP**	**23 33 10.2**	**+1.1**
BDFB	**Brasilia**	**153.84**	**26**	PKIKP	**PKiKP**	**23 33 10.2**	**+1.1**
BDFB	**Brasilia**	**153.84**	**26**	*eP*	**PKiKP**	**23 33 09.7**	**+0.6**
PLCA	**Paso Flores**	**154.01**	**103**	*eP*	**PKiKP**	**23 33 11.6**	**+2.9**
JANB	**Januaria**	**154.35**	**18**	*eP*	**PKiKP**	**23 33 10.8**	**+0.7**
VAO	**Valinhos**	**160.97**	**31**	*eP*	PKPdf	23 33 17.7	+7.9

*ISK **21** 23:48:23.1, 39˚.60N×34˚.36E, h5km, ML3.5/28*
*DDA **21** 23:48:23.8±0.0, 39˚.58N×34˚.36E, h14km, MW3.5*
ISC 21 23:48:23.9±0.8, 39˚.59N±0˚.01×34˚.35E±0˚.01, h13km±5km, n72, σ0.9 91/110, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDAG	**Cicekdag**	**0.04**	**25**	P	**Pg**	**23 48 26.8**	**+0.3**
CDAG				S	**Sg**	**23 48 28.3**	**0.0**
CDAG				*i* AML	AML	23 48 29.0	
	comp=N,1µm,0.3s						
CDAG				*i* AML	AML	23 48 29.0	
	comp=E,2µm,0.4s						
DELI	**KIRIKKALE**	**0.53**	**321**	P	**Pb**	**23 48 34.6**	**-0.6**
DELI				S	**Sb**	**23 48 41.8**	**-1.0**
KAMT	**Kaman**	**0.54**	**246**	PG	**Pb**	**23 48 35.1**	**-0.3**
KOZK	**Kozakli-Nevseh**	**0.55**	**133**	PG	**Pb**	**23 48 35.0**	**-0.5**
KOZK				SG	**Sb**	**23 48 43.4**	**0.0**
KIRS	**Kirsehir-Merke**	**0.56**	**217**	P	**Pb**	**23 48 35.2**	**-0.5**
KIRS				S	**Sb**	**23 48 43.4**	**-0.4**
BRTR	**Keskin Array B**	**0.57**	**284**	PG	**Pb**	**23 48 35.2**	**-0.6**
CORM	**Corum**	**0.63**	**20**	PG	**Pg**	**23 48 35.5**	**-0.7**
CORM				SG	**Sb**	**23 48 45.9**	**+0.2**
SIRC	**Yozgat**	**0.67**	**112**	P	**Pb**	**23 48 36.8**	**-0.7**
SIRC				*i* AML	AML	23 48 46.0	
	comp=N,3µm,0.2s						
SIRC				S	**S**	**23 48 46.0**	**+0.3**
SIRC				*i* AML	AML	23 48 47.0	
	comp=E,2µm,0.3s						
YOZ	**Yozgat**	**0.75**	**86**	PG	**Pg**	**23 48 38.2**	**-0.3**
COAL	**Corum-Alaca**	**0.83**	**36**	P	**Pg**	**23 48 39.3**	**-0.7**
COAL				S	**Sn**	**23 48 53.2**	**-0.4**
AVNS	**Nevsehir-Avano**	**0.87**	**154**	P	**Pb**	**23 48 40.6**	**-0.4**
AVNS				S	**Sb**	**23 48 52.9**	**+0.3**
SERE	**Sereflikochisa**	**0.89**	**224**	PG	**Pb**	**23 48 41.1**	**-0.1**
SERE				SG	**Sn**	**23 48 54.9**	**+0.1**
BBAL	**Bala**	**0.95**	**268**	P	**Pn**	**23 48 42.8**	**-0.4**
BBAL				S	**Sb**	**23 48 55.7**	**+0.8**
CKRK	**Yozgat, Cekere**	**1.01**	**61**	P	**Pg**	**23 48 42.7**	**-0.8**
CKRK				S	**Sn**	**23 48 59.1**	**+1.1**
CKRK				*i* AML	AML	23 49 01.0	
	comp=N,2µm,0.5s						
CKRK				*i* AML	AML	23 49 01.0	
	comp=E,1µm,0.5s						
AKSY	**AKSARAY - Alti**	**1.04**	**206**	P	**Pn**	**23 48 44.7**	**+0.3**
AKSY				S	**Sn**	**23 48 58.7**	**-0.1**
HACI	**Hacifakili, Ak**	**1.07**	**83**	P	**Pg**	**23 48 44.0**	**-0.7**
HACI				S	**Sb**	**23 48 58.4**	**0.0**
ELDT	**Eldivan**	**1.15**	**322**	P	**Pg**	**23 48 45.5**	**-0.5**
ELDT				S	**Sn**	**23 49 02.6**	**+1.0**
ELDT				*i* AML	AML	23 49 07.0	
	comp=E,712nm,0.5s						
ELDT				*i* AML	AML	23 49 08.0	
	comp=N,539nm,0.5s						
CANT	**Cankiri**	**1.16**	**331**	PN	**Pb**	**23 48 45.7**	**-0.2**
KULU	**Kulu**	**1.18**	**243**	PN	**Pn**	**23 48 47.4**	**+1.1**
GUNE	**Kayseri**	**1.20**	**124**	P	**Pn**	**23 48 47.0**	**+0.3**
GUNE				S	**Sn**	**23 49 03.8**	**+0.9**
GUNE				*i* AML	AML	23 49 07.0	
	comp=N,1µm,0.3s						
GUNE				*i* AML	AML	23 49 09.0	
	comp=E,2µm,0.3s						
ANTO	**Ankara**	**1.23**	**284**	PN	**Pg**	**23 48 48.3**	**+0.6**
GULA	**Gulagac**	**1.25**	**184**	PN	**Pg**	**23 48 47.9**	**0.0**
LOD	**Lodumlu**	**1.26**	**284**	PN	**Pb**	**23 48 47.6**	**0.0**
BNN	**Bunyan**	**1.37**	**122**	PN	**Pg**	**23 48 49.8**	**-0.6**
TOS	**Tosya**	**1.47**	**350**	PN	**Pg**	**23 48 51.9**	**-0.3**
CUSAR	**Sarkisla-SIVAS**	**1.48**	**96**	P	**Pg**	**23 48 51.7**	**-0.6**
NIG	**Nigde**	**1.49**	**172**	PN	**Pg**	**23 48 52.7**	**+0.1**
CHBY	**Cihanbeyli**	**1.52**	**229**	PN	**Pg**	**23 48 52.7**	**-0.4**
SULT	**Sultanhani-AKS**	**1.53**	**205**	PN	**Pg**	**23 48 53.3**	**-0.1**
ILGA	**Ilgaz**	**1.54**	**342**	P	**Pb**	**23 48 52.3**	**-0.2**
ILGA				S	**Sg**	**23 49 13.2**	**-0.4**
AMSY	**Amasya-Merkez**	**1.55**	**47**	P	**Pg**	**23 48 53.8**	**+0.1**
AMSY				S	**Sg**	**23 49 15.2**	**+1.4**
AMSY				*i* AML	AML	23 49 17.0	
	comp=N,330nm,0.5s						
AMSY				*i* AML	AML	23 49 18.0	
	comp=E,289nm,0.5s						
KAGI	**orum-Kargı**	**1.55**	**4**	P	**Pg**	**23 48 53.0**	**-0.8**
KAGI				S	**Sg**	**23 49 13.8**	**-0.1**
KAGI				*i* AML	AML	23 49 16.0	
	comp=N,175nm,0.7s						
KAGI				*i* AML	AML	23 49 18.0	
	comp=E,118nm,0.3s						
YAHY	**KAYSERI_Yahyal**	**1.69**	**152**	P	**Pb**	**23 48 54.8**	**-0.2**
YAHY				S	**Sg**	**23 49 16.9**	**-1.3**
CMDR	**Camlidere-ANKA**	**1.70**	**303**	P	**Pb**	**23 48 55.4**	**+0.3**
CMDR				S	**Sg**	**23 49 17.9**	**-0.8**
ALIN	**Konya, Altinte**	**1.73**	**222**	P	**Pb**	**23 48 55.5**	**0.0**
ALIN				S	**Sg**	**23 49 18.7**	**-0.7**
ALIN				*i* AML	AML	23 49 23.0	
	comp=N,70nm,0.4s						
ALIN				*i* AML	AML	23 49 58.0	
	comp=E,76nm,2.1s						
YARM	**Yarimca-Ladik(**	**1.75**	**40**	PN	**Pb**	**23 48 55.4**	**-0.5**
KIZO	**Buyukkizoglu-L**	**1.79**	**42**	PN	**Pb**	**23 48 56.1**	**-0.5**
TOKA	**Tokat**	**1.79**	**65**	P	**Pb**	**23 48 56.2**	**-0.5**
KMON	**Kastamonu**	**1.84**	**347**	PN	**Pb**	**23 48 57.2**	**-0.3**
TOKT	**Tokat**	**1.84**	**66**	PN	**Pb**	**23 48 57.6**	**+0.1**
CUAYA	**Sivas-Altinyay**	**1.88**	**99**	P	**Pb**	**23 48 58.5**	**+0.2**
CUAYA				S	**Sg**	**23 49 25.0**	**+0.5**
PELI	**Kastamonı-Ara**	**1.89**	**335**	P	**Pb**	**23 48 58.0**	**-0.3**
PELI				S	**Sb**	**23 49 22.6**	**+0.8**
PELI				*i* AML	AML	23 49 26.0	
	comp=N,84nm,0.4s						
PELI				*i* AML	AML	23 49 38.0	
	comp=E,38nm,0.5s						
KAST	**KASTAMONU**	**1.93**	**351**	P	**Pb**	**23 48 58.5**	**-0.5**
KAST				S	**Sb**	**23 49 23.0**	**0.0**
BOYA	**Sinop/Boyabat-**	**1.96**	**7**	P	**Pb**	**23 48 59.9**	**+0.3**
BOYA				S	**Sg**	**23 49 25.6**	**-1.4**
BOYA				*i* AML	AML	23 49 33.0	
	comp=N,57nm,0.8s						
BOYA				*i* AML	AML	23 49 34.0	
	comp=E,66nm,0.4s						
KVT	**Kavak**	**1.98**	**40**	PN	**Pb**	**23 48 58.8**	**-1.0**
CMRD	**Camardi-Nigde**	**1.99**	**165**	PN	**Pb**	**23 48 59.7**	**-0.3**
SARI	**SarD1z-Kayseri**	**2.00**	**126**	PN	**Pb**	**23 48 59.1**	**-1.1**
KDHN	**Kadinhani**	**2.04**	**239**	P	**Pb**	**23 48 60.0**	**-0.9**
KDHN				S	**Sg**	**23 49 28.7**	**-0.8**
KIZT	**Kizilcal**	**2.04**	**251**	PN	**Pb**	**23 49 00.2**	**-0.8**
SVSK	**Karacayir**	**2.07**	**80**	PN	**Pb**	**23 49 00.2**	**-1.1**
LADK	**Ladik-KONYA**	**2.08**	**229**	PN	**Pb**	**23 49 00.1**	**-1.5**
KIBS	**BOLU**	**2.09**	**294**	P	**Pb**	**23 49 01.3**	**-0.5**
KIBS				S	**Sg**	**23 49 29.8**	**-1.4**
KIBS				*i* AML	AML	23 49 33.0	
	comp=E,160nm,0.9s						
KIBS				*i* AML	AML	23 49 39.0	
	comp=N,115nm,0.9s						
SAIM	**ADANA**	**2.10**	**139**	P	**Pb**	**23 49 00.8**	**-1.2**
SAIM				S	**Sg**	**23 49 31.2**	**-0.4**
SAIM				*i* AML	AML	23 49 37.0	
	comp=N,128nm,0.2s						
SAIM				*i* AML	AML	23 49 41.0	
	comp=E,65nm,0.2s						
KBUK	**KARABUK-Merkez**	**2.11**	**322**	P	**Pg**	**23 49 03.0**	**-1.4**
KBUK				S	**Sb**	**23 49 28.8**	**+0.7**
BCAM	**Yenicaga**	**2.14**	**306**	P	**Pg**	**23 49 04.3**	**-0.7**
BCAM				S	**Sg**	**23 49 33.2**	**+0.5**
ERBA	**Erbaa**	**2.14**	**59**	P	**Pb**	**23 49 01.0**	**-1.7**
ERBA				S	**Sg**	**23 49 33.0**	**+0.2**
SCER	**sogukcermik**	**2.16**	**82**	P	**Pb**	**23 49 01.6**	**-1.4**
SCER				S	**Sg**	**23 49 32.1**	**-1.3**
DIKM	**Dikmen**	**2.17**	**18**	PN	**Pb**	**23 49 01.6**	**-1.5**
KERG	**Konya-Eregli**	**2.18**	**185**	P	**Pg**	**23 49 05.4**	**-0.3**
KERG				S	**Sg**	**23 49 33.1**	**-0.8**
AUSIV	**SIVRIHISAR**	**2.18**	**267**	P	**Pb**	**23 49 02.4**	**-1.0**
AUSIV				S	**Sn**	**23 49 28.6**	**+1.7**
AUSIV				*i* AML	AML	23 49 39.0	
	comp=E,61nm,0.4s						
AUSIV				*i* AML	AML	23 49 40.0	
	comp=N,44nm,0.2s						
SVRH	**Sivrihisar-ESK**	**2.19**	**267**	PN	**Pb**	**23 49 02.4**	**-1.1**
YUVA	**Yuva-Kibriscik**	**2.20**	**292**	PN	**Pb**	**23 49 02.5**	**-1.1**
SAMS	**Samsun-Alacam**	**2.26**	**38**	P	**Pb**	**23 49 05.3**	**+0.7**
KONT	**Konya--Tatoy**	**2.26**	**224**	P	**Pg**	**23 49 06.6**	**-0.7**
KONT				S	**Sg**	**23 49 37.7**	**+1.1**
KONT				*i* AML	AML	23 49 41.0	
	comp=E,52nm,0.5s						
KONT				*i* AML	AML	23 49 42.0	
	comp=N,54nm,0.4s						
AKO	**Adana**	**2.29**	**158**	P	**Pg**	**23 49 06.8**	**-1.0**
AKO				S	**Sg**	**23 49 38.1**	**+0.5**
AKO				*i* AML	AML	23 49 41.0	
	comp=E,45nm,0.4s						
AKO				*i* AML	AML	23 49 42.0	
	comp=N,60nm,0.4s						
GULE	**Gulek**	**2.32**	**172**	P	**Pg**	**23 49 07.6**	**-0.9**
GULE				S	**Sg**	**23 49 37.8**	**-0.9**
GULE				*i* AML	AML	23 49 42.0	
	comp=E,180nm,0.6s						
GULE				*i* AML	AML	23 49 45.0	
	comp=N,119nm,0.5s						
BZK	**Bozkurt**	**2.38**	**354**	PN	**Pb**	**23 49 04.7**	**-2.0**
RSDY	**Resadiye-TOKAT**	**2.43**	**70**	PN	**Pn**	**23 49 05.1**	**+1.8**
DOGA	**KONYA_Doganhis**	**2.56**	**236**	P	**Pn**	**23 49 07.4**	**+2.0**
DOGA				S	**Sn**	**23 49 38.6**	**+2.1**
DOGA				*i* AML	AML	23 49 41.0	
	comp=N,31nm,0.4s						
DOGA				*i* AML	AML	23 49 43.0	
	comp=E,28nm,0.5s						
KURC	**Kurucasile-Bar**	**2.56**	**332**	PN	**Pb**	**23 49 07.6**	**-2.2**
MDUB	**Mudurnu**	**2.58**	**291**	PN	**Pb**	**23 49 07.9**	**-2.2**
KKBE	**Karaman, Kazim**	**2.61**	**206**	P	**Pb**	**23 49 08.7**	**-2.0**
KKBE				*i* AML	AML	23 49 59.0	
	comp=E,14nm,1.1s						
KKBE				*i* AML	AML	23 50 01.0	
	comp=N,13nm,1.0s						

*IDC **21** 23:48:28.2±1.1, 55˚.59S×26˚.86W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=46.7km s-min=31.3km az=83.0*
*NEIC **21** 23:48:30.8±1.5, 55˚.7S±0˚.1×27˚.0W±0˚.2, h10km±2km, mb4.5/17, Error ellipse: s-maj=25.6km s-min=14.4km az=37.0*
ISC 21 23:48:32.4±0.8, 55˚.7S±0˚.1×27˚.1W±0˚.1, h25km, n28, σ1.9 21/24, mb4.3/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.59**	**281**	Pn	**Pn**	**23 49 54.7**	**+0.8**
HOPE				Sn	**Sn**	**23 50 55.0**	**-2.2**
SNAA	**Sanae**	**19.03**	**157**	P	**Pn**	**23 52 52.0**	**-1.1**
BELA	**Belgrano 2**	**22.42**	**184**	P	**P**	**23 53 27.2**	**-1.5**
TRQA	**Tornquist**	**29.24**	**292**	P	**P**	**23 54 32.6**	**+0.5**
TRQA				IAmb	IAmb	23 55 02.2	
	comp=Z,10nm,1.2s						
QSPA	**South Pole Qui**	**34.54**	**180**	P	**P**	**23 55 19.3**	**+0.8**
QSPA				IAmb	IAmb	23 55 36.1	
	comp=Z,5.8nm,1.5s						
MT02	**Curacav**	**37.73**	**288**	P	**P**	**23 55 47.0**	**+1.1**
ROC1	**El Roble**	**37.88**	**288**	P	**P**	**23 55 45.6**	**-1.8**
AC05	**El Transito**	**40.74**	**293**	P	**P**	**23 56 12.2**	**+1.0**
AC05				IAmb	IAmb	23 56 33.4	
	comp=Z,26nm,1.4s						
AC02	**Maricunga**	**41.77**	**296**	P	**P**	**23 56 21.5**	**+1.4**
AC02				IAmb	IAmb	23 56 52.7	
	comp=Z,20nm,1.4s						
GO02	**Mina Guanaco**	**43.38**	**297**	P	**P**	**23 56 34.3**	**+1.3**
GO02				IAmb	IAmb	23 57 08.8	
	comp=Z,20nm,1.3s						
LVC	**Limon Verde**	**45.18**	**300**	P	**P**	**23 56 47.7**	**+0.2**
LVC				IAmb	IAmb	23 56 51.3	
	comp=Z,18nm,1.3s						
PB01	**IPOC Station P**	**46.78**	**300**	P	**P**	**23 57 01.1**	**+1.3**
VNDA	**Vanda**	**46.91**	**183**	P	**P**	**23 57 01.0**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=191,slow=7.7,SNR=12 comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**46.91**	**183**	P	**P**	**23 57 01.5**	**+1.5**
H10S2	**ASCENSION HYDR** baz=183,slow=74	**47.66**	**17**	T	T	00 48 30.1	
H10S3	**ASCENSION HYDR** baz=37,slow=74	**47.67**	**17**	T	T	00 48 31.0	
GO01	**Chusmiza**	**47.81**	**302**	P	**P**	**23 57 09.7**	**+1.4**
H10N1	**ASCENSION HYDR** baz=189,slow=76,SNR=3.5	**48.78**	**17**	T	T	00 49 55.0	
H10N3	**ASCENSION HYDR** baz=189,slow=76,SNR=14	**48.78**	**17**	T	T	00 49 55.9	
H10N2	**ASCENSION HYDR** baz=189,slow=76,SNR=8.1	**48.80**	**17**	T	T	00 49 57.8	
LPAZ	**La Paz** comp=Z,0.6nm,0.4s,baz=169,slow=5.2,SNR=6.1 comp=Z,0.6nm,0.4s	**50.23**	**305**	P	**P**	**23 57 27.2**	**+0.3**
LPAZ	**La Paz**	**50.23**	**305**	P	**P**	**23 57 28.0**	**+1.1**
BOAV	**Boa Vista**	**64.04**	**322**	P	**P**	**23 59 03.6**	**-0.2**
BOAV				IAmb	IAmb	23 59 03.9	
	comp=Z,2.1nm,0.8s						
TOA0	**Torodi Ar. Sit**	**72.74**	**29**	P	**P**	**23 59 58.1**	**-0.1**
TOA0				IAmb	IAmb	00 00 34.2	
	comp=Z,4.3nm,1.3s						
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.6s,baz=202,slow=4.9,SNR=4.8 comp=Z,0.4nm,0.6s	**72.74**	**29**	P	**P**	**23 59 57.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**72.74**	**29**	P	**P**	**23 59 58.2**	**0.0**
TORD				IAmb	IAmb	00 00 34.2	
	comp=Z,4.1nm,1.4s						
ILAR	**Eielson Array** comp=Z,0.9nm,0.7s,baz=116,slow=2.1,SNR=7.4	**149.93**	**312**	PKPbc	**PKPbc**	**00 08 17.5**	**-1.4**
SONM	**Songino Array** comp=Z,0.7nm,0.7s,baz=222,slow=1.9,SNR=3.8	**150.66**	**86**	PKPbc	**PKPbc**	**00 08 20.1**	**-1.2**

IDC 21 23:55:23.2±1.7, 3˚.84N×126˚.65E, h0km, mb3.7/5, mbtmp3.7/5, MS3.4/1, Error ellipse: s-maj=102.8km s-min=23.7km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang** comp=Z,161nm,18.6s,baz=270,slow=39	**11.17**	**218**	LR	LR	00 02 37.7	
FITZ	**Fitzroy Crossi** 1.4nm,0.7s,baz=8.1,slow=11,SNR=2.2 1.4nm,0.7s	**21.82**	**183**	P	P	00 00 16.9	-0.4
WRA	**Warramunga Arr** 2.7nm,0.8s,baz=343,slow=10,SNR=32 2.7nm,0.8s	**24.81**	**163**	P	P	00 00 47.0	-0.3
ASAR	**Alice Springs** 0.4nm,0.8s,baz=351,slow=6.1,SNR=2.8 0.4nm,0.8s	**28.24**	**166**	P	P	00 01 18.3	+0.1
STKA	**Stephens Creek** 1.9nm,0.5s,baz=335,slow=8.1,SNR=8.0 1.9nm,0.5s	**38.26**	**159**	P	P	00 02 45.6	+0.3
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=131,slow=7.7,SNR=6.8 0.2nm,0.4s	**57.42**	**325**	P	P	00 05 13.7	-0.1

*SKO **22** 00:06:48.4, 40˚.77N×23˚.25E, h3km*
ATH 22 00:06:47.1, 40˚.77N×23˚.28E, h16km±1km, ML1.6/5, 2C-1D, Error ellipse: s-maj=1.9km s-min=0.9km az=172.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOH	**Sokhos**	**0.08**	**49**	⇓*i* Pg	Pg	00 06 50.4	0.0
SOH				*i* Sg	Sg	00 06 52.6	+0.2
SOH	**Sokhos**	**0.08**	**49**	P	Pg	00 06 50.4	0.0
SOH				S	Sg	00 06 52.4	-0.1
SOH				AML	AML	00 06 52.9	
	comp=E,1076µm,0.1s						
SOH				AML	AML	00 06 53.0	
	comp=N,1675µm,0.2s						
HORT	**Hortiatis**	**0.22**	**218**	P	Pg	00 06 52.1	0.0
HORT				S	Sg	00 06 55.7	+0.1
HORT				AML	AML	00 06 56.3	
	comp=N,696µm,0.2s						
HORT				AML	AML	00 06 56.3	
	comp=E,1632µm,0.2s						
THE	**Thessaloniki**	**0.27**	**240**	⇑*i* Pg	Pg	00 06 53.0	0.0
THE				*i* Sg	Sg	00 06 56.9	-0.1
THE	**Thessaloniki**	**0.27**	**240**	P	Pg	00 06 53.0	0.0
THE				S	Sg	00 06 56.7	-0.3
THE				AML	AML	00 06 57.4	
	comp=E,350µm,0.2s						
THE				AML	AML	00 06 57.9	
	comp=N,409µm,0.2s						
SRS	**Serrai**	**0.42**	**35**	*i* Pg	Pg	00 06 55.4	-0.3
SRS	**Serrai**	**0.42**	**35**	P	Pg	00 06 55.4	-0.3
SRS				S	Sg	00 07 01.2	-0.2
SRS				AML	AML	00 07 04.9	
	comp=E,98µm,0.1s						
SRS				AML	AML	00 07 06.3	
	comp=N,109µm,0.2s						
KNT	**Kendrikon**	**0.48**	**324**	⇑*i* Pg	Pb	00 06 57.1	-0.2
KNT				*i* Sg	Sg	00 07 03.5	+0.2
KNT	**Kendrikon**	**0.48**	**324**	P	Pg	00 06 57.0	+0.2
KNT				S	Sg	00 07 03.1	-0.2
KOKK	**Kokkinochori,**	**0.55**	**85**	P	Pg	00 07 05.7	-0.4
KOKK				S	Sg	00 07 04.8	0.6
GRG	**Griva**	**0.69**	**286**	*i* Pg	Pb	00 07 01.4	+0.6
NVR	**Nevrokopi**	**0.73**	**37**	P	Pg	00 07 01.0	-0.4
NVR				S	Sg	00 07 10.9	-0.1
NVR				AML	AML	00 07 15.0	
	comp=E,89µm,0.2s						
NVR				AML	AML	00 07 15.1	
	comp=N,71µm,0.4s						
VAY	**Valandovo**	**0.77**	**316**	*i* Sg	Sb	00 07 13.4	+1.1
VAY				*i* Pg	Pb	00 07 02.5	+0.5
VAY				*e*Lg	Lg	00 07 14.0	
	comp=N,13nm,0.3s						
LIT	**Litokhoron**	**0.90**	**222**	*i* Pg	Pb	00 07 03.9	-0.4
STIP	**Stip**	**1.24**	**319**	*i* Pg	Pn	00 07 09.2	-0.6
STIP				*i* Sg	Sb	00 07 24.7	-1.1

*SKO **22** 00:32:27.4, 40˚.72N×23˚.25E, h11km*
ATH 22 00:32:24.8, 40˚.62N×23˚.20E, h17km±1km, ML1.3/4, 1C, Error ellipse: s-maj=2.0km s-min=1.3km az=287.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HORT	**Hortiatis**	**0.08**	**256**	P	Pg	00 32 28.5	+0.1
HORT				S	Sg	00 32 30.4	-0.3
HORT				AML	AML	00 32 30.7	
	comp=E,326µm,0.1s						
HORT				AML	AML	00 32 30.7	
	comp=N,352µm,0.1s						
SOH	**Sokhos**	**0.23**	**29**	⇑*i* Pg	Pg	00 32 30.3	0.0
SOH				*i* Sg	Sg	00 32 34.1	+0.1
SOH	**Sokhos**	**0.23**	**29**	P	Pg	00 32 30.3	0.0
SOH				S	Sg	00 32 33.6	-0.4
SOH				AML	AML	00 32 34.2	
	comp=N,526µm,0.2s						
SOH				AML	AML	00 32 34.4	
	comp=E,558µm,0.2s						
SRS	**Serrai**	**0.58**	**30**	*i* Pg	Pg	00 32 35.7	-0.6
SRS				*i* Sg	Sg	00 32 44.2	+0.1
SRS	**Serrai**	**0.58**	**30**	P	Pg	00 32 35.6	-0.7
SRS				S	Sg	00

	23nm,0.4s,baz=152,slow=12,SNR=29						
MJAR				S	**Sn**	**00 34 03.4**	**-0.9**
	29nm,0.6s,baz=157,slow=24,SNR=5.5						
JCJ	**Chichijima**	**7.56**	**167**	P	**Pn**	**00 34 41.0**	**+0.3**
	32nm,0.4s,baz=319,slow=20,SNR=1.5						
JCJ				S	**Sn**	**00 35 59.2**	**-5.6**
	101nm,0.9s,baz=288,slow=24,SNR=1.2						
H11N2	**WAKE ISLAND Hy 27.80**		**115**	T	T	01 08 27.8	
	baz=308,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy 27.80**		**115**	T	T	01 08 28.2	
	baz=308,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy 27.82**		**115**	T	T	01 08 28.3	
	baz=308,slow=75,SNR=27						
H11S3	**WAKE ISLAND Hy 28.41**		**117**	T	T	01 09 14.5	
	baz=310,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy 28.41**		**117**	T	T	01 09 14.9	
	baz=310,slow=75,SNR=7.6						
H11S2	**WAKE ISLAND Hy 28.42**		**117**	T	T	01 09 10.2	
	baz=310,slow=75,SNR=13						
MKAR	**Makanchi Array**	**44.71**	**304**	P	**P**	**00 40 59.6**	**+0.3**
	0.4nm,0.4s,baz=90,slow=10,SNR=5.4						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**54.42**	**187**	P	**P**	**00 42 14.2**	**+1.0**
	0.8nm,0.6s,baz=0.7,slow=7.7,SNR=23						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**70.62**	**332**	P	**P**	**00 44 01.1**	**+0.4**
	0.5nm,0.4s,baz=57,slow=5.1,SNR=4.9						
	0.5nm,0.4s						
NOA	**NORSAR Array B**	**76.16**	**337**	P	**P**	**00 44 34.1**	**+0.7**
	0.3nm,0.7s,baz=46,slow=5.1,SNR=2.5						
	0.3nm,0.7s						

*IDC **22** 00:37:53.0±2.0, 0.°80S×97.°31E, h0km, mb3.5/4, mbtmp3.5/6, ML3.0/1, Error ellipse: s-maj=55.9km s-min=23.0km az=68.0*

ISC 22 00:37:56.5±1.6, 0.°8S±0.°1×97.°4E±0.°2, h23km, n12, σ0°39/7, mb3.5/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.86**	**24**	Pn	**Pn**	**00 38 54.6**	**-0.1**
	1.2nm,0.3s,baz=203,slow=8.4,SNR=3.3						
PSI				Sn	**Sn**	**00 39 39.5**	**+0.2**
	1.0nm,0.3s,baz=120,slow=23,SNR=1.6						
	3.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**19.15**	**5**	P	**Pn**	**00 42 19.3**	**-0.1**
	0.8nm,0.4s,baz=194,slow=11,SNR=5.8						
H08S2	**Diego Garcia H**	**25.72**	**254**	T	T	01 09 23.4	
	baz=75,slow=74,SNR=5.7						
H08S3	**Diego Garcia H**	**25.72**	**254**	T	T	01 09 22.7	
	baz=75,slow=74,SNR=5.2						
H08S1	**Diego Garcia H**	**25.73**	**254**	T	T	01 09 24.1	
	baz=75,slow=74,SNR=5.5						
H01W3	**Cape Leeuwin H**	**37.39**	**157**	T	T	01 25 27.9	
	baz=331						
H01W2	**Cape Leeuwin H**	**37.40**	**157**	T	T	01 25 37.3	
	baz=331						
H01W1	**Cape Leeuwin H**	**37.41**	**157**	T	T	01 25 29.5	
	baz=331						
WRA	**Warramunga Arr**	**40.89**	**120**	P	**P**	**00 45 36.9**	**-0.4**
	0.7nm,1.1s,baz=302,slow=9.5,SNR=4.7						
	0.7nm,1.1s						
ASAR	**Alice Springs**	**42.11**	**126**	P	**P**	**00 45 47.8**	**+0.5**
	0.2nm,0.3s,baz=300,slow=7.4,SNR=1.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**49.16**	**346**	P	**P**	**00 46 43.0**	**+0.3**
	0.4nm,0.6s,baz=170,slow=6.3,SNR=1.9						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**55.50**	**351**	P	**P**	**00 47 29.2**	**-0.3**
	0.4nm,0.4s,baz=149,slow=6.7,SNR=2.0						
	0.4nm,0.4s						

*SOME **22** 00:55:21.1, 39.°30N×73.°05E, h15km*
*KRNET **22** 00:55:24.2±0.1, 39.°49N×73.°14E, mb3.2*
*NNC **22** 00:55:27.2±2.9, 39.°62N×73.°15E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=22.5km s-min=10.6km az=176.0*

ISC 22 00:55:28.3±1.6, 39.°37N±0.°08×73.°00E±0.°05, h33km, n25, σ2°90/39, 12C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.16**	**352**	⇑*i*P	**Pn**	**00 55 44.7**	**-3.6**
	baz=45						
OHH				⇑*i*S	**Sn**	**00 55 59.8**	**-3.3**
	baz=45						
GAR	**Garm**	**2.12**	**261**	⇑*i*P	**Pb**	**00 56 05.1**	**-1.0**
	baz=58						
GAR				⇑*i*S	**Sb**	**00 56 34.6**	**+2.5**
	baz=58						
ARK	**Arkit**	**2.55**	**342**	⇑*i*P	**Pn**	**00 56 08.1**	**+0.7**
	baz=39						
ARK				⇑*i*S	**Sn**	**00 56 40.0**	**+2.6**
	baz=39						
UCH	**Uchtor**	**3.08**	**21**	⇑*i*P	**Pn**	**00 56 14.5**	**-0.4**
	baz=20						
UCH				⇑*i*S	**Sn**	**00 56 51.0**	**+0.2**
	baz=20						
IUG	**Iuzhnay**	**3.58**	**322**	*e*P	**Pb**	**00 56 27.6**	**-3.2**
	191nm,0.4s						
IUG				*e*S	**Sb**	**00 57 15.4**	**+1.6**
	29nm,0.5s						
IUG	**Iuzhnay**	**3.58**	**322**	Pg	**Pb**	**00 56 27.6**	**-3.2**
	191nm,0.4s						
IUG				Lg	Lg	00 57 15.4	
	29nm,0.5s						
TKM2	**Tokmak 2**	**4.05**	**28**	⇑Pn	**Pn**	**00 56 28.0**	**-0.1**
	1.9nm,0.5s						
TKM2				⇓Lg	Lg	00 57 28.9	
	5.0nm,0.6s						
KK31	**Karatay Array**	**4.18**	**334**	⇓Pn	**Pn**	**00 56 30.8**	**+1.1**
	0.6nm,0.3s,baz=135,slow=13						
KK31				⇑Pg	**Pb**	**00 56 39.7**	**-1.3**
	2.4nm,0.4s,baz=142,slow=15,SNR=11						
KK31				⇑Sn	**Sn**	**00 57 19.6**	**+2.3**
	6.2nm,0.6s,baz=148,slow=21,SNR=5.2						
KK09	**Karatay Array**	**4.20**	**334**	⇑Lg	Lg	00 57 32.6	
	4.8nm,0.5s						
KST	**Kastek**	**4.29**	**30**	*e*P	**Pb**	**00 56 39.3**	**-3.8**
	2.7nm,0.8s						
KST				*e*S	**Sb**	**00 57 35.8**	**+1.4**
	9.1nm,1.0s						
KST	**Kastek**	**4.29**	**30**	Pg	**Pb**	**00 56 39.3**	**-3.8**
	2.7nm,0.8s						
KST				Lg	Lg	00 57 35.8	
	9.1nm,1.0s						
DGS	**Degeres**	**4.39**	**27**	*e*P	**Pb**	**00 56 40.7**	**-4.1**
	3.0nm,0.5s						
DGS				*e*S	**Sb**	**00 57 38.3**	**+1.0**
	5.0nm,0.9s						
DGS	**Degeres**	**4.39**	**27**	Pg	**Pb**	**00 56 40.7**	**-4.1**
	3.0nm,0.5s						
DGS				Lg	Lg	00 57 38.3	
	5.0nm,0.9s						
MTBS	**Maitube**	**4.56**	**33**	*e*P	**Pb**	**00 56 46.2**	**-1.3**
	3.4nm,0.3s						
MTBS				*e*S	**Sb**	**00 57 47.5**	**+5.5**
	4.6nm,0.2s						
MTBS	**Maitube**	**4.56**	**33**	Pg	**Pb**	**00 56 46.2**	**-1.3**
	3.4nm,0.3s						
MTBS				Lg	Lg	00 57 47.5	
	4.6nm,0.2s						
KRBS	**Karabastau**	**4.76**	**24**	*e*P	**Pb**	**00 56 48.9**	**-2.1**
	2.1nm,0.7s						
KRBS				*e*S	**Sb**	**00 57 52.1**	**+4.2**
	4.4nm,0.5s						
KRBS	**Karabastau**	**4.76**	**24**	Pg	**Pb**	**00 56 48.9**	**-2.1**
	2.1nm,0.7s						
KRBS				Lg	Lg	00 57 52.1	
	4.4nm,0.5s						
MDOK	**Medeo**	**4.86**	**38**	*e*P	**Pb**	**00 56 50.2**	**-2.5**
	2.9nm,0.8s						
MDOK				*e*S	**Sb**	**00 57 54.2**	**+3.4**
	7.2nm,1.1s						
MDOK	**Medeo**	**4.86**	**38**	Pg	**Pb**	**00 56 50.2**	**-2.5**
	2.9nm,0.8s						
MDOK				Lg	Lg	00 57 54.2	
	7.2nm,1.1s						
KOTS	**Kotyrbulak**	**4.95**	**37**	*e*P	**Pb**	**00 56 52.2**	**-2.0**
	0.3nm,0.7s						
KOTS				*e*S	**Sb**	**00 57 57.9**	**+4.6**
	13nm,0.7s						
KOTS	**Kotyrbulak**	**4.95**	**37**	Pg	**Pb**	**00 56 52.2**	**-2.0**
	0.3nm,0.7s						
KOTS				Lg	Lg	00 57 57.9	
	13nm,0.7s						
KTBS	**Karatobe**	**5.14**	**31**	*e*P	**Pb**	**00 56 54.2**	**-3.2**
	2.0nm,0.8s						
KTBS				*e*S	**Sb**	**00 58 01.2**	**+2.5**
	3.9nm,0.4s						
KTBS	**Karatobe**	**5.14**	**31**	Pg	**Pb**	**00 56 54.2**	**-3.2**
	2.0nm,0.8s						
KTBS				Lg	Lg	00 58 01.2	
	3.9nm,0.4s						
KUU	**Kurty**	**5.16**	**28**	*e*P	**Pb**	**00 56 56.0**	**-1.8**
	1.0nm,0.6s						
KUU				*e*S	**Sb**	**00 58 03.8**	**+4.5**
	5.5nm,0.6s						
KUU	**Kurty**	**5.16**	**28**	Pg	**Pb**	**00 56 56.0**	**-1.8**
	1.0nm,0.6s						
KUU				Lg	Lg	00 58 03.8	
	5.5nm,0.6s						

NEIC 22 01:12:13.4±1.0, 19.°35N±0.°07×157.°0W±0.°2, h20km±16km, ML2.8/18, Error ellipse: s-maj=22.3km s-min=9.3km az=80.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPH	**Captain Cook**	**1.00**	**82**		Pg	01 12 32.7	-0.2
KHLU	**Kahalu`u**	**1.04**	**77**		Pb	01 12 31.1	-1.7
HUH	**Hualalai**	**1.11**	**73**	Pn	Pn	01 12 33.2	-1.0
HUH				IAML		01 12 42.6	
	comp=N,184nm,2.1s						
HUH				IAML		01 12 56.9	
	comp=E,244nm,3.0s						
ALEP	**Alea Permanent**	**1.26**	**81**		Pn	01 12 36.5	+0.2
KHU	**Kahuku**	**1.28**	**95**	Pn	Pn	01 12 35.8	-0.7
KHU					Sn	01 12 53.4	+0.3
KHU				IAML		01 13 12.4	
	comp=E,221nm,3.9s						
MWH	**Moku'aweowe**	**1.30**	**84**	Pn	Pn	01 12 36.5	-0.4
MWH				IAML		01 13 15.0	
	comp=N,180nm,1.4s						
MLOA	**Mauna Loa Obse**	**1.32**	**82**	Pn	Pn	01 12 36.6	-0.6
MLOA				IAML		01 12 58.5	
	comp=E,176nm,3.0s						
MLOA				IAML		01 13 17.4	
	comp=N,151nm,3.0s						
HPAH	**Hawaii Prepara**	**1.37**	**60**	Pn	Pn	01 12 38.0	+0.4
HMH	**Humu'ula Sheep**	**1.42**	**80**	Pn	Pn	01 12 38.4	0.0
HMH				IAML		01 12 46.4	
	comp=N,111nm,2.9s						
HMH				IAML		01 13 21.2	
	comp=E,152nm,3.0s						
AIN	**Ainahou**	**1.42**	**89**	Pn	Pn	01 12 38.0	-0.3
AIN				IAML		01 12 55.6	
	comp=E,115nm,1.7s						
HTC	**Hot Caves**	**1.48**	**94**		Pn	01 12 39.1	0.0
MLH	**Mauna Loa**	**1.50**	**84**	Pn	Pn	01 12 38.7	-0.7
MLH				IAML		01 12 53.9	
	comp=E,114nm,1.8s						
RSD	**Rainshed**	**1.60**	**86**	Pn	Pn	01 12 39.7	-1.1

IDC 22 01:14:52.3±9.3, 2.°72S×138.°29E, h0km, mb3.4/2, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=400.7km s-min=33.6km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.55**	**192**	Pn	Pn	01 18 58.6	0.0
	0.5nm,0.3s,baz=10.0,slow=13,SNR=52						
WRA				Sn	Sn	01 22 04.6	-10
	0.2nm,0.3s,baz=10,slow=23,SNR=4.9						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**21.25**	**191**	P	P	01 19 40.3	-0.1
	0.6nm,0.5s,baz=21,slow=10.0,SNR=5.2						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**69.54**	**323**	P	P	01 26 03.1	0.0
	0.4nm,0.7s,baz=102,slow=8.3,SNR=2.1						
	0.4nm,0.7s						

*AEIC **22** 01:26:40±2.7, 58.°83N±0.°01×134.°36W±0.°04, h5km±3km, Error ellipse: s-maj=3.1km s-min=1.5km az=69.0*
*PGC **22** 01:26:40.7, 58.°84N×134.°32W, h1km, ML2.6, ML2.7/10, 59km northeast of Juneau, Ak Southeastern Alaska*
*NEIC **22** 01:26:40.5±2.1, 58.°84N±0.°02×134.°31W±0.°02, h1km±4km, Error ellipse: s-maj=2.5km s-min=1.1km az=165.0*

ISC 22 01:26:39.3±0.8, 58.°81N±0.°02×134.°25W±0.°02, h10km, n51, σ2°22/73, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.39**	**234**	Pg	**Pg**	**01 26 47.5**	**+0.5**
BESE				Sg	**Sg**	**01 26 52.6**	**+0.4**
BESE	**Bessie Mountai**	**0.39**	**234**	P	**Pg**	**01 26 47.6**	**+0.5**
BESE				S	**Sg**	**01 26 52.7**	**+0.4**
JIS	**Juneau Island**	**0.54**	**188**	Pg	**Pb**	**01 26 50.5**	**-0.3**
JIS				Sg	**Sb**	**01 26 57.9**	**-0.8**
SKAG	**Skagway**	**0.86**	**320**	Pg	**Pg**	**01 26 54.2**	**-1.6**
SKAG				Sg	**Sg**	**01 27 05.4**	**-1.6**
PLBC	**Pleasant Camp**	**1.27**	**302**		**Pn**	**01 27 02.1**	**-1.0**
PLBC					**Sb**	**01 27 17.5**	**-2.2**
PLBC	**Pleasant Camp**	**1.27**	**302**	P	**Pn**	**01 27 02.1**	**-1.0**
PLBC				S	**Sb**	**01 27 17.5**	**-2.2**
P33M	**Teslin, Yukon**	**1.58**	**27**		**Pb**	**01 27 08.6**	**-0.1**
P33M	**Teslin, Yukon**	**1.58**	**27**	Pn	**Pb**	**01 27 08.6**	**-0.1**
P33M				Sg	**Sb**	**01 27 29.5**	**+0.7**
SIT	**Sitka**	**1.85**	**199**	Pn	**Pb**	**01 27 12.3**	**-0.9**
SIT				IAML		01 27 39.8	
	comp=E,29nm,0.8s						
SIT				IAML		01 27 40.8	
	comp=N,37nm,1.0s						
WHY	**Whitehorse**	**1.88**	**350**	Pn	**Pn**	**01 27 12.5**	**+0.8**
WHY	**Whitehorse**	**1.88**	**350**	IAML		01 27 40.6	
	comp=E,51nm,0.5s						
WHY				IAML		01 27 45.8	
	comp=N,32nm,0.6s						
WHY	**Whitehorse**	**1.88**	**350**	Pn	**Pn**	**01 27 12.9**	**+1.2**
WHY				Sg	**Sb**	**01 27 38.8**	**+1.4**
P29M	**Windy Craggy**	**1.98**	**296**	Pn	**Pb**	**01 27 14.9**	**-0.5**
P29M				IAML		01 27 47.5	
	comp=E,72nm,0.6s						
DLBC	**Dease Lake**	**2.24**	**98**	Pn	**Pb**	**01 27 18.9**	**-1.0**
DLBC	**Dease Lake**	**2.24**	**98**	IAML		01 27 53.5	
	comp=E,27nm,0.3s						
DLBC				IAML		01 27 54.5	
	comp=N,39nm,0.4s						
DLBC	**Dease Lake**	**2.24**	**98**	Pn	**Pb**	**01 27 19.6**	**-0.3**
DLBC				Pg	**Pg**	**01 27 21.4**	**-0.8**
DLBC				Sg	**Sg**	**01 27 51.0**	**-0.2**
HYT	**Haines Junctio**	**2.61**	**322**	Pn	**Pn**	**01 27 23.1**	**+1.5**
HYT				IAML		01 28 00.9	
	comp=N,31nm,0.6s						
HYT				IAML		01 28 02.1	
	comp=E,28nm,0.6s						
HYT	**Haines Junctio**	**2.61**	**322**	Pn	**Pn**	**01 27 23.4**	**+1.8**
HYT				Sg	**Sb**	**01 27 59.9**	**+1.6**
HYT	**Haines Junctio**	**2.61**	**322**	Pn	**Pn**	**01 27 23.4**	**+1.8**
HYT				Sg	**Sb**	**01 27 59.9**	**+1.6**
WRAK	**Wrangell Islan**	**2.61**	**156**	Pn	**Pb**	**01 27 24.1**	**-2.0**
WRAK				IAML		01 28 10.1	
	comp=E,43nm,0.5s						
WRAK				IAML		01 28 15.0	
	comp=E,40nm,0.6s						
YUK7	**Dusty Glacier**	**2.62**	**313**	Pn	**Pn**	**01 27 22.9**	**+1.0**
YUK7				Sg	**Sb**	**01 28 01.4**	**+2.6**
YUK7	**Dusty Glacier**	**2.62**	**313**	Pn	**Pn**	**01 27 22.9**	**+1.0**
YUK7				Sg	**Sb**	**01 28 01.4**	**+2.6**
PNL	**Peninsula**	**2.78**	**290**	Pn	**Pn**	**01 27 25.6**	**+1.7**
PNL				Sg	**Sb**	**01 28 04.8**	**+1.5**
PNL	**Peninsula**	**2.78**	**290**	Pn	**Pn**	**01 27 25.6**	**+1.7**
PNL				Sg	**Sb**	**01 28 04.8**	**+1.5**
N31M	**Braeburn, Yuko**	**2.79**	**345**	Pn	**Pn**	**01 27 24.8**	**+0.8**
N31M	**Braeburn, Yuko**	**2.79**	**345**	Pn	**Pn**	**01 27 25.4**	**+1.4**
N31M				Sg	**Sb**	**01 28 06.1**	**+2.6**
YUK6	**Outpost Mounta**	**2.98**	**318**	Pn	**Pn**	**01 27 29.0**	**+2.2**
YUK6				Sg	**Sb**	**01 28 12.5**	**+3.4**
YUK6	**Outpost Mounta**	**2.98**	**318**	Pn	**Pn**	**01 27 29.0**	**+2.2**
YUK6				Sg	**Sb**	**01 28 12.5**	**+3.4**
PCA	**Pinnacle**	**3.33**	**295**	Pn	**Pn**	**01 27 33.3**	**+1.8**
PCA	**Pinnacle**	**3.33**	**295**	Pn	**Pn**	**01 27 33.3**	**+1.8**
YUK4	**Talbot Arm**	**3.36**	**321**	Pn	**Pn**	**01 27 34.3**	**+2.2**
YUK4				Pg	**Pb**	**01 27 40.6**	**+1.4**
YUK4				Sg	**Sb**	**01 28 24.1**	**+3.9**
YUK4	**Talbot Arm**	**3.36**	**321**	Pn	**Pn**	**01 27 34.3**	**+2.2**
YUK4				Pg	**Pb**	**01 27 40.6**	**+1.4**
YUK4				Sg	**Sb**	**01 28 24.1**	**+3.9**
M31M	**Drury Creek, Y**	**3.40**	**359**	Pn	**Pn**	**01 27 33.5**	**+1.0**
M31M	**Drury Creek, Y**	**3.40**	**359**	IAML		01 28 32.9	
	comp=E,26nm,0.7s						
M31M				IAML		01 28 35.1	
	comp=N,16nm,0.9s						
M31M	**Drury Creek, Y**	**3.40**	**359**	Pn	**Pn**	**01 27 34.0**	**+1.5**
M31M				Sg	**Sg**	**01 28 25.8**	**-2.8**
FARO	**Faro, Yukon**	**3.46**	**7**	Pn	**Pn**	**01 27 35.5**	**+2.2**
FARO				IAML		01 28 34.4	
	comp=N,14nm,0.5s						
FARO	**Faro, Yukon**	**3.46**	**7**	Sg	**Sg**	**01 28 27.1**	**-3.2**
M30M	**Minto, Yukon**	**3.98**	**343**	Pn	**Pn**	**01 27 40.9**	**+0.5**
M30M	**Minto, Yukon**	**3.98**	**343**	IAML		01 28 48.9	
	comp=E,12nm,0.6s						
M30M				IAML		01 28 49.4	
	comp=N,8.6nm,0.7s						
M30M	**Minto, Yukon**	**3.98**	**343**	Pn	**Pn**	**01 27 41.8**	**+1.4**
M30M				Sg	**Sb**	**01 28 42.6**	**+5.0**
TGTN	**Hyland Airport**	**4.04**	**45**	Pn	**Pn**	**01 27 43.8**	**+2.6**
TGTN				Sg	**Sg**	**01 28 46.5**	**-2.4**
MMPY	**Sheldon Lake,**	**4.09**	**20**	Pn	**Pn**	**01 27 44.2**	**+2.2**
MESA	**MESA**	**4.16**	**293**	Pn	**Pn**	**01 27 42.0**	**-1.0**
CTGM	**Chitina Glacie**	**4.17**	**304**	Sg	**Sg**	**01 28 50.0**	**-3.2**
CTGM	**Chitina Glacie**	**4.17**	**304**	Sg	**Sg**	**01 28 50.0**	**-3.2**
YUK2	**White River**	**4.43**	**315**	Pn	**Pn**	**01 27 48.3**	**+1.6**
YUK2	**White River**	**4.43**	**315**	Pn	**Pn**	**01 27 48.3**	**+1.6**
BCAR	**Beaver Creek A**	**5.63**	**322**	Pn	**Pn**	**01 28 05.3**	**+2.3**
L27K	**Beaver Creek,**	**5.64**	**322**	Pn	**Pn**	**01 28 04.5**	**+1.4**
DAWY	**Dawson**	**5.82**	**337**	Sg	**Sg**	**01 29 39.6**	**-6.3**
DAWY	**Dawson**	**5.82**	**337**	Sg	**Sg**	**01 29 39.6**	**-6.3**

*IDC **22** 01:42:12.0±0.6, 55.°06S×30.°61W, h0km, mb4.3/10, mbtmp4.4/11, ML4.2/1, MS4.1/31, Error ellipse: s-maj=20.7km s-min=16.3km az=60.0*
*NEIC **22** 01:42:13.9±1.9, 55.°15S±0.°10×30.°86W±0.°09, h10km±1km, mb4.8/32, Error ellipse: s-maj=16.5km s-min=8.5km az=3.0*
*GCMT **22** 01:42:17.9±0.3, 55.°10S±0.°02×30.°80W±0.°04, h12km, MW4.9/89, Moment Tensor Solution. s34,c38; s89,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.72±.09; $M_{\theta\theta}$-1.20±.08; $M_{\phi\phi}$-0.52±.07; $M_{r\theta}$-2.11±.30; $M_{r\phi}$1.55±.07; $M_{\theta\phi}$1.34±.30; Best double couple: M_o3.25900×10^{16} NP1:ϕ_s303.00000°, δ70.00000°, λ84.00000°. NP2: ϕ_s139.00000°, δ21.00000°, λ105.00000°. Principal axes: T 2.9080, Plg64.0000°, Azm203.0000°; N 0.6970, Plg5.0000°, Azm305.0000°; P -3.6100, Plg25.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 01:42:13.6±0.5, 55.°06S±0.°09×30.°82W±0.°10, h10km, n83, σ0°89/54, mb4.8/21, MS4.1/30, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.38**	**281**	Pn	**Pn**	**01 43 05.0**	**-1.5**
ORCD	**Orcadas**	**9.33**	**227**	Pn	Pn	01 44 24.1	-3.9
VNA1	**Neumayer--Stat**	**18.52**	**156**	P	**P**	**01 46 30.5**	**+0.8**
VNA3	**Neumayer Olymp**	**18.65**	**159**	P	**P**	**01 46 31.5**	**+0.3**
VNA2	**Neumayer--Watz**	**18.91**	**156**	P	**P**	**01 46 35.5**	**+1.4**
	baz=306,slow=5.0						
PMSA	**Palmer Station**	**19.05**	**226**	P	**P**	**01 46 36.8**	**+1.2**
	0.7nm,0.3s,baz=50,slow=9.8,SNR=4.7						
PMSA				LR	LR	01 53 01.0	
	comp=Z,523nm,18.8s,baz=72,slow=34						
	19nm,0.8s						
SNAA	**Sanae**	**20.50**	**155**	P	Pn	01 46 54.9	+1.2
SNAA	**Sanae**	**20.50**	**155**	P	**P**	**01 46 50.9**	**-0.6**
	4.0nm,0.8s,baz=303,slow=12,SNR=12						
SNAA				LR	LR	01 52 45.3	
	comp=Z,175nm,21.4s,baz=328,slow=31						
	4.0nm,0.8s						
SNAA	**Sanae**	**20.50**	**155**		**P**	**01 46 50.4**	**-1.1**
BELA	**Belgrano 2**	**22.96**	**182**		**P**	**01 47 17.6**	**-0.1**
PLCA	**Paso Flores**	**29.79**	**282**	LR	LR	02 00 20.8	
	comp=Z,289nm,20.1s,baz=184,slow=36						
CPUP	**Villa Florida**	**34.63**	**315**	P	**P**	**01 49 02.8**	**0.0**
	6.3nm,1.0s,baz=161,slow=6.4,SNR=7.7						
CPUP				LR	LR	02 04 56.1	
	comp=Z,311nm,18.2s,baz=194,slow=39						
	6.3nm,1.0s						
CPUP	**Villa Florida**	**34.63**	**315**	P	**P**	**01 49 02.8**	**0.0**
CPUP				IAmb	IAmb	01 49 14.2	
	comp=Z,26nm,1.2s						
MT09	**Talagante**	**35.03**	**291**	P	**P**	**01 49 04.7**	**-1.8**
MT01	**Popeta**	**35.11**	**290**	P	**P**	**01 49 06.8**	**-0.1**
MT01				IAmb	IAmb	01 49 25.9	
	comp=Z,22nm,1.4s						
QSPA	**South Pole Qui**	**35.20**	**180**	P	**P**	**01 49 07.3**	**-0.3**
	comp=Z,17nm,1.0s,baz=185,slow=3.5,SNR=21						
QSPA				LR	LR	02 02 30.1	
	comp=Z,334nm,19.4s,baz=190,slow=35						
	comp=Z,17nm,1.0s						
QSPA	**South Pole Qui**	**35.20**	**180**	P	**P**	**01 49 07.5**	**-0.1**
QSPA				IAmb	IAmb	01 49 11.7	
	comp=Z,20nm,1.0s						
MT02	**Curacav**	**35.51**	**291**	P	**P**	**01 49 10.3**	**-0.1**
MT02				IAmb	IAmb	01 49 17.4	
	comp=Z,20nm,0.9s						
ZON	**Zonda**	**35.55**	**296**	P	**P**	**01 49 10.4**	**-0.4**
ZON				IAmb	IAmb	01 49 31.1	
	comp=Z,10nm,0.9s						
VA03	**San Esteban**	**35.58**	**292**	P	**P**	**01 49 11.6**	**+0.5**
VA06	**Catapilco**	**36.13**	**292**	P	**P**	**01 49 15.8**	**+0.1**
CO02	**Combarbal**	**37.03**	**293**	P	**P**	**01 49 23.4**	**-0.2**
CO03	**El Pedregal**	**37.15**	**294**	P	**P**	**01 49 23.5**	**-1.1**
CO03				IAmb	IAmb	01 49 40.1	
	comp=Z,17nm,1.2s						
CO01	**Juntas del Tor**	**37.53**	**296**	P	**P**	**01 49 28.9**	**+0.9**
CO01				IAmb	IAmb	01 49 53.5	
	comp=Z,23nm,1.3s						
GO04	**Tololo Observa**	**37.74**	**295**	P	**P**	**01 49 30.5**	**+0.8**
AC05	**El Transito**	**38.54**	**296**	P	**P**	**01 49 35.7**	**-0.6**
AC05				IAmb	IAmb	01 49 56.6	
	comp=Z,40nm,1.5s						
GO02	**Mina Guanaco**	**41.21**	**301**	P	**P**	**01

comp=Z,7.7nm,0.5s,baz=96,slow=6.1,SNR=34
comp=Z,7.7nm,0.5s
LPAZ La Paz 48.13 309 P **P** 01 50 55.1 +0.7
LPAZ IAmb IAmb 01 51 15.3
comp=Z,12nm,0.8s
H10N1 ASCENSION HYDR 48.86 22 T T 02 44 41.5
baz=192
H10N3 ASCENSION HYDR 48.86 22 T T 02 44 00.9
baz=192,slow=74,SNR=11
H10N2 ASCENSION HYDR 48.87 22 T T 02 44 03.6
baz=192,slow=74,SNR=12
RCBR Riachuelo 49.26 353 LR LR 02 09 55.4
comp=Z,168nm,18.0s,baz=325,slow=34
LBTB Lobatse 50.75 77 P **P** 01 51 12.7 -1.1
comp=Z,4.7nm,1.0s,baz=222,slow=7.2,SNR=6.2
LBTB LR LR 02 09 44.7
comp=Z,42nm,19.0s,baz=209,slow=33
comp=Z,4.7nm,1.0s
TSUM Tsumeb 51.07 65 LR LR 02 09 51.3
comp=Z,90nm,18.4s,baz=161,slow=33
ETMB Extrema 53.07 314 P **P** 01 51 30.3 -0.7
ETMB IAmb IAmb 01 51 31.9
comp=Z,10nm,1.4s
NNA Nana 55.97 302 LR LR 02 18 47.9
comp=Z,62nm,18.0s,baz=149,slow=39
MACA Manacapuru-AM 57.11 324 **P** 01 52 00.2 0.0
MACA IAmb IAmb 01 52 08.2
comp=Z,7.3nm,0.8s
LSZ Lusaka 59.99 73 LR LR 02 16 46.6
comp=Z,268nm,18.1s,baz=216,slow=35
ATAH Atahualpa 60.92 303 LR LR 02 20 31.9
comp=Z,121nm,19.1s,baz=151,slow=38
BOAV Boa Vista 62.27 326 P **P** 01 52 36.4 +0.7
BOAV IAmb IAmb 01 53 00.7
comp=Z,5.9nm,1.1s
MDP Montagnes des 62.63 335 LR LR 02 21 09.6
comp=Z,182nm,18.1s,baz=154,slow=37
DBIC Dimbokro 65.20 29 LR LR 02 15 46.5
comp=Z,88nm,19.1s,baz=193,slow=31
OPO Ambohidratompo 68.14 91 LR LR 02 18 08.5
comp=Z,100nm,21.1s,baz=325,slow=32
AIS Amsterdam Isla 69.18 126 P **P** 01 53 21.4 +1.3
BBTS Babate 70.49 15 LR LR 02 20 11.6
comp=Z,239nm,18.3s,baz=208,slow=32
SDV Santo Domingo 71.87 318 LR LR 02 28 30.0
comp=Z,415nm,18.0s,baz=136,slow=39
TOA0 Torodi Ar. Sit 73.28 33 P **P** 01 53 44.9 -0.1
TORD Torodi Ar. Bea 73.28 33 P **P** 01 53 44.5 -0.5
comp=Z,0.9nm,0.5s,baz=199,slow=6.6,SNR=14
comp=Z,0.9nm,0.5s
TORD Torodi Ar. Bea 73.28 33 P **P** 01 53 45.1 +0.2
MBAR Mbarara 73.59 66 LR LR 02 24 12.4
comp=Z,300nm,18.1s,baz=210,slow=34
PTCN Pitcairn Islan 74.90 248 P **P** 01 53 53.5 -1.0
KMBO Kilima Mbogo 76.66 72 LR LR 02 26 18.1
comp=Z,220nm,18.0s,baz=235,slow=35
ATD Arta Tunnel 90.22 70 LR LR 02 35 05.5
comp=Z,261nm,18.1s,baz=190,slow=35
MDT Midelt 90.37 22 LR LR 02 29 09.7
comp=Z,186nm,21.8s,baz=201,slow=31
PPT Papeete 91.07 237 LR LR 02 27 29.6
comp=Z,51nm,19.5s,baz=138,slow=30
STKA Stephens Creek 93.17 174 LR LR 02 34 32.0
comp=Z,183nm,20.2s,baz=202,slow=34
KEST Kesra 96.77 32 LR LR 02 36 13.2
comp=Z,225nm,18.4s,baz=231,slow=34
ESDC Sonseca Array 97.12 21 LR LR 02 35 24.4
comp=Z,143nm,19.7s,baz=153,slow=33
VAE Valguarnera 99.97 35 LR LR 02 38 44.5
comp=Z,86nm,18.3s,baz=153,slow=34
ASAR Alice Springs 100.51 166 PP **PP** 02 00 05.7 -1.2
comp=Z,1.2nm,1.0s,baz=187,slow=6.5,SNR=5.6
FINES FINESS Array B 124.49 29 PKP **PKPdf** 02 01 11.4 -0.2
comp=Z,0.9nm,0.6s,baz=286,slow=1.4,SNR=6.0
CMAR Chiang Mai Arr 127.35 113 PKP **PKPdf** 02 01 18.0 -0.4
comp=Z,0.9nm,0.4s,baz=231,slow=3.6,SNR=5.0
ARCES ARCESS Array B 130.80 23 PKP **PKPdf** 02 01 23.1 -0.3
comp=Z,1.3nm,0.7s,baz=336,slow=2.7,SNR=4.1
YKA Yellowknife Ar 134.07 320 PKP **PKPdf** 02 01 30.8 +1.1
comp=Z,0.6nm,0.6s,baz=127,slow=2.3,SNR=2.5
ZALV Zalesovo Beam 143.79 64 PKP **PKPdf** 02 01 48.0 +0.3
comp=Z,1.6nm,0.5s,baz=248,slow=2.9,SNR=4.7
ILAR Eielson Array 147.92 314 PKPbc **PKPdf** 02 01 57.0 +2.5
comp=Z,7.9nm,1.0s,baz=120,slow=1.3,SNR=36
SONM Songino Array 152.73 87 PKPbc **PKPbc** 02 02 09.3 -0.5
comp=Z,1.7nm,0.7s,baz=220,slow=3.9,SNR=8.0

IDC 22 01:51:26.0±4.7, 6.°15S×147.°68E, h0km, mb3.5/2, mbtmp3.4/3, ML3.3/1, MS3.0/1, Error ellipse: s-maj=163.0km s-min=48.3km az=113.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**13.92**	**186**	LR	LR	02 00 31.1	
	comp=Z,64nm,19.7s,baz=256,slow=39						
WRA	**Warramunga Arr**	**18.86**	**222**	P	P	01 55 47.8	-0.1
	0.1nm,0.3s,baz=42,slow=12,SNR=12						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.88**	**216**	P	P	01 56 20.9	+0.2
	0.4nm,0.3s,baz=52,slow=8.6,SNR=13						
	0.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**24.56**	**239**	P	P	01 56 47.8	0.0
	1.4nm,0.6s,baz=53,slow=8.7,SNR=2.1						
	1.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**145.78**	**284**	PKPbc	PKPdf	02 11 07.2	-0.5
	0.3nm,0.6s,baz=74,slow=4.0,SNR=6.1						

IDC 22 01:57:19.8±1.8, 2.°60S×139.°22E, h0km, mb3.6/4, mbtmp3.7/5, ML3.7/1, MS3.2/2, Error ellipse: s-maj=68.2km s-min=28.2km az=87.0
DJA 22 01:57:23.7±0.8, 2.°S±8.°×13.°9E±.°, h24km±12km, M4.0/3, MLv4.0/3
ISC 22 01:57:23.6±0.8, 2.°62S±0.°07×139.°30E±0.°05, h27km, n12, σ1§74/15, mb3.9/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.85**	**317**	P	**Pn**	**01 57 39.0**	**-0.9**
SMPI				S	**Sn**	**01 57 49.9**	**-1.6**
GENI	**Genyem**	**0.87**	**89**	P	**Pn**	**01 57 40.2**	**+0.1**
GENI				S	**Sn**	**01 57 52.0**	**+0.1**
WAMI	**Wamena**	**1.39**	**205**	P	**Pb**	**01 57 50.9**	**+2.0**
SRPI	**Serui, Papua**	**3.14**	**284**	P	**Pn**	**01 58 13.0**	**+1.6**
SRPI				S	**Sn**	**01 58 48.4**	**+0.4**
SIJI	**Sorong**	**8.21**	**282**	LR	LR	02 02 50.8	
	comp=Z,65nm,19.4s,baz=263,slow=41						
WRA	**Warramunga Arr**	**17.89**	**195**	P	**Pn**	**02 01 31.0**	**+0.3**
	0.2nm,0.3s,baz=17,slow=12,SNR=7.9						
WRA				S	**Sn**	**02 04 44.7**	**-4.8**
	0.4nm,0.6s,baz=15,slow=23,SNR=2.6						
	1.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.40**	**220**	P	**P**	**02 01 57.5**	**-1.1**
	1.5nm,0.8s,baz=35,slow=10,SNR=1.9						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**21.57**	**194**	P	**P**	**02 02 10.9**	**-0.4**
	1.2nm,0.7s,baz=16,slow=10.0,SNR=3.3						
ASAR				S	**S**	**02 06 08.0**	**-1.1**
	0.2nm,0.3s,baz=19,slow=26,SNR=1.8						
	1.2nm,0.7s						
MKAR	**Makanchi Array**	**70.07**	**322**	P	**P**	**02 08 33.7**	**+0.3**
	0.6nm,0.7s,baz=124,slow=7.2,SNR=4.4						
	0.6nm,0.7s						
VNDA	**Vanda**	**75.82**	**175**	P	**P**	**02 09 07.5**	**+0.6**
	1.1nm,0.7s,baz=317,slow=7.4,SNR=8.9						
	1.1nm,0.7s						
GEYT	**Alibeck**	**84.64**	**308**	LR	LR	02 51 22.8	
	comp=Z,36nm,19.5s,baz=290,slow=38						
TORD	**Torodi Ar. Bea**	**136.79**	**286**	PKP	**PKPdf**	**02 16 45.2**	**+0.4**
	0.4nm,0.7s,baz=76,slow=4.1,SNR=2.2						

ISK 22 01:57:40.1, 36.°76N×37.°22E, h9km, ML2.2/6
DDA 22 01:57:42.3±0.0, 36.°85N×37.°04E, h5km±2km, ML2.8
ISC 22 01:57:42.1±0.9, 36.°83N±0.°03×37.°10E±0.°02, h10km±6km, n32, σ0§70/53, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUZU	**Kuzuini**	**0.06**	**200**	P	**Pg**	**01 57 44.3**	**+0.1**
KUZU				S	**Sg**	**01 57 45.9**	**+0.2**
KUZU				*i* AML	AML	01 57 46.0	
	comp=Z,7μm,0.2s						
KUZU				*i* AML	AML	01 57 46.0	
	comp=N,8μm,0.2s						
KUZU				*i* AML	AML	01 57 46.0	
	comp=E,1μm,0.2s						
KAMA	**Osmaniye**	**0.50**	**316**	P	**Pg**	**01 57 51.7**	**-0.1**
KAMA				S	**Sg**	**01 57 57.9**	**-0.5**
HCB	**Kahramanmara**	**0.54**	**344**	P	**Pg**	**01 57 52.2**	**-0.4**
HCB				S	**Sg**	**01 57 59.5**	**-0.2**
GZT	**Gaziantep**	**0.65**	**35**	P	**Pb**	**01 57 55.5**	**-0.1**
GZT				S	**Sb**	**01 58 04.3**	**-0.5**
KAHM	**Kahramanmaras,**	**0.69**	**353**	P	**Pg**	**01 57 55.6**	**0.0**
KAHM				S	**Sg**	**01 58 04.1**	**-0.6**
KMRS	**Kahramanmaras**	**0.69**	**347**	PG	**Pg**	**01 57 55.6**	**0.0**
TAHT	**Tahtakopru-Hat**	**0.86**	**239**	PG	**Pg**	**01 57 58.1**	**-0.6**
TAHT				SG	**Sb**	**01 58 11.4**	**+0.6**
ANDN	**Andirin**	**0.96**	**322**	P	**Pg**	**01 58 00.6**	**-0.1**
ANDN				S	**Sb**	**01 58 14.8**	**+1.0**
CEYT	**Ceyhan**	**1.10**	**280**	PN	**Pn**	**01 58 03.9**	**+0.3**
ATAB	**Bozova**	**1.15**	**56**	P	**Pn**	**01 58 04.9**	**+0.5**
ATAB				S	**Sn**	**01 58 21.1**	**+0.8**
ATAB				*i* AML	AML	01 58 25.0	
	comp=E,148nm,0.2s						
YURE	**YUREGIR**	**1.18**	**270**	P	**Pn**	**01 58 04.8**	**+0.1**
YURE				S	**Sn**	**01 58 20.8**	**0.0**
KOZT	**Kozan**	**1.21**	**303**	PN	**Pg**	**01 58 05.2**	**-0.1**
SURC	**SANLIURFA_SURC**	**1.22**	**87**	P	**Pn**	**01 58 06.1**	**+0.8**
SURC				S	**Sn**	**01 58 22.1**	**+0.3**
SAIM	**ADANA**	**1.40**	**325**	P	**Pg**	**01 58 08.8**	**-0.3**
SAIM				S	**Sg**	**01 58 28.6**	**+1.3**
KRTS	**Karatas**	**1.41**	**260**	PN	**Pn**	**01 58 07.6**	**-0.2**
AKO	**Adana**	**1.47**	**296**	P	**Pn**	**01 58 08.8**	**-0.1**
AKO				S	**Sn**	**01 58 28.0**	**+0.1**
ELBS	**KAHRAMANMARAS**	**1.50**	**1**	P	**Pg**	**01 58 11.6**	**+0.8**
ELBS				S	**Sg**	**01 58 30.9**	**+0.7**
URFA	**Urfa**	**1.51**	**65**	PN	**Pn**	**01 58 07.0**	**-2.3**
SANL	**SANLIURFA_Merk**	**1.55**	**77**	P	**Pg**	**01 58 11.8**	**-0.1**
SANL				S	**Sg**	**01 58 32.5**	**+0.5**
AKCD	**Akcadag**	**1.61**	**24**	P	**Pg**	**01 58 13.7**	**+0.8**
AKCD				S	**Sb**	**01 58 32.5**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.67**	**341**	PN	**Pn**	**01 58 11.8**	**+0.2**
DARE	**Darende-Malaty**	**1.77**	**10**	PN	**Pn**	**01 58 12.6**	**-0.3**
DED	**Mersin**	**1.85**	**275**	P	**Pn**	**01 58 14.2**	**+0.3**
DED				S	**Sn**	**01 58 36.9**	**-0.6**
YAHY	**KAYSERI_Yahyal**	**1.87**	**313**	P	**Pb**	**01 58 15.6**	**-0.9**
YAHY				S	**Sb**	**01 58 39.7**	**-0.3**
CMRD	**Camardi-Nigde**	**1.88**	**297**	PN	**Pn**	**01 58 15.1**	**+0.7**
CUGUR	**Gurin_SVAS**	**1.90**	**4**	P	**Pg**	**01 58 18.3**	**-0.2**
CUGUR				S	**Sg**	**01 58 44.5**	**+1.3**
CUGUR				*i* AML	AML	01 58 46.0	
	comp=N,68nm,0.6s						
GULE	**Gulek**	**1.91**	**284**	P	**Pn**	**01 58 15.8**	**+0.8**
GULE				S	**Sb**	**01 58 40.8**	**-0.4**
HEKM	**Malatya_Hekimh**	**2.16**	**18**	P	**Pg**	**01 58 23.7**	**+0.2**
HEKM				S	**Sg**	**01 58 50.2**	**-1.3**
BNN	**Bunyan**	**2.25**	**334**	PN	**Pn**	**01 58 20.2**	**+0.6**
KERG	**Konya-Eregli**	**2.45**	**285**	P	**Pn**	**01 58 23.8**	**+1.5**
KERG				S	**Sn**	**01 58 53.0**	**+0.6**
CUAYA	**Sivas-Altinyay**	**2.45**	**354**	P	**Pg**	**01 58 28.3**	**-0.8**
ARPR	**Arapgir-MALATY**	**2.46**	**23**	PN	**Pn**	**01 58 22.1**	**-0.4**

IDC 22 02:39:09.3±0.5, 55.°08N×165.°42E, h0km, mb4.7/33, mbtmp4.7/36, ML4.8/3, MS4.3/77, Error ellipse: s-maj=12.5km s-min=9.5km az=157.0
KRSC 22 02:39:10.1±1.6, 54.°95N×165.°32E, h44km±14km, ML5.4
MOS 22 02:39:12.3±0.9, 55.°01N×165.°41E, h37km, mb5.2/74, MS4.4/21, Error ellipse: s-maj=4.7km s-min=4.0km az=105.2
BJI 22 02:39:13.1±0.0, 55.°28N×165.°19E, h34km, mb5.0/59, mB5.2/51, Ms4.9/59, Ms7 4.6/56
NEIC 22 02:39:13.1±1.7, 55.°13N±0.°08×165.°27E±0.°10, h27km±4km, mb5.2/511, Error ellipse: s-maj=12.3km s-min=8.0km az=175.0
GCMT 22 02:39:14.1±0.2, 55.°09N±0.°01×165.°43E±0.°02, h24km, MW5.1/131, Moment Tensor Solution. s79,c109; s131,c208; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.93±.14; Mθθ-5.19±.10; Mφφ1.27±.10; Mrθ2.43±.22; Mθφ1.84±.08; Mrφ2.27±.24; Best double couple: M◎6.03700×10^16 NP1:φs76.00000°, δ63.00000°, λ54.00000°. NP2:φs314.00000°, δ44.00000°, λ139.00000°. Principal axes: T 6.0460, Plg56.0000°, Azm298.0000°; N -0.0090, Plg32.0000°, Azm94.0000°; P -6.0270, Plg11.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 22 02:39:13.5±0.5, 55.°00N±0.°04×165.°45E±0.°03, h30km±3km, n1215, σ1§18/1089, mb5.2/363, MS4.5/112, 56C-34D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.36**	**56**	PN	**Pb**	**02 39 20.2**	**-1.6**
BKI				S	**Sb**	**02 39 26.0**	**-1.5**
BKI	**Bering**	**0.36**	**56**	P	**Pb**	**02 39 20.2**	**-1.6**
BKI				S	**Sb**	**02 39 26.0**	**-1.5**
KBTR	**Krutoberegovo**	**1.92**	**310**	PN	**Pn**	**02 39 41.1**	**-2.9**
KBTR				S	**Sn**	**02 40 03.9**	**-3.2**
KBTR	**Krutoberegovo**	**1.92**	**310**	P	**Pn**	**02 39 41.1**	**-2.9**
KBTR				S	**Sn**	**02 40 03.9**	**-3.2**
KBG	**Krutoberegovo**	**2.00**	**310**	PN	**Pn**	**02 39 42.3**	**-2.8**
KBG				S	**Sn**	**02 40 04.4**	**-2.6**
KBG	**Krutoberegovo**	**2.00**	**310**	P	**Pn**	**02 39 42.3**	**-2.8**
KBG				S	**Sn**	**02 40 06.4**	**-2.6**
MKZ	**Mys Kozlova**	**2.20**	**260**	PN	**Pn**	**02 39 46.5**	**-1.3**
MKZ				S	**Sn**	**02 40 12.1**	**-1.9**
MKZ	**Mys Kozlova**	**2.20**	**260**	P	**Pn**	**02 39 46.5**	**-1.3**
MKZ				S	**Sn**	**02 40 12.1**	**-1.9**
SMKR	**Semkarok**	**2.75**	**307**	PN	**Pn**	**02 39 54.4**	**-1.1**
SMKR				S	**Sn**	**02 40 26.6**	**-1.0**
SMKR	**Semkarok**	**2.75**	**307**	P	**Pn**	**02 39 54.4**	**-1.1**
SMKR				S	**Sn**	**02 40 26.6**	**-1.0**
BDR	**Baidarnaya**	**2.86**	**305**	PN	**Pn**	**02 39 56.5**	**-0.5**
BDR	**Baidarnaya**	**2.86**	**305**	P	**Pn**	**02 39 56.5**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**2.86**	**291**	PN	**Pn**	**02 39 57.2**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**2.86**	**291**	P	**Pn**	**02 39 57.2**	**+0.1**
BZMR	**Bezymyannaya**	**2.97**	**290**	PN	**Pn**	**02 39 59.0**	**+0.4**
BZMR	**Bezymyannaya**	**2.97**	**290**	P	**Pn**	**02 39 59.0**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.98**	**291**	PN	**Pn**	**02 39 59.3**	**+0.6**
BZWR	**Bezymyannyi-We**	**2.98**	**291**	P	**Pn**	**02 39 59.3**	**+0.6**
KLY	**Klyuchi**	**3.02**	**298**	PN	**Pn**	**02 39 57.3**	**-1.8**
KLY				S	**Sn**	**02 40 30.6**	**-3.5**
KLY	**Klyuchi**	**3.02**	**298**	P	**Pn**	**02 39 57.3**	**-1.8**
KLY				S	**Sn**	**02 40 30.6**	**-3.5**
KRSR	**Krestovskiy**	**3.02**	**296**	PN	**Pn**	**02 39 59.5**	**+0.2**
KRSR	**Krestovskiy**	**3.02**	**296**	P	**Pn**	**02 39 59.5**	**+0.2**
TUMR	**Tumrok**	**3.06**	**277**	PN	**Pn**	**02 39 59.8**	**+0.1**
TUMR	**Tumrok**	**3.06**	**277**	P	**Pn**	**02 39 59.8**	**+0.1**
KIRR	**Kirishev**	**3.06**	**290**	PN	**Pn**	**02 40 00.1**	**+0.3**
KIRR	**Kirishev**	**3.06**	**290**	P	**Pn**	**02 40 00.1**	**+0.3**
KMNR	**Kamenistaya**	**3.07**	**286**	PN	**Pn**	**02 40 00.5**	**+0.6**
KMNR				S	**Sn**	**02 40 34.9**	**-0.6**
KMNR	**Kamenistaya**	**3.07**	**286**	P	**Pn**	**02 40 00.5**	**+0.6**
KMNR				S	**Sn**	**02 40 34.9**	**-0.6**
KPT	**Kopyto**	**3.13**	**290**	PN	**Pn**	**02 40 01.0**	**+0.3**
KPT	**Kopyto**	**3.13**	**290**	P	**Pn**	**02 40 01.0**	**+0.3**
KOZ	**Kozyrevsk**	**3.34**	**291**	PN	**Pn**	**02 40 04.1**	**+0.6**
KOZ				S	**Sn**	**02 40 41.2**	**-0.9**
KOZ	**Kozyrevsk**	**3.34**	**291**	P	**Pn**	**02 40 04.1**	**+0.6**
KOZ				S	**Sn**	**02 40 41.2**	**-0.9**
SRDR	**Sredinnyy**	**3.50**	**294**	PN	**Pn**	**02 40 06.2**	**+0.4**
SRDR				S	**Sn**	**02 40 45.8**	**-0.4**
SRDR	**Sredinnyy**	**3.50**	**294**	P	**Pn**	**02 40 06.2**	**+0.4**
SRDR				S	**Sn**	**02 40 45.8**	**-0.4**
KII	**Karymskiy**	**3.63**	**257**	PN	**Pn**	**02 40 07.4**	**-0.2**
KII	**Karymskiy**	**3.63**	**257**	P	**Pn**	**02 40 07.4**	**-0.2**
SPN	**Mys Shipunski**	**3.72**	**241**	PN	**Pn**	**02 40 07.5**	**-1.3**
SPN	**Mys Shipunski**	**3.72**	**241**	P	**Pn**	**02 40 07.5**	**-1.3**
SPN				S	**Sn**	**02 40 47.2**	**-4.4**
ESO	**Esso**	**3.95**	**286**	PN	**Pn**	**02 40 10.7**	**-1.2**
ESO				S	**Sn**	**02 40 56.0**	**-1.2**
ESO	**Esso**	**3.95**	**286**	P	**Pn**	**02 40 10.7**	**-1.2**
ESO				S	**Sn**	**02 40 56.0**	**-1.2**
NLC	**Nalytchevo**	**4.04**	**245**	PN	**Pn**	**02 40 12.2**	**-0.9**
NLC	**Nalytchevo**	**4.04**	**245**	P	**Pn**	**02 40 12.2**	**-0.9**
NLC				S	**Sn**	**02 40 56.2**	**-3.0**
SDLR	**Sedlovina**	**4.23**	**249**	PN	**Pn**	**02 40 15.3**	**-0.6**
SDLR	**Sedlovina**	**4.23**	**249**	P	**Pn**	**02 40 15.3**	**-0.6**
SDLR				S	**Sn**	**02 41 01.8**	**-2.4**
SMAR	**Somma**	**4.28**	**249**	PN	**Pn**	**02 40 16.3**	**-0.4**
SMAR	**Somma**	**4.28**	**249**	P	**Pn**	**02 40 16.3**	**-0.4**
SMAR				S	**Sn**	**02 41 03.7**	**-1.9**
KRER	**Koryakskii**	**4.29**	**249**	PN	**Pn**	**02 40 17.1**	**+0.3**
KRER	**Koryakskii**	**4.29**	**249**	P	**Pn**	**02 40 17.1**	**+0.3**
KRER				S	**Sn**	**02 41 04.0**	**-1.8**
UGLR	**Uglovaya**	**4.29**	**248**	PN	**Pn**	**02 40 16.7**	**0.0**
UGLR	**Uglovaya**	**4.29**	**248**	P	**Pn**	**02 40 16.7**	**0.0**
UGLR				S	**Sn**	**02 41 03.5**	**-2.3**
AVH	**Avacha**	**4.31**	**249**	PN	**Pn**	**02 40 17.1**	**+0.1**
AVH	**Avacha**	**4.31**	**249**	P	**Pn**	**02 40 17.1**	**+0.1**
AVH				S	**Sn**	**02 41 04.2**	**-2.0**
KRX	**Arik**	**4.32**	**250**	PN	**Pn**	**02 40 17.2**	**+0.1**
KRX	**Arik**	**4.32**	**250**	P	**Pn**	**02 40 17.2**	**+0.1**
KRX				S	**Sn**	**02 41 04.8**	**-1.7**
KOK	**Koryaka**	**4.36**	**250**	PN	**Pn**	**02 40 17.7**	**+0.1**
KOK	**Koryaka**	**4.36**	**250**	P	**Pn**	**02 40 17.7**	**+0.1**
DALK	**Dalny**	**4.42**	**246**	PN	**Pn**	**02 40 18.1**	**-0.2**
DALK	**Dalny**	**4.42**	**246**	P	**Pn**	**02 40 18.1**	**-0.2**
DALK				S	**Sn**	**02 41 05.3**	**-3.3**
PET	**Petropavlovsk**	**4.47**	**246**	Pn	**Pn**	**02 40 18.3**	**-0.7**
PET				Sn	**Sn**	**02 41 06.8**	**-3.1**
PET	**Petropavlovsk**	**4.47**	**246**	*i*PN	**Pn**	**02 40 18.7**	**-0.4**
PET				pmax	pmax		
	comp=Z,318nm,0.6s						
PET				MLR	MLR		
	comp=Z,5μm,12.0s						
PET				MLR	MLR		
	comp=Z,4μm,12.0s						
PET	**Petropavlovsk**	**4.47**	**246**	P	**Pn**	**02 40 19.0**	**-0.1**
PET				S	**Sn**	**02 41 07.0**	**-3.0**
GNL	**Ganaly**	**4.58**	**256**	PN	**Pn**	**02 40 21.1**	**+0.4**
GNL	**Ganaly**	**4.58**	**256**	P	**Pn**	**02 40 21.1**	**+0.4**
KRMR	**Karymshinskiy**	**4.84**	**246**	PN	**Pn**	**02 40 24.4**	**+0.2**
KRMR	**Karymshinskiy**	**4.84**	**246**	P	**Pn**	**02 40 24.4**	**+0.2**
KRMR				S	**Sn**	**02 41 17.2**	**-1.9**
RUS	**Russkaya**	**4.86**	**241**	PN	**Pn**	**02 40 24.2**	**-0.2**
RUS	**Russkaya**	**4.86**	**241**	P	**Pn**	**02 40 24.2**	**-0.2**
RUS				S	**Sn**	**02 41 15.3**	**-4.2**
PEA0B	**Petropavlovsk-**	**4.94**	**251**	Pn	**Pn**	**02 40 25.7**	**+0.1**
PEA0B	**Petropavlovsk-**	**4.94**	**251**	*c i*PN	**Pn**	**02 40 25.7**	**+0.1**
PETK	**Petropavlovsk-**	**4.94**	**251**	Pn	**Pn**	**02 40 25.1**	**-0.5**
	comp=Z,45nm,0.3s,baz=70,slow=16,SNR=161						
PETK				Sn	**Sn**	**02 41 21.2**	**-0.5**
	comp=Z,38nm,0.3s,baz=297,slow=6.5,SNR=8.7						
PETK				LR	LR	02 42 33.0	
	comp=Z,2μm,18.8s,baz=64,slow=41						
	comp=Z,111nm,0.4s						
PETK	**Petropavlovsk-**	**4.94**	**251**		**Pn**	**02 40 24.6**	**-1.0**
MTVR	**Mutnovka**	**5.00**	**243**	PN	**Pn**	**02 40 26.2**	**-0.2**
MTVR	**Mutnovka**	**5.00**	**243**	P	**Pn**	**02 40 26.2**	**-0.2**
MTVR				S	**Sn**	**02 41 19.8**	**-3.4**
GRL	**Gorelyy**	**5.02**	**244**	PN	**Pn**	**02 40 27.0**	**+0.3**
GRL	**Gorelyy**	**5.02**	**244**	P	**Pn**	**02 40 27.0**	**+0.3**
GRL				S	**Sn**	**02 41 22.2**	**-1.4**
PALN	**Palana**	**5.07**	**326**	PN	**Pn**	**02 40 28.1**	**+0.8**
PALN	**Palana**	**5.07**	**326**	P	**Pn**	**02 40 28.1**	**+0.8**
APC	**Apacha**	**5.32**	**250**	PN	**Pn**	**02 40 31.6**	**+0.9**
APC	**Apacha**	**5.32**	**250**	P	**Pn**	**02 40 31.6**	**+0.9**
APC				S	**Sn**	**02 41 31.1**	**+0.3**
KDTR	**Khodutka, Kamc**	**5.45**	**237**	PN	**Pn**	**02 40 31.0**	**-1.5**
KDTR	**Khodutka, Kamc**	**5.45**	**237**	P	**Pn**	**02 40 31.0**	**-1.5**
KDTR				S	**Sn**	**02 41 28.9**	**-5.1**
TILK	**Tilichiki**	**5.47**	**4**	PN	**Pn**	**02 40 33.9**	**+1.2**
TILK	**Tilichiki**	**5.47**	**4**	P	**Pn**	**02 40 33.9**	**+1.2**
SHEM	**Shemya Is, Ala**	**5.60**	**110**	Pn	**Pn**	**02 40 37.3**	**+2.7**
	comp=Z,14nm,0.3s,baz=7.9,slow=4.1,SNR=17						
SHEM				Sn	**Sn**	**02 41 41.1**	**+3.2**
	comp=Z,14nm,0.3s,baz=287,slow=20,SNR=3.7						
SHEM				LR	LR	02 42 02.2	
	comp=Z,312nm,20.3s,baz=306,slow=31						
SMY	**Shemya**	**5.60**	**110**	Pn	**Pn**	**02 40 37.0**	**+2.5**
SMY	**Shemya**	**5.60**	**110**	PN	**Pn**	**02 40 37.1**	**+2.5**
PAU	**Pauzhetka**	**6.28**	**239**	PN	**Pn**	**02 40 43.8**	**-0.1**
PAU	**Pauzhetka**	**6.28**	**239**	P	**Pn**	**02 40 43.8**	**-0.1**
SKR	**Severo-Kuril's**	**7.12**	**236**	*e*PN	**Pn**	**02 40 54.5**	**-0.8**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR	**Severo-Kuril's**	**7.12**	**236**	P	**Pn**	**02 40 54.2**	**-1.1**
SKR				S	**Sn**	**02 42 09.7**	**-5.4**
KMSK	**Kamenskaya**	**7.50**	**3**	PN	**Pn**	**02 41 01.4**	**+0.9**
KMSK	**Kamenskaya**	**7.50**	**3**	P	**Pn**	**02 41 01.4**	**+0.9**
AMKA	**Amchitka**	**9.07**	**108**	Pn	**Pn**	**02 41 25.5**	**+3.3**
MA2	**Magadan**	**9.17**	**306**	Pn	**Pn**	**02 41 24.5**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=89,slow=12,SNR=5.0						
MA2				LR	LR	02 45 16.9	
	comp=Z,3μm,18.7s,baz=110,slow=40						
	comp=Z,7.8nm,0.7s						
MA2	**Magadan**	**9.17**	**306**	*e*PN	**Pn**	**02 41 25.9**	**+2.5**
SEY	**Seymchan**	**10.40**	**325**	Pn	**Pn**	**02 41 40.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=139,slow=13,SNR=4.3						
SEY	**Seym

comp=Z,51nm,0.9s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=E,13nm,1.3s
YAK pmax pmax
comp=Z,153nm,1.6s
YAK pmax pmax
comp=N,40nm,1.6s
YAK pmax pmax
comp=E,34nm,1.5s
YAK smax smax
comp=N,80nm,2.4s
YAK smax smax
comp=E,41nm,2.2s
YAK MLR MLR
comp=Z,799nm,17.0s
YAK MLR MLR
comp=N,323nm,16.0s
YAK MLR MLR
comp=E,472nm,16.0s
CHNA Chernabura Isl 19.98 76 P **P** **02 43 43.2 +0.2**
baz=285
CNBA Chernabura Isl 19.98 76 P **P** **02 43 43.2 +0.2**
O16K Kokwok River B 20.05 62 P **P** **02 43 43.7 0.0**
baz=273,SNR=5.1
P16K Nushagak River 20.13 63 P **P** **02 43 45.4 +0.8**
baz=275
CHGN Chignik 20.29 71 P **P** **02 43 45.6 -0.7**
CHGN IAmb IAmb 02 43 56.7
comp=Z,86nm,0.9s
CHGN Chignik 20.29 71 P **P** **02 43 47.2 +0.8**
baz=282
R16K Pilot Point 20.52 68 P **P** **02 43 48.9 +0.1**
baz=279
O17K Koliganek Bris 20.54 61 P **P** **02 43 49.1 +0.1**
baz=274
Q16K King Salmon 20.86 64 P **P** **02 43 53.6 +1.1**
baz=277,SNR=12
TEY Ternei 20.90 253⇑*e*P Pn 02 43 54.6 -1.1
TEY *e* 02 47 40.9
TEY pmax pmax
comp=E,20nm,0.7s
P17K Kvichak River 20.92 63 P **P** **02 43 53.8 +0.7**
baz=276,SNR=15
GCSA Galena City Sc 20.94 47 P **P** **02 43 53.4 +0.1**
baz=261
TTA Tatalina 21.10 52 P **P** **02 43 55.3 +0.2**
baz=266
N18K Kilae Creek 21.11 59 P **P** **02 43 56.4 +1.2**
N18K Kilae Creek 21.11 59 P **P** **02 43 55.8 +0.6**
baz=272,SNR=15
R17K Ugashik Creek 21.14 67 P **P** **02 43 56.4 +0.8**
baz=280,SNR=8.6
SVW2 Sparrevohn 21.25 57 P **P** **02 43 56.0 -0.7**
KLR Kul'dur 21.34 268 P **P** **02 43 58.1 +0.4**
comp=E,14nm,0.8s,baz=49,slow=10,SNR=17
KLR LR LR 02 53 08.8
comp=E,827nm,18.9s,baz=62,slow=39
comp=E,14nm,0.8s
KLR Kul'dur 21.34 268⇓*i*P **P** **02 43 59.3 +1.6**
KLR pmax pmax
comp=Z,33nm,1.0s
KLR MLR MLR
comp=Z,641nm,15.0s
JTM Tennabayashi 21.51 239 P **P** **02 43 59.4 -0.3**
L19K White Mountain 21.60 55 P **P** **02 44 01.0 +0.5**
L19K IAmb IAmb 02 44 17.2
comp=Z,166nm,1.4s
L19K White Mountain 21.60 55 P **P** **02 44 01.0 +0.5**
baz=269,SNR=16
N19K Bonanza Creek 21.79 58 P **P** **02 44 03.7 +1.1**
N19K Bonanza Creek 21.79 58 P **P** **02 44 03.3 +0.7**
baz=273,SNR=12
M19K Big River Lodg 21.81 55 P **P** **02 44 03.3 +0.6**
M19K Big River Lodg 21.81 55 P **P** **02 44 03.4 +0.6**
baz=270,SNR=13
O19K Port Alsworth 21.91 60 P **P** **02 44 04.3 +0.6**
O19K IAmb IAmb 02 44 20.2
comp=Z,153nm,1.8s
O19K Port Alsworth 21.91 60 P **P** **02 44 03.9 +0.2**
baz=275
CHIR Chirikof Islan 21.92 72 P **P** **02 44 04.6 +0.6**
baz=285
K20K Telida 22.01 51 P **P** **02 44 05.0 +0.2**
baz=267,SNR=26
J20K Nowinta River 22.04 49 P **P** **02 44 05.3 +0.2**
J20K Nowinta River 22.04 49 P **P** **02 44 05.6 +0.5**
baz=265,SNR=36
L20K Farewell, AK 22.06 54 P **P** **02 44 06.3 +0.9**
baz=269,SNR=6.1
Q19K Cape Douglas, 22.38 63 P **P** **02 44 09.2 +0.3**
baz=278
M20K Styx River 22.41 55 P **P** **02 44 09.4 +0.2**
baz=271
IMAR Indian Mountai 22.44 44 P **P** **02 44 09.3 -0.2**
P19K Oil Pt 22.50 61 P **P** **02 44 10.2 0.0**
baz=277
SII Sitkinak Islan 22.53 69 P **P** **02 44 10.8 +0.3**
baz=284
G21K Allakaket 22.63 43 P **P** **02 44 12.4 +0.9**
baz=260,SNR=22
RSO Redoubt South 22.66 59 P **P** **02 44 12.3 +0.3**
O20K Slope Mountain 22.76 60 P **P** **02 44 13.3 +0.4**
baz=276
H21K Melozitna Rive 22.78 45 IAmb IAmb 02 44 15.8
comp=Z,81nm,1.1s
H21K Melozitna Rive 22.78 45 P **P** **02 44 13.6 +0.6**
baz=263,SNR=56
F21K Alatna River 22.78 41 P **P** **02 44 13.6 +0.5**
baz=258,SNR=20
TIXI Tiksi 22.80 331 P **P** **02 44 12.5 -0.7**
comp=Z,6.6nm,0.5s,baz=90,slow=20,SNR=11
TIXI LR LR 02 54 03.6
comp=Z,1µm,18.0s,baz=74,slow=39
comp=Z,6.6nm,0.5s
TIXI Tiksi 22.80 331 P **P** **02 44 12.1 -1.1**
TIXI Tiksi 22.80 331*c i*P **P** **02 44 12.7 -0.5**
TIXI pmax pmax
comp=Z,41nm,1.3s
TIXI MLR MLR
comp=Z,1µm,17.0s
CHUM Lake Minchumin 22.82 50 P **P** **02 44 13.9 +0.5**
baz=267,SNR=12
PPLA Purkeypile 22.84 53 IAmb IAmb 02 44 25.6
comp=Z,124nm,1.3s
PPLA Purkeypile 22.84 53 P **P** **02 44 14.7 +0.8**
baz=270
OHAK Old Harbor 22.86 67 P **P** **02 44 12.0 -1.9**
OHAK IAmb IAmb 02 44 15.1
comp=Z,154nm,1.4s
OHAK Old Harbor 22.86 67 P **P** **02 44 13.9 0.0**
baz=282
SPCR Spurr Chakacha 22.88 57 P **P** **02 44 14.7 +0.6**
baz=274
CAST Castle Rocks 22.90 51 P **P** **02 44 14.0 -0.4**
CAST Castle Rocks 22.90 51 P **P** **02 44 14.1 -0.2**
baz=269,SNR=30
SPU Mount Spurr 22.95 57 P **P** **02 44 15.3 +0.4**
A21K Barrow 23.05 30 P **P** **02 44 14.9 -0.8**
baz=245
I21K Tanana 23.06 47 P **P** **02 44 16.1 +0.2**
baz=265,SNR=14
Q20K Shuyak Island 23.07 64 P **P** **02 44 16.1 0.0**
baz=280,SNR=5.3
KDAK Kodiak Island 23.12 66 P **P** **02 44 15.2 -1.4**
KDAK IAmb IAmb 02 44 18.6
comp=Z,44nm,0.7s
KDAK Kodiak Island 23.12 66 P **P** **02 44 15.2 -1.4**
KDAK pmax pmax
comp=Z,44nm,0.7s
KDAK Kodiak Island 23.12 66 P **P** **02 44 15.9 -0.7**
baz=282
SKT Skwentna 23.16 55 P **P** **02 44 17.0 0.0**
baz=273
HOM Homer 23.30 61 P **P** **02 44 17.7 -0.6**
baz=278
F22K John River 23.33 41 P **P** **02 44 18.3 -0.4**
baz=259
H22K Ishtalitna Cre 23.39 45 P **P** **02 44 18.7 -0.6**
baz=264,SNR=44
BPAW Bear Paw Mtn. 23.41 50 IAmb IAmb 02 44 22.0
comp=Z,71nm,1.2s
BPAW Bear Paw Mtn. 23.41 50 P **P** **02 44 19.3 -0.2**
baz=268,SNR=39
CAPN Captain Cook N 23.42 58 P **P** **02 44 19.4 -0.1**
baz=276
KTH Kantishna Hill 23.43 51 IAmb IAmb 02 44 22.4
comp=Z,131nm,1.5s
G22K Bettles 23.49 42 P **P** **02 44 20.1 0.0**
baz=261,SNR=78
CNPM China Poot 23.53 61 IAmb IAmb 02 44 22.6
comp=Z,174nm,1.6s
MLY Manley 23.57 47 P **P** **02 44 21.0 -0.1**
MLY IAmb IAmb 02 44 33.2
comp=Z,67nm,1.2s
MLY Manley 23.57 47 P **P** **02 44 21.2 +0.1**
baz=266,SNR=42
E22K Anaktuvuk Pass 23.60 39 P **P** **02 44 20.9 -0.3**
baz=258
TRF Thorofare Moun 23.71 51 IAmb IAmb 02 44 24.9
comp=Z,93nm,1.0s
TRF Thorofare Moun 23.71 51 P **P** **02 44 22.8 +0.3**
baz=270,SNR=6.7
CUT Chulitna 23.74 54 IAmb IAmb 02 44 32.8
comp=Z,112nm,1.2s
CUT Chulitna 23.74 54 P **P** **02 44 22.3 -0.2**
baz=273
BRSE Bradley Lake S 23.75 61 P **P** **02 44 22.4 -0.3**
baz=278
M22K Willow 23.84 55 P **P** **02 44 22.7 -0.8**
M22K IAmb IAmb 02 44 27.6
comp=Z,78nm,0.9s
M22K Willow 23.84 55 P **P** **02 44 23.3 -0.2**
baz=274
USRK Ussuriysk Ar. 24.00 257 P **P** **02 44 25.2 +0.1**
comp=Z,3.8nm,0.5s,baz=46,slow=10.0,SNR=12
USRK LR LR 02 53 17.1
comp=Z,2µm,19.7s,baz=222,slow=35
comp=Z,3.8nm,0.5s
USRK Ussuriysk Ar. 24.00 257 P **P** **02 44 23.2 -1.9**
USRK Ussuriysk Ar. 24.00 257 P **P** **02 44 23.2 -1.9**
G23K Bananza Creek 24.04 43 P **P** **02 44 25.3 -0.1**
baz=283,SNR=15
RC01 Rabbit Creek A 24.08 57 P **P** **02 44 25.9 +0.1**
baz=276
H23K Yukon River 24.14 45 IAmb IAmb 02 44 29.3
comp=Z,97nm,1.1s
H23K Yukon River 24.14 45 P **P** **02 44 26.6 +0.3**
baz=266,SNR=54
O22K Cooper Landing 24.15 59 P **P** **02 44 26.5 0.0**
baz=277
I23K Minto, Yukon-K 24.16 47 P **P** **02 44 26.6 +0.1**
I23K IAmb IAmb 02 44 29.4
comp=Z,142nm,1.4s
I23K Minto, Yukon-K 24.16 47 P **P** **02 44 26.9 +0.4**
baz=267,SNR=53
D23K Nanushuk River 24.19 38 P **P** **02 44 27.0 +0.2**
baz=257,SNR=9.4
NEA2 Nenana 24.27 48 P **P** **02 44 27.6 +0.2**
baz=269,SNR=30
MCK McKinley 24.31 51 IAmb IAmb 02 44 29.8
comp=Z,54nm,1.0s
MCK McKinley 24.31 51 P **P** **02 44 28.2 +0.2**
baz=271,SNR=21
PMR Palmer 24.32 56 P **P** **02 44 27.7 -0.3**
baz=275
SEW Seward 24.34 59 IAmb IAmb 02 44 31.0
comp=Z,69nm,1.0s
SEW Seward 24.34 59 P **P** **02 44 27.6 -0.5**
baz=278,SNR=6.6
RND Reindeer 24.36 51 IAmb IAmb 02 44 29.3
comp=Z,46nm,0.8s
C23K Itkillik River 24.42 36 P **P** **02 44 28.2 -0.6**
baz=256,SNR=5.6
WAT1 Susitna Watana 24.51 53 P **P** **02 44 29.2 -0.6**
baz=273
TOLK Toolik Lake Re 24.52 39 P **P** **02 44 28.7 -1.1**
TOLK Toolik Lake Re 24.52 39 P **P** **02 44 29.0 -0.8**
baz=259,SNR=26
MDM Murphy Dome 24.64 48 IAmb IAmb 02 44 35.7
comp=Z,46nm,0.9s
KNK Knik Glacier 24.66 56 P **P** **02 44 31.0 -0.1**
baz=276,SNR=15
SML Sawmill 24.68 55 P **P** **02 44 31.1 -0.4**
SML Sawmill 24.68 55 P **P** **02 44 31.0 -0.4**
baz=276,SNR=20
PWL Port Wells 24.79 57 P **P** **02 44 31.7 -0.5**
baz=278,SNR=17
TCOL CIGO, UAF Yank 24.79 48 IAmb IAmb 02 44 35.2
comp=Z,68nm,1.1s
TCOL CIGO, UAF Yank 24.79 48 P **P** **02 44 31.8 -0.4**
baz=269,SNR=13
COLA College 24.79 48 P **P** **02 44 31.1 -1.1**
COLA IAmb IAmb 02 44 35.2
comp=Z,74nm,1.1s
COLA College 24.79 48*c i*P **P** **02 44 32.3 +0.1**
COLA pmax pmax
comp=Z,73nm,1.2s
COLA College 24.79 48 P **P** **02 44 31.7 -0.5**
baz=269
E24K Your Creek 24.82 40 P **P** **02 44 31.8 -0.7**
baz=262
H24K Noodor Dome 24.82 46 IAmb IAmb 02 44 36.1
comp=Z,78nm,1.4s
H24K Noodor Dome 24.82 46 P **P** **02 44 32.0 -0.6**
baz=267,SNR=34
D24K Happy Valley 24.88 38 P **P** **02 44 32.6 -0.4**
baz=259
WAT6 Susitna Watana 24.90 53 P **P** **02 44 32.9 -0.5**
baz=274,SNR=9.1
F24K Squaw Lake 24.97 42 P **P** **02 44 33.5 -0.3**
baz=264,SNR=31
M23K Glacier View 24.97 55 P **P** **02 44 34.0 +0.1**
baz=276,SNR=21
POKR Poker Plat Res 24.98 47 IAmb IAmb 02 44 36.8
comp=Z,74nm,1.2s
POKR Poker Plat Res 24.98 47 P **P** **02 44 34.3 +0.3**
baz=269,SNR=13
DHY Denali Highway 25.04 52 P **P** **02 44 33.6 -1.0**
DHY IAmb IAmb 02 44 36.4
comp=Z,42nm,0.9s
DHY Denali Highway 25.04 52 P **P** **02 44 34.0 -0.6**
baz=274,SNR=30
C24K Franklin Bluff 25.04 36 P **P** **02 44 33.9 -0.5**
baz=258
G24K Hadweenzic Riv 25.04 43 P **P** **02 44 34.6 +0.1**
baz=266,SNR=75
SCM Sheep Creek Mo 25.16 55 P **P** **02 44 35.3 -0.3**
baz=276,SNR=46
HDA Harding Lake 25.18 49 IAmb IAmb 02 44 38.1
comp=Z,44nm,1.0s
HDA Harding Lake 25.18 49 P **P** **02 44 35.2 -0.5**
baz=271,SNR=37
IL31 25.21 48 P **P** **02 44 35.1 -0.9**
IL31 IAmb IAmb 02 44 53.4
comp=Z,60nm,0.9s
ILAR Eielson Array 25.21 48 P **P** **02 44 35.7 -0.2**
comp=Z,31nm,0.8s,baz=258,slow=8.0,SNR=142
ILAR LR LR 02 55 28.9
comp=Z,750nm,18.9s,baz=262,slow=39
comp=Z,31nm,0.8s
P23K Montague Islan 25.37 59 P **P** **02 44 37.1 -0.4**
baz=280
GLI Glacier Island 25.38 57 P **P** **02 44 37.3 -0.3**
GLI IAmb IAmb 02 44 40.0
comp=Z,64nm,0.9s
GLI Glacier Island 25.38 57 P **P** **02 44 36.8 -0.8**
baz=278
M24K Tolsona, Glenn 25.67 54 P **P** **02 44 40.0 -0.3**
M24K Tolsona, Glenn 25.67 54 P **P** **02 44 41.3 +1.0**
baz=277,SNR=20
H25K Birch Creek 25.68 45 P **P** **02 44 40.4 +0.2**
baz=268
BNX BinXian 25.68 265⇓P **P** **02 44 40.4 -0.1**
BNX pP **sP** **02 44 51.3 +1.1**
BNX sP **pwP** **02 44 57.1 +1.2**
BNX S **S** **02 49 10.9 +4.0**
BNX pmax pmax
comp=Z,34nm,0.8s
BNX pmax pmax
comp=Z,270nm,8.0s
BNX LR LR
comp=Z,400nm,12.5s
BNX LR LR
comp=Z,850nm,12.0s
BNX LR LR
comp=Z,940nm,11.9s
FID Port Fidalgo 25.70 57 IAmb IAmb 02 44 44.5
comp=Z,62nm,0.9s
K24K Donnelly Dome 25.71 50 P **P** **02 44 40.0 -0.7**
baz=273
HIN Hinchinbrook I 25.75 58 IAmb IAmb 02 44 41.5
comp=Z,49nm,1.0s
D25K Kavik River 25.77 38 P **P** **02 44 40.6 -0.6**
baz=261
PRP Porcupine Dome 25.78 46 IAmb IAmb 02 44 42.7
comp=Z,66nm,1.0s
PRP Porcupine Dome 25.78 46 P **P** **02 44 41.2 -0.2**
baz=270,SNR=50
F25K Christian Rive 25.83 42 P **P** **02 44 42.1 +0.5**
baz=266,SNR=23
J25K Salcha River, 25.86 48 P **P** **02 44 40.6 -1.4**
baz=272,SNR=19
KLU Klutina 25.86 56 P **P** **02 44 41.2 -0.9**
KLU IAmb IAmb 02 44 54.7
comp=Z,59nm,0.9s
KLU Klutina 25.86 56 P **P** **02 44 41.7 -0.3**
baz=278,SNR=22
E25K Arctic Village 25.91 40 P **P** **02 44 42.4 +0.1**
baz=265,SNR=15
PAX Paxson 25.91 52 P **P** **02 44 42.1 -0.5**
baz=275,SNR=16
Q23K Middleton Isla 26.00 60 P **P** **02 44 43.2 0.0**
baz=282
EYAK Cordova Ski Ar 26.09 58 P **P** **02 44 43.4 -0.6**
baz=280,SNR=5.1
HARP HAARP 26.11 53 P **P** **02 44 43.8 -0.5**
baz=277,SNR=6.4
RIDG Independent Ri 26.13 50 IAmb IAmb 02 44 45.2
comp=Z,67nm,1.3s
RIDG Independent Ri 26.13 50 P **P** **02 44 43.8 -0.6**
baz=274,SNR=19
MAJO Matsushiro 26.23 237 P **P** **02 44 45.2 -0.3**
MAJO Matsushiro 26.23 237⇑*e*P **P** **02 44 46.8 +1.3**
MAJO pmax pmax
comp=Z,62nm,2.0s
MJAR Matsushiro Arr 26.23 237 P **P** **02 44 46.4 +0.9**
comp=Z,3.2nm,0.6s,baz=51,slow=9.9,SNR=6.6
MJAR LR LR 02 55 42.3
comp=Z,520nm,19.3s,baz=128,slow=38
comp=Z,3.2nm,0.6s
BMAR Burnt Mountain 26.23 42 P **P** **02 44 45.8 +0.5**
C26K Camden Bay 26.37 36 P **P** **02 44 45.2 -1.2**
baz=262
F26K Sheenjek River 26.41 41 P **P** **02 44 46.8 -0.1**
baz=267,SNR=10
N25K Chitina, Valde 26.48 55 P **P** **02 44 47.7 +0.1**
N25K Chitina, Valde 26.48 55 P **P** **02 44 47.1 -0.5**
baz=279
SCRK Sand Creek 26.50 50 P **P** **02 44 46.5 -1.3**
SCRK Sand Creek 26.50 50 P **P** **02 44 46.1 -1.7**
baz=274,SNR=30
G26K Porcupine Rive 26.52 43 P **P** **02 44 48.0 +0.2**
baz=269,SNR=43
BMRM Bremner River 26.57 57 IAmb IAmb 02 44 50.1
comp=Z,50nm,1.0s
BMRM Bremner River 26.57 57 P **P** **02 44 48.2 -0.3**
baz=280,SNR=12
RAGM Ragged Mountai 26.64 58 IAmb IAmb 02 45 05.0
comp=Z,127nm,1.5s
J26L Joseph Creek 26.64 49 P **P** **02 44 47.7 -1.4**
baz=274
MENT Mentasta 26.71 52 P **P** **02 44 49.5 -0.2**
C27K Jago River 26.75 37 P **P** **02 44 48.8 -1.0**
baz=263,SNR=11
I26K Coal Creek Min 26.78 47 P **P** **02 44 49.8 -0.4**
baz=273
HMT Hamilton 26.85 58 IAmb IAmb 02 44 52.3
comp=Z,45nm,0.9s
KAIM Kayak Island 26.86 59 P **P** **02 44 51.6 +0.7**
KAIM Kayak Island 26.86 59 P **P** **02 44 50.8 -0.2**
baz=282,SNR=5.2
M26K Nabesna, AK 27.11 53 P **P** **02 44 53.2 -0.1**
baz=278
BERG Berg Lake 27.11 58 IAmb IAmb 02 45 07.6
comp=Z,65nm,1.2s
SUCK Suckling Hills 27.14 58 IAmb IAmb 02 45 00.3
comp=Z,56nm,1.2s
MCARA McCarthy VSAT 27.26 55 P **P** **02 44 54.2 -0.3**
baz=280
K27K Chicken 27.33 50 P **P** **02 44 54.6 -0.6**
baz=276
G27K Doyon Strip 27.36 43 P **P** **02 44 54.8 -0.6**
baz=271,SNR=22
E27K Coleen River 27.39 40 P **P** **02 44 55.1 -0.7**
baz=268,SNR=7.2
I27K Kandik River 27.41 46 P **P** **02 44 55.6 -0.3**
baz=273
H27K Steamboat Moun 27.42 45 P **P** **02 44 55.6 -0.4**
baz=272
WAX Waxell Ridge 27.52 57 IAmb IAmb 02 45 10.2
comp=Z,48nm,1.1s
L27K Beaver Creek, 27.55 52 P **P** **02 44 57.5 +0.3**
L27K IAmb IAmb 02 44 59.1
comp=Z,56nm,1.0s
L27K Beaver Creek, 27.55 52 P **P** **02 44 57.2 0.0**
baz=278,SNR=20
BCAR Beaver Creek A 27.57 52 P **P** **02 44 57.8 +0.4**
M27K Edge Creek, AK 27.63 53 P **P** **02 44 57.7 -0.3**
baz=279
EGAK Eagle 27.66 48 P **P** **02 44 57.2 -0.8**
baz=275,SNR=31
ISLE Juniper Island 27.73 57 IAmb IAmb 02 45 18.1
comp=Z,51nm,1.2s
CN2 Changchun 27.95 263*e*P **P** **02 45 00.6 -0.3**
CN2 S **S** **02 49 38.3 -4.4**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,800nm,15.0s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,500nm,16.0s
MESA MESA 28.01 58 IAmb IAmb 02 45 03.3
comp=Z,38nm,1.0s
MESA MESA 28.01 58 P **P** **02 45 01.3 -0.2**
baz=283,SNR=6.4
BOD Bodaibo 28.04 297*e*P **P** **02 45 00.3 -1.2**
BOD pmax pmax
comp=Z,34nm,1.8s
YAH Yahtse 28.07 57 P **P** **02 45 02.3 +0.2**
YAH IAmb IAmb 02 45 03.9
comp=Z,46nm,1.0s
BVCY Beaver Creek 28.09 53 P **P** **02 45 01.2 -0.8**
baz=280
CTG Chitna Glacier 28.14 56 P **P** **02 45 02.0 -0.6**
baz=282,SNR=5.3
YUK3 Moose Creek 28.39 54 P **P** **02 45 04.6 -0.3**
baz=281
DAWY Dawson 28.50 49 P **P** **02 45 05.2 -0.5**
baz=278,SNR=7.1
O28M Mount Upton 28.73 56 P **P** **02 45 07.6 -0.4**
baz=283,SNR=17
I29M Ogilvie Camp, 28.80 46 IAmb IAmb 02 45 10.1
comp=Z,64nm,1.6s
I29M Ogilvie Camp, 28.80 46 P **P** **02 45 07.7 -0.6**
baz=276,SNR=14
PCA Pinnacle 28.86 57 P **P** **02 45 08.4 -0.5**
PCA IAmb IAmb 02 45 12.8
comp=Z,77nm,1.2s
PINM Pinnacle 28.86 57 P **P** **02 45 09.0 +0.1**
baz=285,SNR=14
M29M Somme Creek 29.18 52 P **P** **02 45 11.1 -0.7**
baz=282
BCPM Bancas Point 29.20 58 IAmb IAmb 02 45 13.2
comp=Z,49nm,1.0s
YUK4 Talbot Arm 29.33 55 P **P** **02 45 12.8 -0.4**
baz=283,SNR=11
EPYK Eagle Plains 29.35 44 IAmb IAmb 02 45 14.9
comp=Z,64nm,1.1s
EPYK Eagle Plains 29.35 44 P **P** **02 45 12.6 -0.5**
baz=276,SNR=22
K29M Barlow Dome 29.35 49 P **P** **02 45 12.6 -0.7**
baz=280
PNL Peninsula 29.39 58 P **P** **02 45 12.9 -0.7**
baz=286,SNR=5.3
YUK6 Outpost Mounta 29.56 55 P **P** **02 45 14.8 -0.5**
baz=284,SNR=8.4
O29M Mount Kennedy 29.62 57 P **P** **02 45 15.6 -0.1**
baz=285,SNR=6.4
M30M Minto, Yukon 29.91 52 P **P** **02 45 19.4 +1.2**
baz=283,SNR=13
HYT Haines Junctio 29.99 55 P **P** **02 45 19.1 0.0**
HYT IAmb IAmb 02 45 21.5
comp=Z,37nm,1.0s
HYT Haines Junctio 29.99 55 P **P** **02 45 18.9 -0.1**
baz=285,SNR=24
N30M Aishikik Lake 30.03 54 P **P** **02 45 18.8 -0.5**
baz=284

SEHB	SEOHWA	30.07	252		P		P	02 45 20.7	+0.9
P29M	Windy Craggy	30.21	58		IAmb		IAmb	02 45 23.4	
	comp=Z,67nm,1.7s								
P29M	Windy Craggy	30.21	58		P		P	02 45 21.1	+0.3
	baz=287,SNR=7.0								
SNY	Shenyang	30.27	262	⇑	P		P	02 45 22.1	+0.7
SNY					pmax		pmax		
	comp=Z,18nm,0.5s								
SNY					pmax		pmax		
	comp=Z,430nm,3.7s								
SNY					LR		LR		
	comp=Z,2μm,17.2s								
SNY					LR		LR		
	comp=Z,1μm,16.7s								
SNY					LR		LR		
	comp=Z,1μm,18.2s								
INK	Inuvik	30.40	40		P		P	02 45 22.5	+0.2
	comp=Z,12nm,0.5s,baz=260,slow=5.7,SNR=57								
INK					LR		LR	02 58 03.3	
	comp=Z,233nm,20.9s,baz=236,slow=37								
	comp=Z,12nm,0.5s								
INK	Inuvik	30.40	40		IAmb		IAmb	02 45 24.0	
	comp=Z,34nm,1.1s								
INK	Inuvik	30.40	40		P		P	02 45 22.2	-0.1
	baz=275,SNR=12								
CIT	Chita	30.42	286		*e*P		P	02 45 23.8	+1.0
CIT					*e*			02 45 35.6	
CIT					*e*			02 46 39.6	
CIT					pmax		pmax		
	comp=Z,106nm,2.4s								
P30M	Million Dollar	30.44	57		P		P	02 45 23.2	+0.2
	baz=287								
N31M	Braeburn, Yuko	30.63	54		P		P	02 45 24.4	-0.2
	baz=285								
O30N	Mendenhall	30.68	55		P		P	02 45 25.1	+0.1
	baz=286,SNR=10								
KSRS	Korea Array	30.84	251		P		P	02 45 28.6	+2.0
	comp=Z,5.4nm,0.7s,baz=42,slow=9.4,SNR=18								
KSRS					LR		LR	02 57 25.0	
	comp=Z,563nm,19.0s,baz=45,slow=36								
	comp=Z,5.4nm,0.7s								
KSAR	Wonju Array Be	30.87	251		P		P	02 45 27.1	+0.2
KSAR	Wonju Array Be	30.87	251		P		P	02 45 27.1	+0.2
PLBC	Pleasant Camp	30.93	58		P		P	02 45 27.6	+0.5
	baz=288								
M31M	Drury Creek, Y	31.09	52		IAmb		IAmb	02 45 31.0	
	comp=Z,29nm,0.9s								
M31M	Drury Creek, Y	31.09	52		P		P	02 45 28.8	+0.2
	baz=285,SNR=22								
WHY	Whitehorse	31.28	55		P		P	02 45 30.9	+0.6
WHY					IAmb		IAmb	02 45 32.8	
	comp=Z,31nm,1.1s								
WHY	Whitehorse	31.28	55		P		P	02 45 30.7	+0.3
	baz=287,SNR=10								
SKAG	Skagway	31.43	57		P		P	02 45 31.1	-0.4
SKAG	Skagway	31.43	57		P		P	02 45 32.3	+0.8
	baz=289								
FARO	Faro, Yukon	31.55	52		P		P	02 45 32.7	+0.1
	baz=286,SNR=11								
TJN	Taejon	31.94	250	⇑	*e*P		P	02 45 35.5	-0.7
BESE	Bessie Mountai	31.95	59		IAmb		IAmb	02 45 38.4	
	comp=Z,32nm,1.1s								
P32M	Atlin	32.16	57		P		P	02 45 38.4	+0.3
	baz=289,SNR=7.0								
SIT	Sitka	32.26	62		P		P	02 45 38.9	+0.1
	baz=292								
MMPY	Sheldon Lake,	32.38	50		P		P	02 45 39.0	-0.9
	baz=286,SNR=24								
P33M	Teslin, Yukon	32.39	55		IAmb		IAmb	02 45 43.1	
	comp=Z,36nm,1.2s								
P33M	Teslin, Yukon	32.39	55		P		P	02 45 39.8	-0.3
	baz=289,SNR=24								
JCJ	Chichijima	32.63	221		LR		LR	02 56 05.3	
	comp=Z,116nm,21.5s,baz=200,slow=31								
A36M	Sachs Harbour	32.84	32		P		P	02 45 43.3	-0.4
	baz=277								
XLT	XiLinHaoTe	33.28	271		*e*P		P	02 45 45.3	-2.7
XLT					pP		pP	02 45 55.3	+0.2
XLT					sP		sP	02 45 58.5	+0.4
XLT					sS		sS	02 51 17.3	-1.0
XLT					pmax		pmax		
	comp=Z,10.0nm,1.0s								
XLT					pmax		pmax		
	comp=Z,210nm,4.4s								
XLT					LR		LR		
	comp=Z,86nm,14.9s								
XLT					LR		LR		
	comp=Z,700nm,13.9s								
XLT					LR		LR		
	comp=Z,1μm,12.6s								
R33M	Jennings River	33.55	56		P		P	02 45 50.7	+0.4
	baz=291,SNR=22								
C36M	Paulatuk	33.64	37		P		P	02 45 50.0	-0.8
C36M	Paulatuk	33.64	37		P		P	02 45 50.4	-0.3
	baz=282,SNR=6.3								
WRAK	Wrangell Islan	34.02	61		P		P	02 45 55.3	+1.1
	baz=295								
CRAG	Craig	34.02	63		P		P	02 45 55.1	+0.9
	baz=296								
TGTN	Hyland Airport	34.06	52		P		P	02 45 54.9	+0.4
	baz=290,SNR=6.2								
DLBC	Dease Lake	34.36	57		LR		LR	03 00 22.9	
	comp=Z,264nm,18.0s,baz=300,slow=37								
DLBC	Dease Lake	34.36	57		P		P	02 45 58.9	+1.7
DLBC					IAmb		IAmb	02 46 00.5	
	comp=Z,27nm,0.9s								
DLBC	Dease Lake	34.36	57		P		P	02 45 57.7	+0.5
	baz=293,SNR=20								
T35M	Bob Quinn	34.84	60		P		P	02 46 02.5	+1.2
	baz=295,SNR=9.5								
V35K	Ketchikan	34.86	63		P		P	02 46 01.9	+0.5
	baz=296								
H11N2	WAKE ISLAND Hy	35.23	178		T		T	03 23 38.5	
	baz=360,slow=76,SNR=1291								
H11N3	WAKE ISLAND Hy	35.24	178		T		T	03 23 37.1	
	baz=360,slow=76,SNR=1004								
H11N1	WAKE ISLAND Hy	35.25	178		T		T	03 23 38.0	
	baz=360,slow=76,SNR=1000								
IRK	Irkutsk	35.38	291		*e*P		P	02 46 05.8	-0.2
IRK					pmax		pmax		
	comp=Z,87nm,2.4s								
WRGLY	Wrigley	35.58	47		P		P	02 46 07.9	+0.3
	baz=291,SNR=10.0								
BJI	Beijing	35.67	266		P		P	02 46 06.3	-2.3
BJI					S		S	02 51 43.6	+0.6
BJI					pmax		pmax		
	comp=Z,200nm,7.5s								
BJI					LR		LR		
	comp=Z,220nm,16.5s								
BJI					LR		LR		
	comp=Z,550nm,15.6s								
BJI					LR		LR		
	comp=Z,880nm,13.9s								
ULN	Ulaanbaatar	36.14	283		P		P	02 46 13.5	+0.7
ULN	Ulaanbaatar	36.14	283	*c*	*i*P		P	02 46 13.6	+0.9
ULN					pmax		pmax		
	comp=Z,53nm,1.9s								
NRIK	Noril'sk	36.19	324		P		P	02 46 12.8	0.0
	comp=Z,5.5nm,0.7s,baz=78,slow=9.5,SNR=9.2								
NRIK					LR		LR	03 01 49.7	
	comp=Z,701nm,18.8s,baz=73,slow=38								
	comp=Z,5.5nm,0.7s								
NRIK	Noril'sk	36.19	324		P		P	02 46 11.9	-0.9
NRIK	Noril'sk	36.19	324	*c*	*i*P		P	02 46 12.3	-0.4
NRIK					pmax		pmax		
	comp=Z,40nm,1.9s								
H11S1	WAKE ISLAND Hy	36.44	178		T		T	03 25 09.9	
	baz=359,slow=76,SNR=124								
H11S3	WAKE ISLAND Hy	36.46	178		T		T	03 25 11.2	
	baz=359,slow=76,SNR=47								
H11S2	WAKE ISLAND Hy	36.46	178		T		T	03 25 11.3	
	baz=359,slow=76,SNR=321								
SONM	Songino Array	36.52	284		P		P	02 46 17.4	+1.4
	comp=Z,24nm,0.7s,baz=58,slow=8.2,SNR=138								
SONM					PcP		PcP	02 48 39.5	+0.5
	comp=Z,1.8nm,0.6s,baz=83,slow=1.3,SNR=4.1								
SONM					LR		LR	03 02 49.1	
	comp=Z,774nm,18.5s,baz=53,slow=39								
	comp=Z,24nm,0.7s								
SONM	Songino Array	36.52	284		P		P	02 46 16.6	+0.6
SONM					IAmb		IAmb	02 46 19.0	
	comp=Z,25nm,0.8s								
SONM	Songino Array	36.52	284		P		P	02 46 16.6	+0.6
SONM					pmax		pmax		
	comp=Z,25nm,0.8s								
ZAK	Zakamensk	36.86	289		*e*P		P	02 46 19.5	+0.7
ZAK					pmax		pmax		
	comp=Z,15nm,1.8s								
MOY	Mondy	37.42	292		*e*P		P	02 46 24.8	+1.3
MOY					pmax		pmax		
	comp=Z,74nm,1.9s								
BBB	Bella Bella	38.20	66		LR		LR	03 00 20.3	
	comp=Z,396nm,21.4s,baz=308,slow=33								
HNS	HongShan	38.31	264	⇑	P		P	02 46 32.0	+1.0
HNS					S		S	02 52 24.5	+1.4
HNS					pmax		pmax		
	comp=Z,24nm,1.7s								
HNS					LR		LR		
	comp=Z,290nm,16.2s								
HNS					LR		LR		
	comp=Z,1μm,17.2s								
HNS					LR		LR		
	comp=Z,840nm,19.6s								
BTO	Baotou	38.85	272		*e*P		P	02 46 36.8	+1.1
BTO					S		S	02 52 33.5	+2.1
BTO					LR		LR		
	comp=Z,3μm,14.6s								
BTO					LR		LR		
	comp=Z,3μm,14.6s								
JOW	Kunigami	39.00	239		P		P	02 46 38.0	+1.1
JOW					IAmb		IAmb	02 46 44.5	
	comp=Z,51nm,1.3s								
YKA	Yellowknife Ar	39.59	46		P		P	02 46 41.8	+0.3
	comp=Z,18nm,0.9s,baz=298,slow=7.8,SNR=49								
YKA					LR		LR	03 04 28.1	
	comp=Z,470nm,18.6s,baz=292,slow=38								
	comp=Z,18nm,0.9s								
YKA	Yellowknife Ar	39.59	46	*i*	P		P	02 46 42.0	+0.5
YKA					pmax		pmax		
	comp=Z,18nm,0.9s								
KNGR	Kungurtug, Tuv	39.84	293	⇓	*i*P		P	02 46 45.1	+1.3
KNGR					pmax		pmax		
	comp=Z,14nm,0.8s								
NJ2	Nanjing	39.84	254		*e*P		P	02 46 43.3	-0.6
NJ2					S		S	02 52 47.3	+1.1
NJ2					pmax		pmax		
	comp=Z,15nm,0.8s								
NJ2					LR		LR		
	comp=Z,620nm,14.2s								
NJ2					LR		LR		
	comp=Z,440nm,18.0s								
NJ2					LR		LR		
	comp=Z,1μm,18.9s								
LYN	LuoYang	41.60	263	⇑	*i*P		P	02 46 58.0	-0.4
LYN					sP		pwP	02 47 14.3	+0.3
LYN					S		S	02 53 13.8	+1.3
LYN					sS		sS	02 53 29.8	+4.9
LYN					SS		SS	02 56 11.3	-6.5
LYN					pmax		pmax		
	comp=Z,40nm,1.8s								
LYN					pmax		pmax		
	comp=Z,260nm,6.5s								
LYN					LR		LR		
	comp=Z,800nm,19.2s								
LYN					LR		LR		
	comp=Z,610nm,20.6s								
LYN					LR		LR		
	comp=Z,400nm,18.1s								
CLRS	Cowichan Lake	42.18	68		IAmb		IAmb	02 47 05.9	
	comp=Z,37nm,1.0s								
NLWA	Neilton Lookou	43.18	70		P		P	02 47 12.4	+1.2
NLWA					IAmb		IAmb	02 47 14.3	
	comp=Z,36nm,1.1s								
WISH	Wishkah	43.40	70		IAmb		IAmb	02 47 19.1	
	comp=Z,70nm,1.1s								
WHN	Wuhan	43.49	257	⇓	P		P	02 47 14.8	+1.0
E03A	Lebam	43.86	70		IAmb		IAmb	02 47 19.0	
	comp=Z,50nm,1.1s								
XAN	Xi'an	44.00	266	⇑	P		P	02 47 18.3	+0.3
XAN					pmax		pmax		
	comp=Z,16nm,1.0s								
XAN					LR		LR		
	comp=Z,1μm,17.8s								
XAN					LR		LR		
	comp=Z,1μm,18.1s								
XAN					LR		LR		
	comp=Z,1μm,16.2s								
D05A	Enumclaw	44.32	69		IAmb		IAmb	02 47 22.8	
	comp=Z,45nm,1.1s								
ZAA0	Zalesovo Array	44.38	303		P		P	02 47 19.2	-1.4
ZALV	Zalesovo Beam	44.38	303		P		P	02 47 20.5	-0.1
	comp=Z,1.5nm,0.6s,baz=52,slow=8.1,SNR=7.8								
ZALV					PcP		PP	02 49 04.1	0.0
	comp=Z,1.1nm,0.5s,baz=52,slow=2.8,SNR=4.0								
ZALV					LR		LR	03 07 58.5	
	comp=Z,474nm,19.8s,baz=45,slow=39								
	comp=Z,1.5nm,0.6s								
ZALV	Zalesovo Beam	44.38	303		P		P	02 47 18.7	-1.9
ZALV	Zalesovo Beam	44.38	303	*i*	P		P	02 47 20.0	-0.6
ZALV					pmax		pmax		
	comp=Z,2.0nm,0.6s								
F04D	Rainier, OR	44.45	71		P		P	02 47 20.3	-1.0
	baz=309								
G03D	McMinnville, O	44.86	72		P		P	02 47 24.8	+0.2
	baz=310								
F04A	Amboy	44.87	70		P		P	02 47 24.9	+0.3
F04A					IAmb		IAmb	02 47 26.5	
	comp=Z,31nm,1.1s								
B08A	Colville Reser	45.01	66		IAmb		IAmb	02 47 28.1	
	comp=Z,31nm,1.0s								
EDM	Edmonton	45.08	57		P		P	02 47 26.2	-0.1
EDM	Edmonton	45.08	57		P		P	02 47 26.2	-0.1
EDM					pmax		pmax		
	comp=Z,113nm,1.1s								
I02E	Swisshome, OR	45.25	73		P		P	02 47 27.7	0.0
	baz=310								
LZH	Lanzhou	45.47	272	⇑	P		P	02 47 31.3	+1.5
LZH					sP		pwP	02 47 47.8	+3.0
LZH					S		S	02 54 13.3	+3.9
LZH					pmax		pmax		
	comp=Z,38nm,1.5s								
LZH					pmax		pmax		
	comp=Z,180nm,5.2s								
LZH					LR		LR		
	comp=Z,860nm,15.1s								
LZH					LR		LR		
	comp=Z,750nm,14.7s								
LZH					LR		LR		
	comp=Z,1μm,15.1s								
GTA	Gaotai	45.49	278	⇑	P		P	02 47 30.4	+0.5
GTA					pP		sP	02 47 40.8	+0.7
GTA					sP		pwP	02 47 44.9	-0.1
GTA					pmax		pmax		
	comp=Z,35nm,1.3s								
GTA					pmax		pmax		
	comp=Z,270nm,4.7s								
GTA					LR		LR		
	comp=Z,730nm,18.5s								
GTA					LR		LR		
	comp=Z,760nm,18.5s								
GTA					LR		LR		
	comp=Z,880nm,18.2s								
QZH	Quanzhou	45.54	248		*e*P		P	02 47 33.8	+3.6
QZH					S		S	02 54 18.5	+8.4
QZH					LR		LR		
	comp=Z,270nm,14.2s								
H04D	Lebanon	45.59	72		P		P	02 47 30.3	0.0
	baz=310								
HOOD	Mount Hood Mea	45.67	71		IAmb		IAmb	02 47 33.2	
	comp=Z,49nm,1.1s								
SPITS	Spitsbergen Ar	45.74	351		LR		LR	03 06 12.1	
	comp=Z,174nm,18.2s,baz=350,slow=36								
SPB2	Spitsbergen Ar	45.74	351		P		P	02 47 30.1	-1.1
I03D	Drain, OR	45.79	73		P		P	02 47 31.3	-0.7
	baz=311								
H04A	Detroit Lake	45.79	72		IAmb		IAmb	02 47 33.9	
	comp=Z,35nm,1.3s								
TPUB	Ta-pu	45.80	245		P		P	02 47 32.8	+0.6
J01E	Myrtle Point	45.81	74		P		P	02 47 31.9	-0.3
	baz=311								
G05D	Wamic, OR	45.90	70		P		P	02 47 32.7	-0.2
	baz=310								
C09A	Chrisman Ranch	45.91	66		IAmb		IAmb	02 47 34.5	
	comp=Z,31nm,1.1s								
CNSH	ChangSha	46.09	256	⇑	P		P	02 47 34.9	+0.4
CNSH					S		S	02 54 15.9	-2.2
CNSH					pmax		pmax		
	comp=Z,190nm,6.8s								
CNSH					LR		LR		
	comp=Z,350nm,15.0s								
CNSH					LR		LR		
	comp=Z,460nm,12.4s								
CNSH					LR		LR		
	comp=Z,580nm,14.0s								
HAWA	Hanford	46.13	68		P		P	02 47 34.6	0.0
HAWA					IAmb		IAmb	02 47 36.4	
	comp=Z,24nm,1.1s								
NEW	Newport	46.22	65		LR		LR	03 05 01.8	
	comp=Z,512nm,20.5s,baz=303,slow=34								
NEW	Newport	46.22	65		IAmb		IAmb	02 47 36.9	
	comp=Z,25nm,1.1s								
NEW	Newport	46.22	65		P		P	02 47 35.2	-0.2
	baz=309,SNR=13								
F07A	Phinny Hill Vi	46.24	69		IAmb		IAmb	02 47 37.5	
	comp=Z,48nm,1.3s								
I04A	Tendick Farm,	46.24	73		P		P	02 47 36.1	+0.5
	baz=311								
K02D	Willamette Mer	46.27	75		P		P	02 47 35.8	-0.1
	baz=311								
I05D	Terrebonne, OR	46.47	71		P		P	02 47 38.5	+1.1
	baz=311,SNR=5.5								
L02F	Cave Junction	46.70	75		P		P	02 47 39.4	+0.3
	baz=312								
HUMO	Hull Mountain	46.72	74		P		P	02 47 40.0	+0.7
HUMO					IAmb		IAmb	02 47 56.0	
	comp=Z,34nm,1.8s								
J04D	Umpqua Nationa	46.77	73		P		P	02 47 40.3	+0.4
	baz=311,SNR=6.8								
HSPB	Hornsund (broa	46.90	351		*e*P		P	02 47 38.6	-1.6
PINE	Pine Mountain	47.05	72		P		P	02 47 42.0	-0.1
PINE					IAmb		IAmb	02 47 44.4	
	comp=Z,25nm,1.1s								
G08A	Pilot Rock	47.15	69		P		P	02 47 42.9	+0.1
J05D	Fort Rock, OR	47.22	72		P		P	02 47 43.0	-0.4
	baz=312,SNR=24								
L04D	Klamath Falls	47.34	74		P		P	02 47 43.3	-1.0
	baz=312,SNR=13								
K04D	Chiloquin, OR	47.37	73		P		P	02 47 45.1	+0.5
	baz=312								
YBH	Yreka Blue Hor	47.44	75		LR		LR	03 05 32.1	
	comp=Z,246nm,20.2s,baz=314,slow=33								
KMPM	Mount Pierce	47.53	77		IAmb		IAmb	02 48 02.6	
	comp=Z,25nm,1.1s								
K05A	Summer Lake	47.78	73		IAmb		IAmb	02 47 50.3	
	comp=Z,34nm,1.2s								
JTMT	Jette	48.02	63		P		P	02 47 49.5	0.0
KCPM	Cahto Peak	48.33	78		IAmb		IAmb	02 47 54.4	
	comp=Z,40nm,1.6s								
ZSN	Zaisan	48.37	296	*c*	*i*P		P	02 47 52.1	0.0
ZSN					pmax		pmax		
	comp=Z,15nm,1.4s								
ZSN	Zaisan	48.37	296	⇑	*i*P		P	02 47 52.1	0.0
	comp=Z,15nm,1.4s,baz=296								
MOD	Modoc Plateau	48.65	73		IAmb		IAmb	02 47 56.6	
	comp=Z,38nm,1.2s								
SEM	Semipalatinsk	48.77	302		*e*P		P	02 47 54.2	-1.2
SEM					pmax		pmax		
	comp=Z,41nm,1.9s								
SEM	Semipalatinsk	48.77	302		*e*P		P	02 47 54.3	-1.2
	comp=Z,41nm,1.9s,baz=302								
MSO	Missoula	48.79	64		IAmb		IAmb	02 47 57.6	
	comp=Z,30nm,1.2s								
MSO	Missoula	48.79	64		P		P	02 47 55.4	-0.1
	baz=311,SNR=11								
PLID	Pearl Lake	48.86	67		IAmb		IAmb	02 47 58.4	
	comp=Z,25nm,1.3s								
HOPS	Hopland Field	49.09	78		IAmb		IAmb	02 47 59.9	
	comp=Z,27nm,1.3s								
CD2	Chengdu	49.26	267		P		P	02 48 00.4	+1.3
CD2					S		S	02 55 03.3	+0.2
CD2					pmax		pmax		
	comp=Z,40nm,0.6s								
CD2					LR		LR		
	comp=Z,920nm,20.0s								
CD2					LR		LR		
	comp=Z,730nm,19.6s								
CD2					LR		LR		
	comp=Z,620nm,18.1s								
WMQ	Urumqi	49.27	291	⇓	P		P	02 48 00.4	+1.3
WMQ					sP		pwP	02 48 13.1	-1.2
WMQ					pmax		pmax		
	comp=Z,55nm,0.9s								
WMQ					pmax		pmax		
	comp=Z,280nm,4.7s								
WMQ					LR		LR		
	comp=Z,1μm,20.7s								
WMQ					LR		LR		
	comp=Z,750nm,19.3s								
WMQ					LR		LR		
	comp=Z,550nm,20.7s								
KURK	Kurchatov	49.37	303		P		P	02 47 58.8	-0.8
KURK	Kurchatov	49.37	303	*c*	*i*P		P	02 47 59.3	-0.3
KURK					pmax		pmax		
	comp=Z,81nm,1.7s								
KURBB	Kurchatov Arra	49.47	303		LR		LR	03 11 11.3	
	comp=Z,641nm,18.0s,baz=39,slow=39								
KURBB	Kurchatov Arra	49.47	303		P		P	02 47 59.4	-1.0
MK31	Makanchi Array	50.13	297	*c*	*i*P		P	02 48 04.8	-0.7
MKAR	Makanchi Array	50.13	297		P		P	02 48 04.9	-0.6
	comp=Z,8.0nm,0.7s,baz=52,slow=6.6,SNR=29								
MKAR					PcP		PcP	02 49 24.7	+0.1
	comp=Z,0.8nm,0.7s,baz=63,slow=4.0,SNR=0.9								
MKAR					LR		LR	03 11 00.4	
	comp=Z,687nm,18.0s,baz=46,slow=38								
	comp=Z,8.0nm,0.7s								
MKAR	Makanchi Array	50.13	297		P		P	02 48 04.0	-1.6
EGMT	Eagleton	50.14	61		IAmb		IAmb	02 48 06.9	
	comp=Z,26nm,1.1s								
EGMT	Eagleton	50.14	61		P		P	02 48 05.5	-0.2
	baz=312,SNR=7.7								
MAKZ	Makanchi	50.28	297		P		P	02 48 05.5	-1.2
MAKZ	Makanchi	50.28	297		P		P	02 48 05.5	-1.2
MAKZ					pmax		pmax		
	comp=Z,12nm,1.0s								
HLID	Hailey	50.73	68		P		P	02 48 10.1	-0.2
HLID	Hailey	50.73	68		P		P	02 48 10.5	+0.2
	baz=313,SNR=24								
VCNR	Virginia City	50.80	75		P		P	02 48 11.5	+0.6
VCNR					IAmb		IAmb	02 48 13.2	
	comp=Z,21nm,1.0s								
BOZ	Bozeman (W)	50.81	64		IAmb		IAmb	02 48 12.6	
	comp=Z,28nm,1.2s								
BOZ	Bozeman (W)	50.81	64		P		P	02 48 11.0	+0.1
	baz=313,SNR=29								
GYA	Guiyang	50.96	261	⇑	P		P	02 48 13.9	+1.8
GYA					S		S	02 55 30.9	+3.9
GYA					pmax		pmax		
	comp=Z,34nm,1.8s								
GYA					LR		LR		
	comp=Z,360nm,18.0s								
GYA					LR		LR		
	comp=Z,410nm,18.2s								
GYA					LR		LR		
	comp=Z,710nm,19.1s								
PNTR	Pine Nut	50.97	75		IAmb		IAmb	02 48 14.6	
	comp=Z,27nm,0.9s								
BMN	Battle Mountai	51.36	72		P		P	02 48 15.2	+0.2
BMN	Battle Mountai	51.36	72		P		P	02 48 15.2	+0.2
BMN					pmax		pmax		
	comp=Z,18nm,1.0s								
YHL	Hebgen Lake	51.55	64		IAmb		IAmb	02 48 18.6	
	comp=Z,34nm,1.2s								
BVAR	Borovoye Array	51.63	310		LR		LR	03 12 54.8	
	comp=Z,815nm,18.6s,baz=43,slow=39								
SUMG	Summit	51.63	9		P		P	02 48 16.0	-0.9
SUMG					IAmb		IAmb	02 48 18.0	
	comp=Z,29nm,1.0s								
SUMG	Summit	51.63	9		P		P	02 48 16.0	-0.9
SUMG					pmax		pmax		
	comp=Z,29nm,1.0s								
SUMG	Summit	51.63	9	*i*	P		P	02 48 16.0	-0.9
BRVK	Borovoye	51.66	310		P		P	02 48 16.1	-0.8
BRVK					IAmb		IAmb	02 48

NVAR Mina Array Bea 52.16 75 P P 02 48 22.4 +1.3
comp=Z,7.5nm,0.8s,baz=295,slow=7.6,SNR=60
NVAR LR LR 03 08 24.8
comp=Z,196nm,20.7s,baz=294,slow=34
comp=Z,7.5nm,0.8s
LHV Little Huntoon 52.17 75 P P 02 48 21.6 +0.7
LHV IAmb IAmb 02 48 23.9
comp=Z,37nm,1.3s
H17A Grant Village 52.18 64 IAmb IAmb 02 48 25.2
comp=Z,40nm,1.1s
H17A Grant Village 52.18 64 P P 02 48 22.8 +1.6
baz=314,SNR=18
ELK Elko 52.22 71 LR LR 03 07 37.4
comp=Z,221nm,21.7s,baz=316,slow=33
PMPB Monarch Peak 52.33 79 pP 02 48 29.1 -0.9
FLWY Flagg Ranch 52.33 65 IAmb IAmb 02 48 25.0
comp=Z,42nm,1.1s
IMW Indian Meadow 52.33 65 P P 02 48 23.2 +0.8
IMW IAmb IAmb 02 48 25.4
comp=Z,36nm,1.1s
RLMT Red Lodge 52.35 63 P P 02 48 23.1 +0.6
baz=314,SNR=48
ARA0 ARCESS Array S 52.41 343 IAmb IAmb 02 48 21.4
comp=Z,32nm,1.2s
ARA0 *eP* **P 02 48 21.6 -0.7**
ARCES ARCESS Array B 52.41 343 P P 02 48 21.4 -0.9
comp=Z,4.5nm,0.6s,baz=23,slow=11,SNR=24
ARCES LR LR 03 14 05.2
comp=Z,255nm,18.4s,baz=14,slow=40
comp=Z,4.5nm,0.6s
ARCES ARCESS Array B 52.41 343 P P 02 48 21.3 -0.9
ARCES ARCESS Array B 52.41 343 P P 02 48 21.3 -1.0
ARCES pmax pmax
comp=Z,108nm,2.0s
MLAC Mammoth, Mammo 52.42 76 P P 02 48 23.0 -0.1
baz=316
FXWY Fox Creek 52.47 65 P P 02 48 24.3 +1.0
DGMT Dagmar 52.58 57 IAmb IAmb 02 48 25.4
comp=Z,29nm,0.9s
DGMT Dagmar 52.58 57 P P 02 48 24.8 +0.9
baz=314
DGMT Dagmar 52.58 57 P P 02 48 23.5 -0.4
baz=314
TPAW Teton Pass 52.61 66 P P 02 48 24.2 -0.2
TPAW IAmb IAmb 02 48 26.5
comp=Z,28nm,1.3s
BRZS Berezniki 52.68 306 *c iP* **P 02 48 23.9 -0.7**
BRZS pmax pmax
comp=Z,28nm,1.6s
BRZS Berezniki 52.68 306 *⇑ iP* **P 02 48 23.9 -0.7**
comp=Z,28nm,1.6s,baz=306
LOHW Long Hollow 52.70 65 IAmb IAmb 02 48 27.4
comp=Z,31nm,1.2s
LAO LASA Array 52.81 60 P P 02 48 26.2 +0.5
LAO LASA Array 52.81 60 P P 02 48 26.6 +0.9
baz=314,SNR=8.7
LAO LASA Array 52.81 60 P P 02 48 26.8 +1.2
baz=314,SNR=8.7
VOG Valley Oaks Go 53.05 78 P P 02 48 28.2 +0.8
baz=316
JETT Jettan, Norway 53.17 345 *eP* **P 02 48 27.6 -0.4**
JETT IAmb IAmb 02 48 28.4
comp=Z,27nm,0.9s
MZP Montezuma Peak 53.19 75 P P 02 48 29.4 +0.6
TRO Tromso 53.31 346 *eP* **P 02 48 28.4 -0.5**
TRO IAmb IAmb 02 48 33.4
comp=Z,19nm,1.2s
TDK Taldyqorghan 53.33 298 *eP* **P 02 48 29.2 -0.2**
TDK Taldyqorghan 53.33 298 *eP* **P 02 48 29.3 -0.2**
baz=298
SMMC Simmler 53.43 79 P P 02 48 31.3 +1.0
baz=317
VES Vestal, Richgr 53.56 78 P P 02 48 31.5 +0.3
baz=316
HWUT Hardware Ranch 53.60 68 IAmb IAmb 02 48 34.0
comp=Z,29nm,1.1s
CWC Cottonwood Cre 53.70 77 P P 02 48 33.1 +0.7
baz=316
GRAC Grapevine Rang 53.70 76 P P 02 48 33.0 +0.7
baz=316
R11A Troy Canyon, C 53.72 73 P P 02 48 33.6 +1.0
baz=316,SNR=27
PZH PanZhiHua 53.74 265 P P 02 48 34.8 +2.0
PZH PcP **PcP 02 49 38.6 0.0**
PZH S **S 02 56 08.9 +3.9**
PZH pmax pmax
comp=Z,30nm,1.3s
PZH pmax pmax
comp=Z,190nm,7.6s
PZH LR LR
comp=Z,1μm,21.1s
PZH LR LR
comp=Z,1μm,21.1s
PZH LR LR
comp=Z,1μm,17.8s
PKM Mcpherson Peak 53.84 79 P P 02 48 35.0 +1.5
baz=317,SNR=5.1
BW06 Boulder Array 53.84 65 P P 02 48 33.5 0.0
BW06 IAmb IAmb 02 48 35.5
comp=Z,31nm,1.1s
BW06 Boulder Array 53.84 65 P P 02 48 34.2 +0.7
baz=315,SNR=34
PD31 Pinedale Array 53.84 65 IAmb IAmb 02 48 35.5
comp=Z,27nm,1.1s
PDAR Pinedale Array 53.84 65 P P 02 48 34.2 +0.7
comp=Z,21nm,1.0s,baz=316,slow=4.1,SNR=94
comp=Z,21nm,1.0s
DUG Dugway, Tooele 53.92 70 IAmb IAmb 02 48 36.4
comp=Z,29nm,1.1s
DUG Dugway, Tooele 53.92 70 P P 02 48 35.2 +1.2
baz=315,SNR=26
SPR3 Spring Creek 3 53.95 72 IAmb IAmb 02 48 37.5
comp=Z,49nm,1.1s
TCUT Toone Canyon 54.03 68 IAmb IAmb 02 48 46.0
comp=Z,18nm,1.1s
BCW Bitter Crk Wfg 54.03 79 IAmb IAmb 02 48 38.1
comp=Z,41nm,1.3s
ISA Isabella, Lake 54.03 78 P P 02 48 35.2 +0.5
baz=317,SNR=9.5
ARU Arti 54.08 319 LR LR 03 14 48.8
comp=Z,911nm,18.5s,baz=38,slow=40
ARU Arti 54.08 319 P P 02 48 33.9 -0.8
ARU IAmb IAmb 02 48 35.0
comp=Z,15nm,0.6s
ARU Arti 54.08 319 *d iP* **P 02 48 34.4 -0.3**
ARU 02 49 36.4
ARU 02 50 32.8
ARU S **S 02 56 10.2 +1.6**
ARU SS **SKiKP 02 59 42.9 -0.8**
ARU pmax pmax
comp=Z,47nm,1.8s
ARU MLR MLR
comp=Z,885nm,18.0s
SHLS Shalkode 54.08 296 *eP* **P 02 48 33.0 -2.1**
SHLS Shalkode 54.08 296 *eP* **P 02 48 33.1 -2.1**
baz=295
CTU Camp Tracy 54.14 69 P P 02 48 36.2 +0.5
CTU IAmb IAmb 02 48 37.7
comp=Z,22nm,1.1s
ARVC Arvin 54.22 78 P P 02 48 36.2 +0.2
baz=317
KMI Kunming 54.23 263 ⇑P P 02 48 37.3 +0.8
KMI pP pP 02 48 44.3 +0.6
KMI sP pwP 02 48 49.6 -2.6
KMI S **S 02 56 13.1 +1.2**
KMI pmax pmax
comp=Z,25nm,1.4s
KMI pmax pmax
comp=Z,260nm,7.4s
KMI LR LR
comp=Z,760nm,21.3s
KMI LR LR
comp=Z,670nm,20.4s
KMI LR LR
comp=Z,420nm,17.7s
JMIC Jan Mayen 54.23 358 LR LR 03 10 56.5
comp=Z,57nm,19.6s,baz=54,slow=35
KPKS Kokpek 54.27 296 *c iP* **P 02 48 36.1 -0.3**
KPKS Kokpek 54.27 296 *⇑ iP* **P 02 48 36.1 -0.3**
baz=296
MPMC Manual Prospec 54.30 77 P P 02 48 37.7 +0.8
baz=317,SNR=18
UZB Uzunbulak 54.32 296 *eP* **P 02 48 35.7 -1.2**
UZB Uzunbulak 54.32 296 *eP* **P 02 48 35.7 -1.2**
baz=296
TPNV Topopah Spring 54.35 75 P P 02 48 37.8 +0.6
baz=316,SNR=41

FURC Furnace Creek, 54.36 76 P P 02 48 37.8 +0.8
baz=316,SNR=21
JLU Jordanelle 54.37 68 IAmb IAmb 02 48 39.6
comp=Z,22nm,1.1s
FRB Frobisher Bay 54.45 26 LR LR 03 13 36.0
comp=Z,218nm,21.8s,baz=318,slow=38
PRGR Permogore 54.45 329 *eP* **P 02 48 36.7 -0.6**
NLU North Lily Min 54.49 69 P P 02 48 38.9 +0.6
NLU IAmb IAmb 02 48 40.6
comp=Z,25nn,1.1s
PSUT Pine Spring 54.54 72 IAmb IAmb 02 48 41.0
comp=Z,30nn,1.2s
SCZ2 Santa Cruz Isl 54.59 80 P P 02 48 39.2 +0.5
baz=317
LRMC Laurel Mtn Rad 54.61 77 P P 02 48 40.5 +1.5
baz=317,SNR=6.6
OSI Osito Audit: C 54.65 79 P P 02 48 39.9 +0.6
baz=317
GWY Greenwater Val 54.67 76 P P 02 48 40.0 +0.5
MPU Maple Canyon 54.69 69 IAmb IAmb 02 48 42.0
comp=Z,34nn,1.1s
SATY Saty 54.70 296 *eP* **P 02 48 39.6 0.0**
SATY pmax pmax
comp=Z,19nm,1.5s
SATY Saty 54.70 296 *eP* **P 02 48 39.6 0.0**
comp=Z,19nm,1.5s,baz=296
QSM Queen of Sheba 54.72 76 IAmb IAmb 02 48 42.0
comp=Z,25nn,1.1s
EDW2 Edwards Air Fo 54.87 78 P P 02 48 42.3 +1.5
baz=317,SNR=7.5
QIZ Qiongzhong 55.05 252 P P 02 48 44.5 +2.2
QIZ S **S 02 56 25.4 +2.8**
QIZ pmax pmax
comp=Z,15nm,1.5s
QIZ pmax pmax
comp=Z,230nm,6.0s
QIZ LR LR
comp=Z,210nm,12.7s
QIZ LR LR
comp=Z,370nm,19.1s
QIZ LR LR
comp=Z,370nm,14.3s
SHOC Shoshone, Teco 55.10 76 P P 02 48 43.3 +0.9
baz=317
DECC Green Verdugo 55.14 79 P P 02 48 43.3 +0.5
baz=317
KUU Kurty 55.17 298 *c iP* **P 02 48 41.6 -1.2**
KUU pmax pmax
comp=Z,28nm,1.5s
KUU Kurty 55.17 298 *⇑ iP* **P 02 48 41.6 -1.2**
comp=Z,28nm,1.5s,baz=298
ULM Lac du Bonnet 55.19 51 P P 02 48 43.1 +0.3
comp=Z,18nn,0.8s,baz=312,slow=7.6,SNR=16
ULM LR LR 03 13 49.6
comp=Z,562nm,18.1s,baz=338,slow=38
comp=Z,18nn,0.8s
ULM Lac du Bonnet 55.19 51 P P 02 48 43.1 +0.3
MDND Maddock 55.20 55 P P 02 48 44.0 +1.0
baz=316,SNR=12
MDND Maddock 55.20 55 P P 02 48 44.2 +1.2
baz=316,SNR=12
GSC Goldstone, Bar 55.23 77 P P 02 48 44.3 +0.8
baz=317,SNR=21
TCRU Three Creeks R 55.25 71 IAmb IAmb 02 48 49.4
comp=Z,30nn,1.0s
SHPR Sheep Range 55.28 74 IAmb IAmb 02 48 46.4
comp=Z,31nn,1.6s
SFJD Kangerlussuaq 55.35 16 LR LR 03 14 34.1
comp=Z,76nm,18.2s,baz=338,slow=38
AAA Alma-Ata 55.36 297 *eP* **P 02 48 44.1 -0.2**
AAA Alma-Ata 55.36 297 *eP* **P 02 48 44.1 -0.2**
baz=297
LOF Lofoten 55.43 348 *eP* **P 02 48 43.5 -0.8**
RRX Edison Barstow 55.44 77 P P 02 48 45.9 +1.0
baz=317
BTLS Baital 55.50 301 *c iP* **P 02 48 44.3 -0.8**
BTLS pmax pmax
comp=Z,18nn,1.6s
BTLS Baital 55.50 301 *⇑ iP* **P 02 48 44.3 -0.8**
comp=Z,18nn,1.6s,baz=301
K22A Casper 55.50 63 IAmb IAmb 02 48 47.9
comp=Z,26nn,1.1s
K22A Casper 55.50 63 P P 02 48 45.9 +0.5
baz=316,SNR=14
K22A Casper 55.50 63 P P 02 48 45.8 +0.4
baz=316,SNR=14
CCUT Cedar City 55.52 72 IAmb IAmb 02 48 48.2
comp=Z,20nn,1.0s
BFSC Mount Baldy Ra 55.53 78 P P 02 48 46.5 +0.8
baz=317,SNR=7.6
WTNK Soaring Height 55.59 75 IAmb IAmb 02 48 48.7
comp=Z,8.2nn,1.0s
E28A Huff 55.60 57 P P 02 48 46.8 +1.0
baz=316,SNR=5.5
TUQ Turquoise Moun 55.63 76 P P 02 48 47.1 +0.7
baz=317,SNR=10
SZCU Shurtz Canyon 55.63 72 IAmb IAmb 02 48 48.9
comp=Z,22nn,1.1s
KIRV Kirov 55.68 325 *c iP* **P 02 48 46.2 0.0**
P18A Preston Nutter 55.71 68 IAmb IAmb 02 48 49.7
comp=Z,26nn,1.0s
CIS Catalina Islan 55.71 79 P P 02 48 48.4 +1.5
baz=318
RSSD Black Hills 55.71 61 P P 02 48 46.8 -0.2
RSSD IAmb IAmb 02 48 48.7
comp=Z,32nn,1.2s
RSSD Black Hills 55.71 61 P P 02 48 46.8 -0.2
RSSD pmax pmax
comp=Z,33nn,1.2s
RSSD Black Hills 55.71 61 P P 02 48 47.3 +0.3
baz=316,SNR=15
RSSD Black Hills 55.71 61 P P 02 48 47.3 +0.3
baz=316
Q16A Castle Valley 55.72 70 IAmb IAmb 02 48 49.6
comp=Z,32nn,1.0s
MTPU Mount Pierson 55.80 71 IAmb IAmb 02 48 50.9
comp=Z,24nn,1.1s
HEC Hector,Ludlow 55.84 77 P P 02 48 49.2 +1.3
baz=317,SNR=8.9
FAUS Fauske 55.91 347 *eP* **P 02 48 47.1 -0.7**
FAUS IAmb IAmb 02 48 48.0
comp=Z,51nn,1.4s
BBRC Big Bear Solar 55.93 78 P P 02 48 49.6 +0.9
baz=318
SCI2 San Clemente I 55.95 80 P P 02 48 50.3 +1.8
baz=318
LCMT Little Creek M 55.97 73 IAmb IAmb 02 48 51.6
comp=Z,26nn,1.1s
V12A Nelson 56.02 75 IAmb IAmb 02 48 51.7
comp=Z,23nn,1.1s
PKCU Pink Cliffs 56.17 72 IAmb IAmb 02 48 53.5
comp=Z,28nn,1.0s
KNB Kanab 56.20 72 P P 02 48 51.6 +1.1
KNB IAmb IAmb 02 48 53.4
comp=Z,34nn,1.2s
KNB Kanab 56.20 72 P P 02 48 51.6 +1.1
KNB pmax pmax
comp=Z,34nn,1.2s
GMRC Granite Mounta 56.25 76 P P 02 48 52.1 +1.3
baz=318,SNR=21
MURC Murrieta 56.26 78 P P 02 48 51.4 +0.6
baz=318,SNR=5.5
SGDS Sogindy 56.35 299 *eP* **P 02 48 51.1 -0.2**
SGDS pmax pmax
comp=Z,29nn,1.8s
SGDS Sogindy 56.35 299 *eP* **P 02 48 51.2 -0.2**
comp=Z,29nn,1.8s,baz=299
O20A White River Ci 56.41 67 P P 02 48 52.6 +0.6
baz=317,SNR=33
USP Ospenovka 56.55 299 P P 02 48 53.1 +0.4
SNR=13
AGMN Agassiz Nation 56.61 52 P P 02 48 52.9 -0.2
AGMN IAmb IAmb 02 48 54.6
comp=Z,41nn,1.2s
AGMN Agassiz Nation 56.61 52 P P 02 48 53.3 +0.2
baz=317,SNR=15
AGMN Agassiz Nation 56.61 52 P P 02 48 53.5 +0.5
baz=317,SNR=15
CHMS Chumysh 56.61 299 P P 02 48 53.7 +0.5
SNR=5.4
BELC Belle Mtn. Jos 56.64 77 P P 02 48 54.3 +0.7
baz=318,SNR=9.6
PFO Pinyon Flats O 56.66 78 LR LR 03 09 34.0
comp=Z,418nm,20.5s,baz=312,slow=32
PFO Pinyon Flats O 56.66 78 P P 02 48 54.3 +0.5
baz=318,SNR=5.3
TPFO Pinon Flats 56.67 78 P P 02 48 54.2 +0.4
baz=318,SNR=6.4

PMD Palm Desert 56.68 78 IAmb IAmb 02 48 55.4
comp=Z,18nm,1.1s
KBK Karagaybulak 56.76 298 P P 02 48 53.5 -1.0
SNR=5.5
KLMR Klimovskoe 56.82 332 *eP* **P 02 48 53.0 -1.3**
KLMR pmax pmax
comp=Z,29nm,1.1s
KLMR Klimovskoe 56.82 332 *eP* **P 02 48 53.1 -1.3**
KLMR AMP 02 48 56.0
comp=Z,29nm,1.1s
KLMR LQ LQ 03 10 07.2
KLMR LQ LQ 03 10 07.2
KLMR LR LR 03 12 36.8
109C Camp Elliot, M 56.83 79 IAmb IAmb 02 48 56.9
comp=Z,35nn,1.4s
109C Camp Elliot, M 56.83 79 P P 02 48 55.9 +1.0
baz=318
NEE2 Needles Airpor 56.85 76 P P 02 48 55.2 +0.3
baz=318
IRM Iron Mountain 57.00 76 P P 02 48 56.8 +0.8
baz=318,SNR=20
AAK Ala-Arcba 57.01 298 P P 02 48 56.5 +0.3
SNR=6.6
AAK Ala-Arcba 57.01 298 P P 02 48 55.3 -0.9
AAK IAmb IAmb 02 48 57.6
comp=Z,44nn,1.6s
AAK Ala-Arcba 57.01 298 *c iP* **P 02 48 55.8 -0.4**
AAK pmax pmax
comp=Z,27nn,1.4s
W13A Hualapai Mount 57.01 75 P P 02 48 56.5 +0.1
N23A Red Feather La 57.07 65 P P 02 48 58.2 +1.4
baz=317,SNR=21
MOR8 Moi Rana 57.17 346 *eP* **P 02 48 54.8 -2.0**
MOR8 IAmb IAmb 02 48 55.8
comp=Z,21nn,1.0s
BC3 Big Chuckawall 57.20 77 P P 02 48 58.1 +0.6
baz=318,SNR=10
MONP2 Monument Peak 57.22 78 P P 02 48 58.1 +0.3
baz=318
EKS2 Erkin-Say 57.35 299 P P 02 48 58.7 +0.2
SNR=11
DAV Davao City (W) 57.40 229 LR LR 03 16 19.5
comp=Z,85nm,19.0s,baz=342,slow=39
PDMCI Parker Dam,Lak 57.45 76 P P 02 48 59.7 +0.5
baz=318,SNR=13
SWSC Sam W. Stewart 57.53 78 P P 02 49 00.3 +0.6
baz=318
B35A Bob, Littlefor 57.53 51 IAmb IAmb 02 49 00.9
comp=Z,28nm,1.2s
B35A Bob, Littlefor 57.53 51 P P 02 48 59.7 +0.1
baz=318,SNR=8.6
IKP In-Ko-Pah, Jac 57.57 78 P P 02 49 00.9 +0.7
baz=318
BLYC Blythe 57.65 76 P P 02 49 01.0 +0.4
BLYC IAmb IAmb 02 49 03.0
comp=Z,29nm,1.2s
AML Almayashu 57.78 298 P P 02 49 02.6 +0.7
SNR=8.3
SMCO Snowmass 57.78 67 IAmb IAmb 02 49 04.1
comp=Z,23nn,1.1s
GLA Glamis 57.99 77 IAmb IAmb 02 49 05.4
comp=Z,32nn,1.1s
GLA Glamis 57.99 77 P P 02 49 04.0 +0.9
baz=318
ISCO Idaho Springs 58.04 65 P P 02 49 04.3 +0.7
ISCO IAmb IAmb 02 49 06.5
comp=Z,36nn,1.2s
ISCO Idaho Springs 58.04 65 P P 02 49 04.3 +0.7
ISCO pmax pmax
comp=Z,36nn,1.2s
ISCO Idaho Springs 58.04 65 P P 02 49 05.4 +1.7
baz=318,SNR=34
ISCO Idaho Springs 58.04 65 P P 02 49 04.7 +1.1
baz=318,SNR=34
WUAZ Wupatki 58.09 73 IAmb IAmb 02 49 06.6
comp=Z,24nn,1.1s
WUAZ Wupatki 58.09 73 P P 02 49 04.9 +1.0
baz=318,SNR=16
F33A 5 Mile Ranch, 58.22 54 IAmb IAmb 02 49 05.9
comp=Z,30nn,1.3s
F33A 5 Mile Ranch, 58.22 54 P P 02 49 04.5 +0.1
baz=318,SNR=7.6
DZA Taraz 58.40 301 *eP* **P 02 49 05.2 -0.6**
DZA Taraz 58.40 301 *eP* **P 02 49 05.3 -0.6**
baz=301
MVCO Mesa Verde 58.41 69 P P 02 49 06.7 +0.5
baz=318,SNR=6.0
ANGG Ammassalik, Gr 58.43 11 P P 02 49 03.8 -1.7
ANGG IAmb IAmb 02 49 07.5
comp=Z,24nn,1.1s
KSH Kashi 58.53 295 P P 02 49 10.8 +4.0
KSH sP pwP 02 49 24.6 +2.2
KSH pmax pmax
comp=Z,22nn,1.2s
KSH pmax pmax
comp=Z,200nm,8.4s
KSH LR LR
comp=Z,430nm,16.1s
KSH LR LR
comp=Z,640nm,15.5s
KSH LR LR
comp=Z,620nm,18.9s
VALR Valaam 58.57 336 *deP* **P 02 49 06.5 -0.1**
VALR pmax pmax
comp=Z,40nn,0.9s
KK31 Karatay Array 58.65 301 *i P* **P 02 49 06.7 -0.8**
KKAR Karatay Array 58.65 301 P P 02 49 06.4 -1.1
KKAR Karatay Array 58.65 301 P P 02 49 06.4 -1.1
KKAR pmax pmax
comp=Z,49nn,1.6s
AKTO Aktyubinsk 58.80 314 LR LR 03 17 05.6
comp=Z,473nm,18.1s,baz=35,slow=39
113A Mohawk Valley, 58.80 76 IAmb IAmb 02 49 10.7
comp=Z,18nn,1.3s
EYMN Ely 58.83 50 P P 02 49 08.2 -0.5
EYMN IAmb IAmb 02 49 12.3
comp=Z,21nm,0.9s
EYMN Ely 58.83 50 P P 02 49 09.1 +0.4
baz=319
EYMN Ely 58.83 50 P P 02 49 08.8 +0.1
baz=319
X16A Lo Mia Camp, P 58.87 74 P P 02 49 11.1 +1.7
AB31 Akbulak array 58.90 312 P P 02 49 08.5 -0.6
ABKAR Akbulak array 58.90 312 IAmb IAmb 02 49 09.3
comp=Z,9.1nn,0.6s
Q24A Divide 58.90 66 P P 02 49 10.2 +0.5
baz=318
S22A 4UR Ranch, Cre 58.91 68 IAmb IAmb 02 49 26.0
comp=Z,23nn,1.1s
S22A 4UR Ranch, Cre 58.91 68 P P 02 49 10.7 +1.0
baz=318,SNR=28
OGNE Ogallala 59.04 62 P P 02 49 10.6 +0.2
baz=318
NSS Namsos 59.06 347 *eP* **P 02 49 09.3 -0.6**
NSS IAmb IAmb 02 49 09.5
comp=Z,6.6nm,0.7s
W18A Petrified Fore 59.29 72 IAmb IAmb 02 49 14.8
comp=Z,21nn,1.1s
W18A Petrified Fore 59.29 72 P P 02 49 13.2 +1.0
baz=318,SNR=7.0
CRAI Chiangrai 59.41 262 P P 02 49 13.4 +0.4
F36A Milaca 59.49 53 P P 02 49 13.4 +0.1
baz=319
FIA1 FINESS Array S 59.55 339 P P 02 49 12.1 -1.3
FINES FINESS Array B 59.55 339 P P 02 49 12.8 -0.6
comp=Z,7.8nm,0.8s,baz=27,slow=9.8,SNR=26
FINES LR LR 03 17 35.5
comp=Z,214nm,21.4s,baz=36,slow=39
comp=Z,7.8nm,0.8s
IUG luzhnay 59.60 301 *eP* **P 02 49 14.3 +0.1**
IUG luzhnay 59.60 301 *eP* **P 02 49 14.3 +0.1**
baz=301
X18A Snowflake 59.61 72 P P 02 49 15.8 +1.3
X18A IAmb IAmb 02 49 17.2
comp=Z,26nn,1.1s
SDCO Great Sand Dun 59.61 67 P P 02 49 15.9 +1.3
baz=318,SNR=17
SDCO Great Sand Dun 59.61 67 P P 02 49 15.2 +0.6
baz=318,SNR=17
ECSD EROS Data Cent 59.64 56 IAmb IAmb 02 49 15.3
comp=Z,18nn,1.1s
ECSD EROS Data Cent 59.64 56 P P 02 49 14.4 +0.1
baz=319,SNR=12
ECSD EROS Data Cent 59.64 56 P P 02 49 14.1 -0.2
baz=319,SNR=12
E38A The Farm, Brul 59.82 51 P P 02 49 15.3 -0.2

baz=320,SNR=7.4
214A Organ Pipe Nat 59.94 76 lAmb lAmb 02 49 18.9
comp=Z,16nm,1.1s
214A Organ Pipe Nat 59.94 76 P **P** **02 49 17.6 +1.0**
baz=319,SNR=11
KRVT Keravat (AS076 60.14 195 LR LR 03 12 14.6
comp=Z,254nm,19.7s,baz=85,slow=33
KSCO Kaye Shedlock' 60.17 64 P **P** **02 49 18.7 +0.5**
baz=319
SPMN Marine on St. 60.30 53 lAmb lAmb 02 49 20.2
comp=Z,25nm,1.2s
SPMN Marine on St. 60.30 53 P **P** **02 49 19.4 +0.5**
baz=320,SNR=6.7
SPMN Marine on St. 60.30 53 P **P** **02 49 18.4 -0.5**
baz=320,SNR=6.7
BORG Borgarnes 60.46 3 LR LR 03 17 04.1
comp=Z,80nm,18.1s,baz=342,slow=38
UBPT Khong Chiam 60.51 254 P **P** **02 49 20.6 0.0**
UBPT lAmb lAmb 02 49 28.3
comp=Z,31nm,1.4s
BGNE Belgrade 60.64 59 P **P** **02 49 21.0 -0.3**
baz=319
T25A Trinidad 60.64 66 P **P** **02 49 21.5 -0.1**
T25A lAmb lAmb 02 49 23.7
comp=Z,23nm,1.2s
T25A Trinidad 60.64 66 P **P** **02 49 22.2 +0.6**
baz=319,SNR=6.6
RAF Rauma 60.80 341 *eP* **P** **02 49 22.1 +0.1**
TUC Tucson 60.81 75 P **P** **02 49 23.1 +0.5**
TUC Tucson 60.81 75 P **P** **02 49 23.1 +0.5**
TUC pmax pmax
comp=Z,10.0nm,1.2s
TUC Tucson 60.81 75 P **P** **02 49 23.6 +1.0**
baz=319
I37B Waseca 60.95 54 P **P** **02 49 24.2 +1.0**
baz=320,SNR=15
MEF Metsahovi 61.02 339 *eP* **P** **02 49 23.0 -0.4**
ANMO Albuquerque 61.20 70 LR LR 03 14 48.6
comp=Z,136nm,20.7s,baz=326,slow=35
ANMO Albuquerque 61.20 70 P **P** **02 49 24.8 -0.5**
ANMO Albuquerque 61.20 70*c iP* **P** **02 49 26.3 +1.0**
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO Albuquerque 61.20 70 P **P** **02 49 26.3 +1.0**
baz=319,SNR=15
ANMO Albuquerque 61.20 70 P **P** **02 49 26.2 +0.9**
baz=319
BELG Belogornoye 61.24 322 LR LR 03 18 11.4
comp=Z,462nm,19.4s,baz=52,slow=38
BELG Belogornoye 61.24 322*c iP* **P** **02 49 24.4 -0.6**
BELG pmax pmax
comp=Z,11nm,1.5s
COWI Conover 61.28 50 lAmb lAmb 02 49 26.4
comp=Z,22nm,1.2s
CHTO Chiang Mai 61.34 262 P **P** **02 49 26.2 0.0**
CHTO Chiang Mai 61.34 262 P **P** **02 49 26.2 0.0**
CHTO pmax pmax
comp=Z,56nm,1.9s
MOL Molde 61.49 349 *eP* **P** **02 49 25.9 -0.7**
N33A J Bar K, Exete 61.49 59 P **P** **02 49 26.7 -0.3**
Y22D IRIS PASSCAL I 61.60 71 P **P** **02 49 29.6 +1.6**
baz=319
CMAR Chiang Mai Arr 61.62 262 P **P** **02 49 28.8 +0.6**
comp=Z,2.8nm,0.3s,baz=21,slow=7.6,SNR=13
CMAR LR LR 03 18 36.3
comp=Z,275nm,19.6s,baz=50,slow=38
comp=Z,2.8nm,0.3s
CMAR Chiang Mai Arr 61.62 262 P **P** **02 49 28.0 -0.2**
CMAR Chiang Mai Arr 61.62 262 *i* P **P** **02 49 29.2 +1.0**
CMAR pmax pmax
comp=Z,3.0nm,0.3s
Y22A Socorro 61.68 71 P **P** **02 49 30.3 +1.7**
baz=320,SNR=18
MOS Moscow 61.69 330 *eP* **P** **02 49 24.6 -3.4**
MOS MLR MLR
comp=Z,500nm,19.0s
ODAN Odare 61.72 277 *eP* **P** **02 49 29.0 0.0**
GUN Gumba 61.78 279 *eP* **P** **02 49 29.5 0.0**
comp=Z,34nm,0.5s
JIRN Jiri 61.79 279 *eP* **P** **02 49 29.3 -0.3**
CBKS Cedar Bluff 61.81 62 P **P** **02 49 28.9 -0.3**
baz=320
DOMB Dombas 61.83 348 *eP* **P** **02 49 28.4 -0.5**
DOMB lAmb lAmb 02 49 30.0
comp=Z,27nm,1.2s
AKN Aaknes 61.94 349 *eP* **P** **02 49 29.9 +0.2**
AKN lAmb lAmb 02 49 31.3
comp=Z,19nm,0.8s
RAMN Ramite 62.10 278 *eP* **P** **02 49 31.2 -0.4**
comp=Z,82nm,0.5s
VSU Vasula 62.11 337*c iP* **P** **02 49 30.2 -0.6**
VSU Vasula 62.11 337 *eP* **P** **02 49 30.8 0.0**
KKN Kakani 62.21 279 *eP* **P** **02 49 32.2 -0.1**
N35A Tabor 62.29 58 P **P** **02 49 33.0 +0.6**
baz=320,SNR=6.9
121A Cookes Peak, D 62.30 72 P **P** **02 49 33.2 +0.4**
121A lAmb lAmb 02 50 04.3
comp=Z,25nm,1.4s
121A Cookes Peak, D 62.30 72 P **P** **02 49 34.1 +1.3**
baz=320,SNR=6.2
121A Cookes Peak, D 62.30 72 P **P** **02 49 34.2 +1.5**
baz=320,SNR=6.2
PKI Pulchoki 62.30 279 *eP* **P** **02 49 32.6 -0.4**
PKIN Phulchoki 62.30 279 *eP* **P** **02 49 32.5 -0.5**
comp=Z,45nm,0.7s
NC303 NORSAR Array S 62.31 346 *eP* **P** **02 49 31.8 -0.4**
NC303 lAmb lAmb 02 49 32.8
comp=Z,30nm,1.2s
I40A Norwalk 62.33 52 lAmb lAmb 02 49 33.5
comp=Z,17nm,1.1s
SIJI Sorong 62.34 219 P **P** **02 49 33.7 +0.8**
comp=Z,7.6nm,0.4s,baz=351,slow=8.0,SNR=10
SIJI LR LR 03 13 04.4
comp=Z,111nm,21.5s,baz=314,slow=33
comp=Z,7.6nm,0.4s
319A Douglas 62.35 74 lAmb lAmb 02 49 35.4
comp=Z,27nm,1.1s
NC204 NORSAR Array S 62.35 347 P **P** **02 49 31.6 -0.9**
GKN Gorkha 62.41 280 *eP* **P** **02 49 33.1 -0.4**
SCHQ Schefferville 62.43 31 P **P** **02 49 32.8 -0.3**
comp=Z,12nm,0.9s,baz=318,slow=6.6,SNR=11
SCHQ LR LR 03 18 19.7
comp=Z,165nm,20.7s,baz=320,slow=38
comp=Z,12nm,0.9s
SCHQ Schefferville 62.43 31 P **P** **02 49 32.4 -0.7**
DMN Daman 62.45 279 *eP* **P** **02 49 34.0 +0.1**
NB2 NORSAR Subarra 62.51 346 P **P** **02 49 32.7 -0.9**
comp=Z,69nm,1.7s,baz=17,slow=6.9
NB2 NORSAR Subarra 62.51 346 P **P** **02 49 32.7 -0.9**
baz=17,slow=6.9
NOA NORSAR Array B 62.51 346 P **P** **02 49 33.1 -0.5**
comp=Z,7.2nm,0.8s,baz=17,slow=6.7,SNR=58
NOA LR LR 03 17 45.6
comp=Z,91nm,20.1s,baz=20,slow=37
comp=Z,7.2nm,0.8s
OBN Obninsk 62.53 330⇑ *eP* **P** **02 49 32.8 -0.9**
OBN *e* 02 50 15.0
OBN *e* 02 51 48.5
OBN *eS* **S** **02 57 50.3 -8.5**
OBN pmax pmax
comp=Z,38nm,1.8s
OBN MLR MLR
comp=Z,258nm,17.0s
DANN Dangsing 62.64 281 *eP* **P** **02 49 35.1 -0.1**
comp=Z,87nm,0.9s
SCIA State Center 62.65 55 P **P** **02 49 35.3 +0.5**
baz=321,SNR=6.6
SCIA State Center 62.65 55 P **P** **02 49 34.4 -0.3**
baz=321,SNR=6.6
HYA Hoyanger 63.02 349 *eP* **P** **02 49 37.2 +0.4**
HYA lAmb lAmb 02 49 38.4
comp=Z,21nm,0.8s
HFS Hagfors 63.02 345 LR LR 03 19 28.6
comp=Z,143nm,18.4s,baz=23,slow=38
KSU1 Kansas State U 63.16 60 P **P** **02 49 36.9 -1.2**
KSU1 lAmb lAmb 02 49 38.3
comp=Z,25nm,1.2s
KSU1 Kansas State U 63.16 60 P **P** **02 49 37.2 -1.0**
baz=320
JFWS Jewell Farm 63.26 53 P **P** **02 49 37.7 -1.1**
baz=322
N38A Joes South For 63.51 56 lAmb lAmb 02 49 44.0
comp=Z,14nm,0.8s
N38A Joes South For 63.51 56 P **P** **02 49 40.3 -0.1**
baz=321
AMTX Amarillo 63.79 66 P **P** **02 49 42.4 -0.1**
baz=320
ASK Askoy 63.79 349 *eP* **P** **02 49 42.3 +0.4**
ASK lAmb lAmb 02 49 43.6
comp=Z,40nm,0.9s
SLIT Slitere, Latvi 63.83 339 *eP* **P** **02 49 42.2 -0.1**
BER Bergen 63.87 349 *eP* **P** **02 49 43.9 +1.4**
KMSI Cibinong 63.91 228 P **P** **02 49 43.6 +0.3**
comp=Z,9µmcomp=Z,202nm,0.4s
MSTX Muleshoe 63.91 68 P **P** **02 49 42.9 -0.5**
MSTX lAmb lAmb 02 49 44.9
comp=Z,19nm,1.1s
MSTX Muleshoe 63.91 68 P **P** **02 49 43.9 +0.6**
baz=320,SNR=7.3
MSTX Muleshoe 63.91 68 P **P** **02 49 43.9 +0.6**
baz=320,SNR=7.3
LPSR Galich'ya Gora 63.98 327 *eP* **P** **02 49 41.1 -2.3**
LPSR pmax pmax
comp=Z,40nm,1.9s
CPRX Cap Rock 64.05 69 P **P** **02 49 44.6 +0.3**
KONO Kongsberg 64.08 347 *eP* **P** **02 49 43.8 -0.1**
KAN17 Caldwell West 64.16 62 lAmb lAmb 02 49 45.0
comp=Z,23nm,1.3s
ODD1 Odda 64.19 348 *eP* **P** **02 49 45.0 +0.3**
L42A Oliver, Polo 64.24 53 P **P** **02 49 44.6 -0.6**
baz=322
MNTX Cornudas Mount 64.25 71 lAmb lAmb 02 49 47.8
comp=Z,25nm,1.1s
MNTX Cornudas Mount 64.25 71 P **P** **02 49 46.3 +0.9**
baz=320,SNR=44
MNTX Cornudas Mount 64.25 71 P **P** **02 49 46.3 +0.9**
baz=320,SNR=44
P38A Dawn 64.27 57 lAmb lAmb 02 49 46.2
comp=Z,27nm,1.2s
P38A Dawn 64.27 57 P **P** **02 49 45.4 0.0**
baz=321,SNR=7.4
VRH Novokhopyorsk 64.27 324 *eP* **P** **02 49 43.5 -1.8**
VRH pmax pmax
comp=Z,40nm,1.6s
HNR Honiara 64.36 186 LR LR 03 19 02.6
comp=Z,684nm,18.0s,baz=354,slow=37
CROK Carrier 64.47 63 P **P** **02 49 46.0 -0.8**
CROK lAmb lAmb 02 49 47.2
comp=Z,21nm,1.2s
HTMS Hat Mesa 64.60 69 P **P** **02 49 48.1 +0.2**
BLS5 Blasjo 64.69 348 *eP* **P** **02 49 48.1 +0.2**
BLS5 lAmb lAmb 02 50 00.6
comp=Z,174nm,2.2s
VORR Voronezh 64.69 326 *eP* **P** **02 49 44.5 -3.5**
VORR pmax pmax
comp=Z,50nm,0.4s
L44A Lake County Fo 64.90 52 P **P** **02 49 48.4 -1.1**
baz=323
VSVD Vaisvydziai 65.00 337 *eP* **P** **02 49 50.3 +0.3**
P40A Paris 65.06 56 lAmb lAmb 02 49 51.4
comp=Z,26nm,0.9s
P40A Paris 65.06 56 P **P** **02 49 50.1 -0.5**
baz=322,SNR=15
VSR Storozhevoye 65.10 326 *eP* **P** **02 49 48.7 -2.0**
VSR pmax pmax
comp=Z,20nm,1.6s
NACGM Naroch 65.33 335⇑ *eP* **P** **02 49 52.6 +0.6**
baz=25
PBUR Paburge 65.40 338 *eP* **P** **02 49 52.5 0.0**
MNK Minsk 65.42 334 *i* P **P** **02 49 53.9 +1.2**
MNK *i* 02 52 17.5
MNK *i* PPP PPP 02 53 50.6
MNK *i* S **S** **02 58 35.8 +1.2**
MNK *i* SS **SS** **03 02 49.8 +2.8**
MNK pmax pmax
comp=Z,16nm,1.4s
MNK pmax pmax
comp=E,4.0nm,1.4s
MNK MLR MLR
comp=Z,437nm,17.0s
MNK MLR MLR
comp=E,42nm,17.0s
MNK Minsk 65.42 334 *i* P **P** **02 49 53.9 +1.2**
comp=E,4.0nm,1.4s
MNK *i* P **P** **02 49 53.9 +1.2**
MNK *i* P **P** **02 49 53.9 +1.2**
comp=Z,16nm,1.4s,baz=206
MNK *i* PP **PP** **02 52 17.6 +1.4**
MNK *i* PPP PPP 02 53 50.6
MNK *i* S **S** **02 58 35.9 +1.2**
MNK *i* SS **SS** **03 02 49.9 +2.8**
MNK *i* SSS SSS 03 05 55.5
MNK *i* LQ LQ 03 13 48.6
MNK *i* LR LR 03 18 46.7
MNK *i* LRM MLR 03 20 54.8
comp=E,42nm,16.6s
MNK *i* LRM MLR 03 20 54.8
MNK *i* LRM MLR 03 20 54.8
comp=Z,437nm,16.6s
WMOK Wichita Mounta 65.42 64 P **P** **02 49 52.5 -0.6**
WMOK lAmb lAmb 02 49 54.4
comp=Z,22nm,1.1s
WMOK Wichita Mounta 65.42 64 P **P** **02 49 52.5 -0.6**
WMOK pmax pmax
comp=Z,22nm,1.1s
WMOK Wichita Mounta 65.42 64 P **P** **02 49 53.4 +0.3**
baz=321,SNR=11
WMOK Wichita Mounta 65.42 64 P **P** **02 49 53.5 +0.4**
baz=321,SNR=11
PABE Paberze 65.43 337 *eP* **P** **02 49 52.9 +0.2**
HDIL Hopedale 65.55 54 P **P** **02 49 53.2 -0.7**
HDIL Hopedale 65.55 54 P **P** **02 49 53.8 +0.1**
baz=323,SNR=7.1
HDIL Hopedale 65.55 54 P **P** **02 49 53.1 -0.7**
baz=323,SNR=7.1
SNART Snartemo 65.66 348 *eP* **P** **02 49 54.5 +0.4**
S39A Bolivar 65.88 58 P **P** **02 49 54.8 -1.2**
baz=322
KBL Kabul 65.90 296 P **P** **02 49 54.4 -2.0**
KBL Kabul 65.90 296 P **P** **02 49 54.4 -2.0**
KBL pmax pmax
comp=Z,53nm,1.8s
R40A Maddies Statio 65.92 57 P **P** **02 49 55.6 -0.6**
baz=322,SNR=11
TUL1 Lenard 66.04 61 P **P** **02 49 56.3 -0.7**
baz=322
P43A Skaggs, Pawnee 66.17 55 P **P** **02 49 57.0 -0.8**
P43A lAmb lAmb 02 49 58.5
comp=Z,27nm,1.1s
P43A Skaggs, Pawnee 66.17 55 P **P** **02 49 57.4 -0.4**
baz=323
U38A Gravette 66.33 60 lAmb lAmb 02 49 59.1
comp=Z,34nm,1.9s
U38A Gravette 66.33 60 P **P** **02 49 58.3 -0.6**
baz=322
SADO Sadowa 66.57 45 LR LR 03 21 31.5
comp=Z,196nm,18.2s,baz=346,slow=38
CCM Cathedral Cave 66.61 57 P **P** **02 49 59.8 -0.8**
CCM lAmb lAmb 02 50 01.1
comp=Z,20nm,1.1s
CCM Cathedral Cave 66.61 57 P **P** **02 49 59.8 -0.8**
CCM pmax pmax
comp=Z,20nm,1.1s
CCM Cathedral Cave 66.61 57 P **P** **02 50 00.3 -0.3**
baz=323,SNR=11
CCM Cathedral Cave 66.61 57 P **P** **02 49 59.6 -1.0**
baz=323
ABTX Abilene, Hawle 66.61 66 lAmb lAmb 02 50 02.1
comp=Z,21nm,1.0s
ABTX Abilene, Hawle 66.61 66 P **P** **02 50 01.3 +0.6**
baz=322,SNR=10
ABTX Abilene, Hawle 66.61 66 P **P** **02 50 01.1 +0.4**
baz=322,SNR=10
HHAR Hobbs 66.68 60 lAmb lAmb 02 50 01.3
comp=Z,16nm,1.0s
HHAR Hobbs 66.68 60 P **P** **02 50 00.4 -0.8**
baz=322
AAM Ann Arbor 66.69 49 P **P** **02 50 00.2 -0.8**
baz=324
SFIN Lafayette 66.71 53 P **P** **02 50 00.2 -0.9**
baz=324
LATQ La Tuque 66.83 39 lAmb lAmb 02 50 02.4
comp=Z,43nm,1.6s
Q44A Meyer Farm, Va 66.99 55 lAmb lAmb 02 50 03.8
comp=Z,24nm,1.1s
Q44A Meyer Farm, Va 66.99 55 P **P** **02 50 02.9 -0.2**
baz=323
TX31 Lajitas Ar. Si 67.01 72 P **P** **02 50 03.8 +0.3**
TX31 Lajitas Ar. Si 67.01 72 P **P** **02 50 04.3 +0.9**
baz=322,SNR=33
TX32 Lajitas Array 67.01 72 lAmb lAmb 02 50 05.3
comp=Z,28nm,1.2s
TXAR Lajitas Array 67.01 72 P **P** **02 50 04.2 +0.8**
comp=Z,12nm,1.0s,baz=305,slow=4.4,SNR=74
comp=Z,12nm,1.0s
FVM French Village 67.06 56 P **P** **02 50 03.4 0.0**
baz=323,SNR=13
TRQ Mont Tremblant 67.15 41 P **P** **02 50 02.6 -1.4**
TRQ lAmb lAmb 02 50 04.7
comp=Z,26nm,1.1s
LPIG La Paz 67.37 80 LR LR 03 13 40.5
comp=Z,150nm,21.8s,baz=306,slow=31
DELO Deloro Mine 67.39 44 lAmb lAmb 02 50 06.1
comp=Z,20nm,1.1s
OLIL Olney 67.56 54 lAmb lAmb 02 50 07.4
comp=Z,19nm,1.0s
OLIL Olney 67.56 54 P **P** **02 50 06.2 -0.4**
baz=324,SNR=5.5
O48B Farmland 67.68 51 P **P** **02 50 06.3 -1.1**
baz=324,SNR=6.8
O48B Farmland 67.68 51 P **P** **02 50 06.1 -1.3**
baz=324,SNR=6.8
SBUM Sibu 67.71 240 P **P** **02 50 09.6 +1.8**
SBUM lAmb lAmb 02 50 11.1
comp=Z,20nm,1.1s
S44A Carbondale 67.85 56 P **P** **02 50 08.2 -0.3**
baz=323,SNR=9.0
FCAR Ozark Folk Cen 67.89 59 P **P** **02 50 07.5 -1.3**
FCAR lAmb lAmb 02 50 08.9
comp=Z,28nm,1.0s
BLO Bloomington 67.94 53 lAmb lAmb 02 50 12.2
comp=Z,11nm,0.8s
CGM3 Cape Girardeau 67.97 56 lAmb lAmb 02 50 09.7
comp=Z,31nm,1.8s
O49A Covington 68.11 51 lAmb lAmb 02 50 10.6
comp=Z,19nm,0.9s
O49A Covington 68.11 51 P **P** **02 50 09.3 -0.7**
baz=325
O49A P **P** **02 50 09.3 -0.7**
baz=325
JCT Junction City 68.20 68 lAmb lAmb 02 50 12.1
comp=Z,22nm,1.1s
JCT Junction City 68.20 68 P **P** **02 50 11.0 +0.2**
baz=322,SNR=11
JCT Junction City 68.20 68 P **P** **02 50 10.8 0.0**
baz=322,SNR=11
P48A Milroy 68.21 52 P **P** **02 50 09.8 -0.9**
baz=324,SNR=7.5
P48A P **P** **02 50 09.8 -0.9**
baz=324,SNR=7.5
MIAR Mount Ida 68.23 61 lAmb lAmb 02 50 12.0
comp=Z,22nm,1.1s
MIAR Mount Ida 68.23 61 P **P** **02 50 10.0 -0.9**
baz=323,SNR=14
MIAR Mount Ida 68.23 61 P **P** **02 50 10.5 -0.4**
baz=323,SNR=14
WHTX Lake Whitney, 68.25 65 P **P** **02 50 10.0 -1.1**
WHTX Lake Whitney, 68.25 65 P **P** **02 50 10.8 -0.3**
baz=322
WHAR Wooly Hollow 68.28 59 lAmb lAmb 02 50 11.8
comp=Z,22nm,1.0s
D62A Allapoint, All 68.40 37 P **P** **02 50 09.8 -2.0**
baz=330,SNR=6.6
D62A P **P** **02 50 09.8 -2.0**
baz=330,SNR=6.6
P49A Miami Univ. Ec 68.47 51 P **P** **02 50 11.8 -0.5**
baz=325,SNR=7.2
P49A Miami Univ. Ec 68.47 51 P **P** **02 50 11.6 -0.7**
baz=325,SNR=7.2
LONY Lake Ozonia 68.49 42 lAmb lAmb 02 50 12.1
comp=Z,18nm,1.2s
LONY Lake Ozonia 68.49 42 P **P** **02 50 10.9 -1.6**
baz=328
AKASG Malin Array Be 68.51 332 P **P** **02 50 11.6 -0.8**
comp=Z,1.9nm,0.5s,baz=28,slow=6.2,SNR=18
AKASG LR LR 03 23 48.7
comp=Z,377nm,18.5s,baz=26,slow=39
comp=Z,1.9nm,0.5s
AKBB Malin Array Si 68.51 332 lAmb lAmb 02 50 12.8
comp=Z,34nm,1.9s
AKBB Malin Array Si 68.51 332*c iP* **P** **02 50 11.1 -1.3**
AKBB pmax pmax
comp=Z,12nm,1.1s
GEYT Alibeck 68.61 306 P **P** **02 50 13.2 -0.1**
comp=Z,6.2nm,0.6s,baz=40,slow=7.5,SNR=14
GEYT LR LR 03 24 53.5
comp=Z,456nm,18.2s,baz=48,slow=40
comp=Z,6.2nm,0.6s
GEYT Alibeck 68.61 306 P **P** **02 50 12.8 -0.5**
GYA0B ALIBECK ARRAY 68.61 306 P **P** **02 50 11.7 -1.6**
GYA0B lAmb lAmb 02 50 15.3
comp=Z,18nm,1.1s
E62A Clayton Lake 68.64 37 P **P** **02 50 12.3 -1.0**
E62A Clayton Lake 68.64 37 P **P** **02 50 12.7 -0.6**
baz=330,SNR=9.3
E62A P **P** **02 50 12.7 -0.6**
baz=330,SNR=9.3
ACSO Alum Creek Sta 68.67 50 P **P** **02 50 12.3 -1.3**
baz=325
M53A WI Miller and 68.68 48 P **P** **02 50 12.1 -1.6**
baz=326
GKP Gorka Klasztor 68.94 340 *eP* **P** **02 50 14.9 -0.1**
J57A Williamstown 68.96 43 P **P** **02 50 15.2 -0.2**
baz=327
J57A P **P** **02 50 15.2 -0.2**
baz=327
GOF Gofitskoye 69.03 320⇑ *eP* **P** **02 50 15.5 -0.3**
GOF pmax pmax
comp=Z,39nm,0.9s
435B Jarrell 69.14 66 lAmb lAmb 02 50 17.9
comp=Z,16nm,0.9s
435B Jarrell 69.14 66 P **P** **02 50 16.3 -0.4**
baz=323
BATG Bathurst New B 69.24 35 P **P** **02 50 16.1 -0.9**
BATG lAmb lAmb 02 50 17.9
comp=Z,23nm,1.1s
O52A Adamsville 69.27 49 P **P** **02 50 16.8 -0.5**
baz=326,SNR=7.8
O52A P **P** **02 50 16.8 -0.5**
baz=326,SNR=7.8
R49A Shelbyville 69.27 53 lAmb lAmb 02 50 18.4
comp=Z,30nm,1.4s
L56A Greenwood 69.40 45 P **P** **02 50 17.3 -0.8**
baz=327,SNR=10
L56A P **P** **02 50 17.3 -0.8**
baz=327,SNR=10
O53A New Philadelph 69.43 49 P **P** **02 50 17.2 -1.1**
baz=326
T47A Sharon Grove 69.43 55 P **P** **02 50 18.6 +0.2**
baz=324,SNR=15
M55A Ridgway 69.46 46 P **P** **02 50 18.1 -0.4**
baz=327,SNR=8.8
M55A P **P** **02 50 18.1 -0.4**
baz=327,SNR=8.8
G62A West of Eustis 69.49 39 lAmb lAmb 02 50 19.6
comp=Z,38nm,1.4s
Q51A Peebles 69.50 51 lAmb lAmb 02 50 19.4
comp=Z,32nm,1.4s
P52A Corning 69.53 50 P **P** **02 50 17.7 -1.3**
baz=326
BEL Belsk 69.55 337 *eP* **P** **02 50 19.4 +0.6**
GROC Groznyy 69.56 317 *eP* **P** **02 50 18.0 -1.1**
GROC *e* 02 50 43.8
GROC pmax pmax
comp=Z,26nm,0.8s
F63A Nahmakanta, Br 69.58 38 lAmb lAmb 02 50 19.9
comp=Z,27nm,1.3s
EKA Eskdalemuir Ar 69.63 353 LR LR 03 20 06.7
comp=Z,70nm,18.4s,baz=6.0,slow=35
CCAR Cane Creek 69.64 60 lAmb lAmb 02 50 21.2
comp=Z,31nm,1.1s
R50A Paris 69.66 52 lAmb lAmb 02 50 20.7
comp=Z,22nm,1.1s
R50A Paris 69.66 52 P **P** **02 50 19.2 -0.5**
baz=325,SNR=5.3
R50A P **P** **02 50 19.2 -0.5**
baz=325,SNR=5.3
F64A Sherman 69.70 37 P **P** **02 50 18.1 -1.8**
F64A lAmb lAmb 02 50 20.9
comp=Z,22nm,1.1s
F64A Sherman 69.70 37 P **P** **02 50 19.1 -0.7**
baz=330,SNR=7.2
F64A P **P** **02 50 19.1 -0.7**
baz=330,SNR=7.2
WVT Waverly 69.78 56 P **P** **02 50 19.9 -0.6**
WVT lAmb lAmb 02 50 21.8
comp=Z,28nm,1.1s
WVT Waverly 69.78 56 P **P** **02 50 19.9 -0.6**
WVT pmax pmax
comp=Z,28nm,1.2s
WVT Waverly 69.78 56 P **P** **02 50 20.3 -0.2**

baz=324,SNR=18
WVT Waverly 69.78 56 P **P 02 50 20.3 -0.2**
baz=324
LBNH Lisbon 69.82 40 IAmb IAmb 02 50 21.4
comp=Z,22nm,1.1s
LBNH Lisbon 69.82 40 P **P 02 50 19.4 -1.2**
baz=329
ACCN Adirondack Com 69.89 42 IAmb IAmb 02 50 21.2
comp=Z,39nm,1.4s
NATX Nacogdoches 69.89 63 IAmb IAmb 02 50 22.5
comp=Z,21nm,1.1s
NATX Nacogdoches 69.89 63 P **P 02 50 21.2 0.0**
baz=323
PKME Peaks-Kenny Pk 69.89 38 P **P 02 50 20.3 -0.7**
baz=330
BINY Binghamton 69.98 44 P **P 02 50 20.5 -1.2**
baz=328
Q52A Bidwell 70.03 50 P **P 02 50 20.6 -1.4**
Q52A IAmb IAmb 02 50 22.4
comp=Z,25nm,1.3s
KVAR Kislovodsk Arr 70.11 320 LR LR 03 24 56.4
comp=Z,390nm,19.3s,baz=279,slow=39
KIV Kislovodsk 70.11 320 *eP* **P 02 50 22.1 -0.5**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,257nm,17.0s
833A Chaparral WMA, 70.12 69 IAmb IAmb 02 50 24.6
comp=Z,23nm,1.2s
833A Chaparral WMA, 70.12 69 P **P 02 50 23.1 +0.4**
baz=323
HNH Hanover 70.14 41 IAmb IAmb 02 50 23.3
comp=Z,28nm,1.2s
NCK Nalchik 70.16 319⇓ *eP* **P 02 50 23.6 +0.8**
NCK pmax pmax
comp=Z,8.0nm,0.6s
KBZ Khabaz 70.22 320 P **P 02 50 23.4 +0.3**
comp=Z,4.3nm,0.8s,baz=330,slow=5.3,SNR=9.8
KBZ LR LR 03 25 06.3
comp=Z,540nm,21.0s,baz=20,slow=39
comp=Z,4.3nm,0.8s
KBZ Khabaz 70.22 320 *c iP* **P 02 50 22.4 -0.7**
KBZ pmax pmax
comp=Z,24nm,2.0s
M57A Sunshine Farm, 70.24 45 P **P 02 50 22.6 -0.7**
baz=327,SNR=7.7
M57A P **P 02 50 22.6 -0.7**
baz=327,SNR=7.7
OXF Oxford 70.32 58 P **P 02 50 23.5 -0.3**
baz=324
J61A Chester 70.34 41 IAmb IAmb 02 50 24.4
comp=Z,33nm,1.5s
L59A Walton 70.36 43 P **P 02 50 23.1 -1.0**
baz=328,SNR=6.6
L59A P **P 02 50 23.1 -1.0**
baz=328,SNR=6.6
U49A Red Boiling Sp 70.44 54 IAmb IAmb 02 50 25.5
comp=Z,22nm,1.1s
U49A Red Boiling Sp 70.44 54 P **P 02 50 24.6 +0.1**
baz=325,SNR=13
T50A Nancy 70.46 53 IAmb IAmb 02 50 25.6
comp=Z,19nm,1.1s
T50A Nancy 70.46 53 P **P 02 50 24.7 0.0**
baz=325
T50A P **P 02 50 24.7 0.0**
baz=325
MCWV Mont Chateau 70.51 48 P **P 02 50 24.3 -0.6**
baz=327
SSPA Standing Stone 70.52 46 P **P 02 50 23.8 -1.1**
SSPA IAmb IAmb 02 50 26.2
comp=Z,24nm,1.2s
SSPA Standing Stone 70.52 46 P **P 02 50 24.0 -1.0**
baz=327
V48A Smith Brothers 70.57 55 P **P 02 50 25.6 +0.2**
baz=325,SNR=12
Q54A Coxs Mills 70.64 49 IAmb IAmb 02 50 26.5
comp=Z,36nm,1.5s
ZEI Tsey 70.65 318 *eP* **P 02 50 24.7 -1.3**
ZEI pmax pmax
comp=Z,10.0nm,1.1s
R53A Hurricane 70.69 50 P **P 02 50 25.9 -0.1**
baz=326,SNR=7.6
R53A P **P 02 50 25.9 -0.1**
baz=326,SNR=7.6
NEY Neytrino 70.70 319⇑ *eP* **P 02 50 26.7 +0.4**
HKT Hockley 70.72 65 P **P 02 50 26.3 +0.1**
HKT IAmb IAmb 02 50 27.9
comp=Z,30nm,1.6s
HKT Hockley 70.72 65 P **P 02 50 26.3 +0.1**
HKT pmax pmax
comp=Z,31nm,1.7s
Y45A Yeager Farm, C 70.78 58 P **P 02 50 27.2 +0.5**
baz=324,SNR=6.7
N58A Sunbury 70.83 45 IAmb IAmb 02 50 27.1
comp=Z,31nm,1.3s
GGN Saint George 70.87 36 IAmb IAmb 02 50 28.3
comp=Z,29nm,1.2s
SORM Soroca 71.08 331 ⇓P **P 02 50 25.9 -2.3**
SORM Soroca 71.08 331 ⇓P **P 02 50 25.9 -2.3**
KWP Kalwaria Pacla 71.16 335 *eP* **P 02 50 28.7 0.0**
KWP *eS* **SKiKP 03 00 00.1 -6.8**
OJC Ojcow 71.28 337 *eP* **P 02 50 28.7 -0.8**
AFI Afiamalu 71.30 157 LR LR 03 14 35.6
comp=Z,131nm,20.3s,baz=352,slow=30
S54A Dingess, Beckl 71.41 50 IAmb IAmb 02 50 32.2
comp=Z,32nm,1.6s
SWET Sewanee 71.42 55 P **P 02 50 28.9 -1.7**
KSP Ksiaz 71.43 340 *eP* **P 02 50 30.4 +0.1**
TZTN Tazewell 71.44 52 IAmb IAmb 02 50 31.8
comp=Z,25nm,1.2s
TZTN Tazewell 71.44 52 P **P 02 50 30.8 +0.2**
baz=326,SNR=5.1
TZTN Tazewell 71.44 52 P **P 02 50 30.3 -0.3**
baz=326,SNR=5.1
HRV Adam Dziewonsk 71.44 41 P **P 02 50 29.7 -0.8**
baz=330
X48A Hartselle 71.51 56 IAmb IAmb 02 50 31.7
comp=Z,21nm,1.1s
X48A Hartselle 71.51 56 P **P 02 50 30.8 -0.3**
baz=325,SNR=11
SOC Sochi 71.52 322 *eP* **P 02 50 29.6 -1.4**
SOC *e* 02 53 07.5
SOC *eS* **S 02 59 47.6 +0.2**
SOC *eSS* **SS 03 04 22.7 +1.2**
SOC pmax pmax
comp=Z,5.0nm,0.6s
SOC MLR MLR
comp=Z,200nm,17.0s
R55A Marlinton 71.53 49 IAmb IAmb 02 50 32.2
comp=Z,30nm,1.4s
CLL Collm 71.60 342 *i* P **P 02 50 30.7 -0.6**
CLL *i* *PP **sP 02 50 43.3 +0.9**
CLL pmax pmax
comp=Z,37nm,1.6s
CLL Collm 71.60 342 *i* P **P 02 50 30.7 -0.6**
comp=Z,37nm,1.6s
CLL *i* pP **sP 02 50 43.3 +0.9**
CLL *e* PP **PP 02 53 09.0 -0.6**
CLL *e* PPP PPP 02 54 58.0
CLL *eS* **S 02 59 54.0 +5.9**
CLL *eSS* **SS 03 04 24.0 +1.6**
CLL *e* SSS SSS 03 07 48.0
CLL *e* (SSSS) 03 09 42.0
VBMS Vicksburg 71.62 60 IAmb IAmb 02 50 33.2
comp=Z,33nm,1.1s
VBMS Vicksburg 71.62 60 P **P 02 50 31.4 -0.3**
baz=324
V51A Loudon 71.68 53 IAmb IAmb 02 50 33.0
comp=Z,38nm,1.2s
V51A Loudon 71.68 53 P **P 02 50 31.9 -0.2**
baz=326,SNR=9.6
OSTC Ostas 71.71 340 *eP* **P 02 50 30.6 -1.5**
OSTC AMS AMS 03 27 00.0
comp=Z,200nm,17.9s
CHVC Chvalec 71.72 340 *eP* **P 02 50 32.3 +0.2**
W50A Signal Mountai 71.72 55 P **P 02 50 31.4 -1.0**
W50A IAmb IAmb 02 50 33.2
comp=Z,32nm,1.1s
W50A Signal Mountai 71.72 55 P **P 02 50 32.1 -0.3**
baz=325,SNR=16
UPC Upice 71.80 340 AMS AMS 03 27 10.0
comp=Z,300nm,15.9s
PAL Palisades 71.82 43 P **P 02 50 31.3 -1.5**
baz=329
BRG Berggiesshubel 71.84 341 *eP* **P 02 50 32.9 0.0**
BRG Amp 02 50 34.8
comp=Z,21nm,1.6s
BRG *ex* x 02 50 45.1
BRG Amp 02 50 46.8
comp=Z,9.4nm,1.3s
BRG Amp 03 28 01.0
comp=Z,0.4nm,15.5s
BRG Amp 03 28 05.0
comp=N,0.2nm,13.8s
BRG Amp 03 28 06.0
comp=E,0.2nm,13.0s
BRG Berggiesshubel 71.84 341 *eP* **P 02 50 32.8 0.0**
BRG *e* 02 50 45.1
BRG pmax pmax
comp=Z,21nm,1.6s
DPC Dobruska-Polom 71.89 340 *eP* **P 02 50 33.5 +0.3**
DPC MLR MLR
comp=Z,300nm,15.3s
DPC Dobruska-Polom 71.89 340 *eP* **P 02 50 33.5 +0.3**
DPC AMS AMS 03 26 10.0
comp=Z,300nm,15.3s
CPCT Cooper Cave 71.89 54 IAmb IAmb 02 50 34.2
comp=Z,26nm,1.1s
NIE Niedzica 71.92 337 *eP* **P 02 50 34.1 +0.7**
V52A Sevierville 72.00 53 IAmb IAmb 02 50 35.0
comp=Z,25nm,1.2s
V52A Sevierville 72.00 53 P **P 02 50 34.0 0.0**
baz=326,SNR=8.8
146A Union 72.01 59 P **P 02 50 34.8 +0.7**
baz=325,SNR=11
Z47A Carrollton 72.04 58 P **P 02 50 34.3 +0.1**
baz=325,SNR=17
KRLC Kraliky 72.06 339 *eP* **P 02 50 34.6 +0.4**
KRLC MLR MLR
comp=Z,300nm,18.4s
KRLC Kraliky 72.06 339 *eP* **P 02 50 34.6 +0.4**
KRLC AMS AMS 03 26 20.0
comp=Z,300nm,18.4s
PVCC Panska Ves 72.06 341 *eP* **P 02 50 35.6 +1.5**
PVCC MLR MLR
comp=Z,300nm,15.4s
PVCC Panska Ves 72.06 341 *eP* **P 02 50 35.6 +1.5**
PVCC AMS AMS 03 26 30.0
comp=Z,300nm,15.4s
TKL Tuckaleechee C 72.06 53 LR LR 03 24 14.9
comp=Z,399nm,18.6s,baz=330,slow=38
TKL Tuckaleechee C 72.06 53 P **P 02 50 34.0 -0.4**
TKL Tuckaleechee C 72.06 53 P **P 02 50 34.0 -0.4**
TKL pmax pmax
comp=Z,19nm,1.2s
TKL Tuckaleechee C 72.06 53 P **P 02 50 34.5 +0.1**
baz=326,SNR=5.7
MORC Moravsky Berou 72.19 339 ⇓P **P 02 50 33.1 -1.9**
MORC Moravsky Berou 72.19 339 IAmb IAmb 02 50 36.6
comp=Z,36nm,1.7s
MORC Moravsky Berou 72.19 339 *eP* **P 02 50 35.1 +0.1**
SIM Simferopol' 72.22 326 *eP* P 02 50 42.0 +6.8
SIM *e* 02 53 24.0
SIM *eS* **SKiKP 03 00 02.5 -6.0**
SIM pmax pmax
comp=N,117nm,18.8s
SIM smax smax
comp=N,50nm,18.1s
U54A Nelsons Funny 72.24 51 IAmb IAmb 02 50 36.5
comp=Z,41nm,1.3s
U54A Nelsons Funny 72.24 51 P **P 02 50 35.6 +0.1**
baz=326,SNR=6.4
U54A P **P 02 50 35.6 +0.1**
baz=326,SNR=6.4
BLA Blacksburg 72.29 50 IAmb IAmb 02 50 38.9
comp=Z,28nm,1.2s
BLA Blacksburg 72.29 50 P **P 02 50 34.8 -1.0**
baz=327
Y49A Blount Mountai 72.30 56 P **P 02 50 35.4 -0.5**
Y49A Blount Mountai 72.30 56 P **P 02 50 34.9 -1.0**
baz=325,SNR=7.5
LANS Liptovska Anna 72.36 337 *eP* **P 02 50 37.5 +1.5**
LANS pmax pmax
comp=Z,7.0nm,0.8s
LANS Liptovska Anna 72.36 337 *eP* **P 02 50 37.5 +1.5**
BUR08 Bucovina Ar. S 72.38 333 P **P 02 50 34.0 -2.2**
BURAR Bucovina Array 72.40 333 ⇑P **P 02 50 35.7 -0.6**
BURAR Bucovina Array 72.40 333 ⇑P **P 02 50 36.6 +0.2**
W52A Murphy 72.46 54 IAmb IAmb 02 50 37.8
comp=Z,32nm,1.2s
W52A Murphy 72.46 54 P **P 02 50 36.7 -0.1**
baz=326,SNR=9.8
X51A Calhoun 72.46 55 IAmb IAmb 02 50 37.7
comp=Z,40nm,1.1s
X51A Calhoun 72.46 55 P **P 02 50 37.0 +0.2**
baz=326,SNR=6.2
X51A P **P 02 50 37.0 +0.2**
baz=326,SNR=6.2
S57A Dark Hollow, R 72.47 49 IAmb IAmb 02 50 37.9
comp=Z,27nm,1.2s
S57A Dark Hollow, R 72.47 49 P **P 02 50 37.1 +0.3**
baz=327,SNR=6.1
S57A P **P 02 50 37.1 +0.3**
baz=327,SNR=6.1
V53A Saluda 72.50 52 IAmb IAmb 02 50 38.1
comp=Z,23nm,1.3s
V53A Saluda 72.50 52 P **P 02 50 36.8 -0.3**
baz=326,SNR=8.1
V53A P **P 02 50 36.8 -0.3**
baz=326,SNR=8.1
GNI Garni 72.57 316 P **P 02 50 38.5 +0.9**
comp=Z,4.1nm,0.6s,baz=174,slow=4.4,SNR=7.5
GNI LR LR 03 27 04.2
comp=Z,637nm,19.8s,baz=28,slow=40
comp=Z,4.1nm,0.6s
GNI Garni 72.57 316 P **P 02 50 38.1 +0.5**
GNI Garni 72.57 316 *c iP* **P 02 50 38.3 +0.7**
GNI pmax pmax
comp=Z,17nm,1.1s
PRU Pruhonice 72.58 341 *eP* **P 02 50 37.5 +0.3**
PRU MLR MLR
comp=Z,300nm,16.7s
PRU Pruhonice 72.58 341 *eP* **P 02 50 37.5 +0.3**
PRU AMS AMS 03 26 40.0
comp=Z,300nm,16.7s
LRAL Lakeview Retre 72.69 57 P **P 02 50 37.5 -0.7**
baz=325,SNR=12
LRAL Lakeview Retre 72.69 57 P **P 02 50 37.5 -0.7**
baz=325,SNR=12
R58B Mineral 72.76 48 IAmb IAmb 02 50 39.5
comp=Z,41nm,1.4s
R58B Mineral 72.76 48 P **P 02 50 37.9 -0.6**
baz=328,SNR=7.2
R58B P **P 02 50 37.9 -0.6**
baz=328,SNR=7.2
CBN Corbin Frederi 72.78 47 P **P 02 50 37.9 -0.7**
baz=328
VRAC Vranov 72.83 339 ⇑P **P 02 50 37.6 -1.1**
VRAC Vranov 72.83 339 LR LR 03 26 22.7
comp=Z,159nm,19.0s,baz=25,slow=39
VRAC Vranov 72.83 339 ⇑P **P 02 50 37.6 -1.1**
VRAC Vranov 72.83 339 *eP* **P 02 50 38.9 +0.2**
CASEE Lake Jocassee 73.00 53 P **P 02 50 40.3 +0.3**
baz=326,SNR=10
U56A King 73.03 50 IAmb IAmb 02 50 41.0
comp=Z,31nm,1.3s
U56A King 73.03 50 P **P 02 50 40.2 0.0**
baz=327
U56A P **P 02 50 40.2 0.0**
baz=327
JAVC Velka Javorina 73.03 338 *eP* Pn 02 50 41.4 +1.0
TREC Trest 73.06 340 AMS AMS 03 27 00.0
comp=Z,300nm,16.8s
V55A Taylorsville 73.07 51 IAmb IAmb 02 50 41.3
comp=Z,23nm,1.3s
V55A Taylorsville 73.07 51 P **P 02 50 40.3 -0.1**
baz=327
V55A P **P 02 50 40.3 -0.1**
baz=327
KRUC Moravsky 73.10 339 *eP* **P 02 50 40.7 +0.4**
VYHS Vyhne 73.12 338 *eP* **P 02 50 40.3 -0.2**
VYHS pmax pmax
comp=Z,19nm,1.6s
VYHS Vyhne 73.12 338 *eP* **P 02 50 40.3 -0.2**
MSVF Nonsavu 73.24 167 LR LR 03 15 49.2
comp=Z,192nm,20.7s,baz=45,slow=30
EDFI Ende, Flores 73.27 226 P **P 02 50 41.3 -0.5**
comp=Z,4.5nm,1.2s
MEM Membach 73.36 346 *dP* **P 02 50 42.0 +0.1**
BTNL Ternell 73.37 346 *dP* **P 02 50 41.4 -0.6**
SMOL Smolenice 73.41 338 *eP* **P 02 50 43.0 +0.8**
SMOL pmax pmax
comp=Z,12nm,1.6s
Y52A Lilburn 73.41 54 IAmb IAmb 02 50 43.5
comp=Z,41nm,1.2s
Y52A Lilburn 73.41 54 P **P 02 50 42.6 +0.2**
baz=326,SNR=12
Y52A P **P 02 50 42.6 +0.2**
baz=326,SNR=12
BSTI Sart Tilman 73.45 347 *dP* **P 02 50 42.8 +0.5**
GRA1 Grafenberg Arr 73.46 343 IAmb IAmb 02 50 44.3
comp=Z,35nm,1.3s
GRFO Grafenberg 73.46 343 P **P 02 50 42.3 -0.2**
GRFO IAmb IAmb 02 50 44.2
comp=Z,37nm,1.3s
GRFO Grafenberg 73.46 343 P **P 02 50 42.3 -0.2**
GRFO pmax pmax
comp=Z,37nm,1.3s
MTN Manton Dam 73.53 215 IAmb IAmb 02 50 44.8
comp=Z,36nm,1.2s
MODS Modra-Piesok 73.57 338 *eP* **P 02 50 43.7 +0.5**
MODS Modra-Piesok 73.57 338 *eP* **P 02 50 43.7 +0.5**
KHC Kasperske Hory 73.58 341 IAmb IAmb 02 50 45.1
comp=Z,34nm,1.6s
KHC Kasperske Hory 73.58 341 *eP* **P 02 50 43.7 +0.5**
KHC MLR MLR
comp=Z,300nm,14.2s
KHC Kasperske Hory 73.58 341 *eP* **P 02 50 43.7 +0.5**
KHC AMS AMS 03 27 10.0
comp=Z,300nm,14.2s
KMSC Kings Mountain 73.61 52 P **P 02 50 43.5 -0.1**
baz=327,SNR=7.2
KMSC Kings Mountain 73.61 52 P **P 02 50 42.9 -0.7**
baz=327,SNR=7.2
BHOU Houvegnez 73.61 346 *dP* **P 02 50 44.5 +1.2**
BCLA Clavier 73.64 347 *dP* **P 02 50 43.1 -0.4**
PAULI Pauline 73.66 52 P **P 02 50 43.4 -0.4**
baz=327
CKRC Cesky Krumlov 73.74 341 *eP* **P 02 50 44.3 +0.1**
CKRC AMS AMS 03 28 20.0
comp=Z,300nm,16.2s
COVR Voineasa-Covas 73.77 332 ⇓P **P 02 50 45.0 +0.6**
BATI Baumata 73.80 223 LR LR 03 23 49.5
comp=Z,67nm,19.2s,baz=334,slow=36
DRGR 73.81 334 ⇑P Pn 02 50 44.8 +0.8
GERES GERESS Array B 73.83 341 P **P 02 50 44.9 +0.1**
comp=Z,1.5nm,0.5s,baz=34,slow=6.2,SNR=23
comp=Z,1.5nm,0.5s
GERES GERESS Array B 73.83 341 P **P 02 50 43.6 -1.1**
GERES GERESS Array B 73.83 341 P **P 02 50 43.7 -1.1**
CFR Carcaliu 73.84 330 ⇓P **P 02 50 45.7 +1.0**
CFR Carcaliu 73.84 330 ⇓P **P 02 50 46.1 +1.4**
250A Grady 73.91 57 IAmb IAmb 02 50 47.1
comp=Z,14nm,0.7s
250A Grady 73.91 57 P **P 02 50 45.3 0.0**
baz=326,SNR=5.6
HODGE Hodges 73.94 53 IAmb IAmb 02 50 46.5
comp=Z,37nm,1.2s
HODGE Hodges 73.94 53 P **P 02 50 45.5 0.0**
baz=327,SNR=10
V58A Windy Hill, Pi 74.05 50 IAmb IAmb 02 50 47.1
comp=Z,41nm,1.2s
V58A Windy Hill, Pi 74.05 50 P **P 02 50 45.5 -0.6**
baz=328,SNR=6.9
V58A P **P 02 50 45.5 -0.6**
baz=328,SNR=6.9
GOGA Godfrey 74.06 54 P **P 02 50 45.7 -0.5**
baz=326
152A Waverly Hall 74.08 56 P **P 02 50 44.9 -1.5**
152A IAmb IAmb 02 50 46.9
comp=Z,26nm,1.1s
152A Waverly Hall 74.08 56 P **P 02 50 45.7 -0.7**
baz=326,SNR=11
DSRI Dabo 74.12 245 P **P 02 50 47.4 +0.7**
HYBB Hyderabad (bro 74.16 278 *eP* **P 02 50 46.3 -0.8**
HYBB *ep* P **pP 02 50 55.2 +0.6**
HYBB *eP* P **PP 02 53 31.5 -1.0**
U59A Littleton 74.16 49 IAmb IAmb 02 50 47.9
comp=Z,28nm,1.2s
U59A Littleton 74.16 49 P **P 02 50 47.1 +0.4**
baz=328
U59A P **P 02 50 47.1 +0.4**
baz=328
MLR Muntele Rosu 74.17 332 ⇓P **P 02 50 45.8 -1.0**
MLR Muntele Rosu 74.17 332 LR LR 03 27 00.4
comp=Z,332nm,19.5s,baz=40,slow=39
MLR Muntele Rosu 74.17 332 ⇓P **P 02 50 47.6 +0.8**
BRAL Brewton 74.19 58 P **P 02 50 46.8 -0.2**
baz=326
W57A Gilead 74.20 51 IAmb IAmb 02 50 47.8
comp=Z,31nm,1.2s
W57A Gilead 74.20 51 P **P 02 50 46.9 -0.1**
baz=327,SNR=5.4
W57A P **P 02 50 46.9 -0.1**
baz=327,SNR=5.4
CONA Conrad Observa 74.29 339 *eP* **P 02 50 48.2 +0.7**
comp=Z,15nm,1.6s,SNR=6.0
JSC Jenkinsville 74.36 52 P **P 02 50 47.7 -0.2**
baz=327,SNR=5.8
BIRD Birdtown, Kers 74.41 51 P **P 02 50 47.7 -0.6**
BIRD IAmb IAmb 02 50 49.1
comp=Z,22nm,1.1s
BIRD Birdtown, Kers 74.41 51 P **P 02 50 47.8 -0.5**
baz=327
RONA Rosalia, Austr 74.42 339 *i* P **P 02 50 48.8 +0.6**
comp=Z,7.0nm,1.3s
VOIR 74.46 332 ⇓P **P 02 50 49.3 +0.8**
VOIR 74.46 332 ⇓P **P 02 50 49.3 +0.8**
ARR Arges 74.64 332 ⇑P Pn 02 50 50.2 +0.5
MOA Molln 74.68 340 *eP* **P 02 50 49.8 +0.1**
comp=Z,2.4nm,0.7s
DIKM Dikmen 74.78 324 ⇓P **P 02 50 50.7 +0.4**
154A Montrose 74.89 54 P **P 02 50 51.2 +0.1**
baz=327,SNR=9.0
352A Blakely 74.96 56 IAmb IAmb 02 50 52.4
comp=Z,28nm,1.2s
HAW Hawthorne Fire 74.96 53 P **P 02 50 51.1 -0.3**
baz=327,SNR=6.9
X58A Rowland 74.99 51 IAmb IAmb 02 50 52.6
comp=Z,40nm,1.4s
CNNC Cliffs of the 75.06 49 P **P 02 50 51.6 -0.3**
CNNC Cliffs of the 75.06 49 P **P 02 50 51.6 -0.3**
baz=328
GZR Gura Zlata 75.09 334 ⇓P **P 02 50 51.1 -1.0**
GZR Gura Zlata 75.10 334 ⇓P Pb 02 50 51.1 +0.2
BZS Buzias 75.18 335 ⇑P **P 02 52.1 -0.4**
BZS Buzias 75.18 335 ⇓P **P 02 52.3 -0.2**
KBA Koelnbreinsper 75.60 341 *eP* **P 02 50 56.1 +1.0**
comp=Z,38nm,1.6s
TIGA Tifton 75.64 55 P **P 02 50 55.7 +0.3**
baz=327,SNR=6.1
TIGA Tifton 75.64 55 P **P 02 50 55.0 -0.3**
baz=327,SNR=6.1
SOKA Soboth 75.65 339 *eP* **P 02 50 55.8 +0.5**
comp=Z,6.7nm,1.0s
RETA Reutte 75.67 343 *eP* **P 02 50 55.9 +0.5**
comp=Z,12nm,1.7s
WATA Walderalm 75.68 342 *eP* **P 02 50 55.6 +0.1**
comp=Z,15nm,1.5s,SNR=7.2
WTTA Wattenberg 75.73 342 *eP* **P 02 50 56.3 +0.4**
comp=Z,21nm,1.4s,SNR=8.1
MOTA Moosalm 75.75 342 *eP* **P 02 50 55.9 0.0**
comp=Z,17nm,1.3s,SNR=5.1
255A Hazlehurst 75.76 54 P **P 02 50 56.6 +0.6**
baz=327,SNR=9.6
NHSC New Hope 75.83 52 P **P 02 50 56.5 +0.1**
baz=328
ILGA Ilgaz 75.83 324 P **P 02 50 56.3 -0.3**
ILGA IAmb IAmb 02 50 57.8
comp=Z,38nm,1.2s
SQTA Sankt Quirin 75.85 342 *eP* **P 02 50 56.9 +0.4**
comp=Z,5.5nm,0.7s
OBKA Obir 75.91 340 *eP* **P 02 50 57.2 +0.3**
comp=Z,14nm,1.1s
FRGS Fruska Gora 76.05 336 ⇓P **P 02 50 56.2 -1.4**
ABTA Abfaltersbach 76.07 341 *eP* **P 02 50 58.0 +0.3**
comp=Z,16nm,1.3s
FETA Feichten 76.13 342 *eP* **P 02 50 58.4 +0.2**
comp=Z,12nm,1.3s,SNR=5.4
DAVOX Davos/Dischmat 76.51 343 LR LR 03 28 36.1
comp=Z,216nm,19.4s,baz=26,slow=39
CTA Charters Tower 76.57 199 LR LR 03 21 53.2
comp=Z,153nm,18.9s,baz=72,slow=34
DZM Mont Dzumac 76.77 179 *e*LR LR 03 14 53.8
comp=Z,116nm,21.6s
BR131 Keskin Array S 77.05 324 P **P 02 51 01.1 -2.3**
BR131 IAmb IAmb 02 51 04.5

comp=Z,59nm,2.0s
BR131 Keskin Array S 77.05 324*d i*P P 02 51 03.4 0.0
BRTR Keskin Array B 77.05 324 P P 02 51 03.2 -0.2
comp=Z,3.7nm,0.7s,baz=60,slow=3.7,SNR=26
BRTR LR LR 03 31 57.6
comp=Z,125nm,18.1s,baz=36,slow=41
comp=Z,3.7nm,0.7s
BNN Bunyan 77.06 322 P P 02 51 01.5 -2.0
VTS Vitosha 77.56 332 ⇑P P 02 51 05.3 -1.0
VTS Vitosha 77.56 332 ⇑P P 02 51 05.3 -1.0
TEOL Teolo 77.57 341 P P 02 51 05.2 -0.9
TAOE Nuku Hiva Isla 78.09 125 *e*LR LR 03 15 32.0
comp=Z,293nm,25.7s
RDO Rodhopi 78.29 330 IAmb IAmb 02 51 11.6
comp=Z,43nm,1.8s
PDG Podgorica 78.75 335 ⇓P P 02 51 11.6 -1.0
WB0 Warramunga Arr 79.05 210 P P 02 51 13.4 -1.0
WB0 IAmb IAmb 02 51 15.7
comp=Z,36nm,1.5s
WR0 Warramunga Arr 79.19 209 P P 02 51 14.4 -0.7
WRAB Tennant Creek 79.22 210 P P 02 51 14.8 -0.5
WRAB IAmb IAmb 02 51 18.5
comp=Z,36nm,1.6s
WRAB Tennant Creek 79.22 210⇑ *i*P P 02 51 14.7 -0.6
WRAB pmax pmax
comp=Z,18nm,1.3s
WB2 Warramunga Arr 79.22 210 P P 02 51 14.9 -0.5
WB2 IAmb IAmb 02 51 16.7
comp=Z,28nm,1.4s
WRA Warramunga Arr 79.23 210 P P 02 51 15.6 +0.2
comp=Z,4.0nm,0.7s,baz=25,slow=6.0,SNR=67
WRA LR LR 03 27 39.4
comp=Z,96nm,18.8s,baz=28,slow=37
comp=Z,4.0nm,0.7s
WRA Warramunga Arr 79.23 210 P P 02 51 14.6 -0.8
DWPF Disney Wildern 79.44 56 P P 02 51 16.8 +0.2
baz=328
FITZ Fitzroy Crossi 80.30 218 P P 02 51 21.9 +0.8
comp=Z,3.5nm,0.3s,baz=48,slow=2.7,SNR=3.7
FITZ LR LR 03 28 47.4
comp=Z,55nm,18.6s,baz=29,slow=37
comp=Z,3.5nm,0.3s
PALK Pallekele 81.08 270 LR LR 03 30 48.5
comp=Z,95nm,21.9s,baz=139,slow=38
RAR Rarotonga 81.52 147 LR LR 03 25 50.3
comp=Z,107nm,18.3s,baz=306,slow=34
PPT Papeete 81.75 137 LR LR 03 23 57.8
comp=Z,240nm,18.1s,baz=321,slow=33
PPT2 Papeete2 81.77 137 *e*LR LR 03 17 13.8
comp=Z,264nm,22.5s
MMAI Mount Meron Ar 82.42 320 LR LR 03 31 10.1
comp=Z,175nm,19.8s,baz=195,slow=38
TIP Timpagrande 82.43 336 ⇓P P 02 51 30.6 -2.0
TIP Timpagrande 82.43 336 P P 02 51 30.8 -1.7
ASAR Alice Springs 82.88 209 P P 02 51 35.6 +0.8
comp=Z,11nm,1.0s,baz=17,slow=5.1,SNR=50
ASAR LR LR 03 29 44.9
comp=Z,143nm,18.4s,baz=349,slow=37
comp=Z,11nm,1.0s
ASAR Alice Springs 82.88 209 P P 02 51 34.6 -0.2
ASAR Alice Springs 82.88 209 P P 02 51 34.6 -0.2
PBRG Braganca 83.33 354 *e*P P 02 51 38.2 +1.1
comp=Z,36nm,1.6s
IDI Anoyia 83.91 328 LR LR 03 34 00.6
comp=Z,100nm,19.0s,baz=32,slow=39
PVRL Vila Real 83.91 355 *e*P P 02 51 41.1 +1.0
MVO Moncorvo 83.99 354 *e*P P 02 51 41.6 +1.1
PVIS Viseu 84.48 355 *e*P P 02 51 43.8 +0.8
VAE Valguarnera 84.59 337 LR LR 03 35 45.8
comp=Z,149nm,18.1s,baz=158,slow=40
MTE Manteigas 84.78 355 *e*P P 02 51 45.2 +0.7
COI Coimbra 85.01 355 *e*P P 02 51 46.6 +1.0
PCAS Casmilo, Conde 85.17 355 *e*P P 02 51 46.7 +0.2
comp=Z,61nm,2.0s
ESDC Sonseca Array 85.26 352 P P 02 51 47.1 +0.2
comp=Z,5.7nm,0.8s,baz=358,slow=5.1,SNR=68
comp=Z,5.7nm,0.8s
PCBR Castelo Branco 85.33 355 *e*P P 02 51 47.7 +0.5
PAB San Pablo 85.42 352 P P 02 51 47.8 0.0
PAB San Pablo 85.42 352 P P 02 51 47.8 0.0
PAB pmax pmax
comp=Z,60nm,1.9s
EIL Elat 85.59 318 LR LR 03 35 56.8
comp=Z,298nm,18.2s,baz=53,slow=40
PSBE So Bento 85.72 356 *e*P P 02 51 49.6 +0.4
comp=Z,52nm,1.6s
PMRV Marv??o 85.74 354 *e*P P 02 51 49.2 -0.1
comp=Z,29nm,2.4s
PMTG Montargil 86.14 355 A A 02 51 54.5
comp=Z,28nm,1.6s
PESTR Estremoz 86.31 355 A A 02 51 54.3
comp=Z,25nm,1.2s
RAYN Ar Rayn 86.53 307 P P 02 51 52.2 -1.2
RAYN IAmb IAmb 02 51 53.9
comp=Z,29nm,1.8s
RAYN Ar Rayn 86.53 307 P P 02 51 52.3 -1.2
EVO Evora 86.66 355 *e*P P 02 51 54.2 +0.4
PBAR Barrancos 86.97 354 *e*P P 02 51 55.6 +0.3
TBI Tubuai 87.04 139 *e*LR LR 03 19 40.4
comp=Z,196nm,22.2s
STKA Stephens Creek 88.93 200 P P 02 52 05.3 +0.9
comp=Z,3.6nm,0.8s,baz=353,slow=8.1,SNR=6.8
STKA LR LR 03 31 06.7
comp=Z,150nm,19.3s,baz=26,slow=35
comp=Z,3.6nm,0.8s
STKA Stephens Creek 88.93 200 P P 02 52 04.5 +0.1
STKA Stephens Creek 88.93 200⇓ *i*P P 02 52 04.7 +0.3
SJG San Juan 95.04 48 LR LR 03 38 03.8
comp=Z,84nm,20.1s,baz=320,slow=37
ATD Arta Tunnel 98.16 303 LR LR 03 42 58.9
comp=Z,258nm,19.1s,baz=14,slow=39
RPZ Rata Peaks 98.46 176 LR LR 03 36 51.7
comp=Z,100nm,18.1s,baz=308,slow=35
MAW Mawson 143.42 219 PKP PKPbc 02 58 41.6 +1.1
comp=Z,1.8nm,0.5s,baz=74,slow=1.8,SNR=6.8

ROM 22 02:48:59.2±0.1, 42°02N±0°01×15°246E±0°006, h10km±1km, ML2.1/7, Error ellipse: s-maj=1.1km s-min=0.5km az=12.0, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TREM	**Isole Tremiti**	**0.22**	**62**	P	Pg	02 49 04.6	+0.7
TREM				S	Sg	02 49 08.9	+1.9
TREM				AML	AML		
	comp=E,1255μm,0.6s						
TREM				AML	AML		
	comp=N,1180μm,0.2s						
MELA	**Melanico ??? S**	**0.33**	**196**	P	Pg	02 49 06.1	+0.4
MELA				S	Sb	02 49 11.7	-0.6
MELA				AML	AML		
	comp=E,552μm,0.2s						
MELA				AML	AML		
	comp=N,326μm,1.5s						
MELA				AML	AML		
	comp=N,283μm,0.8s						
MELA				AML	AML		
	comp=E,546μm,0.2s						
APRC	**Apricena**	**0.34**	**140**	P	Pg	02 49 06.3	+0.2
APRC				S	Sb	02 49 12.2	-0.7
APRC				AML	AML		
	comp=N,424μm,0.3s						
APRC				AML	AML		
	comp=E,375μm,0.2s						
APRC				AML	AML		
	comp=N,423μm,0.3s						
CIGN	**Sant'Elia a Pi**	**0.45**	**215**	P	Pg	02 49 08.3	+0.3
CIGN				S	Sb	02 49 14.9	-0.9
CIGN				AML	AML		
	comp=E,53μm,1.6s						
CIGN				AML	AML		
	comp=N,56μm,1.6s						
CIGN				AML	AML		
	comp=E,53μm,1.6s						
CIGN				AML	AML		
	comp=N,56μm,1.6s						
SGRT	**San Giovanni R**	**0.46**	**125**	P	Pg	02 49 08.2	+0.1
SGRT				S	Sg	02 49 15.2	+1.0
SGRT				AML	AML		
	comp=N,234μm,1.6s						
SGRT				AML	AML		
	comp=E,343μm,0.7s						
GATE	**Gambatesa**	**0.56**	**207**	P	Pb	02 49 10.8	-0.4
TRIV	**Trivento**	**0.58**	**244**	P	Pg	02 49 10.8	+0.4
TRIV				S	Sb	02 49 19.4	-0.3
MSAG	**Monte S. Angel**	**0.58**	**122**	P	Pg	02 49 10.4	-0.1
MSAG				S	Sb	02 49 19.6	-0.3
MSAG				AML	AML		
	comp=E,351μm,0.6s						
MSAG				AML	AML		
	comp=E,350μm,0.6s						
MSAG				AML	AML		
	comp=N,591μm,0.6s						
BSSO	**Busso**	**0.68**	**226**	P	Pg	02 49 12.0	-0.4
BSSO				AML	AML		
	comp=E,16μm,1.6s						
BSSO				AML	AML		
	comp=N,21μm,1.3s						
BSSO				AML	AML		
	comp=E,16μm,1.6s						
LPEL	**Lama dei Pelig**	**0.79**	**272**	P	Pg	02 49 13.8	-0.7
LPEL				AML	AML		
	comp=N,123μm,0.3s						
LPEL				AML	AML		
	comp=E,168μm,0.3s						
CAPA	**Cerignola FG**	**0.96**	**153**	P	Pg	02 49 17.1	-0.6
INTR	**Introdacqua**	**1.00**	**270**	P	Pg	02 49 17.9	-0.6
INTR				S	Sg	02 49 31.3	-0.2
INTR				AML	AML		
	comp=N,126μm,0.3s						
INTR				AML	AML		
	comp=E,54μm,0.4s						
PALZ	**Palazzo San Ge**	**1.20**	**153**	P	Pb	02 49 21.2	-0.8
PALZ				S	Sb	02 49 37.3	-0.3
MIGL	**Miglionico**	**1.68**	**147**	AML	AML		
	comp=E,77μm,1.5s						
MIGL				AML	AML		
	comp=N,94μm,1.2s						
VIVA	**Pratoni del Vi**	**1.87**	**263**	S	Sg	02 49 60.0	+0.7
MPRI	**Monte Prat**	**4.52**	**340**	S	Sn	02 50 58.0	-2.4
CRJA	**Costa Raja**	**4.55**	**203**	P	Pg	02 50 22.9	-3.5

IDC 22 02:50:57.9±2.4, 5°44N×126°00E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=208.7km s-min=27.6km az=65.0
MAN 22 02:51:07, 5°88N×126°49E, h17km, Ms2.7
ISC 22 02:50:58.2±1.6, 5°8N±0°2×126°7E±0°2, h10km, n5, σ0s43/5, mb3.4/3, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.04**	**288**⇓ *e*P		Pn	02 51 22.4	+3.5
DDMP				*e*S	**Sn**	**02 51 33.5**	**+0.1**
BUKP	**Musuan**	**2.65**	**322**⇓ *e*P		Pb	02 51 42.7	-3.0
BUKP				*e*S	**Sb**	**02 52 18.1**	**-0.3**
WRA	**Warramunga Arr**	**26.64**	**164**	P	**P**	**02 56 37.6**	**+0.3**
	0.5nm,0.6s,baz=341,slow=10,SNR=10						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**30.10**	**167**	P	**P**	**02 57 07.8**	**-0.4**
	0.2nm,0.3s,baz=344,slow=7.0,SNR=2.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.87**	**324**	P	**P**	**03 00 36.4**	**+0.2**
	0.7nm,0.8s,baz=116,slow=6.4,SNR=4.8						
	0.7nm,0.8s						

VIE 22 02:51:51.0±0.2, 46°13N×15°05E, h0km, mb1.9/2, ml2.4/6, Error ellipse: s-maj=1.9km s-min=1.4km az=130.0 20 km SW of Celje Suspected Mining induced.
LJU 22 02:51:50.9, 46°13N×15°02E, h6km, ML1.7, 4C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDKS	**Podkum**	**0.07**	**194**⇓ *i*Pg		Pg	02 51 52.7	-0.1
PDKS				*i* Sg	Sg	02 51 54.3	+0.3
VNDS	**Vrh nad Dolski**	**0.23**	**262**⇑ *i*Pg		Pg	02 51 55.9	+0.5
VNDS				*i* Sg	Sg	02 51 58.4	+0.1
VNDS				IAML		02 51 58.8	
	comp=Z,47nm,0.1s						
LEGS	**Legarje**	**0.28**	**132**⇑ *i*Pg		Pg	02 51 56.6	+0.3
CESS	**Cesta pri Krsk**	**0.34**	**118**⇓ *i*Pg		Pg	02 51 58.0	+0.3
CESS				*i* Sg	Sg	02 52 03.3	+1.2
CESS				IAML		02 52 04.1	
	comp=Z,36nm,0.1s						
VISS	**Visnje**	**0.35**	**201**⇑ *e*Pg		Pg	02 51 58.0	+0.2
LJU	**Ljubljana**	**0.36**	**256** *e*Pg		Pb	02 51 58.8	-0.9
CRES	**Cresnjev**	**0.43**	**135** *e*Pg		Pg	02 51 59.2	-0.1
MOZS	**Mozjanca**	**0.43**	**292** *i* Pg		Pg	02 51 59.7	+0.4
GOLS	**Golise**	**0.44**	**106**⇑ *e*Pg		Pg	02 51 59.7	+0.3
GBAS	**Gorenja Brezov**	**0.45**	**244**⇓ *i*Pg		Pg	02 52 00.1	+0.4
GROS	**Grobnik**	**0.47**	**45** *i* Pg		Pg	02 51 59.8	-0.1
GCIS	**Gornji Cirnik**	**0.50**	**122** *e*Pg		Pg	02 52 00.8	+0.3
GCIS				*i* Sg	Sg	02 52 07.4	+0.4
OBKA	**Obir**	**0.50**	**319** *e*Pg		Pg	02 52 00.9	+0.3
	comp=Z,2.3nm,0.1s,SNR=42						
PERS	**Pernice**	**0.51**	**7** *i* Pg		Pg	02 52 00.7	0.0
CRNS	**Crni Vrh**	**0.53**	**265** *i* Pg		Pg	02 52 01.6	+0.4
SOKA	**Soboth**	**0.54**	**1** *e*Pg		Pg	02 52 01.3	-0.1
	comp=Z,1.9nm,0.2s,SNR=48						
CEY	**Cerknica**	**0.57**	**227** *i* Pg		Pg	02 52 02.4	+0.4
OZLJ	**Ozalj**	**0.60**	**149** *e*Pg		Pg	02 52 02.0	-0.5
GBRS	**Gornja Briga**	**0.62**	**194** *i* Pg		Pg	02 52 03.0	+0.1
BOJS	**Bojanci**	**0.65**	**166** *i* Pg		Pg	02 52 03.4	0.0
PTJ	**Puntijarka**	**0.70**	**109** *e*Pg		Pb	02 52 05.0	-0.5
JAVS	**Javornik**	**0.71**	**251** *i* Pg		Pg	02 52 04.6	+0.1
LOBO	**Lobor**	**0.73**	**88** *e*Pg		Pg	02 52 04.6	-0.2
LOBO					Sb	02 52 15.6	-0.6
VOJS	**Vojsko**	**0.80**	**263** *i* Pg		Pg	02 52 06.3	0.0
KALN	**Kalnik**	**1.00**	**90** *e*Pg		Pg	02 52 09.4	-0.6
ARSA	**Arzberg**	**1.17**	**17** Pg		Pg	02 52 12.5	-0.8
	comp=Z,7.4nm,0.3s,SNR=16						
MOSL	**Moslavina**	**1.32**	**113** *e*Pg		Pn	02 52 15.8	0.0
PLIT	**Plitvice**	**1.32**	**161** *e*Pg		Pn	02 52 15.9	0.0
KBA	**Koelnbreinsper**	**1.49**	**310** Pg		Pg	02 52 20.0	+0.5
	comp=Z,3.5nm,0.2s						
MOA	**Molln**	**1.79**	**343** Pg		Pg	02 52 26.1	+0.8
	comp=Z,2.6nm,0.5s						
ABTA	**Abfaltersbach**	**1.84**	**290** Pg		Pg	02 52 26.7	+0.5
	comp=Z,2.6nm,0.4s						

IDC 22 02:57:28.4±0.8, 0°03N×17°81W, h0km, mb4.2/10, mbtmp4.2/12, ML4.6/2, MS2.9/1, Error ellipse: s-maj=23.7km s-min=22.0km az=14.0
NEIC 22 02:57:30.7±1.6, 0°03N±0°08×17°72W±0°05, h10km±1km, mb4.7/30, Error ellipse: s-maj=15.0km s-min=5.6km az=204.0
ISC 22 02:57:32.1±0.4, 0°04N±0°08×17°77W±0°07, h23km, n61, σ0s83/55, mb4.5/25, 3C, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.47**	**157**	T	T	03 08 19.2	
	baz=348,SNR=373						
H10N3	**ASCENSION HYDR**	**8.48**	**157**	T	T	03 08 21.6	
	baz=348,slow=74,SNR=262						
H10N1	**ASCENSION HYDR**	**8.49**	**157**	T	T	03 08 27.9	
	baz=348,slow=74						
ASCN	**Ascension**	**8.62**	**157**	Pn	**Pn**	**02 59 34.6**	**-0.9**
H10S3	**ASCENSION HYDR**	**9.46**	**161**	T	T	03 09 06.2	
	SNR=85						
H10S2	**ASCENSION HYDR**	**9.47**	**161**	T	T	03 09 38.7	
	SNR=20						
LIC	**Lamto**	**14.12**	**64**⇑ *e*P		**Pn**	**03 00 51.6**	**+0.7**
	7.0nm,0.5s						
TIC	**Toumodi**	**14.31**	**62**⇑ *e*P		**Pn**	**03 00 52.4**	**-1.2**
	5.3nm,0.4s						
KIC	**Kosan Boka**	**14.44**	**64**⇑ *e*P		**Pn**	**03 00 54.9**	**-0.4**
	6.9nm,0.3s						
DBIC	**Dimbokro**	**14.47**	**63** Pn		**Pn**	**03 00 55.0**	**-0.7**
	1.7nm,0.3s,baz=253,slow=14,SNR=41						
DBIC				Sn	Sn	03 03 25.4	-10
	1.9nm,0.3s,baz=170,slow=14,SNR=5.4						
DBIC				LR	LR	03 05 19.5	
	comp=Z,54nm,20.6s,baz=243,slow=32						
	4.0nm,0.3s						
DBIC	**Dimbokro**	**14.47**	**63** Pn		**Pn**	**03 00 53.6**	**-2.1**
BBTS	**Babate**	**14.58**	**5** Pn		**Pn**	**03 00 55.8**	**-1.4**
	3.9nm,0.3s,baz=267,slow=0.7,SNR=15						
BBTS				Sn	Sn	03 03 25.4	-13
	0.6nm,0.3s,baz=141,slow=20,SNR=1.6						
	7.2nm,0.3s						
RCBR	**Riachuelo**	**19.02**	**252**	P	**Pn**	**03 01 52.9**	**-0.5**
KOWA	**Kowa**	**19.79**	**43**	P	**P**	**03 02 00.8**	**-0.2**
TOA0	**Torodi Ar. Sit**	**23.28**	**55**	P	**P**	**03 02 38.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**23.28**	**55**	P	**P**	**03 02 37.9**	**-0.5**
	4.2nm,0.8s,baz=249,slow=11,SNR=15						
TORD	**Torodi Ar. Bea**	**23.28**	**55**	P	**P**	**03 02 37.8**	**-0.5**
BDFB	**Brasilia**	**33.68**	**241**	P	**P**	**03 04 10.8**	**-1.1**
	1.2nm,0.5s,baz=73,slow=9.6,SNR=3.2						
	1.2nm,0.5s						
BDFB	**Brasilia**	**33.68**	**241**	P	**P**	**03 04 11.7**	**-0.2**
BOAV	**Boa Vista**	**42.80**	**273**	P	**P**	**03 05 29.4**	**+0.8**
BOAV				IAmb	IAmb	03 05 32.8	
	comp=Z,5.5nm,1.1s						
PTLB	**Pontes e Lacer**	**43.65**	**247**	P	**P**	**03 05 36.4**	**+1.0**
PTLB				IAmb	IAmb	03 05 45.7	
	comp=Z,1.4nm,0.9s						
LSZ	**Lusaka**	**47.88**	**111**	P	**P**	**03 06 09.7**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=324,slow=6.4,SNR=5.2						
	comp=Z,1.3nm,0.3s						
SUR	**Sutherland**	**48.62**	**135**	P	**P**	**03 06 14.6**	**0.0**
	comp=Z,4.9nm,0.7s,baz=297,slow=11,SNR=1.1						
	comp=Z,4.9nm,0.7s						
SUR	**Sutherland**	**48.62**	**135**	P	**P**	**03 06 14.3**	**-0.3**
LBTB	**Lobatse**	**48.76**	**124**	P	**P**	**03 06 15.4**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=283,slow=5.9,SNR=5.0						
	comp=Z,2.8nm,0.8s						
LBTB	**Lobatse**	**48.76**	**124**	P	**P**	**03 06 15.7**	**+0.1**
LBTB				IAmb	IAmb	03 06 54.5	
	comp=Z,16nm,1.5s						
ETMB	**Extrema**	**49.18**	**257**	P	**P**	**03 06 18.2**	**-0.7**
ETMB				IAmb	IAmb	03 06 21.0	
	comp=Z,0.6nm,0.6s						
BIRV	**Birongo**	**49.32**	**284**	P	**P**	**03 06 20.1**	**+0.1**
BOSA	**Boshof**	**50.03**	**128**	P	**P**	**03 06 24.9**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=297,slow=7.7,SNR=9.3						
	comp=Z,2.9nm,0.6s						
BOSA	**Boshof**	**50.03**	**128**	P	**P**	**03 06 24.4**	**-1.0**
TIP	**Timpagrande**	**50.15**	**35**	P	**P**	**03 06 28.9**	**+2.9**
TIP				IAmb	IAmb	03 06 32.3	
	comp=Z,5.7nm,1.3s						
BAUV	**El Baul**	**50.83**	**281**	P	**P**	**03 06 31.6**	**+0.1**
BAUV				IAmb	IAmb	03 06 44.0	
	comp=Z,12nm,1.2s						
POGA	**Pongola**	**54.72**	**124**	P	**P**	**03 07 00.3**	**+0.3**
BANI	**BANI**	**54.75**	**293**	P	**P**	**03 07 00.9**	**+0.4**
AC02	**Maricunga**	**56.11**	**237**	P	**P**	**03 07 10.9**	**+0.2**
AC02				IAmb	IAmb	03 07 17.2	
	comp=Z,11nm,1.2s						
VA03	**San Esteban**	**59.38**	**231**	P	**P**	**03 07 34.1**	**+1.0**
BRTR	**Keskin Array B**	**61.22**	**43**	P	**P**	**03 07 46.0**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=248,slow=5.6,SNR=5.7						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**61.22**	**43**	P	**P**	**03 07 46.8**	**+1.2**
BATG	**Bathurst New B**	**63.03**	**325**	P	**P**	**03 07 57.6**	**+0.2**
BATG				IAmb	IAmb	03 08 13.1	
	comp=Z,11nm,1.2s						
FINES	**FINESS Array B**	**69.69**	**21**	P	**P**	**03 08 40.3**	**+0.6**
FIA1	**FINESS Array S**	**69.69**	**21**	P	**P**	**03 08 39.4**	**-0.4**
FIA1				IAmb	IAmb	03 08 48.5	
	comp=Z,9.2nm,1.1s						
VNA2	**Neumayer--Watz**	**71.17**	**176**	P	**P**	**03 08 49.2**	**+0.5**
	baz=337,slow=6.0						
SNAA	**Sanae**	**72.24**	**175**	P	**P**	**03 08 55.4**	**+0.3**
SNAA	**Sanae**	**72.24**	**175**	P	**P**	**03 08 55.2**	**0.0**
SNAA				IAmb	IAmb	03 08 56.4	
	comp=Z,4.4nm,0.8s						
LRAL	**Lakeview Retre**	**72.64**	**305**	P	**P**	**03 08 58.6**	**+0.3**
LRAL				IAmb	IAmb	03 09 32.6	
	comp=Z,5.0nm,1.3s						
Z47A	**Carrollton**	**73.56**	**305**	P	**P**	**03 09 04.2**	**+0.5**
Z47A				IAmb	IAmb	03 09 07.1	
	comp=Z,6.1nm,0.8s						
CCM	**Cathedral Cave**	**77.00**	**309**	P	**P**	**03 09 22.3**	**-1.1**
CCM				IAmb	IAmb	03 09 23.4	
	comp=Z,3.4nm,0.7s						
MGMO	**Mountain Grove**	**77.65**	**308**	P	**P**	**03 09 26.9**	**-0.2**
MGMO				IAmb	IAmb	03 09 29.7	
	comp=Z,10nm,1.4s						
BELA	**Belgrano 2**	**78.37**	**184**	P	**P**	**03 09 30.1**	**-0.2**
BELA				IAmb	IAmb	03 09 31.0	
	comp=Z,3.4nm,0.8s						
E38A	**The Farm, Brul**	**78.87**	**218**	P	**P**	**03 09 33.3**	**-0.3**
E38A				IAmb	IAmb	03 10 04.2	
	comp=Z,5.6nm,1.1s						
ABKAR	**Akbulak array**	**81.95**	**40**	P	**P**	**03 09 49.9**	**-0.2**
MSTX	**Muleshoe**	**85.83**	**304**	P	**P**	**03 10 10.0**	**-0.4**
MSTX				IAmb	IAmb	03 10 14.0	
	comp=Z,7.1nm,1.0s						
TXAR	**Lajitas Array**	**86.40**	**299**	P	**P**	**03 10 13.8**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=108,slow=6.7,SNR=8.4						
	comp=Z,1.6nm,1.0s						
TX31	**Lajitas Ar. Si**	**86.40**	**299**	P	**P**	**03 10 11.8**	**-1.6**
TX32	**Lajitas Array**	**86.40**	**299**	P	**P**	**03 10 12.2**	**-1.2**
TX32				IAmb	IAmb	03 10 24.4	
	comp=Z,7.7nm,1.4s						
MAW	**Mawson**	**86.46**	**158**	P	**P**	**03 10 13.4**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=233,slow=2.7,SNR=4.2						
	comp=Z,1.4nm,0.8s						
GDL2	**Guadalupe Moun**	**87.09**	**302**	P	**P**	**03 10 16.1**	**-0.6**
QSPA	**South Pole Qui**	**90.11**	**180**	P	**P**	**03 10 29.8**	**-0.4**
QSPA				IAmb	IAmb	03 10 42.3	
	comp=Z,6.6nm,1.1s						
YKA	**Yellowknife Ar**	**93.13**	**333**	P	**P**	**03 10 44.0**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=76,slow=5.2,SNR=3.8						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**143.84**	**132**	PKP	PKPbc	03 17 03.9	-0.2
	comp=Z,0.6nm,0.6s,baz=233,slow=2.2,SNR=7.0						
WRA	**Warramunga Arr**	**146.28**	**128**	PKPbc	**PKPbc**	**03 17 11.1**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=235,slow=2.7,SNR=7.0						

NEIC 22 03:11:02.2±1.1, 18°70N±0°03×145°5E±0°1, h178km±6km, mb4.5/100, Error ellipse: s-maj=14.9km s-min=3.4km az=96.0
IDC 22 03:11:04.0±1.5, 18°66N×145°43E, h206km±15km, mb3.8/18, mbtmp4.3/20, Error ellipse: s-maj=17.7km s-min=9.9km az=87.0
ISC 22 03:11:03.5±0.4, 18°68N±0°05×145°40E±0°10, h200km, n135, σ0s86/136, mb4.4/65, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.09**	**186**	P	**Pn**	**03 12 20.1**	**+0.9**
	82nm,0.3s,baz=0.0,slow=9.1,SNR=26						
GUMO				S	**Sn**	**03 13 17.9**	**-1.0**
	134nm,0.4s,baz=346,slow=21,SNR=9.6						
GUMO	**Guam**	**5.09**	**186**	Pn	**Pn**	**03 12 17.4**	**-1.8**
JCJ	**Chichijima**	**8.88**	**341**	S	**Sn**	**03 14 45.0**	**-2.9**
	128nm,0.6s,baz=297,slow=21,SNR=1.6						
JOW	**Kunigami**	**17.74**	**300**		**Pn**	**03 14 58.7**	**+0.2**
JMN	**Monobe**	**18.18**	**328**	Pn	**Pn**	**03 15 04.2**	**+0.5**
JMN				IAmb	IAmb	03 15 11.1	
	comp=Z,45nm,1.4s						
MJAR	**Matsushiro Arr**	**18.88**	**342**	P	**P**	**03 15 09.8**	**+0.9**
	comp=Z,2.9nm,0.6s,baz=165,slow=9.4,SNR=6.9						
JSD	**Sado**	**20.27**	**344**	P	**P**	**03 15 24.7**	**+1.0**
JSD				IAmb	IAmb	03 15 40.7	
	comp=Z,24nm,1.2s						
JTM	**Tenmabayashi**	**22.34**	**351**	P	**P**	**03 15 46.2**	**+1.4**
KSRS	**Korea Array**	**24.16**	**324**	P	**P**	**03 16 01.8**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=149,slow=9.0,SNR=7.0						
	comp=Z,1.7nm,0.6s						
KLR	**Kul'dur**	**32.40**	**343**	P	**P**	**03 17 14.5**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=140,slow=12,SNR=9.7						
	comp=Z,4.1nm,0.6s						
MTN	**Manton Dam**	**34.34**	**205**	P	**P**	**03 17 31.8**	**+0.3**
MTN				IAmb	IAmb	03 17 59.9	
	comp=Z,24nm,1.4s						
PEA0B	**Petropavlovsk-**	**35.67**	**13**	P	**P**	**03 17 43.8**	**+1.4**
PEA0B				IAmb	IAmb	03 17 44.1	
	comp=Z

comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,80nm,6.0s
FITZ Fitzroy Crossi 41.39 209 P **P** **03 18 31.3 +0.9**
FITZ IAmb IAmb 03 18 51.0
comp=Z,15nm,1.5s
SONM Songino Array 42.98 322 P **P** **03 18 43.3 +0.1**
comp=Z,1.1nm,0.5s,baz=140,slow=9.4,SNR=6.1
comp=Z,1.1nm,0.5s
SONM Songino Array 42.98 322 P **P** **03 18 43.2 +0.1**
ASAR Alice Springs 43.56 195 P **P** **03 18 48.0 +0.1**
comp=Z,0.5nm,0.6s,baz=18,slow=6.6,SNR=8.5
comp=Z,0.5nm,0.6s
SEY Seymchan 44.47 5 P **P** **03 18 55.7 +1.1**
comp=Z,1.7nm,0.2s,baz=240,slow=16,SNR=5.6
comp=Z,1.7nm,0.2s
ADK Adak 44.49 33 P **P** **03 18 55.4 +0.6**
DZM Mont Dzumac 45.44 152 P **P** **03 19 02.0 -0.8**
DZM IAmb IAmb 03 19 12.1
comp=Z,25nm,1.4s
MBWA Marble Bar 46.90 214 P **P** **03 19 14.5 +0.4**
MBWA IAmb IAmb 03 19 52.9
comp=Z,34nm,1.4s
PSA00 Pilbara Seismi 47.18 213 P **P** **03 19 17.1 +0.7**
PSA00 IAmb IAmb 03 19 22.3
comp=Z,29nm,1.4s
NIKH Nikolski High 49.18 35 P **P** **03 19 31.0 -0.2**
ARMA Armidale 49.19 173 P **P** **03 19 33.9 +2.3**
ARMA IAmb IAmb 03 19 45.4
comp=Z,16nm,1.5s
SPIA Saint Paul Isl 50.49 30 P **P** **03 19 41.7 +0.7**
UNV Unalaska Valle 50.83 35 P **P** **03 19 43.3 -0.2**
AKUT Akutan 51.34 35 P **P** **03 19 47.5 +0.1**
FORT Forrest 51.93 199 P **P** **03 19 52.2 +0.2**
FORT IAmb IAmb 03 20 09.1
comp=Z,16nm,1.1s
BBOO Buckleboo 51.98 190 P **P** **03 19 53.2 +0.9**
BBOO IAmb IAmb 03 20 10.0
comp=Z,17nm,1.4s
WMQ Urumqi 54.10 311 *e*P **P** **03 20 10.3 +2.4**
SDPT Sand Point 54.64 35 P **P** **03 20 11.3 -0.1**
CNBA Chernabura Isl 54.95 35 P **P** **03 20 13.2 -0.5**
CHGN Chignik 56.05 34 P **P** **03 20 21.2 -0.3**
ZALV Zalesovo Beam 57.85 323 P **P** **03 20 33.9 -0.3**
comp=Z,1.4nm,0.5s,baz=102,slow=7.5,SNR=6.1
comp=Z,1.4nm,0.5s
ZALV Zalesovo Beam 57.85 323 P **P** **03 20 34.4 +0.2**
MK31 Makanchi Array 58.27 314 P **P** **03 20 38.1 +0.9**
MKAR Makanchi Array 58.27 314 P **P** **03 20 37.8 +0.5**
comp=Z,2.2nm,0.6s,baz=91,slow=8.1,SNR=20
comp=Z,2.2nm,0.6s
SII Sitkinak Islan 58.38 34 P **P** **03 20 38.7 +0.9**
MAKZ Makanchi 58.48 314 P **P** **03 20 39.2 +0.4**
N18K Kilae Creek 58.70 29 P **P** **03 20 41.0 +1.0**
N18K IAmb IAmb 03 20 41.7
comp=Z,14nm,1.2s
CNPM China Poot 60.62 32 P **P** **03 20 52.7 -0.4**
CAST Castle Rocks 61.24 27 P **P** **03 20 57.9 +0.7**
IMAR Indian Mountai 61.35 24 P **P** **03 20 59.0 +1.2**
NRIK Noril'sk 61.53 340 P **P** **03 20 58.5 -0.5**
comp=Z,6.3nm,0.6s,baz=116,slow=7.9,SNR=6.6
comp=Z,6.3nm,0.6s
NRIK Noril'sk 61.53 340 P **P** **03 20 58.5 -0.5**
NRIK IAmb IAmb 03 20 59.2
comp=Z,6.8nm,0.6s
I21K Tanana 61.79 25 P **P** **03 21 01.5 +0.7**
I21K IAmb IAmb 03 21 10.8
comp=Z,11nm,1.4s
BPAW Bear Paw Mtn. 61.90 26 P **P** **03 21 01.7 +0.2**
PMR Palmer 62.10 29 P **P** **03 21 02.8 -0.1**
PMR IAmb IAmb 03 21 03.2
comp=Z,7.1nm,1.0s
MLY Manley 62.25 26 P **P** **03 21 04.4 +0.5**
MLY IAmb IAmb 03 21 04.8
comp=Z,6.8nm,0.7s
PWL Port Wells 62.33 30 P **P** **03 21 04.5 0.0**
SML Sawmill 62.52 29 P **P** **03 21 05.7 -0.1**
I23K Minto, Yukon-K 62.85 26 P **P** **03 21 07.8 0.0**
I23K IAmb IAmb 03 21 09.3
comp=Z,5.0nm,0.7s
SCM Sheep Creek Mo 63.00 29 P **P** **03 21 07.7 -1.3**
FID Port Fidalgo 63.20 31 P **P** **03 21 09.9 -0.3**
MDM Murphy Dome 63.27 26 P **P** **03 21 11.4 +0.8**
MDM IAmb IAmb 03 21 11.9
comp=Z,7.9nm,0.7s
CCB Clear Creek Bu 63.37 26 P **P** **03 21 10.2 -1.0**
CCB IAmb IAmb 03 21 44.7
comp=Z,5.9nm,1.3s
KLU Klutina 63.59 30 P **P** **03 21 13.4 +0.5**
KLU IAmb IAmb 03 21 15.0
comp=Z,5.8nm,0.8s
H24K Noodor Dome 63.62 25 P **P** **03 21 13.4 +0.5**
H24K IAmb IAmb 03 21 14.1
comp=Z,4.8nm,0.7s
HDA Harding Lake 63.68 27 P **P** **03 21 12.3 -1.0**
HDA IAmb IAmb 03 21 13.4
comp=Z,3.9nm,0.8s
TOLK Toolik Lake Re 63.71 22 P **P** **03 21 14.4 +0.9**
ILAR Eielson Array 63.78 26 P **P** **03 21 12.8 -1.2**
comp=Z,3.6nm,0.8s,baz=261,slow=4.8,SNR=6.7
comp=Z,3.6nm,0.8s
HMT Hamilton 64.22 31 P **P** **03 21 17.1 +0.1**
N25K Chitina, Valde 64.24 30 P **P** **03 21 17.7 +0.6**
N25K IAmb IAmb 03 21 36.4
comp=Z,8.8nm,1.4s
J25K Salcha River, 64.39 27 P **P** **03 21 16.6 -1.4**
J25K IAmb IAmb 03 21 17.5
comp=Z,3.1nm,0.7s
SUCK Suckling Hills 64.43 32 P **P** **03 21 18.9 +0.7**
RIDG Independent Ri 64.46 28 P **P** **03 21 18.0 -0.5**
RIDG IAmb IAmb 03 21 19.1
comp=Z,7.1nm,0.8s
GLB Gilahina Butte 64.59 30 P **P** **03 21 19.5 +0.2**
GLB IAmb IAmb 03 21 20.6
comp=Z,11nm,1.3s
DOT Dot Lake 64.79 28 P **P** **03 21 20.3 -0.3**
DOT IAmb IAmb 03 21 21.1
comp=Z,8.3nm,0.8s
SCRK Sand Creek 64.88 27 P **P** **03 21 19.9 -1.4**
SCRK IAmb IAmb 03 21 21.9
comp=Z,5.9nm,1.2s
J26L Joseph Creek 65.14 27 P **P** **03 21 22.6 -0.3**
J26L IAmb IAmb 03 21 23.6
comp=Z,9.7nm,1.2s
BMAR Burnt Mountain 65.24 24 P **P** **03 21 24.4 +1.0**
YAH Yahtse 65.47 31 P **P** **03 21 25.4 +0.2**
YAH IAmb IAmb 03 21 26.7
comp=Z,6.9nm,0.8s
CTGM Chitina Glacie 65.73 31 P **P** **03 21 26.9 +0.2**
CTGM IAmb IAmb 03 21 28.2
comp=Z,5.9nm,0.8s
BCAR Beaver Creek A 65.73 29 P **P** **03 21 26.6 0.0**
TABL Table Mountain 65.77 31 P **P** **03 21 27.3 +0.1**
EGAK Eagle 66.21 27 P **P** **03 21 30.1 +0.5**
EGAK IAmb IAmb 03 21 37.9
comp=Z,5.0nm,0.9s
BRVK Borovoye 66.37 320 P **P** **03 21 30.9 +0.1**
BRVK IAmb IAmb 03 21 32.3
comp=Z,4.1nm,0.7s
KK31 Karatay Array 66.56 310 P **P** **03 21 33.1 +0.9**
KKAR Karatay Array 66.56 310 P **P** **03 21 32.9 +0.7**
KKAR Karatay Array 66.56 310 P **P** **03 21 33.3 +1.1**
KKAR IAmb IAmb 03 21 33.9
comp=Z,2.8nm,0.8s
P29M Windy Craggy 67.44 32 P **P** **03 21 39.0 +1.5**
P29M IAmb IAmb 03 21 39.3
comp=Z,7.2nm,0.7s
HYT Haines Junctio 67.59 31 P **P** **03 21 39.4 +0.9**
HYT IAmb IAmb 03 21 40.4
comp=Z,8.1nm,0.8s
M30M Minto, Yukon 67.98 29 P **P** **03 21 41.4 +0.5**
EPYK Eagle Plains 68.19 25 P **P** **03 21 42.0 -0.1**
EPYK IAmb IAmb 03 21 48.9
comp=Z,16nm,1.4s
INK Inuvik 69.50 23 P **P** **03 21 49.6 -0.3**
comp=Z,6.3nm,0.8s,baz=311,slow=4.8,SNR=12
comp=Z,6.3nm,0.8s
INK Inuvik 69.50 23 P **P** **03 21 48.9 -1.1**
INK IAmb IAmb 03 21 50.5
comp=Z,7.3nm,0.9s
DLBC Dease Lake 71.46 34 P **P** **03 22 03.0 +0.9**
DLBC IAmb IAmb 03 22 03.9
comp=Z,9.3nm,1.2s
C36M Paulatuk 72.87 22 P **P** **03 22 09.4 -0.8**
ABKAR Akbulak array 73.16 317 P **P** **03 22 11.1 -1.2**
HOLB Holberg 73.58 41 P **P** **03 22 15.4 +0.6**
YKA Yellowknife Ar 78.14 28 P **P** **03 22 39.8 -0.5**
comp=Z,3.4nm,0.6s,baz=290,slow=5.4,SNR=25
comp=Z,3.4nm,0.6s
YKA Yellowknife Ar 78.14 28 P **P** **03 22 39.6 -0.6**
BUCK Buck Mountain 78.35 47 P **P** **03 22 43.0 +1.1**
HUMO Hull Mountain 78.77 49 P **P** **03 22 46.1 +1.9**
KCPM Cahto Peak 79.08 52 P **P** **03 22 46.2 +0.2**
KCPM IAmb IAmb 03 22 47.0
comp=Z,6.4nm,0.7s
LTY Liberty 79.11 44 P **P** **03 22 46.0 0.0**
B08A Colville Reser 79.68 42 P **P** **03 22 48.8 -0.2**
B08A IAmb IAmb 03 22 49.8
comp=Z,5.0nm,0.7s
PINE Pine Mountain 79.88 47 IAmb IAmb 03 22 51.9
comp=Z,11nm,0.8s
K05A Summer Lake 80.21 48 P **P** **03 22 52.6 +0.5**
K05A IAmb IAmb 03 22 53.5
comp=Z,7.9nm,0.8s
NEW Newport 81.11 42 P **P** **03 22 56.4 -0.3**
BEKR Beckworth 81.41 51 P **P** **03 22 58.6 0.0**
BEKR IAmb IAmb 03 22 59.7
comp=Z,6.6nm,0.8s
WVOR Wild Horse Val 81.89 48 P **P** **03 23 00.8 -0.1**
CMB Columbia Colle 81.93 53 P **P** **03 23 01.6 +0.5**
PNTR Pine Nut 82.20 51 P **P** **03 23 02.9 +0.1**
PNTR IAmb IAmb 03 23 04.3
comp=Z,8.9nm,0.7s
ARCES ARCESS Array B 82.42 342 P **P** **03 23 03.0 0.0**
comp=Z,2.8nm,0.7s,baz=68,slow=8.0,SNR=8.9
comp=Z,2.8nm,0.7s
YERR Yerington 82.50 52 P **P** **03 23 04.8 +0.5**
YERR IAmb IAmb 03 23 05.2
comp=Z,5.9nm,0.8s
RYN Ryan 83.15 52 P **P** **03 23 07.8 +0.2**
RYN IAmb IAmb 03 23 08.6
comp=Z,4.8nm,0.8s
KVN Kaiserville 83.33 51 P **P** **03 23 08.4 -0.1**
KVN IAmb IAmb 03 23 09.3
comp=Z,4.4nm,0.7s
NVAR Mina Array Bea 83.37 52 P **P** **03 23 09.0 +0.2**
comp=Z,5.5nm,0.7s,baz=264,slow=6.0,SNR=54
comp=Z,5.5nm,0.7s
DSP Deep Springs 83.96 53 P **P** **03 23 11.9 +0.5**
LRM Limekiln Ridge 84.95 43 P **P** **03 23 16.6 0.0**
HRY Holter Researc 85.02 42 P **P** **03 23 16.7 -0.1**
MCMT McKenzie Canyo 85.05 44 P **P** **03 23 17.3 +0.1**
TPNV Topopah Spring 85.40 53 P **P** **03 23 18.9 -0.1**
TPNV IAmb IAmb 03 23 19.6
comp=Z,4.8nm,0.7s
DUG Dugway, Tooele 86.77 49 P **P** **03 23 25.5 0.0**
FINES FINESS Array B 86.78 335 P **P** **03 23 22.9 -2.1**
comp=Z,1.4nm,0.4s,baz=65,slow=4.3,SNR=19
comp=Z,1.4nm,0.4s
V12A Nelson 86.88 53 IAmb IAmb 03 23 27.1
comp=Z,3.8nm,0.7s
PDAR Pinedale Array 88.04 45 P **P** **03 23 30.9 -0.8**
comp=Z,0.4nm,0.3s,baz=163,slow=0.4,SNR=9.9
comp=Z,0.4nm,0.3s
Y14A Wickenburg 88.94 55 P **P** **03 23 36.2 +0.3**
BRTR Keskin Array B 93.92 314 P **P** **03 23 57.8 -1.1**
comp=Z,0.2nm,0.5s,baz=110,slow=6.7,SNR=4.0
comp=Z,0.2nm,0.5s
PLCA Paso Flores 142.20 133 PKhKP PKPpre 03 30 06.8
comp=Z,1.5nm,0.9s,baz=30,slow=1.9,SNR=3.8
BOAV Boa Vista 147.00 53 PKPdf **PKPdf** **03 30 21.2 -0.1**
LPAZ La Paz 147.96 91 PKPbc **PKPbc** **03 30 26.6 -0.3**
comp=Z,2.4nm,0.5s,baz=330,slow=3.8,SNR=14
LPAZ La Paz 147.96 91 **PKPdf** **03 30 22.9 -0.6**
LPAZ PKPbc **PKPbc** **03 30 26.6 -0.3**
ETMB Extrema 148.16 78 PKPdf **PKPdf** **03 30 21.0 -2.1**
ETMB PKPbc **PKPbc** **03 30 25.0 -1.7**
MACA Manacapuru-AM 150.18 62 PKPbc **PKPbc** **03 30 30.4 -1.3**

*UCR **22** 03:18:49.3±1.0, 10°.58N×84°.91W, h148km±2km, MW3.8*
*INET **22** 03:18:49.7±0.3, 10°.60N×84°.86W, h143km±4km, MW2.8*
ISC 22 03:18:49.1±2.8, 10°.60N±0°.08×84°.92W±0°.08,
h150km±16km, n30, σ0°.28/41, 13C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACAL	**Aguas Claras**	**0.12**	**289**	⇑*i*P	**Pn**	**03 19 09.5**	**+0.1**
ACAL				*e*S	**Sn**	**03 19 24.9**	**+0.1**
PACM	**Arenal**	**0.19**	**126**	*e*P	**Pn**	**03 19 10.3**	**+0.8**
CEDE	**Laguna Cedeo**	**0.24**	**117**	⇑*i*P	**Pn**	**03 19 09.7**	**+0.1**
CASC	**Castillo**	**0.24**	**131**	⇑*i*P	**Pn**	**03 19 09.7**	**0.0**
CASO				*e*S	**Sn**	**03 19 25.6**	**+0.4**
CUI	**Cuipilapa**	**0.25**	**284**	⇑*i*P	**Pn**	**03 19 09.5**	**-0.1**
CUI				*e*S	**Sn**	**03 19 24.9**	**-0.2**
VERA	**Finca Concepci**	**0.26**	**11**	*e*P	**Pn**	**03 19 09.4**	**-0.2**
HORNC	**Hornillas**	**0.28**	**295**	⇑*i*P	**Pn**	**03 19 09.7**	**-0.1**
HORNC				*e*S	**Sn**	**03 19 25.6**	**+0.2**
FORC	**Fortuna**	**0.28**	**117**	⇑*i*P	**Pn**	**03 19 09.7**	**0.0**
COLC	**Colonia**	**0.29**	**284**	⇑*i*P	**Pn**	**03 19 09.7**	**0.0**
COLC				*e*S	**Sn**	**03 19 25.4**	**+0.1**
VMAR	**Armenia, Volca**	**0.29**	**318**	*e*P	**Pn**	**03 19 09.7**	**-0.1**
JTS	**Las Juntas de**	**0.30**	**186**	*e*P	**Pn**	**03 19 09.6**	**-0.2**
JTS				*e*S	**Sn**	**03 19 25.0**	**-0.5**
GUAB	**Guayabo de Bag**	**0.32**	**290**	⇑*i*P	**Pn**	**03 19 09.7**	**-0.1**
GUAB				*e*S	**Sn**	**03 19 25.8**	**+0.2**
GPS2	**Hotel Rincn d**	**0.45**	**290**	⇑*e*P	**Pn**	**03 19 10.3**	**-0.1**
GPS2				*e*S	**Sn**	**03 19 26.7**	**+0.1**
BUEV	**Buena Vista**	**0.52**	**293**	⇑*i*P	**Pn**	**03 19 10.7**	**-0.1**
BUEV				*e*S	**Sn**	**03 19 27.4**	**+0.2**
GB1A	**Borinquen Arri**	**0.52**	**295**	⇑*i*P	**Pn**	**03 19 10.8**	**0.0**
COVE	**Coope Vega, Sa**	**0.53**	**76**	*e*P	**Pn**	**03 19 09.9**	**-0.7**
ORTG	**Ortega, Santa**	**0.58**	**246**	*e*P	**Pn**	**03 19 11.1**	**+0.1**
GUAI	**GUAI**	**0.66**	**241**	⇑*i*P	**Pn**	**03 19 11.5**	**+0.1**
GUAI				*e*S	**Sn**	**03 19 28.8**	**+0.4**
SRA1	**San Ramn**	**0.67**	**139**	*e*P	**Pn**	**03 19 11.2**	**-0.5**
HZTE	**Horizontes, Gu**	**0.67**	**280**	*e*P	**Pn**	**03 19 11.6**	**+0.1**
HZTE	**Horizontes, Gu**	**0.67**	**280**	⇑*i*P	**Pn**	**03 19 11.6**	**+0.1**
HZTE				*e*S	**Sn**	**03 19 28.7**	**+0.1**
LAFE	**Finca La Fe, P**	**0.78**	**179**	*e*P	**Pn**	**03 19 12.0**	**-0.3**
LAFE	**Finca La Fe, P**	**0.78**	**179**	*e*P	**Pn**	**03 19 11.9**	**-0.3**
INDI	**Punta indio, G**	**0.92**	**218**	*e*P	**Pn**	**03 19 13.1**	**-0.3**
SAJU	**San Juanillo,**	**0.94**	**236**	*e*P	**Pn**	**03 19 13.0**	**-0.4**
LCR2	**La Lucha 2**	**1.24**	**133**	*e*P	**Pn**	**03 19 16.5**	**+0.2**
RIMA	**Rio Macho**	**1.33**	**128**	*e*P	**Pn**	**03 19 17.2**	**0.0**
ACON	**Acoyapa**	**1.39**	**350**	*e*P	**Pn**	**03 19 17.4**	**-0.1**
CDM	**Cerro de Muert**	**1.54**	**132**	*e*P	**Pn**	**03 19 18.8**	**+0.1**
CDM	**Cerro de Muert**	**1.54**	**132**	*e*P	**Pn**	**03 19 20.0**	**+0.3**

*IDC **22** 03:28:39.8±1.3, 55°.18S×129°.67W, h0km, mb3.9/4, mbtmp3.9/4, MS3.7/5, Error ellipse: s-maj=57.3km s-min=33.3km az=16.0*
*NEIC **22** 03:28:42.0±2.0, 54°.9S±0°.2×130°.1W±0°.1, h10km±2km, mb4.4/13, Error ellipse: s-maj=33.3km s-min=12.0km az=344.0*
ISC 22 03:28:41.5±1.0, 54°.8S±0°.2×129°.9W±0°.1, h10km, n37,
σ1§40/23, mb4.3/11, MS3.7/5, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.56**	**202**	P	**P**	**03 35 14.5**	**+2.2**
VNDA					IAmb	IAmb	03 35 24.0
	comp=Z,3.4nm,1.4s						
PMSA	**Palmer Station**	**33.04**	**134**	P	**P**	**03 35 18.9**	**+2.4**
GO09	**Cerro Castillo**	**33.95**	**108**	P	**P**	**03 35 25.6**	**+0.9**
QSPA	**South Pole Qui**	**35.34**	**180**	LR	LR	03 48 10.0	
	comp=Z,107nm,19.2s,baz=58,slow=33						
QSPA	**South Pole Qui**	**35.34**	**180**	P	**P**	**03 35 36.2**	**-0.6**
QSPA					IAmb	IAmb	03 35 50.1
	comp=Z,7.7nm,1.2s						
PPT	**Papeete**	**40.14**	**330**	LR	LR	03 49 38.9	
	comp=Z,98nm,19.0s,baz=138,slow=31						
RAR	**Rarotonga**	**40.40**	**314**	LR	LR	03 47 41.7	
	comp=Z,62nm,21.5s,baz=289,slow=28						
H03S2	**Juan Fernandez**	**40.96**	**81**	T	T	04 19 45.7	
	baz=219						
H03S1	**Juan Fernandez**	**40.97**	**81**	T	T	04 19 46.9	
	baz=219						
H03S3	**Juan Fernandez**	**40.98**	**81**	T	T	04 19 46.0	
	baz=219						
H03N3	**Juan Fernandez**	**41.24**	**80**	T	T	04 20 03.5	
	baz=224,slow=72,SNR=393						
H03N2	**Juan Fernandez**	**41.24**	**80**	T	T	04 20 02.4	
	baz=224,slow=72,SNR=640						
H03N1	**Juan Fernandez**	**41.25**	**80**	T	T	04 20 01.2	
	baz=224,slow=72,SNR=506						
SNAA	**Sanae**	**48.44**	**160**	P	**P**	**03 37 20.5**	**-3.0**
	comp=Z,0.5nm,0.8s,baz=222,slow=15,SNR=1.5						
	comp=Z,0.5nm,0.8s						
SNAA	**Sanae**	**48.44**	**160**	P	**P**	**03 37 20.8**	**-2.7**
MAW	**Mawson**	**57.51**	**186**	LR	LR	04 02 02.4	
	comp=Z,81nm,18.1s,baz=60,slow=35						
STKA	**Stephens Creek**	**63.79**	**251**	P	**P**	**03 39 14.4**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=182,slow=6.8,SNR=4.4						
	comp=Z,1.6nm,0.7s						
BBOO	**Buckleboo**	**66.07**	**247**	P	**P**	**03 39 28.7**	**+0.3**
FORT	**Forrest**	**71.84**	**242**	P	**P**	**03 40 04.2**	**-0.2**
ASAR	**Alice Springs**	**74.43**	**251**	P	**P**	**03 40 19.6**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=142,slow=5.8,SNR=16						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**74.43**	**251**	P	**P**	**03 40 18.2**	**-1.6**
H01W1	**Cape Leeuwin H**	**75.14**	**230**	T	T	05 03 42.7	
	baz=147,slow=76,SNR=10						
H01W2	**Cape Leeuwin H**	**75.14**	**230**	T	T	05 03 45.0	
	baz=147,slow=76,SNR=9.7						
H01W3	**Cape Leeuwin H**	**75.15**	**230**	T	T	05 04 06.9	
	baz=147,slow=76,SNR=9.1						
WR0	**Warramunga Arr**	**77.04**	**254**	P	**P**	**03 40 34.3**	**-0.5**
WR0					IAmb	IAmb	03 40 52.4
	comp=Z,2.2nm,1.1s						
WB2	**Warramunga Arr**	**77.16**	**254**	P	**P**	**03 40 34.8**	**-0.6**
WB2					IAmb	IAmb	03 40 59.8
	comp=Z,5.2nm,1.4s						
WRA	**Warramunga Arr**	**77.17**	**254**	P	**P**	**03 40 35.2**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=142,slow=5.4,SNR=30						
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**77.17**	**254**	P	**P**	**03 40 34.3**	**-1.1**
WRAB	**Tennant Creek**	**77.17**	**254**	P	**P**	**03 40 35.1**	**-0.4**
WRAB					IAmb	IAmb	03 40 55.1
	comp=Z,6.5nm,1.2s						
WB0	**Warramunga Arr**	**77.28**	**254**	P	**P**	**03 40 35.7**	**-0.4**
WB0					IAmb	IAmb	03 40 39.0
	comp=Z,4.8nm,1.2s						
FITZ	**Fitzroy Crossi**	**83.42**	**248**	LR	LR	04 15 24.4	
	comp=Z,40nm,18.0s,baz=154,slow=34						
FITZ	**Fitzroy Crossi**	**83.42**	**248**	P	**P**	**03 41 09.5**	**+0.4**
FITZ					IAmb	IAmb	03 41 19.4
	comp=Z,7.2nm,1.2s						
ILAR	**Eielson Array**	**119.98**	**352**	PKP	**PKPdf**	**03 47 31.2**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=171,slow=2.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**123.96**	**119**	PKP	**PKPdf**	**03 47 38.8**	**-1.1**
	comp=Z,0.4nm,1.0s,baz=248,slow=2.3,SNR=1.4						
SONM	**Songino Array**	**144.98**	**282**	PKPbc	**PKPbc**	**03 48 17.8**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=124,slow=2.2,SNR=6.5						
MKAR	**Makanchi Array**	**158.28**	**262**	PKPab	**PKPab**	**03 49 12.2**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=130,slow=3.6,SNR=5.7						
BRTR	**Keskin Array B**	**161.29**	**137**	PKPab	**PKPab**	**03 49 23.6**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=172,slow=5.6,SNR=2.2						

*IDC **22** 03:40:25.1±0.9, 39°.37S×174°.29E, h207km±12km, mb3.5/5, mbtmp4.1/7, Error ellipse: s-maj=16.5km s-min=15.1km az=86.0*
*NOU **22** 03:40:25.3, 39°.52S×174°.29E, h230km, MLv4.5/10, North Island, New Zealand*
*WEL **22** 03:40:28.2±0.8, 40°.5±4°.×17°.4E±°, h206km±5km, M4.0/26, ML3.8/10, MLv4.0/26, Error ellipse: s-maj=0.0km s-min=0.0km az=76.7*
ISC 22 03:40:24.4±0.8, 39°.57S±0°.05×174°.33E±0°.05, h236km±6km,
n105, σ1§31/122, mb3.6/5, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LREZ	**Lake Rotokare**	**0.12**	**28**	P	**Pn**	**03 40 55.8**	**+0.7**
LREZ				S	**S**	**03 41 18.4**	**-0.6**
PREZ	**Palmer Road**	**0.26**	**329**	P	**Pn**	**03 40 55.9**	**+0.7**
PREZ				S	**S**	**03 41 18.6**	**-0.8**
NEZ	**North Egmont**	**0.35**	**328**	P	**Pn**	**03 40 56.1**	**+0.6**
NEZ				S	**S**	**03 41 19.9**	**+0.1**
KHEZ	**Kahui Hut**	**0.36**	**318**	P	**Pn**	**03 40 56.1**	**+0.6**
KHEZ				S	**S**	**03 41 18.8**	**-1.0**
NMEZ	**Namu Road**	**0.38**	**293**	P	**Pn**	**03 40 56.1**	**+0.7**
NMEZ				S	**S**	**03 41 19.5**	**-0.1**
PKE	**Pukeiti**	**0.46**	**324**	P	**Pn**	**03 40 56.2**	**+0.5**
NBEZ	**Newall Road No**	**0.47**	**310**	P	**Pn**	**03 40 56.3**	**+0.6**
NBEZ				S	**S**	**03 41 19.7**	**-0.4**
MHEZ	**Mangahewa**	**0.49**	**359**	P	**Pn**	**03 40 56.3**	**+0.5**
MHEZ				S	**S**	**03 41 19.1**	**-1.2**
PKVZ	**Pokaka**	**0.83**	**71**	P	**Pn**	**03 40 57.6**	**+0.4**
TRVZ	**Turoa**	**0.98**	**75**	P	**Pn**	**03 40 58.9**	**+0.7**
TRVZ				S	**S**	**03 41 22.0**	**-2.5**
FWVZ	**Far West T-bar**	**1.00**	**72**	P	**Pn**	**03 40 58.8**	**+0.5**
FWVZ				S	**S**	**03 41 22.0**	**-2.6**
WNVZ	**Wahianoa**	**1.01**	**77**	P	**Pn**	**03 40 59.0**	**+0.7**
WNVZ				S	**S**	**03 41 22.2**	**-2.4**
NNVZ	**North Ngauruho**	**1.09**	**67**	P	**Pn**	**03 40 59.3**	**+0.6**
HIZ	**Hauiti**	**1.13**	**21**	P	**Pn**	**03 40 58.6**	**-0.2**
DUWZ	**D'Urville Isla**	**1.27**	**194**	P	**Pn**	**03 41 00.7**	**+1.0**
KIW	**Kapiti Island**	**1.37**	**161**	P	**Pn**	**03 41 01.4**	**+1.1**
KIW				S	**S**	**03 41 27.1**	**-1.6**
MRZ	**Mangatainoka R**	**1.45**	**139**	P	**Pn**	**03 41 02.1**	**+1.1**
MRZ				S	**S**	**03 41 28.2**	**-1.6**
HOWZ	**Holdsworth Sta**	**1.61**	**146**	P	**Pn**	**03 41 03.3**	**+1.0**
HOWZ				S	**S**	**03 41 30.2**	**-1.9**
CAW	**Cannon Point**	**1.64**	**160**	P	**Pn**	**03 41 03.6**	**+1.1**
CAW				S	**S**	**03 41 30.7**	**-1.8**
TCW	**Tory Channel**	**1.64**	**181**	P	**Pn**	**03 41 03.7**	**+1.2**
TCW				S	**S**	**03 41 30.5**	**-2.0**
TIWZ	**Tintock**	**1.70**	**136**	P	**Pn**	**03 41 04.3**	**+1.2**
TIWZ				S	**S**	**03 41 31.8**	**-1.6**
BKZ	**Black Stump Fm**	**1.72**	**77**	P	**Pn**	**03 41 03.9**	**+0.6**
WEL	**Wellington**	**1.75**	**169**	P	**Pn**	**03 41 04.6**	**+1.3**
SNZO	**South Karori**	**1.77**	**171**	P	**Pn**	**03 41 04.7**	**+1.2**
NNZ	**Nelson**	**1.80**	**203**	P	**Pn**	**03 41 04.9**	**+1.0**
NNZ				S	**S**	**03 41 33.1**	**-1.8**
MTW	**Mount Morrison**	**1.82**	**151**	P	**Pn**	**03 41 05.1**	**+1.0**
MTW				S	**S**	**03 41 33.8**	**-1.5**
BFZ	**Birch Farm**	**1.84**	**128**	P	**Pn**	**03 41 05.5**	**+1.2**
BFZ	**Birch Farm**	**1.84**	**128**	P	**Pn**	**03 41 05.6**	**+1.3**
QRZ	**Quartz Range**	**1.87**	**227**	P	**Pn**	**03 41 04.6**	**+0.2**
QRZ				S	**S**	**03 41 34.4**	**-1.6**
QRZ	**Quartz Range**	**1.87**	**227**	P	**Pn**	**03 41 04.7**	**+0.2**
TUWZ	**Tuamarina**	**1.89**	**189**	P	**Pn**	**03 41 05.6**	**+1.0**
TMWZ	**Te Maipa**	**1.95**	**143**	P	**Pn**	**03 41 06.4**	**+1.2**
MSWZ	**Moikau Station**	**1.98**	**160**	P	**Pn**	**03 41 06.4**	**+1.0**
PAWZ	**Paruwai Farm**	**2.00**	**156**	P	**Pn**	**03 41 06.7**	**+1.0**
TRWZ	**Traveller**	**2.10**	**151**	P	**Pn**	**03 41 07.8**	**+1.2**
PLWZ	**Palliser**	**2.12**	**161**	P	**Pn**	**03 41 07.8**	**+0.9**
BSWZ	**Blackbirch Sta**	**2.17**	**189**	P	**Pn**	**03 41 08.5**	**+1.2**
CMWZ	**Cape Campbell**	**2.18**	**182**	P	**Pn**	**03 41 08.9**	**+1.5**
MRNZ	**Matariki Terra**	**2.19**	**213**	P	**Pn**	**03 41 08.0**	**+0.6**
THZ	**Tophouse**	**2.45**	**206**	P	**Pn**	**03 41 11.0**	**+0.9**
URZ	**Urewera**	**2.53**	**60**	P	**Pn**	**03 41 10.5**	**-0.5**
	137nm,0.3s,baz=246,slow=6.8,SNR=348						
URZ				S	**S**	**03 41 43.4**	**-4.

RACZ	**Rakaia**	**4.47 201**	P	**Pn**	**03 41 33.3**	**+0.2**
WACZ	**Wakanui South**	**4.75 202**	P	**Pn**	**03 41 37.0**	**+0.4**
GCSZ	**Gaunt Creek Bo**	**4.80 217**	P	**Pn**	**03 41 37.1**	**-0.2**
RPZ	**Rata Peaks**	**4.82 210**	P	**Pn**	**03 41 37.6**	**+0.2**
	21nm,0.3s,baz=256,slow=1.7,SNR=97					
RPZ			S	**S**	**03 42 30.7**	**-4.7**
	307nm,0.4s,baz=3.5,slow=3.5,SNR=39					
RPZ	**Rata Peaks**	**4.82 210**	P	**Pn**	**03 41 37.4**	**0.0**
RPZ	**Rata Peaks**	**4.82 210**	P	**Pn**	**03 41 37.9**	**+0.5**
ARCZ	**Arundel**	**4.97 207**	P	**Pn**	**03 41 39.4**	**+0.1**
FOZ	**Fox Glacier**	**5.21 219**	P	**Pn**	**03 41 41.9**	**-0.4**
TMZ	**Timaru**	**5.41 206**	P	**Pn**	**03 41 45.4**	**+0.6**
LBZ	**Lake Benmore**	**5.72 211**	P	**Pn**	**03 41 48.5**	**-0.2**
JCZ	**Jackson Bay**	**6.12 221**	P	**Pn**	**03 41 53.2**	**-0.6**
ODZ	**Otahua Downs**	**6.12 205**	P	**Pn**	**03 41 54.5**	**+0.9**
ODZ	**Otahua Downs**	**6.12 205**	P	**Pn**	**03 41 54.6**	**+0.9**
WKZ	**Wanaka**	**6.57 215**	P	**Pn**	**03 41 58.4**	**-1.0**
EAZ	**Earnscleugh**	**6.77 212**	P	**Pn**	**03 42 00.8**	**-1.1**
HHSZ	**Highcliff Hill**	**6.89 202**	P	**Pn**	**03 42 05.4**	**+2.1**
MSZ	**Milford Sound**	**6.98 221**	P	**Pn**	**03 42 03.8**	**-0.7**
TUZ	**Tuapeka**	**7.26 207**	P	**Pn**	**03 42 09.0**	**+1.0**
MLZ	**Mavora Lakes**	**7.39 216**	P	**Pn**	**03 42 10.1**	**+0.2**
WHZ	**Wether Hill Ro**	**7.88 215**	P	**Pn**	**03 42 14.9**	**-1.0**
SYZ	**Scrubby Hill**	**7.94 207**	P	**Pn**	**03 42 17.6**	**+0.9**
CTZ	**Chatham Island**	**7.95 124**	P	Pn	03 42 22.0	+5.1
APZ	**The Paps**	**8.61 210**	P	**Pn**	**03 42 25.6**	**+0.3**
STKA	**Stephens Creek**	**27.55 276**	P	**P**	**03 45 53.0**	**+3.4**
	1.0nm,0.8s,baz=126,slow=10,SNR=3.1 1.0nm,0.8s					
ASAR	**Alice Springs**	**37.56 283**	P	P	03 47 19.0	+2.7
	1.1nm,0.5s,baz=121,slow=6.6,SNR=20 1.1nm,0.5s					
VNDA	**Vanda**	**38.43 184**	P	P	03 47 27.9	+5.1
	1.3nm,0.8s,baz=360,slow=8.5,SNR=7.9 1.3nm,0.8s					
WRA	**Warramunga Arr**	**39.44 288**	P	**P**	**03 47 34.4**	**+2.5**
	1.1nm,0.4s,baz=125,slow=8.0,SNR=78 1.1nm,0.4s					
QSPA	**South Pole Qui**	**50.56 180**	P	P	03 49 04.2	+5.4
	4.6nm,0.6s,baz=209,slow=4.9,SNR=34 4.6nm,0.6s					
ARCES	**ARCESS Array B**	**145.74 341**	PKPbc	**PKiKP**	**03 59 37.4**	**-0.3**
	1.1nm,0.4s,baz=62,slow=2.8,SNR=20					
FINES	**FINESS Array B**	**150.72 329**	PKPbc	**PKPab**	**03 59 50.0**	**-5.5**
	0.4nm,0.5s,baz=11,slow=1.4,SNR=3.8					
TORD	**Torodi Ar. Bea**	**152.89 196**	PKPbc	**PKiKP**	**03 59 55.9**	**+1.9**
	0.2nm,0.5s,baz=211,slow=2.5,SNR=1.3					

IDC ***22*** *03:45:38.1±0.8,40.30N×143.68E,h0km,mb3.7/12, mbtmp3.7/14,ML2.5/2,MS3.0/1,Error ellipse: s-maj=23.9km s-min=17.7km az=122.0*

JMA ***22*** *03:45:39.5±0.4,40.4N±0.6×14.4E±, h9km±4km,MV3.9/30, FAR E OFF SANRIKU*

ISC 22 03:45:40.7±0.7,40.39N±0.05×143.63E±0.07,h16km,n33, σ1§07/34,mb3.7/12,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.43**	**252**	*eP*	**Pn**	**03 46 04.5**	**-1.5**
JTH				*eS*	**Sn**	**03 46 22.4**	**-2.0**
JKEN	**Kujiedanarisaw**	**1.48**	**263**	*eP*	**Pn**	**03 46 05.0**	**-1.6**
MIYJ	**Miyakonagasawa**	**1.61**	**240**	*eP*	**Pn**	**03 46 07.8**	**-0.6**
JANG	**Nango**	**1.62**	**270**	*eP*	**Pn**	**03 46 07.5**	**-1.1**
JNBK	**Urakawa-nobuka**	**2.00**	**341**	*eP*	**Pn**	**03 46 13.7**	**0.0**
JNBK				*eS*	**Sn**	**03 46 39.1**	**+0.7**
JOM	**Ohasama**	**2.02**	**244**	*eP*	**Pn**	**03 46 13.9**	**-0.2**
JOT	**Ohata**	**2.19**	**298**	*eP*	**Pn**	**03 46 16.5**	**+0.1**
JOT				*eS*	**Sn**	**03 46 42.5**	**-0.7**
JCH	**Churui**	**2.23**	**355**	*eP*	**Pn**	**03 46 16.5**	**-0.4**
JCH				*eS*	**Sn**	**03 46 42.3**	**-1.7**
JMK	**Ichinoseki**	**2.35**	**233**	*eP*	**Pn**	**03 46 18.4**	**-0.3**
JMK				*eS*	**Sn**	**03 46 46.4**	**-0.8**
JAK	**Akkeshi**	**2.72**	**17**	*eP*	**Pn**	**03 46 23.1**	**-0.5**
JAK				*eS*	**Sn**	**03 46 55.7**	**-0.5**
JAR	**Ashorobuto**	**2.90**	**2**	*eP*	**Pn**	**03 46 24.9**	**-1.3**
JAR				*eS*	**Sn**	**03 46 58.0**	**-2.7**
JYK	**Kaneyama**	**2.93**	**241**	*eP*	**Pn**	**03 46 26.7**	**+0.2**
JYK				*eS*	**Sn**	**03 47 02.2**	**+0.9**
MJAR	**Matsushiro Arr**	**5.74**	**230**	Pn	**Pn**	**03 47 04.6**	**-0.6**
	0.3nm,0.3s,baz=40,slow=11,SNR=10 4.1nm,0.5s						
USRK	**Ussuriysk Ar.**	**9.43**	**298**	Pn	**Pn**	**03 47 58.1**	**+2.4**
	0.2nm,0.3s,baz=101,slow=12,SNR=4.5 2.5nm,0.7s						
KSRS	**Korea Array**	**12.58**	**262**	LR	LR	03 53 20.6	
	comp=Z,69nm,18.4s,baz=205,slow=37						
SEY	**Seymchan**	**23.17**	**10**	P	**P**	**03 50 45.9**	**-0.3**
	1.3nm,0.3s,baz=161,slow=7.1,SNR=4.2 1.3nm,0.3s						
SONM	**Songino Array**	**27.54**	**298**	P	**P**	**03 51 27.3**	**+0.6**
	0.3nm,0.5s,baz=82,slow=10,SNR=1.8 0.3nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.65**	**129**	T	T	04 21 34.4	
	baz=321,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.66**	**129**	T	T	04 21 39.1	
	baz=321						
H11N3	**WAKE ISLAND Hy**	**28.66**	**129**	T	T	04 21 30.7	
	baz=321,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.49**	**131**	T	T	04 22 47.4	
	baz=323,slow=76,SNR=8.8						
H11S3	**WAKE ISLAND Hy**	**29.49**	**131**	T	T	04 22 39.6	
	baz=323,slow=76,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**29.50**	**131**	T	T	04 22 42.4	
	baz=323,slow=76,SNR=8.8						
MKAR	**Makanchi Array**	**43.89**	**300**	P	**P**	**03 53 46.6**	**+0.3**
	0.5nm,0.7s,baz=88,slow=6.8,SNR=2.4 0.5nm,0.7s						
ILAR	**Eielson Array**	**45.74**	**34**	P	**P**	**03 54 01.1**	**+0.4**
	0.7nm,0.8s,baz=271,slow=6.2,SNR=7.5 0.7nm,0.8s						
INK	**Inuvik**	**50.61**	**29**	P	**P**	**03 54 38.8**	**+0.6**
	2.4nm,0.9s,baz=0.0,slow=4.0,SNR=2.0 2.4nm,0.9s						
YKA	**Yellowknife Ar**	**60.04**	**32**	P	**P**	**03 55 46.5**	**+0.3**
	0.2nm,0.5s,baz=303,slow=6.0,SNR=2.6 0.2nm,0.5s						
WRA	**Warramunga Arr**	**60.65**	**190**	P	**P**	**03 55 49.8**	**-1.1**
	0.7nm,0.6s,baz=7.2,slow=6.8,SNR=11 0.7nm,0.6s						
ASAR	**Alice Springs**	**64.37**	**190**	P	**P**	**03 56 15.2**	**-0.5**
	0.2nm,0.3s,baz=15,slow=7.7,SNR=2.3 0.2nm,0.3s						
FINES	**FINESS Array B**	**66.65**	**332**	P	**P**	**03 56 30.3**	**+0.2**
	0.5nm,0.6s,baz=87,slow=7.1,SNR=1.3 0.5nm,0.6s						
NVAR	**Mina Array Bea**	**71.61**	**55**	P	**P**	**03 57 02.6**	**+1.1**
	0.6nm,0.7s,baz=301,slow=6.7,SNR=6.6 0.6nm,0.7s						
NOA	**NORSAR Array B**	**71.75**	**338**	P	**P**	**03 57 02.0**	**+0.2**
	0.3nm,0.6s,baz=36,slow=6.1,SNR=3.3 0.3nm,0.6s						
PDAR	**Pinedale Array**	**74.09**	**47**	P	**P**	**03 57 16.7**	**+0.5**
	0.3nm,0.4s,baz=265,slow=3.3,SNR=5.6 0.3nm,0.4s						

IDC 22 03:52:13.3±1.3,33.06N×130.05E,h0km,mb3.7/3, mbtmp3.8/4,ML3.2/1,Error ellipse: s-maj=46.3km s-min=29.0km az=80.0,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**7.56**	**60**	Pn	Pn	03 54 05.4	+0.7
	0.3nm,0.3s,baz=206,slow=9.6,SNR=10 2.7nm,0.3s						
WRA	**Warramunga Arr**	**52.86**	**175**	P	P	04 01 30.7	-0.1
	0.1nm,0.3s,baz=356,slow=7.5,SNR=9.1 0.1nm,0.3s						
ARCES	**ARCESS Array B**	**64.27**	**338**	P	P	04 02 48.7	-1.2
	1.4nm,0.8s,baz=66,slow=9.0,SNR=3.5 1.4nm,0.8s						
FINES	**FINESS Array B**	**67.75**	**330**	P	P	04 03 13.2	+0.9
	0.7nm,0.5s,baz=76,slow=7.3,SNR=6.2 0.7nm,0.5s						

IDC ***22*** *03:55:52.5±1.0,54.99S×31.37W,h0km,mb3.9/6, mbtmp4.0/6,MS3.7/7,Error ellipse: s-maj=45.7km s-min=21.2km az=69.0*

NEIC ***22*** *03:55:54.6±1.1,55.11S±0.07×31.16W±0.2,h10km±1km, mb4.5/15,Error ellipse: s-maj=20.3km s-min=11.3km az=76.0*

ISC 22 03:55:53.9±0.7,55.08S±0.10×31.5W±0.1,h10km,n40, σ1§20/30,mb4.4/10,MS3.9/6,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.01**	**283**	Pn	**Pn**	**03 56 41.2**	**-0.3**
ORCD	**Orcadas**	**9.04**	**226**	Pn	**Pn**	**03 58 04.2**	**0.0**
PMSA	**Palmer Station**	**18.76**	**226**	LR	LR	04 07 05.0	
	comp=Z,139nm,22.0s,baz=74,slow=36						
VNA3	**Neumayer Olymp**	**18.77**	**158**	P	**Pn**	**04 00 14.1**	**+0.9**
VNA2	**Neumayer--Watz**	**19.05**	**156**	P	**P**	**04 00 11.7**	**-4.1**
	baz=318,slow=10.0						
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**04 00 33.5**	**+0.2**
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**04 00 33.8**	**+0.5**
	4.5nm,0.7s,baz=298,slow=9.8,SNR=16 4.5nm,0.7s						
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**04 00 34.2**	**+1.0**
TRQA	**Tornquist**	**26.70**	**297**	P	**P**	**04 01 33.4**	**+0.3**
TRQA				IAmb	IAmb	04 01 48.2	
	comp=Z,9.3nm,1.2s						
MT09	**Talagante**	**34.69**	**291**	P	**P**	**04 02 42.4**	**-1.3**
MT01	**Popeta**	**34.76**	**291**	P	**P**	**04 02 43.9**	**-0.2**
MT01				IAmb	IAmb	04 03 00.5	
	comp=Z,21nm,1.1s						
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**04 02 48.7**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=172,slow=8.1,SNR=6.3						
QSPA				LR	LR	04 16 17.2	
	comp=Z,73nm,19.3s,baz=222,slow=35 comp=Z,2.1nm,0.8s						
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**04 02 48.4**	**+0.8**
QSPA				IAmb	IAmb	04 02 54.4	
	comp=Z,4.1nm,0.9s						
CO01	**Juntas del Tor**	**37.19**	**296**	P	**P**	**04 03 05.9**	**+0.6**
CO01				IAmb	IAmb	04 03 10.3	
	comp=Z,24nm,1.4s						
AC05	**El Transito**	**38.20**	**297**	P	**P**	**04 03 14.1**	**+0.4**
GO02	**Mina Guanaco**	**40.89**	**301**	P	**P**	**04 03 37.2**	**+0.9**
GO02				IAmb	IAmb	04 03 58.6	
	comp=Z,32nm,1.4s						
MAW	**Mawson**	**42.36**	**145**	P	**P**	**04 03 47.6**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=229,slow=11,SNR=3.6 comp=Z,2.0nm,0.7s						
VNDA	**Vanda**	**47.40**	**184**	P	**P**	**04 04 28.5**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=182,slow=6.0,SNR=6.4 comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**47.40**	**184**	P	**P**	**04 04 28.4**	**+0.8**
VNDA				IAmb	IAmb	04 04 53.5	
	comp=Z,2.7nm,1.2s						
LPAZ	**La Paz**	**47.85**	**309**	P	**P**	**04 04 32.5**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=154,slow=7.8,SNR=11 comp=Z,2.2nm,0.6s						
LPAZ	**La Paz**	**47.85**	**309**	P	**P**	**04 04 32.2**	**-0.3**
LPAZ				IAmb	IAmb	04 04 36.3	
	comp=Z,4.8nm,0.9s						
H10N1	**ASCENSION HYDR**	**49.02**	**23**	T	T	04 57 17.4	
	baz=192						
H10N3	**ASCENSION HYDR**	**49.02**	**23**	T	T	04 57 21.6	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**49.04**	**23**	T	T	04 57 19.8	
	baz=192,slow=74						
RCBR	**Riachuelo**	**49.24**	**354**	LR	LR	04 23 20.1	
	comp=Z,68nm,19.2s,baz=324,slow=34						
ETMB	**Extrema**	**52.82**	**315**	P	**P**	**04 05 10.7**	**+1.3**
ETMB				IAmb	IAmb	04 05 35.6	
	comp=Z,1.5nm,1.3s						
MDP	**Montagnes des**	**62.49**	**336**	LR	LR	04 31 08.5	
	comp=Z,70nm,19.3s,baz=172,slow=34						
TOA0	**Torodi Ar. Sit**	**73.51**	**34**	P	**P**	**04 07 27.1**	**+0.5**
TOA0				IAmb	IAmb	04 07 51.5	
	comp=Z,6.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.51**	**34**	P	**P**	**04 07 26.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=202,slow=6.2,SNR=2.4 comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.51**	**34**	P	**P**	**04 07 27.4**	**+0.8**
TORD				IAmb	IAmb	04 08 03.6	
	comp=Z,3.5nm,1.4s						
MBAR	**Mbarara**	**73.95**	**67**	LR	LR	04 37 55.1	
	comp=Z,70nm,18.1s,baz=192,slow=34						
THZ	**Tophouse**	**81.31**	**198**	P	**P**	**04 08 08.4**	**-1.7**
MDT	**Midelt**	**90.54**	**22**	LR	LR	04 45 19.8	
	comp=Z,40nm,20.1s,baz=213,slow=33						
ESDC	**Sonseca Array**	**97.28**	**21**	LR	LR	04 47 27.6	
	comp=Z,52nm,19.5s,baz=170,slow=32						
BCAR	**Beaver Creek A**	**145.01**	**312**		PKPbc	04 15 28.5	-0.8
L27K	**Beaver Creek,**	**145.02**	**312**		**PKPbc**	**04 15 29.2**	**-0.1**
K27K	**Chicken**	**145.45**	**313**		**PKPab**	**04 15 31.1**	**+0.2**
ILAR	**Eielson Array**	**147.66**	**314**	PKPbc	**PKPbc**	**04 15 36.2**	**-0.8**
	comp=Z,3.4nm,1.2s,baz=96,slow=1.5,SNR=9.0						
ILAR	**Eielson Array**	**147.66**	**314**	PKPdf	**PKPbc**	**04 15 36.0**	**-1.1**
BPAW	**Bear Paw Mtn.**	**149.25**	**312**	PKPdf	**PKPdf**	**04 15 34.5**	**-2.4**

IDC 22 04:11:27.2±4.4,55.83S×30.40W,h0km,mb3.7/2, mbtmp3.7/2,Error ellipse: s-maj=151.6km s-min=57.7km az=176.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**48.38**	**21**	T	T	05 11 48.6	
	baz=28,slow=74,SNR=5.7						
H10S3	**ASCENSION HYDR**	**48.38**	**21**	T	T	05 11 48.4	
	baz=192,slow=74,SNR=12						
LPAZ	**La Paz**	**48.80**	**309**	P	P	04 20 14.6	-0.1
	1.0nm,0.8s,baz=171,slow=5.1,SNR=3.5 1.0nm,0.8s						
H10N1	**ASCENSION HYDR**	**49.49**	**21**	T	T	05 13 11.9	
	baz=192,slow=75,SNR=5.5						
H10N3	**ASCENSION HYDR**	**49.49**	**21**	T	T	05 13 10.7	
	baz=192,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**49.51**	**21**	T	T	05 13 13.3	
	baz=192,slow=75,SNR=9.7						
TORD	**Torodi Ar. Bea**	**73.80**	**33**	P	P	04 23 03.3	0.0
	0.4nm,0.8s,baz=199,slow=6.9,SNR=2.2 0.4nm,0.8s						
ILAR	**Eielson Array**	**148.63**	**313**	PKPbc	PKPbc	04 31 14.1	-0.6
	0.3nm,0.6s,baz=119,slow=2.1,SNR=4.5						

IDC 22 04:18:27.9±11.0,12.31S×165.38E,h116km±125km, mb3.4/4,mbtmp3.8/5,ML3.8/1,MS2.9/1,Error ellipse: s-maj=89.0km s-min=28.3km az=159.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.76**	**174**	P	Pn	04 20 44.9	-0.4
	0.8nm,0.3s,baz=331,slow=19,SNR=14						
DZM				S	Sn	04 22 34.5	+1.4
	3.9nm,0.8s,baz=125,slow=17,SNR=1.4						
DZM				LR	LR	04 24 17.1	
	comp=Z,70nm,18.3s,baz=32,slow=36 3.0nm,0.5s						
WRA	**Warramunga Arr**	**30.73**	**252**	P	P	04 24 32.0	-0.3
	0.7nm,0.7s,baz=83,slow=8.8,SNR=10 0.7nm,0.7s						
ASAR	**Alice Springs**	**31.92**	**245**	P	P	04 24 42.7	-0.1
	0.8nm,0.7s,baz=74,slow=9.1,SNR=11 0.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**38.72**	**256**	P	P	04 25 41.1	+0.1
	1.7nm,0.8s,baz=76,slow=8.3 1.7nm,0.8s						
ILAR	**Eielson Array**	**84.82**	**19**	P	P	04 30 49.0	0.0
	0.5nm,0.7s,baz=238,slow=5.3,SNR=7.9 0.5nm,0.7s						

JMA ***22*** *04:22:42.2±0.1,29.3N±0.4×130.5E±0.9,h66km±3km, MV3.5/29,NEAR AMAMI-OSHIMA ISLAND*

NEIC ***22*** *04:22:43.0±2.0,29.21N±0.06×130.4E±0.1,h38km±8km, mb4.5/23,Error ellipse: s-maj=14.3km s-min=8.6km az=105.0*

NIED ***22*** *04:22:42.2,29.30N×130.54E,h66km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.91; Mθθ-0.02; Mφφ-0.89; Mrθ0.81; Mθφ-1.24; Mφr1.00; Fault plane solution: M0 1.86000×10¹⁵ NP1: φs204.00000°,δ24.00000°,λ74.00000°. NP2:φs41.00000°, δ67.00000°,λ97.00000°.*

IDC ***22*** *04:22:45.9±3.9,29.33N×130.35E,h65km±34km, mb3.7/19, mbtmp4.0/22,ML3.1/3,MS3.4/13 Error ellipse: s-maj=21.7km s-min=16.6km az=56.0*

ISC 22 04:22:41.6±1.4,29.26N±0.04×130.54E±0.06,h29km±10km, n82,σ1§24/84,mb4.3/30,MS3.6/11,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.82**	**315**	*eP*	**Pn**	**04 22 57.8**	**+0.6**
JNN				*eS*	**Sn**	**04 23 10.0**	**+1.6**
JYAK	**Yakushimahirau**	**0.97**	**358**	*eP*	**Pn**	**04 22 59.4**	**0.0**
JYAK				*eS*	**Sn**	**04 23 13.5**	**+1.3**
JZK	**Kikaishima**	**1.07**	**208**	*eP*	**Pn**	**04 23 02.4**	**+1.7**
JMTN	**Minamitane**	**1.17**	**15**	*eP*	**Pb**	**04 23 02.3**	**-1.1**
JMTN				S	**Sn**	**04 23 17.9**	**+0.7**
JTAJ	**Takarajima**	**1.18**	**265**	*eP*	**Pb**	**04 23 03.5**	**+0.1**
JTAJ				*eS*	**Sn**	**04 23 19.1**	**+1.9**
JAM	**Amami Oshima**	**1.18**	**224**	*eP*	**Pb**	**04 23 03.2**	**-0.2**
JAM				*eS*	**Sn**	**04 23 20.1**	**+2.8**
JKC	**Kuchinoerabu**	**1.23**	**346**	*eP*	**Pb**	**04 23 03.7**	**-0.7**
JKC				*eS*	**Sn**	**04 23 19.2**	**+0.6**
JTN	**Tanegashima 3**	**1.44**	**15**	*eP*	**Pn**	**04 23 06.0**	**+0.2**
JTN				S	**Sn**	**04 23 24.1**	**+0.4**
JAMN	**Amaminishikomi**	**1.57**	**230**	*eP*	**Pb**	**04 23 08.4**	**-1.6**
JAMN				*eS*	**Sb**	**04 23 29.1**	**-0.4**
JTSR	**Tashiro 2**	**1.93**	**10**	*eP*	**Pn**	**04 23 13.0**	**+0.4**
JTSR				*eS*	**Sn**	**04 23 36.7**	**+0.9**
JTK	**Tokunoshima**	**2.03**	**224**	*eP*	**Pn**	**04 23 14.8**	**+0.8**
JTK				*eS*	**Sn**	**04 23 39.6**	**+1.3**
JSU	**Suzuyama**	**2.24**	**358**		**Pn**	**04 23 16.8**	**0.0**
JSU	**Suzuyama**	**2.24**	**358**	*eP*	**Pn**	**04 23 16.9**	**+0.1**
JSU				*eS*	**Sn**	**04 23 43.8**	**+0.3**
JNAR	**Kushima--Naru**	**2.34**	**15**	*eP*	**Pn**	**04 23 19.1**	**+0.9**
JNU	**Nakatsue**	**3.86**	**4**	Pn	**Pn**	**04 23 42.0**	**+2.9**
JMN	**Monobe**	**5.29**	**32**	Pn	**Pn**	**04 23 58.4**	**-0.3**
JTU	**Tsushima**	**5.34**	**350**	Pn	**Pn**	**04 23 58.8**	**-0.6**
JHS	**Saijyo**	**6.12**	**20**	Pn	**Pn**	**04 24 09.8**	**-0.4**
INU	**Inuyama**	**8.18**	**40**	Pn	**Pn**	**04 24 40.2**	**+1.8**
YOJ	**Yonaguni jima**	**8.25**	**236**	Pn	**Pn**	**04 24 38.0**	**-1.4**
KSRS	**Korea Array**	**8.46**	**346**	P	**Pn**	**04 24 45.6**	**+3.4**
	0.2nm,0.3s,baz=169,slow=13,SNR=10						
KSRS				LR	LR	04 28 15.3	
	comp=Z,141nm,19.8s,baz=170,slow=40 2.3nm,0.8s						
JYT	**Yasato**	**10.69**	**47**	Pn	**Pn**	**04 25 16.3**	**+3.6**
USRK	**Ussuriysk Ar.**	**14.95**	**4**	P	**Pn**	**04 26 13.3**	**+2.4**
	0.1nm,0.3s,baz=180,slow=10,SNR=1.7 1.2nm,0.5s						
KLR	**Kul'dur**	**19.96**	**2**	P	**P**	**04 27 10.6**	**-0.8**
	0.4nm,0.3s,baz=173,slow=5.2,SNR=9.6						
KLR				LR	LR	04 34 42.0	
	comp=Z,49nm,18.1s,baz=154,slow=36 3.8nm,0.7s						
GUMO	**Guam**	**20.49**	**137**	LR	LR	04 33 47.2	
	comp=Z,45nm,20.1s,baz=288,slow=32						
SONM	**Songino Array**	**26.29**	**322**	P	**P**	**04 28 13.1**	**-1.6**
	1.2nm,0.7s,baz=136,slow=9.3,SNR=7.7						
SONM				LR	LR	04 40 00.3	
	comp=Z,135nm,19.3s,baz=136,slow=40 1.2nm,0.7s						
SONM	**Songino Array**	**26.29**	**322**	P	**P**	**04 28 13.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**30.74**	**257**	LR	LR	04 42 02.8	
	comp=Z,48nm,20.5s,baz=80,slow=38						
PETK	**Petropavlovsk-**	**31.05**	**32**	LR	LR	04 41 43.8	
	comp=Z,26nm,18.9s,baz=142,slow=37						
MA2	**Magadan**	**33.29**	**19**	LR	LR	04 44 08.8	
	comp=Z,33nm,19.0s,baz=181,slow=38						
H11N2	**WAKE ISLAND Hy**	**34.30**	**98**	T	T	05 06 04.9	
	baz=296						
H11N1	**WAKE ISLAND Hy**	**34.30**	**98**	T	T	05 05 54.2	
	baz=296						
H11N3	**WAKE ISLAND Hy**	**34.31**	**98**	T	T	05 06 10.6	
	baz=296						
MK31	**Makanchi Array**	**41.14**	**309**	P	**P**	**04 30 23.1**	**-0.2**
MKAR	**Makanchi Array**	**41.14**	**309**	P	**P**	**04 30 22.1**	**-1.2**
	0.7nm,0.4s,baz=90,slow=11,SNR=14 0.7nm,0.4s						
MKAR	**Makanchi Array**	**41.14**	**309**	P	**P**	**04 30 23.2**	**0.0**
ZALV	**Zalesovo Beam**	**41.16**	**320**	P	**P**	**04 30 22.4**	**-0.8**
	1.4nm,0.6s,baz=108,slow=13,SNR=4.3 1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**41.16**	**320**	P	**P**	**04 30 23.0**	**-0.3**
MAKZ	**Makanchi**	**41.36**	**309**	P	**P**	**04 30 25.2**	**+0.2**
KURK	**Kurchatov**	**44.11**	**314**	P	**P**	**04 30 47.1**	**-0.1**
KURK				IAmb	IAmb	04 30 47.9	
	comp=Z,6.4nm,0.7s						
KURBB	**Kurchatov Arra**	**44.16**	**314**	P	**P**	**04 30 46.7**	**-0.9**
	comp=Z,4.5nm,0.5s,baz=100,slow=8.8,SNR=37						
KURBB				LR	LR	04 50 15.7	
	comp=Z,80nm,18.2s,baz=59,slow=38 comp=Z,4.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**47.32**	**186**	P	**P**	**04 31 11.0**	**-1.8**
WB0	**Warramunga Arr**	**48.88**	**175**	P	**P**	**04 31 23.1**	**-1.8**
WB0				IAmb	IAmb	04 31 37.6	
	comp=Z,8.2nm,1.4s						
WRA	**Warramunga Arr**	**49.05**	**175**	P	**P**	**04 31 27.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=355,slow=8.1,SNR=5.1 comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**49.05**	**175**	P	**P**	**04 31 23.3**	**-2.9**
WB2	**Warramunga Arr**	**49.06**	**175**	P	**P**	**04 31 25.4**	**-0.9**
WB2				IAmb	IAmb	04 31 42.5	
	comp=Z,4.4nm,1.1s						
KK31	**Karatay Array**	**49.40**	**303**	P	**P**	**04 31 28.0**	**-0.8**
KK31				IAmb	IAmb	04 31 30.5	
	comp=Z,3.1nm,0.9s						
KKAR	**Karatay Array**	**49.40**	**303**	P	**P**	**04 31 28.0**	**-0.8**
BRVK	**Borovoye**	**49.51**	**316**	P	**P**	**04 31 28.7**	**-0.7**
ASAR

BR131					IAmb	IAmb	04 34 32.8		
	comp=Z,4.4nm,0.9s								
BRTR	**Keskin Array B**	**76.79**	**308**	P	**P**	**P**	**04 34 30.7**	**-0.1**	
	comp=Z,1.5nm,0.7s,baz=95,slow=4.6,SNR=11								
	comp=Z,1.5nm,0.7s								
BRTR	**Keskin Array B**	**76.79**	**308**	P	**P**		**04 34 31.4**	**+0.5**	
NOA	**NORSAR Array B**	**77.50**	**334**	P	**P**		**04 34 32.6**	**-1.7**	
	comp=Z,0.2nm,0.5s,baz=49,slow=5.4,SNR=3.3								
	comp=Z,0.2nm,0.5s								
NC204	**NORSAR Array S**	**77.52**	**335**	P	**P**		**04 34 33.9**	**-0.5**	
URZ	**Urewera**	**80.04**	**145**	P	**P**		**04 34 49.7**	**+1.3**	
	comp=Z,6.0nm,0.9s,baz=183,slow=21,SNR=2.0								
	comp=Z,6.0nm,0.9s								
NVAR	**Mina Array Bea**	**86.94**	**47**	P	**P**		**04 35 25.3**	**+0.9**	
	comp=Z,0.3nm,0.6s,baz=291,slow=6.8,SNR=4.2								
	comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**89.53**	**40**	P	**P**		**04 35 36.7**	**0.0**	
	comp=Z,0.2nm,0.6s,baz=355,slow=4.5,SNR=2.9								
	comp=Z,0.2nm,0.6s								

*IDC **22** 04:25:06.8±0.9, 15°.57S×178°.02W, h0km, mb3.9/10, mbtmp3.9/11, ML5.2/1, MS3.7/25, Error ellipse: s-maj=40.8km s-min=17.2km az=141.0*
*NEIC **22** 04:25:13.0±1.9, 16°.5S±0°.1×177°.96W±0°.04, h10km±2km, mb4.4/15, Error ellipse: s-maj=25.7km s-min=3.9km az=349.0*

ISC 22 04:25:07.8±0.7, 15°.8S±0°.1×177°.9W±0°.1, h10km, n56, σ1°15/31, mb4.3/16, MS3.8/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.39**	**243**	Pn		**Pn**	**04 26 14.9**	**+0.3**
	4.8nm,0.3s,baz=165,slow=19,SNR=13							
MSVF				Sn		**Sn**	**04 27 04.7**	**-1.2**
	1.3nm,0.3s,baz=152,slow=16,SNR=3.9							
MSVF				LR		LR	04 27 48.6	
	comp=Z,726nm,18.8s,baz=13,slow=37							
	6.3nm,0.3s							
AFI	**Afiamalu**	**6.16**	**73**	Pn		Pb	04 26 49.7	-5.5
RAO	**Raoul Island**	**13.41**	**180**	Pn		Pn	04 28 13.6	-4.7
DZM	**Mont Dzumac**	**16.12**	**245**	LR		LR	04 34 12.9	
	comp=Z,188nm,19.2s,baz=44,slow=34							
DZM	**Mont Dzumac**	**16.12**	**245**	*e*LR		LR	04 33 05.9	
	comp=Z,264nm,24.9s							
DZM	**Mont Dzumac**	**16.12**	**245**	P		**P**	**04 28 57.0**	**-1.0**
ONTNC	**Ouen Toro**	**16.20**	**244**	P		**P**	**04 28 59.9**	**+1.1**
ONTNC				IAmb		IAmb	04 29 20.6	
	comp=Z,38nm,1.2s							
KOUNC	**Koumac, New Ca**	**17.63**	**252**	P		**P**	**04 29 16.3**	**+1.7**
KOUNC				IAmb		IAmb	04 29 28.7	
	comp=Z,39nm,1.4s							
HNR	**Honiara**	**22.56**	**284**	LR		LR	04 37 42.5	
	comp=Z,608nm,19.5s,baz=146,slow=34							
URZ	**Urewera**	**22.83**	**190**	P		**P**	**04 30 12.2**	**+1.1**
	comp=Z,5.0nm,0.8s,baz=20,slow=21,SNR=2.5							
	comp=Z,5.0nm,0.8s							
URZ	**Urewera**	**22.83**	**190**	P		**P**	**04 30 08.7**	**-2.4**
URZ				IAmb		IAmb	04 30 12.5	
	comp=Z,16nm,1.2s							
PPT2	**Papeete2**	**27.13**	**98**	*e*LR		LR	04 37 16.5	
	comp=Z,361nm,26.8s							
TBI	**Tubuai**	**27.75**	**110**	*e*LR		LR	04 37 36.8	
	comp=Z,438nm,29.2s							
RPZ	**Rata Peaks**	**29.41**	**197**	LR		LR	04 42 49.2	
	comp=Z,148nm,18.5s,baz=62,slow=36							
CTA	**Charters Tower**	**34.38**	**257**	P		**P**	**04 31 54.9**	**-0.5**
	comp=Z,1.2nm,0.2s,baz=101,slow=5.2,SNR=1.9							
CTA				LR		LR	04 43 49.4	
	comp=Z,113nm,20.5s,baz=82,slow=33							
	comp=Z,1.2nm,0.2s							
CAN	**Canberra**	**35.45**	**230**	P		**P**	**04 32 04.0**	**-0.5**
TAOE	**Nuku Hiva Isla**	**37.42**	**84**	*e*LR		LR	04 41 59.6	
	comp=Z,298nm,24.3s							
COEN	**Coen**	**37.68**	**267**	P		P	04 32 26.7	+3.0
COEN				IAmb		IAmb	04 32 34.0	
	comp=Z,11nm,1.4s							
TOO	**Toolangi**	**38.95**	**229**	P		**P**	**04 32 34.2**	**+0.1**
TOO				IAmb		IAmb	04 32 38.1	
	comp=Z,9.9nm,1.1s							
STKA	**Stephens Creek**	**40.15**	**239**	P		**P**	**04 32 44.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=56,slow=6.6,SNR=4.1							
	comp=Z,1.5nm,0.7s							
BBOO	**Buckleboo**	**44.93**	**239**	P		**P**	**04 33 24.0**	**+0.9**
BBOO				IAmb		IAmb	04 34 03.7	
	comp=Z,5.0nm,1.1s							
WB0	**Warramunga Arr**	**45.54**	**258**	P		**P**	**04 33 27.3**	**-0.9**
WB0				IAmb		IAmb	04 33 33.4	
	comp=Z,7.6nm,1.4s							
WB2	**Warramunga Arr**	**45.57**	**257**	P		**P**	**04 33 30.5**	**+2.1**
WB2				IAmb		IAmb	04 34 03.8	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**45.58**	**257**	P		**P**	**04 33 28.3**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=94,slow=7.5,SNR=4.3							
WRA				PcP		**PcP**	**04 35 06.9**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=83,slow=4.0,SNR=2.9							
	comp=Z,0.6nm,1.0s							
WRA	**Warramunga Arr**	**45.58**	**257**	P		**P**	**04 33 30.6**	**+2.1**
AS31	**Alice Springs**	**45.92**	**252**	P		**P**	**04 33 32.0**	**+0.9**
ASAR	**Alice Springs**	**45.92**	**252**	P		**P**	**04 33 31.0**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=84,slow=8.5,SNR=21							
ASAR				PcP		**PcP**	**04 35 08.5**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=97,slow=3.9,SNR=1.4							
	comp=Z,1.8nm,0.5s							
ASAR	**Alice Springs**	**45.92**	**252**	P		**P**	**04 33 31.2**	**+0.1**
FORT	**Forrest**	**51.43**	**243**	P		**P**	**04 34 14.4**	**+1.1**
SIJI	**Sorong**	**52.31**	**281**	LR		LR	04 57 30.1	
	comp=Z,70nm,18.2s,baz=258,slow=37							
FITZ	**Fitzroy Crossi**	**53.94**	**259**	LR		LR	04 56 08.5	
	comp=Z,103nm,19.4s,baz=112,slow=35							
BATI	**Baumata**	**57.12**	**268**	LR		LR	04 59 51.7	
	comp=Z,72nm,18.1s,baz=337,slow=37							
PSA00	**Pilbara Seismi**	**58.99**	**254**	P		**P**	**04 35 09.0**	**+0.8**
RPN	**Rapa Nui**	**64.10**	**113**	LR		LR	04 56 07.7	
	comp=Z,63nm,21.9s,baz=210,slow=29							
SHEM	**Shemya Is, Ala**	**68.58**	**355**	LR		LR	04 59 30.9	
	comp=Z,27nm,20.6s,baz=116,slow=30							
PETK	**Petropavlovsk-**	**71.77**	**345**	P		**P**	**04 36 27.8**	**-2.4**
	comp=Z,0.5nm,0.4s,baz=147,slow=8.6,SNR=1.4							
	comp=Z,0.5nm,0.4s							
QSPA	**South Pole Qui**	**74.27**	**180**	P		**P**	**04 36 44.1**	**-1.0**
QSPA				IAmb		IAmb	04 37 14.6	
	comp=Z,4.9nm,1.3s							
PFO	**Pinyon Flats O**	**76.36**	**49**	LR		LR	05 02 32.3	
	comp=Z,44nm,19.1s,baz=234,slow=29							
YBH	**Yreka Blue Hor**	**76.54**	**39**	LR		LR	05 02 00.3	
	comp=Z,49nm,21.2s,baz=250,slow=29							
NVAR	**Mina Array Bea**	**77.52**	**44**	P		**P**	**04 37 05.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=228,slow=8.1,SNR=8.1							
	comp=Z,0.6nm,0.7s							
KLR	**Kul'dur**	**78.57**	**329**	LR		LR	05 10 02.7	
	comp=Z,24nm,18.6s,baz=154,slow=34							
BBB	**Bella Bella**	**80.20**	**28**	LR		LR	05 07 31.2	
	comp=Z,29nm,18.7s,baz=198,slow=32							
ELK	**Elko**	**80.74**	**43**	LR		LR	05 04 44.6	
	comp=Z,29nm,20.3s,baz=266,slow=30							
NEW	**Newport**	**83.48**	**36**	LR		LR	05 09 17.8	
	comp=Z,20nm,18.5s,baz=216,slow=32							
DLBC	**Dease Lake**	**83.67**	**23**	LR		LR	05 10 20.0	
	comp=Z,70nm,18.0s,baz=225,slow=32							
ILAR	**Eielson Array**	**83.70**	**13**	P		**P**	**04 37 35.9**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=223,slow=6.6,SNR=7.0							
ILAR				LR		LR	05 07 05.2	
	comp=Z,31nm,19.9s,baz=68,slow=30							
	comp=Z,0.8nm,0.8s							
ANMO	**Albuquerque**	**84.36**	**51**	LR		LR	05 06 18.7	
	comp=Z,22nm,20.2s,baz=225,slow=29							
TXAR	**Lajitas Array**	**84.40**	**58**	P		**P**	**04 37 41.6**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=135,slow=32,SNR=4.1							
	comp=Z,0.4nm,0.9s							
PDAR	**Pinedale Array**	**85.44**	**43**	P		**P**	**04 37 47.1**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=207,slow=3.0,SNR=3.7							
PDAR				LR		LR	05 12 21.2	
	comp=Z,25nm,19.6s,baz=233,slow=33							
	comp=Z,0.4nm,0.8s							
MAW	**Mawson**	**86.04**	**200**	LR		LR	05 13 07.2	
	comp=Z,59nm,19.7s,baz=186,slow=33							
CMAR	**Chiang Mai Arr**	**88.68**	**289**	LR		LR	05 14 35.9	
	comp=Z,19nm,20.6s,baz=190,slow=34							
INK	**Inuvik**	**89.70**	**15**	LR		LR	05 12 13.5	
	comp=Z,32nm,19.2s,baz=112,slow=32							
YKA	**Yellowknife Ar**	**92.18**	**25**	LR		LR	05 13 41.6	
	comp=Z,64nm,19.2s,baz=306,slow=32							
ATAH	**Atahualpa**	**97.10**	**99**	LR		LR	05 12 06.4	
	comp=Z,59nm,21.5s,baz=215,slow=29							
BRTR	**Keskin Array B**	**143.63**	**317**	PKP		**PKPdf**	**04 44 43.0**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=55,slow=2.0,SNR=7.1							
GERES	**GERESS Array B**	**145.69**	**346**	PKPbc		**PKPab**	**04 44 47.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=5.7,slow=2.0,SNR=3.9							

IDC 22 04:47:26.7±1.4, 55°.19S×31°.05W, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=51.4km s-min=33.0km az=57.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SNAA	**Sanae**	**20.44**	**155**	P		P	04 52 05.2	-0.1
	0.9nm,0.7s,baz=311,slow=10.0,SNR=6.2							
	0.9nm,0.7s							
LPAZ	**La Paz**	**48.11**	**309**	P		P	04 56 08.6	-0.3
	0.9nm,0.5s,baz=131,slow=5.3,SNR=5.7							
	0.9nm,0.5s							
H10N1	**ASCENSION HYDR**	**49.03**	**22**	T		T	05 49 16.9	
	baz=192							
H10N3	**ASCENSION HYDR**	**49.03**	**22**	T		T	05 49 23.5	
	baz=192							
H10N2	**ASCENSION HYDR**	**49.05**	**22**	T		T	05 49 13.5	
	baz=192							
TORD	**Torodi Ar. Bea**	**73.46**	**33**	P		P	04 59 00.8	0.0
	0.2nm,0.4s,baz=211,slow=5.3,SNR=9.5							
	0.2nm,0.4s							
ILAR	**Eielson Array**	**147.92**	**313**	PKPbc		PKPbc	05 07 11.8	-0.5
	0.5nm,0.7s,baz=117,slow=1.9,SNR=6.3							

*IDC **22** 04:48:10.9±1.3, 35°.68N×140°.91E, h0km, mb3.5/5, mbtmp3.4/6, ML2.3/1, MS3.1/2, Error ellipse: s-maj=36.4km s-min=22.0km az=46.0*
*JMA **22** 04:48:15.3±0.2, 35°.8N±0°.6×140°.9E±1°.0, h35km±1km, MV3.3/32, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .

ISC 22 04:48:15.7±1.0, 35°.83N±0°.05×140°.89E±0°.08, h31km±6km, n24, σ0°.86/18, mb3.5/5, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.13**	**190**	⇓P		**Pb**	**04 48 21.4**	**0.0**
CHOJ				⇓*e*S		**Sb**	**04 48 25.4**	**+0.2**
JIHU	**Itakohorinouch**	**0.32**	**295**	P		**Pn**	**04 48 24.2**	**0.0**
JIHU				*e*S		**Sn**	**04 48 30.8**	**+0.9**
JSMT	**Sammumatsuo**	**0.40**	**243**	P		**Pn**	**04 48 25.2**	**-0.1**
JSMT				*e*S		**Sn**	**04 48 31.8**	**0.0**
JHYU	**Hitachinakayam**	**0.57**	**335**	⇓P		**Pb**	**04 48 27.1**	**-0.1**
JHYU				⇓*e*S		**Sb**	**04 48 35.4**	**+0.3**
JYT	**Yasato**	**0.69**	**306**	*e*P		**Pb**	**04 48 28.5**	**-0.8**
JYT				*e*S		**Sb**	**04 48 37.8**	**-0.7**
JHO	**Hitachi**	**0.82**	**342**	⇓P		**Pn**	**04 48 30.4**	**-0.8**
MJAR	**Matsushiro Arr**	**2.28**	**289**	Pn		**Pn**	**04 48 50.1**	**-1.1**
	0.8nm,0.3s,baz=97,slow=14,SNR=22							
MJAR				Sn		**Sn**	**04 49 19.7**	**+1.4**
	0.8nm,0.3s,baz=97,slow=15,SNR=3.5							
	3.6nm,0.3s							
PETK	**Petropavlovsk-**	**20.94**	**29**	LR		LR	05 03 08.1	
	comp=Z,28nm,18.2s,baz=154,slow=43							
H11N2	**WAKE ISLAND Hy**	**27.93**	**118**	T		T	05 22 58.5	
	baz=311,slow=75,SNR=62							
H11N1	**WAKE ISLAND Hy**	**27.93**	**118**	T		T	05 23 01.2	
	baz=311,slow=75,SNR=50							
H11N3	**WAKE ISLAND Hy**	**27.94**	**118**	T		T	05 23 00.7	
	baz=311,slow=75,SNR=75							
SONM	**Songino Array**	**28.13**	**306**	P		**P**	**04 54 06.2**	**+1.3**
	0.2nm,0.4s,baz=108,slow=9.5,SNR=2.3							
	0.2nm,0.4s							
H11S1	**WAKE ISLAND Hy**	**28.59**	**120**	T		T	05 23 56.8	
	baz=312,slow=75,SNR=32							
H11S3	**WAKE ISLAND Hy**	**28.59**	**120**	T		T	05 23 53.8	
	baz=312,slow=75,SNR=76							
H11S2	**WAKE ISLAND Hy**	**28.61**	**120**	T		T	05 23 56.0	
	baz=312,slow=75,SNR=43							
MKAR	**Makanchi Array**	**44.41**	**303**	P		**P**	**04 56 23.8**	**+0.3**
	0.5nm,0.6s,baz=90,slow=9.4,SNR=4.4							
	0.5nm,0.6s							
WRA	**Warramunga Arr**	**55.81**	**187**	P		**P**	**04 57 48.9**	**-1.1**
	0.5nm,0.6s,baz=3.0,slow=7.5,SNR=11							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**59.54**	**187**	P		**P**	**04 58 15.0**	**-1.2**
	0.2nm,0.5s,baz=17,slow=9.8,SNR=2.4							
	0.2nm,0.5s							
JMIC	**Jan Mayen**	**71.26**	**350**	LR		LR	05 30 47.1	
	comp=Z,21nm,19.5s,baz=98,slow=36							
NVAR	**Mina Array Bea**	**76.05**	**53**	P		**P**	**05 00 00.9**	**+0.4**
	0.1nm,0.3s,baz=289,slow=8.2,SNR=2.5							
	0.1nm,0.3s							
H06E1	**SOCORRO T-PHAS**	**93.09**	**64**	T		T	06 44 26.0	
	SNR=7.1							
H03N2	**Juan Fernandez**	**147.30**	**98**	T		T	07 52 24.5	
	baz=290,slow=76,SNR=6.7							
H03N3	**Juan Fernandez**	**147.31**	**98**	T		T	07 52 23.5	
	baz=290,slow=76,SNR=5.2							
H03N1	**Juan Fernandez**	**147.32**	**98**	T		T	07 52 29.4	
	baz=290,slow=76,SNR=5.0							

*IDC **22** 04:48:40.5±0.6, 55°.14S×30°.98W, h0km, mb4.2/12, mbtmp4.2/13, ML3.8/1, Error ellipse: s-maj=19.5km s-min=16.1km az=54.0*
*NEIC **22** 04:48:42.0±1.5, 55°.16S±0°.10×31°.1W±0°.2, h10km±1km, mb4.7/29, Error ellipse: s-maj=19.2km s-min=16.0km az=65.0*

ISC 22 04:48:41.7±0.5, 55°.11S±0°.07×31°.13W±0°.09, h10km, n60, σ0°.78/54, mb4.5/24, 1C, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	**3.22**	**283**	Pn		**Pn**	**04 49 31.2**	**-1.1**
ORCD	**Orcadas**	**9.16**	**227**	Pn		**Pn**	**04 50 52.3**	**-1.5**
VNA1	**Neumayer--Stat**	**18.54**	**156**	P		**Pn**	**04 52 59.8**	**+1.7**
VNA3	**Neumayer Olymp**	**18.66**	**158**	P		**Pn**	**04 53 00.3**	**+0.6**
PMSA	**Palmer Station**	**18.88**	**226**	P		**Pn**	**04 53 02.6**	**+0.3**
	0.3nm,0.3s,baz=190,slow=9.0,SNR=5.5							
	3.0nm,0.7s							
PMSA	**Palmer Station**	**18.88**	**226**	P		**Pn**	**04 53 02.9**	**+0.5**
VNA2	**Neumayer--Watz**	**18.93**	**156**	P		**Pn**	**04 53 03.0**	**0.0**
	baz=310,slow=10.0							
SNAA	**Sanae**	**20.53**	**155**	P		**P**	**04 53 19.5**	**-0.4**
SNAA	**Sanae**	**20.53**	**155**	P		**P**	**04 53 19.8**	**0.0**
	5.1nm,0.7s,baz=297,slow=8.5,SNR=21							
	5.1nm,0.7s							
SNAA	**Sanae**	**20.53**	**155**	P		**P**	**04 53 20.0**	**+0.1**
USHA	**Ushuaia**	**21.25**	**255**	P		**P**	**04 53 29.4**	**+1.8**
	9.8nm,0.6s,baz=357,slow=9.3,SNR=2.2							
	9.8nm,0.6s							
TROLL	**Troll, Antarti**	**22.09**	**153**	P		**P**	**04 53 38.0**	**+1.3**
BELA	**Belgrano 2**	**22.90**	**182**	P		**P**	**04 53 45.5**	**+0.5**
PLCA	**Paso Flores**	**29.62**	**283**	P		**P**	**04 54 48.2**	**+1.2**
	3.8nm,1.1s,baz=135,slow=8.6,SNR=2.1							
	3.8nm,1.1s							
ITQB	**Itaqui**	**31.30**	**314**	P		**P**	**04 55 02.2**	**+0.4**
ITQB				IAmb		IAmb	04 55 10.5	
	comp=Z,22nm,1.2s							
CPUP	**Villa Florida**	**34.54**	**316**	P		**P**	**04 55 30.5**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=141,slow=6.5,SNR=7.3							
	comp=Z,2.1nm,0.6s							
CPUP	**Villa Florida**	**34.54**	**316**	P		**P**	**04 55 29.8**	**-0.4**
CPUP				IAmb		IAmb	04 55 31.3	
	comp=Z,16nm,1.4s							
MT09	**Talagante**	**34.89**	**291**	P		**P**	**04 55 32.3**	**-1.0**
MT01	**Popeta**	**34.96**	**291**	P		**P**	**04 55 32.7**	**-1.1**
QSPA	**South Pole Qui**	**35.14**	**180**	P		**P**	**04 55 35.2**	**0.0**
	comp=Z,2.9nm,0.9s,baz=183,slow=5.2,SNR=7.6							
	comp=Z,2.9nm,0.9s							
QSPA	**South Pole Qui**	**35.14**	**180**	P		**P**	**04 55 35.0**	**-0.2**
VA06	**Catapilco**	**35.99**	**292**	P		**P**	**04 55 43.0**	**+0.5**
CO02	**Combarbal**	**36.89**	**294**	P		**P**	**04 55 50.8**	**+0.3**
CO03	**El Pedregal**	**37.02**	**295**	P		**P**	**04 55 52.3**	**+0.8**
CO03				IAmb		IAmb	04 56 03.2	
	comp=Z,26nm,1.3s							
CO01	**Juntas del Tor**	**37.39**	**296**	P		**P**	**04 55 56.6**	**+1.7**
CO01				IAmb		IAmb	04 55 59.4	
	comp=Z,30nm,1.4s							
AC05	**El Transito**	**38.40**	**297**	P		**P**	**04 56 03.5**	**+0.2**
AC05				IAmb		IAmb	04 56 16.0	
	comp=Z,23nm,1.2s							
AC04	**Llanos de Chal**	**39.33**	**297**	P		**P**	**04 56 10.8**	**-0.1**
GO02	**Mina Guanaco**	**41.08**	**301**	P		**P**	**04 56 26.0**	**+0.2**
GO02				IAmb		IAmb	04 56 47.3	
	comp=Z,9.7nm,0.8s							
BDFB	**Brasilia**	**41.50**	**335**	P		**P**	**04 56 29.8**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=49,slow=26,SNR=1.8							
	comp=Z,1.6nm,0.6s							
PB14	**IPOC Station P**	**41.93**	**300**	P		**P**	**04 56 33.1**	**+0.3**
PB14				IAmb		IAmb	04 56 42.7	
	comp=Z,23nm,1.2s							
MAW	**Mawson**	**42.21**	**145**	P		**P**	**04 56 34.3**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=214,slow=23,SNR=2.7							
	comp=Z,1.3nm,0.7s							
SUR	**Sutherland**	**42.62**	**80**	P		**P**	**04 56 37.6**	**-0.6**
	comp=Z,13nm,1.0s,baz=124,slow=6.1,SNR=3.3							
	comp=Z,13nm,1.0s							
LVC	**Limon Verde**	**42.91**	**304**	P		**P**	**04 56 42.0**	**+1.2**
LVC				IAmb		IAmb	04 56 50.8	
	comp=Z,11nm,1.1s							
PB02	**IPOC Station P**	**44.48**	**304**	P		**P**	**04 56 53.7**	**+0.5**
PB01	**IPOC Station P**	**44.52**	**304**	P		**P**	**04 56 54.1**	**+0.7**
PB01				IAmb		IAmb	04 57 25.1	
	comp=Z,12nm,1.2s							
PTLB	**Pontes e Lacer**	**45.10**	**320**	P		**P**	**04 56 57.6**	**-0.4**
PTLB				IAmb		IAmb	04 56 59.2	
	comp=Z,8.1nm,1.3s							
GO01	**Chusmiza**	**45.56**	**306**	P		**P**	**04 57 02.7**	**+0.5**
GO01				IAmb		IAmb	04 57 09.7	
	comp=Z,7.0nm,0.8s							
PB16	**IPOC Station P**	**46.87**	**306**	P		**P**	**04 57 12.8**	**+0.2**
PB16				IAmb		IAmb	04 57 14.7	
	comp=Z,13nm,1.4s							
VNDA	**Vanda**	**47.38**	**184**	P		**P**	**04 57 14.9**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=175,slow=5.3,SNR=7.8							
	comp=Z,1.0nm,0.8s							
VNDA	**Vanda**	**47.38**	**184**	P		**P**	**04 57 13.5**	**-1.8**
H10S2	**ASCENSION HYDR**	**47.86**	**22**	T		T	05 49 04.7	
	baz=193,slow=74,SNR=3.7							
H10S3	**ASCENSION HYDR**	**47.86**	**22**	T		T	05 49 07.4	
	baz=27,slow=74,SNR=8.9							
LPAZ	**La Paz**	**48.03**	**309**	P		**P**	**04 57 22.9**	**+1.2**
	comp=Z,6.2nm,0.4s,baz=95,slow=4.6,SNR=49							
	comp=Z,6.2nm,0.4s							
LPAZ	**La Paz**	**48.03**	**309**	P		**P**	**04 57 22.4**	**+0.8**
LPAZ				IAmb		IAmb	04 57 31.2	
	comp=Z,7.3nm,0.8s							
H10N1	**ASCENSION HYDR**	**48.98**	**22**	T		T	05 51 00.2	
	baz=192,slow=75,SNR=7.6							
H10N3	**ASCENSION HYDR**	**48.98**	**22**	T		T	05 50 33.8	
	baz=192,slow=75,SNR=12							
H10N2	**ASCENSION HYDR**	**48.99**	**22**	T		T	05 50 30.5	
	baz=192,slow=75,SNR=12							
LBTB	**Lobatse**	**50.94**	**78**	P		**P**	**04 57 43.0**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=213,slow=21,SNR=1.1							
	comp=Z,1.3nm,0.6s							
MACA	**Manacapuru-AM**	**57.05**	**324**	P		**P**	**04 58 27.5**	**-0.3**
MACA				IAmb		IAmb	04 58 40.4	
	comp=Z,5.3nm,0.7s							
MCLT	**Moule a Chique**	**73.04**	**330**	P		**P**	**05 00 10.9**	**-0.8**
TOA0	**Torodi Ar. Sit**	**73.42**	**33**	P		**P**	**05 00 14.3**	**+0.4**
TOA0				IAmb		IAmb	05 00 56.6	
	comp=Z,5.7nm,1.2s							
TORD	**Torodi Ar. Bea**	**73.42**	**33**	P		**P**	**05 00 14.6**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=198,slow=6.9,SNR=12							
	comp=Z,0.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.42**	**33**	P		**P**	**05 00 13.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**127.49**	**114**	PKP		**PKPdf**	**05 07 46.5**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=240,slow=1.8,SNR=1.1							
ARCES	**ARCESS Array B**	**130.92**	**23**	PKP		**PKPdf**	**05 07 51.9**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=228,slow=2.2,SNR=2.3							
YKA	**Yellowknife Ar**	**134.00**	**320**	PKP		**PKPdf**	**05 07 57.0**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=153,slow=1.8,SNR=2.4							
ZALV	**Zalesovo Beam**	**143.98**	**65**	PKhKP		PKPpre	05 08 14.2	
	comp=Z,1.4nm,0.5s,baz=242,slow=2.2,SNR=4.2							
XAN	**Xi'an**	**145.26**	**111**	⇑PKPbc		**PKPdf**	**05 08 19.3**	**+0.2**
ILAR	**Eielson Array**	**147.83**	**314**	PKPbc		**PKPbc**	**05 08 25.1**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=116,slow=2.1,SNR=16							
SONM	**Songino Array**	**152.91**	**88**	PKPbc		**PKPbc**	**05 08 38.2**	**0.0**
	comp=Z,1.1nm,0.7s,baz=228,slow=4.0,SNR=5.6							

PB01 IAmb IAmb 05 01 02.2
comp=Z,10nm,0.7s
PTLB Pontes e Lacer 45.15 320 P P 05 01 05.7 +0.2
PTLB IAmb IAmb 05 01 07.0
comp=Z,12nm,1.1s
GO01 Chusmiza 45.61 305 P P 05 01 10.3 +0.6
GO01 IAmb IAmb 05 01 11.7
comp=Z,12nm,0.9s
PB16 IPOC Station P 46.91 306 P P 05 01 20.9 +0.8
VNDA Vanda 47.36 184 P P 05 01 22.3 0.0
comp=Z,1.1nm,0.9s,baz=200,slow=5.7,SNR=7.5
comp=Z,1.1nm,0.9s
VNDA Vanda 47.36 184 P P 05 01 22.1 -0.1
H10S2 ASCENSION HYDR 47.87 22 T T 05 53 32.3
baz=193
H10S3 ASCENSION HYDR 47.88 22 T T 05 53 20.6
baz=27
LPAZ La Paz 48.07 309 P P 05 01 30.3 +1.1
comp=Z,9.7nm,0.5s,baz=95,slow=5.4,SNR=68
comp=Z,9.7nm,0.5s
LPAZ La Paz 48.07 309 P P 05 01 30.1 +1.0
LPAZ IAmb IAmb 05 01 30.7
comp=Z,10.0nm,0.5s
H10N1 ASCENSION HYDR 48.99 22 T T 05 54 59.8
baz=192,slow=75,SNR=10
H10N3 ASCENSION HYDR 48.99 22 T T 05 55 02.6
baz=192,slow=75,SNR=13
H10N2 ASCENSION HYDR 49.00 22 T T 05 55 04.9
baz=192,slow=75,SNR=12
LBTB Lobatse 50.91 78 P P 05 01 49.6 -0.6
comp=Z,2.9nm,0.9s,baz=239,slow=11,SNR=1.7
comp=Z,2.9nm,0.9s
ETMB Extrema 53.03 315 P P 05 02 05.9 0.0
ETMB IAmb IAmb 05 02 06.5
comp=Z,14nm,1.6s
MACA Manacapuru-AM 57.09 324 P P 05 02 33.9 -1.3
MACA IAmb IAmb 05 02 44.5
comp=Z,6.3nm,0.7s
BOAV Boa Vista 62.25 326 P P 05 03 10.6 -0.2
BOAV IAmb IAmb 05 03 34.5
comp=Z,20nm,1.9s
COHC Cochancay 65.33 305 P P 05 03 32.6 +1.5
TOA0 Torodi Ar. Sit 73.42 33 P P 05 04 21.9 +0.8
TOA0 IAmb IAmb 05 05 45.8
comp=Z,18nm,1.8s
TORD Torodi Ar. Bea 73.42 33 P P 05 04 20.1 -1.0
comp=Z,0.8nm,0.6s,baz=198,slow=5.9,SNR=8.7
comp=Z,0.8nm,0.6s
TORD Torodi Ar. Bea 73.42 33 P P 05 04 21.8 +0.7
FINES FINESS Array B 124.64 29 PKP PKPdf 05 11 46.9 -0.2
comp=Z,2.2nm,0.8s,baz=90,slow=3.8,SNR=4.3
CMAR Chiang Mai Arr 127.45 114 PKP PKPdf 05 11 53.1 -0.8
comp=Z,0.6nm,0.3s,baz=224,slow=4.0,SNR=5.2
YKA Yellowknife Ar 134.04 320 PKP PKPdf 05 12 05.3 +0.4
comp=Z,0.4nm,0.6s,baz=128,slow=2.4,SNR=2.6
WMQ Urumqi 139.90 80 *e*PKP **PKiKP 05 12 17.8 -1.1**
CD2 Chengdu 140.03 108 PKP PKPdf 05 12 17.3 +0.2
ZALV Zalesovo Beam 143.96 65 PKhKP PKPpre 05 12 20.0
comp=Z,1.5nm,0.6s,baz=171,slow=5.0,SNR=4.5
XAN Xi'an 145.22 111 ⇑PKPbc **PKPab 05 12 25.8 -0.2**
ILAR Eielson Array 147.88 313 PKPbc PKPbc 05 12 32.5 -0.1
comp=Z,4.1nm,0.9s,baz=117,slow=1.7,SNR=26
SONM Songino Array 152.88 88 PKPbc PKPbc 05 12 44.6 -0.8
comp=Z,1.8nm,0.8s,baz=228,slow=2.8,SNR=7.4

IDC 22 05:10:57.2±4.0, 54°.58S×31°.50W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=127.8km s-min=50.4km az=4.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIV	**San Ignacio**	**44.80**	**318**	P	P	05 19 12.1	-0.6
	0.5nm,0.7s,baz=180,slow=9.1,SNR=1.9						
	0.5nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.45**	**23**	T	T	06 11 13.7	
	baz=192						
H10S3	**ASCENSION HYDR**	**47.45**	**23**	T	T	06 11 12.6	
	baz=28						
LPAZ	**La Paz**	**47.52**	**309**	P	P	05 19 35.0	+0.3
	1.2nm,0.6s,baz=127,slow=5.1,SNR=4.0						
	1.2nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.56**	**23**	T	T	06 12 39.5	
	baz=193,slow=75,SNR=6.8						
H10N3	**ASCENSION HYDR**	**48.58**	**23**	T	T	06 12 39.7	
	baz=193,slow=75,SNR=9.6						
H10N2	**ASCENSION HYDR**	**48.58**	**23**	T	T	06 12 37.5	
	baz=193,slow=75,SNR=13						
TORD	**Torodi Ar. Bea**	**73.09**	**34**	P	P	05 22 29.2	+0.1
	0.5nm,0.6s,baz=208,slow=6.5,SNR=2.4						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**147.31**	**314**	PKPbc	PKPbc	05 30 40.2	-0.9
	1.3nm,1.1s,baz=107,slow=0.9,SNR=6.5						

IDC 22 05:13:05.0±0.5, 22°.15N×143°.77E, h98km±4km, mb3.9/21, mbtmp4.3/23, MS3.1/4, Error ellipse: s-maj=18.1km s-min=10.0km az=81.0
NEIC 22 05:13:06.8±2.4, 22°.20N±0°.06×143°.8E±0°.1, h107km±8km, mb4.5/31, Error ellipse: s-maj=19.1km s-min=6.7km az=104.0
JMA 22 05:13:08.4±0.3, 23°.1N±1°.4×14°.4E±°, h117km, IOTO ISLANDS REGION

ISC 22 05:13:05.4±0.5, 22°.18N±0°.06×143°.7E±0°.1, h100km, n76, σ0$96/85, mb4.4/31, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**4.65**	**343**	P	**Pn**	**05 14 14.3**	**+0.9**
JHH2				*e*S	**Sn**	**05 15 05.2**	**-1.1**
JHH2	**Haha-jima-NKT2**	**4.65**	**343**	A	A	05 14 14.3	
	comp=E,12nm,0.4s,comp=E,14nm,0.4s						
CBIJ	**Chichi jima**	**5.09**	**344**	P	**Pn**	**05 14 19.6**	**+0.2**
CBIJ				*e*S	**Sn**	**05 15 14.6**	**-2.3**
JCJ	**Chichijima**	**5.09**	**344**	P	**Pn**	**05 14 19.5**	**+0.2**
	58nm,0.3s,baz=288,slow=23,SNR=13						
JCJ				S	**Sn**	**05 15 13.8**	**-3.1**
	378nm,0.4s,baz=105,slow=23,SNR=21						
JMN	**Monobe**	**14.41**	**325**	Pn	**Pn**	**05 16 24.2**	**-0.4**
MJAR	**Matsushiro Arr**	**15.09**	**343**	P	**Pn**	**05 16 32.6**	**-0.7**
	5.8nm,0.7s,baz=159,slow=10,SNR=22						
MAJO	**Matsushiro**	**15.10**	**343**	Pn	**Pn**	**05 16 32.6**	**-0.6**
MAJO				IAmb	IAmb	05 16 38.5	
	comp=Z,24nm,0.8s						
JHS	**Saijyo**	**15.79**	**326**		**Pn**	**05 16 40.2**	**-1.9**
JHS				IAmb	IAmb	05 16 48.7	
	comp=Z,16nm,0.7s						
JHS	**Saijyo**	**15.79**	**326**	*e*P	**P**	**05 16 44.9**	**+1.0**
JMM	**Marumori**	**15.84**	**351**	Pn	**Pn**	**05 16 42.3**	**-0.2**
JMM				IAmb	IAmb	05 16 47.6	
	comp=Z,29nm,0.8s						
JSD	**Sado**	**16.49**	**345**	Pn	**Pn**	**05 16 50.2**	**-0.5**
JSD				IAmb	IAmb	05 16 54.2	
	comp=Z,20nm,0.6s						
JMK	**Ichinoseki**	**16.86**	**353**	*e*P	**Pn**	**05 16 55.3**	**+0.1**
KSBUS	**Busan**	**18.24**	**319**	P	**P**	**05 17 11.5**	**+0.7**
KSBUS				IAmb	IAmb	05 17 29.1	
	comp=Z,102nm,1.5s						
NAWB	**Namwon**	**19.42**	**316**	P	**Pn**	**05 17 25.4**	**-0.6**
NAWB				IAmb	IAmb	05 17 26.8	
	comp=Z,22nm,0.9s						
KSRS	**Korea Array**	**20.44**	**322**	P	**P**	**05 17 35.9**	**+1.2**
	comp=Z,6.0nm,0.5s,baz=142,slow=9.5,SNR=27						
KSRS				LR	LR	05 25 48.6	
	comp=Z,23nm,19.4s,baz=135,slow=37						
	comp=Z,6.0nm,0.5s						
KSAR	**Wonju Array Be**	**20.45**	**322**	P	**P**	**05 17 35.5**	**+0.6**
KS19	**Wonju Array Si**	**20.50**	**322**	P	**P**	**05 17 35.5**	**0.0**
SSLB	**Suanglung**	**21.02**	**279**	P	**P**	**05 17 42.5**	**+1.3**
SSLB				IAmb	IAmb	05 17 46.5	
	comp=Z,32nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**21.78**	**92**	T	T	05 40 37.9	
	baz=279						
H11N2	**WAKE ISLAND Hy**	**21.78**	**92**	T	T	05 40 24.2	
	baz=279,slow=74						
H11N3	**WAKE ISLAND Hy**	**21.80**	**92**	T	T	05 40 25.3	
	baz=279,slow=74						
H11S3	**WAKE ISLAND Hy**	**21.84**	**95**	T	T	05 40 16.1	
	baz=283,slow=74						
H11S1	**WAKE ISLAND Hy**	**21.85**	**95**	T	T	05 40 34.6	
	baz=283,slow=74						
H11S2	**WAKE ISLAND Hy**	**21.86**	**95**	T	T	05 40 35.5	
	baz=283						
USA0B	**Ussuriysk Arra**	**24.01**	**339**	P	**P**	**05 18 12.2**	**+1.4**
USRK	**Ussuriysk Ar.**	**24.01**	**339**	P	**P**	**05 18 11.6**	**+0.8**
	comp=Z,8.7nm,0.7s,baz=150,slow=9.5,SNR=18						
	comp=Z,8.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**24.01**	**339**	P	**P**	**05 18 11.8**	**+1.0**
KLR	**Kul'dur**	**28.62**	**344**	P	**P**	**05 18 53.2**	**+1.0**
	comp=Z,10nm,0.5s,baz=148,slow=6.7,SNR=26						
KLR				LR	LR	05 29 45.3	
	comp=Z,20nm,19.3s,baz=20,slow=35						
	comp=Z,10nm,0.5s						
MTN	**Manton Dam**	**36.93**	**201**	P	**P**	**05 20 05.2**	**+0.4**
SONM	**Songino Array**	**39.29**	**320**	P	**P**	**05 20 25.3**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=128,slow=8.0,SNR=13						
SONM				pP	**pP**	**05 20 47.0**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=136,slow=9.8,SNR=3.4						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**39.29**	**320**	P	**P**	**05 20 25.9**	**+1.4**
KNRA	**Kununurra**	**40.37**	**203**	P	**P**	**05 20 33.5**	**-0.1**
CTAO	**Charters Tower**	**42.08**	**176**	P	**P**	**05 20 47.8**	**+0.2**
CTAO				IAmb	IAmb	05 20 48.7	
	comp=Z,6.9nm,0.6s						
ADK	**Adak**	**42.51**	**36**	P	**P**	**05 20 51.5**	**+0.8**
WB0	**Warramunga Arr**	**42.67**	**193**	P	**P**	**05 20 52.3**	**-0.1**
WB0				IAmb	IAmb	05 21 06.0	
	comp=Z,8.4nm,1.4s						
WR0	**Warramunga Arr**	**42.83**	**193**	P	**P**	**05 20 52.6**	**-1.0**
WRAB	**Tennant Creek**	**42.84**	**193**	P	**P**	**05 20 53.7**	**0.0**
WRAB				IAmb	IAmb	05 20 56.1	
	comp=Z,6.3nm,0.4s						
WB2	**Warramunga Arr**	**42.85**	**193**	P	**P**	**05 20 53.6**	**-0.2**
WB2				IAmb	IAmb	05 20 59.1	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**42.85**	**193**	P	**P**	**05 20 53.8**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=16,slow=9.1,SNR=101						
WRA				pP	**pP**	**05 21 16.5**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=16,slow=8.9,SNR=2.9						
WRA				PcP	**PcP**	**05 22 42.7**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=11,slow=3.3,SNR=2.3						
WRA				ScP	**ScP**	**05 26 23.6**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=9.4,slow=3.9,SNR=15						
	comp=Z,1.5nm,0.3s						
WRA	**Warramunga Arr**	**42.85**	**193**	P	**P**	**05 20 53.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**43.76**	**205**	P	**P**	**05 21 01.6**	**+0.5**
ASAR	**Alice Springs**	**46.56**	**192**	P	**P**	**05 21 22.8**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=15,slow=7.9,SNR=24						
ASAR				pP	**pP**	**05 21 45.4**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=19,slow=9.3,SNR=2.3						
ASAR				PcP	**PcP**	**05 22 54.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=19,slow=5.9,SNR=4.4						
ASAR				ScP	**ScP**	**05 26 39.8**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=21,slow=4.2,SNR=6.1						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**46.56**	**192**	P	**P**	**05 21 22.4**	**-0.8**
PSA00	**Pilbara Seismi**	**49.32**	**210**	P	**P**	**05 21 45.7**	**+1.1**
PSA00				IAmb	IAmb	05 21 45.7	
	comp=Z,4.9nm,1.1s						
GSI	**Gunungsitoli**	**49.42**	**252**	P	**P**	**05 21 44.2**	**-1.3**
TIXI	**Tiksi**	**50.23**	**354**	P	**P**	**05 21 50.5**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=90,slow=23,SNR=2.2						
	comp=Z,2.3nm,0.5s						
TIXI	**Tiksi**	**50.23**	**354**	P	**P**	**05 21 49.4**	**-1.4**
TIXI				IAmb	IAmb	05 21 49.9	
	comp=Z,5.5nm,0.9s						
STKA	**Stephens Creek**	**53.78**	**182**	P	**P**	**05 22 16.8**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=341,slow=11,SNR=6.2						
	comp=Z,1.1nm,0.4s						
STKA	**Stephens Creek**	**53.78**	**182**	P	**P**	**05 22 16.9**	**-0.8**
ZAA0	**Zalesovo Array**	**54.15**	**321**	P	**P**	**05 22 20.4**	**+0.3**
ZAA0				IAmb	IAmb	05 22 20.8	
	comp=Z,2.9nm,0.6s						
ZALV	**Zalesovo Beam**	**54.15**	**321**	P	**P**	**05 22 20.1**	**0.0**
	comp=Z,2.7nm,0.5s,baz=113,slow=6.9,SNR=7.9						
	comp=Z,2.7nm,0.5s						
ZALV	**Zalesovo Beam**	**54.15**	**321**	P	**P**	**05 22 20.3**	**+0.2**
MK31	**Makanchi Array**	**54.74**	**312**	P	**P**	**05 22 25.4**	**+0.8**
MKAR	**Makanchi Array**	**54.74**	**312**	P	**P**	**05 22 25.5**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=87,slow=8.8,SNR=18						
MKAR				pP	**pP**	**05 22 47.9**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=86,slow=9.5,SNR=6.0						
	comp=Z,1.5nm,0.5s						
MAKZ	**Makanchi**	**54.96**	**312**	P	**P**	**05 22 27.0**	**+0.9**
MAKZ				IAmb	IAmb	05 22 55.5	
	comp=Z,3.5nm,0.8s						
BBOO	**Buckleboo**	**55.16**	**188**	P	**P**	**05 22 27.0**	**-0.6**
KURK	**Kurchatov**	**57.46**	**317**	P	**P**	**05 22 43.8**	**0.0**
KURK				IAmb	IAmb	05 22 45.0	
	comp=Z,4.7nm,0.8s						
KURBB	**Kurchatov Arra**	**57.51**	**317**	P	**P**	**05 22 44.7**	**+0.6**
	comp=Z,8.7nm,0.6s,baz=93,slow=7.6,SNR=58						
KURBB				pP	**pP**	**05 23 07.5**	**-0.1**
	comp=Z,4.0nm,0.8s,baz=94,slow=7.9,SNR=5.0						
	comp=Z,8.7nm,0.6s						
BPAW	**Bear Paw Mtn.**	**59.52**	**28**	P	**P**	**05 22 58.7**	**+0.8**
BPAW				IAmb	IAmb	05 22 59.4	
	comp=Z,4.3nm,0.7s						
ILAR	**Eielson Array**	**61.39**	**27**	P	**P**	**05 23 09.8**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=260,slow=5.2,SNR=18						
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**62.63**	**319**	LR	LR	05 50 17.4	
	comp=Z,31nm,19.4s,baz=53,slow=36						
BRVK	**Borovoye**	**62.69**	**319**	P	**P**	**05 23 20.2**	**+0.7**
INK	**Inuvik**	**66.93**	**24**	P	**P**	**05 23 46.4**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=234,slow=4.7,SNR=6.9						
	comp=Z,3.4nm,0.8s						
ABKAR	**Akbulak array**	**69.55**	**316**	P	**P**	**05 24 03.8**	**+0.4**
ABKAR				IAmb	IAmb	05 24 04.3	
	comp=Z,4.4nm,0.6s						
YKA	**Yellowknife Ar**	**75.80**	**28**	P	**P**	**05 24 40.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=292,slow=5.9,SNR=6.6						
	comp=Z,0.5nm,0.5s						
ARCES	**ARCESS Array B**	**78.63**	**342**	P	**P**	**05 24 55.3**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=70,slow=8.0,SNR=9.9						
ARCES				LR	LR	06 02 58.5	
	comp=Z,31nm,19.9s,baz=192,slow=38						
	comp=Z,1.6nm,0.6s						
KBZ	**Khabaz**	**82.39**	**314**	P	**P**	**05 25 17.5**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=121,slow=9.4,SNR=3.9						
KBZ				pP	**pP**	**05 25 43.5**	**+2.0**
	comp=Z,7.5nm,0.8s,baz=89,slow=5.1,SNR=10.0						
	comp=Z,1.9nm,0.7s						
NVAR	**Mina Array Bea**	**82.46**	**52**	P	**P**	**05 25 17.9**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=278,slow=5.5,SNR=11						
NVAR				pP	**pP**	**05 25 42.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=282,slow=5.7,SNR=3.4						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**82.96**	**335**	P	**P**	**05 25 17.2**	**-1.8**
	comp=Z,1.4nm,0.6s,baz=67,slow=6.4,SNR=7.0						
FINES				pP	**pP**	**05 25 44.3**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=128,slow=3.1,SNR=3.1						
	comp=Z,1.4nm,0.6s						
AKASG	**Malin Array Be**	**87.41**	**325**	P	**P**	**05 25 40.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=51,slow=5.3,SNR=2.1						
AKASG				pP	**pP**	**05 26 07.4**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=50,slow=5.5,SNR=2.5						
	comp=Z,0.3nm,0.3s						
NB2	**NORSAR Subarra**	**88.68**	**339**	P	pP	05 26 13.1	+0.7
	comp=Z,1.1nm,0.9s,baz=42,slow=4.6						
NOA	**NORSAR Array B**	**88.68**	**339**	P	**P**	**05 25 45.7**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=46,slow=5.3,SNR=1.8						
NOA				pP	**pP**	**05 26 13.2**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=38,slow=5.0,SNR=3.6						
	comp=Z,0.5nm,0.8s						
BRTR	**Keskin Array B**	**90.37**	**314**	P	**P**	**05 25 55.3**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=69,slow=4.8,SNR=1.9						
BRTR				pP	**pP**	**05 26 23.1**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=110,slow=4.1,SNR=4.2						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**128.82**	**310**	PKP	**PKPdf**	**05 32 01.9**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=28,slow=3.1,SNR=1.7						
PLCA	**Paso Flores**	**145.70**	**131**	PKPbc	**PKPdf**	**05 32 33.0**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=244,slow=3.5,SNR=22						
LPAZ	**La Paz**	**149.40**	**85**	PKPbc	**PKPbc**	**05 32 44.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=292,slow=0.4,SNR=7.4						

IDC 22 05:31:12.9±1.3, 30°.16S×179°.58W, h338km±18km, mb3.1/3, mbtmp3.9/4, Error ellipse: s-maj=46.9km s-min=27.3km az=139.0

ISC 22 05:31:12.1±1.2, 30°.6S±0°.1×179°.2W±0°.2, h350km, n7, σ1$31/8, mb3.3/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.72**	**42**	P	**Pn**	**05 32 01.1**	**-0.5**
	231nm,0.3s,baz=54,slow=12,SNR=6.9						
RAO				S	S	05 32 29.2	-12
	250nm,0.3s,baz=92,slow=19,SNR=2.4						
URZ	**Urewera**	**8.26**	**200**	P	**P**	**05 33 12.8**	**+0.7**
	4.6nm,0.3s,baz=266,slow=3.9,SNR=16						
URZ				S	**S**	**05 34 43.8**	**-1.1**
	3.9nm,0.3s,baz=228,slow=19,SNR=1.8						
STKA	**Stephens Creek**	**33.41**	**257**	P	**P**	**05 37 20.4**	**+1.3**
	0.6nm,0.4s,baz=94,slow=16,SNR=3.2						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**42.04**	**268**	P	**P**	**05 38 30.2**	**-0.7**
	0.3nm,0.3s,baz=101,slow=7.4,SNR=4.7						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**43.04**	**273**	P	**P**	**05 38 37.2**	**-1.6**
	1.1nm,0.5s,baz=113,slow=7.1,SNR=22						
	1.1nm,0.5s						
FINES	**FINESS Array B**	**144.91**	**339**	PKP	**PKPdf**	**05 50 06.6**	**-0.5**
	0.6nm,0.4s,baz=64,slow=3.5,SNR=7.7						
AKASG	**Malin Array Be**	**150.76**	**322**	PKPbc	**PKiKP**	**05 50 24.9**	**+1.4**
	0.8nm,0.5s,baz=42,slow=1.5,SNR=2.5						

IDC 22 05:36:21.6±1.6, 0°.56N×100°.08E, h139km±13km, mb3.6/13, mbtmp4.0/14, Error ellipse: s-maj=27.0km s-min=13.8km az=54.0
DJA 22 05:36:23.5±0.6, 0°.N±3°×10°.0E±°, h142km±8km, M4.0/7, MLv4.0/7
NEIC 22 05:36:23.6±0.9, 0°.49N±0°.08×99°.9E±0°.1, h155km±7km, mb4.2/9, Error ellipse: s-maj=16.8km s-min=7.2km az=57.0

ISC 22 05:36:22.6±0.5, 0°.53N±0°.05×99°.92E±0°.07, h150km, n40, σ0$98/42, mb3.8/18, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKNI	**Bangkinang**	**1.14**	**100**	Pn	**Pn**	**05 36 50.1**	**+1.5**
BKNI	**Bangkinang**	**1.14**	**100**	P	**Pn**	**05 36 49.9**	**+1.3**
SISI	**Saibi**	**2.02**	**204**	P	**Pn**	**05 36 58.5**	**+0.6**
SISI				S	**Sn**	**05 37 23.9**	**-1.2**
RPSI	**Rantau Prapat**	**2.37**	**335**	Pn	**Pn**	**05 37 03.4**	**+1.2**
RPSI	**Rantau Prapat**	**2.37**	**335**		**Pn**	**05 37 03.2**	**+1.0**
GSI	**Gunungsitoli**	**2.46**	**288**	Pn	**Pn**	**05 37 04.1**	**+0.8**
GSI	**Gunungsitoli**	**2.46**	**288**	P	**Pn**	**05 37 04.4**	**+1.1**
PSI	**Prapat**	**2.47**	**336**	P	**Pn**	**05 37 03.2**	**-0.3**
	53nm,0.4s,baz=184,slow=16,SNR=41						
PSI				S	**Sn**	**05 37 31.7**	**-3.3**
	8.0nm,0.3s,baz=178,slow=17,SNR=3.6						
PPSI	**Pulau Pagai**	**3.27**	**178**	P	**Pn**	**05 37 13.3**	**-0.1**
PPSI				S	**Sn**	**05 37 51.9**	**-0.9**
KCSI	**Kotacane, Aceh**	**3.67**	**324**	P	**Pn**	**05 37 19.3**	**+0.7**
MNAI	**Manna**	**5.73**	**148**	Pn	**Pn**	**05 37 46.1**	**+0.4**
WB0	**Warramunga Arr**	**39.35**	**123**	P	**P**	**05 43 36.9**	**-0.7**
WB0				IAmb	IAmb	05 43 40.0	
	comp=Z,7.8nm,1.4s						
WRA	**Warramunga Arr**	**39.38**	**123**	P	**P**	**05 43 36.7**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=302,slow=8.9,SNR=7.2						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**39.38**	**123**	P	**P**	**05 43 37.4**	**-0.5**
WB2	**Warramunga Arr**	**39.40**	**123**	P	**P**	**05 43 37.3**	**-0.8**
WR0	**Warramunga Arr**	**39.56**	**123**	P	**P**	**05 43 39.3**	**-0.1**
WR0				IAmb	IAmb	05 43 43.0	
	comp=Z,4.7nm,1.2s						
ASAR	**Alice Springs**	**40.84**	**128**	P	**P**	**05 43 48.0**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=303,slow=8.4,SNR=2.1						
	comp=Z,0.2nm,0.3s						
KSRS	**Korea Array**	**44.92**	**32**	P	**P**	**05 44 21.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=237,slow=11,SNR=2.0						
	comp=Z,0.5nm,0.3s						
SONM	**Songino Array**	**47.46**	**6**	P	**P**	**05 44 42.1**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=199,slow=11,SNR=5.0						
	comp=Z,1.2nm,0.6s						
BBOO	**Buckleboo**	**47.54**	**138**	P	**P**	**05 44 42.7**	**-0.3**
MK31	**Makanchi Array**	**48.59**	**344**	P	**P**	**05 44 51.8**	**+0.9**
MK31				IAmb	IAmb	05 44 52.3	
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**48.59**	**344**	P	**P**	**05 44 51.4**	**+0.5**
	comp=Z,2.5nm,0.3s,baz=157,slow=8.3,SNR=92						
	comp=Z,2.5nm,0.3s						
MKAR	**Makanchi Array**	**48.59**	**344**	P	**P**	**05 44 51.5**	**+0.6**
STKA	**Stephens Creek**	**50.91**	**133**	P	**P**	**05 45 07.8**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=308,slow=9.6,SNR=4.3						
	comp=Z,0.7nm,0.4s						
STKA	**Stephens Creek**	**50.91**	**133**	P	**P**	**05 45 08.5**	**-0.1**
USRK	**Ussuriysk Ar.**	**51.99**	**29**	P	**P**	**05 45 16.3**	**-0.1**
ZAA0	**Zalesovo Array**	**54.69**	**349**	P	**P**	**05 45 36.8**	**+0.8**
ZAA0				IAmb	IAmb	05 45 37.0	
	comp=Z,4.9nm,1.0s						
ZALV	**Zalesovo Beam**	**54.69**	**349**	P	**P**	**05 45 36.0**	**0.0**
	comp=Z,1.3nm,0.3s,baz=160,slow=4.7,SNR=9.8						
	comp=Z,1.3nm,0.3s						
ZALV	**Zalesovo Beam**	**54.69**	**349**	P	**P**	**05 45 36.2**	**+0.3**
BRVK	**Borovoye**	**57.87**	**339**	P	**P**	**05 45 59.0**	**+0.5**
BRVK				IAmb	IAmb	05 45 59.1	
	comp=Z,4.3nm,1.1s						
ABKAR	**Akbulak array**	**59.40**	**331**	P	**P**	**05 46 09.0**	**-0.2**
BRTR	**Keskin Array B**	**71.57**	**312**	P	**P**	**05 47 27.4**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=134,slow=6.2,SNR=2.9						
	comp=Z,0.7nm,0.7s						
BOSA	**Boshof**	**76.81**	**241**	P	**P**	**05 48 00.0**	**+1.7**
	comp=Z,0.7nm,0.4s,baz=76,slow=4.2,SN

PB06 IPOC Station P 2.73 300⇑ *eP* **Pn 05 41 42.9 +1.2**
PB06 *eS* **Sn 05 42 16.9 -0.8**
PB06 IAML 05 42 20.1
comp=E,1μm,0.2s
PB06 IPOC Station P 2.73 300 *eP* **Pn 05 41 42.3 +0.6**
PB06 *eS* **Sn 05 42 18.2 +0.6**
PB06 IAML 05 42 21.4
comp=Z,707nm,0.3s
PB09 IPOC Station P 3.07 318 Pn 05 41 47.2 +1.4
PB09 IPOC Station P 3.07 318⇑ *eP* **Pn 05 41 47.4 +1.5**
PB09 *i* S **Sn 05 42 25.5 +0.5**
PB09 IAML 05 42 26.8
comp=N,846nm,0.4s
PB09 IPOC Station P 3.07 318 *eP* **Pn 05 41 46.2 +0.4**
PB09 *eS* **Sn 05 42 24.6 -0.4**
PB09 IAML 05 42 26.5
comp=Z,726nm,0.6s
PB14 IPOC Station P 3.14 259 Pn 05 41 47.2 +0.4
PB14 IPOC Station P 3.14 259⇑ *iP* **Pn 05 41 47.1 +0.4**
PB14 *i* S **Sn 05 42 24.7 -1.9**
PB14 IAML 05 42 25.8
comp=E,953nm,0.4s
PB14 IPOC Station P 3.14 259 *eP* **Pn 05 41 47.2 +0.4**
PB14 *eS* **Sn 05 42 26.3 -0.4**
PB14 IAML 05 42 27.2
comp=Z,716nm,0.3s
AC02 Maricunga 3.34 215 Pn 05 41 50.1 +0.8
AC02 Maricunga 3.34 215⇑ *eP* **Pn 05 41 50.1 +0.8**
AC02 *eS* **Sn 05 42 30.8 -0.6**
AC02 Maricunga 3.34 215 *eP* **Pn 05 41 50.2 +0.8**
AC02 *eS* **Sn 05 42 36.2 +4.8**
PB04 IPOC Station P 3.37 301 Pn 05 41 50.1 +0.6
PB04 IPOC Station P 3.37 301⇑ *eP* **Pn 05 41 50.0 +0.6**
PB04 *eS* **Sn 05 42 29.5 -2.0**
PB04 IPOC Station P 3.37 301 *eP* **Pn 05 41 50.0 +0.6**
PB04 *eP* 05 41 50.2
PB04 *eS* **Sn 05 42 31.4 -0.2**
PB04 IAML 05 42 34.2
comp=Z,779nm,0.6s
PB07 IPOC Station P 3.54 311 Pn 05 41 52.2 +0.6
PB07 IPOC Station P 3.54 311⇑ *eP* **Pn 05 41 52.1 +0.6**
PB07 *eS* **Sn 05 42 33.2 -2.1**
PB07 IPOC Station P 3.54 311 *eP* **Pn 05 41 52.1 +0.6**
PB07 *eS* **Sn 05 42 34.9 -0.4**
PB07 IAML 05 42 38.3
comp=Z,936nm,0.5s
PB01 IPOC Station P 3.80 322 Pn 05 41 55.1 +0.4
PB01 IPOC Station P 3.80 322⇑ *eP* **Pn 05 41 55.0 +0.3**
PB01 *eS* **Sn 05 42 39.2 -1.7**
PB01 IPOC Station P 3.80 322 *eP* **Pn 05 41 55.1 +0.4**
PB01 *eS* **Sn 05 42 40.1 -0.8**
PB01 IAML 05 42 44.3
comp=Z,368nm,0.3s
PB02 IPOC Station P 3.83 315 Pn 05 41 55.4 +0.3
PB02 IPOC Station P 3.83 315⇑ *eP* **Pn 05 41 55.2 +0.1**
PB02 *eS* **Sn 05 42 39.4 -2.3**
PB02 IPOC Station P 3.83 315 *eP* **Pn 05 41 55.4 +0.3**
PB02 *eS* **Sn 05 42 40.9 -0.8**
PB02 IAML 05 42 45.5
comp=Z,1μm,0.3s
AC01 Pan de Azucar 3.84 237 Pn **Pn 05 41 54.6 -0.5**
AC01 Pan de Azucar 3.84 237⇑ *eP* **Pn 05 41 54.4 -0.7**
AC01 *eS* **Sn 05 42 38.9 -2.9**
AC01 Pan de Azucar 3.84 237 *eP* **Pn 05 41 54.5 -0.5**
AC01 *eS* **Sn 05 42 38.8 -3.0**
AC01 IAML 05 42 40.4
comp=Z,543nm,0.2s
AC06 Mina Casimiro 4.44 222 Pn 05 42 01.9 -0.7
AC06 Mina Casimiro 4.44 222 *i* P **Pn 05 42 01.6 -1.0**
AC06 *i* S **Sn 05 42 52.0 -3.3**
GO03 Copiap 4.54 219 Pn **Pn 05 42 03.5 -0.4**
GO03 Copiap 4.54 219 *i* P **Pn 05 42 02.9 -1.0**
GO03 *i* S **Sn 05 42 54.7 -3.0**
TA01 Diego Aracena 4.57 319 Pn **Pn 05 42 04.2 -0.1**
TA01 Diego Aracena 4.57 319 *eP* **Pn 05 42 04.2 -0.1**
TA01 *eS* **Sn 05 42 55.4 -2.9**
VCA Vinchina 4.75 193 *eP* **Pn 05 42 07.4 +0.7**
VCA *eS* Sn 05 43 11.4 +8.7
TA02 Huaiquique 4.77 322 Pn 05 42 06.3 -0.6
TA02 Huaiquique 4.77 322 *eP* **Pn 05 42 07.2 +0.2**
TA02 *eS* **Sn 05 43 01.7 -1.3**
GO01 Chusmiza 4.84 335 Pn **Pn 05 42 08.4 +0.2**
GO01 Chusmiza 4.84 335 *eP* **Pn 05 42 08.8 +0.5**
GO01 *eS* **Sn 05 43 04.2 -1.2**
ACLC CERRO LA CRUZ 5.32 179 *eP* **Pn 05 42 13.8 -0.2**
ACLC *eS* **Sn 05 43 13.2 -2.6**
AC04 Llanos de Chal 5.49 221 Pn **Pn 05 42 15.4 -0.6**
AC05 El Transito 5.56 211 Pn **Pn 05 42 17.2 +0.2**
LCO Las Campanas 5.91 213 Pn **Pn 05 42 21.2 -0.6**
PB16 IPOC Station P 6.18 337 Pn 05 42 26.1 +0.5
PB12 IPOC Station P 6.26 330 Pn 05 42 25.4 -0.9
CO01 Juntas del Tor 6.48 204 Pn **Pn 05 42 28.7 -0.4**
CO05 La Serena 6.92 212 Pn **Pn 05 42 34.0 -0.6**
GO04 Tololo Observa 6.94 208 Pn **Pn 05 42 35.1 0.0**
CO03 El Pedregal 7.47 205 Pn **Pn 05 42 41.4 -0.6**
LPAZ La Paz 7.83 352 P **Pn 05 42 48.1 +0.9**
comp=Z,6.7nm,0.3s,baz=140,slow=5.6,SNR=77
LPAZ S **Sn 05 44 11.0 -4.8**
comp=Z,6.6nm,0.6s,baz=28,slow=16,SNR=2.2
LPAZ La Paz 7.83 352 Pn **Pn 05 42 47.3 0.0**
LPAZ La Paz 7.83 352 *eP* **Pn 05 42 48.2 +0.9**
CO02 Combarbal 7.92 206 Pn **Pn 05 42 46.7 -1.1**
CPUP Villa Florida 9.05 106 P **Pn 05 42 59.1 -3.4**
comp=Z,3.0nm,0.6s,baz=281,slow=11,SNR=7.4
VA03 San Esteban 9.19 199 Pn **Pn 05 43 03.8 -0.6**
VA06 Catapilco 9.24 203 Pn **Pn 05 43 02.7 -2.3**
ROC1 El Roble 9.53 201 Pn **Pn 05 43 07.5 -1.5**
SIV San Ignacio 9.80 36 P **Pn 05 43 10.9 -1.6**
comp=Z,5.5nm,0.7s,baz=212,slow=12,SNR=23
SIV S **Sn 05 45 01.7 -0.2**
comp=Z,1.1nm,0.4s,baz=272,slow=12,SNR=1.4
MT02 Curacav 9.83 201 Pn **Pn 05 43 11.5 -1.1**
MT05 Renca 9.83 199 Pn **Pn 05 43 12.2 -0.5**
MT03 Universidad Ad 9.86 197 Pn **Pn 05 43 12.1 -1.0**
LMEL Las Melosas 10.12 195 Pn **Pn 05 43 17.7 +1.2**
MT09 Talagante 10.26 199 Pn **Pn 05 43 17.6 -0.8**
MT01 Popeta 10.42 200 Pn **Pn 05 43 19.1 -1.2**
ITQB Itaqui 10.81 123 Pn **Pn 05 43 24.2 -1.2**
ITQB Itaqui 10.81 123 *eP* **Pn 05 43 24.1 -1.2**
AQDB Aquidauana 11.07 73 Pn **Pn 05 43 26.7 -2.1**
AQDB Aquidauana 11.07 73 *eP* **Pn 05 43 31.9 +3.1**
BO02 Sierra Bellavi 11.16 196 Pn **Pn 05 43 29.2 -0.7**
PTLB Pontes e Lacer 11.35 42 Pn **Pn 05 43 32.5 +0.2**
UNIS Unistalda (Bra 11.78 117 *eP* **Pn 05 43 37.3 -0.5**
CRSM Crissiumal (Br 12.17 109 *eP* **Pn 05 43 44.8 +2.0**
RODS Rosario do Sul 12.22 123 *eP* **Pn 05 43 43.0 -0.5**
VILB Vilhena 12.82 31 Pn **Pn 05 43 50.2 -0.9**
TRCB Terra Rica 13.26 87 Pn **Pn 05 43 56.2 -0.5**
TRCB Terra Rica 13.26 87 *eP* **P 05 44 00.2 +0.4**
ALGR Alto Alegre (B 13.37 114 *eP* **Pn 05 43 57.5 -0.6**
CPSB Cacapava Do Su 13.61 120 *eP* **Pn 05 43 59.4 -1.5**
ITAB Concordia 13.78 106 *eP* **P 05 44 04.2 -1.3**
VA04 Juan Fernndez 14.05 225 Pn **Pn 05 44 05.5 -1.0**
PLTB Pedras Altas 14.10 126 Pn **Pn 05 44 05.3 -1.7**
PLTB Pedras Altas 14.10 126 *eP* **Pn 05 44 05.2 -1.9**
ETMB Extrema 14.21 3 Pn 05 44 07.2 -1.4
TRQA Tornquist 14.57 164 Pn **Pn 05 44 11.5 -1.3**
PCMB Pacaembu 14.73 83 *eP* **P 05 44 17.5 +1.4**
NNA Nana 15.23 321 P **P 05 44 22.8 +1.1**
comp=Z,5.5nm,0.6s,baz=215,slow=12,SNR=1.9
CNLB Canela 15.35 113 *eP* **Pn 05 44 21.1 -1.3**
PDRB Porto dos Gac 15.79 40 *eP* **P 05 44 27.5 -0.4**
ITRB Iturama 16.06 77 *eP* **Pn 05 44 32.2 +1.1**
TER01 Tubaro-SC 16.63 109 *eP* **P 05 44 35.6 -1.4**
PLCA Paso Flores 16.86 189 P **Pn 05 44 40.3 -0.3**
comp=Z,1.6nm,0.7s,baz=359,slow=9.4,SNR=6.3
CLDB Colider 16.93 41 *eP* **P 05 44 39.9 -0.5**
CZSB Cruzeiro do Su 17.16 341 P **P 05 44 43.7 +0.8**
CZSB IAmb IAmb 05 44 53.4
comp=Z,18nm,0.6s
RCLB Rio Claro- Sao 17.98 89 *eP* **P 05 44 51.5 -0.4**
PET01 Itanhaem-SP 18.01 95 *eP* **P 05 44 51.1 -1.0**
VAO Valinhos 18.41 91 *eP* **P 05 44 55.9 -0.7**
IPMB Ipameri, GO 18.56 74 *eP* **P 05 44 58.2 -0.1**
SNDB Serra Nova Dou 19.17 54 *eP* **P 05 45 04.5 -0.4**
PARB Paraibuna 19.60 92 *eP* **P 05 45 09.2 -0.2**
BDFB Brasilia 19.73 68 P **P 05 45 10.6 -0.3**
comp=Z,31nm,0.7s,baz=241,slow=11,SNR=54
BDFB Brasilia 19.73 68 P **P 05 45 10.6 -0.3**
BDFB Brasilia 19.73 68 *eP* **P 05 45 11.2 +0.3**
PMNB Patos De Minas 19.94 78 *eP* **P 05 45 13.2 +0.1**

NPGB Novo Progresso 20.30 35 *eP* **P 05 45 15.3 -1.6**
BSCB Bom Sucesso 20.77 86 *eP* **P 05 45 21.2 -0.6**
MAN01 Angra dos Reis 21.17 91 *eP* **P 05 45 25.2 -1.0**
MACA Manacapuru-AM 21.68 17 *eP* **P 05 45 30.3 -1.1**
VAS01 Vassouras-RJ 21.74 90 *eP* **P 05 45 31.0 -1.0**
ITTB Itaituba 22.42 31 *eP* **P 05 45 37.7 -0.8**
DIAM Diamantina, MG 22.50 80 *eP* **P 05 45 37.4 -2.0**
MC01 Montes Claros 22.82 76 *eP* **P 05 45 40.7 -1.5**
JANB Januaria 23.17 71 *eP* **P 05 45 44.5 -0.9**
CAM01 Campos-RJ 23.45 90 *eP* **P 05 45 46.4 -1.3**
BOSC San Juan Bosco 23.59 330 P **P 05 45 49.4 +0.1**
SMTB Santa Maria do 23.95 54 *eP* **P 05 45 52.2 -0.3**
SDBA SAO DESIDERIO 23.95 65 *eP* **P 05 45 51.7 -0.9**
PRPB Parauapebas 24.30 46 *eP* **P 05 45 54.2 -1.4**
COHC Cochancay 24.54 329 *eP* **P 05 46 01.7 +3.9**
ALF01 Guarapari-ES 24.54 87 *eP* **P 05 45 57.0 -0.8**
SJMB Sao Joao De Ma 24.62 82 *eP* **P 05 45 55.7 -2.8**
RIB01 Linhares ES 25.16 84 *eP* **P 05 46 01.8 -1.7**
NAN01 Guarapari, ES 25.84 81 *eP* **P 05 46 08.2 -1.3**
GUA01 Guaratinga, BA 26.55 79 *eP* **P 05 46 15.1 -0.8**
OTAV Otavalo 26.61 334 *eP* **P 05 46 10.7 -6.3**
BOAV Boa Vista 27.07 14 P **P 05 46 21.0 +0.5**
BOAV IAmb IAmb 05 46 53.5
comp=Z,5.8nm,1.4s
CMC01 Camacan, BA 27.26 77 *eP* **P 05 46 21.0 -1.2**
BBAC Balboa, Cauca 27.80 338 *eP* **P 05 46 30.1 +2.9**
GDU01 Guandu, BA 27.88 73 *eP* **P 05 46 26.6 -1.1**
POPC Popayan, Colom 28.09 339 *eP* **P 05 46 32.9 +3.1**
EFI East Falkland 28.39 168 P **P 05 46 30.2 -1.6**
PRAC Prado 28.68 343 *eP* **P 05 46 35.4 +0.6**
CHIC Chingaza 29.29 346 *eP* **P 05 46 41.3 +0.6**
PLMC San Jos del P 30.20 341 *eP* **P 05 46 48.6 +0.3**
GUY2C Guyana, Caldas 30.25 343 *eP* **P 05 46 49.8 +0.6**
SPBC San Pablo de B 30.35 346 *eP* **P 05 46 50.2 +0.6**
CBOC Ciudad Bolivar 31.04 342 *eP* **P 05 46 56.1 +0.4**
HELC Santa Helena 31.22 343 *eP* **P 05 46 56.9 -0.7**
PTBC PUERTO BERRIO, 31.30 346 *eP* **P 05 46 56.0 -1.9**
ZARC Zaragoza, Cauc 32.31 345 *eP* **P 05 47 05.0 -1.7**
NBAN Anadia - AL 32.62 69 *eP* **P 05 47 07.5 -2.0**
BAUV El Baul 32.84 358 P **P 05 47 11.5 +0.2**
BAUV IAmb IAmb 05 47 11.9
comp=Z,16nm,0.8s
NBRF Rio Formoso - 34.09 69 *eP* **P 05 47 20.6 -1.6**
RCBR Riachuelo 34.97 64 P **P 05 47 28.8 -1.0**
RCBR IAmb IAmb 05 47 33.7
comp=Z,7.6nm,1.1s
BCIP Isla Barro Col 35.35 338 P **P 05 47 34.5 +1.6**
TOSP Speyside 35.73 11 P **P 05 47 37.9 +1.7**
GRGR Grenville 36.38 9 P **P 05 47 42.5 +0.8**
SRBA San Rafael, Bu 36.77 332 P **P 05 47 45.4 +0.3**
SRBA IAmb IAmb 05 47 55.0
comp=Z,20nm,1.4s
FDF Fort de France 39.01 9 P **P 05 48 03.6 -0.1**
ILAM Ilet Lapin Mar 39.09 9 P **P 05 48 02.8 -1.5**
SVN Savane Anatole 39.11 9 P **P 05 48 04.5 0.0**
DLPL La Plaine 39.58 9 P **P 05 48 08.2 -0.2**
ORCD Orcadas 39.73 163 P **P 05 48 08.7 -0.4**
ORCD IAmb IAmb 05 48 10.0
comp=Z,5.6nm,0.6s
MLPR Magueyes Islan 41.80 360 P **P 05 48 24.7 -1.8**
MLPR IAmb IAmb 05 48 39.8
comp=Z,23nm,1.2s
CRPR Cabo Rojo, PR 41.84 360 P **P 05 48 26.4 -0.4**
OBIP Obispado Ponce 41.88 1 P **P 05 48 25.0 -2.1**
CELP Cerrillos 41.91 1 P **P 05 48 26.7 -0.7**
GCPR Guaynabo City 42.15 1 P **P 05 48 28.4 -0.9**
GCPR IAmb IAmb 05 48 29.7
comp=Z,13nm,0.8s
BANI BANI 42.35 355 P **P 05 48 30.7 -0.4**
DR12 Loma Pena Alta 42.68 357 P **P 05 48 32.1 -1.5**
SOR Soroa 49.12 340 P **P 05 49 25.4 +1.5**
SOR IAmb IAmb 05 49 26.1
comp=Z,13nm,0.9s
061Z Ochoppi 51.45 344 P **P 05 49 43.2 +2.0**
656A Willston 55.21 343 P **P 05 50 10.0 +1.5**
BELA Belgrano 2 55.95 172 P **P 05 50 14.8 +1.4**
553A Crawfordville 56.50 342 P **P 05 50 19.6 +1.9**
VNA3 Neumayer Olymp 57.07 161 P **P 05 50 22.6 +1.3**
VNA1 Neumayer--Stat 57.27 160 P **P 05 50 24.4 +1.8**
VNA2 Neumayer--Watz 57.64 160 P **P 05 50 26.6 +1.3**
baz=278,slow=7.0
352A Blakely 57.85 342 P **P 05 50 28.4 +1.2**
154A Montrose 58.44 344 P **P 05 50 32.3 +1.0**
152A Waverly Hall 58.92 343 P **P 05 50 35.3 +0.8**
152A IAmb IAmb 05 50 35.5
comp=Z,5.4nm,0.6s
SNAA Sanae 59.27 161 P **P 05 50 37.8 +1.1**
SNAA Sanae 59.27 161 P **P 05 50 37.3 +0.6**
GOGA Godfrey 59.29 344 P **P 05 50 37.7 +0.6**
GOGA IAmb IAmb 05 51 08.4
comp=Z,7.2nm,1.4s
JSC Jenkinsville 59.61 346 P **P 05 50 40.3 +1.0**
JSC IAmb IAmb 05 50 41.3
comp=Z,5.3nm,0.8s
Y52A Lilburn 59.87 344 P **P 05 50 41.6 +0.6**
Y52A IAmb IAmb 05 50 42.2
comp=Z,6.4nm,0.6s
LRAL Lakeview Retre 59.92 341 P **P 05 50 41.0 -0.4**
LRAL IAmb IAmb 05 50 42.3
comp=Z,3.6nm,0.7s
Y49A Blount Mountai 60.51 341 P **P 05 50 46.2 +0.7**
Y49A IAmb IAmb 05 50 47.0
comp=Z,4.2nm,0.8s
833A Chaparral WMA, 60.73 327 P **P 05 50 49.0 +2.0**
X51A Calhoun 60.74 343 P **P 05 50 47.6 +0.7**
TROLL Troll, Antarti 60.98 161 P **P 05 50 49.7 +1.3**
V55A Taylorsville 61.11 347 P **P 05 50 50.8 +1.4**
V55A IAmb IAmb 05 50 51.4
comp=Z,6.2nm,0.6s
X48A Hartselle 61.25 341 P **P 05 50 51.1 +0.7**
X48A IAmb IAmb 05 50 52.0
comp=Z,9.7nm,0.8s
W50A Signal Mountai 61.46 343 P **P 05 50 52.5 +0.6**
W50A IAmb IAmb 05 50 53.1
comp=Z,5.6nm,0.6s
Y45A Yeager Farm, C 61.49 339 P **P 05 50 52.8 +0.8**
Y45A IAmb IAmb 05 50 54.5
comp=Z,11nm,0.9s
CPCT Cooper Cave 61.49 344 P **P 05 50 53.0 +0.9**
CPCT IAmb IAmb 05 50 53.5
comp=Z,3.7nm,0.5s
V52A Sevierville 61.64 345 P **P 05 50 53.8 +0.8**
V52A IAmb IAmb 05 50 54.3
comp=Z,16nm,1.5s
SWET Sewanee 61.65 342 P **P 05 50 53.9 +0.8**
SWET IAmb IAmb 05 50 54.5
comp=Z,11nm,0.8s
U54A Nelsons Funny 61.88 346 P **P 05 50 55.9 +1.3**
U54A IAmb IAmb 05 50 56.5
comp=Z,11nm,0.9s
PLAL Pickwick Lake 62.05 340 P **P 05 50 56.2 +0.5**
PLAL IAmb IAmb 05 50 56.8
comp=Z,5.7nm,0.8s
V48A Smith Brothers 62.39 342 P **P 05 50 58.7 +0.7**
V48A IAmb IAmb 05 50 59.3
comp=Z,7.6nm,0.7s
CLTN Cedars of Leba 62.58 342 P **P 05 51 00.0 +0.8**
CLTN IAmb IAmb 05 51 00.6
comp=Z,6.3nm,0.7s
WLAR White Oak Lake 62.60 336 P **P 05 51 01.3 +1.9**
JCT Junction City 62.71 328 P **P 05 51 01.7 +1.4**
WHTX Lake Whitney, 62.90 331 P **P 05 51 03.2 +1.8**
WHTX IAmb IAmb 05 51 03.6
comp=Z,7.0nm,0.7s
S54A Dingess, Beckl 63.01 347 P **P 05 51 03.1 +1.0**
S54A IAmb IAmb 05 51 03.9
comp=Z,8.0nm,0.8s
WVT Waverly 63.04 341 P **P 05 51 02.5 +0.3**
MIAR Mount Ida 63.53 336 IAmb IAmb 05 51 07.7
comp=Z,4.6nm,0.9s
TX31 Lajitas Ar. Si 63.74 324 P **P 05 51 08.2 +1.0**
TX31 IAmb IAmb 05 51 09.4
comp=Z,5.4nm,0.8s
TX32 Lajitas Array 63.74 324 P **P 05 51 08.2 +1.0**
TXAR Lajitas Array 63.74 324 P **P 05 51 08.9 +1.8**
comp=Z,1.5nm,0.8s,baz=154,slow=8.3,SNR=16
comp=Z,1.5nm,0.8s
TXAR Lajitas Array 63.74 324 P **P 05 51 06.7 -0.5**
ABTX Abilene, Hawle 64.42 330 P **P 05 51 11.3 -0.1**
ABTX IAmb IAmb 05 51 13.7
comp=Z,15nm,1.4s
HHAR Hobbs 65.21 336 P **P 05 51 16.4 0.0**
HHAR IAmb IAmb 05 51 18.4

comp=Z,5.6nm,0.9s
MGMO Mountain Grove 65.40 338 IAmb IAmb 05 51 19.4
comp=Z,4.1nm,0.9s
DEOK Depew 65.81 334 P **P 05 51 19.9 -0.4**
DEOK IAmb IAmb 05 51 22.2
comp=Z,13nm,0.6s
WMOK Wichita Mounta 65.81 332 P **P 05 51 20.4 +0.1**
CCM Cathedral Cave 65.87 339 P **P 05 51 21.4 +0.8**
OK025 Westminster Rd 65.92 333 P **P 05 51 21.1 +0.1**
OK025 IAmb IAmb 05 51 22.6
comp=Z,8.3nm,0.7s
OK030 Cody Creek RV 66.00 334 P **P 05 51 20.8 -0.7**
OK030 IAmb IAmb 05 51 23.3
comp=Z,10nm,0.8s
OK034 N. Norfolk Rd. 66.04 334 P **P 05 51 21.7 0.0**
OK034 IAmb IAmb 05 51 23.6
comp=Z,9.2nm,0.7s
OK031 S. Brethren Rd 66.04 334 P **P 05 51 21.1 -0.6**
S39A Bolivar 66.25 337 IAmb IAmb 05 51 25.1
comp=Z,10nm,0.9s
R40A Maddies Statio 66.42 339 IAmb IAmb 05 51 25.3
comp=Z,5.1nm,0.6s
MNTX Cornudas Mount 66.51 325 P **P 05 51 25.5 +0.7**
MNTX IAmb IAmb 05 51 26.9
comp=Z,4.5nm,0.9s
MSTX Muleshoe 67.01 328 IAmb IAmb 05 51 30.9
comp=Z,11nm,0.8s
P40A Paris 67.47 339 IAmb IAmb 05 51 32.3
comp=Z,6.1nm,0.8s
DBIC Dimbokro 67.84 72 P **P 05 51 31.7 -1.8**
comp=Z,2.2nm,0.8s,baz=234,slow=7.4,SNR=5.7
comp=Z,2.2nm,0.8s
319A Douglas 68.40 322 P **P 05 51 39.2 +2.4**
319A IAmb IAmb 05 51 40.4
comp=Z,8.6nm,0.6s
121A Cookes Peak, D 68.44 324 IAmb IAmb 05 51 41.0
comp=Z,6.0nm,0.9s
R32A Long Quarter, 68.92 334 P **P 05 51 40.7 +0.9**
R32A IAmb IAmb 05 51 41.8
comp=Z,5.0nm,0.7s
ANMO Albuquerque 69.61 326 P **P 05 51 46.0 +1.7**
ANMO IAmb IAmb 05 51 47.7
comp=Z,5.3nm,0.9s
T25A Trinidad 70.35 329 P **P 05 51 49.2 +0.5**
T25A IAmb IAmb 05 51 52.2
comp=Z,4.3nm,0.8s
I42A Draeger Farm, 70.57 343 P **P 05 51 50.1 +0.5**
I42A IAmb IAmb 05 51 51.3
comp=Z,11nm,0.9s
SDCO Great Sand Dun 71.36 329 P **P 05 51 57.0 +2.1**
X16A Lo Mia Camp, P 71.87 322 P **P 05 51 59.1 +1.2**
113A Mohawk Valley, 72.01 320 P **P 05 51 59.0 +0.5**
G40A Rib Lake 72.19 343 P **P 05 52 00.2 +0.9**
G40A IAmb IAmb 05 52 17.6
comp=Z,8.1nm,1.3s
MVCO Mesa Verde 72.41 326 P **P 05 52 02.0 +0.8**
MVCO IAmb IAmb 05 52 04.7
comp=Z,4.2nm,0.9s
KOWA Kowa 72.48 65 P **P 05 52 01.3 -0.5**
KOWA IAmb IAmb 05 52 32.5
comp=Z,9.1nm,1.4s
WUAZ Wupatki 72.64 323 P **P 05 52 03.6 +1.1**
WUAZ IAmb IAmb 05 52 06.5
comp=Z,6.4nm,0.9s
ECSD EROS Data Cent 72.76 338 P **P 05 52 03.3 +0.6**
ECSD IAmb IAmb 05 52 05.2
comp=Z,5.4nm,0.9s
SPMN Marine on St. 72.88 341 IAmb IAmb 05 52 05.3
comp=Z,7.6nm,1.1s
BLYC Blythe 73.15 320 P **P 05 52 07.0 +1.8**
BLYC IAmb IAmb 05 52 09.2
comp=Z,5.0nm,1.0s
F36A Milaca 73.67 341 IAmb IAmb 05 52 09.5
comp=Z,7.2nm,0.6s
PFO Pinyon Flats O 74.20 319 P **P 05 52 13.2 +1.7**
comp=Z,3.0nm,0.8s,baz=149,slow=5.7,SNR=4.7
comp=Z,3.0nm,0.8s
KNB Kanab 74.54 323 IAmb IAmb 05 52 17.8
comp=Z,9.9nm,1.0s
O20A White River Ci 74.55 328 P **P 05 52 14.8 +1.3**
O20A IAmb IAmb 05 52 17.1
comp=Z,6.3nm,0.8s
P18A Preston Nutter 75.14 327 IAmb IAmb 05 52 20.8
comp=Z,5.3nm,1.0s
CCUT Cedar City 75.22 324 P **P 05 52 20.3 +2.8**
CCUT IAmb IAmb 05 52 21.9
comp=Z,6.1nm,0.8s
P17A Butcher Ranch, 75.27 326 P **P 05 52 18.5 +0.9**
RWWY Rawlins 75.29 330 P **P 05 52 18.3 +0.5**
RWWY IAmb IAmb 05 52 21.2
comp=Z,5.2nm,0.8s
MSU Marysvale 75.30 325 P **P 05 52 18.2 +0.4**
RDMU Red Mountain 75.53 328 P **P 05 52 19.8 +0.6**
RDMU IAmb IAmb 05 52 22.2
comp=Z,3.9nm,0.6s
B35A Bob, Littlefor 75.99 342 IAmb IAmb 05 52 23.0
comp=Z,9.4nm,0.7s
GWY Greenwater Val 76.11 321 IAmb IAmb 05 52 25.9
comp=Z,4.1nm,0.8s
MPU Maple Canyon 76.14 326 P **P 05 52 23.6 +1.1**
PSUT Pine Spring 76.20 324 P **P 05 52 23.1 +0.1**
PSUT IAmb IAmb 05 52 26.8
comp=Z,3.1nm,0.7s
JLU Jordanelle 76.48 327 P **P 05 52 25.1 +0.5**
AGMN Agassiz Nation 76.56 341 P **P 05 52 24.5 0.0**
AGMN IAmb IAmb 05 52 26.4
comp=Z,6.1nm,0.9s
TORD Torodi Ar. Bea 76.61 69 P **P 05 52 25.5 0.0**
comp=Z,1.5nm,0.5s,baz=261,slow=5.6,SNR=42
comp=Z,1.5nm,0.5s
TORD Torodi Ar. Bea 76.61 69 P **P 05 52 24.8 -0.7**
SPR3 Spring Creek 3 76.80 324 IAmb IAmb 05 52 29.8
comp=Z,3.2nm,0.9s
BW06 Boulder Array 77.22 329 P **P 05 52 30.3 +1.7**
PD31 Pinedale Array 77.22 329 P **P 05 52 28.5 -0.1**
PDAR Pinedale Array 77.22 329 P **P 05 52 30.4 +1.8**
comp=Z,1.1nm,0.5s,baz=133,slow=7.8,SNR=17
comp=Z,1.1nm,0.5s
PDAR Pinedale Array 77.22 329 P **P 05 52 28.8 +0.2**
GMN Gold Mountain 77.22 321 P **P 05 52 29.4 +0.6**
HWUT Hardware Ranch 77.30 327 P **P 05 52 30.1 +1.2**
HWUT IAmb IAmb 05 52 33.0
comp=Z,3.3nm,0.6s
AHID Auburn Hatcher 77.95 328 IAmb IAmb 05 52 35.7
comp=Z,7.3nm,1.1s
REDW Red Top Meadow 78.28 329 P **P 05 52 33.7 -0.7**
ULM Lac du Bonnet 78.31 342 P **P 05 52 35.0 +1.0**
comp=Z,7.7nm,0.6s,baz=154,slow=7.1,SNR=10
comp=Z,7.7nm,0.6s
ULM Lac du Bonnet 78.31 342 P **P 05 52 34.2 +0.1**
ULM IAmb IAmb 05 52 35.5
comp=Z,6.7nm,0.5s
SNOW Snow King Moun 78.31 329 P **P 05 52 34.1 -0.6**
LOHW Long Hollow 78.36 329 P **P 05 52 35.3 +0.5**
OMMB Old Mammoth Mi 78.45 320 IAmb IAmb 05 52 39.0
comp=Z,4.1nm,0.7s
ELK Elko 78.54 325 P **P 05 52 36.2 +0.3**
FXWY Fox Creek 78.58 329 P **P 05 52 37.3 +1.3**
LHV Little Huntoon 78.59 321 P **P 05 52 38.3 +2.4**
SCHQ Schefferville 78.60 0 P **P 05 52 36.5 +0.9**
comp=Z,2.4nm,0.6s,baz=192,slow=3.7,SNR=4.0
comp=Z,2.4nm,0.6s
NVAR Mina Array Bea 78.60 321 P **P 05 52 38.6 +2.4**
comp=Z,0.6nm,0.6s,baz=145,slow=5.8,SNR=9.1
comp=Z,0.6nm,0.6s
IMW Indian Meadow 78.73 329 IAmb IAmb 05 52 40.4
comp=Z,3.4nm,0.7s
LAO LASA Array 78.87 334 IAmb IAmb 05 52 39.7
comp=Z,4.6nm,0.7s
KVN Kaiserville 78.91 322 IAmb IAmb 05 52 41.1
comp=Z,4.4nm,0.7s
YERR Yerington 79.52 321 P **P 05 52 40.9 -0.3**
YHL Hebgen Lake 79.57 330 IAmb IAmb 05 52 44.9
comp=Z,3.5nm,0.6s
GCMT Greycliff 79.61 331 P **P 05 52 42.6 +1.1**
PNTR Pine Nut 79.79 321 P **P 05 52 44.3 +1.6**
PNTR IAmb IAmb 05 52 46.6
comp=Z,7.2nm,0.8s
PAHR Pah Rah Range 80.08 322 IAmb IAmb 05 52 48.0
comp=Z,6.1nm,0.9s
HLID Hailey 80.16 327 IAmb IAmb 05 52 48.4
comp=Z,5.6nm,0.8s
MCMT McKenzie Canyo 80.33 329 P **P 05 52 47.7 +2.2**
BOSA Boshof 80.70 117 P **P 05 52 47.0 -0.9**
comp=Z,2.9nm,0.6s,baz=292,slow=3.7,SNR=6.7
comp=Z,2.9nm,0.6s

LRM	**Limekiln Ridge**	**80.89**	**330**	P	**P**	**05 52 50.2**	**+1.7**
HRY	**Holter Researc**	**81.28**	**331**	P	**P**	**05 52 51.1**	**+0.7**
MAW	**Mawson**	**81.35**	**163**	P	**P**	**05 52 48.8**	**-1.6**
	comp=Z,1.8nm,0.7s,baz=239,slow=9.6,SNR=3.3						
	comp=Z,1.8nm,0.7s						
PLID	**Pearl Lake**	**82.05**	**327**	P	**P**	**05 52 54.6**	**+0.1**
PLID				IAmb	IAmb	05 52 57.6	
	comp=Z,5.1nm,0.7s						
J08A	**Circle Bar Ran**	**82.09**	**325**	P	**P**	**05 52 56.2**	**+1.5**
J08A				IAmb	IAmb	05 52 58.0	
	comp=Z,4.6nm,0.5s						
BMO	**Blue Mountains**	**82.53**	**327**	P	**P**	**05 52 58.3**	**+1.5**
K05A	**Summer Lake**	**82.96**	**323**	IAmb	IAmb	05 53 02.8	
	comp=Z,5.4nm,0.7s						
PINE	**Pine Mountain**	**83.70**	**324**	P	**P**	**05 53 04.7**	**+1.7**
PINE				IAmb	IAmb	05 53 06.2	
	comp=Z,4.3nm,0.7s						
ESDC	**Sonseca Array**	**86.47**	**44**	P	**P**	**05 53 18.3**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=246,slow=5.5,SNR=1.6						
	comp=Z,0.5nm,0.7s						
YKA	**Yellowknife Ar**	**94.20**	**340**	P	**P**	**05 53 53.4**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=132,slow=4.6,SNR=24						
	comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	**128.37**	**205**	PKP	**PKiKP**	**05 59 40.8**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=112,slow=1.7,SNR=8.8						
WRA	**Warramunga Arr**	**131.54**	**207**	PKP	**PKiKP**	**05 59 47.2**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=155,slow=1.9,SNR=27						
WRA				SKPbc	**SKPab**	**06 02 54.9**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=150,slow=3.6,SNR=11						
ZALV	**Zalesovo Beam**	**143.48**	**28**	PKP	PKPbc	06 00 05.4	+0.6
	comp=Z,2.5nm,0.6s,baz=301,slow=5.1,SNR=8.7						
MKAR	**Makanchi Array**	**146.60**	**40**	PKPbc	**PKPbc**	**06 00 14.3**	**-0.1**
	comp=Z,3.0nm,0.5s,baz=339,slow=2.1,SNR=30						
SONM	**Songino Array**	**155.73**	**11**	PKPab	**PKPab**	**06 00 54.8**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=318,slow=1.9,SNR=3.2						

NEIC ***22*** *05:42:55.4±1.5, 16°.3S±0°.1×175°.2W±0°.1, h10km±2km, mb4.6/17, Error ellipse: s-maj=23.5km s-min=19.5km az=317.0*

IDC ***22*** *05:42:59.7±3.9, 16°.25S×176°.22W, h0km, mb4.5/3, mbtmp4.5/3, Error ellipse: s-maj=149.8km s-min=78.9km az=152.0*

ISC 22 05:42:55.2±0.9, 16°.4S±0°.1×175°.3W±0°.1, h10km, n23, σ1°21/25, mb4.6/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.17**	**55**	Pn	**Pn**	**05 43 58.4**	**-0.6**
NIUE	**Niue**	**5.78**	**119**	Pn	**Pn**	**05 44 20.2**	**-0.9**
EIDS	**Eidsvold**	**32.61**	**248**	P	**P**	**05 49 27.1**	**-0.1**
EIDS				IAmb	IAmb	05 49 27.9	
	comp=Z,5.3nm,1.0s						
ARMA	**Armidale**	**33.30**	**239**	P	**P**	**05 49 34.0**	**+0.6**
ARMA				IAmb	IAmb	05 50 00.5	
	comp=Z,10nm,1.2s						
CTAO	**Charters Tower**	**36.67**	**258**	P	**P**	**05 50 01.4**	**-1.1**
CTAO				IAmb	IAmb	05 50 11.1	
	comp=Z,11nm,1.4s						
CAN	**Canberra**	**37.01**	**232**	P	**P**	**05 50 04.9**	**-0.4**
CAN				IAmb	IAmb	05 50 31.5	
	comp=Z,15nm,1.4s						
COEN	**Coen**	**40.12**	**268**	P	**P**	**05 50 30.2**	**-1.3**
TOO	**Toolangi**	**40.46**	**231**	P	**P**	**05 50 33.0**	**-1.2**
TOO				IAmb	IAmb	05 50 38.6	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**41.99**	**240**	P	**P**	**05 50 47.0**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=97,slow=11,SNR=12						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**41.99**	**240**	P	**P**	**05 50 47.4**	**+0.6**
BBOO	**Buckleboo**	**46.77**	**240**	P	**P**	**05 51 25.0**	**0.0**
WB0	**Warramunga Arr**	**47.83**	**258**	P	**P**	**05 51 32.2**	**-1.3**
WB0				IAmb	IAmb	05 51 51.8	
	comp=Z,6.3nm,1.2s						
WB2	**Warramunga Arr**	**47.85**	**258**	P	**P**	**05 51 33.1**	**-0.6**
WRAB	**Tennant Creek**	**47.85**	**258**	P	**P**	**05 51 32.7**	**-1.0**
WRAB				IAmb	IAmb	05 51 48.6	
	comp=Z,3.7nm,0.6s						
WRA	**Warramunga Arr**	**47.86**	**258**	P	**P**	**05 51 32.9**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=94,slow=7.4,SNR=38						
WRA				PcP	**PcP**	**05 53 06.1**	**+3.6**
	comp=Z,0.1nm,0.3s,baz=94,slow=3.7,SNR=2.2						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**47.86**	**258**	P	**P**	**05 51 32.9**	**-0.9**
AS31	**Alice Springs**	**48.09**	**253**	P	**P**	**05 51 35.4**	**-0.2**
AS31				IAmb	IAmb	05 51 35.7	
	comp=Z,4.1nm,0.7s						
ASAR	**Alice Springs**	**48.09**	**253**	P	**P**	**05 51 35.1**	**-0.4**
	comp=Z,14nm,0.6s,baz=87,slow=8.4,SNR=149						
ASAR				PcP	**PcP**	**05 53 05.6**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=92,slow=4.6,SNR=2.0						
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**48.09**	**253**	P	**P**	**05 51 35.3**	**-0.3**
FORT	**Forrest**	**53.37**	**244**	P	**P**	**05 52 14.1**	**-1.1**
KNRA	**Kununurra**	**53.63**	**262**	P	**P**	**05 52 17.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**56.24**	**259**	P	**P**	**05 52 36.4**	**+0.2**
FITZ				IAmb	IAmb	05 52 57.8	
	comp=Z,8.9nm,1.4s						
QSPA	**South Pole Qui**	**73.69**	**180**	P	**P**	**05 54 30.4**	**+1.2**

NEIC ***22*** *05:58:28.7±1.7, 43°.92N±0°.05×128°.9W±0°.2, h10km±2km, ML3.2/38, Error ellipse: s-maj=23.2km s-min=4.3km az=250.0*

IDC ***22*** *05:58:29.9±5.0, 44°.11N×128°.44W, h0km, mb3.1/2, mbtmp3.0/6, ML3.1/4, MS2.9/7, Error ellipse: s-maj=76.8km s-min=31.7km az=64.0*

ISC 22 05:58:29.7±2.6, 44°.0N±0°.1×128°.8W±0°.2, h10km, n46, σ1°14/36, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.46**	**107**	Pn	**Pn**	**05 59 21.7**	**-1.9**
KEBM				IAML		06 00 46.5	
	comp=N,55nm,2.1s						
KEBM				IAML		06 01 31.2	
	comp=E,51nm,1.6s						
I02E	**Swisshome, OR**	**3.60**	**86**	Pn	**Pn**	**05 59 25.4**	**-0.1**
I02E				IAML		06 00 42.9	
	comp=N,33nm,2.9s						
I02E				IAML		06 00 45.3	
	comp=E,39nm,3.0s						
J01E	**Myrtle Point**	**3.65**	**101**	Pn	**Pn**	**05 59 25.3**	**-1.0**
HEBO	**Mount Hebo**	**3.83**	**69**	Pn	**Pn**	**05 59 28.4**	**-0.5**
COR	**Corvallis**	**4.02**	**79**	Pn	**Pn**	**05 59 29.8**	**-1.5**
COR				IAML		06 00 27.4	
	comp=E,27nm,2.0s						
COR				IAML		06 00 34.6	
	comp=E,32nm,2.7s						
DBO	**Dodson Butte**	**4.15**	**100**		**Pn**	**05 59 32.1**	**-1.1**
G03D	**McMinnville, O**	**4.17**	**71**		**Pn**	**05 59 32.0**	**-1.4**
G03D				IAML		06 00 15.2	
	comp=E,34nm,2.8s						
G03D				IAML		06 01 53.4	
	comp=N,28nm,2.8s						
BUCK	**Buck Mountain**	**4.22**	**85**	Pn	**Pn**	**05 59 34.4**	**+0.2**
BUCK				IAML		06 00 55.6	
	comp=N,24nm,3.1s						
BUCK				IAML		06 01 22.1	
	comp=E,28nm,2.5s						
RADR	**Rader Ridge**	**4.32**	**54**	Pn	**Pn**	**05 59 34.7**	**-0.8**
RADR				IAML		06 00 25.4	
	comp=N,42nm,1.9s						
RADR				IAML		06 01 02.5	
	comp=E,38nm,2.9s						
H04D	**Lebanon**	**4.41**	**81**		**Pn**	**05 59 35.8**	**-1.0**
H04D				IAML		06 00 38.0	
	comp=E,20nm,3.0s						
H04D				IAML		06 00 53.3	
	comp=N,20nm,3.4s						
HUMO	**Hull Mountain**	**4.50**	**106**	Pn	**Pn**	**05 59 40.2**	**+2.3**
E03A	**Lebam**	**4.52**	**54**		**Pn**	**05 59 37.8**	**-0.4**
E03A				IAML		06 00 44.6	
	comp=E,25nm,3.1s						
E03A				IAML		06 01 49.1	
	comp=N,18nm,3.4s						
H04A	**Detroit Lake**	**4.82**	**79**		**Pn**	**05 59 40.8**	**-1.6**
NLWA	**Neilton Lookou**	**4.88**	**44**	Pn	**Pn**	**05 59 43.6**	**+0.4**
NLWA				IAML		06 01 46.4	
	comp=N,16nm,3.4s						
NLWA				IAML		06 02 29.2	
	comp=N,18nm,3.1s						
J04D	**Umpqua Nationa**	**4.94**	**96**		**Pn**	**05 59 43.4**	**-0.8**
F04A	**Amboy**	**4.96**	**64**		**Pn**	**05 59 44.3**	**+0.1**
F04A				IAML		06 00 45.0	
	comp=N,16nm,1.2s						
YBH	**Yreka Blue Hor**	**5.03**	**114**	Pn	**Pn**	**05 59 45.4**	**+0.1**
	comp=N,0.2nm,0.3s,baz=283,slow=14,SNR=1.7						
YBH				Sn	**Sn**	**06 00 44.9**	**+1.4**
	comp=N,0.1nm,0.3s,baz=341,slow=18,SNR=1.8						
YBH				LR	LR	06 01 28.3	
	comp=N,68nm,18.6s,baz=266,slow=37						
	comp=N,0.7nm,0.6s						
L04D	**Klamath Falls**	**5.09**	**108**	Pn	**Pn**	**05 59 45.8**	**-0.4**
L04D				IAML		06 00 40.9	
	comp=N,14nm,4.2s						
L04D				IAML		06 00 49.1	
	comp=E,17nm,3.7s						
HOOD	**Mount Hood Mea**	**5.30**	**73**		**Pn**	**05 59 48.2**	**-0.9**
PINE	**Pine Mountain**	**5.71**	**89**		**Pn**	**05 59 54.2**	**-0.5**
D05A	**Enumclaw**	**5.78**	**54**	Pn	**Pn**	**05 59 55.6**	**+0.1**
CLRS	**Cowichan Lake**	**5.84**	**32**		**Pn**	**05 59 55.4**	**-0.9**
CBB	**Campbell River**	**6.51**	**20**	Pn	**Pn**	**06 00 05.8**	**+0.3**
LTY	**Liberty**	**6.60**	**57**	Pn	**Pn**	**06 00 08.0**	**+1.2**
TLCB	**Telegraph Cove**	**6.77**	**11**	Pn	**Pn**	**06 00 08.2**	**-0.1**
G08A	**Pilot Rock**	**7.17**	**76**		**Pn**	**06 00 14.7**	**+0.1**
BEKR	**Beckworth**	**7.53**	**120**	Pn	**Pn**	**06 00 17.3**	**-2.5**
J08A	**Circle Bar Ran**	**7.54**	**91**	Pn	**Pn**	**06 00 18.9**	**-0.8**
D08A	**Wollman Farm,**	**7.61**	**63**		**Pn**	**06 00 18.8**	**-1.9**
C09A	**Chrisman Ranch**	**8.30**	**59**	Pn	**Pn**	**06 00 30.6**	**+0.5**
NEW	**Newport**	**9.19**	**58**	LR	LR	06 03 56.3	
	comp=E,77nm,19.0s,baz=264,slow=37						
NVAR	**Mina Array Bea**	**9.67**	**121**	Pn	**Pn**	**06 00 49.5**	**+0.3**
	baz=287,slow=13,SNR=1.1						
	comp=E,0.3nm,0.7s						
ELK	**Elko**	**10.57**	**103**	Pn	**Pn**	**06 01 01.5**	**+0.2**
	baz=297,slow=14,SNR=1.3						
	comp=E,0.2nm,0.3s						
PDAR	**Pinedale Array**	**14.08**	**88**	Pn	**Pn**	**06 01 51.6**	**+2.3**
	comp=E,0.1nm,0.3s,baz=297,slow=8.0,SNR=2.0						
PDAR				LR	LR	06 07 25.8	
	comp=E,42nm,19.6s,baz=280,slow=39						
	comp=E,0.2nm,0.6s						
PFO	**Pinyon Flats O**	**14.13**	**133**	LR	LR	06 06 33.9	
	comp=E,45nm,19.3s,baz=314,slow=34						
ANMO	**Albuquerque**	**19.44**	**110**	LR	LR	06 10 58.3	
	comp=E,26nm,19.4s,baz=159,slow=39						
YKA	**Yellowknife Ar**	**20.32**	**19**	P	**P**	**06 03 04.8**	**-0.9**
	comp=E,1.0nm,0.9s,baz=208,slow=10,SNR=3.5						
	comp=E,1.0nm,0.9s						
INK	**Inuvik**	**24.52**	**356**	LR	LR	06 12 58.6	
	comp=E,34nm,20.3s,baz=151,slow=36						
TXAR	**Lajitas Array**	**24.80**	**118**	P	**P**	**06 03 52.0**	**+0.1**
	comp=E,0.4nm,0.9s,baz=321,slow=8.4,SNR=3.0						
	comp=E,0.4nm,0.9s						
TKL	**Tuckaleechee C**	**35.23**	**88**	LR	LR	06 20 11.4	
	comp=E,47nm,19.2s,baz=288,slow=37						
H11N3	**WAKE ISLAND Hy**	**58.16**	**267**	T	T	07 11 05.2	
	baz=49,slow=75,SNR=361						
H11N2	**WAKE ISLAND Hy**	**58.17**	**267**	T	T	07 11 04.7	
	baz=49,slow=75,SNR=270						
H11N1	**WAKE ISLAND Hy**	**58.18**	**267**	T	T	07 11 04.7	
	baz=49,slow=75,SNR=274						
H11S1	**WAKE ISLAND Hy**	**59.09**	**266**	T	T	07 12 15.8	
	baz=49,slow=75,SNR=89						
H11S2	**WAKE ISLAND Hy**	**59.10**	**266**	T	T	07 12 17.4	
	baz=49,slow=75,SNR=87						
H11S3	**WAKE ISLAND Hy**	**59.11**	**266**	T	T	07 12 15.5	
	baz=49,slow=75,SNR=79						

BJI ***22*** *06:11:01.3±0.0, 38°.21N×142°.34E, h9km, mb4.8/75, mB4.9/54, Ms4.8/83, Ms7 4.7/79*

IDC ***22*** *06:11:03.6±0.4, 38°.35N×142°.14E, h0km, mb4.9/37, mbtmp4.9/41, ML3.4/3, MS4.4/84, Error ellipse: s-maj=11.3km s-min=9.2km az=85.0*

NIED ***22*** *06:11:07.4, 38°.38N×142°.17E, h33km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.10; $M_{\theta\theta}$=2.84; $M_{\phi\phi}$=-0.74; $M_{r\theta}$=1.94; $M_{\theta\phi}$=-1.61; $M_{\phi r}$=1.64; Fault plane solution: $M_0$3.93000×10^{16} NP1: ϕ_s143.00000°, δ44.00000°, λ-32.00000°. NP2: ϕ_s257.00000°, δ68.00000°, λ-129.00000°.*

MOS ***22*** *06:11:07.5±1.0, 38°.47N×142°.09E, h35km, mb5.5/82, MS4.9/19 Error ellipse: s-maj=5.7km s-min=3.8km az=107.9*

JMA ***22*** *06:11:07.4±0.2, 38°.4N±0°.4×142°.2E±0°.8, h33km±1km, MD5.3/39, MW5.1/39, E OFF MIYAGI PREF*

JMA Felt III J1 at E OFF MIYAGI PREF .

NEIC ***22*** *06:11:09.0±1.7, 38°.33N±0°.05×142°.11E±0°.08, h35km±1km, mb5.3/476, Mww5.1, Error ellipse: s-maj=11.1km s-min=8.1km az=292.0*

GCMT ***22*** *06:11:09.0±0.2, 38°.40N±0°.01×142°.14E±0°.01, h24km, MW5.2/124, Moment Tensor Solution. s87,c130; s124,c211; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.01±.12; $M_{\theta\theta}$4.12±.09; $M_{\phi\phi}$-1.11±.08; $M_{r\theta}$5.06±.25; $M_{\theta\phi}$-1.93±.06; $M_{\phi r}$3.67±.24; Best double couple: $M_0$7.42000×10^{16} NP1:ϕ_s248.00000°, δ78.00000°, λ-118.00000°. NP2:ϕ_s136.00000°, δ30.00000°, λ-25.00000°. Principal axes: T 6.7450, Plg27.0000°, Azm0.0000°; N 1.3510, Plg27.0000°, Azm255.0000°; P -8.0960, Plg50.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *06:11:09, 38°.32N×142°.13E, h30km, Moment Tensor Solution. Duration: 2s^2 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.95; $M_{\theta\theta}$3.79; $M_{\phi\phi}$1.17; $M_{r\theta}$1.80; $M_{\theta\phi}$-0.59; $M_{\phi r}$1.11; Fault plane solution: $M_0$4.99000×10^{16} NP1: ϕ_s111.00000°, δ36.00000°, λ-70.00000°. NP2: ϕ_s267.00000°, δ56.00000°, λ-103.00000°. Principal axes: T 4.1885, Plg10.0000°, Azm7.0000°; N 1.3355, Plg11.0000°, Azm275.0000°; P -5.5240, Plg75.0000°, Azm138.0000°;*

ISC 22 06:11:07.9±0.2, 38°.37N±0°.03×142°.23E±0°.03, h31km±1km, h31km:pP-P, n1437, σ1°35/1293, mb5.3/368, MS4.6/135, 79C-44D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibobu**	**0.60**	**265**	⇓*i* P	**Pb**	**06 11 18.5**	**-1.5**
JIKH				⇓S	**Sb**	**06 11 25.8**	**-2.5**
JIKH	**Ishinomakibobu**	**0.60**	**265**	A	A	06 11 18.5	
	comp=E,126nm,0.8s,comp=E,181nm,0.9s						
JIO	**Ouri**	**0.70**	**277**	P	**Pb**	**06 11 20.1**	**-1.5**
JIO				S	**Sb**	**06 11 28.7**	**-2.2**
JIO	**Ouri**	**0.70**	**277**	A	A	06 11 20.1	
	comp=E,101nm,1.3s,comp=E,151nm,1.0s						
JKMT	**Kesennumamotoy**	**0.74**	**307**	*i* P	**Pb**	**06 11 20.9**	**-1.5**
JKMT				S	**Sb**	**06 11 30.1**	**-2.1**
JKMT	**Kesennumamotoy**	**0.74**	**307**	A	A	06 11 20.9	
	comp=E,228nm,1.3s,comp=E,350nm,1.0s						
OFUJ	**Ofunato**	**0.84**	**329**	*i* P	**Pn**	**06 11 22.2**	**-1.4**
OFUJ				S	**Sb**	**06 11 32.5**	**-2.4**
OFUJ	**Ofunato**	**0.84**	**329**	A	A	06 11 22.2	
	comp=E,280nm,0.9s,comp=E,140nm,0.8s						
JMK	**Ichinoseki**	**0.98**	**307**	*i* P	**Pn**	**06 11 24.5**	**-1.1**
JMK				S	**Sn**	**06 11 36.7**	**-1.7**
JMK	**Ichinoseki**	**0.98**	**307**	A	A	06 11 24.5	
	comp=E,93nm,1.6s,comp=E,119nm,3.5s						
JOFO	**Osakifurukawao**	**1.06**	**283**	A	A	06 11 25.5	
	comp=E,361nm,1.6s,comp=E,349nm,1.4s						
JOU	**Okura**	**1.23**	**270**	*i* P	**Pn**	**06 11 28.4**	**-0.6**
JOU				S	**Sn**	**06 11 44.2**	**-0.4**
JOU	**Okura**	**1.23**	**270**	A	A	06 11 28.4	
	comp=E,132nm,0.8s,comp=E,267nm,0.8s						
JMM	**Marumori**	**1.24**	**247**		**Pn**	**06 11 27.8**	**-1.3**
JMM	**Marumori**	**1.24**	**247**	*i* P	**Pn**	**06 11 27.7**	**-1.3**
JMM				*e*S	**Sn**	**06 11 42.9**	**-1.8**
JMM	**Marumori**	**1.24**	**247**	A	A	06 11 27.7	
	comp=E,64nm,2.2s,comp=E,76nm,1.1s						
JMST	**Minamisoumatoc**	**1.24**	**239**	A	A	06 11 28.5	
	comp=E,69nm,0.8s,comp=E,69nm,1.1s						
MIYJ	**Miyakonagasawa**	**1.25**	**345**	A	A	06 11 28.7	
	comp=E,84nm,0.3s,comp=E,84nm,1.7s						
JOM	**Ohasama**	**1.32**	**327**	*i* P	**Pn**	**06 11 29.7**	**-0.5**
JOM				S	**Sn**	**06 11 46.3**	**-0.6**
JOM	**Ohasama**	**1.32**	**327**	A	A	06 11 29.7	
	comp=E,83nm,1.5s,comp=E,76nm,0.4s						
JFK	**Kawauchi**	**1.47**	**227**	*i* P	**Pn**	**06 11 30.6**	**-1.6**
JFK				S	**Sn**	**06 11 47.6**	**-2.8**
JFK	**Kawauchi**	**1.47**	**227**	A	A	06 11 30.6	
	comp=E,28nm,3.6s,comp=E,35nm,1.2s						
JYK	**Kaneyama**	**1.56**	**291**	*i* P	**Pn**	**06 11 33.1**	**-0.4**
JYK	**Kaneyama**	**1.56**	**291**	A	A	06 11 33.1	
	comp=E,43nm,1.3s,comp=E,48nm,1.0s						
JTH	**Tanohata**	**1.59**	**350**	A	A	06 11 33.9	
	comp=E,50nm,1.5s,comp=E,31nm,1.6s						
JRG	**Rokugo**	**1.61**	**310**	*i* P	**Pn**	**06 11 33.9**	**-0.3**
JRG				*e*S	**Sn**	**06 11 54.0**	**0.0**
JRG	**Rokugo**	**1.61**	**310**	A	A	06 11 33.9	
	comp=E,84nm,1.0s,comp=E,76nm,3.0s						
JSZI	**Iwateshizukuis**	**1.69**	**325**	A	A	06 11 35.1	
	comp=E,235nm,1.4s,comp=E,167nm,1.1s						
ONAJ	**Iwakimizuishiy**	**1.70**	**222**	A	A	06 11 35.4	
	comp=E,55nm,0.3s,comp=E,30nm,0.4s						
JYAR	**Yonezawaarcadi**	**1.71**	**255**	A	A	06 11 35.2	
	comp=E,243nm,1.3s,comp=E,246nm,1.3s						
JYS	**Shirataka**	**1.71**	**266**	A	A	06 11 35.2	
	comp=E,126nm,1.7s,comp=E,141nm,2.5s						
JFT	**Otama**	**1.72**	**241**	*i* P	**Pn**	**06 11 35.3**	**-0.4**
JFT				S	**Sn**	**06 11 55.9**	**-0.7**
JFT	**Otama**	**1.72**	**241**	A	A	06 11 35.3	
	comp=E,201nm,2.3s,comp=E,301nm,1.4s						
JKZ	**Kuzumaki**	**1.76**	**337**	A	A	06 11 36.2	
	comp=E,106nm,2.1s,comp=E,65nm,1.0s						
JFFD	**Fukushimafurud**	**1.84**	**227**	A	A	06 11 37.4	
	comp=E,30nm,0.8s,comp=E,24nm,0.9s						
JKEN	**Kujiedanarisaw**	**1.88**	**348**	A	A	06 11 38.0	
	comp=E,136nm,0.9s,comp=E,144nm,1.2s						
JYYZ	**Yamagatayuza**	**1.91**	**291**	A	A	06 11 38.1	
	comp=E,284nm,2.4s,comp=E,207nm,1.5s						
JYW	**Yuwa**	**1.96**	**307**	A	A	06 11 38.9	
	comp=E,174nm,1.2s,comp=E,165nm,1.3s						
JYA	**Atsumi**	**1.99**	**277**	A	A	06 11 39.2	
	comp=E,184nm,1.3s,comp=E,88nm,1.4s						
JANG	**Nango**	**2.08**	**345**	A	A	06 11 40.9	
	comp=E,47nm,1.4s,comp=E,34nm,1.5s						
JHO	**Hitachi**	**2.19**	**217**	A	A	06 11 42.6	
	comp=E,15nm,2.5s,comp=E,16nm,2.2s						
JAH	**Hinai**	**2.20**	**326**	A	A	06 11 42.5	
	comp=E,59nm,2.5s,comp=E,49nm,4.2s						
JFY	**Yanaizu**	**2.21**	**245**	A	A	06 11 42.7	
	comp=E,41nm,3.2s,comp=E,33nm,3.8s						
JTB	**Tobi-shima**	**2.25**	**292**	A	A	06 11 43.0	
	comp=E,128nm,1.8s,comp=E,75nm,2.7s						
JSB	**Shiboa**	**2.30**	**233**	A	A	06 11 44.0	
	comp=E,94nm,4.7s,comp=E,84nm,1.4s						
JAW	**Awa shima**	**2.34**	**273**	A	A	06 11 44.4	
	comp=E,38nm,3.9s,comp=E,50nm,3.4s						
JNS	**Sasagawa**	**2.36**	**257**	A	A	06 11 44.7	
	comp=E,18nm,3.7s,comp=E,34nm,3.6s						
JHYU	**Hitachinakayam**	**2.41**	**213**	A	A	06 11 45.8	
	comp=E,25nm,4.4s,comp=E,19nm,4.6s						
JNTW	**Noshirotokiwa**	**2.49**	**321**	A	A	06 11 46.5	
	comp=E,209nm,3.4s,comp=E,264nm,2.5s						
JTM	**Tenmabayashi**	**2.58**	**340**	Pn	**Pn**	**06 11 47.7**	**+0.2**
JTM	**Tenmabayashi**	**2.58**	**340**	A	A	06 11 48.0	
	comp=E,62nm,1.5s,comp=E,35nm,2.9s						
JYT	**Yasato**	**2.68**	**218**	Pn	**Pn**	**06 11 47.4**	**-1.5**
JYT	**Yasato**	**2.68**	**218**	A	A	06 11 49.6	
	comp=E,24nm,0.5s,comp=E,25nm,1.2s						
JHHS	**Hirosakihyakuz**	**2.70**	**328**	A	A	06 11 49.6	
	comp=E,90nm,3.9s,comp=E,121nm,3.3s						
JARK	**Aomorirokkasho**	**2.72**	**346**	A	A	06 11 50.0	
	comp=E,49nm,1.4s,comp=E,30nm,2.1s						
JUON	**Uonuma**	**2.77**	**246**	A	A	06 11 50.5	
	comp=E,13nm,2.9s,comp=E,14nm,8.1s						
JIW	**Iwasaki**	**2.81**	**323**	A	A	06 11 51.2	
	comp=E,51nm,2.3s,comp=E,56nm,1.6s						
JKT	**Katashina**	**2.86**	**237**	A	A	06 11 51.9	
	comp=E,13nm,2.5s,comp=E,22nm,3.3s						
JOG3	**Oga3**	**2.90**	**303**	A	A	06 11 45.7	
	comp=E,78nm,2.3s,comp=E,133nm,4.1s						
JIZZ	**Izumozaki**	**2.90**	**254**	A	A	06 11 52.5	
	comp=E,63nm,2.6s,comp=E,59nm,2.4s						
JAG	**Ashikaga**	**2.94**	**230**	A	A	06 11 53.1	
	comp=E,10.0nm,4.1s,comp=E,13nm,4.3s						
JAHD	**Aomorihigashid**	**2.98**	**347**	A	A	06 11 53.7	
	comp=E,77nm,1.0s,comp=E,79nm,0.9s						
JSI2	**Shiura 2**	**3.03**	**333**	A	A	06 11 54.4	
	comp=E,65nm,1.4s,comp=E,119nm,1.3s						
JSD	**Sado**	**3.14**	**265**	Pn	**Pn**	**06 11 54.4**	**-0.8**
JSD	**Sado**	**3.14**	**265**	A	A	06 11 55.8	
	comp=E,18nm,2.3s,comp=E,32nm,3.4s						
JOT	**Ohata**	**3.15**	**344**	A	A	06 11 56.1	
	comp=E,22nm,1.4s,comp=E,14nm,1.6s						
JGK	**Kuni**	**3.38**	**239**	A	A	06 11 59.3	
	comp=E,25nm,4.0s,comp=E,20nm,2.7s						
JHU	**Hanno**	**3.44**	**224**	A	A	06 12 00.3	
	comp=E,10.0nm,1.6s,comp=E,12nm,1.5s						
JSR	**Shiriuchi**	**3.45**	**337**	A	A	06 12 00.4	
	comp=E,19nm,1.7s,comp=E,30nm,3.3s						
JJN	**Nakama**	**3.46**	**250**	A	A	06 12 00.4	
	comp=E,15nm,1.3s,comp=E,21nm,2.9s						
JRY	**Ryogami san**	**3.54**	**230**	A	A	06 12 01.7	
	comp=E,10.0nm,3.4s,

RUSJ **Misakicho** 6.17 21 *e*P Pn 06 12 36.3 -0.5
YUK **Yuzh-Kuril'sk** 6.29 25 *e*P Pn 06 12 37.1 -1.4
YUK *e*S **Sn** 06 13 45.3 -3.9
YUK pmax pmax
comp=Z,952nm,0.3s
YUK pmax pmax
comp=E,380nm,0.2s
YUK pmax pmax
comp=N,297nm,0.3s
YUK pmax pmax
comp=Z,1μm,1.0s
YUK smax smax
comp=N,3μm,0.5s
YUK smax smax
comp=E,2μm,0.5s
YUK smax smax
comp=N,5μm,1.1s
YUK smax smax
comp=E,2μm,1.0s
YUK MLR MLR
comp=N,4μm,13.0s
YUK MLR MLR
comp=E,2μm,13.0s
YUK MLR MLR
comp=Z,3μm,13.0s
TEY **Ternei** 7.88 330⇑ *e*P **Pn** 06 13 00.2 -0.1
TEY pmax pmax
comp=N,10.0nm,1.6s
TEY pmax pmax
comp=E,10.0nm,1.6s
TEY pmax pmax
comp=Z,10.0nm,1.3s
TEY MLR MLR
comp=E,100nm,15.0s
TEY MLR MLR
comp=N,100nm,13.0s
TEY MLR MLR
comp=Z,200nm,14.0s
KUR **Kuril'sk** 8.05 30⇑ *e*P **Pn** 06 13 02.0 -0.6
KUR *e*S **Sn** 06 14 28.0 -4.5
KUR pmax pmax
comp=Z,475nm,0.8s
KUR pmax pmax
comp=N,275nm,0.7s
KUR smax smax
comp=N,561nm,0.9s
JHS **Saijyo** 8.05 248 **Pn** 06 13 04.7 +1.9
JMN **Monobe** 8.19 238 Pn **Pn** 06 13 03.1 -1.6
YSS **Yuzh-Sakhalins** 8.59 2 **Pn** 06 13 11.0 +0.9
YSS **Yuzh-Sakhalins** 8.59 2 *αe*P **Pn** 06 13 09.7 -0.3
YSS *e*S **Sn** 06 14 42.6 -3.2
YSS pmax pmax
comp=Z,1μm,3.2s
YSS pmax pmax
comp=N,700nm,2.9s
YSS pmax pmax
comp=E,400nm,2.7s
YSS pmax pmax
comp=Z,390nm,1.0s
YSS pmax pmax
comp=N,360nm,0.9s
YSS smax smax
comp=E,900nm,5.1s
YSS MLR MLR
comp=Z,2μm,18.0s
YSS MLR MLR
comp=N,2μm,16.0s
YSS **Yuzh-Sakhalins** 8.59 2 P **Pn** 06 13 11.6 +1.6
VLA **Vladivostok** 9.17 304 *d i*P **Pn** 06 13 18.0 0.0
MSHR **Mys Shultsa** 9.43 300⇓ *e*P **Pn** 06 13 21.7 +0.2
MSHR pmax pmax
comp=Z,35nm,0.6s
USA0B **Ussuriysk Arra** 9.66 310 **Pn** 06 13 25.5 +0.8
USA0B **Ussuriysk Arra** 9.66 310 P **Pn** 06 13 25.5 +0.8
USRK **Ussuriysk Ar.** 9.66 310 Pn **Pn** 06 13 25.1 +0.5
comp=Z,1.4nm,0.3s,baz=138,slow=12,SNR=40
USRK LR LR 06 16 54.2
comp=Z,3μm,18.8s,baz=213,slow=36
comp=Z,23nm,0.7s
USRK **Ussuriysk Ar.** 9.66 310 Pn **Pn** 06 13 25.0 +0.3
USRK **Ussuriysk Ar.** 9.66 310 P **Pn** 06 13 25.0 +0.3
KSBUS **Busan** 10.97 258 Pn **Pn** 06 13 41.8 -0.8
SEHB **SEOHWA** 10.98 274 Pn **Pn** 06 13 44.0 +1.1
JCJ **Chichijima** 11.24 180 Pn **Pn** 06 13 44.3 -2.1
comp=Z,66nm,0.3s,baz=8.1,slow=14,SNR=14
JCJ Sn Sn 06 15 38.7 -12
comp=Z,35nm,0.3s,baz=315,slow=19,SNR=8.0
JCJ **Chichijima** 11.24 180 Pn **Pn** 06 13 45.1 -1.3
JCJ **Chichijima** 11.24 180 P **Pn** 06 13 46.9 +0.5
KSRS **Korea Array** 11.34 270 Pn **Pn** 06 13 51.0 +3.3
comp=Z,0.5nm,0.3s,baz=91,slow=14,SNR=14
KSRS LR LR 06 17 49.3
comp=Z,2μm,19.6s,baz=75,slow=36
MDJ **Mudanjiang** 11.34 307 **Pn** 06 13 47.4 -0.4
KS19 **Wonju Array Si** 11.38 270 Pn **Pn** 06 13 46.6 -1.6
KSCHJ **Chungju** 11.40 267 Pn **Pn** 06 13 46.4 -2.2
JSU **Suzuyama** 11.83 238 Pn **Pn** 06 13 53.9 -0.7
TJN **Taejon** 11.99 265 Pn **Pn** 06 13 56.4 -0.3
TJN **Taejon** 11.99 265 P **Pn** 06 13 56.4 -0.3
NAWB **Namwon** 12.23 261 Pn **Pn** 06 13 56.2 -3.8
INCN **Inchon** 12.35 271 Pn **Pn** 06 13 58.8 -2.8
INCN **Inchon** 12.35 271 P **Pn** 06 13 58.8 -2.8
TYV **Tymovskoe** 12.50 1 *e*P **Pn** 06 14 02.5 -1.0
TYV *e*S **Sn** 06 16 22.6 +1.1
TYV pmax pmax
comp=Z,300nm,4.1s
TYV pmax pmax
comp=Z,57nm,1.0s
TYV smax smax
comp=N,200nm,6.0s
TYV smax smax
comp=E,200nm,6.0s
TYV smax smax
comp=E,16nm,1.1s
TYV MLR MLR
comp=E,2μm,18.0s
TYV MLR MLR
comp=Z,3μm,18.0s
GRNR **Gornyy** 13.07 343⇓ *i*P **Pn** 06 14 11.2 -0.1
GRNR *e*S **Sn** 06 16 37.5 +2.0
GRNR pmax pmax
comp=N,30nm,0.8s
GRNR pmax pmax
comp=E,20nm,0.8s
GRNR pmax pmax
comp=Z,40nm,0.8s
GRNR smax smax
comp=E,5.0nm,0.6s
GRNR MLR MLR
comp=E,950nm,17.0s
GRNR MLR MLR
comp=N,1μm,18.0s
GRNR MLR MLR
comp=Z,2μm,15.0s
KLR **Kul'dur** 13.22 329 Pn **Pn** 06 14 13.2 -0.2
comp=Z,0.4nm,0.3s,baz=136,slow=14,SNR=15
KLR LR LR 06 19 14.7
comp=Z,4μm,19.4s,baz=144,slow=37
comp=Z,13nm,1.0s
KLR **Kul'dur** 13.22 329 *d i*P **Pn** 06 14 13.2 -0.2
KLR pmax pmax
comp=Z,22nm,1.3s
KLR MLR MLR
comp=Z,4μm,15.0s
BNX **BinXian** 13.24 309 ⇑P **Pn** 06 14 15.8 +2.1
BNX pP P 06 14 17.3 -5.8
BNX sP 06 14 20.3
BNX PP **PnPn** 06 14 27.4 +5.9
BNX S Sn 06 16 48.9 +9.2
BNX sS S 06 16 53.8 -10
BNX pmax pmax
comp=Z,12nm,0.9s
BNX pmax pmax
comp=Z,420nm,5.6s
BNX LR LR
comp=Z,2μm,15.5s
BNX LR LR
comp=Z,2μm,16.8s
BNX LR LR
comp=Z,4μm,17.2s
CN2 **Changchun** 13.77 299 *e*P **P** 06 14 25.8 -3.2
CN2 S **Sn** 06 16 54.9 +2.3
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,400nm,5.0s
CN2 LR LR
comp=Z,2μm,17.0s
CN2 LR LR
comp=Z,2μm,17.0s
CN2 LR LR
comp=Z,2μm,17.0s
SNY **Shenyang** 14.69 289 ⇓P **Pn** 06 14 34.1 +0.7
SNY S **S** 06 17 26.1 -7.0
SNY pmax pmax
comp=Z,12nm,0.7s
SNY pmax pmax
comp=Z,89nm,5.3s
SNY LR LR
comp=Z,2μm,12.4s
SNY LR LR
comp=Z,4μm,15.1s
SNY LR LR
comp=Z,5μm,15.7s
OKH **Okha** 15.19 2 *c i*P **Pn** 06 14 40.0 -0.1
OKH pmax pmax
comp=Z,100nm,12.7s
OKH MLR MLR
comp=E,3μm,17.0s
OKH MLR MLR
comp=N,1μm,17.0s
OKH MLR MLR
comp=Z,2μm,16.0s
SKR **Severo-Kuril's** 15.77 34 *e*P **P** 06 14 51.8 +0.7
SKR pmax pmax
comp=Z,100nm,2.7s
SKR MLR MLR
comp=Z,800nm,17.0s
DL2 **Dalian** 16.11 278 P **P** 06 14 54.1 -0.9
DL2 pmax pmax
comp=Z,67nm,1.4s
DL2 LR LR
comp=Z,640nm,13.1s
DL2 LR LR
comp=Z,1μm,17.5s
DL2 LR LR
comp=Z,2μm,17.9s
PEA0B **Petropavlovsk-** 18.21 31 P **Pn** 06 15 15.9 -2.3
PEA0B **Petropavlovsk-** 18.21 31⇓ *e*P **Pn** 06 15 15.2 -3.0
PETK **Petropavlovsk-** 18.21 31 Pn **Pn** 06 15 14.9 -3.2
comp=Z,0.3nm,0.3s,baz=210,slow=13,SNR=20
PETK LR LR 06 22 06.3
comp=Z,693nm,20.0s,baz=218,slow=36
PETK **Petropavlovsk-** 18.21 31 P **Pn** 06 15 15.9 -2.3
PETK **Petropavlovsk-** 18.21 31 P **Pn** 06 15 15.9 -2.3
ZEA **Zeya** 18.50 331 *e*P **P** 06 15 18.7 -2.6
ZEA pmax pmax
comp=Z,200nm,1.3s
ZEA pmax pmax
comp=E,50nm,0.8s
ZEA pmax pmax
comp=N,80nm,0.9s
ZEA pmax pmax
comp=Z,130nm,0.9s
ZEA MLR MLR
comp=E,1μm,17.0s
ZEA MLR MLR
comp=N,2μm,14.0s
ZEA MLR MLR
comp=Z,2μm,14.0s
PET **Petropavlovsk** 18.55 32 P **Pn** 06 15 22.6 +0.5
PET IAmb IAmb 06 15 25.1
comp=Z,365nm,1.6s
PET **Petropavlovsk** 18.55 32 *α i*P **Pn** 06 15 23.6 +1.4
PET *e*S **Sn** 06 18 45.8 -2.6
PET pmax pmax
comp=Z,1μm,2.2s
PET pmax pmax
comp=Z,178nm,1.5s
PET pmax pmax
comp=Z,300nm,10.6s
PET pmax pmax
comp=Z,100nm,11.6s
PET MLR MLR
comp=Z,1μm,19.0s
PET MLR MLR
comp=Z,900nm,16.0s
SSE **Sheshan** 18.73 254 P **P** 06 15 24.0 0.0
SSE S **S** 06 18 56.8 +1.3
SSE pmax pmax
comp=Z,33nm,0.8s
SSE pmax pmax
comp=Z,160nm,4.6s
SSE LR LR
comp=Z,690nm,16.1s
SSE LR LR
comp=Z,700nm,18.4s
TIA **Tai'an** 20.07 272 *e*P **P** 06 15 36.8 -1.9
TIA S Sn 06 19 29.3 +3.7
TIA pmax pmax
comp=Z,50nm,1.2s
TIA pmax pmax
comp=Z,140nm,4.7s
TIA LR LR
comp=Z,650nm,12.8s
TIA LR LR
comp=Z,1μm,14.1s
TIA LR LR
comp=Z,1μm,12.6s
NJ2 **Nanjing** 20.09 259 ⇑P **P** 06 15 34.9 -3.9
NJ2 S Sn 06 19 27.8 +1.9
NJ2 sS **sS** 06 19 33.5 -2.3
NJ2 pmax pmax
comp=Z,12nm,0.6s
NJ2 pmax pmax
comp=Z,290nm,6.6s
NJ2 LR LR
comp=Z,690nm,13.7s
NJ2 LR LR
comp=Z,1μm,18.0s
NJ2 LR LR
comp=Z,1μm,15.2s
BJI **Beijing** 20.24 283 P **P** 06 15 37.3 -3.2
BJI S **S** 06 19 24.0 -1.8
BJI pmax pmax
comp=Z,7.0nm,1.4s
BJI pmax pmax
comp=Z,110nm,4.5s
BJI LR LR
comp=Z,1μm,14.0s
BJI LR LR
comp=Z,2μm,13.9s
BJT **Baijiatuau** 20.25 283 P **P** 06 15 38.8 -1.8
BJT IAmb IAmb 06 15 49.1
comp=Z,173nm,1.7s
BJT **Baijiatuau** 20.25 283 P **P** 06 15 38.8 -1.8
BJT pmax pmax
comp=Z,173nm,1.7s
XLT **XiLinHaoTe** 20.41 294 *e*P **P** 06 15 40.4 -2.0
XLT pP pP 06 15 49.3 -1.4
XLT sP sP 06 15 53.5 -1.0
XLT PP **PnPn** 06 16 00.3 +0.4
XLT S **S** 06 19 26.3 -3.1
XLT sS Sn 06 19 37.5 +3.7
XLT pmax pmax
comp=Z,26nm,1.3s
XLT pmax pmax
comp=Z,190nm,4.5s
XLT LR LR
comp=Z,1μm,13.5s
XLT LR LR
comp=Z,1μm,14.3s
YOJ **Yonaguni jima** 21.42 235 P **P** 06 15 50.1 -3.1
YOJ **Yonaguni jima** 21.42 235 P **P** 06 15 50.1 -3.1
YOJ pmax pmax
comp=Z,29nm,0.7s
HNS **HongShan** 21.72 276 ⇓P **P** 06 15 53.3 -3.1
HNS pP **pP** 06 16 02.4 -2.3
HNS S **S** 06 19 55.8 +0.7
HNS pmax pmax
comp=Z,67nm,0.8s
HNS LR LR
comp=Z,600nm,12.7s
HNS LR LR
comp=Z,2μm,17.1s
HNS LR LR
comp=Z,2μm,16.9s
MA2 **Magadan** 21.92 12 P **P** 06 15 58.5 +0.1
comp=Z,102nm,0.9s,baz=203,slow=9.7,SNR=36
MA2 LR LR 06 26 05.4
comp=Z,540nm,18.2s,baz=192,slow=41
comp=Z,102nm,0.9s
MA2 **Magadan** 21.92 12 P **P** 06 15 58.8 +0.4
MA2 IAmb IAmb 06 16 10.5
comp=Z,142nm,0.8s
MA2 **Magadan** 21.92 12 *c i*P **P** 06 15 58.7 +0.4
MA2 pmax pmax
comp=Z,520nm,2.5s
MA2 **Magadan** 21.92 12 P **P** 06 15 59.7 +1.3
SSLB **Suanglung** 23.23 237 P **P** 06 16 14.7 +2.2
TIY **Taiyuan** 23.43 278 *e*P **P** 06 16 17.3 +2.8
TIY pP **pP** 06 16 23.5 +0.5
TIY S **S** 06 20 28.6 +2.8
TIY LR LR
comp=Z,790nm,14.2s
TIY LR LR
comp=Z,1μm,14.2s
TIY LR LR
comp=Z,1μm,17.2s
TPUB **Ta-pu** 23.78 237 P **P** 06 16 15.0 -2.9
TPUB IAmb IAmb 06 16 34.9
comp=Z,54nm,0.8s
TPUB **Ta-pu** 23.78 237 P **P** 06 16 20.1 +2.2
TWG **Pinlang** 23.83 236 P **P** 06 16 15.1 -3.1
TWG IAmb IAmb 06 16 35.1
comp=Z,83nm,1.0s
LYN **LuoYang** 24.19 270⇓ *i*P **P** 06 16 20.5 -1.0
LYN pP pP 06 16 25.6 -4.8
LYN S **S** 06 20 37.3 -0.5
LYN SS **SnSn** 06 21 32.1 +11
LYN pmax pmax
comp=Z,30nm,0.7s
LYN pmax pmax
comp=Z,160nm,3.9s
LYN LR LR
comp=Z,1μm,13.7s
LYN LR LR
comp=Z,770nm,14.2s
CIT **Chita** 24.20 314 *e*P **P** 06 16 22.1 +0.6
CIT *e* 06 16 29.3
CIT *e* 06 16 33.9
CIT *e* 06 16 53.1
CIT *e* 06 20 35.2
CIT *e* 06 20 51.5
CIT pmax pmax
comp=Z,106nm,2.4s
WHN **Wuhan** 24.21 260 ⇓P **P** 06 16 21.3 -0.5
WHN S **S** 06 20 39.9 +1.7
WHN pmax pmax
comp=Z,45nm,0.6s
WHN LR LR
comp=Z,2μm,13.2s
WHN LR LR
comp=Z,780nm,13.7s
WHN LR LR
comp=Z,3μm,21.2s
GUMO **Guam** 24.79 174 LR LR 06 26 48.0
comp=Z,434nm,21.0s,baz=15,slow=38
BTO **Baotou** 24.89 285 *e*P **P** 06 16 29.8 +1.8
BTO S **S** 06 20 51.4 +2.2
BTO LR LR
comp=Z,3μm,13.1s
BTO LR LR
comp=Z,9μm,16.5s
YAK **Yakutsk** 24.92 346 P **P** 06 16 27.0 -0.9
comp=Z,28nm,0.3s,baz=140,slow=5.6,SNR=30
YAK LR LR 06 26 18.7
comp=Z,779nm,19.0s,baz=96,slow=37
comp=Z,28nm,0.3s
YAK **Yakutsk** 24.92 346 P **P** 06 16 26.8 -1.2
YAK **Yakutsk** 24.92 346 *c i*P **P** 06 16 26.7 -1.2
YAK *e**PP **pP** 06 16 36.6 -0.1
YAK *e* 06 17 01.3
YAK *e* 06 20 03.3
YAK *e*S **S** 06 20 46.6 -2.5
YAK *e*SS **SnSn** 06 21 40.0 +1.6
YAK *e* 06 27 23.7
YAK pmax pmax
comp=Z,181nm,1.1s
YAK pmax pmax
comp=N,95nm,1.0s
YAK pmax pmax
comp=E,25nm,1.0s
YAK pmax pmax
comp=Z,80nm,1.0s
YAK pmax pmax
comp=N,18nm,1.0s
YAK pmax pmax
comp=E,71nm,1.1s
YAK smax smax
comp=N,110nm,1.6s
YAK smax smax
comp=E,144nm,1.6s
SEY **Seymchan** 25.36 11 P **P** 06 16 33.2 +1.4
comp=E,118nm,0.9s,baz=200,slow=7.5,SNR=131
comp=E,118nm,0.9s
SEY **Seymchan** 25.36 11 *c i*P **P** 06 16 33.5 +1.6
SEY pmax pmax
comp=Z,184nm,1.0s
SHEM **Shemya Is, Ala** 26.28 46 LR LR 06 26 21.2
comp=Z,255nm,21.9s,baz=250,slow=35
CNSH **ChangSha** 26.42 256 ⇑P **P** 06 16 40.4 -1.4
CNSH S **S** 06 21 12.4 -1.0
CNSH pmax pmax
comp=Z,31nm,0.9s
CNSH LR LR
comp=Z,650nm,16.8s
CNSH LR LR
comp=Z,840nm,14.3s
CNSH LR LR
comp=Z,1μm,17.2s
BOD **Bodaibo** 26.77 326 *e*P **P** 06 16 43.9 -0.8
BOD pmax pmax
comp=Z,60nm,1.8s
XAN **Xi'an** 27.13 271 ⇑P **P** 06 16 47.3 -1.0
XAN pP pP 06 16 55.4 -1.7
XAN sP sP 06 16 59.3 -1.6
XAN S **S** 06 21 24.4 -0.3
XAN pmax pmax
comp=Z,10.0nm,0.7s
XAN LR LR
comp=Z,1μm,14.9s
XAN LR LR
comp=Z,1μm,15.6s
XAN LR LR
comp=Z,2μm,15.6s
ULN **Ulaanbaatar** 27.17 302 P **P** 06 16 48.0 -0.7
ULN **Ulaanbaatar** 27.17 302⇓ *e*P **P** 06 16 48.5 -0.1
ULN pmax pmax
comp=Z,26nm,1.3s
SONM **Songino Array** 27.61 302 P **P** 06 16 52.1 -0.5
comp=Z,6.7nm,0.8s,baz=104,slow=8.5,SNR=38
SONM LR LR 06 28 15.5
comp=Z,1μm,18.1s,baz=106,slow=38
comp=Z,6.7nm,0.8s
SONM **Songino Array** 27.61 302 P **P** 06 16 50.7 -1.8
SONM **Songino Array** 27.61 302 P **P** 06 16 50.7 -1.8
SONM pmax pmax
comp=Z,15nm,0.8s
ENH **Enshi** 28.11 263 P **P** 06 16 56.0 -1.0
ENH **Enshi** 28.11 263 P **P** 06 16 56.8 -0.2
ENH pP **pP** 06 17 05.6 -0.3
ENH sP **sP** 06 17 11.6 +1.9
H11N2 **WAKE ISLAND Hy** 28.32 124 T T 06 46 43.9
baz=316,slow=76,SNR=2073
H11N1 **WAKE ISLAND Hy** 28.32 124 T T 06 46 47.2
baz=316,slow=76,SNR=2201
H11N3 **WAKE ISLAND Hy** 28.33 124 T T 06 46 42.3
baz=316,slow=76,SNR=1983
H11S1 **WAKE ISLAND Hy** 29.08 126 T T 06 48 07.8
baz=318,slow=76,SNR=1292
H11S3 **WAKE ISLAND Hy** 29.08 126 T T 06 48 07.9
baz=318,slow=76,SNR=1533
H11S2 **WAKE ISLAND Hy** 29.10 126 T T 06 48 09.0
baz=318,slow=76,SNR=1773
IRK **Irkutsk** 29.71 310 *e*P **P** 06 17 10.4 -0.6
IRK pmax pmax
comp=Z,57nm,2.0s
ZAK **Zakamensk** 29.98 306 *e*P **P** 06 17 13.1 -0.4
ZAK pmax pmax
comp=Z,34nm,1.1s
LZH **Lanzhou** 30.50 278 *e*P **P** 06 17 17.1 -1.3
LZH pP pP 06 17 24.4 -2.9
LZH S **S** 06 22 18.8 +0.9
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,270nm,5.8s

LZH LR LR
comp=Z,920nm,12.4s
LZH LR LR
comp=Z,2μm,12.4s
LZH LR LR
comp=Z,2μm,13.1s
MOY Mondy 31.59 308 *e*P P 06 17 17.8 -10
GYA Guiyang 32.10 259 ⇑P **P** **06 17 32.8 +0.4**
GYA S **S** **06 22 49.8 +6.9**
GYA pmax pmax
comp=Z,30nm,1.1s
GYA pmax pmax
comp=Z,79nm,3.5s
GYA LR LR
comp=Z,490nm,16.1s
GYA LR LR
comp=Z,790nm,18.5s
GYA LR LR
comp=Z,990nm,20.3s
CD2 Chengdu 32.34 268 P **P** **06 17 33.5 -0.9**
CD2 S **S** **06 22 44.9 -1.5**
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,820nm,15.7s
CD2 LR LR
comp=Z,710nm,16.2s
CD2 LR LR
comp=Z,1μm,17.2s
BILL Bilibino 32.57 17 P **P** **06 17 37.0 +1.0**
BILL IAmb IAmb 06 17 48.2
comp=Z,70nm,1.1s
BILL Bilibino 32.57 17 *ce* P **P** **06 17 37.0 +1.0**
BILL *e* 06 18 41.4
BILL pmax pmax
comp=Z,71nm,1.7s
BILL MLR MLR
comp=Z,233nm,15.0s
GTA Gaotai 32.81 285 ⇑P **P** **06 17 39.0 +0.4**
GTA pP pP 06 17 48.3 +0.8
GTA ScP **ScP** **06 24 05.0 +0.2**
GTA PcS **PcS** **06 24 09.6 +1.1**
GTA ScS **ScS** **06 28 03.5 -1.3**
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,130nm,6.5s
GTA LR LR
comp=Z,570nm,20.4s
GTA LR LR
comp=Z,2μm,18.5s
GTA LR LR
comp=Z,2μm,18.5s
KNGR Kungurtug, Tuv 33.66 306 ⇓ *e*P **P** **06 17 46.6 +0.8**
KNGR pmax pmax
comp=Z,51nm,1.0s
TIXI Tiksi 34.05 352 P **P** **06 17 48.1 -0.7**
comp=Z,19nm,0.9s,baz=90,slow=23,SNR=18
TIXI LR LR 06 32 57.0
comp=Z,1μm,18.2s,baz=180,slow=39
comp=Z,19nm,0.9s
TIXI Tiksi 34.05 352 P **P** **06 17 48.3 -0.5**
TIXI IAmb IAmb 06 17 49.6
comp=Z,26nm,0.9s
TIXI Tiksi 34.05 352 *c i* P **P** **06 17 48.4 -0.4**
TIXI pmax pmax
comp=Z,53nm,1.7s
TIXI MLR MLR
comp=Z,1μm,17.0s
TIXI Tiksi 34.05 352 P **P** **06 17 48.3 -0.5**
TIXI pP **pP** **06 17 58.3 +0.6**
QIZ Qiongzhong 34.07 245 P **P** **06 17 51.4 +1.8**
QIZ S **S** **06 23 13.1 -0.3**
QIZ LR LR
comp=Z,1μm,19.1s
QIZ LR LR
comp=Z,710nm,14.3s
QIZ LR LR
comp=Z,1μm,15.9s
DAV Davao City (W) 34.61 210 LR LR 06 31 18.6
comp=Z,293nm,20.7s,baz=168,slow=35
MIDW Midway 35.02 95 P **P** **06 17 57.1 -0.6**
KMI Kunming 35.81 260 ⇓P **P** **06 18 04.8 0.0**
KMI pP pP 06 18 12.5 -1.3
KMI sP sP 06 18 16.3 -1.2
KMI S **S** **06 23 42.9 +2.3**
KMI pmax pmax
comp=Z,22nm,1.3s
KMI pmax pmax
comp=Z,150nm,5.5s
KMI LR LR
comp=Z,850nm,16.7s
KMI LR LR
comp=Z,750nm,16.7s
KMI LR LR
comp=Z,1μm,17.7s
PZH PanZhiHua 35.89 263 P **P** **06 18 05.9 +0.5**
PZH pP **sP** **06 18 16.1 -2.0**
PZH S **S** **06 23 41.6 0.0**
PZH sS **sS** **06 23 56.6 +0.1**
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,180nm,6.4s
PZH LR LR
comp=Z,1μm,16.7s
PZH LR LR
comp=Z,2μm,16.3s
PZH LR LR
comp=Z,3μm,16.9s
GOMU GeErMu 37.47 282 P **P** **06 18 19.5 +0.5**
GOMU pP pP 06 18 22.3 -5.7
GOMU sP sP 06 18 24.4 -7.3
GOMU S **S** **06 24 05.4 -0.5**
GOMU pmax pmax
comp=Z,15nm,0.6s
GOMU pmax pmax
comp=Z,140nm,5.3s
GOMU LR LR
comp=Z,640nm,16.0s
GOMU LR LR
comp=Z,450nm,15.8s
GOMU LR LR
comp=Z,570nm,15.7s
TNA Tin City 39.38 30 P **P** **06 18 34.4 +0.2**
TNA IAmb IAmb 06 18 52.8
comp=Z,78nm,1.0s
UBPT Khong Chiam 39.67 245 P **P** **06 18 37.8 +0.5**
SMPI Sarmi 40.29 185 P **P** **06 18 42.1 -0.2**
comp=Z,28nm,1.5s
SIJI Sorong 40.33 197 P **P** **06 18 41.7 -1.0**
comp=Z,27nm,0.7s,baz=349,slow=10,SNR=8.7
comp=Z,27nm,0.7s
CRAI Chiangrai 40.33 255 P **P** **06 18 43.2 +0.4**
GENI Genyem 40.80 183 P **P** **06 18 45.5 -1.0**
comp=Z,62nm,0.9s
WMQ Urumqi 40.83 296 ⇓P **P** **06 18 47.9 +1.2**
WMQ pP pP 06 18 56.3 +0.6
WMQ PP **PnPn** **06 20 25.4 +0.2**
WMQ pmax pmax
comp=Z,97nm,0.9s
WMQ pmax pmax
comp=Z,110nm,3.9s
WMQ LR LR
comp=Z,820nm,20.7s
WMQ LR LR
comp=Z,400nm,16.9s
WMQ LR LR
comp=Z,410nm,20.7s
WMQ Urumqi 40.83 296 P **P** **06 18 47.3 +0.6**
WMQ pP **pP** **06 18 56.4 +0.6**
WMQ sP **sP** **06 19 01.0 +1.7**
KMSI Cibinong 41.18 208 P **P** **06 18 50.2 +0.6**
comp=Z,130nm,0.6s
SDPT Sand Point 41.41 47 P **P** **06 18 52.2 +1.0**
SDPT IAmb IAmb 06 19 11.1
comp=Z,58nm,1.0s
GTOI Gorontalo 41.49 210 P **P** **06 18 51.5 -0.7**
comp=Z,305nmcomp=Z,41nm,1.0s
ZAA0 Zalesovo Array 41.51 311 P **P** **06 18 51.6 -0.4**
ZAA0 IAmb IAmb 06 19 02.0
comp=Z,73nm,0.8s
ZALV Zalesovo Beam 41.51 311 P **P** **06 18 52.2 +0.3**
comp=Z,9.4nm,0.6s,baz=86,slow=7.5,SNR=35
ZALV PcP **PcP** **06 20 49.4 +0.4**
comp=Z,3.4nm,0.3s,baz=102,slow=2.6,SNR=5.5

ZALV LR LR 06 36 40.5
comp=Z,1μm,18.9s,baz=80,slow=37
comp=Z,9.4nm,0.6s
ZALV Zalesovo Beam 41.51 311 P **P** **06 18 51.6 -0.4**
CHNA Chernabura Isl 41.93 47 P **P** **06 18 54.9 -0.6**
baz=272
CNBA Chernabura Isl 41.93 47 P **P** **06 18 55.5 0.0**
CNBA IAmb IAmb 06 18 58.5
comp=Z,134nm,1.3s
TOLI2 Tolitoli 41.98 213 P **P** **06 18 54.7 -1.5**
MRSI Marisa 42.06 211 P **P** **06 18 57.7 +0.8**
comp=Z,2μmcomp=Z,76nm,1.3s
FAKI Fak Fak 42.10 195 P **P** **06 18 56.6 -0.6**
FAKI IAmb IAmb 06 19 11.0
comp=Z,42nm,0.9s
FAKI Fak Fak 42.10 195 P **P** **06 18 57.0 -0.2**
comp=Z,952nmcomp=Z,50nm,0.8s
ZSN Zaisan 42.12 302 *c i* P **P** **06 18 57.3 +0.1**
ZSN *e*S **S** **06 25 15.4 +0.7**
ZSN pmax pmax
comp=Z,21nm,0.9s
ZSN Zaisan 42.12 302 ⇑ *i* P **P** **06 18 57.3 +0.1**
comp=Z,21nm,0.9s,baz=302
ZSN *e*S **S** **06 25 15.4 +0.7**
baz=302
CHTO Chiang Mai 42.25 255 P **P** **06 18 57.1 -1.3**
CHTO Chiang Mai 42.25 255 P **P** **06 18 57.2 -1.3**
CHTO pmax pmax
comp=Z,18nm,0.7s
CHTO Chiang Mai 42.25 255 P **P** **06 18 58.8 +0.3**
NRIK Noril'sk 42.34 335 P **P** **06 18 58.0 -0.6**
comp=Z,4.4nm,0.3s,baz=118,slow=7.6,SNR=11
NRIK LR LR 06 37 29.7
comp=Z,2μm,18.8s,baz=110,slow=38
comp=Z,4.4nm,0.3s
NRIK Noril'sk 42.34 335 P **P** **06 18 57.6 -0.9**
NRIK Noril'sk 42.34 335 *c i* P **P** **06 18 58.0 -0.6**
NRIK pmax pmax
comp=Z,38nm,1.5s
NRIK MLR MLR
comp=Z,2μm,19.0s
CMAR Chiang Mai Arr 42.47 255 P **P** **06 19 00.9 +0.7**
comp=Z,1.9nm,0.4s,baz=51,slow=4.9,SNR=7.4
CMAR PcP **PcP** **06 20 54.0 +1.2**
comp=Z,2.9nm,0.5s,baz=15,slow=3.4,SNR=5.0
CMAR LR LR 06 38 51.6
comp=Z,331nm,18.5s,baz=50,slow=39
comp=Z,1.9nm,0.4s
N16K Nishlik Lake 42.48 39 P **P** **06 18 59.7 -0.2**
baz=266
CHGN Chignik 42.56 45 P **P** **06 19 01.3 +0.8**
baz=271
LSA Lhasa 42.74 274 P **P** **06 19 02.8 -0.2**
LSA IAmb IAmb 06 19 16.1
comp=Z,135nm,1.7s
LSA Lhasa 42.74 274 P **P** **06 19 04.0 +1.0**
LSA pmax pmax
comp=Z,20nm,1.4s
LSA Lhasa 42.74 274 P **P** **06 19 02.8 -0.2**
LSA pmax pmax
comp=Z,135nm,1.7s
LSA Lhasa 42.74 274 P P 06 19 11.9 +9.0
O16K Kokwok River B 42.77 40 P **P** **06 19 02.8 +0.6**
baz=268
P16K Nushagak River 42.81 41 P **P** **06 19 03.4 +0.9**
baz=268
SANI Sanana 42.92 204 P **P** **06 19 02.3 -1.6**
comp=Z,896nmcomp=Z,114nm,1.0s
MPSI Magaga 43.05 214 P **P** **06 19 03.3 -1.6**
comp=Z,1μmcomp=Z,42nm,1.2s
O17K Koliganek Bris 43.28 40 P **P** **06 19 07.4 +1.0**
baz=268
KRVT Keravat (AS076 43.42 166 LR LR 06 35 40.4
comp=Z,148nm,20.4s,baz=141,slow=34
APSI Ampana 43.44 211 P **P** **06 19 07.4 -0.7**
comp=Z,827nmcomp=Z,95nm,1.3s
Q16K King Salmon 43.49 42 P **P** **06 19 08.0 0.0**
baz=270
P17K Kvichak River 43.61 41 P **P** **06 19 09.4 +0.4**
baz=270
AAI Ambon 43.82 200 P **P** **06 19 11.3 +0.2**
comp=Z,68nm,0.5s
N18K Kilae Creek 43.91 39 P **P** **06 19 10.7 -0.8**
N18K IAmb IAmb 06 19 25.4
comp=Z,29nm,0.8s
N18K Kilae Creek 43.91 39 P **P** **06 19 11.7 +0.2**
baz=268
MK31 Makanchi Array 43.97 301 P **P** **06 19 12.2 +0.1**
MK31 Makanchi Array 43.97 301 *c i* P **P** **06 19 11.9 -0.2**
MKAR Makanchi Array 43.97 301 P **P** **06 19 12.1 0.0**
comp=Z,14nm,0.8s,baz=85,slow=8.8,SNR=70
MKAR LR LR 06 38 04.0
comp=Z,578nm,19.6s,baz=74,slow=37
comp=Z,14nm,0.8s
MKAR Makanchi Array 43.97 301 P **P** **06 19 12.2 +0.1**
SVW2 Sparrevohn 44.07 38 P **P** **06 19 13.4 +0.7**
SVW2 IAmb IAmb 06 19 26.6
comp=Z,26nm,0.8s
CHIR Chirikof Islan 44.15 46 P **P** **06 19 12.8 -0.5**
MAKZ Makanchi 44.18 301 P **P** **06 19 13.8 -0.1**
MAKZ Makanchi 44.18 301 P **P** **06 19 13.7 -0.1**
MAKZ Makanchi 44.18 301 P **P** **06 19 13.9 +0.1**
MAKZ pP **pP** **06 19 22.9 0.0**
P18K Big Mountain, 44.23 41 P **P** **06 19 13.4 -0.6**
baz=270
O18K Koktuh Hills 44.24 40 P **P** **06 19 14.9 +0.9**
O18K IAmb IAmb 06 19 29.8
comp=Z,26nm,0.8s
O18K Koktuh Hills 44.24 40 P **P** **06 19 13.9 -0.2**
baz=270
L19K White Mountain 44.46 37 P **P** **06 19 15.7 -0.1**
L19K White Mountain 44.46 37 P **P** **06 19 15.8 -0.1**
baz=268
N19K Bonanza Creek 44.60 39 P **P** **06 19 16.6 -0.4**
N19K Bonanza Creek 44.60 39 P **P** **06 19 17.0 -0.1**
baz=270
SEM Semipalatinsk 44.66 307 *ce* P **P** **06 19 17.1 -0.7**
SEM pmax pmax
comp=Z,10.0nm,0.9s
SEM Semipalatinsk 44.66 307 ⇑ *e* P **P** **06 19 17.1 -0.7**
comp=Z,9.7nm,0.9s,baz=306
M19K Big River Lodg 44.67 37 P **P** **06 19 16.7 -0.8**
M19K Big River Lodg 44.67 37 P **P** **06 19 17.4 0.0**
baz=269
O19K Port Alsworth 44.69 39 P **P** **06 19 17.4 -0.2**
baz=270
K20K Telida 44.87 35 P **P** **06 19 18.4 -0.6**
K20K IAmb IAmb 06 19 32.8
comp=Z,24nm,0.8s
K20K Telida 44.87 35 P **P** **06 19 19.2 +0.1**
baz=267
J20K Nowinta River 44.88 34 P **P** **06 19 19.7 +0.7**
J20K IAmb IAmb 06 19 33.3
comp=Z,39nm,1.1s
J20K Nowinta River 44.88 34 P **P** **06 19 18.5 -0.5**
baz=266,SNR=9.4
L20K Farewell, AK 44.92 36 P **P** **06 19 19.3 -0.2**
baz=268
Q19K Cape Douglas, 45.06 41 P **P** **06 19 20.5 -0.2**
baz=272
SBUM Sibu 45.06 225 P **P** **06 19 19.4 -1.7**
IMAR Indian Mountai 45.18 31 P **P** **06 19 22.1 +0.7**
M20K Styx River 45.26 37 P **P** **06 19 24.3 +2.0**
M20K Styx River 45.26 37 P **P** **06 19 20.9 -1.4**
baz=270
G21K Allakaket 45.32 31 P **P** **06 19 22.1 -0.5**
baz=265,SNR=10
OHAK Old Harbor 45.34 44 P **P** **06 19 21.7 -1.1**
baz=274
F21K Alatna River 45.40 30 P **P** **06 19 22.6 -0.7**
baz=264
RSO Redoubt South 45.46 39 P **P** **06 19 25.3 +1.3**
H21K Melozitna Rive 45.54 32 P **P** **06 19 24.5 +0.2**
H21K Melozitna Rive 45.54 32 P **P** **06 19 24.4 0.0**
baz=266
KURK Kurchatov 45.63 307 P **P** **06 19 24.7 -0.5**
KURK Kurchatov 45.63 307 *c i* P **P** **06 19 25.0 -0.2**
KURK pmax pmax
comp=Z,75nm,0.8s
KURK Kurchatov 45.63 307 P **P** **06 19 25.2 -0.1**
KURK pP **pP** **06 19 34.6 +0.2**
KURK sP **sP** **06 19 39.5 +1.5**
KDAK Kodiak Island 45.68 43 P **P** **06 19 24.5 -1.0**
baz=274
KDAK Kodiak Island 45.68 43 P **P** **06 19 26.5 +1.0**
KDAK pP **sP** **06 19 36.4 -1.8**

KURBB Kurchatov Arra 45.70 307 P **P** **06 19 25.7 -0.1**
comp=Z,44nm,0.8s,baz=82,slow=8.0,SNR=147
KURBB LR LR 06 39 05.0
comp=Z,879nm,20.4s,baz=55,slow=37
comp=Z,44nm,0.8s
PPLA Purkeypile 45.71 36 P **P** **06 19 27.9 +2.1**
PPLA IAmb IAmb 06 19 47.4
comp=Z,39nm,1.1s
PPLA Purkeypile 45.71 36 P **P** **06 19 25.7 -0.2**
baz=270
N20K Mount Spurr 45.71 38 P **P** **06 19 25.9 +0.1**
baz=271
SPCR Spurr Chakacha 45.71 38 P **P** **06 19 26.1 +0.2**
baz=271
CAST Castle Rocks 45.76 35 P **P** **06 19 26.7 +0.6**
CAST Castle Rocks 45.76 35 P **P** **06 19 26.8 +0.6**
baz=269
SPU Mount Spurr 45.78 38 P **P** **06 19 27.3 +0.9**
I21K Tanana 45.86 32 P **P** **06 19 27.4 +0.6**
I21K Tanana 45.86 32 P **P** **06 19 27.8 +0.9**
baz=268
F22K John River 45.93 29 P **P** **06 19 28.9 +1.5**
baz=265
E22K Anaktuvuk Pass 46.12 28 P **P** **06 19 30.3 +1.3**
baz=265
H22K Ishtalitna Cre 46.14 31 P **P** **06 19 29.9 +0.8**
baz=267
G22K Bettles 46.15 30 P **P** **06 19 29.8 +0.7**
baz=266
BPAW Bear Paw Mtn. 46.26 34 P **P** **06 19 32.1 +2.1**
BPAW Bear Paw Mtn. 46.26 34 P **P** **06 19 30.9 +0.9**
baz=270
KTH Kantishna Hill 46.28 35 P **P** **06 19 29.9 -0.5**
KTH IAmb IAmb 06 19 51.0
comp=Z,38nm,0.9s
TARA Tarawa 46.35 135 P **P** **06 19 30.6 -0.6**
MLY Manley 46.38 33 P **P** **06 19 31.7 +0.7**
MLY IAmb IAmb 06 19 45.3
comp=Z,31nm,1.0s
MLY Manley 46.38 33 P **P** **06 19 31.9 +0.9**
baz=269,SNR=11
BRSE Bradley Lake S 46.50 40 P **P** **06 19 32.8 +0.8**
baz=274
TAPN Taplejung 46.50 273 *e*P **P** **06 19 33.6 +0.8**
comp=Z,95nm,0.9s
D23K Nanushuk River 46.61 27 P **P** **06 19 34.1 +1.4**
baz=265
M22K Willow 46.69 37 P **P** **06 19 34.1 +0.7**
baz=272
C23K Itkillik River 46.72 26 P **P** **06 19 34.6 +1.1**
baz=264,SNR=8.0
G23K Bananza Creek 46.72 30 P **P** **06 19 34.4 +0.7**
baz=268
SHLS Shalkode 46.80 297 *e*P **P** **06 19 32.0 -2.7**
SHLS Shalkode 46.80 297 *e*P **P** **06 19 32.0 -2.7**
baz=297
H23K Yukon River 46.89 32 P **P** **06 19 36.6 +1.6**
H23K IAmb IAmb 06 19 49.7
comp=Z,39nm,1.0s
H23K Yukon River 46.89 32 P **P** **06 19 35.4 +0.4**
baz=269,SNR=11
RC01 Rabbit Creek A 46.91 38 P **P** **06 19 35.5 +0.3**
RC01 IAmb IAmb 06 19 46.0
comp=Z,32nm,1.0s
RC01 Rabbit Creek A 46.91 38 P **P** **06 19 35.3 +0.2**
baz=274
BWN Browne 46.92 34 P **P** **06 19 37.1 +1.8**
SPSI Kidrap Palu 46.98 211 P **P** **06 19 36.8 +0.7**
comp=Z,6μmcomp=Z,30nm,1.3s
ODAN Odare 46.98 273 *e*P **P** **06 19 35.8 -0.7**
comp=Z,26nm,1.1s
TOLK Toolik Lake Re 46.99 28 P **P** **06 19 36.4 +0.6**
TOLK IAmb IAmb 06 19 51.9
comp=Z,21nm,0.8s
TOLK Toolik Lake Re 46.99 28 P **P** **06 19 35.9 +0.2**
baz=266
TDK Taldyqorghan 47.03 300 *e*P **P** **06 19 36.6 +0.3**
TDK *e*S **S** **06 26 26.1 +0.2**
TDK Taldyqorghan 47.03 300 *e*P **P** **06 19 36.6 +0.3**
baz=300
TDK *e*S **S** **06 26 26.2 +0.2**
baz=300
NEA2 Nenana 47.09 33 P **P** **06 19 36.8 +0.3**
NEA2 IAmb IAmb 06 19 50.7
comp=Z,62nm,1.4s
NEA2 Nenana 47.09 33 P **P** **06 19 37.1 +0.5**
baz=271,SNR=11
UZB Uzynbulak 47.11 297 *e*P **P** **06 19 36.6 -0.5**
UZB Uzynbulak 47.11 297 *e*P **P** **06 19 36.7 -0.5**
baz=297
SEW Seward 47.12 39 P **P** **06 19 36.7 0.0**
baz=275
MCK McKinley 47.17 34 P **P** **06 19 37.6 +0.4**
MCK IAmb IAmb 06 19 50.6
comp=Z,24nm,0.9s
MCK McKinley 47.17 34 P **P** **06 19 37.6 +0.4**
MCK pmax pmax
comp=Z,24nm,0.9s
MCK McKinley 47.17 34 P **P** **06 19 37.1 -0.1**
baz=272
PMR Palmer 47.17 37 P **P** **06 19 37.7 +0.5**
PMR IAmb IAmb 06 20 10.8
comp=Z,25nm,1.0s
PMR Palmer 47.17 37 P **P** **06 19 37.7 +0.5**
PMR pmax pmax
comp=Z,25nm,1.0s
PMR Palmer 47.17 37 P **P** **06 19 37.6 +0.5**
baz=274
RND Reindeer 47.22 35 P **P** **06 19 38.5 +0.9**
RND IAmb IAmb 06 20 16.1
comp=Z,24nm,1.0s
RND Reindeer 47.22 35 P **P** **06 19 38.5 +0.9**
RND pmax pmax
comp=Z,24nm,1.0s
KPKS Kokpek 47.26 297 *c i* P **P** **06 19 38.1 -0.1**
KPKS Kokpek 47.26 297 ⇑ *i* P **P** **06 19 38.2 -0.1**
baz=297
GHO Glory Hole Cre 47.26 37 P **P** **06 19 38.4 +0.4**
D24K Happy Valley 47.29 27 P **P** **06 19 38.1 +0.1**
baz=267
BBSI Bau Bau 47.30 207 P **P** **06 19 38.0 -0.6**
comp=Z,15nm,0.9s
E24K Your Creek 47.37 29 P **P** **06 19 38.7 0.0**
baz=268
C24K Franklin Bluff 47.37 26 P **P** **06 19 38.4 -0.2**
baz=266
WAT1 Susitna Watana 47.38 36 P **P** **06 19 38.9 +0.1**
baz=273
MDM Murphy Dome 47.45 33 P **P** **06 19 41.1 +1.8**
MDM IAmb IAmb 06 19 54.0
comp=Z,53nm,1.1s
KNK Knik Glacier 47.51 38 P **P** **06 19 40.7 +0.8**
KNK IAmb IAmb 06 20 01.7
comp=Z,30nm,1.0s
WRH Wood River Hil 47.52 33 P **P** **06 19 41.0 +1.2**
WRH IAmb IAmb 06 21 22.1
comp=Z,36nm,1.0s
SML Sawmill 47.54 37 P **P** **06 19 41.3 +1.2**
SML IAmb IAmb 06 20 04.1
comp=Z,45nm,1.0s
SML Sawmill 47.54 37 P **P** **06 19 40.2 +0.1**
baz=274,SNR=6.7
JIRN Jiri 47.55 274 *e*P **P** **06 19 41.6 +0.6**
RAMN Ramite 47.56 273 *e*P **P** **06 19 40.7 -0.3**
comp=Z,326nm,0.9s
SATY Saty 47.57 297 *e*P **P** **06 19 40.7 0.0**
SATY Saty 47.57 297 *e*P **P** **06 19 40.7 0.0**
baz=297
F24K Squaw Lake 47.58 29 P **P** **06 19 40.6 +0.2**
baz=269
H24K Noodor Dome 47.58 32 P **P** **06 19 41.4 +1.0**
H24K IAmb IAmb 06 21 23.2
comp=Z,27nm,1.0s
H24K Noodor Dome 47.58 32 P **P** **06 19 40.9 +0.6**
baz=271,SNR=11
TCOL CIGO, UAF Yank 47.60 33 P **P** **06 19 41.8 +1.4**
TCOL IAmb IAmb 06 20 27.5
comp=Z,24nm,0.8s
COLA College 47.61 33 ⇓ *e*P **P** **06 19 42.2 +1.7**
COLA pmax pmax
comp=Z,22nm,0.9s
COLA College 47.61 33 P **P** **06 19 42.3 +1.8**
COLA pP **sP** **06 19 51.9 -1.3**
CCB Clear Creek Bu 47.64 33 P **P** **06 19 41.9 +1.2**
CCB IAmb IAmb 06 21 22.8
comp=Z,46nm,1.8s

GUN **Gumba** 47.68 275 *e*P P 06 19 42.8 +0.8
G24K **Hadweenzic Riv** 47.74 30 P P 06 19 42.1 +0.6
baz=270
WAT6 **Susitna Watana** 47.77 36 P P 06 19 41.6 -0.4
baz=274
POKR **Poker Plat Res** 47.78 33 P P 06 19 44.1 +2.3
POKR **Poker Plat Res** 47.78 33 P P 06 19 43.2 +1.3
baz=272
M23K **Glacier View** 47.83 37 P P 06 19 42.4 +0.1
baz=274
DHY **Denali Highway** 47.90 35 P P 06 19 43.3 +0.3
DHY IAmb IAmb 06 20 24.1
comp=Z,24nm,1.0s
DHY **Denali Highway** 47.90 35 P P 06 19 42.2 -0.8
baz=274
KAPI **Kappang** 47.94 211 LR LR 06 39 40.8
comp=Z,158nm,20.4s,baz=48,slow=36
KAPI **Kappang** 47.94 211 P P 06 19 43.1 -0.5
KAPI **Kappang** 47.94 211 *d* iP P 06 19 44.4 +0.8
KAPI pmax pmax
comp=Z,74nm,1.3s
KAPI **Kappang** 47.94 211 P P 06 19 44.4 +0.8
SCM **Sheep Creek Mo** 48.01 37 P P 06 19 44.7 +0.9
SCM IAmb IAmb 06 20 01.8
comp=Z,37nm,0.8s
SCM **Sheep Creek Mo** 48.01 37 P P 06 19 44.7 +0.9
SCM pmax pmax
comp=Z,37nm,0.8s
SCM **Sheep Creek Mo** 48.01 37 P P 06 19 43.6 -0.2
baz=275
HDA **Harding Lake** 48.02 33 P P 06 19 43.9 +0.2
HDA IAmb IAmb 06 19 56.7
comp=Z,26nm,0.8s
HDA **Harding Lake** 48.02 33 P P 06 19 43.9 +0.2
baz=273,SNR=7.8
IL31 **48.02 33** P P 06 19 42.9 -0.8
IL31 IAmb IAmb 06 19 56.9
comp=Z,32nm,0.9s
ILAR **Eielson Array** 48.02 33 P P 06 19 44.9 +1.1
comp=Z,5.0nm,0.8s,baz=268,slow=6.3,SNR=47
ILAR LR LR 06 41 03.2
comp=Z,155nm,20.3s,baz=270,slow=37
comp=Z,5.0nm,0.8s
ILAR **Eielson Array** 48.02 33 P P 06 19 44.2 +0.4
ILAR **Eielson Array** 48.02 33 P P 06 19 44.2 +0.4
BKSI **Bulukumba** 48.07 210 P P 06 19 44.4 -0.2
comp=Z,28nm,0.7s
D25K **Kavik River** 48.17 27 P P 06 19 45.7 +0.8
baz=269,SNR=5.1
KKN **Kakani** 48.20 275 *e*P P 06 19 46.0 +0.1
comp=Z,45nm,0.8s
PKI **Pulchoki** 48.20 275 *e*P P 06 19 45.7 -0.3
PKIN **Phulchoki** 48.21 275 *e*P P 06 19 45.9 -0.1
comp=Z,113nm,0.7s
H25K **Birch Creek** 48.41 31 P P 06 19 47.6 +0.9
baz=272
DMN **Daman** 48.42 275 *e*P P 06 19 47.7 0.0
F25K **Christian River** 48.44 29 P P 06 19 47.7 +0.7
baz=271
E25K **Arctic Village** 48.46 28 P P 06 19 47.0 -0.1
baz=271
MDOK **Medeo** 48.49 298 *e*P P 06 19 47.5 -0.3
MDOK **Medeo** 48.49 298 *e*P P 06 19 47.5 -0.3
baz=298
M24K **Tolsona, Glenn** 48.53 37 P P 06 19 48.2 +0.4
M24K IAmb IAmb 06 20 08.7
comp=Z,40nm,0.8s
M24K **Tolsona, Glenn** 48.53 37 P P 06 19 49.0 +1.2
baz=276
PRP **Porcupine Dome** 48.56 32 P P 06 19 48.7 +0.6
PRP IAmb IAmb 06 20 02.1
comp=Z,24nm,0.8s
PRP **Porcupine Dome** 48.56 32 P P 06 19 48.6 +0.6
baz=273,SNR=7.6
AAA **Alma-Ata** 48.57 298 *e*P P 06 19 48.5 +0.2
AAA **Alma-Ata** 48.57 298 *e*P P 06 19 48.6 +0.2
baz=298
GKN **Gorkha** 48.61 276 *e*P P 06 19 48.9 0.0
comp=Z,313nm,0.9s
J25K **Salcha River,** 48.69 33 P P 06 19 49.8 +0.8
J25K **Salcha River,** 48.69 33 P P 06 19 49.3 +0.4
baz=274
KLU **Klutina** 48.71 37 P P 06 19 50.1 +0.9
KLU IAmb IAmb 06 20 12.5
comp=Z,29nm,0.9s
KLU **Klutina** 48.71 37 P P 06 19 49.6 +0.4
baz=276
BBKI **Banjar Baru** 48.73 218 P P 06 19 49.4 -0.3
comp=Z,44nm,0.8s
KUU **Kurty** 48.76 299 *e*P P 06 19 49.0 -0.7
KUU pmax pmax
comp=Z,15nm,0.9s
KUU **Kurty** 48.76 299 *e*P P 06 19 49.0 -0.7
comp=Z,15nm,0.9s,baz=299
PAX **Paxson** 48.77 35 P P 06 19 49.6 0.0
PAX IAmb IAmb 06 21 27.8
comp=Z,20nm,0.9s
PAX **Paxson** 48.77 35 P P 06 19 49.6 0.0
PAX pmax pmax
comp=Z,21nm,0.9s
PAX **Paxson** 48.77 35 P P 06 19 49.7 0.0
baz=275
DIV **Divide** 48.83 38 P P 06 19 50.4 +0.4
DIV IAmb IAmb 06 20 04.0
comp=Z,38nm,1.0s
BMAR **Burnt Mountain** 48.85 29 P P 06 19 50.9 +0.7
EYAK **Cordova Ski Ar** 48.91 39 P P 06 19 51.9 +1.3
baz=277
RIDG **Independent Ri** 48.98 34 P P 06 19 51.6 +0.4
RIDG IAmb IAmb 06 20 26.6
comp=Z,39nm,1.4s
RIDG **Independent Ri** 48.98 34 P P 06 19 52.2 +1.0
baz=275
F26K **Sheenjek River** 49.01 29 P P 06 19 52.6 +1.2
baz=272,SNR=14
C27K **Jago River** 49.11 26 P P 06 19 52.7 +0.6
baz=271
DANN **Dangsing** 49.13 277 *e*P P 06 19 53.4 +0.3
comp=Z,806nm,0.7s
G26K **Porcupine Rive** 49.19 30 P P 06 19 53.4 +0.7
baz=273,SNR=5.1
N25K **Chitina, Valde** 49.33 37 P P 06 19 54.3 +0.3
N25K **Chitina, Valde** 49.33 37 P P 06 19 54.5 +0.6
baz=277
DOT **Dot Lake** 49.34 34 P P 06 19 55.0 +1.1
SCRK **Sand Creek** 49.34 34 P P 06 19 55.2 +1.1
SCRK IAmb IAmb 06 20 07.3
comp=Z,38nm,1.2s
SCRK **Sand Creek** 49.34 34 P P 06 19 54.2 +0.2
baz=276,SNR=19
BMRM **Bremner River** 49.41 38 P P 06 19 55.7 +1.2
BMRM IAmb IAmb 06 20 11.2
comp=Z,51nm,1.2s
BMRM **Bremner River** 49.41 38 P P 06 19 55.0 +0.5
baz=278
RAGM **Ragged Mountai** 49.46 39 P P 06 19 54.2 -0.7
RAGM IAmb IAmb 06 21 39.5
comp=Z,38nm,1.2s
J26L **Joseph Creek** 49.47 33 P P 06 19 55.1 +0.1
J26L **Joseph Creek** 49.47 33 P P 06 19 55.4 +0.5
baz=276
BOOM **Boomskoye usch** 49.47 297 P P 06 19 56.0 +0.5
BOOM **Boomskoye usch** 49.47 297 P P 06 19 56.0 +0.5
BRZS **Berezniki** 49.51 307 *c* iP P 06 19 55.0 -0.3
BRZS *e*S S 06 27 00.1 -0.7
BRZS **Berezniki** 49.51 307⇑ *i*P P 06 19 55.0 -0.3
baz=307
BRZS *e*S S 06 27 00.2 -0.7
baz=307
I26K **Coal Creek Min** 49.57 32 P P 06 19 56.1 +0.5
baz=275
MENT **Mentasta** 49.57 35 P P 06 19 57.2 +1.5
MENT IAmb IAmb 06 20 26.8
comp=Z,22nm,0.8s
TKM2 **Tokmak 2** 49.58 298 *i* P P 06 19 56.2 0.0
TKM2 pmax pmax
comp=Z,63nm,0.7s
KAIM **Kayak Island** 49.65 39 P P 06 19 56.1 -0.1
baz=279
GLB **Gilahina Butte** 49.73 37 P P 06 19 57.0 +0.1
L26K **Log Cabin Wild** 49.73 35 P P 06 19 57.9 +1.0
L26K IAmb IAmb 06 20 11.2
comp=Z,20nm,0.8s
L26K **Log Cabin Wild** 49.73 35 P P 06 19 56.4 -0.5
baz=277,SNR=11
BERG **Berg Lake** 49.93 39 P P 06 19 59.2 +0.7
BERG IAmb IAmb 06 20 12.8
comp=Z,26nm,0.8s
E27K **Coleen River** 49.94 28 P P 06 19 58.3 -0.1
baz=274
M26K **Nabesna, AK** 49.97 36 P P 06 19 59.3 +0.5
M26K IAmb IAmb 06 20 21.7
comp=Z,38nm,1.1s
M26K **Nabesna, AK** 49.97 36 P P 06 19 59.2 +0.4
baz=278,SNR=9.9
BTLS **Baital** 49.98 301 *c* iP P 06 19 58.3 -0.7
BTLS **Baital** 49.98 301⇑ *i*P P 06 19 58.4 -0.7
baz=301
G27K **Doyon Strip** 50.04 30 P P 06 19 59.4 +0.2
baz=275
SGDS **Sogindy** 50.08 299 *e*P P 06 19 59.8 -0.1
SGDS **Sogindy** 50.08 299 *e*P P 06 19 59.8 -0.1
baz=299
MCARA **McCarthy VSAT** 50.11 37 P P 06 19 59.7 -0.1
MCARA IAmb IAmb 06 20 35.0
comp=Z,23nm,0.9s
MCARA **McCarthy VSAT** 50.11 37 P P 06 20 00.3 +0.5
baz=279
H27K **Steamboat Moun** 50.15 31 P P 06 20 00.7 +0.6
baz=276
BVA0 **Borovoye Array** 50.16 312 *i* P P 06 20 00.3 0.0
BVAR **Borovoye Array** 50.16 312 LR LR 06 42 08.5
comp=Z,920nm,18.6s,baz=76,slow=37
K27K **Chicken** 50.17 34 P P 06 20 00.1 -0.1
K27K IAmb IAmb 06 20 14.4
comp=Z,19nm,0.8s
K27K **Chicken** 50.17 34 P P 06 20 00.7 +0.6
baz=277
I27K **Kandik River** 50.18 32 P P 06 20 00.8 +0.5
baz=276
OTUK **Ortayu** 50.18 305 P P 06 20 00.2 -0.3
BRVK **Borovoye** 50.22 312 P P 06 20 00.2 -0.5
BRVK IAmb IAmb 06 20 11.2
comp=Z,46nm,0.9s
BRVK **Borovoye** 50.22 312 *c* iP P 06 20 00.9 +0.2
BRVK pmax pmax
comp=Z,18nm,1.0s
BRVK **Borovoye** 50.22 312 P P 06 20 00.8 +0.1
BRVK pP pP 06 20 10.2 +0.3
TGL **Tana Glacier** 50.30 38 P P 06 20 02.9 +1.5
TGL IAmb IAmb 06 20 37.2
comp=Z,23nm,0.9s
MMRI **Maumere** 50.34 206 P P 06 20 00.5 -1.4
WAX **Waxell Ridge** 50.34 38 P P 06 20 02.1 +0.5
WAX IAmb IAmb 06 21 34.1
comp=Z,20nm,0.8s
HNR **Honiara** 50.34 157 LR LR 06 39 36.8
comp=Z,580nm,21.2s,baz=338,slow=34
IPM **Ipoh** 50.39 238 P P 06 20 00.1 -2.4
IPM IAmb IAmb 06 20 14.6
comp=Z,44nm,1.2s
L27K **Beaver Creek,** 50.41 35 P P 06 20 02.1 0.0
L27K IAmb IAmb 06 20 28.8
comp=Z,24nm,0.9s
L27K **Beaver Creek,** 50.41 35 P P 06 20 03.0 +0.9
baz=278,SNR=13
BCAR **Beaver Creek A** 50.43 35 P P 06 20 03.8 +1.5
AAK **Ala-Arcba** 50.44 298 P P 06 20 01.9 -0.8
AAK IAmb IAmb 06 20 13.1
comp=Z,28nm,1.0s
AAK **Ala-Arcba** 50.44 298⇓ *e*P P 06 20 02.6 -0.1
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK **Ala-Arcba** 50.44 298 *i* P P 06 20 04.1 +1.4
SNR=7.2
AAK **Ala-Arcba** 50.44 298 P P 06 20 03.4 +0.6
AAK pP pP 06 20 12.1 +0.2
KSH **Kashi** 50.46 293 P P 06 20 07.4 +4.5
KSH pP sP 06 20 15.5 -0.2
KSH pmax pmax
comp=Z,7.0nm,0.8s
KSH pmax pmax
comp=Z,250nm,5.0s
KSH LR LR
comp=Z,410nm,16.2s
KSH LR LR
comp=Z,910nm,17.1s
KSH LR LR
comp=Z,840nm,15.9s
EGAK **Eagle** 50.47 33 P P 06 20 03.4 +1.0
EGAK IAmb IAmb 06 20 21.7
comp=Z,41nm,1.4s
EGAK **Eagle** 50.47 33 P P 06 20 03.4 +1.0
baz=278
M27K **Edge Creek, AK** 50.50 36 P P 06 20 04.2 +1.4
M27K IAmb IAmb 06 20 25.7
comp=Z,27nm,0.9s
M27K **Edge Creek, AK** 50.50 36 P P 06 20 03.3 +0.5
baz=279
EDFI **Ende, Flores** 50.64 207 P P 06 20 02.7 -1.6
comp=Z,303nmcomp=Z,31nm,1.2s
MESA **MESA** 50.83 39 P P 06 20 05.4 -0.1
baz=281
BVCY **Beaver Creek** 50.95 36 P P 06 20 06.9 +0.7
baz=280
CTG **Chitna Glacier** 50.98 38 P P 06 20 07.1 +0.6
baz=280
CTGM **Chitina Glacie** 50.99 38 P P 06 20 07.0 +0.4
CTGM IAmb IAmb 06 20 30.1
comp=Z,22nm,1.0s
YUK3 **Moose Creek** 51.25 36 P P 06 20 09.2 +0.6
baz=281
DAWY **Dawson** 51.33 33 P P 06 20 08.6 -0.4
DAWY **Dawson** 51.33 33 P P 06 20 10.2 +1.1
baz=280
BATI **Baumata** 51.34 204 LR LR 06 41 58.5
comp=Z,160nm,19.9s,baz=26,slow=36
O28M **Mount Upton** 51.57 38 P P 06 20 11.7 +0.6
baz=282
I29M **Ogilvie Camp,** 51.58 32 P P 06 20 11.8 +1.0
I29M IAmb IAmb 06 20 25.5
comp=Z,44nm,1.1s
I29M **Ogilvie Camp,** 51.58 32 P P 06 20 11.7 +1.0
baz=280,SNR=7.7
MTN **Manton Dam** 51.99 194 P P 06 20 14.5 +0.2
M29M **Somme Creek** 52.05 35 P P 06 20 15.3 +0.9
baz=282
EPYK **Eagle Plains** 52.05 30 IAmb IAmb 06 20 29.2
comp=Z,59nm,1.1s
EPYK **Eagle Plains** 52.05 30 P P 06 20 15.2 +0.9
baz=280,SNR=7.5
COEN **Coen** 52.05 179 P P 06 20 15.3 +0.5
K29M **Barlow Dome** 52.19 34 P P 06 20 16.5 +1.0
baz=281
YUK4 **Talbot Arm** 52.19 37 P P 06 20 17.4 +1.8
baz=282
PNL **Peninsula** 52.19 39 P P 06 20 16.7 +1.2
baz=283
PLAI **Plampang** 52.20 211 P P 06 20 14.4 -1.5
comp=Z,50nm,1.0s
YUK6 **Outpost Mounta** 52.41 37 P P 06 20 17.8 +0.5
baz=283
O29M **Mount Kennedy** 52.45 38 P P 06 20 18.5 +1.0
baz=283
TWSI **Taliwang, Sumb** 52.48 212 P P 06 20 18.4 +0.4
comp=Z,30nm,1.0s
DZA **Taraz** 52.54 299 *e*P P 06 20 18.3 0.0
DZA **Taraz** 52.54 299 *e*P P 06 20 18.4 0.0
baz=299
M30M **Minto, Yukon** 52.77 35 P P 06 20 20.4 +0.6
baz=283,SNR=6.9
HYT **Haines Junctio** 52.85 37 P P 06 20 20.6 +0.2
HYT IAmb IAmb 06 20 48.8
comp=Z,46nm,0.9s
HYT **Haines Junctio** 52.85 37 P P 06 20 21.2 +0.8
baz=284,SNR=12
INK **Inuvik** 52.91 28 P P 06 20 22.2 +1.7
comp=Z,3.7nm,0.5s,baz=293,slow=7.8,SNR=9.3
INK LR LR 06 44 31.8
comp=Z,292nm,21.1s,baz=296,slow=38
comp=Z,3.7nm,0.5s
INK **Inuvik** 52.91 28 P P 06 20 21.1 +0.6
INK **Inuvik** 52.91 28 P P 06 20 21.1 +0.6
INK pmax pmax
comp=Z,15nm,0.8s
INK **Inuvik** 52.91 28 P P 06 20 21.6 +1.1
baz=281
MAYO **Mayo, Yukon** 52.95 34 P P 06 20 21.7 +0.7
MAYO IAmb IAmb 06 20 37.9
comp=Z,34nm,0.8s
MAYO **Mayo, Yukon** 52.95 34 P P 06 20 22.1 +1.1
baz=283
P29M **Windy Craggy** 53.02 39 IAmb IAmb 06 20 48.9
comp=Z,38nm,0.9s
P29M **Windy Craggy** 53.02 39 P P 06 20 23.3 +1.7
baz=284,SNR=7.8
KK31 **Karatay Array** 53.02 299 P P 06 20 21.8 0.0
KK31 IAmb IAmb 06 20 32.1
comp=Z,53nm,0.8s
KK31 **Karatay Array** 53.02 299 P P 06 20 21.8 0.0
KK31 pmax pmax
comp=Z,53nm,0.9s
KKAR **Karatay Array** 53.02 299 P P 06 20 21.7 -0.2
KKAR **Karatay Array** 53.02 299 P P 06 20 21.7 -0.2
PSI **Prapat** 53.03 239 LR LR 06 43 11.5
comp=Z,182nm,21.1s,baz=34,slow=36
P30M **Million Dollar** 53.28 38 P P 06 20 25.3 +1.8
baz=285
BKNI **Bangkinang** 53.48 235 P P 06 20 24.8 -0.7
comp=Z,157nm,1.0s
N31M **Braeburn, Yuko** 53.50 36 IAmb IAmb 06 20 49.5
comp=Z,26nm,0.9s
N31M **Braeburn, Yuko** 53.50 36 P P 06 20 26.7 +1.7
baz=284,SNR=5.8
IUG **Iuzhnay** 53.70 299 *e*P P 06 20 27.2 +0.2
IUG **Iuzhnay** 53.70 299 *e*P P 06 20 27.2 +0.2
baz=298
PLBC **Pleasant Camp** 53.74 39 P P 06 20 28.6 +1.8
baz=286
M31M **Drury Creek, Y** 53.95 35 P P 06 20 28.3 0.0
M31M **Drury Creek, Y** 53.95 35 P P 06 20 29.6 +1.2
baz=285,SNR=5.3
WHY **Whitehorse** 54.13 37 P P 06 20 30.1 +0.3
WHY **Whitehorse** 54.13 37 P P 06 20 30.9 +1.1
baz=286
PWJI **Pagerwojo** 54.16 218 P P 06 20 29.8 -0.5
comp=Z,2µmcomp=Z,86nm,0.7s
SKAG **Skagway** 54.25 39 P P 06 20 31.3 +0.8
baz=286
FARO **Faro, Yukon** 54.41 35 P P 06 20 31.9 +0.2
baz=286,SNR=6.3
NIL **Nilore** 54.82 288 P P 06 20 34.9 -0.2
NIL **Nilore** 54.82 288 P P 06 20 34.9 -0.2
NIL pmax pmax
comp=Z,172nm,0.7s
NIL **Nilore** 54.82 288 P P 06 20 36.1 +1.0
NIL pP pP 06 20 44.9 +0.5
P32M **Atlin** 55.00 38 P P 06 20 36.5 +0.5
baz=287
GSI **Gunungsitoli** 55.04 239 P P 06 20 34.5 -2.4
KLI **Kotabumi** 55.22 227 P P 06 20 38.4 +0.3
comp=Z,196nm,0.8s
KNRA **Kununurra** 55.22 196 P P 06 20 37.8 -0.2
MMPY **Sheldon Lake,** 55.23 34 P P 06 20 38.2 +0.4
baz=287
P33M **Teslin, Yukon** 55.24 37 P P 06 20 37.5 -0.4
P33M IAmb IAmb 06 21 02.6
comp=Z,31nm,1.4s
P33M **Teslin, Yukon** 55.24 37 P P 06 20 38.6 +0.8
baz=288,SNR=9.5
LEM **Lembang** 55.29 223 LR LR 06 45 22.9
comp=Z,152nm,19.5s,baz=269,slow=37
CHGR **Chuyangaron** 55.68 295 P P 06 20 41.2 -0.1
CHGR **Chuyangaron** 55.68 295 P P 06 20 41.2 -0.1
CHGR pmax pmax
comp=Z,175nm,0.7s
ARU **Arti** 55.80 318 P P 06 20 42.2 +0.5
comp=Z,9.9nm,0.5s,baz=88,slow=4.3,SNR=27
ARU LR LR 06 46 56.8
comp=Z,2µm,18.2s,baz=68,slow=39
comp=Z,9.9nm,0.5s
ARU **Arti** 55.80 318 P P 06 20 40.8 -1.0
ARU **Arti** 55.80 318 *d* iP P 06 20 41.7 0.0
ARU 06 21 39.0
ARU S S 06 28 29.0 +2.6
ARU SS SS 06 32 07.7 -3.9
ARU pmax pmax
comp=Z,51nm,1.2s
ARU MLR MLR
comp=Z,2µm,17.0s
ARU **Arti** 55.80 318 P P 06 20 41.9 +0.2
ARU pP pP 06 20 50.9 -0.1
ARU sP sP 06 20 57.1 +2.5
C36M **Paulatuk** 55.95 25 P P 06 20 43.9 +1.3
baz=289
R33M **Jennings River** 56.39 38 P P 06 20 47.0 +0.9
baz=290
WRAK **Wrangell Islan** 56.72 41 P P 06 20 48.7 +0.4
baz=290
TGTN **Hyland Airport** 56.92 35 P P 06 20 49.3 -0.5
baz=290
DLBC **Dease Lake** 57.18 39 P P 06 20 52.9 +1.2
DLBC **Dease Lake** 57.18 39 P P 06 20 51.1 -0.5
baz=291,SNR=9.7
KBL **Kabul** 57.55 291 P P 06 20 54.2 -0.6
KBL IAmb IAmb 06 21 05.3
comp=Z,49nm,0.9s
KBL **Kabul** 57.55 291 P P 06 20 54.2 -0.6
KBL pmax pmax
comp=Z,49nm,1.0s
AB31 **Akbulak array** 57.58 310 *i* P P 06 20 54.2 -0.3
ABKAR **Akbulak array** 57.58 310 P P 06 20 54.2 -0.3
T35M **Bob Quinn** 57.60 40 P P 06 20 54.7 +0.1
baz=292,SNR=5.8
CTA **Charters Tower** 58.27 176 LR LR 06 47 07.8
comp=Z,110nm,20.4s,baz=344,slow=37
CTAO **Charters Tower** 58.27 176 P P 06 20 59.0 -0.5
CTAO IAmb IAmb 06 21 00.8
comp=Z,18nm,0.9s
CTAO **Charters Tower** 58.27 176 P P 06 20 59.0 -0.5
CTAO pmax pmax
comp=Z,18nm,1.0s
CTAO **Charters Tower** 58.27 176 P P 06 20 59.7 +0.2
CTAO pP sP 06 21 11.1 -1.3
AKTO **Aktyubinsk** 58.27 312 P P 06 20 58.9 -0.5
comp=Z,11nm,0.9s,baz=54,slow=5.7,SNR=18
AKTO LR LR 06 47 06.8
comp=Z,425nm,19.3s,baz=57,slow=37
comp=Z,11nm,0.9s
FITZ **Fitzroy Crossi** 58.28 199 P P 06 20 57.9 -1.8
WB0 **Warramunga Arr** 58.29 189 P P 06 20 58.2 -1.5
WRAB **Tennant Creek** 58.46 189 P P 06 21 00.1 -0.8
WRAB **Tennant Creek** 58.46 189 *d* iP P 06 21 00.7 -0.2
WRAB pmax pmax
comp=Z,115nm,0.9s
WRAB **Tennant Creek** 58.46 189 P P 06 21 00.7 -0.2
WRAB pP pP 06 21 10.4 +0.2
WRAB sP sP 06 21 15.6 +1.9
WR0 **Warramunga Arr** 58.46 188 P P 06 21 00.1 -0.8
WB2 **Warramunga Arr** 58.47 189 P P 06 21 00.5 -0.5
WRA **Warramunga Arr** 58.47 189 P P 06 21 00.5 -0.4
comp=Z,86nm,0.9s,baz=6.7,slow=7.3,SNR=197
WRA LR LR 06 45 44.7
comp=Z,185nm,21.7s,baz=38,slow=36
WRA PKP2ab 06 51 01.5
comp=Z,1.0nm,0.8s,baz=208,slow=1.4,SNR=5.4
WRA **Warramunga Arr** 58.47 189 P P 06 21 00.6 -0.4
ALE **Alert** 58.74 4 P P 06 21 03.6 +1.4
ALE pP sP 06 21 12.9 -2.2
ALE sP pP 06 21 17.6 +6.1
HYBB **Hyderabad (bro** 58.89 268 *e*P P 06 21 04.4 +0.2
HYBB *e*sP sP 06 21 18.5 +1.5
HYBB *e*PP PP 06 23 14.4 0.0
HYBB *e*S S 06 29 06.9 -1.3
SPITS **Spitsbergen Ar** 59.34 349 LR LR 06 48 36.5
comp=Z,364nm,19.8s,baz=3.0,slow=38
KBS **Kingsbay** 59.46 350 *e*P P 06 21 08.4 +1.2
KIRV **Kirov** 59.58 323 P P 06 21 08.7 +0.4
comp=Z,18nm,0.5s,baz=64,slow=5.1,SNR=12
KIRV LR LR 06 50 58.2
comp=Z,351nm,19.7s,baz=61,slow=40
comp=Z,18nm,0.5s
PRGR **Permogore** 60.00 327⇓ *i*P P 06 21 12.0 +0.9
PRGR *e**PP pP 06 21 18.8 -1.7
PRGR *e* 06 23 19.2
HSPB **Hornsund (broa** 60.28 348 *e*P P 06 21 14.0 +1.2
HSPB *e*L L 06 48 54.9
comp=Z,422nm,21.3s
BBB **Bella Bella** 60.66 45 LR LR 06 45 46.3
comp=Z,57nm,21.1s,baz=298,slow=34
RES **Resolute Bay** 61.15 15 LR LR 06 52 25.8
comp=Z,127nm,18.1s,baz=357,slow=41
LVZ **Lovozero** 61.16 336 *c* eP P 06 21 16.3 -2.7
LVZ pmax pmax
comp=Z,41nm,1.2s
LVZ MLR MLR
comp=Z,797nm,17.0s

LVZ **Lovozero** 61.16 336 P **P** 06 21 19.6 +0.6
LVZ pP **pP** 06 21 28.9 +0.5
BJO1 Bjornoya 61.34 345 *e* P 06 21 29.2 +9.2
APA Apatity 61.74 336⇑ *i*P P 06 21 30.6 +7.7
APA *i* S S 06 29 56.0 +13
APA pmax pmax
comp=Z,32nm,0.8s
APA MLR MLR
comp=Z,800nm,17.0s
KOUNC **Koumac, New Ca** 62.16 157 P **P** 06 21 27.4 +1.2
AS31 Alice Springs 62.20 189 P **P** 06 21 26.3 -0.1
AS31 IAmb IAmb 06 21 27.9
comp=Z,14nm,0.8s
ASAR Alice Springs 62.20 189 P **P** 06 21 26.6 +0.2
comp=Z,48nm,0.8s,baz=10,slow=6.4,SNR=442
ASAR LR LR 06 48 33.4
comp=Z,185nm,21.1s,baz=353,slow=36
ASAR PKPPKP **P'P'df** 06 50 32.1 +5.3
comp=Z,0.5nm,0.8s,baz=183,slow=5.0,SNR=5.2
ASAR PKP2bc 06 50 42.4
comp=Z,1.4nm,1.0s,baz=193,slow=2.8,SNR=8.0
ASAR PKP2ab 06 50 50.0
comp=Z,1.8nm,0.8s,baz=181,slow=1.9,SNR=12
comp=Z,48nm,0.8s
YKA Yellowknife Ar 62.33 31 P **P** 06 21 27.7 +0.8
comp=Z,3.5nm,0.7s,baz=303,slow=6.8,SNR=18
YKA LR LR 06 52 19.2
comp=Z,116nm,18.9s,baz=318,slow=40
comp=Z,3.5nm,0.7s
YKA Yellowknife Ar 62.33 31 P **P** 06 21 26.7 -0.2
YKA Yellowknife Ar 62.33 31 P **P** 06 21 26.7 -0.2
HRA Herat 62.58 293 P **P** 06 21 29.6 +0.3
HAMF Hammerfest 62.77 341 *e*P **P** 06 21 30.1 +0.4
MBWA Marble Bar 62.87 204 P **P** 06 21 29.6 -1.3
MBWA IAmb IAmb 06 21 31.9
comp=Z,35nm,0.9s
MBWA Marble Bar 62.87 204 P **P** 06 21 30.9 0.0
MBWA pP **sP** 06 21 41.8 -2.0
KLMR Klimovskoe 62.98 328 *e*P **P** 06 21 29.2 -2.0
KLMR *e* 06 23 46.4
KLMR pmax pmax
comp=Z,50nm,0.9s
KLMR MLR MLR
comp=Z,1μm,17.0s
KLMR Klimovskoe 62.98 328 *e*P **P** 06 21 29.3 -2.0
KLMR AMP 06 21 42.4
comp=Z,50nm,0.9s
KLMR *e*PP **PP** 06 23 46.5 -3.0
KLMR LQ LQ 06 44 10.4
KLMR LQ LQ 06 44 10.4
KLMR LR LR 06 48 35.1
KLMR AMP 06 51 05.2
comp=Z,1μm,16.7s
ARA0 ARCESS Array S 62.98 339 *e*P **P** 06 21 31.9 +0.7
ARA0 IAmb IAmb 06 21 41.6
comp=Z,46nm,1.4s
ARCES ARCESS Array B 62.98 339 P **P** 06 21 31.4 +0.2
comp=Z,1.5nm,0.4s,baz=50,slow=8.4,SNR=22
ARCES LR LR 06 51 47.7
comp=Z,372nm,21.8s,baz=52,slow=39
comp=Z,1.5nm,0.4s
ARCES ARCESS Array B 62.98 339 P **P** 06 21 30.8 -0.4
ARCES IAmb IAmb 06 21 41.9
comp=Z,26nm,1.1s
ARCES ARCESS Array B 62.98 339 P **P** 06 21 30.8 -0.4
ARCES pmax pmax
comp=Z,26nm,1.1s
PSA00 Pilbara Seismi 63.22 203 P **P** 06 21 32.4 -0.9
PSA00 IAmb IAmb 06 21 34.2
comp=Z,37nm,1.1s
BELG Belogornoye 63.27 317 P **P** 06 21 33.4 +0.1
comp=Z,34nm,0.8s,baz=45,slow=2.7,SNR=8.6
BELG LR LR 06 50 59.1
comp=Z,896nm,18.1s,baz=74,slow=38
comp=Z,34nm,0.8s
BELG Belogornoye 63.27 317 *c i*P **P** 06 21 33.3 0.0
BELG pmax pmax
comp=Z,7.0nm,0.9s
BELG MLR MLR
comp=Z,146nm,17.0s
PALK Pallekele 63.29 257 LR LR 06 50 36.4
comp=Z,132nm,19.6s,baz=154,slow=38
PALK Pallekele 63.29 257 P **P** 06 21 32.9 -1.1
PALK IAmb IAmb 06 21 44.6
comp=Z,20nm,0.8s
PALK Pallekele 63.29 257 P **P** 06 21 32.9 -1.1
PALK pmax pmax
comp=Z,20nm,0.9s
GEYT Alibeck 63.76 299 P **P** 06 21 36.8 -0.1
comp=Z,5.7nm,0.8s,baz=42,slow=6.8,SNR=5.6
GEYT LR LR 06 51 12.7
comp=Z,694nm,18.3s,baz=78,slow=38
comp=Z,5.7nm,0.8s
GEYT Alibeck 63.76 299 P **P** 06 21 36.8 -0.1
GEYT IAmb IAmb 06 21 47.4
comp=Z,24nm,0.8s
GYA0B **ALIBECK ARRAY** 63.76 299 P **P** 06 21 37.0 +0.1
GYA0B IAmb IAmb 06 21 48.7
comp=Z,23nm,0.8s
KTK1 Kautokeino 63.94 339 *e*P **P** 06 21 38.5 +1.0
KTK1 IAmb IAmb 06 21 48.0
comp=Z,41nm,0.9s
EIDS Eidsvold 63.94 171 P **P** 06 21 37.3 -0.7
NOUC Port Laguerre 64.25 155 P **P** 06 21 41.4 +1.4
NOUC pP **sP** 06 21 53.3 +0.4
DZM Mont Dzumac 64.27 155 P **P** 06 21 41.9 +1.6
comp=Z,84nm,1.0s,baz=6.3,slow=8.6,SNR=20
DZM LR LR 06 46 28.0
comp=Z,668nm,21.7s,baz=24,slow=33
comp=Z,84nm,1.0s
DZM Mont Dzumac 64.27 155 *e*P **P** 06 21 41.7 +1.4
comp=Z,287nm,1.2s
DZM Mont Dzumac 64.27 155 *e*LR LR 06 40 54.4
comp=Z,1μm,21.9s
DZM Mont Dzumac 64.27 155 P **P** 06 21 42.1 +1.9
DZM Mont Dzumac 64.27 155 P **P** 06 21 42.2 +1.9
DZM sP **sP** 06 21 59.4 +6.2
JETT Jettan, Norway 64.34 341 *e*P **P** 06 21 41.0 +0.8
ONTNC **Ouen Toro** 64.50 155 P **P** 06 21 42.5 +0.9
PCHI Peechi 64.65 263 *e*P P 06 21 50.9 +7.9
PCHI *e*S S 06 29 31.6 -49
TRO Tromso 64.67 341 *e*P **P** 06 21 42.6 +0.4
OUENC **Ouen Island, N** 64.73 155 P **P** 06 21 45.5 +2.4
LLLB Lillooet 64.85 44 P **P** 06 21 45.7 +1.9
LLLB IAmb IAmb 06 21 46.4
comp=Z,20nm,1.0s
MSVF Nonsavu 65.14 142 LR LR 06 45 12.8
comp=Z,404nm,21.1s,baz=1.4,slow=31
NLWA Neilton Lookou 65.34 48 P **P** 06 21 49.5 +2.4
NLWA IAmb IAmb 06 21 50.6
comp=Z,42nm,0.9s
WISH Wishkah 65.54 48 P **P** 06 21 50.4 +2.2
E03A Lebam 65.95 49 P **P** 06 21 53.3 +2.4
E03A IAmb IAmb 06 21 54.8
comp=Z,35nm,1.0s
VALR Valaam 66.18 331⇑ *e*P **P** 06 21 51.4 -0.7
VALR pmax pmax
comp=Z,24nm,0.8s
D05A Enumclaw 66.55 48 P **P** 06 21 57.1 +2.4
D05A IAmb IAmb 06 21 58.2
comp=Z,28nm,0.8s
MOS Moscow 66.57 323 *e*P **P** 06 21 53.5 -1.2
MOS *i* 06 22 03.1
MOS *e*S **S** 06 30 39.9 -3.4
MOS pmax pmax
comp=Z,50nm,1.1s
MOS MLR MLR
comp=Z,900nm,15.0s
STEI Steigen 66.82 341 *e*P **P** 06 21 56.9 +0.8
STEI IAmb IAmb 06 22 06.3
comp=Z,28nm,0.9s
G03D McMinnville, O 66.82 50 P **P** 06 21 57.5 +1.0
baz=302
F04A Amboy 66.95 49 P **P** 06 21 58.4 +1.1
F04A IAmb IAmb 06 22 00.2
comp=Z,28nm,0.8s
DBG Daneborg 67.00 355 *e*P **P** 06 21 56.5 -0.7
VRH Novokhopyorsk 67.03 318 *e*P **P** 06 21 57.0 -0.7
VRH pmax pmax
comp=Z,50nm,0.8s
VRH MLR MLR
comp=Z,2μm,17.0s
I02E Swisshome, OR 67.05 51 P **P** 06 21 58.7 +0.7
baz=302
FAUS Fauske 67.21 340 *e*P **P** 06 21 58.9 +0.2
FAUS IAmb IAmb 06 22 09.1
comp=Z,68nm,0.9s
LTY Liberty 67.27 47 P **P** 06 21 59.9 +0.5
LTY IAmb IAmb 06 22 11.8
comp=Z,68nm,1.6s
B08A Colville Reser 67.44 46 IAmb IAmb 06 22 03.0
comp=Z,18nm,1.0s
J01E Myrtle Point 67.49 52 P **P** 06 22 01.5 +0.7
baz=302
AFI Afiamalu 67.50 131 LR LR 06 46 14.2
comp=Z,243nm,19.2s,baz=342,slow=31
H04D Lebanon 67.50 50 IAmb IAmb 06 22 45.3
comp=Z,36nm,1.2s
H04D Lebanon 67.50 50 P **P** 06 22 00.9 0.0
baz=302
BUCK Buck Mountain 67.53 51 IAmb IAmb 06 22 14.9
comp=Z,37nm,1.0s
I03D Drain, OR 67.57 51 P **P** 06 22 01.4 +0.2
baz=302,SNR=7.3
LPSR Galich'ya Gora 67.69 320 *e*P **P** 06 22 01.3 -0.6
LPSR pmax pmax
comp=Z,70nm,1.4s
LPSR MLR MLR
comp=Z,1μm,17.0s
HOOD Mount Hood Mea 67.73 49 IAmb IAmb 06 22 06.1
comp=Z,38nm,1.1s
H04A Detroit Lake 67.75 50 P **P** 06 22 04.0 +1.5
H04A IAmb IAmb 06 22 05.3
comp=Z,29nm,1.0s
EDM Edmonton 67.90 39 P **P** 06 22 04.0 +0.7
EDM IAmb IAmb 06 22 07.8
comp=Z,40nm,1.3s
EDM Edmonton 67.90 39 P **P** 06 22 04.0 +0.7
EDM pmax pmax
comp=Z,40nm,1.3s
K02D Willamette Mer 67.91 53 P **P** 06 22 03.2 -0.3
baz=302
FIA1 FINESS Array S 67.94 332 P **P** 06 22 03.6 +0.3
FINES FINESS Array B 67.94 332 P **P** 06 22 03.1 -0.2
comp=Z,19nm,0.8s,baz=56,slow=8.6,SNR=28
FINES LR LR 06 56 56.8
comp=Z,455nm,18.3s,baz=40,slow=40
comp=Z,19nm,0.8s
FINES FINESS Array B 67.94 332 P **P** 06 22 03.5 +0.3
FINES FINESS Array B 67.94 332 *i* P **P** 06 22 03.7 +0.4
FINES pmax pmax
comp=Z,19nm,0.8s
DBO Dodson Butte 67.94 52 P **P** 06 22 06.0 +2.2
DBO IAmb IAmb 06 22 17.0
comp=Z,35nm,1.5s
G05D Wamic, OR 67.97 49 P **P** 06 22 04.3 +0.4
baz=303
VORR Voronezh 68.08 319 *e*P **P** 06 22 04.5 +0.2
VORR pmax pmax
comp=Z,109nm,0.5s
I04A Tendick Farm, 68.09 51 P **P** 06 22 05.4 +0.7
baz=303,SNR=7.4
MAK Makhachkala 68.15 308 *e*P **P** 06 22 02.7 -2.2
MAK *e* 06 24 35.4
MAK *e*PPP PPP 06 26 09.7
MAK *e*S **S** 06 31 00.7 -2.1
MAK *e*SS **SS** 06 35 24.5 -0.5
MAK pmax pmax
comp=Z,314nm,2.1s
MAK MLR MLR
comp=Z,681nm,16.0s
KSXB Camp Six Broad 68.23 53 IAmb IAmb 06 22 12.4
comp=Z,30nm,1.1s
L02F Cave Junction 68.27 53 P **P** 06 22 06.7 +0.9
baz=303
MOR8 Moi Rana 68.34 340 *e*P **P** 06 22 04.9 -0.9
C09A Chrisman Ranch 68.34 46 P **P** 06 22 07.3 +1.2
C09A IAmb IAmb 06 22 08.6
comp=Z,24nm,0.8s
VSR Storozhevoye 68.36 319 *e*P **P** 06 22 05.6 -0.5
VSR pmax pmax
comp=Z,30nm,0.6s
VSR MLR MLR
comp=Z,1μm,15.0s
D08A Wollman Farm, 68.38 47 P **P** 06 22 07.6 +1.2
D08A IAmb IAmb 06 22 08.8
comp=Z,20nm,0.9s
F07A Phinny Hill Vi 68.44 48 IAmb IAmb 06 22 09.7
comp=Z,18nm,0.8s
I05D Terrebonne, OR 68.45 50 P **P** 06 22 08.1 +1.2
baz=303,SNR=6.5
J04D Umpqua Nationa 68.58 51 IAmb IAmb 06 22 11.0
comp=Z,43nm,0.9s
J04D Umpqua Nationa 68.58 51 P **P** 06 22 08.7 +0.8
baz=303,SNR=10.0
E08A Dider Farm, El 68.62 47 P **P** 06 22 07.0 -0.9
E08A IAmb IAmb 06 22 20.1
comp=Z,51nm,1.6s
NEW Newport 68.73 45 LR LR 06 51 06.8
comp=Z,80nm,20.8s,baz=308,slow=35
NEW Newport 68.73 45 P **P** 06 22 09.5 +0.9
NEW IAmb IAmb 06 22 23.7
comp=Z,19nm,0.9s
NEW Newport 68.73 45 P **P** 06 22 09.5 +0.9
NEW pmax pmax
comp=Z,19nm,0.9s
NEW Newport 68.73 45 P **P** 06 22 09.4 +0.8
baz=304,SNR=12
KHMM Horse Mountain 68.84 54 P **P** 06 22 09.6 +0.1
JMIC Jan Mayen 68.95 350 LR LR 06 55 06.4
comp=Z,130nm,18.1s,baz=66,slow=38
PINE Pine Mountain 68.99 50 P **P** 06 22 12.2 +1.8
PINE IAmb IAmb 06 22 13.9
comp=Z,40nm,0.9s
ARMA Armidale 68.99 171 P **P** 06 22 11.1 +0.8
ARMA IAmb IAmb 06 22 12.7
comp=Z,45nm,1.1s
L04D Klamath Falls 69.01 52 P **P** 06 22 12.0 +1.5
L04D Klamath Falls 69.01 52 P **P** 06 22 11.5 +1.0
baz=303,SNR=17
YBH Yreka Blue Hor 69.02 53 LR LR 06 47 16.3
comp=Z,59nm,20.9s,baz=304,slow=31
GROC Groznyy 69.07 309 *e*P **P** 06 22 12.7 +2.0
GROC *e* 06 22 36.6
J05D Fort Rock, OR 69.09 51 P **P** 06 22 12.2 +1.2
baz=303,SNR=15
E09A Wood Farm, Sta 69.13 47 P **P** 06 22 12.8 +1.8
E09A IAmb IAmb 06 22 13.8
comp=Z,24nm,1.1s
K04D Chiloquin, OR 69.13 52 P **P** 06 22 12.0 +0.8
baz=303
SUMG Summit 69.35 0 P **P** 06 22 13.5 +1.1
SUMG IAmb IAmb 06 22 24.9
comp=Z,28nm,0.8s
SUMG Summit 69.35 0 P **P** 06 22 13.5 +1.1
SUMG pmax pmax
comp=Z,28nm,0.8s
SUMG Summit 69.35 0 *i* P **P** 06 22 13.0 +0.5
SUMG IAmb IAmb 06 22 23.6
comp=Z,146nm,1.8s
MEF Metsahovi 69.37 332 *e*P **P** 06 22 13.2 +1.0
K05A Summer Lake 69.60 51 IAmb IAmb 06 22 17.7
comp=Z,49nm,1.0s
VSU Vasula 69.63 330⇑ *e*P **P** 06 22 14.3 +0.4
VSU pmax pmax
comp=Z,104nm,1.2s
VSU Vasula 69.63 330 *e*P **P** 06 22 14.9 +1.1
I07A Izee 69.69 50 P **P** 06 22 16.1 +1.4
RAF Rauma 69.77 333 *e*P **P** 06 22 15.2 +0.6
STKA Stephens Creek 69.89 181 P **P** 06 22 16.2 +0.6
comp=Z,26nm,0.9s,baz=348,slow=7.9,SNR=56
STKA LR LR 06 51 52.5
comp=Z,69nm,22.0s,baz=19,slow=35
comp=Z,26nm,0.9s
STKA Stephens Creek 69.89 181 P **P** 06 22 16.2 +0.6
STKA Stephens Creek 69.89 181 *j i*P **P** 06 22 15.1 -0.5
WALA Waterton Lakes 70.02 43 P **P** 06 22 18.0 +1.4
WALA IAmb IAmb 06 22 31.8
comp=Z,21nm,1.0s
FORT Forrest 70.05 193 P **P** 06 22 17.0 +0.4
NCK Nalchik 70.24 310⇑ *e*P **P** 06 22 19.3 +1.4
NCK pmax pmax
comp=Z,22nm,0.2s
NSS Namsos 70.26 339 *e*P **P** 06 22 20.1 +2.4
MOD Modoc Plateau 70.43 52 P **P** 06 22 20.8 +1.5
ZEI Tsey 70.45 309 *e*P **P** 06 22 18.8 -0.7
ZEI pmax pmax
comp=Z,37nm,1.4s
KIV Kislovodsk 70.52 311 P **P** 06 22 19.7 0.0
KIV Kislovodsk 70.52 311 *e*P **P** 06 22 20.9 +1.1
KIV *e*S **S** 06 31 31.3 +0.3
KIV pmax pmax
comp=Z,88nm,1.0s
KIV pmax pmax
comp=Z,5.0nm,2.1s
KIV MLR MLR
comp=Z,265nm,17.0s
KIV Kislovodsk 70.52 311 *i* P **P** 06 22 21.2 +1.5
SNR=7.9
KIV Kislovodsk 70.52 311 P **P** 06 22 21.1 +1.3
KIV pP **sP** 06 22 31.3 -1.5
KIV sP **PcP** 06 22 37.5 -3.4
KBZ Khabaz 70.53 311 P **P** 06 22 20.0 +0.4
comp=Z,14nm,0.9s,baz=86,slow=7.1,SNR=21
KBZ LR LR 06 58 02.1
comp=Z,380nm,18.8s,baz=44,slow=40
comp=Z,14nm,0.9s
KBZ Khabaz 70.53 311 *c i*P **P** 06 22 20.3 +0.7
KBZ pmax pmax
comp=Z,20nm,1.0s
BMO Blue Mountains 70.55 48 P **P** 06 22 21.0 +1.0
BMO Blue Mountains 70.55 48 P **P** 06 22 21.0 +1.0
BMO pmax pmax
comp=Z,17nm,1.2s
GDXM Geysers 70.58 56 P **P** 06 22 21.3 +1.1
JTMT Jette 70.59 44 P **P** 06 22 21.0 +0.9
JTMT IAmb IAmb 06 22 22.8
comp=Z,25nm,0.9s
J08A Circle Bar Ran 70.72 50 P **P** 06 22 21.8 +0.8
J08A IAmb IAmb 06 22 24.0
comp=Z,23nm,1.1s
ONI Oni 70.84 309 P **P** 06 22 22.3 +0.6
ONI IAmb IAmb 06 22 33.2
comp=Z,68nm,1.3s
ONI Oni 70.84 309 P **P** 06 22 22.3 +0.6
ONI pmax pmax
comp=Z,68nm,1.3s
NEY Neytrino 70.90 310⇑ *e*P **P** 06 22 24.6 +2.4
BBOO Buckleboo 71.05 185 P **P** 06 22 22.9 +0.2
WVOR Wild Horse Val 71.15 51 IAmb IAmb 06 22 36.2
comp=Z,28nm,1.4s
WSAR Wadi Sarin 71.15 285 LR LR 06 58 04.5
comp=Z,86nm,18.3s,baz=90,slow=40
PLID Pearl Lake 71.17 47 P **P** 06 22 23.8 -0.1
MSO Missoula 71.31 45 P **P** 06 22 25.1 +0.6
baz=306,SNR=13
GNI Garni 71.43 307 LR LR 06 56 50.1
comp=Z,459nm,18.1s,baz=56,slow=38
GNI Garni 71.43 307 *i* P **P** 06 22 26.7 +1.3
GNI pmax pmax
comp=Z,53nm,1.8s
GNI MLR MLR
comp=Z,424nm,15.0s
SHME Shamm 71.44 289 *i* P P 06 22 33.5 +8.0
SNR=9.7
BEKR Beckworth 71.54 54 P **P** 06 22 25.5 -0.6
BEKR IAmb IAmb 06 22 28.6
comp=Z,22nm,1.0s
PLTX Planet X, Gerl 71.62 52 IAmb IAmb 06 22 39.2
comp=Z,22nm,0.7s
MDH Madha 71.75 288 P P 06 22 35.6 +8.3
MNK Minsk 71.75 326 *i* P **P** 06 22 28.3 +1.4
MNK *i* 06 25 07.2
MNK *i* PPP PPP 06 26 50.7
MNK *i* S **S** 06 31 50.3 +5.7
MNK *i* SS **SS** 06 36 21.5 +1.7
MNK pmax pmax
comp=E,5.0nm,1.1s
MNK MLR MLR
comp=Z,932nm,15.0s
MNK MLR MLR
comp=E,141nm,17.0s
MNK Minsk 71.75 326 *i* P **P** 06 22 28.3 +1.4
comp=E,5.0nm,1.1s,baz=229
MNK *i* P **P** 06 22 28.3 +1.4
MNK *i* P **P** 06 22 28.3 +1.4
comp=Z,932nm,15.0s
MNK *i* PP **PP** 06 25 07.2 +1.4
MNK *i* PPP PPP 06 26 50.7
MNK *i* S **S** 06 31 50.3 +5.7
MNK *i* SS **SS** 06 36 21.5 +1.7
MNK *i* SSS SSS 06 39 45.0
MNK *i* LQ LQ 06 49 04.1
MNK *i* LR LR 06 54 31.6
MNK *i* LRM MLR 06 56 29.7
comp=E,141nm,16.9s
MNK *i* LRM MLR 06 56 29.7
MNK *i* LRM MLR 06 56 29.7
comp=Z,932nm,15.0s
ISAL Salakas 71.80 328 *e*P **P** 06 22 29.1 +1.9
MSFE Esma-Masafi 71.82 288 *i* P P 06 22 34.6 +6.8
SNR=6.1
SLIT Slitere, Latvi 71.94 331 *e*P **P** 06 22 29.6 +1.7
NACGM **Naroch** 71.97 327‖ *e*P **P** 06 22 29.1 +1.0
baz=48
UOSS Minazif 72.02 288 P **P** 06 22 27.9 -1.1
UOSS IAmb IAmb 06 22 39.4
comp=Z,34nm,0.8s
UOSS Minazif 72.02 288 *i* P P 06 22 36.3 +7.4
SNR=11
UOSS Minazif 72.02 288 P **P** 06 22 30.0 +1.0
UOSS pP **pP** 06 22 38.0 -0.5
MPK Martis Peak 72.08 54 IAmb IAmb 06 22 32.9
comp=Z,41nm,1.2s
HATD Hatta, Dubai 72.14 288 *i* P P 06 22 37.4 +7.7
SNR=9.6
EMB Emerald Bay 72.22 54 P **P** 06 22 31.3 +1.1
SOHO SOHO 72.23 287 *i* P P 06 22 37.4 +7.2
SNR=9.0
PAHR Pah Rah Range 72.25 53 IAmb IAmb 06 22 42.8
comp=Z,22nm,1.0s
MFID Camas Ranch 72.25 48 P **P** 06 22 31.4 +1.1
ASHO Ashiyiah 72.27 288 *i* P P 06 22 38.4 +7.8
SNR=6.7
ILULI Ilulissat 72.28 5 IAmb IAmb 06 22 41.7
comp=Z,18nm,0.7s
SOC Sochi 72.49 312 *e*P **P** 06 22 31.5 0.0
SOC *e* 06 25 10.4
SOC *e*PPP PPP 06 26 54.8
SOC *e*S **S** 06 31 55.2 +1.7
SOC *e*SS **SS** 06 36 34.6 +2.9
SOC pmax pmax
comp=Z,44nm,1.1s
SOC MLR MLR
comp=Z,454nm,16.0s
CMB Columbia Colle 72.57 55 P **P** 06 22 33.9 +1.7
CMB Columbia Colle 72.57 55 P **P** 06 22 33.9 +1.7
CMB pmax pmax
comp=Z,12nm,0.9s
FAQ Al Faqa, Dubai 72.59 288 P P 06 22 40.1 +7.7
BCA Borcka 72.61 309 ⇑P **P** 06 22 34.0 +1.7
PABE Paberze 72.75 328 *e*P **P** 06 22 33.9 +1.1
YERR Yerington 72.76 54 IAmb IAmb 06 22 36.2
comp=Z,29nm,1.1s
EGMT Eagleton 72.85 42 IAmb IAmb 06 22 50.9
comp=Z,28nm,0.8s
EGMT Eagleton 72.85 42 P **P** 06 22 34.2 +0.6
baz=309,SNR=16
ICESG Greenland Ices 72.85 1 *i* P **P** 06 22 34.4 +0.7
ICESG IAmb IAmb 06 22 44.2
comp=Z,26nm,0.8s
ASUD Al Ashush, Dub 72.85 288 *i* P P 06 22 42.5 +8.5
SNR=5.6
BBGB Big Mountain B 72.99 57 IAmb IAmb 06 22 38.0
comp=Z,27nm,1.1s
HLID Hailey 73.00 48 P **P** 06 22 35.8 +1.1
baz=307,SNR=23
NC405 NORSAR Array S 73.00 337 P **P** 06 22 34.4 +0.2
NC303 NORSAR Array S 73.01 338 P **P** 06 22 34.4 +0.1
DOMB Dombas 73.04 339 *e*P **P** 06 22 35.1 +0.7
DOMB *e*S **S** 06 31 58.5 -0.7
ANN Anapa 73.07 314 *e*P P 06 22 42.9 +8.0
ANN pmax pmax
comp=Z,84nm,1.2s
ANN MLR MLR
comp=N,451nm,19.0s
ANN MLR MLR
comp=Z,359nm,16.0s
ANN MLR MLR
comp=E,270nm,14.0s
HFS Hagfors 73.14 336 LR LR 06 57 38.4
comp=E,1μm,18.7s,baz=36,slow=38
NC204 NORSAR Array S 73.16 338 P **P** 06 22 35.5 +0.3
BMN Battle Mountai 73.17 52 P **P** 06 22 37.0 +1.2
BMN IAmb IAmb 06 22 48.6
comp=Z,82nm,1.8s

BMN	**Battle Mountai**	**73.17**	**52**	P	**P**	**06 22 37.0 +1.2**			
BMN				pmax	pmax				
	comp=Z,82nm,1.8s								
NB201	**NORSAR Array S**	**73.17**	**337**	P	**P**	**06 22 35.9 +0.6**			
NB2	**NORSAR Subarra**	**73.21**	**337**	P	**P**	**06 22 35.8 +0.3**			
	comp=Z,112nm,2.5s,baz=36,slow=6.2								
NB2	**NORSAR Subarra**	**73.21**	**337**	P	**P**	**06 22 35.8 +0.3**			
	baz=36,slow=6.2								
NOA	**NORSAR Array B**	**73.21**	**337**	P	**P**	**06 22 35.8 +0.3**			
	comp=Z,6.8nm,0.8s,baz=38,slow=6.0,SNR=30								
NOA				LR	LR	06 57 40.3			
	comp=Z,548nm,19.5s,baz=30,slow=38								
	comp=Z,6.8nm,0.8s								
PBUR	**Paburge**	**73.21**	**330**	*e*P	**P**	**06 22 37.4 +1.9**			
BOZ	**Bozeman (W)**	**73.34**	**45**	P	**P**	**06 22 37.3 +0.6**			
	baz=308,SNR=27								
NBO00	**NORSAR Array S**	**73.34**	**338**	P	**P**	**06 22 36.7 +0.5**			
KVN	**Kaiserville**	**73.44**	**53**	P	**P**	**06 22 37.9 +0.4**			
KVN				IAmb	IAmb	06 22 40.3			
	comp=Z,29nm,1.1s								
KVN	**Kaiserville**	**73.44**	**53**	P	**P**	**06 22 37.9 +0.4**			
KVN				pmax	pmax				
	comp=Z,29nm,1.1s								
NAO01	**NORSAR Array S**	**73.46**	**337**	P	**P**	**06 22 35.7 -1.2**			
AKN	**Aaknes**	**73.50**	**340**	*e*P	**P**	**06 22 41.3 +4.1**			
CAN	**Canberra**	**73.59**	**174**	IAmb	IAmb	06 22 40.7			
	comp=Z,44nm,1.2s								
AKASG	**Malin Array Be**	**73.64**	**322**	P	**P**	**06 22 38.0 -0.1**			
	comp=Z,13nm,0.8s,baz=45,slow=6.7,SNR=48								
AKASG				LR	LR	06 57 45.3			
	comp=Z,992nm,18.3s,baz=46,slow=38								
	comp=Z,13nm,0.8s								
AKASG	**Malin Array Be**	**73.64**	**322**	IAmb	IAmb	06 22 48.9			
	comp=Z,34nm,1.1s								
AKASG	**Malin Array Be**	**73.64**	**322**	*i* P	**P**	**06 22 38.0 -0.1**			
AKASG				pmax	pmax				
	comp=Z,6.0nm,0.5s								
AKBB	**Malin Array Si**	**73.64**	**322**	P	**P**	**06 22 38.2 +0.1**			
AKBB	**Malin Array Si**	**73.64**	**322**	P	**P**	**06 22 38.2 +0.1**			
AKBB				pmax	pmax				
	comp=Z,70nm,1.0s								
LHV	**Little Huntoon**	**73.65**	**54**	IAmb	IAmb	06 22 42.5			
	comp=Z,42nm,1.1s								
NVAR	**Mina Array Bea**	**73.68**	**54**	P	**P**	**06 22 40.6 +1.7**			
	comp=Z,13nm,0.9s,baz=289,slow=6.4,SNR=76								
NVAR				LR	LR	06 52 36.4			
	comp=Z,100nm,18.4s,baz=300,slow=34								
	comp=Z,13nm,0.9s								
NVAR	**Mina Array Bea**	**73.68**	**54**	P	**P**	**06 22 39.9 +1.0**			
MLAC	**Mammoth, Mammo**	**73.81**	**55**	P	**P**	**06 22 40.6 +0.9**			
	baz=306								
PAGB	**Antelope Grade**	**74.00**	**57**	IAmb	IAmb	06 22 43.4			
	comp=Z,32nm,0.9s								
ELK	**Elko**	**74.20**	**50**	LR	LR	06 49 15.4			
	comp=Z,94nm,21.5s,baz=298,slow=31								
OSL	**Oslo**	**74.23**	**337**	*e*	P	06 22 51.4 +10			
GCMT	**Greycliff**	**74.29**	**44**	P	**P**	**06 22 43.4 +1.1**			
SKAR	**Skarslia**	**74.35**	**338**	*e*	P	06 22 52.8 +11			
SMMC	**Simmler**	**74.41**	**57**	P	**P**	**06 22 42.4 -0.6**			
	baz=306								
YNR	**Norris Junctio**	**74.41**	**45**	IAmb	IAmb	06 22 47.2			
	comp=Z,37nm,1.6s								
FOO	**Floro**	**74.50**	**340**	*e*P	**P**	**06 22 45.5 +2.5**			
SFJD	**Kangerlussuaq**	**74.50**	**5**	LR	LR	06 55 57.2			
	comp=Z,278nm,21.9s,baz=352,slow=36								
SFJD	**Kangerlussuaq**	**74.50**	**5**	P	**P**	**06 22 44.0 +1.1**			
SFJD	**Kangerlussuaq**	**74.50**	**5**	P	**P**	**06 22 44.0 +1.1**			
SFJD				pmax	pmax				
	comp=Z,18nm,1.0s								
HYA	**Hoyanger**	**74.55**	**340**	*e*	P	06 22 53.2 +10			
H17A	**Grant Village**	**74.67**	**45**	IAmb	IAmb	06 22 49.6			
	comp=Z,38nm,1.1s								
H17A	**Grant Village**	**74.67**	**45**	P	**P**	**06 22 45.5 +0.8**			
	baz=309,SNR=28								
VES	**Vestal, Richgr**	**74.70**	**56**	P	**P**	**06 22 44.9 +0.3**			
	baz=306,SNR=12								
IMW	**Indian Meadow**	**74.78**	**46**	IAmb	IAmb	06 22 48.7			
	comp=Z,21nm,0.9s								
PKM	**Mcpherson Peak**	**74.78**	**58**	P	**P**	**06 22 44.8 -0.6**			
	baz=306,SNR=6.7								
KONO	**Kongsberg**	**74.80**	**337**	*e*	P	06 22 55.3 +11			
LCH	**Last Change Ra**	**74.81**	**55**	P	**P**	**06 22 46.8 +1.4**			
SIM	**Simferopol'**	**74.83**	**316**	*e*P	**P**	**06 22 49.8 +4.6**			
SIM				*e*PPP	PPP	06 27 26.2			
SIM				*e*SS	SS	06 37 14.7 +7.5			
SIM				pmax	pmax				
	comp=Z,82nm,1.1s								
SIM				pmax	pmax				
	comp=N,41nm,13.7s								
SIM				MLR	MLR				
	comp=N,410nm,18.1s								
RLMT	**Red Lodge**	**74.94**	**44**	IAmb	IAmb	06 23 01.7			
	comp=Z,56nm,1.5s								
RLMT	**Red Lodge**	**74.94**	**44**	P	**P**	**06 22 45.9 -0.2**			
	baz=310								
CWC	**Cottonwood Cre**	**75.00**	**55**	P	**P**	**06 22 46.5 -0.1**			
	baz=307								
BCW	**Bitter Crk WRg**	**75.02**	**57**	IAmb	IAmb	06 22 59.5			
	comp=Z,24nm,0.8s								
TPAW	**Teton Pass**	**75.03**	**46**	P	**P**	**06 22 47.7 +1.0**			
SUE	**Sulen**	**75.03**	**340**	*e*	P	06 22 56.8 +11			
HVU	**Hansel Valley**	**75.04**	**48**	P	**P**	**06 22 48.6 +1.9**			
HVU	**Hansel Valley**	**75.04**	**48**	P	**P**	**06 22 48.6 +1.9**			
HVU				pmax	pmax				
	comp=Z,17nm,0.9s								
SBC	**Santa Barbara**	**75.11**	**58**	P	**P**	**06 22 45.9 -1.1**			
	baz=306								
GRAC	**Grapevine Rang**	**75.12**	**55**	P	**P**	**06 22 48.9 +1.8**			
GRAC				IAmb	IAmb	06 22 59.8			
	comp=Z,18nm,0.8s								
GRAC	**Grapevine Rang**	**75.12**	**55**	P	**P**	**06 22 46.8 -0.3**			
	baz=307,SNR=16								
REDW	**Red Top Meadow**	**75.16**	**46**	IAmb	IAmb	06 23 03.2			
	comp=Z,25nm,1.1s								
MZR	**Muzera**	**75.17**	**288**	*i* P	P	06 22 55.8 +8.3			
	SNR=6.5								
ISA	**Isabella, Lake**	**75.20**	**56**	P	**P**	**06 22 47.8 +0.1**			
	baz=307,SNR=7.1								
DY2G	**Dye2**	**75.28**	**4**	*i* P	**P**	**06 22 47.3 -0.4**			
DY2G				IAmb	IAmb	06 22 51.2			
	comp=Z,31nm,1.1s								
ARVC	**Arvin**	**75.29**	**57**	P	**P**	**06 22 48.4 +0.4**			
	baz=307,SNR=5.6								
FRB	**Frobisher Bay**	**75.33**	**14**	LR	LR	06 59 04.3			
	comp=Z,190nm,20.5s,baz=360,slow=38								
ASK	**Askoy**	**75.39**	**340**	*e*sP	sP	06 22 58.9 -2.3			
DGMT	**Dagmar**	**75.40**	**39**	IAmb	IAmb	06 23 03.7			
	comp=Z,40nm,1.0s								
DGMT	**Dagmar**	**75.40**	**39**	P	**P**	**06 22 49.4 +0.9**			
	baz=312								
DGMT	**Dagmar**	**75.40**	**39**	P	**P**	**06 22 48.7 +0.3**			
	baz=312,SNR=6.6								
BGU	**Big Grassy Mou**	**75.42**	**49**	P	**P**	**06 22 50.2 +1.3**			
R11A	**Troy Canyon, C**	**75.44**	**53**	P	**P**	**06 22 50.4 +1.4**			
R11A	**Troy Canyon, C**	**75.44**	**53**	P	**P**	**06 22 49.6 +0.5**			
	baz=308,SNR=32								
BER	**Bergen**	**75.44**	**339**	*e*sP	sP	06 23 01.2 -0.2			
ODD1	**Odda**	**75.47**	**339**	*e*sP	sP	06 22 59.9 -1.8			
LAO	**LASA Array**	**75.55**	**41**	IAmb	IAmb	06 22 52.1			
	comp=Z,38nm,0.9s								
LAO	**LASA Array**	**75.55**	**41**	P	**P**	**06 22 51.0 +1.6**			
	baz=311								
LAO	**LASA Array**	**75.55**	**41**	P	**P**	**06 22 49.8 +0.4**			
	baz=311,SNR=22								
MPMC	**Manual Prospec**	**75.61**	**55**	P	**P**	**06 22 50.5 +0.4**			
	baz=307,SNR=18								
OSI	**Osito Audit: C**	**75.67**	**57**	P	**P**	**06 22 50.4 +0.2**			
	baz=307								
S11A	**Rachel**	**75.76**	**53**	IAmb	IAmb	06 23 03.7			
	comp=Z,26nm,0.8s								
FURC	**Furnace Creek,**	**75.77**	**55**	P	**P**	**06 22 50.7 0.0**			
	baz=307,SNR=21								
CCAC	**Calif City Air**	**75.81**	**56**	IAmb	IAmb	06 23 03.4			
	comp=Z,24nm,0.8s								
SPR3	**Spring Creek 3**	**75.82**	**51**	P	**P**	**06 22 53.7 +2.3**			
SPR3				IAmb	IAmb	06 23 05.4			
	comp=Z,42nm,1.6s								
LRMC	**Laurel Mtn Rad**	**75.83**	**56**	P	**P**	**06 22 52.1 +0.7**			
	baz=307								
HWUT	**Hardware Ranch**	**75.86**	**48**	P	**P**	**06 22 53.1 +1.7**			
HWUT				IAmb	IAmb	06 23 07.2			
	comp=Z,34nm,1.1s								
TPNV	**Topopah Spring**	**75.87**	**54**	P	**P**	**06 22 53.1 +1.6**			
TPNV				IAmb	IAmb	06 22 54.1			
	comp=Z,22nm,1.0s								
TPNV	**Topopah Spring**	**75.87**	**54**	P	**P**	**06 22 53.1 +1.6**			
TPNV				pmax	pmax				
	comp=Z,23nm,1.0s								
TPNV	**Topopah Spring**	**75.87**	**54**	P	**P**	**06 22 52.0 +0.4**			
	baz=308,SNR=33								
BLS5	**Blasjo**	**75.92**	**338**	*e*	P	06 22 36.8 -14			
EDW2	**Edwards Air Fo**	**75.99**	**57**	P	**P**	**06 22 53.9 +1.8**			
	baz=307,SNR=13								
DUG	**Dugway, Tooele**	**76.00**	**50**	P	**P**	**06 22 53.8 +1.6**			
DUG				IAmb	IAmb	06 23 05.0			
	comp=Z,50nm,1.4s								
DUG	**Dugway, Tooele**	**76.00**	**50**	P	**P**	**06 22 53.8 +1.6**			
DUG				pmax	pmax				
	comp=Z,50nm,1.5s								
DUG	**Dugway, Tooele**	**76.00**	**50**	P	**P**	**06 22 53.2 +1.0**			
	baz=309,SNR=31								
GWY	**Greenwater Val**	**76.06**	**55**	P	**P**	**06 22 53.9 +1.3**			
GWY				IAmb	IAmb	06 22 55.0			
	comp=Z,20nm,0.9s								
QSM	**Queen of Sheba**	**76.07**	**55**	P	**P**	**06 22 53.5 +1.0**			
QSM				IAmb	IAmb	06 22 55.0			
	comp=Z,35nm,1.0s								
DECC	**Green Verdugo**	**76.14**	**57**	P	**P**	**06 22 53.2 +0.2**			
	baz=307								
TCUT	**Toone Canyon**	**76.25**	**48**	IAmb	IAmb	06 23 12.1			
	comp=Z,22nm,0.8s								
DIKM	**Dikmen**	**76.27**	**312**	⇑P	**P**	**06 22 55.1 +1.6**			
BW06	**Boulder Array**	**76.27**	**46**	P	**P**	**06 22 54.2 +0.4**			
	baz=310,SNR=24								
PD31	**Pinedale Array**	**76.28**	**46**	P	**P**	**06 22 54.9 +1.1**			
PDAR	**Pinedale Array**	**76.28**	**46**	P	**P**	**06 22 54.9 +1.1**			
	comp=Z,9.8nm,0.7s,baz=289,slow=2.8,SNR=117								
	comp=Z,9.8nm,0.7s								
PDAR	**Pinedale Array**	**76.28**	**46**	P	**P**	**06 22 54.5 +0.6**			
CTU	**Camp Tracy**	**76.32**	**49**	P	**P**	**06 22 56.1 +2.0**			
PSUT	**Pine Spring**	**76.40**	**52**	P	**P**	**06 22 55.6 +1.0**			
PSUT				IAmb	IAmb	06 23 08.4			
	comp=Z,32nm,1.3s								
BORG	**Borgarnes**	**76.41**	**353**	LR	LR	06 57 52.1			
	comp=Z,74nm,18.2s,baz=21,slow=37								
KMY	**Karmoy**	**76.44**	**339**	*e*sP	sP	06 23 04.5 -2.7			
SHOC	**Shoshone, Teco**	**76.49**	**55**	P	**P**	**06 22 55.3 +0.4**			
	baz=308,SNR=5.8								
GSC	**Goldstone, Bar**	**76.51**	**56**	P	**P**	**06 22 55.8 +0.7**			
	baz=308,SNR=9.1								
JLU	**Jordanelle**	**76.56**	**49**	P	**P**	**06 22 57.5 +2.0**			
SNART	**Snartemo**	**76.59**	**337**	*e*	P	06 23 05.0 +10			
BFSC	**Mount Baldy Ra**	**76.59**	**57**	P	**P**	**06 22 56.4 +0.8**			
	baz=307								
LVV	**L'vov**	**76.68**	**324**	*e*P	**P**	**06 22 55.9 +0.2**			
LVV				*e*S	**S**	**06 32 39.5 -0.7**			
LVV				MLR	MLR				
	comp=N,400nm,15.0s								
LVV				MLR	MLR				
	comp=E,400nm,15.0s								
LVV				MLR	MLR				
	comp=Z,400nm,14.0s								
BZK	**Bozkurt**	**76.80**	**313**	⇓P	**P**	**06 22 57.8 +1.4**			
MPU	**Maple Canyon**	**76.82**	**49**	P	**P**	**06 22 58.6 +1.7**			
MPU				IAmb	IAmb	06 22 59.7			
	comp=Z,23nm,1.0s								
SHPR	**Sheep Range**	**76.83**	**54**	P	**P**	**06 22 59.0 +2.0**			
RAO	**Raoul Island**	**76.89**	**145**	LR	LR	06 53 35.8			
	comp=Z,304nm,19.6s,baz=33,slow=33								
TUQ	**Turquoise Moun**	**77.00**	**55**	P	**P**	**06 22 58.9 +0.9**			
	baz=308,SNR=9.5								
BBRC	**Big Bear Solar**	**77.06**	**57**	P	**P**	**06 22 59.1 +0.6**			
	baz=308								
HEC	**Hector,Ludlow**	**77.10**	**56**	P	**P**	**06 22 58.6 +0.1**			
	baz=308								
NUUK	**Nuuk**	**77.19**	**6**	*i* P	**P**	**06 23 01.3 +3.0**			
NUUK				IAmb	IAmb	06 23 01.8			
	comp=Z,17nm,1.0s								
TCRU	**Three Creeks R**	**77.21**	**51**	IAmb	IAmb	06 23 16.2			
	comp=Z,25nm,1.2s								
MURC	**Murrieta**	**77.29**	**57**	P	**P**	**06 22 59.6 +0.2**			
	baz=308								
CCUT	**Cedar City**	**77.31**	**52**	P	**P**	**06 23 01.2 +1.5**			
CCUT				IAmb	IAmb	06 23 13.9			
	comp=Z,30nm,1.4s								
KWP	**Kalwaria Pacla**	**77.42**	**325**	*e*P	**P**	**06 23 01.5 +1.6**			
KWP				*e*PcP	**PcP**	**06 23 10.4 +0.1**			
KWP				*e*L	L	07 00 35.0			
	comp=Z,1μm,16.3s								
SZCU	**Shurtz Canyon**	**77.45**	**52**	P	**P**	**06 23 02.5 +1.9**			
TLCR		**77.52**	**318**	⇑P	**P**	**06 23 02.3 +1.8**			
TMUT	**Trail Mountain**	**77.53**	**50**	IAmb	IAmb	06 23 14.4			
	comp=Z,31nm,1.5s								
ILGA	**Ilgaz**	**77.55**	**313**	P	**P**	**06 23 03.0 +2.0**			
GMRC	**Granite Mounta**	**77.57**	**55**	P	**P**	**06 23 01.4 +0.3**			
	baz=308,SNR=12								
BUR08	**Bucovina Ar. S**	**77.65**	**322**	P	**P**	**06 23 02.0 +0.6**			
BUR08				IAmb	IAmb	06 23 12.6			
	comp=Z,41nm,1.0s								
BURAR	**Bucovina Array**	**77.67**	**322**	⇓P	**P**	**06 23 02.6 +1.2**			
BURAR	**Bucovina Array**	**77.67**	**322**	P	**P**	**06 23 01.7 +0.3**			
BURAR				IAmb	IAmb	06 23 13.0			
	comp=Z,42nm,0.9s								
RDMU	**Red Mountain**	**77.68**	**48**	P	**P**	**06 23 03.3 +1.6**			
RDMU				IAmb	IAmb	06 23 15.1			
	comp=Z,40nm,0.9s								
P17A	**Butcher Ranch,**	**77.69**	**49**	P	**P**	**06 23 03.4 +1.6**			
P17A				IAmb	IAmb	06 23 17.4			
	comp=Z,69nm,1.4s								
TESR	**Tescani**	**77.72**	**320**	⇑P	**P**	**06 23 02.8 +1.2**			
PFO	**Pinyon Flats O**	**77.77**	**57**	LR	LR	06 53 16.9			
	comp=Z,104nm,19.3s,baz=297,slow=32								
PFO	**Pinyon Flats O**	**77.77**	**57**	P	**P**	**06 23 03.7 +1.4**			
PFO	**Pinyon Flats O**	**77.77**	**57**	P	**P**	**06 23 03.7 +1.4**			
PFO				pmax	pmax				
	comp=Z,15nm,1.1s								
PFO	**Pinyon Flats O**	**77.77**	**57**	P	**P**	**06 23 03.0 +0.8**			
	baz=308								
TPFO	**Pinon Flats**	**77.77**	**57**	P	**P**	**06 23 02.1 -0.2**			
	baz=308								
109C	**Camp Elliot, M**	**77.78**	**58**	P	**P**	**06 23 02.8 +0.6**			
109C	**Camp Elliot, M**	**77.78**	**58**	P	**P**	**06 23 02.4 +0.2**			
	baz=308								
Q16A	**Castle Valley**	**77.79**	**50**	IAmb	IAmb	06 23 16.7			
	comp=Z,50nm,1.5s								
PMD	**Palm Desert**	**77.80**	**57**	IAmb	IAmb	06 23 04.3			
	comp=Z,16nm,1.2s								
BELC	**Belle Mtn. Jos**	**77.83**	**56**	P	**P**	**06 23 02.8 +0.1**			
	baz=308,SNR=7.0								
CFR	**Carcaliu**	**77.88**	**319**	⇑P	**P**	**06 23 03.5 +1.0**			
P18A	**Preston Nutter**	**77.89**	**49**	P	**P**	**06 23 04.1 +1.0**			
P18A				IAmb	IAmb	06 23 18.7			
	comp=Z,23nm,0.9s								
TPGR	**Topolog**	**77.95**	**318**	⇑P	**P**	**06 23 04.2 +1.3**			
KNB	**Kanab**	**77.98**	**52**	IAmb	IAmb	06 23 17.4			
	comp=Z,34nm,1.1s								
PKCU	**Pink Cliffs**	**78.03**	**52**	P	**P**	**06 23 04.7 +0.8**			
ULM	**Lac du Bonnet**	**78.04**	**34**	P	**P**	**06 23 03.7 +0.4**			
	comp=Z,11nm,0.9s,baz=308,slow=8.3,SNR=9.4								
	comp=Z,11nm,0.9s								
ULM	**Lac du Bonnet**	**78.04**	**34**	P	**P**	**06 23 03.1 -0.2**			
ULM				IAmb	IAmb	06 23 05.1			
	comp=Z,80nm,1.9s								
ULM	**Lac du Bonnet**	**78.04**	**34**	P	**P**	**06 23 03.1 -0.2**			
ULM				pmax	pmax				
	comp=Z,80nm,2.0s								
K22A	**Casper**	**78.05**	**45**	IAmb	IAmb	06 23 18.1			
	comp=Z,26nm,1.1s								
K22A	**Casper**	**78.05**	**45**	P	**P**	**06 23 04.8 +1.1**			
	baz=312								
K22A	**Casper**	**78.05**	**45**	P	**P**	**06 23 04.0 +0.3**			
	baz=312,SNR=8.8								
SRU	**San Rafael Swe**	**78.05**	**49**	IAmb	IAmb	06 23 19.1			
	comp=Z,26nm,0.9s								
MDND	**Maddock**	**78.06**	**37**	P	**P**	**06 23 03.8 +0.4**			
MDND	**Maddock**	**78.06**	**37**	P	**P**	**06 23 03.8 +0.4**			
	baz=315								
VRI	**Vrincioaia**	**78.13**	**320**	⇓P	**P**	**06 23 05.3 +1.4**			
PLOR	**Plostina**	**78.18**	**320**	⇓P	**P**	**06 23 06.2 +2.0**			
TIRR	**Tirgusor**	**78.22**	**318**	⇑P	**P**	**06 23 05.6 +1.3**			
MONP2	**Monument Peak**	**78.23**	**57**	P	**P**	**06 23 05.9 +1.0**			
	baz=308								
IRM	**Iron Mountain**	**78.29**	**56**	P	**P**	**06 23 05.2 +0.2**			
	baz=309,SNR=16								
OJC	**Ojcow**	**78.29**	**326**	*e*P	**P**	**06 23 05.0 +0.3**			
OJC				*e*PcP	**PcP**	**06 23 13.9 -0.1**			
OJC				*e*L	L	07 00 39.8			
	comp=Z,1μm,17.7s								
OJC	**Ojcow**	**78.29**	**326**	P	**P**	**06 23 05.0 +0.3**			
OJC	**Ojcow**	**78.29**	**326**	P	**P**	**06 23 05.0 +0.3**			
OJC				pmax	pmax				
	comp=Z,105nm,1.0s								
RWWY	**Rawlins**	**78.30**	**46**	IAmb	IAmb	06 23 07.4			
	comp=Z,25nm,0.9s								
HARR	**Harsova**	**78.31**	**318**	⇑P	**P**	**06 23 06.8 +1.9**			
UZH	**Uzhgorod**	**78.33**	**324**	*e*P	**P**	**06 23 06.7 +1.8**			
UZH				*e*		06 23 14.5			
UZH				*e*		06 23 20.7			
UZH				*e*		06 26 10.1			
UZH				*e*S	**S**	**06 33 01.7 +3.7**			
UZH				MLR	MLR				
	comp=Z,90nm,16.0s								
BC3	**Big Chuckawall**	**78.40**	**56**	P	**P**	**06 23 06.0 +0.3**			
	baz=308,SNR=9.9								
COVR	**Voineasa-Covas**	**78.41**	**320**	⇑P	**P**	**06 23 07.2 +1.8**			
RSSD	**Black Hills**	**78.41**	**42**	P	**P**	**06 23 05.5 -0.3**			
RSSD				IAmb	IAmb	06 23 20.3			
	comp=Z,32nm,1.2s								
RSSD	**Black Hills**	**78.41**	**42**	P	**P**	**06 23 05.5 -0.3**			
RSSD				pmax	pmax				
	comp=Z,33nm,1.2s								
RSSD	**Black Hills**	**78.41**	**42**	P	**P**	**06 23 06.7 +1.0**			
	baz=313								
RSSD	**Black Hills**	**78.41**	**42**	P	**P**	**06 23 05.9 +0.1**			
	baz=313								
E28A	**Huff**	**78.42**	**39**	P	**P**	**06 23 05.5 0.0**			
E28A				IAmb	IAmb	06 23 07.5			
	comp=Z,30nm,0.9s								
E28A	**Huff**	**78.42**	**39**	P	**P**	**06 23 06.7 +1.2**			
	baz=314								
OZUR		**78.44**	**321**	⇑P	**P**	**06 23 07.9 +2.3**			
BRTR	**Keskin Array B**	**78.45**	**312**	P	**P**	**06 23 06.8 +0.8**			
	comp=Z,1.4nm,0.7s,baz=69,slow=4.6,SNR=8.5								
BRTR				LR	LR	07 02 08.0			
	comp=Z,232nm,18.9s,baz=47,slow=39								
	comp=Z,1.4nm,0.7s								
ARCR	**ARCALIA**	**78.45**	**322**	⇑P	**P**	**06 23 07.7 +2.0**			
W13A	**Hualapai Mount**	**78.51**	**54**	P	**P**	**06 23 06.2 -0.3**			
IKP	**In-Ko-Pah, Jac**	**78.59**	**57**	P	**P**	**06 23 07.0 +0.2**			
	baz=308								
SWSC	**Sam W. Stewart**	**78.61**	**57**	P	**P**	**06 23 07.7 +0.9**			
	baz=308								
NIE	**Niedzica**	**78.66**	**326**	*e*P	**P**	**06 23 07.8 +1.0**			
NIE				*e*PcP	**pP**	**06 23 17.5 +1.0**			
NIE				*e*L	L	07 00 57.9			
	comp=Z,753nm,17.6s								
DOPR	**Dopca**	**78.73**	**321**	⇑P	**P**	**06 23 09.4 +2.2**			
O20A	**White River Ci**	**78.73**	**47**	IAmb	IAmb	06 23 22.6			
	comp=Z,25nm,1.0s								
O20A	**White River Ci**	**78.73**	**47**	P	**P**	**06 23 07.9 +0.3**			
	baz=311,SNR=14								
ISR	**Istrita**	**78.74**	**319**	⇑P	**P**	**06 23 08.5 +1.2**			
ICOR	**Ion Corvin**	**78.78**	**318**	⇓P	**P**	**06 23 09.8 +2.3**			
MLR	**Muntele Rosu**	**78.78**	**320**	⇓P	**P**	**06 23 09.7 +2.0**			
MLR	**Muntele Rosu**	**78.78**	**320**	LR	LR	07 00 46.1			
	comp=Z,809nm,19.8s,baz=45,slow=38								
MLR	**Muntele Rosu**	**78.78**	**320**	IAmb	IAmb	06 23 19.7			
	comp=Z,58nm,1.3s								
PDMCI	**Parker Dam,Lak**	**78.85**	**55**	P	**P**	**06 23 09.5 +1.5**			
	baz=309,SNR=14								
ANTO	**Ankara**	**78.85**	**312**	⇑P	**P**	**06 23 09.6 +1.5**			
BLYC	**Blythe**	**78.95**	**56**	P	**P**	**06 23 08.3 -0.3**			
SECR		**79.04**	**320**	⇑P	**P**	**06 23 09.9 +1.0**			
CJR	**Cluj-Napoca**	**79.08**	**322**	⇑P	**P**	**06 23 11.0 +1.8**			
MESR	**Meseseni**	**79.08**	**323**	⇑P	**P**	**06 23 11.2 +2.1**			
GLA	**Glamis**	**79.19**	**56**	P	**P**	**06 23 09.6 -0.4**			
GLA	**Glamis**	**79.19**	**56**	P	**P**	**06 23 09.6 -0.4**			
GLA				pmax	pmax				
	comp=Z,14nm,0.8s								
GLA	**Glamis**	**79.19**	**56**	P	**P**	**06 23 10.4 +0.4**			
	baz=309,SNR=6.2								
LANS	**Liptovska Anna**	**79.23**	**326**	*e*P	**P**	**06 23 12.0 +2.1**			
LANS				*e*		06 23 21.0			
LANS				pmax	pmax				
	comp=Z,28nm,1.1s								
LANS	**Liptovska Anna**	**79.23**	**326**	*e*P	**P**	**06 23 12.0 +2.1**			
LANS				*e*		06 23 21.0			
VOIR		**79.27**	**320**

CLL eSS SS 06 38 42.0 +14
CLL eSSS SSS 06 42 06.0
VRAC Vranov 80.35 327 ⇑P **P 06 23 18.0 +2.1**
VRAC Vranov 80.35 327 LR LR 07 01 49.7
comp=Z,759nm,18.3s,baz=34,slow=38
VRAC Vranov 80.35 327 *e*P **P 06 23 17.3 +1.3**
VRAC *e* 06 23 26.8
B35A Bob, Littlefor 80.38 34 P **P 06 23 16.7 +0.6**
baz=319,SNR=6.4
RAR Rarotonga 80.42 127 LR LR 06 51 49.7
comp=Z,236nm,20.3s,baz=279,slow=30
GZR Gura Zlata 80.43 322 ⇑P **P 06 23 17.7 +1.2**
SFX San Felipe 80.43 58 IAmb IAmb 06 23 19.1
comp=Z,22nm,1.0s
ISCO Idaho Springs 80.46 46 IAmb IAmb 06 23 29.6
comp=Z,47nm,1.9s
ISCO Idaho Springs 80.46 46 P **P 06 23 18.4 +1.3**
baz=313
ISCO Idaho Springs 80.46 46 P **P 06 23 18.4 +1.3**
baz=313,SNR=13
MVCO Mesa Verde 80.50 50 P **P 06 23 17.4 +0.1**
MVCO Mesa Verde 80.50 50 P **P 06 23 18.2 +0.9**
baz=311,SNR=14
SMOL Smolenice 80.60 326 *e*P **P 06 23 19.4 +2.1**
SMOL *e* 06 23 28.3
SMOL pmax pmax
comp=Z,37nm,1.1s
KRUC Moravsky 80.62 327 *e*P **P 06 23 19.2 +1.8**
KRUC *e* 06 23 27.9
PRU Pruhonice 80.68 329 *e*PCP **PcP 06 23 27.6 +3.2**
PRU AMS AMS 07 01 30.0
comp=Z,700nm,17.5s
SRE Strehaia 80.74 321 ⇑P **P 06 23 20.3 +2.1**
RAYN Ar Rayn 80.75 293 P **P 06 23 18.4 -0.2**
RAYN IAmb IAmb 06 23 30.0
comp=Z,48nm,1.1s
RAYN Ar Rayn 80.75 293 P **P 06 23 18.4 -0.2**
RAYN pmax pmax
comp=Z,48nm,1.1s
RAYN Ar Rayn 80.75 293 *i*P P 06 23 25.6 +7.0
SNR=5.6
MODS Modra-Piesok 80.77 326 *e*P **P 06 23 21.0 +2.8**
MODS *e* 06 23 28.7
MODS pmax pmax
comp=Z,146nm,1.2s
MODS Modra-Piesok 80.77 326 *e*P **P 06 23 21.0 +2.8**
MODS *e* 06 23 28.7
SUSD Miller 80.80 39 P **P 06 23 19.6 +1.2**
SUSD Miller 80.80 39 P **P 06 23 19.5 +1.1**
baz=316
SUSD Miller 80.80 39 P **P 06 23 18.7 +0.2**
baz=316
TREC Trest 80.83 328 *e*PCP **PcP 06 23 28.9 +3.8**
BZS Buzias 80.83 322 ⇑P **P 06 23 20.6 +2.0**
HERR Herculane 80.97 321 ⇑P **P 06 23 20.5 +1.1**
ZST Bratislava 80.98 326 *e* P 06 23 30.7 +11
F33A 5 Mile Ranch, 81.08 37 P **P 06 23 20.3 +0.4**
F33A IAmb IAmb 06 23 32.6
comp=Z,20nm,0.8s
F33A 5 Mile Ranch, 81.08 37 P **P 06 23 20.8 +0.9**
baz=317,SNR=11
W18A Petrified Fore 81.11 52 P **P 06 23 21.1 +0.6**
baz=311
S22A 4UR Ranch, Cre 81.14 49 P **P 06 23 22.8 +2.0**
baz=312,SNR=23
214A Organ Pipe Nat 81.19 56 P **P 06 23 22.2 +1.4**
baz=310,SNR=9.9
Q24A Divide 81.29 47 P **P 06 23 22.6 +1.0**
baz=313
NKC Novy Kostel 81.33 330 AMS AMS 07 02 30.0
comp=Z,700nm,15.2s
MDVR Moldovita 81.39 322 ⇑P **P 06 23 22.7 +1.0**
OGNE Ogallala 81.67 44 P **P 06 23 22.5 -0.7**
OGNE IAmb IAmb 06 23 38.7
comp=Z,36nm,0.9s
OGNE Ogallala 81.67 44 P **P 06 23 23.6 +0.4**
baz=314
EYMN Ely 81.67 33 P **P 06 23 23.6 +0.6**
baz=320,SNR=5.6
EYMN S **S 06 33 31.7 -1.6**
baz=320
EYMN Ely 81.67 33 P **P 06 23 22.9 -0.1**
baz=320
CKRC Cesky Krumlov 81.69 328 *e*PCP **PcP 06 23 33.1 +4.2**
CKRC *e*S **S 06 33 33.1 -0.3**
CKRC AMS AMS 07 02 40.0
comp=Z,600nm,17.6s
RONA Rosalia, Austr 81.71 326 *e*P P 06 23 34.1 +11
comp=Z,62nm,1.0s,SNR=8.1
MMAI Mount Meron Ar 81.72 306 LR LR 07 03 21.8
comp=Z,233nm,18.9s,baz=208,slow=38
CONA Conrad Observa 81.72 327 *e*P P 06 23 34.0 +11
comp=Z,48nm,1.0s,SNR=6.9
KHC Kasperske Hory 81.74 329 *e*P **P 06 23 24.6 +1.2**
KHC *e* 06 23 33.8
KHC *e*S **S 06 33 29.4 -4.7**
KHC MLR MLR
comp=Z,900nm,18.7s
KHC Kasperske Hory 81.74 329 *e*P **P 06 23 24.6 +1.2**
KHC *e*PCP **pP 06 23 33.8 +0.8**
KHC *e*S **S 06 33 29.4 -4.7**
KHC AMS AMS 07 02 20.0
comp=Z,900nm,18.7s
KDZ Kurdzhali 81.75 317 P P 06 23 33.0 +9.5
BLKB Belogradchik 81.76 320 ⇓P **P 06 23 25.5 +1.9**
PGB Panagyurishte 81.77 319 P P 06 23 33.0 +9.3
MORH Mrgy, Hungar 81.79 324 ⇓P **P 06 23 25.3 +1.7**
SDCO Great Sand Dun 81.92 48 P **P 06 23 25.7 +0.8**
SDCO Great Sand Dun 81.92 48 P **P 06 23 26.5 +1.7**
baz=313
SDCO Great Sand Dun 81.92 48 P **P 06 23 25.7 +0.8**
baz=313,SNR=18
GEC2 GERESS Array S 81.92 329 P **P 06 23 24.7 +0.3**
GEC2 IAmb IAmb 06 23 35.5
comp=Z,37nm,1.0s
GERES GERESS Array B 81.92 329 P **P 06 23 24.2 -0.2**
comp=Z,1.0nm,0.7s,baz=32,slow=5.8,SNR=10
GERES LR LR 07 02 47.8
comp=Z,663nm,18.9s,baz=34,slow=38
comp=Z,1.0nm,0.7s
GERES GERESS Array B 81.92 329 P **P 06 23 25.1 +0.7**
FRGS Fruska Gora 82.03 323 ⇑P **P 06 23 26.4 +1.4**
EKA Eskdalemuir Ar 82.09 341 LR LR 07 04 06.7
comp=Z,386nm,18.2s,baz=30,slow=39
RZN Rozhen 82.09 318 P P 06 23 35.0 +9.4
VTS Vitosha 82.20 319 ⇑P **P 06 23 28.0 +1.9**
VTS Vitosha 82.20 319 P **P 06 23 26.9 +0.9**
VTS Vitosha 82.20 319 P **P 06 23 26.9 +0.9**
VTS pmax pmax
comp=Z,56nm,1.0s
VTS Vitosha 82.20 319 P P 06 23 36.0 +10
K31A O'Neill 82.20 41 P **P 06 23 27.2 +1.3**
K31A O'Neill 82.20 41 P **P 06 23 27.0 +1.0**
baz=316,SNR=5.4
TUC Tucson 82.28 55 P **P 06 23 26.8 +0.2**
TUC Tucson 82.28 55 P **P 06 23 26.8 +0.2**
TUC pmax pmax
comp=Z,8.0nm,1.0s
TUC Tucson 82.28 55 P **P 06 23 28.0 +1.4**
baz=311
F36A Milaca 82.36 36 P **P 06 23 26.8 +0.1**
baz=319
ARSA Arzberg 82.39 327 *e*P P 06 23 37.0 +10
comp=Z,30nm,1.1s,SNR=8.4
MOA Molln 82.46 328 *e*P P 06 23 37.1 +10
comp=Z,54nm,1.3s,SNR=7.0
ECSD EROS Data Cent 82.47 39 P **P 06 23 27.5 +0.2**
ECSD IAmb IAmb 06 23 38.7
comp=Z,19nm,0.8s
ECSD EROS Data Cent 82.47 39 P **P 06 23 27.9 +0.6**
baz=317,SNR=17
ECSD EROS Data Cent 82.47 39 P **P 06 23 28.0 +0.6**
baz=317
E38A The Farm, Brul 82.67 34 P **P 06 23 28.2 -0.1**
E38A IAmb IAmb 06 23 40.9
comp=Z,32nm,1.1s
E38A The Farm, Brul 82.67 34 P **P 06 23 28.8 +0.5**
baz=320,SNR=5.5
DIVS Divibare 82.73 322 P **P 06 23 28.4 -0.4**
DIVS IAmb IAmb 06 23 39.8
comp=Z,51nm,1.2s
URZ Urewera 82.73 153 P **P 06 23 28.0 -0.4**
comp=Z,22nm,0.8s,baz=316,slow=4.1,SNR=13
URZ LR LR 06 56 30.2
comp=Z,197nm,19.1s,baz=30,slow=33
comp=Z,22nm,0.8s
URZ Urewera 82.73 153 P **P 06 23 28.0 -0.4**
URZ IAmb IAmb 06 23 28.6
comp=Z,24nm,0.9s
KKB Krupnik 82.82 319 P P 06 23 39.0 +10
BIOA Bad Ischl, Aus 82.85 328 *e*P P 06 23 39.5 +10
comp=Z,96nm,1.1s,SNR=10.0
T25A Trinidad 82.96 48 P **P 06 23 30.1 -0.2**
T25A IAmb IAmb 06 23 42.6
comp=Z,14nm,0.8s
T25A Trinidad 82.96 48 P **P 06 23 31.4 +1.1**
baz=314,SNR=8.6
SOKA Soboth 83.05 326 *e*P P 06 23 40.4 +10
comp=Z,126nm,1.1s
SPMN Marine on St. 83.17 36 P **P 06 23 30.7 -0.1**
SPMN Marine on St. 83.17 36 P **P 06 23 31.4 +0.5**
baz=320
SPMN Marine on St. 83.17 36 P **P 06 23 30.5 -0.4**
baz=320
ANMO Albuquerque 83.24 50 LR LR 06 54 03.2
comp=Z,82nm,21.3s,baz=323,slow=31
ANMO Albuquerque 83.24 50 P **P 06 23 32.3 +0.6**
ANMO IAmb IAmb 06 23 34.6
comp=Z,19nm,1.1s
ANMO Albuquerque 83.24 50 P **P 06 23 32.3 +0.6**
ANMO pmax pmax
comp=Z,19nm,1.2s
ANMO Albuquerque 83.24 50 P **P 06 23 33.1 +1.5**
baz=313,SNR=30
ANMO Albuquerque 83.24 50 P **P 06 23 33.0 +1.3**
baz=313
BEBN Eben Emael 83.36 334 *d*pP pP 06 23 41.5 +0.2
BTNL Ternell 83.39 334 *d*pP pP 06 23 42.0 +0.5
OBKA Obir 83.39 327 *e*P P 06 23 41.8 +10
comp=Z,30nm,1.0s
MEM Membach 83.41 334 *d*pP pP 06 23 40.8 -0.8
comp=Z,40nm,0.9s
KBA Koelnbreinsper 83.45 328 *e*P P 06 23 42.2 +10
comp=Z,40nm,0.9s
BSTI Sart Tilman 83.58 334 *d*pP pP 06 23 43.0 +0.5
Y22A Socorro 83.61 51 P **P 06 23 35.4 +1.8**
baz=312,SNR=15
BHOU Houvegnez 83.62 334 *d*pP pP 06 23 43.5 +0.7
VNDS Vrh nad Dolski 83.64 326 *e*P P 06 23 42.8 +9.5
MYKA Terra Mystica 83.68 327 *e*P P 06 23 42.9 +9.3
comp=Z,34nm,1.2s,SNR=6.3
LJU Ljubljana 83.76 326 *e*P P 06 23 43.4 +9.5
I37B Waseca 83.81 37 P **P 06 23 35.5 +1.3**
baz=319,SNR=14
BCLA Clavier 83.81 334 *d*pP **pP 06 23 44.3 +0.6**
BCLA *d*sP sP 06 23 47.8 +0.6
319A Douglas 83.86 55 IAmb IAmb 06 23 37.3
comp=Z,28nm,0.9s
SCHQ Schefferville 83.88 16 P **P 06 23 34.0 -0.4**
comp=Z,4.1nm,0.6s,baz=342,slow=6.4,SNR=4.3
SCHQ LR LR 07 02 33.1
comp=Z,204nm,21.0s,baz=342,slow=37
comp=Z,4.1nm,0.6s
WATA Walderalm 83.98 329 *e*P P 06 23 44.9 +10
comp=Z,21nm,0.9s
WTTA Wattenberg 84.02 329 *e*P P 06 23 45.3 +10
comp=Z,47nm,1.2s,SNR=5.4
ARG Arkhangelos 84.03 312 P **P 06 23 35.1 -0.3**
ARG Arkhangelos 84.03 312 P **P 06 23 35.1 -0.3**
ARG pmax pmax
comp=Z,302nm,1.6s
121A Cookes Peak, D 84.04 53 P **P 06 23 36.7 +0.9**
121A IAmb IAmb 06 23 38.7
comp=Z,22nm,0.9s
121A Cookes Peak, D 84.04 53 P **P 06 23 37.4 +1.6**
baz=312,SNR=19
121A Cookes Peak, D 84.04 53 P **P 06 23 36.9 +1.1**
baz=312,SNR=19
ROBS Robic 84.04 327 *e*P P 06 23 42.0 +6.7
ABTA Abfaltersbach 84.07 328 *e*P P 06 23 44.5 +8.9
comp=Z,29nm,1.1s,SNR=10.0
BMRD Maredsous 84.09 334 *d*pP pP 06 23 45.4 +0.3
PMOR Pomariorio Ree 84.13 114 *e*T T 07 56 11.0
comp=Z,44nm,0.2s
CLUD Cludinico 84.14 327 P **P 06 23 35.8 -0.1**
WLF Walferdange 84.15 333 *d*pP pP 06 23 46.4 +1.0
MOTA Moosalm 84.17 329 *e*P P 06 23 46.0 +10
comp=Z,94nm,1.1s,SNR=7.9
EIL Elat 84.19 303 LR LR 07 05 17.9
comp=Z,342nm,19.0s,baz=81,slow=39
RETA Reutte 84.19 329 *e*P P 06 23 46.3 +10
comp=Z,81nm,1.0s
SQTA Sankt Quirin 84.22 329 *e*P P 06 23 46.2 +10
comp=Z,41nm,1.0s,SNR=9.5
G40A Rib Lake 84.31 34 IAmb IAmb 06 23 51.9
comp=Z,17nm,0.9s
G40A Rib Lake 84.31 34 P **P 06 23 37.5 +0.8**
baz=321,SNR=6.9
DOU Dourbes 84.33 334 *d*PcP **P 06 23 38.2 +1.6**
DOU *d*pP **pP 06 23 46.5 +0.2**
DOU *d*sP **sP 06 23 50.1 +0.2**
PDG Podgorica 84.33 321 ⇑P **P 06 23 39.1 +2.3**
STAL STALIGIAL 84.37 327 P **P 06 23 36.1 -0.9**
LIT Litokhoron 84.40 318 P **P 06 23 36.2 -1.0**
LIT Litokhoron 84.40 318 P **P 06 23 36.3 -1.0**
BFO Black Forest 84.45 331 P **P 06 23 37.5 +0.1**
BFO Black Forest 84.45 331 P **P 06 23 37.6 +0.1**
BFO pmax pmax
comp=Z,108nm,1.0s
FETA Feichten 84.58 329 *e*P P 06 23 48.2 +10
comp=Z,41nm,1.0s,SNR=12
PPT Papeete 84.66 117 LR LR 06 54 28.7
comp=Z,87nm,19.7s,baz=316,slow=31
PPT2 Papeete2 84.67 117 *e*LR LR 06 50 23.2
comp=Z,676nm,24.8s
PPT2 Papeete2 84.67 117 *e*T T 07 56 52.3
comp=Z,7.7nm,0.3s
DAVA Damuels 84.71 330 *e*P P 06 23 48.9 +10
comp=Z,129nm,1.0s,SNR=14
PAE Paea 84.72 117 *e*T T 07 56 55.0
comp=Z,1.3nm,0.2s
TIAR Tiarei 84.81 117 *e*T T 07 57 02.0
comp=Z,2.1nm,0.2s
APE Apeiranthos 84.92 314 ⇑P **P 06 23 41.3 +1.2**
ECH Echery 84.99 332 P **P 06 23 40.9 +0.8**
ECH Echery 84.99 332 P **P 06 23 40.9 +0.8**
ECH pmax pmax
comp=Z,68nm,1.0s
N35A Tabor 85.08 40 P **P 06 23 40.2 -0.5**
N35A Tabor 85.08 40 P **P 06 23 41.8 +1.1**
baz=318
DAVOX Davos/Dischmat 85.12 329 LR LR 07 05 05.1
comp=Z,806nm,18.6s,baz=32,slow=38
K38A Parkersburg 85.15 37 P **P 06 23 41.8 +0.8**
baz=320
I40A Norwalk 85.19 35 P **P 06 23 41.0 -0.2**
I40A IAmb IAmb 06 23 54.1
comp=Z,17nm,0.7s
I40A Norwalk 85.19 35 P **P 06 23 41.4 +0.2**
baz=321
AGG Agios Georgios 85.27 317 P **P 06 23 41.0 -0.7**
AGG IAmb IAmb 06 23 51.2
comp=Z,36nm,1.2s
AGG Agios Georgios 85.27 317 P **P 06 23 41.0 -0.7**
AGG pmax pmax
comp=Z,36nm,1.2s
TEOL Teolo 85.53 328 P **P 06 23 41.5 -1.3**
OXZ Oxford 85.69 159 P **P 06 23 43.9 +0.6**
RPZ Rata Peaks 85.77 159 P **P 06 23 44.7 +0.9**
comp=Z,20nm,1.0s,baz=350,slow=6.1,SNR=4.0
RPZ LR LR 07 00 56.2
comp=Z,238nm,18.4s,baz=328,slow=35
comp=Z,20nm,1.0s
SALO Salr 85.80 328 P **P 06 23 43.8 -0.4**
TAOE Nuku Hiva Isla 85.87 105 *e*LR LR 06 50 57.1
comp=Z,537nm,29.1s
KSU1 Kansas State U 85.89 42 P **P 06 23 44.3 -0.4**
KSU1 Kansas State U 85.89 42 P **P 06 23 45.2 +0.5**
baz=316,SNR=6.5
KSU1 Kansas State U 85.89 42 P **P 06 23 44.7 0.0**
baz=318
MEH Mehetia 85.92 116 *e*T T 07 58 25.5
comp=Z,92nm,0.3s
I42A Draeger Farm, 85.96 34 IAmb IAmb 06 23 56.4
comp=Z,26nm,0.8s
I42A Draeger Farm, 85.96 34 P **P 06 23 45.9 +0.9**
baz=322,SNR=5.3
KEK Kerkira 86.09 319 P **P 06 23 45.6 -0.1**
MNTX Cornudas Mount 86.10 52 P **P 06 23 46.5 +0.5**
MNTX Cornudas Mount 86.10 52 P **P 06 23 47.2 +1.2**
baz=313
MNTX Cornudas Mount 86.10 52 P **P 06 23 46.6 +0.6**
baz=313,SNR=16
AMTX Amarillo 86.12 48 P **P 06 23 46.1 +0.1**
AMTX IAmb IAmb 06 23 57.9
comp=Z,22nm,0.8s
AMTX Amarillo 86.12 48 P **P 06 23 47.7 +1.6**
baz=315,SNR=7.8
AMTX Amarillo 86.12 48 P **P 06 23 46.3 +0.2**
baz=315
MSTX Muleshoe 86.12 49 P **P 06 23 46.3 +0.2**
MSTX IAmb IAmb 06 23 58.5
comp=Z,19nm,1.2s
MSTX Muleshoe 86.12 49 P **P 06 23 46.7 +0.6**
baz=315
JFWS Jewell Farm 86.12 36 P **P 06 23 45.9 +0.1**
JFWS IAmb IAmb 06 23 56.8
comp=Z,16nm,0.8s
JFWS Jewell Farm 86.12 36 P **P 06 23 45.9 +0.1**
JFWS pmax pmax
comp=Z,16nm,0.8s
JFWS Jewell Farm 86.12 36 P **P 06 23 46.0 +0.2**
baz=322
JFWS Jewell Farm 86.12 36 P **P 06 23 45.3 -0.5**
baz=322
L40A Anamosa 86.33 37 P **P 06 23 46.9 +0.1**
L40A IAmb IAmb 06 23 58.1
comp=Z,26nm,0.8s
L40A Anamosa 86.33 37 P **P 06 23 47.1 +0.2**
baz=321,SNR=7.0
N38A Joes South For 86.33 39 P **P 06 23 48.0 +1.1**
baz=320
GDL2 Guadalupe Moun 86.39 51 P **P 06 23 48.4 +0.9**
IDI Anoyia 86.55 313 ⇑P **P 06 23 50.4 +2.3**
IDI Anoyia 86.55 313 LR LR 07 08 03.6
comp=Z,193nm,18.4s,baz=67,slow=40
CLN7 Carlsbad 7 86.58 51 P **P 06 23 49.1 +0.7**
HTMS Hat Mesa 86.64 51 P **P 06 23 48.4 -0.3**
OK032 Salt Plains WL 86.71 44 IAmb IAmb 06 24 00.8
comp=Z,23nm,0.8s
KS20 Mayfield South 86.75 44 IAmb IAmb 06 24 00.3
comp=Z,19nm,0.8s
MATE Matera 86.93 322 ⇑P **P 06 23 51.5 +1.7**
VLDQ Val d'Or 86.94 25 IAmb IAmb 06 23 59.9
comp=Z,19nm,0.9s
GLMI Grayling 87.04 31 P **P 06 23 51.1 +0.8**
baz=325
P38A Dawn 87.07 40 P **P 06 23 50.9 +0.4**
baz=320,SNR=10.0
L42A Oliver, Polo 87.10 36 IAmb IAmb 06 24 03.3
comp=Z,34nm,1.2s
L42A Oliver, Polo 87.10 36 P **P 06 23 51.0 +0.3**
baz=322
N41A Harden Midland 87.56 37 P **P 06 23 53.7 +0.8**
baz=321,SNR=6.3
P40A Paris 87.89 39 P **P 06 23 55.0 +0.6**
baz=320,SNR=16
WMOK Wichita Mounta 87.89 46 **P 06 23 54.9 +0.3**
WMOK IAmb IAmb 06 24 07.7
comp=Z,12nm,0.9s
WMOK Wichita Mounta 87.89 46 P **P 06 23 54.9 +0.3**
WMOK pmax pmax
comp=Z,12nm,1.0s
WMOK Wichita Mounta 87.89 46 P **P 06 23 55.2 +0.7**
baz=317
WMOK Wichita Mounta 87.89 46 P **P 06 23 55.6 +1.0**
baz=317,SNR=6.5
LPIG La Paz 87.97 61 LR LR 06 58 09.1
comp=Z,76nm,18.5s,baz=284,slow=32
TIP Timpagrande 88.03 321 ⇑P **P 06 23 56.2 +1.0**
TIP Timpagrande 88.03 321 P **P 06 23 55.3 +0.1**
TIP IAmb IAmb 06 24 06.2
comp=Z,37nm,1.2s
J47A Sunmer 88.25 32 P **P 06 23 57.6 +1.5**
baz=325
J47A P **P 06 23 57.6 +1.5**
baz=325
M44A Midewin, Midew 88.33 35 P **P 06 23 56.6 +0.1**
baz=323
DEOK Depew 88.35 44 **P 06 23 56.8 0.0**
DEOK IAmb IAmb 06 24 08.7
comp=Z,23nm,1.0s
HDIL Hopedale 88.41 37 P **P 06 23 57.2 +0.3**
HDIL Hopedale 88.41 37 P **P 06 23 57.5 +0.6**
baz=322,SNR=7.0
HDIL Hopedale 88.41 37 P **P 06 23 57.5 +0.6**
baz=322
S39A Bolivar 88.65 41 P **P 06 23 57.9 -0.2**
S39A IAmb IAmb 06 24 09.0
comp=Z,10nm,0.8s
S39A Bolivar 88.65 41 P **P 06 23 58.3 +0.2**
baz=320
TBI Tubuai 88.66 121 *e*LR LR 06 52 13.3
comp=Z,314nm,22.5s
TBI Tubuai 88.66 121 *e*T T 08 01 50.2
comp=Z,72nm,0.3s
TUL1 Leonard 88.68 44 IAmb IAmb 06 24 11.5
comp=Z,11nm,0.9s
TUL1 Leonard 88.68 44 P **P 06 23 59.8 +1.5**
baz=318
TUL1 Leonard 88.68 44 P **P 06 23 58.9 +0.6**
baz=318
R40A Maddies Statio 88.73 40 P **P 06 23 58.5 +0.1**
R40A Maddies Statio 88.73 40 P **P 06 23 58.6 +0.1**
baz=320,SNR=13
TX31 Lajitas Ar. Si 88.80 53 P **P 06 23 60.0 +0.9**
TX31 Lajitas Ar. Si 88.80 53 P **P 06 24 00.0 +0.9**
baz=314,SNR=31
TX32 Lajitas Array 88.80 53 P **P 06 23 60.0 +0.9**
TX32 IAmb IAmb 06 24 11.1
comp=Z,7.0nm,0.7s
TXAR Lajitas Array 88.80 53 P **P 06 24 00.1 +1.0**
comp=Z,5.8nm,0.7s,baz=296,slow=3.4,SNR=106
TXAR LR LR 07 01 31.5
comp=Z,80nm,18.4s,baz=314,slow=34
comp=Z,5.8nm,0.7s
TXAR Lajitas Array 88.80 53 P **P 06 23 59.7 +0.6**
TXAR Lajitas Array 88.80 53 P **P 06 23 59.7 +0.6**
ABTX Abilene, Hawle 88.92 48 P **P 06 23 59.2 -0.3**
ABTX IAmb IAmb 06 24 11.6
comp=Z,23nm,1.1s
ABTX Abilene, Hawle 88.92 48 P **P 06 24 00.7 +1.2**
baz=316,SNR=10
ABTX Abilene, Hawle 88.92 48 P **P 06 23 59.9 +0.4**
baz=316,SNR=10
P43A Skaggs, Pawnee 89.03 37 P **P 06 24 00.2 +0.4**
P43A Skaggs, Pawnee 89.03 37 P **P 06 24 00.3 +0.4**
baz=322
U38A Gravette 89.04 42 IAmb IAmb 06 24 11.5
comp=Z,15nm,0.8s
U38A Gravette 89.04 42 P **P 06 24 00.7 +0.7**
baz=319,SNR=10.0
O44A Mansfield 89.12 36 IAmb IAmb 06 24 11.7
comp=Z,16nm,0.8s
SADO Sadowa 89.22 28 LR LR 07 06 48.8
comp=Z,165nm,19.8s,baz=360,slow=38
HHAR Hobbs 89.39 42 P **P 06 23 59.8 -1.9**
HHAR IAmb IAmb 06 24 12.9
comp=Z,9.7nm,0.8s
HHAR Hobbs 89.39 42 P **P 06 24 02.2 +0.6**
baz=319
CCM Cathedral Cave 89.42 39 P **P 06 24 01.9 +0.2**
CCM Cathedral Cave 89.42 39 P **P 06 24 01.9 +0.2**
CCM pmax pmax
comp=Z,32nm,0.9s
CCM Cathedral Cave 89.42 39 P **P 06 24 02.7 +1.0**
baz=321,SNR=20
CCM Cathedral Cave 89.42 39 P **P 06 24 01.8 +0.2**
baz=321
L48A N Adams 89.48 33 P **P 06 24 03.1 +1.2**
AAM Ann Arbor 89.51 32 P **P 06 24 02.6 +0.5**
baz=326
TRQ Mont Tremblant 89.56 25 IAmb IAmb 06 24 15.4
comp=Z,38nm,1.4s
SFIN Lafayette 89.57 35 P **P 06 24 03.2 +0.8**
baz=324
SFIN Lafayette 89.57 35 P **P 06 24 02.2 -0.1**
baz=324
MGMO Mountain Grove 89.60 41 IAmb IAmb 06 24 13.9
comp=Z,25nm,0.9s
Z35A Perchaven, San 89.78 46 P **P 06 24 04.4 +0.9**
baz=318,SNR=13
N47A Urbana 89.80 34 P **P 06 24 04.2 +0.8**
baz=324
N47A P **P 06 24 04.2 +0.8**
baz=324
Q44A Meyer Farm, Va 89.85 37 IAmb IAmb 06 24 16.5
comp=Z,23nm,0.9s

Q44A	**Meyer Farm, Va**	**89.85**	**37**	P	**P**	**06 24 04.5 +0.8**
	baz=322					
FVM	**French Village**	**89.88**	**39**	P	**P**	**06 24 04.3 +0.4**
FVM				IAmb	IAmb	06 24 15.6
	comp=Z,15nm,0.8s					
FVM	**French Village**	**89.88**	**39**	P	**P**	**06 24 04.3 +0.4**
FVM				pmax	pmax	
	comp=Z,15nm,0.8s					
FVM	**French Village**	**89.88**	**39**	P	**P**	**06 24 04.1 +0.2**
	baz=322					
X37A	**Clayton**	**89.90**	**44**	IAmb	IAmb	06 24 18.0
	comp=Z,12nm,1.0s					
X37A	**Clayton**	**89.90**	**44**	P	**P**	**06 24 04.8 +0.8**
	baz=319					
P46A	**Rosedale**	**90.13**	**36**	P	**P**	**06 24 05.2 +0.3**
P46A	**Rosedale**	**90.13**	**36**	P	**P**	**06 24 05.8 +0.9**
	baz=324					
ATD	**Arta Tunnel**	**90.16**	**285**	LR	LR	07 07 52.7
	comp=Z,78nm,18.7s,baz=20,slow=38					
JCT	**Junction City**	**90.36**	**50**	P	**P**	**06 24 07.0 +0.7**
JCT				IAmb	IAmb	06 24 17.9
	comp=Z,17nm,0.8s					
JCT	**Junction City**	**90.36**	**50**	P	**P**	**06 24 07.0 +0.7**
JCT				pmax	pmax	
	comp=Z,17nm,0.8s					
JCT	**Junction City**	**90.36**	**50**	P	**P**	**06 24 07.2 +0.8**
	baz=316,SNR=10					
JCT	**Junction City**	**90.36**	**50**	P	**P**	**06 24 07.1 +0.8**
	baz=316,SNR=10					
OLIL	**Olney**	**90.42**	**37**	P	**P**	**06 24 06.7 +0.4**
N49A	**Columbus Grove**	**90.42**	**33**	P	**P**	**06 24 06.3 0.0**
VAE	**Valguarnera**	**90.51**	**321**	LR	LR	07 09 57.1
	comp=Z,377nm,18.0s,baz=92,slow=39					
O48B	**Farmland**	**90.54**	**34**	P	**P**	**06 24 07.5 +0.6**
	baz=325					
O48B	**Farmland**	**90.54**	**34**	P	**P**	**06 24 07.9 +1.0**
	baz=325					
FCAR	**Ozark Folk Cen**	**90.64**	**41**	P	**P**	**06 24 08.1 +0.6**
FCAR				IAmb	IAmb	06 24 18.7
	comp=Z,31nm,1.3s					
WHTX	**Lake Whitney,**	**90.64**	**47**	P	**P**	**06 24 08.3 +0.8**
WHTX	**Lake Whitney,**	**90.64**	**47**	P	**P**	**06 24 09.0 +1.5**
	baz=317,SNR=13					
WHTX	**Lake Whitney,**	**90.64**	**47**	P	**P**	**06 24 08.4 +0.8**
	baz=317,SNR=13					
S44A	**Carbondale**	**90.69**	**38**	P	**P**	**06 24 08.2 +0.6**
S44A	**Carbondale**	**90.69**	**38**	P	**P**	**06 24 08.5 +0.9**
	baz=322					
SIUC	**Southern Illin**	**90.69**	**38**	P	**P**	**06 24 08.4 +0.7**
MIAR	**Mount Ida**	**90.90**	**43**	IAmb	IAmb	06 24 20.6
	comp=Z,19nm,0.8s					
MIAR	**Mount Ida**	**90.90**	**43**	P	**P**	**06 24 09.7 +1.0**
	baz=320,SNR=13					
MIAR	**Mount Ida**	**90.90**	**43**	P	**P**	**06 24 09.5 +0.8**
	baz=320					
H06N1	**SOCORRO T-PHAS**	**90.94**	**65**	T	T	08 05 27.1
O49A	**Covington**	**90.96**	**34**	IAmb	IAmb	06 24 20.4
	comp=Z,16nm,0.9s					
WHAR	**Wooly Hollow**	**91.02**	**42**	P	**P**	**06 24 09.2 0.0**
ERPA	**Erie**	**91.15**	**30**	P	**P**	**06 24 10.3 +0.6**
	baz=328					
P49A	**Miami Univ. Ec**	**91.33**	**34**	P	**P**	**06 24 10.2 -0.3**
P49A	**Miami Univ. Ec**	**91.33**	**34**	P	**P**	**06 24 10.8 +0.3**
	baz=325					
435B	**Jarrell**	**91.45**	**48**	P	**P**	**06 24 10.8 -0.5**
435B				IAmb	IAmb	06 24 23.1
	comp=Z,13nm,0.8s					
435B	**Jarrell**	**91.45**	**48**	P	**P**	**06 24 11.3 0.0**
	baz=317					
ACSO	**Alum Creek Sta**	**91.51**	**33**	P	**P**	**06 24 11.6 +0.3**
	baz=326					
J57A	**Williamstown**	**91.53**	**27**	P	**P**	**06 24 11.6 +0.2**
WLAR	**White Oak Lake**	**91.80**	**43**	P	**P**	**06 24 12.1 -0.7**
VT1	**Waterbury**	**91.82**	**24**	P	**P**	**06 24 14.1 +1.3**
VT1				IAmb	IAmb	06 24 24.6
	comp=Z,14nm,0.9s					
PKME	**Peaks-Kenny Pk**	**92.04**	**22**	P	**P**	**06 24 13.3 -0.4**
	baz=336					
833A	**Chaparral WMA,**	**92.16**	**51**	IAmb	IAmb	06 24 28.3
	comp=Z,10nm,0.9s					
833A	**Chaparral WMA,**	**92.16**	**51**	P	**P**	**06 24 15.6 +1.0**
	baz=316					
M55A	**Ridgway**	**92.18**	**30**	P	**P**	**06 24 14.8 +0.3**
O53A	**New Philadelph**	**92.24**	**32**	P	**P**	**06 24 14.0 -0.8**
	baz=327					
T47A	**Sharon Grove**	**92.28**	**37**	P	**P**	**06 24 15.8 +0.7**
T47A				IAmb	IAmb	06 24 26.8
	comp=Z,15nm,0.8s					
T47A	**Sharon Grove**	**92.28**	**37**	P	**P**	**06 24 16.1 +1.1**
	baz=324					
CCAR	**Cane Creek**	**92.34**	**42**	P	**P**	**06 24 16.9 +1.5**
Q51A	**Peebles**	**92.35**	**34**	P	**P**	**06 24 16.4 +1.0**
	baz=326					
Q51A				P	**P**	**06 24 16.4 +1.0**
	baz=326					
BINY	**Binghamton**	**92.59**	**27**	P	**P**	**06 24 15.2 -1.2**
	baz=331					
WVT	**Waverly**	**92.62**	**38**	P	**P**	**06 24 16.5 -0.1**
WVT				IAmb	IAmb	06 24 28.2
	comp=Z,7.8nm,0.8s					
WVT	**Waverly**	**92.62**	**38**	P	**P**	**06 24 16.5 -0.1**
WVT				pmax	pmax	
	comp=Z,8.0nm,0.8s					
WVT	**Waverly**	**92.62**	**38**	P	**P**	**06 24 16.2 -0.4**
	baz=323					
O54A	**Avella**	**92.64**	**31**	P	**P**	**06 24 15.9 -0.7**
O54A				IAmb	IAmb	06 24 28.7
	comp=Z,13nm,0.8s					
W45A	**Hickory Valley**	**92.72**	**40**	P	**P**	**06 24 16.7 -0.4**
M57A	**Sunshine Farm,**	**92.92**	**29**	IAmb	IAmb	06 24 31.7
	comp=Z,16nm,0.9s					
L59A	**Walton**	**92.94**	**27**	P	**P**	**06 24 19.2 +1.2**
OXF	**Oxford**	**93.11**	**40**	P	**P**	**06 24 18.6 -0.3**
OXF				IAmb	IAmb	06 24 32.1
	comp=Z,20nm,0.9s					
OXF	**Oxford**	**93.11**	**40**	P	**P**	**06 24 18.6 -0.3**
OXF				pmax	pmax	
	comp=Z,20nm,1.0s					
OXF	**Oxford**	**93.11**	**40**	P	**P**	**06 24 19.4 +0.6**
	baz=322					
U49A	**Red Boiling Sp**	**93.30**	**37**	P	**P**	**06 24 19.5 -0.2**
U49A				IAmb	IAmb	06 24 31.2
	comp=Z,11nm,0.7s					
U49A	**Red Boiling Sp**	**93.30**	**37**	P	**P**	**06 24 20.1 +0.4**
	baz=324					
T50A	**Nancy**	**93.32**	**36**	P	**P**	**06 24 20.3 +0.5**
T50A				IAmb	IAmb	06 24 31.3
	comp=Z,15nm,0.8s					
T50A	**Nancy**	**93.32**	**36**	P	**P**	**06 24 20.4 +0.5**
	baz=325					
T50A				P	**P**	**06 24 20.4 +0.5**
	baz=325					
CLTN	**Cedars of Leba**	**93.37**	**37**	P	**P**	**06 24 21.1 +1.0**
CLTN				IAmb	IAmb	06 24 31.7
	comp=Z,9.0nm,0.8s					
S51A	**Beattyville**	**93.38**	**35**	IAmb	IAmb	06 24 31.7
	comp=Z,8.5nm,0.8s					
V48A	**Smith Brothers**	**93.42**	**38**	P	**P**	**06 24 19.5 -0.8**
V48A				IAmb	IAmb	06 24 31.7
	comp=Z,9.8nm,0.8s					
Q54A	**Coxs Mills**	**93.46**	**32**	P	**P**	**06 24 20.0 -0.5**
Q54A				IAmb	IAmb	06 24 32.2
	comp=Z,11nm,0.7s					
HRV	**Adam Dziewonsk**	**93.84**	**24**	P	**P**	**06 24 21.0 -1.1**
	baz=334					
SWET	**Sewanee**	**94.27**	**38**	IAmb	IAmb	06 24 35.3
	comp=Z,14nm,0.9s					
KEST	**Kesra**	**94.35**	**323**	LR	LR	07 11 43.2
	comp=Z,705nm,18.5s,baz=309,slow=39					
V52A	**Sevierville**	**94.86**	**36**	P	**P**	**06 24 27.8 +0.8**
	baz=326					
TKL	**Tuckaleechee C**	**94.93**	**36**	LR	LR	07 08 23.8
	comp=Z,102nm,21.7s,baz=343,slow=36					
TKL	**Tuckaleechee C**	**94.93**	**36**	IAmb	IAmb	06 24 38.5
	comp=Z,9.3nm,0.7s					
TKL	**Tuckaleechee C**	**94.93**	**36**	P	**P**	**06 24 27.6 +0.3**
	baz=326					
CBN	**Corbin Frederi**	**95.53**	**30**	P	**P**	**06 24 28.7 -1.2**
	baz=330					
BG3	**Lake Jocassee**	**95.87**	**36**	P	**P**	**06 24 30.4 -1.2**
BG3				IAmb	IAmb	06 24 43.1
	comp=Z,11nm,0.7s					
ESDC	**Sonseca Array**	**96.38**	**334**	P	**P**	**06 24 34.3 +0.5**
	comp=Z,0.8nm,1.0s,baz=18,slow=4.5,SNR=4.5					
ESDC				LR	LR	07 13 16.9
	comp=Z,504nm,18.0s,baz=14,slow=39					
	comp=Z,0.8nm,1.0s					

ESDC	**Sonseca Array**	**96.38**	**334**	P	**P**	**06 24 33.3 -0.5**
ESDC				IAmb	IAmb	06 24 44.7
	comp=Z,7.6nm,1.1s					
VNDA	**Vanda**	**116.25**	**175**	PKP	**PKiKP**	**06 29 47.2 +0.4**
	comp=Z,1.6nm,0.8s,baz=299,slow=4.6,SNR=12					
VNDA	**Vanda**	**116.25**	**175**	PKPdf	**PKiKP**	**06 29 47.1 +0.3**
VNDA	**Vanda**	**116.25**	**175**	PKiKP	**PKiKP**	**06 29 47.1 +0.3**
TORD	**Torodi Ar. Bea**	**116.84**	**316**	PKP	**PKPdf**	**06 29 49.5 -0.3**
	comp=Z,0.4nm,0.5s,baz=28,slow=3.4,SNR=2.4					
TORD				PKKPbc	**PKKPbc**	**06 40 14.9 +0.3**
	comp=Z,1.7nm,0.9s,baz=234,slow=5.1,SNR=3.7					
SDV	**Santo Domingo**	**123.89**	**40**	PKPdf	**PKiKP**	**06 30 03.8 -0.1**
SDV	**Santo Domingo**	**123.89**	**40**	*eP*	**PKiKP**	**06 30 04.3 +0.4**
BAUV	**El Baul**	**125.12**	**38**	PKPdf	**PKPdf**	**06 30 04.9 -0.9**
LBTB	**Lobatse**	**125.42**	**264**	PKPdf	**PKPdf**	**06 30 06.2 +0.1**
LBTB	**Lobatse**	**125.42**	**264**	PKiKP	**PKPdf**	**06 30 06.2 +0.1**
TIC	**Toumodi**	**125.85**	**318**	⇑*i*PKiKP	PKiKP	06 30 17.8 +10
	comp=Z,26nm,1.0s					
KIC	**Kosan Boka**	**125.94**	**318**	⇑*i*PKiKP	PKiKP	06 30 18.0 +10
	comp=Z,12nm,0.8s					
LIC	**Lamto**	**126.21**	**318**	⇑*i*PKiKP	PKiKP	06 30 18.5 +10
	comp=Z,38nm,1.0s					
QSPA	**South Pole Qui**	**128.11**	**180**		**PKPdf**	**06 30 09.8 -0.1**
BOSC	**San Juan Bosco**	**128.95**	**57**	PKPdf	**PKiKP**	**06 30 14.5 +0.5**
CZSB	**Cruzeiro do Su**	**136.16**	**55**	*eP*	**PKiKP**	**06 30 27.6 -0.7**
MCPB	**Macapa, AP**	**139.96**	**23**	*eP*	**PKPdf**	**06 30 34.3 +0.6**
MALB	**Monte Alegre**	**140.64**	**27**	*eP*	**PKiKP**	**06 30 37.7 +0.2**
TROLL	**Troll, Antarti**	**140.70**	**199**	PKPdf	**PKPdf**	**06 30 26.6 -6.8**
SNAA	**Sanae**	**142.21**	**197**	PKPdf	**PKPdf**	**06 30 30.9 -5.1**
ITTB	**Itaituba**	**142.41**	**30**	*eP*	**PKPdf**	**06 30 39.2 +1.2**
TMAB	**Tom-Au,PA,Br**	**142.95**	**17**	*eP*	**PKiKP**	**06 30 40.8 -1.4**
VNA2	**Neumayer--Watz**	**143.78**	**196**	PKPdf	PKPbc	06 30 36.4 -0.1
	baz=110,slow=3.0					
VNA3	**Neumayer Olymp**	**144.02**	**195**	PKPdf	PKPbc	06 30 37.0 -0.2
VNA1	**Neumayer--Stat**	**144.18**	**196**	PKPdf	PKPbc	06 30 37.9 +0.3
ROSB	**Rosario**	**144.22**	**11**	*eP*	**PKPdf**	**06 30 41.9 +0.7**
NPGB	**Novo Progresso**	**144.99**	**32**	*eP*	**PKPdf**	**06 30 42.9 +0.4**
LPAZ	**La Paz**	**145.46**	**59**	PKPbc	**PKPab**	**06 30 44.5 +0.2**
	comp=Z,25nm,0.8s,baz=335,slow=4.3,SNR=80					
LPAZ	**La Paz**	**145.46**	**59**	PKPbc	**PKPab**	**06 30 44.7 +0.5**
LPAZ	**La Paz**	**145.46**	**59**	*eP*	**PKPab**	**06 30 44.5 +0.2**
PB12	**IPOC Station P**	**145.53**	**64**	PKPbc	**PKPab**	**06 30 44.6 +0.8**
PB16	**IPOC Station P**	**145.92**	**63**	PKPbc	**PKPab**	**06 30 47.3 +1.4**
SMAI	**San Martin Ant**	**146.08**	**161**	PKPdf	**PKPbc**	**06 30 43.7 0.0**
PRPB	**Parauapebas**	**146.14**	**22**	*eP*	**PKPab**	**06 30 46.5 +0.4**
TA01	**Diego Aracena**	**146.90**	**67**	PKPbc	**PKPab**	**06 30 48.8 -0.1**
GO01	**Chusmiza**	**147.03**	**65**	PKPbc	**PKPab**	**06 30 49.3 -0.7**
RCBR	**Riachuelo**	**147.56**	**357**	*eP*	**PKPbc**	**06 30 48.8 -0.8**
PB01	**IPOC Station P**	**147.70**	**67**		**PKPbc**	**06 30 48.8 -1.1**
VILB	**Vilhena**	**147.78**	**44**	PKPbc	**PKiKP**	**06 30 51.4 -0.7**
CLDB	**Colider**	**148.22**	**35**	*eP*	**PKPdf**	**06 30 49.5 +1.5**
PB09	**IPOC Station P**	**148.35**	**68**		**PKPbc**	**06 30 50.7 -1.0**
PDRB	**Porto dos Gac**	**148.43**	**37**	*eP*	**PKPdf**	**06 30 49.8 +1.4**
PB06	**IPOC Station P**	**148.67**	**69**	PKPbc	**PKPbc**	**06 30 52.5 +0.1**
LVC	**Limon Verde**	**149.09**	**68**	PKPbc	**PKiKP**	**06 30 54.5 -0.5**
LVC	**Limon Verde**	**149.09**	**68**	PKP2	**PKiKP**	**06 30 54.5 -0.5**
LVC	**Limon Verde**	**149.09**	**68**	*eP*	**PKPdf**	**06 30 51.6 +2.0**
SMTB	**Santa Maria do**	**149.32**	**19**	*eP*	**PKPdf**	**06 30 51.6 +1.8**
PMSA	**Palmer Station**	**149.38**	**158**	*eP*	**PKPdf**	**06 30 50.2 +1.9**
GO02	**Mina Guanaco**	**150.07**	**73**	PKPbc	**PKiKP**	**06 30 57.4 +0.5**
PTLB	**Pontes e Lacer**	**150.41**	**45**	PKPdf	**PKPdf**	**06 30 50.0 -1.4**
PTLB	**Pontes e Lacer**	**150.41**	**45**	*eP*	**PKPdf**	**06 30 53.0 +1.6**
AC06	**Mina Casimiro**	**150.65**	**78**	PKPbc	**PKPbc**	**06 30 56.5 -0.5**
GO03	**Copiap**	**150.86**	**78**	PKPbc	**PKiKP**	**06 30 58.8 +0.6**
SNDB	**Serra Nova Dou**	**151.08**	**28**	*eP*	**PKPdf**	**06 30 53.9 +1.4**
AC02	**Maricunga**	**151.32**	**76**	PKPdf	**PKiKP**	**06 31 00.8 +1.1**
NBAN	**Anadia - AL**	**151.39**	**357**	*eP*	**PKPdf**	**06 30 54.9 +1.8**
SALV	**Santo Antonio**	**152.62**	**40**	*eP*	**PKPdf**	**06 30 56.4 +1.7**
MT09	**Talagante**	**152.85**	**91**	PKPdf	**PKPdf**	**06 30 54.2 -0.6**
MT09				PKPbc	**PKiKP**	**06 31 02.3 +0.1**
MT09					**pPKPbc**	**06 31 12.2 +0.2**
MT05	**Renca**	**152.92**	**90**		**PKPbc**	**06 31 01.2 -0.9**
MT05				PKPab	**PKPab**	**06 31 12.7 -0.7**
BO01	**Tunca**	**152.97**	**92**		**PKPbc**	**06 31 01.8 -0.2**
MT03	**Universidad Ad**	**153.13**	**90**		**PKPbc**	**06 31 02.7 +0.1**
LR03	**Panguipulli**	**153.19**	**104**	PKPdf	**PKPdf**	**06 30 55.0 +0.1**
LR03					**PKiKP**	**06 31 02.5 0.0**
LR03				PKPab	**PKPab**	**06 31 14.3 0.0**
LL04	**Puerto Octay**	**153.31**	**106**		**PKiKP**	**06 31 03.7 +1.0**
SDBA	**SAO DESIDERIO**	**153.38**	**16**	*eP*	**PKPdf**	**06 30 57.3 +1.3**
COYC	**Coyhaique**	**153.64**	**117**	PKPdf	**PKPdf**	**06 30 55.8 +0.4**
COYC					**pPKPdf**	**06 31 04.3 -1.0**
COYC				PKPab	**sPKPbc**	**06 31 14.8 -1.7**
ZON	**Zonda**	**153.85**	**84**		**PKiKP**	**06 31 05.1 +0.9**
GO06	**Curarrehue**	**153.86**	**103**		**PKPbc**	**06 31 04.0 0.0**
LL02	**Futaleuf**	**153.86**	**112**		**PKiKP**	**06 31 04.4 +0.6**
LL02				PKPab	**sPKPbc**	**06 31 14.8 -2.2**
PLCA	**Paso Flores**	**154.69**	**106**	PKP	**PKPdf**	**06 30 56.8 -0.3**
	comp=Z,2.3nm,1.1s,baz=276,slow=1.8,SNR=3.4					
PLCA				PKPbc	**pPKPdf**	**06 31 06.5 -0.5**
	comp=Z,6.7nm,1.0s,baz=272,slow=2.7,SNR=10					
PLCA	**Paso Flores**	**154.69**	**106**	*eP*	**PKPdf**	**06 30 58.7 +1.6**
GDU01	**Guandu, BA**	**155.40**	**4**	*eP*	**PKPdf**	**06 30 58.8 +0.1**
BDFB	**Brasilia**	**155.63**	**25**	PKPab	**PKPab**	**06 31 19.0 -6.1**
	comp=Z,4.8nm,0.7s,baz=55,slow=1.2,SNR=7.0					
BDFB	**Brasilia**	**155.63**	**25**	*eP*	**PKPdf**	**06 31 00.5 +1.4**
JANB	**Januaria**	**156.07**	**16**	*eP*	**PKPdf**	**06 31 01.2 +1.6**
AQDB	**Aquidauana**	**156.37**	**46**	*eP*	**PKPdf**	**06 31 00.9 +1.1**
IPMB	**Ipameri, GO**	**157.74**	**27**	*eP*	**PKPdf**	**06 31 02.9 +1.2**
NAN01	**Guarapari, ES**	**159.45**	**6**	*eP*	**PKPdf**	**06 31 04.6 +0.9**
CPUP	**Villa Florida**	**159.63**	**60**	PKPab	**PKPab**	**06 31 41.9 -0.3**
	comp=Z,4.3nm,1.0s,baz=313,slow=5.4,SNR=3.5					
PCMB	**Pacaembu**	**159.66**	**39**	*eP*	**PKPdf**	**06 31 04.6 +0.8**
TRCB	**Terra Rica**	**159.93**	**44**	*eP*	**PKPdf**	**06 31 04.5 +0.3**
RIB01	**Linhares ES**	**160.88**	**8**	*eP*	**PKPdf**	**06 31 06.6 +1.4**
PLTB	**Pedras Altas**	**165.47**	**68**	*eP*	**PKPdf**	**06 31 10.3 +1.0**

IDC 22 06:14:31.8±2.6, 54°17N×86°50E, h0km, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=20.7km s-min=12.5km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**258**	*i*		06 20 10.0	
	baz=80,slow=320,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.02**	**258**	Pg	Pg	06 14 50.0	-1.3
	2.0nm,0.3s,baz=77,slow=16,SNR=10						
ZALV				Lg	Lg	06 15 05.8	
	3.6nm,0.3s,baz=74,slow=29,SNR=15						
KURBB	**Kurchatov Arra**	**6.03**	**237**	Pn	Pn	06 16 03.5	+1.2
	0.4nm,0.3s,baz=54,slow=14,SNR=4.6						
KURBB				Lg	Lg	06 17 43.9	
	0.1nm,0.3s,baz=50,slow=30,SNR=1.4						
	1.3nm,0.2s						
MKAR	**Makanchi Array**	**7.85**	**202**	Pn	Pn	06 16 27.9	+0.7
	0.4nm,0.3s,baz=20,slow=15,SNR=16						
MKAR				Sn	Sn	06 17 57.6	+0.8
	0.1nm,0.3s,baz=19,slow=26,SNR=2.6						
MKAR				Lg	Lg	06 18 40.5	
	0.1nm,0.3s,baz=17,slow=31,SNR=1.2						
	0.5nm,0.4s						

TAP 22 06:15:48.5, 24°59N×122°17E, h56km, ML2.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.29**	**275**	P	Pn	06 15 57.9	-0.2
	baz=274						
TWC				*i* S	Sn	06 16 04.9	-0.1
	baz=274						
EGS		**0.34**	**320**	*eP*	Pn	06 15 58.6	+0.1
	baz=321						
TWB1	**Santiao Chiao**	**0.45**	**338**	P	Pn	06 16 00.1	+0.4
	baz=331						
TWB1				S	Sn	06 16 07.1	-0.6
	baz=331						
TIPB	**Shuangxi**	**0.50**	**321**	*i* P	Pn	06 16 00.2	+0.1
	baz=323						
TIPB				*i* S	Sn	06 16 08.5	-0.1
	baz=323						
FUSB	**Fushanzhiwuyua**	**0.56**	**288**	P	Pn	06 16 01.4	+0.5
	baz=294						
FUSB				S	Sn	06 16 10.7	+0.8
	baz=294						
SXI1	**Grass Mountain**	**0.57**	**332**	P	Pn	06 16 01.4	+0.3
	baz=334						
SXI1				*e*S	Sn	06 16 07.9	-2.3
	baz=334						
LATG	**Datong**	**0.59**	**265**	*eP*	Pn	06 16 03.4	+2.1
	baz=267						
LATG				*i* S	Sn	06 16 11.8	+1.2
	baz=267						
NDT	**Datong Townshi**	**0.60**	**272**	*i* P	Pn	06 16 02.2	+0.9
	baz=273						
NDT				S	Sn	06 16 11.7	+1.0
	baz=273						
NACB	**Ninganchiao**	**0.67**	**232**	P	Pn	06 16 02.8	+0.6
	baz=222						
NACB				*e*S	Sn	06 16 14.2	+2.2
	baz=222						
YHNB	**Yeheng**	**0.73**	**277**	*eP*	Pn	06 16 03.0	0.0
	baz=276						
YHNB				*e*S	Sn	06 16 14.9	+1.4
	baz=276						
YHNB	**Yeheng**	**0.73**	**277**	P	Pn	06 16 02.4	-0.6
ETLH	**Xiulin Townshi**	**0.73**	**239**	P	Pn	06 16 04.2	+1.2
	baz=229						
ETLH				*i* S	Sn	06 16 15.0	+1.4
	baz=229						
YOJ	**Yonaguni jima**	**0.78**	**99**	*eP*	Pn	06 16 04.1	+0.6
	baz=94						
YOJ				*e*S	Sn	06 16 11.8	-2.6
	baz=94						
FUSS	**Fushou**	**0.91**	**248**	*i* P	Pn	06 16 06.7	+1.2
	baz=240						
WHF	**Hehuan Shan**	**0.94**	**242**	P	Pn	06 16 06.1	+0.1
	baz=233						
WHF				S	Sn	06 16 20.6	+1.8
	baz=233						
CHGB	**Renai**	**1.05**	**240**	*eP*	Pn	06 16 09.1	+1.8
	baz=231						
CHGB				*e*S	Sn	06 16 20.1	-1.0
	baz=231						
OWD	**Renai**	**1.10**	**236**	*eP*	Pn	06 16 07.9	-0.1
	baz=227						
WUSB	**Renai**	**1.13**	**239**	*eP*	Pn	06 16 09.0	+0.7
	baz=230						
WUSB				*e*S	Sn	06 16 23.8	+0.9
	baz=230						
HGSD	**Ruisui**	**1.28**	**212**	*eP*	Pn	06 16 12.2	+1.9
	baz=223						
SMLT	**Sun Moon Lake**	**1.35**	**239**	P	Pn	06 16 11.9	+0.6
	baz=230						
SMLT				*e*S	Sn	06 16 29.4	+1.1
	baz=230						
SSLB	**Suanglung**	**1.37**	**235**	IAmb	IAmb	06 16 27.5	
	comp=Z,47nm,0.7s						
SSLB	**Suanglung**	**1.37**	**235**	*eP*	Pn	06 16 09.9	-1.5
	baz=228						
SSLB				*e*S	Sn	06 16 26.5	-2.0
	baz=228						
SSLB	**Suanglung**	**1.37**	**235**	P	Pn	06 16 10.2	-1.2
YULB	**Yu-li**	**1.43**	**214**	*eP*	Pn	06 16 11.2	-1.0
	baz=223						
YULB	**Yu-li**	**1.43**	**214**	P	Pn	06 16 08.0	-4.3

IDC 22 06:24:11.2±3.5, 54°26N×86°97E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=31.1km s-min=19.1km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**257**	*i*		06 32 25.0	
	baz=76,slow=319,SNR=9.1						
ZALV	**Zalesovo Beam**	**1.30**	**257**	Pg	Pg	06 24 36.2	+0.1
	0.9nm,0.3s,baz=71,slow=15,SNR=6.7						
ZALV				Lg	Lg	06 24 54.0	
	0.6nm,0.3s,baz=78,slow=25,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.31**	**238**	Pn	Pn	06 25 43.9	-1.6
	0.1nm,0.3s,baz=56,slow=14,SNR=3.3						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**8.05**	**204**	Pn	Pn	06 26 11.9	+2.6
	0.1nm,0.3s,baz=17,slow=10,SNR=1.8						
	0.4nm,0.6s						

IDC 22 06:36:09.4±3.1, 53°42N×87°40E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=27.2km s-min=14.3km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.62**	**290**	*i*		06 46 35.0	
	0.1nm,1.1s,baz=105,slow=319,SNR=31						
ZALV	**Zalesovo Beam**	**1.62**	**290**	Pg	Pn	06 36 39.2	0.0
	0.8nm,0.3s,baz=109,slow=13,SNR=8.0						
ZALV				Lg	Lg	06 37 00.5	
	0.8nm,0.3s,baz=106,slow=22,SNR=5.6						
KURBB	**Kurchatov Arra**	**6.15**	**246**	Pn	Pn	06 37 42.1	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=4.8						
KURBB				Lg	Lg	06 39 22.1	
	baz=62,slow=32,SNR=1.1						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.40**	**208**	Pn	Pn	06 37 59.8	+1.2
	0.1nm,0.3s,baz=28,slow=13,SNR=4.5						
MKAR				Sn	Sn	06 39 23.2	-0.1
	baz=30,slow=25,SNR=2.8						
MKAR				Lg	Lg	06 40 03.7	
	0.1nm,0.3s,baz=27,slow=29,SNR=2.2					

	comp=Z,2.3nm,0.8s						
CPUP	**Villa Florida**	**35.67**	**317**	P	**P**	**07 14 52.4**	**-0.9**
CPUP				IAmb	IAmb	07 15 09.1	
	comp=Z,8.1nm,1.4s						
ROC1	**El Roble**	**36.15**	**294**	P	**P**	**07 14 57.6**	**-0.1**
ROC1				IAmb	IAmb	07 15 20.3	
	comp=Z,31nm,1.2s						
CO02	**Combarbal**	**37.56**	**295**	P	**P**	**07 15 07.7**	**-1.9**
CO01	**Juntas del Tor**	**38.12**	**298**	P	**P**	**07 15 14.8**	**+0.4**
CO01				IAmb	IAmb	07 15 17.2	
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	**45.88**	**184**	P	P	07 16 25.4	+8.4
	comp=Z,0.3nm,0.3s,baz=185,slow=14,SNR=8.6						
	comp=Z,0.3nm,0.3s						
VNDA	**Vanda**	**45.88**	**184**	P	**P**	**07 16 17.2**	**+0.2**
LPAZ	**La Paz**	**49.02**	**310**	P	**P**	**07 16 45.2**	**+2.5**
	comp=Z,1.0nm,0.4s,baz=155,slow=3.1,SNR=13						
	comp=Z,1.0nm,0.4s						
LPAZ	**La Paz**	**49.02**	**310**	P	**P**	**07 16 41.2**	**-1.5**
LPAZ				IAmb	IAmb	07 16 57.5	
	comp=Z,3.5nm,1.3s						
H10S2	**ASCENSION HYDR**	**49.24**	**22**	T	T	08 08 22.7	
	baz=28,slow=74,SNR=5.1						
H10S3	**ASCENSION HYDR**	**49.24**	**22**	T	T	08 08 23.9	
	baz=192,slow=74,SNR=16						
H10N1	**ASCENSION HYDR**	**50.36**	**22**	T	T	08 09 45.4	
	baz=192,slow=75,SNR=25						
H10N3	**ASCENSION HYDR**	**50.36**	**21**	T	T	08 09 47.1	
	baz=192,slow=75,SNR=36						
H10N2	**ASCENSION HYDR**	**50.37**	**21**	T	T	08 09 45.8	
	baz=192,slow=75,SNR=42						
TOA0	**Torodi Ar. Sit**	**74.65**	**33**	P	**P**	**07 19 34.6**	**+0.1**
TOA0				IAmb	IAmb	07 19 55.4	
	comp=Z,5.0nm,1.3s						
TORD	**Torodi Ar. Bea**	**74.65**	**33**	P	**P**	**07 19 34.5**	**0.0**
	comp=Z,1.5nm,0.6s,baz=202,slow=6.9,SNR=9.7						
	comp=Z,1.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**74.65**	**33**	P	**P**	**07 19 34.4**	**-0.2**
ILAR	**Eielson Array**	**148.89**	**312**	PKPbc	**PKPab**	**07 27 46.2**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=110,slow=1.9,SNR=12						

*JMA **22** 07:08:23.5±0.3,25°N±4°×122°3E±0°9,h214km±4km, MV3.7/11,TAIWAN REGION*
*TAP **22** 07:08:25.4,25°21N×122°29E,h210km,ML3.6,C*
ISC 22 07:08:22.7±2.0,25°32N±0°08×122°31E±0°04, h223km±11km,n86,σ0°71/117,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCYT	**Pengchaiyu**	**0.38**	**325**	P	**Pn**	**07 08 53.6**	**+1.4**
	baz=343						
TWB1	**Santiao Chiao**	**0.42**	**224**	P	**Pn**	**07 08 53.1**	**+0.7**
	baz=225						
SXI1	**Grass Mountain**	**0.45**	**241**	P	**Pn**	**07 08 53.1**	**+0.6**
	baz=253						
SXI1				*e*S	**S**	**07 09 14.2**	**-1.5**
	baz=253						
NWF	**Wu-fen Shan**	**0.54**	**243**	*e*P	**Pn**	**07 08 53.5**	**+0.7**
	baz=245						
TIPB	**Shuangxi**	**0.56**	**232**	P	**Pn**	**07 08 53.4**	**+0.6**
	baz=251						
TIPB				*e*S	**S**	**07 09 14.8**	**-1.4**
	baz=251						
EGS		**0.58**	**216**	P	**Pn**	**07 08 53.6**	**+0.7**
	baz=211						
NTC	**Toucheng**	**0.64**	**224**	*e*P	**Pn**	**07 08 53.5**	**+0.5**
	baz=239						
TWY	**Chenhua**	**0.65**	**267**	*e*P	**Pn**	**07 08 54.1**	**+1.0**
	baz=267						
YM01	**YM01**	**0.69**	**256**	*e*P	**Pn**	**07 08 54.0**	**+0.6**
	baz=258						
TWA	**Mucha**	**0.74**	**243**	*e*P	**Pn**	**07 08 54.6**	**+1.0**
	baz=255						
NHDH	**Xindian Distri**	**0.80**	**244**	*e*P	**Pn**	**07 08 54.5**	**+0.7**
	baz=259						
TWC	**Suao**	**0.82**	**211**	*e*P	**Pn**	**07 08 54.2**	**+0.3**
	baz=207						
TWC				*e*S	**S**	**07 09 16.5**	**-1.7**
	baz=207						
TWE	**Neicheng**	**0.83**	**225**	*e*P	**Pn**	**07 08 55.1**	**+1.1**
	baz=230						
TWS1	**Kuangyinshan**	**0.84**	**255**	*e*P	**Pn**	**07 08 54.7**	**+0.7**
	baz=271						
FUSB	**Fushanzhiwuyua**	**0.86**	**230**	P	**Pn**	**07 08 54.6**	**+0.4**
	baz=233						
FUSB				*e*S	**S**	**07 09 19.2**	**+0.5**
	baz=233						
NDS	**Dongshan**	**0.87**	**219**	*e*P	**Pn**	**07 08 54.4**	**+0.2**
	baz=220						
NDS				*e*S	**S**	**07 09 18.7**	**0.0**
	baz=220						
ENTT	**Nioudou**	**0.96**	**225**	*e*P	**Pn**	**07 08 54.4**	**-0.3**
	baz=239						
EWUT	**Wuta**	**0.99**	**209**	*e*P	**Pn**	**07 08 54.5**	**-0.4**
	baz=208						
EWUT				*e*S	**S**	**07 09 18.9**	**-1.1**
	baz=208						
NDT	**Datong Townshi**	**1.02**	**226**	P	**Pn**	**07 08 55.7**	**+0.6**
	baz=239						
NDT				*e*S	**S**	**07 09 20.1**	**-0.1**
	baz=239						
ENA	**Nanau**	**1.03**	**211**	*e*P	**Pn**	**07 08 55.9**	**+0.8**
	baz=207						
ENA				*e*S	**S**	**07 09 20.7**	**+0.4**
	baz=207						
JYNG	**Yonagunijimaku**	**1.04**	**146**	P	**Pn**	**07 08 55.2**	**0.0**
JYNG				S	**S**	**07 09 20.1**	**-0.3**
LATG	**Datong**	**1.06**	**223**	P	**Pn**	**07 08 56.2**	**+0.7**
	baz=235						
LATG				*e*S	**S**	**07 09 21.8**	**+0.9**
	baz=235						
YOJ	**Yonaguni jima**	**1.06**	**143**	*e*P	**Pn**	**07 08 55.3**	**0.0**
	baz=144						
YOJ				*e*S	**S**	**07 09 20.7**	**0.0**
	baz=144						
YOJ	**Yonaguni jima**	**1.06**	**143**	P	**Pn**	**07 08 55.4**	**0.0**
YOJ				S	**S**	**07 09 20.3**	**-0.4**
YHNB	**Yeheng**	**1.07**	**233**	P	**Pn**	**07 08 55.7**	**+0.3**
	baz=246						
YHNB				*e*S	**S**	**07 09 20.1**	**-0.8**
	baz=246						
NSK	**Sanguang**	**1.08**	**234**	*e*P	**Pn**	**07 08 54.6**	**-0.9**
	baz=246						
NSK				*e*S	**S**	**07 09 19.1**	**-1.9**
	baz=246						
NCUH	**Zhongli**	**1.08**	**251**	*e*P	**Pn**	**07 08 56.0**	**+0.6**
	baz=264						
NNS	**Nan Shan**	**1.22**	**225**	P	**Pn**	**07 08 56.1**	**-0.4**
	baz=227						
NNSB	**Datong**	**1.22**	**224**	P	**Pn**	**07 08 57.1**	**+0.5**
	baz=227						
NNSB				*e*S	**S**	**07 09 22.8**	**-0.1**
	baz=227						
NNSH	**Datong**	**1.22**	**224**	*e*P	**Pn**	**07 08 57.1**	**+0.6**
	baz=230						
NFF	**Wufeng Townshi**	**1.28**	**238**	*e*P	**Pn**	**07 08 55.8**	**-1.1**
	baz=248						
NFF				*e*S	**S**	**07 09 21.8**	**-1.6**
	baz=248						
NACB	**Ninganchiao**	**1.31**	**210**	*e*P	**Pn**	**07 08 56.8**	**-0.3**
	baz=203						
NACB				*e*S	**S**	**07 09 23.4**	**-0.4**
	baz=203						
SBCB	**Hsinchu**	**1.31**	**247**	*e*P	**Pn**	**07 08 57.6**	**+0.5**
	baz=259						
ETL	**Fush Village**	**1.31**	**209**	*e*P	**Pn**	**07 08 57.2**	**+0.1**
	baz=217						
ETLH	**Xiulin Townshi**	**1.34**	**215**	P	**Pn**	**07 08 57.6**	**+0.2**
	baz=216						
ETLH				*e*S	**S**	**07 09 24.5**	**+0.2**
	baz=216						
LIOB	**Emei**	**1.35**	**241**	*e*P	**Pn**	**07 08 57.8**	**+0.4**
	baz=245						
LIOB				*e*S	**S**	**07 09 23.9**	**-0.4**
	baz=245						
NSTT	**Nanjuang**	**1.37**	**240**	P	**Pn**	**07 08 57.8**	**+0.3**
	baz=248						
NSTT				*e*S	**S**	**07 09 24.6**	**+0.1**
	baz=248						
TWD	**Chiawan**	**1.39**	**208**	*e*P	**Pn**	**07 08 57.8**	**+0.1**
	baz=217						
TWD				*e*S	**S**	**07 09 24.9**	**0.0**
	baz=217						
FUSS	**Fushou**	**1.44**	**223**	P	**Pn**	**07 08 59.2**	**+0.8**
	baz=233						
TDCB	**Techi**	**1.49**	**225**	*e*P	**Pn**	**07 08 59.4**	**+0.8**
	baz=235						
WHF	**Hehuan Shan**	**1.51**	**219**	P	**Pn**	**07 08 59.8**	**+0.7**
	baz=215						
IRIF	**Iriomote-Funau**	**1.62**	**127**	P	**Pn**	**07 08 59.8**	**+0.3**
IRIF				S	**S**	**07 09 27.4**	**-0.7**
WHP	**Taichung City**	**1.62**	**230**	P	**Pn**	**07 09 00.2**	**+0.6**
	baz=242						
CHGB	**Renai**	**1.62**	**220**	P	**Pn**	**07 09 00.8**	**+0.9**
	baz=228						
NSY	**Sanyi**	**1.67**	**238**	P	**Pn**	**07 09 00.8**	**+0.7**
	baz=238						
ESL	**Shilin**	**1.70**	**208**	*e*P	**Pn**	**07 08 59.8**	**-0.4**
	baz=208						
TWQ1	**Liyutan**	**1.70**	**236**	*e*P	**Pn**	**07 09 00.6**	**+0.4**
	baz=240						
OWD	**Renai**	**1.71**	**218**	*e*P	**Pn**	**07 09 01.3**	**+0.8**
	baz=219						
OWD				*e*S	**S**	**07 09 30.9**	**+1.0**
	baz=219						
WUSB	**Renai**	**1.71**	**220**	P	**Pn**	**07 09 01.2**	**+0.7**
	baz=216						
WUSB				*e*S	**S**	**07 09 31.6**	**+1.7**
	baz=216						
WCS	**Beigang Elemen**	**1.79**	**226**	P	**Pn**	**07 09 00.4**	**-0.6**
	baz=229						
HATJ	**Hateruma jima**	**1.85**	**132**	P	**Pn**	**07 09 02.2**	**+0.6**
HATJ				S	**S**	**07 09 31.4**	**-0.4**
JKRS	**Kuro-shima**	**1.88**	**125**	P	**Pn**	**07 09 02.5**	**+0.6**
JKRS				S	**S**	**07 09 31.9**	**-0.4**
VWDT	**VWDT**	**1.89**	**215**	P	**Pn**	**07 09 03.2**	**+1.3**
	baz=216						
JIJ	**Ishigaki jima**	**1.92**	**119**	*i* P	**Pn**	**07 09 02.4**	**+0.2**
JIJ				S	**S**	**07 09 31.3**	**-1.5**
SMLT	**Sun Moon Lake**	**1.92**	**222**	*e*P	**Pn**	**07 09 02.8**	**+0.4**
	baz=218						
SSLB	**Suanglung**	**1.96**	**219**	P	**Pn**	**07 09 02.9**	**+0.2**
	baz=222						
HGSD	**Ruisui**	**1.99**	**204**	*e*P	**Pn**	**07 09 03.4**	**+0.4**
	baz=208						
WNT	**Mingjian**	**2.06**	**226**	*e*P	**Pn**	**07 09 04.3**	**+0.7**
	baz=235						
WHYT	**Xinyi Township**	**2.09**	**220**	*e*P	**Pn**	**07 09 04.6**	**+0.6**
	baz=222						
WHYT				*e*S	**S**	**07 09 36.4**	**+0.4**
	baz=222						
YULB	**Yu-li**	**2.13**	**206**	*e*P	**Pn**	**07 09 03.5**	**-0.9**
	baz=203						
EYUL	**Yuli**	**2.16**	**205**	*e*P	**Pn**	**07 09 06.1**	**+1.4**
	baz=204						
TWF1	**Yuli**	**2.17**	**206**	*e*P	**Pn**	**07 09 04.1**	**-0.6**
	baz=204						
ALS	**Alishan**	**2.26**	**218**	*e*P	**Pn**	**07 09 06.4**	**+0.3**
	baz=224						
CHN5	**Tsauling**	**2.27**	**221**	*e*P	**Pn**	**07 09 05.2**	**-0.6**
	baz=220						
JTJ	**Tarama**	**2.27**	**107**	*i* P	**Pn**	**07 09 06.2**	**+0.5**
JTJ				S	**S**	**07 09 38.5**	**-0.6**
MATB	**Ma-tsu**	**2.29**	**292**	*e*P	**Pn**	**07 09 05.7**	**-0.2**
	baz=293						
FULB	**Fuli**	**2.31**	**204**	*e*P	**Pn**	**07 09 06.5**	**+0.3**
	baz=203						
WTK	**Tuku**	**2.39**	**228**	*e*P	**Pn**	**07 09 07.1**	**+0.2**
	baz=232						
ELDTW	**Lidau**	**2.43**	**209**	*e*P	**Pn**	**07 09 07.7**	**+0.2**
	baz=207						
EDH	**Donghe**	**2.51**	**202**	*e*P	**Pn**	**07 09 08.1**	**-0.1**
	baz=204						
TPUB	**Ta-pu**	**2.53**	**218**	P	**Pn**	**07 09 08.4**	**-0.1**
	baz=220						
STYH	**Taoyuan**	**2.56**	**214**	*e*P	**Pn**	**07 09 08.1**	**-0.7**
	baz=221						
WTP	**Ta-pu**	**2.58**	**217**	P	**Pn**	**07 09 09.2**	**+0.1**
	baz=224						
WSL	**Shuilin Townsh**	**2.61**	**227**	*e*P	**Pn**	**07 09 09.8**	**+0.5**
	baz=231						
VWUC	**VWUC**	**2.62**	**263**	*e*P	**Pn**	**07 09 08.8**	**-0.5**
	baz=266						
TWK	**Hsinying**	**2.63**	**220**	P	**Pn**	**07 09 09.9**	**+0.2**
	baz=229						
CHN1	**Nanshi**	**2.68**	**218**	*e*P	**Pn**	**07 09 10.2**	**+0.1**
	baz=221						
JIKM	**Ikemajima**	**2.69**	**98**	*e*P	**Pn**	**07 09 10.8**	**+0.6**
JIKM				S	**S**	**07 09 46.1**	**-1.0**
SGST	**Jiashian**	**2.73**	**216**	*e*P	**Pn**	**07 09 10.1**	**-0.5**
	baz=222						
JMJ2	**Miyako jima3**	**2.79**	**101**	P	**Pn**	**07 09 12.1**	**+0.8**
JMJ2				*e*S	**S**	**07 09 49.3**	**+0.1**
SSD	**Sandimen**	**2.98**	**211**	*e*P	**Pn**	**07 09 14.0**	**+0.5**
	baz=212						
MASBT	**Mashibuluo**	**3.10**	**210**	P	**Pn**	**07 09 15.2**	**+0.4**
	baz=211						
WDGT	**Dungji**	**3.17**	**230**	*e*P	**Pn**	**07 09 15.5**	**-0.1**
	baz=230						
EAST	**Anshuo**	**3.21**	**205**	*e*P	**Pn**	**07 09 17.1**	**+1.0**
	baz=213						
SCZT	**Fangliau**	**3.32**	**208**	*e*P	**Pn**	**07 09 17.4**	**+0.1**
	baz=201						
SLIU	**Shizi**	**3.38**	**205**	*e*P	**Pn**	**07 09 18.4**	**+0.3**
	baz=203						

IDC 22 07:18:59.2±3.0,4°93S×153°52E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=51.9km s-min=29.6km az=49.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.61**	**292**	Pg	Pn	07 19 29.3	+0.4
	141nm,0.3s,baz=254,slow=2.2,SNR=94						
KRVT				Lg	Lg	07 19 46.4	
	160nm,0.3s,baz=123,slow=23,SNR=6.3						
WRA	**Warramunga Arr**	**23.90**	**230**	P	P	07 24 15.2	+0.3
	0.7nm,0.5s,baz=52,slow=9.6,SNR=18						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.55**	**224**	P	P	07 24 40.0	+1.1
	0.2nm,0.5s,baz=57,slow=9.3,SNR=6.3						
	0.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**30.23**	**242**	P	P	07 25 10.5	-1.4
	1.7nm,0.6s,baz=67,slow=6.6,SNR=6.8						
	1.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**151.02**	**288**	PKPbc	PKPbc	07 38 54.3	-0.9
	0.5nm,0.9s,baz=62,slow=2.5,SNR=1.6						

WEL 22 07:33:02.5±0.9,34°S±21'×18°0W±3°5,h366km±14km, M4.1/7,mB4.6/2,ML4.0/10,MLv4.1/7,Mw(mB)3.8/2,Error ellipse: s-maj=0.1km s-min=0.0km az=120.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.96**	**202**	P	Pn	07 34 11.4	-0.5
WMGZ	**Waiomatatini S**	**4.17**	**200**	P	Pn	07 34 14.7	+0.6
WMGZ				S	S	07 35 12.0	0.0
HAZ	**Te Kaha**	**4.32**	**206**	P	Pn	07 34 14.7	-0.8
HAZ				S	S	07 35 15.5	+0.9
PKGZ	**Pakihiroa**	**4.33**	**203**	P	Pn	07 34 15.7	-0.1
PKGZ				S	S	07 35 14.2	-1.0
RUGZ	**Raukumara Rang**	**4.54**	**206**	P	Pn	07 34 17.5	-0.5
RUGZ				S	S	07 35 15.2	-3.9
TWGZ	**Tauwhareparae**	**4.63**	**202**	P	Pn	07 34 20.2	+1.3
TWGZ				S	S	07 35 23.8	+3.1
TKGZ	**Te Karaka**	**4.91**	**202**	P	Pn	07 34 21.9	+0.1
TKGZ				S	S	07 35 27.9	+1.9
MWZ	**Matawai**	**4.92**	**205**	P	Pn	07 34 21.5	-0.4
MWZ				S	S	07 35 25.6	-0.8
URZ	**Urewera**	**5.01**	**209**	P	Pn	07 34 21.3	-1.6
URZ				S	S	07 35 28.1	0.0
MUGZ	**Murupara**	**5.34**	**210**	P	Pn	07 34 26.6	+0.1
MUGZ				S	S	07 35 35.4	+0.8
SNGZ	**Shannon Statio**	**5.39**	**205**	P	Pn	07 34 27.3	+0.3
SNGZ				S	S	07 35 36.9	+1.3
KNZ	**Kokohu**	**5.50**	**201**	P	Pn	07 34 28.6	+0.4
KNZ				S	S	07 35 35.9	-1.8
KWHZ	**Kaweka Forest**	**6.29**	**208**	P	Pn	07 34 37.2	+0.1
KWHZ				S	S	07 35 54.7	+0.6
HIZ	**Hauiti**	**6.31**	**222**	P	Pn	07 34 40.0	+2.7
BHHZ	**Black Hill Sta**	**6.49**	**210**	P	Pn	07 34 39.5	+0.1
BHHZ				S	S	07 36 00.3	+2.1
PNHZ	**Pukenui**	**6.80**	**207**	P	Pn	07 34 42.9	0.0
PNHZ				S	S	07 36 04.0	-0.6
TSZ	**Takapari Road**	**7.02**	**208**	P	Pn	07 34 45.2	-0.2
TSZ				S	S	07 36 09.7	+0.4
POWZ	**Post Office Ro**	**7.38**	**207**	P	P	07 34 50.3	-0.3
BFZ	**Birch Farm**	**7.46**	**204**	P	P	07 34 51.3	-0.3
BFZ				S	S	07 36 18.9	+0.3
MRZ	**Mangatainoka R**	**7.68**	**207**	P	Pn	07 34 53.0	0.0
MRZ				S	S	07 36 23.1	-0.2

*VAO **22** 07:33:40.2±0.4,21°82S×69°33W,h165km,mb4.0*
*IDC **22** 07:33:42.8±1.0,21°76S×68°20W,h106km±16km,mb3.3/2, mbtmp3.7/5,Error ellipse: s-maj=35.3km s-min=17.8km az=125.0*
*GUC **22** 07:33:43.8±0.8,21°70S×68°72W,h127km±5km,ML3.5*
*NEIC **22** 07:33:43.3±1.3,21°69S±0°04×68°75W±0°07,h126km±1km, mb4.3/4,ML3.5(GUC),Error ellipse: s-maj=9.5km s-min=5.9km az=72.0*
ISC 22 07:33:42.7±0.6,21°66S±0°04×68°70W±0°06,h126km±6km, n65,σ0°99/83,mb4.1/3,9C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.52**	**255**		**Pn**	**07 34 02.0**	**+0.3**
PB09				Sn	**Sn**	**07 34 16.4**	**+0.4**
PB09	**IPOC Station P**	**0.52**	**255**	↑*i*P	**Pn**	**07 34 02.1**	**+0.5**
PB09				*e*S	**Sn**	**07 34 16.5**	**+0.5**
PB09				IAML		07 34 19.3	
	comp=N,997nm,0.3s						
PB01	**IPOC Station P**	**0.96**	**310**		**Pn**	**07 34 05.1**	**+0.1**
PB01				Sn	**Sn**	**07 34 22.5**	**+0.7**
PB01	**IPOC Station P**	**0.96**	**310**	↑*i*P	**Pn**	**07 34 05.1**	**+0.1**
PB01				*i* S	**Sn**	**07 34 22.3**	**+0.5**
PB01				IAML		07 34 24.2	
	comp=E,889nm,0.2s						
LVC	**Limon Verde**	**0.96**	**192**	P	**Pn**	**07 34 05.3**	**+0.1**
	comp=E,160nm,0.5s,baz=9.4,slow=7.7,SNR=132						
LVC				S	**Sn**	**07 34 21.5**	**-0.9**
	comp=E,171nm,0.3s,baz=90,slow=20,SNR=74						
LVC	**Limon Verde**	**0.96**	**192**	Pn	**Pn**	**07 34 05.4**	**+0.1**
LVC				Sn	**Sn**	**07 34 21.8**	**-0.6**
LVC	**Limon Verde**	**0.96**	**192**	↑*i*P	**Pn**	**07 34 05.4**	**+0.1**
LVC				*i* S	**Sn**	**07 34 21.9**	**-0.6**
LVC	**Limon Verde**	**0.96**	**192**	*e*P	**Pn**	**07 34 05.6**	**+0.3**
PB07	**IPOC Station P**	**1.10**	**267**		**Pn**	**07 34 06.9**	**+0.4**
PB07				Sn	**Sn**	**07 34 25.0**	**+0.5**
PB07	**IPOC Station P**	**1.10**	**267**	↑*i*P	**Pn**	**07 34 06.9**	**+0.4**
PB07				*i* S	**Sn**	**07 34 24.8**	**+0.3**
PB07				IAML		07 34 25.2	
	comp=N,2μm,0.4s						
PB02	**IPOC Station P**	**1.17**	**287**		**Pn**	**07 34 07.3**	**+0.3**
PB02				Sn	**Sn**	**07 34 26.4**	**+1.0**
PB02	**IPOC Station P**	**1.17**	**287**	↑*i*P	**Pn**	**07 34 07.3**	**+0.3**
PB02				*i* S	**Sn**	**07 34 25.9**	**+0.4**
PB02				IAML		07 34 27.9	
	comp=N,1μm,0.3s						
PB06	**IPOC Station P**	**1.31**	**218**		**Pn**	**07 34 08.9**	**+0.3**
PB06				Sn	**Sn**	**07 34 28.5**	**+0.2**
PB06	**IPOC Station P**	**1.31**	**218**	↑*i*P	**Pn**	**07 34 09.0**	**+0.3**
PB06				*i* S	**Sn**	**07 34 28.6**	**+0.2**
PB06				IAML		07 34 29.3	
	comp=E,2μm,0.3s						
AF01	**San Pedro de A**	**1.37**	**159**		**Pn**	**07 34 10.3**	**+0.9**
AF01	**San Pedro de A**	**1.37**	**159**	↑*i*P	**Pn**	**07 34 10.0**	**+0.6**
AF01				*i* S	**Sn**	**07 34 30.7**	**+1.0**
PB04	**IPOC Station P**	**1.50**	**243**		**Pn**	**07 34 10.9**	**+0.2**
PB04				Sn	**Sn**	**07 34 31.1**	**-0.9**
PB04	**IPOC Station P**	**1.50**	**243**	↑*i*P	**Pn**	**07 34 11.0**	**+0.2**
PB04				*i* S	**Sn**	**07 34 31.7**	**-0.3**
PB04				IAML		07 34 33.3	
	comp=N,576nm,0.2s						
PB15	**IPOC Station P**	**1.69**	**205**		**Pn**	**07 34 13.4**	**+0.4**
PB15	**IPOC Station P**	**1.69**	**205**	*e*P	**Pn**	**07 34 13.4**	**+0.4**
TA01	**Diego Aracena**	**1.76**	**308**		**Pn**	**07 34 13.4**	**-0.1**
TA01	**Diego Aracena**	**1.76**	**308**	*e*P	**Pn**	**07 34 13.5**	**-0.1**
TA01				*i* S	**Sn**	**07 34 37.1**	**0.0**
TA02	**Huaiquique**	**1.93**	**316**		**Pn**	**07 34 14.6**	**-0.9**
GO01	**Chusmiza**	**2.04**	**347**		**Pn**	**07 34 18.0**	**+0.6**
GO01	**Chusmiza**	**2.04**	**347**	↑*i*P	**Pn**	**07 34 18.1**	**+0.6**
GO01				*i* S	**Sn**	**07 34 45.7**	**+1.8**
GO01				IAML		07 34 47.3	
	comp=N,568nm,0.1s						
PB14	**IPOC Station P**	**3.34**	**208**	Pn	**Pn**	**07 34 35.0**	**+1.0**
PB16	**IPOC Station P**	**3.40**	**347**		**Pn**	**07 34 35.4**	**+0.4**
PB12	**IPOC Station P**	**3.40**	**333**	Pn	**Pn**	**07 34 33.1**	**-1.4**
GO02	**Mina Guanaco**	**3.58**	**193**	Pn	**Pn**	**07 34 37.0**	**-0.1**
AC01	**Pan de Azucar**	**4.79**	**201**	Pn	**Pn**	**07 34 51.2**	**-1.6**
LPAZ	**La Paz**	**5.38**	**6**	P	**Pn**	**07 35 03.4**	**+2.0**
	comp=N,4.3nm,0.4s,baz=178,slow=5.1,SNR=50						
LPAZ	**La Paz**	**5.38**	**6**	Pn	**Pn**	**07 35 03.5**	**+2.2**
LPAZ	**La Paz**	**5.38**	**6**	*e*P	**Pn**	**07 35 02.9**	**+1.6**
SIV	**San Ignacio**	**9.16**	**53**	P	**Pn**	**07 35 48.7**	**-3.2**
	comp=N,0.8nm,0.3s,baz=241,slow=9.9,SNR=8.3						
SIV				S	Sn	07 37 22.8	-11
	comp=N,1.0nm,0.7s,baz=291,slow=16,SNR=6.5						
CPUP	**Villa Florida**	**11.38**	**116**	P	**Pn**	**07 36 17.5**	**-4.0**
	comp=N,1.5nm,0.7s,baz=297,slow=11,SNR=3.5						
AQDB	**Aquidauana**	**12.20**	**87**	Pn	**Pn**	**07 36 32.8**	**+0.5**
SALV	**Santo Antonio**	**13.58**	**67**	*e*P	**P**	**07 36 55.1**	**+0.2**
CRSM	**Crissiumal (Br**	**14.54**	**116**	*e*P	**Pn**	**07 37 04.4**	**+2.0**
RODS	**Rosario do Sul**	**14.89**	**128**	*e*P	**Pn**	**07 37 06.8**	**0.0**
TRCB	**Terra Rica**	**14.92**	**97**	*e*P	**P**	**07 37 10.1**	**+0.3**
FRBT	**Francisco Belt**	**14.94**	**110**	*e*P	**P**	**07 37 10.2**	**+0.3**
PDRB	**Porto dos Gac**	**15.20**	**51**	*e*P	**P**	**07 37 13.2**	**+0.3**
PTGB	**Pitanga**	**15.60**	**104**	*e*P	**P**	**07 37 18.4**	**+1.1**
ALGR	**Alto Alegre (B**	**15.85**	**120**	*e*P	**P**	**07 37 20.3**	**+0.2**
ITAB	**Concordia**	**16.07**	**113**	*e*P	**Pn**	**07 37 22.4**	**+0.9**
PCMB	**Pacaembu**	**16.22**	**93**	*e*P	**P**	**07 37 25.4**	**+1.2**
CPSB	**Cacapava Do Su**	**16.23**	**126**	*e*P	**Pn**	**07 37 23.7**	**+0.3**
CLDB	**Colider**	**16.37**	**51**	*e*P	**P**	**07 37 26.8**	**+0.9**
NPGB	**Novo Progresso**	**19.43**	**44**	*e*P	**P**	**07 37 57.9**	**-1.4**
IPMB	**Ipameri, GO**	**19.62**	**83**	*e*P	**P**	**07 38 01.6**	**+0.1**
RCLB	**

σ0.81/21, mb4.1/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.91**	**281**	P	**P**	**08 12 27.2**	**-0.9**
KRVT	**Keravat (AS076**	**3.02**	**279**	P	**P**	**08 12 28.4**	**-0.4**
	48nm,0.5s,baz=343,slow=19,SNR=2.4						
COEN	**Coen**	**14.82**	**231**	P	**P**	**08 14 26.4**	**+0.3**
DZM	**Mont Dzumac**	**20.45**	**148**	P	**P**	**08 15 21.6**	**+1.1**
	5.1nm,0.6s,baz=311,slow=9.3,SNR=8.1						
	5.1nm,0.6s						
DZM	**Mont Dzumac**	**20.45**	**148**	P	**P**	**08 15 21.6**	**+1.1**
MARNC	**Mare, Loyalty**	**20.86**	**144**	P	**P**	**08 15 22.2**	**-2.0**
WR0	**Warramunga Arr**	**25.01**	**231**	P	**P**	**08 16 02.2**	**+0.8**
WB0	**Warramunga Arr**	**25.02**	**232**	P	**P**	**08 16 02.1**	**+0.6**
WB0				IAmb	IAmb	08 16 02.3	
	comp=Z,3.8nm,0.5s						
WRAB	**Tennant Creek**	**25.15**	**231**	P	**P**	**08 16 03.0**	**+0.4**
WRAB				IAmb	IAmb	08 16 03.7	
	comp=Z,3.1nm,0.6s						
WB2	**Warramunga Arr**	**25.15**	**231**	P	**P**	**08 16 03.5**	**+0.9**
WRA	**Warramunga Arr**	**25.16**	**231**	P	**P**	**08 16 03.2**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=55,slow=9.3,SNR=27						
	comp=Z,2.7nm,0.5s						
AS31	**Alice Springs**	**27.70**	**225**	P	**P**	**08 16 25.5**	**+0.3**
ASAR	**Alice Springs**	**27.71**	**225**	P	**P**	**08 16 25.2**	**0.0**
	comp=Z,1.3nm,0.5s,baz=56,slow=9.0,SNR=26						
	comp=Z,1.3nm,0.5s						
KNRA	**Kununurra**	**27.98**	**245**	P	**P**	**08 16 27.7**	**+0.1**
KNRA				IAmb	IAmb	08 17 02.1	
	comp=Z,16nm,1.2s						
FITZ	**Fitzroy Crossi**	**31.63**	**243**	P	**P**	**08 16 59.0**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=52,slow=9.4,SNR=2.6						
	comp=Z,1.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**31.63**	**243**	P	**P**	**08 16 58.9**	**-0.3**
FITZ				IAmb	IAmb	08 17 36.1	
	comp=Z,9.1nm,1.4s						
BBOO	**Buckleboo**	**33.05**	**210**	P	**P**	**08 17 10.8**	**-0.4**
BBOO				IAmb	IAmb	08 17 14.3	
	comp=Z,12nm,1.3s						
FORT	**Forrest**	**36.24**	**221**	P	**P**	**08 17 38.5**	**+0.5**
FORT				IAmb	IAmb	08 17 45.7	
	comp=Z,15nm,1.1s						
MBWA	**Marble Bar**	**37.92**	**241**	P	**P**	**08 17 50.9**	**-1.0**
PSA00	**Pilbara Seismi**	**37.96**	**241**	P	**P**	**08 17 52.7**	**+0.5**
MKAR	**Makanchi Array**	**81.76**	**318**	P	**P**	**08 22 44.5**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=92,slow=4.6,SNR=2.5						
	comp=Z,0.5nm,0.8s						

HEL 22 08:14:38.6±0.2, 61.38N×27.41E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIA0	**FINESS Array S**	**0.65**	**276**	PG	Pg	08 14 50.4	-0.5
FIA0				SG	Sg	08 14 59.7	+0.4
RUFX	**Ruokolahti**	**0.74**	**85**	PG	Pg	08 14 52.6	-0.2
RUFX				SB	Sg	08 15 02.3	-0.1
KAF	**Kangasniemi**	**0.91**	**325**	PB	Pg	08 14 55.4	-0.5
	baz=145						
KAF				SB	Sg	08 15 08.0	+0.4
PVF	**Pernaja**	**1.13**	**223**	PG	Pg	08 14 58.8	-1.4
PVF				MSG		08 15 13.1	
	comp=Z,2.2nm,0.2s						
PVF				SB	Sg	08 15 14.2	-0.6
KEF	**Keuruu**	**1.44**	**304**	PN	Pn	08 15 05.3	-0.6
KEF				MSG		08 15 22.1	
	comp=Z,0.9nm,0.2s						
KEF				SN	Sg	08 15 24.3	-0.6
JOF	**Joensuu**	**2.40**	**48**	SG	Sb	08 15 52.6	0.0
RAF	**Rauma**	**2.76**	**265**	MSG		08 15 59.7	
	comp=Z,0.9nm,0.2s						
RAF				SG	Sb	08 16 03.2	+0.2

HEL 22 08:15:25.7±0.0, 63.70N×19.82E, h9km, ML1.2, ML1.0(UPP), 1C-1D, Confirmed Earthquake, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUSU	**Husum**	**0.45**	**217**	*i* P	Pg	08 15 33.8	-0.6
HUSU				*i* S	Sg	08 15 39.5	-0.7
BREU	**Bredtraesk**	**0.58**	**290**	⇓*i* P	Pg	08 15 36.2	-0.7
BREU				*i* S	Sg	08 15 44.0	-0.6
SVAU	**Svanoeiden**	**0.81**	**353**	*i* P	Pg	08 15 40.2	-1.0
SVAU				*i* S	Sg	08 15 50.6	-1.1
ODEU	**Stanfors**	**0.82**	**29**	⇑*i* P	Pg	08 15 40.3	-1.1
ODEU				*i* S	Sg	08 15 50.7	-1.3
BURU	**Burvik**	**1.12**	**37**	PN	Pg	08 15 45.7	-1.6
BURU	**Burvik**	**1.12**	**37**	*e*P	Pg	08 15 45.6	-1.6
BURU				*e*S	Sg	08 15 59.9	-1.9
SOLU	**Sollefteaa**	**1.23**	**250**	*e*P	Pn	08 15 47.7	-1.4
SOLU				*e*S	Sb	08 16 03.6	-1.5
HEMU	**Hemsoen**	**1.30**	**219**	PN	Pn	08 15 48.6	-1.4
HEMU	**Hemsoen**	**1.30**	**219**	*e*P	Pn	08 15 48.3	-1.7
HEMU				*e*S	Sb	08 16 05.6	-1.6
VAF	**Ylistaro**	**1.45**	**116**	*e*P	Pn	08 15 51.3	-0.6
VAF				*e*S	Sn	08 16 09.6	-1.4
VAF				MSG		08 16 12.4	
	comp=Z,1.7nm,0.1s						
LILU	**Lilltraesk**	**1.59**	**0**	*e*P	Pn	08 15 53.8	-0.3
LILU				*e*S	Sn	08 16 14.1	-0.6
OBF8	**Ulkokalla**	**1.72**	**67**	SB	Sn	08 16 17.9	+0.1
OBF8	**Ulkokalla**	**1.72**	**67**	*e*S	Sn	08 16 17.8	0.0
OBF8				MSG		08 16 18.8	
	comp=Z,1.8nm,0.1s						
OBF0	**Syolatti, Pyha**	**2.10**	**66**	*e*S	Sn	08 16 26.9	-0.2
OBF0				MSG		08 16 30.1	
	comp=Z,1.1nm,0.1s						
OUF	**Merijarvi**	**2.27**	**71**	*e*S	Sn	08 16 30.8	-0.4
OUF				MSG		08 16 34.7	
	comp=Z,0.5nm,0.1s						
OBF4	**Vikkela, Lumij**	**2.56**	**62**	*e*S	Sn	08 16 38.7	+0.1
KEF	**Keuruu**	**2.77**	**121**	*e*PB	Pb	08 16 12.9	-2.4
KEF				*e*SB	Sb	08 16 48.3	-1.1
KEF				MSG		08 16 50.4	
	comp=Z,0.7nm,0.1s						

IDC 22 08:20:57.2±2.4, 5.06S×133.22E, h0km, mb3.5/1, mbtmp3.7/5, ML3.7/4, MS3.0/2, Error ellipse: s-maj=79.7km s-min=15.5km az=81.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.60**	**335**	Pn	Pn	08 22 08.0	-0.1
	2.1nm,0.3s,baz=156,slow=13,SNR=2.8						
	13nm,0.5s						
DAV	**Davao City (W)**	**14.26**	**328**	LR	LR	08 30 45.4	
	comp=Z,31nm,18.5s,baz=188,slow=41						
WRA	**Warramunga Arr**	**14.83**	**176**	Pn	Pn	08 24 28.9	+0.5
	0.2nm,0.3s,baz=355,slow=13,SNR=5.9						
WRA				Sn	Sn	08 27 14.9	+1.4
	0.1nm,0.3s,baz=357,slow=23,SNR=3.7						
	0.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**14.92**	**209**	Pn	Pn	08 24 30.3	+0.7
	0.6nm,0.3s,baz=32,slow=12,SNR=14						
FITZ				Sn	Sn	08 27 16.4	+0.6
	0.5nm,0.3s,baz=90,slow=20,SNR=2.2						
	1.6nm,0.3s						
ASAR	**Alice Springs**	**18.51**	**178**	P	Pn	08 25 15.3	+0.1
	0.2nm,0.3s,baz=4.7,slow=11,SNR=19						
ASAR				S	Sn	08 28 43.8	+1.0
	0.4nm,0.7s,baz=354,slow=26,SNR=2.8						
	1.9nm,0.8s						
CTA	**Charters Tower**	**19.59**	**141**	LR	LR	08 34 15.8	
	comp=Z,73nm,18.5s,baz=286,slow=41						
MKAR	**Makanchi Array**	**68.43**	**325**	P	P	08 32 01.0	-0.1
	0.3nm,0.5s,baz=125,slow=6.7,SNR=2.6						
	0.3nm,0.5s						
	0.2nm,0.3s,baz=53,slow=13,SNR=9.3						
KURBB				Sn	Sn	08 24 47.4	-2.2
	0.1nm,0.3s,baz=62,slow=30,SNR=1.5						
KURBB				Lg	Lg	08 25 23.1	
	0.1nm,0.3s,baz=58,slow=32,SNR=6.3						
	1.3nm,0.4s						
MK31	**Makanchi Array**	**8.10**	**206**	P	Pg	08 24 32.6	-0.1
	0.1nm,0.2s,baz=38,slow=18,SNR=55						
MK31				⇑S	Sn	08 24 49.3	-39
	1.1nm,0.2s,baz=41,slow=34,SNR=19						
MKAR	**Makanchi Array**	**8.10**	**206**	Pn	Pn	08 23 58.0	+1.4
	0.1nm,0.3s,baz=26,slow=14,SNR=5.2						
MKAR				Lg	Lg	08 26 15.2	
	baz=19,slow=29						
	0.2nm,0.3s						
MAKZ	**Makanchi**	**8.17**	**207**	⇑P	Pg	08 24 35.1	+1.0
	0.5nm,0.3s						
MAKZ				⇑S	Sn	08 24 52.7	-38
	2.1nm,0.3s						

IDC 22 08:30:59.8±2.6, 53.73N×86.76E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=21.9km s-min=14.4km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.17**	**281**	*i*		08 38 30.0	
	baz=100,slow=315,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.17**	**281**	Pg	Pg	08 31 21.4	-0.8
	0.7nm,0.3s,baz=99,slow=18,SNR=11						
ZALV				Lg	Lg	08 31 39.2	
	0.9nm,0.3s,baz=99,slow=27,SNR=12						
KURBB	**Kurchatov Arra**	**5.94**	**242**	Pn	Pn	08 32 29.5	+0.6
	baz=56,slow=13,SNR=2.0						
KURBB				Sn	Sn	08 33 35.7	-2.0
	baz=56,slow=29,SNR=1.3						
KURBB				Lg	Lg	08 34 08.8	
	baz=50,slow=30,SNR=1.2						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**7.51**	**204**	Pn	Pn	08 32 52.1	+1.6
	0.1nm,0.3s,baz=24,slow=13,SNR=6.7						
	0.2nm,0.3s						

*IDC **22** 08:32:36.4±0.5, 55.24S×31.82W, h0km, mb4.6/15, mbtmp4.6/16, ML4.1/1, MS4.1/32, Error ellipse: s-maj=16.9km s-min=14.3km az=54.0*

*NEIC **22** 08:32:38.1±1.6, 55.28S±0.09×32.0W±0.1, h10km±1km, mb5.2/72, Error ellipse: s-maj=15.7km s-min=12.3km az=219.0*

*MOS **22** 08:32:38.8±1.4, 55.30S×32.05W, h24km, mb5.2/17, Error ellipse: s-maj=19.3km s-min=10.9km az=120.3*

*GCMT **22** 08:32:43.1±0.3, 55.14S±0.02×31.64W±0.03, h31km±1km, MW5.0/84, Moment Tensor Solution. s31,c35; s84,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.08±.21; $M_{\theta\theta}$-2.60±.16; $M_{\phi\phi}$-0.48±.14; $M_{r\theta}$-1.51±.17; $M_{\theta\phi}$2.38±.10; $M_{\phi r}$2.34±.17; Best double couple: M_o4.61300×10^{16} NP1:ϕ_s320.00000°,δ65.00000°,λ109.00000°. NP2: ϕ_s102.00000°,δ31.00000°,λ55.00000°. Principal axes: T 4.2560, Plg65.0000°, Azm263.0000°; N 0.7130, Plg17.0000°, Azm132.0000°; P -4.9700, Plg18.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 08:32:38.1±0.3, 55.26S±0.06×31.95W±0.06, h10km, n467, σ0.96/435, mb5.2/63, MS4.2/38, 1C-6D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.80**	**289**	Pn	**Pn**	**08 33 23.0**	**+0.1**
HOPE	**Hope Point**	**2.80**	**289**	P	**Pn**	**08 33 23.0**	**+0.1**
ORCD	**Orcadas**	**8.72**	**226**	Pn	**Pn**	**08 34 41.6**	**-2.5**
EFI	**East Falkland**	**15.92**	**272**	*i* P	**Pn**	**08 36 22.1**	**+0.2**
EFI				pmax	pmax		
	comp=Z,50nm,1.0s						
PMSA	**Palmer Station**	**18.44**	**226**	P	**Pn**	**08 36 54.6**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=60,slow=11,SNR=14						
PMSA				LR	LR	08 43 20.1	
	comp=Z,594nm,18.1s,baz=73,slow=35						
	comp=Z,7.0nm,0.7s						
PMSA	**Palmer Station**	**18.44**	**226**		**P**	**08 36 51.6**	**-1.8**
PMSA	**Palmer Station**	**18.44**	**226**	*e*P	**Pn**	**08 36 56.0**	**+2.6**
VNA1	**Neumayer--Stat**	**18.60**	**155**	P	**Pn**	**08 36 55.6**	**+0.2**
VNA3	**Neumayer Olymp**	**18.70**	**158**	P	**Pn**	**08 36 57.8**	**+1.2**
VNA2	**Neumayer--Watz**	**19.00**	**155**	P	**Pn**	**08 37 01.6**	**+1.4**
	baz=309,slow=9.0						
SNAA	**Sanae**	**20.60**	**154**	P	**P**	**08 37 17.3**	**+0.2**
SNAA	**Sanae**	**20.60**	**154**	P	**P**	**08 37 16.3**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=288,slow=12,SNR=28						
SNAA				LR	LR	08 44 04.1	
	comp=Z,156nm,18.2s,baz=342,slow=33						
	comp=Z,3.1nm,0.7s						
SNAA	**Sanae**	**20.60**	**154**	P	**P**	**08 37 16.4**	**-0.7**
SNAA	**Sanae**	**20.60**	**154**	*e*P	Pn	08 37 18.7	-0.6
SMAI	**San Martin Ant**	**20.68**	**218**		**P**	**08 37 17.4**	**-0.4**
USHA	**Ushuaia**	**20.76**	**256**	P	**P**	**08 37 18.4**	**-0.4**
	comp=Z,29nm,1.1s,baz=90,slow=10,SNR=2.3						
	comp=Z,29nm,1.1s						
TROLL	**Troll, Antarti**	**22.18**	**152**	P	**P**	**08 37 34.8**	**+0.7**
BELA	**Belgrano 2**	**22.74**	**181**	P	**P**	**08 37 39.2**	**-0.6**
MG05	**Puerto Natales**	**24.16**	**262**	P	**P**	**08 37 53.6**	**-0.5**
MG05				IAmb	IAmb	08 37 56.5	
	comp=Z,78nm,1.1s						
TRQA	**Tornquist**	**26.54**	**298**	P	**P**	**08 38 14.7**	**-1.2**
TRQA				IAmb	IAmb	08 38 21.8	
	comp=Z,59nm,1.4s						
TRQA	**Tornquist**	**26.54**	**298**	P	**P**	**08 38 14.7**	**-1.2**
TRQA				pmax	pmax		
	comp=Z,59nm,1.4s						
COYC	**Coyhaique**	**26.99**	**274**	P	**P**	**08 38 18.4**	**-1.5**
COYC				IAmb	IAmb	08 38 44.6	
	comp=Z,70nm,1.7s						
PLTB	**Penas Altas**	**28.02**	**318**	*e*P	**P**	**08 38 30.2**	**+1.0**
LL02	**Futaleuf**	**28.31**	**278**	P	**P**	**08 38 30.9**	**-0.7**
CPSB	**Cacapava Do Su**	**29.18**	**320**	*e*P	**P**	**08 38 39.8**	**+0.4**
PLCA	**Paso Flores**	**29.20**	**284**	P	**P**	**08 38 39.7**	**0.0**
	comp=Z,9.8nm,1.0s,baz=138,slow=9.0,SNR=12						
PLCA				LR	LR	08 50 07.6	
	comp=Z,640nm,20.2s,baz=144,slow=36						
	comp=Z,9.8nm,1.0s						
PLCA	**Paso Flores**	**29.20**	**284**	P	**P**	**08 38 39.5**	**-0.1**
PLCA	**Paso Flores**	**29.20**	**284**	*e*P	**P**	**08 38 39.0**	**-0.6**
PLCA	**Paso Flores**	**29.20**	**284**	*e*P	**P**	**08 38 40.2**	**+0.6**
CNLB	**Canela**	**29.26**	**325**	*e*P	**P**	**08 38 40.0**	**-0.3**
RODS	**Rosario do Sul**	**29.90**	**317**	*e*P	**P**	**08 38 46.3**	**+0.4**
LL04	**Puerto Octay**	**30.11**	**281**	P	**P**	**08 38 46.5**	**-1.1**
ALGR	**Alto Alegre (B**	**30.48**	**322**	*e*P	**P**	**08 38 52.1**	**+1.0**
GO06	**Curarrehue**	**30.50**	**284**	P	**P**	**08 38 50.4**	**-0.9**
UNIS	**Unistalda (Bra**	**30.99**	**318**	*e*P	**P**	**08 38 56.6**	**+1.1**
ITQB	**Itaqui**	**31.07**	**315**	P	**P**	**08 38 55.9**	**-0.3**
ITQB				IAmb	IAmb	08 39 17.5	
	comp=Z,49nm,1.3s						
ITQB	**Itaqui**	**31.07**	**315**	*e*P	**P**	**08 38 57.2**	**+1.1**
LR04	**Corral**	**31.38**	**282**	P	**P**	**08 38 57.9**	**-1.0**
ITAB	**Concordia**	**31.61**	**324**	*e*P	**P**	**08 39 01.5**	**+0.6**
CRSM	**Crissiumal (Br**	**32.03**	**321**	*e*P	**P**	**08 39 05.8**	**+1.1**
FRBT	**Francisco Belt**	**33.08**	**324**	*e*P	**P**	**08 39 15.0**	**+1.1**
PTGB	**Pitanga**	**33.92**	**326**	*e*P	**P**	**08 39 22.1**	**+0.8**
LMEL	**Las Melosas**	**34.03**	**293**	P	**P**	**08 39 20.6**	**-1.8**
LMEL				IAmb	IAmb	08 39 25.9	
	comp=Z,29nm,1.1s						
BO01	**Tunca**	**34.08**	**291**	P	**P**	**08 39 21.2**	**-1.3**
BO01				IAmb	IAmb	08 39 47.8	
	comp=Z,61nm,1.8s						
CPUP	**Villa Florida**	**34.32**	**317**	P	**P**	**08 39 24.4**	**-0.2**
	comp=Z,5.7nm,0.5s,baz=156,slow=6.8,SNR=14						
CPUP				LR	LR	08 51 49.3	
	comp=Z,138nm,22.0s,baz=172,slow=34						
	comp=Z,5.7nm,0.5s						
CPUP	**Villa Florida**	**34.32**	**317**	P	**P**	**08 39 24.7**	**0.0**
CPUP	**Villa Florida**	**34.32**	**317**	P	**P**	**08 39 24.7**	**0.0**
CPUP				pmax	pmax		
	comp=Z,16nm,1.1s						
CPUP	**Villa Florida**	**34.32**	**317**	*e*P	**P**	**08 39 24.6**	**0.0**
MT03	**Universidad Ad**	**34.47**	**293**	P	**P**	**08 39 24.7**	**-1.3**
MT03				IAmb	IAmb	08 40 04.8	
	comp=Z,38nm,1.1s						
MT09	**Talagante**	**34.50**	**292**	P	**P**	**08 39 25.6**	**-0.8**
MT09				IAmb	IAmb	08 39 33.4	
	comp=Z,29nm,0.7s						
MT01	**Popeta**	**34.57**	**292**	P	**P**	**08 39 26.5**	**-0.4**
MT01				IAmb	IAmb	08 39 27.9	
	comp=Z,35nm,1.1s						
PEL	**Peldehue**	**34.83**	**293**	P	**P**	**08 39 28.4**	**-0.7**
PEL	**Peldehue**	**34.83**	**293**	P	**P**	**08 39 28.4**	**-0.7**
PEL				pmax	pmax		
	comp=Z,56nm,1.0s						
VA05	**Santo Domingo**	**34.93**	**292**	P	**P**	**08 39 29.8**	**0.0**
MT02	**Curacav**	**34.98**	**293**	P	**P**	**08 39 30.8**	**+0.5**
MT02				IAmb	IAmb	08 39 32.9	
	comp=Z,47nm,1.1s						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**08 39 30.1**	**-0.2**
	comp=Z,12nm,0.9s,baz=202,slow=2.8,SNR=26						
QSPA				LR	LR	08 53 26.0	
	comp=Z,323nm,18.3s,baz=186,slow=36						
	comp=Z,12nm,0.9s						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**08 39 31.7**	**+1.4**
QSPA				IAmb	IAmb	08 39 43.0	
	comp=Z,19nm,0.9s						
ZON	**Zonda**	**35.05**	**297**	P	**P**	**08 39 30.4**	**-0.7**
ZON				IAmb	IAmb	08 39 41.3	
	comp=Z,18nm,0.8s						
ZON	**Zonda**	**35.05**	**297**	P	**P**	**08 39 30.4**	**-0.7**
ZON				pmax	pmax		
	comp=Z,18nm,0.8s						
VA03	**San Esteban**	**35.06**	**294**	P	**P**	**08 39 32.1**	**+1.0**
ROC1	**El Roble**	**35.13**	**293**	P	**P**	**08 39 31.4**	**-0.5**
ALF01	**Guarapari-ES**	**35.22**	**346**	*e*P	**P**	**08 39 31.6**	**-0.7**
VA06	**Catapilco**	**35.61**	**293**	P	**P**	**08 39 36.5**	**+0.8**
RIB01	**Linhares ES**	**36.45**	**347**	*e*P	**P**	**08 39 44.2**	**+1.1**
CO02	**Combarbal**	**36.52**	**295**	P	**P**	**08 39 43.0**	**-0.6**
CO03	**El Pedregal**	**36.65**	**296**	P	**P**	**08 39 45.4**	**+0.6**
CO03				IAmb	IAmb	08 40 16.4	
	comp=Z,86nm,1.6s						
CO01	**Juntas del Tor**	**37.03**	**297**	P	**P**	**08 39 47.0**	**-1.2**
CO01				IAmb	IAmb	08 39 51.6	
	comp=Z,62nm,1.2s						
SJMB	**Sao Joao De Ma**	**37.16**	**345**	*e*P	**P**	**08 39 49.2**	**+0.2**
NAN01	**Guarapari, ES**	**37.87**	**347**	*e*P	**P**	**08 39 56.3**	**+1.2**
DIAM	**Diamantina, MG**	**37.97**	**342**	*e*P	**P**	**08 39 57.2**	**+1.2**
AC05	**El Transito**	**38.05**	**298**	P	**P**	**08 39 55.6**	**-1.1**
AC05				IAmb	IAmb	08 40 18.4	
	comp=Z,82nm,1.5s						
PMNB	**Patos De Minas**	**38.28**	**337**	*e*P	**P**	**08 39 59.6**	**+0.9**
AC04	**Llanos de Chal**	**38.97**	**298**	P	**P**	**08 40 04.5**	**+0.2**
AQDB	**Aquidauana**	**39.07**	**323**	P	**P**	**08 40 02.8**	**-2.3**
AQDB	**Aquidauana**	**39.07**	**323**	*e*P	**P**	**08 40 06.8**	**+1.7**
GUA01	**Guaratinga, BA**	**39.07**	**348**	*e*P	**P**	**08 40 05.3**	**+0.1**
IPMB	**Ipameri, GO**	**39.23**	**335**	*e*P	**P**	**08 40 08.0**	**+1.4**
MC01	**Montes Claros**	**39.56**	**342**	*e*P	**P**	**08 40 09.6**	**+0.2**
C2SB	**Chapadao do Su**	**39.74**	**328**	*e*P	**P**	**08 40 11.7**	**+1.0**
CMC01	**Camacan, BA**	**40.24**	**349**	*e*P	**P**	**08 40 16.4**	**+1.5**
AC01	**Pan de Azucar**	**40.42**	**300**	P	**P**	**08 40 15.9**	**-0.5**
AC01				IAmb	IAmb	08 40 18.4	
	comp=Z,97nm,1.4s						
GO02	**Mina Guanaco**	**40.75**	**302**	P	**P**	**08 40 19.0**	**-0.5**
GO02				IAmb	IAmb	08 40 33.2	
	comp=Z,97nm,1.5s						
ELIM	**Elim**	**40.88**	**82**	*e*P	**P**	**08 40 18.6**	**-1.5**
ELIM				IAmb	IAmb	08 40 23.1	
	comp=Z,23nm,1.0s						
JANB	**Januaria**	**41.24**	**342**	*e*P	**P**	**08 40 24.1**	**+0.8**
BDFB	**Brasilia**	**41.44**	**336**	P	**P**	**08 40 24.7**	**-0.2**
	comp=Z,5.8nm,0.9s,baz=157,slow=7.7,SNR=4.6						
	comp=Z,5.8nm,0.9s						
BDFB	**Brasilia**	**41.44**	**336**	*e*P	**P**	**08 40 24.8**	**-0.1**
CER	**Ceres**	**41.52**	**80**	*e*Pn	P	08 40 15.3	-10
CER				IAmb	IAmb	08 40 18.2	
	comp=Z,517nm,2.7s						
AF01	**San Pedro de A**	**41.96**	**305**	P	**P**	**08 40 28.7**	**-0.7**
PB15	**IPOC Station P**	**42.35**	**304**	P	**P**	**08 40 30.3**	**-2.2**
MAW	**Mawson**	**42.36**	**145**	P	**P**	**08 40 31.7**	**-0.1**
	comp=Z,6.3nm,1.0s,baz=250,slow=8.0,SNR=7.6						
MAW				LR	LR	08 57 59.9	
	comp=Z,114nm,19.4s,baz=238,slow=36						
	comp=Z,6.3nm,1.0s						
MAW	**Mawson**	**42.36**	**145**	P	**P**	**08 40 31.7**	**-0.1**
MAW	**Mawson**	**42.36**	**145**	P	**P**	**08 40 31.7**	**-0.1**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.4s						
LVC	**Limon Verde**	**42.60**	**305**	P	**P**	**08 40 34.2**	**-0.4**
LVC	**Limon Verde**	**42.60**	**305**	*e*P	**P**	**08 40 35.1**	**+0.4**
LVC	**Limon Verde**	**42.60**	**305**	*e*P	**P**	**08 40 36.6**	**+1.9**
SUR	**Sutherland**	**43.11**	**80**	P	**P**	**08 40 38.2**	**-0.4**
	comp=Z,31nm,1.2s,baz=253,slow=9.2,SNR=2.0						
SUR				LR	LR	08 54 28.4	
	comp=Z,70nm,20.0s,baz=204,slow=30						
	comp=Z,31nm,1.2s						
SALV	**Santo Antonio**	**43.33**	**326**	*e*P	**P**	**08 40 40.9**	**+0.7**
PB04	**IPOC Station P**	**43.42**	**304**	P	**P**	**08 40 41.6**	**+0.5**
PB09	**IPOC Station P**	**43.45**	**305**	P	**P**	**08 40 42.5**	**+1.1**
PB09				IAmb	IAmb	08 40 56.1	
	comp=Z,73nm,1.4s						
PB07	**IPOC Station P**	**43.81**	**304**	P	**P**	**08 40 43.4**	**-0.9**
PB07				IAmb	IAmb	08 41 15.9	
	comp=Z,51nm,1.4s						
GRAN	**Grantham**	**43.93**	**82**	*e*P	**P**	**08 40 48.5**	**+3.4**
GRAN				IAmb	IAmb	08 40 49.7	
	comp=Z,17nm,1.0s						
SDBA	**SAO DESIDERIO**	**43.94**	**342**	*e*P	**P**	**08 40 46.4**	**+1.2**
PB02	**IPOC Station P**	**44.17**	**305**	P	**P**	**08 40 48.0**	**+0.9**
PB02				IAmb	IAmb	08 40 48.6	
	comp=Z,24nm,0.9s						
PB01	**IPOC Station P**	**44.21**	**305**	P	**P**	**08 40 48.1**	**+0.7**
PTLB	**Pontes e Lacer**	**44.92**	**321**	P	**P**	**08 40 53.2**	**+0.3**
PTLB				IAmb	IAmb	08 41 03.2	
	comp=Z,16nm,0.9s						
PTLB	**Pontes e Lacer**	**44.92**	**321**	*e*P	**P**	**08 40 53.0**	**+0.1**
SIV	**San Ignacio**	**45.13**	**319**	LR	L

BOSA pmax pmax
comp=Z,43nm,1.1s
BOSA Boshof 48.45 81 *e*P **P 08 41 20.0 -0.8**
BOSA IAmb IAmb 08 41 25.4
comp=Z,42nm,1.1s
H10N1 ASCENSION HYDR 49.29 23 T T 09 34 47.0
baz=193,slow=75,SNR=199
H10N3 ASCENSION HYDR 49.29 23 T T 09 34 46.5
baz=193,slow=75,SNR=210
H10N2 ASCENSION HYDR 49.31 23 T T 09 34 47.8
baz=193,slow=75,SNR=221
RCBR Riachuelo 49.39 355 LR LR 08 58 39.7
comp=Z,182nm,19.3s,baz=322,slow=32
SWZ Schweizer 49.60 80 *e*P **P 08 41 28.7 -0.8**
SWZ IAmb IAmb 08 41 33.6
comp=Z,41nm,1.0s
PRYS Parys 50.94 81 *e*P **P 08 41 38.7 -1.0**
PRYS IAmb IAmb 08 41 43.8
comp=Z,41nm,1.0s
PRPB Parauapebas 51.00 337 *e*P **P 08 41 41.5 +1.5**
LBTB Lobatse 51.43 78 LR LR 08 59 43.9
comp=Z,58nm,20.2s,baz=218,slow=32
LBTB Lobatse 51.43 78 *e*P **P 08 41 43.0 -0.4**
LBTB Lobatse 51.43 78 P **P 08 41 43.0 -0.4**
LBTB pmax pmax
comp=Z,42nm,0.9s
LBTB Lobatse 51.43 78 *e*P **P 08 41 43.4 0.0**
LBTB IAmb IAmb 08 41 47.5
comp=Z,43nm,0.9s
NPGB Novo Progresso 51.59 330 *e*P **P 08 41 44.2 -0.2**
TSUM Tsumeb 51.75 66 LR LR 08 58 36.1
comp=Z,104nm,21.0s,baz=156,slow=30
TSUM Tsumeb 51.75 66 P **P 08 41 45.0 -0.8**
TSUM IAmb IAmb 08 41 51.2
comp=Z,64nm,1.7s
TSUM Tsumeb 51.75 66 *e*P **P 08 41 44.8 -1.0**
TSUM IAmb IAmb 08 41 50.9
comp=Z,71nm,1.8s
SLR Silverton 52.38 81 *e*P **P 08 41 52.1 +1.6**
SLR IAmb IAmb 08 41 54.4
comp=Z,38nm,1.2s
ETMB Extrema 52.76 316 P **P 08 41 52.8 -0.4**
ETMB IAmb IAmb 08 41 54.5
comp=Z,34nm,1.4s
ETMB Extrema 52.76 316 *e*P **P 08 41 53.0 -0.1**
POGA Pongola 53.09 86 *e*P **P 08 41 53.3 -2.3**
ROSB Rosrio 53.13 345 *e*P **P 08 41 55.4 -0.4**
LEPH Lephalale, Lim 53.57 79 *e*P **P 08 41 58.4 -0.9**
LEPH IAmb IAmb 08 42 03.3
comp=Z,13nm,0.8s
ITTB Itaituba 54.24 330 *e*P **P 08 42 04.0 0.0**
TMAB Tom-Au,PA,Br 54.33 340 *e*P **P 08 42 06.7 +2.1**
CASY Casey 55.52 163 P **P 08 42 14.0 +1.3**
NNA Nana 55.52 303 LR LR 09 08 53.1
comp=Z,100nm,18.0s,baz=144,slow=39
NNA Nana 55.52 303 *i* P **P 08 42 13.2 -0.2**
NNA pmax pmax
comp=Z,30nm,0.9s
MOPA Mopani 55.87 82 *e*P **P 08 42 14.7 -1.2**
MOPA IAmb IAmb 08 42 19.8
comp=Z,18nm,0.9s
MUSN Musina, Limpop 55.97 80 *e*P **P 08 42 17.1 +0.5**
MUSN IAmb IAmb 08 42 20.9
comp=Z,44nm,0.9s
MALB Monte Alegre 56.24 333 *e*P **P 08 42 19.3 +0.8**
MATP Matopo 56.69 78 *e*P **P 08 42 20.1 -1.6**
MATP IAmb IAmb 08 42 25.8
comp=Z,81nm,0.9s
BLWY Bulawayo 56.98 77 *e*P **P 08 42 22.7 -1.2**
BLWY IAmb IAmb 08 42 27.7
comp=Z,174nm,1.0s
MCPB Macapa, AP 57.13 336 *e*P **P 08 42 25.9 +1.1**
CZSB Cruzeiro do Su 57.36 310 P **P 08 42 25.8 -0.7**
CZSB IAmb IAmb 08 42 26.8
comp=Z,59nm,1.5s
CZSB Cruzeiro do Su 57.36 310 *e*P **P 08 42 26.2 -0.2**
ATAH Atahualpa 60.49 304 LR LR 09 11 02.8
comp=Z,62nm,18.4s,baz=147,slow=38
LSZ Lusaka 60.68 74 LR LR 09 05 35.4
comp=Z,263nm,19.2s,baz=186,slow=33
BOAV Boa Vista 62.08 327 P **P 08 42 58.2 -0.7**
BOAV IAmb IAmb 08 42 59.2
comp=Z,16nm,1.2s
BOAV Boa Vista 62.08 327 *e*P **P 08 42 58.4 -0.5**
MDP Montagnes des 62.55 337 LR LR 09 10 02.3
comp=Z,124nm,19.5s,baz=130,slow=36
BOSC San Juan Bosco 64.03 306 P **P 08 43 12.3 +0.2**
BOSC IAmb IAmb 08 43 24.9
comp=Z,11nm,0.7s
ARNL Arenillas 64.41 305 P **P 08 43 14.4 0.0**
LIC Lamto 65.22 30⇓ *i*P **P 08 43 19.0 -0.6**
comp=Z,30nm,0.6s
PTLC Puerto Leguiza 65.33 312 *e*P **P 08 43 18.6 -1.8**
KIC Kosan Boka 65.43 30⇓ *i*P **P 08 43 20.2 -0.8**
comp=Z,16nm,0.9s
TIC Toumodi 65.62 30⇓ *i*P **P 08 43 21.4 -0.8**
comp=Z,42nm,1.0s
PORT Chimborazo Vol 65.64 307 P **P 08 43 21.7 -1.4**
PORT IAmb IAmb 08 43 36.2
comp=Z,16nm,0.9s
DBIC Dimbokro 65.69 30 P **P 08 43 22.2 -0.4**
comp=Z,12nm,0.9s,baz=205,slow=7.7,SNR=8.3
DBIC LR LR 09 05 51.8
comp=Z,132nm,18.6s,baz=186,slow=30
comp=Z,12nm,0.9s
DBIC Dimbokro 65.69 30 P **P 08 43 22.4 -0.3**
DBIC IAmb IAmb 08 43 22.9
comp=Z,19nm,1.1s
DBIC Dimbokro 65.69 30 P **P 08 43 22.4 -0.3**
DBIC pmax pmax
comp=Z,19nm,1.1s
DBIC Dimbokro 65.69 30 *e*P **P 08 43 21.4 -1.3**
MACC Macarena, Meta 66.71 313 *e*P **P 08 43 29.1 -0.1**
FLOC Florencia 66.97 311 *e*P **P 08 43 30.5 -0.4**
OTAV Otavalo 67.00 308 P **P 08 43 30.8 -0.8**
OTAV Otavalo 67.00 308 P **P 08 43 30.8 -0.8**
OTAV pmax pmax
comp=Z,24nm,1.1s
OTAV Otavalo 67.00 308 *e*P **P 08 43 32.1 +0.4**
FLF1 Flavio Alfaro- 67.11 306 *e*P **P 08 43 33.5 +1.7**
GARC Garzon, Huila 67.44 312 *e*P **P 08 43 34.6 +0.4**
BBAC Balboa, Cauca 68.05 310 *e*P **P 08 43 38.6 +0.6**
POPC Popayan, Colom 68.27 311 *e*P **P 08 43 40.1 +0.7**
ABPO Ambohimpanom 68.45 92 P **P 08 43 39.7 -0.8**
ABPO IAmb IAmb 08 43 47.7
comp=Z,13nm,1.1s
ABPO Ambohimpanom 68.45 92 P **P 08 43 39.7 -0.8**
ABPO pmax pmax
comp=Z,13nm,1.1s
PRAC Prado 68.56 313 *e*P **P 08 43 40.7 -0.3**
OPO Ambohidratompo 68.79 92 LR LR 09 08 15.6
comp=Z,189nm,18.9s,baz=29,slow=31
ROSC El Rosal 69.34 314 P **P 08 43 46.5 +0.3**
comp=Z,5.0nm,0.3s,baz=150,slow=18,SNR=5.1
ROSC LR LR 09 17 39.4
comp=Z,107nm,18.6s,baz=48,slow=39
comp=Z,5.0nm,0.3s
ROSC El Rosal 69.34 314 P **P 08 43 45.9 -0.3**
ROSC IAmb IAmb 08 43 52.4
comp=Z,20nm,1.1s
ROSC El Rosal 69.34 314 P **P 08 43 45.9 -0.3**
ROSC pmax pmax
comp=Z,20nm,1.2s
YOTC Yotoco, Valle 69.42 312 *e*P **P 08 43 45.3 -1.1**
SPBC San Pablo de B 69.98 315 *e*P **P 08 43 47.7 -2.1**
GUY2C Guyana, Caldas 70.12 313 *e*P **P 08 43 50.4 -0.7**
PLMC San Jos del P 70.22 312 *e*P **P 08 43 51.0 -0.2**
NORC Norcasia 70.22 314 *e*P **P 08 43 49.8 -1.4**
BAUV El Baul 70.70 322 P **P 08 43 53.6 -0.4**
PTBC PUERTO BERRIO, 70.94 315 *e*P **P 08 43 53.2 -2.4**
CBOC Ciudad Bolivar 70.97 313 *e*P **P 08 43 53.6 -2.3**
SDV Santo Domingo 71.59 319 LR LR 09 17 08.7
comp=Z,148nm,18.7s,baz=99,slow=37
SDV Santo Domingo 71.59 319 P **P 08 43 58.9 -0.8**
SDV IAmb IAmb 08 44 05.2
comp=Z,12nm,0.9s
SDV Santo Domingo 71.59 319 *e*P **P 08 44 00.6 +0.9**
ZARC Zaragoza, Cauc 71.97 315 *e*P **P 08 43 59.5 -2.3**
KOWA Kowa 73.39 28 P **P 08 44 09.6 -0.5**
KOWA IAmb IAmb 08 44 15.8
comp=Z,18nm,1.2s
TOA0 Torodi Ar. Sit 73.81 34 P **P 08 44 12.6 0.0**
TOA0 IAmb IAmb 08 44 17.9
comp=Z,14nm,0.8s
TORD Torodi Ar. Bea 73.81 34 P **P 08 44 12.3 -0.3**
comp=Z,9.9nm,0.7s,baz=198,slow=6.7,SNR=56
TORD LR LR 09 10 03.0
comp=Z,284nm,19.9s,baz=214,slow=30
comp=Z,9.9nm,0.7s
TORD Torodi Ar. Bea 73.81 34 P **P 08 44 12.7 +0.1**
MBAR Mbarara 74.27 67 LR LR 09 13 45.2
comp=Z,222nm,18.5s,baz=168,slow=33
MBAR Mbarara 74.27 67 *i* P **P 08 44 15.6 0.0**
MBAR pmax pmax
comp=Z,14nm,1.1s
KMBO Kilima Mbogo 77.34 73 LR LR 09 15 43.4
comp=Z,261nm,19.3s,baz=258,slow=34
KMBO Kilima Mbogo 77.34 73 *i* P **P 08 44 35.2 +1.9**
SJG San Juan 78.64 327 LR LR 09 20 03.8
comp=Z,44nm,20.8s,baz=153,slow=36
JTS Las Juntas de 78.84 307 *i* P **P 08 44 41.2 0.0**
JTS pmax pmax
comp=Z,10.0nm,1.1s
RPZ Rata Peaks 79.48 197 LR LR 09 18 29.6
comp=Z,101nm,18.5s,baz=142,slow=35
TBI Tubuai 85.40 235 *e*LR LR 09 12 14.1
comp=Z,160nm,28.5s
TEIG Tepich 89.07 309 P **P 08 45 34.0 +0.8**
PPT2 Papeete2 90.39 238 *e*LR LR 09 14 33.2
comp=Z,132nm,22.2s
PPT Papeete 90.41 238 LR LR 09 17 37.8
comp=Z,98nm,19.6s,baz=167,slow=30
MDT Mitt 90.81 23 LR LR 09 20 40.0
comp=Z,219nm,20.9s,baz=190,slow=32
ATD Arta Tunnel 90.90 71 LR LR 09 22 45.0
comp=Z,177nm,21.7s,baz=188,slow=33
STKA Stephens Creek 93.04 175 *i* P **P 08 45 54.6 +2.8**
KEST Kesra 97.28 33 LR LR 09 25 51.3
comp=Z,259nm,19.4s,baz=168,slow=33
ESDC Sonseca Array 97.54 21 P Pdif 08 46 12.3 +0.4
comp=Z,0.3nm,0.7s,baz=188,slow=3.6,SNR=2.8
ESDC LR LR 09 25 38.4
comp=Z,151nm,19.9s,baz=150,slow=33
comp=Z,0.3nm,0.7s
ASAR Alice Springs 100.47 167 P **Pdif 08 46 22.9 -2.6**
comp=Z,0.2nm,0.7s,baz=180,slow=4.3,SNR=6.4
HKT Hockley 100.87 307 *i* P **Pdif 08 46 28.5 +1.7**
HKT pmax pmax
comp=Z,3.0nm,1.1s
DZM Mont Dzumac 101.39 197 *e*LR LR 09 19 37.7
comp=Z,236nm,27.6s
CLL Collm 112.58 29 *e*PS PS 09 01 36.0 +1.6
CLL *e*SS SS 09 07 48.0 +5.9
CLL Lm MLR 09 32 00.0
comp=Z,100nm,21.1s
TPFO Pinon Flats 113.95 295 P **PKiKP 08 51 18.1 +1.3**
baz=142
PFO Pinyon Flats O 113.96 295 P **PKiKP 08 51 18.6 +1.7**
baz=142
BELC Belle Mtn. Jos 114.02 295 P PKPdf 08 51 16.7 -0.3
baz=142
MURC Murrieta 114.33 294 P **PKiKP 08 51 18.3 +0.8**
baz=141
K22A Casper 116.18 308 P **PKiKP 08 51 21.3 +0.4**
baz=142
RSSD Black Hills 116.23 310 P **PKiKP 08 51 21.8 +0.7**
baz=143
AGMN Agassiz Nation 116.25 318 P **PKiKP 08 51 22.7 +2.1**
baz=145
SBC Santa Barbara 116.30 293 P **PKiKP 08 51 22.1 +0.9**
baz=140
MPMC Manual Prospec 116.38 296 P **PKiKP 08 51 22.9 +1.3**
baz=140
TPNV Topopah Spring 116.43 297 P **PKiKP 08 51 21.8 +0.2**
baz=140
CWC Cottonwood Cre 116.98 295 P **PKiKP 08 51 23.8 +1.2**
baz=140
KBZ Khabaz 117.15 52 *i* PKIKP **PKiKP 08 51 23.0 +0.5**
KBZ pmax pmax
comp=Z,3.0nm,1.1s
KIV Kislovodsk 117.23 52 *i* PKIKP **PKiKP 08 51 23.9 +1.1**
KIV pmax pmax
comp=Z,6.0nm,0.9s
KIV MLR MLR
comp=Z,22nm,22.0s
PDAR Pinedale Array 117.66 306 PKP **PKPdf 08 51 23.4 -0.4**
comp=Z,0.3nm,0.5s,baz=133,slow=4.0,SNR=4.5
NVAR Mina Array Bea 118.61 297 PKP **PKPdf 08 51 25.6 -0.2**
comp=Z,0.5nm,0.7s,baz=125,slow=2.7,SNR=4.3
MOOW Moose Ponds 118.97 306 PKPdf **PKPdf 08 51 26.0 -0.3**
EGMT Eagleton 121.77 309 P **PKiKP 08 51 31.4 -0.1**
baz=139
MSO Missoula 122.77 306 PKPdf **PKPdf 08 51 32.4 -0.9**
MSO Missoula 122.77 306 P **PKiKP 08 51 34.0 +0.4**
baz=138
BMO Blue Mountains 122.91 302 PKPdf **PKPdf 08 51 32.9 -0.8**
BMO Blue Mountains 122.91 302 PKIKP **PKPdf 08 51 32.9 -0.8**
OBN Obninsk 123.41 40‖ *e*PKIKP **PKiKP 08 51 34.2 -0.1**
OBN *e* 08 53 16.0
OBN *e* 08 58 34.8
OBN pmax pmax
comp=Z,4.0nm,1.0s
L04D Klamath Falls 123.47 297 P **PKPdf 08 51 34.7 -0.2**
baz=137
J05D Fort Rock, OR 123.70 299 P **PKPdf 08 51 35.1 -0.2**
baz=136
G08A Pilot Rock 124.03 302 PKPdf **PKiKP 08 51 36.1 0.0**
L02F Cave Junction 124.05 296 P **PKPdf 08 51 35.5 -0.3**
baz=136
J04D Umpqua Nationa 124.11 298 P **PKiKP 08 51 36.2 -0.3**
baz=136
K02D Willamette Mer 124.51 297 P **PKPdf 08 51 36.4 -0.4**
baz=136
I05D Terrebonne, OR 124.52 299 P **PKPdf 08 51 36.5 -0.2**
baz=136
E08A Dider Farm, El 124.95 303 PKPdf **PKPdf 08 51 37.2 -0.2**
FINES FINESS Array B 124.99 30 PKP **PKPdf 08 51 36.0 -0.9**
comp=Z,1.5nm,0.6s,baz=184,slow=3.6,SNR=6.7
NEW Newport 125.30 305 P **PKPdf 08 51 38.0 -0.1**
baz=136
H04D Lebanon 125.35 299 P **PKiKP 08 51 38.9 +0.3**
baz=135
I02E Swisshome, OR 125.61 298 P **PKiKP 08 51 39.2 +0.1**
baz=135
G03D McMinnville, O 126.10 299 P **PKiKP 08 51 40.2 +0.1**
baz=135
SUMG Summit 127.62 358 *i* P **PKiKP 08 51 46.0 +3.2**
CMAR Chiang Mai Arr 127.86 115 PKP **PKPdf 08 51 42.9 -1.0**
comp=Z,2.4nm,0.4s,baz=254,slow=1.6,SNR=4.1
KLMR Klimovskoe 128.75 37 *e*PKIKP **PKiKP 08 51 46.6 +1.8**
KLMR pmax pmax
comp=Z,8.0nm,1.1s
KLMR Klimovskoe 128.75 37 *e*PKPdf **PKiKP 08 51 46.7 +1.9**
KLMR AMP 08 51 49.0
comp=Z,8.0nm,1.1s
AKTO Aktyubinsk 129.06 55 PKP **PKPdf 08 51 44.7 -0.4**
comp=Z,1.8nm,0.9s,baz=244,slow=5.1,SNR=4.5
ABKAR Akbulak array 129.19 58 PKPdf **PKPdf 08 51 44.6 -0.7**
KKAR Karatay Array 130.45 70 PKPdf **PKPdf 08 51 47.5 -0.5**
KKAR Karatay Array 130.45 70 PKIKP **PKPdf 08 51 47.5 -0.5**
KSH Kashi 130.99 77 PKP **PKiKP 08 51 50.0 -0.2**
ARCES ARCESS Array B 131.24 23 PKP **PKPdf 08 51 48.2 -0.5**
comp=Z,7.5nm,1.0s,baz=23,slow=12,SNR=6.5
PRGR Permogore 131.42 38 *e*PKIKP **PKiKP 08 51 52.4 +2.2**
ARU Arti 133.21 50 *i* PKIKP **PKPdf 08 51 52.7 0.0**
ARU 08 54 17.7
ARU SS SS 09 12 02.6 -1.4
YKA Yellowknife Ar 133.81 320 PKP **PKPdf 08 51 53.2 -0.5**
comp=Z,3.1nm,1.0s,baz=130,slow=2.5,SNR=11
YKA PP PP 08 54 23.4 -0.9
comp=Z,1.3nm,1.0s,baz=126,slow=7.9,SNR=5.9
YKA Yellowknife Ar 133.81 320 PKIKP **PKPdf 08 51 53.3 -0.4**
PZH PanZhiHua 135.92 111 PKP **PKiKP 08 52 01.3 +0.7**
BRVK Borovoye 136.63 59 *i* PKIKP **PKPdf 08 51 59.8 +0.5**
BRVK pmax pmax
comp=Z,3.0nm,0.9s
V35K Ketchikan 136.70 305 P **PKiKP 08 52 00.9 -0.1**
baz=125
T35M Bob Quinn 137.00 307 P **PKiKP 08 52 02.8 +1.1**
baz=124
CRAG Craig 137.49 304 P **PKiKP 08 52 02.6 -0.1**
baz=124
WRGLY Wrigley 137.55 318 P **PKiKP 08 52 03.1 +0.6**
baz=122
WRAK Wrangell Islan 137.65 306 P **PKiKP 08 52 04.3 +1.4**
baz=123
R33M Jennings River 138.62 310 P **PKPdf 08 52 03.2 +0.3**
baz=121
MK31 Makanchi Array 139.22 74 *i* PKIKP **PKiKP 08 52 05.6 -1.0**
MKAR Makanchi Array 139.22 74 PKP **PKPdf 08 52 01.6 -2.7**
comp=Z,0.7nm,0.8s,baz=245,slow=3.0,SNR=5.4
SIT Sitka 139.38 305 P **PKPdf 08 52 03.8 -0.3**
baz=121
KURK Kurchatov 139.54 67 PKPdf **PKPdf 08 52 02.6 -2.1**
KURK Kurchatov 139.54 67 *i* PKIKP **PKPdf 08 52 01.1 -3.6**
P33M Teslin, Yukon 139.84 311 P **PKPdf 08 52 05.6 +0.5**
baz=119
P32M Atlin 139.93 309 P **PKPdf 08 52 05.7 +0.5**
baz=119
MMPY Sheldon Lake, 140.34 314 P **PKPdf 08 52 06.2 +0.3**
baz=118
N32M Quiet Lake 140.41 312 P **PKPdf 08 52 06.2 +0.2**
baz=118
WMQ Urumqi 140.42 81 *e*PKP **PKPdf 08 52 07.6 +1.0**
WMQ LR LR
comp=Z,200nm,21.5s
CD2 Chengdu 140.47 109 PKP **PKPdf 08 52 07.0 -0.1**
FARO Faro, Yukon 141.02 313 P **PKPdf 08 52 07.8 +0.7**
baz=117
M31M Drury Creek, Y 141.45 313 PKPdf **PKiKP 08 52 09.2 -1.4**
N31M Braeburn, Yuko 141.72 311 P **PKPdf 08 52 09.0 +0.6**
baz=116
LOGN Logan Glacier 143.74 308 PKPdf PKPbc 08 52 10.6 +0.8
YAH Yahtse 143.88 307 PKPdf PKPbc 08 52 10.6 +0.2
CTGM Chitina Glacie 143.94 309 PKPdf PKPbc 08 52 10.7 +0.3
EPYK Eagle Plains 144.02 318 PKPdf **PKPab 08 52 09.7 -0.1**
ISLE Juniper Island 144.25 308 PKPdf **PKPab 08 52 10.7 -0.3**
DAWY Dawson 144.28 314 **PKPab 08 52 10.6 -0.3**
I29M Ogilvie Camp, 144.29 316 PKPdf PKPbc 08 52 10.8 -0.3
LZH Lanzhou 144.41 104⇓ PKP **PKPdf 08 52 15.3 +1.2**
ZAA0 Zalesovo Array 144.47 65 PKPdf PKPbc 08 52 11.6 -0.4
ZALV Zalesovo Beam 144.47 65 PKP PKPbc 08 52 11.7 -0.3
comp=Z,13nm,0.8s,baz=236,slow=3.0,SNR=14
ZALV PP **PP 08 55 31.6 +1.2**
comp=Z,0.5nm,0.4s,baz=271,slow=6.5,SNR=2.2
ZALV Zalesovo Beam 144.47 65 PKPdf **PKPab 08 52 11.3 -0.4**
ZALV Zalesovo Beam 144.47 65 PKIKP **PKPab 08 52 11.4 -0.4**
GTA Gaotai 144.48 96⇓ PKP PKPbc 08 52 12.8 +0.1
GTA LR LR
comp=Z,860nm,17.5s
GTA LR LR
comp=Z,410nm,16.7s
GTA LR LR
comp=Z,300nm,17.4s
TGL Tana Glacier 144.53 308 PKPdf PKPbc 08 52 12.2 +0.1
M27K Edge Creek, AK 144.71 311 PKPdf PKPbc 08 52 12.8 +0.1
M27K Edge Creek, AK 144.71 311 P PKPbc 08 52 12.9 +0.2
baz=111
MCARA McCarthy VSAT 144.86 309 PKPdf PKPbc 08 52 13.2 +0.2
MCARA McCarthy VSAT 144.86 309 P **PKPdf 08 52 13.8 -0.1**
baz=112
BCAR Beaver Creek A 144.93 312 PKPdf **PKPab 08 52 12.4 -0.9**
KAIM Kayak Island 144.94 306 P **PKPdf 08 52 13.6 -0.4**
baz=113
L27K Beaver Creek, 144.94 312 PKPdf PKPbc 08 52 13.2 -0.1
L27K Beaver Creek, 144.94 312 P **PKPab 08 52 12.7 -0.7**
baz=110,SNR=31
HMT Hamilton 145.02 307 PKPbc **PKPdf 08 52 13.9 -0.3**
M26K Nabesna, AK 145.22 310 PKPbc **PKPbc 08 52 13.4 -0.8**
M26K Nabesna, AK 145.22 310 P **PKPbc 08 52 13.6 -0.8**
baz=110,SNR=7.9
GLB Gilahina Butte 145.23 309 PKPbc **PKPbc 08 52 14.1 -0.3**
RAGM Ragged Mountai 145.23 307 PKPbc **PKPdf 08 52 14.5 -0.1**
EGAK Eagle 145.24 315 PKPbc **PKPbc 08 52 13.2 -0.9**
EGAK Eagle 145.24 315 P **PKPbc 08 52 13.8 -0.3**
baz=108
K27K Chicken 145.38 313 PKPbc **PKPab 08 52 14.8 0.0**
K27K Chicken 145.38 313 P **PKPab 08 52 14.8 0.0**
baz=109
BMRM Bremner River 145.42 308 PKPbc **PKPab 08 52 14.9 -0.2**
BMRM Bremner River 145.42 308 P **PKPdf 08 52 14.4 -0.5**
baz=111,SNR=9.9
L26K Log Cabin Wild 145.58 311 PKPdf **PKPbc 08 52 15.1 -0.2**
L26K Log Cabin Wild 145.58 311 P **PKPbc 08 52 15.2 -0.2**
baz=109,SNR=16
N25K Chitina, Valde 145.64 309 PKPdf **PKPab 08 52 16.1 0.0**
N25K Chitina, Valde 145.64 309 P **PKPbc 08 52 15.4 -0.3**
baz=110
Q23K Middleton Isla 145.65 304 P **PKPab 08 52 15.6 -0.3**
baz=112
XAN Xi'an 145.65 112⇓ PKPbc **PKPdf 08 52 15.8 -0.4**
I27K Kandik River 145.68 316 P **PKPdf 08 52 15.2 0.0**
baz=107
MENT Mentasta 145.71 311 PKPdf **PKPdf 08 52 14.4 -0.9**
EYAK Cordova Ski Ar 145.79 306 PKPdf **PKPbc 08 52 15.8 -0.2**
EYAK Cordova Ski Ar 145.79 306 P **PKPbc 08 52 15.9 -0.1**
baz=111
H27K Steamboat Moun 145.82 317 P **PKPbc 08 52 15.6 -0.5**
baz=106
DIV Divide 146.01 307 PKPdf **PKPbc 08 52 16.7 -0.1**
G27K Doyon Strip 146.03 318 P **PKPbc 08 52 16.2 -0.4**
baz=105,SNR=15
J26L Joseph Creek 146.14 314 P **PKPbc 08 52 17.1 -0.1**
baz=107,SNR=28
SCRK Sand Creek 146.16 313 P **PKPbc 08 52 16.8 -0.4**
baz=108,SNR=13
HARP HAARP 146.16 310 P **PKPbc 08 52 17.1 -0.1**
baz=109
KLU Klutina 146.20 308 P **PKPbc 08 52 16.9 -0.5**
baz=110,SNR=10
I26K Coal Creek Min 146.21 315 P **PKPbc 08 52 17.1 0.0**
baz=106
E27K Coleen River 146.35 321 P **PKPbc 08 52 17.2 -0.3**
baz=103
P23K Montague Islan 146.36 305 P **PKPbc 08 52 17.4 -0.4**
baz=111
RIDG Independent Ri 146.45 312 P **PKPbc 08 52 18.2 +0.2**
baz=107,SNR=32
PAX Paxson 146.48 311 P **PKPbc 08 52 18.0 -0.2**
baz=108,SNR=22
M24K Tolsona, Glenn 146.52 309 P **PKPab 08 52 18.7 -0.6**
baz=109
GLI Glacier Island 146.52 307 P **PKPbc 08 52 18.1 -0.1**
baz=110
G26K Porcupine Rive 146.88 318 P **PKPbc 08 52 18.5 -0.6**
baz=103
J25K Salcha River, 146.92 314 P **PKPbc 08 52 19.3 -0.1**
baz=105,SNR=9.3
SCM Sheep Creek Mo 146.94 308 P **PKPbc 08 52 19.3 -0.2**
baz=108,SNR=13
PWL Port Wells 147.09 306 P **PKPbc 08 52 19.6 -0.2**
baz=109
M23K Glacier View 147.11 308 P **PKPbc 08 52 19.5 -0.4**
baz=108,SNR=8.0
F26K Sheenjek River 147.18 319 P **PKPbc 08 52 20.6 +0.6**
baz=102,SNR=9.1
PRP Porcupine Dome 147.22 315 P **PKPbc 08 52 20.2 -0.1**
baz=104,SNR=14
BMAR Burnt Mountain 147.29 319 PKPdf **PKPdf 08 52 17.9 +0.1**
KNK Knik Glacier 147.32 307 P **PKPbc 08 52 20.3 -0.2**
baz=108
DHY Denali Highway 147.34 310 P **PKPbc 08 52 20.9 +0.2**
baz=106,SNR=15
SEW Seward 147.36 305 P **PKPbc 08 52 20.5 0.0**
baz=110
WAT6 Susitna Watana 147.36 309 P **PKPbc 08 52 20.8 +0.1**
baz=107,SNR=16
C27K Jago River 147.39 323 P **PKPbc 08 52 20.5 +0.1**
baz=99
SML Sawmill 147.39 308 P **PKPbc 08 52 20.7 0.0**
baz=108
H25K Birch Creek 147.51 316 P **PKPbc 08 52 21.3 +0.5**
baz=103
HDA Harding Lake 147.52 313 P **PKPbc 08 52 20.7 -0.3**
baz=105
ILAR Eielson Array 147.59 314 PKPbc **PKPbc 08 52 20.6 -0.5**
comp=Z,18nm,1.0s,baz=129,slow=1.7,SNR=63
O22K Cooper Landing 147.61 305 P **PKPbc 08 52 21.0 -0.2**
baz=109
PMR Palmer 147.69 307 P **PKPbc 08 52 21.2 -0.2**
baz=108
F25K Christian River 147.72 319 P **PKPbc 08 52 21.2 -0.3**
baz=101,SNR=13
WAT1 Susitna Watana 147.79 310 P **PKPbc 08 52 21.2 -0.5**
baz=106
E25K Arctic Village 147.79 320 P **PKPbc 08 52 21.5 -0.1**
baz=100,SNR=14
RC01 Rabbit Creek A 147.81 306 P **PKPbc 08 52 21.4 -0.4**
baz=108
BRSE Bradley Lake S 147.85 303 P **PKPbc 08 52 21.8 -0.2**
baz=109
POKR Poker Plat Res 147.90 314 P **PKPbc 08 52 21.4 -0.6**
baz=103
COLA College 148.02 314 *i* PKP2 **PKPdf 08 52 20.4 +1.4**
COLA College 148.02 314 P **PKPbc 08 52 21.5 -0.7**
baz=103
TCOL CIGO, UAF Yank 148.02 314 P **PKPbc 08 52 21.6 -0.6**
baz=103,SNR=6.2

KDAK	Kodiak Island baz=111	148.06	299	P	PKPbc	08 52 21.8	-0.8
M22K	Willow baz=107,SNR=13	148.19	307	P	PKPbc	08 52 22.2	-0.5
MCK	McKinley baz=104,SNR=14	148.20	311	P	PKPbc	08 52 22.5	-0.3
OHAK	Old Harbor baz=112	148.21	298	P	PKPbc	08 52 22.6	-0.3
H24K	Noodor Dome baz=102,SNR=9.4	148.24	315	P	PKPbc	08 52 22.6	-0.3
HOM	Homer baz=109	148.25	303	P	PKPbc	08 52 22.7	-0.3
G24K	Hadweenzic Riv baz=101	148.25	317	P	PKPbc	08 52 22.9	0.0
Q20K	Shuyak Island baz=110	148.26	301	P	PKPbc	08 52 22.6	-0.5
D25K	Kavik River baz=98	148.27	322	P	PKPbc	08 52 22.8	-0.1
CAPN	Captain Cook N baz=108	148.37	305	P	PKPbc	08 52 23.1	-0.2
SUA	Susitna One baz=107	148.39	307	P	PKPbc	08 52 23.1	-0.4
SII	Sitkinak Islan baz=112	148.41	297	P	PKPbc	08 52 23.3	-0.3
CUT	Chulitna baz=106,SNR=8.1	148.44	308	P	PKPbc	08 52 23.0	-0.3
NEA2	Nenana baz=103,SNR=18	148.46	313	P	PKPbc	08 52 22.8	-0.6
F24K	Squaw Lake baz=99,SNR=12	148.56	318	P	PKPbc	08 52 23.3	-0.3
O20K	Slope Mountain baz=108	148.85	304	P	PKPbc	08 52 23.8	-0.8
E24K	Your Creek baz=98,SNR=13	148.87	319	P	PKPbc	08 52 24.3	-0.2
CHIR	Chirikof Islan baz=113	148.87	295	P	PKPbc	08 52 24.1	-0.6
SKT	Skwentna baz=105	148.89	307	P	PKPbc	08 52 24.3	-0.3
H23K	Yukon River baz=101	148.91	315	P	PKPbc	08 52 24.4	-0.2
Q19K	Cape Douglas, baz=109	148.98	301	P	PKPbc	08 52 23.9	-1.0
SPCR	Spurr Chakacha baz=106	148.99	306	P	PKPbc	08 52 24.2	-0.8
NJ2	Nanjing	149.03	126	*e*PKPbc	PKPbc	08 52 24.5	-1.4
D24K	Happy Valley baz=96	149.12	322	P	PKPbc	08 52 24.6	-0.4
C24K	Franklin Bluff baz=95	149.13	323	P	PKPbc	08 52 24.8	-0.1
BPAW	Bear Paw Mtn. baz=102,SNR=34	149.16	311	P	PKPbc	08 52 25.1	-0.1
MLY	Manley baz=101,SNR=11	149.25	313	P	PKPbc	08 52 24.7	-0.8
G23K	Bananza Creek baz=99,SNR=16	149.25	317	P	PKPbc	08 52 25.4	-0.1
TOLK	Toolik Lake Re	149.33	320	PKPdf	PKPdf	08 52 21.7	+0.5
TOLK				PKPbc	PKPbc	08 52 25.9	+0.3
TOLK				PKPab	PKPab	08 52 31.1	+0.7
TOLK	Toolik Lake Re baz=96	149.33	320	P	PKPbc	08 52 25.5	-0.1
PPLA	Purkeypile baz=103,SNR=9.0	149.42	309	P	PKPbc	08 52 25.9	-0.1
CAST	Castle Rocks baz=103,SNR=12	149.49	310	P	PKPbc	08 52 25.6	-0.5
M20K	Styx River baz=104,SNR=7.3	149.60	307	P	PKPbc	08 52 25.9	-0.5
H22K	Ishtalitna Cre baz=99,SNR=17	149.66	315	P	PKPbc	08 52 26.5	0.0
CHUM	Lake Minchumin baz=102	149.69	311	P	PKPbc	08 52 26.2	-0.3
O19K	Port Alsworth baz=106	149.70	303	P	PKPbc	08 52 25.9	-0.7
D23K	Nanushuk River baz=94	149.76	321	P	PKiKP	08 52 27.0	-0.6
I21K	Tanana baz=100	149.79	313	P	PKPbc	08 52 26.3	-0.4
C23K	Itkillik River baz=93	149.80	323	P	PKiKP	08 52 26.9	-0.7
G22K	Bettles baz=97,SNR=13	149.87	317	P	PKPbc	08 52 26.9	+0.1
P18K	Big Mountain, baz=107	149.90	301	P	PKPbc	08 52 26.4	-0.8
R17K	Ugashik Creek baz=110	149.92	298	P	PKPbc	08 52 26.0	-1.3
N19K	Bonanza Creek	149.95	304		PKPbc	08 52 26.6	-0.7
N19K	Bonanza Creek baz=105	149.95	304	P	PKPbc	08 52 26.5	-0.9
O18K	Koktuh Hills	150.03	302	PKPbc	PKPbc	08 52 27.1	-0.4
O18K				PKPab	PKPab	08 52 34.2	+0.7
O18K	Koktuh Hills baz=106	150.03	302	P	PKPbc	08 52 26.4	-1.1
NRIK	Noril'sk	150.07	38	PKPdf	PKPdf	08 52 22.2	-0.1
NRIK	Noril'sk	150.07	38	PKIKP	PKPdf	08 52 22.2	-0.1
L20K	Farewell, AK baz=103	150.08	308	P	PKPbc	08 52 27.0	-0.5
E22K	Anaktuvuk Pass baz=95	150.11	319	P	PKPbc	08 52 27.6	+0.1
M19K	Big River Lodg	150.18	307		PKPbc	08 52 27.6	-0.2
M19K	Big River Lodg baz=104	150.18	307	P	PKPbc	08 52 27.2	-0.6
F22K	John River baz=96	150.19	318	P	PKiKP	08 52 28.1	-0.4
H21K	Melozitna Rive	150.21	314		PKPbc	08 52 27.8	+0.1
H21K	Melozitna Rive baz=98,SNR=19	150.21	314	P	PKPbc	08 52 27.9	+0.2
K20K	Telida baz=101,SNR=11	150.35	309	P	PKPbc	08 52 27.4	-0.7
Q16K	King Salmon baz=108	150.39	300	P	PKPbc	08 52 27.5	-0.8
P17K	Kvichak River baz=107	150.44	301	P	PKPbc	08 52 27.9	-0.5
L19K	White Mountain baz=103	150.46	307	P	PKPbc	08 52 27.9	-0.5
J20K	Nowinta River baz=100	150.54	311	P	PKPbc	08 52 28.1	-0.5
N18K	Kilae Creek baz=105	150.58	304	P	PKPbc	08 52 28.4	-0.4
IMAR	Indian Mountai	150.64	315		PKiKP	08 52 29.1	-0.3
F21K	Alatna River baz=95,SNR=12	150.67	317	P	PKPbc	08 52 28.9	0.0
O17K	Koliganek Bris baz=106	150.92	302	P	PKPbc	08 52 29.2	-0.3
BTO	Baotou	151.03	104	*e*PKPbc	PKPdf	08 52 20.0	-4.8
S14K	Fog Glacier baz=110	151.09	294	P	PKPbc	08 52 29.8	-0.4
TTA	Tatalina	151.13	308	PKPdf	PKPdf	08 52 24.8	+0.6
TTA				PKPbc	PKiKP	08 52 30.9	+0.3
TTA				PKPab	PKPab	08 52 38.4	+0.4
TTA	Tatalina baz=101	151.13	308	PKIKP	PKiKP	08 52 30.9	+0.3
TTA						08 52 38.4	
TTA	Tatalina baz=101	151.13	308	P	PKPbc	08 52 30.0	-0.1
TIA	Tai'an	151.57	119	*e*PKPbc	PKPdf	08 52 27.9	+2.2
N16K	Nishlik Lake baz=103	151.91	303	P	PKPbc	08 52 31.8	0.0
SONM	Songino Array comp=Z,2.3nm,0.5s,baz=250,slow=2.9,SNR=10	153.39	89	PKPbc	PKPbc	08 52 35.1	-0.7
ULN	Ulaanbaatar	153.78	89	PKPdf	PKPdf	08 52 26.9	-1.8
ULN				PKPbc	PKiKP	08 52 36.5	-0.2
ULN				PKPab	PKPab	08 52 49.1	-0.6
ULN	Ulaanbaatar	153.78	89	PKIKP	PKPdf	08 52 26.9	-1.8
ULN						08 52 36.5	
ULN						08 52 49.1	
RDOG	Red Dog Mine	154.27	319	PKPdf	PKPdf	08 52 28.1	-0.5
RDOG				PKPbc	pPKPbc	08 52 37.7	-1.9
RDOG				PKPab	PKPab	08 52 50.0	-1.0

IDC 22 08:35:50.3±2.5, 54°.55N×86°.62E, h0km, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=22.3km s-min=13.6km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA baz=58,slow=317,SNR=6.1	1.21	241	*i*		08 43 20.0	
ZALV	Zalesovo Beam 4.0nm,0.3s,baz=56,slow=16,SNR=33	1.21	241	Pg	Pg	08 36 12.0	-1.6
ZALV				Lg	Lg	08 36 29.9	
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=52,slow=14,SNR=24	6.30	235	Pn	Pn	08 37 25.1	+0.7
KURBB	baz=48,slow=1.4,SNR=2.5 2.2nm,0.3s			Sn	Sn	08 38 36.3	-0.8
MKAR	Makanchi Array 0.4nm,0.3s,baz=25,slow=14,SNR=17	8.23	201	Pn	Pn	08 37 51.7	+0.8
MKAR				Sn	Sn	08 39 24.3	-0.3
	0.1nm,0.3s,baz=24,slow=24,SNR=10						
MKAR				Lg	Lg	08 40 11.7	
	0.1nm,0.3s,baz=24,slow=30,SNR=4.5 0.5nm,0.3s						
BVAR	Borovoye Array 0.3nm,0.3s,baz=80,slow=16,SNR=4.0 0.4nm,0.4s	9.73	268	Pn	Pn	08 38 10.9	-0.5

IDC 22 09:00:25.5±5.5, 52°.52N×34°.82E, h0km, mbtmp3.6/2, ML2.8/3, Error ellipse: s-maj=77.5km s-min=17.6km az=118.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKASG	Malin Array Be 0.7nm,0.3s,baz=59,slow=13,SNR=1.6	3.93	245	Pn	Pn	09 01 27.6	+0.5
AKASG				Pg	Pb	09 01 32.9	-2.8
	2.3nm,0.3s,baz=52,slow=16,SNR=8.4						
AKASG				Sn	Sn	09 02 14.6	+0.7
	3.8nm,0.3s,baz=54,slow=12,SNR=6.1						
AKASG				Lg	Lg	09 02 32.9	
	4.4nm,0.3s,baz=43,slow=17,SNR=4.6						
I43RU	DUBNA INFRASON 4.44 baz=196,slow=318,SNR=1.8	17	*i*			09 24 30.0	
FINES	FINESS Array B 0.2nm,0.3s,baz=151,slow=14,SNR=1.6	10.13	335	Pn	Pn	09 02 47.6	-4.4
FINES				Sn	Sn	09 04 41.2	-5.0
	0.3nm,0.3s,baz=135,slow=24,SNR=1.3						
FINES				Lg	Lg	09 05 41.2	
	0.2nm,0.3s,baz=144,slow=26,SNR=1.5 0.9nm,0.5s						
ARCES	ARCESS Array B 0.1nm,0.3s,baz=158,slow=10.0,SNR=10.0 1.3nm,0.6s	17.62	349	P	Pn	09 04 30.3	-1.8

IGQ 22 09:05:04±0.5, 0°.S±3°.3×8°.1W±°, h10km
IDC 22 09:05:07.2±2.1, 0°.01S×80°.08W, h0km, mb3.4/2, mbtmp3.6/3, ML3.5/1, MS3.5/2, Error ellipse: s-maj=138.5km s-min=25.9km az=63.0
ISC 22 09:05:06.7±1.0, 0°.13S±0°.04×80°.43W±0°.06, h9km, n58, σ1°.75/60, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAG1	Magdalena	0.66	85	P	Pn	09 05 22.0	-0.3
PTGL	Punta Galera	0.99	24	P	Pb	09 05 25.0	-1.1
BV15	Puerto Quito-O	1.25	77	P	Pn	09 05 29.0	-1.3
AMA1	Acelerografo,	1.27	34	P	Pg	09 05 30.0	-1.2
ISPT	Isla de la Pla	1.29	210	P	Pn	09 05 24.0	-6.9
ISPT				S	Sb	09 05 39.0	-8.9
PAC1	Pacto, Paraso	1.69	76	*e*P	Pb	09 05 36.3	-1.7
PAC1				*e*S	Sg	09 06 02.7	+1.6
PINO	Pino	1.83	91	P	Pb	09 05 39.0	-1.6
PAST	Pastocalle	1.88	107	P	Pn	09 05 39.0	-0.4
SRAM	San Ramn-Vol	1.96	108	P	Pb	09 05 42.0	-0.9
CAMI	Rancho Maria	2.00	106	P	Pb	09 05 42.0	-1.6
SUCR	Mariscal Sucre	2.00	105	P	Pb	09 05 42.0	-1.6
BNAS	Cotopaxi Volca	2.02	105	P	Pn	09 05 42.0	+0.5
SLOR	San Lorenzo -	2.02	107	P	Pb	09 05 43.0	-1.0
TOMA	Boca Toma-Volc	2.03	100	P	Pn	09 05 42.0	+0.5
BREF	Cotopaxi Volca	2.06	105	P	Pb	09 05 43.0	-1.7
CHSH	Refugio Sur-Vol	2.07	131	P	Pn	09 05 42.0	-0.1
CUSE	Cuicocha Este	2.08	78	*e*P	Pb	09 05 43.3	-1.6
CUSE				*e*S	Sg	09 06 14.9	+1.3
CUSE	Cuicocha Este	2.08	78	P	Pb	09 05 43.0	-1.9
BVC2	Cotopaxi Volca	2.09	104	P	Pb	09 05 44.0	-1.1
BTAM	Cotopaxi Volca	2.11	105	P	Pb	09 05 44.0	-1.4
CUIC	Cuicocha-Domo	2.12	78	P	Pb	09 05 44.0	-1.5
PORT	Chimborazo Vol	2.12	129	P	Pn	09 05 42.0	-0.9
PORT				S	Sb	09 06 13.0	+0.6
CUSW	Cuicocha Oeste	2.12	79	P	Pn	09 05 43.0	+0.3
TAMB	Tambo	2.14	105	P	Pb	09 05 44.0	-1.9
TAMH	Tambohuasha Ch	2.17	130	P	Pn	09 05 43.0	-0.4
URCU	Urcuqui	2.25	75	P	Pb	09 05 46.0	-1.8
IMBA	Imbabura, San	2.27	80	P	Pb	09 05 48.0	-0.1
MILO	Milagro-Astudi	2.31	158	P	Pn	09 05 42.0	-2.9
MILO				S	Sn	09 06 10.0	-3.4
PIAT	Ana Tenorio	2.33	112	P	Pb	09 05 47.0	-2.2
JUI6	Juive	2.35	123	P	Pn	09 05 45.0	-0.7
POND	Pondoa	2.36	123	P	Pn	09 05 47.0	+1.1
BMAS	Trigal station	2.38	125	P	Pn	09 05 47.0	+0.7
BRUN	Tungurahua Vol	2.39	122	P	Pn	09 05 47.0	+0.6
ARRY	Arrayan	2.40	125	P	Pn	09 05 47.0	+0.5
YAHU	Yahuarcocha	2.41	78	P	Pb	09 05 50.0	-0.5
CAYR	Refugio Cayamb	2.43	87	P	Pb	09 05 50.0	-1.0
CAYA	Cayambe	2.45	85	P	Pb	09 05 49.0	-2.3
MORR	Playas El Morr	2.49	178	P	Pn	09 05 46.0	-1.4
ARDO	Archidona, Ten	2.77	108	P	Pb	09 05 54.0	-2.4
CONE	Cono NE Rev Vo	2.79	89	P	Pb	09 05 55.0	-2.0
BONI	La Bonita	2.96	79	P	Pb	09 05 58.0	-1.8
CASC	Dorado de Casc	3.11	85	P	Pb	09 05 59.0	-3.2
ARNL	Arenillas	3.41	174	P	Pn	09 05 59.0	-1.1
BOSC	San Juan Bosco	3.57	147	P	Pn	09 06 05.0	+2.6
BBAC	Balboa, Cauca	3.84	56	*e*P	Pn	09 06 06.8	+0.6
BBAC				*e*S	Sn	09 06 54.2	+2.6
BBAC	comp=Z,42nm,0.3s			*i*		09 07 09.6	
BBAC	Balboa, Cauca	3.84	56	P	Pn	09 06 06.0	-0.2
POPC	Popayan, Colom	4.60	55	*e*P	Pn	09 06 17.7	+1.1
POPC				*e*S	Sb	09 07 20.5	-2.9
ZUMB	Zumba	4.87	165	P	Pn	09 06 22.0	+1.7
PLMC	San Jos del P	6.50	40	*e*P	Pn	09 06 39.1	-3.6
ANIL	Santa Ana	6.81	48	*e*P	Pb	09 06 55.1	-10
MACC	Macarena, Meta	6.96	71	*e*P	Pn	09 06 51.2	+2.3
MACC				*e*S	Sg	09 08 49.8	-0.6
ATAH	Atahualpa comp=Z,0.7nm,0.3s,baz=3.2,slow=10,SNR=5.6	7.25	164	Pn	Pn	09 06 55.6	+2.4
ATAH				Sn	Sn	09 08 19.4	+3.5
	comp=Z,0.7nm,0.3s,baz=127,slow=15,SNR=2.0 comp=Z,2.4nm,0.4s						
CBOC	Ciudad Bolivar	7.41	36	*e*P	Pn	09 07 00.7	+5.4
LPAZ	La Paz comp=Z,1.3nm,0.7s,baz=330,slow=12,SNR=3.6	20.12	144	P	Pn	09 09 42.4	-1.2
LPAZ				LR	LR	09 18 40.2	
	comp=Z,91nm,21.9s,baz=320,slow=41 comp=T,1.3nm,0.7s						
MDP	Montagnes des comp=Z,128nm,18.9s,baz=210,slow=36	28.24	79	LR	LR	09 21 46.1	
NVAR	Mina Array Bea comp=Z,0.5nm,0.9s,baz=150,slow=5.8,SNR=4.1 comp=Z,0.5nm,0.9s	51.79	322	P	P	09 14 18.0	+2.8
ASAR	Alice Springs comp=Z,0.1nm,0.7s,baz=96,slow=2.5,SNR=1.3	139.13	232	PKhKP	PKPpre	09 24 31.5	
ASAR				PKP	PKiKP	09 24 36.4	-0.8
	comp=Z,0.4nm,0.8s,baz=143,slow=3.2,SNR=3.1						
WRA	Warramunga Arr 140.53 238 PKiKP PKPpre 09 24 34.6 comp=Z,0.3nm,0.8s,baz=115,slow=1.5,SNR=2.6						
WRA				PKP	pPKPdf	09 24 40.1	-0.6
	comp=Z,0.5nm,0.7s,baz=112,slow=1.8,SNR=7.5						

NDI 22 09:20:10.1±2.0, 28°.11N×76°.13E, h30km±5km, ML3.8
IDC 22 09:20:12.3±2.0, 29°.04N×75°.51E, h0km, mb3.6/5, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=82.1km s-min=24.5km az=67.0
ISC 22 09:20:06.6±0.8, 28°.09N±0°.05×76°.11E±0°.04, h14km, n18, σ1°.46/20, mb3.5/5, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHET	Khetri	0.27	266	*e*Pg	Pn	09 20 17.4	+1.2
KHET				*i* Sg	Sn	09 20 22.6	+0.5
KUDL	Kundal	0.34	81	*e*Pg	Pn	09 20 18.4	+1.3
KUDL				*i* Sg	Sn	09 20 24.0	+0.2
NDI	New Delhi	1.14	59	*e*Pg	Pg	09 20 29.8	+1.2
NDI				*e*S	Sn	09 20 43.9	+0.2
AJM	Ajmer	2.07	219	*e*P	Pb	09 20 44.1	+0.2
DDI	Dehra Dun comp=E,1μm,0.4s	2.80	37	IAML		09 21 37.7	
DDI				IAML		09 21 41.6	
	comp=N,888nm,0.1s						
SMLA	Simla	3.16	17	*i* Pn	Pn	09 20 56.9	+0.9
SMLA				*e*Pn	Sn	09 21 33.3	-0.2
SMLA				IAML		09 21 34.2	
	comp=N,331nm,0.2s						
SMLA				IAML		09 21 36.2	
	comp=E,338nm,0.3s						
SMLA				IAML		09 21 47.0	
	comp=E,504nm,0.5s						
BHK	Bhakra	3.32	5	*e*P	Pn	09 20 59.2	+1.0
BHK				*e*S	Sn	09 21 37.4	-0.1
PTH	Pithoragarh	3.89	67	*e*P	Pn	09 21 08.4	+2.3
BHPL	Bhopal	4.97	166	*e*P	Pn	09 21 22.9	+2.0
ALBI	Allahabad	5.80	117	*e*S	Sn	09 22 35.1	-3.6
CHCP	Chirah Chowk	6.06	337	P	Pn	09 21 36.1	+0.2
CEP	Cherat	6.75	329	P	Pn	09 21 46.4	+0.9
MKAR	Makanchi Array comp=E,0.1nm,0.3s,baz=206,slow=12,SNR=6.3 comp=E,0.6nm,0.5s	19.29	13	P	P	09 24 29.6	-1.4
KURBB	Kurchatov Arra comp=E,3.3nm,0.6s,baz=191,slow=11,SNR=24 comp=E,3.3nm,0.6s	22.58	4	P	P	09 25 04.4	-2.0
BVAR	Borovoye Array comp=E,0.4nm,0.3s,baz=170,slow=10,SNR=4.2 comp=E,0.4nm,0.3s	25.27	352	P	P	09 25 31.8	-0.4
ARCES	ARCESS Array B comp=E,2.2nm,1.0s,baz=105,slow=7.0,SNR=10 comp=E,2.2nm,1.0s	50.53	339	P	P	09 29 03.2	-0.8
WRA	Warramunga Arr comp=E,0.3nm,0.7s,baz=320,slow=5.9,SNR=1.7 comp=E,0.3nm,0.7s	73.81	124	P	P	09 31 53.4	+12
ASAR	Alice Springs comp=E,0.1nm,0.4s,baz=312,slow=6.1,SNR=1.4 comp=E,0.1nm,0.4s	75.83	127	P	P	09 32 07.6	+15

JMA 22 09:21:02.7±0.2, 24°.N±1°.×12°.2E±°, h24km±3km, MV2.7/9, TAIWAN REGION
TAP 22 09:21:03.2, 23°.75N×121°.91E, h41km, ML3.2, C
ISC 22 09:21:02.9±1.0, 23°.73N±0°.02×121°.92E±0°.02, h31km±8km, n105, σ0°.71/179, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEYL	Yanliau Villag baz=299	0.32	295	*i* P	Pn	09 21 11.8	+0.3
TEYL				S	Sn	09 21 18.1	+1.0
	baz=299						
TEGC	Jichi Village baz=256	0.35	266	*i* P	Pn	09 21 11.8	0.0
TEGC				S	Sn	09 21 18.4	+0.7
	baz=256						
HWA	Hwalien baz=310	0.38	310	P	Pn	09 21 12.2	0.0
HWA				*e*S	Sn	09 21 18.7	+0.3
	baz=310						
ESL	Shilin baz=275	0.45	280	P	Pb	09 21 12.6	-0.1
ESL				*e*S	Sb	09 21 18.7	-0.6
	baz=275						
ETM	Tongmen baz=306	0.46	301	P	Pb	09 21 12.6	0.0
ETM				S	Sb	09 21 19.5	+0.1
	baz=306						
EGFH	Guangfu baz=256	0.46	262	*e*P	Pn	09 21 13.2	-0.1
EGFH				*e*S	Sn	09 21 20.4	0.0
	baz=256						
TWD	Chiawan baz=320	0.46	319	P	Pb	09 21 12.7	+0.1
TWD				S	Sb	09 21 19.3	0.0
	baz=320						
ETL	Fush Village baz=324	0.50	327	P	Pb	09 21 13.4	0.0
ETL				*e*S	Sb	09 21 20.7	0.0
	baz=324						
HGSD	Ruisui baz=234	0.51	242	P	Pb	09 21 13.6	+0.1
NACB	Ninganchiao baz=323	0.53	326	P	Pb	09 21 13.5	-0.3
NACB				S	Sb	09 21 21.3	-0.1
	baz=323						
EHY	Hungye baz=258	0.59	248	P	Pb	09 21 15.0	+0.1
EHY				*e*S	Sb	09 21 23.2	+0.2
	baz=258						
ECBN	Changbin baz=217	0.60	226	S	Sn	09 21 24.1	+0.2
ETLH	Xiulin Townshi baz=319	0.62	320	P	Pb	09 21 15.0	-0.4
ETLH				*e*S	Sb	09 21 23.9	0.0
	baz=319						
YULB	Yu-li baz=250	0.66	239	P	Pn	09 21 16.1	-0.1
YULB				S	Sb	09 21 25.3	+0.3
	baz=250						
EYUL	Yuli baz=229	0.67	235	*e*P	Pb	09 21 16.5	+0.3
EYUL				*e*S	Sn	09 21 26.1	+0.4
	baz=229						
TWF1	Yuli baz=246	0.69	237	P	Pn	09 21 16.4	-0.1
TWF1				*e*S	Sn	09 21 27.5	+1.4
	baz=246						
ENA	Nanau baz=348	0.71	347	*i* P	Pn	09 21 16.5	-0.3
ENA				S	Sb	09 21 26.0	-0.4
	baz=348						
VWDT	VWDT baz=270	0.71	272	P	Pb	09 21 17.2	+0.4
VWDT				*e*S	Sn	09 21 27.2	+0.4
	baz=270						
OWD	Renai baz=287	0.72	288	*e*P	Pn	09 21 17.0	0.0
OWD				*e*S	Sb	09 21 26.1	-0.5
	baz=287						
EWUT	Wuta baz=350	0.72	350	*e*P	Pn	09 21 15.9	-1.1
EWUT				*e*S	Sb	09 21 25.4	-1.2
	baz=350						
WHF	Hehuan Shan baz=304	0.73	305	*i* P	Pn	09 21 16.9	-0.5
WHF				*e*S	Sb	09 21 27.3	+0.1
	baz=304						
CHGB	Renai baz=295	0.76	296	*e*P	Pn	09 21 17.7	+0.1
CHGB				*e*S	Sb	09 21 27.6	-0.3
	baz=295						
WUSB	Renai baz=288	0.78	290	P	Pb	09 21 18.1	0.0
WUSB				*e*S	Sn	09 21 28.5	-0.1
	baz=288						
FULB	Fuli baz=217	0.78	227	*i* P	Pn	09 21 17.5	-0.3
FULB				*e*S	Sn	09 21 27.9	-0.6
	baz=217						
FUSS	Fushou baz=309	0.80	310	*i* P	Pn	09 21 18.3	0.0
FUSS				S	Sn	09 21 28.9	-0.5
	baz=309						
CHKT	Chengkung baz=209	0.81	219	P	Pn	09 21 17.1	-1.0
CHKT				*e*S	Sn	09 21 27.0	-2.1
	baz=209						
NNSB	Datong baz=316	0.85	325	P	Pn	09 21 18.8	0.0
NNSB				S	Sn	09 21 29.8	-0.5
	baz=316						
TWT	Tachien baz=306	0.86	307	*i* P	Pb	09 21 19.4	0.0
TWT				*e*S	Sn	09 21 30.1	-0.4
	baz=306						
NNS	Nan Shan baz=317	0.86	325	*e*P	Pn	09 21 18.1	-0.9
NNS				S	Sn	09 21 29.1	-1.5
	baz=317						
TDCB	Techi baz=306	0.87	307	P	Pb	09 21 19.4	-0.1
TDCB				S	Sn	09 21 30.1	-0.8
	baz=306						
TWC	Suao baz=357	0.88	356	*e*P	Pb	09 21 19.5	-0.1
TWC				*e*S	Sb	09 21 31.3	+0.4
	baz=357						
LATG	Datong baz=336	0.88	336	P	Pn	09 21 19.1	-0.1
LATG				*e*S	Sn	09 21 29.9	-1.1
	baz=336						
SSLB	Suanglung baz=272	0.89	274	*e*P	Pn	09 21 19.4	+0.1
ECS	Chishang baz=218	0.90	226	*e*P	Pb	09 21 20.2	+0.1
ECS				*e*S	Sb	09 21 33.1	+1.3
	baz=218						
NDS	Dongshan baz=344	0.92	348	*e*P	Pn	09 21 18.9	-0.7
NDS				*e*S	Sn	09 21 30.7	-1.1
	baz=344						
YUS	Yu-Shan	0.92	255	P	Pn	09 21 20.4	+0.3

baz=253
YUS S Sn 09 21 32.4 -0.2
baz=253
WPL Puli Township 0.92 288 *eP* Pb 09 21 20.2 -0.2
baz=282
WPL *eS* Sn 09 21 32.2 +0.2
baz=282
NDT Datong Townshi 0.94 337 *eP* Pb 09 21 20.5 -0.2
baz=337
NDT *eS* Sb 09 21 33.2 +0.3
baz=337
EDH Donghe 0.94 217 *eP* Pn 09 21 19.7 -0.4
baz=209
EDH *eS* Sn 09 21 31.3 -1.2
baz=209
SMLT Sun Moon Lake 0.95 279 *eP* Pn 09 21 20.4 +0.2
baz=283
SMLT *eS* Sb 09 21 33.6 +0.5
baz=283
DPDB Guoxing 0.96 288 *eP* Pn 09 21 20.9 -0.1
baz=283
DPDB *eS* Sb 09 21 33.5 +0.2
baz=283
ENTT Nioudou 0.96 340 P Pn 09 21 19.7 -0.6
baz=341
ENTT *eS* Sn 09 21 32.1 -0.8
baz=341
WCS Beigang Elemen 0.98 289 *eP* Pn 09 21 20.2 -0.2
baz=288
WHYT Xinyi Township 0.98 268 *eP* Pb 09 21 21.3 0.0
baz=259
WHYT *eS* Sb 09 21 33.8 -0.1
baz=259
ELDTW Lidau 0.99 237 *eS* Sn 09 21 32.5 -1.3
baz=227
TWE Neicheng 1.01 347 *eP* Pb 09 21 21.6 -0.3
baz=356
WHP Taichung City 1.04 302 *eP* Pb 09 21 23.1 +0.6
baz=301
ALS Alishan 1.05 258 P Pb 09 22.6 0.0
baz=265
ALS S Sb 09 21 36.3 +0.2
baz=265
YHNB Yeheng 1.06 332 P Pn 09 21 21.9 +0.3
baz=332
YHNB *eS* Sn 09 21 34.4 -1.0
baz=332
FUSB Fushanzhiwuyua 1.07 344 *eP* Pn 09 21 22.2 +0.4
baz=333
FUSB *eS* Sb 09 21 36.2 -0.3
baz=333
NSK Sanguang 1.07 331 P Pn 09 21 21.1 -0.7
baz=332
NSK *eS* Sn 09 21 34.0 -1.7
baz=332
EGS 1.11 1 *eP* Pb 09 21 23.3 -0.2
baz=11
NTC Toucheng 1.12 356 *eP* Pb 09 21 23.4 -0.2
baz=356
LDUT Ludao 1.13 202 *eP* Pn 09 21 21.6 -1.0
baz=201
LDUT *eS* Sn 09 21 35.3 -1.8
baz=201
CHN5 Tsauling 1.15 263 *eP* Pn 09 21 23.5 +0.6
baz=262
NFF Wufeng Townshi 1.16 321 *eP* Pb 09 21 24.1 -0.2
baz=320
NFF *eS* Sn 09 21 37.3 -0.6
baz=320
WWF Wufeng 1.16 286 *eP* Pb 09 21 24.7 +0.3
baz=284
JYNG Yonagunijimaku 1.18 52 P Pn 09 21 23.9 +0.7
JYNG S Sn 09 21 38.5 +0.3
STYH Taoyuan 1.19 242 *eP* Pn 09 21 22.6 -0.8
baz=232
TWGBT Beinan 1.19 220 *eP* Pn 09 21 23.4 -0.1
baz=228
TWGBT *eS* Sn 09 21 37.3 -1.3
baz=228
TCU Taichung 1.21 290 *eS* Sb 09 21 43.4 +2.9
baz=289
TWQ1 Liyutan 1.22 301 *eP* Pb 09 21 25.5 +0.2
baz=300
TWQ1 *eS* Sb 09 21 41.6 +1.0
baz=300
NSTT Nanjuang 1.23 317 *eP* Pb 09 21 25.8 +0.3
baz=317
NSTT *eS* Sb 09 21 40.6 -0.4
baz=317
LIOB Emei 1.23 318 *eP* Pb 09 21 25.9 +0.4
baz=317
LIOB *eS* Sb 09 21 41.0 0.0
baz=317
YOJ Yonaguni jima 1.23 54 P Pn 09 21 24.6 +0.6
baz=54
YOJ S Sn 09 21 39.9 +0.3
baz=54
YOJ Yonaguni jima 1.23 54 P Pn 09 21 24.7 +0.7
YOJ *eS* Sn 09 21 39.8 +0.3
TIPB Shuangxi 1.24 356 *eP* Pb 09 21 25.3 -0.3
baz=2.0
TIPB *eS* Sb 09 21 40.9 -0.4
baz=2.0
WCKO Fanlu 1.24 257 *eP* Pb 09 21 25.4 -0.3
baz=255
WCKO *eS* Sb 09 21 42.0 +0.6
baz=255
TPUB Ta-pu 1.26 250 *eP* Pb 09 21 26.1 +0.1
baz=249
TPUB *eS* Sb 09 21 42.7 +0.7
baz=249
WDLH Douliu 1.27 268 *eP* Pb 09 21 26.2 0.0
baz=267
TWB1 Santiao Chiao 1.27 3 *eP* Pb 09 21 25.4 -0.8
baz=3.0
CHN4 Tsaushan 1.28 253 *eP* Pn 09 21 25.5 +0.9
baz=251
TWA Mucha 1.28 346 *eP* Pb 09 21 26.3 -0.1
baz=346
WCHH Zhanghua 1.29 286 *eP* Pb 09 21 26.8 +0.2
baz=284
WCHH *eS* Sb 09 21 45.2 +2.3
baz=284
WTP Ta-pu 1.29 248 *eP* Pb 09 21 26.5 -0.1
baz=247
WTP *eS* Sb 09 21 43.7 +0.8
baz=247
TATO Taipei 1.30 342 P Pb 09 21 26.0 -0.7
baz=342
TATO S Sb 09 21 42.5 -0.6
baz=342
NWF Wu-fen Shan 1.34 355 *eP* Pb 09 21 27.3 -0.2
baz=355
NWF *eS* Sb 09 21 44.2 -0.1
baz=355
WFSB Wu-fen Shan 1.34 355 *eP* Pb 09 21 27.3 -0.1
baz=355
WFSB *eS* Sb 09 21 44.0 -0.2
baz=355
SXI1 Grass Mountain 1.36 358 P Pb 09 21 27.1 -0.6
baz=13
SXI1 *eS* Sb 09 21 44.4 -0.3
baz=13
SGST Jiashian 1.39 242 *eP* Pb 09 21 27.9 -0.3
baz=232
CHN1 Nanshi 1.39 247 *eP* Pb 09 21 28.5 +0.3
baz=246
CHN1 *eS* Sb 09 21 46.7 +1.1
baz=246
CHY Chiayi 1.39 261 *eP* Pb 09 21 28.4 +0.2
baz=259
CHY *eS* Sb 09 21 46.3 +0.6
baz=259
TWK Hsinying 1.39 251 *eP* Pb 09 21 28.4 0.0
baz=249
TWK *eS* Sb 09 21 46.5 +0.7
baz=249
SNST Tainan City 1.40 249 *eP* Pb 09 21 28.9 +0.5
baz=248
SNST *eS* Sb 09 21 46.9 +0.9
baz=248
WRL Guolierlin Hig 1.42 277 *eP* Pn 09 21 27.2 +0.6
baz=276
WRL *eS* Sb 09 21 45.8 -0.8
baz=276
YM01 YM01 1.44 347 *eP* Pn 09 21 28.0 +1.1
baz=333
YM01 *eS* Sn 09 21 45.9 +1.1
baz=333
YM08 YM08 1.48 348 *eP* Pn 09 21 28.0 +0.6
baz=334
SSD Sandimen 1.54 231 *eP* Pb 09 21 30.5 -0.3
baz=224
ICHU Yijhu 1.55 257 *eP* Pb 09 21 29.9 -1.0
baz=255
ICHU *eS* Sb 09 21 49.8 -0.4
baz=255
TSMG Majia 1.56 229 *eP* Pb 09 21 30.3 -0.8
baz=222
WSL Shuilin Townsh 1.57 263 *eP* Pb 09 21 30.3 -0.9
baz=261
WSL *eS* Sb 09 21 51.1 +0.4
baz=261
MASBT Mashibuluo 1.63 227 *eP* Pb 09 21 31.1 -1.2
baz=220
EAST Anshuo 1.67 217 *eP* Pb 09 21 32.1 -0.8
baz=207
LYUB Lan-yu 1.75 190 *eP* Pn 09 21 29.2 -1.9
baz=190
IRIF Iriomote-Funau 1.76 70 P Pn 09 21 32.1 +0.9
IRIF S Sn 09 21 53.2 +0.6
TSCK Chigu Township 1.78 251 *eP* Pn 09 21 32.1 +0.6
baz=250
JKRS Kuro-shima 1.98 75 P Pn 09 21 35.0 +0.8
JKRS S Sn 09 21 59.4 +1.5
TWKBT Hengchun 2.06 210 *eP* Pn 09 21 35.8 +0.5
baz=209
TWK1 Hengchun 2.06 210 *eP* Pn 09 21 35.8 +0.5
baz=209
JIJ Ishigaki jima 2.13 72 P Pn 09 21 36.5 +0.2
JIJ S Sn 09 22 00.9 -0.7
WDGT Dungji 2.13 258 *eP* Pn 09 21 37.5 +1.2
baz=256
PHUB P'eng-hu 2.17 265 *eP* Pn 09 21 37.5 +0.7
baz=252
VCHM Qimei 2.35 258 *eP* Pn 09 21 40.0 +0.7
baz=256
VWUC VWUC 2.58 300 *eP* Pn 09 21 42.3 -0.2
baz=298
JTJ Tarama 2.70 70 P Pn 09 21 44.7 +0.6
JTJ S Sn 09 22 16.9 +1.2

IDC 22 09:31:48.1±3.1, 53.47N×87.62E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=27.9km s-min=14.5km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**287**	*i*		09 42 49.3	
	baz=102,slow=325,SNR=21						
ZALV	**Zalesovo Beam**	**1.73**	**287**	Pg	Pn	09 32 19.8	+0.3
	1.1nm,0.3s,baz=101,slow=15,SNR=9.8						
ZALV				Lg	Lg	09 32 42.5	
	1.4nm,0.3s,baz=115,slow=23,SNR=9.8						
KURBB	**Kurchatov Arra**	**6.29**	**247**	Pn	Pn	09 33 23.1	+1.0
	0.1nm,0.3s,baz=61,slow=13,SNR=4.0						
KURBB				Lg	Lg	09 35 07.1	
	baz=63,slow=28						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.51**	**209**	Pn	Pn	09 33 40.0	+1.2
	0.2nm,0.3s,baz=31,slow=13,SNR=8.6						
MKAR				Sn	Sn	09 35 04.1	-0.5
	0.1nm,0.3s,baz=32,slow=25,SNR=3.1						
MKAR				Lg	Lg	09 35 45.0	
	0.1nm,0.3s,baz=23,slow=22,SNR=6.0						
	0.3nm,0.3s						

*KEA **22** 09:33:05.6,29.84N×139.43E,h408km,MS4.9/4*
*BJI **22** 09:33:06.4±0.0,29.90N×138.97E,h394km,mb5.6/84, mB5.0/39*
*MOS **22** 09:33:06.9±0.8,29.91N×139.02E,h402km,mb5.6/68, MS4.8/13,Error ellipse: s-maj=6.4km s-min=3.6km az=111.3*
*NIED **22** 09:33:06.5,29.86N×139.44E,h418km,MW5.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^17Nm; Mrr-0.40; Mθθ1.16; Mϕϕ-0.76; Mrθ1.49; Mθϕ0.51; Mϕr-0.34; Fault plane solution: M0 2.87000×10^17 NP1:φs 32.00000°, δ32.00000°,λ-164.00000°. NP2:φs 288.00000°, δ82.00000°,λ-59.00000°.*
*JMA **22** 09:33:06.5±0.2,29.9N±0.9×139.9E±, h418km±2km, MD5.8/40,MW5.6/40,NEAR TORISHIMA IS*
JMA Felt I J1 at NEAR TORISHIMA IS .
*NEIC **22** 09:33:07.8±2.3,29.88N±0.07×139.14E±0.09, h391km±1km,mb5.5/644,Mwb5.6/54,Mww5.6,Error ellipse: s-maj=13.8km s-min=11.6km az=74.0*
*NEIC **22** 09:33:08.4,29.88N×139.13E,h400km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.38; Mθθ1.47; Mϕϕ-1.09; Mrθ2.17; Mθϕ0.48; Mϕr-1.21; Fault plane solution: M0 2.86000×10^17 NP1:φs 298.71000°, δ85.37000°,λ-62.11000°. NP2:φs 37.38000°,δ28.24000°, λ-170.18000°. Principal axes: T 2.9304, Plg34.0000°, Azm5.0000°; N -0.1431, Plg28.0000°, Azm116.0000°; P -2.7873, Plg43.0000°, Azm236.0000°;*
*IDC **22** 09:33:08.9±0.4,29.91N×139.05E,h412km±4km,mb5.1/56, mbtmp5.8/59 Error ellipse: s-maj=6.6km s-min=4.8km az=89.0*
*GCMT **22** 09:33:09.8±0.2,29.95N±0.02×138.89E±0.02, h409km±1km,MW5.6/129,Moment Tensor Solution. s129,c217; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr-0.66±.04; Mθθ1.69±.05; Mϕϕ-1.03±.06; Mrθ2.33±.05; Mθϕ0.58±.05; Mϕr-1.08±.05; Best double couple: M0 3.01200×10^17 NP1:φs 294.00000°,δ82.00000°, λ-62.00000°. NP2:φs 38.00000°,δ28.00000°, λ-164.00000°. Principal axes: T 3.1260, Plg32.0000°, Azm1.0000°; N -0.2270, Plg27.0000°, Azm110.0000°; P -2.8980, Plg46.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
*NEIC **22** 09:33:09,29.90N×139.25E,h420km,Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^17Nm; Mrr-0.48; Mθθ1.83; Mϕϕ-1.34; Mrθ2.55; Mθϕ0.61; Mϕr-1.00; Fault plane solution: M0 3.25000×10^17 NP1:φs 35.00000°, δ30.00000°,λ-168.00000°. NP2:φs 295.00000°, δ84.00000°,λ-60.00000°. Principal axes: T 3.4740, Plg33.0000°, Azm0.0000°; N -0.4956, Plg29.0000°, Azm112.0000°; P -2.9784, Plg43.0000°, Azm233.0000°;*

ISC 22 09:33:08.3±0.2, 29.95N±0.02×139.08E±0.03, h410km±1km, h410km:pP-P, n1966, σ1.37/1870, mb5.5/578, 135C-89D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**2.57**	**13**	A	A	09 34 08.5	
	comp=E,142nm,2.0s,comp=E,80nm,1.2s						
JHCJ	**Hachijojimakas**	**3.17**	**11**	⇓P	**P**	**09 34 13.6**	**+0.1**
JHCJ				⇓*e*S	**S**	**09 35 05.0**	**-1.5**
JHCJ	**Hachijojimakas**	**3.17**	**11**	A	A	09 34 13.6	
	comp=E,44nm,3.4s,comp=E,46nm,3.7s						
JHJ2	**Mitsune**	**3.21**	**11**		**P**	**09 34 13.5**	**-0.2**
JHJ2	**Mitsune**	**3.21**	**11**	P	**P**	**09 34 13.9**	**+0.1**
JHJ2	**Mitsune**	**3.21**	**11**	⇓P	**P**	**09 34 13.8**	**0.0**
JHJ2	**Mitsune**	**3.21**	**11**	A	A	09 34 13.8	
	comp=E,40nm,2.8s,comp=E,66nm,3.0s						
CBIJ	**Chichi jima**	**3.94**	**135**	P	**P**	**09 34 16.9**	**-3.5**
CBIJ				*e*S	**S**	**09 35 12.1**	**-7.0**
CBIJ	**Chichi jima**	**3.94**	**135**	A	A	09 34 16.9	
	comp=E,73nm,2.8s,comp=E,65nm,4.1s						
JCJ	**Chichijima**	**3.94**	**135**	P	**P**	**09 34 16.7**	**-3.7**
	3μm,0.4s,baz=332,slow=2.6,SNR=334						
JCJ				S	**S**	**09 35 11.6**	**-7.6**
	9μm,0.4s,baz=270,slow=23,SNR=6.1						
JCJ	**Chichijima**	**3.94**	**135**		**P**	**09 34 17.0**	**-3.5**
JMKN	**Mikurajimanish**	**3.95**	**6**	P	**P**	**09 34 19.9**	**-0.4**
JMKN	**Mikurajimanish**	**3.95**	**6**	A	A	09 34 19.9	
	comp=E,39nm,2.8s,comp=E,30nm,2.8s						
TTO1	**TONANKAI O.B.S**	**4.15**	**332**	⇓P	**P**	**09 34 24.4**	**+2.6**
JKO	**Kozu shima**	**4.22**	**1**	A	A	09 34 23.2	
	comp=E,73nm,1.7s,comp=E,39nm,3.0s						
TTO4	**TONANKAI O.B.S**	**4.25**	**342**	A	A	09 34 24.3	
	comp=E,123nm,2.4s,comp=E,73nm,3.1s						
JHH2	**Haha-jima-NKT2**	**4.29**	**140**	A	A	09 34 20.3	
	comp=E,65nm,0.3s,comp=E,80nm,2.5s						
JSKK	**Shikinejimakit**	**4.37**	**1**	A	A	09 34 24.5	
	comp=E,42nm,1.5s,comp=E,35nm,4.4s						
JNIO	**Nijimaoohara**	**4.39**	**2**	A	A	09 34 24.7	
	comp=E,68nm,3.4s,comp=E,52nm,3.4s						
TTO5	**TONANKAI O.B.S**	**4.44**	**345**	A	A	09 34 26.0	
	comp=E,118nm,3.0s,comp=E,97nm,2.7s						
JWKM	**Wakayamakushim**	**4.49**	**322**	A	A	09 34 27.4	
	comp=E,25nm,2.5s,comp=E,33nm,2.9s						
JTHY	**Toshimahigashi**	**4.56**	**2**	A	A	09 34 26.4	
	comp=E,49nm,3.8s,comp=E,63nm,4.5s						
JMMH	**Miemihama**	**4.65**	**327**	A	A	09 34 28.9	
	comp=E,6.0nm,6.1s,comp=E,20nm,4.8s						
JIZS	**Izushimoda**	**4.75**	**358**	A	A	09 34 28.6	
	comp=E,27nm,3.7s,comp=E,24nm,2.4s						
JIM2	**Oshima 3**	**4.76**	**3**	A	A	09 34 28.3	
	comp=E,63nm,1.5s,comp=E,92nm,3.3s						
JSG	**Sagara**	**4.77**	**351**	A	A	09 34 29.1	
	comp=E,46nm,4.1s,comp=E,32nm,2.9s						
JTNC	**Tanabenakahech**	**4.85**	**323**	P	**P**	**09 34 31.1**	**+2.1**
JTNC				S	**S**	**09 35 37.4**	**+2.3**
JTNC	**Tanabenakahech**	**4.85**	**323**	A	A	09 34 31.1	
	comp=E,13nm,2.4s,comp=E,18nm,4.9s						
JIE	**Ise**	**4.86**	**336**	⇓P	**P**	**09 34 31.6**	**+2.6**
JIE				⇓*e*S	**S**	**09 35 36.7**	**+1.5**
JIE	**Ise**	**4.86**	**336**	A	A	09 34 31.6	
	comp=E,36nm,2.0s,comp=E,43nm,3.9s						
JKKS	**Kakegawashinom**	**4.87**	**349**	A	A	09 34 30.2	
	comp=E,57nm,3.2s,comp=E,33nm,3.0s						
JKN2	**Miekihoku**	**4.89**	**332**	A	A	09 34 31.1	
	comp=E,21nm,2.3s,comp=E,30nm,4.0s						
JAA	**Atsumi**	**4.94**	**341**	A	A	09 34 31.3	
	comp=E,32nm,2.8s,comp=E,20nm,5.0s						
BSO1	**Boso 1**	**4.95**	**18**	⇓P	**P**	**09 34 28.9**	**-0.4**
JHTM	**Izuhatsuma**	**4.99**	**359**	A	A	09 34 30.9	
	comp=E,114nm,1.8s,comp=E,140nm,1.6s						
JWM	**Minabe**	**5.01**	**322**	A	A	09 34 32.8	
	comp=E,16nm,2.5s,comp=E,26nm,3.9s						
HMMJ	**Hamamatsu 2**	**5.02**	**347**	A	A	09 34 31.8	
	comp=E,35nm,2.3s,comp=E,12nm,3.2s						
JNTK	**Naratenkawa**	**5.09**	**329**	A	A	09 34 33.3	
	comp=E,19nm,5.3s,comp=E,32nm,3.1s						
JSSY	**Shinshiroyabe**	**5.12**	**345**	A	A	09 34 32.9	
	comp=E,45nm,2.1s,comp=E,17nm,1.6s						
SHZ3	**Shizuoka 3**	**5.15**	**352**	A	A	09 34 32.9	
	comp=E,37nm,3.8s,comp=E,27nm,2.9s						
JWY	**Kouya**	**5.18**	**326**	A	A	09 34 34.4	
	comp=E,22nm,2.1s,comp=E,39nm,3.4s						
JFNN	**Fujinakano**	**5.24**	**356**	A	A	09 34 33.5	
	comp=E,39nm,4.1s,comp=E,34nm,3.1s						
TSUJ	**Tsu 2**	**5.25**	**335**	A	A	09 34 34.7	
	comp=E,50nm,2.1s,comp=E,53nm,3.3s						
JKUC	**kamogawauchiur**	**5.28**	**10**	A	A	09 34 33.2	
	comp=E,46nm,3.0s,comp=E,59nm,3.0s						
JYO	**Yokosk**	**5.28**	**5**	A	A	09 34 33.5	
	comp=E,52nm,1.5s,comp=E,44nm,1.5s						
JOD2	**Odawara 2**	**5.29**	**0**	P	**P**	**09 34 33.6**	**+0.1**
JOD2	**Odawara 2**	**5.29**	**0**	A	A	09 34 33.6	
	comp=E,19nm,2.0s,comp=E,24nm,4.1s						
MRT2	**Murotomisaki 2**	**5.42**	**310**	A	A	09 34 37.4	
	comp=E,13nm,3.5s,comp=E,7.0nm,3.2s						
JNY	**Yasuok**	**5.49**	**350**	A	A	09 34 36.6	
	comp=E,29nm,3.8s,comp=E,21nm,3.4s						
JAI	**Aioi**	**5.49**	**315**	A	A	09 34 38.0	
	comp=E,10.0nm,2.7s,comp=E,15nm,3.3s						
JHE	**Heguri**	**5.50**	**329**	A	A	09 34 37.6	
	comp=E,25nm,4.9s,comp=E,42nm,4.3s						
JAO	**Obara**	**5.52**	**344**	A	A	09 34 37.1	
	comp=E,52nm,1.9s,comp=E,23nm,1.5s						
JCN	**Nagara**	**5.53**	**10**	A	A	09 34 35.9	
	comp=E,66nm,1.4s,comp=E,48nm,4.0s						
JYN	**Shimob**	**5.55**	**355**	A	A	09 34 36.9	
	comp=E,24nm,3.9s,comp=E,20nm,2.9s						
JSGW	**Sagamiharawaka**	**5.63**	**1**	A	A	09 34 37.4	
	comp=E,17nm,5.4s,comp=E,24nm,2.4s						
JEG	**Eigenji**	**5.64**	**337**	A	A	09 34 38.8	
	comp=E,55nm,3.1s,comp=E,33nm,2.8s						
INU	**Inuyama**	**5.65**	**343**	Pn	**P**	**09 34 39.1**	**+1.9**
INU	**Inuyama**	**5.65**	**343**	P	**P**	**09 34 39.3**	**+2.1**
JICN	**Ichinomiyachia**	**5.66**	**341**	A	A	09 34 38.7	
	comp=E,88nm,2.8s,comp=E,60nm,2.2s						
JAWN	**Awajishima-nag**	**5.74**	**323**	A	A	09 34 40.4	
	comp=E,13nm,7.7s,comp=E,29nm,3.1s						
TOK	**Tokyo**	**5.75**	**6**	A	A	09 34 38.4	
	comp=E,58nm,1.1s,comp=E,79nm,3.5s						
JSMT	**Sammumatsuo**	**5.79**	**11**	A	A	09 34 38.5	
	comp=E,70nm,2.4s,comp=E,67nm,4.8s						
JMN	**Monobe**	**5.81**	**312**	Pn	**P**	**09 34 41.6**	**+2.7**
JGF	**Kuroka**	**5.81**	**346**	Pn	**P**	**09 34 40.2**	**+1.2**
JGF	**Kuroka**	**5.81**	**346**	A	A	09 34 40.2	
	comp=E,58nm,4.5s,comp=E,8.0nm,8.8s						
JMAF	**Mimaanabuki**	**5.84**	**316**	A	A	09 34 41.7	
	comp=E,7.0nm,4.2s,comp=E,12nm,5.6s						
JHU	**Hanno**	**5.88**	**2**	A	A	09 34 40.1	
	comp=E,19nm,1.7s,comp=E,22nm,2.3s						
JMIK	**Miki**	**5.92**	**326**	A	A	09 34 42.2	
	comp=E,14nm,5.3s,comp=E,50nm,2.6s						
CHOJ	**Chosi**	**5.92**	**14**	A	A	09 34 39.8	
	comp=E,47nm,2.7s,comp=E,40nm,4.7s						
JNT	**Takato**	**5.96**	**353**	A	A	09 34 41.4	
	comp=E,16nm,3.4s,comp=E,12nm,2.0s						
JYTA	**Yamagatataniai**	**5.96**	**341**	A	A	09 34 42.0	
	comp=E,27nm,3.0s,comp=E,20nm,3.8s						
JRY	**Ryogami san**	**6.05**	**359**	P	**P**	**09 34 41.6**	**+0.2**
JRY				*e*S	**S**	**09 35 55.3**	**-2.6**
JRY	**Ryogami san**	**6.05**	**359**	A	A	09 34 41.6	
	comp=E,25nm,1.5s,comp=E,26nm,2.1s						
JTO	**Tosashimizu**	**6.10**	**300**	P	**P**	**09 34 44.7**	**+2.7**
JIHU	**Itakohorinouch**	**6.12**	**11**	A	A	09 34 42.0	
	comp=E,105nm,4.0s,comp=E,118nm,2.1s						
JFM	**Mihama**	**6.14**	**336**	A	A	09 34 44.2	
	comp=E,46nm,2.2s,comp=E,38nm,5.1s						
JWT	**Wachi**	**6.15**	**331**	A	A	09 34 44.6	
	comp=E,20nm,2.4s,comp=E,34nm,4.0s						
JKS	**Kasai**	**6.16**	**326**	A	A	09 34 44.9	
	comp=E,10.0nm,7.1s,comp=E,41nm,3.5s						
JJS	**Sakaide**	**6.20**	**317**	A	A	09 34 45.6	
	comp=E,11nm,4.1s,comp=E,12nm,6.1s						
JYT	**Yasato**	**6.33**	**8**	Pn	**P**	**09 34 43.4**	**-0.9**
JYT	**Yasato**	**6.33**	**8**	A	A	09 34 44.5	
	comp=E,18nm,0.8s,comp=E,30nm,1.1s						
UWA2	**Uwa jima 2**	**6.39**	**302**	A	A	09 34 48.1	
	comp=E,5.0nm,3.3s,comp=E,4.0nm,5.2s						
JGN	**Niukaw**	**6.42**	**347**	A	A	09 34 46.8	
	comp=E,9.0nm,6.9s,comp=E,6.0nm,2.9s						
JAG	**Ashikaga**	**6.46**	**3**	A	A	09 34 46.3	
	comp=E,43nm,1.1s,comp=E,39nm,1.7s						
JAD	**Aida**	**6.48**	**321**	A	A	09 34 48.5	
	comp=E,9.0nm,2.6s,comp=E,17nm,3.0s						
JNG	**Nsakai**	**6.49**	**353**	A	A	09 34 47.1	
	comp=E,12nm,3.5s,comp=E,8.0nm,5.0s						
JHYU	**Hitachinakayam**	**6.49**	**11**	A	A	09 34 46.1	
	comp=E,54nm,1.7s,comp=E,56nm,2.3s						
JKY	**Yasaka**	**6.57**	**330**	A	A	09 34 49.2	
	comp=E,38nm,2.4s,comp=E,38nm,4.0s						
JGK	**Kuni**	**6.60**	**357**	A	A	09 34 48.2	
	comp=E,10.0nm,4.9s,comp=E,13nm,4.2s						
MJAR	**Matsushiro Arr**	**6.61**	**354**	P	**P**	**09 34 44.7**	**-3.5**
	368nm,0.6s,baz=164,slow=12,SNR=335						
MJAR				S	**S**	**09 36 04.9**	**-4.2**
	376nm,0.9s,baz=163,slow=18,SNR=7.0						
MJAR				ScP	**ScP**	**09 43 44.6**	**+0.7**
	14nm,0.8s,baz=156,slow=2.1,SNR=12						
MAJO	**Matsushiro**	**6.61**	**354**	Pn	**P**	**09 34 47.4**	**-0.8**
MAJO	**Matsushiro**	**6.61**	**354***c*	*i*P	**P**	**09 34 47.3**	**-0.9**
MAJO	**Matsushiro**	**6.61**	**354**	P	**P**	**09 34 47.7**	**-0.5**
JNA	**Nagahama**	**6.67**	**304**	A	A	09 34 51.1	
	comp=E,5.0nm,3.0s,comp=E,4.0nm,6.1s						
JKG	**Kaga**	**6.71**	**341**	A	A	09 34 50.3	
	comp=E,22nm,3.5s,comp=E,27nm,2.9s						
JKSM	**Kasumi**	**6.74**	**328**	A	A	09 34 51.1	
	comp=E,21nm,6.0s,comp=E,41nm,4.2s						
JHO	**Hitachi**	**6.75**	**10**	A	A	09 34 49.1	
	comp=E,29nm,3.8s,comp=E,29nm,2.3s						
JTT	**Ttatey**	**6.79**	**348**	A	A	09 34 50.8	
	comp=E,26nm,3.9s,comp=E,15nm,4.9s						
JKT	**Katashina**	**6.80**	**1**	A	A	09 34 50.1	
	comp=E,36nm,1.2s,comp=E,18nm,1.8s						
JJG	**Jouge**	**6.86**	**315**	A	A	09 34 52.9	
	comp=E,6.0nm,3.1s,comp=E,15nm,5.1s						
JHM	**Kurahashi**	**6.95**	**309**	A	A	09 34 54.1	
	comp=E,9.0nm,2.6s,comp=E,9.0nm,5.1s						
JUS	**Usuki**	**6.99**	**298**	A	A	09 34 54.7	
	comp=E,2.0nm,9.4s,comp=E,5.0nm,4.8s						
JKR	**Kurayoshi**	**6.99**	**322**	A	A	09 34 54.2	
	comp=E,32nm,2.6s,comp=E,35nm,4.0s						
JSB	**Shiboa**	**7.03**	**5**	A	A	09 34 52.4	
	comp=E,53nm,2.0s,comp=E,89nm,2.3s						
JMTN	**Minamitane**	**7.10**	**276**	A	A	09 34 55.9	
	comp=E,5.0nm,3.0s,comp=E,8.0nm,4.7s						
JHS	**Saijyo**	**7.12**	**316**	Pn	**P**	**09 34 55.9**	**+2.1**
JHS	**Saijyo**	**7.12**	**316**	P	**P**	**09 34 55.9**	**+2.1**

JHS **Saijyo** 7.12 316 A A 09 34 55.9
comp=E,7.0nm,3.3s,comp=E,11nm,4.2s
JTZ **Takazaki** 7.14 288 A A 09 34 56.4
comp=E,4.0nm,4.7s,comp=E,4.0nm,5.4s
JJN **Nakama** 7.17 354 A A 09 34 54.6
comp=E,11nm,4.5s,comp=E,8.0nm,5.0s
JJH **Hakui** 7.21 345 A A 09 34 55.6
comp=E,25nm,2.8s,comp=E,12nm,3.1s
JFFD **Fukushimafurud** 7.22 9 A A 09 34 54.3
comp=E,37nm,3.3s,comp=E,34nm,2.9s
JUON **Uonuma** 7.24 360 A A 09 34 55.0
comp=E,10.0nm,3.4s,comp=E,23nm,1.7s
ONAJ **Iwakimizuishiy** 7.27 11 A A 09 34 54.7
comp=E,60nm,1.8s,comp=E,27nm,1.3s
JHT **Toyohira** 7.33 312 A A 09 34 58.3
comp=E,7.0nm,2.0s,comp=E,11nm,4.7s
JKD **Kudamatsu** 7.36 306 A A 09 34 58.7
comp=E,8.0nm,2.9s,comp=E,12nm,4.5s
JBEP **Beppuamama** 7.36 299 A A 09 34 58.8
comp=E,6.0nm,2.4s,comp=E,17nm,3.8s
JKI **Kunimi** 7.37 302 A A 09 34 58.9
comp=E,10.0nm,2.5s,comp=E,10.0nm,4.2s
JFY **Yanaizu** 7.45 4 A A 09 34 57.2
comp=E,19nm,2.6s,comp=E,17nm,3.9s
JNM **Ikuma** 7.52 319 A A 09 35 00.2
comp=E,16nm,4.0s,comp=E,22nm,2.8s
JGT2 **ShimaneMisato** 7.53 314 A A 09 35 00.5
comp=E,13nm,2.3s,comp=E,25nm,3.3s
JIU3 **Izumi3** 7.54 292 A A 09 35 00.9
comp=E,7.0nm,3.7s,comp=E,6.0nm,6.9s
JFK **Kawauchi** 7.54 11 A A 09 34 57.8
comp=E,51nm,2.8s,comp=E,30nm,1.6s
JIZZ **Izumozaki** 7.56 358 A A 09 34 58.8
comp=E,25nm,3.2s,comp=E,29nm,2.8s
JHIK **Hikimi** 7.58 309 A A 09 35 01.2
comp=E,3.0nm,2.5s,comp=E,9.0nm,4.1s
JSU **Suzuyama** 7.58 284 P **P** **09 35 00.8 +1.8**
JFT **Otama** 7.62 8 A A 09 34 58.8
comp=E,68nm,2.6s,comp=E,39nm,2.1s
JISK **Izumosakaura** 7.62 318 A A 09 35 01.4
comp=E,17nm,3.3s,comp=E,18nm,5.9s
JNS **Sasagawa** 7.85 1 A A 09 35 01.8
comp=E,12nm,3.7s,comp=E,16nm,3.8s
JMST **Minamisoumatoc** 7.89 10 A A 09 35 01.7
comp=E,69nm,3.8s,comp=E,58nm,1.3s
JKDJ **Kitadaitoujima** 7.96 242 A A 09 35 04.6
comp=E,47nm,4.3s,comp=E,18nm,3.9s
JYAR **Yonezawaarcadi** 7.99 6 A A 09 35 03.1
comp=E,34nm,1.4s,comp=E,32nm,1.2s
JOI **OKI** 7.99 324 P **P** **09 35 04.6 +1.2**
JOI *eS* **S** **09 36 38.5 +1.2**
JOI **OKI** 7.99 324 A A 09 35 04.6
comp=E,14nm,2.2s,comp=E,21nm,2.7s
JMM **Marumori** 8.02 10 P **P** **09 35 03.0 -0.6**
JMM **Marumori** 8.02 10 A A 09 35 03.2
comp=E,28nm,3.8s,comp=E,27nm,0.9s
JTY **Toyota** 8.04 304 A A 09 35 06.5
comp=E,6.0nm,2.0s,comp=E,10.0nm,4.3s
JHD **Hondo** 8.06 290 A A 09 35 06.8
comp=E,10.0nm,2.9s,comp=E,10.0nm,7.4s
JHG **Hegura jima** 8.08 348 A A 09 35 05.2
comp=E,8.0nm,7.0s,comp=E,6.0nm,3.8s
JMZ **Minamidaito 2** 8.08 241 P **P** **09 35 05.7 +1.2**
JMZ **Minamidaito 2** 8.08 241 A A 09 35 05.7
comp=E,33nm,9.0s,comp=E,16nm,4.2s
JSD **Sado** 8.09 355 P **P** **09 35 02.7 -1.7**
JSD **Sado** 8.09 355 A A 09 35 04.9
comp=E,5.0nm,3.9s,comp=E,4.0nm,2.0s
JFI **Itaya** 8.18 297 A A 09 35 08.1
comp=E,5.0nm,6.3s,comp=E,8.0nm,4.5s
JSJ **Shimokoshiki** 8.23 284 ⇓P **P** **09 35 08.2 +2.0**
JHGM **Hagimishima** 8.26 308 A A 09 35 08.9
comp=E,11nm,3.7s,comp=E,15nm,6.9s
JYS **Shirataka** 8.29 5 A A 09 35 06.5
comp=E,48nm,2.1s,comp=E,46nm,2.9s
NGSJ **Nagasakinomoza** 8.38 291 A A 09 35 10.5
comp=E,6.0nm,4.6s,comp=E,6.0nm,9.4s
JUR **Ureshino** 8.40 294 A A 09 35 10.7
comp=E,5.0nm,3.9s,comp=E,6.0nm,5.8s
JAW **Awa shima** 8.48 1 A A 09 35 09.0
comp=E,11nm,2.0s,comp=E,11nm,3.4s
JOU **Okura** 8.49 8 A A 09 35 08.7
comp=E,52nm,2.6s,comp=E,32nm,3.7s
JYA **Atsumi** 8.63 3 A A 09 35 10.6
comp=E,30nm,2.6s,comp=E,21nm,2.1s
JIO **Ouri** 8.69 12 A A 09 35 10.7
comp=E,14nm,3.6s,comp=E,6.0nm,2.3s
JOFO **Osakifurukawao** 8.76 9 A A 09 35 11.6
comp=E,88nm,3.5s,comp=E,114nm,3.0s
JAMN **Amaminishikomi** 8.83 261 P **P** **09 35 14.0 +1.2**
JYK **Kaneyama** 9.00 6 A A 09 35 14.7
comp=E,27nm,3.2s,comp=E,21nm,3.1s
JKMT **Kesennumamotoy** 9.05 12 A A 09 35 14.8
comp=E,23nm,2.1s,comp=E,8.0nm,3.5s
JYYZ **Yamagatayuza** 9.07 4 A A 09 35 15.5
comp=E,50nm,3.7s,comp=E,64nm,2.5s
JTK **Tokunoshima** 9.14 259 A A 09 35 18.8
comp=E,16nm,2.6s,comp=E,10.0nm,6.7s
JMK **Ichinoseki** 9.15 11 P **P** **09 35 16.2 +0.1**
JMK *eS* **S** **09 36 56.3 -5.1**
JMK **Ichinoseki** 9.15 11 A A 09 35 16.2
comp=E,20nm,2.3s,comp=E,13nm,3.2s
JTB **Tobi-shima** 9.23 2 A A 09 35 17.5
comp=E,25nm,2.3s,comp=E,12nm,2.0s
JFU **Fukue jima 2** 9.24 290 A A 09 35 20.4
comp=E,7.0nm,4.3s,comp=E,8.0nm,6.2s
JTSM **Tsushimamitsus** 9.31 301 A A 09 35 21.0
comp=E,7.0nm,3.1s,comp=E,12nm,3.1s
OFUJ **Ofunato** 9.35 12 A A 09 35 18.2
comp=E,27nm,2.8s,comp=E,10.0nm,3.2s
JTU **Tsushima** 9.38 302 P **P** **09 35 20.2 +1.5**
JTU **Tsushima** 9.38 302 P **P** **09 35 21.4 +2.7**
JTU *eS* **S** **09 37 09.2 +2.9**
JRG **Rokugo** 9.51 7 A A 09 35 20.4
comp=E,21nm,2.8s,comp=E,24nm,5.0s
JOKE **Okinoerabujima** 9.59 257 A A 09 35 23.9
comp=E,8.0nm,6.0s,comp=E,5.0nm,3.4s
JYW **Yuwa** 9.61 5 A A 09 35 21.7
comp=E,28nm,2.1s,comp=E,50nm,3.6s
JOM **Ohasama** 9.67 10 A A 09 35 22.1
comp=E,9.0nm,3.7s,comp=E,8.0nm,2.1s
JYRO **Yoronjima** 9.80 255 A A 09 35 26.2
comp=E,6.0nm,5.3s,comp=E,9.0nm,4.3s
MIYJ **Miyakonagasawa** 9.86 12 A A 09 35 24.1
comp=E,17nm,4.4s,comp=E,21nm,2.5s
JSZI **Iwateshizukuis** 9.88 8 A A 09 35 24.6
comp=E,58nm,2.7s,comp=E,36nm,3.7s
KSBUS **Busan** 9.93 305 P **P** **09 35 26.9 +2.2**
JOG3 **Oga3** 9.94 360 A A 09 35 25.8
comp=E,19nm,2.2s,comp=E,23nm,3.2s
JOW **Kunigami** 10.01 255 P **P** **09 35 28.2 +2.3**
JOW **Kunigami** 10.01 255 P **P** **09 35 28.7 +2.8**
JOW **Kunigami** 10.01 255 P **P** **09 35 28.2 +2.3**
JOW **Kunigami** 10.01 255 A A 09 35 28.2
comp=E,7.0nm,5.9s,comp=E,7.0nm,7.2s
JIH **Iheya** 10.20 256 A A 09 35 30.9
comp=E,5.0nm,3.8s,comp=E,8.0nm,4.4s
JTH **Tanohata** 10.22 12 A A 09 35 28.3
comp=E,30nm,2.1s,comp=E,33nm,2.6s
JAH **Hinai** 10.29 7 A A 09 35 29.4
comp=E,20nm,2.8s,comp=E,12nm,1.6s
JNTW **Noshirotokiwa** 10.33 5 A A 09 35 30.0
comp=E,47nm,3.4s,comp=E,60nm,3.9s
JKEN **Kujiedanarisaw** 10.45 11 A A 09 35 31.0
comp=E,32nm,5.4s,comp=E,24nm,2.0s
JANG **Nango** 10.59 10 A A 09 35 32.6
comp=E,25nm,3.0s,comp=E,10.0nm,2.1s
JIW **Iwasaki** 10.64 4 A A 09 35 33.7
comp=E,13nm,3.4s,comp=E,15nm,2.3s
JHHS **Hirosakihyakuz** 10.72 5 A A 09 35 34.5
comp=E,45nm,4.8s,comp=E,46nm,4.9s
JTM **Tenmabayashi** 10.93 8 P **P** **09 35 37.1 +1.4**
JTM **Tenmabayashi** 10.93 8 A A 09 35 36.7
comp=E,21nm,5.7s,comp=E,22nm,2.2s
JSI2 **Shiura 2** 11.13 5 A A 09 35 39.2
comp=E,14nm,6.9s,comp=E,11nm,2.5s
JARK **Aomorirokkasho** 11.19 9 A A 09 35 39.5
comp=E,31nm,1.8s,comp=E,32nm,2.1s
NAWB **Namwon** 11.25 302 P **P** **09 35 41.4 +2.0**
JAHD **Aomorihigashid** 11.44 9 A A 09 35 42.4
comp=E,31nm,3.0s,comp=E,21nm,2.9s
JKE **Kume jima 2** 11.44 255 P **P** **09 35 43.3 +1.7**
JKE **Kume jima 2** 11.44 255 A A 09 35 43.3
comp=E,4.0nm,4.1s,comp=E,4.0nm,3.7s
JOT **Ohata** 11.52 7 P **P** **09 35 43.4 +1.2**
JOT *eS* **S** **09 37 49.0 -0.3**
JOT **Ohata** 11.52 7 A A 09 35 43.4
comp=E,17nm,4.2s,comp=E,8.0nm,3.3s
KSCHJ **Chungju** 11.56 310 P **P** **09 35 44.6 +1.8**
JOMM **Oshimamatsumae** 11.57 3 A A 09 35 44.3
comp=E,13nm,3.1s,comp=E,11nm,4.0s
JSR **Shiriuchi** 11.60 5 A A 09 35 44.6
comp=E,14nm,6.2s,comp=E,14nm,5.1s
TJN **Taejon** 11.72 306 P **P** **09 35 45.9 +1.3**
TJN **Taejon** 11.72 306 *ce*P **P** **09 35 45.3 +0.8**
TJN **Taejon** 11.72 306 P **P** **09 35 46.7 +2.2**
KSRS **Korea Array** 11.92 312 P **P** **09 35 48.2 +1.5**
1μm,0.8s,baz=124,slow=11,SNR=2021
KSRS S **S** **09 37 57.8 +0.2**
38nm,0.9s,baz=173,slow=11,SNR=1.7
KSRS ScP **ScP** **09 43 51.1 +1.2**
29nm,0.9s,baz=170,slow=0.9,SNR=37
KSAR **Wonju Array Be** 11.94 312 P **P** **09 35 49.1 +2.2**
KSAR **Wonju Array Be** 11.94 312 P **P** **09 35 49.1 +2.2**
KS19 **Wonju Array Si** 11.98 312 P **P** **09 35 49.0 +1.5**
JKB **Kayabe** 12.01 7 A A 09 35 49.1
comp=E,12nm,6.9s,comp=E,10.0nm,1.8s
JOSM **Okushiri--Mats** 12.11 1 P **P** **09 35 49.9 +1.1**
JOSM **Okushiri--Mats** 12.11 1 A A 09 35 49.9
comp=E,12nm,5.3s,comp=E,8.0nm,9.9s
JYM2 **Yakumo 2** 12.18 5 A A 09 35 51.2
comp=E,11nm,5.9s,comp=E,11nm,6.7s
JHST **Hiyamasetana** 12.46 3 A A 09 35 54.4
comp=E,15nm,3.7s,comp=E,12nm,2.6s
ERM **Erimo** 12.48 14 P **P** **09 35 54.5 +1.7**
ERM **Erimo** 12.48 14 *ce*P **P** **09 35 54.4 +1.7**
ERM pmax pmax
comp=Z,1μm,0.8s
ERM **Erimo** 12.48 14 P **P** **09 35 54.5 +1.7**
JEM **Erimo** 12.48 14 A A 09 35 53.9
comp=Z,8.0nm,8.1s,comp=Z,6.0nm,3.6s
JNB **Noboribetsu** 12.59 7 A A 09 35 55.6
comp=Z,11nm,3.0s,comp=Z,4.0nm,2.6s
JNBK **Urakawa-nobuka** 12.65 13 A A 09 35 55.9
comp=Z,17nm,2.9s,comp=Z,15nm,1.4s
JSH **Shimam** 12.69 3 A A 09 35 56.9
comp=Z,7.0nm,5.1s,comp=Z,5.0nm,4.8s
JSHD **Hidakashinhida** 12.73 11 A A 09 35 56.8
comp=Z,29nm,2.0s,comp=Z,30nm,2.0s
JTHR **Tokachihiroo** 12.77 14 A A 09 35 57.1
comp=Z,18nm,3.5s,comp=Z,9.0nm,1.5s
INCN **Inchon** 12.79 309 P **P** **09 35 57.2 +1.0**
INCN **Inchon** 12.79 309 P **P** **09 35 57.3 +1.0**
INCN **Inchon** 12.79 309 P **P** **09 35 57.6 +1.3**
JIAM **Iburiatsuma** 12.85 9 A A 09 35 58.3
comp=Z,17nm,4.3s,comp=Z,29nm,2.6s
JEW **Eniwo** 13.00 8 A A 09 36 00.1
comp=Z,18nm,7.2s,comp=Z,16nm,1.9s
JBT2 **Biratori 2** 13.07 11 A A 09 36 00.6
comp=Z,11nm,2.9s,comp=Z,8.0nm,2.5s
JCH **Churui** 13.10 14 P **P** **09 36 01.1 +1.6**
JCH **Churui** 13.10 14 A A 09 36 01.1
comp=Z,13nm,7.0s,comp=Z,11nm,3.6s
JOGS **Gusukube** 13.20 250 P **P** **09 36 03.6 +2.6**
JOGS **Gusukube** 13.20 250 A A 09 36 03.6
comp=Z,8.0nm,3.4s,comp=Z,11nm,3.1s
JMJ **Miyako jima 2** 13.27 251 P **P** **09 36 04.3 +2.6**
JIRB **Irabujima** 13.37 251 A A 09 36 06.3
comp=Z,5.0nm,1.9s,comp=Z,10.0nm,2.7s
JISS **Ishikarishitsu** 13.43 7 A A 09 36 04.7
comp=Z,13nm,6.0s,comp=Z,11nm,7.3s
JOB **Onbets** 13.47 15 A A 09 36 04.8
comp=Z,12nm,4.3s,comp=Z,12nm,4.2s
JFR **Furan** 13.48 11 A A 09 36 05.1
comp=Z,8.0nm,5.1s,comp=Z,10.0nm,3.2s
HJU **Haeju** 13.70 310 P **P** **09 36 06.9 +0.7**
HJU pP 09 37 16.3
HJU S S 09 38 43.8 +11
HJU AMS AMS
comp=N,3μm,2.9s
HJU AMS AMS
comp=E,3μm,3.3s
HJU AMS AMS
comp=Z,3μm,2.8s
HHU **Hamhung** 13.73 320 P **P** **09 36 06.7 +0.2**
HHU pP 09 37 14.1
HHU S **S** **09 38 34.8 +0.9**
HHU AMS AMS
comp=N,205nm,1.5s
HHU AMS AMS
comp=E,385nm,2.7s
HHU AMS AMS
comp=Z,163nm,1.2s
JAB **Ashibetsu** 13.76 10 A A 09 36 08.1
comp=Z,14nm,3.7s,comp=Z,11nm,2.3s
JAK **Akkeshi** 13.77 18 A A 09 36 07.8
comp=Z,11nm,3.2s,comp=Z,9.0nm,5.0s
JAR **Ashorobuto** 13.84 14 A A 09 36 08.7
comp=Z,12nm,4.1s,comp=Z,8.0nm,2.3s
JHR **Hokuryu** 13.92 8 P **P** **09 36 10.9 +2.3**
JHR **Hokuryu** 13.92 8 A A 09 36 10.9
comp=Z,11nm,3.8s,comp=Z,12nm,4.3s
JKHN **Kushirohamanak** 13.98 19 A A 09 36 09.9
comp=Z,20nm,4.8s,comp=Z,9.0nm,3.7s
MSHR **Mys Shultsa** 14.12 335 *ce*P **P** **09 36 11.1 +0.4**
MSHR pmax pmax
comp=Z,384nm,1.7s
JKK2 **Kamakawa 2** 14.20 11 A A 09 36 12.7
comp=Z,8.0nm,3.7s,comp=Z,4.0nm,3.4s
PYAG **Pyongyang** 14.23 313 P **P** **09 36 13.5 +1.5**
PYAG pP 09 37 27.5
PYAG S S 09 38 56.6 +13
PYAG AMS AMS
comp=N,155nm,2.5s
PYAG AMS AMS
comp=E,99nm,1.6s
PYAG AMS AMS
comp=Z,152nm,2.4s
VLA **Vladivostok** 14.35 338 *c iP* **P** **09 36 11.6 -1.6**
VLA pmax pmax
comp=Z,577nm,0.7s
NEM2 **Nemuro 2** 14.40 20 P **P** **09 36 15.2 +1.4**
NEM2 **Nemuro 2** 14.40 20 A A 09 36 15.2
comp=Z,9.0nm,3.1s,comp=Z,4.0nm,8.3s
NMR **Nemuro--Hokkai** 14.40 20 *d iP* **P** **09 36 14.4 +0.6**
JMP **Maruseppu** 14.43 12 A A 09 36 15.1
comp=Z,8.0nm,3.3s,comp=Z,6.0nm,1.2s
JTKR **Abashiri--Toko** 14.51 14 P **P** **09 36 16.7 +1.8**
JTKR **Abashiri--Toko** 14.51 14 A A 09 36 16.7
comp=Z,6.0nm,4.3s,comp=Z,4.0nm,2.2s
JKRS **Kuro-shima** 14.58 251 A A 09 36 19.1
comp=Z,9.0nm,4.2s,comp=Z,11nm,3.3s
JNSB **Nemuroshibetsu** 14.58 17 A A 09 36 16.4
comp=Z,14nm,4.3s,comp=Z,12nm,3.7s
JSS **Shosan** 14.59 8 A A 09 36 17.0
comp=Z,14nm,3.7s,comp=Z,8.0nm,3.1s
JRA **Rausu** 14.76 17 A A 09 36 18.3
comp=Z,6.0nm,7.4s,comp=Z,5.0nm,1.9s
HATJ **Hateruma jima** 14.82 250 A A 09 36 21.6
comp=Z,6.0nm,3.0s,comp=Z,9.0nm,2.9s
RUSJ **Misakicho** 14.95 17 *d iP* **P** **09 36 21.5 +1.8**
YUK **Yuzh-Kuril'sk** 15.05 19 *d iP* **P** **09 36 21.6 +0.8**
YUK pmax pmax
comp=N,396nm,0.7s
YUK pmax pmax
comp=E,259nm,0.7s
YUK pmax pmax
comp=Z,2μm,0.7s
YUK pmax pmax
comp=Z,6μm,1.0s
TEY **Ternei** 15.18 353 ⇑*iP* **P** **09 36 23.3 +1.1**
TEY *e* 09 39 01.6
TEY pmax pmax
comp=Z,1μm,2.1s
TEY pmax pmax
comp=N,800nm,2.1s
TEY pmax pmax
comp=N,800nm,2.3s
TEY pmax pmax
comp=Z,1μm,2.2s
TEY pmax pmax
comp=E,200nm,2.1s
JSE **Soyaes** 15.23 10 A A 09 36 23.6
comp=E,5.0nm,3.3s,comp=E,4.0nm,3.8s
USA0B **Ussuriysk Arra** 15.29 340 P **P** **09 36 24.5 +1.1**
USA0B **Ussuriysk Arra** 15.29 340 P **P** **09 36 24.5 +1.1**
USRK **Ussuriysk Ar.** 15.29 340 P **P** **09 36 24.2 +0.8**
comp=E,526nm,0.6s,baz=144,slow=10,SNR=888
USRK ScP **ScP** **09 43 56.0 +0.5**
comp=E,12nm,0.9s,baz=225,slow=0.5,SNR=5.9
USRK **Ussuriysk Ar.** 15.29 340 P **P** **09 36 24.6 +1.2**
USRK **Ussuriysk Ar.** 15.29 340 P **P** **09 36 24.6 +1.2**
YOJ **Yonaguni jima** 15.30 253 P **P** **09 36 23.7 0.0**
YOJ **Yonaguni jima** 15.30 253 P **P** **09 36 23.7 0.0**
SSE **Sheshan** 15.47 279 P **P** **09 36 23.8 -1.6**
SSE S **S** **09 39 06.8 -1.8**
SSE pmax pmax
comp=E,73nm,1.0s
SSE LR LR
comp=E,780nm,10.3s
SSE LR LR
comp=E,440nm,10.1s
SUJ **Sinuiju** 15.64 314 P **P** **09 36 27.6 +0.4**
SUJ pP sP 09 37 40.1 -35
SUJ S **S** **09 39 14.7 +2.9**
SUJ AMS AMS
comp=N,3μm,2.6s
SUJ AMS AMS
comp=E,2μm,2.2s
SUJ AMS AMS
comp=Z,2μm,2.5s
TATO **Taipei** 16.38 257 P **P** **09 36 34.9 -0.4**
TATO **Taipei** 16.38 257 P **P** **09 36 35.0 -0.2**
MDJ **Mudanjiang** 16.45 335 P **P** **09 36 36.5 +0.7**
YHNB **Yeheng** 16.59 256 P **P** **09 36 36.3 -1.4**
YHNB **Yeheng** 16.59 256 P **P** **09 36 36.7 -0.9**
NACB **Ninganchiao** 16.60 254 P **P** **09 36 35.7 -1.9**
KUR **Kuril'sk** 16.75 22 *c iP* **P** **09 36 40.2 +1.3**
KUR *i* S **S** **09 39 36.3 +3.1**
KUR pmax pmax
comp=E,4μm,5.5s
KUR pmax pmax
comp=Z,883nm,0.8s
KUR pmax pmax
comp=N,86nm,0.9s
KUR pmax pmax
comp=E,109nm,0.9s
KUR smax smax
comp=E,348nm,0.6s
KUR smax smax
comp=N,169nm,0.7s
KUR MLR MLR
comp=Z,456nm,15.0s
DL2 **Dalian** 16.92 306 ⇑*iP* **P** **09 36 40.6 -0.3**
DL2 S **S** **09 39 34.3 -2.5**
DL2 ScP **ScP** **09 43 59.4 +0.7**
DL2 ScS **ScS** **09 47 35.9 -2.7**
DL2 pmax pmax
comp=Z,200nm,0.7s
DL2 pmax pmax
comp=Z,210nm,3.8s
GUMO **Guam** 17.14 161 P **P** **09 36 43.0 -0.5**
comp=Z,230nm,0.5s,baz=316,slow=2.9,SNR=35
GUMO S **S** **09 39 42.8 +1.2**
comp=Z,425nm,0.9s,baz=39,slow=23,SNR=12
GUMO **Guam** 17.14 161 P **P** **09 36 43.5 -0.1**
GUMO **Guam** 17.14 161 P **P** **09 36 43.8 +0.3**
YSS **Yuzh-Sakhalins** 17.21 9 P **P** **09 36 44.9 +1.1**
YSS **Yuzh-Sakhalins** 17.21 9 *α iP* **P** **09 36 45.0 +1.1**
YSS *i* S **S** **09 39 43.8 +1.6**
YSS pmax pmax
comp=E,5μm,2.9s
YSS pmax pmax
comp=N,3μm,3.1s
YSS pmax pmax
comp=E,1μm,2.5s
YSS pmax pmax
comp=Z,1μm,1.1s
YSS smax smax
comp=N,210nm,1.2s
YSS smax smax
comp=E,250nm,1.4s
YSS smax smax
comp=N,3μm,4.3s
YSS smax smax
comp=E,2μm,4.0s
YSS MLR MLR
comp=Z,1μm,11.0s
YSS MLR MLR
comp=N,900nm,14.0s
YSS **Yuzh-Sakhalins** 17.21 9 P **P** **09 36 45.2 +1.4**
SNY **Shenyang** 17.24 318 ⇑P **P** **09 36 44.9 +0.7**
SNY sP sP 09 38 19.6 -13
SNY S **S** **09 39 40.4 -2.4**
SNY pmax pmax
comp=N,1μm,3.8s
SNY LR LR
comp=N,1μm,8.0s
SNY LR LR
comp=N,860nm,11.4s
SNY LR LR
comp=N,890nm,13.5s
SSLB **Suanglung** 17.29 254 P **P** **09 36 44.8 -0.3**
NJ2 **Nanjing** 17.47 282 ⇓*iP* **P** **09 36 46.1 -0.7**
NJ2 S **S** **09 39 45.8 -1.8**
NJ2 ScP **ScP** **09 44 01.4 +1.4**
NJ2 ScS **ScS** **09 47 40.6 +0.1**
NJ2 pmax pmax
comp=N,350nm,0.7s
CN2 **Changchun** 17.57 326 ⇑*iP* **P** **09 36 48.3 +0.6**
CN2 sP sP 09 38 30.3 -6.2
CN2 S **S** **09 39 46.4 -2.9**
CN2 ScP **ScP** **09 44 00.6 +0.6**
CN2 ScS **ScS** **09 47 40.1 -0.3**
CN2 pmax pmax
comp=N,430nm,0.9s
TPUB **Ta-pu** 17.77 252 P **P** **09 36 49.1 -1.0**
TPUB **Ta-pu** 17.77 252 P **P** **09 36 49.8 -0.3**
BNX **BinXian** 18.23 333 ⇑P **P** **09 36 54.9 +0.3**
BNX sP **sP** **09 38 39.3 -4.5**
BNX S **S** **09 40 02.8 +1.5**
BNX pmax pmax
comp=N,2μm,1.1s
QZH **Quanzhou** 18.85 260 ⇓*iP* **P** **09 36 59.6 -1.7**
QZH S **S** **09 40 11.0 -1.5**
QZH ScS **ScS** **09 47 46.4 +1.3**
QZH pmax pmax
comp=N,460nm,0.8s
QZH pmax pmax
comp=N,1μm,5.3s
QZH LR LR
comp=N,640nm,14.2s
QZH LR LR
comp=N,490nm,7.3s
QZH LR LR
comp=N,600nm,9.2s
UGL **Uglegorsk** 19.23 6 ⇑*iP* **P** **09 37 06.2 +1.5**
UGL *eS* **S** **09 40 19.1 +0.9**
UGL pmax pmax
comp=Z,9μm,1.2s
UGL pmax pmax
comp=Z,4μm,0.8s
UGL smax smax
comp=E,4μm,3.9s
UGL smax smax
comp=N,3μm,6.0s
TIA **Tai'an** 19.41 295 ⇓P **P** **09 37 05.9 -0.7**
TIA S **S** **09 40 19.4 -2.1**
TIA pmax pmax
comp=N,320nm,0.8s
TIA pmax pmax
comp=N,400nm,4.2s
TIA LR LR
comp=N,790nm,8.0s
TIA LR LR
comp=N,820nm,8.0s
KLR **Kul'dur** 20.05 346 P **P** **09 37 13.1 +0.8**
comp=N,885nm,0.7s,baz=155,slow=7.9,SNR=860
KLR ScP **ScP** **09 44 05.3 -0.1**
comp=N,30nm,0.9s,baz=211,slow=1.6,SNR=9.3
KLR ScS **ScS** **09 47 48.1 -0.2**
comp=N,9.4nm,1.2s,baz=36,slow=21,SNR=19
comp=N,885nm,0.7s
GRNR **Gornyy** 20.89 355 ⇑*iP* **P** **09 37 21.6 +1.7**
GRNR *eS* **S** **09 40 50.1 +5.0**
GRNR pmax pmax
comp=E,100nm,0.9s
GRNR pmax pmax
comp=N,330nm,1.1s
GRNR pmax pmax
comp=Z,540nm,0.9s
GRNR smax smax
comp=E,20nm,1.0s
TYV **Tymovskoe** 21.06 6 *eP* **P** **09 37 23.0 +1.6**
TYV *eS* **S** **09 40 51.1 +3.4**
TYV pmax pmax
comp=Z,2μm,3.6s

TYV pmax pmax
comp=Z,624nm,0.9s
TYV smax smax
comp=N,800nm,3.7s
TYV smax smax
comp=E,400nm,3.7s
TYV smax smax
comp=N,33nm,1.3s
TYV smax smax
comp=E,20nm,1.3s
BJI Beijing 21.24 304 P **P** **09 37 23.3 +0.1**
BJI sP **sP** **09 39 14.9 -1.7**
BJI S **S** **09 40 48.5 -2.4**
BJI ScP **ScP** **09 44 09.0 +0.4**
BJI ScS **ScS** **09 47 52.3 -0.5**
BJI pmax pmax
comp=E,180nm,1.2s
WHN Wuhan 21.37 278 ⇓P **P** **09 37 25.1 +0.6**
WHN sP **sP** **09 39 18.5 +1.9**
WHN S **S** **09 40 53.1 -0.1**
WHN ScP **ScP** **09 44 10.3 +1.2**
WHN ScS **ScS** **09 47 53.4 -0.2**
WHN pmax pmax
comp=E,500nm,1.1s
HNS HongShan 21.56 297 ⇓P **P** **09 37 26.4 +0.2**
HNS S **S** **09 40 55.6 -0.6**
HNS ScP **ScP** **09 44 10.8 +1.4**
HNS ScS **ScS** **09 47 53.9 -0.2**
HNS pmax pmax
comp=E,200nm,0.8s
CNSH ChangSha 22.91 272 ⇓P **P** **09 37 38.8 +0.2**
CNSH sP **sP** **09 39 34.0 0.0**
CNSH S **S** **09 41 16.8 -1.0**
CNSH pmax pmax
comp=E,110nm,1.3s
CNSH LR LR
comp=E,700nm,11.8s
CNSH LR LR
comp=E,1μm,13.3s
CNSH LR LR
comp=E,1μm,11.1s
LYN LuoYang 22.94 288 ⇓*i*P **P** **09 37 37.9 -0.9**
LYN sP sP 09 39 33.3 -2.2
LYN S **S** **09 41 16.3 -1.9**
LYN ScP **ScP** **09 44 13.3 +0.2**
LYN ScS **ScS** **09 47 58.3 -1.2**
LYN pmax pmax
comp=E,50nm,0.7s
LYN pmax pmax
comp=E,200nm,7.4s
XLT XiLinHaoTe 22.96 314 ⇑*i*P **P** **09 37 39.3 +0.3**
XLT sP sP 09 39 37.0 +1.1
XLT S **S** **09 41 17.8 -0.7**
XLT ScP **ScP** **09 44 13.8 +0.7**
XLT pmax pmax
comp=E,88nm,1.0s
XLT LR LR
comp=E,88nm,11.4s
XLT LR LR
comp=E,840nm,12.8s
XLT LR LR
comp=E,1μm,12.9s
TGY Tagaytay City 23.01 231 P **P** **09 37 39.5 -0.1**
baz=90,slow=5.2
NKL Nikolayevsk 23.21 2 *e*P **P** **09 37 42.5 +1.6**
NKL pmax pmax
comp=N,220nm,0.6s
NKL pmax pmax
comp=E,37nm,0.6s
NKL pmax pmax
comp=E,656nm,0.6s
TIY Taiyuan 23.39 296 ⇑P **P** **09 37 44.1 +1.2**
TIY sP **sP** **09 39 39.3 -1.1**
TIY S **S** **09 41 24.6 -0.8**
TIY pmax pmax
comp=Z,72nm,0.5s
HIA Hailar 24.25 328 IAmb IAmb 09 37 52.6
comp=Z,292nm,1.0s
HIA Hailar 24.25 328*c i*P **P** **09 37 51.0 +0.7**
HIA pmax pmax
comp=Z,334nm,1.1s
SKR Severo-Kuril's 24.33 27 *e*P **P** **09 37 51.3 +0.3**
SKR *e*S **S** **09 41 38.6 -1.0**
SKR pmax pmax
comp=Z,100nm,2.6s
SKR pmax pmax
comp=Z,300nm,1.0s
SKR MLR MLR
comp=Z,400nm,11.0s
ZEA Zeya 25.28 343*ce*P **P** **09 38 00.9 +1.5**
ZEA *e**PP **pP** **09 39 10.1 +1.8**
ZEA *e**SP **sP** **09 40 00.1 -0.2**
ZEA *e*S **S** **09 41 55.0 +0.5**
ZEA pmax pmax
comp=E,140nm,1.2s
ZEA pmax pmax
comp=N,440nm,0.8s
ZEA pmax pmax
comp=Z,810nm,0.8s
ZEA pmax pmax
comp=E,200nm,1.1s
ZEA pmax pmax
comp=N,500nm,2.2s
ZEA pmax pmax
comp=Z,600nm,1.5s
ZEA smax smax
comp=N,300nm,4.1s
ZEA smax smax
comp=E,600nm,7.9s
ENH Enshi 25.57 278 IAmb IAmb 09 38 05.0
comp=Z,180nm,0.8s
XAN Xi'an 25.85 287 ⇓P **P** **09 38 05.1 +0.2**
XAN sP sP 09 40 02.6 -1.4
XAN S **S** **09 42 02.4 -1.8**
XAN ScP **ScP** **09 44 22.3 +0.9**
XAN ScS **ScS** **09 48 10.3 -1.4**
XAN pmax pmax
comp=Z,390nm,0.8s
XAN pmax pmax
comp=Z,710nm,6.8s
BTO Baotou 25.89 302 *e*P **P** **09 38 07.8 +2.6**
BTO S **S** **09 42 07.8 +3.1**
BTO LR LR
comp=Z,6μm,9.2s
BTO LR LR
comp=Z,4μm,8.2s
DAV Davao City (W) 26.07 212 P **P** **09 38 06.0 -0.8**
comp=Z,217nm,0.4s,baz=54,slow=11,SNR=3.6
comp=Z,217nm,0.4s
PEA0B Petropavlovsk- 26.85 25 P **P** **09 38 14.3 +1.0**
PEA0B IAmb IAmb 09 38 15.9
comp=Z,362nm,1.2s
PEA0B Petropavlovsk- 26.85 25*ce*P **P** **09 38 14.4 +1.0**
PETK Petropavlovsk- 26.85 25 P **P** **09 38 13.9 +0.5**
comp=Z,106nm,0.7s,baz=212,slow=14,SNR=65
PETK ScP **ScP** **09 44 22.3 -1.6**
comp=Z,11nm,0.5s,baz=179,slow=1.1,SNR=12
comp=Z,106nm,0.7s
PET Petropavlovsk 27.14 26 P **P** **09 38 16.8 +0.8**
PET Petropavlovsk 27.14 26*α i*P **P** **09 38 17.0 +1.1**
PET *e**PP **PP** **09 39 28.7 +0.8**
PET *e**SP **sP** **09 40 16.3 +0.3**
PET *e*S **S** **09 42 25.2 +1.4**
PET *e* 09 48 16.3
PET pmax pmax
comp=Z,490nm,0.8s
PET pmax pmax
comp=Z,2μm,1.8s
PET pmax pmax
comp=Z,800nm,16.9s
PET MLR MLR
comp=Z,1μm,15.0s
PET MLR MLR
comp=Z,900nm,11.0s
PET Petropavlovsk 27.14 26 P **P** **09 38 17.1 +1.1**
H11N2 WAKE ISLAND Hy 27.15 106 T T 10 07 02.4
baz=300
H11N1 WAKE ISLAND Hy 27.16 106 T T 10 07 28.5
baz=300
H11N3 WAKE ISLAND Hy 27.17 106 T T 10 07 06.0
baz=300
H11S3 WAKE ISLAND Hy 27.57 108 T T 10 08 43.1
baz=304,slow=75
H11S1 WAKE ISLAND Hy 27.57 108 T T 10 08 38.6
baz=304,slow=75
H11S2 WAKE ISLAND Hy 27.58 108 T T 10 08 41.5
baz=304,slow=75
QIZ Qiongzhong 28.66 254 ⇓*i*P **P** **09 38 31.3 +1.5**
QIZ pP **pP** **09 39 43.9 +1.3**
QIZ sP **sP** **09 40 28.9 -0.4**
QIZ S **S** **09 42 49.1 +0.6**
QIZ sS **sS** **09 45 04.8 +0.7**
QIZ pmax pmax
comp=Z,130nm,1.2s
QIZ Qiongzhong 28.66 254 P **P** **09 38 31.3 +1.5**
QIZ Qiongzhong 28.66 254 P **P** **09 38 31.2 +1.5**
QIZ ScP **ScP** **09 44 31.8 +1.7**
GYA Guiyang 28.73 271 ⇓*i*P **P** **09 38 30.5 +0.1**
GYA S **S** **09 42 46.8 -2.7**
GYA pmax pmax
comp=Z,470nm,1.0s
GYA pmax pmax
comp=Z,1μm,3.5s
CIT Chita 29.01 327 *e*P **P** **09 38 34.4 +1.9**
CIT *e* 09 39 49.0
CIT *e* 09 40 37.6
CIT *e*S **S** **09 42 55.7 +2.5**
CIT *e* 09 48 21.1
CIT pmax pmax
comp=Z,1μm,1.1s
SGSI Sangihe 29.11 209 P **P** **09 38 33.2 -0.5**
comp=Z,11μmcomp=Z,278nm,0.8s
LZH Lanzhou 30.06 291 ⇓P **P** **09 38 42.3 +0.3**
LZH S **S** **09 43 07.8 -2.4**
LZH ScP **ScP** **09 44 36.0 +1.4**
LZH PcS **PcS** **09 45 17.3 +1.1**
LZH SS **SS** **09 45 37.3 -2.3**
LZH ScS **ScS** **09 48 30.8 -0.4**
LZH pmax pmax
comp=Z,230nm,1.5s
LZH LR LR
comp=Z,750nm,15.5s
LZH LR LR
comp=Z,590nm,15.1s
LZH LR LR
comp=Z,650nm,15.8s
ULN Ulaanbaatar 30.38 315 P **P** **09 38 45.7 +1.1**
ULN IAmb IAmb 09 38 47.0
comp=Z,385nm,1.5s
ULN Ulaanbaatar 30.38 315*ce*P **P** **09 38 45.6 +1.0**
ULN pmax pmax
comp=Z,231nm,1.3s
ULN Ulaanbaatar 30.38 315 P **P** **09 38 45.9 +1.2**
ULN Ulaanbaatar 30.38 315 P **P** **09 38 45.9 +1.2**
ULN ScP **ScP** **09 44 36.0 +0.6**
CD2 Chengdu 30.40 281 ⇓*i*P **P** **09 38 45.3 +0.4**
CD2 sP sP 09 40 47.1 +2.1
CD2 S **S** **09 43 12.9 -2.4**
CD2 sS sS 09 45 31.4 0.0
CD2 pmax pmax
comp=Z,690nm,0.5s
CD2 LR LR
comp=Z,1μm,10.6s
CD2 LR LR
comp=Z,750nm,9.4s
CD2 LR LR
comp=Z,1μm,9.8s
MA2 Magadan 30.66 12 P **P** **09 38 47.9 +1.2**
comp=Z,670nm,0.6s,baz=198,slow=8.2,SNR=398
MA2 S **S** **09 43 16.8 -1.8**
comp=Z,12nm,1.0s,baz=18,slow=20,SNR=1.7
MA2 ScP **ScP** **09 44 34.9 -1.0**
comp=Z,62nm,1.0s,baz=186,slow=4.5,SNR=13
comp=Z,670nm,0.6s
MA2 Magadan 30.66 12 P **P** **09 38 47.9 +1.2**
MA2 Magadan 30.66 12 P **P** **09 38 47.8 +1.1**
MA2 Magadan 30.66 12 ⇑P **P** **09 38 48.0 +1.2**
MA2 pP **pP** **09 39 58.5 -2.5**
MA2 ScP **ScP** **09 44 35.0 -0.9**
SONM Songino Array 30.77 315 P **P** **09 38 49.0 +1.0**
comp=Z,49nm,0.7s,baz=121,slow=8.4,SNR=190
SONM ScP **ScP** **09 44 37.1 +0.4**
comp=Z,84nm,0.9s,baz=140,slow=3.6,SNR=34
comp=Z,49nm,0.7s
SONM Songino Array 30.77 315 P **P** **09 38 48.9 +1.0**
SONM Songino Array 30.77 315 P **P** **09 38 49.0 +1.0**
TNTI Ternate 31.09 203 IAmb IAmb 09 38 53.8
comp=Z,298nm,1.1s
BAKI Biak 31.10 186 P **P** **09 38 51.0 -0.1**
comp=Z,5μmcomp=Z,459nm,1.1s
MYLDM Lahad Datu 31.38 222 P **P** **09 38 54.5 +1.1**
SWI Sorong 31.54 195 P **P** **09 38 54.4 -0.5**
comp=Z,4μmcomp=Z,277nm,1.3s
SIJI Sorong 31.55 195 P **P** **09 38 54.7 -0.2**
comp=Z,87nm,0.4s,baz=11,slow=9.4,SNR=75
SIJI S **S** **09 43 31.4 -1.8**
comp=Z,9.6nm,0.8s,baz=276,slow=23,SNR=16
SIJI ScP **ScP** **09 44 39.5 -0.1**
comp=Z,31nm,0.8s,baz=20,slow=5.7,SNR=8.8
comp=Z,87nm,0.4s
SRPI Serui, Papua 31.76 185 P **P** **09 38 55.9 -0.9**
comp=Z,335nm,1.4s
SMPI Sarmi 31.77 181 P **P** **09 38 56.5 -0.3**
comp=Z,3μmcomp=Z,299nm,1.2s
LBMI Labuha 32.36 202 P **P** **09 39 01.5 -0.5**
comp=Z,5μmcomp=Z,327nm,0.9s
GENI Genyem 32.38 178 P **P** **09 39 02.9 +0.8**
comp=Z,9μmcomp=Z,992nm,1.1s
GENI Genyem 32.38 178 P **P** **09 39 03.1 +1.0**
KMI Kunming 32.49 270 ⇓P **P** **09 39 03.9 +0.6**
KMI PP **PP** **09 40 27.4 +0.1**
KMI S **S** **09 43 46.5 -1.6**
KMI sS sS 09 46 03.3 -1.5
KMI SS **SS** **09 46 28.4 -0.8**
KMI pmax pmax
comp=Z,150nm,1.6s
KMI pmax pmax
comp=Z,690nm,3.5s
KMI LR LR
comp=Z,160nm,8.3s
KMI LR LR
comp=Z,420nm,13.1s
KMI LR LR
comp=Z,430nm,17.6s
KMI Kunming 32.49 270 P **P** **09 39 03.8 +0.6**
KMI pP **pP** **09 40 19.6 +2.8**
KMSI Cibinong 32.56 209 P **P** **09 39 03.7 +0.1**
comp=Z,7μmcomp=Z,782nm,0.8s
YAK Yakutsk 32.67 352 P **P** **09 39 04.0 0.0**
comp=Z,103nm,0.5s,baz=161,slow=4.3,SNR=50
YAK pP **pP** **09 40 18.1 +0.1**
comp=Z,179nm,0.7s,baz=132,slow=1.1,SNR=7.5
YAK S **S** **09 43 48.3 -1.0**
comp=Z,19nm,0.6s,baz=170,slow=21,SNR=7.8
YAK ScS **ScS** **09 48 40.4 -2.6**
comp=Z,7.4nm,0.4s,baz=214,slow=22,SNR=14
comp=Z,103nm,0.5s
YAK Yakutsk 32.67 352 P **P** **09 39 04.2 +0.2**
YAK Yakutsk 32.67 352*c i*P **P** **09 39 04.2 +0.2**
YAK *e**PP **pP** **09 40 17.4 -0.7**
YAK *e*S **S** **09 43 46.9 -2.4**
YAK *e**SS **SS** **09 46 24.8 -6.5**
YAK pmax pmax
comp=Z,415nm,0.9s
YAK pmax pmax
comp=N,147nm,0.9s
YAK pmax pmax
comp=E,20nm,0.9s
YAK pmax pmax
comp=Z,128nm,1.4s
YAK pmax pmax
comp=N,185nm,1.3s
YAK pmax pmax
comp=E,104nm,1.3s
YAK smax smax
comp=E,116nm,1.3s
YAK smax smax
comp=N,232nm,1.3s
YAK Yakutsk 32.67 352 P **P** **09 39 04.0 0.0**
YAK pP **pP** **09 40 17.3 -0.7**
YAK ScP **ScP** **09 44 41.7 -0.9**
BOD Bodaibo 32.83 335 *e*P **P** **09 39 05.9 +0.5**
BOD pmax pmax
comp=Z,438nm,1.1s
GTOI Gorontalo 32.92 211 P **P** **09 39 05.8 -1.0**
comp=Z,2μmcomp=Z,131nm,1.5s
PZH PanZhiHua 32.98 273 ⇓P **P** **09 39 07.6 +0.2**
PZH pP **pwP** **09 40 24.6 -2.6**
PZH PP **PP** **09 40 34.0 +1.4**
PZH sP **sP** **09 41 10.3 +2.4**
PZH S **S** **09 43 53.0 -2.4**
PZH sS **sS** **09 46 09.8 -2.6**
PZH ScS **ScS** **09 48 43.9 -2.4**
PZH pmax pmax
comp=Z,290nm,1.0s
PZH pmax pmax
comp=Z,940nm,3.5s
PZH LR LR
comp=Z,1μm,17.1s
PZH LR LR
comp=Z,2μm,16.1s
PZH LR LR
comp=Z,2μm,15.8s
FAKI Fak Fak 33.33 192 P **P** **09 39 09.1 -1.2**
FAKI IAmb IAmb 09 39 12.1
comp=Z,296nm,1.1s
FAKI Fak Fak 33.33 192 P **P** **09 39 09.2 -1.1**
comp=Z,2μmcomp=Z,4μmcomp=Z,298nm,1.0s
FAKI Fak Fak 33.33 192 P **P** **09 39 10.2 -0.1**
GTA Gaotai 33.42 297 ⇓P **P** **09 39 11.3 +0.4**
GTA S **S** **09 43 59.6 -2.1**
GTA ScP **ScP** **09 44 47.0 +1.0**
GTA ScS **ScS** **09 48 45.6 -2.6**
GTA pmax pmax
comp=Z,100nm,0.8s
MRSI Marisa 33.55 212 P **P** **09 39 12.2 +0.1**
comp=Z,3μmcomp=Z,8μmcomp=Z,670nm,1.3s
TOLI2 Tolitoli 33.55 215 IAmb IAmb 09 39 12.2
comp=Z,172nm,0.8s
TOLI2 Tolitoli 33.55 215 P **P** **09 39 11.7 -0.4**
DLV T Lat 33.57 244 P **P** **09 39 13.4 +0.9**
comp=Z,173nm,1.8s
ZAK Zakamensk 33.67 318 *e*P **P** **09 39 13.1 +0.3**
ZAK pmax pmax
comp=Z,172nm,1.2s
ZAK pmax pmax
comp=Z,66nm,1.3s
IRK Irkutsk 33.91 321 *e*P **P** **09 39 15.6 +0.9**
IRK *e* 09 40 43.6
IRK *e*S **S** **09 44 08.7 +0.1**
IRK pmax pmax
comp=Z,206nm,2.1s
SEY Seymchan 34.09 11 P **P** **09 39 17.2 +1.1**
comp=Z,436nm,0.9s,baz=202,slow=7.0,SNR=465
SEY ScP **ScP** **09 44 47.1 -0.5**
comp=Z,43nm,0.9s,baz=190,slow=2.5,SNR=11
comp=Z,436nm,0.9s
SEY Seymchan 34.09 11*ce*P **P** **09 39 17.0 +0.9**
SEY pmax pmax
comp=Z,685nm,1.0s
UBPT Khong Chiam 34.14 252 P **P** **09 39 17.9 +0.8**
UBPT IAmb IAmb 09 39 19.4
comp=Z,548nm,1.4s
SANI Sanana 34.20 204 P **P** **09 39 15.9 -1.7**
comp=Z,2μmcomp=Z,8μmcomp=Z,718nm,0.8s
SANI Sanana 34.20 204 P **P** **09 39 16.3 -1.3**
SHEM Shemya Is, Ala 34.25 38 P **P** **09 39 19.0 +1.4**
comp=Z,180nm,0.8s,baz=81,slow=2.0,SNR=17
comp=Z,180nm,0.8s
SMY Shemya 34.25 38 P **P** **09 39 18.8 +1.3**
SMY IAmb IAmb 09 39 21.0
comp=Z,458nm,1.1s
SMY Shemya 34.25 38 P **P** **09 39 18.8 +1.3**
SMY pmax pmax
comp=Z,458nm,1.1s
MSAI Masohi 34.51 198 P **P** **09 39 20.8 +0.6**
comp=Z,1μmcomp=Z,69nm,1.5s
LUWI Luwuk 34.53 210 IAmb IAmb 09 39 24.9
comp=Z,244nm,1.0s
LUWI Luwuk 34.53 210 P **P** **09 39 18.2 -2.2**
comp=Z,4μmcomp=Z,274nm,1.4s
LUWI Luwuk 34.53 210 P **P** **09 39 18.8 -1.6**
MPSI Mapaga 34.66 215 P **P** **09 39 20.9 -0.6**
comp=Z,2μmcomp=Z,132nm,1.5s
APSI Ampana 34.91 212 P **P** **09 39 23.0 -0.6**
comp=Z,8μmcomp=Z,679nm,0.8s
NLAI Namlea 34.94 201 P **P** **09 39 24.3 +0.4**
comp=Z,6μmcomp=Z,340nm,1.0s
AAI Ambon 35.04 199 P **P** **09 39 25.1 +0.4**
comp=Z,12μmcomp=Z,11μmcomp=Z,1μm,0.8s
BNDI Bandanaira 35.39 196 P **P** **09 39 26.7 -0.9**
BNDI Bandanaira 35.39 196 P **P** **09 39 28.1 +0.5**
MOY Mondy 35.50 319 *e*P **P** **09 39 29.4 +1.1**
MOY pmax pmax
comp=Z,133nm,1.4s
RABL Rabaul 36.19 158 P **P** **09 39 33.1 -1.3**
RABL IAmb IAmb 09 40 40.6
comp=Z,191nm,0.5s
RABL Rabaul 36.19 158 P **P** **09 39 35.1 +0.7**
CRAI Chiangrai 36.22 264 P **P** **09 39 35.6 +1.0**
AMKA Amchitka 36.64 43 P **P** **09 39 38.9 +1.3**
SMKI Samarinda 36.72 219 P **P** **09 39 39.9 +1.1**
comp=Z,417nm,1.3s
GOMU GeÉrMu 37.36 292 P **P** **09 39 45.4 +1.0**
GOMU PcP **PcP** **09 41 55.3 +2.0**
GOMU S **S** **09 45 02.0 +0.1**
GOMU pmax pmax
comp=Z,230nm,0.7s
GOMU pmax pmax
comp=Z,170nm,5.7s
GOMU LR LR
comp=Z,210nm,15.2s
GOMU LR LR
comp=Z,180nm,15.1s
GOMU LR LR
comp=Z,270nm,15.4s
SBUM Sibu 37.38 228 P **P** **09 39 44.4 +0.1**
SBUM IAmb IAmb 09 39 46.0
comp=Z,531nm,1.4s
BKB Balikpapan 37.57 218 P **P** **09 39 44.1 -1.8**
comp=Z,7μmcomp=Z,508nm,1.3s
BKB Balikpapan 37.57 218 P **P** **09 39 45.5 -0.4**
TTSI Tana Toraja 37.63 213 P **P** **09 39 45.0 -1.3**
comp=Z,1μmcomp=Z,66nm,1.0s
LKP Lekhapani 37.87 277 ⇓*i*P **P** **09 39 49.1 +0.9**
LKP IAmb IAmb 09 39 50.5
comp=Z,993nm,0.8s
CHTO Chiang Mai 38.03 262 P **P** **09 39 49.9 +0.3**
CHTO Chiang Mai 38.03 262 P **P** **09 39 49.9 +0.3**
CHTO pmax pmax
comp=Z,479nm,0.9s
CHTO Chiang Mai 38.03 262 P **P** **09 39 50.4 +0.7**
CHTO Chiang Mai 38.03 262 P **P** **09 39 50.2 +0.6**
CHTO Chiang Mai 38.03 262 ⇓P **P** **09 39 50.2 +0.6**
CHTO pP **pwP** **09 41 09.8 -1.5**
CHTO PP **PP** **09 41 27.9 +0.5**
CHTO sP **PcP** **09 41 56.0 +0.8**
CHTO ScP **ScP** **09 45 04.5 +1.4**
CM31 Chiang Mai Arr 38.18 262 IAmb IAmb 09 39 52.8
comp=Z,171nm,0.8s
CMAR Chiang Mai Arr 38.18 262 P **P** **09 39 51.5 +0.7**
comp=Z,92nm,0.8s,baz=48,slow=8.1,SNR=92
CMAR PcP **PcP** **09 41 56.5 +0.8**
comp=Z,19nm,0.8s,baz=48,slow=2.5,SNR=7.0
CMAR ScP **ScP** **09 45 03.4 -0.3**
comp=Z,18nm,0.9s,baz=31,slow=3.1,SNR=13
comp=Z,92nm,0.8s
MTKI Muara Teweh, K 38.42 221 P **P** **09 39 52.8 -0.1**
SAUI Saumlaki 38.45 192 P **P** **09 39 53.6 +0.5**
SAUI Saumlaki 38.45 192 P **P** **09 39 52.3 -0.8**
comp=Z,14μmcomp=Z,920nm,1.1s
SAUI Saumlaki 38.45 192 P **P** **09 39 53.6 +0.5**
SPSI Sidrap Palu 38.47 212 P **P** **09 39 51.7 -1.5**
comp=Z,3μmcomp=Z,226nm,1.2s
BBSI Bau Bau 38.63 207 P **P** **09 39 55.6 +1.0**
comp=Z,428nmcomp=Z,38nm,0.9s
DIBR DIBRUGARH 38.64 278 ⇓*i*P **P** **09 39 54.9 +0.3**
DIBR IAmb IAmb 09 39 57.0
comp=Z,261nm,0.8s
ADK Adak 39.17 43 P **P** **09 39 58.8 +0.3**
ADK IAmb IAmb 09 40 00.4
comp=Z,654nm,1.5s
ADK Adak 39.17 43 P **P** **09 39 58.8 +0.3**
ADK pmax pmax
comp=Z,654nm,1.5s
ADK Adak 39.17 43 P **P** **09 39 59.4 +0.9**
ADK Adak 39.17 43 P **P** **09 39 59.2 +0.7**
ADK pP **pwP** **09 41 21.8 -1.9**
MOKO MOKOCHONG 39.28 276 ⇓*i*P **P** **09 39 59.8 -0.2**
MOKO *i* PCP **PcP** **09 41 57.8 -1.4**
MOKO *ex* x 09 45 09.1
KAPI Kappang 39.40 211 P **P** **09 40 00.8 -0.1**
comp=Z,188nm,1.0s,baz=48,slow=4.9,SNR=43
KAPI PcP **PcP** **09 42 00.4 +0.9**
comp=Z,102nm,0.8s,baz=300,slow=0.4,SNR=9.7

KAPI ScP **ScP** **09 45 08.5 +0.2**
comp=Z,14nm,0.3s,baz=38,slow=2.9,SNR=7.5
comp=Z,188nm,1.0s
KAPI Kappang **39.40 211** P **P** **09 40 00.5 -0.4**
KAPI IAmb IAmb 09 40 03.4
comp=Z,536nm,1.4s
KAPI Kappang **39.40 211** *d iP* **P** **09 40 00.8 -0.1**
KAPI pmax pmax
comp=Z,429nm,1.3s
KAPI Kappang **39.40 211** P **P** **09 40 01.1 +0.3**
KAPI Kappang **39.40 211** P **P** **09 40 00.8 -0.1**
KAPI pP **pP** **09 41 16.9 -0.2**
KAPI sP **sP** **09 42 04.0 +0.8**
KAPI ScP **ScP** **09 45 09.2 +0.9**
BKSI Bulukumba **39.51 211** P **P** **09 40 00.9 -0.8**
comp=Z,2µmcomp=Z,157nm,1.1s
ZIRO ZIRO **39.54 278** ⇓*iP* **P** **09 40 03.0 +0.9**
GSTR Great Sitkin T **39.60 43** P **P** **09 40 02.6 +0.6**
STKI Sintang **39.68 227** P **P** **09 40 02.5 -0.6**
comp=Z,229nm,0.9s
ITAN ITANAGAR **39.75 277** *eP* **P** **09 40 04.4 +0.8**
ITAN IAmb IAmb 09 40 06.6
comp=Z,2µm,1.8s
KOHI KOHIMA **39.80 275** *eP* **P** **09 40 03.0 -1.3**
BSSI Bau Bau, Buton **40.08 209** P **P** **09 40 05.5 -0.9**
comp=Z,1µmcomp=Z,137nm,1.1s
IMP Imphal **40.20 274** *eP* **P** **09 40 06.4 -1.0**
BBKI Banjar Baru **40.52 219** P **P** **09 40 09.4 -0.6**
comp=Z,5µmcomp=Z,433nm,1.3s
TEZP TEZPUR **40.68 277** ⇓*iP* **P** **09 40 11.4 +0.3**
TEZP IAmb IAmb 09 40 13.2
comp=Z,543nm,1.0s
ATKA Atka Island **40.74 43** P **P** **09 40 11.7 +0.5**
SILR SILCHAR **41.21 274** *eP* **P** **09 40 16.2 +0.8**
SILR IAmb IAmb 09 40 21.2
comp=Z,365nm,0.8s
LSA Lhasa **41.34 282** P **P** **09 40 17.5 +0.5**
LSA pmax pmax
comp=Z,70nm,0.9s
LSA LR LR
comp=Z,2µm,10.7s
LSA LR LR
comp=Z,270nm,7.1s
LSA LR LR
comp=Z,150nm,6.4s
LSA Lhasa **41.34 282** P **P** **09 40 18.4 +1.5**
LSA PP **PP** **09 42 04.4 +1.5**
BILL Bilibino **41.35 15** P **P** **09 40 16.9 +1.0**
BILL Bilibino **41.35 15** P **P** **09 40 17.1 +1.2**
BILL pP **pP** **09 41 34.8 +0.6**
MMRI Maumere **41.65 206** P **P** **09 40 18.4 -0.5**
comp=Z,2µmcomp=Z,8µmcomp=Z,863nm,1.0s
MMRI Maumere **41.65 206** P **P** **09 40 18.5 -0.5**
PBKI Pangkalan Bun **41.73 224** P **P** **09 40 19.6 0.0**
comp=Z,9µmcomp=Z,864nm,1.0s
GUWA GUWAHATI **41.75 277** IAmb IAmb 09 40 21.1
comp=Z,254nm,0.8s
SHL Shillong **41.77 276** ⇓*iP* **P** **09 40 19.7 -0.4**
EDFI Ende, Flores **41.96 206** P **P** **09 40 20.3 -1.3**
comp=Z,3µmcomp=Z,339nm,1.0s
TIXI Tiksi **42.12 355** P **P** **09 40 22.3 +0.3**
comp=Z,182nm,0.5s,baz=255,slow=19,SNR=236
TIXI ScP **ScP** **09 45 16.8 -1.4**
comp=Z,20nm,1.0s,baz=307,slow=9.7,SNR=5.1
TIXI S **S** **09 46 08.8 -1.3**
comp=Z,11nm,0.8s,baz=88,slow=24,SNR=12
TIXI ScS **SS** **09 49 33.3 -0.1**
comp=Z,3.9nm,0.7s,baz=272,slow=24,SNR=8.6
comp=Z,182nm,0.5s
TIXI Tiksi **42.12 355** P **P** **09 40 22.2 +0.3**
TIXI IAmb IAmb 09 40 23.2
comp=Z,217nm,0.8s
TIXI Tiksi **42.12 355** *ceP* **P** **09 40 22.0 0.0**
TIXI pmax pmax
comp=Z,240nm,0.8s
TIXI Tiksi **42.12 355** P **P** **09 40 22.3 +0.3**
TIXI pP **pP** **09 41 40.5 +0.2**
TIXI sP **sP** **09 42 31.6 +4.9**
TIXI ScP **ScP** **09 45 16.8 -1.4**
BATI Baumata **42.60 203** P **P** **09 40 25.8 -0.8**
comp=Z,513nm,0.4s,baz=161,slow=0.5,SNR=64
BATI PcP **PcP** **09 42 10.2 +0.2**
comp=Z,150nm,0.6s,baz=44,slow=2.5,SNR=3.2
BATI S **S** **09 46 16.2 -2.1**
comp=Z,86nm,0.6s,baz=89,slow=23,SNR=11
BATI ScS **ScS** **09 49 40.8 -0.9**
comp=Z,35nm,0.3s,baz=85,slow=0.9,SNR=2.4
comp=Z,513nm,0.4s
BATI Baumata **42.60 203** P **P** **09 40 25.6 -0.9**
comp=Z,6µmcomp=Z,736nm,1.1s
WMQ Urumqi **42.71 304** ⇓P **P** **09 40 29.1 +1.9**
WMQ PcP **PcP** **09 42 08.4 -1.8**
WMQ S **S** **09 46 18.9 -0.7**
WMQ SS **ScS** **09 49 40.4 -1.5**
WMQ pmax pmax
comp=Z,64nm,0.9s
WMQ pmax pmax
comp=Z,210nm,4.5s
AGT Agartala **42.83 274** *eP* **P** **09 40 29.8 +1.5**
AGT IAmb IAmb 09 40 31.5
comp=Z,500nm,0.8s
KDU Kakadu **42.87 190** P **P** **09 40 28.1 -0.5**
BRDH Bariadhala **42.90 272** P **P** **09 40 30.5 +1.7**
comp=Z,0.6nm,0.3s,baz=355,slow=24,SNR=9.6
MTN Manton Dam **43.23 191** P **P** **09 40 30.9 -0.6**
MYKOM Kota Tinggi **43.62 237** IAmb IAmb 09 40 36.9
comp=Z,306nm,1.2s
PLAI Plampang **43.67 211** P **P** **09 40 33.3 -1.6**
comp=Z,1µmcomp=Z,9µmcomp=Z,936nm,1.1s
PLAI Plampang **43.67 211** P **P** **09 40 33.8 -1.1**
WBSI Waikabubak, Su **43.69 209** P **P** **09 40 32.5 -2.7**
comp=Z,3µmcomp=Z,285nm,0.7s
BWJI Bawean **43.70 220** P **P** **09 40 34.3 -1.0**
comp=Z,10µmcomp=Z,654nm,1.3s
TPRI Tanjung Pinang **43.73 235** P **P** **09 40 36.4 +0.9**
comp=Z,276nm,1.3s
BASI Baing, Sumba **43.73 207** P **P** **09 40 33.2 -2.3**
comp=Z,4µmcomp=Z,403nm,0.7s
KULM Kulim **43.74 244** P **P** **09 40 36.3 +0.7**
COEN Coen **43.83 174** IAmb IAmb 09 40 37.8
comp=Z,209nm,0.8s
COEN Coen **43.83 174** P **P** **09 40 36.7 +0.5**
IPM Ipoh **43.96 242** P **P** **09 40 37.2 -0.1**
IPM IAmb IAmb 09 40 38.6
comp=Z,320nm,0.9s
IPM Ipoh **43.96 242** P **P** **09 40 37.5 +0.2**
KMMI Kalianget **43.99 217** P **P** **09 40 36.4 -1.1**
comp=Z,6µmcomp=Z,777nm,1.1s
TWSI Taliwang, Sumb **44.00 213** P **P** **09 40 36.1 -1.4**
comp=Z,5µmcomp=Z,522nm,1.3s
NIKH Nikolski High **44.08 43** P **P** **09 40 37.8 +0.1**
NIKH Nikolski High **44.08 43** P **P** **09 40 38.0 +0.3**
baz=260,SNR=46
GTK Tadong **44.10 280** ⇓*iP* **P** **09 40 39.0 +0.5**
GTK IAmb IAmb 09 40 46.0
comp=Z,225nm,1.6s
GTK *i* x x 09 42 16.4
SRBI Singaraja **44.24 215** P **P** **09 40 39.5 +0.1**
comp=Z,3µmcomp=Z,12µmcomp=Z,1µm,0.9s
SPIA Saint Paul Isl **44.26 37** P **P** **09 40 40.3 +1.3**
baz=254,SNR=6.3
SPIA Saint Paul Isl **44.26 37** P **P** **09 40 40.0 +1.0**
TPI Tanjungpandan **44.28 228** P **P** **09 40 40.2 +0.4**
comp=Z,3µmcomp=Z,291nm,1.1s
ABJI Asem Bagus **44.49 216** P **P** **09 40 41.5 +0.1**
comp=Z,8µmcomp=Z,754nm,1.1s
DSRI Dabo **44.68 234** P **P** **09 40 44.1 +1.2**
comp=Z,2µmcomp=Z,102nm,1.5s
DNP Denpasar **44.75 215** P **P** **09 40 43.3 -0.1**
comp=Z,2µm,0.9s
BLJI Banyuglugur **44.78 217** P **P** **09 40 43.2 -0.4**
comp=Z,115nm,1.5s
ZSN Zaisan **44.82 309** *eP* **P** **09 40 44.4 +0.7**
ZSN *eS* **S** **09 46 50.4 +0.8**
ZSN Zaisan **44.82 309** *eP* **P** **09 40 44.4 +0.7**
baz=309
ZSN *eS* **S** **09 46 50.5 +0.8**
baz=309
PPBI Pangkal Pinang **44.83 230** P **P** **09 40 44.6 +0.5**
comp=Z,24µmcomp=Z,296nm,1.2s
TAPN Taplejung **44.85 280** *eP* **P** **09 40 45.3 +0.8**
comp=Z,200nm,0.4s
TAPN Taplejung **44.85 280** *eP* **P** **09 40 45.3 +0.8**
comp=Z,200nm,0.4s
TBJI Tambak Boyo **44.95 220** P **P** **09 40 44.8 -0.2**
comp=Z,6µmcomp=Z,658nm,1.2s

JAGI Jajag, Banyuwa **45.10 216** P **P** **09 40 44.5 -1.7**
JAGI IAmb IAmb 09 40 46.4
comp=Z,403nm,0.9s
JAGI Jajag, Banyuwa **45.10 216** P **P** **09 40 44.0 -2.2**
comp=Z,2µmcomp=Z,4µmcomp=Z,508nm,0.9s
JAGI Jajag, Banyuwa **45.10 216** P **P** **09 40 44.9 -1.3**
ODAN Odare **45.26 279** *eP* **P** **09 40 48.4 +0.8**
comp=Z,129nm,0.8s
ODAN Odare **45.26 279** *eP* **P** **09 40 48.4 +0.8**
comp=Z,129nm,0.8s
GMJI Gumukmas **45.30 217** P **P** **09 40 45.7 -2.0**
comp=Z,2µmcomp=Z,115nm,0.9s
ZALV Zalesovo Beam **45.55 318** P **P** **09 40 49.2 +0.1**
comp=Z,72nm,0.8s,baz=99,slow=7.1,SNR=147
ZALV PcP **PcP** **09 42 19.4 -0.2**
comp=Z,22nm,0.5s,baz=115,slow=3.6,SNR=11
ZALV ScP **ScP** **09 45 32.1 -0.5**
comp=Z,51nm,0.6s,baz=115,slow=3.9,SNR=20
ZALV S **S** **09 46 57.9 -1.7**
comp=Z,14nm,0.9s,baz=102,slow=14,SNR=4.3
ZALV ScS **ScS** **09 49 57.3 -2.2**
comp=Z,8.9nm,0.8s,baz=104,slow=4.7,SNR=5.3
comp=Z,72nm,0.8s
NGJI Ngawi **45.62 220** P **P** **09 40 50.7 +0.6**
comp=Z,5µmcomp=Z,486nm,0.9s
UNV Unalaska Valle **45.62 42** P **P** **09 40 50.0 +0.4**
baz=261
DGPR DIGLIPUR **45.72 259** ⇓*iP* **P** **09 40 51.3 +0.3**
GAMB Gambell **45.82 28** P **P** **09 40 52.5 +1.5**
baz=246
RAMN Ramite **45.91 280** *eP* **P** **09 40 53.6 +0.9**
comp=Z,1µm,0.7s
RAMN Ramite **45.91 280** *eP* **P** **09 40 53.4 +0.7**
SMRI Semarang **45.94 221** P **P** **09 40 52.7 +0.1**
comp=Z,10µmcomp=Z,912nm,0.9s
SMRI Semarang **45.94 221** P **P** **09 40 53.5 +0.9**
PWJI Pagerwojo **45.97 219** P **P** **09 40 51.1 -1.7**
comp=Z,7µmcomp=Z,995nm,0.8s
JIRN Jiri **46.06 281** *eP* **P** **09 40 55.2 +1.2**
comp=Z,2µm,0.7s
JIRN Jiri **46.06 281** *eP* **P** **09 40 55.2 +1.2**
comp=Z,2µm,0.7s
AKUT Akutan **46.09 42** IAmb IAmb 09 40 55.5
comp=Z,145nm,0.7s
JMBI JAMBI **46.15 233** P **P** **09 40 54.6 +0.3**
comp=Z,6µmcomp=Z,490nm,1.2s
GUN Gumba **46.26 281** *eP* **P** **09 40 56.7 +1.3**
comp=Z,1µm,0.7s
GUN Gumba **46.26 281** *eP* **P** **09 40 56.7 +1.3**
comp=Z,1µm,0.7s
PMBI Palembang **46.31 231** P **P** **09 40 56.0 +0.5**
comp=Z,13µmcomp=Z,1µm,1.1s
PMBI Palembang **46.31 231** P **P** **09 40 57.4 +1.9**
KNRA Kununurra **46.44 194** P **P** **09 40 56.1 -0.3**
KNRA Kununurra **46.44 194** P **P** **09 40 56.5 +0.1**
PCJI Pacitan **46.46 220** P **P** **09 40 54.8 -1.8**
comp=Z,5µmcomp=Z,389nm,0.9s
TSI Tutungan **46.47 243** P **P** **09 40 56.8 0.0**
comp=Z,10µmcomp=Z,487nm,0.9s
MK31 Makanchi Array **46.56 308** *i* P **P** **09 40 57.3 +0.2**
MK31 pmax pmax
comp=Z,4.0nm,0.4s
MKAR Makanchi Array **46.56 308** P **P** **09 40 57.8 +0.7**
comp=Z,9.8nm,0.6s,baz=82,slow=10,SNR=119
MKAR PcP **PcP** **09 42 24.1 +0.7**
comp=Z,21nm,0.6s,baz=81,slow=6.2,SNR=13
MKAR ScP **ScP** **09 45 37.1 0.0**
comp=Z,116nm,0.8s,baz=83,slow=5.0,SNR=38
MKAR S **S** **09 47 12.8 -1.5**
comp=Z,2.7nm,0.8s,baz=85,slow=18,SNR=2.0
MKAR ScS **ScS** **09 50 03.8 -2.8**
comp=Z,12nm,0.9s,baz=86,slow=11,SNR=9.1
UGM Wanagama **46.59 221** P **P** **09 40 56.4 -1.3**
comp=Z,15µmcomp=Z,2µm,1.1s
UGM Wanagama **46.59 221** P **P** **09 40 57.1 -0.6**
PSI Prapat **46.64 242** P **P** **09 40 58.4 +0.3**
PSI pmax pmax
comp=Z,414nm,1.0s
PSI Prapat **46.64 242** P **P** **09 40 58.5 +0.3**
YOGI Yogyakarta **46.64 221** P **P** **09 40 57.1 -0.9**
comp=Z,13µmcomp=Z,2µm,1.0s
BKNI Bangkinang **46.66 238** P **P** **09 40 58.9 +0.7**
comp=Z,7µmcomp=Z,630nm,1.2s
BKNI Bangkinang **46.66 238** P **P** **09 40 58.4 +0.2**
LHMI Lhok Sumawe **46.69 247** P **P** **09 40 59.7 +1.3**
comp=Z,8µmcomp=Z,873nm,1.1s
LHMI Lhok Sumawe **46.69 247** P **P** **09 40 59.6 +1.2**
RPSI Rantau Prapat **46.70 242** P **P** **09 40 58.4 -0.1**
RPSI IAmb IAmb 09 40 59.7
comp=Z,414nm,1.0s
PKI Pulchoki **46.75 281** *eP* **P** **09 40 59.7 +0.5**
comp=Z,297nm,0.7s
PKI Pulchoki **46.75 281** *eP* **P** **09 40 59.7 +0.5**
comp=Z,297nm,0.7s
PKIN Phulchoki **46.76 281** *eP* **P** **09 40 59.7 +0.5**
comp=Z,283nm,0.7s
PKIN Phulchoki **46.76 281** *eP* **P** **09 40 59.6 +0.4**
comp=Z,295nm,0.7s
MAKZ Makanchi **46.78 308** P **P** **09 40 59.5 +0.7**
MAKZ Makanchi **46.78 308** P **P** **09 40 59.5 +0.7**
MAKZ pmax pmax
comp=Z,19nm,0.7s
MAKZ Makanchi **46.78 308** ⇑P **P** **09 40 59.6 +0.9**
MAKZ ScP **ScP** **09 45 37.4 -0.5**
KKN Kakani **46.80 281** *eP* **P** **09 41 00.2 +0.8**
comp=Z,118nm,1.0s
KKN Kakani **46.80 281** *eP* **P** **09 41 00.2 +0.8**
comp=Z,118nm,1.0s
DMN Daman **47.00 281** *eP* **P** **09 41 01.7 +0.7**
comp=Z,306nm,0.6s
DMN Daman **47.00 281** *eP* **P** **09 41 01.7 +0.7**
comp=Z,306nm,0.6s
KCSI Kotacane, Aceh **47.08 244** P **P** **09 41 00.0 -1.4**
comp=Z,2µmcomp=Z,227nm,1.1s
GKN Gorkha **47.29 282** *eP* **P** **09 41 03.9 +0.8**
GKN Gorkha **47.29 282** *eP* **P** **09 41 03.8 +0.7**
LEM Lembang **47.43 225** P **P** **09 41 04.5 +0.3**
comp=Z,2µm,0.8s,baz=292,slow=20,SNR=204
LEM Lembang **47.43 225** P **P** **09 41 04.3 +0.1**
comp=Z,2µmcomp=Z,12µmcomp=Z,1µm,0.8s
BOK Bokaro **47.50 276** ⇓*iP* **P** **09 41 05.6 +1.0**
BOK IAmb IAmb 09 41 07.8
comp=Z,219nm,0.8s
KLI Kotabumi **47.68 229** P **P** **09 41 05.3 -0.7**
comp=Z,20µmcomp=Z,2µm,0.9s
BLSI Bandar Lampung **47.81 228** P **P** **09 41 06.3 -0.6**
comp=Z,13µmcomp=Z,2µm,0.8s
DANN Dangsing **47.94 283** *eP* **P** **09 41 09.4 +1.2**
comp=Z,888nm,0.6s
DANN Dangsing **47.94 283** *eP* **P** **09 41 09.3 +1.1**
comp=Z,888nm,0.6s
SEM Semipalatinsk **48.00 313** *eP* **P** **09 41 07.5 -0.6**
SEM *i* S **S** **09 47 31.8 -2.7**
SEM pmax pmax
comp=Z,44nm,0.9s
SEM Semipalatinsk **48.00 313** *eP* **P** **09 41 07.6 -0.6**
comp=Z,44nm,0.9s,baz=313
SEM *i* S **S** **09 47 31.9 -2.7**
baz=313
TNA Tin City **48.01 27** IAmb IAmb 09 41 10.4
comp=Z,285nm,1.3s
TNA Tin City **48.01 27** P **P** **09 41 09.5 +1.8**
baz=249,SNR=5.2
KRJI Kerinci **48.01 235** P **P** **09 41 09.0 +0.4**
comp=Z,54µmcomp=Z,1µm,1.1s
MTSU Mount Surprise **48.07 173** P **P** **09 41 08.8 0.0**
CNJI Cibinong **48.11 225** P **P** **09 41 06.1 -3.1**
comp=Z,9µmcomp=Z,378nm,0.9s
VLK Valmikinagar **48.14 281** ⇓*iP* **P** **09 41 10.2 +1.0**
MASI Maura Aman, Be **48.20 233** P **P** **09 41 10.4 +0.4**
comp=Z,23µmcomp=Z,3µm,1.0s
LWLI Liwa **48.33 230** P **P** **09 41 09.9 -1.1**
comp=Z,664nm,0.9s
KASI Kota Agung **48.41 229** P **P** **09 41 09.6 -1.9**
comp=Z,4µmcomp=Z,613nm,1.1s
MNAI Manna **48.59 232** P **P** **09 41 11.1 -1.7**
MNAI Manna **48.59 232** P **P** **09 41 12.3 -0.5**
comp=Z,1µm,1.2s
MNAI Manna **48.59 232** P **P** **09 41 12.4 -0.4**
GSI Gunungsitoli **48.62 242** P **P** **09 41 13.1 0.0**
comp=Z,26µmcomp=Z,3µm,1.1s
GSI Gunungsitoli **48.62 242** P **P** **09 41 13.3 +0.2**
ANM Nome **48.69 28** P **P** **09 41 14.6 +1.7**
baz=252,SNR=7.3
SHLS Shalkode **48.72 303** *eP* **P** **09 41 11.6 -2.0**
SHLS *eS* **S** **09 47 40.1 -4.4**
SHLS Shalkode **48.72 303** *eP* **P** **09 41 11.7 -2.0**
baz=303
SHLS *eS* **S** **09 47 40.1 -4.4**
baz=303
BWNR Bhubaneshwar **48.82 272** ⇓*iP* **P** **09 41 15.4 +0.9**
NRIK Noril'sk **49.00 338** P **P** **09 41 16.0 +1.0**
comp=Z,592nm,0.9s,baz=111,slow=8.8,SNR=233
NRIK ScP **ScP** **09 45 47.3 +0.4**
comp=Z,52nm,0.7s,baz=132,slow=3.9,SNR=9.6
NRIK S **S** **09 47 48.1 +0.8**
comp=Z,16nm,0.7s,baz=200,slow=23,SNR=17
comp=Z,592nm,0.9s
NRIK Noril'sk **49.00 338** P **P** **09 41 16.1 +1.0**
NRIK Noril'sk **49.00 338** *ceP* **P** **09 41 15.8 +0.7**
NRIK pmax pmax
comp=Z,698nm,1.0s
UZB Uzunbulak **49.04 303** *eP* **P** **09 41 15.9 -0.1**
UZB *eS* **S** **09 47 49.1 +0.1**
UZB Uzunbulak **49.04 303** *eP* **P** **09 41 15.9 -0.1**
baz=303
UZB *eS* **S** **09 47 49.2 +0.1**
baz=303
KURK Kurchatov **49.04 313** P **P** **09 41 16.1 +0.4**
KURK Kurchatov **49.04 313** *ceP* **P** **09 41 16.1 +0.4**
KURK pmax pmax
comp=Z,188nm,1.3s
KURK Kurchatov **49.04 313** P **P** **09 41 16.1 +0.4**
KURK Kurchatov **49.04 313** P **P** **09 41 16.0 +0.4**
KURK pP **pwP** **09 42 42.1 +0.4**
KURK ScP **ScP** **09 45 46.9 -0.5**
KURBB Kurchatov Arra **49.10 313** ScP **ScP** **09 45 47.0 -0.7**
comp=Z,32nm,1.0s,baz=101,slow=3.2,SNR=14
KURBB S **S** **09 47 46.9 -2.4**
comp=Z,23nm,0.9s,baz=88,slow=12,SNR=17
KURBB Kurchatov Arra **49.10 313** P **P** **09 41 16.2 +0.1**
SISI Saibi **49.21 238** P **P** **09 41 16.6 -0.8**
comp=Z,2µmcomp=Z,226nm,1.0s
KPKS Kokpek **49.26 303** *eP* **P** **09 41 17.8 +0.3**
KPKS *i* S **S** **09 47 51.1 -0.7**
KPKS Kokpek **49.26 303** *eP* **P** **09 41 17.9 +0.3**
baz=303
KPKS *i* S **S** **09 47 51.2 -0.7**
baz=303
SDPT Sand Point **49.28 41** P **P** **09 41 17.1 -0.3**
SDPT Sand Point **49.28 41** P **P** **09 41 17.3 -0.1**
baz=265,SNR=22
TDK Taldyqorghan **49.33 305** *eP* **P** **09 41 18.4 +0.4**
TDK *eS* **S** **09 47 52.3 -0.4**
TDK Taldyqorghan **49.33 305** *eP* **P** **09 41 18.5 +0.4**
baz=305
TDK *eS* **S** **09 47 52.3 -0.4**
baz=305
ZHN Zhinishke **49.46 303** *eP* **P** **09 41 19.3 +0.2**
ZHN *eS* **S** **09 47 54.9 +0.1**
ZHN Zhinishke **49.46 303** *eP* **P** **09 41 19.4 +0.2**
baz=303
ZHN *eS* **S** **09 47 55.0 +0.1**
baz=303
SATY Saty **49.50 303** *eP* **P** **09 41 19.9 +0.5**
SATY *eS* **S** **09 47 55.2 -0.1**
SATY Saty **49.50 303** *eP* **P** **09 41 19.9 +0.5**
baz=303
SATY *eS* **S** **09 47 55.2 -0.1**
baz=303
FITZ Fitzroy Crossi **49.50 197** P **P** **09 41 19.6 +0.2**
comp=Z,356nm,0.7s,baz=22,slow=9.9
FITZ S **S** **09 47 52.5 -2.8**
comp=Z,28nm,1.0s,baz=210,slow=14,SNR=6.1
comp=Z,356nm,0.7s
FITZ Fitzroy Crossi **49.50 197** P **P** **09 41 19.6 +0.2**
PPSI Pulau Pagai **49.52 236** P **P** **09 41 19.1 -0.6**
comp=Z,8µmcomp=Z,836nm,1.0s
CHNA Chernabura Isl **49.75 42** P **P** **09 41 21.4 +0.5**
baz=266,SNR=18
CNBA Chernabura Isl **49.75 42** P **P** **09 41 21.3 +0.4**
WRAB Tennant Creek **49.81 186** P **P** **09 41 21.2 -0.5**
WRAB Tennant Creek **49.81 186** *ceP* **P** **09 41 21.0 -0.7**
WRAB pmax pmax
comp=Z,572nm,1.0s
WRAB Tennant Creek **49.81 186** P **P** **09 41 21.3 -0.5**
WRAB Tennant Creek **49.81 186** ⇓P **P** **09 41 21.3 -0.5**
WRAB pP **pP** **09 42 43.1 +0.6**
WRAB ScP **ScP** **09 45 51.0 0.0**
WRA Warramunga Arr **49.82 186** P **P** **09 41 21.1 -0.8**
comp=Z,366nm,0.9s,baz=5.0,slow=7.8,SNR=528
WRA PcP **PcP** **09 42 35.5 0.0**
comp=Z,33nm,0.8s,baz=359,slow=4.2,SNR=5.6
WRA ScP **ScP** **09 45 51.1 0.0**
comp=Z,32nm,1.1s,baz=358,slow=4.5,SNR=10
WRA S **S** **09 47 57.9 -1.8**
comp=Z,20nm,0.8s,baz=8.6,slow=14,SNR=7.6
WRA PKPPKP **P'P'df** **10 12 05.1 -0.2**
comp=Z,0.5nm,0.7s,baz=172,slow=1.9,SNR=7.1
WRA PKP2ab 10 12 59.9
comp=Z,1.4nm,1.0s,baz=198,slow=3.6,SNR=5.4
WRA P4KPbc 10 18 49.5
comp=Z,1.8nm,0.7s,baz=357,slow=5.0,SNR=23
comp=Z,366nm,0.9s
WRA Warramunga Arr **49.82 186** *ceP* **P** **09 41 19.6 -2.2**
WRA pmax pmax
comp=Z,364nm,0.9s
S14K Fog Glacier **49.89 40** P **P** **09 41 21.8 -0.2**
baz=265,SNR=5.0
JHSG JHARSUGUDA **50.04 274** ⇓*iP* **P** **09 41 24.1 +0.6**
QIS Mount Isa **50.22 179** P **P** **09 41 24.4 -0.4**
CTA Charters Tower **50.23 171** P **P** **09 41 24.5 -0.3**
comp=Z,60nm,0.9s,baz=349,slow=7.7,SNR=41
comp=Z,60nm,0.9s
CTA Charters Tower **50.23 171** P **P** **09 41 25.0 +0.2**
CTAO Charters Tower **50.23 171** P **P** **09 41 24.0 -0.8**
CTAO IAmb IAmb 09 41 26.3
comp=Z,551nm,1.9s
CTAO Charters Tower **50.23 171** P **P** **09 41 24.0 -0.8**
CTAO pmax pmax
comp=Z,551nm,1.9s
CTAO Charters Tower **50.23 171** P **P** **09 41 25.1 +0.2**
CTAO Charters Tower **50.23 171** P **P** **09 41 24.6 -0.3**
CTAO pP **pP** **09 42 46.5 +0.2**
MDOK Medeo **50.47 303** P **P** **09 41 27.7 +1.0**
MDOK Medeo **50.47 303** *eP* **P** **09 41 27.7 +1.0**
baz=303
MDOK *i* S **S** **09 48 09.4 +0.8**
baz=303
ALBI Allahabad **50.51 279** ⇓*iP* **P** **09 41 26.7 -0.3**
CHGN Chignik **50.52 40** IAmb IAmb 09 41 27.2
comp=Z,158nm,0.7s
CHGN Chignik **50.52 40** P **P** **09 41 26.3 -0.3**
baz=266,SNR=16
AAA Alma-Ata **50.57 303** *eP* **P** **09 41 28.5 +1.3**
AAA *eS* **S** **09 48 10.3 +0.6**
AAA pmax pmax
comp=Z,48nm,0.7s
AAA Alma-Ata **50.57 303** *eP* **P** **09 41 28.6 +1.3**
comp=Z,48nm,0.7s,baz=303
AAA *eS* **S** **09 48 10.4 +0.6**
baz=303
PTH Pithoragarh **50.60 285** ⇓*iP* **P** **09 41 28.5 +0.7**
LGTI Lohaghat **50.60 285** ⇓*iP* **P** **09 41 29.4 +1.8**
N16K Nishlik Lake **50.77 34** P **P** **09 41 30.3 +1.8**
baz=262,SNR=45
KUU Kurty **50.91 304** *eP* **P** **09 41 30.0 +0.4**
KUU *i* S **S** **09 48 13.6 -0.6**
KUU pmax pmax
comp=Z,31nm,0.4s
KUU Kurty **50.91 304** *eP* **P** **09 41 30.1 +0.4**
comp=Z,31nm,0.4s,baz=304
KUU *i* S **S** **09 48 13.7 -0.6**
baz=304
P16K Nushagak River **50.99 36** P **P** **09 41 31.9 +1.9**
baz=264,SNR=16
O16K Kokwok River B **51.00 36** P **P** **09 41 31.5 +1.4**
baz=263,SNR=31
R16K Pilot Point **51.08 38** P **P** **09 41 31.0 +0.4**
baz=266
RAGD RAYAGADA **51.26 271** ⇓*iP* **P** **09 41 33.6 +0.9**
BLSP Bilaspur **51.32 275** *eP* **P** **09 41 33.2 +0.1**
XMI Christmas Isla **51.45 224** P **P** **09 41 32.8 -1.1**
XMIS Christmas Isla **51.49 224** P **P** **09 41 32.7 -1.6**
XMIS IAmb IAmb 09 41 33.7
comp=Z,380nm,1.2s
XMIS Christmas Isla **51.49 224** P **P** **09 41 33.1 -1.2**
O17K Koliganek Bris **51.52 35** P **P** **09 41 35.4 +1.5**
baz=264,SNR=41
TKM2 Tokmak 2 **51.56 303** P **P** **09 41 36.1 +1.4**
SNR=26
Q16K King Salmon **51.65 37** P **P** **09 41 35.7 +0.9**
baz=265,SNR=23

R17K Ugashik Creek 51.72 38 P P 09 41 35.2 -0.2
baz=266,SNR=18
KSH Kashi 51.79 299 P P 09 41 40.4 +4.0
KSH ScP ScP 09 46 02.3 +2.6
KSH S S 09 48 30.8 +4.2
KSH ScS ScS 09 50 44.8 +2.0
KSH pmax pmax
comp=Z,47nm,0.7s
P17K Kvichak River 51.80 36 P P 09 41 37.5 +1.6
baz=265,SNR=56
VIS Vishakhapatnam 51.99 270 ⇓ix P 09 41 33.9 -4.0
CHIR Chirikof Islan 52.06 41 P P 09 41 39.2 +1.3
baz=268,SNR=19
KBK Karagaybulak 52.07 303 P P 09 41 39.8 +1.4
SNR=11
CHMS Chumysh 52.16 303 P P 09 41 40.1 +1.2
SNR=7.3
DDI Dehra Dun 52.19 287 ⇓iP P 09 41 39.9 +0.6
SGDS Sogindy 52.19 304 eP P 09 41 39.5 +0.4
SGDS Sogindy 52.19 304 eP P 09 41 39.5 +0.4
baz=304
N18K Kilae Creek 52.21 34 IAmb IAmb 09 41 42.0
comp=Z,604nm,1.6s
N18K Kilae Creek 52.21 34 P P 09 41 40.9 +1.9
baz=264,SNR=52
GCSA Galena City Sc 52.29 29 P P 09 41 40.1 +0.8
baz=260,SNR=20
USP Ospenovka 52.31 304 P P 09 41 40.8 +0.9
SNR=16
SVW2 Sparrevohn 52.40 34 P P 09 41 41.6 +1.4
SVW2 IAmb IAmb 09 41 43.3
comp=Z,189nm,1.0s
TTA Tatalina 52.40 32 P P 09 41 41.7 +1.4
baz=263,SNR=17
AAK Ala-Archa 52.40 303 P P 09 41 41.8 +1.0
SNR=12
AAK Ala-Archa 52.40 303 P P 09 41 41.6 +0.8
AAK Ala-Archa 52.40 303 ceP P 09 41 41.7 +1.0
AAK pmax pmax
comp=Z,18nm,0.7s
AAK Ala-Archa 52.40 303 P P 09 41 41.9 +1.0
AAK Ala-Archa 52.40 303 iP P 09 41 41.6 +0.8
SNR=14
AAK Ala-Archa 52.40 303 P P 09 41 41.6 +0.8
AAK ScP ScP 09 46 02.2 -0.2
BTLS Baital 52.41 306 eP P 09 41 41.0 +0.4
BTLS iS S 09 48 33.0 -1.4
BTLS Baital 52.41 306 eP P 09 41 41.0 +0.4
baz=306
BTLS iS S 09 48 33.1 -1.4
baz=306
P18K Big Mountain, 52.44 36 P P 09 41 41.7 +1.2
baz=266
UCH Uchtor 52.45 302 P P 09 41 42.9 +1.4
SNR=12
O18K Koktuh Hills 52.48 35 IAmb IAmb 09 41 44.8
comp=Z,280nm,1.1s
O18K Koktuh Hills 52.48 35 P P 09 41 42.5 +1.7
baz=266
SMLA Simla 52.70 288 ⇓iP P 09 41 43.2 +0.3
L19K White Mountain 52.85 33 IAmb IAmb 09 41 46.5
comp=Z,252nm,1.1s
L19K White Mountain 52.85 33 P P 09 41 45.2 +1.7
baz=264,SNR=95
BRZS Berezniki 52.87 312 eP P 09 41 44.1 +0.3
BRZS iS S 09 48 39.7 -0.7
BRZS Berezniki 52.87 312 eP P 09 41 44.1 +0.3
baz=312
BRZS iS S 09 48 39.8 -0.7
baz=312
SII Sitkinak Islan 52.88 40 P P 09 41 44.9 +1.1
baz=269,SNR=24
SII Sitkinak Islan 52.88 40 P P 09 41 44.9 +1.1
N19K Bonanza Creek 52.91 34 IAmb IAmb 09 41 46.8
comp=Z,192nm,0.8s
N19K Bonanza Creek 52.91 34 P P 09 41 45.9 +1.8
baz=266,SNR=63
EKS2 Erkin-Say 52.92 303 P P 09 41 45.4 +0.9
SNR=11
O19K Port Alsworth 52.95 35 P P 09 41 45.8 +1.6
baz=266,SNR=73
M19K Big River Lodg 53.04 33 IAmb IAmb 09 41 47.9
comp=Z,175nm,1.0s
M19K Big River Lodg 53.04 33 P P 09 41 46.8 +1.9
baz=265
AML Almayashu 53.07 302 P P 09 41 47.5 +1.7
SNR=30
Q19K Cape Douglas, 53.23 37 P P 09 41 46.4 +0.1
baz=268,SNR=16
BHK Bhakra 53.24 289 ⇓iP P 09 41 47.6 +0.7
JHNI Jhansi 53.26 281 ⇓iP P 09 41 45.6 -1.4
K20K Telida 53.33 31 P P 09 41 49.0 +2.1
baz=264,SNR=260
L20K Farewell, AK 53.33 32 P P 09 41 48.8 +1.8
baz=265,SNR=62
OHAK Old Harbor 53.38 39 P P 09 41 47.8 +0.5
OHAK Old Harbor 53.38 39 P P 09 41 48.0 +0.7
baz=269,SNR=45
J20K Nowinta River 53.38 30 P P 09 41 49.2 +2.0
baz=264,SNR=272
P19K Oil Pt 53.47 36 P P 09 41 48.9 +0.9
baz=268,SNR=12
ILSW Iliamna Southw 53.53 35 IAmb IAmb 09 41 51.0
comp=Z,208nm,1.3s
ASAR Alice Springs 53.54 186 P P 09 41 48.5 -0.4
comp=Z,148nm,0.8s,baz=22,slow=11,SNR=909
ASAR PcP PcP 09 42 49.6 +0.1
comp=Z,23nm,0.7s,baz=12,slow=4.4,SNR=6.0
ASAR ScP ScP 09 46 07.7 +0.5
comp=Z,9.6nm,0.9s,baz=1.6,slow=4.1,SNR=5.8
ASAR S S 09 48 48.1 -1.9
comp=Z,7.4nm,0.9s,baz=18,slow=22,SNR=9.1
ASAR PKPPKP P'P'df 10 12 01.9 +1.7
comp=Z,0.8nm,1.0s,baz=148,slow=2.5,SNR=4.7
ASAR P4KPbc 10 19 06.8
comp=Z,2.0nm,0.8s,baz=8.1,slow=4.4,SNR=22
comp=Z,148nm,0.8s
THN Thein Dam 53.55 290 ⇓iP P 09 41 49.2 +0.2
SONA Sohna 53.60 285 eP P 09 41 49.7 +0.3
M20K Styx River 53.63 33 P P 09 41 51.2 +2.0
baz=266,SNR=53
A21K Barrow 53.73 21 P P 09 41 51.2 +1.6
baz=256
KDAK Kodiak Island 53.76 38 P P 09 41 50.6 +0.5
KDAK Kodiak Island 53.76 38 P P 09 41 50.6 +0.5
KDAK pmax pmax
comp=Z,691nm,0.9s
KDAK Kodiak Island 53.76 38 P P 09 41 50.8 +0.7
baz=270
KDAK Kodiak Island 53.76 38 ⇑P P 09 41 50.8 +0.7
KDAK pP pwP 09 43 15.3 -1.3
KDAK sP PP 09 43 55.3 -0.7
O20K Slope Mountain 53.79 35 P P 09 41 50.9 +0.6
baz=268,SNR=11
Q20K Shuyak Island 53.87 37 P P 09 41 51.3 +0.4
baz=269,SNR=42
G21K Allakaket 53.93 27 P P 09 41 52.7 +1.5
baz=262
F21K Alatna River 54.04 26 P P 09 41 53.2 +1.2
baz=262,SNR=85
SPCR Spurr Chakacha 54.04 34 P P 09 41 53.7 +1.6
baz=267,SNR=62
BVA0 Borovoye Array 54.10 316 P P 09 41 53.0 +0.4
BVAR Borovoye Array 54.10 316 P P 09 41 53.3 +0.7
comp=Z,50nm,0.6s,baz=93,slow=8.9,SNR=256
BVAR ScP ScP 09 46 08.4 -1.0
comp=Z,14nm,0.7s,baz=90,slow=4.7,SNR=8.2
BVAR S S 09 48 55.5 -1.2
comp=Z,21nm,0.8s,baz=86,slow=12,SNR=18
comp=Z,50nm,0.6s
H21K Melozitna Rive 54.11 28 P P 09 41 54.4 +1.9
baz=264,SNR=357
MBWA Marble Bar 54.12 202 P P 09 41 53.2 +0.1
MBWA Marble Bar 54.12 202 P P 09 41 53.2 +0.1
MBWA Marble Bar 54.12 202 P P 09 41 53.3 +0.1
MBWA Marble Bar 54.12 202 ⇓P P 09 41 53.2 +0.1
PPLA Purkeypile 54.14 32 IAmb IAmb 09 41 55.3
comp=Z,230nm,0.8s
PPLA Purkeypile 54.14 32 P P 09 41 54.8 +1.9
baz=266,SNR=89
CHUM Lake Minchumin 54.15 31 P P 09 41 54.9 +2.2
baz=265,SNR=51
RK1H Rockhampton Ha 54.16 167 P P 09 41 52.8 -0.5
BRVK Borovoye 54.16 316 P P 09 41 53.7 +0.7
BRVK Borovoye 54.16 316 ceP P 09 41 53.5 +0.5
BRVK pmax pmax
comp=Z,143nm,1.3s
BRVK Borovoye 54.16 316 P P 09 41 53.8 +0.8
BRVK Borovoye 54.16 316 ⇑P P 09 41 53.8 +0.8
BRVK ScP ScP 09 46 09.3 -0.3
CAST Castle Rocks 54.22 31 P P 09 41 55.2 +1.9
baz=266,SNR=418
HOM Homer 54.27 36 P P 09 41 54.5 +0.8
baz=269
SKT Skwentna 54.40 33 IAmb IAmb 09 41 56.4
comp=Z,224nm,1.0s
SKT Skwentna 54.40 33 P P 09 41 55.3 +0.8
baz=268
I21K Tanana 54.41 29 IAmb IAmb 09 41 57.8
comp=Z,486nm,1.1s
I21K Tanana 54.41 29 P P 09 41 56.6 +2.1
baz=265,SNR=202
PSA00 Pilbara Seismi 54.47 202 IAmb IAmb 09 41 56.7
comp=Z,655nm,1.1s
PSA00 Pilbara Seismi 54.47 202 P P 09 41 55.8 +0.2
CNPM China Poot 54.48 36 IAmb IAmb 09 41 57.1
comp=Z,238nm,0.9s
CAPN Captain Cook N 54.54 34 P P 09 41 57.4 +1.9
baz=269
F22K John River 54.58 26 P P 09 41 57.6 +1.9
baz=263,SNR=286
BRLK Bradley Lake 54.66 36 IAmb IAmb 09 41 58.7
comp=Z,296nm,1.0s
DZA Taraz 54.66 304 eP P 09 41 57.5 +0.7
DZA eS S 09 49 04.5 0.0
DZA Taraz 54.66 304 eP P 09 41 57.5 +0.7
baz=304
DZA eS S 09 49 04.5 0.0
baz=304
H22K Ishtalitna Cre 54.72 28 P P 09 41 59.0 +2.2
baz=265,SNR=235
BRSE Bradley Lake S 54.73 36 P P 09 41 57.0 0.0
baz=270,SNR=30
KTH Kantishna Hill 54.75 31 IAmb IAmb 09 42 04.2
comp=Z,155nm,0.9s
SUA Susitna One 54.75 34 IAmb IAmb 09 41 59.3
comp=Z,284nm,0.7s
BPAW Bear Paw Mtn. 54.75 30 IAmb IAmb 09 41 59.8
comp=Z,215nm,0.7s
BPAW Bear Paw Mtn. 54.75 30 P P 09 41 58.6 +1.6
baz=266,SNR=220
G22K Bettles 54.77 27 P P 09 41 58.6 +1.5
baz=264
E22K Anaktuvuk Pass 54.79 25 P P 09 41 59.1 +1.8
baz=263
MLY Manley 54.92 29 IAmb IAmb 09 42 01.1
comp=Z,290nm,0.9s
MLY Manley 54.92 29 P P 09 42 00.0 +1.8
baz=266,SNR=370
BHPL Bhopal 54.98 279 ⇓iP P 09 41 58.2 -1.1
BHPL IAmb IAmb 09 41 59.4
comp=Z,310nm,0.6s
CUT Chulitna 55.00 32 P P 09 41 59.4 +0.6
baz=268,SNR=28
TRF Thorofare Moun 55.03 31 IAmb IAmb 09 42 01.4
comp=Z,227nm,1.2s
TRF Thorofare Moun 55.03 31 P P 09 42 00.1 +0.9
baz=268,SNR=13
M22K Willow 55.06 33 P P 09 41 59.4 +0.2
baz=269,SNR=81
KK31 Karatay Array 55.22 304 iP P 09 42 01.3 +0.6
NIL Nilore 55.22 292 P P 09 42 01.8 +0.9
NIL Nilore 55.22 292 P P 09 42 01.8 +0.9
NIL pmax pmax
comp=Z,120nm,0.8s
NIL Nilore 55.22 292 P P 09 42 01.9 +1.0
NIL pP pP 09 43 24.3 +0.6
RC01 Rabbit Creek A 55.23 34 IAmb IAmb 09 42 02.0
comp=Z,278nm,0.8s
RC01 Rabbit Creek A 55.23 34 P P 09 42 01.0 +0.5
baz=270,SNR=37
O22K Cooper Landing 55.24 35 P P 09 42 00.8 +0.3
baz=270,SNR=15
D23K Nanushuk River 55.30 24 P P 09 42 02.9 +2.0
baz=263,SNR=104
G23K Bananza Creek 55.34 27 P P 09 42 03.0 +1.9
baz=266,SNR=417
SEW Seward 55.38 35 IAmb IAmb 09 42 03.1
comp=Z,322nm,0.9s
SEW Seward 55.38 35 P P 09 42 02.1 +0.6
baz=271,SNR=29
C23K Itkillik River 55.43 23 P P 09 42 03.5 +1.8
baz=263,SNR=72
H23K Yukon River 55.47 28 IAmb IAmb 09 42 05.4
comp=Z,405nm,1.1s
H23K Yukon River 55.47 28 P P 09 42 04.2 +2.1
baz=267,SNR=193
PMR Palmer 55.53 33 P P 09 42 02.9 +0.4
baz=270,SNR=193
NEA2 Nenana 55.61 30 P P 09 42 04.3 +1.3
baz=268,SNR=511
GHO Glory Hole Cre 55.63 33 IAmb IAmb 09 42 05.3
comp=Z,248nm,0.9s
MCK McKinley 55.64 31 P P 09 42 04.2 +0.9
baz=269,SNR=262
WRKA Warakurna 55.65 192 P P 09 42 03.8 -0.1
TOLK Toolik Lake Re 55.67 25 IAmb IAmb 09 42 06.2
comp=Z,296nm,1.1s
TOLK Toolik Lake Re 55.67 25 P P 09 42 05.1 +1.6
baz=265,SNR=75
IUG luzhnay 55.74 303 eP P 09 42 05.5 +1.0
IUG iS S 09 49 20.0 +1.1
IUG luzhnay 55.74 303 eP P 09 42 05.5 +1.0
baz=303
IUG iS S 09 49 20.1 +1.1
baz=303
KOUNC Koumac, New Ca 55.77 151 P P 09 42 05.8 +1.1
WAT1 Susitna Watana 55.80 32 P P 09 42 04.9 +0.4
baz=270
KNK Knik Glacier 55.85 34 P P 09 42 05.6 +0.8
baz=271,SNR=153
SML Sawmill 55.91 33 P P 09 42 06.2 +0.9
baz=270,SNR=159
PWL Port Wells 55.92 34 P P 09 42 06.0 +0.7
baz=271,SNR=66
MDM Murphy Dome 55.98 29 IAmb IAmb 09 42 08.3
comp=Z,500nm,1.2s
D24K Happy Valley 55.99 24 P P 09 42 07.4 +1.8
baz=265
E24K Your Creek 56.03 26 P P 09 42 07.9 +1.9
baz=265,SNR=107
WRH Wood River Hil 56.03 30 IAmb IAmb 09 42 10.2
comp=Z,248nm,1.4s
C24K Franklin Bluff 56.08 24 P P 09 42 07.7 +1.5
baz=265
TCOL CIGO, UAF Yank 56.14 29 IAmb IAmb 09 42 09.4
comp=Z,177nm,0.7s
TCOL CIGO, UAF Yank 56.14 29 P P 09 42 07.5 +0.7
baz=269,SNR=118
COLA College 56.14 29 P P 09 42 06.9 +0.2
COLA IAmb IAmb 09 42 09.4
comp=Z,176nm,0.7s
COLA College 56.14 29 c iP P 09 42 07.3 +0.6
COLA pmax pmax
comp=Z,189nm,0.9s
COLA College 56.14 29 P P 09 42 07.6 +0.8
baz=269
COLA College 56.14 29 P P 09 42 07.4 +0.7
H24K Noodor Dome 56.16 28 IAmb IAmb 09 42 09.9
comp=Z,212nm,1.0s
H24K Noodor Dome 56.16 28 P P 09 42 08.8 +1.9
baz=268,SNR=167
WAT6 Susitna Watana 56.18 32 P P 09 42 08.1 +0.8
baz=270,SNR=278
M23K Glacier View 56.20 33 P P 09 42 08.0 +0.8
baz=271,SNR=104
EIDS Eidsvold 56.20 167 P P 09 42 07.5 -0.1
GAR Garm 56.20 299 IAmb IAmb 09 42 09.3
comp=Z,95nm,0.6s
F24K Squaw Lake 56.22 26 P P 09 42 09.3 +2.0
baz=267,SNR=312
AJM Ajmer 56.22 283 eP P 09 42 06.8 -1.2
HYBB Hyderabad (bro 56.26 272 eP P 09 42 09.0 +0.6
HYBB IVmB_BB 09 42 09.1
comp=Z,960nm,1.5s
HYBB ePcP PcP 09 43 01.3 +0.9
HYBB epP pP 09 43 30.5 -1.0
HYBB ePP PP 09 44 20.1 +1.0
HYBB eScP ScP 09 46 22.0 +2.5
HYBB ePcS PcS 09 47 03.6 +1.7
HYBB eS S 09 49 29.1 +3.0
POKR Poker Plat Res 56.32 29 IAmb IAmb 09 42 10.8
comp=Z,345nm,0.9s
POKR Poker Plat Res 56.32 29 P P 09 42 09.1 +1.0
baz=269,SNR=78
DHY Denali Highway 56.34 32 P P 09 42 08.9 +0.5
baz=270,SNR=66
G24K Hadweenzic Riv 56.35 27 P P 09 42 10.3 +2.1
baz=268,SNR=190
SCM Sheep Creek Mo 56.38 33 P P 09 42 09.8 +1.2
baz=271,SNR=163
P23K Montague Islan 56.41 35 P P 09 42 10.0 +1.3
baz=272,SNR=18
QLP Quilpie 56.43 174 P P 09 42 08.7 -0.5
GLI Glacier Island 56.52 34 IAmb IAmb 09 42 11.4
comp=Z,288nm,0.8s
GLI Glacier Island 56.52 34 P P 09 42 10.3 +0.7
baz=272,SNR=21
HDA Harding Lake 56.53 30 P P 09 42 09.7 +0.3
baz=270,SNR=248
IL31 56.55 30 IAmb IAmb 09 42 10.8
comp=Z,552nm,1.6s
ILAR Eielson Array 56.55 30 P P 09 42 09.6 0.0
comp=Z,111nm,0.9s,baz=281,slow=5.4,SNR=637
ILAR ScP ScP 09 46 18.1 -1.8
comp=Z,1.6nm,0.6s,baz=237,slow=5.3,SNR=4.1
ILAR S S 09 49 26.8 -1.7
comp=Z,0.5nm,0.9s,baz=256,slow=11,SNR=2.1
ILAR PKPPKP P'P'df 10 11 56.0 -6.2
comp=Z,2.4nm,1.0s,baz=111,slow=3.3,SNR=12
comp=Z,111nm,0.9s
FID Port Fidalgo 56.83 34 IAmb IAmb 09 42 13.7
comp=Z,144nm,0.8s
HIN Hinchinbrook I 56.84 35 IAmb IAmb 09 42 15.0
comp=Z,159nm,1.0s
D25K Kavik River 56.87 24 P P 09 42 13.4 +1.6
baz=267,SNR=88
RMQ Roma 56.88 170 P P 09 42 12.7 +0.3
M24K Tolsona, Glenn 56.92 33 IAmb IAmb 09 42 14.9
comp=Z,246nm,0.8s
M24K Tolsona, Glenn 56.92 33 P P 09 42 14.0 +1.7
baz=272,SNR=43
Q23K Middleton Isla 56.97 36 P P 09 42 13.9 +1.3
baz=274
H25K Birch Creek 57.00 28 P P 09 42 14.9 +2.3
baz=270
K24K Donnelly Dome 57.05 31 P P 09 42 13.6 +0.5
baz=271,SNR=67
KLU Klutina 57.07 34 IAmb IAmb 09 42 15.6
comp=Z,205nm,1.0s
KLU Klutina 57.07 34 P P 09 42 14.6 +1.3
baz=273,SNR=76
F25K Christian Rive 57.09 26 P P 09 42 15.8 +2.4
baz=269,SNR=174
E25K Arctic Village 57.12 26 P P 09 42 15.9 +2.3
baz=269,SNR=120
PRP Porcupine Dome 57.13 29 IAmb IAmb 09 42 16.2
comp=Z,137nm,0.9s
PRP Porcupine Dome 57.13 29 P P 09 42 13.7 0.0
baz=270,SNR=124
DIV Divide 57.16 34 IAmb IAmb 09 42 16.4
comp=Z,211nm,1.1s
EYAK Cordova Ski Ar 57.20 35 P P 09 42 15.4 +1.3
baz=274,SNR=10
J25K Salcha River, 57.21 30 P P 09 42 13.7 -0.5
baz=271,SNR=108
PAX Paxson 57.21 32 IAmb IAmb 09 42 16.6
comp=Z,191nm,0.8s
PAX Paxson 57.21 32 P P 09 42 15.5 +1.1
baz=272,SNR=174
HARP HAARP 57.38 32 P P 09 42 17.1 +1.7
baz=273,SNR=132
INKA Innaminka 57.39 178 P P 09 42 15.6 -0.2
C26K Camden Bay 57.41 23 P P 09 42 17.6 +2.2
baz=268,SNR=12
RIDG Independent Ri 57.46 31 P P 09 42 16.6 +0.6
baz=272,SNR=161
GIRL Giralia 57.49 207 P P 09 42 17.6 +1.0
OOD Oodnadatta 57.52 184 P P 09 42 16.5 -0.2
F26K Sheenjek River 57.66 26 P P 09 42 19.7 +2.4
baz=270,SNR=183
N25K Chitina, Valde 57.69 33 P P 09 42 18.9 +1.3
baz=274,SNR=59
BMRM Bremner River 57.73 34 P P 09 42 19.2 +1.3
baz=274,SNR=99
G26K Porcupine Rive 57.81 27 P P 09 42 20.4 +2.2
baz=271,SNR=132
C27K Jago River 57.82 24 P P 09 42 20.3 +2.0
baz=270,SNR=105
SCRK Sand Creek 57.83 31 P P 09 42 19.4 +0.8
baz=273,SNR=379
KAIM Kayak Island 57.91 35 IAmb IAmb 09 42 21.7
comp=Z,161nm,0.9s
KAIM Kayak Island 57.91 35 P P 09 42 20.7 +1.6
baz=275,SNR=12
J26L Joseph Creek 57.99 30 P P 09 42 20.1 +0.4
baz=273,SNR=548
NOUC Port Laguerre 58.00 150 P P 09 42 21.2 +1.0
NOUC Port Laguerre 58.00 150 P P 09 42 21.1 +0.9
MENT Mentasta 58.01 32 IAmb IAmb 09 42 22.6
comp=Z,242nm,0.9s
DZM Mont Dzumac 58.04 150 P P 09 42 21.2 +0.7
comp=Z,107nm,0.9s,baz=332,slow=2.8,SNR=41
comp=Z,107nm,0.9s
DZM Mont Dzumac 58.04 150 eP P 09 42 20.5 0.0
comp=Z,370nm,1.1s
DZM Mont Dzumac 58.04 150 eLR LR 10 00 00.7
comp=Z,266nm,23.8s
DZM Mont Dzumac 58.04 150 IAmb IAmb 09 42 23.0
comp=Z,212nm,1.2s
DZM Mont Dzumac 58.04 150 P P 09 42 21.9 +1.4
DZM Mont Dzumac 58.04 150 P P 09 42 21.6 +1.1
GLB Gilahina Butte 58.08 33 IAmb IAmb 09 42 22.7
comp=Z,260nm,1.2s
I26K Coal Creek Min 58.12 29 P P 09 42 20.3 -0.2
baz=273
L26K Log Cabin Wild 58.18 32 IAmb IAmb 09 42 23.6
comp=Z,434nm,1.3s
L26K Log Cabin Wild 58.18 32 P P 09 42 22.6 +1.7
baz=274,SNR=168
SUCK Suckling Hills 58.22 35 IAmb IAmb 09 42 23.9
comp=Z,133nm,1.0s
YATNC Mamie plateau, 58.22 149 P P 09 42 23.6 +1.9
BERG Berg Lake 58.23 35 IAmb IAmb 09 42 23.7
comp=Z,185nm,0.6s
ONTNC Ouen Toro 58.25 150 IAmb IAmb 09 42 24.0
comp=Z,131nm,1.0s
ONTNC Ouen Toro 58.25 150 P P 09 42 23.1 +1.3
KBL Kabul 58.33 294 P P 09 42 21.7 -1.0
KBL Kabul 58.33 294 P P 09 42 21.7 -1.0
KBL pmax pmax
comp=Z,38nm,0.6s
KBL Kabul 58.33 294 P P 09 42 23.2 +0.5
SNR=19
M26K Nabesna, AK 58.39 32 IAmb IAmb 09 42 25.0
comp=Z,213nm,1.2s
M26K Nabesna, AK 58.39 32 P P 09 42 23.7 +1.4
baz=275,SNR=93
COCO West Island 58.40 231 P P 09 42 23.1 +0.1
COCO West Island 58.40 231 P P 09 42 23.1 +0.1
COCO pmax pmax
comp=Z,733nm,1.2s
BGLC Bering Glacier 58.46 35 P P 09 42 24.1 +1.4
baz=276
MCARA McCarthy VSAT 58.46 34 IAmb IAmb 09 42 25.2
comp=Z,193nm,0.8s
MCARA McCarthy VSAT 58.46 34 P P 09 42 24.3 +1.5
baz=275,SNR=67
OUENC Ouen Island, N 58.52 150 P P 09 42 25.1 +1.5
OUENC IAmb IAmb 09 42 26.2
comp=Z,522nm,2.0s
OUENC Ouen Island, N 58.52 150 P P 09 42 25.1 +1.5
E27K Coleen River 58.61 25 P P 09 42 25.8 +2.0
baz=272,SNR=127
TGL Tana Glacier 58.62 34 IAmb IAmb 09 42 26.1
comp=Z,153nm,0.8s
WAX Waxell Ridge 58.64 35 IAmb IAmb 09 42 26.3
comp=Z,250nm,0.8s
G27K Doyon Strip 58.66 27 P P 09 42 25.9 +1.8
baz=273,SNR=91
K27K Chicken 58.67 30 IAmb IAmb 09 42 26.9
comp=Z,256nm,1.1s
K27K Chicken 58.67 30 P P 09 42 25.8 +1.6
baz=274
SNH Sunshine Point 58.68 35 IAmb IAmb 09 42 26.9
comp=Z,270nm,0.9s
H27K Steamboat Moun 58.74 28 P P 09 42 26.8 +2.1
baz=274
I27K Kandik River 58.75 29 P P 09 42 26.1 +1.3
baz=274
L27K Beaver Creek, 58.86 31 P P 09 42 27.1 +1.5

baz=275,SNR=141
ISLE Juniper Island 58.88 34 IAmb IAmb 09 42 27.7
comp=Z,507nm,1.7s
M27K Edge Creek, AK 58.91 32 IAmb IAmb 09 42 28.5
comp=Z,214nm,1.1s
M27K Edge Creek, AK 58.91 32 P **P** **09 42 27.4 +1.4**
baz=276
PINNC Pines Island, 58.95 149 P **P** **09 42 28.2 +1.6**
EGAK Eagle 59.01 29 P **P** **09 42 27.0 +0.6**
baz=275,SNR=144
PALK Pallekele 59.08 260 P **P** **09 42 28.5 +0.7**
PALK IAmb IAmb 09 42 29.4
comp=Z,182nm,0.9s
PALK Pallekele 59.08 260 P **P** **09 42 28.5 +0.7**
PALK pmax pmax
comp=Z,182nm,1.0s
PALK Pallekele 59.08 260 P **P** **09 42 28.3 +0.6**
PALK Pallekele 59.08 260 ⇓P **P** **09 42 28.4 +0.6**
MESA MESA 59.12 35 P **P** **09 42 28.8 +1.2**
baz=277,SNR=8.5
JASL Jaisalmer 59.22 285 *e*P **P** **09 42 29.0 +0.5**
CTG Chitna Glacier 59.32 34 P **P** **09 42 30.1 +1.2**
baz=277,SNR=30
BVCY Beaver Creek 59.38 32 P **P** **09 42 30.5 +1.4**
baz=276,SNR=42
MEEK Meekatharra 59.59 201 P **P** **09 42 30.4 -0.5**
YUK3 Moose Creek 59.64 33 P **P** **09 42 32.3 +1.2**
baz=277,SNR=50
DAWY Dawson 59.84 30 IAmb IAmb 09 42 34.6
comp=Z,214nm,1.4s
DAWY Dawson 59.84 30 P **P** **09 42 33.5 +1.3**
baz=277,SNR=88
O28M Mount Upton 59.90 34 P **P** **09 42 34.3 +1.3**
baz=278,SNR=76
PCA Pinnacle 59.97 35 IAmb IAmb 09 42 35.4
comp=Z,208nm,0.9s
PINM Pinnacle 59.97 35 P **P** **09 42 34.3 +1.2**
baz=278,SNR=32
LCRK Leigh Creek 60.07 181 P **P** **09 42 34.5 +0.5**
KAD Karad 60.09 274 ⇓*i*P **P** **09 42 34.7 +0.1**
MULG Mulgathing 60.09 185 P **P** **09 42 34.2 0.0**
I29M Ogilvie Camp, 60.15 29 IAmb IAmb 09 42 36.7
comp=Z,268nm,1.1s
I29M Ogilvie Camp, 60.15 29 P **P** **09 42 35.6 +1.4**
baz=277,SNR=107
J29M Klondike Camp 60.30 30 IAmb IAmb 09 42 37.9
comp=Z,182nm,0.7s
J29M Klondike Camp 60.30 30 P **P** **09 42 36.9 +1.6**
baz=278,SNR=12
DGTI Dogotuki 60.42 134 P **P** **09 42 38.3 +1.7**
PNL Peninsula 60.46 35 P **P** **09 42 37.8 +1.4**
baz=279,SNR=43
M29M Somme Creek 60.48 32 P **P** **09 42 38.6 +2.1**
baz=278
MSVF Nonsavu 60.48 136 P **P** **09 42 38.1 +1.0**
comp=Z,34nm,0.9s,baz=309,slow=5.3,SNR=9.8
comp=Z,34nm,0.9s
MSVF Nonsavu 60.48 136 P **P** **09 42 39.4 +2.3**
MSVF Nonsavu 60.48 136 P **P** **09 42 39.4 +2.3**
MSVF pmax pmax
comp=Z,105nm,1.3s
MSVF Nonsavu 60.48 136 P **P** **09 42 39.5 +2.4**
ARU Arti 60.50 321 P **P** **09 42 36.7 +0.1**
comp=Z,100nm,0.4s,baz=92,slow=3.0,SNR=170
ARU S **S** **09 50 17.8 -1.2**
comp=Z,4.1nm,0.5s,baz=212,slow=19,SNR=13
ARU ScS SKKSac 09 51 42.4 -2.8
comp=Z,2.3nm,0.3s,baz=180,slow=23,SNR=6.1
comp=Z,100nm,0.4s
ARU Arti 60.50 321 P **P** **09 42 37.1 +0.5**
ARU IAmb IAmb 09 42 38.1
comp=Z,225nm,1.0s
ARU Arti 60.50 321*c i*P **P** **09 42 37.0 +0.5**
ARU 09 43 15.5
ARU *PP **pP** **09 44 02.8 +1.5**
ARU *SP **sP** **09 44 45.7 +0.3**
ARU 09 44 55.9
ARU S **S** **09 50 21.4 +2.4**
ARU 09 51 42.0
ARU SS **SS** **09 54 28.5 +3.6**
ARU pmax pmax
comp=Z,272nm,1.1s
ARU MLR MLR
comp=Z,391nm,14.0s
ARU Arti 60.50 321 ⇑P **P** **09 42 37.1 +0.5**
ARU pP **pwP** **09 44 08.2 +1.3**
YUK4 Talbot Arm 60.56 33 P **P** **09 42 39.2 +1.9**
baz=279,SNR=78
EPYK Eagle Plains 60.66 27 P **P** **09 42 39.2 +1.6**
baz=278,SNR=335
K29M Barlow Dome 60.69 30 P **P** **09 42 39.7 +1.8**
baz=279
YUK6 Outpost Mounta 60.76 34 P **P** **09 42 40.6 +2.0**
baz=280,SNR=38
O29M Mount Kennedy 60.77 34 P **P** **09 42 40.6 +2.1**
baz=280,SNR=132
AB31 Akbulak array 61.15 313 *i*P **P** **09 42 41.4 +0.3**
ABKAR Akbulak array 61.15 313 IAmb IAmb 09 42 42.7
comp=Z,79nm,0.7s
HYT Haines Junctio 61.20 34 P **P** **09 42 43.4 +2.0**
baz=280,SNR=186
ARMA Armidale 61.22 168 IAmb IAmb 09 42 43.2
comp=Z,73nm,0.7s
ARMA Armidale 61.22 168 P **P** **09 42 42.4 +0.6**
M30M Minto, Yukon 61.22 32 IAmb IAmb 09 42 43.7
comp=Z,82nm,0.8s
M30M Minto, Yukon 61.22 32 P **P** **09 42 43.1 +1.7**
baz=280,SNR=106
PCHI Peechi 61.24 266 ⇓*e*P **P** **09 42 42.8 +0.6**
PCHI *e*S **S** **09 50 28.2 -1.3**
N30M Aishikik Lake 61.28 33 P **P** **09 42 43.5 +1.7**
baz=280,SNR=54
P29M Windy Craggy 61.30 35 P **P** **09 42 44.0 +2.1**
baz=281,SNR=112
FORT Forrest 61.30 191 P **P** **09 42 42.5 +0.3**
MAYO Mayo, Yukon 61.45 30 IAmb IAmb 09 42 45.5
comp=Z,151nm,0.7s
MAYO Mayo, Yukon 61.45 30 P **P** **09 42 44.6 +1.8**
baz=280,SNR=36
CMSA Cobar Meteorol 61.48 174 P **P** **09 42 43.8 +0.5**
STKA Stephens Creek 61.54 178 P **P** **09 42 43.8 0.0**
comp=Z,116nm,0.5s,baz=352,slow=7.0,SNR=858
STKA S **S** **09 50 29.9 -2.5**
comp=Z,3.6nm,0.8s,baz=120,slow=20,SNR=2.6
comp=Z,116nm,0.5s
STKA Stephens Creek 61.54 178 P **P** **09 42 43.7 0.0**
INK Inuvik 61.59 25 P **P** **09 42 44.4 +0.8**
comp=Z,152nm,0.5s,baz=285,slow=5.5,SNR=612
INK S **S** **09 50 30.5 -1.7**
comp=Z,3.2nm,1.0s,baz=28,slow=30,SNR=7.0
INK ScS **SKSac** **09 51 51.8 -1.2**
comp=Z,6.3nm,1.1s,baz=198,slow=19,SNR=8.6
INK PKPPKP **P'P'df** **10 11 51.6 -2.8**
comp=Z,10nm,1.1s,baz=64,slow=3.2,SNR=5.6
comp=Z,152nm,0.5s
INK Inuvik 61.59 25 IAmb IAmb 09 42 45.3
comp=Z,219nm,0.9s
INK Inuvik 61.59 25 P **P** **09 42 44.5 +0.8**
baz=280,SNR=96
P30M Million Dollar 61.59 34 P **P** **09 42 45.8 +1.9**
baz=281
TRD Trivandrum 61.68 263 *e*P **P** **09 42 45.7 +0.6**
O30N Mendenhall 61.89 34 P **P** **09 42 47.3 +1.5**
baz=281,SNR=59
N31M Braeburn, Yuko 61.89 33 P **P** **09 42 47.7 +1.9**
baz=281,SNR=182
PLBC Pleasant Camp 62.02 35 P **P** **09 42 48.4 +1.8**
baz=282,SNR=247
AKTO Aktyubinsk 62.09 314 P **P** **09 42 47.5 +0.2**
comp=Z,66nm,0.7s,baz=86,slow=7.8,SNR=137
AKTO S **S** **09 50 38.5 -0.5**
comp=Z,35nm,1.0s,baz=194,slow=20,SNR=21
comp=Z,66nm,0.7s
M31M Drury Creek, Y 62.39 32 IAmb IAmb 09 42 51.4
comp=Z,201nm,0.9s
M31M Drury Creek, Y 62.39 32 P **P** **09 42 50.5 +1.5**
baz=282,SNR=190
BBOO Buckleboo 62.49 183 P **P** **09 42 50.0 0.0**
WHY Whitehorse 62.49 34 P **P** **09 42 51.6 +1.8**
baz=282,SNR=111
SKAG Skagway 62.53 35 IAmb IAmb 09 42 52.8
comp=Z,218nm,1.0s
SKAG Skagway 62.53 35 P **P** **09 42 51.8 +1.9**
baz=283,SNR=40
WHYH Whyalla 62.66 181 P **P** **09 42 51.3 +0.3**
MORW Morawa 62.68 203 P **P** **09 42 51.2 -0.1**
PTPS Port Pirie 62.79 181 P **P** **09 42 52.6 +0.7**

FARO Faro, Yukon 62.86 32 IAmb IAmb 09 42 54.5
comp=Z,133nm,0.8s
FARO Faro, Yukon 62.86 32 P **P** **09 42 53.5 +1.4**
baz=283,SNR=155
BESE Bessie Mountai 62.98 36 IAmb IAmb 09 42 55.5
comp=Z,134nm,0.9s
HTT Hallett 63.04 180 P **P** **09 42 54.1 +0.5**
SIT Sitka 63.10 38 IAmb IAmb 09 42 56.5
comp=Z,288nm,1.7s
SIT Sitka 63.10 38 P **P** **09 42 55.4 +1.7**
baz=284,SNR=11
N32M Quiet Lake 63.23 33 P **P** **09 42 56.0 +1.4**
baz=284
P32M Atlin 63.31 35 P **P** **09 42 56.6 +1.5**
baz=284,SNR=61
A36M Sachs Harbour 63.55 20 P **P** **09 42 57.7 +1.4**
baz=285,SNR=7.6
P33M Teslin, Yukon 63.59 34 IAmb IAmb 09 42 59.6
comp=Z,233nm,1.4s
P33M Teslin, Yukon 63.59 34 P **P** **09 42 58.3 +1.4**
baz=284,SNR=127
NTLH Newcastle Hard 63.64 168 P **P** **09 42 58.9 +1.5**
MMPY Sheldon Lake, 63.71 31 P **P** **09 42 59.4 +1.7**
baz=284,SNR=57
BLDU Ballidu 63.89 201 P **P** **09 42 59.1 0.0**
LHI Lord Howe Isla 64.02 161 P **P** **09 43 00.8 +0.9**
SYDH Sydney Hard Ro 64.32 169 P **P** **09 43 03.1 +1.3**
AFI Afiamalu 64.36 125 P **P** **09 43 03.1 +0.6**
AFI IAmb IAmb 09 43 04.5
comp=Z,69nm,0.8s
AFI Afiamalu 64.36 125 P **P** **09 43 03.2 +0.6**
AFI pmax pmax
comp=Z,69nm,0.8s
AFI Afiamalu 64.36 125 P **P** **09 43 03.5 +1.0**
T33K Petersburg 64.42 38 P **P** **09 43 03.7 +1.6**
baz=286
KLBR Kellerberrin 64.47 200 P **P** **09 43 02.7 -0.1**
GHSS Government Hou 64.53 180 P **P** **09 43 04.2 +1.2**
TWOA Tennyson Woods 64.64 180 P **P** **09 43 04.6 +0.8**
C36M Paulatuk 64.67 23 P **P** **09 43 04.3 +0.8**
baz=288,SNR=29
CRAG Craig 64.70 39 P **P** **09 43 05.5 +1.5**
baz=286,SNR=9.0
R33M Jennings River 64.71 34 P **P** **09 43 05.9 +1.7**
baz=286,SNR=55
KIRV Kirov 64.80 325 P **P** **09 43 05.4 +0.9**
comp=Z,363nm,0.7s,baz=82,slow=2.8,SNR=101
KIRV S **S** **09 51 11.4 -0.4**
comp=Z,19nm,0.5s,baz=180,slow=23,SNR=4.0
comp=Z,363nm,0.7s
KIRV Kirov 64.80 325*ce*P **P** **09 43 05.3 +0.8**
WRAK Wrangell Islan 64.85 38 IAmb IAmb 09 43 07.8
comp=Z,237nm,1.6s
WRAK Wrangell Islan 64.85 38 P **P** **09 43 06.5 +1.6**
baz=286,SNR=13
MUN Mundaring 65.31 201 P **P** **09 43 08.2 +0.1**
TGTN Hyland Airport 65.37 32 P **P** **09 43 10.0 +1.8**
baz=287,SNR=158
MTKN Mount Kenneth 65.41 202 P **P** **09 43 09.1 +0.4**
DLBC Dease Lake 65.45 35 IAmb IAmb 09 43 11.9
comp=Z,147nm,1.1s
DLBC Dease Lake 65.45 35 P **P** **09 43 10.7 +1.8**
baz=287,SNR=66
V35K Ketchikan 65.56 39 P **P** **09 43 10.6 +1.1**
baz=288
CAN Canberra 65.60 171 IAmb IAmb 09 43 13.0
comp=Z,116nm,1.2s
CAN Canberra 65.60 171 P **P** **09 43 10.3 +0.4**
CAN Canberra 65.60 171 ⇓P **P** **09 43 10.6 +0.7**
CNB Canberra Magne 65.64 171 P **P** **09 43 11.0 +0.8**
GEYT Alibeck 65.68 301 P **P** **09 43 11.3 +0.7**
comp=Z,26nm,0.8s,baz=52,slow=2.4,SNR=34
comp=Z,26nm,0.8s
PRGR Permogore 65.70 328 ⇑*i*P **P** **09 43 11.0 +0.8**
PRGR *e* 09 43 37.1
PRGR *e* 09 44 42.6
PRGR *i*S **S** **09 51 24.7 +2.1**
PRGR *i* 09 52 21.6
DIB Dawson Inlet, 65.73 41 IAmb IAmb 09 43 12.4
comp=Z,160nm,0.9s
T35M Bob Quinn 65.78 37 P **P** **09 43 13.0 +2.0**
baz=288,SNR=42
NWAO Narrogin (SRO) 65.88 200 P **P** **09 43 11.9 +0.3**
NWAO Narrogin (SRO) 65.88 200 P **P** **09 43 12.0 +0.3**
NWAO pmax pmax
comp=Z,722nm,0.9s
NWAO Narrogin (SRO) 65.88 200 P **P** **09 43 12.1 +0.4**
ARPS Mount Arapiles 66.42 178 P **P** **09 43 15.4 +0.4**
HOPEN Hopen 66.43 346 *e*P **P** **09 43 16.3 +1.7**
HOPEN IAmb IAmb 09 43 16.9
comp=Z,466nm,1.2s
WRGLY Wrigley 66.93 29 P **P** **09 43 19.2 +1.4**
baz=291,SNR=48
GRNB Greville Isla 66.95 40 IAmb IAmb 09 43 20.1
comp=Z,106nm,0.7s
SPA0 Spitsbergen Ar 67.08 349 *e*P **P** **09 43 19.8 +1.1**
SPA0 IAmb IAmb 09 43 20.7
comp=Z,261nm,1.1s
ALE Alert 67.27 3 P **P** **09 43 21.4 +1.6**
KBS Kingsbay 67.29 350 P **P** **09 43 21.5 +1.6**
KBS Kingsbay 67.29 350*ce*P **P** **09 43 21.7 +1.8**
KBS pmax pmax
comp=Z,327nm,1.3s
KBS Kingsbay 67.29 350 ⇑*i*P **P** **09 43 21.2 +1.3**
KBS Kingsbay 67.29 350 *e*P **P** **09 43 21.6 +1.8**
KBS IAmb IAmb 09 43 22.3
comp=Z,226nm,0.9s
KBS Kingsbay 67.29 350 P **P** **09 43 21.4 +1.5**
BRAT Ballarat 67.31 176 P **P** **09 43 21.6 +1.1**
TOO Toolangi 67.44 174 IAmb IAmb 09 43 23.2
comp=Z,123nm,0.8s
TOO Toolangi 67.44 174 P **P** **09 43 22.3 +0.9**
RKGY Rocky Gully 67.52 200 P **P** **09 43 22.6 +0.7**
BELG Belogornoye 67.72 319 P **P** **09 43 23.6 +0.6**
comp=Z,226nm,0.9s,baz=91,slow=0.4,SNR=54
BELG PcP **PcP** **09 43 48.5 +2.1**
comp=Z,62nm,0.8s,baz=311,slow=4.2,SNR=4.5
BELG S **S** **09 51 44.4 -2.5**
comp=Z,46nm,1.0s,baz=168,slow=22,SNR=26
comp=Z,226nm,0.9s
BELG Belogornoye 67.72 319*c i*P **P** **09 43 23.5 +0.5**
BELG pmax pmax
comp=Z,54nm,1.0s
LVZ Lovozero 67.79 337 P **P** **09 43 23.6 +0.4**
LVZ IAmb IAmb 09 43 24.9
comp=Z,111nm,1.0s
LVZ Lovozero 67.79 337*ce*P **P** **09 43 23.5 +0.3**
LVZ pmax pmax
comp=Z,132nm,1.0s
LVZ Lovozero 67.79 337 P **P** **09 43 23.5 +0.3**
HSPB Hornsund (broa 67.96 348 *e*P **P** **09 43 25.3 +1.3**
HSPB *e*PcP **PcP** **09 43 49.4 +2.4**
HSPB *e*pP **pP** **09 44 51.9 +0.2**
HSPB Hornsund (broa 67.96 348 *e*P **P** **09 43 25.5 +1.5**
HSPB IAmb IAmb 09 43 26.3
comp=Z,466nm,1.1s
NOR Nord 67.97 356 ⇑*i*P **P** **09 43 25.0 +0.9**
NOR IAmb IAmb 09 43 25.5
comp=Z,105nm,1.0s
GEXS Deakin Univers 67.98 176 P **P** **09 43 26.3 +1.7**
FLDN Fort Liard 68.01 32 P **P** **09 43 26.1 +1.4**
baz=292
APA Apatity 68.36 337 ⇑*i*P **P** **09 43 26.4 -0.3**
APA *i*S **S** **09 51 53.0 -0.9**
APA *i* 09 52 42.0
APA pmax pmax
comp=Z,202nm,0.8s
APA MLR MLR
comp=Z,400nm,15.0s
BBB Bella Bella 68.57 41 IAmb IAmb 09 43 29.7
comp=Z,75nm,0.8s
KLMR Klimovskoe 68.74 329 *e*P **P** **09 43 27.0 -2.1**
KLMR *e**PP **pP** **09 44 56.5 0.0**
KLMR *e* 09 46 04.9
KLMR pmax pmax
comp=Z,110nm,0.7s
KLMR Klimovskoe 68.74 329 *e*P **P** **09 43 27.0 -2.1**
KLMR AMP 09 43 30.1
comp=Z,110nm,0.7s
KLMR *e*pP **pP** **09 44 56.5 0.0**
KLMR *e*PP **PP** **09 46 04.9 -1.9**
BJO1 Bjornoya 68.81 346 *e*P **P** **09 43 30.1 +0.9**
BJO1 IAmb IAmb 09 43 30.6
comp=Z,129nm,1.0s
KEV Kevo 69.38 340 P **P** **09 43 33.9 +1.1**

KEV Kevo 69.38 340 P **P** **09 43 33.9 +1.1**
KEV pmax pmax
comp=Z,233nm,0.9s
KEV Kevo 69.38 340 ⇑P **P** **09 43 33.8 +1.1**
HAMF Hammerfest 69.86 341 *e*P **P** **09 43 36.4 +0.7**
HAMF IAmb IAmb 09 43 36.8
comp=Z,129nm,0.9s
TLCB Telegraph Cove 69.93 43 IAmb IAmb 09 43 38.7
comp=Z,92nm,1.1s
ARA0 ARCESS Array S 69.94 340 *e*P **P** **09 43 37.5 +1.2**
ARA0 IAmb IAmb 09 43 38.2
comp=Z,268nm,0.9s
ARCES ARCESS Array B 69.94 340 P **P** **09 43 37.4 +1.1**
comp=Z,133nm,0.5s,baz=72,slow=8.8,SNR=867
ARCES PP **PP** **09 46 14.9 -2.0**
comp=Z,26nm,0.9s,baz=60,slow=7.2,SNR=4.7
comp=Z,133nm,0.5s
JASK Jask - Hormozg 70.43 289 P **P** **09 43 42.0 +2.0**
SNR=6.3
WBK Wadi Bani Khal 70.88 286 P **P** **09 43 43.6 +0.9**
SNR=8.3
WSAR Wadi Sarin 70.89 286 P **P** **09 43 42.8 +0.1**
comp=Z,31nm,0.9s,baz=138,slow=6.0,SNR=16
comp=Z,31nm,0.9s
KTK1 Kautokeino 70.91 340 *e*P **P** **09 43 42.8 +0.8**
KTK1 IAmb IAmb 09 43 43.7
comp=Z,175nm,1.1s
YKA Yellowknife Ar 70.92 28 P **P** **09 43 42.6 +0.4**
comp=Z,80nm,0.7s,baz=339,slow=9.9,SNR=342
YKA PKPPKP P'P'df 10 11 27.9 -11
comp=Z,2.5nm,0.9s,baz=104,slow=3.1,SNR=10
comp=Z,80nm,0.7s
GLAD Gladstone 71.06 173 P **P** **09 43 43.9 +0.7**
BIDO Bidbid 71.19 287 P **P** **09 43 45.8 +1.3**
SNR=15
MAK Makhachkala 71.35 309 *e*P **P** **09 43 41.2 -3.9**
MAK *e**PP **pP** **09 45 08.8 -4.4**
MAK *e*SP **sP** **09 45 52.4 -3.9**
MAK *e* 09 46 27.6
MAK *e*PPP PPP 09 48 15.3
MAK *e*S **S** **09 52 21.7 -7.3**
MAK pmax pmax
comp=Z,150nm,1.0s
MAK MLR MLR
comp=Z,438nm,15.0s
OZB Mount Ozzard 71.37 44 IAmb IAmb 09 43 47.4
comp=Z,120nm,0.7s
JETT Jettan, Norway 71.41 341 *e*P **P** **09 43 46.1 +1.1**
JETT IAmb IAmb 09 43 46.9
comp=Z,155nm,0.7s
CORO Coronation Par 71.44 174 P **P** **09 43 46.7 +1.3**
comp=Z,70nm,0.9s
SMDO Samad 71.45 286 P **P** **09 43 46.8 +0.7**
SNR=7.6
VRH Novokhopyorsk 71.57 319 *e*P **P** **09 43 45.9 -0.3**
VRH *e**PP **pwP** **09 45 18.8 -1.1**
VRH *eS **S** **09 52 23.0 -8.2**
VRH pmax pmax
comp=Z,160nm,0.7s
VRH smax smax
comp=N,460nm,6.2s
JMDO Jabal Madar 71.70 286 P **P** **09 43 47.6 +0.1**
SNR=6.5
SHME Shamm 71.76 290 P **P** **09 43 49.2 +1.4**
SNR=16
SHME Shamm 71.76 290 *i*P **P** **09 43 48.4 +0.5**
SNR=13
TRO Tromso 71.78 341 *e*P **P** **09 43 47.8 +0.7**
TRO IAmb IAmb 09 43 48.6
comp=Z,138nm,0.8s
MOS Moscow 71.81 324 *e*P **P** **09 43 46.8 -0.7**
MOS *e**PP **pwP** **09 45 20.3 -0.8**
MOS *eS **S** **09 52 32.2 -1.6**
MOS *e* 09 53 10.1
MOS pmax pmax
comp=Z,300nm,1.2s
MOS pmax pmax
comp=Z,198nm,1.0s
MOS smax smax
comp=N,2μm,3.0s
MOS smax smax
comp=E,200nm,1.2s
MOS MLR MLR
comp=Z,900nm,18.0s
HOQ Hoqain 71.84 287 P **P** **09 43 49.2 +0.8**
SNR=23
MDH Madha 71.95 289 P **P** **09 43 48.7 -0.3**
MASF Masafi 72.03 289 P **P** **09 43 50.4 +0.9**
SNR=9.5
MSFE Esma-Masafi 72.04 289 *i*P **P** **09 43 50.3 +0.7**
SNR=12
UOSS Minazif 72.18 289 P **P** **09 43 50.4 +0.1**
UOSS Minazif 72.18 289 P **P** **09 43 50.6 +0.3**
UOSS Minazif 72.18 289 *i*P **P** **09 43 50.1 -0.2**
SNR=17
CLRS Cowichan Lake 72.24 44 IAmb IAmb 09 43 52.4
comp=Z,69nm,0.8s
SOHO SOHO 72.25 288 P **P** **09 43 51.5 +0.8**
SOHO SOHO 72.25 288 *i*P **P** **09 43 51.0 +0.3**
SNR=71
HATD Hatta, Dubai 72.29 289 P **P** **09 43 51.9 +0.9**
SNR=17
HATD Hatta, Dubai 72.29 289 *i*P **P** **09 43 51.6 +0.7**
SNR=44
BSY Bisya 72.30 286 P **P** **09 43 51.8 +0.7**
SNR=9.6
TULEG Thule 72.35 7 *i*P **P** **09 43 51.0 +0.7**
GROC Groznyy 72.39 310 *e*P **P** **09 43 52.0 +0.8**
GROC *e* 09 44 07.0
GROC *e**PP **pP** **09 45 19.7 +0.1**
GROC *e*SP **sP** **09 46 04.1 +1.4**
GROC *e* 09 46 38.8
GROC *eS **S** **09 52 39.5 -1.3**
GROC pmax pmax
comp=Z,144nm,0.6s
ASHO Ashiyiah 72.41 289 P **P** **09 43 52.4 +0.6**
SNR=17
ASHO Ashiyiah 72.41 289 *i*P **P** **09 43 52.3 +0.6**
SNR=10
MHTO MHTO 72.41 284 P **P** **09 43 52.1 +0.3**
SNR=12
MOO Moorlands 72.42 174 P **P** **09 43 51.9 +0.7**
LPSR Galich'ya Gora 72.52 321 *e*P **P** **09 43 51.7 -0.1**
LPSR *e**PP **pwP** **09 45 25.4 -0.2**
LPSR *eS **S** **09 52 35.4 -6.5**
LPSR pmax pmax
comp=Z,80nm,0.7s
LPSR smax smax
comp=N,560nm,7.7s
OUZ Omahuta 72.53 151 IAmb IAmb 09 43 55.2
comp=Z,124nm,1.2s
ARQ Araqi 72.60 287 P **P** **09 43 53.8 +1.0**
SNR=16
NAZ Nazwa, Dubai 72.61 289 P **P** **09 43 53.4 +0.7**
SNR=8.1
NAZ Nazwa, Dubai 72.61 289 *i*P **P** **09 43 53.2 +0.4**
SNR=8.6
OBN Obninsk 72.63 324 P **P** **09 43 52.9 +0.6**
comp=Z,30nm,0.7s,baz=64,slow=3.2,SNR=39
OBN S **SKiKP** **09 52 41.3 -0.8**
comp=Z,5.7nm,0.5s,baz=60,slow=21,SNR=13
comp=Z,30nm,0.7s
OBN Obninsk 72.63 324 P **P** **09 43 53.0 +0.7**
OBN IAmb IAmb 09 43 53.9
comp=Z,164nm,0.9s
DAG Danmarks Havn 72.64 355 ⇑*i*P **P** **09 43 52.7 +0.7**
DAG IAmb IAmb 09 43 54.0
comp=Z,258nm,1.0s
PGC Sidney 72.72 44 IAmb IAmb 09 43 55.6
comp=Z,125nm,0.8s
FAQ Al Faqa, Dubai 72.77 289 P **P** **09 43 54.2 +0.5**
SNR=6.6
FAQ Al Faqa, Dubai 72.77 289 *i*P **P** **09 43 54.0 +0.2**
SNR=20
VORR Voronezh 72.78 320 *e*P **P** **09 43 54.2 +0.9**
VORR *e**PP **pwP** **09 45 28.3 +1.0**
VORR *eS **SKiKP** **09 52 43.6 +1.1**
VORR pmax pmax
comp=Z,140nm,0.6s
VORR pmax pmax
comp=Z,160nm,0.5s
VORR smax smax
comp=E,370nm,0.9s
LLLB Lillooet 72.78 41 IAmb IAmb 09 43 55.3
comp=Z,76nm,0.9s
TAU Tasmania Unive 72.90 174 P **P** **09 43 54.8 +0.9**

TAU IAmb IAmb 09 43 55.7
comp=Z,144nm,0.9s
TAU Tasmania Unive 72.90 174 P **P** **09 43 54.8 +0.9**
TAU pmax pmax
comp=Z,144nm,1.0s
TAU Tasmania Unive 72.90 174 P **P** **09 43 54.6 +0.7**
ALNE Al Ain 72.93 288 P **P** **09 43 55.7 +0.9**
SNR=14
ALNE Al Ain 72.93 288 *i* P **P** **09 43 55.4 +0.6**
SNR=14
B04A Port Angeles 72.95 44 IAmb IAmb 09 43 57.4
comp=Z,124nm,1.1s
VSR Storozhevoye 73.01 320 *e*P **P** **09 43 55.0 +0.4**
VSR *e**PP **pwP** **09 45 28.0 -0.7**
VSR *e*S **SKiKP** **09 52 43.0 +0.1**
VSR pmax pmax
comp=Z,240nm,1.2s
VSR smax smax
comp=E,160nm,5.9s
NLWA Neilton Lookou 73.01 45 IAmb IAmb 09 43 57.5
comp=Z,86nm,0.8s
ASUD Al Ashush, Dub 73.03 289 P **P** **09 43 56.2 +0.9**
ASUD Al Ashush, Dub 73.03 289 *i* P **P** **09 43 56.0 +0.8**
SNR=13
WISH Wishkah 73.19 45 IAmb IAmb 09 43 59.3
comp=Z,151nm,0.9s
DQM DQM 73.24 284 P **P** **09 43 56.7 +0.2**
PUL Pulkovo 73.30 330*ce*P **P** **09 43 57.6 +1.5**
PUL pmax pmax
comp=Z,290nm,0.7s
AJN Ajban 73.34 289 P **P** **09 43 58.0 +1.0**
SNR=6.4
AJN Ajban 73.34 289 *i* P **P** **09 43 57.3 +0.2**
SNR=5.8
RADR Rader Ridge 73.48 46 IAmb IAmb 09 44 00.7
comp=Z,122nm,0.8s
E03A Lebam 73.57 46 IAmb IAmb 09 44 00.9
comp=Z,180nm,1.0s
NCK Nalchik 73.72 311 *i* P **P** **09 44 00.0 +1.1**
NCK pmax pmax
comp=Z,54nm,1.0s
ZEI Tsey 73.83 310 *e*P **P** **09 43 59.2 -0.6**
ZEI pmax pmax
comp=Z,45nm,0.6s
DGAR Diego Garcia 73.87 251 P **P** **09 44 01.2 +1.1**
DGAR Diego Garcia 73.87 251*ce*P **P** **09 44 01.5 +1.3**
DGAR pmax pmax
comp=Z,268nm,1.7s
STEI Steigen 73.90 341 *e*P **P** **09 44 00.3 +0.9**
STEI IAmb IAmb 09 44 00.6
comp=Z,152nm,0.8s
UMZA Um Al Zommool 74.00 287 P **P** **09 44 01.0 +0.1**
HEBO Mount Hebo 74.04 47 IAmb IAmb 09 44 03.9
comp=Z,343nm,1.8s
KBZ Khabaz 74.07 311 P **P** **09 44 01.9 +1.1**
comp=Z,91nm,0.8s,baz=94,slow=4.1,SNR=153
KBZ S **S** **09 53 00.2 +0.8**
comp=Z,12nm,1.1s,baz=71,slow=23,SNR=22
comp=Z,91nm,0.8s
KBZ Khabaz 74.07 311*d* *i*P **P** **09 44 01.9 +1.1**
KBZ pmax pmax
comp=Z,85nm,0.8s
KIV Kislovodsk 74.11 312 ⇓P **P** **09 44 02.3 +1.1**
KIV Kislovodsk 74.11 312 P **P** **09 44 02.1 +0.9**
KIV IAmb IAmb 09 44 04.4
comp=Z,69nm,0.8s
KIV Kislovodsk 74.11 312 *e*P **P** **09 44 02.0 +0.8**
KIV *e**PP **pP** **09 45 30.6 +0.5**
KIV *e*S **S** **09 52 59.6 -0.5**
KIV pmax pmax
comp=Z,97nm,1.1s
KIV Kislovodsk 74.11 312 *i* P **P** **09 44 03.5 +2.2**
SNR=6.7
F04D Rainier, OR 74.12 46 P **P** **09 44 02.9 +1.7**
baz=297,SNR=7.3
FINES FINESS Array B 74.17 333 P **P** **09 44 01.2 +0.1**
comp=Z,107nm,0.6s,baz=70,slow=5.0,SNR=329
FINES pP **pwP** **09 45 35.7 +0.5**
comp=Z,21nm,0.9s,baz=81,slow=10.0,SNR=2.4
FINES PP **PP** **09 46 53.7 +0.9**
comp=Z,27nm,0.9s,baz=55,slow=10,SNR=4.9
FINES S **S** **09 52 58.5 -1.5**
comp=Z,8.5nm,0.8s,baz=42,slow=17,SNR=9.6
FINES ScS **ScS** **09 53 31.5 -0.5**
comp=Z,3.1nm,0.7s,baz=95,slow=6.9,SNR=4.4
comp=Z,107nm,0.6s
FINES FINESS Array B 74.17 333*ce*P **P** **09 44 01.6 +0.5**
FINES pmax pmax
comp=Z,107nm,0.6s
SHA1 Shidzhatmaz 74.22 312*d* *i*P **P** **09 44 02.3 +0.2**
LOF Lofoten 74.24 342 *e*P **P** **09 44 01.6 +0.3**
LOF IAmb IAmb 09 44 03.2
comp=Z,59nm,1.0s
D05A Enumclaw 74.25 44 IAmb IAmb 09 44 04.5
comp=Z,88nm,0.8s
FAUS Fauske 74.25 340 *e*P **P** **09 44 02.2 +0.7**
FAUS IAmb IAmb 09 44 03.1
comp=Z,183nm,0.9s
G03D McMinnville, O 74.36 47 IAmb IAmb 09 44 05.6
comp=Z,193nm,1.1s
G03D McMinnville, O 74.36 47 P **P** **09 44 04.3 +1.8**
baz=297,SNR=17
NEY Neytrino 74.40 311 *i* P **P** **09 44 06.2 +3.2**
GNI Garni 74.41 307 P **P** **09 44 04.1 +1.0**
comp=Z,23nm,0.9s,baz=14,slow=1.8,SNR=9.5
comp=Z,23nm,0.9s
GNI Garni 74.41 307 P **P** **09 44 04.8 +1.6**
GNI Garni 74.41 307*ce*P **P** **09 44 04.9 +1.8**
GNI pmax pmax
comp=Z,16nm,0.7s
GNI Garni 74.41 307 P **P** **09 44 04.5 +1.4**
I02E Swisshome, OR 74.48 48 IAmb IAmb 09 44 06.3
comp=Z,107nm,1.1s
I02E Swisshome, OR 74.48 48 P **P** **09 44 05.1 +1.9**
baz=297
COR Corvallis 74.61 47 P **P** **09 44 06.3 +2.4**
COR Corvallis 74.61 47 P **P** **09 44 06.3 +2.4**
COR pmax pmax
comp=Z,220nm,1.0s
J01E Myrtle Point 74.85 49 IAmb IAmb 09 44 08.3
comp=Z,102nm,0.8s
J01E Myrtle Point 74.85 49 P **P** **09 44 07.3 +2.0**
baz=297,SNR=13
JRN Qarnain Island 74.92 290 P **P** **09 44 05.8 -0.2**
I03D Drain, OR 74.99 48 P **P** **09 44 08.2 +2.2**
baz=297,SNR=54
H04D Lebanon 75.00 47 P **P** **09 44 08.1 +2.0**
baz=297,SNR=19
LTY Liberty 75.02 44 IAmb IAmb 09 44 07.9
comp=Z,63nm,0.9s
KBO Bosley Butte 75.08 50 IAmb IAmb 09 44 09.9
comp=Z,168nm,1.1s
DBG Daneborg 75.10 354⇑ *i*P **P** **09 44 06.9 +0.7**
DBG IAmb IAmb 09 44 07.8
comp=Z,299nm,1.8s
K02D Willamette Mer 75.23 49 P **P** **09 44 09.1 +1.5**
baz=297,SNR=20
MZR Muzera 75.27 288 P **P** **09 44 08.3 +0.3**
SNR=9.0
MZR Muzera 75.27 288 *i* P **P** **09 44 08.2 +0.2**
SNR=26
H04A Detroit Lake 75.28 47 IAmb IAmb 09 44 10.3
comp=Z,128nm,1.0s
B08A Colville Reser 75.29 42 IAmb IAmb 09 44 10.1
comp=Z,143nm,0.8s
MOR8 Moi Rana 75.31 340 *e*P **P** **09 44 07.1 -0.5**
MOR8 IAmb IAmb 09 44 07.8
comp=Z,251nm,0.8s
DBO Dodson Butte 75.32 49 IAmb IAmb 09 44 11.0
comp=Z,72nm,0.9s
KONS Konsvik 75.48 340 *e*P **P** **09 44 09.2 +0.8**
KONS IAmb IAmb 09 44 09.8
comp=Z,57nm,0.9s
KSXB Camp Six Broad 75.49 50 IAmb IAmb 09 44 12.1
comp=Z,134nm,1.1s
I04A Tendick Farm, 75.55 48 P **P** **09 44 10.8 +1.5**
baz=298,SNR=53
MEF Metsahovi 75.55 332 *e*P **P** **09 44 09.4 +0.5**
L02F Cave Junction 75.56 50 P **P** **09 44 11.1 +1.7**
baz=297,SNR=14
G05D Wamic, OR 75.56 46 P **P** **09 44 11.0 +1.7**
baz=298,SNR=29
VSU Vasula 75.57 330 *e*P **P** **09 44 10.1 +1.1**
KRPM Rodgers 75.70 51 IAmb IAmb 09 44 13.5
comp=Z,107nm,0.9s
HUMO Hull Mountain 75.74 49 IAmb IAmb 09 44 13.6
comp=Z,199nm,1.9s

JCC Jacoby Creek, 75.85 51 IAmb IAmb 09 44 14.1
comp=Z,132nm,0.9s
BCA Borcka 75.94 310⇑P **P** **09 44 14.1 +2.6**
KMPM Mount Pierce 75.97 51 IAmb IAmb 09 44 15.0
comp=Z,132nm,0.9s
I05D Terrebonne, OR 75.97 47 P **P** **09 44 13.2 +1.5**
baz=298,SNR=42
J04D Umpqua Nationa 76.00 48 P **P** **09 44 13.8 +1.8**
comp=Z,73nm,SNR=73
KHMM Horse Mountain 76.03 51 IAmb IAmb 09 44 15.3
comp=Z,165nm,1.2s
SHMA Al-Shehemyia 76.04 292 P **P** **09 44 12.3 0.0**
F07A Phinny Hill Vi 76.11 45 IAmb IAmb 09 44 15.1
comp=Z,116nm,0.9s
HAWA Hanford 76.11 44 IAmb IAmb 09 44 15.0
comp=Z,118nm,1.2s
RAF Rauma 76.12 334 *e*P **P** **09 44 12.9 +0.9**
SOC Sochi 76.19 312 *e*P **P** **09 44 12.0 -0.8**
SOC *e**PP **pP** **09 45 39.8 -2.5**
SOC *e**SP **sP** **09 46 22.4 -2.7**
SOC *e* 09 47 09.5
SOC *e*PPP PPP 09 48 57.2
SOC *e*S **S** **09 53 22.1 -0.5**
SOC *e*SS **SS** **09 58 31.4 +5.7**
SOC *e*SSS SSS 10 01 48.8
SOC pmax pmax
comp=Z,63nm,0.6s
SLWR Sila 76.25 290 P **P** **09 44 13.8 +0.2**
YBH Yreka Blue Hor 76.31 50 P **P** **09 44 14.7 +1.0**
comp=Z,44nm,0.8s,baz=334,slow=2.2,SNR=26
comp=Z,44nm,0.8s
YBH Yreka Blue Hor 76.31 50 IAmb IAmb 09 44 16.5
comp=Z,60nm,0.8s
KMRM Mail Ridge 76.34 51 IAmb IAmb 09 44 16.9
comp=Z,88nm,0.9s
L04D Klamath Falls 76.35 49 P **P** **09 44 15.6 +1.6**
baz=298,SNR=25
E08A Dider Farm, El 76.35 44 IAmb IAmb 09 44 16.1
comp=Z,93nm,0.9s
DMTO DMTO 76.42 283 P **P** **09 44 14.7 +0.2**
K04D Chiloquin, OR 76.52 49 P **P** **09 44 16.6 +1.8**
baz=298,SNR=13
J05D Fort Rock, OR 76.54 48 P **P** **09 44 16.9 +1.9**
baz=298,SNR=146
URZ Urewera 76.60 150 IAmb IAmb 09 44 15.2
comp=Z,107nm,1.0s
NEW Newport 76.63 42 P **P** **09 44 15.9 +0.7**
comp=Z,104nm,0.8s,baz=298,slow=4.5,SNR=128
comp=Z,104nm,0.8s
NEW Newport 76.63 42 IAmb IAmb 09 44 17.5
comp=Z,131nm,0.9s
NEW Newport 76.63 42 P **P** **09 44 16.5 +1.2**
baz=300,SNR=65
MTSE Matsula 76.68 331 *e*P **P** **09 44 15.8 +0.7**
JMIC Jan Mayen 76.75 350 *e*P **P** **09 44 17.3 +1.9**
E09A Wood Farm, Sta 76.89 44 IAmb IAmb 09 44 19.2
comp=Z,150nm,1.0s
QRZ Quartz Range 76.94 155 IAmb IAmb 09 44 18.2
comp=Z,119nm,0.8s
QRZ Quartz Range 76.94 155 P **P** **09 44 17.2 +0.4**
UPNV Upernavik 77.01 5 *i* P **P** **09 44 17.6 +0.8**
UPNV IAmb IAmb 09 44 18.4
comp=Z,189nm,1.2s
BKZ Black Stump Fm 77.09 151 P **P** **09 44 17.8 +0.1**
RBK Rabkut 77.15 283 P **P** **09 44 18.5 -0.1**
NSS Namsos 77.20 339 *e*P **P** **09 44 18.2 +0.2**
NSS IAmb IAmb 09 44 18.8
comp=Z,89nm,0.8s
I07A Izee 77.25 46 IAmb IAmb 09 44 21.5
comp=Z,61nm,1.0s
MNK Minsk 77.26 326 *i* P **P** **09 44 19.2 +0.7**
MNK *i* *PP **pP** **09 45 48.5 +0.2**
MNK *i* 09 47 19.6
MNK *i* PPP PPP 09 49 09.1
MNK *i* S **S** **09 53 33.2 -0.4**
MNK pmax pmax
comp=Z,221nm,1.3s
MNK pmax pmax
comp=E,16nm,1.4s
MNK MLR MLR
comp=E,74nm,24.0s
MNK MLR MLR
comp=Z,319nm,15.0s
MNK Minsk 77.26 326 *i* P **P** **09 44 19.3 +0.7**
comp=E,16nm,1.4s
MNK *i* P **P** **09 44 19.3 +0.7**
MNK *i* P **P** **09 44 19.3 +0.7**
comp=Z,221nm,1.3s,baz=236
MNK *i* pP **pP** **09 45 48.5 +0.2**
MNK *i* PP **PP** **09 47 19.6 +0.9**
MNK *i* PPP PPP 09 49 09.2
MNK *i* S **S** **09 53 33.3 -0.4**
MNK *i* sS **sS** **09 56 15.4 -0.3**
MNK *i* SSS SSS 10 03 01.2
MNK *i* LR LR 10 18 18.7
MNK *i* LRM MLR 10 21 06.9
comp=E,74nm,23.5s
MNK *i* LRM MLR 10 21 15.9
MNK *i* LRM MLR 10 21 19.8
comp=Z,319nm,15.3s
WHFO Wadi Hawf 77.32 283 P **P** **09 44 19.0 -0.6**
HOPS Hopland Field 77.35 52 IAmb IAmb 09 44 21.8
comp=Z,78nm,1.2s
DUWZ D'Urville Isla 77.45 154 P **P** **09 44 19.6 0.0**
DSZ Denniston Nort 77.48 156 P **P** **09 44 19.3 -0.4**
ISAL Salakas 77.49 328 *e*P **P** **09 44 21.2 +1.5**
MRNZ Matariki Terra 77.52 155 P **P** **09 44 19.5 -0.4**
NACGM Naroch 77.56 327⇓ *e*P **P** **09 44 21.1 +1.0**
NNZ Nelson 77.60 154 IAmb IAmb 09 44 21.0
comp=Z,119nm,0.8s
NNZ Nelson 77.60 154 P **P** **09 44 20.3 -0.1**
GDXM Geysers 77.63 52 IAmb IAmb 09 44 23.9
comp=Z,76nm,1.1s
SUMG Summit 77.73 359⇑ *i*P **P** **09 44 22.9 +1.6**
SUMG IAmb IAmb 09 44 24.0
comp=Z,221nm,1.1s
MOD Modoc Plateau 77.81 49 IAmb IAmb 09 44 24.4
comp=Z,67nm,0.8s
KIW Kapiti Island 77.88 153 P **P** **09 44 21.6 -0.4**
MCCM Maconi Confer 77.89 53 IAmb IAmb 09 44 24.4
comp=Z,131nm,1.0s
THZ Tophouse 77.89 155 P **P** **09 44 21.3 -0.7**
TCW Tory Channel 77.93 154 P **P** **09 44 21.9 -0.3**
OGWZ Otaki Gorge 77.95 153 P **P** **09 44 22.0 -0.3**
SLIT Slitere, Latvi 77.97 331 *e*P **P** **09 44 22.8 +0.5**
ABTO Aybut 77.98 283 P **P** **09 44 23.2 0.0**
TUWZ Tuamarina 77.99 154 P **P** **09 44 22.1 -0.4**
WALA Waterton Lakes 78.04 40 IAmb IAmb 09 44 25.5
comp=Z,153nm,1.2s
CAW Cannon Point 78.15 153 P **P** **09 44 23.0 -0.5**
HOWZ Holdsworth Sta 78.15 153 P **P** **09 44 22.8 -0.6**
ORV Oroville 78.15 51 IAmb IAmb 09 44 25.6
comp=Z,118nm,1.1s
SNZO South Karori 78.19 153 P **P** **09 44 23.1 -0.4**
SNZO IAmb IAmb 09 44 23.8
comp=Z,176nm,1.1s
INZ Inchbonnie 78.21 156 P **P** **09 44 22.8 -0.9**
BSWZ Blackbirch Sta 78.21 154 P **P** **09 44 23.0 -0.7**
BMO Blue Mountains 78.23 45 IAmb IAmb 09 44 26.5
comp=Z,92nm,0.9s
VSVD Vaisvydziai 78.25 329 *e*P **P** **09 44 24.9 +1.1**
BFZ Birch Farm 78.27 152 IAmb IAmb 09 44 24.8
comp=Z,117nm,0.9s
BFZ Birch Farm 78.27 152 P **P** **09 44 24.1 +0.1**
WVZ Waitaha Valley 78.27 157 P **P** **09 44 23.6 -0.4**
GCSZ Gaunt Creek Bo 78.35 157 P **P** **09 44 24.4 0.0**
MTW Mount Morrison 78.37 153 P **P** **09 44 24.0 -0.6**
FOZ Fox Glacier 78.37 158 IAmb IAmb 09 44 25.6
comp=Z,98nm,1.0s
NUUG Nuugaatsiaq 78.42 4 *e*P **P** **09 44 25.5 +1.0**
MARD Mardin 78.47 306 IAmb IAmb 09 44 27.3
comp=Z,100nm,0.6s
MSWZ Moikau Station 78.49 153 P **P** **09 44 25.0 -0.2**
PABE Paberze 78.52 328 *e*P **P** **09 44 26.0 +0.7**
JTMT Jette 78.53 41 IAmb IAmb 09 44 28.2
comp=Z,125nm,1.0s
LTZ Lake Taylor 78.55 156 IAmb IAmb 09 44 30.4
comp=Z,103nm,1.6s
LTZ Lake Taylor 78.55 156 P **P** **09 44 25.2 -0.4**
PLWZ Palliser 78.62 153 P **P** **09 44 26.1 +0.2**
WVOR Wild Horse Val 78.62 48 IAmb IAmb 09 44 28.4
comp=Z,75nm,0.8s
TBLU Trondheim 78.65 339 *e*P **P** **09 44 24.6 -1.3**
KHZ Kahutara 78.69 155 IAmb IAmb 09 44 26.1
comp=Z,60nm,0.9s

KHZ Kahutara 78.69 155 P **P** **09 44 25.1 -1.2**
AKASG Malin Array Be 78.70 322 P **P** **09 44 26.4 0.0**
comp=Z,24nm,0.5s,baz=48,slow=6.4,SNR=181
AKASG pP **pwP** **09 46 00.3 -1.6**
comp=Z,18nm,0.9s,baz=50,slow=6.2,SNR=4.1
AKASG PP **PP** **09 47 29.9 -0.7**
comp=Z,13nm,0.9s,baz=50,slow=8.5,SNR=5.0
AKASG S **S** **09 53 46.9 -2.0**
comp=Z,13nm,0.9s,baz=51,slow=9.9,SNR=12
comp=Z,24nm,0.5s
AKASG Malin Array Be 78.70 322 IAmb IAmb 09 44 27.6
comp=Z,59nm,0.9s
AKASG Malin Array Be 78.70 322*ce*P **P** **09 44 26.6 +0.2**
AKASG pmax pmax
comp=Z,27nm,0.5s
AKBB Malin Array Si 78.70 322 IAmb IAmb 09 44 27.6
comp=Z,80nm,0.8s
AKBB Malin Array Si 78.70 322*ce*P **P** **09 44 26.4 0.0**
BEKR Beckworth 78.77 50 IAmb IAmb 09 44 29.3
comp=Z,127nm,0.8s
SCO Scoresbysund 78.93 354⇑ *i*P **P** **09 44 28.8 +1.5**
SCO IAmb IAmb 09 44 29.4
comp=Z,82nm,0.8s
OXZ Oxford 78.94 156 IAmb IAmb 09 44 27.9
comp=Z,151nm,1.3s
OXZ Oxford 78.94 156 P **P** **09 44 27.4 -0.2**
PLTX Planet X, Gerl 78.94 49 IAmb IAmb 09 44 30.6
comp=Z,102nm,0.7s
RPZ Rata Peaks 78.95 157 IAmb IAmb 09 44 30.6
comp=Z,96nm,1.0s
RPZ Rata Peaks 78.95 157 P **P** **09 44 27.3 -0.4**
PBUR Paburge 79.12 329 *e*P **P** **09 44 28.9 +0.4**
MSO Missoula 79.21 42 IAmb IAmb 09 44 31.4
comp=Z,182nm,1.9s
MSO Missoula 79.21 42 P **P** **09 44 30.0 +0.6**
baz=302,SNR=30
LBZ Lake Benmore 79.25 158 IAmb IAmb 09 44 30.3
comp=Z,108nm,1.0s
EMB Emerald Bay 79.38 51 IAmb IAmb 09 44 32.9
comp=Z,132nm,0.9s
MQZ McQueen's Vall 79.49 156 IAmb IAmb 09 44 31.7
comp=Z,169nm,1.6s
PAHR Pah Rah Range 79.50 50 IAmb IAmb 09 44 33.3
comp=Z,62nm,0.9s
CMB Columbia Colle 79.66 52 IAmb IAmb 09 44 33.6
comp=Z,90nm,0.7s
PNTR Pine Nut 79.67 51 IAmb IAmb 09 44 34.6
comp=Z,93nm,0.9s
HFS Hagfors 79.72 335 S **S** **09 53 54.3 -4.9**
comp=Z,12nm,1.1s,baz=61,slow=12,SNR=6.6
PYZ Puysegur Point 79.79 161 IAmb IAmb 09 44 33.1
comp=Z,94nm,0.7s
MFID Camas Ranch 79.89 46 IAmb IAmb 09 44 35.7
comp=Z,100nm,1.1s
DOMB Dombas 79.91 338 *e*P **P** **09 44 33.3 +0.6**
DOMB IAmb IAmb 09 44 33.7
comp=Z,145nm,0.9s
BBGB Big Mountain B 79.93 54 IAmb IAmb 09 44 36.0
comp=Z,133nm,0.9s
NB2 NORSAR Subarra 79.94 337 P **P** **09 44 32.9 0.0**
comp=Z,100nm,0.7s,baz=47,slow=5.1
NB2 NORSAR Subarra 79.94 337 P **P** **09 44 32.9 0.0**
baz=47,slow=5.1
NOA NORSAR Array B 79.94 337 P **P** **09 44 33.0 +0.1**
comp=Z,112nm,0.8s,baz=49,slow=4.8,SNR=517
NOA pP **pwP** **09 46 06.3 -2.1**
comp=Z,15nm,0.8s,baz=43,slow=5.6,SNR=6.1
NOA PP **PP** **09 47 38.3 -2.3**
comp=Z,12nm,0.9s,baz=44,slow=8.5,SNR=7.0
NOA S **S** **09 53 57.0 -4.5**
comp=Z,3.1nm,1.0s,baz=49,slow=10.0,SNR=4.2
comp=Z,112nm,0.8s
YERR Yerington 79.96 51 IAmb IAmb 09 44 35.5
comp=Z,77nm,0.7s
MOL Molde 79.99 339 *e*P **P** **09 44 32.7 -0.4**
MOL IAmb IAmb 09 44 35.4
comp=Z,85nm,0.9s
DIKM Dikmen 80.01 312⇑P **P** **09 44 35.8 +2.2**
NC602 NORSAR Array S 80.05 337 IAmb IAmb 09 44 33.8
comp=Z,94nm,0.9s
NC602 NORSAR Array S 80.05 337 *e*P **P** **09 44 33.2 -0.2**
NC602 IAmb IAmb 09 44 33.5
comp=Z,51nm,0.9s
AKN Aaknes 80.46 339 *e*P **P** **09 44 36.4 +0.8**
AKN IAmb IAmb 09 44 37.1
comp=Z,135nm,0.9s
BMN Battle Mountai 80.56 49 IAmb IAmb 09 44 39.3
comp=Z,68nm,1.0s
SORM Soroca 80.61 321⇑P **P** **09 44 36.0 -0.6**
SORM Soroca 80.61 321⇑P **P** **09 44 36.0 -0.6**
RYN Ryan 80.62 51 IAmb IAmb 09 44 39.5
comp=Z,84nm,0.9s
BZK Bozkurt 80.64 313⇑P **P** **09 44 36.2 -0.7**
PURM Purcari 80.66 319⇓P **P** **09 44 37.7 +0.8**
HLID Hailey 80.68 45 P **P** **09 44 38.9 +1.6**
baz=302,SNR=109
KVN Kaiserville 80.69 50 IAmb IAmb 09 44 39.8
comp=Z,94nm,0.9s
LHV Little Huntoon 80.83 51 IAmb IAmb 09 44 41.0
comp=Z,111nm,0.9s
ILULI Ilulissat 80.84 4 IAmb IAmb 09 44 39.3
comp=Z,81nm,1.0s
ILULI Ilulissat 80.84 4 *i* P **P** **09 44 38.0 +0.6**
ILULI IAmb IAmb 09 44 39.0
comp=Z,81nm,1.0s
NVAR Mina Array Bea 80.87 51 P **P** **09 44 39.6 +1.2**
comp=Z,75nm,0.8s,baz=285,slow=5.6,SNR=686
NVAR pP **pwP** **09 46 12.1 -0.9**
comp=Z,3.8nm,0.7s,baz=291,slow=5.8,SNR=2.5
NVAR PKKPbc **PKKPbc** **10 03 13.1 +0.2**
comp=Z,0.4nm,0.6s,baz=175,slow=3.3,SNR=5.1
comp=Z,75nm,0.8s
PAGB Antelope Grade 80.90 54 IAmb IAmb 09 44 41.1
comp=Z,127nm,0.8s
OSL Oslo 80.91 336 *e*P **P** **09 44 38.4 +0.5**
OSL IAmb IAmb 09 44 38.9
comp=Z,170nm,0.8s
EGMT Eagleton 80.92 39 P **P** **09 44 39.4 +1.0**
baz=305,SNR=71
MLAC Mammoth, Mammo 80.92 52 P **P** **09 44 40.5 +1.7**
baz=301,SNR=47
KIS Kishinev 81.00 319 *e*P **P** **09 44 38.5 -0.2**
KIS *i* pP **pwP** **09 46 15.0 +0.2**
KIS *i* S **S** **09 54 11.0 -1.8**
comp=Z,180nm,1.5s
KIS Kishinev 81.00 319 *e*P **P** **09 44 38.5 -0.2**
KIS *i* *PP **pwP** **09 46 15.0 +0.2**
KIS *i* S **S** **09 54 11.0 -1.8**
KIS smax smax
comp=N,180nm,1.5s
KIS smax smax
comp=E,290nm,2.3s
MILM Milestii Mici 81.05 319⇑ *i*P **P** **09 44 39.0 +0.1**
comp=E,47nm,1.0s
MILM *i* pP **pwP** **09 46 15.0 -0.1**
MILM *i* S **S** **09 54 11.0 -2.3**
comp=E,200nm,1.8s
MILM LRM MLR 10 23 43.0
comp=E,400nm,16.0s
MILM Milestii Mici 81.05 319*c* *i*P **P** **09 44 39.0 +0.1**
MILM *i* *PP **pwP** **09 46 15.0 -0.1**
MILM *i* S **S** **09 54 11.0 -2.3**
MILM pmax pmax
comp=Z,47nm,1.0s
MILM smax smax
comp=E,240nm,2.6s
MILM smax smax
comp=N,200nm,1.8s
MILM MLR MLR
comp=Z,400nm,16.0s
FCC Fort Churchill 81.21 25 IAmb IAmb 09 44 40.8
comp=Z,103nm,1.1s
VOG Valley Oaks Go 81.21 53 P **P** **09 44 40.7 +0.7**
baz=301,SNR=8.8
BOZ Bozeman (W) 81.23 42 P **P** **09 44 41.3 +1.2**
baz=304,SNR=113
ICESG Greenland Ices 81.25 360 *i* P **P** **09 44 40.8 +0.8**
ICESG IAmb IAmb 09 44 42.8
comp=Z,140nm,0.8s
SMMC Simmler 81.29 54 P **P** **09 44 42.1 +1.6**
baz=300,SNR=9.5
ILGA Ilgaz 81.31 312 IAmb IAmb 09 44 43.5
comp=Z,111nm,0.8s
Q09A Carvers 81.42 50 IAmb IAmb 09 44 43.5
comp=Z,91nm,0.8s
HYA Hoyanger 81.48 339 *e*P **P** **09 44 41.5 +0.7**
HYA IAmb IAmb 09 44 42.1

comp=Z,143nm,1.0s
FOO Floro 81.50 340 *e*P P **09 44 41.6 +0.7**
FOO IAmb IAmb 09 44 42.2
comp=Z,86nm,0.8s
KONO Kongsberg 81.50 337 P P **09 44 41.5 +0.5**
KONO Kongsberg 81.50 337 *c*eP P **09 44 41.5 +0.5**
KONO pmax pmax
comp=Z,36nm,0.8s
KONO Kongsberg 81.50 337 *e*P P **09 44 41.1 0.0**
KONO IAmb IAmb 09 44 41.8
comp=Z,41nm,0.9s
RAYN Ar Rayn 81.52 292 P P **09 44 42.8 +0.9**
RAYN Ar Rayn 81.52 292 P P **09 44 42.8 +0.9**
RAYN pmax pmax
comp=Z,117nm,0.7s
RAYN Ar Rayn 81.52 292 P P **09 44 42.9 +0.9**
RAYN Ar Rayn 81.52 292 *i* P P **09 44 42.8 +0.9**
SNR=13
TIN Tinemaha, Big 81.63 52 P P **09 44 44.0 +1.7**
baz=301,SNR=20
PKM Mcpherson Peak 81.64 55 P P **09 44 44.0 +1.6**
baz=301,SNR=16
VES Vestal, Richgr 81.66 53 P P **09 44 42.9 +0.6**
baz=301,SNR=37
ELK Elko 81.67 48 P P **09 44 43.7 +1.1**
comp=Z,41nm,0.7s,baz=311,slow=5.4,SNR=226
ELK pP **pP 09 46 15.7 +1.6**
comp=Z,4.2nm,0.7s,baz=338,slow=4.4,SNR=2.3
ELK S **S 09 54 21.0 +0.5**
comp=Z,0.3nm,0.3s,baz=268,slow=23,SNR=16
comp=Z,41nm,0.7s
ELK Elko 81.67 48 IAmb IAmb 09 44 44.8
comp=Z,48nm,0.7s
VASR Vaslui 81.78 320 ⇑P P **09 44 43.9 +1.1**
MZP Montezuma Peak 81.87 51 IAmb IAmb 09 44 45.9
comp=Z,58nm,0.6s
SOEG Soedalen 81.88 356 *e*P P **09 44 42.8 -0.1**
BCW Bitter Crk WRg 81.89 54 IAmb IAmb 09 44 46.5
comp=Z,81nm,0.9s
YHL Hebgen Lake 81.91 43 IAmb IAmb 09 44 46.7
comp=Z,96nm,1.0s
LVV L'vov 81.92 324 *e*P P **09 44 43.5 +0.1**
LVV *e*PPP PPP 09 49 47.9
LVV *e*S **S 09 54 21.2 -1.0**
LVV *e*PS 09 55 09.5
LVV pmax pmax
comp=Z,100nm,1.3s
LVV MLR MLR
comp=E,500nm,16.0s
LVV MLR MLR
comp=N,200nm,14.0s
LVV MLR MLR
comp=Z,500nm,15.0s
SBC Santa Barbara 81.94 55 P P **09 44 45.2 +1.5**
baz=301
LCH Last Change Ra 81.94 52 IAmb IAmb 09 44 45.7
comp=Z,69nm,0.6s
SUE Sulen 82.00 339 IAmb IAmb 09 44 44.4
comp=Z,67nm,1.0s
SUE *e*P P **09 44 44.5 +1.0**
TLCR 82.03 318 ⇑P P **09 44 44.9 +0.9**
TLCR 82.03 318 ⇑P P **09 44 44.9 +0.9**
CWC Cottonwood Cre 82.05 53 P P **09 44 45.4 +0.9**
baz=301
BR131 Keskin Array S 82.07 311 IAmb IAmb 09 44 46.5
comp=Z,103nm,0.8s
BRTR Keskin Array B 82.07 311 P P **09 44 45.1 +0.6**
comp=Z,63nm,0.8s,baz=98,slow=3.8,SNR=164
BRTR pP **pP 09 46 16.9 +1.4**
comp=Z,4.8nm,0.9s,baz=76,slow=5.4,SNR=1.7
BRTR PKKPbc **PKKPbc 10 03 10.1 -0.1**
comp=Z,2.3nm,0.6s,baz=212,slow=4.3,SNR=7.0
comp=Z,63nm,0.8s
BRTR Keskin Array B 82.07 311 *c*eP P **09 44 45.2 +0.6**
BRTR pmax pmax
comp=Z,64nm,0.8s
VLDR Vladesti 82.08 319 ⇓P P **09 44 45.5 +1.2**
BIR Birlad 82.09 319 ⇑P P **09 44 46.0 +1.7**
BIR Birlad 82.09 319 ⇑P P **09 44 46.0 +1.7**
YMR Madison River 82.14 43 IAmb IAmb 09 44 48.0
comp=Z,125nm,1.1s
GMN Gold Mountain 82.16 51 IAmb IAmb 09 44 47.1
comp=Z,79nm,0.6s
VARL Varlezi 82.18 319 ⇑P P **09 44 44.8 0.0**
ISA Isabella, Lake 82.18 53 IAmb IAmb 09 44 46.4
comp=Z,151nm,1.8s
ISA Isabella, Lake 82.18 53 P P **09 44 45.4 +0.3**
baz=301,SNR=33
ARVC Arvin 82.21 54 P P **09 44 46.3 +1.1**
baz=301,SNR=21
SCZ2 Santa Cruz Isl 82.22 55 P P **09 44 46.1 +0.9**
baz=301
JURR Jurilovca 82.23 318 ⇑P P **09 44 46.7 +1.6**
GRAC Grapevine Rang 82.25 52 IAmb IAmb 09 44 48.0
comp=Z,160nm,1.2s
GRAC Grapevine Rang 82.25 52 P P **09 44 47.0 +1.5**
baz=302,SNR=33
BEL Belsk 82.28 327 *e*P P **09 44 45.7 +0.6**
BEL *e*pP **pWP 09 46 22.4 +0.8**
YNR Norris Junctio 82.28 42 IAmb IAmb 09 44 49.3
comp=Z,113nm,1.1s
ODD1 Odda 82.30 338 *e*P P **09 44 45.8 +0.6**
ODD1 IAmb IAmb 09 44 46.5
comp=Z,88nm,1.0s
ASK Askoy 82.32 339 *e*P P **09 44 46.1 +1.0**
ASK IAmb IAmb 09 44 46.6
comp=Z,130nm,0.8s
GHRR 82.33 319 ⇑P P **09 44 47.3 +1.7**
BER Bergen 82.35 339 IAmb IAmb 09 44 46.3
comp=Z,67nm,0.8s
BER *e*P P **09 44 46.3 +1.0**
CFR Carcaliu 82.43 318 ⇑P P **09 44 46.8 +0.8**
CFR Carcaliu 82.43 318 ⇑P P **09 44 46.8 +0.8**
TPGR Topolog 82.45 318 ⇑P P **09 44 47.3 +1.1**
TESR Tescani 82.50 320 ⇑P P **09 44 47.1 +0.7**
H17A Grant Village 82.53 43 P P **09 44 50.2 +3.3**
baz=305,SNR=84
LKWY Lake 82.53 42 IAmb IAmb 09 44 51.3
comp=Z,147nm,1.0s
ANTO Ankara 82.54 312 ⇑P P **09 44 47.6 +0.8**
ANTO Ankara 82.54 312 P P **09 44 48.0 +1.1**
ANTO IAmb IAmb 09 44 48.6
comp=Z,59nm,0.7s
ANTO Ankara 82.54 312 P P **09 44 48.0 +1.1**
ANTO pmax pmax
comp=Z,59nm,0.7s
BIZ Bicaz 82.55 320 ⇑P P **09 44 47.9 +1.2**
OSI Osito Audit: C 82.55 54 P P **09 44 48.3 +1.3**
baz=301,SNR=5.6
PANC Panciu 82.59 319 ⇓P P 09 44 55.0 +8.1
IMW Indian Meadow 82.60 43 IAmb IAmb 09 44 50.4
comp=Z,53nm,0.8s
BUR08 Bucovina Ar. S 82.62 321 IAmb IAmb 09 44 49.1
comp=Z,54nm,0.8s
BURAR Bucovina Array 82.63 321 ⇑P P **09 44 48.4 +1.2**
BURAR Bucovina Array 82.63 321 IAmb IAmb 09 44 49.4
comp=Z,83nm,0.8s
FLWY Flagg Ranch 82.63 43 IAmb IAmb 09 44 51.0
comp=Z,112nm,1.1s
MPMC Manual Prospec 82.66 53 P P **09 44 48.8 +1.1**
baz=302,SNR=101
HVU Hansel Valley 82.67 46 IAmb IAmb 09 44 50.4
comp=Z,101nm,0.9s
SNCC San Nicolas Is 82.68 56 P P **09 44 48.8 +1.2**
baz=301
TIRR Tirgusor 82.68 318 ⇑P P **09 44 47.7 +0.3**
TIRR Tirgusor 82.68 318 IAmb IAmb 09 44 49.3
comp=Z,93nm,0.9s
TIRR Tirgusor 82.68 318 ⇑P P **09 44 47.7 +0.3**
FXWY Fox Creek 82.69 43 IAmb IAmb 09 44 50.9
comp=Z,91nm,1.4s
ODBI Odobesti 82.71 319 ⇑P P **09 44 50.3 +2.8**
KWP Kalwaria Pacla 82.72 324 *e*P P **09 44 48.3 +0.8**
KWP *e*pP **pP 09 46 18.1 -0.6**
R11A Troy Canyon, C 82.73 50 IAmb IAmb 09 44 50.5
comp=Z,75nm,1.1s
R11A Troy Canyon, C 82.73 50 P P **09 44 49.3 +1.3**
baz=302,SNR=150
BLS5 Blasjo 82.73 338 *e*P P **09 44 48.0 +0.6**
BLS5 IAmb IAmb 09 44 48.7
comp=Z,124nm,1.1s
CCAC Calif City Air 82.77 54 IAmb IAmb 09 44 50.5
comp=Z,127nm,1.0s
MOOW Moose Ponds 82.80 43 IAmb IAmb 09 44 51.3
comp=Z,118nm,1.7s
LRMC Laurel Mtn Rad 82.83 53 P P **09 44 49.6 +1.1**
baz=302,SNR=32
HARR Harsova 82.83 318 ⇑P P **09 44 49.0 +0.9**
HARR Harsova 82.83 318 ⇑P P **09 44 49.0 +0.9**
VRI Vrincioaia 82.83 319 ⇓P P **09 44 49.7 +1.5**
VRI Vrincioaia 82.83 319 ⇓P P **09 44 49.7 +1.5**
TLBR Topalu 82.85 318 ⇑P P **09 44 49.5 +1.3**
WCT Wildcat Mounta 82.86 52 IAmb IAmb 09 44 50.8
comp=Z,271nm,1.7s
RLMT Red Lodge 82.87 42 IAmb IAmb 09 44 51.4
comp=Z,104nm,1.1s
RLMT Red Lodge 82.87 42 P P **09 44 50.2 +1.6**
baz=306,SNR=64
FURC Furnace Creek, 82.87 52 P P **09 44 49.9 +1.4**
baz=302,SNR=118
PLOR Plostina 82.89 319 ⇑P P **09 44 49.4 +0.9**
PLOR Plostina 82.89 319 ⇑P P **09 44 49.4 +0.9**
HOMB Homborsund 82.91 336 *e*P P **09 44 48.3 +0.1**
EDW2 Edwards Air Fo 82.92 54 P P **09 44 50.3 +1.4**
baz=302,SNR=66
REDW Red Top Meadow 82.95 44 IAmb IAmb 09 44 52.0
comp=Z,100nm,1.5s
GKP Gorka Klasztor 82.98 329 *e*P P **09 44 49.0 +0.3**
GKP *e*S **S 09 54 29.3 -3.3**
GKP Gorka Klasztor 82.98 329 *e*P P **09 44 49.7 +1.0**
DECC Green Verdugo 83.01 55 P P **09 44 50.2 +0.9**
baz=302,SNR=7.9
TPNV Topopah Spring 83.03 51 P P **09 44 50.8 +1.2**
baz=302,SNR=297
SFJD Kangerlussuaq 83.07 4 P P **09 44 49.6 +0.7**
SFJD IAmb IAmb 09 44 50.6
comp=Z,134nm,0.9s
SFJD Kangerlussuaq 83.07 4 P P **09 44 49.6 +0.7**
SFJD pmax pmax
comp=Z,134nm,1.0s
SFJD Kangerlussuaq 83.07 4 *i* P P **09 44 49.2 +0.4**
SFJD IAmb IAmb 09 44 50.3
comp=Z,122nm,0.9s
COVR Voineasa-Covas 83.14 320 ⇑P P **09 44 51.5 +1.8**
PASC Pasadena Art C 83.16 55 IAmb IAmb 09 44 52.0
comp=Z,82nm,1.1s
SPR3 Spring Creek 3 83.21 49 IAmb IAmb 09 44 53.4
comp=Z,211nm,1.7s
OZUR 83.23 320 ⇓P P **09 44 51.9 +1.8**
ICOR Ion Corvin 83.24 317 ⇑P P **09 44 51.8 +1.6**
PMOR Pomariorio Ree 83.28 111 *e*T T 11 14 38.6
comp=Z,5.1nm,0.2s
KMY Karmoy 83.29 338 *e*P P **09 44 50.7 +0.6**
SNART Snartemo 83.31 337 *e*P P **09 44 50.8 +0.6**
FMP Fort Macarthur 83.32 55 P P **09 44 51.8 +1.0**
baz=302
COP Copenhagen 83.33 333 *e*P P **09 44 50.8 +0.3**
COP IAmb IAmb 09 44 51.4
comp=Z,227nm,0.8s
PPT2 Papeete2 83.36 115 *e*LR LR 10 11 43.8
comp=Z,184nm,25.0s
ISR Istrita 83.38 319 ⇑P P **09 44 50.2 -0.8**
ISR Istrita 83.38 319 ⇑P P **09 44 50.2 -0.8**
CIS Catalina Islan 83.39 55 P P **09 44 52.3 +1.0**
baz=302,SNR=6.0
ARCR ARCALIA 83.42 321 ⇑P P **09 44 52.8 +1.7**
BFSC Mount Baldy Ra 83.49 54 P P **09 44 52.6 +0.8**
baz=302,SNR=22
MLR Muntele Rosu 83.50 319 ⇑P P **09 44 52.6 +0.9**
MLR Muntele Rosu 83.50 319 P P **09 44 52.3 +0.7**
comp=Z,13nm,0.7s,baz=50,slow=7.9,SNR=5.1
MLR S **S 09 54 33.4 -4.9**
comp=Z,9.6nm,0.9s,baz=3.8,slow=22,SNR=14
comp=Z,13nm,0.7s
MLR Muntele Rosu 83.50 319 ⇑P P **09 44 52.6 +0.9**
BMR Baia Mare 83.52 322 ⇑P P **09 44 53.4 +1.9**
BMR Baia Mare 83.52 322 ⇑P P **09 44 53.4 +1.9**
SCI2 San Clemente I 83.52 56 P P **09 44 52.7 +0.9**
baz=302
DOPR Dopca 83.53 320 ⇑P P **09 44 53.1 +1.4**
DUG Dugway, Tooele 83.53 47 IAmb IAmb 09 44 54.5
comp=Z,138nm,0.8s
DUG Dugway, Tooele 83.53 47 P P **09 44 53.5 +1.6**
baz=304,SNR=218
GSC Goldstone, Bar 83.53 53 IAmb IAmb 09 44 54.2
comp=Z,135nm,0.9s
GSC Goldstone, Bar 83.53 53 P P **09 44 53.2 +1.2**
baz=302,SNR=106
UZH Uzhgorod 83.56 323 *e*P P **09 44 52.5 +0.8**
UZH *e*S **S 09 54 38.5 +0.1**
UZH MLR MLR
comp=Z,80nm,17.0s
SHOC Shoshone, Teco 83.58 52 P P **09 44 53.3 +1.1**
baz=302,SNR=57
PRN Pahroc Range 83.60 50 IAmb IAmb 09 44 54.9
comp=Z,114nm,1.0s
RRX Edison Barstow 83.62 53 P P **09 44 53.8 +1.4**
baz=302,SNR=5.4
DGMT Dagmar 83.62 37 IAmb IAmb 09 44 53.9
comp=Z,127nm,1.0s
DGMT Dagmar 83.62 37 P P **09 44 52.5 +0.4**
baz=309
DGMT Dagmar 83.62 37 P P **09 44 52.8 +0.7**
baz=309,SNR=34
LAO LASA Array 83.64 39 IAmb IAmb 09 44 54.6
comp=Z,97nm,0.9s
LAO LASA Array 83.64 39 P P **09 44 53.4 +1.1**
baz=308
LAO LASA Array 83.64 39 P P **09 44 53.5 +1.1**
baz=308,SNR=56
SECR 83.70 319 ⇓P P **09 44 53.8 +1.3**
PSUT Pine Spring 83.77 49 IAmb IAmb 09 44 55.4
comp=Z,74nm,0.8s
DY2G Dye2 83.79 2 *i* P P **09 44 53.4 +0.5**
DY2G IAmb IAmb 09 44 54.3
comp=Z,75nm,0.8s
OJC Ojcow 83.80 326 *e*P P **09 44 51.6 -1.3**
OJC *e*pP **pP 09 46 24.9 +0.4**
OJC *e*S **S 09 54 32.4 -8.5**
OJC *e*SS **SS 10 00 12.5 -5.4**
ASF Jabal al Asfar 83.81 304 P P **09 44 54.0 +0.6**
comp=Z,48nm,0.8s,baz=66,slow=2.7,SNR=74
comp=Z,48nm,0.8s
CRVS Cervenica-Dubn 83.81 324 *e*P P **09 44 53.5 +0.5**
CRVS pmax pmax
comp=Z,53nm,1.3s
CRVS Cervenica-Dubn 83.81 324 *e*P P **09 44 53.5 +0.5**
CRVS *e*pP **pWP 09 46 31.5 +1.7**
CRVS *e*PP **PP 09 48 12.5 +0.1**
CTU Camp Tracy 83.92 46 IAmb IAmb 09 44 56.3
comp=Z,99nm,0.9s
ELS Elsinore Mount 83.97 55 IAmb IAmb 09 44 56.2
comp=Z,292nm,1.8s
BBRC Big Bear Solar 84.00 54 P P **09 44 55.5 +1.0**
baz=302,SNR=37
SHPR Sheep Range 84.01 51 IAmb IAmb 09 44 57.0
comp=Z,96nm,0.8s
MUD Monsted U'grnd 84.03 335 *e*P P **09 44 54.0 +0.1**
MUD IAmb IAmb 09 44 54.8
comp=Z,66nm,0.9s
VOIR 84.03 320 ⇑P P **09 44 55.4 +1.1**
VOIR 84.03 320 ⇑P P **09 44 55.4 +1.1**
TUQ Turquoise Moun 84.07 52 P P **09 44 56.0 +1.2**
baz=303,SNR=87
NIE Niedzica 84.07 325 *e*P P **09 44 55.3 +1.0**
NIE *e*pP **pWP 09 46 30.6 -0.6**
NIE *e*PP **PP 09 48 16.1 +1.6**
NIE *e*S **S 09 54 43.9 +0.3**
BW06 Boulder Array 84.07 44 P P **09 44 55.5 +0.7**
baz=306,SNR=71
PDAR Pinedale Array 84.07 44 P P **09 44 55.3 +0.6**
comp=Z,32nm,0.9s,baz=302,slow=2.8,SNR=213
PDAR pP **pP 09 46 28.1 +1.2**
comp=Z,3.9nm,0.7s,baz=256,slow=1.9,SNR=2.8
comp=Z,32nm,0.9s
HEC Hector,Ludlow 84.11 53 P P **09 44 56.0 +1.2**
baz=302,SNR=59
NLU North Lily Min 84.13 47 IAmb IAmb 09 44 57.5
comp=Z,89nm,1.0s
MURC Murrieta 84.16 55 P P **09 44 56.1 +1.0**
baz=302,SNR=35
WTNK Soaring Height 84.28 51 IAmb IAmb 09 44 58.0
comp=Z,38nm,0.8s
ARR Arges 84.31 320 ⇓P P **09 44 57.4 +1.8**
BORG Borgarnes 84.37 352 P P **09 44 57.7 +2.3**
BORG IAmb IAmb 09 44 58.5
comp=Z,60nm,0.9s
BORG Borgarnes 84.37 352 P P **09 44 57.7 +2.3**
BORG pmax pmax
comp=Z,60nm,0.9s
MPU Maple Canyon 84.37 47 IAmb IAmb 09 44 58.7
comp=Z,116nm,1.1s
MMAI Mount Meron Ar 84.44 305 P P **09 44 57.1 +0.6**
comp=Z,15nm,0.6s,baz=46,slow=6.0,SNR=40
MMAI pP **pWP 09 46 31.6 -2.2**
comp=Z,7.5nm,0.7s,baz=49,slow=9.7,SNR=2.8
comp=Z,15nm,0.6s
LRW Lerwick 84.48 341 *e*P P **09 44 56.6 +0.6**
LRW IAmb IAmb 09 44 57.8
comp=Z,121nm,1.1s
DRGR 84.49 322 ⇑P P **09 44 57.6 +1.1**
DRGR 84.49 322 ⇑P P **09 44 57.6 +1.1**
KECS Kecovo 84.58 324 *e*pP **pP 09 46 36.3 +7.8**
KECS *e*PP **PP 09 48 19.2 +0.6**
109C Camp Elliot, M 84.60 55 IAmb IAmb 09 44 58.8
comp=Z,59nm,0.9s
109C Camp Elliot, M 84.60 55 P P **09 44 58.2 +1.0**
baz=302,SNR=12
GMRC Granite Mounta 84.60 53 P P **09 44 58.5 +1.1**
baz=303,SNR=84
V12A Nelson 84.64 52 IAmb IAmb 09 44 59.9
comp=Z,92nm,0.9s
TCRU Three Creeks R 84.65 48 IAmb IAmb 09 45 00.3
comp=Z,68nm,0.8s
LANS Liptovska Anna 84.66 325 *e*P P **09 44 58.9 +1.7**
LANS pmax pmax
comp=Z,10.0nm,0.8s
LANS Liptovska Anna 84.66 325 *e*P P **09 44 58.9 +1.7**
LANS *e*pP **pWP 09 46 36.3 +2.1**
PFO Pinyon Flats O 84.67 54 P P **09 44 58.3 +0.6**
comp=Z,116nm,0.8s,baz=308,slow=4.9,SNR=234
PFO pP **pP 09 46 31.6 +1.6**
comp=Z,9.7nm,0.9s,baz=180,slow=2.0,SNR=2.9
comp=Z,116nm,0.8s
PFO Pinyon Flats O 84.67 54 P P **09 44 58.8 +1.0**
PFO Pinyon Flats O 84.67 54 P P **09 44 58.8 +1.0**
baz=302,SNR=104
TPFO Pinon Flats 84.68 54 P P **09 44 58.9 +1.1**
baz=302,SNR=98
PMD Palm Desert 84.71 54 IAmb IAmb 09 44 59.7
comp=Z,178nm,1.1s
LOT Lotru 84.74 320 ⇑P P **09 44 58.7 +0.8**
BELC Belle Mtn. Jos 84.79 54 P P **09 44 59.2 +0.8**
baz=303,SNR=133
CSS Mathiatis 84.84 307 IAmb IAmb 09 44 59.6
comp=Z,70nm,0.6s
OKC Ostrava-Krasne 84.85 326 *e*P P **09 44 58.7 +0.6**
OKC Ostrava-Krasne 84.85 326 *e*P P **09 44 58.7 +0.6**
BAR Barrett 85.02 55 IAmb IAmb 09 45 01.3
comp=Z,67nm,0.9s
LCMT Little Creek M 85.02 50 IAmb IAmb 09 45 01.9
comp=Z,80nm,0.8s
KSP Ksiaz 85.05 328 *e*P P **09 44 59.5 +0.4**
KSP *e*pP **pP 09 46 32.3 +1.3**
KSP *e*PP **PP 09 48 18.9 -3.4**
KSP *e*S S 09 54 41.1 -12
KSP *e*SS **SS 10 00 32.0 -4.1**
MONP2 Monument Peak 85.08 55 P P **09 45 00.9 +1.0**
baz=303,SNR=37
TKX Tecate 85.12 55 IAmb IAmb 09 45 01.8
comp=Z,50nm,0.9s
MTPU Mount Pierson 85.14 49 IAmb IAmb 09 45 03.1
comp=Z,81nm,0.8s
MORC Moravsky Berou 85.18 326 ⇓P P **09 45 00.0 +0.2**
MORC Moravsky Berou 85.18 326 ⇓P P **09 45 00.0 +0.2**
MORC Moravsky Berou 85.18 326 *e*P P **09 45 00.0 +0.2**
MORC *e*pP **pP 09 46 33.1 +1.3**
MORC *e*PP **PP 09 48 20.2 -3.2**
PSZ Piszkesteto 85.24 324 ⇑P P **09 45 00.1 -0.1**
PSZ Piszkesteto 85.24 324 ⇑P P **09 45 00.1 -0.1**
PSZ Piszkesteto 85.24 324 P P **09 45 00.5 +0.3**
PSZ PP **pWP 09 46 37.9 +0.6**
P17A Butcher Ranch, 85.25 47 IAmb IAmb 09 45 03.0
comp=Z,89nm,0.8s
OSTC Ostas 85.29 327 *e*SKS **SKSac 09 54 43.9 -1.4**
IRM Iron Mountain 85.30 53 P P **09 45 01.9 +1.2**
baz=303,SNR=71
GZR Gura Zlata 85.32 321 ⇓P P **09 44 59.6 -1.0**
GZR Gura Zlata 85.32 321 ⇓P P **09 44 59.6 -1.0**
NEE2 Needles Airpor 85.33 52 P P **09 45 01.7 +0.9**
baz=303,SNR=11
CHVC Chvalec 85.34 328 *e*P P **09 45 00.3 -0.2**
KRLC Kraliky 85.35 327 *e*P P **09 45 01.0 +0.4**
KRLC Kraliky 85.35 327 *e*P P **09 45 01.0 +0.4**
BC3 Big Chuckawall 85.35 54 P P **09 45 02.3 +1.2**
baz=303,SNR=81
DPC Dobruska-Polom 85.38 327 *e*P P **09 45 01.3 +0.5**
DPC *e* 09 54 43.9
DPC Dobruska-Polom 85.38 327 *e*P P **09 45 01.3 +0.5**
DPC *e*SKS **SKSac 09 54 43.9 -2.0**
VYHS Vyhne 85.40 325 *e*P P **09 45 01.3 +0.4**
VYHS pmax pmax
comp=Z,74nm,1.9s
VYHS Vyhne 85.40 325 *e*P P **09 45 01.3 +0.4**
VYHS *e*pP **pWP 09 46 39.6 +1.5**
VYHS *e*PP **PP 09 48 24.6 -0.6**
UPC Upice 85.41 328 *e*pP pP 09 46 39.5 +6.7
IKP In-Ko-Pah, Jac 85.44 55 P P **09 45 02.8 +1.3**
baz=303,SNR=22
CCX Cicese 85.46 56 IAmb IAmb 09 45 03.3
comp=Z,46nm,0.9s
RMX La Rumorosa 85.48 55 IAmb IAmb 09 45 04.2
comp=Z,76nm,0.9s
SWSC Sam W. Stewart 85.50 55 P P **09 45 02.6 +1.0**
baz=303,SNR=20
SRE Strehaia 85.54 320 ⇑P P **09 45 02.3 +0.7**
SRE Strehaia 85.54 320 ⇑P P **09 45 02.3 +0.7**
YUH Yuha Desert 85.57 55 IAmb IAmb 09 45 03.6
comp=Z,47nm,0.8s
SRU San Rafael Swe 85.59 47 IAmb IAmb 09 45 04.3
comp=Z,70nm,0.8s
JAVC Velka Javorina 85.74 326 *e*P P **09 45 03.7 +1.1**
JAVC *e*pP **pP 09 46 34.9 +0.3**
NUUK Nuuk 85.80 5 *i* P P **09 45 03.0 +0.6**
NUUK IAmb IAmb 09 45 04.1
comp=Z,105nm,1.2s
BZS Buzias 85.82 321 ⇑P P **09 45 02.7 -0.2**
BZS Buzias 85.82 321 ⇑P P **09 45 02.7 -0.2**
HERR Herculane 85.84 320 ⇑P P **09 45 03.1 0.0**
PDMCI Parker Dam,Lak 85.91 53 P P **09 45 04.6 +1.0**
baz=304,SNR=33
K22A Casper 85.93 42 IAmb IAmb 09 45 05.6
comp=Z,66nm,0.9s
K22A Casper 85.93 42 P P **09 45 04.5 +0.7**
baz=308
K22A S S **09 55 01.1 -1.2**
baz=308
K22A Casper 85.93 42 P P **09 45 04.6 +0.8**
baz=308,SNR=57
BLYC Blythe 85.95 53 IAmb IAmb 09 45 06.2
comp=Z,62nm,0.8s
VRAC Vranov 85.96 326 ⇓P P **09 45 03.9 +0.3**
VRAC Vranov 85.96 326 ⇓P P **09 45 03.9 +0.3**
VRAC Vranov 85.96 326 *e*P P **09 45 03.9 +0.3**
VRAC *e*pP **pP 09 46 35.9 +0.2**
VRAC *e*PP **PP 09 48 27.1 -2.5**
U15A North Rim 85.98 50 IAmb IAmb 09 45 08.0
comp=Z,56nm,0.9s
PVCC Panska Ves 86.07 328 *e*P P **09 45 04.7 +0.7**
PVCC Panska Ves 86.07 328 *e*P P **09 45 04.7 +0.7**
SMOL Smolenice 86.09 325 *e*P P **09 45 05.0 +0.8**
SMOL pmax pmax
comp=Z,9.0nm,0.9s
BRG Berggiesshubel 86.11 329 *i* P P **09 45 04.3 +0.1**
BRG Amp 09 45 06.1
comp=Z,24nm,1.0s
BRG pP **pP 09 46 37.8 +1.4**
BRG Amp 09 46 45.8
comp=Z,31nm,1.4s
BRG sP sP 09 47 06.1 -13
BRG Amp 09 47 07.7
comp=Z,13nm,1.2s
BRG PP **PP 09 48 27.4 -3.3**
BRG Amp 09 48 30.0
comp=Z,16nm,1.0s
BRG Berggiesshubel 86.11 329 sS sS 09 57 47.0 -2.4
BRG Berggiesshubel 86.11 329 *i* P P **09 45 04.3 +0.1**
BRG 09 46 37.8
BRG 09 48 27.4
BRG 09 54 46.0
BRG S S **09 55 03.0 -0.2**
BRG SP **SPn 09 56 02.0 -0.9**
BRG pmax pmax
comp=Z,24nm,1.0s
BRG pmax pmax
comp=Z,31nm,1.5s
BRG pmax pmax

BRG pmax pmax
comp=Z,16nm,1.0s
BRG pmax pmax
comp=E,216nm,12.1s
BRG MLR MLR
comp=Z,452nm,14.1s
BRG MLR MLR
comp=N,295nm,12.9s
RWWY Rawlins 86.11 43 IAmb IAmb 09 45 06.8
comp=Z,87nm,0.9s
GLA Glamis 86.12 54 IAmb IAmb 09 45 07.2
comp=Z,83nm,0.8s
GLA Glamis 86.12 54 P **P** **09 45 06.2 +1.5**
baz=303,SNR=17
ELL Elmali 86.16 311 IAmb IAmb 09 45 16.2
comp=Z,49nm,0.7s
CLL Collm 86.22 329 *i* P **P** **09 45 04.2 -0.5**
comp=Z,49nm,1.4s
CLL *i* pP **pP** **09 46 37.0 +0.1**
CLL *i* pPmax 09 46 42.1
comp=Z,58nm,1.4s
CLL *i* x x 09 47 01.2
CLL *e*sP **sP** **09 47 16.0 -3.1**
CLL *e*x x 09 48 04.0
CLL *e*x x 09 48 07.0
CLL *e*PP **PP** **09 48 28.0 -3.6**
comp=Z,32nm,1.3s
CLL *e*SKSac **SKSac** **09 54 50.0 -0.9**
CLL *e*S **S** **09 55 03.0 -1.2**
CLL *e*ScS **ScS** **09 55 13.0 +2.0**
CLL *e*x x 09 55 32.0
CLL *e*SP **SPn** **09 56 04.0 -0.2**
CLL *e*sS **sS** **09 57 46.0 -4.5**
CLL *e*SS **SS** **10 00 48.0 -5.0**
CLL *e*sSS 10 03 24.0
CLL *e*SSS SSS 10 04 24.0
CLL *e*SSSS 10 07 42.0
CLL *e*x x 10 09 54.0
KRUC Moravsky 86.22 326 *e*P **P** **09 45 04.8 0.0**
KRUC *e*pP **pP** **09 46 38.0 +1.0**
KRUC *e*PP **PP** **09 48 28.0 -3.7**
MODS Modra-Piesok 86.26 325 *e*P **P** **09 45 05.8 +0.8**
MODS pmax pmax
comp=Z,54nm,1.5s
MODS Modra-Piesok 86.26 325 *e*P **P** **09 45 05.8 +0.8**
MODS *e*pP **pwP** **09 46 43.5 +1.3**
MDVR Moldovita 86.30 321 ⇑P **P** **09 45 05.3 0.0**
MDND Maddock 86.37 35 P **P** **09 45 06.5 +0.9**
baz=312
MDND Maddock 86.37 35 P **P** **09 45 06.5 +0.9**
baz=312,SNR=28
O20A White River Ci 86.42 45 IAmb IAmb 09 45 08.3
comp=Z,57nm,1.1s
O20A White River Ci 86.42 45 P **P** **09 45 07.0 +0.8**
baz=307,SNR=31
RSSD Black Hills 86.44 40 P **P** **09 45 06.7 +0.5**
RSSD IAmb IAmb 09 45 08.9
comp=Z,66nm,0.8s
RSSD Black Hills 86.44 40 P **P** **09 45 06.7 +0.5**
RSSD pmax pmax
comp=Z,66nm,0.9s
RSSD Black Hills 86.44 40 P **P** **09 45 06.8 +0.5**
baz=309
RSSD S **S** **09 55 05.4 -1.8**
baz=309
RSSD Black Hills 86.44 40 P **P** **09 45 06.9 +0.6**
baz=309
PRU Pruhonice 86.46 328 *e*P **P** **09 45 06.3 +0.4**
PRU *e* 09 54 50.0
PRU MLR MLR
comp=Z,400nm,17.3s
PRU Pruhonice 86.46 328 *e*P **P** **09 45 06.3 +0.4**
PRU *e*pP **pwP** **09 46 44.6 +1.6**
PRU *e*SKS **SKSac** **09 54 50.0 -2.4**
PRU AMS AMS 10 26 50.0
comp=Z,400nm,17.3s
ZST Bratislava 86.46 325 *e*pP pP 09 46 44.7 +6.5
TAOE Nuku Hiva Isla 86.47 102 *e*LR LR 10 13 08.4
comp=Z,348nm,25.4s
BLKB Belogradchik 86.49 319 ⇑P **P** **09 45 06.1 -0.1**
ULM Lac du Bonnet 86.50 32 P **P** **09 45 06.2 +0.1**
comp=Z,18nm,0.7s,baz=304,slow=4.2,SNR=23
comp=Z,18nm,0.7s
ULM Lac du Bonnet 86.50 32 IAmb IAmb 09 45 07.4
comp=Z,210nm,2.0s
EIL Elat 86.54 302 P **P** **09 45 06.4 -0.3**
comp=Z,15nm,0.7s,baz=16,slow=7.3,SNR=8.2
comp=Z,15nm,0.7s
BIGH Upper Bighouse 86.63 342 *e*P **P** **09 45 06.8 +0.3**
BIGH IAmb IAmb 09 45 08.0
comp=Z,56nm,0.8s
MLA1 Latheron 86.64 341 *e*P **P** **09 45 07.1 +0.5**
E28A Huff 86.66 37 IAmb IAmb 09 45 08.9
comp=Z,70nm,0.8s
E28A Huff 86.66 37 P **P** **09 45 07.9 +0.9**
baz=311
TBI Tubuai 86.68 119 *e*LR LR 10 13 15.6
comp=Z,141nm,25.8s
MSEY Mahe Island 86.78 263 P **P** **09 45 09.0 +0.9**
MSEY Mahe Island 86.78 263 P **P** **09 45 09.0 +0.9**
MSEY pmax pmax
comp=Z,196nm,1.2s
MSEY Mahe Island 86.78 263 P **P** **09 45 08.8 +0.7**
VTS Vitosha 86.80 318 ⇓P **P** **09 45 08.4 +0.5**
VTS Vitosha 86.80 318 ⇓P **P** **09 45 08.4 +0.5**
MPLH Magyarpolny 86.94 324 P **P** **09 45 08.3 +0.1**
PV23 Carpenter Ridg 86.94 47 IAmb IAmb 09 45 11.2
comp=Z,95nm,1.1s
PV10 Paradox Valley 86.97 47 IAmb IAmb 09 45 11.5
comp=Z,119nm,1.1s
MORH Mrgy, Hungar 87.01 323 ⇑P **P** **09 45 07.9 -0.7**
MORH Mrgy, Hungar 87.01 323 P **P** **09 45 08.2 -0.4**
MORH PP **pwP** **09 46 46.7 +0.6**
BOVS Bovan 87.03 320 ⇑P **P** **09 45 08.7 0.0**
FRGS Fruska Gora 87.09 322 ⇑P **P** **09 45 10.6 +1.6**
FRGS Fruska Gora 87.09 322 ⇑*i*P **P** **09 45 09.1 +0.1**
WUAZ Wupatki 87.11 50 P **P** **09 45 10.9 +1.4**
baz=305,SNR=22
PV11 David Mesa, Pa 87.12 47 IAmb IAmb 09 45 12.0
comp=Z,118nm,1.3s
RONA Rosalia, Austr 87.20 325 *e*P **P** **09 45 10.0 +0.5**
comp=Z,12nm,0.8s
RONA *e*P **pP** **09 46 43.5 +1.5**
comp=Z,9.4nm,0.9s
RONA *e*S **SKSac** **09 54 59.1 +2.0**
comp=Z,26nm,1.2s
SFX San Felipe 87.21 56 IAmb IAmb 09 45 12.2
comp=Z,47nm,0.8s
MCD Coleburn Disti 87.22 341 *e*P **P** **09 45 09.6 +0.2**
PV13 Radium Mtn., P 87.23 47 IAmb IAmb 09 45 12.4
comp=Z,82nm,1.4s
NKC Novy Kostel 87.23 329 *e*P **P** **09 45 09.7 +0.1**
NKC Novy Kostel 87.23 329 *e*P **P** **09 45 09.7 +0.1**
CONA Conrad Observa 87.25 326 *e*P **P** **09 45 10.2 +0.4**
comp=Z,17nm,0.9s,SNR=9.0
CONA P **pP** **09 46 43.4 +1.1**
comp=Z,21nm,1.4s
CONA *e*S **SKSac** **09 55 00.1 +2.6**
comp=Z,19nm,1.2s
LINV Loch Inver, As 87.28 342 *e*P **P** **09 45 09.9 +0.4**
LINV IAmb IAmb 09 45 11.0
comp=Z,73nm,1.0s
N23A Red Feather La 87.35 43 IAmb IAmb 09 45 13.6
comp=Z,95nm,0.9s
N23A Red Feather La 87.35 43 P **P** **09 45 12.2 +1.5**
baz=308,SNR=60
KOVH Kovagotottos 87.37 323 P **P** **09 45 09.2 -1.1**
CKRC Cesky Krumlov 87.38 327 *e*P **P** **09 45 10.3 0.0**
CKRC *e*pP **pwP** **09 46 48.4 +0.6**
CKRC *e*SKS **SKSac** **09 54 55.7 -2.4**
CKRC AMS AMS 10 29 00.0
comp=Z,300nm,11.1s
PHWY Pilot Hill 87.39 43 IAmb IAmb 09 45 13.1
comp=Z,57nm,0.9s
KHC Kasperske Hory 87.50 328 *e*P **P** **09 45 11.1 +0.2**
KHC *e* 09 48 40.5
KHC *e* 09 54 53.0
KHC MLR MLR
comp=Z,400nm,17.0s
KHC Kasperske Hory 87.50 328 *e*P **P** **09 45 11.1 +0.2**
KHC *e*pP **pwP** **09 46 50.0 +1.6**
KHC *ex* x 09 48 40.5
KHC *e*SKS **SKSac** **09 54 53.0 -5.9**
KHC AMS AMS 10 29 20.0
comp=Z,400nm,17.0s
GERES GERESS Array B 87.65 327 P **P** **09 45 10.9 -0.8**
comp=Z,9.8nm,0.7s,baz=46,slow=5.8,SNR=56
GERES pP **pwP** **09 46 46.9 -2.3**
comp=Z,3.4nm,0.9s,baz=51,slow=7.7,SNR=1.4
GERES PP **PP** **09 48 41.0 -2.2**
comp=Z,5.8nm,0.9s,baz=38,slow=6.8,SNR=6.8
GERES PKKPbc **PKKPbc** **10 02 56.5 -1.1**
comp=Z,1.0nm,0.7s,baz=250,slow=4.0,SNR=6.2
comp=Z,9.8nm,0.7s
MDO Dochfour 87.66 341 *e*P **P** **09 45 11.2 -0.2**
DIVS Divibare 87.68 321 ⇑*i*P **P** **09 45 11.4 -0.5**
KAC Achnashellach 87.86 342 *e*P **P** **09 45 12.8 +0.4**
AGMN Agassiz Nation 87.88 33 P **P** **09 45 12.8 +0.1**
baz=315,SNR=16
AGMN Agassiz Nation 87.88 33 P **P** **09 45 12.9 +0.2**
baz=315,SNR=16
ARSA Arzberg 87.89 325 *e*P **P** **09 45 12.8 0.0**
comp=Z,7.5nm,0.7s
ARSA *e*P **pP** **09 46 46.6 +1.2**
comp=Z,10nm,1.6s
MVCO Mesa Verde 88.00 48 P **P** **09 45 14.8 +1.0**
baz=307,SNR=11
EDU Dundee 88.03 340 *e*P **P** **09 45 13.6 +0.4**
MOA Molln 88.08 326 *e*P **P** **09 45 13.6 -0.1**
comp=Z,13nm,0.9s,SNR=5.4
MOA P **pP** **09 46 47.8 +1.5**
comp=Z,12nm,1.3s
MOA *e*S S 09 55 02.8 -19
comp=Z,25nm,1.4s
KPL Plockton 88.10 342 *e*P **P** **09 45 14.0 +0.5**
KPL IAmb IAmb 09 45 14.9
comp=Z,145nm,0.9s
D32B Dogwood Acres, 88.14 35 P **P** **09 45 14.2 +0.3**
baz=314
214A Organ Pipe Nat 88.14 54 P **P** **09 45 15.7 +1.4**
baz=304,SNR=16
ISCO Idaho Springs 88.23 44 P **P** **09 45 16.3 +1.5**
baz=308,SNR=42
ISCO S **S** **09 55 23.3 -1.0**
baz=308
ISCO Idaho Springs 88.23 44 P **P** **09 45 16.4 +1.5**
baz=308,SNR=42
RUDO Rudo 88.33 321 ⇑*i*P **P** **09 45 14.4 -0.5**
W18A Petrified Fore 88.43 50 P **P** **09 45 17.0 +1.2**
baz=306
INVG Invergeldie, C 88.43 341 *e*P **P** **09 45 15.3 +0.2**
INVG IAmb IAmb 09 45 16.0
comp=Z,50nm,0.8s
ESY Stoneypath 88.44 340 *e*P **P** **09 45 15.2 +0.1**
ESY IAmb IAmb 09 45 16.1
comp=Z,48nm,1.0s
GROS Grobnik 88.44 325 *i* P **P** **09 45 15.0 -0.4**
BIOA Bad Ischl, Aus 88.50 327 *e*P **P** **09 45 15.5 -0.1**
comp=Z,11nm,0.7s,SNR=6.7
PERS Pernice 88.52 325 *i* P **P** **09 45 15.6 -0.1**
PERS *i* S **SKSac** **09 55 01.9 -3.1**
SOKA Soboth 88.53 325 *e*P **P** **09 45 15.6 -0.3**
comp=Z,11nm,0.6s,SNR=8.8
SOKA *e*P **pP** **09 46 49.9 +1.3**
comp=Z,18nm,1.5s
SOKA S **SKSac** **09 55 04.0 -1.1**
comp=Z,16nm,1.4s
EBL Broad Law 88.69 340 *e*P **P** **09 45 16.2 -0.1**
A051A Mrakovica 88.72 323 ⇑*i*P **P** **09 45 16.2 -0.5**
S22A 4UR Ranch, Cre 88.74 46 P **P** **09 45 18.7 +1.4**
baz=308,SNR=34
BLY Banja Luka 88.75 323 ⇑*i*P **P** **09 45 16.9 +0.1**
B35A Bob, Littlefor 88.84 32 P **P** **09 45 17.7 +0.5**
baz=316,SNR=29
OBKA Obir 88.88 325 ⇑*i*P **P** **09 45 16.5 -1.0**
OBKA Obir 88.88 325 *e*P **P** **09 45 17.0 -0.6**
comp=Z,4.0nm,0.5s
LAWE Loch Awe, Argy 88.96 341 *e*P **P** **09 45 16.8 -0.7**
LAWE IAmb IAmb 09 45 18.6
comp=Z,56nm,1.0s
IVI Ivigtut 88.98 4 *i* P **P** **09 45 16.6 -0.9**
IVI IAmb IAmb 09 45 18.0
comp=Z,35nm,1.2s
SUSD Miller 88.99 37 P **P** **09 45 18.6 +0.6**
baz=313
SUSD S **S** **09 55 29.2 -1.3**
baz=313
SUSD Miller 88.99 37 P **P** **09 45 18.5 +0.6**
baz=313,SNR=7.3
Q24A Divide 89.03 45 P **P** **09 45 19.9 +1.2**
baz=309,SNR=20
MGRS Mrkonjic Grad 89.03 323 ⇑*i*P **P** **09 45 18.5 +0.3**
PGBU Glenifferbraes 89.09 340 *e*P **P** **09 45 18.3 +0.2**
PGBU IAmb IAmb 09 45 19.4
comp=Z,133nm,1.0s
ESK Eskdalemuir 89.13 340 *e*P **P** **09 45 18.5 +0.2**
ESK IAmb IAmb 09 45 19.4
comp=Z,39nm,0.9s
ESK Eskdalemuir 89.13 340 P **P** **09 45 18.7 +0.4**
ESK Eskdalemuir 89.13 340 P **P** **09 45 18.7 +0.4**
ESK pmax pmax
comp=Z,39nm,0.9s
PDG Podgorica 89.18 320 ⇑P **P** **09 45 18.6 -0.2**
LJU Ljubljana 89.22 325 *i* P **P** **09 45 18.7 -0.3**
BOJS Bojanci 89.23 324 ⇑*i*P **P** **09 45 18.4 -0.6**
MYKA Terra Mystica 89.24 326 *e*P **P** **09 45 17.9 -1.3**
comp=Z,6.5nm,0.4s
BRY Bratogost 89.26 321 ⇑*i*P **P** **09 45 18.0 -1.4**
A050A Klekovaca 89.28 323 ⇑*i*P **P** **09 45 19.2 -0.2**
TUC Tucson 89.35 53 P **P** **09 45 21.3 +1.4**
TUC Tucson 89.35 53 P **P** **09 45 21.3 +1.4**
TUC pmax pmax
comp=Z,15nm,0.9s
TUC Tucson 89.35 53 P **P** **09 45 21.4 +1.4**
baz=306
DRME Dracevica, Mon 89.38 320 ⇑*i*P **P** **09 45 19.2 -0.6**
F33A 5 Mile Ranch, 89.40 35 IAmb IAmb 09 45 21.7
comp=Z,102nm,0.9s
F33A 5 Mile Ranch, 89.40 35 P **P** **09 45 20.7 +0.9**
baz=314
F33A S **S** **09 55 31.8 -2.4**
baz=314
CEY Cerknica 89.48 325 ⇑*i*P **P** **09 45 19.2 -1.0**
SDCO Great Sand Dun 89.57 46 P **P** **09 45 22.4 +1.3**
baz=308
SDCO S **S** **09 55 36.0 -0.7**
baz=308
SDCO Great Sand Dun 89.57 46 P **P** **09 45 22.6 +1.4**
baz=308,SNR=63
NEWG New Galloway 89.61 340 *e*P **P** **09 45 20.6 +0.1**
NEWG IAmb IAmb 09 45 21.5
comp=Z,49nm,0.9s
OGNE Ogallala 89.61 42 P **P** **09 45 21.8 +0.7**
baz=311,SNR=27
OGNE S **S** **09 55 36.6 0.0**
baz=311
OGNE Ogallala 89.61 42 P **P** **09 45 21.8 +0.7**
baz=311,SNR=27
ATD Arta Tunnel 89.64 283 IAmb IAmb 09 45 24.6
comp=Z,115nm,1.7s
BTNL Ternell 89.67 332 *d*P **P** **09 45 20.4 -0.6**
comp=Z,9.2nm,1.0s
MEM Membach 89.70 332 *d*P **P** **09 45 20.7 -0.4**
ABTA Abfaltersbach 89.71 326 *e*P **P** **09 45 20.1 -1.2**
comp=Z,21nm,0.7s,SNR=11
ABTA *e*S **SKSac** **09 55 09.4 -2.6**
comp=Z,53nm,1.2s
WATA Walderalm 89.73 327 *e*P **P** **09 45 20.8 -0.7**
comp=Z,17nm,0.9s
WATA *e*S **SKSac** **09 55 09.8 -2.4**
comp=Z,4.2nm,0.5s
CLUD Cludinico 89.74 326 IAmb IAmb 09 45 21.5
comp=Z,54nm,0.8s
WTTA Wattenberg 89.75 327 *i* P **P** **09 45 21.2 -0.5**
comp=Z,16nm,0.8s,SNR=6.2
WTTA *e*S **SKSac** **09 55 10.5 -1.9**
comp=Z,15nm,1.3s
HPK Haverah Park 89.78 338 *e*P **P** **09 45 21.5 +0.1**
SKDS Skadanscina 89.83 325 ⇑*i*P **P** **09 45 20.7 -1.1**
BSTI Sart Tilman 89.90 332 *d*PcP **PcP** **09 45 22.7 -0.3**
MOTA Moosalm 89.94 328 *e*P **P** **09 45 22.0 -0.5**
comp=Z,16nm,0.8s,SNR=6.8
MOTA *e*S **SKSac** **09 55 11.5 -2.0**
comp=Z,18nm,1.7s
SQTA Sankt Quirin 89.98 327 *e*P **P** **09 45 22.0 -0.7**
comp=Z,11nm,0.7s
SQTA *e*S S 09 55 13.4 -26
comp=Z,12nm,0.9s
RETA Reutte 89.99 328 *i* P **P** **09 45 22.5 -0.2**
comp=Z,21nm,1.0s,SNR=8.8
RETA *e*S **SKSac** **09 55 12.8 -0.8**
comp=Z,3.7nm,0.7s
CIMO Cimolais 90.06 326 IAmb IAmb 09 45 25.7
comp=Z,16nm,0.8s
BCLA Clavier 90.13 332 *d*P **P** **09 45 22.6 -0.5**
BCLA *d*PcP **PcP** **09 45 23.4 -0.5**
EYMN Ely 90.16 31 IAmb IAmb 09 45 25.1
comp=Z,75nm,1.4s
EYMN Ely 90.16 31 P **P** **09 45 23.7 +0.3**
baz=318,SNR=9.7
EYMN S **S** **09 55 39.0 -2.1**
baz=318
EYMN Ely 90.16 31 P **P** **09 45 23.9 +0.6**
baz=318,SNR=9.7
CLGH Cloghs, Cushen 90.19 341 *e*P **P** **09 45 23.0 -0.3**
CLGH IAmb IAmb 09 45 24.8
comp=Z,76nm,0.9s
LBWR Ladybower, Pea 90.28 338 *e*P **P** **09 45 23.5 -0.3**
LBWR IAmb IAmb 09 45 25.3
comp=Z,116nm,1.0s
IDI Anoyia 90.30 312 P **P** **09 45 23.0 -1.3**
comp=Z,2.9nm,0.5s,baz=12,slow=9.3,SNR=2.1
IDI S **SKSac** **09 55 11.1 -4.7**
comp=Z,9.1nm,0.8s,baz=7.2,slow=3.4,SNR=3.9
comp=Z,2.9nm,0.5s
K31A O'Neill 90.33 39 P **P** **09 45 24.7 +0.4**
baz=313,SNR=10
K31A S **S** **09 55 42.1 -0.8**
baz=313
FETA Feichten 90.35 328 *e*P **P** **09 45 24.0 -0.5**
comp=Z,30nm,0.9s,SNR=14
FETA *e*S **SKSac** **09 55 11.0 -4.9**
comp=Z,22nm,1.5s
RCHB Rochefort 90.37 332 *d*P **P** **09 45 23.6 -0.5**
WLF Walferdange 90.37 332 *d*P **P** **09 45 23.5 -0.7**
WLF *d*PcP **PcP** **09 45 25.1 0.0**
BMRD Maredsous 90.44 333 *d*P **P** **09 45 24.4 -0.1**
BFO Black Forest 90.46 330 P **P** **09 45 23.9 -0.8**
BFO Black Forest 90.46 330 P **P** **09 45 23.9 -0.8**
BFO pmax pmax
comp=Z,34nm,0.9s
KSCO Kaye Shedlock' 90.52 43 IAmb IAmb 09 45 27.3
comp=Z,102nm,1.4s
KSCO Kaye Shedlock' 90.52 43 P **P** **09 45 26.0 +0.7**
baz=310,SNR=7.5
KSCO Kaye Shedlock' 90.52 43 P **P** **09 45 26.2 +0.8**
baz=310,SNR=7.5
DAVA Damuels 90.55 328 *e*P **P** **09 45 25.1 -0.2**
comp=Z,37nm,0.9s,SNR=13
T25A Trinidad 90.62 46 IAmb IAmb 09 45 28.4
comp=Z,60nm,0.8s
T25A Trinidad 90.62 46 P **P** **09 45 27.4 +1.4**
baz=309,SNR=25
DOU Dourbes 90.67 333 *d*P **P** **09 45 25.2 -0.4**
ANMO Albuquerque 90.69 48 P **P** **09 45 26.9 +0.7**
comp=Z,48nm,0.9s,baz=300,slow=5.4,SNR=233
ANMO PP **PP** **09 49 06.1 -1.6**
comp=Z,13nm,1.2s,baz=320,slow=8.3,SNR=11
comp=Z,48nm,0.9s
ANMO Albuquerque 90.69 48 P **P** **09 45 27.5 +1.3**
ANMO IAmb IAmb 09 45 28.8
comp=Z,47nm,0.8s
ANMO Albuquerque 90.69 48 *ce*P **P** **09 45 27.5 +1.3**
ANMO pmax pmax
comp=Z,53nm,1.0s
ANMO Albuquerque 90.69 48 P **P** **09 45 27.4 +1.1**
baz=308,SNR=115
ANMO Albuquerque 90.69 48 P **P** **09 45 27.7 +1.4**
baz=308
CWF Charnwood Fore 90.69 337 *e*P **P** **09 45 24.4 -1.3**
ECSD EROS Data Cent 90.71 37 IAmb IAmb 09 45 27.5
comp=Z,56nm,0.9s
ECSD EROS Data Cent 90.71 37 P **P** **09 45 26.3 +0.3**
baz=314,SNR=74
ECSD S **S** **09 55 45.1 -1.1**
baz=314
ECSD EROS Data Cent 90.71 37 P **P** **09 45 26.4 +0.5**
baz=314,SNR=74
F36A Milaca 90.74 34 P **P** **09 45 26.1 0.0**
baz=316,SNR=9.3
F36A S **S** **09 55 45.0 -1.3**
baz=316
FUORN Ofenpass-Fuorn 90.86 328 IAmb IAmb 09 45 28.1
comp=Z,45nm,0.9s
Y22D IRIS PASSCAL I 90.91 49 IAmb IAmb 09 45 30.0
comp=Z,46nm,0.8s
Y22D IRIS PASSCAL I 90.91 49 P **P** **09 45 29.0 +1.7**
baz=308,SNR=6.9
Y22D IRIS PASSCAL I 90.91 49 P **P** **09 45 28.9 +1.7**
baz=308,SNR=6.9
DAVOX Davos/Dischmat 90.92 328 S **SKSac** **09 55 17.6 -1.6**
comp=Z,7.1nm,0.9s,baz=328,slow=23,SNR=6.5
319A Douglas 90.94 53 IAmb IAmb 09 45 30.0
comp=Z,72nm,0.9s
Y22A Socorro 90.97 49 P **P** **09 45 28.8 +1.2**
baz=308,SNR=30
ITM Ithomi 91.00 315 IAmb IAmb 09 45 27.6
comp=Z,42nm,0.8s
WME Myndd Eilian 91.11 339 *e*P **P** **09 45 27.7 +0.2**
TEOL Teolo 91.11 326 IAmb IAmb 09 45 29.5
comp=Z,31nm,0.6s
E38A The Farm, Brul 91.13 32 IAmb IAmb 09 45 29.1
comp=Z,33nm,0.8s
E38A The Farm, Brul 91.13 32 P **P** **09 45 28.0 +0.2**
baz=318,SNR=8.8
FOEL Foel Wylfa 91.19 338 *e*P **P** **09 45 27.4 -0.6**
FOEL IAmb IAmb 09 45 28.6
comp=Z,105nm,1.0s
121A Cookes Peak, D 91.27 51 IAmb IAmb 09 45 31.9
comp=Z,67nm,0.9s
121A Cookes Peak, D 91.27 51 P **P** **09 45 30.7 +1.7**
baz=307,SNR=43
121A Cookes Peak, D 91.27 51 P **P** **09 45 30.9 +1.9**
baz=307,SNR=43
YLL Llanberis 91.28 339 *e*P **P** **09 45 28.4 +0.1**
HLM1 Long Mynd 91.40 338 *e*P **P** **09 45 28.2 -0.8**
HLM1 IAmb IAmb 09 45 29.3
comp=Z,27nm,1.0s
SALO Salr 91.48 327 IAmb IAmb 09 45 29.9
comp=Z,35nm,0.8s
BGNE Belgrade 91.49 39 P **P** **09 45 29.8 +0.2**
baz=313,SNR=7.4
BGNE Belgrade 91.49 39 P **P** **09 45 29.9 +0.2**
baz=313,SNR=7.4
SPMN Marine on St. 91.55 34 IAmb IAmb 09 45 31.4
comp=Z,32nm,0.8s
SPMN Marine on St. 91.55 34 P **P** **09 45 30.3 +0.6**
baz=317,SNR=17
SPMN Marine on St. 91.55 34 P **P** **09 45 30.4 +0.6**
baz=317,SNR=17
MCH1 Michaelchurch 91.88 338 *e*P **P** **09 45 31.2 +0.1**
MCH1 IAmb IAmb 09 45 32.0
comp=Z,48nm,0.7s
MONM Monmouth 91.95 337 *e*P **P** **09 45 31.2 -0.2**
MONM IAmb IAmb 09 45 32.7
comp=Z,78nm,0.9s
L34A Svendsen Farm, 92.06 38 P **P** **09 45 32.6 +0.4**
baz=314,SNR=15
L34A S **S** **09 55 57.3 -1.0**
baz=314
D41A Chassel 92.13 30 IAmb IAmb 09 45 48.1
comp=Z,82nm,1.4s
D41A Chassel 92.13 30 P **P** **09 45 33.2 +0.8**
baz=320
I37A Lemond, Waseca 92.14 35 IAmb IAmb 09 45 34.5
comp=Z,87nm,1.1s
I37A pwP 09 47 09.3 +2.8
I37B Waseca 92.14 35 P **P** **09 45 33.5 +1.0**
baz=316,SNR=15
N33A J Bar K, Exete 92.33 39 IAmb IAmb 09 45 34.3
comp=Z,65nm,0.9s
N33B J Bar K, Exete 92.33 39 P **P** **09 45 33.2 -0.4**
baz=314
CBKS Cedar Bluff 92.35 42 IAmb IAmb 09 45 34.8
comp=Z,52nm,0.9s
CBKS Cedar Bluff 92.35 42 P **P** **09 45 33.8 +0.2**
baz=312,SNR=5.6
CBKS Cedar Bluff 92.35 42 P **P** **09 45 33.7 +0.1**
baz=312,SNR=5.6
KIDD KIDD Seismic O 92.59 51 P **P** **09 45 36.0 +1.0**
baz=308,SNR=6.7

COWI	Conover	92.61	31			pwP		09 47 09.9	+1.4
COWI	Conover baz=320	92.61	31	P		P		09 45 34.9	+0.2
SCHQ	Schefferville comp=Z,9.0nm,0.8s,baz=303,slow=3.9,SNR=8.9	92.66	15	P		P		09 45 34.1	-0.6
SCHQ	comp=Z,5.3nm,0.7s,baz=139,slow=3.6,SNR=4.3 comp=Z,9.0nm,0.8s			PKKP		PKKPdf		10 02 42.0	+1.1
G40A	Rib Lake	92.75	32			pwP		09 47 11.2	-0.3
G40A	Rib Lake baz=319,SNR=13	92.75	32	P		P		09 45 35.8	+0.5
TIP	Timpagrande	92.76	319	⇑P		P		09 45 34.8	-0.7
R32A	Long Quarter, comp=Z,57nm,1.4s	93.20	42	IAmb		IAmb		09 45 39.0	
R32A	Long Quarter, baz=313	93.20	42	P		P		09 45 37.6	0.0
N35A	Tabor baz=315,SNR=16	93.23	38	P		P		09 45 38.2	+0.6
N35A	baz=315			S		S		09 56 05.9	-2.6
CLF	Chambon-Foret comp=Z,45nm,0.9s	93.25	333	IAmb		IAmb		09 45 38.9	
E43A	Lone Tree Farm comp=Z,82nm,1.7s	93.35	30	IAmb		IAmb		09 45 39.8	
E43A	Lone Tree Farm baz=321	93.35	30	P		P		09 45 38.4	+0.4
E43A	baz=321			S		S		09 56 08.5	-0.7
MNTX	Cornudas Mount	93.39	50			pwP		09 47 14.3	-0.6
MNTX	Cornudas Mount baz=308,SNR=50	93.39	50	P		P		09 45 39.6	+1.0
MNTX	Cornudas Mount baz=308,SNR=50	93.39	50	P		P		09 45 39.6	+1.0
K38A	Parkersburg baz=317	93.45	36	P		P		09 45 39.0	+0.4
I40A	Norwalk baz=318,SNR=8.2	93.59	34	P		P		09 45 39.4	+0.2
MSTX	Muleshoe baz=310,SNR=6.4	93.67	47	P		P		09 45 40.3	+0.4
MSTX	Muleshoe baz=310,SNR=6.4	93.67	47	P		P		09 45 40.2	+0.4
BNI	Bardonecchia comp=Z,70nm,1.9s	93.69	328	IAmb		IAmb		09 45 40.4	
GDL2	Guadalupe Moun	93.75	49			pwP		09 47 16.4	-0.4
SCIA	State Center baz=317,SNR=6.8	93.76	36	P		P		09 45 40.8	+0.7
SCIA	State Center baz=317,SNR=6.8	93.76	36	P		P		09 45 40.7	+0.7
AMTX	Amarillo comp=Z,39nm,0.8s	93.77	46	IAmb		IAmb		09 45 42.5	
AMTX						pwP		09 47 16.5	-0.1
AMTX	Amarillo baz=311,SNR=18	93.77	46	P		P		09 45 41.4	+1.1
AMTX	Amarillo baz=311	93.77	46	P		P		09 45 41.3	+1.0
CEL	Celeste comp=Z,48nm,0.8s	93.88	319	IAmb		IAmb		09 45 42.4	
KSU1	Kansas State U baz=314,SNR=46	93.93	40	P		P		09 45 41.2	+0.4
KSU1	Kansas State U baz=314,SNR=46	93.93	40	P		P		09 45 41.2	+0.4
ELIS	Ellis County comp=Z,161nm,1.9s	94.37	44	IAmb		IAmb		09 45 45.1	
ELIS						pwP		09 47 19.3	+0.2
I42A	Draeger Farm, comp=Z,25nm,0.6s	94.40	33	IAmb		IAmb		09 45 43.7	
I42A	Draeger Farm, baz=320,SNR=9.5	94.40	33	P		P		09 45 43.2	+0.4
H43A	Windswept, Lux baz=321	94.48	32	S		S		09 56 18.7	-0.5
E46A	Sault Ste Mari comp=Z,56nm,1.2s	94.49	28	IAmb		IAmb		09 45 45.0	
JFWS	Jewell Farm comp=Z,22nm,0.8s	94.50	34	IAmb		IAmb		09 45 44.3	
JFWS	Jewell Farm baz=319,SNR=6.7	94.50	34	P		P		09 45 43.3	0.0
JFWS	Jewell Farm baz=319,SNR=6.7	94.50	34	P		P		09 45 43.2	-0.1
N38A	Joes South For comp=Z,48nm,0.9s	94.56	37	IAmb		IAmb		09 45 45.1	
N38A	Joes South For baz=316,SNR=8.2	94.56	37	P		P		09 45 44.1	+0.5
N38A	baz=316			S		S		09 56 19.8	-0.2
OK032	Salt Plains WL comp=Z,20nm,0.8s	94.59	43	IAmb		IAmb		09 45 46.7	
L40A	Anamosa comp=Z,35nm,0.9s	94.66	35	IAmb		IAmb		09 45 45.2	
L40A	Anamosa baz=318,SNR=7.5	94.66	35	P		P		09 45 44.4	+0.3
CROK	Carrier comp=Z,20nm,0.9s	94.93	43	IAmb		IAmb		09 45 48.2	
SLBS	Sierra La Lagu	94.95	59	P		P		09 45 48.2	+2.3
SLBS	comp=Z,42nm,1.6s			IAmb		IAmb		09 47 29.8	
P38A	Dawn comp=Z,51nm,0.8s	95.25	38	IAmb		IAmb		09 45 48.2	
P38A	Dawn baz=316,SNR=43	95.25	38	P		P		09 45 47.2	+0.4
P38A	baz=316			S		S		09 56 24.3	-1.7
L42A	Oliver, Polo comp=Z,20nm,0.8s	95.47	34	IAmb		IAmb		09 45 48.6	
L42A	Oliver, Polo baz=319,SNR=5.1	95.47	34	P		P		09 45 47.6	-0.1
T35B	Sooner Cattle baz=314	95.50	42	P		P		09 45 47.8	-0.3
GLMI	Grayling baz=323	95.60	30	P		P		09 45 48.9	+0.6
WMOK	Wichita Mounta	95.65	44			pwP		09 47 21.9	-3.4
WMOK	Wichita Mounta baz=312	95.65	44	P		P		09 45 49.1	+0.4
VLDQ	Val d'Or comp=Z,25nm,0.8s	95.66	24	IAmb		IAmb		09 45 48.7	
OK029	Liberty Lake	95.72	43			pwP		09 47 24.1	-1.1
BCOK	Bluff Creek, N comp=Z,15nm,0.8s	95.73	43	IAmb		IAmb		09 45 52.8	
BCOK						pwP		09 47 24.6	-0.8
N41A	Harden Midland comp=Z,25nm,0.9s	95.85	36	IAmb		IAmb		09 45 50.8	
N41A	Harden Midland baz=318,SNR=6.1	95.85	36	P		P		09 45 49.8	+0.3
N41A	baz=318			S		S		09 56 30.3	-0.8
TX31	Lajitas Ar. Si baz=309,SNR=62	96.02	51	P		P		09 45 51.8	+1.2
TXAR	Lajitas Array comp=Z,19nm,0.7s,baz=295,slow=3.2,SNR=136	96.02	51	P		P		09 45 51.8	+1.1
TXAR	comp=Z,9.1nm,0.8s,baz=302,slow=2.9,SNR=8.7			pP		pP		09 47 24.0	-0.6
TXAR	comp=Z,4.2nm,1.0s,baz=305,slow=5.2,SNR=3.6			PP		PP		09 49 47.4	-1.6
TXAR	comp=Z,1.3nm,0.9s,baz=148,slow=7.4,SNR=8.5 comp=Z,19nm,0.7s			PKKP		PKKPdf		10 02 35.5	+0.3
P40A	Paris comp=Z,30nm,0.8s	96.10	37	IAmb		IAmb		09 45 52.1	
P40A	Paris baz=317,SNR=20	96.10	37	P		P		09 45 51.1	+0.5
P40A	baz=317			S		S		09 56 31.8	-1.5
DEOK	Depew comp=Z,47nm,1.6s	96.26	42	IAmb		IAmb		09 45 52.9	
ABTX	Abilene, Hawle comp=Z,48nm,1.9s	96.53	47	IAmb		IAmb		09 45 55.9	
ABTX						pwP		09 47 26.2	-3.1
ABTX	Abilene, Hawle baz=312,SNR=7.1	96.53	47	P		P		09 45 53.4	+0.6
ABTX	baz=312			S		S		09 56 34.5	-2.7
ABTX	Abilene, Hawle baz=312,SNR=7.1	96.53	47	P		P		09 45 53.3	+0.6
TUL1	Leonard baz=314	96.62	42	P		P		09 45 53.7	+0.6
TUL1	Leonard baz=314	96.62	42	P		P		09 45 53.2	+0.2
HDIL	Hopedale comp=Z,28nm,0.8s	96.75	35	IAmb		IAmb		09 45 54.8	
HDIL	Hopedale baz=319,SNR=9.9	96.75	35	P		P		09 45 53.8	+0.2
HDIL	Hopedale baz=319,SNR=9.9	96.75	35	P		P		09 45 54.0	+0.5
J47A	Sunmer baz=323	96.77	31	P		P		09 45 54.3	+0.7
J47A	baz=323			P		P		09 45 54.3	+0.7
R40A	Maddies Statio comp=Z,21nm,0.9s	96.89	38	IAmb		IAmb		09 45 55.2	
R40A	Maddies Statio baz=317,SNR=15	96.89	38	P		P		09 45 54.0	-0.2
R40A	baz=317			S		S		09 56 37.4	-2.7
U38A	Gravette baz=315,SNR=6.8	97.06	41	P		P		09 45 55.0	-0.1
P43A	Skaggs, Pawnee comp=Z,17nm,0.9s	97.32	36	IAmb		IAmb		09 45 57.4	
P43A	Skaggs, Pawnee baz=319	97.32	36	P		Pdif		09 45 56.5	+0.4
HHAR	Hobbs comp=Z,32nm,1.7s	97.42	41	IAmb		IAmb		09 49 59.0	
HHAR	Hobbs baz=316	97.42	41	P		P		09 45 56.7	0.0
CCM	Cathedral Cave	97.61	38	P		P		09 45 56.8	-0.7
CCM	Cathedral Cave	97.61	38	P		P		09 45 56.8	-0.7
CCM	comp=Z,14nm,0.9s			pmax		pmax			
CCM	Cathedral Cave baz=318,SNR=16	97.61	38	P		Pdif		09 45 57.6	+0.1
CCM	baz=318			S		S		09 56 43.8	-2.3
CCM	Cathedral Cave baz=318	97.61	38	P		Pdif		09 45 57.6	+0.1
JCT	Junction City comp=Z,23nm,1.1s	97.84	48	IAmb		IAmb		09 50 03.0	
JCT	Junction City baz=312,SNR=7.1	97.84	48	P		Pdif		09 45 59.1	+0.4
JCT	Junction City baz=312,SNR=7.1	97.84	48	P		Pdif		09 45 59.1	+0.3
SFIN	Lafayette baz=321	97.96	34	P		Pdif		09 45 59.5	+0.5
SFIN	Lafayette baz=321	97.96	34	P		Pdif		09 45 59.3	+0.3
L48A	N Adams baz=323	97.97	31	P		Pdif		09 45 59.7	+0.6
L48A	baz=323			P		Pdif		09 45 59.7	+0.6
FVM	French Village baz=318	98.10	37	P		Pdif		09 45 59.9	+0.2
Q44A	Meyer Farm, Va baz=319	98.14	36	P		Pdif		09 46 00.3	+0.5
WHTX	Lake Whitney, baz=313	98.32	46	P		Pdif		09 46 01.4	+0.6
P46A	Rosedale baz=321	98.50	34	P		P		09 46 02.0	+0.6
MIAR	Mount Ida	98.87	42			pwP		09 47 38.4	-1.2
MIAR	Mount Ida baz=316,SNR=6.6	98.87	42	P		P		09 46 03.6	+0.4
MIAR	Mount Ida baz=316,SNR=6.6	98.87	42	P		P		09 46 03.5	+0.4
O48B	Farmland baz=322	98.98	33	P		Pdif		09 46 03.6	0.0
LCAR	Lake Charles baz=318	99.12	39	P		Pdif		09 46 04.0	-0.3
LONY	Lake Uzonia baz=331	99.68	24	P		Pdif		09 46 06.7	+0.1
P49A	Miami Univ. Ec baz=322	99.76	33	P		Pdif		09 46 07.0	0.0
ACSO	Alum Creek Sta baz=324	100.00	31	P		Pdif		09 46 08.2	+0.1
O53A	New Philadelph baz=325	100.77	30	P		Pdif		09 46 10.4	-1.1
KMBO	Kilima Mbogo comp=Z,2nm,1.0s,baz=32,slow=7.9,SNR=4.5	100.81	275	PP		PP		09 50 25.7	-0.6
KMBO	Kilima Mbogo	100.81	275	*i* P		Pdif		09 46 12.6	+0.2
KMBO	comp=Z,2.0nm,0.5s			pmax		pmax			
PKME	Peaks-Kenny Pk baz=335	100.81	20	P		Pdif		09 46 12.5	+1.0
WVT	Waverly baz=320	100.86	37	P		Pdif		09 46 12.4	+0.5
P52A	Corning baz=324	100.87	31	P		Pdif		09 46 12.6	+0.7
OXF	Oxford baz=319	101.23	39	P		Pdif		09 46 13.3	-0.4
BINY	Binghamton baz=330	101.27	26	P		Pdif		09 46 13.6	-0.1
U49A	Red Boiling Sp baz=321	101.61	35	P		Pdif		09 46 15.8	+0.5
SSPA	Standing Stone baz=328	101.85	28	P		Pdif		09 46 16.3	0.0
ESDC	Sonseca Array comp=Z,8.9nm,0.9s,baz=26,slow=6.7,SNR=8.6	102.67	332	PP		PP		09 50 37.8	-0.5
ESDC	comp=Z,0.8nm,0.6s,baz=238,slow=2.3,SNR=4.8			PKKPbc		PKKPbc		10 02 17.2	-0.8
TZTN	Tazewell baz=323	102.69	34	P		Pdif		09 46 20.1	-0.1
PAL	Palisades baz=331	103.08	25	P		Pdif		09 46 21.9	+0.2
BLA	Blacksburg baz=325	103.62	32	P		Pdif		09 46 24.1	-0.2
VNDA	Vada comp=Z,1.3nm,1.0s,baz=264,slow=3.1,SNR=5.2	108.11	175	PKKPbc		PKKPbc		10 02 01.2	-1.3
VNDA	comp=Z,1.6nm,0.9s,baz=169,slow=3.0,SNR=5.5			PKKP		PKKPdf		10 02 15.8	-0.2
MAW	Mawson comp=Z,41nm,1.0s,baz=66,slow=9.5,SNR=27	112.31	204	PP		PP		09 51 47.8	-0.8
MAW	comp=Z,3.1nm,0.9s,baz=277,slow=7.9,SNR=6.2			PKKPbc		PKKPbc		10 01 47.5	-1.2
LSZ	Lusaka	115.39	266			PKiKP		09 51 03.7	+0.8
LSZ	Lusaka	115.39	266	PKiKP		PKiKP		09 51 03.7	+0.8
TORD	Toroidi Ar. Bea comp=Z,9.5nm,0.6s,baz=54,slow=1.3,SNR=94	120.66	310	PKP		PKPdf		09 51 12.5	-0.5
TORD	comp=Z,3.9nm,0.8s,baz=356,slow=7.2,SNR=5.9			PP		PP		09 52 47.1	+0.7
TORD	comp=Z,4.4nm,0.7s,baz=28,slow=1.6,SNR=6.0			SKP				09 54 08.6	
TORD	comp=Z,6.7nm,0.9s,baz=264,slow=1.7,SNR=14			PKKPbc		PKKPbc		10 01 16.4	-2.3
BOSA	Boshof comp=Z,17nm,0.8s,baz=102,slow=1.8,SNR=17	123.02	254	PKP		PKPdf		09 51 17.2	0.0
KOWA	Kowa	123.27	316	PKPdf		PKPdf		09 51 17.9	-0.2
TSUM	Tsumeb	126.22	267			PKiKP		09 51 24.0	-0.2
CRJC	Cerrejon, Guaj	128.94	42	*eP*		PKPdf		09 51 27.3	-1.7
DBIC	Dimbokro comp=Z,15nm,0.6s,baz=47,slow=2.3,SNR=24	129.76	310	PKP		PKPdf		09 51 30.6	+0.2
TIC	Toumodi comp=Z,25nm,0.5s	129.89	311	⇑*i* PKiKP		PKiKP		09 51 31.2	-0.4
UREC	San Jos de Ur	129.89	47	*eP*		PKPdf		09 51 31.1	+0.4
KIC	Kosan Boka comp=Z,30nm,0.6s	129.91	310	⇓*e* PKiKP		PKPdf		09 51 30.7	-0.1
NVL	N'lazarevskaya	130.00	200	*e* PKiKP		PKPdf		09 51 29.1	0.0
NVL	comp=Z,36nm,1.0s			pmax		pmax			
LIC	Lamto comp=Z,50nm,0.7s	130.20	310	⇓*e* PKiKP		PKPdf		09 51 31.0	-0.3
ZARC	Zaragoza, Cauc	130.51	47	*eP*		PKPdf		09 51 32.3	+0.4
CBOC	Ciudad Bolivar	131.00	49	*eP*		PKiKP		09 51 33.7	-0.3
PTBC	PUERTO BERRIO	131.50	47	*eP*		PKPdf		09 51 33.9	+0.1
PLMC	San Jos del P	131.53	50	*eP*		PKPdf		09 51 33.6	-0.3
GUY2C	Guyana, Caldas	131.90	49	*eP*		PKPdf		09 51 33.7	-1.4
TROLL	Troll, Antarti	131.91	197	PKPdf		PKPdf		09 51 33.1	+0.2
TROLL	Troll, Antarti	131.91	197	SKPbc		SKPbc		09 54 19.8	-0.1
SDV	Santo Domingo	131.96	41	PKPdf		PKiKP		09 51 35.5	-0.4
YOTC	Yotoco, Valle	132.16	51	*eP*		PKPdf		09 51 33.5	-1.7
SOCV	Socops	132.32	42	*eP*		PKPdf		09 51 35.4	0.0
BBAC	Balboa, Cauca	132.95	54	*eP*		PKPdf		09 51 37.0	+0.3
POPC	Popayan, Colom	132.98	53	*eP*		PKPdf		09 51 36.1	-0.8
PRAC	Prado	133.34	50	*eP*		PKPdf		09 51 37.2	-0.1
BAUV	El Baul	133.35	38			PKPpre		09 51 29.6	
CHIC	Chingaza	133.41	48	*eP*		PKPdf		09 51 38.1	+0.2
SNAA	Sanae	133.43	196	PKPdf		PKPdf		09 51 35.0	-0.7
SNAA	Sanae	133.43	196	SKPbc		SKPbc		09 54 24.4	-0.4
SNAA	Sanae	133.43	196	PKPdf		PKPdf		09 51 34.1	-1.6
SNAA	Sanae	133.43	196	PKiKP		PKPdf		09 51 34.1	-1.6
VNA2	Neumayer--Watz baz=99,slow=2.0	134.99	195	PKPdf		PKPdf		09 51 38.4	-0.1
VNA2	Neumayer--Watz	134.99	195	SKPbc		SKPbc		09 54 29.5	-0.3
VNA3	Neumayer Olymp	135.24	194	PKPdf		PKPdf		09 51 39.3	+0.3
VNA3	Neumayer Olymp	135.24	194	SKPbc		SKPbc		09 54 30.1	-0.5
VNA1	Neumayer--Stat	135.39	195	PKPdf		PKPdf		09 51 39.2	-0.1
VNA1	Neumayer--Stat	135.39	195	SKPbc		SKPbc		09 54 31.0	0.0
PTLC	Puerto Leguiza	135.98	53	*eP*		PKPdf		09 51 42.7	+0.5
ATAH	Atahualpa comp=Z,3.4nm,0.6s,baz=355,slow=23,SNR=3.0	138.14	65	PKhKP		PKPpre		09 51 41.3	
ATAH	comp=Z,22nm,1.1s,baz=270,slow=1.8,SNR=13			SKPbc		SKPbc		09 54 42.2	+0.7
NNA	Nana	142.20	70	PKhKP		PKPpre		09 51 48.1	
PMSA	Palmer Station	142.27	164	*eP*		PKPdf		09 51 52.5	+0.5
BOAV	Boa Vista	142.77	34			PKPpre		09 51 51.3	
BOAV	Boa Vista	142.77	34	*eP*		PKPdf		09 51 54.5	0.0
CZSB	Cruzeiro do Su	142.89	60	*eP*		PKPdf		09 51 55.4	+0.7
MDP	Montagnes des comp=Z,9.4nm,0.6s,baz=160,slow=1.9,SNR=6.3	143.38	20	SKPbc		SKPbc		09 54 54.9	+0.3
MACA	Manacapuru-AM	147.43	39	*eP*		PKPdf		09 52 03.2	+0.7
MCPB	Macapa, AP	148.72	22	*eP*		PKPdf		09 52 04.5	-0.1
ETMB	Extrema	149.03	55	PKPdf		PKPdf		09 52 04.6	-0.4
ETMB	Extrema	149.03	55	*eP*		PKPdf		09 52 05.5	+0.5
ORCD	Orcadas	149.11	176	PKPdf		PKPdf		09 52 02.9	-0.7
MALB	Monte Alegre	149.31	27	*eP*		PKPdf		09 52 06.1	+0.6
ITTB	Itaituba	150.95	32	*eP*		PKPdf		09 52 07.7	-0.4
COYC	Coyhaique	151.07	131	PKPdf		PKPdf		09 52 08.0	+0.8
LPAZ	La Paz	151.61	67	PKP		PKPdf		09 52 10.3	+0.6
LPAZ	comp=Z,7.1nm,1.0s,baz=288,slow=0.3,SNR=19			PKPbc		PKiKP		09 52 17.4	+0.8
LPAZ	comp=Z,22nm,0.6s,baz=6.6,slow=3.7,SNR=36 La Paz	151.61	67	*eP*		PKPdf		09 52 10.5	+0.8
LPAZ	La Paz	151.61	67	*eP*		PKPdf		09 52 09.7	0.0
TMAB	Tom-Au,PA,Br	151.73	15	*eP*		PKPdf		09 52 09.7	+0.5
ROSB	Rosrio	152.92	7	*eP*		PKPdf		09 52 11.1	+0.2
NPGB	Novo Progresso	153.47	34	*eP*		PKPdf		09 52 11.8	+0.1
PLCA	Paso Flores comp=Z,3.1nm,0.9s,baz=269,slow=0.3,SNR=5.3	153.66	122	PKP		PKPdf		09 52 11.7	+0.4
PLCA	comp=Z,14nm,0.6s,baz=249,slow=2.3,SNR=68			PKPbc		PKiKP		09 52 20.3	+0.8
PLCA	comp=Z,20nm,0.7s,baz=244,slow=4.2,SNR=15			PKPab		PKPab		09 52 35.4	+1.2
PLCA	Paso Flores	153.66	122	*eP*		PKPdf		09 52 12.0	+0.7
LVC	Limon Verde comp=Z,5.6nm,0.6s,baz=317,slow=2.1,SNR=7.4	153.90	80	PKPbc		PKiKP		09 52 21.4	+0.5
LVC	comp=Z,3.8nm,0.5s,baz=285,slow=3.0,SNR=5.7			PKPab		PKPab		09 52 36.9	+0.8
LVC	Limon Verde	153.90	80			PKiKP		09 52 21.8	+0.8
AC06	Mina Casimiro	154.07	92			PKiKP		09 52 20.8	+0.1
PRPB	Parauapebas	154.90	21	*eP*		PKPdf		09 52 14.0	+0.3
VILB	Vilhena	155.40	51	*eP*		PKPdf		09 52 14.3	-0.1
RCBR	Riachuelo	155.54	348			PKPab		09 52 42.0	-0.7
RCBR	Riachuelo	155.54	348	PKP2		PKPab		09 52 42.0	-0.7
PDRB	Porto dos Gac	156.57	42	*eP*		PKPdf		09 52 16.2	+0.3
SIV	San Ignacio comp=Z,4.1nm,0.8s,baz=268,slow=5.5,SNR=12	156.87	58	PKP		PKPdf		09 52 16.7	+0.5
SIV	comp=Z,3.0nm,0.5s,baz=314,slow=5.0,SNR=4.4			PKPab		PKPab		09 52 48.3	-0.1
PTLB	Pontes e Lacer	157.89	53	*eP*		PKPdf		09 52 18.1	+0.6
SMTB	Santa Maria do	158.11	18	*eP*		PKPdf		09 52 17.9	+0.1
SALV	Santo Antonio	160.52	47	*eP*		PKPdf		09 52 21.5	+1.1
SDBA	SAO DESIDERIO	162.15	13	*eP*		PKPdf		09 52 22.8	+0.5
AQDB	Aquidauana	163.65	58	*eP*		PKPdf		09 52 24.1	+0.6
GDU01	Guandu, BA	163.80	355	*eP*		PKPdf		09 52 24.4	+0.6
BDFB	Brasilia comp=Z,3.3nm,0.7s,baz=214,slow=3.7,SNR=5.3	164.33	26	PKP		PKPdf		09 52 24.9	+0.5
BDFB	comp=Z,6.5nm,0.7s,baz=42,slow=1.8,SNR=6.2			PKPab		PKPab		09 53 21.2	+0.2
BDFB	Brasilia	164.33	26	*eP*		PKPdf		09 52 24.9	+0.5
CPUP	Villa Florida comp=Z,9.8nm,1.0s,baz=312,slow=2.7,SNR=11	165.08	80	PKP		PKPdf		09 52 24.8	+0.2
CPUP	comp=Z,3.4nm,0.8s,baz=276,slow=1.1,SNR=4.0			PKPab		PKPab		09 53 24.6	+0.3
CPUP	Villa Florida	165.08	80	*eP*		PKPdf		09 52 24.3	-0.3
CMC01	Camacan, BA	165.42	355	*eP*		PKPdf		09 52 25.0	-0.1
IPMB	Ipameri, GO	166.35	31	*eP*		PKPdf		09 52 25.4	-0.5
PMNB	Patos De Minas	167.57	25	*eP*		PKPdf		09 52 26.8	-0.1
SJMB	Sao Joao De Ma	168.80	1	*eP*		PKPdf		09 52 27.5	0.0
PLTB	Pedras Altas	168.95	103	*eP*		PKPdf		09 52 26.1	-1.2
CPSB	Cacapava Do Su	169.16	96	*eP*		PKPdf		09 52 27.3	-0.1
RIB01	Linhares ES	169.40	357	*eP*		PKPdf		09 52 28.8	+0.9
ITAB	Concordia	169.78	77	*eP*		PKPdf		09 52 29.1	+1.2
RCLB	Rio Claro- Sao	170.43	40	*eP*		PKPdf		09 52 30.0	+1.5
DUB01	Friburgo-RJ	172.05	10	*eP*		PKPdf		09 52 30.3	+1.0
MAN01	Angra dos Reis	172.43	22	*eP*		PKPdf		09 52 30.3	+0.9

IDC ***22*** *09:39:12.5±2.3, 7.26S×155.27E, h0km, mb3.9/2, mbtmp4.0/3, ML3.5/1, Error ellipse: s-maj=82.6km s-min=50.3km az=16.0*

ISC 22 09:39:17.4±1.6, 7.3S±0.4×155.2E±0.3, h35km, n11, σ1§44/12, 6C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076 2.4nm,0.3s,baz=262,slow=4.3,SNR=7.5	4.35	313	Pn	Pn	09 40 20.4	-0.8
KRVT	16nm,0.3s,baz=210,slow=20,SNR=2.0 64nm,0.8s			Sn	Sn	09 41 11.5	+0.8
CMAR	Chiang Mai Arr 1.4nm,0.6s,baz=122,slow=4.8,SNR=4.4 1.4nm,0.6s	61.12	296	P	P	09 49 28.9	+0.2
ILAR	Eielson Array 0.3nm,0.5s,baz=251,slow=5.5,SNR=1.9 0.3nm,0.5s	83.56	21	P	P	09 51 41.9	+0.3
VRI	Vrincioaia	121.45	320	⇑P	Pdif	09 54 31.1	-3.4
PLOR	Plostina	121.50	320	⇑P	Pdif	09 54 35.4	+0.6
ISR	Istrita	121.87	319	⇑P	Pdif	09 54 35.6	-0.9
OZUR		121.94	321	⇑P	Pdif	09 54 36.7	-0.1
MLR	Muntele Rosu	122.10	320	⇓P	Pdif	09 54 35.8	-1.8
VOIR		122.69	320	⇑P	Pdif	09 54 40.7	+0.5
GZR	Gura Zlata	124.14	321	⇑P	Pdif	09 54 46.1	-0.6
TORD	Toroidi Ar. Bea 0.5nm,0.5s,baz=70,slow=2.1,SNR=6.8	153.33	285	PKPbc	PKiKP	09 59 13.9	+0.8

IDC ***22*** *10:20:44.7±0.6, 55.12S×29.99W, h0km, mb4.3/9, mbtmp4.4/10, ML4.1/1, MS4.1/28, Error ellipse: s-maj=21.8km s-min=16.6km az=64.0*
NEIC ***22*** *10:20:46.9±1.6, 55.13S±0.0°×30.3W±0.1, h10km±1km, mb4.7/22, Error ellipse: s-maj=18.7km s-min=4.7km az=42.0*
GCMT ***22*** *10:20:50.9±0.3, 55.09S±0.02°×29.94W±0.05, h20km±1km, MW5.0/90, Moment Tensor Solution. s26,c30; s90,c114; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.75±.22; Mθθ -3.35±.16; Mφφ 0.60±.14; Mrθ -2.37±.29; Mφθ 0.88±.11; Mφr 0.52±.33; Best double couple: Mo 3.97100×10^16 NP1: φs 102.00000°, δ 26.00000°, λ 89.00000°. Principal axes: T 3.5780, Plg 71.0000°, Azm 193.0000°; N 0.7870, Plg 0.0000°, Azm

CPUP					LR	LR	10 41 25.5		
	comp=Z,250nm,19.1s,baz=145,slow=35 comp=Z,3.2nm,1.0s								
CPUP	**Villa Florida**	**34.91**	**314**		P	**P**	**10 27 38.1**	**+0.1**	
QSPA	**South Pole Qui**	**35.16**	**180**		P	**P**	**10 27 40.0**	**+0.1**	
	comp=Z,11nm,1.1s,baz=214,slow=1.8,SNR=18								
QSPA					LR	LR	10 41 14.1		
	comp=Z,628nm,19.1s,baz=189,slow=35 comp=Z,11nm,1.1s								
QSPA	**South Pole Qui**	**35.16**	**180**		P	**P**	**10 27 40.7**	**+0.7**	
VA06	**Catapilco**	**36.48**	**291**		P	**P**	**10 27 51.3**	**-0.1**	
CO03	**El Pedregal**	**37.50**	**293**		P	**P**	**10 28 00.5**	**+0.3**	
CO03					IAmb	IAmb	10 28 08.4		
	comp=Z,15nm,1.0s								
CO01	**Juntas del Tor**	**37.87**	**295**		P	**P**	**10 28 04.5**	**+0.9**	
GO02	**Mina Guanaco**	**41.54**	**300**		P	**P**	**10 28 34.7**	**+0.6**	
GO02					IAmb	IAmb	10 28 36.4		
	comp=Z,18nm,1.1s								
MAW	**Mawson**	**41.92**	**145**		P	**P**	**10 28 35.6**	**-0.9**	
	comp=Z,2.3nm,0.8s,baz=228,slow=7.5,SNR=5.4 comp=Z,2.3nm,0.8s								
MAW	**Mawson**	**41.92**	**145**		P	**P**	**10 28 36.3**	**-0.1**	
SUR	**Sutherland**	**42.08**	**79**		LR	LR	10 42 57.2		
	comp=Z,132nm,18.6s,baz=160,slow=32								
LVC	**Limon Verde**	**43.35**	**303**		LR	LR	10 48 56.1		
	comp=Z,102nm,18.7s,baz=168,slow=39								
PB01	**IPOC Station P**	**44.96**	**303**		P	**P**	**10 29 01.7**	**+0.1**	
PB01					IAmb	IAmb	10 29 28.3		
	comp=Z,25nm,1.4s								
SIV	**San Ignacio**	**45.69**	**316**		LR	LR	10 47 55.8		
	comp=Z,155nm,19.2s,baz=286,slow=36								
SBA	**Scott Base**	**46.91**	**185**		P	**P**	**10 29 17.0**	**+0.8**	
SBA					IAmb	IAmb	10 29 23.0		
	comp=Z,19nm,1.4s								
VNDA	**Vanda**	**47.44**	**184**		P	**P**	**10 29 19.9**	**-0.5**	
	comp=Z,3.3nm,0.7s,baz=192,slow=5.5,SNR=22								
VNDA					LR	LR	10 47 00.1		
	comp=Z,68nm,19.0s,baz=188,slow=33 comp=Z,3.3nm,0.7s								
VNDA	**Vanda**	**47.44**	**184**		P	**P**	**10 29 20.6**	**+0.3**	
VNDA					IAmb	IAmb	10 29 26.9		
	comp=Z,14nm,1.5s								
LPAZ	**La Paz**	**48.44**	**308**		P	**P**	**10 29 29.4**	**-0.1**	
	comp=Z,6.6nm,0.7s,baz=160,slow=4.3,SNR=15								
LPAZ					LR	LR	10 50 28.0		
	comp=Z,73nm,21.4s,baz=158,slow=37 comp=Z,6.6nm,0.7s								
LPAZ	**La Paz**	**48.44**	**308**		P	**P**	**10 29 29.4**	**-0.1**	
LPAZ					IAmb	IAmb	10 29 41.4		
	comp=Z,7.2nm,0.8s								
H10N1	**ASCENSION HYDR**	**48.76**	**21**		T	T	11 22 32.5		
	baz=191,slow=75								
H10N3	**ASCENSION HYDR**	**48.76**	**21**		T	T	11 22 16.2		
	baz=191,slow=75								
H10N2	**ASCENSION HYDR**	**48.77**	**21**		T	T	11 22 22.8		
	baz=191,slow=75								
RCBR	**Riachuelo**	**49.34**	**352**		LR	LR	10 48 34.8		
	comp=Z,227nm,18.1s,baz=314,slow=34								
TSUM	**Tsumeb**	**50.75**	**65**		LR	LR	10 48 02.8		
	comp=Z,136nm,18.7s,baz=142,slow=32								
LSZ	**Lusaka**	**59.66**	**72**		LR	LR	10 53 46.3		
	comp=Z,202nm,18.4s,baz=184,slow=33								
BOAV	**Boa Vista**	**62.50**	**325**		P	**P**	**10 31 09.8**	**-0.1**	
BOAV					IAmb	IAmb	10 31 12.5		
	comp=Z,10nm,1.4s								
MDP	**Montagnes des**	**62.81**	**335**		LR	LR	10 56 21.2		
	comp=Z,210nm,20.6s,baz=130,slow=34								
DBIC	**Dimbokro**	**65.06**	**28**		LR	LR	10 53 35.8		
	comp=Z,94nm,21.9s,baz=345,slow=30								
ROSC	**El Rosal**	**69.97**	**312**		LR	LR	11 04 21.5		
	comp=Z,123nm,19.5s,baz=231,slow=37								
BBTS	**Babate**	**70.44**	**14**		LR	LR	10 56 12.5		
	comp=Z,243nm,19.6s,baz=230,slow=30								
SDV	**Santo Domingo**	**72.14**	**318**		LR	LR	11 03 49.0		
	comp=Z,327nm,21.2s,baz=102,slow=36								
TOA0	**Torodi Ar. Sit**	**73.11**	**33**		P	**P**	**10 32 16.7**	**0.0**	
TOA0					IAmb	IAmb	10 32 22.3		
	comp=Z,11nm,1.4s								
TORD	**Torodi Ar. Bea**	**73.11**	**33**		P	**P**	**10 32 16.5**	**-0.2**	
	comp=Z,3.1nm,0.6s,baz=197,slow=6.3,SNR=24 comp=Z,3.1nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.11**	**33**		P	**P**	**10 32 17.0**	**+0.3**	
TORD					IAmb	IAmb	10 32 30.0		
	comp=Z,8.7nm,1.4s								
MBAR	**Mbarara**	**73.27**	**66**		LR	LR	11 02 26.4		
	comp=Z,218nm,18.1s,baz=82,slow=34								
KMBO	**Kilima Mbogo**	**76.32**	**72**		LR	LR	11 04 31.6		
	comp=Z,246nm,18.2s,baz=188,slow=34								
SJG	**San Juan**	**79.07**	**325**		LR	LR	11 08 00.9		
	comp=Z,61nm,20.5s,baz=145,slow=36								
RPZ	**Rata Peaks**	**79.92**	**195**		LR	LR	11 04 07.9		
	comp=Z,104nm,20.4s,baz=142,slow=33								
URZ	**Urewera**	**84.12**	**201**		LR	LR	11 06 03.3		
	comp=Z,114nm,21.2s,baz=211,slow=32								
MDT	**Midelt**	**90.27**			LR	LR	11 08 02.9		
	comp=Z,221nm,21.6s,baz=201,slow=31								
PPT	**Papeete**	**91.36**	**236**		LR	LR	11 04 54.0		
	comp=Z,40nm,21.7s,baz=188,slow=29								
STKA	**Stephens Creek**	**93.10**	**173**		LR	LR	11 13 04.0		
	comp=Z,220nm,21.3s,baz=203,slow=34								
KEST	**Kesra**	**96.60**	**31**		LR	LR	11 13 10.9		
	comp=Z,247nm,20.0s,baz=170,slow=33								
ESDC	**Sonseca Array**	**97.02**	**20**		LR	LR	11 13 23.9		
	comp=Z,183nm,20.3s,baz=166,slow=33								
ASAR	**Alice Springs**	**100.39**	**165**		P	**Pdif**	**10 34 32.1**	**-1.3**	
	comp=Z,0.4nm,0.8s,baz=186,slow=4.7,SNR=4.9								
NVAR	**Mina Array Bea**	**119.45**	**296**		PKP	**PKiKP**	**10 39 37.3**	**+1.6**	
	comp=Z,0.2nm,0.6s,baz=65,slow=4.3,SNR=2.9								
FINES	**FINESS Array B**	**124.34**	**29**		PKP	**PKiKP**	**10 39 43.5**	**-0.7**	
	comp=Z,1.6nm,0.9s,baz=270,slow=5.0,SNR=2.0								
CMAR	**Chiang Mai Arr**	**127.00**	**113**		PKP	**PKiKP**	**10 39 49.9**	**-1.0**	
	comp=Z,0.6nm,0.4s,baz=231,slow=3.5,SNR=5.2								
ARCES	**ARCESS Array B**	**130.69**	**23**		PKP	**PKiKP**	**10 39 55.8**	**-1.0**	
	comp=Z,1.8nm,0.8s,baz=197,slow=1.9,SNR=4.5								
YKA	**Yellowknife Ar**	**134.33**	**320**		PKP	**PKiKP**	**10 40 03.8**	**-0.5**	
	comp=Z,0.7nm,0.6s,baz=125,slow=2.3,SNR=8.4								
BVAR	**Borovoye Array**	**135.71**	**58**		PKP	**PKiKP**	**10 40 06.5**	**-0.9**	
	comp=Z,0.5nm,0.5s,baz=197,slow=4.5,SNR=2.7								
ZALV	**Zalesovo Beam**	**143.48**	**64**		PKP	PKPbc	10 40 17.3	+0.1	
	comp=Z,0.7nm,0.5s,baz=298,slow=3.1,SNR=4.0								
ILAR	**Eielson Array**	**148.21**	**313**		PKPbc	**PKPbc**	**10 40 30.6**	**-0.4**	
	comp=Z,12nm,1.0s,baz=126,slow=1.9,SNR=37								
SONM	**Songino Array**	**152.37**	**87**		PKPbc	**PKiKP**	**10 40 41.1**	**-0.9**	
	comp=Z,1.9nm,0.6s,baz=227,slow=2.1,SNR=11								
KSRS	**Korea Array**	**156.92**	**131**		PKPab	**PKPab**	**10 41 10.5**	**-0.8**	
	comp=Z,1.6nm,0.8s,baz=224,slow=4.1,SNR=6.0								

*IDC **22** 11:01:02.1±0.9,35°.77N×70°.83E,h0km,mb4.0/11, mbtmp4.0/15,ML3.7/4,MS3.5/2,Error ellipse: s-maj=24.1km s-min=19.1km az=52.0*

*MOS **22** 11:01:14.9±1.8,36°.25N×70°.66E,h109km,mb4.3/12,Error ellipse: s-maj=11.0km s-min=5.6km az=89.4*

*NEIC **22** 11:01:16.3±1.8,36°.27N±0°.07×70°.71E±0°.09, h115km±13km,mb4.5/5,Error ellipse: s-maj=11.8km s-min=9.4km az=127.0*

*NNC **22** 11:01:19.9±3.2,36°.67N×70°.33E,h95km±91km,mb4.0, mpv4.4,Error ellipse: s-maj=32.1km s-min=17.5km az=150.0*

*SOME **22** 11:01:21.2,38°.12N×71°.93E,h10km*

ISC 22 11:01:15.4±0.5,36°.19N±0°.05×70°.68E±0°.05,h110km,n89, σ2s89/101,mb4.0/19,15C-6D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.12**	**220**		**Pn**	**11 01 52.9**	**+2.8**
KBL	**Kabul**	**2.12**	**220**	PN	**Pn**	**11 01 52.9**	**+2.8**
CHGR	**Chuyangaron**	**2.75**	**334**		**Pn**	**11 01 58.3**	**+0.1**
CHGR	**Chuyangaron**	**2.75**	**334**	PN	**Pn**	**11 01 58.3**	**+0.1**
GAR	**Garm**	**2.82**	**354**		**Pn**	**11 01 59.6**	**+0.4**
NIL	**Nilore**	**3.30**	**139**		**Pn**	**11 02 06.6**	**+1.2**
NIL	**Nilore**	**3.30**	**139**	PN	**Pn**	**11 02 06.6**	**+1.2**
JMU	**Jammu**	**4.91**	**134**	*eP*	**Pn**	**11 02 27.1**	**0.0**
JMU				*eS*	**Sn**	**11 03 20.9**	**-1.8**
KSH	**Kashi**	**5.35**	**50**	Pn	**Pn**	**11 02 28.6**	**-4.4**
KSH				Sn	Sn	11 03 18.3	-15
KSH				pmax	pmax		
	comp=Z,35nm,0.6s						
KSH				smax	smax		
	comp=N,500nm,0.6s						
KSH				smax	smax		
	comp=E,320nm,0.9s						
THN	**Thein Dam**	**5.60**	**130**	*eP*	**Pn**	**11 02 36.1**	**-0.3**
THN				*eP*		11 02 37.0	
THN				*eS*	**Sn**	**11 03 36.8**	**-2.7**
THN				*eS*		11 03 37.0	
IUG	**Iuzhnay**	**5.97**	**355**	*eP*	**Pn**	**11 02 41.2**	**-0.2**
	comp=E,301nm,0.5s						
IUG				*eS*	**Sn**	**11 03 45.0**	**-3.5**
	comp=E,224nm,0.4s						
AML	**Almayashu**	**6.38**	**21**	P	**Pn**	**11 02 46.6**	**-0.6**
	SNR=57						
UCH	**Uchtor**	**6.72**	**25**	P	**Pn**	**11 02 50.8**	**-1.2**
	SNR=12						
BHK	**Bhakra**	**6.74**	**133**	*eP*	**Pn**	**11 02 51.1**	**-0.7**
BHK				*ex*	x	11 04 04.7	
EKS2	**Erkin-Say**	**6.89**	**19**	P	**Pn**	**11 02 53.5**	**-0.4**
	SNR=22						
KK31	**Karatay Array**	**6.91**	**359**	Pn	**Pn**	**11 02 53.3**	**-0.7**
KK31	**Karatay Array**	**6.91**	**359**	*e*PN	**Pn**	**11 02 53.3**	**-0.7**
KK31	**Karatay Array**	**6.91**	**359**	P	**Pn**	**11 02 53.3**	**-0.7**
	comp=E,10nm,0.4s,baz=184,slow=13,SNR=52						
KK31				⇓S	**Sn**	**11 04 06.2**	**-4.8**
	comp=E,18nm,0.6s,baz=183,slow=16,SNR=8.8						
KKAR	**Karatay Array**	**6.91**	**359**	Pn	**Pn**	**11 02 52.9**	**-1.1**
KKAR	**Karatay Array**	**6.91**	**359**	Pn	**Pn**	**11 02 53.1**	**-0.9**
KKAR	**Karatay Array**	**6.91**	**359**	PN	**Pn**	**11 02 52.9**	**-1.1**
AAK	**Ala-Archa**	**7.08**	**23**	P	**Pn**	**11 02 56.0**	**-0.6**
	SNR=9.1						
AAK	**Ala-Archa**	**7.08**	**23**		**Pn**	**11 02 56.1**	**-0.4**
AAK	**Ala-Archa**	**7.08**	**23**	*de*PN	**Pn**	**11 02 55.8**	**-0.8**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SMLA	**Simla**	**7.39**	**131**	*eP*	**Pn**	**11 02 58.5**	**-2.2**
SMLA				*eS*	**Sn**	**11 04 15.9**	**-7.1**
SMLA				IAML		11 04 23.6	
	comp=E,74nm,0.3s						
SMLA				IAML		11 04 24.4	
	comp=N,78nm,0.3s						
CHMS	**Chumysh**	**7.49**	**24**	P	**Pn**	**11 03 01.4**	**-0.6**
	SNR=5.9						
CHMS	**Chumysh**	**7.49**	**24**	*i* PN	**Pn**	**11 03 01.0**	**-1.0**
CHMS				pmax	pmax		
	comp=Z,22nm,0.6s						
CHMS	**Chumysh**	**7.49**	**24**	⇓P	**Pn**	**11 03 01.0**	**-1.0**
	comp=Z,22nm,0.6s						
CHMS				⇑S	**Sn**	**11 04 21.9**	**-3.4**
	comp=Z,45nm,0.8s						
USP	**Ospenovka**	**7.66**	**21**	P	**Sn**	**11 04 27.0**	**-2.3**
	SNR=8.0						
TKM2	**Tokmak 2**	**7.72**	**28**	P	**Pn**	**11 03 05.3**	**0.0**
	SNR=11						
TKM2	**Tokmak 2**	**7.72**	**28**	*i* PN	**Pn**	**11 03 04.2**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,11nm,0.6s						
TKM2	**Tokmak 2**	**7.72**	**28**	⇓P	**Pn**	**11 03 04.2**	**-1.0**
	comp=Z,11nm,0.7s						
TKM2				⇑S	**Sn**	**11 04 27.9**	**-3.2**
	comp=Z,59nm,0.8s						
DGS	**Degeres**	**8.06**	**28**	*eP*	**Pn**	**11 03 09.9**	**+0.1**
	comp=Z,8.8nm,0.8s						
DGS				*eS*	**Sn**	**11 04 36.4**	**-2.9**
	comp=Z,17nm,1.1s						
MDOK	**Medeo**	**8.52**	**33**	PN	**Pn**	**11 03 19.7**	**+3.7**
MDOK	**Medeo**	**8.52**	**33**	⇑P	**Pn**	**11 03 19.7**	**+3.7**
	comp=Z,13nm,0.7s						
KUDL	**Kundal**	**9.41**	**147**	*eP*	**Pn**	**11 03 25.9**	**-2.1**
KUDL				*eS*	**Sn**	**11 05 04.1**	**-7.8**
ARXS	**Arharly**	**9.70**	**32**	*eP*	Pn	11 03 41.2	+9.3
	comp=Z,3.1nm,0.3s						
ARXS				*eS*	Sn	11 05 33.3	+14
	comp=Z,6.3nm,0.4s						
GEYT	**Alibeck**	**10.19**	**284**	Pn	Pn	11 03 34.1	-4.5
	comp=Z,0.7nm,0.3s,baz=115,slow=6.5,SNR=2.4						
GEYT				Sn	**Sn**	**11 05 26.3**	**-4.7**
	comp=Z,1.4nm,0.3s,baz=138,slow=24,SNR=7.3 comp=Z,1.6nm,0.4s						
GYA0	**ALIBECK ARRAY**	**10.19**	**284**	P	**Pn**	**11 03 37.8**	**-0.8**
GYA0				S	**Sn**	**11 05 26.1**	**-4.8**
GYA0B	**ALIBECK ARRAY**	**10.19**	**284**		**Pn**	**11 03 39.0**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**10.19**	**284**	⇓P	**Pn**	**11 03 37.8**	**-0.8**
GYA0B				⇑S	**Sn**	**11 05 26.1**	**-4.8**
PTH	**Pithoragarh**	**10.39**	**127**	*ex*	Pn	11 03 51.9	+10
PTH				*ex*	x	11 05 13.8	
JHNI	**Jhansi**	**12.63**	**146**	*eP*	**Pn**	**11 04 07.8**	**-3.5**
JHNI				*eS*	Sn	11 06 18.3	-12
MAKZ	**Makanchi**	**13.56**	**35**	Pn	**Pn**	**11 04 21.6**	**-1.5**
MAKZ	**Makanchi**	**13.56**	**35**	P	**Pn**	**11 04 21.6**	**-1.5**
MK31	**Makanchi Array**	**13.69**	**36**	*i* P	**Pn**	**11 04 25.7**	**+0.8**
MKAR	**Makanchi Array**	**13.69**	**36**	Pn	Pn	11 04 17.9	-7.0
	comp=Z,0.1nm,0.3s,baz=217,slow=10,SNR=5.0						
AB31	**Akbulak array**	**15.24**	**332**	*eP*	**Pn**	**11 04 43.8**	**-0.7**
AB31				*eS*	**Sn**	**11 07 22.4**	**-10**
AB31	**Akbulak array**	**15.24**	**332**	⇑P	**Pn**	**11 04 43.0**	**-1.5**
	comp=Z,4.3nm,0.6s,baz=152,slow=12,SNR=74						
AB31				⇓S	Sn	11 07 20.8	-12
	comp=Z,2.7nm,0.6s,baz=158,slow=21,SNR=5.9						
ABKAR	**Akbulak array**	**15.24**	**332**	P	**Pn**	**11 04 43.9**	**-0.6**
ABKAR	**Akbulak array**	**15.24**	**332**	P	**Pn**	**11 04 43.9**	**-0.6**
KURBB	**Kurchatov Arra**	**15.50**	**19**	Pn	**Pn**	**11 04 43.6**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=209,slow=11,SNR=2.5 comp=Z,0.7nm,0.2s						
KURK	**Kurchatov**	**15.61**	**19**	*ce*P	**P**	**11 04 51.7**	**+0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	**Borovoye Array**	**16.84**	**359**	P	**Pn**	**11 05 03.1**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=172,slow=14,SNR=6.5 comp=Z,0.9nm,0.6s						
BRVK	**Borovoye**	**16.87**	**359**	*ce*P	**Pn**	**11 05 03.4**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AKTO	**Aktyubinsk**	**16.93**	**331**	P	**Pn**	**11 05 05.1**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=145,slow=10,SNR=26						
AKTO				S	Sn	11 08 02.2	-11
	comp=Z,0.7nm,0.6s,baz=162,slow=20,SNR=1.3 comp=Z,7.8nm,0.6s						
AKTO	**Aktyubinsk**	**16.93**	**331**	⇑P	**P**	**11 05 06.8**	**+1.3**
	comp=Z,8.3nm,0.7s						
AKTO				⇑S	**Sn**	**11 08 03.7**	**-10**
	comp=Z,6.4nm,1.1s						
HYBB	**Hyderabad (bro**	**19.96**	**157**	*eP*	**P**	**11 05 40.1**	**+1.1**
HYBB				*eS*	**S**	**11 09 20.9**	**+3.4**
ZAA0	**Zalesovo Array**	**20.30**	**25**	P	**P**	**11 05 42.6**	**+0.3**
ZAA0				IAmb	IAmb	11 05 44.1	
	comp=Z,14nm,0.6s						
ZALV	**Zalesovo Beam**	**20.30**	**25**	P	**P**	**11 05 42.5**	**+0.1**
	comp=Z,15nm,0.6s,baz=220,slow=11,SNR=42 comp=Z,15nm,0.6s						
ZALV	**Zalesovo Beam**	**20.30**	**25**	P	**P**	**11 05 42.3**	**-0.1**
ARU	**Arti**	**21.84**	**342**	P	**P**	**11 06 01.2**	**+2.4**
	comp=Z,8.2nm,0.2s,baz=148,slow=6.3,SNR=14 comp=Z,8.2nm,0.2s						
ARU	**Arti**	**21.84**	**342**	P	**P**	**11 05 58.2**	**-0.6**
ARU				IAmb	IAmb	11 06 04.3	
	comp=Z,19nm,1.0s						
ARU	**Arti**	**21.84**	**342**	*c* iP	**P**	**11 06 00.9**	**+2.1**
ARU						11 06 24.3	
ARU				S	Sn	11 10 02.6	-8.4
ARU				SS	**SnSn**	**11 10 35.6**	**+6.3**
ARU				pmax	pmax		
	comp=Z,19nm,1.0s						
KBZ	**Khabaz**	**22.52**	**298**	*i* P	**P**	**11 06 04.8**	**-1.1**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	**Kislovodsk**	**22.71**	**299**	*eP*	**P**	**11 06 04.3**	**-3.6**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MMAI	**Mount Meron Ar**	**29.11**	**274**	LR	LR	11 21 20.0	
	comp=Z,204nm,18.1s,baz=37,slow=42						
BR231	**Keskin MP Arra**	**29.94**	**289**	P	**P**	**11 07 14.4**	**+1.2**
OBN	**Obninsk**	**30.01**	**320**	⇑*eP*	**P**	**11 07 12.9**	**-0.5**
OBN				*e*		11 08 13.9	
OBN				*eS*	**S**	**11 12 09.6**	**+6.5**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,32nm,22.0s						
CMAR	**Chiang Mai Arr**	**30.54**	**118**	*ce*P	**P**	**11 07 18.2**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**32.94**	**309**	P	**P**	**11 07 42.8**	**+3.5**
	comp=Z,0.5nm,0.5s,baz=85,slow=6.6,SNR=3.0						
AKASG				LR	LR	11 22 42.6	
	comp=Z,34nm,19.8s,baz=229,slow=39 comp=Z,0.5nm,0.5s						
NRIK	**Noril'sk**	**34.48**	**10**	*i* P	**P**	**11 07 54.8**	**+2.5**
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FINES	**FINESS Array B**	**37.60**	**326**	P	**P**	**11 08 21.8**	**+2.8**
	comp=Z,2.2nm,0.9s,baz=119,slow=11,SNR=2.3 comp=Z,2.2nm,0.9s						
NJ2	**Nanjing**	**39.77**	**82**	*e*P	**P**	**11 08 36.3**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARCES	**ARCESS Array B**	**41.33**	**338**	P	**P**	**11 08 52.9**	**+3.0**
	comp=Z,2.0nm,0.7s,baz=98,slow=8.7,SNR=12 comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**41.33**	**338**	P	**P**	**11 08 51.8**	**+1.9**
ARCES				IAmb	IAmb	11 08 59.5	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**41.33**	**338**	P	**P**	**11 08 51.8**	**+1.9**
ARCES				pmax	pmax		
	comp=Z,12nm,1.4s						
YAK	**Yakutsk**	**44.37**	**35**	*i* P	**P**	**11 09 15.2**	**+0.8**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NB2	**NORSAR Subarra**	**44.47**	**323**	P	**P**	**11 09 18.5**	**+3.1**
	comp=Z,0.8nm,0.8s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.47**	**323**	P	**P**	**11 09 18.2**	**+2.9**
	comp=Z,1.4nm,0.8s,baz=96,slow=7.9,SNR=6.3 comp=Z,1.4nm,0.8s						
KONO	**Kongsberg**	**45.16**	**321**	*ce*P	**P**	**11 09 19.5**	**-1.3**
KONO				pmax	pmax		
	comp=Z,24nm,2.5s						
KLR	**Kul'dur**	**45.54**	**54**	*i* P	**P**	**11 09 27.2**	**+3.3**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BILL	**Bilibino**	**59.00**	**26**	⇑*eP*	**P**	**11 11 03.3**	**+0.2**
BILL				*e*		11 13 22.0	
BILL				*eS*	S	11 19 14.3	+14
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,75nm,16.0s						
TORD	**Torodi Ar. Bea**	**65.45**	**269**	P	**P**	**11 11 46.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=46,slow=6.1,SNR=13 comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**75.15**	**16**	P	**P**	**11 12 47.0**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=328,slow=5.3,SNR=7.5 comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**81.57**	**2**	P	**P**	**11 13 23.6**	**+3.1**
	comp=Z,1.3nm,0.7s,baz=352,slow=5.4,SNR=8.4 comp=Z,1.3nm,0.7s						
YKA	**Yellowknife Ar**	**81.57**	**2**	*ce*P	**P**	**11 13 23.7**	**+3.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**	**11 13 23.1**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=325,slow=5.0,SNR=5.6 comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**	**11 13 34.9**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=309,slow=5.0,SNR=16 comp=Z,0.7nm,0.6s						

*IDC **22** 11:11:12.9±0.6,55°.05S×32°.66W,h0km,mb4.3/9, mbtmp4.3/10,ML3.9/1,MS3.7/6,Error ellipse: s-maj=21.3km s-min=17.5km az=51.0*

*NEIC **22** 11:11:15.8±1.6,55°.10S±0°.09×32°.7W±0°.2,h15km±3km, mb5.0/28,Error ellipse: s-maj=14.6km s-min=10.9km az=52.0*

ISC 22 11:11:14.5±0.4,55°.06S±0°.07×32°.72W±0°.08,h10km,n93, σ0s75/85,mb4.8/20,MS3.7/5,2C,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.32**	**288**		**Pn**	**11 11 52.5**	**-0.2**
ORCD	**Orcadas**	**8.56**	**223**	Pn	**Pn**	**11 13 16.2**	**-2.1**
PMSA	**Palmer Station**	**18.27**	**225**	P	**Pn**	**11 15 26.7**	**-1.0**
	0.4nm,0.3s,baz=62,slow=10,SNR=2.8						
PMSA				LR	LR	11 22 19.1	
	comp=Z,224nm,18.7s,baz=108,slow=36 1.7nm,0.4s						
PMSA	**Palmer Station**	**18.27**	**225**		**P**	**11 15 29.9**	**+2.1**
VNA1	**Neumayer--Stat**	**18.97**	**155**	P	**Pn**	**11 15 37.9**	**+1.7**
VNA3	**Neumayer Olymp**	**19.06**	**157**	P	**Pn**	**11 15 37.5**	**+0.2**
VNA2	**Neumayer--Watz**	**19.37**	**155**	P	**Pn**	**11 15 41.9**	**+0.9**
	baz=299,slow=4.0						
SMAI	**San Martin Ant**	**20.57**	**217**	P	**P**	**11 15 54.0**	**+1.0**
SNAA	**Sanae**	**20.98**	**154**	P	**P**	**11 15 57.2**	**-0.3**
SNAA	**Sanae**	**20.98**	**154**	P	**P**	**11 15 58.5**	**+1.0**
	1.5nm,0.6s,baz=312,slow=13,SNR=18 1.5nm,0.6s						
SNAA	**Sanae**	**20.98**	**154**	P	**P**	**11 15 57.4**	**-0.1**
TROLL	**Troll, Antarti**	**22.57**	**152**	P	**P**	**11 16 14.7**	**+0.1**
BELA	**Belgrano 2**	**22.93**	**181**	P	**P**	**11 16 18.8**	**+0.6**
MG05	**Puerto Natales**	**23.75**	**262**	P

LSZ	**Lusaka**	**61.05**	**75**	LR	LR	11 45 45.6	
	comp=Z,99nm,18.3s,baz=254,slow=34						
DBIC	**Dimbokro**	**65.74**	**31**	P	**P**	**11 21 58.9**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=210,slow=7.4,SNR=4.6 comp=Z,3.1nm,0.6s						
DBIC	**Dimbokro**	**65.74**	**31**	P	**P**	**11 21 59.2**	**-0.2**
IMBA	**Imbabura, San**	**66.45**	**309**	P	**P**	**11 22 03.3**	**-1.2**
TOA0	**Torodi Ar. Sit**	**73.89**	**35**	P	**P**	**11 22 49.6**	**+0.1**
TOA0				IAmb	IAmb	11 22 55.5	
	comp=Z,5.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.89**	**35**	P	**P**	**11 22 49.4**	**0.0**
	comp=Z,3.0nm,0.6s,baz=199,slow=6.7,SNR=33 comp=Z,3.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.89**	**35**	P	**P**	**11 22 49.2**	**-0.3**
ASAR	**Alice Springs**	**100.76**	**168**	P	**Pdif**	**11 25 01.5**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=183,slow=5.3,SNR=4.4						
ARCES	**ARCESS Array B**	**131.23**	**23**	PKP	**PKPdf**	**11 30 25.4**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=270,slow=2.7,SNR=4.3						
YKA	**Yellowknife Ar**	**133.37**	**321**	PKP	**PKPdf**	**11 30 28.5**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=129,slow=2.7,SNR=3.9						
PZH	**PanZhiHua**	**136.40**	**112**	PKP	**PKPdf**	**11 30 35.3**	**-1.0**
MKAR	**Makanchi Array**	**139.59**	**74**	PKP	**PKPdf**	**11 30 41.6**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=237,slow=2.4,SNR=2.4						
BCAR	**Beaver Creek A**	**144.46**	**312**		**PKPab**	**11 30 47.6**	**-0.4**
L27K	**Beaver Creek,**	**144.48**	**312**		**PKPab**	**11 30 48.3**	**+0.3**
ZAA0	**Zalesovo Array**	**144.78**	**65**		**PKPdf**	**11 30 50.1**	**-0.2**
ZALV	**Zalesovo Beam**	**144.78**	**65**	PKP	**PKPab**	**11 30 48.7**	**-0.7**
	comp=Z,5.6nm,0.6s,baz=246,slow=4.0,SNR=14						
ZALV	**Zalesovo Beam**	**144.78**	**65**		**PKPab**	**11 30 49.3**	**0.0**
LZH	**Lanzhou**	**144.89**	**104**	ePKP	**PKiKP**	**11 30 55.5**	**+0.3**
LZH				pPKP	sPKPdf	11 31 04.3	+11
K27K	**Chicken**	**144.92**	**314**		**PKPab**	**11 30 49.2**	**-0.4**
GTA	**Gaotai**	**144.94**	**96**	⇑PKP	**PKPdf**	**11 30 51.5**	**+0.2**
GTA				pPKP	PKiKP	11 30 55.6	+0.5
GTA				sPKP		11 30 58.4	
L26K	**Log Cabin Wild**	**145.12**	**312**		**PKPbc**	**11 30 50.3**	**0.0**
DOT	**Dot Lake**	**145.63**	**313**		**PKPdf**	**11 30 51.1**	**-0.4**
J26L	**Joseph Creek**	**145.68**	**314**		**PKPdf**	**11 30 51.8**	**+0.1**
SCRK	**Sand Creek**	**145.70**	**313**		**PKPdf**	**11 30 52.1**	**+0.3**
KLU	**Klutina**	**145.73**	**308**		**PKPdf**	**11 30 52.1**	**+0.3**
I26K	**Coal Creek Min**	**145.75**	**316**		**PKPdf**	**11 30 52.0**	**+0.3**
RIDG	**Independent Ri**	**145.99**	**313**		**PKPdf**	**11 30 52.4**	**+0.2**
PAX	**Paxson**	**146.02**	**311**		**PKPdf**	**11 30 52.4**	**+0.1**
XAN	**Xi'an**	**146.14**	**112**	⇑PKPbc	**PKPdf**	**11 30 53.6**	**+0.2**
J25K	**Salcha River,**	**146.46**	**314**		**PKPdf**	**11 30 53.6**	**+0.6**
PRP	**Porcupine Dome**	**146.76**	**315**		**PKPbc**	**11 30 55.6**	**+0.2**
IL31		**147.13**	**314**		**PKPbc**	**11 30 55.6**	**-0.6**
ILAR	**Eielson Array**	**147.13**	**314**	PKPbc	**PKPbc**	**11 30 55.8**	**-0.5**
	comp=Z,6.3nm,0.7s,baz=130,slow=2.2,SNR=66						
ILAR	**Eielson Array**	**147.13**	**314**		**PKPbc**	**11 30 55.4**	**-0.9**
CCB	**Clear Creek Bu**	**147.48**	**313**		**PKPbc**	**11 30 56.2**	**-1.0**
COLA	**College**	**147.56**	**314**		**PKPdf**	**11 30 55.4**	**+0.8**
WRH	**Wood River Hil**	**147.56**	**313**		**PKPbc**	**11 30 56.7**	**-0.7**
TCOL	**CIGO, UAF Yank**	**147.56**	**314**		**PKPdf**	**11 30 54.8**	**+0.1**
RND	**Reindeer**	**147.61**	**311**		**PKPbc**	**11 30 57.2**	**-0.5**
MCK	**McKinley**	**147.73**	**312**		**PKPbc**	**11 30 58.1**	**+0.1**
MDM	**Murphy Dome**	**147.73**	**314**		**PKPdf**	**11 30 56.6**	**+1.5**
SKT	**Skwentna**	**148.42**	**308**		**PKPbc**	**11 30 59.4**	**-0.4**
KTH	**Kantishna Hill**	**148.55**	**311**		**PKPbc**	**11 30 59.6**	**-0.5**
TOLK	**Toolik Lake Re**	**148.90**	**321**		**PKPbc**	**11 31 00.6**	**-0.3**
H21K	**Melozitna Rive**	**149.75**	**315**		**PKPbc**	**11 31 02.9**	**-0.2**
H21K					**PKPab**	**11 31 09.3**	**+0.7**
IMAR	**Indian Mountai**	**150.19**	**315**		**PKPbc**	**11 31 04.0**	**-0.1**
SONM	**Songino Array**	**153.83**	**89**	PKPbc	**PKPbc**	**11 31 12.1**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=207,slow=1.6,SNR=1.7						

GCG ***22*** *11:32:15.2±0.7, 13.°63N×92.°58W, h50km±27km, MD3.9*
IDC ***22*** *11:32:18.9±4.1, 14.°52N×90.°95W, h0km, mb3.7/3, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=142.6km s-min=63.5km az=41.0*
ISC 22 11:32:27.0±1.9, 14.°2N±0.°3×91.°9W±0.°1, h54km, n10, σθ=99/10, mb3.7/3, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.62**	**30**	⇑*i*P		**Pn**	**11 32 39.8**	**-0.3**
FUG	**Fuego 3**	**1.05**	**75**	*e*P		**Pn**	**11 32 45.1**	**-0.6**
PCG	**Pacaya**	**1.26**	**80**	*e*P		**Pn**	**11 32 48.3**	**-0.3**
NBG	**Las Nubes**	**1.55**	**75**	*e*P		**Pn**	**11 32 53.6**	**+1.1**
MRL	**Marmol**	**2.32**	**67**	*e*P		**Pn**	**11 33 03.5**	**+0.6**
MRL				*e*S		Sn	11 33 41.2	+11
TXAR	**Lajitas Array**	**18.61**	**326**	P		**Pn**	**11 36 41.6**	**+0.7**
	baz=147,slow=11,SNR=9.0 0.7nm,0.8s							
ANMO	**Albuquerque**	**24.50**	**330**	P		**P**	**11 37 42.1**	**+0.6**
	1.1nm,0.6s,baz=153,slow=10,SNR=8.3 1.1nm,0.6s							
NVAR	**Mina Array Bea**	**33.60**	**321**	P		**P**	**11 39 03.3**	**+0.9**
	0.7nm,0.7s,baz=135,slow=9.0,SNR=8.2 0.7nm,0.7s							
YKA	**Yellowknife Ar**	**50.88**	**347**	P		**P**	**11 41 20.5**	**-1.7**
	0.6nm,0.6s,baz=137,slow=9.0,SNR=6.6 0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**145.86**	**341**	PKPbc		**PKPdf**	**11 52 00.3**	**-0.4**
	1.0nm,0.4s,baz=341,slow=4.8,SNR=6.7							

GCG ***22*** *11:42:16.3±0.4, 16.°78N×94.°08W, h17km, MD4.9*
INET ***22*** *11:42:24.1±1.5, 15.°92N×93.°90W, h15km±999km, MW4.8*
GCMT ***22*** *11:42:30.7±0.3, 15.°90N±0.°02×93.°27W±0.°02, h104km±2km, MW5.0/111, Moment Tensor Solution. s57,c65; s111,c152; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.55±.09; Mθθ 0.65±.12; Mϕϕ 1.90±.11; Mrθ 1.65±.07; Mθϕ-1.87±.10; Mϕr-0.84±.07; Best double couple: Mo 3.46900×10^16 NP1:ϕs308.00000°, δ62.00000°, λ-109.00000°. NP2:ϕs164.00000°, δ33.00000°, λ-59.00000°. Principal axes: T 3.6890, Plg15.0000°, Azm51.0000°; N -0.4440, Plg17.0000°, Azm317.0000°; P -3.2500, Plg67.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***22*** *11:42:30.4±0.4, 15.°94N×92.°97W, h108km±2km, mb4.2/28, mbtmp4.6/30, MS3.6/41 Error ellipse: s-maj=13.4km s-min=7.3km az=54.0*
MEX ***22*** *11:42:31.7±1.0, 15.°84N×93.°40W, h108km±7km, MD5.0*
NEIC ***22*** *11:42:32.1±3.4, 15.°87N±0.°05×93.°36W±0.°05, h111km±5km, Error ellipse: s-maj=8.3km s-min=5.8km az=223.0*
ISC 22 11:42:30.3±0.3, 15.°83N±0.°03×93.°36W±0.°03, h110km±2km, h110km: pP-P, n780, σ1°86/852, mb4.9/82, 29C-11D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PCIG		**0.18**	**134**			**Pn**	**11 42 45.1**	**-0.5**
PCIG						Sn	11 42 56.1	-1.0
PCIG		**0.18**	**134**	⇓*e*P		**Pn**	**11 42 45.1**	**-0.5**
PCIG				*e*S		Sn	11 42 56.1	-1.0
CARR	**Arriaga**	**0.68**	**308**	*e*P		**Pn**	**11 42 48.1**	**-0.4**
CARR				*e*S		Sn	11 43 01.7	-0.4
TGIG		**0.97**	**13**			**Pn**	**11 42 51.2**	**0.0**
TGIG						Sn	11 43 06.4	-0.6
TGIG		**0.97**	**13**	⇓*e*P		**Pn**	**11 42 51.2**	**0.0**
TGIG				*i* S		Sn	11 43 06.4	-0.6
TGBT	**Tuxtla Gutierr**	**0.97**	**15**			**Pn**	**11 42 51.2**	**0.0**
TGBT						Sn	11 43 06.3	-0.6
TGBT	**Tuxtla Gutierr**	**0.97**	**15**	*e*P		**Pn**	**11 42 51.2**	**0.0**
TGBT				*e*S		Sn	11 43 06.3	-0.6
CCIG	**Comitan**	**1.25**	**69**	⇓*e*P		**Pn**	**11 42 55.3**	**+0.9**
CCIG				*e*S		Sn	11 43 12.7	0.0
PATR	**El Naranjo**	**1.30**	**123**	⇓*e*P		**Pn**	**11 42 55.0**	**+0.1**
PATR				*e*S		Sn	11 43 13.6	-0.1
PAVE	**Pavencul**	**1.30**	**119**	⇓*e*P		**Pn**	**11 42 55.7**	**+0.6**
PAVE				*i* S		Sn	11 43 14.9	+1.2
THIG		**1.40**	**131**			**Pn**	**11 42 56.7**	**+0.8**
THIG						Sn	11 43 16.4	+1.1
THIG		**1.40**	**131**	⇓*e*P		**Pn**	**11 42 56.7**	**+0.8**
THIG				*i* S		Sn	11 43 16.4	+1.1
CHUJ	**Union Juarez**	**1.41**	**121**	⇑*e*P		**Pn**	**11 42 56.6**	**+0.2**
CHUJ				*e*S		Sn	11 43 16.4	+0.5
NILT	**Santiago Nilte**	**1.41**	**301**	*e*P		**Pn**	**11 42 55.5**	**-0.6**
NILT				*e*S		Sn	11 43 14.6	-1.1
UXUV	**UXUV**	**1.66**	**333**	⇓*e*P		**Pn**	**11 42 59.2**	**+0.1**
UXUV				*e*S		Sn	11 43 19.7	-1.2
HUEH	**Huehuetenango**	**1.86**	**106**			**Pn**	**11 43 02.6**	**+0.8**
STG3	**Santiaguito 3,**	**2.05**	**123**	*e*P		**Pn**	**11 43 05.9**	**+1.7**
RTAL	**Retalhuleu**	**2.07**	**129**			**Pn**	**11 43 05.5**	**+1.3**
VHSA	**Villahermosa**	**2.17**	**11**	⇑*e*P		**Pn**	**11 43 06.7**	**+1.2**
VHSA				*e*S		Sn	11 43 34.0	+1.5
TUIG	**Tuzandepetl**	**2.41**	**335**	*e*P		**Pn**	**11 43 07.8**	**-0.8**
TUIG				*e*S		Sn	11 43 35.5	-2.5
FUG	**Fuego 3**	**2.79**	**119**	*e*P		**Pn**	**11 43 15.9**	**+2.1**
NEUV	**Arroyo Zacate**	**3.00**	**309**	*e*P		**Pn**	**11 43 15.3**	**-0.9**
NEUV				*e*S		Sn	11 43 43.0	-8.7
PANG	**Puerto Angel**	**3.01**	**267**			**Pn**	**11 43 13.8**	**-2.6**
PANG						Sn	11 43 46.8	-5.1
PANG	**Puerto Angel**	**3.01**	**267**	*e*P		**Pn**	**11 43 13.8**	**-2.6**
PANG				*e*S		Sn	11 43 46.8	-5.1
PCG	**Pacaya**	**3.02**	**118**	*e*P		**Pn**	**11 43 19.1**	**+2.3**
NBG	**Las Nubes**	**3.16**	**113**	*e*P		**Pn**	**11 43 21.0**	**+2.3**
OXLC	**Oaxaca**	**3.44**	**291**	*e*P		**Pn**	**11 43 23.6**	**+1.3**
OXLC				*i* S		Sn	11 44 01.3	-1.2
OXBJ	**Oaxaca**	**3.46**	**291**			**Pn**	**11 43 23.2**	**+0.6**
OXBJ						Sn	11 44 01.6	-1.3
OXBJ	**Oaxaca**	**3.46**	**291**	*e*P		**Pn**	**11 43 23.2**	**+0.6**
OXBJ				*e*S		Sn	11 44 01.6	-1.3
VHO	**Vista Hermosa**	**3.47**	**291**	⇑*e*P		**Pn**	**11 43 23.5**	**+0.8**
VHO				*e*S		Sn	11 43 59.5	-3.7
PETF	**Flores**	**3.52**	**72**			**Pn**	**11 43 23.6**	**+0.5**
PETF	**Flores**	**3.52**	**72**	*e*P		**Pn**	**11 43 23.7**	**+0.5**
PETF				*e*S		Sn	11 44 02.7	-1.5
MRL	**Marmol**	**3.62**	**101**	*e*P		**Pn**	**11 43 25.4**	**+0.6**
PEIG	**Puerto Escondi**	**3.65**	**273**	⇑*e*P		**Pn**	**11 43 23.0**	**-2.1**
PEIG				*e*S		Sn	11 44 03.0	-4.3
SCIG	**Sabancuy**	**3.74**	**33**	⇑*i*P		**Pn**	**11 43 26.1**	**-0.1**
SCIG				*e*S		Sn	11 44 05.1	-4.4
ESQI	**Esquipulas**	**4.08**	**108**			**Pn**	**11 43 30.7**	**-0.1**
YOIG	**Yosondua**	**4.15**	**285**	⇑*e*P		**Pn**	**11 43 31.8**	**-0.1**
YOIG				*e*S		Sn	11 44 13.0	-6.7
TOIG	**Toxpalan**	**4.20**	**303**	*e*P		**Pn**	**11 43 32.9**	**+0.4**
TOIG				*i* S		Sn	11 44 19.3	-1.4
TXIG	**Tlaxiaco**	**4.46**	**289**	⇑*e*P		**Pn**	**11 44 25.9**	**+0.7**
TXIG				*e*S		Sn	11 44 25.9	-1.3
SNET	**Serv Nac Est T**	**4.53**	**118**			**Pn**	**11 43 38.7**	**+1.8**
TPIG	**Tehuac#an**	**4.61**	**304**			**Pn**	**11 43 39.2**	**+1.1**
TPIG						Sn	11 44 27.4	-3.3
TPIG	**Tehuac#an**	**4.61**	**304**	*e*P		**Pn**	**11 43 39.2**	**+1.1**
TPIG				*e*S		Sn	11 44 27.4	-3.3
PNIG	**Pinotepa**	**4.62**	**278**			**Pn**	**11 43 36.7**	**-1.3**
PNIG						Sn	11 44 23.4	-7.3
PNIG	**Pinotepa**	**4.62**	**278**	⇑*e*P		**Pn**	**11 43 36.7**	**-1.3**
PNIG				*e*S		Sn	11 44 23.4	-7.3
OZST	**Orizaba**	**4.67**	**311**	*e*P		**Pn**	**11 43 38.4**	**-0.4**
OZST				*i* S		Sn	11 44 29.4	-2.7
HLIG	**Huajuapan de L**	**4.70**	**296**	⇑*e*P		**Pn**	**11 43 40.5**	**+1.2**
HLIG				*i* S		Sn	11 44 32.0	-0.9
JAUV	**Jalcomulco**	**4.81**	**317**	⇓*e*P		**Pn**	**11 43 38.9**	**-1.7**
JAUV				*e*S		Sn	11 44 30.7	-4.6
LVIG	**Laguna Verde**	**4.84**	**323**	*e*P		**Pn**	**11 43 39.0**	**-2.1**
LVIG				*e*S		Sn	11 44 29.7	-6.3
FTIG	**Fresnillo de T**	**5.02**	**295**	⇑*e*P		**Pn**	**11 43 44.8**	**+1.3**
FTIG				*e*S		Sn	11 44 37.0	-3.4
MGIG	**Malinaltepec**	**5.25**	**286**	⇑*i*P		**Pn**	**11 43 47.1**	**+0.4**
MGIG				*e*S		Sn	11 44 42.4	-3.8
TLIG	**Tlapa**	**5.28**	**290**	⇑*i*P		**Pn**	**11 43 48.0**	**+0.9**
TLIG				*e*S		Sn	11 44 45.4	-1.5
CRIG	**Cruz Grande**	**5.62**	**280**			**Pn**	**11 43 50.6**	**-0.9**
CRIG	**Cruz Grande**	**5.62**	**280**	⇑*e*P		**Pn**	**11 43 50.6**	**-0.9**
CXUV	**Coxquihui**	**5.90**	**318**	⇓*e*P		**Pn**	**11 43 54.7**	**-0.7**
CXUV				*i* S		Sn	11 44 54.8	-7.0
TGUH	**Tegucigalpa,Un**	**6.14**	**106**	Pn		**Pn**	**11 44 00.2**	**+1.4**
TGUH	**Tegucigalpa,Un**	**6.14**	**106**	*e*P		**Pn**	**11 44 00.1**	**+1.4**
MYIG	**Mrida**	**6.14**	**33**	*e*P		**Pn**	**11 43 58.3**	**-0.4**
MYIG				*e*S		Sn	11 45 07.1	-0.5
DAIG	**Los Arroyos**	**6.16**	**282**			**Pn**	**11 43 58.3**	**-0.5**
DAIG						Sn	11 45 01.4	-6.5
DAIG	**Los Arroyos**	**6.16**	**282**	⇑*e*P		**Pn**	**11 43 58.3**	**-0.5**
DAIG				*e*S		Sn	11 45 01.4	-6.5
CSGN	**Cosiguina Volc**	**6.29**	**116**	*e*P		**Pn**	**11 44 02.7**	**+1.9**
TLVM	**San Miguel Top**	**6.47**	**302**	*i* P		**Pn**	**11 44 06.5**	**+3.1**
TLVM				*e*S		Sn	11 45 13.8	-2.2
TEIG	**Tepich**	**6.51**	**47**	Pn		**Pn**	**11 44 02.2**	**-1.4**
TEIG	**Tepich**	**6.51**	**47**	*e*P		**Pn**	**11 44 02.2**	**-1.4**
UNM	**Universidad Na**	**6.55**	**303**	Pn		**Pn**	**11 44 07.0**	**+2.6**
MAVM	**Malinalco, Edo**	**6.63**	**299**			Pn	11 44 12.7	+7.2
MAVM						Sn	11 45 20.8	+1.0
MAVM	**Malinalco, Edo**	**6.63**	**299**	⇑*i*P		Pn	11 44 12.7	+7.2
MAVM				*e*S		Sn	11 45 20.8	+1.0
AOVM	**Tlapan**	**6.64**	**302**	*e*P		**Pn**	**11 44 08.2**	**+2.5**
AOVM				*e*S		Sn	11 45 19.8	-0.4
INVM	**La Marquesa**	**6.70**	**302**	*e*P		Pn	11 43 58.7	-7.8
INVM				*e*S		Sn	11 45 23.0	+1.4
CAIG	**El Cayaco**	**6.74**	**281**			**Pn**	**11 44 06.3**	**-0.4**
CAIG						Sn	11 45 17.9	-4.1
CAIG	**El Cayaco**	**6.74**	**281**	⇑*i*P		**Pn**	**11 44 06.3**	**-0.4**
CAIG				*i* S		Sn	11 45 17.9	-4.1
CRIN	**San Cristobal**	**6.86**	**116**			**Pn**	**11 44 11.3**	**+2.8**
CRIN	**San Cristobal**	**6.86**	**116**	*e*P		**Pn**	**11 44 10.8**	**+2.4**
ARIG	**Puente Sto Nin**	**7.12**	**291**			**Pn**	**11 44 13.7**	**+1.8**
ARIG	**Puente Sto Nin**	**7.12**	**291**	⇑*i*P		**Pn**	**11 44 13.7**	**+1.8**
ARIG				*e*S		Sn	11 45 32.6	+1.4
CNGN	**Cerro Negro**	**7.26**	**116**			**Pn**	**11 44 16.0**	**+2.1**
RCON	**San Juan de Ri**	**7.35**	**108**	*e*P		**Pn**	**11 44 16.3**	**+1.1**
COPN	**Copaltepe**	**7.50**	**118**	*e*P		**Pn**	**11 44 18.6**	**+1.5**
MATN	**Matagalpa**	**7.76**	**111**	Pn		**Pn**	**11 44 22.3**	**+1.7**
ZIIG	**Zihuatanejo**	**7.97**	**284**			**Pn**	**11 44 24.1**	**+0.8**
ZIIG						Sn	11 45 49.6	-2.3
ZIIG	**Zihuatanejo**	**7.97**	**284**	⇑*i*P		**Pn**	**11 44 24.1**	**+0.8**
ZIIG				*e*S		Sn	11 45 49.6	-2.3
BOAB	**BOACO BROADBAN**	**8.18**	**113**			**Pn**	**11 44 27.9**	**+1.6**
RPIG	**Rio Verde**	**8.69**	**315**	*e*P		**Pn**	**11 44 36.1**	**+2.8**
RPIG				*e*S		Sn	11 46 08.2	-1.5
ACON	**Acoyapa**	**8.82**	**115**			**Pn**	**11 44 36.3**	**+1.2**
HZTE	**Horizontes, Gu**	**9.11**	**123**			**Pn**	**11 44 40.9**	**+1.9**
HZTE	**Horizontes, Gu**	**9.11**	**123**	*e*P		**Pn**	**11 44 40.8**	**+1.9**
BUEV	**Buena Vista**	**9.21**	**122**	*e*P		**Pn**	**11 44 41.4**	**+1.0**
SAJU	**San Juanillo,**	**9.40**	**127**	*e*P		**Pn**	**11 44 43.7**	**+0.9**
ORTG	**Ortega, Santa**	**9.42**	**124**	Pn		**Pn**	**11 44 45.0**	**+1.8**
ORTG	**Ortega, Santa**	**9.42**	**124**	⇑*e*P		**Pn**	**11 44 44.5**	**+1.3**
HORNC	**Hornillas**	**9.45**	**122**	*e*P		**Pn**	**11 44 44.5**	**+0.9**
CUI	**Cuipilapa**	**9.49**	**122**	*e*P		**Pn**	**11 44 45.3**	**+1.2**
ESPN	**Las Esperanzas**	**9.50**	**111**			**Pn**	**11 44 45.8**	**+1.6**
GRZA	**Playa Garza**	**9.55**	**127**	⇑*e*P		**Pn**	**11 44 46.1**	**+1.2**
NICO	**Nicoya**	**9.56**	**125**	⇑*i*P		**Pn**	**11 44 46.4**	**+1.3**
INDI	**Punta indio, G**	**9.68**	**127**	⇑*e*P		**Pn**	**11 44 47.9**	**+1.2**
MMIG	**Aquila**	**9.86**	**286**			**Pn**	**11 44 50.1**	**+1.1**
MMIG	**Aquila**	**9.86**	**286**	⇑*i*P		**Pn**	**11 44 50.1**	**+1.1**
JTS	**Las Juntas de**	**9.87**	**123**	Pn		**Pn**	**11 44 50.2**	**+1.0**
JTS	**Las Juntas de**	**9.87**	**123**	*e*P		**Pn**	**11 44 50.4**	**+1.2**
JTS	**Las Juntas de**	**9.87**	**123**	*e*P		**Pn**	**11 44 49.9**	**+0.6**
CEDE	**Laguna Cedeo**	**9.96**	**121**	*e*P		**Pn**	**11 44 51.7**	**+1.2**
COVE	**Coope Vega, Sa**	**10.09**	**119**			**Pn**	**11 44 53.0**	**+0.8**
LAFE	**Finca La Fe, P**	**10.18**	**125**	*e*P		**Pn**	**11 44 53.5**	**0.0**
LAFE	**Finca La Fe, P**	**10.18**	**125**	*e*P		**Pn**	**11 44 54.5**	**+1.0**
JUBC	**Volcan de Coli**	**10.40**	**292**	⇑*e*P		**Pn**	**11 44 59.6**	**+3.0**
COIG	**Colima**	**10.40**	**290**	⇑*i*P		**Pn**	**11 44 59.0**	**+2.5**
COIG				*e*S		Sn	11 46 47.2	-4.1
EZ5V		**10.42**	**292**			**Pn**	**11 45 00.3**	**+3.5**
EZ5V		**10.42**	**292**	⇓*e*P		**Pn**	**11 45 00.3**	**+3.5**
MNGA	**Volcan de Coli**	**10.43**	**292**	*e*P		**Pn**	**11 44 59.4**	**+2.4**
INCO	**Volcan de Coli**	**10.43**	**292**	⇓*e*P		**Pn**	**11 44 58.7**	**+1.5**
JACO	**JACO, Garabito**	**10.47**	**125**			**Pn**	**11 44 59.2**	**+1.9**
JACO	**JACO, Garabito**	**10.47**	**125**	*e*P		**Pn**	**11 44 58.7**	**+1.3**
CDAR	**Ciudad de Arme**	**10.63**	**288**	*e*P		**Pn**	**11 45 00.4**	**+0.9**
R15V		**10.67**	**290**			**Pn**	**11 45 01.8**	**+1.7**
R15V		**10.67**	**290**	⇓*e*P		**Pn**	**11 45 01.8**	**+1.7**
HDC	**Heredia**	**10.71**	**122**	Pn		**Pn**	**11 45 01.9**	**+1.2**
LCR2	**La Lucha 2**	**10.94**	**122**	⇑*i*P		**Pn**	**11 45 04.5**	**+0.6**
CVTR	**Volcan Turrial**	**10.99**	**121**			**Pn**	**11 45 05.4**	**+0.6**
CVTR	**Volcan Turrial**	**10.99**	**121**	*e*P		**Pn**	**11 45 05.6**	**+0.8**
VTCV	**VTCV, Calle Va**	**11.04**	**121**	*e*P		**Pn**	**11 45 05.8**	**+0.6**
RIMA	**Rio Macho**	**11.05**	**122**			**Pn**	**11 45 06.4**	**+1.0**
RIMA	**Rio Macho**	**11.05**	**122**	*e*P		**Pn**	**11 45 06.2**	**+0.8**
CDM	**Cerro de Muert**	**11.25**	**123**	⇑*i*P		**Pn**	**11 45 08.8**	**+0.5**
PEZE	**Perez Zeledon,**	**11.41**	**123**			**Pn**	**11 45 11.2**	**+1.1**
SRBA	**San Rafael, Bu**	**11.76**	**123**	Pn		**Pn**	**11 45 15.3**	**+0.5**
SRBA	**San Rafael, Bu**	**11.76**	**123**	*e*P		**Pn**	**11 45 14.6**	**-0.1**
DRK0	**Durika**	**11.83**	**122**			**Pn**	**11 45 17.7**	**+1.9**
DRK0	**Durika**	**11.83**	**122**	*e*P		**Pn**	**11 45 16.8**	**+0.9**
SOR	**Soroa**	**11.97**	**53**	Pn		**Pn**	**11 45 15.2**	**-2.2**
POTG	**Potrero Grande**	**12.05**	**123**	*e*P		**Pn**	**11 45 19.3**	**+0.7**
BRU2	**Volcan**	**12.55**	**123**			**Pn**	**11 45 26.1**	**+0.8**
BRU2	**Volcan**	**12.55**	**123**	*e*P		**Pn**	**11 45 24.6**	**-0.6**
BRU2	**Volcan**	**12.55**	**123**	*e*P		**Pn**	**11 45 25.4**	**+0.2**
LCCV	**Blossom Villag**	**13.21**	**71**	Pn		**Pn**	**11 45 33.3**	**-0.3**
833A	**Chaparral WMA,**	**13.63**	**337**	Pn		**Pn**	**11 45 41.1**	**+2.1**
833A	**Chaparral WMA,**	**13.63**	**337**	P		**Pn**	**11 45 41.0**	**+1.9**
	baz=155,SNR=24							
HKT	**Hockley**	**14.23**	**351**	Pn		**Pn**	**11 45 48.3**	**+1.5**
441A	**DeRidder**	**14.85**	**1**			**Pn**	**11 45 55.9**	**+1.2**
AZU	**Azuero**	**15.09**	**120**	*e*P		**Pn**	**11 45 59.0**	**+1.2**
MTDJ	**Mount Denham**	**15.32**	**79**	Pn		**Pn**	**11 46 00.1**	**-0.7**
MTDJ	**Mount Denham**	**15.32**	**79**	*e*P		**P**	**11 46 04.0**	**+1.0**
061Z	**Ochoppi**	**15.32**	**47**			**Pn**	**11 45 59.6**	**-1.1**
435B	**Jarrell**	**15.38**	**346**			**P**	**11 46 02.7**	**-0.8**
435B	**Jarrell**	**15.38**	**346**	P		**Pn**	**11 46 02.0**	**+0.6**
	baz=165							
342A	**Flagon Creek P**	**15.50**	**3**	P		**P**	**11 46 03.9**	**-0.9**
JCT	**Junction City**	**15.73**	**339**			**P**	**11 46 08.1**	**+0.6**
JCT	**Junction City**	**15.73**	**339**	P		**P**	**11 46 09.2**	**+1.7**
	baz=157,SNR=12							
344A	**Westbrook Farm**	**15.73**	**8**	P		**Pn**	**11 46 06.4**	**+0.7**
346A	**Big Creek Wild**	**15.89**	**12**	P		**P**	**11 46 08.7**	**-0.5**
NATX	**Nacogdoches**	**15.90**	**356**	P		**Pn**	**11 46 07.4**	**-0.4**
	baz=176							
237A	**Washetta, Mont**	**16.25**	**353**	P		**P**	**11 46 14.4**	**+1.2**
451A	**Vernon**	**16.28**	**24**	P		**P**	**11 46 14.1**	**+0.6**
BRAL	**Brewton**	**16.32**	**20**	P		**P**	**11 46 14.6**	**+

T47A Sharon Grove 21.79 14 P **P** **11 47 11.8 -1.6**
PRAC Prado 21.80 122 *e*P **P** **11 47 12.3 -1.4**
BIRD Birdtown, Kers 22.02 29 P **P** **11 47 17.1 +1.2**
KMSC Kings Mountain 22.04 27 P **P** **11 47 16.0 -0.1**
baz=212
BANI BANI 22.12 80 P **P** **11 47 18.3 +1.1**
CCM Cathedral Cave 22.21 4 P **P** **11 47 16.7 -1.1**
CCM Cathedral Cave 22.21 4 P **P** **11 47 17.5 -0.4**
baz=186
CHIC Chingaza 22.26 118 *e*P **P** **11 47 18.1 -1.0**
ANMO Albuquerque 22.37 331 P **P** **11 47 21.5 +1.8**
9.2nm,0.7s,baz=145,slow=11,SNR=38
ANMO pP **pP** **11 47 42.6 +1.6**
17nm,0.8s,baz=142,slow=12,SNR=11
9.2nm,0.7s
ANMO Albuquerque 22.37 331 P **P** **11 47 20.5 +0.8**
baz=145
R40A Maddies Statio 22.39 2 P **P** **11 47 19.0 -0.6**
TZTN Tazewell 22.40 21 P **P** **11 47 18.7 -1.1**
TZTN Tazewell 22.40 21 P **P** **11 47 19.1 -0.6**
baz=206
T50A Nancy 22.42 18 P **P** **11 47 20.1 +0.2**
PORT Chimborazo Vol 22.43 139 P **P** **11 47 24.0 +3.0**
FLOC Florencia 22.48 127 *e*P **P** **11 47 21.9 +1.1**
TUC Tucson 22.80 319 P **P** **11 47 26.5 +2.6**
TUC Tucson 22.80 319 P **P** **11 47 25.9 +2.0**
baz=132
R32A Long Quarter, 22.99 349 P **P** **11 47 25.4 -0.2**
U54A Nelsons Funny 23.02 24 P **P** **11 47 26.3 +0.3**
DR12 Loma Pena Alta 23.07 79 P **P** **11 47 24.9 -1.8**
SDV Santo Domingo 23.23 105 P **P** **11 47 26.4 -2.0**
4.4nm,0.3s,baz=283,slow=6.5,SNR=8.2
SDV pP **pP** **11 47 47.5 -3.3**
15nm,0.6s,baz=289,slow=9.2,SNR=3.4
SDV LR LR 11 57 56.2
comp=Z,108nm,18.0s,baz=282,slow=40
4.4nm,0.3s
SDV Santo Domingo 23.23 105 P **P** **11 47 27.1 -1.2**
SDV Santo Domingo 23.23 105 *e*P **P** **11 47 26.9 -1.4**
OLIL Olney 23.28 10 P **P** **11 47 27.3 -1.0**
Q44A Meyer Farm, Va 23.30 9 P **P** **11 47 27.8 -0.7**
KSU1 Kansas State U 23.36 354 P **P** **11 47 28.8 -0.2**
baz=172,SNR=11
T25A Trinidad 23.38 337 P **P** **11 47 31.2 +1.7**
baz=152,SNR=22
MACC Macarena, Meta 23.55 123 *e*P **P** **11 47 31.5 +0.5**
CBKS Cedar Bluff 23.57 347 P **P** **11 47 31.1 +0.1**
CBKS Cedar Bluff 23.57 347 P **P** **11 47 31.4 +0.4**
baz=165,SNR=5.5
P40A Paris 23.64 3 P **P** **11 47 30.2 -1.3**
P38A Dawn 23.70 360 P **P** **11 47 31.5 -0.6**
PTGC Puerto Gaitan, 23.85 117 *e*P **P** **11 47 26.7 -7.0**
X18A Snowflake 23.85 324 P **P** **11 47 36.7 +2.9**
214A Organ Pipe Nat 23.89 316 P **P** **11 47 36.1 +2.1**
214A Organ Pipe Nat 23.89 316 P **P** **11 47 35.6 +1.6**
baz=128,SNR=33
BOSC San Juan Bosco 23.91 141 P **P** **11 47 37.5 +3.0**
P43A Skaggs, Pawnee 23.95 7 P **P** **11 47 33.4 -1.0**
BLO Bloomington 24.01 13 P **P** **11 47 33.7 -1.2**
PTLC Puerto Leguiza 24.04 129 *e*P **P** **11 47 38.9 +3.5**
BLA Blacksburg 24.18 26 P **P** **11 47 36.5 0.0**
baz=212
P46A Rosedale 24.30 12 P **P** **11 47 36.3 -1.2**
SDCO Great Sand Dun 24.32 336 P **P** **11 47 40.2 +2.1**
SDCO Great Sand Dun 24.32 336 P **P** **11 47 39.4 +1.3**
baz=151,SNR=22
KSCO Kaye Shedlock' 24.48 342 P **P** **11 47 40.9 +1.5**
KSCO Kaye Shedlock' 24.48 342 P **P** **11 47 39.7 +0.3**
baz=158,SNR=8.1
X16A Lo Mia Camp, P 24.64 322 P **P** **11 47 43.7 +2.8**
P49A Miami Univ. Ec 24.79 16 P **P** **11 47 39.4 -2.6**
baz=200
S22A 4UR Ranch, Cre 24.86 334 P **P** **11 47 45.8 +2.7**
baz=148,SNR=18
N38A Joes South For 24.87 0 P **P** **11 47 42.1 -0.6**
HDIL Hopedale 24.89 7 P **P** **11 47 41.6 -1.2**
HDIL Hopedale 24.89 7 P **P** **11 47 41.1 -1.7**
baz=189,SNR=8.0
113A Mohawk Valley, 25.03 316 P **P** **11 47 46.7 +2.5**
113A IAmb IAmb 11 48 25.0
comp=Z,55nm,1.1s
SFIN Lafayette 25.06 11 P **P** **11 47 42.5 -1.9**
baz=194,SNR=5.7
N33A J Bar K, Exete 25.07 353 P **P** **11 47 44.6 0.0**
MVCO Mesa Verde 25.17 331 P **P** **11 47 48.3 +2.5**
MVCO IAmb IAmb 11 48 27.9
comp=Z,46nm,1.2s
MVCO Mesa Verde 25.17 331 P **P** **11 47 47.0 +1.3**
baz=144,SNR=17
CRPR Cabo Rojo, PR 25.20 81 P **P** **11 47 46.9 +1.0**
CRPR IAmb IAmb 11 47 48.3
comp=Z,25nm,0.7s
R55A Marlinton 25.22 25 P **P** **11 47 45.6 -0.4**
R55A IAmb IAmb 11 48 22.2
comp=Z,37nm,0.9s
Q24A Divide 25.26 338 P **P** **11 47 48.1 +1.4**
baz=153
O48B Farmland 25.36 15 P **P** **11 47 45.6 -1.5**
baz=199
WUAZ Wupatki 25.37 324 P **P** **11 47 50.2 +2.7**
WUAZ IAmb IAmb 11 48 15.9
comp=Z,35nm,0.9s
WUAZ Wupatki 25.37 324 P **P** **11 47 49.7 +2.2**
baz=136,SNR=14
BAUV El Baul 25.64 102 P **P** **11 47 46.9 -3.0**
BAUV IAmb IAmb 11 48 31.1
comp=Z,34nm,0.7s
CELP Cerrillos 25.70 81 P **P** **11 47 51.2 +0.7**
CELP IAmb IAmb 11 47 53.3
comp=Z,18nm,0.6s
BGNE Belgrade 25.82 352 P **P** **11 47 50.8 -0.5**
baz=170
GLA Glamis 25.91 315 P **P** **11 47 55.0 +2.8**
GLA Glamis 25.91 315 P **P** **11 47 54.4 +2.1**
baz=126,SNR=11
ACSO Alum Creek Sta 25.93 18 P **P** **11 47 50.6 -1.8**
baz=203
SCIA State Center 25.98 0 P **P** **11 47 52.6 -0.1**
baz=180
PV15 Paradox Valley 26.08 332 P **P** **11 47 57.0 +3.0**
PV15 IAmb IAmb 11 48 37.0
comp=Z,49nm,1.4s
PV13 Radium Mtn., P 26.09 331 P **P** **11 47 56.6 +2.6**
PV13 IAmb IAmb 11 48 33.2
comp=Z,43nm,1.2s
SJG San Juan 26.11 81 P **P** **11 47 51.4 -2.8**
comp=Z,13nm,0.3s,baz=254,slow=4.9,SNR=5.4
SJG LR LR 11 59 41.4
comp=Z,77nm,18.2s,baz=266,slow=40
comp=Z,13nm,0.3s
BLYC Blythe 26.13 317 P **P** **11 47 56.9 +2.7**
OGNE Ogallala 26.13 345 P **P** **11 47 56.1 +1.9**
OGNE IAmb IAmb 11 48 20.1
comp=Z,35nm,0.9s
OGNE Ogallala 26.13 345 P **P** **11 47 55.7 +1.5**
baz=161
SMCO Snowmass 26.14 335 P **P** **11 47 57.0 +2.3**
ISCO Idaho Springs 26.17 338 P **P** **11 47 55.8 +1.0**
ISCO Idaho Springs 26.17 338 P **P** **11 47 56.4 +1.5**
baz=153
L40A Anamosa 26.20 4 P **P** **11 47 53.6 -1.1**
PDMCI Parker Dam,Lak 26.23 318 P **P** **11 47 57.4 +2.3**
baz=130,SNR=18
L42A Oliver, Polo 26.27 6 P **P** **11 47 54.1 -1.2**
IKP In-Ko-Pah, Jac 26.57 313 P **P** **11 48 00.5 +2.2**
baz=124,SNR=5.6
W13A Hualapai Mount 26.58 320 P **P** **11 48 01.4 +2.9**
BC3 Big Chuckawall 26.69 316 P **P** **11 48 01.8 +2.4**
baz=126,SNR=49
IRM Iron Mountain 26.79 317 P **P** **11 48 02.1 +1.9**
baz=128,SNR=16
MONP2 Monument Peak 26.92 313 P **P** **11 48 03.8 +2.2**
baz=124
JFWS Jewell Farm 27.12 5 P **P** **11 48 02.2 -0.8**
JFWS Jewell Farm 27.12 5 P **P** **11 48 01.6 -1.4**
baz=187,SNR=12
ATAH Atahualpa 27.21 146 P **P** **11 48 04.5 0.0**
comp=Z,30nm,0.8s,baz=328,slow=7.8,SNR=20
comp=Z,30nm,0.8s
N23A Red Feather La 27.25 339 P **P** **11 48 05.5 +1.0**
baz=153
BELC Belle Mtn. Jos 27.26 316 P **P** **11 48 06.3 +1.8**
baz=126,SNR=13
KNB Kanab 27.26 324 P **P** **11 48 07.0 +2.4**
TPFO Pinon Flats 27.34 315 P **P** **11 48 07.5 +2.3**
baz=125,SNR=5.7
PFO Pinyon Flats O 27.35 315 P **P** **11 48 07.6 +2.4**
comp=Z,5.4nm,0.7s,baz=132,slow=4.7,SNR=8.3
PFO LR LR 12 00 14.0
comp=Z,158nm,18.3s,baz=141,slow=39
comp=Z,5.4nm,0.7s
PFO Pinyon Flats O 27.35 315 P **P** **11 48 07.8 +2.5**
PFO Pinyon Flats O 27.35 315 P **P** **11 48 07.7 +2.4**
baz=125,SNR=5.3
PHWY Pilot Hill 27.45 340 P **P** **11 48 08.5 +2.2**
O20A White River Ci 27.47 335 P **P** **11 48 08.4 +2.0**
O20A White River Ci 27.47 335 P **P** **11 48 08.6 +2.3**
baz=148
LCMT Little Creek M 27.50 324 P **P** **11 48 09.5 +2.9**
GMRC Granite Mounta 27.50 317 P **P** **11 48 08.9 +2.3**
baz=128,SNR=19
V12A Nelson 27.58 320 P **P** **11 48 10.1 +2.8**
V12A IAmb IAmb 11 48 11.1
comp=Z,30nm,0.9s
SRU San Rafael Swe 27.64 330 P **P** **11 48 10.7 +2.7**
MTPU Mount Pierson 27.66 327 P **P** **11 48 10.8 +2.5**
MTPU IAmb IAmb 11 48 52.3
comp=Z,24nm,0.9s
Q16A Castle Valley 27.81 329 P **P** **11 48 12.4 +3.0**
Q16A IAmb IAmb 11 48 56.7
comp=Z,52nm,1.6s
SZCU Shurtz Canyon 27.82 325 P **P** **11 48 12.2 +2.7**
MURC Murrieta 27.85 314 P **P** **11 48 12.5 +2.8**
baz=124
CCUT Cedar City 27.94 325 P **P** **11 48 14.2 +3.5**
ECSD EROS Data Cent 27.95 355 P **P** **11 48 09.7 -0.6**
ECSD IAmb IAmb 11 48 10.8
comp=Z,22nm,0.7s
ECSD EROS Data Cent 27.95 355 P **P** **11 48 09.5 -0.8**
baz=173,SNR=17
HEC Hector,Ludlow 27.97 317 P **P** **11 48 13.0 +2.2**
baz=127,SNR=12
WTNK Soaring Height 27.98 320 P **P** **11 48 12.4 +1.6**
WTNK IAmb IAmb 11 48 14.2
comp=Z,3.0nm,0.8s
MSU Marysvale 28.01 327 P **P** **11 48 14.1 +2.9**
BBRC Big Bear Solar 28.03 315 P **P** **11 48 13.6 +2.0**
baz=125,SNR=5.3
TUQ Turquoise Moun 28.07 318 P **P** **11 48 14.7 +2.9**
baz=128
SHPR Sheep Range 28.28 321 P **P** **11 48 16.1 +2.5**
SHPR IAmb IAmb 11 48 53.5
comp=Z,25nm,1.4s
RWWY Rawlins 28.40 338 P **P** **11 48 16.9 +2.1**
RWWY IAmb IAmb 11 48 47.6
comp=Z,20nm,1.1s
RRX Edison Barstow 28.44 316 P **P** **11 48 17.6 +2.7**
baz=126
BFSC Mount Baldy Ra 28.52 314 P **P** **11 48 18.4 +2.6**
baz=124
GSC Goldstone, Bar 28.57 317 P **P** **11 48 18.4 +2.3**
baz=127
SHOC Shoshone, Teco 28.59 319 P **P** **11 48 18.4 +2.3**
baz=129
CIS Catalina Islan 28.60 312 P **P** **11 48 18.7 +2.4**
baz=122
SUSD Miller 28.91 352 P **P** **11 48 20.0 +1.1**
baz=169
DECC Green Verdugo 29.00 314 P **P** **11 48 22.1 +2.3**
baz=123
QSM Queen of Sheba 29.01 318 P **P** **11 48 22.0 +2.1**
GWY Greenwater Val 29.01 319 P **P** **11 48 22.5 +2.4**
K22A Casper 29.01 340 P **P** **11 48 21.2 +1.2**
baz=153
EDW2 Edwards Air Fo 29.11 315 P **P** **11 48 22.8 +1.9**
baz=125
TPNV Topopah Spring 29.23 320 P **P** **11 48 25.3 +3.2**
TPNV IAmb IAmb 11 49 01.9
comp=Z,20nm,1.2s
TPNV Topopah Spring 29.23 320 P **P** **11 48 24.3 +2.3**
baz=130,SNR=9.9
LRMC Laurel Mtn Rad 29.25 317 P **P** **11 48 24.5 +2.4**
baz=126
SPMN Marine on St. 29.30 1 P **P** **11 48 21.5 -0.8**
SPMN IAmb IAmb 11 48 22.5
comp=Z,25nm,0.8s
SPMN Marine on St. 29.30 1 P **P** **11 48 21.6 -0.7**
baz=181
FURC Furnace Creek, 29.31 319 P **P** **11 48 25.4 +2.9**
baz=128
WCT Wildcat Mounta 29.37 320 P **P** **11 48 26.4 +3.3**
MPMC Manual Prospec 29.46 318 P **P** **11 48 26.5 +2.4**
baz=127,SNR=20
RSSD Black Hills 29.62 344 P **P** **11 48 25.9 +0.5**
RSSD Black Hills 29.62 344 P **P** **11 48 26.4 +1.0**
baz=159
RSSD Black Hills 29.62 344 P **P** **11 48 26.6 +1.2**
TCUT Toone Canyon 29.65 332 P **P** **11 48 28.9 +3.2**
TCUT IAmb IAmb 11 49 07.6
comp=Z,18nm,1.0s
R11A Troy Canyon, C 29.76 323 P **P** **11 48 29.1 +2.4**
R11A IAmb IAmb 11 49 10.1
comp=Z,32nm,1.9s
R11A Troy Canyon, C 29.76 323 P **P** **11 48 29.0 +2.3**
baz=133,SNR=10
ARVC Arvin 29.82 315 P **P** **11 48 29.9 +2.9**
baz=124
ISA Isabella, Lake 29.88 316 P **P** **11 48 30.0 +2.3**
baz=125
GRAC Grapevine Rang 29.96 319 P **P** **11 48 31.5 +3.2**
GRAC IAmb IAmb 11 48 32.7
comp=Z,27nm,1.0s
GRAC Grapevine Rang 29.96 319 P **P** **11 48 30.7 +2.4**
baz=128,SNR=10
CWC Cottonwood Cre 30.07 318 P **P** **11 48 31.9 +2.4**
baz=127
GMN Gold Mountain 30.08 320 P **P** **11 48 32.0 +2.4**
BW06 Boulder Array 30.22 336 P **P** **11 48 32.0 +1.2**
BW06 Boulder Array 30.22 336 P **P** **11 48 32.6 +1.9**
baz=148
PD31 Pinedale Array 30.22 336 P **P** **11 48 32.0 +1.2**
PDAR Pinedale Array 30.22 336 P **P** **11 48 31.9 +1.2**
comp=Z,1.7nm,0.8s,baz=128,slow=9.6,SNR=14
PDAR PcP **PcP** **11 51 28.4 -0.7**
comp=Z,0.7nm,0.4s,baz=125,slow=5.6,SNR=5.6
PDAR pPcP 11 51 57.3
comp=Z,1.2nm,0.5s,baz=135,slow=5.2,SNR=8.2
PDAR ScP **ScP** **11 55 05.0 +3.4**
comp=Z,0.9nm,0.9s,baz=155,slow=4.9,SNR=4.8
PDAR LR LR 12 04 04.5
comp=Z,65nm,20.0s,baz=157,slow=43
comp=Z,1.7nm,0.8s
LCH Last Change Ra 30.28 319 P **P** **11 48 34.1 +2.9**
PKM Mcpherson Peak 30.37 314 P **P** **11 48 34.8 +2.6**
baz=122
COWI Conover 30.38 6 P **P** **11 48 30.4 -1.5**
COWI IAmb IAmb 11 48 31.3
comp=Z,23nm,0.6s
VES Vestal, Richgr 30.39 316 P **P** **11 48 35.2 +3.1**
baz=124
MZP Montezuma Peak 30.41 320 P **P** **11 48 35.2 +2.6**
TIN Tinemaha, Big 30.54 319 P **P** **11 48 36.4 +2.9**
baz=127
TPH Tonopah 30.55 321 P **P** **11 48 35.6 +1.9**
DSP Deep Springs 30.57 319 P **P** **11 48 36.3 +2.7**
L59A Walton 30.62 27 P **P** **11 48 33.2 -1.0**
SMMC Simmler 30.72 314 P **P** **11 48 37.6 +2.6**
baz=122
HVU Hansel Valley 30.80 331 P **P** **11 48 38.7 +2.9**
CZSB Cruzeiro do Su 31.09 137 P **P** **11 48 40.3 +1.8**
CZSB IAmb IAmb 11 48 43.5
comp=Z,69nm,1.1s
CZSB Cruzeiro do Su 31.09 137 *e*P **P** **11 48 38.4 0.0**
PAGB Antelope Grade 31.12 315 P **P** **11 48 42.0 +3.4**
PAGB IAmb IAmb 11 49 23.4
comp=Z,24nm,1.1s
REDW Red Top Meadow 31.24 335 P **P** **11 48 41.8 +2.0**
REDW IAmb IAmb 11 48 43.7
comp=Z,27nm,0.8s
SADO Sadowa 31.25 20 P **P** **11 48 38.2 -1.3**
comp=Z,2.4nm,0.3s,baz=262,slow=9.7,SNR=3.6
SADO pP **pP** **11 49 03.1 -1.0**
comp=Z,12nm,0.8s,baz=262,slow=10,SNR=4.3
SADO sP **sP** **11 49 13.8 -3.1**
comp=Z,13nm,0.9s,baz=264,slow=7.7,SNR=4.1
SADO LR LR 12 03 22.7
comp=Z,185nm,18.2s,baz=188,slow=40
comp=Z,2.4nm,0.3s
ELK Elko 31.25 327 P **P** **11 48 42.3 +2.5**
comp=Z,3.0nm,0.8s,baz=141,slow=6.1,SNR=13
ELK pP **pP** **11 49 05.2 +0.8**
comp=Z,3.3nm,0.8s,baz=128,slow=3.7,SNR=5.3
ELK sP **sP** **11 49 18.3 +1.1**
comp=Z,2.1nm,0.8s,baz=143,slow=6.1,SNR=3.2
ELK PcP **PcP** **11 51 32.8 +0.9**
comp=Z,2.9nm,0.7s,baz=102,slow=2.8,SNR=7.8
ELK pPcP 11 52 01.3
comp=Z,1.3nm,0.5s,baz=122,slow=3.5,SNR=5.9
ELK LR LR 12 03 45.1
comp=Z,102nm,20.3s,baz=148,slow=41
comp=Z,3.0nm,0.8s
MLAC Mammoth, Mammo 31.27 319 P **P** **11 48 43.1 +3.0**
baz=127
SNOW Snow King Moun 31.28 335 P **P** **11 48 42.6 +2.4**
NV11 Mina Array Sit 31.34 321 P **P** **11 48 44.0 +3.3**
NV11 IAmb IAmb 11 48 45.0
comp=Z,24nm,1.0s
LOHW Long Hollow 31.34 336 P **P** **11 48 42.3 +1.7**
LOHW IAmb IAmb 11 48 43.8
comp=Z,22nm,1.2s
OMMB Old Mammoth Mi 31.36 319 P **P** **11 48 44.0 +3.0**
OMMB IAmb IAmb 11 48 45.1
comp=Z,15nm,1.1s
TPAW Teton Pass 31.38 335 P **P** **11 48 42.3 +1.3**
TPAW IAmb IAmb 11 48 47.4
comp=Z,17nm,0.9s
NVAR Mina Array Bea 31.43 321 P **P** **11 48 44.3 +2.8**
comp=Z,19nm,0.8s,baz=136,slow=9.1,SNR=68
NVAR pP **pP** **11 49 08.4 +2.4**
comp=Z,6.8nm,0.7s,baz=133,slow=9.3,SNR=4.4
NVAR sP **sP** **11 49 20.6 +1.7**
comp=Z,20nm,0.8s,baz=134,slow=9.0,SNR=7.9
NVAR PcP **PcP** **11 51 33.8 +1.4**
comp=Z,3.6nm,0.7s,baz=168,slow=3.3,SNR=7.5
NVAR pPcP 11 52 02.3
comp=Z,0.4nm,0.4s,baz=212,slow=27,SNR=5.4
NVAR ScP **ScP** **11 55 07.4 +1.8**
comp=Z,0.7nm,0.8s,baz=134,slow=4.0,SNR=4.4
NVAR LR LR 12 03 44.1
comp=Z,62nm,21.9s,baz=111,slow=40
comp=Z,19nm,0.8s
NVAR Mina Array Bea 31.43 321 P **P** **11 48 44.7 +3.2**
EYMN Ely 32.06 2 P **P** **11 48 45.0 -1.6**
baz=183
BMN Battle Mountai 32.10 324 P **P** **11 48 49.8 +2.5**
NNA Nana 32.11 148 PcP **PcP** **11 51 34.7 +0.3**
comp=Z,3.6nm,0.4s,baz=317,slow=2.5,SNR=4.8
NNA LR LR 12 00 01.5
comp=Z,55nm,19.2s,baz=326,slow=33
RLMT Red Lodge 32.13 339 P **P** **11 48 49.1 +1.6**
baz=150,SNR=10
MDND Maddock 32.34 352 P **P** **11 48 49.0 0.0**
baz=169,SNR=13
YERR Yerington 32.35 321 P **P** **11 48 52.9 +3.4**
YERR IAmb IAmb 11 49 29.3
comp=Z,31nm,1.3s
AGMN Agassiz Nation 32.44 357 P **P** **11 48 49.5 -0.4**
baz=176,SNR=8.2
LAO LASA Array 32.58 343 P **P** **11 48 51.9 +0.7**
baz=157,SNR=5.8
YHL Hebgen Lake 32.61 336 P **P** **11 48 54.2 +2.4**
YHL IAmb IAmb 11 49 33.2
comp=Z,40nm,2.0s
PNTR Pine Nut 32.63 320 P **P** **11 48 55.0 +3.0**
PNTR IAmb IAmb 11 49 31.9
comp=Z,44nm,1.4s
QLMT Earthquake Lak 32.69 336 P **P** **11 48 55.3 +2.9**
LONY Lake Ozonia 32.79 25 P **P** **11 48 51.2 -1.8**
baz=215
HLID Hailey 32.95 331 P **P** **11 48 57.1 +2.5**
baz=141,SNR=12
MPK Martis Peak 33.02 320 P **P** **11 48 58.6 +3.2**
BOZ Bozeman (W) 33.41 336 P **P** **11 48 60.0 +1.4**
baz=147,SNR=12
DGMT Dagmar 33.74 347 P **P** **11 49 01.8 +0.5**
baz=161
ULM Lac du Bonnet 34.39 357 P **P** **11 49 05.0 -1.8**
comp=Z,3.7nm,0.3s,baz=180,slow=10,SNR=13
ULM pP **pP** **11 49 28.8 -2.8**
comp=Z,16nm,1.1s,baz=187,slow=8.6,SNR=4.0
ULM PcP **PcP** **11 51 39.7 -0.4**
comp=Z,6.3nm,0.8s,baz=167,slow=6.7,SNR=3.4
ULM LR LR 12 04 33.0
comp=Z,90nm,21.4s,baz=196,slow=39
comp=Z,3.7nm,0.3s
J08A Circle Bar Ran 34.80 327 P **P** **11 49 12.9 +2.4**
J08A IAmb IAmb 11 49 49.6
comp=Z,22nm,1.0s
EGMT Eagleton 34.83 341 P **P** **11 49 12.0 +1.2**
EGMT Eagleton 34.83 341 P **P** **11 49 12.4 +1.7**
baz=152,SNR=13
BOAV Boa Vista 34.98 109 *e*P **P** **11 49 10.4 -1.9**
MSO Missoula 35.33 335 P **P** **11 49 17.0 +1.9**
baz=144,SNR=7.6
K04D Chiloquin, OR 36.11 323 P **P** **11 49 23.6 +1.8**
baz=129
YBH Yreka Blue Hor 36.12 322 P **P** **11 49 21.9 -0.1**
comp=Z,4.5nm,0.8s,baz=109,slow=6.7,SNR=11
YBH pP **pP** **11 49 46.7 -0.1**
comp=Z,1.7nm,0.6s,baz=221,slow=7.5,SNR=2.5
YBH PcP **PcP** **11 51 45.0 -0.5**
comp=Z,2.3nm,0.9s,baz=45,slow=5.7,SNR=3.6
YBH LR LR 12 06 12.0
comp=Z,88nm,20.1s,baz=158,slow=39
comp=Z,4.5nm,0.8s
L04D Klamath Falls 36.18 322 P **P** **11 49 23.9 +1.4**
baz=128
J05D Fort Rock, OR 36.24 325 P **P** **11 49 26.0 +3.0**
baz=131
J04D Umpqua Nationa 36.70 324 P **P** **11 49 29.1 +2.1**
baz=129
L02F Cave Junction 36.87 321 P **P** **11 49 30.0 +1.8**
baz=126
I05D Terrebonne, OR 36.98 326 P **P** **11 49 31.0 +1.8**
baz=132
ETMB Extrema 37.04 132 P **P** **11 49 29.8 -0.1**
ETMB IAmb IAmb 11 49 31.6
comp=Z,23nm,1.5s
ETMB Extrema 37.04 132 *e*P **P** **11 49 30.2 +0.3**
I04A Tendick Farm, 37.22 324 P **P** **11 49 32.4 +1.3**
baz=130
G05D Wamic, OR 37.58 327 P **P** **11 49 37.0 +2.9**
baz=132
H04A Detroit Lake 37.67 326 P **P** **11 49 37.0 +2.1**
H04A IAmb IAmb 11 49 37.5
comp=Z,16nm,0.8s
I03D Drain, OR 37.69 324 P **P** **11 49 37.0 +1.9**
baz=128
J01E Myrtle Point 37.70 323 P **P** **11 49 37.3 +2.2**
baz=127
NEW Newport 37.78 334 P **P** **11 49 35.9 +0.1**
NEW comp=Z,2.2nm,0.7s,baz=125,slow=5.1,SNR=3.6
pP **pP** **11 50 00.8 0.0**
NEW comp=Z,2.3nm,0.6s,baz=146,slow=15,SNR=3.0
sP **sP** **11 50 14.3 +0.8**
NEW comp=Z,2.5nm,0.6s,baz=112,slow=16,SNR=2.8
PcP **PcP** **11 51 49.8 -0.5**
NEW comp=Z,3.3nm,0.9s,baz=66,slow=2.1,SNR=2.5
LR LR 12 08 50.5
comp=Z,70nm,18.4s,baz=151,slow=42
comp=Z,2.2nm,0.7s
NEW Newport 37.78 334 P **P** **11 49 37.5 +1.7**
baz=141
H04D Lebanon 37.87 325 P **P** **11 49 38.0 +1.5**
baz=130,SNR=5.2
I02E Swisshome, OR 38.23 324 P **P** **11 49 41.3 +1.8**
baz=128
G03D McMinnville, O 38.59 326 P **P** **11 49 45.0 +2.3**
baz=130
SAML Samuel 38.72 127 P **P** **11 49 42.4 -1.6**
SAML IAmb IAmb 11 49 43.2
comp=Z,7.6nm,0.7s
SAML Samuel 38.72 127 P **P** **11 49 41.8 -2.2**
SAML pP **pP** **11 50 08.5 -0.4**
SAML sP **sP** **11 50 23.3 +1.9**
LPAZ La Paz 40.48 141 P **P** **11 49 59.6 +0.4**
comp=Z,15nm,0.8s,baz=327,slow=6.2,SNR=61
LPAZ LR LR 12 04 58.3
comp=Z,88nm,19.7s,baz=138,slow=33
comp=Z,15nm,0.8s
LPAZ La Paz 40.48 141 P **P** **11 49 59.7 +0.4**
LPAZ IAmb IAmb 11 50 00.5
comp=Z,16nm,0.8s
LPAZ La Paz 40.48 141 *e*P **P** **11 49 59.9 +0.6**
LPAZ La Paz 40.48 141 P **P** **11 49 59.6 +0.4**
LPAZ pP **pP** **11 50 26.0 +1.7**
LPAZ sP **sP** **11 50 40.5 +3.7**
EDM Edmonton 40.49 342 P **P** **11 49 59.0 +0.8**

EDM IAmb IAmb 11 49 59.5
comp=Z,27nm,0.9s
PB18 Visviri 40.70 144 P **P** **11 50 01.2 +0.2**
PB18 IAmb IAmb 11 50 26.2
comp=Z,33nm,1.1s
MDP Montagnes des 41.35 100 LR LR 12 08 33.0
comp=Z,114nm,18.2s,baz=298,slow=38
ITTB Itaituba 42.30 115 *eP* **P** **11 50 12.2 -1.2**
MALB Monte Alegre 42.44 111 *eP* **P** **11 50 12.7 -1.9**
VILB Vilhena 43.52 129 *eP* **P** **11 50 22.5 -0.8**
MCPB Macapa, AP 43.83 108 *eP* **P** **11 50 21.7 -4.1**
NPGB Novo Progresso 43.96 118 *eP* **P** **11 50 26.8 -0.1**
SCHQ Schefferville 43.99 22 LR LR 12 10 17.4
comp=Z,126nm,18.2s,baz=234,slow=38
LVC Limon Verde 45.09 147 P **P** **11 50 37.7 +1.6**
LVC IAmb IAmb 11 50 38.8
comp=Z,20nm,0.8s
LVC Limon Verde 45.09 147 *eP* **P** **11 50 37.0 +0.9**
LVC Limon Verde 45.09 147 P **P** **11 50 37.7 +1.6**
LVC sP **sP** **11 51 18.5 +4.5**
PDRB Porto dos Gac 45.36 125 *eP* **P** **11 50 37.4 -0.7**
RPN Rapa Nui 45.43 200 LR LR 12 06 32.2
comp=Z,54nm,18.4s,baz=52,slow=32
CLDB Colider 45.68 123 *eP* **P** **11 50 38.2 -2.3**
AF01 San Pedro de A 45.75 147 P **P** **11 50 43.3 +2.1**
PTLB Pontes e Lacer 45.91 131 P **P** **11 50 41.9 -0.4**
PTLB IAmb IAmb 11 50 42.8
comp=Z,30nm,1.6s
PTLB Pontes e Lacer 45.91 131 *eP* **P** **11 50 41.6 -0.6**
AC06 Mina Casimiro 48.39 152 P **P** **11 51 02.4 +1.0**
SALV Santo Antonio 48.75 129 *eP* **P** **11 51 05.3 +1.0**
YKA Yellowknife Ar 48.95 347 P **P** **11 51 05.1 -0.1**
comp=Z,8.5nm,0.7s,baz=151,slow=7.5,SNR=59
YKA pP **pP** **11 51 30.0 -1.4**
comp=Z,6.9nm,0.9s,baz=149,slow=7.5,SNR=3.6
YKA sP **sP** **11 51 42.3 -1.5**
comp=Z,11nm,0.8s,baz=147,slow=7.6,SNR=7.0
YKA PcP **PcP** **11 52 27.9 +0.2**
comp=Z,1.0nm,0.7s,baz=146,slow=3.9,SNR=1.7
YKA LR LR 12 15 27.2
comp=Z,52nm,18.6s,baz=147,slow=40
comp=Z,8.5nm,0.7s
YKA Yellowknife Ar 48.95 347 P **P** **11 51 05.2 0.0**
T35M Bob Quinn 49.58 334 P **P** **11 51 12.8 +2.7**
baz=131
SNDB Serra Nova Dou 49.96 121 *eP* **P** **11 51 12.1 -1.4**
DLBC Dease Lake 50.45 336 P **P** **11 51 19.1 +2.3**
comp=Z,14nm,0.8s,baz=124,slow=3.7,SNR=25
DLBC pP **pP** **11 51 43.8 +0.7**
comp=Z,9.8nm,0.9s,baz=164,slow=5.5,SNR=4.9
comp=Z,14nm,0.8s
DLBC Dease Lake 50.45 336 P **P** **11 51 19.5 +2.8**
DLBC Dease Lake 50.45 336 P **P** **11 51 20.1 +3.4**
baz=132,SNR=17
FRB Frobisher Bay 50.84 14 LR LR 12 15 57.0
comp=Z,81nm,18.5s,baz=202,slow=40
R33M Jennings River 51.46 336 P **P** **11 51 27.5 +3.2**
baz=131,SNR=11
SMTB Santa Maria do 51.54 115 *eP* **P** **11 51 25.0 -0.4**
AQDB Aquidauana 51.67 133 *eP* **P** **11 51 26.0 -0.3**
WRGLY Wrigley 51.77 343 P **P** **11 51 27.5 +1.2**
baz=142
TGTN Hyland Airport 51.96 340 P **P** **11 51 30.6 +2.7**
baz=136,SNR=7.6
ANTJ Antonio Joao (52.48 135 *eP* **P** **11 51 32.0 -0.2**
P32M Atlin 52.66 336 P **P** **11 51 35.0 +1.9**
baz=128
P33M Teslin, Yukon 52.70 336 P **P** **11 51 35.9 +2.4**
baz=130
ZON Zonda 52.73 153 P **P** **11 51 35.2 +1.3**
N32M Quiet Lake 53.40 337 P **P** **11 51 41.7 +3.1**
baz=130
PLBC Pleasant Camp 53.66 334 P **P** **11 51 43.0 +2.6**
baz=126
MMPY Sheldon Lake, 53.73 339 P **P** **11 51 42.9 +1.9**
baz=133,SNR=12
LMEL Las Melosas 54.11 156 P **P** **11 51 45.9 +1.7**
FARO Faro, Yukon 54.20 338 P **P** **11 51 46.5 +2.2**
FARO IAmb IAmb 11 52 16.8
comp=Z,12nm,0.8s
FARO Faro, Yukon 54.20 338 P **P** **11 51 46.6 +2.2**
baz=130,SNR=5.9
BO01 Tunca 54.26 157 P **P** **11 51 46.1 +1.1**
P30M Million Dollar 54.29 335 P **P** **11 51 47.5 +2.4**
baz=125
O30N Mendenhall 54.32 336 P **P** **11 51 47.5 +2.3**
baz=127
P29M Windy Craggy 54.33 334 P **P** **11 51 48.0 +2.7**
baz=124
M31M Drury Creek, Y 54.56 338 P **P** **11 51 49.6 +2.7**
baz=129
BDFB Brasilia 54.61 123 P **P** **11 51 46.7 -1.3**
comp=Z,9.5nm,0.8s,baz=306,slow=9.0,SNR=5.9
comp=Z,9.5nm,0.8s
BDFB Brasilia 54.61 123 *eP* **P** **11 51 47.1 -1.0**
CPUP Villa Florida 54.62 140 P **P** **11 51 46.7 -1.1**
comp=Z,9.7nm,0.8s,baz=328,slow=8.7,SNR=17
CPUP LR LR 12 14 41.5
comp=Z,139nm,18.3s,baz=216,slow=36
comp=Z,9.7nm,0.8s
CPUP Villa Florida 54.62 140 P **P** **11 51 47.7 -0.1**
CPUP IAmb IAmb 11 51 47.8
comp=Z,16nm,0.9s
CPUP Villa Florida 54.62 140 *eP* **P** **11 51 47.3 -0.5**
CPUP Villa Florida 54.62 140 P **P** **11 51 46.9 -0.9**
CPUP pP **pP** **11 52 14.2 0.0**
CPUP sP **sP** **11 52 25.5 -0.8**
N31M Braeburn, Yuko 54.63 337 P **P** **11 51 50.0 +2.5**
baz=127
HYT Haines Junctio 54.91 335 P **P** **11 51 52.2 +2.5**
baz=125
PNL Peninsula 55.06 334 P **P** **11 51 53.2 +2.7**
baz=122
ITRB Iturama 55.08 128 *eP* **P** **11 51 50.4 -0.9**
N30M Aishikik Lake 55.12 336 P **P** **11 51 53.3 +2.3**
baz=126
YUK6 Outpost Mounta 55.33 335 P **P** **11 51 54.7 +1.9**
baz=124
TRCB Terra Rica 55.34 133 *eP* **P** **11 51 52.7 -0.4**
MCR1 Marechal Candi 55.46 135 *eP* **P** **11 51 52.7 -1.2**
PCMB Pacaembu 55.57 131 *eP* **P** **11 51 55.1 +0.3**
PINM Pinnacle 55.65 334 P **P** **11 51 57.1 +2.3**
baz=122
YUK4 Talbot Arm 55.67 335 P **P** **11 51 57.5 +2.4**
baz=124
M30M Minto, Yukon 55.67 337 P **P** **11 51 57.2 +2.3**
baz=127,SNR=7.6
IPMB Ipameri, GO 55.74 125 *eP* **P** **11 51 54.5 -1.6**
MAYO Mayo, Yukon 55.97 339 P **P** **11 51 58.7 +1.7**
baz=128
O28M Mount Upton 55.98 334 P **P** **11 51 59.8 +2.3**
baz=122
M29M Somme Creek 56.22 337 P **P** **11 52 01.3 +2.4**
baz=125
CTG Chitna Glacier 56.56 334 P **P** **11 52 03.1 +1.7**
baz=121
YUK3 Moose Creek 56.63 335 P **P** **11 52 04.0 +2.0**
baz=122
K29M Barlow Dome 56.70 338 P **P** **11 52 04.1 +1.8**
baz=127
PTGB Pitanga 56.98 134 *eP* **P** **11 52 03.9 -0.9**
FRBT Francisco Belt 57.13 136 *eP* **P** **11 52 04.8 -1.0**
JANB Januaria 57.35 120 *eP* **P** **11 52 07.6 +0.1**
KAIM Kayak Island 57.39 332 P **P** **11 52 09.2 +2.1**
baz=117
PMNB Patos De Minas 57.45 125 *eP* **P** **11 52 08.8 +0.6**
ITQB Itaqui 57.47 142 *eP* **P** **11 52 08.2 +0.2**
MCARA McCarthy VSAT 57.48 334 P **P** **11 52 09.5 +1.8**
baz=120
DAWY Dawson 57.50 338 P **P** **11 52 09.2 +1.3**
DAWY Dawson 57.50 338 P **P** **11 52 09.1 +1.3**
baz=125
CRSM Crissiumal (Br 57.52 138 *eP* **P** **11 52 07.6 -0.9**
BCAR Beaver Creek A 57.84 336 P **P** **11 52 12.6 +2.3**
L27K Beaver Creek, 57.86 336 P **P** **11 52 12.2 +1.8**
baz=122,SNR=7.9
I29M Ogilvie Camp, 57.88 340 P **P** **11 52 12.0 +1.6**
baz=127
BMRM Bremner River 57.95 333 P **P** **11 52 12.5 +1.4**
baz=118
UNIS Unistalda (Bra 57.97 140 *eP* **P** **11 52 11.7 +0.1**
M26K Nabesna, AK 57.98 335 P **P** **11 52 13.2 +2.0**
baz=120
EPYK Eagle Plains 57.98 341 P **P** **11 52 12.6 +1.4**
baz=129
SFJD Kangerlussuaq 58.18 18 LR LR 12 19 20.3
comp=Z,89nm,18.2s,baz=238,slow=38
N25K Chitina, Valde 58.25 334 P **P** **11 52 15.5 +2.3**
baz=118
EYAK Cordova Ski Ar 58.26 333 P **P** **11 52 14.9 +1.8**
baz=116
INK Inuvik 58.32 344 P **P** **11 52 13.5 +0.1**
comp=Z,11nm,0.8s,baz=125,slow=5.2,SNR=34
INK pP **pP** **11 52 38.8 -1.6**
comp=Z,9.9nm,0.9s,baz=93,slow=6.6,SNR=4.9
INK LR LR 12 20 14.8
comp=Z,40nm,19.8s,baz=192,slow=39
comp=Z,11nm,0.8s
INK Inuvik 58.32 344 P **P** **11 52 14.3 +0.9**
INK IAmb IAmb 11 52 46.0
comp=Z,20nm,1.1s
INK Inuvik 58.32 344 P **P** **11 52 14.4 +0.9**
baz=133,SNR=6.6
L26K Log Cabin Wild 58.43 336 P **P** **11 52 16.7 +2.3**
baz=120
K27K Chicken 58.46 337 P **P** **11 52 15.4 +0.9**
K27K IAmb IAmb 11 52 47.3
comp=Z,8.8nm,1.1s
K27K Chicken 58.46 337 P **P** **11 52 16.0 +1.5**
baz=122
MC01 Montes Claros 58.49 121 *eP* **P** **11 52 14.6 -0.9**
EGAK Eagle 58.53 338 P **P** **11 52 16.1 +1.1**
baz=123
ITAB Concordia 58.59 137 *eP* **P** **11 52 15.4 -0.5**
KLU Klutina 58.76 334 P **P** **11 52 18.8 +2.1**
baz=117
GO06 Curarrehue 58.79 160 P **P** **11 52 18.2 +1.0**
GO06 IAmb IAmb 11 52 19.0
comp=Z,14nm,0.9s
RODS Rosario do Sul 58.81 141 *eP* **P** **11 52 17.2 -0.2**
RCLB Rio Claro- Sao 58.81 129 *eP* **P** **11 52 17.7 +0.1**
HARP HAARP 58.86 335 P **P** **11 52 19.6 +2.4**
baz=118
RES Resolute Bay 58.86 360 LR LR 12 19 08.8
comp=Z,35nm,18.5s,baz=128,slow=37
GLI Glacier Island 59.00 333 P **P** **11 52 20.4 +2.0**
baz=115
ALGR Alto Alegre (B 59.06 139 *eP* **P** **11 52 18.5 -0.7**
M24K Tolsona, Glenn 59.15 334 P **P** **11 52 21.2 +1.8**
baz=117
I27K Kandik River 59.15 339 P **P** **11 52 21.4 +2.1**
baz=123
SCRK Sand Creek 59.16 337 P **P** **11 52 21.8 +2.3**
baz=120
PAX Paxson 59.25 335 P **P** **11 52 21.5 +1.4**
PAX IAmb IAmb 11 52 48.0
comp=Z,9.6nm,0.8s
PAX Paxson 59.25 335 P **P** **11 52 21.8 +1.7**
baz=118
J26L Joseph Creek 59.26 337 P **P** **11 52 22.2 +2.1**
J26L IAmb IAmb 11 52 52.9
comp=Z,14nm,1.2s
J26L Joseph Creek 59.26 337 P **P** **11 52 21.7 +1.6**
baz=121,SNR=8.5
RIDG Independent Ri 59.37 336 P **P** **11 52 22.0 +1.2**
baz=119
H27K Steamboat Moun 59.46 339 P **P** **11 52 22.9 +1.5**
baz=124
SCM Sheep Creek Mo 59.51 334 P **P** **11 52 22.9 +1.0**
baz=116
I26K Coal Creek Min 59.53 338 P **P** **11 52 22.9 +1.0**
baz=122
DIAM Diamantina, MG 59.53 123 *eP* **P** **11 52 21.6 -1.1**
VAO Valinhos 59.58 129 *eP* **P** **11 52 22.6 -0.3**
M23K Glacier View 59.67 333 P **P** **11 52 24.7 +1.8**
baz=115
LL04 Puerto Octay 59.71 162 P **P** **11 52 24.1 +0.7**
K24K Donnelly Dome 59.77 336 P **P** **11 52 24.8 +1.3**
baz=118
KNK Knik Glacier 59.83 333 P **P** **11 52 25.5 +1.5**
baz=114
G27K Doyon Strip 59.83 340 P **P** **11 52 25.4 +1.4**
baz=124,SNR=5.4
CPSB Cacapava Do Su 59.92 140 *eP* **P** **11 52 24.4 -0.6**
SML Sawmill 59.94 333 P **P** **11 52 26.7 +1.9**
baz=114
J25K Salcha River, 60.00 337 P **P** **11 52 26.8 +1.7**
baz=119
WAT6 Susitna Watana 60.01 334 P **P** **11 52 27.3 +1.9**
baz=116
PET01 Itanhaem-SP 60.11 131 *eP* **P** **11 52 25.0 -1.5**
PLCA Paso Flores 60.13 160 P **P** **11 52 26.7 +0.4**
comp=Z,26nm,0.9s,baz=332,slow=8.4,SNR=49
comp=Z,26nm,0.9s
PLCA Paso Flores 60.13 160 P **P** **11 52 27.3 +1.0**
PLCA Paso Flores 60.13 160 *eP* **P** **11 52 27.3 +1.0**
PLCA Paso Flores 60.13 160 P **P** **11 52 27.0 +0.7**
PLCA pP **pP** **11 52 56.1 +3.0**
PLCA sP **PcP** **11 53 09.2 -1.7**
PMR Palmer 60.20 333 P **P** **11 52 28.0 +1.6**
baz=114
BRSE Bradley Lake S 60.23 331 P **P** **11 52 28.0 +1.2**
baz=111
RC01 Rabbit Creek A 60.27 332 P **P** **11 52 28.2 +1.2**
baz=113
WAT1 Susitna Watana 60.45 334 P **P** **11 52 29.7 +1.4**
baz=115
KDAK Kodiak Island 60.48 328 P **P** **11 52 29.9 +1.5**
baz=108
PRP Porcupine Dome 60.49 338 P **P** **11 52 30.9 +2.3**
PRP IAmb IAmb 11 53 00.8
comp=Z,17nm,1.0s
PRP Porcupine Dome 60.49 338 P **P** **11 52 30.9 +2.3**
baz=119,SNR=9.7
HDA Harding Lake 60.50 336 P **P** **11 52 30.0 +1.5**
baz=117,SNR=5.3
E27K Coleen River 60.59 341 P **P** **11 52 30.6 +1.6**
baz=125,SNR=5.3
G26K Porcupine Rive 60.61 340 P **P** **11 52 31.1 +1.9**
baz=122
Q20K Shuyak Island 60.64 329 P **P** **11 52 30.9 +1.4**
baz=109
IL31 60.65 337 P **P** **11 52 30.5 +1.1**
IL31 IAmb IAmb 11 52 57.8
comp=Z,9.6nm,0.8s
ILAR Eielson Array 60.65 337 P **P** **11 52 30.1 +0.6**
comp=Z,5.9nm,0.8s,baz=135,slow=5.4,SNR=42
ILAR pP **pP** **11 52 55.0 -1.7**
comp=Z,3.6nm,0.7s,baz=164,slow=4.6,SNR=6.8
ILAR sP **sP** **11 53 09.3 +0.5**
comp=Z,5.0nm,1.0s,baz=130,slow=4.9,SNR=2.9
comp=Z,5.9nm,0.8s
ILAR Eielson Array 60.65 337 P **P** **11 52 30.8 +1.3**
OHAK Old Harbor 60.67 327 P **P** **11 52 31.1 +1.4**
baz=107
GDU01 Guandu, BA 60.74 116 *eP* **P** **11 52 30.6 -0.2**
PLTB Pedras Altas 60.77 141 P **P** **11 52 30.7 -0.1**
PLTB Pedras Altas 60.77 141 *eP* **P** **11 52 30.8 0.0**
RCBR Riachuelo 60.80 106 LR LR 12 23 35.4
comp=Z,67nm,18.3s,baz=345,slow=41
CNLB Canela 60.81 137 *eP* **P** **11 52 30.6 -0.6**
RND Reindeer 60.82 335 P **P** **11 52 32.6 +1.8**
SUA Susitna One 60.86 332 P **P** **11 52 32.6 +1.4**
SUA Susitna One 60.86 332 P **P** **11 52 32.2 +1.1**
baz=112
H25K Birch Creek 60.97 338 P **P** **11 52 33.5 +1.9**
baz=119
MCK McKinley 60.99 335 P **P** **11 52 33.5 +1.6**
MCK IAmb IAmb 11 52 35.9
comp=Z,11nm,0.8s
MCK McKinley 60.99 335 P **P** **11 52 34.3 +2.4**
baz=115
CUT Chulitna 61.01 334 P **P** **11 52 33.1 +1.1**
baz=113
POKR Poker Flat Res 61.01 337 P **P** **11 52 33.6 +1.6**
baz=117
COLA College 61.06 337 P **P** **11 52 33.3 +1.0**
COLA IAmb IAmb 11 52 36.1
comp=Z,14nm,0.9s
COLA College 61.06 337 P **P** **11 52 34.0 +1.7**
baz=116
COLA College 61.06 337 P **P** **11 52 33.1 +0.9**
COLA pP **pP** **11 52 59.2 -0.2**
TCOL CIGO, UAF Yank 61.06 337 P **P** **11 52 33.3 +1.0**
TCOL IAmb IAmb 11 52 36.1
comp=Z,12nm,0.8s
TCOL CIGO, UAF Yank 61.06 337 P **P** **11 52 33.8 +1.6**
baz=116
F26K Sheenjek River 61.12 340 P **P** **11 52 34.3 +1.6**
baz=122
BMAR Burnt Mountain 61.13 340 P **P** **11 52 34.3 +1.5**
SKT Skwentna 61.40 333 P **P** **11 52 35.8 +1.2**
SKT IAmb IAmb 11 53 02.7
comp=Z,15nm,0.9s
SKT Skwentna 61.40 333 P **P** **11 52 36.3 +1.6**
baz=111
NEA2 Nenana 61.41 336 P **P** **11 52 35.6 +0.9**
baz=115
TRF Thorofare Moun 61.43 335 P **P** **11 52 36.6 +1.5**
baz=113
TER01 Tubaro-SC 61.44 136 *eP* **P** **11 52 35.7 +0.3**
H24K Noodor Dome 61.51 338 P **P** **11 52 36.9 +1.5**
baz=117,SNR=8.5
CMC01 Camacan, BA 61.54 118 *eP* **P** **11 52 35.7 -0.5**
F25K Christian Rive 61.56 340 P **P** **11 52 37.3 +1.5**
baz=120,SNR=5.1
KTH Kantishna Hill 61.73 335 P **P** **11 52 37.8 +0.9**
KTH IAmb IAmb 11 52 41.0
comp=Z,16nm,0.9s
G24K Hadweenzic Riv 61.76 339 P **P** **11 52 39.1 +2.2**
baz=118,SNR=5.6
SJMB Sao Joao De Ma 61.76 122 *eP* **P** **11 52 37.1 -0.6**
E25K Arctic Village 61.81 340 P **P** **11 52 38.8 +1.4**
baz=120
GUA01 Guaratinga, BA 61.87 119 *eP* **P** **11 52 37.9 -0.6**
LL02 Futaleuf 61.96 162 P **P** **11 52 39.9 +1.3**
LL02 IAmb IAmb 11 52 40.1
comp=Z,16nm,0.9s
BPAW Bear Paw Mtn. 61.97 335 P **P** **11 52 39.6 +1.1**
BPAW Bear Paw Mtn. 61.97 335 P **P** **11 52 40.0 +1.6**
baz=113,SNR=9.8
PPLA Purkeypile 62.02 334 P **P** **11 52 39.5 +0.5**
baz=111
C27K Jago River 62.03 342 P **P** **11 52 39.8 +1.1**
baz=123
M20K Styx River 62.07 332 P **P** **11 52 39.9 +0.6**
baz=110
O19K Port Alsworth 62.08 330 P **P** **11 52 40.3 +1.1**
baz=108
H23K Yukon River 62.12 337 P **P** **11 52 40.6 +1.2**
baz=115
CAST Castle Rocks 62.16 334 P **P** **11 52 40.3 +0.6**
CAST IAmb IAmb 11 53 07.0
comp=Z,14nm,0.9s
CAST Castle Rocks 62.16 334 P **P** **11 52 40.4 +0.6**
baz=112,SNR=8.8
MLY Manley 62.24 336 P **P** **11 52 41.4 +1.1**
baz=114,SNR=13
P18K Big Mountain, 62.28 329 P **P** **11 52 41.5 +0.9**
baz=106
F24K Squaw Lake 62.28 339 P **P** **11 52 41.9 +1.4**
baz=118
N19K Bonanza Creek 62.34 331 P **P** **11 52 42.0 +0.9**
baz=108
R17K Ugashik Creek 62.40 327 P **P** **11 52 43.1 +1.8**
baz=105
L20K Farewell, AK 62.60 333 P **P** **11 52 43.6 +0.9**
baz=109,SNR=9.2
M19K Big River Lodg 62.64 332 P **P** **11 52 44.3 +1.4**
baz=109
D25K Kavik River 62.67 341 P **P** **11 52 44.3 +1.3**
baz=120
G23K Bananza Creek 62.67 338 P **P** **11 52 44.8 +1.7**
baz=115,SNR=5.7
RIB01 Linhares ES 62.72 122 *eP* **P** **11 52 42.9 -1.1**
E24K Your Creek 62.74 340 P **P** **11 52 44.6 +1.1**
baz=117
I21K Tanana 62.78 336 P **P** **11 52 45.3 +1.5**
baz=112
H22K Ishtalitna Cre 62.83 337 P **P** **11 52 45.4 +1.2**
baz=114
AY01 Puyuhuapi 62.87 163 P **P** **11 52 45.5 +1.0**
L19K White Mountain 62.94 332 P **P** **11 52 46.2 +1.2**
baz=108
N18K Kilae Creek 62.96 331 P **P** **11 52 46.3 +1.1**
baz=107
K20K Telida 62.98 334 P **P** **11 52 45.8 +0.7**
K20K Telida 62.98 334 P **P** **11 52 45.9 +0.7**
baz=110,SNR=11
CHGN Chignik 63.17 326 P **P** **11 52 47.3 +0.9**
baz=102
H21K Melozitna Rive 63.28 336 P **P** **11 52 48.1 +1.0**
baz=112
J20K Nowinta River 63.29 335 P **P** **11 52 48.2 +1.0**
baz=110
G22K Bettles 63.29 338 P **P** **11 52 48.3 +1.2**
baz=114
O17K Koliganek Bris 63.30 329 P **P** **11 52 48.2 +1.0**
baz=105
D24K Happy Valley 63.35 341 P **P** **11 52 49.2 +1.7**
baz=118
TOLK Toolik Lake Re 63.36 340 P **P** **11 52 49.0 +1.4**
baz=116
C24K Franklin Bluff 63.58 341 P **P** **11 52 50.4 +1.5**
baz=118
TTA Tatalina 63.68 333 P **P** **11 52 50.6 +0.7**
baz=108
O16K Kokwok River B 63.74 329 P **P** **11 52 51.4 +1.2**
baz=104
F22K John River 63.77 338 P **P** **11 52 52.1 +1.8**
baz=113
D23K Nanushuk River 63.87 340 P **P** **11 52 52.7 +1.8**
baz=116
G21K Allakaket 63.87 337 P **P** **11 52 52.3 +1.3**
baz=112
E22K Anaktuvuk Pass 63.89 339 P **P** **11 52 52.3 +1.2**
baz=114
COYC Coyhaique 64.09 164 P **P** **11 52 53.4 +0.8**
COYC Coyhaique 64.09 164 P **P** **11 52 53.7 +1.2**
F21K Alatna River 64.12 338 P **P** **11 52 54.8 +2.1**
baz=112,SNR=10
SDPT Sand Point 64.13 324 P **P** **11 52 54.2 +1.4**
baz=100
C23K Itkillik River 64.22 341 P **P** **11 52 55.0 +1.8**
baz=116
N16K Nishlik Lake 64.28 330 P **P** **11 52 55.0 +1.2**
baz=104
UNV Unalaska Valle 67.43 322 P **P** **11 53 15.5 +1.5**
baz=94
ANM Nome 68.11 334 P **P** **11 53 19.2 +1.1**
baz=99
BORG Borgarnes 68.14 26 LR LR 12 21 42.5
comp=Z,34nm,21.3s,baz=291,slow=35
NIKH Nikolski High 68.80 321 P **P** **11 53 23.3 +0.7**
baz=92
JMIC Jan Mayen 73.47 20 LR LR 12 26 46.7
comp=Z,46nm,20.4s,baz=244,slow=36
BBTS Babate 73.71 79 LR LR 12 21 25.1
comp=Z,62nm,21.7s,baz=272,slow=32
PCAS Casmilo, Conde 76.11 52 *epP* **pP** **11 54 33.4 -1.0**
PCAS *esP* sP 11 54 45.3 -1.0
PNCL Nicolau / Gran 76.40 54 *epP* **pP** **11 54 34.4 -1.8**
PNCL *esP* sP 11 54 46.0 -2.1
POLO Lamas de Olo 76.43 51 *epP* **pP** **11 54 35.0 -1.3**
POLO *esP* sP 11 54 45.3 -2.9
PVIS Viseu 76.46 51 *epP* **pP** **11 54 35.1 -1.3**
PVIS *esP* sP 11 54 47.2 -1.1
PMTG Montargil 76.48 53 *epP* **pP** **11 54 35.3 -1.2**
PMTG *esP* sP 11 54 46.4 -2.0
PCBR Castelo Branco 76.92 52 *epP* **pP** **11 54 37.0 -2.0**
PCBR *esP* sP 11 54 49.5 -1.3
PESTR Estremoz 77.00 53 *epP* **pP** **11 54 38.3 -1.3**
PESTR *esP* sP 11 54 49.8 -1.7
MVO Moncorvo 77.03 51 *epP* **pP** **11 54 38.5 -1.2**
MVO *esP* sP 11 54 50.3 -1.3
PMRV Marv??o 77.06 52 *epP* **pP** **11 54 38.3 -1.5**
PMRV *esP* sP 11 54 50.6 -1.1
PBRG Braganca 77.14 50 *epP* **pP** **11 54 39.4 -0.9**
PBRG *esP* sP 11 54 51.5 -0.6
EKA Eskdalemuir Ar 77.25 36 LR LR 12 25 15.8
comp=Z,40nm,22.0s,baz=238,slow=33
SPITS Spitsbergen Ar 78.56 11 LR LR 12 31 06.4
comp=Z,59nm,19.2s,baz=272,slow=37
ESDC Sonseca Array 79.61 52 P **P** **11 54 23.1 -2.7**
comp=Z,1.0nm,0.9s,baz=290,slow=6.0,SNR=5.0
ESDC pP **pP** **11 54 51.7 -2.4**
comp=Z,4.4nm,0.9s,baz=290,slow=5.7,SNR=11
ESDC sP **sP** **11 55 03.2 -2.8**
comp=Z,3.7nm,1.0s,baz=286,slow=5.4,SNR=6.3
ESDC LR LR 12 24 10.5
comp=Z,58nm,19.5s,baz=306,slow=32
comp=Z,1.0nm,0.9s
MDT Midelt 80.56 59 LR LR 12 25 51.6
comp=Z,51nm,18.9s,baz=306,slow=32
NB2 NORSAR Subarra 83.16 28 P **P** **11 54 43.7 -0.4**
comp=Z,5.1nm,2.0s,baz=294,slow=5.3
NOA NORSAR Array B 83.16 28 P **P** **11 54 43.4 -0.7**
comp=Z,0.6nm,0.8s,baz=290,slow=5.2,SNR=4.1
NOA LR LR 12 29 21.4
comp=Z,32nm,21.5s,baz=245,slow=34

comp=Z,0.6nm,0.8s
PMSA Palmer Station 83.41 168 P **P** **11 54 45.6 +0.7**
PMSA Palmer Station 83.41 168 *e*P **P** **11 54 46.8 +1.8**
HFS Hagfors 84.64 29 LR LR 12 31 42.1
comp=Z,62nm,20.4s,baz=307,slow=35
ARCES ARCESS Array B 84.81 18 P **P** **11 54 50.2 -2.0**
comp=Z,2.0nm,0.6s,baz=290,slow=5.4,SNR=16
ARCES LR LR 12 33 49.6
comp=Z,26nm,19.4s,baz=232,slow=36
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 84.81 18 P **P** **11 54 51.9 -0.3**
ARCES IAmb IAmb 11 56 55.7
comp=Z,24nm,1.6s
HOPE Hope Point 84.90 150 P **P** **11 54 54.1 +1.4**
DBIC Dimbokro 86.77 84 P **P** **11 54 59.6 -3.4**
comp=Z,2.2nm,0.8s,baz=279,slow=13,SNR=1.6
comp=Z,2.2nm,0.8s
DAVOX Davos/Dischmat 87.39 42 LR LR 12 32 16.7
comp=Z,37nm,18.4s,baz=261,slow=34
TIXI Tiksi 88.20 348 P **P** **11 55 08.5 -0.2**
TIXI IAmb IAmb 11 58 12.8
comp=Z,6.9nm,0.5s
PETK Petropavlovsk- 88.40 325 P **P** **11 55 09.2 -0.8**
comp=Z,2.4nm,0.8s,baz=116,slow=6.6,SNR=7.3
PETK pP **pP** **11 55 40.3 +1.3**
comp=Z,2.1nm,0.9s,baz=67,slow=12,SNR=3.5
comp=Z,2.4nm,0.8s
FINES FINESS Array B 89.40 25 LR LR 12 36 26.7
comp=Z,35nm,18.8s,baz=346,slow=36
VRAC Vranov 90.57 38 LR LR 12 36 01.7
comp=Z,27nm,19.4s,baz=296,slow=36
TORD Torodi Ar. Bea 91.22 76 P **P** **11 55 20.4 -3.5**
comp=Z,0.2nm,0.4s,baz=294,slow=5.4,SNR=8.1
comp=Z,0.2nm,0.4s
VAE Valguarnera 93.98 49 LR LR 12 33 05.4
comp=Z,73nm,21.3s,baz=282,slow=32
AKASG Malin Array Be 96.91 33 LR LR 12 43 04.2
comp=Z,27nm,18.2s,baz=284,slow=38
OBN Obninsk 97.64 26 LR LR 12 39 22.9
comp=Z,14nm,19.2s,baz=348,slow=35
MLR Muntele Rosu 97.97 38 LR LR 12 38 31.5
comp=Z,41nm,19.0s,baz=251,slow=34
BVAR Borovoye Array 110.00 10 PKiKP **PKiKP** **12 00 49.2 +0.3**
comp=Z,0.5nm,0.6s,baz=17,slow=6.5,SNR=4.1
KURBB Kurchatov Arra 113.45 6 PKiKP **PKiKP** **12 00 54.9 -0.6**
comp=Z,1.3nm,0.7s,baz=353,slow=1.8,SNR=12
MKAR Makanchi Array 117.54 3 PKP **PKPdf** **12 01 02.4 -1.1**
comp=Z,0.8nm,0.7s,baz=16,slow=1.8,SNR=7.9
GEYT Alibeck 120.18 26 PKP **PKiKP** **12 01 09.1 +0.1**
comp=Z,1.2nm,0.4s,baz=141,slow=52,SNR=2.4
WMQ Urumqi 120.63 359 *e*PKP **PKPdf** **12 01 09.6 0.0**
BOSA Boshof 122.31 114 PKP **PKPdf** **12 01 12.6 -0.7**
comp=Z,12nm,0.9s,baz=268,slow=3.0,SNR=8.9
NJ2 Nanjing 123.25 327 *e*P **PKiKP** **12 01 22.3 +7.2**
NJ2 pmax pmax
comp=Z,14nm,0.6s
MAW Mawson 126.02 169 PKP **PKiKP** **12 01 19.2 -0.1**
comp=Z,4.2nm,0.7s,baz=204,slow=3.8,SNR=12
XAN Xi'an 126.05 337 ⇑PKP **PKPdf** **12 01 20.3 0.0**
STKA Stephens Creek 127.79 242 PKP **PKiKP** **12 01 24.2 +0.2**
comp=Z,9.1nm,0.7s,baz=99,slow=2.0,SNR=28
STKA pPKP **pPKPdf** **12 01 53.5 +0.1**
comp=Z,6.2nm,1.0s,baz=40,slow=5.1,SNR=4.5
CD2 Chengdu 130.70 341 PKP **PKPdf** **12 01 28.8 -0.4**
WRA Warramunga Arr 134.54 257 PKhKP PKPpre 12 01 19.9
comp=Z,0.4nm,0.7s,baz=82,slow=4.1,SNR=8.7
WRA PKP **PKPdf** **12 01 37.1 +0.5**
comp=Z,4.5nm,0.5s,baz=84,slow=2.7,SNR=32
WRA pPKP pPKPdf 12 02 07.0 +0.4
comp=Z,3.2nm,0.8s,baz=80,slow=1.3,SNR=5.1
ASAR Alice Springs 135.01 252 PKhKP PKPpre 12 01 20.0
comp=Z,0.8nm,0.8s,baz=97,slow=3.0,SNR=7.2
ASAR PKP **PKiKP** **12 01 38.7 -0.2**
comp=Z,1.9nm,0.5s,baz=88,slow=2.0,SNR=15
ASAR pPKP pPKPdf 12 02 06.8 -0.5
comp=Z,1.2nm,0.8s,baz=100,slow=2.3,SNR=2.7
ASAR SKPbc **SKPbc** **12 04 58.7 +0.6**
comp=Z,0.5nm,0.8s,baz=99,slow=3.1,SNR=2.9
PZH PanZhiHua 135.43 341 PKP **PKPdf** **12 01 38.3 0.0**
CMAR Chiang Mai Arr 143.84 340 PKP PKPbc 12 01 51.5 +0.1
comp=Z,3.6nm,0.7s,baz=336,slow=3.4,SNR=18
CMAR pPKP pPKPdf 12 02 22.1 -1.8
comp=Z,5.3nm,1.0s,baz=341,slow=2.9,SNR=4.3
HYBB Hyderabad (bro 146.01 14 *e*PKiKP **PKiKP** **12 02 02.3 +0.7**

*THE **22** 12:07:43.6, 40.25N× 19.69E, h10km±1km, ML2.7/5, Error ellipse: s-maj=1.3km s-min=0.5km az=254.0*
*TIR **22** 12:07:45.5, 40.13N× 19.79E, h9km±1km, Md2.9, Ml2.9*
*ATH **22** 12:07:46.4, 40.15N× 19.79E, h10km±1.31km, ML2.6/14, Error ellipse: s-maj=31.6km s-min=1.7km az=0.0*
ISC 22 12:07:45.8±1.0, 40.15N±0.02× 19.80E±0.03, h12km±8km, n39, σ0=82/59, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.31**	**150**	P	**Pg**	**12 07 52.0**	**0.0**
SRN				S	**Sb**	**12 07 58.4**	**+0.2**
	1μm,0.3s						
SRN	**Sarande**	**0.31**	**150**	P	**Pg**	**12 07 51.8**	**-0.2**
	baz=146						
SRN				S	**Sg**	**12 07 56.7**	**+0.5**
	baz=146						
SRN				AMP			
	comp=E,7.0nm,0.4s,baz=146						
VLO	**Vlora**	**0.40**	**324**	P	**Pg**	**12 07 53.7**	**0.0**
	baz=327						
VLO				S	**Sb**	**12 08 00.4**	**-0.3**
	baz=327						
VLO				AMP			
	comp=E,12nm,0.2s,baz=327						
KASA	**Kassiopi**	**0.41**	**166**	P	**Pg**	**12 07 53.7**	**-0.3**
KASA				S	**Sb**	**12 08 00.7**	**-0.5**
KASA				AML	AML	12 08 02.1	
	comp=E,2465μm,0.2s						
KASA				AML	AML	12 08 02.4	
	comp=N,1832μm,0.2s						
KEK	**Kerkira**	**0.43**	**180**	P	**Pg**	**12 07 54.0**	**-0.4**
KEK				S	**Sb**	**12 08 02.3**	**+0.5**
	comp=N,1μm,0.3s						
KEK	**Kerkira**	**0.43**	**180**	P	**Pg**	**12 07 53.9**	**-0.4**
KEK				S	**Sb**	**12 08 01.3**	**-0.5**
KEK				AML	AML	12 08 03.7	
	comp=E,2801μm,0.3s						
KEK				AML	AML	12 08 04.5	
	comp=N,1652μm,0.4s						
LSK	**Leskovik**	**0.61**	**90**	P	**Pg**	**12 07 57.0**	**-0.7**
LSK				S	**Sb**	**12 08 07.3**	**+0.3**
LSK	**Leskovik**	**0.61**	**90**	P	**Pg**	**12 07 57.5**	**-0.2**
	baz=87						
LSK				S	**Sb**	**12 08 07.7**	**+0.6**
	baz=87						
LSK				AMP			
	comp=E,3.2nm,0.6s,baz=87						
IGT	**Igoumenitsa**	**0.74**	**146**	P	**Pg**	**12 07 59.8**	**-0.2**
IGT				S	**Sn**	**12 08 12.8**	**-0.3**
	comp=E,378nm,0.3s						
IGT	**Igoumenitsa**	**0.74**	**146**	P	**Pg**	**12 07 59.8**	**-0.2**
	baz=144						
IGT				S	**Sb**	**12 08 10.9**	**+0.3**
	baz=144						
IGT	**Igoumenitsa**	**0.74**	**146**	P	**Pg**	**12 07 59.6**	**-0.5**
IGT				S	**Sb**	**12 08 11.3**	**+0.8**
IGT				AML	AML	12 08 15.9	
	comp=N,651μm,0.3s						
IGT				AML	AML	12 08 16.8	
	comp=E,863μm,0.4s						
KBN	**Korca**	**0.89**	**57**	P	**Pg**	**12 08 00.7**	**-2.3**
KBN				S	**Sg**	**12 08 14.3**	**-0.3**
	comp=E,332nm,0.7s						
KBN	**Korca**	**0.89**	**57**	P	**Pb**	**12 08 03.5**	**+0.4**
	baz=56						
KBN				S	**Sn**	**12 08 16.9**	**-0.2**
	baz=56						
KBN				AMP			
	comp=N,1.4nm,0.5s,baz=56						
JAN	**Janina**	**0.94**	**121**	P	**Pg**	**12 08 03.4**	**-0.6**
JAN				S	**Sn**	**12 08 19.3**	**+1.0**
	comp=N,480nm,0.4s						
JAN	**Janina**	**0.94**	**121**	P	**Pb**	**12 08 04.2**	**+0.2**
JAN				AML	AML	12 08 23.9	
	comp=E,761μm,0.4s						
JAN				AML	AML	12 08 24.6	
	comp=N,1146μm,0.4s						
NEST	**Nestorio**	**0.99**	**74**	P	**Pg**	**12 08 03.5**	**-1.4**
NEST	**Nestorio**	**0.99**	**74**	P	**Pn**	**12 08 05.5**	**-0.1**
NEST				AML	AML	12 08 28.0	
	comp=E,358μm,0.6s						
NEST				AML	AML	12 08 30.8	
	comp=N,420μm,0.5s						
SCTE	**Santa Cesarea**	**1.03**	**266**	P	**Pn**	**12 08 05.6**	**-0.4**
	baz=268						
SCTE				S	**Sn**	**12 08 20.7**	**+0.5**
	baz=268						
SCTE				AMP			
	comp=E,1.3nm,0.3s,baz=268						
SCTE	**Santa Cesarea**	**1.03**	**266**	P	**Pb**	**12 08 05.4**	**-0.1**
SCTE				S	**Sn**	**12 08 20.3**	**+0.1**
SCTE				AML	AML	12 08 22.1	
	comp=N,758μm,0.3s						
SCTE				AML	AML	12 08 22.8	
	comp=E,655μm,0.3s						
TIR	**Tirane**	**1.20**	**2**	P	**Pg**	**12 08 10.1**	**+1.3**
	baz=2.0						
TIR				S	**Sn**	**12 08 27.6**	**+3.0**
	baz=2.0						
TIR				AMP			
	comp=E,0.5nm,0.4s,baz=2.0						
OHR	**Ohrid**	**1.23**	**38**	*e*Pn	**Pg**	**12 08 09.4**	**+0.1**
TSLK	**Tsoukalades, L**	**1.48**	**153**	P	**Pg**	**12 08 14.5**	**+0.4**
TSLK				AML	AML	12 08 40.5	
	comp=E,549μm,0.4s						
TSLK				AML	AML	12 08 41.4	
	comp=N,665μm,0.4s						
LKD2	**Lefkada island**	**1.51**	**154**	P	**Pg**	**12 08 15.0**	**+0.2**
	baz=153						
LKD2				S	**Sg**	**12 08 35.8**	**+1.4**
	baz=153						
LKD2	**Lefkada island**	**1.51**	**154**	P	**Pg**	**12 08 14.8**	**0.0**
LKD2				S	**Sg**	**12 08 34.4**	**+0.1**
LKD2				AML	AML	12 08 41.8	
	comp=E,358μm,0.4s						
LKD2				AML	AML	12 08 43.2	
	comp=N,373μm,0.4s						
EVGI	**Lefkada island**	**1.66**	**156**	P	**Pg**	**12 08 17.3**	**-0.3**
THL	**Klokotos Trika**	**1.80**	**108**	P	**Pb**	**12 08 19.3**	**+0.6**
THL				AML	AML	12 08 52.1	
	comp=N,152μm,0.9s						
THL				AML	AML	12 08 58.8	
	comp=E,115μm,0.6s						
EVR	**Evrytania**	**1.98**	**128**	P	**Pb**	**12 08 21.8**	**0.0**
EVR				AML	AML	12 08 55.7	
	comp=E,173μm,0.5s						
EVR				AML	AML	12 09 01.8	
	comp=N,182μm,0.8s						
PVO	**Paravola**	**2.03**	**138**	P	**Pb**	**12 08 22.9**	**+0.3**
MAKR	**Makrakomi, Fth**	**2.13**	**121**	P	**Pb**	**12 08 24.6**	**+0.4**
MAKR				AML	AML	12 09 02.1	
	comp=E,331μm,0.3s						
MAKR				AML	AML	12 09 06.8	
	comp=N,365μm,0.4s						
BCI	**Bajram Curri**	**2.23**	**5**	P	**Pb**	**12 08 26.4**	**+0.4**
	baz=5.0						
AGG	**Agios Georgios**	**2.25**	**119**	P	**Pb**	**12 08 26.0**	**-0.4**
AGG				AML	AML	12 09 11.7	
	comp=E,100μm,0.4s						
AGG				AML	AML	12 09 13.2	
	comp=N,107μm,0.8s						
ANX	**Ano Chora**	**2.26**	**133**	P	**Pb**	**12 08 26.1**	**-0.4**
ANX				AML	AML	12 09 04.6	
	comp=N,179μm,0.5s						
ANX				AML	AML	12 09 05.6	
	comp=E,167μm,0.5s						
SERG	**Sergoula**	**2.46**	**134**	P	**Pb**	**12 08 29.3**	**-0.6**
SERG				AML	AML	12 09 18.2	
	comp=E,125μm,0.5s						
SERG				AML	AML	12 09 21.6	
	comp=N,110μm,0.6s						
DBRK	**Dubrovnik**	**2.81**	**334**	*e*Pn	**Pn**	**12 08 30.5**	**0.0**
STON	**Ston**	**3.15**	**331**	*e*Pn	**Pn**	**12 08 33.6**	**-1.5**
LSTV	**Lastovo**	**3.41**	**321**	*e*Pn	**Pn**	**12 08 37.7**	**-1.0**
RICI	**Ricice**	**3.89**	**330**	*e*Pn	**Pn**	**12 08 45.5**	**+0.1**
MORI	**Morici**	**4.81**	**322**	*e*Pn	**Pn**	**12 08 57.4**	**-0.5**
DUGI	**Dugi Otok**	**5.22**	**319**	*e*Pn	**Pn**	**12 09 03.3**	**-0.2**
DUGI				Sn	**Sn**	**12 10 01.2**	**-2.4**

*IDC **22** 12:09:53.7±0.5, 22.77S× 172.86E, h0km, mb4.4/17, mbtmp4.4/20, ML4.2/3, MS3.8/42, Error ellipse: s-maj=17.7km s-min=15.9km az=129.0*
*NOU **22** 12:09:56.4, 23.21S× 172.84E, h0km, mb5.1/40, Southeast of Loyalty Islands*
*NEIC **22** 12:09:57.1±2.0, 22.98S±0.05× 172.85E±0.09, h10km±1km, mb4.9/40, Error ellipse: s-maj=13.4km s-min=8.6km az=92.0*
*BJI **22** 12:09:59.0±0.0, 22.90S× 172.80E, h40km, mb4.5/14, mB5.2/9, Ms4.6/1, Ms7 4.3/1*
*GCMT **22** 12:10:02.2±0.3, 22.96S±0.02× 172.73E±0.03, h15km±1km, MW4.9/86, Moment Tensor Solution. s36,c41; s86,c120; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.41±.16; Mθθ-2.29±.11; Mϕϕ-0.12±.09; Mrθ0.54±.28; Mrϕ-0.44±.06; Mθϕ-0.32±.32; Best double couple: Mo2.47300×10^16 NP1:ϕs88.00000°, δ51.00000°, λ102.00000°. NP2: ϕs250.00000°, δ40.00000°, λ76.00000°. Principal axes: T 2.5240, Plg79.0000°, Azm49.0000°; N -0.1060, Plg9.0000°, Azm261.0000°; P -2.4230, Plg6.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 12:09:56.1±0.4, 22.86S±0.07× 172.80E±0.06, h10km, n200, σ1°35/170, mb4.8/43, MS3.8/39, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.63**	**286**		**Pn**	**12 11 08.7**	**+2.5**
MARNC	**Mare, Loyalty**	**4.63**	**286**	P	**Pn**	**12 11 06.8**	**+0.6**
PINNC	**Pines Island,**	**4.95**	**272**		**Pn**	**12 11 11.7**	**+1.1**
PINNC	**Pines Island,**	**4.95**	**272**	P	**Pn**	**12 11 11.2**	**+0.7**
OUENC	**Ouen Island, N**	**5.52**	**273**		**Pn**	**12 11 20.5**	**+2.1**
OUENC	**Ouen Island, N**	**5.52**	**273**	P	**Pn**	**12 11 19.4**	**+1.0**
YATNC	**Mamie plateau,**	**5.52**	**277**	P	**Pn**	**12 11 21.5**	**+3.0**
	126nm,0.9s						
ONTNC	**Ouen Toro**	**5.89**	**274**		**Pn**	**12 11 25.1**	**+1.6**
ONTNC	**Ouen Toro**	**5.89**	**274**	P	**Pn**	**12 11 26.2**	**+2.7**
DZM	**Mont Dzumac**	**5.93**	**276**	Pn	**Pn**	**12 11 24.7**	**+0.5**
	2.5nm,0.3s,baz=109,slow=14,SNR=40						
DZM					Sn	**Sn**	**12 12 30.3**	**-2.0**
	3.2nm,0.3s,baz=90,slow=22,SNR=2.1						
	11nm,0.3s						
DZM	**Mont Dzumac**	**5.93**	**276**	*e*Pn	**Pn**	**12 11 26.6**	**+2.4**
	141nm,1.0s						
DZM				*e*Sn	**Sn**	**12 12 30.0**	**-2.3**
	238nm,1.1s						
DZM				*e*LR	LR	12 12 44.1	
DZM	**Mont Dzumac**	**5.93**	**276**	Pn	**Pn**	**12 11 25.1**	**+1.0**
DZM	**Mont Dzumac**	**5.93**	**276**	P	**Pn**	**12 11 25.6**	**+1.4**
NOUC	**Port Laguerre**	**6.05**	**276**	P	**Pn**	**12 11 26.8**	**+1.0**
RTV	**Rentapao**	**6.50**	**320**	P	Pn	12 11 39.4	+7.5
DVP	**Devils Point**	**6.70**	**319**	P	Pn	12 11 41.0	+6.4
MSVF	**Nonsavu**	**7.09**	**45**	Pn	**Pn**	**12 11 39.1**	**-1.0**
	0.7nm,0.3s,baz=201,slow=17,SNR=1.9						
MSVF				LR	LR	12 13 51.8	
	comp=Z,977nm,18.5s,baz=197,slow=34						
	5.3nm,0.6s						
MSVF	**Nonsavu**	**7.09**	**45**		**Pn**	**12 11 43.3**	**+3.2**
MSVF	**Nonsavu**	**7.09**	**45**	P	**Pn**	**12 11 42.7**	**+2.6**
NFK	**Norfolk Island**	**7.55**	**214**	P	**Pn**	**12 11 46.0**	**-0.3**
	baz=7.4,SNR=5.4						
KOUNC	**Koumac, New Ca**	**8.24**	**285**	Pn	**Pn**	**12 11 58.8**	**+3.0**
KOUNC	**Koumac, New Ca**	**8.24**	**285**	P	Pn	12 12 01.0	+5.2
RAO	**Raoul Island**	**10.49**	**129**	LR	LR	12 15 28.7	
	comp=Z,1μm,21.8s,baz=340,slow=32						
OUZ	**Omahuta**	**12.33**	**177**	Pn	**Pn**	**12 12 54.5**	**+2.7**
URZ	**Urewera**	**15.79**	**167**	Pn	**Pn**	**12 13 39.7**	**+1.2**
	0.1nm,0.3s,baz=351,slow=8.4,SNR=3.8						
URZ				LR	LR	12 18 15.5	
	comp=Z,1μm,21.1s,baz=31,slow=32						
	29nm,1.2s						
URZ	**Urewera**	**15.79**	**167**	P	**P**	**12 13 41.1**	**-1.3**
AFI	**Afiamalu**	**17.12**	**61**	LR	LR	12 18 42.2	
	comp=Z,61nm,18.6s,baz=194,slow=31						
HNR	**Honiara**	**18.17**	**315**	LR	LR	12 20 05.5	
	comp=Z,413nm,21.2s,baz=166,slow=34						
TUWZ	**Tuamarina**	**18.54**	**177**	P	**Pn**	**12 14 15.1**	**+2.0**
LTZ	**Lake Taylor**	**19.87**	**181**		**Pn**	**12 14 29.9**	**+0.8**
LTZ				IAmb	IAmb	12 14 39.5	
	comp=Z,41nm,0.9s						
EIDS	**Eidsvold**	**19.98**	**258**	P	**P**	**12 14 29.5**	**+0.7**
	baz=20,SNR=9.9						
EIDS	**Eidsvold**	**19.98**	**258**		Pn	12 14 31.7	+1.2
EIDS				IAmb	IAmb	12 14 38.0	
	comp=Z,49nm,0.8s						
ARMA	**Armidale**	**20.34**	**244**	P	**P**	**12 14 32.4**	**-0.5**
	baz=20,SNR=6.8						
ARMA	**Armidale**	**20.34**	**244**	P	**P**	**12 14 32.9**	**+0.1**
ARMA	**Armidale**	**20.34**	**244**	P	**P**	**12 14 32.7**	**-0.2**
OXZ	**Oxford**	**20.42**	**182**	P	Pn	12 14 36.7	+1.2
OXZ				IAmb	IAmb	12 14 44.8	
	comp=Z,35nm,0.9s						
RPZ	**Rata Peaks**	**20.85**	**184**	P	**P**	**12 14 39.1**	**+1.1**
	comp=Z,9.0nm,0.9s,baz=52,slow=3.8,SNR=2.5						
RPZ				LR	LR	12 21 47.7	
	comp=Z,997nm,20.7s,baz=342,slow=34						
	comp=Z,9.0nm,0.9s						
RMQ	**Roma**	**22.13**	**256**	P	**P**	**12 14 54.1**	**+2.0**
	baz=22,SNR=85						
CNB	**Canberra Magne**	**23.88**	**233**	P	**P**	**12 15 11.7**	**+1.7**
	baz=24,SNR=12						
CNB	**Canberra Magne**	**23.88**	**233**	P	**P**	**12 15 09.4**	**-0.6**
CAN	**Canberra**	**24.15**	**234**	P	**P**	**12 15 13.9**	**+1.4**
CAN				IAmb	IAmb	12 15 24.3	
	comp=Z,45nm,1.1s						
CAN	**Canberra**	**24.15**	**234**	P	**P**	**12 15 14.8**	**+2.3**
CTA	**Canberra Tower**	**24.84**	**271**	P	**P**	**12 15 18.8**	**-0.2**
	comp=Z,9.9nm,0.6s,baz=101,slow=9.3,SNR=21						
CTA				LR	LR	12 24 55.2	
	comp=Z,152nm,18.6s,baz=86,slow=36						
	comp=Z,9.9nm,0.6s						
CTA	**Charters Tower**	**24.84**	**271**	P	**P**	**12 15 21.0**	**+2.0**
	comp=Z,18nm,0.7s						
CTAO	**Charters Tower**	**24.84**	**271**	P	**P**	**12 15 19.9**	**+0.9**
CTAO	**Charters Tower**	**24.84**	**271**	P	**P**	**12 15 21.0**	**+2.0**
	comp=Z,16nm,0.7s						
RAR	**Rarotonga**	**25.46**	**92**	LR	LR	12 23 05.5	
	comp=Z,78nm,21.9s,baz=262,slow=31						
CMSA	**Cobar Meteorol**	**25.56**	**244**	P	**P**	**12 15 25.9**	**+0.6**
	baz=25,SNR=14						
CMSA	**Cobar Meteorol**	**25.56**	**244**	P	**P**	**12 15 25.5**	**+0.2**
QLP	**Quilpie**	**26.18**	**256**	P	**P**	**12 15 31.6**	**+0.6**
	baz=26,SNR=18						
MTSU	**Mount Surprise**	**27.07**	**275**	P	**P**	**12 15 39.8**	**+0.7**
	baz=27,SNR=20						
TOO	**Toolangi**	**27.65**	**232**	P	**P**	**12 15 45.5**	**+1.3**
	baz=28,SNR=8.3						
TOO	**Toolangi**	**27.65**	**232**	P	**P**	**12 15 45.6**	**+1.3**
TOO				IAmb	IAmb	12 16 21.8	
	comp=Z,28nm,1.4s						
TOO	**Toolangi**	**27.65**	**232**	P	**P**	**12 15 45.6**	**+1.3**
	comp=Z,16nm,2.1s						
STKA	**Stephens Creek**	**29.05**	**245**	P	**P**	**12 15 57.3**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=64,slow=9.1,SNR=12						
STKA				PcP	**PcP**	**12 19 05.0**	**0.0**
	comp=Z,3.4nm,0.7s,baz=84,slow=3.0,SNR=5.0						
	comp=Z,3.2nm,0.6s						
STKA	**Stephens Creek**	**29.05**	**245**	P	**P**	**12 15 57.5**	**+0.8**
	baz=29,SNR=12						
STKA	**Stephens Creek**	**29.05**	**245**	P	**P**	**12 15 57.4**	**+0.8**
STKA	**Stephens Creek**	**29.05**	**245**	P	**P**	**12 15 58.1**	**+1.4**
COEN	**Coen**	**29.42**	**282**	P	**P**	**12 16 01.0**	**+0.8**
	baz=29,SNR=5.6						
COEN	**Coen**	**29.42**	**282**	P	**P**	**12 16 01.7**	**+1.6**
COEN				IAmb	IAmb	12 16 02.8	
	comp=Z,12nm,0.9s						
ARPS	**Mount Arapiles**	**30.08**	**236**	P	**P**	**12 16 08.3**	**+2.6**
	comp=Z,9.9nm,1.0s						
QIS	**Mount Isa**	**30.89**	**268**	P	**P**	**12 16 12.9**	**-0.2**
	baz=31,SNR=5.6						
QIS	**Mount Isa**	**30.89**	**268**	P	**P**	**12 16 12.6**	**-0.5**
	comp=Z,9.0nm,2.7s						
HTT	**Hallett**	**31.55**	**243**	P	**P**	**12 16 19.4**	**+0.6**
	baz=31,SNR=8.8						
HTT	**Hallett**	**31.55**	**243**	P	**P**	**12 16 20.1**	**+1.3**
	comp=Z,19nm,0.8s						
LCRK	**Leigh Creek**	**31.73**	**249**	P	**P**	**12 16 21.4**	**+1.1**
OOD	**Oodnadatta**	**33.82**	**254**	P	**P**	**12 16 40.5**	**+1.8**
BBOO	**Buckleboo**	**33.82**	**245**	P	**P**	**12 16 38.7**	**+0.1**
	baz=34,SNR=14						
BBOO	**Buckleboo**	**33.82**	**245**	P	**P**	**12 16 38.1**	**-0.6**
BBOO	**Buckleboo**	**33.82**	**245**	P	**P**	**12 16 38.7**	**+0.1**
TBI	**Tubuai**	**34.65**	**98**	*e*LR	LR	12 26 06.3	
	comp=Z,117nm,29.8s						
MULG	**Mulgathing**	**35.30**	**250**	P	**P**	**12 16 52.2**	**+0.7**
PPT2	**Papeete2**	**35.63**	**89**	*e*S	**S**	**12 22 30.6**	**-0.4**
	comp=Z,41nm,22.5s						
PPT2				*e*LR	LR	12 26 33.4	
	comp=Z,81nm,22.8s						
PPT	**Papeete**	**35.63**	**89**	LR	LR	12 28 43.4	
	comp=Z,65nm,19.3s,baz=170,slow=32						
AS31	**Alice Springs**	**35.67**	**261**	P	**P**	**12 16 54.5**	**-0.3**
ASAR	**Alice Springs**	**35.67**	**261**	P	**P**	**12 16 54.4**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=80,slow=8.8,SNR=142						
ASAR				PcP	**PcP**	**12 19 23.3**	**0.0**
	comp=Z,4.7nm,1.1s,baz=100,slow=4.1,SNR=4.9						
ASAR				LR	LR	12 30 34.8	
	comp=Z,117nm,18.0s,baz=86,slow=35						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**35.67**	**261**	P	**P**	**12 16 54.1**	**-0.7**
WB2	**Warramunga Arr**	**35.85**	**267**	P	**P**	**12 16 55.2**	**-1.2**
WB2				IAmb	IAmb	12 16 57.3	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**35.85**	**267**	P	**P**	**12 16 55.0**	**-1.4**
WRAB				IAmb	IAmb	12 16 57.3	
	comp=Z,14nm,0.9s						
WRAB	**Tennant Creek**	**35.85**	**267**	P	**P**	**12 16 57.1**	**+0.7**
WRA	**Warramunga Arr**	**35.86**	**267**	P	**P**	**12 16 55.0**	**-1.5**
	comp=Z,8.2nm,0.8s,baz=102,slow=7.8,SNR=64						
WRA				LR	LR	12 30 49.4	
	comp=Z,87nm,18.5s,baz=40,slow=35						
	comp=Z,8.2nm,0.8s						
WRA	**Warramunga Arr**	**35.86**	**267**	P	**P**	**12 16 54.6**	**-1.8**
FORT	**Forrest**	**40.48**	**249**	P	**P**	**12 17 35.1**	**-0.2**
	baz=40,SNR=40						
FORT	**Forrest**	**40.48**	**249**	P	**P**	**12 17 35.6**	**+0.3**
FORT	**Forrest**	**40.48**	**249**	P	**P**	**12 17 36.3**	**-0.1**
WRKA	**Warakurna**	**40.59**	**258**	P	**P**	**12 17 36.3**	**-0.1**
	baz=40,SNR=25						
WRKA	**Warakurna**	**40.59**	**258**	P	**P**	**12 17 38.1**	**+1.8**
MTN	**Manton Dam**	**40.77**	**277**	P	**P**	**12 17 36.9**	**-0.8**
	baz=41,SNR=4.3						
MTN	**Manton Dam**	**40.77**	**277**	P	**P**	**12 17 37.1**	**-0.7**
MTN				IAmb	IAmb	12 18 10.2	
	comp=Z,60nm,1.9s						
KNRA	**Kununurra**	**42.06**	**272**	P	**P**	**12 17 47.9**	**-0.5**
	baz=42,SNR=4.3						
KNRA	**Kununurra**	**42.06**	**272**	P	**P**	**12 17 47.5**	**-0.9**
KNRA	**Kununurra**	**42.06**	**272**	P	**P

MORW Morawa 51.00 250 P **P** 12 18 57.8 -0.7
comp=Z,21nm,0.8s
KAPI Kappang 54.13 281 LR LR 12 42 42.6
comp=Z,51nm,19.9s,baz=130,slow=36
VNDA Vanda 54.97 183 P **P** 12 19 26.4 -0.6
comp=Z,0.8nm,0.9s,baz=4.0,slow=2.6,SNR=4.5
VNDA LR LR 12 38 56.7
comp=Z,329nm,21.8s,baz=16,slow=32
comp=Z,0.8nm,0.9s
VNDA Vanda 54.97 183 P **P** 12 19 27.5 +0.6
SBA Scott Base 55.12 182 P **P** 12 19 29.4 +1.4
SBA IAmb IAmb 12 19 54.4
comp=Z,18nm,1.1s
MTKI Muara Teweh, K 60.24 283 P **P** 12 20 01.6 -3.5
QSPA South Pole Qui 67.21 180 P **P** 12 20 49.8 -0.7
comp=Z,6.4nm,1.0s,baz=38,slow=1.7,SNR=16
QSPA LR LR 12 47 58.7
comp=Z,77nm,18.8s,baz=63,slow=34
comp=Z,6.4nm,1.0s
QSPA South Pole Qui 67.21 180 P **P** 12 20 49.9 -0.5
MJAR Matsushiro Arr 67.51 330 LR LR 12 48 09.6
comp=Z,24nm,20.8s,baz=155,slow=34
RPN Rapa Nui 69.64 112 LR LR 12 47 12.2
comp=Z,32nm,19.5s,baz=210,slow=32
KSRS Korea Array 73.37 324 P **P** 12 21 27.9 -0.4
comp=Z,1.2nm,0.8s,baz=130,slow=6.8,SNR=4.1
KSRS LR LR 12 52 30.8
comp=Z,19nm,18.8s,baz=115,slow=35
comp=Z,1.2nm,0.8s
IPM Ipoh 75.07 281 P **P** 12 21 39.0 +0.2
IPM IAmb IAmb 12 21 39.6
comp=Z,13nm,0.8s
NJ2 Nanjing 75.11 315 *eP* **P** 12 21 38.6 +0.1
NJ2 pmax pmax
comp=Z,13nm,0.8s
SHEM Shemya Is, Ala 75.28 1 LR LR 12 53 35.8
comp=Z,32nm,19.0s,baz=285,slow=35
PSI Prapat 76.28 279 P **P** 12 21 44.5 -1.3
comp=Z,2.8nm,0.3s,baz=165,slow=7.9,SNR=8.2
comp=Z,2.8nm,0.3s
MAW Mawson 76.33 202 P **P** 12 21 45.0 0.0
comp=Z,3.7nm,1.0s,baz=106,slow=9.1,SNR=5.8
MAW LR LR 12 52 55.2
comp=Z,87nm,18.0s,baz=156,slow=34
comp=Z,3.7nm,1.0s
MAW Mawson 76.33 202 P **P** 12 21 45.7 +0.7
PEA0B Petropavlovsk- 76.78 351 P **P** 12 21 51.4 +3.8
PETK Petropavlovsk- 76.78 351 P **P** 12 21 47.0 -0.6
comp=Z,2.7nm,0.8s,baz=175,slow=8.5,SNR=6.5
PETK LR LR 12 48 13.9
comp=Z,90nm,21.7s,baz=155,slow=30
comp=Z,2.7nm,0.8s
PETK Petropavlovsk- 76.78 351 P **P** 12 21 47.5 -0.1
KLR Kul'dur 80.55 334 LR LR 12 52 31.1
comp=Z,37nm,21.3s,baz=142,slow=32
PMSA Palmer Station 82.36 159 P **P** 12 22 18.1 +0.1
PMSA IAmb IAmb 12 22 18.9
comp=Z,8.7nm,0.8s
CMAR Chiang Mai Arr 83.00 293 P **P** 12 22 22.8 +0.6
comp=Z,0.5nm,0.3s,baz=129,slow=4.0,SNR=1.4
CMAR LR LR 13 01 01.8
comp=Z,14nm,19.6s,baz=180,slow=37
comp=Z,0.5nm,0.3s
MA2 Magadan 84.11 349 LR LR 12 53 49.8
comp=Z,113nm,21.9s,baz=156,slow=31
PZH PanZhiHua 84.44 302 P **P** 12 22 30.5 +1.0
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,4.3s
CD2 Chengdu 85.06 306 *eP* **P** 12 22 33.0 +0.6
TROLL Troll, Antarti 85.14 183 P **P** 12 22 31.0 -1.3
SNAA Sanae 85.67 181 P **P** 12 22 33.0 -1.9
SNAA Sanae 85.67 181 LR LR 12 57 22.0
comp=Z,80nm,21.5s,baz=192,slow=33
SNAA Sanae 85.67 181 P **P** 12 22 33.4 -1.5
VNA3 Neumayer Olymp 86.13 179 P **P** 12 22 35.3 -1.8
VNA2 Neumayer--Watz 86.47 180 P **P** 12 22 37.3 -1.5
baz=173,slow=5.0
SEY Seymchan 87.02 351 P **P** 12 22 40.4 -0.9
comp=Z,3.2nm,0.8s,baz=154,slow=4.6,SNR=4.7
comp=Z,3.2nm,0.8s
CMB Columbia Colle 87.15 47 P **P** 12 22 42.2 -0.3
ISA Isabella, Lake 87.23 49 P **P** 12 22 43.7 +0.6
ISA IAmb IAmb 12 22 44.4
comp=Z,13nm,1.3s
LZH Lanzhou 87.61 311 *eP* **P** 12 22 47.8 +2.8
LZH pP pwP 12 23 00.8 +8.2
LZH pmax pmax
comp=Z,17nm,1.5s
YBH Yreka Blue Hor 87.64 43 LR LR 12 53 39.0
comp=Z,47nm,21.2s,baz=251,slow=30
PFO Pinyon Flats O 87.65 52 LR LR 12 52 59.5
comp=Z,32nm,21.0s,baz=248,slow=30
OMMB Old Mammoth Mi 87.87 48 P **P** 12 22 46.0 -0.4
OMMB IAmb IAmb 12 23 08.7
comp=Z,4.7nm,1.3s
MPK Martis Peak 88.05 46 P **P** 12 22 47.2 0.0
MPK IAmb IAmb 12 22 49.5
comp=Z,7.8nm,1.2s
PNTR Pine Nut 88.23 46 P **P** 12 22 48.7 +0.8
PNTR IAmb IAmb 12 22 50.4
comp=Z,14nm,1.6s
NVAR Mina Array Bea 88.76 47 P **P** 12 22 49.1 -1.4
comp=Z,3.3nm,1.1s,baz=225,slow=7.2,SNR=14
NVAR LR LR 12 54 54.1
comp=Z,40nm,20.3s,baz=251,slow=30
comp=Z,3.3nm,1.1s
NVAR Mina Array Bea 88.76 47 P **P** 12 22 50.9 +0.4
NV11 Mina Array Sit 88.86 47 P **P** 12 22 52.0 +1.2
NV11 IAmb IAmb 12 22 52.3
comp=Z,12nm,1.6s
W13A Hualapai Mount 90.23 52 P **P** 12 22 58.2 +0.8
BBB Bella Bella 90.73 32 LR LR 12 57 55.4
comp=Z,48nm,18.6s,baz=229,slow=32
YAK Yakutsk 91.33 341 LR LR 12 58 20.5
comp=Z,33nm,20.5s,baz=89,slow=32
H03N1 Juan Fernandez 91.73 127 T T 14 06 11.5
SNR=4.4
ELK Elko 91.96 46 LR LR 12 56 39.2
comp=Z,49nm,20.3s,baz=246,slow=30
U15A North Rim 91.99 51 P 12 23 06.1 +0.4
U15A IAmb IAmb 12 23 07.4
comp=Z,9.1nm,1.2s
GTA Gaotai 92.02 312 *eP* **P** 12 23 06.8 +1.3
GTA pmax pmax
comp=Z,1.0nm,1.2s
ILAR Eielson Array 92.73 16 P **P** 12 23 05.6 -2.4
comp=Z,1.1nm,0.8s,baz=229,slow=5.4,SNR=6.8
ILAR LR LR 12 58 04.1
comp=Z,117nm,20.6s,baz=218,slow=31
comp=Z,1.1nm,0.8s
PLCA Paso Flores 93.63 137 P **P** 12 23 13.1 0.0
comp=Z,3.5nm,0.9s,baz=214,slow=6.4,SNR=4.7
PLCA LR LR 13 00 32.2
comp=Z,76nm,18.1s,baz=191,slow=32
comp=Z,3.5nm,0.9s
DLBC Dease Lake 93.76 26 LR LR 12 57 25.7
comp=Z,69nm,21.0s,baz=234,slow=30
GOMU GeErMu 94.12 308 P **P** 12 23 16.1 +0.5
GOMU pmax pmax
comp=Z,9.0nm,0.6s
GOMU pmax pmax
comp=Z,110nm,5.0s
NEW Newport 94.44 39 LR LR 13 01 03.7
comp=Z,49nm,18.0s,baz=252,slow=32
TXAR Lajitas Array 95.60 61 P **P** 12 23 21.8 -0.4
comp=Z,0.6nm,0.9s,baz=235,slow=4.4,SNR=5.8
TXAR PKKPbc **PKKPbc** 12 40 14.1 +0.6
comp=Z,0.7nm,0.7s,baz=93,slow=3.8,SNR=11
TXAR LR LR 12 56 32.4
comp=Z,23nm,21.4s,baz=192,slow=29
comp=Z,0.6nm,0.9s
ANMO Albuquerque 95.65 55 LR LR 13 01 42.4
comp=Z,18nm,18.2s,baz=215,slow=32
PDAR Pinedale Array 96.66 46 LR LR 13 02 09.6
comp=Z,25nm,18.1s,baz=253,slow=32
INK Inuvik 98.94 18 LR LR 13 01 09.0
comp=Z,63nm,21.8s,baz=207,slow=31
TIXI Tiksi 98.98 347 LR LR 13 02 59.7
comp=Z,60nm,21.0s,baz=179,slow=32
WMQ Urumqi 102.10 312 *eP* **Pdif** 12 23 53.0 +2.0
BDFB Brasilia 124.68 130 PKP **PKPdf** 12 28 55.0 -2.1
comp=Z,2.8nm,0.6s,baz=143,slow=5.1,SNR=3.4
KMBO Kilima Mbogo 130.60 247 PKP **PKiKP** 12 29 09.3 -0.1
comp=Z,4.2nm,1.2s,baz=31,slow=5.9,SNR=4.0
CRVS Cervenica-Dubn 145.52 326 *ePKP* **PKPdf** 12 29 34.5 0.0

LANS Liptovska Anna 146.36 328 *ePKP* **PKPbc** 12 29 37.3 +0.1
MORC Moravsky Berou 146.85 330 *ePKP* **PKPbc** 12 29 38.0 -0.6
OSTC Ostas 146.87 332 *ePKP* **PKPbc** 12 29 38.2 -0.4
DPC Dobruska-Polom 146.97 332 *ePKP* **PKPbc** 12 29 38.1 -0.8
VYHS Vyhne 147.11 327 *ePKP* **PKPbc** 12 29 38.8 -0.5
JAVC Velka Javorina 147.43 329 *ePKP* **PKPbc** 12 29 40.2 -0.1
CLL Collm 147.57 336 *ePKPbc* **PKPdf** 12 29 39.0 +1.2
VRAC Vranov 147.61 330 *ePKP* **PKPbc** 12 29 40.3 -0.4
KRUC Moravsky 147.88 330 *ePKP* **PKPbc** 12 29 40.3 -1.1
CONA Conrad Observa 148.94 329 *eP* **PKPdf** 12 29 42.2 +1.9
comp=Z,3.4nm,1.0s
CKRC Cesky Krumlov 148.99 332 *ePKP* **PKPbc** 12 29 44.6 +0.3
KHC Kasperske Hory 149.06 333 *ePKP* **PKPbc** 12 29 42.7 -1.8
KHC *ex* x 12 30 08.0
GERES GERESS Array B 149.23 333 PKPbc **PKPdf** 12 29 41.6 +0.8
comp=Z,0.7nm,0.7s,baz=68,slow=2.6,SNR=6.1
SOKA Soboth 150.23 328 *eP* **PKPbc** 12 29 45.7 -1.9
comp=Z,3.6nm,1.0s
KBA Koelnbreinsper 150.73 331 *eP* **PKPbc** 12 29 46.5 -2.3
comp=Z,5.9nm,0.7s
MYKA Terra Mystica 150.93 330 *eP* **PKiKP** 12 29 49.7 -0.1
comp=Z,3.2nm,0.6s
ABTA Abfaltersbach 151.35 331 *eP* **PKPbc** 12 29 50.3 +0.2
comp=Z,4.3nm,0.9s
MOTA Moosalm 151.49 333 *eP* **PKiKP** 12 29 51.1 0.0
comp=Z,3.9nm,0.7s
SQTA Sankt Quirin 151.55 333 *eP* **PKPbc** 12 29 49.4 -1.3
comp=Z,4.7nm,0.7s
ESDC Sonseca Array 163.02 351 PKPab **PKPab** 12 30 45.5 -3.0
comp=Z,0.8nm,0.9s,baz=36,slow=2.8,SNR=4.9
TORD Torodi Ar. Bea 167.16 223 PKP **PKPdf** 12 30 02.4 -0.8
comp=Z,1.6nm,1.0s,baz=125,slow=2.4,SNR=6.3
TORD PKPab **PKPab** 12 31 05.9 -1.5
comp=Z,2.6nm,0.9s,baz=121,slow=5.0,SNR=8.2

*IDC **22** 12:21:08.4±1.2,55.˚33S×27.˚81W,h0km,mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=89.4km s-min=34.5km az=103.0*
ISC 22 12:21:12.4±1.4,**55.˚3S**±0.˚2×**27.˚9W**±0.˚5,**h26km**,**n10,**
σ0s47/7,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.81**	**161**			P	**P**	**12 25 19.4**	**+0.8**
SNAA	**Sanae**	**19.57**	**156**			P	**P**	**12 25 37.8**	**-0.2**
TROLL	**Troll, Antarti**	**21.08**	**154**			P	**P**	**12 25 53.9**	**-0.4**
VNDA	**Vanda**	**47.28**	**183**			P	**P**	**12 29 42.6**	**-0.1**
	0.6nm,0.7s,baz=153,slow=6.8,SNR=5.3								
	0.6nm,0.7s								
H10N1	**ASCENSION HYDR**	**48.54**	**18**			T	T	13 22 54.6	
	baz=190								
H10N3	**ASCENSION HYDR**	**48.55**	**18**			T	T	13 22 11.5	
	baz=190								
H10N2	**ASCENSION HYDR**	**48.56**	**18**			T	T	13 22 23.4	
	baz=190								
TORD	**Torodi Ar. Bea**	**72.63**	**30**	P		P	**P**	**12 32 37.5**	**+0.2**
	0.7nm,0.6s,baz=195,slow=6.1,SNR=8.3								
	0.7nm,0.6s								
ILAR	**Eielson Array**	**149.33**	**313**	PKPbc		**PKPbc**		**12 40 57.1**	**-0.1**
	1.3nm,0.7s,baz=103,slow=1.6,SNR=12								
SONM	**Songino Array**	**151.08**	**86**	PKPbc		**PKPbc**		**12 41 02.0**	**-0.2**
	0.5nm,0.7s,baz=257,slow=1.8,SNR=2.0								

*SKHL **22** 13:09:03.9±0.8,44.˚40N×146.˚80E,h125km±3km, mb4.5/3, msha5.5/2*
*MOS **22** 13:09:03.8±1.2,44.˚42N×146.˚64E,h132km, mb3.7/4, Error ellipse: s-maj=13.4km s-min=9.0km az=65.6*
*IDC **22** 13:09:04.1±2.6,44.˚58N×146.˚49E,h116km±24km, mb3.3/14, mbtmp3.7/19, Error ellipse: s-maj=20.6km s-min=14.0km az=146.0*
*NIED **22** 13:09:05.5,44.˚34N×146.˚74E,h117km,MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}-0.52; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$1.53; $M_{r\theta}$-1.32; $M_{\theta\phi}$-5.49; $M_{\phi r}$-3.08; Fault plane solution: $M_0$6.56000×10¹⁴ NP1: ϕ_s99.00000°, δ61.00000°, λ-171.00000°. NP2:ϕ_s5.00000°, δ83.00000°, λ-29.00000°.*
*JMA **22** 13:09:05.5±0.4,44.˚N×14.˚7E,h117km±3km, MV3.5/38, NEAR KUNASHIRI ISLAND*
ISC 22 13:09:04.3±0.7,**44.˚39N**±0.˚05×**146.˚72E**±0.˚05,**h124**km±6km,
n61,**σ1s24/67**,**mb3.6**/15,**3C-3D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.71**	**240**	*i*	P	**Pn**		**13 09 24.7**	**+0.6**
YUK					AMB	AMB		13 09 25.2	
	1μm,0.6s								
YUK				*e*	S	**Sn**		**13 09 39.7**	**+0.7**
YUK					A	A		13 09 43.4	
	2μm,0.5s								
YUK					A	A		13 09 43.4	
	3μm,0.5s								
RUSJ	**Misakicho**	**1.10**	**255**	⇑	iPN	**Pn**		**13 09 28.3**	**+0.8**
KUR	**Kuril'sk**	**1.17**	**44**	*d*	iPN	**Pn**		**13 09 29.1**	**+0.8**
KUR				*i*	S	**Sn**		**13 09 47.4**	**+0.9**
KUR					pmax	pmax			
	comp=N,38nm,0.4s								
KUR					pmax	pmax			
	comp=Z,134nm,0.4s								
KUR					pmax	pmax			
	comp=E,37nm,0.5s								
KUR					smax	smax			
	comp=N,427nm,0.6s								
KUR					smax	smax			
	comp=E,244nm,0.6s								
KUR	**Kuril'sk**	**1.17**	**44**	*i*	P	**Pn**		**13 09 29.1**	**+0.8**
KUR					AMB	AMB		13 09 29.5	
	comp=E,170nm,0.7s								
KUR				*i*	S	**Sn**		**13 09 47.4**	**+0.9**
KUR					A	A		13 09 47.9	
	comp=E,610nm,0.6s								
KUR					A	A		13 09 47.9	
	comp=E,440nm,0.6s								
JRA	**Rausu**	**1.24**	**249**		P	**Pn**		**13 09 29.8**	**+0.8**
NEM2	**Nemuro 2**	**1.25**	**215**		P	**Pn**		**13 09 29.5**	**+0.4**
NEM2					S	**Sn**		**13 09 47.1**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.25**	**215**	⇑	iPN	**Pn**		**13 09 29.4**	**+0.3**
NMR				*e*	S	**Sn**		**13 09 47.0**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.25**	**215**	*i*	P	**Pn**		**13 09 29.5**	**+0.3**
NMR				*e*	S	**Sn**		**13 09 47.0**	**-1.0**
JNSB	**Nemuroshibetsu**	**1.38**	**244**		P	**Pn**		**13 09 31.8**	**+1.2**
JNK	**Nakash**	**1.66**	**242**		P	**Pn**		**13 09 34.8**	**+1.1**
JKHN	**Kushirohamanak**	**1.73**	**221**	*e*	P	**Pn**		**13 09 35.3**	**+0.7**
JKHN				*e*	S	**Sn**		**13 09 58.0**	**+0.3**
AKK	**Akkeshi**	**1.94**	**225**	*i*	P	**Pn**		**13 09 37.7**	**+0.6**
AKK				*e*	S	**Sn**		**13 10 02.1**	**0.0**
JAK	**Akkeshi**	**2.03**	**227**		P	**Pn**		**13 09 38.9**	**+0.7**
JAK				*e*	S	**Sn**		**13 10 04.7**	**+0.6**
JTKR	**Abashiri--Toko**	**2.07**	**259**		P	**Pn**		**13 09 39.6**	**+1.0**
JTKR				*e*	S	**Sn**		**13 10 06.4**	**+1.4**
JAR	**Ashorobuto**	**2.40**	**244**	*e*	P	**Pn**		**13 09 44.8**	**+2.0**
JMP	**Maruseppu**	**2.45**	**262**		P	**Pn**		**13 09 44.5**	**+1.0**
JOB	**Onbets**	**2.57**	**236**	*e*	P	**Pn**		**13 09 46.9**	**+1.8**
JOB				*e*	S	**Sn**		**13 10 18.0**	**+1.6**
JKK2	**Kamakawa 2**	**2.91**	**261**		P	**Pn**		**13 09 51.0**	**+1.6**
JKK2				*e*	S	**Sn**		**13 10 26.1**	**+1.9**
ASAJ	**Asahikawa**	**2.98**	**266**		P	**Pn**		**13 09 52.1**	**+1.8**
JSE	**Soyaes**	**3.00**	**282**	*e*	P	**Pn**		**13 09 51.8**	**+1.1**
JCH	**Churui**	**3.02**	**235**	*e*	P	**Pn**		**13 09 52.4**	**+1.5**
JCH				*e*	S	**Sn**		**13 10 26.8**	**-0.1**
JFR	**Furan**	**3.23**	**249**	*e*	P	**Pn**		**13 09 56.0**	**+2.3**
ERM	**Erimo**	**3.53**	**229**	*d*	iPN	**Pn**		**13 09 59.7**	**+2.2**
YSS	**Yuzh-Sakhalins**	**3.78**	**314**	*e*	PN	**Pn**		**13 10 01.5**	**+0.6**
YSS				*e*	S	**Sn**		**13 10 45.8**	**+1.1**
YSS					pmax	pmax			
	comp=Z,20nm,0.7s								
YSS					smax	smax			
	comp=E,10.0nm,0.7s								
YSS	**Yuzh-Sakhalins**	**3.78**	**314**	*e*	P	**Pn**		**13 10 01.5**	**+0.6**
YSS					AMB	AMB		13 10 05.2	
	comp=E,20nm,0.7s								
YSS				*e*	S	**Sn**		**13 10 45.8**	**+1.1**
MAJO	**Matsushiro**	**10.17**	**222**	*i*	PN	**Pn**		**13 11 27.3**	**+0.4**
MJAR	**Matsushiro Arr**	**10.17**	**222**		P	**Pn**		**13 11 25.6**	**-1.3**
	comp=E,1.5nm,0.6s,baz=27,slow=14,SNR=5.4								
USRK	**Ussuriysk Ar.**	**10.57**	**274**		P	**Pn**		**13 11 30.5**	**-1.6**
	comp=E,3.6nm,0.8s,baz=87,slow=13,SNR=5.4								
PETK	**Petropavlovsk-**	**11.33**	**36**		P	**Pn**		**13 11 41.0**	**-1.3**
	comp=E,2.2nm,0.7s,baz=173,slow=9.2,SNR=12								
PETK	**Petropavlovsk-**	**11.33**	**36**		PN	**Pn**		**13 11 41.0**	**-1.3**
KLR	**Kul'dur**	**11.34**	**301**		P	**Pn**		**13 11 40.4**	**-2.0**
	comp=E,3.1nm,0.9s,baz=176,slow=10,SNR=4.2								
KLR	**Kul'dur**	**11.34**	**301**	*i*	PN	**Pn**		**13 11 42.5**	**+0.1**
KLR					pmax	pmax			
	comp=Z,2.0nm,0.8s								
KLR	**Kul'dur**	**11.34**	**301**	*e*	P	**Pn**		**13 11 42.5**	**+0.1**
KSRS	**Korea Array**	**15.79**	**250**		P	**Pn**		**13 12 38.1**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=58,slow=13,SNR=3.1								
SEY	**Seymchan**	**18.86**	**8**	*i*	P	**Pn**		**13 13 16.6**	**+0.2**
SEY					pmax	pmax			
	comp=Z,6.0nm,1.3s								
SEY	**Seymchan**	**18.86**	**8**	*e*	P	**Pn**		**13 13 16.6**	**+0.2**
YAK	**Yakutsk**	**20.29**	**337**	*i*	P	Pn		13 13 32.5	-0.5
YAK					pmax	pmax			
	comp=Z,3.0nm,0.9s								
YAK	**Yakutsk**	**20.29**	**337**	*e*	P	Pn		13 13 32.5	-0.5
SONM	**Songino Array**	**27.94**	**291**		P	**P**		**13 14 42.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=72,slow=9.3,SNR=1.9								
	comp=Z,0.3nm,0.3s								
H11N2	**WAKE ISLAND Hy**	**29.79**	**139**		T	T		13 46 01.0	
	baz=330,slow=75,SNR=80								
H11N1	**WAKE ISLAND Hy**	**29.80**	**139**		T	T		13 46 08.1	
	baz=330,slow=75,SNR=84								
H11N3	**WAKE ISLAND Hy**	**29.81**	**139**		T	T		13 46 08.5	
	baz=330,slow=75,SNR=92								
H11S1	**WAKE ISLAND Hy**	**30.76**	**141**		T	T		13 47 19.8	
	baz=330,slow=76,SNR=173								
H11S3	**WAKE ISLAND Hy**	**30.77**	**141**		T	T		13 47 16.2	
	baz=330,slow=76,SNR=156								
H11S2	**WAKE ISLAND Hy**	**30.78**	**141**		T	T		13 47 14.5	
	baz=330,slow=76,SNR=90								
ILAR	**Eielson Array**	**41.16**	**37**		P	**P**		**13 16 36.6**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=276,slow=7.2,SNR=6.9								
	comp=Z,0.9nm,0.8s								
MKAR	**Makanchi Array**	**44.02**	**297**		P	**P**		**13 16 58.2**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=76,slow=10,SNR=4.8								
	comp=Z,0.7nm,0.8s								
CMAR	**Chiang Mai Arr**	**47.41**	**253**		P	**P**		**13 17 27.9**	**+1.6**
	comp=Z,1.5nm,0.8s,baz=42,slow=6.8,SNR=6.7								
	comp=Z,1.5nm,0.8s								
CMAR	**Chiang Mai Arr**	**47.41**	**253**	*e*	P	**P**		**13 17 28.2**	**+1.9**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
KK31	**Karatay Array**	**53.14**	**297**	⇓	Pg	P		13 18 31.6	+23
	comp=Z,0.4nm,0.4s,baz=209,slow=17,SNR=4.4				⇑	Lg	Lg	13 19 28.7	
KK31									
	comp=Z,0.4nm,0.3s,baz=208,slow=30,SNR=3.7								
YKA	**Yellowknife Ar**	**55.44**	**34**		P	**P**		**13 18 26.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=297,slow=6.9,SNR=4.5								
	comp=Z,1.0nm,0.7s								
GEYT	**Alibeck**	**63.86**	**298**		P	**P**		**13 19 21.1**	**-2.5**
	comp=Z,1.7nm,0.5s,baz=49,slow=9.7,SNR=2.0								
	comp=Z,1.7nm,0.5s								
FINES	**FINESS Array B**	**64.16**	**333**		P	**P**		**13 19 23.5**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=59,slow=9.3,SNR=6.5								
	comp=Z,1.0nm,0.5s								
FINES	**FINESS Array B**	**64.16**	**333**	*e*	P	**P**		**13 19 24.1**	**-0.9**
FINES					pmax	pmax			
	comp=Z,1.0nm,0.5s								
WRA	**Warramunga Arr**	**65.02**	**193**		P	**P**		**13 19 31.9**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=8.7,slow=6.8,SNR=2.7								
	comp=Z,0.3nm,0.6s								
NVAR	**Mina Array Bea**	**67.50**	**58**		P	**P**		**13 19 48.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=276,slow=6.2,SNR=6.9								
	comp=Z,0.6nm,0.7s								
ASAR	**Alice Springs**	**68.74**	**193**		P	**P**		**13 19 56.2**	**+1.7**
	comp=Z,0.3nm,0.9s,baz=9.6,slow=6.1,SNR=2.1								
	comp=Z,0.3nm,0.9s								
NOA	**NORSAR Array B**	**68.89**	**339**		P	**P**		**13 19 53.2**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=38,slow=5.7,SNR=4.0								
	comp=Z,0.1nm,0.4s								
PDAR	**Pinedale Array**	**69.73**	**50**		P	**P**		**13 20 01.9**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=53,slow=0.7,SNR=3.5								
	comp=Z,0.3nm,0.6s								
AKASG	**Malin Array Be**	**70.88**	**323**		P	**P**		**13 20 06.3**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=39,slow=6.0,SNR=2.3								
	comp=Z,0.4nm,0.4s								
TXAR	**Lajitas Array**	**82.55**	**56**		P	**P**		**13 21 14.5**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=266,slow=6.7,SNR=3.7								
	comp=Z,0.2nm,0.6s								

*IDC **22** 13:23:22.2±0.9,55.˚29S×28.˚03W,h0km,mb3.9/4, mbtmp3.9/5,ML4.1/1,MS3.1/1, Error ellipse: s-maj=45.0km s-min=22.1km az=84.0*
ISC 22 13:23:25.9±1.0,**55.˚3S**±0.˚1×**28.˚1W**±0.˚3,**h26**km,**n13,**
σ0s33/10,**mb3.9/4**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.87**	**161**			P	**Pn**	**13 27 32.1**	**-0.2**
SNAA	**Sanae**	**19.64**	**156**			P	**P**	**13 27 51.8**	**-0.3**
SNAA	**Sanae**	**19.64**	**156**			P	**P**	**13 27 51.9**	**-0.3**
	0.5nm,0.3s,baz=291,slow=12,SNR=23								
SNAA						LR	LR	13 34 35.2	
	comp=Z,49nm,18.4s,baz=352,slow=34								
	2.0nm,0.5s								
TROLL	**Troll, Antarti**	**21.15**	**154**			P	**P**	**13 28 08.5**	**-0.2**
QSPA	**South Pole Qui**	**34.95**	**180**			P	**P**	**13 30 15.7**	**+0.3**
	1.4nm,0.6s,baz=174,slow=6.1,SNR=18								
	1.4nm,0.6s								
VNDA	**Vanda**	**47.30**	**183**			P	**P**	**13 31 56.8**	**+0.4**
	1.0nm,0.8s,baz=188,slow=7.6,SNR=7.6								
	1.0nm,0.8s								
H10N1	**ASCENSION HYDR**	**48.55**	**18**			T	T	14 24 40.8	
	baz=190								
H10N3	**ASCENSION HYDR**	**48.56**	**18**			T	T	14 24 35.9	
	baz=190								
H10N2	**ASCENSION HYDR**	**48.57**	**18**			T	T	14 24 36.8	
	baz=190								
LPAZ	**La Paz**	**49.52**	**306**			P	**P**	**13 32 14.8**	**-0.1**
	0.6nm,0.5s,baz=158,slow=5.4,SNR=2.5								
	0.6nm,0.5s								
TORD	**Torodi Ar. Bea**	**72.66**	**30**			P	**P**	**13 34 51.3**	**+0.2**
	0.7nm,0.6s,baz=200,slow=6.6,SNR=8.9								
	0.7nm,0.6s								
ILAR	**Eielson Array**	**149.23**	**313**		PKPbc		**PKiKP**	**13 43 11.2**	**-0.5**
	2.3nm,0.9s,baz=124,slow=2.1,SNR=17								
SONM	**Songino Array**	**151.19**	**86**		PKPbc		**PKPbc**	**13 43 16.0**	**+0.1**
	0.3nm,0.4s,baz=254,slow=1.0,SNR=2.9								

*ISK **22** 13:24:07.6,38.˚39N×24.˚08E,h5km,ML3.1/27*
*ATH **22** 13:24:10.5,38.˚33N×24.˚06E,h15km±1km,ML3.4/20, Error ellipse: s-maj=1.9km s-min=0.7km az=115.0*
*THE **22** 13:24:11.0,38.˚34N×24.˚01E,h10km,ML3.6/5, Error ellipse: s-maj=1.1km s-min=0.3km az=127.0*
*DDA **22** 13:24:15.5±0.0,38.˚65N×24.˚51E,h35km±4km, ML2.6*
ISC 22 13:24:09.4±1.0,**38.˚36N**±0.˚02×**24.˚08E**±0.˚02,**h11**km±9km,
n73,**σ1s01/95**,**Aegean Sea**

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

comp=N,18421µm,0.2s
VLY AML AML 13 24 32.7
comp=E,12738µm,0.3s
SKY Skiros Island 0.63 36 P **Pn** **13 24 23.8 -0.5**
SKY S **Sn** **13 24 34.6 +0.2**
comp=E,8µm,0.2s
SKY Skiros Island 0.63 P **Pn** **13 24 23.9 -0.4**
SKY S **Sb** **13 24 32.3 +1.0**
SKY AML AML 13 24 37.0
comp=E,17939µm,0.2s
SKY AML AML 13 24 38.0
comp=N,13579µm,0.2s
VILL Villia 0.63 252 P **Pb** **13 24 22.1 -0.4**
VILL S **Sg** **13 24 30.2 +0.1**
comp=N,9µm,0.3s
VIL2 Platees 0.66 257 P **Pg** **13 24 21.8 -0.2**
VIL2 AML AML 13 24 33.6
comp=N,18254µm,0.3s
VIL2 AML AML 13 24 34.6
comp=E,12765µm,0.2s
ALNA Alonissos 0.80 348 P **Pn** **13 24 26.6 0.0**
ALNA AML AML 13 24 43.5
comp=N,19985µm,0.4s
ALNA AML AML 13 24 43.5
comp=E,10661µm,0.5s
LTK Loutraki 0.94 249 P **Pb** **13 24 27.3 -0.3**
LTK S **Sb** **13 24 40.6 +0.5**
LTK AML AML 13 24 42.5
comp=E,15054µm,0.4s
LTK AML AML 13 24 43.0
comp=N,18332µm,0.3s
LOUT Loutraki 0.95 247 P **Pb** **13 24 28.0 +0.2**
EPID Epidavros 1.06 226 P **Pb** **13 24 29.8 0.0**
EPID S **Sb** **13 24 44.1 +0.4**
NEO Neokhori 1.15 325 P **Pn** **13 24 32.5 +1.0**
NEO S **Sn** **13 24 47.5 +0.2**
NEO AML AML 13 24 49.0
comp=E,4560µm,0.3s
NEO AML AML 13 24 49.5
comp=N,4664µm,0.3s
AXAR Agios Charalam 1.18 290 P **Pg** **13 24 31.4 -0.7**
AXAR AML AML 13 24 54.3
comp=N,5070µm,0.3s
AXAR AML AML 13 25 01.1
comp=E,3785µm,0.4s
TNSA Tinos 1.19 133 P **Pn** **13 24 32.5 +0.5**
TNSA AML AML 13 24 51.5
comp=N,4263µm,0.2s
TNSA AML AML 13 24 52.8
comp=E,2402µm,0.2s
XOR Xorichti 1.22 326 P **Pn** **13 24 33.3 +1.0**
XOR S **Sb** **13 24 49.0 +0.8**
XOR AML AML 13 24 55.4
comp=E,1654µm,0.5s
XOR AML AML 13 24 56.7
comp=N,1984µm,0.7s
DLFA Delphi 1.25 276 P **Pg** **13 24 32.5 -0.9**
DLFA AML AML 13 24 57.7
comp=E,1853µm,0.4s
DLFA AML AML 13 24 57.7
comp=N,1472µm,0.4s
EFSA Agios Efstrati 1.37 31 P **Pb** **13 24 35.6 +0.6**
AGG Agios Georgios 1.52 296 PN **Pn** **13 24 36.8 +0.3**
AGG Agios Georgios 1.52 296 P **Pg** **13 24 37.7 -0.8**
KLV Kalavryta, Ach 1.55 259 P **Pn** **13 24 37.6 +0.6**
KLV AML AML 13 25 01.6
comp=N,1021µm,0.6s
KLV AML AML 13 25 02.0
comp=E,920µm,0.6s
CHOS Chios island 1.55 89 PN **Pn** **13 24 37.4 +0.4**
CHOS Chios island 1.55 89 P **Pg** **13 24 38.8 -0.4**
CHOS AML AML 13 25 04.3
comp=N,995µm,0.4s
CHOS AML AML 13 25 05.0
comp=E,1208µm,0.3s
SERG Sergoula 1.59 272 P **Pn** **13 24 38.3 +0.8**
PAIG Paliouri 1.59 349 P **Pb** **13 24 38.7 -0.1**
SIGR SIGRI 1.63 58 PN **Pn** **13 24 38.3 +0.3**
MAKR Makrakomi, Fth 1.66 294 P **Pb** **13 24 39.9 0.0**
LAKA Lakka 1.66 266 P **Pb** **13 24 39.6 -0.3**
LAKA AML AML 13 25 03.5
comp=N,1789µm,0.7s
LAKA AML AML 13 25 12.9
comp=E,2103µm,0.6s
ANX Ano Chora 1.71 278 P **Pb** **13 24 40.5 -0.3**
ANX AML AML 13 25 13.4
comp=N,1834µm,0.4s
ANX AML AML 13 25 22.7
comp=E,1320µm,0.5s
EFP Efpalio 1.71 273 P **Pb** **13 24 40.3 -0.5**
EFP AML AML 13 25 09.4
comp=N,750µm,0.6s
EFP AML AML 13 25 11.2
comp=E,875µm,0.4s
APE Apeiranthos 1.73 138 PN **Pn** **13 24 40.4 +1.0**
APE SN **Sg** **13 25 04.8 -0.3**
APE Apeiranthos 1.73 138 P **Pn** **13 24 40.5 +1.0**
APE AML AML 13 25 08.7
comp=N,3916µm,0.3s
APE AML AML 13 25 10.3
comp=E,1872µm,0.3s
EVR Evrytania 1.86 288 P **Pb** **13 24 42.9 -0.5**
VLI Velíai 1.88 209 P **Pn** **13 24 41.9 +0.5**
DRO Drossia 1.91 258 P **Pn** **13 24 43.2 +1.3**
DRO AML AML 13 25 14.7
comp=E,1520µm,0.5s
DRO AML AML 13 25 15.6
comp=N,1609µm,0.4s
ZEYE Izmir, Urla-Ze 1.91 93 P **Pg** **13 24 45.6 -0.4**
ZEYE *i* AML AML 13 25 15.0
comp=N,107nm,0.3s
ZEYE *i* AML AML 13 25 25.0
comp=N,84nm,0.5s
KOCA Canakkale, Ayv 1.97 54 P **Pn** **13 24 43.2 +0.5**
KOCA S **Sn** **13 25 07.7 +0.3**
KOCA *i* AML AML 13 25 24.0
comp=N,81nm,1.1s
KOCA *i* AML AML 13 25 24.0
comp=N,80nm,0.5s
URLA Izmir 1.98 89 PN **Pn** **13 24 43.5 +0.7**
URLA Izmir 1.98 89 P **Pb** **13 24 44.5 -0.9**
URLA S **Sn** **13 25 08.0 +0.3**
URLA *i* AML AML 13 25 19.0
comp=N,77nm,0.4s
URLA *i* AML AML 13 25 27.0
comp=N,109nm,1.1s
ITM Ithomi 2.07 236 PN **Pn** **13 24 45.2 +1.1**
ITM Ithomi 2.07 236 P **Pn** **13 24 45.5 +1.4**
BOZC Bozcaada 2.13 46 PN **Pn** **13 24 45.5 +0.6**
BOZC Bozcaada 2.13 46 P **Pn** **13 24 45.1 +0.2**
BOZC S **Sn** **13 25 07.5 -3.8**
DGB zmir 2.23 97 P **Pn** **13 24 48.0 +1.7**
DGB S **Sn** **13 25 13.5 -0.3**
KTHA Kythira Island 2.25 201 PN **Pn** **13 24 47.3 +0.7**
SANT Santorini 2.27 151 PN **Pn** **13 24 48.1 +1.2**
EZN Ezine 2.28 49 PN **Pn** **13 24 47.5 +0.6**
GADA Gvkgeada 2.31 37 PN **Pn** **13 24 47.9 +0.6**
DKL Dikili 2.32 71 PN **Pn** **13 24 48.3 +0.8**
BLCB Balcova 2.33 89 PN **Pn** **13 24 48.5 +0.9**
HORT Hortiatis 2.36 342 PN **Pn** **13 24 48.6 +0.5**
BAYC CANAKKALE_Bayr 2.36 54 P **Pn** **13 24 49.2 +1.1**
BAYC S **Sn** **13 25 13.0 -4.1**
GELI Tayfur-Gelibol 2.75 42 PN **Pn** **13 24 54.2 +0.8**
ENEZ Enez 2.86 33 PN **Pn** **13 24 55.7 +0.8**
BODT Bodrum 2.87 116 PN **Pn** **13 24 56.4 +1.3**
IMMV Iera Moni Meta 2.90 182 PN **Pn** **13 24 57.1 +1.6**
KNT Kendrikon 2.94 342 PN **Pn** **13 24 56.9 +0.9**
ALN Alexandroupoli 2.95 30 PN **Pn** **13 24 57.0 +0.8**
BDRM Kayabasi 2.97 115 P **Pn** **13 24 57.8 +1.4**
RDO Rodhopi 3.00 22 PN **Pn** **13 24 57.6 +0.8**
AYDB Zeytinkoy-Aydi 3.04 97 PN **Pn** **13 24 58.7 +1.3**
IDI Anoyia 3.14 168 PN **Pn** **13 25 00.5 +1.7**
KDZ Kurdzhali 3.44 17 PN **Pn** **13 25 03.5 +0.6**
GVDS Gavdos 3.51 180 PN **Pn** **13 25 05.9 +2.0**
KULA Kula-Manisa 3.60 86 PN **Pn** **13 25 06.6 +1.4**
ZKR Zakros 3.67 151 PN **Pn** **13 25 08.1 +2.0**
TVSB Tavsanli 4.34 74 PN **Pn** **13 25 17.0 +1.7**

*IDC **22** 13:25:20.8±0.9,55˚.30S×27˚.84W,h0km,mb4.1/5,*
mbtmp4.1/6,ML4.3/1,Error ellipse: s-maj=42.3km
s-min=21.6km az=82.0
*NEIC **22** 13:25:22.8±0.9,55˚.4S±0˚.1×28˚.1W±0˚.3,h10km±2km,*
mb4.1/6,Error ellipse: s-maj=31.2km s-min=20.7km
az=61.0
ISC 22 13:25:24.5±0.9,55˚.3S±0˚.1×28˚.1W±0˚.1,h26km,n24,
σ0s68/19,mb4.1/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.96**	**279**	Pn	**Pn**	**13 26 36.5**	**-0.7**
ORCD	**Orcadas**	**10.34**	**232**	Pn	**Pn**	**13 27 50.8**	**-0.1**
ESPZ	**Base Esperanza**	**16.66**	**229**	Pn	**Pn**	**13 29 16.1**	**+0.2**
VNA3	**Neumayer Olymp**	**17.85**	**161**	P	**P**	**13 29 30.8**	**-0.4**
SNAA	**Sanae**	**19.62**	**156**	P	**P**	**13 29 50.3**	**-0.3**
SNAA	**Sanae**	**19.62**	**156**	P	**P**	**13 29 50.3**	**-0.3**
	0.8nm,0.3s,baz=298,slow=9.8,SNR=22						
	3.4nm,0.5s						
SNAA	**Sanae**	**19.62**	**156**	P	**P**	**13 29 50.4**	**-0.3**
SNAA				IAmb	IAmb	13 29 53.5	
	comp=Z,4.2nm,0.5s						
TROLL	**Troll, Antarti**	**21.13**	**154**	P	**P**	**13 30 06.7**	**-0.4**
BELA	**Belgrano 2**	**22.77**	**184**	P	**P**	**13 30 24.2**	**-0.2**
BELA				IAmb	IAmb	13 30 26.3	
	comp=Z,3.2nm,0.7s						
QSPA	**South Pole Qui**	**34.93**	**180**	P	**P**	**13 32 14.1**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=219,slow=2.8,SNR=10						
	comp=Z,1.9nm,0.7s						
QSPA	**South Pole Qui**	**34.93**	**180**	P	**P**	**13 32 14.5**	**+0.7**
QSPA				IAmb	IAmb	13 32 17.8	
	comp=Z,3.9nm,1.2s						
VNDA	**Vanda**	**47.27**	**183**	P	**P**	**13 33 55.8**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=186,slow=5.5,SNR=8.9						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**47.27**	**183**	P	**P**	**13 33 54.8**	**-0.1**
VNDA				IAmb	IAmb	13 33 56.8	
	comp=Z,2.0nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.46**	**18**	T	T	14 25 10.7	
	baz=190						
H10S3	**ASCENSION HYDR**	**47.47**	**18**	T	T	14 25 06.8	
	baz=30						
H10N1	**ASCENSION HYDR**	**48.58**	**18**	T	T	14 26 42.8	
	baz=195						
H10N3	**ASCENSION HYDR**	**48.58**	**18**	T	T	14 26 31.8	
	baz=195,slow=74						
H10N2	**ASCENSION HYDR**	**48.60**	**18**	T	T	14 26 42.1	
	baz=195,slow=74						
LPAZ	**La Paz**	**49.53**	**306**	P	**P**	**13 34 14.4**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=124,slow=7.2,SNR=5.2						
	comp=Z,2.0nm,0.8s						
LPAZ	**La Paz**	**49.53**	**306**	P	**P**	**13 34 14.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**72.68**	**30**	P	**P**	**13 36 50.2**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=198,slow=6.6,SNR=10						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**99.84**	**163**	P	**Pdif**	**13 39 05.2**	**-1.5**
	comp=Z,0.4nm,0.9s,baz=172,slow=3.9,SNR=4.6						
	comp=Z,0.4nm,0.9s						
ILAR	**Eielson Array**	**149.24**	**313**	PKPbc	**PKiKP**	**13 45 09.8**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=118,slow=1.8,SNR=21						
SONM	**Songino Array**	**151.20**	**86**	PKPbc	**PKPbc**	**13 45 13.6**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=270,slow=1.5,SNR=4.2						

*SOME **22** 13:26:19.0,39˚.27N×73˚.53E,h15km*
*KRNET **22** 13:26:23.3±0.1,39˚.36N×73˚.53E,mb2.9*
*NNC **22** 13:26:25.9±6.8,39˚.62N×73˚.63E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=49.9km s-min=20.8km az=170.0
ISC 22 13:26:25.2±1.4,39˚.52N±0˚.07×73˚.46E±0˚.04,h10km,n24,
σ1s89/42,17C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.13**	**333**	⇑*i*P	**Pn**	**13 26 47.0**	**-0.1**
	baz=34						
OHH				⇑*i*S	**Sn**	**13 27 04.9**	**+2.1**
	baz=34						
DRK	**Karamyk**	**1.28**	**269**	⇑*i*P	**Pn**	**13 26 48.2**	**-1.2**
	baz=76						
DRK				⇑*i*S	**Sg**	**13 27 06.3**	**-0.2**
	baz=76						
BTK	**Batken**	**2.10**	**286**	⇑*i*P	**Pb**	**13 27 01.7**	**-1.8**
	baz=89						
BTK				⇑*i*S	**Sb**	**13 27 29.9**	**+0.2**
	baz=89						
ARLS	**Aral**	**2.43**	**15**	⇑*i*P	**Pb**	**13 27 07.3**	**-1.8**
	baz=13						
ARLS				⇑*i*S	**Sb**	**13 27 38.6**	**-0.6**
	baz=13						
GAR	**Garm**	**2.49**	**259**	⇑*i*P	**Pn**	**13 27 06.6**	**+0.7**
	baz=63						
GAR				⇑*i*S	**Sn**	**13 27 37.7**	**+1.2**
	baz=63						
ARK	**Arkit**	**2.55**	**334**	⇓*i*P	**Pb**	**13 27 09.0**	**-2.0**
	baz=34						
ARK				⇓*i*S	**Sb**	**13 27 42.6**	**+0.2**
	baz=34						
TRKS	**Terek-Say**	**2.68**	**319**	⇑*i*P	**Pn**	**13 27 09.9**	**+1.4**
	baz=20						
TRKS				⇑*i*S	**Sb**	**13 27 44.3**	**-1.9**
	baz=20						
UCH	**Uchtor**	**2.82**	**16**	⇑*i*P	**Pn**	**13 27 12.7**	**+2.0**
	baz=14						
UCH				⇑*i*S	**Sb**	**13 27 48.3**	**-2.4**
	baz=14						
IUG	**luznay**	**3.70**	**316**	*e*P	**Pb**	**13 27 30.4**	**-0.2**
	122nm,0.2s						
IUG				*e*S	**Sg**	**13 28 21.4**	**-2.4**
	17nm,0.4s						
IUG	**luznay**	**3.70**	**316**	Pg	**Pb**	**13 27 30.4**	**-0.2**
	114nm,0.5s						
IUG				Lg	Lg	13 28 21.4	
	17nm,0.4s						
KST	**Kastek**	**4.00**	**27**	*e*P	**Pb**	**13 27 36.0**	**+0.3**
	1.7nm,0.2s						
KST				*e*S	**Sg**	**13 28 31.5**	**-2.0**
	11nm,0.2s						
KST	**Kastek**	**4.00**	**27**	Pg	**Pb**	**13 27 36.0**	**+0.3**
	1.8nm,0.4s						
KST				Lg	Lg	13 28 31.5	
	9.1nm,0.5s						
DGS	**Degeres**	**4.11**	**24**	*e*P	**Pb**	**13 27 38.4**	**+0.8**
	2.0nm,0.2s						
DGS				*e*S	**Sg**	**13 28 35.6**	**-1.4**
	9.5nm,0.5s						
DGS	**Degeres**	**4.11**	**24**	Pg	**Pb**	**13 27 38.4**	**+0.8**
	2.0nm,0.4s						
DGS				Lg	Lg	13 28 35.6	
	6.3nm,1.4s						
KK31	**Karatay Array**	**4.21**	**329**	⇑Pn	**Pn**	**13 27 31.9**	**+2.4**
	0.3nm,0.2s,baz=199,slow=17,SNR=6.5						
KK31				⇑Pg	**Pb**	**13 27 40.9**	**+1.6**
	0.9nm,0.2s,baz=143,slow=15,SNR=4.5						
KK31				Sn	**Sn**	**13 28 23.2**	**+4.5**
	1.6nm,0.3s,baz=148,slow=23,SNR=5.6						
KK31				⇑Lg	Lg	13 28 37.0	
	1.2nm,0.2s,baz=133,slow=30						
KRBS	**Karabastau**	**4.49**	**21**	*e*P	**Pb**	**13 27 45.5**	**+1.3**
	2.7nm,0.2s						
KRBS				*e*S	**Sg**	**13 28 47.8**	**-1.6**
	4.6nm,0.5s						
KRBS	**Karabastau**	**4.49**	**21**	Pg	**Pb**	**13 27 45.5**	**+1.3**
	2.7nm,0.5s						
KRBS				Lg	Lg	13 28 47.8	
	4.6nm,0.5s						
MDOK	**Medeo**	**4.53**	**35**	*e*P	**Pb**	**13 27 45.3**	**+0.4**
	1.5nm,0.2s						
MDOK				*e*S	**Sg**	**13 28 47.7**	**-3.1**
	5.7nm,0.3s						
MDOK	**Medeo**	**4.53**	**35**	Pg	**Pb**	**13 27 45.3**	**+0.4**
	1.5nm,0.4s						
MDOK				Lg	Lg	13 28 47.7	
	4.3nm,0.8s						
KTBS	**Karatobe**	**4.84**	**29**	*e*P	**Pb**	**13 27 50.7**	**+0.7**
	1.7nm,0.2s						
KTBS				*e*S	**Sg**	**13 28 56.8**	**-3.6**
	8.5nm,0.2s						
KTBS	**Karatobe**	**4.84**	**29**	Pg	**Pb**	**13 27 50.7**	**+0.7**
	1.7nm,0.6s						
KTBS				Lg	Lg	13 28 56.8	
	8.5nm,0.4s						
KUU	**Kurty**	**4.87**	**25**	*e*P	**Pb**	**13 27 52.3**	**+1.7**
	1.4nm,0.2s						
KUU				*e*S	**Sg**	**13 28 59.1**	**-2.5**
	8.2nm,0.4s						
KUU	**Kurty**	**4.87**	**25**	Pg	**Pb**	**13 27 52.3**	**+1.7**
	1.4nm,0.4s						
KUU				Lg	Lg	13 28 59.1	
	8.2nm,0.8s						
ARXS	**Arharly**	**5.71**	**33**	*e*P	**Pb**	**13 28 06.6**	**+1.6**
	1.6nm,0.4s						
ARXS				*e*S	**Sg**	**13 29 24.1**	**-4.4**
	6.5nm,0.2s						

*SIGU **22** 13:36:31.5,49˚.35N×23˚.47E,h6km*
*MCSM **22** 13:36:33.1±0.4,49˚.N±3˚×2˚.4E±˚,h4km±2km,ML2.7*
ISC 22 13:36:31.8±1.2,49˚.30N±0˚.03×23˚.58E±0˚.03,h1km±11km,
n30,σ1s00/47,1C,Ukraine-Moldova-Southwestern
Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHIU	**Shidnytsya**	**0.16**	**243**	⇑*i*Pg	**Pg**	**13 36 34.5**	**-0.4**
SHIU				Pm		13 36 34.8	
SHIU				*i* Sg	**Sg**	**13 36 37.2**	**+0.3**
SHIU				Sm		13 36 42.5	
SHIU				m		13 36 42.9	
MORS	**Morshin**	**0.26**	**128**	*e*Pg	**Pb**	**13 36 38.9**	**-0.5**
MORS				*e*Sg	**Sb**	**13 36 44.7**	**+0.3**
LVV	**L'vov**	**0.60**	**29**	*e*Pg	**Pg**	**13 36 44.1**	**+0.8**
LVV				Pm		13 36 45.7	
LVV				m		13 36 45.9	
LVV				*e*Sg	**Sg**	**13 36 51.8**	**+0.7**
LVV				Sm		13 37 06.0	
STZU	**Stuzhytsa**	**0.69**	**246**	*e*Sg	**Sg**	**13 36 53.9**	**+0.1**
MEZ	**Mezhgor'ye**	**0.79**	**183**	*e*Pg	**Pb**	**13 36 48.0**	**-0.2**
MEZ				*e*Sg	**Sn**	**13 37 00.5**	**-1.9**
MEZ				m		13 37 06.6	
STNU	**Starunia**	**0.84**	**134**	*e*Pg	**Pn**	**13 36 50.1**	**-0.8**
BRIU	**Brid**	**1.03**	**201**	*e*Pg	**Pg**	**13 36 52.0**	**+0.5**
BRIU				m		13 37 21.0	
MUKU	**Mukachevo**	**1.03**	**215**	*e*Pg	**Pb**	**13 36 52.7**	**+0.3**
MUKU				*e*Sg	**Sn**	**13 37 07.3**	**-1.1**
MUKU				m		13 37 16.7	
UZH	**Uzhgorod**	**1.08**	**232**	*e*Pg	**Pb**	**13 36 53.1**	**-0.1**
UZH				*e*Sg	**Sn**	**13 37 08.7**	**-0.9**
UZHM	**Uzhgorod**	**1.08**	**232**	Pg	**Pn**	**13 36 54.0**	**-0.1**
HOLU	**Holmets**	**1.10**	**226**	*e*Pg	**Pg**	**13 36 52.9**	**0.0**
HOLU				*e*Sg	**Sn**	**13 37 09.4**	**-0.8**
KORU	**Korolevo**	**1.18**	**195**	*e*Pg	**Pn**	**13 36 56.0**	**+0.6**
KORU				Pm		13 36 56.6	
KORU				m		13 36 58.4	
KORU				*e*Sg	**Sn**	**13 37 12.8**	**+0.7**
KORU				Sm		13 37 20.4	
BERU	**Beregovo**	**1.23**	**210**	*e*Pg	**Pn**	**13 36 56.2**	**+0.1**
BERU				*e*Sg	**Sn**	**13 37 13.9**	**+0.5**
BERU				m		13 38 09.3	
NSLU	**Nyzhne Selyshc**	**1.24**	**152**	*e*Pg	**Pg**	**13 36 54.3**	**-1.3**
TRSU	**Trosnyk**	**1.27**	**199**	*e*Pg	**Pn**	**13 36 57.1**	**+0.4**
TRSU				*e*Sg	**Sn**	**13 37 16.4**	**+2.0**
TRSU				m		13 37 39.7	
RAKU	**Rahkiv**	**1.33**	**163**	*e*Pn	**Pg**	**13 36 58.0**	**+0.7**
KSV	**Kosov**	**1.39**	**134**	*e*Pn	**Pg**	**13 36 59.3**	**+0.9**
KSV				Pm		13 36 59.5	
KSV				m		13 37 02.1	
KSV				*e*Sn	**Sn**	**13 37 18.6**	**+1.2**
KSV				Sm		13 37 22.6	
HORU	**Horodok**	**1.87**	**91**	*e*Pn	**Pb**	**13 37 06.5**	**-0.2**
HORU				Pm		13 37 06.8	
HORU				*e*Sn	**Sg**	**13 37 31.4**	**-0.3**
HORU				Sm		13 37 33.1	
KMPD	**K-Podol'skiy**	**2.04**	**110**	*e*Pn	**Pn**	**13 37 08.0**	**+0.8**
KMPD				*e*Sn	**Sb**	**13 37 35.3**	**-0.1**
KMPD	**K-Podol'skiy**	**2.04**	**110**	Pn	**Pn**	**13 37 07.3**	**+0.1**
KMPD				Sn	**Sn**	**13 37 32.8**	**-0.5**
RNPP5	**Staryi Chortor**	**2.44**	**37**	Pn	**Pn**	**13 37 13.8**	**+1.1**
RNPP1	**Kostyukhnivka**	**2.49**	**33**	Pn	**Pn**	**13 37 14.3**	**+0.9**
RNPP8	**Varash**	**2.51**	**35**	Pn	**Pn**	**13 37 15.1**	**+1.4**
NDNU	**Novodnistrovsk**	**2.59**	**104**	*e*Pn	**Pn**	**13 37 16.5**	**+1.6**
NDNU				*e*Sn	**Sb**	**13 37 51.1**	**-0.3**
LUBAR	**Lubar, Ukraine**	**2.79**	**75**	Pn	**Pn**	**13 37 18.3**	**+0.7**
MI28	**Mi28,Pidlybu**	**3.10**	**57**	Pn	**Pn**	**13 37 22.7**	**+0.9**
MI28				sP	**Pb**	**13 37 23.9**	**-3.8**
MI28				Sn	**Sn**	**13 38 00.1**	**+0.6**
AK20	**Malin Array Si**	**3.79**	**65**	Pn	**Pn**	**13 37 31.7**	**+0.4**
AK21	**Malin Array Si**	**3.82**	**65**	Pn	**Pn**	**13 37 32.1**	**+0.4**
AK23	**Malin Array Si**	**3.87**	**66**	Pn	**Pn**	**13 37 32.6**	**+0.3**
AKBB	**Malin Array Si**	**3.90**	**67**	Pn	**Pn**	**13 37 33.3**	**+0.4**

*JMA **22** 13:40:09.8±0.1,24˚.3N±0˚.5×121˚.7E±0˚.8,h49km±1km,*
MV3.2/11,TAIWAN REGION
*TAP **22** 13:40:10.9,24˚.42N×121˚.73E,h31km,ML3.8,C*
ISC 22 13:40:10.7±0.9,24˚.41N±0˚.02×121˚.74E±0˚.02,h21km±1km,
n120,σ1s10/195,6C-25D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.01**	**355**	⇑*i*P	**Pb**	**13 40 16.3**	**+2.1**
	baz=65						
ENA				S	**Sb**	**13 40 20.4**	**+3.8**
	baz=65						
EWUT	**Wuta**	**0.05**	**46**	⇑P	**Pb**	**13 40 15.3**	**+1.0**
	baz=58						
EWUT				S	**Sb**	**13 40 19.3**	**+2.5**
	baz=58						
EHP	**Heping Village**	**0.10**	**181**	P	**Pb**	**13 40 16.7**	**-0.2**
	baz=170						
EHP				S	**Sb**	**13 40 21.2**	**-0.1**
	baz=170						
TWC	**Suao**	**0.22**	**26**	⇑*i*P	**Pb**	**13 40 17.7**	**+1.2**
	baz=32						
TWC				S	**Sb**	**13 40 22.5**	**+2.0**
	baz=32						
NDS	**Dongshan**	**0.22**	**354**	⇑*i*P	**Pb**	**13 40 16.8**	**+0.2**
	baz=351						
NDS				S	**Sb**	**13 40 21.8**	**+1.2**
	baz=351						
LATG	**Datong**	**0.23**	**302**	⇓*i*P	**Pb**	**13 40 17.7**	**+1.0**
	baz=302						
LATG				*e*S	**Sb**	**13 40 22.6**	**+1.7**
	baz=302						
NACB	**Ninganchiao**	**0.27**	**210**	⇓P	**Pb**	**13 40 17.8**	**+0.8**
	baz=207						
NACB				S	**Sn**	**13 40 23.7**	**-1.3**
	baz=207						
ETL	**Fush Village**	**0.28**	**203**	P	**Pn**	**13 40 18.1**	**-1.5**
	baz=205						
ETL				*e*S	**Sn**	**13 40 23.5**	**-1.7**
	baz=205						
ENTT	**Nioudou**	**0.28**	**325**	⇓*i*P	**Pb**	**13 40 17.3**	**+0.2**
	baz=325						
ENTT				*i* S	**Sn**	**13 40 23.1**	**-2.1**
	baz=325						
NDT	**Datong Townshi**	**0.28**	**312**	⇓*i*P	**Pn**	**13 40 18.7**	**-0.9**
	baz=312						
NDT				S	**Sn**	**13 40 24.4**	**-0.9**
	baz=312						
ETLH	**Xiulin Townshi**	**0.31**	**229**	P	**Pn**	**13 40 18.7**	**-1.5**
	baz=232						
ETLH				S	**Sn**	**13 40 24.1**	**-2.1**
	baz=232						
TWE	**Neicheng**	**0.31**	**347**	⇓*i*P	**Pn**	**13 40 18.9**	**-1.2**
	baz=351						
TWE				S	**Sn**	**13 40 24.8**	**-1.3**
	baz=351						
NNSB	**Datong**	**0.33**	**273**	⇓*i*P	**Pn**	**13 40 18.9**	**-1.5**
	baz=268						
NNSB				S	**Sn**	**13 40 24.6**	**-2.0**
	baz=268						
NDNH	**Datong**	**0.33**	**273**	⇓*i*P	**Pn**	**13 40 18.9**	**-1.5**
	baz=272						
NNSH				S	**Sn**	**13 40 24.4**	**-2.2**
	baz=272						
NNS	**Nan Shan**	**0.34**	**275**	⇓*i*P	**Pb**	**13 40 18.0**	**0.0**
	baz=269						
NNS				*i* S	**Sb**	**13 40 24.0**	**+1.0**
	baz=269						
ILA	**Ilan**	**0.35**	**1**	⇓*i*P	**Pn**	**13 40 19.6**	**-0.9**
	baz=359						
ILA				*e*S	**Sn**	**13 40 25.9**	**-1.1**
	baz=359						
TWD	**Chiawan**	**0.36**	**202**	P	**Pn**	**13 40 19.0**	**-1.6**
	baz=206						
TWD				S	**Sn**	**13 40 25.4**	**-1.6**
	baz=206						
FUSB	**Fushanzhiwuyua**	**0.37**	**338**	⇓*i*P	**Pn**	**13 40 19.6**	**-1.4**
	baz=337						
FUSB				S	**Sn**	**13 40 26.1**	**-1.5**
	baz=337						
YHNB	**Yeheng**	**0.42**	**307**	⇓*i*P	**Pn**	**13 40 20.3**	**-1.3**
	baz=301						
YHNB				S	**Sn**	**13 40 26.4**	**-2.4**
	baz=301						
NSK	**Sanguang**	**0.44**	**307**	⇓*i*P	**Pb**	**13 40 19.4**	**-0.2**

	baz=300							
NSK				S		Sb	13 40 25.8	0.0
	baz=300							
NTC	**Toucheng**	**0.45**	**10**	*e*P		Pn	13 40 21.1	-0.7
	baz=11							
NTC				S		Sn	13 40 28.2	-1.1
	baz=11							
HWA	**Hwalien**	**0.45**	**196**	*e*P		Pn	13 40 20.7	-1.2
	baz=202							
HWA				*e*S		Sn	13 40 28.5	-0.9
	baz=202							
EGS		**0.46**	**22**	⇑*i*P		Pn	13 40 21.2	-0.9
	baz=30							
EGS				S		Sn	13 40 28.8	-1.0
	baz=30							
FUSS	**Fushou**	**0.48**	**250**	⇓P		Pn	13 40 21.3	-1.4
	baz=251							
FUSS				*e*S		Sn	13 40 28.5	-2.1
	baz=251							
ETM	**Tongmen**	**0.50**	**207**	*i* P		Pb	13 40 20.8	+0.1
	baz=207							
TWT	**Tachien**	**0.54**	**253**	⇓P		Pn	13 40 22.4	-1.0
	baz=247							
TWT				S		Sn	13 40 30.4	-1.6
	baz=247							
TDCB	**Techi**	**0.56**	**253**	⇓*i*P		Pn	13 40 22.4	-1.1
	baz=248							
TDCB				S		Sn	13 40 30.2	-2.0
	baz=248							
TEYL	**Yanliau Villag**	**0.56**	**194**	P		Pb	13 40 22.2	+0.4
	baz=201							
TEYL				*e*S		Sn	13 40 32.1	+0.1
	baz=201							
TIPB	**Shuangxi**	**0.56**	**8**	⇓*i*P		Pn	13 40 22.8	-0.8
	baz=1.0							
TIPB				S		Sn	13 40 31.1	-1.1
	baz=1.0							
NHDH	**Xindian Distri**	**0.58**	**340**	*e*P		Pn	13 40 23.0	-0.7
	baz=329							
NHDH				*e*S		Sn	13 40 31.8	-0.9
	baz=329							
TWA	**Mucha**	**0.58**	**346**	*e*P		Pn	13 40 23.2	-0.6
	baz=343							
TWA				*e*S		Sn	13 40 32.1	-0.6
	baz=343							
TATO	**Taipei**	**0.61**	**338**	P		Pn	13 40 23.3	-0.8
	baz=338							
TATO				S		Sn	13 40 32.0	-1.2
	baz=338							
NFF	**Wufeng Townshi**	**0.61**	**291**	P		Pb	13 40 22.3	-0.5
	baz=288							
NFF				*e*S		Sn	13 40 31.9	-1.5
	baz=288							
CHGB	**Renai**	**0.63**	**236**	⇓P		Pn	13 40 23.4	-1.2
	baz=236							
CHGB				S		Sn	13 40 32.1	-2.0
	baz=236							
TWB1	**Santiao Chiao**	**0.63**	**21**	⇑*i*P		Pn	13 40 23.8	-0.7
	baz=25							
TWB1				S		Sn	13 40 33.0	-0.9
	baz=25							
NWF	**Wu-fen Shan**	**0.66**	**3**	⇓*i*P		Pn	13 40 24.5	-0.4
	baz=351							
NWF				S		Sn	13 40 34.4	-0.2
	baz=351							
WFSB	**Wu-fen Shan**	**0.66**	**3**	⇓*i*P		Pn	13 40 24.5	-0.3
	baz=351							
WFSB				S		Sn	13 40 34.1	-0.4
	baz=351							
TAP	**Taipei**	**0.66**	**341**	*e*P		Pn	13 40 23.9	-0.9
	baz=331							
TAP				*e*S		Sn	13 40 34.1	-0.5
	baz=331							
ESL	**Shilin**	**0.66**	**205**	P		Pb	13 40 22.6	-1.0
	baz=204							
SXI1	**Grass Mountain**	**0.69**	**10**	⇓P		Pn	13 40 24.9	-0.4
	baz=357							
SXI1				*e*S		Sn	13 40 34.9	-0.6
	baz=357							
OWD	**Renai**	**0.69**	**229**	P		Pn	13 40 24.5	-0.9
	baz=229							
OWD				S		Sb	13 40 33.5	+0.3
	baz=229							
LIOB	**Emei**	**0.70**	**289**	⇓*i*P		Pn	13 40 25.2	-0.2
	baz=289							
LIOB				S		Sn	13 40 35.0	-0.7
	baz=289							
WUSB	**Renai**	**0.71**	**234**	⇓*i*P		Pn	13 40 24.7	-0.9
	baz=234							
WUSB				S		Sn	13 40 34.3	-1.7
	baz=234							
NSTT	**Nanjuang**	**0.71**	**288**	⇓*i*P		Pn	13 40 25.2	-0.3
	baz=288							
NSTT				*i* S		Sn	13 40 34.8	-1.0
	baz=288							
TEGC	**Jichi Village**	**0.72**	**195**	P		Pn	13 40 25.8	+0.1
	baz=207							
TNOU	**National Taiwa**	**0.73**	**2**	P		Pn	13 40 25.3	-0.6
	baz=351							
TNOU				S		Sn	13 40 35.7	-0.7
	baz=351							
WHP	**Taichung City**	**0.74**	**260**	⇓P		Pn	13 40 25.8	-0.2
	baz=260							
WHP				*e*S		Sn	13 40 35.6	-1.1
	baz=260							
TWS1	**Kuangyinshan**	**0.75**	**337**	*e*P		Pn	13 40 25.4	-0.6
	baz=336							
TWS1				*e*S		Sn	13 40 36.8	+0.1
	baz=336							
YM01	**YM01**	**0.75**	**348**	*e*P		Pb	13 40 25.0	0.0
	baz=337							
NCU	**National Centr**	**0.75**	**318**	P		Pn	13 40 25.7	-0.4
	baz=317							
NCU				S		Sn	13 40 37.3	+0.5
	baz=317							
NCUH	**Zhongli**	**0.75**	**318**	*e*P		Pn	13 40 25.6	-0.5
	baz=317							
NCUH				*e*S		Sn	13 40 37.0	+0.1
	baz=317							
HSN1	**Hsinchu**	**0.75**	**299**	*e*P		Pn	13 40 26.9	+0.8
	baz=293							
HSN1				*e*S		Sn	13 40 38.3	+1.4
	baz=293							
YM08	**YM08**	**0.78**	**350**	*e*P		Pb	13 40 25.4	-0.2
	baz=338							
SBCB	**Hsinchu**	**0.79**	**299**	*e*P		Pn	13 40 26.4	-0.2
	baz=298							
SBCB				*e*S		Sn	13 40 38.5	+0.8
	baz=298							
NTST	**Danshui**	**0.79**	**340**	*e*P		Pn	13 40 26.1	-0.6
	baz=348							
NTST				*e*S		Sn	13 40 38.0	+0.1
	baz=348							
EGFH	**Guangfu**	**0.80**	**201**	P		Pn	13 40 26.2	-0.4
	baz=201							
EGFH				*e*S		Sn	13 40 37.0	-0.9
	baz=201							
ANP	**Anpu**	**0.80**	**345**	*e*P		Pb	13 40 25.3	-0.5
	baz=346							
HSN	**Hsinchu**	**0.80**	**299**	*e*P		Pb	13 40 25.4	-0.5
	baz=301							
HSN				*e*S		Sn	13 40 38.5	+0.4
	baz=301							
WPL	**Puli Township**	**0.82**	**241**	*i* P		Pn	13 40 26.9	-0.2
	baz=240							
DPDB	**Guoxing**	**0.83**	**243**	P		Pn	13 40 27.3	0.0
	baz=242							
WCS	**Beigang Elemen**	**0.84**	**245**	*e*P		Pb	13 40 26.0	-0.5
	baz=244							
VWDT	**VWDT**	**0.86**	**220**	*e*P		Pn	13 40 27.2	-0.3
	baz=207							
VWDT				*e*S		Sn	13 40 39.3	-0.1
	baz=207							
NHW	**Xinwu Township**	**0.86**	**313**	*i* P		Pn	13 40 27.5	-0.2
	baz=312							
NHW				*i* S		Sn	13 40 40.2	+0.6
	baz=312							
TWY	**Chenhua**	**0.87**	**351**	*e*P		Pn	13 40 27.2	-0.5
	baz=340							
NMLH	**Miaoli**	**0.88**	**278**	*e*P		Pn	13 40 28.4	+0.6
	baz=278							
NMLH				*e*S		Sn	13 40 41.0	+1.1
	baz=278							
TWQ1	**Liyutan**	**0.89**	**266**	⇓P		Pn	13 40 28.7	+0.7
	baz=266							
TWQ1				*e*S		Sn	13 40 40.7	+0.5
	baz=266							
NSY	**Sanyi**	**0.90**	**270**	*e*P		Pn	13 40 29.1	+1.0
	baz=265							
NSY				*e*S		Sn	13 40 42.0	+1.6
	baz=265							
SMLT	**Sun Moon Lake**	**0.93**	**236**	*e*P		Pn	13 40 28.6	-0.1
	baz=228							
SSLB	**Suanglung**	**0.95**	**229**	*e*P		Pn	13 40 28.4	-0.5
	baz=229							
HGSD	**Ruisui**	**0.96**	**198**	*e*P		Pn	13 40 28.9	-0.1
	baz=209							
HGSD				*e*S		Sn	13 40 44.6	+2.5
	baz=209							
EHY	**Hungye**	**0.98**	**203**	*e*P		Pb	13 40 26.8	-2.2
	baz=203							
WDJ	**Dajia District**	**1.01**	**267**	*e*P		Pn	13 40 31.4	+1.8
	baz=273							
WDJ				*e*S		Sn	13 40 44.5	+1.4
	baz=273							
TCU	**Taichung**	**1.01**	**255**	*e*P		Pn	13 40 30.6	+1.0
	baz=268							
TCU				*e*S		Sn	13 40 45.3	+2.1
	baz=268							
WHYT	**Xinyi Township**	**1.08**	**229**	*e*P		Pb	13 40 31.0	+0.3
	baz=232							
WHYT				*e*S		Sn	13 40 46.4	+1.3
	baz=232							
YULB	**Yu-li**	**1.09**	**202**	*e*P		Pn	13 40 29.2	-1.7
	baz=202							
JYNG	**Yonaguni jima**	**1.10**	**88**	*i* P		Pn	13 40 30.4	-0.4
JYNG				S		Sn	13 40 45.8	+0.4
WNT	**Mingjian**	**1.10**	**241**	*e*P		Pb	13 40 31.9	+0.9
	baz=243							
WNT				*e*S		Sn	13 40 48.0	+2.4
	baz=243							
EYUL	**Yuli**	**1.13**	**200**	*e*P		Pb	13 40 31.6	+0.1
	baz=201							
WCHH	**Zhanghua**	**1.13**	**253**	*e*P		Pb	13 40 32.4	+0.9
	baz=252							
TWF1	**Yuli**	**1.13**	**201**	*e*P		Pn	13 40 30.8	-0.5
	baz=202							
YOJ	**Yonaguni jima**	**1.16**	**87**	*e*P		Pn	13 40 31.1	-0.6
	baz=74							
YOJ				*e*S		Sb	13 40 47.0	+0.4
	baz=74							
YOJ	**Yonaguni jima**	**1.16**	**87**	P		Pn	13 40 31.2	-0.4
YOJ				*e*S		Sb	13 40 46.8	+0.2
YUS	**Yu-Shan**	**1.17**	**218**	*e*P		Pb	13 40 31.9	-0.6
	baz=208							
ALS	**Alisham**	**1.24**	**224**	*e*P		Pb	13 40 33.3	-0.3
	baz=213							
ALS				*e*S		Sn	13 40 50.9	+1.5
	baz=213							
PCYT	**Pengchaiyu**	**1.25**	**14**	*e*P		Pn	13 40 32.7	-0.2
	baz=13							
CHN5	**Tsauling**	**1.27**	**230**	*e*P		Pb	13 40 33.3	-0.6
	baz=230							
FULB	**Fuli**	**1.28**	**199**	*e*P		Pb	13 40 33.3	-0.7
	baz=208							
WDLH	**Douliu**	**1.32**	**237**	*e*P		Pb	13 40 35.2	+0.5
	baz=236							
WRL	**Guolierlin Hig**	**1.35**	**248**	*e*P		Pn	13 40 33.7	-0.5
	baz=247							
ELDTW	**Lidau**	**1.39**	**209**	*e*P		Pn	13 40 34.0	-1.0
	baz=199							
WTK	**Tuku**	**1.43**	**240**	*e*P		Pb	13 40 36.3	-0.3
	baz=239							
EDH	**Donghe**	**1.49**	**196**	*e*P		Pn	13 40 34.8	-1.4
	baz=207							
TPUB	**Ta-pu**	**1.50**	**223**	*e*P		Pb	13 40 37.5	-0.4
	baz=214							
TPUB				*e*S		Sb	13 40 57.9	+1.3
	baz=214							
CHY	**Chiayi**	**1.51**	**233**	*e*P		Pb	13 40 37.7	-0.3
	baz=235							
CHY				*e*S		Sb	13 40 58.2	+1.5
	baz=235							
STYH	**Taoyuan**	**1.52**	**216**	*e*P		Pn	13 40 36.2	-0.4
	baz=207							
WTP	**Ta-pu**	**1.56**	**222**	P		Pb	13 40 38.0	-0.7
	baz=209							
WTP				*e*S		Sb	13 40 59.2	+1.2
	baz=209							
LONT	**Longtian**	**1.60**	**201**	*e*P		Pn	13 40 37.8	0.0
	baz=190							
TWK	**Hsinying**	**1.62**	**225**	*e*P		Pb	13 40 39.1	-0.7
	baz=212							
TWK				*e*S		Sb	13 41 00.2	+0.3
	baz=212							
WSL	**Shuilin Townsh**	**1.65**	**238**	*e*P		Pb	13 40 39.6	-0.6
	baz=251							
CHN1	**Nanshi**	**1.65**	**223**	*e*P		Pb	13 40 39.4	-1.0
	baz=212							
CHN1				*e*S		Sb	13 41 01.8	+1.0
	baz=212							
SGST	**Jiashian**	**1.70**	**219**	*e*P		Pn	13 40 39.2	+0.1
	baz=208							
SGST				*e*S		Sb	13 41 02.4	+0.3
	baz=208							
ICHU	**Yijhu**	**1.70**	**232**	*e*P		Pb	13 40 40.4	-0.8
	baz=232							
TWGBT	**Beinan**	**1.70**	**201**	*e*P		Pn	13 40 38.0	-1.2
	baz=190							
IRIF	**Iriomote-Funau**	**1.81**	**92**	P		Pn	13 40 39.8	-0.9
IRIF				*e*S		Sn	13 41 01.9	-1.1
HATJ	**Hateruma jima**	**1.92**	**100**	P		Pn	13 40 42.2	+0.1
ECL	**Taimali**	**1.95**	**202**	*e*P		Pn	13 40 42.0	-0.5
	baz=194							
SSD	**Sandimen**	**1.95**	**212**	*e*P		Pn	13 40 43.0	+0.4
	baz=212							
MASBT	**Mashibuluo**	**2.06**	**210**	*e*P		Pn	13 40 44.9	+0.8
	baz=211							
JKRS	**Kuro-shima**	**2.08**	**94**	P		Pn	13 40 44.1	-0.2
JKRS				S		Sn	13 41 09.6	+0.1
VWUC	**VWUC**	**2.16**	**286**	*e*P		Pn	13 40 44.3	-1.2
	baz=285							
EAST	**Anshuo**	**2.18**	**202**	*e*P		Pb	13 40 47.4	-2.1
	baz=196							
JIJ	**Ishigaki jima**	**2.19**	**91**	P		Pn	13 40 45.0	-0.9
JIJ				*e*S		Sn	13 41 10.5	-1.9
SSPT	**Xinbi**	**2.20**	**210**	*e*P		Pn	13 40 46.4	+0.3
	baz=211							
WDGT	**Dungji**	**2.23**	**239**	P		Pn	13 40 46.6	+0.2
	baz=239							
SCZT	**Fangliau**	**2.28**	**207**	*e*P		Pb	13 40 49.6	-1.4
	baz=196							
JISG	**Ishigakijimahi**	**2.35**	**85**	P		Pn	13 40 47.2	-0.8
SLIU	**Shizi**	**2.35**	**202**	*e*P		Pn	13 40 48.8	+0.7
	baz=193							
LAY	**Lan-yu**	**2.37**	**184**	*e*P		Pn	13 40 46.4	-2.0
	baz=187							
JTJ	**Tarama**	**2.71**	**85**	*e*S		Sn	13 41 26.0	+0.9
XPSS	**Dashiqiu**	**2.87**	**331**	*e*P		Pn	13 40 53.9	-1.4
	baz=329							

*IDC **22** 13:44:03.7±2.3,55.34S×31.00W,h0km,mb4.0/2, mbtmp4.0/2,Error ellipse: s-maj=91.9km s-min=47.9km az=9.0*

ISC 22 13:44:06.6±1.1,55.0S±0.2×31.0W±0.3,h10km,n12, σ1§17/7,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**18.78**	**159**	P		**P**		**13 48 26.6**	**+1.0**
SNAA	**Sanae**	**20.64**	**155**	P		**P**		**13 48 45.1**	**-0.8**
TROLL	**Troll, Antarti**	**22.20**	**153**	P		**P**		**13 49 03.4**	**+0.7**
H10S2	**ASCENSION HYDR**	**47.70**	**22**	T		T		14 44 51.7	
	baz=195								
H10S3	**ASCENSION HYDR**	**47.71**	**22**	T		T		14 44 21.2	
	baz=25								
LPAZ	**La Paz**	**47.97**	**309**	P		**P**		**13 52 46.5**	**+0.4**
	3.2nm,0.6s,baz=151,slow=5.4,SNR=4.9								
	3.2nm,0.6s								
H10N1	**ASCENSION HYDR**	**48.82**	**22**	T		T		14 45 50.0	
	baz=192								
H10N3	**ASCENSION HYDR**	**48.82**	**22**	T		T		14 45 48.4	
	baz=192,slow=74								
H10N2	**ASCENSION HYDR**	**48.84**	**22**	T		T		14 45 47.6	
	baz=192,slow=74								
TORD	**Torodi Ar. Bea**	**73.27**	**33**	P		**P**		**13 55 38.5**	**+0.6**
	0.7nm,0.9s,baz=202,slow=7.0,SNR=4.6								
	0.7nm,0.9s								
ILAR	**Eielson Array**	**147.77**	**314**	PKPbc		**PKPbc**		**14 03 49.2**	**-0.8**
	1.2nm,0.7s,baz=131,slow=2.0,SNR=10								
SONM	**Songino Array**	**152.86**	**87**	PKPbc		**PKPbc**		**14 04 01.6**	**-1.4**
	0.3nm,0.4s,baz=219,slow=2.4,SNR=1.6								

*IDC **22** 13:44:56.0±1.6,1.31N×126.19E,h0km,mb3.7/3, mbtmp3.6/4,ML3.7/1,MS2.6/1,Error ellipse: s-maj=116.4km s-min=23.6km az=68.0*

*DJA **22** 13:45:00.0±0.7,1°N±2°×12°6E±°,h13km±6km,M3.7/11, MLv3.7/11*

ISC 22 13:45:02.5±0.9,1.35N±0.05×126.44E±0.05,h47km,n13, σ1§02/18,mb3.7/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.09**	**121**	P		**P**	**Pn**	**13 45 20.9**	**-0.5**
TNTI				S			**Sn**	**13 45 35.9**	**+0.5**
LBMI	**Labuha**	**2.24**	**152**	P		**P**	**Pn**	**13 45 37.9**	**+0.8**
LBMI				S			**Sn**	**13 46 04.2**	**+0.6**
SGSI	**Sangihe**	**2.50**	**339**	P		**P**	**Pn**	**13 45 40.9**	**+0.2**
SGSI				S			**Sn**	**13 46 11.2**	**+1.3**
KMSI	**Cibinong**	**2.57**	**253**	P		**P**	**Pn**	**13 45 40.9**	**-0.8**
KMSI				S			**Sn**	**13 46 12.0**	**+0.2**
SANI	**Sanana**	**3.40**	**188**	P		**P**	**Pn**	**13 45 53.2**	**+0.1**
GTOI	**Gorontalo**	**3.50**	**258**	P		**P**	**Pn**	**13 45 55.2**	**+0.8**
LUWI	**Luwuk**	**4.36**	**237**	P		**P**	**Pn**	**13 46 05.7**	**-0.6**
LUWI				S			**Sn**	**13 46 58.5**	**+2.6**
MRSI	**Marisa**	**4.58**	**259**	P		**P**	**Pn**	**13 46 07.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**19.34**	**182**	P		**P**	**P**	**13 49 23.6**	**-0.4**
	0.2nm,0.3s,baz=348,slow=9.3,SNR=1.6								
	0.5nm,0.3s								
WRA	**Warramunga Arr**	**22.53**	**160**	P			**P**	**13 49 57.9**	**-0.7**
	1.5nm,0.5s,baz=337,slow=11,SNR=41								
	1.5nm,0.5s								
ASAR	**Alice Springs**	**25.90**	**164**	P			**P**	**13 50 29.9**	**-0.4**
	0.5nm,0.5s,baz=344,slow=11,SNR=33								
ASAR				PcP			**PcP**	**13 53 59.4**	**+0.9**
	0.2nm,0.6s,baz=354,slow=2.8,SNR=1.5								
	0.5nm,0.5s								
MJAR	**Matsushiro Arr**	**36.68**	**16**	LR			LR	14 08 45.4	
	comp=Z,9.6nm,19.5s,baz=198,slow=39								
MKAR	**Makanchi Array**	**59.35**	**326**	P			**P**	**13 54 59.2**	**-0.7**
	0.4nm,0.4s,baz=113,slow=7.1,SNR=6.9								
	0.4nm,0.4s								

TAP 22 13:45:28.3,24.55N×121.62E,h23km±1km,ML0.9,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LATG	**Datong**	**0.09**	**263**	*e*P			Pb	13 45 33.2	+0.4
	baz=262								
ENTT	**Nioudou**	**0.10**	**333**	P			Pb	13 45 33.0	+0.2
	baz=335								
NDT	**Datong Townshi**	**0.11**	**300**	*e*P			Pn	13 45 33.8	-0.9
	baz=300								
ENA	**Nanau**	**0.16**	**137**	*e*P			Pb	13 45 33.7	+0.4
	baz=135								
ENA				*e*S			Sb	13 45 37.7	+1.0
	baz=135								
EWUT	**Wuta**	**0.18**	**125**	*e*P			Pb	13 45 33.9	+0.5
	baz=124								
FUSB	**Fushanzhiwuyua**	**0.21**	**352**	*e*P			Pb	13 45 34.2	+0.2
	baz=352								
NNSB	**Datong**	**0.24**	**242**	*e*P			Pb	13 45 34.5	0.0
	baz=241								
NNSB				*e*S			Sb	13 45 39.5	+0.8
	baz=241								
YHNB	**Yeheng**	**0.25**	**299**	*e*P			Pb	13 45 35.4	+0.9
	baz=299								

TAP 22 13:45:29.6,24.42N×121.70E,h29km,ML1.2,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.04**	**77**	*e*P			Pb	13 45 34.9	+0.3
	baz=81								
ENA				*e*S			Sb	13 45 38.7	+0.8
	baz=81								
EWUT	**Wuta**	**0.07**	**70**	*e*P			Pb	13 45 34.9	+0.2
	baz=69								
EWUT				*e*S			Sb	13 45 38.2	+0.1
	baz=69								
EWUT	**Wuta**	**0.07**	**70**	*e*S			Sb	13 45 38.0	-0.1
	baz=124								
LATG	**Datong**	**0.20**	**305**	*e*P			Pb	13 45 36.0	+0.1
	baz=305								
LATG				*e*S			Sb	13 45 40.9	+0.8
	baz=305								
NDS	**Dongshan**	**0.21**	**3**	*e*P			Pb	13 45 36.3	+0.4
	baz=3.0								
NDS				*e*S			Sb	13 45 40.9	+0.8
	baz=3.0								
TWC	**Suao**	**0.23**	**35**	*e*P			Pb	13 45 36.4	+0.3
	baz=36								
TWC				*e*S			Sb	13 45 41.5	+1.1
	baz=36								
NDT	**Datong Townshi**	**0.25**	**316**	*e*P			Pn	13 45 37.1	-0.4
	baz=316								
NDT				*e*S			Sn	13 45 42.1	-0.4
	baz=316								
ENTT	**Nioudou**	**0.25**	**330**	*e*P			Pb	13 45 36.4	0.0
	baz=331								
ENTT				*e*S			Sn	13 45 42.0	-0.5
	baz=331								
NACB	**Ninganchiao**	**0.27**	**202**	*e*P			Pb	13 45 37.0	+0.4
	baz=183								
NACB				*e*S			Sn	13 45 42.5	-0.2
	baz=183								
NACB	**Ninganchiao**	**0.27**	**202**	*e*P			Pb	13 45 37.0	+0.5
	baz=202								
NACB				S			Sn	13 45 42.4	-0.3
	baz=202								
NNSB	**Datong**	**0.29**	**272**	P			Pb	13 45 37.5	+0.5
	baz=271								
NNSB				S			Sn	13 45 43.0	-0.6
	baz=271								
ETLH	**Xiulin Townshi**	**0.29**	**224**	*e*P			Pb	13 45 37.2	+0.2
	baz=200								
ETLH				*e*S			Sb	13 45 42.6	+0.6
	baz=200								
ETLH	**Xiulin Townshi**	**0.29**	**224**	*e*P			Pn	13 45 37.5	-0.5
	baz=223								
ETLH				*e*S			Sn	13 45 42.9	-0.6
	baz=223								
NNS	**Nan Shan**	**0.30**	**274**	*e*P			Pb	13 45 37.3	+0.1
	baz=273								
NNS				*e*S			Sb	13 45 42.7	+0.4
	baz=273								
TWE	**Neicheng**	**0.30**	**354**	*e*P			Pb	13 45 37.5	+0.4
	baz=356								
TWE				*e*S			Sn	13 45 43.5	-0.2
	baz=356								
ILA	**Ilan**	**0.35**	**7**	*e*P			Pb	13 45 38.0	+0.4
	baz=7.0								
ILA				*e*S			Sn	13 45 44.1	-0.6
	baz=7.0								
FUSB	**Fushanzhiwuyua**	**0.35**	**343**	*e*P			Pb	13 45 38.0	+0.1
	baz=342								
FUSB				*e*S			Sn	13 45 44.5	-0.6
	baz=342								
YHNB	**Yeheng**	**0.39**	**310**	*e*P			Pn	13 45 39.1	-0.3
	baz=309								
YHNB				*e*S			Sn	13 45 45.4	-0.5
	baz=309								
FUSS	**Fushou**	**0.45**	**248**	*e*S			Sn	13 45 47.2	-0.5
	baz=247								
WHF	**Hehuan Shan**	**0.48**	**236**	*e*P			Pb	13 45 40.1	0.0
	baz=235								
WHF				*e*S			Sn	13 45 48.2	-0.5
	baz=235								
TWT	**Tachien**	**0.51**	**251**	*e*S			Sn	13 45 48.9	-0.1
	baz=251								
TIPB	**Shuangxi**	**0.56**	**11**	*e*S			Sn	13 45 50.0	-0.1
	baz=11								
OWD	**Renai**	**0.67**	**226**	*e*P			Pb	13 45 43.0	0.0
	baz=226								
OWD				*e*S			Sn	13 45 52.6	-0.3
	baz=226								
WUSB	**Renai**	**0.68**	**232**	*e*P			Pb	13 45 43.3	+0.1
	baz=231								
WUSB				*e*S	

VAO ***22*** *13:47:15.5±0.4,21.42S×68.75W,h114km,mb4.4*
GUC ***22*** *13:47:15.6±0.7,21.41S×68.65W,h108km±4km,ML4.3*
ISC 22 13:47:15.3±0.6,**21°36S**±0.03×**68°61W**±0.05,**h106**km±5km,
n106,σ1°**46**/120,**mb4.2**/12,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.73**	**234**		**Pn**	**13 47 33.7**	**0.0**
PB09	**IPOC Station P**	**0.73**	**234**	*e*P	**Pn**	**13 47 34.0**	**+0.2**
PB09				*i* S	**Sn**	**13 47 47.7**	**+0.1**
PB01	**IPOC Station P**	**0.88**	**291**		**Pn**	**13 47 34.4**	**-0.7**
PB01	**IPOC Station P**	**0.88**	**291**	*e*P	**Pn**	**13 47 34.8**	**-0.2**
PB01				*i* S	**Sn**	**13 47 49.5**	**-0.4**
PB01				IAML		13 47 50.7	
	comp=E,8μm,0.2s						
PB02	**IPOC Station P**	**1.20**	**272**		**Pn**	**13 47 37.7**	**-0.8**
PB02	**IPOC Station P**	**1.20**	**272**	*e*P	**Pn**	**13 47 38.0**	**-0.5**
PB02				*i* S	**Sn**	**13 47 54.9**	**-1.1**
PB02				IAML		13 47 56.0	
	comp=N,9μm,0.2s						
PB07	**IPOC Station P**	**1.24**	**253**		**Pn**	**13 47 38.0**	**-1.0**
PB07	**IPOC Station P**	**1.24**	**253**	*e*P	**Pn**	**13 47 38.4**	**-0.6**
PB07				*i* S	**Sn**	**13 47 55.6**	**-1.4**
PB07				IAML		13 47 56.1	
	comp=N,9μm,0.2s						
LVC	**Limon Verde**	**1.27**	**193**	P	**Pn**	**13 47 39.4**	**-0.2**
	comp=N,465nm,0.4s,baz=8.8,slow=8.1,SNR=759						
LVC				S	**Sn**	**13 47 57.8**	**-0.1**
	comp=N,445nm,0.3s,baz=325,slow=16,SNR=19						
LVC	**Limon Verde**	**1.27**	**193**		**Pn**	**13 47 39.8**	**+0.2**
LVC	**Limon Verde**	**1.27**	**193**	*e*P	**Pn**	**13 47 39.1**	**-0.5**
LVC				*i* S	**Sn**	**13 47 58.1**	**+0.2**
LVC	**Limon Verde**	**1.27**	**193**	*e*P	**Pn**	**13 47 39.2**	**-0.4**
PB06	**IPOC Station P**	**1.61**	**214**	Pn	**Pn**	**13 47 42.8**	**-0.6**
PB06	**IPOC Station P**	**1.61**	**214**	*e*P	**Pn**	**13 47 43.0**	**-0.4**
PB06				*i* S	**Sn**	**13 48 03.9**	**-0.8**
PB06				IAML		13 48 04.9	
	comp=N,3μm,0.3s						
AF01	**San Pedro de A**	**1.63**	**166**		**Pn**	**13 47 45.2**	**+1.4**
TA01	**Diego Aracena**	**1.67**	**298**		**Pn**	**13 47 43.4**	**-0.5**
TA01	**Diego Aracena**	**1.67**	**298**	*e*P	**Pn**	**13 47 43.4**	**-0.5**
TA01				*i* S	**Sn**	**13 48 05.0**	**-0.7**
TA01				IAML		13 48 10.0	
	comp=E,4μm,0.3s						
PB04	**IPOC Station P**	**1.73**	**236**		**Pn**	**13 47 43.8**	**-1.0**
PB04	**IPOC Station P**	**1.73**	**236**	*e*P	**Pn**	**13 47 43.3**	**-1.5**
PB04				*i* S	**Sn**	**13 48 06.3**	**-1.0**
PB04				IAML		13 48 11.0	
	comp=N,2μm,0.3s						
GO01	**Chusmiza**	**1.77**	**342**		**Pn**	**13 47 46.8**	**+1.1**
GO01	**Chusmiza**	**1.77**	**342**	*e*P	**Pn**	**13 47 46.4**	**+0.7**
GO01				*i* S	**Sn**	**13 48 11.7**	**+3.0**
GO01				IAML		13 48 14.8	
	comp=E,5μm,0.2s						
TA02	**Huaiquique**	**1.79**	**307**		**Pn**	**13 47 44.8**	**-0.7**
TA02	**Huaiquique**	**1.79**	**307**	*e*P	**Pn**	**13 47 45.1**	**-0.4**
TA02				*i* S	**Sn**	**13 48 08.2**	**-0.2**
TA02				IAML		13 48 14.1	
	comp=N,5μm,0.1s						
PB15	**IPOC Station P**	**2.00**	**203**		**Pn**	**13 47 48.2**	**-0.2**
PB15	**IPOC Station P**	**2.00**	**203**	*e*P	**Pn**	**13 47 47.9**	**-0.4**
PB15				*i* S	**Sn**	**13 48 13.2**	**-0.4**
PB10	**IPOC Station P**	**2.80**	**220**		**Pn**	**13 47 58.2**	**-0.3**
PB10	**IPOC Station P**	**2.80**	**220**	*e*P	**Pn**	**13 47 58.0**	**-0.5**
PB16	**IPOC Station P**	**3.13**	**344**	*e*P	**Pn**	**13 48 04.5**	**+1.1**
PB16				*i* S	**Sn**	**13 48 41.9**	**+1.4**
PB12	**IPOC Station P**	**3.17**	**329**	Pn	**Pn**	**13 48 02.3**	**-1.3**
PB12	**IPOC Station P**	**3.17**	**329**	*e*P	**Pn**	**13 48 02.4**	**-1.3**
PB12				*i* S	**Sn**	**13 48 40.5**	**-0.4**
AP01	**Chacalluta**	**3.39**	**331**		**Pn**	**13 48 05.4**	**-1.1**
PB14	**IPOC Station P**	**3.65**	**207**	Pn	**Pn**	**13 48 08.9**	**-1.2**
GO02	**Mina Guanaco**	**3.89**	**193**	Pn	**Pn**	**13 48 11.7**	**-1.7**
GO02	**Mina Guanaco**	**3.89**	**193**	*e*P	**Pn**	**13 48 11.7**	**-1.7**
GO02				*i* S	**Sn**	**13 48 56.1**	**-2.2**
LPAZ	**La Paz**	**5.07**	**5**	P	**Pn**	**13 48 32.5**	**+2.9**
	comp=N,12nm,0.3s,baz=199,slow=3.6,SNR=86						
LPAZ				S	**Sn**	**13 49 20.1**	**-7.2**
	comp=N,27nm,0.8s,baz=234,slow=19,SNR=5.7						
LPAZ				LR	LR	13 50 27.5	
	comp=N,54nm,21.4s,baz=43,slow=37						
LPAZ	**La Paz**	**5.07**	**5**		**Pn**	**13 48 30.4**	**+0.8**
LPAZ	**La Paz**	**5.07**	**5**	*e*P	**Pn**	**13 48 32.7**	**+3.1**
AC01	**Pan de Azucar**	**5.10**	**201**		**Pn**	**13 48 26.0**	**-3.4**
AC02	**Maricunga**	**5.47**	**185**		**Pn**	**13 48 33.8**	**-1.1**
AC06	**Mina Casimiro**	**6.18**	**195**	Pn	**Pn**	**13 48 41.0**	**-3.0**
GO03	**Copiap**	**6.38**	**193**	Pn	**Pn**	**13 48 43.1**	**-3.8**
AC04	**Llanos de Chal**	**7.17**	**198**	Pn	**Pn**	**13 48 52.3**	**-5.3**
SIV	**San Ignacio**	**8.92**	**54**	P	**Pn**	**13 49 19.9**	**-1.4**
	comp=N,9.3nm,0.4s,baz=240,slow=12,SNR=61						
SIV				S	**Sn**	**13 50 55.3**	**-4.8**
	comp=N,0.9nm,0.4s,baz=296,slow=16,SNR=1.5						
GO04	**Tololo Observa**	**8.99**	**192**	Pn	**Pn**	13 49 17.6	-4.9
CPUP	**Villa Florida**	**11.45**	**118**	P	**Pn**	**13 49 53.2**	**-2.3**
	comp=N,4.7nm,0.8s,baz=304,slow=14,SNR=4.9						
CPUP	**Villa Florida**	**11.45**	**118**		**Pn**	**13 49 55.9**	**+0.4**
ANTJ	**Antonio Joao (**	**11.74**	**95**	*e*P	**Pn**	**13 49 59.7**	**+0.2**
MT02	**Curacav**	**12.06**	**190**	Pn	**Pn**	**13 50 02.4**	**-1.3**
SALV	**Santo Antonio**	**13.39**	**68**	*e*P	**Pn**	**13 50 23.1**	**+1.9**
BO02	**Sierra Bellavi**	**13.52**	**188**	Pn	**Pn**	**13 50 21.7**	**-1.1**
UNIS	**Unistalda (Bra**	**14.45**	**125**	*e*P	**Pn**	**13 50 35.9**	**+1.1**
PDRB	**Porto dos Gac**	**14.95**	**51**	*e*P	**Pn**	**13 50 43.4**	**+2.1**
FRBT	**Francisco Belt**	**14.96**	**111**	*e*P	**P**	**13 50 44.0**	**-0.4**
RODS	**Rosario do Sul**	**15.02**	**129**	*e*P	**P**	**13 50 43.7**	**-1.2**
PTGB	**Pitanga**	**15.59**	**106**	*e*P	**P**	**13 50 51.3**	**0.0**
ALGR	**Alto Alegre (B**	**15.93**	**121**	*e*P	**P**	**13 50 55.5**	**+0.4**
ITAB	**Concordia**	**16.11**	**115**		**P**	**13 50 56.7**	**-0.3**
ITAB	**Concordia**	**16.11**	**115**	*e*P	**P**	**13 50 56.7**	**-0.3**
CLDB	**Colider**	**16.12**	**52**	*e*P	**P**	**13 50 58.4**	**+1.2**
PCMB	**Pacaembu**	**16.15**	**94**	*e*P	**P**	**13 50 58.6**	**+1.1**
CPSB	**Cacapava Do Su**	**16.34**	**127**	*e*P	**P**	**13 50 59.4**	**-0.1**
PLTB	**Pedras Altas**	**16.94**	**131**	P	**Pn**	**13 51 05.2**	**-0.7**
PLTB				IAmb	IAmb	13 51 07.0	
	comp=Z,9.1nm,0.9s						
PLTB	**Pedras Altas**	**16.94**	**131**	*e*P	**Pn**	**13 51 05.9**	**+0.1**
ATAH	**Atahualpa**	**17.01**	**325**	P	**P**	**13 51 10.3**	**+2.9**
	comp=Z,4.4nm,0.8s,baz=139,slow=7.3,SNR=3.7						
CNLB	**Canela**	**17.89**	**120**	*e*P	**P**	**13 51 16.5**	**-0.1**
GO06	**Curarrehue**	**18.33**	**187**	P	**P**	**13 51 21.2**	**-0.2**
GO06				IAmb	IAmb	13 51 22.3	
	comp=Z,6.4nm,1.0s						
SNDB	**Serra Nova Dou**	**19.02**	**63**	*e*P	**P**	**13 51 29.4**	**+0.3**
PLCA	**Paso Flores**	**19.38**	**184**	P	**P**	**13 51 33.0**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=0.5,slow=12,SNR=5.3						
PLCA	**Paso Flores**	**19.38**	**184**	P	**P**	**13 51 33.0**	**+0.1**
PLCA	**Paso Flores**	**19.38**	**184**	*e*P	**P**	**13 51 32.6**	**-0.3**
IPMB	**Ipameri, GO**	**19.50**	**84**	*e*P	**P**	**13 51 34.1**	**-0.2**
LL04	**Puerto Octay**	**19.75**	**189**	P	**P**	**13 51 36.5**	**-0.3**
LL04				IAmb	IAmb	13 51 37.3	
	comp=Z,11nm,0.7s						
PET01	**Itanhaem-SP**	**19.88**	**102**	*e*P	**P**	**13 51 38.5**	**+0.2**
VAO	**Valinhos**	**20.11**	**99**	*e*P	**P**	**13 51 41.0**	**0.0**
BDFB	**Brasilia**	**20.34**	**77**	P	**P**	**13 51 42.9**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=263,slow=15,SNR=3.1						
	comp=Z,3.0nm,0.5s						
BDFB	**Brasilia**	**20.34**	**77**	P	**P**	**13 51 43.1**	**-0.4**
BDFB				IAmb	IAmb	13 51 47.0	
	comp=Z,8.3nm,1.1s						
BDFB	**Brasilia**	**20.34**	**77**	*e*P	**P**	**13 51 43.8**	**+0.4**
LL07	**Hotel Espejo d**	**21.79**	**190**	P	**P**	**13 51 55.6**	**-3.0**
SMTB	**Santa Maria do**	**23.76**	**62**	*e*P	**P**	**13 52 18.1**	**-0.1**
JANB	**Januaria**	**23.90**	**79**	*e*P	**P**	**13 52 19.7**	**+0.2**
MALB	**Monte Alegre**	**23.90**	**38**	*e*P	**P**	**13 52 19.6**	**+0.1**
SDBA	**SAO DESIDERIO**	**24.34**	**72**	*e*P	**P**	**13 52 23.8**	**+0.2**
BOAV	**Boa Vista**	**24.90**	**20**	P	**P**	**13 52 27.0**	**-1.5**
BOAV				IAmb	IAmb	13 52 37.9	
	comp=Z,2.9nm,1.0s						
BOAV	**Boa Vista**	**24.90**	**20**	*e*P	**P**	**13 52 29.1**	**+0.6**
SDV	**Santo Domingo**	**30.12**	**356**	LR	LR	14 06 19.9	
	comp=Z,28nm,19.7s,baz=41,slow=38						
TX31	**Lajitas Ar. Si**	**60.68**	**325**	P	**P**	**13 57 13.3**	**-2.3**
TX31				IAmb	IAmb	13 57 56.0	
	comp=Z,4.5nm,1.1s						
TX32	**Lajitas Array**	**60.68**	**325**	P	**P**	**13 57 13.3**	**-2.3**
TX32				IAmb	IAmb	13 57 56.0	
	comp=Z,1.3nm,1.1s						
SNAA	**Sanae**	**62.32**	**161**	P	**P**	**13 57 26.1**	**+0.1**
SNAA				IAmb	IAmb	13 57 27.3	
	comp=Z,3.7nm,0.9s						
DBIC	**Dimbokro**	**68.43**	**73**	P	**P**	**13 58 05.9**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=262,slow=8.6,SNR=1.9						
	comp=Z,1.5nm,0.5s						
DBIC	**Dimbokro**	**68.43**	**73**	P	**P**	**13 58 05.9**	**-0.4**
PDAR	**Pinedale Array**	**74.13**	**330**	P	**P**	**13 58 41.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=142,slow=7.5,SNR=4.0						
	comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	**75.56**	**322**	P	**P**	**13 58 50.2**	**+1.5**
	comp=Z,1.0nm,0.9s,baz=157,slow=6.8,SNR=8.6						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**77.03**	**190**	P	**P**	**13 58 57.3**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=144,slow=7.0,SNR=5.1						
	comp=Z,0.7nm,0.8s						
TOA0	**Torodi Ar. Sit**	**77.05**	**70**	P	**P**	**13 58 56.7**	**-0.6**
TOA0				IAmb	IAmb	13 58 57.6	
	comp=Z,4.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.05**	**70**	P	**P**	**13 58 56.6**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=258,slow=5.3,SNR=14						
TORD				pP	**pP**	**13 59 25.3**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=269,slow=6.9,SNR=4.9						
	comp=Z,2.3nm,0.7s						
RAR	**Rarotonga**	**83.53**	**250**	P	**P**	**13 59 33.4**	**+1.4**
	comp=Z,6.4nm,0.6s,baz=114,slow=10.0,SNR=2.0						
	comp=Z,6.4nm,0.6s						
MAW	**Mawson**	**84.38**	**163**	P	**P**	**13 59 35.7**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=227,slow=8.4,SNR=4.5						
	comp=Z,2.1nm,0.7s						
MAW	**Mawson**	**84.38**	**163**	P	**P**	**13 59 36.3**	**+0.9**
ESDC	**Sonseca Array**	**85.54**	**44**	LR	LR	14 37 28.8	
	comp=Z,23nm,18.6s,baz=160,slow=35						
YKA	**Yellowknife Ar**	**91.15**	**340**	P	**P**	**14 00 07.9**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=130,slow=4.3,SNR=13						
	comp=Z,1.8nm,0.7s						
AFI	**Afiamalu**	**96.87**	**252**	LR	LR	14 34 51.2	
	comp=Z,44nm,19.6s,baz=164,slow=29						
ASAR	**Alice Springs**	**130.16**	**207**	PKP	**PKPdf**	**14 06 12.4**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=118,slow=1.7,SNR=7.7						
WRA	**Warramunga Arr**	**133.21**	**210**	PKP	**PKPdf**	**14 06 19.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=174,slow=1.8,SNR=8.9						
ZALV	**Zalesovo Beam**	**141.71**	**25**	PKP	**PKPdf**	**14 06 34.9**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=307,slow=3.3,SNR=4.4						
MKAR	**Makanchi Array**	**145.36**	**36**	PKPbc	**PKPab**	**14 06 41.4**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=332,slow=4.4,SNR=18						
MKAR				pPKPbc	pPKPab	14 07 10.3	-0.4
	comp=Z,2.5nm,0.9s,baz=316,slow=3.3,SNR=4.6						
SONM	**Songino Array**	**153.28**	**7**	PKP	**PKPdf**	**14 06 55.2**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=64,slow=6.5,SNR=2.9						
SONM				PKPbc	**PKPbc**	**14 07 00.9**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=80,slow=1.8,SNR=1.9						

TIR ***22*** *13:56:53.6,42.22N×18.67E,h3km±1km,Md3.2,Ml3.4*
PDG ***22*** *13:56:56.8±0.2,42.22N×18.81E,h10km,MD3.2/9,*
ML3.2/14,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0
BEO ***22*** *13:56:56.4±0.4,42.17N×18.67E,h0km±1km,ML3.1/13*
RHSSO ***22*** *13:56:57.2±0.4,42.18N×18.82E,h3km±1km,ML3.3/11*
ISC 22 13:56:56.4±1.1,**42.19N**±0.02×**18.76E**±0.02,**h3km**±8km,
n121,σ1°**15**/208,**27C-29D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUM	**Brajici-Budva**	**0.15**	**41**	⇓*i*Pg	**Pg**	**13 56 59.5**	**+0.1**
BUM				*i* Sg	**Sg**	**13 57 01.6**	**+0.2**
DRME	**Dracevica, Mon**	**0.32**	**90**	⇓*i*Pg	**Pg**	**13 57 02.3**	**-0.2**
DRME				*e*Sg	**Sg**	**13 57 06.9**	**+0.3**
DRME	**Dracevica, Mon**	**0.32**	**90**	⇓*i*Pg	**Pg**	**13 57 02.4**	**-0.1**
DRME				*i* Sg	**Sg**	**13 57 07.1**	**+0.5**
HCY	**Herceg Novi**	**0.33**	**323**	⇑*i*Pg	**Pg**	**13 57 03.1**	**+0.4**
HCY				*e*Sg	**Sb**	**13 57 09.0**	**-1.5**
HCY	**Herceg Novi**	**0.33**	**323**	⇑*i*Pg	**Pg**	**13 57 03.0**	**+0.4**
HCY				*i* Sg	**Sg**	**13 57 08.3**	**+1.4**
CEME	**Cevo**	**0.38**	**18**	⇓*i*Pg	**Pg**	**13 57 03.4**	**-0.3**
CEME				*i* Sg	**Sg**	**13 57 08.8**	**+0.2**
ULC	**Ulcinj**	**0.42**	**122**	⇓*i*Pg	**Pg**	**13 57 04.1**	**-0.4**
ULC				*i* Sg	**Sg**	**13 57 10.9**	**+0.8**
PDG	**Podgorica**	**0.44**	**56**	⇓P	**Pg**	**13 57 04.3**	**-0.5**
PDG				⇓S	**Sg**	**13 57 11.1**	**+0.5**
PDG	**Podgorica**	**0.44**	**56**	*e*Pg	**Pg**	**13 57 04.2**	**-0.6**
PDG				*e*Sg	**Sg**	**13 57 10.9**	**+0.3**
PDG	**Podgorica**	**0.44**	**56**	*e*Pg	**Pg**	**13 57 04.2**	**-0.6**
PDG				*e*Sg	**Sg**	**13 57 10.9**	**+0.3**
TTG	**Podgorica**	**0.44**	**56**	⇓*i*Pg	**Pg**	**13 57 04.2**	**-0.6**
TTG				*i* Sg	**Sg**	**13 57 10.8**	**+0.2**
NKME	**Niksic**	**0.60**	**14**	⇑*i*Pg	**Pg**	**13 57 07.1**	**-0.7**
NKME				*i* Sg	**Sg**	**13 57 15.9**	**+0.3**
NKY	**Niksic**	**0.65**	**15**	⇓*i*Pg	**Pg**	**13 57 07.8**	**-1.0**
NKY				*i* Sg	**Sg**	**13 57 17.9**	**+0.6**
DBRK	**Dubrovnik**	**0.66**	**317**	*i* Pg	**Pg**	**13 57 08.0**	**-1.1**
DBRK				Sg	**Sg**	**13 57 18.6**	**+0.9**
BRY	**Bratogost**	**0.73**	**347**	⇑*i*Pg	**Pg**	**13 57 09.7**	**-0.7**
BRY				*e*Sg	**Sb**	**13 57 21.4**	**-0.9**
BRY	**Bratogost**	**0.73**	**347**	⇑*i*Pg	**Pg**	**13 57 09.8**	**-0.7**
BRY				*i* Sg	**Sb**	**13 57 21.4**	**-0.9**
KOME	**Kolasin**	**0.87**	**40**	⇓*i*Pg	**Pg**	**13 57 11.7**	**-1.3**
KOME				*i* Sg	**Sb**	**13 57 25.1**	**-1.0**
PVY	**Plav**	**0.98**	**65**	⇓*i*Pg	**Pg**	**13 57 14.0**	**-1.1**
PVY				*i* Sg	**Sb**	**13 57 28.9**	**-0.4**
BCI	**Bajram Curri**	**0.99**	**79**	P	**Pg**	**13 57 14.5**	**-0.8**
	baz=81						
BCI				S	**Sn**	**13 57 30.1**	**-1.4**
	baz=81						
BCI				AMP			
	comp=N,4.2nm,0.2s,baz=81						
UPM	**Unac-Piva**	**1.02**	**6**	⇑*i*Pg	**Pg**	**13 57 15.6**	**-0.4**
UPM				*e*Sg	**Sg**	**13 57 29.6**	**+0.4**
UPM	**Unac-Piva**	**1.02**	**6**	⇑*i*Pg	**Pg**	**13 57 15.0**	**-1.0**
UPM				*i* Sg	**Sb**	**13 57 30.7**	**0.0**
STON	**Ston**	**1.04**	**311**	*e*Pg	**Pg**	**13 57 16.1**	**-0.2**
STON				*e*Sg	**Sb**	**13 57 31.6**	**+0.6**
STON	**Ston**	**1.04**	**311**	*e*Pg	**Pg**	**13 57 15.2**	**-1.2**
STON				*e*Sg	**Sb**	**13 57 30.7**	**-0.3**
STON	**Ston**	**1.04**	**311**	*e*Pg	**Pg**	**13 57 14.2**	**-2.1**
STON				*e*Sg	**Sg**	**13 57 29.0**	**-0.8**
IVA	**Berane**	**1.08**	**50**	⇓*i*Pg	**Pg**	**13 57 16.1**	**-1.0**
IVA				*i* Sg	**Sb**	**13 57 32.4**	**+0.1**
TIR	**Tirane**	**1.18**	**135**	⇑P	**Pb**	**13 57 19.3**	**-0.1**
TIR				⇑S	**Sn**	**13 57 37.8**	**+1.6**
TIR	**Tirane**	**1.18**	**135**	*e*Pg	**Pg**	**13 57 18.9**	**-0.1**
TIR				*e*Sg	**Sn**	**13 57 36.4**	**+0.1**
TIR	**Tirane**	**1.18**	**135**	P	**Pg**	**13 57 18.5**	**-0.4**
	baz=133						
TIR				S	**Sn**	**13 57 36.9**	**+0.6**
	baz=133						
TIR				AMP			
	comp=E,1.5nm,0.2s,baz=133						
PLE	**Pljevlja**	**1.23**	**22**	⇓*i*Pg	**Pg**	**13 57 19.1**	**-0.9**
PLE				*i* Sg	**Sn**	**13 57 37.3**	**-0.5**
PHP	**Peshkopia**	**1.35**	**111**	P	**Pn**	**13 57 21.3**	**-0.9**
	baz=111						
PHP				S	**Sn**	**13 57 42.0**	**+1.4**
	baz=111						
PHP				AMP			
	comp=N,3.4nm,0.4s,baz=111						
SJES	**Sjenica**	**1.40**	**39**	*e*Pg	**Pn**	**13 57 22.2**	**-0.6**
SJES				*e*Sg	**Sb**	**13 57 40.8**	**-0.6**
SJES	**Sjenica**	**1.40**	**39**	*e*Pg	**Pn**	**13 57 22.4**	**-0.4**
SJES				*e*Sg	**Sn**	**13 57 43.3**	**+1.5**
RUDO	**Rudo**	**1.50**	**17**	⇑*i*Pg	**Pn**	**13 57 23.8**	**-0.4**
RUDO				*e*Sg	**Sg**	**13 57 45.0**	**+0.5**
RUDO	**Rudo**	**1.50**	**17**	*e*Pg	**Pn**	**13 57 23.8**	**-0.4**
RUDO				*e*Sg	**Sg**	**13 57 45.4**	**+0.9**
LSTV	**Lastovo**	**1.50**	**293**	*e*Pn	**Pn**	**13 57 24.3**	**+0.1**
MAKA	**Makarska**	**1.69**	**311**	*e*Pn	**Pb**	**13 57 27.8**	**-0.3**
IVAS	**Ivanjica**	**1.72**	**36**	*e*Pn	**Pb**	**13 57 27.9**	**-0.8**
IVAS				*e*Sn	**Sg**	**13 57 52.6**	**+0.8**
BBLS	**Lazići**	**1.74**	**16**	*e*Pn	**Pb**	**13 57 28.2**	**-0.8**
BBLS				*e*Sn	**Sb**	**13 57 51.0**	**-0.3**
BBLS	**Lazići**	**1.74**	**16**	*e*Pg	**Pb**	**13 57 29.2**	**+0.2**
BBLS				*e*Sg	**Sg**	**13 57 54.2**	**+1.8**
RICI	**Ricice**	**1.77**	**318**	*e*Pn	**Pb**	**13 57 28.9**	**-0.6**
OHR	**Ohrid**	**1.87**	**124**	*i* Pn	**Pb**	**13 57 31.5**	**+0.3**
NOCI	**Noci**	**1.89**	**223**	P	**Pn**	**13 57 29.1**	**-0.4**
	baz=221						
SKO	**Skopje**	**2.01**	**95**	*i* Pn	**Pg**	**13 57 34.2**	**-0.6**
SELS	**Selova**	**2.02**	**59**	*e*Pn	**Pn**	**13 57 32.2**	**+0.8**
SELS				*e*Sn	**Sb**	**13 57 59.6**	**+0.3**
DIVS	**Divibare**	**2.11**	**25**	⇓*i*Pn	**Pn**	**13 57 33.1**	**+0.4**
DIVS				*e*Sn	**Sn**	**13 57 59.7**	**+0.3**
DIVS	**Divibare**	**2.11**	**25**	*e*Pn	**Pn**	**13 57 33.5**	**+0.8**
DIVS				*e*Sn	**Sb**	**13 58 02.5**	**+0.5**
SCTE	**Santa Cesarea**	**2.12**	**186**	P	**Pn**	**13 57 34.0**	**+1.2**
	baz=185						
MATE	**Matera**	**2.18**	**226**	⇑P	**Pn**	**13 57 33.4**	**-0.1**
MATE				⇑S	**Sn**	**13 58 01.5**	**+0.6**
KBN	**Korca**	**2.18**	**135**	P	**Pb**	**13 57 35.7**	**-0.8**
	baz=134						
KBN				S	**Sg**	**13 58 06.9**	**+0.4**
	baz=134						
KBN				AMP			
	comp=N,0.8nm,0.5s,baz=134						
SRKY	**Kupres RS**	**2.21**	**329**	*e*Pn	**Pn**	**13 57 35.4**	**+1.3**
SRKY				*e*Sn	**Sn**	**13 58 03.0**	**+1.1**
GRUS	**Gruza**	**2.22**	**39**	*e*Pn	**Pn**	**13 57 35.1**	**+1.0**
GRUS				*e*Sn	**Sb**	**13 58 04.7**	**-0.4**
SGRT	**San Giovanni R**	**2.29**	**260**	P	**Pn**	**13 57 35.2**	**+0.1**
	baz=259						
BARS	**Barje**	**2.34**	**73**	*e*Pn	**Pn**	**13 57 36.9**	**+1.1**
TRUS	**Trudelj**	**2.36**	**30**	*e*Pn	**Pn**	**13 57 37.0**	**+1.0**
TRUS				*e*Sn	**Sb**	**13 58 08.0**	**-1.1**
TEKS	**Tekeris**	**2.43**	**13**	*e*Pn	**Pn**	**13 57 37.9**	**+1.0**
LSK	**Leskovik**	**2.46**	**145**	P	**Pn**	**13 57 38.2**	**+0.7**
	baz=144						
PRVS	**Prvonek**	**2.48**	**81**	*e*Pn	**Pn**	**13 57 39.0**	**+1.3**
SRN	**Sarande**	**2.49**	**157**	P	**Pn**	**13 57 37.6**	**-0.2**
	baz=156						
SRN				AMP			
	comp=E,0.2nm,0.7s,baz=156						
KIJV	**Kijevo**	**2.50**	**317**	*e*Pn	**Pn**	**13 57 39.5**	**+1.5**
BOVS	**Bovan**	**2.60**	**55**	⇑P	**Pn**	**13 57 39.4**	**+0.1**
BOVS				⇓S	**Sb**	**13 58 13.4**	**-2.6**
BOVS	**Bovan**	**2.60**	**55**	*e*Pn	**Pn**	**13 57 39.6**	**+0.3**
BOVS				*e*Sn	**Sb**	**13 58 13.5**	**-2.5**
BLJ	**Bijeljina**	**2.62**	**8**	*e*Sn	**Sn**	**13 58 11.4**	**-0.4**
BOSS	**Bosilegrad**	**2.77**	**82**	*e*Pn	**Pn**	**13 57 42.8**	**+1.1**
BOSS				*e*Sn	**Sn**	**13 58 17.2**	**+1.5**
MORI	**Morici**	**2.80**	**308**	*e*Pn	**Pn**	**13 57 43.7**	**+1.8**
BLY	**Banja Luka**	**2.81**	**336**	*e*Pn	**Pn**	**13 57 43.3**	**+1.2**
BLY				*e*Sn	**Sn**	**13 58 17.7**	**+1.3**
BLY	**Banja Luka**	**2.81**	**336**	*e*Pn	**Pn**	**13 57 43.6**	**+1.5**
BLY				*e*Sn	**Sn**	**13 58 16.4**	**0.0**
A050A	**Klekovaca**	**2.81**	**325**	*e*Pn	**Pn**	**13 57 43.0**	**+0.7**
A050A				*e*Sn	**Sn**	**13 58 18.5**	**+1.8**
IGT	**Igoumenitsa**	**2.91**	**155**	*e*Pn	**Pn**	**13 57 43.0**	**-0.5**
IGT	**Igoumenitsa**	**2.91**	**155**	P	**Pn**	**13 57 43.2**	**-0.3**
	baz=154						
VAY	**Valandovo**	**2.98**	**106**	*i* Pn	**Pn**	**13 57 45.7**	**+1.2**
**ZAG

H10N1	**ASCENSION HYDR**	**49.33**	**23**	T	T	15 20 16.0			
	baz=193,slow=75,SNR=32								
H10N3	**ASCENSION HYDR**	**49.33**	**23**	T	T	15 20 15.5			
	baz=193,slow=75,SNR=38								
H10N2	**ASCENSION HYDR**	**49.34**	**23**	T	T	15 20 17.2			
	baz=193,slow=75,SNR=34								
TORD	**Torodi Ar. Bea**	**73.84**	**34**	P	P	14 29 52.1	-0.3		
	0.5nm,0.7s,baz=195,slow=6.6,SNR=4.3								
	0.5nm,0.7s								
ASAR	**Alice Springs**	**100.45**	**167**	P	Pdif	14 32 04.0	-1.1		
	0.3nm,0.9s,baz=171,slow=3.5,SNR=2.1								
ZALV	**Zalesovo Beam**	**144.50**	**65**	PKP	PKPdf	14 37 53.9	+0.9		
	0.6nm,0.5s,baz=262,slow=2.9,SNR=3.6								
ILAR	**Eielson Array**	**147.59**	**314**	PKPbc	PKPbc	14 38 00.2	-0.5		
	0.8nm,0.5s,baz=97,slow=0.9,SNR=7.6								

*IDC **22** 14:23:53.8±0.7, 44.˚17S×38.˚72E, h0km, mb3.9/10, mbtmp4.0/11, ML3.5/1, MS3.5/15, Error ellipse: s-maj=29.6km s-min=18.7km az=48.0*
*NEIC **22** 14:23:55.6±1.3, 44.˚2S±0.˚4×38.˚8E±0.˚6, h10km±2km, mb4.4/5, Error ellipse: s-maj=92.7km s-min=13.0km az=227.0*

ISC 22 14:23:55.2±0.7, 44.˚2S±0.˚1×38.˚7E±0.˚1, h10km, n29, σ0s93/18, mb3.9/11, MS3.5/14, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SOE	**Somerset East**	**15.40**	**314**	P		**P**		**14 27 38.5**	**+1.3**
SOE				IAmb		IAmb		14 27 41.0	
	comp=Z,69nm,1.3s								
SUR	**Sutherland**	**18.31**	**304**	P		**Pn**		**14 28 07.9**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=71,slow=4.0,SNR=2.6								
	comp=Z,16nm,1.1s								
SUR	**Sutherland**	**18.31**	**304**	P		**Pn**		**14 28 08.6**	**-0.8**
SUR				IAmb		IAmb		14 28 16.5	
	comp=Z,70nm,1.4s								
BOSA	**Boshof**	**18.92**	**321**	LR		LR		14 34 12.8	
	comp=Z,158nm,21.7s,baz=189,slow=33								
LBTB	**Lobatse**	**21.93**	**327**	P		**P**		**14 28 47.2**	**-1.6**
	comp=Z,4.5nm,0.9s,baz=216,slow=6.4,SNR=2.2								
LBTB				LR		LR		14 36 04.7	
	comp=Z,114nm,19.4s,baz=160,slow=33								
	comp=Z,4.5nm,0.9s								
MATP	**Matopo**	**25.19**	**337**	P		**P**		**14 29 20.7**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=160,slow=5.3,SNR=4.1								
	comp=Z,3.2nm,0.8s								
OPO	**Ambohidratompo**	**26.52**	**18**	LR		LR		14 37 51.1	
	comp=Z,97nm,20.2s,baz=68,slow=32								
MAW	**Mawson**	**26.72**	**160**	P		**P**		**14 29 33.9**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=315,slow=18,SNR=1.4								
MAW				LR		LR		14 39 19.0	
	comp=Z,98nm,18.4s,baz=293,slow=35								
	comp=Z,0.9nm,0.7s								
LSZ	**Lusaka**	**30.19**	**339**	LR		LR		14 39 43.7	
	comp=Z,88nm,21.0s,baz=198,slow=32								
TSUM	**Tsumeb**	**30.56**	**318**	LR		LR		14 41 26.5	
	comp=Z,96nm,19.3s,baz=156,slow=34								
SNAA	**Sanae**	**33.97**	**202**	P		**P**		**14 30 38.5**	**0.0**
	comp=Z,1.0nm,0.9s,baz=18,slow=14,SNR=1.5								
SNAA				LR		LR		14 41 08.7	
	comp=Z,67nm,19.5s,baz=14,slow=30								
	comp=Z,1.0nm,0.9s								
KMBO	**Kilima Mbogo**	**42.91**	**358**	LR		LR		14 47 55.8	
	comp=Z,78nm,18.9s,baz=95,slow=34								
MBAR	**Mbarara**	**43.99**	**348**	LR		LR		14 49 44.9	
	comp=Z,102nm,18.3s,baz=149,slow=35								
QSPA	**South Pole Qui**	**46.02**	**180**	LR		LR		14 49 30.4	
	comp=Z,76nm,20.4s,baz=228,slow=33								
VNDA	**Vanda**	**53.66**	**167**	LR		LR		14 54 24.0	
	comp=Z,72nm,18.9s,baz=192,slow=34								
TORD	**Torodi Ar. Bea**	**66.28**	**320**	P		**P**		**14 34 44.3**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=140,slow=4.8,SNR=1.8								
	comp=Z,0.4nm,0.8s								
WSAR	**Wadi Sarin**	**69.54**	**20**	LR		LR		15 00 12.2	
	comp=Z,35nm,20.7s,baz=192,slow=31								
BBOO	**Buckleboo**	**72.70**	**119**	P		**P**		**14 35 21.5**	**-1.8**
CPUP	**Villa Florida**	**76.21**	**247**	P		**P**		**14 35 44.2**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=191,slow=5.2,SNR=1.8								
	comp=Z,1.8nm,0.6s								
STKA	**Stephens Creek**	**76.77**	**122**	P		**P**		**14 35 47.4**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=270,slow=9.1,SNR=3.2								
	comp=Z,1.0nm,0.5s								
STKA	**Stephens Creek**	**76.77**	**122**	P		**P**		**14 35 47.1**	**+0.1**
ASAR	**Alice Springs**	**77.42**	**111**	P		**P**		**14 35 51.0**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=220,slow=5.4,SNR=24								
	comp=Z,1.4nm,0.8s								
ASAR	**Alice Springs**	**77.42**	**111**	P		**P**		**14 35 50.5**	**-0.2**
AS31	**Alice Springs**	**77.42**	**111**	P		**P**		**14 35 50.4**	**-0.4**
AS31				IAmb		IAmb		14 35 52.0	
	comp=Z,0.6nm,0.8s								
IDI	**Anoyia**	**80.11**	**349**	LR		LR		15 11 45.7	
	comp=Z,25nm,19.9s,baz=224,slow=36								
WRA	**Warramunga Arr**	**80.25**	**108**	P		**P**		**14 36 06.4**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=226,slow=4.7,SNR=4.9								
	comp=Z,1.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**83.08**	**56**	P		**P**		**14 36 21.8**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=216,slow=5.4,SNR=2.5								
CMAR				LR		LR		15 06 16.7	
	comp=Z,13nm,20.7s,baz=170,slow=31								
	comp=Z,0.3nm,0.3s								
BELG	**Belogornoye**	**96.52**	**5**	LR		LR		15 22 53.0	
	comp=Z,17nm,18.1s,baz=149,slow=37								
TXAR	**Lajitas Array**	**146.74**	**256**	PKPbc		**PKPbc**		**14 43 38.0**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=136,slow=6.0,SNR=24								

TAP 22 14:38:34.4, 22.˚05N×120.˚50E, h57km±1km, ML2.2, 2C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HEN	**Hengchun**	**0.22**	**102**	*i* P			Pn	14 38 43.9	+0.3
HEN	baz=101			*i* S			Sn	14 38 51.1	+0.8
SNW	**Nanwan**	**0.25**	**112**	S			Sn	14 38 51.4	+0.8
	baz=111								
TWK1	**Hengchun**	**0.30**	**111**	⇑*i* P			Pn	14 38 44.6	+0.4
TWK1	baz=110			*i* S			Sn	14 38 51.8	+0.5
TWKBT	**Hengchun**	**0.31**	**111**	⇑P			Pn	14 38 44.6	+0.3
TWKBT	baz=111			S			Sn	14 38 51.8	+0.4
SMST	**Manzhou Townsh**	**0.31**	**96**	P			Pn	14 38 44.8	+0.5
SMST	baz=95			S			Sn	14 38 52.2	+0.8
WLCH	**Liuqiu**	**0.32**	**339**	P			Pn	14 38 44.6	+0.2
WLCH	baz=339			S			Sn	14 38 52.9	+1.4
SLIU	**Shizi**	**0.32**	**59**	*i* P			Pn	14 38 44.8	+0.4
SLIU	baz=59			S			Sn	14 38 52.2	+0.6
TWP	**Hsiaoliuchiu**	**0.32**	**336**	*i* P			Pn	14 38 44.5	+0.1
TWP	baz=337			*i* S			Sn	14 38 52.5	+0.9
SCZT	**Fangliau**	**0.34**	**19**	*i* P			Pn	14 38 44.4	-0.1
SCZT	baz=20			*i* S			Sn	14 38 51.3	-0.5
TSEB	**Hengchuen, Pin**	**0.40**	**112**	P			Pn	14 38 45.4	+0.3
TSEB	baz=114			*i* S			Sn	14 38 53.8	+1.0
SSPT	**Xinbi**	**0.43**	**8**	*e*P			Pn	14 38 46.0	+0.6
SSPT	baz=8.0			*e*S			Sn	14 38 54.5	+1.0
SSPT	**Xinbi**	**0.43**	**8**	*e*P			Pn	14 38 46.4	+0.9
	baz=194								
TAWH	**Dawu Township**	**0.46**	**51**	*e*P			Pn	14 38 45.4	-0.2
TAWH	baz=51			*e*S			Sn	14 38 54.2	+0.4
EAST	**Anshuo**	**0.46**	**44**	*i* P			Pn	14 38 46.8	+1.0
EAST	baz=44			*i* S			Sn	14 38 55.2	+1.2
EAST	**Anshuo**	**0.46**	**44**	*i* P			Pn	14 38 46.8	+1.0
EAST	baz=159			*i* S			Sn	14 38 55.1	+1.2
MASBT	**Mashibuluo**	**0.57**	**12**	*e*P			Pn	14 38 47.4	+0.5
MASBT	baz=12			S			Sn	14 38 56.9	+0.8
WSSB	**Gushan**	**0.63**	**339**	P			Pn	14 38 47.8	+0.1
WSSB	baz=339			S			Sn	14 38 58.4	+1.1
TSMG	**Majia**	**0.66**	**11**	*e*P			Pn	14 38 48.7	+0.6
TSMG	baz=11			*e*S			Sn	14 38 59.2	+1.2
ECL	**Taimali**	**0.69**	**38**	*e*P			Pn	14 38 49.2	+0.9
ECL	baz=38			S			Sn	14 38 59.4	+0.9
TWGBT	**Beinan**	**0.93**	**35**	*e*S			Sn	14 39 05.3	+1.3
	baz=35								

TAP 22 14:38:37.4, 22.˚85N×120.˚67E, h15km±1km, ML1.4, 1C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.11**	**199**	⇑*i* P			Pb	14 38 41.5	+0.2
SSD	baz=194			*i* S			Sb	14 38 44.3	+0.5
SLGT	**Liugui**	**0.14**	**351**	*e*P			Pg	14 38 41.5	+0.2
SLGT	baz=350			*e*S			Sb	14 38 44.8	+0.1
TSMG	**Majia**	**0.15**	**189**	*i* P			Pb	14 38 42.0	+0.1
TSMG	baz=189			*i* S			Sb	14 38 45.1	+0.2
SCST	**Cishan**	**0.17**	**281**	*e*P			Pg	14 38 41.6	0.0
SCST	baz=280			*e*S			Sb	14 38 46.1	+0.7
TWM1	**Shoushan**	**0.23**	**262**	*i* P			Pb	14 38 43.5	+0.2
TWM1	baz=261			S			Sb	14 38 47.4	+0.2
SGST	**Jiashian**	**0.24**	**340**	*i* P			Pg	14 38 42.8	0.0
SGST	baz=341			*i* S			Sg	14 38 46.7	+0.3
MASBT	**Mashibuluo**	**0.24**	**188**	P			Pb	14 38 43.4	-0.1
	baz=188								
SNJT	**Kaohsiung City**	**0.33**	**252**	*e*S			Sb	14 38 50.6	+0.7
	baz=252								
STYH	**Taoyuan**	**0.33**	**17**	*e*P			Pg	14 38 44.0	-0.3
STYH	baz=17			*e*S			Sg	14 38 49.4	+0.4
	baz=17								
CHN1	**Nanshi**	**0.35**	**338**	P			Pb	14 38 45.5	0.0
	baz=338								
CHN1				S			Sb	14 38 51.9	+1.0
	baz=338								
ECL	**Taimali**	**0.37**	**134**	*i* P			Pb	14 38 45.8	+0.2
	baz=133								
ECL				*i* S			Sb	14 38 51.0	-0.1
	baz=133								
TWGBT	**Beinan**	**0.38**	**95**	*e*P			Pb	14 38 45.8	0.0
	baz=95								
TWGBT				*e*S			Sb	14 38 52.1	+0.6
	baz=95								
SSPT	**Xinbi**	**0.38**	**194**	*e*S			Sb	14 38 52.6	+1.1
	baz=194								
WTP	**Ta-pu**	**0.39**	**352**	*i* P			Pb	14 38 46.1	0.0
	baz=353								
WTP				*i* S			Sb	14 38 52.9	+0.9
	baz=353								
SNST	**Tainan City**	**0.40**	**336**	*e*P			Pg	14 38 45.5	0.0
	baz=336								
SNST				*e*S			Sb	14 38 52.8	+0.7
	baz=336								
LONT	**Longtian**	**0.43**	**83**	*i* P			Pb	14 38 47.5	+0.9
	baz=82								
LONT				S			Sb	14 38 54.0	+1.1
	baz=82								
TWK	**Hsinying**	**0.44**	**338**	*e*P			Pb	14 38 46.8	-0.2
	baz=338								
TWK				*e*S			Sb	14 38 53.4	0.0
	baz=338								
TPUB	**Ta-pu**	**0.45**	**355**	P			Pb	14 38 46.8	-0.2
	baz=355								
TPUB				S			Sb	14 38 53.8	+0.3
	baz=355								
ELDTW	**Lidau**	**0.46**	**44**	*i* P			Pb	14 38 47.4	+0.1
	baz=44								
ELDTW				*i* S			Sb	14 38 54.1	+0.1
	baz=44								
EDH	**Donghe**	**0.59**	**78**	P			Pn	14 38 50.7	-0.6
	baz=78								
EDH				*i* S			Sn	14 38 60.0	-0.7
	baz=78								
TSCK	**Chigu Township**	**0.61**	**299**	*e*P			Pg	14 38 48.9	-0.6
	baz=298								
TSCK				*e*S			Sb	14 38 58.8	+0.6
	baz=298								
ICHU	**Yijhu**	**0.62**	**325**	*e*S			Sb	14 38 59.1	+0.6
	baz=324								
ALS	**Alishan**	**0.67**	**11**	*i* P			Pb	14 38 51.1	+0.2
	baz=11								
FULB	**Fuli**	**0.67**	**59**	P			Pn	14 38 51.9	-0.5
	baz=59								
YUS	**Yu-Shan**	**0.68**	**22**	P			Pb	14 38 51.5	+0.2
	baz=22								
YUS				S			Sb	14 39 01.1	+0.4
	baz=22								
EYUL	**Yuli**	**0.77**	**50**	*e*P			Pb	14 38 52.8	+0.3
	baz=50								
EYUL				*e*S			Sb	14 39 03.4	+0.6
	baz=50								
YULB	**Yu-li**	**0.79**	**47**	P			Pb	14 38 53.2	+0.4
	baz=47								
YULB				S			Sb	14 39 03.5	+0.2
	baz=47								
WDLH	**Douliu**	**0.84**	**352**	*e*S			Sn	14 39 06.2	-0.6
	baz=351								
EHY	**Hungye**	**0.88**	**43**	S			Sn	14 39 07.1	-0.7
	baz=43								

*NOU **22** 14:45:08.1, 38.˚30S×175.˚98E, h190km, MLv4.5/9, North Island, New Zealand*
*WEL **22** 14:45:11.3±0.7, 38.˚5S±4.˚×17.˚6E±.˚, h146km±6km, M3.3/60, ML2.3/8, MLv3.3/60, Error ellipse: s-maj=0.0km s-min=0.0km az=142.1*

ISC 22 14:45:05.0±1.9, 38.˚20S±0.˚08×176.˚13E±0.˚06, h195km±10km, n174, σ1s90/179, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UTU	**Utuhina**	**0.05**	**67**	P			**Pn**	**14 45 31.9**	**+1.2**
NGRZ	**Ngongotaha**	**0.11**	**25**	P			**Pn**	**14 45 31.8**	**+1.0**
HSRZ	**Hossack Road**	**0.14**	**142**	P			**Pn**	**14 45 31.9**	**+1.2**
GRRZ	**Galatos Road**	**0.15**	**186**	P			**Pn**	**14 45 32.0**	**+1.3**
KARZ	**Kaharoa**	**0.20**	**27**	P			**Pn**	**14 45 31.8**	**+0.9**
OMRZ	**Omania**	**0.21**	**64**	P			**Pn**	**14 45 31.8**	**+0.9**
HRRZ	**Handcock Road**	**0.23**	**148**	P			**Pn**	**14 45 32.1**	**+1.2**
MKRZ	**Makatiti**	**0.27**	**78**	P			**Pn**	**14 45 32.6**	**+1.6**
LIRZ	**Lichensteins R**	**0.28**	**46**	P			**Pn**	**14 45 31.9**	**+0.9**
TARZ	**Mount Tarawera**	**0.30**	**97**	P			**Pn**	**14 45 32.3**	**+1.2**
WPRZ	**Whakapapatarin**	**0.32**	**176**	P			**Pn**	**14 45 32.4**	**+1.3**
RRRZ	**Republican Roa**	**0.33**	**115**	P			**Pn**	**14 45 32.1**	**+1.0**
PRRZ	**Plateau Road**	**0.36**	**146**	P			**Pn**	**14 45 32.2**	**+1.1**
KUTZ	**Kaahu Road**	**0.38**	**220**	P			**Pn**	**14 45 32.6**	**+1.4**
KMRZ	**Kaimai**	**0.38**	**337**	P			**Pn**	**14 45 32.3**	**+1.0**
ALRZ	**Allen Road**	**0.40**	**155**	P			**Pn**	**14 45 32.6**	**+1.3**
MARZ	**Manawahe**	**0.48**	**64**	P			**Pn**	**14 45 32.7**	**+1.1**
TGRZ	**Tauranga**	**0.48**	**12**	P			**Pn**	**14 45 32.3**	**+0.8**
TGRZ				S			**S**	**14 45 50.0**	**-2.0**
TLZ	**Tolley Road**	**0.48**	**254**	P			**Pn**	**14 45 33.1**	**+1.5**
TLZ				S			**S**	**14 45 50.9**	**-1.2**
OPRZ	**Ohinepanea**	**0.49**	**44**	P			**Pn**	**14 45 32.3**	**+0.7**
WHTZ	**Whakaora**	**0.49**	**196**	P			**Pn**	**14 45 33.3**	**+1.7**
EDRZ	**Edgecumbe**	**0.49**	**79**	P			**Pn**	**14 45 32.6**	**+0.9**
MUGZ	**Murupara**	**0.58**	**119**	P			**Pn**	**14 45 32.8**	**+0.9**
WATZ	**Wairara**	**0.60**	**211**	P			**Pn**	**14 45 33.7**	**+1.7**
MRHZ	**Matea Rd**	**0.67**	**161**	P			**Pn**	**14 45 33.8**	**+1.4**
MRHZ				S			**S**	**14 45 50.9**	**-2.9**
TOZ	**Tahuroa Road**	**0.68**	**313**	P			**Pn**	**14 45 33.7**	**+1.3**
TOZ				S			**S**	**14 45 51.7**	**-1.7**
HATZ	**Hinemaiaia**	**0.69**	**182**	P			**Pn**	**14 45 34.0**	**+1.5**
HATZ				S			**S**	**14 45 51.4**	**-2.5**
RATZ	**Rangitukua**	**0.72**	**203**	P			**Pn**	**14 45 34.3**	**+1.6**
URZ	**Urewera**	**0.78**	**95**	P			**Pn**	**14 45 33.7**	**+0.8**
URZ				S			**S**	**14 45 51.3**	**-3.0**
RITZ	**Rihia Road**	**0.81**	**195**	P			**Pn**	**14 45 35.3**	**+2.2**
MTHZ	**Maungataniwha**	**0.86**	**140**	P			**Pn**	**14 45 35.2**	**+1.7**
MTHZ				S			**S**	**14 45 53.5**	**-2.0**
MYRZ	**Mayor Island**	**0.92**	**6**	P			**Pn**	**14 45 35.3**	**+1.4**
NTVZ	**North Tongariro**	**0.97**	**201**	P			**Pn**	**14 45 36.1**	**+1.9**
TMVZ	**Te Maari**	**0.98**	**200**	P			**Pn**	**14 45 36.1**	**+1.9**
ETVZ	**East Tongariro**	**0.99**	**199**	P			**Pn**	**14 45 36.3**	**+1.9**
BKZ	**Black Stump Fm**	**1.01**	**164**	P			**Pn**	**14 45 36.2**	**+1.8**
BKZ	**Black Stump Fm**	**1.01**	**164**	P			**Pn**	**14 45 36.1**	**+1.7**
WTVZ	**West Tongariro**	**1.01**	**205**	P			**Pn**	**14 45 36.4**	**+1.9**
NNVZ	**North Ngauruho**	**1.02**	**203**	P			**Pn**	**14 45 36.5**	**+1.9**
TWVZ	**Taurewa**	**1.03**	**212**	P			**Pn**	**14 45 36.6**	**+2.0**
OTVZ	**Oturere**	**1.03**	**201**	P			**Pn**	**14 45 37.0**	**+2.3**
RAHZ	**Arahi**	**1.04**	**134**	P			**Pn**	**14 45 36.9**	**+2.4**
NMHZ	**Naumai**	**1.04**	**150**	P			**Pn**	**14 45 37.3**	**+2.7**
HIZ	**Hauiti**	**1.05**	**252**	P			**Pn**	**14 45 36.7**	**+2.1**
HIZ	**Hauiti**	**1.05**	**252**	P			**Pn**	**14 45 36.6**	**+2.0**
RAGZ	**Rawiri**	**1.05**	**107**	P			**Pn**	**14 45 36.6**	**+1.8**
RAGZ				S			**S**	**14 45 56.4**	**-1.3**
SNVZ	**South Ngauruho**	**1.06**	**201**	P			**Pn**	**14 45 37.0**	**+2.1**
NGZ	**Ngauruhoe**	**1.06**	**203**	P			**Pn**	**14 45 36.8**	**+1.9**
MWZ	**Matawai**	**1.11**	**97**	P			**Pn**	**14 45 36.5**	**+1.4**
SNGZ	**Shannon Statio**	**1.11**	**122**	P			**Pn**	**14 45 37.3**	**+2.2**
TUVZ	**Tukino**	**1.13**	**199**	P			**Pn**	**14 45 37.6**	**+2.2**
FWHZ	**Far West T-bar**	**1.15**	**203**	P			**Pn**	**14 45 37.4**	**+1.8**
WHVZ	**Whangaehu Hut**	**1.16**	**201**	P			**Pn**	**14 45 37.6**	**+1.9**
DRZ	**Dome Shelter**	**1.16**	**202**	P			**Pn**	**14 45 38.3**	**+2.5**
TRVZ	**Turoa**	**1.19**	**202**	P			**Pn**	**14 45 38.0**	**+2.1**
WNVZ	**Wahianoa**	**1.20**	**200**	P			**Pn**	**14 45 38.1**	**+2.1**
WHHZ	**Waihua**	**1.23**	**136**	P			**Pn**	**14 45 38.5**	**+2.5**
MOVZ	**Moawhango**	**1.24**	**194**	P			**Pn**	**14 45 38.0**	**+1.8**
RUGZ	**Raukumara Rang**	**1.24**	**80**	P			**Pn**	**14 45 36.7**	**+0.5**
KWHZ	**Kaweka Forest**	**1.25**	**170**	P			**Pn**	**14 45 38.5**	**+2.3**
PKVZ	**Pokaka**	**1.25**	**209**	P			**Pn**	**14 45 38.4**	**+2.2**
ARHZ	**Aropaoanui**	**1.26**	**148**	P			**Pn**	**14 45 39.0**	**+2.7**
BHHZ	**Black Hill Sta**	**1.29**	**182**	P			**Pn**	**14 45 38.5**	**+2.0**
MTVZ	**Mangateitei**	**1.29**	**203**	P			**Pn**	**14 45 38.8**	**+2.2**
MKAZ	**Moumakai**	**1.33**	**325**	P			**Pn**	**14 45 38.6**	**+1.7**
TKGZ	**Te Karaka**	**1.37**	**101**	P			**Pn**	**14 45 39.3**	**+2.1**
HAZ	**Te Kaha**	**1.38**	**72**	P			**Pn**	**14 45 38.0**	**+0.8**
RIGZ	**Rimuhau**	**1.38**	**112**	P			**Pn**	**14 45 39.5**	**+2.3**
VRZ	**Vera Road**	**1.42**	**229**	P			**Pn**	**14 45 40.4**	**+2.8**
KRUZ	**Kereru**	**1.46**	**173**	P			**Pn**	**14 45 40.3**	**+2.4**
TWGZ	**Tauwhareparae**	**1.46**	**90**	P			**Pn**	**14 45 40.2**	**+2.2**
KNZ	**Kokohu**	**1.46**	**125**	P			**Pn**	**14 45 40.2**	**+2.2**
KUZ	**Kuaotunu**	**1.49**	**347**	P			**Pn**	**14 45 39.7**	**+1.5**
PRGZ	**Paritu Road**	**1.55**	**118**	P			**Pn**	**14 45 41.2**	**+2.4**
ETAZ	**East Tamaki Re**	**1.57**	**322**	P			**Pn**	**14 45 40.8**	**+1.8**
PKGZ	**Pakihiroa**	**1.57**	**79**	P			**Pn**	**14 45 40.7**	**+1.7**
CKHZ	**Cape Kidnapper**	**1.64**	**153**	P			**Pn**	**14 45 42.5**	**+3.0**
AWAZ	**Awhitu Peninsu**	**1.64**	**313**	P			**Pn**	**14 45 41.5**	**+1.9**
CNGZ	**Carnagh Statio**	**1.66**	**101**	P			**Pn**	**14 45 42.6**	**+2.8**
MHEZ	**Mangahewa**	**1.67**	**238**	P			**Pn**	**14 45 43.3**	**+3.5**
PUZ	**Puketiti**	**1.68**	**86**	P			**Pn**	**14 45 41.7**	**+1.7**
MHGZ	**Mahia Peninsul**	**1.69**	**125**	P			**Pn**	**14 45 42.8**	**+2.8**
KAHZ	**Kahuranaki**	**1.70**	**160**	P			**Pn**	**14 45 43.1**	**+2.9**
PNHZ	**Pukenui**	**1.71**	**178**	P			**Pn**	**14 45 42.6**	**+2.2**
EPAZ	**Eden Park BICE**	**1.72**	**320**	P			**Pn**	**14 45 42.2**	**+1.8**
MBAZ	**Motutapu North**	**1.73**	**325**	P			**Pn**	**14 45 42.5**	**+2.0**
HBAZ	**Herne Bay Bore**	**1.75**	**320**	P			**Pn**	**14 45 42.5**	**+1.8**
WTAZ	**Waiatarua**	**1.77**	**315**	P			**Pn**	**14 45 43.0**	**+2.1**
WAZ	**Wanganui**	**1.79**	**209**	P			**Pn**	**14 45 43.8**	**+2.7**
DREZ	**Durham Road**	**1.81**	**236**	P			**Pn**	**14 45 44.6**	**+3.4**
MXZ	**Matakaoa Point**	**1.83**	**70**	P			**Pn**	**14 45 43.7**	**+2.2**
WMGZ	**Waiomatatini S**	**1.84**	**79**	P			**Pn**	**14 45 43.5**	**+1.9**
LREZ	**Lake Rotokare**	**1.85**	**226**	P			**Pn**	**14 45 45.0**	**+3.4**
TSZ	**Takapari Road**	**1.86**	**184**	P			**Pn**	**14 45 44.1**	**+2.3**
WPHZ	**Waipukurau**	**1.88**	**173**	P			**Pn**	**14 45 44.4**	**+2.5**
RVAZ	**Riverhead Bore**	**1.89**	**319**	P			**Pn**	**14 45 43.9**	**+1.9**
ABAZ	**Army Bay**	**1.90**	**327**	P			**Pn**	**14 45 44.4**	**+2.3**
PXZ	**Pawanui**	**1.92**	**163**	P			**Pn**	**14 45 45.0**	**+2.7**
NEZ	**North Egmont**	**1.92**	**235**	P			**Pn**	**14 45 46.0**	**+3.6**
PREZ	**Palmer Road**	**1.92**	**233**	P			**Pn**	**14 45 46.0**	**+3.7**
PKE	**Pukeiti**	**1.95**	**239**	P			**Pn**	**14 45 46.1**	**+3.5**
KHEZ	**Kahui Hut**	**1.98**	**236**	P			**Pn**	**14 45 46.5**	**+3.4**
GRZ	**Great Barrier**	**2.02**	**344**	P			**Pn**	**14 45 45.4**	**+2.0**
NBEZ	**Newall Road No**	**2.07**	**238**	P			**Pn**	**14 45 47.4**	**+3.5**
DWHZ	**Dannevirke**	**2.10**	**179**	P			**Pn**	**14 45 46.4**	**+2.2**
OHWZ	**Ohakea**	**2.10**	**197**	P			**Pn**	**14 45 47.1**	**+2.9**
PRHZ	**Porangahau**	**2.10**	**169**	P			**Pn**	**14 45 46.9**	**+2.6**
NMEZ	**Namu Road**	**2.14**	**235**	P			**Pn**	**14 45 48.1**	**+3.5**
POWZ	**Post Office Ro**	**2.21**	**187**	P			**Pn**	**14 45 47.6**	**+2.2**
ANWZ	**Angora Road**	**2.

mbtmp4.1/13,ML3.3/1,MS3.8/18,Error ellipse: s-maj=21.2km s-min=15.0km az=57.0

NEIC ***22*** *14:51:55.1± 1.7, 55.02S± 0.08× 31.42W± 0.10, h10km± 1km, mb4.6/20,Error ellipse: s-maj=13.5km s-min=9.2km az=165.0*

ISC 22 14:51:55.1±0.5,**55.00S**±0.08×**31.49W**±0.09,**h10**km,**n65,** σ=**0.94**/**47**,**mb4.4**/**17**,**MS3.8**/**18**,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.99**	**282**	Pn	**Pn**	**14 52 40.8**	**-1.8**
ORCD	**Orcadas**	**3.09**	**225**	Pn	**Pn**	**14 54 04.7**	**-1.6**
EFI	**East Falkland**	**16.18**	**271**	P	**P**	**14 55 45.3**	**-0.2**
PMSA	**Palmer Station**	**18.81**	**226**	P	**P**	**14 56 14.5**	**+0.1**
	0.1nm,0.3s,baz=53,slow=5.1,SNR=2.7 3.6nm,0.9s						
VNA3	**Neumayer Olymp**	**18.84**	**158**	P	**Pn**	**14 56 16.9**	**+1.5**
VNA2	**Neumayer--Watz**	**19.12**	**156**	P	**P**	**14 56 17.7**	**-0.2**
	baz=314,slow=11						
SNAA	**Sanae**	**20.72**	**155**	P	**P**	**14 56 36.5**	**+1.2**
SNAA	**Sanae**	**20.72**	**155**	P	**P**	**14 56 35.9**	**+0.5**
	3.4nm,0.7s,baz=307,slow=8.8,SNR=19						
SNAA				LR	LR	15 03 27.4	
	comp=Z,93nm,19.4s,baz=322,slow=34 3.4nm,0.7s						
SNAA	**Sanae**	**20.72**	**155**		**P**	**14 56 36.4**	**+1.0**
TROLL	**Troll, Antarti**	**22.29**	**153**	P	**P**	**14 56 53.0**	**+0.7**
BELA	**Belgrano 2**	**23.00**	**182**	P	**P**	**14 56 58.5**	**-1.1**
PLTB	**Pedras Altas**	**28.01**	**317**	P	**P**	**14 57 47.6**	**+1.5**
PLTB				IAmb	IAmb	14 58 18.8	
	comp=Z,18nm,1.3s						
PLCA	**Paso Flores**	**29.39**	**283**	P	**P**	**14 58 00.8**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=134,slow=14,SNR=3.3						
PLCA				LR	LR	15 09 05.0	
	comp=Z,232nm,18.0s,baz=188,slow=35 comp=Z,1.1nm,0.8s						
CPUP	**Villa Florida**	**34.31**	**316**	P	**P**	**14 58 42.3**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=161,slow=9.6,SNR=7.2						
CPUP				LR	LR	15 14 11.7	
	comp=Z,65nm,18.5s,baz=194,slow=39 comp=Z,4.0nm,0.7s						
CPUP	**Villa Florida**	**34.31**	**316**	P	**P**	**14 58 41.7**	**+0.1**
CPUP				IAmb	IAmb	14 58 43.2	
	comp=Z,7.1nm,0.9s						
MT01	**Popeta**	**34.73**	**291**	P	**P**	**14 58 44.7**	**-0.5**
QSPA	**South Pole Qui**	**35.25**	**180**	P	**P**	**14 58 50.2**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=191,slow=1.5,SNR=16						
QSPA				LR	LR	15 12 51.8	
	comp=Z,131nm,18.5s,baz=186,slow=36 comp=Z,1.8nm,0.8s						
QSPA	**South Pole Qui**	**35.25**	**180**	P	**P**	**14 58 50.0**	**+0.4**
QSPA				IAmb	IAmb	14 59 01.1	
	comp=Z,9.0nm,1.1s						
CO01	**Juntas del Tor**	**37.15**	**296**	P	**P**	**14 59 07.1**	**+0.9**
CO01				IAmb	IAmb	14 59 42.4	
	comp=Z,11nm,1.2s						
GO02	**Mina Guanaco**	**40.84**	**301**	P	**P**	**14 59 37.3**	**+0.1**
GO02				IAmb	IAmb	14 59 42.1	
	comp=Z,8.7nm,0.8s						
BDFB	**Brasilia**	**41.31**	**335**	P	**P**	**14 59 41.2**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=152,slow=8.6,SNR=4.4						
BDFB				LR	LR	15 12 45.6	
	comp=Z,130nm,21.8s,baz=122,slow=30 comp=Z,2.8nm,0.6s						
MAW	**Mawson**	**42.43**	**146**	P	**P**	**14 59 49.1**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=219,slow=5.4,SNR=6.5 comp=Z,2.2nm,0.7s						
MAW	**Mawson**	**42.43**	**146**	P	**P**	**14 59 48.5**	**-0.8**
LVC	**Limon Verde**	**42.67**	**304**	P	**P**	**14 59 52.2**	**0.0**
	comp=Z,2.6nm,0.4s,baz=191,slow=4.7,SNR=2.2 comp=Z,2.6nm,0.4s						
SUR	**Sutherland**	**42.80**	**80**	LR	LR	15 14 16.7	
	comp=Z,61nm,19.9s,baz=214,slow=31						
PB01	**IPOC Station P**	**44.28**	**305**	P	**P**	**15 00 05.2**	**+0.2**
PB01				IAmb	IAmb	15 00 23.6	
	comp=Z,21nm,1.5s						
GO01	**Chusmiza**	**45.33**	**306**	P	**P**	**15 00 14.1**	**+0.3**
GO01				IAmb	IAmb	15 00 27.8	
	comp=Z,11nm,1.2s						
VNDA	**Vanda**	**47.48**	**184**	P	**P**	**15 00 29.6**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=190,slow=4.8,SNR=8.1 comp=Z,1.1nm,0.8s						
VNDA	**Vanda**	**47.48**	**184**	P	**P**	**15 00 29.4**	**-0.1**
LPAZ	**La Paz**	**47.79**	**309**	P	**P**	**15 00 33.1**	**-0.1**
	comp=Z,2.1nm,0.4s,baz=147,slow=3.4,SNR=9.0 comp=Z,2.1nm,0.4s						
LPAZ	**La Paz**	**47.79**	**309**	P	**P**	**15 00 33.7**	**+0.5**
LPAZ				IAmb	IAmb	15 00 42.4	
	comp=Z,7.7nm,1.2s						
H10S2	**ASCENSION HYDR**	**47.84**	**23**	T	T	15 52 11.1	
	baz=190						
H10S3	**ASCENSION HYDR**	**47.84**	**23**	T	T	15 52 25.0	
	baz=30						
BOSA	**Boshof**	**48.15**	**81**	P	**P**	**15 00 35.2**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=220,slow=8.7,SNR=1.7 comp=Z,2.5nm,0.7s						
BOSA	**Boshof**	**48.15**	**81**	P	**P**	**15 00 35.3**	**-0.2**
H10N1	**ASCENSION HYDR**	**48.95**	**23**	T	T	15 54 25.1	
	baz=195,slow=74						
H10N3	**ASCENSION HYDR**	**48.95**	**23**	T	T	15 53 32.1	
	baz=195						
H10N2	**ASCENSION HYDR**	**48.97**	**23**	T	T	15 53 36.1	
	baz=195,slow=74						
RCBR	**Riachuelo**	**49.16**	**354**	LR	LR	15 19 10.6	
	comp=Z,83nm,18.2s,baz=321,slow=33						
LBTB	**Lobatse**	**51.12**	**78**	P	**P**	**15 00 56.3**	**-1.7**
	comp=Z,3.7nm,0.9s,baz=200,slow=6.8,SNR=2.8 comp=Z,3.7nm,0.9s						
LBTB	**Lobatse**	**51.12**	**78**	P	**P**	**15 00 56.3**	**-1.7**
TSUM	**Tsumeb**	**51.40**	**66**	LR	LR	15 18 24.7	
	comp=Z,60nm,19.4s,baz=160,slow=31						
SAML	**Samuel**	**52.36**	**319**	P	**P**	**15 01 07.1**	**-0.1**
SAML				IAmb	IAmb	15 01 09.0	
	comp=Z,7.3nm,1.1s						
BOAV	**Boa Vista**	**62.00**	**327**	P	**P**	**15 02 14.7**	**-0.8**
BOAV				IAmb	IAmb	15 02 16.9	
	comp=Z,7.5nm,0.8s						
MDP	**Montagnes des**	**62.41**	**336**	LR	LR	15 27 22.6	
	comp=Z,66nm,20.8s,baz=184,slow=34						
DBIC	**Dimbokro**	**65.34**	**29**	LR	LR	15 25 08.7	
	comp=Z,48nm,18.3s,baz=180,slow=31						
SDV	**Santo Domingo**	**71.57**	**319**	LR	LR	15 35 14.7	
	comp=Z,58nm,20.2s,baz=125,slow=36						
TORD	**Torodi Ar. Bea**	**73.44**	**34**	P	**P**	**15 03 27.9**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=199,slow=6.4,SNR=7.8 comp=Z,1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.44**	**34**	P	**P**	**15 03 26.6**	**-0.9**
TORD				IAmb	IAmb	15 03 33.2	
	comp=Z,7.3nm,1.5s						
SJG	**San Juan**	**78.57**	**327**	LR	LR	15 42 25.0	
	comp=Z,26nm,18.7s,baz=186,slow=39						
RPZ	**Rata Peaks**	**79.81**	**196**	LR	LR	15 36 03.4	
	comp=Z,42nm,18.5s,baz=119,slow=33						
MDT	**Midelt**	**90.46**	**22**	LR	LR	15 39 13.8	
	comp=Z,98nm,21.5s,baz=172,slow=31						
ATD	**Arta Tunnel**	**90.57**	**71**	LR	LR	15 44 44.7	
	comp=Z,100nm,18.0s,baz=24,slow=35						
STKA	**Stephens Creek**	**93.27**	**174**	LR	LR	15 44 27.1	
	comp=Z,105nm,20.1s,baz=204,slow=34						
KEST	**Kesra**	**96.92**	**32**	LR	LR	15 43 57.2	
	comp=Z,117nm,19.6s,baz=226,slow=32						
ESDC	**Sonseca Array**	**97.20**	**21**	LR	LR	15 44 24.3	
	comp=Z,75nm,20.1s,baz=158,slow=32						
ASAR	**Alice Springs**	**100.66**	**166**	P		**Pdif**	**15 05 41.6**	**-1.8**
	comp=Z,0.2nm,0.8s,baz=188,slow=3.6,SNR=2.5						
FINES	**FINESS Array B**	**124.63**	**30**	PKP		**PKPdf**	**15 10 52.3**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=238,slow=3.6,SNR=5.5						
CMAR	**Chiang Mai Arr**	**127.73**	**114**	PKP		**PKiKP**	**15 11 01.9**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=236,slow=4.6,SNR=6.1						
ARCES	**ARCESS Array B**	**130.90**	**23**	PKP		**PKiKP**	**15 11 06.3**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=247,slow=2.5,SNR=4.4						
YKA	**Yellowknife Ar**	**133.78**	**320**	PKP		**PKPdf**	**15 11 11.1**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=130,slow=2.6,SNR=4.2						
MKAR	**Makanchi Array**	**138.89**	**73**	PKP		**PKPdf**	**15 11 21.9**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=158,slow=1.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**144.12**	**65**	PKP		**PKPab**	**15 11 27.6**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=225,slow=4.0,SNR=4.3						
ILAR	**Eielson Array**	**147.60**	**314**	PKPbc		**PKPbc**	**15 11 37.8**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=123,slow=1.6,SNR=30						
SONM	**Songino Array**	**153.12**	**88**	PKPbc		**PKPbc**	**15 11 51.4**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=250,slow=2.5,SNR=5.1						

NEIC ***22*** *14:56:48.5± 2.5, 15.5S± 0.2× 167.5E± 0.2, h116km± 21km, mb4.3/16,Error ellipse: s-maj=32.9km s-min=19.7km az=112.0*

IDC ***22*** *14:56:50.6± 4.9, 15.69S× 167.44E, h145km± 51km, mb3.5/8, mbtmp4.0/9,Error ellipse: s-maj=44.8km s-min=23.6km az=152.0*

ISC 22 14:56:48.7±0.9,**15.54S**±0.08×**167.5E**±0.1,**h124**km,**n31,** σ=**29**/**32**,**mb4.1**/**15**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**5.85**	**211**		**Pn**	**14 58 13.2**	**+0.1**
MARNC	**Mare, Loyalty**	**5.94**	**175**	Pn	**Pn**	**14 58 12.5**	**-1.8**
DZM	**Mont Dzumac**	**6.58**	**189**	P	**Pn**	**14 58 24.3**	**+1.3**
DZM	7.3nm,0.3s,baz=323,slow=21,SNR=38			S	**Sn**	**14 59 34.7**	**-2.0**
	14nm,0.5s,baz=323,slow=20,SNR=14						
ONTNC	**Ouen Toro**	**6.81**	**188**	Pn	**Pn**	**14 58 28.5**	**+2.5**
OUENC	**Ouen Island, N**	**6.87**	**185**	Pn	**Pn**	**14 58 29.2**	**+2.3**
PINNC	**Pines Island,**	**7.04**	**180**	Pn	**Pn**	**14 58 31.4**	**+2.2**
EIDS	**Eidsvold**	**18.21**	**235**	Pn	**Pn**	**15 00 54.5**	**+1.0**
CTA	**Charters Tower**	**20.72**	**254**	P	**P**	**15 01 19.5**	**+0.1**
	2.5nm,0.7s,baz=81,slow=9.8,SNR=5.2 2.5nm,0.7s						
CTAO	**Charters Tower**	**20.72**	**254**	P	**P**	**15 01 20.3**	**+0.9**
COEN	**Coen**	**23.57**	**271**	P	**P**	**15 01 47.7**	**-0.5**
COEN				IAmb	IAmb	15 02 19.3	
	comp=Z,11nm,1.3s						
STKA	**Stephens Creek**	**28.64**	**231**	P	**P**	**15 02 33.0**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=43,slow=9.1,SNR=7.9 comp=Z,1.3nm,0.5s						
STKA	**Stephens Creek**	**28.64**	**231**	P	**P**	**15 02 34.4**	**+0.7**
WR0	**Warramunga Arr**	**31.66**	**257**	P	**P**	**15 02 59.0**	**-1.4**
WR0				IAmb	IAmb	15 03 38.8	
	comp=Z,4.6nm,1.2s						
WB0	**Warramunga Arr**	**31.79**	**257**	P	**P**	**15 03 00.1**	**-1.5**
WB0				IAmb	IAmb	15 03 12.1	
	comp=Z,4.8nm,1.4s						
WB2	**Warramunga Arr**	**31.84**	**257**	P	**P**	**15 03 00.0**	**-2.0**
WB2				IAmb	IAmb	15 03 18.8	
	comp=Z,4.0nm,1.2s						
WRAB	**Tennant Creek**	**31.84**	**257**	P	**P**	**15 03 00.3**	**-1.7**
WRA	**Warramunga Arr**	**31.85**	**257**	P	**P**	**15 03 00.1**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=83,slow=7.8,SNR=20 comp=Z,0.9nm,0.5s						
AS31	**Alice Springs**	**32.59**	**250**	P	**P**	**15 03 07.8**	**-0.9**
AS31				IAmb	IAmb	15 03 08.9	
	comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**32.60**	**250**	P	**P**	**15 03 07.5**	**-1.1**
	comp=Z,3.8nm,0.5s,baz=75,slow=9.0,SNR=123 comp=Z,3.8nm,0.5s						
BBOO	**Buckleboo**	**33.26**	**233**	P	**P**	**15 03 14.7**	**+0.4**
BBOO				IAmb	IAmb	15 03 15.5	
	comp=Z,6.0nm,0.6s						
FAKI	**Fak Fak**	**36.90**	**286**	P	**P**	**15 03 45.6**	**-0.1**
KNRA	**Kununurra**	**37.27**	**264**	P	**P**	**15 03 47.9**	**-0.9**
FORT	**Forrest**	**39.08**	**240**	P	**P**	**15 04 04.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**40.08**	**260**	P	**P**	**15 04 12.0**	**-0.3**
FITZ				IAmb	IAmb	15 04 18.4	
	comp=Z,5.5nm,1.1s						
MBWA	**Marble Bar**	**45.55**	**255**	P	**P**	**15 04 56.3**	**-0.1**
MORW	**Morawa**	**49.12**	**245**	P	**P**	**15 05 23.8**	**-0.1**
MORW				IAmb	IAmb	15 05 59.8	
	comp=Z,15nm,1.1s						
PETK	**Petropavlovsk-**	**68.88**	**354**	P	**P**	**15 07 40.1**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=164,slow=6.9,SNR=4.0 comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**75.47**	**294**	P	**P**	**15 08 20.8**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=129,slow=5.0,SNR=6.9 comp=Z,0.7nm,0.7s						
SONM	**Songino Array**	**83.27**	**324**	P	**P**	**15 09 01.3**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=145,slow=5.3,SNR=1.7 comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**87.22**	**18**	P	**P**	**15 09 20.3**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=235,slow=4.8,SNR=8.6 comp=Z,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**121.08**	**345**	PKP	**PKPdf**	**15 15 25.9**	**-0.2**
	comp=Z,2.4nm,1.0s,baz=64,slow=2.8,SNR=5.7						

IDC ***22*** *15:18:55.2± 2.1, 7.55S× 128.96E, h135km± 26km, mb3.2/1, mbtmp3.7/6,MS3.0/2,Error ellipse: s-maj=25.9km s-min=19.6km az=121.0*

ISC 22 15:18:54.8±0.9,**7.58S**±0.07×**128.86E**±0.08,**h131**km,**n14,** σ=**3**/**33**/**17**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.69**	**157**	P	**Pn**	**15 20 20.2**	**+3.0**
FAKI	**Fak Fak**	**5.73**	**36**	P	**Pn**	**15 20 15.6**	**-2.1**
BATI	**Baumata**	**5.76**	**243**	P	**Pn**	**15 20 21.7**	**+3.5**
BATI	12nm,0.3s,baz=90,slow=4.0,SNR=7.8			S	**Sn**	**15 21 26.2**	**+3.0**
	13nm,0.3s,baz=108,slow=19,SNR=8.1						
KDU	**Kakadu**	**6.19**	**145**	P	**Pn**	**15 20 26.4**	**+2.4**
SIJI	**Sorong**	**7.08**	**20**	P	**Pn**	**15 20 35.2**	**-0.8**
	2.2nm,0.2s,baz=231,slow=22,SNR=13						
KNRA	**Kununurra**	**8.05**	**181**	P	**Pn**	**15 20 51.5**	**+2.6**
FITZ	**Fitzroy Crossi**	**10.91**	**196**	P	**Pn**	**15 21 27.1**	**-0.3**
	1.5nm,0.3s,baz=24,slow=12,SNR=40						
FITZ				S	**Sn**	**15 23 23.9**	**-3.9**
	3.0nm,0.7s,baz=310,slow=9.2,SNR=2.9						
FITZ				LR	LR	15 26 39.2	
	comp=Z,31nm,21.7s,baz=247,slow=42						
FITZ	**Fitzroy Crossi**	**10.91**	**196**	P	**Pn**	**15 21 27.8**	**+0.4**
PLAI	**Plampang**	**11.04**	**263**	P	**Pn**	**15 21 25.8**	**-3.3**
WRA	**Warramunga Arr**	**13.39**	**157**	P	**Pn**	**15 21 59.2**	**-0.5**
	0.3nm,0.3s,baz=332,slow=14,SNR=10						
WRA				S	**Sn**	**15 24 21.9**	**-5.7**
	0.5nm,0.3s,baz=329,slow=24,SNR=8.6						
ASAR	**Alice Springs**	**16.71**	**164**	P	**P**	**15 22 43.0**	**+1.7**
	0.2nm,0.5s,baz=334,slow=9.8,SNR=3.3						
ASAR				S	**Sn**	**15 25 43.3**	**-4.3**
	0.2nm,0.4s,baz=335,slow=25,SNR=6.6						
WRKA	**Warakurna**	**17.37**	**182**	P	**Pn**	**15 22 54.4**	**+5.2**
PSI	**Prapat**	**31.60**	**288**	LR	LR	15 38 44.4	
	comp=Z,73nm,18.2s,baz=212,slow=38						
MKAR	**Makanchi Array**	**68.10**	**327**	P	**P**	**15 29 40.6**	**+0.1**
	0.4nm,0.5s,baz=126,slow=7.9,SNR=4.9 0.4nm,0.5s						

DJA ***22*** *15:33:30.7± 0.6, 2.7S× 13.8E, h17km± 6km, M4.3/10, mbB4.9/5, mb4.4/10, MLv4.3/7, Mw(mB)4.2/5*

NEIC ***22*** *15:33:31.6± 1.3, 2.40S× 0.10× 138.4E± 0.1, h35km± 2km, mb4.5/40,Error ellipse: s-maj=18.3km s-min=15.6km az=232.0*

IDC ***22*** *15:33:33.6± 4.3, 2.52S× 138.45E, h72km± 36km, mb3.6/7, mbtmp4.0/10,ML4.2/3,MS3.0/3,Error ellipse: s-maj=39.5km s-min=12.3km az=92.0*

ISC 22 15:33:31.2±0.5,**2.47S**±0.05×**138.30E**±0.05,**h35**km,**n79,** σ=**34**/**77**,**mb4.5**/**30**,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.63**	**41**	P	**Pn**	**15 33 43.7**	**0.0**
SMPI				S	**Sn**	**15 33 52.3**	**-0.1**
GENI	**Genyem**	**1.87**	**94**	P	**Pn**	**15 34 03.0**	**+2.2**
GENI				S	**Sn**	**15 34 25.9**	**+2.7**
SRPI	**Serui, Papua**	**2.14**	**286**	P	**Pn**	**15 34 05.5**	**+1.0**
SRPI				S	**Sn**	**15 34 29.8**	**-0.1**
BAKI	**Biak**	**2.53**	**300**	P	**Pn**	**15 34 11.3**	**+1.4**
FAKI	**Fak Fak**	**6.06**	**266**		**Pn**	**15 35 00.2**	**+1.8**
FAKI	**Fak Fak**	**6.06**	**266**	P	**Pn**	**15 35 00.1**	**+1.7**
	0.2nm720nm38nm,0.5s						
SIJI	**Sorong**	**7.21**	**283**	P	**Pn**	**15 35 18.1**	**+3.9**
	1.9nm,0.3s,baz=156,slow=24,SNR=6.2 4.0nm,0.3s						
SAUI	**Saumlaki**	**8.87**	**232**	P	**Pn**	**15 35 37.4**	**+0.5**
	90nm,1.1s						
AAI	**Ambon**	**10.16**	**263**	P	**Pn**	**15 35 56.0**	**+1.2**
	12nm,0.5s						
COEN	**Coen**	**12.39**	**157**	Pn	**Pn**	**15 36 24.8**	**-0.5**
MTN	**Manton Dam**	**12.52**	**214**	Pn	**Pn**	**15 36 27.2**	**+0.3**
KNRA	**Kununurra**	**16.14**	**215**		**Pn**	**15 37 15.5**	**-0.1**
KNRA				IAmb	IAmb	15 37 20.4	
	comp=Z,15nm,0.5s						
BATI	**Baumata**	**16.45**	**241**	P	**P**	**15 37 24.6**	**+2.7**
	comp=Z,48nm,0.6s,baz=130,slow=3.2,SNR=8.7						
BATI	**Baumata**	**16.45**	**241**	P	**P**	**15 37 27.5**	**+5.6**
APSI	**Ampana**	**16.71**	**275**	P	**Pn**	**15 37 19.6**	**-3.3**
GUMO	**Guam**	**17.23**	**22**	LR	LR	15 42 48.6	
	comp=Z,44nm,19.8s,baz=232,slow=32						
WB0	**Warramunga Arr**	**17.61**	**192**	Pn	**Pn**	**15 37 32.9**	**-1.2**
WRAB	**Tennant Creek**	**17.78**	**192**	Pn	**Pn**	**15 37 35.0**	**-1.2**
WB2	**Warramunga Arr**	**17.79**	**192**	Pn	**Pn**	**15 37 35.3**	**-1.0**
WRA	**Warramunga Arr**	**17.80**	**192**	P	**Pn**	**15 37 34.5**	**-1.8**
	comp=Z,1.6nm,0.3s,baz=15,slow=13,SNR=64 comp=Z,3.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.89**	**218**	P	**P**	**15 38 00.1**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=46,slow=13,SNR=9.2 comp=Z,2.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.89**	**218**	P	**P**	**15 38 00.2**	**+0.4**
AS31	**Alice Springs**	**21.50**	**191**	P	**P**	**15 38 17.2**	**0.0**
ASAR	**Alice Springs**	**21.50**	**191**	P	**P**	**15 38 17.4**	**+0.1**
	comp=Z,8.0nm,0.7s,baz=21,slow=11,SNR=207						
ASAR				S	**S**	**15 42 11.7**	**-2.3**
	comp=Z,1.5nm,0.8s,baz=12,slow=21,SNR=7.4						
ASAR				LR	LR	15 47 23.1	
	comp=Z,86nm,19.8s,baz=180,slow=39 comp=Z,8.0nm,0.7s						
MBWA	**Marble Bar**	**25.93**	**223**	P	**P**	**15 39 00.7**	**+0.3**
PSA00	**Pilbara Seismi**	**26.14**	**222**	P	**P**	**15 39 02.1**	**-0.2**
PSA00	**Pilbara Seismi**	**26.14**	**222**	P	**P**	**15 39 02.4**	**+0.1**
PSA00				IAmb	IAmb	15 39 26.6	
	comp=Z,12nm,1.5s						
SBUM	**Sibu**	**26.53**	**280**	P	**P**	**15 39 05.6**	**-0.3**
SBUM				IAmb	IAmb	15 39 47.4	
	comp=Z,13nm,1.5s						
STKA	**Stephens Creek**	**29.42**	**174**	P	**P**	**15 39 32.0**	**+0.4**
FORT	**Forrest**	**29.78**	**198**	P	**P**	**15 39 35.0**	**+0.2**
FORT				IAmb	IAmb	15 40 12.5	
	comp=Z,10nm,0.8s						
BBOO	**Buckleboo**	**30.26**	**184**	P	**P**	**15 39 39.6**	**+0.7**
BBOO				IAmb	IAmb	15 39 47.7	
	comp=Z,15nm,1.4s						
ONTNC	**Ouen Toro**	**33.71**	**128**	P	**P**	**15 40 09.8**	**+0.3**
MORW	**Morawa**	**33.89**	**216**	P	**P**	**15 40 11.3**	**+0.4**
H11S3	**WAKE ISLAND Hy**	**34.85**	**52**	T	T	16 16 14.1	
	baz=236,slow=75,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**34.86**	**52**	T	T	16 16 14.8	
	baz=236,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**34.87**	**52**	T	T	16 16 15.5	
	baz=236,slow=75,SNR=12						
KSRS	**Korea Array**	**40.87**	**347**	LR	LR	15 55 33.1	
	comp=Z,11nm,21.2s,baz=345,slow=32						
CMAR	**Chiang Mai Arr**	**43.96**	**300**	P	**P**	**15 41 35.1**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=113,slow=6.9,SNR=2.3 comp=Z,0.5nm,0.4s						
PZH	**PanZhiHua**	**45.56**	**312**	P	**P**	**15 41 49.3**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,90nm,6.3s						
USA0B	**Ussuriysk Arra**	**46.80**	**354**	P	**P**	**15 41 56.0**	**-1.4**
USA0B				IAmb	IAmb	15 41 56.8	
	comp=Z,4.1nm,0.7s						
LZH	**Lanzhou**	**50.04**	**323**	*e*P	P	15 42 08.3	-15
LZH				pP	pP	15 42 15.8	-18
LZH				pmax	pmax		
	comp=Z,19nm,1.5s						
TUWZ	**Tuamarina**	**50.30**	**145**	P	**P**	**15 42 25.5**	**+1.0**
GTA	**Gaotai**	**54.63**	**324**	*e*P	**P**	**15 42 57.6**	**+0.8**
GTA				pP	pP	15 43 08.4	+1.0
GTA				sP	sP	15 43 11.8	+0.2
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**57.33**	**335**	P	**P**	**15 43 15.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=156,slow=11,SNR=2.1 comp=Z,0.4nm,0.6s						
WMQ	**Urumqi**	**64.57**	**322**	*e*P	**P**	**15 44 05.6**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
MK31	**Makanchi Array**	**69.35**	**322**	P	**P**	**15 44 34.7**	**-0.7**
MKAR	**Makanchi Array**	**69.35**	**322**	P	**P**	**15 44 34.6**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=116,slow=8.2,SNR=15 comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**69.35**	**322**	P	**P**	**15 44 35.0**	**-0.4**
MAKZ	**Makanchi**	**69.55**	**322**	P	**P**	**15 44 36.3**	**-0.3**
MAKZ				IAmb	IAmb	15 44 37.4	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**71.52**	**330**	P	**P**	**15 44 46.8**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=98,slow=5.8,SNR=5.4 comp=Z,1.0nm,0.6s						
GAR	**Garm**	**74.63**	**311**	P	**P**	**15 45 06.9**	**-0.5**
GAR				IAmb	IAmb	15 45 08.0	
	comp=Z,9.7nm,1.2s						
KK31	**Karatay Array**	**75.67**	**316**	P	**P**	**15 45 12.8**	**-0.3**
KKAR	**Karatay Array**	**75.67**	**316**	P	**P**	**15 45 12.6**	**-0.5**
VNDA	**Vanda**	**76.06**	**175**	P	**P**	**15 45 12.0**	**-2.6**
	comp=Z,0.6nm,0.9s,baz=304,slow=3.6,SNR=3.0 comp=Z,0.6nm,0.9s						
BRVK	**

PUZ			S	S		
RUGZ	**Raukumara Rang**	**2.38 202**	P	Pn	16 06 06.5	-1.4
RUGZ			S	S	16 06 42.4	-0.3
TWGZ	**Tauwhareparae**	**2.51 195**	P	Pn	16 06 08.3	-0.8
TWGZ			S	S	16 06 46.1	+1.2
KUZ	**Kuaotunu**	**2.68 247**	P	Pn	16 06 07.3	-3.7
OPRZ	**Ohinepanea**	**2.76 220**	P	Pn	16 06 11.6	-0.2
CNGZ	**Carnagh Statio**	**2.77 190**	P	Pn	16 06 11.3	-0.6
MWZ	**Matawai**	**2.77 201**	P	Pn	16 06 10.3	-1.7
MWZ			S	S	16 06 50.8	+0.9
TKGZ	**Te Karaka**	**2.79 196**	P	Pn	16 06 11.2	-0.9
TKGZ			S	S	16 06 50.7	+0.5
URZ	**Urewera**	**2.84 208**	Pn	Pn	16 06 11.5	-1.2
	3.7nm,0.3s,baz=0.0,slow=1.0,SNR=64					
URZ			Sn	S	16 06 52.5	+1.3
	9.1nm,0.3s,baz=9.0,slow=19,SNR=8.5 16nm,0.4s					
URZ	**Urewera**	**2.84 208**	P	Pn	16 06 11.4	-1.2
URZ			S	S	16 06 52.6	+1.3
URZ	**Urewera**	**2.84 208**	P	Pn	16 06 11.6	-1.2
RAGZ	**Rawiri**	**2.95 202**	P	Pn	16 06 13.5	-0.6
RAGZ			S	S	16 06 58.2	+4.5
RIGZ	**Rimuhau**	**3.06 195**	P	Pn	16 06 14.3	-0.9
RIGZ			S	S	16 06 58.1	+2.2
MUGZ	**Murupara**	**3.17 210**	P	Pn	16 06 15.4	-1.1
MUGZ			S	S	16 06 59.4	+1.5
MKAZ	**Moumakai**	**3.23 244**	P	Pn	16 06 14.3	-2.8
SNGZ	**Shannon Statio**	**3.24 201**	P	Pn	16 06 16.7	-0.6
SNGZ			S	S	16 07 00.3	+0.8
PRGZ	**Paritu Road**	**3.25 193**	P	Pn	16 06 16.1	-1.2
PRGZ			S	S	16 06 60.0	+0.3
TOZ	**Tahuroa Road**	**3.31 232**	P	Pn	16 06 16.6	-1.4
MBAZ	**Motutapu North**	**3.31 251**	P	Pn	16 06 14.3	-3.8
KNZ	**Kokohu**	**3.38 195**	P	Pn	16 06 17.2	-1.6
KNZ			S	S	16 07 02.0	-0.4
RAHZ	**Arahi**	**3.44 203**	P	Pn	16 06 18.8	-0.8
RAHZ			S	S	16 07 04.8	+1.1
MHGZ	**Mahia Peninsul**	**3.47 192**	P	Pn	16 06 18.5	-1.4
MHGZ			S	S	16 07 02.3	-1.9
TLZ	**Tolley Road**	**3.66 224**	P	Pn	16 06 23.5	+1.3
BKZ	**Black Stump Fm**	**3.87 208**	P	Pn	16 06 24.6	-0.1
KWHZ	**Kaweka Forest**	**4.12 207**	P	Pn	16 06 26.9	-0.9
TMVZ	**Te Maari**	**4.16 215**	P	Pn	16 06 27.3	-1.1
HIZ	**Hauiti**	**4.19 228**	P	Pn	16 06 29.9	+1.4
HIZ	**Hauiti**	**4.19 228**	P	Pn	16 06 29.9	+1.4
FWVZ	**Far West T-bar**	**4.35 216**	P	Pn	16 06 30.5	-0.2
MOVZ	**Moawhango**	**4.38 213**	P	Pn	16 06 29.0	-1.9
MOVZ			S	S	16 07 26.4	+2.3
WNVZ	**Wahianoa**	**4.38 215**	P	Pn	16 06 31.1	0.0
WNVZ			S	S	16 07 29.1	+4.7
PKVZ	**Pokaka**	**4.47 217**	P	Pn	16 06 32.5	+0.4
PXZ	**Pawanui**	**4.54 199**	P	Pn	16 06 31.0	-1.8
PXZ			S	S	16 07 28.3	+0.8
PNHZ	**Pukenui**	**4.63 206**	P	Pn	16 06 32.0	-2.1
PNHZ			S	S	16 07 30.4	+0.7
VRZ	**Vera Road**	**4.66 223**	P	Pn	16 06 38.6	+4.4
TSZ	**Takapari Road**	**4.85 207**	P	Pn	16 06 35.0	-1.7
DVHZ	**Dannevirke**	**4.99 204**	P	Pn	16 06 36.7	-1.8
DVHZ			S	S	16 07 35.8	-2.0
ANWZ	**Angora Road**	**5.04 201**	P	Pn	16 06 38.3	-0.8
PRWZ	**Pori Road**	**5.29 204**	P	Pn	16 06 41.6	-0.5
BFZ	**Birch Farm**	**5.32 201**	P	Pn	16 06 41.0	-1.5
BFZ	**Birch Farm**	**5.32 201**	P	Pn	16 06 41.2	-1.3
TIWZ	**Tintock**	**5.51 204**	P	Pn	16 06 43.2	-1.8
MRZ	**Mangatainoka R**	**5.52 206**	P	Pn	16 06 42.5	-2.5
HOWZ	**Holdsworth Sta**	**5.75 206**	P	Pn	16 06 45.7	-2.3
OGWZ	**Otaki Gorge**	**5.80 208**	P	Pn	16 06 46.2	-2.5
TMWZ	**Te Maipa**	**5.81 202**	P	Pn	16 06 46.8	-2.0
MTW	**Mount Morrison**	**5.98 205**	P	Pn	16 06 48.5	-2.4
CAW	**Cannon Point**	**6.10 208**	P	Pn	16 06 49.7	-2.7
QRZ	**Quartz Range**	**7.07 222**	P	Pn	16 07 06.8	+2.0
	49nm,2.6s					
KHZ	**Kahutara**	**7.81 210**	P	Pn	16 07 12.9	-1.3
RPZ	**Rata Peaks**	**9.94 215**	Pn	Pn	16 07 38.8	-2.7
	0.1nm,0.3s,baz=22,slow=19,SNR=1.6					
RPZ			Sn	S	16 09 27.5	-5.5
	0.3nm,0.3s,baz=24,slow=18,SNR=1.7 5.8nm,1.0s					
ODZ	**Otahua Downs**	**11.16 211**	P	Pn	16 07 57.3	+0.2
ASAR	**Alice Springs**	**40.49 275**	P	P	16 12 40.8	0.0
	0.6nm,0.4s,baz=116,slow=7.7,SNR=50 0.6nm,0.4s					
WRA	**Warramunga Arr**	**41.98 280**	P	P	16 12 52.2	-0.6
	0.4nm,0.4s,baz=118,slow=7.7,SNR=19 0.4nm,0.4s					
BRTR	**Keskin Array B**	**152.28 289**	PKPbc	PKPab	16 25 07.6	+4.2
	0.5nm,0.4s,baz=64,slow=3.2,SNR=1.7					

JMA ***22*** *16:05:55.2±0.2,23°.8N±0°.7×12°.2E±°, h11km±3km, MV2.5/10, TAIWAN REGION*
TAP ***22*** *16:05:55.9,23°.83N×121°.72E, h22km, ML3.4, C*
ISC 22 16:05:55.3±0.9, 23°.81N±0°.01×121°.75E±0°.02, h16km±8km, n112, σ0861/181, 12C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.15**	**292**	⇓*i*P	**Pb**	**16 06 00.6**	**+0.9**
	baz=305						
TEYL				*i* S	**Sb**	**16 06 04.3**	**+1.6**
	baz=305						
HWA	**Hwalien**	**0.21**	**321**	⇓*i*P	**Pb**	**16 06 01.2**	**+0.4**
	baz=323						
HWA				*i* S	**Sb**	**16 06 05.6**	**+1.1**
	baz=323						
TEGC	**Jichi Village**	**0.22**	**243**	P	**Pb**	**16 06 01.7**	**+0.8**
	baz=242						
TEGC				S	**Sb**	**16 06 06.3**	**+1.7**
	baz=242						
ETM	**Tongmen**	**0.28**	**303**	⇓*i*P	**Pb**	**16 06 01.9**	**-0.2**
	baz=304						
ETM				S	**Sb**	**16 06 06.7**	**+0.2**
	baz=304						
ESL	**Shilin**	**0.29**	**271**	⇓*i*P	**Pb**	**16 06 01.9**	**-0.3**
	baz=263						
ESL				*i* S	**Sb**	**16 06 06.2**	**-0.6**
	baz=263						
TWD	**Chiawan**	**0.30**	**332**	⇓*i*P	**Pb**	**16 06 02.4**	**0.0**
	baz=335						
TWD				*i* S	**Sb**	**16 06 07.2**	**+0.1**
	baz=335						
EGFH	**Guangfu**	**0.33**	**245**	P	**Pb**	**16 06 02.9**	**+0.1**
	baz=242						
EGFH				S	**Sb**	**16 06 08.1**	**+0.2**
	baz=242						
ETL	**Fush Village**	**0.37**	**341**	⇓*i*P	**Pb**	**16 06 03.4**	**0.0**
	baz=342						
ETL				*e*S	**Sb**	**16 06 08.7**	**-0.2**
	baz=342						
NACB	**Ninganchiao**	**0.39**	**338**	⇓*i*P	**Pg**	**16 06 03.6**	**+0.3**
	baz=338						
NACB				S	**Sg**	**16 06 08.6**	**-0.1**
	baz=338						
HGSD	**Ruisui**	**0.44**	**224**	P	**Pb**	**16 06 04.9**	**+0.3**
	baz=217						
HGSD				S	**Sb**	**16 06 12.3**	**+1.4**
	baz=217						
ETLH	**Xiulin Townshi**	**0.47**	**328**	⇓*i*P	**Pg**	**16 06 04.9**	**+0.2**
	baz=327						
ETLH				S	**Sb**	**16 06 11.5**	**-0.4**
	baz=327						
EHY	**Hungye**	**0.50**	**233**	⇑*i*P	**Pb**	**16 06 05.6**	**-0.1**
	baz=242						
EHY				S	**Sb**	**16 06 13.4**	**+0.7**
	baz=242						
OWD	**Renai**	**0.55**	**285**	P	**Pg**	**16 06 06.2**	**0.0**
	baz=292						
OWD				S	**Sg**	**16 06 13.3**	**-0.3**
	baz=292						
WHF	**Hehuan Shan**	**0.56**	**307**	⇓*i*P	**Pg**	**16 06 06.5**	**0.0**
	baz=306						
WHF				*i* S	**Sg**	**16 06 13.9**	**-0.1**
	baz=306						
VWDT	**VWDT**	**0.56**	**264**	⇑*i*P	**Pb**	**16 06 07.0**	**+0.3**
	baz=264						
VWDT				*i* S	**Sb**	**16 06 14.9**	**+0.4**
	baz=264						
ECBN	**Changbin**	**0.56**	**209**	*e*P	**Pb**	**16 06 07.4**	**+0.6**
	baz=195						
ECBN				*e*S	**Sb**	**16 06 15.7**	**+1.1**
	baz=195						
CHGB	**Renai**	**0.58**	**295**	⇓*i*P	**Pg**	**16 06 07.0**	**+0.1**
	baz=302						
CHGB				S	**Sb**	**16 06 15.0**	**-0.4**
	baz=302						
YULB	**Yu-li**	**0.59**	**225**	⇑*i*P	**Pg**	**16 06 07.2**	**+0.2**
	baz=237						
YULB				S	**Sb**	**16 06 15.2**	**-0.2**
	baz=237						
WUSB	**Renai**	**0.61**	**287**	⇓*i*P	**Pb**	**16 06 07.6**	**0.0**
	baz=294						
WUSB				*e*S	**Sb**	**16 06 15.7**	**-0.3**
	baz=294						
EYUL	**Yuli**	**0.61**	**221**	*e*P	**Pn**	**16 06 08.6**	**-0.7**
	baz=209						
ENA	**Nanau**	**0.61**	**359**	⇓*i*P	**Pb**	**16 06 07.8**	**+0.2**
	baz=356						
ENA				S	**Sb**	**16 06 16.3**	**+0.2**
	baz=356						
TWF1	**Yuli**	**0.62**	**223**	⇑*i*P	**Pg**	**16 06 07.7**	**+0.2**
	baz=236						
TWF1				S	**Sb**	**16 06 16.8**	**+0.6**
	baz=236						
EWUT	**Wuta**	**0.63**	**2**	P	**Pg**	**16 06 07.1**	**-0.6**
	baz=353						
EWUT				*e*S	**Sg**	**16 06 16.3**	**+0.2**
	baz=353						
FUSS	**Fushou**	**0.64**	**313**	P	**Pb**	**16 06 08.2**	**0.0**
	baz=313						
FUSS				*e*S	**Sb**	**16 06 16.7**	**-0.2**
	baz=313						
TWT	**Tachien**	**0.69**	**310**	⇓P	**Pb**	**16 06 09.2**	**+0.2**
	baz=300						
TWT				*e*S	**Sb**	**16 06 18.6**	**+0.3**
	baz=300						
TDCB	**Techi**	**0.70**	**309**	⇓P	**Pb**	**16 06 09.2**	**+0.1**
	baz=300						
TDCB				*e*S	**Sg**	**16 06 16.5**	**-1.9**
	baz=300						
NNSB	**Datong**	**0.70**	**331**	⇓P	**Pb**	**16 06 09.2**	**0.0**
	baz=323						
NNSB				S	**Sg**	**16 06 18.5**	**+0.1**
	baz=323						
NNSH	**Datong**	**0.70**	**331**	P	**Pg**	**16 06 09.2**	**+0.1**
	baz=322						
NNSH				*e*S	**Sb**	**16 06 18.7**	**0.0**
	baz=322						
NNS	**Nan Shan**	**0.72**	**331**	⇓P	**Pg**	**16 06 08.4**	**-0.9**
	baz=323						
NNS				S	**Sg**	**16 06 18.3**	**-0.6**
	baz=323						
SSLB	**Suanglung**	**0.73**	**268**	⇑P	**Pg**	**16 06 09.4**	**-0.2**
	baz=268						
SSLB				S	**Sg**	**16 06 18.5**	**-0.8**
	baz=268						
FULB	**Fuli**	**0.74**	**215**	*e*P	**Pb**	**16 06 10.3**	**+0.5**
	baz=198						
LATG	**Datong**	**0.75**	**344**	⇓P	**Pg**	**16 06 10.0**	**0.0**
	baz=334						
LATG				*e*S	**Sg**	**16 06 19.9**	**0.0**
	baz=334						
SMLT	**Sun Moon Lake**	**0.79**	**275**	⇓*i*P	**Pb**	**16 06 10.7**	**+0.1**
	baz=275						
SMLT				S	**Sb**	**16 06 21.0**	**-0.1**
	baz=275						
TWC	**Suao**	**0.80**	**6**	P	**Pg**	**16 06 11.1**	**+0.2**
	baz=359						
TWC				S	**Sn**	**16 06 23.0**	**-0.5**
	baz=359						
YUS	**Yu-Shan**	**0.80**	**247**	⇑*i*P	**Pb**	**16 06 11.2**	**+0.1**
	baz=246						
YUS				*i* S	**Sb**	**16 06 21.8**	**-0.1**
	baz=246						
WCS	**Beigang Elemen**	**0.81**	**288**	*e*P	**Pb**	**16 06 09.7**	**-1.2**
	baz=295						
NDT	**Datong Townshi**	**0.82**	**344**	*e*P	**Pb**	**16 06 11.2**	**0.0**
	baz=336						
NDT				*e*S	**Sg**	**16 06 22.1**	**0.0**
	baz=336						
NDS	**Dongshan**	**0.82**	**358**	*e*P	**Pb**	**16 06 10.5**	**-0.6**
	baz=359						
NDS				*e*S	**Sb**	**16 06 21.3**	**-0.7**
	baz=359						
WHYT	**Xinyi Township**	**0.83**	**262**	*e*P	**Pg**	**16 06 11.7**	**+0.2**
	baz=262						
WHYT				*e*S	**Sb**	**16 06 21.7**	**-0.6**
	baz=262						
ENTT	**Nioudou**	**0.84**	**348**	⇓*i*P	**Pb**	**16 06 10.6**	**-1.0**
	baz=339						
ENTT				*e*S	**Sb**	**16 06 22.8**	**+0.1**
	baz=339						
WHP	**Taichung City**	**0.87**	**302**	*e*P	**Pg**	**16 06 12.2**	**0.0**
	baz=295						
TWE	**Neicheng**	**0.91**	**355**	*e*P	**Pg**	**16 06 13.1**	**+0.1**
	baz=357						
TWE				*e*S	**Sn**	**16 06 25.8**	**-0.4**
	baz=357						
ELDTW	**Lidau**	**0.92**	**228**	⇑*i*P	**Pb**	**16 06 12.0**	**-0.9**
	baz=226						
ELDTW				S	**Sb**	**16 06 24.4**	**-0.5**
	baz=226						
ALS	**Alishan**	**0.92**	**251**	⇑*i*P	**Pg**	**16 06 13.3**	**+0.1**
	baz=251						
ALS				S	**Sn**	**16 06 26.1**	**-0.7**
	baz=251						
YHNB	**Yeheng**	**0.92**	**338**	⇓*i*P	**Pb**	**16 06 12.9**	**-0.1**
	baz=337						
YHNB				S	**Sb**	**16 06 24.9**	**0.0**
	baz=337						
EDH	**Donghe**	**0.93**	**206**	*e*P	**Pb**	**16 06 13.2**	**+0.2**
	baz=187						
EDH				*e*S	**Sg**	**16 06 26.1**	**+0.5**
	baz=187						
NSK	**Sanguang**	**0.93**	**337**	⇓*i*P	**Pb**	**16 06 12.0**	**-1.1**
	baz=336						
NSK				S	**Sb**	**16 06 24.3**	**-1.0**
	baz=336						
FUSB	**Fushanzhiwuyua**	**0.96**	**351**	*e*P	**Pb**	**16 06 13.3**	**-0.3**
	baz=349						
FUSB				*e*S	**Sg**	**16 06 26.5**	**+0.1**
	baz=349						
WNT	**Mingjian**	**0.98**	**274**	P	**Pn**	**16 06 14.9**	**+0.6**
	baz=274						
WNT				S	**Sn**	**16 06 28.8**	**+0.9**
	baz=274						
WWF	**Wufeng**	**0.99**	**284**	*e*P	**Pn**	**16 06 14.6**	**+0.1**
	baz=284						
NFF	**Wufeng Townshi**	**1.00**	**325**	*e*P	**Pb**	**16 06 13.4**	**-0.9**
	baz=325						
CHN5	**Tsauling**	**1.01**	**258**	*e*P	**Pb**	**16 06 14.3**	**-0.1**
	baz=248						
NTC	**Toucheng**	**1.04**	**4**	*e*P	**Pg**	**16 06 15.8**	**+0.4**
	baz=5.0						
TCU	**Taichung**	**1.04**	**289**	*e*P	**Pg**	**16 06 16.2**	**+0.8**
	baz=289						
TWQ1	**Liyutan**	**1.04**	**301**	⇓P	**Pg**	**16 06 15.7**	**+0.2**
	baz=309						
TWQ1				*e*S	**Sn**	**16 06 29.7**	**+0.2**
	baz=309						
NSTT	**Nanjuang**	**1.07**	**320**	*e*P	**Pn**	**16 06 15.6**	**0.0**
	baz=319						
NSTT				*e*S	**Sn**	**16 06 31.0**	**+0.9**
	baz=319						
LONT	**Longtian**	**1.07**	**213**	*e*P	**Pb**	**16 06 13.9**	**-1.4**
	baz=209						
LIOB	**Emei**	**1.07**	**321**	*e*P	**Pn**	**16 06 15.8**	**+0.2**
	baz=321						
NSY	**Sanyi**	**1.09**	**304**	*e*P	**Pg**	**16 06 17.1**	**+0.7**
	baz=304						
WGK	**Gukeng**	**1.10**	**264**	*e*P	**Pg**	**16 06 16.9**	**+0.3**
	baz=264						
STYH	**Taoyuan**	**1.10**	**235**	*e*P	**Pb**	**16 06 14.7**	**-1.3**
	baz=236						
STYH				*e*S	**Sb**	**16 06 28.9**	**-1.1**
	baz=236						
WCKO	**Fanlu**	**1.12**	**251**	*e*P	**Pb**	**16 06 15.4**	**-0.9**
	baz=251						
WDLH	**Douliu**	**1.12**	**264**	*e*P	**Pg**	**16 06 17.0**	**0.0**
	baz=264						
WDLH				*e*S	**Sg**	**16 06 32.8**	**+1.2**
	baz=264						
WCHH	**Zhanghua**	**1.13**	**284**	*e*P	**Pg**	**16 06 17.9**	**+0.9**
	baz=284						
NMLH	**Miaoli**	**1.14**	**310**	*e*P	**Pg**	**16 06 17.8**	**+0.5**
	baz=309						
TPUB	**Ta-pu**	**1.15**	**244**	⇑P	**Pg**	**16 06 17.2**	**-0.3**
	baz=232						
TIPB	**Shuangxi**	**1.16**	**3**	*e*P	**Pg**	**16 06 17.6**	**-0.1**
	baz=350						
CHN4	**Tsaushan**	**1.16**	**247**	⇑*i*P	**Pn**	**16 06 16.6**	**-0.3**
	baz=248						
CHN4				S	**Sg**	**16 06 32.8**	**-0.1**
	baz=248						
TWGBT	**Beinan**	**1.17**	**212**	*e*P	**Pn**	**16 06 15.3**	**-1.7**
	baz=193						
TWA	**Mucha**	**1.17**	**352**	*e*P	**Pg**	**16 06 19.0**	**+1.0**
	baz=352						
WTP	**Ta-pu**	**1.19**	**242**	⇑*i*P	**Pb**	**16 06 17.8**	**+0.4**
	baz=252						
WTP				*i* S	**Sg**	**16 06 34.3**	**+0.6**
	baz=252						
TWB1	**Santiao Chiao**	**1.21**	**10**	*e*P	**Pg**	**16 06 19.3**	**+0.7**
	baz=14						
NWF	**Wu-fen Shan**	**1.25**	**1**	*e*P	**Pb**	**16 06 18.8**	**+0.1**
	baz=346						
WTK	**Tuku**	**1.26**	**265**	*e*P	**Pg**	**16 06 19.2**	**-0.3**
	baz=265						
CHY	**Chiayi**	**1.26**	**256**	*e*P	**Pg**	**16 06 19.4**	**-0.1**
	baz=256						
JYNG	**Yonagunijimaku**	**1.26**	**59**	P	**Pn**	**16 06 18.7**	**+0.5**
JYNG				*e*S	**Sb**	**16 06 35.0**	**+0.4**
WRL	**Guolierlin Hig**	**1.26**	**274**	*e*P	**Pn**	**16 06 18.3**	**0.0**
	baz=275						
WRL				*e*S	**Sn**	**16 06 35.3**	**+0.4**
	baz=275						
SXI1	**Grass Mountain**	**1.28**	**5**	*e*P	**Pg**	**16 06 19.9**	**-0.2**
	baz=346						
SXI1				*e*S	**Sg**	**16 06 38.0**	**+1.2**
	baz=346						
TWK	**Hsinying**	**1.28**	**245**	⇓P	**Pb**	**16 06 19.3**	**+0.3**
	baz=246						
TWK				S	**Sg**	**16 06 37.2**	**+0.5**
	baz=246						
CHN1	**Nanshi**	**1.29**	**241**	⇓P	**Pb**	**16 06 19.6**	**+0.4**
	baz=255						
CHN1				S	**Sg**	**16 06 37.8**	**+0.9**
	baz=255						
SNST	**Tainan City**	**1.29**	**243**	*e*P	**Pb**	**16 06 19.8**	**+0.5**
	baz=244						
SNST				*e*S	**Sg**	**16 06 37.8**	**+0.7**
	baz=244						
SGST	**Jiashian**	**1.30**	**236**	⇑*i*P	**Pn**	**16 06 18.6**	**-0.1**
	baz=227						
SGST				S	**Sg**	**16 06 36.5**	**-0.8**
	baz=227						
YOJ	**Yonaguni jima**	**1.32**	**60**	*e*P	**Pn**	**16 06 18.9**	**-0.2**
	baz=65						
YOJ	**Yonaguni jima**	**1.32**	**60**	P	**Pn**	**16 06 19.8**	**+0.8**
YOJ				S	**Sn**	**16 06 36.5**	**+0.3**
TWS1	**Kuangyinshan**	**1.32**	**347**	*e*P	**Pg**	**16 06 21.1**	**+0.4**
	baz=346						
YM01	**YM01**	**1.34**	**353**	*e*P	**Pb**	**16 06 20.5**	**+0.4**
	baz=352						
ANP	**Anpu**	**1.39**	**351**	*e*P	**Pg**	**16 06 21.7**	**-0.4**
	baz=351						
WSF	**Szhu**	**1.41**	**263**	*e*P	**Pg**	**16 06 22.1**	**-0.4**
	baz=264						
WSF				*e*S	**Sg**	**16 06 40.8**	**-0.2**
	baz=264						
ECL	**Taimali**	**1.42**	**211**	*e*P	**Pn**	**16 06 20.2**	**-0.1**
	baz=209						
ICHU	**Yijhu**	**1.43**	**252**	*e*P	**Pb**	**16 06 21.5**	**0.0**
	baz=252						
CHN3	**Shinhua**	**1.47**	**240**	*e*P	**Pg**	**16 06 23.1**	**-0.5**
	baz=241						
SSD	**Sandimen**	**1.48**	**224**	*e*P	**Pn**	**16 06 21.7**	**+0.4**
	baz=220						
SSD				*e*S	**Sg**	**16 06 42.0**	**-1.0**
	baz=220						
SCST	**Cishan**	**1.48**	**232**	*e*P	**Pg**	**16 06 23.2**	**-0.6**
	baz=248						
TSMG	**Majia**	**1.50**	**223**	*e*P	**Pb**	**16 06 23.5**	**+0.8**
	baz=215						
SHHT	**Tainan City**	**1.51**	**239**	*e*P	**Pb**	**16 06 22.9**	**-0.1**
	baz=239						
TWM1	**Shoushan**	**1.57**	**231**	P	**Pg**	**16 06 25.3**	**-0.2**
	baz=247						
MASBT	**Mashibuluo**	**1.58**	**221**	*e*P	**Pn**	**16 06 23.4**	**+0.8**
	baz=222						
EAST	**Anshuo**	**1.65**	**211**	*e*P	**Pn**	**16 06 23.4**	**-0.2**
	baz=193						
TSCK	**Chigu Township**	**1.67**	**247**	*e*P	**Pn**	**16 06 23.9**	**0.0**
	baz=248						
TSCK				*e*S	**Sb**	**16 06 45.7**	**-0.6**
	baz=248						
SSPT	**Xinbi**	**1.71**	**220**	*e*P	**Pb**	**16 06 26.5**	**+0.2**
	baz=209						
SCZT	**Fangliau**	**1.77**	**216**	*e*P	**Pb**	**16 06 27.1**	**-0.3**
	baz=192						
SCZT				*e*S	**Sb**	**16 06 50.3**	**+0.9**
	baz=192						
SLIU	**Shizi**	**1.81**	**209**	*e*P	**Pb**	**16 06 28.2**	**+0.1**
	baz=192						
IRIF	**Iriomote-Funau**	**1.88**	**74**	P	**Pn**	**16 06 27.2**	**+0.5**
IRIF				*e*S	**Sn**	**16 06 50.4**	**+0.3**
HATJ	**Hateruma jima**	**1.89**	**82**	P	**Pn**	**16 06 26.4**	**-0.6**
HATJ				S	**Sn**	**16 06 49.5**	**-0.9**
WDGT	**Dungji**	**2.00**	**254**	*e*P	**Pn**	**16 06 28.5**	**+0.2**
	baz=256						
WDGT				*e*S	**Sn**	**16 06 53.1**	**+0.1**
	baz=256						
HEN	**Hengchun**	**2.03**	**208**	*e*P	**Pb**	**16 06 31.0**	**-0.8**
	baz=190						
TWK1	**Hengchun**	**2.06**	**205**	*e*P	**Pb**	**16 06 31.2**	**-1.0**
	baz=187						
JKRS	**Kuro-shima**	**2.11**	**78**	P	**Pn**	**16 06 30.6**	**+0.8**
JKRS				*e*S	**Sn**	**16 06 55.0**	**-0.7**
VCHM	**Qimei**	**2.22**	**255**	*e*P	**Pn**	**16 06 31.3**	**0.0**
	baz=256						
JIJ	**Ishigaki jima**	**2.25**	**75**	P	**Pn**	**16 06 31.7**	**-0.1**
JIJ				*e*S	**Sn**	**16 06 57.8**	**-1.5**
VWUC	**VWUC**	**2.41**	**300**	*e*P	**Pn**	**16 06 33.4**	**-0.6**
	baz=300						
JTJ	**Tarama**	**2.82**	**72**	P	**Pn**	**16 06 40.1**	**+0.5**
JTJ				*e*S	**Sn**	**16 07 14.1**	**+0.9**

IDC 22 16:24:57.6±9.5, 20°.67S×172°.65E, h50km±64km, mb3.4/4, mbtmp3.7/5, ML2.9/1, Error ellipse: s-maj=97.7km s-min=54.7km az=143.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.95**	**255**	P	Pn	16 26 23.9	+0.8
	0.3nm,0.3s,baz=90,slow=17,SNR=10						
DZM				S	Sn	16 27 29.5	-0.5
	3.6nm,0.7s,baz=72,slow=20,SNR=1.5 1.9nm,0.3s						
STKA	**Stephens Creek**	**29.90**	**242**	P	P	16 30 59.0	-1.7
	1.5nm,1.0s,baz=72,slow=20,SNR=2.7 1.5nm,1.0s						
WRA	**Warramunga Arr**	**35.88**	**264**	P	P	16 31 54.2	+1.1
	0.5nm,0.8s,baz=96,slow=8.6,SNR=10 0.5nm,0.8s						
ASAR	**Alice Springs**	**35.93**	**258**	P	P	16 31 53.9	+0.4
	0.7nm,0.8s,baz=80,slow=8.1,SNR=12 0.7nm,0.8s						
SONM	**Songino Array**	**90.30**	**322**	P	P	16 37 52.1	-1.1
	0.2nm,0.4s,baz=114,slow=3.6,SNR=2.1 0.2nm,0.4s						

IDC ***22*** *16:51:19.3±3.0, 7°.18S×130°.12E, h60km±40km, mb3.2/1, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=60.8km s-min=20.8km az=85.0*
ISC 22 16:51:18.0±0.9, 7°.14S±0°.06×130°.0E±0°.1, h50km, n13, σ3901/14, Banda Sea

|

0.6nm,0.4s,baz=335,slow=22,SNR=9.1
0.4nm,0.3s
COEN Coen 14.61 119 P **P** **16 54 47.2 0.0**
ASAR Alice Springs 16.85 168 P **P** **16 55 12.1 0.0**
0.1nm,0.3s,baz=341,slow=9.4,SNR=22
ASAR S **Sn** **16 58 14.3 -2.7**
0.1nm,0.4s,baz=331,slow=15,SNR=1.6
0.2nm,0.4s
MKAR Makanchi Array 68.34 327 P **P** **17 02 15.4 +1.2**
0.4nm,0.7s,baz=143,slow=5.0,SNR=3.1
0.4nm,0.7s

NEIC ***22*** *17:29:02.1±1.7, 18°.9S±0°.1×176°.6W±0°.1, h10km±1km, mb4.7/97, Error ellipse: s-maj=21.9km s-min=18.5km az=178.0*
GCMT ***22*** *17:29:06.1±0.2, 18°.93S±0°.01×176°.45W±0°.01, h19km±1km, MW5.0/101, Moment Tension Solution. s43,c49; s101,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.10; $M_{\theta\theta}$-2.08±.09; $M_{\phi\phi}$2.59±.09; $M_{r\theta}$0.69±.20; $M_{\theta\phi}$2.30±.08; $M_{\phi r}$1.39±.20; Best double couple: M_o3.54300×10^{16} NP1:$\phi_1$69.00000°, δ79.00000°, λ16.00000°. NP2:$\phi_2$336.00000°, δ75.00000°, λ169.00000°. Principal axes: T 4.0580, Plg19.0000°, Azm293.0000°; N -1.0260, Plg71.0000°, Azm103.0000°; P -3.0280, Plg3.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***22*** *17:29:07.7±2.8, 18°.89S×176°.78W, h56km±24km, mb3.8/13, mbtmp4.1/16, ML4.3/3, MS4.0/49 Error ellipse: s-maj=26.9km s-min=13.6km az=157.0*
ISC 22 17:29:03.5±0.4,**19°.1S**±0°.1×**176°.56W**±0°.07,**h21km**,**n200,**
σ1s36/162,mb4.7/62,MS4.1/47,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.29**	**284**	P		**Pn**	**17 30 21.9**	**+0.5**
	3.5nm,0.3s,baz=114,slow=14,SNR=32							
MSVF				LR		LR	17 32 14.4	
	comp=Z,7μm,19.6s,baz=129,slow=37							
	95nm,1.0s							
MSVF	**Nonsavu**	**5.29**	**284**	Pn		**Pn**	**17 30 22.1**	**+0.6**
NIUE	**Niue**	**6.27**	**91**	Pn		Pn	17 30 29.6	-5.1
AFI	**Afiamalu**	**6.88**	**42**	P		**Pn**	**17 30 44.7**	**+1.5**
	1.3nm,0.3s,baz=216,slow=19,SNR=3.6							
	56nm,0.9s							
RAO	**Raoul Island**	**10.21**	**187**	LR		LR	17 35 01.0	
	comp=Z,3μm,19.8s,baz=33,slow=34							
RAR	**Rarotonga**	**15.90**	**101**	P		**Pn**	**17 32 41.5**	**-4.6**
	58nm,0.8s,baz=257,slow=8.9,SNR=13							
RAR				LR		LR	17 37 46.0	
	comp=Z,296nm,21.1s,baz=270,slow=32							
RAR	**Rarotonga**	**15.90**	**101**	Pn		**Pn**	**17 32 42.6**	**-3.5**
RAR				IAmb		IAmb	17 32 45.3	
	comp=Z,63nm,0.8s							
DZM	**Mont Dzumac**	**16.20**	**256**	P		**Pn**	**17 32 50.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=119,slow=19,SNR=1.3							
DZM				LR		LR	17 37 53.8	
	comp=Z,789nm,20.6s,baz=94,slow=33							
	comp=Z,4.4nm,1.0s							
DZM	**Mont Dzumac**	**16.20**	**256**	*e*Pn		**P**	**17 32 52.9**	**-0.1**
	comp=Z,117nm,1.4s							
DZM				*e*LR		LR	17 36 36.9	
	comp=Z,948nm,25.4s							
DZM	**Mont Dzumac**	**16.20**	**256**	P		**Pn**	**17 32 51.8**	**+1.8**
ONTNC	**Ouen Toro**	**16.22**	**256**			**Pn**	**17 32 52.2**	**+2.0**
ONTNC				IAmb		IAmb	17 33 19.2	
	comp=Z,101nm,1.5s							
KOUNC	**Koumac, New Ca**	**18.09**	**262**	P		**Pn**	**17 33 12.9**	**-0.7**
URZ	**Urewera**	**19.90**	**195**	LR		LR	17 40 22.3	
	comp=Z,1μm,19.6s,baz=33,slow=34							
HNR	**Honiara**	**24.68**	**290**	LR		LR	17 42 25.2	
	comp=Z,271nm,20.9s,baz=134,slow=33							
TBI	**Tubuai**	**25.60**	**104**	*e*LR		LR	17 40 55.0	
	comp=Z,951nm,25.0s							
PAE	**Paea**	**25.63**	**91**	*e*T		T	18 01 01.0	
	comp=Z,2.4nm,0.3s							
PPT2	**Papeete2**	**25.64**	**91**	*e*LR		LR	17 40 55.3	
	comp=Z,1μm,25.5s							
PPT	**Papeete**	**25.65**	**91**	P		**P**	**17 34 34.6**	**+2.6**
	comp=Z,124nm,1.0s,baz=255,slow=19,SNR=6.2							
PPT				LR		LR	17 41 53.9	
	comp=Z,393nm,21.7s,baz=262,slow=30							
PPTF	**Pamatai, Papee**	**25.66**	**91**	P		**P**	**17 34 35.3**	**+3.2**
KRVT	**Keravat (AS076**	**33.99**	**292**	LR		LR	17 48 47.8	
	comp=Z,428nm,18.1s,baz=246,slow=35							
CTA	**Charters Tower**	**35.01**	**262**	P		**P**	**17 35 53.0**	**-1.7**
	comp=Z,3.4nm,0.8s,baz=79,slow=6.9,SNR=4.6							
CTA				LR		LR	17 48 36.2	
	comp=Z,406nm,19.1s,baz=91,slow=34							
	comp=Z,3.4nm,0.8s							
CTAO	**Charters Tower**	**35.01**	**262**	P		**P**	**17 35 53.7**	**-1.1**
TAOE	**Nuku Hiva Isla**	**36.69**	**79**	*e*LR		LR	17 46 01.8	
	comp=Z,374nm,24.6s							
TAOE	**Nuku Hiva Isla**	**36.69**	**79**	*e*T		T	18 14 43.5	
	comp=Z,36nm,0.3s							
TOO	**Toolangi**	**37.84**	**233**	P		**P**	**17 36 20.0**	**+1.2**
TOO				IAmb		IAmb	17 36 27.3	
	comp=Z,14nm,1.1s							
COEN	**Coen**	**38.88**	**271**	P		**P**	**17 36 26.8**	**-1.0**
COEN				IAmb		IAmb	17 36 37.6	
	comp=Z,22nm,1.1s							
MANU	**Manus Island**	**39.16**	**291**	P		**P**	**17 36 29.6**	**-0.5**
MANU				IAmb		IAmb	17 36 36.0	
	comp=Z,22nm,1.1s							
STKA	**Stephens Creek**	**39.64**	**243**	P		**P**	**17 36 34.2**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=90,slow=12,SNR=11							
STKA				LR		LR	17 52 18.6	
	comp=Z,186nm,18.0s,baz=63,slow=35							
	comp=Z,4.1nm,0.8s							
STKA	**Stephens Creek**	**39.64**	**243**	P		**P**	**17 36 34.2**	**+0.2**
WRA	**Warramunga Arr**	**46.16**	**260**	P		**P**	**17 37 25.0**	**-2.0**
	comp=Z,1.1nm,0.8s,baz=97,slow=7.7,SNR=8.8							
WRA				LR		LR	17 55 42.8	
	comp=Z,232nm,18.8s,baz=90,slow=35							
	comp=Z,1.1nm,0.8s							
WRA	**Warramunga Arr**	**46.16**	**260**	P		**P**	**17 37 25.1**	**-1.9**
AS31	**Alice Springs**	**46.18**	**255**	P		**P**	**17 37 24.7**	**-2.5**
ASAR	**Alice Springs**	**46.18**	**255**	P		**P**	**17 37 25.6**	**-1.6**
	comp=Z,3.8nm,0.7s,baz=87,slow=7.5,SNR=38							
ASAR				LR		LR	17 55 49.1	
	comp=Z,253nm,21.1s,baz=100,slow=35							
	comp=Z,3.8nm,0.7s							
ASAR	**Alice Springs**	**46.18**	**255**	P		P	17 37 21.9	-5.3
SIJI	**Sorong**	**54.21**	**283**	LR		LR	17 59 16.4	
	comp=Z,187nm,20.8s,baz=80,slow=34							
FITZ	**Fitzroy Crossi**	**54.58**	**261**	LR		LR	18 00 15.6	
	comp=Z,286nm,20.7s,baz=102,slow=34							
BATI	**Baumata**	**58.28**	**270**	LR		LR	18 03 44.7	
	comp=Z,262nm,19.3s,baz=138,slow=36							
SBA	**Scott Base**	**59.38**	**184**	P		**P**	**17 39 06.0**	**+2.2**
VNDA	**Vanda**	**59.45**	**185**	P		**P**	**17 39 05.2**	**+1.0**
	comp=Z,1.3nm,1.1s,baz=3.6,slow=6.8,SNR=3.7							
VNDA				LR		LR	18 00 23.0	
	comp=Z,124nm,21.2s,baz=56,slow=32							
	comp=Z,1.3nm,1.1s							
VNDA	**Vanda**	**59.45**	**185**	P		**P**	**17 39 05.4**	**+1.1**
JCJ	**Chichijima**	**60.88**	**318**	LR		LR	18 02 04.6	
	comp=Z,97nm,20.4s,baz=123,slow=33							
RPN	**Rapa Nui**	**61.73**	**111**	LR		LR	17 59 20.5	
	comp=Z,199nm,21.1s,baz=259,slow=29							
DAV	**Davao City (W)**	**62.64**	**289**	LR		LR	18 05 34.3	
	comp=Z,81nm,18.2s,baz=96,slow=35							
KAPI	**Kappang**	**63.53**	**274**	LR		LR	18 05 17.8	
	comp=Z,84nm,21.9s,baz=100,slow=34							
JMM	**Marumori**	**69.39**	**325**	P		**P**	**17 40 09.0**	**-0.8**
MJAR	**Matsushiro Arr**	**69.89**	**322**	P		**P**	**17 40 11.9**	**-1.1**
	comp=Z,4.0nm,1.1s,baz=180,slow=5.4,SNR=3.5							
MJAR				LR		LR	18 05 19.1	
	comp=Z,36nm,21.3s,baz=129,slow=31							
	comp=Z,4.0nm,1.1s							
QSPA	**South Pole Qui**	**70.99**	**180**	LR		LR	18 05 58.8	
	comp=Z,47nm,21.3s,baz=66,slow=31							
QSPA	**South Pole Qui**	**70.99**	**180**	P		**P**	**17 40 20.5**	**+1.0**
SHEM	**Shemya Is, Ala**	**71.96**	**354**	LR		LR	18 05 11.0	
	comp=Z,132nm,21.4s,baz=234,slow=30							
PETK	**Petropavlovsk-**	**75.26**	**344**	P		**P**	**17 40 47.5**	**+2.9**
	comp=Z,3.2nm,0.9s,baz=149,slow=10.0,SNR=4.2							
PETK				LR		LR	18 10 01.9	
	comp=Z,48nm,19.1s,baz=147,slow=33							
CHIR	**Chirikof Islan**	**76.68**	**12**	P		**P**	**17 40 52.4**	**-0.1**
KSRS	**Korea Array**	**76.74**	**318**	P		**P**	**17 40 50.4**	**-2.9**
	comp=Z,0.6nm,0.8s,baz=142,slow=6.2,SNR=2.9							
KSRS				LR		LR	18 09 11.9	
	comp=Z,53nm,21.6s,baz=125,slow=31							
	comp=Z,0.6nm,0.8s							
KSAR	**Wonju Array Be**	**76.76**	**318**	P		**P**	**17 40 53.1**	**-0.3**
ISA	**Isabella, Lake**	**77.37**	**45**	P		**P**	**17 40 57.0**	**0.0**
ISA				IAmb		IAmb	17 41 03.5	
	comp=Z,12nm,1.2s							
CMB	**Columbia Colle**	**77.50**	**42**	P		**P**	**17 40 59.1**	**+1.4**
PFO	**Pinyon Flats O**	**77.61**	**48**	LR		LR	18 08 54.9	
	comp=Z,93nm,18.9s,baz=237,slow=31							
GSC	**Goldstone, Bar**	**78.30**	**46**	P		**P**	**17 41 03.0**	**+0.8**
GSC				IAmb		IAmb	17 41 08.5	
	comp=Z,8.4nm,1.1s							
YBH	**Yreka Blue Hor**	**78.33**	**38**	LR		LR	18 07 52.2	
	comp=Z,140nm,20.4s,baz=244,slow=30							
YBH	**Yreka Blue Hor**	**78.33**	**38**	P		**P**	**17 41 03.3**	**+1.0**
YBH				IAmb		IAmb	17 41 07.7	
	comp=Z,4.6nm,0.8s							
GLA	**Glamis**	**78.47**	**49**	P		**P**	**17 41 06.1**	**+2.9**
GLA				IAmb		IAmb	17 41 09.3	
	comp=Z,11nm,1.3s							
BEKR	**Beckworth**	**78.60**	**41**	P		**P**	**17 41 03.8**	**-0.1**
PNTR	**Pine Nut**	**78.61**	**42**	P		**P**	**17 41 02.9**	**-1.2**
PNTR				IAmb		IAmb	17 41 09.8	
	comp=Z,15nm,1.2s							
QSM	**Queen of Sheba**	**78.62**	**46**	P		**P**	**17 41 02.5**	**-1.4**
QSM				IAmb		IAmb	17 41 09.5	
	comp=Z,9.8nm,1.2s							
DSP	**Deep Springs**	**78.67**	**44**	P		**P**	**17 41 03.6**	**-0.5**
DSP				IAmb		IAmb	17 41 10.2	
	comp=Z,8.1nm,1.1s							
YERR	**Yerington**	**78.78**	**42**	P		**P**	**17 41 04.1**	**-0.9**
YERR				IAmb		IAmb	17 41 10.5	
	comp=Z,6.4nm,0.9s							
LCH	**Last Change Ra**	**78.81**	**44**			**P**	**17 41 04.6**	**-0.5**
LHV	**Little Huntoon**	**78.83**	**43**	P		**P**	**17 41 04.3**	**-0.6**
LHV				IAmb		IAmb	17 41 11.0	
	comp=Z,7.8nm,1.0s							
GRAC	**Grapevine Rang**	**78.86**	**44**	P		**P**	**17 41 04.9**	**-0.3**
GRAC				IAmb		IAmb	17 41 11.8	
	comp=Z,11nm,1.1s							
GWY	**Greenwater Val**	**78.87**	**45**	P		**P**	**17 41 03.9**	**-1.6**
RYN	**Ryan**	**79.03**	**43**	P		**P**	**17 41 04.3**	**-2.0**
NVAR	**Mina Array Bea**	**79.06**	**43**	P		**P**	**17 41 05.8**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=226,slow=8.3,SNR=21							
NVAR				LR		LR	18 08 39.0	
	comp=Z,151nm,20.8s,baz=266,slow=30							
	comp=Z,1.2nm,0.9s							
NVAR	**Mina Array Bea**	**79.06**	**43**	P		**P**	**17 41 04.9**	**-1.6**
GMN	**Gold Mountain**	**79.10**	**44**	P		**P**	**17 41 05.5**	**-1.3**
PAHR	**Pah Rah Range**	**79.11**	**41**	P		**P**	**17 41 05.8**	**-0.9**
NV11	**Mina Array Sit**	**79.15**	**43**	P		**P**	**17 41 05.8**	**-1.1**
NV11				IAmb		IAmb	17 41 12.6	
	comp=Z,7.8nm,0.9s							
MZP	**Montezuma Peak**	**79.24**	**44**	P		**P**	**17 41 06.9**	**-0.7**
SMAI	**San Martin Ant**	**79.45**	**159**	P		**P**	**17 41 09.4**	**+1.5**
SMAI				IAmb		IAmb	17 41 15.9	
	comp=Z,14nm,1.1s							
KVN	**Kaiserville**	**79.54**	**42**	P		**P**	**17 41 07.3**	**-1.9**
KVN				IAmb		IAmb	17 41 14.6	
	comp=Z,6.9nm,1.0s							
TPH	**Tonopah**	**79.56**	**44**	P		**P**	**17 41 08.0**	**-1.2**
TPNV	**Topopah Spring**	**79.58**	**45**	P		**P**	**17 41 09.3**	**-0.1**
TPNV				IAmb		IAmb	17 41 15.0	
	comp=Z,8.0nm,1.1s							
MOD	**Modoc Plateau**	**79.86**	**39**	P		**P**	**17 41 10.7**	**0.0**
MOD				IAmb		IAmb	17 41 16.1	
	comp=Z,12nm,1.3s							
V12A	**Nelson**	**79.86**	**47**	P		**P**	**17 41 10.1**	**-0.8**
K05A	**Summer Lake**	**80.00**	**38**			**P**	**17 41 10.9**	**-0.6**
K05A				IAmb		IAmb	17 41 17.4	
	comp=Z,12nm,1.0s							
SHPR	**Sheep Range**	**80.07**	**46**	P		**P**	**17 41 10.1**	**-1.9**
SHPR				IAmb		IAmb	17 41 18.1	
	comp=Z,11nm,1.4s							
W13A	**Hualapai Mount**	**80.20**	**48**	P		**P**	**17 41 11.9**	**-0.9**
PRN	**Pahroc Range**	**80.63**	**45**	P		**P**	**17 41 14.1**	**-0.9**
PRN				IAmb		IAmb	17 41 21.2	
	comp=Z,10nm,1.3s							
PINE	**Pine Mountain**	**80.63**	**37**	P		**P**	**17 41 13.6**	**-1.3**
PINE				IAmb		IAmb	17 41 20.8	
	comp=Z,15nm,1.1s							
BMN	**Battle Mountai**	**80.89**	**42**	P		**P**	**17 41 15.7**	**-0.6**
BMN				IAmb		IAmb	17 41 21.8	
	comp=Z,8.5nm,1.0s							
X16A	**Lo Mia Camp, P**	**81.59**	**49**	P		**P**	**17 41 18.8**	**-1.4**
X16A				IAmb		IAmb	17 41 26.6	
	comp=Z,5.4nm,0.9s							
LCMT	**Little Creek M**	**81.64**	**46**	P		**P**	**17 41 19.1**	**-1.3**
J08A	**Circle Bar Ran**	**81.81**	**39**	P		**P**	**17 41 20.7**	**-0.3**
J08A				IAmb		IAmb	17 41 26.6	
	comp=Z,10nm,1.2s							
CCUT	**Cedar City**	**81.84**	**46**	P		**P**	**17 41 21.6**	**0.0**
KNB	**Kanab**	**81.93**	**46**	P		**P**	**17 41 18.9**	**-3.0**
U15A	**North Rim**	**82.00**	**47**	P		**P**	**17 41 22.5**	**+0.1**
U15A				IAmb		IAmb	17 41 28.9	
	comp=Z,6.9nm,1.0s							
KLR	**Kul'dur**	**82.01**	**329**	LR		LR	18 10 45.2	
	comp=Z,68nm,20.2s,baz=134,slow=31							
BNX	**BinXian**	**82.06**	**324**	⇑P		**P**	**17 41 25.8**	**+3.7**
BNX				pmax		pmax		
	comp=Z,8.0nm,0.9s							
BNX				pmax		pmax		
	comp=Z,73nm,5.8s							
WUAZ	**Wupatki**	**82.18**	**48**	P		**P**	**17 41 21.9**	**-1.3**
WUAZ				IAmb		IAmb	17 41 29.1	
	comp=Z,5.9nm,1.1s							
ELK	**Elko**	**82.31**	**42**	LR		LR	18 13 11.4	
	comp=Z,96nm,18.0s,baz=239,slow=32							
ELK	**Elko**	**82.31**	**42**	P		**P**	**17 41 25.0**	**+1.1**
BBB	**Bella Bella**	**82.51**	**28**	LR		LR	18 10 56.6	
	comp=Z,95nm,20.1s,baz=221,slow=30							
G08A	**Pilot Rock**	**82.66**	**37**	P		**P**	**17 41 24.2**	**-1.2**
MA2	**Magadan**	**82.79**	**344**	LR		LR	18 14 55.8	
	comp=Z,31nm,19.4s,baz=156,slow=33							
MTPU	**Mount Pierson**	**82.89**	**46**	P		**P**	**17 41 26.9**	**-0.3**
MTPU				IAmb		IAmb	17 41 34.0	
	comp=Z,4.6nm,1.1s							
HAWA	**Hanford**	**83.00**	**36**	P		**P**	**17 41 26.3**	**-0.8**
MVU	**Marysvale**	**83.11**	**45**	P		**P**	**17 41 27.5**	**-0.7**
MSU	**Marysvale**	**83.14**	**45**	P		**P**	**17 41 27.5**	**-0.8**
W18A	**Petrified Fore**	**83.15**	**49**	P		**P**	**17 41 26.6**	**-1.8**
BMO	**Blue Mountains**	**83.36**	**38**	P		**P**	**17 41 27.6**	**-1.5**
BMO				IAmb		IAmb	17 41 34.4	
	comp=Z,6.0nm,1.1s							
MAW	**Mawson**	**83.36**	**199**	LR		LR	18 17 16.0	
	comp=Z,264nm,18.3s,baz=128,slow=35							
MFID	**Camas Ranch**	**83.42**	**40**	P		**P**	**17 41 28.6**	**-0.9**
MFID				IAmb		IAmb	17 41 35.0	
	comp=Z,12nm,1.4s							
D08A	**Wollman Farm,**	**83.73**	**36**	P		**P**	**17 41 31.5**	**+0.6**
D08A				IAmb		IAmb	17 41 35.9	
	comp=Z,5.6nm,0.8s							
TMUT	**Trail Mountain**	**84.19**	**45**	P		**P**	**17 41 33.2**	**-0.6**
PLID	**Pearl Lake**	**84.25**	**38**	P		**P**	**17 41 32.3**	**-1.5**
PLID				IAmb		IAmb	17 41 38.5	
	comp=Z,5.1nm,0.9s							
HLID	**Hailey**	**84.36**	**40**	P		**P**	**17 41 33.8**	**-0.5**
HLID				IAmb		IAmb	17 41 40.3	
	comp=Z,6.8nm,0.9s							
HVU	**Hansel Valley**	**84.44**	**42**	P		**P**	**17 41 32.6**	**-2.1**
SRU	**San Rafael Swe**	**84.56**	**46**	P		**P**	**17 41 34.8**	**-0.7**
P17A	**Butcher Ranch,**	**84.59**	**45**	P		**P**	**17 41 34.9**	**-0.7**
P17A				IAmb		IAmb	17 41 41.8	
	comp=Z,6.7nm,1.0s							
MNTX	**Cornudas Mount**	**84.82**	**54**	P		**P**	**17 41 36.3**	**-0.4**
MNTX				IAmb		IAmb	17 41 46.1	
	comp=Z,5.5nm,1.0s							
BNM	**Barren Site**	**84.97**	**51**	P		**P**	**17 41 37.1**	**-0.6**
TCUT	**Toone Canyon**	**84.98**	**43**	P		**P**	**17 41 37.6**	**0.0**
P18A	**Preston Nutter**	**85.00**	**45**	P		**P**	**17 41 36.6**	**-1.3**
P18A				IAmb		IAmb	17 41 49.4	
	comp=Z,5.6nm,1.1s							
TX31	**Lajitas Ar. Si**	**85.14**	**57**	P		**P**	**17 41 38.2**	**-0.3**
TX32	**Lajitas Array**	**85.14**	**57**	P		**P**	**17 41 38.2**	**-0.3**
TXAR	**Lajitas Array**	**85.14**	**57**	P		**P**	**17 41 39.0**	**+0.5**
	comp=Z,2.6nm,1.1s,baz=224,slow=5.2,SNR=15							
	comp=Z,2.6nm,1.1s							
TXAR	**Lajitas Array**	**85.14**	**57**	P		**P**	**17 41 38.5**	**0.0**
PV13	**Radium Mtn., P**	**85.26**	**47**	P		**P**	**17 41 38.9**	**-0.2**
PV13				IAmb		IAmb	17 41 44.4	
	comp=Z,4.9nm,1.1s							
PV23	**Carpenter Ridg**	**85.27**	**47**	P		**P**	**17 41 37.8**	**-1.4**
MCK	**McKinley**	**85.30**	**12**	P		**P**	**17 41 38.4**	**0.0**
NEW	**Newport**	**85.43**	**35**	LR		LR	18 12 38.8	
	comp=Z,107nm,19.5s,baz=190,slow=31							
ANMO	**Albuquerque**	**85.45**	**51**	LR		LR	18 15 00.2	
	comp=Z,71nm,18.1s,baz=243,slow=32							
ANMO	**Albuquerque**	**85.45**	**51**	P		**P**	**17 41 39.5**	**-0.5**
ANMO				IAmb		IAmb	17 41 45.7	
	comp=Z,11nm,1.5s							
PSI	**Prapat**	**85.73**	**274**	LR		LR	18 20 37.2	
	comp=Z,80nm,18.9s,baz=126,slow=36							
GDL2	**Guadalupe Moun**	**85.81**	**54**	P		**P**	**17 41 41.0**	**-0.8**
WRH	**Wood River Hil**	**86.12**	**12**	P		**P**	**17 41 43.2**	**+0.8**
MLY	**Manley**	**86.14**	**11**	P		**P**	**17 41 43.0**	**+0.4**
MLY				IAmb		IAmb	17 41 51.1	
	comp=Z,6.5nm,1.1s							
DLBC	**Dease Lake**	**86.21**	**22**	LR		LR	18 12 01.8	
	comp=Z,167nm,21.0s,baz=262,slow=30							
BCAR	**Beaver Creek A**	**86.29**	**15**	P		**P**	**17 41 44.4**	**+1.0**
HDA	**Harding Lake**	**86.30**	**12**	P		**P**	**17 41 44.0**	**+0.8**
HDA				IAmb		IAmb	17 41 48.8	
	comp=Z,6.7nm,0.8s							
CCB	**Clear Creek Bu**	**86.34**	**12**	P		**P**	**17 41 43.7**	**+0.2**
ENH	**Enshi**	**86.38**	**304**	P		**P**	**17 41 43.3**	**-1.2**
FXWY	**Fox Creek**	**86.50**	**41**	P		**P**	**17 41 45.2**	**+0.1**
MDM	**Murphy Dome**	**86.53**	**12**	P		**P**	**17 41 44.1**	**-0.4**
ILAR	**Eielson Array**	**86.63**	**12**	P		**P**	**17 41 45.0**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=222,slow=5.2,SNR=8.7							
ILAR				LR		LR	18 13 22.5	
	comp=Z,68nm,21.1s,baz=211,slow=31							
	comp=Z,1.8nm,0.9s							
ILAR	**Eielson Array**	**86.63**	**12**	P		**P**	**17 41 44.3**	**-0.6**
J25K	**Salcha River,**	**86.81**	**13**	P		**P**	**17 41 44.4**	**-1.4**
J25K				IAmb		IAmb	17 41 50.6	
	comp=Z,4.2nm,0.9s							
PDAR	**Pinedale Array**	**87.00**	**43**	P		**P**	**17 41 48.6**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=204,slow=3.3,SNR=6.4							
PDAR				LR		LR	18 14 09.5	
	comp=Z,97nm,19.2s,baz=246,slow=31							
	comp=Z,0.7nm,0.9s							
PDAR	**Pinedale Array**	**87.00**	**43**	P		**P**	**17 41 48.0**	**+0.5**
YHL	**Hebgen Lake**	**87.02**	**40**	P		**P**	**17 41 47.6**	**-0.1**
YHL				IAmb		IAmb	17 41 54.1	
	comp=Z,7.3nm,1.0s							
J26L	**Joseph Creek**	**87.10**	**14**	P		**P**	**17 41 48.0**	**+0.6**
J26L				IAmb		IAmb	17 41 59.2	
	comp=Z,8.9nm,1.1s							
BOZ	**Bozeman (W)**	**87.13**	**40**	P		**P**	**17 41 47.7**	**-0.3**
BOZ				IAmb		IAmb	17 41 53.8	
	comp=Z,4.6nm,0.9s							
WALA	**Waterton Lakes**	**87.64**	**36**	P		**P**	**17 41 49.0**	**-1.4**
XAN	**Xi'an**	**88.36**	**307**	P		**P**	**17 41 55.0**	**+1.0**
XAN				pP		pP	17 42 00.4	+0.1
XAN				pmax		pmax		
	comp=Z,6.0nm,1.1s							
PLCA	**Paso Flores**	**89.26**	**133**	LR		LR	18 13 38.9	
	comp=Z,92nm,19.8s,baz=200,slow=30							
SNAA	**Sanae**	**89.39**	**178**	LR		LR	18 17 18.0	
	comp=Z,39nm,21.1s,baz=201,slow=32							
ABTX	**Abilene, Hawle**	**89.63**	**55**	P		**P**	**17 41 59.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**90.93**	**289**	P		**P**	**17 42 04.1**	**-2.3**
	comp=Z,0.9nm,0.8s,baz=113,slow=2.8,SNR=6.6							
CMAR				LR		LR	18 21 12.1	
	comp=Z,28nm,20.3s,baz=110,slow=34							
	comp=Z,0.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**90.93**	**289**	P		**P**	**17 42 06.2**	**-0.2**
PZH	**PanZhiHua**	**91.25**	**298**	P		**P**	**17 42 10.5**	**+2.7**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,80nm,4.6s							
YAK	**Yakutsk**	**91.31**	**338**	LR		LR	18 18 26.7	
	comp=Z,18nm,20.7s,baz=82,slow=32							
INK	**Inuvik**	**92.55**	**15**	LR		LR	18 16 32.6	
	comp=Z,76nm,20.7s,baz=176,slow=31							
YKA	**Yellowknife Ar**	**94.66**	**24**	P		**P**	**17 42 20.6**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=236,slow=4.1,SNR=3.7							
	comp=Z,0.7nm,0.8s							
NNA	**Nana**	**95.11**	**104**	LR		LR	18 14 51.2	
	comp=Z,40nm,21.0s,baz=220,slow=29							
ATAH	**Atahualpa**	**95.34**	**99**	LR		LR	18 16 39.0	
	comp=Z,76nm,19.4s,baz=226,slow=30							
TIXI	**Tiksi**	**97.73**	**345**	LR		LR	18 20 43.8	
	comp=Z,39nm,21.9

DVP	**Devils Point**	**3.38**	**215**	P		**P**	**17 52 01.2**	**-3.4**
MARNC	**Mare, Loyalty**	**6.83**	**197**	P		**P**	**17 52 27.7**	**-2.3**
MARNC	**Mare, Loyalty**	**6.83**	**197**	P		**P**	**17 52 28.0**	**-2.0**
YATNC	**Mamie plateau,**	**7.75**	**203**	P		**P**	**17 52 35.8**	**-2.3**
KOUNC	**Koumac, New Ca**	**7.94**	**224**	P		**P**	**17 52 39.2**	**-0.6**
DZM	**Mont Dzumac**	**7.94**	**206**	P		**P**	**17 52 39.0**	**-0.9**
	2.9nm,0.4s,baz=326,slow=20,SNR=9.0							
MSVF	**Nonsavu**	**8.03**	**111**	P		**P**	**17 52 40.0**	**-0.7**
	3.6nm,0.6s,baz=268,slow=21,SNR=1.6							
MSVF	**Nonsavu**	**8.03**	**111**	P		**P**	**17 52 40.2**	**-0.6**
NOUC	**Port Laguerre**	**8.03**	**207**	P		**P**	**17 52 40.0**	**-0.6**
	18nm,1.3s							
PINNC	**Pines Island,**	**8.07**	**198**	P		**P**	**17 52 40.2**	**-0.7**
OUENC	**Ouen Island, N**	**8.10**	**203**	P		**P**	**17 52 40.4**	**-0.8**
OUENC	**Ouen Island, N**	**8.10**	**203**	P		**P**	**17 52 40.2**	**-1.0**
	22nm,1.2s							
ONTNC	**Ouen Toro**	**8.15**	**205**	P		**P**	**17 52 40.8**	**-0.8**
ONTNC	**Ouen Toro**	**8.15**	**205**	P		**P**	**17 52 40.9**	**-0.8**
	29nm,1.1s							
FUNA	**Funafuti**	**10.86**	**55**	P		**P**	**17 53 05.8**	**-1.7**
CTAO	**Charters Tower**	**23.40**	**254**	P		**P**	**17 54 59.5**	**-1.7**
CTAO				IAmb		IAmb	17 55 31.3	
	comp=Z,9.7nm,1.4s							
BKZ	**Black Stump Fm**	**24.76**	**168**	P		**P**	**17 55 12.9**	**-0.1**
QRZ	**Quartz Range**	**25.87**	**176**	P		**P**	**17 55 24.8**	**+2.1**
SNZO	**South Karori**	**26.57**	**172**	P		**P**	**17 55 29.4**	**+0.8**
TUWZ	**Tuamarina**	**26.59**	**174**	P		**P**	**17 55 29.4**	**+0.4**
MSWZ	**Moikau Station**	**26.74**	**172**	P		**P**	**17 55 30.0**	**-0.3**
THZ	**Tophouse**	**26.83**	**176**	P		**P**	**17 55 32.3**	**+1.3**
KHZ	**Kahutara**	**27.53**	**175**	P		**P**	**17 55 36.7**	**-0.3**
LTZ	**Lake Taylor**	**27.80**	**177**	P		**P**	**17 55 40.3**	**+0.8**
LTZ				IAmb		IAmb	17 56 10.5	
	comp=Z,20nm,1.4s							
RPZ	**Rata Peaks**	**28.69**	**179**	P		**P**	**17 55 47.9**	**+0.8**
	comp=Z,6.4nm,0.8s,baz=4.2,slow=2.8,SNR=8.9							
	comp=Z,6.4nm,0.8s							
RPZ	**Rata Peaks**	**28.69**	**179**	P		**P**	**17 55 47.7**	**+0.7**
RPZ				IAmb		IAmb	17 56 25.2	
	comp=Z,30nm,1.4s							
MQZ	**McQueen's Vall**	**28.75**	**176**	P		**P**	**17 55 48.2**	**+0.7**
MQZ				IAmb		IAmb	17 55 50.2	
	comp=Z,42nm,1.5s							
LBZ	**Lake Benmore**	**29.35**	**180**	P		**P**	**17 55 52.8**	**+0.1**
LBZ				IAmb		IAmb	17 56 28.5	
	comp=Z,16nm,1.3s							
ODZ	**Otahua Downs**	**30.01**	**179**	P		**P**	**17 55 58.8**	**+0.5**
ODZ				IAmb		IAmb	17 56 12.8	
	comp=Z,8.2nm,1.1s							
STKA	**Stephens Creek**	**31.07**	**232**	P		**P**	**17 56 08.5**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=67,slow=8.4,SNR=6.2							
	comp=Z,2.0nm,0.6s							
STKA	**Stephens Creek**	**31.07**	**232**	P		**P**	**17 56 08.0**	**+0.5**
WB0	**Warramunga Arr**	**34.48**	**257**	P		**P**	**17 56 35.6**	**-0.7**
WB0				IAmb		IAmb	17 56 42.8	
	comp=Z,7.2nm,1.5s							
WRAB	**Tennant Creek**	**34.52**	**257**	P		**P**	**17 56 35.8**	**-0.9**
WRAB				IAmb		IAmb	17 57 03.5	
	comp=Z,6.5nm,1.4s							
WRA	**Warramunga Arr**	**34.53**	**256**	P		**P**	**17 56 35.8**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=88,slow=9.6,SNR=7.3							
WRA				S		**S**	**18 01 24.4**	**+2.1**
	comp=Z,0.5nm,0.9s,baz=86,slow=14,SNR=2.5							
	comp=Z,0.4nm,0.4s							
AS31	**Alice Springs**	**35.26**	**250**	P		**P**	**17 56 42.3**	**-0.5**
ASAR	**Alice Springs**	**35.26**	**250**	P		**P**	**17 56 42.1**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=74,slow=9.6,SNR=27							
ASAR				S		**S**	**18 01 30.7**	**-2.4**
	comp=Z,0.5nm,0.8s,baz=75,slow=16,SNR=6.5							
	comp=Z,1.5nm,0.6s							
ASAR	**Alice Springs**	**35.26**	**250**	P		**P**	**17 56 42.5**	**-0.3**
BBOO	**Buckleboo**	**35.73**	**234**	P		**P**	**17 56 46.9**	**+0.5**
BBOO				IAmb		IAmb	17 56 47.2	
	comp=Z,14nm,1.2s							
MTN	**Manton Dam**	**37.96**	**268**	P		**P**	**17 57 04.9**	**+0.2**
MTN				IAmb		IAmb	17 57 16.2	
	comp=Z,21nm,1.4s							
FITZ	**Fitzroy Crossi**	**42.77**	**259**	P		**P**	**17 57 42.9**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=45,slow=19,SNR=0.9							
	comp=Z,0.8nm,0.7s							
VNDA	**Vanda**	**62.74**	**182**	P		**P**	**18 00 04.3**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=332,slow=1.9,SNR=3.8							
	comp=Z,0.4nm,0.7s							
VNDA	**Vanda**	**62.74**	**182**	P		**P**	**18 00 02.2**	**-0.5**
PETK	**Petropavlovsk-**	**68.62**	**352**	P		**P**	**18 00 39.5**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=154,slow=7.2,SNR=4.6							
	comp=Z,0.8nm,0.6s							
QSPA	**South Pole Qui**	**75.09**	**180**	P		**P**	**18 01 17.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**77.64**	**293**	P		P	18 01 33.5	+2.2
	comp=Z,0.8nm,0.5s,baz=142,slow=3.9,SNR=5.0							
	comp=Z,0.8nm,0.5s							
L19K	**White Mountain**	**81.63**	**16**	P		**P**	**18 01 52.0**	**+0.8**
L19K				IAmb		IAmb	18 01 54.1	
	comp=Z,14nm,1.2s							
NVAR	**Mina Array Bea**	**85.27**	**48**	P		**P**	**18 02 12.1**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=217,slow=7.1,SNR=5.3							
	comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**99.32**	**316**	P		**Pdif**	**18 03 15.2**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=115,slow=4.9,SNR=1.9							
	comp=Z,0.3nm,0.8s							
ARCES	**ARCESS Array B**	**121.15**	**346**	PKP		**PKiKP**	**18 08 19.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=54,slow=3.1,SNR=6.8							

IDC 22 17:57:16.4±2.2, 16°07'S×173°45'E, h0km, mb3.8/5, mbtmp3.8/5, MS3.3/11, Error ellipse: s-maj=107.9km s-min=28.3km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.91**	**227**	LR	LR	18 02 20.9	
	comp=Z,247nm,20.6s,baz=33,slow=34						
AFI	**Afiamalu**	**14.43**	**83**	LR	LR	18 04 54.9	
	comp=Z,131nm,19.9s,baz=284,slow=32						
CTA	**Charters Tower**	**26.15**	**257**	LR	LR	18 11 12.5	
	comp=Z,64nm,18.5s,baz=86,slow=32						
RPZ	**Rata Peaks**	**27.63**	**184**	LR	LR	18 12 24.9	
	comp=Z,94nm,18.1s,baz=46,slow=33						
STKA	**Stephens Creek**	**32.93**	**236**	LR	LR	18 15 41.5	
	comp=Z,45nm,21.3s,baz=30,slow=34						
WRA	**Warramunga Arr**	**37.34**	**258**	P	P	18 04 30.4	-0.5
	1.0nm,0.8s,baz=90,slow=8.9,SNR=8.1						
WRA				LR	LR	18 18 03.2	
	comp=Z,25nm,20.1s,baz=232,slow=33						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**37.86**	**252**	P	P	18 04 34.5	-0.7
	1.3nm,0.8s,baz=82,slow=8.7,SNR=15						
ASAR				LR	LR	18 18 01.4	
	comp=Z,62nm,21.1s,baz=99,slow=33						
	1.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**45.65**	**260**	LR	LR	18 23 20.2	
	comp=Z,50nm,19.3s,baz=108,slow=34						
MA2	**Magadan**	**77.61**	**348**	LR	LR	18 38 52.4	
	comp=Z,17nm,20.6s,baz=149,slow=32						
CMAR	**Chiang Mai Arr**	**80.96**	**292**	P	P	18 09 35.2	+1.9
	1.2nm,1.0s,baz=125,slow=4.5,SNR=5.5						
	1.2nm,1.0s						
PFO	**Pinyon Flats O**	**83.02**	**52**	LR	LR	18 39 38.1	
	comp=Z,15nm,20.5s,baz=46,slow=31						
ILAR	**Eielson Array**	**86.07**	**16**	P	P	18 09 57.1	-1.5
	0.7nm,0.7s,baz=224,slow=6.0,SNR=6.6						
	0.7nm,0.7s						
TXAR	**Lajitas Array**	**91.72**	**60**	P	P	18 10 27.2	+0.9
	0.2nm,0.5s,baz=238,slow=5.0,SNR=2.9						
TXAR				LR	LR	18 44 56.9	
	comp=Z,21nm,19.5s,baz=213,slow=31						
	0.2nm,0.5s						

EAF 22 17:57:19.8±0.4, 5°78'N×38°05'E, h10km, ML3.3
AAE 22 17:57:47.9±7.9, 8°12'N×36°76'E, h15km±50km, ML2.9

ISC 22 17:57:33.3±1.8, 6°56'N±0'1×38°1'E±0'2, h8km±12km, n24, σ2°13/46, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FURI	**Furi**	**2.32**	**14**	*e*P	**Pn**	**17 58 09.3**	**-2.8**
FURI				*e*S	**Sb**	**17 58 45.8**	**+1.2**
FURI				IAML		17 58 50.9	
	135nm,0.5s						
FURI				IAML		17 58 52.5	
	comp=Z,158nm,0.7s						
FURI	**Furi**	**2.32**	**14**	*e*P	**Pg**	**17 58 20.2**	**+2.4**
FURI				*i* Sg	**Sg**	**17 58 47.6**	**-0.3**
FURI	**Furi**	**2.32**	**14**	*e*P	**Pg**	**17 58 20.2**	**+2.4**
FURI				*i* Sg	**Sg**	**17 58 47.7**	**-0.2**
FURI				IAML		17 58 52.0	
	comp=Z,158nm,0.7s						
FURI	**Furi**	**2.32**	**14**	*e*P	**Pg**	**17 58 20.6**	**+2.8**
FURI				*e*S	**Sg**	**17 58 46.4**	**-1.5**
FURI				IAML		17 58 52.4	
	comp=Z,158nm,0.7s						
FURI	**Furi**	**2.32**	**14**	*e*P	**Pn**	**17 58 09.3**	**-2.8**
FURI				*e*S	**Sb**	**17 58 45.8**	**+1.2**
FURI				IAML		17 58 50.9	
	135nm,0.5s						
FURI				IAML		17 58 52.5	
	comp=Z,158nm,0.7s						
FURI	**Furi**	**2.32**	**14**	*e*P	**Pg**	**17 58 21.3**	**+3.5**
FURI				*e*S	**Sg**	**17 58 48.4**	**+0.5**
FURI	**Furi**	**2.32**	**14**	*e*P	**Pg**	**17 58 20.2**	**+2.4**
FURI				*e*S	**Sg**	**17 58 46.3**	**-1.6**
FURI	**Furi**	**2.32**	**14**	*e*P	**Pg**	**17 58 20.2**	**+2.4**
FURI				*i* Sg	**Sg**	**17 58 47.6**	**-0.3**
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pn**	**17 58 11.7**	**-2.4**
AAE				*e*S	**Sb**	**17 58 49.2**	**+0.4**
AAE				IAML		17 58 56.3	
	comp=E,49nm,0.7s						
AAE				IAML		17 59 00.6	
	comp=N,208nm,0.5s						
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pn**	**17 58 11.7**	**-2.4**
AAE				*e*S	**Sb**	**17 58 49.2**	**+0.4**
AAE				IAML		17 58 56.3	
	comp=E,49nm,0.7s						
AAE				IAML		17 59 00.6	
	comp=N,208nm,0.5s						
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 20.7**	**0.0**
AAE				*e*S	**Sn**	**17 58 45.9**	**+1.2**
AAE				*i* Sg	**Sb**	**17 58 50.8**	**+1.9**
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 21.1**	**+0.4**
AAE				*e*S	**Sb**	**17 58 50.7**	**+1.8**
AAE				IAML		17 58 55.9	
	comp=E,49nm,0.7s						
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 20.8**	**+0.2**
AAE				*i* Sg	**Sb**	**17 58 50.8**	**+1.9**
AAE				IAML		17 59 00.4	
	comp=N,208nm,0.5s						
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pn**	**17 58 11.7**	**-2.4**
AAE				*e*S	**Sb**	**17 58 49.2**	**+0.4**
AAE				IAML		17 58 56.3	
	comp=E,49nm,0.7s						
AAE				IAML		17 59 00.6	
	comp=N,208nm,0.5s						
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 22.4**	**+1.7**
AAE				*e*S	**Sb**	**17 58 50.9**	**+2.0**
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 21.5**	**+0.8**
AAE				*e*S	**Sb**	**17 58 50.3**	**+1.4**
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pn**	**17 58 11.7**	**-2.4**
AAE				*e*S	**Sb**	**17 58 49.2**	**+0.4**
AAE				IAML		17 58 56.3	
	comp=E,49nm,0.7s						
AAE				IAML		17 59 00.6	
	comp=N,208nm,0.5s						
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 20.8**	**+0.2**
AAE				*e*S	**Sb**	**17 58 49.6**	**+0.7**
AAE	**Adis Abeba**	**2.47**	**15**	*e*P	**Pg**	**17 58 20.7**	**0.0**
AAE				*e*S	**Sn**	**17 58 45.9**	**+1.2**
AAE				*i* Sg	**Sb**	**17 58 50.8**	**+1.9**
ANKE	**Ethiopia-Afar**	**3.35**	**28**	*e*P	**Pg**	**17 58 38.7**	**+1.1**
ANKE				*e*S	**Sn**	**17 59 12.5**	**+5.9**
LODK	**Lodwar**	**4.21**	**221**	*e*P	**Pb**	**17 58 44.5**	**-3.1**
LODK				*e*S	**Sg**	**17 59 51.3**	**+2.8**
LODK				IAML		18 00 12.3	
	comp=N,16nm,0.5s						
LODK				IAML		18 00 13.4	
	comp=E,14nm,0.5s						
LODK	**Lodwar**	**4.21**	**221**	*e*P	Pg	17 58 56.7	+2.8
LODK				*e*S	Sg	17 59 57.4	+8.9
LODK				*i* Sg	Sb	18 00 08.3	+30
LODK	**Lodwar**	**4.21**	**221**	*e*P	Pg	17 58 56.4	+2.5
LODK				*e*S	Sg	18 00 05.9	+17
LODK				IAML		18 00 13.5	
	comp=E,14nm,0.5s						
LODK	**Lodwar**	**4.21**	**221**	*e*P	**Pb**	**17 58 44.5**	**-3.1**
LODK				*e*S	**Sg**	**17 59 51.3**	**+2.8**
LODK				IAML		18 00 12.3	
	comp=N,16nm,0.5s						
LODK				IAML		18 00 13.4	
	comp=E,14nm,0.5s						

KRNET 22 18:07:48.2±0.1, 39°70N×75°33E, mb2.4
SOME 22 18:07:51.7, 40°95N×78°87E, h0km, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**2.13**	**351**	*e*P	Pg	18 08 33.7	+1.0
	5.6nm,0.6s						
SATY				*e*S	Sg	18 09 04.0	+3.7
	20nm,0.5s						
UZB	**Uzymbulak**	**2.20**	**3**	*e*P	Pg	18 08 33.2	-0.7
	1.5nm,0.3s						
UZB				*e*S	Sg	18 09 03.3	+0.9
	9.1nm,0.5s						
ZHN	**Zhinishke**	**2.24**	**352**	*e*P	Pg	18 08 34.6	-0.1
	6.2nm,0.2s						
ZHN				*e*S	Sg	18 09 05.7	+2.1
	32nm,0.3s						
SHLS	**Shalkode**	**2.25**	**11**	*e*P	Pg	18 08 36.4	+1.6
	7.5nm,0.3s						
SHLS				*e*S	Sg	18 09 08.8	+4.8
	16nm,0.5s						
ULHL	**Ulahol**	**2.36**	**304**	⇓*i*P	Pb	18 08 34.3	-0.9
	baz=15						
ULHL				⇓*i*S	Sg	18 09 08.0	+0.6
	baz=15						
KPKS	**Kokpek**	**2.52**	**357**	*e*P	Pg	18 08 39.4	-0.6
	5.3nm,0.2s						
KPKS				*e*S	Sg	18 09 13.6	+1.0
	20nm,0.3s						
KURS	**Kuram**	**2.59**	**349**	*e*P	Pg	18 08 40.5	-0.8
	7.0nm,0.7s						
KURS				*e*S	Sg	18 09 15.6	+0.7
	8.1nm,0.9s						
MDOK	**Medeo**	**2.59**	**329**	*e*P	Pg	18 08 40.7	-0.7
	4.6nm,0.5s						
MDOK				*e*S	Sg	18 09 16.2	+1.2
	23nm,0.9s						
AAA	**Alma-Ata**	**2.69**	**328**	*e*P	Pg	18 08 43.1	-0.1
	18nm,0.2s						
AAA				*e*S	Sg	18 09 19.9	+1.9
	36nm,0.3s						
KST	**Kastek**	**3.01**	**315**	*e*P	Pg	18 08 48.2	-1.2
	2.4nm,0.6s						
KST				*e*S	Sg	18 09 28.7	+0.3
	7.7nm,0.8s						
TKM2	**Tokmak 2**	**3.13**	**310**	⇑*i*P	Pn	18 08 42.4	-0.2
	baz=4.0						
TKM2				⇑*i*S	Sn	18 09 22.1	+1.3
	baz=4.0						
DGS	**Degeres**	**3.25**	**316**	*e*P	Pb	18 08 51.8	+1.5
	1.3nm,0.6s						
DGS				*e*S	Sg	18 09 35.2	-0.8
	3.6nm,0.7s						
ARXS	**Arharly**	**3.35**	**347**	*e*P	Pg	18 08 54.7	-1.2
	1.8nm,0.3s						
ARXS				*e*S	Sg	18 09 39.8	+0.5
	5.3nm,0.5s						
DJR	**Jarkent**	**3.45**	**11**	*e*P	Pb	18 08 55.5	+1.8
	0.8nm,0.2s						
DJR				*e*S	Sg	18 09 41.2	-1.3
	4.9nm,0.3s						
KUU	**Kurty**	**3.49**	**328**	*e*P	Pg	18 08 56.4	-2.1
	1.1nm,0.4s						
KUU				*e*S	Sg	18 09 42.9	-0.8
	6.3nm,0.6s						
KRBS	**Karabastau**	**3.62**	**320**	*e*P	Pb	18 08 58.7	+2.0
	0.7nm,0.4s						
KRBS				*e*S	Sg	18 09 47.1	-1.0
	1.6nm,0.6s						
EKS2	**Erkin-Say**	**4.17**	**296**	⇑*i*P	Pn	18 08 41.9	-15
	baz=39						
EKS2				⇑*i*S	Sn	18 09 21.1	-25
	baz=39						

IDC 22 18:22:51.9±0.8, 6°74N×72°97W, h158km±14km, mb2.8/2, mbtmp3.4/4, Error ellipse: s-maj=49.4km s-min=7.7km az=132.0
RSNC 22 18:22:53.7±1.1, 6°82N×73°13W, h148km±4km, ML3.2, Mw3.6

ISC 22 18:22:52.1±0.9, 6°83N±0'03×73°09W±0'04, h156km±6km, n35, σ1°42/67, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**201**	⇓*i*P	**Pn**	**18 23 13.6**	**0.0**
BARC				*e*S	**Sn**	**18 23 28.7**	**-1.2**
BARC				*i*		18 23 29.9	
	comp=Z,319nm,0.3s						
PAMC	**Pamplona, Colo**	**0.64**	**37**	*e*P	**Pn**	**18 23 16.5**	**+1.0**
PAMC				*e*S	**Sn**	**18 23 33.4**	**0.0**
PAMC				*i*		18 23 35.8	
	comp=Z,608nm,0.5s						
BRRC	**Barranca, Sant**	**0.67**	**295**	*e*P	**Pn**	**18 23 15.3**	**+0.2**
BRRC				*e*S	**Sn**	**18 23 32.3**	**-0.3**
BRRC				*i*		18 23 35.9	
	comp=Z,217nm,0.3s						
RUSC	**La Rusia**	**0.93**	**179**	*e*P	**Pn**	**18 23 17.9**	**+0.4**
RUSC				*e*S	**Sn**	**18 23 36.4**	**-0.5**
RUSC				*i*		18 23 38.1	
	comp=Z,269nm,0.4s						
TAMC	**Tame, Arauca**	**1.35**	**107**	⇓*i*P	**Pn**	**18 23 22.0**	**+1.3**
TAMC				*e*S	**Sn**	**18 23 43.5**	**+0.9**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*e*P	**Pn**	**18 23 20.4**	**-0.6**
PTBC				*e*S	**Sn**	**18 23 42.1**	**-1.0**
PTBC				*i*		18 23 47.0	
	comp=Z,102nm,0.3s						
OCAC	**Ocana**	**1.42**	**351**	*e*P	**Pn**	**18 23 21.6**	**+0.1**
OCAC				*e*S	**Sn**	**18 23 43.3**	**-0.9**
OCAC				*i*		18 23 46.9	
	comp=Z,261nm,0.2s						
SPBC	**San Pablo de B**	**1.52**	**220**	*e*P	**Pn**	**18 23 22.5**	**0.0**
SPBC				*e*S	**Sn**	**18 23 44.7**	**-1.1**
SPBC				*i*		18 23 47.2	
	comp=Z,307nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	*e*P	**Pn**	**18 23 26.2**	**0.0**
ZARC				*e*S	**Sn**	**18 23 52.0**	**-0.3**
ZARC				*i*		18 23 57.8	
	comp=Z,87nm,0.6s						
NORC	**Norcasia**	**2.17**	**235**	*e*P	**Pn**	**18 23 29.5**	**-0.1**
NORC				*e*S	**Sn**	**18 23 57.7**	**-0.8**
NORC				*i*		18 24 05.1	
	comp=Z,109nm,0.2s						
NORC				*e*		18 24 08.4	
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**18 23 31.8**	**+0.5**
CHIC				*e*S	**Sn**	**18 24 01.0**	**-0.4**
CHIC				*i*		18 24 04.6	
	comp=Z,116nm,0.5s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**18 23 33.2**	**+1.4**
	comp=Z,92nm,0.3s,baz=316,slow=6.9,SNR=28						
ROSC				S	**Sn**	**18 24 02.3**	**-0.1**
	comp=Z,202nm,0.3s,baz=94,slow=20,SNR=12						
ROSC	**El Rosal**	**2.32**	**212**	*e*P	**Pn**	**18 23 33.2**	**+1.4**
ROSC				*e*S	**Sn**	**18 24 01.9**	**-0.4**
ROSC				*i*		18 24 05.7	
	comp=Z,205nm,0.3s						
HELC	**Santa Helena**	**2.50**	**256**	*e*P	**Pn**	**18 23 35.8**	**+1.8**
HELC				*e*S	**Sn**	**18 24 04.8**	**-1.4**
HELC				*i*		18 24 12.6	
	comp=Z,83nm,0.4s						
UREC	**San Jos de Ur**	**2.59**	**291**	*e*P	**Pn**	**18 23 33.1**	**-1.6**
UREC				*e*S	**Sn**	**18 24 04.9**	**-2.6**
UREC				*i*		18 24 16.6	
	comp=Z,79nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.74**	**350**	*e*P	**Pn**	**18 23 38.9**	**+2.4**
LL1C				*e*S	**Sn**	**18 24 14.2**	**+3.3**
VILC	**Villavicencio,**	**2.76**	**193**	*e*P	**Pn**	**18 23 36.8**	**-0.2**
VILC				*e*S	**Sn**	**18 24 11.5**	**-0.1**
VILC				*i*		18 24 14.2	
	comp=Z,172nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P	**Pn**	**18 23 39.1**	**+1.8**
GUY2C				*e*S	**Sn**	**18 24 14.9**	**+2.9**
GUY2C				*i*		18 24 19.8	
	comp=Z,108nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.78**	**160**	*e*P	**Pn**	**18 23 36.7**	**-0.3**
PTGC				*e*S	**Sn**	**18 24 10.1**	**-1.7**
PTGC				*i*		18 24 15.2	
	comp=Z,129nm,0.5s						
LL6C	**La Loma 6 Bece**	**2.90**	**357**	*e*P	**Pn**	**18 23 38.8**	**+0.3**
LL6C				*e*S	**Sn**	**18 24 13.8**	**-0.6**
LL6C				*i*		18 24 20.5	
	comp=Z,50nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*e*P	**Pn**	**18 23 41.5**	**+0.8**
CBOC				*e*S	**Sn**	**18 24 18.2**	**+0.1**
CBOC				*i*		18 24 33.0	
	comp=Z,26nm,0.6s						
DBBC	**Dabeiba**	**3.10**	**274**	*e*P	**Pn**	**18 23 41.2**	**+0.1**
DBBC				*e*S	**Sn**	**18 24 17.2**	**-2.0**
DBBC				*i*		18 24 21.3	
	comp=Z,37nm,0.7s						
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**18 23 43.0**	**+0.8**
	comp=Z,8.8nm,0.3s,baz=241,slow=10,SNR=7.2						
SDV				S	**Sn**	**18 24 20.0**	**-1.1**
	comp=Z,72nm,0.4s,baz=285,slow=20,SNR=35						
ARGC	**Ariguani, Magd**	**3.22**	**339**	*e*P	**Pn**	**18 23 44.0**	**+1.4**
ARGC				*e*S	**Sn**	**18 24 23.9**	**+2.2**
ARGC				*i*		18 24 32.1	
	comp=Z,28nm,0.3s						
ANIL	**Santa Ana**	**3.27**	**225**	*e*P	**Pn**	**18 23 45.0**	**+1.6**
ANIL				*e*S	**Sn**	**18 24 23.9**	**+0.7**
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**18 23 47.3**	**+0.2**
PRAC				*e*S	**Sn**	**18 24 29.0**	**-0.8**
PRAC				*i*		18 24 37.8	
	comp=Z,67nm,0.4s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**18 23 47.7**	**-0.9**
SJCC				*e*S	**Sn**	**18 24 28.9**	**-3.5**
SJCC				*i*		18 24 33.4	
	comp=Z,36nm,0.5s						
PLMC	**San Jos del P**	**3.70**	**239**	*e*P	**Pn**	**18 23 49.5**	**+0.7**
PLMC				*e*S	**Sn**	**18 24 32.8**	**0.0**
PLMC				*i*		18 24 43.1	
	comp=Z,29nm,0.6s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**18 23 54.0**	**-0.9**
CRJC				*e*S	**Sn**	**18 24 41.5**	**-2.4**
CRJC				*i*		18 24 48.8	
	comp=Z,39nm,0.3s						
GUVC	**San Jose del G**	**4.28**	**174**	*e*P	**Pn**	**18 23 56.1**	**-0.2**
GUVC				*e*S	**Sn**	**18

1.0nm,0.9s
LEM Lembang 60.83 309 LR LR 19 07 32.8
comp=Z,44nm,18.7s,baz=240,slow=34
H08S2 Diego Garcia H 77.33 276 T T 20 08 17.8
baz=148,slow=76,SNR=42
H08S1 Diego Garcia H 77.34 276 T T 20 08 15.8
baz=148,slow=76,SNR=14
H08S3 Diego Garcia H 77.35 276 T T 20 08 19.4
baz=148,slow=76,SNR=45
FINES FINESS Array B 152.53 301 PKPbc PKiKP 18 52 33.4 +0.2
1.5nm,0.9s,baz=99,slow=8.7,SNR=2.3
GERES GERESS Array B 153.26 269 PKPbc PKiKP 18 52 36.7 +1.4
0.3nm,0.6s,baz=132,slow=4.2,SNR=4.2

IDC ***22*** *18:59:51.2±1.3, 17.66S×178.87W, h554km±16km, mb3.4/7, mbtmp4.4/9, Error ellipse: s-maj=26.3km s-min=20.7km az=39.0*

NEIC ***22*** *18:59:52.6±1.4, 17.6S±0.2×179.01W±0.09, h557km±12km, mb4.4/25, Error ellipse: s-maj=29.1km s-min=12.8km az=179.0*

ISC 22 18:59:51.3±0.8, 17.7S±0.1×179.0W±0.1, h539km, n38, σ1s33/40, mb4.3/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.85**	**269**	P	**P**	**19 01 07.0**	**+2.4**
	43nm,0.5s,baz=124,slow=11,SNR=47						
MSVF	**Nonsavu**	**2.85**	**269**	P	**P**	**19 01 06.7**	**+2.0**
AFI	**Afiamalu**	**7.87**	**62**	P	**P**	**19 01 46.7**	**-0.9**
	23nm,0.5s,baz=225,slow=7.1,SNR=2.5						
AFI	**Afiamalu**	**7.87**	**62**	P	**P**	**19 01 48.9**	**+1.3**
RAO	**Raoul Island**	**11.53**	**175**	P	**P**	**19 02 23.3**	**-1.6**
OUZ	**Omahuta**	**18.66**	**199**	P	**P**	**19 03 38.8**	**+3.3**
URZ	**Urewera**	**20.76**	**189**	P	**P**	**19 03 53.4**	**-1.2**
	4.3nm,0.4s,baz=120,slow=12,SNR=8.2						
	4.3nm,0.4s						
URZ	**Urewera**	**20.76**	**189**	P	**P**	**19 03 53.5**	**-1.2**
URZ				IAmb	IAmb	19 03 55.4	
	comp=Z,11nm,0.9s						
LTZ	**Lake Taylor**	**26.09**	**195**	P	**P**	**19 04 41.2**	**-0.8**
LTZ				IAmb	IAmb	19 04 45.6	
	comp=Z,9.2nm,1.1s						
OXZ	**Oxford**	**26.66**	**195**	P	**P**	**19 04 44.1**	**-2.9**
OXZ				IAmb	IAmb	19 04 47.1	
	comp=Z,12nm,0.8s						
RPZ	**Rata Peaks**	**27.27**	**196**	P	**P**	**19 04 52.2**	**-0.2**
	comp=Z,5.4nm,0.6s,baz=14,slow=8.3,SNR=2.4						
	comp=Z,5.4nm,0.6s						
FOZ	**Fox Glacier**	**27.44**	**198**	P	**P**	**19 04 54.4**	**+0.5**
LBZ	**Lake Benmore**	**28.12**	**197**	P	**P**	**19 04 59.0**	**-0.9**
WKZ	**Wanaka**	**28.86**	**198**	P	**P**	**19 05 05.7**	**-0.7**
ARMA	**Armidale**	**29.59**	**239**	P	**P**	**19 05 13.3**	**+0.3**
ARMA				IAmb	IAmb	19 05 36.1	
	comp=Z,22nm,1.3s						
MLZ	**Mavora Lakes**	**29.62**	**199**	P	**P**	**19 05 13.7**	**+0.9**
MLZ				IAmb	IAmb	19 05 14.5	
	comp=Z,11nm,0.7s						
WHZ	**Wether Hill Ro**	**30.14**	**198**	P	**P**	**19 05 17.6**	**+0.2**
CAN	**Canberra**	**33.41**	**232**	P	**P**	**19 05 45.7**	**+0.2**
COEN	**Coen**	**36.58**	**270**	P	**P**	**19 06 11.8**	**-0.4**
COEN				IAmb	IAmb	19 06 27.1	
	comp=Z,6.8nm,1.1s						
TOO	**Toolangi**	**36.90**	**230**	P	**P**	**19 06 13.5**	**-1.0**
TOO				IAmb	IAmb	19 06 16.7	
	comp=Z,5.8nm,1.1s						
STKA	**Stephens Creek**	**38.27**	**241**	P	**P**	**19 06 26.7**	**+1.0**
	comp=Z,1.4nm,0.4s,baz=95,slow=7.7,SNR=11						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**38.27**	**241**	P	**P**	**19 06 26.4**	**+0.6**
BBOO	**Buckleboo**	**43.05**	**241**	P	**P**	**19 07 03.9**	**+0.1**
BBOO				IAmb	IAmb	19 07 19.7	
	comp=Z,20nm,1.4s						
WR0	**Warramunga Arr**	**43.97**	**259**	P	**P**	**19 07 09.3**	**-1.8**
WB0	**Warramunga Arr**	**44.12**	**260**	P	**P**	**19 07 11.0**	**-1.3**
WB2	**Warramunga Arr**	**44.15**	**259**	P	**P**	**19 07 11.2**	**-1.2**
WB2				IAmb	IAmb	19 07 43.3	
	comp=Z,6.5nm,1.3s						
WRAB	**Tennant Creek**	**44.15**	**259**	P	**P**	**19 07 11.1**	**-1.4**
WRA	**Warramunga Arr**	**44.16**	**259**	P	**P**	**19 07 11.2**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=95,slow=8.3,SNR=31						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**44.16**	**259**	P	**P**	**19 07 10.2**	**-2.4**
AS31	**Alice Springs**	**44.34**	**254**	P	**P**	**19 07 13.5**	**-0.5**
ASAR	**Alice Springs**	**44.34**	**254**	P	**P**	**19 07 12.6**	**-1.5**
	comp=Z,3.4nm,0.4s,baz=89,slow=7.8,SNR=202						
ASAR				PcP	**PcP**	**19 08 45.2**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=100,slow=4.4,SNR=4.2						
ASAR				S	**S**	**19 13 09.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=86,slow=15,SNR=5.5						
	comp=Z,3.4nm,0.4s						
ASAR	**Alice Springs**	**44.34**	**254**	P	**P**	**19 07 13.1**	**-0.9**
FORT	**Forrest**	**49.62**	**244**	P	**P**	**19 07 52.6**	**-1.0**
FORT				IAmb	IAmb	19 08 10.7	
	comp=Z,26nm,1.2s						
KNRA	**Kununurra**	**49.99**	**264**	P	**P**	**19 07 56.0**	**-0.6**
KNRA				IAmb	IAmb	19 08 33.6	
	comp=Z,28nm,1.4s						
SIJI	**Sorong**	**51.68**	**283**	P	**P**	**19 08 08.2**	**-0.7**
	comp=Z,6.5nm,0.5s,baz=90,slow=5.1						
	comp=Z,6.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**52.55**	**260**	P	**P**	**19 08 15.1**	**+0.1**
FITZ				IAmb	IAmb	19 08 16.3	
	comp=Z,19nm,1.5s						
QSPA	**South Pole Qui**	**72.35**	**180**	P	**P**	**19 10 22.9**	**+0.5**
QSPA				IAmb	IAmb	19 10 23.2	
	comp=Z,11nm,1.5s						
MAW	**Mawson**	**83.87**	**200**	P	**P**	**19 11 24.1**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=115,slow=5.5,SNR=4.5						
	comp=Z,2.0nm,0.8s						

JMA ***22*** *19:08:10.0±0.4, 23°N±1°×12°1E±°, h4km, MV3.9/14, TAIWAN REGION*

NIED ***22*** *19:08:10.0, 22°.84N×120°.98E, h4km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^15 Nm; Mrr=2.49; Mθθ 0.94; Mφφ 1.55; Mrθ=2.33; Mθφ=-0.17; Mrφ=0.64; Fault plane solution: M0 2.95000×10^15 NP1: φs 72.00000°, δ 18.00000°, λ -92.00000°. NP2: φs 254.00000°, δ 72.00000°, λ -89.00000°.*

TAP ***22*** *19:08:11.9, 22°.86N×120°.94E, h7km, ML4.4, C*

NEIC ***22*** *19:08:14.0±1.8, 22°.97N±0°.06×121°.08E±0°.07, h10km±1km, mb4.2/15, Error ellipse: s-maj=10.9km s-min=10.2km az=88.0*

BJI ***22*** *19:08:14.0±0.0, 22°.91N×120°.90E, h10km, mb4.1/26, mB4.5/15, ML3.9/7, Ms3.8/17, Ms7 3.7/15*

IDC ***22*** *19:08:17.6±3.9, 22°.88N×121°.16E, h46km±38km, mb3.7/20, mbtmp4.0/21, ML2.0/1, MS3.2/13, Error ellipse: s-maj=22.7km s-min=14.7km az=67.0*

ISC 22 19:08:13.3±0.7, 22°.86N±0°.01×121°.00E±0°.01, h11km±4km, n210, σ1s45/316, mb4.1/28, MS3.3/13, 50C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**0.07**	**120**		**Pg**	**19 08 14.7**	**-1.0**
TWGBT	**Beinan**	**0.08**	**119**	⇑*iP*	**Pg**	**19 08 15.3**	**-0.5**
	baz=109						
TWGBT				*i* S	**Sg**	**19 08 17.4**	**-0.2**
	baz=109						
LONT	**Longtian**	**0.13**	**68**	⇑*iP*	**Pg**	**19 08 16.1**	**-0.3**
	baz=76						
LONT				S	**Sg**	**19 08 18.5**	**-0.1**
	baz=76						
TTN	**Taitung**	**0.17**	**128**	⇑*iP*	**Pg**	**19 08 17.8**	**+0.8**
	baz=119						
TTN				S	**Sb**	**19 08 21.9**	**+2.3**
	baz=119						
ECL	**Taimali**	**0.26**	**190**	⇑*iP*	**Pg**	**19 08 17.5**	**-1.2**
	baz=176						
ECL				S	**Sg**	**19 08 20.9**	**-1.4**
	baz=176						
EDH	**Donghe**	**0.30**	**68**	⇑*iP*	**Pg**	**19 08 19.8**	**+0.4**
	baz=72						
EDH				S	**Sb**	**19 08 25.5**	**-0.2**
	baz=72						
ECS	**Chishang**	**0.31**	**40**	⇑*iP*	**Pg**	**19 08 19.2**	**-0.3**
	baz=48						
ECS				*e*S	**Sb**	**19 08 24.5**	**-1.5**
	baz=48						
ELDTW	**Lidau**	**0.33**	**2**	⇑*iP*	**Pg**	**19 08 18.8**	**-1.2**
	baz=13						
ELDTW				S	**Sg**	**19 08 23.1**	**-1.4**
	baz=13						
SLGT	**Liugui**	**0.35**	**292**	⇑*iP*	**Pg**	**19 08 18.5**	**-1.9**
	baz=295						
SLGT				*e*S	**Sg**	**19 08 22.5**	**-2.7**
	baz=295						
SSD	**Sandimen**	**0.36**	**252**	⇑*iP*	**Pg**	**19 08 18.3**	**-2.1**
	baz=247						
SSD				S	**Sg**	**19 08 22.3**	**-3.0**
	baz=247						
TSMG	**Majia**	**0.36**	**245**	⇑*iP*	**Pg**	**19 08 18.4**	**-2.1**
	baz=241						
TSMG				*e*S	**Sg**	**19 08 22.4**	**-2.9**
	baz=241						
STYH	**Taoyuan**	**0.38**	**326**	⇑*eP*	**Pg**	**19 08 18.5**	**-2.2**
	baz=335						
STYH				*e*S	**Sg**	**19 08 23.2**	**-2.5**
	baz=335						
CHKT	**Chengkung**	**0.41**	**54**	⇑*eP*	**Pg**	**19 08 21.6**	**+0.2**
	baz=59						
CHKT				*e*S	**Sb**	**19 08 28.9**	**+0.1**
	baz=59						
MASBT	**Mashibuluo**	**0.42**	**234**	⇑*iP*	**Pg**	**19 08 19.6**	**-2.0**
	baz=229						
MASBT				*e*S	**Sg**	**19 08 24.8**	**-2.4**
	baz=229						
FULB	**Fuli**	**0.43**	**38**	⇑*iP*	**Pg**	**19 08 21.7**	**-0.1**
	baz=44						
FULB				*i* S	**Sb**	**19 08 28.8**	**-0.7**
	baz=44						
SGST	**Jiashian**	**0.45**	**300**	⇑*eP*	**Pg**	**19 08 19.9**	**-2.2**
	baz=304						
SGST				*e*S	**Sg**	**19 08 25.7**	**-2.3**
	baz=304						
LDUT	**Ludao**	**0.47**	**113**	⇓*iP*	**Pg**	**19 08 23.0**	**+0.6**
	baz=111						
LDUT				S	**Sb**	**19 08 31.1**	**+0.6**
	baz=111						
SCST	**Cishan**	**0.47**	**273**	⇑*iP*	**Pg**	**19 08 21.3**	**-1.2**
	baz=273						
SCST				*e*S	**Sg**	**19 08 27.6**	**-1.1**
	baz=273						
SGLT	**Jiouru**	**0.49**	**254**	⇑*eP*	**Pg**	**19 08 22.0**	**-0.9**
	baz=251						
SGLT				*e*S	**Sb**	**19 08 29.9**	**-1.3**
	baz=251						
EAST	**Anshuo**	**0.49**	**197**	⇑*iP*	**Pg**	**19 08 21.8**	**-1.1**
	baz=190						
EAST				*e*S	**Sg**	**19 08 28.5**	**-1.0**
	baz=190						
TSPT	**Pingtung City**	**0.50**	**249**	⇑*eP*	**Pg**	**19 08 22.2**	**-0.8**
	baz=246						
TSPT				*e*S	**Sg**	**19 08 28.1**	**-1.6**
	baz=246						
TAW	**Tawu**	**0.51**	**191**	⇑*iP*	**Pg**	**19 08 22.1**	**-1.1**
	baz=184						
TAW				*e*S	**Sg**	**19 08 29.0**	**-0.9**
	baz=184						
TAWH	**Dawu Township**	**0.53**	**192**	⇑*eP*	**Pg**	**19 08 21.4**	**-2.1**
	baz=186						
TAWH				*e*S	**Sg**	**19 08 30.5**	**0.0**
	baz=186						
WTP	**Ta-pu**	**0.53**	**317**	⇑*iP*	**Pg**	**19 08 22.8**	**-0.8**
	baz=322						
WTP				*e*S	**Sb**	**19 08 30.8**	**-1.5**
	baz=322						
TWM1	**Shoushan**	**0.54**	**266**	⇑*eP*	**Pg**	**19 08 23.2**	**-0.6**
	baz=265						
CHN1	**Nanshi**	**0.55**	**307**	⇑P	**Pg**	**19 08 23.3**	**-0.6**
	baz=310						
CHN1				*e*S	**Sb**	**19 08 31.8**	**-1.0**
	baz=310						
SSPT	**Xinbi**	**0.55**	**227**	⇑P	**Pg**	**19 08 22.7**	**-1.3**
	baz=223						
SSPT				*e*S	**Sg**	**19 08 29.9**	**-1.3**
	baz=223						
TPUB	**Ta-pu**	**0.56**	**322**		**Pg**	**19 08 22.6**	**-1.6**
TPUB	**Ta-pu**	**0.56**	**322**	⇑*eP*	**Pg**	**19 08 23.5**	**-0.7**
	baz=326						
TPUB				*e*S	**Sg**	**19 08 31.1**	**-0.5**
	baz=326						
TWF1	**Yuli**	**0.56**	**29**	⇑P	**Pg**	**19 08 23.2**	**-1.0**
	baz=34						
TWF1				*e*S	**Sg**	**19 08 30.5**	**-1.2**
	baz=34						
EYUL	**Yuli**	**0.57**	**31**	⇑*iP*	**Pg**	**19 08 23.3**	**-1.1**
	baz=36						
EYUL				S	**Sg**	**19 08 30.8**	**-1.1**
	baz=36						
SNST	**Tainan City**	**0.59**	**308**	⇑*eP*	**Pg**	**19 08 24.4**	**-0.3**
	baz=311						
SNST				*e*S	**Sb**	**19 08 33.7**	**-0.2**
	baz=311						
YULB	**Yu-li**	**0.60**	**27**		**Pg**	**19 08 23.0**	**-1.9**
YULB	**Yu-li**	**0.60**	**27**	⇑*iP*	**Pg**	**19 08 23.7**	**-1.3**
	baz=32						
YULB				S	**Sg**	**19 08 31.0**	**-1.8**
	baz=32						
SCZT	**Fangliau**	**0.60**	**216**	⇑*iP*	**Pg**	**19 08 23.3**	**-1.6**
	baz=211						
SCZT				*e*S	**Sg**	**19 08 30.5**	**-2.3**
	baz=211						
CHN4	**Tsaushan**	**0.62**	**323**	⇑*eP*	**Pg**	**19 08 23.9**	**-1.5**
	baz=326						
CHN4				*e*S	**Sb**	**19 08 33.7**	**-1.2**
	baz=326						
SHHT	**Tainan City**	**0.62**	**285**	⇑*eP*	**Pg**	**19 08 25.1**	**-0.3**
	baz=286						
SHHT				*e*S	**Sn**	**19 08 36.9**	**-1.2**
	baz=286						
TWK	**Hsinying**	**0.62**	**311**	⇑*eP*	**Pg**	**19 08 25.1**	**-0.4**
	baz=314						
TWK				*e*S	**Sb**	**19 08 34.9**	**-0.2**
	baz=314						
CHN3	**Shinhua**	**0.63**	**290**	*eP*	**Pb**	**19 08 26.0**	**-0.2**
	baz=292						
CHN3				*e*S	**Sn**	**19 08 37.6**	**-0.5**
	baz=292						
YUS	**Yu-Shan**	**0.63**	**356**	⇑*iP*	**Pg**	**19 08 24.3**	**-1.4**
	baz=1.0						
YUS				*e*S	**Sg**	**19 08 32.5**	**-1.6**
	baz=1.0						
SLIU	**Shizi**	**0.67**	**196**	⇑*iP*	**Pg**	**19 08 24.8**	**-1.4**
	baz=192						
SLIU				*e*S	**Sg**	**19 08 34.5**	**-0.4**
	baz=192						
ALS	**Alishan**	**0.68**	**344**	⇓*eP*	**Pg**	**19 08 25.3**	**-1.1**
	baz=349						
ALS				*e*S	**Sg**	**19 08 34.3**	**-1.1**
	baz=349						
WCKO	**Fanlu**	**0.68**	**328**	⇑*eP*	**Pg**	**19 08 25.2**	**-1.4**
	baz=331						
WCKO				*e*S	**Sg**	**19 08 34.8**	**-0.8**
	baz=331						
KAU	**Kaohsiung**	**0.70**	**246**	*eP*	**Pg**	**19 08 26.8**	**-0.1**
	baz=243						
EHY	**Hungye**	**0.71**	**24**	⇑*eP*	**Pg**	**19 08 25.6**	**-1.4**
	baz=29						
EHY				*e*S	**Sg**	**19 08 34.5**	**-1.9**
	baz=29						
SSHA	**Shanhua**	**0.71**	**293**	*eP*	**Pn**	**19 08 28.2**	**-1.1**
	baz=294						
WSSB	**Gushan**	**0.72**	**253**	*eP*	**Pb**	**19 08 27.7**	**-0.1**
	baz=251						
TAI1	**Yung-k'ang**	**0.74**	**284**	*eP*	**Pb**	**19 08 28.0**	**-0.1**
	baz=285						
HGSD	**Ruisui**	**0.74**	**31**	*eP*	**Pg**	**19 08 27.0**	**-0.7**
	baz=35						
HGSD				*e*S	**Sb**	**19 08 38.0**	**-0.4**
	baz=35						
WLCH	**Liuqiu**	**0.77**	**229**	*eP*	**Pn**	**19 08 29.6**	**-0.5**
	baz=226						
TWP	**Hsiaoliuchiu**	**0.78**	**229**	⇑*eP*	**Pn**	**19 08 29.9**	**-0.4**
	baz=226						
TWP				*e*S	**Sn**	**19 08 45.3**	**+3.4**
	baz=226						
SCLT	**Jiali**	**0.81**	**293**	*eP*	**Pn**	**19 08 29.4**	**-1.2**
	baz=294						
SCLT				*e*S	**Sn**	**19 08 42.8**	**+0.2**
	baz=294						
CHN2	**Minshiung**	**0.83**	**324**	*eP*	**Pn**	**19 08 29.4**	**-1.5**
	baz=327						
CHN2				*e*S	**Sn**	**19 08 41.7**	**-1.4**
	baz=327						
CHY	**Chiayi**	**0.83**	**320**	*eP*	**Pb**	**19 08 29.1**	**-0.6**
	baz=323						
CHY				*e*S	**Sn**	**19 08 41.3**	**-1.9**
	baz=323						
ICHU	**Yijhu**	**0.83**	**307**	*eP*	**Pb**	**19 08 29.1**	**-0.7**
	baz=309						
ICHU				*e*S	**Sn**	**19 08 41.5**	**-1.7**
	baz=309						
WHYT	**Xinyi Township**	**0.85**	**351**	*eP*	**Pg**	**19 08 28.8**	**-0.9**
	baz=354						
WHYT				*e*S	**Sg**	**19 08 39.8**	**-0.9**
	baz=354						
SMST	**Manzhou Townsh**	**0.85**	**190**	*eP*	**Pg**	**19 08 28.8**	**-0.8**
	baz=187						
HEN	**Hengchun**	**0.88**	**196**	*eP*	**Pb**	**19 08 30.0**	**-0.6**
	baz=192						
TSCK	**Chigu Township**	**0.89**	**289**	*eP*	**Pg**	**19 08 29.3**	**-1.2**
	baz=290						
TSCK				*e*S	**Sn**	**19 08 42.8**	**-1.9**
	baz=290						
EGFH	**Guangfu**	**0.90**	**26**	⇑*eP*	**Pg**	**19 08 28.6**	**-2.0**
	baz=29						
EGFH				*e*S	**Sg**	**19 08 40.4**	**-1.9**
	baz=29						
VWDT	**VWDT**	**0.90**	**8**	⇑P	**Pg**	**19 08 28.9**	**-1.8**
	baz=12						
VWDT				*e*S	**Sb**	**19 08 42.2**	**-0.8**
	baz=12						
WGK	**Gukeng**	**0.92**	**334**	*eP*	**Pn**	**19 08 31.6**	**-0.6**
	baz=337						
WGK				*e*S	**Sn**	**19 08 44.8**	**-0.6**
	baz=337						
SSLB	**Suanglung**	**0.93**	**357**		**Pg**	**19 08 29.1**	**-2.1**
SSLB	**Suanglung**	**0.93**	**357**	⇑*eP*	**Pg**	**19 08 29.4**	**-1.8**
	baz=1.0						
SSLB				*e*S	**Sn**	**19 08 43.7**	**-1.9**
	baz=1.0						
TWK1	**Hengchun**	**0.93**	**191**	*eP*	**Pb**	**19 08 30.5**	**-0.9**
	baz=187						
TWKBT	**Hengchun**	**0.93**	**191**	⇑*eP*	**Pb**	**19 08 30.4**	**-1.0**
	baz=188						
TWKBT				*e*S	**Sn**	**19 08 46.7**	**+1.1**
	baz=188						
WDLH	**Douliu**	**0.93**	**333**	*eP*	**Pn**	**19 08 31.3**	**-1.0**
	baz=336						
WDLH				*e*S	**Sn**	**19 08 45.0**	**-0.7**
	baz=336						
TSEB	**Hengchuen, Pin**	**0.96**	**186**	*eP*	**Pn**	**19 08 32.3**	**-0.4**
	baz=185						
LAY	**Lan-yu**	**0.96**	**148**	*eP*	**Pb**	**19 08 30.0**	**-2.0**
	baz=145						
WSL	**Shuilin Townsh**	**0.97**	**313**	⇑*eP*	**Pn**	**19 08 31.9**	**-1.0**
	baz=315						
WSL				*e*S	**Sn**	**19 08 46.0**	**-0.7**
	baz=315						
TEGC	**Jichi Village**	**0.98**	**30**	*eP*	**Pn**	**19 08 32.2**	**-0.8**
	baz=33						
WJS	**Zhushan**	**0.99**	**345**	*eP*	**Pn**	**19 08 33.2**	**0.0**
	baz=348						
WJS				*e*S	**Sn**	**19 08 47.1**	**-0.1**
	baz=348						
WTK	**Tuku**	**1.00**	**326**	⇑*eP*	**Pn**	**19 08 32.1**	**-1.1**
	baz=328						
WTK				*e*S	**Sn**	**19 08 46.2**	**-1.2**
	baz=328						
LYUB	**Lan-yu**	**1.01**	**148**	*eP*	**Pb**	**19 08 29.2**	**-3.5**
	baz=145						
SMLT	**Sun Moon Lake**	**1.02**	**355**	*eP*	**Pb**	**19 08 32.0**	**-1.2**
	baz=358						
SMLT				*e*S	**Sn**	**19 08 48.7**	**+0.5**
	baz=358						
ESL	**Shilin**	**1.03**	**22**	*eP*	**Pb**	**19 08 31.5**	**-1.7**
	baz=26						
ESL				*e*S	**Sb**	**19 08 45.0**	**-1.8**
	baz=26						
WNT	**Mingjian**	**1.06**	**344**	*eP*	**Pn**	**19 08 33.7**	**-0.3**
	baz=347						
WNT				*e*S	**Sn**	**19 08 48.9**	**+0.1**
	baz=347						
WSF	**Szhu**	**1.06**	**317**	*eP*	**Pg**	**19 08 32.9**	**-0.8**
	baz=320						
WSF				*e*S	**Sn**	**19 08 48.5**	**-0.3**
	baz=320						
WNT1	**Nantou City**	**1.09**	**344**	*eP*	**Pn**	**19 08 34.7**	**+0.2**
	baz=347						
WNT1				*e*S	**Sn**	**19 08 50.2**	**+0.7**
	baz=347						
OWD	**Renai**	**1.10**	**8**	⇑*eP*	**Pb**	**19 08 32.2**	**-2.3**
	baz=11						
OWD				*e*S	**Sb**	**19 08 46.8**	**-2.1**
	baz=11						
WUSB	**Renai**	**1.13**	**5**	⇑*eP*	**Pb**	**19 08 32.9**	**-2.1**
	baz=8.0						
WUSB				*e*S	**Sg**	**19 08 49.3**	**-0.6**
	baz=8.0						
TEYL	**Yanliau Villag**	**1.15**	**28**	*eP*	**Pb**	**19 08 34.1**	**-1.0**
	baz=30						
WPL	**Puli Township**	**1.15**	**358**	*eP*	**Pb**	**19 08 33.8**	**-1.4**
WPL				*e*S	**Sn**	**19 08 51.4**	**+0.3**
WYL	**Yuanlin Townsh**	**1.17**	**341**	*eP*	**Pg**	**19 08 35.2**	**-0.5**
	baz=343						
WYL				*e*S	**Sn**	**19 08 52.2**	**+0.8**
	baz=343						
DPDB	**Guoxing**	**1.17**	**357**	*eP*	**Pb**	**19 08 34.3**	**-1.4**
	baz=359						
DPDB				*e*S	**Sn**	**19 08 51.7**	**0.0**
	baz=359						
WRL	**Guolierlin Hig**	**1.19**	**331**	*eP*	**Pb**	**19 08 34.2**	**-1.7**
	baz=333						
WRL				*e*S	**Sb**	**19 08 49.8**	**-1.4**
	baz=333						
ETM	**Tongmen**	**1.19**	**22**	*eP*	**Pn**	**19 08 34.2**	**-1.7**
	baz=25						
ETM				*e*S	**Sb**	**19 08 50.4**	**-0.9**
	baz=25						
WCS	**Beigang Elemen**	**1.20**	**356**	*eP*	**Pn**	**19 08 34.1**	**-1.9**
	baz=359						
WCS				*e*S	**Sn**	**19 08 50.9**	**-1.3**
	baz=359						
CHGB	**Renai**	**1.21**	**7**	*eP*	**Pn**	**19 08 34.3**	**-2.0**
	baz=10.0						
CHGB				*e*S	**Sb**	**19 08 50.8**	**-1.2**
	baz=10.0						
WWF	**Wufeng**	**1.21**	**347**	*eP*	**Pb**	**19 08 35.4**	**-0.8**
	baz=349						
WWF				*e*S	**Sg**	**19 08 52.9**	**+0.5**
	baz=349						
HWA	**Hwalien**	**1.24**	**26**	*eP*	**Pb**	**19 08 36.4**	**-0.4**
	baz=29						
WCHH	**Zhanghua**	**1.28**	**342**	*eP*	**Pg**	**19 08 37.5**	**-0.4**
	baz=344						
WCHH				*e*S	**Sg**	**19 08 55.0**	**+0.4**
	baz=344						
WDGT	**Dungji**	**1.30**	**288**	*eP*	**Pn**	**19 08 35.7**	**-1.7**
	baz=289						
WDGT				*e*S	**Sb**	**19 08 53.0**	**-1.4**
	baz=289						
WHF	**Hehuan Shan**	**1.30**	**11**	*eP*	**Pn**	**19 08 36.1**	**-1.8**
	baz=13						
WHF				*e*S	**Sg**	**19 08 54.5**	**-0.9**
	baz=13						
TCU	**Taichung**	**1.32**	**347**	*eP*	**Pg**	**19 08 38.4**	**-0.2**
	baz=349						
TCU				*e*S	**Sg**	**19 08 57.5**	**+1.7**
	baz=349						
TWD	**Chiawan**	**1.33**	**24**	*eP*	**Pn**	**19 08 36.9**	**-1.0**
	baz=27						
TWD				*e*S	**Sb**	**19 08 53.6**	**-1.9**
	baz=27						
TDCB	**Techi**	**1.40**	**6**	*eP*	**Pn**	**19 08 37.6**	**-1.3**
	baz=8.0						
TDCB				*e*S	**Sg**	**19 08 58.3**	**-0.1**
	baz=8.0						
TWT	**Tachien**	**1.40**	**6**	*eP*	**Pb**	**19 08 38.8**	**-0.8**
	baz=8.0						
TWT				*e*S	**Sg**	**19 08 58.0**	**-0.4**
	baz=8.0						
FUSS	**Fushou**	**1.40**	**9**	*eP*	**Pn**	**19 08 37.8**	**-1.3**

baz=25
PHUB P'eng-hu 1.47 297 *e*P Pn 19 08 38.0 -1.7
baz=297
PHUB *e*S Sn 19 08 56.6 -2.4
baz=297
VCHM Qimei 1.49 284 *e*P Pn 19 08 38.6 -1.4
baz=284
TWQ1 Liyutan 1.50 352⇓ *e*P Pg 19 08 40.9 -1.2
baz=354
TWQ1 *e*S Sg 19 09 02.8 +1.3
baz=354
PNG Penghu 1.51 298 *e*P Pn 19 08 38.9 -1.4
baz=299
WDJ Dajia District 1.52 347 *e*P Pg 19 08 42.2 -0.3
baz=349
NSY Sanyi 1.57 352 *e*P Pg 19 08 42.5 -0.8
baz=354
NSY *e*S Sg 19 09 04.7 +1.0
baz=354
NNSB Datong 1.60 12 *e*P Pb 19 08 42.0 -1.0
baz=14
NNSB *e*S Sb 19 09 02.2 -1.1
baz=14
NNSH Datong 1.60 13 *e*P Pb 19 08 41.8 -1.2
baz=14
NNSH *e*S Sb 19 09 03.0 -0.3
baz=14
NNS Nan Shan 1.61 12 *e*P Pn 19 08 41.3 -0.6
baz=14
NNS *e*S Sb 19 09 02.5 -1.1
baz=14
NMLH Miaoli 1.68 353 *e*P Pg 19 08 45.0 -0.6
baz=355
NMLH *e*S Sg 19 09 07.7 +0.2
baz=355
ENA Nanau 1.70 23 *e*P Pn 19 08 42.7 -0.2
baz=25
EWUT Wuta 1.73 24 *e*P Pn 19 08 42.3 -1.0
baz=26
LATG Datong 1.74 16 *e*P Pn 19 08 42.6 -0.9
baz=18
LATG *e*S Sb 19 09 06.0 -1.2
baz=18
NSTT Nanjuang 1.77 360 *e*P Pn 19 08 42.8 -1.0
baz=2.0
NSTT *e*S Sg 19 09 09.7 -0.4
baz=2.0
NFF Wufeng Townshi 1.77 3 *e*P Pb 19 08 44.1 -1.8
baz=5.0
NFF *e*S Sg 19 09 08.6 -1.6
baz=5.0
LIOB Emei 1.78 0 *e*P Pb 19 08 45.0 -1.0
baz=2.0
LIOB *e*S Sg 19 09 09.7 -0.9
baz=2.0
NDT Datong Townshi 1.80 15 *e*P Pb 19 08 44.5 -1.7
baz=17
NDT *e*S Sb 19 09 07.9 -1.0
baz=17
YHNB Yeheng 1.84 11 Pn Pb 19 08 45.9 -1.1
YHNB Yeheng 1.84 11 *e*P Pb 19 08 45.4 -1.6
baz=12
NSK Sanguang 1.84 10 *e*P Pn 19 08 44.6 -0.3
baz=12
NSK *e*S Sn 19 09 06.9 -1.3
baz=12
ENTT Nioudou 1.85 16 *e*P Pn 19 08 44.1 -0.9
baz=18
ENTT *e*S Sb 19 09 09.1 -1.2
baz=18
NDS Dongshan 1.89 20 *e*P Pn 19 08 43.8 -1.7
baz=22
TWC Suao 1.91 24 *e*P Pb 19 08 46.3 -1.9
baz=26
HSN1 Hsinchu 1.91 0 *e*P Pb 19 08 48.1 -0.1
baz=2.0
HSN Hsinchu 1.94 359 *e*P Pg 19 08 50.2 -0.2
baz=2.0
TWE Neicheng 1.95 18 *e*P Pn 19 08 46.9 +0.5
baz=20
TWE *e*S Sg 19 09 15.1 -1.0
baz=20
FUSB Fushanzhiwuyua 1.97 16 *e*P Pn 19 08 46.9 +0.3
baz=17
NCUH Zhongli 2.11 5 *e*P Pg 19 08 52.4 -1.3
baz=6.0
TATO Taipei 2.15 12 Pn 19 08 48.5 -0.6
JYNG Yonaguni jima 2.38 48 P Pn 19 08 51.7 -0.6
JYNG *e*S Sn 19 09 21.8 +0.2
YOJ Yonaguni jima 2.44 49 Pn Pn 19 08 52.0 -1.1
YOJ Yonaguni jima 2.44 49 *e*P Pn 19 08 52.5 -0.5
baz=50
YOJ *e*S Sn 19 09 21.8 -1.1
baz=50
YOJ Yonaguni jima 2.44 49 *e*P Pn 19 08 52.6 -0.5
YOJ *e*S Sn 19 09 22.8 -0.1
HATJ Hateruma jima 2.84 65 *e*P Pn 19 08 56.5 -2.1
HATJ *e*S Sn 19 09 29.6 -3.1
KNMB Chin-men Tao 2.88 304 Pn Pn 19 08 58.2 -1.0
IRIF Iriomote-Funau 2.90 59 P Pn 19 08 59.1 -0.3
IRIF *e*S Sn 19 09 35.6 +1.3
QZH Quanzhou 3.03 314 *e*Pn Pn 19 09 03.3 +2.1
QZH Sn Sn 19 09 39.5 +2.0
QZH smax smax
comp=N,220nm,0.7s
QZH smax smax
comp=E,200nm,0.8s
JKRS Kuro-shima 3.08 63 P Pn 19 09 01.4 -0.5
JKRS S Sn 19 09 37.6 -1.2
JIJ Ishigaki jima 3.25 62 P Pn 19 09 03.4 -0.8
JIJ *e*S Sn 19 09 41.0 -1.9
JTJ Tarama 3.83 62 P Pn 19 09 11.4 -0.7
JTJ *e*S Sn 19 09 55.4 -1.8
JIRB Irabujima 4.29 62 *e*P Pn 19 09 17.7 -0.8
JIRB S Sn 19 10 05.6 -3.1
JMJ2 Miyako jima3 4.38 64 P Pn 19 09 19.4 -0.4
JMJ2 *e*S Sn 19 10 08.6 -2.3
JIKM Ikemajima 4.40 61 P Pn 19 09 19.2 -0.8
JIKM *e*S Sn 19 10 09.3 -1.9
JOGS Gusukube 4.46 64 *e*P Pn 19 09 20.1 -0.7
JOGS *e*S Sn 19 10 10.7 -1.9
SSE Sheshan 8.21 1 P Pn 19 10 19.3 +7.0
SSE S Sn 19 11 51.9 +6.8
SSE smax smax
comp=N,15nm,1.3s
SSE smax smax
comp=E,23nm,0.7s
SSE LR LR
comp=N,140nm,11.3s
SSE LR LR
comp=E,130nm,11.2s
CNSH ChangSha 9.01 308 ⇑P Pn 19 10 15.3 -8.1
CNSH S Sn 19 11 54.0 -11
CNSH smax smax
comp=N,74nm,0.9s
CNSH smax smax
comp=E,70nm,1.1s
NJ2 Nanjing 9.36 349 *e*P Pn 19 10 31.1 +3.0
NJ2 pmax pmax
comp=E,13nm,0.5s
NJ2 smax smax
comp=E,66nm,0.9s
NJ2 smax smax
comp=E,60nm,1.1s
NJ2 LR LR
comp=E,640nm,9.5s
NJ2 LR LR
comp=E,200nm,5.7s
NJ2 LR LR
comp=E,630nm,7.6s
WHN Wuhan 9.69 324 ⇑P Pn 19 10 36.5 +3.8
WHN S Sn 19 12 28.3 +6.7
WHN LR LR
comp=E,600nm,7.4s
WHN LR LR
comp=E,700nm,7.3s
QIZ Qiongzhong 11.10 252 P Pn 19 10 54.8 +2.7
QIZ S Sn 19 12 59.5 +3.2
QIZ LR LR
comp=E,430nm,14.3s
QIZ LR LR
comp=E,380nm,14.7s
QIZ LR LR
comp=E,430nm,12.7s
HNS HongShan 15.47 341 ⇓P P 19 11 59.0 +3.0
HNS *e*S S 19 15 01.9 +3.0

HNS pmax pmax
comp=Z,10.0nm,1.1s
HNS LR LR
comp=N,240nm,10.4s
HNS LR LR
comp=Z,190nm,13.1s
KSRS Korea Array 15.72 21 P Pn 19 11 55.9 +1.1
baz=201,slow=11,SNR=10
KSRS LR LR 19 18 40.0
comp=Z,61nm,19.7s,baz=210,slow=40
comp=Z,0.8nm,0.7s
PZH PanZhiHua 17.87 286 P P 19 12 22.4 -0.4
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,80nm,4.7s
JHJ Hachijo jima 2 19.45 54 LR LR 19 20 42.5
comp=Z,36nm,18.5s,baz=320,slow=38
MJAR Matsushiro Arr 20.19 44 P Pn 19 12 48.8 -1.1
comp=Z,5.5nm,0.8s,baz=226,slow=7.9,SNR=13
MJAR LR LR 19 21 11.4
comp=Z,86nm,19.9s,baz=209,slow=39
comp=Z,5.5nm,0.8s
CMAR Chiang Mai Arr 21.09 262 P P 19 13 00.4 +2.4
comp=Z,0.7nm,0.6s,baz=61,slow=7.9,SNR=9.0
CMAR PcP PcP 19 17 04.8 +0.4
comp=Z,0.4nm,0.6s,baz=9.5,slow=2.2,SNR=5.0
CMAR LR LR 19 21 14.7
comp=Z,55nm,20.3s,baz=85,slow=37
comp=Z,0.7nm,0.6s
XLT XiLinHaoTe 21.38 350 *e*P P 19 13 01.8 +0.9
XLT sP sP 19 13 11.3 +5.3
XLT pmax pmax
comp=Z,9.0nm,1.0s
XLT pmax pmax
comp=Z,71nm,4.9s
XLT LR LR
comp=Z,19nm,10.0s
XLT LR LR
comp=Z,170nm,12.0s
XLT LR LR
comp=Z,170nm,12.1s
GTA Gaotai 24.43 317 ⇑P P 19 13 33.1 +1.0
GTA pP sP 19 13 38.4 +1.0
GTA sP pP 19 13 41.4 +5.5
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,38nm,5.8s
GTA LR LR
comp=Z,76nm,15.6s
GTA LR LR
comp=Z,75nm,15.3s
GTA LR LR
comp=Z,63nm,16.7s
GUMO Guam 24.44 108 LR LR 19 21 06.5
comp=Z,41nm,21.4s,baz=302,slow=32
ULN Ulaanbaatar 27.34 339 P P 19 13 58.4 +0.1
ULN IAmb IAmb 19 14 03.1
comp=Z,3.4nm,0.9s
SONM Songino Array 27.53 338 P P 19 13 59.3 -0.8
comp=Z,1.4nm,0.8s,baz=164,slow=9.2,SNR=12
SONM LR LR 19 26 13.6
comp=Z,66nm,21.4s,baz=146,slow=39
comp=Z,1.4nm,0.8s
SONM Songino Array 27.53 338 P P 19 14 00.4 +0.4
LSA Lhasa 27.57 291 P P 19 14 02.1 +1.1
LSA IAmb IAmb 19 14 10.3
comp=Z,3.2nm,0.6s
KLR Kul'dur 27.66 15 P P 19 13 59.8 -1.2
comp=Z,1.4nm,0.6s,baz=198,slow=13,SNR=2.3
KLR LR LR 19 25 38.6
comp=Z,39nm,20.0s,baz=194,slow=38
comp=Z,1.4nm,0.6s
WMQ Urumqi 34.46 315 *e*P P 19 15 03.6 +2.4
MK31 Makanchi Array 39.18 317 P P 19 15 41.5 +0.2
MKAR Makanchi Array 39.18 317 P P 19 15 41.5 +0.2
comp=Z,0.9nm,0.7s,baz=98,slow=8.8,SNR=6.3
MKAR PcP PcP 19 17 49.8 -0.8
comp=Z,1.6nm,0.8s,baz=95,slow=5.1,SNR=6.9
comp=Z,0.9nm,0.7s
MKAR Makanchi Array 39.18 317 P P 19 15 41.2 -0.1
PETK Petropavlovsk- 41.06 33 LR LR 19 34 21.3
comp=Z,43nm,18.9s,baz=209,slow=38
ZAA0 Zalesovo Array 41.27 328 P P 19 15 58.5 +0.1
ZAA0 IAmb IAmb 19 16 00.1
comp=Z,5.5nm,1.0s
ZALV Zalesovo Beam 41.27 328 P P 19 15 58.3 -0.1
comp=Z,5.9nm,0.8s,baz=114,slow=8.2,SNR=18
ZALV PcP PcP 19 17 54.4 -2.6
comp=Z,0.7nm,0.6s,baz=117,slow=1.9,SNR=2.4
ZALV LR LR 19 32 53.6
comp=Z,26nm,19.8s,baz=52,slow=36
comp=Z,5.9nm,0.8s
ZALV Zalesovo Beam 41.27 328 P P 19 15 58.0 -0.5
H11N1 WAKE ISLAND Hy 42.74 85 T T 20 01 31.1
baz=282,slow=74,SNR=11
H11N2 WAKE ISLAND Hy 42.75 85 T T 20 01 33.9
baz=282,slow=74,SNR=16
H11N3 WAKE ISLAND Hy 42.76 85 T T 20 01 34.6
baz=282,slow=74,SNR=15
H11S3 WAKE ISLAND Hy 42.84 87 T T 20 01 30.7
baz=284,slow=75,SNR=19
H11S1 WAKE ISLAND Hy 42.84 87 T T 20 01 36.7
baz=284,slow=75,SNR=11
H11S2 WAKE ISLAND Hy 42.85 87 T T 20 01 36.9
baz=284,slow=75,SNR=11
KURK Kurchatov 43.01 321 P P 19 16 13.3 +0.7
KURBB Kurchatov Arra 43.02 321 P P 19 16 12.4 -0.3
comp=Z,2.2nm,1.0s,baz=113,slow=7.2,SNR=10
KURBB PcP PcP 19 18 02.7 -0.2
comp=Z,0.6nm,0.8s,baz=113,slow=3.9,SNR=5.8
comp=Z,2.2nm,1.0s
WRA Warramunga Arr 44.49 162 P P 19 16 23.7 -1.2
comp=Z,1.1nm,0.9s,baz=344,slow=8.9,SNR=7.3
comp=Z,1.1nm,0.9s
KK31 Karatay Array 46.15 308 P P 19 16 39.3 +1.3
KK31 IAmb IAmb 19 16 44.0
comp=Z,2.6nm,1.1s
KKAR Karatay Array 46.15 308 P P 19 16 39.6 +1.7
KKAR Karatay Array 46.15 308 P P 19 16 39.6 +1.7
KKAR IAmb IAmb 19 16 44.0
comp=Z,2.6nm,1.1s
KBL Kabul 46.59 296 P P 19 16 41.9 +0.1
ASAR Alice Springs 47.92 164 P P 19 16 50.8 -1.1
comp=Z,0.5nm,0.6s,baz=329,slow=5.7,SNR=15
ASAR PcP PcP 19 18 19.6 -0.7
comp=Z,0.2nm,0.8s,baz=347,slow=3.8,SNR=1.7
comp=Z,0.5nm,0.6s
BVAR Borovoye Array 48.60 322 PcP PcP 19 18 22.0 -0.3
comp=Z,1.2nm,0.8s,baz=134,slow=6.2,SNR=6.9
BRVK Borovoye 48.67 322 P 19 16 58.3 +1.0
BRVK IAmb IAmb 19 17 00.2
comp=Z,3.4nm,0.9s
NRIK Noril'sk 50.64 345 P P 19 17 10.8 -1.2
comp=Z,4.0nm,0.6s,baz=137,slow=6.9,SNR=3.7
comp=Z,4.0nm,0.6s
HRA Herat 52.21 297 P P 19 17 24.2 -0.5
ABKAR Akbulak array 54.25 315 P P 19 17 39.9 +0.7
ABKAR Akbulak array 54.25 315 P P 19 17 39.4 +0.2
ABKAR IAmb IAmb 19 17 42.5
comp=Z,2.7nm,1.0s
GEYT Alibeck 55.33 301 P P 19 17 48.5 +1.2
comp=Z,2.1nm,0.8s,baz=149,slow=3.9,SNR=3.9
comp=Z,2.1nm,0.8s
AKTO Aktyubinsk 55.61 316 P P 19 17 49.2 +0.2
comp=Z,0.6nm,0.5s,baz=72,slow=6.4,SNR=1.4
comp=Z,0.6nm,0.5s
ARU Arti 56.07 324 P P 19 17 52.3 +0.1
comp=Z,2.0nm,0.5s,baz=80,slow=3.9,SNR=6.7
ARU LR LR 19 43 11.7
comp=Z,26nm,18.0s,baz=160,slow=37
comp=Z,2.0nm,0.5s
ARU Arti 56.07 324 P P 19 17 52.0 -0.2
ARU IAmb IAmb 19 17 57.0
comp=Z,7.2nm,1.1s
KBZ Khabaz 66.18 309 P P 19 19 01.9 +0.8
comp=Z,1.5nm,0.6s,baz=67,slow=6.0,SNR=2.8
comp=Z,1.5nm,0.6s
KLMR Klimovskoe 66.19 328 *e*P P 19 18 57.6 -3.2
KLMR AMP 19 19 04.2
comp=Z,12nm,1.4s
FINES FINESS Array B 72.50 330 P P 19 19 40.1 +0.2
comp=Z,3.2nm,1.0s,baz=44,slow=5.8,SNR=6.5
comp=Z,3.2nm,1.0s
AKASG Malin Array Be 73.75 319 P P 19 19 46.6 -0.8
comp=Z,0.3nm,0.4s,baz=62,slow=4.2,SNR=5.2
comp=Z,0.3nm,0.4s

HFS Hagfors 78.64 331 P P 19 20 14.2 -0.9
comp=Z,1.7nm,0.8s,baz=36,slow=5.4,SNR=3.9
comp=Z,1.7nm,0.8s
NB2 NORSAR Subarra 79.31 332 P P 19 20 18.2 -0.6
comp=Z,2.7nm,1.0s,baz=59,slow=5.6
NOA NORSAR Array B 79.31 332 P P 19 20 18.2 -0.6
comp=Z,2.4nm,1.0s,baz=61,slow=5.2,SNR=5.7
NOA LR LR 19 58 15.8
comp=Z,21nm,19.4s,baz=195,slow=38
comp=Z,2.4nm,1.0s
IDI Anoyia 81.85 305 LR LR 20 04 37.5
comp=Z,14nm,19.5s,baz=234,slow=41
GERES GERESS Array B 83.76 321 P P 19 20 43.0 +0.3
comp=Z,1.2nm,0.9s,baz=0.0,slow=1.3,SNR=8.2
comp=Z,1.2nm,0.9s
YKA Yellowknife Ar 84.25 23 P P 19 20 43.7 -1.1
comp=Z,1.0nm,0.9s,baz=307,slow=4.7,SNR=4.6
comp=Z,1.0nm,0.9s
KMBO Kilima Mbogo 84.67 267 LR LR 19 58 23.0
comp=Z,46nm,20.0s,baz=93,slow=35

*ISN **22** 19:11:43.7±0.5, 35°.33N×46°.21E, h6km±111km, ML3.2*
*TEH **22** 19:11:44.9, 35°.35N×46°.27E, h6km, ML3.4*
*AZER **22** 19:11:51.2±0.9, 35°.51N×47°.56E, h6km, Error ellipse:*
s-maj=17.3km s-min=10.1km az=322.0
ISC 22 19:11:48.5±0.8, 35°.28N±0°.02×46°.24E±0°.04, h10km, n49,
σ1ŝ84/59, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.59**	**168**	*e*Pg	**Pg**	**19 11 59.4**	**-0.6**
IDHR				*e*		19 12 12.0	
	comp=Z,28μm,0.4s						
ILIN	**Lien**	**0.69**	**121**	*e*Pg	Pg	19 11 59.4	-2.6
ILIN				*e*Sg	**Sg**	**19 12 10.4**	**-0.6**
ILIN				*e*		19 12 16.0	
	comp=Z,22μm,0.4s						
SNGE	**Sanandaj**	**0.92**	**101**	*e*Pg	Pg	19 12 01.9	-4.5
IGHG	**Ghaleghazi**	**0.98**	**164**	*e*		19 12 28.3	
	comp=Z,22μm,0.6s						
IGHG				*e*Pg	**Pg**	**19 12 07.0**	**-0.5**
KER	**Kermanshah**	**1.15**	**140**	*e*		19 12 29.7	
	comp=Z,12μm,0.6s						
KER				*e*Pg	**Pb**	**19 12 08.8**	**-1.9**
KCHF	**Cheshme Sefid,**	**1.20**	**147**	*e*Pg	**Pn**	**19 12 10.1**	**-1.4**
KCHF				*e*Sg	**Sb**	**19 12 28.1**	**+1.0**
KCHF				*e*		19 12 32.1	
	comp=Z,13μm,0.4s						
IKOM	**Komasi**	**1.52**	**136**	*e*Pg	**Pn**	**19 12 15.7**	**-0.2**
IKOM				*e*		19 12 48.0	
	comp=Z,11μm,0.5s						
MAHB	**Mahabad**	**1.55**	**344**	*e*Pg	**Pn**	**19 12 14.6**	**-1.7**
IBZA	**Bozab**	**1.56**	**121**	*e*Pn	**Pn**	**19 12 14.4**	**-2.1**
IBZA				*e*		19 12 45.4	
	comp=Z,4μm,0.3s						
IBDR	**Badra**	**2.18**	**187**	*e*Pn	**Pn**	**19 12 24.0**	**-0.8**
IBDR				*e*Sn	**Sn**	**19 12 53.0**	**+1.1**
IBDR				AML	AML	19 13 10.1	
	comp=N,120nm,0.6s						
IBDR				AML	AML	19 13 10.3	
	comp=E,132nm,0.5s						
IDOB	**Doab**	**2.18**	**132**	*e*Pn	**Pn**	**19 12 25.6**	**+0.5**
IDOB				*e*		19 13 08.2	
	comp=Z,2μm,1.1s						
IHSH	**Hashtrud**	**2.18**	**22**	*e*Pn	**Pn**	**19 12 23.5**	**-1.7**
IHSH				*e*		19 12 30.9	
	comp=Z,2μm,0.2s						
IKFM	**Kafar-mosalman**	**2.20**	**142**	*e*Pn	**Pn**	**19 12 25.6**	**+0.5**
IKFM				*e*		19 13 20.4	
	comp=Z,5μm,0.6s						
HSAM	**Samen**	**2.22**	**118**	*e*Pn	**Pn**	**19 12 26.1**	**+0.5**
HSAM				*e*		19 13 02.9	
	comp=Z,1μm,0.6s						
IAZR	**Azarshahr**	**2.40**	**355**	*e*Pn	**Pn**	**19 12 27.2**	**-1.0**
ZNJK	**Zanjan**	**2.42**	**54**	*e*Pn	**Pn**	**19 12 27.7**	**-0.7**
HAGD	**Aghdareh**	**2.42**	**100**	*e*Pn	**Pn**	**19 12 28.4**	**0.0**
IBST	**Bostanabad**	**2.47**	**12**	*e*Pn	**Pn**	**19 12 27.5**	**-1.6**
IBST				*e*		19 13 12.8	
	comp=Z,1μm,0.7s						
BHD	**Baghdad**	**2.53**	**218**	*e*Pn	**Pn**	**19 12 28.0**	**-1.6**
BHD				*e*Sn	**Sn**	**19 13 01.0**	**+0.5**
BHD				AML	AML	19 13 16.6	
	comp=E,366nm,0.4s						
QABG	**Abgarm-Qazvin**	**2.76**	**80**	*e*Pn	**Pn**	**19 12 33.2**	**+0.2**
ISRB	**Sarab**	**2.79**	**24**	*e*Pn	**Pn**	**19 12 32.1**	**-1.3**
ISRB				*e*		19 12 40.2	
	comp=Z,1μm,0.4s						
ITBZ	**Tabriz**	**2.95**	**359**	*e*Pn	**Pn**	**19 12 33.1**	**-2.5**
ITBZ				*e*		19 13 23.9	
	comp=Z,1μm,0.6s						
IRAZ	**Razeghan**	**3.02**	**87**	*e*Pn	**Pn**	**19 12 36.0**	**-0.6**
IRAZ				*e*		19 13 27.3	
	comp=Z,1μm,0.7s						
ISHB	**Shabestar**	**3.04**	**351**	*e*Pn	**Pn**	**19 12 35.8**	**-1.1**
ISHB				*e*		19 13 27.1	
	comp=Z,2μm,0.4s						
IHRS	**Heris**	**3.10**	**12**	*e*Pn	**Pn**	**19 12 36.7**	**-1.0**
IHRS				*e*		19 13 12.0	
	comp=Z,598nm,0.4s						
ASAO	**Ashtian**	**3.19**	**102**	*e*Pn	**Pn**	**19 12 40.1**	**+1.1**
TVRZ	**Varzaqan**	**3.24**	**6**	*e*	**Sg**	**19 13 38.4**	**+5.9**
	comp=Z,2μm,0.9s						
GIDE	**GILAN DEYLAMAN**	**3.39**	**60**	*e*Pn	**Pn**	**19 12 43.7**	**+2.0**
KHMZ	**Khomeyn**	**3.43**	**116**	*e*Pn	**Pn**	**19 12 44.0**	**+1.7**
IMRD	**Marand**	**3.46**	**353**	*e*Pn	**Pn**	**19 12 41.9**	**-0.7**
IMRD				*e*		19 13 46.4	
	comp=Z,1μm,0.8s						
RAFI	**Al-Rafai**	**3.55**	**182**	*e*Pn	**Pn**	**19 12 43.0**	**-0.7**
RAFI				*e*Sn	**Sn**	**19 13 26.0**	**+0.3**
RAFI				AML	AML	19 13 27.3	
	comp=E,88nm,0.3s						
LHJ2	**Lahijan - Gila**	**3.62**	**58**	*e*Pn	**Pn**	**19 12 44.1**	**-0.5**
ORD	**Ordubad**	**3.65**	**357**	P	**Pb**	**19 12 52.2**	**-0.9**
ORD				S	**Sb**	**19 13 40.2**	**+2.7**
LRK	**Lerik**	**3.75**	**26**	P	**Pn**	**19 12 46.5**	**-0.2**
LRK				S	**Sn**	**19 13 26.5**	**-4.5**
QALM	**Alamut, Qazvin**	**3.76**	**71**	*e*Pn	**Pn**	**19 12 46.8**	**0.0**
GRMI	**Germi**	**3.76**	**20**	*e*Pn	**Pn**	**19 12 45.6**	**-1.1**
ASTR	**Astara**	**3.86**	**31**	P	**Pn**	**19 12 46.8**	**-1.1**
ASTR				S	**Sn**	**19 13 27.4**	**-5.9**
NAX	**Nakhchivan**	**3.93**	**351**	P	**Pb**	**19 12 57.7**	**-0.3**
NAX				S	**Sb**	**19 13 50.3**	**+4.6**
YRD	**Yardimli**	**3.97**	**23**	P	**Pn**	**19 12 49.4**	**-0.2**
YRD				S	**Sn**	**19 13 36.0**	**-0.3**
SBZ	**Shahbuz**	**4.15**	**353**	P	**Pb**	**19 13 00.5**	**-1.1**
SBZ				S	**Sb**	**19 13 54.6**	**+2.7**
GHVR	**GHOM**	**4.23**	**99**	*e*Pn	**Pn**	**19 12 53.5**	**+0.4**
GLBA	**Clilabad**	**4.31**	**23**	P	**Pn**	**19 12 54.1**	**0.0**
GLBA				S	**Sn**	**19 13 41.8**	**-2.6**
AMIS	**Naft Sefid**	**4.41**	**144**	*e*Pn	**Pn**	**19 12 55.9**	**+0.3**
IVRN	**Varamin**	**4.50**	**92**	*e*Pn	**Pn**	**19 12 57.9**	**+1.0**
QAMS	**Qamsar**	**4.53**	**108**	*e*Pn	**Pn**	**19 12 58.3**	**+0.9**
IPIR	**Pirpir**	**4.65**	**123**	*e*Pn	**Pn**	**19 12 59.4**	**+0.3**
KRSH	**Karshahi**	**5.03**	**103**	*e*Pn	**Pn**	**19 13 05.4**	**+1.2**
IZEF	**Zefreh**	**5.58**	**113**	*e*Pn	**Pn**	**19 13 12.2**	**+0.3**
IRAM	**Ramesheh**	**6.18**	**122**	*e*Pn	**Pn**	**19 13 20.3**	**+0.2**

*IDC **22** 19:16:52.6±0.9, 55°.09S×31°.12W, h0km, mb3.9/7,*
mbtmp3.9/7, MS3.4/3, Error ellipse: s-maj=40.6km
s-min=19.6km az=64.0
*NEIC **22** 19:16:55.1±0.1, 55°.26S±0°.08×31°.5W±0°.2, h10km±1km,*
mb4.2/6, Error ellipse: s-maj=21.2km s-min=9.6km
az=63.0
ISC 22 19:16:54.4±0.7, 55°.22S±0°.09×31°.5W±0°.1, h10km, n29,
σ1ŝ49/19, mb4.0/7, MS3.3/3, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.06**	**286**	Pn	**Pn**	**19 17 43.1**	**+0.4**
ORCD	**Orcadas**	**8.96**	**226**	Pn	**Pn**	**19 19 03.4**	**-0.2**
VNA3	**Neumayer Olymp**	**18.64**	**158**	P	**Pn**	**19 21 14.7**	**+2.6**
SNAA	**Sanae**	**20.52**	**154**	P	**P**	**19 21 32.8**	**+0.4**
SNAA	**Sanae**	**20.52**	**154**	P	**P**	**19 21 32.8**	**+0.4**
	1.6nm,0.8s,baz=284,slow=8.0,SNR=6.3						
	1.6nm,0.8s						
SNAA	**Sanae**	**20.52**	**154**	P	**P**	**19 21 32.0**	**-0.4**
SNAA				IAmb	IAmb	19 22 01.5	
	comp=Z,8.2nm,1.5s						
TROLL	**Troll, Antarti**	**22.09**	**152**	P	P	19 21 41.2	-8.2
BELA	**Belgrano 2**	**22.79**	**182**	P	**P**	**19 21 52.4**	**-4.3**
CPUP	**Villa Florida**	**34.48**	**316**	P	**P**	**19 23 42.4**	**+0.1**

comp=Z,1.7nm,0.6s,baz=127,slow=10,SNR=3.7
comp=Z,1.7nm,0.6s
QSPA South Pole Qui 35.04 180 P P 19 23 48.4 +1.5
comp=Z,0.8nm,0.6s,baz=134,slow=7.0,SNR=2.8
comp=Z,0.8nm,0.6s
QSPA South Pole Qui 35.04 180 P P 19 23 48.8 +1.9
QSPA IAmb IAmb 19 24 17.1
comp=Z,3.7nm,1.1s
MAW Mawson 42.24 145 P P 19 24 46.4 -0.6
comp=Z,1.3nm,0.8s,baz=22,slow=16,SNR=2.6
comp=Z,1.3nm,0.8s
VNDA Vanda 47.27 184 P P 19 25 27.4 +0.3
comp=Z,0.7nm,0.9s,baz=278,slow=4.8,SNR=2.1
comp=Z,0.7nm,0.9s
LPAZ La Paz 47.94 309 P P 19 25 33.8 +0.1
comp=Z,4.0nm,0.5s,baz=173,slow=5.8,SNR=13
comp=Z,4.0nm,0.5s
LPAZ La Paz 47.94 309 P P 19 25 34.2 +0.5
LPAZ IAmb IAmb 19 25 39.9
comp=Z,4.5nm,0.7s
H10S2 ASCENSION HYDR 48.03 23 T T 20 17 11.4
baz=192
H10S3 ASCENSION HYDR 48.03 23 T T 20 17 13.7
baz=28
BOSA Boshof 48.17 81 P P 19 25 35.4 +0.6
H10N1 ASCENSION HYDR 49.14 22 T T 20 18 33.2
baz=192,slow=75,SNR=7.4
H10N3 ASCENSION HYDR 49.14 22 T T 20 18 31.2
baz=192,slow=75,SNR=10
H10N2 ASCENSION HYDR 49.16 22 T T 20 18 31.7
baz=192,slow=75,SNR=11
LBTB Lobatse 51.14 78 LR LR 19 43 09.7
comp=Z,32nm,20.0s,baz=198,slow=31
SAML Samuel 52.54 319 P P 19 26 08.1 +0.3
SAML IAmb IAmb 19 26 09.1
comp=Z,2.3nm,0.7s
NNA Nana 55.74 303 LR LR 19 49 03.1
comp=Z,24nm,21.4s,baz=204,slow=35
LSZ Lusaka 60.39 73 LR LR 19 49 37.9
comp=Z,52nm,19.7s,baz=170,slow=33
TORD Torodi Ar. Bea 73.61 34 P P 19 28 26.8 -0.9
comp=Z,0.5nm,0.5s,baz=193,slow=6.1,SNR=4.7
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 144.19 65 PKP PKPbc 19 36 27.2 -0.2
comp=Z,0.6nm,0.5s,baz=224,slow=8.3,SNR=4.2
ILAR Eielson Array 147.76 313 PKPbc PKPbc 19 36 37.6 -0.3
comp=Z,1.9nm,0.8s,baz=121,slow=1.9,SNR=16
SONM Songino Array 153.11 88 PKPbc PKPbc 19 36 49.9 -1.5
comp=Z,0.4nm,0.5s,baz=240,slow=2.8,SNR=2.4

*IDC **22** 19:22:22.8±1.0,20.71N×147.40E,h0km,mb3.8/11, mbtmp3.8/12,ML4.3/2,MS2.9/3,Error ellipse: s-maj=36.6km s-min=16.6km az=83.0*
*NEIC **22** 19:22:25.9±2.5,20.71N±0.08×147.3E±0.2,h10km±2km, mb4.2/9,Error ellipse: s-maj=36.4km s-min=13.6km az=84.0*
ISC 22 19:22:28.3±0.8,20.69N±0.06×147.2E±0.1,h35km,n36, σ1957/36,mb4.0/16,MS2.6/3,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**7.40**	**198**	Pn	**Pn**	**19 24 14.5**	**+0.7**
GUMO	5.1nm,0.3s,baz=326,slow=14,SNR=2.2			Sn	**Sn**	**19 25 35.1**	**-1.6**
	3.2nm,0.3s,baz=177,slow=21,SNR=1.8						
GUMO	**Guam**	**7.40**	**198**	Pn	**Pn**	**19 24 11.0**	**-2.9**
GUMO				Sn	**Sn**	**19 25 37.6**	**+0.9**
JCJ	**Chichijima**	**7.86**	**325**	Pn	**Pn**	**19 24 19.3**	**-0.9**
	3.8nm,0.3s,baz=108,slow=22,SNR=1.1						
JCJ				Sn	**Sn**	**19 25 42.7**	**-5.2**
	2.3nm,0.3s,baz=111,slow=23,SNR=1.2						
	31nm,0.5s						
JCJ	**Chichijima**	**7.86**	**325**	Pn	**Pn**	**19 24 20.7**	**+0.5**
JCJ				Sn	**Sn**	**19 25 46.9**	**-1.0**
PATS	**Pohnpei**	**17.47**	**140**		**Pn**	**19 26 27.6**	**-1.8**
H11S3	**WAKE ISLAND Hy**	**18.48**	**93**	T	T	19 44 44.8	
	baz=280,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**18.49**	**93**	T	T	19 44 44.4	
	baz=280,slow=75,SNR=21						
H11S2	**WAKE ISLAND Hy**	**18.50**	**93**	T	T	19 44 45.2	
	baz=280,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**18.50**	**90**	T	T	19 44 48.6	
	baz=276,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hy**	**18.50**	**90**	T	T	19 44 48.9	
	baz=276,slow=75,SNR=35						
H11N3	**WAKE ISLAND Hy**	**18.52**	**90**	T	T	19 44 49.9	
	baz=276,slow=75,SNR=31						
KSRS	**Korea Array**	**23.66**	**319**	P	**P**	**19 27 38.5**	**+2.0**
	0.6nm,0.5s,baz=147,slow=8.7,SNR=6.6						
	0.6nm,0.5s						
KSAR	**Wonju Array Be**	**23.67**	**319**	P	**P**	**19 27 39.4**	**+2.7**
DAV	**Davao City (W)**	**24.93**	**240**	LR	LR	19 35 29.4	
	comp=Z,16nm,21.1s,baz=132,slow=31						
WR0	**Warramunga Arr**	**42.26**	**198**	P	**P**	**19 30 19.0**	**+0.6**
WR0				IAmb	IAmb	19 31 00.8	
	comp=Z,7.0nm,1.3s						
WRAB	**Tennant Creek**	**42.29**	**198**	P	**P**	**19 30 18.7**	**0.0**
WRAB				IAmb	IAmb	19 30 23.0	
	comp=Z,3.8nm,1.1s						
WB2	**Warramunga Array**	**42.30**	**198**	P	**P**	**19 30 18.6**	**-0.1**
WB2				IAmb	IAmb	19 30 41.8	
	comp=Z,7.1nm,1.4s						
WRA	**Warramunga Arr**	**42.30**	**198**	P	**P**	**19 30 19.1**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=21,slow=8.3,SNR=12						
WRA				PcP	**PcP**	**19 32 12.2**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=19,slow=3.7,SNR=2.5						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**42.30**	**198**	P	**P**	**19 30 18.9**	**+0.1**
SONM	**Songino Array**	**42.53**	**319**	P	**P**	**19 30 21.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=137,slow=6.7,SNR=5.4						
SONM				PcP	**PcP**	**19 32 12.3**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=132,slow=4.3,SNR=1.5						
	comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**42.53**	**319**	P	**P**	**19 30 19.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**43.97**	**210**	P	**P**	**19 30 34.0**	**+1.8**
CMAR	**Chiang Mai Arr**	**45.40**	**276**	P	**P**	**19 30 43.8**	**0.0**
	comp=Z,1.9nm,0.3s,baz=99,slow=4.8,SNR=3.2						
CMAR				LR	LR	19 50 15.3	
	comp=Z,6.7nm,18.8s,baz=135,slow=37						
	comp=Z,1.9nm,0.3s						
ASAR	**Alice Springs**	**45.95**	**197**	P	**P**	**19 30 47.9**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=15,slow=7.5,SNR=8.1						
ASAR				PcP	**PcP**	**19 32 25.7**	**+1.2**
	comp=Z,0.5nm,1.0s,baz=24,slow=5.3,SNR=2.6						
	comp=Z,0.2nm,0.7s						
ASAR	**Alice Springs**	**45.95**	**197**	P	**P**	**19 30 48.0**	**0.0**
ZALV	**Zalesovo Beam**	**57.33**	**322**	P	**P**	**19 32 12.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=111,slow=8.0,SNR=2.2						
	comp=Z,0.3nm,0.3s						
MK31	**Makanchi Array**	**58.14**	**313**	P	**P**	**19 32 20.2**	**+1.7**
MK31				IAmb	IAmb	19 32 31.4	
	comp=Z,2.4nm,1.2s						
MKAR	**Makanchi Array**	**58.14**	**313**	P	**P**	**19 32 18.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=86,slow=7.6,SNR=7.4						
MKAR				PcP	**PcP**	**19 33 10.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=96,slow=4.3,SNR=2.6						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**58.14**	**313**	P	**P**	**19 32 20.6**	**+2.1**
MAKZ	**Makanchi**	**58.35**	**313**	P	**P**	**19 32 21.8**	**+1.8**
MAKZ				IAmb	IAmb	19 32 47.4	
	comp=Z,2.9nm,1.1s						
KURBB	**Kurchatov Arra**	**60.82**	**317**	P	**P**	**19 32 38.1**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=93,slow=7.7,SNR=7.5						
	comp=Z,0.4nm,0.4s						
ILAR	**Eielson Array**	**61.24**	**27**	P	**P**	**19 32 39.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=268,slow=5.4,SNR=4.6						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**65.87**	**320**	P	**P**	**19 33 11.3**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=94,slow=6.8,SNR=6.4						
	comp=Z,0.6nm,0.4s						
KKAR	**Karatay Array**	**66.62**	**309**	P	**P**	**19 33 17.4**	**+2.1**
RPZ	**Rata Peaks**	**67.72**	**162**	LR	LR	20 04 02.2	
	comp=Z,33nm,18.1s,baz=69,slow=37						
FINES	**FINESS Array B**	**85.68**	**336**	P	**P**	**19 35 02.4**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=58,slow=4.7,SNR=19						
	comp=Z,1.4nm,0.5s						

*NOU **22** 19:39:55.5,14.70S×167.40E,h115km,mb4.1/7, Vanuatu Islands*
*IDC **22** 19:39:58.4±7.9,15.05S×167.01E,h142km±86km,mb3.4/4, mbtmp3.7/5,Error ellipse: s-maj=84.3km s-min=54.4km az=126.0*
ISC 22 19:39:58.4±3.8,15.05S±0.2×167.2E±0.4,h150km,n8, σ1979/8,mb3.5/3,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**6.14**	**206**	P	**Pn**	**19 41 29.0**	**+2.0**
YATNC	**Mamie plateau,**	**6.99**	**182**	P	**Pn**	**19 41 39.1**	**+0.7**
DZM	**Mont Dzumac**	**7.03**	**186**	P	**Pn**	**19 41 39.5**	**+0.5**
	2.2nm,0.3s,baz=342,slow=20,SNR=11						
DZM				S	**Sn**	**19 42 56.0**	**-1.9**
	1.8nm,0.6s,baz=151,slow=22,SNR=0.9						
NOUC	**Port Laguerre**	**7.08**	**187**	P	**Pn**	**19 41 41.9**	**+2.4**
STKA	**Stephens Creek**	**28.74**	**230**	P	**P**	**19 45 42.0**	**+0.1**
	0.7nm,0.3s,baz=34,slow=7.4,SNR=7.8						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	**31.68**	**256**	P	**P**	**19 46 06.6**	**-1.4**
	0.3nm,0.7s,baz=82,slow=7.9,SNR=5.0						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**32.49**	**250**	P	**P**	**19 46 14.6**	**-0.5**
	0.4nm,0.4s,baz=77,slow=9.4,SNR=11						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**97.37**	**316**	P	Pdif	19 53 14.6	-0.3
	0.3nm,0.7s,baz=114,slow=3.5,SNR=2.3						
	0.3nm,0.7s						

IDC 22 19:43:30.7±2.7,21.74S×173.08E,h0km,mb3.6/3, mbtmp3.5/3,Error ellipse: s-maj=232.3km s-min=37.6km az=164.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.12**	**259**	P	P	19 50 35.9	+1.1
	0.8nm,0.8s,baz=91,slow=8.2,SNR=8.8						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**36.19**	**266**	P	P	19 50 33.4	-1.9
	0.3nm,0.9s,baz=100,slow=9.0,SNR=1.8						
	0.3nm,0.9s						
TXAR	**Lajitas Array**	**94.83**	**60**	P	P	19 56 54.8	-0.1
	0.3nm,0.8s,baz=206,slow=7.9,SNR=3.4						
	0.3nm,0.8s						

*IDC **22** 19:56:02.3±1.1,4.63S×131.56E,h0km,mb3.8/5, mbtmp3.9/8,ML4.1/3,MS2.9/5,Error ellipse: s-maj=42.4km s-min=18.2km az=67.0*
*DJA **22** 19:56:09.0±0.4,5.5S×13.1E±.,h65km±15km,M4.1/13, mb4.1/5,mB4.7/2,MLv4.0/13,Mw(mB)3.9/2*
ISC 22 19:56:07.1±0.6,4.63S±0.06×131.45E±0.05,h35km,n39, σ1984/43,mb3.9/8,MS3.0/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.55**	**274**	P	**Pn**	**19 56 33.6**	**+1.5**
BNDI				S	**Sn**	**19 56 52.0**	**+1.0**
BNDI	**Bandanaira**	**1.55**	**274**	P	**Pn**	**19 56 34.0**	**+1.9**
FAKI	**Fak Fak**	**1.88**	**25**	P	**Pn**	**19 56 38.4**	**+1.7**
FAKI				S	**Sn**	**19 57 01.0**	**+1.8**
FAKI	**Fak Fak**	**1.88**	**25**	P	**Pn**	**19 56 38.6**	**+1.9**
MSAI	**Masohi**	**2.82**	**297**	P	**Pn**	**19 56 50.4**	**+0.7**
MSAI				S	**Sn**	**19 57 22.3**	**-0.3**
AAI	**Ambon**	**3.38**	**286**	P	**Pn**	**19 56 58.5**	**+1.1**
AAI				S	**Sn**	**19 57 34.8**	**-1.6**
SIJI	**Sorong**	**3.74**	**357**	Pn	**Pn**	**19 57 02.5**	**+0.1**
	5.7nm,0.3s,baz=198,slow=19,SNR=17						
SIJI				Sn	**Sn**	**19 57 41.5**	**-3.8**
	12nm,0.3s,baz=223,slow=22,SNR=6.0						
SIJI				LR	LR	19 59 20.3	
	comp=Z,55nm,18.8s,baz=54,slow=53						
	9.8nm,0.3s						
NLAI	**Namlea**	**4.56**	**288**	P	**Pn**	**19 57 16.2**	**+2.6**
SRPI	**Serui, Papua**	**5.51**	**60**	P	**Pn**	**19 57 29.7**	**+3.0**
	0.2nm1μm16nm,0.4s						
LBMI	**Labuha**	**5.60**	**315**	P	**Pn**	**19 57 28.1**	**+0.2**
	0.1nm14nm,1.7s						
LBMI				S	**Sn**	**19 58 30.3**	**-0.7**
	0.1nm14nm,1.7s						
SANI	**Sanana**	**6.03**	**295**	P	**Pn**	**19 57 32.7**	**-1.1**
	0.1nm429nm13nm,0.6s						
SMPI	**Sarmi**	**7.71**	**70**	P	**Pn**	**19 57 57.7**	**+0.9**
	0.0nm8.0nm,0.9s						
KDU	**Kakadu**	**8.07**	**173**	P	**Pn**	**19 58 01.6**	**-0.2**
MTN	**Manton Dam**	**8.17**	**182**	P	**Pn**	**19 58 03.9**	**+0.7**
	38nm,0.4s						
BATI	**Baumata**	**9.50**	**234**	Pn	**Pn**	**19 58 23.8**	**+2.2**
	3.4nm,0.3s,baz=56,slow=5.1,SNR=5.2						
BATI				Sn	**Sn**	**20 00 09.4**	**+2.1**
	1.4nm,0.3s,baz=98,slow=22,SNR=1.4						
	9.7nm,0.4s						
KNRA	**Kununurra**	**11.29**	**193**	P	**Pn**	**19 58 44.7**	**-1.3**
	18nm,1.9s						
TTSI	**Tana Toraja**	**11.71**	**277**	P	**Pn**	**19 58 50.5**	**-1.3**
DAV	**Davao City (W)**	**13.02**	**333**	LR	LR	20 04 51.0	
	comp=Z,45nm,18.4s,baz=123,slow=40						
PLAI	**Plipaneng**	**14.21**	**252**	P	**Pn**	**19 59 27.6**	**+1.7**
	22nm,1.3s						
FITZ	**Fitzroy Crossi**	**14.54**	**203**	Pn	**Pn**	**19 59 25.9**	**-4.5**
	0.1nm,0.3s,baz=31,slow=10,SNR=10.0						
FITZ				Sn	Sn	20 01 56.8	-14
	0.3nm,0.3s,baz=20,slow=11,SNR=2.4						
FITZ	**Fitzroy Crossi**	**14.54**	**203**	P	**Pn**	**19 59 28.2**	**-2.2**
	8.9nm,2.5s						
COEN	**Coen**	**14.81**	**130**	P	**Pn**	**19 59 33.3**	**-0.8**
	11nm,1.8s						
WRAB	**Tennant Creek**	**15.47**	**170**	P	**Pn**	**19 59 40.0**	**-2.8**
	6.3nm,1.3s						
WRA	**Warramunga Arr**	**15.48**	**170**	Pn	**Pn**	**19 59 38.0**	**-4.8**
	0.6nm,0.3s,baz=349,slow=14,SNR=43						
WRA				Sn	Sn	20 02 19.9	-13
	0.5nm,0.3s,baz=340,slow=27,SNR=3.7						
QIS	**Mount Isa**	**17.70**	**154**	P	**Pn**	**20 00 10.6**	**-0.4**
	7.7nm,1.1s						
ASAR	**Alice Springs**	**19.07**	**173**	P	**P**	**20 00 26.0**	**-0.7**
	0.9nm,0.3s,baz=353,slow=9.9,SNR=39						
ASAR				S	Sn	20 03 48.1	-12
	0.5nm,0.6s,baz=355,slow=27,SNR=3.5						
	2.7nm,0.5s						
PSA00	**Pilbara Seismi**	**20.26**	**213**	P	**P**	**20 00 38.8**	**-0.8**
WRKA	**Warakurna**	**20.52**	**188**	P	**P**	**20 00 42.2**	**-0.2**
	7.0nm,1.4s						
CTA	**Charters Tower**	**21.06**	**138**	P	**P**	**20 00 47.8**	**-0.6**
	1.5nm,0.6s,baz=316,slow=12,SNR=1.8						
	1.5nm,0.6s						
OOD	**Oodnadatta**	**23.39**	**171**	P	**P**	**20 01 12.9**	**+0.1**
	7.8nm,0.6s						
SBJI	**Serang**	**25.25**	**266**	P	P	20 01 22.3	-7.9
MULG	**Mulgathing**	**25.63**	**175**	P	**P**	**20 01 35.7**	**+2.3**
	9.9nm,2.2s						
LCRK	**Leigh Creek**	**26.46**	**167**	P	**P**	**20 01 41.7**	**+0.8**
	9.3nm,1.7s						
STKA	**Stephens Creek**	**28.73**	**162**	P	**P**	**20 02 01.1**	**-0.1**
	0.8nm,0.4s,baz=316,slow=7.6,SNR=6.6						
	0.8nm,0.4s						
STKA	**Stephens Creek**	**28.73**	**162**	P	**P**	**20 02 01.9**	**+0.7**
CMAR	**Chiang Mai Arr**	**39.41**	**307**	P	**P**	**20 03 34.3**	**+0.4**
	0.8nm,0.4s,baz=114,slow=7.4,SNR=2.2						
CMAR				LR	LR	20 21 31.7	
	comp=Z,14nm,19.7s,baz=210,slow=39						
	0.8nm,0.4s						
MJAR	**Matsushiro Arr**	**41.44**	**8**	LR	LR	20 19 45.2	
	comp=Z,22nm,20.0s,baz=226,slow=34						
MKAR	**Makanchi Array**	**67.07**	**326**	P	**P**	**20 06 57.9**	**+1.0**
	0.8nm,0.5s,baz=113,slow=7.6,SNR=23						
MKAR				LR	LR	20 38 16.8	
	comp=Z,28nm,18.8s,baz=216,slow=38						
	0.8nm,0.5s						
VNDA	**Vanda**	**74.61**	**173**	P	**P**	**20 07 42.8**	**+0.5**
	0.3nm,0.5s,baz=311,slow=6.5,SNR=2.3						
	0.3nm,0.5s						

*DJA **22** 20:01:55.9±0.9,8.3S×12.8E±.,h18km±7km,M4.7/12, mb4.7/12,mB5.4/11,MLv4.6/12,Mw(mB)4.8/11*
*NEIC **22** 20:01:55.8±1.4,7.41S±0.08×128.51E±0.04,h156km±8km, mb4.3/24,Error ellipse: s-maj=11.4km s-min=5.5km az=172.0*
*IDC **22** 20:01:57.0±1.7,7.39S×128.49E,h170km±15km, mb3.8/15, mbtmp4.3/17,MS3.2/1,Error ellipse: s-maj=17.5km s-min=10.7km az=71.0*
ISC 22 20:01:54.9±0.3,7.44S±0.04×128.43E±0.04,h151km,n142, σ1972/141,mb4.3/28,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.90**	**101**	Pn	**Pn**	**20 02 41.8**	**+0.8**
SAUI	**Saumlaki**	**2.90**	**101**	P	**Pn**	**20 02 42.8**	**+1.8**
SAUI				S	**Sn**	**20 03 16.7**	**0.0**
SAUI	**Saumlaki**	**2.90**	**101**	P	**Pn**	**20 02 44.4**	**+3.4**
BNDI	**Bandanaira**	**3.25**	**27**	P	**Pn**	**20 02 49.1**	**+3.5**
BNDI	**Bandanaira**	**3.25**	**27**	P	**Pn**	**20 02 49.3**	**+3.7**
AAI	**Ambon**	**3.74**	**356**	P	**Pn**	**20 02 56.2**	**+4.3**
AAI				S	**Sn**	**20 03 43.9**	**+7.8**
MSAI	**Masohi**	**4.10**	**7**	P	Pn	20 03 01.1	+4.5
NLAI	**Namlea**	**4.38**	**342**	P	Pn	20 03 06.3	+6.1
BATI	**Baumata**	**5.45**	**239**	P	**Pn**	**20 03 17.3**	**+2.9**
	882nm,0.4s,baz=103,slow=2.2,SNR=376						
BATI				S	**Sn**	**20 04 13.7**	**-2.8**
	400nm,0.5s,baz=19,slow=1.3,SNR=8.4						
BATI	**Baumata**	**5.45**	**239**	P	**Pn**	**20 03 17.3**	**+2.9**
	2.8nm10μm649nm,0.5s						
BATI				S	**Sn**	**20 04 17.8**	**+1.3**
	2.8nm10μm649nm,0.5s						
SANI	**Sanana**	**5.88**	**335**	P	**Pn**	**20 03 24.0**	**+3.9**
	0.1nm21nm,0.8s						
FAKI	**Fak Fak**	**5.89**	**40**		**Pn**	**20 03 19.3**	**-0.9**
FAKI	**Fak Fak**	**5.89**	**40**	P	**Pn**	**20 03 19.8**	**-0.4**
FAKI	**Fak Fak**	**5.89**	**40**	P	**Pn**	**20 03 23.1**	**+2.9**
MTN	**Manton Dam**	**5.99**	**154**	Pn	**Pn**	**20 03 21.3**	**-0.2**
MTN	**Manton Dam**	**5.99**	**154**	P	**Pn**	**20 03 22.3**	**+0.7**
BBSI	**Bau Bau**	**6.14**	**288**	P	**Pn**	**20 03 26.9**	**+3.4**
	0.0nm89nm9.6nm,1.0s						
MMRI	**Maumere**	**6.24**	**259**	Pn	**Pn**	**20 03 26.8**	**+1.8**
MMRI	**Maumere**	**6.24**	**259**	P	**Pn**	**20 03 27.6**	**+2.7**
	0.7nm2μm126nm,0.7s						
MMRI	**Maumere**	**6.24**	**259**	P	**Pn**	**20 03 28.0**	**+3.1**
KDU	**Kakadu**	**6.56**	**143**	P	**Pn**	**20 03 29.8**	**+0.7**
EDFI	**Ende, Flores**	**6.80**	**259**	P	**Pn**	**20 03 35.2**	**+2.8**
	0.2nm776nm32nm,0.8s						
SIJI	**Sorong**	**7.12**	**24**	P	**Pn**	**20 03 37.6**	**+1.0**
	23nm,0.4s,baz=29,slow=23,SNR=54						
SIJI				S	**Sn**	**20 04 54.2**	**-2.3**
	25nm,0.2s,baz=179,slow=22,SNR=8.2						
BSSI	**Bau Bau, Buton**	**7.99**	**279**	P	Pn	20 03 53.4	+5.2
	17nm,1.0s						
KNRA	**Kununurra**	**8.19**	**178**	Pn	**Pn**	**20 03 50.5**	**-0.4**
KNRA	**Kununurra**	**8.19**	**178**	P	**Pn**	**20 03 51.3**	**+0.4**
BASI	**Baing, Sumba**	**8.23**	**250**	P	**Pn**	**20 03 52.7**	**+1.2**
	2μm72nm,1.1s						
LUWI	**Luwuk**	**8.50**	**318**	Pn	**Pn**	**20 03 54.9**	**-0.1**
LUWI	**Luwuk**	**8.50**	**318**	P	Pn	20 04 09.7	+15
BKSI	**Bulukumba**	**8.52**	**284**	P	Pn	20 04 00.7	+5.4
	13nm,1.5s						
WBSI	**Waikabubak, Su**	**9.20**	**256**	P	**Pn**	**20 04 07.6**	**+3.2**
	1μm104nm,0.6s						
BAKI	**Biak**	**9.86**	**51**	P	**Pn**	**20 04 16.2**	**+3.1**
	86nm,0.9s						
PLAI	**Plampang**	**10.63**	**262**	P	**Pn**	**20 04 28.0**	**+4.6**
	1μm82nm,0.8s						
PLAI	**Plampang**	**10.63**	**262**	P	**Pn**	**20 04 23.8**	**+0.4**
WAMI	**Wamena**	**10.83**	**72**	P	P	20 04 40.5	+6.0
FITZ	**Fitzroy Crossi**	**10.93**	**194**	P	**Pn**	**20 04 26.6**	**-0.7**
	17nm,0.3s,baz=19,slow=10,SNR=58						
FITZ				S	Sn	20 06 19.4	-8.8
	46nm,0.5s,baz=117,slow=9.3,SNR=5.1						
FITZ	**Fitzroy Crossi**	**10.93**	**194**	Pn	**Pn**	**20 04 25.6**	**-1.7**
FITZ	**Fitzroy Crossi**	**10.93**	**194**	P	**Pn**	**20 04 25.9**	**-1.4**
TOLI2	**Tolitoli**	**11.42**	**318**	P	**P**	**20 04 38.6**	**-2.8**
GENI	**Genyem**	**12.65**	**68**	P	**P**	**20 04 53.2**	**-1.8**
GENI	**Genyem**	**12.65**	**68**	P	**P**	**20 04 52.6**	**-2.4**
WB0	**Warramunga Arr**	**13.55**	**155**	Pn	**Pn**	**20 04 58.3**	**-2.8**
WRAB	**Tennant Creek**	**13.68**	**156**		**Pn**	**20 05 00.5**	**-2.4**
WRA	**Warramunga Arr**	**13.68**	**156**	P	**Pn**	**20 05 00.2**	**-2.7**
	9.0nm,0.3s,baz=335,slow=14,SNR=82						
WRA				S	Sn	20 07 22.7	-12
	36nm,0.4s,baz=332,slow=23,SNR=11						
WRA	**Warramunga Arr**	**13.68**	**156**		**Pn**	**20 04 59.4**	**-3.5**
WB2	**Warramunga Arr**	**13.69**	**156**	Pn	**Pn**	**20 05 00.7**	**-2.3**
WR0	**Warramunga Arr**	**13.78**	**155**	Pn	Pn	20 05 00.2	-4.0
JAGI	**Jajag, Banyuwa**	**14.18**	**265**	P	Pn	**20 05 08.9**	**-0.2**
JAGI	**Jajag, Banyuwa**	**14.18**	**265**	P	**Pn**	**20 05 11.0**	**+1.9**
COEN	**Coen**	**15.87**	**115**	P	**Pn**	**20 05 30.1**	**-0.1**
COEN	**Coen**	**15.87**	**115**	P	**P**	**20 05 30.7**	**-0.1**
MBWA	**Marble Bar**	**16.02**	**211**		**Pn**	**20 05 31.6**	**-0.3**
MBWA	**Marble Bar**	**16.02**	**211**	P	**Pn**	**20 05 32.1**	**+0.2**
PSA00	**Pilbara Seismi**	**16.31**	**210**	P	**Pn**	**20 05 35.9**	**+0.4**
PSA00	**Pilbara Seismi**	**16.31**	**210**	P	**Pn**	**20 05 36.0**	**+0.6**
PSA00				IAmb	IAmb	20 05 38.1	
	comp=Z,6.9nm,0.7s						
PSA00	**Pilbara Seismi**	**16.31**	**210**	P	**Pn**	**20 05 36.9**	**+1.4**
QIS	**Mount Isa**	**16.94**	**141**	P	**P**	**20 05 43.4**	**+0.7**
AS31	**Alice Springs**	**16.96**	**163**	P	**P**	**20 05 43.8**	**+0.9**
ASAR	**Alice Springs**	**16.97**	**163**	P	**P**	**20 05 43.8**	**+0.9**
	comp=Z,18nm,0.5s,baz=333,slow=9.4,SNR=129						
ASAR				S	S	20 08 42.3	-10
	comp=Z,7.0nm,0.7s,baz=333,slow=20,SNR=8.9						
ASAR				ScP	**ScP**	**20 13 38.5**	**-3.2**
	comp=Z,1.9nm,0.7s,baz=347,slow=1.8,SNR=5.2						
ASAR	**Alice Springs**	**16.97**	**163**	P	**P**	**20 05 43.4**	**+0.5**
WRKA	**Warakurna**	**17.50**	**180**	P	**P**	**20 05 50.5**	**+1.8**
UGM	**Wanagama**	**17.75**	**267**	P	**P**	**20 05 52.9**	**+1.3**
SBUM	**Sibu**	**18.92**	**301**	P	**P

comp=Z,29nm,0.5s
GTA Gaotai 53.62 333 ⇑P **P** **20 11 01.1 +0.2**
GTA pP pP 20 11 10.3 -24
GTA sP pwP 20 11 13.9 -26
GTA pmax pmax
comp=Z,5.0nm,1.0s
JIRN Jiri 53.71 312 *eP* **P** **20 11 01.8 -0.3**
comp=Z,10nm,0.5s
GUN Gumba 54.08 312 *eP* **P** **20 11 04.6 -0.1**
comp=Z,23nm,0.5s
PKI Pulchoki 54.24 312 *eP* **P** **20 11 05.2 -0.6**
PKIN Phulchoki 54.25 312 *eP* **P** **20 11 05.5 -0.4**
comp=Z,7.6nm,0.4s
KKN Kakani 54.46 312 *eP* **P** **20 11 06.6 -0.7**
DMN Daman 54.49 312 *eP* **P** **20 11 07.3 -0.2**
comp=Z,11nm,0.5s
GKN Gorkha 55.05 312 *eP* **P** **20 11 11.0 -0.4**
comp=Z,30nm,0.5s
DANN Dangsing 55.89 312 *eP* **P** **20 11 17.2 -0.4**
ULN Ulaanbaatar 58.22 343 P **P** **20 11 33.2 -0.3**
ULN IAmb IAmb 20 11 35.1
comp=Z,2.9nm,1.0s
SONM Songino Array 58.38 343 P **P** **20 11 35.0 +0.4**
comp=Z,1.0nm,0.5s,baz=162,slow=7.2,SNR=5.9
comp=Z,1.0nm,0.5s
SONM Songino Array 58.38 343 P **P** **20 11 34.5 0.0**
PETK Petropavlovsk- 65.24 19 P **P** **20 12 19.9 -0.2**
comp=Z,2.8nm,0.6s,baz=177,slow=2.8,SNR=15
comp=Z,2.8nm,0.6s
MK31 Makanchi Array 67.75 328 **P** **20 12 36.8 +0.5**
MK31 IAmb IAmb 20 12 37.4
comp=Z,4.5nm,1.1s
MKAR Makanchi Array 67.75 328 P **P** **20 12 36.5 +0.3**
comp=Z,2.9nm,0.5s,baz=118,slow=7.8,SNR=54
comp=Z,2.9nm,0.5s
MKAR Makanchi Array 67.75 328 **P** **20 12 36.4 +0.1**
MAKZ Makanchi 67.93 328 P **P** **20 12 37.6 +0.2**
MAKZ IAmb IAmb 20 12 38.5
comp=Z,5.2nm,1.2s
ZALV Zalesovo Beam 71.30 335 P **P** **20 12 57.3 -0.5**
comp=Z,2.8nm,0.6s,baz=136,slow=5.7,SNR=11
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 71.30 335 P **P** **20 12 56.8 -1.0**
KURK Kurchatov 72.09 329 P **P** **20 13 02.6 -0.1**
KURK IAmb IAmb 20 13 03.6
comp=Z,8.8nm,0.9s
VNDA Vanda 72.20 173 P **P** **20 13 03.0 +0.1**
comp=Z,0.4nm,0.5s,baz=227,slow=8.8,SNR=2.9
comp=Z,0.4nm,0.5s
VNDA Vanda 72.20 173 P **P** **20 13 02.6 -0.3**
KK31 Karatay Array 72.65 319 P **P** **20 13 06.2 0.0**
KKAR Karatay Array 72.65 319 P **P** **20 13 05.7 -0.5**
KKAR Karatay Array 72.65 319 P **P** **20 13 05.9 -0.3**
KKAR IAmb IAmb 20 13 07.8
comp=Z,2.7nm,1.1s
MAW Mawson 73.97 201 P **P** **20 13 14.7 +1.3**
comp=Z,1.3nm,0.7s,baz=207,slow=1.8,SNR=6.8
comp=Z,1.3nm,0.7s
HRA Herat 75.00 308 P **P** **20 13 20.5 +0.2**
BVAR Borovoye Array 77.61 328 P **P** **20 13 34.4 +0.1**
comp=Z,1.7nm,0.8s,baz=133,slow=8.3,SNR=12
comp=Z,1.7nm,0.8s
BRVK Borovoye 77.68 328 P **P** **20 13 33.8 -0.9**
BRVK IAmb IAmb 20 13 35.9
comp=Z,7.9nm,1.4s
ABKAR Akbulak array 81.89 322 P **P** **20 13 56.1 -1.4**
ABKAR IAmb IAmb 20 13 57.9
comp=Z,4.2nm,1.1s
AKTO Aktyubinsk 83.47 323 P **P** **20 14 05.4 -0.2**
comp=Z,1.5nm,0.5s,baz=126,slow=6.2,SNR=7.5
comp=Z,1.5nm,0.5s
ARU Arti 85.26 328 P **P** **20 14 14.1 -0.4**
comp=Z,2.0nm,0.4s,baz=279,slow=22,SNR=5.9
comp=Z,2.0nm,0.4s
SNAA Sanae 94.87 194 LR LR 20 58 52.0
comp=Z,222nm,18.1s,baz=302,slow=36
ARCES ARCESS Array B 101.45 340 P **Pdif** **20 15 27.8 -1.1**
comp=Z,1.2nm,0.9s,baz=87,slow=3.7,SNR=1.3
GERES GERESS Array B 111.75 320 PKiKP **PKiKP** **20 20 11.4 -0.6**
comp=Z,0.4nm,0.5s,baz=50,slow=2.1,SNR=6.0
EKA Eskdalemuir Ar 118.80 331 PKP **PKPdf** **20 24 24.7 -0.5**
comp=Z,0.4nm,0.4s,baz=37,slow=3.4,SNR=5.5
TXAR Lajitas Array 126.49 59 PKP **PKPdf** **20 20 40.6 -0.3**
comp=Z,0.1nm,0.4s,baz=119,slow=1.1,SNR=2.0
TORD Torodi Ar. Bea 127.36 281 PKP **PKPdf** **20 20 41.7 -1.1**
comp=Z,1.0nm,0.8s,baz=94,slow=2.4,SNR=6.6
CPUP Villa Florida 145.97 171 PKPbc **PKPdf** **20 21 16.8 +0.1**
comp=Z,0.6nm,0.3s,baz=222,slow=2.6,SNR=2.9
LPAZ La Paz 151.28 145 PKPbc **PKPbc** **20 21 31.3 -1.1**
comp=Z,0.8nm,0.5s,baz=326,slow=3.6,SNR=2.4

HEL 22 20:06:16.6±0.3, 67°81N×20°33E, h0km, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.67**	**69**	PG	Pg	20 06 28.3	-1.2
LANU				SG	Sg	20 06 38.0	-0.1
KIF	**Kilpisjarvi**	**1.21**	**8**	*eP*	Pg	20 06 37.9	-1.8
KIF	**Kilpisjarvi**	**1.21**	**8**	PG	Pg	20 06 39.2	-0.5
KIF				SG	Sg	20 06 54.4	-1.1
KIF				MSG		20 06 54.5	
comp=Z,7.2nm,0.2s							
HEF	**Hetta**	**1.39**	**63**	*eP*	Pg	20 06 41.3	-1.8
HEF	**Hetta**	**1.39**	**63**	PG	Pg	20 06 41.2	-1.9
baz=243							
HEF				MSG		20 06 58.3	
comp=Z,4.8nm,0.2s							
HEF				SG	Sg	20 07 00.0	-1.0
KLF	**Kolari**	**1.51**	**111**	PG	Pn	20 06 43.7	-1.2
baz=298							
KLF				SN	Sg	20 07 04.8	-0.3
KTK1	**Kautokeino**	**1.61**	**40**	PG	Pn	20 06 45.7	-0.6
KTK1				SN	Sg	20 07 08.4	0.0
TRO	**Tromso**	**1.90**	**345**	PB	Pn	20 06 49.9	-0.2
TRO				SB	Sn	20 07 14.0	-0.8
KALU	**Kalix**	**2.30**	**147**	PB	Pn	20 06 55.7	0.0
KALU				SB	Sb	20 07 26.6	-1.2
TOF	**Tornio**	**2.35**	**136**	PB	Pn	20 06 56.8	+0.5
TOF				MSG		20 07 26.1	
comp=Z,3.7nm,0.2s							
TOF				SG	Sb	20 07 28.7	-0.4
SGF	**Sodankyl**	**2.40**	**96**	PG	Pn	20 06 58.5	+1.4
RNF	**Rovaniemi**	**2.52**	**116**	PB	Pn	20 06 59.8	+1.0
RNF				SG	Sb	20 07 32.6	-1.6
KEV	**Kevo**	**3.12**	**48**	SN	Sn	20 07 45.2	+0.5
KEV				MSG		20 07 48.1	
comp=Z,1.6nm,0.2s							

HEL 22 20:06:34.5±0.2, 67°64N×33°72E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.44**	**53**	PG	Pg	20 06 42.4	-0.6
LVZ				SG	Sg	20 06 47.9	-0.8
VRF	**Varrio**	**1.57**	**276**	PG	Pn	20 07 02.2	-1.4
VRF				MSG		20 07 21.7	
comp=Z,5.8nm,0.2s							
VRF				SG	Sn	20 07 22.4	-2.3
OLKF	**Oulanka, Finla**	**2.15**	**234**	PG	Pb	20 07 13.0	-1.2
OLKF				SG	Sb	20 07 41.8	+0.4
KU6	**Riekki**	**2.21**	**225**	PG	Pn	20 07 13.6	+1.2
baz=45							
KU6				MSG		20 07 40.1	
comp=Z,3.4nm,0.2s							
KU6				SG	Sb	20 07 43.3	+0.1
MSF	**Maaselka**	**2.54**	**229**	PN	Pb	20 07 19.0	-1.8
MSF	**Maaselka**	**2.54**	**229**	PG	Pb	20 07 19.0	-1.8
MSF				SG	Sb	20 07 52.9	+0.4
SGF	**Sodankyl**	**2.77**	**269**	PG	Pb	20 07 23.6	-1.2
RNF	**Rovaniemi**	**3.18**	**255**	PN	Pn	20 07 25.9	+0.2
KEV	**Kevo**	**3.25**	**314**	PN	Pn	20 07 26.6	0.0
KEV				SN	Sn	20 08 04.6	-1.2
KTK1	**Kautokeino**	**4.13**	**294**	SG	Sb	20 08 41.7	+3.5
LANU	**Lannavaara**	**4.46**	**281**	SG	Sb	20 08 51.9	+4.0

*IDC **22** 20:20:59.5±8.0, 21°.24S×172°.96E, h0km, mb4.0/3, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=132.9km s-min=117.3km az=40.0*
*NEIC **22** 20:21:08.4±0.5, 21°.1S±0°.2×172°.20E±0°.04, h10km±2km, mb4.4/11, Error ellipse: s-maj=34.9km s-min=4.5km az=172.0*

ISC 22 20:21:16.5±1.7, 21°.4S±0°.2×171°.5E±0°.1, h35km, n22, σ26°60/26, mb4.3/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**3.24**	**267**	Pn	**Pn**	**20 22 07.9**	**+3.0**
MARNC				Sn	**Sn**	**20 22 46.4**	**+4.1**
PINNC	**Pines Island,**	**3.97**	**251**	Pn	**Pn**	**20 22 18.5**	**+3.5**
PINNC				Sn	**Sn**	**20 22 57.7**	**-2.6**
OUENC	**Ouen Island, N**	**4.46**	**255**	Pn	**Pn**	**20 22 25.8**	**+4.2**
OUENC				Sn	**Sn**	**20 23 10.9**	**-1.5**
DZM	**Mont Dzumac**	**4.76**	**260**	Pn	Pn	20 22 31.2	+5.3
2.3nm,0.3s,baz=87,slow=19,SNR=56							
4.2nm,0.3s							
DZM	**Mont Dzumac**	**4.76**	**260**	Pn	**Pn**	**20 22 29.0**	**+3.0**
DZM				Sn	**Sn**	**20 23 15.7**	**-4.2**
ONTNC	**Ouen Toro**	**4.79**	**258**	Pn	**Pn**	**20 22 29.4**	**+3.2**
ONTNC				Sn	**Sn**	**20 23 15.7**	**-4.9**
KOUNC	**Koumac, New Ca**	**6.80**	**275**	Pn	**Pn**	**20 22 57.7**	**+3.9**
LHI	**Lord Howe Isla**	**15.04**	**225**	P	**P**	**20 24 52.7**	**+1.3**
LHI				IAmb	IAmb	20 24 55.5	
comp=Z,231nm,1.5s							
HNR	**Honiara**	**16.26**	**315**	Pn	**Pn**	**20 25 00.3**	**-2.0**
STKA	**Stephens Creek**	**28.64**	**242**	P	**P**	**20 27 08.0**	**-1.9**
comp=Z,1.7nm,0.8s,baz=93,slow=18,SNR=4.2							
comp=Z,1.7nm,0.8s							
WR0	**Warramunga Arr**	**34.57**	**266**	P	**P**	**20 28 02.5**	**+0.3**
WR0				IAmb	IAmb	20 28 25.1	
comp=Z,7.2nm,1.4s							
WB0	**Warramunga Arr**	**34.74**	**266**	P	**P**	**20 28 03.9**	**+0.3**
WB0				IAmb	IAmb	20 28 36.0	
comp=Z,7.1nm,1.4s							
WB2	**Warramunga Arr**	**34.75**	**266**	P	**P**	**20 28 03.7**	**0.0**
WB2				IAmb	IAmb	20 28 28.3	
comp=Z,5.8nm,1.4s							
AS31	**Alice Springs**	**34.75**	**259**	P	**P**	**20 28 04.7**	**+1.0**
WRAB	**Tennant Creek**	**34.75**	**266**	P	**P**	**20 28 03.8**	**0.0**
WRAB				IAmb	IAmb	20 28 44.2	
comp=Z,6.0nm,1.4s							
ASAR	**Alice Springs**	**34.75**	**259**	P	**P**	**20 28 03.5**	**-0.3**
comp=Z,2.1nm,0.7s,baz=78,slow=9.4,SNR=47							
comp=Z,2.1nm,0.7s							
ASAR	**Alice Springs**	**34.75**	**259**	P	**P**	**20 28 04.2**	**+0.5**
WRA	**Warramunga Arr**	**34.76**	**266**	P	**P**	**20 28 04.0**	**+0.2**
comp=Z,0.5nm,0.4s,baz=98,slow=8.7,SNR=37							
comp=Z,0.5nm,0.4s							
WRA	**Warramunga Arr**	**34.76**	**266**	P	**P**	**20 28 03.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**43.19**	**266**	P	**P**	**20 29 14.1**	**-0.2**
FITZ				IAmb	IAmb	20 29 50.8	
comp=Z,7.6nm,1.4s							
PSA00	**Pilbara Seismi**	**47.89**	**260**	P	**P**	**20 29 51.8**	**+0.2**
PSA00				IAmb	IAmb	20 30 33.9	
comp=Z,12nm,1.3s							
LUWI	**Luwuk**	**51.59**	**286**	P	**P**	**20 30 17.9**	**-1.9**

*WEL **22** 20:27:00,38°.83S×176°.02E, h2km, ML3.7, Mw3.9, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M_{rr}=7.38; $M_{\theta\theta}$0.32; $M_{\phi\phi}$7.06; $M_{r\theta}$-3.25; $M_{\theta\phi}$5.40; $M_{\phi r}$-0.83; Fault plane solution: $M_0$9.51000×10^{14} NP1: ϕ_s187.00000°, δ42.00000°, λ-124.00000°. NP2: ϕ_s49.00000°, δ56.00000°, λ-64.00000°. Principal axes: T 103.6400, Plg7.0000°, Azm120.0000°; N -17.0000, Plg22.0000°, Azm213.0000°; P -86.6400, Plg67.0000°, Azm12.0000°;*
*IDC **22** 20:27:05.9±1.4, 39°.03S×176°.09E, h0km, mb3.7/2, mbtmp3.7/3, ML2.7/1, MS3.2/4 Error ellipse: s-maj=42.3km s-min=10.9km az=141.0*
*WEL **22** 20:27:08.5±0.8, 39°.S±2°×17°.6E±°, h6km±6km, M3.7/27, ML4.0/27, MLv3.7/27, Error ellipse: s-maj=0.0km s-min=0.0km az=114.4*

ISC 22 20:27:08.2±0.8, 38°.83S±0°.02×175°.99E±0°.02, h13km±6km, n74, σ0°67/76, MS3.1/4, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATZ	**Hinemaiaia**	**0.10**	**128**	P	**Pg**	**20 27 11.0**	**-0.4**
HATZ				S	**Sg**	**20 27 12.9**	**-0.6**
WHTZ	**Whakaora**	**0.17**	**351**	P	**Pg**	**20 27 12.9**	**+0.7**
RATZ	**Rangitukua**	**0.17**	**257**	P	**Pb**	**20 27 13.2**	**-0.1**
RITZ	**Tihia Road**	**0.18**	**105**	P	**Pb**	**20 27 13.2**	**-0.2**
WAKZ	**Wairara**	**0.23**	**301**	P	**Pb**	**20 27 14.2**	**+0.1**
KATZ	**Kakaramea**	**0.27**	**238**	P	**Pg**	**20 27 14.8**	**+0.8**
MRHZ	**Matea Rd**	**0.33**	**91**	P	**Pg**	**20 27 15.2**	**+0.2**
MRHZ				S	**Sg**	**20 27 20.0**	**+0.3**
WPRZ	**Whakapapatarin**	**0.34**	**24**	P	**Pg**	**20 27 15.4**	**+0.3**
TMVZ	**Te Maari**	**0.36**	**218**	P	**Pg**	**20 27 16.3**	**+0.6**
KUTZ	**Kaahu Road**	**0.36**	**339**	P	**Pb**	**20 27 16.3**	**-0.2**
NTVZ	**North Tongarir**	**0.36**	**222**	P	**Pg**	**20 27 16.3**	**+0.7**
ETVZ	**East Tongariro**	**0.38**	**215**	P	**Pg**	**20 27 16.5**	**+0.6**
KRVZ	**Karewarewa**	**0.38**	**226**	P	**Pg**	**20 27 16.6**	**+0.7**
ALRZ	**Allen Road**	**0.38**	**46**	P	**Pg**	**20 27 16.0**	**0.0**
ALRZ				S	**Sg**	**20 27 21.6**	**+0.4**
OTVZ	**Oturere**	**0.42**	**217**	P	**Pg**	**20 27 17.3**	**+0.7**
NNVZ	**North Ngauruho**	**0.42**	**224**	P	**Pg**	**20 27 17.4**	**+0.7**
SNVZ	**South Ngauruho**	**0.45**	**217**	P	**Pg**	**20 27 17.9**	**+0.7**
PRRZ	**Plateau Road**	**0.46**	**44**	P	**Pg**	**20 27 17.4**	**+0.1**
NGZ	**Ngauruhoe**	**0.46**	**221**	P	**Pg**	**20 27 18.1**	**+0.7**
GRRZ	**Galatos Road**	**0.49**	**11**	P	**Pb**	**20 27 18.7**	**0.0**
TWVZ	**Taurewa**	**0.49**	**241**	P	**Pb**	**20 27 18.8**	**0.0**
HRRZ	**Handcock Road**	**0.49**	**28**	P	**Pg**	**20 27 18.4**	**+0.4**
TUVZ	**Tukino**	**0.51**	**211**	P	**Pb**	**20 27 19.2**	**+0.1**
BKZ	**Black Stump Fm**	**0.52**	**131**	P	**Pb**	**20 27 19.2**	**+0.1**
FWVZ	**Far West T-bar**	**0.54**	**218**	P	**Pg**	**20 27 19.5**	**+0.5**
HSRZ	**Hossack Road**	**0.55**	**21**	P	**Pb**	**20 27 19.9**	**+0.1**
DRZ	**Dome Shelter**	**0.56**	**217**	P	**Pb**	**20 27 20.1**	**+0.1**
TRVZ	**Turoa**	**0.58**	**216**	P	**Pb**	**20 27 20.5**	**+0.2**
WNVZ	**Wahianoa**	**0.58**	**211**	P	**Pg**	**20 27 20.1**	**+0.4**
MOVZ	**Moawhango**	**0.61**	**198**	P	**Pg**	**20 27 20.3**	**+0.2**
TLZ	**Tolley Road**	**0.61**	**325**	P	**Pg**	**20 27 20.4**	**+0.2**
RRRZ	**Republican Roa**	**0.64**	**40**	P	**Pg**	**20 27 20.8**	**+0.1**
HLRZ	**Highlands Stat**	**0.64**	**26**	P	**Pb**	**20 27 21.8**	**+0.6**
BHHZ	**Black Hill Sta**	**0.66**	**175**	P	**Pb**	**20 27 21.7**	**+0.1**
MTHZ	**Maungataniwha**	**0.67**	**92**	P	**Pb**	**20 27 21.7**	**0.0**
UTU	**Utuhina**	**0.67**	**14**	P	**Pn**	**20 27 23.1**	**-0.3**
PKVZ	**Pokaka**	**0.68**	**227**	P	**Pb**	**20 27 22.2**	**+0.2**
KWHZ	**Kaweka Forest**	**0.68**	**151**	P	**Pb**	**20 27 22.6**	**+0.6**
MTVZ	**Mangateitei**	**0.69**	**216**	P	**Pb**	**20 27 22.3**	**+0.2**
NMHZ	**Naumai**	**0.69**	**113**	P	**Pn**	**20 27 23.1**	**-0.6**
MUGZ	**Murupara**	**0.70**	**60**	P	**Pg**	**20 27 21.9**	**0.0**
TARZ	**Mount Tarawera**	**0.72**	**35**	P	**Pb**	**20 27 22.8**	**+0.3**
NGRZ	**Ngongotaha**	**0.74**	**12**	P	**Pb**	**20 27 23.5**	**+0.5**
OMRZ	**Omania**	**0.78**	**23**	P	**Pb**	**20 27 24.2**	**+0.6**
MKRZ	**Makatiti**	**0.79**	**29**	P	**Pn**	**20 27 24.9**	**-0.1**
KARZ	**Kaharoa**	**0.83**	**14**	P	**Pb**	**20 27 25.2**	**+0.7**
RAHZ	**Arahi**	**0.86**	**96**	P	**Pn**	**20 27 26.1**	**+0.1**
KRHZ	**Kereru**	**0.86**	**160**	P	**Pn**	**20 27 25.9**	**-0.1**
LIRZ	**Lichensteins R**	**0.88**	**21**	P	**Pn**	**20 27 26.5**	**+0.2**
ARHZ	**Aropaoanui**	**0.90**	**119**	P	**Pn**	**20 27 27.8**	**+1.3**
EDRZ	**Edgecumbe**	**0.93**	**39**	P	**Pn**	**20 27 27.4**	**+0.4**
HIZ	**Hauiti**	**0.94**	**289**	P	**Pn**	**20 27 27.2**	**+0.1**
KMRZ	**Kaimai**	**0.98**	**358**	P	**Pg**	**20 27 27.6**	**+0.4**
MARZ	**Manawahe**	**1.00**	**33**	P	**Pb**	**20 27 27.5**	**+0.2**
WHHZ	**Waihua**	**1.00**	**105**	P	**Pn**	**20 27 29.3**	**+1.4**
VRZ	**Vera Road**	**1.00**	**253**	P	**Pn**	**20 27 28.3**	**+0.4**
URZ	**Urewera**	**1.05**	**57**	Pg	**Pb**	**20 27 27.8**	**-0.3**
56nm,0.3s,baz=246,slow=6.5,SNR=216							
URZ				Lg	Lg	20 27 41.7	
86nm,0.3s,baz=77,slow=20,SNR=7.9							
URZ	**Urewera**	**1.05**	**57**	P	**Pb**	**20 27 28.1**	**-0.1**
SNGZ	**Shannon Statio**	**1.06**	**88**	P	**Pn**	**20 27 29.6**	**+0.9**
OPRZ	**Ohinepanea**	**1.08**	**25**	P	**Pb**	**20 27 28.8**	**+0.1**
PNHZ	**Pukenui**	**1.09**	**172**	P	**Pg**	**20 27 30.0**	**+0.7**
TOZ	**Tahuroa Road**	**1.16**	**341**	P	**Pb**	**20 27 29.6**	**-0.5**
RAGZ	**Rawiri**	**1.17**	**74**	P	**Pg**	**20 27 30.8**	**+0.1**
WAZ	**Wanganui**	**1.21**	**220**	P	**Pg**	**20 27 32.2**	**+0.7**
TSZ	**Takapari Road**	**1.23**	**181**	P	**Pg**	**20 27 32.3**	**+0.4**
WPHZ	**Waipukurau**	**1.28**	**164**	P	**Pg**	**20 27 34.4**	**+1.5**
MHEZ	**Mangahewa**	**1.32**	**259**	P	**Pg**	**20 27 35.2**	**+1.6**
RPZ	**Rata Peaks**	**6.13**	**216**	Pn	**Pn**	**20 28 37.3**	**-1.2**
0.2nm,0.3s,baz=57,slow=19,SNR=2.5							
RPZ				Pg	**Pb**	**20 28 54.0**	**-0.8**
0.6nm,0.3s,baz=313,slow=3.4,SNR=6.4							
RPZ				Sn	**Sn**	**20 29 45.6**	**-2.9**
0.3nm,0.3s,baz=213,slow=20,SNR=1.5							
8.7nm,1.0s							
STKA	**Stephens Creek**	**28.78**	**273**	LR	LR	20 44 03.9	
comp=Z,34nm,19.0s,baz=197,slow=35							
CTA	**Charters Tower**	**31.71**	**298**	LR	LR	20 44 47.6	
comp=Z,38nm,18.7s,baz=81,slow=33							

ASAR	**Alice Springs**	**38.67**	**280**	P	**P**	**20 34 32.7**	**+1.0**
1.1nm,0.8s,baz=130,slow=8.5,SNR=9.0							
1.1nm,0.8s							
WRA	**Warramunga Arr**	**40.47**	**286**	P	**P**	**20 34 46.9**	**+0.3**
0.9nm,0.8s,baz=128,slow=8.0,SNR=7.0							
WRA				LR	LR	20 52 08.6	
comp=Z,42nm,18.6s,baz=155,slow=37							
0.9nm,0.8s							
KSRS	**Korea Array**	**87.86**	**324**	LR	LR	21 15 16.0	
comp=Z,7.6nm,20.8s,baz=230,slow=33							
TORD	**Torodi Ar. Bea**	**153.93**	**193**	PKPbc	**PKPbc**	**20 47 07.2**	**-0.5**
0.5nm,1.0s,baz=194,slow=3.0,SNR=1.7							

*IDC **22** 20:43:58.1±0.5, 55°.09S×31°.19W, h0km, mb4.5/12, mbtmp4.5/13, ML3.5/1, MS4.0/33, Error ellipse: s-maj=20.2km s-min=15.3km az=55.0*
*NEIC **22** 20:43:59.7±1.5, 55°.07S±0°.07×31°.2W±0°.1, h10km±1km, mb5.0/42, Error ellipse: s-maj=15.7km s-min=5.8km az=136.0*
*GCMT **22** 20:44:05.7±0.3, 55°.10S±0°.03×31°.19W±0°.04, h21km±1km, MW5.0/81, Moment Tensor Solution. s22,c24; s81,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.12±.22; $M_{\theta\theta}$-1.51±.15; $M_{\phi\phi}$-1.60±.14; $M_{r\theta}$-0.89±.28; $M_{\theta\phi}$1.71±.08; $M_{\phi r}$0.38±.25; Best double couple: $M_0$3.33800×10^{16} NP1:ϕ_s309.00000°, δ53.00000°, λ82.00000°. NP2: ϕ_s143.00000°, δ38.00000°, λ101.00000°. Principal axes: T 3.2870, Plg80.0000°, Azm185.0000°; N 0.1130, Plg7.0000°, Azm314.0000°; P -3.3890, Plg8.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 20:43:59.4±0.3, 55°.08S±0°.06×31°.20W±0°.07, h10km, n238, σ0°74/207, mb4.9/32, MS4.0/37, 2C-2D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.17**	**282**	Pn	**Pn**	**20 44 48.4**	**-0.9**
ORCD	**Orcadas**	**9.16**	**226**	Pn	**Pn**	**20 46 08.2**	**-3.2**
ESPZ	**Base Esperanza**	**15.50**	**227**	Pn	Pn	20 47 23.6	-14
VNA1	**Neumayer--Stat**	**18.59**	**156**	P	**Pn**	**20 48 18.6**	**+2.1**
VNA3	**Neumayer Olymp**	**18.71**	**158**	P	**Pn**	**20 48 18.2**	**+0.3**
PMSA	**Palmer Station**	**18.87**	**226**	P	**P**	**20 48 19.9**	**+0.5**
0.1nm,0.3s,baz=60,slow=16,SNR=3.0							
PMSA				LR	LR	20 54 52.4	
comp=Z,804nm,18.7s,baz=48,slow=35							
14nm,0.9s							
PMSA	**Palmer Station**	**18.87**	**226**	P	**Pn**	**20 48 20.1**	**+0.1**
PMSA	**Palmer Station**	**18.87**	**226**	*eP*	**Pn**	**20 48 24.4**	**+4.5**
VNA2	**Neumayer--Watz**	**18.98**	**156**	P	**P**	**20 48 20.3**	**-0.3**
baz=314,slow=11							
SNAA	**Sanae**	**20.58**	**155**	P	**P**	**20 48 37.8**	**-0.3**
SNAA	**Sanae**	**20.58**	**155**	P	**P**	**20 48 38.4**	**+0.4**
19nm,0.9s,baz=306,slow=10,SNR=47							
19nm,0.9s							
SNAA	**Sanae**	**20.58**	**155**	P	**P**	**20 48 37.7**	**-0.3**
SMAI	**San Martin Ant**	**21.08**	**218**	P	**P**	**20 48 45.0**	**+1.6**
TROLL	**Troll, Antarti**	**22.14**	**153**	P	**P**	**20 48 54.5**	**-0.5**
BELA	**Belgrano 2**	**22.93**	**182**	P	**P**	**20 49 03.4**	**+0.3**
PLCA	**Paso Flores**	**29.57**	**283**	P	**P**	**20 50 03.4**	**-0.9**
2.3nm,0.9s,baz=142,slow=11,SNR=5.7							
PLCA				LR	LR	21 01 50.6	
comp=Z,226nm,20.2s,baz=145,slow=36							
2.3nm,0.9s							
ITQB	**Itaqui**	**31.25**	**314**	*eP*	**P**	**20 50 20.2**	**+1.2**
CPUP	**Villa Florida**	**34.49**	**316**	P	**P**	**20 50 47.3**	**0.0**
13nm,1.0s,baz=154,slow=8.1,SNR=16							
CPUP				LR	LR	21 06 37.4	
comp=Z,162nm,18.2s,baz=174,slow=39							
13nm,1.0s							
CPUP	**Villa Florida**	**34.49**	**316**	P	**P**	**20 50 47.1**	**-0.3**
CPUP				IAmb	IAmb	20 50 49.1	
comp=Z,24nm,1.2s							
QSPA	**South Pole Qui**	**35.17**	**180**	LR	LR	21 05 10.5	
comp=Z,277nm,18.1s,baz=187,slow=36							
QSPA	**South Pole Qui**	**35.17**	**180**	P	**P**	**20 50 53.1**	**0.0**
QSPA				IAmb	IAmb	20 51 04.2	
comp=Z,19nm,0.9s							
VA05	**Santo Domingo**	**35.26**	**291**	P	**P**	**20 50 53.4**	**-0.5**
MT02	**Curacav**	**35.31**	**291**	P	**P**	**20 50 54.8**	**+0.4**
MT02				IAmb	IAmb	20 50 59.8	
comp=Z,24nm,1.1s							
ZON	**Zonda**	**35.35**	**296**	P	**P**	**20 50 54.4**	**-0.5**
VA03	**San Esteban**	**35.38**	**293**	P	**P**	**20 50 56.3**	**+1.2**
VA03				IAmb	IAmb	20 51 02.5	
comp=Z,27nm,0.8s							
VA06	**Catapilco**	**35.93**	**292**	P	**P**	**20 51 00.2**	**+0.5**
CO01	**Juntas del Tor**	**37.34**	**296**	P	**P**	**20 51 13.7**	**+1.7**
CO01				IAmb	IAmb	20 51 21.4	
comp=Z,16nm,0.9s							
AQDB	**Aquidauana**	**39.18**	**322**	P	**P**	**20 51 26.6**	**-0.8**
AQDB				IAmb	IAmb	20 51 29.6	
comp=Z,38nm,1.7s							
AQDB	**Aquidauana**	**39.18**	**322**	*eP*	**P**	**20 51 27.8**	**+0.5**
GO02	**Mina Guanaco**	**41.03**	**301**	P	**P**	**20

H10N1 ASCENSION HYDR 48.96 22 T T 21 45 44.5
baz=192,slow=75,SNR=17
H10N3 ASCENSION HYDR 48.96 22 T T 21 45 46.7
baz=192,slow=75,SNR=22
H10N2 ASCENSION HYDR 48.98 22 T T 21 45 40.4
baz=192,slow=75,SNR=22
RCBR Riachuelo 49.25 354 LR LR 21 11 40.8
comp=Z,91nm,18.2s,baz=320,slow=34
LBTB Lobatse 50.97 78 LR LR 21 11 57.6
comp=Z,55nm,19.2s,baz=207,slow=33
TSUM Tsumeb 51.28 66 LR LR 21 09 54.4
comp=Z,85nm,21.3s,baz=188,slow=30
NPGB Novo Progresso 51.65 329 *eP* **P 20 53 06.3 +0.2**
SAML Samuel 52.53 319 P **P 20 53 12.7 0.0**
SAML IAmb IAmb 20 53 13.9
comp=Z,19nm,0.9s
ETMB Extrema 52.93 315 P **P 20 53 15.6 -0.1**
ETMB IAmb IAmb 20 53 17.0
comp=Z,38nm,1.6s
ETMB Extrema 52.93 315 *eP* **P 20 53 15.7 0.0**
ROSB Rosrio 53.07 344 *eP* **P 20 53 16.0 -0.7**
ITTB Itaituba 54.30 329 *eP* **P 20 53 25.9 +0.2**
NNA Nana 55.79 302 LR LR 21 20 44.3
comp=Z,44nm,18.0s,baz=154,slow=40
MACA Manacapuru-AM 57.00 324 *eP* **P 20 53 44.0 -1.1**
MCPB Macapa, AP 57.15 335 *eP* **P 20 53 45.4 -0.7**
CZSB Cruzeiro do Su 57.58 309 P **P 20 53 47.7 -1.6**
CZSB IAmb IAmb 20 54 01.7
comp=Z,20nm,1.1s
CZSB Cruzeiro do Su 57.58 309 *eP* **P 20 53 49.1 -0.2**
LSZ Lusaka 60.21 73 LR LR 21 18 36.5
comp=Z,282nm,18.1s,baz=213,slow=34
ATAH Atahualpa 60.74 303 LR LR 21 21 17.8
comp=Z,52nm,18.7s,baz=145,slow=37
RPN Rapa Nui 61.55 263 LR LR 21 17 52.5
comp=Z,100nm,18.0s,baz=126,slow=33
BOAV Boa Vista 62.16 326 P **P 20 54 19.7 -1.0**
BOAV IAmb IAmb 20 54 26.1
comp=Z,6.1nm,1.0s
BOAV Boa Vista 62.16 326 *eP* **P 20 54 20.4 -0.3**
MDP Montagnes des 62.55 336 LR LR 21 22 17.5
comp=Z,90nm,18.4s,baz=169,slow=37
BOSC San Juan Bosco 64.27 305 P **P 20 54 34.6 -0.3**
BOSC IAmb IAmb 20 54 36.4
comp=Z,12nm,1.3s
ARNL Arenillas 64.67 304 P **P 20 54 36.3 -1.1**
DBIC Dimbokro 65.33 29 P **P 20 54 41.5 -0.1**
comp=Z,4.1nm,0.7s,baz=168,slow=1.7,SNR=4.3
DBIC LR LR 21 18 55.4
comp=Z,74nm,18.3s,baz=193,slow=32
comp=Z,4.1nm,0.7s
OTAV Otavalo 67.23 307 P **P 20 54 55.1 +0.7**
OTAV IAmb IAmb 20 54 56.9
comp=Z,27nm,1.6s
OTAV Otavalo 67.23 307 *eP* **P 20 54 56.0 +1.6**
OPO Ambohidratompo 68.36 92 LR LR 21 19 45.4
comp=Z,104nm,20.0s,baz=334,slow=31
BBTS Babate 70.57 15 LR LR 21 22 17.8
comp=Z,121nm,18.3s,baz=162,slow=33
BAUV El Baul 70.83 321 P **P 20 55 15.9 -0.2**
SDV Santo Domingo 71.74 319 LR LR 21 28 49.7
comp=Z,153nm,18.9s,baz=212,slow=38
SDV Santo Domingo 71.74 319 P **P 20 55 21.7 -0.1**
SDV IAmb IAmb 20 55 33.9
comp=Z,8.5nm,0.9s
TOA0 Torodi Ar. Sit 73.42 34 P **P 20 55 31.7 +0.2**
TORD Torodi Ar. Bea 73.42 34 P **P 20 55 32.0 +0.5**
comp=Z,3.4nm,0.7s,baz=198,slow=6.6,SNR=28
TORD LR LR 21 21 12.9
comp=Z,201nm,21.0s,baz=216,slow=30
comp=Z,3.4nm,0.7s
TORD Torodi Ar. Bea 73.42 34 P **P 20 55 32.0 +0.5**
MBAR Mbarara 73.80 67 LR LR 21 26 20.1
comp=Z,229nm,18.0s,baz=216,slow=34
KMBO Kilima Mbogo 76.87 73 LR LR 21 29 10.8
comp=Z,378nm,18.0s,baz=236,slow=35
SJG San Juan 78.73 326 LR LR 21 36 00.2
comp=Z,19nm,18.1s,baz=248,slow=40
RPZ Rata Peaks 79.78 196 LR LR 21 28 04.2
comp=Z,58nm,19.1s,baz=114,slow=33
MATN Matagalpa 81.84 306 P **P 20 56 18.6 -0.2**
MATN IAmb IAmb 20 56 19.8
comp=Z,14nm,1.1s
CRIN San Cristobal 82.17 305 P **P 20 56 19.5 -0.8**
TAM Tamanrasset 83.67 34 P **P 20 56 26.0 -2.1**
TAM IAmb IAmb 20 56 49.3
comp=Z,7.8nm,1.4s
TBI Tubuai 85.86 234 *e*LR LR 21 23 46.1
comp=Z,153nm,31.5s
ATD Arta Tunnel 90.44 70 LR LR 21 37 23.1
comp=Z,237nm,18.0s,baz=163,slow=35
MDT Midelt 90.47 22 LR LR 21 31 08.4
comp=Z,140nm,21.5s,baz=191,slow=31
PPT2 Papeete2 90.85 237 *e*LR LR 21 26 04.7
comp=Z,122nm,25.8s
PPT Papeete 90.87 237 LR LR 21 29 24.9
comp=Z,53nm,20.9s,baz=146,slow=30
STKA Stephens Creek 93.18 174 P **P 20 57 13.5 -0.1**
comp=Z,1.1nm,0.8s,baz=165,slow=8.4,SNR=2.9
STKA LR LR 21 39 04.1
comp=Z,159nm,18.0s,baz=202,slow=36
comp=Z,1.1nm,0.8s
KEST Kesra 96.90 32 LR LR 21 39 21.7
comp=Z,172nm,18.1s,baz=198,slow=34
ESDC Sonseca Array 97.22 21 LR LR 21 37 11.8
comp=Z,103nm,19.7s,baz=183,slow=33
ASAR Alice Springs 100.54 166 P **Pdif 20 57 45.4 -1.8**
comp=Z,0.7nm,0.7s,baz=176,slow=4.1,SNR=9.8
ASAR PP **PP 21 01 52.1 -0.8**
comp=Z,0.6nm,1.0s,baz=193,slow=9.4,SNR=6.0
DZM Mont Dzumac 101.69 197 *e*LR LR 21 31 06.9
comp=Z,403nm,38.8s
WRA Warramunga Arr 104.27 166 Pdiff **Pdif 20 58 02.9 -0.9**
comp=Z,0.3nm,0.8s,baz=202,slow=4.3,SNR=1.9
CLL Collm 112.22 28 *e*SKSac **SKSac 21 09 16.0 0.0**
CLL *ex* x 21 11 30.0
CLL *e*PS PS 21 12 58.0 +5.7
CLL *e*PPS PPS 21 14 12.0
CLL *e*SS **SS 21 19 00.0 +1.4**
CLL *e*SSS SSS 21 22 48.0
CLL Lm MLR 21 44 00.0
comp=Z,100nm,20.0s
NVAR Mina Array Bea 118.92 296 PKP **PKiKP 21 02 48.6 +0.9**
comp=Z,0.4nm,0.7s,baz=103,slow=4.0,SNR=2.2
NOA NORSAR Array B 120.54 22 PKP **PKPdf 21 02 49.9 +0.1**
comp=Z,0.6nm,0.8s,baz=204,slow=2.2,SNR=2.8
WVOR Wild Horse Val 122.07 299 **PKPdf 21 02 53.5 +0.1**
G08A Pilot Rock 124.31 301 PKPdf **PKiKP 21 02 58.2 +0.3**
FINES FINESS Array B 124.62 29 PKP **PKPdf 21 02 57.4 -0.1**
comp=Z,1.4nm,0.6s,baz=148,slow=0.8,SNR=12
CMAR Chiang Mai Arr 127.55 114 PKP **PKPdf 21 03 04.6 +0.1**
comp=Z,3.1nm,0.9s,baz=227,slow=3.5,SNR=8.8
ABKAR Akbulak array 128.73 57 PKPdf **PKPdf 21 03 05.8 +0.1**
ABKAR Akbulak array 128.73 57 PKPdf **PKPdf 21 03 05.7 -0.1**
ARCES ARCESS Array B 130.91 23 PKP **PKPdf 21 03 09.4 +0.1**
comp=Z,4.0nm,0.9s,baz=225,slow=3.3,SNR=6.0
YKA Yellowknife Ar 133.94 320 PKP **PKPdf 21 03 15.2 0.0**
comp=Z,0.8nm,0.6s,baz=123,slow=2.6,SNR=8.8
PZH PanZhiHua 135.58 110 PKP **PKPdf 21 03 19.4 -0.2**
MKAR Makanchi Array 138.76 73 PKhKP PKPpre 21 03 15.4
comp=Z,0.5nm,0.9s,baz=223,slow=1.6,SNR=2.4
MKAR PKP **PKPdf 21 03 23.7 -1.0**
comp=Z,0.4nm,0.6s,baz=226,slow=1.7,SNR=4.1
WMQ Urumqi 139.96 80 *e*PKP **PKiKP 21 03 28.8 -0.7**
CD2 Chengdu 140.12 108 PKP **PKPdf 21 03 27.4 -0.4**
ZALV Zalesovo Beam 144.00 65 PKP PKPbc 21 03 32.0 +0.2
comp=Z,3.4nm,0.5s,baz=242,slow=3.5,SNR=14
ZALV Zalesovo Beam 144.00 65 PKPpre 21 03 30.7
LZH Lanzhou 144.04 103 ⇑PKP **PKPdf 21 03 34.3 -0.4**
GTA Gaotai 144.07 95 ⇓PKP PKPbc 21 03 32.9 +0.2
GTA pPKP sPKPdf 21 03 37.4 +0.5
GTA sPKP 21 03 40.8
GTA LR LR
comp=Z,59nm,16.7s
GTA LR LR
comp=Z,73nm,16.7s
GTA LR LR
comp=Z,72nm,17.1s
DAWY Dawson 144.46 314 P **PKPab 21 03 32.3 -0.4**
baz=110
BVCY Beaver Creek 144.50 311 P **PKPab 21 03 32.8 -0.1**
baz=111
M27K Edge Creek, AK 144.92 311 P **PKPab 21 03 34.7 0.0**
baz=111
L27K Beaver Creek, 145.14 312 **PKPbc 21 03 34.8 -0.5**
L27K Beaver Creek, 145.14 312 P **PKPbc 21 03 35.3 0.0**
baz=110
KAIM Kayak Island 145.18 306 P **PKPbc 21 03 35.2 -0.1**
baz=112
XAN Xi'an 145.32 111 ⇓PKPbc **PKPbc 21 03 36.5 -0.2**
WHN Wuhan 145.37 121 PKPbc **PKPbc 21 03 36.3 -0.5**
EGAK Eagle 145.42 315 **PKPdf 21 03 35.2 -0.7**
EGAK Eagle 145.42 315 P **PKPdf 21 03 35.2 -0.7**
baz=108
M26K Nabesna, AK 145.43 310 P **PKPdf 21 03 35.8 -0.3**
baz=110
BMRM Bremner River 145.65 307 P **PKPdf 21 03 36.9 +0.3**
baz=111
I27K Kandik River 145.84 316 P **PKPdf 21 03 37.3 +0.5**
baz=106,SNR=12
Q23K Middleton Isla 145.90 304 P **PKPdf 21 03 37.2 +0.3**
baz=112
H27K Steamboat Moun 145.98 317 P **PKPdf 21 03 37.4 +0.4**
baz=105,SNR=14
EYAK Cordova Ski Ar 146.03 306 P **PKPbc 21 03 38.1 +0.1**
baz=111
G27K Doyon Strip 146.18 318 P **PKPbc 21 03 38.4 +0.1**
baz=104,SNR=6.9
J26L Joseph Creek 146.32 314 P **PKPbc 21 03 38.9 0.0**
baz=106,SNR=9.9
SCRK Sand Creek 146.35 313 **PKPbc 21 03 39.2 +0.1**
SCRK Sand Creek 146.35 313 P **PKPbc 21 03 38.8 -0.2**
baz=107
HARP HAARP 146.38 310 P **PKPbc 21 03 38.8 -0.3**
baz=108
I26K Coal Creek Min 146.38 315 **PKPdf 21 03 37.7 +0.1**
KLU Klutina 146.43 308 P **PKPbc 21 03 39.1 -0.2**
baz=109
E27K Coleen River 146.48 321 P **PKPbc 21 03 39.0 -0.2**
baz=102
RIDG Independent Ri 146.65 312 **PKPbc 21 03 40.1 +0.3**
RIDG Independent Ri 146.65 312 P **PKPbc 21 03 39.9 0.0**
baz=107,SNR=14
PAX Paxson 146.69 311 **PKPbc 21 03 39.9 -0.1**
PAX Paxson 146.69 311 P **PKPbc 21 03 39.7 -0.3**
baz=107,SNR=8.2
M24K Tolsona, Glenn 146.74 309 P **PKPbc 21 03 40.3 +0.1**
baz=108
G26K Porcupine Rive 147.03 318 P **PKPbc 21 03 40.7 0.0**
baz=103,SNR=5.7
J25K Salcha River, 147.11 314 **PKPdf 21 03 40.1 +1.2**
J25K Salcha River, 147.11 314 P **PKPbc 21 03 40.5 -0.6**
baz=105
SCM Sheep Creek Mo 147.17 308 P **PKPbc 21 03 40.9 -0.6**
baz=108
F26K Sheenjek River 147.32 319 P **PKPbc 21 03 41.8 +0.2**
baz=101,SNR=6.9
M23K Glacier View 147.34 308 P **PKPbc 21 03 41.5 -0.3**
baz=108
PRP Porcupine Dome 147.39 315 P **PKPbc 21 03 41.7 -0.3**
baz=104
C27K Jago River 147.50 323 P **PKPbc 21 03 41.8 -0.2**
baz=99
DHY Denali Highway 147.55 310 P **PKPbc 21 03 42.3 -0.3**
baz=106
LYN LuoYang 147.59 114 ⇑PKPbc **PKPdf 21 03 42.1 +1.5**
SML Sawmill 147.62 308 P **PKPbc 21 03 42.6 0.0**
baz=107
H25K Birch Creek 147.68 317 P **PKPbc 21 03 42.5 -0.1**
baz=102
HDA Harding Lake 147.72 313 P **PKPbc 21 03 42.8 0.0**
baz=104
IL31 147.78 314 **PKPbc 21 03 42.5 -0.3**
ILAR Eielson Array 147.78 314 PKPbc **PKPbc 21 03 43.0 +0.1**
comp=Z,11nm,0.8s,baz=123,slow=1.7,SNR=73
ILAR Eielson Array 147.78 314 **PKPbc 21 03 42.5 -0.4**
F25K Christian Rive 147.87 319 P **PKPbc 21 03 43.2 +0.1**
baz=100,SNR=7.7
E25K Arctic Village 147.93 320 P **PKPbc 21 03 43.2 0.0**
baz=99,SNR=13
BRSE Bradley Lake S 148.10 303 P **PKPbc 21 03 43.8 -0.1**
baz=109
CCB Clear Creek Bu 148.13 313 **PKPbc 21 03 43.4 -0.4**
TCOL CIGO, UAF Yank 148.21 314 P **PKPbc 21 03 44.2 +0.3**
baz=103
WRH Wood River Hil 148.21 313 **PKPbc 21 03 43.9 -0.1**
KDAK Kodiak Island 148.35 299 P **PKPbc 21 03 44.2 -0.3**
baz=111
MDM Murphy Dome 148.38 314 **PKPbc 21 03 44.2 -0.3**
D25K Kavik River 148.39 322 P **PKPbc 21 03 44.5 +0.1**
baz=97
MCK McKinley 148.40 311 **PKPbc 21 03 44.8 +0.2**
MCK McKinley 148.40 311 P **PKPbc 21 03 44.2 -0.4**
baz=100,SNR=5.4
G24K Hadweenzic Riv 148.41 317 P **PKPbc 21 03 45.4 +0.8**
baz=100
H24K Noodor Dome 148.41 315 **PKPbc 21 03 43.7 -0.9**
H24K Noodor Dome 148.41 315 P **PKPbc 21 03 44.3 -0.3**
baz=101
M22K Willow 148.42 307 P **PKPbc 21 03 44.7 +0.1**
baz=106
OHAK Old Harbor 148.50 298 P **PKPbc 21 03 44.6 -0.3**
baz=111
NEA2 Nenana 148.65 313 P **PKPbc 21 03 44.7 -0.5**
baz=102
F24K Squaw Lake 148.71 319 P **PKPbc 21 03 45.6 +0.3**
baz=98,SNR=6.0
TRF Thorofare Moun 148.92 310 P **PKPbc 21 03 45.6 -0.5**
baz=103
E24K Your Creek 149.01 320 P **PKPbc 21 03 46.6 +0.5**
baz=97,SNR=9.8
H23K Yukon River 149.09 315 P **PKPbc 21 03 46.0 -0.3**
baz=100
D24K Happy Valley 149.24 322 P **PKPbc 21 03 46.6 0.0**
baz=95
BPAW Bear Paw Mtn. 149.37 312 P **PKPbc 21 03 46.9 -0.1**
baz=102,SNR=16
G23K Bananza Creek 149.42 317 P **PKPbc 21 03 47.0 -0.1**
baz=98
MLY Manley 149.44 313 **PKPbc 21 03 47.0 -0.1**
MLY Manley 149.44 313 P **PKPbc 21 03 47.1 -0.1**
baz=100
TOLK Toolik Lake Re 149.47 321 **PKPbc 21 03 47.8 +0.7**
TOLK Toolik Lake Re 149.47 321 P **PKPbc 21 03 47.4 +0.2**
baz=95,SNR=17
CAST Castle Rocks 149.71 310 P **PKPbc 21 03 47.5 -0.3**
baz=102,SNR=6.1
M20K Styx River 149.83 307 P **PKPbc 21 03 47.8 -0.5**
baz=104
H22K Ishtalitna Cre 149.84 315 P **PKPbc 21 03 48.6 +0.5**
baz=98
D23K Nanushuk River 149.89 321 P **PKPbc 21 03 48.8 +0.7**
baz=94
CHUM Lake Minchumin 149.90 311 P **PKPbc 21 03 48.7 +0.5**
baz=101
C23K Itkillik River 149.91 323 P **PKPbc 21 03 48.5 +0.4**
baz=92
O19K Port Alsworth 149.96 303 P **PKPbc 21 03 49.2 +0.7**
baz=106
I21K Tanana 149.98 314 **PKPbc 21 03 48.2 -0.2**
I21K Tanana 149.98 314 P **PKPbc 21 03 49.2 +0.8**
baz=99
N19K Bonanza Creek 150.20 304 P **PKPbc 21 03 48.9 -0.4**
baz=105
R17K Ugashik Creek 150.22 298 P **PKPbc 21 03 49.1 -0.1**
baz=109
H21K Melozitna Rive 150.39 314 **PKPbc 21 03 48.9 -0.6**
H21K Melozitna Rive 150.39 314 P **PKPbc 21 03 49.5 +0.1**
baz=98,SNR=9.0
M19K Big River Lodg 150.42 307 P **PKPbc 21 03 49.7 0.0**
baz=103
K20K Telida 150.57 310 P **PKPbc 21 03 49.4 -0.5**
baz=101
BTO Baotou 150.66 103 *e*PKPbc **PKPdf 21 03 47.3 +1.8**
Q16K King Salmon 150.67 300 P **PKPbc 21 03 50.4 +0.2**
baz=107
L19K White Mountain 150.69 307 P **PKPbc 21 03 50.4 +0.1**
baz=102
P17K Kvichak River 150.72 301 P **PKPbc 21 03 50.2 -0.1**
baz=106
J20K Nowinta River 150.74 311 **PKPbc 21 03 50.3 0.0**
J20K Nowinta River 150.74 311 P **PKPbc 21 03 50.3 0.0**
baz=99
G21K Allakaket 150.77 316 P **PKPbc 21 03 50.5 +0.2**
baz=95,SNR=6.0
F21K Alatna River 150.82 318 P **PKPbc 21 03 50.8 +0.4**
baz=94,SNR=11
N18K Kilae Creek 150.84 304 P **PKPbc 21 03 51.2 +0.6**
baz=104
CHNA Chernabura Isl 150.91 291 P **PKPbc 21 03 51.4 +0.5**
baz=112
O17K Koliganek Bris 151.19 302 P **PKPbc 21 03 51.2 -0.3**
baz=105
TIA Tai'an 151.28 118 *e*PKPbc **PKPbc 21 03 50.8 -1.7**
TTA Tatalina 151.36 308 P **PKPbc 21 03 52.5 +0.6**
baz=100
S14K Fog Glacier 151.41 294 P **PKPbc 21 03 52.1 -0.1**
baz=110
SDPT Sand Point 151.58 292 P **PKPbc 21 03 52.7 +0.2**
baz=111
O16K Kokwok River B 151.64 301 P **PKiKP 21 03 53.3 +0.4**
baz=104
N16K Nishlik Lake 152.17 303 P **PKiKP 21 03 54.6 +0.5**
baz=102
SONM Songino Array 152.96 88 PKPbc **PKPbc 21 03 55.9 -0.1**
comp=Z,2.5nm,0.8s,baz=225,slow=3.1,SNR=12
KSRS Korea Array 157.37 133 PKP **PKPdf 21 03 54.5 -0.4**
comp=Z,0.3nm,0.4s,baz=277,slow=26,SNR=2.2
KSRS PKPab **PKPab 21 04 26.2 -0.1**
comp=Z,0.7nm,0.7s,baz=212,slow=2.2,SNR=2.3

NIED ***22*** *21:04:58.3,24.˚85N×125.˚84E,h33km,MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-1.36; Mθθ0.53; Mϕϕ0.83; Mrθ-0.43; Mθϕ-0.82; Mϕr0.02; Fault plane solution: M0 1.51000×10^14 NP1: ϕs333.00000°,δ41.00000°,λ-70.00000°. NP2: ϕs127.00000°,δ52.00000°,λ-107.00000°.*

JMA 22 21:04:58.3±0.2,24.˚9N±0.˚9×125.˚8E±0.˚7, h33km±1km, MV3.5/13, NEAR MIYAKOJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.41**	**257**	*i* P		Pb	21 05 07.1	-0.3
JOGS				S		Sb	21 05 13.4	-0.3
JMJ2	**Miyako jima3**	**0.48**	**257**	*i* P		Pb	21 05 08.3	-0.2
JMJ2				S		Sb	21 05 15.7	+0.1
JIKM	**Ikemajima**	**0.55**	**278**	*i* P		Pb	21 05 09.2	-0.3
JIKM				S		Sb	21 05 17.2	-0.1
JIRB	**Irabujima**	**0.61**	**268**	*i* P		Pb	21 05 10.0	-0.6
JIRB				S		Sb	21 05 18.4	-0.6
JTJ	**Tarama**	**1.06**	**259**	*i* P		Pn	21 05 16.9	+0.1
JTJ				*e*S		Sn	21 05 30.8	+0.4
JIJ	**Ishigaki jima**	**1.62**	**253**	P		Pn	21 05 25.7	+1.1
JIJ				*e*S		Sn	21 05 45.6	+1.3
JKE	**Kume jima 2**	**1.70**	**30**	P		Pb	21 05 27.5	-1.4
JKE				*e*S		Sb	21 05 49.7	-0.2
JKRS	**Kuro-shima**	**1.78**	**250**	*i* P		Pb	21 05 28.9	-1.4
JKRS				S		Sb	21 05 51.3	-0.9
IRIF	**Iriomote-Funau**	**1.99**	**255**	P		Pn	21 05 31.6	+1.9
IRIF				*e*S		Sb	21 05 56.5	-1.7
HATJ	**Hateruma jima**	**2.02**	**247**	P		Pb	21 05 33.1	-1.2
HATJ				*e*S		Sn	21 05 56.6	+2.4
JAGN	**Aguni-jima**	**2.14**	**36**	P		Pn	21 05 34.0	+2.2
JAGN				*e*S		Sn	21 05 58.9	+1.7

JMA ***22*** *21:21:39.2±0.5,33˚N±4˚×13˚9E±˚, h318km,MV3.0/36, FAR S OFF TOKAI DISTRICT*

IDC ***22*** *21:21:41.9±0.9,32˚71N×138˚45E,h324km±19km,mb2.8/3, mbtmp3.7/8,Error ellipse: s-maj=54.7km s-min=16.7km az=65.0*

ISC 22 21:21:40.6±0.8, 32.˚57N±0.˚07×138.˚34E±0.˚10, h300km, n19, σ2s07/22, mb3.2/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.33**	**65**	P		**Pn**	**21 22 24.9**	**+2.2**
	150nm,0.9s,baz=331,slow=22,SNR=8.6							
JHJ				S		**S**	**21 23 01.8**	**+5.7**
	38nm,0.2s,baz=307,slow=20,SNR=1.7							
TTO1	**TONANKAI O.B.S**	**1.67**	**309**	P		**Pn**	**21 22 27.2**	**+2.7**
JIE	**Ise**	**2.27**	**324**	P		**Pn**	**21 22 31.2**	**+1.7**
JNY	**Yasuok**	**2.81**	**352**	*e*P		**Pn**	**21 22 36.0**	**+1.6**
BSO3	**Boso 3**	**2.87**	**39**	*e*S		**S**	**21 23 17.7**	**-0.2**
JYN	**Shimob**	**2.92**	**3**	*e*P		**Pn**	**21 22 37.4**	**+1.8**
BSO4	**Boso 4**	**2.93**	**34**	P		**Pn**	**21 22 36.2**	**+0.7**
BSO1	**Boso 1**	**3.03**	**46**	*e*S		**S**	**21 23 19.8**	**-0.4**
JHU	**Hanno**	**3.37**	**13**	*e*P		**Pn**	**21 22 40.3**	**+0.4**
JHU				*e*S		**S**	**21 23 26.8**	**-0.6**
JRY	**Ryogami san**	**3.47**	**8**	*e*P		**Pn**	**21 22 42.2**	**+1.2**
JAG	**Ashikaga**	**3.95**	**13**	P		**Pn**	**21 22 45.4**	**-0.8**
MJAR	**Matsushiro Arr**	**3.96**	**358**	P		**Pn**	**21 22 46.7**	**+0.4**
	1.7nm,0.4s,baz=174,slow=11,SNR=6.9							
JCJ	**Chichijima**	**6.40**	**148**	P		**Pn**	**21 23 16.6**	**+1.9**
	83nm,0.9s,baz=342,slow=20,SNR=6.5							
JCJ				S		**S**	**21 24 26.6**	**-4.0**
	34nm,0.4s,baz=96,slow=23,SNR=2.1							
KSRS	**Korea Array**	**9.83**	**303**	P		**Pn**	**21 23 57.5**	**+1.0**
	3.0nm,0.7s,baz=113,slow=13,SNR=13							
USRK	**Ussuriysk Ar.**	**12.63**	**339**	P		**Pn**	**21 24 30.2**	**-0.3**
	1.8nm,0.6s,baz=133,slow=8.0,SNR=4.0							
KLR	**Kul'dur**	**17.36**	**345**	P		**P**	**21 25 21.5**	**-1.6**
	0.5nm,0.4s,baz=157,slow=7.7,SNR=2.4							
SONM	**Songino Array**	**28.52**	**312**	P		**P**	**21 27 08.7**	**-0.2**
	0.4nm,0.4s,baz=121,slow=10,SNR=4.0							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**44.50**	**306**	P		**P**	**21 29 21.8**	**-0.9**
	0.4nm,0.3s,baz=88,slow=9.5,SNR=15							
	0.4nm,0.3s							
WRA	**Warramunga Arr**	**52.36**	**185**	P		**P**	**21 30 22.9**	**+0.4**
	0.3nm,0.8s,baz=7.3,slow=7.5,SNR=1.0							
	0.3nm,0.8s							

IDC ***22*** *21:31:43.1±0.7,54˚68S×30˚56W,h0km,mb4.2/10, mbtmp4.2/10,MS3.6/7,Error ellipse: s-maj=33.0km s-min=15.2km az=63.0*

NEIC ***22*** *21:31:45.2±1.7,54˚8S±0.˚1×31˚0W±0.˚2,h10km±1km, mb4.5/15,Error ellipse: s-maj=24.7km s-min=16.9km az=31.0*

ISC 22 21:31:44.7±0.6, 54.˚70S±0.˚09×30.˚9W±0.˚1, h10km, n45, σ0s95/34, mb4.3/14, MS3.8/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.30**	**275**	Pn		**Pn**	**21 32 33.6**	**-2.9**
VNA1	**Neumayer--Stat**	**18.85**	**157**	P		**Pn**	**21 36 05.7**	**+0.7**
VNA3	**Neumayer Olymp**	**18.99**	**159**	P		**Pn**	**21 36 06.5**	**-0.2**
VNA2	**Neumayer--Watz**	**19.25**	**157**	P		**P**	**21 36 08.6**	**-0.3**
	baz=309,slow=9.0							
SNAA	**Sanae**	**20.84**	**155**	P		**P**	**21 36 25.8**	**-0.4**
SNAA	**Sanae**	**20.84**	**155**	P		**P**	**21 36 25.9**	**-0.3**
	7.6nm,0.6s,baz=296,slow=9.8,SNR=62							
SNAA				LR	LR		21 43 39.0	
	comp=Z,71nm,19.3s,baz=347,slow=34							
	7.6nm,0.6s							
SNAA	**Sanae**	**20.84**	**155**	P		**P**	**21 36 25.8**	**-0.4**
SNAA				IAmb	IAmb		21 36 27.2	
	comp=Z,8.3nm,0.6s							
SMAI	**San Martin Ant**	**21.50**	**217**	P		**P**	**21 36 35.9**	**+2.6**
SMAI				IAmb	IAmb		21 36 36.5	
	comp=Z,14nm,0.7s							
TROLL	**Troll, Antarti**	**22.39**	**153**	P		**P**	**21 36 42.5**	**-0.5**
BELA	**Belgrano 2**	**23.31**	**182**	P		**P**	**21 36 52.6**	**+0.2**
TRQA	**Tornquist**	**26.85**	**295**	P		**P**	**21 37 26.7**	**+1.4**
TRQA				IAmb	IAmb		21 38 00.5	
	comp=Z,10nm,1.2s							
CPUP	**Villa Florida**	**34.35**	**315**	P		**P**	**21 38 32.2**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=207,slow=5.4,SNR=5.8							
	comp=Z,2.5nm,0.6s							
QSPA	**South Pole Qui**	**35.55**	**180**	P		**P**	**21 38 42.0**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=190,slow=2.4,SNR=33							
QSPA				LR	LR		21 53 51.8	
	comp=Z,155nm,18.3s,baz=157,slow=37							
	comp=Z,3.5nm,0.6s							
QSPA	**South Pole Qui**	**35.55**	**180**	P		**P**	**21 38 42.0**	**+0.2**
QSPA				IAmb	IAmb		21 38 56.4	
	comp=Z,14nm,1.5s							
VA06	**Catapilco**	**35.97**	**291**	P		**P**	**21 38 45.0**	**-0.5**
LCO	**Las Campanas**	**38.44**	**296**	P		**P**	**21 39 07.1**	**+0.4**
LCO				IAmb	IAmb		21 39 12.3	
	comp=Z,19nm,1.5s							
GO02	**Mina Guanaco**	**41.00**	**300**	P		**P**	**21 39 29.1**	**+0.9**
GO02				IAmb	IAmb		21 39 29.3	
	comp=Z,20nm,1.5s							
BDFB	**Brasilia**	**41.19**	**334**	P		**P**	**21 39 30.0**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=165,slow=15,SNR=1.8							
	comp=Z,1.8nm,0.6s							
MAW	**Mawson**	**42.47**	**146**	P		**P**	**21 39 38.8**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=258,slow=11,SNR=7.0							
	comp=Z,3.1nm,0.8s							
MAW	**Mawson**	**42.47**	**146**	P		**P**	**21 39 39.5**	**+0.2**
LVC	**Limon Verde**	**42.80**	**303**	P		**P**	**21 39 44.5**	**+1.5**

comp=Z,2.5nm,0.5s,baz=173,slow=12,SNR=2.4
comp=Z,2.5nm,0.5s
SIV San Ignacio 45.14 317 P **P** **21 40 02.5 +1.1**
comp=Z,0.5nm,0.4s,baz=160,slow=14,SNR=2.2
comp=Z,0.5nm,0.4s
GO01 Chusmiza 45.45 305 P **P** **21 40 04.4 +0.1**
H10S2 ASCENSION HYDR 47.43 22 T T 22 31 35.8
baz=190
H10S3 ASCENSION HYDR 47.43 22 T T 22 31 39.6
baz=30,SNR=9.9
VNDA Vanda 47.80 184 P **P** **21 40 21.3 -0.3**
comp=Z,1.3nm,0.8s,baz=175,slow=5.2,SNR=11
comp=Z,1.3nm,0.8s
VNDA Vanda 47.80 184 P **P** **21 40 21.2 -0.3**
LPAZ La Paz 47.89 308 P **P** **21 40 23.9 +0.3**
comp=Z,4.5nm,0.6s,baz=160,slow=6.7,SNR=13
comp=Z,4.5nm,0.6s
LPAZ La Paz 47.89 308 P **P** **21 40 23.3 -0.3**
H10N1 ASCENSION HYDR 48.54 22 T T 22 32 49.5
baz=192,slow=76,SNR=14
H10N3 ASCENSION HYDR 48.54 22 T T 22 32 48.9
baz=192,slow=76,SNR=15
H10N2 ASCENSION HYDR 48.56 22 T T 22 32 50.1
baz=192,slow=76,SNR=14
BBTS Babate 70.16 15 LR LR 22 09 08.1
comp=Z,27nm,19.6s,baz=105,slow=32
SDV Santo Domingo 71.58 318 P **P** **21 43 06.6 +0.3**
SDV IAmb IAmb 21 43 25.8
comp=Z,5.0nm,1.0s
TORD Torodi Ar. Bea 73.00 33 P **P** **21 43 14.1 -0.4**
comp=Z,0.9nm,0.8s,baz=196,slow=6.0,SNR=8.8
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 73.00 33 P **P** **21 43 14.2 -0.2**
TORD IAmb IAmb 21 43 16.8
comp=Z,3.2nm,1.4s
SJG San Juan 78.52 326 LR LR 22 21 30.8
comp=Z,16nm,18.7s,baz=194,slow=38
MDT Midelt 90.05 22 LR LR 22 19 02.7
comp=Z,50nm,20.8s,baz=206,slow=32
RAO Raoul Island 91.70 208 LR LR 22 19 07.4
comp=Z,57nm,18.3s,baz=160,slow=31
STKA Stephens Creek 93.53 174 LR LR 22 24 03.5
comp=Z,52nm,21.1s,baz=203,slow=34
YKA Yellowknife Ar 133.78 320 PKP **PKPdf** **21 51 00.2 -0.1**
comp=Z,0.7nm,0.8s,baz=143,slow=1.3,SNR=3.0
MKAR Makanchi Array 138.46 72 PKP **PKPdf** **21 51 09.3 -0.2**
comp=Z,0.2nm,0.7s,baz=250,slow=4.3,SNR=2.6
ZALV Zalesovo Beam 143.66 64 PKP PKPbc 21 51 17.1 +1.0
comp=Z,0.4nm,0.4s,baz=230,slow=3.6,SNR=2.7
ILAR Eielson Array 147.66 314 PKPbc **PKPbc** **21 51 27.1 -0.8**
comp=Z,1.5nm,0.8s,baz=109,slow=1.7,SNR=12
SONM Songino Array 152.75 87 PKPbc **PKPbc** **21 51 39.3 -1.7**
comp=Z,1.0nm,0.8s,baz=240,slow=1.7,SNR=6.0

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*IDC **22** 21:40:18.7±1.6, 14.˚23S×72.˚96W, h89km±17km, mb3.6/1, mbtmp3.9/4, MS2.5/1, Error ellipse: s-maj=70.9km s-min=11.0km az=28.0*
ISC 22 21:40:18.8±1.0, 14.˚4S±0.˚4×73.˚0W±0.˚2, h100km, n6, σ0s83/8, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.38**	**302**	P	**Pn**	**21 41 24.2**	**+0.9**
	16nm,0.3s,baz=126,slow=12,SNR=5.4						
NNA				S	**Sn**	**21 42 12.8**	**-0.5**
	17nm,0.3s,baz=250,slow=15,SNR=4.9						
NNA				LR	LR	21 42 58.1	
	comp=Z,49nm,19.3s,baz=158,slow=36						
LPAZ	**La Paz**	**5.11**	**113**	P	**Pn**	**21 41 34.7**	**+1.0**
	2.4nm,0.4s,baz=289,slow=9.2,SNR=9.3						
LPAZ				S	**Sn**	**21 42 31.8**	**-0.1**
	1.6nm,0.4s,baz=217,slow=25,SNR=9.7						
CPUP	**Villa Florida**	**18.93**	**131**	P	**P**	**21 44 31.2**	**-0.7**
	2.8nm,0.7s,baz=301,slow=12,SNR=5.5						
TORD	**Torodi Ar. Bea**	**78.88**	**73**	P	**P**	**21 52 11.1**	**-0.6**
	0.5nm,0.5s,baz=257,slow=5.0,SNR=10						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**136.57**	**219**	PKP	**PKiKP**	**21 59 31.7**	**-0.2**
	0.3nm,0.6s,baz=135,slow=1.8,SNR=5.6						
SONM	**Songino Array**	**146.61**	**1**	PKPbc	**PKiKP**	**21 59 51.2**	**-0.6**
	0.9nm,0.6s,baz=329,slow=2.5,SNR=7.9						

IDC 22 21:49:48.5±2.8, 8.˚02S×159.˚72E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=57.9km s-min=24.4km az=66.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.43**	**171**	Pn	Pn	21 50 14.4	-1.2
	97nm,0.3s,baz=11,slow=10,SNR=14						
HNR				Sn	Sn	21 50 38.0	+2.9
	321nm,0.3s,baz=18,slow=20,SNR=13						
H11S3	**WAKE ISLAND Hy**	**27.23**	**15**	T	T	22 23 25.4	
	baz=193,slow=76,SNR=1505						
H11S2	**WAKE ISLAND Hy**	**27.23**	**15**	T	T	22 23 24.0	
	baz=193,slow=76,SNR=1985						
H11S1	**WAKE ISLAND Hy**	**27.24**	**15**	T	T	22 23 26.6	
	baz=193,slow=76,SNR=982						
WRA	**Warramunga Arr**	**27.28**	**242**	P	P	21 55 35.6	+0.7
	1.6nm,0.5s,baz=66,slow=9.1,SNR=36						
	1.6nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**28.45**	**14**	T	T	22 24 54.2	
	baz=193,slow=76,SNR=753						
H11N3	**WAKE ISLAND Hy**	**28.45**	**14**	T	T	22 24 56.2	
	baz=193,slow=76,SNR=661						
H11N2	**WAKE ISLAND Hy**	**28.46**	**14**	T	T	22 24 55.6	
	baz=193,slow=76,SNR=1412						
ASAR	**Alice Springs**	**29.22**	**235**	P	P	21 55 51.4	-0.8
	0.4nm,0.3s,baz=63,slow=9.7,SNR=6.7						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**87.28**	**318**	P	P	22 02 37.7	+0.5
	0.5nm,1.0s,baz=85,slow=4.8,SNR=1.9						
	0.5nm,1.0s						

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*JMA **22** 22:22:52.2±0.3, 24.˚N×122.˚0E±0.˚8, h51km±3km, MV2.4/10, TAIWAN REGION*
*TAP **22** 22:22:53.3, 24.˚20N×122.˚00E, h49km, ML3.1, C*
ISC 22 22:22:51.3±1.1, 24.˚10N±0.˚02×122.˚05E±0.˚02, h13km±9km, n76, σ0s70/116, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.39**	**278**	P	**Pn**	**22 23 02.7**	**0.0**
	baz=257						
ETL				eS	**Sn**	**22 23 10.3**	**+0.3**
	baz=257						
TWD	**Chiawan**	**0.41**	**267**	eP	**Pn**	**22 23 03.3**	**+0.4**
	baz=246						
TWD				eS	**Sn**	**22 23 10.3**	**-0.1**
	baz=246						
EWUT	**Wuta**	**0.42**	**324**	eP	**Pn**	**22 23 02.0**	**-1.0**
	baz=325						
EWUT				eS	**Sb**	**22 23 08.8**	**+2.0**
	baz=325						
NACB	**Ninganchiao**	**0.42**	**280**	P	**Pn**	**22 23 02.9**	**-0.1**
	baz=263						
NACB				eS	**Sn**	**22 23 10.4**	**-0.2**
	baz=263						
HWA	**Hwalien**	**0.42**	**253**	eP	**Pn**	**22 23 03.7**	**+0.7**
	baz=238						
HWA				eS	**Sn**	**22 23 12.6**	**+1.8**
	baz=238						
ENA	**Nanau**	**0.43**	**319**	eP	**Pn**	**22 23 02.9**	**-0.2**
	baz=322						
ENA				eS	**Sn**	**22 23 09.9**	**-0.9**
	baz=322						
ETLH	**Xiulin Townshi**	**0.53**	**281**	P	**Pn**	**22 23 04.3**	**-0.2**
	baz=265						
ETLH				eS	**Sn**	**22 23 12.4**	**-1.1**
	baz=265						
TWC	**Suao**	**0.54**	**340**	eP	**Pn**	**22 23 04.0**	**-0.6**
	baz=346						
TWC				eS	**Sb**	**22 23 11.7**	**+1.6**
	baz=346						
NDS	**Dongshan**	**0.61**	**330**	eP	**Pb**	**22 23 04.4**	**+0.6**
	baz=329						
NDS				eS	**Sb**	**22 23 12.6**	**+0.3**
	baz=329						
ESL	**Shilin**	**0.63**	**243**	eP	**Pn**	**22 23 05.8**	**-0.1**
	baz=233						
ESL				eS	**Sn**	**22 23 15.7**	**-0.2**
	baz=233						
LATG	**Datong**	**0.64**	**312**	eP	**Pb**	**22 23 05.4**	**+1.0**
	baz=308						
LATG				eS	**Sb**	**22 23 13.7**	**+0.4**
	baz=308						
NNSB	**Datong**	**0.69**	**298**	P	**Pb**	**22 23 06.1**	**+0.9**
	baz=292						
NNSB				eS	**Sb**	**22 23 15.6**	**+0.9**
	baz=292						
ENTT	**Nioudou**	**0.69**	**321**	eP	**Pb**	**22 23 05.3**	**+0.1**
	baz=314						
ENTT				eS	**Sg**	**22 23 14.3**	**+0.4**
	baz=314						
NDT	**Datong Townshi**	**0.70**	**316**	P	**Pn**	**22 23 06.4**	**-0.5**
	baz=313						
NDT				eS	**Sb**	**22 23 15.2**	**+0.4**
	baz=313						
NNS	**Nan Shan**	**0.70**	**299**	eP	**Pb**	**22 23 05.5**	**0.0**
	baz=293						
NNS				eS	**Sb**	**22 23 15.2**	**+0.1**
	baz=293						
TWE	**Neicheng**	**0.71**	**331**	P	**Pb**	**22 23 06.4**	**+0.9**
	baz=331						
TWE				eS	**Sb**	**22 23 15.9**	**+0.8**
	baz=331						
EGFH	**Guangfu**	**0.71**	**233**	eP	**Pn**	**22 23 07.2**	**+0.1**
	baz=217						
EGFH				eS	**Sn**	**22 23 18.6**	**+0.7**
	baz=217						
WHF	**Hehuan Shan**	**0.72**	**273**	eP	**Pn**	**22 23 07.2**	**-0.2**
	baz=258						
WHF				eS	**Sn**	**22 23 17.2**	**-1.4**
	baz=258						
EGS		**0.74**	**352**	eP	**Pn**	**22 23 07.2**	**-0.3**
	baz=355						
EGS				eS	**Sb**	**22 23 17.2**	**+1.0**
	baz=355						
FUSS	**Fushou**	**0.75**	**281**	eP	**Pn**	**22 23 07.8**	**+0.1**
	baz=268						
NTC	**Toucheng**	**0.77**	**345**	eP	**Pn**	**22 23 07.7**	**-0.2**
	baz=356						
NTC				eS	**Sb**	**22 23 17.9**	**+0.9**
	baz=356						
FUSB	**Fushanzhiwuyua**	**0.78**	**327**	eP	**Pn**	**22 23 07.6**	**-0.3**
	baz=317						
FUSB				eS	**Sg**	**22 23 17.0**	**+0.4**
	baz=317						
CHGB	**Renai**	**0.80**	**267**	eP	**Pn**	**22 23 08.3**	**-0.2**
	baz=253						
CHGB				eS	**Sn**	**22 23 19.3**	**-1.0**
	baz=253						
OWD	**Renai**	**0.81**	**260**	eP	**Pn**	**22 23 08.6**	**+0.1**
	baz=252						
OWD				eS	**Sb**	**22 23 18.9**	**+0.6**
	baz=252						
TWT	**Tachien**	**0.81**	**281**	eP	**Pn**	**22 23 09.0**	**+0.5**
	baz=274						
TWT				eS	**Sn**	**22 23 19.9**	**-0.6**
	baz=274						
TDCB	**Techi**	**0.83**	**281**	eP	**Pn**	**22 23 08.7**	**-0.1**
	baz=274						
TDCB				eS	**Sb**	**22 23 19.8**	**+1.1**
	baz=274						
YHNB	**Yeheng**	**0.83**	**313**	eP	**Pb**	**22 23 07.8**	**+0.2**
	baz=303						
YHNB				eS	**Sg**	**22 23 18.0**	**-0.3**
	baz=303						
HGSD	**Ruisui**	**0.84**	**223**	eP	**Pn**	**22 23 09.2**	**+0.5**
	baz=216						
NSK	**Sanguang**	**0.85**	**312**	eP	**Pg**	**22 23 07.2**	**-0.5**
	baz=301						
NSK				eS	**Sg**	**22 23 17.1**	**-1.8**
	baz=301						
WUSB	**Renai**	**0.86**	**263**	eP	**Pn**	**22 23 09.3**	**+0.1**
	baz=251						
WUSB				eS	**Sn**	**22 23 20.5**	**-1.1**
	baz=251						
JYNG	**Yonagunijimaku**	**0.89**	**67**	P	**Pn**	**22 23 09.9**	**+0.5**
JYNG				S	**Sn**	**22 23 21.9**	**-0.2**
TIPB	**Shuangxi**	**0.89**	**347**	eP	**Pb**	**22 23 09.0**	**+0.5**
	baz=349						
EHY	**Hungye**	**0.89**	**228**	eP	**Pn**	**22 23 09.4**	**-0.1**
	baz=230						
VWDT	**VWDT**	**0.90**	**247**	eP	**Pn**	**22 23 10.2**	**+0.6**
	baz=231						
TWB1	**Santiao Chiao**	**0.90**	**356**	eP	**Pg**	**22 23 08.8**	**+0.1**
	baz=1.0						
TWB1				eS	**Sg**	**22 23 19.6**	**-1.0**
	baz=1.0						
YOJ	**Yonaguni jima**	**0.95**	**68**	eP	**Pn**	**22 23 10.5**	**+0.3**
	baz=73						
YOJ				eS	**Sb**	**22 23 22.9**	**+1.0**
	baz=73						
YOJ	**Yonaguni jima**	**0.95**	**68**	P	**Pn**	**22 23 10.7**	**+0.5**
YOJ				eS	**Sn**	**22 23 23.1**	**-0.5**
YULB	**Yu-li**	**0.99**	**224**	eP	**Pn**	**22 23 10.7**	**-0.1**
	baz=228						
SXI1	**Grass Mountain**	**1.00**	**351**	eP	**Pb**	**22 23 10.1**	**-0.4**
	baz=6.0						
SXI1				eS	**Sb**	**22 23 22.1**	**-1.4**
	baz=6.0						
NFF	**Wufeng Townshi**	**1.00**	**302**	eP	**Pb**	**22 23 10.1**	**-0.3**
	baz=299						
NFF				eS	**Sb**	**22 23 22.1**	**-1.5**
	baz=299						
EYUL	**Yuli**	**1.01**	**222**	eP	**Pn**	**22 23 11.4**	**+0.3**
	baz=227						
WHP	**Taichung City**	**1.02**	**280**	eP	**Pn**	**22 23 12.1**	**+0.7**
	baz=269						
WCS	**Beigang Elemen**	**1.04**	**268**	eP	**Pb**	**22 23 11.1**	**0.0**
	baz=259						
SSLB	**Suanglung**	**1.05**	**253**	eP	**Pn**	**22 23 12.0**	**+0.3**
	baz=238						
SMLT	**Sun Moon Lake**	**1.07**	**258**	eP	**Pn**	**22 23 12.5**	**+0.4**
	baz=244						
LIOB	**Emei**	**1.09**	**300**	eP	**Pg**	**22 23 12.9**	**+0.7**
	baz=297						
NSTT	**Nanjuang**	**1.09**	**299**	eP	**Pg**	**22 23 12.5**	**+0.2**
	baz=296						
NSTT				eS	**Sb**	**22 23 25.8**	**-0.4**
	baz=296						
YM01	**YM01**	**1.13**	**337**	eP	**Pb**	**22 23 11.9**	**-0.7**
	baz=338						
FULB	**Fuli**	**1.14**	**218**	eP	**Pg**	**22 23 13.3**	**+0.1**
	baz=203						
WHYT	**Xinyi Township**	**1.17**	**250**	eP	**Pg**	**22 23 14.8**	**+1.0**
	baz=239						
YUS	**Yu-Shan**	**1.18**	**239**	eP	**Pg**	**22 23 14.5**	**+0.5**
	baz=233						
TWQ1	**Liyutan**	**1.19**	**282**	eP	**Pg**	**22 23 14.3**	**+0.1**
	baz=277						
NSY	**Sanyi**	**1.22**	**285**	eP	**Pg**	**22 23 15.9**	**+1.2**
	baz=281						
WJS	**Zhushan**	**1.24**	**257**	eP	**Pg**	**22 23 16.0**	**+0.8**
	baz=242						
WNT	**Mingjian**	**1.27**	**260**	eP	**Pg**	**22 23 16.2**	**+0.6**
	baz=255						
ALS	**Alishan**	**1.28**	**243**	eP	**Pg**	**22 23 16.4**	**+0.4**
	baz=228						
ELDTW	**Lidau**	**1.31**	**226**	eP	**Pb**	**22 23 15.6**	**-0.2**
	baz=214						
EDH	**Donghe**	**1.32**	**211**	eP	**Pn**	**22 23 15.2**	**-0.2**
	baz=197						
CHN5	**Tsauling**	**1.35**	**248**	eP	**Pb**	**22 23 16.4**	**-0.1**
	baz=243						
WDLH	**Douliu**	**1.44**	**254**	eP	**Pg**	**22 23 18.9**	**-0.1**
	baz=248						
LONT	**Longtian**	**1.46**	**215**	eP	**Pb**	**22 23 17.5**	**-0.8**
	baz=211						
STYH	**Taoyuan**	**1.49**	**232**	eP	**Pb**	**22 23 18.0**	**-0.8**
	baz=218						
TPUB	**Ta-pu**	**1.53**	**239**	eP	**Pg**	**22 23 20.3**	**-0.3**
	baz=224						
CHN4	**Tsaushan**	**1.53**	**241**	eP	**Pb**	**22 23 19.4**	**-0.1**
	baz=236						
CHN2	**Minshiung**	**1.55**	**249**	eP	**Pg**	**22 23 21.4**	**+0.3**
	baz=244						
IRIF	**Iriomote-Funau**	**1.55**	**81**	P	**Pb**	**22 23 19.2**	**-0.6**
IRIF				eS	**Sn**	**22 23 37.7**	**-0.8**
TWGBT	**Beinan**	**1.56**	**215**	eP	**Pn**	**22 23 18.5**	**-0.2**
	baz=211						
WTP	**Ta-pu**	**1.57**	**237**	eP	**Pg**	**22 23 20.5**	**-1.0**
	baz=222						
WTK	**Tuku**	**1.58**	**255**	eP	**Pb**	**22 23 20.4**	**+0.2**
	baz=250						
HATJ	**Hateruma jima**	**1.60**	**91**	P	**Pb**	**22 23 20.9**	**+0.2**
HATJ				eS	**Sb**	**22 23 40.8**	**-0.1**
TWK	**Hsinying**	**1.66**	**240**	eP	**Pb**	**22 23 21.9**	**+0.2**
	baz=235						
CHN1	**Nanshi**	**1.67**	**237**	eP	**Pg**	**22 23 22.3**	**-1.0**
	baz=232						
SGST	**Jiashian**	**1.69**	**233**	eP	**Pb**	**22 23 21.8**	**-0.3**
	baz=219						
JKRS	**Kuro-shima**	**1.79**	**85**	P	**Pn**	**22 23 22.6**	**+0.7**
JKRS				eS	**Sn**	**22 23 45.0**	**+0.4**
JIJ	**Ishigaki jima**	**1.93**	**82**	P	**Pn**	**22 23 24.2**	**+0.4**
JIJ				S	**Sn**	**22 23 46.3**	**-1.6**
JTJ	**Tarama**	**2.48**	**77**	P	**Pn**	**22 23 32.2**	**+0.9**
JTJ				eS	**Sn**	**22 24 01.4**	**0.0**

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*IDC **22** 22:48:23.8±2.3, 6.˚31S×154.˚89E, h51km±18km, mb4.0/15, mbtmp4.3/18, ML4.0/3, MS3.2/12, Error ellipse: s-maj=20.0km s-min=13.0km az=76.0*
*NEIC **22** 22:48:25.6±1.3, 6.˚4S±0.˚1×154.˚8E±0.˚1, h56km±7km, mb4.5/29, Error ellipse: s-maj=18.6km s-min=14.2km az=66.0*
*DJA **22** 22:48:28.8±0.9, 6.˚5S±5.˚1×15.˚5E±.˚1, h123km±11km, M4.9/8, mB4.3/1, mb4.5/8, MLv5.1/1, Mw(mB)3.4/1*
ISC 22 22:48:24.7±0.5, 6.˚29S±0.˚06×154.˚86E±0.˚08, h56km, n77, σ0s85/69, mb4.5/26, MS3.2/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.40**	**308**		**Pn**	**22 49 15.3**	**-0.1**
RABL	**Rabaul**	**3.40**	**308**	P	Pn	22 49 22.2	+6.9
KRVT	**Keravat (AS076**	**3.44**	**305**	P	**Pn**	**22 49 15.6**	**-0.3**
	25nm,0.3s,baz=256,slow=4.9,SNR=14						
KRVT				S	**Sn**	**22 49 55.5**	**0.0**
	301nm,0.5s,baz=240,slow=21,SNR=6.0						
KRVT				Lg	Lg	22 50 11.1	
	82nm,0.3s,baz=180,slow=20,SNR=4.9						
KRVT				LR	LR	22 50 26.1	
	comp=Z,137nm,18.0s,baz=263,slow=35						
	60nm,0.3s						
HNR	**Honiara**	**5.93**	**122**	LR	LR	22 52 16.4	
	comp=Z,198nm,19.8s,baz=2.5,slow=40						
PATS	**Pohnpei**	**13.48**	**15**	Pn	**Pn**	**22 51 34.5**	**+1.1**
COEN	**Coen**	**13.80**	**236**	P	**P**	**22 51 46.9**	**+2.5**
CTA	**Charters Tower**	**16.07**	**211**	P	**Pn**	**22 52 07.1**	**-0.1**
	0.4nm,0.3s,baz=42,slow=14,SNR=4.4						
CTA				LR	LR	22 58 08.1	
	comp=Z,63nm,18.6s,baz=76,slow=36						
	5.3nm,0.5s						
CTAO	**Charters Tower**	**16.07**	**211**	P	**Pn**	**22 52 08.5**	**+1.3**
CTAO				IAmb	IAmb	22 52 11.7	
	comp=Z,21nm,1.1s						
SRPI	**Serui, Papua**	**19.08**	**283**	P	**P**	**22 52 42.5**	**-0.4**
	comp=Z,166nm,0.5s						
DZM	**Mont Dzumac**	**19.27**	**146**	P	**P**	**22 52 44.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=345,slow=12,SNR=4.4						
DZM				LR	LR	22 58 36.0	
	comp=Z,88nm,20.2s,baz=215,slow=32						
	comp=Z,7.1nm,0.8s						
DZM	**Mont Dzumac**	**19.27**	**146**	P	**P**	**22 52 46.5**	**+1.4**
EIDS	**Eidsvold**	**19.32**	**190**	P	**P**	**22 52 46.0**	**+0.6**
EIDS				IAmb	IAmb	22 52 48.6	
	comp=Z,15nm,0.9s						
EIDS	**Eidsvold**	**19.32**	**190**	P	**P**	**22 52 46.4**	**+1.0**
QIS	**Mount Isa**	**20.50**	**225**	P	Pn	22 53 01.9	+0.9
RMQ	**Roma**	**20.91**	**195**	P	**P**	**22 53 03.7**	**+0.9**
GUMO	**Guam**	**22.10**	**333**	LR	LR	23 01 57.2	
	comp=Z,19nm,18.5s,baz=112,slow=37						
QLP	**Quilpie**	**22.58**	**205**	P	**P**	**22 53 20.6**	**-0.1**
WR0	**Warramunga Arr**	**23.97**	**234**	P	**P**	**22 53 33.6**	**-0.5**
WR0				IAmb	IAmb	22 53 35.0	
	comp=Z,24nm,0.9s						
WB0	**Warramunga Arr**	**23.98**	**234**	P	**P**	**22 53 34.0**	**-0.3**
WB0				IAmb	IAmb	22 53 35.1	
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**24.11**	**234**	P	**P**	**22 53 34.6**	**-0.8**
WRAB				IAmb	IAmb	22 53 36.2	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**24.11**	**234**	P	**P**	**22 53 35.0**	**-0.4**
WB2	**Warramunga Arr**	**24.11**	**234**	P	**P**	**22 53 34.9**	**-0.6**
WB2				IAmb	IAmb	22 53 36.3	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**24.12**	**234**	P	**P**	**22 53 35.3**	**-0.3**
	comp=Z,11nm,0.7s,baz=57,slow=9.5,SNR=68						
WRA				PcP	**PcP**	**22 57 15.0**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=50,slow=2.3,SNR=4.6						
WRA				ScP	**ScP**	**23 00 49.5**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=74,slow=3.6,SNR=2.2						
WRA				LR	LR	23 01 45.8	
	comp=Z,75nm,18.5s,baz=352,slow=33						
	comp=Z,11nm,0.7s						
WRA	**Warramunga Arr**	**24.12**	**234**	P	**P**	**22 53 34.4**	**-1.2**
SIJI	**Sorong**	**24.15**	**282**	P	**P**	**22 53 36.5**	**+0.7**
	comp=Z,6.1nm,0.4s,baz=108,slow=7.4,SNR=6.3						
	comp=Z,6.1nm,0.4s						
ARMA	**Armidale**	**24.20**	**187**	P	**P**	**22 53 36.6**	**+0.3**
ARMA				IAmb	IAmb	22 53 46.0	
	comp=Z,26nm,1.4s						
INKA	**Innaminka**	**25.20**	**211**	P	**P**	**22 53 44.7**	**-0.6**
AS31	**Alice Springs**	**26.55**	**227**	P	**P**	**22 53 57.1**	**-0.5**
ASAR	**Alice Springs**	**26.55**	**227**	P	**P**	**22 53 56.5**	**-1.2**
	comp=Z,4.5nm,0.6s,baz=60,slow=8.6,SNR=47						
ASAR				PcP	**PcP**	**22 57 20.9**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=57,slow=2.5,SNR=4.2						
ASAR				ScP	**ScP**	**23 00 56.0**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=35,slow=3.4,SNR=4.1						
ASAR				LR	LR	23 03 46.6	
	comp=Z,64nm,19.3s,baz=87,slow=35						
	comp=Z,4.5nm,0.6s						
ASAR	**Alice Springs**	**26.55**	**227**	P	**P**	**22 53 57.3**	**-0.3**
KNRA	**Kununurra**	**27.24**	**248**	P	**P**	**22 54 03.1**	**-0.7**
H11S3	**WAKE ISLAND Hy**	**27.25**	**25**	T	T	23 22 13.6	
	baz=205,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.25**	**25**	T	T	23 22 16.4	
	baz=205,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.26**	**25**	T	T	23 22 17.3	
	baz=205						
STKA	**Stephens Creek**	**28.32**	**204**	P	**P**	**22 54 12.0**	**-1.3**
	comp=Z,3.6nm,0.6s,baz=34,slow=12,SNR=12						
STKA				LR	LR	23 04 40.9	
	comp=Z,67nm,20.4s,baz=24,slow=34						
	comp=Z,3.6nm,0.6s						
STKA	**Stephens Creek**	**28.32**	**204**	P	**P**	**22 54 12.4**	**-0.9**
STKA	**Stephens Creek**	**28.32**	**204**	P	**P**	**22 54 12.3**	**-1.0**
H11N1	**WAKE ISLAND Hy**	**28.42**	**24**	T	T	23 23 43.2	
	baz=212						
H11N3	**WAKE ISLAND Hy**	**28.43**	**24**	T	T	23 23 44.5	
	baz=212						
H11N2	**WAKE ISLAND Hy**	**28.44**	**24**	T	T	23 23 45.3	
	baz=212						
FITZ	**Fitzroy Crossi**	**30.82**	**245**	P	**P**	**22 54 34.9**	**-0.8**
FITZ				IAmb	IAmb	22 54 47.5	
	comp=Z,21nm,1.4s						
BBOO	**Buckleboo**	**31.67**	**211**	P	**P**	**22 54 41.5**	**-1.4**
KAPI	**Kappang**	**34.96**	**270**	LR	LR	23 11 08.6	
	comp=Z,25nm,18.2s,baz=213,slow=39						
FORT	**Forrest**	**35.02**	**223**	P	**P**	**22 55 10.8**	**-1.3**
LTZ	**Lake Taylor**	**39.47**	**160**	P	**P**	**22 55 49.7**	**-0.1**
LTZ				IAmb	IAmb	22 56 13.6	
	comp=Z,10nm,1.2s						
RPZ	**Rata Peaks**	**39.91**	**162**	LR	LR	23 12 07.8	
	comp=Z,22nm,19.8s,baz=328,slow=36						
NACB	**Ninganchiao**	**44.37**	**314**	P	**P**	**22 56 30.1**	**+0.2**
NACB				IAmb	IAmb	22 56 30.5	
	comp=Z,10nm,0.7s						
KSRS	**Korea Array**	**50.25**	**332**	P	**P**	**22 57 15.2**	**-0.2**
	comp

	comp=Z,0.8nm,0.9s									
VNDA	**Vanda**	**71.29**	**178**		P		**P**	**22 59 38.7**	**+0.8**	
L19K	**White Mountain**	**78.35**	**22**		P		**P**	**23 00 20.2**	**+1.4**	
L19K					IAmb		IAmb	23 00 37.2		
	comp=Z,11nm,1.2s									
IMAR	**Indian Mountai**	**81.10**	**19**		P		**P**	**23 00 34.2**	**+0.5**	
MLY	**Manley**	**81.54**	**20**		P		**P**	**23 00 36.1**	**0.0**	
ILAR	**Eielson Array**	**82.77**	**22**		P		**P**	**23 00 41.5**	**-1.0**	
	comp=Z,0.4nm,0.5s,baz=240,slow=5.0,SNR=4.8									
	comp=Z,0.4nm,0.5s									
MK31	**Makanchi Array**	**82.79**	**319**		P		**P**	**23 00 42.7**	**-0.3**	
MK31					IAmb		IAmb	23 00 43.9		
	comp=Z,1.9nm,0.7s									
MKAR	**Makanchi Array**	**82.79**	**319**		P		**P**	**23 00 43.0**	**0.0**	
	comp=Z,2.9nm,0.8s,baz=101,slow=5.2,SNR=18									
	comp=Z,2.9nm,0.8s									
MKAR	**Makanchi Array**	**82.79**	**319**		P		**P**	**23 00 43.5**	**+0.5**	
ZALV	**Zalesovo Beam**	**83.52**	**326**		P		**P**	**23 00 45.2**	**-1.3**	
	comp=Z,1.5nm,0.5s,baz=123,slow=6.1,SNR=6.8									
	comp=Z,1.5nm,0.5s									
ZALV	**Zalesovo Beam**	**83.52**	**326**		P		**P**	**23 00 45.4**	**-1.1**	
QSPA	**South Pole Qui**	**83.69**	**180**		P		**P**	**23 00 47.0**	**-0.4**	
BCAR	**Beaver Creek A**	**83.90**	**24**		P		**P**	**23 00 49.3**	**+0.9**	
MAW	**Mawson**	**85.00**	**203**		P		**P**	**23 00 53.8**	**0.0**	
	comp=Z,1.1nm,0.5s,baz=108,slow=6.6,SNR=4.3									
	comp=Z,1.1nm,0.5s									
MAW	**Mawson**	**85.00**	**203**		P		**P**	**23 00 54.5**	**+0.7**	
MAW					IAmb		IAmb	23 01 37.5		
	comp=Z,2.9nm,1.4s									
YBH	**Yreka Blue Hor**	**88.51**	**48**		LR		LR	23 35 13.1		
	comp=Z,20nm,18.8s,baz=328,slow=32									
YKA	**Yellowknife Ar**	**95.78**	**28**		P		**P**	**23 01 43.7**	**-0.8**	
	comp=Z,0.4nm,0.6s,baz=267,slow=4.4,SNR=2.5									
	comp=Z,0.4nm,0.6s									
PDAR	**Pinedale Array**	**98.32**	**48**		P		**P**	**23 01 56.1**	**-0.8**	
	comp=Z,0.4nm,0.8s,baz=235,slow=3.2,SNR=2.5									
	comp=Z,0.4nm,0.8s									
TORD	**Torodi Ar. Bea**	**152.71**	**286**		PKPbc		**PKPbc**	**23 08 14.8**	**-1.6**	
	comp=Z,0.5nm,0.6s,baz=72,slow=2.4,SNR=12									
TORD					PKPab		**pPKPdf**	**23 08 24.7**	**-1.0**	
	comp=Z,0.5nm,0.5s,baz=86,slow=4.0,SNR=7.5									

NNC ***22*** *22:52:27.9±0.7,42.16N×76.32E,h0km,mb2.6,mpv2.7, Error ellipse: s-maj=4.9km s-min=2.3km az=3.0*
KRNET ***22*** *22:52:28.3±0.1,42.16N×76.34E,h23km,mb2.5*

ISC 22 22:52:28.3±1.2, 42.17N±0.04×76.31E±0.02, h11km±7km, n25, σ0.972/46, 19C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
ULHL	**Ulahol**	**0.09**	**325**	⇑*iP*			**Pg**	**22 52 31.1**	**0.0**
	baz=19								
ULHL				⇑*iS*			**Sg**	**22 52 33.2**	**+0.1**
	baz=19								
KST	**Kastek**	**0.91**	**344**	P			**Pg**	**22 52 45.8**	**0.0**
	3.4nm,0.1s								
KST				S			**Sb**	**22 52 58.7**	**+0.4**
	7.9nm,0.3s								
TKM2	**Tokmak 2**	**0.91**	**325**	⇑P			**Pg**	**22 52 45.8**	**-0.2**
	0.3nm,0.3s								
TKM2				⇑S			**Sb**	**22 52 58.6**	**0.0**
	1.4nm,0.3s								
TKM2	**Tokmak 2**	**0.91**	**325**	⇑*iP*			**Pg**	**22 52 46.1**	**+0.1**
	baz=24								
TKM2				⇑*iS*			**Sb**	**22 52 59.0**	**+0.4**
	baz=24								
MTBS	**Maitube**	**0.96**	**5**	P			**Pg**	**22 52 46.3**	**-0.5**
	2.8nm,0.2s								
MTBS				S			**Sg**	**22 52 59.7**	**+0.3**
	12nm,0.2s								
KBK	**Karagaybulak**	**1.12**	**296**	⇑*iP*			**Pb**	**22 52 49.9**	**+0.1**
	baz=96								
KBK				⇑*iS*			**Sg**	**22 53 05.2**	**+0.8**
	baz=96								
MDOK	**Medeo**	**1.13**	**29**	⇑P			**Pb**	**22 52 48.2**	**-1.7**
	0.5nm,0.2s								
MDOK					Pg		**Pg**	**22 52 49.7**	**-0.4**
	2.6nm,0.2s								
MDOK					Lg		Lg	22 53 05.2	
	2.4nm,0.3s								
MDOK				S			**Sn**	**22 53 06.2**	**+0.4**
	3.1nm,0.6s								
DGS	**Degeres**	**1.14**	**340**	P			**Pb**	**22 52 49.8**	**-0.3**
	2.8nm,0.2s								
DGS				S			**Sg**	**22 53 05.6**	**+0.6**
	12nm,0.2s								
UCH	**Uchtor**	**1.34**	**273**	⇑*iP*			**Pg**	**22 52 53.9**	**-0.1**
	baz=73								
UCH				⇑*iS*			**Sg**	**22 53 12.2**	**+0.8**
	baz=73								
CHMS	**Chumysh**	**1.42**	**306**	⇓P			**Pb**	**22 52 54.5**	**-0.3**
	0.4nm,0.3s								
CHMS				⇓S			**Sg**	**22 53 14.5**	**+0.6**
	2.2nm,0.4s								
CHMS	**Chumysh**	**1.42**	**306**	⇑*iP*			**Pb**	**22 52 54.9**	**+0.1**
	baz=6.0								
CHMS				⇑*iS*			**Sg**	**22 53 14.5**	**+0.6**
	baz=6.0								
AAK	**Ala-Archa**	**1.42**	**290**	⇓*iP*			**Pb**	**22 52 54.9**	**-0.1**
	baz=90								
AAK				⇓*iS*			**Sg**	**22 53 14.5**	**+0.4**
	baz=90								
ARLS	**Aral**	**1.51**	**259**	⇓*iP*			**Pb**	**22 52 56.2**	**-0.3**
	baz=59								
ARLS				⇓*iS*			**Sg**	**22 53 17.0**	**0.0**
	baz=59								
KTBS	**Karatobe**	**1.56**	**10**	P			**Pb**	**22 52 57.2**	**0.0**
	2.2nm,0.1s								
KTBS				S			**Sg**	**22 53 18.2**	**-0.4**
	8.7nm,0.2s								
KRBS	**Karabastau**	**1.59**	**343**	P			**Pb**	**22 52 57.9**	**+0.1**
	1.0nm,0.3s								
KRBS				S			**Sg**	**22 53 19.4**	**-0.1**
	4.3nm,0.3s								
KUU	**Kurty**	**1.72**	**1**	P			**Pb**	**22 53 00.1**	**+0.2**
	2.4nm,0.2s								
KUU				S			**Sg**	**22 53 23.1**	**-0.4**
	9.4nm,0.4s								
USP	**Ospenovka**	**1.73**	**310**	⇑*iP*			**Pb**	**22 53 00.5**	**+0.5**
	baz=10.0								
USP				⇑*iS*			**Sg**	**22 53 23.8**	**0.0**
	baz=10.0								
SATY	**Saty**	**1.78**	**60**	P			**Pb**	**22 53 00.9**	**-0.1**
	2.4nm,0.1s								
SATY				S			**Sg**	**22 53 24.5**	**-1.1**
	13nm,0.2s								
ZHN	**Zhinishke**	**1.85**	**57**	P			**Pb**	**22 53 01.8**	**-0.5**
	5.0nm,0.2s								
ZHN				S			**Sb**	**22 53 25.9**	**+0.4**
	20nm,0.2s								
EKS2	**Erkin-Say**	**1.94**	**285**	⇑*iP*			**Pb**	**22 53 03.7**	**0.0**
	baz=86								
EKS2				⇑*iS*			**Sb**	**22 53 29.1**	**+1.1**
	baz=86								
KPKS	**Kokpek**	**2.17**	**53**		Pg		**Pb**	**22 53 07.4**	**-0.3**
	2.8nm,0.3s								
KPKS					Lg		Lg	22 53 35.8	
	14nm,0.4s								
UZB	**Uzynbulak**	**2.22**	**63**		Pg		**Pb**	**22 53 08.4**	**-0.2**
UZB					Lg		Lg	22 53 37.3	
ARXS	**Arharly**	**2.32**	**28**		Pg		**Pb**	**22 53 10.3**	**0.0**
	5.3nm,0.3s								
ARXS					Lg		Lg	22 53 41.1	
	4.8nm,0.4s								
SHLS	**Shalkode**	**2.52**	**66**		Pg		**Pg**	**22 53 18.3**	**+1.7**
	1.3nm,0.4s								
SHLS					Lg		Lg	22 53 54.3	
	7.2nm,0.5s								
KK31	**Karatay Array**	**4.38**	**284**	⇑Pg			**Pg**	**22 53 49.2**	**-2.9**
	0.3nm,0.6s,baz=92,slow=14								
KK31				⇑Lg			Lg	22 54 47.9	
	0.2nm,0.3s,baz=98,slow=25								

IDC ***22*** *22:59:58.2±3.2,33.71S×178.59W,h0km,mb3.6/2, mbtmp3.7/3,ML3.4/1,Error ellipse: s-maj=74.0km s-min=36.8km az=119.0,South of Kermadec Islands*

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
URZ	**Urewera**	**5.72**	**216**	Pn			Pn	23 01 24.5	0.0
	1.0nm,0.3s,baz=37,slow=17,SNR=7.9								
URZ				Sn			Sn	23 02 31.0	+0.1
	1.9nm,0.3s,baz=56,slow=7.3,SNR=6.4								
	7.3nm,0.5s								
ASAR	**Alice Springs**	**42.54**	**271**	P			P	23 07 55.6	-0.3
	0.5nm,0.6s,baz=114,slow=7.3,SNR=6.2								
	0.5nm,0.6s								
WRA	**Warramunga Arr**	**43.83**	**276**	P			P	23 08 06.3	+0.1
	0.7nm,0.7s,baz=116,slow=7.6,SNR=10								
	0.7nm,0.7s								
FINES	**FINESS Array B**	**148.04**	**338**	PKPbc			PKPbc	23 19 44.2	-0.7
	1.3nm,0.9s,baz=20,slow=6.2,SNR=4.7								

IDC ***22*** *23:05:30.0±3.9,35.95N×71.09E,h45km±33km,mb3.4/8, mbtmp3.6/13,ML3.4/5,MS4.2/1,Error ellipse: s-maj=32.4km s-min=25.0km az=168.0*
NEIC ***22*** *23:05:38.1±2.5,36.44N±0.04×70.92E±0.07, h105km±10km,mb4.3/9,Error ellipse: s-maj=9.0km s-min=5.8km az=101.0*
NNC ***22*** *23:05:42.1±5.1,36.90N×70.48E,h69km±136km,mb3.8, mpv4.0,Error ellipse: s-maj=48.2km s-min=25.3km az=153.0*
SOME ***22*** *23:05:45.1,38.37N×72.00E,h10km*

ISC 22 23:05:36.7±0.5, 36.45N±0.04×70.94E±0.05, h100km, n74, σ2.958/91, mb3.6/9, 6C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
KBL	**Kabul**	**2.46**	**220**				**Pn**	**23 06 16.5**	**+1.1**
KBL					Sn		**Sn**	**23 06 47.4**	**+2.3**
GAR	**Garm**	**2.59**	**349**				**Pn**	**23 06 19.2**	**+2.1**
GAR					Sn		**Sn**	**23 06 51.1**	**+3.0**
CHGR	**Chuyangaron**	**2.62**	**328**				**Pn**	**23 06 18.9**	**+1.5**
CHGR							**Sn**	**23 06 48.9**	**+0.2**
NIL	**Nilore**	**3.38**	**145**				**Pn**	**23 06 28.4**	**+0.9**
NIL					Sn		**Sn**	**23 07 07.4**	**+0.6**
JMU	**Jammu**	**4.96**	**138**	*eP*			**Pn**	**23 06 47.9**	**-0.9**
JMU				*eS*			**Sn**	**23 07 40.5**	**-4.3**
THN	**Thein Dam**	**5.62**	**134**	*eP*			**Pn**	**23 06 55.6**	**-2.3**
THN				*eS*			**Sn**	**23 07 57.2**	**-3.9**
IUG	**Iuzhnay**	**5.73**	**353**	*eP*			**Pn**	**23 07 02.2**	**+2.9**
	176nm,0.2s								
IUG				*eS*			**Sn**	**23 08 03.2**	**-0.5**
	93nm,0.5s								
CHM	**Chimkent**	**5.95**	**350**	*eP*			**Pn**	**23 07 04.8**	**+2.5**
	6.6nm,0.5s								
CHM				*eS*			**Sn**	**23 08 07.6**	**-1.4**
	164nm,0.4s								
AML	**Almayashu**	**6.06**	**20**	P			**Pn**	**23 07 05.5**	**+1.4**
	SNR=33								
NRN	**Naryn**	**6.34**	**37**	Pn			**Pn**	**23 07 09.0**	**+1.1**
UCH	**Uchtor**	**6.40**	**25**	P			**Pn**	**23 07 10.1**	**+1.4**
	SNR=5.7								
DZA	**Taraz**	**6.44**	**3**	*eP*			**Pn**	**23 07 10.9**	**+2.0**
	41nm,0.2s								
DZA				*eS*			**Sn**	**23 08 18.9**	**-2.0**
	230nm,0.4s								
EKS2	**Erkin-Say**	**6.58**	**19**	P			**Pn**	**23 07 12.4**	**+1.5**
	SNR=9.3								
KK31	**Karatay Array**	**6.65**	**357**				**Pn**	**23 07 13.0**	**+1.2**
KK31	**Karatay Array**	**6.65**	**357**	⇑P			**Pn**	**23 07 12.9**	**+1.2**
	2.5nm,0.2s,baz=174,slow=12,SNR=276								
KK31				S			**Sn**	**23 08 23.3**	**-2.7**
	4.1nm,0.3s,baz=188,slow=24,SNR=11								
KKAR	**Karatay Array**	**6.65**	**357**				**Pn**	**23 07 12.6**	**+0.9**
KKAR	**Karatay Array**	**6.65**	**357**				**Pn**	**23 07 13.1**	**+1.3**
KKAR					Sn		**Sn**	**23 08 24.1**	**-1.9**
AAK	**Ala-Archa**	**6.76**	**23**	P			**Pn**	**23 07 15.2**	**+1.8**
	SNR=11								
AAK	**Ala-Archa**	**6.76**	**23**				**Pn**	**23 07 15.2**	**+1.8**
BHK	**Bhakra**	**6.78**	**136**	*eS*			**Sn**	**23 08 23.5**	**-5.7**
KBK	**Karagaybulak**	**6.92**	**25**	P			**Pn**	**23 07 17.5**	**+1.9**
	SNR=5.7								
CHMS	**Chumysh**	**7.17**	**23**	P			**Pn**	**23 07 20.1**	**+1.4**
	SNR=24								
CHMS	**Chumysh**	**7.17**	**23**	⇓P			**Pn**	**23 07 19.9**	**+1.2**
	16nm,0.6s								
CHMS				⇓S			**Sn**	**23 08 36.5**	**-2.1**
	11nm,0.7s								
USP	**Ospenovka**	**7.33**	**21**	P			**Pn**	**23 07 22.1**	**+1.1**
	SNR=6.2								
TKM2	**Tokmak 2**	**7.39**	**28**	P			**Pn**	**23 07 23.4**	**+1.5**
	SNR=10.0								
TKM2	**Tokmak 2**	**7.39**	**28**	⇑P			**Pn**	**23 07 22.9**	**+0.9**
	3.3nm,0.4s								
TKM2				⇓S			**Sn**	**23 08 43.8**	**-0.5**
	6.6nm,0.8s								
HRA	**Herat**	**7.39**	**256**				**Pn**	**23 07 23.6**	**+1.6**
SMLA	**Simla**	**7.42**	**134**	*eP*			**Pn**	**23 07 20.7**	**-1.5**
SMLA				*eS*			Sn	23 08 37.2	-7.6
SMLA					IAML			23 08 40.9	
	comp=N,41nm,0.2s								
SMLA					IAML			23 08 41.7	
	comp=E,54nm,0.2s								
DGS	**Degeres**	**7.73**	**27**	*eP*			Pn	23 07 32.5	+6.0
	comp=E,4.7nm,0.3s								
DGS				*eS*			**Sn**	**23 08 57.9**	**+5.4**
	comp=E,4.1nm,0.2s								
KUDL	**Kundal**	**9.52**	**149**	*eS*			Sn	23 09 25.0	-11
GEYT	**Alibeck**	**10.34**	**282**	P			**Pn**	**23 07 59.2**	**-2.8**
	comp=E,0.7nm,0.3s,baz=138,slow=9.3,SNR=11								
GEYT					S		**Sn**	**23 09 51.4**	**-4.4**
	comp=E,1.4nm,0.3s,baz=124,slow=38,SNR=2.5								
	comp=E,1.2nm,0.4s								
GEYT	**Alibeck**	**10.34**	**282**	Pn			**Pn**	**23 08 00.5**	**-1.4**
GYA0B	**ALIBECK ARRAY**	**10.34**	**282**	Pn			**Pn**	**23 08 01.0**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**10.34**	**282**	⇑P			**Pn**	**23 08 00.1**	**-1.9**
GYA0B				⇑S			**Sn**	**23 09 52.6**	**-3.2**
MAKZ	**Makanchi**	**13.22**	**35**				**Pn**	**23 08 40.2**	**-0.1**
MAKZ	**Makanchi**	**13.22**	**35**	⇑P			**P**	**23 08 48.6**	**+2.1**
	comp=E,3.8nm,1.4s								
MK31	**Makanchi Array**	**13.36**	**36**	P			**P**	**23 08 48.0**	**0.0**
MKAR	**Makanchi Array**	**13.36**	**36**	P			**Pn**	**23 08 41.7**	**-0.4**
	comp=E,0.1nm,0.3s,baz=224,slow=15,SNR=4.2								
	comp=E,0.4nm,0.8s								
MKAR	**Makanchi Array**	**13.36**	**36**				**Pn**	**23 08 42.0**	**-0.1**
MKAR					P		**P**	**23 08 49.0**	**+0.9**
AB31	**Akbulak array**	**15.10**	**331**		P		**Pn**	**23 09 05.3**	**+0.8**
	comp=E,0.3nm,0.3s,baz=168,slow=12,SNR=29								
AB31					⇓S		Sn	23 11 40.4	-11
	comp=E,1.8nm,0.5s,baz=151,slow=23,SNR=10.0								
ABKAR	**Akbulak array**	**15.10**	**331**				**Pn**	**23 09 05.4**	**+0.9**
ABKAR	**Akbulak array**	**15.10**	**331**	Pn			**Pn**	**23 09 05.5**	**+1.0**
KURBB	**Kurchatov Arra**	**15.18**	**19**	P			**P**	**23 09 08.7**	**+0.5**
	comp=E,0.1nm,0.3s,baz=207,slow=10,SNR=8.9								
	comp=E,0.7nm,0.7s								
KURBB	**Kurchatov Arra**	**15.18**	**19**	⇑P			**Pn**	**23 09 07.0**	**+1.5**
	comp=E,1.8nm,0.6s								
KURK	**Kurchatov**	**15.29**	**19**	P			**P**	**23 09 09.9**	**+0.5**
BVAR	**Borovoye Array**	**16.57**	**359**	P			**Pn**	**23 09 23.4**	**+0.6**
	comp=E,0.1nm,0.3s,baz=175,slow=8.7,SNR=4.4								
BVAR					S		**Sn**	**23 12 18.7**	**-7.8**
	comp=E,0.2nm,0.4s,baz=167,slow=27,SNR=2.9								
	comp=E,0.3nm,0.5s								
BRVK	**Borovoye**	**16.61**	**359**	Pn			**Pn**	**23 09 23.0**	**-0.2**
AKTO	**Aktyubinsk**	**16.80**	**330**	P			**P**	**23 09 27.7**	**+1.6**
	comp=E,0.3nm,0.3s,baz=123,slow=16,SNR=7.1								
AKTO					S		**Sn**	**23 12 22.7**	**-9.3**
	comp=E,1.1nm,0.5s,baz=195,slow=22,SNR=3.3								
	comp=E,1.3nm,0.4s								
AKTO	**Aktyubinsk**	**16.80**	**330**	⇓P			**P**	**23 09 27.7**	**+1.6**
	comp=E,2.7nm,1.1s								
AKTO				⇓S			**Sn**	**23 12 23.4**	**-8.5**
	comp=E,3.1nm,1.1s								
UOSS	**Minazif**	**17.07**	**232**	Pn			**P**	**23 09 31.8**	**+2.4**
UOSS				IAmb			IAmb	23 09 39.8	
	comp=Z,8.8nm,1.2s								
ZAA0	**Zalesovo Array**	**19.98**	**25**	P			**P**	**23 10 02.1**	**+1.2**
ZALV	**Zalesovo Beam**	**19.98**	**25**	P			**P**	**23 10 01.6**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=216,slow=11,SNR=9.1								
	comp=Z,2.5nm,0.3s								
HYBB	**Hyderabad (bro**	**20.12**	**158**	*eP*			Pn	23 10 07.3	+1.8
HYBB				*eS*			**S**	**23 13 45.5**	**+2.1**
GNI	**Garni**	**20.86**	**288**	P			**P**	**23 10 13.2**	**+2.5**
GNI				IAmb			IAmb	23 10 45.2	
	comp=Z,12nm,1.4s								
KIV	**Kislovodsk**	**22.77**	**298**	P			**P**	**23 10 29.3**	**-1.3**
KIV				IAmb			IAmb	23 10 43.7	
	comp=Z,14nm,1.3s								
BNN	**Bunyan**	**27.79**	**286**	P			**P**	**23 11 18.9**	**+2.5**
PALK	**Palkekele**	**30.38**	**161**	LR			LR	23 23 25.1	
	comp=Z,447nm,21.6s,baz=236,slow=36								
FINES	**FINESS Array B**	**37.49**	**326**	P			**P**	**23 12 43.2**	**+2.9**
	comp=Z,0.5nm,0.6s,baz=149,slow=4.4,SNR=4.0								
	comp=Z,0.5nm,0.6s								
FINES	**FINESS Array B**	**37.49**	**326**	P			**P**	**23 12 41.4**	**+1.1**
KEV	**Kevo**	**40.83**	**338**	P			**P**	**23 13 10.3**	**+2.3**
ARCES	**ARCESS Array B**	**41.17**	**338**	P			**P**	**23 13 13.9**	**+3.1**
	comp=Z,1.1nm,0.7s,baz=97,slow=7.8,SNR=5.6								
	comp=Z,1.1nm,0.7s								
ARCES	**ARCESS Array B**	**41.17**	**338**	P			**P**	**23 13 12.0**	**+1.2**
HFS	**Hagfors**	**43.07**	**322**	P			**P**	**23 13 29.4**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=99,slow=9.8,SNR=6.4								
	comp=Z,0.5nm,0.3s								
NC405	**NORSAR Array S**	**44.15**	**323**	P			**P**	**23 13 37.8**	**+2.7**
NC602	**NORSAR Array S**	**44.20**	**323**	P			**P**	**23 13 35.4**	**+0.1**
NC303	**NORSAR Array S**	**44.33**	**323**	P			**P**	**23 13 37.8**	**+1.4**
NC303					IAmb		IAmb	23 14 00.2	
	comp=Z,4.9nm,1.1s								
NB201	**NORSAR Array S**	**44.35**	**323**	P			**P**	**23 13 38.5**	**+1.9**
NB2	**NORSAR Subarra**	**44.39**	**323**	P			**P**	**23 13 39.4**	**+2.5**
	comp=Z,0.5nm,0.6s,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.39**	**323**	P			**P**	**23 13 39.5**	**+2.5**
	comp=Z,0.4nm,0.6s,baz=97,slow=7.8,SNR=4.6								
	comp=Z,0.4nm,0.6s								
NC204	**NORSAR Array S**	**44.63**	**323**	P			**P**	**23 13 41.5**	**+2.7**
TIXI	**Tiksi**	**45.83**	**22**	P			**P**	**23 13 49.6**	**+1.5**
TORD	**Torodi Ar. Bea**	**65.67**	**269**	P			**P**	**23 16 09.9**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=58,slow=7.0,SNR=5.7								
	comp=Z,0.3nm,0.5s								
YKA	**Yellowknife Ar**	**81.29**	**3**	P			**P**	**23 17 43.6**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=348,slow=5.1,SNR=3.6								
	comp=Z,0.7nm,0.8s								
WRA	**Warramunga Arr**	**82.01**	**122**	P			**P**	**23 17 43.9**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=326,slow=4.9,SNR=2.0								
	comp=Z,0.3nm,0.8s								

IDC ***22*** *23:23:54.7±1.8,18.66N×145.64E,h199km±17km, mb3.6/17,mbtmp4.2/19,Error ellipse: s-maj=17.6km s-min=10.9km az=83.0*
NEIC ***22*** *23:23:55.6±1.1,18.66N±0.08×145.6E±0.1,h197km±7km, mb4.5/78,Error ellipse: s-maj=17.7km s-min=10.7km az=79.0*

ISC 22 23:23:55.3±0.4, 18.69N±0.05×145.5E±0.1, h200km, n113, σ0.999/109, mb4.3/56, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
GUMO	**Guam**	**5.11**	**187**	P			**Pn**	**23 25 11.4**	**+0.3**
	50nm,0.3s,baz=354,slow=14,SNR=2.6								
GUMO					S		**Sn**	**23 26 08.5**	**-2.4**
	88nm,0.4s,baz=166,slow=23,SNR=6.0								
GUMO	**Guam**	**5.11**	**187**	P			**Pn**	**23 25 14.9**	**+3.8**
JCJ	**Chichijima**	**8.92**	**340**	P			**Pn**	**23 26 01.7**	**+1.3**
	52nm,0.5s,baz=160,slow=18,SNR=2.2								
JCJ					S		**Sn**	**23 27 36.7**	**-3.9**
	47nm,0.5s,baz=278,slow=20,SNR=1.8								
JCJ	**Chichijima**	**8.92**	**340**	Pn			**Pn**	**23 26 01.4**	**+0.9**
PATS	**Pohnpei**	**17.13**	**132**	Pn			**Pn**	**23 27 44.8**	**+1.6**
H11S3	**WAKE ISLAND Hy**	**20.05**	**87**	T			T	23 49 30.1	
	baz=275,slow=74,SNR=4.8								
H11S1	**WAKE ISLAND Hy**	**20.07**	**87**	T			T	23 49 42.5	
	baz=275,slow=74,SNR=6.0								
H11S2	**WAKE ISLAND Hy**	**20.07**	**87**	T			T	23 49 39.6	
	baz=275,slow=74,SNR=8.7								
H11N1	**WAKE ISLAND Hy**	**20.20**	**84**	T			T	23 49 31.9	
	baz=267,slow=74,SNR=5.7								
H11N2	**WAKE ISLAND Hy**	**20.20**	**84**	T			T	23 49 32.2	
	baz=267,slow=74,SNR=4.3								
H11N3	**WAKE ISLAND Hy**	**20.21**	**84**	T			T	23 49 33.3	
	baz=267,slow=74,SNR=5.0								
KSRS	**Korea Array**	**24.23**	**324**	P			**P**	**23 28 54.2**	**+0.5**
	0.7nm,0.5s,baz=150,slow=9.7,SNR=2.2								
	0.7nm,0.5s								
KLR	**Kul'dur**	**32.43**	**343**	P			**P**	**23 30 06.9**	**+0.5**
	1.5nm,0.3s,baz=149,slow=10,SNR=8.3								
	1.5nm,0.3s								
KNRA	**Kununurra**	**37.93**	**207**	P			**P**	**23 30 54.0**	**+0.4**
WB0	**Warramunga Arr**	**39.75**	**197**	P			**P**	**23 31 08.5**	**-0.2**
WR0	**Warramunga Arr**	**39.89**	**196**	P			**P**	**23 31 09.3**	**-0.5**
WRAB	**Tennant Creek**	**39.92**	**197**	P			**P**	**23 31 09.8**	**-0.3**
WB2	**Warramunga Arr**	**39.93**	**197**	P			**P**	**23 31 09.9**	**-0.2**
WRA	**Warramunga Arr**	**39.93**	**197**	P			**P**	**23 31 10.0**	**-0.2**
	1.5nm,0.3s,baz=32,slow=9.2,SNR=54								
WRA				PcP			**PcP**	**23 33 10.5**	**-1.1**
	0.6nm,0.9s,baz=24,slow=3.7,SNR=1.

SCM	**Sheep Creek Mo**	**62.93**	**29**	P	**P**	**23 34 00.8**	**+0.5**
WRH	**Wood River Hil**	**63.15**	**26**	P	**P**	**23 34 01.3**	**-0.2**
WRH				IAmb	IAmb	23 34 01.8	
	comp=Z,13nm,1.4s						
MDM	**Murphy Dome**	**63.21**	**26**	P	**P**	**23 34 03.2**	**+1.2**
MDM				IAmb	IAmb	23 34 03.7	
	comp=Z,3.5nm,0.6s						
CCB	**Clear Creek Bu**	**63.31**	**26**	P	**P**	**23 34 02.2**	**-0.3**
KLU	**Klutina**	**63.53**	**30**	P	**P**	**23 34 04.7**	**+0.5**
H24K	**Noodor Dome**	**63.56**	**25**	P	**P**	**23 34 05.2**	**+1.0**
TOLK	**Toolik Lake Re**	**63.66**	**22**	P	**P**	**23 34 06.1**	**+1.2**
TOLK				IAmb	IAmb	23 34 43.0	
	comp=Z,9.9nm,1.4s						
IL31		**63.73**	**26**	P	**P**	**23 34 04.3**	**-0.9**
IL31				IAmb	IAmb	23 34 05.3	
	comp=Z,8.1nm,1.4s						
ILAR	**Eielson Array**	**63.73**	**26**	P	**P**	**23 34 04.1**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=250,slow=5.1,SNR=18						
	comp=Z,1.8nm,0.7s						
PAX	**Paxson**	**63.99**	**28**	P	**P**	**23 34 07.6**	**+0.4**
PAX				IAmb	IAmb	23 34 44.0	
	comp=Z,9.3nm,1.4s						
J25K	**Salcha River,**	**64.33**	**27**	P	**P**	**23 34 08.4**	**-0.9**
RIDG	**Independent Ri**	**64.40**	**28**	P	**P**	**23 34 10.3**	**+0.5**
RIDG				IAmb	IAmb	23 34 15.6	
	comp=Z,7.6nm,1.2s						
FYU	**Fort Yukon**	**64.77**	**24**	P	**P**	**23 34 11.1**	**-0.9**
FYU				IAmb	IAmb	23 34 34.5	
	comp=Z,7.1nm,0.7s						
SCRK	**Sand Creek**	**64.82**	**27**	P	**P**	**23 34 11.6**	**-1.0**
SCRK				IAmb	IAmb	23 34 19.7	
	comp=Z,11nm,1.4s						
J26L	**Joseph Creek**	**65.08**	**27**	P	**P**	**23 34 14.4**	**+0.2**
J26L				IAmb	IAmb	23 34 15.2	
	comp=Z,7.2nm,1.3s						
ISLE	**Juniper Island**	**65.13**	**31**	P	**P**	**23 34 12.7**	**-2.0**
BMAR	**Burnt Mountain**	**65.19**	**24**	P	**P**	**23 34 15.5**	**+0.7**
I26K	**Coal Creek Min**	**65.38**	**26**	P	**P**	**23 34 14.8**	**-1.2**
I26K				IAmb	IAmb	23 34 44.5	
	comp=Z,8.8nm,1.4s						
M27K	**Edge Creek, AK**	**65.54**	**29**	P	**P**	**23 34 17.5**	**+0.2**
M27K				IAmb	IAmb	23 34 51.5	
	comp=Z,17nm,1.5s						
L27K	**Beaver Creek,**	**65.65**	**28**	P	**P**	**23 34 18.0**	**+0.2**
L27K				IAmb	IAmb	23 34 56.4	
	comp=Z,7.0nm,1.4s						
K27K	**Chicken**	**65.66**	**27**	P	**P**	**23 34 18.3**	**+0.5**
CTGM	**Chitina Glacie**	**65.66**	**31**	P	**P**	**23 34 18.2**	**+0.1**
CTGM				IAmb	IAmb	23 34 35.9	
	comp=Z,15nm,1.2s						
BCAR	**Beaver Creek A**	**65.67**	**28**	P	**P**	**23 34 18.4**	**+0.4**
BVAR	**Borovoye Array**	**66.38**	**320**	P	**P**	**23 34 22.8**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=96,slow=6.9,SNR=18						
	comp=Z,1.9nm,0.5s						
KKAR	**Karatay Array**	**66.66**	**310**	P	**P**	**23 34 25.1**	**+0.6**
HYT	**Haines Junctio**	**67.52**	**31**	P	**P**	**23 34 31.2**	**+1.4**
HYT				IAmb	IAmb	23 34 31.8	
	comp=Z,3.5nm,0.7s						
M30M	**Minto, Yukon**	**67.92**	**29**	P	**P**	**23 34 33.0**	**+0.8**
M30M				IAmb	IAmb	23 35 10.3	
	comp=Z,8.5nm,1.5s						
INK	**Inuvik**	**69.44**	**23**	P	**P**	**23 34 41.3**	**0.0**
	comp=Z,4.3nm,0.9s,baz=200,slow=2.0,SNR=4.1						
	comp=Z,4.3nm,0.9s						
INK	**Inuvik**	**69.44**	**23**	P	**P**	**23 34 41.6**	**+0.3**
INK				IAmb	IAmb	23 34 49.1	
	comp=Z,17nm,1.4s						
CRAG	**Craig**	**69.94**	**37**	P	**P**	**23 34 44.6**	**0.0**
CRAG				IAmb	IAmb	23 35 17.1	
	comp=Z,22nm,1.4s						
GRNB	**Grenville Isla**	**71.92**	**38**	P	**P**	**23 34 55.5**	**-1.2**
GRNB				IAmb	IAmb	23 35 10.6	
	comp=Z,24nm,1.4s						
C36M	**Paulatuk**	**72.82**	**22**	P	**P**	**23 35 01.5**	**-0.1**
ABKAR	**Akbulak array**	**73.24**	**317**	P	**P**	**23 35 03.8**	**-0.7**
GEYT	**Alibeck**	**76.78**	**306**	P	**P**	**23 35 26.8**	**+1.7**
	comp=Z,0.7nm,0.4s,baz=309,slow=19,SNR=2.1						
	comp=Z,0.7nm,0.4s						
NLWA	**Neilton Lookou**	**76.88**	**44**	P	**P**	**23 35 25.5**	**+0.1**
NLWA				IAmb	IAmb	23 35 58.7	
	comp=Z,18nm,1.4s						
EUNU	**Eureka**	**77.76**	**8**	P	**P**	**23 35 29.6**	**-0.1**
EUNU				IAmb	IAmb	23 35 56.0	
	comp=Z,13nm,1.4s						
YKA	**Yellowknife Ar**	**78.07**	**28**	P	**P**	**23 35 31.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=265,slow=5.6,SNR=9.4						
	comp=Z,1.3nm,0.6s						
B08A	**Colville Reser**	**79.59**	**42**	P	**P**	**23 35 40.5**	**+0.3**
PINE	**Pine Mountain**	**79.78**	**47**	P	**P**	**23 35 42.1**	**+0.5**
PINE				IAmb	IAmb	23 35 43.1	
	comp=Z,7.7nm,0.8s						
CMB	**Columbia Colle**	**81.83**	**53**	P	**P**	**23 35 52.5**	**+0.2**
PNTR	**Pine Nut**	**82.10**	**52**	P	**P**	**23 35 54.6**	**+0.6**
PNTR				IAmb	IAmb	23 35 55.5	
	comp=Z,6.7nm,0.7s						
ARCES	**ARCESS Array B**	**82.46**	**342**	P	**P**	**23 35 53.8**	**-1.1**
	comp=Z,1.9nm,1.0s,baz=46,slow=3.9,SNR=6.4						
	comp=Z,1.9nm,1.0s						
KVN	**Kaiserville**	**83.22**	**51**	P	**P**	**23 35 59.9**	**+0.1**
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**23 36 00.2**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=266,slow=6.0,SNR=30						
	comp=Z,3.0nm,0.7s						
ELK	**Elko**	**84.75**	**49**	P	**P**	**23 36 07.2**	**-0.2**
TPNV	**Topopah Spring**	**85.29**	**53**	P	**P**	**23 36 10.2**	**+0.1**
FINES	**FINESS Array B**	**86.83**	**335**	P	**P**	**23 36 15.0**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=54,slow=5.2,SNR=12						
	comp=Z,0.6nm,0.4s						
KNB	**Kanab**	**87.84**	**52**	P	**P**	**23 36 22.3**	**-0.2**
KNB				IAmb	IAmb	23 36 24.0	
	comp=Z,6.2nm,1.1s						
PDAR	**Pinedale Array**	**87.94**	**45**	P	**P**	**23 36 22.4**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=84,slow=1.7,SNR=4.8						
	comp=Z,0.3nm,0.3s						
U15A	**North Rim**	**88.45**	**52**	P	**P**	**23 36 25.7**	**+0.2**
LPAZ	**La Paz**	**147.83**	**91**	PKPbc	**PKPdf**	**23 43 15.6**	**+0.6**
	comp=Z,4.8nm,1.2s,baz=140,slow=0.8,SNR=5.7						

*BJI **22** 23:26:47.6±0.0,24.31N×122.94E,h50km,mb4.2/41, mB4.4/24,ML3.9/6,Ms4.0/41,Ms7 3.8/40*
*JMA **22** 23:26:48.1±0.1,24.2N×123.0E±0.5,h48km±1km, MD4.7/14,MV4.4/14,NW OFF ISHIGAKIJIMA IS*
JMA Felt II J1 at NW OFF ISHIGAKIJIMA IS .
*NEIC **22** 23:26:48.8±1.4,24.29N±0.05×122.95E±0.06,h46km±5km, mb4.7/91,Mwr4.7/23,Error ellipse: s-maj=8.1km s-min=7.1km az=151.0*
*NEIC **22** 23:26:48.6,24.28N×122.94E,h49km,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr1.55; Mθθ-1.65; Mφφ0.10; Mrθ0.13; Mθφ0.11; Mφr0.46; Fault plane solution: M0 1.67000×10^16^ NP1:φs289.36000°, δ45.49000°,λ113.31000°. NP2:φs77.78000°,δ49.09000°, λ68.07000°. Principal axes: T 1.6898, Plg73.0000°, Azm279.0000°; N -0.0312, Plg16.0000°, Azm93.0000°; P -1.6586, Plg2.0000°, Azm183.0000°;*
*TAP **22** 23:26:48.8,24.30N×122.85E,h34km,ML4.9,C*
*NIED **22** 23:26:48.1,24.33N×122.97E,h48km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr1.12; Mθθ-1.32; Mφφ0.20; Mrθ-0.00; Mθφ0.07; Mφr0.05; Fault plane solution: M0 1.22000×10^16^ NP1:φs89.00000°, δ45.00000°,λ85.00000°. NP2:φs276.00000°,δ45.00000°, λ94.00000°.*
*IDC **22** 23:26:49.9±3.6,24.41N×122.92E,h64km±32km,mb3.9/24, mbtmp4.1/25,ML4.0/1,MS3.8/50 Error ellipse: s-maj=17.3km s-min=12.3km az=77.0*
ISC 22 23:26:48.6±0.5,24.30N±0.03×122.93E±0.02,h51km±4km, n384,σ1§30/437,mb4.6/74,MS3.8/56,8C-42D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.15**	**4**	*i*	P		**Pn**	**23 26 55.8**	**-1.0**
JYNG					S		**Sn**	**23 27 01.2**	**-1.3**
JYNG	**Yonagunijimaku**	**0.15**	**4**		A		A	23 26 55.8	
	comp=E,13nm,0.5s,comp=E,528nm,0.6s								
YOJ	**Yonaguni jima**	**0.18**	**23**				**Pn**	**23 26 55.9**	**-1.0**
YOJ					Sn		**Sn**	**23 27 01.1**	**-1.7**
YOJ	**Yonaguni jima**	**0.18**	**23**	⇑	*i*P		**Pn**	**23 26 56.0**	**-0.9**
	baz=39								
YOJ					*i* S		**Sn**	**23 27 01.1**	**-1.7**
	baz=39								
YOJ	**Yonaguni jima**	**0.18**	**23**	*i*	P		**Pn**	**23 26 56.0**	**-0.9**
YOJ					S		**Sn**	**23 27 01.3**	**-1.5**
YOJ	**Yonaguni jima**	**0.18**	**23**		A		A	23 26 56.0	
	comp=E,123nm,0.5s,comp=E,319nm,4.1s								
IRIF	**Iriomote-Funau**	**0.73**	**87**		P		**Pn**	**23 27 01.7**	**-1.0**
IRIF					S		**Sn**	**23 27 11.5**	**-1.5**
IRIF	**Iriomote-Funau**	**0.73**	**87**		A		A	23 27 01.7	
	comp=E,53nm,1.5s,comp=E,66nm,1.4s								
HATJ	**Hateruma jima**	**0.83**	**107**		P		**Pn**	**23 27 03.3**	**-0.8**
HATJ					eS		**Sn**	**23 27 14.5**	**-0.9**
HATJ	**Hateruma jima**	**0.83**	**107**		A		A	23 27 03.3	
	comp=E,71nm,1.9s,comp=E,47nm,1.2s								
JKRS	**Kuro-shima**	**0.98**	**93**		P		**Pn**	**23 27 05.6**	**-0.6**
JKRS					eS		**Sn**	**23 27 18.4**	**-0.6**
JKRS	**Kuro-shima**	**0.98**	**93**		A		A	23 27 05.6	
	comp=E,48nm,1.6s,comp=E,44nm,1.7s								
TWC	**Suao**	**1.04**	**288**	⇓	*i*P		**Pn**	**23 27 06.1**	**-0.7**
	baz=301								
TWC					*e*S		**Sn**	**23 27 18.1**	**-2.2**
	baz=301								
EGS		**1.06**	**301**	⇓	P		**Pn**	**23 27 06.8**	**-0.4**
EGS	baz=313				*e*S		**Sn**	**23 27 19.5**	**-1.4**
	baz=313								
EWUT	**Wuta**	**1.06**	**278**		*e*P		**Pn**	**23 27 06.3**	**-0.9**
	baz=290								
EWUT					*e*S		**Sn**	**23 27 18.4**	**-2.6**
	baz=290								
EHP	**Heping Village**	**1.09**	**271**		*e*P		**Pn**	**23 27 08.7**	**+1.1**
	baz=270								
ENA	**Nanau**	**1.10**	**277**		*e*P		**Pn**	**23 27 07.2**	**-0.4**
	baz=288								
ENA					*e*S		**Sn**	**23 27 20.9**	**-0.8**
	baz=288								
JIJ	**Ishigaki jima**	**1.10**	**86**		P		**Pn**	**23 27 06.7**	**-1.0**
JIJ					S		**Sn**	**23 27 20.1**	**-1.8**
JIJ	**Ishigaki jima**	**1.10**	**86**		A		A	23 27 06.7	
	comp=E,14nm,1.0s,comp=E,16nm,1.1s								
TWB1	**Santiao Chiao**	**1.11**	**310**	⇓	*i*P		**Pn**	**23 27 07.4**	**-0.5**
	baz=323								
TWB1					*e*S		**Sn**	**23 27 19.9**	**-2.3**
	baz=323								
NTC	**Toucheng**	**1.15**	**299**	⇓	P		**Pn**	**23 27 08.1**	**-0.2**
	baz=301								
NTC					*e*S		**Sn**	**23 27 22.3**	**-0.7**
	baz=301								
NDS	**Dongshan**	**1.16**	**287**		*e*P		**Pn**	**23 27 07.5**	**-1.0**
	baz=299								
NDS					S		**Sn**	**23 27 21.1**	**-2.2**
	baz=299								
ILA	**Ilan**	**1.18**	**294**		*e*P		**Pn**	**23 27 09.4**	**+0.7**
	baz=295								
ILA					*e*S		**Sn**	**23 27 22.9**	**-0.8**
	baz=295								
ETL	**Fush Village**	**1.21**	**264**		P		**Pn**	**23 27 09.2**	**0.0**
	baz=263								
TIPB	**Shuangxi**	**1.21**	**304**	⇓	*i*P		**Pn**	**23 27 09.0**	**-0.2**
	baz=317								
TIPB					S		**Sn**	**23 27 23.4**	**-1.3**
	baz=317								
NACB	**Ninganchiao**	**1.23**	**265**				**Pn**	**23 27 09.4**	**-0.1**
NACB						Sn	**Sn**	**23 27 23.9**	**-1.1**
NACB	**Ninganchiao**	**1.23**	**265**	⇓	P		**Pn**	**23 27 09.3**	**-0.1**
	baz=250								
NACB					*e*S		**Sn**	**23 27 23.5**	**-1.5**
	baz=250								
TWE	**Neicheng**	**1.23**	**290**		P		**Pn**	**23 27 09.4**	**-0.1**
	baz=302								
TWE					S		**Sn**	**23 27 24.1**	**-0.8**
	baz=302								
TWD	**Chiawan**	**1.24**	**260**		P		**Pn**	**23 27 09.2**	**-0.4**
	baz=245								
TWD					S		**Sn**	**23 27 24.1**	**-1.2**
	baz=245								
SXI1	**Grass Mountain**	**1.25**	**310**	⇓	*i*P		**Pn**	**23 27 09.5**	**-0.3**
	baz=322								
SXI1					S		**Sn**	**23 27 23.3**	**-2.2**
	baz=322								
HWA	**Hwalien**	**1.26**	**256**		*e*P		**Pn**	**23 27 09.6**	**-0.3**
	baz=254								
ENTT	**Nioudou**	**1.29**	**286**		P		**Pn**	**23 27 10.1**	**-0.2**
	baz=296								
ENTT					*e*S		**Sn**	**23 27 25.4**	**-1.2**
	baz=296								
TEYL	**Yanliau Villag**	**1.29**	**251**		P		**Pn**	**23 27 10.1**	**-0.3**
	baz=239								
TEYL					*e*S		**Sn**	**23 27 25.3**	**-1.3**
	baz=239								
NWF	**Wu-fen Shan**	**1.30**	**307**	⇓	*i*P		**Pn**	**23 27 10.4**	**-0.1**
	baz=308								
NWF					S		**Sn**	**23 27 25.8**	**-1.1**
	baz=308								
WFSB	**Wu-fen Shan**	**1.30**	**307**	⇓	*i*P		**Pn**	**23 27 10.4**	**0.0**
	baz=308								
WFSB					S		**Sn**	**23 27 25.6**	**-1.2**
	baz=308								
LATG	**Datong**	**1.30**	**281**	⇓	*i*P		**Pn**	**23 27 10.7**	**+0.1**
	baz=292								
FUSB	**Fushanzhiwuyua**	**1.31**	**291**	⇓	*i*P		**Pn**	**23 27 10.5**	**-0.1**
	baz=301								
FUSB					S		**Sn**	**23 27 25.8**	**-1.3**
	baz=301								
ETLH	**Xiulin Townshi**	**1.33**	**266**		P		**Pn**	**23 27 11.0**	**+0.1**
	baz=266								
NDT	**Datong Townshi**	**1.33**	**284**		*e*P		**Pn**	**23 27 11.5**	**+0.7**
	baz=293								
TNOU	**National Taiwa**	**1.35**	**309**		*e*P		**Pn**	**23 27 10.8**	**-0.4**
	baz=320								
TNOU					S		**Sn**	**23 27 26.5**	**-1.5**
	baz=320								
ETM	**Tongmen**	**1.36**	**256**		*e*P		**Pn**	**23 27 10.7**	**-0.5**
	baz=256								
ETM					*e*S		**Sn**	**23 27 26.9**	**-1.2**
	baz=256								
TEGC	**Jichi Village**	**1.40**	**246**		*e*P		**Pn**	**23 27 11.3**	**-0.5**
	baz=244								
TEGC					*e*S		**Sn**	**23 27 28.7**	**-0.5**
	baz=244								
TWA	**Mucha**	**1.41**	**299**		P		**Pn**	**23 27 11.8**	**-0.1**
	baz=312								
TWA					S		**Sn**	**23 27 28.6**	**-0.7**
	baz=312								
NNSB	**Datong**	**1.42**	**276**	⇑	*i*P		**Pn**	**23 27 12.8**	**+0.6**
	baz=275								
NNSH	**Datong**	**1.42**	**276**		*e*P		**Pn**	**23 27 12.6**	**+0.4**
	baz=275								
NNS	**Nan Shan**	**1.43**	**276**	⇑	*i*P		**Pn**	**23 27 12.0**	**-0.4**
	baz=276								
NHDH	**Xindian Distri**	**1.44**	**298**		*e*P		**Pn**	**23 27 12.6**	**+0.2**
	baz=298								
ESL	**Shilin**	**1.45**	**251**		P		**Pn**	**23 27 11.6**	**-0.9**
	baz=239								
NWRT	**Kuosheng**	**1.47**	**308**		*e*P		**Pn**	**23 27 12.9**	**+0.2**
	baz=309								
YHNB	**Yeheng**	**1.47**	**285**				**Pn**	**23 27 13.1**	**+0.3**
YHNB						Sn	**Sn**	**23 27 31.1**	**+0.2**
YHNB	**Yeheng**	**1.47**	**285**		*e*P		**Pn**	**23 27 13.2**	**+0.5**
	baz=296								
YHNB					*e*S		**Sn**	**23 27 30.6**	**-0.3**
	baz=296								
TATO	**Taipei**	**1.48**	**297**				**Pn**	**23 27 12.9**	**0.0**
TATO						Sn	**Sn**	**23 27 30.2**	**-0.9**
TATO	**Taipei**	**1.48**	**297**		P		**Pn**	**23 27 12.8**	**0.0**
	baz=299								
TATO					S		**Sn**	**23 27 30.6**	**-0.5**
	baz=299								
TAP1	**Taipei**	**1.48**	**300**		*e*P		**Pn**	**23 27 13.4**	**+0.5**
	baz=312								
TAP1					*e*S		**Sn**	**23 27 30.5**	**-0.6**
	baz=312								
NSK	**Sanguang**	**1.48**	**285**		*e*P		**Pn**	**23 27 12.6**	**-0.4**
	baz=296								
NSK					*e*S		**Sn**	**23 27 30.5**	**-0.9**
	baz=296								
TAP	**Taipei**	**1.50**	**300**		*e*P		**Pn**	**23 27 13.8**	**+0.7**
	baz=300								
YM01	**YM01**	**1.50**	**305**		P		**Pn**	**23 27 13.0**	**-0.2**
	baz=306								
YM01					S		**Sn**	**23 27 30.6**	**-1.1**
	baz=306								
YM08	**YM08**	**1.51**	**306**		*e*P		**Pn**	**23 27 13.0**	**-0.3**
	baz=307								
EGFH	**Guangfu**	**1.51**	**246**		*e*P		**Pn**	**23 27 12.7**	**-0.6**
	baz=244								
WHF	**Hehuan Shan**	**1.53**	**265**		*e*P		**Pn**	**23 27 13.8**	**-0.2**
	baz=251								
WHF					*e*S		**Sn**	**23 27 32.4**	**-0.6**
	baz=251								
PCYT	**Pengchaiyu**	**1.54**	**330**	⇓	P		**Pn**	**23 27 14.2**	**+0.5**
	baz=319								
FUSS	**Fushou**	**1.54**	**269**		*e*P		**Pn**	**23 27 14.4**	**+0.4**
	baz=268								
TWY	**Chenhua**	**1.56**	**309**		P		**Pn**	**23 27 14.2**	**+0.3**
	baz=310								
TWY					*e*S		**Sn**	**23 27 33.0**	**+0.1**
	baz=310								
ANP	**Anpu**	**1.56**	**305**		*e*P		**Pn**	**23 27 13.4**	**-0.7**
	baz=305								
TWS1	**Kuangyinshan**	**1.59**	**300**		*e*P		**Pn**	**23 27 14.7**	**+0.3**
	baz=302								
TWS1					*e*S		**Sn**	**23 27 33.6**	**-0.3**
	baz=302								
HGSD	**Ruisui**	**1.60**	**240**	⇓	*i*P		**Pn**	**23 27 13.4**	**-1.0**
	baz=239								
HGSD					*e*S		**Sn**	**23 27 30.9**	**-3.1**
	baz=239								
NTST	**Danshui**	**1.60**	**303**		*e*P		**Pn**	**23 27 15.1**	**+0.6**
	baz=303								
TWT	**Tachien**	**1.61**	**269**		*e*P		**Pn**	**23 27 15.7**	**+1.0**
	baz=257								
TDCB	**Techi**	**1.62**	**269**	⇑	*i*P		**Pn**	**23 27 15.8**	**+0.9**
	baz=257								
CHGB	**Renai**	**1.62**	**262**		*e*P		**Pn**	**23 27 15.2**	**+0.1**
	baz=249								
CHGB					S		**Sn**	**23 27 33.8**	**-1.2**
	baz=249								
OWD	**Renai**	**1.64**	**258**		P		**Pn**	**23 27 15.2**	**0.0**
	baz=257								
NTY	**Taoyuan**	**1.65**	**296**		*e*P		**Pn**	**23 27 15.7**	**+0.5**
	baz=296								
JTJ	**Tarama**	**1.65**	**78**		P		**Pn**	**23 27 14.8**	**-0.3**
JTJ					S		**Sn**	**23 27 34.1**	**-1.0**
JTJ	**Tarama**	**1.65**	**78**		A		A	23 27 14.8	
	comp=E,20nm,1.3s,comp=E,25nm,1.9s								
ECBN	**Changbin**	**1.67**	**235**		*e*P		**Pn**	**23 27 14.7**	**-0.8**
	baz=233								
ECBN					*e*S		**Sn**	**23 27 33.8**	**-2.0**
	baz=233								
EHY	**Hungye**	**1.67**	**242**	⇓	*i*P		**Pn**	**23 27 14.8**	**-0.8**
	baz=241								
EHY					*e*S		**Sn**	**23 27 34.3**	**-1.6**
	baz=241								
WUSB	**Renai**	**1.69**	**260**	⇓	P		**Pn**	**23 27 16.1**	**+0.3**
	baz=260								
WUSB					*e*S		**Sn**	**23 27 35.3**	**-1.1**
	baz=260								
NFF	**Wufeng Townshi**	**1.69**	**282**	⇓	*e*P		**Pn**	**23 27 16.4**	**+0.6**
	baz=282								
NCU	**National Centr**	**1.73**	**293**		*e*P		**Pn**	**23 27 17.8**	**+1.6**
	baz=305								
NCUH	**Zhongli**	**1.73**	**293**		*e*P		**Pn**	**23 27 17.3**	**+1.1**
	baz=305								
VWDT	**VWDT**	**1.73**	**252**	⇓	*i*P		**Pn**	**23 27 16.4**	**+0.2**
	baz=252								
VWDT					S		**Sn**	**23 27 36.2**	**-0.9**
	baz=252								
YULB	**Yu-li**	**1.75**	**239**				**Pn**	**23 27 15.9**	**-0.7**
YULB						Sn	**Sn**	**23 27 36.2**	**-1.5**
YULB	**Yu-li**	**1.75**	**239**	⇓	*i*P		**Pn**	**23 27 15.8**	**-0.7**
	baz=254								
YULB					S		**Sn**	**23 27 36.5**	**-1.2**
	baz=254								
EYUL	**Yuli**	**1.76**	**238**	⇓	P		**Pn**	**23 27 16.1**	**-0.6**
	baz=237								
EYUL					*e*S		**Sn**	**23 27 37.0**	**-0.8**
	baz=237								
TWF1	**Yuli**	**1.77**	**238**	⇓	*i*P		**Pn**	**23 27 16.1**	**-0.8**
	baz=237								
TWF1					S		**Sn**	**23 27 37.3**	**-0.9**
	baz=237								
LIOB	**Emei**	**1.78**	**282**		*e*P		**Pn**	**23 27 18.5**	**+1.5**
	baz=282								
NSTT	**Nanjuang**	**1.79**	**281**		*e*P		**Pn**	**23 27 18.4**	**+1.3**
	baz=281								
HSN1	**Hsinchu**	**1.81**	**286**		*e*P		**Pn**	**23 27 18.1**	**+0.8**
	baz=286								
WHP	**Taichung City**	**1.81**	**270**		*e*P		**Pn**	**23 27 19.0**	**+1.5**
	baz=258								
WPL	**Puli Township**	**1.83**	**261**		*e*P		**Pn**	**23 27 18.2**	**+0.6**
	baz=261								
SBCB	**Hsinchu**	**1.84**	**286**		*e*P		**Pn**	**23 27 20.0**	**+2.2**
	baz=286								
DPDB	**Guoxing**	**1.85**	**262**		*e*P		**Pn**	**23 27 18.9**	**+0.9**
	baz=262								
NHW	**Xinwu Township**	**1.86**	**293**		*e*P		**Pn**	**23 27 18.4**	**+0.4**
	baz=305								
FULB	**Fuli**	**1.86**	**234**		*e*P		**Pn**	**23 27 16.7**	**-1.4**
	baz=223								
FULB					*e*S		**Sn**	**23 27 38.8**	**-1.6**
	baz=223								
HSN	**Hsinchu**	**1.86**	**286**		*e*P		**Pn**	**23 27 19.4**	**+1.4**
	baz=301								
WCS	**Beigang Elemen**	**1.86**	**263**		*e*P		**Pn**	**23 27 17.9**	**-0.2**
	baz=253								
SSLB	**Suanglung**	**1.88**	**255**				**Pn**	**23 27 18.5**	**+0.1**
SSLB						Sn	**Sn**	**23 27 39.8**	**-1.2**
SSLB	**Suanglung**	**1.88**	**255**	⇓	P		**Pn**	**23 27 18.6**	**+0.2**
	baz=255								
SSLB					*e*S		**Sn**	**23 27 39.8**	**-1.2**
	baz=255								
SMLT	**Sun Moon Lake**	**1.91**	**258**		*e*P		**Pn**	**23 27 19.2**	**+0.5**
	baz=258								
SMLT					*e*S		**Sn**	**23 27 41.7**	**0.0**
	baz=258								
NMLH	**Miaoli**	**1.97**	**277**		*e*P		**Pn**	**23 27 21.1**	**+1.6**
	baz=277								
TWQ1	**Liyutan**	**1.97**	**272**		*e*P		**Pn**	**23 27 21.1**	**+1.5**
	baz=273								
TWQ1					*e*S		**Sn**	**23 27 44.4**	**+1.2**
	baz=273								
ECS	**Chishang**

JMJ	**Miyako jima 2**	**2.21**	**76**	*e*P		**Pn**	**23 27 23.4**	**+0.6**
	baz=78								
JMJ				*e*S		**Sn**	**23 27 49.1**	**+0.1**
	baz=78								
JMJ2	**Miyako jima3**	**2.22**	**78**	P		**Pn**	**23 27 23.3**	**+0.3**
JMJ2				*e*S		**Sn**	**23 27 49.2**	**-0.2**
JMJ2	**Miyako jima3**	**2.22**	**78**	A		A	23 27 23.3	
	comp=E,13nm,2.4s,comp=E,12nm,2.1s								
TTN	**Taitung**	**2.25**	**227**	*e*P		**Pn**	**23 27 21.7**	**-1.6**
	baz=216								
TWGBT	**Beinan**	**2.25**	**230**	⇓*e*P		**Pn**	**23 27 22.2**	**-1.2**
	baz=241								
TWGBT				*e*S		**Sn**	**23 27 46.8**	**-3.2**
	baz=241								
WGK	**Gukeng**	**2.25**	**255**	*e*P		**Pn**	**23 27 25.3**	**+1.9**
	baz=254								
TWG	**Pinlang**	**2.25**	**230**			**Pn**	**23 27 22.1**	**-1.4**
TWG					Sn	**Sn**	**23 27 47.4**	**-2.7**
STYH	**Taoyuan**	**2.27**	**241**	*e*P		**Pn**	**23 27 22.4**	**-1.3**
	baz=232								
STYH				*e*S		**Sn**	**23 27 48.5**	**-2.1**
	baz=232								
WDLH	**Douliu**	**2.27**	**255**	*e*P		**Pn**	**23 27 25.7**	**+2.0**
	baz=254								
JOGS	**Gusukube**	**2.30**	**78**	*e*P		**Pn**	**23 27 24.6**	**+0.5**
JOGS				*e*S		**Sn**	**23 27 51.8**	**+0.7**
JOGS	**Gusukube**	**2.30**	**78**	A		A	23 27 24.6	
	comp=E,15nm,2.5s,comp=E,16nm,1.4s								
WCKO	**Fanlu**	**2.30**	**249**	⇓*e*P		**Pn**	**23 27 24.6**	**+0.5**
	baz=249								
WCKO				*e*S		**Sn**	**23 27 51.9**	**+0.8**
	baz=249								
TPUB	**Ta-pu**	**2.33**	**245**			**Pn**	**23 27 25.5**	**+0.9**
TPUB					Sn	**Sn**	**23 27 53.7**	**+1.6**
TPUB	**Ta-pu**	**2.33**	**245**	⇓*i*P		**Pn**	**23 27 25.8**	**+1.3**
	baz=245								
TPUB				S		**Sn**	**23 27 52.5**	**+0.5**
	baz=245								
CHN4	**Tsaushan**	**2.34**	**247**	⇓*e*P		**Pn**	**23 27 25.1**	**+0.4**
	baz=246								
CHN4				*e*S		**Sn**	**23 27 53.1**	**+0.9**
	baz=246								
WTP	**Ta-pu**	**2.37**	**244**	⇓P		**Pn**	**23 27 26.2**	**+1.2**
	baz=244								
WTP				*e*S		**Sn**	**23 27 55.0**	**+2.0**
	baz=244								
WRL	**Guolierlin Hig**	**2.37**	**261**	*e*P		**Pn**	**23 27 25.2**	**+0.2**
	baz=260								
CHN2	**Minshiung**	**2.38**	**252**	*e*P		**Pn**	**23 27 27.3**	**+2.2**
	baz=251								
WTK	**Tuku**	**2.41**	**256**	*e*P		**Pn**	**23 27 27.8**	**+2.2**
	baz=244								
CHY	**Chiayi**	**2.43**	**251**	*e*P		**Pn**	**23 27 27.5**	**+1.6**
	baz=250								
WTCT	**Ta-ch'eng**	**2.46**	**260**	*e*P		**Pn**	**23 27 27.5**	**+1.2**
	baz=260								
TWK	**Hsinying**	**2.46**	**246**	*e*P		**Pn**	**23 27 28.0**	**+1.6**
	baz=245								
TWK				S		**Sn**	**23 27 56.8**	**+1.5**
	baz=245								
CHN1	**Nanshi**	**2.47**	**244**	⇓*e*P		**Pn**	**23 27 27.9**	**+1.5**
	baz=242								
SLGT	**Liugui**	**2.47**	**239**	*e*P		**Pn**	**23 27 27.4**	**+1.0**
	baz=229								
SGST	**Jiashian**	**2.47**	**241**	*e*P		**Pn**	**23 27 27.1**	**+0.6**
	baz=240								
SGST				*e*S		**Sn**	**23 27 56.4**	**+1.0**
	baz=240								
SNST	**Tainan City**	**2.48**	**245**	*e*P		**Pn**	**23 27 27.9**	**+1.4**
	baz=243								
ECL	**Taimali**	**2.48**	**227**	⇓*e*P		**Pn**	**23 27 25.1**	**-1.6**
	baz=236								
WSF	**Szhu**	**2.57**	**256**	*e*P		**Pn**	**23 27 28.5**	**+0.8**
	baz=255								
LAY	**Lan-yu**	**2.58**	**210**	*e*P		**Pn**	**23 27 25.6**	**-2.4**
	baz=208								
WSL	**Shuilin Townsh**	**2.59**	**253**	*e*P		**Pn**	**23 27 29.5**	**+1.4**
	baz=252								
LYUB	**Lan-yu**	**2.60**	**209**	⇓*e*P		**Pn**	**23 27 25.7**	**-2.6**
	baz=217								
ICHU	**Yijhu**	**2.60**	**250**	*e*P		**Pn**	**23 27 29.8**	**+1.6**
	baz=248								
SSD	**Sandimen**	**2.62**	**234**	*e*P		**Pn**	**23 27 28.5**	**+0.1**
	baz=228								
SSD				*e*S		**Sn**	**23 28 00.4**	**+1.4**
	baz=228								
TSMG	**Majia**	**2.63**	**233**	*e*P		**Pn**	**23 27 29.5**	**+0.8**
	baz=225								
SCST	**Cishan**	**2.64**	**238**	*e*P		**Pn**	**23 27 31.3**	**+2.5**
	baz=237								
CHN3	**Shinhua**	**2.65**	**243**	*e*P		**Pn**	**23 27 30.9**	**+2.0**
	baz=242								
SSHA	**Shanhua**	**2.69**	**245**	*e*P		**Pn**	**23 27 31.2**	**+1.8**
	baz=244								
SHHT	**Tainan City**	**2.69**	**242**	*e*P		**Pn**	**23 27 30.7**	**+1.3**
	baz=241								
TAW	**Tawu**	**2.69**	**225**	*e*P		**Pn**	**23 27 28.3**	**-1.1**
	baz=233								
MASBT	**Mashibuluo**	**2.70**	**232**	⇓P		**Pn**	**23 27 29.3**	**-0.2**
	baz=226								
MASBT				*e*S		**Sn**	**23 28 01.9**	**+0.9**
	baz=226								
EAST	**Anshuo**	**2.70**	**226**	⇓*i*P		**Pn**	**23 27 28.5**	**-1.2**
	baz=224								
TAWH	**Dawu Township**	**2.71**	**224**	*e*P		**Pn**	**23 27 27.6**	**-2.1**
	baz=232								
TWM1	**Shoushan**	**2.73**	**238**	*e*P		**Pn**	**23 27 32.5**	**+2.5**
	baz=237								
TWM1				*e*S		**Sn**	**23 28 05.7**	**+3.9**
	baz=237								
SGLT	**Jiouru**	**2.73**	**236**	*e*P		**Pn**	**23 27 32.5**	**+2.5**
	baz=234								
TSPT	**Pingtung City**	**2.76**	**235**	*e*P		**Pn**	**23 27 32.7**	**+2.3**
	baz=233								
SSPT	**Xinbi**	**2.83**	**231**	*e*P		**Pn**	**23 27 32.9**	**+1.6**
	baz=224								
TSCK	**Chigu Township**	**2.85**	**247**	*e*P		**Pn**	**23 27 32.4**	**+0.7**
	baz=245								
SLIU	**Shizi**	**2.85**	**224**	*e*P		**Pn**	**23 27 31.0**	**-0.7**
	baz=213								
SCZT	**Fangliau**	**2.86**	**228**	*e*P		**Pn**	**23 27 31.7**	**-0.1**
	baz=220								
WSSB	**Gushan**	**2.96**	**237**	*e*P		**Pn**	**23 27 34.8**	**+1.7**
	baz=235								
SMST	**Manzhou Townsh**	**2.98**	**221**	*e*P		**Pn**	**23 27 33.2**	**-0.2**
	baz=219								
TSEB	**Hengchuen, Pin**	**3.03**	**219**	*e*P		**Pn**	**23 27 34.4**	**+0.3**
	baz=218								
TSEB				*e*S		**Sn**	**23 28 08.6**	**-0.6**
	baz=218								
WLCH	**Liuqiu**	**3.04**	**231**	*e*P		**Pn**	**23 27 36.9**	**+2.6**
	baz=243								
HEN	**Hengchun**	**3.05**	**222**	*e*P		**Pn**	**23 27 35.3**	**+1.0**
	baz=221								
TWKBT	**Hengchun**	**3.05**	**220**	⇓*e*P		**Pn**	**23 27 33.8**	**-0.6**
	baz=219								
TWKBT				*e*S		**Sn**	**23 28 08.5**	**-1.2**
	baz=219								
TWK1	**Hengchun**	**3.05**	**220**	⇓*e*P		**Pn**	**23 27 33.7**	**-0.8**
	baz=219								
TWK1				*e*S		**Sn**	**23 28 08.1**	**-1.7**
	baz=219								
TWP	**Hsiaoliuchiu**	**3.06**	**231**	*e*P		**Pn**	**23 27 36.7**	**+2.2**
	baz=243								
WDGT	**Dungji**	**3.17**	**252**	P		**Pn**	**23 27 36.8**	**+0.7**
	baz=241								
WDGT				*e*S		**Sn**	**23 28 11.4**	**-1.3**
	baz=241								
PHUB	**P'eng-hu**	**3.17**	**256**	*e*P		**Pn**	**23 27 36.3**	**+0.2**
	baz=257								
PHUB				*e*S		**Sn**	**23 28 12.4**	**-0.3**
	baz=257								
PNG	**Penghu**	**3.18**	**257**	*e*P		**Pn**	**23 27 36.2**	**+0.1**
	baz=258								
PNG				*e*S		**Sn**	**23 28 11.9**	**-0.8**
	baz=258								
VWUC	**VWUC**	**3.25**	**283**	*e*P		**Pn**	**23 27 37.3**	**+0.3**
	baz=283								
MATB	**Ma-tsu**	**3.28**	**305**	*e*P		**Pn**	**23 27 37.0**	**-0.4**
	baz=304								
VCHM	**Qimei**	**3.39**	**252**	*e*P		**Pn**	**23 27 39.3**	**+0.3**
	baz=252								
VCHM				*e*S		**Sn**	**23 28 17.0**	**-1.0**
	baz=252								
XPSS	**Dashiqiu**	**3.61**	**317**	*e*P		**Pn**	**23 27 42.0**	**0.0**
	baz=316								
MHZQ	**Yeshan**	**3.97**	**298**	*e*P		**Pn**	**23 27 48.3**	**+1.4**
	baz=298								

QZH	**Quanzhou**	**4.00**	**280**	⇑*i*P		**Pn**	**23 27 47.3**	**-0.1**
QZH				S		**Sn**	**23 28 30.3**	**-2.8**
QZH				smax	smax			
	comp=N,200nm,0.6s							
QZH				smax	smax			
	comp=E,140nm,0.4s							
QZH				LR	LR			
	comp=N,690nm,9.5s							
QZH				LR	LR			
	comp=E,360nm,5.7s							
QZH				LR	LR			
	comp=Z,650nm,7.1s							
KNM	**Kinmen**	**4.11**	**273**	*e*P		**Pn**	**23 27 50.5**	**+1.7**
	baz=260							
KNMB	**Chin-men Tao**	**4.15**	**273**	Pn		**Pn**	**23 27 48.9**	**-0.5**
KNMB				Sn		**Sn**	**23 28 34.8**	**-1.9**
KNMB	**Chin-men Tao**	**4.15**	**273**	*e*P		**Pn**	**23 27 49.4**	**-0.1**
	baz=274							
AXDP	**Jialang**	**4.56**	**279**	*e*P		**Pn**	**23 27 55.0**	**-0.1**
	baz=280							
ZPLA	**Ao Xicun**	**4.75**	**267**	*e*P		**Pn**	**23 27 57.1**	**-0.6**
	baz=266							
DSXP	**Dongshan**	**5.07**	**264**	*e*P		**Pn**	**23 28 01.7**	**-0.4**
	baz=263							
SXFK	**Yanhouchang**	**5.22**	**295**	*e*P		**Pn**	**23 28 05.8**	**+1.5**
	baz=296							
JOW	**Kunigami**	**5.44**	**61**	Pn		**Pn**	**23 28 06.4**	**-0.8**
JOW				Sn		**Sn**	**23 29 09.5**	**+1.0**
VDOS	**Pratas Island**	**6.76**	**239**	*e*P		**Pn**	**23 28 26.4**	**+1.1**
	baz=237							
NJ2	**Nanjing**	**8.52**	**336**	⇑P		**Pn**	**23 28 49.3**	**-0.1**
NJ2				S		**Sn**	**23 30 22.0**	**-2.1**
NJ2				pmax	pmax			
	comp=Z,34nm,0.6s							
NJ2				smax	smax			
	comp=N,53nm,1.1s							
NJ2				smax	smax			
	comp=E,34nm,1.0s							
NJ2				LR	LR			
	comp=N,790nm,12.3s							
NJ2				LR	LR			
	comp=E,210nm,11.1s							
NJ2				LR	LR			
	comp=Z,850nm,16.6s							
CNSH	**ChangSha**	**9.78**	**295**	⇓P		**Pn**	**23 29 10.6**	**+4.0**
CNSH				S		**Sn**	**23 31 00.8**	**+5.8**
CNSH				smax	smax			
	comp=N,93nm,0.8s							
CNSH				smax	smax			
	comp=E,100nm,0.8s							
WHN	**Wuhan**	**9.84**	**311**	*e*P		Pn	23 29 18.5	+11
WHN				*e*S		Sn	23 31 10.8	+14
WHN				LR	LR			
	comp=N,750nm,7.6s							
WHN				LR	LR			
	comp=E,620nm,5.7s							
QIZ	**Qiongzhong**	**13.25**	**249**	P		**Pn**	**23 29 52.1**	**-2.0**
QIZ				S		**Sn**	**23 32 19.4**	**-0.6**
QIZ				LR	LR			
	comp=E,350nm,18.3s							
QIZ				LR	LR			
	comp=E,410nm,20.7s							
QIZ				LR	LR			
	comp=E,520nm,21.5s							
KSCHJ	**Chungju**	**13.26**	**18**	Pn		**Pn**	**23 29 54.7**	**+0.5**
INCN	**Inchon**	**13.52**	**13**	Pn		**Pn**	**23 29 58.1**	**+0.4**
LYN	**LuoYang**	**13.69**	**321**	⇑*i*P		**P**	**23 30 08.8**	**+1.5**
LYN				S		**S**	**23 32 44.8**	**-6.1**
LYN				pmax	pmax			
	comp=Z,10.0nm,0.5s							
LYN				LR	LR			
	comp=N,450nm,12.3s							
LYN				LR	LR			
	comp=Z,470nm,23.0s							
KSAR	**Wonju Array Be**	**13.77**	**17**	P		**P**	**23 30 06.3**	**-1.9**
KSRS	**Korea Array**	**13.79**	**17**	P		**Pn**	**23 30 02.4**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=196,slow=12,SNR=22							
	comp=Z,3.4nm,0.6s							
KS19	**Wonju Array Si**	**13.82**	**17**	P		**P**	**23 30 08.3**	**-0.5**
SEHB	**SEOHWA**	**14.65**	**17**	P		**P**	**23 30 17.8**	**-0.2**
HNS	**HongShan**	**14.84**	**334**	⇓P		**P**	**23 30 19.3**	**-0.8**
HNS				LR	LR			
	comp=Z,410nm,13.5s							
HNS				LR	LR			
	comp=Z,370nm,13.1s							
HNS				LR	LR			
	comp=Z,450nm,15.2s							
GYA	**Guiyang**	**14.87**	**282**	⇑P		**P**	**23 30 23.3**	**+2.7**
GYA				pmax	pmax			
	comp=Z,12nm,0.7s							
GYA				LR	LR			
	comp=Z,460nm,17.9s							
XAN	**Xi'an**	**15.61**	**312**	P		**P**	**23 30 30.0**	**+1.3**
XAN				sP		sP	23 30 47.0	+0.6
XAN				pmax	pmax			
	comp=Z,9.0nm,0.8s							
XAN				LR	LR			
	comp=Z,500nm,16.5s							
XAN				LR	LR			
	comp=Z,360nm,17.1s							
XAN				LR	LR			
	comp=Z,470nm,15.9s							
BJI	**Beijing**	**16.70**	**342**	P		**P**	**23 30 44.0**	**+3.3**
BJI				pmax	pmax			
	comp=Z,10.0nm,2.4s							
BJI				LR	LR			
	comp=Z,64nm,19.1s							
BJI				LR	LR			
	comp=Z,190nm,16.9s							
BJI				LR	LR			
	comp=Z,460nm,21.7s							
JHJ	**Hachijo jima 2**	**17.18**	**55**	LR		LR	23 37 06.5	
	comp=Z,149nm,20.9s,baz=315,slow=36							
JCJ	**Chichijima**	**17.57**	**77**	LR		LR	23 36 42.3	
	comp=Z,146nm,21.0s,baz=112,slow=34							
KMI	**Kunming**	**18.37**	**277**	⇓P		**Pn**	**23 31 03.3**	**+3.3**
KMI				S		**S**	**23 34 28.8**	**+1.8**
KMI				pmax	pmax			
	comp=Z,7.0nm,0.7s							
KMI				LR	LR			
	comp=Z,210nm,9.8s							
KMI				LR	LR			
	comp=Z,330nm,17.5s							
KMI				LR	LR			
	comp=Z,310nm,18.4s							
PZH	**PanZhiHua**	**19.27**	**281**	P		**Pn**	**23 31 12.1**	**+1.4**
PZH				S		**S**	**23 34 43.8**	**-1.2**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.6s							
PZH				pmax	pmax			
	comp=Z,130nm,6.3s							
PZH				LR	LR			
	comp=Z,680nm,17.0s							
PZH				LR	LR			
	comp=Z,570nm,16.7s							
PZH				LR	LR			
	comp=Z,740nm,16.7s							
BTO	**Baotou**	**19.54**	**329**	*e*P		**Pn**	**23 31 18.1**	**+4.4**
BTO				LR	LR			
	comp=Z,1μm,20.1s							
BTO				LR	LR			
	comp=Z,710nm,16.8s							
CN2	**Changchun**	**19.57**	**5**	*e*P		**Pn**	**23 31 14.6**	**+0.7**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=Z,600nm,13.0s							
CN2				LR	LR			
	comp=Z,200nm,13.0s							
CN2				LR	LR			
	comp=Z,600nm,13.0s							
LZH	**Lanzhou**	**20.22**	**310**	*e*P		**P**	**23 31 19.9**	**+0.3**
LZH				sP		sP	23 31 35.8	-1.5
LZH				PP		**PnPn**	**23 31 41.0**	**+3.3**
LZH				pmax	pmax			
	comp=Z,12nm,1.4s							
LZH				LR	LR			
	comp=Z,280nm,13.7s							
LZH				LR	LR			
	comp=Z,290nm,14.8s							
LZH				LR	LR			
	comp=Z,440nm,15.1s							
XLT	**XiLinHaoTe**	**20.35**	**346**	*e*P		Pn	23 31 26.3	+3.1
XLT				pP		sP	23 31 35.8	-2.6
XLT				sP		pP	23 31 41.4	+9.3
XLT				pmax		pmax		
	comp=Z,10.0nm,1.0s							
XLT				pmax		pmax		
	comp=Z,93nm,5.3s							
XLT				LR		LR		
	comp=Z,37nm,13.9s							
XLT				LR		LR		
	comp=Z,180nm,15.7s							
XLT				LR		LR		
	comp=Z,550nm,16.7s							
USRK	**Ussuriysk Ar.**	**21.19**	**18**	P		**P**	**23 31 29.2**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=198,slow=9.8,SNR=9.0							
	comp=Z,5.2nm,0.8s							
USRK	**Ussuriysk Ar.**	**21.19**	**18**	P		**P**	**23 31 29.4**	**-0.3**
CRAI	**Chiangrai**	**21.26**	**263**	P		**P**	**23 31 32.3**	**+1.5**
BNX	**BinXian**	**21.70**	**8**	⇓P		**P**	**23 31 35.8**	**+0.6**
BNX				pP		**pP**	**23 31 47.6**	**+1.0**
BNX				sP		**sP**	**23 31 53.3**	**+0.6**
BNX				PP		**PnPn**	**23 31 56.3**	**-1.5**
BNX				S		**S**	**23 35 30.6**	**-1.9**
BNX				sS		Sn	23 35 46.9	+3.1
BNX				pmax		pmax		
	comp=Z,19nm,0.8s							
BNX				pmax		pmax		
	comp=Z,100nm,5.0s							
BNX				LR		LR		
	comp=Z,280nm,14.1s							
BNX				LR		LR		
	comp=Z,130nm,8.7s							
BNX				LR		LR		
	comp=Z,350nm,14.1s							
CHTO	**Chiang Mai**	**22.96**	**261**	P		**P**	**23 31 50.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**23.07**	**260**	P		**P**	**23 31 51.3**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=58,slow=8.1,SNR=9.6							
CMAR				PcP		**PcP**	**23 35 38.7**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=349,slow=1.6,SNR=5.7							
CMAR				LR		LR	23 41 31.0	
	comp=Z,182nm,19.1s,baz=75,slow=38							
	comp=Z,1.8nm,0.3s							
GUMO	**Guam**	**23.29**	**113**	LR		LR	23 40 33.8	
	comp=Z,132nm,19.6s,baz=303,slow=35							
SBUM	**Sibu**	**24.06**	**207**	P		**P**	**23 31 59.0**	**-0.3**
SBUM				IAmb		IAmb	23 32 01.1	
	comp=Z,26nm,1.0s							
GTA	**Gaotai**	**24.66**	**313**	*e*P		**P**	**23 32 03.6**	**-1.1**
GTA				S		**S**	**23 36 26.3**	**+3.4**
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
GTA				pmax		pmax		
	comp=Z,100nm,4.4s							
GTA				LR		LR		
	comp=Z,210nm,18.2s							
GTA				LR		LR		
	comp=Z,170nm,17.4s							
GTA				LR		LR		
	comp=Z,180nm,19.3s							
KLR	**Kul'dur**	**25.83**	**13**	P		**P**	**23 32 14.2**	**-0.9**
	comp=Z,3.8nm,0.6s,baz=226,slow=6.8,SNR=8.0							
KLR				PcP		**PcP**	**23 35 43.5**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=160,slow=2.4,SNR=4.4							
	comp=Z,3.8nm,0.6s							
SONM	**Songino Array**	**26.91**	**335**	P		**P**	**23 32 24.3**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=151,slow=9.7,SNR=11							
SONM				PcP		**PcP**	**23 35 45.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=200,slow=2.5,SNR=2.1							
SONM				LR		LR	23 44 15.6	
	comp=Z,326nm,20.9s,baz=156,slow=39							
	comp=Z,3.3nm,0.8s							
SONM	**Songino Array**	**26.91**	**335**	P		**P**	**23 32 25.4**	**+0.4**
PSI	**Prapat**	**31.53**	**231**	LR		LR	23 46 24.2	
	comp=Z,171nm,18.5s,baz=46,slow=37							
WMQ	**Urumqi**	**34.74**	**313**	*e*P		**P**	**23 33 33.5**	**-0.5**
WMQ				pP		pP	23 33 47.3	+0.4
WMQ				sP		sP	23 33 51.5	-1.3
WMQ				pmax		pmax		
	comp=Z,27nm,1.1s							
WMQ				LR		LR		
	comp=Z,150nm,21.3s							
MTN	**Manton Dam**	**37.77**	**167**	P		**P**	**23 33 59.2**	**-0.7**
MTN				IAmb		IAmb	23 34 22.2	
	comp=Z,14nm,1.3s							
PETK	**Petropavlovsk-**	**38.89**	**33**	LR		LR	23 50 35.1	
	comp=Z,116nm,19.1s,baz=235,slow=37							
MK31	**Makanchi Array**	**39.38**	**315**	P		**P**	**23 34 12.8**	**-0.5**
MKAR	**Makanchi Array**	**39.38**	**315**	P		**P**	**23 34 12.4**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=101,slow=11,SNR=13							
MKAR				PcP		**PcP**	**23 36 20.3**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=84,slow=6.2,SNR=5.2							
MKAR				LR		LR	23 51 57.9	
	comp=Z,164nm,18.1s,baz=106,slow=38							
	comp=Z,1.3nm,0.5s							
MKAR	**Makanchi Array**	**39.38**	**315**	P		**P**	**23 34 13.2**	**-0.1**
KRVT	**Keravat (AS076**	**40.13**	**131**	LR		LR	23 48 50.8	
	comp=Z,71nm,21.1s,baz=102,slow=33							
KNRA	**Kununurra**	**40.13**	**171**	P		**P**	**23 34 19.6**	**-0.1**
MA2	**Magadan**	**40.28**	**22**	LR		LR	23 51 12.9	
	comp=Z,222nm,21.7s,baz=197,slow=36							
ZALV	**Zalesovo Beam**	**41.03**	**326**	P		**P**	**23 34 24.6**	**-2.1**
	comp=Z,1.7nm,0.6s,baz=108,slow=7.8,SNR=5.1							
ZALV				LR		LR	23 52 46.0	
	comp=Z,206nm,19.6s,baz=118,slow=38							
	comp=Z,1.7nm,0.6s							
ZALV	**Zalesovo Beam**	**41.03**	**326**	P		**P**	**23 34 26.6**	**-0.2**
KSH	**Kashi**	**42.18**	**303**	P		**P**	**23 34 40.0**	**+3.4**
KSH				pP		sP	23 34 54.8	-0.8
KSH				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KSH				LR		LR		
	comp=Z,99nm,11.7s							
KSH				LR		LR		
	comp=Z,250nm,15.2s							
KSH				LR		LR		
	comp=Z,180nm,16.5s							
FITZ	**Fitzroy Crossi**	**42.22**	**176**	P		**P**	**23 34 36.8**	**-0.1**
FITZ				IAmb		IAmb	23 34 54.6	
	comp=Z,12nm,1.3s							
COEN	**Coen**	**42.85**	**150**	P		**P**	**23 34 42.8**	**+0.7**
COEN				IAmb		IAmb	23 34 43.7	
	comp=Z,10nm,0.6s							
KURBB	**Kurchatov Arra**	**43.06**	**319**	P		**P**	**23 34 42.2**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=114,slow=9.4,SNR=9.7							
KURBB				PcP		**PcP**	**23 36 31.0**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=110,slow=3.7,SNR=4.3							
KURBB				LR		LR	23 54 33.5	
	comp=Z,61nm,21.5s,baz=95,slow=39							
	comp=Z,0.9nm,0.6s							
SEY	**Seymchan**	**43.34**	**19**	P		**P**	**23 34 43.9**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=50,slow=23,SNR=1.8							
	comp=Z,0.9nm,0.4s							
PALK	**Pallekele**	**43.80**	**254**	LR		LR	23 52 58.6	
	comp=Z,86nm,21.4s,baz=168,slow=36							
WB0	**Warramunga Arr**	**45.20**	**165**	P		**P**	**23 35 00.6**	**-0.2**
WB0				IAmb		IAmb	23 35 01.6	
	comp=Z,8.5nm,0.8s							
MBWA	**Marble Bar**	**45.29**	**184**	P		**P**	**23 35 00.7**	**-0.8**
MBWA				IAmb		IAmb	23 35 22.3	
	comp=Z,27nm,1.4s							
WRAB	**Tennant Creek**	**45.35**	**165**	P		**P**	**23 35 01.9**	**-0.1**
WRAB				IAmb		IAmb	23 35 02.9	
	comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**45.35**	**165**	P		**P**	**23 35 02.0**	**0.0**
	comp=Z,8.2nm,0.7s,baz=346,slow=8.8,SNR=47							
WRA				PcP		**PcP**	**23 36 40.3**	**-0.

CTA	**Charters Tower**	**49.62**	**151**	LR	LR	23 54 37.2		
	comp=Z,85nm,21.7s,baz=34,slow=34							
NRIK	**Noril'sk**	**49.72**	**344**	LR	LR	23 58 55.8		
	comp=Z,262nm,18.6s,baz=142,slow=39							
ABKAR	**Akbulak array**	**54.51**	**314**	P	**P**	**23 36 10.9**	**-0.3**	
ABKAR					pP	23 36 11.4	-13	
FORT	**Forrest**	**54.98**	**175**	P	**P**	**23 36 15.4**	**+0.7**	
AKTO	**Aktyubinsk**	**55.81**	**316**	LR	LR	00 01 40.7		
	comp=Z,72nm,19.9s,baz=93,slow=38							
ARU	**Arti**	**55.98**	**323**	LR	LR	00 03 08.2		
	comp=Z,63nm,18.2s,baz=93,slow=39							
GEYT	**Alibeck**	**56.12**	**300**	P	**P**	**23 36 23.2**	**+0.1**	
	comp=Z,1.5nm,0.6s,baz=121,slow=5.7,SNR=4.2							
GEYT				LR	LR	00 04 03.2		
	comp=Z,91nm,21.3s,baz=138,slow=40							
	comp=Z,1.5nm,0.6s							
WSAR	**Wadi Sarin**	**58.37**	**283**	LR	LR	00 05 13.8		
	comp=Z,32nm,19.6s,baz=88,slow=40							
STKA	**Stephens Creek**	**58.64**	**161**	P	**P**	**23 36 41.2**	**+0.5**	
	comp=Z,1.9nm,0.4s,baz=323,slow=9.1,SNR=7.9							
	comp=Z,1.9nm,0.4s							
STKA	**Stephens Creek**	**58.64**	**161**	P	**P**	**23 36 41.5**	**+0.8**	
KIRV	**Kirov**	**61.04**	**325**	LR	LR	00 05 49.1		
	comp=Z,200nm,20.7s,baz=92,slow=38							
BELG	**Belogornoye**	**62.28**	**318**	LR	LR	00 07 02.4		
	comp=Z,56nm,21.1s,baz=123,slow=39							
DZM	**Mont Dzumac**	**62.55**	**134**	LR	LR	23 59 37.9		
	comp=Z,124nm,21.3s,baz=19,slow=31							
DZM	**Mont Dzumac**	**62.55**	**134**	*e*LR	LR	23 55 46.9		
	comp=Z,267nm,25.4s							
SDPT	**Sand Point**	**62.82**	**39**	P	**P**	**23 37 08.0**	**-0.9**	
CNBA	**Chernabura Isl**	**63.37**	**39**	P	**P**	**23 37 11.6**	**-0.9**	
L19K	**White Mountain**	**65.21**	**31**	P	**P**	**23 37 24.4**	**-0.1**	
L19K				IAmb	IAmb	23 37 24.9		
	comp=Z,9.9nm,1.4s							
J20K	**Nowinta River**	**65.35**	**29**	P	**P**	**23 37 25.9**	**+0.6**	
J20K				IAmb	IAmb	23 37 48.1		
	comp=Z,7.6nm,1.5s							
K20K	**Telida**	**65.46**	**29**	P	**P**	**23 37 26.6**	**+0.5**	
N19K	**Bonanza Creek**	**65.52**	**32**	P	**P**	**23 37 27.6**	**+0.9**	
N19K				IAmb	IAmb	23 37 46.5		
	comp=Z,14nm,1.4s							
H21K	**Melozitna Rive**	**65.78**	**27**	P	**P**	**23 37 28.7**	**+0.6**	
GNI	**Garni**	**66.05**	**305**	LR	LR	00 11 39.0		
	comp=Z,48nm,18.5s,baz=71,slow=41							
I21K	**Tanana**	**66.17**	**27**	P	**P**	**23 37 32.1**	**+1.4**	
SII	**Sitkinak Islan**	**66.21**	**37**	P	**P**	**23 37 31.4**	**+0.4**	
P19K	**Oil Pt**	**66.28**	**33**	P	**P**	**23 37 31.9**	**+0.4**	
PPLA	**Purkeypile**	**66.36**	**30**	P	**P**	**23 37 30.1**	**-1.9**	
OHAK	**Old Harbor**	**66.60**	**36**	P	**P**	**23 37 33.1**	**-0.4**	
KBZ	**Khabaz**	**66.65**	**309**	LR	LR	00 10 17.7		
	comp=Z,72nm,20.6s,baz=56,slow=39							
TOLK	**Toolik Lake Re**	**66.71**	**23**	P	**P**	**23 37 34.2**	**+0.2**	
TOLK				IAmb	IAmb	23 37 49.7		
	comp=Z,14nm,1.4s							
MLY	**Manley**	**66.72**	**27**	P	**P**	**23 37 35.1**	**+0.9**	
BPAW	**Bear Paw Mtn.**	**66.73**	**28**	P	**P**	**23 37 35.1**	**+0.8**	
H23K	**Yukon River**	**67.10**	**27**	P	**P**	**23 37 36.9**	**+0.3**	
H23K				IAmb	IAmb	23 37 38.6		
	comp=Z,7.1nm,1.1s							
NEA2	**Nenana**	**67.49**	**28**	IAmb	IAmb	23 37 40.4		
	comp=Z,3.4nm,0.6s							
H24K	**Noodor Dome**	**67.78**	**26**	P	**P**	**23 37 42.8**	**+1.9**	
H24K				IAmb	IAmb	23 38 09.5		
	comp=Z,7.4nm,1.5s							
RND	**Reindeer**	**67.78**	**29**	P	**P**	**23 37 41.5**	**+0.6**	
RND				IAmb	IAmb	23 37 46.6		
	comp=Z,13nm,1.2s							
MDM	**Murphy Dome**	**67.78**	**27**	IAmb	IAmb	23 37 42.2		
	comp=Z,5.5nm,1.0s							
WRH	**Wood River Hil**	**67.92**	**28**	P	**P**	**23 37 42.2**	**+0.4**	
WRH				IAmb	IAmb	23 37 55.7		
	comp=Z,8.0nm,1.4s							
CCB	**Clear Creek Bu**	**68.01**	**28**	P	**P**	**23 37 42.9**	**+0.6**	
POKR	**Poker Plat Res**	**68.08**	**27**	P	**P**	**23 37 43.2**	**+0.4**	
POKR				IAmb	IAmb	23 37 46.2		
	comp=Z,6.5nm,0.8s							
SML	**Sawmill**	**68.31**	**31**	P	**P**	**23 37 44.7**	**+0.4**	
SML				IAmb	IAmb	23 37 59.4		
	comp=Z,19nm,1.3s							
IL31		**68.38**	**27**	P	**P**	**23 37 44.9**	**+0.4**	
IL31				IAmb	IAmb	23 37 54.8		
	comp=Z,7.6nm,1.4s							
ILAR	**Eielson Array**	**68.38**	**27**	P	**P**	**23 37 43.9**	**-0.8**	
	comp=Z,0.9nm,0.4s,baz=266,slow=4.7,SNR=16							
ILAR				LR	LR	00 09 42.2		
	comp=Z,42nm,19.0s,baz=280,slow=38							
	comp=Z,0.9nm,0.4s							
ILAR	**Eielson Array**	**68.38**	**27**	P	**P**	**23 37 44.1**	**-0.5**	
OBN	**Obninsk**	**68.40**	**322**	LR	LR	00 10 33.4		
	comp=Z,20nm,21.3s,baz=4.5,slow=38							
HDA	**Harding Lake**	**68.42**	**28**	P	**P**	**23 37 44.6**	**-0.3**	
HDA				IAmb	IAmb	23 37 45.6		
	comp=Z,15nm,1.4s							
BMAR	**Burnt Mountain**	**68.77**	**24**	P	**P**	**23 37 49.1**	**+2.1**	
SCM	**Sheep Creek Mo**	**68.77**	**31**	P	**P**	**23 37 47.7**	**+0.6**	
J25K	**Salcha River,**	**69.05**	**27**	P	**P**	**23 37 48.4**	**-0.5**	
M24K	**Tolsona, Glenn**	**69.24**	**30**	P	**P**	**23 37 51.0**	**+0.9**	
PAX	**Paxson**	**69.37**	**29**	P	**P**	**23 37 50.8**	**-0.1**	
PAX				IAmb	IAmb	23 38 15.8		
	comp=Z,5.2nm,1.1s							
FID	**Port Fidalgo**	**69.40**	**32**	P	**P**	**23 37 51.9**	**+0.9**	
RIDG	**Independent Ri**	**69.47**	**28**	P	**P**	**23 37 51.2**	**-0.2**	
RIDG				IAmb	IAmb	23 38 08.9		
	comp=Z,11nm,1.3s							
KLU	**Klutina**	**69.50**	**31**	P	**P**	**23 37 52.5**	**+0.8**	
KLU				IAmb	IAmb	23 38 00.2		
	comp=Z,14nm,1.2s							
MARD	**Mardin**	**69.74**	**303**	P	**P**	**23 37 53.8**	**+0.1**	
MARD				IAmb	IAmb	23 37 56.4		
	comp=Z,4.7nm,0.6s							
SCRK	**Sand Creek**	**69.78**	**28**	P	**P**	**23 37 53.7**	**+0.2**	
J26L	**Joseph Creek**	**69.83**	**27**	P	**P**	**23 37 53.5**	**-0.2**	
ARCES	**ARCESS Array B**	**70.03**	**338**	LR	LR	00 11 54.8		
	comp=Z,63nm,21.2s,baz=107,slow=39							
N25K	**Chitina, Valde**	**70.08**	**31**	P	**P**	**23 37 56.3**	**+1.0**	
N25K				IAmb	IAmb	23 38 09.1		
	comp=Z,20nm,1.5s							
BMRM	**Bremner River**	**70.24**	**31**	P	**P**	**23 37 56.7**	**+0.4**	
GLB	**Gilahina Butte**	**70.49**	**31**	P	**P**	**23 37 58.5**	**+0.7**	
GLB				IAmb	IAmb	23 38 02.9		
	comp=Z,20nm,1.4s							
M26K	**Nabesna, AK**	**70.61**	**30**	P	**P**	**23 37 59.1**	**+0.6**	
M26K				IAmb	IAmb	23 37 59.5		
	comp=Z,7.1nm,0.9s							
L27K	**Beaver Creek,**	**70.95**	**29**	P	**P**	**23 38 01.6**	**+1.0**	
L27K				IAmb	IAmb	23 38 20.7		
	comp=Z,6.7nm,1.3s							
BCAR	**Beaver Creek A**	**70.97**	**29**	P	**P**	**23 38 01.6**	**+0.9**	
HEF	**Hetta**	**70.99**	**337**	*e*P	**P**	**23 37 56.8**	**-3.9**	
M27K	**Edge Creek, AK**	**71.13**	**29**	P	**P**	**23 38 01.9**	**+0.2**	
M27K				IAmb	IAmb	23 38 20.3		
	comp=Z,12nm,1.3s							
DAWY	**Dawson**	**71.70**	**27**	IAmb	IAmb	23 38 07.2		
	comp=Z,11nm,1.4s							
CTGM	**Chitina Glacie**	**71.78**	**31**	P	**P**	**23 38 06.7**	**+1.0**	
CTGM				IAmb	IAmb	23 38 24.9		
	comp=Z,20nm,1.3s							
KIF	**Kilpisjarvi**	**71.79**	**338**	*e*P	P	23 37 53.9	-11	
EPYK	**Eagle Plains**	**72.04**	**25**	P	**P**	**23 38 06.9**	**-0.1**	
EPYK				IAmb	IAmb	23 38 25.4		
	comp=Z,12nm,1.2s							
FIA1	**FINESS Array S**	**72.15**	**330**	P	**P**	**23 38 07.4**	**-0.2**	
FIA1				IAmb	IAmb	23 38 17.7		
	comp=Z,12nm,1.3s							
FINES	**FINESS Array B**	**72.15**	**330**	P	**P**	**23 38 07.1**	**-0.6**	
	comp=Z,0.8nm,0.5s,baz=64,slow=4.8,SNR=6.9							
FINES				LR	LR	00 13 06.2		
	comp=Z,182nm,20.1s,baz=74,slow=38							
	comp=Z,0.8nm,0.5s							
FINES	**FINESS Array B**	**72.15**	**330**	P	**P**	**23 38 07.7**	**0.0**	
INK	**Inuvik**	**72.52**	**22**	P	**P**	**23 38 09.1**	**-0.7**	
	comp=Z,2.1nm,0.4s,baz=293,slow=6.8,SNR=6.5							
INK				LR	LR	00 13 50.2		
	comp=Z,55nm,18.1s,baz=286,slow=39							
	comp=Z,2.1nm,0.4s							
INK	**Inuvik**	**72.52**	**22**	P	**P**	**23 38 09.9**	**+0.1**	
INK				IAmb	IAmb	23 38 11.8		
	comp=Z,17nm,1.4s							
M30M	**Minto, Yukon**	**73.30**	**28**	P	**P**	**23 38 15.8**	**+1.2**	
HYT	**Haines Junctio**	**73.59**	**30**	P	**P**	**23 38 17.2**	**+0.8**	
HYT				IAmb	IAmb	23 38 17.5		
	comp=Z,14nm,1.3s							
AKASG	**Malin Array Be**	**73.84**	**319**	P	**P**	**23 38 16.8**	**-1.1**	
	comp=Z,0.7nm,0.4s,baz=59,slow=6.2,SNR=5.9							
AKASG				LR	LR	00 13 59.2		
	comp=Z,39nm,18.8s,baz=40,slow=38							
	comp=Z,0.7nm,0.4s							
AFI	**Afiamalu**	**74.18**	**114**	LR	LR	00 05 42.2		
	comp=Z,68nm,19.0s,baz=66,slow=31							
BRTR	**Keskin Array B**	**74.39**	**307**	P	**P**	**23 38 21.4**	**-0.1**	
	comp=Z,0.8nm,0.6s,baz=270,slow=33,SNR=3.8							
BRTR				LR	LR	00 13 27.0		
	comp=Z,32nm,21.6s,baz=61,slow=38							
	comp=Z,0.8nm,0.6s							
M31M	**Drury Creek, Y**	**74.48**	**28**	P	**P**	**23 38 21.8**	**+0.4**	
WHY	**Whitehorse**	**74.86**	**30**	P	**P**	**23 38 24.5**	**+0.8**	
WHY				IAmb	IAmb	23 38 29.7		
	comp=Z,9.2nm,1.2s							
FARO	**Faro, Yukon**	**74.92**	**28**	P	**P**	**23 38 24.6**	**+0.6**	
FARO				IAmb	IAmb	23 38 25.1		
	comp=Z,4.2nm,0.7s							
ATD	**Arta Tunnel**	**76.40**	**277**	LR	LR	00 12 54.6		
	comp=Z,37nm,18.3s,baz=350,slow=36							
EIL	**Elat**	**76.73**	**297**	LR	LR	00 19 05.7		
	comp=Z,39nm,19.4s,baz=286,slow=41							
MLR	**Muntele Rosu**	**77.72**	**314**	LR	LR	00 17 00.5		
	comp=Z,73nm,19.4s,baz=66,slow=39							
MLR	**Muntele Rosu**	**77.72**	**314**	P	**P**	**23 38 39.8**	**-0.5**	
HFS	**Hagfors**	**78.24**	**331**	LR	LR	00 16 54.8		
	comp=Z,206nm,18.3s,baz=61,slow=38							
NC405	**NORSAR Array S**	**78.62**	**333**	P	**P**	**23 38 45.2**	**+0.4**	
NC405				IAmb	IAmb	23 39 06.9		
	comp=Z,13nm,1.2s							
KOLS	**Kolonicke sedl**	**78.68**	**319**	*e*P	**P**	**23 38 44.4**	**-1.0**	
NB201	**NORSAR Array S**	**78.83**	**333**	P	**P**	**23 38 46.8**	**+0.8**	
NB201				IAmb	IAmb	23 39 13.6		
	comp=Z,4.4nm,0.9s							
NOA	**NORSAR Array B**	**78.87**	**333**	P	**P**	**23 38 44.4**	**-1.9**	
	comp=Z,0.6nm,0.7s,baz=55,slow=5.6,SNR=6.4							
NOA				LR	LR	00 17 22.5		
	comp=Z,98nm,18.0s,baz=75,slow=38							
	comp=Z,0.6nm,0.7s							
NC204	**NORSAR Array S**	**78.94**	**333**	P	**P**	**23 38 46.7**	**+0.1**	
NC204				IAmb	IAmb	23 38 50.9		
	comp=Z,5.7nm,0.9s							
DIB	**Dawson Inlet,**	**79.13**	**36**	P	**P**	**23 38 48.1**	**+0.4**	
DIB				IAmb	IAmb	23 39 13.2		
	comp=Z,20nm,1.4s							
GRNB	**Grenville Isla**	**80.18**	**35**	P	**P**	**23 38 53.8**	**+0.4**	
GRNB				IAmb	IAmb	23 39 17.0		
	comp=Z,11nm,1.2s							
URZ	**Urewera**	**80.32**	**140**	LR	LR	00 10 06.2		
	comp=Z,49nm,20.9s,baz=32,slow=32							
VTS	**Vitosha**	**80.64**	**312**	P	**P**	**23 38 56.1**	**-0.3**	
KARP	**Karpathos**	**80.68**	**305**	P	**P**	**23 38 56.0**	**-0.6**	
RPZ	**Rata Peaks**	**80.80**	**147**	LR	LR	00 12 26.8		
	comp=Z,42nm,21.6s,baz=326,slow=34							
RPZ	**Rata Peaks**	**80.80**	**147**	P	**P**	**23 38 57.4**	**+0.6**	
LBZ	**Lake Benmore**	**80.86**	**148**	P	**P**	**23 38 58.0**	**+0.9**	
VYHS	**Vyhne**	**80.93**	**319**	*e*P	**P**	**23 38 57.3**	**-0.3**	
BFZ	**Birch Farm**	**81.44**	**142**	P	**P**	**23 39 00.3**	**+0.1**	
PLWZ	**Palliser**	**81.49**	**143**	P	**P**	**23 39 00.9**	**+0.4**	
VRAC	**Vranov**	**81.88**	**321**	LR	LR	00 17 55.4		
	comp=Z,48nm,20.9s,baz=62,slow=38							
YKA	**Yellowknife Ar**	**82.24**	**23**	P	**P**	**23 39 04.0**	**-0.3**	
	comp=Z,4.3nm,0.8s,baz=310,slow=5.1,SNR=20							
	comp=Z,4.3nm,0.8s							
IDI	**Anoyia**	**82.48**	**305**	LR	LR	00 20 47.3		
	comp=Z,21nm,19.1s,baz=96,slow=39							
GERES	**GERESS Array B**	**83.76**	**321**	P	**P**	**23 39 12.0**	**-0.6**	
	comp=Z,0.6nm,0.7s,baz=64,slow=6.1,SNR=7.3							
GERES				LR	LR	00 20 47.0		
	comp=Z,46nm,18.6s,baz=104,slow=39							
	comp=Z,0.6nm,0.7s							
GERES	**GERESS Array B**	**83.76**	**321**	P	**P**	**23 39 12.3**	**-0.2**	
ITM	**Ithomi**	**83.85**	**308**	P	**P**	**23 39 12.7**	**-0.4**	
ITM				IAmb	IAmb	23 39 19.0		
	comp=Z,12nm,1.3s							
BORG	**Borgarnes**	**87.02**	**345**	LR	LR	00 21 12.0		
	comp=Z,58nm,20.6s,baz=11,slow=38							
DAVOX	**Davos/Dischmat**	**87.04**	**321**	LR	LR	00 23 03.4		
	comp=Z,46nm,19.8s,baz=57,slow=39							
EKA	**Esdalemuir Ar**	**88.36**	**332**	LR	LR	00 23 18.2		
	comp=Z,48nm,18.0s,baz=26,slow=38							
NEW	**Newport**	**89.99**	**35**	P	**P**	**23 39 43.4**	**+0.6**	
PINE	**Pine Mountain**	**90.50**	**41**		pP	23 39 59.9	-0.2	
FRB	**Frobisher Bay**	**91.79**	**5**	LR	LR	00 22 22.2		
	comp=Z,38nm,21.9s,baz=6.0,slow=36							
J08A	**Circle Bar Ran**	**92.21**	**40**	IAmb	IAmb	23 40 09.3		
	comp=Z,4.8nm,1.1s							
HLID	**Hailey**	**94.41**	**38**	IAmb	IAmb	23 40 06.0		
	comp=Z,2.9nm,1.0s							
PPT2	**Papeete2**	**94.86**	**107**	*e*LR	LR	00 10 46.1		
	comp=Z,127nm,24.5s							
NVAR	**Mina Array Bea**	**95.25**	**44**	P	**P**	**23 40 07.7**	**+0.2**	
	comp=Z,1.0nm,0.7s,baz=294,slow=4.6,SNR=7.7							
	comp=Z,1.0nm,0.7s							
TBI	**Tubuai**	**97.25**	**112**	*e*LR	LR	00 11 51.2		
	comp=Z,114nm,30.5s							
PDAR	**Pinedale Array**	**97.60**	**36**	P	**P**	**23 40 17.7**	**-0.3**	
	comp=Z,0.2nm,0.4s,baz=318,slow=1.2,SNR=1.9							
	comp=Z,0.2nm,0.4s							
ESDC	**Sonseca Array**	**99.36**	**321**	LR	LR	00 30 21.2		
	comp=Z,46nm,18.3s,baz=56,slow=38							
TORD	**Torodi Ar. Bea**	**111.62**	**296**	PKiKP	**PKiKP**	**23 45 16.5**	**-1.9**	
	comp=Z,0.6nm,0.8s,baz=29,slow=2.8,SNR=4.2							

JMA 22 23:28:13.9±0.0, 32.6N±0.2×130.7E±0.2, h8km, MV1.0/32,
SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.09**	**108**	*i* P		Pg 23 28 16.2	+0.1
JIU3				*e*S		Sg 23 28 17.9	+0.2
JTA	**Tamana**	**0.42**	**338**	P		Pg 23 28 22.2	+0.1
JTA				S		Sg 23 28 28.5	+0.9
JZO	**Okuchi**	**0.45**	**193**	P		Pg 23 28 22.5	-0.1
JZO				*e*S		Sg 23 28 29.0	+0.5
JTZ	**Takazaki**	**0.74**	**155**	S		Sg 23 28 38.5	+0.6

*JMA **22** 23:29:52.3±0.1, 24.°N±.3°×123.°0E±0.°5, h48km±2km,*
MV2.2/10, NW OFF ISHIGAKIJIMA IS
*TAP **22** 23:29:52.2, 24.°29N×122.°91E, h40km, ML3.0, D*
ISC 22 23:29:52.4±1.2, 24.°28N±0.°04×122.°95E±0.°03, h44km±8km,
n59, σ0°90/98, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.17**	**358**	P		**Pn 23 29 59.9**	**0.0**
JYNG				S		**Sn 23 30 05.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.19**	**16**	*i* P		**Pn 23 29 59.9**	**-0.1**
	baz=25						
YOJ				*i* S		**Sn 23 30 05.4**	**0.0**
	baz=25						
YOJ	**Yonaguni jima**	**0.19**	**16**	P		**Pn 23 30 00.1**	**+0.1**
YOJ				S		**Sn 23 30 05.4**	**0.0**
IRIF	**Iriomote-Funau**	**0.71**	**85**	P		**Pn 23 30 05.8**	**-0.2**
IRIF				S		**Sn 23 30 15.9**	**0.0**
JKRS	**Kuro-shima**	**0.96**	**92**	P		**Pn 23 30 09.9**	**+0.5**
JKRS				*e*S		**Sn 23 30 22.6**	**+0.5**
TWC	**Suao**	**1.06**	**288**	*e*P		**Pn 23 30 10.3**	**-0.5**
	baz=298						
TWC				*e*S		**Sn 23 30 23.5**	**-0.9**
	baz=298						
EWUT	**Wuta**	**1.08**	**279**	*e*P		**Pn 23 30 10.9**	**-0.2**
	baz=278						
EGS		**1.09**	**301**	*e*P		**Pn 23 30 11.1**	**-0.1**
	baz=309						
EGS				*e*S		**Sn 23 30 25.3**	**+0.2**
	baz=309						
JIJ	**Ishigaki jima**	**1.09**	**85**	P		**Pn 23 30 10.9**	**-0.2**
JIJ				S		**Sn 23 30 24.2**	**-0.9**
ENA	**Nanau**	**1.11**	**278**	*e*P		**Pn 23 30 11.7**	**+0.1**
	baz=286						
ENA				*e*S		**Sn 23 30 25.5**	**-0.3**
	baz=286						
TWB1	**Santiao Chiao**	**1.14**	**310**	*e*P		**Pn 23 30 11.7**	**-0.2**
	baz=321						
TWB1				*e*S		**Sn 23 30 24.7**	**-1.6**
	baz=321						
NTC	**Toucheng**	**1.17**	**299**	*e*P		**Pn 23 30 12.2**	**-0.1**
	baz=299						
NDS	**Dongshan**	**1.18**	**288**	*e*P		**Pn 23 30 11.4**	**-1.0**
	baz=297						
TIPB	**Shuangxi**	**1.24**	**304**	*e*P		**Pn 23 30 12.8**	**-0.4**
	baz=314						
TIPB				*e*S		**Sn 23 30 27.1**	**-1.6**
	baz=314						
NACB	**Ninganchiao**	**1.24**	**265**	*e*P		**Pn 23 30 13.2**	**-0.2**
	baz=250						
NACB				*e*S		**Sn 23 30 28.4**	**-0.5**
	baz=250						
TWE	**Neicheng**	**1.25**	**291**	*e*P		**Pn 23 30 13.5**	**+0.1**
	baz=300						
TWE				*e*S		**Sn 23 30 27.8**	**-1.3**
	baz=300						
TWD	**Chiawan**	**1.25**	**261**	*e*P		**Pn 23 30 12.8**	**-0.7**
	baz=246						
TWD				*e*S		**Sn 23 30 29.2**	**+0.1**
	baz=246						
SXI1	**Grass Mountain**	**1.27**	**310**	*e*P		**Pn 23 30 14.0**	**+0.2**
	baz=319						
SXI1				*e*S		**Sn 23 30 29.1**	**-0.6**
	baz=319						
JISG	**Ishigakijimahi**	**1.27**	**76**	P		**Pn 23 30 13.9**	**+0.2**
ENTT	**Nioudou**	**1.31**	**286**	*e*P		**Pn 23 30 14.2**	**-0.1**
	baz=293						
ENTT				*e*S		**Sn 23 30 30.4**	**-0.3**
	baz=293						
LATG	**Datong**	**1.32**	**281**	*e*P		**Pn 23 30 15.1**	**+0.6**
	baz=288						
LATG				*e*S		**Sn 23 30 31.5**	**+0.4**
	baz=288						
FUSB	**Fushanzhiwuyua**	**1.33**	**291**	*e*P		**Pn 23 30 15.5**	**+0.9**
	baz=298						
FUSB				*e*S		**Sn 23 30 31.1**	**-0.1**
	baz=298						
ETLH	**Xiulin Townshi**	**1.34**	**267**	*e*P		**Pn 23 30 14.2**	**-0.5**
	baz=266						
ETLH				*e*S		**Sn 23 30 31.4**	**-0.1**
	baz=266						
NDT	**Datong Townshi**	**1.35**	**284**	*e*P		**Pn 23 30 15.4**	**+0.6**
	baz=291						
NDT				*e*S		**Sn 23 30 31.6**	**0.0**
	baz=291						
NNSB	**Datong**	**1.44**	**276**	*e*P		**Pn 23 30 16.1**	**0.0**
	baz=275						
YHNB	**Yeheng**	**1.49**	**285**	*e*P		**Pn 23 30 17.4**	**+0.7**
	baz=295						
NSK	**Sanguang**	**1.51**	**286**	*e*P		**Pn 23 30 16.2**	**-0.7**
	baz=295						
YM01	**YM01**	**1.52**	**305**	*e*P		**Pn 23 30 18.2**	**+1.0**
	baz=304						
HGSD	**Ruisui**	**1.60**	**241**	*e*P		**Pn 23 30 17.6**	**-0.6**
	baz=239						
HGSD				*e*S		**Sn 23 30 35.7**	**-2.1**
	baz=239						
TWT	**Tachien**	**1.62**	**269**	*e*P		**Pn 23 30 19.9**	**+1.2**
	baz=258						
JTJ	**Tarama**	**1.63**	**77**	*e*S		**Sn 23 30 38.4**	**-0.1**
TDCB	**Techi**	**1.64**	**269**	*e*P		**Pn 23 30 19.6**	**+0.8**
	baz=268						
TDCB				*e*S		**Sn 23 30 38.6**	**-0.2**
	baz=268						
CHGB	**Renai**	**1.64**	**263**	*e*P		**Pn 23 30 19.5**	**+0.6**
	baz=248						
CHGB				*e*S		**Sn 23 30 39.9**	**+0.9**
	baz=248						
OWD	**Renai**	**1.66**	**259**	*e*P		**Pn 23 30 19.2**	**+0.1**
	baz=258						
OWD				*e*S		**Sn 23 30 38.7**	**-0.6**
	baz=258						
EHY	**Hungye**	**1.68**	**243**	*e*P		**Pn 23 30 18.7**	**-0.6**
	baz=241						
EHY				*e*S		**Sn 23 30 39.3**	**-0.4**
	baz=241						
WUSB	**Renai**	**1.70**	**261**	*e*P		**Pn 23 30 19.6**	**-0.1**
	baz=259						
WUSB				*e*S		**Sn 23 30 40.3**	**-0.1**
	baz=259						
VWDT	**VWDT**	**1.74**	**253**	*e*P		**Pn 23 30 20.3**	**+0.2**
	baz=251						
VWDT				*e*S		**Sn 23 30 40.8**	**-0.3**
	baz=251						
YULB	**Yu-li**	**1.75**	**240**	*e*P		**Pn 23 30 20.1**	**-0.2**
	baz=238						
YULB				*e*S		**Sn 23 30 40.5**	**-0.9**
	baz=238						
WHP	**Taichung City**	**1.83**	**270**	*e*P		**Pn 23 30 23.0**	**+1.5**
	baz=258						
FULB	**Fuli**	**1.86**	**235**	*e*P		**Pn 23 30 22.9**	**+1.1**
	baz=223						
FULB				*e*S		**Sn 23 30 42.8**	**-1.4**
	baz=223						
WCS	**Beigang Elemen**	**1.88**	**264**	*e*P		**Pn 23 30 21.6**	**-0.4**
	baz=253						
WCS				*e*S		**Sn 23 30 44.9**	**+0.4**
	baz=253						
SSLB	**Suanglung**	**1.89**	**255**	*e*P		**Pn 23 30 22.6**	**+0.3**
	baz=254						
SSLB				*e*S		**Sn 23 30 44.6**	**-0.3**
	baz=254						
SMLT	**Sun Moon Lake**	**1.92**	**259**	*e*P		**Pn 23 30 22.9**	**+0.2**
	baz=257						
YUS	**Yu-Shan**	**1.99**	**247**	*e*P		**Pn 23 30 24.0**	**-0.1**
	baz=245						
**ED

baz=90,slow=6.1
TGY S **Sn** **23 34 05.2 +0.6**
TGY Tagaytay City 1.20 307 ↑ *e*P **Pn** **23 33 48.7 +0.7**
TGY *e*S **Sn** **23 34 04.1 -0.5**
MACP Maragondon, Ca 1.47 307 ↓ *e*P **Pn** **23 33 52.3 +1.1**
MACP *e*S **Sn** **23 34 08.4 -2.0**
LUBP Lubang 1.67 283 ↓ *e*P **Pn** **23 33 56.4 +2.6**
LUBP *e*S **Sn** **23 34 15.4 +0.5**
KSRS Korea Array 24.57 12 P **P** **23 38 37.0 -0.6**
0.6nm,0.4s,baz=206,slow=8.5,SNR=2.1
0.6nm,0.4s
WRA Warramunga Arr 35.29 160 P P 23 40 30.6 +18
0.5nm,1.0s,baz=331,slow=10,SNR=2.7
0.5nm,1.0s
ASAR Alice Springs 38.63 162 P P 23 40 59.8 +19
0.1nm,0.3s,baz=337,slow=6.5,SNR=1.3
0.1nm,0.3s
MKAR Makanchi Array 47.01 323 P **P** **23 41 47.8 -0.6**
0.2nm,0.3s,baz=114,slow=8.0,SNR=4.9
0.2nm,0.3s

IDC ***23*** *00:01:53.5±2.6, 13.37°N×121.62°E, h0km, mb3.4/3, mbtmp3.5/3, MS2.4/1, Error ellipse: s-maj=107.0km s-min=11.3km az=53.0*
MAN ***23*** *00:01:55, 13.57°N×121.54°E, h7km, Ms2.2*
ISC 23 00:01:54.7±1.3, 13°50N±0°03×121°58E±0°03, h5km±10km, n17, σ1°68/28, mb3.4/3, 5C-8D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.26**	**98**	↓	*e*P		**Pb**	**00 02 01.8**	**-0.1**
BOAC					*e*S		**Sb**	**00 02 07.4**	**+0.7**
PGP	**Puerto Galera**	**0.61**	**271**	↑	*e*P		**Pb**	**00 02 07.1**	**-0.7**
PGP					*i* S		**Sb**	**00 02 17.7**	**+1.0**
LQP	**Lukban**	**0.61**	**357**	↑	*i*P		**Pg**	**00 02 06.4**	**-0.1**
LQP					*i* S		**Sg**	**00 02 14.9**	**+0.4**
TGY	**Tagaytay City**	**0.87**	**314**		Pg		**Pg**	**00 02 11.4**	**+0.1**
TGY	baz=270,slow=3.6				Lg		Lg	00 02 26.2	
TGY	baz=90,slow=19 **Tagaytay City**	**0.87**	**314**	↑	*e*P		**Pg**	**00 02 11.1**	**-0.2**
TGY					*e*S		**Sn**	**00 02 25.8**	**-0.9**
GQP	**Guinayangan**	**0.94**	**64**	↑	*e*P		**Pg**	**00 02 10.7**	**-1.9**
GQP					*e*S		**Sb**	**00 02 27.3**	**+1.1**
SJMP	**San Jose**	**1.12**	**204**	↓	*e*P		**Pn**	**00 02 17.8**	**+0.7**
SJMP					*e*S		**Sn**	**00 02 35.1**	**+2.2**
MACP	**Maragondon, Ca**	**1.13**	**313**	↓	*e*P		**Pg**	**00 02 15.0**	**-1.4**
MACP					*e*S		**Sg**	**00 02 29.2**	**-1.8**
LUBP	**Lubang**	**1.32**	**281**	↓	*i*P		**Pn**	**00 02 18.7**	**-1.0**
LUBP					*i* S		**Sn**	**00 02 37.8**	**+0.1**
JCNP	**Jose Panganiba**	**1.34**	**54**	↓	*e*P		**Pn**	**00 02 20.1**	**0.0**
JCNP					*e*S		**Sn**	**00 02 38.5**	**+0.1**
PCPH	**Palayan**	**2.11**	**347**	↓	*e*P		**Pb**	**00 02 32.2**	**-1.1**
BALP	**Baler**	**2.23**	**360**	↓	*e*P		**Pn**	**00 02 33.3**	**+0.9**
BALP					*e*S		**Sb**	**00 03 04.0**	**+0.5**
RCP	**Roxas**	**2.24**	**149**	↑	*e*P		**Pg**	**00 02 37.3**	**-0.2**
SMPP	**San Manuel, Pa**	**2.78**	**342**	↓	*e*P		**Pn**	**00 02 39.7**	**-0.2**
SMPP					*e*S		**Sg**	**00 03 29.8**	**+5.8**
CMAR	**Chiang Mai Arr**	**22.30**	**286**	P			**P**	**00 06 55.4**	**+2.1**
CMAR	0.5nm,0.3s,baz=98,slow=7.7,SNR=5.5			LR			LR	00 16 11.6	
WRA	comp=Z,9.4nm,19.9s,baz=220,slow=38 0.5nm,0.3s **Warramunga Arr**	**35.52**	**159**	P			**P**	**00 08 50.4**	**-2.4**
ASAR	0.6nm,0.8s,baz=330,slow=10,SNR=5.6 0.6nm,0.8s **Alice Springs**	**38.85**	**162**	P			**P**	**00 09 19.7**	**-1.4**
	0.3nm,0.5s,baz=340,slow=7.0,SNR=6.1 0.3nm,0.5s								

NEIC ***23*** *00:37:05.2±1.3, 10.69°S±0.08°×160.26°E±0.07, h10km±2km, mb4.1/5, Error ellipse: s-maj=13.1km s-min=11.0km az=20.0*
IDC ***23*** *00:37:10.8±1.9, 9.74°S×158.85°E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=92.4km s-min=17.3km az=158.0*
ISC 23 00:37:05.5±1.3, 10°73S±0°09×160°5E±0°2, h10km, n18, σ2°96/14, mb4.0/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.40**	**338**			Pn	**Pg**	**00 37 34.6**	**+2.3**
HNR	48nm,0.3s,baz=195,slow=12,SNR=2.7					Sn	**Sn**	**00 37 49.5**	**-0.1**
HNR	113nm,0.3s,baz=69,slow=23,SNR=10 **Honiara**	**1.40**	**338**				**Pn**	**00 37 29.4**	**-1.6**
HNR						Sn	**Sn**	**00 37 49.5**	**-0.1**
HNR	**Honiara**	**1.40**	**338**			Pn	**Pn**	**00 37 29.1**	**-1.9**
WR0	**Warramunga Arr**	**26.61**	**247**			P	**P**	**00 42 40.5**	**-3.9**
WB0	**Warramunga Arr**	**26.69**	**247**			P	**P**	**00 42 42.2**	**-2.9**
WB0	comp=Z,8.4nm,1.4s					IAmb	IAmb	00 42 54.9	
WB2	**Warramunga Arr**	**26.78**	**247**			P	**P**	**00 42 43.5**	**-2.4**
WB2	comp=Z,4.2nm,1.1s					IAmb	IAmb	00 43 12.5	
WRA	**Warramunga Arr**	**26.79**	**247**			P	**P**	**00 42 43.4**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=72,slow=9.0,SNR=17 comp=Z,0.4nm,0.3s								
WRA	**Warramunga Arr**	**26.79**	**247**			P	**P**	**00 42 42.7**	**-3.3**
STKA	**Stephens Creek**	**27.34**	**217**			P	**P**	**00 42 56.7**	**+5.9**
	comp=Z,0.7nm,0.2s,baz=42,slow=12,SNR=3.4 comp=Z,0.7nm,0.2s								
ASAR	**Alice Springs**	**28.39**	**240**			P	**P**	**00 42 59.1**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=64,slow=9.7,SNR=4.9 comp=Z,0.4nm,0.6s								
H11S2	**WAKE ISLAND Hy 29.68**	**12**		T		T		01 11 52.9	
	baz=194,slow=76,SNR=80								
H11S3	**WAKE ISLAND Hy 29.68**	**12**		T		T		01 11 48.8	
	baz=194,slow=76,SNR=56								
H11S1	**WAKE ISLAND Hy 29.70**	**12**		T		T		01 11 50.0	
	baz=194,slow=76,SNR=58								
H11N1	**WAKE ISLAND Hy 30.91**	**12**		T		T		01 13 20.8	
	baz=194,slow=76,SNR=59								
H11N3	**WAKE ISLAND Hy 30.91**	**12**		T		T		01 13 23.0	
	baz=194,slow=76,SNR=64								
H11N2	**WAKE ISLAND Hy 30.92**	**12**		T		T		01 13 23.8	
	baz=194,slow=76,SNR=38								
PLWZ	**Palliser**	**33.35**	**160**			P	**P**	**00 43 42.8**	**-1.1**
QSPA	**South Pole Qui**	**79.27**	**180**			P	**P**	**00 49 11.5**	**+0.4**
QSPA	comp=Z,2.5nm,1.2s					IAmb	IAmb	00 49 12.6	

IDC ***23*** *00:54:49.3±0.8, 15.25°S×176.26W, h0km, mb4.1/8, mbtmp4.1/10, ML4.2/2, MS4.0/46, Error ellipse: s-maj=43.3km s-min=16.8km az=144.0*
NEIC ***23*** *00:54:51±1.1, 15.28°S±0.08°×176.15°W±0.07, h10km±1km, mb4.7/109, Error ellipse: s-maj=14.1km s-min=11.3km az=165.0*
GCMT ***23*** *00:54:56.0±0.2, 15.14°S±0.01°×176.01°W±0.01, h12km, MW4.9/97, Moment Tensor Solution. s15,c17; s97,c126; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~0.50±.07; Mθθ 2.49±.07; Mϕϕ~1.99±.07; Mrθ~0.30±.22; Mrϕ 1.02±.06; Mθϕ~0.75±.20; Best double couple: Mo 2.61200×10^16 NP1: ϕs 34.00000°, δ 82.00000°, λ -160.00000°. NP2: ϕs 302.00000°, δ 70.00000°, λ -8.00000°. Principal axes: T 2.7750, Plg 8.0000°, Azm 167.0000°; N -0.3280, Plg 69.0000°, Azm 55.0000°; P -2.4490, Plg 19.0000°, Azm 260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 00:54:50.2±0.4, 15°25S±0°09×176°14W±0°07, h10km, n193, σ1°13/146, mb4.6/55, MS4.1/44, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.43**	**73**			Pn	Pn	00 55 51.6	-6.0
AFI	11nm,0.3s,baz=296,slow=14,SNR=4.9					LR	LR	00 57 29.8	
AFI	comp=Z,3μm,19.5s,baz=218,slow=35 **Afiamalu**	**4.43**	**73**			Pn	**Pn**	**00 55 53.9**	**-3.7**
MSVF	**Nonsavu**	**6.09**	**245**			Pn	**Pn**	**00 56 20.8**	**+0.4**
MSVF	0.6nm,0.3s,baz=102,slow=18,SNR=4.0					LR	LR	00 58 29.5	
MSVF	comp=Z,4μm,19.5s,baz=70,slow=37 4.1nm,0.6s **Nonsavu**	**6.09**	**245**			Pn	**Pn**	**00 56 22.3**	**+1.8**
FUNA	**Funafuti**	**8.09**	**325**			Pn	**Pn**	**00 56 46.5**	**-1.3**
RAO	**Raoul Island**	**14.03**	**186**			LR	LR	01 02 41.1	
	comp=Z,1μm,21.8s,baz=112,slow=34								
RAO	**Raoul Island**	**14.03**	**186**			Pn	Pn	00 58 01.1	-8.0
MARNC	**Mare, Loyalty**	**16.25**	**245**			Pn	**Pn**	**00 58 37.5**	**-1.1**
RAR	**Rarotonga**	**16.64**	**113**			LR	LR	01 04 53.9	
	comp=Z,82nm,18.0s,baz=326,slow=36								
RAR	**Rarotonga**	**16.64**	**113**			Pn	**Pn**	**00 58 44.3**	**+0.7**
OUENC	**Ouen Island, N**	**17.61**	**244**				**Pn**	**00 58 54.1**	**-1.6**
OUENC	comp=Z,77nm,1.0s					IAmb	IAmb	00 59 06.0	
DZM	**Mont Dzumac**	**17.83**	**245**			P	**Pn**	**00 58 59.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=77,slow=18,SNR=2.3								
DZM	comp=Z,809nm,19.1s,baz=53,slow=34 comp=Z,4.6nm,0.9s					LR	LR	01 04 45.6	
DZM	**Mont Dzumac**	**17.83**	**245**		*e*P		**P**	**00 59 04.5**	**+5.1**
DZM	comp=Z,84nm,1.4s				*e*LR		LR	01 03 26.3	
DZM	comp=Z,1μm,25.5s **Mont Dzumac**	**17.83**	**245**			P	**Pn**	**00 58 58.7**	**0.0**
DZM						IAmb	IAmb	00 59 20.2	
ONTNC	comp=Z,66nm,1.5s **Ouen Toro**	**17.90**	**244**			Pn	**Pn**	**00 58 57.5**	**-1.9**
ONTNC						IAmb	IAmb	00 59 15.6	
KOUNC	comp=Z,57nm,1.1s **Koumac, New Ca**	**19.35**	**251**			P	**P**	**00 59 13.9**	**-2.2**
KOUNC						IAmb	IAmb	00 59 44.4	
OUZ	comp=Z,41nm,1.2s **Omahuta**	**21.92**	**203**			P	**P**	**00 59 42.3**	**-1.4**
URZ	**Urewera**	**23.68**	**193**			LR	LR	01 07 59.4	
	comp=Z,1μm,22.0s,baz=31,slow=33								
URZ	**Urewera**	**23.68**	**193**			P	**P**	**01 00 01.0**	**-1.0**
URZ	comp=Z,27nm,1.2s					IAmb	IAmb	01 00 09.3	
HNR	**Honiara**	**24.05**	**281**			LR	LR	01 07 49.3	
	comp=Z,408nm,21.7s,baz=136,slow=33								
HNR	**Honiara**	**24.05**	**281**			P	**P**	**01 00 05.2**	**-0.6**
PPT	**Papeete**	**25.58**	**99**			LR	LR	01 07 40.0	
	comp=Z,152nm,21.5s,baz=262,slow=30								
PPT2	**Papeete2**	**25.58**	**99**		*e*LR		LR	01 06 21.2	
	comp=Z,686nm,25.8s								
TBI	**Tubuai**	**26.41**	**112**		*e*LR		LR	01 06 51.7	
	comp=Z,437nm,28.5s								
TAOE	**Nuku Hiva Isla**	**35.73**	**84**		*e*LR		LR	01 10 56.0	
	comp=Z,706nm,26.9s								
CTA	**Charters Tower**	**36.10**	**257**			LR	LR	01 14 37.0	
	comp=Z,253nm,19.9s,baz=80,slow=33								
CTAO	**Charters Tower**	**36.10**	**257**			P	**P**	**01 01 50.7**	**-1.9**
CTAO	comp=Z,8.1nm,1.0s					IAmb	IAmb	01 01 58.0	
H11N3	**WAKE ISLAND Hy**	**38.54**	**334**			T	T	01 43 12.6	
	baz=153,slow=76,SNR=12								
H11N1	**WAKE ISLAND Hy**	**38.55**	**334**			T	T	01 43 13.5	
	baz=153,slow=76,SNR=47								
H11N2	**WAKE ISLAND Hy**	**38.56**	**334**			T	T	01 43 08.3	
	baz=153,slow=76,SNR=23								
COEN	**Coen**	**39.35**	**266**			P	**P**	**01 02 19.7**	**-0.4**
TOO	**Toolangi**	**40.53**	**229**			P	**P**	**01 02 28.6**	**-1.1**
TOO	comp=Z,15nm,1.1s					IAmb	IAmb	01 02 33.6	
KHLH	**Kahului Airpor**	**40.81**	**29**			P	**P**	**01 02 30.4**	**-1.6**
STKA	**Stephens Creek**	**41.83**	**239**			P	**P**	**01 02 40.5**	**0.0**
	comp=Z,7.3nm,0.9s,baz=59,slow=9.1,SNR=8.0								
STKA	comp=Z,202nm,18.1s,baz=64,slow=36 comp=Z,7.3nm,0.9s					LR	LR	01 19 41.0	
STKA	**Stephens Creek**	**41.83**	**239**			P	**P**	**01 02 39.8**	**-0.7**
BBOO	**Buckleboo**	**46.61**	**239**			P	**P**	**01 03 18.6**	**-0.2**
WB0	**Warramunga Arr**	**47.26**	**257**			P	**P**	**01 03 23.5**	**-0.6**
WB0	comp=Z,6.2nm,1.1s					IAmb	IAmb	01 03 29.8	
WB2	**Warramunga Arr**	**47.29**	**257**			P	**P**	**01 03 23.3**	**-1.0**
WB2	comp=Z,11nm,1.2s					IAmb	IAmb	01 03 28.0	
WRA	**Warramunga Arr**	**47.30**	**257**			P	**P**	**01 03 23.5**	**-0.9**
	comp=Z,2.0nm,0.9s,baz=89,slow=7.0,SNR=14								
WRA	comp=Z,214nm,21.1s,baz=74,slow=33 comp=Z,2.0nm,0.9s					LR	LR	01 20 48.4	
WRA	**Warramunga Arr**	**47.30**	**257**			P	**P**	**01 03 24.0**	**-0.4**
AS31	**Alice Springs**	**47.64**	**252**			P	**P**	**01 03 26.2**	**-0.8**
ASAR	**Alice Springs**	**47.64**	**252**			P	**P**	**01 03 26.1**	**-0.9**
	comp=Z,4.0nm,0.9s,baz=84,slow=8.4,SNR=20								
ASAR	comp=Z,280nm,20.6s,baz=110,slow=34 comp=Z,4.0nm,0.9s					LR	LR	01 21 32.7	
ASAR	**Alice Springs**	**47.64**	**252**			P	**P**	**01 03 26.2**	**-0.8**
FORT	**Forrest**	**53.13**	**243**			P	**P**	**01 04 06.9**	**-1.5**
SIJI	**Sorong**	**53.83**	**280**			LR	LR	01 26 28.1	
	comp=Z,158nm,20.4s,baz=194,slow=35								
FITZ	**Fitzroy Crossi**	**55.65**	**258**			LR	LR	01 26 33.9	
	comp=Z,228nm,19.1s,baz=98,slow=34								
SOEI	**Soe**	**58.29**	**268**			P	**P**	**01 04 44.8**	**-1.1**
JCJ	**Chichijima**	**58.38**	**316**			LR	LR	01 25 17.6	
	comp=Z,145nm,20.5s,baz=134,slow=31								
BATI	**Baumata**	**58.78**	**267**			LR	LR	01 28 49.0	
	comp=Z,141nm,19.2s,baz=122,slow=35								
DAV	**Davao City (W)**	**61.85**	**287**			LR	LR	01 30 49.6	
	comp=Z,43nm,18.1s,baz=118,slow=35								
SBA	**Scott Base**	**63.20**	**184**			P	**P**	**01 05 19.1**	**+1.0**
SBA	comp=Z,9.2nm,1.2s					IAmb	IAmb	01 05 31.8	
VNDA	**Vanda**	**63.27**	**185**			P	**P**	**01 05 18.9**	**+0.3**
	comp=Z,2.1nm,1.1s,baz=37,slow=6.5,SNR=6.2								
VNDA	comp=Z,60nm,18.1s,baz=117,slow=35 comp=Z,2.1nm,1.1s					LR	LR	01 31 17.7	
VNDA	**Vanda**	**63.27**	**185**			P	**P**	**01 05 19.5**	**+0.9**
VNDA	comp=Z,6.3nm,1.2s					IAmb	IAmb	01 05 33.4	
KAPI	**Kappang**	**63.73**	**272**			LR	LR	01 30 55.9	
	comp=Z,39nm,21.2s,baz=99,slow=34								
JHJ	**Hachijo jima 2**	**63.91**	**319**			LR	LR	01 33 36.4	
	comp=Z,32nm,18.3s,baz=82,slow=36								
MJAR	**Matsushiro Arr**	**67.14**	**321**			LR	LR	01 29 35.9	
	comp=Z,50nm,19.9s,baz=136,slow=31								
SHEM	**Shemya Is, Ala**	**68.22**	**354**			LR	LR	01 29 21.2	
	comp=Z,182nm,21.5s,baz=106,slow=30								
PETK	**Petropavlovsk-**	**71.71**	**344**			LR	LR	01 31 14.2	
	comp=Z,140nm,21.9s,baz=138,slow=30								
KMRM	**Mal Ridge**	**73.59**	**39**			P	**P**	**01 06 25.1**	**+1.2**
CCX	**Cicese**	**73.75**	**50**			P	**P**	**01 06 24.4**	**-0.5**
JCC	**Jacoby Creek,**	**73.76**	**39**			P	**P**	**01 06 23.8**	**-0.8**
KSRS	**Korea Array**	**74.22**	**317**			LR	LR	01 36 04.6	
	comp=Z,34nm,19.4s,baz=115,slow=33								
ISA	**Isabella, Lake**	**74.42**	**46**			P	**P**	**01 06 28.2**	**-0.5**
PFO	**Pinyon Flats O**	**74.78**	**48**			LR	LR	01 30 45.0	
	comp=Z,95nm,19.7s,baz=222,slow=29								
QSPA	**South Pole Qui**	**74.79**	**180**			LR	LR	01 36 23.3	
	comp=Z,100nm,19.1s,baz=127,slow=33								
QSPA	**South Pole Qui**	**74.79**	**180**			P	**P**	**01 06 30.9**	**+0.4**
QSPA	comp=Z,6.4nm,1.1s					IAmb	IAmb	01 06 52.3	
MDPB	**Devils Postpil**	**75.06**	**44**			P	**P**	**01 06 32.0**	**-0.7**
YBH	**Yreka Blue Hor**	**75.10**	**38**			LR	LR	01 33 23.7	
	comp=Z,65nm,18.9s,baz=224,slow=31								
YBH	**Yreka Blue Hor**	**75.10**	**38**			P	**P**	**01 06 33.6**	**+1.0**
YBH	comp=Z,9.1nm,1.4s					IAmb	IAmb	01 07 05.8	
LPIG	**La Paz**	**75.23**	**60**			LR	LR	01 31 36.6	
	comp=Z,120nm,20.1s,baz=265,slow=29								
BEKR	**Beckworth**	**75.47**	**41**			P	**P**	**01 06 35.7**	**+0.8**
BEKR	comp=Z,7.1nm,1.4s					IAmb	IAmb	01 06 41.7	
PNTR	**Pine Nut**	**75.52**	**42**			P	**P**	**01 06 35.8**	**+0.5**
PNTR	comp=Z,8.5nm,1.1s					IAmb	IAmb	01 06 48.3	
VCNR	**Virginia City**	**75.61**	**42**			P	**P**	**01 06 34.6**	**-1.1**
DSP	**Deep Springs**	**75.67**	**44**			P	**P**	**01 06 36.1**	**+0.3**
DSP	comp=Z,7.3nm,1.4s					IAmb	IAmb	01 06 42.5	
QSM	**Queen of Sheba**	**75.69**	**46**			P	**P**	**01 06 36.5**	**+0.5**
GLA	**Glamis**	**75.69**	**49**			P	**P**	**01 06 37.0**	**+0.8**
GLA	comp=Z,11nm,1.3s					IAmb	IAmb	01 06 43.0	
USRK	**Ussuriysk Ar.**	**75.70**	**324**			LR	LR	01 33 03.5	
	comp=Z,119nm,21.2s,baz=224,slow=30								
USRK	**Ussuriysk Ar.**	**75.70**	**324**			P	**P**	**01 06 36.4**	**+0.6**
YERR	**Yerington**	**75.70**	**42**			P	**P**	**01 06 36.3**	**+0.1**
LHV	**Little Huntoon**	**75.78**	**43**			P	**P**	**01 06 37.4**	**+0.9**
LHV	comp=Z,8.4nm,1.2s					IAmb	IAmb	01 06 48.0	
PAHR	**Pah Rah Range**	**76.00**	**42**			P	**P**	**01 06 38.8**	**+0.9**
PAHR	comp=Z,6.1nm,1.2s					IAmb	IAmb	01 06 44.0	
NVAR	**Mina Array Bea**	**76.01**	**43**			P	**P**	**01 06 39.1**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=226,slow=9.0,SNR=9.7								
NVAR						LR	LR	01 32 26.3	
	comp=Z,31nm,19.1s,baz=250,slow=30 comp=Z,1.7nm,0.9s								
NVAR	**Mina Array Bea**	**76.01**	**43**			P	**P**	**01 06 37.8**	**-0.2**
GMN	**Gold Mountain**	**76.11**	**45**			P	**P**	**01 06 39.1**	**+0.4**
NV11	**Mina Array Sit**	**76.11**	**43**			P	**P**	**01 06 39.1**	**+0.5**
NV11	comp=Z,8.5nm,1.3s					IAmb	IAmb	01 06 49.9	
WCT	**Wildcat Mounta**	**76.28**	**45**			P	**P**	**01 06 40.3**	**+0.9**
KVN	**Kaiserville**	**76.48**	**43**			P	**P**	**01 06 41.4**	**+0.7**
TPH	**Tonopah**	**76.54**	**44**			P	**P**	**01 06 41.6**	**+0.6**
MOD	**Modoc Plateau**	**76.66**	**39**			P	**P**	**01 06 42.3**	**+0.7**
MOD	comp=Z,8.3nm,1.1s					IAmb	IAmb	01 06 53.8	
214A	**Organ Pipe Nat**	**76.67**	**51**			P	**P**	**01 06 42.1**	**+0.4**
214A	comp=Z,5.8nm,1.1s					IAmb	IAmb	01 06 49.2	
H04D	**Lebanon**	**76.76**	**36**			P	**P**	**01 06 43.0**	**+1.1**
K05A	**Summer Lake**	**76.78**	**38**			P	**P**	**01 06 42.9**	**+0.6**
K05A	comp=Z,12nm,1.2s					IAmb	IAmb	01 06 59.3	
P19K	**Oil Pt**	**76.92**	**12**			P	**P**	**01 06 43.0**	**+0.5**
H04A	**Detroit Lake**	**77.18**	**36**			P	**P**	**01 06 44.8**	**+0.5**
H04A	comp=Z,7.3nm,1.1s					IAmb	IAmb	01 07 07.6	
PINE	**Pine Mountain**	**77.37**	**38**			P	**P**	**01 06 45.6**	**0.0**
R11A	**Troy Canyon, C**	**77.79**	**44**			P	**P**	**01 06 48.6**	**+0.6**
BMN	**Battle Mountai**	**77.79**	**42**			P	**P**	**01 06 48.4**	**+0.4**
BMN	comp=Z,8.3nm,1.3s					IAmb	IAmb	01 06 54.8	
DIB	**Dawson Inlet,**	**77.81**	**25**			P	**P**	**01 06 48.3**	**+0.8**
C03A	**Quillayute Air**	**77.89**	**33**			P	**P**	**01 06 48.5**	**+0.4**
WVOR	**Wild Horse Val**	**77.99**	**40**			P	**P**	**01 06 49.2**	**+0.2**
WVOR	comp=Z,5.3nm,1.2s					IAmb	IAmb	01 06 55.8	
TUC	**Tucson**	**78.36**	**52**			P	**P**	**01 06 51.3**	**+0.1**
I07A	**Izee**	**78.39**	**38**			P	**P**	**01 06 50.4**	**-0.8**
I07A	comp=Z,6.8nm,1.4s					IAmb	IAmb	01 06 55.6	
J08A	**Circle Bar Ran**	**78.60**	**39**			P	**P**	**01 06 52.8**	**+0.4**
J08A	comp=Z,8.2nm,1.5s					IAmb	IAmb	01 06 59.0	
X16A	**Lo Mia Camp, P**	**78.82**	**50**			P	**P**	**01 06 54.2**	**+0.4**
X16A	comp=Z,5.5nm,1.0s					IAmb	IAmb	01 07 01.3	
SPR3	**Spring Creek 3**	**78.96**	**44**			P	**P**	**01 06 55.1**	**+0.3**
SPR3	comp=Z,7.4nm,1.4s					IAmb	IAmb	01 07 07.9	
PSUT	**Pine Spring**	**79.06**	**45**			P	**P**	**01 06 54.6**	**-0.5**
319A	**Douglas**	**79.11**	**53**			P	**P**	**01 06 55.8**	**+0.4**
319A	comp=Z,10nm,1.2s					IAmb	IAmb	01 07 02.4	
SZCU	**Shurtz Canyon**	**79.13**	**46**			P	**P**	**01 06 55.6**	**+0.1**
U15A	**North Rim**	**79.13**	**47**			P	**P**	**01 06 56.3**	**+0.6**
U15A	comp=Z,6.9nm,1.3s					IAmb	IAmb	01 07 20.1	
ELK	**Elko**	**79.24**	**43**			LR	LR	01 39 26.3	
	comp=Z,43nm,18.1s,baz=248,slow=34								
ELK	**Elko**	**79.24**	**43**			P	**P**	**01 06 56.7**	**+0.6**
MA2	**Magadan**	**79.25**	**344**			LR	LR	01 37 02.3	
	comp=Z,119nm,20.7s,baz=139,slow=32								
G08A	**Pilot Rock**	**79.39**	**37**			P	**P**	**01 06 57.7**	**+1.0**
G08A	comp=Z,12nm,1.5s					IAmb	IAmb	01 07 03.3	
TTA	**Tatalina**	**79.50**	**9**			P	**P**	**01 06 57.4**	**+0.6**
TTA	comp=Z,16nm,1.4s					IAmb	IAmb	01 07 12.1	
MFID	**Camas Ranch**	**80.25**	**40**			P	**P**	**01 07 01.7**	**+0.3**
D08A	**Wollman Farm,**	**80.41**	**36**			P	**P**	**01 07 02.8**	**+0.8**
D08A	comp=Z,11nm,1.4s					IAmb	IAmb	01 07 08.5	
DUG	**Dugway, Tooele**	**80.57**	**44**			P	**P**	**01 07 03.6**	**+0.5**
M24K	**Tolsona, Glenn**	**80.64**	**14**			P	**P**	**01 07 04.1**	**+1.1**
121A	**Cookes Peak, D**	**80.75**	**53**			P	**P**	**01 07 04.8**	**+0.5**
121A	comp=Z,6.5nm,1.1s					IAmb	IAmb	01 07 11.9	
J20K	**Nowinta River**	**80.97**	**10**			P	**P**	**01 07 06.3**	**+1.7**
J20K	comp=Z,7.8nm,1.0s					IAmb	IAmb	01 07 12.4	
HLID	**Hailey**	**81.21**	**40**			P	**P**	**01 07 07.0**	**+0.4**
RND	**Reindeer**	**81.22**	**12**			P	**P**	**01 07 06.8**	**+0.8**
DHY	**Denali Highway**	**81.23**	**13**			P	**P**	**01 07 07.5**	**+1.3**
HVU	**Hansel Valley**	**81.37**	**43**			P	**P**	**01 07 07.7**	**+0.2**
HVU	comp=Z,6.3nm,1.3s					IAmb	IAmb	01 07 13.4	
M26K	**Nabesna, AK**	**81.66**	**15**			P	**P**	**01 07 08.7**	**+0.3**
M26K	comp=Z,8.9nm,1.2s					IAmb	IAmb	01 07 16.8	
M27K	**Edge Creek, AK**	**81.90**	**15**			P	**P**	**01 07 10.9**	**+1.1**
TCUT	**Toone Canyon**	**81.95**	**44**			P	**P**	**01 07 11.6**	**+1.0**
NEW	**Newport**	**82.10**	**35**			LR	LR	01 35 25.8	
	comp=Z,41nm,19.2s,baz=198,slow=30								
NEA2	**Nenana**	**82.24**	**11**			P	**P**	**01 07 11.8**	**+0.4**
MNTX	**Cornudas Mount**	**82.27**	**54**			P	**P**	**01 07 12.3**	**+0.1**
MNTX	comp=Z,7.5nm,1.4s					IAmb	IAmb	01 07 19.0	
BNM	**Barren Site**	**82.29**	**52**			P	**P**	**01 07 13.0**	**+0.4**

SMCO				IAmb	IAmb	01 07 51.2	
	comp=Z,6.1nm,1.4s						
SDCO	**Great Sand Dun**	**84.59**	**49**	P	**P**	**01 07 24.2**	**-0.2**
PMSA	**Palmer Station**	**85.38**	**157**	LR	LR	01 40 52.3	
	comp=Z,383nm,18.1s,baz=48,slow=32						
MAW	**Mawson**	**87.08**	**199**	LR	LR	01 46 43.3	
	comp=Z,161nm,18.2s,baz=178,slow=36						
H03S2	**Juan Fernandez**	**87.48**	**124**	T	T	02 44 18.8	
	baz=247,SNR=9.5						
H03S1	**Juan Fernandez**	**87.49**	**124**	T	T	02 44 17.4	
	baz=247,SNR=11						
H03S3	**Juan Fernandez**	**87.50**	**124**	T	T	02 44 15.4	
	baz=247,SNR=9.4						
INK	**Inuvik**	**88.77**	**15**	LR	LR	01 43 34.0	
	comp=Z,23nm,19.8s,baz=212,slow=33						
YKA	**Yellowknife Ar**	**91.03**	**24**	LR	LR	01 41 25.7	
	comp=Z,44nm,19.3s,baz=290,slow=31						
PLCA	**Paso Flores**	**91.56**	**133**	LR	LR	01 41 20.2	
	comp=Z,144nm,19.6s,baz=194,slow=30						
SNAA	**Sanae**	**93.17**	**178**	LR	LR	01 51 11.0	
	comp=Z,76nm,18.0s,baz=220,slow=36						
TIXI	**Tiksi**	**94.16**	**345**	LR	LR	01 46 58.8	
	comp=Z,120nm,20.8s,baz=181,slow=33						
ATAH	**Atahualpa**	**95.56**	**99**	LR	LR	01 43 06.8	
	comp=Z,98nm,18.1s,baz=265,slow=30						
NNA	**Nana**	**95.66**	**104**	LR	LR	01 41 45.5	
	comp=Z,41nm,20.0s,baz=234,slow=29						
BRTR	**Keskin Array B**	**144.34**	**319**	PKP	**PKPab**	**01 14 25.1**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=77,slow=5.3,SNR=8.9						
KHC	**Kasperske Hory**	**145.29**	**349**	*e*PKP	**PKPdf**	**01 14 29.7**	**+1.3**
CKRC	**Cesky Krumlov**	**145.44**	**348**	*e*PKP	**PKiKP**	**01 14 33.8**	**+1.2**
GERES	**GERESS Array B**	**145.54**	**348**	PKPbc	**PKPab**	**01 14 30.0**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=45,slow=4.0,SNR=4.7						
CONA	**Conrad Observa**	**145.94**	**346**	*e*P	**PKiKP**	**01 14 33.8**	**+0.1**
	comp=Z,2.7nm,1.0s						
RONA	**Rosalia, Austr**	**146.04**	**345**	*e*P	**PKiKP**	**01 14 34.3**	**+0.5**
	comp=Z,3.2nm,0.8s						
MOA	**Molln**	**146.37**	**347**	*e*P	**PKiKP**	**01 14 34.7**	**+0.2**
	comp=Z,2.9nm,0.9s						
BIOA	**Bad Ischl, Aus**	**146.65**	**348**	*e*P	**PKPab**	**01 14 34.9**	**+1.5**
	comp=Z,5.6nm,1.1s						
RETA	**Reutte**	**147.35**	**351**	*e*P	**PKiKP**	**01 14 39.3**	**+2.7**
	comp=Z,5.1nm,1.7s						
WATA	**Walderalm**	**147.37**	**350**	*e*P	**PKiKP**	**01 14 38.6**	**+1.8**
WTTA	**Wattenberg**	**147.43**	**350**	*e*P	**PKPdf**	**01 14 31.7**	**-0.5**
	comp=Z,3.2nm,0.9s						
MOTA	**Moosalm**	**147.44**	**351**	*e*P	**PKiKP**	**01 14 40.0**	**+3.1**
	comp=Z,6.0nm,1.4s						
SQTA	**Sankt Quirin**	**147.54**	**351**	*e*P	**PKPbc**	**01 14 35.3**	**+0.4**
	comp=Z,6.2nm,1.5s						
DAVA	**Damuels**	**147.67**	**352**	*e*P	**PKPab**	**01 14 41.5**	**+4.0**
	comp=Z,5.5nm,1.0s						
ABTA	**Abfaltersbach**	**147.78**	**349**	*e*P	**PKPdf**	**01 14 34.5**	**+1.8**
	comp=Z,4.3nm,1.2s						
FETA	**Feichten**	**147.81**	**351**	*e*P	**PKPbc**	**01 14 35.2**	**-0.5**
	comp=Z,2.8nm,1.0s						
DAVOX	**Davos/Dischmat**	**148.16**	**352**	PKPbc	**PKPbc**	**01 14 37.8**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=333,slow=6.5,SNR=3.1						

*IDC **23** 01:09:49.2±0.5, 14°.88N×61°.40W, h144km±4km, mb3.7/20, mbtmp4.2/22, MS3.1/3, Error ellipse: s-maj=15.2km s-min=12.2km az=168.0*
*TRN **23** 01:09:49.1, 14°.87N×61°.25W, h152km, MD4.2*
TRN Felt in Saint Lucia MMI IV.

ISC 23 01:09:49.9±0.6, 14°.84N±0°.03×61°.34W±0°.05, h153km±4km, n97, σ1°.14/116, mb4.0/24, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVN	**Savane Anatole**	**0.17**	**89**	*e*P	**Pn**	**01 10 10.4**	**0.0**
FDF	**Fort de France**	**0.21**	**120**	*e*P	**Pn**	**01 10 10.7**	**+0.1**
FDF				*e*S	**Sn**	**01 10 26.0**	**-0.2**
BIM	**Bigot**	**0.41**	**141**	*e*P	**Pn**	**01 10 11.2**	**0.0**
BIM				*e*S	**Sn**	**01 10 25.8**	**-1.6**
ILAM	**Ilet Lapin Mar**	**0.46**	**98**	*e*P	**Pn**	**01 10 10.9**	**-0.4**
ILAM				*e*S	**Sn**	**01 10 26.3**	**-1.3**
MDN	**Morne-Daniel**	**0.48**	**354**	*e*P	**Pn**	**01 10 11.6**	**+0.2**
MDN				*e*S	**Sn**	**01 10 27.4**	**-0.6**
DLPL	**La Plaine**	**0.50**	**10**	*e*P	**Pn**	**01 10 11.7**	**+0.1**
DLPL				*e*S	**Sn**	**01 10 27.6**	**-0.6**
DSLB	**Salisbury**	**0.60**	**353**	*e*P	**Pn**	**01 10 12.4**	**+0.3**
DSLB				*e*S	**Sn**	**01 10 28.5**	**-0.6**
MPOM	**Morne Pois Mar**	**0.61**	**130**	*e*P	**Pn**	**01 10 11.7**	**-0.4**
MPOM				*e*S	**Sn**	**01 10 28.2**	**-0.8**
H05S1	**Guadeloupe/Mar**	**0.64**	**130**	P	**Pn**	**01 10 11.9**	**-0.3**
H05S1				S	**Sn**	**01 10 28.8**	**-0.5**
MDVC	**Dominica, Viel**	**0.77**	**355**	*e*P	**Pn**	**01 10 13.8**	**+0.6**
MDVC				*e*S	**Sn**	**01 10 31.6**	**+0.6**
MDCT	**Cottage Hill,**	**0.78**	**351**	*e*P	**Pn**	**01 10 13.7**	**+0.5**
SLBI	**Saint Lucia, B**	**0.89**	**156**	*e*P	**Pn**	**01 10 13.7**	**-0.3**
SLBI				*e*S	**Sn**	**01 10 31.2**	**-1.2**
SLCP	**Castries, St.**	**0.89**	**158**	*e*P	**Pn**	**01 10 13.6**	**-0.5**
SLCP				*e*S	**Sn**	**01 10 32.1**	**-0.4**
SLW	**Petit Monier**	**0.90**	**154**	*e*P	**Pn**	**01 10 15.0**	**+0.8**
SLW				*e*S	**Sn**	**01 10 33.2**	**+0.5**
TDBA	**Terre de Bas,**	**1.04**	**344**	*e*P	**Pn**	**01 10 15.5**	**+0.2**
TDBA				*e*S	**Sn**	**01 10 34.2**	**-0.6**
SLB	**Belfond**	**1.05**	**164**	*e*P	**Pn**	**01 10 16.7**	**+1.2**
TBG	**Guadaloupe-3**	**1.05**	**344**	*e*P	**Pn**	**01 10 15.4**	**+0.1**
TBG				*e*S	**Sn**	**01 10 34.3**	**-0.6**
MAGL	**Barre de l'ile**	**1.10**	**3**	*e*P	**Pn**	**01 10 15.6**	**-0.3**
MAGL				*e*S	**Sn**	**01 10 34.5**	**-1.2**
MCLT	**Moule a Chique**	**1.19**	**161**	*e*P	**Pn**	**01 10 17.2**	**+0.6**
MCLT				*e*S	**Sn**	**01 10 37.3**	**+0.2**
CBE	**Ff, Capester**	**1.25**	**348**	*e*P	**Pn**	**01 10 17.4**	**+0.2**
CBE				*e*S	**Sn**	**01 10 37.3**	**-0.8**
SVB	**Belmont**	**1.56**	**177**	*e*P	**Pn**	**01 10 20.6**	**+0.3**
SVB				*e*S	**Sn**	**01 10 43.2**	**-0.5**
ABD	**La Joyeuse, An**	**1.63**	**355**	*e*P	**Pn**	**01 10 20.7**	**-0.4**
ABD				*e*S	**Sn**	**01 10 43.6**	**-1.4**
MLYT	**Lee's Yard**	**2.04**	**336**	*e*P	**Pn**	**01 10 27.0**	**+1.3**
MBFL	**Flemmings, Mon**	**2.08**	**336**	*e*P	**Pn**	**01 10 26.9**	**+0.9**
ANBD	**Bethesda, Anti**	**2.23**	**350**	*e*P	**Pn**	**01 10 27.7**	**-0.2**
ANBD				*e*S	**Sn**	**01 10 55.6**	**-1.6**
ANDO	**Antigua, Disas**	**2.31**	**348**	*e*P	**Pn**	**01 10 28.3**	**-0.5**
GCMP	**Grenada, Carri**	**2.34**	**182**	*e*P	**Pn**	**01 10 29.4**	**+0.2**
GCMP				*e*S	**Sn**	**01 10 59.0**	**-0.6**
BBGH	**Gun Hill**	**2.42**	**134**	*e*P	**Pn**	**01 10 31.1**	**+0.9**
BBGH				*e*S	**Sn**	**01 10 59.4**	**-1.8**
BBSP	**Saint Philip**	**2.51**	**133**	*e*P	**Pn**	**01 10 31.8**	**+0.5**
BBSP				*e*S	**Sn**	**01 11 02.5**	**-0.8**
GRGR	**Grenville**	**2.71**	**186**	*e*P	**Pn**	**01 10 34.1**	**+0.4**
GRGR				*e*S	**Sn**	**01 11 08.4**	**+0.7**
SKI	**Saint Kitts**	**2.82**	**332**	*e*P	**Pn**	**01 10 35.2**	**+0.1**
ANWB	**Willy Bob**	**2.85**	**351**	*e*P	**Pn**	**01 10 34.8**	**-0.6**
ANWB				*e*S	**Sn**	**01 11 08.6**	**-2.1**
TOSP	**Speyside**	**3.61**	**167**	*e*P	**Pn**	**01 10 45.3**	**+0.1**
TOSP				*e*S	**Sn**	**01 11 25.5**	**-2.5**
TRN	**Trinidad (W)**	**4.17**	**181**	*e*P	**Pn**	**01 10 53.1**	**+0.7**
TRN	**Trinidad (W)**	**4.17**	**181**	*e*S	**Sn**	**01 11 39.1**	**-2.0**
SJG	**San Juan**	**5.64**	**306**	P	**Pn**	**01 11 09.5**	**-2.4**
	19nm,1.0s,baz=122,slow=9.3,SNR=6.9						
SJG				LR	LR	01 13 19.6	
	comp=Z,39nm,19.2s,baz=106,slow=38						
BAUV	**El Baul**	**8.79**	**229**	*e*P	**Pn**	**01 11 53.9**	**-0.1**
BAUV	**El Baul**	**8.79**	**229**	*e*S	**Sn**	**01 13 27.0**	**-4.7**
SDV	**Santo Domingo**	**10.85**	**238**	LR	LR	01 16 50.5	
	comp=Z,57nm,18.3s,baz=76,slow=39						
MDP	**Montagnes des**	**12.92**	**138**	P	**Pn**	**01 12 44.9**	**-3.1**
	3.4nm,0.5s,baz=332,slow=16,SNR=14						
MDP				S	Sn	01 14 59.8	-11
	54nm,0.6s,baz=311,slow=16,SNR=5.8						
ARGC	**Ariguani, Magd**	**13.54**	**250**	*e*P	**Pn**	**01 12 58.7**	**+2.6**
BARC	**Barichara**	**14.22**	**236**	*e*P	**P**	**01 13 09.0**	**+1.4**
BRRC	**Barranca, Sant**	**14.37**	**239**	*e*P	**Pn**	**01 13 08.0**	**+1.6**
SJCC	**San Jacinto, C**	**14.38**	**252**	*e*P	**Pn**	**01 13 08.3**	**+1.6**
RUSC	**La Rusia**	**14.57**	**234**	*e*P	**P**	**01 13 13.2**	**+1.5**
ZARC	**Zaragoza, Cauc**	**15.13**	**243**	*e*P	**Pn**	**01 13 18.4**	**+2.5**
PTBC	**PUERTO BERRIO,**	**15.29**	**239**	*e*P	**Pn**	**01 13 17.9**	**-0.1**
SPBC	**San Pablo de B**	**15.49**	**235**	*e*P	**Pn**	**01 13 22.3**	**+1.8**
CHIC	**Chingaza**	**15.87**	**231**	*e*P	**Pn**	**01 13 26.9**	**+1.5**
VILC	**Villavicencio,**	**16.18**	**230**	*e*P	**P**	**01 13 31.6**	**+2.4**
NORC	**Norcasia**	**16.18**	**237**	*e*P	**Pn**	**01 13 29.9**	**+1.0**
ROSC	**El Rosal**	**16.18**	**233**	P	**Pn**	**01 13 30.1**	**+0.9**
	22nm,0.6s,baz=50,slow=7.9,SNR=16						
GUY2C	**Guyana, Caldas**	**16.78**	**237**	*e*P	**P**	**01 13 35.8**	**-0.4**
CBOC	**Ciudad Bolivar**	**16.95**	**240**	*e*P	**P**	**01 13 37.3**	**-0.6**
ANIL	**Santa Ana**	**17.25**	**235**	*e*P	**P**	**01 13 42.0**	**+0.8**
PRAC	**Prado**	**17.33**	**232**	*e*P	**P**	**01 13 42.3**	**+0.5**
MACC	**Macarena, Meta**	**17.65**	**226**	*e*P	**P**	**01 13 46.2**	**+0.9**
PLMC	**San Jos del P**	**17.71**	**238**	*e*P	**P**	**01 13 45.4**	**-0.6**
YOTC	**Yotoco, Valle**	**18.30**	**235**	*e*P	**P**	**01 13 50.0**	**-2.5**
BETC	**Betania**	**18.42**	**230**	*e*P	**P**	**01 13 54.4**	**+0.6**
GARC	**Garzon, Huila**	**18.79**	**229**	*e*P	**P**	**01 13 60.0**	**+1.9**
POPC	**Popayan, Colom**	**19.45**	**233**	*e*P	**P**	**01 14 05.1**	**-0.1**
OTAV	**Otavalo**	**22.29**	**231**	*e*P	**P**	**01 14 34.7**	**-0.7**
PAC1	**Pacto, Paraso**	**22.52**	**232**	*e*P	**P**	**01 14 37.0**	**-0.4**
ATAH	**Atahualpa**	**27.61**	**219**	P	**P**	**01 15 24.1**	**+0.3**
	9.6nm,0.8s,baz=50,slow=1.8,SNR=5.5						
	9.6nm,0.8s						
CPUP	**Villa Florida**	**41.11**	**175**	P	**P**	**01 17 20.0**	**+1.1**
	1.0nm,0.5s,baz=344,slow=4.1,SNR=3.4						
	1.0nm,0.5s						
TXAR	**Lajitas Array**	**41.55**	**298**	P	**P**	**01 17 22.3**	**-0.5**
	0.7nm,0.8s,baz=111,slow=9.3,SNR=7.5						
	0.7nm,0.8s						
PDAR	**Pinedale Array**	**49.71**	**314**	P	**P**	**01 18 26.8**	**0.0**
	1.6nm,0.7s,baz=117,slow=9.2,SNR=14						
	1.6nm,0.7s						
H10N3	**ASCENSION HYDR**	**51.62**	**113**	T	T	02 14 18.4	
	baz=296,slow=75,SNR=49						
H10N2	**ASCENSION HYDR**	**51.62**	**113**	T	T	02 14 15.9	
	baz=296,slow=75,SNR=61						
H10N1	**ASCENSION HYDR**	**51.64**	**113**	T	T	02 14 19.0	
	baz=296,slow=75,SNR=61						
H10S3	**ASCENSION HYDR**	**51.96**	**114**	T	T	02 14 38.3	
	baz=295,slow=74,SNR=23						
H10S2	**ASCENSION HYDR**	**51.98**	**114**	T	T	02 14 40.2	
	baz=295,slow=74,SNR=7.9						
NVAR	**Mina Array Bea**	**55.14**	**307**	P	**P**	**01 19 06.7**	**-0.2**
	0.7nm,0.6s,baz=112,slow=8.0,SNR=5.8						
	0.7nm,0.6s						
PLCA	**Paso Flores**	**55.95**	**188**	P	**P**	**01 19 10.8**	**-1.4**
	1.4nm,0.7s,baz=317,slow=6.0,SNR=3.7						
	1.4nm,0.7s						
SUMG	**Summit**	**59.26**	**8**	*i* P	**P**	**01 19 35.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**59.99**	**34**	P	**P**	**01 19 39.9**	**-0.2**
	1.0nm,0.8s,baz=260,slow=5.6,SNR=6.4						
	1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**61.01**	**83**	P	**P**	**01 19 48.0**	**+0.3**
	1.7nm,0.6s,baz=289,slow=7.2,SNR=22						
	1.7nm,0.6s						
KEST	**Kesra**	**65.91**	**57**	P	**P**	**01 20 20.7**	**+1.0**
	4.5nm,0.8s,baz=20,slow=2.7,SNR=4.5						
	4.5nm,0.8s						
DAVOX	**Davos/Dischmat**	**66.50**	**45**	P	**P**	**01 20 24.0**	**+0.6**
	3.2nm,0.9s,baz=244,slow=5.2,SNR=4.8						
	3.2nm,0.9s						
DAVA	**Damuels**	**66.52**	**45**	*e*P	**P**	**01 20 24.5**	**+0.9**
	4.2nm,0.7s						
FETA	**Feichten**	**67.09**	**45**	*e*P	**P**	**01 20 27.5**	**+0.4**
	4.6nm,0.8s						
MOTA	**Moosalm**	**67.36**	**45**	*e*P	**P**	**01 20 28.8**	**-0.1**
	4.2nm,1.1s						
ABTA	**Abfaltersbach**	**68.30**	**45**	*e*P	**P**	**01 20 35.3**	**+0.7**
	3.8nm,1.1s						
NB2	**NORSAR Subarra**	**68.69**	**30**	P	**P**	**01 20 37.6**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=261,slow=6.5						
NOA	**NORSAR Array B**	**68.69**	**30**	P	**P**	**01 20 36.9**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=262,slow=6.3,SNR=14						
	comp=Z,2.1nm,0.8s						
GERES	**GERESS Array B**	**69.15**	**43**	P	**P**	**01 20 40.2**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=308,slow=3.0,SNR=7.5						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**74.80**	**334**	P	**P**	**01 21 12.4**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=76,slow=4.4,SNR=6.3						
	comp=Z,0.3nm,0.5s						
ARCES	**ARCESS Array B**	**75.11**	**21**	P	**P**	**01 21 14.1**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=298,slow=5.2,SNR=5.6						
	comp=Z,2.8nm,0.8s						
FINES	**FINESS Array B**	**75.87**	**30**	P	**P**	**01 21 19.5**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=343,slow=9.1,SNR=3.9						
	comp=Z,1.6nm,0.7s						
IDI	**Anoyia**	**78.56**	**56**	P	**P**	**01 21 35.5**	**+0.6**
	comp=Z,3.0nm,0.6s,baz=286,slow=8.9,SNR=6.3						
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**79.03**	**40**	P	**P**	**01 21 36.8**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=288,slow=3.9,SNR=4.6						
	comp=Z,0.4nm,0.5s						
BRTR	**Keskin Array B**	**84.42**	**51**	P	**P**	**01 22 06.0**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=269,slow=4.9,SNR=4.5						
	comp=Z,1.0nm,0.7s						
MMAI	**Mount Meron Ar**	**87.56**	**57**	P	**P**	**01 22 22.9**	**+1.7**
	comp=Z,2.5nm,0.8s,baz=288,slow=5.5,SNR=3.7						
	comp=Z,2.5nm,0.8s						
KBZ	**Khabaz**	**89.83**	**45**	P	**P**	**01 22 32.8**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=210,slow=4.9,SNR=4.0						
	comp=Z,2.1nm,0.8s						
ARU	**Arti**	**93.22**	**29**	LR	LR	02 02 33.3	
	comp=Z,58nm,21.5s,baz=110,slow=34						
WRA	**Warramunga Arr**	**164.20**	**249**	PKPab	**PKPab**	**01 30 29.8**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=108,slow=4.5,SNR=6.2						

*MOS **23** 01:18:48.0±0.8, 51°.52N×157°.19E, h172km, mb3.7/1, Error ellipse: s-maj=22.6km s-min=6.1km az=73.8*
*KRSC **23** 01:18:48.1±1.6, 51°.46N×157°.62E, h161km±14km, ML4.1*
*IDC **23** 01:18:51.0±1.4, 51°.73N×157°.03E, h173km±8km, mb3.3/12, mbtmp3.8/12, MS3.4/2, Error ellipse: s-maj=26.2km s-min=17.5km az=128.0*

ISC 23 01:18:48.6±0.8, 51°.47N±0°.06×157°.54E±0°.07, h166km±5km, n74, σ1°.39/92, mb3.6/11, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.46**	**271**	PN	**Pn**	**01 19 11.8**	**+0.3**
PAU				S	**Sn**	**01 19 28.3**	**-0.7**
PAU	**Pauzhetka**	**0.46**	**271**	*e*P	**Pn**	**01 19 11.8**	**+0.3**
PAU				*e*S	**Sn**	**01 19 28.3**	**-0.7**
KDTR	**Khodutka, Kamc**	**0.48**	**44**	PN	**Pn**	**01 19 11.7**	**+0.1**
KDTR				S	**Sn**	**01 19 27.9**	**-1.4**
KDTR	**Khodutka, Kamc**	**0.48**	**44**	*e*P	**Pn**	**01 19 11.7**	**+0.1**
KDTR				*e*S	**Sn**	**01 19 27.9**	**-1.4**
MTVR	**Mutnovka**	**1.09**	**21**	PN	**Pn**	**01 19 16.5**	**+0.8**
MTVR				S	**Sn**	**01 19 36.6**	**-0.2**
MTVR	**Mutnovka**	**1.09**	**21**	*e*P	**Pn**	**01 19 16.5**	**+0.8**
MTVR				*e*S	**Sn**	**01 19 36.6**	**-0.2**
GRL	**Gorelyy**	**1.14**	**17**	PN	**Pn**	**01 19 17.1**	**+1.0**
GRL				S	**Sn**	**01 19 37.7**	**+0.3**
GRL	**Gorelyy**	**1.14**	**17**	*e*P	**Pn**	**01 19 17.1**	**+1.0**
GRL				*e*S	**Sn**	**01 19 37.7**	**+0.3**
RUS	**Russkaya**	**1.14**	**31**	PN	**Pn**	**01 19 16.5**	**+0.6**
RUS				S	**Sn**	**01 19 36.2**	**-0.9**
RUS	**Russkaya**	**1.14**	**31**	*e*P	**Pn**	**01 19 16.5**	**+0.6**
RUS				*e*S	**Sn**	**01 19 36.2**	**-0.9**
SKR	**Severo-Kuril's**	**1.19**	**229**	PN	**Pn**	**01 19 16.4**	**0.0**
SKR				S	**Sn**	**01 19 36.5**	**-1.3**
SKR	**Severo-Kuril's**	**1.19**	**229**	*e*P	**Pn**	**01 19 16.4**	**0.0**
SKR				*e*S	**Sn**	**01 19 36.5**	**-1.3**
KRMR	**Karymshinskiy**	**1.42**	**15**	PN	**Pn**	**01 19 19.1**	**+0.7**
KRMR				S	**Sn**	**01 19 41.2**	**-0.4**
KRMR	**Karymshinskiy**	**1.42**	**15**	*e*P	**Pn**	**01 19 19.1**	**+0.7**
KRMR				*e*S	**Sn**	**01 19 41.2**	**-0.4**
APC	**Apacha**	**1.48**	**351**	PN	**Pn**	**01 19 19.3**	**+0.2**
APC				S	**Sn**	**01 19 41.0**	**-1.7**
APC	**Apacha**	**1.48**	**351**	*e*P	**Pn**	**01 19 19.3**	**+0.2**
APC				*e*S	**Sn**	**01 19 41.0**	**-1.7**
PETK	**Petropavlovsk-**	**1.65**	**3**	P	**Pn**	**01 19 20.0**	**-0.8**
	16nm,0.5s,baz=140,slow=7.2,SNR=8.3						
PETK				S	**Sn**	**01 19 46.0**	**+0.2**
	4.1nm,0.4s,baz=257,slow=33,SNR=5.5						
PET	**Petropavlovsk**	**1.71**	**23**	*e*PN	**Pn**	**01 19 22.4**	**+1.0**
PET				*e*S	**Sn**	**01 19 46.4**	**-0.4**
PET				smax	smax		
	comp=E,196nm,0.7s						
PET	**Petropavlovsk**	**1.71**	**23**	*e*P	**Pn**	**01 19 22.1**	**+0.7**
PET				*e*S	**Sn**	**01 19 46.1**	**-0.7**
DALK	**Dalny**	**1.74**	**25**	PN	**Pn**	**01 19 22.5**	**+0.8**
DALK				S	**Sn**	**01 19 46.5**	**-0.9**
DALK	**Dalny**	**1.74**	**25**	*e*P	**Pn**	**01 19 22.5**	**+0.8**
DALK				*e*S	**Sn**	**01 19 46.5**	**-0.9**
UGLR	**Uglovaya**	**1.92**	**24**	PN	**Pn**	**01 19 25.4**	**+1.6**
UGLR	**Uglovaya**	**1.92**	**24**	*e*P	**Pn**	**01 19 25.4**	**+1.6**
AVH	**Avacha**	**1.95**	**22**	PN	**Pn**	**01 19 25.8**	**+1.7**
AVH	**Avacha**	**1.95**	**22**	*e*P	**Pn**	**01 19 25.8**	**+1.7**
KOK	**Koryaka**	**1.95**	**20**	PN	**Pn**	**01 19 25.8**	**+1.7**
KOK	**Koryaka**	**1.95**	**20**	*e*P	**Pn**	**01 19 25.8**	**+1.7**
SMAR	**Somma**	**1.96**	**23**	PN	**Pn**	**01 19 25.7**	**+1.3**
SMAR	**Somma**	**1.96**	**23**	*e*P	**Pn**	**01 19 25.7**	**+1.3**
KRER	**Koryakskii**	**1.99**	**21**	PN	**Pn**	**01 19 26.2**	**+1.6**
KRER	**Koryakskii**	**1.99**	**21**	*e*P	**Pn**	**01 19 26.2**	**+1.6**
SDLR	**Sedlovina**	**2.00**	**24**	PN	**Pn**	**01 19 25.7**	**+1.0**
SDLR	**Sedlovina**	**2.00**	**24**	*e*P	**Pn**	**01 19 25.7**	**+1.0**
KRX	**Arik**	**2.02**	**19**	PN	**Pn**	**01 19 26.1**	**+1.2**
KRX				S	**Sn**	**01 19 53.4**	**+0.3**
KRX	**Arik**	**2.02**	**19**	*e*P	**Pn**	**01 19 26.1**	**+1.2**
KRX				*e*S	**Sn**	**01 19 53.4**	**+0.3**
NLC	**Nalytchevo**	**2.04**	**32**	PN	**Pn**	**01 19 25.0**	**0.0**
NLC				S	**Sn**	**01 19 50.9**	**-2.3**
NLC	**Nalytchevo**	**2.04**	**32**	*e*P	**Pn**	**01 19 25.0**	**0.0**
NLC				*e*S	**Sn**	**01 19 50.9**	**-2.3**
GNL	**Ganaly**	**2.25**	**6**	PN	**Pn**	**01 19 28.2**	**+0.7**
GNL	**Ganaly**	**2.25**	**6**	*e*P	**Pn**	**01 19 28.2**	**+0.7**
MKZ	**Mys Kozlova**	**4.00**	**38**	PN	**Pn**	**01 19 49.5**	**+0.4**
MKZ				S	**Sn**	**01 20 34.2**	**-2.2**
MKZ	**Mys Kozlova**	**4.00**	**38**	*e*P	**Pn**	**01 19 49.5**	**+0.4**
MKZ				*e*S	**Sn**	**01 20 34.2**	**-2.2**
TUMR	**Tumrok**	**4.13**	**21**	PN	**Pn**	**01 19 53.2**	**+2.3**
TUMR	**Tumrok**	**4.13**	**21**	*e*P	**Pn**	**01 19 53.2**	**+2.3**
KBTR	**Krutoberegovo**	**5.69**	**31**	PN	**Pn**	**01 20 11.8**	**+0.7**
KBTR				S	**Sn**	**01 21 13.0**	**-2.9**
KBTR	**Krutoberegovo**	**5.69**	**31**	*e*P	**Pn**	**01 20 11.8**	**+0.7**
KBTR				*e*S	**Sn**	**01 21 13.0**	**-2.9**
KBG	**Krutoberegovo**	**5.69**	**30**	*e*S	**Sn**	**01 21 12.0**	**-3.9**
BKI	**Bering**	**6.29**	**50**	PN	**Pn**	**01 20 20.1**	**+1.1**
BKI	**Bering**	**6.29**	**50**	*e*P	**Pn**	**01 20 20.1**	**+1.1**
BKI				*e*S	**Sn**	**01 21 25.7**	**-4.4**
MJAR	**Matsushiro Arr**	**20.30**	**230**	P	Pn	01 23 14.1	-1.4
	comp=E,2.0nm,0.6s,baz=26,slow=12,SNR=4.8						
	comp=E,2.0nm,0.6s						
TIXI	**Tiksi**	**23.96**	**338**	P	**P**	**01 23 46.3**	**-0.7**
	comp=E,9.1nm,0.7s,baz=88,slow=23,SNR=4.9						
	comp=E,9.1nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**32.51**	**163**	T	T	01 59 19.3	
	baz=349,slow=74,SNR=15						
H11N3	**WAKE ISLAND Hy**	**32.53**	**163**	T	T	01 59 18.5	
	baz=349,SNR=16						
H11N1	**WAKE ISLAND Hy**	**32.53**	**163**	T	T	01 59 19.3	
	baz=349,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	**33.67**	**164**	T	T	02 00 41.2	
	baz=348,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**33.69**	**164**	T	T	02 00 42.0	
	baz=348,slow=76,SNR=25						
H11S2	**WAKE ISLAND Hy**	**33.69**	**164**	T	T	02 00 43.4	
	baz=348,slow=76,SNR=6.8						
INK	**Inuvik**	**36.11**	**36**	P	**P**	**01 25 35.9**	**+2.0**
	comp=E,1.4nm,0.5s,baz=280,slow=13,SNR=4.6						
	comp=E,1.4nm,0.5s						
**

CTA	**Charters Tower**	**15.89**	**227**	Pn	**Pn**	**02 00 26.7**	**-2.0**
	0.4nm,0.3s,baz=47,slow=14,SNR=5.9						
CTA				LR	LR	02 05 46.5	
	comp=Z,112nm,19.3s,baz=74,slow=34 5.7nm,0.9s						
WRA	**Warramunga Arr**	**25.57**	**243**	P	**P**	**02 02 13.4**	**-0.3**
	3.1nm,0.8s,baz=71,slow=9.8,SNR=22						
WRA				PcP	**PcP**	**02 05 45.1**	**+0.5**
	0.5nm,0.5s,baz=72,slow=3.1,SNR=8.4 3.1nm,0.8s						
STKA	**Stephens Creek**	**27.30**	**213**	P	**P**	**02 02 29.8**	**+0.6**
	4.5nm,0.8s,baz=2.5,slow=8.8,SNR=8.8						
STKA				LR	LR	02 11 58.9	
	comp=Z,83nm,19.6s,baz=28,slow=34 4.5nm,0.8s						
ASAR	**Alice Springs**	**27.44**	**236**	P	**P**	**02 02 30.2**	**-0.4**
	0.7nm,0.5s,baz=65,slow=10.0,SNR=7.9						
ASAR				PcP	**PcP**	**02 05 49.7**	**+0.7**
	0.2nm,0.3s,baz=80,slow=1.5,SNR=4.2						
ASAR				LR	LR	02 12 34.6	
	comp=Z,42nm,18.0s,baz=162,slow=35 0.7nm,0.5s						
AFI	**Afiamalu**	**29.43**	**102**	LR	LR	02 12 01.2	
	comp=Z,96nm,20.5s,baz=282,slow=31						
RPZ	**Rata Peaks**	**35.87**	**164**	LR	LR	02 17 54.5	
	comp=Z,48nm,18.1s,baz=28,slow=35						
PPT	**Papeete**	**51.00**	**105**	LR	LR	02 26 26.6	
	comp=Z,70nm,18.1s,baz=114,slow=35						
PETK	**Petropavlovsk-**	**62.28**	**359**	P	**P**	**02 07 05.0**	**-1.1**
	2.5nm,0.6s,baz=171,slow=10,SNR=4.4 2.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**64.95**	**295**	P	**P**	**02 07 25.1**	**+0.6**
	1.4nm,0.3s,baz=133,slow=5.5,SNR=8.3 1.4nm,0.3s						
VNDA	**Vanda**	**68.10**	**179**	P	**P**	**02 07 44.7**	**+1.0**
	0.7nm,0.8s,baz=335,slow=6.0,SNR=5.3 0.7nm,0.8s						
SONM	**Songino Array**	**73.25**	**326**	P	**P**	**02 08 16.2**	**+0.6**
	3.3nm,0.8s,baz=146,slow=6.2,SNR=13 3.3nm,0.8s						
ILAR	**Eielson Array**	**84.37**	**21**	P	**P**	**02 09 15.6**	**-0.5**
	0.5nm,0.5s,baz=242,slow=5.2,SNR=9.2 0.5nm,0.5s						
MKAR	**Makanchi Array**	**87.51**	**318**	P	**P**	**02 09 31.9**	**-0.2**
	0.5nm,0.5s,baz=94,slow=7.6,SNR=7.1 0.5nm,0.5s						
NVAR	**Mina Array Bea**	**90.50**	**51**	P	**P**	**02 09 47.5**	**+0.8**
	0.7nm,0.8s,baz=255,slow=5.5,SNR=4.4 0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**156.96**	**281**	PKPab	**PKPab**	**02 17 10.9**	**0.0**
	0.4nm,0.6s,baz=90,slow=2.5,SNR=4.2						

BJI ***23*** *02:11:11.8±0.0,23˚.89N×94˚.62E,h120km,mb5.1/69, mB4.9/45*

IDC ***23*** *02:11:12.8±0.4,23˚.80N×94˚.67E,h113km±3km,mb4.6/36, mbtmp5.0/37,MS3.8/36,Error ellipse: s-maj=7.6km s-min=6.6km az=34.0*

NEIC ***23*** *02:11:12.8±1.4,23˚.90N±0˚.04×94˚.70E±0˚.07,h102km±3km, mb5.2/168,Mwr5.0/12,Error ellipse: s-maj=9.2km s-min=5.7km az=74.0*

MOS ***23*** *02:11:12.5±1.1,23˚.90N×94˚.76E,h123km,mb4.9/57, MS4.0/5,Error ellipse: s-maj=7.5km s-min=3.4km az=122.4*

NEIC ***23*** *02:11:12.9,23˚.90N×94˚.71E,h84km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.71; Mθθ-4.52; Mϕϕ2.81; Mrθ-1.08; Mϕr0.64; Mθr-2.12; Fault plane solution: Mo4.66000×10¹⁶ NP1:ϕs236.63000°, δ70.77000°,λ35.16000°. NP2:ϕs133.57000°,δ57.06000°, λ156.89000°. Principal axes: T 4.6033, Plg38.0000°, Azm99.0000°; N 0.1134, Plg51.0000°, Azm262.0000°; P -4.7167, Plg9.0000°, Azm2.0000°;*

GCMT ***23*** *02:11:13.8±0.2,23˚.76N±0˚.01×94˚.71E±0˚.01,h127km±1km, MW5.1/139,Moment Tensor Solution. s78,c98; s139,c239; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.67±.10; Mθθ-5.22±.11; Mϕϕ1.55±.11; Mrθ-1.36±.09; Mϕϕ2.06±.12; Mθr-2.60±.08; Best double couple: Mo5.86600×10¹⁶ NP1:ϕs254.00000°,δ59.00000°, λ45.00000°. NP2:ϕs137.00000°,δ52.00000°,λ140.00000°. Principal axes: T 5.8910, Plg53.0000°, Azm110.0000°; N -0.0500, Plg37.0000°, Azm281.0000°; P -5.8410, Plg4.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NDI ***23*** *02:11:14.0±4.1,23˚.85N×94˚.40E,h106km±15km,mb5.4, ML5.3,mb5.2(NEIC)*

ISC 23 02:11:12.7±0.2,23˚.88N±0˚.03×94˚.58E±0˚.02,h114km±1km, h114km:pP-P,n1028,σ1§67/1217,mb5.2/293,70C-48D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.11**	**329**	*eP*	**Pn**	**02 11 35.8**	**+0.4**
IMP				*eS*	**Sn**	**02 11 51.9**	**-0.7**
IMP				IAML		02 11 55.3	
	comp=E,48μm,0.3s						
IMP				IAML		02 11 55.5	
	comp=N,29μm,0.4s						
SILR	**SILCHAR**	**1.85**	**299**	*eP*	**Pn**	**02 11 44.7**	**+0.8**
SILR				*ex*	x	02 12 07.9	
KOHI	**KOHIMA**	**1.88**	**347**	*eP*	**Pn**	**02 11 45.1**	**+0.6**
KOHI				*eS*	**Sn**	**02 12 08.0**	**-0.8**
KOHI				IAML		02 12 10.1	
	comp=N,59μm,0.5s						
KOHI				IAML		02 12 12.1	
	comp=E,61μm,0.7s						
MND	**Mandalay**	**2.33**	**142**	Pn	**Pn**	**02 11 48.9**	**-1.2**
MOKO	**MOKOCHONG**	**2.43**	**359**	*eP*	**Pn**	**02 11 52.6**	**+1.1**
MOKO				*eS*	**Sn**	**02 12 21.2**	**-0.1**
BRDH	**Bariadhala**	**2.95**	**247**	P	**Pn**	**02 11 58.0**	**-0.1**
	comp=E,1.9nm,0.4s,baz=16,slow=24,SNR=43						
BRDH				S	**Sn**	**02 12 31.8**	**-1.4**
	comp=E,134nm,0.4s,baz=282,slow=24,SNR=82						
SHL	**Shillong**	**2.97**	**305**	Pn	**Pn**	**02 11 58.2**	**-0.3**
SHL	**Shillong**	**2.97**	**305**	P	**Pn**	**02 11 58.3**	**-0.3**
SHL	**Shillong**	**2.97**	**305**	*eP*	**Pn**	**02 11 58.7**	**+0.2**
SHL				*eS*	**Sn**	**02 12 30.3**	**-3.6**
AGT	**Agartala**	**3.04**	**271**	*eP*	**Pn**	**02 11 59.6**	**+0.3**
AGT				*ex*	x	02 12 35.4	
TEZP	**TEZPUR**	**3.17**	**330**	*eP*	**Pn**	**02 12 00.9**	**0.0**
TEZP				*eS*	**Sn**	**02 12 34.7**	**-3.5**
ITAN	**ITANAGAR**	**3.34**	**347**	*eP*	**Pn**	**02 12 04.3**	**+1.0**
ITAN				*eS*	**Sn**	**02 12 41.3**	**-1.1**
GUWA	**GUWAHATI**	**3.49**	**312**	*eP*	**Pn**	**02 12 04.8**	**-0.4**
GUWA				*eS*	**Sn**	**02 12 41.6**	**-4.2**
LKP	**Lekhapani**	**3.63**	**18**	*eP*	**Pn**	**02 12 08.2**	**+1.1**
ZIRO	**ZIRO**	**3.69**	**350**	*eP*	**Pn**	**02 12 08.7**	**+0.5**
ZIRO				*eS*	**Sn**	**02 12 48.9**	**-2.1**
TURI	**Tura**	**4.20**	**294**	*eP*	**Pn**	**02 12 12.9**	**-1.9**
TURI				*eS*	**Sn**	**02 12 58.4**	**-4.6**
SLGI	**Shiliguri**	**6.24**	**298**	*eP*	**Pn**	**02 12 43.4**	**+1.1**
GTK	**Tadong**	**6.39**	**304**	*eP*	**Pn**	**02 12 46.1**	**+1.7**
GTK				*ex*	x	02 13 54.3	
CHTO	**Chiang Mai**	**6.48**	**140**		**Pn**	**02 12 44.3**	**-1.3**
CHTO	**Chiang Mai**	**6.48**	**140**	P	**Pn**	**02 12 44.3**	**-1.3**
CHTO	**Chiang Mai**	**6.48**	**140**	P	**Pn**	**02 12 45.1**	**-0.5**
CRAI	**Chiangrai**	**6.49**	**123**	Pn	**Pn**	**02 12 45.1**	**-0.6**
LSA	**Lhasa**	**6.56**	**333**	Pn	**Pn**	**02 12 47.9**	**+0.9**
LSA	**Lhasa**	**6.56**	**333**	P	**Pn**	**02 12 48.8**	**+1.8**
LSA	**Lhasa**	**6.56**	**333**	P	**Pn**	**02 12 47.9**	**+0.9**
CM31	**Chiang Mai Arr**	**6.76**	**142**		**Pn**	**02 12 48.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**6.76**	**142**	P	**Pn**	**02 12 48.3**	**-1.1**
	comp=E,32nm,0.9s,baz=316,slow=13,SNR=112						
CMAR				LR	LR	02 16 15.3	
	comp=E,922nm,18.6s,baz=305,slow=46						
CMAR				ScP	**ScP**	**02 22 51.9**	**-0.8**
	comp=E,2.2nm,0.7s,baz=301,slow=2.1,SNR=9.4						
PZH	**PanZhiHua**	**7.00**	**67**	P	**Pn**	**02 12 56.3**	**+3.6**
PZH				sP		02 13 19.8	
PZH				S	**Sn**	**02 14 15.9**	**+5.1**
PZH				pmax	pmax		
	comp=E,60nm,1.2s						
PZH				pmax	pmax		
	comp=E,100nm,5.7s						
PZH				LR	LR		
	comp=E,5μm,9.8s						
PZH				LR	LR		
	comp=E,2μm,10.4s						
PZH				LR	LR		
	comp=E,2μm,9.3s						
TAPN	**Taplejung**	**7.09**	**301**	*e*Pn	**Pn**	**02 12 52.9**	**-1.3**
TAPN				*e*Sn	**Sn**	**02 14 07.2**	**-6.2**
ODAN	**Odare**	**7.14**	**296**	*e*Pn	**Pn**	**02 12 53.9**	**-0.9**
ODAN				*e*Sn	**Sn**	**02 14 09.7**	**-4.9**
KMI	**Kunming**	**7.54**	**79**	⇑P	**Pn**	**02 13 03.4**	**+3.3**
KMI				S	**Sn**	**02 14 28.4**	**+4.3**
KMI				pmax	pmax		
	comp=E,220nm,1.2s						
KMI				pmax	pmax		
	comp=E,870nm,3.5s						
KMI				LR	LR		
	comp=E,1μm,6.2s						
KMI				LR	LR		
	comp=E,1μm,7.8s						
KMI				LR	LR		
	comp=E,930nm,10.7s						
RAMN	**Ramite**	**7.83**	**295**	*e*Pn	**Pn**	**02 13 03.3**	**-0.8**
RAMN				*e*Sn	**Sn**	**02 14 27.2**	**-4.1**
	comp=E,2μm,0.3s						
BOK	**Bokaro**	**7.96**	**271**	*eP*	**Pn**	**02 13 05.1**	**-0.4**
BOK				*ex*	x	02 14 29.1	
JIRN	**Jiri**	**8.44**	**298**	*e*Pn	**Pn**	**02 13 11.0**	**-1.5**
JIRN				*e*Sn	**Sn**	**02 14 40.1**	**-6.2**
	comp=E,2μm,0.3s						
GUN	**Gumba**	**8.80**	**299**	*e*Pn	**Pn**	**02 13 15.9**	**-1.4**
GUN				*e*Sn	**Sn**	**02 14 48.6**	**-6.3**
BWNR	**Bhubaneshwar**	**8.88**	**248**	*eP*	**Pn**	**02 13 17.2**	**-0.8**
PKI	**Pulchoki**	**9.04**	**296**	*e*Pn	**Pn**	**02 13 19.7**	**-0.9**
PKI				*e*Sn	**Sn**	**02 14 55.2**	**-5.7**
PKIN	**Phulchoki**	**9.06**	**296**	*e*Pn	**Pn**	**02 13 19.3**	**-1.4**
PKIN				*e*Sn	**Sn**	**02 14 55.8**	**-5.3**
	comp=E,1μm,0.2s						
KKN	**Kakani**	**9.23**	**297**	*e*Pn	**Pn**	**02 13 21.2**	**-1.9**
KKN				*e*Sn	**Sn**	**02 14 59.9**	**-5.4**
DMN	**Daman**	**9.31**	**296**	*e*Pn	**Pn**	**02 13 22.9**	**-1.2**
DMN				*e*Sn	**Sn**	**02 15 01.8**	**-5.4**
	comp=E,2μm,0.4s						
GKN	**Gorkha**	**9.84**	**297**	*e*Pn	**Pn**	**02 13 29.4**	**-1.8**
GKN				*e*Sn	**Sn**	**02 15 13.8**	**-6.1**
	comp=E,3μm,0.3s						
JHSG	**JHARSUGUGA**	**10.18**	**260**	*eP*	**Pn**	**02 13 35.1**	**-0.6**
VLK	**Valmikinagar**	**10.25**	**292**	*eP*	**Pn**	**02 13 35.6**	**-1.0**
DANN	**Dangsing**	**10.69**	**297**	*e*Pn	**Pn**	**02 13 40.9**	**-1.9**
DANN				*e*Sn	**Sn**	**02 15 33.6**	**-7.1**
	comp=E,878nm,0.4s						
CD2	**Chengdu**	**10.75**	**47**	P	**Pn**	**02 13 43.1**	**-0.3**
CD2				S	**Sn**	**02 15 36.5**	**-5.3**
CD2				pmax	pmax		
	comp=E,60nm,0.6s						
CD2				LR	LR		
	comp=E,1μm,7.2s						
CD2				LR	LR		
	comp=E,810nm,7.6s						
CD2				LR	LR		
	comp=E,620nm,8.4s						
DGPR	**DIGLIPUR**	**10.76**	**189**	*eP*	**Pn**	**02 13 41.9**	**-1.6**
GYA	**Guiyang**	**11.25**	**74**	*i*P	**Pn**	**02 13 50.3**	**+0.1**
GYA				S	**Sn**	**02 15 54.8**	**+0.8**
GYA				pmax	pmax		
	comp=E,25nm,1.2s						
GYA				pmax	pmax		
	comp=E,190nm,3.5s						
GYA				LR	LR		
	comp=E,630nm,10.6s						
GYA				LR	LR		
	comp=E,310nm,7.1s						
GYA				LR	LR		
	comp=E,440nm,17.4s						
RAGD	**RAYAGADA**	**11.32**	**248**	*eP*	**Pn**	**02 13 50.3**	**-0.8**
BLSP	**Bilaspur**	**11.59**	**264**	*eP*	**Pn**	**02 13 52.8**	**-1.9**
ALBI	**Allahabad**	**11.70**	**280**	*ex*	x	02 13 53.7	
VIS	**Vishakhapatnam**	**12.17**	**242**	*ex*	x	02 13 56.7	
VIS				*eS*	Sn	02 15 59.4	-17
BRCI	**Bahraich**	**12.27**	**290**	*eP*	**Pn**	**02 14 02.5**	**-1.1**
PBA	**Port Blair**	**12.28**	**188**		**Pn**	**02 14 01.1**	**-2.7**
PBA	**Port Blair**	**12.28**	**188**	*eP*	**Pn**	**02 14 01.8**	**-2.0**
GOMU	**GeErMu**	**12.28**	**1**	P	**Pn**	**02 14 01.8**	**-2.2**
GOMU				S	**Sn**	**02 16 14.1**	**-5.2**
UBPT	**Khong Chiam**	**13.36**	**128**	Pn	**Pn**	**02 14 15.1**	**-2.7**
JBP	**Jabalpur**	**13.41**	**270**	*eP*	**Pn**	**02 14 17.0**	**-1.4**
JBP				⇓eS	Sn	02 16 37.1	-9.0
PTH	**Pithoragarh**	**14.02**	**297**	*eP*	**Pn**	**02 14 24.2**	**-2.3**
LZH	**Lanzhou**	**14.57**	**31**	*eP*	**Pn**	**02 14 31.8**	**-1.6**
LZH				sP	P	02 15 05.6	+29
LZH				ScP	**ScP**	**02 23 02.9**	**+0.1**
LZH				ScS	**ScS**	**02 26 40.5**	**-0.1**
LZH				pmax	pmax		
	comp=E,120nm,1.2s						
LZH				pmax	pmax		
	comp=E,260nm,7.3s						
LZH				LR	LR		
	comp=E,580nm,15.9s						
LZH				LR	LR		
	comp=E,580nm,16.8s						
LZH				LR	LR		
	comp=E,610nm,17.0s						
NGP	**Nagpur**	**14.60**	**262**	*eP*	**Pn**	**02 14 32.3**	**-1.6**
JHNI	**Jhansi**	**14.66**	**279**	*ex*	x	02 17 00.4	
ENH	**Enshi**	**14.72**	**61**	Pn	**Pn**	**02 14 34.7**	**-0.6**
VJD	**Vijayawada**	**14.98**	**243**	*eP*	**P**	**02 14 40.0**	**-1.2**
QIZ	**Qiongzhong**	**15.01**	**106**	P	**Pn**	**02 14 39.6**	**+0.7**
QIZ	**Qiongzhong**	**15.01**	**106**	P	**Pn**	**02 14 39.8**	**+0.9**
QIZ				sP	**sP**	**02 15 13.5**	**-3.1**
QIZ				S	**Sn**	**02 17 24.4**	**-0.5**
QIZ				pmax	pmax		
	comp=E,240nm,1.2s						
QIZ				LR	LR		
	comp=E,990nm,18.3s						
QIZ				LR	LR		
	comp=E,650nm,17.5s						
QIZ				LR	LR		
	comp=E,580nm,14.3s						
BHPL	**Bhopal**	**15.74**	**271**	*eP*	**Pn**	**02 14 44.7**	**-3.4**
BHPL				IAmb	IAmb	02 14 50.6	
	comp=Z,188nm,0.8s						
BHPL				*eS*	Sn	02 17 30.5	-12
SRIT	**Nakonsritamara**	**15.94**	**162**	P	**Pn**	**02 14 51.0**	**+0.4**
DDI	**Dehra Dun**	**16.04**	**297**	*eP*	**P**	**02 14 56.0**	**+3.0**
DDI				*eS*	**Sn**	**02 17 41.6**	**-8.2**
GTA	**Gaotai**	**16.11**	**15**	⇓P	**Pn**	**02 14 50.8**	**-1.8**
GTA				S	**Sn**	**02 17 47.3**	**-4.1**
GTA				PcP	**PcP**	**02 19 43.4**	**+1.9**
GTA				ScP	**ScP**	**02 23 05.6**	**+0.1**
GTA				PcS	**PcS**	**02 23 18.3**	**+1.1**
GTA				ScS	**ScS**	**02 26 43.8**	**-0.7**
GTA				pmax	pmax		
	comp=Z,65nm,1.3s						
GTA				pmax	pmax		
	comp=Z,380nm,5.1s						
GTA				LR	LR		
	comp=Z,580nm,10.5s						
GTA				LR	LR		
	comp=Z,430nm,13.1s						
GTA				LR	LR		
	comp=Z,430nm,18.9s						
XAN	**Xi'an**	**16.11**	**48**	⇑P	**Pn**	**02 14 52.9**	**+0.3**
XAN				sP	pP	02 15 21.6	+7.2
XAN				S	**Sn**	**02 17 52.3**	**+0.9**
XAN				ScP	**ScP**	**02 23 05.0**	**-0.5**
XAN				ScS	**ScS**	**02 26 42.1**	**-2.4**
XAN				pmax	pmax		
	comp=Z,26nm,0.7s						
SONA	**Sohna**	**16.31**	**289**	*eP*	**Pn**	**02 14 53.6**	**-1.4**
HYBB	**Hyderabad (bro**	**16.31**	**250**	*eP*	**P**	**02 14 58.1**	**+2.1**
HYBB				*eS*	**S**	**02 18 05.4**	**+4.8**
HYBB				IVMs_BB	IVMs_BB	02 20 33.1	
	comp=Z,394nm,5.2s						
AKL	**Akola**	**16.56**	**262**	⇓*i*x	x	02 17 48.5	
SMLA	**Simla**	**17.04**	**299**	*eP*	**P**	**02 15 02.0**	**-1.9**
SMLA				IAmb	IAmb	02 15 11.5	
	comp=Z,151nm,0.7s						
SMLA				*eS*	**Sn**	**02 18 03.8**	**-10**
CNSH	**ChangSha**	**17.04**	**72**	⇓P	**P**	**02 15 02.8**	**-1.2**
CNSH				S	**Sn**	**02 18 05.8**	**-8.0**
CNSH				pmax	pmax		
	comp=Z,66nm,0.8s						
CNSH				LR	LR		
	comp=Z,810nm,7.0s						
CNSH				LR	LR		
	comp=Z,290nm,8.4s						
CNSH				LR	LR		
	comp=Z,280nm,7.4s						
AJM	**Ajmer**	**18.23**	**282**	*eP*	**P**	**02 15 17.3**	**+0.2**
THN	**Thein Dam**	**18.67**	**301**	*eP*	**Pn**	**02 15 24.6**	**+1.2**
LHMI	**Lhok Sumawe**	**18.68**	**173**	P	Pn	02 15 34.4	+11
WHN	**Wuhan**	**18.79**	**65**	⇑P	**Pn**	**02 15 24.9**	**0.0**
WHN				S	**S**	**02 18 45.0**	**-6.0**
WHN				pmax	pmax		
	comp=Z,470nm,0.8s						
WHN				pmax	pmax		
	comp=Z,1μm,4.7s						
WHN				LR	LR		
	comp=Z,390nm,9.5s						
WHN				LR	LR		
	comp=Z,1μm,13.9s						
WHN				LR	LR		
	comp=Z,870nm,14.4s						
LYN	**LuoYang**	**18.87**	**52**	⇑P	**Pn**	**02 15 25.3**	**-0.5**
LYN				sP	sP	02 15 56.6	-2.7
LYN				S	**S**	**02 18 49.3**	**-3.2**
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
LYN				pmax	pmax		
	comp=Z,80nm,3.8s						
LYN				LR	LR		
	comp=Z,750nm,9.3s						
LYN				LR	LR		
	comp=Z,380nm,8.5s						
LYN				LR	LR		
	comp=Z,410nm,22.6s						
KULM	**Kulim**	**19.39**	**161**	P	**P**	**02 15 30.3**	**+0.5**
JMU	**Jammu**	**19.41**	**301**	*eP*	**Pn**	**02 15 33.2**	**+1.0**
JMU				*i*x	x	02 15 55.6	
POO	**Poona**	**20.04**	**259**	*eP*	Pn	02 15 43.9	+4.2
POO				*eS*	**S**	**02 19 09.2**	**-6.8**
IPM	**Ipoh**	**20.27**	**161**	P	**P**	**02 15 38.4**	**-0.9**
KCSI	**Kotacane, Aceh**	**20.47**	**171**	P	**P**	**02 15 43.1**	**+1.6**
	comp=Z,1μmcomp=Z,152nm,0.9s						
TSI	**Tuntungan**	**20.62**	**169**	P	**P**	**02 15 44.4**	**+1.3**
	comp=Z,434nm,0.9s						
WMQ	**Urumqi**	**20.68**	**346**	P	Pn	02 15 45.6	-1.4
WMQ				pP	pP	02 16 07.6	+2.4
WMQ				PP	**PnPn**	**02 16 12.3**	**+4.1**
WMQ				S	**S**	**02 19 27.4**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,400nm,0.9s						
WMQ				LR	LR		
	comp=Z,180nm,20.3s						
WMQ				LR	LR		
	comp=Z,490nm,21.7s						
SARP	**Sargodha**	**20.93**	**297**	P	**P**	**02 15 47.6**	**+1.3**
CHCP	**Chirah Chowk**	**21.04**	**302**	P	**P**	**02 15 49.2**	**+1.7**
NIL	**Nilore**	**21.04**	**302**	P	**P**	**02 15 48.2**	**+0.7**
NIL	**Nilore**	**21.04**	**302**	P	**P**	**02 15 48.2**	**+0.7**
PALK	**Pallekele**	**21.21**	**221**	P	**P**	**02 15 51.3**	**+1.9**
	comp=Z,29nm,0.9s,baz=128,slow=11,SNR=7.7						
PALK				S	**S**	**02 19 35.9**	**-3.1**
	comp=Z,15nm,0.4s,baz=221,slow=22,SNR=11 comp=Z,29nm,0.9s						
PALK	**Pallekele**	**21.21**	**221**	P	**P**	**02 15 51.0**	**+1.6**
PSI	**Prapat**	**21.37**	**168**	P	**P**	**02 15 53.3**	**+2.0**
	comp=Z,40nm,0.7s,baz=324,slow=6.6,SNR=20						
PSI				S	**S**	**02 19 41.2**	**-1.0**
	comp=Z,12nm,1.0s,baz=170,slow=19,SNR=4.5						
PSI				ScP	**ScP**	**02 23 16.4**	**-1.1**
	comp=Z,8.7nm,0.7s,baz=244,slow=7.6,SNR=3.7 comp=Z,40nm,0.7s						
RPSI	**Rantau Prapat**	**21.48**	**168**	P	**P**	**02 15 52.7**	**+0.5**
PCHI	**Peechi**	**21.86**	**236**	*eP*	**P**	**02 15 58.4**	**+2.0**
PCHI				*eS*	**S**	**02 19 49.5**	**-1.5**
HNS	**HongShan**	**21.89**	**47**	⇓P	**P**	**02 15 55.8**	**-0.6**
HNS				pP	**pP**	**02 16 21.8**	**+3.8**
HNS				S	**S**	**02 19 51.3**	**+0.2**
HNS				ScP	**ScP**	**02 23 16.9**	**-1.4**
HNS				pmax	pmax		
	comp=Z,18nm,1.3s						
QZH	**Quanzhou**	**21.89**	**82**	⇑*i*P	**P**	**02 15 55.3**	**-1.3**
QZH				sP	**sP**	**02 16 31.0**	**-1.5**
QZH				S	**S**	**02 19 50.0**	**-1.5**
QZH				SS	**SnSn**	**02 20 33.6**	**+5.5**
QZH				pmax	pmax		
	comp=Z,270nm,5.2s						
QZH				LR	LR		
	comp=Z,810nm,15.6s						
QZH				LR	LR		
	comp=Z,380nm,14.2s						
CEP	**Cherat**	**22.15**	**302**	P	**P**	**02 16 01.3**	**+1.9**
KSH	**Kashi**	**22.15**	**319**	P	**P**	**02 16 00.6**	**+1.3**
KSH				PP	**PnPn**	**02 16 27.4**	**-0.7**
KSH				sP	sP	02 16 37.1	+1.6
KSH				S	**S**	**02 19 57.0**	**+1.1**
KSH				sS	sS	02 20 33.4	+0.2
KSH				pmax	pmax		
	comp=Z,41nm,1.0s						
KSH				pmax	pmax		
	comp=Z,200nm,4.5s						
KSH				LR	LR		
	comp=Z,510nm,12.4s						
KSH				LR	LR		
	comp=Z,380nm,13.4s						
KSH				LR	LR		
	comp=Z,380nm,13.4s						
GSI	**Gunungsitoli**	**22.63**	**172**	P	**P**	**02 16 04.3**	**+0.1**
GSI	**Gunungsitoli**	**22.63**	**172**	P	**P**	**02 16 04.1**	**-0.1**
	comp=Z,158nm,1.2s						
NJ2	**Nanjing**	**22.90**	**64**	⇑P	**P**	**02 16 05.8**	**-1.0**
NJ2				pP	**pP**	**02 16 33.3**	**+4.2**
NJ2				PP	**PnPn**	**02 16 40.1**	**+1.9**
NJ2				sP	**sP**	**02 16 49.9**	**+6.7**
NJ2				S	**S**	**02 20 10.3**	**+2.4**
NJ2				sS	**sS**	**02 20 48.8**	**+0.8**
NJ2				SS	**SnSn**	**02 20 54.8**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,62nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.7s						
SHLS	**Shalkode**	**22.92**	**331**	*eP*	**P**	**02 16 06.5**	**-0.5**
SHLS				*eS*	**S**	**02 20 08.2**	**-0.1**
SHLS	**Shalkode**	**22.92**	**331**	*eP*	**P**	**02 16 06.6**	**-0.5**
	baz=331						
SHLS				*eS*	**S**	**02 20 08.2**	**-0.1**
	baz=331						
TIA	**Tai'an**	**23.00**	**53**	⇑P	**P**	**02 16 07.0**	**-0.7**
TIA				S	**S**	**02 20 07.3**	**-2.2**
TIA				pmax	pmax		
	comp=Z,39nm,0.9s						
TIA				pmax	pmax		
	comp=Z,170nm,4.3s						
TIA				LR	LR		
	comp=Z,210nm,11.3s						
TIA				LR	LR		
	comp=Z,180nm,7.4s						
TIA				LR	LR		
	comp=Z,290nm,14.6s						
UZB	**Uzynbulak**	**23.11**	**330**	*eP*	**P**	**02 16 10.3**	**+1.5**
UZB				*eS*	**S**	**02 20 13.4**	**+2.0**
UZB	**Uzynbulak**	**23.11**	**330**	*eP*	**P**	**02 16 10.3**	**+1.5**
	baz=330						
UZB				*eS*	**S**	**02 20 13.4**	**+2.0**
	baz=330						
SATY	**Saty**	**23.33**	**329**	*eP*	**P**	**02 16 12.7**	**+1.9**
SATY				*eS*	**S**	**02 20 18.4**	**+3.6**
SATY				pmax	pmax		
	comp=Z,40nm,0.9s						
SATY	**Saty**	**23.33**	**329**	*

MDOK *i* S **S** **02 20 30.4 +3.6**
baz=327
SSLB Suanglung 24.12 85 P **P** **02 16 18.0 0.0**
AAA Alma-Ata 24.16 327 *e*P **P** **02 16 21.2 +2.9**
AAA *e*S **S** **02 20 32.0 +3.8**
AAA Alma-Ata 24.16 327 *e*P **P** **02 16 21.2 +2.9**
baz=327
AAA *e*S **S** **02 20 32.1 +3.8**
baz=327
BKNI Bangkinang 24.24 164 P **P** **02 16 22.0 +2.9**
comp=Z,120nm,1.1s
BJI Beijing 24.31 43 P **P** **02 16 20.3 +0.8**
BJI pP **pP** **02 16 44.3 +0.6**
BJI sP **sP** **02 16 56.3 -1.3**
BJI PP **PnPn** **02 17 01.0 +3.9**
BJI S **S** **02 20 29.4 -0.9**
BJI ScP **ScP** **02 23 23.6 -1.1**
BJI pmax pmax
comp=Z,110nm,4.7s
BJI LR LR
comp=Z,41nm,9.2s
BJI LR LR
comp=Z,89nm,8.0s
BJI LR LR
comp=Z,160nm,7.6s
TWG Pinlang 24.34 87 P **P** **02 16 20.4 +0.3**
YHNB Yeheng 24.43 83 P **P** **02 16 20.7 -0.3**
YULB Yu-li 24.48 86 P **P** **02 16 21.8 +0.6**
ARXS Arharly 24.49 330 *e*P **P** **02 16 22.7 +1.5**
TATO Taipei 24.52 82 P **P** **02 16 22.2 +0.6**
KBL Kabul 24.62 301 P **P** **02 16 24.6 +1.9**
KBL Kabul 24.62 301 P **P** **02 16 24.6 +1.9**
TKM2 Tokmak 2 24.63 325 P **P** **02 16 25.6 +2.8**
SNR=99
TKM2 Tokmak 2 24.63 325 *i* P **P** **02 16 25.0 +2.3**
TKM2 pmax pmax
comp=Z,109nm,0.7s
SSE Sheshan 24.64 67 P **P** **02 16 22.8 +0.2**
SSE pmax pmax
comp=Z,57nm,0.8s
SSE pmax pmax
comp=Z,190nm,3.8s
SSE LR LR
comp=Z,100nm,10.3s
SSE LR LR
comp=Z,150nm,11.7s
NACB Ninganchiao 24.67 84 P **P** **02 16 23.4 +0.4**
UCH Uchtor 24.75 323 P **P** **02 16 27.1 +3.0**
SNR=19
ZSN Zaisan 24.77 344 *e*P **P** **02 16 25.9 +2.2**
ZSN *e*S **S** **02 20 40.7 +3.1**
ZSN pmax pmax
comp=Z,36nm,0.9s
ZSN Zaisan 24.77 344 *e*P **P** **02 16 25.9 +2.2**
comp=Z,36nm,0.9s,baz=344
ZSN *e*S **S** **02 20 40.7 +3.1**
baz=344
TPRI Tanjung Pinang 24.78 156 P **P** **02 16 27.0 +3.0**
comp=Z,76nm,1.1s
KBK Karagaybulak 24.80 324 P **P** **02 16 27.4 +3.3**
SNR=45
TDK Taldyqorghan 24.85 332 *e*P **P** **02 16 26.0 +1.6**
TDK *e*S **S** **02 20 41.6 +2.7**
TDK pmax pmax
comp=Z,17nm,0.5s
TDK Taldyqorghan 24.85 332 *e*P **P** **02 16 26.0 +1.6**
comp=Z,17nm,0.5s,baz=332
TDK *e*S **S** **02 20 41.6 +2.7**
baz=332
MK31 Makanchi Array 24.90 340 P **P** **02 16 26.3 +1.3**
MK31 Makanchi Array 24.90 340 *i* P **P** **02 16 27.1 +2.2**
MK31 pmax pmax
comp=Z,86nm,0.5s
MKAR Makanchi Array 24.90 340 P **P** **02 16 27.2 +2.3**
comp=Z,172nm,0.7s,baz=146,slow=10,SNR=763
MKAR PcP **PcP** **02 19 58.5 +0.8**
comp=Z,13nm,0.8s,baz=116,slow=2.8,SNR=4.6
MKAR ScP **ScP** **02 23 25.6 -0.7**
comp=Z,7.2nm,0.9s,baz=123,slow=4.5,SNR=9.6
comp=Z,172nm,0.7s
MKAR Makanchi Array 24.90 340 P **P** **02 16 26.9 +2.0**
MKAR Makanchi Array 24.90 340 *ce*P **P** **02 16 27.2 +2.3**
MKAR pmax pmax
comp=Z,173nm,0.7s
KUU Kurty 24.95 328 *e*P **P** **02 16 27.1 +1.7**
KUU pmax pmax
comp=Z,35nm,0.7s
KUU Kurty 24.95 328 *e*P **P** **02 16 27.1 +1.7**
comp=Z,34nm,0.7s,baz=327
MAKZ Makanchi 25.02 339 P **P** **02 16 27.7 +1.8**
MAKZ Makanchi 25.02 339 P **P** **02 16 27.8 +1.8**
AAK Ala-Archa 25.03 323 P **P** **02 16 29.4 +3.1**
SNR=22
AAK Ala-Archa 25.03 323 P **P** **02 16 28.3 +2.0**
AAK Ala-Archa 25.03 323 *ce*P **P** **02 16 29.5 +3.2**
AAK pmax pmax
comp=Z,47nm,0.8s
CHMS Chumysh 25.13 324 P **P** **02 16 31.4 +4.4**
SNR=9.7
CHMS Chumysh 25.13 324 *i* P **P** **02 16 28.9 +1.8**
CHMS pmax pmax
comp=Z,51nm,1.2s
AML Almayashu 25.15 321 P **P** **02 16 30.6 +3.0**
SNR=14
SISI Saibi 25.43 169 P **P** **02 16 31.0 +1.0**
comp=Z,82nm,0.9s
SISI pP pP 02 16 40.5 -14
comp=Z,82nm,0.9s
EKS2 Erkin-Say 25.44 322 P **P** **02 16 33.4 +3.4**
SNR=18
USP Ospenovka 25.45 324 P **P** **02 16 32.6 +2.6**
SNR=25
GAR Garm 25.50 312 P **P** **02 16 32.4 +1.8**
SGDS Sogindy 25.51 325 *e*P **P** **02 16 32.2 +1.7**
SGDS *e*S **S** **02 20 52.4 +2.9**
SGDS Sogindy 25.51 325 *e*P **P** **02 16 32.3 +1.7**
baz=324
SGDS *e*S **S** **02 20 52.5 +2.9**
baz=324
SONM Songino Array 25.69 19 P **P** **02 16 33.0 +0.8**
comp=Z,6.9nm,0.6s,baz=199,slow=11,SNR=16
SONM ScP **ScP** **02 23 27.6 -1.0**
comp=Z,9.7nm,1.0s,baz=194,slow=2.3,SNR=16
SONM LR LR 02 28 48.5
comp=Z,123nm,20.8s,baz=167,slow=41
comp=Z,6.9nm,0.6s
SONM Songino Array 25.69 19 P **P** **02 16 33.0 +0.8**
ULN Ulaanbaatar 25.92 19 P **P** **02 16 34.7 +0.5**
ULN Ulaanbaatar 25.92 19 *ce*P **P** **02 16 35.1 +0.9**
ULN pmax pmax
comp=Z,14nm,0.8s
YOJ Yonaguni jima 25.93 83 P **P** **02 16 33.1 -1.3**
YOJ IAmb IAmb 02 16 35.3
comp=Z,106nm,1.0s
YOJ Yonaguni jima 25.93 83 P **P** **02 16 33.1 -1.3**
YOJ pmax pmax
comp=Z,106nm,1.0s
CHGR Chuyangaron 26.14 310 P **P** **02 16 37.4 +1.1**
CHGR IAmb IAmb 02 17 06.2
comp=Z,99nm,0.8s
CHGR Chuyangaron 26.14 310 P **P** **02 16 37.4 +1.1**
CHGR pmax pmax
comp=Z,99nm,0.8s
XLT XiLinHaoTe 26.65 36 ⇓ *i* P **P** **02 16 40.9 +0.1**
XLT S **S** **02 21 08.9 +1.4**
XLT SS **SnSn** **02 22 25.3 +1.7**
XLT ScP **ScP** **02 23 31.0 -0.5**
XLT pmax pmax
comp=Z,12nm,0.6s
XLT pmax pmax
comp=Z,140nm,4.8s
XLT LR LR
comp=Z,29nm,13.5s
XLT LR LR
comp=Z,190nm,22.5s
XLT LR LR
comp=Z,250nm,14.6s
BTLS Baital 26.92 327 *e*P **P** **02 16 44.4 +1.3**
BTLS Baital 26.92 327 *e*P **P** **02 16 44.4 +1.3**
baz=326
PPSI Pulau Pagai 27.00 168 P **P** **02 16 46.0 +1.9**
comp=Z,226nm,1.3s
SBUM Sibu 27.30 139 P **P** **02 16 47.1 +0.4**
SBUM IAmb IAmb 02 16 48.8
comp=Z,56nm,0.9s
ZAK Zakamensk 27.31 12 *e*P **P** **02 16 47.3 +0.6**
ZAK *e* 02 20 04.6
ZAK pmax pmax
comp=Z,13nm,1.1s
ZAK pmax pmax
comp=Z,16nm,1.0s
IUG Iuzhnay 27.33 318 *e*P **P** **02 16 48.9 +1.9**
IUG Iuzhnay 27.33 318 *e*P **P** **02 16 48.9 +1.9**
baz=318
KKM Kota Kinabalu 27.34 127 P **P** **02 16 46.4 -0.8**
KKM IAmb IAmb 02 16 49.7
comp=Z,71nm,1.1s
KK31 Karatay Array 27.59 320 P **P** **02 16 50.0 +0.9**
KK31 Karatay Array 27.59 320 P **P** **02 16 50.1 +0.9**
KK31 pmax pmax
comp=Z,13nm,0.9s
KKAR Karatay Array 27.59 320 P **P** **02 16 50.2 +1.0**
KKAR Karatay Array 27.59 320 P **P** **02 16 50.3 +1.1**
KKAR Karatay Array 27.59 320 P **P** **02 16 50.3 +1.1**
PPBI Pangkal Pinang 28.22 155 P **P** **02 16 56.0 +1.0**
comp=Z,72nm,1.1s
SEM Semipalatinsk 28.73 341 *e*P **P** **02 16 59.9 +0.4**
SEM Semipalatinsk 28.73 341 *e*P **P** **02 16 59.1 -0.4**
baz=340
STKI Sintang 28.80 143 P **P** **02 17 01.6 +1.5**
comp=Z,78nm,1.4s
KURBB Kurchatov Arra 29.46 339 P **P** **02 17 07.3 +1.7**
comp=Z,21nm,0.8s,baz=154,slow=8.2,SNR=130
KURBB PcP **PcP** **02 20 09.3 +0.9**
comp=Z,30nm,0.8s,baz=173,slow=1.9,SNR=22
KURBB ScP **ScP** **02 23 40.0 +0.1**
comp=Z,9.0nm,0.7s,baz=154,slow=2.7,SNR=22
KURBB PKiKP **PKiKP** **02 27 39.8 -1.6**
comp=Z,1.1nm,0.8s,baz=322,slow=0.3,SNR=4.9
comp=Z,21nm,0.8s
KURK Kurchatov 29.51 339 P **P** **02 17 07.6 +1.5**
KURK IAmb IAmb 02 17 52.4
comp=Z,27nm,0.8s
KURK Kurchatov 29.51 339 *ce*P **P** **02 17 08.0 +1.9**
KURK pmax pmax
comp=Z,28nm,0.8s
KURK Kurchatov 29.51 339 P **P** **02 17 07.9 +1.9**
KURK pP **pP** **02 17 31.9 +0.7**
KURK sP **sP** **02 17 44.3 -0.3**
KURK ScP **ScP** **02 23 39.2 -0.8**
MYLDM Lahad Datu 29.60 125 P **P** **02 17 07.3 +0.1**
MYLDM IAmb IAmb 02 17 10.0
comp=Z,115nm,1.2s
HRA Herat 30.00 298 P **P** **02 17 11.7 +0.8**
SNY Shenyang 30.03 46 ⇓ P **P** **02 17 09.3 -1.4**
SNY pmax pmax
comp=Z,26nm,1.2s
LWLI Liwa 30.17 161 P **P** **02 17 11.3 -1.1**
comp=Z,120nm,0.8s
TJN Taejon 30.82 59 P **P** **02 17 14.4 -3.4**
TJN Taejon 30.82 59 *ce*P **P** **02 17 16.2 -1.6**
ZAA0 Zalesovo Array 30.91 349 P **P** **02 17 19.0 +0.6**
ZALV Zalesovo Beam 30.91 349 P **P** **02 17 19.9 +1.5**
comp=Z,6.0nm,0.4s,baz=168,slow=7.6,SNR=25
ZALV PcP **PcP** **02 20 12.1 -0.1**
comp=Z,3.5nm,0.4s,baz=198,slow=4.4,SNR=4.3
ZALV ScP **ScP** **02 23 43.7 -0.8**
comp=Z,4.1nm,0.8s,baz=149,slow=3.1,SNR=4.0
comp=Z,6.0nm,0.4s
ZALV Zalesovo Beam 30.91 349 P **P** **02 17 19.0 +0.7**
BRZS Berezniki 31.16 332 *e*P **P** **02 17 22.5 +1.9**
BRZS *e*S **S** **02 22 20.6 +2.5**
BRZS pmax pmax
comp=Z,15nm,0.7s
BRZS Berezniki 31.16 332 *e*P **P** **02 17 22.6 +1.9**
comp=Z,15nm,0.7s,baz=332
BRZS *e*S **S** **02 22 20.6 +2.5**
baz=332
KSRS Korea Array 31.54 57 P **P** **02 17 22.1 -2.0**
comp=Z,4.1nm,0.5s,baz=253,slow=7.5,SNR=18
KSRS S **S** **02 22 21.6 -2.6**
comp=Z,11nm,1.2s,baz=248,slow=15,SNR=8.7
KSRS ScP **ScP** **02 23 45.8 -1.2**
comp=Z,3.8nm,1.1s,baz=244,slow=2.8,SNR=7.1
KSRS LR LR 02 31 05.5
comp=Z,137nm,18.5s,baz=250,slow=38
comp=Z,4.1nm,0.5s
MTKI Muara Teweh, K 31.60 138 P **P** **02 17 26.3 +1.5**
SEHB SEOHWA 32.02 55 P **P** **02 17 26.8 -1.5**
SEHB IAmb IAmb 02 17 28.2
comp=Z,32nm,0.9s
CN2 Changchun 32.16 44 *e*P **P** **02 17 31.9 +2.4**
CN2 S **S** **02 22 31.0 -2.8**
CN2 ScP **ScP** **02 23 47.4 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
JSU Suzuyama 32.56 68 P **P** **02 17 31.9 -1.3**
JSU IAmb IAmb 02 17 33.0
comp=Z,34nm,1.0s
WSAR Wadi Sarin 32.90 276 LR LR 02 34 17.4
comp=Z,99nm,18.7s,baz=107,slow=42
BBKI Banjar Baru 33.59 141 P **P** **02 17 43.6 +1.4**
comp=Z,4μmcomp=Z,435nm,0.9s
MPSI Mapaga 33.92 130 P **P** **02 17 46.3 +1.2**
comp=Z,505nmcomp=Z,36nm,1.1s
TOLI2 Tolitoli 34.01 128 P **P** **02 17 45.8 -0.1**
GEYT Alibeck 34.05 303 P **P** **02 17 48.0 +2.0**
comp=Z,3.5nm,0.6s,baz=153,slow=10.0,SNR=7.8
GEYT pP **pP** **02 18 12.7 +1.2**
comp=Z,20nm,1.0s,baz=155,slow=4.9,SNR=9.0
GEYT ScP **ScP** **02 23 55.4 -0.4**
comp=Z,2.4nm,0.5s,baz=99,slow=2.0,SNR=3.6
GEYT LR LR 02 36 00.9
comp=Z,150nm,18.2s,baz=132,slow=44
comp=Z,3.5nm,0.6s
GEYT Alibeck 34.05 303 P **P** **02 17 47.4 +1.3**
GEYT IAmb IAmb 02 18 16.3
comp=Z,47nm,1.2s
GYA0B ALIBECK ARRAY 34.05 303 P **P** **02 17 46.8 +0.8**
GYA0B IAmb IAmb 02 18 16.2
comp=Z,37nm,1.1s
DAV Davao City (W) 34.11 114 LR LR 02 32 39.5
comp=Z,111nm,18.8s,baz=350,slow=38
BNX BinXian 34.31 42 ⇑ P **P** **02 17 47.8 -0.3**
BNX pP **pP** **02 18 12.5 -0.9**
BNX sP **sP** **02 18 25.3 -1.3**
BNX PP **PnPn** **02 19 06.6 +0.1**
BNX S **S** **02 23 05.4 -1.6**
BNX pmax pmax
comp=Z,10.0nm,1.0s
BNX pmax pmax
comp=Z,88nm,4.8s
BNX LR LR
comp=Z,150nm,4.6s
BNX LR LR
comp=Z,95nm,5.4s
BNX LR LR
comp=Z,100nm,7.0s
BVA0 Borovoye Array 34.39 334 *i* P **P** **02 17 50.3 +1.6**
BVAR Borovoye Array 34.39 334 P **P** **02 17 50.5 +1.8**
comp=Z,9.9nm,0.6s,baz=134,slow=11,SNR=53
BVAR PcP **PcP** **02 20 23.0 +1.1**
comp=Z,13nm,0.7s,baz=130,slow=2.3,SNR=10
BVAR ScP **ScP** **02 23 57.2 +0.6**
comp=Z,4.7nm,0.8s,baz=141,slow=5.0,SNR=6.6
BVAR LR LR 02 33 41.1
comp=Z,481nm,21.8s,baz=138,slow=39
comp=Z,9.9nm,0.6s
SMRI Semarang 34.42 151 P **P** **02 17 49.7 +0.3**
SMRI Semarang 34.42 151 P **P** **02 17 51.7 +2.3**
comp=Z,413nm,0.8s
BRVK Borovoye 34.46 334 P **P** **02 17 50.4 +1.1**
BRVK IAmb IAmb 02 18 21.1
comp=Z,18nm,0.8s
BRVK Borovoye 34.46 334 *ce*P **P** **02 17 51.3 +2.0**
BRVK pmax pmax
comp=Z,16nm,1.0s
BRVK Borovoye 34.46 334 P **P** **02 17 51.1 +1.8**
BRVK pP **pP** **02 18 17.5 +2.5**
BRVK ScP **ScP** **02 23 56.9 +0.1**
TBJI Tambak Boyo 34.86 149 P **P** **02 17 56.4 +3.3**
comp=Z,184nm,0.9s
NGJI Ngawi 35.16 150 P **P** **02 17 59.6 +3.9**
comp=Z,79nm,0.9s
MRSI Marisa 35.29 127 P **P** **02 17 57.0 +0.2**
comp=Z,1μmcomp=Z,121nm,1.0s
MRSI pP pP 02 18 07.6 -15
comp=Z,1μmcomp=Z,121nm,1.0s
JMN Monobe 35.63 65 P **P** **02 17 59.2 -0.5**
JMN IAmb IAmb 02 18 30.5
comp=Z,67nm,1.1s
PWJI Pagerwojo 35.90 150 P **P** **02 18 02.3 +0.3**
comp=Z,88nm,0.9s
APSI Ampana 36.04 129 P **P** **02 18 05.6 +2.4**
comp=Z,678nmcomp=Z,69nm,1.2s
KMMI Kalianget 36.10 146 P **P** **02 18 05.2 +1.4**
comp=Z,5μmcomp=Z,541nm,0.9s
VLA Vladivostok 36.17 49 *i* P **P** **02 18 01.1 -3.0**
VLA pmax pmax
comp=Z,47nm,0.9s
TTSI Tana Toraja 36.33 134 P **P** **02 18 07.3 +1.6**
comp=Z,2μmcomp=Z,207nm,1.1s
BLJI Banyuglugur 36.51 147 P **P** **02 18 08.9 +1.7**
comp=Z,918nmcomp=Z,96nm,0.9s
USRK Ussuriysk Ar. 36.62 47 P **P** **02 18 06.8 -1.1**
comp=Z,7.7nm,0.8s,baz=248,slow=8.4,SNR=25
USRK S **S** **02 23 42.6 +0.3**
comp=Z,2.3nm,0.9s,baz=240,slow=15,SNR=5.2
USRK ScP **ScP** **02 24 02.4 -2.5**
comp=Z,2.5nm,0.8s,baz=252,slow=1.2,SNR=5.9
comp=Z,7.7nm,0.8s
USRK Ussuriysk Ar. 36.62 47 P **P** **02 18 05.8 -2.0**
BOD Bodaibo 36.68 17 *e*P **P** **02 18 08.1 -0.1**
BOD pmax pmax
comp=Z,21nm,1.4s
KMSI Cibinong 36.73 125 P **P** **02 18 11.2 +2.0**
comp=Z,309nm,0.8s
ABJI Asem Bagus 36.88 146 P **P** **02 18 14.0 +3.7**
comp=Z,133nm,1.4s
GMJI Gumukmas 36.89 148 P **P** **02 18 12.1 +1.7**
comp=Z,88nm,0.9s
LUWI Luwuk 36.93 128 P **P** **02 18 10.7 -0.1**
LUWI Luwuk 36.93 128 P **P** **02 18 11.7 +0.9**
comp=Z,5μmcomp=Z,283nm,0.9s
SPSI Sidrap Palu 36.99 135 P **P** **02 18 12.4 +1.1**
comp=Z,3μmcomp=Z,194nm,1.2s
AB31 Akbulak array 37.10 322 *e*P **P** **02 18 13.4 +1.5**
ABKAR Akbulak array 37.10 322 P **P** **02 18 13.3 +1.4**
ABKAR Akbulak array 37.10 322 P **P** **02 18 13.5 +1.6**
ABKAR IAmb IAmb 02 18 39.2
comp=Z,14nm,0.8s
JAGI Jajag, Banyuwa 37.41 147 P **P** **02 18 14.5 -0.4**
JAGI Jajag, Banyuwa 37.41 147 P **P** **02 18 15.5 +0.6**
comp=Z,150nm,0.8s
SRBI Singaraja 37.62 145 P **P** **02 18 18.7 +2.0**
comp=Z,3μmcomp=Z,286nm,1.1s
KAPI Kappang 37.78 136 P **P** **02 18 17.4 -0.6**
comp=Z,24nm,0.5s,baz=285,slow=4.9,SNR=21
KAPI LR LR 02 36 09.4
comp=Z,85nm,19.1s,baz=318,slow=40
comp=Z,24nm,0.5s
KAPI Kappang 37.78 136 P **P** **02 18 18.4 +0.4**
KAPI Kappang 37.78 136 P **P** **02 18 18.4 +0.4**
KAPI pmax pmax
comp=Z,105nm,1.5s
KAPI Kappang 37.78 136 P **P** **02 18 18.7 +0.7**
KAPI Kappang 37.78 136 P **P** **02 18 18.2 +0.2**
BKSI Bulukumba 38.25 136 P **P** **02 18 22.0 +0.1**
comp=Z,1μmcomp=Z,88nm,1.1s
INU Inuyama 38.37 63 P **P** **02 18 21.7 -1.0**
INU pP **pP** **02 18 51.1 +2.6**
INU Inuyama 38.37 63 P **P** **02 18 22.0 -0.8**
INU pP **pP** **02 18 50.8 +2.3**
AKTO Aktyubinsk 38.77 323 P **P** **02 18 27.2 +1.3**
comp=Z,5.1nm,0.5s,baz=115,slow=8.9,SNR=26
AKTO PcP **PcP** **02 20 36.2 +1.1**
comp=Z,9.2nm,0.9s,baz=94,slow=5.8,SNR=4.7
AKTO ScP **ScP** **02 24 11.8 -1.1**
comp=Z,3.4nm,0.6s,baz=140,slow=5.5,SNR=6.5
AKTO LR LR 02 36 17.0
comp=Z,119nm,18.4s,baz=124,slow=39
comp=Z,5.1nm,0.5s
AKTO Aktyubinsk 38.77 323 P **P** **02 18 27.5 +1.6**
TWSI Taliwang, Sumb 39.06 143 P **P** **02 18 27.7 -1.0**
comp=Z,619nmcomp=Z,57nm,0.9s
BSSI Bau Bau, Buton 39.11 136 P **P** **02 18 28.6 -0.6**
comp=Z,560nmcomp=Z,47nm,0.9s
TNTI Ternate 39.21 121 P **P** **02 18 28.8 -1.2**
MAJO Matsushiro 39.45 61 P **P** **02 18 30.1 -1.7**
MAJO IAmb IAmb 02 18 31.5
comp=Z,44nm,0.8s
MAJO Matsushiro 39.45 61 P **P** **02 18 30.1 -1.7**
MAJO pmax pmax
comp=Z,44nm,0.9s
MAJO Matsushiro 39.45 61 P **P** **02 18 30.4 -1.3**
MAJO pP **pP** **02 18 59.5 +1.8**
MJAR Matsushiro Arr 39.45 61 P **P** **02 18 30.9 -0.9**
comp=Z,24nm,0.9s,baz=271,slow=7.8,SNR=39
MJAR pP **pP** **02 18 57.1 -0.5**
comp=Z,20nm,1.0s,baz=268,slow=7.8,SNR=6.4
MJAR ScP **ScP** **02 24 14.3 -1.5**
comp=Z,2.2nm,0.6s,baz=256,slow=2.4,SNR=4.7
MJAR LR LR 02 35 34.3
comp=Z,97nm,21.3s,baz=262,slow=37
comp=Z,24nm,0.9s
PLAI Plampang 39.63 142 P **P** **02 18 32.7 -0.7**
comp=Z,2μmcomp=Z,269nm,0.8s
PLAI Plampang 39.63 142 P **P** **02 18 34.8 +1.4**
JSD Sado 39.67 59 P **P** **02 18 31.6 -2.0**
JSD IAmb IAmb 02 18 33.4
comp=Z,49nm,1.0s
SANI Sanana 39.96 126 P **P** **02 18 35.5 -0.7**
comp=Z,1μmcomp=Z,43nm,0.8s
BBSI Bau Bau 39.97 133 P **P** **02 18 38.2 +1.9**
comp=Z,287nmcomp=Z,11nm,1.1s
WBSI Waikabubak, Su 41.21 141 P **P** **02 18 45.1 -1.4**
comp=Z,4μmcomp=Z,587nm,0.9s
NLAI Namlea 41.58 126 P **P** **02 18 51.1 +1.6**
comp=Z,103nm,0.9s
ARU Arti 41.75 331 S **S** **02 24 59.6 +0.7**
comp=Z,4.5nm,0.7s,baz=355,slow=22,SNR=14
ARU LR LR 02 38 12.6
comp=Z,370nm,18.1s,baz=122,slow=39
ARU Arti 41.75 331 P **P** **02 18 52.0 +1.6**
ARU IAmb IAmb 02 19 21.8
comp=Z,38nm,1.4s
ARU Arti 41.75 331 *c i* P **P** **02 18 52.0 +1.6**
ARU *PP **pP** **02 19 16.6 -0.1**
ARU 02 20 31.2
ARU S **S** **02 25 00.7 +1.8**
ARU *SS **sS** **02 25 46.2 +2.2**
ARU SS **SS** **02 28 06.0 -2.9**
ARU pmax pmax
comp=Z,11nm,0.6s
ARU MLR MLR
comp=Z,259nm,15.0s
ARU Arti 41.75 331 P **P** **02 18 52.2 +1.8**
ARU ScP **ScP** **02 24 24.4 -0.1**
EDFI Ende, Flores 41.87 138 P **P** **02 18 50.0 -2.0**
comp=Z,35nm,0.8s
GRNR Gornyy 41.93 39 ⇓ *i* P **P** **02 18 50.8 -1.2**
GRNR pmax pmax
comp=Z,8.0nm,1.1s
GRNR MLR MLR
comp=E,100nm,17.0s
GRNR MLR MLR
comp=N,70nm,12.0s
GRNR MLR MLR
comp=Z,80nm,15.0s
MMRI Maumere 42.13 137 P **P** **02 18 53.1 -0.8**
MMRI Maumere 42.13 137 P **P** **02 18 53.5 -0.4**
comp=Z,94nm,0.7s
BASI Baing, Sumba 42.36 140 P **P** **02 18 55.0 -0.8**
comp=Z,100nm,1.2s
AAI Ambon 42.69 125 P **P** **02 19 00.0 +1.5**
comp=Z,2μmcomp=Z,223nm,1.1s
MSAI Masohi 43.02 124 P **P** **02 19 02.2 +1.0**
comp=Z,36nm,0.7s
MAK Makhachkala 43.03 308 *e*P **P** **02 19 00.9 0.0**
MAK *e**PP **pP** **02 19 24.7 -2.6**
MAK *e**SP **sP** **02 19 38.4 -2.0**
MAK *e* 02 20 43.9
MAK *e*PPP PPP 02 21 23.3
MAK *e*S **S** **02 25 17.8 -0.2**
MAK *e**SS **sS** **02 26 03.4 +0.2**
MAK pmax pmax
comp=Z,69nm,0.7s
MAK MLR MLR
comp=Z,92nm,17.0s
SIJI Sorong 43.29 119 P **P** **02 19 01.7 -1.7**
comp=Z,47nm,0.8s,baz=317,slow=10,SNR=16
comp=Z,47nm,0.8s
BATI Baumata 44.23 137 P **P** **02 19 09.0 -1.9**
comp=Z,136nm,0.8s,baz=178,slow=2.2,SNR=20
BATI LR LR 02 40 03.5
comp=Z,182nm,19.6s,baz=282,slow=39
comp=Z,136nm,0.8s
BATI Baumata 44.23 137 P **P** **02 19 09.5 -1.4**

comp=Z,1µmcomp=Z,102nm,1.1s
SOEI Soe 44.27 136 P **P** **02 19 10.4 -0.9**
SOEI Soe 44.27 136 P **P** **02 19 10.4 -0.9**
comp=Z,3µmcomp=Z,317nm,1.0s
SOEI Soe 44.27 136 P **P** **02 19 11.0 -0.3**
GROC Groznyy 44.30 308 *e*P **P** **02 19 13.0 +1.9**
GROC *e**SP **sP** **02 19 52.2 +1.5**
GROC *e* 02 20 58.7
GROC *e*S **S** **02 25 39.5 +2.9**
GROC *e**SS **sS** **02 26 24.5 +2.5**
GROC pmax pmax
comp=Z,66nm,0.8s
BNDI Bandanaira 44.52 125 P **P** **02 19 12.6 -0.6**
comp=Z,249nm,0.8s
YSS Yuzh-Sakhalins 44.65 47 *e*P **P** **02 19 12.9 -1.0**
YSS *e*S **S** **02 25 38.6 -2.9**
YSS pmax pmax
comp=Z,30nm,1.2s
YSS pmax pmax
comp=Z,100nm,2.9s
YSS MLR MLR
comp=Z,200nm,13.0s
RAYN Ar Rayn 44.75 280 P **P** **02 19 16.6 +1.6**
RAYN Ar Rayn 44.75 280 P **P** **02 19 16.6 +1.6**
RAYN pmax pmax
comp=Z,23nm,1.1s
RAYN Ar Rayn 44.75 280 P **P** **02 19 16.7 +1.7**
RAYN ScP **ScP** **02 24 37.0 -0.4**
YAK Yakutsk 44.92 23 *e*P **P** **02 19 14.4 -1.4**
YAK *e**PP **pP** **02 19 38.8 -3.3**
YAK *e* 02 20 54.8
YAK *e*S **S** **02 25 44.0 -1.0**
YAK *e* 02 29 00.8
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK smax smax
comp=E,109nm,2.2s
YAK smax smax
comp=N,17nm,1.0s
FAKI Fak Fak 45.31 121 P **P** **02 19 19.1 -0.4**
FAKI Fak Fak 45.31 121 P **P** **02 19 19.2 -0.3**
comp=N,1µmcomp=N,194nm,1.0s
FAKI Fak Fak 45.31 121 P **P** **02 19 19.4 -0.1**
BELG Belogornoye 45.49 321 *i* P **P** **02 19 22.5 +2.1**
BELG pmax pmax
comp=Z,3.0nm,0.9s
ZEI Tsey 45.61 307 *e*P **P** **02 19 23.6 +1.8**
ZEI *e* 02 19 49.5
ZEI pmax pmax
comp=Z,31nm,0.9s
NRIK Noril'sk 45.67 357 P **P** **02 19 22.8 +1.2**
comp=Z,26nm,0.6s,baz=157,slow=6.3,SNR=42
NRIK PcP **PcP** **02 20 58.6 +1.0**
comp=Z,24nm,0.8s,baz=139,slow=3.0,SNR=5.4
NRIK ScP **ScP** **02 24 40.2 0.0**
comp=Z,8.4nm,0.8s,baz=117,slow=3.3,SNR=6.2
comp=Z,26nm,0.6s
NRIK Noril'sk 45.67 357 P **P** **02 19 22.9 +1.4**
NRIK IAmb IAmb 02 19 24.1
comp=Z,36nm,0.8s
NRIK Noril'sk 45.67 357*ce*P **P** **02 19 22.7 +1.1**
NRIK pmax pmax
comp=Z,23nm,0.9s
ONI Oni 45.92 307 P **P** **02 19 25.4 +1.4**
ONI Oni 45.92 307 P **P** **02 19 25.4 +1.4**
ONI pmax pmax
comp=Z,19nm,0.9s
NCK Nalchik 45.93 308 *i* P **P** **02 19 26.1 +2.0**
NCK pmax pmax
comp=Z,9.0nm,0.8s
KARS Kars 45.98 304 P **P** **02 19 26.3 +1.6**
KARS Kars 45.98 304 P **P** **02 19 26.3 +1.6**
KARS pmax pmax
comp=Z,86nm,1.0s
KBZ Khabaz 46.47 308 P **P** **02 19 30.0 +1.8**
comp=Z,3.0nm,0.8s,baz=145,slow=6.1,SNR=5.5
KBZ PcP **PcP** **02 21 02.2 +1.3**
comp=Z,10nm,0.8s,baz=96,slow=9.5,SNR=4.4
KBZ LR LR 02 43 37.9
comp=Z,100nm,18.6s,baz=86,slow=42
comp=Z,3.0nm,0.8s
KBZ Khabaz 46.47 308*ce*P **P** **02 19 30.8 +2.6**
KBZ pmax pmax
comp=Z,15nm,1.1s
SHA1 Shidzhatmaz 46.64 308 *i* P **P** **02 19 31.6 +1.7**
KIV Kislovodsk 46.65 309 ⇓P **P** **02 19 32.5 +2.7**
KIV Kislovodsk 46.65 309 P **P** **02 19 31.5 +1.7**
KIV IAmb IAmb 02 19 58.8
comp=Z,48nm,1.0s
KIV Kislovodsk 46.65 309 *e*P **P** **02 19 32.0 +2.2**
KIV *e**PP **pP** **02 19 57.5 +0.9**
KIV *e*S **S** **02 26 14.7 +4.1**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,32nm,16.0s
KIV Kislovodsk 46.65 309 P **P** **02 19 31.5 +1.7**
KIV pP **pP** **02 19 56.9 +0.3**
GURO Guroymak-BITLI 46.66 301 P **P** **02 19 32.3 +2.3**
KIRV Kirov 47.08 330 S **S** **02 26 16.0 0.0**
comp=Z,8.0nm,0.6s,baz=234,slow=20,SNR=8.3
KIRV Kirov 47.08 330*ce*P **P** **02 19 35.1 +2.4**
BCA Borcka 47.15 305 ⇓P **P** **02 19 36.2 +2.6**
BAKI Biak 47.41 116 P **P** **02 19 35.9 0.0**
comp=Z,2µmcomp=Z,176nm,0.9s
MARD Mardin 47.62 299 P **P** **02 19 39.2 +1.7**
MARD IAmb IAmb 02 20 06.9
comp=Z,32nm,0.9s
SAUI Saumlaki 47.84 127 P **P** **02 19 40.5 +1.3**
comp=Z,89nm,0.5s
GUMO Guam 48.50 93 LR LR 02 41 59.0
comp=Z,38nm,18.2s,baz=289,slow=38
VRH Novokhopyorsk 48.65 318 *e*P **P** **02 19 45.1 +0.1**
VRH *e*S **S** **02 26 36.1 -2.3**
VRH pmax pmax
comp=Z,10.0nm,0.8s
VRH smax smax
comp=N,230nm,2.0s
SMPI Sarmi 50.01 115 P **P** **02 19 56.4 +0.6**
comp=N,117nm,0.9s
PRGR Permogore 50.15 332 ⇓*i*P **P** **02 19 57.8 +1.6**
PRGR *e**PP **pP** **02 20 23.3 +0.2**
PRGR *i* S **S** **02 26 59.7 +0.7**
VSR Storozhevoye 50.22 318 *e*P **P** **02 19 57.2 +0.3**
VSR *e**PP **pP** **02 20 21.9 -2.1**
VSR *e*S **S** **02 26 57.8 -2.5**
VSR pmax pmax
comp=Z,10.0nm,1.5s
VSR smax smax
comp=N,100nm,1.1s
VORR Voronezh 50.29 318 *e*P **P** **02 19 57.5 +0.1**
VORR *e**PP **pP** **02 20 26.2 +1.7**
VORR *e*S **S** **02 26 59.2 -2.0**
VORR pmax pmax
comp=Z,20nm,0.4s
VORR smax smax
comp=N,150nm,0.7s
ANN Anapa 50.49 309 *e*P **P** **02 19 59.9 +0.9**
ANN pmax pmax
comp=Z,30nm,0.9s
ATD Arta Tunnel 50.53 265 LR LR 02 41 06.7
comp=Z,58nm,18.3s,baz=341,slow=35
LPSR Galich'ya Gora 50.65 319 *e*P **P** **02 20 00.9 +0.8**
LPSR *e**PP **pP** **02 20 26.5 -0.8**
LPSR *e*S **S** **02 27 03.5 -2.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR smax smax
comp=N,40nm,1.3s
TOKA Tokat 51.00 303 P **P** **02 20 04.5 +1.5**
TOKA IAmb IAmb 02 20 06.5
comp=Z,42nm,1.4s
MBWA Marble Bar 51.03 149 P **P** **02 20 03.2 -0.1**
MBWA Marble Bar 51.03 149 P **P** **02 20 03.4 +0.1**
MBWA Marble Bar 51.03 149 P **P** **02 20 03.1 -0.1**
MBWA pP **pP** **02 20 27.5 -2.7**
MBWA x x 02 20 32.6
MTN Manton Dam 51.08 132 P **P** **02 20 02.3 -1.5**
MTN IAmb IAmb 02 20 03.5
comp=Z,16nm,0.7s
PSA00 Pilbara Seismi 51.44 149 P **P** **02 20 06.4 0.0**
PSA00 Pilbara Seismi 51.44 149 P **P** **02 20 05.7 -0.6**
PSA00 IAmb IAmb 02 20 07.2
comp=Z,29nm,0.9s
PSA00 Pilbara Seismi 51.44 149 P **P** **02 20 06.3 0.0**
BNN Bunyan 51.50 301 P **P** **02 20 07.4 +0.5**
GENI Genyem 51.55 114 P **P** **02 20 08.1 +0.7**
comp=Z,9µmcomp=Z,549nm,0.9s
GENI pP pP 02 20 16.4 -18
comp=Z,9µmcomp=Z,549nm,0.9s
FITZ Fitzroy Crossi 51.57 141 P **P** **02 20 07.2 -0.1**
FITZ Fitzroy Crossi 51.57 141 P **P** **02 20 07.3 -0.1**
TIXI Tiksi 51.59 13 P **P** **02 20 06.3 -0.5**
comp=Z,27nm,0.6s,baz=127,slow=7.2,SNR=14
comp=Z,27nm,0.6s
TIXI Tiksi 51.59 13 P **P** **02 20 06.3 -0.5**
TIXI Tiksi 51.59 13*ce*P **P** **02 20 07.6 +0.8**
TIXI pmax pmax
comp=Z,42nm,1.7s
TIXI Tiksi 51.59 13 P **P** **02 20 06.3 -0.5**
TIXI pP **pP** **02 20 34.0 +0.2**
KNRA Kununurra 51.59 136 P **P** **02 20 07.0 -0.5**
KNRA Kununurra 51.59 136 P **P** **02 20 07.5 0.0**
DIKM Dikmen 51.93 305 ⇑P **P** **02 20 11.4 +1.5**
MOS Moscow 52.10 323 *e*P **P** **02 20 07.8 -3.0**
MOS *e**PP **pP** **02 20 35.3 -2.7**
MOS *e* 02 21 29.7
MOS *e* 02 23 27.7
MOS *e*S **S** **02 27 22.3 -3.7**
MOS *e**SS **sS** **02 28 11.1 -1.4**
MOS *e* 02 29 48.1
MOS pmax pmax
comp=Z,27nm,0.9s
MMAI Mount Meron Ar 52.23 294 LR LR 02 45 13.0
comp=Z,90nm,19.4s,baz=216,slow=39
GHAJ Ghor Haditha 52.30 292 P **P** **02 20 14.6 +1.9**
GHAJ IAmb IAmb 02 20 51.3
comp=Z,33nm,1.1s
OBN Obninsk 52.55 322 LR LR 02 45 33.4
comp=Z,28nm,20.9s,baz=147,slow=39
OBN Obninsk 52.55 322 *i* P **P** **02 20 14.4 +0.3**
OBN *i* *PP **pP** **02 20 40.0 -1.5**
OBN *i* 02 21 23.6
OBN *i* 02 22 14.0
OBN *i* S **S** **02 27 29.3 -2.8**
OBN pmax pmax
comp=Z,16nm,1.3s
KLMR Klimovskoe 52.58 330 *e*P **P** **02 20 14.5 +0.2**
KLMR *e**PP **pP** **02 20 40.6 -1.0**
KLMR *e**SP **sP** **02 20 52.7 -1.6**
KLMR pmax pmax
comp=Z,16nm,0.9s
KLMR Klimovskoe 52.58 330 *e*P **P** **02 20 14.5 +0.2**
KLMR AMP 02 20 20.2
comp=Z,16nm,0.9s
KLMR *ep*P **pP** **02 20 40.6 -1.0**
KLMR *es*P **sP** **02 20 52.8 -1.6**
SIM Simferopol' 52.85 309 *e*P **P** **02 20 17.0 +0.4**
SIM *e**PP **pP** **02 20 43.3 -0.6**
SIM *e* 02 21 18.5
SIM *e*S **S** **02 27 37.4 +0.8**
SIM *e* 02 29 53.9
SIM pmax pmax
comp=Z,29nm,1.4s
SIM pmax pmax
comp=Z,60nm,1.3s
SIM pmax pmax
comp=Z,30nm,1.4s
SIM smax smax
comp=E,77nm,1.6s
SIM pmax pmax
comp=E,69nm,1.9s
SIM pmax pmax
comp=E,85nm,2.0s
BZK Bozkurt 52.87 305 ⇑P **P** **02 20 17.1 +0.3**
BZK Bozkurt 52.87 305 P **P** **02 20 16.9 +0.1**
BZK **pP** **02 20 43.6 -0.5**
EIL Elat 53.05 290 LR LR 02 48 41.7
comp=E,107nm,18.6s,baz=88,slow=42
ILGA Ilgaz 53.10 304 P **P** **02 20 20.0 +1.3**
BR131 Keskin Array S 53.19 303 P **P** **02 20 20.4 +1.0**
BR131 IAmb IAmb 02 20 48.1
comp=Z,22nm,1.1s
BR131 Keskin Array S 53.19 303 P **P** **02 20 20.4 +1.0**
BR131 pmax pmax
comp=Z,22nm,1.2s
BRTR Keskin Array B 53.19 303 P **P** **02 20 20.6 +1.3**
comp=Z,3.4nm,0.6s,baz=115,slow=6.4,SNR=21
BRTR S **S** **02 27 43.0 +1.3**
comp=Z,1.1nm,0.8s,baz=78,slow=12,SNR=5.9
comp=Z,3.4nm,0.6s
BRTR Keskin Array B 53.19 303 P **P** **02 20 20.9 +1.5**
ANTO Ankara 53.83 303 ⇓P **P** **02 20 25.6 +1.6**
ANTO Ankara 53.83 303 P **P** **02 20 25.5 +1.6**
ANTO IAmb IAmb 02 20 26.6
comp=Z,18nm,0.8s
ANTO Ankara 53.83 303 P **P** **02 20 25.5 +1.6**
ANTO pmax pmax
comp=Z,18nm,0.8s
ANTO Ankara 53.83 303 P **P** **02 20 25.6 +1.6**
BR231 Keskin MP Arra 53.85 303 IAmb IAmb 02 20 26.7
comp=Z,19nm,0.8s
SEY Seymchan 54.48 28*ce*P **P** **02 20 27.8 -0.3**
SEY pmax pmax
comp=Z,8.0nm,1.7s
MEEK Meekatharra 55.34 154 P **P** **02 20 34.9 +0.1**
BORA Eskisehir 55.63 303 IAmb IAmb 02 21 05.5
comp=Z,66nm,1.5s
PURM Purcari 55.86 311 ⇑P **P** **02 20 39.1 +0.8**
AKASG Malin Array Be 56.40 316 P **P** **02 20 42.3 +0.2**
comp=Z,1.0nm,0.3s,baz=80,slow=6.6,SNR=35
AKASG S **S** **02 28 22.1 -1.8**
comp=Z,2.6nm,0.8s,baz=84,slow=14,SNR=12
AKASG LR LR 02 47 45.7
comp=Z,83nm,21.9s,baz=94,slow=39
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 56.40 316 IAmb IAmb 02 21 10.4
comp=Z,24nm,1.4s
AKASG Malin Array Be 56.40 316*ce*P **P** **02 20 42.2 +0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKBB Malin Array Si 56.40 316 IAmb IAmb 02 21 11.3
comp=Z,24nm,0.7s
AKBB Malin Array Si 56.40 316*ce*P **P** **02 20 42.5 +0.4**
MORW Morawa 56.55 157 IAmb IAmb 02 20 44.1
comp=Z,20nm,0.8s
MORW Morawa 56.55 157 P **P** **02 20 43.6 +0.2**
MILM Milestii Mici 56.59 312 ⇓P **P** **02 20 44.1 +0.6**
TLCR 56.61 309 ⇑P **P** **02 20 44.6 +0.9**
LVZ Lovozero 56.89 337 P **P** **02 20 46.7 +1.3**
LVZ IAmb IAmb 02 21 17.6
comp=Z,38nm,0.9s
LVZ Lovozero 56.89 337*ce*P **P** **02 20 47.1 +1.7**
LVZ pmax pmax
comp=Z,38nm,1.3s
LVZ Lovozero 56.89 337 P **P** **02 20 46.4 +1.1**
LVZ pP **pP** **02 21 14.6 +1.7**
LVZ sP **sP** **02 21 29.6 +4.0**
SORM Soroca 56.90 313 ⇑P **P** **02 20 45.0 -0.6**
CFR Carcaliu 57.09 309 ⇓P **P** **02 20 47.8 +0.7**
APA Apatity 57.24 336 ⇑*i*P **P** **02 20 47.2 -0.6**
APA *i* 02 21 18.2
APA *i* S **S** **02 28 27.0 -7.5**
APA pmax pmax
comp=Z,12nm,0.9s
APA MLR MLR
comp=Z,300nm,23.0s
ICOR Ion Corvin 57.37 308 ⇑P **P** **02 20 50.5 +1.5**
MNK Minsk 57.44 321*de*P **P** **02 20 50.8 +1.5**
MNK Minsk 57.44 321 *i* P **P** **02 20 50.8 +1.5**
comp=E,1.0nm,0.8s
MNK *i* P **P** **02 20 50.8 +1.5**
MNK *i* P **P** **02 20 50.8 +1.5**
comp=Z,10.0nm,0.8s,baz=94
MNK *i* pP **pP** **02 21 16.5 -0.5**
MNK *i* PP **PP** **02 23 00.7 +2.9**
MNK *i* PPP PPP 02 24 19.1
MNK *i* S **S** **02 28 43.5 +6.0**
MNK *i* sS **sS** **02 29 25.1 +0.5**
MNK *i* SS **SS** **02 32 35.3 +6.9**
MNK *i* SSS SSS 02 35 09.4
MNK *i* LQ LQ 02 41 41.6
MNK *i* LR LR 02 44 40.9
MNK *i* LRM MLR 02 48 19.0
MNK *i* LRM MLR 02 48 19.0
comp=Z,54nm,19.5s
MNK *i* LRM MLR 02 49 05.1
comp=E,31nm,19.8s
VRI Vrincioaia 58.05 310 ⇑P **P** **02 20 55.9 +2.0**
NACGM Naroch 58.10 321 ⇓*e*P **P** **02 20 54.1 +0.1**
baz=93
PLOR Plostina 58.11 310 ⇑P **P** **02 20 56.3 +2.0**
BLDU Ballidu 58.19 158 P **P** **02 20 54.6 -0.3**
ISR Istrita 58.22 309 ⇑P **P** **02 20 57.3 +2.2**
WRA Warramunga Arr 58.30 135 P **P** **02 20 55.6 -0.2**
comp=E,105nm,0.8s,baz=321,slow=7.5,SNR=305
WRA pP **pP** **02 21 22.0 -1.4**
WRA comp=E,25nm,0.7s,baz=323,slow=7.1,SNR=2.4
PKPPKP **P'P'df** **02 50 38.7 +4.7**
comp=E,5.1nm,1.1s,baz=132,slow=1.0,SNR=8.1
WRAB Tennant Creek 58.30 135 P **P** **02 20 55.7 -0.1**
WRAB Tennant Creek 58.30 135 P **P** **02 20 55.7 -0.1**
WRAB pmax pmax
comp=Z,133nm,0.8s
WRAB Tennant Creek 58.30 135 P **P** **02 20 55.7 -0.1**
VSU Vasula 58.40 325 *e*P **P** **02 20 57.6 +1.5**
COVR Voineasa-Covas 58.42 310 ⇓P **P** **02 20 58.1 +1.7**
BIZ Bicaz 58.44 312 ⇓P **P** **02 20 57.4 +0.8**
WRKA Warakurna 58.58 144 P **P** **02 20 58.0 +0.2**
MLR Muntele Rosu 58.62 310 ⇑P **P** **02 20 59.8 +1.8**
MLR Muntele Rosu 58.62 310 LR LR 02 50 21.3
comp=Z,106nm,18.2s,baz=84,slow=40
OZUR 58.70 311 ⇑P **P** **02 20 59.7 +1.3**
DOPR Dopca 58.98 310 ⇑P **P** **02 21 00.9 +0.6**
BURAR Bucovina Array 59.02 312 IAmb IAmb 02 21 51.9
comp=Z,12nm,0.9s
FIA1 FINESS Array S 59.05 329 IAmb IAmb 02 21 37.9
comp=Z,11nm,0.8s
FINES FINESS Array B 59.05 329 P **P** **02 21 01.4 +1.0**
comp=Z,3.2nm,0.4s,baz=86,slow=6.1,SNR=60
FINES pP **pP** **02 21 28.0 -0.1**
comp=Z,5.8nm,0.6s,baz=101,slow=9.9,SNR=3.5
FINES S **S** **02 28 58.0 -0.3**
comp=Z,1.4nm,0.8s,baz=102,slow=10,SNR=2.3
FINES LR LR 02 48 52.3
comp=Z,180nm,19.2s,baz=98,slow=38
comp=Z,3.2nm,0.4s
FINES FINESS Array B 59.05 329*ce*P **P** **02 21 01.3 +0.8**
FINES pmax pmax
comp=Z,3.0nm,0.4s
COPA Copaceanca 59.22 308 ⇓P **P** **02 21 03.7 +1.8**
VOIR 59.25 310 ⇓P **P** **02 21 02.9 +0.6**
RDO Rodhopi 59.26 305 IAmb IAmb 02 21 31.3
comp=Z,52nm,1.4s
MUN Mundaring 59.27 159 P **P** **02 21 02.1 -0.2**
HUMR Humele 59.36 309 ⇓P **P** **02 21 03.9 +0.9**
KLBR Kellerberrin 59.45 157 P **P** **02 21 03.1 -0.5**
ARR Arges 59.55 310 ⇓P **P** **02 21 05.3 +1.0**
LVV L'vov 59.72 315 *e*P **P** **02 21 05.7 +0.4**
LVV *e**PP **pP** **02 21 30.8 -2.5**
LVV *e* 02 21 55.0
LVV pmax pmax
comp=Z,30nm,1.2s
PABE Paberze 59.74 322 *e*P **P** **02 21 05.9 +0.7**
MEF Metsahovi 59.75 327 *e*P **P** **02 21 06.7 +1.4**
APE Apeiranthos 59.77 300 ⇑P **P** **02 21 05.6 -0.3**
SANT Santorini 59.93 299 ⇓P **P** **02 21 07.2 +0.2**
SANT Santorini 59.93 299 P **P** **02 21 07.3 +0.2**
MTSE Matsula 59.95 325 *e*P **P** **02 21 07.4 +0.7**
KEV Kevo 60.07 338 P **P** **02 21 08.7 +1.4**
KEV pP **pP** **02 21 36.7 +1.7**
KEV sP **sP** **02 21 47.4 -0.2**
LOT Lotru 60.15 310 ⇑P **P** **02 21 09.3 +0.9**
CJR Cluj-Napoca 60.17 311 ⇑P **P** **02 21 10.3 +1.8**
CBBR Cluj-Babes-Bol 60.20 311 ⇓P **P** **02 21 10.0 +1.4**
NWAO Narrogin (SRO) 60.48 158 P **P** **02 21 10.3 -0.3**
NWAO IAmb IAmb 02 21 10.4
comp=Z,26nm,0.7s
NWAO Narrogin (SRO) 60.48 158 P **P** **02 21 10.3 -0.3**
NWAO pmax pmax
comp=Z,26nm,0.7s
NWAO Narrogin (SRO) 60.48 158 P **P** **02 21 09.8 -0.7**
ARA0 ARCESS Array S 60.54 338 *e*P **P** **02 21 12.5 +1.9**
ARA0 IAmb IAmb 02 21 12.9
comp=Z,19nm,0.9s
ARCES ARCESS Array B 60.54 338 P **P** **02 21 12.1 +1.5**
comp=Z,15nm,0.8s,baz=94,slow=7.2,SNR=34
ARCES pP **pP** **02 21 40.6 +2.3**
comp=Z,16nm,0.7s,baz=93,slow=6.1,SNR=8.1
ARCES ScP **ScP** **02 25 45.9 +1.2**
comp=Z,2.3nm,0.9s,baz=96,slow=5.5,SNR=3.6
ARCES LR LR 02 49 37.4
comp=Z,153nm,20.4s,baz=84,slow=38
comp=Z,15nm,0.8s
ARCES ARCESS Array B 60.54 338 P **P** **02 21 12.2 +1.6**
ARCES IAmb IAmb 02 21 43.0
comp=Z,24nm,0.9s
LODK Lodwar 60.55 260 P **P** **02 21 12.4 +0.7**
IDI Anoyia 60.56 298 ⇓P **P** **02 21 11.7 +0.3**
IDI Anoyia 60.56 298 LR LR 02 52 40.8
comp=Z,23nm,19.1s,baz=108,slow=41
IDI Anoyia 60.56 298 P **P** **02 21 11.9 +0.5**
IDI IAmb IAmb 02 21 40.2
comp=Z,40nm,1.3s
COEN Coen 60.58 123 IAmb IAmb 02 21 12.1
comp=Z,9.4nm,0.7s
COEN Coen 60.58 123 P **P** **02 21 10.5 -1.1**
KWP Kalwaria Pacla 60.59 315 *e*P **P** **02 21 12.3 +1.0**
KWP *ep*P **pP** **02 21 39.0 -0.3**
KWP Kalwaria Pacla 60.59 315 P **P** **02 21 12.6 +1.4**
KWP Kalwaria Pacla 60.59 315 P **P** **02 21 12.6 +1.4**
KWP pmax pmax
comp=Z,461nm,0.9s
DEV Deva 60.72 311 ⇓P **P** **02 21 14.2 +2.1**
AS31 Alice Springs 60.75 138 IAmb IAmb 02 21 13.6
comp=Z,24nm,0.6s
ASAR Alice Springs 60.75 138 P **P** **02 21 12.8 +0.1**
comp=Z,64nm,0.7s,baz=320,slow=6.8,SNR=567
ASAR pP **pP** **02 21 41.3 +0.8**
comp=Z,21nm,0.8s,baz=317,slow=6.3,SNR=5.8
ASAR PKPPKP **P'P'df** **02 50 30.4 +0.4**
comp=Z,9.1nm,1.0s,baz=123,slow=2.8,SNR=4.6
comp=Z,64nm,0.7s
VTS Vitosha 60.81 307 ⇓P **P** **02 21 14.1 +1.1**
VTS Vitosha 60.81 307 P **P** **02 21 14.5 +1.5**
VTS IAmb IAmb 02 21 15.4
comp=Z,15nm,1.0s
VTS Vitosha 60.81 307 P **P** **02 21 14.5 +1.5**
VTS pmax pmax
comp=Z,15nm,1.0s
PUNG Punghina 60.85 309 ⇑P **P** **02 21 14.9 +1.8**
GZR Gura Zlata 60.85 310 ⇑P **P** **02 21 14.1 +0.9**
KMBO Kilima Mbogo 60.90 254 P **P** **02 21 15.7 +1.5**
comp=Z,4.4nm,0.6s,baz=48,slow=12,SNR=18
KMBO LR LR 02 47 17.7
comp=Z,64nm,19.3s,baz=91,slow=36
comp=Z,4.4nm,0.6s
KMBO Kilima Mbogo 60.90 254 P **P** **02 21 15.3 +1.1**
KMBO Kilima Mbogo 60.90 254 *i* P **P** **02 21 15.6 +1.4**
KMBO pmax pmax
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 60.90 254 P **P** **02 21 15.6 +1.4**
KMBO pP **pP** **02 21 42.2 +0.1**
KOLS Kolonicke sedl 60.91 314 *e*P **P** **02 21 14.7 +1.2**
KOLS pmax pmax
comp=Z,3.0nm,0.7s
KOLS Kolonicke sedl 60.91 314 *e*P **P** **02 21 14.7 +1.2**
UZH Uzhgorod 60.92 314 *e*P **P** **02 21 13.8 +0.3**
UZH *i* 02 21 40.8
UZH *e* 02 22 02.6
RAF Rauma 61.10 328 *e*P **P** **02 21 14.8 +0.3**
BLKB Belogradchik 61.10 308 ⇓P **P** **02 21 15.6 +0.8**
HERR Herculane 61.15 309 ⇓P **P** **02 21 16.3 +1.2**
BILL Bilibino 61.24 24 *i* P **P** **02 21 12.8 -2.5**
BILL *i* *PP **pP** **02 21 41.4 -1.7**
BILL pmax pmax
comp=Z,7.0nm,0.5s
KTK1 Kautokeino 61.25 337 *e*P **P** **02 21 16.8 +1.4**
KTK1 IAmb IAmb 02 21 17.4
comp=Z,43nm,1.0s
HAMF Hammerfest 61.35 339 *e*P **P** **02 21 18.0 +2.0**
HAMF IAmb IAmb 02 21 18.4
comp=Z,60nm,0.7s
CRVS Cervenica-Dubn 61.45 314 *e*P **P** **02 21 19.2 +2.1**
CRVS pmax pmax
comp=Z,19nm,1.1s
CRVS Cervenica-Dubn 61.45 314 *e*P **P** **02 21 19.2 +2.1**
SIRR Siria 61.54 311 ⇓P **P** **02 21 19.1 +1.4**
BZS Buzias 61.64 310 ⇑P **P** **02 21 19.4 +1.0**

MDVR Moldovita 61.66 309 ⇓P **P 02 21 19.7 +1.1**
BOVS Bovan 61.80 308 ⇑P **P 02 21 19.6 +0.1**
AGG Agios Georgios 61.98 303 IAmb IAmb 02 21 21.4
comp=Z,55nm,1.1s
KECS Kecovo 62.13 314 *e*P **P 02 21 23.4 +1.8**
KECS Kecovo 62.13 314 *e*P **P 02 21 23.4 +1.8**
NIE Niedzica 62.17 315 *e*P **P 02 21 23.6 +1.7**
QIS Mount Isa 62.24 131 P **P 02 21 22.4 -0.3**
JETT Jettan, Norway 62.31 338 *e*P **P 02 21 23.9 +1.4**
JETT IAmb IAmb 02 21 25.5
comp=Z,34nm,0.7s
OJC Ojcow 62.43 316 *e*P **P 02 21 23.3 -0.3**
OJC *ep*P **pP 02 21 51.0 -0.5**
OJC *e*S **S 02 29 36.9 -4.7**
OJC Ojcow 62.43 316 pP 02 21 51.9 +0.3
PSZ Piszkesteto 62.58 313 ⇑P **P 02 21 25.6 +0.9**
LANS Liptovska Anna 62.74 314 *e*P **P 02 21 26.7 +1.0**
LANS pmax pmax
comp=Z,4.0nm,1.3s
LANS Liptovska Anna 62.74 314 *e*P **P 02 21 26.7 +1.0**
TRO Tromso 62.84 338 *e*P **P 02 21 27.1 +1.2**
TRO IAmb IAmb 02 21 27.7
comp=Z,38nm,0.8s
ABPO Ambohimpanom 62.84 231 P **P 02 21 27.9 +1.0**
ABPO IAmb IAmb 02 21 28.7
comp=Z,28nm,0.9s
ABPO Ambohimpanom 62.84 231 P **P 02 21 27.9 +1.0**
ABPO pmax pmax
comp=Z,28nm,1.0s
ABPO Ambohimpanom 62.84 231 P **P 02 21 27.6 +0.6**
FRGS Fruska Gora 62.96 310 ⇑P **P 02 21 28.1 +0.9**
FORT Forrest 63.12 148 P **P 02 21 27.9 -0.3**
VYHS Vyhne 63.22 314 *e*P **P 02 21 29.5 +0.6**
VYHS pmax pmax
comp=Z,9.0nm,1.2s
VYHS Vyhne 63.22 314 *e*P **P 02 21 29.4 +0.6**
OKC Ostrava-Krasne 63.52 315 *e*P **P 02 21 32.1 +1.3**
OKC *e* 02 21 57.3
OKC Ostrava-Krasne 63.52 315 *e*P **P 02 21 32.1 +1.3**
OKC *ep*P **pP 02 21 57.3 -1.6**
MORH Mrgy, Hungar 63.63 311 P **P 02 21 31.4 -0.2**
SRO Srobarova 63.65 313 *e*P **P 02 21 33.0 +1.3**
SRO pmax pmax
comp=Z,15nm,1.0s
SRO Srobarova 63.65 313 *e*P **P 02 21 32.9 +1.3**
MORC Moravsky Berou 63.92 315 *e*P **P 02 21 34.5 +1.0**
MORC *ep*P **pP 02 22 01.1 -0.4**
JAVC Velka Javorina 63.95 314 *e*P **P 02 21 35.5 +1.8**
KOVH Kovagotottos 64.02 311 P **P 02 21 34.5 +0.4**
FAUS Fauske 64.09 335 *e*P **P 02 21 35.2 +1.1**
FAUS IAmb IAmb 02 21 35.7
comp=Z,33nm,0.9s
STEI Steigen 64.11 336 *e*P **P 02 21 35.3 +1.0**
STEI IAmb IAmb 02 21 35.8
comp=Z,52nm,1.4s
MPLH Magyarpolny 64.25 312 P **P 02 21 35.8 +0.2**
MODS Modra-Piesok 64.27 314 *e*P **P 02 21 35.8 +0.1**
MODS pmax pmax
comp=Z,18nm,1.1s
MODS Modra-Piesok 64.27 314 *e*P **P 02 21 35.8 +0.1**
KRLC Kraliky 64.37 316 *e*P **P 02 21 37.0 +0.6**
KRLC *e* 02 22 03.8
KRLC Kraliky 64.37 316 *e*P **P 02 21 37.0 +0.6**
KRLC *ex* x 02 22 03.8
SPA0 Spitsbergen Ar 64.38 347 *e*P **P 02 21 37.7 +1.7**
SPA0 IAmb IAmb 02 21 38.4
comp=Z,38nm,1.0s
ZST Bratislava 64.41 314 *e*P **P 02 21 36.9 +0.3**
ZST pmax pmax
comp=Z,30nm,1.2s
ZST Bratislava 64.41 314 *e*P **P 02 21 36.9 +0.3**
MOR8 Moi Rana 64.44 334 *e*P **P 02 21 36.6 +0.1**
MOR8 IAmb IAmb 02 21 37.4
comp=Z,37nm,0.8s
HSPB Hornsund (broa 64.44 346 *e*P **P 02 21 37.8 +1.5**
HSPB Hornsund (broa 64.44 346 *e*P **P 02 21 37.8 +1.5**
KSP Ksiaz 64.59 317 *e*P **P 02 21 38.9 +1.1**
KSP *ep*P **pP 02 22 05.3 -0.6**
VRAC Vranov 64.59 315 LR LR 02 53 20.5
comp=Z,75nm,20.1s,baz=82,slow=39
VRAC Vranov 64.59 315 *e*P **P 02 21 39.1 +1.3**
VRAC *ep*P **pP 02 22 05.1 -0.8**
DPC Dobruska-Polom 64.63 316 *e*P **P 02 21 38.5 +0.4**
DPC *e* 02 22 05.8
DPC Dobruska-Polom 64.63 316 *e*P **P 02 21 38.5 +0.4**
DPC *ep*P **pP 02 22 05.8 -0.5**
OSTC Ostas 64.67 316 *e*P **P 02 21 39.4 +1.1**
OSTC *ep*P **pP 02 22 06.9 +0.4**
LOF Lofoten 64.74 336 *e*P **P 02 21 39.0 +0.5**
LOF IAmb IAmb 02 21 39.5
comp=Z,62nm,1.1s
KRUC Moravsky 64.75 315 *e*P **P 02 21 39.8 +0.9**
KRUC *ep*P **pP 02 22 06.3 -0.7**
KONS Konsvik 64.96 334 *e*P **P 02 21 41.2 +1.4**
KONS IAmb IAmb 02 21 41.3
comp=Z,32nm,1.1s
RONA Rosalia, Austr 65.01 313 *e*P **P 02 21 41.3 +0.6**
comp=Z,8.4nm,1.1s
RONA *e*P **pP 02 22 08.2 -0.8**
comp=Z,6.5nm,1.0s
VOI Vohitsoka 65.05 229 P **P 02 21 41.9 +0.7**
VOI IAmb IAmb 02 21 42.5
comp=Z,37nm,0.9s
VOI Vohitsoka 65.05 229 P **P 02 21 41.8 +0.7**
HFS Hagfors 65.10 327 LR LR 02 51 54.0
comp=Z,148nm,18.1s,baz=90,slow=37
CONA Conrad Observa 65.27 313 *i* P **P 02 21 42.8 +0.5**
comp=Z,12nm,1.1s,SNR=10
CONA *e*P **pP 02 22 10.1 -0.4**
comp=Z,22nm,1.8s
TREC Trest 65.31 315 *e*P **P 02 21 43.7 +1.2**
TREC *e* 02 22 10.5
TREC Trest 65.31 315 *e*P **P 02 21 43.7 +1.2**
TREC *ep*P **pP 02 22 10.5 -0.2**
DEL Delary 65.36 323 *i* P **P 02 21 43.0 +0.4**
A251A Rujevac 65.44 310 *i* P **P 02 21 44.8 +1.4**
NSS Namsos 65.55 332 *e*P **P 02 21 44.7 +1.0**
NSS IAmb IAmb 02 21 45.5
comp=Z,19nm,0.9s
ARSA Arzberg 65.60 313 *e*P **P 02 21 45.4 +1.0**
comp=Z,5.2nm,0.9s
ARSA *e*P **pP 02 22 12.3 -0.5**
comp=Z,7.6nm,1.1s
PVCC Panska Ves 65.72 316 *e*P **P 02 21 46.7 +1.6**
PVCC Panska Ves 65.72 316 *e*P **P 02 21 46.7 +1.6**
PRU Pruhonice 65.81 316 *e*P **P 02 21 46.8 +1.1**
PRU *e* 02 22 14.2
PRU Pruhonice 65.81 316 *e*P **P 02 21 46.8 +1.1**
PRU *ep*P **pP 02 22 14.2 +0.3**
BORU Boraas 65.83 324 *i* P **P 02 21 46.8 +1.2**
FABU Falkenberg 65.93 324 *i* P **P 02 21 46.8 +0.5**
NC405 NORSAR Array S 65.97 328 IAmb IAmb 02 21 48.5
comp=Z,69nm,1.2s
SOKA Soboth 66.03 312 *e*P **P 02 21 47.6 +0.4**
comp=Z,8.3nm,0.9s
SOKA *e*P **PcP 02 22 16.5 -0.4**
comp=Z,8.5nm,1.1s
BRG Berggiesshubel 66.06 317 *i* P **P 02 21 48.4 +1.1**
BRG Amp 02 21 49.6
comp=Z,17nm,1.0s
BRG *ex* x 02 22 11.3
BRG Amp 02 22 14.1
comp=Z,4.5nm,0.9s
BRG *ex* x 02 22 18.2
BRG Amp 02 22 18.9
comp=Z,14nm,1.0s
BRG *ex* x 02 22 35.4
BRG Amp 02 22 39.0
comp=Z,6.8nm,0.8s
BRG Amp 02 49 29.0
comp=Z,0.1nm,19.6s
BRG Amp 02 49 44.0
comp=E,0.1nm,23.4s
BRG Amp 02 49 47.0
comp=N,0.1nm,21.8s
BRG Berggiesshubel 66.06 317 *i* P **P 02 21 48.3 +1.1**
BRG *e* 02 22 18.2
BRG *e* 02 22 35.3
BRG pmax pmax
comp=Z,17nm,1.0s
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,14nm,1.0s
BRG pmax pmax
comp=Z,7.0nm,0.8s
BRG MLR MLR
comp=E,87nm,19.6s
BRG MLR MLR
comp=N,81nm,17.0s
BRG MLR MLR
comp=Z,132nm,21.9s
MORI Morici 66.06 309 *i* P **P 02 21 47.2 -0.1**
NC602 NORSAR Array S 66.10 328 IAmb IAmb 02 21 48.9
comp=Z,49nm,1.1s
NC602 NORSAR Array S 66.10 328 *e*P **P 02 21 48.5 +1.2**
NC602 IAmb IAmb 02 21 48.6
comp=Z,27nm,1.0s
NC303 NORSAR Array S 66.13 328 IAmb IAmb 02 21 49.3
comp=Z,29nm,0.9s
CKRC Cesky Krumlov 66.15 315 *e*P **P 02 21 48.9 +1.0**
CKRC *ex* x 02 22 13.8
PDKS Podkum 66.16 312 *i* P **P 02 21 49.1 +1.1**
NB201 NORSAR Array S 66.19 328 IAmb IAmb 02 21 49.6
comp=Z,40nm,1.1s
NB2 NORSAR Subarra 66.22 328 P **P 02 21 48.3 +0.1**
comp=Z,29nm,1.0s,baz=83,slow=6.5
NB2 NORSAR Subarra 66.22 328 P **P 02 21 48.3 +0.1**
baz=83,slow=6.5
NOA NORSAR Array B 66.22 328 P **P 02 21 48.5 +0.3**
comp=Z,14nm,0.9s,baz=84,slow=6.3,SNR=74
NOA pP **PcP 02 22 17.1 -0.3**
comp=Z,9.5nm,0.8s,baz=84,slow=6.6,SNR=7.5
NOA S **S 02 30 35.1 +7.1**
comp=Z,0.6nm,0.7s,baz=95,slow=14,SNR=3.3
NOA LR LR 02 53 12.7
comp=Z,125nm,18.5s,baz=95,slow=38
comp=Z,14nm,0.9s
MOA Molln 66.34 314 *i* P **P 02 21 50.0 +0.9**
comp=Z,13nm,0.9s,SNR=7.8
MOA *e*P **PcP 02 22 18.4 +0.2**
comp=Z,16nm,1.2s
OBKA Obir 66.39 312 *e*P **P 02 21 50.7 +1.2**
comp=Z,10nm,0.9s
OBKA *e*P **pP 02 22 15.5 -2.6**
comp=Z,12nm,1.1s
NAO01 NORSAR Array S 66.41 328 IAmb IAmb 02 22 22.6
comp=Z,36nm,1.1s
NC204 NORSAR Array S 66.42 328 IAmb IAmb 02 21 51.1
comp=Z,45nm,0.9s
NBO00 NORSAR Array S 66.44 328 IAmb IAmb 02 21 51.4
comp=Z,78nm,1.6s
MBAR Mbarara 66.46 258 LR LR 02 50 49.3
comp=Z,137nm,20.0s,baz=74,slow=36
MBAR Mbarara 66.46 258 pP 02 22 20.4 +1.5
MBAR Mbarara 66.46 258 *ce*P **P 02 21 52.4 +1.8**
MBAR pmax pmax
comp=Z,43nm,1.7s
MBAR Mbarara 66.46 258 P **P 02 21 52.2 +1.6**
LJU Ljubljana 66.48 312 *i* P **P 02 21 51.0 +1.0**
GEC2 GERESS Array S 66.54 315 IAmb IAmb 02 21 52.7
comp=Z,20nm,1.0s
GERES GERESS Array B 66.54 315 P **P 02 21 51.9 +1.4**
comp=Z,9.0nm,0.8s,baz=91,slow=5.3,SNR=81
GERES LR LR 02 57 54.1
comp=Z,123nm,20.8s,baz=61,slow=42
comp=Z,9.0nm,0.8s
KHC Kasperske Hory 66.57 315 *e*P **P 02 21 51.3 +0.7**
KHC Kasperske Hory 66.57 315 *e*P **P 02 21 51.3 +0.7**
KHC *ep*P pP 02 22 05.9 -1.2
CLL Collm 66.57 317 ⇑*i*P **P 02 21 51.1 +0.6**
CLL *e**PP **pP 02 22 17.0 -1.8**
CLL *e*S S 02 30 23.0 -9.5
CLL pmax pmax
comp=Z,16nm,1.2s
CLL Collm 66.57 317 ⇑*i*P **P 02 21 51.1 +0.6**
comp=Z,16nm,1.2s
CLL *ep*P **pP 02 22 17.0 -1.8**
CLL *es*P **sP 02 22 30.0 -1.3**
CLL *i* x x 02 22 42.9
CLL *e*PP **PP 02 24 15.0 -3.2**
CLL *e*S **S 02 30 30.0 -2.5**
CLL *e*PS **PnS 02 31 11.0 +0.7**
CLL *es*S **SS 02 34 42.0 -9.3**
CLL *es*SS 02 35 40.0
CLL *e*(SSS) 02 37 42.0
OSL Oslo 66.60 327 *e*P **P 02 21 51.7 +1.2**
OSL IAmb IAmb 02 21 52.3
comp=Z,66nm,1.0s
CEY Cerknica 66.61 311 *i* P **P 02 21 51.6 +0.8**
CTAO Charters Tower 66.67 127 P **P 02 21 51.4 -0.1**
CTAO IAmb IAmb 02 21 52.5
comp=Z,49nm,1.1s
CTAO Charters Tower 66.67 127 P **P 02 21 51.4 -0.1**
CTAO pmax pmax
comp=Z,49nm,1.1s
CTAO Charters Tower 66.67 127 P **P 02 21 51.4 -0.1**
CTAO pP **pP 02 22 19.3 -0.5**
BIOA Bad Ischl, Aus 66.78 313 *e*P **P 02 21 52.8 +0.8**
comp=Z,8.4nm,1.0s
BIOA *e*P **PcP 02 22 19.9 -0.2**
comp=Z,5.7nm,0.6s
MYKA Terra Mystica 66.98 312 *e*P **P 02 21 54.3 +1.0**
comp=Z,6.7nm,1.2s
MYKA *e*P **PcP 02 22 21.0 +0.1**
comp=Z,5.4nm,1.1s
CEL Celeste 67.07 303 IAmb IAmb 02 21 55.9
comp=Z,36nm,0.9s
KBA Koelnbreinsper 67.09 313 *e*P **P 02 21 54.6 +0.5**
comp=Z,4.4nm,0.6s
KBA *e*P **pP 02 22 22.5 +0.1**
comp=Z,8.4nm,0.7s
NKC Novy Kostel 67.10 316 *e*P **P 02 21 55.1 +1.2**
NKC Novy Kostel 67.10 316 *e*P **P 02 21 55.1 +1.2**
DOMB Dombas 67.12 329 *e*P **P 02 21 55.2 +1.3**
DOMB IAmb IAmb 02 21 55.4
comp=Z,32nm,0.9s
KONO Kongsberg 67.20 327 *ce*P **P 02 21 55.7 +1.4**
KONO pmax pmax
comp=Z,32nm,1.7s
KONO Kongsberg 67.20 327 *e*P **P 02 21 55.3 +0.9**
KONO IAmb IAmb 02 21 56.4
comp=Z,20nm,1.1s
KONO Kongsberg 67.20 327 P **P 02 21 55.0 +0.7**
KONO pP **pP 02 22 22.7 +0.1**
STAL STALIGIAL 67.68 312 IAmb IAmb 02 21 58.7
comp=Z,24nm,0.9s
ABTA Abfaltersbach 67.72 313 *i* P **P 02 21 58.0 0.0**
comp=Z,10nm,1.0s,SNR=5.1
ABTA *e*P **PcP 02 22 22.3 -1.8**
comp=Z,4.6nm,0.8s
MOL Molde 67.74 330 *e*P **P 02 21 58.7 +1.0**
CIMO Cimolais 67.86 312 IAmb IAmb 02 22 26.5
comp=Z,18nm,0.9s
GRA1 Grafenberg Arr 67.98 316 IAmb IAmb 02 22 02.1
comp=Z,79nm,1.9s
GRFO Grafenberg 67.98 316 P **P 02 22 00.6 +1.2**
GRFO IAmb IAmb 02 22 02.1
comp=Z,68nm,1.8s
GRFO Grafenberg 67.98 316 P **P 02 22 00.6 +1.2**
GRFO pmax pmax
comp=Z,68nm,1.8s
AKN Aaknes 68.06 330 *e*P **P 02 22 01.0 +1.3**
NRCA Norcia 68.12 308 IAmb IAmb 02 22 03.7
comp=Z,26nm,0.9s
WTTA Wattenberg 68.20 313 *i* P **P 02 22 01.0 -0.1**
comp=Z,16nm,1.0s,SNR=7.1
WTTA *e*P **PcP 02 22 26.6 +0.4**
comp=Z,14nm,1.5s
WATA Walderalm 68.22 313 *e*P **P 02 22 00.9 -0.3**
comp=Z,8.7nm,0.9s
WATA *e*P **PcP 02 22 27.7 +1.4**
comp=Z,8.5nm,0.8s
MURB Monte Urbino 68.45 309 IAmb IAmb 02 22 05.4
comp=Z,56nm,1.0s
SQTA Sankt Quirin 68.49 313 *i* P **P 02 22 02.8 0.0**
comp=Z,14nm,0.9s,SNR=6.6
SQTA *e*P **PcP 02 22 27.9 +0.5**
comp=Z,14nm,1.0s
MOTA Moosalm 68.54 313 *i* P **P 02 22 03.2 0.0**
comp=Z,23nm,0.9s,SNR=11
MOTA *e*P **PcP 02 22 28.0 +0.4**
comp=Z,9.6nm,0.9s
TEOL Teolo 68.58 311 IAmb IAmb 02 22 04.8
comp=Z,22nm,0.9s
ODD1 Odda 68.64 327 *e*P **P 02 22 04.7 +1.3**
RETA Reutte 68.73 314 *i* P **P 02 22 04.6 +0.3**
comp=Z,18nm,0.9s,SNR=10
RETA *e*P **pP 02 22 31.9 -0.8**
comp=Z,10.0nm,1.3s
FETA Feichten 68.86 313 *i* P **P 02 22 05.3 +0.1**
comp=Z,12nm,0.9s,SNR=8.1
FETA *e*P **PcP 02 22 30.0 +1.1**
comp=Z,9.7nm,1.4s
LATE Laterza 69.11 308 IAmb IAmb 02 22 07.7
comp=Z,64nm,1.1s
BER Bergen 69.18 328 *e*P **P 02 22 07.9 +1.2**
ZCCA Zocca 69.29 310 IAmb IAmb 02 22 14.6
comp=Z,23nm,0.8s
SALO Salr 69.31 312 IAmb IAmb 02 22 09.9
comp=Z,42nm,0.9s
SUE Sulen 69.32 329 *e*P **P 02 22 09.0 +1.6**
DAVA Damuels 69.36 314 *i* P **P 02 22 08.8 +0.5**
comp=Z,19nm,1.1s,SNR=9.7
DAVA *e*P **pP 02 22 34.7 -2.0**
comp=Z,11nm,1.0s
STU Stuttgart 69.47 315 IAmb IAmb 02 22 10.9
comp=Z,35nm,1.0s
DAVOX Davos/Dischmat 69.48 313 LR LR 02 57 21.9
comp=Z,53nm,20.5s,baz=82,slow=40
NOR Nord 69.55 352 *i* P **P 02 22 09.2 +0.6**
NOR *e*P **P 02 22 09.2 +0.6**
NOR IAmb IAmb 02 22 11.9
comp=Z,92nm,1.6s
BFO Black Forest 70.14 315 P **P 02 22 13.1 +0.3**
BFO Black Forest 70.14 315 P **P 02 22 13.1 +0.3**
BFO pmax pmax
comp=Z,8.0nm,1.0s
BFO Black Forest 70.14 315 P **P 02 22 13.4 +0.5**
ECH Echery 70.92 315 P **P 02 22 18.1 +0.5**
BTNL Ternell 70.98 318 *dP* **P 02 22 18.8 +0.9**
comp=Z,9.4nm,1.0s
BTNL *dx* x 02 22 50.1
MEM Membach 71.05 318 *dP* **P 02 22 18.6 +0.3**
MEM *dx* x 02 22 50.8
BHOU Houvegnez 71.11 317 *dP* **P 02 22 19.8 +1.1**
BHOU *dP*cP **PcP 02 22 39.9 +1.7**
WLF Walferdange 71.19 317 IAmb IAmb 02 22 22.0
comp=Z,57nm,0.9s
WLF Walferdange 71.19 317 *dP* **P 02 22 20.9 +1.7**
WLF *dx* x 02 22 52.2
BSTI Sart Tilman 71.32 318 *dP* **P 02 22 21.4 +1.4**
BSTI *dx* x 02 22 52.9
STKA Stephens Creek 71.37 139 P **P 02 22 19.9 -0.4**
comp=Z,34nm,0.9s,baz=320,slow=6.5,SNR=65
comp=Z,34nm,0.9s
STKA Stephens Creek 71.37 139 P **P 02 22 20.0 -0.4**
BCLA Clavier 71.53 318 *dP* **P 02 22 22.9 +1.7**
BCLA *dp*P **pP 02 22 49.4 -0.4**
BCLA *dx* x 02 22 53.1
RCHB Rochefort 71.64 317 *dP* **P 02 22 22.2 +0.4**
comp=Z,7.9nm,0.9s
RCHB *dx* x 02 22 54.0
JMIC Jan Mayen 71.80 340 LR LR 02 58 49.2
comp=Z,26nm,20.6s,baz=76,slow=40
BMRD Maredsous 71.89 318 *dP* **P 02 22 24.2 +0.8**
BMRD *dx* x 02 22 55.9
DAG Danmarks Havn 72.03 347 *i* P **P 02 22 24.0 +0.3**
DAG IAmb IAmb 02 22 25.1
comp=Z,50nm,1.1s
KEST Kesra 72.78 302 P **P 02 22 30.0 +1.0**
comp=Z,35nm,1.0s,baz=295,slow=2.4,SNR=18
comp=Z,35nm,1.0s
KEST Kesra 72.78 302 IAmb IAmb 02 22 31.4
comp=Z,46nm,1.0s
EIDS Eidsvold 73.41 128 IAmb IAmb 02 22 33.8
comp=Z,42nm,1.1s
SSB Saint Sauveur 73.46 313 pP pP 02 23 02.4 +0.8
DBG Daneborg 73.57 345 *e*P **P 02 22 32.4 -0.4**
LMK Market Rasen 73.99 322 *e*P **P 02 22 36.7 +1.1**
LMK IAmb IAmb 02 22 38.2
comp=Z,80nm,0.8s
CLF Chambon-Foret 74.13 316 IAmb IAmb 02 22 38.5
comp=Z,38nm,1.0s
CLF pP pP 02 23 07.8 +2.4
MCD Coleburn Disti 74.22 326 ⇑*e*P **P 02 22 38.2 +1.3**
ESY Stoneypath 74.44 325 *e*P **P 02 22 39.1 +0.9**
EDMD Edmundbyers 74.45 323 *e*P **P 02 22 39.2 +0.9**
EDMD IAmb IAmb 02 22 40.0
comp=Z,36nm,0.8s
EBL Broad Law 74.72 325 *e*P **P 02 22 40.9 +1.1**
EDI Edinburgh 74.75 325 *e*P **P 02 22 40.8 +0.8**
LBWR Ladybower, Pea 74.80 322 *e*P **P 02 22 40.8 +0.5**
LBWR IAmb IAmb 02 22 42.2
comp=Z,42nm,1.0s
EKA Eskdalemuir Ar 74.93 324 LR LR 02 57 53.6
comp=Z,95nm,19.3s,baz=58,slow=37
ESK Eskdalemuir 74.96 324 P **P 02 22 42.5 +1.2**
ESK IAmb IAmb 02 22 43.3
comp=Z,28nm,0.8s
ESK Eskdalemuir 74.96 324 P **P 02 22 42.5 +1.2**
ESK pmax pmax
comp=Z,28nm,0.8s
KESW Keswick, Cumbr 75.16 323 *e*P **P 02 22 43.6 +1.2**
KESW IAmb IAmb 02 22 43.9
comp=Z,41nm,0.9s
KAC Achnashellach 75.28 327 *e*P **P 02 22 43.9 +0.8**
PGBU Glenifferbraes 75.47 325 *e*P **P 02 22 45.4 +1.3**
PGBU IAmb IAmb 02 22 45.7
comp=Z,56nm,1.1s
NEWG New Galloway 75.58 324 *e*P **P 02 22 46.0 +1.2**
HLM1 Long Mynd 75.76 321 *e*P **P 02 22 46.7 +0.9**
LAWE Loch Awe, Argy 75.78 325 *e*P **P 02 22 47.2 +1.3**
LAWE IAmb IAmb 02 22 47.9
comp=Z,32nm,0.9s
FOEL Foel Wylfa 75.81 322 *e*P **P 02 22 46.2 +0.1**
C23K Itkillik River 75.86 19 P **P 02 22 45.7 -0.4**
baz=301
MCH1 Michaelchurch 76.01 321 *e*P **P 02 22 47.7 +0.4**
IOMK Kirk Michael 76.08 323 *e*P **P 02 22 48.9 +1.3**
IOMK IAmb IAmb 02 22 49.8
comp=Z,60nm,0.8s
WME Myndd Eilian 76.25 322 *e*P **P 02 22 49.6 +1.0**
F21K Alatna River 76.26 22 P **P 02 22 48.3 -0.1**
baz=299
EUNU Eureka 76.28 0 IAmb IAmb 02 22 50.9
comp=Z,57nm,0.9s
D23K Nanushuk River 76.29 20 P **P 02 22 48.9 +0.3**
baz=301
WLF1 Llynfaes 76.34 322 *e*P **P 02 22 50.0 +0.9**
WLF1 IAmb IAmb 02 22 51.2
comp=Z,71nm,0.9s
E22K Anaktuvuk Pass 76.36 21 P **P 02 22 49.0 0.0**
baz=300
F22K John River 76.55 21 P **P 02 22 50.0 -0.1**
baz=300
G21K Allakaket 76.59 22 P **P 02 22 50.2 -0.1**
baz=299
D24K Happy Valley 76.75 19 P **P 02 22 51.4 +0.2**
baz=303
TOLK Toolik Lake Re 76.80 20 P **P 02 22 52.0 +0.5**
baz=302
GMM Mts of Mourne 76.84 324 *e*P **P 02 22 53.0 +1.2**
ARMA Armidale 76.86 132 IAmb IAmb 02 22 54.5
comp=Z,34nm,0.8s
RSBS Rosebush, Pemb 77.03 321 *e*P **P 02 22 54.1 +1.1**
RSBS IAmb IAmb 02 22 54.6
comp=Z,27nm,0.7s
H21K Melozitna Rive 77.27 23 P **P 02 22 54.1 0.0**
H21K Melozitna Rive 77.27 23 P **P 02 22 54.1 0.0**
baz=300
MOPA Mopani 77.32 237 ⇑*i*P **P 02 22 55.4 +0.3**
MOPA IAmb IAmb 02 22 56.0
comp=Z,14nm,0.8s
D25K Kavik River 77.39 19 P **P 02 22 55.1 +0.4**
baz=305
E24K Your Creek 77.45 20 P **P 02 22 55.6 +0.4**
baz=303
J20K Nowinta River 77.50 25 P **P 02 22 55.0 -0.4**
baz=299
TOO Toolangi 77.63 141 IAmb IAmb 02 22 57.9
comp=Z,38nm,0.8s
H22K Ishtalitna Cre 77.66 23 P **P 02 22 56.4 +0.1**
baz=301
G23K Bananza Creek 77.69 22 P **P 02 22 55.8 -0.7**
baz=302
BLWY Bulawayo 77.73 241 ⇑*i*P **P 02 22 58.4 +0.8**
BLWY IAmb IAmb 02 22 59.1
comp=Z,206nm,0.8s
I21K Tanana 77.81 23 P **P 02 22 57.0 -0.1**
baz=301
MUSN Musina, Limpop 77.86 239 *e*P **P 02 22 59.2 +1.1**
MUSN IAmb IAmb 02 23 00.2
comp=Z,30nm,0.9s

K20K Telida 77.94 25 P P 02 22 58.0 +0.1
baz=299
F24K Squaw Lake 77.95 20 P P 02 22 58.2 +0.3
baz=304
C27K Jago River 77.97 18 P P 02 22 57.6 -0.3
baz=307
MATP Matopo 77.97 241⇑ *i*P P 02 22 59.8 +0.9
MATP IAmb IAmb 02 23 00.7
comp=Z,183nm,0.8s
O16K Kokwok River B 78.00 30 P P 02 22 57.6 -0.7
baz=297
IWEX Carrickbyrne, 78.02 322 *e*P P 02 23 00.2 +1.6
L19K White Mountain 78.19 27 P P 02 22 59.6 +0.2
baz=299
CAN Canberra 78.24 137 IAmb IAmb 02 23 00.9
comp=Z,31nm,0.8s
H23K Yukon River 78.33 22 P P 02 23 00.1 +0.1
baz=303
MLY Manley 78.33 23 P P 02 22 59.6 -0.5
baz=302
CHUM Lake Minchumin 78.35 25 P P 02 23 00.1 0.0
baz=301
L20K Farewell, AK 78.44 26 P P 02 22 59.5 -1.2
baz=300
G24K Hadweenzic Riv 78.54 21 P P 02 23 00.7 -0.5
baz=304
F25K Christian Rive 78.61 20 P P 02 23 02.2 +0.7
baz=306
CAST Castle Rocks 78.68 25 P P 02 23 01.6 -0.4
baz=301
SUMG Summit 78.72 347 *i* P P 02 23 03.0 +0.5
SUMG IAmb IAmb 02 23 04.3
comp=Z,107nm,1.2s
BPAW Bear Paw Mtn. 78.74 24 P P 02 23 02.2 -0.1
baz=302
H24K Noodor Dome 78.90 22 P P 02 23 03.3 +0.1
baz=304
BORG Borgarnes 78.93 337 LR LR 02 59 44.2
comp=Z,63nm,21.1s,baz=53,slow=37
P17K Kvichak River 78.94 30 P P 02 23 03.5 +0.1
baz=298
F26K Sheenjek River 79.01 19 P P 02 23 03.8 +0.1
baz=307
BMAR Burnt Mountain 79.04 20 P P 02 23 05.1 +1.2
M20K Styx River 79.05 27 P P 02 23 04.0 -0.1
baz=300
POGA Pongola 79.20 234 IAmb IAmb 02 23 07.3
comp=Z,64nm,0.7s
POGA Pongola 79.20 234⇑ *i*P P 02 23 06.2 +0.9
POGA IAmb IAmb 02 23 07.2
comp=Z,64nm,0.7s
MDM Murphy Dome 79.27 23 IAmb IAmb 02 23 55.2
comp=Z,26nm,1.1s
TULEG Thule 79.29 356 *i* P P 02 23 04.0 -1.1
H25K Birch Creek 79.34 21 P P 02 23 05.7 +0.3
baz=306
E27K Coleen River 79.46 18 P P 02 23 06.2 0.0
baz=309
G26K Porcupine Rive 79.58 20 P P 02 23 07.6 +0.9
baz=308
SKT Skwentna 79.65 26 P P 02 23 06.3 -1.0
baz=302
CRLN Carolina, Mapu 79.72 236⇑ *i*P P 02 23 09.4 +1.0
CRLN IAmb IAmb 02 23 10.6
comp=Z,11nm,0.8s
ILAR Eielson Array 79.85 22 P P 02 23 07.0 -1.2
comp=Z,1.5nm,0.7s,baz=301,slow=5.4,SNR=12
ILAR PKKPbc **PKKPbc** 02 41 52.6 -2.3
comp=Z,0.9nm,0.8s,baz=153,slow=4.3,SNR=4.6
ILAR PKPPKP **P'P'df** 02 49 56.2 -2.5
comp=Z,1.1nm,1.0s,baz=181,slow=1.2,SNR=5.3
comp=Z,1.5nm,0.7s
PRP Porcupine Dome 79.88 22 P P 02 23 08.6 0.0
baz=306
LEPH Lephalale, Lim 80.30 239⇑ *i*P P 02 23 12.2 +0.8
LEPH IAmb IAmb 02 23 13.1
comp=Z,61nm,1.0s
G27K Doyon Strip 80.32 20 P P 02 23 11.0 +0.2
baz=309
J25K Salcha River, 80.47 22 P P 02 23 10.1 -1.6
baz=306
H27K Steamboat Moun 80.73 20 P P 02 23 13.3 +0.3
baz=310
NWCL Newcastle 80.76 234⇑ *i*P P 02 23 14.6 +0.7
NWCL IAmb IAmb 02 23 15.4
comp=Z,40nm,0.9s
I26K Coal Creek Min 80.80 21 P P 02 23 13.2 -0.2
baz=308
SLR Silverton 80.90 237⇑ *i*P P 02 23 16.0 +1.3
SLR IAmb IAmb 02 23 16.7
comp=Z,47nm,0.8s
KOUNC Koumac, New Ca 80.97 117 P P 02 23 15.5 +0.5
KOUNC IAmb IAmb 02 23 16.8
comp=Z,21nm,0.9s
I27K Kandik River 81.11 20 P P 02 23 15.5 +0.5
baz=310
J26L Joseph Creek 81.16 22 P P 02 23 15.0 -0.4
baz=308
RIDG Independent Ri 81.18 23 P P 02 23 14.5 -1.0
baz=307
ESDC Sonseca Array 81.31 309 P P 02 23 17.4 +0.7
comp=Z,8.1nm,1.0s,baz=44,slow=5.3,SNR=42
ESDC LR LR 03 06 03.0
comp=Z,23nm,18.3s,baz=130,slow=40
comp=Z,8.1nm,1.0s
SCRK Sand Creek 81.34 22 P P 02 23 16.0 -0.4
baz=308
UPNV Upernavik 81.58 352 *i* P P 02 23 17.9 +0.6
UPNV IAmb IAmb 02 23 18.8
comp=Z,97nm,0.8s
ICESG Greenland Ices 81.58 345 *i* P P 02 23 18.5 +0.7
ICESG IAmb IAmb 02 23 19.6
comp=Z,125nm,1.1s
INK Inuvik 81.58 16 P P 02 23 17.4 0.0
INK IAmb IAmb 02 23 47.7
comp=Z,28nm,1.2s
INK Inuvik 81.58 16 P P 02 23 17.4 0.0
INK pmax pmax
comp=Z,28nm,1.2s
INK Inuvik 81.58 16 P P 02 23 17.1 -0.3
baz=316
PAB San Pablo 81.64 309 P P 02 23 19.0 +0.6
PAB San Pablo 81.64 309 P P 02 23 19.0 +0.6
PAB pmax pmax
comp=Z,32nm,1.6s
EGAK Eagle 81.79 21 IAmb IAmb 02 23 47.6
comp=Z,46nm,2.0s
K27K Chicken 81.96 22 P P 02 23 19.7 +0.1
baz=309
KSR Koster 82.03 237 *e*P P 02 23 21.5 +0.8
KSR IAmb IAmb 02 23 22.6
comp=Z,62nm,0.9s
EPYK Eagle Plains 82.09 19 P P 02 23 19.3 -0.9
baz=314
KLU Klutina 82.13 25 P P 02 23 20.0 -0.6
baz=306
L26K Log Cabin Wild 82.15 23 P P 02 23 21.0 +0.4
baz=308
PRYS Parys 82.23 236⇑ *i*P P 02 23 22.3 +0.6
PRYS IAmb IAmb 02 23 22.6
comp=Z,22nm,0.9s
PBRG Braganca 82.36 312 *e*P P 02 23 22.7 +0.6
N25K Chitina, Valde 82.57 24 P P 02 23 23.1 +0.2
baz=308
LBTB Lobatse 82.61 239 IAmb IAmb 02 23 25.8
comp=Z,63nm,0.8s
LBTB Lobatse 82.61 239⇑ *i*P P 02 23 24.7 +1.0
LBTB IAmb IAmb 02 23 25.5
comp=Z,61nm,0.8s
SNKL Senekal, Frees 82.63 235⇑ *i*P P 02 23 24.4 +0.7
SNKL IAmb IAmb 02 23 25.4
comp=Z,47nm,0.8s
L27K Beaver Creek, 82.67 22 P P 02 23 23.9 +0.7
baz=310
M26K Nabesna, AK 82.67 23 P P 02 23 24.8 +1.5
baz=309
MVO Moncorvo 82.82 312 *e*P P 02 23 25.9 +1.3
C36M Paulatuk 82.95 13 P P 02 23 23.9 -0.6
baz=325
M27K Edge Creek, AK 83.10 23 pP 02 23 54.7 -0.2
M27K Edge Creek, AK 83.10 23 P P 02 23 26.1 +0.4
baz=310
PVRL Vila Real 83.24 312 *e*P P 02 23 28.1 +1.4
POLO Lamas de Olo 83.25 312 *e*P P 02 23 28.0 +1.2
PCAB Cabril 83.27 313 *e*P P 02 23 27.9 +1.1
PGAV Gavieira, Arco 83.32 313 *e*P P 02 23 26.6 -0.5
DZM Mont Dzumac 83.46 117 P P 02 23 28.4 +0.3
comp=Z,10.0nm,1.1s,baz=303,slow=12,SNR=3.2
comp=Z,10.0nm,1.1s
MTE Manteigas 83.51 311 IAmb IAmb 02 23 30.7
comp=Z,38nm,1.3s
MTE Manteigas 83.51 311 *e*P P 02 23 29.0 +0.9
K29M Barlow Dome 83.59 21 P P 02 23 28.0 -0.2
baz=313
PVIS Viseu 83.61 312 *e*P P 02 23 29.9 +1.3
PCBR Castelo Branco 83.70 311 *e*P P 02 23 30.4 +1.4
PMRV Marv??o 83.82 310 *e*P P 02 23 30.8 +1.1
ILULI Ilulissat 83.91 348 *i* P P 02 23 29.5 +0.1
ILULI IAmb IAmb 02 23 30.6
comp=Z,69nm,1.1s
SWZ Schweizer 83.91 237⇑ *i*P P 02 23 30.8 +0.4
SWZ IAmb IAmb 02 23 31.9
comp=Z,55nm,1.1s
PBAR Barrancos 84.12 309 *e*P P 02 23 32.1 +1.0
CTG Chitna Glacier 84.20 24 P P 02 23 31.6 +0.4
baz=310
PESTR Estremoz 84.20 310 *e*P P 02 23 31.9 +0.3
M29M Somme Creek 84.24 22 P P 02 23 31.1 -0.3
baz=313
PMTG Montargil 84.56 310 *e*P P 02 23 34.5 +1.1
MDT Midelt 84.60 303 LR LR 03 09 16.5
comp=Z,43nm,19.0s,baz=33,slow=41
BOSA Boshof 84.69 236 P P 02 23 35.0 +0.7
comp=Z,63nm,0.8s,baz=63,slow=4.4,SNR=82
comp=Z,63nm,0.8s
BOSA Boshof 84.69 236 P P 02 23 34.9 +0.7
BOSA Boshof 84.69 236 P P 02 23 35.0 +0.7
BOSA Boshof 84.69 236⇑ *i*P P 02 23 34.7 +0.5
BOSA IAmb IAmb 02 23 35.8
comp=Z,63nm,0.8s
PBEJ Beja 84.77 309 *e*P P 02 23 36.3 +1.9
PVAQ Vaqueiros 84.94 309 *e*P P 02 23 36.7 +1.4
PCVE Castro Verde 85.06 309 *e*P P 02 23 37.3 +1.4
MESJ Messejana 85.10 309 *e*P P 02 23 37.6 +1.5
MESJ IAmb IAmb 02 23 38.8
comp=Z,28nm,1.1s
MESJ Messejana 85.10 309 *e*P P 02 23 37.6 +1.5
MESJ pmax pmax
comp=Z,28nm,1.1s
MESJ Messejana 85.10 309 *e*P P 02 23 37.5 +1.4
PBDV Barranco-do-Ve 85.16 309 *e*P P 02 23 38.2 +1.8
DY2G Dye2 85.20 345 *i* P P 02 23 36.9 +0.6
DY2G IAmb IAmb 02 23 37.8
comp=Z,137nm,1.5s
PNCL Nicolau / Gran 85.20 310 *e*P P 02 23 37.4 +0.8
N30M Aishikik Lake 85.39 22 P P 02 23 36.8 -0.4
baz=314
HVD Gariep Dam 85.53 234 *e*P P 02 23 39.2 +0.8
HVD IAmb IAmb 02 23 40.1
comp=Z,48nm,1.0s
MORF Marmelete 85.65 309 *e*P P 02 23 40.3 +1.4
MORF Marmelete 85.65 309 *e*P P 02 23 40.3 +1.4
MORF Marmelete 85.65 309 *e*P P 02 23 40.9 +2.0
SFJD Kangerlussuaq 85.72 347 P P 02 23 39.1 +0.6
SFJD IAmb IAmb 02 23 39.8
comp=Z,54nm,1.1s
SFJD Kangerlussuaq 85.72 347 P P 02 23 39.1 +0.6
SFJD pmax pmax
comp=Z,54nm,1.1s
SFJD Kangerlussuaq 85.72 347 *e*P P 02 23 38.6 +0.1
SFJD IAmb IAmb 02 23 39.6
comp=Z,51nm,1.0s
N31M Braeburn, Yuko 85.82 22 P P 02 23 39.6 +0.4
baz=315
PFVI Vila Bisbo 85.85 309 *e*P P 02 23 41.0 +1.2
O30N Mendenhall 86.22 22 P P 02 23 41.5 +0.2
baz=315
WHY Whitehorse 86.72 22 P P 02 23 43.9 +0.1
baz=316
N32M Quiet Lake 86.96 21 P P 02 23 45.6 +0.7
baz=317
TOA0 Torodi Ar. Sit 87.35 283 IAmb IAmb 02 23 50.0
comp=Z,30nm,0.8s
TORD Torodi Ar. Bea 87.35 283 P P 02 23 48.9 +1.3
comp=Z,26nm,0.8s,baz=63,slow=4.1,SNR=135
TORD pP **pP** 02 24 17.9 +0.9
comp=Z,12nm,0.8s,baz=75,slow=2.8,SNR=7.4
TORD PKKPbc **PKKPbc** 02 41 35.6 -0.6
comp=Z,0.6nm,0.9s,baz=252,slow=3.6,SNR=3.5
comp=Z,26nm,0.8s
TORD Torodi Ar. Bea 87.35 283 IAmb IAmb 02 23 50.0
comp=Z,30nm,0.9s
SKAG Skagway 87.42 23 P P 02 23 47.4 +0.4
baz=315
P33M Teslin, Yukon 87.75 22 P P 02 23 48.7 0.0
baz=318
NUUK Nuuk 88.38 346 *e*P P 02 23 51.1 -0.3
NUUK IAmb IAmb 02 23 52.8
comp=Z,56nm,1.0s
R33M Jennings River 88.98 21 P P 02 23 54.6 +0.1
baz=319
FRAZ Fraserburg 89.22 234 *e*P P 02 23 56.9 +0.8
FRAZ IAmb IAmb 02 24 04.3
comp=Z,139nm,1.9s
NRS Narsarsuaq 89.31 342 *i* P P 02 23 55.4 -0.4
NRS IAmb IAmb 02 23 57.1
comp=Z,109nm,1.4s
IVI Ivigtut 90.03 343 *e*P P 02 23 59.4 +0.2
IVI IAmb IAmb 02 24 00.3
comp=Z,64nm,1.2s
S34M Telegraph Cree 90.05 22 P P 02 24 00.4 +1.1
baz=319
YKA Yellowknife Ar 90.83 13 P P 02 24 03.2 +0.3
comp=Z,1.4nm,0.9s,baz=327,slow=4.3,SNR=4.2
comp=Z,1.4nm,0.9s
YKA Yellowknife Ar 90.83 13 *i* P P 02 24 03.2 +0.3
YKA pmax pmax
comp=Z,2.0nm,0.9s
T35M Bob Quinn 91.07 23 P P 02 24 04.8 +0.6
baz=320
FRB Frobisher Bay 91.67 353 LR LR 03 11 00.2
comp=Z,82nm,20.5s,baz=9.5,slow=39
KOWA Kowa 91.85 287 P P 02 24 09.8 +1.2
KOWA IAmb IAmb 02 24 10.9
comp=Z,16nm,0.8s
MAW Mawson 94.21 192 P P 02 24 19.1 +1.1
comp=Z,11nm,1.0s,baz=47,slow=5.5,SNR=10
comp=Z,11nm,1.0s
MAW Mawson 94.21 192 P P 02 24 19.4 +1.3
MAW pP 02 24 49.5 +1.7
MAW Mawson 94.21 192 P P 02 24 19.4 +1.3
MAW *PP **pP** 02 24 49.5 +1.7
MAW pmax pmax
comp=Z,5.0nm,1.3s
DBIC Dimbokro 95.89 280 P P 02 24 28.3 +1.2
comp=Z,14nm,0.9s,baz=66,slow=3.6,SNR=15
comp=Z,14nm,0.9s
DBIC Dimbokro 95.89 280 P P 02 24 27.9 +0.7
DBIC PcP 02 24 28.4 +1.1
DBIC Dimbokro 95.89 280 *e*P P 02 24 27.4 +0.2
KIC Kosan Boka 95.91 280⇑ *i*PKP2 P 02 24 27.9 +0.6
comp=Z,12nm,0.7s
TIC Toumodi 96.05 280⇑ *i*PKP2 P 02 24 28.4 +0.5
comp=Z,16nm,0.9s
LIC Lamto 96.23 280⇑ *i*PKP2 P 02 24 29.2 +0.5
comp=Z,24nm,0.8s
KIP Kipapa 96.26 63 *ce*P P 02 24 28.4 -0.3
KIP pmax pmax
comp=Z,99nm,2.5s
NEW Newport 102.76 21 PKKPbc PKKPbc 02 40 54.1 -2.4
comp=Z,1.5nm,0.7s,baz=117,slow=6.8,SNR=4.9
VNDA Vanda 108.42 168 PKKPbc PKKPbc 02 40 37.5 -2.7
comp=Z,1.7nm,0.7s,baz=96,slow=1.9,SNR=15
PDAR Pinedale Array 110.05 19 PKiKP **PKiKP** 02 29 31.4 +0.1
comp=Z,0.7nm,0.7s,baz=90,slow=0.4,SNR=6.8
PDAR PKKPbc **PKKPbc** 02 40 31.7 -2.6
comp=Z,1.2nm,0.9s,baz=134,slow=4.3,SNR=6.2
NVAR Mina Array Bea 110.77 27 PKiKP **PKiKP** 02 29 32.8 0.0
comp=Z,0.5nm,0.7s,baz=340,slow=1.6,SNR=4.1
NVAR PKKPbc **PKKPbc** 02 40 30.1 -1.6
comp=Z,1.1nm,0.8s,baz=156,slow=4.3,SNR=7.1
BMNY Brushton-Moira 110.89 352 P **PKiKP** 02 29 32.5 0.0
baz=10
ECSD EROS Data Cent 111.94 9 P **PKiKP** 02 29 34.8 +0.2
baz=349
TROLL Troll, Antarti 113.13 200 PKPdf **PKiKP** 02 29 36.4 +0.4
L40A Anamosa 114.17 5 P **PKiKP** 02 29 38.3 -0.6
baz=354
L48A N Adams 114.50 359 P **PKiKP** 02 29 38.9 -0.6
baz=0.9
L48A P **PKiKP** 02 29 38.9 -0.6
baz=0.9
SNAA Sanae 114.78 200 PKPdf **PKiKP** 02 29 38.7 -0.3
N58A Sunbury 115.11 353 P **PKiKP** 02 29 40.1 -0.6
baz=8.7
N58A P **PKiKP** 02 29 40.1 -0.6
baz=8.7
ACSO Alum Creek Sta 116.18 358 P **PKiKP** 02 29 42.7 0.0
baz=2.4
VNA2 Neumayer--Watz 116.27 201 PKPdf **PKiKP** 02 29 41.9 0.0
baz=345,slow=2.9
P38A Dawn 116.38 7 P **PKPdf** 02 29 42.9 -0.3
baz=352
VNA1 Neumayer--Stat 116.57 201 PKPdf **PKiKP** 02 29 42.6 +0.2
P57A Homestead Farm 116.59 354 P **PKPdf** 02 29 42.8 -0.7
baz=7.4
P57A P **PKPdf** 02 29 42.8 -0.7
baz=7.4
P40A Paris 116.62 6 P **PKPdf** 02 29 43.0 -0.6
baz=353
R32A Long Quarter, 116.79 12 P **PKiKP** 02 29 44.5 +0.4
baz=346
P46A Rosedale 116.81 2 P **PKPdf** 02 29 43.7 -0.3
baz=358
VNA3 Neumayer Olymp 116.98 201 PKPdf **PKPdf** 02 29 43.0 -0.3
P48A Milroy 116.99 0 P **PKPdf** 02 29 43.6 -0.7
baz=360
P48A P **PKPdf** 02 29 43.6 -0.7
baz=360
R40A Maddies Statio 117.83 6 P **PKPdf** 02 29 45.7 -0.3
baz=353,SNR=10
CCM Cathedral Cave 118.15 5 **PKPdf** 02 29 45.4 -1.2
CCM Cathedral Cave 118.15 5 PKIKP **PKPdf** 02 29 45.4 -1.2
CCM Cathedral Cave 118.15 5 P **PKPdf** 02 29 46.4 -0.2
baz=354
ANMO Albuquerque 118.19 20 PKPdf **PKiKP** 02 29 47.1 +0.1
ANMO Albuquerque 118.19 20 *c* *i*PKIKP **PKPdf** 02 29 45.7 -1.3
ANMO pmax pmax
comp=Z,6.0nm,1.3s
S39A Bolivar 118.31 7 P **PKPdf** 02 29 46.8 -0.1
baz=352
S57A Dark Hollow, R 118.39 354 P **PKiKP** 02 29 47.3 +0.2
baz=6.6
S57A P **PKiKP** 02 29 47.3 +0.2
baz=6.6
S51A Beattyville 118.79 358 P **PKPdf** 02 29 47.3 -0.5
baz=1.8
S51A P **PKPdf** 02 29 47.3 -0.5
baz=1.8
Y22A Socorro 118.96 20 P **PKPdf** 02 29 48.5 0.0
baz=337
TUC Tucson 119.10 25 PKPdf **PKiKP** 02 29 48.8 0.0
TUC Tucson 119.10 25 PKIKP **PKiKP** 02 29 48.8 0.0
T57A Hurt 119.17 354 P **PKiKP** 02 29 49.1 +0.5
baz=6.3
T57A P **PKiKP** 02 29 49.1 +0.5
baz=6.3
T50A Nancy 119.43 359 P **PKPdf** 02 29 48.7 -0.4
baz=0.5
T50A P **PKPdf** 02 29 48.7 -0.4
baz=0.5
T47A Sharon Grove 119.44 2 P **PKPdf** 02 29 48.8 -0.4
baz=358,SNR=7.5
HHAR Hobbs 119.63 8 P **PKPdf** 02 29 49.0 -0.6
baz=351
TZTN Tazewell 119.88 358 P **PKPdf** 02 29 49.8 -0.2
baz=1.9
U49A Red Boiling Sp 119.93 0 P **PKPdf** 02 29 49.8 -0.3
baz=360,SNR=6.0
LCAR Lake Charles 120.13 5 P **PKPdf** 02 29 49.5 -0.9
baz=354
WVT Waverly 120.27 2 PKPdf **PKPdf** 02 29 50.2 -0.5
WVT Waverly 120.27 2 PKIKP **PKPdf** 02 29 50.2 -0.5
WVT Waverly 120.27 2 P **PKPdf** 02 29 50.5 -0.2
baz=357,SNR=10
V55A Taylorsville 120.46 356 P **PKPdf** 02 29 50.9 -0.2
baz=4.3,SNR=5.3
V55A P **PKPdf** 02 29 50.9 -0.2
baz=4.3,SNR=5.3
V52A Sevierville 120.58 358 P **PKPdf** 02 29 51.2 -0.2
baz=1.8,SNR=9.3
V51A Loudon 120.63 359 P **PKPdf** 02 29 51.1 -0.3
baz=1.0
V48A Smith Brothers 120.69 1 P **PKPdf** 02 29 51.0 -0.5
baz=358,SNR=5.6
V53A Saluda 120.72 358 P **PKPdf** 02 29 51.6 -0.1
baz=2.6,SNR=8.2
V53A P **PKPdf** 02 29 51.6 -0.1
baz=2.6,SNR=8.2
TKL Tuckaleechee C 120.77 358 P **PKPdf** 02 29 51.5 -0.3
baz=1.6,SNR=6.4
KMSC Kings Mountain 121.17 356 P **PKPdf** 02 29 52.4 -0.1
baz=4.2,SNR=8.5
W50A Signal Mountai 121.25 360 P **PKPdf** 02 29 52.6 -0.1
baz=360
W52A Murphy 121.33 359 P **PKPdf** 02 29 52.9 0.0
baz=1.5,SNR=5.9
CASEE Lake Jocassee 121.40 358 P **PKPdf** 02 29 53.0 0.0
baz=2.5,SNR=7.0
PAULI Pauline 121.52 357 P **PKPdf** 02 29 52.8 -0.4
baz=3.7
MNTX Cornudas Mount 121.53 20 P **PKiKP** 02 29 53.4 -0.1
baz=338
BIRD Birdtown, Kers 121.61 355 P **PKPdf** 02 29 53.4 0.0
baz=5.2
X51A Calhoun 121.88 359 P **PKPdf** 02 29 53.8 0.0
baz=0.5,SNR=5.4
X51A P **PKPdf** 02 29 53.8 0.0
baz=0.5,SNR=5.4
X48A Hartselle 121.97 2 P **PKPdf** 02 29 53.2 -0.8
baz=358
Z35A Perchaven, San 122.00 12 P **PKiKP** 02 29 54.5 +0.1
baz=347
JSC Jenkinsville 122.03 356 P **PKiKP** 02 29 54.2 -0.1
baz=4.3,SNR=7.8
HODGE Hodges 122.13 357 P **PKPdf** 02 29 54.4 +0.1
baz=3.3,SNR=5.7
ABTX Abilene, Hawle 122.20 14 P **PKiKP** 02 29 54.8 0.0
baz=344
Y58A Scranton 122.28 354 P **PKPdf** 02 29 54.9 +0.1
baz=6.1,SNR=5.0
Y58A P **PKiKP** 02 29 54.9 +0.1
baz=6.1,SNR=5.0
Y45A Yeager Farm, C 122.44 4 P **PKiKP** 02 29 55.2 0.0
baz=355
Y52A Lilburn 122.56 359 P **PKiKP** 02 29 55.8 +0.3
baz=1.3,SNR=7.9
Y52A P **PKiKP** 02 29 55.8 +0.3
baz=1.3,SNR=7.9
Y49A Blount Mountai 122.58 1 P **PKPdf** 02 29 55.3 +0.1
baz=359
HAW Hawthorne Fire 122.96 356 P **PKPdf** 02 29 56.1 +0.1
baz=4.0
GOGA Godfrey 123.00 358 P **PKPdf** 02 29 56.0 0.0
baz=2.0
Z51A Franklin 123.12 360 P **PKPdf** 02 29 56.4 -0.1
baz=0.1
Z47A Carrollton 123.19 3 P **PKPdf** 02 29 55.9 -0.5
baz=357
152A Waverly Hall 123.77 359 P **PKPdf** 02 29 57.5 0.0
baz=0.6
154A Montrose 123.78 358 P **PKiKP** 02 29 58.0 +0.2
baz=2.4
JCT Junction City 124.22 15 P **PKPdf** 02 29 58.2 -0.3
baz=344
TX31 Lajitas Ar. Si 124.26 19 P **PKPdf** 02 29 58.7 0.0
baz=340
TXAR Lajitas Array 124.26 19 PKP **PKPdf** 02 29 58.8 0.0
comp=Z,4.6nm,0.8s,baz=236,slow=0.9,SNR=26
TXAR SKP 02 33 23.9
comp=Z,1.7nm,0.9s,baz=294,slow=1.2,SNR=5.5
TXAR PKKPbc **PKKPbc** 02 39 42.8 -0.7
comp=Z,0.3nm,0.8s,baz=166,slow=7.5,SNR=4.1
344A Westbrook Farm 124.75 6 P **PKiKP** 02 29 59.8 0.0
baz=354
352A Blakely 124.95 359 P **PKPdf** 02 29 59.5 -0.3
baz=0.4
HKT Hockley 125.55 11 PKPdf **PKiKP** 02 30 01.2 -0.1
HKT Hockley 125.55 11 PKIKP **PKiKP** 02 30 01.2 -0.1
HKT Hockley 125.55 11 P **PKiKP** 02 30 01.8 +0.5
baz=348
456A Hilliard 125.61 356 P **PKiKP** 02 30 01.6 +0.1
baz=3.7
451A Vernon 125.81 0 P **PKiKP** 02 30 02.1 +0.2
baz=360
833A Chaparral WMA, 126.38 15 P **PKiKP** 02 30 04.1 +1.0
baz=344
DWPF Disney Wildern 128.17 356 **PKiKP** 02 30 06.7 0.0
NBRF Rio Formoso - 129.68 279 *e*P **PKiKP** 02 30 10.4 +0.4
NBAN Anadia - AL 131.11 278 *e*P **PKPdf** 02 30 10.4 -1.6
SMAI San Martin Ant 134.33 189 PKPpre 02 30 10.7

MLPR	**Magueyes Islan**	**134.70 335**			**PKPdf**	02 30 17.6	-1.1
GDU01	**Guandu, BA**	**135.60 275**	*e*	P	**PKiKP**	02 30 21.5	-0.5
CMC01	**Camacan, BA**	**136.09 272**	*e*	P	**PKiKP**	02 30 22.4	-0.5
GUA01	**Guaratinga, BA**	**136.73 271**	*e*	P	**PKiKP**	02 30 23.5	-0.6
PMSA	**Palmer Station**	**136.80 193**	*e*	P	**PKiKP**	02 30 22.1	-0.8
MDP	**Montagnes des**	**136.97 308**		PKP	**PKPdf**	02 30 23.5	+0.5
	comp=Z,5.3nm,0.8s,baz=9.4,slow=4.9,SNR=4.5						
NAN01	**Guarapari, ES**	**137.38 269**	*e*	P	**PKiKP**	02 30 25.0	-0.5
RIB01	**Linhares ES**	**138.01 267**	*e*	P	**PKPdf**	02 30 25.3	+0.6
TMAB	**Tom-Au,PA,Br**	**138.06 295**	*e*	P	**PKiKP**	02 30 26.1	-0.9
SJMB	**Sao Joao De Ma**	**138.58 268**	*e*	P	**PKPdf**	02 30 26.1	+0.4
MCPB	**Macapa, AP**	**140.09 301**	*e*	P	**PKPdf**	02 30 29.4	+0.7
MCPB	**Macapa, AP**	**140.09 301**	*e*	P	**PKPdf**	02 30 29.6	-6.2
SMTB	**Santa Maria do**	**140.90 286**	*e*	P	**PKPdf**	02 30 31.1	+1.0
VAS01	**Vassouras-RJ**	**141.44 264**	*e*	P	**PKPdf**	02 30 29.7	-1.2
PRPB	**Parauapebas**	**141.53 291**	*e*	P	**PKPdf**	02 30 31.7	+0.4
MAN01	**Angra dos Reis**	**142.02 263**	*e*	P	**PKPdf**	02 30 32.3	+0.3
MALB	**Monte Alegre**	**142.74 301**	*e*	P	**PKPdf**	02 30 33.8	+0.3
BDFB	**Brasilia**	**143.94 276**		PKP	**PKPdf**	02 30 34.7	-0.9
	comp=Z,27nm,0.8s,baz=86,slow=3.8,SNR=34						
BDFB	**Brasilia**	**143.94 276**	*e*	P	PKPbc	02 30 34.0	+0.3
BDFB	**Brasilia**	**143.94 276**	*e*	P	PKPbc	02 30 34.6	+0.9
SDV	**Santo Domingo**	**144.37 334**		PKP	PKPbc	02 30 35.4	+0.2
	comp=Z,307nm,0.9s,baz=46,slow=2.8,SNR=130						
SDV	**Santo Domingo**	**144.37 334**	*e*	P	PKPbc	02 30 35.5	+0.3
ACON	**Acoyapa**	**144.37 360**	*e*	P	PKPbc	02 30 35.1	+0.3
BOAV	**Boa Vista**	**144.38 314**		PKPdf	PKPbc	02 30 35.6	+0.6
BOAV	**Boa Vista**	**144.38 314**	*e*	P	**PKPab**	02 30 34.3	-0.3
BOAV	**Boa Vista**	**144.38 314**	*e*	P	PKPbc	02 30 35.4	+0.4
LL6C	**La Loma 6 Bece**	**144.54 339**	*e*	P	**PKPab**	02 30 35.2	-0.1
ARGC	**Ariguani, Magd**	**144.74 341**	*e*	P	**PKPdf**	02 30 37.8	+0.8
VAO	**Valinhos**	**144.78 264**	*e*	P	**PKPdf**	02 30 36.7	-0.2
VAO	**Valinhos**	**144.78 264**	*e*	P	**PKPdf**	02 30 37.1	+0.2
LL1C	**La Loma 1 Cana**	**144.82 339**	*e*	P	**PKPdf**	02 30 37.0	-0.1
IPMB	**Ipameri, GO**	**144.82 272**	*e*	P	PKPbc	02 30 36.7	+0.3
IPMB	**Ipameri, GO**	**144.82 272**	*e*	P	**PKPdf**	02 30 37.2	+0.2
SJCC	**San Jacinto, C**	**144.97 342**	*e*	P	**PKPdf**	02 30 37.9	+0.5
SOCV	**Socops**	**145.01 334**	*e*	P	**PKPbc**	02 30 36.0	-1.0
RCLB	**Rio Claro- Sao**	**145.19 265**	*e*	P	**PKPab**	02 30 37.8	+0.2
RCLB	**Rio Claro- Sao**	**145.19 265**	*e*	P	**PKPab**	02 30 39.3	+1.7
PET01	**Itanhaem-SP**	**145.24 261**	*e*	P	**PKPab**	02 30 39.0	+1.3
ITTB	**Itaituba**	**145.43 300**	*e*	P	**PKPbc**	02 30 38.4	+0.1
SNDB	**Serra Nova Dou**	**145.53 284**	*e*	P	**PKPbc**	02 30 38.7	+0.1
SNDB	**Serra Nova Dou**	**145.53 284**	*e*	P	**PKPbc**	02 30 38.6	0.0
OCAC	**Ocana**	**145.96 338**	*e*	P	**PKPbc**	02 30 39.8	-0.3
ORTG	**Ortega, Santa**	**145.97 0**			**PKPdf**	02 30 38.5	-0.7
NPGB	**Novo Progresso**	**146.66 295**	*e*	P	**PKPbc**	02 30 41.3	-0.7
UPA	**Univ. de Panam**	**146.84 349**	*e*	P	**PKPdf**	02 30 40.3	-0.3
TIJ01	**Guaruva-PR**	**146.92 260**	*e*	P	**PKPdf**	02 30 40.8	+0.3
BRRC	**Barranca, Sant**	**147.15 338**	*e*	P	**PKPbc**	02 30 42.8	-0.5
ZARC	**Zaragoza, Cauc**	**147.16 340**	*e*	P	**PKPbc**	02 30 43.4	0.0
TER01	**Tubaro-SC**	**147.19 254**	*e*	P	**PKPbc**	02 30 41.9	-1.2
BRU2	**Volcan**	**147.42 355**	*e*	P	**PKPbc**	02 30 43.8	-0.5
BARC	**Barichara**	**147.44 337**	*e*	P	**PKPdf**	02 30 42.4	+0.6
PTBC	**PUERTO BERRIO**	**147.93 339**	*e*	P	**PKPdf**	02 30 42.5	+0.1
DBBC	**Dabeiba**	**148.00 343**	*e*	P	**PKPbc**	02 30 45.3	-0.5
RUSC	**La Rusia**	**148.05 336**	*e*	P	**PKPdf**	02 30 44.0	+0.9
AZU	**Azuero**	**148.12 350**	*e*	P	**PKPbc**	02 30 46.1	+0.2
MACA	**Manacapuru-AM**	**148.45 307**	*e*	P	**PKPdf**	02 30 44.3	+1.1
MACA	**Manacapuru-AM**	**148.45 307**	*e*	P	**PKPdf**	02 30 44.0	+0.8
PCMB	**Pacaembu**	**148.46 267**	*e*	P	**PKPdf**	02 30 43.7	+0.7
HELC	**Santa Helena**	**148.59 341**	*e*	P	**PKPdf**	02 30 47.2	-0.5
SPBC	**San Pablo de B**	**148.63 338**	*e*	P	**PKPdf**	02 30 43.7	0.0
CACAO	**El Cacao, Vera**	**148.65 351**	*e*	P	**PKPbc**	02 30 46.9	-0.4
NORC	**Norcasia**	**148.98 339**	*e*	P	**PKPdf**	02 30 45.0	+0.9
CLDB	**Colider**	**148.99 290**	*e*	P	**PKPdf**	02 30 45.4	+1.4
CBOC	**Ciudad Bolivar**	**149.04 342**	*e*	P	**PKPdf**	02 30 45.2	+0.8
PTGC	**Puerto Gaitan,**	**149.23 333**	*e*	P	**PKPdf**	02 30 44.2	-0.3
C2SB	**Chapadao do Su**	**149.26 273**	*e*	P	**PKPdf**	02 30 46.0	+1.7
GUY2C	**Guyana, Caldas**	**149.46 340**	*e*	P	**PKPdf**	02 30 46.0	+0.5
CHIC	**Chingaza**	**149.46 337**	*e*	P	**PKPdf**	02 30 45.8	+0.5
ROSC	**El Rosal**	**149.47 338**		PKP	**PKPdf**	02 30 46.3	+0.9
	comp=Z,403nm,1.2s,baz=133,slow=2.6,SNR=23						
ROSC				PKPbc	**PKiKP**	02 30 51.6	+0.6
	comp=Z,459nm,0.8s,baz=91,slow=5.1,SNR=99						
ROSC	**El Rosal**	**149.47 338**	*e*	P	**PKPdf**	02 30 45.9	+0.5
PTGB	**Pitanga**	**149.62 261**	*e*	P	**PKPdf**	02 30 44.5	-0.3
ITAB	**Concordia**	**149.83 257**	*e*	P	**PKiKP**	02 30 50.5	-0.3
TRCB	**Terra Rica**	**149.91 265**	*e*	P	**PKPdf**	02 30 46.0	+0.7
VILC	**Villavicencio,**	**149.92 336**	*e*	P	**PKPbc**	02 30 51.1	+0.4
PLMC	**San Jos del P**	**150.03 342**	*e*	P	**PKPdf**	02 30 46.9	+1.0
PDRB	**Porto dos Gac**	**150.14 289**	*e*	P	**PKPdf**	02 30 46.6	+0.7
ANIL	**Santa Ana**	**150.16 340**	*e*	P	**PKiKP**	02 30 52.2	-0.1
MG05	**Puerto Natales**	**150.52 196**		PKPdf	**PKPdf**	02 30 47.1	+1.8
PRAC	**Prado**	**150.72 338**	*e*	P	**PKPdf**	02 30 47.1	+0.2
PLTB	**Pedras Altas**	**150.86 247**	*e*	P	**PKPdf**	02 30 46.6	+0.1
CPSB	**Cacapava Do Su**	**150.87 250**	*e*	P	**PKPdf**	02 30 48.1	+1.5
CPSB	**Cacapava Do Su**	**150.87 250**	*e*	P	**PKPbc**	02 30 51.8	-0.5
YOTC	**Yotoco, Valle**	**150.93 341**	*e*	P	**PKPdf**	02 30 46.9	-0.4
GUVC	**San Jose del G**	**150.93 333**	*e*	P	**PKPbc**	02 30 52.4	-0.5
SALV	**Santo Antonio**	**150.98 280**	*e*	P	**PKPdf**	02 30 46.3	-0.8
MACC	**Macarena, Meta**	**151.79 335**	*e*	P	**PKPdf**	02 30 48.1	-0.4
MAPC	**Malpelo**	**152.04 352**	*e*	P	**PKPbc**	02 30 55.5	0.0
AQDB	**Aquidauana**	**152.29 277**	*e*	P	**PKPdf**	02 30 48.9	-0.9
AQDB	**Aquidauana**	**152.29 271**	*e*	P	**PKPdf**	02 30 48.9	0.0
GARC	**Garzon, Huila**	**152.35 338**	*e*	P	**PKPdf**	02 30 50.9	+1.3
POPC	**Popayan, Colom**	**152.39 341**	*e*	P	**PKiKP**	02 30 57.0	+0.2
FLOC	**Florencia**	**152.97 338**	*e*	P	**PKPdf**	02 30 51.6	+1.4
BBAC	**Balboa, Cauca**	**153.06 342**	*e*	P	**PKPbc**	02 30 58.1	+0.1
VILB	**Vilhena**	**153.76 290**	*e*	P	**PKPdf**	02 30 52.6	+1.3
GCUF	**Volcan Galeras**	**153.84 341**	*e*	P	**PKPdf**	02 30 54.3	+2.2
PTLB	**Pontes e Lacer**	**153.90 284**	*e*	P	**PKPdf**	02 30 52.6	+1.3
CPUP	**Villa Florida**	**154.46 259**		PKP	**PKPdf**	02 30 52.6	+0.7
	comp=Z,8.9nm,0.9s,baz=79,slow=2.2,SNR=13						
OTAV	**Otavalo**	**155.09 343**		PKPdf	**PKPdf**	02 30 53.7	-0.1
OTAV	**Otavalo**	**155.09 343**		PKIKP	**PKPdf**	02 30 53.7	-0.1
OTAV	**Otavalo**	**155.09 343**	*e*	P	**PKPdf**	02 30 54.9	+1.1
OTAV	**Otavalo**	**155.09 343**	*e*	P	**PKPdf**	02 30 54.4	+0.6
SIV	**San Ignacio**	**155.82 284**		PKP	**PKPdf**	02 30 54.5	+0.4
	comp=Z,3.6nm,0.7s,baz=105,slow=2.4,SNR=18						
SIV				PKPab	**PKPab**	02 31 21.4	+0.1
	comp=Z,6.3nm,0.6s,baz=82,slow=4.8,SNR=10						
LL02	**Futaleuf**	**157.72 207**		PKPdf	**PKPdf**	02 30 54.6	-1.1
PLCA	**Paso Flores**	**159.06 213**		PKP	**PKPdf**	02 30 58.5	+1.0
	comp=Z,10nm,1.1s,baz=229,slow=2.0,SNR=11						
PLCA				PKPab	**PKPab**	02 31 32.7	-1.9
	comp=Z,4.4nm,0.8s,baz=131,slow=3.8,SNR=7.1						
PLCA	**Paso Flores**	**159.06 213**	*e*	P	**PKPdf**	02 30 59.0	+1.5
CZSB	**Cruzeiro do Su**	**159.84 321**	*e*	P	**PKPdf**	02 30 59.6	+0.6
ATAH	**Atahualpa**	**162.04 337**		PKP	**PKPdf**	02 31 03.3	+1.4
	comp=Z,21nm,1.0s,baz=89,slow=2.4,SNR=8.5						
ATAH				PKPab	**PKPab**	02 31 47.6	-0.9
	comp=Z,13nm,0.9s,baz=184,slow=2.9,SNR=5.1						
LPAZ	**La Paz**	**162.10 292**		PKP	**PKPdf**	02 31 02.3	+0.1
	comp=Z,10nm,0.8s,baz=45,slow=2.9,SNR=39						
LPAZ				PKPab	**PKPab**	02 31 47.8	-1.5
	comp=Z,5.9nm,0.8s,baz=48,slow=5.3,SNR=6.5						
LPAZ	**La Paz**	**162.10 292**	*e*	P	**PKPdf**	02 31 02.0	-0.2
LPAZ	**La Paz**	**162.10 292**	*e*	P	**PKPdf**	02 31 02.9	+0.7
LVC	**Limon Verde**	**164.77 271**		PKPab	**PKPab**	02 32 00.2	-0.4
	comp=Z,13nm,0.8s,baz=15,slow=1.2,SNR=8.5						
LVC	**Limon Verde**	**164.77 271**		PKPdf	**PKPdf**	02 31 02.9	-1.3
LVC				PKPab	**PKPab**	02 32 00.7	0.0
LVC	**Limon Verde**	**164.77 271**		PKIKP	**PKPdf**	02 31 02.9	-1.3
LVC						02 32 00.7	
NNA	**Nana**	**165.64 324**		PKP	**PKPdf**	02 31 05.3	+0.6
	comp=Z,7.3nm,0.7s,baz=294,slow=3.1,SNR=2.3						
NNA				PKPab	**PKPab**	02 32 03.7	-0.2
	comp=Z,14nm,0.8s,baz=7.1,slow=8.8,SNR=4.7						

DDA 23 02:20:08.9±0.0, 39°48N×27°98E, h7km±2km, ML1.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.23**	**243**	P	Pg	02 20 13.9	+0.4
STEP				S	Sg	02 20 17.8	+1.2
BALY	**Balya**	**0.38**	**313**	P	Pg	02 20 15.4	-1.0
DURS	**Dursunbey**	**0.40**	**72**	P	Pg	02 20 16.8	+0.1
DURS				*i* AML	AML	02 20 22.0	
	comp=N,18nm,0.3s						
DURS				S	Sg	02 20 22.8	+0.9
DURS				*i* AML	AML	02 20 24.0	
	comp=E,16nm,0.5s						
DEMI	**Demirci**	**0.72**	**127**	P	Pg	02 20 22.8	+0.1
DEMI				S	Sg	02 20 32.4	+0.4

*BJI **23** 02:37:01.2±0.0, 51°17N×177°94E, h9km, mb4.6/23, mB4.9/12, Ms4.2/3, Ms7 3.9/3*

*MOS **23** 02:37:03.8±1.1, 50°83N×177°81E, h16km, mb4.7/33, Error ellipse: s-maj=9.0km s-min=6.7km az=109.2*
*AEIC **23** 02:37:07±1.7, 50°92N±0°08×177°66E±0°08, h38km±6km, Error ellipse: s-maj=11.4km s-min=7.4km az=176.0*
*NEIC **23** 02:37:08.4±1.6, 50°92N±0°10×177°74E±0°08, h33km±6km, mb4.7/241, ML4.6(AEIC), Error ellipse: s-maj=14.6km s-min=7.2km az=175.0*
*IDC **23** 02:37:10.4±0.7, 50°92N×177°79E, h52km±4km, mb4.1/26, mbtmp4.4/29, MS3.6/18, Error ellipse: s-maj=16.3km s-min=9.6km az=170.0*

ISC 23 02:37:07.2±0.6, 50°85N±0°07×177°84E±0°03, h26km±3km, h26km:pP-P,n572,σ1§21/496, mb4.7/180, MS3.7/22, 23C-16D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.06**	**60**		**Pn**	02 37 26.1	-0.3
AMKA					**Sn**	02 37 39.3	-1.0
LSSE	**Little Sitkin**	**1.18**	**23**		**Pb**	02 37 28.1	-0.8
LSSA	**Little Sitkin**	**1.18**	**21**		**Pb**	02 37 28.0	-0.9
LSNW	**Little Sitkin**	**1.20**	**21**		**Pb**	02 37 28.1	-1.2
LSPA	**Little Sitkin**	**1.20**	**22**		**Pb**	02 37 28.4	-0.9
LSPA					**Sb**	02 37 45.1	+0.7
CESW	**Semis' Southwe**	**1.51**	**45**		**Pb**	02 37 33.5	-1.0
CERB	**Semis' Cerberu**	**1.56**	**45**		**Pb**	02 37 34.5	-0.9
CERAA	**Semis' Rag'd T**	**1.57**	**47**		**Pb**	02 37 34.2	-1.3
CEPE	**Semis' Perret**	**1.59**	**45**		**Pb**	02 37 34.8	-1.2
GALAA	**Gareloi Lava P**	**2.32**	**66**		**Pn**	02 37 45.2	+1.6
GANO	**Gareloi North**	**2.32**	**64**		**Pn**	02 37 45.0	+1.3
GANO					**Sb**	02 38 14.2	-2.3
GAEA	**Gareloi East**	**2.34**	**65**		**Pn**	02 37 45.4	+1.4
TANO	**Tanaga North**	**2.75**	**66**		**Pn**	02 37 51.1	+1.6
TASE	**Tanaga Southea**	**2.77**	**68**		**Pn**	02 37 51.4	+1.6
TAPA	**Tanaga Point A**	**2.90**	**69**		**Pn**	02 37 53.1	+1.5
SHEM	**Shemya Is, Ala**	**2.98**	**310**	LR	LR	02 39 22.9	
	comp=Z,662nm,18.5s,baz=118,slow=45						
SMY	**Shemya**	**2.98**	**310**		**Pn**	02 37 51.3	-1.5
SMY					**Sn**	02 38 24.8	-2.8
KIMD	**Kanaga Island**	**3.23**	**72**		**Pn**	02 37 57.4	+1.3
KICM	**Kanaga Island**	**3.29**	**69**		**Pn**	02 37 59.1	+2.1
KIKV	**Kanaga Island**	**3.29**	**70**		**Pn**	02 37 58.8	+1.7
KIWB	**Kanaga Island**	**3.30**	**70**		**Pn**	02 37 58.3	+1.2
ADK	**Adak**	**3.59**	**71**		**Pn**	02 38 02.2	+1.1
ADK					**Sn**	02 38 43.0	+0.5
ADK	**Adak**	**3.59**	**71**	P	**Pn**	02 38 02.2	+1.1
ADK						02 38 43.0	
GSCK	**Great Sitkin C**	**3.93**	**71**		**Pn**	02 38 07.2	+1.4
GSTD	**Great Sitkin T**	**3.95**	**70**		**Pn**	02 38 07.6	+1.5
GSMY	**Great Sitkin M**	**4.00**	**70**		**Pn**	02 38 08.2	+1.4
GSTR	**Great Sitkin T**	**4.01**	**70**		**Pn**	02 38 07.6	+0.6
ATKA	**Atka Island**	**5.16**	**72**		**Pn**	02 38 23.8	+1.2
KOKL	**Mount Kliuchef**	**5.18**	**70**		**Pn**	02 38 24.1	+1.1
KOFP	**Korovin Flat P**	**5.23**	**71**		**Pn**	02 38 25.3	+1.6
CLES	**Cleveland East**	**7.85**	**71**		**Pn**	02 38 59.8	+0.2
CLCO	**Concord Point,**	**7.95**	**71**		**Pn**	02 39 02.3	+2.0
NIKH	**Nikolski High**	**8.50**	**70**		**Pn**	02 39 09.7	+1.2
NIKH	**Nikolski High**	**8.50**	**70**	P	**Pn**	02 39 09.7	+1.2
	baz=262,SNR=13						
OKCE	**Okmok Cone E**	**8.99**	**68**		**Pn**	02 39 16.2	+1.0
OKFG	**Magazine Ridge**	**9.13**	**68**		**Pn**	02 39 17.9	+0.7
SPIA	**Saint Paul Isl**	**9.44**	**43**		**Pn**	02 39 24.4	+3.0
SPIA	**Saint Paul Isl**	**9.44**	**43**	P	**Pn**	02 39 23.7	+2.3
	baz=234						
MAPS	**Pakushin South**	**9.78**	**66**		**Pn**	02 39 27.6	+1.7
MGOD	**Makushin Gods**	**9.81**	**67**		**Pn**	02 39 28.0	+1.5
UNV	**Unalaska Valle**	**10.04**	**67**	Pn	**Pn**	02 39 30.9	+1.4
UNV	**Unalaska Valle**	**10.04**	**67**	P	**Pn**	02 39 30.9	+1.4
	baz=260,SNR=10						
AKUT	**Akutan**	**10.52**	**65**	Pn	**Pn**	02 39 37.6	+1.5
PET	**Petropavlovsk**	**12.03**	**288**	*i* P	**Pn**	02 39 57.0	+0.2
PET				pmax	pmax		
	comp=Z,26nm,0.8s						
PEA0B	**Petropavlovsk-**	**12.61**	**288**	Pn	**Pn**	02 40 04.7	-0.1
PEA0B	**Petropavlovsk-**	**12.61**	**288**	*ce* P	**Pn**	02 40 06.1	+1.3
PETK	**Petropavlovsk-**	**12.61**	**288**	P	**Pn**	02 40 04.8	0.0
	comp=Z,21nm,0.6s,baz=93,slow=18,SNR=22						
PETK				S	Sn	02 42 14.9	-9.3
	comp=Z,3.2nm,0.6s,baz=262,slow=8.5,SNR=3.6						
PETK	**Petropavlovsk-**	**12.61**	**288**	Pn	**Pn**	02 40 05.0	+0.2
PETK	**Petropavlovsk-**	**12.61**	**288**	P	**Pn**	02 40 05.0	+0.2
SDPT	**Sand Point**	**13.76**	**63**	Pn	**Pn**	02 40 18.8	-1.7
SDPT	**Sand Point**	**13.76**	**63**	P	**Pn**	02 40 18.7	-1.7
	baz=260						
CNBA	**Chernabura Isl**	**14.19**	**65**	Pn	**Pn**	02 40 23.9	-2.4
CHNA	**Chernabura Isl**	**14.19**	**65**	P	**Pn**	02 40 23.5	-2.8
	baz=263,SNR=9.2						
CHGN	**Chignik**	**15.09**	**60**	Pn	**Pn**	02 40 36.7	-1.6
CHGN				IAmb	IAmb	02 40 52.6	
	comp=Z,35nm,1.2s						
CHGN	**Chignik**	**15.09**	**60**	P	**Pn**	02 40 36.9	-1.4
	baz=259						
O16K	**Kokwok River B**	**16.20**	**48**	P	**Pn**	02 40 50.9	-1.9
	baz=248,SNR=8.8						
N16K	**Nishlik Lake**	**16.25**	**45**	P	**Pn**	02 40 52.2	-1.2
	baz=244,SNR=6.4						
R17K	**Ugashik Creek**	**16.45**	**56**	P	**Pn**	02 40 53.2	-2.8
	baz=257,SNR=5.4						
Q16K	**King Salmon**	**16.59**	**52**	P	**Pn**	02 40 56.1	-1.5
	baz=253						
O17K	**Koliganek Bris**	**16.74**	**48**	P	**Pn**	02 40 57.1	-2.4
	baz=249						
P17K	**Kvichak River**	**16.86**	**50**	P	**Pn**	02 40 57.5	-3.5
	baz=252,SNR=7.0						
SII	**Sitkinak Islan**	**17.45**	**60**	P	**Pn**	02 41 02.9	-5.5
	baz=263						
MA2	**Magadan**	**17.63**	**310**	P	**P**	02 41 11.1	-0.3
	comp=Z,6.8nm,0.6s,baz=111,slow=11,SNR=5.9						
MA2	**Magadan**	**17.63**	**310**	*i* P	**P**	02 41 11.2	-0.3
MA2				pmax	pmax		
	comp=Z,33nm,2.1s						
N18K	**Kilae Creek**	**17.63**	**46**		**P**	02 41 11.4	-0.1
N18K	**Kilae Creek**	**17.63**	**46**	P	**Pn**	02 41 08.9	-1.8
	baz=248,SNR=6.5						
SVW2	**Sparrevohn**	**17.93**	**45**	P	**P**	02 41 15.3	+0.5
OHAK	**Old Harbor**	**18.02**	**58**		**Pn**	02 41 12.4	-3.1
OHAK				IAmb	IAmb	02 41 15.1	
	comp=Z,32nm,0.3s						
OHAK	**Old Harbor**	**18.02**	**58**	P	**Pn**	02 41 11.8	-3.7
	baz=262,SNR=5.1						
Q19K	**Cape Douglas,**	**18.17**	**53**	P	**Pn**	02 41 15.0	-2.3
	baz=255						
O19K	**Port Alsworth**	**18.19**	**48**	P	**P**	02 41 17.4	-0.2
O19K				IAmb	IAmb	02 41 23.6	
	comp=Z,108nm,1.4s						
SEY	**Seymchan**	**18.27**	**321**	P	**P**	02 41 18.6	+0.1
	comp=Z,3.8nm,0.9s,baz=92,slow=11,SNR=6.0						
SEY	**Seymchan**	**18.27**	**321**	*i* P	**P**	02 41 18.9	+0.4
SEY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
N19K	**Bonanza Creek**	**18.32**	**46**	P	**P**	02 41 19.7	+0.5
N19K				IAmb	IAmb	02 41 22.9	
	comp=Z,59nm,1.1s						
N19K	**Bonanza Creek**	**18.32**	**46**	P	**Pn**	02 41 17.7	-1.6
	baz=250,SNR=11						
KDAK	**Kodiak Island**	**18.48**	**57**	P	**P**	02 41 19.2	-1.7
KDAK				IAmb	IAmb	02 41 32.5	
	comp=Z,83nm,1.5s						
KDAK	**Kodiak Island**	**18.48**	**57**	P	**P**	02 41 19.2	-1.7
KDAK				pmax	pmax		
	comp=Z,83nm,1.5s						
KDAK	**Kodiak Island**	**18.48**	**57**	P	**P**	02 41 18.6	-2.3
	baz=261						
TTA	**Tatalina**	**18.55**	**39**	P	**P**	02 41 20.1	-1.6
	baz=242						
P19K	**Oil Pt**	**18.56**	**51**	P	**P**	02 41 20.9	-0.8
	baz=255						
L19K	**White Mountain**	**18.69**	**42**		**Pn**	02 41 23.5	-0.2
L19K	**White Mountain**	**18.69**	**42**	P	**P**	02 41 22.2	-1.0
	baz=246,SNR=11						
ILSW	**Iliamna Southw**	**18.69**	**50**	P	**P**	02 41 23.1	-0.2
ILSW				IAmb	IAmb	02 41 26.6	
	comp=Z,90nm,1.3s						
Q20K	**Shuyak Island**	**18.73**	**54**	P	**P**	02 41 22.8	-0.8
	baz=259						
M19K	**Big River Lodg**	**18.77**	**43**		**P**	02 41 23.4	-0.7
M19K	**Big River Lodg**	**18.77**	**43**	P	**P**	02 41 23.8	-0.3
	baz=247						
O20K	**Slope Mountain**	**18.97**	**49**	P	**P**	02 41 26.0	-0.3
	baz=254						
RSO	**Redoubt South**	**19.02**	**48**	P	**P**	02 41 27.0	0.0
GCSA	**Galena City Sc**	**19.17**	**34**	P	**Pn**	02 41 28.6	-0.8
	baz=236						
L20K	**Farewell, AK**	**19.23**	**42**	P	**P**	02 41 27.2	-1.9
	baz=246,SNR=6.4						
M20K	**Styx River**	**19.32**	**44**	P	**Pn**	02 41 30.5	-0.8
M20K				IAmb	IAmb	02 41 34.4	
	comp=Z,50nm,1.2s						
M20K	**Styx River**	**19.32**	**44**	P	**P**	02 41 30.3	+0.1
	baz=249						
N20K	**Mount Spurr**	**19.50**	**46**	P	**P**	02 41 31.6	-0.5
	baz=252						
SPCR	**Spurr Chakacha**	**19.50**	**46**	P	**P**	02 41 31.6	-0.5
	baz=252						
K20K	**Telida**	**19.53**	**39**		**Pn**	02 41 33.3	-0.5
K20K				IAmb	IAmb	02 41 36.0	
	comp=Z,39nm,0.8s						
K20K	**Telida**	**19.53**	**39**	P	**Pn**	02 41 32.9	-0.8
	baz=244,SNR=28						
SPU	**Mount Spurr**	**19.56**	**47**	P	**P**	02 41 33.1	+0.4
BRSE	**Bradley Lake S**	**19.80**	**51**	P	**P**	02 41 34.9	-0.5
	baz=258						
J20K	**Nowinta River**	**19.88**	**37**	P	**P**	02 41 36.4	+0.3
J20K				IAmb	IAmb	02 41 40.4	
	comp=Z,52nm,0.9s						
J20K	**Nowinta River**	**19.88**	**37**	P	**P**	02 41 36.2	+0.1
	baz=241,SNR=32						
SKT	**Skwentna**	**20.06**	**45**	P	**P**	02 41 38.6	+0.4
SKT				IAmb	IAmb	02 41 56.9	
	comp=Z,52nm,0.9s						
SKT	**Skwentna**	**20.06**	**45**	P	**P**	02 41 38.5	+0.4
	baz=251						
PPLA	**Purkeypile**	**20.11**	**42**		**P**	02 41 38.3	-0.5
PPLA				IAmb	IAmb	02 41 50.8	
	comp=Z,30nm,0.8s						
PPLA	**Purkeypile**	**20.11**	**42**	P	**P**	02 41 38.6	-0.2
	baz=247,SNR=6.6						
CAST	**Castle Rocks**	**20.36**	**40**	IAmb	IAmb	02 41 46.0	
	comp=Z,21nm,0.8s						
CAST	**Castle Rocks**	**20.36**	**40**	P	**P**	02 41 40.8	-0.6
	baz=246,SNR=16						
CHUM

RIDG Independent Ri 23.52 43 P P 02 42 12.9 -1.9
baz=255
J25K Salcha River, 23.55 40 P P 02 42 12.6 -2.6
J25K Salcha River, 23.55 40 P P 02 42 12.9 -2.3
baz=252
D23K Nanushuk River 23.59 28 P P 02 42 15.1 -0.3
baz=236,SNR=8.4
F24K Squaw Lake 23.74 33 P P 02 42 16.7 -0.2
baz=243,SNR=9.4
TOLK Toolik Lake Re 23.75 29 P P 02 42 17.0 0.0
TOLK Toolik Lake Re 23.75 29 P P 02 42 16.8 -0.2
baz=238,SNR=17
PRP Porcupine Dome 23.79 38 P P 02 42 15.6 -2.0
PRP Porcupine Dome 23.79 38 P P 02 42 15.5 -2.0
baz=250
E24K Your Creek 23.80 31 P P 02 42 17.3 -0.2
baz=241
MENT Mentasta 23.81 45 P P 02 42 17.6 0.0
MENT IAmb IAmb 02 42 30.5
comp=Z,19nm,1.0s
DOT Dot Lake 23.83 43 P P 02 42 16.2 -1.6
SCRK Sand Creek 23.95 42 P P 02 42 16.6 -2.4
SCRK IAmb IAmb 02 42 31.9
comp=Z,24nm,1.3s
SCRK Sand Creek 23.95 42 P P 02 42 16.8 -2.2
baz=255,SNR=8.2
H25K Birch Creek 23.95 36 P P 02 42 18.3 -0.5
baz=248
L26K Log Cabin Wild 24.00 45 P P 02 42 19.8 +0.4
baz=258
C23K Itkillik River 24.11 26 P P 02 42 19.8 -0.5
baz=235
D24K Happy Valley 24.25 29 P P 02 42 21.5 -0.1
baz=238
J26L Joseph Creek 24.26 41 P P 02 42 20.4 -1.5
J26L IAmb IAmb 02 42 21.6
comp=Z,15nm,0.7s
J26L Joseph Creek 24.26 41 P P 02 42 20.2 -1.7
baz=254,SNR=18
M27K Edge Creek, AK 24.54 47 P P 02 42 23.8 -0.7
baz=261
F25K Christian Rive 24.54 33 P P 02 42 24.3 -0.1
baz=246,SNR=6.1
C24K Franklin Bluff 24.59 28 P P 02 42 24.5 -0.2
baz=237
CTG Chitna Glacier 24.61 50 P P 02 42 23.7 -1.5
baz=265
I26K Coal Creek Min 24.66 39 P P 02 42 23.1 -2.2
I26K Coal Creek Min 24.66 39 P P 02 42 23.8 -1.6
baz=253
L27K Beaver Creek, 24.68 45 P P 02 42 25.1 -0.5
L27K IAmb IAmb 02 42 40.9
comp=Z,19nm,0.8s
L27K Beaver Creek, 24.68 45 P P 02 42 25.6 -0.1
baz=260,SNR=10
BCAR Beaver Creek A 24.70 45 P P 02 42 26.3 +0.4
K27K Chicken 24.77 43 P P 02 42 25.9 -0.5
K27K Chicken 24.77 43 P P 02 42 26.2 -0.3
baz=257
E25K Arctic Village 24.80 32 P P 02 42 26.2 -0.5
baz=245
G26K Porcupine Rive 24.96 35 P P 02 42 27.7 -0.3
baz=249,SNR=13
PINM Pinnacle 25.08 52 P P 02 42 29.4 +0.1
baz=268
D25K Kavik River 25.09 29 P P 02 42 28.7 -0.5
baz=241
F26K Sheenjek River 25.11 34 P P 02 42 29.4 -0.1
baz=247,SNR=5.9
YUK3 Moose Creek 25.12 48 P P 02 42 28.1 -1.7
baz=264
O28M Mount Upton 25.15 51 P P 02 42 29.3 -0.9
baz=266
EGAK Eagle 25.34 41 P P 02 42 30.6 -0.9
EGAK IAmb IAmb 02 42 45.5
comp=Z,17nm,0.8s
EGAK Eagle 25.34 41 P P 02 42 30.9 -0.6
baz=257
H27K Steamboat Moun 25.57 38 P P 02 42 33.0 -0.7
baz=253
G27K Doyon Strip 25.70 36 P P 02 42 34.0 -0.8
baz=252
C26K Camden Bay 25.83 29 P P 02 42 36.1 +0.3
baz=242
GRNR Gornyy 25.93 286 *e*P P 02 42 37.0 0.0
GRNR MLR MLR
comp=E,730nm,13.0s
GRNR MLR MLR
comp=N,310nm,16.0s
GRNR MLR MLR
comp=Z,50nm,14.0s
DAWY Dawson 25.94 43 P P 02 42 37.1 0.0
DAWY IAmb IAmb 02 43 00.6
comp=Z,15nm,0.9s
DAWY Dawson 25.94 43 P P 02 42 37.0 0.0
baz=260,SNR=8.3
C27K Jago River 26.06 30 P P 02 42 37.3 -0.8
baz=244
M29M Somme Creek 26.13 47 P P 02 42 37.8 -1.0
baz=264
E27K Coleen River 26.19 33 P P 02 42 38.4 -0.8
baz=249
HYT Haines Junctio 26.47 51 P P 02 42 40.9 -1.1
HYT Haines Junctio 26.47 51 P P 02 42 42.3 +0.3
baz=268
I29M Ogilvie Camp, 26.64 40 P P 02 42 42.7 -0.7
I29M IAmb IAmb 02 43 07.9
comp=Z,22nm,1.4s
I29M Ogilvie Camp, 26.64 40 P P 02 42 43.3 0.0
baz=259
N30M Aishikik Lake 26.70 49 P P 02 42 42.8 -1.1
baz=268
K29M Barlow Dome 26.72 44 P P 02 42 44.3 +0.1
baz=262
YAK Yakutsk 28.18 312 LR LR 02 54 43.2
comp=Z,84nm,19.0s,baz=89,slow=37
YAK Yakutsk 28.18 312 *e*P P 02 42 55.8 -1.3
YAK *e**PP **pP** 02 42 58.6 -4.9
YAK *e* 02 46 08.2
YAK *e*S **S** 02 47 42.9 +2.3
YAK *e**SS **pS** 02 47 48.6 +1.2
YAK *e*SS **SnSn** 02 48 58.8 +1.4
YAK *e* 02 53 46.3
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK smax smax
comp=E,41nm,3.0s
YAK smax smax
comp=N,40nm,3.0s
INK Inuvik 29.11 35 P P 02 43 04.5 -0.8
comp=N,1.1nm,0.3s,baz=259,slow=7.4,SNR=7.3
INK LR LR 02 55 08.7
comp=N,111nm,20.7s,baz=200,slow=37
comp=N,1.1nm,0.3s
TIXI Tiksi 30.07 332 *i*P P 02 43 14.6 +0.9
TIXI pmax pmax
comp=Z,10.0nm,1.1s
DLBC Dease Lake 30.41 55 P P 02 43 17.2 +0.2
comp=Z,1.6nm,0.6s,baz=293,slow=12,SNR=3.2
DLBC LR LR 02 57 10.3
comp=Z,130nm,18.2s,baz=273,slow=40
comp=Z,1.6nm,0.6s
ZEA Zeya 30.54 295 *e*P P 02 43 16.7 -1.4
ZEA pmax pmax
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 31.25 276 P P 02 43 24.2 -0.2
comp=Z,1.8nm,0.6s,baz=50,slow=12,SNR=5.5
comp=Z,1.8nm,0.6s
MAJO Matsushiro 31.60 259 *i*P P 02 43 28.2 +0.5
MAJO pmax pmax
comp=Z,8.0nm,1.1s
MJAR Matsushiro Arr 31.60 259 LR LR 02 53 58.7
comp=Z,94nm,22.0s,baz=58,slow=32
H11N2 WAKE ISLAND Hy 32.24 200 T T 03 19 06.0
baz=11,slow=76,SNR=9.7
H11N3 WAKE ISLAND Hy 32.25 200 T T 03 19 04.6
baz=11,slow=76,SNR=7.6
H11N1 WAKE ISLAND Hy 32.26 200 T T 03 19 06.3
baz=11,slow=76,SNR=7.3
BBB Bella Bella 33.01 66 LR LR 02 57 01.8
comp=Z,62nm,18.1s,baz=288,slow=36
H11S1 WAKE ISLAND Hy 33.47 199 T T 03 20 42.6
baz=18,SNR=4.8
H11S3 WAKE ISLAND Hy 33.48 199 T T 03 20 59.2
baz=18
H11S2 WAKE ISLAND Hy 33.48 199 T T 03 20 39.9
baz=18,SNR=3.1
BOD Bodaibo 36.59 306 *e*P P 02 44 09.1 -1.5
BOD pmax pmax
comp=Z,18nm,0.9s
CLRS Cowichan Lake 36.66 70 P P 02 44 12.0 +0.7
CLRS IAmb IAmb 02 44 14.1
comp=Z,12nm,0.8s
YKA Yellowknife Ar 37.12 45 P P 02 44 14.3 -0.8
comp=Z,2.0nm,0.6s,baz=283,slow=7.4,SNR=19
comp=Z,2.0nm,0.6s
PGC Sidney 37.14 70 P P 02 44 14.9 -0.5
PGC IAmb IAmb 02 44 17.7
comp=Z,8.5nm,0.8s
LLLB Lillooet 37.22 66 P P 02 44 15.2 -0.9
LLLB IAmb IAmb 02 44 18.8
comp=Z,7.1nm,0.5s
NLWA Neilton Lookou 37.45 72 P P 02 44 18.0 -0.1
NLWA IAmb IAmb 02 44 21.4
comp=Z,10.0nm,0.8s
KSRS Korea Array 37.52 269 P P 02 44 19.6 +0.9
comp=Z,5.1nm,0.9s,baz=59,slow=8.3,SNR=17
KSRS LR LR 02 58 48.6
comp=Z,18nm,20.8s,baz=70,slow=35
comp=Z,5.1nm,0.9s
E03A Lebam 38.04 73 P P 02 44 23.1 +0.1
TJN Taejon 38.53 268 *ce*P P 02 44 26.5 -0.7
D05A Enumclaw 38.68 71 P P 02 44 28.9 +0.5
F04A Amboy 39.03 73 P P 02 44 32.2 +0.9
F04A IAmb IAmb 02 44 33.9
comp=Z,26nm,1.2s
I02E Swisshome, OR 39.08 77 P P 02 44 32.5 +0.7
baz=301
LTY Liberty 39.44 70 P P 02 44 35.5 +0.6
LTY IAmb IAmb 02 44 36.8
comp=Z,10nm,0.9s
H04D Lebanon 39.55 75 P P 02 44 36.9 +1.2
baz=301
I03D Drain, OR 39.60 77 P P 02 44 38.1 +2.0
baz=302
B08A Colville Reser 39.71 68 P P 02 44 37.7 +0.7
B08A IAmb IAmb 02 44 39.0
comp=Z,12nm,0.7s
H04A Detroit Lake 39.80 75 P P 02 44 38.6 +0.7
H04A IAmb IAmb 02 44 41.1
comp=Z,10nm,0.8s
HOOD Mount Hood Mea 39.80 74 P P 02 44 38.1 +0.1
HOOD IAmb IAmb 02 44 40.6
comp=Z,13nm,0.9s
K02D Willamette Mer 39.94 78 P P 02 44 40.2 +1.1
baz=303
G05D Wamic, OR 40.05 74 P P 02 44 40.9 +1.0
baz=301
I04A Tendick Farm, 40.13 76 P P 02 44 41.6 +1.0
baz=302,SNR=7.1
I05D Terrebonne, OR 40.50 75 P P 02 44 44.6 +0.9
baz=302
HAWA Hanford 40.54 71 P P 02 44 44.8 +0.9
F07A Phinny Hill Vi 40.55 72 P P 02 44 44.8 +0.8
F07A IAmb IAmb 02 44 47.0
comp=Z,19nm,0.8s
D08A Wollman Farm, 40.58 70 P P 02 44 44.4 +0.2
D08A IAmb IAmb 02 44 46.0
comp=Z,16nm,0.7s
C09A Chrisman Ranch 40.60 68 P P 02 44 44.0 -0.4
C09A IAmb IAmb 02 44 46.1
comp=Z,17nm,0.7s
J04D Umpqua Nationa 40.61 77 P P 02 44 44.9 +0.1
J04D Umpqua Nationa 40.61 77 P P 02 44 45.8 +1.0
baz=303
E08A Dider Farm, El 40.78 71 P P 02 44 46.9 +1.1
EDM Edmonton 40.91 59 P P 02 44 46.6 -0.3
EDM Edmonton 40.91 59 P P 02 44 46.6 -0.3
EDM pmax pmax
comp=Z,16nm,0.4s
PINE Pine Mountain 41.03 75 P P 02 44 48.4 +0.2
PINE IAmb IAmb 02 44 51.5
comp=Z,18nm,1.4s
L04D Klamath Falls 41.04 78 P P 02 44 49.6 +1.3
baz=304
NEW Newport 41.05 67 P P 02 44 48.3 +0.1
comp=Z,17nm,0.8s,baz=300,slow=8.1,SNR=31
comp=Z,17nm,0.8s
NEW Newport 41.05 67 P P 02 44 48.0 -0.1
NEW IAmb IAmb 02 44 49.8
comp=Z,16nm,0.7s
NEW Newport 41.05 67 P P 02 44 48.0 -0.1
baz=299,SNR=18
YBH Yreka Blue Hor 41.06 79 P P 02 44 49.5 +1.1
comp=Z,3.5nm,0.6s,baz=283,slow=5.9,SNR=4.7
comp=Z,3.5nm,0.6s
J05D Fort Rock, OR 41.12 76 P P 02 44 50.8 +1.8
baz=303,SNR=6.5
XLT XiLinHaoTe 41.30 285⇑ *i*P P 02 44 50.8 +0.5
XLT pP pP 02 44 57.4 +0.7
XLT sP sP 02 45 01.8 +2.6
XLT S **S** 02 51 03.6 +0.8
XLT sS sS 02 51 15.8 +2.4
XLT pmax pmax
comp=Z,11nm,0.8s
XLT pmax pmax
comp=Z,100nm,7.5s
XLT LR LR
comp=Z,220nm,20.7s
XLT LR LR
comp=Z,92nm,10.7s
E09A Wood Farm, Sta 41.31 70 P P 02 44 50.8 +0.5
E09A IAmb IAmb 02 44 52.7
comp=Z,15nm,1.0s
G08A Pilot Rock 41.45 72 P P 02 44 52.6 +1.1
K05A Summer Lake 41.64 77 P P 02 44 54.3 +1.1
K05A IAmb IAmb 02 44 56.5
comp=Z,8.2nm,0.6s
I07A Izee 41.76 74 P P 02 44 55.0 +0.9
I07A IAmb IAmb 02 44 57.1
comp=Z,11nm,1.0s
MOD Modoc Plateau 42.46 77 P P 02 45 00.2 +0.4
MOD IAmb IAmb 02 45 03.1
comp=Z,7.7nm,0.8s
BMO Blue Mountains 42.68 72 IAmb IAmb 02 45 03.7
comp=Z,11nm,0.8s
WVOR Wild Horse Val 43.19 76 IAmb IAmb 02 45 25.4
comp=Z,8.2nm,0.8s
MSO Missoula 43.63 68 IAmb IAmb 02 45 12.6
comp=Z,8.6nm,0.8s
MSO Missoula 43.63 68 P P 02 45 09.6 +0.3
baz=302,SNR=11
MFID Camas Ranch 44.35 73 IAmb IAmb 02 45 17.1
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 44.58 295 P P 02 45 15.9 -1.0
ULN Ulaanbaatar 44.58 295 *ce*P P 02 45 16.4 -0.5
ULN pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 44.97 295 P P 02 45 20.4 +0.4
comp=Z,3.1nm,0.5s,baz=58,slow=9.8,SNR=13
SONM pP **pwP** 02 45 34.3 +1.0
comp=Z,1.0nm,0.5s,baz=71,slow=7.7,SNR=3.2
SONM LR LR 03 05 11.5
comp=Z,48nm,20.3s,baz=42,slow=37
comp=Z,3.1nm,0.5s
HLID Hailey 45.12 72 IAmb IAmb 02 45 23.4
comp=Z,13nm,1.0s
HLID Hailey 45.12 72 P P 02 45 22.2 +0.9
baz=304,SNR=19
BMN Battle Mountai 45.20 77 IAmb IAmb 02 45 24.9
comp=Z,7.6nm,0.8s
ZAK Zakamensk 45.39 300 *e*P P 02 45 22.0 -1.3
ZAK pmax pmax
comp=Z,6.0nm,1.4s
RYN Ryan 45.47 80 IAmb IAmb 02 45 29.8
comp=Z,9.4nm,1.3s
BOZ Bozeman (W) 45.65 68 IAmb IAmb 02 45 26.8
comp=Z,11nm,0.7s
BOZ Bozeman (W) 45.65 68 P P 02 45 24.9 -0.6
baz=304,SNR=18
LHV Little Huntoon 45.71 80 IAmb IAmb 02 45 44.6
comp=Z,13nm,1.3s
NVAR Mina Array Bea 45.73 80 P P 02 45 27.7 +1.5
comp=Z,2.0nm,0.6s,baz=291,slow=7.3,SNR=16
comp=Z,2.0nm,0.6s
GUMO Guam 45.76 228 LR LR 03 02 32.0
comp=Z,67nm,21.0s,baz=162,slow=33
OMMB Old Mammoth Mi 45.79 81 P P 02 45 28.0 +1.2
ELK Elko 46.24 75 IAmb IAmb 02 45 32.9
comp=Z,6.4nm,0.8s
NJ2 Nanjing 46.70 270 *e*P P 02 45 29.0 -4.6
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
YNR Norris Junctio 46.70 68 IAmb IAmb 02 45 36.5
comp=Z,11nm,0.9s
H17A Grant Village 46.94 69 P P 02 45 35.8 0.0
baz=305
IMW Indian Meadow 47.01 69 IAmb IAmb 02 45 38.9
comp=Z,10nm,1.2s
CWC Cottonwood Cre 47.09 82 P P 02 45 37.4 +0.5
baz=309
HVU Hansel Valley 47.13 73 IAmb IAmb 02 45 39.7
comp=Z,9.1nm,0.8s
GRAC Grapevine Rang 47.19 81 P P 02 45 38.3 +0.7
baz=309
TPAW Teton Pass 47.23 70 IAmb IAmb 02 45 39.9
comp=Z,4.5nm,0.7s
RLMT Red Lodge 47.30 67 IAmb IAmb 02 45 40.4
comp=Z,9.2nm,0.7s
RLMT Red Lodge 47.30 67 P P 02 45 39.3 +0.8
baz=305
R11A Troy Canyon, C 47.47 78 P P 02 45 40.4 +0.6
baz=308,SNR=14
BGU Big Grassy Mou 47.48 74 IAmb IAmb 02 45 58.6
comp=Z,5.8nm,1.1s
AHID Auburn Hatcher 47.57 71 IAmb IAmb 02 45 42.4
comp=Z,14nm,1.1s
MPMC Manual Prospec 47.70 82 P P 02 45 42.5 +0.8
baz=310
S11A Rachel 47.80 79 IAmb IAmb 02 46 15.1
comp=Z,14nm,1.2s
FURC Furnace Creek, 47.84 81 P P 02 45 43.7 +1.3
baz=309
SPR3 Spring Creek 3 47.85 77 IAmb IAmb 02 45 46.0
comp=Z,3.3nm,0.7s
TPNV Topopah Spring 47.92 80 IAmb IAmb 02 45 45.3
comp=Z,7.3nm,0.8s
TPNV Topopah Spring 47.92 80 P P 02 45 44.3 +1.0
baz=309,SNR=12
HWUT Hardware Ranch 47.97 72 IAmb IAmb 02 46 00.3
comp=Z,5.6nm,0.8s
DUG Dugway, Tooele 48.05 75 P P 02 45 45.3 +1.0
baz=307
GWY Greenwater Val 48.14 81 P P 02 45 45.4 +0.4
GWY IAmb IAmb 02 46 07.8
comp=Z,7.5nm,1.3s
TCUT Toone Canyon 48.35 73 IAmb IAmb 02 45 48.8
comp=Z,11nm,1.1s
PRN Pahroc Range 48.38 79 IAmb IAmb 02 46 04.8
comp=Z,14nm,1.2s
PSUT Pine Spring 48.43 77 IAmb IAmb 02 45 50.2
comp=Z,6.0nm,0.7s
BW06 Boulder Array 48.48 70 P P 02 45 48.3 +0.6
BW06 Boulder Array 48.48 70 P P 02 45 48.0 +0.3
baz=306,SNR=23
PD31 Pinedale Array 48.49 70 IAmb IAmb 02 45 49.2
comp=Z,9.8nm,0.8s
PDAR Pinedale Array 48.49 70 P P 02 45 48.1 +0.5
comp=Z,7.9nm,0.5s,baz=310,slow=3.2,SNR=77
PDAR pP **pwP** 02 46 02.0 +1.8
comp=Z,3.9nm,0.6s,baz=327,slow=3.0,SNR=7.4
comp=Z,7.9nm,0.5s
GSC Goldstone, Bar 48.61 82 IAmb IAmb 02 46 03.1
comp=Z,5.6nm,1.1s
GSC Goldstone, Bar 48.61 82 P P 02 45 49.3 +0.7
baz=310
JLU Jordanelle 48.64 73 IAmb IAmb 02 45 51.0
comp=Z,11nm,1.2s
NLU North Lily Min 48.65 74 IAmb IAmb 02 45 51.2
comp=Z,5.0nm,0.9s
TMUT Trail Mountain 49.58 74 IAmb IAmb 02 45 59.2
comp=Z,9.5nm,0.9s
GMRC Granite Mounta 49.67 82 P P 02 45 57.3 +0.6
baz=310
P17A Butcher Ranch, 49.76 74 IAmb IAmb 02 45 59.7
comp=Z,5.8nm,0.7s
MTPU Mount Pierson 49.76 76 IAmb IAmb 02 46 15.8
comp=Z,5.2nm,0.9s
Q16A Castle Valley 49.84 75 IAmb IAmb 02 46 00.6
comp=Z,7.0nm,0.8s
P18A Preston Nutter 49.96 74 IAmb IAmb 02 46 01.5
comp=Z,6.1nm,0.8s
KNB Kanab 50.01 78 IAmb IAmb 02 46 01.5
comp=Z,14nm,1.4s
SRU San Rafael Swe 50.11 74 IAmb IAmb 02 46 03.1
comp=Z,17nm,1.2s
K22A Casper 50.35 68 P P 02 46 01.2 -0.6
baz=307
IRM Iron Mountain 50.40 82 P P 02 46 02.1 0.0
baz=311
SPA0 Spitsbergen Ar 50.73 355 *e*P P 02 46 03.8 -0.3
SPA0 IAmb IAmb 02 46 15.6
comp=Z,126nm,1.5s
O20A White River Ci 50.86 72 IAmb IAmb 02 46 07.3
comp=Z,11nm,0.8s
O20A White River Ci 50.86 72 P P 02 46 06.1 +0.3
baz=308,SNR=10
PV23 Carpenter Ridg 51.45 74 IAmb IAmb 02 46 16.2
comp=Z,9.9nm,0.7s
PV10 Paradox Valley 51.48 74 IAmb IAmb 02 46 13.2
comp=Z,12nm,0.7s
PV07 Paradox Valley 51.68 74 IAmb IAmb 02 46 13.7
comp=Z,6.6nm,1.0s
ULM Lac du Bonnet 51.73 55 P P 02 46 11.2 -0.7
comp=Z,2.9nm,0.7s,baz=301,slow=10,SNR=4.2
ULM LR LR 03 09 33.4
comp=Z,56nm,18.1s,baz=348,slow=38
comp=Z,2.9nm,0.7s
N23A Red Feather La 51.77 70 IAmb IAmb 02 46 14.7
comp=Z,23nm,1.5s
N23A Red Feather La 51.77 70 P P 02 46 12.5 -0.1
baz=309,SNR=5.9
PV15 Paradox Valley 51.84 74 IAmb IAmb 02 46 15.5
comp=Z,8.6nm,0.9s
WUAZ Wupatki 51.87 78 IAmb IAmb 02 46 15.3
comp=Z,5.9nm,0.6s
WUAZ Wupatki 51.87 78 P P 02 46 14.4 +1.1
baz=311
MVCO Mesa Verde 52.55 75 IAmb IAmb 02 46 37.4
comp=Z,5.4nm,0.7s
MVCO Mesa Verde 52.55 75 P P 02 46 19.1 +0.6
baz=310
ISCO Idaho Springs 52.65 70 IAmb IAmb 02 46 21.4
comp=Z,6.7nm,0.8s
ISCO Idaho Springs 52.65 70 P P 02 46 20.1 +0.9
baz=309,SNR=11
S22A 4UR Ranch, Cre 53.22 73 IAmb IAmb 02 46 26.2
comp=Z,5.4nm,0.8s
S22A 4UR Ranch, Cre 53.22 73 P P 02 46 24.4 +0.9
baz=310,SNR=11
214A Organ Pipe Nat 53.32 83 P P 02 46 24.4 +0.5
baz=312
LZH Lanzhou 53.48 284 *e*P P 02 46 27.6 +2.4
LZH pP pP 02 46 31.4 -0.3
LZH pmax pmax
comp=Z,18nm,1.4s
GTA Gaotai 53.77 290 *e*P P 02 46 27.3 0.0
GTA pP pP 02 46 36.8 +3.0
GTA sP pwP 02 46 40.5 -0.2
GTA pmax pmax
comp=Z,7.0nm,1.2s
GTA pmax pmax
comp=Z,110nm,5.5s
GTA LR LR
comp=Z,66nm,13.8s
GTA LR LR
comp=Z,74nm,16.0s
GTA LR LR
comp=Z,98nm,18.5s
SDCO Great Sand Dun 54.03 72 IAmb IAmb 02 46 31.8
comp=Z,10.0nm,1.2s
SDCO Great Sand Dun 54.03 72 P P 02 46 29.6 +0.2
baz=311
SUMG Summit 54.30 13 *i*P P 02 46 29.0 -1.9
TUC Tucson 54.35 81 P P 02 46 31.6 +0.1
TUC Tucson 54.35 81 P P 02 46 31.7 +0.1
TUC pmax pmax
comp=Z,4.0nm,1.2s
TUC Tucson 54.35 81 P P 02 46 32.3 +0.8
baz=313
KSCO Kaye Shedlock' 54.93 69 P P 02 46 36.8 +1.1
baz=311
T25A Trinidad 55.08 72 IAmb IAmb 02 46 53.0
comp=Z,13nm,1.1s
T25A Trinidad 55.08 72 P P 02 46 38.0 +1.0
baz=311,SNR=10
ANMO Albuquerque 55.28 76 P P 02 46 38.7 +0.4
ANMO Albuquerque 55.28 76 *ce*P P 02 46 39.0 +0.6

ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 55.28 76 P **P** **02 46 39.3 +1.0**
baz=312
121A Cookes Peak, D 56.07 79 P **P** **02 46 45.1 +1.0**
baz=313
CBKS Cedar Bluff 56.77 68 P **P** **02 46 49.3 +0.5**
baz=312
WMQ Urumqi 57.82 301 *e*P **P** **02 46 56.4 +0.2**
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ LR LR
comp=Z,210nm,19.7s
WMQ LR LR
comp=Z,110nm,22.3s
KURK Kurchatov 57.82 312 P **P** **02 46 55.5 -0.4**
KURK IAmb IAmb 02 46 56.6
comp=Z,8.2nm,0.9s
KURK Kurchatov 57.82 312 *ce*P **P** **02 46 55.9 -0.1**
KURK pmax pmax
comp=Z,10.0nm,1.0s
KURBB Kurchatov Arra 57.93 312 LR LR 03 13 11.0
comp=Z,87nm,19.2s,baz=16,slow=37
MNTX Cornudas Mount 58.13 78 IAmb IAmb 02 47 01.5
comp=Z,7.3nm,0.8s
MNTX Cornudas Mount 58.13 78 P **P** **02 46 59.6 +1.2**
baz=314
MSTX Muleshoe 58.19 74 IAmb IAmb 02 47 01.7
comp=Z,8.8nm,0.8s
MSTX Muleshoe 58.19 74 P **P** **02 46 58.9 0.0**
baz=313
ARA0 ARCESS Array S 58.22 349 *e*P **P** **02 46 58.2 -0.3**
ARCES ARCESS Array B 58.22 349 P **P** **02 46 58.0 -0.5**
comp=Z,2.4nm,0.6s,baz=24,slow=8.2,SNR=16
ARCES pP **pwP** **02 47 11.8 +0.6**
comp=Z,1.8nm,0.6s,baz=23,slow=7.9,SNR=3.2
comp=Z,2.4nm,0.6s
KSU1 Kansas State U 58.40 66 P **P** **02 47 00.7 +0.5**
baz=312
SCIA State Center 58.44 61 P **P** **02 47 00.6 +0.1**
baz=312
MK31 Makanchi Array 58.67 307 *i* P **P** **02 47 00.1 -1.9**
MKAR Makanchi Array 58.67 307 P **P** **02 47 01.1 -0.9**
comp=Z,1.6nm,0.6s,baz=52,slow=7.4,SNR=17
MKAR LR LR 03 12 58.3
comp=Z,69nm,20.5s,baz=34,slow=37
comp=Z,1.6nm,0.6s
JETT Jettan, Norway 58.77 351 *e*P **P** **02 47 02.3 -0.1**
JETT IAmb IAmb 02 47 04.2
comp=Z,9.4nm,0.7s
MAKZ Makanchi 58.82 307 P **P** **02 47 02.3 -0.8**
MAKZ Makanchi 58.82 307 P **P** **02 47 02.3 -0.8**
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
TRO Tromso 58.84 352 *e*P **P** **02 47 02.5 -0.3**
TRO IAmb IAmb 02 47 05.8
comp=Z,14nm,1.3s
KTK1 Kautokeino 58.99 350 *e*P **P** **02 47 03.6 -0.3**
KTK1 IAmb IAmb 02 47 04.1
comp=Z,6.6nm,0.6s
JFWS Jewell Farm 59.39 59 P **P** **02 47 06.3 -0.8**
baz=313
BVAR Borovoye Array 59.89 318 LR LR 03 14 05.0
comp=Z,38nm,20.4s,baz=49,slow=37
BRVK Borovoye 59.91 318 P **P** **02 47 10.5 +0.1**
BRVK IAmb IAmb 02 47 26.1
comp=Z,6.3nm,0.6s
BRVK Borovoye 59.91 318 *ce*P **P** **02 47 10.0 -0.5**
BRVK pmax pmax
comp=Z,4.0nm,0.7s
WMOK Wichita Mounta 60.07 71 IAmb IAmb 02 47 13.8
comp=Z,7.5nm,0.9s
WMOK Wichita Mounta 60.07 71 P **P** **02 47 12.7 +0.8**
baz=314,SNR=7.3
OK030 Cody Creek RV 60.45 68 **P** **02 47 14.8 +0.4**
DEOK Depew 60.67 68 IAmb IAmb 02 47 17.2
comp=Z,17nm,0.6s
STEI Steigen 60.82 353 *e*P **P** **02 47 15.8 -0.6**
STEI IAmb IAmb 02 47 17.9
comp=Z,36nm,1.5s
TX32 Lajitas Array 60.83 78 IAmb IAmb 02 47 20.0
comp=Z,4.3nm,0.8s
TXAR Lajitas Array 60.83 78 P **P** **02 47 18.1 +0.8**
comp=Z,4.0nm,0.7s,baz=302,slow=4.5,SNR=42
comp=Z,4.0nm,0.7s
ABTX Abilene, Hawle 61.01 73 P **P** **02 47 19.2 +0.9**
baz=314,SNR=6.3
TUL1 Leonard 61.04 68 P **P** **02 47 18.9 +0.5**
baz=314,SNR=9.3
PZH PanZhiHua 61.33 278 P **P** **02 47 21.8 +1.2**
PZH pmax pmax
comp=Z,70nm,1.0s
PZH pmax pmax
comp=Z,100nm,4.8s
R40A Maddies Statio 61.43 64 IAmb IAmb 02 47 24.3
comp=Z,4.5nm,0.7s
HDIL Hopedale 61.53 60 P **P** **02 47 20.2 -1.4**
baz=314
LOOK Love County 61.55 70 IAmb IAmb 02 47 24.0
comp=Z,18nm,0.8s
SCHQ Schefferville 61.71 36 P **P** **02 47 22.0 -0.6**
comp=Z,2.2nm,0.5s,baz=312,slow=6.6,SNR=11
comp=Z,2.2nm,0.5s
ARU Arti 61.91 327 LR LR 03 18 47.9
comp=Z,71nm,18.4s,baz=44,slow=40
ARU Arti 61.91 327 *d i*P **P** **02 47 24.2 +0.3**
ARU 02 48 02.6
ARU S **S** **02 55 50.0 +4.3**
ARU SS **SS** **02 59 49.9 +2.8**
ARU pmax pmax
comp=Z,3.0nm,0.6s
CCM Cathedral Cave 62.18 63 P **P** **02 47 25.8 -0.2**
baz=314
MGMO Mountain Grove 62.22 65 IAmb IAmb 02 47 27.0
comp=Z,6.5nm,0.9s
JCT Junction City 62.41 75 IAmb IAmb 02 47 30.8
comp=Z,6.6nm,0.7s
JCT Junction City 62.41 75 P **P** **02 47 27.8 +0.1**
baz=315
MOR8 Moi Rana 62.62 352 *e*P **P** **02 47 27.1 -1.4**
WHTX Lake Whitney, 62.78 72 P **P** **02 47 30.8 +0.6**
baz=315
SFIN Lafayette 62.85 59 P **P** **02 47 30.1 -0.3**
baz=315
KIRV Kirov 63.09 333 *ce*P **P** **02 47 33.4 +1.6**
MIAR Mount Ida 63.29 67 P **P** **02 47 34.3 +0.8**
baz=315,SNR=20
LCAR Lake Charles 63.62 65 IAmb IAmb 02 47 52.4
comp=Z,6.5nm,1.2s
KLMR Klimovskoe 63.72 339 *e*P **P** **02 47 37.9 +2.0**
KLMR pmax pmax
comp=Z,8.0nm,1.4s
KLMR Klimovskoe 63.72 339 *e*P **P** **02 47 38.0 +2.0**
KLMR AMP 02 47 49.5
comp=Z,8.0nm,1.4s
SADO Sadowa 63.83 51 LR LR 03 17 12.6
comp=Z,88nm,18.2s,baz=10,slow=38
O48B Farmland 63.98 58 P **P** **02 47 36.8 -1.1**
baz=316
833A Chaparral WMA, 64.19 76 P **P** **02 47 41.4 +1.9**
baz=316
HKT Hockley 65.20 73 P **P** **02 47 46.0 0.0**
HKT IAmb IAmb 02 48 06.8
comp=Z,5.2nm,1.1s
HKT Hockley 65.20 73 P **P** **02 47 46.0 0.0**
HKT pmax pmax
comp=Z,5.0nm,1.1s
WVT Waverly 65.47 63 P **P** **02 47 47.3 -0.4**
WVT IAmb IAmb 02 47 48.2
comp=Z,8.1nm,1.1s
WVT Waverly 65.47 63 P **P** **02 47 47.3 -0.4**
WVT pmax pmax
comp=Z,8.0nm,1.2s
WVT Waverly 65.47 63 P **P** **02 47 47.5 -0.2**
baz=316
AAK Ala-Archa 65.54 308 *ce*P **P** **02 47 48.3 0.0**
AAK pmax pmax
comp=Z,9.0nm,2.5s
OXF Oxford 65.73 65 P **P** **02 47 49.3 -0.1**
baz=316
FINES FINESS Array B 65.80 346 P **P** **02 47 49.1 -0.3**
comp=Z,3.7nm,0.6s,baz=26,slow=7.5,SNR=17
FINES LR LR 03 21 18.7
comp=Z,46nm,18.5s,baz=148,slow=40
comp=Z,3.7nm,0.6s
PLAL Pickwick Lake 66.15 64 IAmb IAmb 02 47 52.8
comp=Z,8.5nm,0.8s

CLTN Cedars of Leba 66.33 62 IAmb IAmb 02 47 54.5
comp=Z,9.2nm,0.8s
U49A Red Boiling Sp 66.33 61 IAmb IAmb 02 48 01.8
comp=Z,3.9nm,0.9s
T50A Nancy 66.48 60 IAmb IAmb 02 48 24.2
comp=Z,12nm,1.5s
CRAI Chiangrai 66.73 274 P **P** **02 47 55.2 -0.8**
CRAI IAmb IAmb 02 47 56.6
comp=Z,4.8nm,0.6s
AKTO Aktyubinsk 66.86 323 LR LR 03 20 10.5
comp=Z,82nm,19.1s,baz=39,slow=39
ABKAR Akbulak array 67.04 321 P **P** **02 47 57.3 -0.3**
ABKAR Akbulak array 67.04 321 IAmb IAmb 02 47 58.3
comp=Z,1.9nm,0.7s
DOMB Dombas 67.10 354 *e*P **P** **02 47 57.9 +0.1**
DOMB IAmb IAmb 02 48 02.2
comp=Z,42nm,1.9s
KKAR Karatay Array 67.15 311 P **P** **02 47 58.1 -0.3**
KKAR Karatay Array 67.15 311 P **P** **02 47 58.1 -0.3**
KKAR pmax pmax
comp=Z,2.0nm,0.7s
BINY Binghamton 67.27 51 P **P** **02 47 58.9 -0.3**
baz=319
SSPA Standing Stone 67.49 53 P **P** **02 48 00.1 -0.5**
baz=319
NC204 NORSAR Array S 67.74 353 P **P** **02 48 01.9 0.0**
NC303 NORSAR Array S 67.75 353 IAmb IAmb 02 48 13.2
comp=Z,9.1nm,1.1s
NB201 NORSAR Array S 67.93 353 P **P** **02 48 01.4 -1.6**
NB201 NORSAR Array S 67.93 353 *e*P **P** **02 48 03.2 +0.2**
NB201 IAmb IAmb 02 48 03.5
comp=Z,12nm,0.6s
NB2 NORSAR Subarra 67.94 353 P **P** **02 48 02.9 -0.3**
comp=Z,2.6nm,0.5s,baz=7.4,slow=6.2
NB2 NORSAR Subarra 67.94 353 P **P** **02 48 02.9 -0.3**
baz=7.4,slow=6.2
NOA NORSAR Array B 67.94 353 P **P** **02 48 03.2 +0.1**
comp=Z,2.9nm,0.6s,baz=2.6,slow=5.7,SNR=35
NOA pP **pwP** **02 48 16.8 +1.0**
comp=Z,0.6nm,0.5s,baz=12,slow=6.9,SNR=5.4
comp=Z,2.9nm,0.6s
TKL Tuckaleechee C 68.06 60 IAmb IAmb 02 48 06.7
comp=Z,11nm,1.2s
LRAL Lakeview Retre 68.18 64 IAmb IAmb 02 48 24.6
comp=Z,6.6nm,1.1s
LRAL Lakeview Retre 68.18 64 P **P** **02 48 03.8 -1.2**
baz=317
CMAR Chiang Mai Arr 68.94 274 P **P** **02 48 09.8 -0.2**
comp=Z,1.8nm,0.7s,baz=24,slow=7.2,SNR=11
CMAR LR LR 03 18 38.2
comp=Z,14nm,21.0s,baz=220,slow=36
comp=Z,1.8nm,0.7s
OSL Oslo 69.07 353 *e*P **P** **02 48 10.8 +0.6**
OSL IAmb IAmb 02 48 11.1
comp=Z,8.3nm,0.5s
Y52A Lilburn 69.23 62 IAmb IAmb 02 48 12.4
comp=Z,8.4nm,0.7s
TAPN Taplejung 69.38 288 *e*P **P** **02 48 12.9 -0.1**
comp=Z,31nm,0.9s
KONO Kongsberg 69.44 354 *ce*P **P** **02 48 13.7 +1.3**
KONO pmax pmax
comp=Z,27nm,2.5s
KONO Kongsberg 69.44 354 *e*P **P** **02 48 13.0 +0.6**
OBN Obninsk 69.58 337 *i* P **P** **02 48 12.6 -0.7**
OBN pmax pmax
comp=Z,5.0nm,1.2s
KMSC Kings Mountain 69.78 59 P **P** **02 48 14.8 -0.2**
baz=319
GOGA Godfrey 69.90 62 IAmb IAmb 02 48 16.7
comp=Z,6.3nm,0.9s
GOGA Godfrey 69.90 62 P **P** **02 48 15.4 -0.3**
baz=318
HODGE Hodges 69.95 60 IAmb IAmb 02 48 17.0
comp=Z,5.4nm,0.6s
JIRN Jiri 70.06 289 *e*P **P** **02 48 17.8 +0.5**
comp=Z,36nm,0.7s
GUN Gumba 70.06 290 *e*P **P** **02 48 17.5 +0.3**
comp=Z,38nm,0.8s
RAMN Ramite 70.34 289 *e*P **P** **02 48 18.9 +0.1**
comp=Z,75nm,0.9s
PKI Pulchoki 70.59 290 *e*P **P** **02 48 20.5 0.0**
PKIN Phulchoki 70.59 290 *e*P **P** **02 48 20.5 +0.1**
comp=Z,17nm,0.7s
GKN Gorkha 70.73 291 *e*P **P** **02 48 21.3 +0.2**
DMN Daman 70.75 290 *e*P **P** **02 48 21.4 +0.1**
HOMB Homborsund 70.89 354 *i* P **P** **02 48 22.6 +1.3**
SNART Snartemo 70.90 355 *i* P **P** **02 48 22.6 +1.3**
DANN Dangsing 70.99 292 *e*P **P** **02 48 23.0 +0.2**
BORU Boraas 71.18 352 *i* P **P** **02 48 22.0 -1.1**
CHGR Chuyangaron 71.20 308 P **P** **02 48 23.6 -0.1**
CHGR Chuyangaron 71.20 308 P **P** **02 48 23.6 -0.1**
CHGR pmax pmax
comp=Z,13nm,0.7s
FABU Falkenberg 71.81 351 *i* P **P** **02 48 26.2 -0.7**
VORR Voronezh 72.00 334 *e*P **P** **02 48 30.3 +2.1**
VORR pmax pmax
comp=Z,10.0nm,0.3s
DEL Delary 72.22 351 *i* P **P** **02 48 29.0 -0.4**
DWPF Disney Wildern 75.03 64 P **P** **02 48 46.9 +0.5**
baz=320
AKASG Malin Array Be 75.35 340 P **P** **02 48 48.0 +0.2**
comp=Z,2.2nm,0.4s,baz=23,slow=6.3,SNR=12
comp=Z,2.2nm,0.4s
AKBB Malin Array Si 75.35 340 IAmb IAmb 02 48 49.1
comp=Z,9.7nm,1.1s
AKBB Malin Array Si 75.35 340 *ce*P **P** **02 48 48.9 +1.1**
CLL Collm 77.40 350 *e*P **P** **02 48 56.0 -3.4**
KWP Kalwaria Pacla 77.66 344 *e*P **P** **02 49 02.2 +1.3**
DPC Dobruska-Polom 77.95 348 *e*P **P** **02 49 03.3 +0.7**
DPC Dobruska-Polom 77.95 348 *e*P **P** **02 49 03.3 +0.7**
SORM Soroca 77.97 340 ⇓P **P** **02 49 01.8 -0.8**
SORM Soroca 77.97 340 ⇓P **P** **02 49 01.8 -0.8**
KBZ Khabaz 77.98 328 P **P** **02 49 03.4 +0.6**
comp=Z,2.3nm,0.8s,baz=7.1,slow=8.1,SNR=3.8
comp=Z,2.3nm,0.8s
KBZ Khabaz 77.98 328 *i* P **P** **02 49 04.4 +1.6**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KRLC Kraliky 78.16 348 *e*P **P** **02 49 04.0 +0.2**
KRLC Kraliky 78.16 348 *e*P **P** **02 49 04.0 +0.2**
KOLS Kolonicke sedl 78.41 344 *e*P **P** **02 49 06.4 +1.3**
KOLS pmax pmax
comp=Z,6.0nm,0.6s
KOLS Kolonicke sedl 78.41 344 *e*P **P** **02 49 06.4 +1.3**
ZEI Tsey 78.48 327 *e*P **P** **02 49 05.5 -0.4**
CRVS Cervenica-Dubn 78.58 344 *e*P **P** **02 49 07.2 +1.1**
CRVS pmax pmax
comp=Z,6.0nm,0.6s
CRVS Cervenica-Dubn 78.58 344 *e*P **P** **02 49 07.2 +1.1**
BUR08 Bucovina Ar. S 79.10 342 IAmb IAmb 02 49 11.2
comp=Z,4.8nm,0.7s
BURAR Bucovina Array 79.12 342 ⇑P **P** **02 49 10.1 +0.9**
BURAR Bucovina Array 79.12 342 IAmb IAmb 02 49 11.6
comp=Z,5.7nm,0.7s
VYHS Vyhne 79.40 346 *e*P **P** **02 49 11.4 +0.8**
VYHS pmax pmax
comp=Z,3.0nm,1.1s
VYHS Vyhne 79.40 346 *e*P **P** **02 49 11.4 +0.8**
KHC Kasperske Hory 79.49 350 *e*P **P** **02 49 11.5 +0.4**
KHC Kasperske Hory 79.49 350 *e*P **P** **02 49 11.5 +0.4**
CKRC Cesky Krumlov 79.71 349 *e*P **P** **02 49 12.3 +0.1**
GERES GERESS Array B 79.75 349 P **P** **02 49 12.8 +0.3**
comp=Z,0.7nm,0.5s,baz=23,slow=7.2,SNR=10.0
GERES pP **pwP** **02 49 27.2 +2.0**
comp=Z,0.3nm,0.4s,baz=18,slow=4.6,SNR=3.1
comp=Z,0.7nm,0.5s
ARCR ARCALIA 79.80 342 ⇑P **P** **02 49 14.5 +1.7**
MESR Meseseni 80.00 343 ⇓P P 02 49 24.6 +11
WRAB Tennant Creek 80.18 221 *ce*P **P** **02 49 13.8 -1.2**
WRAB pmax pmax
comp=Z,11nm,1.7s
WRA Warramunga Arr 80.19 221 P **P** **02 49 14.2 -0.9**
comp=Z,1.9nm,0.6s,baz=31,slow=6.0,SNR=23
comp=Z,1.9nm,0.6s
WRA Warramunga Ar 80.19 221 *i* P **P** **02 49 14.1 -1.0**
WRA pmax pmax
comp=Z,2.0nm,0.6s
CONA Conrad Observa 80.38 348 *e*P **P** **02 49 16.9 +0.9**
comp=Z,1.9nm,0.6s
DRGR 80.39 343 ⇓P **P** **02 49 17.2 +1.1**
DRGR 80.39 343 ⇓P **P** **02 49 17.2 +1.1**
VRI Vrincioaia 80.47 340 ⇓P **P** **02 49 16.5 +0.1**
VRI Vrincioaia 80.47 340 ⇓P **P** **02 49 16.5 +0.1**
RONA Rosalia, Austr 80.55 347 *e*P **P** **02 49 12.1 -4.8**
comp=Z,2.2nm,0.6s
COVR Voineasa-Covas 80.60 340 ⇓P **P** **02 49 18.1 +0.9**

MOA Molln 80.67 349 *e*P P 02 49 22.5 +5.1
comp=Z,0.1nm,0.3s
MLR Muntele Rosu 81.00 340 ⇑P **P** **02 49 23.0 +3.6**
MLR Muntele Rosu 81.00 340 ⇑P **P** **02 49 23.0 +3.6**
SIRR Siria 81.09 344 ⇑P **P** **02 49 21.6 +1.8**
ARSA Arzberg 81.09 348 *e*P **P** **02 49 21.5 +1.7**
comp=Z,3.5nm,0.9s
VOIR 81.24 341 ⇑P **P** **02 49 22.1 +1.5**
VOIR 81.24 341 ⇑P **P** **02 49 22.1 +1.5**
HARR Harsova 81.32 339 ⇓P P 02 49 29.7 +8.8
HARR Harsova 81.32 339 ⇓P P 02 49 29.7 +8.8
ARR Arges 81.39 341 ⇑P **P** **02 49 22.7 +1.3**
WATA Walderalm 81.48 351 *e*P **P** **02 49 22.7 +0.8**
comp=Z,2.9nm,0.6s
MOTA Moosalm 81.52 351 *e*P **P** **02 49 19.3 -2.8**
comp=Z,0.1nm,0.3s
KBA Koelnbreinsper 81.54 349 *e*P **P** **02 49 23.7 +1.4**
comp=Z,8.7nm,0.5s
WTTA Wattenberg 81.54 351 *e*P **P** **02 49 23.0 +0.7**
comp=Z,5.6nm,0.6s
SQTA Sankt Quirin 81.63 351 *e*P **P** **02 49 23.1 +0.5**
comp=Z,3.6nm,0.8s
SOKA Soboth 81.72 348 *e*P **P** **02 49 23.7 +0.6**
comp=Z,0.4nm,0.5s
BZS Buzias 81.73 343 ⇓P **P** **02 49 23.9 +0.8**
BZS Buzias 81.73 343 ⇓P **P** **02 49 23.9 +0.8**
GZR Gura Zlata 81.73 343 ⇑P **P** **02 49 23.6 +0.4**
GZR Gura Zlata 81.73 343 ⇑P **P** **02 49 23.6 +0.4**
FETA Feichten 81.87 351 *e*P **P** **02 49 24.8 +0.7**
comp=Z,3.6nm,1.1s
ICOR Ion Corvin 81.89 339 ⇑P **P** **02 49 25.6 +1.7**
OBKA Obir 81.95 348 *e*P **P** **02 49 28.6 +4.2**
comp=Z,15nm,1.4s
ABTA Abfaltersbach 81.96 350 *e*P **P** **02 49 24.6 +0.2**
comp=Z,3.7nm,0.9s
FRGS Fruska Gora 82.49 345 ⇓P P 02 49 20.2 -6.9
BLKB Belogradchik 83.45 342 ⇓P **P** **02 49 31.5 -0.6**
BOVS Bovan 83.63 343 ⇓P **P** **02 49 33.1 +0.1**
ASAR Alice Springs 83.69 220 P **P** **02 49 33.4 -0.1**
comp=Z,1.9nm,0.7s,baz=20,slow=5.2,SNR=17
comp=Z,1.9nm,0.7s
BRTR Keskin Array B 84.50 333 P **P** **02 49 37.8 +0.1**
comp=Z,1.4nm,0.7s,baz=58,slow=1.7,SNR=5.4
BRTR pP **pwP** **02 49 53.5 +2.1**
comp=Z,2.7nm,0.9s,baz=107,slow=1.3,SNR=5.1
comp=Z,1.4nm,0.7s
BRTR Keskin Array B 84.50 333 *i* P **P** **02 49 39.2 +1.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
STKA Stephens Creek 88.37 210 P **P** **02 49 56.3 0.0**
comp=Z,0.9nm,0.3s,baz=63,slow=6.8,SNR=5.0
comp=Z,0.9nm,0.3s
TORD Torodi Ar. Bea 116.18 356 PKP **PKiKP** **02 55 46.9 -1.3**
comp=Z,0.3nm,0.7s,baz=322,slow=3.1,SNR=4.1
TORD pPKP sPKPdf 02 56 01.8 +4.2
comp=Z,0.5nm,0.7s,baz=350,slow=2.5,SNR=2.8
MAW Mawson 144.78 217 PKP **PKPab** **02 56 39.3 +0.2**
comp=Z,4.3nm,0.7s,baz=77,slow=3.6,SNR=10
BOSA Boshof 149.68 307 PKPbc **PKPbc** **02 56 53.9 -0.5**
comp=Z,2.2nm,0.6s,baz=43,slow=1.3,SNR=8.3

IDC ***23*** *02:52:03.5±0.4, 55°.20S×30°.52W, h0km, mb4.8/15, mbtmp4.8/16, ML4.7/1, MS4.1/31, Error ellipse: s-maj=16.7km s-min=14.4km az=33.0*

MOS ***23*** *02:52:05.3±1.0, 55°.29S×30°.70W, h20km, mb5.3/17, Error ellipse: s-maj=18.3km s-min=11.0km az=117.8*

NEIC ***23*** *02:52:05.1±1.5, 55°.24S±0°.09×30°.7W±0°.1, h10km±1km, mb5.3/93, Error ellipse: s-maj=15.1km s-min=12.5km az=200.0*

GCMT ***23*** *02:52:09.1±0.2, 55°.27S±0°.03×30°.65W±0°.02, h18km, MW5.0/108, Moment Tensor Solution. s43,c47; s108,c147; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.33±.16; $M_{\theta\theta}$-0.66±.10; $M_{\phi\phi}$-2.68±.10; $M_{r\theta}$0.20±.29; $M_{\theta\phi}$0.78±.06; $M_{\phi r}$-1.52±.24; Best double couple: M_o3.49100×10^{16} NP1:ϕ_s166.00000°, δ58.00000°, λ94.00000°. NP2:ϕ_s338.00000°, δ32.00000°, λ83.00000°. Principal axes: T 3.6930, Plg77.0000°, Azm89.0000°; N -0.4080, Plg4.0000°, Azm343.0000°; P -3.2890, Plg13.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 02:52:04.8±0.3, 55°.25S±0°.06×30°.68W±0°.05, h10km, n304, σ0s99/284, mb5.2/60, MS4.1/35, 5C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.50**	**284**	Pn	**Pn**	**02 52 59.3**	**+0.1**
HOPE				Sn	**Sn**	**02 53 40.0**	**-0.7**
HOPE	**Hope Point**	**3.50**	**284**	P	**Pn**	**02 52 59.3**	**+0.1**
HOPE						02 53 40.0	
ORCD	**Orcadas**	**9.26**	**228**	Pn	**Pn**	**02 54 16.0**	**-2.2**
EFI	**East Falkland**	**16.65**	**271**	Pn	**Pn**	**02 55 57.5**	**-0.5**
EFI	**East Falkland**	**16.65**	**271**	*i* P	**Pn**	**02 55 58.1**	**+0.2**
EFI				pmax	pmax		
	comp=Z,106nm,1.0s						
VNA1	**Neumayer--Stat**	**18.30**	**156**	P	**P**	**02 56 20.1**	**+1.6**
VNA1	**Neumayer--Stat**	**18.30**	**156**	ScP	**ScP**	**03 04 25.7**	**+1.0**
VNA3	**Neumayer Olymp**	**18.43**	**158**	P	**Pn**	**02 56 21.5**	**+1.5**
VNA3	**Neumayer Olymp**	**18.43**	**158**	PcP	**PcP**	**03 00 50.1**	**+0.2**
VNA3	**Neumayer Olymp**	**18.43**	**158**	ScP	**ScP**	**03 04 25.3**	**+0.3**
VNA2	**Neumayer--Watz**	**18.70**	**156**	P	**Pn**	**02 56 23.5**	**+0.2**
	baz=313,slow=14						
PMSA	**Palmer Station**	**18.97**	**226**	P	**Pn**	**02 56 28.7**	**+2.1**
	comp=Z,2.3nm,0.3s,baz=85,slow=6.4,SNR=6.4						
PMSA				LR	LR	03 02 46.1	
	comp=Z,644nm,19.8s,baz=39,slow=34						
	comp=Z,42nm,0.9s						
PMSA	**Palmer Station**	**18.97**	**226**	P	**P**	**02 56 25.0**	**-0.9**
PMSA	**Palmer Station**	**18.97**	**226**	*e*P	**P**	**02 56 24.5**	**-1.4**
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**02 56 40.7**	**+0.4**
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**02 56 40.6**	**+0.2**
	comp=Z,24nm,1.0s,baz=306,slow=8.8,SNR=98						
	comp=Z,24nm,1.0s						
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**02 56 40.4**	**0.0**
SNAA	**Sanae**	**20.29**	**155**	*e*P	**P**	**02 56 40.3**	**0.0**
SMAI	**San Martin Ant**	**21.14**	**218**	P	**P**	**02 56 50.5**	**+1.2**
USHA	**Ushuaia**	**21.47**	**255**	P	**P**	**02 56 54.0**	**+0.9**
	comp=Z,56nm,0.9s,baz=149,slow=1.8,SNR=5.4						
	comp=Z,56nm,0.9s						
TROLL	**Troll, Antarti**	**21.85**	**153**	P	**P**	**02 56 56.9**	**-0.4**
MG02	**Cerro Sombrero**	**22.59**	**260**	P	**P**	**02 57 04.9**	**-0.2**
GO10	**Punta Arenas**	**23.48**	**258**	P	**P**	**02 57 14.6**	**+0.3**
MG04	**Isla Riesco**	**23.88**	**259**	P	**P**	**02 57 17.5**	**-0.7**
NVL	**N'lazarevskaya**	**24.02**	**147**	*e*P	**P**	**02 57 17.5**	**-1.8**
NVL				*e*S	**S**	**03 01 33.9**	**-2.0**
NVL				pmax	pmax		
	comp=Z,14nm,0.7s						
MG05	**Puerto Natales**	**24.88**	**261**	P	**P**	**02 57 26.9**	**-0.5**
GO09	**Cerro Castillo**	**24.96**	**262**	P	**P**	**02 57 28.2**	**+0.1**
GO09				IAmb	IAmb	02 57 32.5	
	comp=Z,86nm,1.1s						
PLTB	**Pedras Altas**	**28.52**	**316**	P	**P**	**02 58 00.9**	**+0.7**
PLTB	**Pedras Altas**	**28.52**	**316**	*e*P	**P**	**02 58 01.0**	**+0.7**
CPSB	**Cacapava Do Su**	**29.66**	**317**	*e*P	**P**	**02 58 10.7**	**+0.4**
PLCA	**Paso Flores**	**29.91**	**282**	P	**P**	**02 58 12.7**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=118,slow=7.9,SNR=4.2						
PLCA				LR	LR	03 09 17.0	
	comp=Z,336nm,21.8s,baz=129,slow=34						
	comp=Z,3.3nm,1.0s						
PLCA	**Paso Flores**	**29.91**	**282**	P	**P**	**02 58 12.2**	**-0.4**
PLCA	**Paso Flores**	**29.91**	**282**	*e*P	**P**	**02 58 12.2**	**-0.4**
PLCA	**Paso Flores**	**29.91**	**282**	*e*P	**P**	**02 58 12.6**	**-0.1**
RODS	**Rosario do Sul**	**30.40**	**315**	*e*P	**P**	**02 58 18.2**	**+1.3**
ALGR	**Alto Alegre (B**	**30.94**	**320**	*e*P	**P**	**02 58 23.9**	**+2.1**
UNIS	**Unistalda (Bra**	**31.49**	**316**	*e*P	**P**	**02 58 27.8**	**+1.2**
ITQB	**Itaqui**	**31.59**	**313**	P	**P**	**02 58 27.9**	**+0.6**
ITQB				IAmb	IAmb	02 58 29.0	
	comp=Z,40nm,0.9s						
ITQB	**Itaqui**	**31.59**	**313**	*e*P	**P**	**02 58 28.0**	**+0.6**
CRSM	**Crissiumal (Br**	**32.50**	**319**	*e*P	**P**	**02 58 36.7**	**+1.3**
PTGB	**Pitanga**	**34.33**	**324**	*e*P	**P**	**02 58 53.0**	**+1.4**
GO05	**Huala**	**34.76**	**288**	P	**P**	**02 58 53.9**	**-1.2**
CPUP	**Villa Florida**	**34.82**	**315**	P	**P**	**02 58 55.3**	**-0.3**
	comp=Z,24nm,0.9s,baz=153,slow=8.1,SNR=38						
CPUP				LR	LR	03 15 05.3	
	comp=Z,283nm,18.3s,baz=163,slow=40						
	comp=Z,24nm,0.9s						
CPUP	**Villa Florida**	**34.82**	**315**	P	**P**	**02 58 55.8**	**+0.2**
CPUP				IAmb	IAmb	02 58 57.0	
	comp=Z,29nm,0.9s						

CPUP Villa Florida 34.82 315 P P 02 58 55.8 +0.2
CPUP pmax pmax
comp=Z,29nm,1.0s
QSPA South Pole Qui 35.00 180 LR LR 03 13 09.4
comp=Z,301nm,18.1s,baz=190,slow=36
QSPA South Pole Qui 35.00 180 P P 02 58 58.4 +1.3
QSPA IAmb IAmb 02 59 12.3
comp=Z,31nm,0.9s
MT09 Talagante 35.18 291 P P 02 58 58.5 -0.4
MT09 IAmb IAmb 02 59 04.3
comp=Z,76nm,1.8s
MT01 Popeta 35.25 290 P P 02 58 58.8 -0.6
MT01 IAmb IAmb 02 59 01.0
comp=Z,76nm,1.9s
PEL Peldehue 35.50 292 P P 02 59 02.4 +0.8
PEL IAmb IAmb 02 59 03.6
comp=Z,47nm,0.9s
PEL Peldehue 35.50 292 P P 02 59 02.4 +0.8
PEL pmax pmax
comp=Z,47nm,0.9s
MT02 Curacav 35.66 291 P P 02 59 01.9 -0.9
MT02 IAmb IAmb 02 59 04.9
comp=Z,41nm,1.1s
ZON Zonda 35.70 296 P P 02 59 03.4 +0.1
ZON Zonda 35.70 296 P P 02 59 03.4 +0.1
ZON pmax pmax
comp=Z,20nm,0.9s
VA03 San Esteban 35.73 292 P P 02 59 04.1 +0.6
VA03 IAmb IAmb 02 59 06.2
comp=Z,47nm,1.1s
ROC1 El Roble 35.81 292 P P 02 59 04.6 +0.1
ROC1 IAmb IAmb 02 59 21.7
comp=Z,30nm,0.8s
VA06 Catapilco 36.28 292 P P 02 59 08.6 +0.5
CO02 Combarbal 37.18 293 P P 02 59 16.0 0.0
CO02 IAmb IAmb 02 59 18.3
comp=Z,76nm,1.1s
CO03 El Pedregal 37.31 294 P P 02 59 18.1 +1.0
CO01 Juntas del Tor 37.69 296 P P 02 59 20.9 +0.5
GO04 Tololo Observa 37.90 295 P P 02 59 22.4 +0.2
GO04 IAmb IAmb 02 59 28.3
comp=Z,43nm,1.1s
NAN01 Guarapari, ES 38.03 345 *e*P **P 02 59 23.9 +0.8**
ANTJ Antonio Joao (38.22 320 *e*P **P 02 59 24.7 -0.1**
CO05 La Serena 38.33 294 P P 02 59 26.3 +0.8
CO05 IAmb IAmb 02 59 27.1
comp=Z,58nm,0.8s
PMNB Patos De Minas 38.57 336 *e*P **P 02 59 28.3 +0.6**
AC05 El Transito 38.70 297 P P 02 59 28.5 -0.3
LCO Las Campanas 38.77 296 P P 02 59 29.0 -0.6
LCO Las Campanas 38.77 296 *e*P **P 02 59 29.7 +0.1**
GUA01 Guaratinga, BA 39.23 346 *e*P **P 02 59 33.8 +0.7**
AQDB Aquidauana 39.51 321 P P 02 59 35.4 0.0
AQDB Aquidauana 39.51 321 *e*P **P 02 59 35.6 +0.2**
IPMB Ipameri, GO 39.54 333 *e*P **P 02 59 37.3 +1.4**
AC04 Llanos de Chal 39.62 296 P P 02 59 36.8 +0.4
AC04 IAmb IAmb 02 59 38.8
comp=Z,61nm,1.0s
GO03 Copiap 39.69 298 P P 02 59 36.8 -0.2
AC02 Maricunga 39.76 300 P P 02 59 36.1 -2.0
MC01 Montes Claros 39.80 340 *e*P **P 02 59 38.1 +0.1**
AC06 Mina Casimiro 39.94 298 P P 02 59 39.1 0.0
RVDE Rio Verde (Bra 40.58 323 *e*P **P 02 59 45.0 +0.6**
AC01 Pan de Azucar 41.06 299 P P 02 59 47.9 -0.4
AC01 IAmb IAmb 02 59 50.3
comp=Z,56nm,1.2s
GO02 Mina Guanaco 41.38 301 P P 02 59 50.2 -1.1
JANB Januaria 41.48 340 *e*P **P 02 59 51.9 0.0**
MAW Mawson 41.95 145 P P 02 59 54.9 -0.2
comp=Z,6.6nm,0.9s,baz=223,slow=6.4,SNR=7.6
MAW LR LR 03 14 52.8
comp=Z,128nm,19.1s,baz=242,slow=33
comp=Z,6.6nm,0.9s
MAW Mawson 41.95 145 P P 02 59 54.5 -0.6
PB14 IPOC Station P 42.23 300 P P 02 59 57.5 -0.8
SUR Sutherland 42.38 79 P P 02 59 58.9 -0.5
comp=Z,12nm,1.0s,baz=275,slow=4.5,SNR=3.5
SUR LR LR 03 13 00.3
comp=Z,165nm,19.7s,baz=218,slow=30
comp=Z,12nm,1.0s
AF01 San Pedro de A 42.56 304 P P 03 00 00.6 -0.4
LVC Limon Verde 43.20 303 LR LR 03 17 14.6
comp=Z,147nm,21.6s,baz=164,slow=35
LVC Limon Verde 43.20 303 P P 03 00 05.1 -1.1
LVC Limon Verde 43.20 303 *e*P **P 03 00 06.9 +0.7**
LVC Limon Verde 43.20 303 *e*P **P 03 00 06.3 +0.1**
SALV Santo Antonio 43.74 324 *e*P **P 03 00 11.0 +0.8**
PB09 IPOC Station P 44.05 304 P P 03 00 11.3 -1.5
PB09 IAmb IAmb 03 00 16.0
comp=Z,37nm,1.2s
SDBA SAO DESIDERIO 44.17 340 *e*P **P 03 00 14.2 +0.5**
PB01 IPOC Station P 44.81 304 P P 03 00 16.4 -2.5
PTLB Pontes e Lacer 45.38 320 P P 03 00 23.1 -0.1
PTLB IAmb IAmb 03 00 24.7
comp=Z,33nm,0.9s
PTLB Pontes e Lacer 45.38 320 *e*P **P 03 00 23.4 +0.1**
SIV San Ignacio 45.62 317 LR LR 03 20 05.6
comp=Z,88nm,18.4s,baz=116,slow=37
NBAN Anadia - AL 45.68 352 *e*P **P 03 00 25.4 -0.3**
GO01 Chusmiza 45.85 305 P P 03 00 26.7 -0.9
GO01 IAmb IAmb 03 00 30.3
comp=Z,35nm,0.9s
SNDB Serra Nova Dou 46.10 331 *e*P **P 03 00 30.1 +1.1**
NBRF Rio Formoso - 46.58 354 *e*P **P 03 00 32.7 0.0**
SBA Scott Base 46.72 185 P P 03 00 34.7 +1.5
SBA IAmb IAmb 03 00 38.2
comp=Z,34nm,1.1s
SBA Scott Base 46.72 185 P P 03 00 34.7 +1.5
SBA pmax pmax
comp=Z,34nm,1.1s
PB16 IPOC Station P 47.16 306 P P 03 00 36.6 -1.3
PB16 IAmb IAmb 03 00 44.7
comp=Z,39nm,1.7s
VNDA Vanda 47.26 184 P P 03 00 39.1 +1.7
comp=Z,18nm,0.8s,baz=183,slow=6.8,SNR=71
VNDA LR LR 03 20 39.1
comp=Z,128nm,18.0s,baz=146,slow=36
comp=Z,18nm,0.8s
VNDA Vanda 47.26 184 P P 03 00 38.9 +1.5
VNDA IAmb IAmb 03 00 42.0
comp=Z,25nm,0.9s
VNDA Vanda 47.26 184 P P 03 00 38.9 +1.5
VNDA pmax pmax
comp=Z,25nm,1.0s
BOSA Boshof 47.73 80 P P 03 00 41.5 -0.3
comp=Z,12nm,0.9s,baz=194,slow=6.3,SNR=11
BOSA LR LR 03 16 06.5
comp=Z,229nm,20.5s,baz=200,slow=30
comp=Z,12nm,0.9s
BOSA Boshof 47.73 80 P P 03 00 40.6 -1.3
BOSA IAmb IAmb 03 00 41.9
comp=Z,23nm,1.1s
PB18 Visviri 47.79 306 P P 03 00 41.9 -0.9
PB18 IAmb IAmb 03 01 29.4
comp=Z,32nm,1.0s
H10S2 ASCENSION HYDR 47.89 22 T T 03 52 18.2
baz=192,slow=74,SNR=31
H10S3 ASCENSION HYDR 47.90 22 T T 03 52 18.4
baz=28,slow=74,SNR=45
VILB Vilhena 48.06 320 P P 03 00 44.1 -0.2
VILB IAmb IAmb 03 00 45.5
comp=Z,38nm,1.0s
VILB Vilhena 48.06 320 *e*P **P 03 00 44.9 +0.5**
PDRB Porto dos Gac 48.09 325 *e*P **P 03 00 44.7 +0.2**
SMTB Santa Maria do 48.18 337 *e*P **P 03 00 45.9 +0.7**
LPAZ La Paz 48.31 309 P P 03 00 48.3 +1.4
comp=Z,36nm,0.9s,baz=138,slow=5.8,SNR=97
LPAZ LR LR 03 24 48.6
comp=Z,62nm,18.4s,baz=144,slow=41
comp=Z,36nm,0.9s
LPAZ La Paz 48.31 309 P P 03 00 46.5 -0.5
LPAZ La Paz 48.31 309 *e*P **P 03 00 48.8 +1.8**
CLDB Colider 48.48 326 *e*P **P 03 00 47.3 -0.2**
H10N1 ASCENSION HYDR 49.01 21 T T 03 53 45.5
baz=192,slow=75,SNR=31
H10N3 ASCENSION HYDR 49.01 21 T T 03 53 41.9
baz=192,slow=75,SNR=56
H10N2 ASCENSION HYDR 49.02 21 T T 03 53 49.6
baz=192,slow=75,SNR=55
RCBR Riachuelo 49.46 353 LR LR 03 19 33.4
comp=Z,152nm,18.1s,baz=319,slow=33
LBTB Lobatse 50.71 77 LR LR 03 20 48.0
comp=Z,132nm,18.0s,baz=180,slow=34
LBTB Lobatse 50.71 77 P P 03 01 04.2 -0.4
LBTB IAmb IAmb 03 01 06.1
comp=Z,30nm,1.1s
LBTB Lobatse 50.71 77 P P 03 01 04.2 -0.4
LBTB pmax pmax
comp=Z,30nm,1.1s
TSUM Tsumeb 51.08 65 LR LR 03 19 49.8
comp=Z,137nm,18.1s,baz=134,slow=33
TSUM Tsumeb 51.08 65 P P 03 01 07.2 -0.2
TSUM IAmb IAmb 03 01 08.7
comp=Z,28nm,0.9s
PRPB Parauapebas 51.29 335 *e*P **P 03 01 10.1 +1.2**
NPGB Novo Progresso 51.95 328 *e*P **P 03 01 13.9 +0.1**
ETMB Extrema 53.27 314 P P 03 01 23.5 -0.1
ETMB IAmb IAmb 03 01 25.1
comp=Z,37nm,1.4s
ETMB Extrema 53.27 314 *e*P **P 03 01 24.1 +0.5**
TMAB Tom-Au,PA,Br 54.58 338 *e*P **P 03 01 35.1 +1.9**
ITTB Itaituba 54.60 329 *e*P **P 03 01 33.8 +0.5**
NNA Nana 56.14 302 LR LR 03 26 38.5
comp=Z,54nm,18.9s,baz=152,slow=37
NNA Nana 56.14 302 P P 03 01 44.5 +0.1
NNA IAmb IAmb 03 01 49.6
comp=Z,20nm,0.9s
NNA Nana 56.14 302 *i* P **P 03 01 44.6 +0.1**
NNA pmax pmax
comp=Z,28nm,0.9s
MALB Monte Alegre 56.58 331 *e*P **P 03 01 48.3 +0.7**
MACA Manacapuru-AM 57.32 324 P P 03 01 51.9 -0.9
MACA IAmb IAmb 03 01 52.9
comp=Z,23nm,0.8s
MACA Manacapuru-AM 57.32 324 *e*P **P 03 01 52.3 -0.4**
MCPB Macapa, AP 57.43 334 *e*P **P 03 01 54.8 +1.2**
CZSB Cruzeiro do Su 57.92 308 P P 03 01 56.8 -0.2
CZSB IAmb IAmb 03 01 57.7
comp=Z,19nm,0.9s
CZSB Cruzeiro do Su 57.92 308 *e*P **P 03 01 57.0 -0.1**
LSZ Lusaka 59.97 73 LR LR 03 26 11.4
comp=Z,265nm,18.1s,baz=211,slow=34
LSZ Lusaka 59.97 73 P P 03 02 10.8 -0.7
LSZ IAmb IAmb 03 02 12.4
comp=Z,28nm,1.1s
LSZ Lusaka 59.97 73 P P 03 02 10.8 -0.7
LSZ pmax pmax
comp=Z,28nm,1.2s
RPN Rapa Nui 61.82 262 LR LR 03 24 19.8
comp=Z,47nm,18.2s,baz=132,slow=31
BOAV Boa Vista 62.47 326 P P 03 02 26.5 -1.7
BOAV IAmb IAmb 03 02 28.7
comp=Z,26nm,1.0s
BOAV Boa Vista 62.47 326 *e*P **P 03 02 27.9 -0.3**
BOSC San Juan Bosco 64.62 305 P P 03 02 41.8 -0.8
BOSC IAmb IAmb 03 02 44.4
comp=Z,24nm,1.3s
LIC Lamto 64.86 28⇑ *i*P **P 03 02 43.4 -0.5**
comp=Z,94nm,0.9s
ARNL Arenillas 65.02 303 P P 03 02 44.2 -0.8
KIC Kosan Boka 65.07 29⇑ *i*P **P 03 02 44.8 -0.5**
comp=Z,30nm,0.9s
TIC Toumodi 65.26 28⇑ *i*P **P 03 02 45.9 -0.7**
comp=Z,90nm,1.0s
DBIC Dimbokro 65.33 28 P P 03 02 46.8 -0.2
comp=Z,17nm,0.9s,baz=200,slow=8.0,SNR=17
DBIC LR LR 03 25 24.8
comp=Z,150nm,18.4s,baz=193,slow=31
comp=Z,17nm,0.9s
DBIC Dimbokro 65.33 28 P P 03 02 46.2 -0.7
DBIC IAmb IAmb 03 02 47.8
comp=Z,23nm,0.9s
COHC Cochancay 65.58 305 P P 03 02 48.5 -0.2
COHC Cochancay 65.58 305 *e*P **P 03 02 50.3 +1.7**
OTAV Otavalo 67.58 307 P P 03 03 03.5 +1.5
OTAV IAmb IAmb 03 03 05.7
comp=Z,28nm,1.1s
OTAV Otavalo 67.58 307 P P 03 03 03.5 +1.5
OTAV pmax pmax
comp=Z,28nm,1.1s
OTAV Otavalo 67.58 307 *e*P **P 03 03 01.6 -0.4**
OPO Ambohidratompo 68.06 91 LR LR 03 25 05.2
comp=Z,143nm,21.7s,baz=336,slow=29
POPC Popayan, Colom 68.82 310 *e*P **P 03 03 11.0 +1.5**
PRAC Prado 69.10 312 *e*P **P 03 03 11.5 +0.5**
ROSC El Rosal 69.87 313 P P 03 03 16.8 +0.7
comp=Z,6.3nm,0.5s,baz=120,slow=17,SNR=6.7
comp=Z,6.3nm,0.5s
YOTC Yotoco, Valle 69.97 311 *e*P **P 03 03 15.6 -0.9**
RUSC La Rusia 70.31 315 *e*P **P 03 03 17.7 -1.3**
SPBC San Pablo de B 70.50 314 *e*P **P 03 03 18.0 -1.6**
GUY2C Guyana, Caldas 70.66 312 *e*P **P 03 03 19.4 -1.6**
NORC Norcasia 70.75 313 *e*P **P 03 03 19.6 -1.5**
BAUV El Baul 71.16 321 P P 03 03 23.3 -0.2
PTBC PUERTO BERRIO, 71.46 314 *e*P **P 03 03 23.0 -2.3**
CBOC Ciudad Bolivar 71.51 312 *e*P **P 03 03 24.7 -1.1**
SOCV Socops 71.60 318 *e*P **P 03 03 26.6 +0.4**
BIRV Birongo 71.95 323 P P 03 03 29.0 +0.7
SDV Santo Domingo 72.07 318 P P 03 03 28.4 -0.8
SDV IAmb IAmb 03 03 30.8
comp=Z,32nm,1.0s
SDV Santo Domingo 72.07 318 *e*P **P 03 03 30.2 +1.0**
ZARC Zaragoza, Cauc 72.48 314 *e*P **P 03 03 29.9 -1.7**
KOWA Kowa 73.04 27 P P 03 03 34.3 -0.5
TOA0 Torodi Ar. Sit 73.39 33 P P 03 03 36.4 -0.4
TORD Torodi Ar. Bea 73.39 33 P P 03 03 36.8 0.0
comp=Z,30nm,0.8s,baz=200,slow=6.4,SNR=135
TORD LR LR 03 30 29.7
comp=Z,378nm,18.1s,baz=194,slow=32
comp=Z,30nm,0.8s
TORD Torodi Ar. Bea 73.39 33 P P 03 03 36.5 -0.3
MBAR Mbarara 73.59 66 LR LR 03 33 27.8
comp=Z,222nm,18.1s,baz=200,slow=34
MBAR Mbarara 73.59 66 P P 03 03 39.5 +1.2
MBAR IAmb IAmb 03 03 42.2
comp=Z,24nm,1.3s
MBAR Mbarara 73.59 66 *i* P **P 03 03 38.5 +0.2**
MBAR pmax pmax
comp=Z,11nm,1.1s
GDHS Morne Mazeau, 75.96 329 P P 03 03 51.5 -0.2
KIBK Kibwezi 76.06 74 P P 03 03 54.3 +1.7
KMBO Kilima Mbogo 76.64 72 P P 03 03 57.2 +1.3
comp=Z,0.7nm,0.4s,baz=310,slow=6.9,SNR=3.3
KMBO LR LR 03 36 17.7
comp=Z,317nm,18.0s,baz=216,slow=35
comp=Z,0.7nm,0.4s
KMBO Kilima Mbogo 76.64 72 *i* P **P 03 03 59.5 +3.5**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
SRBA San Rafael, Bu 77.76 307 P P 03 04 02.6 +0.6
SRBA IAmb IAmb 03 04 05.1
comp=Z,34nm,1.2s
PEZE Perez Zeledon, 78.04 306 P P 03 04 04.2 +0.6
RIMA Rio Macho 78.46 306 P P 03 04 05.8 -0.2
RIMA IAmb IAmb 03 04 08.4
comp=Z,46nm,1.6s
STVI Saint Thomas 78.88 327 P P 03 04 07.3 -0.6
STVI IAmb IAmb 03 04 08.9
comp=Z,34nm,1.1s
HUMP Col San Antoni 78.97 326 P P 03 04 08.1 -0.3
HUMP IAmb IAmb 03 04 10.6
comp=Z,26nm,1.0s
SJG San Juan 79.04 326 LR LR 03 42 36.4
comp=Z,80nm,18.0s,baz=122,slow=38
CBYP Canovanas 79.09 326 P P 03 04 09.6 +0.4
CBYP IAmb IAmb 03 04 09.9
comp=Z,26nm,0.9s
MLPR Magueyes Islan 79.20 325 IAmb IAmb 03 04 09.1
comp=Z,26nm,1.1s
MLPR P P **03 04 09.7 0.0**
CRPR Cabo Rojo, PR 79.25 325 P P 03 04 10.1 +0.1
CRPR IAmb IAmb 03 04 10.8
comp=Z,39nm,1.1s
LODK Lodwar 79.42 68 P P 03 04 09.9 -1.3
JTS Las Juntas de 79.43 306 P P 03 04 11.8 +0.7
JTS IAmb IAmb 03 04 13.7
comp=Z,37nm,1.1s
JTS Las Juntas de 79.43 306 P P 03 04 11.8 +0.7
JTS pmax pmax
comp=Z,37nm,1.1s
RPZ Rata Peaks 79.69 196 P P 03 04 12.2 -0.1
ORTG Ortega, Santa 79.73 305 P P 03 04 11.9 -0.9
ORTG IAmb IAmb 03 04 15.1
comp=Z,34nm,1.0s
LTZ Lake Taylor 80.41 197 P P 03 04 15.9 -0.3
ACON Acoyapa 81.00 306 P P 03 04 19.1 -0.5
THZ Tophouse 81.29 198 P P 03 04 21.1 +0.2
THZ IAmb IAmb 03 04 27.4
comp=Z,18nm,0.8s
SDDR Presa de Saban 81.59 321 P P 03 04 21.5 -1.1
BOAB BOACO BROADBAN 81.65 306 P P 03 04 22.6 -0.4
URZ Urewera 83.87 202 LR LR 03 39 02.8
comp=Z,48nm,18.2s,baz=211,slow=34
TBI Tubuai 86.00 234 *e*LR LR 03 31 54.8
comp=Z,231nm,30.5s
TEIG Tepich 89.64 308 P P 03 05 02.4 -0.1
CMIG Matias Romero 90.07 301 LR LR 03 45 31.9
comp=Z,30nm,18.2s,baz=113,slow=36
ATD Arta Tunnel 90.21 70 LR LR 03 44 11.6
comp=Z,164nm,18.0s,baz=60,slow=35
MDT Midelt 90.52 22 LR LR 03 42 37.1
comp=Z,254nm,18.0s,baz=204,slow=34
PPT2 Papeete2 91.01 237 *e*LR LR 03 34 11.8
comp=Z,231nm,28.0s
PPT Papeete 91.03 237 LR LR 03 37 08.2
comp=Z,70nm,21.9s,baz=152,slow=30
STKA Stephens Creek 92.97 173 P P 03 05 17.7 -0.5
comp=Z,1.7nm,0.7s,baz=155,slow=10,SNR=4.3
STKA LR LR 03 44 43.1
comp=Z,90nm,20.5s,baz=204,slow=34
comp=Z,1.7nm,0.7s
KEST Kesra 96.89 32 LR LR 03 45 30.4
comp=Z,332nm,18.0s,baz=196,slow=33
ESDC Sonseca Array 97.27 20 P Pdif 03 05 37.3 -0.1
comp=Z,0.8nm,0.8s,baz=206,slow=4.5,SNR=5.1
ESDC LR LR 03 44 44.9
comp=Z,132nm,19.1s,baz=170,slow=32
comp=Z,0.8nm,0.8s
ASAR Alice Springs 100.30 166 P Pdif 03 05 50.6 -0.9
comp=Z,1.8nm,0.9s,baz=191,slow=4.3,SNR=10
ASAR PP PP 03 09 56.6 +0.1
comp=Z,1.5nm,1.0s,baz=183,slow=7.0,SNR=9.0
DZM Mont Dzumac 101.61 196 *e*LR LR 03 39 09.0
comp=Z,120nm,23.9s
WRA Warramunga Arr 104.03 165 PP PKiKP 03 10 29.3 +4.0
comp=Z,1.1nm,0.9s,baz=187,slow=6.2,SNR=5.6
TXAR Lajitas Array 104.68 300 PP PKiKP 03 10 26.0 -0.2
comp=Z,0.4nm,0.9s,baz=160,slow=4.0,SNR=3.7
CLL Collm 112.23 28 *e*PP PKiKP 03 11 20.0 +41
CLL *e*SKSac **SKSac 03 17 21.0 -0.4**
CLL *e*SKKSac **SKKSac 03 18 24.0 -2.2**
CLL *e*(Sdif) 03 19 24.0
CLL *e*PS **PS 03 21 05.0 +7.2**
CLL *e*PPS PPS 03 22 04.0
CLL *e*SS SS 03 26 48.0 -16
CLL *e*SSS SSS 03 31 18.0
CLL *e*SSSS 03 34 30.0
CLL Lm MLR 06 07 00.0
comp=N,100nm,18.0s
CLL Lm MLR 06 07 00.0
comp=E,100nm,19.7s
CLL Lm MLR 06 07 00.0
comp=Z,100nm,19.7s
MSU Marysvale 116.23 300 PKPdf **PKiKP 03 10 48.4 +0.5**
MSU Marysvale 116.23 300 PKiKP **PKiKP 03 10 48.4 +0.5**
KIV Kislovodsk 116.66 51 *i* PKiKP **PKiKP 03 10 48.7 +0.4**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,29nm,22.0s
PDAR Pinedale Array 118.25 305 PKP **PKPdf 03 10 51.0 -0.6**
comp=Z,0.7nm,0.7s,baz=148,slow=5.5,SNR=7.2
NVAR Mina Array Bea 119.27 296 PKP **PKiKP 03 10 54.9 +1.1**
comp=Z,2.4nm,0.9s,baz=153,slow=3.0,SNR=13
NVAR PKKPab **PKKPab 03 21 08.1 +1.3**
comp=Z,0.3nm,0.6s,baz=302,slow=2.8,SNR=4.0
NB2 NORSAR Subarra 120.58 22 PKPdf **PKPdf 03 10 55.0 -0.3**
comp=Z,3.4nm,1.1s,baz=202,slow=1.9
NOA NORSAR Array B 120.58 22 PKP **PKiKP 03 10 55.6 +0.3**
comp=Z,2.1nm,0.8s,baz=207,slow=2.0,SNR=11
NB201 NORSAR Array S 120.61 22 PKPdf **PKiKP 03 10 55.4 0.0**
OBN Obninsk 122.94 39 *i* PKiKP **PKPdf 03 10 59.5 -0.4**
OBN *i* 03 11 05.2
OBN pmax pmax
comp=Z,6.0nm,1.1s
MSO Missoula 123.36 305 PKPdf **PKPdf 03 11 01.2 0.0**
FINES FINESS Array B 124.62 29 PKP **PKPdf 03 11 02.9 0.0**
comp=Z,7.6nm,0.8s,baz=122,slow=2.5,SNR=24
FINES FINESS Array B 124.62 29 PKPdf **PKiKP 03 11 03.0 -0.2**
G08A Pilot Rock 124.65 301 PKPdf **PKiKP 03 11 04.0 0.0**
BELG Belogornoye 125.22 47 *i* PKiKP **PKPdf 03 11 03.5 -0.8**
BELG pmax pmax
comp=Z,2.0nm,0.9s
DANN Dangsing 126.59 92 *e*P **PKPdf 03 11 08.0 -0.2**
comp=Z,44nm,0.8s
DMN Daman 126.79 94 *e*P **PKPdf 03 11 08.4 -0.2**
GKN Gorkha 126.83 93 *e*P **PKPdf 03 11 08.1 -0.4**
PKIN Phulchoki 126.94 94 *e*P **PKPdf 03 11 08.4 -0.4**
comp=Z,14nm,0.6s
PKI Pulchoki 126.94 94 *e*P **PKPdf 03 11 08.6 -0.3**
comp=Z,27nm,1.0s
CMAR Chiang Mai Arr 127.20 113 PKP **PKPdf 03 11 09.3 +0.1**
comp=Z,3.8nm,0.8s,baz=238,slow=3.6,SNR=20
CMAR Chiang Mai Arr 127.20 113 PKPdf **PKPdf 03 11 09.1 -0.1**
CMAR Chiang Mai Arr 127.20 113 PKiKP **PKPdf 03 11 09.1 -0.1**
JIRN Jiri 127.45 95 *e*P **PKPdf 03 11 10.0 0.0**
comp=Z,40nm,0.7s
GUN Gumba 127.47 94 *e*P **PKPdf 03 11 10.1 +0.2**
comp=Z,20nm,0.7s
SUMG Summit 127.65 357 PKPdf **PKPdf 03 11 09.0 0.0**
SUMG Summit 127.65 357 PKiKP **PKPdf 03 11 09.0 0.0**
SUMG Summit 127.65 357 *i* P **PKPdf 03 11 09.0 0.0**
KLMR Klimovskoe 128.31 36 *e*PKiKP **PKPdf 03 11 09.4 -0.5**
KLMR *e* 03 13 17.9
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 128.31 36 *e*PKPdf **PKPdf 03 11 09.5 -0.5**
KLMR AMP 03 11 22.1
comp=Z,15nm,1.4s
KLMR *e*PP **PP 03 13 18.0 +2.6**
AKTO Aktyubinsk 128.46 55 PKiKP **PKPdf 03 11 10.1 -0.5**
AB31 Akbulak array 128.57 57 *i* PKiKP **PKPdf 03 11 10.0 -0.9**
ABKAR Akbulak array 128.57 57 PKPdf **PKPdf 03 11 10.9 0.0**
KK31 Karatay Array 129.76 69 *i* PKiKP **PKPdf 03 11 13.3 -0.1**
KSH Kashi 130.28 76 PKP **PKPdf 03 11 14.6 0.0**
ARCES ARCESS Array B 130.95 23 PKP **PKPdf 03 11 14.8 0.0**
comp=Z,12nm,0.9s,baz=207,slow=1.9,SNR=26
ARCES ARCESS Array B 130.95 23 PKPdf **PKiKP 03 11 15.3 -0.4**
PRGR Permogore 130.96 38 *e*PKiKP **PKPdf 03 11 14.1 -0.9**
PRGR *e* 03 11 25.9
AAK Ala-Archa 131.60 72 *i* PKiKP **PKiKP 03 11 17.6 -0.5**
AAK pmax pmax
comp=Z,3.0nm,1.0s
LVZ Lovozero 131.95 28 *i* PKiKP **PKPdf 03 11 16.3 -0.5**
LVZ pmax pmax
comp=Z,8.0nm,0.9s
ARU Arti 132.65 49 PKPdf **PKPdf 03 11 18.7 +0.3**
ARU Arti 132.65 49 *i* PKiKP **PKPdf 03 11 17.7 -0.7**
PZH PanZhiHua 135.23 110 PKP **PKiKP 03 11 26.1 +0.2**
BRVK Borovoye 136.00 59 PKPdf **PKiKP 03 11 25.6 -0.8**
BRVK Borovoye 136.00 59 PKiKP **PKiKP 03 11 25.6 -0.8**
BVA0 Borovoye Array 136.03 59 *i* PKiKP **PKPdf 03 11 25.2 +0.3**
BVAR Borovoye Array 136.03 59 PP **PP 03 14 05.7 +0.3**
comp=Z,0.4nm,0.5s,baz=236,slow=6.9,SNR=3.9
MK31 Makanchi Array 138.52 73 *i* PKHKP PKPpre 03 11 21.3
MKAR Makanchi Array 138.52 73 PKhKP PKPpre 03 11 20.4
comp=Z,0.6nm,0.6s,baz=250,slow=3.6,SNR=5.4
MKAR PKP **PKPdf 03 11 29.2 -0.5**
comp=Z,2.0nm,1.0s,baz=253,slow=3.3,SNR=6.6
KURK Kurchatov 138.86 66 *i* PKiKP **PKPdf 03 11 31.0 +0.9**
KURK pmax pmax
comp=Z,6.0nm,1.3s
WMQ Urumqi 139.70 80 *e*PKP **PKiKP 03 11 33.3 -1.1**
CD2 Chengdu 139.78 108 PKP **PKPdf 03 11 33.0 +0.4**
LZH Lanzhou 143.70 103 *e*PKP PKPbc 03 11 37.3 +0.2
LZH pPKP PKiKP 03 11 47.1 +4.1
GTA Gaotai 143.75 95 ⇓PKP PKPbc 03 11 37.3 +0.2
ZALV Zalesovo Beam 143.80 65 PKP PKPbc 03 11 36.5 -0.2
comp=Z,5.7nm,0.7s,baz=252,slow=3.0,SNR=18
ZALV Zalesovo Beam 143.80 65 PKPdf PKPab 03 11 35.9 0.0
XAN Xi'an 144.97 110⇑PKP **PKPab 03 11 40.8 -0.2**
WHN Wuhan 145.02 120 PKPbc **PKPbc 03 11 40.3 -0.8**
LYN LuoYang 147.25 114⇑PKPbc **PKPbc 03 11 46.8 -1.0**
LYN AMB AMB
comp=Z,100nm,7.9s
ILAR Eielson Array 148.12 313 PKPbc **PKPbc 03 11 49.5 +0.3**
comp=Z,44nm,0.9s,baz=220,slow=0.1,SNR=234
NJ2 Nanjing 148.44 125 *e*PKPbc **PKPdf 03 11 47.8 +0.3**
COLA College 148.54 313 PKPdf **PKPdf 03 11 47.9 +1.3**
COLA College 148.54 313 *i* PKP2 **PKPbc 03 11 49.4 -0.8**
COLA pmax pmax
comp=Z,54nm,1.0s
NRIK Noril'sk 149.61 38 PKPbc **PKPbc 03 11 52.5 -0.3**
comp=Z,11nm,0.9s,baz=130,slow=1.7,SNR=7.0
NRIK Noril'sk 149.61 38 *i* PKHKP PKPpre 03 11 48.7

NRIK				pmax	pmax		
	comp=Z,13nm,1.0s						
BTO	**Baotou**	**150.33**	**103**	*e*PKPbc	**PKPdf**	03 11 49.6	**-0.8**
HNS	**HongShan**	**150.59**	**113**	PKPbc	**PKPbc**	03 11 56.0	**-0.2**
H21K	**Melozitna Rive**	**150.73**	**314**	PKPdf	**PKPdf**	03 11 48.2	**-1.9**
N18K	**Kilae Creek**	**151.18**	**303**		**PKiKP**	03 11 57.2	**-0.2**
ZAK	**Zakamensk**	**152.16**	**81**	*e*PKIKP	**PKPbc**	03 11 59.2	**-0.3**
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
SONM	**Songino Array**	**152.66**	**88**	PKP	**PKPdf**	03 11 52.9	**-0.8**
	comp=Z,1.2nm,0.8s,baz=246,slow=1.1,SNR=5.6						
SONM				PKPbc	**PKPbc**	03 12 00.1	**-0.7**
	comp=Z,12nm,0.7s,baz=224,slow=3.3,SNR=43						
SONM				PKPab	**PKPab**	03 12 10.8	**-0.8**
	comp=Z,9.5nm,0.9s,baz=240,slow=3.0,SNR=13						
SONM	**Songino Array**	**152.66**	**88**	PKPdf	**PKPdf**	03 11 53.1	**-0.6**
SONM					**PKiKP**	03 12 00.9	**-0.1**
ULN	**Ulaanbaatar**	**153.05**	**88**		**PKPbc**	03 12 01.6	**-0.1**
ULN	**Ulaanbaatar**	**153.05**	**88**	PKIKP	**PKPbc**	03 12 01.6	**-0.1**
NAWB	**Namwon**	**155.08**	**134**	PKPdf	**PKPdf**	03 11 57.6	**+0.2**
XLT	**XiLinHaoTe**	**155.88**	**104**	*i* PKP	**PKPdf**	03 11 58.4	**+0.1**
XLT				PKPab	**PKPab**	03 12 25.3	**0.0**
KSAR	**Wonju Array Be**	**157.00**	**132**		**PKPdf**	03 11 59.5	**-0.3**
KSAR				PKPab	**PKPab**	03 12 30.0	**-0.2**
KSAR	**Wonju Array Be**	**157.00**	**132**	PKP2	**PKPab**	03 12 30.0	**-0.2**
KSAR						04 11 59.5	
KSRS	**Korea Array**	**157.03**	**132**	PKP	**PKPdf**	03 11 59.5	**-0.4**
	comp=Z,1.2nm,0.4s,baz=209,slow=1.0,SNR=7.8						
KSRS				PKPab	**PKPab**	03 12 30.4	**+0.2**
	comp=Z,7.7nm,1.0s,baz=217,slow=4.3,SNR=13						
USRK	**Ussuriysk Ar.**	**164.30**	**128**	PKPab	**PKPab**	03 13 00.6	**-1.2**
	comp=Z,2.4nm,0.7s,baz=237,slow=5.0,SNR=5.3						

NIED ***23*** *03:27:34.3, 34˚.86N×132˚.84E, h14km, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹³Nm; Mrr=0.83; Mθθ 8.67; Mφφ -7.84; Mrθ -4.02; Mθφ -3.77; Mφr 2.07; Fault plane solution: M₀ 9.98000×10¹³ NP1: φs 235.00000°, δ 69.00000°, λ 172.00000°. NP2: φs 328.00000°, δ 83.00000°, λ 21.00000°.*

JMA 23 03:27:34.3±0.0, 34˚.86N±0˚.07×132˚.84E±0˚.08, h14km, MV3.5/20, 6D, SHIMANE HIROSHIMA BORDER, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHS	**Saijyo**	**0.26**	**59**	P	Pg	03 27 39.8	-0.1
JHS				S	Sg	03 27 43.5	-0.1
JJG	**Jouge**	**0.34**	**131**	⇓P	Pg	03 27 41.2	0.0
JJG				⇓S	Sg	03 27 46.1	+0.2
JGT2	**ShimaneMisato**	**0.34**	**306**	⇓*i*P	Pg	03 27 41.3	0.0
JGT2				⇓S	Sg	03 27 46.0	+0.1
JHT	**Toyohira**	**0.40**	**240**	⇓P	Pg	03 27 42.3	-0.1
JHT				⇓S	Sg	03 27 47.7	-0.1

IDC ***23*** *03:38:16.9±1.6, 1˚.82N×125˚.73E, h0km, mb4.0/4, mbtmp3.9/5, ML3.2/1, Error ellipse: s-maj=113.5km s-min=23.2km az=66.0*

DJA ***23*** *03:38:27.3±0.3, 2˚N±2˚×12˚6E±˚, h55km±15km, M4.2/12, mb4.5/5, MLv4.0/12*

ISC 23 03:38:25.2±0.9, 1˚.74N±0˚.05×125˚.99E±0˚.05, h50km, n17, σ2§58/21, mb4.0/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.99**	**347**	P	**Pn**	**03 38 58.3**	**+1.9**
SGSI				S	**Sn**	**03 39 22.1**	**+1.9**
KMSI	**Cibinong**	**2.32**	**240**	P	**Pn**	**03 39 01.7**	**+0.8**
LBMI	**Labuha**	**2.81**	**147**	P	**Pn**	**03 39 09.3**	**+1.6**
LBMI				S	**Sn**	**03 39 43.6**	**+3.3**
GTOI	**Gorontalo**	**3.17**	**250**	P	**Pn**	**03 39 14.0**	**+1.3**
GTOI				S	**Sn**	**03 39 47.6**	**-1.7**
SANI	**Sanana**	**3.77**	**180**	P	**Pn**	**03 39 21.8**	**+1.0**
SANI				S	**Sn**	**03 40 01.7**	**-2.2**
MRSI	**Marisa**	**4.24**	**253**	P	**Pn**	**03 39 28.7**	**+1.4**
MRSI				S	**Sn**	**03 40 14.2**	**-1.3**
LUWI	**Luwuk**	**4.24**	**229**	P	Pn	03 39 42.9	+16
APSI	**Ampana**	**5.07**	**239**	P	**Pn**	**03 39 39.7**	**+0.9**
APSI				S	**Sn**	**03 40 42.1**	**+5.9**
AAI	**Ambon**	**5.83**	**158**	P	**Pn**	**03 39 51.8**	**+2.7**
	0.2nm49nm,0.5s						
MPSI	**Mapaga**	**6.25**	**257**	P	**Pn**	**03 39 57.4**	**+2.5**
TTSI	**Tana Toraja**	**7.79**	**232**	P	**Pn**	**03 40 20.5**	**+4.5**
PBKI	**Pangkalan Bun**	**14.98**	**253**	P	Pn	03 41 37.1	-17
FITZ	**Fitzroy Crossi**	**19.72**	**181**	P	**P**	**03 42 48.4**	**-2.4**
	0.1nm,0.3s,baz=27,slow=16,SNR=1.7						
	2.2nm,1.0s						
WRA	**Warramunga Arr**	**23.05**	**160**	P	**P**	**03 43 25.6**	**-0.9**
	5.3nm,0.6s,baz=338,slow=10,SNR=31						
	5.3nm,0.6s						
ASAR	**Alice Springs**	**26.40**	**164**	P	**P**	**03 43 57.1**	**-0.2**
	1.1nm,0.7s,baz=345,slow=11,SNR=20						
	1.1nm,0.7s						
STKA	**Stephens Creek**	**36.57**	**157**	P	**P**	**03 45 26.1**	**-0.3**
	3.1nm,0.7s,baz=320,slow=9.1,SNR=9.2						
	3.1nm,0.7s						
MKAR	**Makanchi Array**	**58.77**	**326**	P	**P**	**03 48 15.4**	**-2.9**
	0.4nm,0.5s,baz=123,slow=7.5,SNR=5.8						
	0.4nm,0.5s						

HEL 23 04:08:58.4±0.4, 67˚.75N×33˚.41E, h0km, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.49**	**71**	PG	Pg	04 09 07.6	-0.3
LVZ				SG	Sg	04 09 11.4	-2.8
VRF	**Varrio**	**1.45**	**272**	PG	Pn	04 09 24.3	-1.5
	baz=85						
VRF				MSG		04 09 42.0	
	comp=Z,1.6nm,0.2s						
VRF				SN	Sn	04 09 45.7	+0.2
OLKF	**Oulanka, Finla**	**2.13**	**230**	PG	Pb	04 09 36.5	-1.2
OLKF				SG	Sb	04 10 05.4	+0.7
KU6	**Riekki**	**2.22**	**220**	PB	Pn	04 09 36.8	+0.4
	baz=42						
KU6				MSG		04 10 04.0	
	comp=Z,3.4nm,0.2s						
KU6				SG	Sb	04 10 07.2	0.0

BEO ***23*** *04:09:55.4±1.3, 45˚.82N×26˚.91E, h98km±8km, ML3.0/9*
MCSM ***23*** *04:09:58.2±0.8, 46˚N±7˚×2˚6E±˚, h115km±7km, ML3.8*
BUC ***23*** *04:09:58.5±0.3, 45˚.55N×26˚.45E, h116km±2km, ml3.8/51, Error ellipse: s-maj=1.9km s-min=1.5km az=169.0*
SOF ***23*** *04:10:00.1, 45˚.60N×26˚.38E, h44km, MD2.9*
CFUSG ***23*** *04:10:00.7, 45˚.52N×26˚.66E, h107km, mb2.7/2, MD3.0/2, Romania Magtype MSH 2.8 from 2 stations*

ISC 23 04:09:57.4±1.2, 45˚.56N±0˚.02×26˚.41E±0˚.02, h127km±4km, n167, σ1§18/273, 138C-84D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.15**	**212**	⇑P	**Pn**	**04 10 15.5**	**+0.6**
NEHR				⇑S	**Sn**	**04 10 27.7**	**-0.3**
NEHR	**Nehoiu**	**0.15**	**212**	⇑P	**Pn**	**04 10 15.5**	**+0.6**
NEHR				⇑S	**Sn**	**04 10 27.7**	**-0.3**
COVR	**Voineasa-Covas**	**0.32**	**334**	⇑P	**Pn**	**04 10 15.5**	**+0.2**
COVR				⇑S	**Sn**	**04 10 27.6**	**-1.4**
COVR	**Voineasa-Covas**	**0.32**	**334**	⇑P	**Pn**	**04 10 15.5**	**+0.2**
COVR				⇑S	**Sn**	**04 10 27.6**	**-1.4**
MLR	**Muntele Rosu**	**0.33**	**259**	⇑P	**Pn**	**04 10 15.1**	**-0.4**
MLR				⇑S	**Sn**	**04 10 28.5**	**-0.6**
MLR	**Muntele Rosu**	**0.33**	**259**	⇑P	**Pn**	**04 10 15.1**	**-0.4**
MLR				⇑S	**Sn**	**04 10 28.5**	**-0.6**
MLR	**Muntele Rosu**	**0.33**	**259**	*e*Pg	**Pn**	**04 10 16.0**	**+0.5**
MLR				*e*Sg	**Sn**	**04 10 28.4**	**-0.7**
MLR	**Muntele Rosu**	**0.33**	**259**	P	**Pn**	**04 10 15.9**	**+0.5**
PLOR	**Plostina**	**0.34**	**29**	⇓P	**Pn**	**04 10 15.7**	**+0.3**
PLOR				⇓S	**Sn**	**04 10 27.9**	**-1.2**
PLOR	**Plostina**	**0.34**	**29**	⇓P	**Pn**	**04 10 15.7**	**+0.3**
PLOR				⇓S	**Sn**	**04 10 27.9**	**-1.2**
PLOR	**Plostina**	**0.34**	**29**	P	**Pn**	**04 10 15.6**	**+0.3**
VRI	**Vrincioaia**	**0.38**	**35**	⇑P	**Pn**	**04 10 16.1**	**+0.5**
VRI				⇑S	**Sn**	**04 10 28.6**	**-0.7**
VRI	**Vrincioaia**	**0.38**	**35**	⇑P	**Pn**	**04 10 16.1**	**+0.5**
VRI				⇑S	**Sn**	**04 10 28.6**	**-0.7**
VRI	**Vrincioaia**	**0.38**	**35**	P	**Pn**	**04 10 16.0**	**+0.5**
GRER		**0.43**	**114**	⇑P	**Pn**	**04 10 17.3**	**+1.6**
GRER				⇑S	**Sn**	**04 10 30.5**	**+0.8**
GRER		**0.43**	**114**	⇑P	**Pn**	**04 10 17.3**	**+1.6**
GRER				⇑S	**Sn**	**04 10 30.5**	**+0.8**
ISR	**Istrita**	**0.45**	**168**	⇑P	**Pn**	**04 10 16.5**	**+0.6**
ISR				⇑S	**Sn**	**04 10 29.7**	**-0.2**
ISR	**Istrita**	**0.45**	**168**	⇑P	**Pn**	**04 10 16.5**	**+0.6**
ISR				⇑S	**Sn**	**04 10 29.7**	**-0.2**
SECR		**0.57**	**205**	⇓P	**Pn**	**04 10 17.5**	**+0.9**
SECR		**0.57**	**205**	⇓P	**Pn**	**04 10 17.5**	**+0.9**
PANC	**Panciu**	**0.61**	**58**	⇑P	**Pn**	**04 10 17.6**	**+0.9**
PANC				⇑S	**Sn**	**04 10 31.0**	**-0.5**
PANC	**Panciu**	**0.61**	**58**	⇑P	**Pn**	**04 10 17.6**	**+0.9**
PANC				⇑S	**Sn**	**04 10 31.0**	**-0.5**
OZUR		**0.69**	**321**	⇑P	**Pn**	**04 10 17.8**	**+0.3**
OZUR				⇑S	**Sn**	**04 10 31.4**	**-1.3**
OZUR		**0.69**	**321**	⇑P	**Pn**	**04 10 17.8**	**+0.3**
OZUR				⇑S	**Sn**	**04 10 31.4**	**-1.3**
PLAR	**PLOIESTI**	**0.70**	**203**	⇑P	**Pn**	**04 10 18.2**	**+0.8**
PLAR				⇑S	**Sn**	**04 10 33.5**	**+1.0**
PLAR	**PLOIESTI**	**0.70**	**203**	⇑P	**Pn**	**04 10 18.2**	**+0.8**
PLAR				⇑S	**Sn**	**04 10 33.5**	**+1.0**
PGOR	**Pogoanele**	**0.76**	**148**	⇑S	**Sn**	**04 10 34.0**	**+0.5**
PGOR	**Pogoanele**	**0.76**	**148**	⇑S	**Sn**	**04 10 34.0**	**+0.5**
DOPR	**Dopca**	**0.83**	**300**	⇓P	**Pn**	**04 10 18.9**	**+0.4**
DOPR				⇓S	**Sn**	**04 10 33.8**	**-0.6**
DOPR	**Dopca**	**0.83**	**300**	⇓P	**Pn**	**04 10 18.9**	**+0.4**
DOPR				⇓S	**Sn**	**04 10 33.8**	**-0.6**
GHRR		**0.86**	**54**	⇑P	**Pn**	**04 10 19.8**	**+1.0**
GHRR				⇑S	**Sn**	**04 10 34.9**	**0.0**
GHRR		**0.86**	**54**	⇑P	**Pn**	**04 10 19.8**	**+1.0**
GHRR				⇑S	**Sn**	**04 10 34.9**	**0.0**
SULR		**0.88**	**187**	⇑P	**Pn**	**04 10 19.9**	**+0.9**
SULR				⇑S	**Sn**	**04 10 35.9**	**+0.7**
SULR		**0.88**	**187**	⇑P	**Pn**	**04 10 19.9**	**+0.9**
SULR				⇑S	**Sn**	**04 10 35.9**	**+0.7**
TUDR		**0.89**	**87**	⇑P	**Pn**	**04 10 19.1**	**+0.1**
TUDR				⇑S	**Sn**	**04 10 34.2**	**-1.0**
TUDR		**0.89**	**87**	⇑P	**Pn**	**04 10 19.1**	**+0.1**
TUDR				⇑S	**Sn**	**04 10 34.2**	**-1.0**
IZVR	**Izvoarele**	**0.95**	**90**	⇑P	**Pn**	**04 10 19.2**	**-0.3**
IZVR				⇑S	**Sn**	**04 10 34.3**	**-2.0**
IZVR	**Izvoarele**	**0.95**	**90**	⇑P	**Pn**	**04 10 19.2**	**-0.3**
IZVR				⇑S	**Sn**	**04 10 34.3**	**-2.0**
SLCR	**Slobozia Conac**	**0.96**	**87**	⇑P	**Pn**	**04 10 19.7**	**+0.1**
SLCR				⇑S	**Sn**	**04 10 34.7**	**-1.6**
SLCR	**Slobozia Conac**	**0.96**	**87**	⇑P	**Pn**	**04 10 19.7**	**+0.1**
SLCR				⇑S	**Sn**	**04 10 34.7**	**-1.6**
VOIR		**0.96**	**263**	⇓P	**Pn**	**04 10 20.4**	**+0.6**
VOIR				⇓S	**Sn**	**04 10 35.7**	**-1.1**
VOIR		**0.96**	**263**	⇓P	**Pn**	**04 10 20.4**	**+0.6**
VOIR				⇓S	**Sn**	**04 10 35.7**	**-1.1**
TESR	**Tescani**	**0.97**	**10**	⇑P	**Pn**	**04 10 20.3**	**+0.6**
TESR				⇑S	**Sn**	**04 10 35.7**	**-1.1**
TESR	**Tescani**	**0.97**	**10**	⇑P	**Pn**	**04 10 20.3**	**+0.6**
TESR				⇑S	**Sn**	**04 10 35.7**	**-1.1**
TESR	**Tescani**	**0.97**	**10**	P	**Pn**	**04 10 20.3**	**+0.6**
SCHL	**Schela**	**1.00**	**93**	⇓P	**Pn**	**04 10 20.1**	**+0.1**
SCHL				⇓S	**Sn**	**04 10 35.3**	**-1.7**
SCHL	**Schela**	**1.00**	**93**	⇓P	**Pn**	**04 10 20.1**	**+0.1**
SCHL				⇓S	**Sn**	**04 10 35.3**	**-1.7**
VARL	**Varlezi**	**1.06**	**71**	⇓S	**Sn**	**04 10 37.9**	**-0.4**
VARL	**Varlezi**	**1.06**	**71**	⇓S	**Sn**	**04 10 37.9**	**-0.4**
BIR	**Birlad**	**1.11**	**50**	⇑P	**Pn**	**04 10 22.1**	**+1.0**
BIR				⇑S	**Sn**	**04 10 38.5**	**-0.5**
BIR	**Birlad**	**1.11**	**50**	⇑P	**Pn**	**04 10 22.1**	**+1.0**
BIR				⇑S	**Sn**	**04 10 38.5**	**-0.5**
SCTR	**Scanteiesti**	**1.12**	**83**	⇓S	**Sn**	**04 10 39.0**	**-0.2**
SCTR	**Scanteiesti**	**1.12**	**83**	⇓S	**Sn**	**04 10 39.0**	**-0.2**
LEHL	**Lehliu**	**1.12**	**165**	⇑P	**Pn**	**04 10 22.0**	**+0.8**
LEHL				⇑S	**Sn**	**04 10 39.5**	**+0.3**
LEHL	**Lehliu**	**1.12**	**165**	⇑P	**Pn**	**04 10 22.0**	**+0.8**
LEHL				⇑S	**Sn**	**04 10 39.5**	**+0.3**
INCR	**INCERC-Sediu C**	**1.13**	**189**	⇓S	**Sn**	**04 10 39.2**	**-0.2**
INCR	**INCERC-Sediu C**	**1.13**	**189**	⇓S	**Sn**	**04 10 39.2**	**-0.2**
AMRR	**Amara**	**1.15**	**145**	⇓P	**Pn**	**04 10 21.3**	**-0.2**
AMRR				⇓S	**Sn**	**04 10 39.6**	**-0.1**
AMRR	**Amara**	**1.15**	**145**	⇓P	**Pn**	**04 10 21.3**	**-0.2**
AMRR				⇓S	**Sn**	**04 10 39.6**	**-0.1**
TATR	**Tataca**	**1.15**	**87**	⇑P	**Pn**	**04 10 21.7**	**+0.2**
TATR				⇑S	**Sn**	**04 10 39.5**	**-0.3**
TATR	**Tataca**	**1.15**	**87**	⇑P	**Pn**	**04 10 21.7**	**+0.2**
TATR				⇑S	**Sn**	**04 10 39.5**	**-0.3**
GISR	**Galati**	**1.16**	**95**	⇑S	**Sn**	**04 10 39.4**	**-0.5**
GISR	**Galati**	**1.16**	**95**	⇑S	**Sn**	**04 10 39.4**	**-0.5**
VLDR	**Vladesti**	**1.21**	**76**	⇑P	**Pn**	**04 10 23.0**	**+0.9**
VLDR				⇑S	**Sn**	**04 10 40.4**	**-0.3**
VLDR	**Vladesti**	**1.21**	**76**	⇑P	**Pn**	**04 10 23.0**	**+0.9**
VLDR				⇑S	**Sn**	**04 10 40.4**	**-0.3**
BUC1	**Bucharest**	**1.24**	**193**	⇓P	**Pn**	**04 10 23.2**	**+0.8**
BUC1				⇓S	**Sn**	**04 10 41.0**	**-0.3**
BUC1	**Bucharest**	**1.24**	**193**	⇓P	**Pn**	**04 10 23.2**	**+0.8**
BUC1				⇓S	**Sn**	**04 10 41.0**	**-0.3**
STFAR	**Stefanesti-Arg**	**1.24**	**236**	⇓S	**Sn**	**04 10 42.2**	**+0.7**
STFAR	**Stefanesti-Arg**	**1.24**	**236**	⇓S	**Sn**	**04 10 42.2**	**+0.7**
ARR	**Arges**	**1.27**	**262**	⇑P	**Pn**	**04 10 23.9**	**+1.2**
ARR				⇑S	**Sn**	**04 10 41.9**	**-0.1**
ARR	**Arges**	**1.27**	**262**	⇑P	**Pn**	**04 10 23.9**	**+1.2**
ARR				⇑S	**Sn**	**04 10 41.9**	**-0.1**
GIUM	**Giurgiulesti**	**1.27**	**93**	⇑P	**Pn**	**04 10 23.7**	**+1.1**
GIUM				⇑S	**Sn**	**04 10 41.9**	**0.0**
GIUM	**Giurgiulesti**	**1.27**	**93**	⇑P	**Pn**	**04 10 23.7**	**+1.1**
GIUM				⇑S	**Sn**	**04 10 41.9**	**0.0**
CFR	**Carcaliu**	**1.27**	**107**	⇓P	**Pn**	**04 10 23.1**	**+0.4**
CFR				⇓S	**Sn**	**04 10 40.1**	**-1.9**
CFR	**Carcaliu**	**1.27**	**107**	⇓P	**Pn**	**04 10 23.1**	**+0.4**
CFR				⇓S	**Sn**	**04 10 40.1**	**-1.9**
SGRR	**Singureni**	**1.37**	**193**	⇓P	**Pn**	**04 10 24.4**	**+0.6**
SGRR				⇓S	**Sn**	**04 10 43.3**	**-0.5**
SGRR	**Singureni**	**1.37**	**193**	⇓P	**Pn**	**04 10 24.4**	**+0.6**
SGRR				⇓S	**Sn**	**04 10 43.3**	**-0.5**
HARR	**Harsova**	**1.38**	**128**	⇓P	**Pn**	**04 10 24.4**	**+0.5**
HARR	**Harsova**	**1.38**	**128**	⇓P	**Pn**	**04 10 24.4**	**+0.5**
RASA	**Rasa**	**1.44**	**158**	⇓S	**Sn**	**04 10 44.3**	**-1.0**
RASA	**Rasa**	**1.44**	**158**	⇓S	**Sn**	**04 10 44.3**	**-1.0**
HUMR	**Humele**	**1.44**	**225**	⇑P	**Pn**	**04 10 25.3**	**+0.6**
HUMR				⇑S	**Sn**	**04 10 44.9**	**-0.4**
HUMR	**Humele**	**1.44**	**225**	⇑P	**Pn**	**04 10 25.3**	**+0.6**
HUMR				⇑S	**Sn**	**04 10 44.9**	**-0.4**
HUMR	**Humele**	**1.44**	**225**	P	**Pn**	**04 10 25.2**	**+0.6**
VASR	**Vaslui**	**1.45**	**41**	⇓S	**Sn**	**04 10 44.9**	**-0.7**
VASR	**Vaslui**	**1.45**	**41**	⇓S	**Sn**	**04 10 44.9**	**-0.7**
TLBR	**Topalu**	**1.54**	**130**	⇑P	**Pn**	**04 10 25.9**	**+0.2**
TLBR				⇑S	**Sn**	**04 10 45.9**	**-1.3**
TLBR	**Topalu**	**1.54**	**130**	⇑P	**Pn**	**04 10 25.9**	**+0.2**
TLBR				⇑S	**Sn**	**04 10 45.9**	**-1.3**
LEOM	**Leova**	**1.57**	**54**	⇑P	**Pn**	**04 10 26.2**	**+0.1**
LEOM				⇑S	**Sn**	**04 10 47.6**	**-0.3**
LEOM	**Leova**	**1.57**	**54**	⇑P	**Pn**	**04 10 26.2**	**+0.1**
LEOM				⇑S	**Sn**	**04 10 47.6**	**-0.3**
TPGR	**Topolog**	**1.58**	**115**	⇓P	**Pn**	**04 10 26.5**	**+0.3**
TPGR				⇓S	**Sn**	**04 10 46.4**	**-1.8**
TPGR	**Topolog**	**1.58**	**115**	⇓P	**Pn**	**04 10 26.5**	**+0.3**
TPGR				⇓S	**Sn**	**04 10 46.4**	**-1.8**
COPA	**Copaceanca**	**1.66**	**211**	⇓P	**Pn**	**04 10 27.6**	**+0.6**
COPA				⇓S	**Sn**	**04 10 49.1**	**-0.5**
COPA	**Copaceanca**	**1.66**	**211**	⇓P	**Pn**	**04 10 27.6**	**+0.6**
COPA				⇓S	**Sn**	**04 10 49.1**	**-0.5**
CVDA	**Cernavoda**	**1.68**	**136**	⇓P	**Pn**	**04 10 28.0**	**+0.6**
CVDA				⇓S	**Sn**	**04 10 49.3**	**-0.9**
CVDA	**Cernavoda**	**1.68**	**136**	⇓P	**Pn**	**04 10 28.0**	**+0.6**
CVDA				⇓S	**Sn**	**04 10 49.3**	**-0.9**
TLCR		**1.73**	**101**	⇑P	**Pn**	**04 10 28.9**	**+1.0**
TLCR				⇓S	**Sn**	**04 10 50.4**	**-0.9**
TLCR		**1.73**	**101**	⇑P	**Pn**	**04 10 28.9**	**+1.0**
TLCR				⇓S	**Sn**	**04 10 50.4**	**-0.9**
ICOR	**Ion Corvin**	**1.75**	**145**	⇑P	**Pn**	**04 10 29.2**	**+1.1**
ICOR				⇓S	**Sn**	**04 10 51.1**	**-0.5**
ICOR	**Ion Corvin**	**1.75**	**145**	⇑P	**Pn**	**04 10 29.2**	**+1.1**
ICOR				⇓S	**Sn**	**04 10 51.1**	**-0.5**
TIRR	**Tirgusor**	**1.79**	**127**	⇓P	**Pn**	**04 10 29.3**	**+0.6**
TIRR				⇓S	**Sn**	**04 10 51.7**	**-0.9**
TIRR	**Tirgusor**	**1.79**	**127**	⇓P	**Pn**	**04 10 29.3**	**+0.6**
TIRR				⇓S	**Sn**	**04 10 51.7**	**-0.9**
IAS	**Iasi**	**1.82**	**25**	⇓S	**Sn**	**04 10 52.3**	**-0.9**
IAS	**Iasi**	**1.82**	**25**	⇓S	**Sn**	**04 10 52.3**	**-0.9**
LOT	**Lotru**	**1.86**	**268**	⇑P	**Pn**	**04 10 29.7**	**+0.1**
LOT				⇑S	**Sn**	**04 10 54.7**	**+0.5**
LOT	**Lotru**	**1.86**	**268**	⇑P	**Pn**	**04 10 29.7**	**+0.1**
LOT				⇑S	**Sn**	**04 10 54.7**	**+0.5**
RAZG	**Razgrad**	**1.99**	**178**	⇓P	**Pn**	**04 10 32.0**	**+0.9**
RAZG				⇓S	**Sn**	**04 10 55.5**	**-1.3**
RAZG	**Razgrad**	**1.99**	**178**	⇓P	**Pn**	**04 10 32.0**	**+0.9**
RAZG				⇓S	**Sn**	**04 10 55.5**	**-1.3**
TSCT	**Constanta Port**	**2.12**	**130**	⇑P	**Pn**	**04 10 33.5**	**+0.9**
TSCT				⇑S	**Sn**	**04 10 58.9**	**-0.8**
TSCT	**Constanta Port**	**2.12**	**130**	⇑P	**Pn**	**04 10 33.5**	**+0.9**
TSCT				⇑S	**Sn**	**04 10 58.9**	**-0.8**
MILM	**Milestii Mici**	**2.15**	**50**	⇑P	**Pn**	**04 10 33.7**	**+0.7**
MILM				⇑S	**Sn**	**04 10 59.0**	**-1.4**
MILM	**Milestii Mici**	**2.15**	**50**	⇑P	**Pn**	**04 10 33.7**	**+0.7**
MILM				⇑S	**Sn**	**04 10 59.0**	**-1.4**
MILM	**Milestii Mici**	**2.15**	**50**	*e*P	**Pn**	**04 10 33.8**	**+0.7**
	25nm,0.1s						
MILM				*e*S	**Sn**	**04 10 58.6**	**-1.8**
	140nm,0.2s						
MILM	**Milestii Mici**	**2.15**	**50**	P	**Pn**	**04 10 33.7**	**+0.7**
KIS	**Kishinev**	**2.21**	**48**	*e*P	**Pn**	**04 10 34.8**	**+1.1**
KIS				*e*S	**Sn**	**04 11 00.0**	**-1.6**
	140nm,0.3s						
BUR01	**Bucovina Ar. S**	**2.22**	**339**	⇓P	**Pn**	**04 10 36.2**	**+2.2**
BUR01				⇓S	**Sn**	**04 11 03.8**	**+1.8**
BURAR	**Bucovina Array**	**2.22**	**339**	⇓P	**Pn**	**04 10 36.2**	**+2.2**
BURAR				⇓S	**Sn**	**04 11 03.8**	**+1.8**
PSN	**Preselentsi**	**2.26**	**145**	*i* P	**Pn**	**04 10 36.0**	**+1.6**
SZH	**Strazhica**	**2.31**	**189**	*i* P	**Pn**	**04 10 35.8**	**+0.7**
MANR	**Mangalia**	**2.33**	**137**	⇓S	**Sn**	**04 11 05.0**	**+0.6**
MANR	**Mangalia**	**2.33**	**137**	⇓S	**Sn**	**04 11 05.0**	**+0.6**
SRE	**Strehaia**	**2.44**	**250**	⇓S	**Sn**	**04 11 06.3**	**-0.5**
SRE	**Strehaia**	**2.44**	**250**	⇓S	**Sn**	**04 11 06.3**	**-0.5**
PRD	**Provadia**	**2.46**	**163**	*i* P	**Pn**	**04 10 38.4**	**+1.5**
GZR	**Gura Zlata**	**2.56**	**268**	⇓P	**Pn**	**04 10 39.5**	**+1.2**
GZR				⇓S	**Sn**	**04 11 10.4**	**+0.7**
GZR	**Gura Zlata**	**2.56**	**268**	⇓P	**Pn**	**04 10 39.5**	**+1.2**
GZR				⇓S	**Sn**	**04 11 10.4**	**+0.7**
GZR	**Gura Zlata**	**2.56**	**268**	*e*Pn	**Pn**	**04 10 39.3**	**+1.0**
PURM	**Purcari**	**2.60**	**67**	⇓P	**Pn**	**04 10 38.9**	**+0.2**
PURM				⇓S	**Sn**	**04 11 10.1**	**-0.4**
PURM	**Purcari**	**2.60**	**67**	⇓P	**Pn**	**04 10 38.9**	**+0.2**
PURM				⇓S	**Sn**	**04 11 10.1**	**-0.4**
DRGR		**2.85**	**297**	⇑P	**Pn**	**04 10 42.7**	**+0.7**
DRGR				⇑S	**Sn**	**04 11 18.4**	**+2.0**
DRGR		**2.85**	**297**	⇑P	**Pn**	**04 10 42.7**	**+0.7**
DRGR				⇑S	**Sn**	**04 11 18.4**	**+2.0**
**DR

ETLH	**Xiulin Townshi** baz=269	**0.94 273**	*e*P	**Pn**	**04 46 57.4**	**+0.2**
ETLH	baz=269		*e*S	**Sb**	**04 47 09.7**	**+1.0**
TWE	**Neicheng** baz=302	**0.94 306**	*e*P	**Pn**	**04 46 57.8**	**+0.6**
TWE	baz=302		*e*S	**Sn**	**04 47 10.2**	**-0.5**
ETM	**Tongmen** baz=255	**0.95 258**	*e*P	**Pb**	**04 46 57.2**	**+0.7**
TWB1	**Santiao Chiao** baz=339	**0.96 331**	P	**Pn**	**04 46 57.7**	**+0.2**
TWB1	baz=339		S	**Sn**	**04 47 09.4**	**-1.7**
LATG	**Datong** baz=277	**0.96 293**	*e*P	**Pn**	**04 46 58.2**	**+0.6**
LATG	baz=277		*e*S	**Sn**	**04 47 10.6**	**-0.7**
ENTT	**Nioudou** baz=295	**0.98 299**	P	**Pn**	**04 46 57.8**	**0.0**
ENTT	baz=295		*e*S	**Sn**	**04 47 10.6**	**-0.9**
TEGC	**Jichi Village** baz=240	**0.99 243**	*e*P	**Pn**	**04 46 58.5**	**+0.7**
NDT	**Datong Townshi** baz=282	**1.00 296**	*e*P	**Pn**	**04 46 59.0**	**+0.9**
TIPB	**Shuangxi** baz=330	**1.01 322**	⇑P	**Pn**	**04 46 58.6**	**+0.4**
TIPB	baz=330		S	**Sn**	**04 47 12.0**	**-0.5**
FUSB	**Fushanzhiwuyua** baz=314	**1.02 305**	⇑*i*P	**Pn**	**04 46 59.5**	**+1.1**
ESL	**Shilin** baz=238	**1.04 250**	P	**Pb**	**04 46 58.2**	**+0.1**
NNSB	**Datong** baz=281	**1.06 284**	P	**Pn**	**04 46 59.4**	**+0.5**
NNSH	**Datong** baz=281	**1.06 284**	*e*P	**Pn**	**04 46 59.3**	**+0.4**
NNS	**Nan Shan** baz=281	**1.07 285**	*e*P	**Pb**	**04 46 58.8**	**+0.1**
SXI1	**Grass Mountain** baz=334	**1.09 328**	⇑*i*P	**Pn**	**04 46 59.5**	**+0.3**
EGFH	**Guangfu** baz=233	**1.10 244**	*e*P	**Pb**	**04 46 59.2**	**+0.1**
NWF	**Wu-fen Shan** baz=321	**1.11 324**	P	**Pn**	**04 46 60.0**	**+0.3**
NWF	baz=321		*e*S	**Sn**	**04 47 14.5**	**-0.6**
WFSB	**Wu-fen Shan** baz=321	**1.11 324**	P	**Pn**	**04 47 00.0**	**+0.4**
WFSB	baz=321		*e*S	**Sn**	**04 47 14.1**	**-0.8**
IRIF	**Iriomote-Funau**	**1.13 81**	*i* P	**Pn**	**04 47 00.0**	**+0.2**
IRIF			S	**Sn**	**04 47 14.8**	**-0.5**
WHF	**Hehuan Shan** baz=254	**1.13 269**	P	**Pn**	**04 47 00.5**	**+0.3**
WHF	baz=254		*e*S	**Sg**	**04 47 14.4**	**-0.3**
YHNB	**Yeheng** baz=282	**1.15 296**	P	**Pn**	**04 47 00.9**	**+0.9**
FUSS	**Fushou** baz=271	**1.15 274**	*e*P	**Pn**	**04 47 01.0**	**+0.7**
NSK	**Sanguang** baz=280	**1.16 296**	⇑*e*P	**Pb**	**04 47 00.1**	**-0.1**
NSK	baz=280		*e*S	**Sb**	**04 47 14.4**	**-0.8**
TWA	**Mucha** baz=325	**1.17 314**	*e*P	**Pn**	**04 47 00.9**	**+0.6**
TWA	baz=325		S	**Sn**	**04 47 16.1**	**-0.1**
TNOU	**National Taiwa** baz=323	**1.18 326**	*e*P	**Pn**	**04 47 00.6**	**+0.1**
HATJ	**Hateruma jima**	**1.19 95**	P	**Pg**	**04 47 01.7**	**+0.6**
HATJ			S	**Sn**	**04 47 17.1**	**+0.2**
NHDH	**Xindian Distri** baz=320	**1.19 312**	*e*P	**Pg**	**04 47 01.6**	**+0.6**
HGSD	**Ruisui** baz=234	**1.20 236**	*e*P	**Pn**	**04 47 00.4**	**-0.3**
HGSD	baz=234		*e*S	**Sb**	**04 47 14.7**	**-1.5**
TWT	**Tachien** baz=263	**1.22 274**	*e*P	**Pg**	**04 47 02.6**	**+1.2**
TATO	**Taipei** baz=321	**1.23 311**	*e*P	**Pg**	**04 47 02.4**	**+0.7**
TATO	baz=321		*e*S	**Sn**	**04 47 17.9**	**+0.2**
TDCB	**Techi** baz=263	**1.23 274**	*e*P	**Pg**	**04 47 02.1**	**+0.3**
OWD	**Renai** baz=258	**1.23 260**	⇓P	**Pn**	**04 47 01.7**	**+0.4**
EHY	**Hungye** baz=249	**1.27 239**	*e*P	**Pn**	**04 47 01.5**	**-0.2**
WUSB	**Renai** baz=259	**1.28 262**	P	**Pb**	**04 47 02.6**	**+0.4**
WUSB	baz=259		*e*S	**Sb**	**04 47 17.9**	**-0.8**
YM01	**YM01** baz=316	**1.29 319**	*e*P	**Pg**	**04 47 02.2**	**-0.7**
VWDT	**VWDT** baz=249	**1.31 252**	⇓*i*P	**Pn**	**04 47 03.1**	**+0.8**
VWDT	baz=249		*e*S	**Sb**	**04 47 18.0**	**-1.5**
YM08	**YM08** baz=318	**1.31 321**	*e*P	**Pb**	**04 47 02.2**	**-0.5**
NFF	**Wufeng Townshi** baz=279	**1.35 290**	*e*P	**Pb**	**04 47 03.3**	**0.0**
YULB	**Yu-li** baz=246	**1.35 235**	P	**Pn**	**04 47 02.9**	**0.0**
YULB	baz=246		*e*S	**Sn**	**04 47 18.3**	**-2.4**
EYUL	**Yuli** baz=231	**1.36 233**	*e*P	**Pn**	**04 47 03.4**	**+0.4**
TWF1	**Yuli** baz=223	**1.37 234**	*e*P	**Pn**	**04 47 03.1**	**0.0**
TWF1	baz=223		*e*S	**Sn**	**04 47 19.9**	**-1.3**
JKRS	**Kuro-shima**	**1.38 87**	P	**Pg**	**04 47 04.1**	**-0.4**
JKRS			S	**Sg**	**04 47 21.3**	**-1.1**
TWY	**Chenhua** baz=321	**1.38 323**	P	**Pg**	**04 47 04.0**	**-0.5**
TWY	baz=321		S	**Sg**	**04 47 21.5**	**-1.0**
WPL	**Puli Township** baz=261	**1.42 264**	*e*P	**Pb**	**04 47 05.0**	**+0.4**
WHP	**Taichung City** baz=263	**1.43 275**	*e*P	**Pg**	**04 47 05.7**	**+0.2**
LIOB	**Emei** baz=286	**1.44 290**	*e*P	**Pg**	**04 47 05.8**	**+0.1**
NSTT	**Nanjuang** baz=285	**1.45 289**	*e*P	**Pg**	**04 47 05.5**	**-0.3**
DPDB	**Guoxing** baz=262	**1.45 265**	*e*P	**Pb**	**04 47 05.3**	**+0.2**
WCS	**Beigang Elemen** baz=256	**1.46 266**	*e*P	**Pb**	**04 47 05.9**	**+0.7**
SSLB	**Suanglung** baz=243	**1.47 255**	*e*P	**Pn**	**04 47 05.1**	**+0.6**
FULB	**Fuli** baz=217	**1.47 229**	*e*P	**Pn**	**04 47 04.2**	**-0.3**
FULB	baz=217		*e*S	**Sn**	**04 47 21.9**	**-1.8**
SMLT	**Sun Moon Lake** baz=257	**1.49 259**	*e*P	**Pb**	**04 47 06.0**	**+0.1**
JIJ	**Ishigaki jima**	**1.51 82**	*i* P	**Pn**	**04 47 05.1**	**+0.1**
JIJ			S	**Sn**	**04 47 23.4**	**-1.2**
PCYT	**Pengchaiyu** baz=343	**1.51 345**	P	**Pb**	**04 47 05.1**	**-0.9**
PCYT	baz=343		*e*S	**Sn**	**04 47 23.2**	**-1.4**
YUS	**Yu-Shan** baz=242	**1.57 245**	P	**Pn**	**04 47 07.1**	**+0.7**
YUS	baz=242		*e*S	**Sn**	**04 47 24.9**	**-2.0**
ECS	**Chishang** baz=218	**1.59 228**	*e*P	**Pn**	**04 47 05.9**	**-0.3**
TWQ1	**Liyutan** baz=274	**1.59 277**	*e*P	**Pb**	**04 47 07.5**	**0.0**
NSY	**Sanyi** baz=276	**1.61 279**	*e*P	**Pb**	**04 47 08.2**	**+0.3**
EDH	**Donghe** baz=214	**1.62 223**	*e*P	**Pn**	**04 47 06.5**	**0.0**
EDH	baz=214		*e*S	**Sn**	**04 47 24.9**	**-2.5**
WWF	**Wufeng** baz=264	**1.66 266**	*e*P	**Pb**	**04 47 08.5**	**-0.1**
ELDTW	**Lidau** baz=233	**1.68 235**	*e*P	**Pn**	**04 47 07.3**	**-0.1**
ALS	**Alishan** baz=245	**1.69 248**	*e*P	**Pb**	**04 47 09.3**	**0.0**
WNT1	**Nantou City** baz=259	**1.69 262**	*e*P	**Pb**	**04 47 09.7**	**+0.6**
WNT	**Mingjian** baz=258	**1.69 261**	*e*P	**Pb**	**04 47 09.2**	**0.0**
LDUT	**Ludao** baz=212	**1.77 213**	*e*P	**Pn**	**04 47 07.8**	**-0.7**
LDUT	baz=212		*e*S	**Sn**	**04 47 27.9**	**-3.1**
LONT	**Longtian** baz=234	**1.78 225**	*e*P	**Pn**	**04 47 08.5**	**-0.2**
WDLH	**Douliu** baz=254	**1.86 256**	*e*P	**Pb**	**04 47 11.7**	**-0.4**
STYH	**Taoyuan** baz=227	**1.87 238**	*e*P	**Pn**	**04 47 10.2**	**+0.2**
STYT	**Tauyuan** baz=227	**1.89 238**	*e*P	**Pn**	**04 47 11.6**	**+1.3**
WTP	**Ta-pu** baz=240	**1.96 243**	*e*P	**Pn**	**04 47 13.2**	**+1.9**
WTP	baz=240		*e*S	**Sn**	**04 47 36.7**	**+0.8**
WRL	**Guolierlin Hig** baz=260	**1.96 263**	*e*P	**Pn**	**04 47 12.8**	**+1.5**
TWK	**Hsinying** baz=242	**2.05 245**	*e*P	**Pn**	**04 47 14.6**	**+2.0**
TWK	baz=242		*e*S	**Sn**	**04 47 39.9**	**+1.7**
JTJ	**Tarama**	**2.06 76**	P	**Pn**	**04 47 12.3**	**-0.2**
JTJ			*e*S	**Sn**	**04 47 37.4**	**-0.8**
CHN1	**Nanshi** baz=240	**2.06 242**	*e*P	**Pn**	**04 47 14.5**	**+1.9**
CHN1	baz=240		*e*S	**Sn**	**04 47 39.6**	**+1.3**
SGST	**Jiashian** baz=237	**2.07 239**	*e*P	**Pn**	**04 47 13.9**	**+1.2**
SGST	baz=237		*e*S	**Sn**	**04 47 39.5**	**+1.0**
SLGT	**Liugui** baz=226	**2.07 236**	*e*P	**Pb**	**04 47 15.3**	**-0.2**
ECL	**Taimali** baz=230	**2.12 223**	*e*P	**Pn**	**04 47 12.9**	**-0.5**
SSD	**Sandimen** baz=222	**2.23 231**	*e*P	**Pn**	**04 47 17.3**	**+2.4**
LAY	**Lan-yu** baz=202	**2.29 203**	*e*P	**Pn**	**04 47 16.7**	**+0.9**
MASBT	**Mashibuluo** baz=224	**2.31 228**	*e*P	**Pn**	**04 47 17.7**	**+1.6**
MASBT	baz=224		*e*S	**Sn**	**04 47 45.7**	**+1.1**
LYUB	**Lan-yu** baz=201	**2.32 202**	*e*P	**Pn**	**04 47 15.1**	**-1.1**
EAST	**Anshuo** baz=219	**2.34 221**	*e*P	**Pn**	**04 47 16.6**	**+0.2**
SSPT	**Xinbi** baz=221	**2.44 227**	*e*P	**Pn**	**04 47 20.4**	**+2.6**
SCZT	**Fangliau** baz=219	**2.49 225**	*e*P	**Pn**	**04 47 21.6**	**+3.1**
TWKBT	**Hengchun** baz=214	**2.71 215**	*e*P	**Pn**	**04 47 22.1**	**+0.6**
WDGT	**Dungji** baz=250	**2.76 251**	*e*P	**Pn**	**04 47 23.5**	**+1.3**
PHUB	**P'eng-hu** baz=255	**2.76 257**	*e*P	**Pn**	**04 47 23.9**	**+1.7**
PNG	**Penghu** baz=256	**2.77 258**	*e*P	**Pn**	**04 47 23.7**	**+1.4**
VWUC	**VWUC** baz=284	**2.90 287**	*e*P	**Pn**	**04 47 23.8**	**-0.4**
VCHM	**Qimei** baz=249	**2.98 252**	*e*P	**Pn**	**04 47 26.8**	**+1.6**
VCHM	baz=249		*e*S	**Sn**	**04 47 59.5**	**-1.4**
MATB	**Ma-tsu** baz=316	**3.05 311**	*e*P	**Pn**	**04 47 26.3**	**+0.2**
XPSS	**Dashiqiu** baz=315	**3.46 323**	*e*P	**Pn**	**04 47 32.4**	**+0.6**
KNMB	**Chin-men Tao** baz=264	**3.77 275**	*e*P	**Pn**	**04 47 37.0**	**+0.9**

*IDC **23** 04:59:40.5±0.7,55°.11S×30°.26W,h0km,mb4.2/7, mbtmp4.3/8,Error ellipse: s-maj=28.6km s-min=17.9km az=83.0*
*NEIC **23** 04:59:42.2±0.8,55°.22S±0°.07×30°.6W±0°.1,h10km±1km, mb4.5/12,Error ellipse: s-maj=17.4km s-min=7.8km az=128.0*

ISC 23 04:59:41.9±0.6,55°.11S±0°.09×30°.5W±0°.1,h10km,n34, σ0s83/28,mb4.5/9,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.55**	**281**	Pn	**Pn**	**05 00 35.8**	**-1.1**
ORCD	**Orcadas**	**9.42**	**227**	Pn	Pn	05 01 52.8	-4.6
VNA1	**Neumayer--Stat**	**18.40**	**156**	P	**P**	**05 03 57.8**	**+1.1**
VNA3	**Neumayer Olymp**	**18.54**	**159**	P	**Pn**	**05 03 59.5**	**+1.1**
PMSA	**Palmer Station** 18nm,0.9s,baz=4.8,slow=15,SNR=2.5	**19.13**	**226**	P	**Pn**	**05 04 06.1**	**+0.6**
SNAA	**Sanae**	**20.39**	**155**	P	**P**	**05 04 17.3**	**-1.2**
SNAA	**Sanae** 3.0nm,0.9s,baz=299,slow=8.4,SNR=14 3.0nm,0.9s	**20.39**	**155**	P	**P**	**05 04 17.7**	**-0.8**
SNAA	**Sanae**	**20.39**	**155**	P	**P**	**05 04 17.4**	**-1.0**
TROLL	**Troll, Antarti**	**21.94**	**153**	P	**P**	**05 04 33.7**	**-1.6**
CPUP	**Villa Florida** 3.0nm,0.9s,baz=145,slow=8.7,SNR=5.3 3.0nm,0.9s	**34.78**	**315**	P	**P**	**05 06 33.2**	**+0.9**
QSPA	**South Pole Qui** 3.1nm,0.6s,baz=189,slow=2.3,SNR=18 3.1nm,0.6s	**35.15**	**180**	P	**P**	**05 06 36.0**	**+0.6**
QSPA	**South Pole Qui**	**35.15**	**180**	P	**P**	**05 06 35.7**	**+0.3**
QSPA	comp=Z,9.5nm,1.3s			IAmb	IAmb	05 06 38.0	
GO02	**Mina Guanaco**	**41.37**	**300**	P	**P**	**05 07 28.6**	**+0.2**
GO02	comp=Z,6.8nm,0.7s			IAmb	IAmb	05 07 30.8	
PB01	**IPOC Station P**	**44.80**	**304**	P	**P**	**05 07 56.4**	**+0.6**
PB01	comp=Z,8.3nm,1.1s			IAmb	IAmb	05 07 59.2	
PTLB	**Pontes e Lacer**	**45.32**	**320**	P	**P**	**05 08 00.5**	**+0.6**
PTLB	comp=Z,4.8nm,0.9s			IAmb	IAmb	05 08 01.1	
GO01	**Chusmiza**	**45.84**	**305**	P	**P**	**05 08 04.9**	**+0.4**
VNDA	**Vanda** comp=Z,1.8nm,0.8s,baz=207,slow=5.0,SNR=13 comp=Z,1.8nm,0.8s	**47.41**	**184**	P	**P**	**05 08 15.6**	**-0.1**
VNDA	**Vanda**	**47.41**	**184**	P	**P**	**05 08 15.2**	**-0.4**
BOSA	**Boshof**	**47.63**	**80**	P	**P**	**05 08 17.7**	**-0.4**
H10S2	**ASCENSION HYDR** baz=192,slow=74,SNR=4.0	**47.73**	**21**	T	T	06 00 05.1	
H10S3	**ASCENSION HYDR** baz=28,slow=74,SNR=11	**47.73**	**21**	T	T	06 00 06.5	
LPAZ	**La Paz** comp=Z,3.5nm,0.7s,baz=169,slow=6.3,SNR=19 comp=Z,3.5nm,0.7s	**48.29**	**308**	P	**P**	**05 08 25.2**	**+1.4**
LPAZ	**La Paz**	**48.29**	**308**	P	**P**	**05 08 24.2**	**+0.4**
LPAZ	comp=Z,4.6nm,0.8s			IAmb	IAmb	05 08 26.0	
H10N1	**ASCENSION HYDR** baz=192,slow=76,SNR=9.9	**48.85**	**21**	T	T	06 01 21.8	
H10N3	**ASCENSION HYDR** baz=192,slow=76,SNR=16	**48.85**	**21**	T	T	06 01 21.4	
H10N2	**ASCENSION HYDR** baz=192,slow=76,SNR=18	**48.86**	**21**	T	T	06 01 27.2	
BOAV	**Boa Vista**	**62.40**	**326**	P	**P**	**05 10 04.1**	**-0.7**
BOAV	comp=Z,8.2nm,1.4s			IAmb	IAmb	05 10 05.7	
DBIC	**Dimbokro** comp=Z,4.0nm,1.0s,baz=254,slow=5.0,SNR=3.2 comp=Z,4.0nm,1.0s	**65.17**	**28**	P	**P**	**05 10 23.1**	**+0.1**
TOA0	**Torodi Ar. Sit**	**73.23**	**33**	P	**P**	**05 11 13.6**	**+0.7**
TOA0	comp=Z,4.5nm,0.8s			IAmb	IAmb	05 11 14.4	
TORD	**Torodi Ar. Bea** comp=Z,3.7nm,0.7s,baz=201,slow=6.7,SNR=18 comp=Z,3.7nm,0.7s	**73.23**	**33**	P	**P**	**05 11 12.9**	**0.0**
TORD	**Torodi Ar. Bea**	**73.23**	**33**	P	**P**	**05 11 13.7**	**+0.7**
TORD	comp=Z,3.4nm,0.8s			IAmb	IAmb	05 11 14.4	
YKA	**Yellowknife Ar** comp=Z,0.8nm,0.7s,baz=119,slow=2.8,SNR=3.8	**134.21**	**320**	PKP	**PKPdf**	**05 18 57.1**	**-1.1**
ILAR	**Eielson Array** comp=Z,6.0nm,0.9s,baz=132,slow=1.8,SNR=38	**148.08**	**313**	PKPbc	**PKPbc**	**05 19 25.9**	**-0.2**
SONM	**Songino Array** comp=Z,1.8nm,0.7s,baz=235,slow=2.3,SNR=6.8	**152.57**	**87**	PKPbc	**PKPbc**	**05 19 37.1**	**-0.6**

IDC 23 05:07:47.3±2.3,6°.42S×129°.45E,h0km,mb3.3/1, mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=119.9km s-min=33.0km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=340,slow=12,SNR=9.2	**14.26**	**161**	Pn	Pn	05 11 11.6	+0.9
WRA	0.2nm,0.3s,baz=52,slow=23,SNR=7.1 0.5nm,0.4s			Sn	Sn	05 13 35.0	-15
ASAR	**Alice Springs** 0.2nm,0.3s,baz=346,slow=10,SNR=10 0.6nm,0.4s	**17.68**	**166**	P	Pn	05 11 54.5	-0.7
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=117,slow=8.8,SNR=1.8 0.1nm,0.4s	**67.44**	**327**	P	P	05 18 45.0	+0.1

*DJA **23** 05:27:20.6±0.5,2°.N±3°.×12°.7E±°.,h99km±6km,M4.4/12, mb4.4/7,mB4.7/1,MLv4.4/12,Mw(mB)4.0/1*
*NEIC **23** 05:27:22.8±0.8,1°.29N±0°.07×127°.22E±0°.10,h111km±9km, mb4.3/13,Error ellipse: s-maj=14.9km s-min=8.8km az=69.0*
*IDC **23** 05:27:23.2±7.8,1°.29N×126°.57E,h135km±75km,mb3.9/9, mbtmp4.2/10,MS3.2/1,Error ellipse: s-maj=60.4km s-min=15.9km az=65.0*

ISC 23 05:27:19.9±0.6,1°.48N±0°.05×127°.05E±0°.06,h103km,n53, σ1s72/59,mb4.1/16,1C,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.78**	**156**	Pn	**Pn**	**05 27 40.7**	**+2.3**
TNTI	**Ternate**	**0.78**	**156**	P	**Pn**	**05 27 40.6**	**+2.3**
TNTI				S	**Sn**	**05 27 56.5**	**+4.4**
TNTI	**Ternate**	**0.78**	**156**	P	**Pn**	**05 27 41.4**	**+3.1**
LBMI	**Labuha**	**2.15**	**168**	P	**Pn**	**05 27 54.6**	**0.0**
SGSI	**Sangihe**	**2.66**	**325**	P	**Pn**	**05 28 00.3**	**-1.0**
SGSI				S	**Sn**	**05 28 30.5**	**-2.6**
KMSI	**Cibinong**	**3.20**	**254**	P	**Pn**	**05 28 09.1**	**+0.7**
KMSI				S	**Sn**	**05 28 45.7**	**-0.1**
SANI	**Sanana**	**3.67**	**197**	P	**Pn**	**05 28 14.2**	**-0.5**
SANI				S	**Sn**	**05 28 53.1**	**-4.0**
SANI	**Sanana**	**3.67**	**197**	P	**Pn**	**05 28 15.1**	**+0.4**
GTOI	**Gorontalo**	**4.12**	**258**	P	**Pn**	**05 28 23.0**	**+2.2**
GTOI				S	**Sn**	**05 29 08.3**	**+0.2**
NLAI	**Namlea**	**4.69**	**179**	P	**Pn**	**05 28 29.9**	**+1.4**
NLAI				S	**Sn**	**05 29 19.7**	**-2.1**
LUWI	**Luwuk**	**4.96**	**240**	Pn	Pn	05 28 37.3	+5.2
LUWI	**Luwuk**	**4.96**	**240**	P	**Pn**	**05 28 33.2**	**+1.1**
MRSI	**Marisa** 0.3nm36nm,0.5s	**5.21**	**259**	P	**Pn**	**05 28 35.6**	**+0.1**
KCP	**Kidapawan**	**5.83**	**340**	⇑*e*P	**Pn**	**05 28 43.5**	**-0.5**
KCP				*i* S	**Sn**	**05 29 47.8**	**-1.7**
APSI	**Ampana** 0.4nm876nm26nm,0.6s	**5.90**	**246**	P	**Pn**	**05 28 45.3**	**+0.4**
TOLI2	**Tolitoli**	**6.28**	**267**	P	**Pn**	**05 28 50.3**	**+0.3**
FAKI	**Fak Fak**	**6.79**	**130**	Pn	**Pn**	**05 28 56.4**	**-0.6**
TTSI	**Tana Toraja** 46nm,0.5s	**8.51**	**238**	P	**Pn**	**05 29 20.3**	**-0.1**
SPSI	**Sidrap Palu** 37nm,0.8s	**9.07**	**233**	P	**Pn**	**05 29 28.7**	**+0.7**
MYLDM	**Lahad Datu**	**9.29**	**293**	Pn	**Pn**	**05 29 35.7**	**+4.7**
BKSI	**Bulukumba**	**9.67**	**226**	P	**Pn**	**05 29 37.4**	**+1.2**
MTN	**Manton Dam**	**14.80**	**164**	Pn	**Pn**	**05 30 42.5**	**-1.5**
KDU	**Kakadu**	**15.07**	**159**	P	**Pn**	**05 30 47.7**	**+0.2**
KNRA	**Kununurra**	**17.14**	**174**		**Pn**	**05 31 12.3**	**-0.8**
KNRA	comp=Z,17nm,0.6s			IAmb	IAmb	05 31 14.4	
KNRA	**Kununurra**	**17.14**	**174**	P	**P**	**05 31 13.8**	**+0.7**
UGM	**Wanagama**	**18.94**	**240**		**Pn**	**05 31 35.1**	**+0.3**
FITZ	**Fitzroy Crossi** comp=Z,2.3nm,0.5s,baz=17,slow=11,SNR=16	**19.51**	**184**	P	**P**	**05 31 38.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.51**	**184**	P	**P**	**05 31 39.0**	**-0.1**
FITZ	comp=Z,15nm,1.4s			IAmb	IAmb	05 31 42.0	
FITZ	**Fitzroy Crossi**	**19.51**	**184**	P	**P**	**05 31 39.2**	**+0.1**
COEN	**Coen**	**22.15**	**134**		**P**	**05 32 06.1**	**-1.5**
COEN	**Coen** comp=Z,7.3nm,1.2s	**22.15**	**134**	P	**P**	**05 32 07.6**	**+0.1**
WB0	**Warramunga Arr**	**22.32**	**162**	P	**P**	**05 32 08.5**	**-0.7**
WB0	comp=Z,17nm,0.9s			IAmb	IAmb	05 32 16.0	
WRAB	**Tennant Creek**	**22.46**	**162**	P	**P**	**05 32 09.1**	**-1.6**
WRAB	comp=Z,9.9nm,0.8s			IAmb	IAmb	05 32 53.1	
WRA	**Warramunga Arr** comp=Z,2.7nm,0.3s,baz=340,slow=11,SNR=15 comp=Z,2.7nm,0.3s	**22.46**	**162**	P	**P**	**05 32 09.7**	**-1.0**
WRA	**Warramunga Arr**	**22.46**	**162**	P	**P**	**05 32 08.8**	**-1.9**
WB2	**Warramunga Arr**	**22.47**	**162**	P	**P**	**05 32 09.9**	**-0.9**
WB2	comp=Z,9.6nm,0.7s			IAmb	IAmb	05 32 16.8	
WR0	**Warramunga Arr**	**22.54**	**161**	P	**P**	**05 32 11.1**	**-0.4**
WR0	comp=Z,10.0nm,1.1s			IAmb	IAmb	05 32 18.3	
SSLB	**Suanglung**	**22.95**	**346**	P	**P**	**05 32 19.8**	**+4.3**
YHNB	**Yeheng** comp=Z,13nm,0.8s	**23.69**	**347**	P	**P**	**05 32 26.1**	**+3.6**
QIS	**Mount Isa**	**25.12**	**151**	P	**P**	**05 32 36.0**	**+0.6**
ASAR	**Alice Springs** comp=Z,0.7nm,0.3s,baz=350,slow=14,SNR=9.4 comp=Z,0.7nm,0.3s	**25.87**	**165**	P	**P**	**05 32 41.9**	**-0.3**
WRKA	**Warakurna**	**26.39**	**177**	P	**P**	**05 32 47.5**	**+0.6**
CTA	**Charters Tower** comp=Z,2.6nm,0.5s,baz=321,slow=12,SNR=5.1	**28.54**	**140**	P	**P**	**05 33 09.2**	**+3.2**
CTA	comp=Z,46nm,20.9s,baz=84,slow=38 comp=Z,2.6nm,0.5s			LR	LR	05 45 44.3	
FORT	**Forrest**	**32.10**	**178**	P	**P**	**05 33 36.9**	**-0.4**
BBOO	**Buckleboo**	**35.16**	**167**	P	**P**	**05 34 03.3**	**-0.5**
BBOO	comp=Z,14nm,1.4s			IAmb	IAmb	05 34 12.9	
STKA	**Stephens Creek** comp=Z,1.1nm,0.3s,baz=295,slow=9.0,SNR=5.5 comp=Z,1.1nm,0.3s	**35.93**	**159**	P	**P**	**05 34 10.1**	**-0.4**
STKA	**Stephens Creek**	**35.93**	**159**	P	**P**	**05 34 09.8**	**-0.7**
ARMA	**Armidale**	**39.44**	**146**	P	**P**	**05 34 40.2**	**0.0**
SONM	**Songino Array** comp=Z,1.5nm,0.8s,baz=158,slow=9.9,SNR=5.1 comp=Z,1.5nm,0.8s	**49.52**	**342**	P	**P**	**05 35 59.7**	**-0.5**
MKAR	**Makanchi Array** comp=Z,4.8nm,0.3s,baz=118,slow=7.3,SNR=28 comp=Z,4.8nm,0.3s	**59.58**	**326**	P	**P**	**05 37 12.4**	**-0.4**
KURBB	**Kurchatov Arra** comp=Z,3.5nm,0.5s,baz=129,slow=6.3,SNR=12 comp=Z,3.5nm,0.5s	**63.79**	**328**	P	**P**	**05 37 40.1**	**-0.9**
AKTO	**Aktyubinsk** comp=Z,1.6nm,0.5s,baz=118,slow=8.5,SNR=4.4 comp=Z,1.6nm,0.5s	**75.61**	**322**	P	**P**	**05 38 52.2**	**-1.3**
VNDA	**Vanda** comp=Z,0.6nm,0.5s,baz=314,slow=7.9,SNR=8.5 comp=Z,0.6nm,0.5s	**81.17**	**173**	P	**P**	**05 39 22.4**	**-1.3**

IDC 23 05:30:45.2±28.0,20°.44S×173°.61W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=511.8km s-min=162.4km az=74.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower** baz=96,slow=10	**37.59**	**263**	P	P	05 38 02.4	+0.7
STKA	**Stephens Creek** 1.4nm,0.5s,baz=82,slow=9.6,SNR=4.2 1.4nm,0.5s	**41.53**	**245**	P	P	05 38 33.3	-1.2
ASAR	**Alice Springs** 2.3nm,0.7s,baz=94,slow=8.0,SNR=23 2.3nm,0.7s	**48.53**	**256**	P	P	05 39 30.3	-0.1
WRA	**Warramunga Arr** 2.8nm,0.8s,baz=92,slow=8.2,SNR=19 2.8nm,0.8s	**48.68**	**261**	P	P	05 39 31.5	-0.1

*IDC **23** 05:31:20.4±1.5,6°.81N×124°.16E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=29.5km s-min=17.7km az=170.0*
*MAN **23** 05:31:22.7°.76N×126°.80E,h28km,Ms2.7*

ISC 23 05:31:22.3±1.8,7°.78N±0°.04×126°.74E±0°.09,h31km±14km, n13,σ2s16/22,mb3.5/3,3C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.96**	**210**	⇓*e*P	**Pb**	**05 31 40.2**	**-0.2**
MATI				*e*S	**Sn**	**05 31 52.1**	**-0.2**
DAV	**Davao City (W)** 149nm,0.3s,baz=17,slow=3.4,SNR=9.9	**1.35**	**238**	Pg	**Pb**	**05 31 47.0**	**-0.1**
DAV				Lg	Lg	05 32 06.1	

172nm,0.3s,baz=278,slow=14,SNR=5.0

BUTP	**Butuan**	**1.61**	**317**⇓	*eP*	**Pn**	**05 31 50.7**	**+2.0**
BUTP				*eS*	**Sn**	**05 32 11.2**	**+2.7**
BUKP	**Musuan**	**1.66**	**273**⇑	*iP*	**Pn**	**05 31 51.0**	**+1.7**
BUKP				*iS*	**Sn**	**05 32 12.9**	**+3.2**
KCP	**Kidapawan**	**1.80**	**245**⇓	*eP*	**Pn**	**05 31 52.4**	**+1.0**
KCP				*iS*	**Sn**	**05 32 14.0**	**+0.7**
DDMP	**Don Marcelino,**	**1.95**	**211**⇓	*eP*	**Pn**	**05 31 55.1**	**+1.8**
DDMP				*eS*	**Sn**	**05 32 18.2**	**+1.4**
GLSP	**General Luna,**	**2.08**	**343**⇓	*eP*	**Pn**	**05 31 56.4**	**+1.3**
GLSP				*eS*	**Sn**	**05 32 18.1**	**-1.8**
SCPH	**Surigao**	**2.34**	**328**	*eP*	**Pn**	**05 32 02.2**	**-1.7**
SCPH				*eS*	**Sn**	**05 32 28.7**	**+2.4**
GSPH	**General Santos**	**2.45**	**227**⇑	*eP*	**Pn**	**05 32 01.3**	**+1.0**
GSPH				*iS*	**Sn**	**05 32 27.2**	**-2.0**
CTBH	**Cotabato--PC H**	**2.53**	**257**⇑	*iP*	**Pn**	**05 32 02.1**	**+0.8**
CTBH				*iS*	**Sn**	**05 32 26.1**	**-5.0**
WRA	**Warramunga Arr**	**28.55**	**165**	P	**P**	**05 37 17.4**	**+1.8**
	0.2nm,0.4s,baz=346,slow=11,SNR=2.2						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**32.03**	**168**	P	**P**	**05 37 45.9**	**-0.5**
	0.2nm,0.3s,baz=348,slow=7.0,SNR=2.8						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**54.28**	**324**	P	**P**	**05 40 43.2**	**-2.4**
	0.8nm,0.6s,baz=130,slow=7.8,SNR=4.8						
	0.8nm,0.6s						

IDC ***23*** *05:32:19.4±0.8, 35°.73N×91°.50E, h0km, mb4.0/13, mbtmp4.0/18, ML3.7/5, MS3.6/40, Error ellipse: s-maj=26.5km s-min=14.9km az=45.0*
BJI ***23*** *05:32:20.3±0.0, 35°.87N×91°.42E, h5km, mb4.5/18, mB4.6/6, ML4.1/14, Ms4.0/24, Ms7 3.7/22*
MOS ***23*** *05:32:23.8±1.7, 35°.85N×91°.22E, h37km, mb4.5/13, Error ellipse: s-maj=10.7km s-min=4.6km az=127.4*
NEIC ***23*** *05:32:24.4±2.6, 36°.04N±0°.09×91°.13E±0°.1, h10km±2km, mb4.2/13, Error ellipse: s-maj=16.4km s-min=15.2km az=102.0*

ISC 23 05:32:23.2±0.5, 35°.98N±0°.05×91°.38E±0°.04, h10km, n138, σ2s 00/112, mb4.2/24, MS3.6/41, 8C-3D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOMU	**GeErMu**	**2.79**	**85**	Pn	**Pn**	**05 33 09.1**	**+0.9**
GOMU				Sn	**Sn**	**05 33 44.1**	**+2.0**
GOMU				Sg	**Sg**	**05 33 54.9**	**+2.1**
GOMU				smax	smax		
	comp=N,320nm,0.8s						
GOMU				smax	smax		
	comp=E,200nm,0.8s						
LSA	**Lhasa**	**6.27**	**182**	Pn	**Pn**	**05 33 59.7**	**+3.5**
LSA	**Lhasa**	**6.27**	**182**	Pg	Pn	05 34 05.5	+9.3
LSA				Sg	**Sb**	**05 35 31.0**	**+3.0**
LSA				LR	LR		
	comp=N,650nm,7.1s						
LSA				LR	LR		
	comp=E,590nm,6.4s						
LSA				LR	LR		
	comp=Z,410nm,6.4s						
LSA	**Lhasa**	**6.27**	**182**	P	**Pn**	**05 33 59.7**	**+3.5**
GTA	**Gaotai**	**7.51**	**60**	⇓Pn	**Pn**	**05 34 14.8**	**+2.0**
GTA				Sg	**Sg**	**05 36 18.5**	**-5.6**
GTA				smax	smax		
	comp=N,35nm,1.2s						
GTA				smax	smax		
	comp=E,24nm,1.5s						
GTA				LR	LR		
	comp=E,980nm,17.4s						
GTA				LR	LR		
	comp=Z,950nm,13.8s						
WMQ	**Urumqi**	**8.32**	**341**	*eP*	**Pn**	**05 34 24.6**	**+0.6**
WMQ				S	**Sn**	**05 35 59.4**	**+1.4**
WMQ				smax	smax		
	comp=N,140nm,1.1s						
WMQ				smax	smax		
	comp=E,130nm,1.5s						
WMQ				LR	LR		
	comp=N,690nm,14.3s						
WMQ				LR	LR		
	comp=E,2μm,12.7s						
LZH	**Lanzhou**	**10.09**	**86**	*eP*	**Pn**	**05 34 47.3**	**-1.0**
LZH				pP		05 34 52.6	
LZH				sP		05 34 54.8	
LZH				pmax	pmax		
	comp=Z,17nm,0.9s						
LZH				LR	LR		
	comp=N,1μm,14.8s						
LZH				LR	LR		
	comp=Z,500nm,15.5s						
SHLS	**Shalkode**	**11.65**	**312**	*eP*	**Pn**	**05 35 04.9**	**-4.7**
SHLS				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SHLS	**Shalkode**	**11.65**	**312**	*eP*	**Pn**	**05 35 05.0**	**-4.7**
	comp=Z,5.3nm,1.4s,baz=313						
UZB	**Uzynbulak**	**11.91**	**311**	*eP*	**Pn**	**05 35 11.8**	**-1.4**
UZB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
UZB	**Uzynbulak**	**11.91**	**311**	*eP*	**Pn**	**05 35 11.9**	**-1.4**
	comp=Z,4.0nm,1.0s,baz=311						
SATY	**Saty**	**12.25**	**309**	*eP*	**Pn**	**05 35 16.1**	**-1.7**
SATY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SATY	**Saty**	**12.25**	**309**	*eP*	**Pn**	**05 35 16.2**	**-1.6**
	comp=Z,8.0nm,1.0s,baz=309						
ZHN	**Zhinishke**	**12.29**	**310**	*eP*	**Pn**	**05 35 16.7**	**-1.6**
ZHN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZHN	**Zhinishke**	**12.29**	**310**	*eP*	**Pn**	**05 35 16.7**	**-1.6**
	comp=Z,4.4nm,1.3s,baz=310						
KPKS	**Kokpek**	**12.30**	**311**	*eP*	**Pn**	**05 35 16.8**	**-1.5**
KPKS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KPKS	**Kokpek**	**12.30**	**311**	*eP*	**Pn**	**05 35 16.9**	**-1.5**
	comp=Z,5.9nm,1.0s,baz=312						
ZSN	**Zaisan**	**12.44**	**339**	*eP*	**Pn**	**05 35 20.8**	**+0.6**
ZSN	**Zaisan**	**12.44**	**339**	*eP*	**Pn**	**05 35 20.9**	**+0.6**
	baz=340						
MK31	**Makanchi Array**	**12.77**	**331**		**Pn**	**05 35 25.7**	**+1.0**
MK31	**Makanchi Array**	**12.77**	**331**	*iP*	**Pn**	**05 35 26.6**	**+1.9**
MKAR	**Makanchi Array**	**12.77**	**331**	*iP*	**Pn**	**05 35 22.2**	**-2.5**
	comp=Z,0.9nm,0.3s,baz=141,slow=13,SNR=19						
MKAR				LR	LR	05 40 38.9	
	comp=Z,176nm,20.8s,baz=176,slow=38						
	comp=Z,1.8nm,0.6s						
MKAR	**Makanchi Array**	**12.77**	**331**	Pn	**Pn**	**05 35 25.0**	**+0.3**
MKAR	**Makanchi Array**	**12.77**	**331**	*iP*	**Pn**	**05 35 26.1**	**+1.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MAKZ	**Makanchi**	**12.90**	**330**		**Pn**	**05 35 27.4**	**+0.8**
MAKZ	**Makanchi**	**12.90**	**330**	P	**Pn**	**05 35 27.4**	**+0.8**
MDOK	**Medeo**	**13.17**	**307**	*eP*	**Pn**	**05 35 29.3**	**-1.0**
MDOK	**Medeo**	**13.17**	**307**	*eP*	**Pn**	**05 35 29.4**	**-1.0**
	baz=308						
AAA	**Alma-Ata**	**13.28**	**307**	*eP*	**Pn**	**05 35 30.8**	**-0.9**
AAA	**Alma-Ata**	**13.28**	**307**	*eP*	**Pn**	**05 35 30.8**	**-0.9**
	baz=307						
TDK	**Taldyqorghan**	**13.35**	**316**	*eP*	**Pn**	**05 35 31.2**	**-1.5**
TDK	**Taldyqorghan**	**13.35**	**316**	*eP*	**Pn**	**05 35 31.2**	**-1.5**
	baz=317						
KUU	**Kurty**	**13.97**	**309**	*eP*	**Pn**	**05 35 38.7**	**-2.5**
KUU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KUU	**Kurty**	**13.97**	**309**	*eP*	**Pn**	**05 35 38.7**	**-2.5**
	comp=Z,9.7nm,1.0s,baz=309						
TKM2	**Tokmak 2**	**14.02**	**304**	*iP*	**Pn**	**05 35 40.1**	**-1.9**
TKM2				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN	**Xi'an**	**14.51**	**93**	⇑P	Pn	05 35 44.9	-3.7
XAN				pP	P	05 35 53.3	-2.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MND	**Mandalay**	**14.52**	**162**	Pn	**Pn**	**05 35 50.3**	**+1.6**
AAK	**Ala-Archa**	**14.65**	**302**	Pn	**Pn**	**05 35 50.3**	**-0.4**
AAK	**Ala-Archa**	**14.65**	**302**	*ceP*	**Pn**	**05 35 49.3**	**-1.4**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NIL	**Nilore**	**15.08**	**266**		**Pn**	**05 35 55.1**	**-1.1**
NIL	**Nilore**	**15.08**	**266**	P	**Pn**	**05 35 55.2**	**-1.1**
SONM	**Songino Array**	**16.25**	**39**	Pn	**Pn**	**05 36 10.5**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=228,slow=14,SNR=8.7						
	comp=Z,2.3nm,0.8s						
SONM	**Songino Array**	**16.25**	**39**	Pn	**Pn**	**05 36 12.5**	**+1.0**
SONM	**Songino Array**	**16.25**	**39**	P	**Pn**	**05 36 12.5**	**+1.0**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ULN	**Ulaanbaatar**	**16.60**	**40**	Pn	**Pn**	**05 36 18.0**	**+1.9**
ULN				IAmb	IAmb	05 36 24.9	
	comp=Z,10nm,1.2s						
ULN	**Ulaanbaatar**	**16.60**	**40**	*ceP*	**Pn**	**05 36 17.2**	**+1.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAK	**Zakamensk**	**16.77**	**27**	*eP*	**P**	**05 36 23.8**	**+3.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.8s						
DZA	**Taraz**	**16.94**	**300**	*eP*	**Pn**	**05 36 19.2**	**-1.0**
DZA	**Taraz**	**16.94**	**300**	*eP*	**Pn**	**05 36 19.3**	**-1.0**
	baz=300						
GAR	**Garm**	**16.98**	**287**		**Pn**	**05 36 20.4**	**-0.6**
MOY	**Mondy**	**17.12**	**21**	*eP*	**P**	**05 36 30.4**	**+6.2**
MOY				pmax	pmax		
	comp=Z,34nm,1.7s						
LYN	**LuoYang**	**17.28**	**89**	*eP*	P	05 36 35.0	+9.0
LYN				sP	sP	05 36 41.8	+10
LYN				S	S	05 40 08.1	+22
LYN				sS	sS	05 40 28.8	+36
LYN				SS	SgSg	05 41 00.9	-37
LYN				pmax	pmax		
	comp=Z,120nm,5.9s						
LYN				LR	LR		
	comp=N,240nm,7.7s						
LYN				LR	LR		
	comp=E,170nm,9.8s						
LYN				LR	LR		
	comp=Z,130nm,10.6s						
KURBB	**Kurchatov Arra**	**17.33**	**332**	Pn	**Pn**	**05 36 23.1**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=137,slow=12,SNR=24						
KURBB				LR	LR	05 43 03.4	
	comp=Z,227nm,22.0s,baz=120,slow=37						
	comp=Z,3.4nm,0.7s						
KURK	**Kurchatov**	**17.37**	**332**		**Pn**	**05 36 25.7**	**+0.2**
KURK				IAmb	IAmb	05 36 30.6	
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	**17.37**	**332**	*ceP*	**P**	**05 36 26.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,27nm,1.0s						
KK31	**Karatay Array**	**17.57**	**300**	*iP*	**P**	**05 36 29.5**	**+0.3**
KKAR	**Karatay Array**	**17.57**	**300**	Pn	**Pn**	**05 36 26.9**	**-1.3**
KKAR	**Karatay Array**	**17.57**	**300**		**Pn**	**05 36 28.1**	**-0.1**
KKAR				IAmb	IAmb	05 36 52.4	
	comp=Z,3.1nm,1.0s						
KKAR	**Karatay Array**	**17.57**	**300**	P	**Pn**	**05 36 28.1**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
IUG	**luzhnay**	**17.67**	**297**	*eP*	**Pn**	**05 36 28.5**	**-0.9**
IUG	**luzhnay**	**17.67**	**297**	*eP*	**Pn**	**05 36 28.5**	**-0.9**
	baz=297						
CHGR	**Chuyangaron**	**17.87**	**285**	Pn	**Pn**	**05 36 30.3**	**-1.7**
CHGR	**Chuyangaron**	**17.87**	**285**	P	**Pn**	**05 36 30.3**	**-1.7**
CHGR				pmax	pmax		
	comp=Z,45nm,0.7s						
KBL	**Kabul**	**18.30**	**272**	Pn	**Pn**	**05 36 35.4**	**-2.0**
KBL	**Kabul**	**18.30**	**272**	P	**Pn**	**05 36 35.4**	**-2.0**
KBL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZAA0	**Zalesovo Array**	**18.54**	**348**	P	**Pn**	**05 36 40.3**	**+0.4**
ZAA0				IAmb	IAmb	05 36 46.1	
	comp=Z,7.8nm,0.9s						
ZALV	**Zalesovo Beam**	**18.54**	**348**	P	**P**	**05 36 38.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=164,slow=12,SNR=13						
ZALV				LR	LR	05 44 23.1	
	comp=Z,86nm,20.2s,baz=188,slow=38						
	comp=Z,4.0nm,0.7s						
ZALV	**Zalesovo Beam**	**18.54**	**348**	P	**Pn**	**05 36 40.6**	**+0.7**
ZALV	**Zalesovo Beam**	**18.54**	**348**	*iP*	**Pn**	**05 36 41.7**	**+1.8**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.70**	**157**	P	P	05 36 35.2	-6.5
	comp=Z,0.8nm,0.3s,baz=332,slow=11,SNR=6.2						
CMAR				LR	LR	05 43 42.4	
	comp=Z,111nm,20.3s,baz=345,slow=37						
	comp=Z,1.2nm,0.3s						
BJI	**Beijing**	**19.93**	**71**	P	**P**	**05 36 51.1**	**-4.0**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TIA	**Tai'an**	**20.79**	**82**	⇓P	**P**	**05 37 02.9**	**-1.6**
TIA				S	S	05 40 45.0	-11
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA				LR	LR		
	comp=Z,200nm,14.7s						
TIA				LR	LR		
	comp=Z,130nm,13.9s						
HYBB	**Hyderabad (bro**	**21.72**	**215**	*eP*	**P**	**05 37 15.3**	**+0.8**
HYBB				*eS*	Sn	05 41 22.8	-1.2
BVA0	**Borovoye Array**	**22.54**	**326**	*iP*	**P**	**05 37 24.0**	**+0.8**
BVAR	**Borovoye Array**	**22.54**	**326**	P	**P**	**05 37 23.6**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=133,slow=11,SNR=18						
BVAR				LR	LR	05 46 16.7	
	comp=Z,160nm,19.7s,baz=126,slow=37						
	comp=Z,2.7nm,0.7s						
BRVK	**Borovoye**	**22.61**	**326**	P	**P**	**05 37 24.6**	**+0.8**
BRVK				IAmb	IAmb	05 37 29.4	
	comp=Z,15nm,1.1s						
BRVK	**Borovoye**	**22.61**	**326**	*ceP*	**P**	**05 37 24.7**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,25nm,1.7s						
NJ2	**Nanjing**	**23.07**	**92**	*eP*	**P**	**05 37 29.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
QIZ	**Qiongzhong**	**23.45**	**131**	P	**P**	**05 37 28.3**	**-4.5**
QIZ				S	**S**	**05 41 41.3**	**-5.1**
QIZ				LR	LR		
	comp=Z,790nm,15.9s						
QIZ				LR	LR		
	comp=Z,710nm,17.1s						
QIZ				LR	LR		
	comp=Z,300nm,11.2s						
AB31	**Akbulak array**	**26.45**	**310**	P	**P**	**05 37 59.4**	**-0.8**
ABKAR	**Akbulak array**	**26.45**	**310**	P	**P**	**05 38 01.7**	**+1.5**
ABKAR				IAmb	IAmb	05 38 06.0	
	comp=Z,3.5nm,0.8s						
AKTO	**Aktyubinsk**	**28.01**	**311**	P	**P**	**05 38 14.3**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=104,slow=17,SNR=2.5						
AKTO				LR	LR	05 50 21.1	
	comp=Z,165nm,19.8s,baz=113,slow=38						
	comp=Z,1.4nm,0.8s						
KSRS	**Korea Array**	**29.21**	**76**	P	**P**	**05 38 22.4**	**-2.5**
	comp=Z,1.5nm,0.7s,baz=276,slow=9.1,SNR=5.7						
KSRS				LR	LR	05 51 08.3	
	comp=Z,73nm,19.9s,baz=280,slow=39						
	comp=Z,1.5nm,0.7s						
ARU	**Arti**	**30.11**	**323**	P	**P**	**05 38 32.8**	**+0.1**
	comp=Z,4.0nm,0.5s,baz=106,slow=18,SNR=3.3						
ARU				LR	LR	05 50 53.6	
	comp=Z,115nm,18.1s,baz=114,slow=37						
	comp=Z,4.0nm,0.5s						
ARU	**Arti**	**30.11**	**323**	P	**P**	**05 38 32.5**	**-0.3**
ARU				IAmb	IAmb	05 38 36.9	
	comp=Z,9.3nm,0.9s						
ARU	**Arti**	**30.11**	**323**	*diP*	**P**	**05 38 32.4**	**-0.3**
ARU				S	**S**	**05 43 32.3**	**+1.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	**Zeya**	**30.57**	**43**	*eP*	P	05 38 51.3	+14
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=N,100nm,9.0s						
ZEA				MLR	MLR		
	comp=E,200nm,9.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,11.0s						
NRIK	**Noril'sk**	**33.48**	**358**	LR	LR	05 53 34.6	
	comp=Z,106nm,20.7s,baz=196,slow=38						
NRIK	**Noril'sk**	**33.48**	**358**	*iP*	**P**	**05 39 03.4**	**+1.2**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PSI	**Prapat**	**33.75**	**166**	LR	LR	05 55 02.5	
	comp=Z,135nm,18.2s,baz=280,slow=41						
BELG	**Belogornoye**	**34.79**	**312**	LR	LR	05 53 42.8	
	comp=Z,73nm,19.5s,baz=170,slow=37						
BELG	**Belogornoye**	**34.79**	**312**	*iP*	**P**	**05 39 12.9**	**-0.8**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YAK	**Yakutsk**	**35.32**	**30**	LR	LR	05 54 57.8	
	comp=Z,61nm,18.2s,baz=268,slow=38						
KIRV	**Kirov**	**35.49**	**323**	LR	LR	05 55 27.1	
	comp=Z,82nm,19.2s,baz=112,slow=39						
KIRV	**Kirov**	**35.49**	**323**	*ceP*	**P**	**05 39 21.3**	**+1.6**
GNI	**Garni**	**36.63**	**291**	LR	LR	05 59 01.6	
	comp=Z,54nm,19.0s,baz=110,slow=44						
MJAR	**Matsushiro Arr**	**37.47**	**75**	LR	LR	05 55 48.8	
	comp=Z,61nm,18.6s,baz=282,slow=38						
KBZ	**Khabaz**	**37.57**	**297**	LR	LR	05 56 17.0	
	comp=Z,72nm,18.9s,baz=50,slow=38						
KVAR	**Kislovodsk Arr**	**37.69**	**297**	LR	LR	05 56 45.0	
	comp=Z,101nm,18.9s,baz=253,slow=39						
KIV	**Kislovodsk**	**37.70**	**297**	*eP*	**P**	**05 39 36.6**	**-2.3**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,48nm,16.0s						
KLMR	**Klimovskoe**	**40.95**	**324**	*eP*	**P**	**05 40 03.5**	**-2.1**
KLMR				*e*		05 42 02.5	
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**40.95**	**324**	*eP*	**P**	**05 40 03.6**	**-2.1**
KLMR				AMP		05 40 09.4	
	comp=Z,12nm,0.8s						
KLMR				*e*PcP	**PcP**	**05 42 02.5**	**-3.2**
MOS	**Moscow**	**41.10**	**316**	*eP*	**P**	**05 40 07.6**	**+0.7**
OBN	**Obninsk**	**41.64**	**315**	*iP*	**P**	**05 40 11.8**	**+0.4**
OBN				*i*		05 40 20.5	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,128nm,17.0s						
MA2	**Magadan**	**44.46**	**39**	LR	LR	06 00 13.3	
	comp=Z,126nm,20.2s,baz=270,slow=38						
BRTR	**Keskin Array B**	**45.07**	**293**	P	**P**	**05 40 38.3**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=81,slow=7.6,SNR=4.7						
BRTR				LR	LR	06 03 00.6	
	comp=Z,48nm,20.1s,baz=114,slow=41						
	comp=Z,1.4nm,0.7s						
BRTR	**Keskin Array B**	**45.07**	**293**	P	**P**	**05 40 38.6**	**-0.9**
LEM	**Lembang**	**45.24**	**157**	LR	LR	06 00 14.4	
	comp=Z,99nm,20.8s,baz=230,slow=37						
SEY	**Seymchan**	**45.57**	**34**	*iP*	**P**	**05 40 46.0**	**+3.1**
SEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**46.19**	**309**	P	**P**	**05 40 48.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=74,slow=6.7,SNR=4.6						
AKASG				LR	LR	06 04 14.5	
	comp=Z,67nm,18.1s,baz=100,slow=41						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**46.19**	**309**	*ceP*	**P**	**05 40 50.2**	**+2.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NACGM	**Naroch**	**47.28**	**315**	*eP*	**P**	**05 40 59.8**	**+3.4**
	baz=85						
EIL	**Elat**	**47.28**	**279**	LR	LR	06 04 38.7	
	comp=Z,80nm,19.5s,baz=88,slow=41						
FINES	**FINESS Array B**	**47.48**	**324**	P	**P**	**05 40 59.3**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=76,slow=8.0,SNR=9.2						
FINES				LR	LR	06 00 31.5	
	comp=Z,71nm,18.3s,baz=70,slow=35						
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**47.48**	**324**	*ceP*	**P**	**05 41 00.0**	**+2.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**48.38**	**335**	P	**P**	**05 41 04.5**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=57,slow=8.8,SNR=5.2						
ARCES				LR	LR	06 02 21.9	
	comp=Z,66nm,20.8s,baz=90,slow=37						
	comp=Z,1.4nm,0.8s						
PETK	**Petropavlovsk-**	**48.46**	**48**	LR	LR	06 02 48.5	
	comp=Z,79nm,18.2s,baz=280,slow=38						
MLR	**Muntele Rosu**	**49.24**	**302**	LR	LR	06 04 22.3	
	comp=Z,102nm,20.7s,baz=72,slow=39						
BILL	**Bilibino**	**51.57**	**28**	*iP*	**P**	**05 41 31.4**	**+2.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**52.00**	**345**	LR	LR	06 08 42.1	
	comp=Z,61nm,18.3s,baz=80,slow=42						
GUMO	**Guam**	**52.71**	**101**	LR	LR	06 06 36.7	
	comp=Z,15nm,18.1s,baz=7.0,slow=39						
HFS	**Hagfors**	**53.63**	**323**	LR	LR	06 06 13.9	
	comp=Z,56nm,18.4s,baz=98,slow=38						
VRAC	**Vranov**	**54.44**	**309**	LR	LR	06 07 45.3	
	comp=Z,89nm,19.0s,baz=78,slow=39						
NB2	**NORSAR Subarra**	**54.66**	**324**	P	**P**	**05 41 54.2**	**+2.2**
	comp=Z,2.6nm,0.9s,baz=79,slow=7.4						
NOA	**NORSAR Array B**	**54.66**	**324**	P	**P**	**05 41 51.8**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=79,slow=7.2,SNR=7.8						
NOA				LR	LR	06 06 21.7	
	comp=Z,49nm,18.0s,baz=75,slow=37						
	comp=Z,1.7nm,0.9s						
VAE	**Valguarnera**	**60.01**	**297**	LR	LR	06 12 47.1	
	comp=Z,26nm,19.1s,baz=117,slow=40						
KMBO	**Kilima Mbogo**	**62.37**	**246**	LR	LR	06 09 39.2	
	comp=Z,49nm,18.6s,baz=100,slow=36						
WRA	**Warramunga Arr**	**68.89**	**137**	P	P	05 43 24.6	-3.6
	comp=Z,0.8nm,0.9s,baz=336,slow=6.2,SNR=3.2						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**69.77**	**23**	P	**P**	**05 43 32.0**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=295,slow=4.9,SNR=17						
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**71.66**	**139**	P	P	05 43 42.2	-3.0
	comp=Z,0.9nm,0.7s,baz=326,slow=6.3,SNR=6.6						
	comp=Z,0.9nm,0.7s						
ESDC	**Sonseca Array**	**71.72**	**306**	LR	LR	06 19 51.9	
	comp=Z,28nm,18.5s,baz=9.5,slow=40						
MDT	**Midelt**	**75.86**	**300**	LR	LR	06 23 08.6	
	comp=Z,31nm,18.3s,baz=278,slow=40						
FRB	**Frobisher Bay**	**79.33**	**351**	LR	LR	06 23 51.2	
	comp=Z,32nm,19.0s,baz=354,slow=39						
TORD	**Torodi Ar. Bea**	**82.15**	**280**	P	**P**	**05 44 42.2**	**-2.4**
	comp=Z,0.5nm,0.4s,baz=41,slow=4.8,SNR=8.7						
	comp=Z,0.5nm,0.4s						
STKA	**Stephens Creek**	**82.29**	**139**	LR	LR	06 27 49.6	
	comp=Z,18nm,20.6s,baz=195,slow=41						
YBH	**Yreka Blue Hor**	**96.59**	**25**	LR	LR	06 30 45.8	
	comp=Z,41nm,19.2s,baz=288,slow=36						
SADO	**Sadowa**	**99.16**	**353**	LR	LR	06 34 18.2	
	comp=Z,32nm,19.5s,baz=12,slow=37						
PDAR	**Pinedale Array**	**99.33**	**15**	LR	LR	06

SDV	**Santo Domingo**	**17.66**	**34**	LR	LR	05 59 17.2		
	comp=Z,110nm,21.5s,baz=235,slow=42							
MACA	**Manacapuru-AM**	**19.97**	**83**	*e*P	**P**	**05 51 32.0**	**+0.1**	
VILB	**Vilhena**	**21.25**	**111**	*e*P	**P**	**05 51 44.0**	**-1.8**	
SIV	**San Ignacio**	**21.58**	**119**	P	**P**	**05 51 46.4**	**-2.9**	
	4.0nm,0.9s,baz=296,slow=10,SNR=16 4.0nm,0.9s							
BOAV	**Boa Vista**	**21.61**	**68**	*e*P	**P**	**05 51 50.5**	**+1.0**	
PTLB	**Pontes e Lacer**	**23.07**	**116**	*e*P	**P**	**05 52 04.0**	**-1.1**	
PDRB	**Porto dos Gac**	**24.21**	**105**	*e*P	**P**	**05 52 14.2**	**-1.9**	
ITTB	**Itaituba**	**24.75**	**88**	*e*P	**P**	**05 52 19.8**	**-1.2**	
CLDB	**Colider**	**24.97**	**103**	*e*P	**P**	**05 52 21.3**	**-1.6**	
NPGB	**Novo Progresso**	**25.05**	**94**	*e*P	**P**	**05 52 22.3**	**-1.4**	
SALV	**Santo Antonio**	**26.33**	**114**	*e*P	**P**	**05 52 32.7**	**-2.6**	
H03N2	**Juan Fernandez**	**27.48**	**177**	T	T	06 20 26.5		
	baz=355,slow=76,SNR=89							
H03N1	**Juan Fernandez**	**27.49**	**177**	T	T	06 20 27.4		
	baz=355,slow=76,SNR=119							
H03N3	**Juan Fernandez**	**27.50**	**177**	T	T	06 20 27.3		
	baz=355,slow=76,SNR=82							
SJG	**San Juan**	**27.73**	**31**	LR	LR	06 05 06.8		
	comp=Z,57nm,19.6s,baz=224,slow=40							
RVDE	**Rio Verde (Bra**	**28.16**	**120**	*e*P	P	05 52 48.5	-3.3	
ANTJ	**Antonio Joao (**	**28.64**	**126**	*e*P	**P**	**05 52 54.8**	**-1.2**	
SNDB	**Serra Nova Dou**	**29.50**	**104**	*e*P	**P**	**05 53 02.4**	**-1.3**	
MDP	**Montagnes des**	**29.91**	**69**	LR	LR	06 06 57.2		
	comp=Z,39nm,19.0s,baz=238,slow=40							
SMTB	**Santa Maria do**	**32.80**	**97**	*e*P	**P**	**05 53 31.9**	**-0.9**	
RPN	**Rapa Nui**	**34.62**	**229**	LR	LR	06 04 22.8		
	comp=Z,49nm,18.5s,baz=129,slow=30							
RCBR	**Riachuelo**	**44.40**	**92**	LR	LR	06 16 12.3		
	comp=Z,48nm,18.9s,baz=327,slow=40							
PDAR	**Pinedale Array**	**55.11**	**334**	P	**P**	**05 56 32.0**	**+0.6**	
	0.4nm,0.7s,baz=125,slow=9.8,SNR=4.3 0.4nm,0.7s							
DBIC	**Dimbokro**	**76.54**	**82**	P	**P**	**05 58 50.0**	**+0.2**	
	1.9nm,0.7s,baz=250,slow=6.0,SNR=3.1 1.9nm,0.7s							
ESDC	**Sonseca Array**	**83.47**	**49**	P	**P**	**05 59 28.0**	**+1.2**	
	0.6nm,0.8s,baz=265,slow=6.0,SNR=5.0 0.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**83.80**	**76**	LR	LR	06 35 44.2		
	comp=Z,53nm,20.7s,baz=210,slow=35							
H11N3	**WAKE ISLAND Hy**	**113.17**	**289**	T	T	08 08 29.1		
	baz=90,slow=75,SNR=22							
H11N2	**WAKE ISLAND Hy**	**113.18**	**289**	T	T	08 08 22.4		
	baz=90,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**113.19**	**289**	T	T	08 08 20.3		
	baz=90,slow=75,SNR=19							

IDC 23 06:20:46.2±865.0, 49°.12N×46°.17E, h0km, Error ellipse: s-maj=390.9km s-min=89.2km az=151.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**9.33**	**328**	*i*		07 15 20.0	
	baz=137,slow=318,SNR=0.6						
I26DE	**FREYUNG INFRAS**	**21.22**	**282**	*i*		08 31 10.0	
	baz=80,slow=326,SNR=0.7						
I37NO	**I37NO**	**24.10**	**336**	*i*		08 48 50.0	
	baz=132,slow=331,SNR=1.0						

*DNK **23** 06:25:32.1±1.9, 72°.25N×1°.77E, h15km, ML2.5*
*BER **23** 06:25:36.4±1.5, 72°.30N×1°.97E, h29km±28km, Confirmed Earthquake*

ISC 23 06:25:29.4±1.0, 72°.09N±0°.10×1°.57E±0°.07, h10km, n17, σ2°.57/20, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**3.39**	**256**	*e*P	**Pb**	**06 26 28.1**	**-1.4**
HSPB	**Hornsund (broa**	**6.16**	**31**	*e*P	**Pn**	**06 26 59.1**	**-1.1**
TRO	**Tromso**	**6.21**	**105**	*e*P	**Pn**	**06 27 02.6**	**+1.7**
TRO	**Tromso**	**6.21**	**105**	*e*P	**Pn**	**06 27 02.6**	**+1.7**
STEI	**Steigen**	**6.27**	**125**	*e*P	**Pn**	**06 27 05.4**	**+3.7**
STEI				*e*S	**Sn**	**06 28 10.1**	**-3.1**
STEI				IAML		06 28 13.4	
	comp=Z,2.5nm,0.3s						
STEI	**Steigen**	**6.27**	**125**	*e*P	**Pn**	**06 27 05.4**	**+3.7**
STEI				*e*S	**Sn**	**06 28 10.1**	**-3.1**
STEI				IAML		06 28 13.4	
	comp=Z,2.5nm,0.3s						
DBG	**Daneborg**	**6.67**	**300**	*e*P	**Pn**	**06 27 08.6**	**+1.3**
JETT	**Jettan, Norway**	**6.69**	**103**	*e*P	**Pn**	**06 27 08.7**	**+1.1**
FAUS	**Fauske**	**6.70**	**128**	*e*P	**Pn**	**06 27 11.7**	**+4.1**
FAUS				*e*S	**Sn**	**06 28 21.0**	**-2.8**
FAUS				IAML		06 28 25.2	
	comp=Z,2.0nm,0.4s						
FAUS	**Fauske**	**6.70**	**128**	*e*P	**Pn**	**06 27 11.7**	**+4.1**
FAUS				*e*S	**Sn**	**06 28 21.0**	**-2.8**
FAUS				IAML		06 28 25.2	
	comp=Z,2.0nm,0.4s						
KIF	**Kilpisjarvi**	**7.11**	**106**	*e*P	**Pn**	**06 27 14.8**	**+1.6**
KIF	**Kilpisjarvi**	**7.11**	**106**	*e*P	**Pn**	**06 27 14.8**	**+1.6**
DAG	**Danmarks Havn**	**7.14**	**320**	*e*P	**Pn**	**06 27 13.0**	**-0.7**
DAG				*e*S	Sn	06 28 22.9	-12
SPA0	**Spitsbergen Ar**	**7.17**	**25**	*e*P	**Pn**	**06 27 13.7**	**-0.3**
KBS	**Kingsbay**	**7.33**	**16**	*e*P	**Pn**	**06 27 16.0**	**-0.2**
KBS	**Kingsbay**	**7.33**	**16**	*e*P	**Pn**	**06 27 16.0**	**-0.2**
SCO	**Scoresbysund**	**7.71**	**269**	*i* P	Pn	06 27 12.8	-8.6

*IDC **23** 06:41:12.9±0.5, 37°.58N×143°.84E, h0km, mb4.2/19, mbtmp4.2/24, ML3.1/4, MS3.2/15, Error ellipse: s-maj=15.2km s-min=13.0km az=126.0*
*JMA **23** 06:41:16.4±0.2, 37°.7N±0°.7×14°.4E±°, h50km, MD4.3/36, MV4.7/36, FAR E OFF FUKUSHIMA PREF*
*MOS **23** 06:41:16.1±1.1, 37°.66N×143°.77E, h34km, mb4.6/10, Error ellipse: s-maj=10.8km s-min=7.4km az=116.5*
*NIED **23** 06:41:16.4, 37°.74N×143°.66E, h50km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr=1.58; Mθθ=0.52; Mφφ 1.07; Mrθ=0.56; Mθφ 0.86; Mφr 0.34; Fault plane solution: M0 1.77000×10^15^ NP1:φs 27.00000°, δ 35.00000°, λ -104.00000°. NP2:φs 225.00000°, δ 56.00000°, λ -80.00000°.*
*NEIC **23** 06:41:17.9±2.7, 37°.59N±0°.03×143°.7E±0°.1, h32km±6km, mb4.4/25 Error ellipse: s-maj=15.0km s-min=3.3km az=100.0*

ISC 23 06:41:18.1±0.5, 37°.68N±0°.04×143°.76E±0°.06, h35km, n125, σ1°.98/115, mb4.4/39, MS3.3/13, 9C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.91**	**290**	*i* P	**Pn**	**06 41 46.3**	**-1.9**
JIKH				S	**Sn**	**06 42 07.7**	**-3.4**
JIO	**Ouri**	**2.05**	**293**	P	**Pn**	**06 41 48.2**	**-1.8**
JIO				S	**Sn**	**06 42 11.5**	**-2.9**
JKMT	**Kesennumamotoy**	**2.12**	**303**	*i* P	**Pn**	**06 41 49.0**	**-2.0**
JKMT				S	**Sn**	**06 42 13.0**	**-3.1**
JKMT	**Kesennumamotoy**	**2.12**	**303**	A	A	06 41 49.0	
	comp=E,3.0nm,0.5s,comp=E,5.0nm,0.6s						
OFUJ	**Ofunato**	**2.15**	**311**	*i* P	**Pn**	**06 41 49.3**	**-2.2**
OFUJ				S	**Sn**	**06 42 13.7**	**-3.3**
JMM	**Marumori**	**2.35**	**275**		**Pn**	**06 41 52.6**	**-1.7**
JMM	**Marumori**	**2.35**	**275**	A	A	06 41 52.5	
	comp=E,3.0nm,0.4s,comp=E,4.0nm,0.4s						
JMK	**Ichinoseki**	**2.36**	**303**	*i* P	**Pn**	**06 41 52.6**	**-1.7**
JMK				S	**Sn**	**06 42 19.1**	**-3.1**
JOU	**Okura**	**2.54**	**287**	A	A	06 41 55.0	
	comp=E,4.0nm,4.0s,comp=E,6.0nm,0.7s						
JOM	**Ohasama**	**2.63**	**314**	*i* P	**Pn**	**06 41 56.4**	**-1.7**
JOM				S	**Sn**	**06 42 26.2**	**-2.5**
JOM	**Ohasama**	**2.63**	**314**	A	A	06 41 56.4	
	comp=E,3.0nm,0.4s,comp=E,3.0nm,1.5s						
JFT	**Otama**	**2.72**	**268**	P	**Pn**	**06 41 58.3**	**-1.1**
JFT				S	**Sn**	**06 42 29.3**	**-1.7**
JYK	**Kaneyama**	**2.94**	**296**	*i* P	**Pn**	**06 42 01.2**	**-1.2**
JYK				S	**Sn**	**06 42 34.7**	**-1.8**
JYT	**Yasato**	**3.20**	**244**	Pn	**Pn**	**06 42 04.3**	**-1.7**
JYT	**Yasato**	**3.20**	**244**	A	A	06 42 05.0	
	comp=E,5.0nm,0.5s,comp=E,2.0nm,0.4s						
JANG	**Nango**	**3.20**	**328**	P	**Pn**	**06 42 03.4**	**-2.6**
JANG				S	**Sn**	**06 42 38.5**	**-4.4**
JAW	**Awa shima**	**3.64**	**284**	P	**Pn**	**06 42 11.6**	**-0.4**
JAW				S	**Sn**	**06 42 53.2**	**-0.4**
JAG	**Ashikaga**	**3.66**	**251**	*i* P	**Pn**	**06 42 11.2**	**-1.1**
JAG				S	**Sn**	**06 42 51.6**	**-2.7**
JTM	**Tenmabayashi**	**3.74**	**327**	Pn	**Pn**	**06 42 12.0**	**-1.3**
BSO1	**Boso 1**	**3.77**	**217**	P	**Pn**	**06 42 11.3**	**-1.9**
BSO1				S	**Sn**	**06 42 54.4**	**-1.7**
JRY	**Ryogami san**	**4.23**	**248**	P	**Pn**	**06 42 18.7**	**-1.5**
JRY				S	**Sn**	**06 43 04.2**	**-4.2**
ERM	**Erimo**	**4.35**	**354**	*e*P	**Pn**	**06 42 19.4**	**-2.3**
JSD	**Sado**	**4.36**	**276**	Pn	**Pn**	**06 42 21.0**	**-0.9**
JOD2	**Odawara 2**	**4.47**	**239**	P	**Pn**	**06 42 22.0**	**-1.4**
JOD2				S	**Sn**	**06 43 09.3**	**-4.9**
MJAR	**Matsushiro Arr**	**4.58**	**257**	Pn	**Pn**	**06 42 23.2**	**-1.7**
	1.8nm,0.3s,baz=72,slow=9.6,SNR=35						
MJAR				Sn	**Sn**	**06 43 18.2**	**+1.4**
	1.7nm,0.3s,baz=118,slow=24,SNR=7.3 11nm,0.4s						
MAJO	**Matsushiro**	**4.58**	**257**	Pn	**Pn**	**06 42 25.6**	**+0.7**
MAJO	**Matsushiro**	**4.58**	**257**	*c* *i* P	**Pn**	**06 42 25.3**	**+0.4**
JCH	**Churui**	**4.93**	**357**	P	**Pn**	**06 42 27.0**	**-2.7**
JCH				S	**Sn**	**06 43 19.2**	**-6.3**
JEW	**Eniwo**	**5.44**	**342**	Pn	**Pn**	**06 42 36.6**	**-0.1**
JOSM	**Okushiri--Mats**	**5.49**	**324**	P	**Pn**	**06 42 36.3**	**-1.0**
JOSM				S	**Sn**	**06 43 35.1**	**-4.1**
JGF	**Kuroka**	**5.55**	**250**	Pn	Pn	06 42 32.4	-5.9
JHJ2	**Mitsune**	**5.58**	**216**	Pn	Pn	06 42 32.4	-6.2
JHJ2	**Mitsune**	**5.58**	**216**	*e*P	**Pn**	**06 42 37.4**	**-1.3**
JHJ2				*e*S	**Sn**	**06 43 35.4**	**-6.2**
JHJ	**Hachijo jima 2**	**5.59**	**217**	Pn	**Pn**	**06 42 36.7**	**-2.1**
	57nm,0.3s,baz=54,slow=19,SNR=2.3						
JHJ				Sn	**Sn**	**06 43 35.8**	**-6.0**
	71nm,0.3s,baz=267,slow=23,SNR=7.4						
INU	**Inuyama**	**5.91**	**249**	Pn	Pn	06 42 36.7	-6.4
TEY	**Ternei**	**9.10**	**326**	*e*P	**Pn**	**06 43 26.6**	**-0.3**
YSS	**Yuzh-Sakhalins**	**9.29**	**356**	*e*P	**Pn**	**06 43 26.6**	**-2.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
JCJ	**Chichijima**	**10.64**	**188**	Pn	Pn	06 43 42.5	-5.6
	comp=Z,11nm,0.3s,baz=302,slow=18,SNR=1.9						
JCJ				Sn	Sn	06 45 31.5	-14
	comp=Z,14nm,0.3s,baz=98,slow=24,SNR=5.6						
USRK	**Ussuriysk Ar.**	**11.02**	**310**	Pn	**Pn**	**06 43 53.6**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=92,slow=12,SNR=6.6						
USRK				LR	LR	06 48 06.4	
	comp=Z,73nm,18.1s,baz=201,slow=37 comp=Z,4.3nm,0.7s						
KSRS	**Korea Array**	**12.57**	**274**	Pn	**Pn**	**06 44 15.8**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=81,slow=15,SNR=5.7						
KSRS				LR	LR	06 48 32.9	
	comp=Z,40nm,21.6s,baz=235,slow=35 comp=Z,1.1nm,0.5s						
PETK	**Petropavlovsk-**	**18.22**	**28**	P	**Pn**	**06 45 27.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=221,slow=13,SNR=2.4 comp=Z,2.7nm,0.9s						
ZEA	**Zeya**	**19.68**	**330**	*e*P	**Pn**	**06 45 45.2**	**-0.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,100nm,18.0s						
HIA	**Hailar**	**20.82**	**311**	*e*P	Pn	06 45 58.6	-0.5
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GUMO	**Guam**	**24.02**	**177**	LR	LR	06 56 13.6	
	comp=Z,30nm,19.0s,baz=53,slow=38						
SEY	**Seymchan**	**25.82**	**9**	P	**P**	**06 46 46.7**	**+0.9**
	comp=Z,1.6nm,0.2s,baz=169,slow=7.0,SNR=6.1 comp=Z,1.6nm,0.2s						
SEY	**Seymchan**	**25.82**	**9**	*e*P	**P**	**06 46 47.1**	**+1.3**
SEY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	**Yakutsk**	**25.89**	**345**	LR	LR	06 57 45.5	
	comp=Z,43nm,19.4s,baz=158,slow=38						
YAK	**Yakutsk**	**25.89**	**345**	*d* *i* P	**P**	**06 46 46.9**	**+0.5**
YAK				pmax	pmax		
	comp=Z,22nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**26.93**	**125**	T	T	07 15 11.2	
	baz=317,slow=74,SNR=34						
H11N1	**WAKE ISLAND Hy**	**26.94**	**125**	T	T	07 15 14.8	
	baz=317,slow=74,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**26.95**	**125**	T	T	07 15 20.4	
	baz=317,slow=74,SNR=30						
H11S1	**WAKE ISLAND Hy**	**27.70**	**127**	T	T	07 16 12.6	
	baz=319,slow=76,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**27.71**	**127**	T	T	07 16 16.6	
	baz=319,slow=76,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**27.72**	**127**	T	T	07 16 17.8	
	baz=319,slow=76,SNR=4.3						
ULN	**Ulaanbaatar**	**28.55**	**303**	*e*P	**P**	**06 47 12.1**	**+1.4**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**28.99**	**302**	P	**P**	**06 47 15.4**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=95,slow=9.1,SNR=2.7 comp=Z,1.4nm,0.6s						
ZAK	**Zakamensk**	**31.35**	**307**	*e*P	P	06 47 39.4	+4.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**32.89**	**15**	*i* P	**P**	**06 47 45.8**	**-2.7**
BILL				*i*		06 48 00.3	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DAV	**Davao City (W)**	**34.66**	**213**	LR	LR	07 01 24.1	
	comp=Z,22nm,20.8s,baz=167,slow=35						
ZAA0	**Zalesovo Array**	**42.86**	**312**	P	P	06 49 17.4	+4.7
ZALV	**Zalesovo Beam**	**42.86**	**312**	P	**P**	**06 49 14.6**	**+1.9**
	comp=Z,3.7nm,0.5s,baz=79,slow=7.7,SNR=16						
ZALV				PcP	**PcP**	**06 51 03.5**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=98,slow=3.0,SNR=5.9						
ZALV				LR	LR	07 09 46.8	
	comp=Z,28nm,18.3s,baz=56,slow=40 comp=Z,3.7nm,0.5s						
ZALV	**Zalesovo Beam**	**42.86**	**312**	P	P	06 49 17.6	+4.9
CMAR	**Chiang Mai Arr**	**43.47**	**257**	P	**P**	**06 49 18.8**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=44,slow=6.8,SNR=7.0						
CMAR				LR	LR	07 10 11.5	
	comp=Z,24nm,18.4s,baz=145,slow=40 comp=Z,1.0nm,0.3s						
NRIK	**Noril'sk**	**43.47**	**335**	LR	LR	07 08 54.9	
	comp=Z,60nm,19.6s,baz=160,slow=38						
SVW2	**Sparrevohn**	**43.87**	**38**	P	**P**	**06 49 22.7**	**+1.9**
SVW2				IAmb	IAmb	06 49 22.9	
	comp=Z,6.1nm,0.8s						
K20K	**Telida**	**44.74**	**35**	P	**P**	**06 49 29.4**	**+1.7**
K20K				IAmb	IAmb	06 49 43.7	
	comp=Z,4.4nm,0.9s						
MK31	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 49 33.5**	**+0.6**
MK31	**Makanchi Array**	**45.36**	**302**	*d* *i* P	**P**	**06 49 32.9**	**+0.1**
MKAR	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 49 33.5**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=89,slow=10,SNR=12						
MKAR				LR	LR	07 08 41.6	
	comp=Z,24nm,21.4s,baz=38,slow=36 comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 49 33.2**	**+0.4**
MKAR	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 49 33.2**	**+0.4**
H21K	**Melozitna Rive**	**45.49**	**31**	IAmb	IAmb	06 49 49.5	
	comp=Z,8.6nm,1.2s						
MAKZ	**Makanchi**	**45.56**	**302**	P	**P**	**06 49 35.3**	**+0.8**
MAKZ	**Makanchi**	**45.56**	**302**	P	**P**	**06 49 35.3**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H23K	**Yukon River**	**46.85**	**31**	IAmb	IAmb	06 50 00.3	
	comp=Z,7.3nm,1.1s						
KURK	**Kurchatov**	**47.00**	**308**	P	**P**	**06 49 45.9**	**+0.2**
KURK	**Kurchatov**	**47.00**	**308**	*de*	**P**	**06 49 45.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURBB	**Kurchatov Arra**	**47.08**	**308**	P	**P**	**06 49 46.4**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=82,slow=8.0,SNR=22 comp=Z,2.5nm,0.5s						
IL31		**47.94**	**33**	P	**P**	**06 49 52.7**	**0.0**
ILAR	**Eielson Array**	**47.94**	**33**	P	**P**	**06 49 53.1**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=265,slow=6.7,SNR=31 comp=Z,3.2nm,0.7s						
ILAR	**Eielson Array**	**47.94**	**33**	P	**P**	**06 49 52.2**	**-0.6**
ILAR	**Eielson Array**	**47.94**	**33**	P	**P**	**06 49 52.2**	**-0.6**
COEN	**Coen**	**51.37**	**181**	P	**P**	**06 50 18.7**	**-0.7**
COEN				IAmb	IAmb	06 50 35.1	
	comp=Z,5.0nm,0.9s						
BVAR	**Borovoye Array**	**51.52**	**312**	LR	LR	07 13 59.4	
	comp=Z,29nm,18.2s,baz=94,slow=38						
MTN	**Manton Dam**	**51.64**	**196**	P	**P**	**06 50 19.4**	**-1.9**
INK	**Inuvik**	**52.95**	**28**	P	**P**	**06 50 31.1**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=323,slow=7.6,SNR=4.1 comp=Z,2.4nm,0.7s						
KKAR	**Karatay Array**	**54.41**	**300**	P	**P**	**06 50 41.8**	**+0.1**
KKAR	**Karatay Array**	**54.41**	**300**	P	**P**	**06 50 41.8**	**+0.1**
CHGR	**Chuyangaron**	**57.07**	**296**	P	**P**	**06 51 00.8**	**-0.1**
CHGR	**Chuyangaron**	**57.07**	**296**	P	**P**	**06 51 00.8**	**-0.1**
CHGR				pmax	pmax		
	comp=Z,27nm,0.9s						
ARU	**Arti**	**57.11**	**319**	LR	LR	07 19 47.8	
	comp=Z,22nm,19.9s,baz=329,slow=40						
ARU	**Arti**	**57.11**	**319**	*c* *i* P	**P**	**06 51 00.7**	**0.0**
ARU						06 53 04.5	
ARU				S	**S**	**06 58 59.4**	**+6.3**
ARU				SS	**SS**	**07 02 39.2**	**-2.4**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WB0	**Warramunga Arr**	**57.82**	**190**	P	**P**	**06 51 05.4**	**-0.7**
WB2	**Warramunga Arr**	**58.00**	**190**	P	**P**	**06 51 06.5**	**-0.9**
WRA	**Warramunga Arr**	**58.00**	**190**	P	**P**	**06 51 06.4**	**-1.0**
	comp=Z,8.1nm,0.7s,baz=10.0,slow=7.3,SNR=77						
WRA				PcP	**PcP**	**06 51 59.3**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=360,slow=4.4,SNR=6.0 comp=Z,8.1nm,0.7s						
WRA	**Warramunga Arr**	**58.00**	**190**	P	**P**	**06 51 05.8**	**-1.5**
WRA	**Warramunga Arr**	**58.00**	**190**	*ce*	**P**	**06 51 06.3**	**-1.1**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**58.05**	**200**	P	**P**	**06 51 07.4**	**-0.2**
FITZ				IAmb	IAmb	06 51 21.8	
	comp=Z,4.8nm,1.1s						
ABKAR	**Akbulak array**	**58.94**	**311**	P	**P**	**06 51 13.7**	**0.0**
ABKAR				IAmb	IAmb	06 51 30.1	
	comp=Z,1.9nm,0.7s						
KIRV	**Kirov**	**60.85**	**323**	*ce*	**P**	**06 51 27.3**	**+0.7**
ASAR	**Alice Springs**	**61.72**	**190**	P	**P**	**06 51 32.4**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=12,slow=6.6,SNR=27 comp=Z,2.2nm,0.8s						
YKA	**Yellowknife Ar**	**62.30**	**31**	P	**P**	**06 51 36.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=302,slow=7.1,SNR=3.8 comp=Z,0.7nm,0.7s						
BELG	**Belogornoye**	**64.59**	**318**	LR	LR	07 24 11.5	
	comp=Z,31nm,18.5s,baz=146,slow=40						
FINES	**FINESS Array B**	**69.10**	**333**	P	**P**	**06 52 20.6**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=69,slow=6.3,SNR=6.2						
FINES				LR	LR	07 27 55.9	
	comp=Z,22nm,18.7s,baz=30,slow=40 comp=Z,2.9nm,0.8s						
FINES	**FINESS Array B**	**69.10**	**333**	*ce*	**P**	**06 52 19.3**	**-0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**69.23**	**182**	P	**P**	**06 52 20.7**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=335,slow=11,SNR=4.3 comp=Z,1.4nm,0.6s						
PLTX	**Planet X, Gerl**	**71.08**	**53**	IAmb	IAmb	06 52 35.9	
	comp=Z,26nm,0.6s						
KIV	**Kislovodsk**	**71.88**	**312**	*e*P	**P**	**06 52 39.4**	**+1.8**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KBZ	**Khabaz**	**71.88**	**311**	P	**P**	**06 52 38.7**	**+1.2**
	comp=Z,5.7nm,0.8s,baz=84,slow=2.3,SNR=8.7 comp=Z,5.7nm,0.8s						
BOZ	**Bozeman (W)**	**72.97**	**45**	P	**P**	**06 52 44.5**	**+0.4**
BOZ				IAmb	IAmb	06 52 45.1	
	comp=Z,2.4nm,0.7s						
BOZ	**Bozeman (W)**	**72.97**	**45**	P	**P**	**06 52 44.5**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**73.10**	**54**	P	**P**	**06 52 46.0**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=288,slow=6.3,SNR=7.8 comp=Z,0.7nm,0.7s						
HFS	**Hagfors**	**74.25**	**337**	LR	LR	07 28 46.6	
	comp=Z,23nm,19.3s,baz=44,slow=38						
NB2	**NORSAR Subarra**	**74.29**	**338**	P	**P**	**06 52 50.9**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.29**	**338**	P	**P**	**06 52 51.9**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=37,slow=6.0,SNR=6.6						
NOA				LR	LR	07 29 44.1	
	comp=Z,20nm,19.4s,baz=240,slow=39 comp=Z,1.1nm,0.8s						
IMW	**Indian Meadow**	**74.38**	**46**	IAmb	IAmb	06 52 55.0	
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**74.91**	**323**	P	**P**	**06 52 55.3**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=45,slow=5.9,SNR=15 comp=Z,2.2nm,0.5s						
AKASG	**Malin Array Be**	**74.91**	**323**	*ce*	**P**	**06 52 55.2**	**0.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	**Malin Array Si**	**74.91**	**323**	*ce*	**P**	**06 52 55.3**	**+0.1**
PD31	**Pinedale Array**	**75.87**	**47**	P	**P**	**06 53 01.3**	**+0.1**
PDAR	**Pinedale Array**	**75.87**	**47**	P	**P**	**06 53 01.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=272,slow=2.5,SNR=15 comp=Z,1.1nm,0.6s						
P17A	**Butcher Ranch,**	**77.22**	**50**	IAmb	IAmb	06 53 24.6	
	comp=Z,

	comp=Z,44nm,1.9s						
PB01	**IPOC Station P**	**46.07**	**301**	P	**P**	**07 00 04.4**	**-0.5**
BOSA	**Boshof**	**46.32**	**77**	P	**P**	**07 00 07.2**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=222,slow=9.7,SNR=3.5						
BOSA				LR	LR	07 16 23.0	
	comp=Z,127nm,18.6s,baz=198,slow=32						
	comp=Z,4.8nm,0.8s						
PTLB	**Pontes e Lacer**	**46.39**	**317**	P	**P**	**07 00 06.4**	**-0.9**
PTLB				IAmb	IAmb	07 00 13.0	
	comp=Z,21nm,1.1s						
SBA	**Scott Base**	**46.78**	**184**	P	**P**	**07 00 10.4**	**+0.8**
GO01	**Chusmiza**	**47.10**	**302**	P	**P**	**07 00 13.2**	**-0.2**
VNDA	**Vanda**	**47.28**	**183**	P	**P**	**07 00 14.4**	**+0.9**
	comp=Z,3.9nm,0.8s,baz=192,slow=6.0,SNR=34						
	comp=Z,3.9nm,0.8s						
VNDA	**Vanda**	**47.28**	**183**	P	**P**	**07 00 14.0**	**+0.4**
VNDA				IAmb	IAmb	07 00 15.1	
	comp=Z,4.9nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.46**	**18**	T	T	07 51 22.6	
	baz=30,slow=74,SNR=4.7						
H10S3	**ASCENSION HYDR**	**47.46**	**18**	T	T	07 51 20.2	
	baz=190,slow=74,SNR=12						
H10N1	**ASCENSION HYDR**	**48.57**	**18**	T	T	07 52 50.6	
	baz=189,slow=75,SNR=5.8						
H10N3	**ASCENSION HYDR**	**48.58**	**18**	T	T	07 52 53.1	
	baz=189,slow=75,SNR=14						
H10N2	**ASCENSION HYDR**	**48.59**	**18**	T	T	07 52 50.6	
	baz=189,slow=75,SNR=15						
VILB	**Vilhena**	**49.08**	**317**	P	**P**	**07 00 28.0**	**-0.1**
VILB				IAmb	IAmb	07 01 00.1	
	comp=Z,17nm,0.9s						
LBTB	**Lobatse**	**49.32**	**75**	P	**P**	**07 00 29.8**	**-0.3**
	comp=Z,8.7nm,1.1s,baz=282,slow=5.3,SNR=4.0						
LBTB				LR	LR	07 19 15.5	
	comp=Z,95nm,18.4s,baz=194,slow=34						
	comp=Z,8.7nm,1.1s						
LPAZ	**La Paz**	**49.51**	**306**	P	**P**	**07 00 32.9**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=159,slow=6.8,SNR=25						
LPAZ				LR	LR	07 24 37.7	
	comp=Z,44nm,18.2s,baz=141,slow=40						
	comp=Z,4.6nm,0.8s						
LPAZ	**La Paz**	**49.51**	**306**	P	**P**	**07 00 32.1**	**0.0**
LPAZ				IAmb	IAmb	07 00 34.0	
	comp=Z,5.6nm,0.8s						
RCBR	**Riachuelo**	**49.74**	**350**	LR	LR	07 18 14.7	
	comp=Z,35nm,18.7s,baz=318,slow=32						
TSUM	**Tsumeb**	**49.80**	**62**	LR	LR	07 18 36.9	
	comp=Z,68nm,18.0s,baz=344,slow=32						
ETMB	**Extrema**	**54.38**	**312**	IAmb	IAmb	07 01 39.8	
	comp=Z,6.1nm,1.2s						
NNA	**Nana**	**57.42**	**299**	LR	LR	07 28 00.6	
	comp=Z,22nm,19.3s,baz=153,slow=38						
LSZ	**Lusaka**	**58.62**	**70**	LR	LR	07 24 37.1	
	comp=Z,89nm,18.4s,baz=185,slow=34						
MDP	**Montagnes des**	**63.53**	**333**	LR	LR	07 28 38.8	
	comp=Z,72nm,18.6s,baz=176,slow=35						
DBIC	**Dimbokro**	**64.72**	**26**	P	**P**	**07 02 18.4**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=216,slow=8.4,SNR=1.4						
DBIC				LR	LR	07 26 03.9	
	comp=Z,42nm,18.1s,baz=165,slow=32						
	comp=Z,1.5nm,0.7s						
BAUV	**El Baul**	**72.15**	**318**	P	**P**	**07 03 05.4**	**0.0**
BAUV				IAmb	IAmb	07 03 06.3	
	comp=Z,12nm,1.0s						
MBAR	**Mbarara**	**72.30**	**64**	LR	LR	07 32 07.7	
	comp=Z,56nm,19.3s,baz=213,slow=34						
TOA0	**Torodi Ar. Sit**	**72.68**	**30**	P	**P**	**07 03 07.9**	**-0.6**
TOA0				IAmb	IAmb	07 03 10.7	
	comp=Z,9.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**72.68**	**30**	P	**P**	**07 03 08.7**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=196,slow=6.3,SNR=25						
	comp=Z,6.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.68**	**30**	P	**P**	**07 03 08.4**	**-0.1**
TORD				IAmb	IAmb	07 03 10.8	
	comp=Z,6.8nm,1.1s						
SDV	**Santo Domingo**	**73.11**	**316**	LR	LR	07 37 29.4	
	comp=Z,53nm,18.2s,baz=336,slow=38						
KMBO	**Kilima Mbogo**	**75.28**	**70**	LR	LR	07 35 49.8	
	comp=Z,71nm,18.2s,baz=222,slow=35						
URZ	**Urewera**	**84.32**	**200**	LR	LR	07 37 27.3	
	comp=Z,36nm,18.3s,baz=212,slow=33						
MDT	**Midelt**	**90.07**	**20**	LR	LR	07 40 22.7	
	comp=Z,45nm,18.6s,baz=237,slow=32						
STKA	**Stephens Creek**	**92.72**	**171**	LR	LR	07 43 17.1	
	comp=Z,34nm,20.7s,baz=203,slow=33						
KEST	**Kesra**	**96.20**	**30**	LR	LR	07 43 11.8	
	comp=Z,59nm,20.4s,baz=258,slow=32						
ESDC	**Sonseca Array**	**96.85**	**19**	LR	LR	07 43 12.1	
	comp=Z,53nm,21.1s,baz=172,slow=32						
ASAR	**Alice Springs**	**99.85**	**163**	P	**Pdif**	**07 05 24.8**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=192,slow=3.9,SNR=5.7						
ASAR				LR	LR	07 50 10.5	
	comp=Z,55nm,18.2s,baz=162,slow=35						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**123.98**	**28**	PKP	**PKiKP**	**07 10 37.9**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=158,slow=2.1,SNR=3.8						
ARCES	**ARCESS Array B**	**130.46**	**22**	PKP	**PKPdf**	**07 10 49.6**	**0.0**
	comp=Z,4.1nm,1.0s,baz=160,slow=2.9,SNR=4.8						
YKA	**Yellowknife Ar**	**135.26**	**319**	PKP	**PKPdf**	**07 10 59.4**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=127,slow=2.4,SNR=4.8						
ILAR	**Eielson Array**	**149.22**	**313**	PKPbc	**PKPbc**	**07 11 28.1**	**+0.3**
	comp=Z,10.0nm,0.8s,baz=130,slow=2.1,SNR=68						
SONM	**Songino Array**	**151.21**	**86**	PKPbc	**PKPbc**	**07 11 33.2**	**-0.1**
	comp=Z,4.2nm,0.9s,baz=221,slow=2.6,SNR=9.8						

DDA ***23*** *06:54:05.8±0.0, 42.°64N×40.°60E, h9km±2km, MW3.2*

ISC 23 06:54:05.5±1.9, 42.°7N±0.°1×40.°56E±0.°06, h10km, n7, σ1§35/13, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBOC	**Borcka**	**1.57**	**148**	P	**Pb**	**06 54 34.1**	**-0.4**
DBOC				S	**Sg**	**06 54 56.1**	**+0.2**
DBOC				*i* AML	AML	06 55 00.0	
	comp=E,47nm,0.2s						
DBAD	**Bademkaya**	**1.86**	**152**	P	**Pg**	**06 54 40.6**	**-0.6**
DBAD				S	**Sg**	**06 55 05.3**	**-0.1**
DBAD				*i* AML	AML	06 55 07.0	
	comp=N,33nm,0.4s						
DBAD				*i* AML	AML	06 55 16.0	
	comp=E,39nm,0.3s						
DAGI	**Agillar**	**1.89**	**147**	P	**Pg**	**06 54 41.1**	**-0.6**
DAGI				*i* AML	AML	06 55 14.0	
	comp=E,20nm,0.3s						
ONI	**Oni**	**2.14**	**91**	P	**Pn**	**06 54 42.1**	**+0.8**
ONI				S	**Sn**	**06 55 08.1**	**+0.1**
ALUC	**Giresun/Alucra**	**2.69**	**210**	P	**Pb**	**06 54 52.0**	**-1.8**
ALUC				S	**Sb**	**06 55 27.3**	**+0.4**
ALUC				*i* AML	AML	06 55 32.0	
	comp=N,30nm,0.6s						
ALUC				*i* AML	AML	06 55 36.0	
	comp=E,46nm,0.5s						
KELT	**Kelkit**	**2.71**	**202**	P	**Pb**	**06 54 52.6**	**-1.6**
KELT				S	**Sb**	**06 55 29.1**	**+1.6**
KELT				*i* AML	AML	06 55 33.0	
	comp=E,16nm,0.3s						
KELT				*i* AML	AML	06 55 34.0	
	comp=N,21nm,0.5s						
SUSE	**Susehri**	**3.04**	**216**	P	**Pn**	**06 54 56.3**	**+2.6**
SUSE				S	**Sb**	**06 55 35.5**	**-1.4**
SUSE				*i* AML	AML	06 55 41.0	
	comp=E,8.6nm,0.5s						
SUSE				*i* AML	AML	06 55 42.0	
	comp=N,12nm,0.4s						

IDC 23 06:55:08.2±4.5, 5.°61S×151.°41E, h0km, mb2.9/2, mbtmp3.0/2, Error ellipse: s-maj=191.8km s-min=56.5km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.88**	**228**	P	P	07 00 02.8	-0.1
	0.3nm,0.6s,baz=53,slow=10,SNR=4.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**24.63**	**221**	P	P	07 00 30.7	+0.1
	0.3nm,0.7s,baz=61,slow=8.6,SNR=3.0						
	0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.22**	**286**	PKPbc	PKPbc	07 14 59.4	-0.5
	0.1nm,0.4s,baz=43,slow=3.0,SNR=1.3						

IDC 23 06:55:35.5±383.0, 48.°66N×48.°46E, h0km, Error ellipse: s-maj=137.0km s-min=83.8km az=157.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**6.47**	**71**	*i*		07 30 20.0	
	baz=261,slow=320,SNR=1.1						
I43RU	**DUBNA INFRASON**	**10.56**	**324**	*i*		08 03 10.0	
	baz=134,slow=319,SNR=0.7						
I26DE	**FREYUNG INFRAS**	**22.80**	**284**	*i*		09 18 00.0	
	baz=79,slow=330,SNR=0.6						
I37NO	**I37NO**	**25.15**	**335**	*i*		09 33 30.0	
	baz=130,slow=328,SNR=1.1						

IDC ***23*** *07:59:09.7±0.9, 72.°26N×1.°97E, h0km, mb3.5/6, mbtmp3.5/10, ML2.6/3, MS3.1/16, Error ellipse: s-maj=23.3km s-min=16.8km az=40.0*

BER ***23*** *07:59:13.3±1.0, 72.°31N×1.°88E, h23km±15km, Confirmed Earthquake*

ISC 23 07:59:10.6±0.8, 72.°3N±0.°1×2.°41E±0.°08, h10km, n31, σ1§91/20, mb3.5/6, MS3.0/11, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**3.69**	**255**	Pn	**Pn**	**08 00 05.4**	**-2.1**
	2.8nm,0.3s,baz=54,slow=6.4,SNR=5.1						
	12nm,0.5s						
JMIC	**Jan Mayen**	**3.69**	**255**	*e*P	**Pn**	**08 00 05.5**	**-2.0**
LOF	**Lofoten**	**5.61**	**132**	*e*P	**Pn**	**08 00 35.2**	**+1.4**
TRO	**Tromso**	**6.01**	**108**	*e*P	**Pn**	**08 00 41.2**	**+1.8**
STEI	**Steigen**	**6.16**	**129**	*e*P	**Pn**	**08 00 42.5**	**+1.1**
JETT	**Jettan, Norway**	**6.49**	**106**	*e*P	**Pn**	**08 00 46.4**	**+0.5**
FAUS	**Fauske**	**6.61**	**131**	*e*P	**Pn**	**08 00 49.1**	**+1.5**
FAUS				*e*S	**Sn**	**08 01 58.9**	**-3.9**
FAUS				IAML		08 02 05.8	
	comp=Z,3.1nm,0.6s						
SPITS	**Spitsbergen Ar**	**6.91**	**24**	Pn	**Pn**	**08 00 51.6**	**0.0**
	comp=Z,2.3nm,0.4s,baz=209,slow=15,SNR=11						
KIF	**Kilpisjarvi**	**6.92**	**109**	*e*P	**Pn**	**08 00 52.8**	**+1.0**
KIF				*e*S	**Sn**	**08 02 06.0**	**-4.3**
ARCES	**ARCESS Array B**	**8.02**	**99**	Pn	**Pn**	**08 01 07.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=311,slow=9.5,SNR=6.3						
	comp=Z,1.5nm,0.6s						
BORG	**Borgarnes**	**11.42**	**241**	LR	LR	08 05 17.1	
	comp=Z,48nm,18.9s,baz=255,slow=32						
NOA	**NORSAR Array B**	**11.78**	**159**	LR	LR	08 06 31.2	
	comp=Z,50nm,19.4s,baz=345,slow=37						
HFS	**Hagfors**	**12.96**	**154**	LR	LR	08 07 07.2	
	comp=Z,54nm,18.3s,baz=350,slow=37						
FINES	**FINESS Array B**	**14.15**	**128**	Pn	**Pn**	**08 02 31.0**	**+0.4**
	baz=318,slow=12,SNR=2.6						
FINES				LR	LR	08 07 34.4	
	comp=Z,99nm,18.8s,baz=10,slow=35						
	comp=Z,1.9nm,0.9s						
KLMR	**Klimovskoe**	**18.25**	**109**	*e*P	**P**	**08 03 25.1**	**+1.4**
	comp=Z,11nm,1.2s						
SFJD	**Kangerlussuaq**	**18.61**	**280**	LR	LR	08 09 37.2	
	comp=Z,61nm,20.3s,baz=42,slow=34						
KIRV	**Kirov**	**23.03**	**102**	LR	LR	08 12 22.0	
	comp=Z,32nm,19.9s,baz=327,slow=34						
VRAC	**Vranov**	**23.91**	**157**	LR	LR	08 13 22.3	
	comp=Z,32nm,19.4s,baz=12,slow=36						
GERES	**GERESS Array B**	**24.05**	**161**	P	**P**	**08 04 27.7**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=9.8,slow=8.7,SNR=5.8						
	comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	**24.69**	**137**	P	**P**	**08 04 32.6**	**+1.3**
AKASG				LR	LR	08 13 55.3	
	comp=Z,78nm,18.4s,baz=254,slow=36						
	comp=Z,1.3nm,0.6s						
DAVOX	**Davos/Dischmat**	**25.80**	**168**	LR	LR	08 14 44.8	
	comp=Z,44nm,20.5s,baz=40,slow=36						
FRB	**Frobisher Bay**	**26.23**	**288**	LR	LR	08 14 17.3	
	comp=Z,40nm,21.4s,baz=316,slow=35						
BELG	**Begormoye**	**27.81**	**111**	LR	LR	08 15 44.4	
	comp=Z,50nm,19.4s,baz=139,slow=36						
BRTR	**Keskin Array B**	**36.09**	**137**	LR	LR	08 20 00.4	
	comp=Z,23nm,20.9s,baz=350,slow=35						
GNI	**Garni**	**38.28**	**124**	LR	LR	08 24 01.2	
	comp=Z,9.6nm,19.4s,baz=256,slow=39						
ILAR	**Eielson Array**	**41.66**	**341**	P	**P**	**08 06 58.7**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=15,slow=7.5,SNR=2.6						
	comp=Z,0.3nm,0.7s						
NEW	**Newport**	**52.61**	**313**	LR	LR	08 29 44.9	
	comp=Z,27nm,18.5s,baz=74,slow=35						
PDAR	**Pinedale Array**	**55.98**	**305**	P	**P**	**08 08 48.4**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=29,slow=3.4,SNR=4.2						
	comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**59.09**	**181**	P	**P**	**08 09 11.5**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=1.1,slow=6.6,SNR=6.4						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**67.06**	**294**	P	**P**	**08 10 03.3**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=41,slow=3.6,SNR=3.6						
TXAR				LR	LR	08 37 55.4	
	comp=Z,23nm,18.6s,baz=156,slow=35						
	comp=Z,0.1nm,0.6s						
LPIG	**La Paz**	**73.84**	**299**	LR	LR	08 42 08.1	
	comp=Z,12nm,20.1s,baz=231,slow=35						

NNC 23 08:25:14.8±2.2, 53.°65N×88.°12E, h0km, mb3.6, mpv3.2, 11C-1D, Error ellipse: s-maj=17.3km s-min=9.2km az=60.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.98**	**280**	⇑Pn	Pn	08 25 48.9	-0.6
	3.0nm,0.6s						
ZAA0				⇑Sn	Sb	08 26 16.4	-0.5
	9.3nm,0.8s						
KURK	**Kurchatov**	**6.54**	**247**	⇑Pn	Pn	08 26 52.7	+0.5
	2.2nm,0.6s						
KURK				⇑Lg	Lg	08 28 40.1	
	7.6nm,0.9s						
KURBB	**Kurchatov Arra**	**6.63**	**247**	⇑Pn	Pn	08 26 53.2	-0.2
	3.6nm,0.6s						
KURBB				⇑Sn	Sn	08 28 08.8	-0.9
	4.2nm,0.5s						
KURBB				⇑Lg	Lg	08 28 47.2	
	16nm,0.9s						
MK31	**Makanchi Array**	**7.81**	**211**	⇑Pn	Pn	08 27 11.5	+1.8
	0.8nm,0.6s,baz=36,slow=14,SNR=7.3						
MK31				⇓Sn	Sn	08 28 39.8	+1.0
	0.5nm,0.5s						
MK31				⇑Lg	Lg	08 29 20.9	
	2.8nm,0.7s,baz=27,slow=32,SNR=4.2						
MAKZ	**Makanchi**	**7.89**	**212**	⇑Sn	Sn	08 28 43.2	+2.4
	1.5nm,0.8s						
MAKZ				⇑Lg	Lg	08 29 25.4	
	5.3nm,1.1s						

IDC 23 08:41:05.8±4.4, 2.°26S×139.°68E, h0km, mb3.3/2, mbtmp3.3/3, ML3.4/1, MS3.2/1, Error ellipse: s-maj=169.8km s-min=29.5km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.33**	**196**	P	Pn	08 45 21.3	-0.4
	0.1nm,0.3s,baz=15,slow=11,SNR=12						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**22.00**	**194**	P	P	08 46 01.8	0.0
	0.2nm,0.3s,baz=27,slow=10,SNR=9.2						
ASAR				LR	LR	08 55 19.9	
	comp=Z,71nm,21.5s,baz=164,slow=39						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**70.03**	**322**	P	P	08 52 19.6	+0.1
	0.3nm,0.5s,baz=104,slow=8.1,SNR=4.9						
	0.3nm,0.5s						

NEIC ***23*** *09:02:28.1±2.1, 20.°38S±0.°07×173.°21W±0.°07, h10km±1km, mb5.0/72, Error ellipse: s-maj=12.4km s-min=11.4km az=148.0*

IDC ***23*** *09:02:30.4±0.5, 20.°10S×173.°80W, h0km, mb4.6/15, mbtmp4.6/16, ML5.2/2, MS4.6/50, Error ellipse: s-maj=20.6km s-min=15.1km az=123.0*

MOS ***23*** *09:02:30.4±1.7, 20.°15S×174.°04W, h10km, mb5.3/14, Error ellipse: s-maj=13.5km s-min=11.1km az=72.3*

NOU ***23*** *09:02:34.8, 19.°96S×173.°05W, h79km, mb5.1/19, Tonga Islands*

GCMT ***23*** *09:02:35.1±0.1, 20.°43S±0.°02×173.°08W±0.°01, h17km, MW5.1/120, Moment Tensor Solution. s59,c76; s120,c188; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.65±.15; Mθθ-0.56±.09; Mϕϕ-4.09±.10; Mrθ2.20±.27; Mrϕ-0.81±.06; Mθϕ2.90±.23; Best double couple: Mo5.73800×10¹⁶ NP1:ϕ±27.00000°, δ65.00000°, λ101.00000°. NP2:ϕ182.00000°, δ28.00000°, λ67.00000°. Principal axes: T 6.0680, Plg68.0000°, Azm319.0000°; N -0.6560, Plg10.0000°, Azm202.0000°; P -5.4070, Plg19.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 09:02:28.4±0.3, 20.°34S±0.°04×173.°22W±0.°04, h10km, n368, σ2§45/364, mb5.0/69, MS4.7/64, 28C-18D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.35**	**69**	P	**Pn**	**09 03 19.7**	**-1.1**
	baz=3.3,SNR=36						
NIUE				S	**Sn**	**09 03 56.3**	**-4.4**
	baz=3.3						
NIUE	**Niue**	**3.35**	**69**	Pn	**Pn**	**09 03 19.5**	**-1.3**
NIUE	**Niue**	**3.35**	**69**	P	**Pn**	**09 03 20.1**	**-0.7**
AFI	**Afiamalu**	**6.54**	**12**	Pn	**Pn**	**09 04 02.8**	**-2.0**
	25nm,0.3s,baz=230,slow=3.4,SNR=18						
AFI				S	**Sn**	**09 05 11.9**	**-7.6**
	22nm,0.3s,baz=17,slow=19,SNR=1.5						
AFI	**Afiamalu**	**6.54**	**12**	Pn	**Pn**	**09 04 01.4**	**-3.4**
AFI	**Afiamalu**	**6.54**	**12**	P	**Pn**	**09 04 01.4**	**-3.4**
AFI	**Afiamalu**	**6.54**	**12**	P	**Pn**	**09 04 02.5**	**-2.3**
MSVF	**Nonsavu**	**8.65**	**286**	Pn	**Pn**	**09 04 38.0**	**+4.2**
	2.3nm,0.3s,baz=122,slow=12,SNR=30						
MSVF				LR	LR	09 07 31.3	
	comp=Z,6μm,19.0s,baz=96,slow=37						
MSVF	**Nonsavu**	**8.65**	**286**	P	**Pn**	**09 04 38.2**	**+4.4**
RIZ	**Raoul Island**	**9.84**	**205**	S	**Sn**	**09 06 39.7**	**-0.8**
RAO	**Raoul Island**	**9.84**	**205**	Pn	**Pn**	**09 04 53.3**	**+3.3**
	68nm,0.3s,baz=270,slow=20,SNR=2.8						
RAO				Sn	**Sn**	**09 06 35.7**	**-5.0**
	42nm,0.3s,baz=270,slow=20,SNR=4.1						
RAO				LR	LR	09 08 52.7	
	comp=Z,2μm,18.3s,baz=50,slow=39						
GLKZ	**Green Lake**	**9.85**	**205**	P	**Pn**	**09 04 49.6**	**-0.5**
GLKZ				S	**Sn**	**09 06 33.5**	**-7.3**
RAR	**Rarotonga**	**12.61**	**96**	Pn	**Pn**	**09 05 27.8**	**-0.2**
	10.0nm,0.3s,baz=264,slow=8.1,SNR=27						
RAR				Sn	**Sn**	**09 07 40.7**	**-7.8**
	2.1nm,0.3s,baz=129,slow=18,SNR=1.4						
RAR				LR	LR	09 10 12.5	
	comp=Z,3μm,19.4s,baz=246,slow=35						
RAR	**Rarotonga**	**12.61**	**96**	Pn	**Pn**	**09 05 27.6**	**-0.3**
RAR	**Rarotonga**	**12.61**	**96**	P	**Pn**	**09 05 29.1**	**+1.2**
MARNC	**Mare, Loyalty**	**17.55**	**263**		**Pn**	**09 06 31.1**	**-2.2**
MARNC	**Mare, Loyalty**	**17.55**	**263**	P	**P**	**09 06 35.9**	**+1.5**
PINNC	**Pines Island,**	**18.13**	**259**		**Pn**	**09 06 37.9**	**-2.6**
PINNC	**Pines Island,**	**18.13**	**259**	P	**P**	**09 06 42.0**	**+1.2**
YATNC	**Mamie plateau,**	**18.62**	**261**	P	**Pn**	**09 06 47.5**	**+1.0**
OUENC	**Ouen Island, N**	**18.68**	**260**	P	**P**	**09 06 43.7**	**-3.1**
OUENC				IAmb	IAmb	09 06 54.1	
	comp=Z,58nm,0.9s						
OUZ	**Omahuta**	**18.83**	**215**	P	**Pn**	**09 06 52.9**	**+4.0**
HAZ	**Te Kaha**	**19.03**	**202**	P	**Pn**	**09 06 52.1**	**+0.8**
ONTNC	**Ouen Toro**	**19.04**	**260**	P	**P**	**09 06 48.6**	**-2.2**
DZM	**Mont Dzumac**	**19.04**	**261**	P	**Pn**	**09 06 51.6**	**0.0**
	comp=Z,16nm,0.7s,baz=82,slow=15,SNR=13						
DZM	**Mont Dzumac**	**19.04**	**261**	*e*P	**P**	**09 06 49.8**	**-1.1**
	comp=Z,52nm,0.9s						
DZM				*e*LR	LR	09 11 16.5	
	comp=Z,3μm,23.8s						
DZM	**Mont Dzumac**	**19.04**	**261**	P	**P**	**09 06 48.4**	**-2.4**
DZM	**Mont Dzumac**	**19.04**	**261**	P	**Pn**	**09 06 51.6**	**0.0**
PKGZ	**Pakihiroa**	**19.05**	**202**	P	**Pn**	**09 06 56.0**	**+4.4**
PUZ	**Puketiti**	**19.15**	**201**	P	**Pn**	**09 06 57.9**	**+5.2**
NOUC	**Port Laguerre**	**19.17**	**261**	P	**Pn**	**09 06 52.7**	**-0.4**
RUGZ	**Raukumara Rang**	**19.26**	**202**	P	**Pn**	**09 06 56.3**	**+2.1**
TWGZ	**Tauwhareparae**	**19.34**	**201**	P	**Pn**	**09 07 00.9**	**+5.8**
MWZ	**Matawai**	**19.64**	**202**	P	**Pn**	**09 07 03.4**	**+4.8**
MWZ				S	S	09 10 25.4	-13
URZ	**Urewera**	**19.72**	**203**	P	**Pn**	**09 07 02.1**	**+2.5**
	comp=Z,1.8nm,0.3s,baz=352,slow=7.1,SNR=13						
URZ				S	S	09 10 26.5	-14
	comp=Z,11nm,0.8s,baz=343,slow=19,SNR=1.4						
	comp=Z,24nm,0.7s						
URZ	**Urewera**	**19.72**	**203**	P	**Pn**	**09 07 03.5**	**+4.0**
URZ				S	S	09 10 26.0	-14
URZ	**Urewera**	**19.72**	**203**	P	**Pn**	**09 07 03.3**	**+3.7**
RAGZ	**Rawiri**	**19.82**	**202**	P	**Pn**	**09 07 06.0**	**+5.1**
RAGZ				S	**S**	**09 10 32.0**	**-11**
TOZ	**Tahuroa Road**	**19.91**	**207**	P	**Pn**	**09 07 05.7**	**+4.0**
HIZ	**Hauiti**	**20.84**	**207**	P	Pn	09 07 15.9	+3.2
HIZ	**Hauiti**	**20.84**	**207**	P	Pn	09 07 15.7	+3.0
OTVZ	**Oturere**	**21.06**	**205**	P	**P**	**09 07 12.5**	**-0.3**
KOUNC	**Kounac, New Ca**	**21.08**	**265**	P	**P**	**09 07 15.5**	**+3.5**
SNVZ	**South Ngauruho**	**21.09**	**205**	P	**P**	**09 07 17.2**	**+4.0**
BHHZ	**Black Hill Sta**	**21.19**	**203**	P	**P**	**09 07 17.7**	**+3.5**
PKVZ	**Pokaka**	**21.30**	**205**	P	**P**	**09 07 18.7**	**+3.4**
PXZ	**Pawanui**	**21.39**	**201**	P	P	09 07 23.2	+7.0
TSZ	**Takapari Road**	**21.73**	**203**	P	P	09 07 26.8	+6.9
NEZ	**North Egmont**	**21.80**	**207**	P	P	09 07 27.5	+6.8
NEZ				S	**S**	**09 11 25.5**	**+3.7**
ANWZ	**Angora Road**	**21.90**	**201**	P	P	09 07 30.4	+8.8
ANWZ				S	**S**	**09 11 15.1**	**-8.5**
BFZ	**Birch Farm**	**22.18**	**202**	P	**P**	**09 07 29.5**	**+4.8**
BFZ				S	S	09 11 15.9	-13
**BF

TAU Tasmania Unive 39.94 227 P **P** **09 10 01.4 -1.4**
TAU IAmb IAmb 09 10 17.7
comp=Z,75nm,1.4s
TAU Tasmania Unive 39.94 227 P **P** **09 10 01.4 -1.4**
TAU pmax pmax
comp=Z,75nm,1.5s
MTSU Mount Surprise 40.07 266 P **P** **09 10 02.9 -1.4**
baz=40,SNR=31
STKA Stephens Creek 41.90 245 P **P** **09 10 18.6 -0.6**
comp=Z,15nm,0.8s,baz=90,slow=10,SNR=46
STKA LR LR 09 25 41.5
comp=Z,880nm,18.7s,baz=74,slow=34
comp=Z,15nm,0.8s
STKA Stephens Creek 41.90 245 P **P** **09 10 18.8 -0.5**
baz=42,SNR=40
STKA Stephens Creek 41.90 245 P **P** **09 10 18.6 -0.6**
STKA Stephens Creek 41.90 245 *c iP* **P** **09 10 18.7 -0.5**
COEN Coen 42.05 272 P **P** **09 10 19.5 -1.1**
baz=42,SNR=14
COEN Coen 42.05 272 P **P** **09 10 19.1 -1.5**
COEN IAmb IAmb 09 10 20.5
comp=Z,18nm,0.8s
ARPS Mount Arapiles 42.33 237 P **P** **09 10 22.7 +0.1**
baz=42,SNR=5.3
QIS Mount Isa 44.08 261 P **P** **09 10 35.3 -1.7**
baz=44,SNR=3.7
HTT Hallett 44.27 243 P **P** **09 10 38.2 -0.3**
baz=44,SNR=5.5
BBOO Buckleboo 46.63 244 P **P** **09 10 56.3 -0.9**
baz=47,SNR=14
BBOO Buckleboo 46.63 244 P **P** **09 10 56.3 -0.9**
BBOO IAmb IAmb 09 10 57.5
comp=Z,16nm,0.8s
GENI Genyem 48.74 285 P **P** **09 11 12.4 -1.3**
comp=Z,164nm,0.9s
WR0 Warramunga Arr 48.87 261 P **P** **09 11 11.8 -2.8**
WR0 IAmb IAmb 09 11 33.7
comp=Z,34nm,1.8s
AS31 Alice Springs 48.91 256 P **P** **09 11 13.4 -1.6**
ASAR Alice Springs 48.91 256 P **P** **09 11 13.7 -1.2**
comp=Z,13nm,0.8s,baz=88,slow=8.5,SNR=110
ASAR PcP **PcP** **09 12 41.5 +2.2**
comp=Z,3.6nm,0.8s,baz=98,slow=4.0,SNR=6.4
ASAR LR LR 09 30 55.5
comp=Z,975nm,18.8s,baz=106,slow=35
comp=Z,13nm,0.8s
ASAR Alice Springs 48.91 256 P **P** **09 11 13.4 -1.6**
ASAR Alice Springs 48.91 256 P **P** **09 11 13.4 -1.6**
WB0 Warramunga Arr 49.03 261 P **P** **09 11 14.1 -1.9**
WB0 IAmb IAmb 09 11 14.5
comp=Z,19nm,1.1s
WB2 Warramunga Arr 49.04 261 P **P** **09 11 13.9 -2.1**
WB2 IAmb IAmb 09 11 19.2
comp=Z,18nm,0.9s
WRA Warramunga Arr 49.05 261 P **P** **09 11 14.4 -1.7**
comp=Z,11nm,0.8s,baz=94,slow=7.8,SNR=88
WRA PcP **PcP** **09 12 42.1 +2.2**
comp=Z,2.9nm,0.8s,baz=95,slow=3.3,SNR=3.0
WRA S **S** **09 18 13.1 -8.1**
comp=Z,0.5nm,0.9s,baz=96,slow=14,SNR=2.9
WRA LR LR 09 30 53.6
comp=Z,568nm,19.1s,baz=90,slow=35
comp=Z,11nm,0.8s
WRA Warramunga Arr 49.05 261 P **P** **09 11 13.8 -2.3**
WRA Warramunga Arr 49.05 261 *eP* **P** **09 11 13.7 -2.4**
KDU Kakadu 52.43 269 P **P** **09 11 40.7 -0.9**
baz=52,SNR=7.9
FORT Forrest 53.47 246 P **P** **09 11 48.6 -0.5**
baz=54,SNR=12
FORT Forrest 53.47 246 P **P** **09 11 47.8 -1.3**
MTN Manton Dam 53.64 269 P **P** **09 11 49.6 -0.9**
baz=54,SNR=7.2
MTN Manton Dam 53.64 269 P **P** **09 11 48.8 -1.7**
WRKA Warakurna 53.81 253 P **P** **09 11 50.7 -1.0**
baz=54,SNR=35
SAUI Saumlaki 54.94 275 P **P** **09 11 57.7 -2.3**
comp=Z,8µmcomp=Z,524nm,0.6s
KNRA Kununurra 55.14 265 P **P** **09 12 00.6 -0.8**
baz=55,SNR=7.4
KNRA Kununurra 55.14 265 P **P** **09 11 59.9 -1.5**
FITZ Fitzroy Crossi 57.48 261 LR LR 09 37 24.9
comp=Z,507nm,18.7s,baz=97,slow=37
FITZ Fitzroy Crossi 57.48 261 P **P** **09 12 17.6 -0.6**
baz=57,SNR=7.4
FITZ Fitzroy Crossi 57.48 261 P **P** **09 12 17.2 -0.9**
FITZ IAmb IAmb 09 12 45.7
comp=Z,25nm,1.4s
SIJI Sorong 57.55 282 LR LR 09 37 05.4
comp=Z,325nm,19.4s,baz=162,slow=36
SWI Sorong 57.56 282 P **P** **09 12 18.0 -0.7**
comp=Z,176nm,0.9s
RPN Rapa Nui 58.34 110 LR LR 09 31 57.6
comp=Z,933nm,18.4s,baz=256,slow=30
VNDA Vanda 58.51 186 P P 09 12 30.0 +5.6
comp=Z,4.4nm,1.0s,baz=20,slow=4.9,SNR=18
VNDA LR LR 09 32 49.3
comp=Z,275nm,20.1s,baz=10.0,slow=31
comp=Z,4.4nm,1.0s
VNDA Vanda 58.51 186 P **P** **09 12 23.2 -1.2**
VNDA IAmb IAmb 09 12 34.7
comp=Z,18nm,1.4s
BATI Baumata 61.41 269 LR LR 09 39 49.8
comp=Z,485nm,19.2s,baz=130,slow=37
BATI Baumata 61.41 269 P **P** **09 12 44.1 -1.3**
comp=Z,45nm,0.8s
TNTI Ternate 61.78 282 P **P** **09 12 46.8 -1.0**
SANI Sanana 61.97 279 P P 09 12 34.0 -15
PSA00 Pilbara Seismi 62.06 256 P **P** **09 12 48.6 -1.0**
PSA00 IAmb IAmb 09 12 51.5
comp=Z,8.8nm,0.9s
KLBR Kellerberrin 62.17 244 P **P** **09 12 50.5 +0.3**
baz=62,SNR=12
MEEK Meekatharra 62.19 250 P **P** **09 12 50.2 -0.3**
baz=62,SNR=4.5
BLDU Ballidu 63.20 245 P **P** **09 12 57.9 +0.7**
baz=63,SNR=15
MMRI Maumere 63.23 270 P **P** **09 12 55.5 -2.0**
MMRI Maumere 63.23 270 P **P** **09 12 56.6 -0.9**
comp=Z,84nm,0.8s
MUN Mundaring 63.42 244 P **P** **09 12 60.0 +1.4**
baz=63,SNR=3.6
EDFI Ende, Flores 63.71 270 P **P** **09 12 59.8 -1.0**
MORW Morawa 64.02 247 P **P** **09 13 03.0 +0.4**
baz=64,SNR=7.0
MORW Morawa 64.02 247 P **P** **09 13 01.6 -1.0**
H01W1 Cape Leeuwin H 64.71 240 P **P** **09 13 11.0 +4.3**
baz=114,slow=9.2,SNR=7.0
H01W2 Cape Leeuwin H 64.73 240 P **P** **09 13 10.3 +3.5**
baz=114,slow=9.2,SNR=4.9
H01W3 Cape Leeuwin H 64.73 240 P **P** **09 13 10.9 +4.0**
baz=114,slow=9.2,SNR=3.5
LUWI Luwuk 65.33 279 P **P** **09 13 09.0 -2.3**
DAV Davao City (W) 66.02 288 LR LR 09 41 49.3
comp=Z,158nm,18.0s,baz=34,slow=36
CASY Casey 66.03 205 P **P** **09 13 14.5 -0.5**
CASY IAmb IAmb 09 13 23.0
comp=Z,16nm,1.0s
TOLI2 Tolitoli 67.97 280 P **P** **09 13 27.1 -1.1**
QSPA South Pole Qui 69.73 180 LR LR 09 43 20.2
comp=Z,390nm,18.1s,baz=51,slow=35
MJAR Matsushiro Arr 72.83 321 P **P** **09 13 58.3 +0.9**
comp=Z,7.2nm,0.8s,baz=152,slow=7.1,SNR=18
MJAR LR LR 09 41 30.3
comp=Z,198nm,20.6s,baz=142,slow=32
comp=Z,7.2nm,0.8s
MAJO Matsushiro 72.83 321 P **P** **09 13 58.5 +1.1**
MAJO IAmb IAmb 09 13 59.7
comp=Z,13nm,0.9s
MAJO Matsushiro 72.83 321 *c iP* **P** **09 13 58.5 +1.1**
MAJO pmax pmax
comp=Z,12nm,0.9s
SHEM Shemya Is, Ala 73.59 352 LR LR 09 40 47.6
comp=Z,449nm,21.6s,baz=153,slow=31
ERM Erimo 73.99 328 *i* P **P** **09 14 03.1 -1.0**
ERM pmax pmax
comp=Z,51nm,1.2s
JHS Saijyo 74.98 317 P **P** **09 14 08.7 -1.4**
LPIG La Paz 75.51 57 LR LR 09 41 56.1
comp=Z,749nm,18.2s,baz=224,slow=31
PFO Pinyon Flats O 76.18 46 LR LR 09 43 29.0
comp=Z,402nm,18.2s,baz=242,slow=32
PFO Pinyon Flats O 76.18 46 *eP* **P** **09 14 16.9 -0.2**
PFO pmax pmax
comp=Z,2.0nm,0.9s
OMMB Old Mammoth Mi 76.96 41 P **P** **09 14 19.6 -2.1**
PET Petropavlovsk 77.02 343 *eP* **P** **09 14 24.7 +3.5**
PET *e* 09 17 16.8
PET *eS* **S** **09 24 11.1 +1.5**
PET pmax pmax
comp=Z,200nm,12.0s
PET MLR MLR
comp=Z,500nm,16.0s
PET MLR MLR
comp=Z,400nm,17.0s
YULB Yu-li 77.21 301 P **P** **09 14 21.4 -1.6**
YULB IAmb IAmb 09 14 35.0
comp=Z,12nm,0.9s
PEA0B Petropavlovsk- 77.36 343 *eP* **P** **09 14 24.9 +1.7**
PETK Petropavlovsk- 77.36 343 P **P** **09 14 24.5 +1.4**
comp=Z,9.4nm,0.7s,baz=171,slow=10,SNR=9.9
PETK LR LR 09 44 56.4
comp=Z,170nm,19.9s,baz=165,slow=33
comp=Z,9.4nm,0.7s
PETK Petropavlovsk- 77.36 343 P **P** **09 14 22.9 -0.3**
PETK Petropavlovsk- 77.36 343 P **P** **09 14 22.9 -0.3**
YBH Yreka Blue Hor 77.44 36 LR LR 09 42 06.5
comp=Z,552nm,20.1s,baz=224,slow=31
DSP Deep Springs 77.45 42 P **P** **09 14 24.3 +0.3**
DSP IAmb IAmb 09 14 30.4
comp=Z,13nm,1.4s
PNTR Pine Nut 77.52 40 P **P** **09 14 22.9 -1.8**
PNTR IAmb IAmb 09 14 30.5
comp=Z,9.5nm,1.0s
LEM Lembang 77.52 267 LR LR 09 51 24.2
comp=Z,125nm,18.4s,baz=132,slow=38
BLYC Blythe 77.58 47 P **P** **09 14 23.2 -1.6**
BLYC IAmb IAmb 09 14 31.1
comp=Z,12nm,1.1s
SSLB Suanglung 77.67 301 P **P** **09 14 22.5 -3.1**
TPUB Ta-pu 77.70 301 P **P** **09 14 23.7 -2.1**
YSS Yuzh-Sakhalins 77.85 331 *eP* **P** **09 14 28.7 +2.7**
YSS *e* 09 14 40.1
YSS *eS* **S** **09 24 21.5 +2.7**
YSS pmax pmax
comp=Z,300nm,3.6s
YSS pmax pmax
comp=Z,20nm,1.0s
YSS smax smax
comp=N,200nm,6.6s
YSS MLR MLR
comp=Z,300nm,13.0s
YSS MLR MLR
comp=N,200nm,14.0s
NVAR Mina Array Bea 77.89 41 P **P** **09 14 31.2 +4.4**
comp=N,4.4nm,0.8s,baz=225,slow=8.7,SNR=43
NVAR LR LR 09 44 42.8
comp=N,512nm,18.2s,baz=242,slow=32
comp=N,4.4nm,0.8s
KVN Kaiserville 78.40 41 P **P** **09 14 29.4 -0.2**
KVN IAmb IAmb 09 14 35.3
comp=Z,33nm,2.0s
KVN Kaiserville 78.40 41 P **P** **09 14 29.4 -0.2**
KVN pmax pmax
comp=Z,33nm,2.0s
V12A Nelson 78.49 45 P **P** **09 14 28.7 -1.3**
V12A IAmb IAmb 09 14 37.6
comp=Z,27nm,1.8s
W13A Hualapai Mount 78.78 46 P **P** **09 14 30.3 -1.5**
BELA Belgrano 2 79.11 172 P **P** **09 14 32.1 -0.5**
TUC Tucson 79.40 50 P **P** **09 14 32.2 -2.9**
TUC IAmb IAmb 09 14 41.9
comp=Z,11nm,1.1s
TUC Tucson 79.40 50 P **P** **09 14 32.2 -2.9**
TUC pmax pmax
comp=Z,11nm,1.1s
PMSA Palmer Station 79.62 156 LR LR 09 43 09.3
comp=Z,277nm,18.9s,baz=266,slow=30
PINE Pine Mountain 79.78 36 P **P** **09 14 36.6 -0.3**
KSRS Korea Array 79.80 316 P **P** **09 14 38.5 +1.5**
comp=Z,3.8nm,0.9s,baz=134,slow=5.8,SNR=18
KSRS LR LR 09 47 28.9
comp=Z,75nm,18.7s,baz=120,slow=34
comp=Z,3.8nm,0.9s
KSAR Wonju Array Be 79.82 316 P **P** **09 14 34.5 -2.6**
KSAR Wonju Array Be 79.82 316 P **P** **09 14 34.5 -2.6**
319A Douglas 80.00 51 P **P** **09 14 36.6 -1.8**
319A IAmb IAmb 09 14 46.5
comp=Z,15nm,1.0s
X16A Lo Mia Camp, P 80.07 48 P **P** **09 14 37.6 -1.2**
KNB Kanab 80.57 45 P **P** **09 14 40.7 -0.7**
KNB IAmb IAmb 09 14 48.1
comp=Z,12nm,1.1s
KNB Kanab 80.57 45 P **P** **09 14 40.7 -0.7**
KNB pmax pmax
comp=Z,12nm,1.1s
WUAZ Wupatki 80.72 47 P **P** **09 14 40.1 -2.1**
WUAZ IAmb IAmb 09 14 48.9
comp=Z,11nm,1.2s
P18K Big Mountain, 80.80 9 P **P** **09 14 40.0 -1.9**
P18K IAmb IAmb 09 14 45.5
comp=Z,16nm,0.8s
PKCU Pink Cliffs 81.15 45 P **P** **09 14 44.4 -0.2**
ELK Elko 81.18 41 LR LR 09 46 55.1
comp=Z,644nm,18.3s,baz=232,slow=33
ELK Elko 81.18 41 P **P** **09 14 44.2 -0.5**
ELK Elko 81.18 41 P **P** **09 14 44.2 -0.5**
ELK pmax pmax
comp=Z,5.0nm,1.2s
USRK Ussuriysk Ar. 81.42 324 P **P** **09 14 47.3 +1.8**
comp=Z,1.4nm,0.7s,baz=101,slow=7.5,SNR=2.5
USRK LR LR 09 46 23.0
comp=Z,329nm,20.5s,baz=208,slow=32
comp=Z,1.4nm,0.7s
USRK Ussuriysk Ar. 81.42 324 P **P** **09 14 46.3 +0.8**
USRK Ussuriysk Ar. 81.42 324 P **P** **09 14 46.3 +0.8**
MTPU Mount Pierson 81.56 44 P **P** **09 14 46.6 -0.2**
MTPU IAmb IAmb 09 14 54.1
comp=Z,10nm,1.0s
121A Cookes Peak, D 81.69 51 P **P** **09 14 46.1 -1.3**
121A IAmb IAmb 09 14 55.7
comp=Z,9.6nm,1.1s
G08A Pilot Rock 81.83 35 P **P** **09 14 47.2 -0.6**
BBB Bella Bella 82.21 26 LR LR 09 47 07.2
comp=Z,252nm,18.4s,baz=260,slow=33
HAWA Hanford 82.23 34 P **P** **09 14 50.0 +0.2**
H03S2 Juan Fernandez 82.36 123 T T 10 47 39.3
SNR=9.5
H03S1 Juan Fernandez 82.37 123 T T 10 47 51.5
SNR=9.0
MNTX Cornudas Mount 83.05 53 P **P** **09 14 54.6 +0.2**
MNTX IAmb IAmb 09 15 02.2
comp=Z,16nm,1.6s
MAW Mawson 83.19 199 P P 09 14 58.9 +4.4
comp=Z,3.8nm,0.8s,baz=109,slow=6.9,SNR=6.5
MAW LR LR 09 51 37.9
comp=Z,814nm,18.6s,baz=120,slow=35
comp=Z,3.8nm,0.8s
TX31 Lajitas Ar. Si 83.23 55 P **P** **09 14 54.2 -1.3**
TXAR Lajitas Array 83.23 55 P P 09 15 00.7 +5.1
comp=Z,2.1nm,0.9s,baz=216,slow=7.7,SNR=25
TXAR LR LR 09 45 35.6
comp=Z,325nm,19.1s,baz=220,slow=31
comp=Z,2.1nm,0.9s
TXAR Lajitas Array 83.23 55 P **P** **09 14 53.0 -2.5**
NJ2 Nanjing 83.28 308 *eP* **P** **09 14 55.4 -0.1**
NJ2 pmax pmax
comp=Z,13nm,0.5s
CTU Camp Tracy 83.32 42 P **P** **09 14 55.8 0.0**
CTU IAmb IAmb 09 15 03.6
comp=Z,9.5nm,1.0s
BNM Barren Site 83.33 50 P **P** **09 14 55.6 -0.4**
MVCO Mesa Verde 83.58 47 P **P** **09 14 56.0 -1.3**
MVCO IAmb IAmb 09 15 15.5
comp=Z,23nm,1.8s
ANMO Albuquerque 83.85 49 LR LR 09 47 28.1
comp=Z,307nm,18.2s,baz=240,slow=32
NEW Newport 84.68 34 LR LR 09 48 41.0
comp=Z,1µm,18.4s,baz=228,slow=33
MA2 Magadan 84.90 343 LR LR 09 53 25.6
comp=Z,155nm,18.2s,baz=132,slow=36
QIZ Qiongzhong 84.91 292 P **P** **09 15 04.1 0.0**
QIZ S **S** **09 25 33.1 -0.2**
QIZ pmax pmax
comp=Z,180nm,4.0s
QIZ LR LR
comp=Z,250nm,16.7s
QIZ LR LR
comp=Z,280nm,15.9s
QIZ LR LR
comp=Z,340nm,17.5s
CN2 Changchun 84.97 320 *eP* **P** **09 15 06.1 +2.2**
CN2 S **S** **09 25 33.6 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
S22A 4UR Ranch, Cre 84.99 47 P **P** **09 15 05.2 +0.7**
S22A IAmb IAmb 09 15 11.2
comp=Z,14nm,1.0s
CMIG Matias Romero 85.38 70 LR LR 09 45 21.6
comp=Z,498nm,19.1s,baz=218,slow=30
J20K Nowinta River 85.54 8 P **P** **09 15 07.8 +1.5**
SMCO Snowmass 85.62 46 P **P** **09 15 06.6 -1.1**
PDAR Pinedale Array 85.83 41 P **P** **09 15 12.2 +3.7**
comp=Z,3.3nm,0.9s,baz=204,slow=3.3,SNR=17
PDAR LR LR 09 50 30.4
comp=Z,313nm,18.1s,baz=264,slow=34
comp=Z,3.3nm,0.9s
PDAR Pinedale Array 85.83 41 P **P** **09 15 06.8 -1.7**
M26K Nabesna, AK 85.88 14 P **P** **09 15 07.7 -0.3**
M26K IAmb IAmb 09 15 32.3
comp=Z,15nm,1.4s
MCK McKinley 85.92 11 P **P** **09 15 07.9 -0.3**
MCK McKinley 85.92 11 P **P** **09 15 07.9 -0.3**
MCK pmax pmax
comp=Z,16nm,0.9s
MSTX Muleshoe 86.06 52 P **P** **09 15 07.6 -2.1**
PLCA Paso Flores 86.09 132 P P 09 15 16.6 +6.7
comp=Z,1.8nm,1.0s,baz=309,slow=2.7,SNR=4.1
PLCA LR LR 09 47 31.4
comp=Z,474nm,18.1s,baz=230,slow=31
comp=Z,1.8nm,1.0s
833A Chaparral WMA, 86.14 58 P **P** **09 15 08.7 -1.4**
833A IAmb IAmb 09 15 17.2
comp=Z,11nm,1.1s
DLBC Dease Lake 86.22 21 LR LR 09 47 49.8
comp=Z,260nm,20.0s,baz=222,slow=32
TIA Tai'an 86.52 311 *eP* **P** **09 15 13.9 +2.1**
TIA SKS **SKSac** **09 25 32.8 -5.8**
TIA S **SKKSac** **09 25 43.9 -2.7**
TIA pmax pmax
comp=Z,9.0nm,0.7s
TIA pmax pmax
comp=Z,260nm,5.9s
TIA LR LR
comp=Z,93nm,5.3s
TIA LR LR
comp=Z,170nm,14.3s
TIA LR LR
comp=Z,160nm,12.7s
ILAR Eielson Array 87.23 11 P **P** **09 15 17.6 +3.0**
comp=Z,2.8nm,0.7s,baz=220,slow=5.6,SNR=15
ILAR LR LR 09 53 01.4
comp=Z,159nm,18.1s,baz=183,slow=35
IMAR Indian Mountai 87.31 8 P **P** **09 15 15.3 +0.3**
IPM Ipoh 87.56 276 P **P** **09 15 15.4 -2.0**
TROLL Troll, Antarti 87.84 179 P **P** **09 15 22.0 +4.2**
VNA3 Neumayer Olymp 87.95 175 P **P** **09 15 22.2 +4.0**
SNAA Sanae 87.99 177 P **P** **09 15 22.5 +4.0**
SNAA Sanae 87.99 177 LR LR 09 51 32.8
comp=Z,469nm,20.0s,baz=194,slow=33
VNA2 Neumayer--Watz 88.44 175 P **P** **09 15 22.7 +2.2**
baz=179,slow=3.7
VNA1 Neumayer--Stat 88.64 175 P **P** **09 15 25.5 +4.1**
HNS HongShan 88.79 311 ⇓P **P** **09 15 25.9 +3.3**
HNS S **S** **09 26 13.1 +3.0**
HNS LR LR
comp=Z,220nm,17.2s
HNS LR LR
comp=Z,210nm,18.2s
LYN LuoYang 89.17 307 *eP* **P** **09 15 28.0 +3.5**
LYN SKS **SKSac** **09 25 57.5 +2.8**
LYN pmax pmax
comp=Z,170nm,7.6s
LYN LR LR
comp=Z,140nm,13.9s
LYN LR LR
comp=Z,160nm,14.3s
ZEA Zeya 89.73 329 *eP* **P** **09 15 29.8 +3.2**
ZEA *e* 09 25 48.4
ZEA pmax pmax
comp=E,20nm,0.5s
ZEA pmax pmax
comp=Z,20nm,0.5s
GYA Guiyang 90.50 298 *eP* **P** **09 15 30.6 -0.5**
GYA S **S** **09 26 22.0 -4.8**
GYA SS **SS** **09 32 22.9 -5.1**
GYA pmax pmax
comp=Z,140nm,6.2s
XLT XiLinHaoTe 90.83 317 *eP* **P** **09 15 34.1 +2.0**
XLT pP PcP 09 15 38.3 +5.1
XLT sP pwP 09 15 41.8 -2.7
XLT SKS **SKSac** **09 26 03.8 -0.3**
XLT S **S** **09 26 24.8 -4.2**
XLT sS ScS 09 26 34.8 +2.4
XLT pmax pmax
comp=Z,7.0nm,1.2s
XLT pmax pmax
comp=Z,230nm,4.8s
XLT LR LR
comp=Z,150nm,16.1s
XLT LR LR
comp=Z,180nm,17.1s
XAN Xi'an 91.64 306 ⇑P **P** **09 15 38.4 +2.3**
XAN S **S** **09 26 43.3 +6.6**
XAN pmax pmax
comp=Z,11nm,1.0s
XAN LR LR
comp=Z,180nm,17.1s
XAN LR LR
comp=Z,170nm,19.0s
XAN LR LR
comp=Z,220nm,19.4s
NNA Nana 91.76 103 LR LR 09 48 10.4
comp=Z,257nm,19.2s,baz=233,slow=30
ATAH Atahualpa 92.05 98 LR LR 09 50 14.9
comp=Z,480nm,18.4s,baz=252,slow=31
INK Inuvik 93.00 14 LR LR 09 54 38.9
comp=Z,270nm,18.2s,baz=178,slow=34
KMI Kunming 93.30 295 ⇑P **P** **09 15 43.3 -0.9**
KMI pP PcP 09 15 47.8 +3.0
KMI pmax pmax
comp=Z,13nm,0.7s
KMI LR LR
comp=Z,140nm,14.2s
KMI LR LR
comp=Z,180nm,15.1s
KMI LR LR
comp=Z,230nm,16.3s
YAK Yakutsk 93.69 337 LR LR 09 54 20.5
comp=Z,107nm,19.9s,baz=89,slow=33
CMAR Chiang Mai Arr 94.31 288 P **P** **09 15 51.3 +2.6**
comp=Z,2.3nm,0.4s,baz=110,slow=2.9,SNR=19
CMAR LR LR 09 55 12.8
comp=Z,43nm,21.7s,baz=115,slow=34
comp=Z,2.3nm,0.4s
CMAR Chiang Mai Arr 94.31 288 P **P** **09 15 48.6 -0.1**
CMAR Chiang Mai Arr 94.31 288 P **P** **09 15 48.6 -0.1**
CHTO Chiang Mai 94.42 288 P **P** **09 15 46.4 -2.8**
CHTO IAmb IAmb 09 15 53.7
comp=Z,11nm,1.2s
CHTO Chiang Mai 94.42 288 P **P** **09 15 46.4 -2.8**
CHTO pmax pmax
comp=Z,11nm,1.2s
YKA Yellowknife Ar 94.54 23 P **P** **09 15 51.4 +2.7**
comp=Z,0.9nm,0.8s,baz=234,slow=4.3,SNR=2.7
YKA LR LR 09 53 05.8
comp=Z,130nm,18.9s,baz=280,slow=32
comp=Z,0.9nm,0.8s
ECSD EROS Data Cent 94.62 45 P **P** **09 15 49.1 -0.4**
ECSD IAmb IAmb 09 15 54.6
comp=Z,11nm,1.1s
PZH PanZhiHua 94.62 296 P **P** **09 15 51.3 +1.2**
PZH pmax pmax
comp=Z,60nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.1s
LVC Limon Verde 94.72 116 LR LR 09 50 08.0
comp=Z,473nm,19.9s,baz=246,slow=30
LZH Lanzhou 96.26 306 *eP* **P** **09 15 57.5 0.0**
LZH sP pwP 09 16 05.8 -4.0
LZH S **S** **09 27 09.6 -8.0**
LZH sS sS 09 27 21.9 +3.0
LZH pmax pmax
comp=Z,24nm,0.9s

LZH				pmax	pmax			
	comp=Z,110nm,5.2s							
LZH				LR	LR			
	comp=Z,270nm,14.8s							
LZH				LR	LR			
	comp=Z,260nm,16.5s							
LZH				LR	LR			
	comp=Z,340nm,16.5s							
LPAZ	**La Paz**	**97.95**	**111**	LR	LR	09 53 40.8		
	comp=Z,309nm,18.3s,baz=280,slow=31							
SONM	**Songino Array**	**98.61**	**318**	LR	LR	09 58 16.2		
	comp=Z,113nm,19.7s,baz=78,slow=34							
WMQ	**Urumqi**	**110.22**	**310**	*e*PKP	**PKiKP**	**09 21 00.0**	**-0.7**	
WMQ				LR	LR			
	comp=Z,64nm,19.5s							
MKAR	**Makanchi Array**	**114.35**	**313**	PKiKP	**PKiKP**	**09 21 09.9**	**+1.5**	
	comp=Z,1.5nm,0.8s,baz=62,slow=3.1,SNR=9.1							
MAKZ	**Makanchi**	**114.57**	**313**	⇑PKiKP	**PKiKP**	**09 21 09.7**	**+0.9**	
KURK	**Kurchatov**	**116.91**	**317**	⇑*i*PKiKP	**PKiKP**	**09 21 14.3**	**+1.1**	
BRVK	**Borovoye**	**121.88**	**320**	PKPdf	**PKiKP**	**09 21 23.1**	**+0.3**	
BRVK	**Borovoye**	**121.88**	**320**	PKiKP	**PKiKP**	**09 21 23.1**	**+0.3**	
KKAR	**Karatay Array**	**122.64**	**309**	PKPdf	**PKPdf**	**09 21 24.3**	**-0.3**	
KKAR	**Karatay Array**	**122.64**	**309**	PKPdf	**PKPdf**	**09 21 24.2**	**-0.3**	
KKAR	**Karatay Array**	**122.64**	**309**	PKiKP	**PKPdf**	**09 21 24.2**	**-0.3**	
KKAR						09 21 24.3		
ARCES	**ARCESS Array B**	**129.50**	**352**	PKP	**PKiKP**	**09 21 39.6**	**+2.1**	
	comp=Z,1.0nm,0.7s,baz=20,slow=2.9,SNR=4.3							
KIV	**Kislovodsk**	**141.99**	**317**	*i* PKiKP	**PKiKP**	**09 22 02.9**	**-0.9**	
KIV				pmax	pmax			
	comp=Z,7.0nm,1.0s							
MNK	**Minsk**	**142.31**	**340**	*i* PKiKP	**PKiKP**	**09 22 03.1**	**-0.9**	
MNK				*i*		09 25 10.7		
MNK				*i* PPP	PPP	09 28 18.5		
MNK				*i* SS	SS	09 43 47.5	+6.2	
MNK				pmax	pmax			
	comp=E,2.0nm,0.9s							
MNK				pmax	pmax			
	comp=Z,23nm,0.9s							
MNK				MLR	MLR			
	comp=Z,132nm,20.0s							
MNK				MLR	MLR			
	comp=E,86nm,20.0s							
MNK	**Minsk**	**142.31**	**340**	*i* PKP	**PKiKP**	**09 22 03.1**	**-0.9**	
	comp=E,2.0nm,0.9s							
MNK				*i* PKP	**PKiKP**	**09 22 03.1**	**-0.9**	
MNK				*i* PKP	**PKiKP**	**09 22 03.1**	**-0.9**	
	comp=Z,23nm,0.9s,baz=34							
MNK				*i* PP	**PP**	**09 25 10.7**	**+3.6**	
MNK				*i* PPP	PPP	09 28 18.5		
MNK				*i* SKS	SKSac	09 29 28.7	+11	
MNK				*i* SKKS	SKKSac	09 32 37.8	+37	
MNK				*i* SS	**SS**	**09 43 47.6**	**+6.2**	
MNK				*i* SSS	SSS	09 49 30.4		
MNK				*i* LR	LR	10 18 32.9		
MNK				*i* LRM	MLR	10 24 44.4		
	comp=Z,132nm,19.6s							
MNK				*i* LRM	MLR	10 25 01.8		
MNK				*i* LRM	MLR	10 25 48.3		
	comp=E,86nm,19.8s							
AKASG	**Malin Array Be**	**144.91**	**335**	PKP	**PKPdf**	**09 22 06.6**	**+1.0**	
	comp=E,9.3nm,0.7s,baz=41,slow=4.7,SNR=34							
AKASG	**Malin Array Be**	**144.91**	**335**	PKPdf	**PKPdf**	**09 22 05.2**	**-0.4**	
AKASG	**Malin Array Be**	**144.91**	**335**	PKiKP	**PKPdf**	**09 22 05.2**	**-0.4**	
AKBB	**Malin Array Si**	**144.91**	**335**	*d* PKiKP	**PKPdf**	**09 22 06.6**	**+1.0**	
DSB	**Dublin**	**145.62**	**14**	PKPdf	**PKPdf**	**09 22 06.1**	**-0.7**	
SORM	**Soroca**	**147.26**	**333**	⇑P	**PKPab**	**09 22 13.2**	**-0.5**	
SORM	**Soroca**	**147.26**	**333**	⇑PKP2	**PKPab**	**09 22 13.2**	**-0.5**	
LVV	**L'vov**	**147.54**	**339**	*e*PKP2	**PKiKP**	**09 22 16.0**	**+1.1**	
PURM	**Purcari**	**147.77**	**329**	⇑P	**PKPab**	**09 22 16.5**	**+0.7**	
DIKM	**Dikmen**	**147.88**	**318**	⇑P	**PKPab**	**09 22 17.0**	**+0.6**	
MILM	**Milestii Mici**	**147.98**	**331**	⇓P	**PKiKP**	**09 22 14.7**	**-1.2**	
MILM	**Milestii Mici**	**147.98**	**331**	⇓PKP2	**PKiKP**	**09 22 14.7**	**-1.2**	
BZK	**Bozkurt**	**148.49**	**319**	⇑P	**PKiKP**	**09 22 16.6**	**-0.5**	
CLL	**Collm**	**148.71**	**352**	*i* PKP2	**PKPab**	**09 22 18.6**	**-0.8**	
CLL				pmax	pmax			
	comp=Z,16nm,0.9s							
CLL	**Collm**	**148.71**	**352**	*i* PKPbc	**PKPab**	**09 22 18.6**	**-0.8**	
	comp=Z,16nm,0.9s							
CLL				*ex*	x	09 22 33.0		
CLL				*e*SKPdf	**SKPdf**	**09 25 45.0**	**-1.0**	
CLL				*e*PKSdf	**PKSdf**	**09 25 51.0**	**+4.2**	
CLL				*e*PPP	PPP	09 29 06.0		
CLL				*e*(PPS)		09 38 48.0		
CLL				*e*SS	**SS**	**09 45 00.0**	**+6.1**	
CLL				*e*SSS	SSS	09 50 30.0		
CLL				Lm	MLR	10 34 00.0		
	comp=Z,200nm,18.8s							
KOLS	**Kolonicke sedl**	**148.88**	**340**	*e*PKiKP	**PKPbc**	**09 22 14.9**	**-1.4**	
KOLS				*e*		09 22 20.9		
KOLS	**Kolonicke sedl**	**148.88**	**340**	*e*PKP	**PKPbc**	**09 22 14.9**	**-1.4**	
KOLS				*e*		09 22 20.9		
BURAR	**Bucovina Array**	**148.95**	**335**	⇑P	**PKPab**	**09 22 20.6**	**-0.1**	
BRG	**Berggiesshubel**	**149.01**	**351**	*e*PKP	**PKPab**	**09 22 20.0**	**-0.7**	
BRG				Amp		09 22 23.8		
	comp=Z,12nm,0.9s							
BRG	**Berggiesshubel**	**149.01**	**351**	*e*PKP2	**PKPab**	**09 22 19.9**	**-0.7**	
BRG				pmax	pmax			
	comp=Z,13nm,0.9s							
DPC	**Dobruska-Polom**	**149.11**	**348**	*e*PKP2	**PKPab**	**09 22 20.5**	**-0.6**	
DPC	**Dobruska-Polom**	**149.11**	**348**	*e*PKP	**PKPab**	**09 22 20.5**	**-0.6**	
UZH	**Uzhgorod**	**149.14**	**340**	*e*PKP2	**PKPab**	**09 22 19.8**	**-1.4**	
BIZ	**Bicaz**	**149.14**	**334**	⇑P	**PKPab**	**09 22 20.4**	**-1.0**	
MORC	**Moravsky Berou**	**149.40**	**346**	⇓P	**PKPab**	**09 22 21.2**	**-1.1**	
MORC	**Moravsky Berou**	**149.40**	**346**	PKPdf	**PKPdf**	**09 22 10.7**	**-2.6**	
MORC				PKPbc	**PKPbc**	**09 22 15.9**	**-1.7**	
MORC	**Moravsky Berou**	**149.40**	**346**	PKiKP	**PKPbc**	**09 22 16.0**	**-1.7**	
MORC	**Moravsky Berou**	**149.40**	**346**	*e*PKP	**PKPab**	**09 22 21.4**	**-0.9**	
LANS	**Liptovska Anna**	**149.51**	**343**	*e*PKHKP	PKPpre	09 22 13.9		
LANS				*e*		09 22 21.4		
LANS	**Liptovska Anna**	**149.51**	**343**	*e*PKP	**PKPdf**	**09 22 13.9**	**+0.4**	
LANS				*e*		09 22 21.4		
CFR	**Carcaliu**	**149.59**	**329**	⇓P	**PKiKP**	**09 22 01.0**	**+1.8**	
CFR	**Carcaliu**	**149.59**	**329**	⇓PKP2	**PKiKP**	**09 22 21.0**	**+1.8**	
TPGR	**Topolog**	**149.69**	**329**	⇑P	**PKPab**	**09 22 21.6**	**-2.0**	
VRI	**Vrincioaia**	**149.72**	**332**	⇑P	**PKiKP**	**09 22 21.3**	**+1.7**	
VRI	**Vrincioaia**	**149.72**	**332**	⇑PKP2	**PKiKP**	**09 22 21.3**	**+1.7**	
PLOR	**Plostina**	**149.76**	**332**	⇑P	**PKiKP**	**09 22 20.4**	**+0.7**	
PLOR	**Plostina**	**149.76**	**332**	⇑PKP2	**PKiKP**	**09 22 20.4**	**+0.7**	
PRU	**Pruhonice**	**149.78**	**350**	*e*PKP2	**PKPab**	**09 22 21.5**	**-2.3**	
PRU	**Pruhonice**	**149.78**	**350**	*e*PKP	**PKPab**	**09 22 21.5**	**-2.3**	
BTNL	**Ternell**	**149.81**	**1**	*dp*PKP	**PKiKP**	**09 22 20.6**	**+1.0**	
BTNL				*dp*PKPab	**sPKPab**	**09 22 25.2**	**+0.9**	
BR131	**Keskin Array S**	**149.95**	**316**	PKPdf	**PKPdf**	**09 22 13.2**	**-1.4**	
BR131					**PKPbc**	**09 22 18.9**	**-0.6**	
BR131				PKPab	**PKPab**	**09 22 24.0**	**-1.1**	
BR131	**Keskin Array S**	**149.95**	**316**	PKHKP	PKPpre	09 22 13.2		
BR131						09 22 18.9		
BR131						09 22 24.0		
BRTR	**Keskin Array B**	**149.95**	**316**	PKPbc	**PKiKP**	**09 22 21.3**	**+0.9**	
	comp=Z,4.6nm,0.8s,baz=134,slow=2.2,SNR=11							
HARR	**Harsova**	**150.04**	**329**	⇑P	**PKPbc**	**09 22 18.6**	**-0.7**	
HARR	**Harsova**	**150.04**	**329**	⇑PKHKP	PKPpre	09 22 18.6		
VRAC	**Vranov**	**150.05**	**347**	*e*PKP	**PKPab**	**09 22 23.5**	**-1.5**	
BMRD	**Maredsous**	**150.06**	**3**	*d*PKP	**PKPab**	**09 22 23.3**	**-1.6**	
DOPR	**Dopca**	**150.22**	**333**	⇓P	**PKPab**	**09 22 23.4**	**-2.4**	
JAVC	**Velka Javorina**	**150.23**	**345**	*e*PKP	**PKPab**	**09 22 25.0**	**-0.8**	
DOU	**Dourbes**	**150.26**	**3**	*d*PKPab	**PKPab**	**09 22 23.1**	**-2.6**	
VYHS	**Vyhne**	**150.28**	**344**	*e*PKHKP	PKPpre	09 22 18.6		
VYHS				*e*		09 22 24.3		
VYHS	**Vyhne**	**150.28**	**344**	*e*PKP	**PKPbc**	**09 22 18.6**	**-1.2**	
VYHS				*e*		09 22 24.3		
KRUC	**Moravsky**	**150.32**	**347**	*e*PKP	**PKiKP**	**09 22 22.9**	**+2.2**	
MLR	**Muntele Rosu**	**150.35**	**332**	⇑P	**PKPab**	**09 22 23.6**	**-2.9**	
MLR	**Muntele Rosu**	**150.35**	**332**	PKPdf	**PKPdf**	**09 22 12.9**	**-2.1**	
MLR					**PKPbc**	**09 22 19.4**	**-0.9**	
MLR				PKPab	**PKPab**	**09 22 24.5**	**-2.0**	
MLR	**Muntele Rosu**	**150.35**	**332**	⇑PKP2	**PKPab**	**09 22 23.6**	**-2.9**	
KHC	**Kasperske Hory**	**150.76**	**351**	*e*PKiKP	**PKiKP**	**09 22 23.7**	**+2.1**	
KHC				*e*		09 22 30.5		
KHC	**Kasperske Hory**	**150.76**	**351**	*e*PKP	**PKiKP**	**09 22 23.7**	**+2.1**	
KHC				*ex*	x	09 22 30.5		
MODS	**Modra-Piesok**	**150.78**	**346**	*e*PKiKP	**PKPbc**	**09 22 19.8**	**-1.2**	
MODS				*e*		09 22 26.6		
MODS	**Modra-Piesok**	**150.78**	**346**	*e*PKP	**PKPbc**	**09 22 19.8**	**-1.2**	
MODS				*e*		09 22 26.6		
VOIR		**150.78**	**333**	⇑P	**PKiKP**	**09 22 24.0**	**+2.1**	
VOIR		**150.78**	**333**	⇑PKiKP	**PKiKP**	**09 22 24.0**	**+2.1**	
CKRC	**Cesky Krumlov**	**150.95**	**350**	*e*PKP	**PKiKP**	**09 22 24.4**	**+2.4**	
ZST	**Bratislava**	**150.99**	**346**	*e*PKiKP	**PKPdf**	**09 22 15.2**	**-0.5**	
ZST				*e*		09 22 20.4		
ZST				*e*		09 22 27.5		
ZST	**Bratislava**	**150.99**	**346**	*e*PKP	**PKPdf**	**09 22 15.2**	**-0.5**	
ARR	**Arges**	**151.01**	**334**	⇓P	**PKiKP**	**09 22 25.5**	**+3.2**	
GEC2	**GERESS Array S**	**151.02**	**351**	PKPdf	**PKPdf**	**09 22 14.9**	**-1.0**	
GEC2					**PKPbc**	**09 22 20.8**	**-0.8**	
GEC2				PKPab	**PKPab**	**09 22 27.6**	**-1.5**	
GERES	**GERESS Array B**	**151.02**	**351**	PKPbc	**PKiKP**	**09 22 24.5**	**+2.3**	
	comp=Z,2.0nm,0.7s,baz=15,slow=1.5,SNR=12							
GERES	**GERESS Array B**	**151.02**	**351**	PKPdf	**PKPdf**	**09 22 14.9**	**-1.0**	
GERES				PKPbc	**PKPbc**	**09 22 20.9**	**-0.8**	
GERES				PKPab	**PKPab**	**09 22 27.6**	**-1.5**	
SIRR	**Siria**	**151.40**	**338**	⇓P	**PKiKP**	**09 22 25.6**	**+2.6**	
CONA	**Conrad Observa**	**151.51**	**347**	*e*P	**PKiKP**	**09 22 26.0**	**+2.7**	
	comp=Z,20nm,1.7s							
RONA	**Rosalia, Austr**	**151.63**	**346**	*e*P	**PKiKP**	**09 22 25.5**	**+2.0**	
	comp=Z,4.5nm,0.8s							
GZR	**Gura Zlata**	**151.74**	**336**	⇑P	**PKiKP**	**09 22 25.9**	**+2.1**	
GZR	**Gura Zlata**	**151.74**	**336**	⇑PKiKP	**PKiKP**	**09 22 25.9**	**+2.1**	
BORA	**Eskisehir**	**151.88**	**319**	PKPdf	**PKPdf**	**09 22 16.7**	**-0.8**	
BORA				PKPbc	**PKPbc**	**09 22 22.9**	**-1.1**	
BORA				PKPab	**PKPab**	**09 22 31.3**	**-1.8**	
BZS	**Buzias**	**151.98**	**338**	⇑P	**PKiKP**	**09 22 24.9**	**+0.7**	
BZS	**Buzias**	**151.98**	**338**	⇑PKiKP	**PKiKP**	**09 22 24.9**	**+0.7**	
BFO	**Black Forest**	**152.05**	**358**	PKPdf	**PKPdf**	**09 22 15.9**	**-1.5**	
BFO					**PKPbc**	**09 22 22.9**	**-1.0**	
BFO				PKPab	**PKPab**	**09 22 31.8**	**-1.5**	
BFO	**Black Forest**	**152.05**	**358**	PKiKP	**PKPbc**	**09 22 22.9**	**-1.0**	
BFO						09 22 31.8		
HERR	**Herculane**	**152.31**	**336**	⇓P	**PKiKP**	**09 22 27.3**	**+2.4**	
MDVR	**Moldovita**	**152.66**	**336**	⇓P	**PKiKP**	**09 22 27.7**	**+2.0**	
RETA	**Reutte**	**152.73**	**354**	*e*P	**PKPdf**	**09 22 17.2**	**-1.3**	
	comp=Z,5.5nm,1.0s							
WATA	**Walderalm**	**152.79**	**353**	*e*P	**PKiKP**	**09 22 29.6**	**+3.6**	
	comp=Z,1.3nm,0.5s							
MOTA	**Moosalm**	**152.83**	**354**	*e*P	**PKPbc**	**09 22 23.5**	**-2.4**	
	comp=Z,5.7nm,0.8s							
WTTA	**Wattenberg**	**152.85**	**353**	*e*P	**PKiKP**	**09 22 29.8**	**+3.7**	
	comp=Z,5.6nm,0.5s							
SQTA	**Sankt Quirin**	**152.94**	**353**	*e*P	**PKiKP**	**09 22 29.9**	**+3.6**	
	comp=Z,1.4nm,0.4s							
DAVA	**Damuels**	**153.00**	**355**	*e*P	**PKiKP**	**09 22 30.7**	**+4.3**	
	comp=Z,8.7nm,0.9s							
FRGS	**Fruska Gora**	**153.00**	**339**	⇓P	**PKiKP**	**09 22 29.2**	**+2.8**	
MYKA	**Terra Mystica**	**153.18**	**349**	*e*P	**PKiKP**	**09 22 28.4**	**+1.6**	
	comp=Z,8.1nm,1.3s							
FETA	**Feichten**	**153.19**	**354**	*e*P	**PKiKP**	**09 22 30.0**	**+3.2**	
	comp=Z,5.2nm,1.2s							
ABTA	**Abfaltersbach**	**153.25**	**351**	*e*P	**PKiKP**	**09 22 29.5**	**+2.6**	
	comp=Z,8.5nm,0.9s							
BOVS	**Bovan**	**153.63**	**335**	⇓P	**PKiKP**	**09 22 29.5**	**+1.8**	
BNI	**Bardonecchia**	**155.35**	**0**	PKPdf	**PKPdf**	**09 22 20.3**	**-2.0**	
BNI				PKPbc	pPKPbc	09 22 28.6	-3.1	
BNI				PKPab	**PKPab**	**09 22 45.3**	**-2.2**	
BNI	**Bardonecchia**	**155.35**	**0**	PKiKP	**PKPdf**	**09 22 20.3**	**-2.0**	
BNI						09 22 28.6		
BNI						09 22 45.3		
TORD	**Torodi Ar. Bea**	**171.35**	**145**	PKP	**PKPdf**	**09 22 40.5**	**+2.5**	
	comp=Z,1.0nm,0.8s,baz=356,slow=0.9,SNR=4.6							
TORD				PKPab	**sPKPab**	**09 24 03.3**	**+4.7**	
	comp=Z,0.6nm,0.8s,baz=197,slow=4.5,SNR=2.4							

*MAN **23** 09:23:11, 12°.57N×125°.95E, h12km, Ms4.1*
*IDC **23** 09:23:12.2±0.8, 12°.22N×125°.51E, h0km, mb3.9/9, mbtmp3.9/9, MS3.8/5, Error ellipse: s-maj=42.8km s-min=15.4km az=67.0*
*NEIC **23** 09:23:17.7±1.6, 12°.31N±0°.09×125°.5E±0°.1, h32km±6km, mb4.4/20, Error ellipse: s-maj=20.5km s-min=13.4km az=99.0*

ISC 23 09:23:17.4±1.2, 12°.36N±0°.04×125°.47E±0°.05, h34km±4km, n58, σ2°.20/61, mb4.2/20, MS3.7/4, 4C-6D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.80**	**281**	⇓*e*P		**Pn**		**09 23 32.8**	**+0.5**
CNP				*e*S		**Sn**		**09 23 47.1**	**+4.1**
PVCP	**Virac**	**1.78**	**314**	⇓*e*P		**Pn**		**09 23 45.5**	**-0.3**
PVCP				*e*S		**Sb**		**09 24 17.1**	**+5.7**
MSLP	**Maasin**	**2.29**	**195**	⇑*e*P		**Pb**		**09 23 55.2**	**-2.8**
MSLP				*e*S		Sb		09 24 40.5	+1.5
LLP	**Lapu-Lapu**	**2.51**	**216**	⇑*e*P		**Pb**		**09 23 58.9**	**-2.9**
LLP				*i* S		**Sb**		**09 24 35.3**	**+3.0**
SCPH	**Surigao**	**2.56**	**180**	*e*P		**Pb**		**09 24 02.2**	**-0.4**
GLSP	**General Luna,**	**2.63**	**166**	⇓*e*P		**Pn**		**09 23 53.5**	**-3.9**
GLSP				*e*S		**Sb**		**09 24 41.2**	**+5.3**
RCP	**Roxas**	**2.78**	**254**	⇑*e*P		**Pb**		**09 24 03.2**	**-3.2**
RCP				*e*S		**Sb**		**09 24 44.4**	**+4.3**
TBP	**Tagbilaran**	**3.08**	**211**	*e*P		**Pn**		**09 24 02.6**	**-1.0**
TBP				*i* S		**Sb**		**09 24 49.3**	**+0.5**
JCNP	**Jose Panganiba**	**3.31**	**306**	⇓*e*P		**Pb**		**09 24 14.2**	**-1.3**
JCNP				*e*S		**Sb**		**09 24 49.5**	**-5.9**
GQP	**Guinayangan**	**3.32**	**298**	⇓*e*P		**Pb**		**09 24 12.0**	**-3.7**
GQP				*i* S		**Sn**		**09 24 41.2**	**-4.1**
LQP	**Lukban**	**4.21**	**295**	⇓*e*P		Pb		09 24 24.6	-6.2
LQP				*e*S		**Sb**		**09 25 26.0**	**+4.7**
DAV	**Davao City (W)**	**5.25**	**179**	LR		LR		09 27 12.0	
	comp=Z,911nm,18.7s,baz=114,slow=47								
MYLDM	**Lahad Datu**	**9.91**	**225**	Pn		**Pn**		**09 25 36.8**	**-0.7**
JOW	**Kunigami**	**14.64**	**10**	Pn		**Pn**		**09 26 43.4**	**+1.3**
SBUM	**Sibu**	**16.40**	**234**			**Pn**		**09 27 04.6**	**-0.5**
JMN	**Monobe**	**22.62**	**18**	P		**P**		**09 28 14.3**	**-1.1**
LYN	**LuoYang**	**25.06**	**334**	*e*P		**P**		**09 28 40.4**	**+1.8**
KSRS	**Korea Array**	**25.09**	**5**	P		**P**		**09 28 39.7**	**+0.9**
	1.9nm,0.8s,baz=179,slow=10,SNR=8.7								
	1.9nm,0.8s								
CRAI	**Chiangrai**	**25.30**	**291**	P		**P**		**09 28 41.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**26.27**	**287**	P		**P**		**09 28 50.1**	**+0.4**
	2.3nm,0.3s,baz=92,slow=7.1,SNR=10								
CMAR				LR		LR		09 40 33.4	
	comp=Z,105nm,18.1s,baz=105,slow=40								
	2.3nm,0.3s								
CMAR	**Chiang Mai Arr**	**26.27**	**287**	P		**P**		**09 28 50.5**	**+0.8**
XAN	**Xi'an**	**26.33**	**328**	⇑P		**P**		**09 28 50.9**	**+0.7**
XAN				pP		sP		09 28 59.1	-5.0
XAN				pmax		pmax			
	comp=Z,8.0nm,1.1s								
FITZ	**Fitzroy Crossi**	**30.26**	**180**	P		**P**		**09 29 24.7**	**-0.6**
FITZ				IAmb		IAmb		09 29 25.3	
	comp=Z,12nm,1.2s								
WB0	**Warramunga Arr**	**33.11**	**164**	P		**P**		**09 29 48.8**	**-1.6**
WB0				IAmb		IAmb		09 29 48.9	
	comp=Z,8.5nm,1.5s								
WRA	**Warramunga Arr**	**33.26**	**165**	P		**P**		**09 29 49.5**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=339,slow=9.1,SNR=3.3								
WRA				PcP		**PcP**		**09 32 33.3**	**-0.4**
	comp=Z,1.8nm,1.2s,baz=343,slow=2.9,SNR=7.0								
	comp=Z,0.4nm,0.6s								
WRA	**Warramunga Arr**	**33.26**	**165**	P		**P**		**09 29 50.9**	**-0.7**
WB2	**Warramunga Arr**	**33.26**	**165**	P		**P**		**09 29 51.4**	**-0.3**
WB2				IAmb		IAmb		09 29 58.5	
	comp=Z,7.6nm,1.2s								
WR0	**Warramunga Arr**	**33.33**	**164**	P		**P**		**09 29 49.9**	**-2.3**
WR0				IAmb		IAmb		09 30 30.6	
	comp=Z,4.4nm,1.1s								
AS31	**Alice Springs**	**36.74**	**167**	P		**P**		**09 30 21.3**	**-0.3**
ASAR	**Alice Springs**	**36.74**	**167**	P		**P**		**09 30 20.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=343,slow=6.7,SNR=14								
ASAR				PcP		**PcP**		**09 32 43.2**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=339,slow=3.0,SNR=4.2								
	comp=Z,0.3nm,0.3s								
ASAR	**Alice Springs**	**36.74**	**167**	P		**P**		**09 30 20.2**	**-1.5**
SONM	**Songino Array**	**38.80**	**339**	P		**P**		**09 30 39.5**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=167,slow=7.1,SNR=4.7								
	comp=Z,1.7nm,0.8s								
H11N1	**WAKE ISLAND Hy**	**40.40**	**74**	T		T		10 14 03.4	
	baz=266,slow=75,SNR=46								
H11N2	**WAKE ISLAND Hy**	**40.40**	**74**	T		T		10 13 57.9	
	baz=266,slow=75,SNR=39								
H11N3	**WAKE ISLAND Hy**	**40.41**	**74**	T		T		10 14 04.7	
	baz=266,slow=75,SNR=40								
HNR	**Honiara**	**40.52**	**121**	LR		LR		09 45 16.5	
	comp=Z,77nm,21.0s,baz=283,slow=33								
NWAO	**Narrogin (SRO)**	**45.71**	**190**	P		**P**		**09 31 34.4**	**-0.8**
BBOO	**Buckleboo**	**46.04**	**168**	P		**P**		**09 31 37.3**	**-0.5**
BBOO				IAmb		IAmb		09 31 59.3	
	comp=Z,8.8nm,1.1s								
STKA	**Stephens Creek**	**46.62**	**161**	P		**P**		**09 31 41.8**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=341,slow=9.3,SNR=4.2								
	comp=Z,0.9nm,0.7s								
STKA	**Stephens Creek**	**46.62**	**161**	P		**P**		**09 31 42.6**	**+0.2**
MK31	**Makanchi Array**	**49.91**	**322**	P		**P**		**09 32 08.9**	**+1.2**
MK31				IAmb		IAmb		09 32 09.8	
	comp=Z,2.9nm,1.0s								
MKAR	**Makanchi Array**	**49.91**	**322**	P		**P**		**09 32 09.0**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=116,slow=8.2,SNR=13								
	comp=Z,2.1nm,0.9s								
MKAR	**Makanchi Array**	**49.91**	**322**	P		**P**		**09 32 08.5**	**+0.8**
ZAA0	**Zalesovo Array**	**52.43**	**331**	P		**P**		**09 32 26.8**	**+0.3**
ZAA0				IAmb		IAmb		09 32 27.8	
	comp=Z,2.7nm,1.0s								
ZALV	**Zalesovo Beam**	**52.43**	**331**	P		**P**		**09 32 27.2**	**+0.7**
KURK	**Kurchatov**	**53.92**	**325**	P		**P**		**09 32 36.7**	**-0.7**
KURBB	**Kurchatov Arra**	**53.92**	**325**	P		**P**		**09 32 38.5**	**+1.1**
	comp=Z,3.6nm,0.9s,baz=123,slow=7.4,SNR=17								
	comp=Z,3.6nm,0.9s								
GAR	**Garm**	**55.37**	**309**	P		**P**		**09 32 49.2**	**+0.8**
CHGR	**Chuyangaron**	**56.18**	**308**	P		**P**		**09 32 53.4**	**-0.7**
KK31	**Karatay Array**	**56.24**	**314**	P		**P**		**09 32 54.0**	**-0.4**
KK31				IAmb		IAmb		09 32 56.2	
	comp=Z,3.4nm,1.1s								
KKAR	**Karatay Array**	**56.24**	**314**	P		**P**		**09 32 53.7**	**-0.7**
BRVK	**Borovoye**	**59.59**	**325**			**P**		**09 33 17.9**	**+0.3**
BRVK				IAmb		IAmb		09 33 19.4	
	comp=Z,5.5nm,1.0s								
GEYT	**Alibeck**	**64.68**	**306**	P		**P**		**09 33 53.5**	**+1.3**
GEYT				IAmb		IAmb		09 34 35.9	
	comp=Z,3.9nm,1.1s								
ABKAR	**Akbulak array**	**64.80**	**319**	P		**P**		**09 33 52.8**	**+0.1**
ARCES	**ARCESS Array B**	**81.98**	**340**	LR		LR		10 16 04.7	
	comp=Z,182nm,21.4s,baz=356,slow=39								
AKASG	**Malin Array Be**	**84.46**	**321**	P		**P**		**09 35 46.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=67,slow=4.7,SNR=7.1								
	comp=Z,0.2nm,0.3s								
PPT	**Papeete**	**88.96**	**108**	LR		LR		10 17 29.1	
	comp=Z,43nm,18.1s,baz=320,slow=37								
PLCA	**Paso Flores**	**148.42**	**156**	PKPbc		**PKPbc**		**09 43 00.1**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=243,slow=4.5,SNR=3.5								

*RSNC **23** 09:37:12.4±1.1, 6°.86N×73°.15W, h153km±4km, ML3.4, Mw3.7*
*IDC **23** 09:37:13.2±4.7, 6°.73N×73°.10W, h170km±37km, mb3.1/2, mbtmp3.7/3, Error ellipse: s-maj=79.7km s-min=41.2km az=82.0*

**ISC 23 09:37:11.5±0.9, 6°.84N±0°.03×73°.14W±0°.03, h155km±6km, n45, σ1°.94/84, 2C

CAPC				*i*			09 39 10.9		
	comp=Z,25nm,0.5s								
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P		**Pn**	**09 38 20.0**	**-1.2**
MACC				*e*S		**Sn**	**09 39 11.8**	**-4.0**
MACC				*i*			09 39 17.8		
	comp=Z,34nm,0.3s								
BETC	**Betania**	**4.72**	**209**	*e*P		**Pn**	**09 38 21.0**	**-0.4**
BETC				*e*S		**Sn**	**09 39 09.6**	**-6.3**
DABV	**Dabajuro**	**4.75**	**31**	*e*P		**Pn**	**09 38 22.1**	**+0.3**
DABV				*e*S		**Sn**	**09 39 13.1**	**-3.6**
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P		**Pn**	**09 38 23.7**	**-0.8**
URIC				*e*S		**Sn**	**09 39 17.1**	**-4.5**
URIC				*i*			09 39 26.0		
	comp=Z,12nm,0.5s								
MALC	**Bahia Malaga**	**5.03**	**236**	*e*P		**Pn**	**09 38 27.4**	**+1.9**
MALC				*e*S		**Sn**	**09 39 15.6**	**-7.6**
MALC				*i*			09 39 18.2		
	comp=Z,34nm,0.3s								
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P		**Pn**	**09 38 27.1**	**-0.6**
GARC				*e*S		**Sn**	**09 39 24.0**	**-3.1**
GARC				*i*			09 39 31.3		
	comp=Z,51nm,0.2s								
POPC	**Popayan, Colom**	**5.53**	**220**	*e*P		**Pn**	**09 38 32.3**	**-0.1**
POPC				*e*S		**Sn**	**09 39 30.4**	**-5.1**
POPC				*i*			09 39 41.8		
	comp=Z,7.5nm,0.4s								
FLOC	**Florencia**	**5.79**	**206**	*e*P		**Pn**	**09 38 35.2**	**-0.4**
FLOC				*e*S		**Sn**	**09 39 41.8**	**+0.5**
FLOC				*i*			09 39 45.7		
	comp=Z,7.4nm,0.6s								
BBAC	**Balboa, Cauca**	**6.29**	**221**	*e*P		**Pn**	**09 38 43.5**	**+1.0**
BBAC				*e*S		Sn	09 39 24.9	-29
BBAC				*i*			09 39 25.2		
	comp=Z,9.5nm,0.3s								
TXAR	**Lajitas Array**	**36.44**	**312**	P		**P**	**09 44 02.7**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=130,slow=9.0,SNR=7.2								
	comp=Z,0.2nm,0.4s								
YKA	**Yellowknife Ar**	**63.24**	**340**	P		**P**	**09 47 23.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=134,slow=6.8,SNR=5.4								
	comp=Z,0.6nm,0.5s								
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc		**PKiKP**	**09 56 44.9**	**-1.2**	
	comp=Z,0.2nm,0.4s,baz=108,slow=2.7,SNR=1.7								

*NEIC **23** 09:48:08.7±1.6, 37°.62N±0°.02×118°.89W±0°.02, h2km±4km, Error ellipse: s-maj=2.2km s-min=1.8km az=178.0*

NCEDC 23 09:48:07.8±1.6, 37°.63N±0°.02×118°.89W±0°.02, h2km±4km, ML3.0/19, ML2.7/98(NEIC), Error ellipse: s-maj=2.3km s-min=1.8km az=163.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGPM	**Gravel Pit**	**0.01**	**264**		Pg	09 48 08.8	+0.2
MCBM	**Casa Benchmark**	**0.02**	**347**		Pg	09 48 09.6	+0.9
MLCM	**Laurel Creek C**	**0.02**	**231**		Pg	09 48 08.9	+0.2
MCSM	**Casa Diablo Ho**	**0.03**	**338**		Pg	09 48 09.0	+0.3
MLAC	**Mammoth, Mammo**	**0.04**	**86**		Pg	09 48 09.2	+0.4
MDRNC	**Doe Ridge**	**0.05**	**77**		Pg	09 48 09.3	+0.5
MEMM	**East Mammoth H**	**0.05**	**316**		Pg	09 48 09.4	+0.4
MCVM	**Convict Lake**	**0.06**	**127**		Pg	09 48 09.3	+0.2
MMLB	**Mammoth Lakes**	**0.08**	**295**		Pg	09 48 09.9	+0.5
OMMB	**Old Mammoth Mi**	**0.09**	**261**		Pg	09 48 09.8	+0.2
MDYM	**Dry Creek**	**0.10**	**288**		Pg	09 48 10.3	+0.5
MLIM	**Lincoln Peak**	**0.10**	**275**		Pg	09 48 10.4	+0.6
MMPM	**Mammoth Pass**	**0.11**	**261**		Pg	09 48 10.3	+0.3
MMSM	**Mammoth Summit**	**0.11**	**272**		Pg	09 48 10.5	+0.5
MRDM	**Red Cones**	**0.14**	**258**		Pg	09 48 10.8	+0.3
MDCM	**Deadman Creek**	**0.14**	**305**		Pg	09 48 10.9	+0.2
MDPB	**Devils Postpil**	**0.15**	**272**		Pg	09 48 11.0	+0.3
MDPB					Sg	09 48 13.3	+0.5
MDPB	**Devils Postpil**	**0.15**	**272**	IAML		09 48 13.5	
	comp=N,8μm,0.4s						
MDPB				IAML		09 48 13.5	
	comp=E,10μm,0.2s						
ORC	**Owens River**	**0.19**	**87**		Pg	09 48 11.9	+0.4
RCCR	**Rock Creek Can**	**0.19**	**136**		Pg	09 48 11.8	+0.2
BENR	**Benton**	**0.27**	**71**		Pg	09 48 13.3	+0.3
MRCM	**Red Rock Canyo**	**0.31**	**81**		Pg	09 48 14.2	+0.4
MCDM	**Chidago Canyon**	**0.36**	**102**		Pg	09 48 15.4	+0.6
MTUM	**Tungsten Hills**	**0.38**	**136**		Pg	09 48 15.3	+0.2
MFBM	**Five Bridges**	**0.42**	**118**		Pg	09 48 16.4	+0.6
MLNR	**Milner Canyon**	**0.44**	**94**		Pg	09 48 16.7	+0.5
KCC	**Kaiser Creek**	**0.46**	**228**		Pg	09 48 16.5	0.0
KCC					Sg	09 48 22.6	+0.2
LUL	**Lundy Lake**	**0.48**	**332**		Pg	09 48 17.3	+0.2
POCCA	**Poleta Canyon**	**0.55**	**118**		Pg	09 48 18.6	+0.2
LHV	**Little Huntoon**	**0.69**	**26**	Pg	Pg	09 48 21.5	+0.4
DSP	**Deep Springs**	**0.78**	**109**		Pg	09 48 22.5	-0.2
DSP					Sg	09 48 33.1	+0.4
TIN	**Tinemaha, Big**	**0.78**	**137**		Pg	09 48 22.8	+0.2
NV08	**Mina Array Sit**	**0.90**	**30**		Pg	09 48 25.1	0.0
NV08					Sg	09 48 37.6	+1.0
NV09	**Mina Array Sit**	**0.92**	**28**		Pg	09 48 25.4	0.0
NVAR	**Mina Array Bea**	**0.93**	**30**	Pg	Pg	09 48 25.6	0.0
NV11	**Mina Array Sit**	**0.99**	**36**		Pg	09 48 26.6	-0.2
RYN	**Ryan**	**1.04**	**16**		Pg	09 48 27.7	0.0
RYN	**Ryan**	**1.04**	**16**		Sg	09 48 41.9	+0.7
RYN				IAML		09 48 43.1	
	comp=N,262nm,0.2s						
LCH	**Last Change Ra**	**1.07**	**111**		Pg	09 48 28.0	-0.2
LCH				IAML		09 48 44.0	
	comp=E,187nm,0.3s						
LCH				IAML		09 48 45.1	
	comp=N,140nm,0.3s						
LCH	**Last Change Ra**	**1.07**	**111**		Sg	09 48 42.1	0.0
MZP	**Montezuma Peak**	**1.20**	**86**		Pg	09 48 30.8	0.0
CMB	**Columbia Colle**	**1.25**	**289**	Pg	Pg	09 48 30.7	-1.1
CMB				IAML		09 48 47.6	
	comp=E,122nm,0.3s						
CMB				IAML		09 48 47.6	
	comp=N,191nm,0.3s						
GMN	**Gold Mountain**	**1.34**	**104**		Pg	09 48 33.4	0.0
GMN	**Gold Mountain**	**1.34**	**104**	IAML		09 48 55.5	
	comp=N,114nm,0.5s						
MRHM	**Rocky Hill**	**1.35**	**187**		Pg	09 48 32.4	-1.2
CWC	**Cottonwood Cre**	**1.35**	**151**		Pg	09 48 32.8	-0.9
VOG	**Valley Oaks Go**	**1.36**	**197**		Pn	09 48 33.0	-0.7
GRAC	**Grapevine Rang**	**1.37**	**117**		Pg	09 48 34.0	0.0
GRAC	**Grapevine Rang**	**1.37**	**117**	Pn	Pn	09 48 33.8	-0.1
GRAC	**Grapevine Rang**	**1.37**	**117**	IAML		09 48 54.4	
	comp=E,160nm,0.4s						
GRAC				IAML		09 48 57.5	
	comp=N,185nm,0.7s						
CGO	**Cerro Gordo**	**1.38**	**141**		Pg	09 48 33.4	-0.9
YERR	**Yerington**	**1.38**	**349**		Pn	09 48 33.7	-0.6
YERR	**Yerington**	**1.38**	**349**	IAML		09 48 38.9	
	comp=E,70nm,0.4s						
YERR				IAML		09 48 40.0	
	comp=N,71nm,0.5s						
TPH	**Tonopah**	**1.40**	**71**		Pn	09 48 34.2	-0.3
MCUB	**Copperopolis B**	**1.41**	**285**		Pn	09 48 33.7	-0.8
SPG2	**Springville 2**	**1.43**	**176**		Pn	09 48 34.0	-0.7
WLHM	**Little Horse**	**1.54**	**162**		Pn	09 48 36.2	-0.3
KVN	**Kaiserville**	**1.55**	**23**		Pn	09 48 36.7	+0.1
KVN	**Kaiserville**	**1.55**	**23**	IAML		09 49 00.5	
	comp=N,104nm,0.5s						
KVN				IAML		09 49 00.5	
	comp=E,92nm,0.7s						
PNTR	**Pine Nut**	**1.56**	**339**		Pn	09 48 37.1	+0.4
PNTR	**Pine Nut**	**1.56**	**339**	IAML		09 48 42.9	
	comp=E,144nm,0.6s						
PNTR				IAML		09 48 43.3	
	comp=N,94nm,0.5s						
PWMM	**Westland Maint**	**1.59**	**222**		Pb	09 48 37.7	-0.2
SGV	**South Grapevin**	**1.62**	**113**		Pn	09 48 37.7	+0.3
EMB	**Emerald Bay**	**1.65**	**325**		Pb	09 48 38.6	-0.4
EMB				IAML		09 49 21.8	
	comp=N,62nm,0.3s						
PDRM	**Domengine Ranc**	**1.75**	**223**		Pb	09 48 40.2	-0.4
VCNR	**Virginia City**	**1.77**	**341**		Pb	09 48 40.7	-0.4
VCNR				IAML		09 48 47.4	
	comp=E,55nm,0.7s						
VCNR				IAML		09 48 51.4	
	comp=N,54nm,0.7s						
SCKWR	**San Luis Creek**	**1.79**	**256**		Pb	09 48 41.1	-0.2
VES	**Vestal, Richgr**	**1.79**	**185**		Pb	09 48 40.6	-0.6
PARM	**Anticline Ridg**	**1.80**	**221**		Pb	09 48 40.8	-0.7
BMSM	**Mercy Hot Spri**	**1.80**	**238**		Pn	09 48 40.7	+0.8
Q09A	**Carvers**	**1.81**	**48**		Pb	09 48 41.0	-0.6
WCSM	**Coso Springs S**	**1.83**	**150**		Pb	09 48 42.0	-0.1
PKEM	**Kettleman Hill**	**1.84**	**212**		Pb	09 48 41.8	-0.4
MPK	**Martis Peak**	**1.89**	**332**		Pb	09 48 42.6	-0.5
MPK	**Martis Peak**	**1.89**	**332**	IAML		09 49 14.4	
	comp=N,54nm,0.9s						
MPK				IAML		09 49 19.0	
	comp=E,57nm,0.8s						
WASM	**Alta Sierra Ca**	**1.91**	**172**		Pb	09 48 42.7	-0.6
SLD	**San Luis Dam**	**1.94**	**254**		Pn	09 48 42.6	+0.9
CMPM	**Mikes Peak**	**1.95**	**263**		Pn	09 48 42.7	+0.8
TNK	**Tinkers Knob**	**1.95**	**328**		Pb	09 48 44.5	+0.3
WNMM	**Nine Mile Cany**	**1.95**	**156**		Pb	09 48 43.5	-0.4
BAVM	**Antelope Valle**	**1.97**	**241**		Pb	09 48 43.3	-1.1
ISA	**Isabella, Lake**	**1.99**	**170**	Pn	Pb	09 48 44.0	-0.7
WCT	**Wildcat Mounta**	**1.99**	**114**	Pn	Pn	09 48 42.8	+0.3
WCT	**Wildcat Mounta**	**1.99**	**114**	IAML		09 49 15.8	
	comp=E,36nm,0.4s						
WORM	**Onyx Ranch**	**2.00**	**165**		Pb	09 48 44.2	-0.6
PACP	**Pacheco Peak**	**2.01**	**253**		Pn	09 48 43.8	+1.1
BBGB	**Big Mountain B**	**2.01**	**239**		Pb	09 48 44.0	-1.0
VPK	**Verdi Peak**	**2.05**	**334**		Pb	09 48 46.3	+0.4
CTM	**Castle Mountai**	**2.05**	**215**		Pb	09 48 44.8	-1.0
DONR	**Donner Summit**	**2.05**	**327**		Pb	09 48 45.8	-0.1
PSMM	**Smith Mountain**	**2.07**	**222**		Pn	09 48 44.5	+0.9
CMMM	**Mount Mocho**	**2.08**	**266**		Pn	09 48 44.8	+1.1
PMPB	**Monarch Peak**	**2.08**	**228**		Pn	09 48 44.7	+1.0
LRV	**Little Rabbit**	**2.08**	**235**		Pn	09 48 44.8	+1.1
PSRM	**Scobie Ranch**	**2.09**	**213**		Pn	09 48 44.9	+1.1
WOFM	**Oak Flat**	**2.09**	**176**		Pn	09 48 40.3	-3.6
HFEM	**San Felipe**	**2.10**	**253**		Pn	09 48 45.1	+1.2
GHS	**Gilroy Hot Spr**	**2.10**	**256**		Pn	09 48 45.2	+1.2
PAHR	**Pah Rah Range**	**2.11**	**350**		Pn	09 48 44.8	+0.5
BVL	**Bear Valley**	**2.12**	**241**		Pn	09 48 45.5	+1.3
ARN	**Arnold Ranch**	**2.12**	**263**		Pn	09 48 45.1	+0.9
PHFM	**Heflinger Ranc**	**2.12**	**215**		Pn	09 48 45.0	+0.8
PSTM	**Stockdale Moun**	**2.13**	**218**		Pn	09 48 45.2	+0.8
PKD	**Bear Valley Ra**	**2.14**	**219**		Pn	09 48 45.1	+0.6
BPIM	**Pinnacles**	**2.15**	**239**		Pn	09 48 45.9	+1.3
PEAR	**Peavine Mounta**	**2.15**	**337**		Pb	09 48 46.3	-1.2
CDC	**Canada Road**	**2.15**	**255**		Pb	09 48 46.2	-1.2
PVCM	**Vineyard Canyo**	**2.15**	**218**		Pn	09 48 45.5	+0.8
PSNM	**Stone Corral**	**2.15**	**212**		Pn	09 48 45.5	+0.8
BJOM	**Mount Johnson**	**2.18**	**243**		Pb	09 48 46.4	-1.4
THIS	**South End of C**	**2.18**	**210**		Pn	09 48 46.2	+1.1
PAGB	**Antelope Grade**	**2.19**	**210**		Pn	09 48 45.3	+0.2
PAGB				IAML		09 49 22.4	
	comp=N,72nm,0.6s						
PKLM	**Kerr Lake**	**2.19**	**213**		Pn	09 48 46.1	+1.0
CBSNC	**Byron Hot Spri**	**2.19**	**276**		Pb	09 48 47.2	-0.8
BABR	**Babbit Peak**	**2.19**	**335**		Pb	09 48 48.4	+0.1
PCMM	**Cholame Hills**	**2.19**	**214**		Pn	09 48 46.0	+0.8
MHC	**Mount Hamilton**	**2.21**	**263**		Pn	09 48 46.6	+1.1
TPNV	**Topopah Spring**	**2.21**	**107**		Pn	09 48 45.7	0.0
TPNV				IAML		09 49 23.6	
	comp=N,33nm,0.7s						
TPNV				IAML		09 49 32.6	
	comp=N,33nm,0.8s						
SAO	**San Andreas Ge**	**2.21**	**248**		Pn	09 48 46.8	+1.3
SAO	**San Andreas Ge**	**2.21**	**248**	Pn	Pn	09 48 46.4	+0.9
PWKM	**Work Ranch**	**2.23**	**216**		Pn	09 48 46.6	+0.8
HSFM	**Saint Francis**	**2.23**	**249**		Pn	09 48 47.1	+1.3
PTRM	**Twissleman Ran**	**2.24**	**209**		Pn	09 48 47.1	+1.2
PPO	**Portuguese Can**	**2.24**	**219**		Pn	09 48 46.8	+1.0
PMCM	**McMillan Canyo**	**2.24**	**212**		Pn	09 48 42.9	-3.0
TRAM	**Private Proper**	**2.24**	**210**		Pn	09 48 47.0	+1.1
BSGM	**Shirttail Gulc**	**2.25**	**238**		Pn	09 48 47.0	+1.1
FRP	**Fremont Peak**	**2.25**	**248**		Pn	09 48 47.0	+0.9
SCZ	**Santa Cruz**	**2.25**	**244**		Pn	09 48 46.8	+0.7
PSAM	**San Ardo**	**2.26**	**226**		Pb	09 48 48.0	-1.3
SDH	**Striped Hills**	**2.26**	**115**		Pn	09 48 47.0	+0.8
BJCM	**Johnson Can.**	**2.27**	**242**		Pn	09 48 47.1	+0.9
WENL	**Wente Vineyard**	**2.27**	**271**		Pb	09 48 48.4	-1.1
TCHL	**Shandon**	**2.28**	**213**		Pn	09 48 47.6	+1.1
GWY	**Greenwater Val**	**2.29**	**128**	Pn	Pn	09 48 46.4	-0.3
BSRM	**Salinas Radio**	**2.31**	**246**		Pn	09 48 47.5	+0.7
JLAB	**Laurel Hill**	**2.31**	**259**		Pn	09 48 48.2	+1.3
CALM	**Calaveras Res.**	**2.32**	**267**		Pn	09 48 48.4	+1.4
CPY	**CPY**	**2.37**	**106**		Pn	09 48 47.8	+0.1
BSMM	**Soledad Missio**	**2.38**	**239**		Pn	09 48 49.0	+1.1
PCCM	**Crazy Canyon**	**2.38**	**231**		Pn	09 48 49.2	+1.4
TSCN	**Private Proper**	**2.39**	**210**		Pn	09 48 49.3	+1.4
AMDNV	**Amargosa**	**2.40**	**119**		Pn	09 48 49.1	+1.1
HERM	**Elkhorn Road**	**2.40**	**251**		Pn	09 48 49.1	+1.1
AMC	**Almaden**	**2.40**	**260**		Pn	09 48 49.7	+1.7
JHLM	**Holstrom Ranch**	**2.40**	**258**		Pn	09 48 49.1	+1.0
TCAS	**Cass Winery, P**	**2.42**	**214**		Pn	09 48 49.5	+1.1
BPCNC	**Pine Canyon**	**2.43**	**245**		Pn	09 48 49.5	+1.1
CCCA	**Chr Cany lake**	**2.43**	**149**		Pb	09 48 53.1	+0.9
PANM	**San Antonio Re**	**2.45**	**222**		Pn	09 48 50.1	+1.3
HAST	**Hastings Reser**	**2.46**	**241**		Pn	09 48 49.8	+0.8
CRGC	**Crocker Grade**	**2.47**	**196**		Pb	09 48 51.1	-1.8
SMMC	**Simmler**	**2.47**	**201**		Pn	09 48 50.1	+1.0
JJOM	**Saint Joseph's**	**2.49**	**261**		Pn	09 48 50.3	+1.0
ARVC	**Arvin**	**2.50**	**179**		Pb	09 48 52.0	-0.4
S11A	**Rachel**	**2.50**	**89**	Pn	Pb	09 48 52.9	-0.6
S11A				IAML		09 49 40.7	
	comp=E,48nm,0.6s						
S11A				IAML		09 49 41.0	
	comp=N,43nm,1.0s						
PHSB	**Hesperia Broad**	**2.50**	**225**		Pn	09 48 50.5	+1.1
BEKR	**Beckworth**	**2.51**	**333**	Pn	Pb	09 48 52.4	-1.3
BEKR				IAML		09 49 30.2	
	comp=E,34nm,0.5s						
BCWM	**Chews Ridge**	**2.52**	**239**		Pn	09 48 50.7	+0.9
CCAC	**Calif City Air**	**2.57**	**164**	Pn	Pn	09 48 50.7	+0.2
PAPM	**Alder Peak**	**2.62**	**230**		Pn	09 48 52.1	+0.9
BCH	**Branch Mountai**	**2.62**	**202**		Pn	09 48 52.3	+1.1
HMOM	**Monterey**	**2.63**	**248**		Pn	09 48 52.3	+1.1
JFP	**Foothills Park**	**2.64**	**265**		Pn	09 48 52.3	+1.0
BLDC	**Black Mountain**	**2.65**	**218**		Pn	09 48 52.6	+1.1
JJRM	**Joaquin Road**	**2.65**	**265**		Pn	09 48 52.5	+1.0
JBNB	**Ben Lomond Mou**	**2.65**	**260**		Pn	09 48 52.4	+0.8
BKS	**Berkeley--Byer**	**2.66**	**276**		Pn	09 48 53.0	+1.4
R11A	**Troy Canyon, C**	**2.71**	**74**	Pn	Pn	09 48 53.1	+0.6
BCW	**Bitter Crk WRg**	**2.71**	**189**		Pn	09 48 52.9	+0.4
ARDC	**Alexander Ranc**	**2.74**	**219**		Pn	09 48 53.4	+0.8
NBPM	**Berryessa Peak**	**2.80**	**293**		Pn	09 48 57.4	-1.1
ORV	**Oroville**	**2.81**	**314**	Pn	Pn	09 48 53.8	+0.2
ORV				IAML		09 49 35.8	
	comp=E,39nm,0.7s						
ORV				IAML		09 49 36.2	
	comp=N,22nm,0.3s						
OSUM	**Sutter Buttes**	**2.84**	**306**		Pb	09 48 57.3	-1.9
FIGC	**Figueroa Mtn.**	**3.03**	**197**		Pn	09 48 59.1	+2.4
PRN	**Pahroc Range**	**3.06**	**93**		Pn	09 48 58.0	+0.7
PLTX	**Planet X, Gerl**	**3.11**	**352**	Pn	Pn	09 48 57.1	-0.7
MCCM	**Marconi Confer**	**3.20**	**281**	Pn	Pn	09 48 59.6	+0.6
MCCM				IAML		09 49 46.3	
	comp=N,31nm,2.8s						
MCCM				IAML		09 49 48.0	
	comp=E,23nm,1.8s						
HOPS	**Hopland Field**	**3.56**	**294**	Pn	Pn	09 49 04.3	+0.3
HOPS				IAML		09 50 08.2	
	comp=E,18nm,3.1s						
HOPS				IAML		09 50 09.7	
	comp=N,20nm,3.5s						
PSUT	**Pine Spring**	**4.08**	**76**	Pn	Pn	09 49 11.7	+0.3
ELS	**Elsinore Mount**	**4.15**	**163**	Pn	Pn	09 49 11.7	-0.4
ELS				IAML		09 50 23.3	
	comp=E,8.5nm,1.5s						
ELS				IAML		09 50 25.0	
	comp=N,7.9nm,1.4s						
ELK	**Elko**	**4.21**	**41**	Pn	Pn	09 49 11.4	-1.8
CCUT	**Cedar City**	**4.39**	**89**	Pn	Pn	09 49 15.6	-0.1
PFO	**Pinyon Flats O**	**4.47**	**153**	Pn	Pn	09 49 18.3	+1.6
PFO				IAML		09 50 36.7	
	comp=N,5.3nm,3.5s						
PFO				IAML		09 50 43.9	
	comp=N,5.7nm,4.9s						
LCMT	**Little Creek M**	**4.54**	**96**	Pn	Pn	09 49 18.4	+0.7
WVOR	**Wild Horse Val**	**4.80**	**2**	Pn	Pn	09 49 21.6	+0.3
WVOR				IAML		09 49 59.2	
	comp=N,5.0nm,4.0s						
WVOR				IAML		09 50 16.0	
	comp=N,4.2nm,4.8s						
KNB	**Kanab**	**4.88**	**95**	Pn	Pn	09 49 22.3	0.0
YBH	**Yreka Blue Hor**	**5.05**	**325**	Pn	Pn	09 49 23.6	-1.0
YBH				IAML		09 50 43.4	
	comp=N,6.2nm,3.7s						
TCRU	**Three Creeks R**	**5.18**	**77**	Pn	Pn	09 49 27.4	+1.0
L04D	**Klamath Falls**	**5.28**	**331**	Pn	Pn	09 49 26.6	-1.2
K05A	**Summer Lake**	**5.32**	**344**	Pn	Pn	09 49 27.5	-0.8
TJX	**Tijuana**	**5.32**	**163**	Pn	Pn	09 49 27.2	-1.1
MTPU	**Mount Pierson**	**5.33**	**84**	Pn	Pn	09 49 27.1	-1.5
MVU	**Marysvale**	**5.34**	**79**	Pn	Pn	09 49 27.5	-1.2

*HEL **23** 09:59:40.8±0.2, 64°.66N×30°.63E, h0km, ML2.2, Explosion*
*BER **23** 09:59:43.8±1.6, 64°.70N×30°.70E, h0km, ML1.7, ML2.2(HEL), Suspected explosion*
*IDC **23** 09:59:45.4±1.7, 64°.78N×30°.34E, h0km, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=27.1km s-min=10.4km az=112.0*
*KOLA **23** 09:59:47.0, 64°.81N×30°.44E, h0km, ML2.0*

ISC 23 09:59:40.9±1.1, 64°.64N±0°.03×30°.53E±0°.07, h0km, n34, σ1=98/48, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.50**	**212**	PG	**Pg**	**09 59 51.2**	**+0.7**
RMF				SG	**Sg**	**09 59 56.2**	**-0.7**
KU6	**Riekki**	**1.42**	**349**	PG	**Pn**	**10 00 06.0**	**-1.9**
	baz=168						
KU6				MSG		10 00 23.1	
	comp=Z,20nm,0.2s						
KU6				SN	**Sg**	**10 00 26.2**	**-0.2**
MSF	**Maaselka**	**1.42**	**334**	PG	**Pn**	**10 00 06.4**	**-1.6**
	baz=148						
MSF				SN	**Sg**	**10 00 26.4**	**-0.1**
OLKF	**Oulanka, Finla**	**1.75**	**345**	PG	**Pn**	**10 00 11.8**	**-0.8**
OLKF				SN	**Sg**	**10 00 37.5**	**+0.4**
JOF	**Joensuu**	**1.76**	**168**	PG	**Pn**	**10 00 12.6**	**-0.1**
OUL	**Oulu**	**2.03**	**285**	PG	**Pb**	**10 00 17.8**	**-0.9**
OUL				SG	**Sb**	**10 00 44.2**	**-0.2**
OBF4	**Vikkela, Lumij**	**2.34**	**277**	PG	**Pn**	**10 00 22.3**	**+1.8**
	baz=93						
OUF	**Merijarvi**	**2.52**	**266**	PB	**Pn**	**10 00 24.3**	**+1.2**
OUF				MSG		10 00 56.5	
	comp=Z,18nm,0.2s						
OUF				SG	**Sb**	**10 00 59.6**	**+1.0**
OBF0	**Syolatti, Pyha**	**2.72**	**270**	PB	**Pb**	**10 00 28.6**	**-1.8**
RNF	**Rovaniemi**	**2.72**	**319**	PB	**Pn**	**10 00 27.2**	**+1.3**
RNF				SG	**Sb**	**10 01 05.3**	**+1.0**
TOF	**Tornio**	**2.98**	**302**	PB	**Pn**	**10 00 32.2**	**+2.9**
	baz=112						
TOF				MSG		10 01 08.9	
	comp=Z,7.5nm,0.2s						
TOF				SG	**Sb**	**10 01 13.4**	**+1.9**
VRF	**Varrio**	**3.14**	**354**	PN	**Pn**	**10 00 31.2**	**-0.5**
VRF				MSG		10 01 12.5	
	comp=Z,5.8nm,0.2s						
KAF	**Kangasniemi**	**3.17**	**219**	PB	**Pn**	**10 00 34.9**	**+2.9**
KAF				MSG		10 01 15.1	
	comp=Z,3.5nm,0.2s						
KAF				SB	**Sb**	**10 01 16.8**	**-0.4**
SGF	**Sodankyl**	**3.25**	**332**	PN	**Pn**	**10 00 33.8**	**+0.6**
SGF				SG	**Sb**	**10 01 22.0**	**+2.5**
RUFX	**Ruokolahti**	**3.30**	**193**	PN	**Pn**	**10 00 35.5**	**+1.7**
KEF	**Keuruu**	**3.56**	**228**	PB	**Pn**	**10 00 40.3**	**+3.0**
KLF	**Kolari**	**3.74**	**317**	PB	**Pn**	**10 00 42.5**	**+2.6**
FIA0	**FINESS Array S**	**3.80**	**214**	PB	**Pb**	**10 00 47.6**	**-1.1**
FINES	**FINESS Array B**	**3.80**	**214**	Pn	**Pn**	**10 00 44.0**	**+3.4**
	comp=Z,0.3nm,0.3s,baz=33,slow=14,SNR=4.4						
FINES				Pg	**Pg**	**10 00 52.9**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=33,slow=15,SNR=6.9						
FINES				Lg	Lg	10 01 40.8	
	comp=Z,1.1nm,0.3s,baz=41,slow=28,SNR=5.3						
	comp=Z,0.4nm,0.3s						
VAF	**Ylistaro**	**3.83**	**249**	PB	**Pb**	**10 00 47.4**	**-2.0**
PAJU	**Pajala**	**3.88**	**311**	PB	**Pn**	**10 00 45.6**	**+3.8**
BURU	**Burvik**	**3.94**	**273**

PB09				IAML			10 05 54.8	
	comp=N,756nm,0.5s							
PB02	**IPOC Station P**	**1.29**	**19**	‖*eP*	Pn		10 05 32.6	+0.5
PB02				*eS*	Sn		10 05 49.6	+1.4
PB01	**IPOC Station P**	**1.69**	**29**	IAML			10 05 52.6	
	comp=E,851nm,0.3s							
TA01	**Diego Aracena**	**1.97**	**5**	*eP*	Pn		10 05 41.1	-0.3
TA01				*eS*	Sn		10 06 03.8	-1.1
TA01				IAML			10 06 06.0	
	comp=E,455nm,0.3s							
AF01	**San Pedro de A**	**2.05**	**102**	*eP*	Pn		10 05 44.3	+1.5

*NEIC **23** 10:11:53.6±0.7, 3°.49N±0°.06×97°.12E±0°.09, h82km±10km, mb4.3/11, Error ellipse: s-maj=14.2km s-min=8.4km az=69.0*
*DJA **23** 10:11:53.6±0.4, 3°N±2°×97°7E±°, h48km±10km, M4.5/10, mb5.4/1, mB6.4/1, MLv4.1/10, Mw(mB)6.2/1*
*IDC **23** 10:11:55.2±2.4, 3°.62N×97°.26E, h98km±21km, mb3.7/8, mbtmp4.0/8, Error ellipse: s-maj=40.0km s-min=17.0km az=54.0*

ISC 23 10:11:53.2±0.7, 3°.49N±0°.04×97°.12E±0°.06, h81km±6km, n38, σ0§84/45, mb4.1/15, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KCSI	**Kotacane, Aceh**	**0.66**	**87**	P			**Pn**	**10 12 08.0**	**-0.5**
KCSI				S			**Sn**	**10 12 18.3**	**-1.6**
TSI	**Tuntungan**	**1.45**	**89**	P			**Pn**	**10 12 17.6**	**-0.2**
TSI				S			**Sn**	**10 12 36.8**	**+0.3**
LHMI	**Lhok Sumawe**	**1.74**	**354**				**Pn**	**10 12 22.3**	**+0.6**
LHMI	**Lhok Sumawe**	**1.74**	**354**	P			**Pn**	**10 12 21.6**	**-0.1**
LHMI				S			**Sn**	**10 12 43.9**	**+0.7**
PSI	**Prapat**	**1.93**	**111**	P			**Pn**	**10 12 25.6**	**+1.2**
	77nm,0.2s,baz=294,slow=8.4,SNR=53								
PSI				S			**Sn**	**10 12 50.9**	**+2.9**
	287nm,0.5s,baz=291,slow=14,SNR=5.7								
RPSI	**Rantau Prapat**	**1.97**	**114**				**Pn**	**10 12 25.2**	**+0.5**
RPSI	**Rantau Prapat**	**1.97**	**114**				**Pn**	**10 12 25.6**	**+0.8**
GSI	**Gunungsitoli**	**2.22**	**168**	Pn			**Pn**	**10 12 28.3**	**+0.2**
GSI	**Gunungsitoli**	**2.22**	**168**	P			**Pn**	**10 12 27.8**	**-0.3**
GSI				S			**Sn**	**10 12 53.9**	**-0.8**
KULM	**Kulim**	**3.95**	**63**				**Pn**	**10 12 51.5**	**0.0**
IPM	**Ipoh**	**4.02**	**76**				**Pn**	**10 12 52.2**	**-0.3**
SRIT	**Nakonsritamara**	**5.64**	**26**	Pn			**Pn**	**10 13 13.6**	**-1.0**
KRJI	**Kerinci**	**7.04**	**142**	P			**Pn**	**10 13 34.1**	**+0.3**
UBPT	**Khong Chiam**	**14.32**	**35**	Pn			**Pn**	**10 15 12.1**	**0.0**
CM31	**Chiang Mai Arr**	**14.98**	**7**	Pn			**Pn**	**10 15 21.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**14.98**	**7**	P			**P**	**10 15 24.6**	**+0.4**
	0.8nm,0.4s,baz=198,slow=11,SNR=6.4								
HYBB	**Hyderabad (bro**	**22.87**	**309**	*eP*			**P**	**10 16 50.5**	**+0.3**
HYBB				*ep*P			**pP**	**10 17 06.8**	**0.0**
HYBB				*es*P			**sP**	**10 17 17.3**	**+0.4**
KNRA	**Kununurra**	**36.65**	**122**	P			**P**	**10 18 51.4**	**-0.9**
MTN	**Manton Dam**	**37.48**	**116**	P			**P**	**10 18 58.5**	**-0.8**
WB0	**Warramunga Arr**	**43.30**	**124**	P			**P**	**10 19 46.9**	**-0.5**
WB0				IAmb		IAmb		10 19 51.0	
	comp=Z,3.3nm,1.0s								
WRA	**Warramunga Arr**	**43.34**	**124**	P			**P**	**10 19 47.3**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=304,slow=9.3,SNR=8.0								
	comp=Z,1.1nm,0.4s								
WRA	**Warramunga Arr**	**43.34**	**124**	P			**P**	**10 19 46.8**	**-0.9**
WB2	**Warramunga Arr**	**43.35**	**124**	P			**P**	**10 19 47.6**	**-0.2**
WB2				IAmb		IAmb		10 19 49.8	
	comp=Z,9.3nm,1.5s								
WR0	**Warramunga Arr**	**43.52**	**124**	P			**P**	**10 19 48.6**	**-0.5**
WR0				IAmb		IAmb		10 20 00.2	
	comp=Z,3.5nm,0.8s								
AS31	**Alice Springs**	**44.86**	**129**	P			**P**	**10 19 59.1**	**-0.7**
ASAR	**Alice Springs**	**44.86**	**129**	P			**P**	**10 19 59.5**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=302,slow=7.7,SNR=23								
	comp=Z,0.6nm,0.4s								
ASAR	**Alice Springs**	**44.86**	**129**	P			**P**	**10 19 59.2**	**-0.6**
MK31	**Makanchi Array**	**45.02**	**346**	P			**P**	**10 19 59.6**	**-1.0**
MK31				IAmb		IAmb		10 20 15.8	
	comp=Z,0.8nm,0.8s								
MKAR	**Makanchi Array**	**45.02**	**346**	P			**P**	**10 19 59.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=158,slow=8.9,SNR=9.5								
	comp=Z,0.5nm,0.4s								
COEN	**Coen**	**48.85**	**112**	P			**P**	**10 20 30.2**	**-0.8**
COEN				IAmb		IAmb		10 20 33.4	
	comp=Z,3.4nm,0.9s								
ZALV	**Zalesovo Beam**	**51.30**	**351**	P			**P**	**10 20 48.8**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=166,slow=6.0,SNR=6.4								
	comp=Z,1.6nm,0.4s								
ZALV	**Zalesovo Beam**	**51.30**	**351**	P			**P**	**10 20 49.4**	**+0.5**
BBOO	**Buckleboo**	**51.60**	**138**	P			**P**	**10 20 51.2**	**-0.3**
BBOO				IAmb		IAmb		10 21 32.0	
	comp=Z,14nm,1.4s								
STKA	**Stephens Creek**	**54.96**	**133**	P			**P**	**10 21 16.2**	**0.0**
	comp=Z,0.7nm,0.6s,baz=313,slow=7.7,SNR=3.0								
	comp=Z,0.7nm,0.6s								
ABKAR	**Akbulak array**	**55.47**	**331**	P			**P**	**10 21 18.4**	**-1.2**
ABKAR				IAmb		IAmb		10 22 00.0	
	comp=Z,6.9nm,1.2s								
BOSA	**Boshof**	**75.85**	**240**	P			**P**	**10 23 32.7**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=342,slow=3.2,SNR=3.6								
	comp=Z,1.9nm,0.6s								
FINES	**FINESS Arrray B**	**77.94**	**332**	P			**P**	**10 23 42.3**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=116,slow=8.7,SNR=3.8								
	comp=Z,0.5nm,0.4s								
TORD	**Torodi Ar. Bea**	**94.48**	**283**	P			**P**	**10 25 05.7**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=90,slow=7.2,SNR=2.6								
	comp=Z,0.5nm,0.9s								

*NEIC **23** 10:54:02.2±0.7, 15°.6S±0°.2×177°.63W±0°.09, h10km±2km, mb4.4/11, Error ellipse: s-maj=27.0km s-min=13.4km az=350.0*
*IDC **23** 10:54:04.7±1.4, 15°.59S×178°.03W, h0km, mb3.9/7, mbtmp3.9/8, ML5.0/1, MS3.7/34, Error ellipse: s-maj=99.0km s-min=18.4km az=147.0*

ISC 23 10:54:09.0±0.7, 15°.8S±0°.2×178°.0W±0°.1, h35km, n56, σ1§18/24, mb4.2/13, MS3.7/32, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MSVF	**Nonsavu**	**4.27**	**243**	Pn			**Pn**	**10 55 13.0**	**+1.4**
	2.9nm,0.3s,baz=43,slow=19,SNR=13								
MSVF				Sn			**Sn**	**10 56 01.2**	**+0.9**
	1.2nm,0.3s,baz=137,slow=23,SNR=5.6								
MSVF				LR		LR		10 56 45.2	
	comp=Z,580nm,20.3s,baz=50,slow=37								
	3.3nm,0.3s								
MSVF	**Nonsavu**	**4.27**	**243**				**Pn**	**10 55 13.3**	**+1.7**
AFI	**Afiamalu**	**6.27**	**73**	LR		LR		10 57 32.1	
	comp=Z,326nm,18.6s,baz=5.0,slow=33								
AFI	**Afiamalu**	**6.27**	**73**	Pn		Pn		10 55 29.6	-10
NIUE	**Niue**	**8.30**	**114**	Pn		Pn		10 56 00.3	-6.6
RAO	**Raoul Island**	**13.35**	**180**	LR		LR		11 01 23.8	
	comp=Z,156nm,19.8s,baz=21,slow=32								
DZM	**Mont Dzumac**	**16.01**	**245**	LR		LR		11 02 42.1	
	comp=Z,165nm,18.6s,baz=64,slow=32								
DZM	**Mont Dzumac**	**16.01**	**245**	*e*LR		LR		11 02 05.2	
	comp=Z,237nm,25.1s								
OUZ	**Omahuta**	**20.73**	**200**	P			**P**	**10 58 46.0**	**-0.5**
OUZ				IAmb		IAmb		10 59 13.3	
	comp=Z,16nm,1.2s								
HNR	**Honiara**	**22.48**	**284**	LR		LR		11 06 38.5	
	comp=Z,670nm,19.2s,baz=110,slow=34								
URZ	**Urewera**	**22.75**	**190**	LR		LR		11 06 05.9	
	comp=Z,217nm,19.5s,baz=30,slow=31								
PPT	**Papeete**	**27.22**	**98**	LR		LR		11 07 23.3	
	comp=Z,121nm,21.8s,baz=280,slow=29								
PPT2	**Papeete2**	**27.22**	**98**	*e*LR		LR		11 06 00.8	
	comp=Z,352nm,26.0s								
TBI	**Tubuai**	**27.82**	**110**	*e*LR		LR		11 06 22.4	
	comp=Z,449nm,29.0s								
RPZ	**Rata Peaks**	**29.32**	**196**	LR		LR		11 10 06.4	
	comp=Z,138nm,21.0s,baz=36,slow=33								
CTA	**Charters Tower**	**34.27**	**258**	LR				11 12 54.9	
	comp=Z,118nm,19.8s,baz=80,slow=33								
CTAO	**Charters Tower**	**34.27**	**258**	P			**P**	**11 00 50.7**	**-1.4**
CTAO				IAmb		IAmb		11 01 04.2	
	comp=Z,6.9nm,1.1s								
STKA	**Stephens Creek**	**40.04**	**239**	P			**P**	**11 01 42.0**	**+1.1**
	comp=Z,5.2nm,1.1s,baz=67,slow=9.0,SNR=6.2								
	comp=Z,5.2nm,1.1s								
STKA	**Stephens Creek**	**40.04**	**239**	P			**P**	**11 01 40.1**	**-0.8**
WR0	**Warramunga Arr**	**45.29**	**257**	P			**P**	**11 02 22.1**	**-1.6**
WR0				IAmb		IAmb		11 02 49.6	
	comp=Z,7.6nm,1.4s								
WB0	**Warramunga Arr**	**45.43**	**258**	P			**P**	**11 02 23.4**	**-1.5**
WB2	**Warramunga Arr**	**45.47**	**257**	P			**P**	**11 02 23.2**	**-1.9**
WB2				IAmb		IAmb		11 03 00.1	
	comp=Z,5.9nm,1.3s								
WRA	**Warramunga Arr**	**45.48**	**257**	P			**P**	**11 02 25.8**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=92,slow=7.4,SNR=3.6								
WRA				LR		LR		11 19 25.0	
	comp=Z,67nm,19.3s,baz=92,slow=34								
	comp=Z,0.7nm,0.9s								
WRA	**Warramunga Arr**	**45.48**	**257**	P			**P**	**11 02 23.1**	**-2.1**
AS31	**Alice Springs**	**45.81**	**252**	P			**P**	**11 02 26.6**	**-1.2**
AS31				IAmb		IAmb		11 02 38.1	
	comp=Z,1.2nm,0.8s								
ASAR	**Alice Springs**	**45.81**	**252**	P			**P**	**11 02 28.1**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=84,slow=8.2,SNR=32								
ASAR				LR		LR		11 20 08.7	
	comp=Z,154nm,21.1s,baz=128,slow=34								
	comp=Z,2.1nm,0.7s								
ASAR	**Alice Springs**	**45.81**	**252**	P			**P**	**11 02 26.6**	**-1.2**
SIJI	**Sorong**	**52.23**	**281**	LR		LR		11 24 29.0	
	comp=Z,76nm,21.1s,baz=69,slow=35								
FITZ	**Fitzroy Crossi**	**53.83**	**259**	P			**P**	**11 03 27.8**	**-1.0**
BATI	**Baumata**	**57.02**	**268**	LR		LR		11 26 49.2	
	comp=Z,129nm,19.3s,baz=159,slow=34								
DAV	**Davao City (W)**	**60.37**	**288**	LR		LR		11 29 00.7	
	comp=Z,28nm,18.6s,baz=136,slow=35								
KAPI	**Kappang**	**62.02**	**273**	LR		LR		11 29 54.7	
	comp=Z,36nm,19.9s,baz=95,slow=35								
SBA	**Scott Base**	**62.50**	**184**	P			**P**	**11 04 28.6**	**+0.1**
SBA				IAmb		IAmb		11 05 00.9	
	comp=Z,4.5nm,1.4s								
RPN	**Rapa Nui**	**64.16**	**113**	LR		LR		11 25 15.0	
	comp=Z,69nm,18.9s,baz=265,slow=29								
KSRS	**Korea Array**	**73.47**	**318**	LR		LR		11 32 29.5	
	comp=Z,23nm,21.7s,baz=125,slow=32								
QSPA	**South Pole Qui**	**74.20**	**180**	P			**P**	**11 05 41.5**	**-0.5**
QSPA				IAmb		IAmb		11 05 50.1	
	comp=Z,6.2nm,1.4s								
PFO	**Pinyon Flats O**	**76.47**	**49**	LR		LR		11 35 44.5	
	comp=Z,29nm,18.4s,baz=358,slow=33								
YBH	**Yreka Blue Hor**	**76.65**	**39**	LR		LR		11 33 34.3	
	comp=Z,29nm,18.8s,baz=190,slow=31								
NVAR	**Mina Array Bea**	**77.64**	**44**	P			**P**	**11 06 02.9**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=226,slow=9.6,SNR=14								
	comp=Z,1.2nm,0.8s								
BBB	**Bella Bella**	**80.30**	**29**	LR		LR		11 34 00.7	
	comp=Z,34nm,19.7s,baz=188,slow=30								
ELK	**Elko**	**80.86**	**45**	LR		LR		11 34 26.6	
	comp=Z,28nm,19.8s,baz=142,slow=30								
NEW	**Newport**	**83.59**	**36**	LR		LR		11 38 21.6	
	comp=Z,30nm,18.6s,baz=90,slow=32								
DLBC	**Dease Lake**	**83.77**	**23**	LR		LR		11 37 01.5	
	comp=Z,68nm,19.6s,baz=186,slow=31								
ILAR	**Eielson Array**	**83.79**	**13**	P			**P**	**11 06 34.1**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=231,slow=5.0,SNR=6.1								
ILAR				LR		LR		11 35 25.1	
	comp=Z,29nm,20.4s,baz=320,slow=30								
	comp=Z,1.1nm,1.0s								
ANMO	**Albuquerque**	**84.47**	**52**	LR		LR		11 37 05.3	
	comp=Z,61nm,18.4s,baz=93,slow=31								
TXAR	**Lajitas Array**	**84.52**	**58**	P			**P**	**11 06 39.8**	**+0.9**
	comp=Z,0.7nm,1.0s,baz=215,slow=6.2,SNR=5.4								
TXAR				LR		LR		11 38 16.3	
	comp=Z,42nm,18.7s,baz=57,slow=31								
	comp=Z,0.7nm,1.0s								
PDAR	**Pinedale Array**	**85.56**	**43**	P			**P**	**11 06 44.1**	**+0.1**
	comp=Z,1.2nm,1.1s,baz=194,slow=3.1,SNR=5.5								
PDAR				LR		LR		11 38 38.2	
	comp=Z,41nm,18.8s,baz=40,slow=31								
	comp=Z,1.2nm,1.1s								
YAK	**Yakutsk**	**87.84**	**338**	LR		LR		11 44 18.5	
	comp=Z,29nm,19.3s,baz=78,slow=34								
CMIG	**Matias Romero**	**88.17**	**72**	LR		LR		11 37 56.4	
	comp=Z,34nm,18.7s,baz=83,slow=30								
CMAR	**Chiang Mai Arr**	**88.61**	**290**	LR		LR		11 43 51.9	
	comp=Z,22nm,20.0s,baz=250,slow=34								
INK	**Inuvik**	**89.79**	**15**	LR		LR		11 44 42.9	
	comp=Z,35nm,18.6s,baz=188,slow=34								
YKA	**Yellowknife Ar**	**92.28**	**25**	LR		LR		11 41 06.0	
	comp=Z,62nm,20.1s,baz=265,slow=31								
ATAH	**Atahualpa**	**97.18**	**99**	LR		LR		11 42 20.6	
	comp=Z,53nm,18.4s,baz=243,slow=30								
NNA	**Nana**	**97.20**	**105**	LR		LR		11 42 02.8	
	comp=Z,18nm,20.1s,baz=259,slow=30								
BRTR	**Keskin Array B**	**143.62**	**317**	PKP			**PKPdf**	**11 13 41.4**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=107,slow=1.3,SNR=4.9								
GERES	**GERESS Array B**	**145.73**	**346**	PKPbc			**PKPab**	**11 13 44.7**	**0.0**
	comp=Z,0.3nm,0.2s,baz=60,slow=5.8,SNR=3.9								

DDA 23 10:54:53.8±0.0, 38°.41N×29°.78E, h7km±3km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PASA	**Karahalli, USA**	**0.23**	**256**	P			Pg	10 54 59.1	+0.7
PASA				S			Sg	10 55 02.7	+1.1
KZIL	**AFYON_Kizioren**	**0.32**	**117**	P			Pg	10 55 00.4	+0.3
KZIL				*i* AML		AML		10 55 05.0	
	comp=E,85nm,0.3s								
KZIL				S			Sg	10 55 05.2	+0.7
KZIL				*i* AML		AML		10 55 06.0	
	comp=N,58nm,0.3s								
USAK	**Uak-Merkez**	**0.67**	**298**	P			Pb	10 55 07.6	-0.3
USAK				S			Sg	10 55 16.0	+0.5
USAK				*i* AML		AML		10 55 23.0	
	comp=N,26nm,0.3s								
USAK				*i* AML		AML		10 55 37.0	
	comp=E,44nm,1.3s								
BRDR	**BURDUR-Merkez**	**0.74**	**162**	P			Pb	10 55 08.6	-0.5
BRDR				S			Sb	10 55 19.4	0.0
BRDR				*i* AML		AML		10 55 22.0	
	comp=N,42nm,0.5s								
BRDR				*i* AML		AML		10 55 22.0	
	comp=E,21nm,0.4s								
MANT	**Manisa**	**0.96**	**275**	P			Pb	10 55 12.8	-0.1
MANT				S			Sg	10 55 24.7	-0.1
MANT				*i* AML		AML		10 55 56.0	
	comp=E,15nm,1.7s								

BUC 23 10:56:58.7±0.4, 45°.73N×26°.77E, h112km±3km, ml3.5/28, 80C-64D, Error ellipse: s-maj=2.1km s-min=1.8km az=156.0, Romania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
VRI	**Vrincioaia**	**0.14**	**349**	↑P			Pn	10 57 14.9	+0.7
VRI				↑S			Sn	10 57 26.3	+0.4
VRI	**Vrincioaia**	**0.14**	**349**	↑P			Pn	10 57 14.9	+0.7
VRI				↑S			Sn	10 57 26.3	+0.4
PLOR	**Plostina**	**0.14**	**326**	↑P			Pn	10 57 14.8	+0.6
PLOR				↑S			Sn	10 57 26.6	+0.6
PLOR	**Plostina**	**0.14**	**326**	↑P			Pn	10 57 14.8	+0.6
PLOR				↑S			Sn	10 57 26.6	+0.6
NEHR	**Nehoiu**	**0.45**	**228**	↑P			Pn	10 57 15.5	+0.1
NEHR				↑S			Sn	10 57 28.8	+0.8
NEHR	**Nehoiu**	**0.45**	**228**	↑P			Pn	10 57 15.5	+0.1
NEHR				↑S			Sn	10 57 28.8	+0.8
GHRR		**0.56**	**53**	↓P			Pn	10 57 16.8	+0.7
GHRR				↓S			Sn	10 57 30.4	+1.2
GHRR		**0.56**	**53**	↓P			Pn	10 57 16.8	+0.7
GHRR				↓S			Sn	10 57 30.4	+1.2
MLR	**Muntele Rosu**	**0.62**	**248**	↑P			Pn	10 57 17.6	+0.9
MLR				↑S			Sn	10 57 31.0	+0.7
MLR	**Muntele Rosu**	**0.62**	**248**	↑P			Pn	10 57 17.6	+0.9
MLR				↑S			Sn	10 57 31.0	+0.7
ISR	**Istrita**	**0.63**	**194**	↑P			Pn	10 57 17.6	+0.8
ISR				↑S			Sn	10 57 31.5	+1.2
ISR	**Istrita**	**0.63**	**194**	↑P			Pn	10 57 17.6	+0.8
ISR				↑S			Sn	10 57 31.5	+1.2
TUDR		**0.65**	**102**	↑P			Pn	10 57 17.4	+0.7
TUDR				↑S			Sn	10 57 31.5	+1.2
TUDR		**0.65**	**102**	↑P			Pn	10 57 17.4	+0.7
TUDR				↑S			Sn	10 57 31.5	+1.2
SLCR	**Slobozia Conac**	**0.72**	**101**	↑P			Pn	10 57 31.5	+0.1
SLCR	**Slobozia Conac**	**0.72**	**101**	↑S			Sn	10 57 31.5	+0.1
IZVR	**Izvoarele**	**0.73**	**105**	↑P			Pn	10 57 17.9	+0.5
IZVR				↓S			Sn	10 57 32.0	+0.5
IZVR	**Izvoarele**	**0.73**	**105**	↑P			Pn	10 57 17.9	+0.5
IZVR				↓S			Sn	10 57 32.0	+0.5
OZUR		**0.78**	**298**	↑P			Pn	10 57 18.1	+0.2
OZUR				↑S			Sn	10 57 32.0	-0.4
OZUR		**0.78**	**298**	↑P			Pn	10 57 18.1	+0.2
OZUR				↑S			Sn	10 57 32.0	-0.4
VARL	**Varlezi**	**0.78**	**77**	↑S			Sn	10 57 32.4	+0.1
VARL	**Varlezi**	**0.78**	**77**	↑S			Sn	10 57 32.4	+0.1
TESR	**Tescani**	**0.79**	**354**	↓P			Pn	10 57 18.1	+0.1
TESR				↓S			Sn	10 57 31.6	-0.8
TESR	**Tescani**	**0.79**	**354**	↓P			Pn	10 57 18.1	+0.1
TESR				↓S			Sn	10 57 31.6	-0.8
BIR	**Birlad**	**0.80**	**48**	↓P			Pn	10 57 18.0	-0.1
BIR				↓S			Sn	10 57 33.4	+0.6
BIR	**Birlad**	**0.80**	**48**	↓P			Pn	10 57 18.0	-0.1
BIR				↓S			Sn	10 57 33.4	+0.6
PGOR	**Pogoanele**	**0.84**	**169**	↑P			Pn	10 57 19.5	+1.1
PGOR	**Pogoanele**	**0.84**	**169**	↑P			Pn	10 57 19.5	+1.1
SECR		**0.85**	**216**	↑P			Pn	10 57 19.8	+1.2
SECR				↑S			Sn	10 57 33.6	0.0
SECR		**0.85**	**216**	↑P			Pn	10 57 19.8	+1.2
SECR				↑S			Sn	10 57 33.6	0.0
SCTR	**Scanteiesti**	**0.86**	**93**	↓P			Pn	10 57 19.4	+0.8
SCTR				↓S			Sn	10 57 33.7	0.0
SCTR	**Scanteiesti**	**0.86**	**93**	↓P			Pn	10 57 19.4	+0.8
SCTR				↓S			Sn	10 57 33.7	0.0
TATR	**Tatarca**	**0.91**	**98**	↑P			Pn	10 57 19.9	+0.8
TATR				↓S			Sn	10 57 35.0	+0.5
TATR	**Tatarca**	**0.91**	**98**	↑P			Pn	10 57 19.9	+0.8
TATR				↓S			Sn	10 57 35.0	+0.5
VLDR	**Vladesti**	**0.93**	**83**	↑P			Pn	10 57 20.0	+0.8
VLDR				↑S			Sn	10 57 35.3	+0.5
VLDR	**Vladesti**	**0.93**	**83**	↑P			Pn	10 57 20.0	+0.8
VLDR				↑S			Sn	10 57 35.3	+0.5
DOPR	**Dopca**	**0.99**	**284**	↑P			Pn	10 57 20.2	+0.3
DOPR				↑S			Sn	10 57 36.0	0.0
DOPR	**Dopca**	**0.99**	**284**	↑P			Pn	10 57 20.2	+0.3
DOPR				↑S			Sn	10 57 36.0	0.0
GIUM	**Giurgiulesti**	**1.04**	**103**	↓P			Pn	10 57 21.0	+0.6
GIUM				↓S			Sn	10 57 36.4	-0.4
GIUM	**Giurgiulesti**	**1.04**	**103**	↓P			Pn	10 57 21.0	+0.6
GIUM				↓S			Sn	10 57 36.4	-0.4
CFR	**Carcaliu**	**1.11**	**119**	↓P			Pn	10 57 21.7	+0.6
CFR				↓S			Sn	10 57 38.3	+0.2
CFR	**Carcaliu**	**1.11**	**119**	↓P			Pn	10 57 21.7	+0.6
CFR				↓S			Sn	10 57 38.3	+0.2
SULR		**1.11**	**199**	↓P			Pn	10 57 21.2	+0.1
SULR				↓S			Sn	10 57 38.8	+0.7
SULR		**1.11**	**199**	↓P			Pn	10 57 21.2	+0.1
SULR				↓S			Sn	10 57 38.8	+0.7
VASR	**Vaslui**	**1.16**	**38**	↓S			Sn	10 57 39.1	0.0
VASR	**Vaslui**	**1.16**	**38**	↓S			Sn	10 57 39.1	0.0
AMRR	**Amara**	**1.19**	**160**	↓S			Sn	10 57 40.4	+0.7
AMRR	**Amara**	**1.19**	**160**	↓S			Sn	10 57 40.4	+0.7
VOIR		**1.24**	**257**	↑P			Pn	10 57 22.9	+0.2
VOIR				↑S			Sn	10 57 40.3	-0.5
VOIR		**1.24**	**257**	↑P			Pn	10 57 22.9	+0.2
VOIR				↑S			Sn	10 57 40.3	-0.5
LEHL	**Lehliu**	**1.26**	**178**	↑S			Sn	10 57 42.0	+1.0
LEHL	**Lehliu**	**1.26**	**178**	↑S			Sn	10 57 42.0	+1.0
LEOM	**Leova**	**1.27**	**54**	↓P			Pn	10 57 23.3	+0.4
LEOM				↓S			Sn	10 57 41.7	+0.5
LEOM	**Leova**	**1.27**	**54**	↓P			Pn	10 57 23.3	+0.4
LEOM				↓S			Sn	10 57 41.7	+0.5
HARR	**Harsova**	**1.33**	**141**	↑P			Pn	10 57 24.0	+0.5
HARR	**Harsova**	**1.33**	**141**	↑P			Pn	10 57 24.0	+0.5
TPGR	**Topolog**	**1.46**	**126**	↑P			Pn	10 57 24.9	-0.2
TPGR				↑S			Sn	10 57 44.6	-0.6
TPGR	**Topolog**	**1.46**	**126**	↑P			Pn	10 57 24.9

	comp=N,346nm,0.3s					
MTP	**Monte Pirata**	**1.62**	**217**	Pn	**Pb**	**11 09 17.8 -1.0**
MTP				IAML		11 09 41.9
	comp=N,291nm,0.1s					
MTP				IAML		11 09 42.4
	comp=E,340nm,0.3s					
CDVI	**St. Croix**	**1.65**	**188**		**Pb**	**11 09 19.6 +0.2**
CDVI	**St. Croix**	**1.65**	**188**	*eP*	**Pb**	**11 09 19.7 +0.3**
CDVI				*eS*	**Sb**	**11 09 41.1 +1.4**
CBYP	**Canovanas**	**1.69**	**229**	⇓*eP*	**Pb**	**11 09 18.5 -1.5**
CBYP	**Canovanas**	**1.69**	**229**		**Pb**	**11 09 18.5 -1.5**
CBYP	**Canovanas**	**1.69**	**229**	IAML		11 09 34.7
	comp=E,610nm,0.2s					
HUMP	**Col San Antoni**	**1.77**	**226**	⇑*eP*	**Pb**	**11 09 20.1 -1.3**
HUMP	**Col San Antoni**	**1.77**	**226**		**Pb**	**11 09 20.1 -1.3**
HUMP	**Col San Antoni**	**1.77**	**226**	IAML		11 09 46.2
	comp=N,381nm,0.2s					
GCPR	**Guaynabo City**	**1.83**	**234**	⇑*eP*	**Pb**	**11 09 20.4 -2.0**
GCPR	**Guaynabo City**	**1.83**	**234**	*eS*	**Sb**	**11 09 42.1 -2.9**
GCPR	**Guaynabo City**	**1.83**	**234**		**Pb**	**11 09 20.4 -2.0**
GCPR					**Sb**	**11 09 42.1 -2.9**
SMRT	**St. Maarten**	**1.92**	**134**	Pn	**Pb**	**11 09 24.1 +0.3**
SMRT				IAML		11 09 58.5
	comp=N,266nm,0.2s					
SMRT				IAML		11 10 03.2
	comp=E,291nm,0.3s					
SMRT	**St. Maarten**	**1.92**	**134**	*eP*	**Pb**	**11 09 25.1 +1.3**
SMRT				*eS*	**Sb**	**11 09 46.9 -0.4**
SJG	**San Juan**	**2.01**	**231**		**Pb**	**11 09 23.2 -2.1**
SJG				IAML		11 09 54.9
	comp=E,151nm,0.5s					
SJG				IAML		11 09 59.9
	comp=E,138nm,0.4s					
IGPR	**InterUniversit**	**2.07**	**227**	⇑*eP*	**Pb**	**11 09 24.3 -2.1**
EMPR	**Esperanza - Ma**	**2.11**	**245**	⇑*eP*	**Pb**	**11 09 25.2 -2.0**
EMPR	**Esperanza - Ma**	**2.11**	**245**	*eS*	**Sn**	**11 09 49.6 +1.1**
EMPR	**Esperanza - Ma**	**2.11**	**245**		**Pb**	**11 09 25.3 -1.8**
EMPR	**Esperanza - Ma**	**2.11**	**245**		**Sn**	**11 09 49.6 +1.1**
CELP	**Cerrillos**	**2.35**	**236**		**Pn**	**11 09 28.3 +1.8**
CELP				IAML		11 10 02.4
	comp=N,106nm,0.9s					
CELP				IAML		11 10 12.0
	comp=E,76nm,0.5s					
AOPR	**Arecibo Observ**	**2.36**	**244**	⇓*eP*	**Pn**	**11 09 28.6 +2.0**
AOPR	**Arecibo Observ**	**2.36**	**244**	*eS*	**Sn**	**11 09 56.1 +1.4**
AOPR	**Arecibo Observ**	**2.36**	**244**		**Pn**	**11 09 28.6 +2.0**
AOPR					**Sn**	**11 09 56.1 +1.4**
AOPR	**Arecibo Observ**	**2.36**	**244**	*eP*	**Pn**	**11 09 28.2 +1.6**
AOPR				*eS*	**Sb**	**11 09 58.8 -1.3**
OBIP	**Obispado Ponce**	**2.39**	**236**		**Pn**	**11 09 28.0 +1.0**
ICMP	**Isla Caja de M**	**2.43**	**232**		**Pb**	**11 09 31.7 -0.8**
SKI	**Saint Kitts**	**2.66**	**140**	*eP*	Pb	11 09 42.2 +5.6
SKI				*eS*	**Sb**	**11 10 05.1 -3.7**
MLPR	**Magueyes Islan**	**2.78**	**240**		**Pn**	**11 09 33.9 +1.5**
CRPR	**Cabo Rojo, PR**	**2.82**	**241**	⇑*eP*	**Pn**	**11 09 35.1 +2.3**
CRPR	**Cabo Rojo, PR**	**2.82**	**241**	*eS*	**Sn**	**11 10 06.5 +0.6**
CRPR	**Cabo Rojo, PR**	**2.82**	**241**		**Pn**	**11 09 35.1 +2.3**
CRPR					**Sn**	**11 10 06.5 +0.6**
ANWB	**Willy Bob**	**3.11**	**123**	*eP*	**Pn**	**11 09 39.7 +2.8**
ANWB				*eS*	**Sn**	**11 10 13.6 +0.4**
MBFL	**Flemmings, Mon**	**3.43**	**140**	*eP*	**Pb**	**11 09 46.5 -3.1**
MLYT	**Lee's Yard**	**3.46**	**140**	*eP*	**Pb**	**11 09 47.2 -3.0**
ANBD	**Bethesda, Anti**	**3.51**	**131**	*eP*	**Pn**	**11 09 44.9 +2.5**
ANBD				*eS*	**Sn**	**11 10 23.7 +0.7**
ABD	**La Joyeuse, An**	**4.09**	**135**	*eP*	**Pb**	**11 09 58.5 -2.5**
TDBA	**Terre de Bas,**	**4.47**	**142**	*eP*	Pn	11 09 59.9 +4.2
MAGL	**Barre de l'ile**	**4.61**	**138**	Pn	**Pn**	**11 09 56.4 -1.1**
MAGL	**Barre de l'ile**	**4.61**	**138**	*eP*	**Pn**	**11 10 01.0 +3.5**
DR12	**Loma Pena Alta**	**4.64**	**263**	Pn	**Pn**	**11 09 59.7 +1.7**
DSLB	**Salisbury**	**4.92**	**143**	*eP*	**Pn**	**11 10 05.5 +3.6**
SDDR	**Presa de Saban**	**6.41**	**267**	Pn	**Pn**	**11 10 26.5 +4.2**
GRGR	**Grenville**	**7.73**	**159**	Pn	**Pn**	**11 10 41.5 +1.1**

*IDC **23** 11:09:07.1±1.9,4.°22N×126.°96E,h0km,mb3.6/5, mbtmp3.7/5,MS2.9/2,Error ellipse: s-maj=104.9km s-min=27.0km az=68.0*

ISC 23 11:09:12.0±1.4,**4.°2N**±0.°2×**126.°9E**±0.°4,**h36**km,**n9,**σ0⁽⁶⁾**85**/7, **mb3.5**/5,**1C-1D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.71**	**314**	⇑*eP*	**Pn**	**11 09 52.9**	**-0.3**
KCP	**Kidapawan**	**3.34**	**327**	⇓*iP*	**Pn**	**11 10 01.4**	**-0.3**
KCP				*iS*	Sn	11 10 50.2	+10
KAPI	**Kappang**	**11.61**	**218**	LR	LR	11 16 59.0	
	comp=Z,55nm,20.2s,baz=66,slow=40						
FITZ	**Fitzroy Crossi**	**22.18**	**183**	P	**P**	**11 14 05.5**	**+0.3**
	1.9nm,0.6s,baz=340,slow=12,SNR=5.1 1.9nm,0.6s						
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**11 14 34.2**	**+0.9**
	0.9nm,0.7s,baz=343,slow=10,SNR=9.6 0.9nm,0.7s						
ASAR	**Alice Springs**	**28.51**	**166**	P	**P**	**11 15 04.8**	**+0.5**
	0.4nm,0.6s,baz=344,slow=6.9,SNR=7.2 0.4nm,0.6s						
MJAR	**Matsushiro Arr**	**33.84**	**16**	LR	LR	11 32 15.2	
	comp=Z,21nm,18.5s,baz=135,slow=41						
STKA	**Stephens Creek**	**38.49**	**160**	P	**P**	**11 16 29.8**	**-1.1**
	1.4nm,0.8s,baz=326,slow=11,SNR=4.1 1.4nm,0.8s						
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**11 18 56.8**	**+0.6**
	0.2nm,0.4s,baz=132,slow=8.1,SNR=2.8 0.2nm,0.4s						

IDC 23 11:13:01.9±4.8,**55.°31S**×**31.°59W,h0**km,**mb3.7**/2, **mbtmp3.7**/2,**MS3.6**/1,**Error ellipse: s-maj=162.6km s-min=56.5km az=178.0,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**34.94**	**180**	LR	LR	11 32 26.2	
	comp=Z,79nm,18.4s,baz=139,slow=33						
LPAZ	**La Paz**	**47.95**	**310**	P	P	11 21 42.7	-0.1
	0.8nm,0.5s,baz=149,slow=5.9,SNR=4.2 0.8nm,0.5s						
H10S2	**ASCENSION HYDR**	**48.15**	**23**	T	T	12 13 17.8	
	baz=192						
H10S3	**ASCENSION HYDR**	**48.15**	**23**	T	T	12 13 15.4	
	baz=28						
H10N1	**ASCENSION HYDR**	**49.26**	**23**	T	T	12 14 39.5	
	baz=192,slow=75,SNR=5.8						
H10N3	**ASCENSION HYDR**	**49.26**	**23**	T	T	12 14 42.4	
	baz=192,slow=75,SNR=27						
H10N2	**ASCENSION HYDR**	**49.28**	**23**	T	T	12 14 43.7	
	baz=192,slow=75,SNR=7.6						
TORD	**Torodi Ar. Bea**	**73.73**	**34**	P	P	11 24 37.6	0.0
	0.3nm,0.6s,baz=194,slow=5.3,SNR=2.1 0.3nm,0.6s						
ILAR	**Eielson Array**	**147.78**	**313**	PKPbc	PKPbc	11 32 46.4	-0.7
	0.5nm,0.8s,baz=103,slow=1.9,SNR=2.9						

*IDC **23** 11:45:43.3±1.8,16.°37S×176.°57W,h346km±28km,mb3.2/5, mbtmp4.0/6,Error ellipse: s-maj=35.8km s-min=23.3km az=147.0*

ISC 23 11:45:45.5±0.9,**16.°5S**±0.°3×**176.°3W**±0.°2,**h379**km,**n7,** σ1⁽⁹⁾**89**/8,**mb3.1**/5,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.02**	**60**	P	**Pn**	**11 47 06.4**	**-0.4**
	47nm,0.8s,baz=288,slow=20,SNR=8.9						
AFI				S	**S**	**11 48 11.6**	**-1.1**
	53nm,0.9s,baz=203,slow=23,SNR=3.1						
MSVF	**Nonsavu**	**5.59**	**256**	P	**Pn**	**11 47 14.9**	**+2.0**
	12nm,0.7s,baz=80,slow=15,SNR=4.9						
URZ	**Urewera**	**22.48**	**194**	P	**P**	**11 50 14.3**	**+0.5**
	6.2nm,1.0s,baz=307,slow=5.1,SNR=6.3 6.2nm,1.0s						
STKA	**Stephens Creek**	**41.12**	**240**	P	**P**	**11 52 52.7**	**-1.7**
	0.8nm,0.7s,baz=98,slow=15,SNR=3.0 0.8nm,0.7s						
WRA	**Warramunga Arr**	**46.93**	**258**	P	**P**	**11 53 38.3**	**-1.8**
	0.7nm,0.6s,baz=92,slow=7.5,SNR=34 0.7nm,0.6s						
ASAR	**Alice Springs**	**47.17**	**253**	P	**P**	**11 53 40.9**	**-1.1**
	3.9nm,0.3s,baz=90,slow=8.0,SNR=117 3.9nm,0.3s						
TXAR	**Lajitas Array**	**83.49**	**57**	P	**P**	**11 57 34.5**	**+2.3**
	0.2nm,0.7s,baz=215,slow=5.5,SNR=3.7 0.2nm,0.7s						

JMA 23 11:53:31.8±0.1,**24.°3N**±0.°6×**123.°5E**±0.°3,**h19**km±1km, **MV1.2/8,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.20**	**79**	P	Pg	11 53 36.6	-0.2
IRIF				S	Sg	11 53 40.3	+0.1
HATJ	**Hateruma jima**	**0.35**	**133**	P	Pg	11 53 39.0	-0.3
HATJ				*eS*	Sg	11 53 44.1	-0.3
JKRS	**Kuro-shima**	**0.45**	**97**	P	Pg	11 53 41.0	0.0
JKRS				S	Sb	11 53 47.9	+0.3
YOJ	**Yonaguni jima**	**0.49**	**290**	P	Pg	11 53 41.6	-0.2
YOJ				*eS*	Sg	11 53 48.4	-0.2
JIJ	**Ishigaki jima**	**0.57**	**83**	P	Pb	11 53 42.5	-0.6
JIJ				S	Sb	11 53 50.6	-0.3
JTJ	**Tarama**	**1.13**	**72**	*eP*	Pn	11 53 52.6	0.0
JTJ				*eS*	Sn	11 54 08.1	+0.5

TAP 23 11:54:08.2,23.°79N×121.°42E,h9km,**ML1.4,1C,A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.03**	**28**	*iP*	Pg	11 54 10.7	+0.8
	baz=40						
ESL				*iS*	Sg	11 54 11.5	+0.4
	baz=40						
EGFH	**Guangfu**	**0.12**	**175**	*iP*	Pg	11 54 11.5	+0.7
	baz=174						
EGFH				*iS*	Sg	11 54 13.2	+0.4
	baz=174						
TEGC	**Jichi Village**	**0.14**	**124**	P	Pg	11 54 11.7	+0.5
	baz=122						
TEGC				S	Sg	11 54 15.3	+2.0
	baz=122						
TEYL	**Yanliau Villag**	**0.19**	**64**	P	Pg	11 54 14.0	+2.0
	baz=55						
ETM	**Tongmen**	**0.19**	**21**	P	Pg	11 54 12.9	+0.7
	baz=21						
ETM				S	Sg	11 54 16.0	+1.0
	baz=21						
VWDT	**VWDT**	**0.25**	**263**	P	Pb	11 54 14.3	-0.6
	baz=263						
VWDT				S	Sb	11 54 18.2	-1.2
	baz=263						
HWA	**Hwalien**	**0.26**	**42**	*eS*	Sg	11 54 18.2	+1.3
	baz=43						
OWD	**Renai**	**0.28**	**308**	*iP*	Pb	11 54 14.9	-0.5
	baz=307						
OWD				S	Sg	11 54 18.2	+0.7
	baz=307						
HGSD	**Ruisui**	**0.29**	**179**	P	Pb	11 54 14.8	-0.8
	baz=178						
HGSD				S	Sb	11 54 19.9	-0.6
	baz=178						
TWD	**Chiawan**	**0.34**	**29**	*iP*	Pb	11 54 16.0	-0.4
	baz=30						
TWD				S	Sb	11 54 20.7	-1.2
	baz=30						
WUSB	**Renai**	**0.34**	**307**	P	Pb	11 54 16.2	-0.3
	baz=307						
WUSB				S	Sb	11 54 20.9	-1.2
	baz=307						
CHGB	**Renai**	**0.35**	**321**	P	Pb	11 54 16.8	0.0
	baz=321						
CHGB				S	Sg	11 54 21.2	+1.2
	baz=321						
WHF	**Hehuan Shan**	**0.38**	**339**	P	Pb	11 54 17.4	0.0
	baz=339						
WHF				*iS*	Sb	11 54 23.2	-0.5
	baz=339						
YULB	**Yu-li**	**0.41**	**196**	P	Pg	11 54 16.3	+0.2
	baz=195						
YULB				S	Sg	11 54 22.1	+0.6
	baz=195						
NACB	**Ninganchiao**	**0.42**	**23**	P	Pb	11 54 17.3	-0.5
	baz=22						
NACB				S	Sb	11 54 23.8	-0.5
	baz=22						
SSLB	**Suanglung**	**0.42**	**270**	⇑P	Pb	11 54 17.5	-0.4
	baz=270						
SSLB				S	Sg	11 54 22.6	+0.6
	baz=270						
ETLH	**Xiulin Townshi**	**0.42**	**8**	*eP*	Pb	11 54 17.7	-0.2
	baz=8.0						
ETLH				*eS*	Sg	11 54 23.2	+1.0
	baz=8.0						
EYUL	**Yuli**	**0.45**	**192**	*eP*	Pb	11 54 17.8	-0.4
	baz=191						
EYUL				*eS*	Sb	11 54 24.1	-0.8
	baz=191						
SMLT	**Sun Moon Lake**	**0.48**	**282**	*iP*	Pb	11 54 19.0	+0.1
	baz=281						
SMLT				S	Sb	11 54 25.6	-0.6
	baz=281						
FUSS	**Fushou**	**0.49**	**341**	*eP*	Pb	11 54 18.7	-0.4
	baz=341						
FUSS				S	Sb	11 54 26.3	-0.1
	baz=341						
YUS	**Yu-Shan**	**0.52**	**235**	*iP*	Pb	11 54 19.5	-0.2
	baz=234						
YUS				S	Sb	11 54 27.3	-0.3
	baz=234						
WCS	**Beigang Elemen**	**0.54**	**301**	*eP*	Pg	11 54 18.7	+0.1
	baz=300						
FULB	**Fuli**	**0.59**	**191**	P	Pb	11 54 21.7	+0.9
	baz=190						
FULB				S	Sb	11 54 30.2	+0.9
	baz=190						
ALS	**Alishan**	**0.62**	**244**	*iP*	Pb	11 54 21.5	+0.1
	baz=243						
ALS				S	Sb	11 54 29.9	-0.5
	baz=243						
WJS	**Zhushan**	**0.63**	**273**	*eP*	Pn	11 54 22.6	-0.7
	baz=273						
WJS				*eS*	Sb	11 54 31.5	+1.2
	baz=273						
NNSB	**Datong**	**0.64**	**357**	P	Pn	11 54 22.8	-0.8
	baz=357						
NNSB				*eS*	Sb	11 54 30.4	-0.3
	baz=357						
NNS	**Nan Shan**	**0.65**	**357**	*eS*	Sb	11 54 30.4	-0.7
	baz=357						
ELDTW	**Lidau**	**0.70**	**212**	*eS*	Sg	11 54 31.2	+0.4
	baz=211						
LATG	**Datong**	**0.75**	**8**	*eP*	Pb	11 54 24.0	+0.5
	baz=7.0						
LATG				*eS*	Sb	11 54 35.0	+1.0
	baz=7.0						
EDH	**Donghe**	**0.81**	**187**	*eP*	Pb	11 54 24.3	-0.2
	baz=187						
NDT	**Datong Townshi**	**0.82**	**6**	*eP*	Pb	11 54 25.2	+0.6
	baz=6.0						
NDT				*eS*	Sb	11 54 36.5	+0.7
	baz=6.0						
ENTT	**Nioudou**	**0.86**	**9**	*eP*	Pb	11 54 25.8	+0.5
	baz=9.0						
ENTT				*eS*	Sb	11 54 37.9	+0.9
	baz=9.0						
TPUB	**Ta-pu**	**0.87**	**236**	*eP*	Pb	11 54 26.0	+0.6
	baz=236						
YHNB	**Yeheng**	**0.88**	**358**	*eP*	Pb	11 54 26.1	+0.4
	baz=357						
YHNB				*eS*	Sb	11 54 38.3	+0.6
	baz=357						
NFF	**Wufeng Townshi**	**0.89**	**342**	*eS*	Sb	11 54 38.1	+0.4
	baz=342						
NDS	**Dongshan**	**0.89**	**18**	*eP*	Pg	11 54 25.5	+0.2
	baz=17						
NDS				*eS*	Sn	11 54 39.2	-0.7
	baz=17						
NSK	**Sanguang**	**0.89**	**357**	*eS*	Sb	11 54 38.4	+0.5
	baz=357						
FUSB	**Fushanzhiwuyua**	**0.98**	**9**	*eP*	Pn	11 54 29.0	+0.7
	baz=9.0						

*NEIC **23** 11:57:29.2±1.7,30.°33S±0.°05×72.°36W±0.°03,h9km±6km, mb4.4/3,ML3.5(GUC),Error ellipse: s-maj=7.2km s-min=3.4km az=201.0*

*GUC **23** 11:57:31.1±0.7,30.°40S×72.°28W,h39km±4km,ML3.5*

ISC 23 11:57:29.9±1.7,**30.°35S**±0.°05×**72.°33W**±0.°07,**h15**km±10km, **n44,**σ0⁽⁹⁾**80**/49,**mb4.3**/3,**4D,Off coast of central Chile**

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

CO06	**Fray Jorge**	**0.68**	**119**		**Pg**	**11 57 43.0 -0.2**
CO06				Sg	**Sg**	**11 57 52.3 +0.2**
CO06	**Fray Jorge**	**0.68**	**119**	⇓*iP*	**Pg**	**11 57 43.0 -0.2**
CO06				*iS*	**Sb**	**11 57 52.5 -0.2**
CO06				IAML		11 57 55.6
	comp=N,3μm,0.6s					
CO05	**La Serena**	**1.03**	**66**		**Pb**	**11 57 49.3 -0.1**
CO05				Sg	**Sb**	**11 58 03.1 +0.2**
CO05	**La Serena**	**1.03**	**66**	*iP*	**Pb**	**11 57 49.4 -0.1**
CO05				IAML		11 58 07.1
	comp=E,2μm,0.3s					
GO04	**Tololo Observa**	**1.33**	**83**		**Pn**	**11 57 53.8 -0.4**
GO04	**Tololo Observa**	**1.33**	**83**	⇓*iP*	**Pn**	**11 57 53.9 -0.3**
GO04				*iS*	**Sb**	**11 58 11.7 -0.1**
CO02	**Combarbal**	**1.43**	**127**		**Pn**	**11 57 55.5 +0.1**
CO02				Sn	**Sn**	**11 58 13.4 -0.6**
CO02	**Combarbal**	**1.43**	**127**	⇓*iP*	**Pn**	**11 57 55.4 +0.1**
CO02				*iS*	**Sn**	**11 58 12.8 -1.2**
CO02				IAML		11 58 18.8
	comp=N,3μm,0.3s					
CO03	**El Pedregal**	**1.49**	**110**		**Pn**	**11 57 56.1 -0.3**
CO03	**El Pedregal**	**1.49**	**110**	⇓*iP*	**Pn**	**11 57 56.0 -0.3**
CO03				*iS*	**Sn**	**11 58 14.4 -1.3**
CO03				IAML		11 58 18.7
	comp=E,1μm,0.2s					
LCO	**Las Campanas**	**1.94**	**47**	*eP*	**Pn**	**11 58 03.5 +0.8**
CO01	**Juntas del Tor**	**1.97**	**80**		**Pn**	**11 58 04.2 +1.2**
CO01	**Juntas del Tor**	**1.97**	**80**	IAML		11 58 34.5
	comp=N,299nm,0.6s					
AC05	**El Transito**	**2.34**	**50**		**Pn**	**11 58 09.4 +1.5**
AC05	**El Transito**	**2.34**	**50**	*iP*	**Pn**	**11 58 09.4 +1.5**
AC05				IAML		11 58 47.3
	comp=N,290nm,0.4s					
VA06	**Catapilco**	**2.38**	**159**	Pn	**Pn**	**11 58 09.1 +0.8**
AC04	**Llanos de Chal**	**2.40**	**27**	Pn	**Pn**	**11 58 09.0 +0.3**
VA01	**Torpederas**	**2.73**	**168**	Pn	**Pn**	**11 58 13.7 +0.4**
VA03	**San Esteban**	**2.85**	**148**		**Pn**	**11 58 14.5 -0.4**
VA03	**San Esteban**	**2.85**	**148**	*eS*	**Sn**	**11 58 48.4 -0.7**
VA03				IAML		11 59 04.9
	comp=E,260nm,0.5s					
ROCH	**El Roble**	**2.85**	**157**	IAML		11 59 05.2
	comp=N,233nm,0.6s					
ROC1	**El Roble**	**2.85**	**157**		**Pn**	**11 58 15.1 -0.1**
MT02	**Curacav**	**3.08**	**161**	Pn	**Pn**	**11 58 17.8 -0.2**
PEL	**Peldehue**	**3.12**	**154**	Pn	**Pn**	**11 58 18.8 +0.1**
PEL	**Peldehue**	**3.12**	**154**	*eS*	**Sn**	**11 58 54.8 -0.9**
PEL				IAML		11 59 13.9
	comp=E,154nm,0.7s					
MT05	**Renca**	**3.32**	**156**	Pn	**Pn**	**11 58 22.2 +0.8**
VA05	**Santo Domingo**	**3.36**	**170**	Pn	**Pn**	**11 58 21.8 0.0**
AC06	**Mina Casimiro**	**3.44**	**31**	Pn	**Pn**	**11 58 23.1 0.0**
MT03	**Universidad Ad**	**3.50**	**154**	Pn	**Pn**	**11 58 24.3 +0.4**
MT09	**Talagante**	**3.60**	**162**	Pn	**Pn**	**11 58 26.2 +0.8**
MT01	**Popeta**	**3.62**	**166**		**Pn**	**11 58 26.3 +0.8**
LMEL	**Las Melosas**	**3.93**	**153**	Pn	**Pn**	**11 58 31.2 +1.4**
AC01	**Pan de Azucar**	**4.45**	**20**	Pn	**Pn**	**11 58 36.6 -0.3**
AC02	**Maricunga**	**4.49**	**40**	Pn	**Pn**	**11 58 39.3 +1.4**
BO02	**Sierra Bellavi**	**4.62**	**164**	Pn	**Pn**	**11 58 40.5 +1.2**
GO05	**Huala**	**4.66**	**176**	Pn	**Pn**	**11 58 39.9 0.0**
GO02	**Mina Guanaco**	**5.70**	**26**	Pn	**Pn**	**11 58 53.3 -1.1**
PB14	**IPOC Station P**	**5.95**	**17**	Pn	**Pn**	**11 58 56.7 -1.1**
GO06	**Curarrehue**	**9.24**	**176**	Pn	**Pn**	**11 59 41.9 -0.9**
PLCA	**Paso Flores**	**10.46**	**173**	Pn	**Pn**	**11 59 59.2 -0.2**
TRQA	**Tornquist**	**11.51**	**135**	Pn	**Pn**	**12 00 15.0 +1.3**
ACON	**Acoyapa**	**43.85**	**342**	P	**P**	**12 05 34.6 -1.1**
ACON				IAmb	IAmb	12 05 37.8
	comp=Z,23nm,1.1s					
SNAA	**Sanae**	**55.06**	**159**	P	**P**	**12 07 02.2 +1.4**
SNAA				IAmb	IAmb	12 07 26.5
	comp=Z,4.7nm,1.4s					
QSPA	**South Pole Qui**	**59.88**	**180**	P	**P**	**12 07 35.8 +0.8**
QSPA				IAmb	IAmb	12 07 52.3
	comp=Z,2.9nm,1.2s					

*IDC **23** 11:59:41.8±2.8,47.°42N×154.°63E,h0km,mb3.3/2, mbtmp3.3/3,ML2.4/1,Error ellipse: s-maj=73.7km s-min=43.0km az=173.0*

*SKHL **23** 11:59:45.8±0.4,47.°30N×155.°10E,h40km±2km,mb4.1/3*

ISC 23 11:59:46.1±1.7,**47.°5N**±0.°2×**154.°8E**±0.°2,**h21**km,**n13,** σ1⁽⁹⁾**26**/10,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.29**	**15**	*eP*	**Pn**	**12 00 36.7**	**+0.3**
SKR				AMB	AMB	12 00 37.3	
	20nm,0.9s						
SKR				*eS*	**Sn**	**12 01 15.2**	**+0.4**
SKR				A	A	12 01 17.1	
	30nm,0.4s						
SKR				A	A	12 01 17.1	
	70nm,0.4s						
PAU	**Pauzhetka**	**4.17**	**18**	*eP*	**Pn**	**12 00 50.4**	**+1.9**
PAU				AMB	AMB	12 00 53.4	
	10.0nm,0.2s						
PAU				*eS*	**Sn**	**12 01 37.5**	**+1.0**
PAU				A	A	12 01 41.6	
	60nm,0.9s						
PAU				A	A	12 01 41.6	
	70nm,0.9s						
KUR	**Kuril'sk**	**5.30**	**247**	*eP*	**Pn**	**12 01 05.5**	**+1.5**
KUR				AMB	AMB	12 01 10.1	
	30nm,0.5s						
KUR				*eS*	**Sn**	**12 02 05.0**	**+0.6**
KUR				A	A	12 02 22.4	
	70nm,0.7s						
KUR				A	A	12 02 22.4	
	50nm,0.7s						
PETK	**Petropavlovsk-**	**5.90**	**17**	Pn	**Pn**	**12 01 12.2**	**-0.1**
	0.5nm,0.3s,baz=200,slow=11,SNR=2.5 2.4nm,0.6s						
PET	**Petropavlovsk**	**6.05**	**23**	*eS*	**Sn**	**12 02 21.7**	**-1.0**
H11N2	**WAKE ISLAND Hy**	**29.42**	**156**	T	T	12 36 52.3	
	baz=343,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**29.43**	**156**	T	T	12 36 52.3	
	baz=343,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hy**	**29.43**	**156**	T	T	12 36 59.9	
	baz=343,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**30.53**	**157**	T	T	12 38 29.9	
	baz=344,slow=76,SNR=90						
H11S3	**WAKE ISLAND Hy**	**30.54**	**157**	T	T	12 38 21.3	
	baz=344,slow=76,SNR=119						
H11S2	**WAKE ISLAND Hy**	**30.55**	**157**	T	T	12 38 20.7	
	baz=344,slow=76,SNR=101						
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**12 08 18.7**	**-1.5**
	0.3nm,0.6s,baz=48,slow=8.6,SNR=2.3 0.3nm,0.6s						
TXAR	**Lajitas Array**	**76.13**	**62**	P	**P**	**12 11 32.4**	**-0.1**
	0.2nm,0.6s,baz=292,slow=2.4,SNR=3.5 0.2nm,0.6s						

*IDC

AAI				Pg	**Pg**	**12 03 02.5**	**-0.1**	
AAI				Sg	**Sg**	**12 03 13.5**	**+1.0**	
BNDI	**Bandanaira**	**1.55 139**		P	**Pn**	**12 03 14.1**	**-1.5**	
NLAI	**Namlea**	**1.78 274**		P	**Pn**	**12 03 19.2**	**+0.4**	
NLAI				S	**Sn**	**12 03 42.1**	**+0.7**	
LBMI	**Labuha**	**3.03 333**		P	**Pn**	**12 03 35.5**	**-0.5**	
LBMI				S	**Sn**	**12 04 11.8**	**-0.5**	
SANI	**Sanana**	**3.16 294**		P	Pn	12 03 35.9	-1.9	
SANI				S	**Sn**	**12 04 13.9**	**-1.8**	
FAKI	**Fak Fak**	**3.40**	**83**	Pn	**Pn**	**12 03 41.8**	**+0.7**	
FAKI	**Fak Fak**	**3.40**	**83**	P	**Pn**	**12 03 41.8**	**+0.7**	
FAKI				S	**Sn**	**12 04 21.7**	**+0.3**	
SIJI	**Sorong**	**3.44**	**44**	Pn	**Pn**	**12 03 41.9**	**+0.3**	
	51nm,0.3s,baz=251,slow=23,SNR=85							
SIJI				Sn	**Sn**	**12 04 22.2**	**-0.2**	
	81nm,0.3s,baz=14,slow=19,SNR=13							
SIJI				LR	LR	12 05 24.5		
	comp=Z,1μm,19.9s,baz=231,slow=45							
	302nm,0.5s							
SWI	**Sorong**	**3.44**	**44**	P	**Pn**	**12 03 41.6**	**0.0**	
SWI				S	**Sn**	**12 04 23.2**	**+0.8**	
SAUI	**Saumlaki**	**5.19 152**		Pn	**Pn**	**12 04 05.7**	**-0.1**	
SAUI	**Saumlaki**	**5.19 152**		P	**Pn**	**12 04 07.2**	**+1.4**	
	0.9nm8μm235nm,1.2s							
KMSI	**Cibinong**	**6.26 308**		P	Pn	12 04 31.3	+11	
KMSI				S	**Sn**	**12 05 30.0**	**-2.1**	
LUWI	**Luwuk**	**6.52 290**		Pn	**Pn**	**12 04 26.1**	**+2.1**	
LUWI	**Luwuk**	**6.52 290**		P	**Pn**	**12 04 23.2**	**-0.8**	
	0.6nm3μm87nm,1.0s							
GTOI	**Gorontalo**	**7.08 304**		P	**Pn**	**12 04 33.6**	**+1.9**	
	0.3nm722nm484nm58nm,0.8s							
BAKI	**Biak**	**7.54**	**74**	P	**Pn**	**12 04 39.0**	**+1.0**	
	0.4nm94nm,0.7s							
APSI	**Ampana**	**7.62 288**		P	**Pn**	**12 04 40.1**	**+1.0**	
	0.7nm1μm136nm,0.9s							
MRSI	**Marisa**	**7.91 299**		P	Pn	12 04 41.0	-2.1	
	0.3nm874nm84nm,0.9s							
BATI	**Baumata**	**8.55 217**		Pn	**Pn**	**12 04 54.0**	**+2.1**	
	3.5nm,0.3s,baz=315,slow=2.9,SNR=1.5							
BATI				Sn	**Sn**	**12 06 31.6**	**+3.0**	
	4.4nm,0.3s,baz=331,slow=18,SNR=1.9							
BATI	**Baumata**	**8.55 217**		P	Pn	12 05 02.6	+11	
BSSI	**Bau Bau, Buton**	**8.80 251**		P	Pn	12 04 53.2	-2.2	
	43nm,1.0s							
EDFI	**Ende, Flores**	**8.93 233**		P	Pn	12 04 53.7	-3.5	
	11nm,0.8s							
BKSI	**Bulukumba**	**8.94 257**		P	**Pn**	**12 04 57.8**	**+0.5**	
	437nm35nm,0.9s							
TTSI	**Tana Toraja**	**9.05 272**		P	Pn	12 05 03.6	+4.8	
SPSI	**Sidrap Palu**	**9.11 266**		P	**Pn**	**12 04 59.9**	**+0.3**	
	26nm,0.8s							
TOLI2	**Tolitoli**	**9.23 299**		Pn	**Pn**	**12 05 04.8**	**+3.6**	
KAPI	**Kappang**	**9.25 259**		Pn	Pn	12 05 06.9	+5.4	
	0.6nm,0.3s,baz=72,slow=8.9,SNR=1.2							
KAPI				LR	LR	12 09 30.3		
	comp=Z,542nm,18.2s,baz=70,slow=44							
MTN	**Manton Dam**	**9.69 167**		Pn	**Pn**	**12 05 08.9**	**+1.3**	
MPSI	**Mapaga**	**9.69 292**		P	**Pn**	**12 05 06.8**	**-0.8**	
	22nm,0.7s							
GENI	**Genyem**	**11.30**	**86**	P	**Pn**	**12 05 29.8**	**+0.1**	
	52nm,1.2s							
KNRA	**Kununurra**	**12.25 181**		Pn	**Pn**	**12 05 42.4**	**-0.2**	
MYLDM	**Lahad Datu**	**13.39 309**			**Pn**	**12 06 00.5**	**+2.3**	
FITZ	**Fitzroy Crossi**	**14.99 192**		Pn	**Pn**	**12 06 19.1**	**-0.9**	
	0.1nm,0.3s,baz=43,slow=8.9,SNR=5.9							
FITZ				LR	LR	12 13 27.1		
	comp=Z,239nm,18.1s,baz=20,slow=43							
	2.3nm,0.7s							
FITZ	**Fitzroy Crossi**	**14.99 192**		Pn	**Pn**	**12 06 19.5**	**-0.6**	
WB0	**Warramunga Arr**	**17.18 162**		Pn	**Pn**	**12 06 45.2**	**-3.0**	
WRA	**Warramunga Arr**	**17.33 162**		P	**Pn**	**12 06 48.4**	**-1.8**	
	0.2nm,0.3s,baz=346,slow=13,SNR=20							
WRA				LR	LR	12 14 02.9		
	comp=Z,484nm,22.0s,baz=3.0,slow=39							
	3.7nm,0.7s							
WRA	**Warramunga Arr**	**17.33 162**			**Pn**	**12 06 49.6**	**-0.5**	
WB2	**Warramunga Arr**	**17.33 162**			**Pn**	**12 06 49.6**	**-0.6**	
WR0	**Warramunga Arr**	**17.41 162**		Pn	**Pn**	**12 06 49.6**	**-1.5**	
COEN	**Coen**	**17.61 128**			**Pn**	**12 06 52.6**	**-1.1**	
COEN				IAmb	IAmb	12 07 09.7		
	comp=Z,24nm,1.0s							
MBWA	**Marble Bar**	**19.81 206**			**P**	**12 07 18.8**	**0.0**	
MBWA				IAmb	IAmb	12 07 21.3		
	comp=Z,45nm,1.4s							
PSA00	**Pilbara Seismi**	**20.12 205**			**P**	**12 07 21.7**	**-0.6**	
PSA00				IAmb	IAmb	12 07 31.7		
	comp=Z,32nm,1.1s							
AS31	**Alice Springs**	**20.77 167**		P	**P**	**12 07 28.3**	**-1.0**	
ASAR	**Alice Springs**	**20.77 167**		P	**P**	**12 07 28.3**	**-1.0**	
	comp=Z,18nm,0.8s,baz=350,slow=11,SNR=60							
	comp=Z,18nm,0.8s							
ASAR	**Alice Springs**	**20.77 167**		P	**P**	**12 07 28.9**	**-0.4**	
LEM	**Lembang**	**21.45 260**		LR	LR	12 16 57.4		
	comp=Z,489nm,21.7s,baz=90,slow=40							
KRVT	**Keravat (AS076**	**23.12**	**93**	LR	LR	12 18 50.4		
	comp=Z,188nm,19.7s,baz=51,slow=42							
GUMO	**Guam**	**23.14**	**43**	LR	LR	12 16 23.7		
	comp=Z,146nm,21.6s,baz=268,slow=35							
CTA	**Charters Tower**	**23.75 136**		P	**P**	**12 08 01.4**	**+0.7**	
	comp=Z,2.7nm,0.9s,baz=320,slow=11,SNR=4.6							
CTA				LR	LR	12 18 47.7		
	comp=Z,377nm,19.4s,baz=314,slow=40							
	comp=Z,2.7nm,0.9s							
CTAO	**Charters Tower**	**23.75 136**		P	**P**	**12 07 59.6**	**-1.0**	
CTAO				IAmb	IAmb	12 08 15.2		
	comp=Z,14nm,1.1s							
FORT	**Forrest**	**27.29 182**		P	**P**	**12 08 31.8**	**-1.0**	
KULM	**Kulim**	**29.47 287**		P	**P**	**12 08 53.4**	**+1.0**	
BBOO	**Buckleboo**	**30.07 168**		P	**P**	**12 08 56.6**	**-0.9**	
BBOO				IAmb	IAmb	12 08 59.2		
	comp=Z,14nm,1.2s							
STKA	**Stephens Creek**	**30.79 159**		P	**P**	**12 09 02.4**	**-1.6**	
	comp=Z,3.0nm,0.8s,baz=330,slow=9.1,SNR=9.8							
STKA				LR	LR	12 22 47.9		
	comp=Z,328nm,18.6s,baz=344,slow=39							
	comp=Z,3.0nm,0.8s							
STKA	**Stephens Creek**	**30.79 159**		P	**P**	**12 09 03.1**	**-0.8**	
HNR	**Honiara**	**31.45 103**		LR	LR	12 24 02.1		
	comp=Z,83nm,19.5s,baz=258,slow=40							
GSI	**Gunungsitoli**	**31.63 278**		P	**P**	**12 09 12.2**	**+0.7**	
NJ2	**Nanjing**	**36.48 346**		*eP*	**P**	**12 09 56.8**	**+3.5**	
NJ2				pmax	pmax			
	comp=Z,14nm,0.7s							
CMAR	**Chiang Mai Arr**	**36.59 307**		P	P	12 09 51.7	-2.9	
	comp=Z,0.4nm,0.3s,baz=125,slow=6.0,SNR=1.5							
CMAR				LR	LR	12 26 17.9		
	comp=Z,31nm,22.0s,baz=115,slow=39							
	comp=Z,0.4nm,0.3s							
CMAR	**Chiang Mai Arr**	**36.59 307**		P	**P**	**12 09 53.0**	**-1.5**	
CHTO	**Chiang Mai**	**36.79 308**		P	**P**	**12 09 55.0**	**-1.3**	
CHTO				IAmb	IAmb	12 10 01.8		
	comp=Z,8.9nm,1.1s							
TOO	**Toolangi**	**37.31 158**		P	**P**	**12 09 59.4**	**-1.1**	
TOO				IAmb	IAmb	12 10 02.9		
	comp=Z,4.8nm,0.8s							
JHJ2	**Mitsune**	**37.72**	**15**	P	**P**	**12 10 03.1**	**-0.8**	
ENH	**Enshi**	**38.23 332**		P	**P**	**12 10 08.6**	**+0.3**	
KSRS	**Korea Array**	**40.61 359**		P	P	12 10 25.9	-2.1	
	comp=Z,0.5nm,0.5s,baz=170,slow=10,SNR=2.6							
KSRS				LR	LR	12 26 04.5		
	comp=Z,69nm,21.3s,baz=180,slow=34							
	comp=Z,0.5nm,0.5s							
MJAR	**Matsushiro Arr**	**40.63**	**12**	P	P	12 10 25.8	-2.5	
	comp=Z,2.0nm,0.9s,baz=178,slow=9.6,SNR=7.3							
MJAR				LR	LR	12 25 07.9		
	comp=Z,83nm,21.3s,baz=182,slow=33							
	comp=Z,2.0nm,0.9s							
XAN	**Xi'an**	**41.68 335**		⇑P	**P**	**12 10 37.3**	**+0.3**	
XAN				pmax	pmax			
	comp=Z,8.0nm,0.8s							
JSD	**Sado**	**42.09**	**11**	P	**P**	**12 10 40.4**	**+0.2**	
JSD				IAmb	IAmb	12 10 41.4		
	comp=Z,12nm,0.9s							
JMM	**Marumori**	**42.48**	**14**	P	**P**	**12 10 43.1**	**-0.2**	
LZH	**Lanzhou**	**45.69 331**		*eP*	**P**	**12 11 13.3**	**+3.9**	
LZH				pP	sP	12 11 21.0	+7.3	
LZH				pmax	pmax			
	comp=Z,20nm,1.6s							
USA0B	**Ussuriysk Arra**	**47.42**	**3**	P	P	12 11 20.6	-2.0	
USA0B				IAmb	IAmb	12 11 24.5		
	comp=Z,5.4nm,1.1s							
USRK	**Ussuriysk Ar.**	**47.42**	**3**	P	P	12 11 21.0	-1.6	
	comp=Z,2.5nm,0.6s,baz=180,slow=5.4,SNR=3.1							
	comp=Z,2.5nm,0.6s							
GOMU	**GeErMu**	**50.60 324**		P	**P**	**12 11 46.3**	**-1.3**	
GOMU				pP	pP	12 11 48.5	-2.2	
GOMU				sP	sP	12 11 52.1	+0.2	
GOMU				PcP	PcP	12 12 52.6	-13	
GOMU				pmax	pmax			
	comp=Z,16nm,0.6s							
GOMU				pmax	pmax			
	comp=Z,37nm,4.4s							
KLR	**Kul'dur**	**52.43**	**2**	P	**P**	**12 12 00.7**	**0.0**	
	comp=Z,2.1nm,0.9s,baz=339,slow=4.1,SNR=4.8							
	comp=Z,2.1nm,0.9s							
ULN	**Ulaanbaatar**	**54.47 342**		P	**P**	**12 12 14.7**	**-1.2**	
ULN				IAmb	IAmb	12 12 20.0		
	comp=Z,5.0nm,0.8s							
SONM	**Songino Array**	**54.65 342**		P	**P**	**12 12 16.3**	**-0.9**	
	comp=Z,3.2nm,0.9s,baz=161,slow=5.9,SNR=9.6							
SONM				LR	LR	12 37 38.3		
	comp=Z,48nm,21.8s,baz=90,slow=38							
	comp=Z,3.2nm,0.9s							
SONM	**Songino Array**	**54.65 342**		P	**P**	**12 12 16.8**	**-0.4**	
SONM				IAmb	IAmb	12 12 21.8		
	comp=Z,6.8nm,1.2s							
TUWZ	**Tuamarina**	**55.35 140**		P	**P**	**12 12 20.8**	**-1.4**	
URZ	**Urewera**	**55.99 135**		LR	LR	12 39 20.5		
	comp=Z,116nm,18.6s,baz=33,slow=39							
RAO	**Raoul Island**	**56.58 123**		LR	LR	12 38 32.1		
	comp=Z,42nm,18.1s,baz=104,slow=38							
PETK	**Petropavlovsk-**	**61.25**	**19**	P	**P**	**12 13 02.8**	**-0.5**	
	comp=Z,2.9nm,0.9s,baz=186,slow=5.8,SNR=2.1							
PETK				LR	LR	12 36 07.3		
	comp=Z,40nm,21.4s,baz=203,slow=33							
	comp=Z,2.9nm,0.9s							
MK31	**Makanchi Array**	**64.58 326**		P	**P**	**12 13 24.1**	**-1.5**	
MK31				IAmb	IAmb	12 13 29.6		
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**64.58 326**		P	**P**	**12 13 24.2**	**-1.4**	
	comp=Z,2.3nm,0.6s,baz=126,slow=7.2,SNR=19							
MKAR				LR	LR	12 44 37.5		
	comp=Z,33nm,19.1s,baz=98,slow=39							
	comp=Z,2.3nm,0.6s							
MKAR	**Makanchi Array**	**64.58 326**		P	P	12 13 23.9	-1.7	
MAKZ	**Makanchi**	**64.77 326**		P	**P**	**12 13 25.6**	**-1.1**	
MAKZ				IAmb	IAmb	12 13 31.3		
	comp=Z,3.0nm,0.7s							
MA2	**Magadan**	**65.08**	**12**	LR	LR	12 38 15.4		
	comp=Z,20nm,21.9s,baz=138,slow=33							
YAK	**Yakutsk**	**65.21**	**0**	LR	LR	12 45 06.4		
	comp=Z,30nm,18.1s,baz=258,slow=39							
SHEM	**Shemya Is, Ala**	**67.57**	**28**	LR	LR	12 37 33.7		
	comp=Z,54nm,20.1s,baz=270,slow=31							
KBL	**Kabul**	**67.58 309**		P	**P**	**12 13 44.3**	**-1.1**	
KBL				IAmb	IAmb	12 13 53.5		
	comp=Z,4.3nm,0.9s							
ZAA0	**Zalesovo Array**	**67.84 334**		P	**P**	**12 13 46.0**	**-0.2**	
ZAA0				IAmb	IAmb	12 13 49.6		
	comp=Z,4.4nm,0.9s							
ZALV	**Zalesovo Beam**	**67.84 334**		P	P	12 13 44.5	-1.8	
	comp=Z,3.2nm,0.8s,baz=123,slow=5.3,SNR=4.1							
ZALV				LR	LR	12 46 43.1		
	comp=Z,30nm,18.0s,baz=100,slow=39							
	comp=Z,3.2nm,0.8s							
ZALV	**Zalesovo Beam**	**67.84 334**		P	**P**	**12 13 45.2**	**-1.0**	
GAR	**Garm**	**68.33 314**		P	**P**	**12 13 49.7**	**-0.1**	
KURK	**Kurchatov**	**68.84 328**		P	**P**	**12 13 52.5**	**-0.1**	
KK31	**Karatay Array**	**69.88 318**		P	**P**	**12 13 57.6**	**-1.6**	
KKAR	**Karatay Array**	**69.88 318**		P	P	12 13 57.4	-1.8	
RAR	**Rarotonga**	**71.41 111**		LR	LR	12 44 20.4		
	comp=Z,15nm,20.4s,baz=280,slow=35							
WSAR	**Wadi Sarin**	**73.29 295**		LR	LR	12 50 38.1		
	comp=Z,43nm,18.3s,baz=113,slow=39							
BVAR	**Borovoye Array**	**74.40 328**		LR	LR	12 50 33.7		
	comp=Z,24nm,18.7s,baz=108,slow=39							
BRVK	**Borovoye**	**74.47 328**		P	P	12 14 24.4	-2.2	
BRVK				IAmb	IAmb	12 14 31.1		
	comp=Z,6.5nm,1.1s							
TIXI	**Tiksi**	**74.86 360**		LR	LR	12 46 56.6		
	comp=Z,33nm,21.8s,baz=181,slow=35							
VNDA	**Vanda**	**76.18 173**		P	**P**	**12 14 35.5**	**-0.4**	
	comp=Z,1.0nm,0.9s,baz=322,slow=2.3,SNR=4.5							
VNDA				LR	LR	12 47 01.8		
	comp=Z,81nm,19.1s,baz=322,slow=35							
	comp=Z,1.0nm,0.9s							
GEYT	**Alibeck**	**77.02 310**		LR	LR	12 55 48.0		
	comp=Z,26nm,18.0s,baz=6.0,slow=41							
MAW	**Mawson**	**77.92 201**		LR	LR	12 48 41.5		
	comp=Z,66nm,18.0s,baz=48,slow=35							
ABKAR	**Akbulak array**	**78.98 321**		P	**P**	**12 14 51.6**	**-0.4**	
AKTO	**Aktyubinsk**	**80.52 322**		LR	LR	12 53 46.2		
	comp=Z,23nm,21.2s,baz=102,slow=38							
PPT	**Papeete**	**80.94 107**		LR	LR	12 49 51.9		
	comp=Z,38nm,19.0s,baz=280,slow=35							
ARU	**Arti**	**82.04 328**		LR	LR	12 55 04.6		
	comp=Z,36nm,18.4s,baz=105,slow=38							
QSPA	**South Pole Qui**	**86.60 180**		LR	LR	12 54 48.7		
	comp=Z,84nm,19.3s,baz=326,slow=36							
KBZ	**Khabaz**	**89.39 314**		LR	LR	13 01 15.6		
	comp=Z,18nm,18.3s,baz=48,slow=39							
ILAR	**Eielson Array**	**90.55**	**25**	LR	LR	12 51 14.6		
	comp=Z,25nm,22.0s,baz=237,slow=32							
KMBO	**Kilima Mbogo**	**91.56 269**		LR	LR	12 51 29.6		
	comp=Z,72nm,21.1s,baz=92,slow=32							
EIL	**Elat**	**95.05 299**		LR	LR	13 07 50.9		
	comp=Z,26nm,18.5s,baz=86,slow=41							
ARCES	**ARCESS Array B**	**97.79 340**		LR	LR	13 04 48.5		
	comp=Z,26nm,18.6s,baz=334,slow=38							
SPITS	**Spitsbergen Ar**	**97.80 349**		LR	LR	13 06 15.9		
	comp=Z,20nm,19.6s,baz=30,slow=39							
LSZ	**Lusaka**	**99.41 254**		LR	LR	12 55 43.8		
	comp=Z,56nm,19.8s,baz=172,slow=32							
TXAR	**Lajitas Array**	**123.95**	**57**	PKP	**PKPdf**	**12 21 47.9**	**+0.5**	
	comp=Z,0.1nm,0.6s,baz=213,slow=4.3,SNR=3.6							
TORD	**Torodi Ar. Bea**	**126.93 284**		PKP	**PKPdf**	**12 21 52.9**	**-0.4**	
	comp=Z,0.4nm,0.9s,baz=80,slow=2.8,SNR=1.9							
LPAZ	**La Paz**	**154.24 140**		PKPbc	**PKPdf**	**12 22 48.3**	**+6.2**	
	comp=Z,0.6nm,0.4s,baz=180,slow=3.0,SNR=2.8							

IDC 23 12:06:01.0±1.8,3°.34S×128°.79E,h0km,mb3.5/2,
mbtmp3.6/4,ML3.3/2,MS3.8/2,Error ellipse:
s-maj=52.6km s-min=28.9km az=82.0,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.48**	**45**	Pn	Pn	12 06 57.1	+0.7
	5.4nm,0.3s,baz=216,slow=19,SNR=3.0						
SIJI				Sn	Sn	12 07 36.0	-2.5
	2.0nm,0.3s,baz=225,slow=19,SNR=3.0						
	13nm,0.3s						
WRA	**Warramunga Arr**	**17.37**	**162**	P	Pn	12 10 04.3	-0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=2.4						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**20.81**	**167**	P	P	12 10 44.1	0.0
	1.1nm,0.5s,baz=345,slow=10,SNR=4.6						
	1.1nm,0.5s						
PSI	**Prapat**	**30.47**	**281**	LR	LR	12 25 21.5	
	comp=Z,298nm,18.8s,baz=138,slow=38						
PALK	**Pallekele**	**49.13**	**283**	LR	LR	12 35 35.8	
	comp=Z,64nm,21.7s,baz=206,slow=36						
MKAR	**Makanchi Array**	**64.52**	**326**	P	P	12 16 39.8	-0.1
	0.3nm,0.5s,baz=126,slow=7.4,SNR=2.6						
	0.3nm,0.5s						

IDC 23 12:18:13.0±0.9,31°.40N×109°.24E,h0km,mb3.7/8,
mbtmp3.7/10,ML4.0/2,Error ellipse: s-maj=32.8km
s-min=18.2km az=61.0
ISC 23 12:18:18.3±0.9,31°.4N±0°.1×109°.3E±0°.1,h35km,n10,
σ0s39/10,mb3.7/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.93**	**218**	Pn	**Pn**	**12 22 00.2**	**+0.4**
	0.7nm,0.3s,baz=30,slow=9.3,SNR=2.2						
	1.8nm,0.3s						
KSRS	**Korea Array**	**16.52**	**64**	Pn	**Pn**	**12 22 07.5**	**+0.3**
	0.1nm,0.3s,baz=251,slow=14,SNR=1.7						
	0.4nm,0.3s						
KLR	**Kul'dur**	**24.55**	**37**	P	**P**	**12 23 34.8**	**+0.2**
	1.8nm,0.7s,baz=253,slow=9.6,SNR=3.6						
	1.8nm,0.7s						
MKAR	**Makanchi Array**	**25.78**	**314**	P	**P**	**12 23 45.8**	**0.0**
	1.1nm,0.6s,baz=119,slow=12,SNR=6.7						
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**28.54**	**329**	P	**P**	**12 24 10.0**	**-0.5**
	0.4nm,0.4s,baz=129,slow=11,SNR=1.7						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**29.77**	**319**	P	**P**	**12 24 21.3**	**-0.1**
	0.3nm,0.7s,baz=119,slow=9.7,SNR=2.7						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**56.46**	**151**	P	**P**	**12 27 56.3**	**-0.4**
	0.6nm,0.7s,baz=344,slow=7.9,SNR=7.1						
	0.6nm,0.7s						
ARCES	**ARCESS Array B**	**58.78**	**336**	P	**P**	**12 28 13.0**	**+0.5**
	1.0nm,0.6s,baz=84,slow=9.3,SNR=1.5						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**59.65**	**154**	P	**P**	**12 28 18.9**	**-0.2**
	0.8nm,0.8s,baz=339,slow=7.3,SNR=13						
	0.8nm,0.8s						
NOA	**NORSAR Array B**	**66.73**	**328**	P	**P**	**12 29 05.3**	**-0.3**
	0.1nm,0.4s,baz=67,slow=6.2,SNR=2.3						
	0.1nm,0.4s						

IDC 23 12:28:06.7±1.7,3°.43S×128°.80E,h0km,mb3.3/2,
mbtmp3.4/4,ML3.2/2,Error ellipse: s-maj=42.5km
s-min=25.6km az=96.0
DJA 23 12:28:08.7±0.2,3°.5S±2°×12°.9E±°,h10km,M3.3/10,
MLv3.3/10
ISC 23 12:28:08.3±1.3,3°.34S±0°.06×128°.80E±0°.03,h12km±9km,
n12,σ1s36/19,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.13**	**93**	P	**Pb**	**12 28 11.8**	**-1.0**
MSAI				S	**Sg**	**12 28 14.4**	**+0.5**
AAI	**Ambon**	**0.69**	**240**	P	**Pn**	**12 28 24.1**	**+0.1**
AAI				S	**Sn**	**12 28 34.7**	**0.0**
BNDI	**Bandanaira**	**1.61**	**137**	P	**Pb**	**12 28 38.4**	**+0.3**
NLAI	**Namlea**	**1.69**	**273**	P	**Pb**	**12 28 40.0**	**+0.5**
LBMI	**Labuha**	**2.98**	**334**	P	**Pn**	**12 28 53.4**	**-2.1**
LBMI				S	**Sn**	**12 29 30.4**	**-0.8**
SANI	**Sanana**	**3.08**	**294**	P	**Pn**	**12 28 57.4**	**+0.5**
SANI				S	**Sn**	**12 29 36.1**	**+2.4**
FAKI	**Fak Fak**	**3.47**	**83**	P	**Pn**	**12 29 03.5**	**+1.2**
FAKI				S	**Sn**	**12 29 44.2**	**+0.8**
SIJI	**Sorong**	**3.48**	**45**	Pn	**Pn**	**12 29 03.4**	**+1.0**
	5.3nm,0.3s,baz=259,slow=23,SNR=14						
SIJI				Sn	**Sn**	**12 29 45.6**	**+2.0**
	2.1nm,0.3s,baz=217,slow=20,SNR=2.3						
	13nm,0.3s						
SWI	**Sorong**	**3.48**	**45**	P	**Pn**	**12 29 02.4**	**0.0**
SWI				S	**Sn**	**12 29 43.6**	**0.0**
WRA	**Warramunga Arr**	**17.37**	**162**	P	**Pn**	**12 32 08.0**	**-2.8**
	baz=334,slow=13,SNR=2.1						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**20.80**	**167**	P	**P**	**12 32 49.5**	**-0.3**
	1.0nm,0.5s,baz=350,slow=12,SNR=21						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**64.53**	**326**	P	**P**	**12 38 46.0**	**+0.7**
	0.2nm,0.4s,baz=109,slow=7.5,SNR=2.5						
	0.2nm,0.4s						

IDC 23 12:36:20.9±4.1,19°.44N×108°.73W,h0km,mb3.2/4,
mbtmp3.5/7,ML3.5/3,MS3.1/8,Error ellipse: s-maj=70.2km
s-min=40.0km az=28.0
MEX 23 12:36:37.2±0.3,19°.50N×110°.22W,h10km,MD3.9
ISC 23 12:36:29.4±3.3,19°.6N±0°.3×109°.9W±0°.4,h35km,n17,
σ2s19/11,mb3.4/3,MS3.2/3,Revilla Gigedo Islands
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H06E		**1.30**	**230**	*eP*	**Pn**	**12 36 53.0**	**+2.0**
H06E				*eS*	**Sn**	**12 37 04.8**	**-2.4**
H06N	**Isla Socorro**	**1.30**	**234**	*eP*	**Pn**	**12 36 52.9**	**+1.9**
H06N				*eS*	**Sn**	**12 37 05.2**	**-2.1**
H06S		**1.36**	**229**	*i P*	**Pn**	**12 36 53.9**	**+2.0**
H06S				*eS*	**Sn**	**12 37 06.7**	**-2.0**
LPIG	**La Paz**	**4.47**	**355**	LR	LR	12 38 54.9	
	comp=Z,114nm,21.8s,baz=188,slow=32						
TXAR	**Lajitas Array**	**11.19**	**29**	Pn	Pn	12 38 57.8	-9.2
	0.2nm,0.3s,baz=205,slow=14,SNR=33						
TXAR				LR	LR	12 41 45.3	
	comp=Z,14nm,21.1s,baz=202,slow=30						
	3.0nm,0.8s						
CMIG	**Matias Romero**	**14.46**	**98**	Pn	Pn	12 39 32.2	-19
	0.2nm,0.3s,baz=252,slow=8.6,SNR=5.3						
CMIG				LR	LR	12 44 15.9	
	comp=Z,118nm,20.3s,baz=276,slow=36						
	3.6nm,0.6s						
PFO	**Pinyon Flats O**	**15.11**	**338**	LR	LR	12 45 09.2	
	comp=Z,148nm,19.9s,baz=157,slow=34						
**ANM

PCAN				A	A	12 53 59.8	
	116nm,0.4s						
PCAN				*eT*	T	12 55 46.6	
PSCM	**Serra do Cume**	**2.29**	**153**	*eP*	**Pn**	**12 53 28.1**	**-0.7**
PSCM				*eS*	**Sn**	**12 53 56.3**	**-0.8**
PSCM				A	A	12 54 00.1	
	212nm,0.2s						
ADH	**Angra Heroismo**	**2.29**	**155**	*eP*	**Pn**	**12 53 28.6**	**-0.2**
ADH				*eS*	**Sn**	**12 53 56.9**	**-0.2**
ADH				A	A	12 54 07.1	
	115nm,0.5s						
PID	**Ribeirinha**	**2.32**	**173**	*eP*	**Pn**	**12 53 29.2**	**+0.1**
PID				*eS*	**Sn**	**12 53 57.5**	**-0.2**
PID				A	A	12 54 05.0	
	184nm,0.3s						
PSET	**Sete Cidades**	**3.61**	**143**	*eP*	**Pn**	**12 53 47.1**	**+0.1**
PDA	**Ponta Delgada**	**3.70**	**143**	*eP*	**Pn**	**12 53 48.7**	**+0.6**
PDA				*eS*	**Sn**	**12 54 31.5**	**-0.3**
PDA				A	A	12 54 35.3	
	68nm,0.3s						
CMLA	**Cha da Macela**	**3.75**	**142**	*eP*	**Pn**	**12 53 49.0**	**+0.1**
PGRON	**Lagoa das Cont**	**3.82**	**140**	*eP*	**Pn**	**12 53 49.6**	**-0.2**
BART	**Pico Bartolome**	**3.92**	**138**	*eP*	**Pn**	**12 53 51.5**	**+0.3**
PSMA	**Santa Maria**	**4.56**	**144**	*eP*	**Pn**	**12 54 00.3**	**+0.3**
PSMA				*eS*	**Sn**	**12 54 52.2**	**-0.8**
PSMA				A	A	12 54 58.7	
	24nm,0.3s						
PSMN	**Pico do Norte,**	**4.58**	**144**	*eP*	**Pn**	**12 54 00.5**	**+0.2**
PSMN				*eS*	**Sn**	**12 54 52.5**	**-1.1**
PSMN				A	A	12 54 59.5	
	29nm,0.3s						
ESDC	**Sonseca Array**	**18.73**	**85**	P	**P**	**12 57 09.8**	**0.0**
	0.3nm,0.3s,baz=289,slow=12,SNR=4.7						
ESDC				LR	LR	13 02 51.4	
	comp=Z,52nm,21.8s,baz=300,slow=32						
	0.6nm,0.4s						
NOA	**NORSAR Array B**	**31.51**	**36**	LR	LR	13 09 35.2	
	comp=Z,28nm,21.8s,baz=65,slow=32						
HFS	**Hagfors**	**32.35**	**39**	LR	LR	13 11 53.1	
	comp=Z,27nm,20.1s,baz=318,slow=35						
VRAC	**Vranov**	**32.56**	**59**	LR	LR	13 11 44.2	
	comp=Z,23nm,19.5s,baz=359,slow=35						
TORD	**Torodi Ar. Bea**	**38.10**	**128**	P	**P**	**13 00 11.5**	**+1.4**
	1.8nm,1.0s,baz=299,slow=3.2,SNR=6.0						
	1.8nm,1.0s						
FINES	**FINESS Array B**	**38.56**	**39**	LR	LR	13 13 33.3	
	comp=Z,48nm,19.2s,baz=323,slow=32						
AKASG	**Malin Array Be**	**40.53**	**56**	LR	LR	13 16 38.0	
	comp=Z,39nm,18.2s,baz=248,slow=35						
OBN	**Obninsk**	**44.24**	**48**	LR	LR	13 20 23.7	
	comp=Z,10nm,19.3s,baz=190,slow=37						
ULM	**Lac du Bonnet**	**46.70**	**305**	LR	LR	13 18 06.0	
	comp=Z,366nm,21.8s,baz=39,slow=33						
H10N2	**ASCENSION HYDR**	**50.02**	**162**	T	T	13 55 27.3	
	baz=345,slow=75						
H10N3	**ASCENSION HYDR**	**50.03**	**162**	T	T	13 55 21.1	
	baz=345,slow=75						
H10N1	**ASCENSION HYDR**	**50.04**	**162**	T	T	13 55 27.8	
	baz=345,slow=75						
H10S3	**ASCENSION HYDR**	**51.06**	**162**	T	T	13 56 39.5	
	baz=346,slow=74,SNR=12						
H10S2	**ASCENSION HYDR**	**51.07**	**162**	T	T	13 56 40.5	
	baz=234,slow=74,SNR=4.7						
BELG	**Belogornoye**	**51.26**	**50**	LR	LR	13 22 08.7	
	comp=Z,22nm,20.1s,baz=151,slow=34						
AKTO	**Aktyubinsk**	**58.02**	**49**	LR	LR	13 27 28.9	
	comp=Z,11nm,18.7s,baz=347,slow=36						
PDAR	**Pinedale Array**	**58.23**	**301**	P	**P**	**13 02 44.9**	**-0.8**
	1.1nm,0.9s,baz=76,slow=7.8,SNR=6.5						
	1.1nm,0.9s						
ANMO	**Albuquerque**	**59.96**	**292**	LR	LR	13 29 17.7	
	comp=Z,27nm,18.0s,baz=84,slow=36						
TXAR	**Lajitas Array**	**60.90**	**285**	P	**P**	**13 03 04.2**	**+0.1**
	1.2nm,0.8s,baz=70,slow=6.9,SNR=14						
	1.2nm,0.8s						
NVAR	**Mina Array Bea**	**66.16**	**301**	P	**P**	**13 03 38.4**	**-0.5**
	0.2nm,0.6s,baz=116,slow=6.8,SNR=4.1						
	0.2nm,0.6s						
TIXI	**Tiksi**	**66.76**	**8**	LR	LR	13 29 34.5	
	comp=Z,21nm,18.1s,baz=356,slow=33						
PFO	**Pinyon Flats O**	**67.64**	**296**	LR	LR	13 32 26.2	
	comp=Z,27nm,19.3s,baz=72,slow=35						
KURBB	**Kurchatov Arra**	**68.91**	**41**	P	**P**	**13 03 55.6**	**-0.1**
	1.2nm,0.9s,baz=313,slow=6.6,SNR=7.3						
	1.2nm,0.9s						
ZALV	**Zalesovo Beam**	**69.70**	**35**	P	**P**	**13 04 00.5**	**-0.1**
	0.6nm,0.5s,baz=310,slow=8.9,SNR=3.9						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**73.30**	**42**	P	**P**	**13 04 22.5**	**0.0**
	0.6nm,0.7s,baz=321,slow=5.3,SNR=5.5						
MKAR				LR	LR	13 36 19.5	
	comp=Z,18nm,19.7s,baz=358,slow=36						
	0.6nm,0.7s						
SONM	**Songino Array**	**83.14**	**29**	P	**P**	**13 05 17.3**	**+0.2**
	1.0nm,0.8s,baz=316,slow=4.0,SNR=2.1						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**157.43**	**46**	PKPab	**PKPab**	**13 13 18.7**	**-0.3**
	0.8nm,0.9s,baz=324,slow=4.6,SNR=6.7						

*VAO **23** 12:54:21.5±3.8, 1.°91S×79.°93W, h10km, mb4.4*
*IGQ **23** 12:54:21±0.3, 2.°S±2.°×8.°0W±.°, h7km*
*NEIC **23** 12:54:22.1±2.8, 1.°85S±0.°06×80.°5W±0.°1, h64km±16km, mb4.0/13, Error ellipse: s-maj=18.5km s-min=7.8km az=102.0*
*IDC **23** 12:54:26.3±2.9, 2.°09S×80.°43W, h97km±27km, mb3.4/4, mbtmp4.0/9, MS3.2/2, Error ellipse: s-maj=39.9km s-min=18.1km az=81.0*

ISC 23 12:54:21.6±1.0, 1.°94S±0.°03×80.°38W±0.°06, h50km±10km, n116, σ1°95/123, mb3.7/6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPLP	**Puerto Lpez**	**0.56**	**315**	*eP*	Pn	12 54 33.3	-0.4
PPLP	**Puerto Lpez**	**0.56**	**315**	P	**Pn**	**12 54 34.0**	**+0.3**
MORR	**Playas El Morr**	**0.69**	**177**	P	**Pn**	**12 54 37.0**	**+1.7**
AMIL	**Milagro (Trans**	**0.81**	**104**	P	**Pn**	**12 54 37.0**	**+0.3**
AMIL				S	**Sn**	**12 54 48.0**	**+0.2**
MILO	**Milagro-Astudi**	**0.89**	**112**	P	**Pn**	**12 54 36.0**	**-1.8**
MILO				S	**Sn**	**12 54 48.0**	**-1.7**
ISPT	**Isla de la Pla**	**0.97**	**314**	P	**Pn**	**12 54 40.0**	**+1.0**
AMNT	**Manta-Manabi**	**1.06**	**340**	P	**Pn**	**12 54 42.0**	**+1.9**
ACH2	**Ecuador-Machal**	**1.43**	**157**	P	**Pn**	**12 54 46.0**	**+0.8**
CABP	**Cabo Pasado**	**1.55**	**358**	P	**Pn**	**12 54 48.0**	**+1.2**
CHSH	**Refugio Sur-Vo**	**1.57**	**74**	Pn	**Pn**	**12 54 47.9**	**+0.2**
CHSH	**Refugio Sur-Vo**	**1.57**	**74**	P	**Pn**	**12 54 47.0**	**-0.7**
CHSH				S	**Sn**	**12 55 06.0**	**-1.2**
ARNL	**Arenillas**	**1.62**	**169**	Pn	**Pn**	**12 54 48.9**	**+1.2**
ARNL				Sn	**Sn**	**12 55 08.4**	**+0.8**
ARNL	**Arenillas**	**1.62**	**169**	P	**Pn**	**12 54 49.0**	**+1.2**
FLF1	**Flavio Alfaro-**	**1.67**	**19**	*eP*	**Pn**	**12 54 47.1**	**-1.3**
FLF1	**Flavio Alfaro-**	**1.67**	**19**	P	**Pn**	**12 54 48.0**	**-0.4**
FLF1				S	**Sn**	**12 55 10.0**	**+1.3**
ACUE	**Ecuador-Cuenca**	**1.71**	**124**	P	**Pn**	**12 54 51.0**	**+1.7**
ACUE				S	**Sn**	**12 55 12.0**	**+1.8**
IGUA	**Igualata**	**1.80**	**75**	P	**Pn**	**12 54 51.0**	**+0.3**
BMAS	**Trigal station**	**1.95**	**77**	P	**Pn**	**12 54 53.0**	**+0.4**
MAG1	**Magdalena**	**1.96**	**18**	P	**Pn**	**12 54 53.0**	**+0.6**
ARRY	**Arrayan**	**1.97**	**77**	P	**Pn**	**12 54 53.0**	**+0.1**
BPAT	**Tungurahua Vol**	**1.99**	**77**	P	**Pn**	**12 54 54.0**	**+0.7**
RETU	**Refugio**	**1.99**	**76**	P	**Pn**	**12 54 54.0**	**+0.7**
ILLI	**Illinizas Sur**	**2.05**	**54**	P	**Pn**	**12 54 55.0**	**+0.9**
PAST	**Pastocalle**	**2.13**	**54**	P	**Pn**	**12 54 56.0**	**+0.8**
SRAM	**San Ramn-Vol**	**2.17**	**57**	P	**Pn**	**12 54 57.0**	**+1.4**
BOSC	**San Juan Bosco**	**2.23**	**123**	Pn	**Pn**	**12 54 59.2**	**+3.0**
BOSC	**San Juan Bosco**	**2.23**	**123**	P	**Pn**	**12 54 59.0**	**+2.7**
SLOR	**San Lorenzo -**	**2.23**	**57**	Pn	**Pn**	**12 54 58.0**	**+1.4**
SLOR	**San Lorenzo -**	**2.23**	**57**	P	**Pn**	**12 54 59.0**	**+1.4**
CAMI	**Rancho Maria**	**2.26**	**56**	P	**Pn**	**12 54 59.0**	**+2.1**
BNAS	**Cotopaxi Volca**	**2.28**	**56**	P	**Pn**	**12 54 59.0**	**+1.7**
SUCR	**Mariscal Sucre**	**2.29**	**56**	P	**Pn**	**12 54 58.0**	**+0.7**
NAS2	**Nasa**	**2.31**	**56**	P	**Pn**	**12 55 00.0**	**+2.4**
BREF	**Cotopaxi Volca**	**2.31**	**57**	P	**Pn**	**12 55 00.0**	**+2.2**
APSY	**Ecuador-Napo A**	**2.32**	**66**	P	**Pn**	**12 54 59.0**	**+1.2**
BVC2	**Cotopaxi Volca**	**2.34**	**57**	P	**Pn**	**12 55 00.0**	**+1.8**
BTAM	**Cotopaxi Volca**	**2.35**	**58**	P	**Pn**	**12 55 00.0**	**+1.8**
VC1	**Cotopaxi 1**	**2.36**	**57**	P	**Pn**	**12 55 00.0**	**+1.6**
TAMB	**Tambo**	**2.36**	**58**	P	**Pn**	**12 55 00.0**	**+1.6**
BV15	**Puerto Quito-O**	**2.39**	**29**	P	**Pn**	**12 54 58.0**	**-0.3**
PUYO	**Puyo, Santa Ro**	**2.40**	**79**	P	**Pn**	**12 55 01.0**	**+2.5**
TOMA	**Boca Toma-Volc**	**2.42**	**54**	P	**Pn**	**12 55 01.0**	**+1.9**
GGPC	**Guagua Pichinc**	**2.50**	**45**	P	**Pn**	**12 55 01.0**	**+0.7**
PINO	**Pino**	**2.51**	**45**	P	**Pn**	**12 55 01.0**	**+0.5**
ANTG	**Antisana-Guama**	**2.56**	**56**	P	**Pn**	**12 55 03.0**	**+1.9**
YANA	**Yana**	**2.56**	**45**	P	**Pn**	**12 55 02.0**	**+0.9**
ANTS	**Antisana-Sarah**	**2.63**	**57**	P	**Pn**	**12 55 04.0**	**+1.8**
ANTI	**Antisana**	**2.67**	**56**	P	**Pn**	**12 55 05.0**	**+2.3**
PULU	**Pululahua**	**2.71**	**44**	Pn	**Pn**	**12 55 04.1**	**+1.0**
PULU	**Pululahua**	**2.71**	**44**	P	**Pn**	**12 55 04.0**	**+1.0**
PAC1	**Pacto, Paraso**	**2.71**	**36**	*eP*	**Pn**	**12 55 04.7**	**+1.9**
PAC1	**Pacto, Paraso**	**2.71**	**36**	P	**Pn**	**12 55 02.0**	**-0.8**
PTGL	**Punta Galera**	**2.73**	**7**	*eP*	Pn	12 55 07.9	+4.9
ARDO	**Archidona, Ten**	**2.74**	**70**	P	**Pn**	**12 55 05.0**	**+1.8**
OTAV	**Otavalo**	**2.90**	**42**	Pn	**Pn**	**12 55 06.3**	**+0.5**
OTAV	**Otavalo**	**2.90**	**42**	*eP*	**Pn**	**12 55 06.8**	**+1.1**
CUSE	**Cuicocha Este**	**2.98**	**42**	*eP*	**Pn**	**12 55 08.7**	**+1.8**
CUSE				*eS*	**Sn**	**12 55 43.8**	**+2.1**
CUSE				*i*		12 55 51.3	
	comp=Z,3µm,0.3s						
CUSE	**Cuicocha Este**	**2.98**	**42**	P	**Pn**	**12 55 08.0**	**+1.1**
CUSW	**Cuicocha Oeste**	**3.00**	**42**	P	**Pn**	**12 55 09.0**	**+1.9**
CUIC	**Cuicocha-Domo**	**3.01**	**42**	P	**Pn**	**12 55 08.0**	**+0.8**
CAYR	**Refugio Cayamb**	**3.07**	**51**	P	**Pn**	**12 55 12.0**	**+3.8**
IMBA	**Imbabura, San**	**3.10**	**45**	Pn	**Pn**	**12 55 10.4**	**+1.9**
IMBA	**Imbabura, San**	**3.10**	**45**	P	**Pn**	**12 55 11.0**	**+2.5**
ZUMB	**Zumba**	**3.15**	**157**	P	**Pn**	**12 55 12.0**	**+3.1**
URCU	**Urcuqui**	**3.18**	**42**	P	**Pn**	**12 55 11.0**	**+1.5**
YAHU	**Yahuarcocha**	**3.26**	**45**	P	**Pn**	**12 55 13.0**	**+2.4**
CMBC	**Cumbal**	**3.84**	**42**	*eP*	**Pn**	**12 55 22.8**	**+4.2**
CMBC				*eS*	**Sn**	**12 56 11.3**	**+8.6**
CMBC				*i*		12 56 28.6	
	comp=Z,10µm,0.8s						
TUMC	**Tumaco**	**4.09**	**24**	*eP*	**Pn**	**12 55 25.7**	**+4.0**
GCUF	**Volcan Galeras**	**4.37**	**44**	*eP*	**Pn**	**12 55 29.8**	**+3.8**
CRUC	**La Cruz**	**4.89**	**45**	*eP*	**Pn**	**12 55 36.6**	**+3.7**
BBAC	**Balboa, Cauca**	**5.03**	**38**	*eP*	**Pn**	**12 55 37.9**	**+3.2**
BBAC				*eS*	**Sn**	**12 56 32.9**	**+1.1**
BBAC				*i*		12 56 40.1	
	comp=Z,68nm,0.4s						
GR1C	**Gorgona, Isla**	**5.39**	**24**	*eP*	Pn	12 55 46.0	+6.6
ATAH	**Atahualpa**	**5.52**	**159**	P	**Pn**	**12 55 45.2**	**+3.5**
	comp=Z,7.4nm,0.3s,baz=7.3,slow=8.2,SNR=21						
ATAH				S	**Sn**	**12 56 46.8**	**+2.6**
	comp=Z,18nm,0.6s,baz=96,slow=8.0,SNR=3.7						
POPC	**Popayan, Colom**	**5.79**	**40**	*eP*	**Pn**	**12 55 47.1**	**+1.9**
FLOC	**Floridia**	**5.88**	**53**	*eP*	**Pn**	**12 55 46.5**	**+0.2**
PTLC	**Puerto Leguiza**	**5.96**	**69**	*eP*	**Pn**	**12 55 45.5**	**-1.9**
GARC	**Garzon, Huila**	**6.38**	**50**	*eP*	**Pn**	**12 55 55.4**	**+2.1**
MALC	**Bahia Malaga**	**6.65**	**27**	*eP*	**Pn**	**12 56 01.3**	**+4.5**
YOTC	**Yotoco, Valle**	**7.14**	**34**	*eP*	**Pn**	**12 56 03.3**	**-0.2**
MACC	**Macarena, Meta**	**7.69**	**58**	*eP*	**Pn**	**12 56 13.2**	**+2.1**
ANIL	**Santa Ana**	**8.10**	**38**	*eP*	**Pn**	**12 56 14.0**	**-3.0**
VILC	**Villavicencio,**	**8.99**	**48**	*eP*	**Pn**	**12 56 30.0**	**+1.0**
ROSC	**El Rosal**	**9.06**	**42**	P	Pn	12 56 36.7	+6.6
	comp=Z,11nm,0.4s,baz=72,slow=20,SNR=2.2						
ROSC				LR	LR	13 00 21.3	
	comp=Z,135nm,20.3s,baz=270,slow=39						
ROSC	**El Rosal**	**9.06**	**42**	Pn	**Pn**	**12 56 29.4**	**-0.8**
CZSB	**Cruzeiro do Su**	**9.56**	**127**	Pn	**Pn**	**12 56 38.5**	**+1.8**
CZSB	**Cruzeiro do Su**	**9.56**	**127**	*eP*	**Pn**	**12 56 34.9**	**-1.8**
NNA	**Nana**	**10.58**	**161**	P	**Pn**	**12 56 53.2**	**+2.6**
	comp=Z,6.3nm,0.3s,baz=297,slow=11,SNR=2.8						
NNA				S	**Sn**	**12 58 47.4**	**-0.3**
	comp=Z,11nm,0.4s,baz=230,slow=20,SNR=6.5						
NNA	**Nana**	**10.58**	**161**	Pn	**Pn**	**12 56 52.8**	**+2.2**
SDV	**Santo Domingo**	**14.49**	**42**	P	**P**	**12 57 49.0**	**-0.6**
	comp=Z,6.7nm,0.4s,baz=307,slow=10,SNR=1.8						
SDV				LR	LR	13 04 17.5	
	comp=Z,93nm,20.6s,baz=250,slow=40						
SDV	**Santo Domingo**	**14.49**	**42**	Pn	**Pn**	**12 57 44.6**	**+0.5**
ETMB	**Extrema**	**16.11**	**120**	Pn	**Pn**	**12 58 04.4**	**-0.4**
ETMB				IAmb	IAmb	12 58 06.9	
	comp=Z,4.6nm,0.7s						
ETMB	**Extrema**	**16.11**	**120**	*eP*	**Pn**	**12 58 03.2**	**-1.5**
BAUV	**El Baul**	**16.38**	**48**	Pn	**Pn**	**12 58 06.3**	**-1.9**
BAUV				IAmb	IAmb	12 58 40.6	
	comp=Z,7.2nm,0.8s						
SAML	**Samuel**	**18.47**	**113**	P	**P**	**12 58 32.5**	**-1.0**
SAML				IAmb	IAmb	12 58 36.5	
	comp=Z,7.4nm,0.8s						
LPAZ	**La Paz**	**18.67**	**140**	P	**P**	**12 58 37.2**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=347,slow=12,SNR=8.8						
LPAZ	**La Paz**	**18.67**	**140**	P	**P**	**12 58 35.8**	**-0.5**
BIRV	**Birongo**	**18.69**	**48**	P	**P**	**12 58 35.1**	**-0.8**
BIRV				IAmb	IAmb	12 58 42.2	
	comp=Z,8.4nm,0.7s						
PB16	**IPOC Station P**	**19.47**	**147**	P	**Pn**	**12 58 47.4**	**+0.9**
PB16				IAmb	IAmb	12 58 54.7	
	comp=Z,4.3nm,0.7s						
BOAV	**Boa Vista**	**20.31**	**78**	P	**P**	**12 58 50.4**	**-3.2**
BOAV				IAmb	IAmb	12 59 14.6	
	comp=Z,7.4nm,1.4s						
BOAV	**Boa Vista**	**20.31**	**78**	*eP*	**P**	**12 58 53.4**	**-0.3**
GO01	**Chusmiza**	**20.74**	**149**	P	**P**	**12 59 00.0**	**+1.4**
GO01				IAmb	IAmb	12 59 04.3	
	comp=Z,8.6nm,0.9s						
PB02	**IPOC Station P**	**21.80**	**153**	P	**P**	**12 59 10.5**	**+0.9**
PB07	**IPOC Station P**	**22.16**	**153**	P	**P**	**12 59 11.8**	**-1.8**
PB07				IAmb	IAmb	12 59 22.1	
	comp=Z,12nm,1.2s						
PB09	**IPOC Station P**	**22.51**	**152**	P	**P**	**12 59 15.9**	**-1.5**
PB09				IAmb	IAmb	12 59 30.3	
	comp=Z,12nm,1.3s						
SIV	**San Ignacio**	**23.59**	**127**	P	**P**	**12 59 28.2**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=303,slow=14,SNR=6.8						
	comp=Z,2.2nm,0.8s						
TOSP	**Speyside**	**23.72**	**56**	P	**P**	**12 59 27.1**	**-2.1**
ITTB	**Itaituba**	**24.72**	**96**	*eP*	**P**	**12 59 38.1**	**-0.3**
BIM	**Bigot**	**25.16**	**49**	P	**P**	**12 59 40.1**	**-2.3**
NPGB	**Novo Progresso**	**25.45**	**102**	*eP*	**P**	**12 59 45.4**	**+0.4**
CLDB	**Colider**	**25.96**	**111**	*eP*	**P**	**12 59 51.6**	**+1.9**
MALB	**Monte Alegre**	**26.10**	**90**	*eP*	**P**	**12 59 52.1**	**+1.1**
YKA	**Yellowknife Ar**	**69.28**	**344**	P	**P**	**13 05 22.8**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=123,slow=6.9,SNR=4.1						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**81.94**	**337**	P	**P**	**13 06 35.9**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=140,slow=4.4,SNR=3.5						
	comp=Z,0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.72**	**77**	P	**P**	**13 06 40.2**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=272,slow=4.5,SNR=4.5						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**138.05**	**231**	PKP	**PKPdf**	**13 13 40.6**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=146,slow=3.1,SNR=4.1						
WRA	**Warramunga Arr**	**139.59**	**236**	PKhKP	PKPpre	13 13 36.7	
	comp=Z,0.3nm,0.7s,baz=116,slow=2.3,SNR=2.3						
WRA				PKP	**PKPdf**	**13 13 44.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=114,slow=2.0,SNR=7.6						

HEL 23 12:59:19.7±0.1, 63.°96N×28.°23E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.79**	**70**	PB	Pg	12 59 34.5	-0.3
OUF	**Meirjarvi**	**1.59**	**287**	PG	Pn	12 59 47.9	-1.1
OUF				MSG		13 00 07.1	
	comp=Z,2.4nm,0.2s						
OUF				SG	Sn	13 00 08.6	-1.6
OBF4	**Vikkela, Lumij**	**1.61**	**304**	PG	Pn	12 59 48.9	-0.4
OBF4				SN	Sn	13 00 10.8	0.0
JOF	**Joensuu**	**1.73**	**126**	PG	Pn	12 59 50.9	-0.1
	baz=313						
JOF				SN	Sn	13 00 13.6	-0.2
OBF0	**Syolatti, Pyha**	**1.83**	**289**	SB	Sn	13 00 13.8	-2.4
MSF	**Maaselka**	**1.99**	**10**	PG	Pn	12 59 55.5	+0.9
	baz=187						
MSF				SG	Sn	13 00 21.1	+0.9
KAF	**Kangasniemi**	**2.05**	**206**	MSG		13 00 20.6	
	comp=Z,1.0nm,0.2s						
KAF				SG	Sb	13 00 23.2	-0.5
KEF	**Keuruu**	**2.36**	**222**	MSG		13 00 29.4	
	comp=Z,1.3nm,0.2s						
KEF				SG	Sb	13 00 31.8	-0.8
OLKF	**Oulanka, Finla**	**2.42**	**11**	SG	Sb	13 00 34.0	-0.5
VAF	**Ylistaro**	**2.66**	**252**	MSG		13 00 38.0	
	comp=Z,0.6nm,0.2s						
VAF				SG	Sb	13 00 40.4	-0.8
FIA0	**FINESS Array S**	**2.71**	**202**	PG	Pn	13 00 06.4	+1.9
FIA0				SG	Sb	13 00 41.0	-1.8
VJF	**Virojoki**	**3.45**	**186**	SG	Sb	13 01 06.9	+3.1

*IDC **23** 13:00:00.1±3.8, 67.°94N×25.°72E, h0km, Error ellipse: s-maj=33.0km s-min=18.4km az=107.0*
*HEL **23** 13:00:00.0±0.1, 67.°95N×25.°87E, h0km, ML1.8, Explosion*
*BER **23** 13:00:02.2±2.0, 67.°91N×25.°62E, h0km, ML1.2, Suspected explosion*

ISC 23 12:59:59.1±0.8, 67.°95N±0.°02×25.°85E±0.°02, h0km, n32, σ0°68/46, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGF	**Sodankyl**	**0.57**	**153**	PN	**Pn**	**13 00 16.3**	**+1.9**
SGF	**Sodankyl**	**0.57**	**153**	PG	**Pg**	**13 00 10.4**	**+0.5**
SGF				SG	**Pn**	**13 00 16.3**	**+1.9**
HEF	**Hetta**	**0.94**	**301**	*eP*	**Pg**	**13 00 17.2**	**+0.1**
HEF				*eS*	**Sg**	**13 00 30.0**	**+0.8**
HEF	**Hetta**	**0.94**	**301**	PG	**Pg**	**13 00 17.2**	**+0.1**
HEF				MSG		13 00 29.1	
	comp=Z,5.1nm,0.2s						
HEF				SB	**Sg**	**13 00 30.0**	**+0.8**
KLF	**Kolari**	**1.01**	**226**	PN	**Pg**	**13 00 17.8**	**-0.7**
KLF	**Kolari**	**1.01**	**226**	PG	**Pg**	**13 00 17.8**	**-0.7**
	baz=40						
KLF				SG	**Sg**	**13 00 31.3**	**-0.3**
RNF	**Rovaniemi**	**1.34**	**177**	SB	**Sg**	**13 00 42.0**	**-0.2**
RNF	**Rovaniemi**	**1.34**	**177**	PG	**Pg**	**13 00 24.0**	**-0.7**
RNF				SG	**Sg**	**13 00 42.0**	**-0.2**
PAJU	**Pajala**	**1.40**	**230**	PG	**Pg**	**13 00 25.2**	**-0.7**
PAJU	**Pajala**	**1.40**	**230**	PG	**Pg**	**13 00 25.2**	**-0.7**
PAJU				SG	**Sb**	**13 00 44.2**	**-0.3**
VRF	**Varrio**	**1.44**	**96**	PG	**Pg**	**13 00 26.4**	**-0.3**
VRF	**Varrio**	**1.44**	**96**	PN	**Pg**	**13 00 26.4**	**-0.3**
VRF				MSG		13 00 43.0	
	comp=Z,5.5nm,0.2s						
VRF				SG	**Sg**	**13 00 44.6**	**-0.7**
KTK1	**Kautokeino**	**1.44**	**319**	*eP*	**Pn**	**13 00 26.5**	**+0.1**
KTK1				*eS*	**Sg**	**13 00 45.6**	**+0.2**
KTK1				IAML		13 00 49.7	
	comp=Z,4.5nm,0.2s						
KTK1	**Kautokeino**	**1.44**	**319**	PG	**Pn**	**13 00 26.3**	**-0.1**
KTK1				SG	**Sb**	**13 00 45.7**	**0.0**
LANU	**Lannavaara**	**1.46**	**276**	PG	**Pn**	**13 00 26.2**	**-0.4**
LANU				SG	**Sg**	**13 00 45.8**	**0.0**
ARA0	**ARCESS Array S**	**1.60**	**356**	*eP*	**Pb**	**13 00 29.6**	**0.0**
ARA0				*eS*	**Sn**	**13 00 50.2**	**+0.2**
ARA0				IAML		13 00 54.5	
	comp=Z,4.4nm,0.1s						
ARA0	**ARCESS Array S**	**1.60**	**356**	PN	**Pb**	**13 00 29.3**	**-0.2**
	baz=176						
ARA0				SN	**Sn**	**13 00 50.0**	**0.0**
ARCES	**ARCESS Array B**	**1.60**	**356**	Pg	**Pb**	**13 00 29.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=173,slow=15,SNR=42						
ARCES				Lg	Lg	13 00 50.1	
	comp=Z,0.9nm,0.3s,baz=174,slow=26,SNR=15						
KEV	**Kevo**	**1.87**	**12**	*eP*	**Pb**	**13 00 33.8**	**-0.3**
KEV				*eS*	**Sg**	**13 00 59.1**	**+0.1**
KEV	**Kevo**	**1.87**	**12**	PG	**Pb**	**13 00 33.6**	**-0.5**
KEV				MSG		13 00 55.5	
	comp=Z,8.6nm,0.2s						
KEV				SG	**Sb**	**13 00 57.4**	**-0.5**
TOF	**Tornio**	**1.97**	**198**	MSG		13 00 39.2	
	comp=Z,1.1nm,0.2s						
TOF	**Tornio**	**1.97**	**198**	PG	**Pb**	**13 00 35.5**	**-0.2**
TOF				MSG		13 00 58.6	

	490nm,SNR=4.7								
ELGU				S		Sn	13 35 12.7	-0.8	
FIGM	**Figuig**	**4.91**	**216**	P		**Pn**	**13 34 20.1**	**-2.8**	
FIGM				S		**Sn**	**13 35 18.1**	**-1.3**	
ERTA	**Horta de San J**	**4.97**	**344**	P		**Pn**	**13 34 26.5**	**+2.8**	
ERTA				⇑*i*Vmb_V			13 34 28.4		
	68nm,SNR=1.1								
ERTA				S		**Sn**	**13 35 25.5**	**+4.7**	
EGOR	**Sierra Gorda,**	**5.08**	**282**	P		**Pn**	**13 34 27.6**	**+2.3**	
EGOR				⇑*i*Vmb_V			13 34 32.6		
	100nm,SNR=2.0								
EGOR				S		**Sn**	**13 35 23.0**	**-0.8**	
EPOB	**Poblet**	**5.23**	**351**	P		**Pn**	**13 34 29.2**	**+1.9**	
EPOB				⇑*i*Vmb_V			13 34 32.2		
	77nm,SNR=1.7								
EPOB				S		**Sn**	**13 35 31.3**	**+4.0**	
EMIJ	**Mijas**	**5.56**	**276**	P		**Pn**	**13 34 30.5**	**-1.3**	
EMIJ				⇑*i*Vmb_V			13 34 33.6		
	151nm,SNR=2.0								
EMIJ				S		**Sn**	**13 35 32.0**	**-3.4**	
ETOR	**Torete**	**5.67**	**326**	P		**Pn**	**13 34 36.4**	**+3.1**	
ETOR				S		**Sn**	**13 35 41.4**	**+3.3**	
EADA	**Adamuz**	**5.70**	**292**	P		**Pn**	**13 34 35.1**	**+1.5**	
EADA				⇑*i*Vmb_V			13 34 36.9		
	36nm,SNR=0.8								
EADA				S		**Sn**	**13 35 39.4**	**+0.7**	
EMIR	**Miracle**	**5.75**	**356**	P		**Pn**	**13 34 37.6**	**+3.2**	
EMIR				⇑*i*Vmb_V			13 34 40.5		
	273nm,SNR=1.3								
EMIR				S		**Sn**	**13 35 43.9**	**+3.9**	
KEST	**Kesra**	**5.89**	**92**	Pn		**Pn**	**13 34 36.0**	**-0.3**	
	0.7nm,0.3s,baz=282,slow=12,SNR=6.5								
KEST				Sn		**Sn**	**13 35 42.9**	**-0.7**	
	0.6nm,0.3s,baz=59,slow=18,SNR=2.2								
	2.0nm,0.5s								
ESDC	**Sonseca Array**	**5.93**	**308**	Pn		**Pn**	**13 34 38.8**	**+1.9**	
	1.0nm,0.3s,baz=124,slow=13,SNR=35								
ESDC				Sn		**Sn**	**13 35 46.9**	**+2.3**	
	0.3nm,0.3s,baz=124,slow=23,SNR=4.8								
	2.8nm,0.3s								
PAB	**San Pablo**	**6.11**	**305**	P		**Pn**	**13 34 41.3**	**+1.9**	
PAB				⇑*i*Vmb_V			13 34 44.0		
	50nm,SNR=1.3								
PAB				S		**Sn**	**13 35 51.4**	**+2.3**	
EJON	**La Jonquera**	**6.29**	**5**	P		**Pn**	**13 34 44.6**	**+2.8**	
EJON				⇑*i*Vmb_V			13 34 47.1		
	96nm,SNR=1.1								
EJON				S		**Sn**	**13 35 54.5**	**+1.1**	
ECAB	**El Cabril**	**6.30**	**290**	P		**Pn**	**13 34 42.9**	**+0.9**	
ECAB				⇑*i*Vmb_V			13 34 46.1		
	44nm,SNR=0.8								
ECAB				S		**Sn**	**13 35 53.8**	**+0.1**	
MDT	**Midelt**	**6.48**	**241**	Pn		**Pn**	**13 34 43.7**	**-0.7**	
	0.6nm,0.3s,baz=118,slow=9.3,SNR=15								
MDT				Sn		**Sn**	**13 35 59.9**	**+1.8**	
	0.6nm,0.3s,baz=292,slow=19,SNR=1.7								
MDT				Lg		Lg	13 36 30.3		
	0.6nm,0.3s,baz=287,slow=14,SNR=1.9								
	1.4nm,0.3s								
MDT	**Midelt**	**6.48**	**241**	P		**Pn**	**13 34 44.2**	**-0.3**	
MDT				S		**Sn**	**13 36 01.1**	**+3.0**	
MD31	**MD31**	**6.56**	**242**	P		**Pn**	**13 34 45.7**	**+0.2**	
MD31				S		**Sn**	**13 36 02.3**	**+2.2**	
EPF	**Esparros**	**6.98**	**349**	*e*P		**Pn**	**13 34 55.3**	**+4.0**	
EPF				*e*Sn		**Sn**	**13 36 06.2**	**-4.1**	
	1.1nm,0.2s								
ETSF	**Etsaut**	**7.02**	**344**	*e*Pn		**Pn**	**13 34 51.5**	**-0.4**	
ETSF	**Etsaut**	**7.02**	**344**	*e*P		**Pn**	**13 34 55.7**	**+3.8**	
ETSF				*e*Sn		**Sn**	**13 36 07.0**	**-4.4**	
	0.7nm,0.3s								
MTLF	**Montolieu**	**7.16**	**1**	*e*P		Pn	13 34 58.5	+4.9	
SJPF	**Ste Jean**	**7.39**	**341**	*e*P		**Pn**	**13 35 00.6**	**+3.8**	
SJPF				*e*Sn		**Sn**	**13 36 13.9**	**-6.4**	
	1.6nm,0.4s								
LMR	**La Mourre**	**7.91**	**24**	*e*P		**Pn**	**13 35 05.0**	**+1.0**	
LMR				*e*Sn		**Sn**	**13 36 28.9**	**-4.2**	
	7.0nm,0.7s								
SMRF	**Simiane la Rot**	**8.23**	**18**	*e*P		**Pn**	**13 35 10.5**	**+2.1**	
PGF	**Pioggiola**	**8.30**	**38**	*e*P		**Pn**	**13 35 11.0**	**+1.5**	
PGF				*e*Sn		**Sn**	**13 36 37.9**	**-5.1**	
	0.7nm,0.3s								
SBF	**Sospel**	**8.70**	**26**	*e*P		**Pn**	**13 35 16.0**	**+1.2**	
SBF				*e*Sn		**Sn**	**13 36 46.9**	**-5.6**	
	2.3nm,0.3s								
VIVF	**Saint-Julien-l**	**8.89**	**12**	*e*P		**Pn**	**13 35 20.6**	**+3.2**	
VIVF				*e*Sn		**Sn**	**13 36 51.7**	**-5.5**	
	1.9nm,0.5s								
EARI	**Arriondas**	**9.07**	**324**	P		**Pn**	**13 35 23.9**	**+3.9**	
EARI				⇑*i*Vmb_V			13 35 28.4		
	56nm,SNR=0.3								
EARI				S		**Sn**	**13 37 02.0**	**+0.2**	
RJF	**Les Rejaudoux**	**9.13**	**357**	*e*Pn		**Pn**	**13 35 18.3**	**-2.4**	
ORIF	**Oris-en-Rattie**	**9.19**	**17**	*e*P		**Pn**	**13 35 24.4**	**+2.8**	
MBDF	**Montbardon**	**9.25**	**21**	*e*P		**Pn**	**13 35 25.4**	**+2.9**	
MBDF				*e*Sn		**Sn**	**13 36 59.5**	**-6.8**	
	1.0nm,0.3s								
LPG	**La Plagne**	**9.95**	**19**	*e*P		**Pn**	**13 35 36.7**	**+4.5**	
LPG				*e*Sn		**Sn**	**13 37 16.6**	**-7.1**	
	1.5nm,0.2s								
LPL	**La Plagne**	**9.96**	**19**	*e*P		**Pn**	**13 35 36.8**	**+4.5**	
LPL				*e*Sn		**Sn**	**13 37 17.0**	**-6.9**	
	1.5nm,0.5s								
DAVOX	**Davos/Dischmat**	**12.08**	**26**	LR		LR	13 40 31.6		
	comp=Z,17nm,21.1s,baz=285,slow=36								
TORD	**Torodi Ar. Bea**	**22.93**	**181**	P		**P**	**13 38 09.1**	**-4.1**	
	0.5nm,0.5s,baz=358,slow=11,SNR=3.3								
	0.5nm,0.5s								
AKASG	**Malin Array Be**	**24.29**	**45**	LR		LR	13 48 25.5		
	comp=Z,11nm,19.3s,baz=11,slow=38								
MKAR	**Makanchi Array**	**58.55**	**53**	P		**P**	**13 43 05.4**	**0.0**	
	1.6nm,0.6s,baz=282,slow=6.1,SNR=13								
	1.6nm,0.6s								

IDC 23 13:55:04.2±2.0, 8°09S×124°84E, h0km, mb3.3/1, mbtmp3.6/5, ML3.7/4, MS3.1/1, Error ellipse: s-maj=53.9km s-min=27.0km az=76.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.41**	**209**	Pn	Pn	13 55 45.9	+1.1
	71nm,0.3s,baz=282,slow=2.8,SNR=77						
BATI				Sn	Sn	13 56 07.2	-7.9
	73nm,0.3s,baz=22,slow=1.4,SNR=12						
	224nm,0.4s						
FITZ	**Fitzroy Crossi**	**9.98**	**176**	Pn	Pn	13 57 26.9	-2.1
	0.3nm,0.3s,baz=1.8,slow=11,SNR=24						
FITZ				Sn	Sn	13 59 05.2	-17
	1.8nm,0.3s,baz=133,slow=18,SNR=13						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**14.95**	**143**	Pn	Pn	13 58 37.9	+1.0
	0.3nm,0.3s,baz=317,slow=15,SNR=36						
WRA				Sn	Sn	14 01 13.2	-10
	0.3nm,0.3s,baz=311,slow=23,SNR=4.5						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**17.76**	**152**	P	Pn	13 59 13.4	+0.3
	0.2nm,0.3s,baz=323,slow=11,SNR=21						
ASAR				S	Sn	14 02 19.8	-12
	0.6nm,0.7s,baz=313,slow=20,SNR=5.2						
	1.1nm,0.6s						
JHJ	**Hachijo jima 2**	**43.38**	**18**	LR	LR	14 18 17.3	
	comp=Z,28nm,21.9s,baz=84,slow=32						
MKAR	**Makanchi Array**	**66.44**	**330**	P	P	14 05 55.2	-0.1
	0.2nm,0.6s,baz=139,slow=6.8,SNR=2.7						
	0.2nm,0.6s						

ASRS 23 14:09:44.2±0.3, 53°N±2°×9°8E±°, h5km, MLh3.8/7, Error ellipse: s-maj=3.7km s-min=2.3km az=23.5, confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**2.52**	**129**	Pg	Pb	14 10 30.2	+0.1
MOY				Sg	Sg	14 11 03.6	-1.7
KZLR	**Kyzyl**	**2.59**	**234**	Pg	Pb	14 10 31.2	0.0
KZLR				Sg	Sg	14 11 06.2	-1.2
KNGR	**Kungurtug, Tuv**	**2.69**	**184**	Pg	Pg	14 10 35.2	-0.4
KNGR				Sg	Sg	14 11 09.6	-0.9
ARDR	**Aradan**	**2.75**	**257**	Pg	Pg	14 10 35.7	-1.1
ARDR				Sg	Sg	14 11 10.3	-2.1
ERNS	**Erzin**	**3.44**	**210**	Pg	Pb	14 10 47.3	+1.5
ERNS				Sg	Sg	14 11 32.3	-2.5
CERR	**Cheremushki**	**3.89**	**266**	Pg	Pb	14 10 51.6	-1.6
CERR				Sg	Sg	14 11 47.3	-1.6
GZLN	**Zheleznogorsk**	**3.89**	**325**	Pg	Pb	14 10 55.7	+2.5
GZLN				Sg	Sg	14 11 47.2	-1.9
DJOS	**Djoyskaya Sosn**	**3.91**	**265**	Pg	Pb	14 10 50.2	-3.3
DJOS				Sg	Sg	14 11 47.6	-1.9
SHTK	**Zheleznogorsk-**	**3.91**	**323**	Pg	Pb	14 10 54.7	+1.1
SHTK				Sg	Sg	14 11 47.4	-2.4
DJO	**Djoy, Khakassi**	**4.02**	**266**	Pg	Pg	14 11 00.5	-0.6
DJO				Sg	Sg	14 11 49.2	-3.9
IRK	**Irkutsk**	**4.05**	**102**	Sg	Sg	14 11 50.5	-3.8
ZAK	**Zakamensk**	**4.46**	**128**	Pg	Pb	14 11 04.7	+1.7
ZAK				Sg	Sg	14 12 03.4	-4.0
LUZB	**Luzhba, Kemero**	**5.34**	**278**	Pg	Pb	14 11 21.1	+3.2
LUZB				Sg	Sg	14 12 32.3	-3.4
TASR	**Tashtagol**	**6.02**	**269**	Sg	Sb	14 12 49.6	+7.7
ARTR	**Artybash**	**6.60**	**261**	Sg	Sg	14 13 09.1	-6.8
ULGR	**Ulagan, Altay**	**6.65**	**250**	Pg	Pg	14 11 51.4	-0.1
ULGR				Sg	Sg	14 13 17.1	-0.5
CUR	**Chagan-Uzun**	**6.69**	**245**	Sg	Sg	14 13 12.6	-6.4
ELT	**Eltsovka**	**6.95**	**274**	Sg	Sg	14 13 23.7	-3.4
AKAR	**Aktash**	**6.99**	**249**	Sg	Sg	14 13 19.2	-9.1
SALR	**Pechorkino, Sa**	**7.26**	**284**	Pg	Pn	14 11 29.3	-1.5
SALR				Sg	Sg	14 13 27.6	-9.5

*MOS **23** 14:45:59.6±0.8, 44°92N×148°41E, h97km, mb3.7/1, Error ellipse: s-maj=17.0km s-min=12.9km az=139.8*
*SKHL **23** 14:46:00.5±0.4, 44°80N×148°50E, h102km±5km, mb5.3/5, msha5.6/3*
*JMA **23** 14:46:01.0±0.6, 45°N±2°×14°9E±°, h81km, MV3.8/14, SE OFF ETOROFU*
*NIED **23** 14:46:01.0, 44°60N×148°51E, h81km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.55; $M_{\theta\theta}$-0.80; $M_{\phi\phi}$0.25; $M_{r\theta}$-0.52; $M_{\theta\phi}$-0.40; $M_{\phi r}$-0.60; Fault plane solution: $M_0$1.13000×10^{15} NP1: ϕ_s104.00000°, δ32.00000°, λ145.00000°. NP2: ϕ_s225.00000°, δ72.00000°, λ63.00000°.*
*IDC **23** 14:46:02.6±3.6, 45°07N×148°20E, h108km±32km, mb3.2/9, mbtmp3.6/12, MS2.2/1 Error ellipse: s-maj=25.5km s-min=16.3km az=151.0*

ISC 23 14:46:00.0±1.0, 44°81N±0°06×148°50E±0°08, h89km±7km, n48, σ1°35/56, mb3.5/9, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.62**	**314**	*c i*Pn	**Pn**	**14 46 15.5**	**-0.1**
KUR				*e*S	**Sn**	**14 46 26.7**	**-0.6**
KUR				pmax	pmax		
	comp=Z,2μm,0.6s						
KUR				pmax	pmax		
	comp=N,454nm,0.4s						
KUR				pmax	pmax		
	comp=E,985nm,0.3s						
KUR				smax	smax		
	comp=N,3μm,0.4s						
KUR				smax	smax		
	comp=E,2μm,0.5s						
KUR	**Kuril'sk**	**0.62**	**314**	*i* P	**Pn**	**14 46 15.6**	**-0.1**
KUR				AMB	AMB	14 46 16.1	
	comp=E,2μm,0.4s						
KUR				*e*S	**Sn**	**14 46 26.8**	**-0.6**
KUR				A	A	14 46 31.3	
	comp=E,2μm,0.3s						
KUR				A	A	14 46 31.3	
	comp=E,2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.04**	**249**	*d i*Pn	**Pn**	**14 46 33.4**	**+0.7**
YUK				*e*S	**Sn**	**14 46 58.4**	**+0.7**
YUK				pmax	pmax		
	comp=N,109nm,0.2s						
YUK				pmax	pmax		
	comp=Z,433nm,0.2s						
YUK				pmax	pmax		
	comp=E,110nm,0.1s						
YUK				smax	smax		
	comp=N,873nm,0.5s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.04**	**249**	*i* P	**Pn**	**14 46 33.4**	**+0.7**
YUK				AMB	AMB	14 46 33.9	
	comp=E,280nm,0.2s						
YUK				*e*S	**Sn**	**14 46 58.1**	**+0.4**
YUK				A	A	14 46 59.3	
	comp=E,810nm,0.4s						
YUK				A	A	14 46 59.3	
	comp=E,1μm,0.4s						
RUSJ	**Misakicho**	**2.43**	**254**	*e*PN	**Pn**	**14 46 39.8**	**+1.9**
RUSJ				*e*S	**Sn**	**14 47 10.3**	**+3.4**
NEM2	**Nemuro 2**	**2.46**	**235**	*e*P	**Pn**	**14 46 38.0**	**-0.2**
NEM2				*e*S	**Sn**	**14 47 06.1**	**-1.4**
NMR	**Nemuro--Hokkai**	**2.46**	**235**	*e*PN	**Pn**	**14 46 37.9**	**-0.4**
NMR				*e*S	**Sn**	**14 47 05.9**	**-1.7**
NMR	**Nemuro--Hokkai**	**2.46**	**235**	*e*P	**Pn**	**14 46 38.2**	**-0.1**
NMR				*e*S	**Sn**	**14 47 05.9**	**-1.7**
JRA	**Rausu**	**2.58**	**251**	*e*P	**Pn**	**14 46 41.1**	**+1.3**
JNK	**Nakash**	**2.98**	**247**	*e*P	**Pn**	**14 46 46.6**	**+1.3**
JNK				*e*S	**Sn**	**14 47 20.9**	**+0.8**
AKK	**Akkeshi**	**3.19**	**237**	*e*P	**Pn**	**14 46 48.2**	**+0.1**
AKK				*e*S	**Sn**	**14 47 23.6**	**-1.6**
JAK	**Akkeshi**	**3.29**	**238**	*e*P	**Pn**	**14 46 49.5**	**0.0**
JAK				*e*S	**Sn**	**14 47 25.9**	**-1.7**
JTKR	**Abashiri--Toko**	**3.40**	**257**	*e*P	**Pn**	**14 46 51.8**	**+1.0**
JAR	**Ashorobuto**	**3.73**	**248**	*e*P	**Pn**	**14 46 57.0**	**+1.6**
JAR				*e*S	**Sn**	**14 47 39.9**	**+1.7**
JOB	**Onbets**	**3.88**	**242**	*e*P	**Pn**	**14 46 58.6**	**+1.3**
JOB				*e*S	**Sn**	**14 47 41.0**	**-0.7**
JKK2	**Kamakawa 2**	**4.23**	**259**	*e*P	**Pn**	**14 47 03.7**	**+1.5**
JCH	**Churui**	**4.32**	**241**	*e*P	**Pn**	**14 47 04.1**	**+0.7**
JCH				*e*S	**Sn**	**14 47 50.3**	**-2.3**
YSS	**Yuzh-Sakhalins**	**4.55**	**300**	‖*e*PN	**Pn**	**14 47 06.6**	**+0.1**
YSS				*e*S	**Sn**	**14 47 57.3**	**-0.7**
YSS				pmax	pmax		
	comp=Z,90nm,0.5s						
YSS				smax	smax		
	comp=N,40nm,0.7s						
YSS				smax	smax		
	comp=E,30nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.55**	**300**	*i* P	**Pn**	**14 47 06.5**	**+0.1**
YSS				AMB	AMB	14 47 07.3	
	comp=E,70nm,0.4s						
YSS				*e*S	**Sn**	**14 47 57.0**	**-1.0**
YSS				A	A	14 48 00.1	
	comp=E,30nm,0.8s						
YSS				A	A	14 48 00.1	
	comp=E,40nm,0.8s						
JWK2	**Keihoku**	**4.71**	**279**	*e*P	**Pn**	**14 47 11.0**	**+2.5**
JNBK	**Urakawa-nobuka**	**4.88**	**241**	*e*P	**Pn**	**14 47 10.6**	**-0.4**
JNBK				*e*S	**Sn**	**14 48 04.6**	**-1.7**
JANG	**Nango**	**6.80**	**232**	*e*S	Sn	14 48 45.0	-8.0
JTH	**Tanohata**	**6.92**	**228**	*e*S	Sn	14 48 48.2	-7.6
TYV	**Tymovskoe**	**7.22**	**329**	*e*P	**Pn**	**14 47 45.3**	**+2.5**
PETK	**Petropavlovsk-**	**10.27**	**33**	P	**Pn**	**14 48 24.5**	**+0.3**
	comp=E,2.5nm,0.7s,baz=211,slow=13,SNR=8.5						
KLR	**Kul'dur**	**12.25**	**297**	P	**Pn**	**14 48 50.2**	**-1.0**
	comp=E,3.1nm,1.1s,baz=93,slow=15,SNR=4.2						
KSRS	**Korea Array**	**17.13**	**252**	P	**P**	**14 49 54.6**	**+0.7**
	comp=E,0.6nm,0.5s,baz=59,slow=11,SNR=4.4						
KSRS				LR	LR	14 55 26.7	
	comp=E,8.2nm,19.4s,baz=125,slow=33						
H11N2	**WAKE ISLAND Hy**	**29.31**	**143**	T	T	15 23 04.0	
	baz=334,slow=76,SNR=278						
H11N1	**WAKE ISLAND Hy**	**29.32**	**143**	T	T	15 23 05.3	
	baz=334,slow=76,SNR=167						
H11N3	**WAKE ISLAND Hy**	**29.33**	**143**	T	T	15 23 05.6	
	baz=334,slow=76,SNR=227						
H11S1	**WAKE ISLAND Hy**	**30.31**	**144**	T	T	15 24 10.4	
	baz=334,slow=76,SNR=248						
H11S3	**WAKE ISLAND Hy**	**30.32**	**144**	T	T	15 24 18.4	
	baz=334,slow=76,SNR=177						
H11S2	**WAKE ISLAND Hy**	**30.33**	**144**	T	T	15 24 11.8	
	baz=334,slow=76,SNR=149						
ILAR	**Eielson Array**	**40.06**	**37**	P	**P**	**14 53 26.4**	**+0.4**
	comp=E,0.3nm,0.5s,baz=269,slow=8.5,SNR=4.8						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**41.14**	**306**	PcP	**PcP**	**14 55 31.8**	**-0.9**
	comp=E,0.7nm,0.5s,baz=64,slow=3.4,SNR=4.0						
MKAR	**Makanchi Array**	**44.96**	**297**	P	**P**	**14 54 05.6**	**-0.5**
	comp=E,0.3nm,0.5s,baz=85,slow=8.1,SNR=3.0						
MKAR				PcP	**PcP**	**14 55 45.0**	**-0.7**
	comp=E,0.3nm,0.5s,baz=68,slow=2.3,SNR=4.2						
	comp=E,0.3nm,0.5s						
KURK	**Kurchatov**	**45.75**	**304**	P	**P**	**14 54 11.3**	**-0.8**
KURK						14 55 47.6	
KURK	**Kurchatov**	**45.75**	**304**	*e*P	**P**	**14 54 11.3**	**-0.8**
KURBB	**Kurchatov Arra**	**45.84**	**303**	P	**P**	**14 54 11.2**	**-1.6**
	comp=E,0.3nm,0.4s,baz=73,slow=8.5,SNR=2.7						
KURBB				PcP	**PcP**	**14 55 47.6**	**-1.1**
	comp=E,0.1nm,0.3s,baz=60,slow=3.6,SNR=4.2						
	comp=E,0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**48.75**	**254**	P	**P**	**14 54 35.8**	**0.0**
	comp=E,0.8nm,0.6s,baz=33,slow=7.7,SNR=5.2						
	comp=E,0.8nm,0.6s						
FINES	**FINESS Array B**	**64.37**	**333**	P	**P**	**14 56 22.4**	**-3.5**
	comp=E,0.6nm,0.5s,baz=38,slow=7.0,SNR=7.5						
	comp=E,0.6nm,0.5s						
WRA	**Warramunga Arr**	**65.72**	**195**	P	**P**	**14 56 36.2**	**+1.1**
	comp=E,0.3nm,0.6s,baz=11,slow=6.7,SNR=2.4						
	comp=E,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**66.20**	**59**	P	**P**	**14 56 39.9**	**+1.4**
	comp=E,0.5nm,0.6s,baz=289,slow=7.3,SNR=5.8						
	comp=E,0.5nm,0.6s						
ASAR	**Alice Springs**	**69.44**	**194**	P	**P**	**14 56 59.6**	**+1.2**
	comp=E,0.2nm,0.6s,baz=10,slow=6.5,SNR=2.3						
	comp=E,0.2nm,0.6s						
TXAR	**Lajitas Array**	**81.26**	**57**	P	**P**	**14 58 07.6**	**+1.1**
	comp=E,1.0nm,0.6s,baz=298,slow=3.7,SNR=15						
	comp=E,1.0nm,0.6s						
H03N2	**Juan Fernandez**	**141.99**	**89**	T	T	17 44 28.5	
	baz=304,slow=76,SNR=2.5						
H03N3	**Juan Fernandez**	**142.00**	**89**	T	T	17 44 46.9	
	baz=304,SNR=1.9						
H03N1	**Juan Fernandez**	**142.00**	**89**	T	T	17 43 58.8	
	baz=304,slow=76,SNR=2.6						

*IDC **23** 14:47:26.8±0.9, 45°73S×77°44W, h0km, mb4.0/7, mbtmp4.0/9, ML3.9/2, MS4.1/38, Error ellipse: s-maj=38.5km s-min=16.3km az=100.0*
*GUC **23** 14:47:26.8±2.2, 45°72S×77°31W, h10km, ML4.2*
*NEIC **23** 14:47:27.3±2.5, 45°68S±0°05×77°2W±0°2, h14km±3km, mb4.6/21, ML4.2(GUC), Error ellipse: s-maj=21.3km s-min=7.5km az=96.0*
*GCMT **23** 14:47:29.3±0.2, 45°77S±0°01×77°66W±0°02, h22km±1km, MW5.0/120, Moment Tensor Solution. s47, c57; s120, c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.59±.15; $M_{\theta\theta}$2.30±.13; $M_{\phi\phi}$-1.70±.12; $M_{r\theta}$0.29±.18; $M_{\theta\phi}$-3.54±.10; $M_{\phi r}$-1.36±.21; Best double couple: $M_0$4.31000×10^{16} NP1: ϕ_s344.00000°, δ86.00000°, λ-20.00000°. NP2: ϕ_s76.00000°, δ70.00000°, λ-175.00000°. Principal axes: T 4.5420, Plg11.0000°, Azm32.0000°; N -0.4600, Plg70.0000°, Azm152.0000°; P -4.0780, Plg17.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 14:47:27.2±0.6, 45°70S±0°06×77°4W±0°1, h10km, n131, σ1°74/91, mb4.4/11, MS4.1/37, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AY01	**Puyuhuapi**	**3.58**	**71**	Pn	**Pn**	**14 48 21.1**	**-1.7**
AY01	**Puyuhuapi**	**3.58**	**71**	*e*P	**Pn**	**14 48 22.0**	**-0.8**
AY01				*i* S	**Sn**	**14 49 05.0**	**-0.2**
AY01				IAML		14 49 09.5	
	comp=N,510nm,0.6s						
GO07	**Milladeo Hill,**	**3.71**	**47**		**Pn**	**14 48 22.2**	**-2.3**
GO07	**Milladeo Hill,**	**3.71**	**47**	*i* P	**Pn**	**14 48 23.5**	**-1.0**
GO07				IAML		14 48 45.5	
	comp=N,184nm,0.1s						
COYC	**Coyhaique**	**3.71**	**90**	Pn	**Pn**	**14 48 22.7**	**-1.9**
LL07	**Hotel Espejo d**	**4.01**	**46**	Pn	**Pn**	**14 48 26.9**	**-1.8**
LL02	**Futaleuf**	**4.69**	**60**	Pn	**Pn**	**14 48 37.0**	**-0.9**
LL02	**Futaleuf**	**4.69**	**60**	*e*P	**Pn**	**14 48 36.8**	**-1.2**
LL02				IAML		14 49 37.9	
LL01	**San Ignacio de**	**4.88**	**49**	Pn	**Pn**	**14 48 39.2**	**-1.4**
LL01	**San Ignacio de**	**4.88**	**49**	*e*P	Pn	14 48 35.2	-5.4
LL05	**Los Muermos**	**5.15**	**35**		**Pn**	**14 48 43.5**	**-0.7**
LL05	**Los Muermos**	**5.15**	**35**	*e*P	**Pn**	**14 48 43.5**	**-0.7**
LL03	**Petrohue**	**5.82**	**40**	*e*P	**Pn**	**14 48 53.2**	**-0.4**
LL04	**Puerto Octay**	**6.01**	**39**	Pn	**Pn**	**14 48 54.6**	**-1.5**
LL04	**Puerto Octay**	**6.01**	**39**	*e*P	**Pn**	**14 48 55.5**	**-0.6**
GO09	**Cerro Castillo**	**6.50**	**151**	Pn	**Pn**	**14 49 02.3**	**-0.5**
LR04	**Corral**	**6.50**	**28**	*e*P	**Pn**	**14 49 03.0**	**+0.1**
MG05	**Puerto Natales**	**6.79**	**153**	Pn	**Pn**	**14 49 06.3**	**-0.5**
PLCA	**Paso Flores**	**7.04**	**47**	Pn	**Pn**	**14 49 11.1**	**+0.7**
	comp=N,0.8nm,0.3s,baz=232,slow=8.2,SNR=11						
PLCA				LR	LR	14 51 52.0	
	comp=N,3μm,19.6s,baz=214,slow=37						
	comp=N,2.2nm,0.4s						
PLCA	**Paso Flores**	**7.04**	**47**		**Pn**	**14 49 10.8**	**+0.5**
PLCA	**Paso Flores**	**7.04**	**47**	*e*P	**Pn**	**14 49 10.8**	**+0.5**
LR03	**Panguipulli**	**7.11**	**33**		**Pn**	**14 49 10.9**	**-0.3**
GO06	**Curarrehue**	**7.50**	**37**	Pn	**Pn**	**14 49 16.4**	**-0.4**
GO06	**Curarrehue**	**7.50**	**37**	*e*P	**Pn**	**14 49 16.4**	**-0.4

RPN	Rapa Nui	31.41	295	LR	LR	15 02 40.7		
	comp=Z,370nm,18.1s,baz=130,slow=29							
SIV	San Ignacio	32.63	30	LR	LR	15 09 12.1		
	comp=Z,381nm,18.1s,baz=252,slow=40							
NNA	Nana	33.61	1	LR	LR	15 04 31.5		
	comp=Z,248nm,20.1s,baz=182,slow=30							
SALV	Santo Antonio	34.83	38	eP	P	14 54 21.4	+3.0	
VILB	Vilhena	35.75	30	eP	P	14 54 29.5	+3.3	
ETMB	Extrema	37.02	18	eP	P	14 54 37.6	+0.6	
PDRB	Porto dos Gac	38.26	34	eP	P	14 54 48.2	+0.6	
ATAH	Atahualpa	38.43	358	LR	LR	15 07 00.4		
	comp=Z,311nm,20.8s,baz=187,slow=30							
SAML	Samuel	38.60	23	P	P	14 54 50.5	0.0	
SAML				IAmb	IAmb	14 54 54.2		
	comp=Z,14nm,1.4s							
BDFB	Brasilia	38.78	49	LR	LR	15 12 23.3		
	comp=Z,915nm,19.0s,baz=211,slow=38							
CLDB	Colider	39.30	35	eP	P	14 54 57.8	+1.4	
SNDB	Serra Nova Dou	40.27	42	eP	P	14 55 07.2	+2.7	
VNA3	Neumayer Olymp	40.44	153	P	P	14 55 06.9	+1.6	
VNA3	Neumayer Olymp	40.44	153	PcP	PcP	14 57 06.7	-1.1	
VNA2	Neumayer–Watz	41.18	152	P	P	14 55 13.0	+1.6	
	baz=274,slow=8.7							
JANB	Januaria	41.27	53	eP	P	14 55 13.9	+1.1	
SNAA	Sanae	42.62	153	P	P	14 55 23.4	+0.2	
SNAA	Sanae	42.62	153	P	P	14 55 24.0	+0.8	
	comp=Z,3.7nm,0.9s,baz=261,slow=3.7,SNR=11							
SNAA				LR	LR	15 12 22.8		
	comp=Z,102nm,18.6s,baz=272,slow=35							
	comp=Z,3.7nm,0.9s							
SNAA	Sanae	42.62	153	P	P	14 55 23.9	+0.7	
SNAA				IAmb	IAmb	14 55 31.3		
	comp=Z,20nm,1.5s							
NPGB	Novo Progresso	42.97	33	eP	P	14 55 27.6	+1.1	
QSPA	South Pole Qui	44.54	180	P	P	14 55 39.4	+0.6	
	comp=Z,4.6nm,0.8s,baz=154,slow=3.2,SNR=13							
QSPA				LR	LR	15 12 34.1		
	comp=Z,110nm,18.1s,baz=147,slow=34							
	comp=Z,4.6nm,0.8s							
QSPA	South Pole Qui	44.54	180	P	P	14 55 35.6	-3.2	
QSPA				IAmb	IAmb	14 55 42.9		
	comp=Z,5.3nm,0.8s							
SMTB	Santa Maria do	44.75	44	eP	P	14 55 41.2	+0.4	
ITTB	Itaituba	45.29	31	eP	P	14 55 46.2	+1.0	
ROSC	El Rosal	50.39	4	LR	LR	15 15 06.5		
	comp=Z,390nm,21.3s,baz=241,slow=33							
SBA	Scott Base	50.77	194	P	P	14 56 27.6	+0.8	
SBA				IAmb	IAmb	14 56 33.2		
	comp=Z,8.1nm,1.3s							
VNDA	Vanda	51.81	194	P	P	14 56 35.6	+1.0	
	comp=Z,1.4nm,0.8s,baz=131,slow=6.2,SNR=8.0							
VNDA				LR	LR	15 15 09.0		
	comp=Z,147nm,19.3s,baz=133,slow=32							
	comp=Z,1.4nm,0.8s							
VNDA	Vanda	51.81	194	P	P	14 56 35.5	+0.9	
RCBR	Riachuelo	53.53	55	LR	LR	15 19 20.8		
	comp=Z,366nm,19.2s,baz=346,slow=36							
SDV	Santo Domingo	54.68	8	LR	LR	15 18 30.4		
	comp=Z,228nm,20.3s,baz=213,slow=34							
MDP	Montagnes des	55.18	31	LR	LR	15 21 23.5		
	comp=Z,252nm,19.4s,baz=230,slow=37							
HDC	Heredia	55.78	352	P	P	14 57 04.0	-0.5	
MAW	Mawson	63.10	164	LR	LR	15 24 00.7		
	comp=Z,391nm,20.7s,baz=206,slow=35							
PPT	Papeete	65.27	270	LR	LR	15 18 12.0		
	comp=Z,115nm,19.6s,baz=132,slow=28							
RAR	Rarotonga	69.93	260	LR	LR	15 19 59.2		
	comp=Z,104nm,19.2s,baz=156,slow=28							
RPZ	Rata Peaks	72.28	225	LR	LR	15 22 38.3		
	comp=Z,359nm,19.4s,baz=106,slow=29							
SUR	Sutherland	72.79	119	LR	LR	15 27 51.2		
	comp=Z,123nm,18.8s,baz=188,slow=33							
URZ	Urewera	73.00	232	LR	LR	15 22 28.3		
	comp=Z,144nm,19.2s,baz=212,slow=29							
LPIG	La Paz	75.65	329	LR	LR	15 23 44.1		
	comp=Z,55nm,18.4s,baz=183,slow=29							
RAO	Raoul Island	76.42	242	LR	LR	15 23 32.3		
	comp=Z,68nm,21.9s,baz=106,slow=28							
BOSA	Boshof	78.16	119	LR	LR	15 27 09.7		
	comp=Z,126nm,21.8s,baz=202,slow=30							
TXAR	Lajitas Array	78.41	337	P	P	14 59 28.3	+0.4	
	comp=Z,0.4nm,0.8s,baz=149,slow=3.7,SNR=2.3							
TXAR				LR	LR	15 28 59.2		
	comp=Z,44nm,19.3s,baz=150,slow=32							
	comp=Z,0.4nm,0.8s							
TSUM	Tsumeb	79.86	107	LR	LR	15 34 55.5		
	comp=Z,71nm,18.2s,baz=154,slow=36							
LBTB	Lobatse	80.95	116	LR	LR	15 30 15.2		
	comp=Z,94nm,21.8s,baz=220,slow=32							
LBTB	Lobatse	80.95	116	P	P	14 59 39.5	-2.6	
BBTS	Babate	81.31	59	LR	LR	15 33 08.7		
	comp=Z,152nm,19.5s,baz=227,slow=34							
DBIC	Dimbokro	82.72	73	LR	LR	15 33 35.9		
	comp=Z,74nm,18.3s,baz=214,slow=34							
AFI	Afiamalu	83.21	257	LR	LR	15 29 19.2		
	comp=Z,78nm,18.7s,baz=76,slow=30							
ANMO	Albuquerque	84.47	336	LR	LR	15 30 35.5		
	comp=Z,57nm,21.8s,baz=158,slow=31							
PFO	Pinyon Flats O	86.51	328	LR	LR	15 30 45.3		
	comp=Z,55nm,20.3s,baz=124,slow=30							
LSZ	Lusaka	89.69	112	LR	LR	15 39 00.4		
	comp=Z,110nm,18.1s,baz=188,slow=34							
DZM	Mont Dzumac	91.16	236	LR	LR	15 33 03.5		
	comp=Z,74nm,19.5s,baz=195,slow=30							
STKA	Stephens Creek	95.08	212	LR	LR	15 36 04.0		
	comp=Z,129nm,19.2s,baz=201,slow=31							
OPO	Ambohidratompo	98.70	128	LR	LR	15 42 28.9		
	comp=Z,52nm,18.2s,baz=33,slow=33							
NEW	Newport	99.83	334	LR	LR	15 39 51.2		
	comp=Z,22nm,18.2s,baz=112,slow=32							
H11S2	WAKE ISLAND Hyl	21.04	265	T	T	17 18 35.3		
	baz=135,slow=75,SNR=64							
H11S1	WAKE ISLAND Hyl	21.05	265	T	T	17 18 35.3		
	baz=135,slow=75,SNR=40							
H11S3	WAKE ISLAND Hyl	21.05	265	T	T	17 18 42.1		
	baz=135,slow=75,SNR=42							
H11N3	WAKE ISLAND Hyl	21.72	266	T	T	17 19 24.6		
	baz=132,slow=76,SNR=5.6							
H11N1	WAKE ISLAND Hyl	21.73	266	T	T	17 19 26.2		
	baz=132,slow=76,SNR=6.9							
H11N2	WAKE ISLAND Hyl	21.73	266	T	T	17 19 27.9		
	baz=132,slow=76,SNR=7.5							
ILAR	Eielson Array	122.65	332	PKP	PKiKP	15 06 22.9	+0.9	
	comp=Z,0.2nm,0.8s,baz=177,slow=1.8,SNR=2.7							
CMAR	Chiang Mai Arr	152.66	172	PKPbc	PKiKP	15 07 26.4	+1.9	
	comp=Z,0.7nm,0.3s,baz=193,slow=3.5,SNR=1.9							
PZH	PanZhiHua	160.82	178	PKP	PKPdf	15 07 26.4	-1.2	

*TAP **23** 14:48:41.9,24.˚75N×121.˚99E,h63km,ML3.8,B*
*JMA **23** 14:48:41.5±0.1,24.˚7N±0.˚3×122.˚0E±0.˚4,h65km±1km, MV2.6/10,TAIWAN REGION*
ISC 23 14:48:43.3±1.5,24.˚73N±0.˚02×122.˚05E±0.˚02,h37km,n77, σ1§17/125,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		0.16	319	*i* P	Pn	14 48 51.6	-2.4
	baz=335						
TWC	Suao	0.21	237	*i* P	Pn	14 48 52.0	-0.2
	baz=221						
TWC				S	Sn	14 48 58.9	-2.0
	baz=221						
NTC	Toucheng	0.23	303	*i* P	Pn	14 48 52.0	+0.2
	baz=306						
NTC				*e*S	Sn	14 48 58.2	-1.8
	baz=306						
ILA	Ilan	0.28	278	*i* P	Pn	14 48 52.5	+1.0
	baz=274						
ILA				*i* S	Sn	14 48 60.0	+1.1
	baz=274						
TWB1	Santiao Chiao	0.29	349	*i* P	Pn	14 48 52.5	+1.0
TWB1				*i* S	Sn	14 48 59.8	+1.1
NDS	Dongshan	0.32	253	*i* P	Pn	14 48 51.9	+0.4
	baz=245						
NDS				*e*S	Sn	14 48 58.6	+0.1
	baz=245						
TIPB	Shuangxi	0.32	321	*i* P	Pn	14 48 52.5	+0.9
	baz=326						
TWE	Neicheng	0.34	269	*i* P	Pn	14 48 52.8	+1.1
	baz=264						
TWE				*e*S	Sn	14 49 00.4	+2.0
	baz=264						
EWUT	Wuta	0.37	221	*i* P	Pn	14 48 52.2	+0.3
	baz=212						
EWUT				*i* S	Sn	14 49 00.7	+2.0
	baz=212						
SXI1	Grass Mountain	0.40	337	P	Pn	14 48 53.1	+0.7
	baz=342						
ENA	Nanau	0.41	223	*i* P	Pn	14 48 53.6	+1.1
	baz=214						
ENA				*i* S	Sn	14 49 02.5	+3.3
	baz=214						
FUSB	Fushanzhiwuyua	0.42	275	P	Pn	14 48 53.4	+0.7
	baz=272						
FUSB				S	Sn	14 49 00.9	+1.3
	baz=272						
NWF	Wu-fen Shan	0.42	325	*i* P	Pn	14 48 53.4	+0.7
	baz=329						
NWF				*i* S	Sn	14 49 01.6	+1.9
	baz=329						
WFSB	Wu-fen Shan	0.42	325	*i* P	Pn	14 48 53.4	+0.8
	baz=329						
WFSB				*i* S	Sn	14 49 01.6	+2.1
	baz=329						
ENTT	Nioudou	0.45	259	*i* P	Pn	14 48 52.9	-0.1
	baz=254						
ENTT				S	Sn	14 49 02.0	+1.9
	baz=254						
TNOU	National Taiwa	0.49	330	*i* P	Pn	14 48 53.8	+0.1
	baz=333						
TNOU				*i* S	Sn	14 49 02.1	+1.1
	baz=333						
TWA	Mucha	0.49	301	*i* P	Pn	14 48 53.8	0.0
	baz=302						
TWA				*i* S	Sn	14 49 02.1	+1.0
	baz=302						
NDT	Datong Townshi	0.50	256	*i* P	Pn	14 48 54.3	+0.3
	baz=251						
NDT				*i* S	Sn	14 49 03.1	+1.7
	baz=251						
LATG	Datong	0.51	248	*i* P	Pn	14 48 54.5	+0.3
	baz=243						
LATG				*i* S	Sn	14 49 03.8	+2.0
	baz=243						
NHDH	Xindian Distri	0.53	297	*i* P	Pn	14 48 54.3	-0.2
	baz=296						
NHDH				S	Sn	14 49 03.1	+0.9
	baz=296						
TATO	Taipei	0.56	296	*i* P	Pn	14 48 54.5	-0.5
	baz=296						
TAP	Taipei	0.58	303	*i* P	Pn	14 48 54.7	-0.5
	baz=303						
YM01	YM01	0.60	314	*i* P	Pn	14 48 54.9	-0.7
	baz=316						
BACT	New Taipei Cit	0.61	296	P	Pn	14 48 55.2	-0.4
	baz=296						
YHNB	Yeheng	0.61	265	*i* P	Pn	14 48 55.5	-0.3
	baz=262						
YHNB				*i* S	Sn	14 49 04.7	+0.4
	baz=262						
YM08	YM08	0.62	318	*i* P	Pn	14 48 54.9	-0.9
	baz=320						
YM08				*e*S	Sn	14 49 04.0	-0.5
	baz=320						
NSK	Sanguang	0.63	266	*i* P	Pn	14 48 54.4	-1.5
	baz=262						
NSK				*e*S	Sn	14 49 03.1	-1.6
	baz=262						
ANP	Anpu	0.66	314	*i* P	Pn	14 48 55.6	-0.8
	baz=315						
NNSB	Datong	0.67	244	*i* P	Pn	14 48 56.2	-0.3
	baz=240						
NNSH	Datong	0.67	244	*i* P	Pn	14 48 56.2	-0.3
	baz=240						
NNSH				*i* S	Sn	14 49 06.7	+0.9
	baz=240						
NNS	Nan Shan	0.68	245	*i* P	Pn	14 48 55.2	-1.4
	baz=241						
NNS				*i* S	Sn	14 49 06.0	+0.1
	baz=241						
TWS1	Kuangyinshan	0.68	303	*i* P	Pn	14 48 56.0	-0.5
	baz=304						
TWS1				*i* S	Sn	14 49 06.3	+0.4
	baz=304						
ETL	Fush Village	0.68	214	*i* P	Pn	14 48 56.2	-0.4
	baz=209						
ETL				S	Sn	14 49 07.4	+1.5
	baz=209						
NACB	Ninganchiao	0.69	217	*i* P	Pn	14 48 56.3	-0.3
	baz=212						
NTST	Danshui	0.70	309	*i* P	Pn	14 48 56.2	-0.5
	baz=310						
NTST				*i* S	Sn	14 49 06.9	+0.7
	baz=310						
ETLH	Xiulin Townshi	0.73	225	*i* P	Pn	14 48 56.6	-0.6
	baz=220						
ETLH				*e*S	Sn	14 49 07.7	+0.5
	baz=220						
NTY	Taoyuan	0.73	292	P	Pn	14 48 56.8	-0.4
	baz=291						
NTY				S	Sn	14 49 08.0	+0.9
	baz=291						
TWD	Chiawan	0.76	213	*i* P	Pn	14 48 57.0	-0.5
	baz=208						
NCUH	Zhongli	0.82	287	P	Pn	14 48 57.7	-0.6
	baz=286						
NCUH				*i* S	Sn	14 49 09.6	+0.3
	baz=286						
JYNG	Yonagunijimaku	0.86	108	P	Pn	14 48 59.3	+0.4
JYNG				S	Sn	14 49 12.0	+1.7
FUSS	Fushou	0.87	237	*i* P	Pn	14 48 58.9	-0.5
	baz=233						
FUSS				S	Sn	14 49 11.0	0.0
	baz=233						
PCYT	Pengchaiyu	0.90	1	*i* P	Pn	14 48 59.3	-0.2
	baz=5.0						
ETM	Tongmen	0.91	214	*e*P	Pn	14 48 58.1	-1.5
	baz=210						
YOJ	Yonaguni jima	0.92	106	*i* P	Pn	14 48 59.9	+0.2
	baz=106						
YOJ				*i* S	Sn	14 49 13.3	+1.7
	baz=106						
YOJ	Yonaguni jima	0.92	106	P	Pn	14 48 59.8	+0.2
YOJ				S	Sn	14 49 12.5	+0.9
WHF	Hehuan Shan	0.92	231	*i* P	Pn	14 48 59.3	-0.8
	baz=227						
TWT	Tachien	0.92	240	*i* P	Pn	14 48 59.7	-0.2
	baz=236						
TWT				*i* S	Sn	14 49 12.4	+0.3
	baz=236						
TDCB	Techi	0.94	240	*i* P	Pn	14 48 59.7	-0.3
	baz=237						
TDCB				*i* S	Sn	14 49 12.1	-0.3
	baz=237						
LIOB	Emei	0.94	265	*i* P	Pn	14 48 59.2	-0.8
	baz=263						
LIOB				S	Sn	14 49 11.8	-0.5
	baz=263						
TEYL	Yanliau Villag	0.95	206	*i* P	Pn	14 48 59.9	-0.2
	baz=202						
NSTT	Nanjuang	0.96	265	*i* P	Pn	14 48 59.5	-0.7
	baz=262						
NSTT				*i* S	Sn	14 49 11.7	-0.9
	baz=262						
CHGB	Renai	1.03	230	*i* P	Pn	14 49 00.9	-0.5
	baz=227						
ESL	Shilin	1.07	212	*e*P	Pn	14 48 59.7	-2.0
	baz=208						
WHP	Taichung City	1.10	246	*i* P	Pn	14 49 02.0	-0.2
	baz=243						
WHP				*e*S	Sn	14 49 16.3	+0.1
	baz=243						
OWD	Renai	1.10	226	*i* P	Pn	14 49 01.5	-0.9
	baz=223						
OWD				*e*S	Sn	14 49 16.1	-0.3
	baz=223						
WUSB	Renai	1.12	229	*i* P	Pn	14 49 01.9	-0.6
	baz=226						
WUSB				*i* S	Sn	14 49 16.1	-0.7
	baz=226						
NMLH	Miaoli	1.16	261	P	Pn	14 49 02.4	-0.6
	baz=259						
NMLH				*i* S	Sn	14 49 16.9	-0.7
	baz=259						
NSY	Sanyi	1.21	256	*i* P	Pn	14 49 03.1	-0.6
	baz=253						
NSY				S	Sn	14 49 18.4	-0.4
	baz=253						
TWQ1	Liyutan	1.22	252	*i* P	Pn	14 49 03.0	-0.8
	baz=250						
VWDT	VWDT	1.27	221	*i* P	Pn	14 49 03.8	-0.8
	baz=218						
SMLT	Sun Moon Lake	1.34	232	*i* P	Pn	14 49 05.8	+0.2
	baz=228						
SSLB	Suanglung	1.37	227	*i* P	Pn	14 49 05.8	0.0
	baz=224						
SSLB				*e*S	Sn	14 49 23.0	+0.2
	baz=224						
EHY	Hungye	1.38	209	*e*P	Pn	14 49 03.5	-2.6
	baz=206						
WHYT	Xinyi Township	1.50	227	P	Pn	14 49 07.7	+0.1
	baz=224						
IRIF	Iriomote-Funau	1.58	104	P	Pn	14 49 08.7	-0.1
IRIF				S	Sn	14 49 28.6	+0.7
ALS	Alishan	1.66	223	*i* P	Pn	14 49 10.1	0.0
	baz=221						
ALS				*e*S	Sn	14 49 30.8	+0.5
	baz=221						
WGK	Gukeng	1.71	233	*e*S	Sn	14 49 31.0	-0.1
	baz=230						
HATJ	Hateruma jima	1.74	112	*e*S	Sn	14 49 33.7	+1.9
ELDTW	Lidau	1.80	212	*e*P	Pn	14 49 10.3	-1.5
	baz=209						
JKRS	Kuro-shima	1.85	105	P	Pn	14 49 12.9	+0.4
JKRS				S	Sn	14 49 36.0	+1.3
JIJ	Ishigaki jima	1.94	100	*e*P	Pn	14 49 13.9	+0.2
JIJ				*e*S	Sn	14 49 37.0	+0.1
TWK	Hsinying	2.04	225	*i* P	Pn	14 49 14.9	-0.2
	baz=222						
TWK				*e*S	Sn	14 49 40.3	+1.0
	baz=222						
JISG	Ishigakijimahi	2.06	93	P	Pn	14 49 15.7	+0.3
CHN1	Nanshi	2.07	222	*e*P	Pn	14 49 16.0	+0.4
	baz=220						
CHN1				*e*S	Sn	14 49 42.1	+2.0
	baz=220						
MATB	Ma-tsu	2.37	307	*e*P	Pn	14 49 17.1	-2.5
	baz=306						
MATB				*e*S	Sn	14 49 43.5	-4.0
	baz=306						
MSUT	Lienchiang	2.40	307	*e*P	Pn	14 49 17.8	-2.2
	baz=307						
MSUT				*e*S	Sn	14 49 44.4	-3.8
	baz=307						
EAST	Anshuo	2.58	205	*e*P	Pn	14 49 24.4	+1.9
	baz=203						

*IDC **23** 15:00:18.6±2.7,30.˚86S×70.˚94W,h0km,mb3.2/1, mbtmp3.6/3,ML3.6/2,Error ellipse: s-maj=98.2km s-min=44.2km az=106.0*
*GUC **23** 15:00:30.0±0.8,30.˚34S×70.˚83W,h79km±3km,ML3.8*
ISC 23 15:00:31.6±0.9,30.˚35S±0.˚04×70.˚85W±0.˚07,h82km±8km, n21,σ1§62/27,2C-5D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO04	Tololo Observa	0.18	14	eP	Pn	15 00 42.8	-1.0
GO04				eS	Sn	15 00 52.5	-0.3
GO04				IAML		15 00 58.0	
	comp=N,7μm,0.5s						
CO03	El Pedregal	0.51	164	⇓*i* P	Pn	15 00 45.1	-0.6
CO03				eS	Sn	15 00 56.0	-0.1
CO05	La Serena	0.55	322	⇓*i* P	Pn	15 00 45.4	-0.4
CO05				eS	Sn	15 00 56.1	-0.4
CO05				IAML		15 00 57.0	
	comp=E,8μm,0.3s						
CO06	Fray Jorge	0.75	244	⇓*i* P	Pn	15 00 47.4	-0.5
CO06				eS	Sn	15 00 59.9	-0.1
CO06				IAML		15 01 05.7	
	comp=N,3μm,0.2s						
CO01	Juntas del Tor	0.75	61	⇑*i* P	Pn	15 00 47.7	-0.5
CO01				eS	Sn	15 00 59.9	-0.6
CO01				IAML		15 01 00.4	
	comp=N,4μm,0.3s						
CO02	Combarbal	0.86	189	⇓*i* P	Pn	15 00 48.8	-0.5
CO02				eS	Sn	15 01 02.5	+0.1
CO02				IAML		15 01 04.6	
	comp=E,7μm,0.2s						
LCO	Las Campanas	1.34	6	eP	Pn	15 00 54.3	-0.9
LCO				eS	Sn	15 01 12.8	-0.2
AC05	El Transito	1.59	19	⇑*i* P	Pn	15 00 58.0	-0.3
AC05				eS	Sn	15 01 18.3	-0.1
AC05				IAML		15 01 21.4	
	comp=N,1μm,0.1s						
VA06	Catapilco	2.24	190	eP	Pn	15 01 06.4	-0.2
VA06				eS	Sn	15 01 34.0	+0.6
VA06				IAML		15 01 42.3	
	comp=N,1μm,0.4s						
VA03	San Esteban	2.42	174	⇓*e*P	Pn	15 01 09.3	+0.1
VA03				eS	Sn	15 01 39.5	+1.5
VA03				IAML		15 01 50.2	
	comp=E,576nm,0.1s						
ROCH	El Roble	2.62	183	eP	Pn	15 01 11.7	-0.3
ROCH				eS	Sn	15 01 45.8	+2.9
ROCH				IAML		15 01 54.0	
	comp=N,486nm,0.2s						
H03N1	Juan Fernandez	7.52	244	T	T	15 09 15.5	
	baz=72,slow=72,SNR=246						
H03N2	Juan Fernandez	7.53	244	T	T	15 09 16.2	
	baz=72,slow=72,SNR=211						
H03N3	Juan Fernandez	7.53	244	T	T	15 09 10.8	
	baz=72,slow=72,SNR=246						
LVC	Limon Verde	7.90	13	Pn	Pn	15 02 21.9	-2.2
	comp=N,0.4nm,0.3s,baz=162,slow=3.2,SNR=1.5						
LVC				Sn	Sn	15 03 58.5	+6.3
	comp=N,0.7nm,0.3s,baz=180,slow=23,SNR=2.3						
	comp=N,3.3nm,0.5s						
LPAZ	La Paz	14.22	11	Pn	Pn	15 03 49.9	+0.2
	comp=N,0.2nm,0.3s,baz=190,slow=9.9,SNR=6.0						
	comp=N,1.0nm,0.5s						
TXAR	Lajitas Array	67.09	329	P	P	15 11 16.5	+0.1
	comp=N,0.2nm,0.7s,baz=146,slow=8.7,SNR=2.2						
	comp=N,0.2nm,0.7s						
H11S2	WAKE ISLAND Hyl	26.77	271	T	T	17 38 42.8	
	baz=115						
H11S1	WAKE ISLAND Hyl	26.78	271	T	T	17 38 36.1	
	baz=115						
H11S3	WAKE ISLAND Hyl	26.79	271	T	T	17 38 32.1	
	baz=115						
ZALV	Zalesovo Beam	150.59	30	PKPbc	PKPbc	15 20 12.8	-0.7
	comp=N,0.2nm,0.3s,baz=302,slow=2.8,SNR=3.7						

*IDC **23** 15:00:33.9±1.4,8.˚22S×117.˚67E,h0km,mb3.7/4, mbtmp3.8/8,ML3.9/4,MS3.8/7,Error ellipse: s-maj=43.7km s-min=18.8km az=56.0*
*NEIC **23** 15:00:35.9±1.1,8.˚14S±0.˚08×117.˚81E±0.˚07,h4km±6km, mb4.2/13,Error ellipse: s-maj=12.4km s-min=10.0km az=162.0*
*DJA **23** 15:00:38.6±0.6,8.˚S±3.˚×117.˚8E±.˚,h29km±6km,M4.1/17, mb4.3/2,mB4.8/3,MLv4.0/17,Mw(mB)4.0/3*
ISC 23 15:00:39.4±0.6,8.˚20S±0.˚04×117.˚84E±0.˚04,h35km,n61, σ1§10/61,mb3.9/7,MS4.1/6,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.62	186	P	Pn	15 00 51.0	-0.8
PLAI				S	Sn	15 01 00.4	-0.2
PLAI	Plampang	0.62	186	P	Pn	15 00 51.1	-0.8
TWSI	Taliwang, Sumb	1.09	241	P	Pn	15 00 58.3	+0.1
TWSI				S	Sn	15 01 13.3	+1.3
WBSI	Waikabubak, Su	2.09	133	P	Pn	15 01 12.7	+0.6
SRBI	Singaraja	2.61	272	P	Pn	15 01 19.2	+0.1
BSSI	Bau Bau, Buton	3.33	52	P	Pn	15 01 28.7	-0.3
BSSI				S	Sn	15 02 06.1	-1.3
BASI	Baing, Sumba	3.36	127	P	Pn	15 01 29.6	+0.1
BKSI	Bulukumba	3.65	38	P	Pn	15 01 32.8	-0.6
JAGI	Jajag, Banyuwa	3.66	266	Pn	Pn	15 01 33.6	0.0
JAGI	Jajag, Banyuwa	3.66	266	P	Pn	15 01 33.4	-0.2
JAGI	Jajag, Banyuwa	3.66	266	P	Pn	15 01 33.9	+0

BATI	**Baumata**	**6.08 110**	Pn	**Pn**	**15 02 08.7**	**+1.7**
	9.3nm,0.3s,baz=284,slow=6.3,SNR=5.3						
BATI			Sn	**Sn**	**15 03 18.1**	**+2.7**
	3.7nm,0.3s,baz=113,slow=4.7,SNR=1.6						
	18nm,0.4s						
LEM	**Lembang**	**10.23 277**	LR	LR	15 08 23.6		
	comp=Z,94nm,20.2s,baz=74,slow=47						
FITZ	**Fitzroy Crossi**	**12.42 143**	Pn	**Pn**	**15 03 34.0**	**+0.2**
	0.1nm,0.3s,baz=329,slow=12,SNR=1.4						
FITZ			Sn	**Sn**	**15 05 46.0**	**-5.0**
	0.2nm,0.3s,baz=224,slow=16,SNR=1.8						
	0.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**12.42 143**	Pn	**Pn**	**15 03 34.4**	**+0.6**
KNRA	**Kununurra**	**13.01 126**	Pn	**Pn**	**15 03 40.9**	**-1.0**
KNRA	**Kununurra**	**13.01 126**	P	**Pn**	**15 03 41.2**	**-0.6**
MBWA	**Marble Bar**	**13.01 172**	Pn	**Pn**	**15 03 41.1**	**-0.7**
MBWA	**Marble Bar**	**13.01 172**	P	**Pn**	**15 03 41.6**	**-0.3**
PSA00	**Pilbara Seismi**	**13.43 172**	Pn	**Pn**	**15 03 47.9**	**+0.3**
MTN	**Manton Dam**	**13.86 111**	Pn	**Pn**	**15 03 52.1**	**-1.4**
MTN	**Manton Dam**	**13.86 111**	P	**Pn**	**15 03 52.2**	**-1.2**
GIRL	**Giralia**	**14.77 193**	Pn	**Pn**	**15 04 05.7**	**-0.1**
KDU	**Kakadu**	**15.06 108**	P	**Pn**	**15 04 08.4**	**-1.3**
FAKI	**Fak Fak**	**15.27 71**	Pn	**Pn**	**15 04 13.2**	**+0.8**
FAKI			IAmb	IAmb	15 04 28.8		
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**19.73 127**	P	**P**	**15 05 05.8**	**-0.4**
WB0			IAmb	IAmb	15 05 13.0		
	comp=Z,7.5nm,1.4s						
WRA	**Warramunga Arr**	**19.78 128**	P	**P**	**15 05 06.3**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=301,slow=13,SNR=18						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**19.78 128**	P	**P**	**15 05 07.0**	**+0.2**
WB2	**Warramunga Arr**	**19.79 128**	P	**P**	**15 05 06.7**	**-0.3**
WR0	**Warramunga Arr**	**19.95 128**	P	**P**	**15 05 09.3**	**+0.7**
WR0			IAmb	IAmb	15 05 10.9		
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**21.76 137**	P	**P**	**15 05 28.6**	**+0.4**
ASAR	**Alice Springs**	**21.76 137**	P	**P**	**15 05 28.6**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=310,slow=9.8,SNR=90						
ASAR			PcP	**PcP**	**15 09 28.3**	**+0.3**
	comp=Z,0.5nm,1.0s,baz=321,slow=1.7,SNR=2.4						
	comp=Z,2.8nm,0.6s						
FORT	**Forrest**	**24.41 158**	P	**P**	**15 05 55.2**	**+0.6**
COEN	**Coen**	**25.50 105**	P	**P**	**15 06 04.8**	**0.0**
COEN			IAmb	IAmb	15 06 34.6		
	comp=Z,11nm,1.3s						
BBOO	**Buckleboo**	**29.74 148**	P	**P**	**15 06 43.2**	**+0.6**
BBOO			IAmb	IAmb	15 07 02.7		
	comp=Z,13nm,1.4s						
CTAO	**Charters Tower**	**29.92 116**	P	**P**	**15 06 45.4**	**+1.1**
STKA	**Stephens Creek**	**32.29 140**	P	**P**	**15 07 05.8**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=308,slow=10,SNR=3.6						
	comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**32.29 140**	P	**P**	**15 07 06.1**	**+1.0**
STKA			IAmb	IAmb	15 07 45.0		
	comp=Z,1.3nm,1.4s						
JHJ2	**Mitsune**	**46.10 26**	P	**P**	**15 09 00.4**	**+0.2**
SONM	**Songino Array**	**56.71 351**	P	**P**	**15 10 19.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=173,slow=8.3,SNR=4.3						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**63.23 333**	P	**P**	**15 11 03.3**	**-1.0**
	comp=Z,0.2nm,0.8s,baz=157,slow=7.8,SNR=2.3						
	comp=Z,0.2nm,0.6s						
SBA	**Scott Base**	**73.96 170**	P	**P**	**15 12 13.2**	**+2.5**
SBA			IAmb	IAmb	15 12 34.2		
	comp=Z,4.1nm,1.4s						
EIL	**Elat**	**87.89 300**	LR	LR	15 57 45.6		
	comp=Z,68nm,18.7s,baz=268,slow=39						
MMAI	**Mount Meron Ar**	**88.13 304**	LR	LR	16 00 07.5		
	comp=Z,40nm,18.4s,baz=42,slow=41						
AKASG	**Malin Array Be**	**95.41 320**	LR	LR	16 05 21.0		
	comp=Z,30nm,19.3s,baz=241,slow=41						
MLR	**Muntele Rosu**	**97.11 315**	LR	LR	16 05 25.4		
	comp=Z,120nm,19.5s,baz=260,slow=40						
FINES	**FINESS Array B**	**97.99 331**	LR	LR	16 05 51.4		
	comp=Z,78nm,18.4s,baz=246,slow=40						
ARCES	**ARCESS Array B**	**98.45 339**	LR	LR	16 01 56.4		
	comp=Z,73nm,21.3s,baz=282,slow=37						

VAO 23 15:21:43.4±0.3, 6°38.5S×50°09.9W, h10km, mbR3.7, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRPB	**Parauapebas**	**0.34**	**53**	*eP*	Pg	15 21 50.0	-0.2
SMTB	**Santa Maria do**	**3.50**	**135**	*eP*	Pn	15 22 38.0	+0.2
SMTB				eS	Sn	15 23 20.8	+1.4
NPGB	**Novo Progresso**	**5.28**	**262**	*eP*	Pn	15 23 01.9	-0.4
ITTB	**Itaituba**	**5.97**	**289**	*eP*	Pn	15 23 12.5	+0.7
MALB	**Monte Alegre**	**6.13**	**317**	*eP*	Pn	15 23 14.1	0.0
MCPB	**Macapa, AP**	**6.29**	**342**	*eP*	Pn	15 23 17.1	+0.8
CLDB	**Colider**	**7.20**	**231**	*eP*	Pn	15 23 28.4	-0.4
PDRB	**Porto dos Gac**	**8.37**	**231**	*eP*	Pn	15 23 44.3	-0.6

*NEIC **23** 15:49:14.6±1.8, 24°.7S±0°.2×179°.4W±0°.4, h534km±37km, mb4.4/17, Error ellipse: s-maj=53.9km s-min=24.9km az=78.0*
*IDC **23** 15:49:17.2±1.4, 24°.81S×179°.80E, h501km±14km, mb3.2/8, mbtmp4.1/11, Error ellipse: s-maj=19.8km s-min=15.4km az=145.0*
*NOU **23** 15:49:17.7, 24°.50S×179°.71W, h580km, mb4.3/13, South of Fiji Islands*

ISC 23 15:49:17.4±0.6, 24°.80S±0°.06×179°.82E±0°.09, h500km, n71, σ1s80/81, mb4.3/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.88**	**156**	P	**P**	**15 50 45.3**	**+2.1**
GLKZ				S	**S**	**15 51 53.7**	**+0.4**
LKBA	**Tubou, Lakemba**	**6.65**	**11**	P	**P**	**15 51 00.5**	**+0.2**
MSVF	**Nonsavu**	**7.22**	**346**	P	**P**	**15 51 05.8**	**-0.2**
	6.4nm,0.3s,baz=70,slow=23,SNR=18						
MSVF	**Nonsavu**	**7.22**	**346**	P	**P**	**15 51 06.3**	**+0.2**
TAVE	**Taveuni**	**8.05**	**2**	P	**P**	**15 51 15.3**	**+0.8**
OUZ	**Omahuta**	**11.70**	**206**	P	**P**	**15 51 54.2**	**+1.5**
OUZ	**Omahuta**	**11.70**	**206**	P	P	15 51 58.2	+5.6
DZM	**Mont Dzumac**	**12.58**	**280**	P	**P**	**15 52 03.1**	**+0.8**
	7.8nm,0.9s,baz=101,slow=14,SNR=3.9						
TOZ	**Tahuroa Road**	**13.41**	**195**	P	P	15 52 16.4	+5.7
AFI	**Afiamalu**	**13.41**	**38**	P	P	15 52 05.8	-5.4
	21nm,0.6s,baz=218,slow=17,SNR=1.7						
AFI	**Afiamalu**	**13.41**	**38**	P	P	15 52 05.7	-5.5
URZ	**Urewera**	**13.62**	**189**	P	**P**	**15 52 11.4**	**-1.5**
	8.7nm,0.5s,baz=353,slow=12,SNR=16						
URZ				S	**S**	**15 54 38.6**	**+1.0**
	4.2nm,0.7s,baz=256,slow=21,SNR=1.0						
URZ	**Urewera**	**13.62**	**189**	P	**P**	**15 52 11.1**	**-1.8**
URZ	**Urewera**	**13.62**	**189**	P	**P**	**15 52 11.2**	**-1.7**
URZ				S	**S**	**15 54 38.1**	**+0.5**
URZ	**Urewera**	**13.62**	**189**	P	**P**	**15 52 14.4**	**+1.5**
SNGZ	**Shannon Statio**	**14.10**	**188**	P	**P**	**15 52 20.1**	**+2.1**
MTHZ	**Maungataniwha**	**14.24**	**190**	P	**P**	**15 52 21.8**	**+2.3**
MTHZ				S	**S**	**15 54 50.5**	**+0.8**
HIZ	**Hauiti**	**14.31**	**196**	P	**P**	**15 52 24.6**	**+4.4**
HIZ	**Hauiti**	**14.31**	**196**	P	**P**	**15 52 23.5**	**+3.3**
NMHZ	**Naumai**	**14.48**	**189**	P	**P**	**15 52 21.2**	**+0.9**
NMHZ				S	**S**	**15 54 55.1**	**+0.7**
BKZ	**Black Stump Fm**	**14.60**	**190**	P	**P**	**15 52 23.3**	**0.0**
BKZ	**Black Stump Fm**	**14.60**	**190**	P	**P**	**15 52 23.9**	**+0.5**
BKZ				S	**S**	**15 54 54.7**	**-1.9**
BKZ	**Black Stump Fm**	**14.60**	**190**	P	P	15 52 28.0	+4.7
	48nm,1.4s						
TMVZ	**Te Maari**	**14.69**	**193**	P	**P**	**15 52 25.4**	**+1.0**
TWVZ	**Taurewa**	**14.71**	**194**	P	**P**	**15 52 26.5**	**+2.0**
ETVZ	**East Tongariro**	**14.71**	**193**	P	**P**	**15 52 25.3**	**+0.8**
OTVZ	**Oturere**	**14.75**	**193**	P	**P**	**15 52 24.0**	**-1.0**
SNVZ	**South Ngauruho**	**14.78**	**193**	P	**P**	**15 52 27.7**	**+2.4**
TUVZ	**Tukino**	**14.85**	**193**	P	**P**	**15 52 27.0**	**+0.9**
KWHZ	**Kaweka Forest**	**14.86**	**190**	P	**P**	**15 52 26.5**	**+0.4**
VRZ	**Vera Road**	**14.91**	**195**	P	P	15 52 31.1	+4.6
WNVZ	**Wahianoa**	**14.92**	**193**	P	**P**	**15 52 25.6**	**-1.2**
BHHZ	**Black Hill Sta**	**14.99**	**191**	P	**P**	**15 52 23.7**	**-3.7**
BHHZ				S	**S**	**15 54 58.4**	**-5.6**
KRHZ	**Kereru**	**15.09**	**190**	P	**P**	**15 52 28.1**	**-0.3**
KRHZ				S	**S**	**15 55 01.6**	**-4.3**
NEZ	**North Egmont**	**15.22**	**197**	P	**P**	**15 52 34.8**	**+5.0**
PNHZ	**Pukenui**	**15.38**	**191**	P	**P**	**15 52 32.0**	**+0.6**
TSZ	**Takapari Road**	**15.56**	**191**	P	**P**	**15 52 32.1**	**-1.2**
ANWZ	**Angora Road**	**15.87**	**189**	P	**P**	**15 52 35.2**	**-1.2**
ANWZ				S	**S**	**15 55 22.6**	**+1.9**
BFZ	**Birch Farm**	**16.12**	**190**	P	**P**	**15 52 37.8**	**-1.3**
BFZ				S	**S**	**15 55 22.5**	**-2.8**
BFZ	**Birch Farm**	**16.12**	**190**	P	**P**	**15 52 39.2**	**+0.1**

MRZ	**Mangatainoka R**	**16.21**	**192**	P	**P**	**15 52 37.0**	**-3.1**
MRZ				S	**S**	**15 55 22.6**	**-4.5**
QRZ	**Quartz Range**	**17.11**	**199**	P	**P**	**15 52 49.1**	**-0.2**
QRZ	**Quartz Range**	**17.11**	**199**	P	**P**	**15 52 49.4**	**+0.1**
KHZ	**Kahutara**	**18.32**	**195**	P	**P**	**15 53 00.2**	**-0.3**
LTZ	**Lake Taylor**	**18.99**	**197**	P	**P**	**15 53 05.5**	**-1.2**
LHI	**Lord Howe Isla**	**19.48**	**245**	P	**P**	**15 53 14.4**	**+3.2**
RPZ	**Rata Peaks**	**20.19**	**199**	P	**P**	**15 53 16.7**	**-0.9**
	7.1nm,0.8s,baz=29,slow=1.3,SNR=7.9						
	7.1nm,0.8s						
RPZ	**Rata Peaks**	**20.19**	**199**	P	**P**	**15 53 18.2**	**+0.6**
CTAO	**Charters Tower**	**31.33**	**272**	P	**P**	**15 54 56.9**	**+0.5**
STKA	**Stephens Creek**	**34.25**	**249**	P	**P**	**15 55 21.8**	**+0.7**
	0.7nm,0.4s,baz=120,slow=14,SNR=4.7						
	0.7nm,0.4s						
STKA	**Stephens Creek**	**34.25**	**249**	P	**P**	**15 55 22.1**	**+1.0**
COEN	**Coen**	**36.11**	**280**	P	**P**	**15 55 36.6**	**-0.2**
COEN				IAmb	IAmb	15 56 07.4	
	comp=Z,7.5nm,1.2s						
BBOO	**Buckleboo**	**38.95**	**248**	P	**P**	**15 55 59.3**	**-0.6**
BBOO				IAmb	IAmb	15 56 25.8	
	comp=Z,15nm,1.4s						
AS31	**Alice Springs**	**41.74**	**262**	P	**P**	**15 56 22.2**	**-0.2**
ASAR	**Alice Springs**	**41.74**	**262**	P	**P**	**15 56 22.1**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=97,slow=8.4,SNR=23						
ASAR				PcP	**PcP**	**15 58 06.5**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=90,slow=5.0,SNR=2.6						
ASAR				ScP	**ScP**	**16 01 10.9**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=100,slow=4.0,SNR=1.2						
ASAR				S	**S**	**16 02 01.6**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=99,slow=17,SNR=4.4						
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**41.74**	**262**	P	**P**	**15 56 21.9**	**-0.5**
WR0	**Warramunga Arr**	**42.01**	**267**	P	**P**	**15 56 23.7**	**-0.8**
WB2	**Warramunga Arr**	**42.18**	**267**	P	**P**	**15 56 25.0**	**-1.0**
WB2				IAmb	IAmb	15 56 25.9	
	comp=Z,6.4nm,0.5s						
WB0	**Warramunga Arr**	**42.19**	**267**	P	**P**	**15 56 25.1**	**-0.9**
WB0				IAmb	IAmb	15 56 26.2	
	comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	**42.19**	**267**	P	**P**	**15 56 25.1**	**-0.9**
	comp=Z,5.6nm,0.5s,baz=104,slow=8.0,SNR=94						
WRA				ScP	**ScP**	**16 01 12.4**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=101,slow=4.2,SNR=7.0						
WRA				S	**S**	**16 02 07.9**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=104,slow=15,SNR=2.1						
	comp=Z,5.6nm,0.5s						
FORT	**Forrest**	**45.85**	**250**	P	**P**	**15 56 53.5**	**-0.8**
FORT				IAmb	IAmb	15 57 07.2	
	comp=Z,16nm,1.0s						
MTN	**Manton Dam**	**47.37**	**275**	P	**P**	**15 57 04.7**	**-1.2**
MTN				IAmb	IAmb	15 57 11.5	
	comp=Z,14nm,1.2s						
KNRA	**Kununurra**	**48.53**	**271**	P	**P**	**15 57 14.3**	**-0.3**
KNRA				IAmb	IAmb	15 57 14.9	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.61**	**266**	P	**P**	**15 57 30.0**	**+0.1**
MBWA	**Marble Bar**	**55.06**	**261**	P	**P**	**15 58 00.8**	**-1.1**
MBWA				IAmb	IAmb	15 58 26.6	
	comp=Z,33nm,1.4s						
MORW	**Morawa**	**56.42**	**251**	P	**P**	**15 58 10.4**	**-0.8**
MORW				IAmb	IAmb	15 58 45.2	
	comp=Z,24nm,1.4s						
KSRS	**Korea Array**	**78.83**	**320**	P	**P**	**16 00 27.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=123,slow=5.8,SNR=4.6						
	comp=Z,0.8nm,0.7s						
NVAR	**Mina Array Bea**	**85.51**	**44**	P	**P**	**16 01 01.2**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=221,slow=4.8,SNR=2.3						
	comp=Z,0.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	**16 01 23.6**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=151,slow=2.6,SNR=5.6						
	comp=Z,0.8nm,0.9s						
TXAR	**Lajitas Array**	**91.04**	**58**	P	**P**	**16 01 28.3**	**0.0**
	comp=Z,0.4nm,0.7s,baz=213,slow=8.1,SNR=4.8						
	comp=Z,0.4nm,0.7s						
AKASG	**Malin Array Be**	**145.63**	**326**	PKPbc	**PKPdf**	**16 07 56.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=43,slow=4.5,SNR=3.0						

*RSPR **23** 15:49:44.7, 18°.10N×68°.88W, h140km±4km, MD4.0/17*
*NEIC **23** 15:49:44.7±1.3, 18°.3N±0°.1×68°.84W±0°.03, h140km±8km, Error ellipse: s-maj=21.1km s-min=2.6km az=188.0*
*OSPL **23** 15:49:49.8±3.9, 18°.53N×68°.65W, h130km±22km, ML3.7*

ISC 23 15:49:45.1±0.9, 18°.48N±0°.07×68°.73W±0°.03, h145km±7km, n93, σ1s79/100, 9C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.33**	**83**	*ieP*	**Pn**	**15 50 05.3**	**+0.2**
PCDR	**Punta Cana, DR**	**0.33**	**83**	*eS*	**Sn**	**15 50 19.4**	**-0.8**
PCDR	**Punta Cana, DR**	**0.33**	**83**		**Pn**	**15 50 05.3**	**+0.2**
PCDR	**Punta Cana, DR**	**0.33**	**83**		**Sn**	**15 50 19.4**	**-0.8**
PCDR	**Punta Cana, DR**	**0.33**	**83**	IAML		15 50 12.7	
	comp=E,290nm,0.6s						
DR12	**Loma Pena Alta**	**0.69**	**297**	*iP*	**Pn**	**15 50 06.8**	**-0.2**
DR12	**Loma Pena Alta**	**0.69**	**297**		**Pn**	**15 50 06.7**	**-0.4**
SDD	**Santo Domingo**	**1.13**	**269**		**Pn**	**15 50 08.1**	**-2.4**
SDD	**Santo Domingo**	**1.13**	**269**	*i* P	**Pn**	**15 50 11.9**	**+1.4**
SDD				*eS*	**Sn**	**15 50 30.6**	**+0.8**
IDE	**Isla Desecheo**	**1.19**	**94**	*ieP*	**Pn**	**15 50 11.4**	**+0.2**
LONA1	**Toro Cenizo, N**	**1.40**	**310**	*i* P	**Pn**	**15 50 17.1**	**+3.9**
LONA1				*eS*	**Sn**	**15 50 35.8**	**+1.0**
LONA1				IAML		15 50 42.8	
	comp=Z,1μm,0.2s						
PRSN	**Puerto Rico Se**	**1.52**	**99**		**Pn**	**15 50 13.8**	**-0.7**
AGPR	**Aguadilla, PR**	**1.53**	**90**	*ieP*	**Pn**	**15 50 16.2**	**+1.7**
AGPR	**Aguadilla, PR**	**1.53**	**90**	*eS*	**Sn**	**15 50 40.6**	**+3.5**
AGPR	**Aguadilla, PR**	**1.53**	**90**		**Pn**	**15 50 16.2**	**+1.7**
AGPR					**Sn**	**15 50 40.6**	**+3.5**
AGPR	**Aguadilla, PR**	**1.53**	**90**	*i* P	**Pn**	**15 50 16.3**	**+1.7**
AGPR				*eS*	**Sn**	**15 50 37.5**	**+0.4**
AGPR				IAML		15 50 42.1	
	comp=Z,1μm,0.4s						
BANI	**BANI**	**1.55**	**267**	*ieP*	**Pn**	**15 50 16.0**	**+1.1**
BANI	**BANI**	**1.55**	**267**		**Pn**	**15 50 15.7**	**+0.8**
BANI	**BANI**	**1.55**	**267**	*i* P	**Pn**	**15 50 16.2**	**+1.2**
BANI				*eS*	**Sn**	**15 50 38.3**	**+0.5**
BANI				IAML		15 50 47.0	
	comp=Z,387nm,0.3s						
LSP	**Las Mesas**	**1.59**	**101**	*ieP*	**Pn**	**15 50 16.7**	**+1.5**
LSP	**Las Mesas**	**1.59**	**101**	*eS*	**Sn**	**15 50 40.0**	**+1.8**
CRPR	**Cabo Rojo, PR**	**1.60**	**107**	*iP*	**Pn**	**15 50 16.0**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.60**	**107**	*eS*	**Sn**	**15 50 38.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.60**	**107**		**Pn**	**15 50 15.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.60**	**107**		**Sn**	**15 50 38.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.60**	**107**	*i* P	**Pn**	**15 50 15.9**	**+0.6**
CRPR				*eS*	**Sn**	**15 50 37.6**	**-1.0**
CRPR				IAML		15 50 48.9	
	comp=Z,625nm,0.5s						
MLPR	**Magueyes Islan**	**1.68**	**107**	*iP*	**Pn**	**15 50 15.7**	**-0.5**
MLPR	**Magueyes Islan**	**1.68**	**107**	*eS*	**Sn**	**15 50 41.8**	**+1.9**
MLPR	**Magueyes Islan**	**1.68**	**107**		**Pn**	**15 50 15.7**	**-0.5**
MLPR					**Sn**	**15 50 41.8**	**+1.9**
MLPR	**Magueyes Islan**	**1.68**	**107**	IAML		15 50 46.3	
	comp=E,807nm,0.3s						
AOPR	**Arecibo Observ**	**1.88**	**94**	*ieP*	**Pn**	**15 50 19.6**	**+1.1**
AOPR	**Arecibo Observ**	**1.88**	**94**	*eS*	**Sn**	**15 50 44.3**	**+0.2**
AOPR	**Arecibo Observ**	**1.88**	**94**		**Pn**	**15 50 19.6**	**+1.1**
AOPR					**Sn**	**15 50 44.3**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.92**	**96**	*ieP*	**Pn**	**15 50 21.5**	**+2.6**
UUPR	**Utuado, UPR, P**	**1.92**	**96**		**Pn**	**15 50 21.5**	**+2.6**
OBIP	**Obispado Ponce**	**2.06**	**102**	*ieP*	**Pn**	**15 50 20.9**	**+0.3**
OBIP	**Obispado Ponce**	**2.06**	**102**	*eS*	**Sn**	**15 50 48.2**	**+0.3**
OBIP	**Obispado Ponce**	**2.06**	**102**		**Pn**	**15 50 20.9**	**+0.3**
OBIP					**Sn**	**15 50 48.2**	**+0.3**
OBIP	**Obispado Ponce**	**2.06**	**102**	IAML		15 50 53.2	
	comp=N,577nm,0.4s						
CELP	**Cerrillos**	**2.08**	**101**		**Pn**	**15 50 21.3**	**+0.5**
CELP				IAML		15 50 53.5	
	comp=E,1μm,0.5s						
CELP				IAML		15 50 53.8	
	comp=N,1μm,0.7s						
SC01	**Santiago de lo**	**2.12**	**297**	*i* P	**Pn**	**15 50 24.5**	**+3.2**
SC01				IAML		15 50 58.9	
	comp=Z,361nm,0.3s						
LOBA2	**Hotel Casa Bon**	**2.28**	**260**	*i* P	**Pn**	**15 50 25.1**	**+1.9**
LOBA2				*eS*	**Sn**	**15 50 51.9**	**-0.7**
LOBA2				IAML		15 50 54.9	
	comp=Z,311nm,0.2s						
SJG	**San Juan**	**2.47**	**98**		**Pn**	**15 50 26.1**	**+0.5**
SJG				IAML		15 51 00.7	
	comp=Z,692nm,0.3s						
SJG				IAML		15 51 01.0	
	comp=Z,834nm,0.3s						

SDDR	**Presa de Saban**	**2.48**	**282**	Pn	**Pn**	**15 50 24.6**	**-1.1**
SDDR				IAML		15 51 06.7	
	comp=Z,444nm,0.8s						
SDDR				IAML		15 51 07.6	
	comp=Z,500nm,1.0s						
SDDR	**Presa de Saban**	**2.48**	**282**	*ieP*	**Pn**	**15 50 30.0**	**+4.3**
SDDR	**Presa de Saban**	**2.48**	**282**	*ieP*	**Pn**	**15 50 29.3**	**+3.5**
SDDR				*eS*	**Sn**	**15 50 57.7**	**+0.7**
SDDR				*eSg*		15 51 03.2	
SDDR	**Presa de Saban**	**2.48**	**282**	*i* P	**Pn**	**15 50 29.8**	**+4.1**
SDDR				IAML		15 51 08.4	
	comp=Z,232nm,0.7s						
GCPR	**Guaynabo City**	**2.51**	**93**	*ieP*	**Pn**	**15 50 27.0**	**+0.9**
GCPR	**Guaynabo City**	**2.51**	**93**		**Pn**	**15 50 27.0**	**+0.9**
GCPR	**Guaynabo City**	**2.51**	**93**	IAML		15 51 01.7	
	comp=N,378nm,0.7s						
GCPR				IAML		15 51 04.2	
	comp=E,507nm,0.2s						
IGPR	**InterUniversit**	**2.54**	**101**	*ieP*	**Pn**	**15 50 27.6**	**+1.2**
IGPR	**InterUniversit**	**2.54**	**101**	*eS*	**Sn**	**15 50 58.8**	**+0.5**
IGPR	**InterUniversit**	**2.54**	**101**		**Sn**	**15 50 58.8**	**+0.5**
CBYP	**Canovanas**	**2.73**	**94**	*ieP*	**Pn**	**15 50 29.6**	**+0.7**
CBYP	**Canovanas**	**2.73**	**94**		**Pn**	**15 50 29.6**	**+0.7**
HUMP	**Col San Antoni**	**2.75**	**96**	*ieP*	**Pn**	**15 50 30.1**	**+1.0**
HUMP	**Col San Antoni**	**2.75**	**96**	*eS*	**Sn**	**15 51 04.1**	**+1.0**
HUMP	**Col San Antoni**	**2.75**	**96**		**Pn**	**15 50 30.1**	**+1.0**
HUMP					**Sn**	**15 51 04.1**	**+1.0**
LOPE2	**Hotel El Peder**	**2.90**	**262**	*i* P	**Pn**	**15 50 34.3**	**+3.3**
LOPE2				*eS*	**Sn**	**15 51 08.8**	**+2.4**
LOPE2				IAML		15 51 11.7	
	comp=Z,147nm,0.2s						
MTP	**Monte Pirata**	**3.04**	**97**	Pn	**Pn**	**15 50 33.6**	**+0.9**
MTP				IAML		15 51 17.3	
	comp=E,345nm,0.3s						
MTP				IAML		15 51 19.1	
	comp=N,298nm,0.2s						
CUPR	**Culebra, Puert**	**3.27**	**92**	*ieP*	**Pn**	**15 50 35.7**	**0.0**
CUPR	**Culebra, Puert**	**3.27**	**92**		**Pn**	**15 50 35.7**	**0.0**
CUPR	**Culebra, Puert**	**3.27**	**92**	IAML		15 51 17.6	
	comp=E,176nm,0.5s						
CUPR				IAML		15 51 17.8	
	comp=N,208nm,0.4s						
STVI	**Saint Thomas**	**3.58**	**91**	*ieP*	**Pn**	**15 50 40.8**	**+1.0**
STVI	**Saint Thomas**	**3.58**	**91**		**Pn**	**15 50 40.1**	**+0.4**
STVI				IAML		15 51 29.7	
	comp=N,330nm,0.2s						
JAKH	**Jacmel**	**3.61**	**267**	*i* P	**Pn**	**15 50 43.2**	**+3.1**
JAKH				*eS*	**Sn**	**15 51 24.5**	**+1.8**
SJVI	**Gifft Hill Sch**	**3.76**	**92**	*ieP*	**Pn**	**15 50 42.6**	**+0.6**
SJVI	**Gifft Hill Sch**	**3.76**	**92**		**Pn**	**15 50 42.6**	**+0.6**
GRTK	**Grand Turk**	**3.77**	**324**	Pn	**Pn**	**15 50 43.0**	**+0.8**
GRTK	**Grand Turk**	**3.77**	**324**	*eP*	**Pn**	**15 50 43.2**	**+1.0**
GRTK	**Grand Turk**	**3.77**	**324**	*i* P	**Pn**	**15 50 43.2**	**+1.0**
GRTK				*eS*	**Sn**	**15 51 24.6**	**-1.9**
GRTK				IAML		15 51 27.1	
	comp=Z,151nm,0.5s						
CDVI	**St. Croix**	**3.83**	**100**	Pn	**Pn**	**15 50 43.8**	**+0.8**
SMRT	**St. Maarten**	**5.39**	**94**	Pn	**Pn**	**15 51 03.3**	**-0.3**

BBOO IAmb IAmb 16 43 55.3
comp=Z,6.3nm,1.0s
CTAO Charters Tower 50.60 118 P P 16 44 01.4 -0.1
CTAO IAmb IAmb 16 44 34.7
comp=Z,11nm,1.4s
USRK Ussuriysk Ar. 51.26 30 P P 16 44 05.9 -0.2
comp=Z,0.4nm,0.6s,baz=152,slow=4.3,SNR=3.2
comp=Z,0.4nm,0.6s
USRK Ussuriysk Ar. 51.26 30 P P 16 44 06.3 +0.3
STKA Stephens Creek 51.91 134 P P 16 44 10.8 -0.3
comp=Z,0.4nm,0.3s,baz=326,slow=11,SNR=3.6
comp=Z,0.4nm,0.3s
STKA Stephens Creek 51.91 134 P P 16 44 11.0 -0.1
ZAA0 Zalesovo Array 53.58 349 P P 16 44 23.3 +0.3
ZAA0 IAmb IAmb 16 44 23.7
comp=Z,2.2nm,0.5s
ZALV Zalesovo Beam 53.58 349 P P 16 44 23.4 +0.4
comp=Z,2.0nm,0.4s,baz=155,slow=6.7,SNR=9.2
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 53.58 349 P P 16 44 23.1 +0.2
ABKAR Akbulak array 58.30 331 P P 16 44 56.3 -0.3
KBZ Khabaz 65.33 318 P P 16 45 44.2 +0.7
comp=Z,1.8nm,0.6s,baz=147,slow=5.0,SNR=4.3
comp=Z,1.8nm,0.6s
BRTR Keskin Array B 70.59 312 P P 16 46 16.6 -0.2
comp=Z,1.5nm,0.8s,baz=133,slow=5.7,SNR=5.2
comp=Z,1.5nm,0.8s
BURAR Bucovina Array 78.28 318 P P 16 47 01.7 +0.8
BUR08 Bucovina Ar. S 78.30 318 P P 16 47 01.9 +0.8
BUR08 IAmb IAmb 16 47 02.5
comp=Z,3.5nm,1.3s
LIT Litokhoron 79.07 310 P P 16 47 04.5 -0.8
ITM Ithomi 79.17 307 P P 16 47 05.7 -0.2
ITM IAmb IAmb 16 47 12.1
comp=Z,9.1nm,0.9s
FIA1 FINESS Array S 80.74 332 P P 16 47 13.9 +0.2
FIA1 IAmb IAmb 16 47 41.2
comp=Z,9.1nm,1.2s
FINES FINESS Array B 80.74 332 P P 16 47 13.9 +0.2
comp=Z,0.9nm,0.5s,baz=104,slow=6.1,SNR=7.6
comp=Z,0.9nm,0.5s
FINES FINESS Array B 80.74 332 P P 16 47 13.7 -0.1
ARCES ARCESS Array B 82.96 340 P P 16 47 25.3 +0.1
comp=Z,6.3nm,1.3s,baz=114,slow=2.3,SNR=5.2
comp=Z,6.3nm,1.3s
GERES GERESS Array B 86.06 319 P P 16 47 41.8 +0.5
comp=Z,0.2nm,0.4s,baz=115,slow=6.6,SNR=1.7
comp=Z,0.2nm,0.4s

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*IDC **23** 16:56:10.6±0.6,37.°09N×104.°88W,h0km,mb4.1/9, mbtmp3.8/18,ML3.5/9,MS3.2/11,Error ellipse: s-maj=14.2km s-min=8.5km az=68.0*
*NEIC **23** 16:56:11.5±2.6,36.°99N±0.°04×104.°95W±0.°03,h4km±1km, mb4.2/17,mb_Lg4.2/146,ML4.2/63,Mwr3.9/24,Error ellipse: s-maj=5.5km s-min=3.3km az=199.0*
*ANF **23** 16:56:11.5±0.3,37.°01N×104.°98W,h4km,ML5.0/12,Error ellipse: s-maj=4.2km s-min=3.3km az=96.0*
*NEIC **23** 16:56:12.1,36.°97N×104.°91W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=7.95; $M_{\theta\theta}$=0.72; $M_{\phi\phi}$=7.24; $M_{r\theta}$=1.63; $M_{\theta\phi}$=0.46; $M_{\phi r}$=-1.87; Fault plane solution: M_o=8.03000×10^{14} NP1:ϕ_s=352.89000°, δ=52.53000°,λ=-103.26000°. NP2:ϕ_s=194.07000°, δ=39.42000°,λ=-73.34000°. Principal axes: T 7.4723, Plg7.0000°, Azm92.0000°; N 1.0121, Plg10.0000°, Azm1.0000°; P -8.4844, Plg78.0000°, Azm214.0000°;*
ISC 23 16:56:12.2±0.4,37.°04N±0.°03×104.°90W±0.°03,h10km, n221,σ1=$43/222,mb4.2/13,MS3.1/5,Colorado

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T25A	**Trinidad**	**0.40**	**76**	Pg	**Pg**	**16 56 20.0**	**-0.1**
T25A				Sg	**Sg**	**16 56 25.9**	**+0.4**
T25A				IAML		16 56 27.2	
	comp=E,14μm,0.5s						
T25A	**Trinidad**	**0.40**	**76**	P	**Pg**	**16 56 20.1**	**-0.1**
	baz=250						
T25A				S	**Sg**	**16 56 26.4**	**+0.8**
	baz=250						
SDCO	**Great Sand Dun**	**0.85**	**326**		**Pg**	**16 56 27.2**	**-1.5**
SDCO				Sg	**Sg**	**16 56 38.5**	**-1.3**
SDCO	**Great Sand Dun**	**0.85**	**326**	P	**Pg**	**16 56 27.0**	**-1.7**
	baz=150,SNR=759						
SDCO				S	**Sg**	**16 56 38.7**	**-1.1**
	baz=150						
SDCO	**Great Sand Dun**	**0.85**	**326**	P	**Pg**	**16 56 27.0**	**-1.7**
	baz=150,SNR=759						
SDCO				S	**Sg**	**16 56 39.0**	**-0.8**
	baz=150						
S22A	**4UR Ranch, Cre**	**1.69**	**295**	Pn	**Pn**	**16 56 42.0**	**-0.1**
S22A				IAML		16 57 09.5	
	comp=N,2μm,0.7s						
S22A				IAML		16 57 09.9	
	comp=E,2μm,1.1s						
S22A	**4UR Ranch, Cre**	**1.69**	**295**	P	**Pn**	**16 56 42.0**	**-0.1**
	baz=116,SNR=1000						
Q24A	**Divide**	**1.93**	**354**		**Pn**	**16 56 46.9**	**+1.5**
Q24A				IAML		16 57 14.2	
	comp=E,1μm,0.3s						
Q24A	**Divide**	**1.93**	**354**	P	**Pn**	**16 56 47.1**	**+1.7**
	baz=175,SNR=109						
Q24A				Sb	**Sb**	**16 57 13.7**	**+1.8**
	baz=175						
ANMO	**Albuquerque**	**2.44**	**212**	Pn	**Pn**	**16 56 52.2**	**-0.1**
	comp=E,12nm,0.3s,baz=25,slow=13,SNR=219						
ANMO				LR	LR	16 57 19.1	
	comp=E,34nm,21.5s,baz=22,slow=28						
ANMO				Lg	Lg	16 57 23.5	
	comp=E,67nm,0.3s,baz=130,slow=18,SNR=19						
	comp=E,60nm,0.4s						
ANMO	**Albuquerque**	**2.44**	**212**		**Pn**	**16 56 51.6**	**-0.7**
ANMO	**Albuquerque**	**2.44**	**212**	P	**Pn**	**16 56 52.1**	**-0.2**
	baz=31,SNR=124						
ANMO				S	**Sn**	**16 57 22.3**	**0.0**
	baz=31						
ANMO	**Albuquerque**	**2.44**	**212**	P	**Pn**	**16 56 52.1**	**-0.2**
	baz=31						
ANMO				Sb	**Sb**	**16 57 24.3**	**-2.2**
	baz=31						
KSCO	**Kaye Shedlock'**	**2.66**	**42**	Pn	**Pn**	**16 56 56.8**	**+1.5**
KSCO				IAmb_Lg		16 57 37.3	
	comp=Z,745nm,0.7s						
KSCO	**Kaye Shedlock'**	**2.66**	**42**	P	**Pb**	**16 56 58.3**	**-1.8**
	baz=223,SNR=52						
KSCO				Sb	**Sg**	**16 57 36.0**	**-1.7**
	baz=223						
KSCO	**Kaye Shedlock'**	**2.66**	**42**	P	**Pn**	**16 56 57.6**	**+2.3**
	baz=223,SNR=52						
KSCO				Sb	**Sg**	**16 57 35.8**	**-1.9**
	baz=223						
SMCO	**Snowmass**	**2.69**	**323**	Pn	**Pn**	**16 56 57.5**	**+1.6**
SMCO				IAML		16 57 41.6	
	comp=Z,1μm,0.8s						
ISCO	**Idaho Springs**	**2.81**	**349**	Pn	**Pn**	**16 56 59.9**	**+2.4**
ISCO	**Idaho Springs**	**2.81**	**349**	P	**Pn**	**16 57 00.2**	**+2.8**
	baz=169,SNR=105						
ISCO	**Idaho Springs**	**2.81**	**349**	P	**Pn**	**16 57 00.3**	**+2.8**
	baz=169,SNR=105						
ISCO				Sb	**Sb**	**16 57 39.5**	**+2.2**
	baz=169						
MVCO	**Mesa Verde**	**2.88**	**274**	Pn	**Pn**	**16 56 59.0**	**+0.6**
MVCO				IAML		16 57 43.6	
	comp=Z,1μm,1.4s						
MVCO				IAML		16 57 45.2	
	comp=Z,1μm,1.1s						
MVCO	**Mesa Verde**	**2.88**	**274**	P	**Pn**	**16 56 58.4**	**0.0**
	baz=93,SNR=594						
MVCO				Sb	**Sb**	**16 57 39.8**	**+0.6**
	baz=93						
PV15	**Paradox Valley**	**3.12**	**296**		**Pn**	**16 57 02.8**	**+1.1**
PV15				IAML		16 57 56.6	
	comp=E,1μm,0.7s						
PV15				IAML		16 57 57.5	
	comp=N,1μm,0.9s						
BNM	**Barren Site**	**3.21**	**207**	Pn	**Pn**	**16 57 02.5**	**-0.5**
PV07	**Paradox Valley**	**3.28**	**296**		**Pn**	**16 57 05.0**	**+1.1**
PV07				IAML		16 58 03.4	
	comp=N,528nm,1.0s						
PV13	**Radium Mtn., P**	**3.31**	**291**		**Pn**	**16 57 05.3**	**+1.1**
PV13				IAML		16 58 14.6	
	comp=E,652nm,1.4s						
AMTX	**Amarillo**	**3.38**	**129**		**Pn**	**16 57 04.1**	**-1.0**
AMTX	**Amarillo**	**3.38**	**129**	P	**Pn**	**16 57 05.5**	**+0.3**
	baz=310,SNR=11						
AMTX	**Amarillo**	**3.38**	**129**	P	**Pn**	**16 57 05.3**	**+0.1**
	baz=310						
AMTX				Sb	**Sg**	**16 57 56.9**	**-4.0**
	baz=310						
Y22D	**IRIS PASSCAL I**	**3.39**	**210**	Pn	**Pn**	**16 57 05.5**	**+0.3**
Y22D	**IRIS PASSCAL I**	**3.39**	**210**	Sb	**Sb**	**16 57 54.7**	**+1.0**
	baz=28						
Y22D	**IRIS PASSCAL I**	**3.39**	**210**	Sb	**Sb**	**16 57 55.1**	**+1.4**
	baz=28						
CRNM	**Carthage**	**3.43**	**206**		**Pn**	**16 57 05.3**	**-0.6**
MSTX	**Muleshoe**	**3.52**	**150**		**Pn**	**16 57 06.7**	**-0.4**
MSTX				IAmb_Lg		16 58 08.9	
	comp=Z,614nm,0.9s						
MSTX	**Muleshoe**	**3.52**	**150**	P	**Pn**	**16 57 07.5**	**+0.4**
	baz=330,SNR=17						
MSTX				Sb	**Sb**	**16 57 59.2**	**+1.7**
	baz=330						
MSTX	**Muleshoe**	**3.52**	**150**	P	**Pn**	**16 57 06.9**	**-0.2**
	baz=330						
MSTX				Sb	**Sb**	**16 57 59.3**	**+1.7**
	baz=330						
Y22A	**Socorro**	**3.53**	**209**	P	**Pn**	**16 57 06.7**	**-0.5**
	baz=28,SNR=31						
Y22A				Sb	**Sb**	**16 57 57.9**	**+0.1**
	baz=28						
PV10	**Paradox Valley**	**3.54**	**293**		**Pn**	**16 57 06.8**	**-0.7**
PV23	**Carpenter Ridg**	**3.55**	**295**		**Pn**	**16 57 08.2**	**+0.6**
SBM	**South Baldy**	**3.58**	**212**		**Pn**	**16 57 07.3**	**-0.8**
N23A	**Red Feather La**	**3.93**	**348**	Pn	**Pn**	**16 57 14.3**	**+1.4**
N23A				IAML		16 58 27.5	
	comp=E,346nm,0.6s						
N23A	**Red Feather La**	**3.93**	**348**	P	**Pn**	**16 57 15.8**	**+2.9**
	baz=168,SNR=9.2						
N23A				S	**Sn**	**16 58 00.9**	**+1.7**
	baz=168						
O20A	**White River Ci**	**4.05**	**321**	P	**Pn**	**16 57 17.1**	**+2.6**
	baz=140,SNR=28						
CPRX	**Cap Rock**	**4.09**	**168**		**Pn**	**16 57 14.6**	**-0.3**
PHWY	**Pilot Hill**	**4.28**	**354**		**Pn**	**16 57 17.4**	**-0.3**
PHWY				IAML		16 58 43.0	
	comp=E,173nm,0.8s						
W18A	**Petrified Fore**	**4.36**	**245**		**Pn**	**16 57 17.5**	**-1.2**
W18A				IAML		16 58 33.4	
	comp=N,373nm,1.4s						
W18A				IAML		16 58 37.6	
	comp=E,298nm,1.7s						
W18A	**Petrified Fore**	**4.36**	**245**	P	**Pn**	**16 57 20.0**	**+1.3**
	baz=63						
CBKS	**Cedar Bluff**	**4.45**	**65**	Pn	**Pn**	**16 57 19.9**	**+0.1**
CBKS	**Cedar Bluff**	**4.45**	**65**	P	**Pn**	**16 57 21.1**	**+1.4**
	baz=248						
CBKS				S	**Sn**	**16 58 14.5**	**+2.9**
	baz=248						
CBKS	**Cedar Bluff**	**4.45**	**65**	P	**Pn**	**16 57 21.0**	**+1.3**
	baz=248						
CBKS				Sb	**Sg**	**16 58 29.6**	**-5.4**
	baz=248						
OGNE	**Ogallala**	**4.49**	**29**	IAmb_Lg		16 58 44.5	
	comp=Z,378nm,0.9s						
OGNE	**Ogallala**	**4.49**	**29**	P	**Pn**	**16 57 22.8**	**+2.4**
	baz=211,SNR=21						
OGNE	**Ogallala**	**4.49**	**29**	P	**Pn**	**16 57 22.4**	**+2.0**
	baz=211,SNR=21						
OGNE				Sb	**Sg**	**16 58 31.7**	**-4.8**
	baz=211						
ELIS	**Ellis County**	**4.52**	**101**	IAmb_Lg		16 58 47.5	
	comp=Z,489nm,0.9s						
HTMS	**Hat Mesa**	**4.68**	**167**	Pn	**Pn**	**16 57 21.9**	**-1.1**
CLN7	**Carlsbad 7**	**4.70**	**169**		**Pn**	**16 57 22.0**	**-1.3**
U32A	**Winter Ranch,**	**4.79**	**96**		**Pn**	**16 57 24.2**	**-0.2**
U32A				IAmb_Lg		16 58 51.5	
	comp=E,465nm,0.8s						
U32A	**Winter Ranch,**	**4.79**	**96**	P	**Pn**	**16 57 25.6**	**+1.2**
	baz=279,SNR=10						
NOKA	**Waynoka**	**4.80**	**93**		**Pn**	**16 57 25.1**	**+0.4**
NOKA				IAML		16 58 47.6	
	comp=N,2μm,0.7s						
NOKA				IAML		16 58 49.9	
	comp=E,2μm,0.8s						
NOKA				IAmb_Lg		16 58 50.5	
	comp=Z,946nm,1.1s						
X18A	**Snowflake**	**4.81**	**240**		**Pn**	**16 57 23.1**	**-1.8**
X18A				IAML		16 58 40.9	
	comp=N,261nm,1.1s						
GDL2	**Guadalupe Moun**	**4.85**	**175**	Pn	**Pn**	**16 57 24.6**	**-0.8**
SRU	**San Rafael Swe**	**4.89**	**297**		**Pn**	**16 57 26.5**	**+0.5**
P18A	**Preston Nutter**	**4.93**	**303**		**Pn**	**16 57 27.3**	**+0.6**
P18A				IAML		16 58 59.8	
	comp=N,209nm,1.0s						
P18A				IAML		16 59 00.3	
	comp=E,196nm,0.8s						
OK035	**E0210 Rd and N**	**4.97**	**92**	IAmb_Lg		16 58 55.6	
	comp=Z,542nm,0.8s						
RWWY	**Rawlins**	**4.97**	**340**		**Pn**	**16 57 27.8**	**+0.6**
RWWY				IAML		16 58 58.1	
	comp=Z,168nm,1.1s						
OK038	**West end E0370**	**4.98**	**95**		**Pn**	**16 57 26.8**	**-0.2**
121A	**Cookes Peak, D**	**5.09**	**209**	Pn	**Pn**	**16 57 28.1**	**-0.5**
121A				IAML		16 59 00.2	
	comp=E,161nm,0.8s						
121A				IAML		16 59 04.6	
	comp=N,156nm,0.9s						
121A	**Cookes Peak, D**	**5.09**	**209**	P	**Pn**	**16 57 28.5**	**-0.1**
	baz=27,SNR=32						
121A	**Cookes Peak, D**	**5.09**	**209**	P	**Pn**	**16 57 28.6**	**-0.1**
	baz=27						
R32A	**Long Quarter,**	**5.09**	**72**	Pn	**Pn**	**16 57 28.7**	**0.0**
R32A				IAmb_Lg		16 58 59.2	
	comp=Z,416nm,0.7s						
P17A	**Butcher Ranch,**	**5.20**	**300**		**Pn**	**16 57 29.7**	**-0.5**
CSTR	**Hydro, Custer**	**5.20**	**104**	Pn	**Pn**	**16 57 29.2**	**-0.9**
CSTR				IAmb_Lg		16 58 58.9	
	comp=Z,18nm,0.8s						
CSTR				IAML		16 59 02.3	
	comp=E,149nm,0.9s						
MNTX	**Cornudas Mount**	**5.34**	**184**	Pn	**Pn**	**16 57 30.6**	**-1.5**
MNTX				IAML		16 59 05.7	
	comp=E,112nm,1.1s						
MNTX				IAML		16 59 14.3	
	comp=E,132nm,1.0s						
MNTX	**Cornudas Mount**	**5.34**	**184**	Sb	**Sb**	**16 58 53.1**	**+3.1**
	baz=3.8						
MNTX	**Cornudas Mount**	**5.34**	**184**	P	**Pn**	**16 57 32.5**	**+0.5**
	baz=3.8						
OK032	**Salt Plains WL**	**5.37**	**91**	Pn	**Pn**	**16 57 32.2**	**-0.2**
OK032				IAmb_Lg		16 59 16.1	
	comp=Z,424nm,1.1s						
KAN10	**Anthony SW Sta**	**5.44**	**87**	IAmb_Lg		16 59 19.2	
	comp=Z,422nm,1.3s						
WUAZ	**Wupatki**	**5.45**	**256**	Pn	**Pn**	**16 57 32.4**	**-1.2**
WUAZ	**Wupatki**	**5.45**	**256**	P	**Pn**	**16 57 34.2**	**+0.6**
	baz=72,SNR=40						
TMUT	**Trail Mountain**	**5.46**	**296**		**Pn**	**16 57 34.3**	**+0.5**
KAN16	**Harper SW Stat**	**5.46**	**86**	IAmb_Lg		16 59 17.0	
	comp=Z,473nm,1.3s						
WMOK	**Wichita Mounta**	**5.47**	**113**	Pn	**Pn**	**16 57 33.6**	**-0.2**
WMOK	**Wichita Mounta**	**5.47**	**113**	P	**Pn**	**16 57 34.2**	**+0.3**
	baz=296						
WMOK	**Wichita Mounta**	**5.47**	**113**	P	**Pn**	**16 57 34.1**	**+0.3**
	baz=296						
KAN08	**Anthony NE Sta**	**5.54**	**86**	IAmb_Lg		16 59 23.4	
	comp=Z,306nm,1.0s						
KAN14	**Manchester OK**	**5.55**	**89**	Pn	**Pn**	**16 57 34.8**	**-0.1**
KAN14				IAmb_Lg		16 59 21.1	
	comp=Z,422nm,1.2s						
CROK	**Carrier**	**5.58**	**93**	Pn	**Pn**	**16 57 34.8**	**-0.5**
CROK				IAmb_Lg		16 59 11.9	
	comp=Z,281nm,0.8s						
GC02	**Grant County #**	**5.64**	**90**	Pn	**Pn**	**16 57 36.2**	**+0.1**
KAN17	**Caldwell West**	**5.71**	**88**	IAmb_Lg		16 59 17.4	
	comp=Z,270nm,1.0s						
K22A	**Casper**	**5.74**	**348**	P	**Pn**	**16 57 39.2**	**+1.6**
	baz=167						
KS21	**Milan North St**	**5.79**	**85**	Pn	**Pn**	**16 57 38.1**	**0.0**
KS20	**Mayfield South**	**5.87**	**86**	IAmb_Lg		16 59 27.2	
	comp=Z,343nm,0.8s						
MTPU	**Mount Pierson**	**5.87**	**282**	Pn	**Pn**	**16 57 39.8**	**+0.2**
PKCU	**Pink Cliffs**	**5.93**	**276**	Pn	**Pn**	**16 57 40.2**	**-0.1**
KAN13	**South Haven SW**	**5.94**	**88**	Pn	**Pn**	**16 57 40.1**	**-0.1**
MSU	**Marysvale**	**5.95**	**286**	Pn	**Pn**	**16 57 39.9**	**-0.6**
U15A	**North Rim**	**5.97**	**266**	Pn	**Pn**	**16 57 40.8**	**-0.1**
BCOK	**Bluff Creek, N**	**6.04**	**101**	IAmb_Lg		16 59 29.1	
	comp=Z,240nm,1.0s						
OK029	**Liberty Lake**	**6.13**	**99**		**Pn**	**16 57 43.3**	**+0.5**
OK029				IAmb_Lg		16 59 32.6	
	comp=Z,331nm,1.1s						
BLOK	**Blackwell**	**6.17**	**90**	Pn	**Pn**	**16 57 43.6**	**+0.3**
BLOK				IAmb_Lg		16 59 31.4	
	comp=E,441nm,1.0s						
ABTX	**Abilene, Hawle**	**6.17**	**134**	Pn	**Pn**	**16 57 43.2**	**-0.3**
ABTX				IAmb_Lg		16 59 39.9	
	comp=Z,355nm,1.0s						
ABTX	**Abilene, Hawle**	**6.17**	**134**	P	**Pn**	**16 57 43.5**	**0.0**
	baz=317,SNR=7.3						
OK025	**Westminster Rd**	**6.28**	**101**		**Pn**	**16 57 44.9**	**0.0**
OK025				IAmb_Lg		16 59 36.9	
	comp=Z,232nm,0.8s						
FNO	**Franklin**	**6.32**	**104**	Pn	**Pn**	**16 57 45.7**	**+0.2**
FNO				IAmb_Lg		16 59 49.4	
	comp=Z,382nm,0.9s						
KNB	**Kanab**	**6.34**	**272**	Pn	**Pn**	**16 57 46.0**	**+0.1**
OK030	**Cody Creek RV**	**6.63**	**97**	Pn	**Pn**	**16 57 49.0**	**-0.7**
QUOK	**Quay**	**6.65**	**95**	Pn	**Pn**	**16 57 49.2**	**-0.7**
QUOK				IAmb_Lg		16 59 47.4	
	comp=Z,153nm,0.8s						
LCMT	**Little Creek M**	**6.68**	**272**		**Pn**	**16 57 50.2**	**-0.2**
319A	**Douglas**	**6.72**	**214**	Pn	**Pn**	**16 57 49.8**	**-1.2**
T35A	**Sooner Cattle**	**6.72**	**89**	Pn	**Pn**	**16 57 50.6**	**-0.2**
T35A				IAmb_Lg		16 59 56.2	
	comp=Z,343nm,0.9s						
T35B	**Sooner Cattle**	**6.72**	**89**	P	**Pn**	**16 57 51.3**	**+0.5**
	baz=273,SNR=19						
BW06	**Boulder Array**	**6.75**	**329**		**Pn**	**16 57 52.6**	**+1.1**
BW06	**Boulder Array**	**6.75**	**329**	P	**Pn**	**16 57 50.0**	**-1.5**
	baz=147						
PD31	**Pinedale Array**	**6.75**	**329**		**Pn**	**16 57 52.7**	**+1.3**
PDAR	**Pinedale Array**	**6.75**	**329**	Pn	**Pn**	**16 57 52.6**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=137,slow=16,SNR=16						
PDAR				Lg	Lg	16 59 39.6	
	comp=Z,1.4nm,0.3s,baz=147,slow=27,SNR=3.1						
	comp=Z,2.0nm,0.5s						
TUC	**Tucson**	**6.76**	**227**	IAmb_Lg		16 59 56.2	
	comp=Z,24nm,0.9s						
TUC	**Tucson**	**6.76**	**227**	IAmb_Lg		17 00 00.2	
	comp=Z,41nm,1.2s						
BGNE	**Belgrade**	**6.81**	**48**	Pn	**Pn**	**16 57 52.7**	**+0.4**
BGNE	**Belgrade**	**6.81**	**48**	P	**Pn**	**16 57 53.4**	**+1.1**
	baz=232						
BGNE	**Belgrade**	**6.81**	**48**	P	**Pn**	**16 57 53.3**	**+1.1**
	baz=232						
DEOK	**Depew**	**6.88**	**98**	Pn	**Pn**	**16 57 53.1**	**0.0**
DEOK				IAmb_Lg		17 00 05.9	
	comp=Z,310nm,1.3s						
LOOK	**Love County**	**6.99**	**114**	IAmb_Lg		17 00 13.1	
	comp=Z,200nm,0.9s						
RSSD	**Black Hills**	**7.10**	**5**	Pn	**Pn**	**16 57 57.5**	**+1.1**
RSSD	**Black Hills**	**7.10**	**5**	P	**Pn**	**16 57 57.9**	**+1.5**
	baz=186,SNR=27						
RSSD	**Black Hills**	**7.10**	**5**	P	**Pn**	**16 57 58.0**	**+1.6**
	baz=186						
PSUT	**Pine Spring**	**7.25**	**285**		**Pn**	**16 57 58.2**	**-0.1**
Z35A	**Perchaven, San**	**7.27**	**118**	IAmb_Lg		17 00 08.1	
	comp=Z,238nm,0.9s						
TUL1	**Leonard**	**7.42**	**96**	Pn	**Pn**	**16 58 00.7**	**+0.1**
TUL1	**Leonard**	**7.42**	**96**	P	**Pn**	**16 58 01.0**	**+0.4**
	baz=281						
AHID	**Auburn Hatcher**	**7.44**	**322**	Pn	**Pn**	**16 58 02.0**	**+1.0**
SPR3	**Spring Creek 3**	**7.70**	**288**		**Pn**	**16 58 04.7**	**+0.1**
SPR3				IAmb_Lg		17 00 23.0	
	comp=Z,31nm,1.1s						
TX31	**Lajitas Ar. Si**	**7.75**	**172**	Pn	**Pn**	**16 58 05.0**	**-0.2**
TX31	**Lajitas Ar. Si**	**7.75**	**172**	P	**Pn**	**16 58 06.1**	**+0.9**
	baz=352,SNR=15						
TX32	**Lajitas Array**	**7.76**	**172**		**Pn**	**16 58 05.2**	**0.0**
TXAR	**Lajitas Array**	**7.76**	**172**	Pn	**Pn**	**16 58 06.2**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=354,slow=10,SNR=59						
TXAR				Lg	Lg	17 00 11.5	
	comp=Z,3.8nm,0.3s,baz=2.2,slow=26,SNR=3.8						
	comp=Z,1.5nm,0.5s						
JCT	**Junction City**	**7.80**	**146**	Pn	**Pn**	**16 58 05.5**	**-0.3**
JCT				IAmb_Lg		17 00 28.5	
	comp=Z,278nm,0.9s						
LOHW	**Long Hollow**	**7.88**	**328**		**Pn**	**16 58 07.5**	**+0.6**
RLO	**Rose Lookout**	**7.99**	**93**	Pn	**Pn**	**16 58 09.0**	**+0.6**
RLO				IAmb_Lg		17 00 30.2	
	comp=Z,165nm,0.8s						
FXWY	**Fox Creek**	**8.08**	**327**	Pn	**Pn**	**16 58 10.1**	**+0.3**
X37A	**Clayton**	**8.12**	**105**		**Pn**	**16 58 09.2**	**-0.9**
L34A	**Svendsen Farm,**	**8.22**	**51**	Pn	**Pn**	**16 58 11.8**	**+0.3**
U38A	**Gravette**	**8.46**	**91**	Pn	**Pn**	**16 58 14.6**	**-0.2**
U38A	**Gravette**	**8.46**	**91**	P	**Pn**	**16 58 15.7**	**+0.8**
	baz=277,SNR=20						
R11A	**Troy Canyon, C**	**8.57**	**282**		**Pn**	**16 58 15.8**	**-0.8**
R11A	**Troy Canyon, C**	**8.57**	**282**	P	**Pn**	**16 58 16.1**	**-0.4**
	baz=96,SNR=5.0						
SUSD	**Miller**	**8.66**	**30**		**Pn**	**16 58 16.7**	**-0.8**
SUSD				IAmb_Lg		17 00 56.3	
	comp=Z,190nm,0.9s						
SUSD	**Miller**	**8.66**	**30**	P	**Pn**	**16 58 18.6**	**+1.1**
	baz=213,SNR=7.8						
HHAR	**Hobbs**	**8.84**	**92**	Pn	**Pn**	**16 58 19.6**	**-0.4**
ELK	**Elko**	**8.87**	**298**	Pn	**Pn**	**16 58 22.2**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=112,slow=18,SNR=1.2						
ELK				Lg	Lg	17 00 46.5	
	comp=Z,0.1nm,0.3s,baz=133,slow=17,SNR=1.3						
ELK				LR	LR	17 02 12.2	
	comp=Z,169nm,20.5s,baz=98,slow=41						
	comp=Z,0.3nm,0.3s						
YHL	**Hebgen Lake**	**9.13**	**331**	Pn	**Pn**	**16 58 24.2**	**0.0**
ECSD	**EROS Data Cent**	**9.20**	**41**	Pn	**Pn**	**16 58 25.5**	**+0.6**
ECSD	**EROS Data Cent**	**9.20**	**41**	P	**Pn**	**16 58 26.0**	**+1.1**
	baz=226,SNR=9.2						
S39A	**Bolivar**	**9.24**	**82**	Pn	**Pn**	**16 58 25.2**	**-0.3**
P38A	**Dawn**	**9.30**	**70**		**Pn**	**16 58 25.8**	**-0.5**
P38A	**Dawn**	**9.30**	**70**	P	**Pn**	**16 58 25.8**	**-0.5**
	baz=257						
MIAR	**Mount Ida**	**9.53**	**102**		**Pn**	**16 58 28.9**	**-0.6**
MIAR	**Mount Ida**	**9.53**	**102**	P	**Pn**	**16 58 29.5**	**0.0**
	baz=288,SNR=7.2						
MIAR	**Mount Ida**	**9.53**	**102**	P	**Pn**	**16 58 29.4**	**0.0**
	baz

comp=Z,6.9nm,0.9s
U49A Red Boiling Sp 15.34 86 Pn 16 59 46.8 -1.9
U49A IAmb IAmb 16 59 47.4
comp=Z,6.7nm,0.7s
CPCT Cooper Cave 16.52 89 Pn **Pn 17 00 03.2 -0.8**
J47A Sunmer 16.54 62 Pn **Pn 17 00 03.5 -0.7**
J47A IAmb IAmb 17 00 04.7
comp=Z,19nm,1.1s
S51A Beattyville 16.95 82 Pn **Pn 17 00 07.7 -1.8**
TKL Tuckaleechee C 17.08 88 Lg Lg 17 04 59.4
comp=Z,0.4nm,0.3s,baz=184,slow=21,SNR=3.0
TKL LR LR 17 06 48.8
comp=Z,206nm,18.4s,baz=311,slow=37
GOGA Godfrey 17.88 95 Pn 17 00 20.8 -0.2
Q52A Bidwell 17.94 77 Pn 17 00 21.6 -0.1
Q52A IAmb IAmb 17 00 24.8
comp=Z,31nm,1.4s
R53A Hurricane 18.20 79 Pn 17 00 24.9 -0.1
P53A Whipple 18.61 75 P **P 17 00 29.5 -0.2**
P53A IAmb IAmb 17 01 07.2
comp=Z,13nm,1.1s
M55A Ridgway 20.68 70 P **P 17 00 52.6 +0.3**
M55A IAmb IAmb 17 00 55.2
comp=Z,9.7nm,0.8s
SADO Sadowa 20.88 60 Lg Lg 17 07 09.0
comp=Z,0.3nm,0.3s,baz=318,slow=10,SNR=3.1
SADO LR LR 17 09 26.0
comp=Z,70nm,20.2s,baz=14,slow=38
CMIG Matias Romero 21.75 153 P **P 17 01 03.5 -0.4**
comp=Z,2.7nm,0.8s,baz=350,slow=13,SNR=2.6
comp=Z,2.7nm,0.8s
BBB Bella Bella 22.27 320 LR LR 17 10 27.3
comp=Z,46nm,18.6s,baz=143,slow=38
J57A Williamstown 22.90 65 P **P 17 01 14.7 -1.3**
J57A IAmb IAmb 17 01 17.7
comp=Z,11nm,0.9s
WUPA West Chester U 23.07 74 P **P 17 01 16.3 -1.5**
WUPA IAmb IAmb 17 01 17.1
comp=Z,9.5nm,0.6s
YKA Yellowknife Ar 26.18 350 P **P 17 01 47.0 +0.4**
comp=Z,0.5nm,0.6s,baz=160,slow=8.6,SNR=2.9
comp=Z,0.5nm,0.6s
SCHQ Schefferville 31.38 43 LR LR 17 15 23.5
comp=Z,47nm,19.0s,baz=26,slow=37
BERG Berg Lake 33.87 326 P **P 17 02 55.5 +0.7**
ILAR Eielson Array 37.17 332 P **P 17 03 24.8 +1.7**
comp=Z,0.7nm,0.8s,baz=132,slow=6.9,SNR=6.6
BMAR Burnt Mountain 37.72 336 P **P 17 03 28.3 +0.6**
SJG San Juan 38.85 108 LR LR 17 22 53.5
comp=Z,24nm,18.1s,baz=180,slow=41
BOAV Boa Vista 53.39 119 P **P 17 05 31.5 -0.8**
BOAV IAmb IAmb 17 05 33.3
comp=Z,2.1nm,0.8s
DSB Dublin 65.91 41 P **P 17 06 58.7 +0.7**
EKA Eskdalemuir Ar 66.47 38 P **P 17 07 01.6 0.0**
comp=Z,1.1nm,0.7s,baz=294,slow=5.3,SNR=2.6
comp=Z,1.1nm,0.7s
NOA NORSAR Array B 69.36 28 LR LR 17 37 15.1
comp=Z,11nm,18.4s,baz=105,slow=36
PVAQ Vaqueiros 73.55 55 P **P 17 07 45.1 -0.3**
FINES FINESS Array B 74.10 22 P **P 17 07 47.0 -1.2**
comp=Z,1.4nm,0.8s,baz=310,slow=7.1,SNR=4.2
comp=Z,1.4nm,0.8s
FINES FINESS Array B 74.10 22 P **P 17 07 48.0 -0.2**
CPUP Villa Florida 77.30 137 P **P 17 08 06.9 0.0**
comp=Z,2.3nm,0.7s,baz=324,slow=11,SNR=5.5
comp=Z,2.3nm,0.7s
PLCA Paso Flores 83.56 154 P **P 17 08 40.1 -0.2**
comp=Z,1.3nm,0.9s,baz=329,slow=5.9,SNR=4.2
comp=Z,1.3nm,0.9s
PLCA Paso Flores 83.56 154 P **P 17 08 39.0 -1.3**
RAFF Raffo Rosso 87.19 44 P **P 17 08 59.2 +0.5**
ZALV Zalesovo Beam 88.99 354 P **P 17 09 07.2 +0.3**
comp=Z,1.2nm,0.7s,baz=358,slow=4.5,SNR=5.4
comp=Z,1.2nm,0.7s
BVAR Borovoye Array 90.21 3 P **P 17 09 13.9 +1.2**
comp=Z,1.0nm,0.6s,baz=344,slow=4.9,SNR=6.4
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 96.29 355 P **P 17 09 41.3 +0.4**
comp=Z,1.2nm,0.8s,baz=18,slow=4.3,SNR=8.6
comp=Z,1.2nm,0.8s
VNA3 Neumayer Olymp 126.24 156 PKPdf **PKiKP 17 15 19.4 +5.1**
VNA2 Neumayer--Watz 126.93 156 PKPdf **PKiKP 17 15 22.4 +6.8**
MAW Mawson 148.61 171 PKPbc **PKPbc 17 15 58.5 +0.2**
comp=Z,3.7nm,0.6s,baz=207,slow=1.6,SNR=18

*IDC **23** 17:00:39.8±0.9, 67.˚16N×21.˚29E, h0km, mbtmp2.8/3, ML2.2/3, Error ellipse: s-maj=16.9km s-min=6.2km az=113.0*
*UPP **23** 17:00:41.1±0.1, 67.˚04N×20.˚96E, h0km, ML2.4, Explosion*
*HEL **23** 17:00:42.0, 67.˚07N×21.˚09E, h0km, ML2.2, Explosion*
*BER **23** 17:00:43.4±1.8, 66.˚91N×21.˚31E, h0km, ML1.8, Suspected explosion*
*KOLA **23** 17:00:44.8, 67.˚23N×20.˚91E, h0km, ML2.4*

ISC 23 17:00:40.7±0.7, 67.07N±0.02×20.91E±0.02, h0km, n59, σ1℘33/82, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.14**	**290**	**P**		**Pg**	**17 00 44.6**	**+1.2**
DUNU	**Dundret**	**0.14**	**290**	***i*P**		**Pg**	**17 00 44.6**	**+1.2**
MASU	**Masugnsbyn**	**0.57**	**47**	P		**Pg**	**17 00 52.1**	**+0.6**
MASU	**Masugnsbyn**	**0.57**	**47**	***i*P**		**Pg**	**17 00 52.1**	**+0.6**
PAJU	**Pajala**	**0.86**	**92**	P		**Pg**	**17 00 56.8**	**-0.3**
PAJU				S		**Sg**	**17 01 08.8**	**+0.4**
PAJU	**Pajala**	**0.86**	**92**	***e*P**		**Pg**	**17 00 56.5**	**-0.7**
	baz=274							
PAJU				*e*S		**Sg**	**17 01 07.1**	**-1.2**
RATU	**Laukkuluspa**	**0.91**	**326**	P		**Pg**	**17 00 58.5**	**+0.4**
RATU	**Laukkuluspa**	**0.91**	**326**	***e*P**		**Pg**	**17 00 58.5**	**+0.4**
HARU	**Harads**	**0.92**	**178**	P		**Pg**	**17 00 57.6**	**-0.5**
HARU	**Harads**	**0.92**	**178**	***i*P**		**Pg**	**17 00 57.6**	**-0.5**
SALU	**Saltoluokta**	**0.99**	**289**	P		**Pg**	**17 01 00.0**	**+0.5**
SALU	**Saltoluokta**	**0.99**	**289**	***e*P**		**Pg**	**17 01 00.0**	**+0.5**
LANU	**Lannavaara**	**1.06**	**22**	P		**Pg**	**17 01 00.9**	**-0.1**
LANU	**Lannavaara**	**1.06**	**22**	***e*P**		**Pg**	**17 01 00.7**	**-0.3**
LANU				*e*SB		**Sb**	**17 01 16.4**	**0.0**
KOVU	**Salmi**	**1.19**	**346**	P		**Pg**	**17 01 03.5**	**+0.1**
KOVU	**Salmi**	**1.19**	**346**	***e*P**		**Pg**	**17 01 03.5**	**+0.1**
KLF	**Kolari**	**1.20**	**81**	***e*P**		**Pg**	**17 01 02.9**	**-0.8**
KLF				*e*SB		**Sg**	**17 01 19.7**	**+0.5**
SJUU	**Sjulsmark**	**1.60**	**170**	P		**Pn**	**17 01 09.7**	**-0.4**
SJUU	**Sjulsmark**	**1.60**	**170**	***e*P**		**Pn**	**17 01 09.7**	**-0.4**
TOF	**Tornio**	**1.69**	**125**	***e*P**		**Pn**	**17 01 11.2**	**-0.1**
TOF				MSG			17 01 31.0	
	comp=Z,26nm,0.2s							
TOF				*e*SN		**Sn**	**17 01 34.5**	**+0.8**
HEF	**Hetta**	**1.70**	**37**	***e*P**		**Pn**	**17 01 11.9**	**+0.3**
HEF				*e*S		**Sg**	**17 01 36.4**	**+1.2**
HEF	**Hetta**	**1.70**	**37**	***e*P**		**Pn**	**17 01 11.9**	**+0.3**
	baz=219							
HEF				MSG			17 01 31.8	
	comp=Z,30nm,0.2s							
HEF				*e*SN		**Sb**	**17 01 34.8**	**+0.2**
KIF	**Kilpisjarvi**	**1.94**	**359**	***e*P**		**Pb**	**17 01 17.1**	**+0.4**
KIF				*e*S		**Sg**	**17 01 44.4**	**+1.5**
KIF	**Kilpisjarvi**	**1.94**	**359**	***e*PG**		**Pb**	**17 01 17.2**	**+0.4**
KIF				MSG			17 01 41.1	
	comp=Z,31nm,0.2s							
KIF				*e*SG		**Sg**	**17 01 44.1**	**+1.2**
RNF	**Rovaniemi**	**2.07**	**101**	***e*PB**		**Pn**	**17 01 17.6**	**+1.0**
KTK1	**Kautokeino**	**2.13**	**23**	***e*P**		**Pb**	**17 01 20.0**	**-0.2**
KTK1				*e*			17 01 49.4	
KTK1				IAML			17 01 50.5	
	comp=Z,15nm,0.3s							
KTK1	**Kautokeino**	**2.13**	**23**	***e*PG**		**Pb**	**17 01 19.9**	**-0.2**
FAUS	**Fauske**	**2.21**	**281**	***e*P**		**Pb**	**17 01 21.1**	**-0.4**
FAUS				*e*			17 01 52.9	
FAUS				IAML			17 01 53.8	
	comp=Z,18nm,0.3s							
SGF	**Sodankyl**	**2.21**	**78**	***e*PB**		**Pn**	**17 01 19.8**	**+1.2**
STEI	**Steigen**	**2.34**	**294**	***e*P**		**Pb**	**17 01 23.1**	**-0.6**
STEI				*e*S		**Sg**	**17 01 55.0**	**-0.9**
STEI				IAML			17 01 59.0	
	comp=Z,6.8nm,0.3s							
JETT	**Jettan, Norway**	**2.50**	**356**	***e*P**		**Pb**	**17 01 26.2**	**-0.2**
JETT				*e*			17 02 00.3	
JETT				IAML			17 02 03.8	
	comp=Z,21nm,0.3s							
BURU	**Burvik**	**2.51**	**175**	***e*P**		**Pn**	**17 01 23.7**	**+1.1**
BURU				*e*SB		**Sn**	**17 01 56.0**	**+2.2**
TRO	**Tromso**	**2.67**	**345**	***e*P**		**Pb**	**17 01 28.8**	**-0.5**
TRO				*e*S		**Sb**	**17 02 02.2**	**-0.5**
TRO				IAML			17 02 07.8	
	comp=Z,5.0nm,0.2s							
TRO	**Tromso**	**2.67**	**345**	*e*SB		**Sb**	**17 02 03.0**	**+0.3**
MOR8	**Moi Rana**	**2.74**	**254**	***e*P**		**Pn**	**17 01 26.9**	**+1.1**
MOR8				*e*			17 02 02.2	
MOR8				IAML			17 02 06.1	
	comp=Z,5.9nm,0.2s							
OBF4	**Vikkela, Lumij**	**2.84**	**141**	***e*P**		**Pn**	**17 01 28.0**	**+0.8**
	baz=329							
OUL	**Oulu**	**2.85**	**132**	***e*PB**		**Pn**	**17 01 29.3**	**+2.0**
OUL				*e*SG		**Sb**	**17 02 08.1**	**+0.5**
OBF0	**Syolatti, Pyha**	**2.93**	**151**	***e*PB**		**Pn**	**17 01 31.2**	**+2.8**
OBF8	**Ulkokalla**	**2.95**	**158**	***e*P**		**Pn**	**17 01 29.3**	**+0.6**
ARA0	**ARCESS Array S**	**3.00**	**33**	***e*P**		**Pn**	**17 01 30.3**	**+0.9**
	baz=212							
ARA0				*e*SB		**Sb**	**17 02 10.3**	**-1.8**
ARCES	**ARCESS Array B**	**3.00**	**33**	Pg		**Pn**	**17 01 30.3**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=212,slow=14,SNR=26							
ARCES				Sn		**Sn**	**17 02 01.7**	**-4.4**
	comp=Z,0.2nm,0.3s,baz=222,slow=16,SNR=2.3							
ARCES				Lg		Lg	17 02 07.8	
	comp=Z,0.5nm,0.3s,baz=212,slow=22,SNR=10							
ARCES	**ARCESS Array B**	**3.00**	**33**	P		**Pn**	**17 01 30.6**	**+1.2**
ARCES				S		**Sn**	**17 02 06.2**	**+0.1**
LOF	**Lofoten**	**3.02**	**294**	***e*P**		**Pb**	**17 01 33.4**	**-1.7**
LOF				*e*			17 02 19.3	
LOF				IAML			17 02 25.6	
	comp=Z,5.3nm,0.3s							
KONS	**Konsvik**	**3.14**	**263**	***e*P**		**Pb**	**17 01 34.8**	**-2.5**
KONS				IAML			17 02 31.8	
	comp=Z,6.0nm,0.3s							
OUF	**Merijarvi**	**3.14**	**148**	***e*P**		**Pn**	**17 01 32.2**	**+0.9**
	baz=329							
OUF				MSG			17 02 13.2	
	comp=Z,2.4nm,0.2s							
VRF	**Varrio**	**3.42**	**75**	***e*P**		**Pn**	**17 01 36.2**	**+1.0**
VRF				*e*SG		**Sb**	**17 02 25.1**	**+0.9**
OLKF	**Oulanka, Finla**	**3.46**	**99**	***e*P**		**Pn**	**17 01 37.4**	**+1.7**
MSF	**Maaselka**	**3.46**	**106**	***e*P**		**Pn**	**17 01 36.4**	**+0.7**
MSF				*e*SG		**Sb**	**17 02 27.9**	**+2.6**
KEV	**Kevo**	**3.51**	**37**	***e*P**		**Pn**	**17 01 38.2**	**+1.8**
KEV				*e*			17 02 21.8	
KEV	**Kevo**	**3.51**	**37**	***e*P**		**Pn**	**17 01 38.1**	**+1.8**
KU6	**Riekki**	**3.74**	**102**	***e*P**		**Pn**	**17 01 40.4**	**+0.8**
	baz=293							
HUSU	**Husum**	**3.82**	**192**	***e*P**		**Pn**	**17 01 41.5**	**+1.0**
HUSU				*e*S		**Sn**	**17 02 27.7**	**+1.7**
VAF	**Ylistaro**	**4.12**	**169**	***e*P**		**Pn**	**17 01 45.8**	**+1.1**
	baz=356							
HEMU	**Hemsoen**	**4.58**	**197**	***e*P**		**Pn**	**17 01 52.9**	**+1.8**
HEMU				*e*S		**Sn**	**17 02 46.5**	**+1.6**
APA0	**Apatity Array**	**4.70**	**78**	P		**Pn**	**17 01 56.0**	**+3.2**
APA0				S		**Sn**	**17 02 48.1**	**+0.2**
RMF	**Romuvaara**	**4.71**	**123**	***e*P**		**Pn**	**17 01 54.4**	**+1.6**
FINES	**FINESS Array B**	**6.08**	**156**	Pn		**Pn**	**17 02 12.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=344,slow=10,SNR=9.1							
FINES				Sn		**Sn**	**17 03 20.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=346,slow=22,SNR=2.7							
FINES				Lg		Lg	17 03 50.3	
	comp=Z,0.2nm,0.3s,baz=343,slow=24,SNR=3.5							
	comp=Z,0.9nm,0.5s							
NOA	**NORSAR Array B**	**7.39**	**220**	Pn		**Pn**	**17 02 29.4**	**-0.3**
	baz=25,slow=11,SNR=2.3							
NOA				Lg		Lg	17 04 35.8	
	baz=341,slow=8.9,SNR=3.5							
	comp=Z,0.1nm,0.5s							
HFS	**Hagfors**	**7.67**	**208**	Pn		**Pn**	**17 02 33.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=5.2							
HFS				Sn		**Sn**	**17 03 56.5**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=16,slow=16,SNR=2.5							
HFS				Lg		Lg	17 04 37.5	
	comp=Z,0.1nm,0.3s,baz=27,slow=26,SNR=2.8							
	comp=Z,0.4nm,0.3s							

*MOS **23** 17:47:41.7±1.3, 1.˚27S×15.˚87W, h10km, mb4.9/16, Error ellipse: s-maj=13.6km s-min=7.5km az=46.5*
*IDC **23** 17:47:42.0±0.6, 1.˚22S×15.˚96W, h0km, mb4.2/20, mbtmp4.2/21, ML3.5/1, MS3.8/59, Error ellipse: s-maj=18.7km s-min=16.4km az=115.0*
*NEIC **23** 17:47:43.9±1.2, 1.˚25S±0.˚08×15.˚84W±0.˚09, h10km±1km, mb5.0/79, Error ellipse: s-maj=15.0km s-min=13.3km az=95.0*
*GCMT **23** 17:47:46.9±0.4, 1.˚33S±0.˚05×15.˚95W±0.˚02, h18km±1km, MW4.8/78, Moment Tensor Solution. s15,c15; s78,c92; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.76±.18; Mθθ=0.12±.10; Mϕϕ=1.64±.12; Mrθ=-0.80±.28; Mθϕ=0.23±.06; Mϕr=0.05±.20; Best double couple: M0=1.86800×10^16 NP1:ϕs=28.00000°, δ=50.00000°, λ=-63.00000°. NP2: ϕs=170.00000°, δ=47.00000°, λ=-118.00000°. Principal axes: T 1.6760, Plg1.0000°, Azm99.0000°; N 0.3840, Plg20.0000°, Azm190.0000°; P -2.0600, Plg70.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 17:47:44.9±0.3, 1.19S±0.06×15.88W±0.05, h20km, n248, σ1℘63/203, mb4.8/84, MS3.8/60, 15C-4D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.74**	**168**	Pn		**Pn**	**17 49 20.5**	**-2.1**
	baz=344,slow=12							
H10N2				T		T	17 56 03.9	
	baz=349,slow=74,SNR=1505							
H10N3	**ASCENSION HYDR**	**6.75**	**168**	Pn		**Pn**	**17 49 21.4**	**-1.3**
	baz=344,slow=12							
H10N3				T		T	17 56 04.5	
	baz=349,slow=74,SNR=1607							
H10N1	**ASCENSION HYDR**	**6.76**	**168**	Pn		**Pn**	**17 49 20.7**	**-2.2**
	baz=344,slow=12							
H10N1				T		T	17 56 05.2	
	baz=349,slow=74,SNR=2018							
ASCN	**Ascension**	**6.87**	**167**	Pn		**Pn**	**17 49 22.7**	**-1.9**
H10S3	**ASCENSION HYDR**	**7.81**	**171**	T		T	17 57 20.9	
	baz=351,slow=74,SNR=802							
H10S2	**ASCENSION HYDR**	**7.82**	**171**	T		T	17 57 22.8	
	baz=229,slow=74,SNR=168							
LIC	**Lamto**	**13.10**	**56**	***i*P**		**Pn**	**17 50 52.1**	**+2.1**
	97nm,1.1s							
TIC	**Toumodi**	**13.35**	**54**	***i*P**		**Pn**	**17 50 55.4**	**+2.0**
	26nm,1.0s							
KIC	**Kosan Boka**	**13.41**	**56**	***i*P**		**Pn**	**17 50 56.5**	**+2.2**
	32nm,1.2s							
DBIC	**Dimbokro**	**13.49**	**55**	Pn		**Pn**	**17 50 54.2**	**-1.2**
	0.2nm,0.3s,baz=245,slow=17,SNR=9.8							
DBIC				Sn		**Sn**	**17 53 29.6**	**+4.7**
	0.2nm,0.3s,baz=210,slow=13,SNR=1.7							
DBIC				LR		LR	17 55 07.3	
	comp=Z,631nm,21.4s,baz=232,slow=33							
	28nm,1.2s							
DBIC	**Dimbokro**	**13.49**	**55**			**Pn**	**17 50 54.5**	**-0.9**
DBIC	**Dimbokro**	**13.49**	**55**	P		**Pn**	**17 50 54.5**	**-0.9**
BBTS	**Babate**	**15.76**	**358**	LR		LR	17 57 23.4	
	comp=Z,315nm,18.1s,baz=194,slow=37							
SACV	**Santiago Islan**	**17.78**	**335**	Pn		**Pn**	**17 51 50.0**	**-1.4**
KOWA	**Kowa**	**19.52**	**37**	P		**P**	**17 52 10.9**	**-0.3**
RCBR	**Riachuelo**	**20.50**	**257**	LR		LR	17 58 07.0	
	comp=Z,321nm,19.8s,baz=206,slow=31							
RCBR	**Riachuelo**	**20.50**	**257**	P		**P**	**17 52 21.2**	**-0.7**
RCBR	**Riachuelo**	**20.50**	**257**	P		**P**	**17 52 21.3**	**-0.7**
RCBR				pmax		pmax		
	comp=Z,14nm,1.2s							
NBRF	**Rio Formoso -**	**20.55**	**248**	***e*P**		**P**	**17 52 22.8**	**+0.2**
NBAN	**Anadia - AL**	**21.96**	**247**	***e*P**		**P**	**17 52 38.4**	**+0.7**
TOA0	**Torodi Ar. Sit**	**22.51**	**50**	P		**P**	**17 52 42.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**22.51**	**50**	P		**P**	**17 52 43.4**	**-0.2**
	comp=Z,19nm,1.0s,baz=231,slow=7.7,SNR=24							
TORD				PcP		**PcP**	**17 56 37.5**	**0.0**
	comp=Z,0.9nm,0.8s,baz=242,slow=0.8,SNR=4.3							
TORD				LR		LR	18 00 40.7	
	comp=Z,396nm,19.0s,baz=211,slow=34							
	comp=Z,19nm,1.0s							
TORD	**Torodi Ar. Bea**	**22.51**	**50**	P		**P**	**17 52 42.6**	**-1.0**
TAM	**Tamanrasset**	**31.67**	**40**	P		**P**	**17 54 04.7**	**-2.7**
TAM	**Tamanrasset**	**31.67**	**40**	P		**P**	**17 54 04.7**	**-2.7**
TAM				pmax		pmax		
	comp=Z,14nm,1.5s							
PRPB	**Parauapebas**	**34.21**	**261**	***e*P**		**P**	**17 54 30.0**	**+0.4**
BDFB	**Brasilia**	**34.79**	**244**	P		**P**	**17 54 34.1**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=130,slow=7.2,SNR=1.5							
	comp=Z,1.6nm,0.5s							
MDT	**Midelt**	**35.46**	**16**	LR		LR	18 09 03.4	
	comp=Z,80nm,20.4s,baz=182,slow=36							
MDP	**Montagnes des**	**37.24**	**280**	LR		LR	18 06 43.0	
	comp=Z,254nm,21.9s,baz=82,slow=31							
TSUM	**Tsumeb**	**37.35**	**121**	LR		LR	18 06 54.8	
	comp=Z,211nm,21.7s,baz=323,slow=31							
ITTB	**Itaituba**	**39.92**	**265**	***e*P**		**P**	**17 55 18.4**	**+0.2**
ESDC	**Sonseca Array**	**42.11**	**14**	P		**P**	**17 55 36.5**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=253,slow=15,SNR=4.3							
ESDC				PcP		**PcP**	**17 57 32.0**	**+1.7**
	comp=Z,0.9nm,0.9s,baz=197,slow=2.7,SNR=7.1							
ESDC				LR		LR	18 13 33.3	
	comp=Z,82nm,19.1s,baz=140,slow=37							
	comp=Z,0.4nm,0.6s							
KEST	**Kesra**	**43.62**	**30**	LR		LR	18 14 59.3	
	comp=Z,187nm,19.6s,baz=120,slow=38							
KEST	**Kesra**	**43.62**	**30**	P		**P**	**17 55 47.8**	**-0.4**
KEST				IAmb		IAmb	17 55 50.8	
	comp=Z,59nm,1.9s							
BOAV	**Boa Vista**	**44.77**	**275**	P		**P**	**17 55 58.0**	**+0.3**
BOAV				IAmb		IAmb	17 56 01.2	
	comp=Z,20nm,1.7s							
BOAV	**Boa Vista**	**44.77**	**275**	***e*P**		**P**	**17 55 58.2**	**+0.5**
LSZ	**Lusaka**	**45.68**	**110**	P		**P**	**17 56 06.7**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=104,slow=5.5,SNR=1.9							
LSZ				LR		LR	18 12 00.4	
	comp=Z,196nm,18.1s,baz=296,slow=32							
	comp=Z,1.7nm,0.7s							
SUR	**Sutherland**	**46.43**	**136**	P		**P**	**17 56 10.9**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=318,slow=15,SNR=1.2							
SUR				LR		LR	18 12 07.9	
	comp=Z,141nm,19.2s,baz=299,slow=32							
	comp=Z,4.0nm,0.8s							
SUR	**Sutherland**	**46.43**	**136**	P		**P**	**17 56 11.0**	**+0.3**
LBTB	**Lobatse**	**46.51**	**124**	P		**P**	**17 56 11.0**	**-0.4**
	comp=Z,4.3nm,0.9s,baz=291,slow=6.1,SNR=4.0							
LBTB				LR		LR	18 12 29.2	
	comp=Z,122nm,19.3s,baz=274,slow=32							
	comp=Z,4.3nm,0.9s							
LBTB	**Lobatse**	**46.51**	**124**	P		**P**	**17 56 10.7**	**-0.7**
LBTB				IAmb		IAmb	17 57 08.2	
	comp=Z,49nm,1.9s							
LBTB	**Lobatse**	**46.51**	**124**	P		**P**	**17 56 10.7**	**-0.7**
LBTB				pmax		pmax		
	comp=Z,49nm,1.9s							
MBAR	**Mbarara**	**46.62**	**90**	LR		LR	18 14 03.0	
	comp=Z,322nm,18.6s,baz=237,slow=34							
MBAR	**Mbarara**	**46.62**	**90**	P		**P**	**17 56 12.4**	**-0.1**
MBAR				IAmb		IAmb	17 56 17.6	
	comp=Z,10nm,1.1s							
MBAR	**Mbarara**	**46.62**	**90**	P		**P**	**17 56 12.4**	**-0.1**
MBAR				pmax		pmax		
	comp=Z,10.0nm,1.1s							
SIV	**San Ignacio**	**46.90**	**249**	LR		LR	18 14 15.5	
	comp=Z,306nm,20.6s,baz=102,slow=34							
CPUP	**Villa Florida**	**47.03**	**234**	LR		LR	18 16 17.7	
	comp=Z,118nm,18.1s,baz=48,slow=36							
CPUP	**Villa Florida**	**47.03**	**234**	P		**P**	**17 56 14.9**	**-0.4**
CPUP				IAmb		IAmb	17 56 24.7	
	comp=Z,11nm,1.4s							
CPUP	**Villa Florida**	**47.03**	**234**	P		**P**	**17 56 14.9**	**-0.4**
CPUP				pmax		pmax		
	comp=Z,11nm,1.5s							
CPUP	**Villa Florida**	**47.03**	**234**	***e*P**		**P**	**17 56 16.0**	**+0.7**
VAE	**Valguarnera**	**47.60**	**33**	LR		LR	18 18 50.7	
	comp=Z,82nm,18.6s,baz=164,slow=39							
SAML	**Samuel**	**47.70**	**259**	P		**P**	**17 56 20.5**	**-0.2**
SAML	**Samuel**	**47.70**	**259**	P		**P**	**17 56 20.5**	**-0.2**
SAML				pmax		pmax		
	comp=Z,7.0nm,1.3s							
DLPL	**La Plaine**	**47.75**	**292**	P		**P**	**17 56 20.3**	**-0.7**
BOSA	**Boshof**	**47.79**	**129**	P		**P**	**17 56 21.5**	**+0.2**
	comp=Z,7.1nm,0.8s,baz=302,slow=7.6,SNR=9.8							
BOSA				LR		LR	18 13 59.7	
	comp=Z,69nm,18.3s,baz=262,slow=33							
	comp=Z,7.1nm,0.8s							
BOSA	**Boshof**	**47.79**	**129**	P		**P**	**17 56 20.4**	**-1.0**
BOSA	**Boshof**	**47.79**	**129**	P		**P**	**17 56 20.4**	**-1.0**
BOSA				pmax		pmax		
	comp=Z,61nm,1.9s							
CASP	**Castiglione de**	**49.96**	**26**	P		**P**	**17 56 38.7**	**+1.0**
SOE	**Somerset East**	**49.99**	**133**	P		**P**	**17 56 37.4**	**-0.8**
ETMB	**Extrema**	**50.77**	**258**	P		**P**	**17 56 44.2**	**0.0**
ETMB				IAmb		IAmb	17 56 48.6	
	comp=Z,13nm,1.8s							
LODK	**Lodwar**	**51.43**	**85**	P		**P**	**17 56 47.4**	**-1.9**
BIRV	**Birongo**	**51.44**	**284**	P		**P**	**17 56 50.4**	**+1.1**
BIRV				IAmb		IAmb	17 57 22.9	
	comp=Z,17nm,1.2s							
IDI	**Anoyia**	**52.59**	**42**	LR		LR	18 18 51.2	
	comp=Z,31nm,18.2s,baz=232,slow=36							
IDI	**Anoyia**	**52.59**	**42**	P		**P**	**17 56 57.7**	**+0.2**
DAVOX	**Davos/Dischmat**	**52.85**	**22**	LR		LR	18 20 57.0	
	comp=Z,53nm,18.9s,baz=248,slow=38							
BAUV	**El Baul**	**52.93**	**282**	P		**P**	**17 57 00.5**	**+0.2**
BAUV				IAmb		IAmb	17 57 04.1	
	comp=Z,22nm,0.9s							
SJG	**San Juan**	**53.03**	**294**	LR		LR	18 14 32.3	
	comp=Z,156nm,21.4s,baz=92,slow=30							
KMBO	**Kilima Mbogo**	**53.12**	**91**	P		**P**	**17 57 03.5**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=214,slow=19,SNR=2

VYHS	**Vyhne**	**57.91**	**27**	*eP*		**P**		**17 57 38.1**	**+2.5**
VYHS	**Vyhne**	**57.91**	**27**	*eP*		**P**		**17 57 38.1**	**+2.5**
SDDR	**Presa de Saban**	**57.96**	**293**	P		**P**		**17 57 37.1**	**+0.5**
SDDR				IAmb		IAmb		17 57 42.8	
	comp=Z,12nm,0.9s								
PSZ	**Piszkesteto**	**57.97**	**28**	P		**P**		**17 57 36.0**	**0.0**
PSZ				IAmb		IAmb		17 57 45.6	
	comp=Z,10nm,1.1s								
PSZ	**Piszkesteto**	**57.97**	**28**	P		**P**		**17 57 36.1**	**0.0**
PSZ				pmax		pmax			
	comp=Z,10.0nm,1.1s								
AC06	**Mina Casimiro**	**58.25**	**238**	P		**P**		**17 57 37.9**	**-0.5**
AC06				IAmb		IAmb		17 57 40.3	
	comp=Z,12nm,1.1s								
ROSC	**El Rosal**	**58.68**	**276**	LR		LR		18 20 07.5	
	comp=Z,164nm,21.6s,baz=72,slow=33								
MLR	**Muntele Rosu**	**59.38**	**33**	LR		LR		18 25 40.6	
	comp=Z,79nm,18.7s,baz=268,slow=38								
MLR	**Muntele Rosu**	**59.38**	**33**	P		**P**		**17 57 45.8**	**-0.3**
MLR	**Muntele Rosu**	**59.38**	**33**	P		**P**		**17 57 45.8**	**-0.3**
MLR				pmax		pmax			
	comp=Z,29nm,1.3s								
UZH	**Uzhgorod**	**59.60**	**28**	*eP*		**P**		**17 57 51.7**	**+4.4**
UZH				*e*				17 57 58.2	
ATD	**Arta Tunnel**	**59.70**	**76**	LR		LR		18 22 24.1	
	comp=Z,48nm,18.0s,baz=38,slow=35								
KOLS	**Kolonicke sedl**	**59.80**	**28**	*eP*		**P**		**17 57 50.2**	**+1.4**
KOLS	**Kolonicke sedl**	**59.80**	**28**	*eP*		**P**		**17 57 50.2**	**+1.4**
BR131	**Keskin Array S**	**60.83**	**42**	P		**P**		**17 57 55.6**	**-0.5**
BR131				IAmb		IAmb		17 58 05.7	
	comp=Z,19nm,1.2s								
BR131	**Keskin Array S**	**60.83**	**42⇑**	*eP*		**P**		**17 57 56.3**	**+0.2**
BRTR	**Keskin Array B**	**60.83**	**42**	P		**P**		**17 57 57.3**	**+1.2**
	comp=Z,3.6nm,0.9s,baz=233,slow=6.0,SNR=8.6								
BRTR				LR		LR		18 25 53.6	
	comp=Z,49nm,20.1s,baz=229,slow=38								
	comp=Z,3.6nm,0.9s								
BRTR	**Keskin Array B**	**60.83**	**42**	P		**P**		**17 57 56.1**	**-0.1**
BRTR	**Keskin Array B**	**60.83**	**42**	*ce*		**P**		**17 57 58.2**	**+2.1**
BRTR				pmax		pmax			
	comp=Z,4.0nm,0.9s								
LVV	**L'vov**	**61.25**	**28**	*eP*		P		17 58 05.9	+7.3
NNA	**Nana**	**61.37**	**257**	LR		LR		18 24 15.4	
	comp=Z,130nm,18.2s,baz=80,slow=36								
BNN	**Bunyan**	**61.92**	**44**	P		**P**		**17 58 03.3**	**-0.2**
ATAH	**Atahualpa**	**62.58**	**263**	LR		LR		18 24 18.6	
	comp=Z,237nm,20.5s,baz=96,slow=35								
PLCA	**Paso Flores**	**63.08**	**224**	LR		LR		18 21 19.2	
	comp=Z,49nm,21.4s,baz=88,slow=32								
ORCD	**Orcadas**	**63.38**	**195**	P		**P**		**17 58 11.5**	**-1.1**
ORCD				IAmb		IAmb		17 58 12.9	
	comp=Z,8.4nm,0.9s								
AKASG	**Malin Array Be**	**64.35**	**30**	P		**P**		**17 58 19.5**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=230,slow=5.8,SNR=14								
AKASG				LR		LR		18 28 00.6	
	comp=Z,60nm,20.3s,baz=248,slow=38								
	comp=Z,2.4nm,0.9s								
AKASG	**Malin Array Be**	**64.35**	**30**	P		**P**		**17 58 19.6**	**+0.4**
AKASG				IAmb		IAmb		17 58 27.0	
	comp=Z,12nm,1.4s								
AKASG	**Malin Array Be**	**64.35**	**30**	*ce*		**P**		**17 58 20.2**	**+1.0**
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.7s								
AKBB	**Malin Array Si**	**64.35**	**30**	P		**P**		**17 58 19.5**	**+0.3**
AKBB				IAmb		IAmb		17 58 27.3	
	comp=Z,20nm,1.2s								
AKBB	**Malin Array Si**	**64.35**	**30⇑**	*eP*		**P**		**17 58 19.7**	**+0.5**
RAYN	**Ar Rayn**	**64.45**	**63**	P		**P**		**17 58 21.4**	**+0.9**
RAYN	**Ar Rayn**	**64.45**	**63**	P		**P**		**17 58 21.4**	**+0.9**
RAYN				pmax		pmax			
	comp=Z,6.0nm,1.1s								
MARD	**Mardin**	**64.81**	**47**	P		**P**		**17 58 22.6**	**-0.1**
MARD				IAmb		IAmb		17 58 32.5	
	comp=Z,4.9nm,0.6s								
PABE	**Paberze**	**65.18**	**24**	P		**P**		**17 58 25.1**	**+0.6**
PABE				IAmb		IAmb		17 58 34.0	
	comp=Z,15nm,1.1s								
HFS	**Hagfors**	**65.33**	**16**	LR		LR		18 27 40.3	
	comp=Z,25nm,20.9s,baz=222,slow=37								
NB2	**NORSAR Subarra**	**65.47**	**14**	P		**P**		**17 58 27.0**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=195,slow=10								
NOA	**NORSAR Array B**	**65.47**	**14**	P		**P**		**17 58 26.2**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=208,slow=6.4,SNR=3.9								
NOA				LR		LR		18 27 38.1	
	comp=Z,23nm,21.7s,baz=210,slow=37								
	comp=Z,0.5nm,0.7s								
NC204	**NORSAR Array S**	**65.56**	**14**	P		**P**		**17 58 27.4**	**+0.4**
KOPT	**Kop Dagi**	**65.67**	**45**	P		**P**		**17 58 28.9**	**+0.5**
KOPT				IAmb		IAmb		17 58 39.6	
	comp=Z,8.7nm,1.0s								
NACGM	**Naroch**	**65.94**	**25⇑**	*eP*		P		17 58 37.6	+8.2
	baz=228								
MNK	**Minsk**	**66.15**	**26**	*i* P		**P**		**17 58 30.0**	**-0.8**
MNK				*i*				17 59 04.5	
MNK				*i* S		**S**		**18 07 12.9**	**-5.4**
MNK				*i* *SS		sS		18 07 44.9	+17
MNK				*i*				18 08 24.6	
MNK				pmax		pmax			
	comp=E,1.0nm,0.8s								
MNK				pmax		pmax			
	comp=Z,6.0nm,0.8s								
MNK				MLR		MLR			
	comp=Z,73nm,18.0s								
MNK				MLR		MLR			
	comp=E,28nm,18.0s								
MNK	**Minsk**	**66.15**	**26**	*i* P		**P**		**17 58 30.0**	**-0.8**
	comp=E,1.0nm,0.8s								
MNK				*i* P		**P**		**17 58 30.0**	**-0.8**
MNK				*i* P		**P**		**17 58 30.0**	**-0.8**
	comp=Z,6.0nm,0.8s,baz=229								
MNK				*i* pP		**pwP**		**17 58 48.5**	**+7.5**
MNK				*i* sP		**PcP**		**17 58 56.0**	**-5.0**
MNK				*i* PP		PP		18 00 28.5	-28
MNK				*i* PPP		PPP		18 01 44.6	
MNK				*i* S		**S**		**18 07 13.0**	**-5.4**
MNK				*i* sS		sS		18 07 44.9	+17
MNK				*i* SS		SS		18 11 05.4	-29
MNK				*i* SSS		SSS		18 14 59.4	
MNK				*i* LQ		LQ		18 21 29.7	
MNK				*i* LR		LR		18 24 27.4	
MNK				*i* LRM		MLR		18 29 52.4	
	comp=Z,73nm,18.2s								
MNK				*i* LRM		MLR		18 30 03.3	
MNK				*i* LRM		MLR		18 30 22.8	
	comp=E,28nm,18.2s								
SOC	**Sochi**	**66.65**	**41**	*eP*		**P**		**17 58 32.9**	**-1.4**
SOC				*e*				18 01 01.3	
SOC				*e*PPP		PPP		18 02 35.6	
SOC				*e*S		**S**		**18 07 18.4**	**-6.5**
SOC				*e*SS		**SS**		**18 11 37.6**	**-5.1**
SOC				pmax		pmax			
	comp=Z,7.0nm,0.5s								
SOC				MLR		MLR			
	comp=Z,31nm,18.0s								
F62A	**Pittston Farm,**	**66.74**	**322**	P		**P**		**17 58 34.9**	**+0.1**
DRK0	**Durika**	**67.88**	**280**	P		**P**		**17 58 41.4**	**-1.4**
VSU	**Vasula**	**68.33**	**23⇓**	*eP*		**P**		**17 58 47.0**	**+2.4**
VSU				*i* *PP		**PcP**		**17 59 05.6**	**-4.4**
VSU				pmax		pmax			
	comp=Z,9.0nm,0.9s								
KIV	**Kislovodsk**	**68.76**	**41**	P		**P**		**17 58 47.2**	**-0.5**
KIV				IAmb		IAmb		17 59 30.6	
	comp=Z,5.7nm,0.8s								
KIV	**Kislovodsk**	**68.76**	**41**	*eP*		**P**		**17 58 47.7**	**0.0**
KIV				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KIV				MLR		MLR			
	comp=Z,6.0nm,17.0s								
KBZ	**Khabaz**	**68.81**	**42**	P		**P**		**17 58 49.4**	**+1.5**
	comp=Z,6.5nm,1.0s,baz=183,slow=1.3,SNR=8.5								
KBZ				LR		LR		18 30 47.9	
	comp=Z,20nm,21.1s,baz=235,slow=38								
	comp=Z,6.5nm,1.0s								
KBZ	**Khabaz**	**68.81**	**42**	*ce*		**P**		**17 58 49.7**	**+1.8**
KBZ				pmax		pmax			
	comp=Z,7.0nm,1.0s								
VNA1	**Neumayer--Stat**	**69.53**	**177**	P		**P**		**17 58 51.4**	**-0.4**
SCHQ	**Schefferville**	**69.66**	**331**	LR		LR		18 25 54.5	
	comp=Z,54nm,18.1s,baz=265,slow=33								
VNA2	**Neumayer--Watz**	**69.85**	**177**	P		**P**		**17 58 54.5**	**+0.7**
	baz=343,slow=6.4								
VNA2	**Neumayer--Watz**	**69.85**	**177**	PP		PP		18 01 29.7	+1.2
VNA2	**Neumayer--Watz**	**69.85**	**177**	pP		pP		17 59 01.3	+2.2
VSR	**Storozhevoye**	**69.87**	**33**	*eP*		**P**		**17 58 54.3**	**0.0**
VSR				pmax		pmax			
	comp=Z,10.0nm,0.7s								
VNA3	**Neumayer Olymp**	**70.06**	**178**	P		**P**		**17 58 55.4**	**+0.2**
VNA3	**Neumayer Olymp**	**70.06**	**178**	pP		pP		17 59 02.6	+2.1
VORR	**Voronezh**	**70.11**	**33**	*eP*		**P**		**17 58 52.1**	**-3.7**
VORR				pmax		pmax			
	comp=Z,10.0nm,0.3s								
FINES	**FINESS Array B**	**70.17**	**20**	P		**P**		**17 58 57.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=224,slow=4.1,SNR=9.0								
FINES				LR		LR		18 30 03.4	
	comp=Z,15nm,18.7s,baz=269,slow=36								
	comp=Z,1.1nm,0.5s								
FINES	**FINESS Array B**	**70.17**	**20**	P		**P**		**17 58 56.0**	**+0.1**
FINES	**FINESS Array B**	**70.17**	**20**	P		**P**		**17 58 56.0**	**+0.1**
FIA1	**FINESS Array S**	**70.17**	**20**	P		**P**		**17 58 55.5**	**-0.4**
FIA1				IAmb		IAmb		17 59 05.0	
	comp=Z,22nm,1.2s								
LPSR	**Galich'ya Gora**	**70.42**	**32**	*eP*		**P**		**17 59 02.0**	**+4.4**
LPSR				pmax		pmax			
	comp=Z,20nm,1.4s								
KMSC	**Kings Mountain**	**70.81**	**308**	P		**P**		**17 59 02.2**	**+1.8**
KMSC				IAmb		IAmb		17 59 03.1	
	comp=Z,6.0nm,0.8s								
SNAA	**Sanae**	**70.87**	**176**	P		**P**		**17 59 00.7**	**+0.6**
SNAA				S		SKiKP		18 09 12.5	+31
SNAA	**Sanae**	**70.87**	**176**	pP		pP		17 59 07.6	+2.2
SNAA	**Sanae**	**70.87**	**176**	P		**P**		**17 59 00.3**	**+0.1**
SNAA	**Sanae**	**70.87**	**176**	P		**P**		**17 59 00.3**	**+0.1**
SNAA				pmax		pmax			
	comp=Z,5.0nm,0.9s								
V55A	**Taylorsville**	**70.91**	**309**	P		**P**		**17 59 02.4**	**+1.4**
WVNY	**West Valley, N**	**71.00**	**316**	P		**P**		**17 59 02.4**	**+0.9**
WVNY				IAmb		IAmb		17 59 05.4	
	comp=Z,13nm,0.8s								
VRH	**Novokhopyorsk**	**71.28**	**34**	*eP*		**P**		**17 59 05.7**	**+2.8**
VRH				pmax		pmax			
	comp=Z,10.0nm,1.1s								
MOS	**Moscow**	**71.38**	**29**	*eP*		P		17 59 09.0	+5.6
BG3	**Lake Jocassee**	**72.04**	**307**	P		**P**		**17 59 08.7**	**+0.9**
BG3				IAmb		IAmb		17 59 10.8	
	comp=Z,7.5nm,0.8s								
SADO	**Sadowa**	**72.18**	**318**	LR		LR		18 25 40.1	
	comp=Z,80nm,19.6s,baz=153,slow=32								
JMIC	**Jan Mayen**	**72.21**	**3**	LR		LR		18 30 05.5	
	comp=Z,111nm,18.3s,baz=245,slow=35								
TKL	**Tuckaleechee C**	**72.87**	**308**	LR		LR		18 25 52.8	
	comp=Z,59nm,19.7s,baz=146,slow=32								
X51A	**Calhoun**	**73.48**	**307**	P		**P**		**17 59 17.5**	**+1.1**
X51A				IAmb		IAmb		17 59 19.1	
	comp=Z,14nm,0.8s								
T50A	**Nancy**	**74.04**	**309**	P		**P**		**17 59 20.5**	**+0.9**
T50A				IAmb		IAmb		17 59 22.3	
	comp=Z,10nm,0.7s								
UOSS	**Minazif**	**74.31**	**64**	P		**P**		**17 59 21.3**	**-0.1**
UOSS				IAmb		IAmb		17 59 30.7	
	comp=Z,15nm,1.1s								
U49A	**Red Boiling Sp**	**74.65**	**308**	P		**P**		**17 59 24.0**	**+0.8**
KLMR	**Klimovskoe**	**74.93**	**25**	*eP*		**P**		**17 59 23.8**	**-0.5**
KLMR				pmax		pmax			
	comp=Z,26nm,1.5s								
KLMR	**Klimovskoe**	**74.93**	**25**	*eP*		**P**		**17 59 23.9**	**-0.4**
KLMR				AMP				17 59 33.2	
	comp=Z,26nm,1.5s								
CLTN	**Cedars of Leba**	**74.99**	**308**	P		**P**		**17 59 25.8**	**+0.6**
BELG	**Belogornoye**	**75.11**	**35**	LR		LR		18 34 19.2	
	comp=Z,19nm,18.3s,baz=163,slow=37								
X48A	**Hartselle**	**75.22**	**306**	P		**P**		**17 59 26.6**	**+0.1**
V48A	**Smith Brothers**	**75.31**	**307**	P		**P**		**17 59 27.4**	**+0.4**
WVT	**Waverly**	**76.19**	**308**	P		**P**		**17 59 32.3**	**+0.3**
WVT	**Waverly**	**76.19**	**308**	P		**P**		**17 59 32.3**	**+0.3**
WVT				pmax		pmax			
	comp=Z,30nm,1.0s								
WSAR	**Wadi Sarin**	**76.26**	**66**	LR		LR		18 34 54.5	
	comp=Z,81nm,18.2s,baz=254,slow=37								
P46A	**Rosedale**	**76.45**	**311**	P		**P**		**17 59 33.6**	**+0.1**
OLIL	**Olney**	**76.94**	**310**	P		**P**		**17 59 36.5**	**+0.3**
OLIL				IAmb		IAmb		17 59 37.5	
	comp=Z,17nm,0.8s								
BELA	**Belgrano 2**	**77.28**	**184**	P		**P**		**17 59 37.7**	**+0.3**
PRGR	**Permogore**	**77.90**	**25**	*eP*		**P**		**17 59 42.7**	**+1.6**
GEYT	**Alibeck**	**78.15**	**51**	P		**P**		**17 59 43.5**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=228,slow=5.6,SNR=1.9								
GEYT				LR		LR		18 37 19.2	
	comp=Z,114nm,18.4s,baz=322,slow=38								
	comp=Z,1.0nm,0.4s								
KIRV	**Kirov**	**78.39**	**29**	LR		LR		18 36 31.3	
	comp=Z,43nm,19.6s,baz=257,slow=37								
KIRV	**Kirov**	**78.39**	**29⇑**	*eP*		**P**		**17 59 44.5**	**+0.7**
FVM	**French Village**	**78.58**	**309**	P		**P**		**17 59 45.6**	**+0.1**
FVM				IAmb		IAmb		17 59 46.5	
	comp=Z,12nm,0.9s								
FVM	**French Village**	**78.58**	**309**	P		**P**		**17 59 45.6**	**+0.1**
FVM				pmax		pmax			
	comp=Z,12nm,0.9s								
CCM	**Cathedral Cave**	**79.23**	**309**	P		**P**		**17 59 48.4**	**-0.6**
CCM				IAmb		IAmb		17 59 50.2	
	comp=Z,12nm,0.7s								
CCM	**Cathedral Cave**	**79.23**	**309**	P		**P**		**17 59 48.4**	**-0.6**
CCM				pmax		pmax			
	comp=Z,12nm,0.7s								
CMIG	**Matias Romero**	**79.84**	**287**	LR		LR		18 32 47.1	
	comp=Z,26nm,21.6s,baz=31,slow=34								
R40A	**Maddies Statio**	**80.07**	**309**	P		**P**		**17 59 53.7**	**+0.2**
AKTO	**Aktyubinsk**	**80.71**	**39**	LR		LR		18 38 45.3	
	comp=Z,22nm,20.5s,baz=260,slow=38								
S39A	**Bolivar**	**80.80**	**308**	P		**P**		**17 59 57.7**	**+0.2**
S39A				IAmb		IAmb		17 59 58.7	
	comp=Z,8.3nm,0.7s								
P38A	**Dawn**	**81.25**	**310**	P		**P**		**17 59 59.9**	**0.0**
P38A				IAmb		IAmb		18 00 01.0	
	comp=Z,12nm,0.6s								
ABKAR	**Akbulak array**	**81.67**	**40**	P		**P**		**18 00 02.6**	**+0.8**
ABKAR	**Akbulak array**	**81.67**	**40**	P		**P**		**18 00 02.5**	**+0.6**
ABKAR				IAmb		IAmb		18 00 10.8	
	comp=Z,6.7nm,1.4s								
ARU	**Arti**	**82.42**	**33**	LR		LR		18 37 54.4	
	comp=Z,30nm,21.7s,baz=251,slow=36								
ARU	**Arti**	**82.42**	**33**	P		**P**		**18 00 06.6**	**+1.0**
ARU				IAmb		IAmb		18 00 15.2	
	comp=Z,11nm,1.1s								
ARU	**Arti**	**82.42**	**33**	*c* *iP*		**P**		**18 00 07.0**	**+1.4**
ARU								18 03 11.6	
ARU				S		**S**		**18 10 18.1**	**-2.8**
ARU				pmax		pmax			
	comp=Z,8.0nm,1.0s								
B35A	**Bob, Littlefor**	**82.81**	**319**	P		**P**		**18 00 08.5**	**+0.6**
B35A				IAmb		IAmb		18 00 09.4	
	comp=Z,9.4nm,0.8s								
AGMN	**Agassiz Nation**	**84.21**	**319**	P		**P**		**18 00 15.5**	**+0.4**
AGMN				IAmb		IAmb		18 00 16.8	
	comp=Z,9.4nm,0.8s								
OK032	**Salt Plains WL**	**84.56**	**307**	P		**P**		**18 00 17.2**	**+0.1**
MAW	**Mawson**	**84.62**	**158**	P		**P**		**18 00 18.2**	**+1.5**
	comp=Z,4.5nm,0.7s,baz=290,slow=7.4,SNR=14								
	comp=Z,4.5nm,0.7s								
WMOK	**Wichita Mounta**	**84.83**	**305**	P		**P**		**18 00 19.3**	**+0.8**
WMOK				IAmb		IAmb		18 00 27.1	
	comp=Z,12nm,0.8s								
WMOK	**Wichita Mounta**	**84.83**	**305**	P		**P**		**18 00 19.3**	**+0.8**
WMOK				pmax		pmax			
	comp=Z,12nm,0.8s								
JCT	**Junction City**	**85.35**	**301**	P		**P**		**18 00 22.0**	**+0.7**
JCT				IAmb		IAmb		18 00 23.3	
	comp=Z,9.7nm,1.1s								
JCT	**Junction City**	**85.35**	**301**	P		**P**		**18 00 22.0**	**+0.7**
JCT				pmax		pmax			
	comp=Z,10.0nm,1.1s								
OGNE	**Ogallala**	**87.86**	**311**	P		**P**		**18 00 34.6**	**+1.3**
MSTX	**Muleshoe**	**88.07**	**304**	P		**P**		**18 00 34.8**	**+0.2**
MSTX				IAmb		IAmb		18 00 37.0	
	comp=Z,12nm,1.0s								
KKAR	**Karatay Array**	**88.17**	**47**	P		**P**		**18 00 35.0**	**+0.3**
KKAR	**Karatay Array**	**88.17**	**47**	P		**P**		**18 00 35.0**	**+0.3**
BRVK	**Borovoye**	**88.63**	**37⇑**	*eP*		**P**		**18 00 38.3**	**+1.7**
BRVK				pmax		pmax			
	comp=Z,4.0nm,1.3s								
TX31	**Lajitas Ar. Si**	**88.64**	**299**	P		**P**		**18 00 38.0**	**+0.7**
TX32	**Lajitas Array**	**88.64**	**299**	P		**P**		**18 00 37.8**	**+0.4**
TX32				IAmb		IAmb		18 01 34.9	
	comp=Z,17nm,2.0s								
TXAR	**Lajitas Array**	**88.64**	**299**	P		**P**		**18 00 38.3**	**+0.9**
	comp=Z,1.6nm,1.0s,baz=111,slow=6.9,SNR=8.4								
TXAR				LR		LR		18 37 29.8	
	comp=Z,21nm,19.3s,baz=100,slow=34								
	comp=Z,1.6nm,1.0s								
AAK	**Ala-Archa**	**91.08**	**48⇑**	*eP*		**P**		**18 00 51.3**	**+2.8**
AAK				pmax		pmax			
	comp=Z,3.0nm,1.0s								
ANMO	**Albuquerque**	**91.14**	**305**	LR		LR		18 37 10.4	
	comp=Z,101nm,19.3s,baz=100,slow=33								
ANMO	**Albuquerque**	**91.14**	**305⇑**	*eP*		**P**		**18 00 50.4**	**+1.3**
ANMO				pmax		pmax			
	comp=Z,1.0nm,1.1s								
KSH	**Kashi**	**92.18**	**51**	P		**P**		**18 00 54.3**	**+0.6**
KSH				pP		sP		18 01 01.4	+0.2
KSH				pmax		pmax			
	comp=Z,6.0nm,0.8s								
RPN	**Rapa Nui**	**92.54**	**243**	LR		LR		18 37 12.9	
	comp=Z,59nm,21.8s,baz=150,slow=32								
PDAR	**Pinedale Array**	**93.50**	**313**	LR		LR		18 40 56.7	
	comp=Z,47nm,18.2s,baz=103,slow=34								
KURK	**Kurchatov**	**93.77**	**39⇓**	*eP*		**P**		**18 01 01.9**	**+1.3**
KURK				pmax		pmax			
	comp=Z,1.0nm,1.0s								
LPIG	**La Paz**	**94.52**	**294**	LR		LR		18 40 30.6	
	comp=Z,20nm,18.4s,baz=98,slow=34								
YKA	**Yellowknife Ar**	**95.08**	**333**	P		**P**		**18 01 07.3**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=76,slow=5.3,SNR=3.6								
	comp=Z,0.8nm,0.7s								
NRIK	**Noril'sk**	**95.84**	**20**	LR		LR		18 47 30.8	
	comp=Z,28nm,19.0s,baz=72,slow=37								
MK31	**Makanchi Array**	**96.47**	**43**	P		**P**		**18 01 13.2**	**+0.1**
MK31	**Makanchi Array**	**96.47**	**43⇑**	*eP*		**P**		**18 01 13.7**	**+0.7**
MKAR	**Makanchi Array**	**96.47**	**43**	P		**P**		**18 01 14.1**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=280,slow=3.6,SNR=7.4								
	comp=Z,0.9nm,0.8s								
ZALV	**Zalesovo Beam**	**97.26**	**36**	LR		LR		18 47 35.7	
	comp=Z,22nm,20.8s,baz=314,slow=37								
ELK	**Elko**	**97.87**	**311**	LR		LR		18 42 37.8	
	comp=Z,68nm,18.5s,baz=82,slow=34								
NEW	**Newport**	**98.37**	**319**	LR		LR		18 41 13.7	
	comp=Z,79nm,19.7s,baz=107,slow=33								
PFO	**Pinyon Flats O**	**99.47**	**304**	LR		LR		18 39 49.0	
	comp=Z,47nm,21.0s,baz=88,slow=32								
WMQ	**Urumqi**	**100.61**	**46**	*eP*		**Pdif**		**18 01 33.4**	**+1.7**
PZH	**PanZhiHua**	**115.12**	**61**	PKP		**PKPdf**		**18 06 24.8**	**-0.9**
CD2	**Chengdu**	**115.82**	**56**	PKP		**PKPdf**		**18 06 25.3**	**-1.6**
ASAR	**Alice Springs**	**141.62**	**132**	PKhKP		PKPpre		18 07 09.6	
	comp=Z,1.8nm,0.8s,baz=219,slow=3.1,SNR=20								
WRA	**Warramunga Arr**	**144.04**	**127**	PKP		PKPbc		18 07 17.9	-0.1
	comp=Z,2.1nm,0.7s,baz=239,slow=2.6,SNR=19								

GUC 23 17:57:33.9±0.7, 21°.66S×68°.65W, h120km±5km, ML2.9, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.57**	**256**	*i* P		Pn	17 57 52.2	-0.3
PB09				*i* S		Sn	17 58 06.2	-0.4
PB09				IAML			17 58 08.1	
	comp=E,279nm,0.2s							
PB09	**IPOC Station P**	**0.57**	**256**	*e*P		Pn	17 57 52.2	-0.3
PB09				*i* S		Sn	17 58 06.5	0.0
PB09				IAML			17 58 08.1	
	comp=E,272nm,0.3s							
LVC	**Limon Verde**	**0.97**	**194**	*e*P		Pn	17 57 55.3	-0.8
LVC				*i* S		Sn	17 58 12.3	-0.6
LVC	**Limon Verde**	**0.97**	**194**	*e*P		Pn	17 57 55.2	-0.9
PB01	**IPOC Station P**	**1.00**	**308**	*i* P		Pn	17 57 55.1	-0.9
PB01				*i* S		Sn	17 58 12.0	-0.8
PB01				IAML			17 58 14.0	
	comp=N,302nm,0.5s							
PB01	**IPOC Station P**	**1.00**	**308**	*e*P		Pn	17 57 55.2	-0.8
PB01				*i* S		Sn	17 58 12.0	-0.8
PB01				IAML			17 58 14.0	
	comp=N,304nm,0.4s							
PB07	**IPOC Station P**	**1.15**	**267**	*i* P		Pn	17 57 57.1	-0.5
PB07				*i* S		Sn	17 58 14.9	-0.7
PB07				IAML			17 58 15.8	
	comp=N,445nm,0.4s							
PB07	**IPOC Station P**	**1.15**	**267**	*e*P		Pn	17 57 57.1	-0.5
PB07				*i* S		Sn	17 58 15.0	-0.7
PB07				IAML			17 58 15.8	
	comp=N,436nm,0.4s							
PB02	**IPOC Station P**	**1.21**	**286**	*i* P		Pn	17 57 57.5	-0.8
PB02		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRMI	**Germi**	**2.86**	**244**	*e*Pn	**Pn**	**18 15 50.9**	**-0.1**
GRMI				*e*		18 16 27.0	
	comp=Z,99nm,0.2s						
AKT	**Akhty**	**2.96**	**299**	*i* Pn	**Pn**	**18 15 54.1**	**+1.9**
	comp=Z,8.0nm,0.2s						
AKT				*e*Sn	**Sn**	**18 16 27.3**	**-0.5**
	comp=Z,43nm,0.2s						
GIDE	**GILAN DEYLAMAN**	**3.34**	**198**	*e*Pn	**Pn**	**18 15 56.4**	**-1.2**
URKR	**Urkarakh**	**3.38**	**309**	*e*Pn	**Pn**	**18 16 00.1**	**+2.1**
	comp=Z,14nm,0.1s						
URKR				*e*Sn	**Sn**	**18 16 38.5**	**+0.3**
	comp=Z,79nm,0.6s						
SGKR	**Sergokala**	**3.54**	**313**	*e*Pn	**Pn**	**18 16 03.1**	**+2.9**
	comp=Z,17nm,0.8s						
SGKR				*e*Sn	**Sn**	**18 16 43.5**	**+1.3**
	comp=Z,43nm,0.2s						
ISRB	**Sarab**	**3.57**	**231**	*e*Pn	**Pn**	**18 16 01.4**	**+0.6**
ISRB				*e*		18 16 42.3	
	comp=Z,505nm,0.2s						
IHRS	**Heris**	**3.68**	**242**	*e*Pn	**Pn**	**18 16 03.2**	**+0.8**
IHRS				*e*		18 16 46.8	
	comp=Z,2μm,0.2s						
KMKR	**Kumukh**	**3.69**	**304**	*e*Pn	**Pn**	**18 16 05.2**	**+2.9**
	comp=Z,10.0nm,0.3s						
KMKR				*e*Sn	**Sn**	**18 16 47.3**	**+1.3**
	comp=Z,23nm,0.5s						
ZNJK	**Zanjan**	**3.96**	**211**	*e*Pn	**Pn**	**18 16 05.7**	**-0.5**
IPRN	**Peran**	**3.97**	**166**	*e*Pn	**Pn**	**18 16 07.7**	**+1.5**
ARKR	**Arakani**	**4.02**	**310**	*e*Pn	**Pn**	**18 16 09.9**	**+3.1**
	comp=Z,4.0nm,0.5s						
ARKR				*e*Sn	**Sn**	**18 16 55.8**	**+1.9**
	comp=Z,14nm,0.2s						
IBST	**Bostanabad**	**4.13**	**236**	*e*Pn	**Pn**	**18 16 08.8**	**+0.3**
IGLO	**Ghaloghah**	**4.16**	**149**	*e*Pn	**Pn**	**18 16 10.4**	**+1.5**
IGLO				*e*		18 17 00.2	
	comp=Z,1μm,0.5s						
CHTH	**Charan**	**4.20**	**181**	*e*Pn	**Pn**	**18 16 10.4**	**+0.9**
UNCR	**Uncukul**	**4.20**	**310**	*e*Pn	**Pn**	**18 16 12.4**	**+3.1**
	comp=Z,7.0nm,0.4s						
UNCR				*e*Sn	**Sn**	**18 17 00.3**	**+1.9**
	comp=Z,21nm,0.5s						
KRNR	**Karanay**	**4.20**	**312**	*e*Pn	**Pn**	**18 16 12.1**	**+2.7**
	comp=Z,3.0nm,1.2s						
KRNR				*e*Sn	**Sn**	**18 16 59.7**	**+1.1**
	comp=Z,23nm,0.5s						
IMRD	**Marand**	**4.47**	**254**	*e*Pn	**Pn**	**18 16 14.1**	**+1.0**
DAMV	**Damavand**	**4.52**	**172**	*e*Pn	**Pn**	**18 16 16.0**	**+2.1**
MRVT	**Maraveh tapeh**	**4.54**	**121**	*e*Pn	**Pn**	**18 16 16.2**	**+2.2**
IDMV	**Damavand**	**4.58**	**171**	*e*Pn	**Pn**	**18 16 17.6**	**+2.9**
IDMV				*e*		18 17 10.2	
	comp=Z,646nm,0.2s						
ISHM	**Shahmirzad**	**4.61**	**158**	*e*Pn	**Pn**	**18 16 16.8**	**+1.6**
IFIR	**Firoozkooh**	**4.63**	**164**	*e*Pn	**Pn**	**18 16 17.0**	**+1.5**
IFIR				*e*		18 17 13.2	
	comp=Z,566nm,0.3s						
IRAZ	**Razeghan**	**4.81**	**192**	*e*Pn	**Pn**	**18 16 18.5**	**+0.7**
IRAZ				*e*		18 17 15.9	
	comp=Z,314nm,0.8s						
ILAS	**Lasjerd**	**4.93**	**163**	*e*Pn	**Pn**	**18 16 21.1**	**+1.6**
ILAS				*e*		18 17 20.8	
	comp=Z,404nm,0.4s						
BJRD	**Bojnurd**	**5.42**	**114**	*e*Pn	**Pn**	**18 16 28.4**	**+2.3**
SHRO	**Shahrood**	**5.61**	**136**	*e*Pn	**Pn**	**18 16 30.5**	**+1.8**
GEYT	**Alibeck**	**5.82**	**110**	Pn	**Pn**	**18 16 32.7**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=292,slow=4.1,SNR=9.4						
GEYT				Sn	**Sn**	**18 17 33.5**	**-4.9**
	comp=Z,0.4nm,0.3s,baz=254,slow=20,SNR=2.3						
	comp=Z,1.3nm,0.4s						
SNGE	**Sanandaj**	**5.87**	**212**	*e*Pn	**Pn**	**18 16 32.8**	**+0.5**
ISFR	**Sfrayin**	**6.15**	**118**	*e*Pn	**Pn**	**18 16 39.2**	**+2.9**
IEMG	**Emamgholi**	**6.43**	**112**	*e*Pn	**Pn**	**18 16 41.6**	**+1.5**
IAKL	**Akhelmad**	**6.90**	**118**	*e*Pn	**Pn**	**18 16 50.1**	**+3.4**
IKRD	**Kardeh**	**7.34**	**114**	*e*Pn	**Pn**	**18 16 55.2**	**+2.6**
AKTO	**Aktyubinsk**	**11.38**	**23**	Pn	**Pn**	**18 17 47.0**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=198,slow=16,SNR=2.0						
AKTO				Sn	**Sn**	**18 19 48.5**	**-6.3**
	comp=Z,0.4nm,0.3s,baz=21,slow=20,SNR=8.5						
	comp=Z,0.8nm,0.5s						
MMAI	**Mount Meron Ar**	**14.52**	**246**	LR	LR	18 25 47.8	
	comp=Z,44nm,19.4s,baz=118,slow=45						
BVAR	**Borovoye Array**	**18.39**	**39**	P	**Pn**	**18 19 22.0**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=231,slow=8.7,SNR=9.6						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**18.63**	**312**	P	**P**	**18 19 21.8**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=113,slow=13,SNR=4.2						
	comp=Z,0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**21.78**	**52**	P	**P**	**18 19 58.3**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=249,slow=11,SNR=3.7						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**23.44**	**63**	P	**P**	**18 20 15.8**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=274,slow=8.9,SNR=3.5						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**26.30**	**333**	P	**P**	**18 20 40.1**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=128,slow=9.0,SNR=1.5						
	comp=Z,0.5nm,0.5s						
ESDC	**Sonseca Array**	**41.73**	**288**	LR	LR	18 44 30.6	
	comp=Z,25nm,19.9s,baz=244,slow=42						

WEL 23 18:19:28.7±0.5, 40°S±3°×17°9E±°, h33km, M3.3/24, ML3.6/24, MLv3.3/24, Error ellipse: s-maj=0.0km s-min=0.0km az=88.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHGZ	**Mahia Peninsul**	**0.66**	**312**	P	Pn	18 19 40.8	-0.9
PRGZ	**Paritu Road**	**0.84**	**323**	P	Pn	18 19 43.8	-0.5
PRGZ				S	Sb	18 19 56.7	+0.8
KNZ	**Kokohu**	**0.88**	**310**	P	Pn	18 19 44.1	-0.7
RIGZ	**Rimuhau**	**1.07**	**326**	P	Pn	18 19 47.6	+0.2
CKHZ	**Cape Kidnapper**	**1.13**	**266**	P	Pn	18 19 48.4	+0.2
WHHZ	**Waihua**	**1.13**	**297**	P	Pn	18 19 48.0	-0.3
CNGZ	**Carnagh Statio**	**1.14**	**347**	P	Pn	18 19 48.7	+0.4
SNGZ	**Shannon Statio**	**1.23**	**311**	P	Pn	18 19 49.5	-0.2
ARHZ	**Aropaoanui**	**1.24**	**285**	P	Pn	18 19 50.2	+0.5
TKGZ	**Te Karaka**	**1.27**	**335**	P	Pn	18 19 51.1	+0.9
TKGZ				S	Sb	18 20 07.7	-0.5
KAHZ	**Kahuranaki**	**1.29**	**261**	P	Pn	18 19 51.4	+0.9
RAHZ	**Arahi**	**1.31**	**301**	P	Pn	18 19 51.2	+0.4
PXZ	**Pawanui**	**1.36**	**251**	P	Pn	18 19 50.4	-1.0
RAGZ	**Rawiri**	**1.40**	**321**	P	Pn	18 19 52.3	+0.2
RAGZ				S	Sn	18 20 10.2	+0.8
NMHZ	**Naumai**	**1.43**	**290**	P	Pn	18 19 53.2	+0.8
TWGZ	**Tauwhareparae**	**1.48**	**343**	P	Pn	18 19 53.5	+0.4
MWZ	**Matawai**	**1.48**	**328**	P	Pn	18 19 53.2	0.0
MWZ				S	Sn	18 20 11.1	-0.3
MTHZ	**Maungataniwha**	**1.51**	**299**	P	Pn	18 19 53.2	-0.2
PUZ	**Puketiti**	**1.54**	**352**	P	Pn	18 19 53.7	-0.1
PUZ				S	Sn	18 20 13.2	+0.6
PRHZ	**Porangahau**	**1.61**	**245**	P	Pn	18 19 54.5	-0.3
BKZ	**Black Stump Fm**	**1.64**	**284**	P	Pn	18 19 56.3	+1.0
KWHZ	**Kaweka Forest**	**1.64**	**275**	P	Pb	18 19 57.0	-1.5
WPHZ	**Waipukurau**	**1.68**	**253**	P	Pn	18 19 56.8	+1.0
URZ	**Urewera**	**1.73**	**320**	P	Pn	18 19 57.0	+0.5
URZ				S	Sn	18 20 18.3	+0.8
PKGZ	**Pakihiroa**	**1.74**	**348**	P	Pn	18 19 57.1	+0.4
PKGZ				S	Sn	18 20 17.5	-0.3
RUGZ	**Raukumara Rang**	**1.76**	**337**	P	Pn	18 19 56.8	-0.2
MUGZ	**Murupara**	**1.77**	**309**	P	Pn	18 19 57.0	-0.1
WMGZ	**Waiomatatini S**	**1.77**	**357**	P	Pn	18 19 57.6	+0.5
WMGZ				S	Sn	18 20 19.7	+1.2
ANWZ	**Angora Road**	**1.80**	**241**	P	Pn	18 19 56.4	-1.1
MRHZ	**Matea Rd**	**1.81**	**294**	P	Pn	18 19 58.1	+0.5
BHHZ	**Black Hill Sta**	**1.91**	**272**	P	Pn	18 19 59.1	+0.1
HAZ	**Te Kaha**	**1.93**	**342**	P	Pn	18 19 59.3	+0.1
TSZ	**Takapari Road**	**2.03**	**256**	P	Pn	18 20 00.3	-0.4
BFZ	**Birch Farm**	**2.06**	**237**	P	Pn	18 19 59.5	-1.6
TARZ	**Mount Tarawera**	**2.08**	**310**	P	Pb	18 20 03.8	-2.1
MKRZ	**Makatiti**	**2.17**	**311**	P	Pn	18 20 04.7	+2.1
PRWZ	**Pori Road**	**2.19**	**243**	P	Pn	18 20 02.5	-0.3
TMVZ	**Te Maari**	**2.25**	**281**	P	Pn	18 20 05.9	+2.2
TUVZ	**Tukino**	**2.25**	**277**	P	Pb	18 20 06.9	-2.0
OTVZ	**Oturere**	**2.26**	**280**	P	Pn	18 20 04.9	+0.9
POWZ	**Post Office Ro**	**2.27**	**249**	P	Pn	18 20 04.6	+0.7
SNVZ	**South Ngauruho**	**2.28**	**279**	P	Pn	18 20 05.3	+1.1
OPRZ	**Ohinepanea**	**2.33**	**318**	P	Pn	18 20 05.7	+0.9
TIWZ	**Tintock**	**2.35**	**239**	P	Pn	18 20 04.2	-0.8
CTZ	**Chatham Island**	**5.50**	**140**	S	Sn	18 21 51.4	+0.9

*NEIC **23** 18:38:26.9±1.8, 1°.4S±0°.2×16°.4W±0°.2, h10km±1km, mb4.5/11, Error ellipse: s-maj=47.5km s-min=15.4km az=317.0*

*IDC **23** 18:38:26.9±1.3, 1°.26S×16°.19W, h0km, mb4.1/8, mbtmp4.1/8, MS3.5/39, Error ellipse: s-maj=36.7km s-min=29.6km az=111.0*

ISC 23 18:38:26.8±0.6, 1°.4S±0°.2×16°.4W±0°.1, h10km, n64, σ1§48/23, mb4.3/13, MS3.5/36, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.72**	**164**	T	T	18 46 55.1	
	baz=344,slow=74						
H10N3	**ASCENSION HYDR**	**6.72**	**164**	T	T	18 46 51.2	
	baz=344,slow=74						
H10N1	**ASCENSION HYDR**	**6.74**	**164**	T	T	18 46 52.1	
	baz=344,slow=74						
H10S3	**ASCENSION HYDR**	**7.75**	**167**	T	T	18 48 10.1	
	baz=351,slow=74,SNR=107						
H10S2	**ASCENSION HYDR**	**7.76**	**167**	T	T	18 48 11.2	
	baz=229,slow=74,SNR=33						
DBIC	**Dimbokro**	**14.01**	**55**	LR	LR	18 45 53.2	
	comp=Z,334nm,20.9s,baz=234,slow=32						
DBIC	**Dimbokro**	**14.01**	**55**		**Pn**	**18 41 44.2**	**-1.3**
BBTS	**Babate**	**15.90**	**360**	LR	LR	18 47 39.6	
	comp=Z,151nm,20.0s,baz=199,slow=35						
KOWA	**Kowa**	**19.95**	**37**	P	**P**	**18 42 59.5**	**+0.2**
RCBR	**Riachuelo**	**19.96**	**257**	LR	LR	18 48 53.7	
	comp=Z,148nm,19.9s,baz=226,slow=31						
RCBR	**Riachuelo**	**19.96**	**257**	P	**P**	**18 42 57.6**	**-1.8**
RCBR				IAmb	IAmb	18 43 07.8	
	comp=Z,18nm,0.8s						
TOA0	**Torodi Ar. Sit**	**23.01**	**51**	P	**P**	**18 43 30.7**	**-1.5**
TOA0				IAmb	IAmb	18 43 36.5	
	comp=Z,15nm,1.2s						
TORD	**Torodi Ar. Bea**	**23.01**	**51**	P	**P**	**18 43 31.1**	**-1.1**
	comp=Z,8.2nm,1.1s,baz=224,slow=6.8,SNR=13						
TORD				LR	LR	18 51 26.5	
	comp=Z,222nm,19.1s,baz=204,slow=34						
	comp=Z,8.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**23.01**	**51**	P	**P**	**18 43 30.5**	**-1.7**
MDT	**Midelt**	**35.76**	**17**	LR	LR	18 59 58.7	
	comp=Z,49nm,19.0s,baz=152,slow=36						
MDP	**Montagnes des**	**36.76**	**280**	LR	LR	18 57 30.0	
	comp=Z,88nm,21.8s,baz=62,slow=31						
ESDC	**Sonseca Array**	**42.38**	**14**	LR	LR	19 03 46.4	
	comp=Z,47nm,21.1s,baz=143,slow=36						
KEST	**Kesra**	**44.02**	**31**	LR	LR	19 05 45.4	
	comp=Z,124nm,20.4s,baz=354,slow=37						
LSZ	**Lusaka**	**46.11**	**110**	LR	LR	19 02 24.6	
	comp=Z,92nm,20.6s,baz=315,slow=31						
SIV	**San Ignacio**	**46.35**	**249**	LR	LR	19 05 22.6	
	comp=Z,146nm,19.7s,baz=94,slow=35						
CPUP	**Villa Florida**	**46.52**	**234**	LR	LR	19 04 30.3	
	comp=Z,84nm,18.9s,baz=52,slow=33						
CPUP	**Villa Florida**	**46.52**	**234**	P	**P**	**18 46 53.6**	**-1.1**
CPUP				IAmb	IAmb	18 47 10.1	
	comp=Z,6.5nm,1.3s						
SUR	**Sutherland**	**46.68**	**135**	LR	LR	19 02 33.6	
	comp=Z,76nm,19.1s,baz=314,slow=31						
LBTB	**Lobatse**	**46.85**	**124**	LR	LR	19 03 34.5	
	comp=Z,64nm,21.0s,baz=268,slow=32						
MBAR	**Mbarara**	**47.14**	**90**	P	**P**	**18 47 00.1**	**+0.1**
	comp=Z,1.2nm,0.2s,baz=218,slow=8.7,SNR=4.2						
MBAR				LR	LR	19 04 08.9	
	comp=Z,135nm,20.9s,baz=269,slow=33						
	comp=Z,1.2nm,0.2s						
MBAR	**Mbarara**	**47.14**	**90**	P	**P**	**18 46 59.1**	**-0.9**
MBAR				IAmb	IAmb	18 47 02.6	
	comp=Z,8.0nm,1.3s						
BOSA	**Boshof**	**48.10**	**128**	P	**P**	**18 47 06.7**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=220,slow=3.7,SNR=4.4						
BOSA				LR	LR	19 05 19.8	
	comp=Z,32nm,18.4s,baz=226,slow=34						
	comp=Z,4.0nm,0.9s						
SJG	**San Juan**	**52.62**	**294**	LR	LR	19 05 09.0	
	comp=Z,49nm,21.0s,baz=112,slow=30						
LPAZ	**La Paz**	**53.05**	**251**	LR	LR	19 10 02.7	
	comp=Z,94nm,18.6s,baz=112,slow=36						
IDI	**Anoyia**	**53.05**	**42**	LR	LR	19 13 16.9	
	comp=Z,12nm,18.9s,baz=243,slow=40						
DAVOX	**Davos/Dischmat**	**53.20**	**22**	LR	LR	19 10 06.2	
	comp=Z,35nm,19.7s,baz=262,slow=36						
KMBO	**Kilima Mbogo**	**53.64**	**90**	LR	LR	19 08 32.7	
	comp=Z,172nm,19.3s,baz=84,slow=34						
SDV	**Santo Domingo**	**54.98**	**282**	LR	LR	19 08 44.3	
	comp=Z,60nm,21.6s,baz=193,slow=33						
LVC	**Linn Verde**	**55.17**	**243**	LR	LR	19 13 42.6	
	comp=Z,30nm,18.2s,baz=28,slow=38						
GEC2	**GERESS Array S**	**56.37**	**23**	P	**P**	**18 48 08.5**	**+0.2**
GEC2				IAmb	IAmb	18 48 23.7	
	comp=Z,4.1nm,1.4s						
GERES	**GERESS Array B**	**56.37**	**23**	P	**P**	**18 48 10.3**	**+2.0**
GO02	**Mina Guanaco**	**56.45**	**241**	P	**P**	**18 48 07.8**	**-1.7**
GO02				IAmb	IAmb	18 48 29.0	
	comp=Z,10nm,1.3s						
EIL	**Elat**	**57.87**	**53**	LR	LR	19 13 40.4	
	comp=Z,102nm,18.2s,baz=264,slow=37						
VRAC	**Vranov**	**57.92**	**25**	LR	LR	19 15 43.3	
	comp=Z,20nm,18.2s,baz=232,slow=39						
ROSC	**El Rosal**	**58.19**	**276**	LR	LR	19 12 06.7	
	comp=Z,53nm,19.6s,baz=62,slow=35						
MMAI	**Mount Meron Ar**	**59.55**	**50**	LR	LR	19 14 43.1	
	comp=Z,49nm,19.3s,baz=0.5,slow=37						
MLR	**Muntele Rosu**	**59.79**	**33**	LR	LR	19 15 34.8	
	comp=Z,53nm,20.6s,baz=135,slow=37						
MLR	**Muntele Rosu**	**59.79**	**33**	P	**P**	**18 48 32.0**	**-0.4**
MLR				IAmb	IAmb	18 48 35.4	
	comp=Z,8.8nm,1.2s						
NNA	**Nana**	**60.83**	**257**	LR	LR	19 15 01.8	
	comp=Z,47nm,18.2s,baz=48,slow=36						
BRTR	**Keskin Array B**	**61.29**	**42**	P	**P**	**18 48 44.5**	**+1.7**
	comp=Z,2.1nm,0.9s,baz=248,slow=6.5,SNR=6.5						
	comp=Z,2.1nm,0.9s						
BRTR	**Keskin Array B**	**61.29**	**42**	P	**P**	**18 48 43.3**	**+0.5**
ATAH	**Atahualpa**	**62.05**	**263**	LR	LR	19 15 15.7	
	comp=Z,115nm,19.7s,baz=93,slow=36						
BNN	**Bunyan**	**62.40**	**44**	P	**P**	**18 48 49.9**	**-0.3**
PLCA	**Paso Flores**	**62.60**	**224**	LR	LR	19 13 36.0	
	comp=Z,50nm,19.6s,baz=128,slow=34						
AKASG	**Malin Array Be**	**64.75**	**30**	P	**P**	**18 49 05.0**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=234,slow=5.9,SNR=9.0						
AKASG				LR	LR	19 18 45.9	
	comp=Z,47nm,19.4s,baz=262,slow=38						
	comp=Z,0.9nm,0.8s						
AKBB	**Malin Array Si**	**64.75**	**30**	P	**P**	**18 49 06.0**	**+0.7**
HFS	**Hagfors**	**65.62**	**16**	LR	LR	19 19 08.6	
	comp=Z,21nm,18.1s,baz=218,slow=37						
NOA	**NORSAR Array B**	**65.75**	**14**	LR	LR	19 18 34.9	
	comp=Z,17nm,21.1s,baz=215,slow=37						
KBZ	**Khabaz**	**69.27**	**42**	LR	LR	19 20 34.8	
	comp=Z,18nm,21.5s,baz=178,slow=37						
SADO	**Sadowa**	**71.95**	**318**	LR	LR	19 16 08.2	
	comp=Z,25nm,19.2s,baz=152,slow=31						
JMIC	**Jan Mayen**	**72.39**	**9**	LR	LR	19 17 13.3	
	comp=Z,10nm,21.0s,baz=207,slow=32						
TKL	**Tuckaleechee C**	**72.56**	**308**	LR	LR	19 15 49.4	
	comp=Z,20nm,22.0s,baz=142,slow=31						
BELG	**Belogornoye**	**75.53**	**35**	LR	LR	19 26 49.5	
	comp=Z,14nm,18.1s,baz=155,slow=38						
CMIG	**Matias Romero**	**79.39**	**288**	LR	LR	19 27 37.5	
	comp=Z,18nm,19.3s,baz=26,slow=37						
TXAR	**Lajitas Array**	**88.27**	**299**	P	**P**	**18 51 20.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=86,slow=5.7,SNR=2.2						
	comp=Z,0.1nm,0.3s						
QSPA	**South Pole Qui**	**88.73**	**180**	P	**P**	**18 51 24.2**	**+3.6**
	comp=Z,1.8nm,1.0s,baz=202,slow=5.0,SNR=3.5						
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**96.94**	**43**	P	**P**	**18 52 00.3**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=282,slow=6.9,SNR=3.6						
	comp=Z,0.7nm,0.9s						
ASAR	**Alice Springs**	**141.90**	**133**	PKhKP	PKPpre	18 57 55.8	
	comp=Z,0.2nm,0.8s,baz=220,slow=3.8,SNR=4.1						
WRA	**Warramunga Arr**	**144.35**	**128**	PKP	**PKPdf**	**18 58 03.6**	**-0.7**
	comp=Z,0.8nm,1.1s,baz=247,slow=2.9,SNR=4.7						

*IDC **23** 18:41:09.2±0.7, 55°.13S×30°.58W, h0km, mb3.9/10, mbtmp3.9/10, Error ellipse: s-maj=22.9km s-min=19.3km az=55.0*

*NEIC **23** 18:41:11.1±3.2, 55°.1S±0°.1×30°.9W±0°.2, h10km±2km, mb4.3/11, Error ellipse: s-maj=22.9km s-min=12.6km az=29.0*

ISC 23 18:41:10.9±0.6, 55°.1S±0°.1×30°.8W±0°.08, h10km, n32, σ1§64/27, mb4.1/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.36**	**282**		**Pn**	**18 42 02.7**	**-0.7**
HOPE				Sn	**Sn**	**18 42 38.5**	**-4.8**
SNAA	**Sanae**	**20.45**	**155**	P	**P**	**18 45 46.7**	**-1.5**
SNAA	**Sanae**	**20.45**	**155**	P	**P**	**18 45 46.5**	**-1.6**
	1.7nm,0.9s,baz=316,slow=8.0,SNR=7.1						
	1.7nm,0.9s						
SNAA	**Sanae**	**20.45**	**155**	P	**P**	**18 45 46.6**	**-1.5**
MG02	**Cerro Sombrero**	**22.50**	**260**	P	**P**	**18 46 13.1**	**+3.0**
BELA	**Belgrano 2**	**22.88**	**182**	P	**P**	**18 46 14.3**	**+0.3**
PLCA	**Paso Flores**	**29.77**	**282**	P	**P**	**18 47 18.4**	**+0.9**
	0.8nm,0.8s,baz=125,slow=12,SNR=1.3						
	0.8nm,0.9s						
CPUP	**Villa Florida**	**34.66**	**315**	P	**P**	**18 48 01.0**	**+0.7**
	1.4nm,0.7s,baz=154,slow=4.5,SNR=2.2						
	1.4nm,0.7s						
QSPA	**South Pole Qui**	**35.12**	**180**	P	**P**	**18 48 03.8**	**-0.3**
	0.7nm,0.5s,baz=36,slow=7.6,SNR=8.5						
	0.7nm,0.5s						
QSPA	**South Pole Qui**	**35.12**	**180**	P	**P**	**18 48 03.4**	**-0.7**
QSPA				IAmb	IAmb	18 48 09.4	
	comp=Z,7.4nm,1.4s						
MT02	**Curacav**	**35.51**	**291**	P	**P**	**18 48 08.2**	**+0.6**
AC05	**El Transito**	**38.54**	**297**	P	**P**	**18 48 34.7**	**+1.1**
AC05				IAmb	IAmb	18 48 42.4	
	comp=Z,17nm,1.5s						
VNDA	**Vanda**	**47.37**	**184**	P	**P**	**18 49 45.5**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=189,slow=4.8,SNR=9.5						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**47.37**	**184**	P	**P**	**18 49 45.9**	**+1.5**
VNDA				IAmb	IAmb	18 49 48.8	
	comp=Z,1.7nm,0.9s						
BOSA	**Boshof**	**47.83**	**80**	P	**P**	**18 49 47.0**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=200,slow=9.1,SNR=1.7						
	comp=Z,1.7nm,0.8s						
BOSA	**Boshof**	**47.83**	**80**	P	**P**	**18 49 47.9**	**-0.7**
H10S2	**ASCENSION HYDR**	**47.83**	**22**	T	T	19 41 24.2	
	baz=192,slow=74,SNR=5.0						
H10S3	**ASCENSION HYDR**	**47.83**	**22**	T	T	19 41 24.9	
	baz=28,slow=74,SNR=11						
LPAZ	**La Paz**	**48.15**	**309**	P	**P**	**18 49 53.2**	**+1.4**
	comp=Z,2.0nm,0.5s,baz=178,slow=5.6,SNR=9.9						
	comp=Z,2.0nm,0.5s						
LPAZ	**La Paz**	**48.15**	**309**		**P**	**18 49 52.4**	**+0.6**
LPAZ				IAmb	IAmb	18 49 56.5	
	comp=Z,2.4nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.95**	**22**	T	T	19 42 48.9	
	baz=192,slow=76,SNR=25						
H10N3	**ASCENSION HYDR**	**48.95**	**22**	T	T	19 42 56.0	
	baz=192,slow=76,SNR=43						
H10N2	**ASCENSION HYDR**	**48.96**	**22**	T	T	19 42 51.1	
	baz=192,slow=76,SNR=38						
LBTB	**Lobatse**	**50.80**	**77**	P	**P**	**18 50 09.0**	**-2.4**
	comp=Z,1.7nm,0.7s,baz=215,slow=8.2,SNR=1.8						
	comp=Z,1.7nm,0.7s						
TOA0	**Torodi Ar. Sit**	**73.36**	**33**	P	**P**	**18 52 43.1**	**+0.4**
TOA0				IAmb	IAmb	18 52 43.6	
	comp=Z,2.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.36**	**33**	P	**P**	**18 52 42.8**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=199,slow=6.7,SNR=7.5						
	comp=Z,1.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.36**	**33**	P	**P**	**18 52 42.2**	**-0.5**
TORD				IAmb	IAmb	18 52 43.6	
	comp=Z,1.8nm,0.9s						
KMBO	**Kilima Mbogo**	**76.71**	**72**	P	**P**	**18 53 03.3**	**+0.8**
	comp=Z,1.0nm,0.2s,baz=182,slow=12,SNR=2.4						
	comp=Z,1.0nm,0.2s						
ARCES	**ARCESS Array B**	**130.89**	**23**	PKP	**PKPdf**	**19 00 20.1**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=62,slow=2.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**143.86**	**65**	PKP	PKPab	19 00 42.1	0.0
	comp=Z,0.8nm,0.7s,baz=235,slow=5.1,SNR=2.5						
ILAR	**Eielson Array**	**147.95**	**313

KRBS	**Karabastau**	**4.28**	**24**	*e*P		**Pb**	**18 52 13.7**	**+1.3**
	2.4nm,0.4s							
KRBS				*e*S		**Sg**	**18 53 13.8**	**-0.7**
	3.8nm,0.7s							
KRBS	**Karabastau**	**4.28**	**24**	Pg		**Pb**	**18 52 13.7**	**+1.3**
	2.4nm,0.4s							
KRBS				Lg		Lg	18 53 13.8	
	3.8nm,0.7s							
MDOK	**Medeo**	**4.40**	**39**	*e*P		**Pb**	**18 52 15.5**	**+1.1**
	4.5nm,0.6s							
MDOK				*e*S		**Sg**	**18 53 16.8**	**-1.4**
	8.7nm,0.6s							
MDOK	**Medeo**	**4.40**	**39**	⇑Pg		**Pb**	**18 52 17.1**	**+2.7**
	6.2nm,0.8s							
MDOK				⇑Lg		Lg	18 53 15.7	
	6.5nm,0.6s							
KOTS	**Kotyrbulak**	**4.48**	**39**	*e*P		**Pb**	**18 52 16.1**	**+0.3**
	3.7nm,0.4s							
KOTS				*e*S		**Sg**	**18 53 17.9**	**-3.0**
	14nm,0.7s							
KOTS	**Kotyrbulak**	**4.48**	**39**	Pg		**Pb**	**18 52 16.1**	**+0.3**
	3.7nm,0.4s							
KOTS				Lg		Lg	18 53 17.9	
	14nm,0.7s							
KTBS	**Karatobe**	**4.67**	**32**	*e*P		**Pb**	**18 52 20.8**	**+1.9**
	2.5nm,0.4s							
KTBS				*e*S		**Sg**	**18 53 25.8**	**-1.0**
	16nm,0.5s							
KTBS	**Karatobe**	**4.67**	**32**	Pg		**Pb**	**18 52 20.8**	**+1.9**
KTBS				Lg		Lg	18 53 25.8	
KUU	**Kurty**	**4.68**	**28**	*e*P		**Pb**	**18 52 20.2**	**+0.9**
	2.2nm,0.4s							
KUU				*e*S		**Sg**	**18 53 24.7**	**-2.7**
	5.2nm,0.6s							
BTLS	**Baital**	**5.26**	**6**	*e*P		**Pb**	**18 52 31.6**	**+2.6**
	1.3nm,0.5s							
BTLS				*e*S		**Sg**	**18 53 44.3**	**-1.5**
	2.6nm,0.8s							
BTLS	**Baital**	**5.26**	**6**	Pg		**Pb**	**18 52 31.6**	**+2.6**
BTLS				Lg		Lg	18 53 44.3	
ARXS	**Arharly**	**5.56**	**36**	*e*P		**Pb**	**18 52 36.9**	**+2.6**
	2.7nm,0.7s							
ARXS				*e*S		**Sg**	**18 53 53.9**	**-1.6**
	5.6nm,0.8s							
ARXS	**Arharly**	**5.56**	**36**	Pg		**Pb**	**18 52 35.2**	**+1.0**
	2.4nm,0.5s							
ARXS				Lg		Lg	18 53 51.1	
	3.9nm,0.5s							

*IDC **23** 18:52:15.6±1.2,15′.90N×147′.50E,h0km,mb3.9/14, mbtmp3.9/15,ML4.1/1,MS3.1/1,Error ellipse: s-maj=37.6km s-min=15.6km az=95.0*
*NEIC **23** 18:52:19.4±1.9,15′.7N±0′.1×147′.60E±0′.08,h31km±6km, mb4.5/24,Error ellipse: s-maj=15.1km s-min=11.1km az=159.0*

ISC 23 18:52:20.0±0.7,**15′.77N**±0′.08×**147′.6E**±0′.1,**h38**km,**n53,** σ1ᵎ**16**/45,**mb4.3**/27,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**3.42**	**231**	Pn		**Pn**	**18 53 12.2**	**+1.3**
	17nm,0.3s,baz=198,slow=18,SNR=1.8							
GUMO				Sn		**Sn**	**18 53 47.5**	**-2.7**
	17nm,0.3s,baz=14,slow=21,SNR=2.2							
	36nm,0.3s							
GUMO	**Guam**	**3.42**	**231**	Pn		**Pn**	**18 53 10.9**	**0.0**
PATS	**Pohnpei**	**13.74**	**129**	Pn		Pn	18 55 28.8	-3.6
H11S3	**WAKE ISLAND Hy**	**18.44**	**79**	T		T	19 15 48.3	
	baz=262,slow=74,SNR=14							
H11S1	**WAKE ISLAND Hy**	**18.45**	**79**	T		T	19 15 38.1	
	baz=262,slow=74,SNR=9.7							
H11S2	**WAKE ISLAND Hy**	**18.45**	**79**	T		T	19 15 38.2	
	baz=262,slow=74,SNR=13							
H11N1	**WAKE ISLAND Hy**	**18.78**	**75**	T		T	19 16 07.9	
	baz=260,slow=75,SNR=4.2							
H11N2	**WAKE ISLAND Hy**	**18.79**	**75**	T		T	19 16 07.6	
	baz=260,slow=75,SNR=3.7							
H11N3	**WAKE ISLAND Hy**	**18.80**	**75**	T		T	19 16 04.6	
	baz=260,slow=75,SNR=5.3							
JYT	**Yasato**	**21.42**	**343**	P		**P**	**18 57 05.0**	**+0.3**
JYT				IAmb		IAmb	18 57 15.5	
	comp=Z,30nm,1.0s							
MJAR	**Matsushiro Arr**	**22.31**	**340**	P		**P**	**18 57 13.6**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=171,slow=9.5,SNR=5.1							
	comp=Z,1.3nm,0.6s							
MAJO	**Matsushiro**	**22.32**	**340**	P		**P**	**18 57 14.5**	**+0.1**
JMM	**Marumori**	**22.82**	**346**	P		**P**	**18 57 20.0**	**+0.4**
JMM				IAmb		IAmb	18 57 22.6	
	comp=Z,27nm,1.2s							
JHS	**Saijyo**	**23.14**	**328**	P		**P**	**18 57 21.5**	**-1.5**
JHS				IAmb		IAmb	18 57 60.0	
	comp=Z,31nm,1.3s							
JSD	**Sado**	**23.66**	**341**	P		**P**	**18 57 27.8**	**-0.2**
JSD				IAmb		IAmb	18 57 28.8	
	comp=Z,7.9nm,0.7s							
FAKI	**Fak Fak**	**23.99**	**221**	P		**P**	**18 57 29.3**	**-2.0**
FAKI				IAmb		IAmb	18 57 56.4	
	comp=Z,17nm,1.1s							
NAWB	**Namwon**	**26.64**	**321**	P		**P**	**18 57 55.3**	**+0.1**
NAWB				IAmb		IAmb	18 58 25.8	
	comp=Z,16nm,1.1s							
KSRS	**Korea Array**	**27.75**	**325**	P		**P**	**18 58 03.5**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=140,slow=9.9,SNR=4.4							
	comp=Z,0.8nm,0.7s							
USA0B	**Ussuriysk Arra**	**31.28**	**338**	P		**P**	**18 58 35.2**	**-1.2**
USA0B				IAmb		IAmb	18 58 51.5	
	comp=Z,11nm,1.5s							
USRK	**Ussuriysk Ar.**	**31.28**	**338**	P		**P**	**18 58 34.5**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=120,slow=8.5,SNR=2.8							
	comp=Z,1.3nm,0.6s							
MTN	**Manton Dam**	**32.77**	**211**	P		P	18 58 42.4	-7.3
MIDW	**Midway**	**34.63**	**63**	P		**P**	**18 59 03.2**	**-2.6**
KLR	**Kul'dur**	**35.79**	**342**	P		**P**	**18 59 15.9**	**+0.4**
	comp=Z,2.9nm,0.5s,baz=166,slow=6.3,SNR=13							
	comp=Z,2.9nm,0.5s							
WRA	**Warramunga Arr**	**37.81**	**201**	P		**P**	**18 59 34.5**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=19,slow=9.0,SNR=7.7							
	comp=Z,0.2nm,0.4s							
FITZ	**Fitzroy Crossi**	**40.01**	**214**	P		**P**	**18 59 52.7**	**+1.3**
	comp=Z,3.4nm,1.0s,baz=48,slow=12,SNR=2.2							
	comp=Z,3.4nm,1.0s							
ASAR	**Alice Springs**	**41.42**	**199**	P		**P**	**19 00 04.1**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=33,slow=7.0,SNR=7.0							
	comp=Z,0.1nm,0.6s							
SHEM	**Shemya Is, Ala**	**42.40**	**24**	LR		LR	19 15 35.3	
	comp=Z,23nm,20.4s,baz=241,slow=33							
CMAR	**Chiang Mai Arr**	**46.48**	**281**	P		**P**	**19 00 44.1**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=77,slow=6.4,SNR=5.3							
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**46.56**	**322**	P		**P**	**19 00 43.8**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=137,slow=8.1,SNR=7.7							
	comp=Z,1.0nm,0.5s							
SONM	**Songino Array**	**46.56**	**322**	P		**P**	**19 00 44.3**	**+0.1**
YAK	**Yakutsk**	**47.92**	**349**	P		**P**	**19 00 54.7**	**+0.3**
YAK				IAmb		IAmb	19 01 06.7	
	comp=Z,6.8nm,0.9s							
BBOO	**Buckleboo**	**49.55**	**193**	P		**P**	**19 01 07.6**	**+0.3**
MORW	**Morawa**	**54.01**	**214**	P		**P**	**19 01 41.0**	**+0.4**
ZALV	**Zalesovo Beam**	**61.44**	**323**	P		**P**	**19 02 32.1**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=107,slow=8.2,SNR=6.9							
	comp=Z,1.2nm,0.4s							
MK31	**Makanchi Array**	**61.80**	**315**	P		**P**	**19 02 35.3**	**+0.2**
MKAR	**Makanchi Array**	**61.80**	**315**	P		**P**	**19 02 35.6**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=92,slow=7.7,SNR=17							
	comp=Z,1.2nm,0.5s							
MKAR	**Makanchi Array**	**61.80**	**315**	P		**P**	**19 02 35.3**	**+0.2**
MAKZ	**Makanchi**	**62.02**	**315**	P		**P**	**19 02 37.1**	**+0.6**
MAKZ				IAmb		IAmb	19 02 41.9	
	comp=Z,2.4nm,0.8s							
KURK	**Kurchatov**	**64.66**	**319**	P		**P**	**19 02 53.4**	**-0.5**
M24K	**Tolsona, Glenn**	**65.11**	**28**	P		**P**	**19 02 54.6**	**-2.1**
ILAR	**Eielson Array**	**65.47**	**25**	P		**P**	**19 03 00.4**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=265,slow=4.1,SNR=4.0							
	comp=Z,0.3nm,0.5s							
BOOM	**Boomskoye usch**	**66.06**	**310**	P		**P**	**19 03 04.1**	**+0.7**
BMAR	**Burnt Mountain**	**67.08**	**23**	P		**P**	**19 03 12.4**	**+3.1**
BRVK	**Borovoye**	**69.95**	**321**	P		**P**	**19 03 28.0**	**+0.6**
KK31	**Karatay Array**	**70.04**	**311**	P		**P**	**19 03 28.2**	**0.0**
KK31				IAmb		IAmb	19 03 30.9	
	comp=Z,4.9nm,1.5s							
KKAR	**Karatay Array**	**70.04**	**311**	P		**P**	**19 03 28.2**	**0.0**
KKAR	**Karatay Array**	**70.04**	**311**	P		**P**	**19 03 28.2**	**0.0**
KKAR				IAmb		IAmb	19 03 30.9	
	comp=Z,4.9nm,1.5s							
GAR	**Garm**	**70.47**	**306**	P		**P**	**19 03 31.3**	**+0.3**
GAR				IAmb		IAmb	19 03 33.5	
	comp=Z,4.8nm,0.9s							
ARU	**Arti**	**76.50**	**325**	P		**P**	**19 04 05.7**	**-0.3**
ARU				IAmb		IAmb	19 04 07.0	
	comp=Z,4.4nm,0.6s							
ABKAR	**Akbulak array**	**76.72**	**318**	P		**P**	**19 04 06.6**	**-0.7**
ABKAR	**Akbulak array**	**76.72**	**318**	P		**P**	**19 04 06.8**	**-0.5**
ARCES	**ARCESS Array B**	**85.82**	**343**	P		**P**	**19 04 56.7**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=63,slow=5.6,SNR=12							
	comp=Z,2.0nm,0.6s							
FINES	**FINESS Array B**	**90.29**	**336**	P		**P**	**19 05 16.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=71,slow=4.0,SNR=9.1							
	comp=Z,0.6nm,0.6s							

*IDC **23** 18:59:46.9±1.6,3′.49N×125′.70E,h103km±17km,mb3.4/8, mbtmp3.9/12,MS2.6/1,Error ellipse: s-maj=34.2km s-min=10.3km az=81.0*
*DJA **23** 18:59:49.3±1.0,4′.7N±7′×12′.6E±′,h100km±9km,M4.4/12, mb4.7/6,mB5.1/5,MLv4.3/12,Mw(mB)4.4/5*
*NEIC **23** 18:59:49.2±2.8,3′.58N±0′.09×126′.16E±0′.08, h134km±12km,mb4.1/16,Error ellipse: s-maj=17.3km s-min=2.3km az=222.0*

ISC 23 18:59:47.5±0.5,**3′.62N**±0′.05×**126′.18E**±0′.07,**h116**km,**n52,** σ1ᵎ**82**/57,**mb3.9**/13,**1C-2D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**0.65**	**276**	P		**Pn**	**19 00 06.9**	**+0.9**
SGSI				S		**Sn**	**19 00 21.4**	**+1.4**
GSPH	**General Santos**	**2.75**	**334**	⇑*i*P		**Pn**	**19 00 30.4**	**0.0**
GSPH				*i* S		**Sn**	**19 01 02.1**	**-1.4**
DAV	**Davao City (W)**	**3.48**	**350**	P		**Pn**	**19 00 41.8**	**+1.7**
	110nm,0.4s,baz=229,slow=14,SNR=1.8							
DAV				S		**Sn**	**19 01 22.1**	**+1.4**
	134nm,0.4s,baz=82,slow=8.0,SNR=1.8							
KCP	**Kidapawan**	**3.54**	**342**	‖*e*P		**Pn**	**19 00 43.0**	**+2.1**
KCP				*i* S		**Sn**	**19 01 24.3**	**+2.1**
KMSI	**Cibinong**	**3.73**	**216**	P		**Pn**	**19 00 44.1**	**+0.7**
GTOI	**Gorontalo**	**4.33**	**227**	P		**Pn**	**19 00 52.1**	**+0.7**
BUKP	**Musuan**	**4.38**	**345**	‖*e*P		**Pn**	**19 00 53.4**	**+1.3**
LBMI	**Labuha**	**4.43**	**163**	P		**Pn**	**19 00 54.0**	**+1.3**
MRSI	**Marisa**	**5.26**	**234**	P		**Pn**	**19 01 05.8**	**+1.9**
	0.5nm1μm132nm,0.8s							
SANI	**Sanana**	**5.63**	**182**	P		**Pn**	**19 01 07.0**	**-1.9**
	0.7nm6μm91nm,0.5s							
SANI	**Sanana**	**5.63**	**182**	P		**Pn**	**19 01 07.1**	**-1.9**
LUWI	**Luwuk**	**5.75**	**216**			**Pn**	**19 01 13.2**	**+2.7**
LUWI	**Luwuk**	**5.75**	**216**	P		**Pn**	**19 01 14.4**	**+3.9**
	0.2nm35nm,0.7s							
TOLI2	**Tolitoli**	**5.94**	**245**			**Pn**	**19 01 13.4**	**+0.3**
TOLI2	**Tolitoli**	**5.94**	**245**	P		**Pn**	**19 01 13.4**	**+0.3**
SIJI	**Sorong**	**6.76**	**131**	P		**Pn**	**19 01 26.4**	**+2.2**
	2.8nm,0.3s,baz=121,slow=23,SNR=6.5							
SIJI				S		**Sn**	**19 02 40.9**	**+1.1**
	2.3nm,0.5s,baz=164,slow=23,SNR=0.8							
NLAI	**Namlea**	**6.87**	**172**	P		**Pn**	**19 01 25.3**	**-0.4**
MYLDM	**Lahad Datu**	**7.81**	**282**	Pn		**Pn**	**19 01 42.3**	**+3.8**
FAKI	**Fak Fak**	**8.88**	**137**	Pn		**Pn**	**19 01 54.9**	**+1.9**
KAPI	**Kappang**	**10.71**	**217**	P		Pn	19 02 11.3	-6.3
	3.8nm,0.3s,baz=47,slow=17,SNR=1.6							
BATI	**Baumata**	**13.96**	**190**	P		**Pn**	**19 02 56.6**	**-3.7**
	17nm,0.8s,baz=16,slow=7.4,SNR=3.6							
SBUM	**Sibu**	**13.99**	**266**	P		**P**	**19 03 06.3**	**+1.4**
PLAI	**Plampang**	**14.93**	**214**	P		**P**	**19 03 15.9**	**+0.5**
JAGI	**Jajag, Banyuwa**	**16.97**	**225**			**Pn**	**19 03 36.0**	**-2.0**
JAGI	**Jajag, Banyuwa**	**16.97**	**225**	P		**P**	**19 03 41.2**	**+3.2**
MTN	**Manton Dam**	**17.08**	**163**			**P**	**19 03 36.8**	**-2.4**
MTN				IAmb		IAmb	19 03 59.7	
	comp=Z,26nm,1.4s							
KDU	**Kakadu**	**17.36**	**159**	P		**P**	**19 03 41.3**	**-1.0**
KNRA	**Kununurra**	**19.34**	**172**	P		**P**	**19 04 03.6**	**-0.3**
KNRA	**Kununurra**	**19.34**	**172**	P		**Pn**	**19 04 05.5**	**-0.6**
YULB	**Yu-li**	**20.22**	**347**	P		**P**	**19 04 10.1**	**-3.3**
YULB				IAmb		IAmb	19 04 50.4	
	comp=Z,12nm,1.4s							
TPUB	**Ta-pu**	**20.29**	**345**	P		**P**	**19 04 11.2**	**-3.0**
GUMO	**Guam**	**20.95**	**61**	LR		LR	19 12 16.4	
	comp=Z,16nm,18.1s,baz=280,slow=35							
YHNB	**Yeheng**	**21.44**	**348**	P		**P**	**19 04 24.2**	**-2.4**
YHNB				IAmb		IAmb	19 04 57.8	
	comp=Z,23nm,1.4s							
FITZ	**Fitzroy Crossi**	**21.58**	**181**	P		**P**	**19 04 28.1**	**0.0**
	comp=Z,4.4nm,1.1s,baz=8.0,slow=12,SNR=2.9							
	comp=Z,4.4nm,1.1s							
FITZ	**Fitzroy Crossi**	**21.58**	**181**	P		**P**	**19 04 26.1**	**-2.0**
FITZ				IAmb		IAmb	19 04 37.2	
	comp=Z,11nm,1.4s							
COEN	**Coen**	**24.27**	**136**	P		**P**	**19 04 52.6**	**-1.5**
COEN				IAmb		IAmb	19 05 04.7	
	comp=Z,10nm,1.4s							
WB0	**Warramunga Arr**	**24.60**	**161**	P		**P**	**19 04 56.8**	**-0.2**
WB0				IAmb		IAmb	19 04 59.2	
	comp=Z,4.1nm,0.8s							
WRA	**Warramunga Arr**	**24.75**	**161**	P		**P**	**19 04 58.8**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=336,slow=11,SNR=18							
	comp=Z,2.1nm,0.8s							
WRA	**Warramunga Arr**	**24.75**	**161**	P		**P**	**19 04 58.1**	**-0.2**
WB2	**Warramunga Arr**	**24.75**	**161**	P		**P**	**19 04 57.2**	**-1.2**
WB2				IAmb		IAmb	19 05 01.3	
	comp=Z,4.3nm,0.8s							
WR0	**Warramunga Arr**	**24.83**	**161**	P		**P**	**19 04 58.5**	**-0.6**
WR0				IAmb		IAmb	19 05 20.4	
	comp=Z,8.0nm,1.4s							
PSA00	**Pilbara Seismi**	**25.79**	**194**	P		**P**	**19 05 07.0**	**-0.8**
AS31	**Alice Springs**	**28.14**	**165**	P		**P**	**19 05 27.8**	**-1.1**
ASAR	**Alice Springs**	**28.14**	**165**	P		**P**	**19 05 29.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=341,slow=7.4,SNR=15							
ASAR				PcP		**PcP**	**19 08 41.0**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=347,slow=2.7,SNR=1.9							
	comp=Z,0.3nm,0.5s							
GIRL	**Giralia**	**28.59**	**204**	P		**P**	**19 05 29.8**	**-3.0**
KSRS	**Korea Array**	**33.72**	**2**	P		**P**	**19 06 18.8**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=187,slow=8.8,SNR=4.5							
	comp=Z,1.0nm,0.8s							
STKA	**Stephens Creek**	**38.22**	**159**	P		**P**	**19 06 58.5**	**+2.3**
	comp=Z,0.9nm,0.5s,baz=333,slow=7.2,SNR=3.5							
	comp=Z,0.9nm,0.5s							
USRK	**Ussuriysk Ar.**	**40.74**	**6**	P		**P**	**19 07 19.1**	**+2.2**
	comp=Z,0.6nm,0.5s,baz=177,slow=8.6,SNR=4.3							
	comp=Z,0.6nm,0.5s							
SONM	**Songino Array**	**47.23**	**342**	P		**P**	**19 08 08.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=158,slow=7.1,SNR=2.4							
	comp=Z,0.5nm,0.6s							
MK31	**Makanchi Array**	**57.34**	**326**	P		**P**	**19 09 21.9**	**-1.6**
MKAR	**Makanchi Array**	**57.34**	**326**	P		**P**	**19 09 23.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=118,slow=7.9,SNR=7.1							
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**57.34**	**326**	P		**P**	**19 09 21.9**	**-1.6**
MKAR				PcP		**PcP**	**19 10 16.0**	**-0.3**

JMA 23 19:12:53.2±0.1,**24′.N**±4′×**123′.0E**±0′.7,**h45**km±2km,
MV1.0/8,NW OFF ISHIGAKIJIMA IS,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.12**	**336**	P		Pn	19 13 00.4	-0.2
JYNG				*e*S		Sn	19 13 05.8	0.0
YOJ	**Yonaguni jima**	**0.12**	**5**	P		Pn	19 13 00.6	0.0
YOJ				S		Sn	19 13 05.8	0.0
IRIF	**Iriomote-Funau**	**0.67**	**90**	*e*P		Pn	19 13 06.3	-0.1
IRIF				*e*S		Sn	19 13 15.8	-0.1
JKRS	**Kuro-shima**	**0.93**	**96**	*e*P		Pn	19 13 10.4	+0.5
JKRS				*e*S		Sn	19 13 23.1	+1.0
JJI	**Ishigaki jima**	**1.04**	**89**	*e*S		Sn	19 13 25.0	+0.1
JISG	**Ishigakijimahi**	**1.22**	**78**	*e*S		Sn	19 13 28.0	-1.2

TAP 23 19:13:13.1,24′.77N×122′.08E,h85km±1km,**ML2.1,B, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGS		**0.15**	**299**	*e*P		Pn	19 13 25.0	-0.3
	baz=300							
NTC	**Toucheng**	**0.24**	**290**	*e*P		Pn	19 13 26.0	+0.4
	baz=290							
TWB1	**Santiao Chiao**	**0.25**	**341**	P		Pn	19 13 26.2	+0.5
	baz=342							
TWB1				*e*S		Sn	19 13 34.8	-0.2
	baz=342							
TWC	**Suao**	**0.26**	**233**	P		Pn	19 13 25.9	+0.2
	baz=230							
TWC				S		Sn	19 13 35.4	+0.3
	baz=230							
ILA	**Ilan**	**0.30**	**269**	*e*P		Pn	19 13 25.5	-0.4
	baz=268							
ILA				*e*S		Sn	19 13 34.8	-0.7
	baz=268							
TIPB	**Shuangxi**	**0.30**	**311**	*i* P		Pn	19 13 26.6	+0.6
	baz=311							
TIPB				*i* S		Sn	19 13 35.3	-0.3
	baz=311							
NDS	**Dongshan**	**0.36**	**248**	*i* P		Pn	19 13 26.1	-0.1
	baz=247							
NDS				*i* S		Sn	19 13 36.6	+0.5
	baz=247							
SXI1	**Grass Mountain**	**0.37**	**330**	P		Pn	19 13 26.8	+0.3
	baz=330							
SXI1				S		Sn	19 13 36.6	+0.2
	baz=330							
TWE	**Neicheng**	**0.38**	**263**	*i* P		Pn	19 13 26.7	+0.3
	baz=261							
TWE				S		Sn	19 13 36.6	+0.3
	baz=261							
EWUT	**Wuta**	**0.42**	**220**	*i* P		Pn	19 13 26.6	-0.1
	baz=220							
EWUT				*i* S		Sn	19 13 36.8	0.0
	baz=220							
FUSB	**Fushanzhiwuyua**	**0.45**	**269**	P		Pn	19 13 27.2	+0.2
	baz=268							
FUSB				S		Sn	19 13 38.5	+1.2
	baz=268							
ENA	**Nanau**	**0.46**	**222**	*i* P		Pn	19 13 27.9	+0.9
	baz=221							
ENA				*i* S		Sn	19 13 38.5	+1.2
	baz=221							
ENTT	**Nioudou**	**0.48**	**255**	*i* P		Pn	19 13 27.4	+0.2
	baz=254							
ENTT				*i* S		Sn	19 13 38.2	+0.5
	baz=254							
NDT	**Datong Townshi**	**0.54**	**252**	*i* P		Pn	19 13 29.2	+1.6
	baz=252							
NDT				*i* S		Sn	19 13 40.1	+1.6
	baz=252							
LATG	**Datong**	**0.55**	**245**	P		Pn	19 13 29.1	+1.1
	baz=245							
LATG				S		Sn	19 13 40.2	+1.2
	baz=245							
YM01	**YM01**	**0.59**	**309**	P		Pn	19 13 28.6	+0.4
	baz=309							
YM01				S		Sn	19 13 39.3	-0.1
	baz=309							
YHNB	**Yeheng**	**0.65**	**261**	P		Pn	19 13 29.6	+0.8
	baz=261							
YHNB				S		Sn	19 13 41.0	+0.7
	baz=261							
ANP	**Anpu**	**0.66**	**309**	*e*S		Sn	19 13 40.2	-0.3
	baz=309							
NSK	**Sanguang**	**0.66**	**262**	*i* P		Pn	19 13 28.5	-0.4
	baz=261							
NSK				*i* S		Sn	19 13 39.7	-0.9
	baz=261							
TWS1	**Kuangyinshan**	**0.68**	**299**	*e*P		Pn	19 13 28.5	-0.4
	baz=299							
NTST	**Danshui**	**0.69**	**305**	*e*S		Sn	19 13 41.6	+0.6
	baz=304							
NNSB	**Datong**	**0.72**	**242**	P		Pn	19 13 30.5	+1.0
	baz=241							
NNSB				S		Sn	19 13 42.6	+0.9
	baz=241							
NNS	**Nan Shan**	**0.72**	**243**	*i* P		Pn	19 13 29.3	-0.2
	baz=242							
NNS				S		Sn	19 13 41.6	-0.1
	baz=242							
ETL	**Fush Village**	**0.74**	**214**	S		Sn	19 13 42.0	+0.1
	baz=214							
NACB	**Ninganchiao**	**0.74**	**217**	*e*P		Pn	19 13 29.6	0.0
	baz=216							
NACB				S		Sn	19 13 42.4	+0.6
	baz=216							
ETLH	**Xiulin Townshi**	**0.78**	**224**	P		Pn	19 13 31.0	+0.9
	baz=224							
NCUH	**Zhongli**	**0.83**	**284**	*e*S		Sn	19 13 44.9	+1.2
	baz=283							
NFF	**Wufeng Townshi**	**0.88**	**261**	P		Pn	19 13 30.8	-0.4
	baz=261							
NFF				S		Sn	19 13 43.8	-0.9
	baz=261							
YOJ	**Yonaguni jima**	**0.90**	**110**	*e*P		Pn	19 13 32.0	+0.6
	baz=109							
YOJ				*e*S		Sn	19 13 45.0	+0.1
	baz=109							
FUSS	**Fushou**	**0.92**	**236**	*e*P		Pn	19 13 32.7	+0.9
	baz=235							
FUSS				S		Sn	19 13 45.2	-0.6
	baz=235							
WHF	**Hehuan Shan**	**0.97**	**230**	P		Pn	19 13 32.0	-0.6
	baz=229							
TWT	**Tachien**	**0.97**	**238**	P		Pn	19 13 32.7	+0.5
	baz=238							
LIOB	**Emei**	**0.97**	**263**	P		Pn	19 13 33.0	+0.8
	baz=262							
LIOB				*i* S		Sn	19 13 47.2	+0.7

CBOC	**Ciudad Bolivar**	**2.07**	**201**	⇑*iP*		**Pn**	**19 17 09.8**	**+1.3**		
CBOC				*eS*		**Sb**	**19 17 36.7**	**-0.5**		
CBOC				*i*			19 17 40.3			
	comp=Z,221nm,0.8s									
SJCC	**San Jacinto, C**	**2.08**	**2**	*eP*		**Pb**	**19 17 11.5**	**-0.3**		
SJCC				*eS*		**Sb**	**19 17 38.5**	**+1.3**		
SJCC				*i*			19 17 54.2			
	comp=Z,177nm,0.5s									
CAPC	**Capurgana**	**2.22**	**292**	*eP*		**Pn**	**19 17 10.6**	**+0.2**		
CAPC				*eS*		**Sn**	**19 17 38.3**	**+0.9**		
NORC	**Norcasia**	**2.27**	**170**	⇓*iP*		**Pn**	**19 17 11.5**	**+0.4**		
NORC				*eS*		**Sn**	**19 17 40.8**	**+2.2**		
NORC				*i*			19 17 50.2			
	comp=Z,334nm,0.5s									
ARGC	**Ariguani, Magd**	**2.27**	**26**	*eP*		**Pb**	**19 17 14.4**	**-0.6**		
ARGC				*eS*		**Sb**	**19 17 44.6**	**+1.8**		
BARC	**Barichara**	**2.39**	**120**	*eP*		**Pn**	**19 17 15.1**	**+2.1**		
BARC				*eS*		**Sn**	**19 17 45.6**	**+3.6**		
BARC				*i*			19 17 46.8			
	comp=Z,737nm,0.3s									
LL1C	**La Loma 1 Cana**	**2.41**	**44**	*eP*		**Pb**	**19 17 16.6**	**-0.9**		
LL1C				*eS*		**Sb**	**19 17 46.3**	**-0.5**		
LL1C				*i*			19 18 01.7			
	comp=Z,840nm,0.6s									
SPBC	**San Pablo de B**	**2.45**	**151**	*eP*		**Pn**	**19 17 14.1**	**+0.5**		
SPBC				*eS*		**Sn**	**19 17 43.7**	**+0.5**		
SPBC				*i*			19 17 53.5			
	comp=Z,275nm,0.3s									
GUY2C	**Guyana, Caldas**	**2.57**	**182**	*eP*		**Pn**	**19 17 16.7**	**+1.0**		
GUY2C				*eS*		**Sn**	**19 17 48.6**	**+1.9**		
GUY2C				*i*			19 18 02.0			
	comp=Z,241nm,0.5s									
PAMC	**Pamplona, Colo**	**2.59**	**100**	*eP*		**Pn**	**19 17 18.0**	**+2.1**		
PAMC				*eS*		**Sn**	**19 17 50.4**	**+3.4**		
PAMC				*i*			19 17 52.0			
	comp=Z,288nm,0.2s									
PTAC	**Punta Ardita,**	**2.61**	**256**	*eP*		**Pn**	**19 17 16.5**	**+0.8**		
PTAC				*eS*		**Sn**	**19 17 46.6**	**-0.3**		
PTAC				*i*			19 17 48.8			
	comp=Z,133nm,0.2s									
RUSC	**La Rusia**	**2.88**	**131**	*eP*		**Pn**	**19 17 21.2**	**+1.2**		
RUSC				*eS*		**Sn**	**19 17 56.8**	**+2.4**		
RUSC				*i*			19 18 00.7			
	comp=Z,390nm,0.4s									
PLMC	**San Jos del P**	**3.06**	**199**	*eP*		**Pn**	**19 17 23.8**	**+1.7**		
ROSC	**El Rosal**	**3.10**	**162**	Pn		**Pn**	**19 17 19.4**	**-3.4**		
	comp=Z,1.6nm,0.3s,baz=136,slow=22,SNR=1.9									
ROSC				Pg		Pb	19 17 24.5	-4.9		
	comp=Z,14nm,0.3s,baz=309,slow=4.8,SNR=7.0									
ROSC				Sn		**Sn**	**19 17 59.3**	**-0.2**		
	comp=Z,28nm,0.3s,baz=39,slow=22,SNR=5.3									
ROSC				Lg		Lg	19 18 10.3			
	comp=Z,52nm,0.3s,baz=213,slow=23,SNR=9.7									
	comp=Z,9.2nm,0.2s									
ROSC	**El Rosal**	**3.10**	**162**	*eP*		**Pn**	**19 17 24.4**	**+1.6**		
ROSC				*eS*		**Sn**	**19 18 03.2**	**+3.7**		
ROSC				*i*			19 18 17.9			
	comp=Z,249nm,0.3s									
ANIL	**Santa Ana**	**3.30**	**182**	*eP*		**Pn**	**19 17 27.7**	**+2.2**		
ANIL				*eS*		**Sn**	**19 18 08.0**	**+3.6**		
ANIL				*i*			19 18 23.8			
	comp=Z,209nm,0.3s									
SMRC	**Santa Marta, M**	**3.49**	**17**	*eP*		**Pb**	**19 17 33.2**	**-2.5**		
CHIC	**Chingaza**	**3.51**	**154**	*eP*		**Pn**	**19 17 29.4**	**+0.9**		
CHIC				*eS*		**Sn**	**19 18 12.6**	**+2.9**		
CHIC				*i*			19 18 30.0			
	comp=Z,108nm,0.5s									
TAMC	**Tame, Arauca**	**3.71**	**111**	*eP*		**Pn**	**19 17 32.7**	**+1.8**		
TAMC				*eS*		**Sn**	**19 18 18.3**	**+4.1**		
TAMC				*i*			19 18 36.6			
	comp=Z,130nm,0.6s									
YOTC	**Yotoco, Valle**	**3.95**	**196**	*eP*		**Pn**	**19 17 35.9**	**+1.6**		
CRJC	**Cerrejon, Guaj**	**3.96**	**36**	*eP*		**Pn**	**19 17 38.1**	**+3.6**		
CRJC				*eS*		**Sn**	**19 18 26.1**	**+5.5**		
CRJC				*i*			19 18 56.6			
	comp=Z,113nm,0.4s									
VILC	**Villavicencio,**	**3.99**	**157**	*eP*		**Pn**	**19 17 35.9**	**+1.0**		
VILC				*eS*		**Sn**	**19 18 25.9**	**+4.6**		
PRAC	**Prado**	**4.09**	**175**	*eP*		**Pn**	**19 17 37.8**	**+1.6**		
PRAC				*eS*		**Sn**	**19 18 24.8**	**+1.2**		
PRAC				*i*			19 18 47.8			
	comp=Z,233nm,0.4s									
SOCV	**Socops**	**4.39**	**84**	*eP*		**Pn**	**19 17 42.4**	**+2.1**		
SOCV				*eS*		**Sn**	**19 18 32.2**	**+1.2**		
SDV	**Santo Domingo**	**4.71**	**77**	Pn		Pn	19 17 39.8	-5.0		
	comp=Z,0.9nm,0.3s,baz=40,slow=14,SNR=1.6									
SDV				Pg		**Pb**	**19 17 54.7**	**-2.0**		
	comp=Z,14nm,0.3s,baz=291,slow=9.2,SNR=10									
SDV				Sn		**Sn**	**19 18 39.2**	**+0.2**		
	comp=Z,23nm,0.3s,baz=248,slow=23,SNR=11									
	comp=Z,2.5nm,0.4s									
BCIP	**Isla Barro Col**	**4.72**	**287**	*eP*		**Pn**	**19 17 44.9**	**+0.1**		
BCIP				*eS*		**Sn**	**19 18 40.5**	**+1.4**		
DABV	**Dabajuro**	**5.52**	**56**	*eP*		**Pn**	**19 17 58.7**	**+3.0**		
DABV				*eS*		**Sn**	**19 19 00.4**	**+1.6**		
MDP	**Montagnes des**	**22.64**	**95**	LR		LR	19 29 53.6			
	comp=Z,40nm,21.1s,baz=63,slow=36									
SIV	**San Ignacio**	**27.51**	**149**	P		**P**	**19 22 16.4**	**-3.7**		
	comp=Z,5.6nm,0.6s,baz=324,slow=9.1,SNR=22									
	comp=Z,5.6nm,0.6s									
LVC	**Limon Verde**	**30.87**	**168**	LR		LR	19 36 10.9			
	comp=Z,59nm,18.9s,baz=309,slow=38									
TXAR	**Lajitas Array**	**34.23**	**312**	P		**P**	**19 23 17.7**	**-1.7**		
	comp=Z,0.4nm,0.8s,baz=108,slow=5.8,SNR=3.7									
	comp=Z,0.4nm,0.8s									
ESDC	**Sonseca Array**	**70.67**	**51**	P		P	19 27 43.6	-5.8		
	comp=Z,0.3nm,0.6s,baz=263,slow=7.5,SNR=2.5									
	comp=Z,0.3nm,0.6s									
TORD	**Torodi Ar. Bea**	**75.62**	**78**	P		**P**	**19 28 15.9**	**-3.2**		
	comp=Z,0.3nm,0.4s,baz=287,slow=4.9,SNR=12									
	comp=Z,0.3nm,0.4s									
ASAR	**Alice Springs**	**147.91**	**237**	PKPbc		**PKPdf**	**19 36 15.8**	**-0.7**		
	comp=Z,0.4nm,0.5s,baz=115,slow=3.8,SNR=8.3									
WRA	**Warramunga Arr**	**148.90**	**244**	PKPbc		**PKPdf**	**19 36 18.7**	**+0.5**		
	comp=Z,0.5nm,0.8s,baz=104,slow=3.3,SNR=5.6									

*JMA **23** 19:19:25.0±0.1,40.5°N±0.7×14.4E±.°, h12km, MV3.5/37, FAR E OFF SANRIKU*

*NIED **23** 19:19:25.0, 40.54°N×143.58°E, h12km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=0.09; Mθφ=1.10; Mθθ-1.02; Mrθ=1.09; Mθθ=0.56; Mφr=1.35; Fault plane solution: M₀2.10000×10¹⁴ NP1: φs=123.00000°, δ=34.00000°, λ=-3.00000°. NP2: φs=215.00000°, δ=89.00000°, λ=-124.00000°.*

*IDC **23** 19:19:26.7±13.0, 40.73°N×143.28°E, h0km, mb3.5/4, mbtmp3.4/5, ML2.4/1 Error ellipse: s-maj=261.8km s-min=46.8km az=101.0*

ISC 23 19:19:26.3±1.4, 40.58°N±0.06°×143.6°E±0.1, h16km, n26, σ0.73/24, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.48**	**347**	*eP*	**Pn**	**19 19 52.2**	**0.0**
JTH	**Tanohata**	**1.48**	**245**	P	**Pn**	**19 19 51.1**	**-1.2**
JKEN	**Kujiedanarisaw**	**1.50**	**256**	P	**Pn**	**19 19 51.0**	**-1.5**
JANG	**Nango**	**1.62**	**264**	P	**Pn**	**19 19 53.1**	**-1.0**
MIYJ	**Miyakonagasawa**	**1.70**	**235**	*eP*	**Pn**	**19 19 54.4**	**-0.9**
JNBK	**Urakawa-nobuka**	**1.82**	**339**	*eP*	**Pn**	**19 19 57.1**	**+0.2**
JNBK				S	**Sb**	**19 20 21.3**	**-0.5**
JTM	**Tenmabayashi**	**1.95**	**277**	P	**Pn**	**19 19 58.7**	**0.0**
JCH	**Churui**	**2.05**	**355**	P	**Pn**	**19 20 00.1**	**+0.1**
JCH				S	**Sn**	**19 20 24.4**	**-0.8**
JOM	**Ohasama**	**2.10**	**239**	*i* P	**Pn**	**19 20 00.6**	**-0.1**
JOT	**Ohata**	**2.10**	**293**	P	**Pn**	**19 20 00.9**	**+0.1**
JMK	**Ichinoseki**	**2.46**	**229**	P	**Pn**	**19 20 05.7**	**0.0**
JAK	**Akkeshi**	**2.55**	**18**	P	**Pn**	**19 20 06.7**	**-0.2**
JAK				*eS*	**Sn**	**19 20 37.3**	**-0.3**
JAR	**Ashorobuto**	**2.72**	**2**	P	**Pn**	**19 20 08.8**	**-0.5**
JAR				S	**Sn**	**19 20 41.2**	**-0.6**
JOMM	**Oshimamatsumae**	**2.89**	**290**	P	**Pn**	**19 20 12.8**	**+1.2**
JYK	**Kaneyama**	**3.01**	**238**	P	**Pn**	**19 20 13.4**	**+0.2**
MJAR	**Matsushiro Arr**	**5.85**	**228**	Pn	**Pn**	**19 20 53.3**	**+1.0**
	0.1nm,0.3s,baz=39,slow=12,SNR=5.1						
	1.0nm,0.4s						
SONM	**Songino Array**	**27.45**	**298**	P	**P**	**19 25 11.8**	**+0.4**
	0.3nm,0.4s,baz=94,slow=8.8,SNR=2.6						
	0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.77**	**129**	T	T	19 55 34.2	
	baz=323,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.78**	**129**	T	T	19 55 29.8	
	baz=323,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.79**	**129**	T	T	19 55 30.6	
	baz=323						
H11S1	**WAKE ISLAND Hy**	**29.62**	**131**	T	T	19 56 33.8	
	baz=321						
H11S3	**WAKE ISLAND Hy**	**29.62**	**131**	T	T	19 56 35.3	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**29.63**	**131**	T	T	19 56 36.2	
	baz=321						
ZALV	**Zalesovo Beam**	**40.90**	**309**	P	**P**	**19 27 07.3**	**-0.1**
	0.3nm,0.3s,baz=88,slow=9.2,SNR=2.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**43.79**	**299**	P	**P**	**19 27 32.1**	**+1.0**
	0.2nm,0.4s,baz=83,slow=10.0,SNR=2.3						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**45.26**	**306**	P	**P**	**19 27 42.9**	**+0.2**
	0.4nm,0.5s,baz=79,slow=8.9,SNR=3.7						
	0.4nm,0.5s						

IDC 23 19:26:11.9±1.9, 6.72S×129.26E, h0km, mb3.2/1, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=76.1km s-min=29.8km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.15**	**19**	Pn	Pn	19 27 43.7	-0.4
	0.2nm,0.3s,baz=56,slow=24,SNR=1.3						
SIJI				Sn	Sn	19 28 44.8	-10
	0.9nm,0.3s,baz=85,slow=24,SNR=7.6						
	2.3nm,0.6s						
WRA	**Warramunga Arr**	**14.04**	**160**	Pn	Pn	19 29 30.8	-1.5
	0.2nm,0.3s,baz=332,slow=14,SNR=10						
WRA				Sn	Sn	19 31 57.0	-12
	0.1nm,0.3s,baz=343,slow=20,SNR=2.0						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**17.43**	**166**	P	P	19 30 17.8	-0.3
	0.1nm,0.3s,baz=340,slow=9.3,SNR=6.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**67.59**	**327**	P	P	19 37 10.7	+0.1
	0.1nm,0.5s,baz=125,slow=7.3,SNR=1.7						
	0.1nm,0.5s						

*IDC **23** 19:36:51.4±2.2, 33.95°N×27.86°E, h0km, mb3.9/3, mbtmp3.5/10, ML3.4/7, Error ellipse: s-maj=43.6km s-min=19.1km az=30.0*

*HLW **23** 19:36:52.6, 33.91°N×27.95°E, h23km±8km, Md3.5, Ml3.4*

*ISK **23** 19:36:54.3, 33.81°N×27.79°E, h83km, ML3.3/19*

*NIC **23** 19:36:55.0±0.0, 33.75°N×27.82°E, h33km±29km, Ml3.4/4*

*GII **23** 19:36:59.7±0.0, 33.32°N×28.39°E, h1km±1km, Mm3.3/4*

ISC 23 19:36:54.5±1.0, 33.69N±0.04×27.83E±0.04, h53km±17km, n59, σ1.954/83, mb3.6/3, 3D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.94**	**344**	PN	**Pn**	**19 37 25.0**	**0.0**
KARP				SN	**Sn**	**19 37 47.5**	**-0.7**
KARP	**Karpathos**	**1.94**	**344**	P	**Pn**	**19 37 25.0**	**0.0**
KARP				S	**Sn**	**19 37 48.1**	**-0.1**
ZKR	**Zakros**	**1.95**	**317**	PN	**Pn**	**19 37 25.3**	**+0.1**
ZKR	**Zakros**	**1.95**	**317**	P	**Pn**	**19 37 25.2**	**+0.1**
ZKR				S	**Sn**	**19 37 48.6**	**+0.1**
ARG	**Arkhangelos**	**2.54**	**5**	PN	**Pn**	**19 37 33.5**	**+0.3**
ARG	**Arkhangelos**	**2.54**	**5**	P	**Pn**	**19 37 33.8**	**+0.6**
ARG				S	**Sn**	**19 38 02.5**	**-0.3**
HRKL	**Herakleio**	**2.77**	**307**	PN	**Pn**	**19 37 37.2**	**+0.8**
OSC1	**CSNet OBS 1**	**2.89**	**93**	P	**Pn**	**19 37 38.7**	**+0.7**
OSC1				S	**Sn**	**19 38 12.4**	**+1.0**
IDI	**Anoyia**	**2.90**	**304**	Pn	**Pn**	**19 37 39.0**	**+0.7**
	11nm,0.3s,baz=117,slow=11,SNR=133						
IDI				Sn	**Sn**	**19 38 11.3**	**-0.7**
	3.1nm,0.3s,baz=8.5,slow=21,SNR=2.0						
	26nm,0.3s						
IDI	**Anoyia**	**2.90**	**304**	PN	**Pn**	**19 37 39.1**	**+0.8**
IDI				SN	**Sn**	**19 38 11.2**	**-0.8**
AKAS	**Kas**	**2.93**	**29**	PN	**Pn**	**19 37 38.6**	**-0.1**
TURN	**Turunc**	**3.10**	**6**	PN	**Pn**	**19 37 41.4**	**+0.5**
TURN				SN	**Sn**	**19 38 15.9**	**-0.8**
SLUM	**Salum**	**3.11**	**226**	⇓P	**Pn**	**19 37 43.1**	**+2.0**
	baz=225						
SLUM				S	**Sn**	**19 38 16.2**	**-0.8**
	baz=225						
FETY	**Fethiye**	**3.12**	**19**	PN	**Pn**	**19 37 41.9**	**+0.7**
DALY	**Dalyan (Mula)**	**3.19**	**12**	PN	**Pn**	**19 37 42.3**	**+0.1**
GVDS	**Gavdos**	**3.30**	**291**	PN	**Pn**	**19 37 44.8**	**+1.1**
GVD	**Gavdhos**	**3.30**	**291**	PN	**Pn**	**19 37 44.6**	**+0.9**
BODT	**Bodrum**	**3.39**	**353**	PN	**Pn**	**19 37 44.1**	**-0.9**
YER	**Yerkesik**	**3.46**	**6**	PN	**Pn**	**19 37 46.9**	**+1.0**
CAMD	**Cameli-Denizli**	**3.47**	**20**	PN	**Pn**	**19 37 46.4**	**+0.3**
IMMV	**Ier Moni Meta**	**3.63**	**300**	PN	**Pn**	**19 37 49.3**	**+1.1**
OSC2	**CSNet OBS 4**	**3.77**	**98**	P	**Pn**	**19 37 51.1**	**+1.1**
RODP	**Rodopos**	**3.84**	**300**	PN	**Pn**	**19 37 51.8**	**+0.7**
APE	**Apeiranthos**	**3.86**	**332**	PN	**Pn**	**19 37 50.6**	**-0.8**
AKMS	**Akamas**	**3.96**	**69**	P	**Pn**	**19 37 53.5**	**+0.8**
AKMS				AML	AML	19 38 40.3	
	0.1nm,0.2s						
AKMS				AML	AML	19 38 43.0	
	0.2nm,0.3s						
APMY	**Acipayam-Deniz**	**3.96**	**17**	PN	**Pn**	**19 37 53.2**	**+0.4**
NATA	**Nata**	**4.08**	**73**	P	**Pn**	**19 37 55.2**	**+0.9**
NATA				AML	AML	19 38 45.0	
	0.2nm,0.2s						
NATA				AML	AML	19 38 47.7	
	0.4nm,0.4s						
ALFC	**Alefka**	**4.21**	**68**	P	**Pn**	**19 37 57.3**	**+1.1**
ALFC				AML	AML	19 38 46.1	
	0.2nm,0.3s						
ALFC				AML	AML	19 38 46.4	
	0.1nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**4.25**	**1**	PN	**Pn**	**19 37 56.3**	**-0.5**
SZAC	**Souni**	**4.32**	**74**	P	**Pn**	**19 37 59.1**	**+1.4**
SZAC				AML	AML	19 38 52.4	
	0.1nm,0.2s						
SZAC				AML	AML	19 38 57.9	
	0.2nm,0.2s						
ASGA	**Asgata**	**4.62**	**75**	P	**Pn**	**19 38 03.6**	**+1.8**
CSS	**Mathiatis**	**4.73**	**73**	P	**Pn**	**19 38 04.8**	**+1.5**
SWA2		**4.87**	**205**	⇓P	**Pn**	**19 38 07.7**	**+2.4**
	baz=206						
SWA2				S	**Sn**	**19 38 57.9**	**-2.4**
	baz=206						
MVOU	**Mavrovouni**	**4.98**	**73**	P	**Pn**	**19 38 08.8**	**+2.1**
RYAN	**Fayoum**	**5.05**	**155**	P	**Pn**	**19 38 09.9**	**+2.3**
RYAN	baz=156						
RYAN				S	**Sn**	**19 39 04.8**	**+0.1**
	baz=156						
HSAF	**As Saff**	**5.15**	**141**	P	**Pn**	**19 38 10.7**	**+1.5**
	baz=143						
GLL	**Jalalah**	**5.27**	**140**	P	**Pn**	**19 38 12.2**	**+1.5**
	baz=142						
KZIT	**Kziot**	**6.21**	**115**	Pn	**Pn**	**19 38 24.8**	**+1.1**
KZIT				Sn	**Sn**	**19 39 31.2**	**-2.2**
AMAZ	**Amatzia**	**6.36**	**108**	Pn	**Pn**	**19 38 27.2**	**+1.6**
AMAZ				Sn	**Sn**	**19 39 34.4**	**-2.4**
MMAI	**Mount Meron Ar**	**6.38**	**94**	Pn	**Pn**	**19 38 27.0**	**+1.1**
	0.4nm,0.3s,baz=278,slow=14,SNR=1.8						
MMAI				Sn	**Sn**	**19 39 36.0**	**-1.4**
	2.5nm,0.3s,baz=281,slow=18,SNR=5.6						
	0.5nm,0.4s						
HFRF	**Wahat Farafira**	**6.53**	**176**	P	**Pn**	**19 38 30.7**	**+2.7**
	baz=177						
YTIR	**Yattir**	**6.58**	**109**	Pn	**Pn**	**19 38 30.2**	**+1.5**
YTIR				Sn	**Sn**	**19 39 40.6**	**-1.8**
HMDT	**Nahal Hemdat**	**6.63**	**100**	Pn	**Pn**	**19 38 32.0**	**+2.7**
HMDT				Sn	**Sn**	**19 39 42.6**	**-0.9**
DSI	**Dead Sea**	**6.71**	**106**	Pn	**Pn**	**19 38 32.8**	**+2.3**
DSI				Sn	**Sn**	**19 39 44.5**	**-1.1**
KRMI	**Paran Flat**	**6.86**	**119**	Pn	**Pn**	**19 38 33.9**	**+1.4**
KRMI				Sn	**Sn**	**19 39 47.1**	**-2.2**
PRNI	**Paran**	**6.94**	**117**	Pn	**Pn**	**19 38 35.5**	**+1.8**
PRNI				Sn	**Sn**	**19 39 49.1**	**-2.2**
GHAJ	**Ghor Haditha**	**6.96**	**108**	Pn	**Pn**	**19 38 36.2**	**+2.4**
ZFRI	**Zfri**	**6.97**	**115**	Pn	**Pn**	**19 38 35.2**	**+1.2**
ZFRI				Sn	**Sn**	**19 39 49.2**	**-2.8**
EIL	**Elat**	**7.27**	**121**	Pn	**Pn**	**19 38 39.6**	**+1.4**
	0.4nm,0.3s,baz=300,slow=15,SNR=7.2						
EIL				Sn	**Sn**	**19 39 56.7**	**-2.7**
	2.7nm,0.3s,baz=23,slow=1.4,SNR=7.9						
	1.3nm,0.2s						
EIL	**Elat**	**7.27**	**121**	Pn	**Pn**	**19 38 40.0**	**+1.8**
EIL				Sn	**Sn**	**19 39 56.6**	**-2.8**
TR2	**Tor 2**	**7.32**	**135**	⇓P	**Pn**	**19 38 39.6**	**+0.8**
	baz=136						
BRTR	**Keskin Array B**	**7.62**	**36**	Pn	**Pn**	**19 38 43.2**	**+0.2**
	0.1nm,0.3s,baz=307,slow=38,SNR=2.1						
BRTR				Sn	**Sn**	**19 40 04.9**	**-3.2**
	0.2nm,0.3s,baz=217,slow=30,SNR=2.9						
	0.9nm,0.7s						
ASF	**Jabal al Asfar**	**7.77**	**99**	Pn	**Pn**	**19 38 47.4**	**+2.3**
	0.2nm,0.3s,baz=277,slow=8.1,SNR=1.4						
ASF				Sn	**Sn**	**19 40 13.6**	**+1.8**
	0.2nm,0.3s,baz=332,slow=8.5,SNR=1.4						
	0.5nm,0.3s						
HDK1	**Dakhla**	**8.23**	**170**	P	**Pn**	**19 38 54.4**	**+3.1**
	baz=171						
AKASG	**Malin Array Be**	**17.03**	**3**	Pn	**P**	**19 40 47.9**	**-2.1**
	0.4nm,0.3s,baz=186,slow=11,SNR=4.6						
	0.2nm,0.3s						
GERES	**GERESS Array B**	**18.45**	**329**	P	**Pn**	**19 41 07.2**	**+0.9**
	0.1nm,0.3s,baz=148,slow=12,SNR=2.0						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**27.80**	**358**	P	**P**	**19 42 39.6**	**+1.3**
	0.7nm,0.5s,baz=162,slow=12,SNR=9.7						
	0.7nm,0.5s						
HFS	**Hagfors**	**28.04**	**345**	P	**P**	**19 42 40.2**	**-0.2**
	1.1nm,0.8s,baz=145,slow=10,SNR=1.6						
	1.1nm,0.8s						
ARCES	**ARCESS Array B**	**35.92**	**359**	P	**P**	**19 43 50.3**	**+1.0**
	1.7nm,0.9s,baz=165,slow=7.5,SNR=1.6						
	1.7nm,0.9s						

*KLM **23** 19:39:41, 7.55S×122.24E, h424km, mb6.5*

*NEIC **23** 19:39:44.6±2.4, 7.29S±0.04×122.44E±0.07, h533km±3km, mb6.0/309, Mwb6.1/38, Mwc6.1/48, Mww6.0, Error ellipse: s-maj=11.2km s-min=4.6km az=67.0*

*DJA **23** 19:39:44.4±0.1, 7.5S±1×12.2E±.°, h529km±1km, M5.8/133, mb6.1/133, mB6.2/121, MLv6.7/35, Mw6.0/68, Mw(mB)5.9/121, MwMwp5.6/87, Mwp5.7/87*

*IDC **23** 19:39:44.8±0.4, 7.20S×122.51E, h533km±4km, mb5.5/56, mbtmp6.3/62, Error ellipse: s-maj=5.5km s-min=4.1km az=57.0*

*NEIC **23** 19:39:44.2, 7.27S×122.44E, h538km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.48; Mθθ-0.69; Mφφ=0.21; Mrθ-0.18; Mθφ 1.13; Mφr=0.88; Fault plane solution: M₀1.57000×10¹⁸ NP1: φs342.64000°, δ78.01000°, λ139.23000°. NP2: φs82.80000°, δ50.30000°, λ15.67000°. Principal axes: T 1.4478, Plg37.0000°, Azm295.0000°; N 0.2132, Plg48.0000°, Azm149.0000°; P -1.6611, Plg18.0000°, Azm38.0000°;*

*GCMT **23** 19:39:45.6±0.1, 7.29S±0.01×122.48E±0.01, h534km, MW6.1/162, Moment Tensor Solution. s162,c314; s120,c144; Duration: 2s6 Moment tensor: Scale 10¹⁸ Nm; Mrr0.23±.01; Mθθ-0.69±.01; Mφφ0.46±.01; Mrθ-0.08±.01; Mθφ 1.01±.01; Mφr 1.01±.01; Best double couple: M₀1.55300×10¹⁸ NP1: φs343.00000°, δ82.00000°, λ139.00000°. NP2: φs79.00000°, δ50.00000°, λ10.00000°. Principal axes: T 1.6030, Plg33.0000°, Azm293.0000°; N -0.1000, Plg49.0000°, Azm154.0000°; P -1.5030, Plg21.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **23** 19:39:46, 7.38S×122.55E, h560km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10¹⁸Nm; Mrr0.06; Mθθ-0.45; Mφφ 0.40; Mrθ-0.07; Mθφ 1.02; Mφr 0.94; Fault plane solution: M₀1.45000×10¹⁸ NP1: φs81.00000°, δ50.00000°, λ4.00000°. NP2: φs348.00000°, δ87.00000°, λ140.00000°. Principal axes: T 1.4979, Plg29.0000°, Azm297.0000°; N -0.0947, Plg50.0000°, Azm165.0000°; P -1.4032, Plg25.0000°, Azm42.0000°;*

*NEIC **23** 19:40:08.4, 7.75S×123.18E, h554km, Moment Tensor Solution. Duration: 6s1 Moment tensor: Scale 10¹⁸Nm; Mrr0.57; Mθθ-0.91; Mφφ 0.34; Mrθ-0.01; Mθφ 1.01; Mφr 1.06; Fault plane solution: M₀1.67000×10¹⁸ NP1: φs337.49000°, δ74.25000°, λ137.03000°. NP2: φs81.69000°, δ49.00000°, λ21.08000°. Principal axes: T 1.7114, Plg41.0000°, Azm291.0000°; N -0.0877, Plg45.0000°, Azm141.0000°; P -1.6236, Plg16.0000°, Azm35.0000°;*

ISC 23 19:39:44.5±0.2, 7.26S±0.02×122.42E±0.03, h538km±1km, h539km: pP-P, n2184, σ1.952/2541, mb6.0/306, 84C-82D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.38**	**188**	P	**P**	**19 40 49.2**	**-1.5**
MMRI	**Maumere**	**1.38**	**188**	P	**P**	**19 40 49.5**	**-1.2**
MMRI				S	**S**	**19 41 41.8**	**-2.7**
MMRI	**Maumere**	**1.38**	**188**	P	**P**	**19 40 50.6**	**-0.1**
EDFI	**Ende, Flores**	**1.65**	**206**	P	**P**	**19 40 50.3**	**-1.5**
BBSI	**Bau Bau**	**1.77**

BLJI **Banyuglugur** 8.77 266 P P 19 41 49.6 -0.1
15nm10µm37µm4µm,1.2s
SAUI **Saumlaki** 8.83 95 P P 19 41 48.9 -1.5
SAUI **Saumlaki** 8.83 95 P P 19 41 48.4 -2.0
140nm50µm379µm36µm,1.1s
SAUI **Saumlaki** 8.83 95 P P 19 41 49.4 -1.0
GMJI **Gumukmas** 8.95 263 P P 19 41 50.3 -1.3
23nm27µm2µm,1.1s
MTKI **Muara Teweh, K** 9.78 310 P P 19 42 01.9 +1.8
21µm81µm8µm,1.1s
BWJI **Bawean** 9.80 278 P P 19 42 02.7 +2.4
15µm34µm3µm,1.3s
MTN **Manton Dam** 10.21 124 P P 19 42 04.3 -0.2
baz=10
MTN **Manton Dam** 10.21 124 P P 19 42 03.8 -0.8
MTN **Manton Dam** 10.21 124 P P 19 42 04.6 0.0
KNRA **Kununurra** 10.42 144 P P 19 42 06.0 -0.6
baz=10
KNRA **Kununurra** 10.42 144 P P 19 42 05.4 -1.2
KNRA **Kununurra** 10.42 144 P P 19 42 06.8 +0.1
TBJI **Tambak Boyo** 10.50 272 P P 19 42 08.7 +1.1
9µm14µm1µm,1.1s
PWJI **Pagerwojo** 10.55 265 P P 19 42 06.8 -1.3
12µm1µm,0.8s
FAKI **Fak Fak** 10.69 67 P P 19 42 07.1 -2.5
FAKI **Fak Fak** 10.69 67 P P 19 42 07.0 -2.5
10µm30µm4µm,0.7s
FAKI **Fak Fak** 10.69 67 P P 19 42 08.5 -1.1
SWI **Sorong** 10.86 55 P P 19 42 10.8 -0.5
34µm153µm17µm,1.0s
SIJI **Sorong** 10.86 55 P P 19 42 10.9 -0.5
12µm,0.8s,baz=253,slow=4.8,SNR=412
SIJI S S 19 44 11.2 -0.9
553nm,0.6s,baz=190,slow=21,SNR=9.0
SIJI ScP ScP 19 50 01.4 +0.5
113nm,0.9s,baz=97,slow=2.1,SNR=8.1
SIJI ScS ScS 19 53 35.4 -1.2
28nm,1.0s,baz=94,slow=24,SNR=8.1
NGJI **Ngawi** 10.87 269 P P 19 42 12.3 +0.9
22µm13µm1µm,1.0s
PCJI **Pacitan** 11.18 264 P P 19 42 13.1 -1.5
14µm30µm3µm,0.9s
FITZ **Fitzroy Crossi** 11.22 164 P P 19 42 14.5 -0.5
672nm,0.4s,baz=351,slow=6.9,SNR=1871
FITZ S S 19 44 15.2 -3.5
2µm,0.9s,baz=8.2,slow=11,SNR=18
FITZ **Fitzroy Crossi** 11.22 164 P P 19 42 13.5 -1.5
baz=11
FITZ **Fitzroy Crossi** 11.22 164 P P 19 42 13.6 -1.4
FITZ **Fitzroy Crossi** 11.22 164 P P 19 42 14.8 -0.2
KDU **Kakadu** 11.27 119 P P 19 42 14.6 -0.9
baz=11
KDU **Kakadu** 11.27 119 P P 19 42 14.9 -0.6
SGSI **Sangihe** 11.30 16 P P 19 42 15.2 -0.7
2µm69µm9µm,0.9s
PBKI **Pangkalan Bun** 11.62 292 P P 19 42 20.7 +1.4
186µm22µm,1.1s
UGM **Wanagama** 11.81 266 P P 19 42 20.1 -1.1
UGM **Wanagama** 11.81 266 P P 19 42 21.7 +0.5
15µm22µm2µm,1.3s
UGM **Wanagama** 11.81 266 P P 19 42 21.5 +0.3
SMRI **Semarang** 11.89 270 P P 19 42 20.4 -1.6
SMRI **Semarang** 11.89 270 P P 19 42 22.1 +0.1
20µm16µm1µm,1.0s
SMRI **Semarang** 11.89 270 P P 19 42 22.9 +0.9
YOGI **Yogyakarta** 12.04 267 P P 19 42 23.9 +0.4
20µm1µm,0.8s
MYLDM **Lahad Datu** 12.96 342 P P 19 42 33.8 +0.7
STKI **Sintang** 13.12 303 P P 19 42 36.1 +1.3
47µm5µm,1.1s
SBUM **Sibu** 14.02 313 P P 19 42 45.3 +1.1
MBWA **Marble Bar** 14.06 190 P P 19 42 43.0 -1.4
MBWA **Marble Bar** 14.06 190 P P 19 42 43.5 -0.9
MBWA **Marble Bar** 14.06 190 P P 19 42 43.5 -0.9
MBWA **Marble Bar** 14.06 190 P P 19 42 43.6 -0.9
JCJI **Jatiwangi** 14.07 272 P P 19 42 44.5 -0.2
43µm4µm,1.3s
PSA00 **Pilbara Seismi** 14.45 190 P P 19 42 47.0 -1.5
PSA00 **Pilbara Seismi** 14.45 190 P P 19 42 46.8 -1.7
PSA00 **Pilbara Seismi** 14.45 190 P P 19 42 47.8 -0.7
DAV **Davao City (W)** 14.58 13 P P 19 42 49.8 -0.1
3µm,0.8s,baz=118,slow=1.2,SNR=39
DAV S S 19 45 24.9 +2.1
662nm,0.9s,baz=294,slow=23,SNR=6.5
DAV **Davao City (W)** 14.58 13 P P 19 42 49.4 -0.6
DAV **Davao City (W)** 14.58 13 P P 19 42 50.4 +0.5
DAV P P 19 42 50.4 +0.5
DAV **Davao City (W)** 14.58 13 P P 19 42 50.4 +0.5
DAV P P 19 42 50.4 +0.5
DAV **Davao City (W)** 14.58 13 P P 19 42 50.3 +0.4
KKM **Kota Kinabalu** 14.59 335 P P 19 42 49.4 -0.8
KKM **Kota Kinabalu** 14.59 335 P P 19 42 50.3 +0.1
LEM **Lembang** 14.70 271 P P 19 42 50.8 -0.6
1µm,0.6s,baz=74,slow=8.3,SNR=126
LEM S S 19 45 28.7 +3.3
1µm,1.0s,baz=326,slow=18,SNR=5.0
LEM ScS ScS 19 53 46.6 +0.9
34nm,0.8s,baz=33,slow=21,SNR=9.3
SRPI **Serui, Papua** 14.77 69 P P 19 42 51.0 -1.0
11µm29µm2µm,1.0s
BAKI **Biak** 14.91 67 P P 19 42 52.5 -0.9
23µm48µm3µm,0.8s
CNJI **Cibinong** 15.17 269 P P 19 42 53.6 -2.5
16µm80µm9µm,1.1s
TPI **Tanjungpandan** 15.37 286 P P 19 42 58.5 +0.3
19µm2µm,1.2s
CBJI **Citeko** 15.48 272 P P 19 42 56.0 -3.3
18µm62µm7µm,1.0s
DBJI **Dramaga** 15.57 272 P P 19 42 57.8 -2.5
30µm2µm,1.0s
TNG **Tangerang** 15.71 273 P P 19 43 05.0 +3.4
SKJI **Sukabumi** 15.75 270 P P 19 42 59.8 -2.2
28µm3µm,0.6s
SBJI **Serang** 16.22 273 P P 19 43 05.0 -1.7
16µm1µm,1.1s
WAMI **Wamena** 16.55 79 P P 19 43 11.6 +1.8
12µm38µm3µm,0.9s
XMI **Christmas Isla** 16.83 258 P P 19 43 13.1 +0.6
XMIS **Christmas Isla** 16.88 258 P P 19 43 10.5 -2.3
XMIS **Christmas Isla** 16.88 258 P P 19 43 12.2 -0.6
PPBI **Pangkal Pinang** 17.00 287 P P 19 43 14.8 +0.8
37µm92µm6µm,1.3s
WB0 **Warramunga Arr** 17.02 138 P P 19 43 12.4 -1.7
SMPI **Sarmi** 17.05 73 P P 19 43 14.0 -0.5
20µm74µm5µm,1.8s
WRA **Warramunga Arr** 17.11 139 P P 19 43 14.2 -0.7
2µm,1.0s,baz=309,slow=12,SNR=1212
WRA S S 19 46 07.2 +0.6
571nm,0.9s,baz=314,slow=18,SNR=9.2
WRA P3KPbc 20 17 35.4
0.7nm,0.7s,baz=128,slow=3.6,SNR=7.0
WRA **Warramunga Arr** 17.11 139 IAmb IAmb 19 43 16.8
comp=Z,302nm,0.9s
WRAB **Tennant Creek** 17.11 139 P P 19 43 13.7 -1.2
WRAB **Tennant Creek** 17.11 139 P P 19 43 13.7 -1.2
WRAB pmax pmax
comp=Z,3µm,0.7s
BLSI **Bandar Lampung** 17.18 275 P P 19 43 13.8 -1.8
comp=Z,12µmcomp=Z,1µm,1.1s
GIRL **Giralia** 17.21 206 P P 19 43 16.2 +0.4
baz=17,SNR=469
GIRL **Giralia** 17.21 206 P P 19 43 15.7 0.0
GIRL **Giralia** 17.21 206 P P 19 43 17.0 +1.2
KLI **Kotabumi** 17.63 277 P P 19 43 18.3 -1.4
comp=Z,13µmcomp=Z,9µmcomp=Z,989nm,1.0s
KASI **Kota Agung** 17.90 274 P P 19 43 19.7 -2.5
comp=Z,35µmcomp=Z,5µm,1.0s
PMBI **Palembang** 18.09 283 P P 19 43 25.1 +1.1
PMBI **Palembang** 18.09 283 P P 19 43 26.0 +2.0
comp=Z,33µmcomp=Z,200µmcomp=Z,21µm,1.1s
PMBI **Palembang** 18.09 283 P P 19 43 26.0 +2.0
comp=Z,21µm,1.1s
GENI **Genyem** 18.27 76 P P 19 43 25.4 -0.2
comp=Z,17µmcomp=Z,44µmcomp=Z,3µm,1.1s
GENI **Genyem** 18.27 76 P P 19 43 27.9 +2.2
LWLI **Liwa** 18.39 276 P P 19 43 25.6 -1.3
comp=Z,7µmcomp=Z,13µmcomp=Z,1µm,1.0s
WRKA **Warakurna** 18.55 163 P P 19 43 27.6 -0.5
baz=19,SNR=1000
WRKA **Warakurna** 18.55 163 P P 19 43 28.8 +0.7
DSRI **Dabo** 19.02 290 P P 19 43 33.8 +1.3
comp=Z,13µmcomp=Z,14µmcomp=Z,916nm,1.3s
JMBI **JAMBI** 19.53 286 P P 19 43 40.5 +3.4
MNAI **Manna** 19.58 277 P P 19 43 35.3 -2.3
MNAI **Manna** 19.58 277 P P 19 43 36.7 -0.8
comp=Z,14µmcomp=Z,37µmcomp=Z,4µm,1.0s

MNAI **Manna** 19.58 277 P P 19 43 37.8 +0.3
MEEK **Meekatharra** 19.61 190 P P 19 43 36.8 -0.9
baz=20,SNR=1000
MEEK **Meekatharra** 19.61 190 P P 19 43 37.9 +0.2
TPRI **Tanjung Pinang** 19.61 294 P P 19 43 39.5 +1.6
comp=Z,29µmcomp=Z,3µm,1.3s
AS31 **Alice Springs** 19.69 147 IAmb IAmb 19 43 47.3
comp=Z,200nm,0.7s
ASAR **Alice Springs** 19.69 147 P P 19 43 38.9 +0.5
comp=Z,505nm,0.7s,baz=316,slow=7.7,SNR=1964
ASAR S S 19 46 45.4 -3.1
comp=Z,311nm,1.1s,baz=327,slow=17,SNR=4.1
ASAR ScP ScP 19 50 16.9 -0.3
comp=Z,133nm,0.6s,baz=337,slow=2.1,SNR=9.1
ASAR ScS ScS 19 53 56.6 -3.7
comp=Z,43nm,0.8s,baz=339,slow=4.0,SNR=5.6
ASAR P3KPbc 20 17 26.7
comp=Z,0.3nm,0.8s,baz=138,slow=2.1,SNR=1.4
KSI **Kapahiang** 20.06 279 P P 19 43 40.6 -1.4
comp=Z,12µmcomp=Z,988nm,0.8s
MASI **Maura Aman, Be** 20.51 280 P P 19 43 45.5 -0.5
comp=Z,22µmcomp=Z,20µmcomp=Z,2µm,1.1s
MYKOM **Kota Tinggi** 20.60 295 P P 19 43 49.0 +2.2
QIS **Mount Isa** 21.25 130 P P 19 43 52.2 -0.5
baz=21,SNR=592
QIS **Mount Isa** 21.25 130 P P 19 43 53.1 +0.4
COEN **Coen** 21.45 110 P P 19 43 53.2 -1.3
baz=22,SNR=814
COEN **Coen** 21.45 110 P P 19 43 53.1 -1.3
COEN IAmb IAmb 19 43 56.6
comp=Z,222nm,0.7s
COEN **Coen** 21.45 110 P P 19 43 54.0 -0.4
KRJI **Kerinci** 21.50 283 P P 19 43 54.5 -0.6
comp=Z,12µmcomp=Z,53µmcomp=Z,7µm,1.0s
MORW **Morawa** 22.52 195 P P 19 44 03.1 -0.8
baz=23,SNR=422
MORW **Morawa** 22.52 195 P P 19 44 02.9 -1.0
MORW IAmb IAmb 19 44 09.1
comp=Z,417nm,0.6s
MORW **Morawa** 22.52 195 P P 19 44 03.9 +0.1
BKNI **Bangkinang** 22.62 289 P P 19 44 06.3 +1.3
comp=Z,14µmcomp=Z,24µmcomp=Z,2µm,1.3s
BKNI **Bangkinang** 22.62 289 P P 19 44 06.3 +1.3
PPSI **Pulau Pagai** 22.76 280 P P 19 44 06.2 -0.1
comp=Z,18µmcomp=Z,2µm,1.1s
JRMM **Jerantut** 22.78 298 P P 19 44 08.0 +1.6
DLV **T Lat** 23.58 324 P P 19 44 14.3 +0.6
BLDU **Ballidu** 23.85 192 P P 19 44 14.7 -1.0
baz=24,SNR=1000
BLDU **Ballidu** 23.85 192 P P 19 44 15.9 +0.2
MTSU **Mount Surprise** 23.91 119 P P 19 44 16.5 +0.1
baz=24,SNR=232
MTSU **Mount Surprise** 23.91 119 P P 19 44 16.9 +0.5
OOD **Oodnadatta** 23.98 150 P P 19 44 17.3 +0.4
FORT **Forrest** 23.99 168 P P 19 44 16.1 -0.8
baz=24,SNR=411
FORT **Forrest** 23.99 168 P P 19 44 15.9 -1.0
FORT **Forrest** 23.99 168 P P 19 44 17.2 +0.3
SISI **Saibi** 23.99 283 P P 19 44 16.4 -0.8
comp=Z,316nm,0.9s
IPM **Ipoh** 24.33 298 P P 19 44 20.2 0.0
IPM **Ipoh** 24.33 298 P P 19 44 21.0 +0.8
IPM **Ipoh** 24.33 298 P P 19 44 21.3 +1.1
KLBR **Kellerberrin** 24.60 190 P P 19 44 21.5 -0.8
baz=25,SNR=481
KLBR **Kellerberrin** 24.60 190 P P 19 44 22.3 -0.1
KULM **Kulim** 25.05 299 P P 19 44 26.3 -0.2
KULM **Kulim** 25.05 299 P P 19 44 26.0 -0.5
MUN **Mundaring** 25.27 192 P P 19 44 27.7 -0.5
baz=25,SNR=218
MUN **Mundaring** 25.27 192 P P 19 44 28.3 0.0
MULG **Mulgathing** 25.38 156 P P 19 44 29.5 +0.3
MANU **Manus Island** 25.39 79 P P 19 44 29.8 +0.2
MANU IAmb IAmb 19 44 31.8
comp=Z,1µm,1.6s
RPSI **Rantau Prapat** 25.45 292 ScP ScP 19 50 33.4 +0.8
PSI **Prapat** 25.49 292 P P 19 44 31.1 +0.5
comp=Z,2µm,1.1s,baz=141,slow=6.2,SNR=242
PSI ScP ScP 19 50 33.4 +0.5
comp=Z,89nm,1.1s,baz=162,slow=4.4,SNR=5.6
comp=Z,2µm,1.1s
PSI **Prapat** 25.49 292 P P 19 44 31.1 +0.5
COCO **West Island** 25.68 257 P P 19 44 31.0 -1.1
COCO IAmb IAmb 19 44 33.7
comp=Z,642nm,1.0s
COCO **West Island** 25.68 257 P P 19 44 31.0 -1.1
COCO pmax pmax
comp=Z,642nm,1.0s
NWAO **Narrogin (SRO)** 25.99 190 P P 19 44 33.6 -1.0
NWAO IAmb IAmb 19 44 35.2
comp=Z,323nm,0.5s
NWAO **Narrogin (SRO)** 25.99 190 P P 19 44 33.6 -1.0
NWAO pmax pmax
comp=Z,323nm,0.5s
NWAO **Narrogin (SRO)** 25.99 190 P P 19 44 34.3 -0.3
NWAO **Narrogin (SRO)** 25.99 190 P P 19 44 34.3 -0.3
NWAO **Narrogin (SRO)** 25.99 190 P P 19 44 34.6 0.0
TSI **Tuntungan** 26.10 293 P P 19 44 36.4 +0.6
comp=Z,12µmcomp=Z,44µmcomp=Z,4µm,1.3s
GSI **Gunungsitoli** 26.21 288 P P 19 44 35.4 -1.4
GSI **Gunungsitoli** 26.21 288 P P 19 44 36.4 -0.4
comp=Z,10µmcomp=Z,17µmcomp=Z,940nm,0.9s
GSI **Gunungsitoli** 26.21 288 P P 19 44 36.9 +0.1
CTA **Charters Tower** 26.39 121 P P 19 44 38.6 +0.3
comp=Z,86nm,1.0s,baz=300,slow=10,SNR=39
CTA ScP ScP 19 50 35.7 +0.4
comp=Z,118nm,0.7s,baz=259,slow=21,SNR=6.7
comp=Z,86nm,1.0s
CTA **Charters Tower** 26.39 121 P P 19 44 39.3 +1.0
CTAO **Charters Tower** 26.39 121 P P 19 44 37.3 -1.0
CTAO **Charters Tower** 26.39 121 P P 19 44 37.3 -1.0
CTAO pmax pmax
comp=Z,99nm,1.0s
CTAO **Charters Tower** 26.39 121 P P 19 44 39.3 +1.0
INKA **Innaminka** 26.77 142 P P 19 44 42.7 +1.2
KCSI **Kotacane, Aceh** 26.83 293 P P 19 44 41.5 -0.8
comp=Z,10µmcomp=Z,1µm,1.3s
LCRK **Leigh Creek** 27.42 149 P P 19 44 47.8 +0.6
SRIT **Nakonsritamara** 27.67 304 P P 19 44 50.0 +0.4
RKGY **Rocky Gully** 27.68 190 P P 19 44 50.3 +0.9
baz=28,SNR=236
RKGY **Rocky Gully** 27.68 190 P P 19 44 50.7 +1.3
UBPT **Khong Chiam** 27.99 323 IAmb IAmb 19 44 56.0
comp=Z,738nm,1.0s
QLP **Quilpie** 28.28 135 P P 19 44 55.2 +0.5
baz=28,SNR=487
QLP **Quilpie** 28.28 135 P P 19 44 56.1 +1.3
LHMI **Lhok Sumawe** 28.29 295 P P 19 44 55.0 0.0
LHMI **Lhok Sumawe** 28.29 295 P P 19 44 56.1 +1.1
comp=Z,12µmcomp=Z,23µmcomp=Z,2µm,1.2s
LHMI **Lhok Sumawe** 28.29 295 P P 19 44 56.1 +1.1
comp=Z,2µm,1.1s
BBOO **Buckleboo** 28.41 155 P P 19 44 55.1 -0.7
baz=28,SNR=737
BBOO **Buckleboo** 28.41 155 P P 19 44 54.7 -1.1
BBOO IAmb IAmb 19 44 56.5
comp=Z,422nm,0.8s
BBOO **Buckleboo** 28.41 155 P P 19 44 55.7 -0.1
H01W3 **Cape Leeuwin H** 28.53 194 P P 19 44 58.3 +1.7
baz=18,slow=7.5,SNR=72
H01W1 **Cape Leeuwin H** 28.54 194 P P 19 44 57.1 +0.5
H01W2 **Cape Leeuwin H** 28.55 194 P P 19 44 58.3 +1.6
baz=18,slow=7.5,SNR=86
QIZ **Qiongzhong** 28.91 335 ⇓*i* P P 19 45 00.8 +0.4
QIZ sP sP 19 47 29.3 -3.5
QIZ S S 19 49 11.3 -2.1
QIZ pmax pmax
comp=Z,910nm,1.0s
QIZ pmax pmax
comp=Z,2µm,2.8s
QIZ **Qiongzhong** 28.91 335 P P 19 45 02.0 +1.6
QIZ **Qiongzhong** 28.91 335 P P 19 45 00.7 +0.3
QIZ pP pP 19 46 29.9 +0.1
QIZ ScP ScP 19 50 45.8 +2.7
WHYH **Whyalla** 29.25 153 P P 19 45 03.3 +0.2
PTPS **Port Pirie** 29.56 153 P P 19 45 06.4 +0.6
comp=Z,545nm,0.9s
KRVT **Keravat (AS076** 29.59 86 P P 19 45 06.2 -0.2
comp=Z,632nm,0.9s,baz=244,slow=4.5,SNR=14
comp=Z,632nm,0.9s
RABL **Rabaul** 29.75 86 P P 19 45 05.6 -2.2
RABL **Rabaul** 29.75 86 P P 19 45 08.0 +0.3
TWG **Pinlang** 29.92 358 P P 19 45 07.1 -2.0
HTT **Hallett** 30.20 152 P P 19 45 11.5 +0.1
baz=30,SNR=557

HTT **Hallett** 30.20 152 P P 19 45 12.0 +0.6
STKA **Stephens Creek** 30.32 146 P P 19 45 12.4 -0.1
comp=Z,666nm,0.7s,baz=319,slow=8.8,SNR=696
STKA S S 19 49 33.2 -1.7
comp=Z,250nm,0.8s,baz=335,slow=23,SNR=7.3
STKA P3KP 20 18 04.7
comp=Z,3.4nm,1.0s,baz=24,slow=4.2,SNR=3.5
comp=Z,666nm,0.7s
STKA **Stephens Creek** 30.32 146 P P 19 45 12.4 -0.1
baz=30,SNR=946
STKA **Stephens Creek** 30.32 146 P P 19 45 12.2 -0.3
STKA **Stephens Creek** 30.32 146 *d* iP P 19 45 12.3 -0.2
STKA **Stephens Creek** 30.32 146 P P 19 45 13.0 +0.5
TPUB **Ta-pu** 30.42 357 IAmb IAmb 19 45 18.9
comp=Z,267nm,1.0s
TPUB **Ta-pu** 30.42 357 P P 19 45 14.0 +0.6
GUMO **Guam** 30.43 47 P P 19 45 13.1 -0.4
comp=Z,3µm,0.8s,baz=197,slow=6.2,SNR=61
GUMO ScP ScP 19 50 48.1 -0.1
comp=Z,254nm,0.6s,baz=14,slow=21,SNR=5.3
comp=Z,3µm,0.8s
GUMO **Guam** 30.43 47 P P 19 45 12.4 -1.1
GUMO **Guam** 30.43 47 P P 19 45 14.3 +0.8
GUMO **Guam** 30.43 47 P P 19 45 13.1 -0.4
GUMO ScP ScP 19 50 48.0 -0.1
MCO **Taipa Grande** 30.46 344 P P 19 45 15.0 +1.3
YULB **Yu-li** 30.48 358 P P 19 45 11.0 -2.9
SSLB **Suanglung** 30.89 357 P P 19 45 17.0 -0.4
GHSS **Government Hou** 31.30 154 P P 19 45 22.1 +1.4
comp=Z,155nm,0.6s
RK1H **Rockhampton Ha** 31.37 124 P P 19 45 21.2 -0.3
TWOA **Tennyson Woods** 31.38 154 P P 19 45 22.6 +1.1
GZH **Guangzhou** 31.44 344 P P 19 45 25.1 +3.0
GZH sP PcP 19 48 01.6 +2.6
GZH S S 19 49 59.9 +7.8
GZH pmax pmax
comp=Z,880nm,5.1s
RMQ **Roma** 31.51 130 P P 19 45 23.4 +0.7
baz=32,SNR=133
RMQ **Roma** 31.51 130 P P 19 45 24.3 +1.5
YOJ **Yonaguni jima** 31.53 1 P P 19 45 21.0 -1.8
YOJ IAmb IAmb 19 45 26.2
comp=Z,870nm,1.2s
YOJ **Yonaguni jima** 31.53 1 P P 19 45 21.0 -1.8
YOJ pmax pmax
comp=Z,871nm,1.2s
YOJ **Yonaguni jima** 31.53 1 P P 19 45 23.9 +1.1
YHNB **Yeheng** 31.75 358 P P 19 45 24.3 -0.5
JMJ **Miyako jima 2** 32.00 5 P P 19 45 29.4 +2.6
TATO **Taipei** 32.05 358 P P 19 45 25.1 -2.2
TATO **Taipei** 32.05 358 P P 19 45 25.8 -1.4
TATO **Taipei** 32.05 358 P P 19 45 25.8 -1.4
TATO **Taipei** 32.05 358 P P 19 45 25.3 -2.0
TATO pP pP 19 46 54.3 -3.5
TATO ScP ScP 19 50 54.7 +1.2
QZH **Quanzhou** 32.22 353 ⇓*i* P P 19 45 28.3 -0.4
QZH pP pP 19 47 00.9 +1.5
QZH S S 19 50 03.3 -0.7
QZH ScP ScP 19 50 55.9 +1.9
QZH ScS ScS 19 54 54.9 +0.3
QZH pmax pmax
comp=Z,92nm,0.8s
QZH pmax pmax
comp=Z,300nm,4.3s
CMSA **Cobar Meteorol** 32.49 141 P P 19 45 31.3 +0.3
baz=33,SNR=502
CMSA **Cobar Meteorol** 32.49 141 P P 19 45 31.9 +1.0
EIDS **Eidsvold** 32.75 127 P P 19 45 32.8 -0.5
baz=33,SNR=22
EIDS **Eidsvold** 32.75 127 P P 19 45 33.7 +0.4
ARPS **Mount Arapiles** 34.30 152 P P 19 45 46.2 +0.1
baz=34,SNR=420
ARPS **Mount Arapiles** 34.30 152 P P 19 45 46.8 +0.7
JOW **Kunigami** 34.36 9 IAmb IAmb 19 45 49.1
comp=Z,424nm,0.9s
JOW **Kunigami** 34.36 9 P P 19 45 47.5 +0.7
CMAR **Chiang Mai Arr** 34.49 318 P P 19 45 49.4 +1.4
comp=Z,884nm,0.9s,baz=144,slow=6.3,SNR=1365
CMAR PcP PcP 19 48 10.2 +2.3
comp=Z,100nm,0.7s,baz=172,slow=2.7,SNR=16
CMAR S S 19 50 40.3 +1.6
comp=Z,8.6nm,1.1s,baz=134,slow=14,SNR=1.0
CMAR ScP ScP 19 51 04.7 +2.4
comp=Z,55nm,0.7s,baz=169,slow=2.8,SNR=12
CMAR P3KPbc 20 16 35.6
comp=Z,2.4nm,0.9s,baz=309,slow=5.9,SNR=15
comp=Z,884nm,0.9s
CMAR **Chiang Mai Arr** 34.49 318 *i* P P 19 45 49.4 +1.4
CMAR pmax pmax
comp=Z,963nm,0.9s
CHTO **Chiang Mai** 34.74 319 P P 19 45 50.9 +0.8
CHTO **Chiang Mai** 34.74 319 P P 19 45 50.9 +0.8
CHTO pmax pmax
comp=Z,1µm,0.9s
CHTO **Chiang Mai** 34.74 319 P P 19 45 52.3 +2.2
CHTO P P 19 45 52.3 +2.2
CHTO **Chiang Mai** 34.74 319 P P 19 45 52.3 +2.2
CHTO P P 19 45 52.3 +2.2
CHTO **Chiang Mai** 34.74 319 P P 19 45 51.9 +1.8
CHTO **Chiang Mai** 34.74 319 P P 19 45 51.4 +1.3
CHTO ScP ScP 19 51 05.2 +2.1
PBA **Port Blair** 34.99 302 P P 19 45 50.1 -2.1
PBA **Port Blair** 34.99 302 P P 19 45 50.9 -1.4
SNR=34
PBA **Port Blair** 34.99 302 P P 19 45 50.9 -1.4
SNR=34
PBA **Port Blair** 34.99 302 *e* P P 19 45 50.2 -2.1
DGPR **DIGLIPUR** 35.64 305 *e* P P 19 45 56.8 -0.9
DGPR IAmb IAmb 19 45 58.9
comp=Z,461nm,0.6s
ARMA **Armidale** 35.78 134 P P 19 46 00.3 +1.5
baz=36,SNR=123
ARMA **Armidale** 35.78 134 P P 19 46 01.0 +2.3
BRAT **Ballarat** 35.93 150 P P 19 46 00.6 +0.9
CNSH **ChangSha** 36.41 346 ⇑*i* P P 19 46 03.5 -0.2
CNSH S S 19 51 08.4 +1.4
CNSH pmax pmax
comp=Z,700nm,3.0s
GEXS **Deakin Univers** 36.61 151 P P 19 46 06.9 +1.6
MLBS **Spotswood, Mel** 36.62 150 P P 19 46 07.4 +2.0
TOO **Toolangi** 36.73 149 P P 19 46 07.3 +0.9
baz=37,SNR=81
TOO **Toolangi** 36.73 149 P P 19 46 08.1 +1.7
GYA **Guiyang** 36.84 336 ⇑*i* P P 19 46 08.5 +1.0
GYA pP pP 19 47 44.8 +4.0
GYA PcP PcP 19 48 16.8 +1.8
GYA S S 19 51 12.8 -1.0
GYA ScS ScS 19 55 22.3 +2.1
GYA pmax pmax
comp=Z,670nm,0.9s
GYA pmax pmax
comp=Z,2µm,3.5s
CAN **Canberra** 37.08 143 P P 19 46 11.0 +1.7
CAN **Canberra** 37.08 143 P P 19 46 09.4 +0.1
CAN ScP ScP 19 51 11.2 -0.4
SYDH **Sydney Hard Ro** 37.16 139 P P 19 46 11.8 +1.9
HNR **Honiara** 37.18 96 P P 19 46 10.2 -0.1
comp=Z,5µm,0.9s,baz=231,slow=2.2,SNR=109
HNR S S 19 51 13.7 -5.3
comp=Z,456nm,0.9s,baz=182,slow=7.2,SNR=6.8
comp=Z,5µm,0.9s
HNR **Honiara** 37.18 96 P P 19 46 09.9 -0.4
HNR ScP ScP 19 51 13.9 +1.6
HNR **Honiara** 37.18 96 P P 19 46 10.9 +0.5
HNR **Honiara** 37.18 96 P P 19 46 10.5 +0.1
HNR ScP ScP 19 51 13.9 +1.6
NTLH **Newcastle Hard** 37.27 137 P P 19 46 13.0 +2.2
CNB **Canberra Magne** 37.30 142 P P 19 46 12.0 +0.9
baz=37,SNR=74
CNB **Canberra Magne** 37.30 142 P P 19 46 12.5 +1.4
KMI **Kunming** 37.46 330 ⇓P P 19 46 14.8 +2.1
KMI pP pP 19 47 47.8 +1.0
KMI PP PP 19 47 57.4 +2.0
KMI ScP ScP 19 51 17.1 +3.7
KMI S S 19 51 26.0 +2.7
KMI ScS ScS 19 55 26.0 +2.0
KMI pmax pmax
comp=Z,760nm,1.0s
KMI pmax pmax
comp=Z,3µm,4.5s
KMI **Kunming** 37.46 330 P P 19 46 15.4 +2.7
SSE **Sheshan** 38.15 358 P P 19 46 19.9 +1.9
SSE S S 19 51 38.1 +5.3
SSE pmax pmax

comp=Z,140nm,0.8s
SSE pmax pmax
comp=Z,270nm,7.0s
SSE Sheshan 38.15 358 P P 19 46 19.4 +1.4
MILA Mila 38.36 145 P P 19 46 21.0 +1.3
baz=38,SNR=22
WHN Wuhan 38.37 349⇑ *i*P P 19 46 20.5 +0.7
WHN pP **pP** 19 47 55.8 +1.9
WHN ScP **ScP** 19 51 18.8 +2.3
WHN S **S** 19 51 36.8 +0.7
WHN ScS **ScS** 19 55 29.3 +0.7
WHN pmax pmax
comp=Z,270nm,1.0s
PATS Pohnpei 38.44 69 P **P** 19 46 21.9 +1.2
baz=38,SNR=34
PATS Pohnpei 38.44 69 P **P** 19 46 20.4 -0.3
PATS Pohnpei 38.44 69 P **P** 19 46 21.8 +1.2
PZH PanZhiHua 39.10 330 ⇑P **P** 19 46 27.0 +1.1
PZH pP **pP** 19 48 04.8 +3.7
PZH PP **PP** 19 48 15.8 +3.1
PZH S **S** 19 51 46.6 -0.6
PZH ScS **ScS** 19 55 34.1 +0.7
PZH pmax pmax
comp=Z,440nm,1.1s
PZH pmax pmax
comp=Z,2μm,4.8s
CBIJ Chichi jima 39.15 29 P **P** 19 46 25.9 -0.2
JCJ Chichijima 39.15 29 P **P** 19 46 25.6 -0.6
comp=Z,3μm,0.7s,baz=233,slow=2.4,SNR=109
JCJ S **S** 19 51 43.1 -4.5
comp=Z,851nm,1.0s,baz=288,slow=19,SNR=13
JCJ ScS **ScS** 19 55 28.2 -5.2
comp=Z,93nm,0.8s,baz=316,slow=24,SNR=7.2
comp=Z,3μm,0.7s
JCJ Chichijima 39.15 29 P **P** 19 46 25.1 -1.1
JCJ Chichijima 39.15 29 P **P** 19 46 26.7 +0.5
NJ2 Nanjing 39.24 355⇓ *i*P **P** 19 46 27.3 +0.6
NJ2 ScP **ScP** 19 51 21.3 +1.5
NJ2 S **S** 19 51 49.1 +0.4
NJ2 ScS **ScS** 19 55 35.1 +1.4
NJ2 pmax pmax
comp=Z,160nm,1.0s
JSU Suzuyama 39.30 11 P **P** 19 46 26.6 -0.7
JSU IAmb IAmb 19 46 29.2
comp=Z,355nm,0.9s
ENH Enshi 39.33 342 P **P** 19 46 26.6 -1.0
ENH IAmb IAmb 19 46 30.4
comp=Z,324nm,0.8s
ENH Enshi 39.33 342 P **P** 19 46 27.8 +0.2
ENH pP **pP** 19 48 00.9 -1.7
ENH ScP **ScP** 19 51 21.9 +1.7
CORO Coronation Par 40.52 151 P **P** 19 46 37.7 +0.8
GLAD Gladstone 40.59 150 P **P** 19 46 39.1 +1.6
MOO Moorlands 41.31 152 P **P** 19 46 45.1 +1.9
baz=41,SNR=12
MOO Moorlands 41.31 152 P **P** 19 46 44.0 +0.8
TAU Tasmania Unive 41.73 152 P **P** 19 46 46.5 0.0
TAU Tasmania Unive 41.73 152 P **P** 19 46 46.5 0.0
TAU pmax pmax
comp=Z,68nm,0.8s
TAU Tasmania Unive 41.73 152 P **P** 19 46 48.0 +1.5
TAU Tasmania Unive 41.73 152 P **P** 19 46 47.6 +1.1
TAU pP **pP** 19 48 23.2 +0.7
TAU ScP **ScP** 19 51 28.7 -0.8
LHI Lord Howe Isla 41.83 130 P **P** 19 46 49.6 +2.1
baz=42,SNR=8.9
LHI Lord Howe Isla 41.83 130 P **P** 19 46 48.5 +1.0
LHI IAmb IAmb 19 46 50.2
comp=Z,259nm,0.8s
LHI Lord Howe Isla 41.83 130 P **P** 19 46 49.7 +2.2
CD2 Chengdu 41.95 336 ⇑P **P** 19 46 49.1 +0.6
CD2 PP **PP** 19 48 41.6 +2.4
CD2 S **S** 19 52 26.8 -1.5
CD2 SS **ScS** 19 55 49.0 -1.5
CD2 pmax pmax
comp=Z,920nm,0.9s
CD2 pmax pmax
comp=Z,940nm,3.2s
JTU Tsushima 42.08 9 IAmb IAmb 19 46 51.7
comp=Z,289nm,0.9s
JMN Monobe 42.19 14 P **P** 19 46 50.1 -0.1
JMN IAmb IAmb 19 46 53.3
comp=Z,748nm,0.9s
JMN Monobe 42.19 14 P **P** 19 46 50.5 +0.2
BRDH Bariadhala 42.34 315 P **P** 19 46 53.9 +2.3
comp=Z,0.9nm,0.5s,baz=85,slow=24,SNR=45
BRDH S **S** 19 52 35.3 +1.2
comp=Z,1.0nm,0.6s,baz=5.5,slow=24,SNR=8.8
KOUNC Koumac, New Ca 42.59 112 P **P** 19 46 53.6 0.0
KOUNC IAmb IAmb 19 46 55.9
comp=Z,402nm,1.2s
KOUNC Koumac, New Ca 42.59 112 P **P** 19 46 54.9 +1.2
LYN LuoYang 42.63 348⇑ *i*P **P** 19 46 53.3 -0.4
LYN pP PcP 19 48 34.3 +0.8
LYN PP **PP** 19 48 46.8 +1.5
LYN ScP **ScP** 19 51 35.3 +2.0
LYN S **S** 19 52 36.4 -1.5
LYN pmax pmax
comp=Z,90nm,1.4s
NAWB Namwon 42.71 6 IAmb IAmb 19 46 57.5
comp=Z,282nm,1.0s
KSBUS Busan 42.75 8 IAmb IAmb 19 46 56.8
comp=Z,314nm,0.8s
KOHI KOHIMA 42.80 321 *e*P **P** 19 46 54.9 -0.5
KOHI IAmb IAmb 19 46 57.5
comp=Z,1μm,0.4s
BELO BELONIA 42.85 316 IAmb IAmb 19 47 03.0
comp=Z,76μm,0.2s
LKP Lekhapani 42.95 324 *e*P **P** 19 46 56.8 +0.5
LKP IAmb IAmb 19 46 57.6
comp=Z,1μm,1.1s
MOKO MOKOCHONG 42.99 322 *e*P **P** 19 46 57.3 +0.5
MOKO IAmb IAmb 19 46 58.8
comp=Z,4μm,1.3s
XAN Xi'an 43.02 343⇓ P **P** 19 46 56.3 -0.5
XAN pP PcP 19 48 36.3 +1.4
XAN ScP **ScP** 19 51 37.6 +2.6
XAN S **S** 19 52 39.9 -3.6
XAN ScS **ScS** 19 55 58.1 +1.0
XAN pmax pmax
comp=Z,250nm,1.3s
XAN Xi'an 43.02 343 P **P** 19 46 56.4 -0.5
XAN pP **PcP** 19 48 36.2 +1.3
XAN ScP **ScP** 19 51 37.2 +2.2
JHS Saijyo 43.22 13 P **P** 19 46 58.5 +0.2
AGT Agartala 43.41 316 *e*P **P** 19 47 02.1 +2.1
AGT IAmb IAmb 19 47 04.0
comp=Z,2μm,0.8s
JHJ Hachijo jima 2 43.41 21 P **P** 19 46 59.5 -0.3
comp=Z,597nm,0.7s,baz=197,slow=9.8,SNR=21
JHJ ScP **ScP** 19 51 38.2 +1.7
comp=Z,152nm,0.7s,baz=188,slow=1.5,SNR=4.3
JHJ S **S** 19 52 48.2 -0.8
comp=Z,156nm,1.0s,baz=274,slow=21,SNR=1.7
comp=Z,597nm,0.7s
JHJ2 Mitsune 43.42 21 P **P** 19 46 59.0 -0.9
JORH JORHAT 43.45 322 *e*P **P** 19 47 00.9 +0.7
JORH IAmb IAmb 19 47 03.4
comp=Z,5μm,0.2s
TIA Tai'an 43.52 354 P **P** 19 46 59.6 -1.0
TIA S **S** 19 52 49.1 -1.4
TIA ScS **ScS** 19 56 01.8 +1.7
JIE Ise 43.57 17 P **P** 19 47 01.4 +0.3
DIBR DIBRUGARH 43.59 323 *e*P **P** 19 47 01.8 +0.4
TJN Taejon 43.65 6 P **P** 19 47 01.3 -0.3
TJN IAmb IAmb 19 47 04.4
comp=Z,748nm,0.9s
TJN Taejon 43.65 6 *d i*P **P** 19 47 02.4 +0.8
TJN Taejon 43.65 6 P **P** 19 47 03.2 +1.6
PALK Pallekele 44.04 288 P **P** 19 47 05.3 +0.2
comp=Z,421nm,1.0s,baz=204,slow=7.4,SNR=72
PALK PcP **PcP** 19 48 40.4 +1.6
comp=Z,111nm,0.8s,baz=155,slow=4.9,SNR=4.2
PALK ScP **ScP** 19 51 42.2 +2.6
comp=Z,108nm,1.0s,baz=212,slow=4.3,SNR=8.2
comp=Z,421nm,1.0s
PALK Pallekele 44.04 288 P **P** 19 47 04.4 -0.7
PALK IAmb IAmb 19 47 07.4
comp=Z,677nm,1.1s
PALK Pallekele 44.04 288 *c i*P **P** 19 47 05.2 +0.1
PALK pmax pmax
comp=Z,671nm,1.1s
PALK Pallekele 44.04 288 P **P** 19 47 05.7 +0.6
PALK Pallekele 44.04 288 P **P** 19 47 05.7 +0.6
PALK Pallekele 44.04 288 P **P** 19 47 05.3 +0.2
PALK pP **pP** 19 48 40.8 -1.8
PALK ScP **ScP** 19 51 42.2 +2.6
JWT Wachi 44.05 15 P **P** 19 47 05.0 +0.3
ITAN ITANAGAR 44.07 322 *e*P **P** 19 47 05.7 +0.7
ITAN IAmb IAmb 19 47 07.8
comp=Z,1μm,1.0s
SHL Shillong 44.12 319 P **P** 19 47 05.6 -0.1
SHL Shillong 44.12 319 P **P** 19 47 05.6 -0.1
SHL pmax pmax
comp=Z,873nm,0.8s
SHL Shillong 44.12 319 P **P** 19 47 05.7 +0.1
SNR=192
SHL Shillong 44.12 319 P **P** 19 47 05.7 +0.1
SNR=192
SHL Shillong 44.12 319 *e*P **P** 19 47 05.5 -0.2
SHL IAmb IAmb 19 47 07.7
comp=Z,794nm,0.9s
KSCHJ Chungju 44.20 6 P **P** 19 47 06.1 +0.2
TEZP TEZPUR 44.26 321 *e*P **P** 19 47 06.6 +0.1
TEZP IAmb IAmb 19 47 08.7
comp=Z,482nm,0.6s
ZIRO ZIRO 44.27 323 *e*P **P** 19 47 07.5 +0.6
ZIRO IAmb IAmb 19 47 08.9
comp=Z,356nm,0.6s
INU Inuyama 44.56 17 IAmb IAmb 19 47 11.3
comp=Z,400nm,1.1s
INU Inuyama 44.56 17 P **P** 19 47 09.5 +0.8
INU Inuyama 44.56 17 P **P** 19 47 09.4 +0.8
INU ScP **ScP** 19 51 42.1 +0.9
GUWA GUWAHATI 44.67 319 *e*P **P** 19 47 10.0 +0.3
GUWA IAmb IAmb 19 47 12.1
comp=Z,1μm,0.6s
INCN Inchon 44.68 5 P **P** 19 47 10.6 +1.0
comp=Z,97nm,1.2s
INCN Inchon 44.68 5 P **P** 19 47 10.6 +1.0
INCN ScP **ScP** 19 51 43.3 +1.7
NOUC Port Laguerre 44.76 114 P **P** 19 47 11.6 +1.1
NOUC Port Laguerre 44.76 114 P **P** 19 47 11.1 +0.7
NOUC pP **pP** 19 48 51.2 +3.2
NOUC ScP **ScP** 19 51 42.8 +0.4
KSAR Wonju Array Be 44.76 6 P **P** 19 47 10.3 +0.1
KSAR Wonju Array Be 44.76 6 P **P** 19 47 10.3 +0.1
KSRS Korea Array 44.77 6 P **P** 19 47 10.2 0.0
comp=Z,124nm,0.9s,baz=182,slow=8.1,SNR=188
KSRS PcP **PcP** 19 48 42.5 +1.7
comp=Z,29nm,0.7s,baz=186,slow=3.2,SNR=9.6
KSRS ScP **ScP** 19 51 44.0 +2.1
comp=Z,86nm,0.9s,baz=184,slow=3.4,SNR=15
comp=Z,124nm,0.9s
KS19 Wonju Array Si 44.82 6 P **P** 19 47 10.7 +0.1
DZM Mont Dzumac 44.88 114 S **S** 19 53 11.2 +0.8
comp=Z,20nm,1.0s,baz=141,slow=20,SNR=9.2
DZM Mont Dzumac 44.88 114 *e*P **P** 19 47 11.5 0.0
comp=Z,980nm,1.2s
DZM *e*pP **pP** 19 48 47.4 -1.7
comp=Z,245nm,21.5s
DZM *e*S **S** 19 53 11.2 +0.8
comp=Z,1μm,31.1s
DZM *e*SS **SS** 19 56 43.2 +0.7
comp=Z,3μm,27.3s
DZM *e*LR LR 20 00 30.5
comp=Z,2μm,27.3s
DZM Mont Dzumac 44.88 114 P **P** 19 47 11.4 -0.1
DZM IAmb IAmb 19 47 14.1
comp=Z,713nm,1.3s
DZM **S** 19 53 07.3 -3.1
DZM Mont Dzumac 44.88 114 P **P** 19 47 12.9 +1.3
DZM Mont Dzumac 44.88 114 P **P** 19 47 12.8 +1.3
DZM pP **pP** 19 48 52.7 +3.6
DZM ScP **ScP** 19 51 43.5 +0.5
JGF Kuroka 44.89 17 P **P** 19 47 10.9 -0.4
JGF IAmb IAmb 19 47 14.6
comp=Z,348nm,1.0s
JGF Kuroka 44.89 17 P **P** 19 47 10.9 -0.4
ONTNC Ouen Toro 44.94 114 IAmb IAmb 19 47 14.2
comp=Z,666nm,1.0s
ONTNC Ouen Toro 44.94 114 P **P** 19 47 12.9 +1.1
HNS HongShan 45.01 351⇓ P **P** 19 47 11.4 -0.6
HNS PP **PP** 19 49 07.4 +0.5
HNS ScP **ScP** 19 51 44.9 +1.9
HNS S **S** 19 53 08.5 -2.9
HNS ScS **ScS** 19 56 10.8 +1.2
HNS pmax pmax
comp=Z,94nm,1.3s
JOD2 Odawara 2 45.12 19 P **P** 19 47 13.3 +0.3
HJU Haeju 45.17 4 P **P** 19 47 13.1 -0.2
HJU S **S** 19 53 10.3 -3.4
HJU AmB
comp=Z,351nm,1.7s
HJU AMS AMS
comp=N,851nm,2.1s
HJU AMS AMS
comp=E,2μm,4.1s
HJU AMS AMS
comp=Z,1μm,3.0s
BWNR Bhubaneshwar 45.23 308 *e*P **P** 19 47 14.8 +0.7
YATNC Mamie plateau, 45.28 114 P **P** 19 47 16.9 +2.4
OUENC Ouen Island, N 45.31 114 IAmb IAmb 19 47 17.6
comp=Z,643nm,1.0s
OUENC Ouen Island, N 45.31 114 P **P** 19 47 16.6 +1.9
JGN Niukaw 45.46 17 P **P** 19 47 15.4 -0.2
SEHB SEOHWA 45.62 6 P **P** 19 47 16.6 -0.1
TIY Taiyuan 45.70 349⇑ *i*P **P** 19 47 17.5 0.0
TIY S **S** 19 53 17.3 -4.0
TIY ScS **ScS** 19 56 15.8 +1.5
TIY pmax pmax
comp=Z,54nm,0.6s
JRY Ryogami san 45.75 19 P **P** 19 47 17.0 -0.8
DVP Devils Point 45.76 108 P **P** 19 47 20.0 +1.8
VIS Vishakhapatnam 45.90 303 *e*P **P** 19 47 15.1 -4.1
VIS IAmb IAmb 19 47 20.8
comp=Z,350nm,1.0s
PINNC Pines Island, 45.90 114 P **P** 19 47 21.4 +2.2
DL2 Dalian 45.93 359 P **P** 19 47 18.3 -0.8
DL2 PcP **PcP** 19 48 46.6 +1.7
DL2 PP **PP** 19 49 16.3 +1.0
DL2 sP **sP** 19 49 53.6 -3.5
DL2 ScP **ScP** 19 51 48.6 +1.8
DL2 S **S** 19 53 19.8 -4.5
DL2 pmax pmax
comp=Z,130nm,1.2s
DL2 pmax pmax
comp=Z,480nm,3.5s
RTV Rentapao 46.00 108 P **P** 19 47 21.1 +1.1
MAJO Matsushiro 46.02 18 P **P** 19 47 19.0 -0.8
MAJO IAmb IAmb 19 47 21.9
comp=Z,846nm,0.9s
MAJO Matsushiro 46.02 18 *d i*P **P** 19 47 19.1 -0.8
MAJO pmax pmax
comp=Z,775nm,1.0s
MAJO Matsushiro 46.02 18 P **P** 19 47 20.1 +0.3
MAJO Matsushiro 46.02 18 P **P** 19 47 19.2 -0.7
MAJO ScP **ScP** 19 51 47.7 +0.4
MAT Matsushiro 46.02 18 P **P** 19 47 19.1 -0.8
MJAR Matsushiro Arr 46.02 18 P **P** 19 47 18.3 -1.5
comp=Z,559nm,0.9s,baz=183,slow=8.8,SNR=210
MJAR ScP **ScP** 19 51 48.4 +1.1
comp=Z,80nm,0.8s,baz=176,slow=5.5,SNR=10
MJAR S **S** 19 53 24.2 -1.5
comp=Z,29nm,0.9s,baz=202,slow=14,SNR=6.6
comp=Z,559nm,0.9s
MARNC Mare, Loyalty 46.20 113 P **P** 19 47 23.4 +1.9
JYT Yasato 46.37 20 IAmb IAmb 19 47 25.4
comp=Z,664nm,0.9s
LZH Lanzhou 46.52 339 *e*P **P** 19 47 25.1 +1.3
LZH PcP **PcP** 19 48 48.9 +1.6
LZH pP pP 19 49 05.9 +3.0
LZH PP **PP** 19 49 19.0 -1.9
LZH ScP **ScP** 19 51 52.3 +2.7
LZH S **S** 19 53 34.3 +1.3
LZH ScS **ScS** 19 56 21.8 +1.8
LZH pmax pmax
comp=Z,900nm,1.1s
LZH pmax pmax
comp=Z,2μm,5.5s
RAGD RAYAGADA 46.55 305 *e*P **P** 19 47 25.3 +1.1
SUJ Sinuiju 47.16 2 P **P** 19 47 27.5 -0.8
SUJ S **S** 19 53 37.1 -4.3
SUJ AmB
comp=Z,443nm,1.5s
SUJ AMS AMS
comp=N,552nm,4.9s
SUJ AMS AMS
comp=E,410nm,3.6s
SUJ AMS AMS
comp=Z,244nm,2.2s
BOK Bokaro 47.17 312 *e*P **P** 19 47 29.6 +0.8
HHU Hamhung 47.18 5 P **P** 19 47 28.5 0.0
HHU S **S** 19 53 41.0 -0.7
HHU AmB
comp=Z,559nm,1.5s
HHU AMS AMS
comp=N,375nm,5.2s
HHU AMS AMS
comp=E,571nm,8.0s
HHU AMS AMS
comp=Z,316nm,4.4s
SLGI Shiliguri 47.18 317 *e*P **P** 19 47 30.4 +1.6
BJT Baijiatuau 47.39 353 P **P** 19 47 29.8 -0.3
BJT Baijiatuau 47.39 353 P **P** 19 47 29.8 -0.3
BJT pmax pmax
comp=Z,97nm,0.7s
BJT Baijiatuau 47.39 353 P **P** 19 47 29.5 -0.6
BJT ScP **ScP** 19 51 54.8 +1.8
BJI Beijing 47.41 353 P **P** 19 47 29.8 -0.4
BJI PcP **PcP** 19 48 52.1 +2.0
BJI PcS **PcS** 19 52 48.3 +1.9
BJI S **S** 19 53 42.8 -2.1
BJI ScS **ScS** 19 56 25.8 +0.4
BJI pmax pmax
comp=Z,140nm,0.7s
JSD Sado 47.42 17 P **P** 19 47 30.2 -0.1
GTK Tadong 47.47 318 *e*P **P** 19 47 31.9 +0.8
LSA Lhasa 47.48 322 Pn **P** 19 47 33.1 +1.5
LSA smax smax
comp=N,95nm,0.8s
LSA smax smax
comp=E,180nm,1.0s
LSA Lhasa 47.48 322 P **P** 19 47 33.0 +1.5
LSA Lhasa 47.48 322 P **P** 19 47 33.1 +1.5
VJD Vijayawada 47.60 300 *e*P **P** 19 47 33.0 +0.9
JHSG JHARSUGUGA 47.62 308 *e*P **P** 19 47 33.3 +1.1
KWAJ Kwajalein Atol 47.78 71 P **P** 19 47 34.1 +0.6
KWAJ IAmb IAmb 19 47 35.2
comp=Z,419nm,0.8s
KWAJ Kwajalein Atol 47.78 71 P **P** 19 47 34.1 +0.6
KWAJ pmax pmax
comp=Z,419nm,0.9s
KWAJ Kwajalein Atol 47.78 71 P **P** 19 47 35.0 +1.5
SALM Salem 47.83 293 *e*P **P** 19 47 34.9 +1.0
NFK Norfolk Island 47.99 123 P **P** 19 47 36.8 +2.0
baz=48,SNR=3.7
NFK Norfolk Island 47.99 123 P **P** 19 47 36.5 +1.7
ODAN Odare 47.99 316 *e*P **P** 19 47 35.7 +0.6
KOD Kodaikanal 48.02 291 *e*P **P** 19 47 35.8 +0.2
JMM Marumori 48.05 20 P **P** 19 47 35.6 +0.5
TAPN Taplejung 48.08 317 *e*P **P** 19 47 36.7 +0.8
JYA Atsumi 48.37 18 P **P** 19 47 38.2 +0.8
RAMN Ramite 48.59 316 *e*P **P** 19 47 40.7 +1.1
comp=Z,3μm,0.7s
SNY Shenyang 48.86 1⇓ P **P** 19 47 40.0 -1.0
SNY S **S** 19 54 02.6 -2.1
SNY ScS **ScS** 19 56 35.6 +0.5
SNY SS **SS** 19 57 44.9 +0.1
SNY pmax pmax
comp=Z,790nm,3.5s
BTO Baotou 48.98 347 *e*P **P** 19 47 43.3 +1.2
BTO S **S** 19 54 06.6 0.0
BLSP Bilaspur 49.10 308 *e*P **P** 19 47 42.9 -0.3
PCHI Peechi 49.16 291⇑ *e*P **P** 19 47 43.9 +0.2
PCHI *e*S **S** 19 54 07.1 -2.6
JIRN Jiri 49.32 316 *e*P **P** 19 47 45.7 +0.5
H08S2 Diego Garcia H 49.49 266 P **P** 19 47 47.2 +1.3
baz=48,slow=8.9,SNR=122
H08S3 Diego Garcia H 49.50 266 P **P** 19 47 46.8 +0.9
baz=48,slow=8.9,SNR=50
H08S1 Diego Garcia H 49.50 266 P **P** 19 47 47.6 +1.6
baz=48,slow=8.9,SNR=85
DGAR Diego Garcia 49.54 266 P **P** 19 47 47.5 +0.9
DGAR Diego Garcia 49.54 266 *c i*P **P** 19 47 48.2 +1.7
DGAR pmax pmax
comp=Z,3μm,1.0s
DGAR Diego Garcia 49.54 266 P **P** 19 47 48.4 +1.8
DGAR Diego Garcia 49.54 266 P **P** 19 47 48.4 +1.8
DGAR Diego Garcia 49.54 266 P **P** 19 47 48.3 +1.7
JOM Ohasama 49.67 19 P **P** 19 47 47.3 +0.2
GUN Gumba 49.69 316 *e*P **P** 19 47 48.6 +0.7
comp=Z,3μm,0.5s
HYBB Hyderabad (bro 49.80 300 *e*P **P** 19 47 48.1 -0.4
HYBB IVmB_BB 19 47 49.8
comp=Z,6μm,1.5s
HYBB *es*P **sP** 19 50 27.4 -0.9
HYBB *e*ScP **ScP** 19 52 03.3 -0.5
HYBB ⇓ *e*PcS **PcS** 19 52 56.9 -0.8
HYBB *e*S **S** 19 54 16.7 -1.7
PKI Pulchoki 49.80 316 *e*P **P** 19 47 49.0 +0.3
comp=Z,791nm,0.4s
PKIN Phulchoki 49.81 316 *e*P **P** 19 47 48.9 +0.2
comp=Z,951nm,0.4s
KAAM Kaadhehdhoo 49.90 277 P **P** 19 47 49.9 +0.7
KAAM IAmb IAmb 19 47 52.6
comp=Z,1μm,1.1s
KAAM Kaadhehdhoo 49.90 277 P **P** 19 47 50.8 +1.6
SNR=5.5
KAAM Kaadhehdhoo 49.90 277 P **P** 19 47 50.8 +1.6
SNR=5.5
KKN Kakani 50.03 316 *e*P **P** 19 47 50.6 +0.4
DMN Daman 50.03 315 *e*P **P** 19 47 50.8 +0.5
VAR Varanasi 50.17 312 *e*P **P** 19 47 51.0 0.0
MSHR Mys Shultsa 50.23 8 *de*P **P** 19 47 51.2 +0.1
MSHR pmax pmax
comp=Z,336nm,0.9s
GOMU GeErMu 50.41 331 P **P** 19 47 52.0 -1.0
GOMU S **S** 19 54 27.4 +0.6
GOMU ScS **ScS** 19 56 45.3 -1.6
GKN Gorkha 50.60 315 *e*P **P** 19 47 54.9 +0.6
comp=Z,838nm,0.4s
H11S3 WAKE ISLAND Hy 50.61 59 P **P** 19 47 55.2 +1.1
baz=236,slow=5.8,SNR=14
H11S2 WAKE ISLAND Hy 50.62 59 P **P** 19 47 55.3 +1.1
baz=236,slow=5.8,SNR=16
H11S1 WAKE ISLAND Hy 50.62 59 P **P** 19 47 55.4 +1.2
baz=236,slow=5.8,SNR=16
AIS Amsterdam Isla 50.67 226 P **P** 19 47 55.5 +1.0
AIS IAmb IAmb 19 47 58.5
comp=Z,617nm,1.0s
AIS Amsterdam Isla 50.67 226 P **P** 19 47 56.9 +2.4
VLK Valmikinagar 50.73 314 *e*P **P** 19 47 56.4 +1.4
JTM Tenmabayashi 50.80 18 P **P** 19 47 55.5 +0.2
JTM S **S** 19 54 28.9 -2.1
VLA Vladivostok 50.87 9 *d i*P **P** 19 47 53.2 -2.5
VLA pmax pmax
comp=Z,532nm,1.1s
CN2 Changchun 50.89 3 *e*P **P** 19 47 55.3 -0.6
CN2 ScP **ScP** 19 52 09.8 +1.9
CN2 S **S** 19 54 27.8 -4.4
CN2 ScS **ScS** 19 56 49.4 +0.3
CN2 pmax pmax
comp=Z,60nm,1.1s
CN2 pmax pmax
comp=Z,400nm,7.0s
WAKE Wake Island 50.93 58 P **P** 19 47 56.7 +0.1
WAKE IAmb IAmb 19 47 58.8
comp=Z,1μm,1.2s
WAKE Wake Island 50.93 58 P **P** 19 47 58.1 +1.5
WAKE Wake Island 50.93 58 P **P** 19 47 57.5 +0.9
GTA Gaotai 50.94 337⇓ P **P** 19 47 57.1 +0.6
GTA PcP **PcP** 19 49 00.5 -2.9
GTA sP sP 19 50 39.6 +2.3
GTA ScP **ScP** 19 52 10.8 +2.4
GTA S **S** 19 54 33.8 +0.5
GTA ScS **ScS** 19 56 50.6 +0.6
GTA pmax pmax
comp=Z,370nm,0.9s
GTA pmax pmax
comp=Z,1μm,9.8s
ALBI Allahabad 51.08 311 *e*P **P** 19 47 58.0 +0.4
NGP Nagpur 51.09 305 *e*P **P** 19 47 57.6 -0.1
TARA Tarawa 51.10 82 P **P** 19 47 58.5 +0.5
TARA IAmb IAmb 19 48 00.0
comp=Z,539nm,0.9s
TARA Tarawa 51.10 82 P **P** 19 47 59.3 +1.3
TARA Tarawa 51.10 82 P **P** 19 47 58.8 +0.8
XLT XiLinHaoTe 51.24 354⇓ *i*P **P** 19 47 58.3 -0.3
XLT PcP **PcP** 19 49 01.1 -3.3
XLT pP pP 19 49 38.5 -2.2

XLT PP **PP** 19 50 05.6 +2.5
XLT sP sP 19 50 36.1 -3.4
XLT ScP **ScP** 19 52 11.5 +2.0
XLT PcS **PcS** 19 52 57.9 -5.2
XLT S **S** 19 54 32.5 -4.6
XLT ScS **ScS** 19 56 52.5 +0.7
XLT sS sS 19 57 41.0 +0.9
XLT pmax pmax
comp=Z,120nm,0.9s
H11N1 WAKE ISLAND Hy 51.32 58 P **P** 19 48 00.7 +1.4
baz=240,slow=9.5,SNR=65
H11N2 WAKE ISLAND Hy 51.34 58 P **P** 19 48 00.9 +1.5
baz=240,slow=9.5,SNR=54
H11N3 WAKE ISLAND Hy 51.34 58 P **P** 19 48 00.9 +1.5
baz=240,slow=9.5,SNR=102
MNGI Mangalore 51.37 293 *e*P **P** 19 48 00.5 +0.6
DANN Dangsing 51.43 315 *e*P **P** 19 48 01.0 +0.5
comp=Z,2μm,0.6s
MNCI Minicoy 51.57 287 P **P** 19 48 02.1 +0.7
MNCI IAmb IAmb 19 48 06.3
comp=Z,1μm,1.1s
MNCY Minicoy 51.59 286 *e*P **P** 19 48 02.2 +0.6
USRK Ussuriysk Ar. 51.94 9 P **P** 19 48 03.5 0.0
comp=Z,360nm,0.7s,baz=192,slow=7.5,SNR=318
USRK ScP **ScP** 19 52 14.0 +1.6
comp=Z,69nm,0.9s,baz=211,slow=3.3,SNR=12
USRK S **S** 19 54 41.7 -4.6
comp=Z,24nm,1.0s,baz=187,slow=11,SNR=5.0
USRK PKPPKP **P'P'df** 20 18 29.7 +3.4
comp=Z,3.3nm,0.7s,baz=6.3,slow=6.1,SNR=5.5
comp=Z,360nm,0.7s
MDJ Mudanjiang 52.04 6 IAmb IAmb 19 48 07.2
comp=Z,713nm,0.9s
MDJ Mudanjiang 52.04 6 P **P** 19 48 05.2 +1.0
MDJ Mudanjiang 52.04 6 P **P** 19 48 04.4 +0.2
MDJ ScP **ScP** 19 52 13.6 +0.8
BRCI Bahraich 52.52 313 *e*P **P** 19 48 09.0 +1.1
AKL Akola 52.56 303⇑*i*P **P** 19 48 08.3 -0.1
ERM Erimo 52.57 19 P **P** 19 48 08.3 +0.2
ERM IAmb IAmb 19 48 11.2
comp=Z,377nm,0.8s
ERM Erimo 52.57 19*d i*P **P** 19 48 09.6 +1.6
ERM pmax pmax
comp=Z,381nm,0.9s
ERM Erimo 52.57 19 P **P** 19 48 10.9 +2.9
ERM Erimo 52.57 19 P **P** 19 48 10.0 +2.0
JEM Erimo 52.58 19 P **P** 19 48 09.5 +1.5
JEW Eniwo 52.78 18 IAmb IAmb 19 48 12.6
comp=Z,1μm,1.1s
BNX BinXian 52.95 4 ⇑P **P** 19 48 10.3 -0.3
BNX S **S** 19 54 59.3 -0.3
BNX pmax pmax
comp=Z,94nm,1.4s
BNX pmax pmax
comp=Z,700nm,7.8s
GOA Goa 53.18 295 *e*P **P** 19 48 13.6 +0.7
GOA IAmb IAmb 19 48 15.9
comp=Z,2μm,1.4s
BHPL Bhopal 53.41 306 *e*P **P** 19 48 13.2 -1.3
BHPL IAmb IAmb 19 48 14.0
comp=Z,529nm,1.1s
KAD Karad 53.55 298 *e*P **P** 19 48 15.4 -0.1
TEY Ternei 53.59 12⇓*e*P **P** 19 48 15.5 +0.3
TEY *e* 19 49 18.5
TEY pmax pmax
comp=E,20nm,1.7s
TEY pmax pmax
comp=N,240nm,0.9s
TEY pmax pmax
comp=Z,550nm,0.9s
TEY pmax pmax
comp=E,100nm,1.1s
TEY pmax pmax
comp=N,600nm,1.3s
TEY pmax pmax
comp=Z,1μm,1.3s
JHNI Jhansi 53.65 309 *e*P **P** 19 48 14.8 -1.3
DCZ Deep Cove 54.19 142 P **P** 19 48 19.6 +0.1
PYZ Puysegur Point 54.27 143 P **P** 19 48 20.7 +0.6
POO Poona 54.33 299 *e*P **P** 19 48 20.6 -0.4
JMP Maruseppu 54.43 18 P **P** 19 48 23.1 +1.9
LGTI Lohaghat 54.56 314 *e*P **P** 19 48 22.4 0.0
PTH Pithoragarh 54.64 314 *e*P **P** 19 48 22.8 -0.4
WHZ Wether Hill Ro 54.88 142 P **P** 19 48 24.1 -0.3
FOZ Fox Glacier 54.93 139 pP 19 50 07.5 -0.6
MSVF Nonsavu 55.12 106 P **P** 19 48 28.4 +1.7
comp=Z,737nm,0.7s,baz=256,slow=6.6,SNR=288
MSVF S **S** 19 55 31.7 +2.3
comp=Z,24nm,1.1s,baz=350,slow=23,SNR=12
comp=Z,737nm,0.7s
MSVF Nonsavu 55.12 106 P **P** 19 48 28.1 +1.4
MSVF IAmb IAmb 19 48 29.4
comp=Z,1μm,0.8s
MSVF Nonsavu 55.12 106*d i*P **P** 19 48 28.2 +1.5
MSVF pmax pmax
comp=Z,789nm,0.8s
MSVF Nonsavu 55.12 106 P **P** 19 48 28.7 +2.0
MSVF Nonsavu 55.12 106 P **P** 19 48 28.3 +1.7
YUK Yuzh-Kuril'sk 55.28 20*d i*P **P** 19 48 28.3 +1.2
MCQ Macquarie Isla 55.47 155 P **P** 19 48 30.1 +1.9
baz=56,SNR=4.4
LBZ Lake Benmore 55.55 140 P **P** 19 48 28.9 -0.3
LBZ **pP** 19 50 13.0 +0.3
QRZ Quartz Range 55.63 135 IAmb IAmb 19 48 32.6
comp=Z,464nm,1.1s
QRZ pP 19 50 12.7 -0.7
QRZ Quartz Range 55.63 135 P **P** 19 48 31.4 +1.7
QRZ Quartz Range 55.63 135 P **P** 19 48 31.5 +1.8
RPZ Rata Peaks 55.82 139 IAmb IAmb 19 48 32.8
comp=Z,826nm,0.8s
RPZ Rata Peaks 55.82 139 P **P** 19 48 32.1 +1.1
TKNZ Takaka Hill 56.01 135 P **P** 19 48 33.4 +1.1
BISR Bishrakh 56.12 312 *e*P **P** 19 48 32.6 -0.6
FUNA Funafuti 56.21 95 P **P** 19 48 33.6 -0.6
FUNA IAmb IAmb 19 48 36.5
comp=Z,1μm,1.1s
FUNA Funafuti 56.21 95 P **P** 19 48 35.7 +1.5
FUNA Funafuti 56.21 95 P **P** 19 48 35.2 +1.1
SONA Sohna 56.21 311 *e*P **P** 19 48 32.5 -1.4
THZ Tophouse 56.25 136 P **P** 19 48 33.9 -0.2
THZ IAmb IAmb 19 48 36.0
comp=Z,404nm,0.8s
OXZ Oxford 56.30 138 P **P** 19 48 33.3 -1.0
OXZ pP **pwP** 19 50 20.2 -0.8
HIA Hailar 56.34 358 P **P** 19 48 34.3 -0.1
HIA ScP **ScP** 19 52 33.4 +1.8
NDI New Delhi 56.34 311 *e*P **P** 19 48 33.6 -1.2
NNZ Nelson 56.37 135 P **P** 19 48 35.4 +0.6
ULN Ulaanbaatar 56.54 348 P **P** 19 48 36.2 +0.2
ULN Ulaanbaatar 56.54 348*d i*P **P** 19 48 36.1 +0.1
ULN pmax pmax
comp=Z,132nm,1.3s
ULN Ulaanbaatar 56.54 348 P **P** 19 48 36.6 +0.6
ULN Ulaanbaatar 56.54 348 P **P** 19 48 36.6 +0.6
ULN Ulaanbaatar 56.54 348 P **P** 19 48 36.3 +0.3
KUDL Kundal 56.60 311 *e*P **P** 19 48 35.5 -1.1
DDI Dehra Dun 56.62 314 *e*P **P** 19 48 36.4 -0.3
DDI IAmb IAmb 19 48 38.3
comp=Z,2μm,0.2s
SONM Songino Array 56.65 347 P **P** 19 48 36.8 +0.1
comp=Z,76nm,0.7s,baz=164,slow=8.3,SNR=336
SONM PcP **PcP** 19 49 26.3 +1.0
comp=Z,22nm,0.7s,baz=154,slow=4.8,SNR=3.5
SONM ScP **ScP** 19 52 34.9 +1.7
comp=Z,27nm,0.7s,baz=164,slow=4.3,SNR=4.6
SONM S **S** 19 55 48.2 0.0
comp=Z,15nm,1.1s,baz=170,slow=8.8,SNR=4.0
SONM PKPPKP **P'P'df** 20 18 22.5 +2.8
comp=Z,2.8nm,0.9s,baz=153,slow=1.1,SNR=4.3
comp=Z,76nm,0.7s
SONM Songino Array 56.65 347 P **P** 19 48 37.0 +0.2
DGTI Dogotuki 56.67 105 P **P** 19 48 38.9 +1.6
KLR Kul'dur 56.84 7 P **P** 19 48 37.6 -0.2
comp=Z,89nm,0.7s,baz=208,slow=4.1,SNR=174
KLR PcP **PcP** 19 49 27.2 +1.4
comp=Z,27nm,0.6s,baz=351,slow=1.0,SNR=4.5
KLR S **S** 19 55 49.8 -0.5
comp=Z,29nm,1.1s,baz=185,slow=5.3,SNR=9.0
comp=Z,89nm,0.7s
KLR Kul'dur 56.84 7*de*P **P** 19 48 37.5 -0.2
KLR pmax pmax
comp=Z,172nm,1.4s
MQZ McQueen's Vall 56.86 138 P **P** 19 48 38.6 +0.4
MQZ **pP** 19 50 22.1 -0.4

YSS Yuzh-Sakhalins 56.92 17 P **P** 19 48 38.5 +0.2
YSS IAmb IAmb 19 48 41.2
comp=Z,682nm,0.9s
YSS Yuzh-Sakhalins 56.92 17*αe*P **P** 19 48 38.8 +0.4
YSS *e* 19 49 24.0
YSS *e**PP **pP** 19 50 20.5 -1.7
YSS *e**SP **sP** 19 51 21.2 +1.3
YSS *e*S **S** 19 55 50.2 -1.1
YSS *e* 19 57 30.4
YSS *e*SS **SS** 19 59 49.0 -2.4
YSS pmax pmax
comp=Z,2μm,5.9s
YSS pmax pmax
comp=N,1μm,3.9s
YSS pmax pmax
comp=Z,720nm,0.9s
YSS smax smax
comp=N,3μm,5.6s
YSS smax smax
comp=E,2μm,5.3s
YSS smax smax
comp=N,60nm,1.2s
YSS smax smax
comp=E,50nm,1.6s
YSS Yuzh-Sakhalins 56.92 17 P **P** 19 48 39.9 +1.5
YSS Yuzh-Sakhalins 56.92 17 P **P** 19 48 39.3 +1.0
YSS pP **pP** 19 50 22.2 0.0
YSS ScP **ScP** 19 52 34.9 +0.7
TCW Tory Channel 57.00 135 P **P** 19 48 39.4 +0.3
TAVE Taveuni 57.02 105 P **P** 19 48 40.9 +1.2
comp=E,875nm,1.0s
AJM Ajmer 57.19 308⇑*i*P **P** 19 48 40.3 -0.4
AJM *ex* x 19 52 37.0
FWVZ Far West T-bar 57.23 132 P **P** 19 48 42.4 +1.3
FWVZ PcP **PcP** 19 49 27.8 -0.2
NNVZ North Ngauruho 57.24 132 P **P** 19 48 42.6 +1.6
KRVZ Karewarewa 57.24 132 P **P** 19 48 42.6 +1.6
NTVZ North Tongarir 57.27 132 P **P** 19 48 42.9 +1.7
TMVZ Te Maari 57.30 132 P **P** 19 48 42.9 +1.6
ETVZ East Tongariro 57.31 132 P **P** 19 48 42.7 +1.2
KKR Kurukshetra 57.32 313 *e*P **P** 19 48 41.9 +0.5
KIW Kapiti Island 57.32 134 P **P** 19 48 41.2 -0.1
SNZO South Karori 57.33 135 P **P** 19 48 40.9 -0.4
SNZO **pP** 19 50 25.6 -0.4
SNZO South Karori 57.33 135 P **P** 19 48 42.0 +0.6
SNZO South Karori 57.33 135 P **P** 19 48 41.0 -0.4
SNZO pP **pP** 19 50 26.0 -0.1
MOVZ Moawhango 57.43 132 P **P** 19 48 42.5 +0.3
OGWZ Otaki Gorge 57.49 134 P **P** 19 48 42.6 +0.1
CAW Cannon Point 57.52 135 P **P** 19 48 42.3 -0.3
SMLA Simla 57.70 314 *e*P **P** 19 48 44.1 +0.1
SMLA IAmb IAmb 19 48 47.5
comp=Z,1μm,0.7s
PLWZ Palliser 57.81 135 P **P** 19 48 43.9 -0.9
BKZ Black Stump Fm 57.89 132 P **P** 19 48 46.7 +1.4
URZ Urewera 58.07 131 P **P** 19 48 46.5 +0.1
comp=Z,462nm,0.8s
URZ S **S** 19 56 04.9 -1.6
comp=Z,32nm,1.0s,baz=32,slow=22,SNR=11
comp=Z,462nm,0.8s
URZ Urewera 58.07 131 IAmb IAmb 19 48 50.7
comp=Z,474nm,0.8s
LKBA Tubou, Lakemba 58.13 107 P **P** 19 48 47.8 +0.6
BFZ Birch Farm 58.21 134 P **P** 19 48 48.9 +1.5
BHK Bhakra 58.40 314⇑*i*P **P** 19 48 49.4 +0.6
ROCAM **Rodrigues Isla 58.49 251** P **P** 19 48 49.6 0.0
ROCAM **Rodrigues Isla 58.49 251** P **P** 19 48 50.9 +1.3
UGL Uglegorsk 58.68 15⇓*i*P **P** 19 48 52.7 +2.4
UGL *e*S **S** 19 56 14.1 +0.5
UGL pmax pmax
comp=Z,700nm,0.8s
UGL smax smax
comp=E,4μm,6.7s
UGL smax smax
comp=N,7μm,6.4s
MXZ Matakaoa Point 58.78 130 P **P** 19 48 51.9 +0.6
MXZ IAmb IAmb 19 48 53.0
comp=Z,402nm,0.6s
GRNR Gornyy 59.05 10⇓*i*P **P** 19 48 53.9 +1.1
GRNR *e*S **S** 19 56 19.2 +0.9
GRNR pmax pmax
comp=E,40nm,0.8s
GRNR pmax pmax
comp=N,290nm,1.1s
GRNR pmax pmax
comp=Z,690nm,0.9s
GRNR smax smax
comp=E,6.0nm,0.9s
GRNR MLR MLR
comp=E,410nm,12.0s
THN Thein Dam 59.45 314 *e*P **P** 19 48 55.8 0.0
CASY Casey 59.50 186 P **P** 19 48 55.1 -0.4
CASY Casey 59.50 186 P **P** 19 48 55.5 0.0
CIT Chita 59.53 354 *e*P **P** 19 48 57.0 +1.0
CIT *e* 19 49 36.0
CIT *e*S **S** 19 56 24.8 +0.4
CIT pmax pmax
comp=Z,177nm,1.6s
ZAK Zakamensk 59.76 346 *e*P **P** 19 48 57.6 0.0
ZAK pmax pmax
comp=Z,79nm,1.2s
ZAK pmax pmax
comp=Z,63nm,0.9s
WMQ Urumqi 59.76 331⇓P **P** 19 48 59.6 +1.8
WMQ PcP **PcP** 19 49 38.3 +0.5
WMQ S **S** 19 56 29.9 +2.2
WMQ ScS **ScS** 19 57 54.1 +0.2
WMQ pmax pmax
comp=Z,670nm,1.1s
WMQ Urumqi 59.76 331 P **P** 19 48 59.2 +1.4
JMU Jammu 60.18 314 *e*P **P** 19 49 02.0 +1.3
JASL Jaisalmer 60.35 306 *e*P **P** 19 49 01.9 0.0
TYV Tymovskoe 60.47 15 *e*P **P** 19 49 04.5 +2.3
TYV *e*S **S** 19 56 37.4 +1.4
TYV pmax pmax
comp=Z,314nm,0.9s
TYV pmax pmax
comp=Z,2μm,4.0s
TYV smax smax
comp=N,63nm,1.7s
TYV smax smax
comp=E,22nm,1.7s
TYV smax smax
comp=N,3μm,7.6s
TYV smax smax
comp=E,2μm,7.6s
PAF Port-aux-Franc 60.49 216 P **P** 19 49 02.6 +0.2
PAF Port-aux-Franc 60.49 216 P **P** 19 49 02.7 +0.2
PAF pmax pmax
comp=Z,232nm,1.0s
DRV Dumont d'Urvil 60.54 172 P **P** 19 49 02.2 -0.2
ZEA Zeya 60.90 3*de*P **P** 19 49 05.6 +0.6
ZEA *e* 19 51 24.9
ZEA *e**SP **sP** 19 51 50.9 +1.6
ZEA *e*S **S** 19 56 41.2 -0.1
ZEA *e* 19 58 02.3
ZEA *e*SS **SS** 20 00 51.1 -2.3
ZEA pmax pmax
comp=E,100nm,1.5s
ZEA pmax pmax
comp=N,300nm,1.1s
ZEA pmax pmax
comp=Z,600nm,1.1s
ZEA pmax pmax
comp=N,200nm,1.0s
ZEA pmax pmax
comp=Z,390nm,0.9s
ZEA pmax pmax
comp=E,100nm,3.8s
ZEA pmax pmax
comp=N,100nm,3.4s
ZEA pmax pmax
comp=Z,200nm,3.1s
ZEA smax smax
comp=Z,400nm,4.2s
ZEA smax smax
comp=N,1μm,4.3s
ZEA smax smax
comp=E,2μm,4.7s
IRK Irkutsk 61.27 347 *e*P **P** 19 49 07.8 +0.4
IRK *e*S **S** 19 56 46.4 +0.5
IRK *e* 19 58 02.6
IRK pmax pmax
comp=Z,168nm,2.1s

MOY Mondy 61.51 345 *e*P **P** 19 49 09.6 +0.4
MOY pmax pmax
comp=Z,190nm,1.7s
KNGR Kungurtug, Tuv 61.53 342*c i*P **P** 19 49 09.9 +0.6
KNGR pmax pmax
comp=Z,74nm,0.9s
NIL Nilore 61.84 314 P **P** 19 49 11.8 +0.1
NIL Nilore 61.84 314 P **P** 19 49 11.8 +0.1
NIL pmax pmax
comp=Z,1μm,0.8s
NIL Nilore 61.84 314 P **P** 19 49 12.1 +0.4
KSH Kashi 63.31 321 P **P** 19 49 21.8 +0.7
KSH PP **PP** 19 51 47.9 -1.6
KSH S **S** 19 57 12.5 +0.9
KSH pmax pmax
comp=Z,810nm,0.8s
KSH pmax pmax
comp=Z,1μm,5.5s
UZB Uzynbulak 63.77 326 *i* P **P** 19 49 24.9 +1.0
UZB *e*S **S** 19 57 18.8 +1.7
UZB Uzynbulak 63.77 326 *i* P **P** 19 49 25.0 +1.0
baz=326
UZB *e*S **S** 19 57 18.8 +1.7
baz=326
ZSN Zaisan 63.79 333 *i* P **P** 19 49 24.6 +0.7
ZSN *e*S **S** 19 57 17.3 +0.3
ZSN pmax pmax
comp=Z,169nm,1.0s
ZSN Zaisan 63.79 333 *i* P **P** 19 49 24.6 +0.7
comp=Z,169nm,1.0s,baz=332
ZSN *e*S **S** 19 57 17.3 +0.3
baz=332
SATY Saty 64.05 326 *i* P **P** 19 49 26.8 +1.0
SATY *e*S **S** 19 57 21.8 +1.3
SATY pmax pmax
comp=Z,488nm,0.9s
SATY Saty 64.05 326 *i* P **P** 19 49 26.9 +1.0
comp=Z,488nm,0.9s,baz=325
SATY *e*S **S** 19 57 21.9 +1.3
baz=325
ZHN Zhinishke 64.11 326 *e*P **P** 19 49 26.5 +0.4
ZHN *e*S **S** 19 57 21.9 +0.7
ZHN Zhinishke 64.11 326 *e*P **P** 19 49 26.5 +0.4
baz=326
ZHN *e*S **S** 19 57 21.1 -0.1
baz=326
KPKS Kokpek 64.16 326 *i* P **P** 19 49 27.3 +0.9
KPKS *e*S **S** 19 57 23.2 +1.5
KPKS pmax pmax
comp=Z,324nm,0.6s
KPKS Kokpek 64.16 326 *i* P **P** 19 49 27.4 +0.9
comp=Z,324nm,0.6s,baz=326
KPKS *e*S **S** 19 57 23.2 +1.5
baz=326
MK31 Makanchi Array 64.53 331 IAmb IAmb 19 49 31.6
comp=Z,752nm,0.8s
MK31 Makanchi Array 64.53 331*c i*P **P** 19 49 29.4 +0.8
MK31 *i* *PP **pP** 19 51 16.9 +0.1
MKAR Makanchi Array 64.53 331 P **P** 19 49 28.9 +0.3
comp=Z,856nm,0.8s,baz=134,slow=6.7,SNR=1984
MKAR S **S** 19 57 27.7 +1.8
comp=Z,25nm,0.9s,baz=142,slow=13,SNR=7.2
MKAR PKP2bc 20 18 11.9
comp=Z,5.8nm,0.9s,baz=336,slow=2.7,SNR=13
comp=Z,856nm,0.8s
MKAR Makanchi Array 64.53 331 P **P** 19 49 29.5 +0.9
MKAR Makanchi Array 64.53 331 P **P** 19 49 29.5 +0.9
SKR Severo-Kuril's 64.64 23*d i*P **P** 19 49 31.0 +1.9
SKR *e*S **S** 19 57 27.8 +0.9
SKR *e* 19 58 26.6
SKR pmax pmax
comp=Z,315nm,1.4s
SKR pmax pmax
comp=Z,200nm,5.0s
MAKZ Makanchi 64.70 330 P **P** 19 49 29.8 +0.2
MAKZ IAmb IAmb 19 49 32.0
comp=Z,464nm,0.8s
MAKZ Makanchi 64.70 330 P **P** 19 49 29.8 +0.2
MAKZ pmax pmax
comp=Z,464nm,0.9s
MAKZ Makanchi 64.70 330 P **P** 19 49 30.5 +0.9
ULHL Ulahol 64.79 324 P **P** 19 49 31.7 +1.1
SNR=47
AFI Afiamalu 64.86 102 P **P** 19 49 32.8 +1.5
comp=Z,468nm,0.9s,baz=322,slow=0.8,SNR=27
comp=Z,468nm,0.9s
AFI Afiamalu 64.86 102 P **P** 19 49 32.3 +0.9
AFI IAmb IAmb 19 49 34.0
comp=Z,1μm,1.2s
AFI Afiamalu 64.86 102 P **P** 19 49 34.7 +3.3
AFI Afiamalu 64.86 102 P **P** 19 49 32.6 +1.3
AFI pP **pP** 19 51 23.2 +3.2
MDOK Medeo 64.89 325 *i* P **P** 19 49 32.0 +0.9
MDOK *e*S **S** 19 57 32.2 +1.6
MDOK Medeo 64.89 325 *i* P **P** 19 49 32.1 +0.9
baz=325
MDOK *e*S **S** 19 57 32.3 +1.6
baz=325
AAA Alma-Ata 64.99 325 *e*P **P** 19 49 32.7 +1.1
AAA pmax pmax
comp=Z,399nm,0.6s
AAA Alma-Ata 64.99 325 *e*P **P** 19 49 32.7 +1.1
comp=Z,400nm,0.6s,baz=325
ARXS Arharly 65.11 326 *e*P **P** 19 49 32.8 +0.4
BOD Bodaibo 65.22 355 *e*P **P** 19 49 32.5 -0.1
BOD pmax pmax
comp=Z,201nm,1.3s
TDK Taldyqorghan 65.31 327 *e*P **P** 19 49 34.4 +0.9
TDK *e*S **S** 19 57 36.3 +1.0
TDK pmax pmax
comp=Z,577nm,0.9s
TDK Taldyqorghan 65.31 327 *e*P **P** 19 49 34.5 +0.9
comp=Z,577nm,0.9s,baz=327
TDK *e*S **S** 19 57 36.3 +1.0
baz=327
KBL Kabul 65.31 313 P **P** 19 49 34.2 +0.3
KBL Kabul 65.31 313 P **P** 19 49 34.3 +0.3
KBL pmax pmax
comp=Z,754nm,0.8s
KBL Kabul 65.31 313 P **P** 19 49 34.5 +0.5
SNR=282
KBL P **P** 19 49 34.5 +0.5
SNR=282
KBL Kabul 65.31 313 P **P** 19 49 34.5 +0.5
SNR=282
KBL P **P** 19 49 34.5 +0.5
SNR=282
TKM2 Tokmak 2 65.58 324 P **P** 19 49 36.3 +0.8
SNR=302
RER Riviere de l'E 65.69 250 P **P** 19 49 38.5 +2.0
SNR=12
RER Riviere de l'E 65.69 250 P **P** 19 49 38.5 +2.0
SNR=12
RER Riviere de l'E 65.69 250 P **P** 19 49 38.3 +1.8
KUU Kurty 65.75 325 *i* P **P** 19 49 37.0 +0.7
KUU *e*S **S** 19 57 41.0 +0.5
KUU Kurty 65.75 325 *i* P **P** 19 49 37.1 +0.7
baz=325
KUU *e*S **S** 19 57 41.1 +0.5
baz=325
KBK Karagaybulak 65.80 323 P **P** 19 49 38.0 +1.1
SNR=256
UCH Uchtor 65.80 323 P **P** 19 49 38.2 +0.9
SNR=178
AAK Ala-Archa 66.06 323 P **P** 19 49 39.6 +1.1
SNR=525
AAK Ala-Archa 66.06 323 P **P** 19 49 39.3 +0.9
AAK Ala-Archa 66.06 323*d i*P **P** 19 49 39.4 +0.9
AAK pmax pmax
comp=Z,767nm,0.8s
AAK Ala-Archa 66.06 323 P **P** 19 49 39.9 +1.5
AAK Ala-Archa 66.06 323 P **P** 19 49 39.9 +1.5
AAK Ala-Archa 66.06 323 *i* P **P** 19 49 39.6 +1.1
SNR=536
AAK Ala-Archa 66.06 323 P **P** 19 49 39.5 +1.1
CHMS Chumysh 66.12 324 P **P** 19 49 39.6 +1.0
SNR=12
AML Almayashu 66.24 322 P **P** 19 49 40.9 +1.1
SNR=53
USP Ospenovka 66.43 324 P **P** 19 49 41.3 +0.7
SNR=316
SGDS Sogindy 66.46 324 *i* P **P** 19 49 41.3 +0.5
SGDS *e*S **S** 19 57 49.4 +0.3
SGDS pmax pmax
comp=Z,192nm,0.8s
SGDS Sogindy 66.46 324 *i* P **P** 19 49 41.3 +0.5

comp=Z,192nm,0.8s,baz=324
SGDS eS S 19 57 49.4 +0.3
baz=324
EKS2 Erkin-Say 66.50 323 P P 19 49 42.3 +1.2
SNR=586
NIUE Niue 66.58 108 P P 19 49 43.6 +1.7
baz=67,SNR=15
NIUE Niue 66.58 108 P P 19 49 42.8 +0.9
NIUE Niue 66.58 108 P P 19 49 44.6 +2.7
MSEY Mahe Island 66.58 268 P P 19 49 42.8 +0.7
MSEY IAmb IAmb 19 49 45.4
comp=Z,506nm,1.4s
MSEY Mahe Island 66.58 268 P P 19 49 42.8 +0.7
MSEY pmax pmax
comp=Z,506nm,1.5s
MSEY Mahe Island 66.58 268 P P 19 49 43.7 +1.5
MSEY P P 19 49 43.7 +1.5
MSEY Mahe Island 66.58 268 P P 19 49 43.7 +1.5
MSEY P P 19 49 43.7 +1.5
MSEY Mahe Island 66.58 268 *i* P P 19 49 43.3 +1.2
SNR=8.3
MSEY Mahe Island 66.58 268 P P 19 49 43.4 +1.2
GAR Garm 66.66 318 P P 19 49 42.6 +0.4
GAR IAmb IAmb 19 49 45.9
comp=Z,683nm,0.9s
PEA0B Petropavlovsk- 67.16 22 IAmb IAmb 19 49 48.1
comp=Z,466nm,0.8s
PEA0B Petropavlovsk- 67.16 22*c* *i*P P 19 49 46.1 +1.3
PETK Petropavlovsk- 67.16 22 P P 19 49 45.8 +1.0
comp=Z,442nm,0.9s,baz=55,slow=5.6,SNR=283
PETK PKPPKP **P'P'df** **20 18 04.9 +1.8**
comp=Z,12nm,1.1s,baz=225,slow=6.1,SNR=4.0
comp=Z,442nm,0.9s
PETK Petropavlovsk- 67.16 22 P P 19 49 45.3 +0.5
PET Petropavlovsk 67.46 23 P P 19 49 47.4 +0.9
PET IAmb IAmb 19 49 49.8
comp=Z,1μm,1.3s
PET Petropavlovsk 67.46 23 *e*P P 19 49 47.8 +1.2
PET *e**PP **pP** 19 51 36.5 +1.7
PET *e**SP **sP** 19 52 31.5 +0.8
PET *e*S S 19 58 03.9 +3.8
PET *e*SS SS 20 02 33.1 -1.5
PET *e*SP 20 58 28.7
PET *e*SPP SPP 20 58 38.2
PET pmax pmax
comp=Z,844nm,1.3s
PET pmax pmax
comp=Z,1μm,16.9s
PET pmax pmax
comp=Z,1μm,14.5s
PET smax smax
comp=N,42nm,0.4s
PET MLR MLR
comp=Z,500nm,20.0s
PET MLR MLR
comp=Z,600nm,20.0s
PET Petropavlovsk 67.46 23 P P 19 49 48.3 +1.7
PET Petropavlovsk 67.46 23 P P 19 49 48.2 +1.6
BTLS Baital 67.75 325 *i* P P 19 49 48.9 +0.3
BTLS *e*S S 19 58 03.2 -0.7
BTLS pmax pmax
comp=Z,146nm,1.0s
BTLS Baital 67.75 325 *i* P P 19 49 49.0 +0.3
comp=Z,146nm,1.0s,baz=325
BTLS *e*S S 19 58 03.3 -0.7
baz=325
CCD Concordia, Ant 67.80 180 P P 19 49 49.7 +0.8
CCD pP **pP** 19 51 41.9 +3.1
NGCH Negor - Chabah 67.80 301 P P 19 49 51.3 +2.0
SNR=9.6
NGCH Negor - Chabah 67.80 301 P P 19 49 51.3 +2.0
SNR=9.6
MIDW Midway 67.92 56 P P 19 49 50.6 +0.7
MIDW IAmb IAmb 19 49 52.2
comp=Z,708nm,1.1s
MIDW Midway 67.92 56 P P 19 49 51.3 +1.4
comp=Z,775nm,1.2s
MIDW Midway 67.92 56 P P 19 49 51.1 +1.2
SEM Semipalatinsk 68.04 332 *e*P P 19 49 49.7 -0.8
SEM *e*S S 19 58 07.3 -0.3
SEM pmax pmax
comp=Z,149nm,0.7s
SEM Semipalatinsk 68.04 332 *e*P P 19 49 49.8 -0.8
comp=Z,150nm,0.7s,baz=332
SEM *e*S S 19 58 07.3 -0.3
baz=332
DZA Taraz 68.11 322 *e*P P 19 49 50.8 -0.1
DZA *e*S S 19 58 07.7 -0.6
DZA pmax pmax
comp=Z,177nm,0.8s
DZA Taraz 68.11 322 *e*P P 19 49 50.9 0.0
comp=Z,177nm,0.8s,baz=322
DZA *e*S S 19 58 07.8 -0.6
baz=322
IUG Iuzhnay 68.51 321 *i* P P 19 49 54.1 +0.7
IUG *e*S S 19 58 14.2 +1.0
IUG Iuzhnay 68.51 321 *i* P P 19 49 54.2 +0.7
baz=321
IUG *e*S S 19 58 14.2 +1.0
baz=321
ZAA0 Zalesovo Array 68.69 337 P P 19 49 53.8 -0.3
ZAA0 IAmb IAmb 19 49 55.5
comp=Z,501nm,0.9s
ZALV Zalesovo Beam 68.69 337 P P 19 49 53.6 -0.5
comp=Z,506nm,0.8s,baz=135,slow=4.0,SNR=888
ZALV S S 19 58 12.5 -2.0
comp=Z,87nm,0.9s,baz=143,slow=10,SNR=25
ZALV PKPPKP **P'P'df** **20 17 59.0 -1.5**
comp=Z,7.6nm,0.9s,baz=320,slow=4.4,SNR=11
comp=Z,506nm,0.8s
KK31 Karatay Array 68.73 322 IAmb IAmb 19 49 57.9
comp=Z,327nm,1.3s
WBK Wadi Bani Khal 68.79 298 P P 19 49 56.8 +1.3
SNR=40
WBK Wadi Bani Khal 68.79 298 P P 19 49 56.8 +1.3
SNR=40
KURBB Kurchatov Arra 68.98 332 P P 19 49 56.1 +0.2
comp=Z,254nm,0.8s,baz=144,slow=5.1,SNR=1404
KURBB PP **PP** 19 52 38.2 +0.3
comp=Z,41nm,1.0s,baz=135,slow=8.6,SNR=6.4
KURBB S S 19 58 13.0 -5.0
comp=Z,20nm,1.2s,baz=134,slow=13,SNR=9.7
KURBB PKP2bc 20 17 56.4
comp=Z,5.8nm,1.1s,baz=303,slow=3.6,SNR=10
comp=Z,254nm,0.8s
KURK Kurchatov 69.00 332 P P 19 49 56.3 +0.3
KURK IAmb IAmb 19 49 58.7
comp=Z,718nm,0.9s
KURK Kurchatov 69.00 332*d* *i*P P 19 49 56.3 +0.3
KURK pmax pmax
comp=Z,691nm,0.8s
KURK Kurchatov 69.00 332 P P 19 49 56.7 +0.7
KURK Kurchatov 69.00 332 P P 19 49 56.7 +0.7
KURK Kurchatov 69.00 332 P P 19 49 56.5 +0.4
MHTO MHTO 69.20 296 P P 19 49 58.8 +0.9
SNR=60
MHTO MHTO 69.20 296 P P 19 49 58.8 +0.9
SNR=60
WSAR Wadi Sarin 69.28 298 P P 19 49 59.6 +1.3
comp=Z,576nm,0.9s,baz=138,slow=5.9,SNR=217
WSAR S S 19 58 22.9 +0.4
comp=Z,6.9nm,0.9s,baz=145,slow=8.3,SNR=16
comp=Z,576nm,0.9s
DQM DQM 69.29 294 P P 19 49 59.7 +1.3
SNR=28
DQM P P 19 49 59.7 +1.3
SNR=28
DQM DQM 69.29 294 P P 19 49 59.7 +1.3
SNR=28
DQM P P 19 49 59.7 +1.3
SNR=28
YAK Yakutsk 69.31 4 P P 19 49 58.0 +0.4
comp=Z,300nm,0.7s,baz=253,slow=0.6,SNR=149
YAK PKP2bc 20 17 57.9
comp=Z,4.4nm,0.3s,baz=160,slow=1.8,SNR=4.7
comp=Z,300nm,0.7s
YAK Yakutsk 69.31 4 P P 19 49 58.0 +0.4
YAK IAmb IAmb 19 50 00.3
comp=Z,812nm,0.9s
YAK Yakutsk 69.31 4 *e*P P 19 49 57.6 0.0
YAK *e* 19 50 16.4
YAK *e**PP **pP** 19 51 47.4 -1.2
YAK *e* 19 52 39.3
YAK *e*S S 19 58 20.9 -0.4
YAK *e* 19 59 06.5
YAK pmax pmax
comp=Z,839nm,0.9s
YAK pmax pmax
comp=E,74nm,1.1s
YAK pmax pmax
comp=N,365nm,1.3s
YAK pmax pmax
comp=Z,172nm,1.6s
YAK pmax pmax
comp=N,102nm,1.5s
YAK pmax pmax
comp=E,62nm,1.4s
YAK smax smax
comp=E,3μm,2.3s
YAK smax smax
comp=N,975nm,1.8s
YAK Yakutsk 69.31 4 P P 19 49 58.2 +0.5
YAK pP **pP** 19 51 47.5 -1.2
JMDO Jabal Madar 69.48 297 P P 19 50 00.7 +1.1
SNR=40
JMDO Jabal Madar 69.48 297 P P 19 50 00.7 +1.1
SNR=40
JMDO P P 19 50 00.7 +1.1
SNR=40
SMDO Samad 69.74 298 P P 19 50 02.1 +0.9
SNR=50
SMDO P P 19 50 02.1 +0.9
SNR=50
SMDO Samad 69.74 298 P P 19 50 02.1 +0.9
SNR=50
BIDO Bidbid 69.81 298 P P 19 50 03.1 +1.6
SNR=114
BIDO P P 19 50 03.1 +1.6
SNR=114
BIDO Bidbid 69.81 298 P P 19 50 03.1 +1.6
SNR=114
MA2 Magadan 70.35 15 P P 19 50 05.4 +1.5
comp=N,563nm,0.7s,baz=193,slow=5.7,SNR=124
MA2 S S 19 58 36.2 +2.9
comp=N,62nm,1.1s,baz=69,slow=20,SNR=7.0
comp=N,563nm,0.7s
MA2 Magadan 70.35 15 P P 19 50 04.6 +0.7
MA2 IAmb IAmb 19 50 07.4
comp=Z,724nm,0.8s
MA2 Magadan 70.35 15*c* *i*P P 19 50 05.1 +1.2
MA2 pmax pmax
comp=Z,774nm,0.9s
MA2 Magadan 70.35 15 P P 19 50 06.7 +2.8
MA2 Magadan 70.35 15 P P 19 50 05.6 +1.7
BSY Bisya 70.39 297 P P 19 50 06.2 +1.2
SNR=39
BSY Bisya 70.39 297 P P 19 50 06.2 +1.2
SNR=39
SHAO Shalim 70.53 292 P P 19 50 07.4 +1.6
SNR=12
SHAO Shalim 70.53 292 P P 19 50 07.4 +1.6
SNR=12
SHAO Shalim 70.53 292 *i* P P 19 50 06.6 +0.8
SNR=40
HOQ Hoqain 70.54 298 P P 19 50 06.8 +0.9
SNR=81
HOQ Hoqain 70.54 298 P P 19 50 06.8 +0.9
SNR=81
JASK Jask - Hormozg 70.76 300 P P 19 50 09.8 +2.7
JASK Jask - Hormozg 70.76 300 P P 19 50 09.8 +2.7
DMTO DMTO 71.08 291 P P 19 50 10.3 +1.2
SNR=9.2
DMTO DMTO 71.08 291 P P 19 50 10.3 +1.2
SNR=9.2
ARQ Araqi 71.16 298 P P 19 50 10.6 +1.1
SNR=42
ARQ Araqi 71.16 298 P P 19 50 10.6 +1.1
SNR=42
JOHN Johnston Islan 71.37 70 P P 19 50 11.3 +0.6
JOHN Johnston Islan 71.37 70 P P 19 50 13.8 +3.0
JOHN Johnston Islan 71.37 70 P P 19 50 12.1 +1.3
SBV Sambava 71.38 258 P P 19 50 11.8 +0.9
SNR=5.9
SBV Sambava 71.38 258 P P 19 50 11.8 +0.9
SNR=5.9
CRZF Crozet Islands 71.40 223 IAmb IAmb 19 50 12.9
comp=Z,238nm,0.7s
BRZS Berezniki 71.46 329 *i* P P 19 50 11.1 +0.5
BRZS *e*S S 19 58 46.3 +0.1
BRZS pmax pmax
comp=Z,160nm,0.8s
BRZS Berezniki 71.46 329 *i* P P 19 50 11.2 +0.5
comp=Z,160nm,0.8s,baz=329
BRZS *e*S S 19 58 46.3 +0.1
baz=329
RBK Rabkut 71.71 291 P P 19 50 14.0 +1.2
SNR=17
RBK Rabkut 71.71 291 P P 19 50 14.0 +1.2
SNR=17
UOSS Minazif 71.91 299 P P 19 50 13.8 -0.1
UOSS IAmb IAmb 19 50 15.7
comp=Z,272nm,0.9s
UOSS Minazif 71.91 299 P P 19 50 14.7 +0.8
UOSS Minazif 71.91 299 P P 19 50 14.7 +0.8
UOSS Minazif 71.91 299 *i* P P 19 50 13.3 -0.5
SNR=41
HATD Hatta, Dubai 71.94 299 P P 19 50 15.3 +1.3
SNR=96
HATD Hatta, Dubai 71.94 299 P P 19 50 15.3 +1.3
SNR=96
HATD Hatta, Dubai 71.94 299 *i* P P 19 50 14.5 +0.5
SNR=204
ASHO Ashiyiah 71.96 299 P P 19 50 15.0 +0.8
SNR=117
ASHO Ashiyiah 71.96 299 P P 19 50 15.0 +0.8
SNR=117
ASHO Ashiyiah 71.96 299 *i* P P 19 50 14.7 +0.5
SNR=252
MAW Mawson 72.03 200 P P 19 50 14.6 +1.0
comp=Z,75nm,0.7s,baz=73,slow=6.0,SNR=229
MAW PKPPKP **P'P'df** **20 17 51.6 -3.9**
comp=Z,29nm,1.1s,baz=244,slow=5.1,SNR=22
comp=Z,75nm,0.7s
MAW Mawson 72.03 200 P P 19 50 14.1 +0.5
baz=72,SNR=184
MAW Mawson 72.03 200 P P 19 50 14.3 +0.7
ALNE Al Ain 72.04 298 P P 19 50 15.9 +1.3
SNR=104
ALNE Al Ain 72.04 298 P P 19 50 15.9 +1.3
SNR=104
ALNE Al Ain 72.04 298 *i* P P 19 50 15.2 +0.6
SNR=151
MSFE Esma-Masafi 72.07 299 *i* P P 19 50 15.5 +0.7
SNR=162
MASF Masafi 72.07 299 P P 19 50 16.1 +1.3
SNR=94
MASF Masafi 72.07 299 P P 19 50 16.1 +1.3
SNR=94
WHFO Wadi Hawf 72.21 291 P P 19 50 15.8 +0.1
SNR=30
WHFO Wadi Hawf 72.21 291 P P 19 50 15.8 +0.1
SNR=30
SHME Shamm 72.29 300 P P 19 50 17.6 +1.6
SNR=86
SHME Shamm 72.29 300 P P 19 50 17.6 +1.6
SNR=86
SHME Shamm 72.29 300 *i* P P 19 50 16.8 +0.8
SNR=237
FAQ Al Faqa, Dubai 72.38 299 P P 19 50 17.2 +0.7
SNR=131
FAQ Al Faqa, Dubai 72.38 299 P P 19 50 17.2 +0.7
SNR=131
FAQ Al Faqa, Dubai 72.38 299 *i* P P 19 50 17.3 +0.7
SNR=267
NAZ Nazwa, Dubai 72.39 299 P P 19 50 17.6 +1.0
SNR=72
NAZ Nazwa, Dubai 72.39 299 P P 19 50 17.6 +1.0
SNR=72
NAZ Nazwa, Dubai 72.39 299 *i* P P 19 50 17.0 +0.4
SNR=52
ABTO Aybut 72.52 291 P P 19 50 18.5 +1.0
SNR=27
ABTO Aybut 72.52 291 P P 19 50 18.5 +1.0
SNR=27
UMQ Umm Al-Quwin 72.55 300 P P 19 50 19.4 +2.0
SNR=22
UMQ Umm Al-Quwin 72.55 300 P P 19 50 19.4 +2.0
SNR=22
UMQ Umm Al-Quwin 72.55 300 *i* P P 19 50 19.1 +1.6
SNR=23
ASUD Al Ashush, Dub 72.58 299 P P 19 50 19.0 +1.3
SNR=66
ASUD Al Ashush, Dub 72.58 299 P P 19 50 19.0 +1.3
SNR=66
ASUD Al Ashush, Dub 72.58 299 *i* P P 19 50 19.0 +1.3
SNR=156
AJN Ajban 72.86 298 P P 19 50 20.1 +0.8
SNR=44
AJN Ajban 72.86 298 P P 19 50 20.1 +0.8
SNR=44
AJN Ajban 72.86 298 *i* P P 19 50 19.7 +0.5
SNR=34
VNDA Vanda 73.19 172 P P 19 50 20.6 +0.4
comp=Z,40nm,0.7s,baz=317,slow=6.4,SNR=342
VNDA S S 19 59 05.1 +0.5
comp=Z,8.4nm,1.1s,baz=50,slow=22,SNR=8.1
VNDA PKPPKP **P'P'df** **20 17 50.6 -2.6**
comp=Z,1.4nm,0.9s,baz=237,slow=2.5,SNR=3.7
comp=Z,40nm,0.7s
VNDA Vanda 73.19 172 P P 19 50 20.3 +0.1
SEY Seymchan 73.64 14 P P 19 50 24.4 +1.4
comp=Z,413nm,0.7s,baz=212,slow=4.9,SNR=258
SEY S S 19 59 11.9 +2.0
comp=Z,11nm,0.9s,baz=326,slow=22,SNR=30
comp=Z,413nm,0.7s
SEY Seymchan 73.64 14*c* *i*P P 19 50 24.2 +1.3
SEY pmax pmax
comp=Z,500nm,0.9s
ABPO Ambohimpanom 73.71 252 P P 19 50 24.8 +0.3
ABPO Ambohimpanom 73.71 252 P P 19 50 24.8 +0.3
ABPO pmax pmax
comp=Z,213nm,1.0s
MZR Muzera 73.76 296 P P 19 50 26.0 +1.5
SNR=81
MZR Muzera 73.76 296 P P 19 50 26.0 +1.5
SNR=81
MZR Muzera 73.76 296 *i* P P 19 50 24.8 +0.3
SNR=222
OPO Ambohidratompo 73.77 253 P P 19 50 25.3 +0.5
comp=Z,354nm,0.7s,baz=87,slow=4.5,SNR=339
comp=Z,354nm,0.7s
FOMA Nahampoana Res 73.80 246 P P 19 50 25.0 +0.4
FOMA IAmb IAmb 19 50 27.8
comp=Z,414nm,1.2s
VOI Vohitsoka 74.02 249 P P 19 50 26.5 +0.3
VOI IAmb IAmb 19 50 28.3
comp=Z,457nm,0.8s
VOI Vohitsoka 74.02 249 P P 19 50 27.3 +1.1
SNR=18
VOI Vohitsoka 74.02 249 P P 19 50 27.3 +1.1
SNR=18
VOI Vohitsoka 74.02 249 P P 19 50 26.6 +0.4
SHEM Shemya Is, Ala 74.07 30 P P 19 50 27.4 +1.9
comp=Z,1μm,1.1s,baz=328,slow=1.5,SNR=60
SHEM S S 19 59 17.4 +2.5
comp=Z,26nm,0.5s,baz=268,slow=21,SNR=9.7
comp=Z,1μm,1.1s
SBA Scott Base 74.16 171 P P 19 50 26.5 +0.8
SBA Scott Base 74.16 171 P P 19 50 26.5 +0.8
SBA pmax pmax
comp=Z,59nm,0.9s
BVAR Borovoye Array 74.42 330 P P 19 50 27.7 +0.2
comp=Z,94nm,0.9s,baz=141,slow=7.3,SNR=326
BVAR S S 19 59 18.2 -0.5
comp=Z,13nm,1.0s,baz=108,slow=12,SNR=11
comp=Z,94nm,0.9s
BRVK Borovoye 74.49 330 P P 19 50 28.0 +0.1
BRVK Borovoye 74.49 330*c* *i*P P 19 50 28.3 +0.4
BRVK pmax pmax
comp=Z,244nm,1.0s
BRVK Borovoye 74.49 330 P P 19 50 28.6 +0.6
BRVK Borovoye 74.49 330 P P 19 50 28.6 +0.6
GEYT Alibeck 74.73 312 P P 19 50 30.8 +1.1
comp=Z,244nm,0.8s,baz=160,slow=4.7,SNR=322
GEYT PKPPKP **P'P'df** **20 17 52.6 +0.9**
comp=Z,3.1nm,0.8s,baz=305,slow=5.2,SNR=4.7
comp=Z,244nm,0.8s
GEYT Alibeck 74.73 312 IAmb IAmb 19 50 32.4
comp=Z,285nm,0.8s
JRN Qarnain Island 74.83 298 P P 19 50 31.4 +0.9
SNR=31
AMKA Amchitka 76.00 33 P P 19 50 37.2 +0.8
RAR Rarotonga 76.07 110 P P 19 50 39.2 +1.8
comp=Z,125nm,1.0s,baz=239,slow=6.1,SNR=15
comp=Z,125nm,1.0s
RAR Rarotonga 76.07 110 P P 19 50 38.0 +0.5
RAR Rarotonga 76.07 110 P P 19 50 38.9 +1.4
comp=Z,293nm,1.2s
SMRA Abu-Samra 76.55 297 P P 19 50 41.3 +1.3
SMRA Abu-Samra 76.55 297 P P 19 50 41.3 +1.3
SHMA Al-Shehemyia 76.71 299 P P 19 50 42.1 +1.2
SHMA Al-Shehemyia 76.71 299 P P 19 50 42.1 +1.2
ADK Adak 78.43 34 P P 19 50 49.7 +0.1
ADK IAmb IAmb 19 50 52.3
comp=Z,2μm,1.7s
ADK Adak 78.43 34 P P 19 50 49.7 +0.1
ADK pmax pmax
comp=Z,2μm,1.7s
ADK Adak 78.43 34 P P 19 50 51.3 +1.7
TIXI Tiksi 78.86 2 P P 19 50 51.4 0.0
comp=Z,91nm,0.6s,baz=272,slow=23,SNR=64
comp=Z,91nm,0.6s
TIXI Tiksi 78.86 2 P P 19 50 51.1 -0.3
TIXI IAmb IAmb 19 50 53.5
comp=Z,514nm,1.4s
GSTR Great Sitkin T 78.87 34 P P 19 50 52.9 +0.9
AKTO Aktyubinsk 79.77 324 P P 19 50 57.0 +0.2
comp=Z,473nm,0.8s,baz=108,slow=6.0,SNR=595
AKTO S S 20 00 14.7 -0.8
comp=Z,7.1nm,0.9s,baz=318,slow=21,SNR=16
AKTO PKKPbc **PKKPbc** **20 09 39.6 -1.4**
comp=Z,3.3nm,0.6s,baz=13,slow=0.8,SNR=8.5
comp=Z,473nm,0.8s
ATKA Atka Island 79.94 34 P P 19 50 58.8 +1.2
NRIK Noril'sk 80.12 348 P P 19 50 59.3 +1.1
comp=Z,66nm,0.7s,baz=138,slow=5.3,SNR=44
NRIK S S 20 00 18.1 -0.3
comp=Z,32nm,1.1s,baz=140,slow=19,SNR=15
comp=Z,66nm,0.7s
XMAS Kiritimati 80.48 87 P P 19 51 02.3 +1.1
XMAS IAmb IAmb 19 51 04.7
comp=Z,440nm,1.1s
RAYN Ar Rayn 81.01 295 P P 19 51 04.1 +0.2
RAYN IAmb IAmb 19 51 06.7
comp=Z,699nm,0.8s
RAYN Ar Rayn 81.01 295 P P 19 51 04.1 +0.2
RAYN pmax pmax
comp=Z,699nm,0.9s
RAYN Ar Rayn 81.01 295 P P 19 51 05.2 +1.3
RAYN Ar Rayn 81.01 295 P P 19 51 05.2 +1.3
RAYN Ar Rayn 81.01 295 P P 19 51 04.9 +1.0
BILL Bilibino 81.21 15 P P 19 51 04.0 +0.2
BILL Bilibino 81.21 15*d* *i*P P 19 51 04.1 +0.2
BILL *i**PP **pP** 19 53 04.8 +5.3
BILL *i* 19 54 15.2
BILL *i*S S 20 00 23.0 -6.4
BILL pmax pmax
comp=Z,96nm,1.2s
ATD Arta Tunnel 81.31 283 P P 19 51 08.2 +2.6
comp=Z,193nm,1.0s,baz=96,slow=1.6,SNR=46
comp=Z,193nm,1.0s
ATD Arta Tunnel 81.31 283 IAmb IAmb 19 51 10.2
comp=Z,392nm,1.2s
ATD Arta Tunnel 81.31 283 *e*P P 19 51 08.2 +2.6
ATD Arta Tunnel 81.31 283 *e*P P 19 51 08.0 +2.4
ATD *e*S S 20 00 35.3 +2.6
ATD Arta Tunnel 81.31 283 *e*P S 20 00 32.5 -0.2
KEKH Kekaha 81.56 67 IAmb IAmb 19 51 09.9
comp=Z,367nm,1.2s
ARU Arti 82.04 330 P P 19 51 08.4 0.0
comp=Z,448nm,1.0s,baz=133,slow=1.7,SNR=304
ARU S S 20 00 35.8 -2.4
comp=Z,8.6nm,0.7s,baz=194,slow=23,SNR=13
ARU PKKPbc **PKKPbc** **20 09 34.2 -2.0**
comp=Z,7.0nm,0.6s,baz=254,slow=2.6,SNR=9.9
comp=Z,448nm,1.0s
ARU Arti 82.04 330 P P 19 51 08.0 -0.3
ARU IAmb IAmb 19 51 10.5
comp=Z,418nm,0.9s
ARU Arti 82.04 330*c* *i*P P 19 51 08.3 0.0
ARU *e**PP **pP** 19 53 04.3 +0.7
ARU *e**SP **sP** 19 53 57.3 -0.9
ARU 19 54 24.7
ARU PPP PPP 19 56 17.6
ARU S S **20 00 35.7 -2.5**
ARU SS **SS** **20 06 11.6 -1.6**
ARU SSS SSS 20 09 44.7
ARU pmax pmax
comp=Z,525nm,1.0s
ARU MLR MLR

comp=Z,605nm,18.0s
CLES Cleveland East 82.60 34 P **P** **19 51 11.3 +0.1**
CLES IAmb IAmb 19 51 13.4
comp=Z,3μm,0.7s
QSPA South Pole Qui 82.72 180 S **S** **20 00 39.5 -5.5**
comp=Z,15nm,1.0s,baz=272,slow=21,SNR=18
QSPA South Pole Qui 82.72 180 P **P** **19 51 11.2 -0.7**
KIP Kipapa 83.00 67 *d* P **P** **19 51 15.8 +1.9**
KIP pmax pmax
comp=Z,180nm,1.0s
KIP Kipapa 83.00 67 P **P** **19 51 16.8 +2.9**
KIP Kipapa 83.00 67 P **P** **19 51 16.6 +2.7**
NIKH Nikolski High 83.24 35 IAmb IAmb 19 51 16.2
comp=Z,622nm,0.7s
NIKH Nikolski High 83.24 35 P **P** **19 51 14.6 +0.1**
baz=248,SNR=53
MAK Makhachkala 84.01 315 *c i* P **P** **19 51 17.1 -1.4**
MAK *e* *PP **pP** **19 53 14.7 0.0**
MAK *e* *SP **sP** **19 54 08.6 -0.5**
MAK *e* 19 54 39.1
MAK *e* PPP PPP 19 56 39.1
MAK *e* S S 20 00 47.3 -11
MAK *e* SS **SS** **20 06 40.6 -2.1**
MAK *e* SSS SSS 20 10 19.0
MAK pmax pmax
comp=Z,569nm,1.0s
ANKE Ethiopia-Afar 84.05 280 *e* P **P** **19 51 21.8 +2.1**
ANKE Ethiopia-Afar 84.05 280 *e* P **P** **19 51 23.0 +3.2**
ANKE *e* S S 20 00 47.6 -13
SPIA Saint Paul Isl 84.09 30 IAmb IAmb 19 51 21.1
comp=Z,479nm,0.9s
SPIA Saint Paul Isl 84.09 30 P **P** **19 51 19.5 +1.0**
baz=247,SNR=5.4
SPIA S **S** **20 00 59.7 +1.4**
baz=247
SPIA Saint Paul Isl 84.09 30 P **P** **19 51 21.6 +3.1**
KIBK Kibwezi 84.13 268 P **P** **19 51 21.4 +1.5**
SNR=28
KIBK Kibwezi 84.13 268 P **P** **19 51 21.4 +1.5**
SNR=28
KHLH Kahului Airpor 84.36 68 IAmb IAmb 19 51 24.8
comp=Z,509nm,1.2s
HLK Haleakala 84.51 68 IAmb IAmb 19 51 25.4
comp=Z,271nm,1.1s
KHLU Kahalu`u 84.64 70 P **P** **19 51 22.2 0.0**
KHU Kahuku 84.84 70 IAmb IAmb 19 51 26.8
comp=Z,842nm,1.4s
UNV Unalaska Valle 84.86 34 P **P** **19 51 22.2 -0.2**
UNV IAmb IAmb 19 51 26.0
comp=Z,669nm,1.4s
UNV Unalaska Valle 84.86 34 P **P** **19 51 22.4 0.0**
baz=250,SNR=37
UNV S **S** **20 01 04.9 -1.0**
baz=250
MWH Moku'aweowe 84.90 70 IAmb IAmb 19 51 27.4
comp=Z,728nm,1.4s
AAE Adis Abeba 84.91 280 *e* P **P** **19 51 26.3 +2.4**
AAE Adis Abeba 84.91 280 *e* P **P** **19 51 26.3 +2.4**
AAE *e* S **SKSac** **20 00 59.0 +1.1**
AAE Adis Abeba 84.91 280 *e* P **P** **19 51 26.5 +2.6**
AAE *e* S S 20 00 49.4 -19
AAE Adis Abeba 84.91 280 *e* P **S** **20 01 04.8 -3.9**
FURI Furi 84.98 280 P **P** **19 51 25.9 +1.6**
FURI IAmb IAmb 19 51 29.7
comp=Z,278nm,1.1s
FURI Furi 84.98 280 *e* P **P** **19 51 28.0 +3.7**
FURI Furi 84.98 280 *e* P **P** **19 51 28.0 +3.7**
FURI *e* S **SKSac** **20 00 59.0 +0.7**
FURI Furi 84.98 280 *e* P **P** **19 51 28.9 +4.6**
FURI *e* S S 20 00 49.4 -20
FURI Furi 84.98 280 *e* P **S** **20 01 04.8 -4.6**
POHA Pohakuloa 85.00 69 P **P** **19 51 25.7 +1.5**
KMBO Kilima Mbogo 85.07 269 P **P** **19 51 26.1 +1.4**
comp=Z,198nm,0.9s,baz=70,slow=6.9,SNR=262
comp=Z,198nm,0.9s
KMBO Kilima Mbogo 85.07 269 P **P** **19 51 25.6 +0.9**
KMBO IAmb IAmb 19 51 28.0
comp=Z,269nm,1.0s
KMBO Kilima Mbogo 85.07 269 P **P** **19 51 26.3 +1.6**
KMBO Kilima Mbogo 85.07 269 P **P** **19 51 26.3 +1.6**
KMBO Kilima Mbogo 85.07 269 *e* P **P** **19 51 26.5 +1.9**
KMBO Kilima Mbogo 85.07 269 *e* P P 19 51 15.7 -9.0
KMBO *e* S S 20 00 35.2 -35
KMBO Kilima Mbogo 85.07 269 *e* P **P** **19 51 26.1 +1.4**
KMBO Kilima Mbogo 85.07 269 *i* P **P** **19 51 25.7 +1.0**
SNR=171
KMBO Kilima Mbogo 85.07 269 *e* P **SKSac** **20 00 59.6 +0.8**
HLP Hilina Pali 85.14 70 IAmb IAmb 19 51 28.1
comp=Z,717nm,1.3s
PUH Pauahi 85.23 70 IAmb IAmb 19 51 28.5
comp=Z,499nm,1.2s
GROC Groznyy 85.28 314 *e* P **P** **19 51 25.1 +0.4**
GROC *e* *PP **pP** **19 53 19.4 -1.8**
GROC *e* *SP **sP** **19 54 16.1 +0.2**
GROC *e* 19 54 55.2
GROC *e* S **SKSac** **20 00 56.8 -1.6**
GROC pmax pmax
comp=Z,406nm,0.8s
GNI Garni 85.32 311 P **P** **19 51 26.7 +1.5**
comp=Z,203nm,1.0s,baz=344,slow=2.1,SNR=50
comp=Z,203nm,1.0s
GNI Garni 85.32 311 P **P** **19 51 26.2 +1.1**
GNI IAmb IAmb 19 51 40.8
comp=Z,224nm,0.8s
GNI Garni 85.32 311 *c i* P **P** **19 51 26.7 +1.5**
GNI pmax pmax
comp=Z,247nm,1.0s
GNI Garni 85.32 311 P **P** **19 51 27.2 +2.0**
GNI Garni 85.32 311 P **P** **19 51 27.2 +2.0**
GNI Garni 85.32 311 P **P** **19 51 26.3 +1.1**
AKUT Akutan 85.36 34 P **P** **19 51 24.5 -0.3**
TBI Tubuai 85.44 113 *e* P **P** **19 51 27.9 +1.9**
comp=Z,637nm,1.0s
TBI *e* P **pP** **19 53 22.2 -0.8**
comp=Z,260nm,1.0s
TBI Tubuai 85.44 113 *e* LR LR 20 19 17.7
comp=Z,472nm,31.5s
PAE Paea 85.94 107 *e* P **P** **19 51 30.0 +1.6**
comp=Z,85nm,1.1s
PAE *e* P **pP** **19 53 26.0 +1.0**
comp=Z,59nm,1.3s
PPT2 Papeete2 85.95 107 *e* P **P** **19 51 30.0 +1.4**
comp=Z,397nm,1.1s
PPT2 *e* P **pwP** **19 53 26.7 -1.3**
comp=Z,169nm,1.2s
PPT2 Papeete2 85.95 107 *e* LR LR 20 19 32.3
comp=Z,456nm,22.8s
PPT Papeete 85.95 107 P **P** **19 51 30.5 +2.0**
comp=Z,336nm,0.9s,baz=306,slow=3.2,SNR=23
comp=Z,336nm,0.9s
PPTF Pamatai, Papee 85.96 107 IAmb IAmb 19 51 33.0
comp=Z,435nm,1.0s
PPTF Pamatai, Papee 85.96 107 P **P** **19 51 31.1 +2.5**
GAMB Gambell 86.12 24 P **P** **19 51 28.5 +0.3**
baz=245
GAMB S **S** **20 01 18.9 +1.4**
baz=245
TIAR Tiarei 86.17 107 *e* P **P** **19 51 32.2 +2.6**
comp=Z,84nm,1.0s
TVO Taravao 86.23 107 *e* P **P** **19 51 32.0 +2.1**
comp=Z,242nm,1.1s
ZEI Tsey 86.54 314 *e* P **P** **19 51 30.4 -0.6**
ZEI pmax pmax
comp=Z,245nm,1.0s
BELG Belogornoye 86.55 324 P **P** **19 51 30.8 +0.3**
comp=Z,398nm,0.8s,baz=125,slow=0.3,SNR=65
BELG S **SKSac** **20 01 05.5 -0.1**
comp=Z,31nm,0.9s,baz=98,slow=22,SNR=14
comp=Z,398nm,0.8s
BELG Belogornoye 86.55 324 *c i* P **P** **19 51 30.7 +0.3**
BELG pmax pmax
comp=Z,82nm,1.0s
KARS Kars 86.66 311 IAmb IAmb 19 51 34.8
comp=Z,502nm,0.8s
FALS False Pass 86.89 34 P **P** **19 51 31.3 -0.7**
FALS IAmb IAmb 19 51 33.6
comp=Z,911nm,1.6s
FALS False Pass 86.89 34 P **P** **19 51 32.0 -0.1**
baz=253
FALS False Pass 86.89 34 P **P** **19 51 32.4 +0.3**
NCK Nalchik 86.91 314 *c i* P **P** **19 51 33.4 +0.9**
NCK pmax pmax
comp=Z,203nm,0.9s
GURO Guroymak-BITLI 87.02 309 IAmb IAmb 19 51 36.8
comp=Z,354nm,1.0s

POGA Pongola 87.34 243 IAmb IAmb 19 51 37.8
comp=Z,382nm,0.9s
MEH Mehetia 87.34 108 *e* P **P** **19 51 37.1 +2.0**
comp=Z,399nm,1.4s
KIRV Kirov 87.42 330 P **P** **19 51 35.0 +0.5**
comp=Z,188nm,0.9s,baz=94,slow=3.8,SNR=43
KIRV S **SKSac** **20 01 11.0 +0.4**
comp=Z,13nm,0.5s,baz=289,slow=23,SNR=31
comp=Z,188nm,0.9s
KIRV Kirov 87.42 330 *c i* P **P** **19 51 34.2 -0.2**
KBZ Khabaz 87.46 314 P **P** **19 51 35.8 +0.8**
comp=Z,136nm,0.9s,baz=111,slow=3.5,SNR=172
KBZ S **SKSac** **20 01 12.6 +1.1**
comp=Z,8.9nm,1.1s,baz=278,slow=22,SNR=6.0
KBZ PKKPbc **PKKPbc** **20 09 22.2 -0.5**
comp=Z,14nm,0.9s,baz=225,slow=0.9,SNR=16
comp=Z,136nm,0.9s
KBZ Khabaz 87.46 314 *c i* P **P** **19 51 35.7 +0.7**
KBZ pmax pmax
comp=Z,174nm,0.9s
LODK Lodwar 87.52 274 P **P** **19 51 37.6 +1.5**
SNR=83
LODK Lodwar 87.52 274 *e* P **P** **19 51 37.6 +1.5**
LODK Lodwar 87.52 274 *e* P P 19 51 30.9 -5.2
LODK *e* S SKSac 20 00 56.1 -17
LODK Lodwar 87.52 274 *e* P P 19 51 30.2 -5.8
LODK Lodwar 87.52 274 *e* P **SKSac** **20 01 07.4 -5.9**
KIV Kislovodsk 87.66 315 ⇑ P **P** **19 51 36.5 +0.4**
KIV Kislovodsk 87.66 315 P **P** **19 51 35.9 -0.2**
KIV Kislovodsk 87.66 315 *e* P **P** **19 51 36.4 +0.4**
KIV *e* *PP **pP** **19 53 35.1 +1.5**
KIV *e* 19 55 08.3
KIV *e* 20 01 11.9
KIV *e* SS SS 20 07 36.6 +0.9
KIV *e* SSS SSS 20 11 17.3
KIV pmax pmax
comp=Z,152nm,1.0s
KIV pmax pmax
comp=Z,173nm,3.5s
KIV MLR MLR
comp=Z,279nm,20.0s
KIV Kislovodsk 87.66 315 P **P** **19 51 37.1 +1.0**
KIV Kislovodsk 87.66 315 P **P** **19 51 37.1 +1.0**
KIV Kislovodsk 87.66 315 *i* P **P** **19 51 36.2 +0.1**
SNR=28
MARD Mardin 87.75 308 IAmb IAmb 19 51 39.0
comp=Z,264nm,0.8s
PMOR Pomariorio Ree 87.85 105 *e* P **P** **19 51 39.6 +2.2**
comp=Z,2μm,1.2s
BCA Borcka 87.91 312 ⇑ P **P** **19 51 39.9 +2.6**
VAH Vaihoa 88.08 105 *e* P **P** **19 51 41.2 +2.7**
comp=Z,891nm,1.2s
MOPA Mopani 88.08 247 *i* P **P** **19 51 39.2 +0.7**
MOPA Mopani 88.08 247 *i* P **P** **19 51 39.2 +0.7**
TNA Tin City 88.32 23 P **P** **19 51 38.7 +0.2**
baz=248
TNA S **S** **20 01 38.0 +0.1**
baz=248
KOPT Kop Dagi 88.47 310 IAmb IAmb 19 51 50.3
comp=Z,156nm,0.9s
SDPT Sand Point 88.66 34 P **P** **19 51 39.9 -0.4**
baz=255,SNR=33
ANM Nome 88.98 24 P **P** **19 51 42.3 +0.7**
baz=251
ANM S **S** **20 01 44.8 +0.6**
baz=251
CHNA Chernabura Isl 89.02 34 P **P** **19 51 41.6 -0.4**
baz=256,SNR=16
CHNA S **S** **20 01 44.9 0.0**
baz=256
KTUT Trabzon 89.20 311 ⇓ P **P** **19 51 44.0 +0.8**
S14K Fog Glacier 89.39 33 P **P** **19 51 43.6 -0.3**
baz=256,SNR=26
MUSN Musina, Limpop 89.64 248 *i* P **P** **19 51 46.9 +1.1**
MUSN Musina, Limpop 89.64 248 *i* P **P** **19 51 46.9 +1.1**
SOC Sochi 89.69 314 *e* P **P** **19 51 44.3 -1.1**
SOC *e* *PP **pP** **19 53 41.1 -2.4**
SOC *e* *SP **sP** **19 54 35.0 -2.6**
SOC *e* 19 55 22.4
SOC *e* PPP PPP 19 57 25.0
SOC *e* S **SKSac** **20 01 22.3 -2.3**
SOC pmax pmax
comp=Z,69nm,0.6s
VRH Novokhopyorsk 89.81 322 *e* P **P** **19 51 45.0 -0.8**
VRH *e* *PP **pP** **19 53 39.8 -3.7**
VRH *e* 19 55 25.4
VRH *e* 20 01 22.1
VRH *e* S **S** **20 01 47.8 -4.4**
VRH pmax pmax
comp=Z,260nm,0.6s
VRH pmax pmax
comp=Z,280nm,0.6s
VRH smax smax
comp=N,1μm,7.2s
NVL N'lazarevskaya 89.84 198 ⇓ *i* P **P** **19 51 45.1 -0.5**
NVL *e* S S 20 01 42.0 -10
NVL *e* SS **SS** **20 08 07.3 +2.5**
NVL pmax pmax
comp=Z,74nm,0.7s
CHGN Chignik 90.01 33 P **P** **19 51 46.1 -0.4**
baz=257,SNR=12
ASF Jabal al Asfar 90.05 302 P **P** **19 51 49.0 +1.5**
comp=Z,78nm,0.8s,baz=117,slow=2.8,SNR=110
ASF S **SKSac** **20 01 30.5 +3.1**
comp=Z,4.0nm,1.0s,baz=71,slow=22,SNR=11
comp=Z,78nm,0.8s
PRGR Permogore 90.12 332 ⇑ *i* P **P** **19 51 46.2 -0.7**
PRGR *i* S **SKSac** **20 01 26.9 +0.7**
PRGR *i* 20 01 53.9
R16K Pilot Point 90.74 32 P **P** **19 51 49.4 -0.4**
baz=258
N16K Nishlik Lake 90.78 29 P **P** **19 51 51.0 +0.9**
baz=257,SNR=104
N16K S **S** **20 02 01.1 +0.5**
baz=257
P16K Nushagak River 90.84 31 P **P** **19 51 50.7 +0.3**
baz=257,SNR=13
P16K S **S** **20 01 60.0 -1.0**
baz=257
O16K Kokwok River B 90.91 30 P **P** **19 51 51.1 +0.5**
baz=257,SNR=42
O16K S **S** **20 02 01.2 -0.5**
baz=257
GHAJ Ghor Haditha 91.05 301 IAmb IAmb 19 51 54.4
comp=Z,174nm,0.8s
BLWY Bulawayo 91.09 250 *i* P **P** **19 51 53.4 +0.8**
BLWY Bulawayo 91.09 250 *i* P **P** **19 51 53.4 +0.8**
HWQ Hawqa 91.14 304 *e* P **P** **19 51 53.2 +0.7**
MATP Matopo 91.15 249 *i* P **P** **19 51 53.8 +0.9**
MATP Matopo 91.15 249 *i* P **P** **19 51 53.8 +0.9**
BHL Bhannes 91.33 304 *e* P **P** **19 51 53.9 +0.5**
EIL Elat 91.36 300 P **P** **19 51 54.2 +0.7**
comp=Z,55nm,1.0s,baz=358,slow=1.6,SNR=23
EIL PP **PP** **19 55 39.4 -1.4**
comp=Z,54nm,1.0s,baz=276,slow=1.1,SNR=4.1
EIL S **SKSac** **20 01 38.5 +3.9**
comp=Z,8.7nm,0.9s,baz=278,slow=23,SNR=12
EIL PKKP **PKKPdf** **20 09 09.7 +0.7**
comp=Z,7.5nm,0.6s,baz=293,slow=5.3,SNR=6.5
comp=Z,55nm,1.0s
R17K Ugashik Creek 91.38 32 P **P** **19 51 52.5 -0.3**
baz=259,SNR=35
VSR Storozhevoye 91.39 321 *e* P **P** **19 51 52.4 -0.7**
VSR *e* *PP **pP** **19 53 50.2 -0.8**
VSR *e* 19 55 35.8
VSR *e* S **S** **20 01 59.2 -7.0**
VSR pmax pmax
comp=Z,230nm,0.8s
VSR pmax pmax
comp=Z,290nm,0.9s
VSR smax smax
comp=N,1μm,16.0s
MMAI Mount Meron Ar 91.42 303 P **P** **19 51 55.1 +1.4**
comp=N,55nm,0.8s,baz=102,slow=7.1,SNR=89
comp=N,55nm,0.8s
VORR Voronezh 91.44 322 *e* P **P** **19 51 52.8 -0.5**
VORR *e* *PP **pwP** **19 53 53.3 -1.0**
VORR *e* S **SKSac** **20 01 33.9 -0.2**
VORR pmax pmax
comp=Z,170nm,0.5s
VORR pmax pmax
comp=Z,230nm,0.6s
VORR smax smax
comp=N,600nm,1.2s
CHIR Chirikof Islan 91.45 34 IAmb IAmb 19 51 55.0
comp=Z,102nm,0.8s

CHIR Chirikof Islan 91.45 34 P **P** **19 51 53.6 +0.4**
baz=259,SNR=7.0
O17K Koliganek Bris 91.45 30 P **P** **19 51 53.5 +0.4**
baz=258,SNR=37
O17K S **S** **20 02 04.6 -1.8**
baz=258
ANN Anapa 91.52 315 *c i* P **P** **19 51 53.1 -0.7**
ANN *e* *PP **pwP** **19 53 53.3 -0.7**
ANN *e* 19 55 41.6
ANN *e* S **SKSac** **20 01 33.7 -1.1**
ANN *e* PS **SP** **20 03 19.7 -1.8**
ANN pmax pmax
comp=Z,207nm,0.8s
ANN pmax pmax
comp=N,59nm,0.8s
ANN smax smax
comp=Z,153nm,1.6s
ANN smax smax
comp=E,1μm,3.4s
ANN smax smax
comp=N,275nm,1.3s
TOKA Tokat 91.56 310 IAmb IAmb 19 51 57.8
comp=Z,311nm,1.5s
MBAR Mbarara 91.59 269 P **P** **19 51 56.1 +1.0**
comp=Z,182nm,0.7s,baz=85,slow=8.8,SNR=295
comp=Z,182nm,0.7s
MBAR Mbarara 91.59 269 P **P** **19 51 55.0 -0.1**
MBAR IAmb IAmb 19 51 57.7
comp=Z,194nm,0.8s
MBAR Mbarara 91.59 269 *c i* P **P** **19 51 55.8 +0.7**
MBAR Mbarara 91.59 269 P **P** **19 51 55.8 +0.7**
MBAR Mbarara 91.59 269 P **P** **19 51 55.8 +0.7**
MBAR Mbarara 91.59 269 *e* P **P** **19 51 56.1 +1.0**
P17K Kvichak River 91.66 31 P **P** **19 51 53.7 -0.4**
baz=259,SNR=12
P17K S **S** **20 02 05.7 -2.5**
baz=259
LPSR Galich'ya Gora 91.77 323 *e* P **P** **19 51 54.6 -0.2**
LPSR *e* *PP **pP** **19 53 50.2 -2.6**
LPSR *e* 19 55 40.6
LPSR *e* 20 01 33.6
LPSR *e* S **S** **20 02 03.0 -6.5**
LPSR pmax pmax
comp=Z,130nm,0.8s
LPSR pmax pmax
comp=Z,250nm,1.2s
LPSR smax smax
comp=N,2μm,14.3s
BNN Bunyan 91.84 309 IAmb IAmb 19 51 57.0
comp=Z,286nm,1.0s
SOE Somerset East 91.86 237 IAmb IAmb 19 51 58.5
comp=Z,73nm,0.8s
LSZ Lusaka 92.17 254 P **P** **19 51 58.3 +0.7**
comp=Z,218nm,0.7s,baz=99,slow=4.4,SNR=429
LSZ PP **PP** **19 55 48.2 +0.9**
comp=Z,13nm,0.9s,baz=132,slow=13,SNR=3.5
comp=Z,218nm,0.7s
N18K Kilae Creek 92.22 29 IAmb IAmb 19 51 59.2
comp=Z,226nm,1.6s
N18K Kilae Creek 92.22 29 P **P** **19 51 57.2 +0.4**
baz=259,SNR=26
N18K S **S** **20 02 13.0 -0.2**
baz=259
P18K Big Mountain, 92.31 31 P **P** **19 51 55.6 -1.6**
P18K Big Mountain, 92.31 31 P **P** **19 51 56.3 -0.9**
baz=260,SNR=7.4
SII Sitkinak Islan 92.37 33 P **P** **19 51 58.0 +0.5**
baz=260,SNR=28
SII Sitkinak Islan 92.37 33 P **P** **19 51 58.8 +1.3**
O18K Koktuh Hills 92.40 30 P **P** **19 51 57.4 -0.1**
baz=260,SNR=10
O18K S **S** **20 02 13.0 -1.8**
baz=260
SVW2 Sparrevohn 92.44 29 IAmb IAmb 19 52 00.1
comp=Z,206nm,1.4s
GCSA Galena City Sc 92.56 25 P **P** **19 51 58.5 +0.4**
baz=258,SNR=5.5
GCSA S **S** **20 02 14.7 -1.1**
baz=258
TTA Tatalina 92.58 27 IAmb IAmb 19 52 00.5
comp=Z,166nm,1.1s
TTA Tatalina 92.58 27 P **P** **19 51 58.7 +0.3**
baz=259,SNR=28
TTA S **S** **20 02 15.3 -1.1**
baz=259
DIKM Dikmen 92.65 311 ⇓ P **P** **19 51 59.5 +0.4**
BOSA Boshof 92.81 241 P **P** **19 52 00.9 +0.5**
comp=Z,111nm,0.7s,baz=104,slow=4.0,SNR=165
BOSA PKKPbc **PKKPbc** **20 09 09.6 +0.6**
comp=Z,2.6nm,0.5s,baz=297,slow=1.5,SNR=7.7
comp=Z,111nm,0.7s
BOSA Boshof 92.81 241 P **P** **19 51 58.8 -1.6**
BOSA IAmb IAmb 19 52 02.1
comp=Z,115nm,0.8s
BOSA Boshof 92.81 241 *i* P **P** **19 52 01.2 +0.8**
BOSA Boshof 92.81 241 *i* P **P** **19 52 01.2 +0.8**
KLMR Klimovskoe 92.83 331 *e* P **P** **19 51 57.6 -1.9**
KLMR *e* 19 55 46.7
KLMR *e* S **SKSac** **20 01 38.9 -2.4**
KLMR *e* SS **SS** **20 08 49.6 +1.3**
KLMR *e* 20 09 05.4
KLMR pmax pmax
comp=Z,77nm,0.9s
KLMR Klimovskoe 92.83 331 *e* P **P** **19 51 57.7 -1.8**
KLMR AMP 19 52 06.9
comp=Z,77nm,0.9s
KLMR *e* PP **PP** **19 55 46.8 -4.4**
KLMR *e* S **SKSac** **20 01 38.9 -2.4**
KLMR *e* S **SKSac** **20 01 38.9 -2.4**
KLMR *e* SS **SS** **20 08 49.7 +1.4**
KLMR *e* SS **SS** **20 08 49.7 +1.4**
KLMR *e* PKKP **PKKPdf** **20 09 05.4 -1.9**
O19K Port Alsworth 92.90 30 P **P** **19 51 59.2 -0.6**
baz=260
O19K S **S** **20 02 15.2 -3.8**
baz=260
N19K Bonanza Creek 92.92 29 IAmb IAmb 19 52 02.2
comp=Z,250nm,1.1s
N19K Bonanza Creek 92.92 29 P **P** **19 52 00.3 +0.3**
baz=260,SNR=66
N19K S **S** **20 02 17.3 -2.1**
baz=260
OHAK Old Harbor 92.96 33 IAmb IAmb 19 52 01.8
comp=Z,76nm,0.8s
OHAK Old Harbor 92.96 33 P **P** **19 51 60.0 -0.2**
baz=261,SNR=16
OHAK S **S** **20 02 17.3 -2.3**
baz=261
L19K White Mountain 92.97 28 IAmb IAmb 19 52 02.5
comp=Z,211nm,1.1s
L19K White Mountain 92.97 28 P **P** **19 52 00.7 +0.5**
baz=260,SNR=97
L19K S **S** **20 02 19.1 -0.6**
baz=260
MOS Moscow 93.02 326 *e* P **P** **19 51 58.0 -2.4**
MOS *e* 19 55 52.8
MOS *e* 20 01 40.9
MOS *e* *SS **S** **20 02 14.2 -6.0**
MOS pmax pmax
comp=Z,200nm,0.8s
MOS pmax pmax
comp=Z,222nm,0.7s
Q19K Cape Douglas, 93.03 31 IAmb IAmb 19 52 01.2
comp=Z,104nm,1.1s
Q19K Cape Douglas, 93.03 31 P **P** **19 51 59.5 -1.0**
baz=261,SNR=5.5
LBTB Lobatse 93.11 244 IAmb IAmb 19 52 04.0
comp=Z,88nm,0.9s
LBTB Lobatse 93.11 244 *i* P **P** **19 52 02.6 +0.8**
LBTB Lobatse 93.11 244 *i* P **P** **19 52 02.6 +0.8**
M19K Big River Lodg 93.14 28 P **P** **19 52 01.2 +0.3**
M19K IAmb IAmb 19 52 03.5
comp=Z,156nm,1.2s
M19K Big River Lodg 93.14 28 P **P** **19 52 01.3 +0.4**
baz=261,SNR=48
M19K S **S** **20 02 19.9 -1.3**
baz=261
P19K Oil Pt 93.35 30 P **P** **19 52 01.0 -1.0**
baz=261
CSS Mathiatis 93.36 305 IAmb IAmb 19 52 04.5
comp=Z,96nm,1.0s
KDAK Kodiak Island 93.42 32 P **P** **19 52 01.8 -0.4**
KDAK IAmb IAmb 19 52 06.3
comp=Z,75nm,1.0s
KDAK Kodiak Island 93.42 32 P **P** **19 52 01.8 -0.4**
KDAK Kodiak Island 93.42 32 P **P** **19 52 02.3 +0.1**

baz=262
KDAK S **S** **20 02 21.4 -2.2**
baz=262
ILSW Iliamna Southw **93.45 30** IAmb IAmb 19 52 02.8
comp=Z,76nm,1.4s
L20K Farewell, AK **93.47 28** P **P** **19 52 03.0 +0.6**
baz=261,SNR=78
L20K S **S** **20 02 20.2 -3.9**
baz=261
K20K Telida **93.52 27** P **P** **19 52 02.5 -0.2**
K20K IAmb IAmb 19 52 05.0
comp=Z,211nm,1.3s
K20K Telida **93.52 27** P **P** **19 52 03.2 +0.6**
baz=261,SNR=65
K20K S **S** **20 02 22.6 -1.8**
baz=261
SNAA Sanae **93.56 195** P **P** **19 52 03.2 +0.4**
SNAA Sanae **93.56 195** P'P'df P'P'df 20 17 11.2 -5.0
SNAA Sanae **93.56 195** PKKP 20 09 04.3
SNAA Sanae **93.56 195** PKKP 20 09 04.6
comp=Z,5.9nm,0.8s,baz=280,slow=4.1,SNR=24
SNAA Sanae **93.56 195** IAmb IAmb 19 52 04.2
comp=Z,63nm,0.6s
J20K Nowinta River **93.62 26** IAmb IAmb 19 52 05.5
comp=Z,242nm,1.3s
J20K Nowinta River **93.62 26** P **P** **19 52 03.7 +0.7**
baz=261,SNR=86
J20K S **S** **20 02 23.0 -2.1**
baz=261
BZK Bozkurt **93.62 312** ⇓P **P** **19 52 02.2 -1.3**
BZK Bozkurt **93.62 312** IAmb IAmb 19 52 04.3
comp=Z,142nm,0.6s
Q20K Shuyak Island **93.63 32** P **P** **19 52 02.8 -0.4**
baz=262,SNR=7.9
Q20K S **S** **20 02 21.9 -3.6**
baz=262
BR131 Keskin Array S **93.65 309** IAmb IAmb 19 52 04.9
comp=Z,68nm,0.8s
BR131 Keskin Array S **93.65 309** *c* *i*P **P** **19 52 03.5 -0.4**
BRTR Keskin Array B **93.65 309** P **P** **19 52 03.5 -0.4**
comp=Z,34nm,0.7s,baz=128,slow=5.6,SNR=117
BRTR S **SKSac** **20 01 49.0 +1.9**
comp=Z,3.2nm,1.0s,baz=92,slow=7.2,SNR=4.0
BRTR PKKP **PKKPbc** **20 09 06.5 -0.8**
comp=Z,2.5nm,1.0s,baz=251,slow=3.8,SNR=4.7
comp=Z,34nm,0.7s
BRTR Keskin Array B **93.65 309** *i* P **P** **19 52 03.5 -0.4**
BRTR pmax pmax
comp=Z,36nm,0.7s
RSO Redoubt South **93.71 30** P **P** **19 52 02.6 -1.2**
O20K Slope Mountain **93.72 30** P **P** **19 52 02.5 -1.2**
baz=262
O20K S **S** **20 02 21.6 -4.7**
baz=262
M20K Styx River **93.73 28** IAmb IAmb 19 52 05.8
comp=Z,168nm,1.1s
M20K Styx River **93.73 28** P **P** **19 52 04.0 +0.2**
baz=262,SNR=84
M20K S **S** **20 02 25.4 -1.1**
baz=262
ILGA Ilgaz **93.73 311** IAmb IAmb 19 52 05.9
comp=Z,59nm,0.7s
SIM Simferopol' **93.87 315** *e*P **P** **19 52 03.5 -1.1**
SIM *e* 19 55 55.0
SIM pmax pmax
comp=Z,217nm,1.1s
SIM pmax pmax
comp=Z,215nm,1.0s
SIM MLR MLR
comp=Z,230nm,20.0s
A21K Barrow **93.93 19** P **P** **19 52 05.4 +1.1**
baz=259
A21K S **S** **20 02 26.5 -1.1**
baz=259
BELA Belgrano 2 **94.04 185** IAmb IAmb 19 52 05.8
comp=Z,108nm,0.6s
IMAR Indian Mountai **94.06 24** P **P** **19 52 04.8 -0.2**
SPCR Spurr Chakacha **94.07 29** P **P** **19 52 04.6 -0.7**
baz=262,SNR=19
SPCR S **S** **20 02 25.6 -3.8**
baz=262
HOM Homer **94.15 31** P **P** **19 52 04.2 -1.3**
baz=263
G21K Allakaket **94.24 24** P **P** **19 52 06.4 +0.6**
baz=262,SNR=99
G21K S **S** **20 02 28.9 -1.6**
baz=262
PPLA Purkeypile **94.30 27** IAmb IAmb 19 52 08.0
comp=Z,224nm,1.3s
PPLA Purkeypile **94.30 27** P **P** **19 52 06.1 -0.3**
baz=263,SNR=32
ANTO Ankara **94.31 309** ⇑P **P** **19 52 06.7 -0.2**
ANTO Ankara **94.31 309** P **P** **19 52 05.8 -1.0**
ANTO Ankara **94.31 309** ⇑P **P** **19 52 06.7 -0.2**
ANTO Ankara **94.31 309** P **P** **19 52 07.1 +0.2**
ANTO Ankara **94.31 309** P **P** **19 52 07.1 +0.2**
CNPM China Poot **94.34 31** IAmb IAmb 19 52 07.6
comp=Z,110nm,1.0s
F21K Alatna River **94.35 23** P **P** **19 52 06.5 +0.2**
baz=262,SNR=29
F21K S **S** **20 02 29.5 -1.9**
baz=262
CHUM Lake Minchumin **94.37 26** P **P** **19 52 06.8 +0.3**
baz=262,SNR=118
CHUM S **S** **20 02 28.3 -3.4**
baz=262
H21K Melozitna Rive **94.40 24** P **P** **19 52 06.6 0.0**
H21K IAmb IAmb 19 52 09.0
comp=Z,156nm,1.3s
H21K Melozitna Rive **94.40 24** P **P** **19 52 07.2 +0.6**
baz=262,SNR=76
H21K S **S** **20 02 30.9 -1.0**
baz=262
CAST Castle Rocks **94.42 27** IAmb IAmb 19 52 08.9
comp=Z,52nm,0.8s
CAST Castle Rocks **94.42 27** P **P** **19 52 06.4 -0.3**
baz=263,SNR=56
BRLK Bradley Lake **94.55 30** IAmb IAmb 19 52 09.0
comp=Z,192nm,1.2s
BRSE Bradley Lake S **94.62 30** P **P** **19 52 07.1 -0.6**
baz=264,SNR=8.4
BRSE S **S** **20 02 31.0 -3.0**
baz=264
I21K Tanana **94.68 25** IAmb IAmb 19 52 10.2
comp=Z,169nm,1.3s
I21K Tanana **94.68 25** P **P** **19 52 08.5 +0.6**
baz=263,SNR=71
F22K John River **94.89 23** P **P** **19 52 09.8 +1.1**
baz=263,SNR=71
KTH Kantishna Hill **94.95 27** IAmb IAmb 19 52 10.5
comp=Z,152nm,1.0s
BPAW Bear Paw Mtn. **94.98 26** IAmb IAmb 19 52 10.9
comp=Z,111nm,1.2s
BPAW Bear Paw Mtn. **94.98 26** P **P** **19 52 08.9 -0.3**
baz=264,SNR=58
BPAW S **S** **20 02 33.3 -3.7**
baz=264
H22K Ishtalitna Cre **95.02 24** P **P** **19 52 10.0 +0.7**
baz=264,SNR=70
H22K S **S** **20 02 34.2 -3.1**
baz=264
G22K Bettles **95.08 23** P **P** **19 52 10.2 +0.7**
baz=264
E22K Anaktuvuk Pass **95.10 22** P **P** **19 52 10.8 +1.0**
baz=263
E22K S **S** **20 02 36.4 -1.5**
baz=263
CUT Chulitna **95.13 28** P **P** **19 52 09.1 -0.8**
CUT IAmb IAmb 19 52 10.9
comp=Z,208nm,1.1s
CUT Chulitna **95.13 28** P **P** **19 52 09.1 -0.8**
baz=264,SNR=14
M22K Willow **95.13 29** P **P** **19 52 09.1 -0.8**
baz=264,SNR=21
VNA2 Neumayer--Watz **95.18 195** P **P** **19 52 10.5 +0.4**
baz=137,slow=5.7
VNA2 Neumayer--Watz **95.18 195** P'P'df P'P'df 20 17 07.5 -5.6
VNA2 Neumayer--Watz **95.18 195** PKKP 20 09 00.3
MLY Manley **95.19 25** IAmb IAmb 19 52 12.1
comp=Z,135nm,1.0s
MLY Manley **95.19 25** P **P** **19 52 10.4 +0.2**
baz=264,SNR=177
MLY S **S** **20 02 35.4 -3.4**
baz=264
O22K Cooper Landing **95.20 30** P **P** **19 52 09.8 -0.5**
baz=264,SNR=7.9
TRF Thorofare Moun **95.22 27** IAmb IAmb 19 52 11.6
comp=Z,143nm,1.0s
TRF Thorofare Moun **95.22 27** P **P** **19 52 10.0 -0.5**
baz=264,SNR=50
RC01 Rabbit Creek A **95.25 29** IAmb IAmb 19 52 11.6
comp=Z,143nm,1.0s
RC01 Rabbit Creek A **95.25 29** P **P** **19 52 09.8 -0.8**
baz=265,SNR=17
SEW Seward **95.30 30** IAmb IAmb 19 52 11.9
comp=Z,88nm,0.9s
SEW Seward **95.30 30** P **P** **19 52 10.1 -0.6**
baz=265,SNR=15
VNA3 Neumayer Olymp **95.53 194** P **P** **19 52 11.6 0.0**
VNA3 Neumayer Olymp **95.53 194** PKKP **PKKPdf** **20 08 59.3 -2.4**
VNA1 Neumayer--Stat **95.58 195** P **P** **19 52 12.3 +0.4**
VNA1 Neumayer--Stat **95.58 195** PKKP **PKKPdf** **20 08 59.6 -2.0**
PMR Palmer **95.59 29** P **P** **19 52 10.9 -1.1**
PMR IAmb IAmb 19 52 13.1
comp=Z,185nm,1.5s
PMR Palmer **95.59 29** P **P** **19 52 10.9 -1.1**
PMR pmax pmax
comp=Z,185nm,1.5s
PMR Palmer **95.59 29** P **P** **19 52 11.3 -0.6**
baz=265,SNR=12
D23K Nanushuk River **95.60 21** P **P** **19 52 13.4 +1.4**
baz=264,SNR=82
G23K Bananza Creek **95.64 24** P **P** **19 52 13.2 +0.9**
baz=265,SNR=154
G23K S **S** **20 02 39.6 -3.0**
baz=265
GHO Glory Hole Cre **95.70 29** IAmb IAmb 19 52 13.3
comp=Z,68nm,1.1s
C23K Itkillik River **95.71 20** P **P** **19 52 13.1 +0.7**
baz=265,SNR=38
C23K S **S** **20 02 38.4 -4.5**
baz=265
H23K Yukon River **95.76 24** P **P** **19 52 12.8 +0.1**
H23K IAmb IAmb 19 52 15.2
comp=Z,117nm,0.9s
H23K Yukon River **95.76 24** P **P** **19 52 13.4 +0.7**
baz=265,SNR=118
I23K Minto, Yukon-K **95.78 25** P **P** **19 52 13.1 +0.3**
baz=265,SNR=254
I23K S **S** **20 02 39.7 -3.9**
baz=265
LVZ Lovozero **95.83 338** P **P** **19 52 11.6 -1.4**
LVZ Lovozero **95.83 338** ⇓*e*P **P** **19 52 12.0 -1.0**
LVZ pmax pmax
comp=Z,39nm,1.0s
MCK McKinley **95.85 27** P **P** **19 52 12.5 -0.7**
baz=266,SNR=72
SUR Sutherland **95.86 236** P **P** **19 52 13.9 -0.3**
SUR IAmb IAmb 19 52 17.5
comp=Z,99nm,1.0s
NEA2 Nenana **95.86 26** IAmb IAmb 19 52 15.8
comp=Z,216nm,1.8s
NEA2 Nenana **95.86 26** P **P** **19 52 12.5 -0.7**
baz=266,SNR=9.4
KNK Knik Glacier **95.89 29** P **P** **19 52 13.5 +0.1**
baz=266,SNR=40
KNK S **S** **20 02 42.1 -2.8**
baz=266
PWL Port Wells **95.91 29** IAmb IAmb 19 52 15.0
comp=Z,217nm,1.3s
PWL Port Wells **95.91 29** P **P** **19 52 13.1 -0.4**
baz=266,SNR=12
PWL S **S** **20 02 42.0 -3.1**
baz=266
WAT1 Susitna Watana **95.96 27** P **P** **19 52 13.2 -0.5**
baz=266
WAT1 S **S** **20 02 40.9 -4.6**
baz=266
TOLK Toolik Lake Re **95.98 22** P **P** **19 52 12.9 -0.8**
TOLK IAmb IAmb 19 52 16.4
comp=Z,126nm,0.9s
TOLK Toolik Lake Re **95.98 22** P **P** **19 52 14.7 +1.0**
baz=266,SNR=41
TOLK S **S** **20 02 43.8 -1.6**
baz=266
SML Sawmill **95.98 29** P **P** **19 52 13.7 -0.1**
baz=266,SNR=44
SML S **S** **20 02 42.5 -3.3**
baz=266
MDM Murphy Dome **96.24 25** P **P** **19 52 13.8 -1.1**
MDM IAmb IAmb 19 52 17.5
comp=Z,50nm,0.9s
M23K Glacier View **96.27 29** P **P** **19 52 14.8 -0.3**
baz=266,SNR=22
M23K S **S** **20 02 45.9 -2.2**
baz=266
APA Apatity **96.28 337** ⇑*i*P **P** **19 52 13.2 -1.8**
APA *i* *PP **pP** **19 54 13.5 -0.3**
APA *i* 20 01 58.0
APA *i* PS **PS** **20 05 18.0 -5.6**
APA pmax pmax
comp=Z,10.0nm,0.9s
APA MLR MLR
comp=Z,500nm,14.0s
D24K Happy Valley **96.28 21** P **P** **19 52 15.9 +1.0**
baz=266
ELL Elmali **96.30 306** IAmb IAmb 19 52 30.6
comp=Z,110nm,0.9s
WAT6 Susitna Watana **96.31 28** P **P** **19 52 15.3 -0.1**
baz=266,SNR=65
WAT6 S **S** **20 02 44.6 -4.1**
baz=266
P23K Montague Islan **96.32 30** S **S** **20 02 46.8 -1.7**
baz=265
E24K Your Creek **96.34 22** P **P** **19 52 16.0 +0.7**
baz=266,SNR=31
E24K S **S** **20 02 48.6 +0.1**
baz=266
C24K Franklin Bluff **96.36 21** P **P** **19 52 16.2 +0.9**
baz=266
TCOL CIGO, UAF Yank **96.39 25** P **P** **19 52 14.5 -1.1**
baz=267
COLA College **96.40 25** ⇓P **P** **19 52 15.1 -0.4**
COLA College **96.40 25** P **P** **19 52 14.3 -1.2**
baz=267
CCB Clear Creek Bu **96.41 26** P **P** **19 52 15.2 -0.4**
H24K Noodor Dome **96.44 24** Pdiff **P** **19 52 16.5 +0.6**
baz=267
SCM Sheep Creek Mo **96.46 29** P **P** **19 52 14.2 -1.8**
SCM IAmb IAmb 19 52 17.9
comp=Z,192nm,1.2s
SCM Sheep Creek Mo **96.46 29** P **P** **19 52 14.2 -1.8**
SCM pmax pmax
comp=Z,192nm,1.2s
SCM Sheep Creek Mo **96.46 29** Pdiff **P** **19 52 16.0 0.0**
baz=267
SCM S **S** **20 02 47.6 -2.2**
baz=267
DHY Denali Highway **96.51 27** IAmb IAmb 19 52 18.0
comp=Z,106nm,0.8s
DHY Denali Highway **96.51 27** Pdiff **P** **19 52 16.1 -0.2**
baz=267
GLI Glacier Island **96.52 29** Pdiff **P** **19 52 15.8 -0.4**
baz=267
GLI S **S** **20 02 47.2 -3.0**
baz=267
F24K Squaw Lake **96.53 23** Pdiff **P** **19 52 17.1 +0.9**
baz=267
F24K S **S** **20 02 49.0 -1.2**
baz=267
POKR Poker Plat Res **96.59 25** Pdiff **P** **19 52 15.5 -0.9**
baz=267
POKR S **S** **20 02 47.4 -3.3**
baz=267
G24K Hadweenzic Riv **96.65 24** Pdiff **P** **19 52 17.6 +0.8**
baz=267
G24K S **S** **20 02 48.0 -3.1**
baz=267
HDA Harding Lake **96.76 26** P **P** **19 52 15.7 -1.6**
HDA IAmb IAmb 19 52 17.8
comp=Z,131nm,0.9s
HDA Harding Lake **96.76 26** Pdiff **P** **19 52 16.2 -1.0**
baz=267
IL31 **96.81 26** IAmb IAmb 19 52 17.7
comp=Z,130nm,1.4s
ILAR Eielson Array **96.81 26** P **P** **19 52 16.1 -1.3**
comp=Z,37nm,0.9s,baz=284,slow=3.8,SNR=140
ILAR PP **PP** **19 56 20.4 -1.1**
comp=Z,12nm,0.8s,baz=261,slow=5.6,SNR=7.6
ILAR PKKPbc **PKKPbc** **20 08 57.4 -2.4**
comp=Z,5.2nm,0.7s,baz=83,slow=2.5,SNR=21
ILAR SKKP 20 11 45.8
comp=Z,3.4nm,0.9s,baz=60,slow=1.9,SNR=5.1
comp=Z,37nm,0.9s
FID Port Fidalgo **96.81 30** P **P** **19 52 16.4 -1.2**
FID IAmb IAmb 19 52 19.1
comp=Z,62nm,0.9s
Q23K Middleton Isla **96.82 31** Pdiff **P** **19 52 16.6 -1.0**
baz=267
PURM Purcari **96.96 316** ⇑P **P** **19 52 18.2 -0.3**
M24K Tolsona, Glenn **97.02 28** Pdiff Pdif 19 52 18.9 +0.4
baz=268
M24K S **S** **20 02 53.6 -0.9**
baz=268
VALR Valaam **97.05 331** *d* *i*P **P** **19 52 18.1 -0.4**
VALR pmax pmax
comp=Z,43nm,0.9s
KLU Klutina **97.11 29** P **P** **19 52 18.4 -0.5**
KLU Klutina **97.11 29** Pdiff Pdif 19 52 19.3 +0.3
baz=268
KLU S **S** **20 02 52.0 -3.4**
baz=268
D25K Kavik River **97.16 21** Pdiff **P** **19 52 19.5 +0.5**
baz=268
D25K S **S** **20 02 53.4 -2.0**
baz=268
EYAK Cordova Ski Ar **97.17 30** Pdiff **P** **19 52 19.3 +0.2**
baz=268
DIV Divide **97.17 29** IAmb IAmb 19 52 21.4
comp=Z,153nm,1.2s
K24K Donnelly Dome **97.25 27** Pdiff Pdif 19 52 19.3 -0.2
baz=268
PUL Pulkovo **97.28 329** *ce*P **P** **19 52 19.6 0.0**
PUL pmax pmax
comp=Z,120nm,0.5s
H25K Birch Creek **97.30 24** Pdiff **P** **19 52 20.7 +1.1**
baz=269
PAX Paxson **97.37 27** Pdiff **P** **19 52 20.3 +0.2**
baz=269
F25K Christian Rive **97.40 23** Pdiff **P** **19 52 21.2 +1.1**
baz=269
PRP Porcupine Dome **97.41 25** P Pdif 19 52 18.4 -1.8
PRP Porcupine Dome **97.41 25** Pdiff Pdif 19 52 19.1 -1.1
baz=269
E25K Arctic Village **97.43 22** Pdiff **P** **19 52 21.3 +1.1**
baz=269
J25K Salcha River, **97.45 26** IAmb IAmb 19 52 21.3
comp=Z,207nm,1.8s
J25K Salcha River, **97.45 26** Pdiff Pdif 19 52 19.6 -0.8
baz=269
MANT Manisa **97.48 308** IAmb IAmb 19 52 23.3
comp=Z,99nm,1.4s
HARP HAARP **97.50 28** Pdiff Pdif 19 52 20.4 -0.2
baz=269
AKASG Malin Array Be **97.59 320** P Pdif 19 52 20.5 -0.7
comp=Z,39nm,0.8s,baz=73,slow=5.0,SNR=144
AKASG PP **PP** **19 56 28.9 +1.1**
comp=Z,45nm,0.9s,baz=78,slow=6.7,SNR=16
AKASG S **SKSac** **20 02 04.2 -2.4**
comp=Z,4.2nm,0.8s,baz=76,slow=5.4,SNR=5.0
AKASG PKKPbc **PKKPbc** **20 08 54.6 -2.5**
comp=Z,5.7nm,0.8s,baz=278,slow=2.9,SNR=16
AKASG SKKP 20 11 43.1
comp=Z,2.1nm,0.7s,baz=274,slow=3.0,SNR=8.1
comp=Z,39nm,0.8s
AKASG Malin Array Be **97.59 320** IAmb IAmb 19 52 22.0
comp=Z,60nm,0.8s
AKASG Malin Array Be **97.59 320** *i* P Pdif 19 52 20.5 -0.7
AKASG pmax pmax
comp=Z,47nm,0.7s
AKBB Malin Array Si **97.59 320** P Pdif 19 52 20.1 -1.1
AKBB IAmb IAmb 19 52 22.0
comp=Z,70nm,0.8s
AKBB Malin Array Si **97.59 320** *c* *i*P Pdif 19 52 20.4 -0.8
TLCR **97.64 315** ⇑P Pdif 19 52 21.3 -0.2
TLCR **97.64 315** ⇑P Pdif 19 52 21.3 -0.2
RIDG Independent Ri **97.67 27** P Pdif 19 52 20.7 -0.7
RIDG Independent Ri **97.67 27** Pdiff Pdif 19 52 21.2 -0.1
baz=269
C26K Camden Bay **97.68 20** Pdiff **P** **19 52 22.9 +1.7**
baz=270
ARG Arkhangelos **97.70 306** IAmb IAmb 19 52 24.9
comp=Z,54nm,1.2s
KIS Kishinev **97.71 316** *e*P Pdif 19 52 21.0 -0.8
comp=Z,210nm,0.8s
KIS Kishinev **97.71 316** *e*PP **PP** **19 56 30.0 +1.2**
comp=Z,190nm,2.2s
KIS Kishinev **97.71 316** *e*P Pdif 19 52 21.0 -0.8
KIS *e* 19 56 30.0
KIS *e*PPP PPP 19 58 46.0
KIS *i* 20 02 06.0
KIS *e* 20 02 55.0
KIS pmax pmax
comp=Z,21nm,0.8s
KIS pmax pmax
comp=Z,190nm,2.2s
KIS pmax pmax
comp=E,600nm,3.2s
KIS pmax pmax
comp=N,200nm,1.7s
MILM Milestii Mici **97.71 316** ⇓P Pdif 19 52 21.1 -0.7
MILM Milestii Mici **97.71 316** ⇑*i*P Pdif 19 52 21.0 -0.8
comp=N,70nm,0.9s
MILM *es*P sP 19 55 01.0 -13
MILM Milestii Mici **97.71 316** *i* PP **PP** **19 56 27.0 -1.8**
comp=N,2µm,6.6s
MILM Milestii Mici **97.71 316** *c* *i*P Pdif 19 52 21.0 -0.8
MILM *i* 19 56 27.0
MILM *e*PPP PPP 19 58 43.0
MILM *i* 20 02 07.7
MILM *e*PPS PPS 20 05 18.0
MILM pmax pmax
comp=Z,70nm,0.9s
MILM pmax pmax
comp=Z,2µm,6.6s
MILM MLR MLR
comp=Z,400nm,20.0s
BMRM Bremner River **97.74 29** Pdiff **P** **19 52 21.8 +0.1**
baz=269
N25K Chitina, Valde **97.75 29** Pdiff **P** **19 52 22.2 +0.4**
baz=269
KAIM Kayak Island **97.81 31** Pdiff **P** **19 52 22.9 +0.9**
baz=269
TIRR Tirgusor **97.89 314** ⇓P Pdif 19 52 22.2 -0.5
TIRR Tirgusor **97.89 314** ⇓P Pdif 19 52 22.2 -0.5
TPGR Topolog **97.90 314** ⇑P Pdif 19 52 20.4 -2.4
F26K Sheenjek River **97.97 23** Pdiff **P** **19 52 23.8 +1.2**
baz=270
SCRK Sand Creek **98.05 26** Pdiff **P** **19 52 23.2 0.0**
baz=270
SORM Soroca **98.07 318** ⇑P Pdif 19 52 21.9 -1.5
SORM Soroca **98.07 318** ⇑P Pdif 19 52 21.9 -1.5
C27K Jago River **98.10 21** Pdiff **P** **19 52 24.5 +1.3**
baz=271
CFR Carcaliu **98.11 315** ⇓P Pdif 19 52 23.6 0.0
CFR Carcaliu **98.11 315** ⇓P Pdif 19 52 23.6 -0.1
G26K Porcupine Rive **98.12 23** Pdiff **P** **19 52 24.4 +1.1**
baz=271
TLBR Topalu **98.16 314** ⇑P **P** **19 52 24.0 +0.1**
J26L Joseph Creek **98.23 26** Pdiff **P** **19 52 24.2 +0.2**
baz=270
HARR Harsova **98.24 314** ⇓P **P** **19 52 24.8 +0.5**
HARR Harsova **98.24 314** ⇓P **P** **19 52 24.8 +0.5**
ICOR Ion Corvin **98.31 313** ⇑P Pdif 19 52 24.2 -0.4
I26K Coal Creek Min **98.40 25** IAmb IAmb 19 52 26.5
comp=Z,132nm,1.0s
I26K Coal Creek Min **98.40 25** Pdiff **P** **19 52 24.9 +0.4**
baz=271
MNK Minsk **98.50 324** *i* P Pdif 19 52 24.7 -0.4
MNK *i* *PP pP 19 54 24.2 +0.5
MNK *i* 19 56 34.3
MNK *i* PPP PPP 19 58 45.8
MNK *i* S **SKSac** **20 02 10.2 -0.8**
MNK *i* SP **SP** **20 04 37.7 +1.0**
MNK *i* PS **PS** **20 05 34.5 -12**
MNK pmax pmax
comp=Z,131nm,0.9s
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK MLR MLR
comp=E,52nm,20.0s
MNK MLR MLR
comp=Z,485nm,20.0s
MNK Minsk **98.50 324** *i* P Pdif 19 52 24.7 -0.4
comp=E,10.0nm,0.9s
MNK *i* P Pdif 19 52 24.7 -0.4
MNK *i* P Pdif 19 52 24.7 -0.4
comp=Z,131nm,0.9s,baz=91
MNK *i* pP pP 19 54 24.2 +0.5
MNK *i* sP **PP** **19 56 29.0 -5.5**

MNK *i* PP **PP** **19 56 34.4 -0.1**
MNK *i* PPP PPP 19 58 45.8
MNK *i* SKS SKiKP 20 00 26.7 +49
MNK *i* S **SKSac** **20 02 10.2 -0.8**
MNK *i* SP **SP** **20 04 37.7 +1.0**
MNK *i* PS **PS** **20 05 34.6 -12**
MNK *i* sS pS 20 05 57.2 +16
MNK *i* SS SS 20 09 17.3 -50
MNK *i* SSS SSS 20 13 46.0
MNK *i* LRM MLR 20 38 52.5
MNK *i* LRM MLR 20 39 01.6
comp=E,52nm,20.1s
MNK *i* LRM MLR 20 39 07.4
comp=Z,485nm,20.1s
MCARA McCarthy VSAT 98.51 29 Pdiff **P** **19 52 25.2 +0.1**
baz=270
M26K Nabesna, AK 98.51 28 Pdiff **P** **19 52 25.5 +0.3**
baz=271
PRD Provadia 98.58 313 P **P** **19 52 25.9 +0.1**
IAS Iasi 98.58 317 ⇓P Pdif 19 52 25.6 -0.2
IAS Iasi 98.58 317 ⇓P Pdif 19 52 25.6 -0.1
KEV Kevo 98.64 339 *e*P Pdif 19 52 25.0 -0.5
GHRR 98.65 315 ⇑P **P** **19 52 27.2 +1.1**
K27K Chicken 98.89 26 Pdiff **P** **19 52 27.9 +1.1**
baz=272
E27K Coleen River 98.92 22 Pdiff **P** **19 52 27.9 +1.0**
baz=273
G27K Doyon Strip 98.96 24 Pdiff **P** **19 52 28.2 +1.1**
baz=273
I27K Kandik River 99.03 25 Pdiff **Pdif** **19 52 28.5 +1.1**
baz=272
M27K Edge Creek, AK 99.03 28 Pdiff **Pdif** **19 52 28.3 +0.7**
baz=272
L27K Beaver Creek, 99.03 27 Pdiff **Pdif** **19 52 28.4 +1.0**
baz=272
H27K Steamboat Moun 99.04 24 Pdiff **Pdif** **19 52 28.6 +1.2**
baz=273
VSU Vasula 99.12 328*c* *i*P **Pdif** **19 52 27.8 0.0**
VSU pmax pmax
comp=Z,179nm,0.9s
VSU Vasula 99.12 328 *e*P **Pdif** **19 52 28.4 +0.7**
VRI Vrincioaia 99.12 315 ⇑P **Pdif** **19 52 28.6 +0.4**
VRI Vrincioaia 99.12 315 ⇑P **Pdif** **19 52 28.6 +0.4**
NACGM Naroch 99.13 324 *e*P **Pdif** **19 52 28.2 +0.2**
ARA0 ARCESS Array S 99.18 339 *e*P **Pdif** **19 52 27.7 -0.2**
ARA0 IVmBBB 19 52 28.1
comp=Z,421nm,1.0s
ARCES ARCESS Array B 99.18 339 P **Pdif** **19 52 27.6 -0.3**
comp=Z,22nm,0.8s,baz=79,slow=6.3,SNR=38
ARCES PKiKP **PKiKP** **19 56 54.6 +0.2**
comp=Z,5.0nm,0.6s,baz=84,slow=2.8,SNR=7.1
ARCES PKKPbc **PKKPbc** **20 08 50.2 -3.2**
comp=Z,2.6nm,0.6s,baz=268,slow=3.3,SNR=15
comp=Z,22nm,0.8s
PLOR Plostina 99.18 315 ⇑P **Pdif** **19 52 27.5 -1.0**
PLOR Plostina 99.18 315 ⇑P **Pdif** **19 52 27.5 -1.0**
TESR Tescani 99.19 316 ⇑P **Pdif** **19 52 28.5 0.0**
RAZG Razgrad 99.23 313 ⇑P **Pdif** **19 52 28.7 0.0**
EGAK Eagle 99.26 26 Pdiff **Pdif** **19 52 28.6 +0.3**
baz=273
CTG Chitna Glacier 99.33 29 Pdiff **Pdif** **19 52 29.7 +0.8**
baz=272
FINES FINESS Array B 99.37 331 P **Pdif** **19 52 28.5 -0.3**
comp=Z,9.6nm,0.7s,baz=87,slow=6.7,SNR=33
FINES PP **PP** **19 56 37.9 -2.9**
comp=Z,12nm,0.8s,baz=91,slow=9.5,SNR=3.7
FINES PKiKP **PKiKP** **19 56 55.0 0.0**
comp=Z,23nm,0.8s,baz=115,slow=2.0,SNR=5.8
FINES PKKPbc **PKKPbc** **20 08 49.2 -3.3**
comp=Z,1.3nm,0.6s,baz=257,slow=1.6,SNR=6.4
comp=Z,9.6nm,0.7s
SULR 99.44 314 ⇑P **Pdif** **19 52 30.0 +0.4**
COVR Voineasa-Covas 99.49 315 ⇑P **Pdif** **19 52 29.7 -0.1**
ISAL Salakas 99.50 325 *e*P **Pdif** **19 52 35.7 +6.1**
BVCY Beaver Creek 99.50 28 Pdiff **Pdif** **19 52 30.5 +0.9**
baz=273
BIZ Bicaz 99.57 316 ⇓P **Pdif** **19 52 30.7 +0.5**
SGRR Singureni 99.63 314 ⇓P **Pdif** **19 52 30.7 +0.2**
MLR Muntele Rosu 99.67 315 ⇑P **Pdif** **19 52 30.7 -0.1**
MLR Muntele Rosu 99.67 315 P **Pdif** **19 52 31.1 +0.3**
comp=Z,30nm,0.8s,baz=292,slow=1.4,SNR=41
MLR PP **PP** **19 56 42.5 -1.3**
comp=Z,94nm,0.9s,baz=120,slow=4.6,SNR=6.7
MLR PKKPbc **PKKPbc** **20 08 49.2 -2.1**
comp=Z,4.7nm,0.9s,baz=340,slow=2.9,SNR=3.8
MLR SKKP 20 11 37.2
comp=Z,3.7nm,0.8s,baz=165,slow=8.4,SNR=3.5
comp=Z,30nm,0.8s
MLR Muntele Rosu 99.67 315 ⇑P **Pdif** **19 52 30.7 -0.1**
HAMF Hammerfest 99.70 340 *e*P **Pdif** **19 52 30.3 +0.1**
HAMF IVmBBB 19 52 30.6
comp=Z,561nm,0.8s
HAMF *e*SKSac **SKSac** **20 02 17.9 +1.6**
HAMF *e* 20 10 18.7
YUK3 Moose Creek 99.72 29 Pdiff **Pdif** **19 52 30.8 +0.1**
baz=273
O28M Mount Upton 99.90 30 Pdiff **Pdif** **19 52 31.6 0.0**
baz=273
PINM Pinnacle 99.90 30 Pdiff **Pdif** **19 52 31.5 +0.1**
baz=273
HEF Hetta 99.93 338 *e*P **Pdif** **19 52 30.9 -0.4**
KTK1 Kautokeino 100.03 339 *e*P **Pdif** **19 52 31.3 -0.4**
KTK1 IVmB_BB 19 52 40.0
comp=Z,374nm,2.5s
KTK1 *e* 19 56 49.3
KTK1 *e*SKSac **SKSac** **20 02 18.6 +0.6**
DOPR Dopca 100.06 315 ⇑P **Pdif** **19 52 25.9 -6.4**
DAWY Dawson 100.07 26 Pdiff **Pdif** **19 52 32.6 +0.6**
baz=274
BURAR Bucovina Array 100.17 317 ⇑P **Pdif** **19 52 33.5 +0.6**
COPA Copaceanca 100.18 313 ⇓P **Pdif** **19 52 32.9 +0.1**
MEF Metsahovi 100.25 330 *e*P **Pdif** **19 52 33.0 +0.3**
IDI Anoyia 100.29 304 ⇑P **Pdif** **19 52 33.6 -0.1**
IDI Anoyia 100.29 304 P **Pdif** **19 52 34.1 +0.4**
comp=Z,26nm,0.7s,baz=72,slow=6.1,SNR=32
IDI PKiKP **PKiKP** **19 56 59.3 +1.7**
comp=Z,41nm,0.8s,baz=69,slow=6.6,SNR=3.8
IDI PKKPbc **PKKPbc** **20 08 49.0 -0.2**
VOIR 100.30 315 ⇓P **Pdif** **19 52 32.9 -0.6**
VOIR 100.30 315 ⇓P **Pdif** **19 52 32.9 -0.6**
SPA0 Spitsbergen Ar 100.33 348 *e*P **Pdif** **19 52 33.0 +0.1**
SPA0 IVmB_BB 19 52 33.0
comp=Z,891nm,2.1s
SPITS Spitsbergen Ar 100.33 348 P **Pdif** **19 52 32.8 -0.1**
comp=Z,33nm,0.8s,baz=96,slow=7.6,SNR=16
HUMR Humele 100.35 314 ⇑P **Pdif** **19 52 33.2 -0.5**
PNL Peninsula 100.36 31 Pdiff **Pdif** **19 52 33.6 +0.2**
baz=273
I29M Ogilvie Camp, 100.42 25 Pdiff **Pdif** **19 52 33.9 +0.4**
baz=275
J29M Klondike Camp 100.55 26 Pdiff **Pdif** **19 52 34.8 +0.6**
baz=275
ARR Arges 100.59 315 ⇓P **Pdif** **19 52 34.9 +0.1**
M29M Somme Creek 100.61 28 Pdiff **Pdif** **19 52 35.3 +0.7**
baz=275
YUK4 Talbot Arm 100.61 29 Pdiff **Pdif** **19 52 34.5 -0.2**
baz=274
MTSE Matsula 100.63 328 *e*P **Pdif** **19 52 35.3 +0.7**
O29M Mount Kennedy 100.73 30 Pdiff **Pdif** **19 52 35.4 +0.2**
baz=274
VSVD Vaisvydziai 100.73 326 *e*P **Pdif** **19 52 36.0 +1.0**
PABE Paberze 100.73 325 *e*P **Pdif** **19 52 35.8 +0.7**
ARCR ARCALIA 100.76 316 ⇑P **Pdif** **19 52 36.1 +0.6**
YUK6 Outpost Mounta 100.78 29 Pdiff **Pdif** **19 52 36.0 +0.5**
baz=274
HSPB Hornsund (broa 100.81 347 *e*Pdif **Pdif** **19 52 34.8 -0.1**
HSPB *e*Sdif Sdif 20 03 17.9 -7.6
KIF Kilpisjarvi 100.90 339 *e*P **Pdif** **19 52 34.9 -0.6**
LVV L'vov 100.92 319 *e*P **Pdif** **19 52 35.0 -1.1**
LVV *e*PPP PPP 19 59 10.0
LVV *e* 20 02 19.5
LVV *e* 20 03 17.0
LVV *e*SSS SSS 20 14 48.0
JETT Jettan, Norway 100.95 340 *e*P **Pdif** **19 52 35.6 -0.3**
JETT IVmB_BB 19 52 36.4
comp=Z,1μm,0.7s
JETT *e*SP SP 20 05 05.8 +3.8
EPYK Eagle Plains 100.96 24 Pdiff **Pdif** **19 52 36.2 +0.2**
baz=277
KBS Kingsbay 100.97 349 *e*P **Pdif** **19 52 35.4 -0.3**
KBS IVmBBB 19 52 41.5
comp=Z,253nm,2.6s
KBS *e*PS **PS** **20 06 14.4 +3.1**
LOT Lotru 101.20 315 ⇑P **Pdif** **19 52 38.4 +0.8**
P29M Windy Craggy 101.20 31 Pdiff **Pdif** **19 52 37.6 +0.5**
baz=275
HYT Haines Junctio 101.21 29 Pdiff **Pdif** **19 52 37.7 +0.4**
baz=275
MPEP Malo Peshtene 101.25 313 P **Pdif** **19 52 37.2 -0.5**
MMB Musomiste 101.27 311 P **Pdif** **19 52 37.5 -0.4**
CJR Cluj-Napoca 101.29 316 ⇑P **Pdif** **19 52 39.8 +1.9**
CJR Cluj-Napoca 101.29 316 ⇑P **Pdif** **19 52 39.8 +1.9**
CBBR Cluj-Babes-Bol 101.32 316 ⇓P **Pdif** **19 52 38.2 +0.3**
BMR Baia Mare 101.33 317 ⇑P **Pdif** **19 52 38.7 +0.7**
BMR Baia Mare 101.33 317 ⇑P **Pdif** **19 52 38.7 +0.7**
N30M Aishikik Lake 101.35 29 Pdiff **Pdif** **19 52 38.5 +0.7**
baz=276
M30M Minto, Yukon 101.37 28 Pdiff **Pdif** **19 52 38.6 +0.7**
baz=276
TRO Tromso 101.45 340 *e*P **Pdif** **19 52 37.5 -0.5**
TRO IVmB_BB 19 52 37.5
comp=Z,309nm,0.9s
TRO *e*SKSac **SKSac** **20 02 25.4 +0.8**
TRO *e* 20 06 13.1
TRO *e*SS **SS** **20 10 47.4 -0.1**
RAF Rauma 101.48 331 *e*P **Pdif** **19 52 38.9 +0.7**
SLIT Slitere, Latvi 101.52 327 *e*P **Pdif** **19 52 38.6 +0.2**
P30M Million Dollar 101.55 30 Pdiff **Pdif** **19 52 39.2 +0.5**
baz=276
VTS Vitosha 101.63 312 ⇓P **Pdif** **19 52 39.4 -0.2**
VTS Vitosha 101.63 312 ⇓P **Pdif** **19 52 39.4 -0.2**
VTS Vitosha 101.63 312 P **Pdif** **19 52 38.8 -0.8**
KKB Krupnik 101.75 311 P **Pdif** **19 52 39.5 -0.5**
KWP Kalwaria Pacla 101.78 319 *e*PKPbc **Pdif** **19 52 40.3 +0.3**
KWP *e*PP **PP** **19 56 52.4 -6.8**
KWP *e*SKSac **SKSac** **20 02 28.4 +1.3**
DEV Deva 101.79 315 ⇑P **Pdif** **19 52 40.9 +0.9**
DEV Deva 101.79 315 ⇑P **Pdif** **19 52 40.9 +0.9**
PBUR Paburge 101.85 326 *e*P **Pdif** **19 52 41.6 +1.6**
INK Inuvik 101.89 22 P **Pdif** **19 52 40.0 +0.1**
comp=Z,18nm,0.8s,baz=280,slow=6.0,SNR=14
INK PKiKP **PKiKP** **19 56 60.0 +0.6**
comp=Z,4.8nm,0.6s,baz=315,slow=1.5,SNR=1.3
INK S **SKSac** **20 02 25.7 -1.0**
comp=Z,6.9nm,0.8s,baz=46,slow=24,SNR=29
INK PKKPbc **PKKPbc** **20 08 38.4 -7.2**
comp=Z,5.8nm,0.5s,baz=84,slow=3.8,SNR=4.3
INK Inuvik 101.89 22 Pdiff **Pdif** **19 52 40.1 +0.1**
baz=280
GZR Gura Zlata 101.90 315 ⇓P **Pdif** **19 52 40.9 +0.3**
GZR Gura Zlata 101.90 315 ⇓P **Pdif** **19 52 40.9 +0.3**
O30N Mendenhall 101.91 29 Pdiff **Pdif** **19 52 41.0 +0.7**
baz=276
PLBC Pleasant Camp 101.91 31 Pdiff **Pdif** **19 52 40.5 +0.3**
baz=276
N31M Braeburn, Yuko 101.97 29 Pdiff **Pdif** **19 52 41.7 +1.2**
baz=277
BLKB Belogradchik 102.02 313 ⇑P **Pdif** **19 52 41.3 +0.1**
KOLS Kolonicke sedl 102.10 318 *e*P **Pdif** **19 52 42.5 +1.1**
KOLS *e* 19 57 01.6
KOLS Kolonicke sedl 102.10 318 *e*PDIFF **Pdif** **19 52 42.5 +1.1**
KOLS *e*PP **PP** **19 57 01.6 +0.1**
UZH Uzhgorod 102.10 318 *e*P **Pdif** **19 52 40.5 -0.8**
UZH *e*S **Sdif** **20 03 32.3 -5.0**
HERR Herculane 102.17 314 ⇑P **Pdif** **19 52 41.8 +0.1**
SKAG Skagway 102.44 31 Pdiff **Pdif** **19 52 43.3 +0.8**
baz=277
WHY Whitehorse 102.51 29 Pdiff **Pdif** **19 52 43.8 +0.8**
baz=278
M31M Drury Creek, Y 102.53 28 Pdiff **Pdif** **19 52 43.6 +0.6**
baz=278
MDVR Moldovita 102.67 314 ⇑P **Pdif** **19 52 44.2 +0.1**
BZS Buzias 102.70 315 ⇓P **Pdif** **19 52 43.8 -0.3**
BZS Buzias 102.70 315 ⇓P **Pdif** **19 52 43.8 -0.3**
SIT Sitka 102.72 33 Pdiff **Pdif** **19 52 44.4 +0.6**
baz=276
BOVS Bovan 102.72 313 ⇑P **Pdif** **19 52 42.5 -1.7**
BEL Belsk 102.86 321 *e*Pdif **Pdif** **19 52 44.5 -0.1**
BEL *e*PP **PKiKP** **19 56 58.4 -3.1**
BEL *e*SKSac **SKSac** **20 02 34.0 +2.0**
BEL *e*SKKSac **SKKSac** **20 03 15.7 +0.4**
FARO Faro, Yukon 103.01 28 Pdiff **Pdif** **19 52 45.7 +0.6**
baz=279
STEI Steigen 103.12 338 *e*P **Pdif** **19 52 45.2 -0.1**
STEI IVmB_BB 19 52 45.3
comp=Z,528nm,0.7s
STEI *e*PP **PP** **19 57 08.7 +0.4**
STEI *e* 20 02 33.4
STEI *i* 20 03 39.2
STEI *e* 20 05 31.1
STEI *e* 20 06 24.4
STEI *e*SS SS 20 11 10.9 +0.7
FAUS Fauske 103.22 338 *e*P **Pdif** **19 52 45.6 -0.3**
FAUS IVmB_BB 19 52 45.7
comp=Z,261nm,0.5s
FAUS *i* 20 02 34.0
FAUS *e* 20 03 38.6
FAUS *e* 20 06 25.1
FAUS *e* 20 11 09.3
P32M Atlin 103.24 30 Pdiff **Pdif** **19 52 46.7 +0.5**
baz=278
N32M Quiet Lake 103.31 29 Pdiff **Pdif** **19 52 47.0 +0.5**
baz=279
NIE Niedzica 103.36 319 *e*Pdif **Pdif** **19 52 47.9 +0.9**
NIE *e*PP **PKiKP** **19 57 01.6 -1.0**
NIE *e*SKSac **SKSac** **20 02 35.3 +0.8**
NIE *e*SKKSac **SKKSac** **20 03 19.5 +0.4**
P33M Teslin, Yukon 103.59 30 Pdiff **Pdif** **19 52 48.4 +0.6**
baz=279
OJC Ojcow 103.62 320 *e*Pdif **Pdif** **19 52 46.9 -1.2**
OJC *e*PP **PKiKP** **19 57 03.1 0.0**
OJC *e*SKSac **SKSac** **20 02 35.6 +0.1**
OJC *e*Sdif **Sdif** **20 03 47.0 -3.0**
A36M Sachs Harbour 103.68 17 Pdiff **Pdif** **19 52 49.4 +1.5**
baz=289
LOF Lofoten 103.69 339 *e*P **Pdif** **19 52 47.3 -0.6**
LOF IVmBBB 19 52 48.1
comp=Z,155nm,0.6s
LOF *e*SKSac **SKSac** **20 02 36.9 +1.9**
LOF *e* 20 03 42.9
LOF *e*SS **SS** **20 11 20.2 +2.3**
PSZ Piszkesteto 103.75 317 ⇑P **Pdif** **19 52 49.1 +0.3**
PSZ Piszkesteto 103.75 317 ⇑P **Pdif** **19 52 49.1 +0.3**
PSZ Piszkesteto 103.75 317 P **Pdif** **19 52 48.0 -0.8**
MOR8 Moi Rana 103.83 337 *e*P **Pdif** **19 52 47.5 -1.2**
MOR8 IVmBBB 19 52 48.2
comp=Z,158nm,1.0s
MOR8 *e*PP **PP** **19 57 12.4 -1.2**
MOR8 *e*SKSac **SKSac** **20 02 36.1 +0.2**
MMPY Sheldon Lake, 103.89 27 Pdiff **Pdif** **19 52 50.4 +1.3**
baz=281
LANS Liptovska Anna 103.93 319 *e*P **Pdif** **19 52 51.3 +1.8**
LANS *e* 19 57 19.1
LANS Liptovska Anna 103.93 319 *e*PDIFF **Pdif** **19 52 51.3 +1.8**
LANS *e*PP **PP** **19 57 19.1 +4.1**
VYHS Vyhne 104.40 318 *e*P **Pdif** **19 52 51.8 +0.2**
VYHS *e* 19 57 19.9
VYHS Vyhne 104.40 318 *e*PDIFF **Pdif** **19 52 51.8 +0.2**
VYHS *e*PP **PP** **19 57 19.9 +1.5**
WRAK Wrangell Islan 104.43 34 Pdiff **Pdif** **19 52 52.1 +0.7**
baz=279
PDG Podgorica 104.58 312 ⇑P **Pdif** **19 52 52.5 0.0**
R33M Jennings River 104.65 30 Pdiff **Pdif** **19 52 53.6 +0.9**
baz=281
OKC Ostrava-Krasne 104.72 320 *e*PKP **PKiKP** **19 57 03.4 -1.7**
OKC *e*PP **PP** **19 57 22.6 +2.0**
MORH Mrgy, Hungar 104.74 316 ⇓P **Pdif** **19 52 52.6 -0.5**
MORH Mrgy, Hungar 104.74 316 P **Pdif** **19 52 52.5 -0.6**
S34M Telegraph Cree 104.84 32 Pdiff **Pdif** **19 52 54.4 +1.1**
baz=280
GKP Gorka Klasztor 104.86 323 *e*Pdif **Pdif** **19 52 55.1 +1.6**
GKP *e*PP **PP** **19 57 24.0 +2.4**
GKP *e*SKSac **SKSac** **20 02 42.4 +1.5**
C36M Paulatuk 104.94 20 Pdiff **Pdif** **19 52 54.8 +1.4**
baz=290
V35K Ketchikan 105.00 35 PKiKP **PKiKP** **19 57 06.3 +0.9**
baz=279
MORC Moravsky Berou 105.11 320 ⇓P **Pdif** **19 52 56.0 +1.2**
MORC Moravsky Berou 105.11 320 ⇓P **Pdif** **19 52 56.0 +1.2**
MORC Moravsky Berou 105.11 320 *e*PDIFF **Pdif** **19 52 55.1 +0.3**
MORC *e*PP **PP** **19 57 25.5 +1.9**
MORC *e*SKS **SKSac** **20 02 44.8 +2.4**
MORC *e*SDIFF **Sdif** **20 04 01.1 -1.5**
MORC *e*PKKP **PKKPbc** **20 08 35.0 -0.6**
MORC *e* 20 08 55.1
KOVH Kovagotottos 105.12 316 P **Pdif** **19 52 54.6 -0.3**
JAVC Velka Javorina 105.13 319 *e*PDIFF **Pdif** **19 52 56.2 +1.3**
JAVC *e*PP **PP** **19 57 26.8 +3.0**
JAVC *e*SKS **SKSac** **20 02 46.5 +3.9**
JAVC *e*SDIFF **Sdif** **20 04 02.7 -0.1**
JAVC *e*PKKP **PKKPbc** **20 08 35.8 +0.3**
NSS Namsos 105.25 335 *e*P **Pdif** **19 52 54.3 -0.7**
NSS IVmBBB 19 52 55.4
comp=Z,174nm,0.9s
DLBC Dease Lake 105.31 31 Pdiff **Pdif** **19 52 55.9 +0.4**
comp=Z,3.5nm,0.9s,baz=76,slow=1.3,SNR=5.8
DLBC PP **PP** **19 57 23.9 -0.9**
comp=Z,18nm,0.9s,baz=271,slow=7.4,SNR=9.4
DLBC S **SKSac** **20 02 44.4 +1.4**
comp=Z,5.1nm,1.1s,baz=85,slow=26,SNR=7.3
DLBC PKKPbc **PKKPbc** **20 08 34.8 -0.6**
comp=Z,7.4nm,0.6s,baz=47,slow=1.7,SNR=16
DLBC Dease Lake 105.31 31 PKiKP **PKiKP** **19 57 07.2 +1.1**
baz=281
SMOL Smolenice 105.33 318 *e*P **Pdif** **19 52 57.5 +1.8**
SMOL *e* 19 57 25.1
MPLH Magyarpolny 105.40 317 P **Pdif** **19 52 57.1 +1.0**
MODS Modra-Piesok 105.45 318 *e*P **Pdif** **19 52 58.1 +1.8**
MODS *e* 19 57 26.8
MODS Modra-Piesok 105.45 318 *e*PDIFF **Pdif** **19 52 58.1 +1.8**
MODS *e*PP **PP** **19 57 26.8 +0.8**
T35M Bob Quinn 105.47 33 PKiKP **PKiKP** **19 57 06.9 +0.6**
baz=281
TGTN Hyland Airport 105.50 28 PKiKP **PKiKP** **19 57 07.2 +0.9**
baz=284
HFS Hagfors 105.55 331 Pdiff **Pdif** **19 52 56.1 -0.3**
comp=Z,4.4nm,0.5s,baz=101,slow=4.7,SNR=33
HFS PKiKP **PKiKP** **19 57 06.5 +0.2**
comp=Z,4.0nm,0.5s,baz=83,slow=12,SNR=5.3
HFS PP **PP** **19 57 26.7 +0.4**
comp=Z,21nm,0.8s,baz=72,slow=9.3,SNR=6.1
HFS PKKPbc **PKKPbc** **20 08 30.7 -3.9**
comp=Z,2.7nm,0.9s,baz=229,slow=1.6,SNR=5.6
KRLC Kraliky 105.56 320 *e*P **Pdif** **19 52 57.5 +0.7**
KRLC *e* 20 02 45.5
KRLC Kraliky 105.56 320 *e*PDIFF **Pdif** **19 52 57.5 +0.7**
KRLC *e*PKP **PKiKP** **19 57 07.4 +0.7**
KRLC *e*P PP 19 57 14.1 -13
KRLC *e*SKS **SKSac** **20 02 45.5 +1.1**
KRLC *e*PKKP **PKKPbc** **20 08 28.4 -5.9**
KRLC *ex* x 20 08 53.0
ZST Bratislava 105.58 318 *e*P **Pdif** **19 52 57.8 +1.0**
ZST *e* 19 57 27.0
ZST Bratislava 105.58 318 *e*PDIFF **Pdif** **19 52 57.8 +1.0**
ZST *e*PP **PP** **19 57 27.0 0.0**
KSP Ksiaz 105.77 321 *e*Pdif **Pdif** **19 52 58.6 +1.0**
KSP *e*PP **PP** **19 57 31.1 +2.8**
KSP *e*SKSac **SKSac** **20 02 45.6 +0.4**
VRAC Vranov 105.78 319 Pdiff **Pdif** **19 52 58.2 +0.4**
comp=Z,2.1nm,0.7s,baz=100,slow=7.0,SNR=5.9
VRAC PKiKP **PKiKP** **19 57 07.9 +0.8**
comp=Z,4.6nm,0.7s,baz=108,slow=7.3,SNR=4.0
VRAC PKKPbc **PKKPbc** **20 08 31.6 -1.9**
comp=Z,4.5nm,0.8s,baz=337,slow=3.8,SNR=5.2
VRAC PKKPab **PKKPab** **20 08 50.4 -0.6**
comp=Z,5.6nm,1.0s,baz=279,slow=5.9,SNR=5.2
VRAC Vranov 105.78 319 *e*PDIFF **Pdif** **19 52 58.1 +0.4**
VRAC *e*PP **PP** **19 57 29.3 +0.9**
VRAC *e*SKS **SKSac** **20 02 46.7 +1.4**
VRAC *e*SDIFF **Sdif** **20 04 07.2 -0.9**
VRAC *e*PKKP **PKKPbc** **20 08 32.5 -1.0**
VRAC *e* 20 08 51.7
DPC Dobruska-Polom 105.82 320 *e*P **Pdif** **19 52 59.4 +1.5**
DPC *e* 20 02 47.6
DPC Dobruska-Polom 105.82 320 *e*PDIFF **Pdif** **19 52 59.4 +1.5**
DPC *e*P **PKiKP** **19 57 13.3 +6.1**
DPC *e*SKS **SKSac** **20 02 47.6 +2.1**
DPC *e*PKKP **PKKPbc** **20 08 32.0 -1.5**
DPC *ex* x 20 08 50.8
OSTC Ostas 105.86 320 *e*PDIFF **Pdif** **19 52 59.4 +1.3**
OSTC *e*P PKiKP 19 57 17.0 +10
OSTC *e*SKS **SKSac** **20 02 48.0 +2.4**
OSTC *e*PKKP **PKKPbc** **20 08 32.1 -1.3**
OSTC *ex* x 20 08 51.5
KRUC Moravsky 105.94 319 *e*PDIFF **Pdif** **19 52 59.0 +0.6**
KRUC *e*PP **PP** **19 57 31.6 +2.0**
KRUC *e*SKS **SKSac** **20 02 47.9 +1.9**
KRUC *e*SDIFF **Sdif** **20 04 08.6 -0.8**
KRUC *e*PKKP **PKKPbc** **20 08 31.6 -1.4**
KRUC *e* 20 08 50.5
UPC Upice 105.99 320 *e*P **Pdif** **19 53 01.5 +2.9**
UPC Upice 105.99 320 *e*PDIFF **Pdif** **19 53 01.5 +2.9**
UPC *e*PP PP 19 57 18.9 -11
UPC *e*PKKP **PKKPab** **20 08 50.4 +0.3**
RONA Rosalia, Austr 106.18 317 *e*P **Pdif** **19 52 59.5 -0.1**
comp=Z,1.7nm,0.6s
RONA *e*P **PKiKP** **19 57 08.7 +0.8**
comp=Z,3.8nm,0.5s
RONA *e*P **PP** **19 57 30.7 -0.7**
comp=Z,16nm,0.8s
RONA *e*P **PKKPbc** **20 08 31.1 -1.2**
comp=Z,8.4nm,0.7s
RONA *e*P **PKKPab** **20 08 50.1 +0.7**
comp=Z,17nm,1.1s
NC303 NORSAR Array S 106.39 332 *e*P **Pdif** **19 52 59.9 -0.2**
NC303 IVmB_BB 19 53 01.7
comp=Z,166nm,2.7s
CONA Conrad Observa 106.44 318 *e*P **Pdif** **19 53 01.4 +0.6**
comp=Z,0.7nm,0.4s
CONA *e*P **PKiKP** **19 57 09.5 +1.0**
comp=Z,6.4nm,0.7s
CONA *e*P **PP** **19 57 34.8 +1.5**
comp=Z,30nm,1.0s
CONA *i*P **PKKPbc** **20 08 30.5 -1.1**
comp=Z,21nm,1.1s,SNR=6.5
CONA *e*P **PKKPab** **20 08 48.9 +0.6**
comp=Z,14nm,1.0s
TREC Trest 106.50 319 *e*PP **PP** **19 57 35.2 +1.5**
NB2 NORSAR Subarra 106.52 332 P **Pdif** **19 53 00.0 -0.8**
comp=Z,2.4nm,0.6s,baz=75,slow=4.4
NB2 NORSAR Subarra 106.52 332 P **Pdif** **19 53 00.0 -0.8**
baz=75,slow=4.4
NOA NORSAR Array B 106.52 332 Pdiff **Pdif** **19 53 00.0 -0.8**
comp=Z,2.5nm,0.7s,baz=75,slow=4.5,SNR=25
NOA PKiKP **PKiKP** **19 57 08.5 +0.4**
comp=Z,2.4nm,0.7s,baz=270,slow=3.2,SNR=5.5
NOA PP **PP** **19 57 33.7 +0.3**
comp=Z,8.1nm,0.8s,baz=82,slow=7.3,SNR=7.0
NOA PKKPbc **PKKPbc** **20 08 29.1 -2.7**
comp=Z,0.3nm,0.8s,baz=59,slow=3.4,SNR=4.4
NOA PKKPab **PKKPab** **20 08 47.8 0.0**
comp=Z,2.1nm,1.0s,baz=251,slow=4.3,SNR=4.4
NOA SKKPbc SKKPbc 20 11 19.7 -4.1
comp=Z,0.3nm,0.7s,baz=62,slow=2.6,SNR=3.3
NBO00 NORSAR Array S 106.72 332 *e*P **Pdif** **19 53 01.4 -0.2**
NBO00 IVmB_BB 19 53 07.5
comp=Z,142nm,1.9s
ARSA Arzberg 106.76 317 *e*P **Pdif** **19 53 01.3 -0.9**
comp=Z,1.7nm,0.7s
ARSA *e*P **PKiKP** **19 57 09.4 +0.4**
comp=Z,4.9nm,0.6s
ARSA *e*P **PP** **19 57 35.0 -0.6**
comp=Z,15nm,1.1s
ARSA *e*S **SKSac** **20 02 52.3 +2.6**
comp=Z,1.7nm,0.6s
ARSA *e*P **PKKPbc** **20 08 29.4 -1.1**
comp=Z,9.4nm,1.0s
ARSA *e*P **PKKPab** **20 08 47.2 +0.5**
comp=Z,6.8nm,0.9s
PVCC Panska Ves 106.90 321 *e*PKP **PKiKP** **19 57 09.9 +0.8**
PVCC *e*PP **PP** **19 57 33.4 -3.0**
PRU Pruhonice 107.00 320 *e*P **Pdif** **19 53 04.0 +0.9**
PRU *e* 19 57 35.2
PRU *e* 20 02 53.0
PRU Pruhonice 107.00 320 *e*PDIFF **Pdif** **19 53 04.0 +0.9**
PRU *e*PKP **PKiKP** **19 57 09.5 +0.2**
PRU *e*P PP 19 57 23.5 -14
PRU *e*PP **PP** **19 57 35.2 -2.0**
PRU *e*SKS **SKSac** **20 02 53.0 +2.4**
STRU Stroemstad 107.05 330 *e*P **Pdif** **19 53 03.2 +0.1**
SOKA Soboth 107.17 317 *e*P **Pdif** **19 53 04.9 +0.9**
comp=Z,7.8nm,1.4s
SOKA *e*P **PKiKP** **19 57 10.4 +0.6**
comp=Z,8.9nm,0.8s
SOKA *e*P **PP** **19 57 38.1 -0.5**
comp=Z,24nm,1.2s
SOKA *e*P **PKKPbc** **20 08 27.6 -1.7**
comp=Z,4.6nm,0.6s
WRGLY Wrigley 107.19 26 PKiKP **PKiKP** **19 57 10.7 +1.5**
baz=289
DOMB Dombas 107.22 333 *e*P **Pdif** **19 53 03.9 +0.1**
DOMB IVmB_BB 19 53 04.6

comp=Z,342nm,2.4s
BRG Berggiesshubel 107.24 321 ||| *e*Pdif **Pdif** 19 53 04.8 +0.7
BRG Amp 19 53 07.9
comp=Z,15nm,1.1s
BRG *ex* x 19 53 20.4
BRG Amp 19 53 22.9
comp=Z,4.1nm,0.7s
BRG *ex* x 19 54 02.9
BRG Amp 19 54 08.3
comp=Z,7.7nm,1.0s
BRG *ex* x 19 56 24.3
BRG Amp 19 56 27.4
comp=Z,9.4nm,0.9s
BRG PKiKP **PKiKP** **19 57 11.0 +1.3**
BRG Amp 19 57 14.2
comp=Z,9.1nm,0.8s
BRG PP PP 19 57 26.8 -12
BRG Amp 19 57 43.2
comp=Z,55nm,1.1s
BRG Berggiesshubel 107.24 321 SP SP 20 06 11.0 +3.4
BRG *i* PKKP 20 08 28.3
BRG Amp 20 08 30.5
comp=Z,14nm,1.2s
BRG *ex* x 20 08 45.1
BRG Amp 20 08 46.9
comp=Z,17nm,1.2s
BRG Berggiesshubel 107.24 321 SS SS 20 11 57.0 -10
BRG Berggiesshubel 107.24 321 *i* P **Pdif** **19 53 04.8 +0.7**
BRG pmax pmax
comp=Z,15nm,1.1s
BRG pmax pmax
comp=Z,4.0nm,0.7s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=Z,9.0nm,1.0s
CKRC Cesky Krumlov 107.34 319 *e*PDIFF **Pdif** **19 53 05.5 +0.8**
CKRC *e*PKP **PKiKP** **19 57 10.7 +0.7**
CKRC *e*PP **PP** **19 57 40.8 +1.1**
CKRC *e*PKKP **PKKPbc** **20 08 26.8 -2.0**
CKRC *ex* x 20 08 44.0
MOA Molln 107.52 318 *e*P **PKiKP** **19 57 10.7 +0.3**
comp=Z,5.2nm,0.7s
MOA *e*P **PP** **19 57 42.3 +1.3**
comp=Z,67nm,1.6s
MOA *e*P **PKKPbc** **20 08 27.1 -1.1**
comp=Z,9.4nm,0.9s
MOA *e*P **PKKPab** **20 08 44.0 +0.6**
comp=Z,21nm,1.1s
OBKA Obir 107.52 316 *e*P **Pdif** **19 53 05.1 -0.5**
comp=Z,2.4nm,0.6s
OBKA *e*P **PKiKP** **19 57 11.9 +1.4**
comp=Z,7.7nm,0.8s
OBKA *e*P **PP** **19 57 42.0 +0.8**
comp=Z,18nm,0.9s
OBKA *e*P **PKKPbc** **20 08 27.0 -1.2**
comp=Z,5.4nm,0.6s
LJU Ljubljana 107.60 316 *i* PP **PP** **19 57 39.8 -1.9**
BBB Bella Bella 107.60 38 SKP 19 59 55.5
comp=Z,11nm,0.9s,baz=349,slow=1.6,SNR=4.1
KONO Kongsberg 107.67 331 *e*P **Pdif** **19 53 05.8 0.0**
KONO *e*PP **PP** **19 57 42.9 +1.3**
KONO *e*SKSac **SKSac** **20 02 54.2 +1.3**
MOL Molde 107.73 334 *e*P **Pdif** **19 53 05.6 -0.4**
GERES GERESS Array B 107.73 319 Pdiff **Pdif** **19 53 07.2 +0.7**
comp=Z,2.2nm,0.8s,baz=94,slow=4.3,SNR=24
GERES PKiKP **PKiKP** **19 57 11.4 +0.6**
comp=Z,9.9nm,0.7s,baz=77,slow=2.9,SNR=16
GERES PP **PP** **19 57 44.5 +1.9**
comp=Z,11nm,0.9s,baz=86,slow=8.2,SNR=7.0
GERES SKP 19 59 56.3
comp=Z,6.3nm,0.8s,baz=122,slow=1.7,SNR=5.5
GERES PKKPbc **PKKPbc** **20 08 26.5 -1.1**
comp=Z,3.8nm,0.8s,baz=259,slow=1.4,SNR=14
GERES PKKPab **PKKPab** **20 08 42.5 0.0**
comp=Z,5.0nm,0.9s,baz=241,slow=4.4,SNR=11
GERES SKKPbc SKKPbc 20 11 17.4 -2.5
comp=Z,3.1nm,0.9s,baz=247,slow=2.8,SNR=6.6
CLL Collm 107.74 322 *e*P **Pdif** **19 53 06.0 -0.4**
CLL *e* 20 02 48.0
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL pmax pmax
comp=Z,9.0nm,0.7s
CLL pmax pmax
comp=Z,18nm,1.3s
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 107.74 322 *e*Pdif **Pdif** **19 53 06.0 -0.4**
comp=Z,6.0nm,1.0s
CLL *ex* x 19 55 24.0
CLL *ex* x 19 56 20.0
CLL *i* PKiKP **PKiKP** **19 57 11.3 +0.7**
comp=Z,9.0nm,0.7s
CLL *ex* x 19 57 27.0
CLL *e*PP **PP** **19 57 45.0 +2.6**
comp=Z,543nm,3.4s
CLL *i* PPP PPP 20 00 03.2
CLL *e*SKSac **SKSac** **20 02 48.0 -5.6**
CLL *e*SKKSac **SKKSac** **20 03 46.0 -3.5**
CLL *e*Sdif **Sdif** **20 04 26.0 +1.7**
CLL *e*SP **SP** **20 06 17.0 +4.5**
CLL *es*SKSac **sSKSac** **20 06 45.0 +5.1**
CLL *e*PS **PS** **20 07 16.0 -0.5**
CLL *es*Sdif **sSdif** **20 08 06.0 +6.4**
CLL *i* PKKPbc **PKKPbc** **20 08 26.3 -1.3**
comp=Z,18nm,1.3s
CLL *ex* x 20 08 30.0
CLL *i* PKKPab **PKKPab** **20 08 42.1 -0.2**
comp=Z,12nm,1.0s
CLL *i* SKKPbc **SKKPbc** **20 11 17.1 -2.7**
comp=Z,11nm,1.3s
CLL *e*SS **SS** **20 12 12.0 -1.4**
CLL *es*SS 20 15 12.0
CLL *e*SSS SSS 20 16 12.0
CLL *ex* x 20 17 00.0
CLL *e*SSSS 20 19 48.0
KHC Kasperske Hory 107.76 319 *e*P **Pdif** **19 53 06.5 -0.1**
KHC *e* 19 57 46.3
KHC *e* 20 02 55.7
KHC Kasperske Hory 107.76 319 *e*PDIFF **Pdif** **19 53 06.5 -0.1**
KHC *ex* x 19 53 33.5
KHC *e*PKP **PKiKP** **19 57 10.7 -0.1**
KHC *e*P PP 19 57 32.7 -10
KHC *e*PP **PP** **19 57 46.3 +3.5**
KHC *ex* x 19 58 47.5
KHC *e*SKS **SKSac** **20 02 55.7 +1.7**
KHC *e*PKKP **PKKPbc** **20 08 25.8 -1.7**
KHC *ex* x 20 08 42.7
KHC *ex* x 20 09 27.8
KHC *ex* x 20 11 17.0
BIOA Bad Ischl, Aus 107.96 318 *e*P **Pdif** **19 53 08.5 +1.1**
comp=Z,4.8nm,1.1s
BIOA *e*P **PP** **19 57 43.5 -0.7**
comp=Z,9.6nm,0.8s
BIOA *i* P **PKKPbc** **20 08 25.9 -1.0**
comp=Z,10nm,0.6s,SNR=6.1
BIOA *e*P **PKKPab** **20 08 42.6 +1.2**
comp=Z,22nm,1.5s
AKN Aaknes 108.10 334 *e*P **Pdif** **19 53 08.3 +0.5**
AKN IVmBBB 19 53 15.0
comp=Z,199nm,2.8s
AKN *e* 19 57 49.9
AKN *e* 20 03 00.8
AKN *e*SS SS 20 12 19.9 +2.4
MYKA Terra Mystica 108.12 317 *e*P **PKiKP** **19 57 12.3 +0.7**
comp=Z,11nm,0.8s
MYKA *e*P **PP** **19 57 44.6 -0.8**
comp=Z,48nm,1.4s
MYKA *e*P **PKKPbc** **20 08 25.3 -1.1**
comp=Z,5.4nm,0.5s
MYKA *e*P **PKKPab** **20 08 41.5 +0.8**
comp=Z,10nm,1.0s
KBA Koelnbreinsper 108.25 317 *e*P **Pdif** **19 53 10.3 +1.3**
comp=Z,3.0nm,0.6s
KBA *e*P **PKiKP** **19 57 11.6 -0.4**
comp=Z,4.1nm,0.8s
KBA *e*P **PP** **19 57 47.5 +1.0**
comp=Z,17nm,1.1s
KBA *e*S **SKSac** **20 02 59.3 +2.8**
comp=Z,12nm,0.8s
KBA *e*P **PKKPab** **20 08 40.8 +0.5**
comp=Z,14nm,1.2s
VAE Valguarnera 108.67 307 PKiKP **PKiKP** **19 57 14.2 +1.3**
comp=Z,11nm,0.8s,baz=352,slow=7.1,SNR=1.9

ABTA Abfaltersbach 108.87 317 *e*P **Pdif** **19 53 10.7 -0.9**
comp=Z,5.7nm,1.1s
ABTA *i* P **PKiKP** **19 57 13.3 +0.3**
comp=Z,20nm,0.8s,SNR=6.8
ABTA *e*P **PP** **19 57 49.4 -1.4**
comp=Z,20nm,1.0s
ABTA *i* S **SKSac** **20 02 57.5 -1.4**
comp=Z,10nm,0.8s,SNR=6.7
ABTA *i* P **PKKPbc** **20 08 23.4 -0.6**
comp=Z,19nm,0.9s,SNR=5.7
ABTA *e*P **PKKPdf** **20 08 38.1 +0.4**
comp=Z,20nm,1.0s
FOO Floro 109.17 333 *e*P **Pdif** **19 53 13.0 +0.5**
FOO *e*PP **PP** **19 57 53.8 +1.6**
FOO *e*PS **PS** **20 07 31.1 +2.0**
BLS5 Blasjo 109.26 331 *e*P **Pdif** **19 53 13.7 +0.7**
BLS5 *e*PP **PP** **19 57 50.4 -2.7**
RES Resolute Bay 109.31 10 PKiKP **PKiKP** **19 57 13.3 +0.4**
comp=Z,14nm,0.8s,baz=209,slow=2.1,SNR=4.0
WTTA Wattenberg 109.37 318 *e*P **Pdif** **19 53 13.8 -0.2**
comp=Z,12nm,1.3s
WTTA *i* P **PKiKP** **19 57 14.8 +0.7**
comp=Z,39nm,0.6s,SNR=8.7
WTTA *e*P **PP** **19 57 52.1 -2.4**
comp=Z,27nm,1.0s
WTTA *e*S **SKSac** **20 03 01.7 +0.6**
comp=Z,19nm,0.8s
WTTA *e*P **PKKPbc** **20 08 21.9 -0.7**
comp=Z,9.2nm,0.8s
WTTA *e*P **PKKPdf** **20 08 36.3 -0.6**
comp=Z,32nm,1.0s
WATA Walderalm 109.40 318 *e*P **Pdif** **19 53 13.3 -0.7**
comp=Z,5.0nm,0.8s
WATA *i* P **PKiKP** **19 57 14.4 +0.3**
comp=Z,0.1nm,0.1s,SNR=5.9
WATA *e*P **PP** **19 57 55.9 +1.3**
comp=Z,16nm,0.9s
WATA *e*S **SKSac** **20 03 01.4 +0.3**
comp=Z,12nm,0.8s
WATA *e*P **PKKPbc** **20 08 21.6 -0.9**
comp=Z,11nm,0.9s
WATA *e*P **PKKPab** **20 08 35.4 +0.3**
comp=Z,17nm,1.0s
SUE Sulen 109.49 333 *e*P **Pdif** **19 53 14.4 +0.6**
SUE *e*PP **PP** **19 57 54.3 -0.3**
SQTA Sankt Quirin 109.67 318 *e*P **Pdif** **19 53 15.3 +0.1**
comp=Z,4.1nm,0.8s
SQTA *e*P **PKiKP** **19 57 15.0 +0.4**
comp=Z,4.0nm,0.5s
SQTA *e*P **PP** **19 57 55.5 -1.0**
comp=Z,16nm,0.8s
SQTA *e*S **SKSac** **20 03 02.9 +0.7**
comp=Z,16nm,1.2s
SQTA *i* P **PKKPbc** **20 08 21.0 -0.5**
comp=Z,18nm,0.7s,SNR=5.4
SQTA *e*P **PKKPab** **20 08 35.0 +1.1**
comp=Z,34nm,1.0s
MOTA Moosalm 109.71 318 *e*P **Pdif** **19 53 15.3 -0.2**
comp=Z,9.5nm,1.0s
MOTA *i* P **PKiKP** **19 57 15.1 +0.4**
comp=Z,19nm,0.7s,SNR=5.9
MOTA *e*P **PP** **19 57 56.6 -0.3**
comp=Z,32nm,0.9s
MOTA *e*S **SKSac** **20 03 03.5 +1.0**
comp=Z,58nm,2.2s
MOTA *e*P **PKKPbc** **20 08 20.8 -0.6**
comp=Z,15nm,0.8s
MOTA *e*P **PKKPab** **20 08 34.4 +0.6**
comp=Z,34nm,1.0s
RETA Reutte 109.91 318 *e*P **Pdif** **19 53 17.0 +0.8**
comp=Z,5.3nm,1.1s
RETA *e*P **PKKPbc** **20 08 20.5 -0.2**
RETA *e*P **PKKPab** **20 08 33.6 +0.8**
comp=Z,20nm,1.1s
FETA Feichten 110.02 317 *e*P **Pdif** **19 53 17.2 +0.3**
comp=Z,3.7nm,0.9s
FETA *e*P **PKiKP** **19 57 15.8 +0.5**
comp=Z,11nm,0.8s
FETA *e*P **PP** **19 57 56.2 -2.9**
comp=Z,13nm,0.9s
FETA *e*S **SKSac** **20 03 05.0 +1.2**
comp=Z,7.1nm,0.7s
FETA *i* P **PKKPbc** **20 08 20.2 -0.3**
comp=Z,21nm,1.2s,SNR=6.5
FETA *e*P **PKKPab** **20 08 34.0 +1.5**
comp=Z,22nm,1.2s
DAVA Damuels 110.54 318 *e*P **Pdif** **19 53 19.1 0.0**
comp=Z,2.0nm,0.6s
DAVA *i* P **PKiKP** **19 57 16.8 +0.5**
comp=Z,30nm,0.6s,SNR=11
DAVA *e*P **PP** **19 57 55.7 -7.1**
comp=Z,21nm,0.8s
DAVA *e*S **SKSac** **20 03 10.4 +4.5**
comp=Z,3.3nm,0.6s
DAVA *e*P **PKKPbc** **20 08 18.5 -0.3**
comp=Z,7.8nm,1.0s
DAVA *e*P **PKKPab** **20 08 30.8 +0.7**
comp=Z,15nm,0.9s
DAVOX Davos/Dischmat 110.64 317 Pdiff **Pdif** **19 53 20.6 +1.0**
comp=Z,8.9nm,0.9s,baz=132,slow=4.3,SNR=20
DAVOX PKiKP **PKiKP** **19 57 17.1 +0.6**
comp=Z,14nm,0.5s,baz=212,slow=2.9,SNR=14
DAVOX PP **PP** **19 58 01.2 -2.4**
comp=Z,16nm,0.8s,baz=72,slow=11,SNR=4.8
DAVOX PKKPbc **PKKPbc** **20 08 18.2 -0.3**
comp=Z,14nm,0.8s,baz=186,slow=4.5,SNR=19
DAVOX PKKPab **PKKPab** **20 08 29.6 -0.1**
comp=Z,15nm,0.9s,baz=336,slow=7.0,SNR=9.0
DAVOX SKKPbc SKKPbc 20 11 09.7 -1.8
comp=Z,2.4nm,0.8s,baz=206,slow=1.5,SNR=3.6
YKA Yellowknife Ar 111.21 25 Pdiff **Pdif** **19 53 21.9 +0.4**
comp=Z,3.9nm,1.1s,baz=294,slow=4.7,SNR=5.3
YKA PKiKP **PKiKP** **19 57 17.1 +0.2**
comp=Z,22nm,0.8s,baz=299,slow=1.8,SNR=38
YKA SKP 20 00 01.4
comp=Z,3.2nm,0.6s,baz=297,slow=1.6,SNR=4.4
YKA PKKPbc **PKKPbc** **20 08 10.3 -6.6**
comp=Z,3.2nm,0.6s,baz=120,slow=3.5,SNR=10
YKA PKKPab **PKKPab** **20 08 23.6 -3.2**
comp=Z,0.9nm,0.6s,baz=106,slow=4.8,SNR=5.3
YKA SKKPbc SKKPbc 20 11 06.3 -4.1
comp=Z,2.7nm,0.8s,baz=112,slow=2.7,SNR=4.0
I02E Swisshome, OR 112.00 45 PKiKP **PKiKP** **19 57 19.5 +0.6**
baz=282
J01E Myrtle Point 112.13 46 PKiKP **PKiKP** **19 57 19.7 +0.6**
baz=281
BTNL Ternell 112.14 322 *d*PKiKP **PKiKP** **19 57 19.7 +0.7**
BTNL *d*PP **PP** **19 58 13.0 -0.6**
F04D Rainier, OR 112.16 43 PKiKP **PKiKP** **19 57 19.5 +0.4**
baz=283
G03D McMinnville, O 112.18 44 PKiKP **PKiKP** **19 57 20.0 +0.7**
baz=282
MEM Membach 112.21 322 *d*PKiKP **PKiKP** **19 57 19.6 +0.5**
MEM *d*PP **PP** **19 58 13.5 -0.6**
BHOU Houvegnez 112.28 322 *d*PKiKP **PKiKP** **19 57 20.2 +0.9**
BHOU *d*PP **PP** **19 58 14.3 -0.4**
WLF Walferdange 112.38 321 *d*PP **PP** **19 58 17.9 +2.5**
K02D Willamette Mer 112.41 47 PKiKP **PKiKP** **19 57 20.1 +0.2**
baz=281
I03D Drain, OR 112.44 46 PKiKP **PKiKP** **19 57 20.5 +0.8**
baz=282
BSTI Sart Tilman 112.48 322 *d*PKiKP **PKiKP** **19 57 20.1 +0.4**
LRW Lerwick 112.55 333 *e*P **PKiKP** **19 57 20.0 +0.6**
L02F Cave Junction 112.59 47 PKiKP **PKiKP** **19 57 21.0 +0.9**
baz=281
BCLA Clavier 112.69 322 *d*PKiKP **PKiKP** **19 57 19.9 -0.1**
BCLA *d*PP **PP** **19 58 20.4 +2.8**
H04D Lebanon 112.69 45 PKiKP **PKiKP** **19 57 21.0 +0.8**
baz=283
RCHB Rochefort 112.81 322 *d*PKiKP **PKiKP** **19 57 19.8 -0.4**
RCHB *d*PP **PP** **19 58 20.6 +2.2**
KEST Kesra 112.91 306 PKiKP **PKiKP** **19 57 22.2 +1.2**
comp=Z,14nm,0.6s,baz=148,slow=1.0,SNR=27
KEST PP **PP** **19 58 19.1 -0.7**
comp=Z,88nm,1.0s,baz=61,slow=2.1,SNR=16
KEST PKKPbc **PKKPbc** **20 08 10.2 -0.4**
comp=Z,12nm,0.8s,baz=223,slow=6.8,SNR=7.9
BMRD Maredsous 113.05 322 *d*PKiKP **PKiKP** **19 57 21.4 +0.7**
BMRD *d*PP **PP** **19 58 22.8 +2.7**
BMRD *dp*PKiKP **pPKiKP** **19 59 25.0 -1.2**
I04A Tendick Farm, 113.08 45 PKiKP **PKiKP** **19 57 21.4 +0.3**
baz=283
DOU Dourbes 113.22 322 *d*PKiKP **PKiKP** **19 57 21.9 +0.8**
DOU *d*PP **PP** **19 58 23.6 +2.4**
DOU *dp*PKiKP **pPKiKP** **19 59 26.2 -0.3**
YBH Yreka Blue Hor 113.30 48 PKiKP **PKiKP** **19 57 23.2 +1.6**
comp=Z,5.3nm,0.9s,baz=12,slow=7.0,SNR=5.9

YBH PKKPbc **PKKPbc** **20 08 07.5 -2.1**
comp=Z,3.1nm,0.7s,baz=85,slow=16,SNR=5.7
J04D Umpqua Nationa 113.42 46 PKiKP **PKiKP** **19 57 22.7 +0.7**
baz=283
L04D Klamath Falls 113.49 47 PKiKP **PKiKP** **19 57 22.6 +0.6**
baz=282
G05D Wamic, OR 113.51 44 PKiKP **PKiKP** **19 57 22.6 +0.8**
baz=284
I05D Terrebonne, OR 113.71 45 PKiKP **PKiKP** **19 57 23.0 +0.7**
baz=284
K04D Chiloquin, OR 113.81 47 PKiKP **PKiKP** **19 57 23.1 +0.5**
baz=283
J05D Fort Rock, OR 114.03 46 PKiKP **PKiKP** **19 57 24.1 +1.0**
baz=283
UPNV Upernavik 114.53 360 *i* P PKPdf 19 57 22.8 -0.2
ORV Oroville 114.63 50 PKPdf 19 57 22.9 -1.2
ORV Oroville 114.63 50 PKiKP PKPdf 19 57 22.9 -1.2
MCD Coleburn Disti 114.67 331 *e*P PKPdf 19 57 23.6 -0.1
ELSH Elham, Standar 114.96 324 *e*P **PKiKP** **19 57 24.6 +0.2**
ELSH IAmb IAmb 19 57 25.8
comp=Z,28nm,0.7s
I07A Izee 115.05 45 **PKPdf** **19 57 24.6 -0.3**
ESY Stoneypath 115.11 329 *e*P **PKPdf** **19 57 23.6 -0.9**
MDO Dochfour 115.27 331 *e*P **PKiKP** **19 57 24.8 0.0**
LINV Loch Inver, As 115.31 332 *e*P **PKiKP** **19 57 24.8 0.0**
EBL Broad Law 115.39 329 *e*P **PKiKP** **19 57 25.5 +0.4**
NEW Newport 115.43 40 PKP **PKiKP** **19 57 26.1 +0.6**
comp=Z,15nm,0.9s,baz=178,slow=1.3,SNR=14
NEW PKKPab **PKKPab** **20 08 07.2 -1.0**
comp=Z,3.4nm,0.7s,baz=103,slow=6.2,SNR=4.2
NEW Newport 115.43 40 **PKPdf** **19 57 25.3 -0.2**
NEW Newport 115.43 40 PKiKP **PKiKP** **19 57 26.7 +1.3**
baz=289
HPK Haverah Park 115.43 327 *e*P **PKiKP** **19 57 25.7 +0.5**
HPK IAmb IAmb 19 57 26.7
comp=Z,9.5nm,0.7s
INVG Invergeldie, C 115.59 330 *e*P **PKiKP** **19 57 25.6 +0.2**
EKA Eskdalemuir Ar 115.65 329 PKP **PKiKP** **19 57 26.1 +0.5**
comp=Z,6.8nm,0.5s,baz=5.5,slow=2.5,SNR=47
EKA PKKPbc **PKKPbc** **20 08 00.0 -1.9**
comp=Z,2.5nm,0.7s,baz=235,slow=3.8,SNR=7.5
EKA SKKPbc SKKPbc 20 10 53.6 -3.2
comp=Z,3.9nm,0.8s,baz=268,slow=2.6,SNR=6.1
ESK Eskdalemuir 115.68 329 *e*P **PKPdf** **19 57 25.5 -0.1**
ESK Eskdalemuir 115.68 329 **PKPdf** **19 57 25.1 -0.5**
ESK Eskdalemuir 115.68 329 PKiKP **PKPdf** **19 57 25.1 -0.5**
KAC Achnashellach 115.68 332 *e*P **PKiKP** **19 57 25.8 +0.2**
NUUG Nuugaatsiaq 115.73 358 *i* P **PKPdf** **19 57 24.8 -0.5**
KPL Plockton 115.92 332 *e*P **PKPdf** **19 57 25.7 -0.3**
KESW Keswick, Cumbr 115.95 328 *e*P **PKiKP** **19 57 26.4 +0.2**
WVOR Wild Horse Val 116.09 46 **PKPdf** **19 57 25.5 -1.5**
WVOR Wild Horse Val 116.09 46 PKiKP **PKPdf** **19 57 25.5 -1.5**
NEWG New Galloway 116.29 329 *e*P **PKPdf** **19 57 26.6 -0.1**
LAWE Loch Awe, Argy 116.33 331 *e*P **PKPdf** **19 57 26.8 0.0**
BMO Blue Mountains 116.36 43 **PKPdf** **19 57 26.3 -1.1**
BMO Blue Mountains 116.36 43 PKiKP **PKPdf** **19 57 26.3 -1.1**
SWN1 Swindon 116.53 325 *e*P **PKiKP** **19 57 28.0 +0.6**
SMMC Simmler 116.61 54 PKiKP **PKiKP** **19 57 29.5 +1.4**
baz=280
HLM1 Long Mynd 116.72 326 *e*P **PKiKP** **19 57 28.3 +0.5**
HLM1 IAmb IAmb 19 57 28.9
comp=Z,7.0nm,0.9s
PKM Mcpherson Peak 116.83 55 PKiKP **PKiKP** **19 57 30.0 +1.3**
baz=280
IOMK Kirk Michael 116.86 328 *e*P **PKiKP** **19 57 28.4 +0.4**
VOG Valley Oaks Go 116.91 53 PKiKP **PKiKP** **19 57 29.2 +0.6**
baz=281
MONM Monmouth 116.97 325 *e*P **PKPdf** **19 57 28.2 0.0**
WIM Isle of Man 116.97 328 *e*P **PKPdf** **19 57 27.8 -0.4**
SBC Santa Barbara 116.99 55 PKiKP **PKiKP** **19 57 29.7 +0.9**
baz=280
LLW Llanuwychllyn 117.01 327 *e*P **PKiKP** **19 57 28.9 +0.6**
WME Myndd Eilian 117.11 327 *e*P **PKiKP** **19 57 29.1 +0.6**
ICESG Greenland Ices 117.13 353 *i* P **PKiKP** **19 57 28.8 +0.2**
SCZ2 Santa Cruz Isl 117.14 56 PKiKP **PKiKP** **19 57 29.9 +0.8**
baz=280
PLID Pearl Lake 117.17 43 **PKPdf** **19 57 28.2 -0.9**
WLF1 Llynfaes 117.21 327 *e*P **PKiKP** **19 57 28.8 +0.1**
WPS Cemaes, Angles 117.22 327 *e*P **PKiKP** **19 57 28.9 +0.3**
VES Vestal, Richgr 117.24 53 PKiKP **PKiKP** **19 57 29.6 +0.3**
baz=281
CLGH Cloghs, Cushen 117.26 330 *e*P **PKiKP** **19 57 29.2 +0.5**
CLGH IAmb IAmb 19 57 29.7
comp=Z,9.8nm,0.7s
NVAR Mina Array Bea 117.30 50 Pdiff **Pdif** **19 53 50.1 +0.6**
comp=Z,0.2nm,0.6s,baz=81,slow=19,SNR=1.8
NVAR PKP **PKiKP** **19 57 31.1 +1.5**
comp=Z,28nm,0.9s,baz=254,slow=2.6,SNR=44
NVAR SKP 20 00 15.3
comp=Z,21nm,0.9s,baz=252,slow=2.5,SNR=7.8
NVAR PKKPbc **PKKPbc** **20 07 56.5 +0.5**
comp=Z,15nm,0.7s,baz=137,slow=4.2,SNR=14
KVN Kaiserville 117.31 50 **PKPdf** **19 57 28.6 -0.9**
KVN Kaiserville 117.31 50 PKiKP **PKPdf** **19 57 28.6 -0.9**
YRC Rhoscolyn 117.33 327 *e*P **PKPdf** **19 57 27.9 -0.9**
SNCC San Nicolas Is 117.35 56 PKiKP **PKiKP** **19 57 30.4 +0.8**
baz=280
ARVC Arvin 117.58 54 PKiKP **PKiKP** **19 57 31.1 +1.2**
baz=281
JSA Saint Aubin 117.66 322 *e*P **PKiKP** **19 57 29.9 +0.3**
TIN Tinemaha, Big 117.66 52 PKiKP **PKiKP** **19 57 31.5 +1.3**
baz=282
JVM Valle D.L. Mar 117.67 322 *e*P **PKiKP** **19 57 29.8 +0.1**
ISA Isabella, Lake 117.76 54 **PKPdf** **19 57 28.6 -1.8**
ISA Isabella, Lake 117.76 54 PKiKP **PKPdf** **19 57 28.6 -1.8**
ISA Isabella, Lake 117.76 54 PKiKP **PKiKP** **19 57 31.0 +0.6**
baz=282
OSI Osito Audit: C 117.77 55 PKiKP **PKiKP** **19 57 31.3 +0.9**
baz=281
ILTH Belurgan, Co L 117.89 329 *e*P **PKPdf** **19 57 29.7 -0.2**
CWC Cottonwood Cre 117.91 53 PKiKP **PKiKP** **19 57 31.8 +1.0**
baz=282
MSO Missoula 117.94 40 **PKPdf** **19 57 28.7 -1.8**
MSO Missoula 117.94 40 PKiKP **PKiKP** **19 57 30.6 +0.1**
baz=291
ILULI Ilulissat 117.98 357 *e*P **PKPdf** **19 57 28.8 -0.9**
RSBS Rosebush, Pemb 118.00 326 *e*P **PKPdf** **19 57 30.1 -0.1**
DECC Green Verdugo 118.15 55 PKiKP **PKiKP** **19 57 31.7 +0.6**
baz=281
DYA Yadsworthy 118.20 324 *e*P **PKiKP** **19 57 30.9 +0.2**
DYA IAmb IAmb 19 57 31.7
comp=Z,18nm,0.6s
CIS Catalina Islan 118.24 56 PKiKP **PKiKP** **19 57 32.1 +0.8**
baz=280
HTL Hartland 118.28 325 *e*P **PKiKP** **19 57 31.0 +0.3**
HTL IAmb IAmb 19 57 32.0
comp=Z,18nm,0.7s
DSB Dublin 118.29 328 **PKPdf** **19 57 29.8 -0.9**
EDW2 Edwards Air Fo 118.30 54 PKiKP **PKiKP** **19 57 32.8 +1.3**
baz=282
GRAC Grapevine Rang 118.35 52 PKiKP **PKiKP** **19 57 32.8 +1.3**
baz=283
LRMC Laurel Mtn Rad 118.43 54 PKiKP **PKiKP** **19 57 32.9 +1.1**
baz=282
MPMC Manual Prospec 118.46 53 PKiKP **PKiKP** **19 57 33.2 +1.2**
baz=282
BFSC Mount Baldy Ra 118.70 55 PKiKP **PKiKP** **19 57 33.0 +0.6**
baz=281
HLID Hailey 118.73 44 PKiKP **PKiKP** **19 57 33.7 +1.5**
baz=289
FURC Furnace Creek, 118.86 52 PKiKP **PKiKP** **19 57 33.7 +1.3**
baz=283
IWEX Carrickbyrne, 118.92 327 *e*P **PKiKP** **19 57 32.1 +0.1**
ELK Elko 119.00 47 PKP **PKiKP** **19 57 33.9 +1.0**
comp=Z,32nm,0.8s,baz=294,slow=2.9,SNR=62
ELK PP **PP** **19 59 00.9 -0.7**
comp=Z,23nm,1.0s,baz=282,slow=4.1,SNR=7.3
ELK SKP 20 00 17.9
comp=Z,24nm,0.9s,baz=281,slow=2.9,SNR=4.8
ELK PKKPbc **PKKPbc** **20 07 50.3 +0.2**
comp=Z,7.9nm,0.8s,baz=3.1,slow=1.9,SNR=10.0
ELK SKKPbc SKKPbc 20 10 44.5 -1.5
comp=Z,5.0nm,0.9s,baz=111,slow=4.1,SNR=5.7
ELK Elko 119.00 47 **PKiKP** **19 57 33.2 +0.3**
CCA1 Carnmenellis 119.06 324 *e*P **PKiKP** **19 57 32.7 +0.3**
CCA1 IAmb IAmb 19 57 33.5
comp=Z,13nm,0.6s
RRX Edison Barstow 119.11 54 PKiKP **PKiKP** **19 57 34.3 +1.3**
baz=282
GSC Goldstone, Bar 119.17 54 PKiKP **PKiKP** **19 57 34.4 +1.2**
baz=283
MURC Murrieta 119.20 56 PKiKP **PKiKP** **19 57 34.2 +0.9**
baz=281
TPNV Topopah Spring 119.23 52 **PKPdf** **19 57 32.0 -1.3**
TPNV Topopah Spring 119.23 52 PKiKP **PKPdf** **19 57 32.0 -1.3**

TPNV Topopah Spring 119.23 52 PKiKP PKiKP 19 57 34.5 +1.1
baz=284
BBRC Big Bear Solar 119.30 55 PKiKP PKiKP 19 57 34.1 +0.4
baz=282
R11A Troy Canyon, C 119.39 50 PKiKP PKiKP 19 57 34.9 +1.2
baz=285
109C Camp Elliot, M 119.42 56 PKiKP PKiKP 19 57 34.4 +0.8
baz=281
SHOC Shoshone, Teco 119.46 53 PKiKP PKiKP 19 57 35.0 +1.3
baz=283
HEC Hector,Ludlow 119.65 54 PKiKP PKiKP 19 57 35.3 +1.2
baz=283
PFO Pinyon Flats O 119.80 55 PKP PKiKP 19 57 35.7 +1.1
comp=Z,53nm,1.0s,baz=279,slow=1.7,SNR=37
PFO PKKPbc PKKPbc 20 07 45.5 -1.4
comp=Z,8.4nm,0.8s,baz=100,slow=4.4,SNR=6.3
PFO Pinyon Flats O 119.80 55 PKiKP 19 57 34.5 0.0
PFO Pinyon Flats O 119.80 55 PKiKP PKiKP 19 57 35.6 +1.1
baz=282
TPFO Pinon Flats 119.81 55 PKiKP PKiKP 19 57 35.6 +1.0
baz=282
TUQ Turquoise Moun 119.84 53 PKiKP PKiKP 19 57 35.6 +1.1
baz=283
PMD Palm Desert 119.86 55 PKiKP 19 57 35.0 +0.5
PMD PP 19 59 03.2 -4.3
BOZ Bozeman (W) 119.89 41 PKiKP PKiKP 19 57 35.2 +0.9
baz=292
MG05 Puerto Natales 119.91 169 PKiKP 19 57 34.1 +0.1
MONP2 Monument Peak 119.98 56 PKiKP PKiKP 19 57 36.2 +1.2
baz=282
ANGG Ammassalik, Gr 120.09 351 ePKPdf 19 57 32.7 -1.0
EGMT Eagleton 120.09 38 PKiKP PKiKP 19 57 35.0 +0.4
baz=295
BELC Belle Mtn. Jos 120.10 55 PKiKP PKiKP 19 57 36.4 +1.3
baz=282
SFJD Kangerlussuaq 120.16 357 PKiKP 19 57 34.2 +0.2
SFJD Kangerlussuaq 120.16 357 PKiKP PKiKP 19 57 34.2 +0.2
SFJD Kangerlussuaq 120.16 357 iP PKPdf 19 57 31.7 -2.2
GMRC Granite Mounta 120.20 54 PKiKP PKiKP 19 57 36.7 +1.4
baz=283
IKP In-Ko-Pah, Jac 120.28 56 PKiKP PKiKP 19 57 36.6 +1.1
baz=282
DY2G Dye2 120.36 355 iP PKPdf 19 57 33.7 -0.9
YUH Yuha Desert 120.44 56 PKPdf 19 57 35.0 -0.5
YUH PP 19 59 03.7 -7.7
SWSC Sam W. Stewart 120.48 56 PKiKP PKiKP 19 57 36.8 +1.1
baz=282
BC3 Big Chuckawall 120.61 55 PKiKP PKiKP 19 57 37.3 +1.2
baz=282
IRM Iron Mountain 120.75 55 PKiKP PKiKP 19 57 37.6 +1.3
baz=283
DUG Dugway, Tooele 120.93 47 PKiKP 19 57 37.0 +0.4
DUG Dugway, Tooele 120.93 47 PKiKP PKiKP 19 57 37.0 +0.4
DUG Dugway, Tooele 120.93 47 PKiKP PKiKP 19 57 37.6 +1.1
baz=288
H17A Grant Village 121.03 42 PKiKP PKiKP 19 57 38.4 +1.6
baz=292
NEE2 Needles Airpor 121.04 54 PKiKP PKiKP 19 57 37.6 +0.8
baz=284
TPAW Teton Pass 121.12 43 PKPdf 19 57 35.5 -1.4
GLA Glamis 121.26 56 PKiKP PKiKP 19 57 38.3 +1.0
baz=283
EFI East Falkland 121.30 180 PKiKP 19 57 37.2 +0.5
EFI East Falkland 121.30 180 PKiKP PKiKP 19 57 37.2 +0.5
LOHW Long Hollow 121.31 43 PKiKP 19 57 37.3 -0.1
LOHW PP PP 19 59 07.4 -10
TORD Torodi Ar. Bea 121.48 281 PKP PKPdf 19 57 38.0 +0.1
comp=Z,117nm,0.6s,baz=73,slow=1.8,SNR=267
TORD PKKPbc PKKPab 20 07 41.7 -0.3
comp=Z,10nm,0.8s,baz=279,slow=3.4,SNR=14
TORD SKKPbc SKKPbc 20 10 35.3 -1.3
comp=Z,3.1nm,0.9s,baz=257,slow=3.8,SNR=3.6
PDMCI Parker Dam,Lak 121.53 54 PKiKP PKiKP 19 57 38.6 +0.9
baz=284
RLMT Red Lodge 121.61 41 PKiKP PKiKP 19 57 38.7 +0.8
baz=294
JLU Jordanelle 121.78 46 PKiKP 19 57 38.5 +0.2
FIGM Figuig 122.22 303 P PKiKP 19 57 41.0 +1.6
ESDC Sonseca Array 122.28 313 PKP PKiKP 19 57 39.7 +0.6
comp=Z,24nm,0.7s,baz=20,slow=3.0,SNR=10
ESDC SKP 20 00 23.3
comp=Z,11nm,1.0s,baz=61,slow=6.5,SNR=4.2
ESDC PKKPbc PKKPab 20 07 38.7 +0.4
comp=Z,2.1nm,0.9s,baz=281,slow=3.6,SNR=6.7
BW06 Boulder Array 122.34 43 PKiKP PKiKP 19 57 39.7 +0.3
baz=292
PDAR Pinedale Array 122.34 43 PKP PKiKP 19 57 39.9 +0.5
comp=Z,13nm,0.8s,baz=222,slow=2.0,SNR=50
PDAR PP PP 19 59 20.4 -3.5
comp=Z,8.4nm,0.9s,baz=272,slow=2.5,SNR=4.7
PDAR SKP 20 00 24.1
comp=Z,8.4nm,0.8s,baz=222,slow=2.0,SNR=4.1
PDAR PKKPbc PKKPbc 20 07 36.8 -1.2
comp=Z,22nm,0.6s,baz=112,slow=5.3,SNR=52
PDAR SKKPbc SKKPbc 20 10 33.1 -2.3
comp=Z,3.4nm,0.9s,baz=108,slow=4.8,SNR=4.6
PDAR Pinedale Array 122.34 43 PKPdf 19 57 37.7 -1.5
TAF Taforalt 122.52 307 P PKiKP 19 57 41.0 +1.3
PAB San Pablo 122.60 313 PKiKP 19 57 40.0 +0.2
PAB San Pablo 122.60 313 PKiKP PKiKP 19 57 40.0 +0.2
PAB San Pablo 122.60 313 P PKiKP 19 57 41.2 +1.4
JBK JBK 122.77 306 P PKiKP 19 57 41.4 +1.0
LAO LASA Array 122.84 38 P PKiKP 19 57 41.2 +1.2
baz=298
LAO LASA Array 122.84 38 PKiKP PKiKP 19 57 41.2 +1.2
baz=298
FRB Frobisher Bay 123.06 6 PKP PKiKP 19 57 39.8 0.0
comp=Z,43nm,0.7s,baz=30,slow=2.7,SNR=20
FRB PKKPbc PKKPab 20 07 32.0 -2.4
comp=Z,4.5nm,0.5s,baz=196,slow=7.2,SNR=4.3
214A Organ Pipe Nat 123.16 57 PKiKP PKiKP 19 57 41.7 +0.6
baz=283
DGMT Dagmar 123.17 35 P PKiKP 19 57 40.9 +0.3
baz=301
DGMT Dagmar 123.17 35 PKiKP PKiKP 19 57 40.8 +0.3
baz=301
WUAZ Wupatki 123.41 52 PKiKP PKiKP 19 57 42.7 +1.1
baz=286
PBRG Braganca 123.49 316 ePKPdf PKiKP 19 57 41.5 +0.1
PBRG i - 19 58 43.8
PBRG Braganca 123.49 316 ePP PP 19 59 31.7 +0.3
PALE Palemas 123.62 308 P PKiKP 19 57 42.0 +0.1
X16A Lo Mia Camp, P 123.66 53 PKPpre 19 57 32.1
X16A PKiKP 19 57 42.1 +0.5
X16A PP PP 19 59 24.1 -9.0
MVO Moncorvo 123.93 315 ePKPdf PKiKP 19 57 43.3 +0.9
MVO i - 19 58 45.2
MVO Moncorvo 123.93 315 ePP PP 19 59 35.4 +1.0
O20A White River Ci 124.24 46 PKiKP PKiKP 19 57 43.9 +0.7
baz=292
PVRL Vila Real 124.37 316 ePKPdf PKiKP 19 57 43.3 +0.1
PVRL i - 19 58 46.5
POLO Lamas de Olo 124.38 316 ePKPdf PKiKP 19 57 44.0 +0.7
POLO i - 19 58 45.6
POLO Lamas de Olo 124.38 316 ePP PP 19 59 37.4 0.0
PCAB Cabril 124.41 316 ePKPdf PKiKP 19 57 43.8 +0.5
PCAB i - 19 58 46.1
K22A Casper 124.43 42 P PKiKP 19 57 43.4 -0.1
baz=295
K22A Casper 124.43 42 PKiKP PKPdf 19 57 43.2 +0.1
baz=295
PGAV Gavieira, Arco 124.47 317 ePKPdf PKiKP 19 57 44.1 +0.6
PGAV i - 19 58 45.5
PGAV Gavieira, Arco 124.47 317 ePP PP 19 59 38.1 +0.2
PV13 Radium Mtn., P 124.53 48 PKPdf 19 57 42.5 -1.0
PV13 PP PP 19 59 31.3 -7.4
MTE Manteigas 124.59 315 ePKPdf PKiKP 19 57 44.5 +0.8
MTE i - 19 58 46.6
MTE Manteigas 124.59 315 ePP PP 19 59 41.5 +2.8
PVIS Viseu 124.71 315 ePKPdf PKiKP 19 57 44.8 +0.9
PVIS i - 19 58 46.9
PVIS Viseu 124.71 315 ePP PP 19 59 39.6 +0.1
TUC Tucson 124.74 56 PKPdf 19 57 42.7 -1.2
TUC PP PP 19 59 34.5 -5.7
TUC Tucson 124.74 56 PKiKP PKPdf 19 57 42.7 -1.2
TUC Tucson 124.74 56 PKiKP PKiKP 19 57 45.1 +0.9
baz=285
CHEFC Chefchaouen 124.75 308 P PKiKP 19 57 45.0 +0.8
PCBR Castelo Branco 124.75 314 ePKPdf PKiKP 19 57 44.4 +0.5
PCBR i - 19 58 46.4
PCBR Castelo Branco 124.75 314 ePP PP 19 59 39.7 -0.1
LCRM LCR 124.77 306 P PKiKP 19 57 46.0 +1.6
MDT Midelt 124.81 305 PKKPbc PKKPbc 20 07 29.4 +1.3
comp=Z,12nm,0.9s,baz=267,slow=4.0,SNR=12
MDT SKKPbc SKKPbc 20 10 27.1 +0.6
comp=Z,3.1nm,0.8s,baz=200,slow=3.7,SNR=3.7
MDT Midelt 124.81 305 P PKiKP 19 57 45.4 +1.0
W18A Petrified Fore 124.81 52 PKiKP PKiKP 19 57 45.6 +1.1
baz=288
PMRV Marv??o 124.85 314 ePKPdf PKiKP 19 57 45.2 +1.0
PMRV i - 19 58 46.2
PMRV Marv??o 124.85 314 ePP PP 19 59 40.3 -0.1
PTO Porto 125.04 316 ePKPdf PKiKP 19 57 45.5 +1.1
PTO i - 19 58 47.5
PBAR Barrancos 125.04 312 ePKPdf PKiKP 19 57 45.5 +0.9
PBAR i - 19 58 47.3
MVCO Mesa Verde 125.09 49 PKiKP PKiKP 19 57 46.0 +1.0
baz=290
CZD Col de Zad 125.10 305 P PKiKP 19 57 47.0 +1.8
PESTR Estremoz 125.20 313 P PKiKP 19 57 45.8 +0.9
PESTR Estremoz 125.20 313 ePKPdf PKiKP 19 57 45.2 +0.3
PESTR Estremoz 125.20 313 ePP PP 19 59 42.6 -0.1
PCAS Casmilo, Conde 125.40 315 ePKPdf PKiKP 19 57 45.8 +0.6
PCAS i - 19 58 47.2
PCAS Casmilo, Conde 125.40 315 ePP PP 19 59 42.1 -1.9
RSSD Black Hills 125.40 40 PKPpre 19 57 32.0
RSSD PKPdf 19 57 43.9 -1.0
RSSD Black Hills 125.40 40 PKHKP PKPpre 19 57 32.0
RSSD 19 57 43.9
RSSD Black Hills 125.40 40 P PKPdf 19 57 44.6 -0.4
baz=298
RSSD Black Hills 125.40 40 PKiKP PKPdf 19 57 44.9 -0.1
baz=298
NRS Narsarsuaq 125.45 353 eP PKPdf 19 57 40.7 -3.5
N23A Red Feather La 125.56 44 PKiKP PKiKP 19 57 45.9 0.0
baz=294
PMTG Montargil 125.58 313 ePKPdf PKiKP 19 57 46.3 +0.7
PMTG i - 19 58 47.5
PMTG Montargil 125.58 313 ePP PP 19 59 45.4 +0.2
PBEJ Beja 125.70 312 ePKPdf PKiKP 19 57 46.8 +0.9
PBEJ i - 19 58 47.0
IVI Ivigtut 125.71 354 eP PKPdf 19 57 43.7 -1.0
PVAQ Vaqueiros 125.82 311 P PKiKP 19 57 47.6 +1.5
PVAQ Vaqueiros 125.82 311 PKPdf PKiKP 19 57 47.3 +1.2
PVAQ i - 19 58 48.6
PVAQ Vaqueiros 125.82 311 ePP PP 19 59 48.1 +1.3
PSBE So Bento 125.82 314 ePKPdf PKiKP 19 57 47.1 +1.0
PSBE i - 19 58 48.9
PSBE So Bento 125.82 314 ePP PP 19 59 45.5 -1.3
PCVE Castro Verde 125.97 312 ePKPdf PKiKP 19 57 46.9 +0.5
PCVE i - 19 58 47.5
MESJ Messejana 126.03 312 ePKPdf PKiKP 19 57 46.4 -0.1
MESJ ePP PP 19 59 48.7 +0.5
MESJ Messejana 126.03 312 ePKPdf PKiKP 19 57 47.4 +0.9
PBDV Barranco-do-Ve 126.03 311 ePKPdf PKiKP 19 57 47.5 +0.9
PBDV i - 19 58 50.4
MDND Maddock 126.10 34 P PKPdf 19 57 46.0 +0.1
baz=305
MDND Maddock 126.10 34 PKiKP PKiKP 19 57 46.2 -0.2
baz=305
PACT Alcochete 126.13 313 ePKPdf PKiKP 19 57 48.4 +1.7
PACT i - 19 58 50.1
S22A 4UR Ranch, Cre 126.15 48 PKiKP PKiKP 19 57 48.4 +1.2
baz=292
PNCL Nicolau / Gran 126.16 312 ePKPdf PKiKP 19 57 48.0 +1.2
PNCL i - 19 58 49.6
PNCL Nicolau / Gran 126.16 312 ePP PP 19 59 48.9 -0.1
E28A Huff 126.19 36 P PKiKP 19 57 47.0 +0.3
baz=303
ISCO Idaho Springs 126.23 45 PKPpre PKPpre 19 57 34.0
ISCO PKPdf 19 57 45.5 -1.3
ISCO Idaho Springs 126.23 45 PKiKP PKPdf 19 57 45.5 -1.3
ISCO Idaho Springs 126.23 45 P PKiKP 19 57 47.8 +0.4
baz=294,SNR=18
ISCO Idaho Springs 126.23 45 PKiKP PKiKP 19 57 47.5 +0.2
baz=294
ZHG ZHG 126.27 306 P PKiKP 19 57 49.0 +1.7
PMAFR Mafra 126.38 314 ePKPdf PKiKP 19 57 48.6 +1.4
PMAFR i - 19 58 49.7
PMST Lisbon--Monsan 126.40 313 i - 19 58 50.7
PTEO Sao Teotonio 126.51 312 ePKPdf PKiKP 19 57 48.3 +0.8
PTEO i - 19 58 50.8
PTEO epPKPdf PP 19 59 46.1 -5.3
MORF Marmelete 126.55 312 ePKPdf PKPdf 19 57 47.2 +0.1
MORF Marmelete 126.55 312 ePKPdf PKiKP 19 57 48.8 +1.1
ULM Lac du Bonnet 126.59 30 PKP PKPdf 19 57 46.9 +0.1
comp=Z,57nm,0.9s,baz=282,slow=4.7,SNR=3.4
PFVI Vila Bisbo 126.74 311 P PKiKP 19 57 49.2 +1.3
PFVI Vila Bisbo 126.74 311 ePKPdf PKiKP 19 57 49.3 +1.3
PFVI i - 19 58 49.8
LPIG La Paz 126.87 65 PKP PKiKP 19 57 49.5 +0.9
comp=Z,20nm,0.3s,baz=85,slow=0.9,SNR=10.0
Q24A Divide 126.90 46 PKiKP PKiKP 19 57 48.9 +0.2
baz=294
AVE Averroes 126.93 306 PKPdf 19 57 47.0 -0.9
AVE Averroes 126.93 306 P PKiKP 19 57 49.8 +1.3
KOWA Kowa 127.01 283 PKPdf 19 57 47.7 -0.9
KOWA Kowa 127.01 283 P PKiKP 19 57 49.5 +0.4
121A Cookes Peak, D 127.12 54 P PKiKP 19 57 50.4 +1.3
baz=287,SNR=20
121A Cookes Peak, D 127.12 54 PKiKP PKiKP 19 57 50.2 +1.1
baz=287
SDCO Great Sand Dun 127.12 48 P PKiKP 19 57 50.0 +0.8
baz=293,SNR=26
SDCO Great Sand Dun 127.12 48 PKiKP PKiKP 19 57 49.6 +0.5
baz=293
Y22D IRIS PASSCAL I 127.34 52 PKiKP PKiKP 19 57 50.4 +1.0
baz=289
Y22A Socorro 127.35 53 P PKiKP 19 57 50.5 +1.0
baz=289
ANMO Albuquerque 127.41 51 PKP PKiKP 19 57 50.3 +0.6
comp=Z,56nm,1.1s,baz=230,slow=1.7,SNR=80
ANMO PP PP 19 59 57.3 -0.3
comp=Z,45nm,1.2s,baz=290,slow=6.6,SNR=13
ANMO SKPbc SKPbc 20 00 17.6
comp=Z,27nm,0.9s,baz=323,slow=3.8,SNR=8.7
ANMO Albuquerque 127.41 51 PKPpre 19 57 37.8
ANMO PKPdf PKiKP 19 57 49.9 +0.2
ANMO Albuquerque 127.41 51 P PKiKP 19 57 50.1 +0.5
baz=290
ANMO Albuquerque 127.41 51 PKiKP PKiKP 19 57 50.3 +0.6
baz=290
KIC Kosan Boka 127.55 272 ePKP1 PKPdf 19 57 49.6 0.0
comp=Z,50nm,0.6s
DBIC Dimbokro 127.69 273 PKP PKPdf 19 57 50.1 +0.3
comp=Z,52nm,0.7s,baz=109,slow=2.2,SNR=48
DBIC PP PP 20 00 01.0 +1.0
comp=Z,20nm,0.9s,baz=98,slow=4.9,SNR=4.0
DBIC SKPbc SKPbc 20 00 19.0
comp=Z,34nm,0.8s,baz=118,slow=3.7,SNR=7.3
LIC Lamto 127.83 272 ePKP1 PKPdf 19 57 50.2 0.0
comp=Z,155nm,0.7s
AGMN Agassiz Nation 127.84 32 PKPdf 19 57 48.7 -0.5
AGMN Agassiz Nation 127.84 32 P PKPdf 19 57 49.1 0.0
baz=309
AGMN Agassiz Nation 127.84 32 PKiKP PKPdf 19 57 49.2 0.0
baz=309
TIC Toumodi 127.85 273 ePKP1 PKPdf 19 57 50.2 0.0
comp=Z,93nm,0.8s
OUK Oukaimeden 127.91 304 P PKiKP 19 57 53.0 +2.0
T25A Trinidad 128.16 48 PKiKP PKiKP 19 57 51.7 +0.6
baz=293
OGNE Ogallala 128.20 42 P PKPdf 19 57 50.5 +0.3
baz=298
OGNE Ogallala 128.20 42 PKiKP PKiKP 19 57 50.7 -0.2
baz=298
SUSD Miller 128.38 37 P PKPdf 19 57 50.7 +0.3
baz=303
SUSD Miller 128.38 37 PKiKP PKPdf 19 57 50.5 +0.2
baz=303
TTIG Tnine Tigouga, 128.57 303 P PKiKP 19 57 53.1 +1.0
KSCO Kaye Shedlock' 128.66 45 P PKiKP 19 57 52.3 +0.4
baz=296,SNR=5.9
KSCO Kaye Shedlock' 128.66 45 PKiKP PKiKP 19 57 51.9 -0.1
baz=296
B35A Bob, Littlefor 128.89 30 P PKPdf 19 57 51.2 0.0
baz=311
EAH EAH 129.18 305 P PKiKP 19 57 55.0 +1.9
MNTX Cornudas Mount 129.32 55 PKiKP PKiKP 19 57 53.6 +0.3
baz=288
K31A O'Neill 129.48 39 P PKPdf 19 57 52.6 +0.1
baz=302
LL04 Puerto Octay 130.17 165 PKPdf 19 57 52.7 -1.2
ECSD EROS Data Cent 130.17 37 PKPpre 19 57 36.8
ECSD PKPdf PKPdf 19 57 53.5 -0.3
ECSD EROS Data Cent 130.17 37 PKiKP PKiKP 19 57 54.3 -0.4
baz=305
EYMN Ely 130.27 29 PKiKP PKPdf 19 57 54.1 +0.3
baz=314
BGNE Belgrade 130.51 40 P PKPdf 19 57 54.1 -0.5
baz=302
BGNE Belgrade 130.51 40 PKiKP PKPdf 19 57 54.6 +0.1
baz=302
MSTX Muleshoe 130.60 51 P PKPdf 19 57 55.3 +0.2
baz=292
MSTX Muleshoe 130.60 51 PKiKP PKiKP 19 57 55.6 -0.4
baz=292
F36A Milaca 130.62 33 P PKPdf 19 57 54.5 0.0
baz=310
CBKS Cedar Bluff 130.76 44 P PKPdf 19 57 55.6 +0.5
baz=298
CBKS Cedar Bluff 130.76 44 PKiKP PKiKP 19 57 55.7 -0.3
baz=298
PLCA Paso Flores 130.78 167 PKhKP PKPpre 19 57 39.8
comp=Z,2.4nm,0.8s,baz=222,slow=1.5,SNR=8.8
PLCA PKP PKiKP 19 57 56.0 -0.1
comp=Z,30nm,0.7s,baz=246,slow=0.5,SNR=78
PLCA SKPbc SKPab 20 00 29.9 +0.1
comp=Z,189nm,1.1s,baz=212,slow=3.9,SNR=30
PLCA SKKPbc SKKPbc 20 10 05.4 -0.2
comp=Z,4.9nm,0.9s,baz=357,slow=3.5,SNR=4.3
PLCA Paso Flores 130.78 167 eP PKPdf 19 57 54.9 -0.3
AMTX Amarillo 131.08 49 P PKiKP 19 57 57.0 +0.1
baz=294
AMTX Amarillo 131.08 49 PKiKP PKiKP 19 57 56.7 -0.2
baz=294
E38A The Farm, Brul 131.16 31 PKPdf 19 57 53.6 -2.0
E38A The Farm, Brul 131.16 31 P PKPdf 19 57 55.3 -0.3
baz=313
N33B J Bar K, Exete 131.31 40 P PKiKP 19 57 56.7 -0.4
baz=302
SPMN Marine on St. 131.42 33 PKiKP PKPdf 19 57 56.5 +0.4
baz=310
TX31 Lajitas Ar. Si 131.45 57 P PKiKP 19 57 57.6 -0.3
baz=288
TXAR Lajitas Array 131.45 57 PKhKP PKPpre 19 57 40.0
comp=Z,3.0nm,1.1s,baz=242,slow=2.7,SNR=7.2
TXAR PKP PKiKP 19 57 57.8 0.0
comp=Z,9.9nm,0.6s,baz=196,slow=2.4,SNR=29
TXAR PP PP 20 00 22.3 -1.3
comp=Z,9.7nm,1.0s,baz=289,slow=3.8,SNR=5.9
TXAR SKPbc SKPab 20 00 33.0 -0.1
comp=Z,49nm,0.7s,baz=277,slow=2.0,SNR=24
TXAR SKKPbc SKKPbc 20 10 03.2 -0.2
comp=Z,1.2nm,0.5s,baz=120,slow=5.9,SNR=9.0
TXAR Lajitas Array 131.45 57 PKPpre 19 57 40.3
TXAR PKPdf PKiKP 19 57 57.5 -0.3
R32A Long Quarter, 131.65 44 P PKiKP 19 57 57.8 -0.1
baz=299,SNR=14
I37A Lemond, Waseca 131.86 35 PKPpre 19 57 41.5
I37A PKPdf PKPdf 19 57 56.2 -0.8
I37B Waseca 131.86 35 P PKiKP 19 57 58.1 0.0
baz=309
SCHQ Schefferville 131.98 7 PKhKP PKPpre 19 57 41.3
comp=Z,4.5nm,0.8s,baz=203,slow=3.9,SNR=4.8
SCHQ PKP PKiKP 19 57 58.1 +0.1
comp=Z,32nm,0.5s,baz=335,slow=1.8,SNR=46
SCHQ SKPbc SKPab 20 00 33.8 -0.6
comp=Z,207nm,0.9s,baz=358,slow=5.3,SNR=26
D41A Chassel 132.30 28 P PKPdf 19 57 58.2 +0.5
baz=316
U32A Winter Ranch, 132.41 46 PKPdf 19 57 58.4 +0.1
U32A Winter Ranch, 132.41 46 P PKiKP 19 57 59.0 -0.4
baz=297,SNR=7.9
OK038 West end E0370 132.55 46 PKPdf 19 57 57.6 -0.9
COWI Conover 132.72 30 PKPpre 19 57 42.8
KSU1 Kansas State U 132.72 42 P PKPdf 19 57 59.3 +0.6
baz=302,SNR=12
KSU1 Kansas State U 132.72 42 PKiKP PKPdf 19 57 59.3 +0.6
baz=302
K38A Parkersburg 133.07 36 PKPpre 19 57 45.6
K38A PKPdf PKPdf 19 57 58.2 -1.0
CROK Carrier 133.08 46 PKPpre PKPpre 19 57 44.2
CROK PKPdf 19 57 58.4 -1.1
SCIA State Center 133.26 37 PKiKP PKPdf 19 58 00.1 +0.4
baz=308
WMOK Wichita Mounta 133.31 48 PKiKP PKiKP 19 58 00.7 -0.6
baz=296
I40A Norwalk 133.47 33 P PKPdf 19 57 59.9 -0.1
baz=312
ABTX Abilene, Hawle 133.54 51 PKPpre 19 57 44.3
ABTX PKPdf 19 58 00.2 -0.3
ABTX Abilene, Hawle 133.54 51 PKiKP PKiKP 19 58 01.4 -0.5
baz=294
OK029 Liberty Lake 133.79 46 PKPdf 19 58 00.9 0.0
T35B Sooner Cattle 133.91 44 P PKPdf 19 58 01.7 +0.7
baz=300,SNR=12
PMPST Porto Santo, M 133.99 310 ePKPdf PKPdf 19 57 59.5 -1.8
PMPST eSKPbc SKPbc 20 00 40.6 +0.3
PMPS Porto Santo 133.99 310 eSKPab SKPbc 20 00 42.0 +1.7
FNO Franklin 134.08 47 PKPpre 19 57 47.8
FNO PKPdf 19 58 01.8 +0.4
OK030 Cody Creek RV 134.21 46 PKPdf 19 58 01.9 +0.3
JCT Junction City 134.23 54 P PKiKP 19 58 03.2 -0.2
baz=292,SNR=10
JCT Junction City 134.23 54 PKiKP PKiKP 19 58 02.9 -0.4
baz=292
JFWS Jewell Farm 134.32 34 P PKPdf 19 58 01.5 -0.1
baz=312
JFWS Jewell Farm 134.32 34 PKiKP PKPdf 19 58 01.6 -0.1
baz=312
L40A Anamosa 134.33 35 P PKPdf 19 58 01.1 -0.6
baz=310
I42A Draeger Farm, 134.38 32 PKPpre 19 57 46.6
I42A PKPdf 19 58 00.9 -0.8
PMAR Madeira 134.58 310 ePKPdf PKiKP 19 58 05.1 +0.9
PMAR i - 19 59 08.2
PMAR Madeira 134.58 310 ePP PP 20 00 44.5 +1.4
PMOZ Porto Moniz, M 134.75 310 ePKPdf PKPdf 19 57 57.9 -5.0
PMOZ i - 19 59 08.6
PMOZ Porto Moniz, M 134.75 310 ePP PP 20 00 44.1 0.0
TUL1 Leonard 134.92 45 PKPpre 19 57 48.3
TUL1 PKPdf 19 58 02.3 -0.7
TUL1 Leonard 134.92 45 P PKPdf 19 58 03.6 +0.7
baz=300,SNR=5.2
TUL1 Leonard 134.92 45 PKiKP PKPdf 19 58 03.7 +0.7
baz=300
Z35A Perchaven, San 135.07 49 P PKPdf 19 58 03.8 +0.5
baz=296
L42A Oliver, Polo 135.25 34 P PKPdf 19 58 02.8 -0.6
baz=312
833A Chaparral WMA, 135.32 57 PKiKP PKiKP 19 58 05.4 -0.1
baz=290
N41A Harden Midland 135.40 36 PKPpre 19 57 48.3
N41A PKPdf sPdif 19 58 03.1 +0.3
P40A Paris 135.41 39 P PKPdf 19 58 03.7 0.0
baz=307
WHTX Lake Whitney, 135.49 51 PKiKP PKiKP 19 58 05.0 -0.8
baz=295
K43A Burlington 135.50 33 P PKPdf 19 58 03.6 -0.2
baz=314
S39A Bolivar 135.66 42 P PKPdf 19 58 04.4 +0.1
baz=304
GLMI Grayling 135.81 28 PKiKP PKiKP 19 58 05.3 -0.8
baz=320
X37A Clayton 135.87 47 P PKPdf 19 58 04.4 -0.4
baz=299
435B Jarrell 135.88 53 P PKPdf 19 58 05.6 +0.7
baz=294
435B Jarrell 135.88 53 PKiKP PKiKP 19 58 06.1 -0.5
baz=294
R40A Maddies Statio 136.00 40 PKPpre 19 57 51.2
R40A PKPdf sPdif 19 58 05.2 -0.2
R40A Maddies Statio 136.00 40 P PKPdf 19 58 04.6 -0.3
baz=306
L44A Lake County Fo 136.09 33 PKiKP PKiKP 19 58 06.6 -0.1
baz=314
HDIL Hopedale 136.41 36 P PKPdf 19 58 05.3 -0.3
baz=311
HDIL Hopedale 136.41 36 PKiKP PKiKP 19 58 07.2 -0.3
baz=311
M44A Midewin, Midew 136.56 34 P PKPdf 19 58 06.1 +0.3
baz=313
CCM Cathedral Cave 136.79 40 PKPpre 19 57 53.8
CCM PKPdf PKPdf 19 58 06.6 +0.2
CCM Cathedral Cave 136.79 40 PKHKP PKPpre 19 57 53.8
CCM 19 58 06.6
CCM Cathedral Cave 136.79 40 PKiKP PKiKP 19 58 08.1 -0.1
baz=307
P43A Skaggs, Pawnee 136.87 37 P PKPpre 19 57 56.2
baz=310
L46A Eue Claire 137.06 32 PKPpre 19 57 54.3
MIAR Mount Ida 137.17 46 PKiKP PKiKP 19 58 08.5 -0.6
baz=301
FVM French Village 137.35 39 PKPpre 19 57 56.0

FVM PKPdf **PKPdf** 19 58 08.0 +0.6
FVM French Village 137.35 39 PKHKP PKPpre 19 57 56.0
FVM 19 58 08.0
FVM French Village 137.35 39 P PKPpre 19 57 57.6
baz=308
FCAR Ozark Folk Cen 137.46 43 PKPpre 19 57 55.7
HKT Hockley 137.60 53 PKPpre 19 57 57.2
HKT Hockley 137.60 53 PKHKP PKPpre 19 57 57.2
Q44A Meyer Farm, Va 137.64 37 P PKPpre 19 57 59.0
baz=310,SNR=16
NATX Nacogdoches 137.72 50 PKiKP **PKiKP 19 58 09.6 -0.8**
baz=297
SFIN Lafayette 137.77 34 PKPpre 19 57 57.9
SFIN Lafayette 137.77 34 P PKPpre 19 57 58.7
baz=313,SNR=17
SFIN Lafayette 137.77 34 PKiKP **PKiKP 19 58 10.1 -0.1**
baz=313
ROC1 El Roble 138.00 163 PKPpre 19 57 58.2
L48A N Adams 138.06 30 P PKPpre 19 57 58.6
baz=318
L48A P PKPpre 19 57 58.6
baz=318
AAM Ann Arbor 138.18 29 PKPpre 19 57 58.6
AAM Ann Arbor 138.18 29 PKHKP PKPpre 19 57 58.6
AAM Ann Arbor 138.18 29 PKiKP **PKiKP 19 58 10.8 -0.2**
baz=319
N47A Urbana 138.19 32 P PKPpre 19 57 59.0
baz=316,SNR=6.3
N47A P PKPpre 19 57 59.0
baz=316,SNR=6.3
SADO Sadowa 138.19 23 PKhKP PKPpre 19 57 58.7
comp=Z,35nm,0.7s,baz=330,slow=1.1,SNR=18
SADO SKPbc **SKPbc 20 00 52.7 +0.1**
comp=Z,82nm,0.8s,baz=303,slow=1.9,SNR=15
P46A Rosedale 138.23 35 P PKPpre 19 57 59.7
baz=313,SNR=19
S44A Carbondale 138.26 39 PKPpre 19 57 59.2
S44A Carbondale 138.26 39 P PKPpre 19 57 59.8
baz=309,SNR=18
OLIL Olney 138.30 37 P PKPpre 19 57 60.0
baz=311,SNR=17
LMQ La Malbaie 138.40 13 PKPpre 19 57 59.3
PEBM Pemiscott Bayo 138.83 41 PKPpre 19 58 01.0
O48B Farmland 138.92 33 P PKPpre 19 58 01.2
baz=316,SNR=17
O48B Farmland 138.92 33 PKiKP **PKiKP 19 58 12.5 -0.1**
baz=316
N49A Columbus Grove 138.94 31 P PKPpre 19 58 02.2
baz=318,SNR=15
N49A P PKPpre 19 58 02.2
baz=318,SNR=15
T45B Paducah 139.06 39 P PKPpre 19 58 03.0
baz=309
D62A Allapoint, All 139.12 12 PKPpre 19 58 01.5
D62A Allapoint, All 139.12 12 P PKPpre 19 58 02.6
baz=342,SNR=7.0
D62A P PKPpre 19 58 02.6
baz=342,SNR=7.0
M50A Fremont 139.16 30 PKPpre 19 58 00.6
441A DeRidder 139.31 50 P PKPpre 19 58 05.7
baz=298
P48A Milroy 139.33 34 P PKPpre 19 58 03.2
baz=315,SNR=8.1
P48A P PKPpre 19 58 03.2
baz=315,SNR=8.1
O49A Covington 139.40 32 P PKPpre 19 58 04.0
baz=317,SNR=17
O49A P PKPpre 19 58 04.0
baz=317,SNR=17
J54A Appleton 139.63 24 PKPpre 19 58 02.6
J54A Appleton 139.63 24 P PKPpre 19 58 04.3
baz=327,SNR=11
J54A P PKPpre 19 58 04.3
baz=327,SNR=11
342B Flagon Creek P 139.66 49 P PKPpre 19 58 06.8
baz=299,SNR=7.0
P49A Miami Univ. Ec 139.67 33 P PKPpre 19 58 05.2
baz=316,SNR=6.6
P49A Miami Univ. Ec 139.67 33 PKiKP PKPpre 19 58 14.0
baz=316
143A Socs Landing, 139.67 46 P PKPpre 19 58 06.2
baz=302
BMNY Brushton-Moira 139.77 19 P PKPpre 19 58 04.7
baz=334,SNR=7.7
W45A Hickory Valley 139.84 42 P PKPpre 19 58 05.1
baz=306
N51A Ashland 139.85 30 PKPpre 19 58 03.2
N51A Ashland 139.85 30 P PKPpre 19 58 04.1
baz=320,SNR=8.4
N51A P PKPpre 19 58 04.1
baz=320,SNR=8.4
M52A Chesterland 139.86 28 P PKPpre 19 58 05.3
baz=322,SNR=7.2
M52A P PKPpre 19 58 05.3
baz=322,SNR=7.2
E63A Oxbow 139.88 12 P PKPpre 19 58 05.1
baz=343,SNR=9.9
E63A P PKPpre 19 58 05.1
baz=343,SNR=9.9
LONY Lake Ozonia 139.94 19 PKiKP PKPpre 19 58 14.6
baz=333
J55A Hilton 139.97 23 PKPpre 19 58 03.9
J55A Hilton 139.97 23 P PKPpre 19 58 05.3
baz=328,SNR=15
J55A P PKPpre 19 58 05.3
baz=328,SNR=15
ERPA Erie 140.02 26 P PKPpre 19 58 06.0
baz=324,SNR=6.6
ERPA Erie 140.02 26 PKiKP **PKiKP 19 58 14.5 -0.3**
baz=324
T47A Sharon Grove 140.03 38 P PKPpre 19 58 05.7
baz=310,SNR=32
ACSO Alum Creek Sta 140.07 31 P PKPpre 19 58 05.4
baz=319,SNR=12
ACSO Alum Creek Sta 140.07 31 PKiKP **PKiKP 19 58 15.0 +0.1**
baz=319
OXF Oxford 140.07 43 P PKPpre 19 58 05.7
baz=306
OXF Oxford 140.07 43 PKiKP **PKiKP 19 58 15.0 0.0**
baz=306
WVT Waverly 140.13 40 PKPpre 19 58 04.8
WVT Waverly 140.13 40 PKHKP PKPpre 19 58 04.8
WVT Waverly 140.13 40 P PKPpre 19 58 05.8
baz=309
WVT Waverly 140.13 40 PKiKP **PKiKP 19 58 15.0 -0.2**
baz=309
WCNY West Carthage 140.15 20 P PKPpre 19 58 05.6
baz=331,SNR=16
M53A WI Miller and 140.25 27 PKiKP **PKiKP 19 58 15.0 -0.3**
baz=323
R49A Shelbyville 140.29 35 P PKPpre 19 58 07.0
baz=314,SNR=12
R49A P PKPpre 19 58 07.0
baz=314,SNR=12
Y45A Yeager Farm, C 140.35 44 P PKPpre 19 58 07.3
baz=305,SNR=6.7
WVNY West Valley, N 140.37 25 P PKPpre 19 58 06.6
baz=326,SNR=13
F63A Nahmakanta, Br 140.42 13 PKPpre 19 58 05.8
F63A Nahmakanta, Br 140.42 13 P PKPpre 19 58 07.1
baz=342
F63A P PKPpre 19 58 07.1
baz=342
F64A Sherman 140.43 12 P PKPpre 19 58 06.6
baz=343,SNR=11
F64A P PKPpre 19 58 06.6
baz=343,SNR=11
J57A Williamstown 140.52 21 P PKPpre 19 58 07.0
baz=330
J57A P PKPpre 19 58 07.0
baz=330
VBMS Vicksburg 140.56 47 P PKPpre 19 58 09.7
baz=302,SNR=11
VBMS Vicksburg 140.56 47 PKiKP **PKiKP 19 58 16.1 0.0**
baz=302
P51A Williamsport 140.59 32 P PKPpre 19 58 07.0
baz=318,SNR=7.7
P51A P PKPpre 19 58 07.0
baz=318,SNR=7.7
NCB Newcomb 140.63 19 PKPpre 19 58 06.9
NCB Newcomb 140.63 19 P PKPpre 19 58 07.9
baz=333,SNR=19
N53A Lisbon 140.68 28 P PKPpre 19 58 07.3
baz=322,SNR=26
N53A P PKPpre 19 58 07.3
baz=322,SNR=26
O52A Adamsville 140.73 30 PKPpre 19 58 05.8
baz=320,SNR=11
O52A P PKPpre 19 58 07.3
baz=320,SNR=11
VT1 Waterbury 140.76 17 P PKPpre 19 58 08.0
baz=336,SNR=6.5
R50A Paris 140.77 34 P PKPpre 19 58 07.8
baz=315,SNR=6.3
R50A P PKPpre 19 58 07.8
baz=315,SNR=6.3
PKME Peaks-Kenny Pk 140.79 13 PKPpre 19 58 06.3
PKME Peaks-Kenny Pk 140.79 13 P PKPpre 19 58 08.1
baz=342,SNR=7.4
PKME Peaks-Kenny Pk 140.79 13 PKiKP **PKiKP 19 58 16.3 +0.1**
baz=342
344A Westbrook Farm 140.81 48 P PKPpre 19 58 10.2
baz=301,SNR=9.2
J58A Remsen 140.82 21 P PKPpre 19 58 08.7
baz=332,SNR=18
J58A P PKPpre 19 58 08.7
baz=332,SNR=18
K57A Scipio Center 140.92 22 P PKPpre 19 58 09.6
baz=329,SNR=29
O53A New Philadelph 140.93 29 PKiKP **PKiKP 19 58 16.7 0.0**
baz=321
P52A Corning 140.95 31 PKiKP **PKiKP 19 58 16.5 -0.2**
baz=319
H62A Milan 140.99 15 P PKPpre 19 58 07.4
baz=338,SNR=12
H62A P PKPpre 19 58 07.4
baz=338,SNR=12
J59A Piesco 140.99 20 PKPpre 19 58 06.2
J59A Piesco 140.99 20 P PKPpre 19 58 08.4
baz=333,SNR=31
J59A P PKPpre 19 58 08.4
baz=333,SNR=31
V48A Smith Brothers 141.01 39 P PKPpre 19 58 08.4
baz=310
PLTB Pedras Altas 141.01 185 *eP* PKPpre 19 58 11.2
L56A Greenwood 141.02 24 P PKPpre 19 58 08.8
baz=328,SNR=55
L56A P PKPpre 19 58 08.8
baz=328,SNR=55
MCVT Middlebury Col 141.04 18 P PKPpre 19 58 08.7
baz=335
M55A Ridgway 141.07 26 P PKPpre 19 58 08.7
baz=325,SNR=35
M55A P PKPpre 19 58 08.7
baz=325,SNR=35
LBNH Lisbon 141.09 16 PKPpre 19 58 08.6
LBNH Lisbon 141.09 16 PKHKP PKPpre 19 58 08.6
LBNH Lisbon 141.09 16 P PKPpre 19 58 09.1
baz=337,SNR=9.4
LBNH Lisbon 141.09 16 PKiKP PKPpre 19 58 17.1
baz=337
U49A Red Boiling Sp 141.14 37 P PKPpre 19 58 09.1
baz=312
G65A Princeton 141.22 11 P PKPpre 19 58 09.7
baz=344,SNR=12
G65A P PKPpre 19 58 09.7
baz=344,SNR=12
UPAO U. Pittsburgh 141.31 28 P PKPpre 19 58 09.7
baz=323
ACCN Adirondack Com 141.34 19 P PKPpre 19 58 09.8
baz=334
PSDB Penn State Uni 141.36 26 P PKPpre 19 58 09.8
baz=325
T50A Nancy 141.36 36 P PKPpre 19 58 09.5
baz=313
T50A P PKPpre 19 58 09.5
baz=313
WVL Waterville 141.37 14 P PKPpre 19 58 11.2
baz=341,SNR=12
146A Union 141.37 45 P PKPpre 19 58 13.1
baz=304,SNR=6.4
O54A Avella 141.38 28 P PKPpre 19 58 10.0
baz=322,SNR=41
O54A P PKPpre 19 58 10.0
baz=322,SNR=41
Q52A Bidwell 141.38 31 P PKPpre 19 58 09.5
baz=318,SNR=14
Q52A P PKPpre 19 58 09.5
baz=318,SNR=14
P53A Whipple 141.43 30 PKPpre 19 58 08.5
P53A Whipple 141.43 30 P PKPpre 19 58 10.0
baz=320,SNR=31
P53A P PKPpre 19 58 10.0
baz=320,SNR=31
HNH Hanover 141.47 17 P PKPpre 19 58 10.4
baz=336,SNR=16
BINY Binghamton 141.58 22 P PKPpre 19 58 11.0
baz=330,SNR=36
BINY Binghamton 141.58 22 PKiKP **PKiKP 19 58 18.0 0.0**
baz=330
I62A Tamworth 141.59 16 P PKPpre 19 58 10.5
baz=338,SNR=7.7
I62A P PKPpre 19 58 10.5
baz=338,SNR=7.7
I63A Otisfield 141.62 15 P PKPpre 19 58 11.8
baz=339,SNR=8.8
I63A P PKPpre 19 58 11.8
baz=339,SNR=8.8
X48A Hartselle 141.67 41 PKPpre 19 58 09.8
X48A Hartselle 141.67 41 P PKPpre 19 58 10.4
baz=308,SNR=69
HCNY Howe Caverns 141.71 20 P PKPpre 19 58 11.2
baz=332,SNR=15
J61A Chester 141.72 18 P PKPpre 19 58 11.3
baz=336,SNR=9.2
J61A P PKPpre 19 58 11.3
baz=336,SNR=9.2
Z47A Carrollton 141.74 43 P **PKPdf 19 58 12.9 -2.6**
baz=306,SNR=8.4
346A Big Creek Wild 141.76 47 P **PKPdf 19 58 13.0 -2.6**
baz=302
LCO Las Campanas 141.79 161 PKPpre 19 58 11.0
LCO Las Campanas 141.79 161 PKHKP PKPpre 19 58 11.0
M57A Sunshine Farm, 141.87 24 P PKPpre 19 58 11.8
baz=328,SNR=75
M57A P PKPpre 19 58 11.8
baz=328,SNR=75
FFD Franklin Falls 141.87 17 P PKPpre 19 58 12.7
baz=337,SNR=7.4
TRY Troy 141.93 19 PKPpre 19 58 11.7
L59A Walton 141.93 21 P PKPpre 19 58 12.0
baz=331,SNR=26
L59A P PKPpre 19 58 12.0
baz=331,SNR=26
R53A Hurricane 142.02 32 P PKPpre 19 58 12.5
baz=318,SNR=6.1
R53A P PKPpre 19 58 12.5
baz=318,SNR=6.1
MCWV Mont Chateau 142.05 28 P PKPpre 19 58 12.7
baz=322,SNR=68
MCWV Mont Chateau 142.05 28 PKiKP **PKiKP 19 58 18.8 -0.2**
baz=322
Q54A Coxs Mills 142.09 30 P **PKPdf 19 58 12.9 -3.1**
baz=320,SNR=109
Q54A P **PKPdf 19 58 12.9 -3.1**
baz=320,SNR=109
SSPA Standing Stone 142.14 25 **PKPdf 19 58 12.3 -3.7**
SSPA Standing Stone 142.14 25 P **PKPdf 19 58 12.8 -3.1**
baz=326,SNR=122
SSPA Standing Stone 142.14 25 PKiKP **PKiKP 19 58 19.3 +0.1**
baz=326
KSPA Keystone Colle 142.21 22 P **PKPdf 19 58 12.5 -3.6**
baz=330,SNR=33
W50A Signal Mountai 142.29 39 P **PKPdf 19 58 12.9 -3.5**
baz=311,SNR=91
CPSB Cacapava Do Su 142.34 186 *eP* **PKPdf 19 58 16.2 -0.5**
TZTN Tazewell 142.44 35 P **PKPdf 19 58 13.9 -2.8**
baz=315
TZTN Tazewell 142.44 35 PKiKP **PKiKP 19 58 20.0 +0.1**
baz=315
UNH University of 142.44 16 P **PKPdf 19 58 13.8 -2.6**
baz=338,SNR=20
Y49A Blount Mountai 142.45 41 P **PKPdf 19 58 13.4 -3.3**
baz=308,SNR=147
N58A Sunbury 142.45 24 P **PKPdf 19 58 13.8 -2.7**
baz=328,SNR=35
N58A P **PKPdf 19 58 13.8 -2.7**
baz=328,SNR=35
V51A Loudon 142.48 37 P **PKPdf 19 58 13.9 -2.8**
baz=313,SNR=49
RODS Rosario do Sul 142.54 183 *eP* **PKPdf 19 58 15.7 -1.3**
LRAL Lakeview Retre 142.56 43 **PKPdf 19 58 13.3 -3.6**
LRAL Lakeview Retre 142.56 43 P **PKPdf 19 58 14.4 -2.5**
baz=307,SNR=119
LRAL Lakeview Retre 142.56 43 PKiKP **PKiKP 19 58 19.8 -0.4**
baz=307
NPNY Mohonk Preserv 142.63 21 P **PKPdf 19 58 14.8 -1.9**
baz=332,SNR=47
S54A Dingess, Beckl 142.75 32 P **PKPdf 19 58 14.8 -2.4**
baz=319,SNR=22
S54A P **PKPdf 19 58 14.8 -2.4**
baz=319,SNR=22
HRV Adam Dziewonsk 142.78 17 **PKPdf 19 58 14.6 -2.4**
HRV Adam Dziewonsk 142.78 17 PKiKP **PKPdf 19 58 14.6 -2.4**
HRV Adam Dziewonsk 142.78 17 P **PKPdf 19 58 15.0 -2.0**
baz=337,SNR=46
HRV Adam Dziewonsk 142.78 17 PKiKP **PKiKP 19 58 20.6 +0.2**
baz=337
Q56A Snyder Ridge, 142.85 28 P **PKPdf 19 58 15.6 -1.7**
baz=323
Q56A P **PKPdf 19 58 15.6 -1.7**
baz=323
V52A Sevierville 142.90 36 P **PKPdf 19 58 15.8 -1.6**
baz=314
TKL Tuckaleechee C 142.92 37 PKP **PKPdf 19 58 15.4 -2.1**
comp=Z,139nm,0.6s,baz=165,slow=4.6,SNR=84
TKL SKP 20 01 02.1
comp=Z,57nm,0.8s,baz=269,slow=11,SNR=4.1
TKL Tuckaleechee C 142.92 37 P **PKPdf 19 58 15.4 -2.1**
baz=314,SNR=22
WES Weston 142.97 17 P **PKPdf 19 58 15.6 -1.7**
baz=337,SNR=48
BRNY Black Rk. Fore 142.98 21 P **PKPdf 19 58 15.4 -2.0**
baz=332,SNR=35
R55A Marlinton 142.99 30 P **PKPdf 19 58 15.6 -2.0**
baz=321,SNR=236
R55A Marlinton 142.99 30 P **PKPdf 19 58 15.6 -2.0**
baz=321,SNR=236
X51A Calhoun 142.99 39 P **PKPdf 19 58 15.2 -2.5**
baz=311,SNR=71
X51A Calhoun 142.99 39 P **PKPdf 19 58 15.2 -2.5**
baz=311,SNR=71
P57A Homestead Farm 143.03 27 P PKPbc 19 58 15.7 +0.1
baz=325,SNR=261
P57A P PKPbc 19 58 15.7 +0.1
baz=325,SNR=261
ODNJ Ogdensburg 143.06 22 P PKPbc 19 58 15.7 +0.1
baz=331,SNR=64
CNLB Canela 143.07 190 *eP* **PKPdf 19 58 17.5 -0.6**
LUPA Lehigh Univers 143.19 23 PKPab 19 58 15.4 -0.2
W52A Murphy 143.21 37 P PKPbc 19 58 16.2 -0.1
baz=313,SNR=42
ITQB Itaqui 143.27 181 PKPbc 19 58 16.4 -0.1
ITQB Itaqui 143.27 181 *eP* PKPab 19 58 15.8 -0.4
PAL Palisades 143.38 21 P PKPbc 19 58 16.9 +0.4
baz=332,SNR=111
PAL Palisades 143.38 21 PKiKP **PKiKP 19 58 20.7 -0.9**
baz=332
BRNJ Basking Ridge 143.42 22 P PKPbc 19 58 17.1 +0.4
baz=331,SNR=148
U54A Nelsons Funny 143.42 34 P PKPbc 19 58 17.0 0.0
baz=317,SNR=24
U54A P PKPbc 19 58 17.0 0.0
baz=317,SNR=24
V53A Saluda 143.47 36 P PKPbc 19 58 17.7 +0.6
baz=315,SNR=123
V53A P PKPbc 19 58 17.7 +0.6
baz=315,SNR=123
TER01 Tubaro-SC 143.50 193 *eP* PKPab 19 58 15.5 -1.6
FOR Fordham 143.51 21 P PKPbc 19 58 17.4 +0.4
baz=332,SNR=48
L64A Middleborough 143.52 17 PKPbc 19 58 17.0 0.0
L64A Middleborough 143.52 17 P PKPbc 19 58 17.4 +0.5
baz=338,SNR=120
L64A P PKPbc 19 58 17.4 +0.5
baz=338,SNR=120
CPNY Central Park 143.55 21 PKPbc 19 58 17.1 0.0
Z51A Franklin 143.59 41 P PKPbc 19 58 17.5 0.0
baz=309,SNR=112
N62A Caumsett State 143.60 20 P PKPbc 19 58 17.7 +0.4
baz=333,SNR=21
N62A P PKPbc 19 58 17.7 +0.4
baz=333,SNR=21
SDMD Soldier's Deli 143.60 26 P PKPbc 19 58 17.4 +0.1
baz=327,SNR=195
BRAL Brewton 143.61 45 P **PKPdf 19 58 19.0 +0.2**
baz=305
BRAL Brewton 143.61 45 PKiKP **PKiKP 19 58 21.6 -0.8**
baz=305
TUPA Temple Univers 143.63 23 P PKPbc 19 58 17.7 +0.3
baz=330,SNR=206
PANJ Princeton 143.64 22 P PKPbc 19 58 17.7 +0.3
baz=331,SNR=298
M63A Gales Ferry 143.64 18 P PKPbc 19 58 17.4 +0.1
baz=335,SNR=42
M63A P PKPbc 19 58 17.4 +0.1
baz=335,SNR=42
BLA Blacksburg 143.66 32 P PKPbc 19 58 17.8 +0.1
baz=320,SNR=123
BLA Blacksburg 143.66 32 PKiKP **PKiKP 19 58 21.8 -0.6**
baz=320
WUPA West Chester U 143.67 24 PKPab 19 58 17.1 -0.3
250A Grady 143.68 44 P **PKPdf 19 58 18.6 -0.4**
baz=307,SNR=84
GEDE Greenville 143.76 24 P PKPbc 19 58 17.9 +0.1
baz=329,SNR=265
UNIS Unistalda (Bra 143.81 184 *eP* PKPab 19 58 16.4 -1.9
CASEE Lake Jocassee 143.87 37 P **PKPdf 19 58 19.3 +0.1**
baz=314,SNR=524
ALGR Alto Alegre (B 143.89 187 *eP* PKPbc 19 58 18.0 -0.7
Y52A Lilburn 143.95 39 P PKPab 19 58 18.9 +0.2
baz=311,SNR=152
Y52A P PKPab 19 58 18.9 +0.2
baz=311,SNR=152
S57A Dark Hollow, R 143.97 29 P PKPab 19 58 18.8 +0.1
baz=322,SNR=160
S57A P PKPab 19 58 18.8 +0.1
baz=322,SNR=160
P61A Hammonton 144.21 23 P **PKPdf 19 58 19.5 -0.1**
baz=330,SNR=22
P61A P **PKPdf 19 58 19.5 -0.1**
baz=330,SNR=22
V55A Taylorsville 144.25 34 P **PKPdf 19 58 19.9 0.0**
baz=317,SNR=174
V55A P **PKPdf 19 58 19.9 0.0**
baz=317,SNR=174
152A Waverly Hall 144.30 41 PKPbc 19 58 19.5 -0.2
152A Waverly Hall 144.30 41 P PKPbc 19 58 19.7 0.0
baz=309,SNR=559
R58B Mineral 144.32 28 P PKPbc 19 58 19.7 +0.1
baz=324
R58B P PKPbc 19 58 19.7 +0.1
baz=324
U56A King 144.33 32 P **PKPdf 19 58 19.9 -0.1**
baz=319,SNR=41
U56A P **PKPdf 19 58 19.9 -0.1**
baz=319,SNR=41
CBN Corbin Frederi 144.36 27 P **PKPab 19 58 20.2 +0.1**
baz=325,SNR=36
CBN Corbin Frederi 144.36 27 PKiKP **PKiKP 19 58 23.3 -0.5**
baz=325
T57A Hurt 144.42 31 P PKPbc 19 58 19.9 0.0
baz=321,SNR=236
T57A P PKPbc 19 58 19.9 0.0
baz=321,SNR=236
GOGA Godfrey 144.62 39 P **PKPab 19 58 21.3 0.0**
baz=312,SNR=635
GOGA Godfrey 144.62 39 PKiKP **PKiKP 19 58 24.3 -0.1**
baz=312
PAULI Pauline 144.65 36 P **PKPab 19 58 21.7 +0.4**
baz=315
MIDE Milford 144.68 24 P **PKPab 19 58 21.3 +0.1**
baz=328,SNR=12
KMSC Kings Mountain 144.69 35 **PKPdf 19 58 20.4 -0.2**
KMSC Kings Mountain 144.69 35 P **PKPab 19 58 21.3 -0.2**
baz=316,SNR=276
KMSC Kings Mountain 144.69 35 PKiKP **PKiKP 19 58 24.6 0.0**
baz=316
HODGE Hodges 144.80 37 P **PKPab 19 58 21.7 -0.2**
baz=314,SNR=173
451A Vernon 144.84 45 P **PKPab 19 58 22.8 +0.6**
baz=306
352A Blakely 144.90 43 P **PKPab 19 58 22.3 0.0**
baz=308
R61A Willards 145.14 25 P **PKPbc 19 58 22.5 +0.4**
baz=328
R61A P **PKPbc 19 58 22.5 +0.4**
baz=328
T59A Double "B" Far 145.27 29 P **PKPbc 19 58 22.3 -0.2**
baz=324,SNR=298
T59A P **PKPbc 19 58 22.3 -0.2**
baz=324,SNR=298

CRSM	Crissiumal (Br	145.28	186	*e*P		PKPbc	19 58 22.8	-0.1
ITAB	Concordia	145.31	189	*e*P		PKPdf	19 58 21.6	-0.3
JSC	Jenkinsville	145.35	36	P		PKPbc	19 58 23.1	+0.2
	baz=316							
154A	Montrose	145.37	40	P		PKPbc	19 58 23.0	0.0
	baz=311,SNR=66							
V58A	Windy Hill, Pi	145.42	32	P		PKPbc	19 58 22.5	-0.5
	baz=320,SNR=241							
V58A				P		PKPbc	19 58 22.5	-0.5
	baz=320,SNR=241							
W57A	Gilead	145.43	33	P		PKPbc	19 58 22.8	-0.3
	baz=318,SNR=219							
W57A				P		PKPbc	19 58 22.8	-0.3
	baz=318,SNR=219							
T60A	Surry	145.52	28	P		PKPdf	19 58 22.5	+0.6
	baz=325,SNR=97							
T60A				P		PKPdf	19 58 22.5	+0.6
	baz=325,SNR=97							
BIRD	Birdtown, Kers	145.55	35	P		PKPbc	19 58 23.0	-0.4
	baz=317,SNR=99							
S61A	Accomac	145.55	26	P		PKPbc	19 58 23.5	+0.2
	baz=327,SNR=12							
S61A				P		PKPbc	19 58 23.5	+0.2
	baz=327,SNR=12							
U59A	Littleton	145.65	30			PKPdf	19 58 22.3	+0.1
U59A	Littleton	145.65	30	P		PKPdf	19 58 22.8	+0.6
	baz=323,SNR=107							
U59A				P		PKPdf	19 58 22.8	+0.6
	baz=323,SNR=107							
HAW	Hawthorne Fire	145.79	37	P		PKPbc	19 58 23.7	-0.5
	baz=314,SNR=216							
TIGA	Tifton	145.81	42	P		PKPab	19 58 25.3	-0.7
	baz=309							
TIGA	Tifton	145.81	42	PKiKP		PKiKP	19 58 26.7	-0.2
	baz=309							
Y57A	Sumter	146.04	35	P		PKPbc	19 58 25.0	+0.2
	baz=317							
Y57A				P		PKPbc	19 58 25.0	+0.2
	baz=317							
255A	Hazlehurst	146.23	40	P		PKPdf	19 58 23.9	+0.7
	baz=311							
X58A	Rowland	146.24	33	P		PKPbc	19 58 25.6	+0.3
	baz=319,SNR=10							
X58A				P		PKPbc	19 58 25.6	+0.3
	baz=319,SNR=10							
PAYG	Puerto Ayora	146.44	102	PKPdf		PKPdf	19 58 21.9	-2.3
PAYG						PKPbc	19 58 26.4	-0.2
CNNC	Cliffs of the	146.48	31	P		PKPbc	19 58 26.5	+0.5
	baz=322,SNR=20							
CNNC	Cliffs of the	146.48	31	PKiKP		PKiKP	19 58 28.1	-0.1
	baz=322							
Y58A	Scranton	146.54	35	P		PKPbc	19 58 25.0	-1.2
	baz=318,SNR=18							
Y58A				P		PKPbc	19 58 25.0	-1.2
	baz=318,SNR=18							
CPUP	Villa Florida	146.61	180	PKPbc		PKPdf	19 58 25.3	+1.2
	comp=Z,189nm,0.7s,baz=175,slow=1.4,SNR=165							
CPUP	Villa Florida	146.61	180	*e*P		PKPdf	19 58 22.7	-1.4
FRBT	Francisco Belt	146.68	187	*e*P		PKPdf	19 58 24.6	+0.3
V61A	Roper	146.69	29	P		PKPdf	19 58 25.2	+1.3
	baz=324,SNR=16							
V61A				P		PKPdf	19 58 25.2	+1.3
	baz=324,SNR=16							
NHSC	New Hope	146.82	36	P		PKPbc	19 58 26.3	-0.7
	baz=316,SNR=18							
NHSC	New Hope	146.82	36	PKiKP		PKiKP	19 58 29.3	+0.3
	baz=316							
PB10	IPOC Station P	146.89	158	PKPdf		PKPdf	19 58 21.6	-3.0
PB10						PKPbc	19 58 25.7	-1.8
Y59A	Loris	146.91	34	P		PKPbc	19 58 27.6	+0.4
	baz=319,SNR=13							
Y59A				P		PKPbc	19 58 27.6	+0.4
	baz=319,SNR=13							
257A	Skidaway Islan	147.10	39	P		PKiKP	19 58 29.0	-0.6
	baz=314,SNR=5.8							
CAM01	Campos-RJ	147.15	208	*e*P		PKPdf	19 58 24.6	-0.5
MAN01	Angra dos Reis	147.23	204	*e*P		PKPdf	19 58 26.3	+1.0
DUB01	Friburgo-RJ	147.25	207	*e*P		PKPbc	19 58 27.1	-1.4
Y60A	Bolivia	147.26	33	P		PKPdf	19 58 24.7	-0.2
	baz=320,SNR=46							
Y60A				P		PKPdf	19 58 24.7	-0.2
	baz=320,SNR=46							
456A	Hilliard	147.30	41	P		PKPbc	19 58 26.8	-1.5
	baz=311,SNR=21							
ALF01	Guarapari-ES	147.72	211	*e*P		PKPdf	19 58 26.0	-0.1
656A	Willston	147.82	44			PKPdf	19 58 24.1	-1.9
656A					PKPbc	PKPbc	19 58 26.8	-2.9
656A	Willston	147.82	44	P		PKPdf	19 58 27.3	+1.3
	baz=308							
VAO	Valinhos	148.18	199	*e*P		PKPdf	19 58 25.7	-1.2
LVC	Limon Verde	148.31	160	PKPbc		PKPbc	19 58 29.7	-1.9
	comp=Z,121nm,0.8s,baz=245,slow=1.8,SNR=41							
LVC	Limon Verde	148.31	160			PKPdf	19 58 25.0	-2.4
LVC						PKPbc	19 58 29.2	-2.4
LVC				PKPab		PKiKP	19 58 32.9	0.0
LVC	Limon Verde	148.31	160	PKHKP		PKPpre	19 58 29.2	
LVC							19 58 32.9	
LVC	Limon Verde	148.31	160	*e*P		PKPdf	19 58 26.8	-0.7
RIB01	Linhares ES	148.63	212	*e*P		PKPdf	19 58 27.1	-0.5
RCLB	Rio Claro- Sao	148.91	198	*e*P		PKPdf	19 58 27.1	-1.0
DWPF	Disney Wildern	149.35	44	P		PKPdf	19 58 29.6	+1.1
	baz=308							
DWPF	Disney Wildern	149.35	44	PKiKP		PKiKP	19 58 34.3	-0.1
	baz=308							
SJMB	Sao Joao De Ma	149.56	212	*e*P		PKPdf	19 58 28.7	-0.4
NAN01	Guarapari, ES	149.68	214	*e*P		PKPdf	19 58 28.1	-1.2
TRCB	Terra Rica	149.74	189	*e*P		PKPdf	19 58 28.7	-0.7
TGUH	Tegucigalpa,Un	150.07	74	*i* P		PKiKP	19 58 36.8	+0.5
CRIN	San Cristobal	150.49	77	*e*P		PKiKP	19 58 37.6	+0.4
GUA01	Guaratinga, BA	150.50	216	*e*P		PKPdf	19 58 29.2	-1.4
PCMB	Pacaembu	150.65	192	*e*P		PKPdf	19 58 29.2	-1.5
ANTJ	Antonio Joao (	150.88	183	*e*P		PKPdf	19 58 30.5	-0.6
DIAM	Diamantina, MG	151.14	208	*e*P		PKPdf	19 58 30.8	-0.9
CMC01	Camacan, BA	151.27	218	*e*P		PKPdf	19 58 31.1	-0.7
PMNB	Patos De Minas	152.11	203	*e*P		PKPdf	19 58 32.1	-0.9
ITRB	Iturama	152.28	195	*e*P		PKPdf	19 58 31.9	-1.4
AQDB	Aquidauana	152.38	188	*e*P		PKPdf	19 58 32.9	-0.4
GDU01	Guandu, BA	152.54	221	*e*P		PKPdf	19 58 32.9	-0.7
MC01	Montes Claros	152.63	209	*e*P		PKPdf	19 58 32.7	-1.2
JTS	Las Juntas de	152.78	82	*e*P		PKiKP	19 58 42.3	+0.4
NBAN	Anadia - AL	152.92	232	*e*P		PKPdf	19 58 33.5	-0.8
NNA	Nana	152.94	135	PKP		PKPdf	19 58 35.7	+1.4
	comp=Z,59nm,1.0s,baz=269,slow=3.4,SNR=15							
NNA				PKPbc		PKiKP	19 58 42.5	+0.4
	comp=Z,246nm,1.0s,baz=260,slow=5.6,SNR=36							
IPMB	Ipameri, GO	153.27	200	*e*P		PKPdf	19 58 34.5	-0.2
FSCY	Frank Sound, G	154.13	60			PKPdf	19 58 31.5	-4.3
JANB	Januaria	154.22	211	*e*P		PKPdf	19 58 35.3	-0.8
LPAZ	La Paz	154.38	156	PKP		PKPdf	19 58 38.0	+1.0
	comp=Z,26nm,1.1s,baz=79,slow=0.3,SNR=53							
LPAZ				PKPab		PKPab	19 59 03.7	+1.1
	comp=Z,103nm,0.8s,baz=191,slow=5.1,SNR=30							
LPAZ	La Paz	154.38	156	*e*P		PKPdf	19 58 35.3	-1.7
RCBR	Riachuelo	154.77	240	PKP		PKPdf	19 58 37.3	+0.4
	comp=Z,14nm,0.8s,baz=284,slow=3.1,SNR=4.7							
RCBR				PKPbc		PKPbc	19 58 46.9	+0.8
	comp=Z,19nm,0.7s,baz=352,slow=1.9,SNR=8.3							
RCBR				PKPab		PKPab	19 59 05.5	+1.6
	comp=Z,177nm,0.7s,baz=265,slow=5.6,SNR=45							
RCBR	Riachuelo	154.77	240	*e*P		PKPdf	19 58 36.1	-0.8
ATAH	Atahualpa	154.79	124	PKP		PKPdf	19 58 38.9	+1.4
	comp=Z,86nm,1.1s,baz=121,slow=1.0,SNR=50							
ATAH				PKPbc		PKPbc	19 58 47.6	+1.1
	comp=Z,53nm,0.9s,baz=307,slow=6.9,SNR=11							
ATAH				PKPab		PKPab	19 59 06.0	+1.6
	comp=Z,94nm,0.8s,baz=312,slow=4.0,SNR=12							
BRU2	Volcan	155.09	85	*e*P		PKPab	19 59 20.1	+15
BDFB	Brasilia	155.35	203	PKP		PKPdf	19 58 38.3	+0.6
	comp=Z,20nm,1.0s,baz=114,slow=1.8,SNR=12							
BDFB				PKPab		PKPab	19 59 06.9	+0.7
	comp=Z,17nm,0.6s,baz=67,slow=3.2,SNR=6.6							
BDFB	Brasilia	155.35	203	*e*P		PKPdf	19 58 37.0	-0.8
SIV	San Ignacio	156.64	171	PKP		PKPdf	19 58 40.4	+1.1
	comp=Z,20nm,1.0s,baz=185,slow=1.5,SNR=44							
SIV				PKPab		PKPab	19 59 12.5	+0.9
	comp=Z,45nm,0.6s,baz=194,slow=4.4,SNR=23							
SDBA	SAO DESIDERIO	156.75	213	*e*P		PKPdf	19 58 38.8	-0.7
SALV	Santo Antonio	156.91	185	*e*P		PKPdf	19 58 39.6	+0.1
PTLB	Pontes e Lacer	157.39	176	*e*P		PKPdf	19 58 39.6	-0.5
AZU	Azuero	157.49	87	*e*P		PKPab	19 59 18.0	+2.3
BCIP	Isla Barro Col	157.89	84	*e*P		PKPab	19 59 18.4	+1.0
OTAV	Otavalo	158.05	108	*e*P		PKPab	19 58 42.7	+1.0
OTAV	Otavalo	158.05	108	*e*P		PKPdf	19 58 40.4	-1.2
CZSB	Cruzeiro do Su	158.81	134	*e*P		PKPdf	19 58 41.5	-0.5
VILB	Vilhena	159.75	173	*e*P		PKPdf	19 58 42.6	-0.5
SNDB	Serra Nova Dou	159.90	198	*e*P		PKPdf	19 58 42.8	-0.3
POPC	Popayan, Colom	160.41	103	*e*P		PKPdf	19 58 43.6	-0.4
ETMB	Extrema	160.98	153	*e*P		PKPdf	19 58 44.4	+0.1
YOTC	Yotoco, Valle	161.04	99	*e*P		PKPdf	19 58 45.0	+0.4
FLOC	Florencia	161.12	107	*e*P		PKPdf	19 58 45.7	+1.1
SMTB	Santa Maria do	161.15	212	*e*P		PKPdf	19 58 43.9	-0.6
PDRB	Porto dos Gac	161.24	183	*e*P		PKPdf	19 58 43.6	-1.0
CBOC	Ciudad Bolivar	161.63	93	*e*P		PKPdf	19 58 46.0	+0.8
CLDB	Colider	161.90	186	*e*P		PKPdf	19 58 44.4	-0.9
ANIL	Santa Ana	162.06	98	*e*P		PKPdf	19 58 46.0	+0.2
HELC	Santa Helena	162.14	92	*e*P		PKPdf	19 58 46.2	+0.2
GUY2C	Guyana, Caldas	162.20	95	*e*P		PKPdf	19 58 46.1	-0.1
SJCC	San Jacinto, C	162.40	80	*e*P		PKPdf	19 58 46.6	+0.8
NORC	Norcasia	162.71	95	*e*P		PKPdf	19 58 45.2	-1.0
ZARC	Zaragoza, Cauc	162.86	88	*e*P		PKPdf	19 58 46.3	+0.1
ROSC	El Rosal	163.18	97	PKP		PKPdf	19 58 47.8	+0.8
	comp=Z,46nm,0.9s,baz=121,slow=1.7,SNR=20							
ROSC				PKPab		PKPab	19 59 43.3	+2.2
	comp=Z,112nm,0.8s,baz=148,slow=6.1,SNR=18							
ROSB	Rosrio	163.21	234	*e*P		PKPdf	19 58 45.5	-1.1
PTBC	PUERTO BERRIO	163.23	91	*e*P		PKPdf	19 58 46.8	+0.1
SPBC	San Pablo de B	163.53	95	*e*P		PKPdf	19 58 46.8	-0.2
CHIC	Chingaza	163.72	98	*e*P		PKPdf	19 58 46.9	-0.6
DR12	Loma Pena Alta	163.78	44			PKPdf	19 58 45.3	-1.7
DR12						PKPab	19 59 41.3	-1.6
BARC	Barichara	164.50	91	*e*P		PKPdf	19 58 46.8	-1.3
RUSC	La Rusia	164.54	94	*e*P		PKPdf	19 58 48.0	-0.4
PRPB	Parauapebas	164.57	210	*e*P		PKPdf	19 58 47.4	-0.4
PAMC	Pamplona, Colo	165.00	89	*e*P		PKPdf	19 58 48.9	+0.1
URIC	Uribia, Colomb	165.12	72	*e*P		PKPdf	19 58 35.4	-13
PTGC	Puerto Gaitan,	165.20	101	*e*P		PKPdf	19 58 47.8	-0.5
NPGB	Novo Progresso	165.62	189	*e*P		PKPdf	19 58 47.9	-0.8
CELP	Cerrillos	166.12	38			PKPdf	19 58 47.2	-1.7
CELP						PKPab	19 59 50.0	-3.2
GCPR	Guaynabo City	166.24	36			PKPdf	19 58 45.7	-3.3
GCPR						PKPab	19 59 48.7	-5.0
SJG	San Juan	166.36	37	PKP		PKPdf	19 58 48.3	-0.7
	comp=Z,7.5nm,0.2s,baz=355,slow=1.9,SNR=9.1							
SJG	San Juan	166.36	37			PKPdf	19 58 47.1	-1.9
TMAB	Tom-Au,PA,Br	166.55	225	*e*P		PKPdf	19 58 49.0	-0.4
SDV	Santo Domingo	166.97	82	PKPab		PKPab	19 59 58.5	+0.9
	comp=Z,75nm,0.8s,baz=264,slow=2.6,SNR=20							
SDV	Santo Domingo	166.97	82			PKPdf	19 58 48.3	-1.7
SDV						PKPab	19 59 57.9	+0.3
SDV	Santo Domingo	166.97	82	*e*P		PKPdf	19 58 49.2	-0.7
ITTB	Itaituba	168.31	189	*e*P		PKPdf	19 58 50.3	-0.3
MACA	Manacapuru-AM	169.20	163	*e*P		PKPdf	19 58 50.3	-0.9
BAUV	El Baul	169.51	80			PKPdf	19 58 49.2	-2.1
BAUV				PKPab		PKPab	20 00 08.3	-0.3
MALB	Monte Alegre	170.37	200	*e*P		PKPdf	19 58 50.9	-1.0
BIRV	Birongo	170.84	69			PKPdf	19 58 49.7	-2.4
BIRV				PKPab		PKPab	20 00 13.8	-0.6
BIM	Bigot	172.01	25	PKPdf		PKPdf	19 58 48.5	-4.1
BIM						PKPab	20 00 17.8	-1.4
SVB	Belmont	173.01	31	PKPdf		PKPdf	19 58 51.2	-1.9
SVB						PKPab	20 00 21.9	-1.8
BOAV	Boa Vista	174.35	149	*e*P		PKPdf	19 58 53.2	-0.3
MDP	Montagnes des	174.65	247	PKP		PKPdf	19 58 52.6	-1.0
	comp=Z,26nm,1.0s,baz=199,slow=0.7,SNR=8.1							
MDP				PKPab		PKPab	20 00 32.0	+0.7
	comp=Z,33nm,0.7s,baz=135,slow=6.1,SNR=14							
TOSP	Speyside	175.04	36			PKPdf	19 58 51.6	-2.1
TOSP						PKPab	20 00 32.1	-0.7

BJI ***23*** *19:40:46.0±0.0, 7.20S×122.50E, h520km, mb5.9/14, mB5.7/6*
NEIC ***23*** *19:40:46.7±1.8, 7.21S±0.08×122.54E±0.08, h520km±5km, mb5.8/109, Error ellipse: s-maj=11.7km s-min=11.1km az=67.0*
MOS ***23*** *19:40:46.7±0.7, 7.21S×122.51E, h545km, mb5.5/8, Error ellipse: s-maj=10.2km s-min=6.0km az=107.4*
IDC ***23*** *19:40:47.2±0.6, 7.26S×122.50E, h535km±6km, mb5.3/52, mbtmp6.2/59, Error ellipse: s-maj=7.3km s-min=5.4km az=74.0*

ISC 23 19:40:47.0±0.3, 7.26S±0.03×122.51E±0.04, h538km±3km, h541km; pP-P, n565, σ1933/671, mb5.8/125, 5C-4D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	Baumata	3.14	159	S		S	19 43 02.6	-0.5
	17μm,0.4s,baz=126,slow=21,SNR=4.7							
KAPI	Kappang	3.54	309	P		P	19 42 06.1	+1.5
	1μm,0.8s,baz=148,slow=9.5,SNR=3.8							
KAPI	Kappang	3.54	309	P		P	19 42 06.1	+1.5
LUWI	Luwuk	6.18	2	P		P	19 42 27.1	+0.3
JAGI	Jajag, Banyuwa	8.37	261	P		P	19 42 46.5	-1.6
TOLI2	Tolitoli	8.49	348	P		P	19 42 50.6	+1.2
SAUI	Saumlaki	8.74	95	P		P	19 42 51.6	-0.2
MTN	Manton Dam	10.14	124	P		P	19 43 06.3	+0.1
KNRA	Kununurra	10.37	144	P		P	19 43 07.8	-0.8
FAKI	Fak Fak	10.61	67	P		P	19 43 11.2	+0.1
SIJI	Sorong	10.79	54	P		P	19 43 14.0	+1.0
	3μm,0.5s,baz=348,slow=23,SNR=16							
SIJI				S		S	19 45 11.3	-1.8
	330nm,0.6s,baz=305,slow=20,SNR=1.3							
SIJI				ScP		ScP	19 51 03.5	+0.3
	31nm,0.6s,baz=24,slow=5.5,SNR=7.6							
FITZ	Fitzroy Crossi	11.20	165	P		P	19 43 16.9	-0.3
	911nm,0.4s,baz=358,slow=5.5,SNR=20							
FITZ				S		S	19 45 18.1	-2.6
	1μm,0.8s,baz=280,slow=17,SNR=3.0							
FITZ	Fitzroy Crossi	11.20	165	P		P	19 43 16.2	-1.0
UGM	Wanagama	11.90	266	P		P	19 43 24.0	-0.6
SMRI	Semarang	11.98	270	P		P	19 43 24.2	-1.2
MYLDM	Lahad Datu	12.99	342	P		P	19 43 37.3	+1.5
MBWA	Marble Bar	14.08	191	P		P	19 43 46.4	-0.7
SBUM	Sibu	14.09	313	P		P	19 43 49.0	+1.7
PSA00	Pilbara Seismi	14.46	190	P		P	19 43 50.1	-0.9
PSA00	Pilbara Seismi	14.46	190	P		P	19 43 50.1	-0.9
DAV	Davao City (W)	14.56	12	P		P	19 43 51.7	-0.4
	844nm,0.4s,baz=275,slow=6.0,SNR=6.7							
DAV	Davao City (W)	14.56	12	P		P	19 43 51.6	-0.5
KKM	Kota Kinabalu	14.63	334	P		P	19 43 52.5	-0.5
LEM	Lembang	14.79	271	P		P	19 43 54.0	-0.7
	2μm,0.9s,baz=303,slow=18,SNR=7.6							
LEM	Lembang	14.79	271	P		P	19 43 54.0	-0.7
WB0	Warramunga Arr	16.96	138	P		P	19 44 16.5	+0.5
XMIS	Christmas Isla	16.96	258	P		P	19 44 14.4	-1.6
WRA	Warramunga Arr	17.05	139	P		P	19 44 17.3	+0.5
	319nm,0.5s,baz=317,slow=9.5,SNR=9.0							
WRA				S		S	19 47 07.2	-0.7
	251nm,0.7s,baz=317,slow=17,SNR=2.7							
WRA				P3KPbc			20 18 33.6	
	0.3nm,0.3s,baz=359,slow=7.5,SNR=3.6							
WRA	Warramunga Arr	17.05	139	P		P	19 44 16.1	-0.7
WRA	Warramunga Arr	17.05	139	P		P	19 44 17.3	+0.5
WRA				S		S	19 47 07.2	-0.7
WRAB	Tennant Creek	17.05	139	P		P	19 44 17.2	+0.5
WRAB	Tennant Creek	17.05	139	P		P	19 44 17.3	+0.5
WB2	Warramunga Arr	17.05	139	P		P	19 44 16.1	-0.7
GIRL	Giralia	17.25	207	P		P	19 44 19.1	+0.6
PMBI	Palembang	18.18	283	P		P	19 44 28.3	+1.1
AS31	Alice Springs	19.64	147	P		P	19 44 39.9	-0.6
ASAR	Alice Springs	19.64	147	P		P	19 44 40.8	+0.3
	213nm,0.4s,baz=308,slow=7.9,SNR=15							
ASAR				S		S	19 47 48.1	-2.0
	184nm,1.0s,baz=335,slow=23,SNR=1.9							
ASAR				PcP		PcP	19 48 34.1	0.0
	86nm,0.4s,baz=348,slow=1.1,SNR=5.2							
ASAR	Alice Springs	19.64	147	P		P	19 44 40.6	+0.1
ASAR	Alice Springs	19.64	147	P		P	19 44 40.8	+0.3
ASAR				S		S	19 47 48.1	-2.0
MNAI	Manna	19.67	277	P		P	19 44 38.1	-1.6
MYKOM	Kota Tinggi	20.68	295	P		P	19 44 50.9	+1.0
TGY	Tagaytay City	21.28	356	P		P	19 44 55.9	+0.6
	2μm,0.6s,baz=270,slow=13							
	2μm,0.6s							
TGY	Tagaytay City	21.28	356	P		P	19 44 55.9	+0.6
COEN	Coen	21.36	110	P		P	19 44 54.6	-1.5
MORW	Morawa	22.54	195	P		P	19 45 05.7	-0.7
BKNI	Bangkinang	22.70	288	P		P	19 45 09.0	+0.8
FORT	Forrest	23.97	168	P		P	19 45 19.0	-0.1
IPM	Ipoh	24.41	298	P		P	19 45 23.8	+0.4
KULM	Kulim	25.12	299	P		P	19 45 29.9	+0.3
RPSI	Rantau Prapat	25.53	292	P		P	19 45 33.9	+0.7
PSI	Prapat	25.57	292	P		P	19 45 33.5	-0.3
	695nm,1.0s,baz=46,slow=6.6,SNR=23							
PSI				S		S	19 49 21.0	-3.1
	31nm,0.9s,baz=241,slow=22,SNR=1.2							
	695nm,1.0s							
PSI	Prapat	25.57	292	P		P	19 45 33.5	-0.3
PSI				S		S	19 49 21.0	-3.1
NWAO	Narrogin (SRO)	26.01	190	P		P	19 45 36.6	-0.6
NWAO	Narrogin (SRO)	26.01	190	P		P	19 45 36.6	-0.6
GSI	Gunungsitoli	26.29	288	P		P	19 45 38.4	-1.6
SRIT	Nakonsritamara	27.74	304	P		P	19 45 53.7	+1.0
UBPT	Khong Chiam	28.05	323	P		P	19 45 55.1	-0.2
LHMI	Lhok Sumawe	28.37	295	P		P	19 45 57.9	-0.3
BBOO	Buckleboo	28.37	155	P		P	19 45 57.8	-0.2
QIZ	Qiongzhong	28.95	335	P		P	19 46 02.8	-0.3
QIZ	Qiongzhong	28.95	335	P		P	19 46 03.6	+0.5
QIZ				ScP		ScP	19 51 47.4	+1.8
RABL	Rabaul	29.66	86	P		P	19 46 09.2	-0.1
TWG	Pinlang	29.93	357	P		P	19 46 10.5	-1.0
TWG				IAmb		IAmb	19 46 17.1	
	comp=Z,203nm,0.6s							
STKA	Stephens Creek	30.28	147	P		P	19 46 15.1	+0.6
	comp=Z,417nm,0.6s,baz=322,slow=8.7,SNR=16							
STKA				S		S	19 50 36.4	-0.2
	comp=Z,127nm,0.9s,baz=170,slow=14,SNR=3.4							
	comp=Z,417nm,0.6s							
STKA	Stephens Creek	30.28	147	P		P	19 46 14.8	+0.3
STKA				IAmb		IAmb	19 46 43.4	
	comp=Z,655nm,1.8s							
STKA	Stephens Creek	30.28	147	P		P	19 46 15.1	+0.6
STKA				S		S	19 50 36.4	-0.2
GUMO	Guam	30.36	47	P		P	19 46 15.1	-0.2
	comp=Z,570nm,0.4s,baz=178,slow=1.9,SNR=7.6							
	comp=Z,570nm,0.4s							
GUMO	Guam	30.36	47	P		P	19 46 14.9	-0.5
GUMO	Guam	30.36	47	P		P	19 46 15.1	-0.2
GUMO	Guam	30.36	47	P		P	19 46 14.7	-0.7
TPUB	Ta-pu	30.43	357	P		P	19 46 15.5	-0.3
TPUB				IAmb		IAmb	19 46 20.9	
	comp=Z,273nm,0.7s							
YULB	Yu-li	30.48	358	P		P	19 46 14.3	-2.0
YULB				IAmb		IAmb	19 46 19.2	
	comp=Z,203nm,0.7s							
SSLB	Suanglung	30.89	357	P		P	19 46 18.7	-1.1
SSLB				IAmb		IAmb	19 46 23.3	
	comp=Z,242nm,0.5s							
NACB	Ninganchiao	31.25	358	P		P	19 46 21.2	-1.6
NACB				IAmb		IAmb	19 46 24.6	
	comp=Z,155nm,0.6s							
YOJ	Yonaguni jima	31.53	1	P		P	19 46 25.1	-0.1
YOJ	Yonaguni jima	31.53	1	P		P	19 46 25.1	-0.1
YOJ				pmax		pmax		
	comp=Z,695nm,1.2s							
YHNB	Yeheng	31.75	358	P		P	19 46 26.5	-0.8
YHNB				IAmb		IAmb	19 46 32.1	
	comp=Z,182nm,0.9s							
KNMB	Chin-men Tao	31.78	353	P		P	19 46 27.1	-0.3
KNMB				IAmb		IAmb	19 46 29.3	
	comp=Z,183nm,0.6s							
TATO	Taipei	32.05	358	P		P	19 46 28.4	-1.3
TATO				IAmb		IAmb	19 46 29.7	
	comp=Z,259nm,0.6s							
TATO	Taipei	32.05	358	P		P	19 46 28.1	-1.6
TATO				pP		pP	19 47 58.6	-1.5
TATO				ScP		ScP	19 51 56.6	+0.8
QZH	Quanzhou	32.23	353	*i*P		P	19 46 31.3	+0.1
QZH				S		S	19 51 06.0	-0.6
QZH				pmax		pmax		
	comp=Z,280nm,0.6s

ENH	**Enshi**	**39.35**	**342**	P	**P**	**19 47 30.0**	**-0.2**
TAU	**Tasmania Unive**	**41.69**	**152**	P	**P**	**19 47 49.7**	**+1.1**
TAU				IAmb	IAmb	19 48 40.2	
	comp=Z,251nm,1.3s						
TAU	**Tasmania Unive**	**41.69**	**152**	P	**P**	**19 47 49.7**	**+1.1**
TAU				pmax	pmax		
	comp=Z,251nm,1.3s						
TAU	**Tasmania Unive**	**41.69**	**152**	P	**P**	**19 47 49.6**	**+1.1**
TAU				pP	**pP**	**19 49 25.8**	**+1.1**
TAU				ScP	**ScP**	**19 52 32.2**	**+0.5**
JTU	**Tsushima**	**42.06**	**8**	P	**P**	**19 47 52.2**	**+0.6**
JTU				PcP	**PcP**	**19 49 34.8**	**+0.8**
JMN	**Monobe**	**42.16**	**14**	P	**P**	**19 47 53.5**	**+1.0**
JMN				IAmb	IAmb	19 47 55.4	
	comp=Z,279nm,0.8s						
BRDH	**Bariadhala**	**42.41**	**315**	P	**P**	**19 47 55.7**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=282,slow=24,SNR=1.3						
KOUNC	**Koumac, New Ca**	**42.51**	**112**	P	**P**	**19 47 57.5**	**+2.1**
KOUNC				IAmb	IAmb	19 48 36.5	
	comp=Z,141nm,0.9s						
NAWB	**Namwon**	**42.70**	**6**	P	**P**	**19 47 55.8**	**-0.8**
NAWB				IAmb	IAmb	19 47 60.0	
	comp=Z,111nm,0.8s						
NAWB				PcP	**pwP**	**19 49 35.5**	**+0.1**
KSBUS	**Busan**	**42.73**	**8**	P	**P**	**19 47 56.9**	**0.0**
KSBUS				IAmb	IAmb	19 47 58.8	
	comp=Z,157nm,0.6s						
XAN	**Xi'an**	**43.04**	**343**	⇑P	**P**	**19 47 59.6**	**+0.2**
XAN				pP	PcP	19 49 38.6	+1.2
XAN				pmax	pmax		
	comp=Z,510nm,0.7s						
XAN	**Xi'an**	**43.04**	**343**	P	**P**	**19 47 59.3**	**-0.1**
XAN				pP	**PcP**	**19 49 38.2**	**+0.9**
XAN				ScP	**ScP**	**19 52 42.5**	**+5.1**
XAN	**Xi'an**	**43.04**	**343**	sP	pP	19 49 38.3	+1.7
JHS	**Saijyo**	**43.20**	**13**	P	**P**	**19 48 01.1**	**+0.5**
JHS				IAmb	IAmb	19 48 03.6	
	comp=Z,381nm,0.7s						
JHJ	**Hachijo jima 2**	**43.38**	**21**	P	**P**	**19 48 00.8**	**-1.1**
	comp=Z,230nm,0.5s,baz=207,slow=5.6,SNR=13						
	comp=Z,230nm,0.5s						
JHJ2	**Mitsune**	**43.39**	**21**	P	**P**	**19 48 01.4**	**-0.6**
JHJ2				IAmb	IAmb	19 48 03.4	
	comp=Z,382nm,0.9s						
TJN	**Taejon**	**43.64**	**6**	P	**P**	**19 48 04.2**	**+0.3**
TJN					**pP**	**19 49 40.7**	**0.0**
TJN	**Taejon**	**43.64**	**6**	P	**P**	**19 48 04.2**	**+0.3**
TJN						19 49 40.7	
TJN				pmax	pmax		
	comp=Z,591nm,0.6s						
PALK	**Pallekele**	**44.13**	**288**	P	**P**	**19 48 07.1**	**-1.1**
	comp=Z,251nm,0.9s,baz=202,slow=8.6,SNR=8.3						
	comp=Z,251nm,0.9s						
PALK	**Pallekele**	**44.13**	**288**	P	**P**	**19 48 07.8**	**-0.4**
PALK				IAmb	IAmb	19 48 08.9	
	comp=Z,409nm,1.1s						
PALK	**Pallekele**	**44.13**	**288**	P	**P**	**19 48 07.8**	**-0.4**
PALK				pmax	pmax		
	comp=Z,409nm,1.1s						
PALK	**Pallekele**	**44.13**	**288**	P	**P**	**19 48 07.5**	**-0.7**
PALK				pP	**PcP**	**19 49 42.9**	**+1.3**
SHL	**Shillong**	**44.18**	**319**	P	**P**	**19 48 08.3**	**-0.2**
SHL	**Shillong**	**44.18**	**319**	P	**P**	**19 48 08.3**	**-0.2**
SHL				pmax	pmax		
	comp=Z,439nm,0.5s						
KSCHJ	**Chungju**	**44.19**	**6**	P	**P**	**19 48 08.2**	**0.0**
INU	**Inuyama**	**44.53**	**17**	P	**P**	**19 48 10.9**	**+0.1**
INU				IAmb	IAmb	19 48 23.5	
	comp=Z,101nm,0.7s						
INU	**Inuyama**	**44.53**	**17**	P	**P**	**19 48 11.4**	**+0.5**
INU				pP	**pP**	**19 49 48.5**	**+1.2**
INU				ScP	**ScP**	**19 52 44.2**	**+0.7**
INCN	**Inchon**	**44.67**	**5**	P	**P**	**19 48 11.9**	**0.0**
INCN	**Inchon**	**44.67**	**5**	P	**P**	**19 48 11.9**	**0.0**
INCN				pmax	pmax		
	comp=Z,76nm,0.6s						
INCN	**Inchon**	**44.67**	**5**	P	**P**	**19 48 11.5**	**-0.4**
INCN				pP	**pP**	**19 49 48.2**	**-1.0**
NOUC	**Port Laguerre**	**44.67**	**114**	P	**P**	**19 48 14.3**	**+2.1**
KSAR	**Wonju Array Be**	**44.75**	**6**	P	**P**	**19 48 12.7**	**+0.2**
KSAR				PcP	**PcP**	**19 49 42.5**	**-0.6**
KSAR	**Wonju Array Be**	**44.75**	**6**	P	**P**	**19 48 12.7**	**+0.2**
KSAR						19 49 42.5	
KSRS	**Korea Array**	**44.76**	**6**	P	**P**	**19 48 12.9**	**+0.3**
	comp=Z,57nm,0.9s,baz=188,slow=8.9,SNR=15						
KSRS				PcP	**PcP**	**19 49 44.7**	**+1.6**
	comp=Z,32nm,0.6s,baz=177,slow=3.4,SNR=11						
KSRS				ScP	**ScP**	**19 52 45.9**	**+1.5**
	comp=Z,15nm,0.7s,baz=183,slow=3.8,SNR=5.4						
	comp=Z,57nm,0.9s						
KSRS	**Korea Array**	**44.76**	**6**	P	**P**	**19 48 12.9**	**+0.3**
KSRS						19 49 44.7	
DZM	**Mont Dzumac**	**44.80**	**114**	P	**P**	**19 48 13.2**	**-0.1**
KS19	**Wonju Array Si**	**44.80**	**6**	P	**P**	**19 48 12.0**	**-0.9**
KS19				PcP	**PcP**	**19 49 41.8**	**-1.5**
ONTNC	**Ouen Toro**	**44.85**	**114**	P	**P**	**19 48 14.7**	**+1.1**
ONTNC				IAmb	IAmb	19 48 54.8	
	comp=Z,198nm,0.9s						
JGF	**Kuroka**	**44.86**	**17**	P	**P**	**19 48 13.2**	**-0.2**
JGF				IAmb	IAmb	19 48 15.4	
	comp=Z,100nm,0.7s						
HJU	**Haeju**	**45.16**	**4**	pP	**P**	**19 48 16.3**	**+0.7**
OUENC	**Ouen Island, N**	**45.23**	**114**	P	**P**	**19 48 19.5**	**+3.0**
SEHB	**SEOHWA**	**45.60**	**6**	P	**P**	**19 48 20.1**	**+1.1**
PINNC	**Pines Island,**	**45.82**	**114**	P	**P**	**19 48 23.8**	**+2.8**
PINNC				IAmb	IAmb	19 49 02.5	
	comp=Z,136nm,0.8s						
MAJO	**Matsushiro**	**45.99**	**18**	P	**P**	**19 48 22.2**	**+0.2**
MAJO				IAmb	IAmb	19 48 23.6	
	comp=Z,149nm,0.7s						
MAJO				PcP	**PcP**	**19 49 48.5**	**+0.9**
MAJO	**Matsushiro**	**45.99**	**18**	P	**P**	**19 48 22.2**	**+0.2**
MAJO						19 49 48.5	
MAJO				pmax	pmax		
	comp=Z,149nm,0.7s						
MAJO	**Matsushiro**	**45.99**	**18**	P	**P**	**19 48 21.9**	**-0.1**
MAJO				ScP	**ScP**	**19 52 50.4**	**+0.9**
MJAR	**Matsushiro Arr**	**45.99**	**18**	P	**P**	**19 48 22.1**	**0.0**
	comp=Z,115nm,0.7s,baz=174,slow=7.8,SNR=39						
MJAR				PcP	**PcP**	**19 49 48.9**	**+1.3**
	comp=Z,30nm,0.6s,baz=172,slow=4.6,SNR=4.3						
MJAR				ScP	**ScP**	**19 52 50.4**	**+0.9**
	comp=Z,21nm,0.6s,baz=184,slow=5.1,SNR=4.0						
MJAR				PKKP	**PKKPdf**	**20 11 12.0**	**-5.9**
	comp=Z,2.0nm,0.5s,baz=216,slow=16,SNR=5.5						
	comp=Z,115nm,0.7s						
MJAR	**Matsushiro Arr**	**45.99**	**18**	P	**P**	**19 48 22.1**	**0.0**
MJAR						19 49 48.9	
MARNC	**Mare, Loyalty**	**46.12**	**113**	P	**P**	**19 48 24.4**	**+1.2**
JYT	**Yasato**	**46.33**	**20**	P	**P**	**19 48 24.0**	**-0.6**
LZH	**Lanzhou**	**46.55**	**339**	*e*P	**P**	**19 48 28.3**	**+1.8**
LZH				S	**S**	**19 54 34.9**	**-0.9**
LZH				pmax	pmax		
	comp=Z,61nm,1.1s						
LZH				pmax	pmax		
	comp=Z,1μm,4.8s						
SUJ	**Sinuiju**	**47.16**	**2**	pP	**P**	**19 48 29.9**	**-0.9**
HHU	**Hamhung**	**47.17**	**5**	pP	**P**	**19 48 30.9**	**+0.1**
JSD	**Sado**	**47.39**	**17**	P	**P**	**19 48 33.3**	**+0.8**
BJT	**Baijiatuan**	**47.40**	**353**	P	**P**	**19 48 32.6**	**0.0**
BJT				PcP	**PcP**	**19 49 54.4**	**+1.8**
BJT	**Baijiatuan**	**47.40**	**353**	P	**P**	**19 48 32.6**	**0.0**
BJT						19 49 54.4	
BJT				pmax	pmax		
	comp=Z,347nm,0.5s						
BJT	**Baijiatuan**	**47.40**	**353**	P	**P**	**19 48 32.5**	**-0.1**
BJT				ScP	**ScP**	**19 52 56.4**	**+1.1**
LSA	**Lhasa**	**47.53**	**322**	P	**P**	**19 48 35.7**	**+1.4**
LSA	**Lhasa**	**47.53**	**322**	P	**P**	**19 48 35.7**	**+1.4**
LSA				pmax	pmax		
	comp=Z,513nm,0.6s						
LSA	**Lhasa**	**47.53**	**322**	P	**P**	**19 48 35.8**	**+1.4**
LSA	**Lhasa**	**47.53**	**322**	Sn	**P**	**19 48 35.9**	**+1.6**
KWAJ	**Kwajalein Atol**	**47.70**	**71**	P	**P**	**19 48 35.3**	**0.0**
KWAJ				IAmb	IAmb	19 48 38.7	
	comp=Z,962nm,1.6s						
KWAJ	**Kwajalein Atol**	**47.70**	**71**	P	**P**	**19 48 35.3**	**0.0**
KWAJ				pmax	pmax		
	comp=Z,962nm,1.7s						
JMM	**Marumori**	**48.02**	**20**	P	**P**	**19 48 38.5**	**+1.3**
DGAR	**Diego Garcia**	**49.63**	**266**	P	**P**	**19 48 50.5**	**+0.9**
DGAR	**Diego Garcia**	**49.63**	**266**	P	**P**	**19 48 50.5**	**+0.9**
DGAR				pmax	pmax		
	comp=Z,2μm,1.1s						
DGAR	**Diego Garcia**	**49.63**	**266**	P	**P**	**19 48 50.5**	**+0.9**
HYBB	**Hyderabad (bro**	**49.88**	**300**	*e*P	**P**	**19 48 50.5**	**-1.0**
AIS	**Amsterdam Isla**	**50.74**	**226**	P	**P**	**19 48 57.9**	**+0.5**
AIS				IAmb	IAmb	19 49 00.8	
	comp=Z,682nm,1.1s						
AIS	**Amsterdam Isla**	**50.74**	**226**	P	**P**	**19 48 59.0**	**+1.6**
JTM	**Tenmabayashi**	**50.77**	**18**	P	**P**	**19 48 57.9**	**+0.4**
JTM				IAmb	IAmb	19 48 58.8	
	comp=Z,204nm,0.7s						
MNCI	**Minicoy**	**51.66**	**286**	P	**P**	**19 49 04.2**	**-0.2**
MNCI				IAmb	IAmb	19 49 07.8	
	comp=Z,784nm,1.2s						
MNCI					**PcP**	**19 50 06.6**	**-2.3**
USA0B	**Ussuriysk Arra**	**51.93**	**9**	P	**P**	**19 49 06.7**	**+0.9**
USA0B	**Ussuriysk Arra**	**51.93**	**9**	P	**P**	**19 49 06.7**	**+0.9**
USA0B				pmax	pmax		
	comp=Z,93nm,0.5s						
USRK	**Ussuriysk Ar.**	**51.93**	**9**	P	**P**	**19 49 06.4**	**+0.6**
	comp=Z,285nm,0.5s,baz=196,slow=6.8,SNR=69						
USRK				ScP	**ScP**	**19 53 15.8**	**+1.1**
	comp=Z,28nm,0.8s,baz=198,slow=3.6,SNR=5.3						
	comp=Z,285nm,0.5s						
USRK	**Ussuriysk Ar.**	**51.93**	**9**	P	**P**	**19 49 06.6**	**+0.8**
USRK	**Ussuriysk Ar.**	**51.93**	**9**	P	**P**	**19 49 06.6**	**+0.8**
MDJ	**Mudanjiang**	**52.03**	**6**	P	**P**	**19 49 07.4**	**+1.0**
MDJ				IAmb	IAmb	19 49 09.2	
	comp=Z,359nm,0.7s						
MDJ	**Mudanjiang**	**52.03**	**6**	P	**P**	**19 49 07.3**	**+0.8**
ERM	**Erimo**	**52.54**	**19**	P	**P**	**19 49 11.2**	**+1.0**
ERM	**Erimo**	**52.54**	**19**	P	**P**	**19 49 11.2**	**+1.0**
ERM				pmax	pmax		
	comp=Z,94nm,0.7s						
ERM	**Erimo**	**52.54**	**19**	P	**P**	**19 49 11.4**	**+1.2**
JEW	**Eniwo**	**52.76**	**17**	P	**P**	**19 49 11.6**	**-0.2**
JEW				IAmb	IAmb	19 49 24.1	
	comp=Z,374nm,1.2s						
DCZ	**Deep Cove**	**54.13**	**142**	P	**P**	**19 49 22.6**	**+1.1**
DCZ					**PcP**	**19 50 17.7**	**-0.1**
PYZ	**Puysegur Point**	**54.21**	**143**	P	**P**	**19 49 23.5**	**+1.4**
OUZ	**Omahuta**	**54.39**	**128**	P	**P**	**19 49 25.9**	**+2.4**
MLZ	**Mavora Lakes**	**54.67**	**142**	P	**P**	**19 49 25.2**	**-0.2**
WHZ	**Wether Hill Ro**	**54.83**	**143**	P	**P**	**19 49 27.4**	**+0.9**
FOZ	**Fox Glacier**	**54.87**	**139**	P	**P**	**19 49 27.1**	**+0.3**
WKZ	**Wanaka**	**54.97**	**141**	P	**P**	**19 49 29.6**	**+2.2**
MSVF	**Nonsavu**	**55.04**	**106**	P	**P**	**19 49 30.0**	**+1.5**
	comp=Z,73nm,0.7s,baz=262,slow=10,SNR=4.8						
	comp=Z,73nm,0.7s						
MSVF	**Nonsavu**	**55.04**	**106**	P	**P**	**19 49 29.9**	**+1.4**
MSVF					**PcP**	**19 50 20.0**	**-2.0**
MSVF	**Nonsavu**	**55.04**	**106**	P	**P**	**19 49 30.0**	**+1.5**
MSVF	**Nonsavu**	**55.04**	**106**	P	**P**	**19 49 31.4**	**+3.0**
MCQ	**Macquarie Isla**	**55.43**	**155**	P	**P**	**19 49 31.5**	**+1.1**
MCQ	**Macquarie Isla**	**55.43**	**155**	P	**P**	**19 49 31.5**	**+1.1**
MCQ				pmax	pmax		
	comp=Z,116nm,1.0s						
LBZ	**Lake Benmore**	**55.50**	**140**	P	**P**	**19 49 31.8**	**+0.6**
LBZ				IAmb	IAmb	19 50 19.7	
	comp=Z,644nm,2.0s						
QRZ	**Quartz Range**	**55.56**	**135**	P	**P**	**19 49 32.1**	**+0.4**
QRZ				IAmb	IAmb	19 50 21.0	
	comp=Z,266nm,1.1s						
QRZ	**Quartz Range**	**55.56**	**135**	P	**P**	**19 49 33.4**	**+1.7**
RPZ	**Rata Peaks**	**55.76**	**139**	P	**P**	**19 49 33.9**	**+1.0**
	comp=Z,140nm,0.6s,baz=249,slow=3.2,SNR=6.3						
	comp=Z,140nm,0.6s						
RPZ	**Rata Peaks**	**55.76**	**139**	P	**P**	**19 49 33.3**	**+0.4**
RPZ				IAmb	IAmb	19 50 18.8	
	comp=Z,395nm,0.9s						
TKNZ	**Takaka Hill**	**55.95**	**135**	P	**P**	**19 49 36.1**	**+1.8**
ODZ	**Otahua Downs**	**56.09**	**140**	P	**P**	**19 49 35.1**	**-0.1**
FUNA	**Funafuti**	**56.12**	**95**	P	**P**	**19 49 37.9**	**+2.0**
LTZ	**Lake Taylor**	**56.17**	**137**	P	**P**	**19 49 35.3**	**-0.6**
LTZ				IAmb	IAmb	19 50 25.1	
	comp=Z,385nm,1.7s						
THZ	**Tophouse**	**56.19**	**136**	P	**P**	**19 49 37.1**	**+1.1**
OXZ	**Oxford**	**56.24**	**138**	P	**P**	**19 49 36.6**	**+0.3**
NNZ	**Nelson**	**56.31**	**135**	P	**P**	**19 49 37.5**	**+0.8**
NNZ	**Nelson**	**56.31**	**135**	P	**P**	**19 49 37.8**	**+1.0**
HIA	**Hailar**	**56.34**	**358**	P	**P**	**19 49 36.5**	**-0.2**
HIA	**Hailar**	**56.34**	**358**	P	**P**	**19 49 36.6**	**-0.2**
HIA				pmax	pmax		
	comp=Z,101nm,0.6s						
HIA	**Hailar**	**56.34**	**358**	P	**P**	**19 49 37.2**	**+0.4**
ULN	**Ulaanbaatar**	**56.56**	**348**	P	**P**	**19 49 38.7**	**+0.2**
ULN				IAmb	IAmb	19 49 40.3	
	comp=Z,124nm,0.5s						
ULN	**Ulaanbaatar**	**56.56**	**348**	P	**P**	**19 49 38.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,124nm,0.5s						
ULN	**Ulaanbaatar**	**56.56**	**348**	P	**P**	**19 49 39.1**	**+0.6**
ULN				pP	**pP**	**19 51 24.3**	**+0.6**
ULN				ScP	**ScP**	**19 53 36.0**	**+0.8**
SONM	**Songino Array**	**56.67**	**347**	P	**P**	**19 49 39.8**	**+0.5**
	comp=Z,180nm,0.6s,baz=162,slow=8.0,SNR=41						
SONM				ScP	**ScP**	**19 53 36.4**	**+0.7**
	comp=Z,19nm,0.7s,baz=167,slow=4.3,SNR=4.6						
SONM				P3KP		20 18 09.5	
	comp=Z,8.6nm,0.8s,baz=320,slow=4.2,SNR=24						
	comp=Z,180nm,0.6s						
SONM	**Songino Array**	**56.67**	**347**	P	**P**	**19 49 39.8**	**+0.5**
TUWZ	**Tuamarina**	**56.78**	**135**	P	**P**	**19 49 40.0**	**0.0**
MQZ	**McQueen's Vall**	**56.80**	**138**	P	**P**	**19 49 40.5**	**+0.4**
KLR	**Kul'dur**	**56.83**	**7**	P	**P**	**19 49 40.5**	**+0.4**
	comp=Z,108nm,0.6s,baz=200,slow=6.6,SNR=23						
KLR				ScP	**ScP**	**19 53 36.9**	**+0.8**
	comp=Z,10nm,0.5s,baz=196,slow=5.4,SNR=4.6						
	comp=Z,108nm,0.6s						
KLR	**Kul'dur**	**56.83**	**7**	P	**P**	**19 49 40.5**	**+0.4**
KHZ	**Kahutara**	**56.88**	**137**	P	**P**	**19 49 41.2**	**+0.6**
YSS	**Yuzh-Sakhalins**	**56.89**	**16**	P	**P**	**19 49 40.9**	**+0.4**
YSS				IAmb	IAmb	19 49 43.2	
	comp=Z,198nm,0.6s						
YSS	**Yuzh-Sakhalins**	**56.89**	**16**	*e*P	**P**	**19 49 41.1**	**+0.5**
YSS	**Yuzh-Sakhalins**	**56.89**	**16**	P	**P**	**19 49 41.3**	**+0.8**
TCW	**Tory Channel**	**56.93**	**135**	P	**P**	**19 49 41.5**	**+0.4**
TCW				PcP	**PcP**	**19 50 28.2**	**-0.7**
FWVZ	**Far West T-bar**	**57.17**	**132**	P	**P**	**19 49 44.8**	**+1.8**
KIW	**Kapiti Island**	**57.25**	**134**	P	**P**	**19 49 43.2**	**-0.1**
AJM	**Ajmer**	**57.26**	**308**	*i* x	**P**	**19 49 42.5**	**-1.1**
SNZO	**South Karori**	**57.27**	**135**	P	**P**	**19 49 43.1**	**-0.2**
SNZO				IAmb	IAmb	19 50 35.9	
	comp=Z,417nm,1.4s						
OGWZ	**Otaki Gorge**	**57.42**	**134**	P	**P**	**19 49 44.7**	**+0.3**
CAW	**Cannon Point**	**57.45**	**135**	P	**P**	**19 49 44.6**	**-0.1**
BHHZ	**Black Hill Sta**	**57.62**	**133**	P	**P**	**19 49 47.2**	**+1.4**
MRZ	**Mangatainoka R**	**57.66**	**134**	P	**P**	**19 49 46.0**	**-0.1**
MTW	**Mount Morrison**	**57.78**	**135**	P	**P**	**19 49 47.2**	**+0.3**
PAWZ	**Paruwai Farm**	**57.80**	**135**	P	**P**	**19 49 48.6**	**+1.6**
BKZ	**Black Stump Fm**	**57.83**	**132**	P	**P**	**19 49 48.7**	**+1.4**
DVHZ	**Dannevirke**	**57.96**	**133**	P	**P**	**19 49 48.3**	**+0.2**
TMWZ	**Te Maipa**	**58.03**	**134**	P	**P**	**19 49 49.7**	**+1.0**
ROCAM	**Rodrigues Isla**	**58.57**	**251**	P	**P**	**19 49 53.6**	**+1.1**
ROCAM	**Rodrigues Isla**	**58.57**	**251**	P	**P**	**19 49 53.5**	**+0.9**
CASY	**Casey**	**59.51**	**186**	P	**P**	**19 49 58.0**	**-0.1**
CASY				PcP	**PcP**	**19 50 38.2**	**-0.4**
CASY	**Casey**	**59.51**	**186**	P	**P**	**19 49 57.9**	**-0.1**
CIT	**Chita**	**59.54**	**354**	*e*P	**P**	**19 49 58.6**	**+0.1**
CIT				*e*		19 50 39.8	
CIT				*e*		19 53 49.4	
CIT				*e*S	S	19 57 46.0	+19
CIT				*e*		19 58 51.2	
CIT				pmax	pmax		
	comp=Z,175nm,1.3s						
WMQ	**Urumqi**	**59.80**	**331**	P	**P**	**19 50 01.7**	**+1.2**
DRV	**Dumont d'Urvil**	**60.53**	**172**	P	**P**	**19 50 04.8**	**+0.1**
PAF	**Port-aux-Franc**	**60.55**	**216**	P	**P**	**19 50 06.2**	**+1.0**
PAF				IAmb	IAmb	19 50 57.2	
	comp=Z,646nm,1.7s						
PAF	**Port-aux-Franc**	**60.55**	**216**	P	**P**	**19 50 06.2**	**+1.0**
PAF				pmax	pmax		
	comp=Z,647nm,1.7s						
ZEA	**Zeya**	**60.89**	**3**	*e*P	**P**	**19 50 08.8**	**+1.5**
ZEA				pmax	pmax		
	comp=N,100nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,200nm,0.5s						
ZEA				pmax	pmax		
	comp=E,30nm,0.3s						
ZEA				pmax	pmax		
	comp=N,120nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,300nm,0.8s						
NIL	**Nilore**	**61.91**	**314**	P	**P**	**19 50 14.6**	**+0.1**
NIL				PcP	**PcP**	**19 50 43.2**	**-5.9**
NIL	**Nilore**	**61.91**	**314**	P	**P**	**19 50 14.6**	**+0.1**
NIL						19 50 43.2	
NIL				pmax	pmax		
	comp=Z,755nm,0.6s						
NIL	**Nilore**	**61.91**	**314**	P	**P**	**19 50 14.5**	**0.0**
KSH	**Kashi**	**63.36**	**321**	P	**P**	**19 50 24.8**	**+1.0**
KSH				S	**S**	**19 58 15.5**	**+0.8**
KSH				pmax	pmax		
	comp=Z,460nm,0.8s						
MKAR	**Makanchi Array**	**64.58**	**331**	P	**P**	**19 50 32.0**	**+0.8**
	comp=Z,473nm,0.5s,baz=136,slow=7.2,SNR=48						
MKAR				P3KP		20 17 57.4	
	comp=Z,1.4nm,0.7s,baz=300,slow=3.3,SNR=4.5						
MKAR				PKPPKP	**P'P'df**	**20 19 06.2**	**-4.0**
	comp=Z,1.5nm,0.8s,baz=256,slow=3.1,SNR=4.0						
MKAR				PKP2bc		20 19 14.9	
	comp=Z,2.4nm,0.7s,baz=311,slow=2.8,SNR=5.4						
MKAR				P4KPbc		20 27 22.8	
	comp=Z,1.3nm,0.7s,baz=142,slow=5.0,SNR=7.8						
	comp=Z,473nm,0.5s						
MKAR	**Makanchi Array**	**64.58**	**331**	P	**P**	**19 50 32.2**	**+0.9**
MKAR	**Makanchi Array**	**64.58**	**331**	P	**P**	**19 50 32.2**	**+0.9**
MAKZ	**Makanchi**	**64.74**	**330**	P	**P**	**19 50 32.5**	**+0.2**
MAKZ				IAmb	IAmb	19 50 33.9	
	comp=Z,280nm,0.7s						
MAKZ	**Makanchi**	**64.74**	**330**	P	**P**	**19 50 32.5**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,280nm,0.7s						
MAKZ	**Makanchi**	**64.74**	**330**	P	**P**	**19 50 32.7**	**+0.4**
BOD	**Bodaibo**	**65.22**	**355**	*e*P	**P**	**19 50 35.2**	**+0.1**
BOD				pmax	pmax		
	comp=Z,169nm,1.3s						
RER	**Riviere de l'E**	**65.78**	**250**	P	**P**	**19 50 40.2**	**+0.7**
RER	**Riviere de l'E**	**65.78**	**250**	P	**P**	**19 50 40.4**	**+1.0**
AAK	**Ala-Archa**	**66.11**	**323**	P	**P**	**19 50 42.0**	**+0.9**
PETK	**Petropavlovsk-**	**67.12**	**22**	P	**P**	**19 50 48.2**	**+1.3**
	comp=Z,76nm,0.5s,baz=243,slow=1.2,SNR=37						
	comp=Z,76nm,0.5s						
PETK	**Petropavlovsk-**	**67.12**	**22**	P	**P**	**19 50 48.3**	**+1.3**
PET	**Petropavlovsk**	**67.42**	**23**	P	**P**	**19 50 49.8**	**+1.0**
CCD	**Concordia, Ant**	**67.80**	**180**	P	**P**	**19 50 52.2**	**+0.9**
CCD				pP	**pP**	**19 52 45.6**	**+4.4**
TAS	**Tashkent**	**68.60**	**320**	P	**P**	**19 50 56.6**	**+0.3**
TAS	**Tashkent**	**68.60**	**320**	P	**P**	**19 50 56.6**	**+0.3**
TAS				pmax	pmax		
	comp=Z,504nm,0.6s						
ZALV	**Zalesovo Beam**	**68.73**	**337**	P	**P**	**19 50 56.3**	**-0.4**
	comp=Z,326nm,0.5s,baz=135,slow=4.8,SNR=41						
ZALV				PKPPKP	**P'P'df**	**20 19 00.9**	**-1.9**
	comp=Z,3.5nm,0.8s,baz=309,slow=3.1,SNR=2.9						
	comp=Z,326nm,0.5s						
ZALV	**Zalesovo Beam**	**68.73**	**337**	P	**P**	**19 50 56.3**	**-0.4**
KURBB	**Kurchatov Arra**	**69.02**	**332**	P	**P**	**19 50 58.8**	**+0.3**
	comp=Z,212nm,0.7s,baz=139,slow=5.1,SNR=41						
KURBB				PKPPKP	**P'P'df**	**20 19 00.0**	**-2.6**
	comp=Z,3.8nm,1.1s,baz=301,slow=3.8,SNR=3.6						
	comp=Z,212nm,0.7s						
KURK	**Kurchatov**	**69.04**	**332**	P	**P**	**19 50 58.8**	**+0.1**
KURK	**Kurchatov**	**69.04**	**332**	P	**P**	**19 50 59.0**	**+0.3**
YAK	**Yakutsk**	**69.30**	**4**	P	**P**	**19 51 00.6**	**+0.6**
	comp=Z,256nm,0.6s,baz=179,slow=2.7,SNR=18						
YAK				PKPPKP	**P'P'df**	**20 19 01.1**	**-0.2**
	comp=Z,3.8nm,0.4s,baz=116,slow=1.5,SNR=4.8						
	comp=Z,256nm,0.6s						
YAK	**Yakutsk**	**69.30**	**4**	P	**P**	**19 51 00.6**	**+0.6**
YAK	**Yakutsk**	**69.30**	**4**	⇓P	**P**	**19 51 00.5**	**+0.5**
YAK	**Yakutsk**	**69.30**	**4**	P	**P**	**19 51 00.6**	**+0.6**
WSAR	**Wadi Sarin**	**69.36**	**298**	P	**P**	**19 51 01.8**	**+0.6**
	comp=Z,285nm,0.9s,baz=152,slow=4.8,SNR=14						
	comp=Z,285nm,0.9s						
MA2	**Magadan**	**70.32**	**15**	P	**P**	**19 51 07.7**	**+1.5**
	comp=Z,279nm,0.6s,baz=240,slow=6.3,SNR=19						
	comp=Z,279nm,0.6s						
MA2	**Magadan**	**70.32**	**15**	P	**P**	**19 51 07.7**	**+1.5**
MA2	**Magadan**	**70.32**	**15**	P	**P**	**19 51 06.4**	**+0.2**
MA2				pP	**pP**	**19 52 55.3**	**-1.2**
MAW	**Mawson**	**72.06**	**200**	P	**P**	**19 51 16.8**	**+0.6**

CHNA Chernabura Isl 88.97 34 P **P** **19 52 44.5 +0.3**
baz=256
S14K Fog Glacier 89.34 33 P **P** **19 52 47.5 +1.5**
baz=256
VRH Novokhopyorsk 89.86 322 *e*P **P** **19 52 47.2 -1.2**
VRH pmax pmax
comp=Z,260nm,0.6s
ASF Jabal al Asfar 90.12 302 P **P** **19 52 51.1 +0.9**
comp=Z,55nm,1.0s,baz=125,slow=1.4,SNR=13
comp=Z,55nm,1.0s
ASF Jabal al Asfar 90.12 302 P **P** **19 52 51.1 +0.9**
O16K Kokwok River B 90.87 30 P **P** **19 52 54.6 +1.8**
baz=257
GHAJ Ghor Haditha 91.12 301 P **P** **19 52 55.0 +0.3**
GHAJ IAmb IAmb 19 52 56.4
comp=Z,117nm,0.8s
CHIR Chirikof Islan 91.39 34 P **P** **19 52 56.6 +1.2**
baz=259
EIL Elat 91.44 300 P **P** **19 52 56.5 +0.3**
comp=Z,46nm,0.9s,baz=226,slow=1.2,SNR=8.0
EIL PKKPbc **PKKPbc** **20 10 15.8 +1.0**
comp=Z,7.2nm,0.6s,baz=2.5,slow=6.1,SNR=6.2
comp=Z,46nm,0.9s
VSR Storozhevoye 91.45 321 *e*P **P** **19 52 54.3 -1.4**
VSR pmax pmax
comp=Z,140nm,0.6s
MMAI Mount Meron Ar 91.49 303 P **P** **19 52 57.2 +0.7**
comp=Z,30nm,0.6s,baz=94,slow=6.8,SNR=13
comp=Z,30nm,0.6s
VORR Voronezh 91.50 322 *e*P **P** **19 52 55.5 -0.5**
VORR pmax pmax
comp=Z,220nm,0.5s
TOKA Tokat 91.63 310 P **P** **19 52 57.2 +0.2**
TOKA IAmb IAmb 19 52 58.4
comp=Z,159nm,1.2s
MBAR Mbarara 91.69 269 P **P** **19 52 58.1 +0.2**
comp=Z,84nm,0.7s,baz=73,slow=6.8,SNR=14
comp=Z,84nm,0.7s
MBAR Mbarara 91.69 269 P **P** **19 52 58.1 +0.2**
LPSR Galich'ya Gora 91.82 323 *e*P **P** **19 52 56.7 -0.7**
LPSR pmax pmax
comp=Z,150nm,0.8s
SOE Somerset East 91.93 237 P **P** **19 52 58.7 +0.1**
SOE IAmb IAmb 19 53 00.5
comp=Z,129nm,1.2s
LSZ Lusaka 92.25 254 P **P** **19 53 00.4 0.0**
comp=Z,134nm,0.5s,baz=87,slow=5.4,SNR=36
comp=Z,134nm,0.5s
LSZ Lusaka 92.25 254 P **P** **19 53 00.4 0.0**
SII Sitkinak Islan 92.32 33 P **P** **19 53 01.2 +1.5**
baz=260
GCSA Galena City Sc 92.52 25 P **P** **19 53 02.0 +1.7**
baz=258
TTA Tatalina 92.54 27 P **P** **19 53 01.6 +1.0**
baz=259
N19K Bonanza Creek 92.87 29 P **P** **19 53 03.5 +1.3**
baz=260
BOSA Boshof 92.89 241 P **P** **19 53 02.9 -0.2**
comp=Z,71nm,0.7s,baz=111,slow=3.6,SNR=28
comp=Z,71nm,0.7s
BOSA Boshof 92.89 241 P **P** **19 53 02.9 -0.2**
BOSA IAmb IAmb 19 53 04.2
comp=Z,162nm,1.1s
BOSA Boshof 92.89 241 P **P** **19 53 02.9 -0.2**
OHAK Old Harbor 92.91 33 P **P** **19 53 03.5 +1.2**
baz=261
L20K Farewell, AK 93.43 28 P **P** **19 53 05.5 +0.9**
baz=261
K20K Telida 93.48 27 P **P** **19 53 06.2 +1.4**
baz=261
J20K Nowinta River 93.58 26 P **P** **19 53 06.3 +1.0**
baz=261
SNAA Sanae 93.59 195 P **P** **19 53 05.5 +0.2**
SNAA Sanae 93.59 195 PKKPbc PKKPbc 20 10 06.9 -4.0
comp=Z,4.8nm,0.5s,baz=266,slow=4.0,SNR=16
BRTR Keskin Array B 93.72 309 P **P** **19 53 05.7 -1.0**
comp=Z,20nm,0.7s,baz=134,slow=4.2,SNR=12
BRTR PKKPbc **PKKPdf** **20 10 08.2 +0.5**
comp=Z,1.0nm,0.8s,baz=318,slow=1.7,SNR=4.0
comp=Z,20nm,0.7s
BRTR Keskin Array B 93.72 309 P **P** **19 53 05.7 -1.0**
A21K Barrow 93.90 19 P **P** **19 53 08.2 +1.7**
baz=259
CAST Castle Rocks 94.38 27 P **P** **19 53 09.6 +0.6**
baz=263
F22K John River 94.85 23 P **P** **19 53 12.1 +1.1**
baz=263
BPAW Bear Paw Mtn. 94.94 26 P **P** **19 53 12.5 +1.0**
baz=264
G22K Bettles 95.04 23 P **P** **19 53 13.2 +1.4**
baz=263
E22K Anaktuvuk Pass 95.07 22 P **P** **19 53 13.2 +1.3**
baz=263
MLY Manley 95.15 25 P **P** **19 53 13.2 +0.8**
baz=264
RC01 Rabbit Creek A 95.21 29 P **P** **19 53 13.0 +0.3**
baz=264
VNA2 Neumayer--Watz 95.21 195 P **P** **19 53 12.5 -0.1**
baz=137,slow=5.8
SEW Seward 95.25 30 P **P** **19 53 12.8 -0.1**
baz=265
VNA3 Neumayer Olymp 95.55 194 P **P** **19 53 14.1 -0.1**
D23K Nanushuk River 95.57 21 P **P** **19 53 14.7 +0.5**
baz=264
G23K Bananza Creek 95.61 24 P **P** **19 53 15.6 +1.2**
baz=265
VNA1 Neumayer--Stat 95.61 195 P **P** **19 53 14.5 +0.1**
C23K Itkillik River 95.68 20 P **P** **19 53 16.2 +1.5**
baz=265
H23K Yukon River 95.72 24 P **P** **19 53 16.4 +1.4**
baz=265
I23K Minto, Yukon-K 95.74 25 P **P** **19 53 15.7 +0.8**
baz=265
MCK McKinley 95.81 27 P **P** **19 53 15.7 +0.2**
baz=266
NEA2 Nenana 95.82 26 P **P** **19 53 15.9 +0.5**
baz=265
KNK Knik Glacier 95.85 29 P **P** **19 53 16.0 +0.4**
baz=266
PWL Port Wells 95.87 29 P **P** **19 53 16.8 +1.1**
baz=266
SUR Sutherland 95.93 236 P **P** **19 53 17.2 +0.2**
SUR IAmb IAmb 19 53 19.2
comp=Z,115nm,1.1s
SML Sawmill 95.94 29 P **P** **19 53 16.7 +0.7**
baz=266
TOLK Toolik Lake Re 95.94 22 P **P** **19 53 17.5 +1.6**
baz=265
M23K Glacier View 96.22 29 P **P** **19 53 18.1 +0.8**
baz=266
D24K Happy Valley 96.25 21 P **P** **19 53 18.8 +1.6**
baz=266
E24K Your Creek 96.30 22 P **P** **19 53 19.6 +2.1**
baz=266
C24K Franklin Bluff 96.33 21 P **P** **19 53 19.2 +1.6**
baz=266
H24K Noodor Dome 96.41 24 P **P** **19 53 19.1 +1.0**
baz=267
DHY Denali Highway 96.47 27 P **P** **19 53 19.5 +0.9**
baz=267
ILAR Eielson Array 96.77 26 P **P** **19 53 18.8 -0.8**
comp=Z,5.5nm,0.6s,baz=250,slow=4.7,SNR=8.2
ILAR PKKPbc **PKKPbc** **20 09 59.4 -2.9**
comp=Z,8.7nm,1.0s,baz=76,slow=1.6,SNR=10.0
comp=Z,5.5nm,0.6s
ILAR Eielson Array 96.77 26 P **P** **19 53 18.8 -0.8**
MANT Manisa 97.56 308 P Pdif 19 53 23.7 -0.4
MANT IAmb IAmb 19 53 24.7
comp=Z,49nm,1.0s
AKASG Malin Array Be 97.64 320 P Pdif 19 53 22.8 -1.1
comp=Z,34nm,0.8s,baz=69,slow=5.1,SNR=19
AKASG PP **PP** **19 57 32.2 +1.6**
comp=Z,17nm,0.9s,baz=79,slow=7.3,SNR=6.0
AKASG PKiKP **PKiKP** **19 57 54.8 +0.1**
comp=Z,1.5nm,0.4s,baz=71,slow=2.5,SNR=6.7
AKASG PKKPbc **PKKPbc** **20 09 56.7 -2.6**
comp=Z,3.5nm,0.6s,baz=283,slow=3.3,SNR=11
comp=Z,34nm,0.8s
AKASG Malin Array Be 97.64 320 P Pdif 19 53 22.8 -1.1
ARCES ARCESS Array B 99.21 339 P **Pdif** **19 53 30.2 -0.2**
comp=Z,27nm,0.9s,baz=79,slow=6.3,SNR=11
ARCES PKiKP **PKiKP** **19 57 57.0 0.0**
comp=Z,5.6nm,0.7s,baz=121,slow=1.1,SNR=10.0
ARCES PKKPbc **PKKPbc** **20 09 52.2 -3.5**
comp=Z,2.4nm,0.5s,baz=256,slow=2.8,SNR=14
comp=Z,27nm,0.9s
ARCES ARCESS Array B 99.21 339 P **Pdif** **19 53 30.2 -0.2**
FINES FINESS Array B 99.41 331 P **Pdif** **19 53 30.5 -1.0**
comp=Z,8.4nm,0.5s,baz=79,slow=4.1,SNR=12
FINES PKiKP **PKiKP** **19 57 57.8 +0.4**
comp=Z,6.2nm,0.5s,baz=113,slow=3.7,SNR=6.4
FINES PKKPbc **PKKPbc** **20 09 51.5 -3.4**
comp=Z,1.0nm,0.4s,baz=280,slow=1.1,SNR=6.0
comp=Z,8.4nm,0.5s
FINES FINESS Array B 99.41 331 P **Pdif** **19 53 30.5 -1.0**
MLR Muntele Rosu 99.73 315 P **Pdif** **19 53 32.7 -0.7**
comp=Z,26nm,1.0s,baz=114,slow=2.0,SNR=5.0
MLR PKKPbc **PKKPbc** **20 09 51.6 -2.0**
comp=Z,2.6nm,0.6s,baz=200,slow=12,SNR=3.7
comp=Z,26nm,1.0s
MLR Muntele Rosu 99.73 315 P **Pdif** **19 53 32.7 -0.7**
SPITS Spitsbergen Ar 100.35 348 P **Pdif** **19 53 35.3 -0.1**
comp=Z,16nm,0.5s,baz=92,slow=7.5,SNR=15
SPITS PKKPbc **PKKPbc** **20 09 49.1 -3.5**
comp=Z,4.9nm,0.7s,baz=133,slow=3.7,SNR=5.8
SPITS Spitsbergen Ar 100.35 348 P **Pdif** **19 53 35.3 -0.1**
IDI Anoyia 100.36 304 P **Pdif** **19 53 36.1 -0.4**
comp=Z,16nm,0.6s,baz=49,slow=9.8,SNR=6.3
IDI PKiKP **PKiKP** **19 58 01.1 +1.0**
comp=Z,19nm,0.6s,baz=142,slow=3.7,SNR=8.0
INK Inuvik 101.86 22 PKiKP **PKiKP** **19 58 03.0 +1.3**
comp=Z,11nm,0.8s,baz=350,slow=6.2,SNR=4.6
INK PKKPbc **PKKPbc** **20 09 43.9 -4.2**
comp=Z,8.3nm,0.9s,baz=8.4,slow=4.7,SNR=4.1
DLBC Dease Lake 105.27 31 PKKPbc PKKPbc 20 09 37.2 -0.7
comp=Z,7.0nm,0.6s,baz=45,slow=3.1,SNR=8.9
HFS Hagfors 105.59 331 Pdiff **Pdif** **19 53 59.2 +0.2**
comp=Z,4.7nm,0.4s,baz=120,slow=5.3,SNR=11
HFS PKKPbc **PKKPbc** **20 09 33.4 -3.4**
comp=Z,0.6nm,0.3s,baz=182,slow=3.9,SNR=6.9
DEL Delary 106.28 327 *i* P **Pdif** **19 54 02.0 -0.1**
NOA NORSAR Array B 106.56 332 Pdiff **Pdif** **19 54 02.9 -0.5**
comp=Z,1.9nm,0.5s,baz=73,slow=4.4,SNR=8.0
NOA PKiKP **PKiKP** **19 58 10.8 +0.2**
comp=Z,2.2nm,0.6s,baz=252,slow=3.0,SNR=4.4
NOA PKKPbc **PKKPbc** **20 09 31.8 -2.2**
comp=Z,0.5nm,0.5s,baz=61,slow=2.6,SNR=4.5
DAG Danmarks Havn 107.46 351 *i* P **Pdif** **19 54 07.0 0.0**
BBB Bella Bella 107.55 38 PKiKP **PKiKP** **19 58 13.3 +0.7**
comp=Z,7.7nm,0.9s,baz=339,slow=9.3,SNR=3.6
GERES GERESS Array B 107.79 319 PKiKP **PKiKP** **19 58 14.2 +0.9**
comp=Z,7.8nm,0.7s,baz=109,slow=1.3,SNR=7.2
GERES PKKPbc **PKKPbc** **20 09 28.7 -1.2**
comp=Z,1.2nm,0.5s,baz=269,slow=1.7,SNR=9.6
CLL Collm 107.80 322 *e*Pdif **Pdif** **19 54 08.0 -1.0**
CLL *i* PKiKP **PKiKP** **19 58 15.0 +1.9**
CLL *e*PP **PP** **19 58 48.0 +2.8**
CLL *e*Sdif Sdif 20 05 25.0 -2.1
CLL *i* PKKPbc **PKKPbc** **20 09 29.0 -0.8**
CLL *e*SS **SS** **20 13 12.0 -4.5**
RES Resolute Bay 109.29 10 PKiKP **PKiKP** **19 58 15.4 +0.1**
comp=Z,10nm,0.7s,baz=237,slow=1.9,SNR=4.1
DAVOX Davos/Dischmat 110.70 317 PKiKP **PKiKP** **19 58 19.3 +0.3**
comp=Z,16nm,0.5s,baz=250,slow=1.9,SNR=10
DAVOX Davos/Dischmat 110.70 317 *i* PKiKP **PKiKP** **19 58 19.3 +0.3**
YKA Yellowknife Ar 111.17 25 PKiKP **PKiKP** **19 58 19.1 0.0**
comp=Z,19nm,0.6s,baz=304,slow=1.9,SNR=23
YKA SKP 20 01 02.9
comp=Z,4.2nm,0.6s,baz=304,slow=1.7,SNR=8.7
YKA PKKPbc **PKKPbc** **20 09 12.3 -7.1**
comp=Z,2.4nm,0.5s,baz=122,slow=3.3,SNR=4.3
YKA Yellowknife Ar 111.17 25 *i* PKiKP **PKiKP** **19 58 19.2 0.0**
KEST Kesra 112.99 306 PKKPbc PKKPbc 20 09 13.5 +0.7
comp=Z,6.7nm,0.6s,baz=265,slow=2.6,SNR=7.3
PNT Penticton 113.48 39 PKiKP **PKiKP** **19 58 29.9 +5.9**
BEKR Beckworth 115.36 49 **PKPdf** **19 58 27.4 -0.8**
NEW Newport 115.37 40 PKP **PKiKP** **19 58 27.8 +0.1**
comp=Z,9.5nm,0.8s,baz=293,slow=6.6,SNR=3.2
NEW Newport 115.37 40 **PKPdf** **19 58 27.4 -0.3**
NEW Newport 115.37 40 PKiKP **PKiKP** **19 58 27.8 +0.1**
CLF Chambon-Foret 115.37 320 **PKiKP** **19 58 27.8 +0.2**
EKA Eskdalemuir Ar 115.69 329 PKP **PKiKP** **19 58 28.8 +0.8**
comp=Z,6.7nm,0.5s,baz=30,slow=3.9,SNR=21
EKA PKKPbc **PKKPbc** **20 09 02.4 -1.8**
comp=Z,2.0nm,0.6s,baz=245,slow=2.8,SNR=9.9
EKA Eskdalemuir Ar 115.69 329 PKiKP **PKiKP** **19 58 28.8 +0.8**
CMB Columbia Colle 115.71 51 **PKPdf** **19 58 28.4 -0.3**
CMB Columbia Colle 115.71 51 PKiKP **PKPdf** **19 58 28.4 -0.3**
EDM Edmonton 115.79 34 **PKPdf** **19 58 27.5 -0.9**
EDM Edmonton 115.79 34 PKiKP **PKPdf** **19 58 27.5 -0.9**
VCNR Virginia City 116.02 50 **PKiKP** **19 58 30.1 +0.6**
PNTR Pine Nut 116.10 50 **PKiKP** **19 58 29.9 +0.2**
PAHR Pah Rah Range 116.13 49 **PKiKP** **19 58 30.0 +0.4**
MAHO Mahon 116.19 311 PKP **PKiKP** **19 58 36.8 +7.3**
MAHO Mahon 116.19 311 **PKiKP** **19 58 29.8 +0.3**
YERR Yerington 116.39 50 **PKPdf** **19 58 29.1 -1.0**
NVAR Mina Array Bea 117.23 50 PKP **PKiKP** **19 58 33.2 +1.3**
comp=Z,7.8nm,0.8s,baz=243,slow=3.8,SNR=7.2
NVAR SKP 20 01 16.4
comp=Z,3.9nm,0.7s,baz=246,slow=4.0,SNR=3.9
NVAR PKKPbc **PKKPbc** **20 08 59.2 +0.6**
comp=Z,17nm,0.9s,baz=144,slow=4.2,SNR=5.4
NVAR PKPPKP **P'P'df** **20 17 36.7 +1.8**
comp=Z,0.4nm,0.6s,baz=36,slow=4.6,SNR=3.3
MSO Missoula 117.88 40 **PKPdf** **19 58 32.1 -0.6**
DSB Dublin 118.33 328 **PKiKP** **19 58 33.8 +0.5**
HLID Hailey 118.67 44 **PKiKP** **19 58 34.9 +0.4**
ELK Elko 118.93 47 PKP **PKiKP** **19 58 36.2 +1.0**
comp=Z,8.5nm,0.4s,baz=276,slow=1.6,SNR=15
ELK PKKPbc **PKKPbc** **20 08 52.6 -0.2**
comp=Z,5.6nm,0.8s,baz=151,slow=3.4,SNR=5.4
ELK Elko 118.93 47 PKiKP **PKiKP** **19 58 36.2 +1.0**
PFO Pinyon Flats O 119.73 55 PKP **PKiKP** **19 58 38.0 +1.2**
comp=Z,9.6nm,0.6s,baz=280,slow=3.3,SNR=7.2
PFO PKKPbc **PKKPbc** **20 08 49.5 0.0**
comp=Z,6.2nm,0.8s,baz=178,slow=3.4,SNR=3.6
PFO Pinyon Flats O 119.73 55 **PKiKP** **19 58 37.0 +0.3**
PFO Pinyon Flats O 119.73 55 PKiKP **PKiKP** **19 58 38.0 +1.2**
MG05 Puerto Natales 119.90 169 **PKPdf** **19 58 36.2 -0.1**
ANGG Ammassalik, Gr 120.10 351 **PKPdf** **19 58 35.3 -0.9**
V12A Nelson 120.55 53 **PKiKP** **19 58 39.1 +0.8**
TORD Torodi Ar. Bea 121.57 281 PKP **PKPdf** **19 58 40.2 -0.3**
comp=Z,90nm,0.6s,baz=45,slow=2.9,SNR=34
TORD PKPPKP **P'P'df** **20 17 23.6 -4.3**
comp=Z,7.5nm,1.3s,baz=296,slow=5.5,SNR=11
PDAR Pinedale Array 122.27 43 PKP **PKiKP** **19 58 42.2 +0.6**
comp=Z,5.2nm,0.7s,baz=139,slow=1.5,SNR=6.9
PDAR PKKPbc **PKKPbc** **20 08 40.3 -0.3**
comp=Z,12nm,0.5s,baz=117,slow=6.9,SNR=30
PDAR Pinedale Array 122.27 43 **PKPdf** **19 58 41.4 0.0**
FIGM Figuig 122.30 303 P **PKiKP** **19 58 43.1 +1.2**
ESDC Sonseca Array 122.34 313 PKP **PKiKP** **19 58 42.1 +0.5**
comp=Z,23nm,0.7s,baz=40,slow=1.9,SNR=24
TAF Taforalt 122.59 307 P **PKiKP** **19 58 44.1 +1.8**
PAB San Pablo 122.67 313 P **PKiKP** **19 58 42.7 +0.4**
LAO LASA Array 122.78 38 **PKPdf** **19 58 42.0 0.0**
LAO LASA Array 122.78 38 P **PKiKP** **19 58 43.7 +1.4**
baz=298
JBK JBK 122.84 306 P **PKiKP** **19 58 44.0 +1.0**
FRB Frobisher Bay 123.05 6 PKP **PKiKP** **19 58 42.5 +0.3**
comp=Z,45nm,0.7s,baz=13,slow=4.1,SNR=15
FRB SKPbc SKPbc 20 01 03.8
comp=Z,9.8nm,0.8s,baz=359,slow=6.4,SNR=3.5
FRB Frobisher Bay 123.05 6 PKiKP **PKiKP** **19 58 42.5 +0.3**
DGMT Dagmar 123.12 35 P **PKiKP** **19 58 43.7 +0.9**
baz=300
PALE Palemas 123.69 308 P **PKiKP** **19 58 45.0 +0.6**
O20A White River Ci 124.18 46 **PKiKP** **19 58 46.0 +0.6**
MTE Manteigas 124.65 315 **PKPdf** **19 58 45.8 -0.1**
CHEFC Chefchaouen 124.82 308 P **PKiKP** **19 58 48.0 +1.2**
LCRM LCR 124.84 306 P **PKiKP** **19 58 49.0 +2.0**
MDT Midelt 124.88 305 P **PKiKP** **19 58 47.9 +0.9**
CZD Col de Zad 125.17 305 P **PKiKP** **19 58 50.0 +2.2**
PESTR Estremoz 125.26 313 **PKPdf** **19 58 47.1 +0.1**
PESTR Estremoz 125.26 313 P **PKiKP** **19 58 47.5 +0.1**
RSSD Black Hills 125.34 40 P **PKiKP** **19 58 48.1 +0.4**
baz=298
COYC Coyhaique 125.81 167 **PKPdf** **19 58 47.8 -0.1**
MDND Maddock 126.05 34 P **PKiKP** **19 58 49.5 +0.8**
baz=305
MESJ Messejana 126.10 312 *e*PKPdf **PKiKP** **19 58 49.5 +0.5**
E28A Huff 126.14 36 P **PKiKP** **19 58 49.6 +0.7**
baz=303
ISCO Idaho Springs 126.17 45 P **PKiKP** **19 58 50.7 +1.1**
baz=294
ZHG ZHG 126.34 306 P **PKiKP** **19 58 51.0 +1.2**
ULM Lac du Bonnet 126.54 30 PKP **PKPdf** **19 58 49.0 0.0**
comp=Z,35nm,0.6s,baz=286,slow=1.5,SNR=17
ULM SKPbc SKPbc 20 01 15.1
comp=Z,9.4nm,0.5s,baz=308,slow=3.9,SNR=6.5
ULM Lac du Bonnet 126.54 30 **PKPdf** **19 58 48.7 -0.3**
ULM Lac du Bonnet 126.54 30 PKiKP **PKPdf** **19 58 49.0 0.0**
MORF Marmelete 126.61 312 *e*PKPdf **PKiKP** **19 58 50.6 +0.4**

PFVI Vila Bisbo 126.81 311 P **PKiKP** **19 58 51.2 +0.7**
121A Cookes Peak, D 127.05 55 P **PKiKP** **19 58 53.0 +1.6**
baz=287
SDCO Great Sand Dun 127.06 48 P **PKiKP** **19 58 52.6 +1.2**
baz=293
KOWA Kowa 127.10 283 **PKPdf** **19 58 51.1 0.0**
Y22A Socorro 127.28 53 P **PKiKP** **19 58 52.8 +1.0**
baz=289
ANMO Albuquerque 127.34 51 PKP **PKiKP** **19 58 52.3 +0.4**
comp=Z,24nm,1.1s,baz=230,slow=2.1,SNR=7.7
ANMO SKPbc SKPbc 20 01 21.2
comp=Z,8.1nm,0.7s,baz=295,slow=5.0,SNR=6.4
ANMO Albuquerque 127.34 51 PKIKP **PKiKP** **19 58 52.3 +0.4**
ANMO Albuquerque 127.34 51 P **PKiKP** **19 58 53.4 +1.5**
baz=290
SRHM Skhour des Reh 127.64 306 P **PKiKP** **19 58 54.0 +1.6**
KIC Kosan Boka 127.64 272⇑ *e*PKIKP **PKPdf** **19 58 52.4 +0.2**
comp=Z,55nm,0.6s
DBIC Dimbokro 127.78 273 PKP **PKiKP** **19 58 52.9 -0.2**
comp=Z,49nm,0.6s,baz=77,slow=2.2,SNR=18
DBIC Dimbokro 127.78 273 PKIKP **PKiKP** **19 58 52.9 -0.2**
LIC Lamto 127.92 272⇑ *e*PKIKP **PKPdf** **19 58 52.8 +0.1**
comp=Z,78nm,0.4s
TIC Toumodi 127.94 273⇑ *e*PKIKP **PKPdf** **19 58 52.8 0.0**
comp=Z,37nm,0.4s
OUK Oukaimeden 127.98 304 P **PKiKP** **19 58 55.0 +1.5**
LL02 Futaleuf 128.12 167 **PKPdf** **19 58 51.9 -0.4**
TTIG Tnine Tigouga, 128.64 303 P **PKiKP** **19 58 56.0 +1.4**
B35A Bob, Littlefor 128.84 30 P **PKiKP** **19 58 54.0 -0.3**
baz=311
ECSD EROS Data Cent 130.11 37 P **PKiKP** **19 58 56.9 -0.1**
baz=305
F36A Milaca 130.57 33 P **PKiKP** **19 58 57.6 -0.2**
baz=310
PLCA Paso Flores 130.76 167 PKP **PKiKP** **19 58 58.7 +0.2**
comp=Z,27nm,0.6s,baz=203,slow=1.8,SNR=18
PLCA SKPbc **SKPab** **20 01 32.0 -0.2**
comp=Z,34nm,0.8s,baz=294,slow=2.3,SNR=6.8
PLCA Paso Flores 130.76 167 PKIKP **PKiKP** **19 58 58.7 +0.2**
TXAR Lajitas Array 131.37 57 PKhKP PKPpre 19 58 49.8
comp=Z,3.8nm,0.7s,baz=292,slow=2.4,SNR=4.1
TXAR PKP **PKiKP** **19 59 00.6 +0.5**
comp=Z,4.3nm,0.5s,baz=210,slow=2.4,SNR=8.4
TXAR SKPbc **SKPbc** **20 01 34.5 +0.3**
comp=Z,14nm,0.6s,baz=227,slow=3.2,SNR=11
TXAR Lajitas Array 131.37 57 PKIKP **PKiKP** **19 59 00.6 +0.5**
TXAR 20 01 34.5
R32A Long Quarter, 131.59 44 P **PKiKP** **19 59 01.0 +0.8**
baz=299
SCHQ Schefferville 131.97 7 PKP **PKiKP** **19 59 00.3 -0.1**
comp=Z,50nm,0.5s,baz=310,slow=2.2,SNR=18
SCHQ SKPbc **SKPbc** **20 01 35.5 +0.2**
comp=Z,49nm,0.6s,baz=23,slow=1.4,SNR=6.6
SCHQ Schefferville 131.97 7 **PKPdf** **19 58 59.3 0.0**
L42A Oliver, Polo 135.19 34 P **PKiKP** **19 59 06.5 -0.8**
baz=312
U38A Gravette 135.56 44 P **PKiKP** **19 59 09.0 +0.8**
baz=302
S39A Bolivar 135.60 42 P **PKiKP** **19 59 08.8 +0.5**
baz=304
L48A N Adams 138.02 30 PKPpre 19 59 00.9
SADO Sadowa 138.15 23 PKhKP PKPpre 19 59 03.5
comp=Z,20nm,0.6s,baz=294,slow=2.7,SNR=6.7
SADO PKP **PKPdf** **19 59 10.2 -0.9**
comp=Z,24nm,0.6s,baz=284,slow=3.4,SNR=5.6
SADO SKPbc **SKPbc** **20 01 54.5 -0.3**
comp=Z,23nm,0.5s,baz=306,slow=2.1,SNR=11
BLO Bloomington 138.87 35 PKPpre 19 59 04.9
BLO Bloomington 138.87 35 PKHKP PKPpre 19 59 04.9
USIN University of 139.00 37 PKPpre 19 59 04.8
D62A Allapoint, All 139.10 12 PKPpre 19 59 04.7
N51A Ashland 139.81 30 PKPpre 19 59 07.0
R49A Shelbyville 140.24 35 PKPpre 19 59 09.6
I63A Otisfield 141.60 15 PKPpre 19 59 13.8
J61A Chester 141.69 18 PKPpre 19 59 12.3
FFD Franklin Falls 141.84 17 **PKPdf** **19 59 14.7 -3.1**
TKL Tuckaleechee C 142.86 37 PKP **PKPdf** **19 59 18.1 -1.7**
comp=Z,72nm,0.6s,baz=137,slow=3.1,SNR=11
TKL SKPbc **SKPbc** **20 02 07.1 -0.2**
comp=Z,30nm,0.6s,baz=159,slow=6.4,SNR=4.1
TKL Tuckaleechee C 142.86 37 PKIKP **PKPdf** **19 59 18.1 -1.7**
BRAL Brewton 143.54 45 **PKPdf** **19 59 20.9 -0.1**
M63A Gales Ferry 143.61 19 PKPab 19 59 19.4 -0.2
PB14 IPOC Station P 145.90 159 **PKiKP** **19 59 26.6 +0.8**
CNNC Cliffs of the 146.43 31 **PKPdf** **19 59 27.3 -0.9**
CPUP Villa Florida 146.61 180 PKPbc **PKPbc** **19 59 29.4 +0.4**
comp=Z,220nm,0.8s,baz=188,slow=2.5,SNR=18
CPUP Villa Florida 146.61 180 PKP2 **PKPbc** **19 59 29.5 +0.4**
LVC Limon Verde 148.28 160 PKPbc **PKiKP** **19 59 35.0 -0.2**
comp=Z,108nm,0.7s,baz=79,slow=7.6,SNR=9.4
LVC Limon Verde 148.28 160 PKP2 **PKiKP** **19 59 35.0 -0.2**
TA01 Diego Aracena 149.67 156 **PKPbc** **19 59 36.7 -0.1**
TA02 Huaiquique 149.95 156 **PKPbc** **19 59 37.8 +0.2**
NNA Nana 152.87 135 PKPbc **PKiKP** **19 59 44.9 +0.5**
comp=Z,62nm,0.6s,baz=248,slow=3.8,SNR=5.7
NNA Nana 152.87 135 PKIKP **PKiKP** **19 59 44.9 +0.5**
LPAZ La Paz 154.34 156 PKPab **PKPab** **20 00 05.7 +0.9**
comp=Z,80nm,0.6s,baz=129,slow=2.4,SNR=12
LPAZ La Paz 154.34 156 PKP2 **PKPab** **20 00 05.7 +0.9**
ATAH Atahualpa 154.72 124 PKPbc **PKPbc** **19 59 50.0 +1.3**
comp=Z,17nm,0.6s,baz=358,slow=3.1,SNR=4.4
RCBR Riachuelo 154.84 239 PKPbc **PKPbc** **19 59 49.2 +0.6**
comp=Z,17nm,0.8s,baz=187,slow=2.1,SNR=1.1
RCBR PKPab **PKPab** **20 00 07.3 +0.8**
comp=Z,149nm,0.8s,baz=260,slow=4.8,SNR=23
RCBR Riachuelo 154.84 239 PKIKP **PKPbc** **19 59 49.2 +0.6**
RCBR 20 00 07.3
BDFB Brasilia 155.39 202 PKPab **PKPab** **20 00 08.9 +0.2**
comp=Z,70nm,1.1s,baz=109,slow=2.1,SNR=5.5
BDFB Brasilia 155.39 202 PKP2 **PKPab** **20 00 08.9 +0.2**
SIV San Ignacio 156.53 171 PKP **PKPdf** **19 59 41.2 -0.4**
comp=Z,9.2nm,0.8s,baz=317,slow=2.9,SNR=4.5
SIV PKPab **PKPab** **20 00 13.8 -0.1**
comp=Z,52nm,0.5s,baz=204,slow=5.1,SNR=15
VILB Vilhena 159.74 172 PKPdf **PKPdf** **19 59 45.4 0.0**
VILB **PKPab** **20 00 27.9 +0.4**
PCDR Punta Cana, DR 164.58 42 **PKPdf** **19 59 47.6 -2.4**
SJG San Juan 166.30 37 PKP **PKPdf** **19 59 51.0 -0.4**
comp=Z,13nm,0.4s,baz=5.2,slow=6.1,SNR=5.2
SJG San Juan 166.30 37 **PKPdf** **19 59 49.9 -1.6**
SJG San Juan 166.30 37 PKIKP **PKPdf** **19 59 51.0 -0.4**
HUMP Col San Antoni 166.46 36 **PKPdf** **19 59 49.8 -1.8**
MTP Monte Pirata 166.66 35 **PKPdf** **19 59 50.2 -1.5**
SDV Santo Domingo 166.88 82 PKP **PKPdf** **19 59 51.5 -0.7**
comp=Z,16nm,0.8s,baz=146,slow=0.5,SNR=4.8
SDV Santo Domingo 166.88 82 **PKPdf** **19 59 50.7 -1.5**
CDVI St. Croix 167.38 34 **PKPdf** **19 59 50.9 -1.4**
SMRT St. Maarten 167.97 26 **PKPdf** **19 59 51.2 -1.4**
MACA Manacapuru-AM 169.17 163 PKPdf **PKPdf** **19 59 52.8 -0.8**
MACA **PKPab** **20 01 09.2 +0.2**
FDF Fort de France 171.75 26 **PKPdf** **19 59 53.6 -1.3**
FDF Fort de France 171.75 26 PKIKP **PKPdf** **19 59 53.6 -1.3**
BOAV Boa Vista 174.30 148 **PKPdf** **19 59 55.0 -0.9**
BOAV PKPab **PKPab** **20 01 31.9 0.0**
MDP Montagnes des 174.73 246 PKP **PKPdf** **19 59 55.6 -0.5**
comp=Z,18nm,0.8s,baz=232,slow=2.0,SNR=7.4
MDP PKPab **PKPab** **20 01 33.9 -0.2**
comp=Z,89nm,1.2s,baz=103,slow=4.4,SNR=10

WEL 23 20:08:55.3±1.2**,35°S**±13°×**17°9E**±1°**,h206**km±21km**,**
M3.6/7,ML3.8/4,MLv3.6/7,Error ellipse: s-maj=0.0km
s-min=0.0km az=62.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.41**	**191**	P		Pn	20 09 38.1	-0.4
MXZ				S		S	20 10 11.3	-0.5
WMGZ	**Waiomatatini S**	**2.65**	**188**	P		Pn	20 09 42.8	+1.7
WMGZ				S		S	20 10 18.4	+1.9
HAZ	**Te Kaha**	**2.71**	**199**	P		Pn	20 09 41.5	-0.3
HAZ				S		S	20 10 18.7	+1.0
PKGZ	**Pakihiroa**	**2.76**	**193**	P		Pn	20 09 42.6	+0.1
PUZ	**Puketiti**	**2.91**	**190**	P		Pn	20 09 45.4	+1.2
PUZ				S		S	20 10 22.9	+0.9
TWGZ	**Tauwhareparae**	**3.06**	**193**	P		Pn	20 09 46.6	+0.7
TWGZ				S		S	20 10 27.2	+2.0
MWZ	**Matawai**	**3.32**	**199**	P		Pn	20 09 47.5	-1.4
MWZ				S		S	20 10 32.1	+1.5
CNGZ	**Carnagh Statio**	**3.33**	**189**	P		Pn	20 09 48.7	-0.2
TKGZ	**Te Karaka**	**3.34**	**194**	P		Pn	20 09 48.6	-0.6
TKGZ				S		S	20 10 30.5	-0.5
URZ	**Urewera**	**3.37**	**204**	P		Pn	20 09 49.8	+0.3
URZ				S		S	20 10 32.5	+0.8

RIGZ	**Rimuhau**	**3.62**	**194**	P		Pn	20 09 51.9	-0.6
RIGZ				S		S	20 10 38.0	+0.9
KNZ	**Kokohu**	**3.94**	**194**	P		Pn	20 09 54.8	-1.6
KNZ				S		S	20 10 44.3	+0.1
OUZ	**Omahuta**	**4.33**	**268**	P		Pn	20 10 00.4	-0.9
HIZ	**Hauiti**	**4.62**	**223**	P		Pn	20 10 07.4	+2.4
ETVZ	**East Tongariro**	**4.68**	**212**	P		Pn	20 10 05.0	-0.8
ETVZ				S		S	20 11 02.2	+1.2
NNVZ	**North Ngauruho**	**4.72**	**213**	P		Pn	20 10 06.7	+0.4
OTVZ	**Oturere**	**4.72**	**212**	P		Pn	20 10 05.4	-0.9
SNVZ	**South Ngauruho**	**4.75**	**212**	P		Pn	20 10 05.8	-1.0
NGZ	**Ngauruhoe**	**4.76**	**212**	P		Pn	20 10 07.0	+0.1
BHHZ	**Black Hill Sta**	**4.84**	**207**	P		Pn	20 10 06.1	-1.6
BHHZ				S		S	20 11 04.2	-0.4
WHVZ	**Whangaehu Hut**	**4.85**	**212**	P		Pn	20 10 07.6	-0.5
KRHZ	**Kereru**	**4.87**	**204**	P		Pn	20 10 06.1	-2.0
KRHZ				S		S	20 11 03.3	-1.9
MOVZ	**Moawhango**	**4.89**	**210**	P		Pn	20 10 07.1	-1.3
PXZ	**Pawanui**	**5.09**	**198**	P		Pn	20 10 08.0	-2.8
PXZ				S		S	20 11 07.9	-2.2
PNHZ	**Pukenui**	**5.17**	**204**	P		Pn	20 10 09.5	-2.4
PNHZ				S		S	20 11 09.3	-2.9
PRHZ	**Porangahau**	**5.37**	**199**	P		Pn	20 10 12.7	-1.7
PRWZ	**Pori Road**	**5.82**	**202**	P		Pn	20 10 18.7	-1.6

*JMA **23** 20:09:40.9±0.2, 35°N±1°×137°0E±1°.0, h336km±1km, MV3.2/32, MIKAWA BAY REGION*
*IDC **23** 20:09:42.8±0.9, 34°.84N×136°.96E, h321km±7km, mb3.1/7, mbtmp3.8/11, Error ellipse: s-maj=20.9km s-min=13.1km az=33.0*

ISC 23 20:09:42.4±0.8, 34°76N±0°08×137°00E±0°05, h325km±6km, n28, σ0 97/39, mb3.4/7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAA	**Atsumi**	**0.18**	**138**	*eP*		**Pn**	**20 10 23.4**	**+0.1**
JAA				*eS*		**S**	**20 10 56.0**	**0.0**
JIE	**Ise**	**0.44**	**213**	P		**Pn**	**20 10 23.6**	**-0.1**
JIE				S		**S**	**20 10 56.2**	**-0.5**
JYTA	**Yamagatataniai**	**0.85**	**346**	P		**Pn**	**20 10 25.4**	**+0.7**
JYTA				*eS*		**S**	**20 10 59.7**	**+1.1**
JWY	**Kouya**	**1.28**	**245**	P		**Pn**	**20 10 26.5**	**-0.3**
JWT	**Wachi**	**1.41**	**292**	P		**Pn**	**20 10 27.6**	**+0.3**
JWT				S		**S**	**20 11 03.1**	**-0.2**
JYN	**Shimob**	**1.46**	**60**	P		**Pn**	**20 10 27.9**	**+0.1**
JTNC	**Tanabenakahech**	**1.49**	**231**	P		**Pn**	**20 10 27.3**	**-0.7**
JKG	**Kaga**	**1.60**	**340**	*eP*		**Pn**	**20 10 29.1**	**+0.6**
JKG				*eS*		**S**	**20 11 06.6**	**+1.2**
JOD2	**Odawara 2**	**1.79**	**73**	P		**Pn**	**20 10 29.9**	**+0.1**
JRY	**Ryogami san**	**2.00**	**51**	P		**Pn**	**20 10 32.1**	**+0.8**
MAT	**Matsushiro**	**2.03**	**29**	P		**Pn**	**20 10 32.2**	**+0.7**
MAT				S		**S**	**20 11 12.0**	**+1.2**
MJAR	**Matsushiro Arr**	**2.03**	**29**	P		**Pn**	**20 10 30.1**	**-1.4**
	9.0nm,0.6s,baz=192,slow=9.2,SNR=32							
MJAR				S		**S**	**20 11 11.2**	**+0.3**
	2.3nm,0.7s,baz=54,slow=39,SNR=2.6							
JAI	**Aioi**	**2.32**	**246**	P		**Pn**	**20 10 32.9**	**-0.9**
JAG	**Ashikaga**	**2.60**	**50**	P		**Pn**	**20 10 35.5**	**-0.7**
JAG				S		**S**	**20 11 17.0**	**-2.2**
JHJ	**Hachijo jima 2**	**2.84**	**125**	P		**Pn**	**20 10 37.8**	**-0.6**
	40nm,0.4s,baz=343,slow=23,SNR=9.2							
JHJ				S		**S**	**20 11 25.7**	**+2.4**
	56nm,0.5s,baz=75,slow=23,SNR=1.7							
JHS	**Saijyo**	**3.20**	**275**	P		**Pn**	**20 10 41.7**	**0.0**
JHS				*eS*		**S**	**20 11 28.9**	**-0.5**
BSO1	**Boso 1**	**3.28**	**91**	*eP*		**Pn**	**20 10 40.9**	**-1.0**
BSO1				S		**S**	**20 11 28.0**	**-1.8**
KSRS	**Korea Array**	**7.82**	**293**	P		**Pn**	**20 11 34.7**	**+0.8**
	2.5nm,0.5s,baz=108,slow=12,SNR=15							
USRK	**Ussuriysk Ar.**	**10.18**	**339**	P		**Pn**	**20 12 02.2**	**-0.2**
	1.7nm,0.7s,baz=145,slow=8.8,SNR=2.6							
KLR	**Kul'dur**	**14.97**	**347**	P		**P**	**20 12 56.2**	**-1.4**
	0.7nm,0.3s,baz=178,slow=8.8,SNR=4.0							
SONM	**Songino Array**	**26.25**	**309**	P		**P**	**20 14 49.3**	**+0.7**
	1.4nm,0.6s,baz=124,slow=9.6,SNR=6.9							
	1.4nm,0.6s							
ZALV	**Zalesovo Beam**	**40.87**	**314**	P		**P**	**20 16 52.9**	**-0.3**
	0.9nm,0.4s,baz=111,slow=7.7,SNR=5.6							
	0.9nm,0.4s							
MKAR	**Makanchi Array**	**42.33**	**304**	P		**P**	**20 17 05.0**	**-0.2**
	1.0nm,0.5s,baz=86,slow=10,SNR=19							
	1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**44.62**	**309**	P		**P**	**20 17 22.6**	**-0.5**
	0.8nm,0.5s,baz=90,slow=7.9,SNR=7.0							
	0.8nm,0.5s							
ILAR	**Eielson Array**	**53.31**	**31**	P		**P**	**20 18 28.1**	**-0.3**
	0.5nm,0.8s,baz=279,slow=4.8,SNR=6.0							
	0.5nm,0.8s							
NVAR	**Mina Array Bea**	**79.21**	**51**	P		**P**	**20 21 13.0**	**+0.8**
	0.4nm,0.5s,baz=299,slow=6.1,SNR=3.4							
	0.4nm,0.5s							
PDAR	**Pinedale Array**	**81.79**	**43**	P		**P**	**20 21 26.2**	**+0.5**
	0.5nm,0.7s,baz=270,slow=1.5,SNR=3.9							
	0.5nm,0.7s							
LPAZ	**La Paz**	**150.93**	**57**	PKPbc		**PKiKP**	**20 29 00.3**	**+1.7**
	1.0nm,0.4s,baz=14,slow=3.1,SNR=3.6							

*HVO **23** 20:13:33.0±0.9, 19°.409N±0°.009×155°.628W±0°.009, h3km±5km, ML3.2/27, ML3.1/52(NEIC), Error ellipse: s-maj=1.7km s-min=0.4km az=222.0*

NEIC 23 20:13:33.6±1.0, 19°.422N±0°.009×155°.608W±0°.009, h5km±1km, Error ellipse: s-maj=2.4km s-min=1.5km az=1.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MWH	**Moku'aweowe**	**0.06**	**9**	Pg		Pg	20 13 35.4	-0.1
MWH						Sg	20 13 36.8	-0.1
MLOA	**Mauna Loa Obse**	**0.12**	**15**			Pg	20 13 36.5	+0.2
MLOA						Sg	20 13 38.8	+0.8
MLOA	**Mauna Loa Obse**	**0.12**	**15**	IAML			20 13 39.5	
	comp=N,5μm,0.6s							
MLOA				IAML			20 13 39.7	
	comp=E,9μm,0.7s							
ALEP	**Alea Permanent**	**0.12**	**344**			Pg	20 13 36.6	+0.3
ALEP						Sg	20 13 39.0	+0.9
AIN	**Ainahou**	**0.15**	**109**	Pg		Pg	20 13 37.0	+0.4
KHU	**Kahuku**	**0.17**	**182**			Pg	20 13 36.7	-0.4
HMH	**Humu'ula Sheep**	**0.21**	**33**			Pg	20 13 38.1	+0.2
HMH						Sg	20 13 42.2	+1.4
HMH	**Humu'ula Sheep**	**0.21**	**33**	IAML			20 13 42.8	
	comp=N,2μm,0.5s							
HMH				IAML			20 13 42.8	
	comp=E,3μm,0.5s							
MLH	**Mauna Loa**	**0.22**	**71**			Pg	20 13 38.3	+0.3
MLH	**Mauna Loa**	**0.22**	**71**	IAML			20 13 42.6	
	comp=E,3μm,0.5s							
MLH				IAML			20 13 45.4	
	comp=N,4μm,0.6s							
HTC	**Hot Caves**	**0.27**	**133**			Pg	20 13 38.6	-0.3
WRMHI	**West Rim**	**0.29**	**93**			Pg	20 13 39.2	-0.1
WRMHI				IAML			20 13 47.8	
	comp=N,4μm,0.5s							
UWE	**Uwekahuna**	**0.30**	**90**			Pg	20 13 39.6	+0.2
SDHHI	**Sand Hill**	**0.30**	**96**			Pg	20 13 39.4	0.0
SDHHI						Sg	20 13 43.5	+0.2
SDHHI	**Sand Hill**	**0.30**	**96**	IAML			20 13 46.3	
	comp=E,3μm,0.6s							
SDHHI				IAML			20 13 50.0	
	comp=N,3μm,0.5s							
CPH	**Captain Cook**	**0.30**	**283**			Pg	20 13 39.6	+0.2
OBL	**Observatory Le**	**0.31**	**91**			Pg	20 13 40.0	+0.4
OBL						Sg	20 13 43.9	+0.2
OBL	**Observatory Le**	**0.31**	**91**	IAML			20 13 48.0	
	comp=E,5μm,0.6s							
OBL				IAML			20 13 48.8	
	comp=N,8μm,0.4s							
HLP	**Hilina Pali**	**0.31**	**114**			Pg	20 13 39.5	-0.1
HLP						Sg	20 13 44.5	+0.8
HLP	**Hilina Pali**	**0.31**	**114**	IAML			20 13 46.7	
	comp=N,2μm,0.6s							
HLP				IAML			20 13 48.8	
	comp=E,3μm,1.1s							
NPH	**North Pit**	**0.31**	**92**			Sg	20 13 43.9	+0.1
NPH	**North Pit**	**0.31**	**92**	Pg		Pg	20 13 40.4	+0.8
NPH	**North Pit**	**0.31**	**92**	IAML			20 13 44.6	
	comp=E,859nm,0.8s							
NPH				IAML			20 13 50.3	
	comp=N,1μm,0.6s							
UWB	**Uwekahuna B**	**0.31**	**89**			Pg	20 13 39.5	-0.2
UWB				IAML			20 13 50.6	
	comp=N,2μm,0.6s							
RSD	**Rainshed**	**0.31**	**82**			Pg	20 13 39.9	+0.1
RSD						Sg	20 13 44.8	+0.9
RIM	**Rim**	**0.32**	**95**			Pg	20 13 39.4	-0.3
RIM				IAML			20 13 45.1	
	comp=E,2μm,0.7s							
RIM				IAML			20 13 47.8	
	comp=N,3μm,0.5s							
KHLU	**Kahalu`u**	**0.32**	**302**			Pg	20 13 40.3	+0.5
KHLU						Sb	20 13 46.2	-1.1
KHLU	**Kahalu`u**	**0.32**	**302**	IAML			20 13 49.5	
	comp=E,8μm,0.6s							
SBLHI	**Steaming Bluff**	**0.32**	**89**			Pg	20 13 39.7	-0.1
SBLHI						Sg	20 13 44.1	0.0
SBLHI	**Steaming Bluff**	**0.32**	**89**	IAML			20 13 49.1	
	comp=E,2μm,0.7s							
SBLHI				IAML			20 13 50.0	
	comp=N,2μm,0.7s							
KKO	**Keanakako`i**	**0.32**	**94**			Pg	20 13 39.9	0.0
KKO				IAML			20 13 47.9	
	comp=E,2μm,0.7s							
KKO				IAML			20 13 50.4	
	comp=N,3μm,0.6s							
HATHI	**Halema'uma'u T**	**0.33**	**90**			Pg	20 13 39.9	-0.1
HATHI	**Halema'uma'u T**	**0.33**	**90**	IAML			20 13 50.4	
	comp=N,2μm,0.8s							
HATHI				IAML			20 13 51.5	
	comp=E,3μm,0.6s							
BYL	**Byron's Ledge**	**0.33**	**92**			Pg	20 13 39.8	-0.2
BYL				IAML			20 13 48.6	
	comp=E,2μm,0.6s							
BYL				IAML			20 13 51.4	
	comp=N,2μm,0.8s							
HUH	**Hualalai**	**0.34**	**321**			Pb	20 13 41.3	-1.0
POHA	**Pohakuloa**	**0.34**	**12**			Sg	20 13 40.5	-4.4
POHA	**Pohakuloa**	**0.34**	**12**	Pg		Pg	20 13 40.2	-0.1
POHA				IAML			20 13 50.5	
	comp=N,2μm,0.5s							
POHA				IAML			20 13 52.5	
	comp=N,3μm,0.6s							
PUH	**Pauahi**	**0.37**	**97**			Pg	20 13 40.3	-0.5
PUH	**Pauahi**	**0.37**	**97**	IAML			20 13 47.8	
	comp=N,2μm,0.5s							
PUH				IAML			20 13 47.9	
	comp=E,2μm,0.5s							
KNHH	**Kane Nui o Ham**	**0.42**	**96**			Pg	20 13 41.1	-0.5
STCH	**Steam Cracks**	**0.46**	**94**			Pg	20 13 41.6	-0.8
STCH	**Steam Cracks**	**0.46**	**94**			Sg	20 13 49.3	+0.9
NPOC	**North of Pu'u**	**0.47**	**93**			Pg	20 13 42.6	-0.1
NPOC						Sg	20 13 49.7	+0.9
NPOC	**North of Pu'u**	**0.47**	**93**	IAML			20 13 50.4	
	comp=N,2μm,0.6s							
JCUZ	**Jacuzzi**	**0.48**	**94**			Pg	20 13 42.7	-0.1
JCUZ	**Jacuzzi**	**0.48**	**94**	IAML			20 13 51.0	
	comp=E,992nm,0.7s							
JCUZ				IAML			20 13 51.1	
	comp=N,1μm,0.9s							
JOKA	**Jonika Flow**	**0.57**	**89**			Pg	20 13 43.6	-0.9
HPAH	**Hawaii Prepara**	**0.61**	**352**			Pg	20 13 44.7	-0.6
HPAH						Sg	20 13 53.1	-0.2
MHA	**Mahukona**	**0.81**	**340**			Pg	20 13 47.6	-1.6

*IDC **23** 20:15:36.7±0.4, 4°.88S×153°.35E, h0km, mb4.9/28, mbtmp4.9/29, ML3.8/1, MS4.4/48, Error ellipse: s-maj=13.9km s-min=10.8km az=72.0*
*MOS **23** 20:15:41.3±1.2, 4°.81S×153°.15E, h36km, mb5.4/35, Error ellipse: s-maj=9.4km s-min=6.1km az=111.3*
*NEIC **23** 20:15:43.2±1.7, 4°.86S±0°.07×153°.17E±0°.06, h41km±5km, mb5.2/200, Error ellipse: s-maj=11.0km s-min=8.4km az=212.0*
*DJA **23** 20:15:45.0±0.4, 5°S±3°×15°3E±°, h51km±4km, M5.2/49, mb5.1/49, mB5.6/20, MLv5.5/2, Mw(mB)5.1/20, MwMwp5.6/1, Mwp5.7/1*
*GCMT **23** 20:15:45.2±0.3, 4°.98S±0°.02×153°.36E±0°.02, h34km, MW5.2/75, Moment Tensor Solution. s61,c89; s75,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.04±.35; $M_{\theta\theta}$-4.87±.21; $M_{\phi\phi}$-1.17±.23; $M_{r\theta}$3.46±.23; $M_{\theta\phi}$-3.29±.13; $M_{\phi r}$-0.37±.26; Best double couple: M_o7.32800×10^{16} NP1:ϕ_s76.00000°, δ59.00000°, λ109.00000°. NP2: ϕ_s223.00000°, δ36.00000°, λ61.00000°. Principal axes: T 7.2540, Plg69.0000°, Azm28.0000°; N 0.1480, Plg16.0000°, Azm246.0000°; P -7.4020, Plg12.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **23** 20:15:45.1±0.0, 4°.42S×153°.19E, h57km, mb5.0/66, mB5.2/31, Ms4.8/42, Ms7 4.6/41*

ISC 23 20:15:43.5±0.3, 4°.84S±0°.04×153°.19E±0°.04, h46km±2km, h46km:pP-P, n749, σ1§46/735, mb5.1/193, MS4.5/66, 52C-27D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**1.21**	**302**	Pn		**Pn**	**20 16 04.8**	**+0.7**
RABL	**Rabaul**	**1.21**	**302**	P		**Pn**	**20 16 05.3**	**+1.2**
KRVT	**Keravat (AS076**	**1.28**	**294**	Pn		**Pn**	**20 16 06.1**	**+1.1**
	2μm,0.3s,baz=244,slow=1.2,SNR=430							
KRVT						Sn		**Sn**	**20 16 24.1**	**+3.2**
	4μm,0.3s,baz=284,slow=23,SNR=9.0							
KRVT						LR	LR	20 16 34.6	
	comp=Z,20μm,18.1s,baz=218,slow=40							
HNR	**Honiara**	**8.11**	**125**	Pn		**Pn**	**20 17 42.7**	**+3.9**
	9.6nm,0.3s,baz=250,slow=3.0,SNR=16							
HNR						Sn		**Sn**	**20 19 13.0**	**+3.8**
	baz=1.9,slow=20							
HNR						LR	LR	20 20 48.8	
	comp=Z,6μm,20.0s,baz=288,slow=39							
HNR	**Honiara**	**8.11**	**125**			**Pn**	**20 17 39.2**	**+0.4**
HNR	**Honiara**	**8.11**	**125**	P		**Pn**	**20 17 39.2**	**+0.4**
HNR	**Honiara**	**8.11**	**125**	P		Pn	20 17 45.2	+6.4
PATS	**Pohnpei**	**12.67**	**24**	P		**Pn**	**20 18 40.5**	**-0.7**
	baz=12,SNR=25							
PATS	**Pohnpei**	**12.67**	**24**	Pn		**Pn**	**20 18 39.8**	**-1.4**
PATS	**Pohnpei**	**12.67**	**24**	P		**Pn**	**20 18 41.8**	**+0.6**
GENI	**Genyem**	**13.19**	**279**	P		**Pn**	**20 18 48.1**	**-0.2**
	3μm112nm,1.2s							
GENI	**Genyem**	**13.19**	**279**	P		**Pn**	**20 18 48.4**	**+0.1**
COEN	**Coen**	**13.40**	**227**	P		**P**	**20 18 57.5**	**-2.1**
	baz=14,SNR=5.8							
COEN	**Coen**	**13.40**	**227**	Pn		**Pn**	**20 18 50.7**	**-0.5**
COEN	**Coen**	**13.40**	**227**	P		**Pn**	**20 18 52.8**	**+1.5**
SMPI	**Sarmi**	**14.73**	**281**	P		**Pn**	**20 19 09.7**	**+0.6**
	1μm76nm,1.1s							
MTSU	**Mount Surprise**	**15.81**	**213**	P		**P**	**20 19 25.6**	**-0.7**
	baz=16,SNR=12							
MTSU	**Mount Surprise**	**15.81**	**213**	P		**Pn**	**20 19 24.0**	**+0.8**
CTA	**Charters Tower**	**16.60**	**203**	Pn		**Pn**	**20 19 33.2**	**+0.1**
	0.2nm,0.3s,baz=24,slow=13,SNR=15							
CTA						LR	LR	20 25 17.2	
	comp=Z,1μm,21.0s,baz=28,slow=35							
	22nm,1.0s							
CTAO	**Charters Tower**	**16.60**	**203**	P		**Pn**	**20 19 33.0**	**-0.1**
CTAO	**Charters Tower**	**16.60**	**203**	P		**Pn**	**20 19 33.0**	**-0.1**
CTAO					pmax	pmax		
	comp=Z,49nm,1.2s							
CTAO	**Charters Tower**	**16.60**	**203**	P		**Pn**	**20 19 33.6**	**+0.5**
SRPI	**Serui, Papua**	**17.18**	**279**	P		**P**	**20 19 42.7**	**+1.2**
	comp=Z,43nm,1.0s							
BAKI	**Biak**	**17.44**	**281**	P		**P**	**20 19 44.4**	**0.0**
	comp=Z,2μmcomp=Z,96nm,1.5s							
RK1H	**Rockhampton Ha**	**18.63**	**188**	P		**Pn**	**20 19 58.4**	**+0.3**
	comp=Z,31nm,1.0s							
KOUNC	**Koumac, New Ca**	**18.98**	**146**			**Pn**	**20 20 03.4**	**+1.0**
KOUNC	**Koumac, New Ca**	**18.98**	**146**	P		**Pn**	**20 20 03.3**	**+1.0**
KWAJ	**Kwajalein Atol**	**19.75**	**47**	P		**P**	**20 20 10.1**	**+0.3**
KWAJ	**Kwajalein Atol**	**19.75**	**47**	P		**P**	**20 20 10.1**	**+0.3**
KWAJ					pmax	pmax		
	comp=Z,225nm,1.0s							
GUMO	**Guam**	**20.08**	**336**	P		**P**	**20 20 14.0**	**+0.6**
	comp=Z,142nm,1.0s,baz=71,slow=22,SNR=2.2							
GUMO						LR	LR	20 29 02.4	
	comp=Z,811nm,18.1s,baz=150,slow=40							
	comp=Z,142nm,1.0s							
GUMO	**Guam**	**20.08**	**336**	P		**P**	**20 20 12.6**	**-0.8**
GUMO	**Guam**	**20.08**	**336**	P		**P**	**20 20 12.6**	**-0.8**
GUMO					pmax	pmax		
	comp=Z,479nm,1.2s							
GUMO	**Guam**	**20.08**	**336**	P		**P**	**20 20 14.4**	**+1.0**
QIS	**Mount Isa**	**20.46**	**219**	P		**P**	**20 20 18.3**	**+0.8**
	baz=21,SNR=10							
QIS	**Mount Isa**	**20.46**	**219**	P		**P**	**20 20 18.2**	**+0.7**
EIDS	**Eidsvold**	**20.52**	**185**	P		**P**	**20 20 18.9**	**+0.9**
	baz=21,SNR=14							
EIDS	**Eidsvold**	**20.52**	**185**	P		**P**	**20 20 18.6**	**+0.6**
EIDS	**Eidsvold**	**20.52**	**185**	P		Pn	20 20 19.7	-0.9
TARA	**Tarawa**	**20.65**	**73**	P		**P**	**20 20 18.8**	**-0.7**
FAKI	**Fak Fak**	**20.98**	**274**	P		**P**	**20 20 21.7**	**-1.5**
DZM	**Mont Dzumac**	**21.41**	**144**	LR		LR	20 27 42.2	
	comp=Z,3μm,21.3s,baz=310,slow=34							
DZM	**Mont Dzumac**	**21.41**	**144**	*eP*		**P**	**20 20 27.8**	**+0.1**
	comp=Z,188nm,0.8s							
DZM					*eS*	**S**	**20 24 16.2**	**-6.8**
	comp=Z,76nm,1.4s							
DZM					*eLR*	LR	20 25 39.7	
	comp=Z,4μm,22.8s							
DZM	**Mont Dzumac**	**21.41**	**144**	P		**P**	**20 20 27.5**	**-0.3**
DZM					IAmb	IAmb	20 20 46.0	
	comp=Z,92nm,0.7s							
ONTNC	**Ouen Toro**	**21.60**	**145**	P		**P**	**20 20 28.6**	**-1.0**
ONTNC					IAmb	IAmb	20 20 44.8	
	comp=Z,94nm,0.7s							
KDU	**Kakadu**	**21.90**	**248**	P		**P**	**20 20 33.4**	**+0.4**
	baz=22,SNR=8.3							
KDU	**Kakadu**	**21.90**	**248**	P		**P**	**20 20 32.3**	**-0.6**
OUENC	**Ouen Island, N**	**21.91**	**144**	P		**P**	**20 20 31.4**	**-1.5**
OUENC					IAmb	IAmb	20 20 53.6	
	comp=Z,136nm,1.2s							
OUENC	**Ouen Island, N**	**21.91**	**144**	P		**P**	**20 20 38.9**	**+5.9**
MARNC	**Mare, Loyalty**	**21.93**	**140**	P		**P**	**20 20 33.0**	**-0.1**
MARNC	**Mare, Loyalty**	**21.93**	**140**	P		**P**	**20 20 37.9**	**+4.7**
RMQ	**Roma**	**21.94**	**191**	P		**P**	**20 20 34.0**	**+0.6**
	baz=22,SNR=13							
RMQ	**Roma**	**21.94**	**191**	P		**P**	**20 20 36.7**	**+3.4**
SAUI	**Saumlaki**	**21.98**	**261**	P		**P**	**20 20 32.2**	**-1.6**
SAUI	**Saumlaki**	**21.98**	**261**	P		**P**	**20 20 34.1**	**+0.3**
	comp=Z,170nm,1.1s							
SAUI	**Saumlaki**	**21.98**	**261**	P		**P**	**20 20 35.2**	**+1.4**
SIJI	**Sorong**	**22.25**	**280**	P		**P**	**20 20 36.9**	**+0.1**
	comp=Z,75nm,0.7s,baz=203,slow=11,SNR=32							
SIJI						LR	LR	20 28 15.9	
	comp=Z,2μm,21.4s,baz=86,slow=34							
	comp=Z,75nm,0.7s							
SWI	**Sorong**	**22.25**	**280**	P		**P**	**20 20 37.0**	**+0.2**
	comp=Z,1μmcomp=Z,116nm,1.1s							
PINNC	**Pines Island,**	**22.41**	**143**	P		**P**	**20 20 38.7**	**+0.3**
PINNC					IAmb	IAmb	20 20 58.9	
	comp=Z,115nm,0.8s							
PINNC	**Pines Island,**	**22.41**	**143**	P		**P**	**20 20 40.4**	**+2.0**
MTN	**Manton Dam**	**23.19**	**248**	P		**P**	**20 20 45.9**	**-0.7**
	baz=24,SNR=18							
MTN	**Manton Dam**	**23.19**	**248**	P		**P**	**20 20 45.2**	**-1.3**
MTN					IAmb	IAmb	20 20 49.3	
	comp=Z,126nm,1.2s							
MTN						**S**	**20 24 53.4**	**-1.7**
MTN	**Manton Dam**	**23.19**	**248**	P		**P**	**20 20 46.5**	**0.0**
QLP	**Quilpie**	**23.26**	**201**	P		**P**	**20 20 46.7**	**-0.4**
	baz=24,SNR=9.2							
QLP	**Quilpie**	**23.26**	**201**	P		**P**	**20 20 47.0**	**-0.1**
WB0	**Warramunga Arr**	**23.57**	**229**	P		**P**	**20 20 48.7**	**-1.5**
WRAB	**Tennant Creek**	**23.70**	**229**	P		**P**	**20 20 49.8**	**-1.6**
WRAB	**Tennant Creek**	**23.70**	**229**	P		**P**	**20 20 49.8**	**-1.6**
WRAB					pmax	pmax		
	comp=Z,285nm,1.4s							
WB2	**Warramunga Arr**	**23.71**	**229**	P		**P**	**20 20 50.3**	**-1.2**
WRA	**Warramunga Arr**	**23.72**	**229**	P		**P**	**20 20 50.7**	**-0.9**
	comp=Z,38nm,1.0s,baz=51,slow=9.4,SNR=66							
WRA					PcP	**PcP**	**20 24 35.7**	**+0.8**
	comp=Z,5.9nm,0.9s,baz=62,slow=2.6,SNR=5.4							
WRA					S	**S**	**20 25 03.8**	**+0.1**
	comp=Z,14nm,1.2s,baz=53,slow=16,SNR=6.8							
WRA					ScP	**ScP**	**20 28 14.3**	**+4.7**
	comp=Z,2.9nm,0.9s,baz=56,slow=3.3,SNR=5.5							
WRA					LR	LR	20 29 47.0	
	comp=Z,980nm,21.9s,baz=36,slow=36							
	comp=Z,38nm,1.0s							
WRA	**Warramunga Arr**	**23.72**	**229**	P		**P**	**20 20 50.1**	**-1.4**
WRA	**Warramunga Arr**	**23.72**	**229**	*i* P		**P**	**20 20 50.7**	**-0.9**
WRA					pmax	pmax		
	comp=Z,39nm,1.0s							
AAI	**Ambon**	**24.95**	**272**	P		**P**	**20 21 02.0**	**-0.9**
	comp=Z,8μmcomp=Z,2μmcomp=Z,47nm,0.9s							
ARMA	**Armidale**	**25.49**	**183**	P		**P**	**20 21 07.8**	**0.0**
INKA	**Innaminka**	**25.68**	**206**	P		**P**	**20 21 11.7**	**+2.4**
LBMI	**Labuha**	**25.99**	**278**	P		**P**	**20 21 13.3**	**+0.9**
	comp=Z,1μmcomp=Z,99nm,1.2s							
NLAI	**Namlea**	**26.08**	**272**	P		**P**	**20 21 13.2**	**+0.1**
	comp=Z,4μmcomp=Z,26nm,0.9s							
KNRA	**Kununurra**	**26.31**	**244**	P		**P**	**20 21 14.3**

comp=Z,32nm,1.0s
KAPI Kappang 33.32 268*d i*P **P** **20 22 16.2 -1.1**
KAPI pmax pmax
comp=Z,27nm,1.1s
SPSI Sidrap Palu 33.34 270 P **P** **20 22 16.4 -1.1**
comp=Z,28nm,1.0s
ARPS Mount Arapiles 33.45 197 P **P** **20 22 17.3 -0.9**
baz=34,SNR=5.3
ARPS Mount Arapiles 33.45 197 P **P** **20 22 19.8 +1.6**
MPSI Mapaga 33.65 278 P **P** **20 22 19.7 -0.6**
comp=Z,20nm,0.8s
FORT Forrest 35.01 220 P **P** **20 22 30.3 -1.5**
FORT Forrest 35.01 220 P **P** **20 22 31.4 -0.4**
OUZ Omahuta 35.63 151 P **P** **20 22 35.9 -1.1**
OUZ IAmb IAmb 20 23 18.9
comp=Z,20nm,1.0s
AFI Afiamalu 35.67 107 LR LR 20 36 43.4
comp=Z,645nm,18.0s,baz=266,slow=36
MYLDM Lahad Datu 36.05 286 P **P** **20 22 38.0 -3.0**
MYLDM IAmb IAmb 20 23 08.8
comp=Z,46nm,1.1s
MBWA Marble Bar 36.29 240 **P** **20 22 40.2 -2.8**
MBWA Marble Bar 36.29 240 P **P** **20 22 39.9 -3.1**
MBWA IAmb IAmb 20 22 53.2
comp=Z,69nm,1.1s
MBWA Marble Bar 36.29 240 P **P** **20 22 42.1 -0.8**
MBWA Marble Bar 36.29 240 P **P** **20 22 41.8 -1.1**
MBWA pP **pP** **20 22 52.3 -2.7**
MBWA sP **sP** **20 22 58.6 -1.8**
PSA00 Pilbara Seismi 36.35 240 P **P** **20 22 41.3 -2.2**
PSA00 IAmb IAmb 20 22 53.7
comp=Z,41nm,1.2s
PSA00 Pilbara Seismi 36.35 240 P **P** **20 22 41.4 -2.0**
PSA00 IAmb IAmb 20 22 53.7
comp=Z,94nm,1.1s
PSA00 Pilbara Seismi 36.35 240 P **P** **20 22 42.3 -1.1**
BBKI Banjar Baru 38.27 271 P P 20 23 15.9 +16
KKM Kota Kinabalu 38.47 286 P **P** **20 22 58.3 -3.3**
KKM IAmb IAmb 20 23 24.8
comp=Z,43nm,1.4s
HIZ Hauiti 38.88 153 P **P** **20 23 02.3 -2.3**
MEEK Meekatharra 39.49 233 P **P** **20 23 09.2 -0.8**
baz=40,SNR=29
MEEK Meekatharra 39.49 233 P **P** **20 23 12.2 +2.2**
JOW Kunigami 39.65 324 P **P** **20 23 08.5 -2.7**
JOW Kunigami 39.65 324 P **P** **20 23 13.1 +1.9**
URZ Urewera 39.76 150 P **P** **20 23 10.8 -1.0**
comp=Z,24nm,1.0s,baz=46,slow=5.6,SNR=5.6
URZ LR LR 20 38 39.9
comp=Z,613nm,19.6s,baz=26,slow=35
comp=Z,24nm,1.0s
URZ Urewera 39.76 150 P **P** **20 23 11.5 -0.4**
URZ IAmb IAmb 20 23 28.1
comp=Z,84nm,1.5s
JHJ2 Mitsune 39.81 342 P **P** **20 23 10.2 -2.2**
QRZ Quartz Range 39.82 157 P **P** **20 23 13.2 +0.8**
JHJ Hachijo jima 2 39.83 342 LR LR 20 39 02.9
comp=Z,456nm,19.5s,baz=206,slow=35
BKZ Black Stump Fm 40.17 152 P **P** **20 23 15.2 -0.2**
NNZ Nelson 40.49 156 P **P** **20 23 18.3 +0.4**
NNZ IAmb IAmb 20 24 37.5
comp=Z,102nm,1.5s
THZ Tophouse 40.77 157 P **P** **20 23 21.0 +0.7**
THZ IAmb IAmb 20 23 35.8
comp=Z,38nm,0.9s
TUWZ Tuamarina 40.89 156 P **P** **20 23 21.9 +0.7**
BSWZ Blackbirch Sta 41.11 156 P **P** **20 23 21.8 -1.2**
SNZO South Karori 41.11 155 P **P** **20 23 23.9 +0.9**
SNZO IAmb IAmb 20 23 41.6
comp=Z,67nm,1.1s
FOZ Fox Glacier 41.24 162 P **P** **20 23 23.8 -0.2**
FOZ IAmb IAmb 20 24 59.5
comp=Z,74nm,1.3s
BFZ Birch Farm 41.26 153 P **P** **20 23 23.1 -1.2**
BFZ IAmb IAmb 20 23 25.3
comp=Z,40nm,1.0s
LTZ Lake Taylor 41.41 159 P **P** **20 23 23.8 -1.7**
LTZ IAmb IAmb 20 23 28.2
comp=Z,99nm,1.5s
MSWZ Moikau Station 41.42 155 P **P** **20 23 25.3 -0.4**
PBKI Pangkalan Bun 41.48 271 P **P** **20 23 27.8 +1.3**
comp=Z,5µmcomp=Z,142nm,1.0s
SBUM Sibu 41.57 279 P **P** **20 23 26.7 -0.6**
GIRL Giralia 41.59 241 P **P** **20 23 28.3 +1.1**
baz=42,SNR=3.4
GIRL Giralia 41.59 241 P **P** **20 23 27.6 +0.3**
OXZ Oxford 41.80 159 P **P** **20 23 27.4 -1.3**
OXZ IAmb IAmb 20 23 54.7
comp=Z,61nm,1.3s
RPZ Rata Peaks 41.81 161 P **P** **20 23 28.2 -0.6**
comp=Z,29nm,0.9s,baz=17,slow=4.4,SNR=6.6
RPZ LR LR 20 40 07.6
comp=Z,2µm,18.2s,baz=319,slow=35
comp=Z,29nm,0.9s
RPZ Rata Peaks 41.81 161 P **P** **20 23 29.6 +0.9**
YULB Yu-li 41.91 313 P **P** **20 23 28.1 -1.7**
STKI Sintang 41.95 275 P **P** **20 23 31.5 +1.2**
LBZ Lake Benmore 42.13 162 P **P** **20 23 30.3 -1.0**
JSU Suzuyama 42.15 331 P **P** **20 23 31.1 -0.6**
JSU IAmb IAmb 20 23 44.7
comp=Z,74nm,1.2s
NACB Ninganchiao 42.18 315 P **P** **20 23 30.9 -1.0**
NACB IAmb IAmb 20 23 52.5
comp=Z,41nm,0.9s
WKZ Wanaka 42.18 163 P **P** **20 23 32.0 +0.3**
DCZ Deep Cove 42.27 165 P **P** **20 23 32.8 +0.5**
TPUB Ta-pu 42.34 313 P **P** **20 23 31.9 -1.4**
SSLB Suanglung 42.40 314 P **P** **20 23 32.1 -1.7**
SSLB Suanglung 42.40 314 P **P** **20 23 35.7 +1.9**
MLZ Mavora Lakes 42.42 164 P **P** **20 23 34.5 +0.7**
MLZ IAmb IAmb 20 23 36.8
comp=Z,59nm,1.0s
KLBR Kellerberrin 42.57 227 P **P** **20 23 37.3 +2.2**
JOHN Johnston Islan 42.62 59 P **P** **20 23 33.3 -2.4**
MORW Morawa 42.63 231 P **P** **20 23 34.2 -1.4**
baz=43,SNR=5.8
MORW Morawa 42.63 231 P **P** **20 23 34.0 -1.7**
MORW IAmb IAmb 20 23 46.1
comp=Z,58nm,1.4s
MORW Morawa 42.63 231 P **P** **20 23 34.0 -1.7**
YHNB Yeheng 42.64 315 P **P** **20 23 33.9 -2.0**
YHNB IAmb IAmb 20 23 42.4
comp=Z,56nm,1.2s
YHNB Yeheng 42.64 315 P **P** **20 23 37.7 +1.8**
INU Inuyama 42.77 340 P **P** **20 23 34.7 -1.9**
BLDU Balidu 42.85 229 P **P** **20 23 36.4 -1.1**
baz=43,SNR=6.9
MJAR Matsushiro Arr 43.48 342 P **P** **20 23 40.7 -1.8**
comp=Z,1.1nm,0.5s,baz=157,slow=11,SNR=6.1
MJAR PcP **PcP** **20 25 31.1 +1.2**
comp=Z,11nm,0.9s,baz=163,slow=4.0,SNR=14
MJAR LR LR 20 39 54.3
comp=Z,600nm,21.5s,baz=168,slow=34
comp=Z,1.1nm,0.5s
MAJO Matsushiro 43.48 342 P **P** **20 23 41.3 -1.1**
MAJO Matsushiro 43.48 342 P **P** **20 23 41.3 -1.1**
MAJO pmax pmax
comp=Z,43nm,1.7s
JHS Saijyo 43.90 336 P **P** **20 23 45.4 -0.4**
JHS IAmb IAmb 20 24 18.7
comp=Z,71nm,1.8s
JSD Sado 44.85 343 P **P** **20 23 52.5 -0.8**
JSD PcP **PcP** **20 25 34.9 +0.4**
JSD IAmb IAmb 20 25 36.8
comp=Z,32nm,1.0s
LEM Lembang 45.37 265 LR LR 20 45 29.2
comp=Z,331nm,21.9s,baz=82,slow=39
TPI Tanjungpandan 45.48 271 P **P** **20 23 59.4 +0.7**
comp=Z,31nm,1.0s
KSBUS Busan 45.85 332 P **P** **20 24 00.4 -0.9**
KSBUS IAmb IAmb 20 24 42.6
comp=Z,367nm,2.0s
CNJI Cibinong 45.86 265 P **P** **20 24 01.4 -0.3**
comp=Z,272nm,1.0s
JTM Tenmabayashi 46.74 347 P **P** **20 24 08.1 -0.1**
NAWB Namwon 46.81 331 P **P** **20 24 08.6 -0.2**
NAWB IAmb IAmb 20 24 31.9
comp=Z,31nm,0.9s
TJN Taejon 47.59 332 P **P** **20 24 14.0 -0.9**
TJN Taejon 47.59 332*c i*P **P** **20 24 15.5 +0.6**
KSCHJ Chungju 47.71 332 P **P** **20 24 15.9 +0.1**
KSCHJ IAmb IAmb 20 25 38.9
comp=Z,65nm,1.8s
KSRS Korea Array 48.21 333 P **P** **20 24 20.2 +0.6**
comp=Z,7.3nm,0.8s,baz=150,slow=8.7,SNR=26
KSRS PcP **PcP** **20 25 48.1 +1.8**
comp=Z,2.5nm,0.8s,baz=165,slow=4.2,SNR=2.2
KSRS LR LR 20 44 08.7
comp=Z,184nm,18.4s,baz=155,slow=35
comp=Z,7.3nm,0.8s
KSAR Wonju Array Be 48.22 333 P **P** **20 24 18.5 -1.2**
KSAR PcP **PcP** **20 25 48.2 +1.8**
KSAR Wonju Array Be 48.22 333 P **P** **20 24 18.5 -1.2**
KSAR 20 25 48.2
KS19 Wonju Array Si 48.27 333 P **P** **20 24 19.4 -0.8**
KS19 IAmb IAmb 20 24 21.1
comp=Z,20nm,1.1s
RAR Rarotonga 48.41 114 LR LR 20 43 00.0
comp=Z,230nm,18.6s,baz=298,slow=34
KASI Kota Agung 48.49 267 P **P** **20 24 20.4 -1.8**
comp=Z,62nm,1.0s
SEHB SEOHWA 48.73 334 P **P** **20 24 22.9 -0.8**
SEHB IAmb IAmb 20 24 44.5
comp=Z,17nm,1.0s
QIZ Qiongzhong 48.83 300 P **P** **20 24 25.3 +0.6**
QIZ S **S** **20 31 26.3 +1.2**
QIZ LR LR
comp=Z,250nm,25.5s
QIZ LR LR
comp=Z,370nm,17.5s
QIZ LR LR
comp=Z,740nm,21.5s
INCN Inchon 48.83 332 P **P** **20 24 24.9 +0.4**
INCN Inchon 48.83 332 P **P** **20 24 24.9 +0.4**
INCN pmax pmax
comp=Z,65nm,1.1s
INCN Inchon 48.83 332 P **P** **20 24 25.7 +1.2**
INCN pP **pP** **20 24 36.8 +0.4**
INCN sP **sP** **20 24 43.3 +1.9**
LWLI Liwa 48.94 268 P **P** **20 24 25.8 -0.1**
comp=Z,59nm,0.9s
NJ2 Nanjing 49.12 321 ⇑P **P** **20 24 28.3 +1.6**
NJ2 pmax pmax
comp=Z,14nm,0.7s
NJ2 pmax pmax
comp=Z,350nm,12.0s
NJ2 LR LR
comp=Z,460nm,21.3s
NJ2 LR LR
comp=Z,310nm,13.7s
NJ2 LR LR
comp=Z,580nm,21.3s
MNAI Manna 50.07 268 P **P** **20 24 32.3 -2.0**
CNSH ChangSha 50.81 313 ⇑P **P** **20 24 41.0 +1.4**
CNSH S **S** **20 31 54.8 +2.3**
CNSH pmax pmax
comp=Z,18nm,1.2s
CNSH LR LR
comp=Z,410nm,13.0s
CNSH LR LR
comp=Z,330nm,14.5s
CNSH LR LR
comp=Z,450nm,21.6s
MSHR Mys Shultsa 51.26 339⇓*eP* **P** **20 24 44.0 +1.3**
MSHR pmax pmax
comp=Z,8.0nm,1.0s
USA0B Ussuriysk Arra 52.41 341 P **P** **20 24 50.8 -0.5**
USA0B Ussuriysk Arra 52.41 341 P **P** **20 24 50.8 -0.5**
USA0B pmax pmax
comp=Z,16nm,1.1s
USRK Ussuriysk Ar. 52.41 341 P **P** **20 24 52.0 +0.7**
comp=Z,10nm,0.8s,baz=159,slow=7.4,SNR=25
USRK LR LR 20 43 18.2
comp=Z,182nm,21.2s,baz=233,slow=32
comp=Z,10nm,0.8s
USRK Ussuriysk Ar. 52.41 341 P **P** **20 24 51.1 -0.1**
USRK Ussuriysk Ar. 52.41 341 P **P** **20 24 51.2 -0.1**
TIA Tai'an 52.98 323 ⇑P **P** **20 24 56.0 +0.3**
TIA pmax pmax
comp=Z,12nm,0.8s
MDJ Mudanjiang 53.59 339 P **P** **20 24 60.0 0.0**
MDJ IAmb IAmb 20 25 01.9
comp=Z,36nm,1.2s
MDJ PcP **PcP** **20 26 05.9 -0.2**
KIP Kipapa 54.46 59⇑*eP* **P** **20 25 08.9 +2.1**
KIP pmax pmax
comp=Z,30nm,0.9s
ENH Enshi 54.47 313 P **P** **20 25 06.4 -0.3**
ENH Enshi 54.47 313 P **P** **20 25 07.4 +0.7**
ENH pP **pP** **20 25 19.0 -0.5**
ENH sP **sP** **20 25 24.9 +0.1**
CN2 Changchun 54.49 336 *eP* **P** **20 25 06.6 0.0**
CN2 PcP **PcP** **20 26 10.4 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
OPA Opana 54.57 59 P **P** **20 25 08.0 +0.5**
OPA Opana 54.57 59 P **P** **20 25 08.0 +0.5**
OPA pmax pmax
comp=Z,87nm,1.0s
GYA Guiyang 54.73 307 ⇑P **P** **20 25 09.8 +1.0**
GYA pP sP 20 25 26.8 0.0
GYA pmax pmax
comp=Z,12nm,0.8s
GYA LR LR
comp=Z,310nm,17.2s
GYA LR LR
comp=Z,660nm,20.1s
GYA LR LR
comp=Z,880nm,21.3s
HNS HongShan 55.21 323 ⇑P **P** **20 25 12.8 +0.9**
HNS pmax pmax
comp=Z,33nm,1.5s
BNX BinXian 55.35 338 ⇑P **P** **20 25 12.8 +0.1**
BNX pmax pmax
comp=Z,30nm,1.5s
BNX pmax pmax
comp=Z,200nm,6.7s
BJT Baijiatuan 56.13 326 P **P** **20 25 18.5 +0.1**
BJT Baijiatuan 56.13 326 P **P** **20 25 18.5 +0.1**
BJT pmax pmax
comp=Z,9.0nm,1.0s
BJI Beijing 56.14 326 P **P** **20 25 19.5 +1.0**
BJI pP **sP** **20 25 34.6 -1.3**
BJI sP pP 20 25 40.5 +10
BJI PcP **PcP** **20 26 16.8 +0.8**
BJI S **S** **20 33 04.6 +0.2**
BJI pmax pmax
comp=Z,7.0nm,1.3s
BJI LR LR
comp=Z,47nm,20.2s
BJI LR LR
comp=Z,320nm,20.0s
BJI LR LR
comp=Z,500nm,20.9s
XAN Xi'an 56.92 316 ⇑P **P** **20 25 24.4 +0.1**
XAN pP pP 20 25 38.6 +1.5
XAN sP sP 20 25 46.8 +4.4
XAN pmax pmax
comp=Z,20nm,1.2s
XAN LR LR
comp=Z,460nm,17.8s
XAN LR LR
comp=Z,630nm,19.4s
XAN LR LR
comp=Z,950nm,20.6s
KLR Kul'dur 56.99 343 LR LR 20 50 34.1
comp=Z,64nm,18.7s,baz=170,slow=37
KLR Kul'dur 56.99 343*c i*P **P** **20 25 24.9 +0.5**
KLR *i* *PP **pwP** **20 25 38.7 +1.8**
KLR pmax pmax
comp=Z,91nm,1.7s
LHMI Lhok Sumawe 57.06 279 P **P** **20 25 25.3 -0.2**
KMI Kunming 57.33 304 ⇑P **P** **20 25 29.1 +1.5**
KMI pP sP 20 25 45.6 0.0
KMI pmax pmax
comp=Z,15nm,1.0s
KMI LR LR
comp=Z,230nm,18.6s
KMI LR LR
comp=Z,560nm,20.3s
KMI LR LR
comp=Z,630nm,23.4s
PPT Papeete 57.34 108 LR LR 20 48 01.8
comp=Z,241nm,18.0s,baz=294,slow=34
PPT2 Papeete2 57.34 108 *e*LR LR 20 42 20.7
comp=Z,417nm,23.2s
CRAI Chiangrai 57.54 298 P **P** **20 25 29.3 +0.4**
CRAI IAmb IAmb 20 25 30.6
comp=Z,11nm,0.8s
PET Petropavlovsk 57.83 4⇑*eP* **P** **20 25 31.6 +1.4**
PET pmax pmax
comp=Z,22nm,1.3s
PEA0B Petropavlovsk- 57.85 3 P **P** **20 25 31.1 +0.7**
PEA0B Petropavlovsk- 57.85 3*de*P **P** **20 25 32.1 +1.7**
PETK Petropavlovsk- 57.85 3 P **P** **20 25 31.4 +1.1**
comp=Z,20nm,0.9s,baz=180,slow=8.1,SNR=14
PETK LR LR 20 46 24.6
comp=Z,276nm,21.8s,baz=188,slow=32
comp=Z,20nm,0.9s
PETK Petropavlovsk- 57.85 3 P **P** **20 25 30.2 -0.2**
PETK Petropavlovsk- 57.85 3 P **P** **20 25 30.2 -0.2**
TBI Tubuai 58.19 114 *e*LR LR 20 42 43.8
comp=Z,853nm,30.0s
CM31 Chiang Mai Arr 58.25 295 P **P** **20 25 34.2 +0.4**
CM31 IAmb IAmb 20 25 36.2
comp=Z,21nm,0.9s
CMAR Chiang Mai Arr 58.25 295 P **P** **20 25 35.0 +1.2**
comp=Z,10.0nm,0.8s,baz=114,slow=5.2,SNR=74
CMAR LR LR 20 49 03.5
comp=Z,304nm,21.3s,baz=95,slow=34
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 58.25 295 P **P** **20 25 34.2 +0.4**
CMAR Chiang Mai Arr 58.25 295 *i* P **P** **20 25 35.0 +1.2**
CMAR pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 58.36 295 P **P** **20 25 34.9 +0.3**
CHTO IAmb IAmb 20 25 47.4
comp=Z,20nm,1.1s
CHTO Chiang Mai 58.36 295 P **P** **20 25 34.9 +0.3**
CHTO pmax pmax
comp=Z,20nm,1.1s
CHTO Chiang Mai 58.36 295 P **P** **20 25 35.4 +0.8**
CHTO pP **pP** **20 25 46.4 -0.8**
PZH PanZhiHua 58.71 305 P **P** **20 25 38.3 +1.2**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.4s
XLT XiLinHaoTe 58.90 329⇑*iP* **P** **20 25 38.5 +0.5**
XLT pP sP 20 25 55.5 -0.1
XLT sP pwP 20 26 00.1 +7.3
XLT PcP **PcP** **20 26 28.3 +1.4**
XLT S **S** **20 33 40.4 -0.3**
XLT sS sS 20 34 06.8 +3.6
XLT SS **SS** **20 37 32.5 -2.6**
XLT pmax pmax
comp=Z,29nm,0.8s
XLT pmax pmax
comp=Z,320nm,4.1s
XLT LR LR
comp=Z,370nm,17.0s
XLT LR LR
comp=Z,430nm,19.2s
CD2 Chengdu 59.06 310 P **P** **20 25 40.1 +0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,550nm,18.6s
CD2 LR LR
comp=Z,610nm,21.6s
CD2 LR LR
comp=Z,670nm,26.9s
SHEM Shemya Is, Ala 60.02 15 LR LR 20 47 05.2
comp=Z,905nm,22.0s,baz=238,slow=32
BTO Baotou 60.06 323 *eP* **P** **20 25 48.9 +2.8**
BTO S **S** **20 33 58.8 +2.8**
BTO LR LR
comp=Z,900nm,24.5s
BTO LR LR
comp=Z,830nm,19.0s
HIA Hailar 61.23 336 P **P** **20 25 53.3 -0.5**
HIA Hailar 61.23 336 P **P** **20 25 53.3 -0.5**
HIA pmax pmax
comp=Z,8.0nm,0.8s
LZH Lanzhou 61.53 316 ⇑P **P** **20 25 58.0 +1.7**
LZH pP pP 20 26 11.3 +2.0
LZH sP sP 20 26 21.3 +6.8
LZH pmax pmax
comp=Z,37nm,1.5s
LZH LR LR
comp=Z,310nm,17.9s
LZH LR LR
comp=Z,490nm,18.5s
LZH LR LR
comp=Z,630nm,19.2s
ADK Adak 62.06 21 P **P** **20 25 59.5 +0.2**
ADK Adak 62.06 21 P **P** **20 25 59.5 +0.2**
ADK pmax pmax
comp=Z,83nm,1.1s
ZEA Zeya 62.29 343 *eP* **P** **20 26 01.4 +0.6**
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.1s
DRV Dumont d'Urvil 62.40 186 P **P** **20 26 01.6 +0.3**
DRV x x 20 26 05.4
DRV pP **pP** **20 26 12.4 -1.4**
DRV sP **pwP** **20 26 17.3 +0.6**
MA2 Magadan 64.24 359 LR LR 20 54 46.2
comp=Z,148nm,19.2s,baz=130,slow=36
MA2 Magadan 64.24 359*de*P **P** **20 26 14.6 +1.0**
MA2 pmax pmax
comp=Z,71nm,1.3s
CIT Chita 65.90 334 *eP* **P** **20 26 24.6 0.0**
CIT *e* 20 26 31.2
CIT *e* 20 26 44.0
CIT *e* 20 28 51.4
CIT pmax pmax
comp=Z,53nm,1.7s
GTA Gaotai 65.95 317 ⇓P **P** **20 26 22.5 -2.8**
GTA pP pP 20 26 38.0 -0.4
GTA sP sP 20 26 43.8 +0.1
GTA pmax pmax
comp=Z,19nm,1.2s
GTA pmax pmax
comp=Z,140nm,5.8s
GTA LR LR
comp=Z,280nm,17.8s
GTA LR LR
comp=Z,390nm,19.3s
GTA LR LR
comp=Z,540nm,19.6s
ULN Ulaanbaatar 66.23 328 P **P** **20 26 26.9 -0.1**
ULN Ulaanbaatar 66.23 328*c i*P **P** **20 26 27.9 +0.9**
ULN pmax pmax
comp=Z,9.0nm,1.0s
ULN Ulaanbaatar 66.23 328 P **P** **20 26 28.5 +1.5**
ULN pP **pP** **20 26 40.9 +1.3**
ULN sP **sP** **20 26 45.6 +1.0**
SONM Songino Array 66.56 328 P **P** **20 26 30.6 +1.6**
comp=Z,2.7nm,0.5s,baz=147,slow=6.0,SNR=13
SONM LR LR 20 56 12.9
comp=Z,246nm,18.7s,baz=116,slow=36
comp=Z,2.7nm,0.5s
SONM Songino Array 66.56 328 P **P** **20 26 29.7 +0.7**
SONM IAmb IAmb 20 26 31.6
comp=Z,23nm,1.6s
SONM Songino Array 66.56 328 P **P** **20 26 29.7 +0.7**
SONM pmax pmax
comp=Z,23nm,1.6s
SHL Shillong 66.66 300 P **P** **20 26 28.7 -1.5**
SHL IAmb IAmb 20 26 31.6
comp=Z,24nm,1.0s
SHL Shillong 66.66 300 P **P** **20 26 28.7 -1.5**
SHL pmax pmax
comp=Z,24nm,1.0s
UNV Unalaska Valle 67.49 25 P **P** **20 26 35.1 +0.5**
baz=224
SEY Seymchan 67.58 360*de*P **P** **20 26 36.1 +1.1**
SEY pmax pmax
comp=Z,24nm,1.7s
GOMU GeErMu 68.08 312 P **P** **20 26 40.0 +0.8**
GOMU PcP **PcP** **20 27 08.8 +3.8**
GOMU S **S** **20 35 38.3 +2.3**
GOMU pmax pmax
comp=Z,16nm,0.7s
GOMU LR LR
comp=Z,270nm,17.6s
GOMU LR LR
comp=Z,240nm,17.2s
GOMU LR LR
comp=Z,240nm,17.3s
CASY Casey 68.10 197 P **P** **20 26 37.3 -0.9**

CASY IAmb IAmb 20 26 51.6
comp=Z,34nm,1.6s
CASY Casey 68.10 197 P P 20 26 38.2 0.0
CASY pP pP 20 26 49.3 -1.6
LSA Lhasa 68.58 304 P P 20 26 42.1 -0.5
LSA Lhasa 68.58 304 P P 20 26 42.1 -0.5
LSA pmax pmax
comp=Z,8.0nm,0.7s
YAK Yakutsk 69.09 348 LR LR 20 55 34.9
comp=Z,124nm,20.7s,baz=102,slow=35
YAK Yakutsk 69.09 348 P P 20 26 44.5 +0.1
YAK Yakutsk 69.09 348 *e*P **P 20 26 45.2 +0.8**
YAK *e* 20 27 08.7
YAK *e* 20 29 20.4
YAK *e*S **S 20 35 45.2 -0.9**
YAK *e**SS **SKiKP 20 36 23.4 -7.9**
YAK *e* 20 36 43.6
YAK *e*SS **SS 20 40 17.2 +4.2**
YAK pmax pmax
comp=Z,75nm,1.2s
YAK pmax pmax
comp=N,32nm,1.5s
YAK pmax pmax
comp=E,11nm,1.4s
YAK pmax pmax
comp=Z,309nm,4.6s
YAK pmax pmax
comp=E,201nm,4.1s
YAK pmax pmax
comp=N,94nm,4.0s
YAK smax smax
comp=E,39nm,1.8s
YAK smax smax
comp=N,32nm,1.6s
FALS False Pass 69.49 25 P P 20 26 47.2 +0.2
ZAK Zakamensk 69.73 329 *e*P **P 20 26 48.7 -0.1**
ZAK pmax pmax
comp=Z,14nm,1.1s
BOD Bodaibo 69.97 339 *e*P **P 20 26 47.5 -2.4**
BOD pmax pmax
comp=Z,31nm,1.5s
TAPN Taplejung 70.76 301 *e*P **P 20 26 56.3 +0.5**
ODAN Odare 70.90 300 *e*P **P 20 26 57.2 +0.6**
CHNA Chernabura Isl 71.14 27 P P 20 26 56.8 -0.3
baz=231
RAMN Ramite 71.60 300 *e*P **P 20 27 01.2 +0.3**
JIRN Jiri 72.14 301 *e*P **P 20 27 04.7 +0.4**
GUN Gumba 72.47 301 *e*P **P 20 27 06.6 +0.4**
CHGN Chignik 72.58 26 P P 20 27 06.3 +0.5
baz=231
VNDA Vanda 72.78 178 P P 20 27 07.5 +0.8
comp=Z,8.2nm,0.8s,baz=324,slow=6.7,SNR=28
comp=Z,8.2nm,0.8s
VNDA Vanda 72.78 178 P P 20 27 06.2 -0.5
VNDA Vanda 72.78 178 P P 20 27 06.2 -0.5
VNDA pmax pmax
comp=Z,13nm,1.0s
PKI Pulchoki 72.79 301 *e*P **P 20 27 07.9 -0.2**
PKIN Phulchoki 72.80 301 *e*P **P 20 27 08.1 0.0**
KNGR Kungurtug, Tuv 72.93 327*ce*P **P 20 27 09.4 +1.2**
KNGR pmax pmax
comp=Z,25nm,1.4s
KKN Kakani 72.95 301 *e*Pg **P 20 27 09.2 +0.3**
DMN Daman 73.06 301 *e*P **P 20 27 10.1 +0.5**
BILL Bilibino 73.29 5 *i* P **P 20 27 10.8 +1.0**
BILL *i* 20 27 25.2
BILL pmax pmax
comp=Z,14nm,0.8s
GAMB Gambell 73.31 15 P P 20 27 10.3 +0.4
baz=217
SBA Scott Base 73.32 177 P P 20 27 09.9 +0.1
SBA IAmb IAmb 20 27 14.7
comp=Z,21nm,1.1s
SBA Scott Base 73.32 177 P P 20 27 09.9 +0.1
SBA pmax pmax
comp=Z,21nm,1.1s
PALK Pallekele 73.33 279 LR LR 21 00 45.6
comp=Z,88nm,20.3s,baz=220,slow=37
CHIR Chirikof Islan 73.54 27 P P 20 27 11.6 +0.2
baz=234
GKN Gorkha 73.56 301 *e*P **P 20 27 12.7 +0.3**
R16K Pilot Point 73.73 25 P P 20 27 12.6 0.0
baz=232
R17K Ugashik Creek 74.28 26 P P 20 27 16.0 +0.2
baz=233
DANN Dangsing 74.40 301 *e*P **P 20 27 18.1 +0.6**
P16K Nushagak River 74.48 24 P P 20 27 16.5 -0.3
baz=231
SII Sitkinak Islan 74.62 27 P P 20 27 18.2 +0.4
SII Sitkinak Islan 74.62 27 P P 20 27 18.1 +0.4
baz=235
O16K Kokwok River B 74.79 23 P P 20 27 18.9 +0.2
baz=231
N16K Nishlik Lake 75.09 22 P P 20 27 21.7 +1.2
baz=230
O17K Koliganek Bris 75.30 24 P P 20 27 21.8 +0.2
baz=232
OHAK Old Harbor 75.40 27 P P 20 27 22.0 -0.2
OHAK IAmb IAmb 20 28 21.4
comp=Z,35nm,1.4s
OHAK Old Harbor 75.40 27 P P 20 27 23.4 +1.2
baz=236
ANM Nome 75.69 17 P P 20 27 24.5 +0.7
baz=223
TNA Tin City 75.72 16 P P 20 27 24.5 +0.6
baz=220
P18K Big Mountain, 75.82 24 P P 20 27 25.5 +0.8
baz=234
KDAK Kodiak Island 76.03 27 P P 20 27 26.7 +0.8
baz=236
WMQ Urumqi 76.03 317 *e*P **P 20 27 27.6 +1.3**
WMQ PcP **PcP 20 27 33.9 -4.5**
WMQ sP sP 20 27 48.4 +4.5
WMQ pmax pmax
comp=Z,44nm,1.5s
WMQ LR LR
comp=Z,170nm,21.9s
O18K Koktuh Hills 76.11 24 P P 20 27 27.1 +0.8
baz=234
Q19K Cape Douglas, 76.22 25 P P 20 27 26.6 -0.3
Q19K Cape Douglas, 76.22 25 P P 20 27 26.7 -0.3
baz=235
N18K Kilae Creek 76.33 23 P P 20 27 28.1 +0.5
N18K IAmb IAmb 20 27 29.9
comp=Z,40nm,1.4s
N18K Kilae Creek 76.33 23 P P 20 27 28.5 +0.9
baz=233,SNR=5.6
Q20K Shuyak Island 76.57 26 P P 20 27 29.1 +0.3
baz=236
O19K Port Alsworth 76.67 24 P P 20 27 29.7 +0.3
baz=234
P19K Oil Pt 76.80 25 P P 20 27 29.6 -0.6
baz=236
HYBB Hyderabad (bro 76.88 289 *e*P **P 20 27 31.1 -0.4**
HYBB *e*pP **PcP 20 27 43.3 +0.8**
N19K Bonanza Creek 76.97 23 P P 20 27 31.1 -0.1
baz=234
O20K Slope Mountain 77.30 25 P P 20 27 33.2 +0.1
baz=236
CNPM China Poot 77.58 25 P P 20 27 35.1 +0.5
L19K White Mountain 77.63 22 P P 20 27 35.1 +0.3
L19K IAmb IAmb 20 27 36.9
comp=Z,25nm,1.1s
L19K White Mountain 77.63 22 P P 20 27 35.2 +0.3
baz=234,SNR=16
M19K Big River Lodg 77.64 23 P P 20 27 35.2 +0.3
M19K IAmb IAmb 20 27 37.9
comp=Z,18nm,1.0s
M19K Big River Lodg 77.64 23 P P 20 27 35.6 +0.7
baz=234,SNR=11
TTA Tatalina 77.66 21 P P 20 27 35.0 0.0
TTA IAmb IAmb 20 27 36.8
comp=Z,18nm,1.2s
TTA Tatalina 77.66 21 P P 20 27 35.0 0.0
TTA pmax pmax
comp=Z,18nm,1.2s
TTA Tatalina 77.66 21 P P 20 27 35.2 +0.2
baz=232
BRSE Bradley Lake S 77.91 25 P P 20 27 36.7 +0.3
baz=238
TIXI Tiksi 77.98 352 LR LR 20 57 17.3
comp=Z,80nm,21.3s,baz=180,slow=32
TIXI Tiksi 77.98 352 P P 20 27 36.7 +0.2
TIXI IAmb IAmb 20 27 39.8
comp=Z,35nm,1.2s
TIXI Tiksi 77.98 352*de*P **P 20 27 38.8 +2.3**

TIXI pmax pmax
comp=Z,30nm,1.3s
M20K Styx River 78.12 23 P P 20 27 37.6 0.0
M20K Styx River 78.12 23 P P 20 27 38.3 +0.7
baz=235,SNR=9.3
L20K Farewell, AK 78.18 22 P P 20 27 38.7 +0.9
baz=234,SNR=12
GCSA Galena City Sc 78.49 20 P P 20 27 39.9 +0.4
baz=231
K20K Telida 78.62 21 P P 20 27 40.9 +0.6
K20K IAmb IAmb 20 27 43.1
comp=Z,23nm,1.2s
K20K Telida 78.62 21 P P 20 27 41.2 +0.9
baz=234,SNR=11
SEW Seward 78.65 25 P P 20 27 40.7 +0.3
baz=239
RC01 Rabbit Creek A 79.04 25 IAmb IAmb 20 27 44.9
comp=Z,31nm,1.2s
RC01 Rabbit Creek A 79.04 25 P P 20 27 42.5 -0.1
baz=238
PPLA Purkeypile 79.06 22 P P 20 27 42.6 -0.2
PPLA IAmb IAmb 20 27 44.5
comp=Z,31nm,1.3s
PPLA Purkeypile 79.06 22 P P 20 27 42.5 -0.3
baz=236
J20K Nowinta River 79.08 21 IAmb IAmb 20 27 45.7
comp=Z,33nm,1.1s
J20K Nowinta River 79.08 21 P P 20 27 43.8 +1.0
baz=234,SNR=22
ZSN Zaisan 79.15 320*c i*P **P 20 27 44.5 +1.0**
ZSN pmax pmax
comp=Z,18nm,1.0s
ZSN Zaisan 79.15 320⇑*i*P **P 20 27 44.5 +1.0**
comp=Z,18nm,1.0s,baz=320
M22K Willow 79.24 24 IAmb IAmb 20 27 46.5
comp=Z,34nm,1.1s
M22K Willow 79.24 24 P P 20 27 43.9 +0.3
baz=238
CAST Castle Rocks 79.39 22 P P 20 27 44.0 -0.5
baz=236,SNR=16
P23K Montague Islan 79.48 26 P P 20 27 45.3 +0.2
baz=241
PWL Port Wells 79.51 25 P P 20 27 45.5 +0.3
PWL IAmb IAmb 20 27 46.4
comp=Z,39nm,1.0s
PWL Port Wells 79.51 25 P P 20 27 45.2 0.0
baz=240
CUT Chulitna 79.53 23 P P 20 27 45.2 0.0
baz=238
PMR Palmer 79.56 24 IAmb IAmb 20 27 46.2
comp=Z,64nm,1.7s
PMR Palmer 79.56 24 P P 20 27 45.4 +0.1
baz=239
CHUM Lake Minchumin 79.57 21 P P 20 27 45.7 +0.3
baz=236,SNR=18
GHO Glory Hole Cre 79.73 24 IAmb IAmb 20 27 57.1
comp=Z,23nm,1.2s
KNK Knik Glacier 79.74 25 IAmb IAmb 20 27 47.9
comp=Z,62nm,1.6s
KNK Knik Glacier 79.74 25 P P 20 27 46.2 -0.2
baz=240
KTH Kantishna Hill 79.90 22 P P 20 27 46.5 -0.8
KTH IAmb IAmb 20 27 48.9
comp=Z,20nm,1.1s
SML Sawmill 79.99 24 P P 20 27 48.0 +0.2
baz=240,SNR=10.0
GLI Glacier Island 80.05 25 P P 20 27 48.2 +0.1
baz=241
TRF Thorofare Moun 80.08 22 P P 20 27 48.7 +0.3
baz=238
BPAW Bear Paw Mtn. 80.17 22 P P 20 27 48.1 -0.6
baz=237,SNR=7.4
M23K Glacier View 80.23 24 P P 20 27 49.3 +0.2
baz=240
H21K Melozitna Rive 80.41 20 IAmb IAmb 20 27 51.8
comp=Z,24nm,1.4s
H21K Melozitna Rive 80.41 20 P P 20 27 50.5 +0.5
baz=235,SNR=11
SCM Sheep Creek Mo 80.42 24 IAmb IAmb 20 27 52.3
comp=Z,34nm,1.3s
SCM Sheep Creek Mo 80.42 24 P P 20 27 50.3 +0.1
baz=241
I21K Tanana 80.42 20 P P 20 27 50.6 +0.7
I21K IAmb IAmb 20 27 53.1
comp=Z,24nm,1.1s
I21K Tanana 80.42 20 P P 20 27 50.3 +0.3
baz=236,SNR=20
WAT1 Susitna Watana 80.43 23 P P 20 27 49.6 -0.5
baz=239
RND Reindeer 80.61 23 IAmb IAmb 20 27 51.5
comp=Z,18nm,1.0s
MK31 Makanchi Array 80.61 319 IAmb IAmb 20 27 53.6
comp=Z,40nm,1.1s
MK31 Makanchi Array 80.61 319*c i*P **P 20 27 52.1 +0.7**
MKAR Makanchi Array 80.61 319 P P 20 27 52.4 +0.9
comp=Z,37nm,1.0s,baz=101,slow=6.3,SNR=85
MKAR LR LR 21 03 47.0
comp=Z,219nm,19.3s,baz=96,slow=36
comp=Z,37nm,1.0s
MKAR Makanchi Array 80.61 319 P P 20 27 52.2 +0.7
MKAR Makanchi Array 80.61 319 *i* P **P 20 27 52.4 +0.9**
MKAR pmax pmax
comp=Z,38nm,1.0s
WAT6 Susitna Watana 80.62 24 P P 20 27 50.7 -0.7
baz=240
G21K Allakaket 80.68 19 P P 20 27 52.0 +0.6
baz=234
DIV Divide 80.73 25 IAmb IAmb 20 27 54.0
comp=Z,21nm,1.1s
MCK McKinley 80.75 22 P P 20 27 51.1 -0.7
baz=239,SNR=17
MLY Manley 80.78 21 IAmb IAmb 20 27 53.9
comp=Z,19nm,1.0s
MLY Manley 80.78 21 P P 20 27 52.0 +0.1
baz=237
KAIM Kayak Island 80.78 27 P P 20 27 53.1 +1.1
baz=244
MAKZ Makanchi 80.82 319 P P 20 27 53.3 +0.7
MAKZ Makanchi 80.82 319 P P 20 27 53.3 +0.7
MAKZ pmax pmax
comp=Z,61nm,1.0s
KLU Klutina 80.84 25 IAmb IAmb 20 27 54.7
comp=Z,46nm,1.3s
KLU Klutina 80.84 25 P P 20 27 52.7 +0.3
baz=242,SNR=8.4
DHY Denali Highway 81.02 23 P P 20 27 53.2 -0.2
DHY IAmb IAmb 20 27 55.3
comp=Z,36nm,1.6s
DHY Denali Highway 81.02 23 P P 20 27 53.2 -0.2
baz=240
M24K Tolsona, Glenn 81.03 25 P P 20 27 53.6 +0.2
baz=242
H22K Ishtalitna Cre 81.03 20 P P 20 27 54.0 +0.7
baz=236
F21K Alatna River 81.11 18 P P 20 27 53.9 +0.3
baz=234
NEA2 Nenana 81.14 22 IAmb IAmb 20 27 55.4
comp=Z,20nm,1.0s
NEA2 Nenana 81.14 22 P P 20 27 53.0 -0.9
baz=239,SNR=11
BMRM Bremner River 81.17 26 P P 20 27 53.6 -0.5
baz=243
I23K Minto, Yukon-K 81.33 21 P P 20 27 55.0 +0.2
baz=238
ZAA0 Zalesovo Array 81.40 326 IAmb IAmb 20 27 56.4
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 81.40 326 P P 20 27 55.4 -0.1
comp=Z,17nm,0.7s,baz=106,slow=5.3,SNR=68
ZALV LR LR 21 03 05.3
comp=Z,170nm,21.6s,baz=110,slow=35
comp=Z,17nm,0.7s
WRH Wood River Hil 81.44 22 IAmb IAmb 20 27 56.5
comp=Z,27nm,1.2s
N25K Chitina, Valde 81.46 25 P P 20 27 56.2 +0.5
N25K IAmb IAmb 20 27 58.2
comp=Z,30nm,1.4s
N25K Chitina, Valde 81.46 25 P P 20 27 55.9 +0.2
baz=243,SNR=6.3
SHLS Shalkode 81.53 315*c i*P **P 20 27 55.8 -0.7**
SHLS pmax pmax
comp=Z,13nm,1.3s
SHLS Shalkode 81.53 315⇑*i*P **P 20 27 55.9 -0.7**
comp=Z,13nm,1.3s,baz=315
G22K Bettles 81.56 19 P P 20 27 56.5 +0.5
baz=236,SNR=11
HARP HAARP 81.59 24 P P 20 27 56.3 0.0
baz=242
H23K Yukon River 81.63 20 IAmb IAmb 20 27 58.8

comp=Z,18nm,1.1s
H23K Yukon River 81.63 20 P P 20 27 56.5 +0.1
baz=238
F22K John River 81.68 18 P P 20 27 57.3 +0.6
baz=235
GLB Gilahina Butte 81.72 26 IAmb IAmb 20 27 58.4
comp=Z,27nm,1.1s
PAX Paxson 81.73 24 P P 20 27 56.6 -0.5
PAX Paxson 81.73 24 P P 20 27 56.6 -0.5
PAX pmax pmax
comp=Z,8.0nm,1.1s
PAX Paxson 81.73 24 P P 20 27 57.4 +0.3
baz=242
TCOL CIGO, UAF Yank 81.73 22 IAmb IAmb 20 27 58.4
comp=Z,25nm,0.9s
TCOL CIGO, UAF Yank 81.73 22 P P 20 27 57.0 0.0
baz=240
COLA College 81.74 22 P P 20 27 56.3 -0.7
COLA IAmb IAmb 20 27 58.4
comp=Z,25nm,0.9s
COLA College 81.74 22*de*P **P 20 27 56.5 -0.5**
COLA pmax pmax
comp=Z,23nm,1.0s
COLA College 81.74 22 P P 20 27 56.7 -0.2
baz=240
HDA Harding Lake 81.84 22 P P 20 27 57.2 -0.4
baz=241
UZB Uzynbulak 81.84 315 *e*P **P 20 27 59.0 +0.8**
UZB Uzynbulak 81.84 315 *e*P **P 20 27 59.1 +0.8**
baz=315
G23K Bananza Creek 81.94 20 P P 20 27 58.5 +0.4
baz=237,SNR=11
POKR Poker Plat Res 82.02 22 P P 20 27 58.4 0.0
baz=240
MCARA McCarthy VSAT 82.04 26 P P 20 27 59.2 +0.6
baz=244
ILAR Eielson Array 82.05 22 P P 20 27 57.4 -1.2
comp=Z,9.4nm,1.0s,baz=254,slow=4.9,SNR=38
ILAR LR LR 21 03 26.0
comp=Z,190nm,19.0s,baz=243,slow=35
comp=Z,9.4nm,1.0s
E22K Anaktuvuk Pass 82.16 18 P P 20 27 59.6 +0.4
baz=236
KPKS Kokpek 82.16 315*c i*P **P 20 28 00.7 +0.9**
KPKS pmax pmax
comp=Z,15nm,1.4s
KPKS Kokpek 82.16 315⇑*i*P **P 20 28 00.7 +0.9**
comp=Z,15nm,1.4s,baz=315
H24K Noodor Dome 82.22 21 P P 20 27 60.0 +0.4
baz=240
SATY Saty 82.26 314*c i*P **P 20 28 01.4 +1.0**
SATY pmax pmax
comp=Z,15nm,1.4s
SATY Saty 82.26 314⇑*i*P **P 20 28 01.4 +1.0**
comp=Z,15nm,1.4s,baz=314
RIDG Independent Ri 82.33 23 IAmb IAmb 20 28 02.0
comp=Z,22nm,1.1s
RIDG Independent Ri 82.33 23 P P 20 28 00.4 +0.2
baz=243,SNR=9.5
M26K Nabesna, AK 82.49 25 IAmb IAmb 20 28 30.4
comp=Z,25nm,1.7s
M26K Nabesna, AK 82.49 25 P P 20 28 01.3 +0.3
baz=244
J25K Salcha River, 82.54 22 IAmb IAmb 20 28 02.9
comp=Z,27nm,1.0s
J25K Salcha River, 82.54 22 P P 20 28 00.8 -0.5
baz=242,SNR=24
CTG Chitna Glacier 82.60 27 P P 20 28 02.0 +0.3
baz=246
DOT Dot Lake 82.60 24 P P 20 28 01.6 0.0
DOT IAmb IAmb 20 28 04.0
comp=Z,21nm,1.0s
CTGM Chitina Glacie 82.61 27 IAmb IAmb 20 28 03.4
comp=Z,31nm,1.3s
L26K Log Cabin Wild 82.61 24 IAmb IAmb 20 28 58.6
comp=Z,23nm,1.4s
TDK Taldyqorghan 82.73 316 *e*P **P 20 28 03.6 +0.9**
TDK pmax pmax
comp=Z,32nm,1.1s
TDK Taldyqorghan 82.73 316 *e*P **P 20 28 03.7 +0.9**
comp=Z,32nm,1.1s,baz=316
SCRK Sand Creek 82.78 23 IAmb IAmb 20 28 03.8
comp=Z,21nm,1.5s
SCRK Sand Creek 82.78 23 P P 20 28 03.5 +0.9
baz=243,SNR=9.0
G24K Hadweenzic Riv 82.80 20 P P 20 28 03.2 +0.6
baz=240,SNR=9.8
M27K Edge Creek, AK 82.94 25 IAmb IAmb 20 28 06.7
comp=Z,39nm,1.1s
M27K Edge Creek, AK 82.94 25 P P 20 28 04.1 +0.6
baz=246,SNR=19
ARXS Arharly 82.94 315 *e*P **P 20 28 03.9 0.0**
SEM Semipalatinsk 82.95 322 *e*P **P 20 28 03.5 -0.4**
SEM pmax pmax
comp=Z,22nm,1.5s
SEM Semipalatinsk 82.95 322 *e*P **P 20 28 03.5 -0.4**
comp=Z,22nm,1.5s,baz=322
D23K Nanushuk River 82.97 18 P P 20 28 04.4 +1.0
baz=236
PNL Peninsula 82.98 28 P P 20 28 03.9 +0.2
baz=248
O28M Mount Upton 83.04 27 P P 20 28 04.3 0.0
baz=247
F24K Squaw Lake 83.08 19 P P 20 28 04.7 +0.7
baz=239,SNR=13
TOLK Toolik Lake Re 83.13 18 IAmb IAmb 20 28 06.8
comp=Z,13nm,1.0s
TOLK Toolik Lake Re 83.13 18 P P 20 28 04.7 +0.5
baz=238
H25K Birch Creek 83.16 21 P P 20 28 05.0 +0.7
baz=241
E24K Your Creek 83.17 19 P P 20 28 04.9 +0.5
baz=239
J26L Joseph Creek 83.18 23 P P 20 28 04.7 0.0
J26L Joseph Creek 83.18 23 P P 20 28 04.9 +0.2
baz=244,SNR=6.0
MDOK Medeo 83.25 314 *i* P **P 20 28 06.7 +1.1**
MDOK Medeo 83.25 314 *i* P **P 20 28 06.7 +1.1**
baz=314
KSH Kashi 83.26 311 P P 20 28 08.9 +3.3
KSH pmax pmax
comp=Z,19nm,1.1s
KSH LR LR
comp=Z,190nm,16.2s
KSH LR LR
comp=Z,290nm,16.2s
KSH LR LR
comp=Z,350nm,18.4s
L27K Beaver Creek, 83.26 25 IAmb IAmb 20 28 07.4
comp=Z,18nm,1.2s
L27K Beaver Creek, 83.26 25 P P 20 28 05.4 +0.4
baz=245,SNR=15
YUK3 Moose Creek 83.32 26 P P 20 28 06.0 +0.5
baz=247
AAA Alma-Ata 83.36 314 *e*P **P 20 28 07.1 +1.1**
AAA pmax pmax
comp=Z,32nm,1.5s
AAA Alma-Ata 83.36 314 *e*P **P 20 28 07.1 +1.1**
comp=Z,32nm,1.5s,baz=314
C23K Itkillik River 83.47 17 P P 20 28 07.0 +1.2
baz=236
K27K Chicken 83.56 24 IAmb IAmb 20 28 08.8
comp=Z,21nm,1.4s
K27K Chicken 83.56 24 P P 20 28 07.1 +0.6
baz=245
O29M Mount Kennedy 83.60 28 P P 20 28 07.7 +0.8
baz=249
D24K Happy Valley 83.63 18 P P 20 28 07.2 +0.4
baz=238
I26K Coal Creek Min 83.70 22 P P 20 28 07.3 +0.1
baz=244
P29M Windy Craggy 83.76 29 P P 20 28 08.5 +0.9
baz=250
F25K Christian Rive 83.86 20 P P 20 28 08.7 +0.6
baz=241,SNR=6.2
KUU Kurty 83.92 315*c i*P **P 20 28 09.6 +0.8**
KUU pmax pmax
comp=Z,60nm,1.1s
KUU Kurty 83.92 315⇑*i*P **P 20 28 09.7 +0.8**
comp=Z,60nm,1.1s,baz=315
YUK6 Outpost Mounta 83.94 27 P P 20 28 09.3 +0.5
baz=249
C24K Franklin Bluff 83.97 17 P P 20 28 09.4 +1.0
baz=238
KURK Kurchatov 84.04 322 P P 20 28 09.5 +0.3
KURK Kurchatov 84.04 322*c i*P **P 20 28 09.5 +0.3**
KURK pmax pmax
comp=Z,92nm,1.3s

KURBB **Kurchatov Arra** 84.07 322 P P 20 28 09.9 +0.6
comp=Z,17nm,0.8s,baz=104,slow=4.1,SNR=70
comp=Z,17nm,0.8s
E25K **Arctic Village** 84.14 19 P P 20 28 10.2 +0.8
baz=242
G26K **Porcupine Rive** 84.20 21 P P 20 28 10.8 +1.1
baz=243,SNR=18
TKM2 **Tokmak 2** 84.24 314 P P 20 28 12.0 +1.3
SNR=24
EGAK **Eagle** 84.24 23 IAmb IAmb 20 28 11.5
comp=Z,21nm,1.4s
EGAK **Eagle** 84.24 23 P P 20 28 10.4 +0.4
baz=246
HYT **Haines Junctio** 84.28 27 P P 20 28 10.8 +0.4
baz=250,SNR=6.6
P30M **Million Dollar** 84.30 28 P P 20 28 10.9 +0.5
baz=250
NIL **Nilore** 84.32 304 P P 20 28 10.9 -0.2
NIL **Nilore** 84.32 304 P P 20 28 10.9 -0.2
NIL pmax pmax
comp=Z,36nm,0.8s
PLBC **Pleasant Camp** 84.35 29 P P 20 28 11.1 +0.4
baz=251
I27K **Kandik River** 84.41 22 P P 20 28 11.4 +0.6
baz=245,SNR=9.1
F26K **Sheenjek River** 84.42 20 P P 20 28 11.6 +0.8
baz=243,SNR=6.0
M29M **Somme Creek** 84.44 26 P P 20 28 11.5 +0.3
baz=249,SNR=6.7
D25K **Kavik River** 84.47 18 P P 20 28 12.0 +0.9
baz=241
KBK **Karagaybulak** 84.65 313 P P 20 28 14.1 +1.3
SNR=13
DAWY **Dawson** 84.66 24 IAmb IAmb 20 28 14.8
comp=Z,17nm,1.2s
DAWY **Dawson** 84.66 24 P P 20 28 12.9 +0.8
baz=248,SNR=5.9
N30M **Aishikik Lake** 84.69 27 P P 20 28 12.9 +0.5
baz=250
H27K **Steamboat Moun** 84.70 22 P P 20 28 13.2 +0.9
baz=245,SNR=12
CHMS **Chumysh** 84.86 314 P P 20 28 14.8 +1.2
SNR=33
UCH **Uchtor** 84.88 313 P P 20 28 16.1 +1.9
SNR=15
G27K **Doyon Strip** 84.90 21 P P 20 28 13.9 +0.7
baz=245,SNR=7.5
O30N **Mendenhall** 84.92 28 P P 20 28 14.5 +0.9
baz=251
AAK **Ala-Archa** 84.97 313 P P 20 28 15.8 +1.4
SNR=15
AAK **Ala-Archa** 84.97 313 P P 20 28 14.3 0.0
AAK **Ala-Archa** 84.97 313*c* *i*P P 20 28 15.6 +1.2
AAK pmax pmax
comp=Z,34nm,1.0s
SGDS **Sogindy** 85.04 314*c* *i*P P 20 28 15.5 +1.0
SGDS pmax pmax
comp=Z,20nm,1.1s
SGDS **Sogindy** 85.04 314⇑ *i*P P 20 28 15.5 +1.0
comp=Z,20nm,1.1s,baz=314
USP **Ospenovka** 85.09 314 P P 20 28 16.1 +1.3
SNR=31
QSPA **South Pole Qui** 85.12 180 LR LR 21 05 01.3
comp=Z,185nm,18.6s,baz=358,slow=35
C26K **Camden Bay** 85.21 18 P P 20 28 15.9 +1.2
baz=242
M30M **Minto, Yukon** 85.21 26 P P 20 28 15.4 +0.5
baz=250,SNR=6.5
J29M **Klondike Camp** 85.28 24 P P 20 28 16.0 +0.7
baz=249
N31M **Braeburn, Yuko** 85.30 27 IAmb IAmb 20 28 20.0
comp=Z,19nm,1.1s
N31M **Braeburn, Yuko** 85.30 27 P P 20 28 15.9 +0.5
baz=251
C27K **Jago River** 85.44 18 P P 20 28 16.7 +0.8
baz=243
AML **Almayashu** 85.46 313 P P 20 28 18.9 +1.8
SNR=36
E27K **Coleen River** 85.50 20 P P 20 28 17.1 +0.8
baz=245
EKS2 **Erkin-Say** 85.50 313 P P 20 28 18.5 +1.5
SNR=34
I29M **Ogilvie Camp,** 85.58 23 IAmb IAmb 20 28 18.8
comp=Z,19nm,1.2s
I29M **Ogilvie Camp,** 85.58 23 P P 20 28 17.5 +0.8
baz=248,SNR=8.1
V35K **Ketchikan** 85.59 34 P P 20 28 17.3 +0.4
baz=255
P32M **Atlin** 85.68 29 P P 20 28 17.5 +0.2
baz=253
MAW **Mawson** 85.69 203 P P 20 28 17.6 +0.4
comp=Z,14nm,0.9s,baz=81,slow=7.0,SNR=23
MAW LR LR 21 02 41.3
comp=Z,209nm,21.8s,baz=120,slow=33
comp=Z,14nm,0.9s
MAW **Mawson** 85.69 203 P P 20 28 16.0 -1.2
baz=86,SNR=14
MAW **Mawson** 85.69 203 P P 20 28 17.1 -0.1
MAW **Mawson** 85.69 203 P P 20 28 17.1 -0.1
MAW pmax pmax
comp=Z,4.0nm,1.0s
BTLS **Baital** 85.76 316*c* *i*P P 20 28 18.7 +0.7
BTLS pmax pmax
comp=Z,32nm,1.1s
BTLS **Baital** 85.76 316⇑ *i*P P 20 28 18.8 +0.7
comp=Z,32nm,1.1s,baz=316
NRIK **Noril'sk** 86.12 341 P P 20 28 19.7 +0.5
comp=Z,20nm,0.9s,baz=131,slow=3.9,SNR=17
NRIK LR LR 21 05 50.6
comp=Z,209nm,21.3s,baz=116,slow=35
comp=Z,20nm,0.9s
NRIK **Noril'sk** 86.12 341*c* *i*P P 20 28 19.0 -0.3
NRIK pmax pmax
comp=Z,42nm,1.3s
M31M **Drury Creek, Y** 86.15 27 IAmb IAmb 20 28 22.2
comp=Z,9.7nm,1.1s
M31M **Drury Creek, Y** 86.15 27 P P 20 28 20.1 +0.5
baz=252
P33M **Teslin, Yukon** 86.29 29 P P 20 28 21.1 +0.7
baz=254
S34M **Telegraph Cree** 86.52 31 P P 20 28 22.4 +1.0
baz=255
EPYK **Eagle Plains** 86.55 22 P P 20 28 21.7 +0.2
baz=250
FARO **Faro, Yukon** 86.62 27 IAmb IAmb 20 28 23.2
comp=Z,11nm,1.1s
FARO **Faro, Yukon** 86.62 27 P P 20 28 22.7 +0.8
baz=253
T35M **Bob Quinn** 86.75 32 P P 20 28 23.5 +0.9
baz=256
BBB **Bella Bella** 86.89 37 LR LR 21 00 20.1
comp=Z,170nm,21.8s,baz=276,slow=31
R33M **Jennings River** 86.97 30 P P 20 28 24.5 +0.7
baz=255
DLBC **Dease Lake** 87.21 31 LR LR 21 02 57.6
comp=Z,441nm,19.1s,baz=280,slow=33
DLBC **Dease Lake** 87.21 31 IAmb IAmb 20 29 12.0
comp=Z,12nm,1.2s
DLBC **Dease Lake** 87.21 31 P P 20 28 25.7 +0.7
baz=256
DZA **Taraz** 87.31 313 *e*P P 20 28 26.3 +0.6
DZA **Taraz** 87.31 313 *e*P P 20 28 26.3 +0.6
baz=313
BRZS **Berezniki** 87.59 320*c* *i*P P 20 28 26.5 -0.3
BRZS pmax pmax
comp=Z,8.0nm,1.0s
BRZS **Berezniki** 87.59 320⇑ *i*P P 20 28 26.6 -0.3
comp=Z,7.8nm,1.0s,baz=320
MMPY **Sheldon Lake,** 87.66 27 P P 20 28 27.9 +0.9
baz=255
KBL **Kabul** 87.90 305 P P 20 28 27.8 -1.2
KBL **Kabul** 87.90 305 P P 20 28 27.8 -1.2
KBL pmax pmax
comp=Z,5.0nm,0.8s
KK31 **Karatay Array** 87.94 313 IAmb IAmb 20 28 30.2
comp=Z,14nm,1.2s
KKAR **Karatay Array** 87.94 313 IAmb IAmb 20 28 30.2
comp=Z,14nm,1.2s
IUG **luzhnay** 88.15 312*c* *i*P P 20 28 30.8 +1.0
IUG **luzhnay** 88.15 312⇑ *i*P P 20 28 30.8 +1.0
baz=312
INK **Inuvik** 88.35 21 P P 20 28 27.9 -2.0
comp=Z,1.9nm,0.3s,baz=214,slow=8.5,SNR=4.4
comp=Z,1.9nm,0.3s
INK **Inuvik** 88.35 21 IAmb IAmb 20 28 31.6
comp=Z,14nm,1.1s
INK **Inuvik** 88.35 21 P P 20 28 30.4 +0.4
baz=253

YBH **Yreka Blue Hor** 88.79 48 LR LR 21 01 04.7
comp=Z,399nm,21.7s,baz=284,slow=31
BVAR **Borovoye Array** 89.50 323 P P 20 28 35.5 -0.3
comp=Z,32nm,0.8s,baz=106,slow=5.4,SNR=196
comp=Z,32nm,0.8s
BRVK **Borovoye** 89.57 323 P P 20 28 35.5 -0.6
BRVK **Borovoye** 89.57 323*c* *i*P P 20 28 35.8 -0.3
BRVK pmax pmax
comp=Z,45nm,0.8s
J05D **Fort Rock, OR** 90.06 47 P P 20 28 39.0 +0.2
baz=264
LHV **Little Huntoon** 91.63 52 IAmb IAmb 20 29 43.5
comp=Z,13nm,1.3s
EDW2 **Edwards Air Fo** 91.76 55 P P 20 28 47.4 +0.6
baz=265
NVAR **Mina Array Bea** 91.80 52 P P 20 28 47.1 0.0
comp=Z,1.8nm,0.9s,baz=258,slow=5.7,SNR=11
NVAR LR LR 21 02 20.4
comp=Z,500nm,21.6s,baz=276,slow=30
comp=Z,1.8nm,0.9s
CWC **Cottonwood Cre** 91.81 54 P P 20 28 47.4 +0.3
baz=265
DSP **Deep Springs** 91.98 53 P P 20 28 47.8 +0.2
BFSC **Mount Baldy Ra** 91.98 56 P P 20 28 48.6 +0.6
baz=266
KVN **Kaiserville** 92.01 51 P P 20 28 47.6 -0.4
KVN **Kaiserville** 92.01 51 P P 20 28 47.6 -0.4
KVN pmax pmax
comp=Z,4.0nm,1.1s
LRMC **Laurel Mtn Rad** 92.06 55 P P 20 28 49.1 +0.8
baz=266
MPMC **Manual Prospec** 92.26 54 P P 20 28 49.3 0.0
baz=266
GSC **Goldstone, Bar** 92.76 55 P P 20 28 51.6 +0.1
baz=266
FURC **Furnace Creek,** 92.80 54 P P 20 28 51.7 +0.3
baz=266
MONP2 **Monument Peak** 92.92 57 P P 20 28 52.8 +0.4
baz=266
PFO **Pinyon Flats O** 92.93 57 LR LR 21 01 57.1
comp=Z,167nm,22.0s,baz=276,slow=30
PFO **Pinyon Flats O** 92.93 57 P P 20 28 52.8 +0.4
baz=266
TPFO **Pinon Flats** 92.94 57 P P 20 28 52.4 0.0
baz=266
TPNV **Topopah Spring** 93.32 53 IAmb IAmb 20 29 55.4
comp=Z,8.6nm,1.2s
TPNV **Topopah Spring** 93.32 53 P P 20 28 54.3 +0.2
baz=266
BELC **Belle Mtn. Jos** 93.34 56 P P 20 28 54.6 +0.3
baz=266
NEW **Newport** 93.36 42 LR LR 21 03 46.9
comp=Z,234nm,22.0s,baz=328,slow=31
SWSC **Sam W. Stewart** 93.44 57 P P 20 28 55.4 +0.8
baz=266
GMRC **Granite Mounta** 93.67 56 P P 20 28 56.3 +0.6
baz=267
BC3 **Big Chuckawall** 93.77 57 P P 20 28 56.5 +0.3
baz=267
R11A **Troy Canyon, C** 93.92 52 P P 20 28 57.7 +0.8
baz=267
IRM **Iron Mountain** 94.06 56 P P 20 28 57.9 +0.5
baz=267
PRN **Pahroc Range** 94.30 53 P P 20 28 56.7 -1.9
PRN IAmb IAmb 20 30 05.8
comp=Z,9.5nm,1.4s
ELK **Elko** 94.31 50 LR LR 21 04 53.4
comp=Z,388nm,21.0s,baz=285,slow=31
RPN **Rapa Nui** 94.45 118 LR LR 21 05 44.3
comp=Z,229nm,19.7s,baz=210,slow=32
SPR3 **Spring Creek 3** 94.93 51 IAmb IAmb 20 29 51.2
comp=Z,5.0nm,1.1s
YKA **Yellowknife Ar** 95.28 28 P P 20 29 02.2 0.0
comp=Z,1.6nm,0.8s,baz=268,slow=5.0,SNR=5.0
comp=Z,1.6nm,0.8s
ABKAR **Akbulak array** 95.75 319 P P 20 29 03.1 -1.7
ABKAR IAmb IAmb 20 29 05.1
comp=Z,9.3nm,0.9s
ABKAR **Akbulak array** 95.75 319 P P 20 29 02.9 -1.9
ARU **Arti** 96.56 326 P P 20 29 06.3 -1.9
ARU **Arti** 96.56 326*c* *i*P P 20 29 07.0 -1.3
ARU *PP pP 20 29 22.6 +1.1
ARU 20 33 02.5
ARU PPP PPP 20 35 08.8
ARU S SKSac 20 39 39.4 -1.8
ARU SP SP 20 41 59.1 +14
ARU PS PS 20 42 27.2 +35
ARU SSS SSS 20 50 51.4
ARU pmax pmax
comp=Z,27nm,1.3s
ARU MLR MLR
comp=Z,245nm,19.0s
AKTO **Aktyubinsk** 97.00 320 P P 20 29 09.2 -1.2
comp=Z,8.8nm,1.1s,baz=80,slow=3.9,SNR=12
comp=Z,8.8nm,1.1s
LPIG **La Paz** 97.88 66 LR LR 21 04 49.0
comp=Z,247nm,21.9s,baz=278,slow=30
PDAR **Pinedale Array** 98.58 48 P P 20 29 17.0 -1.0
comp=Z,1.1nm,1.1s,baz=273,slow=6.9,SNR=4.9
PDAR LR LR 21 09 13.4
comp=Z,275nm,19.4s,baz=294,slow=33
comp=Z,1.1nm,1.1s
S22A **4UR Ranch, Cre** 100.83 53 P Pdif 20 29 27.6 -0.6
baz=272
ANMO **Albuquerque** 101.23 55 P Pdif 20 29 29.2 -0.7
baz=272
PRGR **Permogore** 102.54 332 *e*P Pdif 20 29 32.9 -1.9
PRGR *e* 20 33 48.5
T25A **Trinidad** 102.78 53 P Pdif 20 29 35.8 -1.0
baz=274
TXAR **Lajitas Array** 103.80 61 PP PP 20 33 48.4 -10
comp=Z,0.4nm,0.8s,baz=298,slow=5.7,SNR=3.9
KLMR **Klimovskoe** 105.60 332 *e*P Pdif 20 29 44.5 -3.9
KLMR pmax pmax
comp=Z,25nm,1.4s
KLMR **Klimovskoe** 105.60 332 *e*Pdif Pdif 20 29 44.6 -3.9
KLMR AMP 20 29 49.8
comp=Z,25nm,1.4s
FINES **FINESS Array B** 111.25 336 Pdiff Pdif 20 30 12.4 -1.2
comp=Z,1.3nm,0.9s,baz=101,slow=4.1,SNR=3.6
MNK **Minsk** 113.83 329 *i* P Pdif 20 30 26.4 +1.2
MNK *i* 20 37 44.6
MNK *i* 20 41 21.3
MNK pmax pmax
comp=Z,5.0nm,1.0s
MNK MLR MLR
comp=E,30nm,20.0s
MNK MLR MLR
comp=Z,293nm,20.0s
MNK **Minsk** 113.83 329 *i* P Pdif 20 30 26.5 +1.2
comp=Z,5.0nm,1.0s,baz=62
MNK *i* pP sPdif 20 30 42.2 -1.2
MNK *i* PKP PKiKP 20 34 37.6 +20
MNK *i* PP PP 20 35 03.5 -6.9
MNK *i* PPP PPP 20 37 26.8
MNK *i* SKS SKSdf 20 41 21.3 -4.2
MNK *i* SKKS SKKSac 20 42 32.8 +24
MNK *i* PS PKKPab 20 45 04.9 -1.9
MNK *i* SS SS 20 50 45.8 -10
MNK *i* SSS SSS 20 56 29.0
MNK *i* LQ LQ 21 15 35.8
MNK *i* LR LR 21 19 15.6
MNK *i* LRM MLR 21 25 08.5
comp=E,30nm,20.0s
MNK *i* LRM MLR 21 25 15.8
comp=Z,293nm,19.5s
MNK *i* LRM MLR 21 25 21.6
AKASG **Malin Array Be** 114.75 324 PKP PKPdf 20 34 19.0 0.0
comp=Z,1.4nm,0.5s,baz=59,slow=2.7,SNR=12
BRTR **Keskin Array B** 115.62 312 PKP PKPdf 20 34 21.4 +0.1
comp=Z,1.9nm,0.9s,baz=85,slow=3.3,SNR=6.3
NB2 **NORSAR Subarra** 117.08 340 PKPdf PKPdf 20 34 23.0 -0.3
comp=Z,2.4nm,1.2s,baz=44,slow=1.9
NOA **NORSAR Array B** 117.08 340 PKP PKiKP 20 34 23.5 +0.2
comp=Z,2.1nm,0.9s,baz=46,slow=1.9,SNR=9.0
CSS **Mathiatis** 117.08 307 PKPdf PKPdf 20 34 22.9 -1.1
P49A **Miami Univ. Ec** 117.55 48 P PKPdf 20 34 24.3 -0.5
baz=288
MANR **Mangalia** 117.87 318 ⇑P PKiKP 20 34 40.0 +15
BIZ **Bicaz** 118.21 322 ⇑P PKiKP 20 34 27.2 +1.3
ACSO **Alum Creek Sta** 118.59 46 P PKPdf 20 34 26.3 -0.5
baz=290
MLR **Muntele Rosu** 118.93 320 PKP PKiKP 20 34 28.4 +0.9
comp=Z,3.6nm,0.9s,baz=190,slow=6.8,SNR=4.3
TZTN **Tazewell** 119.32 51 P PKPdf 20 34 27.6 -0.7
baz=287

P52A **Corning** 119.41 47 P PKPdf 20 34 28.2 -0.1
baz=290
PLCA **Paso Flores** 119.51 143 PKP PKiKP 20 34 29.6 +0.9
comp=Z,2.4nm,0.7s,baz=254,slow=2.1,SNR=11
PLCA PKKPbc PKKPbc 20 44 40.8 -0.6
comp=Z,1.3nm,1.0s,baz=50,slow=7.2,SNR=3.7
M53A **WI Miller and** 119.80 44 P PKPdf 20 34 28.4 -0.7
baz=292
ARR **Arges** 119.82 321 ⇑P PKiKP 20 34 30.6 +1.5
O53A **New Philadelph** 119.85 46 P PKPdf 20 34 27.9 -1.3
baz=291
BOSA **Boshof** 119.92 233 PKP PKiKP 20 34 31.9 +1.9
comp=Z,3.5nm,1.1s,baz=157,slow=5.8,SNR=4.4
DRGR 120.35 323 ⇓P PKiKP 20 34 31.0 +0.8
DRGR 120.35 323 ⇓PKiKP PKiKP 20 34 31.0 +0.8
GZR **Gura Zlata** 120.97 321 ⇓P PKPdf 20 34 31.3 0.0
GZR **Gura Zlata** 120.97 321 ⇓PKiKP PKPdf 20 34 31.3 0.0
HERR **Herculane** 121.44 321 ⇑P PKPdf 20 34 31.7 -0.4
BZS **Buzias** 121.59 322 ⇓P PKiKP 20 34 32.8 +0.3
BZS **Buzias** 121.59 322 ⇓PKiKP PKiKP 20 34 32.8 +0.3
MORC **Moravsky Berou** 121.72 328 ⇑P PKiKP 20 34 34.0 +1.3
MORC **Moravsky Berou** 121.72 328 ⇑PKiKP PKiKP 20 34 34.0 +1.3
MORC **Moravsky Berou** 121.72 328 *e*PKP PKiKP 20 34 34.4 +1.7
BLKB **Belogradchik** 121.85 319 ⇑P PKiKP 20 34 33.4 +0.2
MDVR **Moldovita** 121.93 321 ⇑P PKiKP 20 34 33.8 +0.5
VTS **Vitosha** 121.93 318 ⇑P PKiKP 20 34 33.7 +0.2
VTS **Vitosha** 121.93 318 ⇑PKiKP PKiKP 20 34 33.7 +0.2
KRLC **Kraliky** 121.94 328 *e*PKiKP PKiKP 20 34 34.1 +0.9
KRLC **Kraliky** 121.94 328 *e*PKPDF PKiKP 20 34 34.1 +0.9
OSTC **Ostas** 121.95 329 *e*PKPDF PKiKP 20 34 34.3 +1.2
DPC **Dobruska-Polom** 122.02 329 *e*PKiKP PKiKP 20 34 34.5 +1.2
DPC **Dobruska-Polom** 122.02 329 *e*PKPDF PKiKP 20 34 34.5 +1.2
JAVC **Velka Javorina** 122.17 327 *e*PKP PKiKP 20 34 36.4 +2.7
BOVS **Bovan** 122.47 320 ⇑P PKPdf 20 34 33.8 -0.4
VRAC **Vranov** 122.49 328 PKP PKiKP 20 34 34.2 0.0
comp=Z,3.0nm,0.8s,baz=91,slow=2.6,SNR=7.3
VRAC **Vranov** 122.49 328 *e*PKP PKiKP 20 34 34.9 +0.7
KRUC **Moravsky** 122.74 328 *e*PKP PKiKP 20 34 36.1 +1.4
PVCC **Panska Ves** 122.80 330 *e*PKiKP PKiKP 20 34 36.5 +1.7
PVCC **Panska Ves** 122.80 330 *e*PKPDF PKiKP 20 34 36.5 +1.7
BRG **Berggiesshubel** 122.89 330 *i* PKP PKiKP 20 34 36.5 +1.6
BRG Amp 20 34 38.2
comp=Z,14nm,1.1s
BRG *ex* x 20 34 50.0
BRG Amp 20 34 51.2
comp=Z,4.8nm,0.8s
BRG Amp 20 49 48.0
comp=E,0.3nm,23.0s
BRG Amp 20 49 52.0
comp=Z,0.4nm,24.9s
BRG Amp 20 50 03.0
comp=N,0.2nm,25.7s
BRG **Berggiesshubel** 122.89 330 *i* PKiKP PKiKP 20 34 36.5 +1.6
BRG *e* 20 34 49.9
BRG pmax pmax
comp=Z,14nm,1.1s
BRG pmax pmax
comp=Z,5.0nm,0.8s
BRG MLR MLR
comp=E,269nm,23.0s
BRG MLR MLR
comp=Z,387nm,24.9s
BRG MLR MLR
comp=N,233nm,25.7s
FRGS **Fruska Gora** 122.92 322 ⇓P PKiKP 20 34 36.1 +0.9
MORH **Mrgy, Hungar** 123.07 324 ⇓P PKiKP 20 34 35.6 +0.2
CLL **Collm** 123.07 331 *i* PKiKP PKiKP 20 34 35.3 0.0
CLL *e* 20 34 50.0
CLL pmax pmax
comp=Z,13nm,1.0s
CLL **Collm** 123.07 331 *i* PKiKP PKiKP 20 34 35.3 0.0
comp=Z,13nm,1.0s
CLL *i* x x 20 34 39.0
CLL *ep*PKPdf pPKPdf 20 34 50.0 +2.1
PRU **Pruhonice** 123.15 329 *e*PKiKP PKiKP 20 34 36.5 +1.0
PRU **Pruhonice** 123.15 329 *e*PKPDF PKiKP 20 34 36.5 +1.0
RONA **Rosalia, Austr** 123.59 326 *e*P PKiKP 20 34 36.9 +0.5
comp=Z,13nm,1.2s
IDI **Anoyia** 123.60 310 ⇓P PKiKP 20 34 37.7 +0.8
IDI **Anoyia** 123.60 310 PKP PKiKP 20 34 37.3 +0.4
comp=Z,7.4nm,0.9s,baz=188,slow=4.8,SNR=6.6
CONA **Conrad Observa** 123.69 327 *i* P PKiKP 20 34 37.1 +0.3
comp=Z,7.5nm,0.9s,SNR=6.2
CKRC **Cesky Krumlov** 123.99 328 *e*PKPDF PKiKP 20 34 37.7 +0.5
KHC **Kasperske Hory** 124.17 329 *e*PKiKP PKiKP 20 34 37.9 +0.3
KHC *e* 20 34 49.2
KHC **Kasperske Hory** 124.17 329 *e*PKPDF PKiKP 20 34 37.9 +0.3
KHC *ep*PKP pPKPdf 20 34 49.2 -1.0
ARSA **Arzberg** 124.28 326 *e*P PKPdf 20 34 35.6 -2.0
comp=Z,5.4nm,0.8s
GEC2 **GERESS Array S** 124.29 329 PKPdf 20 34 37.5 -0.1
GERES **GERESS Array B** 124.29 329 PKP PKiKP 20 34 38.0 +0.1
comp=Z,4.2nm,0.7s,baz=70,slow=2.0,SNR=38
MOA **Molln** 124.60 327 *e*P PKPdf 20 34 36.0 -2.1
comp=Z,5.9nm,1.8s
SOKA **Soboth** 124.88 326 *e*P PKiKP 20 34 39.8 +0.6
comp=Z,11nm,1.1s
BIOA **Bad Ischl, Aus** 125.03 328 *e*P PKiKP 20 34 40.1 +0.7
comp=Z,12nm,1.2s
CO03 **El Pedregal** 125.10 133 PKPdf 20 34 38.8 -0.9
OBKA **Obir** 125.25 326 *e*P PKPdf 20 34 38.7 -0.8
comp=Z,8.2nm,1.2s
KBA **Koelnbreinsper** 125.57 327 *e*P PKPdf 20 34 36.8 -3.5
comp=Z,9.8nm,1.7s
MYKA **Terra Mystica** 125.68 327 *e*P PKiKP 20 34 41.7 +1.0
comp=Z,8.7nm,1.3s
ABTA **Abfaltersbach** 126.22 327 *i* P PKiKP 20 34 42.5 +0.7
comp=Z,20nm,1.1s,SNR=5.2
WATA **Walderalm** 126.35 328 *i* P PKiKP 20 34 42.1 0.0
comp=Z,18nm,1.1s,SNR=7.8
WTTA **Wattenberg** 126.36 328 *i* P PKiKP 20 34 43.1 +0.9
comp=Z,27nm,1.2s,SNR=9.9
CIMO **Cimolais** 126.53 327 PKPdf 20 34 41.4 -0.5
MOTA **Moosalm** 126.59 329 *i* P PKiKP 20 34 42.9 +0.3
comp=Z,27nm,1.3s,SNR=8.1
SQTA **Sankt Quirin** 126.61 328 *i* P PKiKP 20 34 42.9 +0.3
comp=Z,24nm,1.3s,SNR=11
RETA **Reutte** 126.67 329 *e*P PKiKP 20 34 44.3 +1.6
comp=Z,3.3nm,0.5s
BTNL **Ternell** 126.70 334 *d*PKiKP PKiKP 20 34 42.8 +0.2
MEM **Membach** 126.74 334 *d*PKiKP PKiKP 20 34 43.2 +0.6
BSTI **Sart Tilman** 126.94 335 *d*PKiKP PKiKP 20 34 44.1 +1.2
FETA **Feichten** 126.99 329 *i* P PKiKP 20 34 43.3 -0.1
comp=Z,20nm,1.1s,SNR=9.8
BCLA **Clavier** 127.18 335 *d*PKiKP PKiKP 20 34 43.9 +0.4
DAVA **Damuels** 127.25 329 *e*P PKiKP 20 34 44.6 +0.7
comp=Z,14nm,0.9s
WLF **Walferdange** 127.37 334 *d*PKiKP PKiKP 20 34 44.6 +0.8
RCHB **Rochefort** 127.41 335 *d*PKiKP PKiKP 20 34 44.4 +0.5
BMRD **Maredsous** 127.49 335 *d*PKiKP PKiKP 20 34 44.4 +0.3
DOU **Dourbes** 127.72 335 *d*PKiKP PKiKP 20 34 45.4 +0.8
ZCCA **Zocca** 128.56 326 PKPdf 20 34 45.9 +0.1
BNI **Bardonecchia** 130.40 329 PKPdf PKPdf 20 34 47.9 -1.6
BNI **Bardonecchia** 130.40 329 PKiKP PKPdf 20 34 47.9 -1.6
LVC **Limon Verde** 130.63 125 PKP PKiKP 20 34 52.5 +0.8
comp=Z,5.6nm,0.8s,baz=267,slow=4.1,SNR=4.2
LVC SKPbc SKPab 20 38 14.4 +3.3
comp=Z,1.6nm,0.4s,baz=325,slow=3.8,SNR=3.5
LPAZ **La Paz** 134.06 118 PKP PKiKP 20 34 58.5 -0.6
comp=Z,4.3nm,0.8s,baz=72,slow=0.7,SNR=14
LPAZ SKPbc SKPab 20 38 25.9 -0.3
comp=Z,4.2nm,0.9s,baz=185,slow=0.5,SNR=10
SDV **Santo Domingo** 136.32 82 SKPbc SKPbc 20 38 32.5 +2.4
comp=Z,2.3nm,0.3s,baz=313,slow=16,SNR=1.2
CPUP **Villa Florida** 137.17 138 PKP PKPdf 20 35 02.8 +0.3
comp=Z,4.7nm,0.9s,baz=280,slow=2.4,SNR=7.2
CPUP SKPbc SKPbc 20 38 33.7 +1.6
comp=Z,1.7nm,0.2s,baz=16,slow=1.8,SNR=3.0
BAUV **El Baul** 138.88 82 PKPdf 20 35 04.2 -1.8
ESDC **Sonseca Array** 139.64 332 PKhKP PKPpre 20 34 59.3
comp=Z,1.0nm,1.0s,baz=20,slow=2.3,SNR=5.7
MVO **Moncorvo** 139.72 337 *e*PKPdf PKiKP 20 35 08.7 -0.5
POLO **Lamas de Olo** 139.84 338 *e*PKPdf PKiKP 20 35 08.9 -0.6
SIV **San Ignacio** 140.28 122 PKP PKPdf 20 35 06.6 -1.9
comp=Z,4.5nm,0.8s,baz=229,slow=3.8,SNR=5.0
SIV SKPbc SKiKP 20 38 43.4 -0.3
comp=Z,2.1nm,0.6s,baz=271,slow=1.5,SNR=8.5
PMRV **Marv??o** 141.34 336 *e*PKPdf PKPdf 20 35 09.9 +0.1
PESTR **Estremoz** 141.90 335 *e*PKPdf PKPdf 20 35 11.5 +0.7
PTLB **Pontes e Lacer** 142.17 123 PKPdf 20 35 08.9 -2.9
CZD **Col de Zad** 145.37 327 P PKiKP 20 35 20.0 -1.4
ZHG **ZHG** 145.90 329 P PKPab 20 35 20.0 +0.8
BOAV **Boa Vista** 146.27 93 PKPdf PKPdf 20 35 18.4 -0.7
AVE **Averroes** 146.41 330 P PKiKP 20 35 23.0 -0.1

SRHM	Skhour des Reh	147.31	330	P		PKiKP	20 35 25.0	-0.1
OUK	Oukaimeden	148.30	328	P		PKiKP	20 35 28.0	+0.5
PMPST	Porto Santo, M	150.25	342	*e*PKiKP		PKiKP	20 35 31.4	+0.4
PMPS	Porto Santo	150.27	342	*e*PKiKP		PKiKP	20 35 31.4	+0.4
TORD	Torodi Ar. Bea	150.69	288	PKPbc		PKPbc	20 35 31.6	-0.2
	comp=Z,48nm,0.9s,baz=5.9,slow=1.6,SNR=52							
PMOZ	Porto Moniz, M	150.74	343	*e*PKiKP		PKiKP	20 35 32.6	+0.4
PMAR	Madeira	150.75	343	*e*PKiKP		PKiKP	20 35 32.8	+0.5
BDFB	Brasilia	150.76	134	PKPbc		PKPbc	20 35 31.5	-0.5
	comp=Z,13nm,1.0s,baz=72,slow=2.2,SNR=11							
KIC	Kosan Boka	157.99	275	⇓*i*PKP1		PKPab	20 36 09.7	-0.2
	comp=Z,9.7nm,0.7s							
DBIC	Dimbokro	158.09	276	PKP		PKPdf	20 35 36.2	-0.4
	comp=Z,2.1nm,0.7s,baz=242,slow=14,SNR=2.6							
DBIC				PKPab		PKPab	20 36 10.2	0.0
	comp=Z,14nm,0.9s,baz=96,slow=5.2,SNR=8.7							
TIC	Toumodi	158.25	276	⇓*i*PKP1		PKPab	20 36 10.8	-0.2
	comp=Z,26nm,1.0s							
LIC	Lamto	158.28	275	⇑*e*PKP1		PKPab	20 36 10.3	-0.8
	comp=Z,30nm,0.9s							

IDC ***23*** *20:29:34.0±0.5,3°.59S×99°.48E,h0km,mb4.5/35, mbtmp4.5/37,ML4.2/2,MS4.1/4,Error ellipse: s-maj=17.1km s-min=10.2km az=42.0*
DJA ***23*** *20:29:37.5±0.8,4°.5±7°×10°.0E±°,h44km±29km,M5.0/10, mb5.1/2,mB5.5/1,MLv4.9/10,Mw(mB)5.0/1*
NEIC ***23*** *20:29:38.9±2.4,3°.39S±0°.07×99°.52E±0°.08,h27km±4km, mb4.7/59,Error ellipse: s-maj=13.6km s-min=8.2km az=49.0*

ISC 23 20:29:38.9±0.4,3°.55S±0°.05×99°.53E±0°.05,h35km,n161, σ1s37/160,mb4.7/69,MS4.3/8,2C,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.92	31	P		P	Pn	20 29 54.7	-0.6
PPSI				S		S	Sn	20 30 07.5	+0.2
SISI	Saibi	2.25	349	P		P	Pn	20 30 11.9	-1.8
KRJI	Kerinci	2.42	53	P		P	Pn	20 30 15.9	-0.1
KRJI				S		S	Sn	20 30 45.1	+0.7
MASI	Maura Aman, Be	2.74	81	P		P	Pn	20 30 19.3	-1.1
MASI				S		S	Sn	20 30 51.4	-0.9
KSI	Kapahiang	3.06	92	P		P	Pn	20 30 23.7	-1.1
KSI				S		S	Sn	20 31 00.4	+0.1
MNAI	Manna	3.51	103			P	Pn	20 30 30.6	-0.4
MNAI	Manna	3.51	103	P		P	Pn	20 30 30.3	-0.7
BKNI	Bangkinang	4.14	21			P	Pn	20 30 40.1	+0.5
BKNI	Bangkinang	4.14	21	P		P	Pn	20 30 39.1	-0.5
JMBI	JAMBI	4.53	65	P		P	Pn	20 30 44.5	-0.5
GSI	Gunungsitoli	5.20	338			P	Pn	20 30 51.4	-2.9
KASI	Kota Agung	5.33	112	P		P	Pn	20 30 53.8	-2.1
	2.3nm5μm143nm,0.6s								
BLSI	Bandar Lampung	5.98	108	P		P	Pn	20 31 16.1	+11
RPSI	Rantau Prapat	6.24	354	Pn		P	Pn	20 31 06.2	-2.2
RPSI	Rantau Prapat	6.24	354			P	Pn	20 31 09.2	+0.7
RPSI						S	Sn	20 32 04.2	-14
PSI	Prapat	6.34	355	Pn		P	Pn	20 31 09.2	-0.8
	1.1nm,0.3s,baz=213,slow=22,SNR=2.0								
PSI					Sn		Sn	20 32 04.2	-17
	2.1nm,0.3s,baz=194,slow=15,SNR=1.9 3.4nm,0.3s								
MYKOM	Kota Tinggi	6.84	39	Pn		P	Pn	20 31 13.4	-3.4
DBJI	Dramaga	7.79	113	P		P	Pn	20 31 28.6	-1.2
IPM	Ipoh	8.12	11	Pn		P	Pn	20 31 29.4	-4.9
LEM	Lembang	8.69	112	Pn		P	Pn	20 31 43.5	+1.3
	13nm,0.3s,baz=121,slow=19,SNR=8.4								
LEM					Sn		Sn	20 33 20.8	+1.7
	5.6nm,0.3s,baz=342,slow=19,SNR=2.1 31nm,0.4s								
KULM	Kulim	8.86	7	Pn		P	Pn	20 31 41.6	-2.8
UGM	Wanagama	11.76	112	Pn		P	Pn	20 32 21.5	-2.8
SBUM	Sibu	14.02	65	Pn		P	Pn	20 32 56.3	+1.2
JAGI	Jajag, Banyuwa	15.34	109	Pn		P	Pn	20 33 08.1	-4.8
JAGI						IAmb	IAmb	20 33 40.6	
	comp=Z,58nm,1.2s								
KKM	Kota Kinabalu	19.20	60			P		20 33 55.7	-4.3
UBPT	Khong Chiam	19.61	17			P		20 33 57.6	-6.8
MYLDM	Lahad Datu	20.84	66	P		P		20 34 17.4	-0.4
MYLDM						IAmb	IAmb	20 34 54.9	
	comp=Z,33nm,1.1s								
TOLI2	Tolitoli	21.74	78	P		P		20 34 26.4	-1.1
CM31	Chiang Mai Arr	21.88	359	P		P		20 34 27.2	-1.6
CM31						IAmb	IAmb	20 34 31.2	
	comp=Z,34nm,0.9s								
CMAR	Chiang Mai Arr	21.88	359	P		P		20 34 29.9	+1.0
	comp=Z,19nm,0.8s,baz=187,slow=10.0,SNR=116 comp=Z,19nm,0.8s								
CMAR	Chiang Mai Arr	21.88	359	P		P		20 34 26.6	-2.2
CHTO	Chiang Mai	22.23	359	P		P		20 34 31.8	-0.9
CRAI	Chiangrai	23.65	2	P		P		20 34 47.7	+0.5
CRAI						IAmb	IAmb	20 34 49.9	
	comp=Z,30nm,0.8s								
BATI	Baumata	24.84	107	P		P		20 34 57.6	-0.7
	comp=Z,15nm,0.5s,baz=114,slow=0.8,SNR=7.3 comp=Z,15nm,0.5s								
MBWA	Marble Bar	26.31	133	P		P		20 35 12.8	+1.3
MBWA						IAmb	IAmb	20 35 24.7	
	comp=Z,49nm,1.4s								
H08S2	Diego Garcia H	27.20	260	T		T		21 04 37.4	
	baz=81,slow=75,SNR=73								
H08S3	Diego Garcia H	27.21	260	T		T		21 04 45.0	
	baz=81,slow=75,SNR=48								
H08S1	Diego Garcia H	27.22	260	T		T		21 04 39.9	
	baz=81,slow=75,SNR=48								
FITZ	Fitzroy Crossi	29.37	121	P		P		20 35 38.4	-0.5
	comp=Z,3.0nm,1.1s,baz=314,slow=23,SNR=2.2 comp=Z,3.0nm,1.1s								
SHL	Shillong	29.88	346	P		P		20 35 42.8	-0.8
SHL						IAmb	IAmb	20 36 08.0	
	comp=Z,7.0nm,0.6s								
PZH	PanZhiHua	29.96	4	P		P		20 35 46.6	+2.5
PZH						pmax	pmax		
	comp=Z,7.0nm,0.8s								
PZH						pmax	pmax		
	comp=Z,100nm,5.1s								
TAPN	Taplejung	32.77	340	*e*Pg		P		20 36 11.2	+2.1
RAMN	Ramite	32.80	338	*e*Pg		P		20 36 11.3	+2.0
JIRN	Jiri	33.59	338	*e*Pg		P		20 36 17.8	+1.5
PKI	Pulchoki	33.81	337	*e*Pg		P		20 36 19.3	+1.1
GUN	Gumba	33.93	338	*e*Pg		P		20 36 20.7	+1.4
H01W3	Cape Leeuwin H	34.00	158	T		T		21 12 48.5	
	baz=332,slow=74								
H01W2	Cape Leeuwin H	34.01	158	T		T		21 12 57.3	
	baz=332								
H01W1	Cape Leeuwin H	34.01	158	T		T		21 12 54.8	
	baz=332,slow=74								
LSA	Lhasa	34.02	347	P		P		20 36 19.6	-0.6
LSA						IAmb	IAmb	20 36 23.2	
	comp=Z,11nm,0.9s								
GKN	Gorkha	34.50	336	*e*Pg		P		20 36 25.0	+1.0
CD2	Chengdu	34.51	6	*e*P		P		20 36 24.3	+0.4
ENH	Enshi	34.96	15	P		P		20 36 26.5	-1.3
ENH						IAmb	IAmb	20 36 29.1	
	comp=Z,12nm,0.8s								
DANN	Dangsing	35.16	335	*e*Pg		P		20 36 30.8	+0.9
YOJ	Yonaguni jima	36.01	38	P		P		20 36 36.2	-0.7
WB0	Warramunga Arr	37.63	118	P		P		20 36 50.3	-0.4
WB0						IAmb	IAmb	20 37 03.1	
	comp=Z,8.5nm,0.9s								
WRA	Warramunga Arr	37.65	118	P		P		20 36 51.0	+0.1
	comp=Z,2.0nm,0.6s,baz=304,slow=9.4,SNR=38								
WRA				PcP		PcP		20 39 07.3	-0.8
	comp=Z,0.4nm,0.5s,baz=301,slow=1.9,SNR=2.0 comp=Z,2.0nm,0.6s								
WRA	Warramunga Arr	37.65	118	P		P		20 36 50.7	-0.2
WB2	Warramunga Arr	37.66	118	P		P		20 36 50.0	-0.9
WB2						IAmb	IAmb	20 37 04.5	
	comp=Z,17nm,1.3s								
XAN	Xi'an	38.43	13	⇑P		P		20 36 58.0	+0.7
XAN				pP		pP		20 37 01.9	-4.0
XAN				pmax		pmax			
	comp=Z,15nm,1.0s								
AS31	Alice Springs	38.75	124	P		P		20 36 60.0	-0.2
ASAR	Alice Springs	38.75	124	P		P		20 37 00.7	+0.5
	comp=Z,2.6nm,0.8s,baz=295,slow=7.8,SNR=29								
ASAR				PcP		PcP		20 39 12.4	+0.9
	comp=Z,1.1nm,0.7s,baz=283,slow=3.0,SNR=4.1								
ASAR				S		S		20 43 06.2	+11
	comp=Z,0.4nm,0.7s,baz=292,slow=14,SNR=4.3 comp=Z,2.6nm,0.8s								
ASAR	Alice Springs	38.75	124	P		P		20 36 58.9	-1.3
LZH	Lanzhou	39.64	5	*e*P		P		20 37 07.5	0.0
LZH				pP		sP		20 37 20.3	+0.5
LZH				sP		pwP		20 37 26.3	+3.3
LZH				pmax		pmax			
	comp=Z,18nm,1.1s								
LZH				LR		LR			
	comp=N,300nm,17.9s								
LZH				LR		LR			
	comp=E,500nm,17.9s								
LZH				LR		LR			
	comp=Z,620nm,18.5s								
LYN	LuoYang	39.81	17	*e*P		P		20 37 09.8	+1.0
LYN				pP		pP		20 37 14.1	-3.3
LYN				S		S		20 43 13.3	+2.4
LYN				pmax		pmax			
	comp=Z,30nm,0.8s								
LYN				pmax		pmax			
	comp=Z,110nm,5.7s								
LYN				LR		LR			
	comp=N,230nm,17.7s								
LYN				LR		LR			
	comp=Z,190nm,19.6s								
NJ2	Nanjing	39.89	26	*e*P		P		20 37 12.6	+3.1
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
GTA	Gaotai	42.75	0	*e*P		P		20 37 33.8	+0.8
GTA				pP		pwP		20 37 49.3	+0.8
GTA				sP		sP		20 37 53.3	+8.0
GTA				pmax		pmax			
	comp=Z,3.0nm,1.3s								
GTA				pmax		pmax			
	comp=Z,50nm,4.0s								
GTA				LR		LR			
	comp=N,280nm,17.1s								
GTA				LR		LR			
	comp=E,380nm,19.3s								
GTA				LR		LR			
	comp=Z,540nm,17.4s								
HNS	HongShan	43.12	18	⇑P		P		20 37 37.8	+1.9
HNS				pmax		pmax			
	comp=Z,17nm,1.1s								
BJI	Beijing	46.00	18	P		P		20 38 00.3	+1.5
BJI				pmax		pmax			
	comp=Z,7.0nm,1.0s								
KSH	Kashi	48.03	335	P		P		20 38 14.1	-0.8
KSH				pmax		pmax			
	comp=Z,7.0nm,0.7s								
WMQ	Urumqi	48.35	349	*e*P		P		20 38 19.3	+2.1
WMQ				sP		sP		20 38 29.3	-0.1
WMQ				pmax		pmax			
	comp=Z,18nm,0.9s								
WMQ				LR		LR			
	comp=Z,170nm,20.7s								
CTA	Charters Tower	48.39	114	P		P		20 38 18.4	+0.6
	comp=Z,2.2nm,0.7s,baz=303,slow=9.5,SNR=2.4 comp=Z,2.2nm,0.7s								
STKA	Stephens Creek	48.49	130	P		P		20 38 19.5	+1.0
	comp=Z,5.9nm,0.7s,baz=304,slow=8.2,SNR=17 comp=Z,5.9nm,0.7s								
STKA	Stephens Creek	48.49	130	P		P		20 38 18.4	-0.1
KSAR	Wonju Array Be	48.56	30	P		P		20 38 18.5	-0.3
KSRS	Korea Array	48.59	30	P		P		20 38 19.9	+0.8
	comp=Z,8.1nm,0.9s,baz=223,slow=8.2,SNR=24 comp=Z,8.1nm,0.9s								
KS19	Wonju Array Si	48.60	30	P		P		20 38 18.9	-0.2
JMN	Monobe	49.25	38	P		P		20 38 24.4	+0.1
CHGR	Chuyangaron	50.51	329	P		P		20 38 32.5	-1.3
CHGR						IAmb	IAmb	20 38 33.6	
	comp=Z,7.7nm,0.7s								
BOOM	Boomskoye usch	50.57	337	P		P		20 38 35.0	+0.7
SONM	Songino Array	51.53	6	P		P		20 38 43.0	+1.7
	comp=Z,9.6nm,0.7s,baz=188,slow=8.9,SNR=35 comp=Z,9.6nm,0.7s								
SONM	Songino Array	51.53	6	P		P		20 38 42.5	+1.1
SONM						IAmb	IAmb	20 38 44.0	
	comp=Z,10.0nm,0.8s								
ULN	Ulaanbaatar	51.63	6	P		P		20 38 43.2	+1.1
ULN						IAmb	IAmb	20 38 44.7	
	comp=Z,10nm,0.8s								
MK31	Makanchi Array	52.39	345	P		P		20 38 48.8	+1.1
MK31						IAmb	IAmb	20 38 49.4	
	comp=Z,7.8nm,1.1s								
MKAR	Makanchi Array	52.39	345	P		P		20 38 48.5	+0.9
	comp=Z,5.0nm,0.5s,baz=150,slow=9.5,SNR=92 comp=Z,5.0nm,0.5s								
MAKZ	Makanchi	52.49	345	P		P		20 38 49.1	+0.8
MAKZ						IAmb	IAmb	20 39 01.2	
	comp=Z,10nm,1.4s								
CN2	Changchun	52.59	23	*e*P		P		20 38 49.6	+0.5
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
OPO	Ambohidratompo	53.28	250	LR		LR		20 57 03.4	
	comp=Z,86nm,19.6s,baz=254,slow=31								
KK31	Karatay Array	53.32	334	P		P		20 38 52.9	-1.7
KKAR	Karatay Array	53.32	334	P		P		20 38 53.0	-1.6
KKAR	Karatay Array	53.32	334	P		P		20 38 53.2	-1.4
KKAR						IAmb	IAmb	20 38 56.5	
	comp=Z,4.7nm,1.2s								
MAJO	Matsushiro	53.77	39	P		P		20 38 57.1	-0.9
MAJO						IAmb	IAmb	20 39 26.3	
	comp=Z,11nm,1.2s								
MJAR	Matsushiro Arr	53.77	39	P		P		20 38 57.9	-0.1
	comp=Z,3.7nm,0.9s,baz=209,slow=6.8,SNR=7.0 comp=Z,3.7nm,0.9s								
JSD	Sado	54.76	37	P		P		20 39 04.7	-0.4
CAN	Canberra	55.54	131	P		P		20 39 12.3	+1.4
USRK	Ussuriysk Ar.	55.74	28	P		P		20 39 13.1	+1.0
	comp=Z,7.6nm,0.7s,baz=235,slow=4.8,SNR=13 comp=Z,7.6nm,0.7s								
USRK	Ussuriysk Ar.	55.74	28	P		P		20 39 12.9	+0.8
JMM	Marumori	56.21	39	P		P		20 39 16.0	+0.4
GEYT	Alibeck	56.34	321	P		P		20 39 16.6	0.0
	comp=Z,4.3nm,0.8s,baz=160,slow=9.0,SNR=8.2 comp=Z,4.3nm,0.8s								
GEYT	Alibeck	56.34	321	P		P		20 39 16.0	-0.6
GEYT						IAmb	IAmb	20 39 17.8	
	comp=Z,5.7nm,0.9s								
GYA0B	ALIBECK ARRAY	56.34	321	P		P		20 39 16.5	-0.1
GYA0B						IAmb	IAmb	20 39 17.8	
	comp=Z,5.5nm,0.8s								
KURBB	Kurchatov Arra	56.90	344	P		P		20 39 20.9	+0.6
	comp=Z,2.3nm,0.7s,baz=167,slow=6.9,SNR=12 comp=Z,2.3nm,0.7s								
KURK	Kurchatov	56.96	344	P		P		20 39 20.7	0.0
KURK						IAmb	IAmb	20 39 22.2	
	comp=Z,6.5nm,0.9s								
ZAA0	Zalesovo Array	58.60	350	P		P		20 39 31.7	-0.4
ZAA0						IAmb	IAmb	20 39 33.9	
	comp=Z,15nm,0.9s								
ZALV	Zalesovo Beam	58.60	350	P		P		20 39 32.9	+0.8
	comp=Z,17nm,0.8s,baz=187,slow=5.2,SNR=50 comp=Z,17nm,0.8s								
ZALV	Zalesovo Beam	58.60	350	P		P		20 39 31.4	-0.7
RAYN	Ar Rayn	59.09	300	P		P		20 39 35.9	-0.3
BVAR	Borovoye Array	61.48	340	P		P		20 39 51.6	-0.2
	comp=Z,2.8nm,0.6s,baz=144,slow=8.7,SNR=32 comp=Z,2.8nm,0.6s								
BRVK	Borovoye	61.54	340	P		P		20 39 51.4	-0.9
BRVK						IAmb	IAmb	20 39 52.9	
	comp=Z,9.9nm,1.4s								
KMBO	Kilima Mbogo	62.26	271	P		P		20 39 56.6	-1.7
	comp=Z,1.5nm,0.6s,baz=61,slow=21,SNR=3.3 comp=Z,1.5nm,0.6s								
KMBO	Kilima Mbogo	62.26	271	P		P		20 39 57.3	-0.9
ABKAR	Akbulak array	62.77	332	P		P		20 40 00.2	-0.5
ABKAR						IAmb	IAmb	20 40 01.5	
	comp=Z,12nm,1.0s								
ABKAR	Akbulak array	62.77	332	P		P		20 39 60.0	-0.7
YSS	Yuzh-Sakhalins	63.04	32	P		P		20 40 02.9	+0.4
AKTO	Aktyubinsk	64.49	332	P		P		20 40 11.5	-0.5
	comp=Z,1.1nm,0.4s,baz=106,slow=16,SNR=5.3 comp=Z,1.1nm,0.4s								
GURO	Guroymak-BITLI	67.52	314	P		P		20 40 31.9	0.0
MARD	Mardin	67.93	313	P		P		20 40 34.3	-0.3
ARU	Arti	68.44	337	P		P		20 40 36.2	-0.9
ARU						IAmb	IAmb	20 40 38.0	
	comp=Z,7.1nm,1.3s								
MAW	Mawson	68.67	194	P		P		20 40 40.0	+1.6
	comp=Z,1.4nm,0.8s,baz=264,slow=14,SNR=2.6 comp=Z,1.4nm,0.8s								
ASF	Jabal al Asfar	69.11	306	P		P		20 40 43.3	+1.4
	comp=Z,2.9nm,0.6s,baz=149,slow=5.8,SNR=7.9 comp=Z,2.9nm,0.6s								
KBZ	Khabaz	69.17	320	P		P		20 40 42.9	+1.0
	comp=Z,6.4nm,0.8s,baz=114,slow=7.1,SNR=12 comp=Z,6.4nm,0.8s								
YAK	Yakutsk	69.35	15	P		P		20 40 42.0	-0.6
EIL	Elat	69.97	303	P		P		20 40 48.2	+1.0
	comp=Z,9.8nm,0.9s,baz=282,slow=2.7,SNR=5.8 comp=Z,9.8nm,0.9s								
MMAI	Mount Meron Ar	70.57	307	P		P		20 40 53.0	+2.1
	comp=Z,3.2nm,0.7s,baz=113,slow=6.4,SNR=6.8 comp=Z,3.2nm,0.7s								
BELG	Belogornoye	70.81	329	P		P		20 40 51.0	-0.7
	comp=Z,6.1nm,0.6s,baz=342,slow=20,SNR=3.6								
BELG					LR		LR	21 16 15.6	
	comp=Z,142nm,19.8s,baz=121,slow=40 comp=Z,6.1nm,0.6s								
CSS	Mathiatis	72.80	308	P		P		20 41 02.6	-1.6
CSS						IAmb	IAmb	20 41 05.9	
	comp=Z,11nm,1.2s								
KIRV	Kirov	73.57	335	LR		LR		21 18 53.9	
	comp=Z,152nm,18.2s,baz=79,slow=40								
BR131	Keskin Array S	74.02	313	P		P		20 41 10.4	-1.1
BR131						IAmb	IAmb	20 41 11.8	
	comp=Z,4.3nm,0.7s								
BRTR	Keskin Array B	74.02	313	P		P		20 41 11.1	-0.3
	comp=Z,2.8nm,0.6s,baz=135,slow=6.5,SNR=14 comp=Z,2.8nm,0.6s								
BRTR	Keskin Array B	74.02	313	P		P		20 41 10.8	-0.6
BZK	Bozkurt	74.49	315	P		P		20 41 13.0	-0.9
BOSA	Boshof	74.50	241	P		P		20 41 15.3	+0.8
	comp=Z,1.8nm,0.8s,baz=67,slow=14,SNR=2.2 comp=Z,1.8nm,0.8s								
SEY	Seymchan	77.23	22	P		P		20 41 29.7	+0.6
	comp=Z,5.1nm,1.0s,baz=238,slow=15,SNR=3.3 comp=Z,5.1nm,1.0s								
KARP	Karpathos	77.82	307	P		P		20 41 34.1	+1.0
KLMR	Klimovskoe	79.02	334	*e*P		P		20 41 37.8	-1.2
KLMR						AMP		20 41 41.3	
	comp=Z,14nm,1.5s								
IDI	Anoyia	79.58	307	P		P		20 41 43.4	+0.6
	comp=Z,4.3nm,0.8s,baz=96,slow=6.1,SNR=4.4 comp=Z,4.3nm,0.8s								
IDI	Anoyia	79.58	307	P		P		20 41 43.9	+1.1
IDI						IAmb	IAmb	20 41 47.4	
	comp=Z,6.0nm,0.9s								
ALN	Alexandroupoli	79.92	312	P		P		20 41 43.8	-0.6
ALN						IAmb	IAmb	20 41 58.3	
	comp=Z,14nm,1.0s								
VTS	Vitosha	82.35	314	P		P		20 41 56.9	-0.6
KOLS	Kolonicke sedl	84.32	320	*e*P		P		20 42 09.0	+1.6
FINES	FINESS Array B	85.26	332	P		P		20 42 12.7	+0.9
	comp=Z,2.2nm,0.5s,baz=104,slow=5.4,SNR=22 comp=Z,2.2nm,0.5s								
ARCES	ARCESS Array B	87.77	340	P		P		20 42 23.4	-0.5
	comp=Z,1.1nm,1.1s,baz=106,slow=5.1,SNR=9.9 comp=Z,1.1nm,1.1s								
GERES	GERESS Array B	89.90	319	P		P		20 42 35.8	+1.3
	comp=Z,1.0nm,0.6s,baz=100,slow=5.5,SNR=11 comp=Z,1.0nm,0.6s								
GERES	GERESS Array B	89.90	319	P		P		20 42 34.4	-0.1
CLUD	Cludinico	90.24	316	P		P		20 42 34.7	-1.4
CLUD						IAmb	IAmb	20 42 38.1	
	comp=Z,6.9nm,0.8s								
CIMO	Cimolais	90.53	316	P		P		20 42 37.5	+0.1
CIMO						IAmb	IAmb	20 42 39.2	
	comp=Z,5.1nm,0.8s								
CLL	Collm	90.57	321	*e*P		P		20 42 38.0	+0.6
	comp=Z,4.0nm,1.3s								
HFS	Hagfors	90.97	330	P		P		20 42 39.6	+0.5
	comp=Z,1.4nm,0.6s,baz=157,slow=8.0,SNR=5.3								
HFS						LR	LR	21 23 35.7	
	comp=Z,147nm,21.9s,baz=26,slow=36 comp=Z,1.4nm,0.6s								
KEST	Kesra	92.20	305	P		P		20 42 45.5	0.0
	comp=Z,3.7nm,0.8s,baz=78,slow=15,SNR=2.3 comp=Z,3.7nm,0.8s								
NB2	NORSAR Subarra	92.26	331	P		P		20 42 45.6	+0.5
	comp=Z,0.4nm,0.7s,baz=96,slow=4.6								
NOA	NORSAR Array B	92.26	331	P		P		20 42 45.7	+0.5
	comp=Z,0.8nm,0.8s,baz=94,slow=4.7,SNR=4.8 comp=Z,0.8nm,0.8s								
TORD	Torodi Ar. Bea	98.42	283	P		Pdif		20 43 14.5	+0.3
	comp=Z,0.9nm,1.1s,baz=93,slow=7.1,SNR=2.7 comp=Z,0.9nm,1.1s								
DEOK	Depew	144.62	23	PKPdf		PKPdf		20 49 11.6	-0.8
R49A	Shelbyville	145.16	6			PKPdf		20 49 12.9	-0.3
SLBS	Sierra La Lagu	145.20	52	PKPdf		PKPdf		20 49 14.7	+0.9
TXAR	Lajitas Array	146.21	38	PKPbc		PKiKP		20 49 17.9	-1.7
	comp=Z,7.1nm,0.8s,baz=297,slow=1.0,SNR=77								
TXAR	Lajitas Array	146.21	38			PKPab		20 49 16.9	-0.3
AC05	El Transito	146.34	196			PKPab		20 49 17.7	+0.1
WVT	Waverly	146.88	11	PKPdf		PKPdf		20 49 16.3	+0.1
AC02	Maricunga	147.86	199	PKPdf		PKPdf		20 49 17.1	-1.7
AC02						PKiKP		20 49 22.7	-0.9
X48A	Hartselle	148.65	10	PKPdf		PKPdf		20 49 18.8	-0.3
X48A						PKPbc		20 49 22.5	-0.4

IDC ***23*** *20:39:40.8±1.3,5°.32S×150°.22E,h0km,mb3.9/3, mbtmp4.0/5,ML4.0/2,Error ellipse: s-maj=60.7km s-min=19.0km az=143.0*
NEIC ***23*** *20:39:46.3±2.3,5°.8S±0°.2×150°.8E±0°.2,h64km±19km, mb4.1/11,Error ellipse: s-maj=32.2km s-min=14.8km az=142.0*

ISC 23 20:39:48.2±0.8,5°.6S±0°.1×150°.7E±0°.1,h114km,n22, σ2s05/23,mb4.0/8,New Britain region

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

comp=E,428nm,0.2s
EKU East Kanab 0.29 84 Pg 20 47 22.9 +0.1
LCMT Little Creek M 0.31 264 Pg 20 47 23.4 +0.4
LCMT Sg 20 47 27.8 +0.6
LCMT Little Creek M 0.31 264 IAML 20 47 28.1
comp=N,3μm,0.2s
LCMT IAML 20 47 28.5
comp=E,3μm,0.1s
ZNPU Zion National 0.38 326 Pg 20 47 24.2 -0.1
ZNPU Sg 20 47 29.5 +0.1
BHU Blowhard Mount 0.55 0 Pg 20 47 27.6 +0.1
SZCU Shurtz Canyon 0.58 342 Pg 20 47 27.7 -0.4
SZCU Sg 20 47 35.4 -0.4
SZCU Shurtz Canyon 0.58 342 IAML 20 47 35.5
comp=N,1μm,0.2s
SZCU IAML 20 47 35.9
comp=E,1μm,0.2s
PKCU Pink Cliffs 0.59 48 Pg 20 47 28.5 +0.1
PKCU Pink Cliffs 0.59 48 IAML 20 47 36.6
comp=N,326nm,0.3s
PKCU IAML 20 47 39.4
comp=E,671nm,0.3s
CCUT Cedar City 0.64 322 Pg 20 47 29.2 -0.1
CCUT Cedar City 0.64 322 IAML 20 47 37.9
comp=E,364nm,0.5s
CCUT IAML 20 47 38.1
comp=N,201nm,0.6s
U15A North Rim 0.77 143 Pg 20 47 31.8 +0.2
U15A IAML 20 47 42.5
comp=N,462nm,0.4s
U15A IAML 20 47 42.9
comp=E,278nm,0.3s
ARUT Antelope Range 0.87 328 Pg 20 47 33.3 -0.3
BTU Barney Top 1.06 48 Pg 20 47 37.0 -0.2
MTPU Mount Pierson 1.13 28 Pg 20 47 38.2 -0.4
MTPU Mount Pierson 1.13 28 IAML 20 47 52.5
comp=N,84nm,0.3s
MTPU IAML 20 47 53.7
comp=E,89nm,0.3s
NMUT North Mineral 1.47 0 Pn 20 47 43.8 +0.3
MVU Marysvale 1.54 19 Pb 20 47 45.4 -0.2
MSU Marysvale 1.56 20 Pb 20 47 46.0 0.0
TCRU Three Creeks R 1.60 12 Pb 20 47 46.3 -0.2
TCRU IAML 20 48 07.4
comp=E,89nm,0.6s
TCRU IAML 20 48 09.5
comp=N,78nm,0.4s
PSUT Pine Spring 1.68 332 Pn 20 47 46.6 +0.2
PSUT IAML 20 48 10.8
comp=N,100nm,0.5s
PSUT IAML 20 48 12.0
comp=E,60nm,0.5s
MMU Miners Mountai 1.70 47 Pb 20 47 47.7 -0.5
PRN Pahroc Range 1.78 282 Pn Pn 20 47 48.2 +0.5
PRN IAML 20 48 18.6
comp=N,87nm,0.4s
PRN IAML 20 48 21.0
comp=E,132nm,0.7s
HMU Henry Mountain 1.91 62 Pb 20 47 51.3 -0.5
WTNK Soaring Height 1.93 244 Pn Pn 20 47 50.0 +0.3
WTNK IAML 20 48 20.3
comp=N,15nm,0.6s
WTNK IAML 20 48 20.4
comp=E,16nm,0.5s
WUAZ Wupatki 1.94 141 Pn Pn 20 47 50.4 +0.5
V12A Nelson 2.08 231 Pn Pn 20 47 52.2 +0.5
V12A IAML 20 48 26.5
comp=E,28nm,0.3s
V12A IAML 20 48 26.7
comp=N,31nm,0.9s
W13A Hualapai Mount 2.11 203 Pn 20 47 53.0 +0.7
SPR3 Spring Creek 3 2.27 330 Pn 20 47 53.7 -0.9
SPR3 IAML 20 48 26.1
comp=E,23nm,0.3s
SPR3 IAML 20 48 28.6
comp=N,28nm,0.3s
S11A Rachel 2.38 285 Pb 20 47 59.6 -0.1
S11A IAML 20 48 35.4
comp=N,82nm,0.8s
R11A Troy Canyon, C 2.52 302 Pb 20 48 01.7 -0.5
TMUT Trail Mountain 2.60 30 Pb 20 48 02.8 -0.8
TMUT IAML 20 48 52.2
comp=E,18nm,0.7s
TPNV Topopah Spring 2.71 269 Pn 20 48 00.4 -0.1
TPNV IAML 20 48 43.2
comp=E,55nm,0.5s
TPNV IAML 20 48 44.2
comp=E,30nm,0.5s
SRU San Rafael Swe 2.77 41 Pn Pn 20 47 59.6 -1.7
SRU Pb 20 48 05.9 -0.5
SRU IAML 20 48 45.1
comp=N,17nm,0.8s
SRU IAML 20 48 48.8
comp=E,22nm,0.7s
X16A Lo Mia Camp, P 2.87 156 Pn Pn 20 48 01.0 -1.6
X16A Pb 20 48 09.3 +1.2
X16A IAML 20 48 49.5
comp=N,21nm,0.5s
X16A IAML 20 48 50.3
comp=E,23nm,0.6s
NLU North Lily Min 2.97 12 Pb 20 48 10.9 +1.0
Y14A Wickenburg 3.10 182 Pn Pn 20 48 04.7 -1.1
Y14A Pb 20 48 12.4 +0.3
Y14A IAML 20 49 01.8
comp=E,14nm,1.1s
DUG Dugway, Tooele 3.15 1 Pn Pn 20 48 04.9 -1.6
DUG Pb 20 48 13.3 +0.4
DUG IAML 20 49 02.4
comp=E,11nm,0.9s
GWY Greenwater Val 3.18 255 Pn Pn 20 48 05.2 -1.7
GWY IAML 20 49 00.9
comp=E,17nm,0.7s
GWY IAML 20 49 02.7
comp=N,14nm,0.4s
W18A Petrified Fore 3.18 126 Pn Pn 20 48 07.0 0.0
P18A Preston Nutter 3.30 38 Pn 20 48 07.2 -1.5
P18A IAML 20 49 01.2
comp=E,9.3nm,0.7s
P18A IAML 20 49 06.8
comp=N,9.8nm,0.8s
PV23 Carpenter Ridg 3.36 64 Pn 20 48 10.7 +1.1
PV13 Radium Mtn., P 3.40 70 Pn 20 48 08.3 -1.7
QSM Queen of Sheba 3.40 253 Pn 20 48 08.3 -1.5
PV11 David Mesa, Pa 3.40 67 Pn 20 48 08.8 -1.2
X18A Snowflake 3.45 136 Pn 20 48 09.8 -0.9
MVCO Mesa Verde 3.49 86 Pn 20 48 13.0 +1.7
GMN Gold Mountain 3.52 275 Pn 20 48 12.0 +0.3
GMN IAML 20 49 19.2
comp=N,9.5nm,0.7s
GRAC Grapevine Rang 3.60 271 Pn 20 48 12.9 +0.2
TPH Tonopah 3.61 288 Pn 20 48 13.7 +0.8
PV07 Paradox Valley 3.62 66 Pn 20 48 12.3 -0.7
PV07 IAML 20 49 13.1
comp=N,24nm,1.0s
PV07 IAML 20 49 14.0
comp=E,23nm,0.8s
MZP Montezuma Peak 3.66 282 Pn 20 48 13.5 -0.1
PV15 Paradox Valley 3.71 68 Pn 20 48 16.4 +2.1
LCH Last Change Ra 3.83 274 Pn 20 48 16.2 +0.4
LCH IAML 20 49 26.0
comp=E,6.4nm,0.7s
DSP Deep Springs 4.09 276 Pn 20 48 18.4 -0.9
DSP IAML 20 49 38.8
comp=E,5.5nm,4.1s
ELK Elko 4.13 334 Pn 20 48 20.4 +0.3
GLA Glamis 4.30 203 Pn Pn 20 48 19.9 -2.4
GLA IAML 20 49 36.8
comp=N,9.6nm,0.7s
GLA IAML 20 49 36.9
comp=E,16nm,1.0s
RDMU Red Mountain 4.36 35 Pn Pn 20 48 21.3 -1.9
RDMU IAML 20 49 46.4
comp=E,6.1nm,2.2s
RDMU IAML 20 50 42.0
comp=N,5.3nm,3.5s
NV11 Mina Array Sit 4.42 290 Pn 20 48 24.2 +0.2
NV11 IAML 20 49 24.4
comp=E,4.5nm,4.3s
NV11 IAML 20 49 37.5
comp=N,4.3nm,0.6s
NVAR Mina Array Bea 4.53 289 Pn Pn 20 48 24.7 -0.9
KVN Kaiserville 4.59 297 Pn 20 48 24.8 -1.7
KVN IAML 20 49 41.4
comp=N,4.1nm,4.0s
KVN IAML 20 49 48.1
comp=E,5.9nm,0.8s
LHV Little Huntoon 4.64 287 Pn Pn 20 48 26.6 -0.2
LHV IAML 20 49 50.1
comp=N,9.5nm,1.6s

*IDC **23** 20:49:37.9±9.6, 5°.23S×146°.56E, h116km±85km, mb3.9/9, mbtmp4.3/10, ML4.4/1, Error ellipse: s-maj=39.8km s-min=19.4km az=75.0*
*NEIC **23** 20:49:41.8±0.7, 5°.2S±0°.1×146°.35E±0°.08, h142km±8km, mb4.1/13, Error ellipse: s-maj=21.0km s-min=7.8km az=151.0*
ISC 23 20:49:38.6±1.0, 5°.1S±0°.1×146°.2E±0°.1, h100km, n29, σ2§38/21, mb4.1/11, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**6.02**	**81**		**Pn**	**20 51 06.7**	**+1.5**
COEN	**Coen**	**9.28**	**198**	Pn	**Pn**	**20 51 51.3**	**+1.8**
MTN	**Manton Dam**	**16.73**	**242**	P	**Pn**	**20 53 27.8**	**+0.8**
MTN				IAmb	IAmb	20 53 57.7	
comp=E,8.1nm,0.9s							
WB0	**Warramunga Arr**	**18.55**	**217**	P	**P**	**20 53 47.3**	**-0.4**
WB0				IAmb	IAmb	20 53 50.2	
comp=Z,10nm,1.0s							
WR0	**Warramunga Arr**	**18.61**	**217**	P	**P**	**20 53 47.9**	**-0.4**
WR0				IAmb	IAmb	20 53 51.2	
comp=Z,12nm,0.8s							
WRAB	**Tennant Creek**	**18.70**	**217**	P	**P**	**20 53 49.0**	**-0.3**
WB2	**Warramunga Arr**	**18.71**	**217**	P	**P**	**20 53 49.0**	**-0.3**
WB2				IAmb	IAmb	20 53 49.9	
comp=Z,12nm,0.8s							
WRA	**Warramunga Arr**	**18.72**	**217**	P	**P**	**20 53 48.6**	**-0.9**
comp=Z,1.2nm,0.3s,baz=39,slow=11,SNR=96							
WRA				S	**S**	**20 57 21.8**	**+4.3**
comp=Z,2.1nm,0.9s,baz=39,slow=18,SNR=6.5							
comp=Z,7.4nm,0.5s							
WRA	**Warramunga Arr**	**18.72**	**217**	P	**P**	**20 53 48.0**	**-1.5**
KNRA	**Kununurra**	**20.08**	**237**	P	**P**	**20 54 03.8**	**-0.5**
AS31	**Alice Springs**	**21.92**	**212**		**P**	**20 54 22.7**	**-1.3**
ASAR	**Alice Springs**	**21.92**	**212**	P	**P**	**20 54 22.7**	**-1.2**
comp=Z,7.7nm,0.7s,baz=48,slow=8.1,SNR=165							
ASAR				S	**S**	**20 58 13.5**	**-6.7**
comp=Z,0.4nm,0.8s,baz=34,slow=20,SNR=3.5							
comp=Z,7.7nm,0.7s							
ASAR	**Alice Springs**	**21.92**	**212**		**P**	**20 54 22.5**	**-1.5**
BATI	**Baumata**	**22.89**	**256**	P	**P**	**20 54 35.8**	**+1.7**
comp=Z,32nm,0.6s,baz=160,slow=4.2,SNR=6.5							
comp=Z,32nm,0.6s							
FITZ	**Fitzroy Crossi**	**23.87**	**236**	P	**P**	**20 54 42.5**	**-0.6**
comp=Z,14nm,0.6s,baz=45,slow=10,SNR=56							
comp=Z,14nm,0.6s							
FITZ	**Fitzroy Crossi**	**23.87**	**236**	P	**P**	**20 54 42.3**	**-0.7**
PSA00	**Pilbara Seismi**	**30.32**	**235**	P	P	20 55 39.7	-1.1
KSRS	**Korea Array**	**45.64**	**340**	P	P	20 57 48.7	-0.4
comp=Z,1.3nm,0.8s,baz=144,slow=8.5,SNR=4.5							
comp=Z,1.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**52.13**	**298**	P	**P**	**20 58 40.5**	**+1.4**
comp=Z,0.8nm,0.3s,baz=127,slow=4.9,SNR=4.3							
comp=Z,0.8nm,0.3s							
VNDA	**Vanda**	**72.84**	**176**	P	P	21 00 52.8	-3.2
comp=Z,0.8nm,0.6s,baz=328,slow=7.3,SNR=9.6							
comp=Z,0.8nm,0.6s							
VNDA	**Vanda**	**72.84**	**176**	P	P	21 00 52.8	-3.2
VNDA				IAmb	IAmb	21 01 33.1	
comp=Z,3.0nm,1.4s							
MK31	**Makanchi Array**	**76.31**	**321**	P	P	21 01 16.0	-0.6
MK31				IAmb	IAmb	21 01 29.0	
comp=Z,3.4nm,1.3s							
MKAR	**Makanchi Array**	**76.31**	**321**	P	P	21 01 15.8	-0.8
comp=Z,0.8nm,0.7s,baz=97,slow=8.3,SNR=6.3							
comp=Z,0.8nm,0.7s							
MKAR	**Makanchi Array**	**76.31**	**321**	P	P	21 01 15.6	-1.0
ZALV	**Zalesovo Beam**	**77.84**	**328**	P	P	21 01 23.1	-1.9
comp=Z,0.8nm,0.6s,baz=113,slow=6.7,SNR=4.7							
comp=Z,0.8nm,0.6s							
QSPA	**South Pole Qui**	**84.85**	**180**	P	P	21 01 58.0	-4.0
QSPA				IAmb	IAmb	21 02 03.0	
comp=Z,4.3nm,1.1s							
ILAR	**Eielson Array**	**84.99**	**23**	P	P	21 01 59.7	-2.8
comp=Z,2.0nm,0.6s,baz=254,slow=5.1,SNR=16							
comp=Z,2.0nm,0.6s							
TORD	**Toroidl Ar. Bea**	**144.09**	**285**	PKP	**PKPab**	**21 08 58.7**	**-2.7**
comp=Z,0.9nm,0.8s,baz=68,slow=2.8,SNR=6.2							
SIV	**San Ignacio**	**145.83**	**128**	PKPbc	**PKPdf**	**21 09 03.5**	**-3.1**
comp=Z,2.7nm,0.5s,baz=234,slow=3.4,SNR=12							

*IDC **23** 21:59:58.4±2.9, 29°.28N×130°.53E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=146.4km s-min=31.4km az=65.0*
*JMA **23** 22:00:03.4±0.2, 29°.2N±0°.6×130°.6E±0°.8, h39km, NEAR AMAMI-OSHIMA ISLAND*
ISC 23 22:00:03.6±1.1, 29°.25N±0°.07×130°.6E±0°.1, h35km, n14, σ0§48/14, mb3.6/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.84**	**315**	P	**Pn**	**22 00 19.1**	**+0.1**
JYAK	**Yakushimahirau**	**0.99**	**358**	P	**Pn**	**22 00 21.4**	**+0.4**
JAM	**Amami Oshima**	**1.18**	**225**	*eP*	**Pn**	**22 00 23.8**	**+0.2**
JTAJ	**Takarajima**	**1.18**	**266**	*eP*	**Pn**	**22 00 24.3**	**+0.6**
JMTN	**Minamitane**	**1.19**	**15**	P	**Pn**	**22 00 24.1**	**+0.4**
JKC	**Kuchinoerabu**	**1.25**	**346**	*eP*	**Pn**	**22 00 25.2**	**+0.6**
JTN	**Tanegashima 3**	**1.45**	**15**	*eP*	**Pn**	**22 00 27.8**	**+0.4**
JAMN	**Amaminishikomi**	**1.57**	**231**	*eP*	**Pn**	**22 00 29.3**	**+0.3**
JTK	**Tokunoshima**	**2.03**	**224**	*eP*	**Pn**	**22 00 36.1**	**+0.8**
JYRO	**Yoronjima**	**2.89**	**220**	*eP*	**Pn**	**22 00 47.1**	**0.0**
MKAR	**Makanchi Array**	**41.16**	**309**	P	**P**	**22 07 43.8**	**-0.7**
0.4nm,0.8s,baz=91,slow=9.0,SNR=5.0							
0.4nm,0.8s							
KURBB	**Kurchatov Arra**	**44.17**	**314**	P	**P**	**22 08 08.8**	**-0.1**
0.7nm,0.5s,baz=97,slow=9.1,SNR=11							
0.7nm,0.5s							
WRA	**Warramunga Arr**	**49.04**	**175**	P	**P**	**22 08 47.4**	**+0.1**
0.4nm,0.8s,baz=347,slow=7.0,SNR=2.8							
0.4nm,0.8s							
FINES	**FINESS Array B**	**71.26**	**331**	P	**P**	**22 11 18.9**	**-0.2**
1.5nm,1.0s,baz=46,slow=8.0,SNR=3.9							
1.5nm,1.0s							

*NEIC **23** 22:00:11.7±1.4, 29°.23N±0°.06×130°.50E±0°.09, h10km±1km, mb4.5/29, Error ellipse: s-maj=14.1km s-min=9.7km az=114.0*
*NIED **23** 22:00:14.0, 29°.21N×130°.56E, h29km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.75; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-0.22; $M_{r\theta}$1.00; $M_{\theta\phi}$-1.00; $M_{\phi r}$1.14; Fault plane solution: $M_0$1.86000×10^{15} NP1: ϕ_s250.00000°, δ19.00000°, λ119.00000°. NP2: ϕ_s39.00000°, δ73.00000°, λ80.00000°.*
*JMA **23** 22:00:14.0±0.3, 29°.2N±0°.6×130°.6E±0°.8, h29km±4km, MV3.8/22, NEAR AMAMI-OSHIMA ISLAND*
*IDC **23** 22:00:16.7±3.0, 29°.32N×130°.69E, h59km±29km, mb3.7/14, mbtmp4.0/18, ML3.3/3, Error ellipse: s-maj=24.6km s-min=15.0km az=64.0*
ISC 23 22:00:14.7±0.5, 29°.16N±0°.04×130°.62E±0°.06, h40km, n91, σ1§30/93, mb4.4/34, 2C, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.94**	**317**	*eP*	**Pn**	**22 00 29.9**	**-1.6**
JNN				*eS*	**Sn**	**22 00 42.4**	**-1.3**
JYAK	**Yakushimahirau**	**1.08**	**355**	*eP*	**Pn**	**22 00 32.5**	**-0.9**
JTAJ	**Takarajima**	**1.24**	**270**	*eP*	**Pn**	**22 00 35.1**	**-0.4**
JMTN	**Minamitane**	**1.26**	**11**	*eP*	**Pn**	**22 00 35.6**	**-0.2**
JKC	**Kuchinoerabu**	**1.35**	**344**	*eP*	**Pn**	**22 00 36.5**	**-0.6**
JKC				*eS*	**Sn**	**22 00 54.0**	**+0.2**
JTN	**Tanegashima 3**	**1.53**	**12**	*eP*	**Pn**	**22 00 39.6**	**+0.1**
JAMN	**Amaminishikomi**	**1.56**	**235**	*eP*	**Pn**	**22 00 40.3**	**+0.4**
JTSR	**Tashiro 2**	**2.02**	**7**	*eS*	**Sn**	**22 01 10.9**	**+0.5**
JSU	**Suzuyama**	**2.35**	**357**		**Pn**	**22 00 48.7**	**-2.0**
JSU	**Suzuyama**	**2.35**	**357**	*eP*	**Pn**	**22 00 51.1**	**+0.4**
JYRO	**Yoronjima**	**2.86**	**223**	*eP*	**Pn**	**22 00 58.4**	**+0.6**
JOW	**Kunigami**	**3.11**	**222**		**Pn**	**22 01 00.2**	**-1.0**
JKDJ	**Kitadaitoujima**	**3.25**	**169**	*eS*	**Sn**	**22 01 39.9**	**-0.7**
JMZ	**Minamidaito 2**	**3.37**	**171**	*eS*	**Sn**	**22 01 41.8**	**-1.7**
JMN	**Monobe**	**5.34**	**31**	Pn	**Pn**	**22 01 30.3**	**-1.6**
JHS	**Saijyo**	**6.20**	**19**	Pn	**Pn**	**22 01 43.4**	**-0.3**
INU	**Inuyama**	**8.21**	**40**	Pn	**Pn**	**22 02 12.0**	**+0.8**
KSRS	**Korea Array**	**8.58**	**345**	P	**Pn**	**22 02 17.4**	**+1.1**
0.4nm,0.3s,baz=164,slow=14,SNR=15							
3.8nm,0.7s							
JHJ2	**Mitsune**	**8.81**	**61**	Pn	**Pn**	**22 02 19.9**	**+0.4**
MJAR	**Matsushiro Arr**	**9.74**	**39**	P	**Pn**	**22 02 33.0**	**+0.8**
baz=226,slow=10,SNR=1.6							
0.7nm,0.5s							
JCJ	**Chichijima**	**10.41**	**99**	P	**Pn**	**22 02 41.5**	**+0.1**
47nm,0.5s,baz=283,slow=22,SNR=4.7							
JCJ	**Chichijima**	**10.41**	**99**	Pn	**Pn**	**22 02 41.8**	**+0.4**
USRK	**Ussuriysk Ar.**	**15.05**	**4**	Pn	**Pn**	**22 03 42.6**	**-1.9**
CN2	**Changchun**	**15.19**	**346**	*eP*	**P**	**22 03 52.3**	**+1.5**
CN2				pmax	pmax		
comp=Z,20nm,0.6s							
ENH	**Enshi**	**18.39**	**279**	P	**P**	**22 04 24.9**	**-1.4**
XAN	**Xi'an**	**19.10**	**290**	P	**P**	**22 04 33.3**	**-0.8**
XAN				pP	Pn	22 04 39.0	+3.8
XAN				sP	pP	22 04 42.0	-1.8
XAN				pmax	pmax		
comp=Z,6.0nm,0.7s							
KLR	**Kul'dur**	**20.07**	**2**	P	**P**	**22 04 42.8**	**-1.7**
comp=Z,0.7nm,0.3s,baz=181,slow=6.8,SNR=18							
comp=Z,2.4nm,0.6s							
LZH	**Lanzhou**	**23.54**	**294**	*eP*	**P**	**22 05 22.5**	**+1.0**
LZH				pP	pP	22 05 27.1	-4.7
LZH				pmax	pmax		
comp=Z,10.0nm,1.0s							
KMI	**Kunming**	**25.11**	**267**	⇑P	**P**	**22 05 36.9**	**+0.8**
KMI				pmax	pmax		
comp=Z,10.0nm,0.7s							
PZH	**PanZhiHua**	**25.65**	**271**	P	**P**	**22 05 43.5**	**+2.7**
PZH				pmax	pmax		
comp=Z,10.0nm,1.0s							
PZH				pmax	pmax		
comp=Z,100nm,4.7s							
SONM	**Songino Array**	**26.41**	**322**	P	**P**	**22 05 45.2**	**-2.4**
comp=Z,1.2nm,0.7s,baz=136,slow=12,SNR=6.6							
comp=Z,1.2nm,0.7s							
SONM	**Songino Array**	**26.41**	**322**	P	**P**	**22 05 45.7**	**-1.9**
GTA	**Gaotai**	**27.31**	**300**	⇑P	**P**	**22 06 00.8**	**+5.0**
GTA				pP	pP	22 06 07.5	+1.1
GTA				sP	sP	22 06 11.3	+0.2
GTA				pmax	pmax		
comp=Z,3.0nm,0.6s							
GTA				pmax	pmax		
comp=Z,19nm,5.5s							
GTA				LR	LR		
comp=N,220nm,16.0s							
GTA				LR	LR		
comp=E,490nm,15.3s							
GTA				LR	LR		
comp=Z,600nm,15.6s							
SHL	**Shillong**	**34.48**	**273**	P	**P**	**22 06 58.1**	**-1.1**
SHL				IAmb	IAmb	22 06 58.5	
comp=Z,7.0nm,0.6s							
WMQ	**Urumqi**	**37.06**	**305**	*eP*	**P**	**22 07 23.9**	**+3.0**
WMQ				LR	LR		
comp=N,170nm,18.9s							
WMQ				LR	LR		
comp=Z,130nm,19.9s							
JIRN	**Jiri**	**38.94**	**279**	*eP*	**P**	**22 07 37.0**	**-0.3**
GUN	**Gumba**	**39.15**	**279**	*eP*	**P**	**22 07 39.2**	**+0.2**
SHEM	**Shemya Is, Ala**	**39.58**	**41**	P	**P**	**22 07 40.3**	**-1.6**
comp=Z,9.7nm,0.3s,baz=275,slow=11,SNR=6.2							
PKI	**Pulchoki**	**39.63**	**279**	*eP*	**P**	**22 07 42.4**	**-0.6**
comp=Z,14nm,0.7s							
PKIN	**Phulchoki**	**39.64**	**279**	*eP*	**P**	**22 07 42.2**	**-0.8**
comp=Z,16nm,0.8s							
GKN	**Gorkha**	**40.20**	**280**	*eP*	**P**	**22 07 46.9**	**-0.6**
DANN	**Dangsing**	**40.88**	**281**	*eP*	**P**	**22 07 53.1**	**-0.2**
MK31	**Makanchi Array**	**41.26**	**309**	P	**P**	**22 07 56.0**	**+0.1**
MKAR	**Makanchi Array**	**41.26**	**309**	P	**P**	**22 07 55.7**	**-0.2**
comp=Z,1.4nm,0.7s,baz=91,slow=9.7,SNR=22							
comp=Z,1.4nm,0.7s							
MKAR	**Makanchi Array**	**41.26**	**309**	P	**P**	**22 07 55.4**	**-0.5**
ZAA0	**Zalesovo Array**	**41.29**	**320**	P	**P**	**22 07 54.9**	**-1.1**
ZALV	**Zalesovo Beam**	**41.29**	**320**	P	**P**	**22 07 55.3**	**-0.7**
comp=Z,1.1nm,0.4s,baz=103,slow=8.8,SNR=5.7							
comp=Z,1.1nm,0.4s							
ZALV	**Zalesovo Beam**	**41.29**	**320**	P	**P**	**22 07 55.0**	**-1.0**
MAKZ	**Makanchi**	**41.48**	**309**	P	**P**	**22 07 57.1**	**-0.5**
KURK	**Kurchatov**	**44.23**	**314**	P	**P**	**22 08 19.7**	**-0.2**
KURK				IAmb	IAmb	22 08 20.3	
comp=Z,8.3nm,0.7s							
KURBB	**Kurchatov Arra**	**44.28**	**314**	P	**P**	**22 08 19.8**	**-0.4**
comp=Z,5.6nm,0.5s,baz=100,slow=9.0,SNR=63							
comp=Z,5.6nm,0.5s							
NRIK	**Noril'sk**	**47.16**	**341**	P	**P**	**22 08 41.8**	**-1.0**
comp=Z,5.3nm,0.7s,baz=134,slow=5.8,SNR=4.0							
comp=Z,5.3nm,0.7s							
NIL	**Nilore**	**48.64**	**291**	P	**P**	**22 08 54.6**	**-0.2**
WB0	**Warramunga Arr**	**48.77**	**175**	P	**P**	**22 08 57.2**	**+1.5**
WB0				IAmb	IAmb	22 09 13.5	
comp=Z,7.6nm,1.2s							
WRA	**Warramunga Arr**	**48.94**	**175**	P	**P**	**22 08 57.0**	**0.0**
comp=Z,0.6nm,0.7s,baz=352,slow=8.0,SNR=8.0							
comp=Z,0.6nm,0.7s							
WRA	**Warramunga Arr**	**48.94**	**175**	P	**P**	**22 08 58.6**	**+1.5**
KK31	**Karatay Array**	**49.51**	**303**	P	**P**	**22 09 01.3**	**0.0**
KK31				IAmb	IAmb	22 09 02.8	
comp=Z,2.6nm,0.8s							
KKAR	**Karatay Array**	**49.51**	**303**	P	**P**	**22 09 01.3**	**-0.1**
BRVK	**Borovoye**	**49.63**	**316**	P	**P**	**22 09 01.8**	**-0.2**
BRVK				IAmb	IAmb	22 09 02.6	
comp=Z,8.6nm,0.8s							
ASAR	**Alice Springs**	**52.61**	**176**	P	**P**	**22 09 26.7**	**+2.0**
comp=Z,0.3nm,0.5s,baz=9.6,slow=13,SNR=9.8							
comp=Z,0.3nm,0.5s							
ABKAR	**Akbulak array**	**56.23**	**312**	P	**P**	**22 09 50.1**	**-0.6**
ABKAR	**Akbulak array**	**56.23**	**312**	P	**P**	**22 09 50.7**	**-0.1**
ABKAR				IAmb	IAmb	22 09 51.4	
comp=Z,9.6nm,0.7s							
ARU	**Arti**	**56.45**	**321**	P	**P**	**22 09 51.3**	**-0.8**
ARU				IAmb	IAmb	22 09 52.6	
comp=Z,5.3nm,0.8s							
J20K	**Nowinta River**	**57.77**	**30**	P	**P**	**22 10 03.2**	**+1.9**
J20K				IAmb	IAmb	22 10 14.5	
comp=Z,2.6nm,0.9s							
K20K	**Telida**	**57.82**	**31**	P	**P**	**22 10 03.2**	**+1.5**
K20K				IAmb	IAmb	22 10 06.6	
comp=Z,3.0nm,0.9s							
I21K	**Tanana**	**58.67**	**29**	P	**P**	**22 10 09.3**	**+1.7**
I21K				IAmb	IAmb	22 10 14.1	
comp=Z,4.2nm,1.1s							
KDAK	**Kodiak Island**	**58.92**	**38**	P	**P**	**22 10 10.4**	**+1.0**
MDM	**Murphy Dome**	**60.27**	**29**	P	**P**	**22 10 20.1**	**+1.4**
MDM				IAmb	IAmb	22 10 31.5	
comp=Z,4.3nm,1.0s							
ILAR	**Eielson Array**	**60.86**	**29**	P	**P**	**22 10 22.7**	**0.0**
comp=Z,0.4nm,0.7s,baz=289,slow=5.7,SNR=3.1							
comp=Z,0.4nm,0.7s							
BMAR	**Burnt Mountain**	**61.46**	**26**	P	**P**	**22 10 28.9**	**+2.0**
KBZ	**Khabaz**	**68.96**	**309**	P	**P**	**22 11 15.9**	**+0.3**
comp=Z,4.0nm,0.8s,baz=52,slow=3.2,SNR=8.5							
comp=Z,4.0nm,0.8s							
FIA1	**FINESS Array S**	**71.36**	**331**	P	**P**	**22 11 29.2**	**-1.0**
FINES	**FINESS Array B**	**71.36**	**331**	P	**P**	**22 11 28.6**	**-1.6**
comp=Z,1.0nm,0.5s,baz=64,slow=5.7,SNR=13							
comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**71.36**	**331**	P	**P**	**22 11 29.3**	**-0.8**
GURO	**Guroymak-BITLI**	**71.47**	**304**	P	**P**	**22 11 32.7**	**+1.2**
GURO				IAmb	IAmb	22 11 33.5	
comp=Z,3.5nm,0.7s							
AKASG	**Malin Array Be**	**74.68**	**320**	P	**P**	**22 11 49.7**	**-0.3**
comp=Z,2.5nm,0.5s,baz=58,slow=6.5,SNR=10.0							
comp=Z,2.5nm,0.5s							
RAYN	**Ar Rayn**	**74.89**	**289**	P	**P**	**22 11 52.0**	**+0.3**
BRTR	**Keskin Array B**	**76.91**	**308**	P	**P**	**22 12 03.3**	**+0.2**
comp=Z,1.8nm,0.7s,baz=121,slow=4.2,SNR=6.5							
comp=Z,1.8nm,0.7s							
NC405	**NORSAR Array S**	**77.38**	**334**	P	**P**	**22 12 04.7**	**-0.5**
NB2	**NORSAR Subarra**	**77.62**	**334**	P	**P**	**22 12 05.0**	**-1.6**
comp=Z,0.6nm,0.6s,baz=50,slow=5.9							
NOA	**NORSAR Array B**	**77.62**	**334**	P	**P**	**22 12 04.9**	**-1.6**

comp=Z,0.2nm,0.3s
GERES **GERESS Array B** 84.13 324 P **P** 22 12 41.9 +0.3
STAL **STALIGIAL** 86.27 322 P **P** 22 12 51.8 -0.5
STAL IAmb IAmb 22 13 01.9
comp=Z,8.3nm,1.2s
VNA2 **Neumayer--Watz** 132.18 197 Pdiff **Pdif** 22 16 22.4 +4.4

BJI ***23*** *22:02:01.4±0.0,28°.95N×130°.94E,h40km,mb4.5/47, mB4.7/29,Ms4.3/43,Ms7 4.2/42*
NEIC ***23*** *22:02:03.7±1.2,29°.27N±0°.05×130°.45E±0°.08,h10km±1km, mb4.9/84,Error ellipse: s-maj=12.6km s-min=7.1km az=110.0*
NIED ***23*** *22:02:06.7,29°.27N×130°.50E,h62km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.94; Mθθ-2.00; Mφφ-0.95; Mrθ3.00; Mθφ-3.64; Mφr3.99; Fault plane solution: M₀6.48000×10¹⁵ NP1: φs254.00000°,δ23.00000°,λ126.00000°. NP2: φs35.00000°,δ72.00000°,λ76.00000°.*
JMA ***23*** *22:02:06.7±0.1,29°.3N±0°.5×13°.0E±°,h62km±4km, MD4.4/26,MV4.2/26,NEAR AMAMI-OSHIMA ISLAND*
JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.
IDC ***23*** *22:02:08.7±2.6,29°.34N×130°.49E,h51km±23km,mb4.1/24, mbtmp4.3/29,ML3.8/4,MS3.7/19,Error ellipse: s-maj=18.1km s-min=14.8km az=73.0*

ISC 23 22:02:06.7±0.4,**29°.27N**±0°.03×**130°.49E**±0°.05,**h34**km,**n238,** σ1ˢ**29**/227,**mb4.7**/82,**MS4.2**/33,**4C-1D,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.78**	**317**	P	P	**Pb**	**22 02 22.2**	**+0.2**
JNN				S	S	**Sb**	**22 02 34.2**	**+1.8**
JNN	**Nakanoshima**	**0.78**	**317**	A	A		22 02 22.2	
	comp=E,117nm,0.5s,comp=E,69nm,1.6s							
JYAK	**Yakushimahirau**	**0.97**	**1**	P	P	**Pn**	**22 02 24.4**	**+0.5**
JYAK	**Yakushimahirau**	**0.97**	**1**	A	A		22 02 24.4	
	comp=E,18nm,2.1s,comp=E,28nm,1.0s							
JZK	**Kikaishima**	**1.05**	**206**	P	P	**Pb**	**22 02 26.1**	**-0.3**
JZK	**Kikaishima**	**1.05**	**206**	A	A		22 02 26.1	
	comp=E,43nm,1.4s,comp=E,48nm,1.1s							
JTAJ	**Takarajima**	**1.13**	**265**	*eP*	P	**Pn**	**22 02 27.1**	**+1.0**
JAM	**Amami Oshima**	**1.15**	**222**	*eP*	P	**Pn**	**22 02 26.9**	**+0.5**
JAM				*eS*	S	**Sb**	**22 02 43.6**	**+0.9**
JAM	**Amami Oshima**	**1.15**	**222**	A	A		22 02 26.9	
	comp=E,11nm,0.8s,comp=E,12nm,2.0s							
JMTN	**Minamitane**	**1.18**	**18**	*eP*	P	**Pn**	**22 02 27.3**	**+0.4**
JMTN	**Minamitane**	**1.18**	**18**	A	A		22 02 27.3	
	comp=E,30nm,2.1s,comp=E,20nm,1.5s							
JKC	**Kuchinoerabu**	**1.22**	**348**	*eP*	P	**Pn**	**22 02 28.2**	**+0.8**
JKC				*eS*	S	**Sb**	**22 02 45.5**	**+0.8**
JKC	**Kuchinoerabu**	**1.22**	**348**	A	A		22 02 28.2	
	comp=E,14nm,1.9s,comp=E,13nm,1.2s							
JTN	**Tanegashima 3**	**1.45**	**17**	*eP*	P	**Pn**	**22 02 30.9**	**+0.3**
JTN	**Tanegashima 3**	**1.45**	**17**	A	A		22 02 30.9	
	comp=E,15nm,1.7s,comp=E,15nm,2.3s							
JAMN	**Amaminishikomi**	**1.54**	**229**	*eP*	P	**Pn**	**22 02 32.4**	**+0.7**
JAMN	**Amaminishikomi**	**1.54**	**229**	A	A		22 02 32.4	
	comp=E,9.0nm,1.3s,comp=E,6.0nm,1.6s							
JTSR	**Tashiro 2**	**1.93**	**11**	*eP*	P	**Pn**	**22 02 38.3**	**+1.1**
JTSR	**Tashiro 2**	**1.93**	**11**	A	A		22 02 38.3	
	comp=E,9.0nm,1.3s,comp=E,7.0nm,0.9s							
JTK	**Tokunoshima**	**2.00**	**223**	*eP*	P	**Pn**	**22 02 38.9**	**+0.8**
JTK	**Tokunoshima**	**2.00**	**223**	A	A		22 02 38.9	
	comp=E,6.0nm,2.3s,comp=E,6.0nm,1.0s							
JSU	**Suzuyama**	**2.23**	**359**	Pn	P	**Pn**	**22 02 42.0**	**+0.7**
JSU				Sn	S	**Sn**	**22 03 07.7**	**-0.1**
JSU	**Suzuyama**	**2.23**	**359**	*eP*	P	**Pn**	**22 02 41.9**	**+0.5**
JNAR	**Kushima--Naru**	**2.35**	**17**	*eP*	P	**Pn**	**22 02 44.5**	**+1.6**
JNAR	**Kushima--Naru**	**2.35**	**17**	A	A		22 02 44.5	
	comp=E,9.0nm,2.1s,comp=E,8.0nm,3.4s							
JNKG	**Nichinankitago**	**2.51**	**18**	A	A		22 02 45.9	
	comp=E,7.0nm,1.9s,comp=E,7.0nm,6.2s							
JOW	**Kunigami**	**3.11**	**219**	Pn	P	**Pn**	**22 02 53.1**	**-0.3**
JOW				Sn	S	**Sn**	**22 03 29.5**	**+0.1**
JMN	**Monobe**	**5.31**	**32**	Pn	P	**Pn**	**22 03 24.4**	**+0.7**
JHS	**Saijyo**	**6.14**	**21**	Pn	P	**Pn**	**22 03 35.2**	**+0.2**
NAWB	**Namwon**	**6.67**	**338**			**Pn**	**22 03 44.1**	**+1.8**
TJN	**Taejon**	**7.56**	**340**			**Pn**	**22 03 54.6**	**+0.1**
INU	**Inuyama**	**8.20**	**41**			**Pn**	**22 04 04.0**	**+0.7**
KSRS	**Korea Array**	**8.44**	**346**	P	P	**Pn**	**22 04 09.1**	**+2.5**
	0.6nm,0.3s,baz=163,slow=14,SNR=20							
KSRS				LR	LR		22 07 39.6	
	comp=Z,512nm,19.7s,baz=165,slow=40 8.1nm,0.7s							
KS19	**Wonju Array Si**	**8.50**	**346**			**Pn**	**22 04 06.3**	**-1.1**
JHJ	**Hachijo jima 2**	**8.84**	**62**	P	P	**Pn**	**22 04 13.2**	**+1.1**
	10nm,0.3s,baz=230,slow=22,SNR=3.7							
JHJ				LR	LR		22 07 18.4	
	comp=Z,269nm,19.9s,baz=318,slow=35 31nm,0.3s							
SEHB	**SEOHWA**	**9.17**	**349**	Pn	P	**Pn**	**22 04 16.6**	**0.0**
YHNB	**Yeheng**	**9.33**	**243**	Pn	P	**Pn**	**22 04 18.1**	**-0.7**
MAJO	**Matsushiro**	**9.73**	**40**	Pn	P	**Pn**	**22 04 23.6**	**-0.7**
MJAR	**Matsushiro Arr**	**9.73**	**40**	P	P	**Pn**	**22 04 26.0**	**+1.7**
	0.1nm,0.3s,baz=228,slow=13,SNR=2.6 0.7nm,0.4s							
SSLB	**Suanglung**	**10.13**	**240**	Pn	P	**Pn**	**22 04 28.4**	**-1.4**
JCJ	**Chichijima**	**10.55**	**99**	P	P	**Pn**	**22 04 34.6**	**-0.9**
	37nm,0.5s,baz=319,slow=22,SNR=5.3							
JCJ				LR	LR		22 08 21.7	
	comp=Z,256nm,18.0s,baz=111,slow=35							
TIA	**Tai'an**	**13.20**	**305**	P	P	**P**	**22 05 18.1**	**-3.2**
TIA				S	Sn		22 07 49.3	+12
TIA				pmax	pmax			
	comp=Z,5.0nm,0.6s							
TIA				pmax	pmax			
	comp=Z,100nm,4.4s							
TIA				LR	LR			
	comp=N,650nm,13.4s							
TIA				LR	LR			
	comp=E,920nm,14.1s							
TIA				LR	LR			
	comp=Z,1μm,13.8s							
USRK	**Ussuriysk Ar.**	**14.95**	**4**	P	P	**Pn**	**22 05 37.4**	**+1.9**
	1.1nm,0.7s,baz=175,slow=8.7,SNR=1.7							
USRK				LR	LR		22 11 02.6	
	comp=Z,258nm,20.4s,baz=230,slow=36							
USRK	**Ussuriysk Ar.**	**14.95**	**4**	Pn	P	**Pn**	**22 05 35.7**	**+0.2**
CN2	**Changchun**	**15.06**	**346**	*eP*	P	**P**	**22 05 44.1**	**+2.3**
CN2				S	S	**Sn**	**22 08 22.5**	**0.0**
CN2				pmax	pmax			
	comp=Z,50nm,0.7s							
CN2				LR	LR			
	comp=N,800nm,13.0s							
CN2				LR	LR			
	comp=E,300nm,13.0s							
CN2				LR	LR			
	comp=Z,700nm,13.0s							
HNS	**HongShan**	**15.47**	**306**	⇓P	P	**P**	**22 05 47.9**	**+1.5**
HNS				S	S		**22 08 41.6**	**-5.9**
HNS				pmax	pmax			
	comp=Z,25nm,0.7s							
HNS				LR	LR			
	comp=Z,540nm,14.3s							
HNS				LR	LR			
	comp=Z,670nm,13.5s							
HNS				LR	LR			
	comp=Z,930nm,13.9s							
BJT	**Baijiatuau**	**15.91**	**316**	P	P	**Pn**	**22 05 49.4**	**+1.3**
BJI	**Beijing**	**15.92**	**316**	P	P	**P**	**22 05 50.4**	**-1.0**
BJI				sP	sP		**22 06 05.8**	**+2.3**
BJI				pmax	pmax			
	comp=Z,8.0nm,0.7s							
BJI				LR	LR			
	comp=Z,210nm,14.0s							
BJI				LR	LR			
	comp=Z,470nm,13.3s							
BJI				LR	LR			
	comp=Z,1μm,14.6s							
LYN	**LuoYang**	**16.18**	**294**	*eP*	P	**P**	**22 05 54.8**	**+0.5**
LYN				pP	pP		22 06 02.9	-0.2
LYN				sP	sP		22 06 09.6	+3.4
LYN				S	S	**Sn**	**22 08 52.3**	**+2.5**
LYN				pmax	pmax			
	comp=Z,20nm,0.8s							
LYN				pmax	pmax			
	comp=Z,100nm,5.7s							
LYN				LR	LR			
	comp=Z,330nm,16.9s							
LYN				LR	LR			
	comp=Z,610nm,17.1s							
LYN				LR	LR			
	comp=Z,640nm,15.0s							
TIY	**Taiyuan**	**17.24**	**304**	P	P		**22 06 12.3**	**+6.2**
TIY				pmax	pmax			
	comp=Z,160nm,7.4s							
ENH	**Enshi**	**18.26**	**278**	P	P		**22 06 17.1**	**-0.3**
XLT	**XiLinHaoTe**	**18.59**	**326**	⇓*i*P	P		**22 06 23.0**	**+1.6**
XLT				pP	pP		22 06 30.5	+0.8
XLT				sP	sP		22 06 38.3	+5.1
XLT				S	Sn		**22 09 40.8**	**-7.5**
XLT				pmax	pmax			
	comp=Z,17nm,0.8s							
XLT				pmax	pmax			
	comp=Z,120nm,5.0s							
XLT				LR	LR			
	comp=Z,540nm,16.6s							
XLT				LR	LR			
	comp=Z,810nm,16.6s							
XAN	**Xi'an**	**18.96**	**290**	⇑P	P		**22 06 25.4**	**+0.3**
XAN				pP	pP		22 06 34.0	+0.4
XAN				sP	sP		22 06 37.6	+0.6
XAN				pmax	pmax			
	comp=Z,30nm,0.9s							
XAN				pmax	pmax			
	comp=Z,110nm,5.4s							
XAN				LR	LR			
	comp=Z,310nm,12.4s							
XAN				LR	LR			
	comp=Z,500nm,12.1s							
XAN				LR	LR			
	comp=Z,640nm,12.7s							
KLR	**Kul'dur**	**19.96**	**2**	P	P		**22 06 35.4**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=180,slow=7.5,SNR=28							
KLR				LR	LR		22 14 48.9	
	comp=Z,204nm,18.3s,baz=173,slow=38 comp=Z,12nm,0.7s							
BTO	**Baotou**	**20.19**	**310**	*eP*	Pn		22 06 44.8	+4.3
BTO				LR	LR			
	comp=Z,2μm,16.4s							
BTO				LR	LR			
	comp=Z,2μm,13.4s							
GUMO	**Guam**	**20.52**	**136**	LR	LR		22 13 40.4	
	comp=Z,99nm,18.3s,baz=296,slow=34							
GUMO	**Guam**	**20.52**	**136**	P	P		**22 06 42.4**	**+0.2**
GYA	**Guiyang**	**21.24**	**268**	⇑P	P		**22 06 51.8**	**+1.8**
GYA				pmax	pmax			
	comp=Z,19nm,0.6s							
GYA				LR	LR			
	comp=Z,370nm,11.4s							
GYA				LR	LR			
	comp=Z,690nm,13.2s							
GYA				LR	LR			
	comp=Z,890nm,15.1s							
QIZ	**Qiongzhong**	**21.39**	**246**	P	P		**22 06 52.2**	**+0.7**
QIZ	**Qiongzhong**	**21.39**	**246**	P	P		**22 06 54.3**	**+2.8**
QIZ				pmax	pmax			
	comp=Z,19nm,1.0s							
QIZ				LR	LR			
	comp=Z,290nm,18.3s							
QIZ				LR	LR			
	comp=Z,220nm,16.7s							
QIZ				LR	LR			
	comp=Z,280nm,15.9s							
CD2	**Chengdu**	**23.17**	**281**	P	P		**22 07 10.9**	**+0.5**
CD2				S	S		**22 11 19.5**	**-0.3**
CD2				pmax	pmax			
	comp=Z,30nm,0.6s							
CD2				LR	LR			
	comp=Z,500nm,13.2s							
CD2				LR	LR			
	comp=Z,640nm,13.3s							
LZH	**Lanzhou**	**23.39**	**294**	*eP*	P		**22 07 14.3**	**+1.6**
LZH				sS	sS		22 11 35.3	-4.1
LZH				pmax	pmax			
	comp=Z,19nm,1.4s							
LZH				LR	LR			
	comp=Z,270nm,14.1s							
LZH				LR	LR			
	comp=Z,690nm,14.4s							
LZH				LR	LR			
	comp=Z,760nm,15.5s							
KMI	**Kunming**	**25.00**	**267**	⇑P	P		**22 07 28.1**	**+0.4**
KMI				pmax	pmax			
	comp=Z,39nm,0.7s							
KMI				LR	LR			
	comp=Z,280nm,15.0s							
KMI				LR	LR			
	comp=Z,540nm,13.0s							
KMI				LR	LR			
	comp=Z,640nm,13.7s							
PZH	**PanZhiHua**	**25.53**	**271**	P	P		**22 07 32.8**	**+0.4**
PZH				S	S		**22 11 53.0**	**-4.9**
PZH				sS	**sS**		**22 12 18.5**	**+4.7**
PZH				pmax	pmax			
	comp=Z,30nm,1.1s							
PZH				pmax	pmax			
	comp=Z,100nm,5.4s							
PZH				LR	LR			
	comp=Z,650nm,18.4s							
PZH				LR	LR			
	comp=Z,570nm,17.1s							
PZH				LR	LR			
	comp=Z,610nm,18.1s							
ULN	**Ulaanbaatar**	**25.92**	**322**	P	P		**22 07 35.1**	**-0.7**
SONM	**Songino Array**	**26.26**	**322**	P	P		**22 07 36.9**	**-2.0**
	comp=Z,2.6nm,0.7s,baz=139,slow=11,SNR=11							
SONM				LR	LR		22 19 04.5	
	comp=Z,354nm,20.1s,baz=100,slow=39 comp=Z,2.6nm,0.7s							
SONM	**Songino Array**	**26.26**	**322**	P	P		**22 07 37.9**	**-0.9**
GTA	**Gaotai**	**27.16**	**300**	*eP*	P		**22 07 47.4**	**+0.4**
GTA				pP	sP		22 07 58.8	-0.8
GTA				sP	pP		22 08 04.9	+8.5
GTA				pmax	pmax			
	comp=Z,3.0nm,0.7s							
GTA				pmax	pmax			
	comp=Z,54nm,6.5s							
GTA				LR	LR			
	comp=Z,220nm,15.3s							
GTA				LR	LR			
	comp=Z,510nm,16.0s							
GTA				LR	LR			
	comp=Z,600nm,16.0s							
CRAI	**Chiangrai**	**28.72**	**259**	P	P		**22 08 00.8**	**-0.3**
CHTO	**Chiang Mai**	**30.54**	**257**	P	P		**22 08 17.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**30.70**	**257**	P	P		**22 08 17.7**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=62,slow=6.4,SNR=7.5							
CMAR				PcP	**PcP**		**22 11 17.6**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=32,slow=1.2,SNR=6.1							
CMAR				LR	LR		22 21 04.3	
	comp=Z,143nm,18.8s,baz=70,slow=37 comp=Z,1.3nm,0.7s							
FAKI	**Fak Fak**	**32.05**	**177**	P	P		**22 08 30.3**	**0.0**
MA2	**Magadan**	**33.30**	**19**	LR	LR		22 23 24.2	
	comp=Z,172nm,18.2s,baz=130,slow=38							
LSA	**Lhasa**	**34.13**	**281**	P	P		**22 08 49.4**	**+0.3**
SHL	**Shillong**	**34.36**	**273**	P	P		**22 08 50.1**	**-0.7**
SEY	**Seymchan**	**36.55**	**17**	P	P		**22 09 08.4**	**-0.5**
	comp=Z,3.4nm,0.6s,baz=292,slow=9.9,SNR=4.2 comp=Z,3.4nm,0.6s							
WMQ	**Urumqi**	**36.90**	**305**	*eP*	P		**22 09 13.3**	**+1.1**
WMQ				sP	sP		22 09 29.6	+4.7
WMQ				LR	LR			
	comp=Z,310nm,18.5s							
WMQ				LR	LR			
	comp=Z,230nm,17.5s							
WMQ				LR	LR			
	comp=Z,200nm,20.1s							
KULM	**Kulim**	**36.94**	**236**	P	P		**22 09 12.4**	**-0.3**
KULM				IAmb	IAmb		22 09 42.2	
	comp=Z,51nm,1.5s							
ODAN	**Odare**	**37.95**	**277**	*eP*	P		**22 09 21.2**	**-0.3**
	comp=Z,4.3nm,0.7s							
RAMN	**Ramite**	**38.62**	**277**	*eP*	P		**22 09 26.8**	**-0.3**
	comp=Z,15nm,0.6s							
JIRN	**Jiri**	**38.80**	**279**	*eP*	P		**22 09 28.9**	**+0.1**
	comp=Z,21nm,0.7s							
GUN	**Gumba**	**39.02**	**279**	*eP*	P		**22 09 31.0**	**+0.4**
	comp=Z,57nm,0.5s							
PKI	**Pulchoki**	**39.50**	**279**	*eP*	P		**22 09 34.3**	**-0.3**
	comp=Z,46nm,0.8s							
PKIN	**Phulchoki**	**39.51**	**279**	*eP*	P		**22 09 34.1**	**-0.5**
	comp=Z,40nm,0.7s							
KKN	**Kakani**	**39.56**	**279**	*eP*	P		**22 09 34.9**	**-0.1**
DMN	**Daman**	**39.75**	**279**	*eP*	P		**22 09 36.4**	**-0.2**
	comp=Z,30nm,0.7s							
PSI	**Prapat**	**39.89**	**235**	LR	LR		22 27 33.1	
	comp=Z,101nm,18.8s,baz=270,slow=38							
GKN	**Gorkha**	**40.07**	**280**	*eP*	P		**22 09 38.8**	**-0.3**
	comp=Z,31nm,0.7s							
DANN	**Dangsing**	**40.74**	**280**	*eP*	P		**22 09 45.1**	**+0.2**
	comp=Z,90nm,0.7s							
MK31	**Makanchi Array**	**41.10**	**309**	P	P		**22 09 47.1**	**-0.2**
MKAR	**Makanchi Array**	**41.10**	**309**	P	P		**22 09 47.4**	**+0.1**
	comp=Z,4.2nm,0.7s,baz=92,slow=9.9,SNR=38							
MKAR				PcP	**PcP**		**22 11 46.5**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=94,slow=3.1,SNR=4.0							
MKAR				LR	LR		22 29 39.5	
	comp=Z,72nm,20.0s,baz=78,slow=40 comp=Z,4.2nm,0.7s							
MKAR	**Makanchi Array**	**41.10**	**309**	P	P		**22 09 46.9**	**-0.4**
ZAA0	**Zalesovo Array**	**41.13**	**320**	P	P		**22 09 46.7**	**-0.6**
ZALV	**Zalesovo Beam**	**41.13**	**320**	P	P		**22 09 46.8**	**-0.5**
	comp=Z,3.9nm,0.6s,baz=104,slow=8.3,SNR=16							
ZALV				PcP	**PcP**		**22 11 45.8**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=132,slow=4.2,SNR=4.7 comp=Z,3.9nm,0.6s							
ZALV	**Zalesovo Beam**	**41.13**	**320**	P	P		**22 09 47.0**	**-0.4**
MTN	**Manton Dam**	**41.87**	**179**	P	P		**22 09 53.4**	**-0.3**
MTN				IAmb	IAmb		22 10 05.4	
	comp=Z,13nm,0.8s							
TIXI	**Tiksi**	**42.44**	**359**	P	P		**22 09 57.3**	**-0.5**
	comp=Z,9.6nm,0.9s,baz=27,slow=2.3,SNR=1.7 comp=Z,9.6nm,0.9s							
TIXI	**Tiksi**	**42.44**	**359**	P	P		**22 09 57.6**	**-0.2**
TIXI				IAmb	IAmb		22 10 18.0	
	comp=Z,39nm,1.1s							
KURK	**Kurchatov**	**44.08**	**314**	P	P		**22 10 10.6**	**-0.7**
KURBB	**Kurchatov Arra**	**44.12**	**314**	P	P		**22 10 11.8**	**+0.2**
	comp=Z,18nm,0.6s,baz=100,slow=9.0,SNR=88 comp=Z,18nm,0.6s							
COEN	**Coen**	**44.68**	**162**	P	P		**22 10 15.9**	**-0.6**
COEN				IAmb	IAmb		22 10 30.5	
	comp=Z,18nm,1.8s							
KNRA	**Kununurra**	**44.71**	**182**	P	P		**22 10 16.8**	**+0.2**
KSH	**Kashi**	**45.53**	**298**	P	P		**22 10 26.4**	**+3.2**
KSH				pmax	pmax			
	comp=Z,4.0nm,0.8s							
KSH				LR	LR			
	comp=Z,140nm,13.0s							
KSH				LR	LR			
	comp=Z,280nm,14.9s							
KSH				LR	LR			
	comp=Z,320nm,14.9s							
AAK	**Ala-Archa**	**46.46**	**302**	P	P		**22 10 30.8**	**+0.2**
NRIK	**Noril'sk**	**47.02**	**341**	P	P		**22 10 33.5**	**-0.9**
	comp=Z,14nm,0.7s,baz=109,slow=8.4,SNR=11 comp=Z,14nm,0.7s							
NRIK	**Noril'sk**	**47.02**	**341**	P	P		**22 10 33.6**	**-0.7**
NRIK				IAmb	IAmb		22 10 34.0	
	comp=Z,12nm,0.7s							
FITZ	**Fitzroy Crossi**	**47.32**	**186**	P	P		**22 10 37.2**	**0.0**
FITZ				IAmb	IAmb		22 11 19.0	
	comp=Z,15nm,1.2s							
NIL	**Nilore**	**48.49**	**291**	P	P		**22 10 46.4**	**0.0**
HYBB	**Hyderabad (bro**	**48.77**	**268**	*eP*	P		**22 10 48.4**	**-0.3**
WB0	**Warramunga Arr**	**48.89**	**175**	P	P		**22 10 49.5**	**+0.1**
WRA	**Warramunga Arr**	**49.06**	**175**	P	P		**22 10 50.5**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=353,slow=8.1,SNR=9.3 comp=Z,1.5nm,0.7s							
WRA	**Warramunga Arr**	**49.06**	**175**	P	P		**22 10 50.1**	**-0.5**
WB2	**Warramunga Arr**	**49.06**	**175**	P	P		**22 10 50.4**	**-0.3**
WB2				IAmb	IAmb		22 11 02.3	
	comp=Z,13nm,1.3s							
KK31	**Karatay Array**	**49.36**	**303**	P	P		**22 10 52.7**	**-0.1**
KK31				IAmb	IAmb		22 10 54.8	
	comp=Z,8.6nm,0.8s							
KKAR	**Karatay Array**	**49.36**	**303**	P	P		**22 10 52.4**	**-0.4**
BRVK	**Borovoye**	**49.47**	**316**	P	P		**22 10 53.5**	**0.0**
CHGR	**Chuyangaron**	**50.89**	**298**	P	P		**22 11 04.2**	**-0.4**
CHGR				IAmb	IAmb		22 11 06.2	
	comp=Z,7.6nm,0.7s							
CTA	**Charters Tower**	**51.37**	**161**	LR	LR		22 31 42.9	
	comp=Z,48nm,20.3s,baz=74,slow=34							
PSA00	**Pilbara Seismi**	**51.57**	**193**	P	P		**22 11 09.3**	**-0.3**
PSA00				IAmb	IAmb		22 11 22.6	
	comp=Z,11nm,1.1s							
KBL	**Kabul**	**51.73**	**293**	P	P		**22 11 10.7**	**-0.4**
KBL				IAmb	IAmb		22 11 12.8	
	comp=Z,7.1nm,0.8s							
ASAR	**Alice Springs**	**52.73**	**176**	P	P		**22 11 18.9**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=8.7,slow=12,SNR=9.7 comp=Z,0.9nm,0.6s							
ABKAR	**Akbulak array**	**56.08**	**312**	P	P		**22 11 42.4**	**+0.1**
ABKAR	**Akbulak array**	**56.08**	**312**	P	P		**22 11 42.2**	**-0.1**
ARU	**Arti**	**56.29**	**321**	P	P		**22 11 43.1**	**-0.6**
HRA	**Herat**	**57.23**	**294**		P		**22 11 51.3**	**+0.2**
HRA				IAmb	IAmb		22 11 52.7	
	comp=Z,7.6nm,0.7s							
J20K	**Nowinta River**	**57.73**	**30**	P	P		**22 11 54.6**	**+0.8**
J20K				IAmb	IAmb		22 12 11.3	
	comp=Z,12nm,1.4s							
K20K	**Telida**	**57.78**	**31**	P	P		**22 11 55.4**	**+1.2**
IMAR	**Indian Mountai**	**57.88**	**28**	P	P		**22 11 55.9**	**+1.1**
H21K	**Melozitna Rive**	**58.27**	**28**	P	P		**22 11 58.0**	**+0.3**
H21K				IAmb	IAmb		22 12 24.9	
	comp=Z,15nm,1.6s							
MLY	**Manley**	**59.16**	**29**	P	P		**22 12 05.2**	**+1.3**
MLY				IAmb	IAmb		22 12 47.9	
	comp=Z,8.1nm,1.4s							
GEYT	**Alibeck**	**59.54**	**299**	P	P		**22 12 07.5**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=101,slow=1.5,SNR=4.0 comp=Z,1.7nm,0.5s							
GEYT	**Alibeck**	**59.54**	**299**	P	P		**22 12 07.3**	**+0.4**
NEA2	**Nenana**	**59.91**	**29**	P	P		**22 12 09.7**	**+0.7**
NEA2				IAmb	IAmb		22 12 11.0	
	comp=Z,7.8nm,0.9s							
MDM	**Murphy Dome**	**60.23**	**29**	P	P		**22 12 11.9**	**+0.7**
MDM				IAmb	IAmb		22 12 13.3	
	comp=Z,8.6nm,0.8s							
ILAR	**Eielson Array**	**60.83**	**29**	P	P		**22 12 13.7**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=286,slow=7.4,SNR=9.7 comp=Z,1.6nm,0.8s							
HDA	**Harding Lake**	**60.84**	**30**	P	P		**22 12 15.4**	**+0.1**
HDA				IAmb	IAmb		22 12 16.9	
	comp=Z,6.0nm,0.9s							
BMAR	**Burnt Mountain**	**61.42**	**26**	P	P		**22 12 21.2**	**+2.0**
BCAR	**Beaver Creek A**	**63.34**	**31**	P	P		**22 12 33.0**	**+0.9**
INK	**Inuvik**	**65.32**	**24**	LR	LR		22 43 06.9	
	comp=Z,59nm,19.0s,baz=209,slow=38							
FARO	**Faro, Yukon**	**67.31**	**30**	P	P		**22 12 57.2**	**-0.7**
FARO				IAmb	IAmb		22 13 19.1	
	comp=Z,10nm,1.2s							
ARCES	**ARCESS Array B**	**67.92**	**338**	P	P		**22 13 00.8**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=69,slow=7.9,SNR=4.7 comp=Z,4.6nm,0.9s							
ARCES	**ARCESS Array B**	**67.92**	**338**	P	P		**22 13 01.3**	**-0.3**
GNI	**Garni**	**68.77**	**305**	P	P		**22 13 07.2**	**

comp=Z,10.0nm,0.7s
BRTR Keskin Array B 76.75 308 P **P** 22 13 55.5 +0.6
comp=Z,6.4nm,0.7s,baz=104,slow=4.6,SNR=22
comp=Z,6.4nm,0.7s
BRTR Keskin Array B 76.75 308 **P** 22 13 54.6 -0.3
HFS Hagfors 77.06 333 LR LR 22 50 50.5
comp=Z,79nm,19.7s,baz=35,slow=38
NC405 NORSAR Array S 77.23 334 P **P** 22 13 56.3 -0.8
NC405 IAmb IAmb 22 13 56.8
comp=Z,7.5nm,0.8s
NB2 NORSAR Subarra 77.47 334 P **P** 22 13 57.0 -1.4
comp=Z,0.7nm,0.5s,baz=49,slow=5.6
NOA NORSAR Array B 77.47 334 P **P** 22 13 57.0 -1.4
comp=Z,1.1nm,0.6s,baz=50,slow=5.6,SNR=16
NOA LR LR 22 53 52.3
comp=Z,73nm,18.5s,baz=65,slow=40
comp=Z,1.1nm,0.6s
TIRR Tirgusor 77.96 314 P **P** 22 14 02.2 +0.8
SUMG Summit 78.15 357 P **P** 22 14 02.8 +0.3
SUMG IAmb IAmb 22 14 14.6
comp=Z,4.7nm,0.7s
SUMG Summit 78.15 357 *i* P **P** 22 14 02.0 -0.5
BUR08 Bucovina Ar. S 78.31 318 P **P** 22 14 04.0 +0.5
BURAR Bucovina Array 78.32 318 P **P** 22 14 03.7 +0.2
BURAR IAmb IAmb 22 14 05.5
comp=Z,6.9nm,0.7s
KWP Kalwaria Pacla 78.70 321 *eP* **P** 22 14 06.6 +1.1
KWP Kalwaria Pacla 78.70 321 P **P** 22 14 06.0 +0.5
MLR Muntele Rosu 78.97 316 P **P** 22 14 07.2 0.0
CSS Mathiatis 79.16 304 P **P** 22 14 08.4 +0.2
CSS IAmb IAmb 22 14 10.2
comp=Z,7.2nm,0.6s
KOLS Kolonicke sedl 79.31 320 *eP* **P** 22 14 09.6 +0.8
OJC Ojcow 79.95 322 *eP* **P** 22 14 11.5 -0.8
OJC Ojcow 79.95 322 **P** 22 14 11.6 -0.8
OJC IAmb IAmb 22 14 13.9
comp=Z,10nm,0.6s
NIE Niedzica 80.13 322 *eP* **P** 22 14 14.8 +1.6
LANS Liptovska Anna 80.73 322 *eP* **P** 22 14 18.3 +1.8
ELL Elmali 80.74 307 P **P** 22 14 16.8 -0.1
OKC Ostrava-Krasne 81.05 323 AMS AMS 22 53 30.0
comp=Z,200nm,19.5s
MORC Moravsky Berou 81.40 323 *eP* **P** 22 14 21.1 +1.0
KSP Ksiaz 81.43 324 *eP* **P** 22 14 20.4 +0.3
VYHS Vyhne 81.45 321 *eP* **P** 22 14 21.0 +0.7
KRLC Kraliky 81.63 323 *eP* **P** 22 14 21.4 +0.1
KRLC AMS AMS 22 54 10.0
comp=Z,200nm,17.7s
OSTC Ostas 81.64 324 *eP* **P** 22 14 23.2 +1.9
OSTC AMS AMS 22 53 50.0
comp=Z,300nm,14.4s
DPC Dobruska-Polom 81.70 324 *eP* **P** 22 14 22.3 +0.6
DPC AMS AMS 22 53 50.0
comp=Z,200nm,15.3s
UPC Upice 81.77 324 AMS AMS 22 53 50.0
comp=Z,200nm,17.5s
JAVC Velka Javorina 81.87 322 *eP* **P** 22 14 24.6 +2.0
VRAC Vranov 82.18 323 *eP* **P** 22 14 25.1 +0.9
ARG Arkhangelos 82.25 307 P **P** 22 14 24.4 -0.3
MODS Modra-Piesok 82.36 322 *eP* **P** 22 14 23.9 -1.3
KRUC Moravsky 82.43 323 *eP* **P** 22 14 25.4 -0.1
PVCC Panska Ves 82.49 325 AMS AMS 22 55 40.0
comp=Z,300nm,15.7s
TREC Trest 82.77 323 AMS AMS 22 54 50.0
comp=Z,200nm,17.2s
CLL Collm 82.79 326 **P** 22 14 27.3 +0.1
CLL Collm 82.79 326 *i* P **P** 22 14 27.0 -0.3
comp=Z,4.0nm,0.7s
CLL *ex* x 22 14 43.0
CLL *eP* PP **PP** 22 17 39.0 +2.0
PRU Pruhonice 82.84 324 AMS AMS 22 54 40.0
comp=Z,200nm,17.2s
DIVS Divibare 83.29 317 P **P** 22 14 29.9 -0.3
DIVS IAmb IAmb 22 15 13.8
comp=Z,12nm,1.5s
RONA Rosalia, Austr 83.29 322 *eP* **P** 22 14 29.8 -0.2
comp=Z,1.5nm,0.8s
CONA Conrad Observa 83.39 322 *eP* **P** 22 14 31.7 +1.1
comp=Z,7.0nm,0.8s
CKRC Cesky Krumlov 83.67 323 *eP* **P** 22 14 32.2 +0.3
KHC Kasperske Hory 83.86 324 *eP* **P** 22 14 33.6 +0.7
KHC AMS AMS 22 55 10.0
comp=Z,200nm,15.6s
GERES GERESS Array B 83.97 324 P **P** 22 14 33.4 -0.2
comp=Z,0.7nm,0.6s,baz=35,slow=4.9,SNR=9.0
comp=Z,0.7nm,0.6s
GERES GERESS Array B 83.97 324 P **P** 22 14 33.8 +0.2
ARSA Arzberg 83.98 322 *eP* **P** 22 14 34.6 +1.1
comp=Z,4.1nm,0.8s
J08A Circle Bar Ran 84.03 43 P **P** 22 14 34.7 +0.7
J08A IAmb IAmb 22 14 44.3
comp=Z,6.7nm,1.2s
SFJD Kangerlussuaq 84.04 0 LR LR 22 51 43.3
comp=Z,47nm,21.9s,baz=335,slow=35
MOA Molln 84.29 323 *eP* **P** 22 14 34.7 -0.4
comp=Z,2.7nm,1.0s
SOKA Soboth 84.60 321 *eP* **P** 22 14 36.9 +0.2
comp=Z,6.1nm,0.9s
BIOA Bad Ischl, Aus 84.72 323 *eP* **P** 22 14 37.1 -0.2
comp=Z,4.6nm,1.2s
OBKA Obir 84.97 321 *eP* **P** 22 14 37.3 -1.3
comp=Z,2.7nm,0.8s
IDI Anoyia 84.98 308 P **P** 22 14 38.7 -0.2
comp=Z,4.0nm,0.8s
comp=Z,4.0nm,0.8s
IDI Anoyia 84.98 308 P **P** 22 14 39.2 +0.4
IDI IAmb IAmb 22 14 40.1
comp=Z,14nm,1.3s
KBA Koelnbreinsper 85.26 322 *eP* **P** 22 14 37.8 -2.4
comp=Z,2.5nm,0.7s
CLUD Cludinico 85.90 322 P **P** 22 14 42.2 -1.0
CLUD IAmb IAmb 22 14 44.5
comp=Z,8.8nm,0.8s
ABTA Abfaltersbach 85.91 322 *eP* **P** 22 14 43.4 +0.1
comp=Z,1.0nm,0.4s
ITM Ithomi 85.96 311 P **P** 22 14 42.4 -1.3
WTTA Wattenberg 86.05 323 *eP* **P** 22 14 43.5 -0.6
comp=Z,3.5nm,1.0s
STAL STALIGIAL 86.12 322 P **P** 22 14 43.5 -0.7
STAL IAmb IAmb 22 15 27.1
comp=Z,19nm,1.4s
CIMO Cimolais 86.23 322 P **P** 22 14 44.2 -0.7
CIMO IAmb IAmb 22 14 44.7
comp=Z,3.2nm,0.6s
MOTA Moosalm 86.27 324 *eP* **P** 22 14 46.7 +1.6
comp=Z,2.2nm,0.9s
SQTA Sankt Quirin 86.30 323 *eP* **P** 22 14 45.2 0.0
comp=Z,1.4nm,0.5s
RETA Reutte 86.36 324 *eP* **P** 22 14 46.1 +0.6
comp=Z,4.5nm,1.7s
FETA Feichten 86.67 323 *eP* **P** 22 14 47.8 +0.6
comp=Z,1.3nm,0.8s
KVN Kaiserville 86.75 47 P **P** 22 14 47.4 -0.3
KVN IAmb IAmb 22 14 58.3
comp=Z,6.3nm,1.3s
EKA Eskdalemuir Ar 86.87 336 P **P** 22 14 46.5 -1.2
comp=Z,0.5nm,0.4s,baz=49,slow=5.3,SNR=7.6
comp=Z,0.5nm,0.4s
DAVA Damuels 86.94 324 *eP* **P** 22 14 49.1 +0.6
comp=Z,2.3nm,1.1s
NVAR Mina Array Bea 86.97 47 P **P** 22 14 49.4 +0.5
comp=Z,0.4nm,0.7s,baz=306,slow=3.1,SNR=2.6
comp=Z,0.4nm,0.7s
NVAR Mina Array Bea 86.97 47 P **P** 22 14 49.0 +0.1
TEOL Teolo 87.25 322 P **P** 22 14 49.9 +0.1
DAVOX Davos/Dischmat 87.27 324 P **P** 22 14 50.0 -0.1
comp=Z,2.1nm,0.6s,baz=3.4,slow=5.3,SNR=7.4
comp=Z,2.1nm,0.6s
PDAR Pinedale Array 89.56 40 P **P** 22 15 02.4 +1.3
comp=Z,0.4nm,0.7s,baz=288,slow=0.9,SNR=2.4
comp=Z,0.4nm,0.7s
PDAR Pinedale Array 89.56 40 P **P** 22 15 00.8 -0.3
PFO Pinyon Flats O 91.01 50 LR LR 22 49 26.5
comp=Z,41nm,20.4s,baz=252,slow=31
TORD Torodi Ar. Bea 115.04 303 PKP **PKiKP** 22 20 43.8 -1.1
comp=Z,0.6nm,0.9s,baz=77,slow=3.1,SNR=3.1
SNAA Sanae 130.62 198 PKPdf **PKiKP** 22 21 16.9 +2.8
SNAA x x 22 21 19.1
VNA2 Neumayer--Watz 132.25 197 PKPdf **PKiKP** 22 21 17.1 -0.2
baz=98,slow=1.1

*DJA **23** 22:10:23.4±0.7, 9.5°S±3.2°×112.4°E±12°, h73km±10km, M3.2/6, MLv3.2/6*
ISC 23 22:10:23.0±1.3, **9.12°S**±0.08°×**123.91°E**±0.08°, **h74km**, **n11**,
σ1^{h}70/14, **Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.10**	**193**	P	**Pn**	**22 10 44.6**	**+1.5**
BATI				S	**Sn**	**22 11 01.4**	**+3.4**
MMRI	**Maumere**	**1.73**	**286**	P	**Pn**	**22 10 50.7**	**-0.4**
MMRI				S	**Sn**	**22 11 13.4**	**+1.0**
MMRI	**Maumere**	**1.73**	**286**	P	**Pn**	**22 10 51.6**	**+0.5**
EDFI	**Ende, Flores**	**2.23**	**279**	P	**Pn**	**22 10 58.2**	**+0.3**
EDFI				S	**Sn**	**22 11 23.2**	**-1.4**
BBSI	**Bau Bau**	**3.85**	**340**	P	**Pn**	**22 11 20.6**	**+0.7**
BSSI	**Bau Bau, Buton**	**4.50**	**311**	P	**Pn**	**22 11 29.4**	**+0.6**
PLAI	**Plampang**	**6.07**	**272**	P	**Pn**	**22 11 50.1**	**-0.1**
MTN	**Manton Dam**	**7.99**	**118**	P	**Pn**	**22 12 15.1**	**-1.4**
KNRA	**Kununurra**	**8.05**	**144**	P	**Pn**	**22 12 15.1**	**-2.2**
FITZ	**Fitzroy Crossi**	**9.08**	**170**	P	**Pn**	**22 12 29.1**	**-2.2**
KDU	**Kakadu**	**9.12**	**114**	P	**Pn**	**22 12 30.5**	**-1.4**

*IDC **23** 22:37:07.5±3.5, 35.7°N×69.8°E, h94km±31km, mb3.9/18, mbtmp4.2/22, Error ellipse: s-maj=20.8km s-min=14.3km az=172.0*
*NNC **23** 22:37:09.5±2.9, 36.5°N×69.4°E, h0km, mb4.7, mpv4.6, Error ellipse: s-maj=24.1km s-min=19.0km az=7.0*
*BJI **23** 22:37:09.6±0.0, 36.0°N×69.8°E, h112km, mb4.4/24, mB4.6/10*
*NEIC **23** 22:37:10.6±2.1, 35.9°N±0.05°×69.72°E±0.07°, h114km±7km, mb4.4/28, Error ellipse: s-maj=8.5km s-min=7.0km az=97.0*
ISC 23 22:37:10.4±0.4, **35.99°N**±0.05°×**69.88°E**±0.04°, **h124km**, **n125**,
σ2^{s}17/138, **mb4.3**/34, **9C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**1.60**	**205**	Pn	**Pn**	**22 37 37.5**	**-1.9**
KBL				Sn	**Sn**	**22 37 58.5**	**-3.1**
CHGR	**Chuyangaron**	**2.72**	**348**	Pn	**Pn**	**22 37 52.6**	**-0.7**
CEP	**Cherat**	**2.73**	**142**	P	**Pn**	**22 37 53.5**	**0.0**
CEP				S	**Sn**	**22 38 26.0**	**-0.6**
GAR	**Garm**	**3.03**	**7**		**Pn**	**22 37 57.4**	**+0.2**
THW	**Thamme Wali**	**3.54**	**154**	P	**Pn**	**22 38 01.9**	**-2.1**
NIL	**Nilore**	**3.63**	**129**		**Pn**	**22 38 04.4**	**-0.7**
CHCP	**Chirah Chowk**	**3.63**	**129**	P	**Pn**	**22 38 04.1**	**-1.1**
SARP	**Sargodha**	**4.67**	**149**	P	**Pn**	**22 38 16.5**	**-2.6**
JMU	**Jammu**	**5.28**	**127**	*eP*	**Pn**	**22 38 25.6**	**-1.6**
JMU				*eS*	**Sn**	**22 39 22.4**	**-4.6**
TAS	**Tashkent**	**5.35**	**355**	Pn	**Pn**	**22 38 28.0**	**0.0**
KSH	**Kashi**	**5.98**	**52**	P	**Pn**	**22 38 33.0**	**-3.6**
KSH				sP		22 38 53.9	
KSH				S	Sn	22 39 34.0	-10
KSH				pmax	pmax		
	comp=Z,44nm,0.7s						
KSH				smax	smax		
	comp=N,190nm,0.6s						
KSH				smax	smax		
	comp=E,170nm,0.6s						
THN	**Thein Dam**	**6.00**	**125**	*eP*	**Pn**	**22 38 36.1**	**-0.7**
THN				*eP*		22 38 37.0	
THN				*eS*	**Sn**	**22 39 40.4**	**-3.8**
THN				*eS*		22 39 41.5	
AML	**Almayashu**	**6.81**	**25**	P	**Pn**	**22 38 48.0**	**-0.2**
	SNR=141						
BHK	**Bhakra**	**7.11**	**128**	*eP*	**Pn**	**22 38 52.0**	**+0.2**
BHK				*eS*	**Sn**	**22 40 04.5**	**-6.6**
KK31	**Karatay Array**	**7.12**	**4**		**Pn**	**22 38 51.5**	**-0.5**
KK31	**Karatay Array**	**7.12**	**4**	⇑P	**Pn**	**22 38 49.5**	**-2.4**
	6.5nm,0.4s,baz=182,slow=13,SNR=134						
KK31				⇓S	**Sn**	**22 40 07.0**	**-4.4**
	24nm,0.5s,baz=190,slow=24,SNR=7.5						
KKAR	**Karatay Array**	**7.12**	**4**	Pn	**Pn**	**22 38 51.5**	**-0.4**
KKAR	**Karatay Array**	**7.12**	**4**	Pn	**Pn**	**22 38 51.2**	**-0.7**
UCH	**Uchtor**	**7.20**	**29**	P	**Pn**	**22 38 53.4**	**0.0**
	SNR=46						
EKS2	**Erkin-Say**	**7.32**	**23**	P	**Pn**	**22 38 54.7**	**+0.1**
	SNR=52						
AAK	**Ala-Archa**	**7.54**	**27**	P	**Pn**	**22 38 57.5**	**-0.2**
	SNR=26						
AAK	**Ala-Archa**	**7.54**	**27**	Pn	**Pn**	**22 38 58.0**	**+0.2**
KBK	**Karagaybulak**	**7.73**	**29**	P	**Pn**	**22 39 00.7**	**+0.3**
	SNR=23						
SMLA	**Simla**	**7.78**	**126**	*eP*	**Pn**	**22 38 58.9**	**-1.9**
SMLA				*eS*	**Sn**	**22 40 21.5**	**-5.8**
SMLA				IAML		22 40 23.3	
	comp=N,76nm,0.5s						
SMLA				IAML		22 40 23.5	
	comp=E,120nm,0.3s						
CHMS	**Chumysh**	**7.95**	**27**	P	**Pn**	**22 39 03.0**	**-0.1**
	SNR=52						
CHMS	**Chumysh**	**7.95**	**27**	⇑P	**Pn**	**22 39 02.7**	**-0.4**
	comp=E,58nm,0.7s						
CHMS				⇓S	**Sn**	**22 40 29.7**	**-1.7**
	comp=E,74nm,0.6s						
ULHL	**Ulahol**	**7.97**	**36**	P	**Pn**	**22 39 05.1**	**+1.6**
	SNR=9.8						
USP	**Ospenovka**	**8.10**	**25**	P	**Pn**	**22 39 04.4**	**-0.7**
	SNR=43						
TKM2	**Tokmak 2**	**8.21**	**31**	P	**Pn**	**22 39 06.8**	**-0.1**
	SNR=28						
TKM2	**Tokmak 2**	**8.21**	**31**	⇑P	**Pn**	**22 39 06.5**	**-0.4**
TKM2	comp=E,28nm,0.8s			⇓S	**Sn**	**22 40 35.4**	**-2.7**
	comp=E,47nm,0.7s						
MDOK	**Medeo**	**9.05**	**35**	⇑P	**Pn**	**22 39 17.6**	**-0.5**
	comp=E,13nm,0.6s						
NDI	**New Delhi**	**9.57**	**138**	*ex*	x	22 41 00.0	
GEYT	**Alibeck**	**9.61**	**285**	P	**Pn**	**22 39 23.9**	**-1.6**
	comp=E,2.4nm,0.4s,baz=114,slow=8.5,SNR=15						
GEYT				S	**Sn**	**22 41 08.5**	**-3.2**
	comp=E,13nm,0.7s,baz=142,slow=32,SNR=12						
GEYT	**Alibeck**	**9.61**	**285**		**Pn**	**22 39 23.4**	**-2.1**
GYA0B	**ALIBECK ARRAY**	**9.61**	**285**	Pn	**Pn**	**22 39 23.5**	**-2.0**
DANN	**Dangsing**	**14.00**	**119**	*eP*	**Pn**	**22 40 21.4**	**-2.3**
DANN				*eS*	Sn	22 42 44.6	-14
MAKZ	**Makanchi**	**14.10**	**36**		**Pn**	**22 40 24.1**	**-0.5**
MAKZ	**Makanchi**	**14.10**	**36**	⇓P	**Pn**	**22 40 24.3**	**-0.2**
	comp=E,23nm,0.7s						
MK31	**Makanchi Array**	**14.24**	**37**	Pn	**Pn**	**22 40 26.6**	**+0.2**
MK31	**Makanchi Array**	**14.24**	**37**	⇑P	**Pn**	**22 40 28.3**	**+2.0**
	comp=E,10nm,0.6s,baz=223,slow=14,SNR=50						
MKAR	**Makanchi Array**	**14.24**	**37**	P	**Pn**	**22 40 26.3**	**0.0**
	comp=E,2.2nm,0.7s,baz=234,slow=12,SNR=38						
MKAR	**Makanchi Array**	**14.24**	**37**		**Pn**	**22 40 25.8**	**-0.5**
BHPL	**Bhopal**	**14.29**	**151**	*eP*	Pn	22 40 22.0	-5.2
GKN	**Gorkha**	**14.83**	**118**	*eP*	**Pn**	**22 40 31.1**	**-3.0**
	comp=E,13nm,0.4s						
AB31	**Akbulak array**	**15.12**	**334**	P	**Pn**	**22 40 36.7**	**-0.7**
	comp=E,2.3nm,0.5s,baz=153,slow=12,SNR=83						
AB31				⇓S	**Sn**	**22 43 15.6**	**-9.0**
	comp=E,9.0nm,0.7s						
ABKAR	**Akbulak array**	**15.12**	**334**	Pn	**Pn**	**22 40 36.5**	**-0.9**
ABKAR	**Akbulak array**	**15.12**	**334**	Pn	**Pn**	**22 40 36.2**	**-1.1**
PKIN	**Phulchoki**	**15.62**	**118**	*eP*	**Pn**	**22 40 41.7**	**-2.4**
PKI	**Pulchoki**	**15.63**	**118**	*eP*	**Pn**	**22 40 41.6**	**-2.7**
WMQ	**Urumqi**	**15.73**	**55**	*eP*	**P**	**22 40 48.5**	**+2.0**
WMQ				pmax	pmax		
	comp=E,19nm,0.8s						
KURBB	**Kurchatov Arra**	**15.91**	**20**	P	**Pn**	**22 40 45.8**	**-1.3**
	comp=E,6.4nm,0.7s,baz=211,slow=10,SNR=30						
KURBB	**Kurchatov Arra**	**15.91**	**20**	⇑P	**P**	**22 40 49.4**	**+1.1**
	comp=E,10.0nm,0.8s						
KURK	**Kurchatov**	**16.02**	**21**		**P**	**22 40 49.7**	**+0.2**
KURK	**Kurchatov**	**16.02**	**21**	⇓P	**P**	**22 40 49.4**	**-0.1**
	comp=E,7.4nm,0.9s						
JIRN	**Jiri**	**16.15**	**116**	*eP*	**Pn**	**22 40 48.2**	**-2.4**
AKTO	**Aktyubinsk**	**16.80**	**333**	P	**Pn**	**22 40 57.5**	**-0.5**
	comp=E,5.6nm,0.7s,baz=137,slow=11,SNR=16						
AKTO				S	**Sn**	**22 44 00.7**	**-4.2**
	comp=E,2.9nm,0.6s,baz=69,slow=20,SNR=6.5						
AKTO	**Aktyubinsk**	**16.80**	**333**	⇑P	**Pn**	**22 40 58.1**	**+0.1**
	comp=E,6.9nm,0.8s						
AKTO				⇑S	**Sn**	**22 43 56.5**	**-8.4**
	comp=E,16nm,1.1s						
RAMN	**Ramite**	**16.86**	**118**	*eP*	**Pn**	**22 40 57.4**	**-1.8**
	comp=E,28nm,0.5s						
BVAR	**Borovoye Array**	**17.04**	**1**	P	**P**	**22 41 00.9**	**+0.1**
	comp=E,5.2nm,0.8s,baz=170,slow=9.0,SNR=29						
BRVK	**Borovoye**	**17.07**	**1**		**P**	**22 41 00.7**	**-0.3**
BRVK	**Borovoye**	**17.07**	**1**	⇓P	**P**	**22 41 00.7**	**-0.3**
	comp=E,8.6nm,1.0s						
BRVK				⇑S	**Sn**	**22 44 05.3**	**-6.1**
	comp=E,3.7nm,0.7s						
HYBB	**Hyderabad (bro**	**20.04**	**155**	*eP*	**P**	**22 41 35.1**	**+1.4**
GNI	**Garni**	**20.20**	**289**	P	**P**	**22 41 37.4**	**+2.0**
	comp=E,17nm,0.6s,baz=16,slow=4.4,SNR=15						
	comp=E,17nm,0.6s						
GNI	**Garni**	**20.20**	**289**	P	Pn	22 41 38.0	-0.6
GNI				IAmb	IAmb	22 41 40.2	
	comp=Z,20nm,0.7s						
ZAA0	**Zalesovo Array**	**20.76**	**25**	P	**P**	**22 41 42.0**	**+0.8**
ZAA0				IAmb	IAmb	22 41 43.5	
	comp=Z,20nm,0.6s						
ZALV	**Zalesovo Beam**	**20.76**	**25**	P	**P**	**22 41 42.6**	**+1.5**
	comp=Z,23nm,0.6s,baz=220,slow=11,SNR=124						
	comp=Z,23nm,0.6s						
ZALV	**Zalesovo Beam**	**20.76**	**25**	P	**P**	**22 41 42.2**	**+1.1**
ONI	**Oni**	**21.44**	**296**	P	**P**	**22 41 50.7**	**+2.0**
ONI				IAmb	IAmb	22 41 55.3	
	comp=Z,7.3nm,0.7s						
ARU	**Arti**	**21.84**	**343**	P	**P**	**22 41 53.8**	**+1.2**
	comp=Z,2.7nm,0.5s,baz=157,slow=7.7,SNR=14						
	comp=Z,2.7nm,0.5s						
ARU	**Arti**	**21.84**	**343**	P	**P**	**22 41 53.5**	**+0.8**
ARU				IAmb	IAmb	22 41 56.8	
	comp=Z,22nm,1.3s						
KBZ	**Khabaz**	**22.04**	**299**	P	**P**	**22 41 56.2**	**+1.3**
	comp=Z,3.2nm,0.8s,baz=113,slow=10,SNR=6.7						
	comp=Z,3.2nm,0.8s						
KIV	**Kislovodsk**	**22.23**	**299**	P	**P**	**22 41 58.1**	**+1.1**
KIV				IAmb	IAmb	22 42 01.7	
	comp=Z,10nm,1.1s						
BELG	**Belogornoye**	**22.74**	**323**	P	**P**	**22 42 03.2**	**+1.5**
	comp=Z,20nm,0.6s,baz=357,slow=3.2,SNR=6.3						
	comp=Z,20nm,0.6s						
GTA	**Gaotai**	**23.88**	**73**	⇓P	**P**	**22 42 15.3**	**+2.7**
GTA				sP	sP	22 42 57.0	+1.8
GTA				pmax	pmax		
	comp=E,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=E,44nm,5.5s						
GTA				LR	LR		
	comp=E,57nm,14.5s						
GTA				LR	LR		
	comp=E,110nm,14.9s						
GTA				LR	LR		
	comp=E,71nm,16.4s						
RAYN	**Ar Rayn**	**24.46**	**246**	P	**P**	**22 42 18.5**	**+0.6**
KIRV	**Kirov**	**26.32**	**336**	P	**P**	**22 42 36.5**	**+2.3**
	comp=E,13nm,0.5s,baz=124,slow=2.7,SNR=7.7						
	comp=Z,13nm,0.5s						
LZH	**Lanzhou**	**27.39**	**80**	*eP*	**P**	**22 42 45.0**	**+0.7**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
BRTR	**Keskin Array B**	**28.73**	**288**	P	**P**	**22 42 57.8**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=110,slow=7.2,SNR=4.0						
	comp=Z,1.2nm,0.6s						
PZH	**PanZhiHua**	**28.73**	**100**	P	**P**	**22 42 59.3**	**+3.0**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
SONM	**Songino Array**	**29.37**	**55**	P	**P**	**22 43 03.2**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=303,slow=8.3,SNR=3.8						
	comp=Z,0.7nm,0.7s						
ELL	**Elmali**	**32.03**	**283**	P	**P**	**22 43 26.6**	**+1.4**
AK05	**Malin Array Si**	**32.56**	**310**	P	**P**	**22 43 30.9**	**+1.3**
AK05				IAmb	IAmb	22 43 31.8	
	comp=Z,5.1nm,0.7s						
AKASG	**Malin Array Be**	**32.56**	**310**	P	**P**	**22 43 30.7**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=83,slow=7.0,SNR=12						
	comp=Z,0.8nm,0.5s						
NRIK	**Noril'sk**	**34.80**	**11**	P	**P**	**22 43 50.3**	**+1.6**
	comp=Z,4.3nm,0.5s,baz=196,slow=7.2,SNR=6.3						
	comp=Z,4.3nm,0.5s						
NRIK	**Noril'sk**	**34.80**	**11**	P	**P**	**22 43 50.4**	**+1.7**
BURAR	**Bucovina Array**	**34.80**	**304**	P	**P**	**22 43 51.2**	**+2.0**
FIA1	**FINESS Array S**	**37.41**	**327**	P	**P**	**22 44 11.9**	**+1.0**
FIA1				IAmb	IAmb	22 44 39.1	
	comp=Z,10nm,1.1s						
FINES	**FINESS Array B**	**37.41**	**327**	P	**P**	**22 44 12.7**	**+1.7**
	comp=Z,3.7nm,0.7s,baz=120,slow=11,SNR=14						
	comp=Z,3.7nm,0.7s						
FINES	**FINESS Array B**	**37.41**	**327**	P	**P**	**22 44 12.2**	**+1.2**
LVZ	**Lovozero**	**37.60**	**339**	P	**P**	**22 44 13.6**	**+0.9**
KEV	**Kevo**	**40.94**	**339**	P	**P**	**22 44 41.6**	**+1.4**
ARA0	**ARCESS Array S**	**41.27**	**338**	*eP*	**P**	**22 44 44.3**	**+1.3**
ARA0				IAmb	IAmb	22 44 49.5	
	comp=Z,61nm,1.5s						
ARCES	**ARCESS Array B**	**41.27**	**338**	P	**P**	**22 44 44.5**	**+1.5**
	comp=Z,6.8nm,0.7s,baz=115,slow=8.1,SNR=35						
	comp=Z,6.8nm,0.7s						
ARCES	**ARCESS Array B**	**41.27**	**338**	P	**P**	**22 44 44.6**	**+1.5**
ARCES				IAmb	IAmb	22 44 46.1	
	comp=Z,9.4nm,0.9s						
KTK1	**Kautokeino**	**41.72**	**337**	*eP*	**P**	**22 44 48.3**	**+1.7**
KTK1				IAmb	IAmb	22 44 48.9	
	comp=Z,11nm,0.5s						
HAMF	**Hammerfest**	**42.37**	**339**	*eP*	**P**	**22 44 54.6**	**+2.7**
HAMF				IAmb	IAmb	22 44 54.6	
	comp=Z,19nm,0.7s						
TRO	**Tromso**	**43.37**	**337**	*eP*	**P**	**22 45 01.7**	**+1.8**
MOR8	**Moi Rana**	**43.82**	**331**	*eP*	**P**	**22 45 04.7**	**+1.1**
MOR8				IAmb	IAmb	22 45 04.9	
	comp=Z,11nm,0.6s						
FAUS	**Fauske**	**43.84**	**333**	*eP*	**P**	**22 45 05.3**	**+1.5**
FAUS				IAmb	IAmb	22 45 05.7	
	comp=Z,6.4nm,0.9s						
NC405	**NORSAR Array S**	**44.01**	**324**	P	**P**	**22 45 06.5**	**+1.2**
STEI	**Steigen**	**44.02**	**334**	*eP*	**P**	**22 45 05.6**	**+0.5**
STEI				IAmb	IAmb	22 45 07.1	
	comp=Z,8.3nm,0.8s						
NB2	**NORSAR Subarra**	**44.24**	**323**	P	**P**	**22 45 07.8**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=97,slow=7.9						
NB2	**NORSAR Subarra**	**44.24**	**323**	P	**P**	**22 45 07.8**	**+0.7**
	baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**22 45 07.8**	**+0.7**
	comp=Z,2.8nm,0.6s,baz=98,slow=7.9,SNR=35						
	comp=Z,2.8nm,0.6s						
KONS	**Konsvik**	**44.42**	**331**	*eP*	**P**	**22 45 10.1**	**+1.7**
NSS	**Namsos**	**44.45**	**328**	*eP*	**P**	**22 45 10.6**	**+2.0**
LOF	**Lofoten**	**44.70**	**334**	*eP*	**P**	**22 45 11.5**	**+1.0**
LOF				IAmb	IAmb	22 45 12.2	
	comp=Z,13nm,1.2s						
TIXI	**Tiksi**	**46.59**	**22**	P	**P**	**22 45 26.9**	**+1.6**
ESDC	**Sonseca Array**	**56.89**	**298**	P	**P**	**22 46 43.0**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=68,slow=6.4,SNR=5.7						
	comp=Z,0.8nm,0.9s						
TOA0	**Torodi Ar. Sit**	**64.80**	**268**	P	**P**	**22 47 35.8**	**-0.3**
TOA0				IAmb	IAmb	22 47 46.2	
	comp=Z,6.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**64.80**	**268**	P	**P**	**22 47 35.1**	**-1.0**
	comp=Z,1.3nm,0.6s,baz

ISC 23 22:53:25.0±2.1, 41°.85N±0°.08×79°.45E±0°.06, h10km, n47, σ1§23/81, 9C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
SHLS	**Shalkode** 12nm,0.2s	**1.30**	**0**	*e*P **Pn**	**22 53 48.9**	**-0.5**
SHLS				*e*S **Sg**	**22 54 08.7**	**+1.7**
SHLS	**Shalkode** 12nm,0.2s	**1.30**	**0**	P **Pn**	**22 53 48.9**	**-0.5**
SHLS				S **Sg**	**22 54 09.0**	**+2.0**
SHLS	**Shalkode** baz=12	**1.30**	**0**	*e*P **Pn**	**22 53 48.9**	**-0.5**
SHLS				*e*S **Sg**	**22 54 08.7**	**+1.7**
UZB	**Uzynbulak** 4.8nm,0.2s	**1.33**	**346**	*e*P **Pn**	**22 53 48.5**	**-1.3**
UZB				*e*S **Sg**	**22 54 08.1**	**+0.2**
UZB	**Uzynbulak** 4.6nm,0.2s	**1.33**	**346**	P **Pn**	**22 53 48.5**	**-1.3**
UZB				S **Sg**	**22 54 08.1**	**+0.2**
UZB	**Uzynbulak** baz=47	**1.33**	**346**	*e*P **Pn**	**22 53 48.5**	**-1.3**
UZB				*e*S **Sg**	**22 54 08.1**	**+0.2**
SATY	**Saty** 6.3nm,0.2s	**1.43**	**328**	*e*P **Pn**	**22 53 50.5**	**-0.7**
SATY				*e*S **Sg**	**22 54 11.0**	**0.0**
SATY	**Saty** 6.3nm,0.2s	**1.43**	**328**	P **Pn**	**22 53 50.5**	**-0.7**
SATY				S **Sg**	**22 54 11.1**	**0.0**
SATY	**Saty** baz=29	**1.43**	**328**	*e*P **Pn**	**22 53 50.5**	**-0.7**
SATY				*e*S **Sg**	**22 54 11.0**	**0.0**
ZHN	**Zhinishke** 25nm,0.2s	**1.51**	**331**	*e*P **Pn**	**22 53 52.2**	**-0.1**
ZHN				*e*S **Sg**	**22 54 14.3**	**+0.6**
ZHN	**Zhinishke** 25nm,0.2s	**1.51**	**331**	P **Pn**	**22 53 52.2**	**-0.1**
ZHN				S **Sg**	**22 54 14.3**	**+0.6**
ZHN	**Zhinishke** baz=32	**1.51**	**331**	*e*P **Pn**	**22 53 52.2**	**-0.1**
ZHN				*e*S **Sg**	**22 54 14.3**	**+0.6**
ANVS	**Anan'yevo** baz=8.0	**1.62**	**306**	⇑*e*P **Pn**	**22 53 53.4**	**-0.4**
ANVS				⇑*e*S **Sg**	**22 54 16.3**	**-0.7**
KPKS	**Kokpek** 36nm,0.2s	**1.71**	**341**	*e*P **Pb**	**22 53 55.7**	**-0.9**
KPKS				*e*S **Sg**	**22 54 20.1**	**+0.1**
KPKS	**Kokpek** 36nm,0.2s	**1.71**	**341**	P **Pb**	**22 53 55.7**	**-0.9**
KPKS				S **Sg**	**22 54 20.1**	**+0.1**
KPKS	**Kokpek** baz=41	**1.71**	**341**	*e*P **Pb**	**22 53 55.7**	**-0.9**
KPKS				*e*S **Sg**	**22 54 20.1**	**+0.1**
KURS	**Kuram** 12nm,0.4s	**1.89**	**330**	*e*P **Pb**	**22 53 58.6**	**-1.0**
KURS				*e*S **Sg**	**22 54 25.9**	**+0.2**
KURS	**Kuram** 12nm,0.4s	**1.89**	**330**	Pg **Pb**	**22 53 58.6**	**-1.0**
KURS				Lg Lg	22 54 25.9	
KURS	**Kuram** baz=31	**1.89**	**330**	*e*P **Pb**	**22 53 58.6**	**-1.0**
KURS				*e*S **Sg**	**22 54 25.8**	**+0.2**
MDOK	**Medeo** 6.6nm,0.2s	**2.21**	**307**	*e*P **Pb**	**22 54 03.9**	**-1.2**
MDOK				*e*S **Sg**	**22 54 34.0**	**-1.9**
MDOK	**Medeo** 6.5nm,0.5s	**2.21**	**307**	Pg **Pb**	**22 54 03.8**	**-1.2**
MDOK				Pg **Pb**	**22 54 03.9**	**-1.2**
MDOK				Lg Lg	22 54 34.0	
KOTS	**Kotyrbulak** 5.0nm,0.1s	**2.21**	**309**	*e*P **Pb**	**22 54 04.0**	**-1.1**
KOTS				*e*S **Sg**	**22 54 34.4**	**-1.6**
KOTS	**Kotyrbulak** 5.0nm,0.1s	**2.21**	**309**	Pg **Pb**	**22 54 04.0**	**-1.1**
KOTS				Lg Lg	22 54 34.4	
KNDC	**Almaty** 17nm,0.6s	**2.29**	**307**	⇑Pg **Pb**	**22 54 06.7**	**+0.3**
KNDC				⇑Lg Lg	22 54 37.2	
BLB	**Baldybastay** 26nm,0.3s	**2.35**	**343**	*e*P **Pb**	**22 54 07.4**	**-0.2**
BLB				*e*S **Sg**	**22 54 40.5**	**-0.1**
BLB	**Baldybastay** 26nm,0.3s	**2.35**	**343**	Pg **Pb**	**22 54 07.0**	**-0.6**
BLB				Lg Lg	22 54 39.5	
ULHL	**Ulahol** baz=82	**2.42**	**280**	⇓*e*P **Pn**	**22 54 05.8**	**+1.0**
ULHL				⇓*e*S **Sb**	**22 54 37.2**	**-1.5**
DJR	**Jarkent** 1.6nm,0.1s	**2.49**	**6**	*e*P **Pb**	**22 54 09.4**	**-0.5**
DJR				*e*S **Sg**	**22 54 44.0**	**-1.1**
DJR	**Jarkent** 2.1nm,0.2s	**2.49**	**6**	Pg **Pb**	**22 54 08.7**	**-1.2**
DJR				Lg Lg	22 54 42.8	
KNOS	**Konyrlen** 5.2nm,0.4s	**2.51**	**356**	*e*P **Pb**	**22 54 09.4**	**-0.9**
KNOS				*e*S **Sg**	**22 54 44.0**	**-1.7**
KNOS	**Konyrlen** 3.9nm,0.3s	**2.51**	**356**	Pg **Pb**	**22 54 08.5**	**-1.8**
KNOS				Lg Lg	22 54 42.8	
MTBS	**Maitube** 6.9nm,0.2s	**2.57**	**301**	*e*P **Pb**	**22 54 09.9**	**-1.4**
MTBS				*e*S **Sb**	**22 54 44.5**	**+1.6**
MTBS	**Maitube** 6.9nm,0.2s	**2.57**	**301**	Pg **Pb**	**22 54 09.9**	**-1.4**
MTBS				Lg Lg	22 54 44.5	
ARXS	**Arharly** 1.3nm,0.2s	**2.64**	**334**	*e*P **Pb**	**22 54 11.7**	**-0.8**
ARXS				*e*S **Sg**	**22 54 47.4**	**-2.5**
ARXS	**Arharly** 1.3nm,0.2s	**2.64**	**334**	Pg **Pb**	**22 54 11.7**	**-0.8**
ARXS				Lg Lg	22 54 47.4	
BOOM	**Boomskoye usch** baz=87	**2.69**	**285**	⇓*e*P **Pn**	**22 54 09.3**	**+0.9**
BOOM				⇓*e*S **Sb**	**22 54 43.8**	**-2.5**
KTBS	**Karatobe** 2.9nm,0.2s	**2.76**	**313**	*e*P **Pb**	**22 54 13.7**	**-0.7**
KTBS				*e*S **Sg**	**22 54 51.1**	**-2.4**
KTBS	**Karatobe** 2.9nm,0.2s	**2.76**	**313**	Pg **Pb**	**22 54 13.7**	**-0.7**
KTBS				Lg Lg	22 54 51.1	
KST	**Kastek** 4.1nm,0.3s	**2.84**	**296**	*e*P **Pb**	**22 54 14.8**	**-1.1**
KST				*e*S **Sb**	**22 54 52.7**	**+1.9**
KST	**Kastek** 4.1nm,0.3s	**2.84**	**296**	Pg **Pb**	**22 54 14.8**	**-1.1**
KST				Lg Lg	22 54 52.7	
TKM2	**Tokmak 2** 1.0nm,0.3s	**3.05**	**292**	⇓Pg **Pb**	**22 54 18.6**	**-0.8**
TKM2				⇑Lg Lg	22 54 58.8	
TKM2	**Tokmak 2** baz=93	**3.05**	**292**	⇑*i*P **Pn**	**22 54 14.5**	**+1.1**
TKM2				⇑*e*S **Sn**	**22 54 52.7**	**+2.6**
KUU	**Kurty** 0.8nm,0.3s	**3.06**	**313**	*e*P **Pb**	**22 54 18.9**	**-0.7**
KUU				*e*S **Sb**	**22 54 59.7**	**+2.7**
KUU	**Kurty** 0.8nm,0.3s	**3.06**	**313**	Pg **Pb**	**22 54 18.9**	**-0.7**
KUU				Lg Lg	22 54 59.7	
TDK	**Taldyqorghan** 10nm,0.3s	**3.24**	**347**	*e*P **Pb**	**22 54 22.1**	**-0.4**
TDK				*e*S **Sg**	**22 55 05.6**	**-3.4**
TDK	**Taldyqorghan** 10nm,0.3s	**3.24**	**347**	Pg **Pb**	**22 54 22.1**	**-0.4**
TDK				Lg Lg	22 55 05.6	
KBK	**Karagaybulak** baz=86	**3.44**	**285**	⇑*e*P **Pn**	**22 54 19.8**	**+1.0**
KBK				⇑*e*S **Sn**	**22 55 01.4**	**+1.8**

*IDC **23** 22:59:28.0±0.9, 22°.83S×173°.30E, h0km, mb4.1/7, mbtmp4.0/9, ML4.5/2, MS3.7/32, Error ellipse: s-maj=29.9km s-min=21.2km az=160.0*
*NEIC **23** 22:59:31.8±2.1, 23°.1S±0°.1×173°.21E±0°.10, h10km±1km, mb4.4/16, Error ellipse: s-maj=22.9km s-min=14.4km az=347.0*
*GCMT **23** 22:59:31.8±0.4, 23°.04S±0°.04×173°.32E±0°.04, h21km±1km, MW4.9/64, Moment Tensor Solution. s25,c25; s64,c81; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.03±.25; Mθθ1.56±.16; Mθφ1.47±.18; Mrθ-0.33±.26; Mφφ1.71±.12; Mφr0.41±.31; Best double couple: Mo3.17600×10¹⁶ NP1:φs216.00000°, δ46.00000°, λ-104.00000°. NP2: φs56.00000°, δ45.00000°, λ-76.00000°. Principal axes: T 3.2260, Plg0.0000°, Azm316.0000°; N -0.1010, Plg10.0000°, Azm226.0000°; P -3.1250, Plg80.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 22:59:30.4±0.6, 22°.9S±0°.1×173°.24E±0°.07, h10km, n68, σ1§27/43, mb4.2/12, MS3.7/28, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**5.04**	**286**	Pn **Pn**	**23 00 46.8**	**+0.7**
PINNC	**Pines Island,**	**5.36**	**272**	**Pn**	**23 00 51.7**	**+1.2**
OUENC	**Ouen Island, N**	**5.93**	**274**	Pn **Pn**	**23 00 59.8**	**+1.5**
DZM	**Mont Dzumac** 1.1nm,0.3s,baz=300,slow=22,SNR=14	**6.34**	**276**	Pn **Pn**	**23 01 05.2**	**+1.0**
DZM				Sn **Sn**	**23 02 16.4**	**-0.3**
	4.7nm,0.3s,baz=146,slow=22,SNR=4.1					
DZM	3.3nm,0.3s **Mont Dzumac** 32nm,0.9s	**6.34**	**276**	*e*Pn Pn	23 01 12.4	+8.3
DZM				*e*Sn **Sn**	**23 02 15.0**	**-1.7**
DZM	60nm,1.0s			*e*LR LR	23 02 31.0	
	comp=Z,834nm,25.9s					
DZM	**Mont Dzumac**	**6.34**	**276**	**Pn**	**23 01 04.9**	**+0.8**
MSVF	**Nonsavu** 1.1nm,0.3s,baz=270,slow=20,SNR=1.5	**6.86**	**42**	Pn **Pn**	**23 01 09.8**	**-1.4**
MSVF				LR LR	23 03 18.3	
	comp=Z,416nm,19.3s,baz=54,slow=34					
MSVF	3.4nm,0.4s **Nonsavu**	**6.86**	**42**	Pn **Pn**	**23 01 14.6**	**+3.4**
KOUNC	**Koumac, New Ca**	**8.66**	**284**	Pn **Pn**	**23 01 35.8**	**0.0**
RAO	**Raoul Island**	**10.13**	**130**	LR LR	23 04 51.7	
	comp=Z,1μm,20.6s,baz=248,slow=32					
URZ	**Urewera**	**15.63**	**169**	LR LR	23 07 44.6	
	comp=Z,784nm,20.9s,baz=32,slow=32					
AFI	**Afiamalu**	**16.80**	**60**	LR LR	23 09 02.3	
	comp=Z,124nm,18.3s,baz=122,slow=34					
HNR	**Honiara**	**18.50**	**314**	LR LR	23 09 51.7	
	comp=Z,259nm,21.9s,baz=170,slow=34					
LTZ	**Lake Taylor**	**19.81**	**182**	P **P**	**23 04 01.3**	**+0.1**
LTZ				IAmb IAmb	23 04 16.8	
	comp=Z,41nm,1.5s					
EIDS	**Eidsvold**	**20.37**	**259**	P **P**	**23 04 08.3**	**+1.0**
EIDS				IAmb IAmb	23 04 14.2	
	comp=Z,20nm,1.1s					
ARMA	**Armidale**	**20.68**	**244**	P **P**	**23 04 11.6**	**+0.8**
ARMA				IAmb IAmb	23 04 17.1	
	comp=Z,12nm,1.1s					
RPZ	**Rata Peaks**	**20.81**	**184**	LR LR	23 11 30.8	
	comp=Z,739nm,19.6s,baz=355,slow=35					
RAR	**Rarotonga**	**25.05**	**91**	LR LR	23 12 39.8	
	comp=Z,43nm,21.6s,baz=263,slow=32					
CTA	**Charters Tower**	**25.26**	**271**	P **P**	**23 04 57.4**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=86,slow=11,SNR=4.1					
CTA				LR LR	23 14 47.2	
	comp=Z,188nm,18.9s,baz=80,slow=36					
	comp=Z,2.9nm,0.8s					
STKA	**Stephens Creek**	**29.39**	**245**	P **P**	**23 05 34.5**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=45,slow=6.4,SNR=4.4					
STKA				LR LR	23 17 08.1	
	comp=Z,108nm,18.4s,baz=53,slow=36					
	comp=Z,1.8nm,0.7s					
STKA	**Stephens Creek**	**29.39**	**245**	P **P**	**23 05 34.5**	**+0.5**
PPT2	**Papeete2** comp=Z,54nm,21.2s	**35.22**	**88**	*e*LR LR	23 16 20.9	
AS31	**Alice Springs**	**36.06**	**261**	P **P**	**23 06 31.9**	**-0.5**
AS31				IAmb IAmb	23 06 34.1	
	comp=Z,3.1nm,1.0s					
ASAR	**Alice Springs**	**36.06**	**261**	P **P**	**23 06 32.2**	**-0.2**
	comp=Z,8.7nm,1.0s,baz=86,slow=8.5,SNR=41					
ASAR				LR LR	23 19 52.6	
	comp=Z,54nm,21.6s,baz=144,slow=34					
	comp=Z,8.7nm,1.0s					
ASAR	**Alice Springs**	**36.06**	**261**	P **P**	**23 06 32.5**	**0.0**
WB0	**Warramunga Arr**	**36.25**	**268**	P **P**	**23 06 33.3**	**-0.8**
WB0				IAmb IAmb	23 06 34.3	
	comp=Z,8.8nm,1.4s					
WRA	**Warramunga Arr**	**36.27**	**267**	P **P**	**23 06 32.2**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=97,slow=8.0,SNR=7.0					
WRA				LR LR	23 21 22.8	
	comp=Z,109nm,18.4s,baz=168,slow=36					
	comp=Z,1.0nm,0.8s					
WRA	**Warramunga Arr**	**36.27**	**267**	P **P**	**23 06 33.0**	**-1.2**
FITZ	**Fitzroy Crossi**	**44.70**	**267**	LR LR	23 24 55.9	
	comp=Z,63nm,18.0s,baz=100,slow=34					
FITZ	**Fitzroy Crossi**	**44.70**	**267**	P **P**	**23 07 44.5**	**+0.6**
GUMO	**Guam**	**45.71**	**320**	LR LR	23 24 42.9	
	comp=Z,158nm,21.2s,baz=124,slow=33					
SIJI	**Sorong**	**46.28**	**292**	LR LR	23 26 47.0	
	comp=Z,129nm,21.0s,baz=94,slow=35					
BATI	**Baumata**	**48.96**	**276**	LR LR	23 29 54.1	
	comp=Z,232nm,18.1s,baz=127,slow=37					
MBWA	**Marble Bar**	**49.40**	**261**	P **P**	**23 08 21.0**	**+0.3**
KAPI	**Kappang** comp=Z,53nm,21.0s,baz=102,slow=35	**54.55**	**281**	LR LR	23 31 17.7	
VNDA	**Vanda**	**54.92**	**183**	P **P**	**23 09 00.4**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=3.4,slow=5.5,SNR=5.2					
VNDA				LR LR	23 28 29.7	
	comp=Z,169nm,21.6s,baz=12,slow=32					
	comp=Z,0.6nm,0.7s					
VNDA	**Vanda**	**54.92**	**183**	P **P**	**23 09 00.9**	**0.0**
SBA	**Scott Base**	**55.06**	**182**	P **P**	**23 09 03.3**	**+1.4**
DAV	**Davao City (W)** comp=Z,34nm,20.1s,baz=157,slow=36	**55.33**	**297**	LR LR	23 32 21.5	
JHJ	**Hachijo jima 2** comp=Z,27nm,21.6s,baz=82,slow=33	**64.23**	**329**	LR LR	23 34 18.1	
QSPA	**South Pole Qui** comp=Z,112nm,18.9s,baz=44,slow=33	**67.14**	**180**	LR LR	23 36 43.6	
QSPA	**South Pole Qui**	**67.14**	**180**	P **P**	**23 10 24.0**	**-0.2**
MJAR	**Matsushiro Arr** comp=Z,35nm,22.0s,baz=164,slow=32	**67.78**	**330**	LR LR	23 35 40.1	
RPN	**Rapa Nui** comp=Z,101nm,21.7s,baz=238,slow=28	**69.23**	**112**	LR LR	23 32 11.7	
KSRS	**Korea Array** comp=Z,27nm,21.3s,baz=150,slow=33	**73.66**	**324**	LR LR	23 39 49.3	
SHEM	**Shemya Is, Ala** comp=Z,38nm,18.7s,baz=150,slow=35	**75.34**	**1**	LR LR	23 43 39.5	
MAW	**Mawson** comp=Z,1.9nm,0.8s,baz=128,slow=3.7,SNR=4.0 comp=Z,1.9nm,0.8s	**76.42**	**202**	P **P**	**23 11 20.3**	**+0.5**
MAW	**Mawson**	**76.42**	**202**	P **P**	**23 11 20.7**	**+0.9**
PETK	**Petropavlovsk-** comp=Z,71nm,18.8s,baz=130,slow=33	**76.92**	**350**	LR LR	23 42 00.4	
BELA	**Belgrano 2**	**78.09**	**174**	P **P**	**23 11 28.3**	**-0.8**
BELA				IAmb IAmb	23 11 30.1	
	comp=Z,6.5nm,1.2s					
SMAI	**San Martin Ant**	**79.14**	**161**	P **P**	**23 11 35.6**	**+0.6**
SMAI				IAmb IAmb	23 11 38.1	
	comp=Z,7.8nm,1.3s					
KLR	**Kul'dur**	**80.79**	**334**	LR LR	23 40 45.8	
	comp=Z,37nm,21.7s,baz=142,slow=31					
CMAR	**Chiang Mai Arr**	**83.40**	**293**	LR LR	23 52 04.4	
	comp=Z,17nm,18.6s,baz=195,slow=38					
SNAA	**Sanae**	**85.61**	**181**	P **P**	**23 12 07.6**	**-1.2**
SNAA	**Sanae** comp=Z,79nm,18.5s,baz=196,slow=35	**85.61**	**181**	LR LR	23 48 49.7	
SNAA	**Sanae**	**85.61**	**181**	P **P**	**23 12 07.4**	**-1.4**
SNAA				IAmb IAmb	23 12 36.3	
	comp=Z,2.4nm,1.1s					
VNA3	**Neumayer Olymp**	**86.06**	**179**	P **P**	**23 12 09.6**	**-1.4**
VNA2	**Neumayer--Watz** baz=182,slow=4.6	**86.40**	**180**	P **P**	**23 12 11.4**	**-1.2**
YAK	**Yakutsk** comp=Z,43nm,18.4s,baz=91,slow=36	**91.53**	**341**	LR LR	23 54 04.9	
SONM	**Songino Array** comp=Z,20nm,22.0s,baz=54,slow=34	**92.41**	**322**	LR LR	23 51 57.2	
ILAR	**Eielson Array** comp=Z,0.7nm,0.7s,baz=220,slow=4.2,SNR=5.6 comp=Z,0.7nm,0.7s	**92.68**	**16**	P **P**	**23 12 40.1**	**-2.0**
PLCA	**Paso Flores** comp=Z,62nm,18.1s,baz=188,slow=33	**93.30**	**137**	LR LR	23 50 12.3	
NEW	**Newport** comp=Z,27nm,18.6s,baz=290,slow=32	**94.23**	**39**	LR LR	23 49 39.4	
ARCES	**ARCESS Array B** comp=Z,2.6nm,0.8s,baz=61,slow=5.7,SNR=5.3	**129.56**	**346**	PKP **PKPdf**	**23 18 37.4**	**-1.4**
FINES	**FINESS Array B** comp=Z,2.5nm,1.0s,baz=16,slow=2.8,SNR=3.4	**135.40**	**338**	PKP **PKPdf**	**23 18 48.8**	**-1.2**
CLL	**Collm** comp=Z,4.0nm,0.9s	**147.80**	**337**	*i* PKPbc **PKPdf**	**23 19 14.6**	**+2.1**
GERES	**GERESS Array B** comp=Z,0.6nm,0.8s,baz=66,slow=3.2,SNR=6.8	**149.48**	**333**	PKPbc **PKPdf**	**23 19 18.4**	**+3.0**
TORD	**Torodi Ar. Bea** comp=Z,1.1nm,1.0s,baz=97,slow=0.9,SNR=4.6	**167.38**	**221**	PKP **PKPdf**	**23 19 36.5**	**-1.1**
TORD				PKPab **PKPab**	**23 20 41.9**	**-0.7**
	comp=Z,1.3nm,1.0s,baz=82,slow=3.1,SNR=4.8					

*IDC **23** 23:11:32.1±1.7, 48°.56N×155°.42E, h0km, mb3.8/10, mbtmp3.8/11, ML2.4/1, MS3.0/3, Error ellipse: s-maj=44.4km s-min=24.9km az=147.0*
*KRSC **23** 23:11:35.4±1.7, 48°.52N×156°.89E, h16km±32km, ML4.0*
*NEIC **23** 23:11:36.2±0.4, 48°.5N±0°.1×155°.7E±0°.2, h35km±8km, mb4.3/6, Error ellipse: s-maj=24.3km s-min=14.0km az=144.0*

ISC 23 23:11:36.1±1.1, 48°.4N±0°.1×155°.8E±0°.1, h35km, n45, σ1§25/42, mb4.1/14, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.30**	**5**	*e*P **Pn**	**23 12 11.5**	**+0.1**
SKR				*e*S **Sn**	**23 12 40.6**	**+2.1**
PAU	**Pauzhetka**	**3.15**	**12**	*e*P **Pn**	**23 12 23.4**	**+0.4**
PAU				*e*S **Sn**	**23 13 00.5**	**+1.2**
KDTR	**Khodutka, Kamc**	**3.72**	**23**	*e*P **Pn**	**23 12 30.9**	**-0.1**
KDTR				*e*S **Sn**	**23 13 12.3**	**-1.3**
MTVR	**Mutnovka**	**4.37**	**20**	*e*P **Pn**	**23 12 40.9**	**+0.9**
MTVR				*e*S **Sn**	**23 13 29.2**	**-0.6**
RUS	**Russkaya**	**4.40**	**22**	*e*P **Pn**	**23 12 40.2**	**-0.1**
RUS				*e*S **Sn**	**23 13 28.4**	**-1.9**
GRL	**Gorelyy**	**4.41**	**19**	*e*P **Pn**	**23 12 40.9**	**+0.3**
PEA0B	**Petropavlovsk-**	**4.87**	**14**	Pn **Pn**	**23 12 45.9**	**-0.9**
PETK	**Petropavlovsk-** 0.8nm,0.3s,baz=184,slow=17,SNR=2.4	**4.87**	**14**	Pn **Pn**	**23 12 47.5**	**+0.7**
PETK				LR LR	23 15 06.2	
	comp=Z,128nm,19.1s,baz=177,slow=45					
	1.8nm,0.4s					
PETK	**Petropavlovsk-**	**4.87**	**14**	Pn **Pn**	**23 12 45.8**	**-1.0**
DALK	**Dalny**	**5.01**	**21**	*e*P **Pn**	**23 12 49.3**	**+0.7**
KOK	**Koryaka**	**5.23**	**19**	*e*P **Pn**	**23 12 53.8**	**+2.1**
KRX	**Arik**	**5.29**	**19**	*e*P **Pn**	**23 12 54.6**	**+1.9**
SPN	**Mys Shipunski**	**5.42**	**28**	*e*S **Sn**	**23 13 52.2**	**-3.3**
GNL	**Ganaly**	**5.48**	**14**	*e*P **Pn**	**23 12 57.8**	**+2.6**
ERM	**Erimo**	**10.95**	**239**	Pn **Pn**	**23 14 10.0**	**-0.1**
KLR	**Kul'dur** comp=Z,62nm,18.2s,baz=66,slow=39	**15.84**	**282**	LR LR	23 21 46.1	
YAK	**Yakutsk** comp=Z,42nm,19.9s,baz=89,slow=39	**20.00**	**323**	LR LR	23 24 30.1	
KSRS	**Korea Array** 1.2nm,0.5s,baz=50,slow=11,SNR=4.7	**23.02**	**252**	P **P**	**23 16 37.4**	**-0.4**
	1.2nm,0.5s					
H11N2	**WAKE ISLAND Hy** baz=343,slow=76,SNR=5.1	**29.98**	**159**	T T	23 49 42.5	
H11N1	**WAKE ISLAND Hy** baz=343,slow=76,SNR=5.9	**29.99**	**159**	T T	23 49 45.3	
H11N3	**WAKE ISLAND Hy** baz=343,slow=76,SNR=3.9	**29.99**	**159**	T T	23 49 44.9	
H11S1	**WAKE ISLAND Hy** baz=345,slow=76,SNR=34	**31.11**	**160**	T T	23 50 59.9	
H11S3	**WAKE ISLAND Hy** baz=345,slow=76,SNR=36	**31.12**	**160**	T T	23 51 01.4	
H11S2	**WAKE ISLAND Hy** baz=345,slow=76,SNR=30	**31.13**	**160**	T T	23 51 09.8	
MK31	**Makanchi Array**	**47.79**	**297**	P **P**	**23 20 08.9**	**-0.8**
MK31				IAmb IAmb	23 20 48.5	
	comp=Z,4.4nm,1.2s					
MKAR	**Makanchi Array**	**47.79**	**297**	P **P**	**23 20 08.7**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=62,slow=8.5,SNR=8.5					
	comp=Z,0.8nm,0.5s					
KURK	**Kurchatov**	**47.96**	**303**	P **P**	**23 20 10.2**	**-0.7**
KURK				IAmb IAmb	23 20 11.5	
	comp=Z,3.3nm,1.4s					
MAKZ	**Makanchi**	**47.97**	**297**	P **P**	**23 20 11.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**54.50**	**257**	P **P**	**23 21 00.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=23,slow=7.4,SNR=1.6					
	comp=Z,0.7nm,0.4s					
ARCES	**ARCESS Array B**	**56.88**	**341**	P **P**	**23 21 15.6**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=35,slow=8.0,SNR=1.6					
	comp=Z,1.6nm,0.8s					
ABKAR	**Akbulak array**	**58.74**	**310**	P **P**	**23 21 29.1**	**-1.0**
FINES	**FINESS Array B**	**63.30**	**336**	P **P**	**23 22 00.0**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=46,slow=6.0,SNR=3.7					
	comp=Z,1.5nm,0.9s					
FINES	**FINESS Array B**	**63.30**	**336**	P **P**	**23 22 00.4**	**-0.4**
NOA	**NORSAR Array B**	**67.23**	**342**	P **P**	**23 22 25.9**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=25,slow=6.4,SNR=2.4					
	comp=Z,0.2nm,0.7s					
AKASG	**Malin Array Be**	**71.16**	**327**	P **P**	**23 22 49.7**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=33,slow=6.1,SNR=3.4					
	comp=Z,0.9nm,0.6s					
AKBB	**Malin Array Si**	**71.16**	**327**	P **P**	**23 22 51.1**	**+0.4**
AKBB				IAmb IAmb	23 23 35.1	
	comp=Z,6.6nm,1.4s					
TXAR	**Lajitas Array**	**75.12**	**63**	P **P**	**23 23 16.8**	**+2.2**
	comp=Z,0.3nm,0.7s,baz=296,slow=5.3,SNR=5.7					
	comp=Z,0.3nm,0.7s					
TXAR	**Lajitas Array**	**75.12**	**63**	P **P**	**23 23 15.4**	**+0.7**
BUR08	**Bucovina Ar. S**	**75.16**	**328**	P **P**	**23 23 14.1**	**-0.5**
BUR08				IAmb IAmb	23 23 38.4	
	comp=Z,5.3nm,1.5s					
BURAR	**Bucovina Array**	**75.18**	**328**	P **P**	**23 23 13.6**	**-1.1**
DPC	**Dobruska-Polom**	**75.64**	**335**	*e*P **P**	**23 23 18.8**	**+1.6**
CLL	**Collm**	**75.68**	**337**	*e*P **P**	**23 23 18.0**	**+0.6**
KHC	**Kasperske Hory**	**77.51**	**336**	*e*P **P**	**23 23 29.2**	**+1.4**
GERES	**GERESS Array B** comp=Z,0.2nm,0.5s,baz=36,slow=3.7,SNR=2.5	**77.74**	**335**	P **P**	**23 23 30.1**	**+1.0**
	comp=Z,0.2nm,0.5s					
MMAI	**Mount Meron Ar** comp=Z,1.1nm,0.5s,baz=42,slow=6.6,SNR=5.3 comp=Z,1.1nm,0.5s	**83.04**	**313**	P **P**	**23 23 58.7**	**+0.8**

*ROM **23** 23:14:08.3±0.1, 41°.916N±0°.006×16°.123E±0°.009, h34km, ML2.6/13, Error ellipse: s-maj=0.9km s-min=0.5km az=222.0*
*BEO **23** 23:14:13.8±1.1, 42°.17N×16°.77E, h0km, ML2.2/5*

ISC 23 23:14:08.1±1.2, 41°.96N±0°.04×16°.16E±0°.03, h34km±3km, n54, σ1§35/67, 14C-9D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MSAG	**Monte S. Angel**	**0.31**	**218**	⇑P **Pb**	**23 14 16.2**	**0.0**
MSAG				S **Sb**	**23 14 21.2**	**-0.5**
MSAG				AML AML		
	comp=E,972μm,0.9s					
MSAG				AML AML		

	comp=N,2120μm,0.4s							
MSAG					AML	AML		
	comp=N,2220μm,0.4s							
MSAG					AML	AML		
	comp=E,1068μm,0.9s							
SGRT	**San Giovanni R**	**0.37**	**237**	⇓P	**Pb**		**23 14 16.8**	**-0.2**
SGRT				S	**Sb**		**23 14 22.2**	**-0.9**
SGRT				AML	AML			
	comp=N,2690μm,0.2s							
SGRT				AML	AML			
	comp=E,1935μm,0.3s							
APRC	**Apricena**	**0.50**	**247**	⇓P	**Pb**		**23 14 18.5**	**-0.4**
APRC				S	**Sb**		**23 14 25.8**	**-0.5**
APRC				AML	AML			
	comp=E,1160μm,0.9s							
APRC				AML	AML			
	comp=N,994μm,0.4s							
APRC				AML	AML			
	comp=E,1155μm,0.9s							
APRC				AML	AML			
	comp=N,992μm,0.4s							
TREM	**Isole Tremiti**	**0.51**	**289**	⇓P	**Pb**		**23 14 18.9**	**-0.1**
TREM				S	**Sb**		**23 14 27.0**	**+0.6**
TREM				AML	AML			
	comp=E,714μm,1.6s							
TREM				AML	AML			
	comp=N,837μm,0.9s							
TREM				AML	AML			
	comp=E,714μm,1.6s							
MELA	**Melanico ??? S**	**0.81**	**252**	⇓P	**Pn**		**23 14 23.2**	**+0.1**
MELA				S	**Sn**		**23 14 34.6**	**+0.7**
MELA				AML	AML			
	comp=N,636μm,0.2s							
MELA				AML	AML			
	comp=E,370μm,1.4s							
MELA				AML	AML			
	comp=N,636μm,0.2s							
LSTV	**Lastovo**	**0.97**	**33**	*e*Pn	**Pn**		**23 14 26.4**	**+1.0**
AMUR	**Altamura**	**1.10**	**162**	⇓P	**Pn**		**23 14 27.4**	**+0.3**
NOCI	**Noci**	**1.35**	**150**	⇓P	**Pn**		**23 14 31.2**	**+0.6**
PTRJ	**Pietraroja**	**1.36**	**245**	AML	AML			
	comp=N,2550μm,0.3s							
PTRJ				AML	AML			
	comp=E,1423μm,1.2s							
PTRJ				AML	AML			
	comp=E,1420μm,1.2s							
PTRJ				AML	AML			
	comp=N,2140μm,0.4s							
PTRJ				AML	AML			
	comp=E,1720μm,0.1s							
PTRJ				AML	AML			
	comp=N,2565μm,0.6s							
LTRZ	**Laterza**	**1.44**	**160**	P	**Pn**		**23 14 32.3**	**+0.6**
STON	**Ston**	**1.46**	**51**	*e*Pn	**Pn**		**23 14 32.0**	**0.0**
STON	**Ston**	**1.46**	**51**	*e*Pg	**Pn**		**23 14 32.0**	**0.0**
STON				*e*Sg	**Sn**		**23 14 43.9**	**-6.0**
STON	**Ston**	**1.46**	**51**	P	**Pn**		**23 14 32.0**	**0.0**
STON				S	**Sn**		**23 14 49.6**	**-0.3**
STON				AML	AML			
	comp=N,59μm,1.1s							
STON				AML	AML			
	comp=E,54μm,1.1s							
MAKA	**Makarska**	**1.47**	**25**	*e*Pn	**Pn**		**23 14 33.2**	**+1.0**
LPEL	**Lama dei Pelig**	**1.48**	**274**	⇑P	**Pn**		**23 14 33.0**	**+0.6**
LPEL				AML	AML			
	comp=E,103μm,0.7s							
LPEL				AML	AML			
	comp=N,92μm,1.5s							
DBRK	**Dubrovnik**	**1.64**	**64**	*e*Pn	**Pn**		**23 14 34.7**	**+0.3**
PIGN	**Pignataro Magg**	**1.67**	**244**	P	**Pn**		**23 14 35.5**	**+0.6**
INTR	**Introdacqua**	**1.68**	**273**	⇑P	**Pn**		**23 14 35.7**	**+0.5**
RICI	**Ricice**	**1.69**	**25**	*e*Pn	**Pn**		**23 14 36.0**	**+0.7**
MORI	**Morici**	**1.94**	**350**	*e*Pn	**Pn**		**23 14 38.9**	**+0.3**
MORI				Sn	**Sn**		**23 15 00.9**	**-0.8**
FAGN	**Fagnano**	**1.94**	**280**	P	**Pn**		**23 14 38.9**	**+0.1**
FAGN				AML	AML			
	comp=E,95μm,0.6s							
FAGN				AML	AML			
	comp=N,73μm,1.1s							
TERO	**Teramo**	**2.01**	**290**	⇑P	**Pn**		**23 14 40.4**	**+0.8**
KIJV	**Kijevo**	**2.06**	**5**	*e*Pn	**Pn**		**23 14 42.4**	**+2.1**
DUGI	**Dugi Otok**	**2.19**	**339**	*e*Pn	**Pn**		**23 14 42.2**	**+0.2**
SMA1	**SAN MARTINO**	**2.20**	**289**	⇑P	**Pn**		**23 14 43.2**	**+0.9**
GIUL	**Giuliano Di Ro**	**2.21**	**261**	⇑P	**Pn**		**23 14 43.1**	**+0.7**
GIUL				AML	AML			
	comp=E,35μm,1.6s							
GIUL				AML	AML			
	comp=N,32μm,1.4s							
RM33	**Pellescritta (**	**2.26**	**285**	⇑P	**Pn**		**23 14 44.3**	**+1.2**
FIAM	**Fiamignano**	**2.29**	**279**	⇑P	**Pn**		**23 14 45.3**	**+1.8**
PDG	**Podgorica**	**2.35**	**77**	*e*Pn	**Pn**		**23 14 46.3**	**+2.1**
PDG				*e*Sn	**Sn**		**23 15 12.3**	**+0.5**
PDG	**Podgorica**	**2.35**	**77**	⇑P	**Pn**		**23 14 46.9**	**+2.7**
LNSS	**Leonessa**	**2.41**	**287**	P	**Pn**		**23 14 46.6**	**+1.5**
LNSS				AML	AML			
	comp=N,57μm,1.3s							
LNSS				AML	AML			
	comp=E,59μm,1.6s							
NRCA	**Norcia**	**2.42**	**292**	⇓P	**Pn**		**23 14 46.5**	**+1.2**
NRCA				AML	AML			
	comp=N,46μm,1.5s							
NRCA				AML	AML			
	comp=E,53μm,0.8s							
VIRC	**Vir**	**2.47**	**341**	*e*Pn	**Pn**		**23 14 46.5**	**+0.6**
VIRC				Sn	**Sn**		**23 15 14.4**	**-0.5**
FDMO	**Fiordimonte**	**2.52**	**296**	⇓P	**Pn**		**23 14 47.6**	**+1.0**
ARRO	**Arrone**	**2.60**	**285**	P	**Pn**		**23 14 49.1**	**+1.4**
CING	**Cingoli**	**2.61**	**304**	P	**Pn**		**23 14 48.4**	**+0.6**
CESI	**CESI - Serrava**	**2.63**	**295**	P	**Pn**		**23 14 49.2**	**+1.1**
EL6	**Elcito**	**2.64**	**302**	⇑P	**Pn**		**23 14 48.9**	**+0.6**
SNTG	**Esanatoglia**	**2.71**	**300**	⇑P	**Pn**		**23 14 49.7**	**+0.4**
NVLJ	**Novalja**	**2.77**	**341**	*e*Pn	**Pn**		**23 14 50.6**	**+0.6**
ASSB	**Assisi San Ben**	**2.81**	**294**	P	**Pn**		**23 14 51.7**	**+1.1**
ARVD	**Arcevia**	**2.83**	**304**	⇓P	**Pn**		**23 14 51.3**	**+0.4**
RABC	**Rab**	**2.97**	**341**	*e*Pn	**Pn**		**23 14 53.3**	**+0.6**
FRON	**Frontone**	**2.97**	**303**	P	**Pn**		**23 14 53.5**	**+0.6**
FSSB	**Fossombrone**	**3.03**	**306**	⇑P	**Pn**		**23 14 54.3**	**+0.6**
FSSB				S	**Sn**		**23 15 28.9**	**+0.1**
FSSB				AML	AML			
	comp=N,79μm,1.5s							
FSSB				AML	AML			
	comp=E,67μm,1.2s							
SJES	**Sjenica**	**3.10**	**64**	*e*Pn	**Pn**		**23 14 58.2**	**+3.5**
SJES				*e*Sn	**Sn**		**23 15 29.9**	**-0.7**
PIEI	**Pieia**	**3.10**	**302**	P	**Pn**		**23 14 55.4**	**+0.8**
NARO	**Abbazia di Nar**	**3.11**	**303**	⇑P	**Pn**		**23 14 55.3**	**+0.6**
IVAS	**Ivanjica**	**3.35**	**60**	*e*Pn	**Pn**		**23 15 00.2**	**+2.1**
IVAS				*e*Sn	**Sn**		**23 15 36.5**	**-0.3**
CAFI	**Castiglion Fio**	**3.39**	**295**	P	**Pn**		**23 14 59.4**	**+0.9**
BRJN	**Brijuni**	**3.43**	**330**	*e*Pn	**Pn**		**23 14 58.8**	**-0.3**
LLI	**Lipari**	**3.63**	**195**	⇑P	Pn		23 15 07.5	+5.7
BARS	**Barje**	**4.27**	**77**	*e*Pn	**Pn**		**23 15 12.6**	**+1.9**
BARS				*e*Sn	**Sn**		**23 15 58.1**	**-1.3**
PRVS	**Prvonek**	**4.42**	**81**	*e*Pn	**Pn**		**23 15 14.6**	**+1.8**
PRVS				*e*Sn	**Sn**		**23 16 00.2**	**-3.0**

*IDC **23** 23:20:40.3±0.7,29°.18S×61°.27E,h0km,mb4.0/10, mbtmp4.0/10,MS3.5/12,Error ellipse: s-maj=27.8km s-min=21.9km az=39.0*
*NEIC **23** 23:20:42.5±2.0,29°.1S±0°.1×61°.2E±0°.1,h10km±1km, mb4.3/6,Error ellipse: s-maj=22.0km s-min=17.9km az=88.0*

ISC 23 23:20:42.1±0.7,29°.1S±0°.1×61°.2E±0°.1,h10km,n40, σ0s91/22,mb4.2/12,MS3.5/12,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.31**	**327**	Pn	**Pn**	**23 22 54.6**	**-2.0**
FOMA	**Nahampoana Res**	**13.32**	**285**	Pn	**Pn**	**23 23 50.6**	**-0.6**
VOI	**Vohitsoka**	**14.84**	**296**	Pn	**Pn**	**23 24 10.9**	**-1.2**
H08S1	**Diego Carcia H**	**23.83**	**29**	T	T	23 50 38.8	
	baz=203,slow=75,SNR=54						
H08S2	**Diego Garcia H**	**23.84**	**29**	T	T	23 50 39.4	
	baz=203,slow=75,SNR=20						
H08S3	**Diego Garcia H**	**23.85**	**29**	T	T	23 50 40.4	
	baz=203,slow=75,SNR=28						
LSZ	**Lusaka**	**33.38**	**287**	LR	LR	23 38 38.3	
	comp=Z,46nm,19.5s,baz=168,slow=32						
LSZ	**Lusaka**	**33.38**	**287**	P	**P**	**23 27 21.2**	**+0.2**
KMBO	**Kilima Mbogo**	**35.98**	**316**	LR	LR	23 40 06.6	
	comp=Z,80nm,19.1s,baz=96,slow=32						
MBAR	**Mbarara**	**40.59**	**309**	LR	LR	23 43 44.8	
	comp=Z,44nm,19.4s,baz=146,slow=34						
TSUM	**Tsumeb**	**40.80**	**274**	LR	LR	23 43 45.0	
	comp=Z,30nm,19.2s,baz=144,slow=34						
ATD	**Arta Tunnel**	**44.10**	**334**	LR	LR	23 43 05.6	
	comp=Z,55nm,21.6s,baz=352,slow=30						
H01W2	**Cape Leeuwin H**	**44.84**	**112**	T	T	00 16 32.5	
	baz=261,slow=74,SNR=24						
H01W3	**Cape Leeuwin H**	**44.84**	**112**	T	T	00 16 35.2	
	baz=261,slow=74,SNR=19						
H01W1	**Cape Leeuwin H**	**44.86**	**112**	T	T	00 16 34.8	
	baz=261,slow=74,SNR=32						
CMAR	**Chiang Mai Arr**	**59.69**	**42**	P	**P**	**23 30 47.8**	**+0.9**
	1.2nm,0.3s,baz=219,slow=7.0,SNR=1.7 1.2nm,0.3s						
QSPA	**South Pole Qui**	**61.06**	**180**	P	**P**	**23 30 55.1**	**-0.8**
	1.1nm,0.7s,baz=258,slow=6.5,SNR=5.3 1.1nm,0.7s						
QSPA	**South Pole Qui**	**61.06**	**180**	P	**P**	**23 30 55.4**	**-0.6**
QSPA				IAmb	IAmb	23 31 16.5	
	comp=Z,4.4nm,1.4s						
EIL	**Elat**	**63.58**	**335**	LR	LR	23 55 26.6	
	comp=Z,40nm,20.1s,baz=178,slow=33						
VNDA	**Vanda**	**64.09**	**166**	P	**P**	**23 31 15.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=260,slow=12,SNR=2.8 comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**64.09**	**166**	P	**P**	**23 31 15.0**	**-0.8**
ASAR	**Alice Springs**	**64.43**	**104**	P	**P**	**23 31 18.6**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=244,slow=6.6,SNR=10 comp=Z,1.4nm,0.8s						
SBA	**Scott Base**	**64.97**	**167**	P	**P**	**23 31 22.0**	**+0.5**
SBA				IAmb	IAmb	23 31 27.8	
	comp=Z,2.6nm,1.2s						
WRA	**Warramunga Arr**	**66.25**	**100**	P	**P**	**23 31 29.1**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=247,slow=5.7,SNR=5.3 comp=Z,1.1nm,0.8s						
GNI	**Garni**	**70.57**	**347**	LR	LR	00 01 34.0	
	comp=Z,28nm,19.6s,baz=156,slow=35						
TOA0	**Torodi Ar. Sit**	**71.14**	**298**	P	**P**	**23 32 01.7**	**+0.5**
TOA0				IAmb	IAmb	23 32 33.6	
	comp=Z,4.4nm,1.3s						
TORD	**Torodi Ar. Bea**	**71.14**	**298**	P	**P**	**23 32 01.0**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=117,slow=5.5,SNR=11 comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.14**	**298**	P	**P**	**23 32 01.0**	**-0.2**
TORD				IAmb	IAmb	23 32 03.8	
	comp=Z,3.2nm,1.3s						
DBIC	**Dimbokro**	**72.72**	**288**	P	**P**	**23 32 11.6**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=114,slow=8.6,SNR=3.3 comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**77.90**	**15**	P	**P**	**23 32 39.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=191,slow=5.3,SNR=6.0 comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**77.90**	**15**	P	**P**	**23 32 40.6**	**+0.8**
ABKAR	**Akbulak array**	**78.00**	**359**	P	**P**	**23 32 40.8**	**+0.5**
RPZ	**Rata Peaks**	**83.25**	**137**	LR	LR	00 03 23.4	
	comp=Z,48nm,20.9s,baz=252,slow=31						
ZALV	**Zalesovo Beam**	**85.19**	**14**	P	**P**	**23 33 18.4**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=197,slow=4.9,SNR=4.9 comp=Z,0.6nm,0.4s						
ARU	**Arti**	**85.21**	**359**	LR	LR	00 10 45.3	
	comp=Z,21nm,18.3s,baz=20,slow=35						
ESDC	**Sonseca Array**	**91.37**	**316**	P	**P**	**23 33 49.0**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=129,slow=3.5,SNR=5.3 comp=Z,0.8nm,0.9s						
FINES	**FINESS Array B**	**94.60**	**344**	LR	LR	00 15 25.6	
	comp=Z,38nm,21.6s,baz=56,slow=35						
HFS	**Hagfors**	**97.06**	**338**	LR	LR	00 18 19.3	
	comp=Z,32nm,20.1s,baz=33,slow=36						
NOA	**NORSAR Array B**	**98.55**	**338**	LR	LR	00 19 24.9	
	comp=Z,8.7nm,18.4s,baz=25,slow=36						
TXAR	**Lajitas Array**	**166.78**	**275**	PKP	**PKPdf**	**23 40 49.6**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=147,slow=2.5,SNR=4.7						

*IDC **23** 23:24:59.8±0.8,55°.14S×30°.50W,h0km,mb4.0/7, mbtmp4.1/8,MS3.4/4,Error ellipse: s-maj=27.2km s-min=19.7km az=73.0*
*NEIC **23** 23:25:01.8±1.8,55°.23S±0°.07×30°.8W±0°.2,h10km±1km, mb4.5/23,Error ellipse: s-maj=16.8km s-min=12.6km az=82.0*

ISC 23 23:25:01.5±0.6,55°.16S±0°.08×30°.74W±0°.09,h10km,n48, σ1s39/39,mb4.5/15,MS3.4/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.45**	**282**		**Pn**	**23 25 54.7**	**-0.5**
ORCD	**Orcadas**	**9.29**	**227**	Pn	**Pn**	**23 27 14.0**	**-1.3**
VNA1	**Neumayer--Stat**	**18.40**	**156**	P	**P**	**23 29 22.8**	**+6.5**
VNA3	**Neumayer Olymp**	**18.53**	**159**	P	**Pn**	**23 29 18.3**	**+0.4**
VNA2	**Neumayer--Watz**	**18.80**	**156**	P	**Pn**	**23 29 21.5**	**+0.4**
	baz=308,slow=12						
PMSA	**Palmer Station**	**19.01**	**226**	P	**Pn**	**23 29 24.3**	**+0.7**
	8.8nm,0.8s,baz=56,slow=16,SNR=2.6						
SNAA	**Sanae**	**20.39**	**155**	P	**P**	**23 29 38.1**	**0.0**
SNAA	**Sanae**	**20.39**	**155**	P	**P**	**23 29 37.6**	**-0.5**
	1.1nm,0.7s,baz=302,slow=10,SNR=7.0 1.1nm,0.7s						
SNAA	**Sanae**	**20.39**	**155**	P	**P**	**23 29 36.0**	**-2.1**
SMAI	**San Martin Ant**	**21.18**	**218**	P	**P**	**23 29 47.5**	**+1.0**
MG02	**Cerro Sombrero**	**22.57**	**260**	P	**P**	**23 30 02.3**	**+0.7**
BELA	**Belgrano 2**	**22.86**	**182**	P	**P**	**23 30 03.6**	**-0.8**
GO10	**Punta Arenas**	**23.46**	**258**	P	**P**	**23 30 10.6**	**-0.2**
MG05	**Puerto Natales**	**24.86**	**261**	P	**P**	**23 30 21.5**	**-2.3**
GO09	**Cerro Castillo**	**24.93**	**262**	P	**P**	**23 30 23.6**	**-1.0**
GO09				IAmb	IAmb	23 30 46.2	
	comp=Z,26nm,1.3s						
TRQA	**Tornquist**	**27.12**	**296**	P	**P**	**23 30 45.1**	**+0.7**
TRQA				IAmb	IAmb	23 31 09.8	
	comp=Z,11nm,1.4s						
PLTB	**Pedras Altas**	**28.43**	**316**	P	**P**	**23 30 57.0**	**+0.8**
PLTB				IAmb	IAmb	23 31 30.7	
	comp=Z,12nm,1.4s						
CPUP	**Villa Florida**	**34.73**	**315**	P	**P**	**23 31 51.8**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=154,slow=8.4,SNR=5.8 comp=Z,2.3nm,0.6s						
CPUP	**Villa Florida**	**34.73**	**315**	P	**P**	**23 31 51.6**	**0.0**
CPUP				IAmb	IAmb	23 31 56.9	
	comp=Z,7.6nm,1.2s						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**23 31 54.7**	**+0.2**
	comp=Z,5.0nm,1.0s,baz=196,slow=4.3,SNR=7.2 comp=Z,5.0nm,1.0s						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**23 31 54.6**	**0.0**
QSPA				IAmb	IAmb	23 32 09.2	
	comp=Z,13nm,1.4s						
MT09	**Talagante**	**35.11**	**291**	P	**P**	**23 31 54.4**	**-0.6**
MT09				IAmb	IAmb	23 31 57.6	
	comp=Z,12nm,1.3s						
VA06	**Catapilco**	**36.21**	**292**	P	**P**	**23 32 04.7**	**+0.4**
CO03	**El Pedregal**	**37.24**	**294**	P	**P**	**23 32 13.1**	**0.0**
GO02	**Mina Guanaco**	**41.30**	**301**	P	**P**	**23 32 48.0**	**+0.7**
GO02				IAmb	IAmb	23 33 05.9	
	comp=Z,6.0nm,0.7s						
LVC	**Limon Verde**	**43.12**	**303**	LR	LR	23 53 11.3	
	comp=Z,29nm,19.1s,baz=221,slow=39						
PB01	**IPOC Station P**	**44.73**	**304**	P	**P**	**23 33 15.5**	**+0.6**
PB01				IAmb	IAmb	23 33 33.3	
	comp=Z,12nm,1.4s						
PTLB	**Pontes e Lacer**	**45.28**	**320**	P	**P**	**23 33 19.5**	**+0.3**
PTLB				IAmb	IAmb	23 33 20.1	
	comp=Z,2.9nm,0.7s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**23 33 34.8**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=166,slow=10,SNR=6.7 comp=Z,1.1nm,0.9s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**23 33 34.0**	**-0.8**
BOSA	**Boshof**	**47.75**	**80**	P	**P**	**23 33 38.0**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=203,slow=13,SNR=2.0 comp=Z,2.6nm,0.9s						
BOSA	**Boshof**	**47.75**	**80**	P	**P**	**23 33 39.0**	**+0.3**
H10S2	**ASCENSION HYDR**	**47.82**	**22**	T	T	00 25 18.0	
	baz=192,slow=74,SNR=4.9						
H10S3	**ASCENSION HYDR**	**47.83**	**22**	T	T	00 25 20.0	
	baz=26,slow=74,SNR=14						
LPAZ	**La Paz**	**48.23**	**309**	P	**P**	**23 33 43.9**	**+0.8**
LPAZ				IAmb	IAmb	23 33 49.2	
	comp=Z,2.4nm,0.5s,baz=170,slow=6.1,SNR=12						
LPAZ				LR	LR	23 52 24.7	
	comp=Z,26nm,21.9s,baz=274,slow=34						
LPAZ	**La Paz**	**48.23**	**309**	P	**P**	**23 33 44.2**	**+1.1**
LPAZ				IAmb	IAmb	23 34 04.3	
	comp=Z,3.4nm,0.8s						
H10N1	**ASCENSION HYDR**	**48.94**	**22**	T	T	00 26 38.2	
	baz=192,slow=75,SNR=17						
H10N3	**ASCENSION HYDR**	**48.94**	**22**	T	T	00 26 37.8	
	baz=192,slow=75,SNR=31						
H10N2	**ASCENSION HYDR**	**48.96**	**22**	T	T	00 26 39.0	
	baz=192,slow=75,SNR=38						
BOAV	**Boa Vista**	**62.38**	**326**	P	**P**	**23 35 23.8**	**-0.5**
BOAV				IAmb	IAmb	23 35 45.1	
	comp=Z,4.4nm,1.4s						
OPO	**Ambohidratompo**	**68.09**	**91**	LR	LR	00 00 52.0	
	comp=Z,43nm,20.9s,baz=137,slow=32						
TOA0	**Torodi Ar. Sit**	**73.34**	**33**	P	**P**	**23 36 33.6**	**+0.4**
TOA0				IAmb	IAmb	23 36 56.2	
	comp=Z,8.4nm,1.3s						
TORD	**Torodi Ar. Bea**	**73.34**	**33**	P	**P**	**23 36 33.3**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=195,slow=5.8,SNR=5.4 comp=Z,1.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.34**	**33**	P	**P**	**23 36 33.3**	**+0.1**
TORD				IAmb	IAmb	23 36 46.2	
	comp=Z,2.2nm,0.8s						
ATD	**Arta Tunnel**	**90.22**	**70**	LR	LR	00 15 28.8	
	comp=Z,28nm,19.7s,baz=38,slow=34						
ZALV	**Zalesovo Beam**	**143.80**	**65**	PKP	PKPbc	23 44 33.3	0.0
	comp=Z,0.3nm,0.4s,baz=272,slow=6.7,SNR=1.8						
ILAR	**Eielson Array**	**148.03**	**313**	PKPbc	**PKPbc**	**23 44 45.2**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=114,slow=1.7,SNR=5.4						
SONM	**Songino Array**	**152.69**	**88**	PKPbc	**PKPbc**	**23 44 55.2**	**-2.4**
	comp=Z,0.5nm,0.5s,baz=197,slow=3.0,SNR=2.2						

*IDC **23** 23:36:23.6±0.5,62°.38N×133°.57W,h0km,mb3.9/14, mbtmp3.9/19,ML4.0/5,MS3.3/5,Error ellipse: s-maj=10.6km s-min=6.8km az=51.0*
*ANF **23** 23:36:23.1±0.2,62°.30N×133°.52W,h3km±2km,ML4.7/41, Error ellipse: s-maj=1.6km s-min=1.2km az=75.0*
*AEIC **23** 23:36:23±3.0,62°.30N±0°.02×133°.48W±0°.04,h2km±3km, Error ellipse: s-maj=2.9km s-min=2.3km az=67.0*
*PGC **23** 23:36:23.8,62°.29N×133°.49W,h4km,ML4.4/18,Mw4.1, 192km northeast of Whitehorse, Yt Southern Yukon Territory, Canada Mmi Ii Faro.*
*NEIC **23** 23:36:23.8,62°.29N×133°.49W,h5km,Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr5.36; Mθθ-5.04; Mϕϕ-0.31; Mrθ-3.27; Mθϕ0.46; Mϕr2.22; Fault plane solution: M◎6.56000×10^14^ NP1:ϕs82.95000°, δ29.45000°,λ64.86000°. NP2:ϕs291.27000°,δ63.57000°, λ103.49000°. Principal axes: T 6.8699, Plg69.0000°, Azm228.0000°; N -0.6808, Plg12.0000°, Azm105.0000°; P -6.1891, Plg18.0000°, Azm11.0000°;*
*NEIC **23** 23:36:23.8,62°.29N×133°.49W,h3km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.16; Mθθ-0.11; Mϕϕ0.01; Mrθ-0.02; Mθϕ0.04; Mϕr0.09; Fault plane solution: M◎1.70000×10^15^ NP1:ϕs313.30000°, δ59.00000°,λ117.00000°. NP2:ϕs88.00000°,δ40.00000°, λ53.00000°. Principal axes: T 0.1829, Plg65.0000°, Azm272.0000°; N -0.0331, Plg23.0000°, Azm118.0000°; P -0.1498, Plg10.0000°, Azm24.0000°;*
*NEIC **23** 23:36:24.3±2.9,62°.33N±0°.02×133°.53W±0°.04,h10km±1km Error ellipse: s-maj=3.4km s-min=2.8km az=52.0*

ISC 23 23:36:23.2±1.0,62°.31N±0°.02×133°.47W±0°.02,h3km±6km, n300,σ1s75/397,mb4.3/33,MS3.4/3,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FARO	**Faro, Yukon**	**0.10**	**145**	Pg	**Pg**	**23 36 25.4**	**+0.2**
FARO				Sg	**Sg**	**23 36 26.9**	**+0.4**
FARO	**Faro, Yukon**	**0.10**	**145**	P	**Pg**	**23 36 25.4**	**+0.2**
FARO				S	**Sg**	**23 36 26.9**	**+0.4**
FARO	**Faro, Yukon**	**0.10**	**145**	P	**Pg**	**23 36 25.4**	**+0.2**
	baz=313						
FARO				S	**Sg**	**23 36 26.9**	**+0.4**
	baz=313						
M31M	**Drury Creek, Y**	**0.44**	**256**	Pg	**Pg**	**23 36 31.4**	**-0.3**
M31M				Sg	**Sg**	**23 36 37.0**	**-0.4**
M31M	**Drury Creek, Y**	**0.44**	**256**	P	**Pg**	**23 36 31.4**	**-0.3**
M31M				S	**Sg**	**23 36 36.9**	**-0.4**
M31M	**Drury Creek, Y**	**0.44**	**256**	P	**Pg**	**23 36 31.4**	**-0.3**
	baz=78,SNR=1000						
M31M				S	**Sg**	**23 36 37.0**	**-0.4**
	baz=78						
MMPY	**Sheldon Lake,**	**1.07**	**72**	P	**Pg**	**23 36 44.0**	**+0.4**
MMPY				S	**Sg**	**23 36 58.2**	**+0.6**
MMPY	**Sheldon Lake,**	**1.07**	**72**	P	**Pg**	**23 36 44.0**	**+0.4**
	baz=253,SNR=1000						
MMPY				S	**Sg**	**23 36 58.3**	**+0.7**
	baz=253						
N32M	**Quiet Lake**	**1.18**	**171**	P	**Pg**	**23 36 45.1**	**-0.6**
	baz=350						
N32M				S	**Sg**	**23 37 01.2**	**+0.2**
	baz=350						
N31M	**Braeburn, Yuko**	**1.37**	**234**	Pn	**Pn**	**23 36 48.6**	**-0.7**
N31M	**Braeburn, Yuko**	**1.37**	**234**		**Sg**	**23 37 06.4**	**-0.8**
N31M	**Braeburn, Yuko**	**1.37**	**234**	P	**Pn**	**23 36 48.4**	**-0.9**
N31M				S	**Sg**	**23 37 06.4**	**-0.8**
N31M	**Braeburn, Yuko**	**1.37**	**234**	P	**Pn**	**23 36 48.3**	**-0.9**
	baz=52,SNR=462						
N31M				S	**Sg**	**23 37 06.9**	**-0.2**
	baz=52						
M30M	**Minto, Yukon**	**1.57**	**281**	Pn	**Pn**	**23 36 50.8**	**-1.1**
M30M	**Minto, Yukon**	**1.57**	**281**		**Sn**	**23 37 10.7**	**-2.0**
M30M	**Minto, Yukon**	**1.57**	**281**	P	**Pn**	**23 36 51.0**	**-0.9**
M30M				S	**Sn**	**23 37 10.7**	**-2.0**
M30M	**Minto, Yukon**	**1.57**	**281**	P	**Pn**	**23 36 51.0**	**-0.9**
	baz=99,SNR=665						
M30M				S	**Sn**	**23 37 12.2**	**-0.5**
	baz

YUK6	Outpost Mounta	2.71 242	Pn	Pn	23 37 07.8	+0.1			
YUK6			Sg	Sb	23 37 47.8	+1.8			
YUK6	Outpost Mounta	2.71 242	P	Pn	23 37 07.9	+0.1			
	baz=58,SNR=35								
P32M	Atlin	2.74 183	P	Pn	23 37 07.6	-0.3			
	baz=2.2,SNR=32								
P32M			Sb	Sb	23 37 47.5	+0.9			
	baz=2.2								
P30M	Million Dollar	2.77 219	P	Pn	23 37 08.7	+0.3			
	baz=36								
P30M			Sb	Sb	23 37 48.7	+1.0			
	baz=36								
YUK7	Dusty Glacier	2.87 234	Pn	Pn	23 37 09.4	-0.5			
YUK7			Sg	Sb	23 37 52.6	+2.0			
YUK7	Dusty Glacier	2.87 234	Pn	Pn	23 37 09.4	-0.5			
YUK7			Sg	Sb	23 37 52.6	+2.0			
SKAG	Skagway	3.00 198	Pn	Pn	23 37 11.7	+0.2			
SKAG	Skagway	3.00 198	Sb	Sb	23 37 56.2	+2.0			
	baz=17								
J29M	Klondike Camp	3.03 317	Pn	Pn	23 37 13.5	+1.5			
J29M	Klondike Camp	3.03 317	Pn	Pn	23 37 12.5	+0.5			
J29M			Sg	Sb	23 37 57.3	+2.3			
J29M	Klondike Camp	3.03 317	Sb	Sb	23 37 57.1	+2.0			
	baz=134								
R33M	Jennings River	3.17 156	P	Pn	23 37 13.9	-0.2			
	baz=338,SNR=22								
O29M	Mount Kennedy	3.18 233	P	Pn	23 37 14.3	+0.1			
	baz=49,SNR=9.5								
O29M			Sb	Sb	23 38 01.2	+1.7			
	baz=49								
PLBC	Pleasant Camp	3.20 208	Pn	Pn	23 37 13.9	-0.3			
PLBC			Pg	Pb	23 37 21.4	+1.0			
PLBC			Sg	Sb	23 38 02.3	+2.6			
PLBC	Pleasant Camp	3.20 208	Pn	Pn	23 37 13.9	-0.3			
PLBC			Pg	Pb	23 37 21.4	+1.0			
PLBC			Sg	Sb	23 38 02.3	+2.6			
PLBC	Pleasant Camp	3.20 208	P	Pn	23 37 14.6	+0.3			
	baz=25,SNR=14								
PLBC			Sb	Sb	23 38 01.6	+1.8			
	baz=25								
DAWY	Dawson	3.21 306	Pn	Pn	23 37 12.3	-2.2			
DAWY	Dawson	3.21 306	Pg	Pb	23 37 21.9	+1.1			
DAWY			Sn	Sn	23 37 51.2	-2.0			
DAWY			Sg	Sb	23 38 02.7	+2.6			
DAWY	Dawson	3.21 306	Pn	Pn	23 37 12.8	-1.6			
DAWY			Pg	Pb	23 37 21.9	+1.1			
DAWY			Sn	Sn	23 37 51.2	-2.0			
DAWY			Sg	Sb	23 38 02.7	+2.6			
DAWY	Dawson	3.21 306	P	Pn	23 37 12.8	-1.6			
	baz=121,SNR=21								
DAWY			Sb	Sb	23 38 02.4	+2.2			
	baz=121								
YUK3	Moose Creek	3.33 264	Pn	Pn	23 37 15.8	-0.5			
YUK3			Sg	Sb	23 38 06.3	+2.2			
YUK3	Moose Creek	3.33 264	Pn	Pn	23 37 15.8	-0.5			
YUK3			Sg	Sb	23 38 06.3	+2.2			
YUK3	Moose Creek	3.33 264	P	Pn	23 37 15.9	-0.5			
	baz=78,SNR=27								
YUK3			Sb	Sb	23 38 06.2	+2.2			
	baz=78								
P29M	Windy Craggy	3.40 220	Pn	Pn	23 37 17.8	+0.7			
P29M	Windy Craggy	3.40 220	P	Pn	23 37 17.8	+0.7			
	baz=36,SNR=13								
P29M			Sb	Sb	23 38 08.2	+2.5			
	baz=36								
BVCY	Beaver Creek	3.44 275	Pn	Pn	23 37 17.5	-0.2			
BVCY			Sn	Sn	23 37 57.0	-2.0			
BVCY			Sg	Sg	23 38 10.9	-2.7			
BVCY	Beaver Creek	3.44 275	Pn	Pn	23 37 17.5	-0.2			
BVCY			Sn	Sn	23 37 57.0	-2.0			
BVCY			Sg	Sg	23 38 10.9	-2.7			
BVCY	Beaver Creek	3.44 275	P	Pn	23 37 17.4	-0.2			
	baz=89								
YUK2	White River	3.51 265	Pn	Pn	23 37 18.1	-0.5			
YUK2			Sn	Sn	23 37 58.6	-2.1			
YUK2			Sg	Sg	23 38 13.1	-2.7			
YUK2	White River	3.51 265	Pn	Pn	23 37 18.1	-0.5			
YUK2			Sn	Sn	23 37 58.6	-2.1			
YUK2			Sg	Sg	23 38 13.1	-2.7			
O28M	Mount Upton	3.57 247	P	Pn	23 37 20.3	+0.7			
	baz=62,SNR=32								
I29M	Ogilvie Camp,	3.73 327		Pn	23 37 21.3	-0.3			
I29M	Ogilvie Camp,	3.73 327	Pn	Pn	23 37 21.4	-0.3			
I29M			Sn	Sn	23 38 03.5	-2.5			
I29M			Sg	Sg	23 38 19.9	-3.0			
I29M	Ogilvie Camp,	3.73 327	P	Pn	23 37 21.2	-0.5			
	baz=143,SNR=52								
I29M			S	Sn	23 38 06.3	+0.2			
	baz=143								
BESE	Bessie Mountai	3.81 191	Pn	Pn	23 37 22.9	+0.2			
BESE	Bessie Mountai	3.81 191	Pn	Pn	23 37 22.9	+0.2			
BESE			Sn	Sn	23 38 05.2	-2.8			
BESE			Sg	Sb	23 38 19.7	+2.2			
BCPM	Bancas Point	3.81 234	Pn	Pn	23 37 23.9	+1.2			
LOGN	Logan Glacier	3.90 251	Pn	Pn	23 37 24.4	+0.3			
LOGN	Logan Glacier	3.90 251	Pn	Pn	23 37 24.5	+0.4			
LOGN			Sg	Sb	23 38 23.4	+3.2			
BCAR	Beaver Creek A	3.91 285	Pn	Pn	23 37 23.0	-1.0			
PNL	Peninsula	3.92 230	Pn	Pn	23 37 25.3	+1.1			
PNL			Sg	Sg	23 38 25.1	-3.8			
PNL	Peninsula	3.92 230	Pn	Pn	23 37 25.3	+1.1			
PNL			Sg	Sg	23 38 25.1	-3.8			
PNL	Peninsula	3.92 230	P	Pn	23 37 25.3	+1.1			
	baz=45,SNR=5.9								
M27K	Edge Creek, AK	3.92 274		Pn	23 37 23.5	-0.8			
M27K	Edge Creek, AK	3.92 274	P	Pn	23 37 23.8	-0.6			
	baz=87,SNR=27								
L27K	Beaver Creek,	3.92 285	Pn	Pn	23 37 23.7	-0.6			
L27K	Beaver Creek,	3.92 285	P	Pn	23 37 23.7	-0.6			
	baz=98,SNR=18								
PINM	Pinnacle	3.96 239	P	Pn	23 37 25.9	+1.1			
	baz=53								
PCA	Pinnacle	3.96 239	Pn	Pn	23 37 25.7	+0.8			
PCA	Pinnacle	3.96 239	Pn	Pn	23 37 26.0	+1.2			
PCA			Sn	Sn	23 38 08.9	-2.9			
PCA			Sg	Sb	23 38 26.1	+4.1			
CTGM	Chitina Glacie	3.99 254	Pn	Pn	23 37 25.2	0.0			
CTGM	Chitina Glacie	3.99 254	Pn	Pn	23 37 25.6	+0.4			
CTGM			Sg	Sb	23 38 26.1	+3.5			
CTG	Chitna Glacier	3.99 254	P	Pn	23 37 25.6	+0.3			
	baz=67,SNR=9.8								
JIS	Juneau Island	4.08 187	Pn	Pn	23 37 26.6	+0.3			
TABL	Table Mountain	4.14 246	Pn	Pn	23 37 28.4	+0.9			
TABL	Table Mountain	4.14 246	Pn	Pn	23 37 28.3	+0.9			
TABL			Sg	Sb	23 38 31.1	+3.9			
SAMH	Samovar Hills	4.16 241	Pn	Pn	23 37 29.1	+1.6			
SAMH			Sg	Sg	23 38 32.5	-4.0			
SAMH	Samovar Hills	4.16 241	Pn	Pn	23 37 29.1	+1.6			
SAMH			Sg	Sg	23 38 32.5	-4.0			
NOWN	Norman Wells,	4.23 42	Pn	Pn	23 37 27.8	-0.7			
NOWN	Norman Wells,	4.23 42	Pn	Pn	23 37 27.8	-0.7			
EGAK	Eagle	4.24 309		Pn	23 37 28.8	+0.3			
EGAK	Eagle	4.24 309	Pg	Pg	23 37 43.2	-1.0			
	baz=123								
DLBC	Dease Lake	4.25 155	Pn	Pn	23 37 28.8	+0.1			
	5.9nm,0.3s,baz=343,slow=27,SNR=59								
DLBC			Pg	Pb	23 37 40.6	+2.2			
	22nm,0.3s,baz=333,slow=16,SNR=39								
DLBC			Sn	Sn	23 38 18.3	-0.5			
	16nm,0.3s,baz=321,slow=14,SNR=3.0								
DLBC			Lg	Lg	23 38 32.6				
	21nm,0.3s,baz=317,slow=14,SNR=3.8								
DLBC			LR	LR	23 39 19.7				
	comp=Z,247nm,19.9s,baz=278,slow=41 16nm,0.4s								
DLBC	Dease Lake	4.25 155	Pn	Pn	23 37 28.2	-0.5			
DLBC	Dease Lake	4.25 155	Pn	Pn	23 37 28.5	-0.3			
DLBC			Pg	Pb	23 37 40.3	+1.9			
DLBC			Sg	Sb	23 38 33.1	+3.0			
DLBC	Dease Lake	4.25 155	P	Pn	23 37 28.6	-0.2			
	baz=338,SNR=32								
K27K	Chicken	4.26 298	Pn	Pn	23 37 27.7	-1.2			
K27K	Chicken	4.26 298	P	Pn	23 37 28.0	-0.9			
	baz=110								
EPYK	Eagle Plains	4.31 342	Pn	Pn	23 37 29.8	+0.2			
EPYK	Eagle Plains	4.31 342	Sn	Sn	23 38 17.9	-2.4			
EPYK	Eagle Plains	4.31 342	Sn	Sn	23 38 17.9	-2.4			
PTPK	Patty Peak	4.42 259	Pn	Pn	23 37 31.3	0.0			
PTPK			Sg	Sg	23 38 40.5	-4.5			
PTPK	Patty Peak	4.42 259	Pn	Pn	23 37 31.3	0.0			
PTPK			Sg	Sg	23 38 40.5	-4.5			
M26K	Nabesna, AK	4.44 275	Pn	Pn	23 37 30.6	-0.7			
M26K	Nabesna, AK	4.44 275	P	Pn	23 37 30.9	-0.5			
	baz=87,SNR=50								
YAH	Yahtse	4.44 248	Pn	Pn	23 37 31.3	-0.2			
S34M	Telegraph Cree	4.57 164	P	Pn	23 37 33.1	+0.1			
	baz=346,SNR=52								
ISLE	Juniper Island	4.59 252	Pn	Pn	23 37 34.0	+0.5			
L26K	Log Cabin Wild	4.61 283	Pn	Pn	23 37 32.2	-1.4			
L26K	Log Cabin Wild	4.61 283	P	Pn	23 37 32.7	-0.9			
	baz=95,SNR=10								
MCARA	McCarthy VSAT	4.62 263	Pn	Pn	23 37 34.4	+0.5			
MCARA	McCarthy VSAT	4.62 263	P	Pn	23 37 34.2	+0.4			
	baz=74,SNR=12								
MESA	MESA	4.62 246	Pn	Pn	23 37 35.3	+1.3			
MESA	MESA	4.62 246	Pn	Pn	23 37 34.4	+0.4			
MESA			Sg	Sb	23 38 45.4	+4.4			
MESA	MESA	4.62 246	P	Pn	23 37 35.2	+1.3			
	baz=59,SNR=7.3								
WRGLY	Wrigley	4.69 74	P	Pn	23 37 34.7	0.0			
	baz=263,SNR=12								
TGL	Tana Glacier	4.74 255	Pn	Pn	23 37 36.3	+0.7			
MENT	Mentasta	4.77 282	Pn	Pn	23 37 34.7	-1.2			
I27K	Kandik River	4.88 316	P	Pn	23 37 36.9	-0.4			
	baz=129								
WAX	Waxell Ridge	4.88 252	Pn	Pn	23 37 38.6	+1.1			
GLB	Gilahina Butte	4.97 264	Pn	Pn	23 37 38.5	-0.1			
SNH	Sunshine Point	5.00 249	Pn	Pn	23 37 40.2	+1.1			
DOT	Dot Lake	5.01 290		Pn	23 37 37.4	-1.8			
DOT	Dot Lake	5.01 290	Pn	Pn	23 37 39.2	0.0			
DOT			Sg	Sg	23 39 00.4	-3.6			
J26L	Joseph Creek	5.04 300		Pn	23 37 38.2	-1.4			
J26L	Joseph Creek	5.04 300	P	Pn	23 37 38.3	-1.3			
	baz=112,SNR=16								
SCRK	Sand Creek	5.05 294	Pn	Pn	23 37 38.8	-1.1			
SCRK	Sand Creek	5.05 294	P	Pn	23 37 39.0	-0.8			
	baz=105,SNR=26								
I26K	Coal Creek Min	5.24 309	Pn	Pn	23 37 43.0	+0.8			
I26K	Coal Creek Min	5.24 309	P	Pn	23 37 42.8	+0.6			
	baz=121								
FLDN	Fort Liard	5.25 109	Sg	Sg	23 39 08.2	-3.4			
H27K	Steamboat Moun	5.27 322	P	Pn	23 37 42.0	-0.7			
	baz=135,SNR=18								
BERG	Berg Lake	5.29 253	Pn	Pn	23 37 44.4	+1.5			
N25K	Chitina, Valde	5.30 267	Pn	Pn	23 37 43.4	+0.2			
N25K	Chitina, Valde	5.30 267	P	Pn	23 37 42.9	-0.3			
	baz=78,SNR=8.3								
SIT	Sitka	5.36 191	Pn	Pn	23 37 44.3	+0.5			
SIT	Sitka	5.36 191	P	Pn	23 37 44.8	+0.9			
	baz=9.2								
RIDG	Independent Ri	5.37 290	Pn	Pn	23 37 43.7	-0.4			
RIDG	Independent Ri	5.37 290	P	Pn	23 37 43.9	-0.3			
	baz=101,SNR=38								
NBC1	NorthernBC 1	5.40 115	Sn	Sn	23 38 43.4	-3.7			
NBC1			Sg	Sg	23 39 12.6	-3.8			
NBC1	NorthernBC 1	5.40 115	Sn	Sn	23 38 43.4	-3.7			
NBC1			Sg	Sg	23 39 12.6	-3.8			
HARP	HAARP	5.44 276	P	Pn	23 37 45.1	0.0			
	baz=86								
BMRM	Bremner River	5.48 261	Pn	Pn	23 37 46.1	+0.5			
BMRM	Bremner River	5.48 261	P	Pn	23 37 46.1	+0.5			
	baz=71								
PAX	Paxson	5.57 282	Pn	Pn	23 37 46.5	-0.5			
PAX	Paxson	5.57 282	P	Pn	23 37 46.4	-0.5			
	baz=92,SNR=10								
T35M	Bob Quinn	5.59 162	P	Pn	23 37 47.5	+0.4			
	baz=344,SNR=18								
G27K	Doyon Strip	5.72 326	P	Pn	23 37 48.4	-0.6			
	baz=138								
J25K	Salcha River,	5.81 299		Pn	23 37 50.3	+0.1			
J25K	Salcha River,	5.81 299	P	Pn	23 37 49.5	-0.7			
	baz=108,SNR=10								
NBC2	NorthernBC 2	5.91 111	Sn	Sn	23 38 56.8	-2.8			
NBC2			Sg	Sg	23 39 27.9	-4.8			
NBC2	NorthernBC 2	5.91 111	Sn	Sn	23 38 56.8	-2.8			
NBC2			Sg	Sg	23 39 27.9	-4.8			
WRAK	Wrangell Islan	5.94 174	Pn	Pn	23 37 51.5	-0.3			
WRAK	Wrangell Islan	5.94 174	P	Pn	23 37 51.7	-0.1			
	baz=355,SNR=7.9								
KLU	Klutina	5.94 268	Pn	Pn	23 37 52.4	+0.4			
KLU	Klutina	5.94 268	P	Pn	23 37 52.9	+0.9			
	baz=77,SNR=26								
M24K	Tolsona, Glenn	5.95 274	Pn	Pn	23 37 53.4	+1.3			
M24K	Tolsona, Glenn	5.95 274	P	Pn	23 37 53.1	+1.1			
	baz=83								
DIV	Divide	5.97 264	Pn	Pn	23 37 53.0	+0.7			
DIV	Divide	5.97 264	Pn	Pn	23 37 51.8	-0.6			
INK	Inuvik	6.02 360	Pn	Pn	23 37 54.1	+1.1			
	4.1nm,0.3s,baz=166,slow=9.8,SNR=19								
INK			Pg	Pb	23 38 12.9	+4.4			
	2.4nm,0.3s,baz=181,slow=17,SNR=6.3								
INK			Sn	Sn	23 38 58.2	-4.0			
	4.0nm,0.3s,baz=183,slow=16,SNR=3.8								
INK			Lg	Lg	23 39 32.3				
	3.7nm,0.3s,baz=84,slow=31,SNR=2.7								
INK			LR	LR	23 40 34.3				
	comp=Z,169nm,18.7s,baz=164,slow=42 16nm,0.5s								
INK	Inuvik	6.02 360	Pn	Pn	23 37 52.7	-0.3			
INK	Inuvik	6.02 360	Pn	Pn	23 37 53.0	+0.1			
INK			Sn	Sn	23 38 57.2	-5.0			
INK	Inuvik	6.02 360	Pn	Pn	23 37 53.0	+0.1			
INK			Sn	Sn	23 38 57.2	-5.0			
INK	Inuvik	6.02 360	P	Pn	23 37 52.8	-0.1			
	baz=180,SNR=11								
FNBB	Fort Nelson	6.19 119	Pn	Pn	23 37 54.7	-0.7			
FNBB			Sn	Sn	23 39 02.8	-3.7			
FNBB			Sg	Sg	23 39 35.9	-5.8			
FNBB	Fort Nelson	6.19 119	Pn	Pn	23 37 54.7	-0.7			
FNBB			Sn	Sn	23 39 02.8	-3.7			
FNBB			Sg	Sg	23 39 35.9	-5.8			
PRP	Porcupine Dome	6.21 306	Pn	Pn	23 37 57.2	+1.5			
PRP	Porcupine Dome	6.21 306	P	Pn	23 37 57.1	+1.3			
	baz=116								
HDA	Harding Lake	6.41 295	Pn	Pn	23 37 57.0	-1.4			
G26K	Porcupine Rive	6.42 321	P	Pn	23 37 59.5	+1.0			
	baz=132								
DHY	Denali Highway	6.45 283	Pn	Pn	23 37 58.3	-0.7			
DHY	Denali Highway	6.45 283	P	Pn	23 37 59.7	+0.8			
	baz=91								
IL31		6.48 298	Pn	Pn	23 37 59.5	+0.2			
ILAR	Eielson Array	6.48 298	Pn	Pn	23 38 00.0	+0.7			
	1.3nm,0.3s,baz=112,slow=12,SNR=46								
ILAR			Pg	Pb	23 38 21.3	+4.9			
	1.2nm,0.3s,baz=108,slow=17,SNR=9.0								
ILAR			Sn	Sn	23 39 10.4	-3.3			
	1.9nm,0.3s,baz=103,slow=16,SNR=5.7								
ILAR			Lg	Lg	23 39 41.9				
	14nm,0.3s,baz=99,slow=28,SNR=17 4.6nm,0.6s								
ILAR	Eielson Array	6.48 298	Pn	Pn	23 37 59.2	-0.1			
SCM	Sheep Creek Mo	6.53 272	Pn	Pn	23 38 01.1	+1.1			
SCM	Sheep Creek Mo	6.53 272	P	Pn	23 38 00.1	0.0			
	baz=80,SNR=6.8								
M23K	Glacier View	6.72 272	P	Pn	23 38 03.2	+0.5			
	baz=80,SNR=13								
POKR	Poker Plat Res	6.80 301	P	Pn	23 38 04.4	+0.6			
	baz=108								
E27K	Coleen River	6.81 334	P	Pn	23 38 03.2	-0.5			
	baz=146,SNR=6.1								
CCB	Clear Creek Bu	6.83 296	Pn	Pn	23 38 03.7	-0.4			
CRAG	Craig	6.87 178	Pn	Pn	23 38 04.5	-0.1			
CRAG	Craig	6.87 178	P	Pn	23 38 04.7	+0.1			
	baz=359								
WRH	Wood River Hil	6.91 295	Pn	Pn	23 38 04.4	-0.8			
BMAR	Burnt Mountain	6.97 322	Pn	Pn	23 38 05.6	-0.5			
SML	Sawmill	7.00 272	Pn	Pn	23 38 07.0	+0.4			
SML	Sawmill	7.00 272	P	Pn	23 38 07.4	+0.9			
	baz=80								
F26K	Sheenjek River	7.04 325	P	Pn	23 38 07.1	+0.1			
	baz=135								
MDM	Murphy Dome	7.08 298	Pn	Pn	23 38 08.0	+0.4			
RND	Reindeer	7.12 286	Pn	Pn	23 38 08.4	+0.3			
P23K	Montague Islan	7.13 257	P	Pn	23 38 08.5	+0.3			
	baz=65								
MCK	McKinley	7.18 288	Pn	Pn	23 38 09.4	+0.6			
H24K	Noodor Dome	7.23 306	Pn	Pn	23 38 08.8	-0.8			
PWL	Port Wells	7.24 265	Pn	Pn	23 38 09.2	-0.5			
NBC5	NorthernBC 5	7.24 127	Pn	Pn	23 38 08.2	-1.6			
NBC5			Sn	Sn	23 39 27.4	-5.1			
NBC5	NorthernBC 5	7.24 127	Pn	Pn	23 38 08.2	-1.6			
NBC5			Sn	Sn	23 39 27.4	-5.1			
BWN	Browne	7.45 292	Pn	Pn	23 38 11.0	-1.6			
I23K	Minto, Yukon-K	7.60 299	Pn	Pn	23 38 11.5	-3.1			
E25K	Arctic Village	7.72 324	P	Pn	23 38 15.5	-0.8			
	baz=133								
H23K	Yukon River	7.87 304	Pn	Pn	23 38 17.4	-0.9			
C36M	Paulatuk	8.04 24	Pn	Pn	23 38 19.6	-0.9			
C36M	Paulatuk	8.04 24	Pn	Pn	23 38 19.6	-0.9			
C36M			Sn	Sn	23 39 45.3	-6.5			
C36M	Paulatuk	8.04 24	P	Pn	23 38 20.7	+0.1			
	baz=213								
KTH	Kantishna Hill	8.05 287	Pn	Pn	23 38 22.3	+1.3			
LIB	Langara Island	8.08 178	Pn	Pn	23 38 21.3	0.0			
BPAW	Bear Paw Mtn.	8.11 290	Pn	Pn	23 38 20.7	-0.9			
MLY	Manley	8.14 297	Pn	Pn	23 38 21.5	-0.6			
C27K	Jago River	8.43 335	P	Pn	23 38 26.6	+0.6			
	baz=146								
E24K	Your Creek	8.54 319	P	Pn	23 38 29.1	+1.6			
	baz=126								
I21K	Tanana	8.68 297	Pn	Pn	23 38 29.3	-0.2			
YKA	Yellowknife Ar	8.76 80	Pn	Pn	23 38 29.6	-0.9			
	1.1nm,0.3s,baz=276,slow=13,SNR=15								
YKA			Sn	Sn	23 40 03.1	-6.5			
	0.6nm,0.3s,baz=314,slow=33,SNR=4.6								
YKA			Lg	Lg	23 40 56.7				
	0.5nm,0.3s,baz=277,slow=30,SNR=6.2 5.0nm,0.6s								
YKA	Yellowknife Ar	8.76 80	Pn	Pn	23 38 28.8	-1.7			
D25K	Kavik River	8.78 329	P	Pn	23 38 31.4	+0.5			
	baz=137								
BNAB	Bonilla	8.97 169	Sg	Sg	23 41 03.3	-7.6			
HWKB	Hawksbury Isla	9.03 163	Sg	Sg	23 41 04.1				
DIB	Dawson Inlet,	9.15 176	Pn	Pn	23 38 36.4	+0.5			
DIB	Dawson Inlet,	9.15 176	Pn	Pn	23 38 36.2	+0.3			
K20K	Telida	9.47 285	P	Pn	23 38 41.8	+1.5			
	baz=87								
KUKN	Kugluktuk,NWT	9.50 47	Pn	Pn	23 38 41.1	+0.5			
IMAR	Indian Mountai	9.57 301	Pn	Pn	23 38 42.4	+0.8			
G21K	Allakaket	9.61 305	P	Pn	23 38 43.1	+0.9			
	baz=107								
BUTB	Butedale	9.65 162	Pn	Pn	23 38 43.2	+0.4			
BNB	Barry Inlet	9.81 174	Pn	Pn	23 38 46.2	+1.2			
WTMTA	White Mountain	9.88 126	Pn	Pn	23 38 44.1	-1.9			
A36M	Sachs Harbour	10.21 15	Pn	Pn	23 38 49.9	-0.4			
A36M	Sachs Harbour	10.21 15	Pn	Pn	23 38 49.4	-1.0			
A36M	Sachs Harbour	10.21 15	P	Pn	23 38 49.9	-0.4			
	baz=202								
BBB	Bella Bella	10.56 162	Lg	Lg	23 41 49.0				
	0.5nm,0.3s,baz=355,slow=11,SNR=2.0								
OHAK	Old Harbor	11.19 252	Pn	Pn	23 39 02.8	-1.0			
EDM	Edmonton	14.02 121		P	23 39 51.0	+0.4			
CNBA	Chernabura Isl	15.46 253	P	P	23 40 07.9	+1.4			
NEW	Newport	16.80 139	Pn	P	23 40 23.5	+2.1			
	0.2nm,0.3s,baz=348,slow=11,SNR=11								
NEW			Lg	Lg	23 45 12.8				
	0.1nm,0.3s,baz=311,slow=19,SNR=2.0								
NEW	Newport	16.80 139	P	P	23 40 20.9	-0.5			
NEW			IAmb	IAmb	23 40 25.1				
	comp=Z,6.3nm,0.8s								
RES	Resolute Bay	18.29 32	Pn	Pn	23 40 36.4	-1.1			
	comp=Z,1.0nm,0.3s,baz=230,slow=6.9,SNR=4.1 comp=Z,4.0nm,0.4s								
BMO	Blue Mountains	19.85 144	P	Pn	23 40 56.4	-0.2			
HRY	Holter Researc	19.89 132	P	Pn	23 40 58.4	+1.3			
DBO	Dodson Butte	20.15 158	P	P	23 40 59.2	+0.9			
DBO			IAmb	IAmb	23 41 06.2				
	comp=Z,8.3nm,1.1s								
LRM	Limekiln Ridge	20.45 134	P	Pn	23 41 02.9	-1.0			
K05A	Summer Lake	20.98 153	P	Pn	23 41 10.1	0.0			
K05A			IAmb	IAmb	23 41 11.5				
	comp=Z,8.9nm,1.1s								
MFID	Camas Ranch	21.58 143	P	P	23 41 15.2	+1.3			
MFID			IAmb	IAmb	23 41 16.6				
	comp=Z,4.7nm,1.0s								
YBH	Yreka Blue Hor	21.59 158	LR	LR	23 50 04.0				
	comp=Z,52nm,19.6s,baz=324,slow=38								
QLMT	Earthquake Lak	21.67 134	P	P	23 41 12.7	-2.2			
HLID	Hailey	21.86 140	P	P	23 41 18.5	+1.7			
PDAR	Pinedale Array	24.13 133	P	P	23 41 40.9	+0.6			
	comp=Z,0.3nm,0.3s,baz=332,slow=8.4,SNR=4.1 comp=Z,0.3nm,0.3s								
NVAR	Mina Array Bea	25.66 152	P	P	23 41 56.1	+2.0			
	comp=Z,1.3nm,0.8s,baz=330,slow=7.1,SNR=6.9 comp=Z,1.3nm,0.8s								
NVAR	Mina Array Bea	25.66 152	P	P	23 41 54.6	+0.4			
PFO	Pinyon Flats O	30.

comp=Z,100nm,5.3s
CMAR Chiang Mai Arr 89.55 311 P **P** **23 49 22.6 +0.8**
comp=Z,0.6nm,0.3s,baz=351,slow=5.0,SNR=4.7
comp=Z,0.6nm,0.3s
VNDA Vanda 145.04 200 PKPbc **PKPdf** **23 55 59.5 -0.3**
comp=Z,1.1nm,0.9s,baz=13,slow=4.3,SNR=6.7

KRSC 23 23:40:54.7±2.3, 48°.45N×157°.56E, h16km±52km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**3.06**	**351**	S	Sn	23 42 19.6	+1.0
KDTR	**Khodutka, Kamc**	**3.38**	**5**	*eP*	Pn	23 41 49.8	+3.0
KDTR				*eS*	Sb	23 42 31.4	-3.7
RUS	**Russkaya**	**4.04**	**8**	*eP*	Pn	23 41 59.1	+3.3
RUS				*eS*	Sn	23 42 47.9	+5.2
MTVR	**Mutnovka**	**4.06**	**5**	*eP*	Pn	23 41 59.6	+3.4
MTVR				*eS*	Sn	23 42 48.8	+5.3
GRL	**Gorelyy**	**4.12**	**4**	*eP*	Pn	23 42 02.0	+4.9
GNL	**Ganaly**	**5.26**	**2**	P	Pn	23 42 18.2	+5.5

*IDC **23** 23:57:14.4±1.3, 2°.77S×142°.21E, h0km, mb3.7/5, mbtmp3.7/6, ML3.7/1, MS3.3/5, Error ellipse: s-maj=75.0km s-min=24.8km az=97.0*
ISC 23 23:57:19.1±1.1, 2°.85S±0°.2×142°.1E±0°.4, h30km, n16, σ0s83/6, mb3.6/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.52**	**9**	LR	LR	00 07 44.4	
	comp=Z,20nm,18.1s,baz=256,slow=38						
WRA	**Warramunga Arr**	**18.65**	**203**	P	**Pn**	**00 01 34.8**	**-0.4**
	0.3nm,0.3s,baz=27,slow=12,SNR=20						
WRA				LR	LR	00 09 28.4	
	comp=Z,84nm,18.8s,baz=208,slow=39						
	1.0nm,0.6s						
BATI	**Baumata**	**19.74**	**247**	LR	LR	00 10 43.9	
	comp=Z,159nm,18.8s,baz=228,slow=41						
FITZ	**Fitzroy Crossi**	**22.18**	**226**	LR	LR	00 11 33.7	
	comp=Z,116nm,19.6s,baz=47,slow=39						
ASAR	**Alice Springs**	**22.21**	**200**	P	**P**	**00 02 12.7**	**-0.6**
	1.4nm,0.9s,baz=29,slow=10,SNR=14						
	1.4nm,0.9s						
STKA	**Stephens Creek**	**28.92**	**181**	P	**P**	**00 03 15.8**	**+0.1**
	0.5nm,0.3s,baz=333,slow=9.0,SNR=3.2						
	0.5nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**32.15**	**48**	T	T	00 37 41.2	
	baz=231,slow=75,SNR=44						
H11S2	**WAKE ISLAND Hy**	**32.16**	**48**	T	T	00 37 36.9	
	baz=231,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**32.16**	**48**	T	T	00 37 36.1	
	baz=231,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**33.06**	**46**	T	T	00 38 43.2	
	baz=229,slow=76,SNR=88						
H11N2	**WAKE ISLAND Hy**	**33.08**	**46**	T	T	00 38 43.4	
	baz=229,slow=76,SNR=109						
H11N3	**WAKE ISLAND Hy**	**33.08**	**46**	T	T	00 38 44.4	
	baz=229,slow=76,SNR=64						
ZALV	**Zalesovo Beam**	**73.75**	**329**	P	**P**	**00 08 50.8**	**+0.5**
	0.7nm,0.7s,baz=108,slow=8.0,SNR=2.2						
	0.7nm,0.7s						
VNDA	**Vanda**	**75.41**	**176**	P	**P**	**00 09 00.3**	**+0.8**
	0.5nm,0.8s,baz=0.0,slow=4.0,SNR=2.3						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**84.52**	**24**	P	**P**	**00 09 48.2**	**-0.8**
	0.3nm,0.7s,baz=251,slow=5.6,SNR=2.5						
	0.3nm,0.7s						
BBB	**Bella Bella**	**92.06**	**38**	LR	LR	00 55 41.4	
	comp=Z,15nm,18.1s,baz=192,slow=38						

*IDC **24** 00:04:32.4±1.6, 3°.43S×128°.87E, h0km, mb3.7/2, mbtmp3.8/5, ML3.4/3, MS2.7/1, Error ellipse: s-maj=47.8km s-min=25.7km az=89.0*
*DJA **24** 00:04:34.1±0.3, 3°.5±3°×12°.9E±°, h10km, M3.7/7, MLv3.7/7*
*NEIC **24** 00:04:37.8±2.4, 3°.51S±0°.06×129°.0E±0°.1, h57km±9km, mb3.9/10, Error ellipse: s-maj=17.0km s-min=9.1km az=94.0*
ISC 24 00:04:34.0±0.8, 3°.38S±0°.06×128°.86E±0°.04, h17km±5km, n28, σ1s50/32, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.07**	**64**	P	**Pg**	**00 04 36.7**	**-0.6**
MSAI				S	**Sg**	**00 04 39.3**	**-0.2**
AAI	**Ambon**	**0.74**	**245**	P	**Pb**	**00 04 49.2**	**+0.9**
AAI				S	**Sg**	**00 04 57.8**	**-0.4**
BNDI	**Bandanaira**	**1.54**	**138**	P	**Pg**	**00 05 05.1**	**+1.4**
NLAI	**Namlea**	**1.77**	**274**	P	**Pn**	**00 05 05.4**	**+1.7**
SANI	**Sanana**	**3.16**	**295**	P	**Pn**	**00 05 23.1**	**+0.2**
SANI				S	**Sn**	**00 06 00.0**	**-0.3**
FAKI	**Fak Fak**	**3.41**	**82**	Pn	**Pn**	**00 05 27.8**	**+1.5**
SIJI	**Sorong**	**3.46**	**44**	Pn	**Pn**	**00 05 28.6**	**+1.5**
	14nm,0.3s,baz=256,slow=23,SNR=14						
SIJI				Sn	**Sn**	**00 06 07.2**	**-0.5**
	5.4nm,0.3s,baz=115,slow=24,SNR=2.2						
	29nm,0.3s						
SWI	**Sorong**	**3.46**	**44**	P	**Pn**	**00 05 28.8**	**+1.8**
MTN	**Manton Dam**	**9.67**	**167**	Pn	**Pn**	**00 06 53.5**	**+1.1**
DAV	**Davao City (W)**	**10.88**	**342**	LR	LR	00 12 13.0	
	comp=Z,38nm,20.1s,baz=334,slow=42						
FITZ	**Fitzroy Crossi**	**14.97**	**192**	Pn	**Pn**	**00 08 05.3**	**+0.5**
	0.1nm,0.3s,baz=17,slow=10,SNR=2.8						
	4.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**14.97**	**192**		**Pn**	**00 08 05.7**	**+0.9**
WB0	**Warramunga Arr**	**17.16**	**162**	Pn	**Pn**	**00 08 29.8**	**-3.3**
WB0				lAmb	lAmb	00 08 42.0	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**17.31**	**162**	P	**Pn**	**00 08 33.2**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=3.6						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**17.31**	**162**		**Pn**	**00 08 32.8**	**-2.2**
WB2	**Warramunga Arr**	**17.31**	**162**		**Pn**	**00 08 34.0**	**-1.0**
WB2				lAmb	lAmb	00 08 36.5	
	comp=Z,18nm,1.5s						
WR0	**Warramunga Arr**	**17.39**	**162**		**Pn**	**00 08 35.5**	**-0.4**
WR0				lAmb	lAmb	00 09 14.9	
	comp=Z,13nm,1.5s						
COEN	**Coen**	**17.61**	**128**		**Pn**	**00 08 37.9**	**-0.9**
COEN				lAmb	lAmb	00 08 56.8	
	comp=Z,6.3nm,1.2s						
PSA00	**Pilbara Seismi**	**20.10**	**205**	Pn	**P**	**00 09 07.2**	**+0.2**
PSA00				lAmb	lAmb	00 09 50.8	
	comp=Z,10nm,1.4s						
AS31	**Alice Springs**	**20.75**	**167**	Pn	**P**	**00 09 13.7**	**-0.3**
ASAR	**Alice Springs**	**20.75**	**167**	P	**P**	**00 09 14.8**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=350,slow=11,SNR=30						
ASAR				S	**S**	**00 13 03.2**	**-2.1**
	comp=Z,0.4nm,0.5s,baz=344,slow=23,SNR=3.0						
	comp=Z,2.9nm,0.6s						
ASAR	**Alice Springs**	**20.75**	**167**	Pn	**P**	**00 09 14.2**	**+0.1**
BBOO	**Buckleboo**	**30.05**	**168**	P	**P**	**00 10 40.0**	**-2.3**
MK31	**Makanchi Array**	**64.60**	**326**	P	**P**	**00 15 13.4**	**+2.9**
MK31				lAmb	lAmb	00 15 56.2	
	comp=Z,2.5nm,1.2s						
MKAR	**Makanchi Array**	**64.60**	**326**	P	**P**	**00 15 12.0**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=142,slow=6.0,SNR=2.9						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**64.60**	**326**	P	**P**	**00 15 11.3**	**+0.8**
MAKZ	**Makanchi**	**64.78**	**326**	P	**P**	**00 15 13.0**	**+1.3**
ABKAR	**Akbulak array**	**78.99**	**321**	P	**P**	**00 16 35.2**	**-1.6**

*NEIC **24** 00:13:39.8±2.1, 4°.54S±0°.07×126°.16E±0°.09, h389km±7km, mb4.2/38, Error ellipse: s-maj=13.6km s-min=10.3km az=111.0*
*IDC **24** 00:13:40.5±1.1, 4°.52S×126°.22E, h409km±13km, mb3.6/15, mbtmp4.5/20, Error ellipse: s-maj=17.9km s-min=8.9km az=80.0*
*DJA **24** 00:13:41.0±0.3, 5°.5±3°×12°.6E±°, h392km±6km, M4.3/21, mb4.5/17, mB4.7/8, MLv4.6/21, Mw(mB)3.9/8*
ISC 24 00:13:39.8±0.4, 4°.56S±0°.04×126°.22E±0°.06, h398km, n127, σ1s34/133, mb4.1/32, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.58**	**34**	P	**Pn**	**00 14 33.3**	**+0.1**
AAI	**Ambon**	**2.15**	**66**	P	**Pn**	**00 14 36.0**	**-0.6**
SANI	**Sanana**	**2.50**	**355**	P	**Pn**	**00 14 39.5**	**+0.4**
SANI	**Sanana**	**2.50**	**355**	P	**Pn**	**00 14 39.7**	**+0.6**
MSAI	**Masohi**	**2.96**	**66**	P	**Pn**	**00 14 42.9**	**+0.4**
BBSI	**Bau Bau**	**3.75**	**256**	P	**Pn**	**00 14 51.7**	**+2.2**
LBMI	**Labuha**	**4.10**	**18**	P	**Pn**	**00 14 54.6**	**+1.8**
LUWI	**Luwuk**	**4.91**	**315**	P	**Pn**	**00 15 01.9**	**+1.1**
SOEI	**Soe**	**5.51**	**200**	Pn	**Pn**	**00 15 08.1**	**+0.8**
SOEI	**Soe**	**5.51**	**200**	P	**Pn**	**00 15 08.4**	**+1.1**
	1.0nm1μm116nm,0.8s						
SOEI	**Soe**	**5.51**	**200**	P	**Pn**	**00 15 08.7**	**+1.4**
KMSI	**Cibinong**	**5.57**	**336**	P	**Pn**	**00 15 09.2**	**+1.4**
	1.2nm303nm,0.6s						
MMRI	**Maumere**	**5.66**	**224**	Pn	**Pn**	**00 15 09.6**	**+0.9**
MMRI	**Maumere**	**5.66**	**224**	P	**Pn**	**00 15 11.1**	**+2.4**
	0.6nm167nm,0.8s						
BSSI	**Bau Bau, Buton**	**5.92**	**254**	P	**Pn**	**00 15 14.2**	**+2.7**
	0.1nm45nm,0.7s						
BKSI	**Bulukumba**	**6.12**	**263**	P	**Pn**	**00 15 14.7**	**+1.0**
EDFI	**Ende, Flores**	**6.13**	**227**	P	**Pn**	**00 15 15.8**	**+1.9**
	0.2nm408nm46nm,0.9s						
BATI	**Baumata**	**6.16**	**204**	P	**Pn**	**00 15 14.9**	**+0.8**
	150nm,0.4s,baz=30,slow=3.1,SNR=19						
BATI				S	**S**	**00 16 26.5**	**-4.4**
	61nm,0.3s,baz=87,slow=1.5,SNR=2.1						
BATI	**Baumata**	**6.16**	**204**	P	**Pn**	**00 15 15.0**	**+0.9**
	0.5nm1μm94nm,0.5s						
SWI	**Sorong**	**6.23**	**54**	P	**Pn**	**00 15 16.6**	**+1.7**
	0.4nm1μm97nm,1.0s						
FAKI	**Fak Fak**	**6.23**	**75**		**Pn**	**00 15 15.2**	**+0.3**
FAKI	**Fak Fak**	**6.23**	**75**	P	**Pn**	**00 15 15.8**	**+0.9**
	0.5nm2μm55nm,0.8s						
FAKI	**Fak Fak**	**6.23**	**75**	P	**Pn**	**00 15 16.1**	**+1.2**
SIJI	**Sorong**	**6.23**	**54**	P	**Pn**	**00 15 16.6**	**+1.6**
	38nm,0.5s,baz=49,slow=23,SNR=18						
SIJI				S	**S**	**00 16 32.0**	**-0.5**
	20nm,0.4s,baz=246,slow=23,SNR=2.3						
SPSI	**Sidrap Palu**	**6.46**	**275**	P	**Pn**	**00 15 18.4**	**+0.9**
	0.2nm44nm,0.5s						
KAPI	**Kappang**	**6.46**	**266**	P	**Pn**	**00 15 17.8**	**+0.3**
	5.0nm,0.4s,baz=80,slow=15,SNR=3.6						
MRSI	**Marisa**	**6.58**	**319**	P	**P**	**00 15 19.5**	**0.0**
TOLI2	**Tolitoli**	**7.83**	**316**		**Pn**	**00 15 32.4**	**-0.5**
BASI	**Baing, Sumba**	**7.93**	**225**	P	**Pn**	**00 15 34.3**	**+0.3**
	0.6nm50nm,0.8s						
PLAI	**Plampang**	**9.40**	**243**	P	**Pn**	**00 15 51.1**	**+0.2**
	25nm,1.2s						
PLAI	**Plampang**	**9.40**	**243**	P	**Pn**	**00 15 51.1**	**+0.2**
MTN	**Manton Dam**	**9.55**	**150**	P	**Pn**	**00 15 53.2**	**+0.5**
MTN	**Manton Dam**	**9.55**	**150**	P	**Pn**	**00 15 53.5**	**+0.8**
KNRA	**Kununurra**	**11.33**	**167**	P	**Pn**	**00 16 13.0**	**-0.2**
KNRA	**Kununurra**	**11.33**	**167**	P	**Pn**	**00 16 13.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**13.47**	**182**	P	**P**	**00 16 36.1**	**+0.4**
	13nm,0.4s,baz=357,slow=7.1,SNR=113						
FITZ				S	**S**	**00 18 57.2**	**-4.0**
	4.1nm,0.6s,baz=189,slow=16,SNR=4.8						
FITZ	**Fitzroy Crossi**	**13.47**	**182**	P	**P**	**00 16 35.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**13.47**	**182**	P	**P**	**00 16 36.1**	**+0.4**
SBUM	**Sibu**	**15.63**	**296**	P	**P**	**00 17 00.3**	**+1.0**
SBUM				lAmb	lAmb	00 17 02.1	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	**17.08**	**153**	P	**P**	**00 17 13.9**	**-0.9**
WB0				lAmb	lAmb	00 17 18.4	
	comp=Z,21nm,0.9s						
WRAB	**Tennant Creek**	**17.21**	**153**	P	**P**	**00 17 15.8**	**-0.3**
WRAB	**Tennant Creek**	**17.21**	**153**	P	**P**	**00 17 16.2**	**+0.1**
WRA	**Warramunga Arr**	**17.21**	**153**	P	**P**	**00 17 16.1**	**0.0**
	comp=Z,17nm,0.5s,baz=329,slow=11,SNR=111						
WRA				S	**S**	**00 20 10.4**	**-4.9**
	comp=Z,5.3nm,0.8s,baz=329,slow=20,SNR=7.9						
WRA	**Warramunga Arr**	**17.21**	**153**	P	**P**	**00 17 15.0**	**-1.2**
WB2	**Warramunga Arr**	**17.22**	**153**	P	**P**	**00 17 15.2**	**-1.0**
WB2				lAmb	lAmb	00 17 19.8	
	comp=Z,22nm,0.8s						
WR0	**Warramunga Arr**	**17.32**	**153**	P	**P**	**00 17 16.6**	**-0.7**
MBWA	**Marble Bar**	**17.66**	**200**	P	**P**	**00 17 20.3**	**-0.6**
PSA00	**Pilbara Seismi**	**18.01**	**200**	P	**P**	**00 17 23.7**	**-0.8**
PSA00				lAmb	lAmb	00 17 37.9	
	comp=Z,36nm,1.4s						
PSA00	**Pilbara Seismi**	**18.01**	**200**	P	**P**	**00 17 23.8**	**-0.7**
COEN	**Coen**	**19.14**	**120**	P	**P**	**00 17 36.3**	**-0.2**
COEN				lAmb	lAmb	00 17 37.9	
	comp=Z,6.6nm,1.1s						
COEN	**Coen**	**19.14**	**120**	P	**P**	**00 17 37.2**	**+0.7**
AS31	**Alice Springs**	**20.39**	**159**	P	**P**	**00 17 48.7**	**+0.6**
AS31				lAmb	lAmb	00 17 50.7	
	comp=Z,9.9nm,0.9s						
ASAR	**Alice Springs**	**20.39**	**159**	P	**P**	**00 17 48.9**	**+0.9**
	comp=Z,23nm,0.8s,baz=328,slow=7.7,SNR=135						
ASAR				S	**S**	**00 21 15.6**	**+4.9**
	comp=Z,2.6nm,0.8s,baz=344,slow=21,SNR=15						
ASAR				ScP	**ScP**	**00 24 38.1**	**-3.0**
	comp=Z,0.7nm,0.6s,baz=338,slow=0.5,SNR=2.2						
	comp=Z,23nm,0.8s						
WRKA	**Warakurna**	**20.46**	**175**	P	**P**	**00 17 49.5**	**+0.9**
QIS	**Mount Isa**	**20.55**	**142**	P	**P**	**00 17 50.8**	**+1.3**
GIRL	**Giralia**	**21.39**	**212**	P	**P**	**00 17 57.4**	**+0.2**
GIRL	**Giralia**	**21.39**	**212**	P	**P**	**00 17 57.6**	**+0.5**
MEEK	**Meekatharra**	**23.13**	**198**	P	**P**	**00 18 12.7**	**-0.2**
OOD	**Oodnadatta**	**24.80**	**160**	P	**P**	**00 18 28.6**	**+0.8**
FORT	**Forrest**	**26.14**	**176**	P	**P**	**00 18 40.0**	**+0.3**
FORT	**Forrest**	**26.14**	**176**	P	**P**	**00 18 40.2**	**+0.5**
MORW	**Morawa**	**26.22**	**201**	P	**P**	**00 18 39.8**	**-0.7**
MORW				lAmb	lAmb	00 18 41.8	
	comp=Z,27nm,1.4s						
MULG	**Mulgathing**	**26.63**	**165**	P	**P**	**00 18 45.1**	**+1.0**
BLDU	**Ballidu**	**27.43**	**198**	P	**P**	**00 18 51.5**	**+0.4**
LCRK	**Leigh Creek**	**28.13**	**158**	P	**P**	**00 18 58.3**	**+1.0**
TPUB	**Ta-pu**	**28.22**	**349**	P	**P**	**00 18 57.1**	**-1.1**
TPUB				lAmb	lAmb	00 18 57.8	
	comp=Z,13nm,0.7s						
UBPT	**Khong Chiam**	**28.48**	**314**	P	**P**	**00 19 01.2**	**+0.7**
UBPT				lAmb	lAmb	00 19 01.6	
	comp=Z,5.7nm,0.8s						
YHNB	**Yeheng**	**29.43**	**351**	P	**P**	**00 19 07.5**	**-1.3**
YHNB				lAmb	lAmb	00 19 08.3	
	comp=Z,21nm,1.3s						
YHNB				PcP	**PcP**	**00 22 00.6**	**-2.6**
NWAO	**Narrogin (SRO)**	**29.45**	**196**	P	**P**	**00 19 08.2**	**-0.6**
NWAO				lAmb	lAmb	00 19 38.2	
	comp=Z,27nm,1.2s						
NWAO	**Narrogin (SRO)**	**29.45**	**196**	P	**P**	**00 19 09.1**	**+0.3**
BBOO	**Buckleboo**	**29.57**	**163**	P	**P**	**00 19 10.4**	**+0.5**
BBOO				lAmb	lAmb	00 19 13.6	
	comp=Z,9.7nm,0.9s						
BBOO	**Buckleboo**	**29.57**	**163**	P	**P**	**00 19 10.5**	**+0.5**
STKA	**Stephens Creek**	**30.77**	**154**	P	**P**	**00 19 21.4**	**+1.1**
	comp=Z,14nm,0.5s,baz=330,slow=8.7,SNR=38						
	comp=Z,14nm,0.5s						
STKA	**Stephens Creek**	**30.77**	**154**	P	**P**	**00 19 21.2**	**+0.8**
STKA	**Stephens Creek**	**30.77**	**154**	P	**P**	**00 19 21.5**	**+1.1**
HTT	**Hallett**	**31.07**	**159**	P	**P**	**00 19 24.3**	**+1.3**
CMSA	**Cobar Meteorol**	**32.47**	**148**	P	**P**	**00 19 36.6**	**+1.5**
ARPS	**Mount Arapiles**	**35.12**	**158**	P	**P**	**00 19 59.2**	**+1.7**
ARMA	**Armidale**	**35.15**	**140**	P	**P**	**00 19 59.1**	**+1.0**
ARMA				lAmb	lAmb	00 20 38.9	
	comp=Z,36nm,1.5s						
ARMA	**Armidale**	**35.15**	**140**	P	**P**	**00 19 59.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**35.30**	**311**	P	**P**	**00 20 00.0**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=139,slow=7.2,SNR=9.3						
	comp=Z,2.1nm,0.3s						
CHTO	**Chiang Mai**	**35.52**	**312**	P	**P**	**00 20 02.0**	**+0.8**
CAN	**Canberra**	**37.15**	**148**	P	**P**	**00 20 16.9**	**+2.3**
CAN				lAmb	lAmb	00 20 17.7	
	comp=Z,15nm,0.9s						
CAN	**Canberra**	**37.15**	**148**	P	**P**	**00 20 16.9**	**+2.3**
TOO	**Toolangi**	**37.28**	**154**	P	**P**	**00 20 17.7**	**+2.0**
TOO				lAmb	lAmb	00 20 19.4	
	comp=Z,17nm,1.4s						
TOO	**Toolangi**	**37.28**	**154**	P	**P**	**00 20 18.0**	**+2.3**
PZH	**PanZhiHua**	**38.93**	**324**	P	**P**	**00 20 31.6**	**+2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.7s						
KSRS	**Korea Array**	**41.83**	**2**	P	**P**	**00 20 51.5**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=179,slow=11,SNR=8.9						
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**42.40**	**14**	P	**P**	**00 20 55.4**	**-1.8**
	comp=Z,3.1nm,0.8s,baz=181,slow=9.0,SNR=6.9						
	comp=Z,3.1nm,0.8s						
JSD	**Sado**	**43.83**	**14**	P	**P**	**00 21 08.4**	**0.0**
JSD				lAmb	lAmb	00 21 15.9	
	comp=Z,13nm,1.0s						
JTM	**Tenmabayashi**	**47.13**	**15**	P	**P**	**00 21 34.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**48.81**	**6**	P	**P**	**00 21 46.3**	**-0.3**
	comp=Z,7.6nm,0.5s,baz=187,slow=7.1,SNR=29						
	comp=Z,7.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**48.81**	**6**		**P**	**00 21 46.4**	**-0.2**
XLT	**XiLinHaoTe**	**49.10**	**350**	*eP*	**P**	**00 21 48.3**	**-0.5**
XLT				pP	pP	00 23 11.0	+2.2
XLT				sP	sP	00 23 56.4	+3.2
XLT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,80nm,4.3s						
GTA	**Gaotai**	**50.08**	**333**	*eP*	**P**	**00 21 56.6**	**+0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KLR	**Kul'dur**	**53.79**	**4**	P	**P**	**00 22 22.2**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=184,slow=4.8,SNR=3.7						
	comp=Z,1.0nm,0.6s						
ULN	**Ulaanbaatar**	**54.86**	**344**	P	**P**	**00 22 31.0**	**+0.3**
SONM	**Songino Array**	**55.01**	**344**	P	**P**	**00 22 31.1**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=148,slow=8.7,SNR=6.1						
	comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**55.01**	**344**	P	**P**	**00 22 31.7**	**-0.1**
THZ	**Tophouse**	**55.66**	**139**	P	**P**	**00 22 38.8**	**+2.3**
TUWZ	**Tuamarina**	**56.20**	**138**	P	**P**	**00 22 40.9**	**+0.8**
KHZ	**Kahutara**	**56.39**	**139**	P	**P**	**00 22 42.4**	**+0.9**
BKZ	**Black Stump Fm**	**56.97**	**135**	P	**P**	**00 22 47.0**	**+1.3**
WMQ	**Urumqi**	**59.34**	**328**	*eP*	**P**	**00 23 03.8**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
PEA0B	**Petropavlovsk-**	**63.28**	**21**	P	**P**	**00 23 28.8**	**+1.3**
PETK	**Petropavlovsk-**	**63.28**	**21**	P	**P**	**00 23 27.4**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=186,slow=8.7,SNR=3.7						
	comp=Z,3.1nm,0.6s						
PETK	**Petropavlovsk-**	**63.28**	**21**	P	**P**	**00 23 28.3**	**+0.7**
MK31	**Makanchi Array**	**64.16**	**328**	P	**P**	**00 23 33.2**	**-0.2**
MKAR	**Makanchi Array**	**64.16**	**328**	P	**P**	**00 23 33.1**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=116,slow=8.5,SNR=25						
	comp=Z,2.3nm,0.5s						
MAKZ	**Makanchi**	**64.33**	**328**	P	**P**	**00 23 34.2**	**-0.4**
MAKZ				lAmb	lAmb	00 23 47.6	
	comp=Z,4.1nm,1.1s						
ZAA0	**Zalesovo Array**	**67.77**	**335**	P	**P**	**00 23 54.3**	**-1.6**
ZAA0				lAmb	lAmb	00 23 55.5	
	comp=Z,2.9nm,0.9s						
ZALV	**Zalesovo Beam**	**67.77**	**335**	P	**P**	**00 23 54.8**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=130,slow=4.4,SNR=8.1						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**67.77**	**335**	P	**P**	**00 23 55.0**	**-0.9**
KURK	**Kurchatov**	**68.51**	**330**	P	**P**	**00 23 59.9**	**-0.7**
KURK				lAmb	lAmb	00 24 00.9	
	comp=Z,4.2nm,0.9s						
SEY	**Seymchan**	**70.18**	**12**	P	**P**	**00 24 11.0**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=359,slow=20,SNR=2.4						
	comp=Z,3.2nm,0.6s						
VNDA	**Vanda**	**75.32**	**172**	P	**P**	**00 24 39.7**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=296,slow=5.5,SNR=8.7						
	comp=Z,1.1nm,0.8s						
VNDA	**Vanda**	**75.32**	**172**	P	**P**	**00 24 40.2**	**+0.1**
MAW	**Mawson**	**75.86**	**201**	P	**P**	**00 24 42.9**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=63,slow=6.4,SNR=7.0						
	comp=Z,1.1nm,0.5s						
MAW	**Mawson**	**75.86**	**201**	P	**P**	**00 24 43.9**	**+0.7**
TIXI	**Tiksi**	**76.08**	**1**	P	**P**	**00 24 44.3**	**-0.1**
SBA	**Scott Base**	**76.25**	**172**	P	**P**	**00 24 46.3**	**+1.0**
SBA				lAmb	lAmb	00 24 47.7	
	comp=Z,3.9nm,1.4s						
ABKAR	**Akbulak array**	**78.28**	**322**	P	**P**	**00 24 56.0**	**-0.9**
ILAR	**Eielson Array**	**92.76**	**25**	P	**P**	**00 26 06.2**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=258,slow=4.5,SNR=2.7						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**124.63**	**283**	PKP	**PKiKP**	**00 31 54.3**	**+0.2**
	comp=Z,0.6nm,1.1s,baz=67,slow=2.6,SNR=2.1						
PLTB	**Pedras Altas**	**143.88**	**180**	PKPdf	PKPbc	00 32 28.3	+0.6
AC01	**Pan de Azucar**	**145.39**	**153**	PKPbc	**PKPab**	**00 32 33.2**	**-0.2**
AC02	**Maricunga**	**145.44**	**155**		**PKPbc**	**00 32 33.3**	**-0.1**

IDC 24 00:30:35.3±5.0, 54°.65S×31°.12W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=169.4km s-min=57.6km az=177.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**48.43**	**22**	T	T	01 30 54.1	
	baz=192

comp=E,1395μm,0.6s
USI AML AML
comp=N,4475μm,1.6s
USI AML AML
comp=N,4475μm,1.6s
USI AML AML
comp=E,1395μm,0.6s
IFIL Filicudi I Eol 0.58 104 ⇑P Pn 00 51 54.0 -0.3
IFIL S Sn 00 52 02.4 -0.6
IFIL AML AML
comp=E,8735μm,0.2s
IFIL AML AML
comp=N,2120μm,1.2s
SOLUN Solunto 0.66 202 P Pb 00 51 55.0 +0.3
SOLUN S Sn 00 52 05.3 +0.3
SOLUN AML AML
comp=N,375μm,0.3s
SOLUN AML AML
comp=E,524μm,0.4s
SOLUN Solunto 0.66 202 ⇓P Pb 00 51 55.0 +0.2
SOLUN AML AML
comp=E,524μm,0.4s
SOLUN AML AML
comp=N,375μm,0.3s
SOLUN AML AML
comp=E,524μm,0.4s
SOLUN AML AML
comp=N,375μm,0.3s
SOLUN AML AML
comp=E,524μm,0.4s
SOLUN AML AML
comp=N,375μm,0.3s
SOLUN AML AML
comp=N,375μm,0.3s
SOLUN AML AML
comp=E,524μm,0.4s
MPG Monte Pellegri 0.67 215 P Pb 00 51 54.5 -0.3
MPG S Sb 00 52 04.3 +0.6
MPG Monte Pellegri 0.67 215 P Pb 00 51 54.3 -0.6
GIB Gibilmanna 0.73 169 P Pb 00 51 55.7 -0.2
GIB S Sb 00 52 05.6 0.0
GIB AML AML
comp=E,798μm,0.4s
GIB AML AML
comp=N,1023μm,0.9s
GIB Gibilmanna 0.73 169 ⇓P Pb 00 51 56.1 +0.1
GIB AML AML
comp=E,798μm,0.4s
GIB AML AML
comp=N,1023μm,0.9s
GIB AML AML
comp=E,798μm,0.4s
GIB AML AML
comp=N,1023μm,0.9s
GIB AML AML
comp=E,798μm,0.4s
GIB AML AML
comp=N,1023μm,0.9s
GIB AML AML
comp=E,798μm,0.4s
GIB AML AML
comp=N,1023μm,0.9s
PLLN Pollina 0.75 162 P Pb 00 51 56.2 -0.1
PLLN AML AML
comp=E,908μm,0.5s
PLLN AML AML
comp=E,908μm,0.5s
PLLN AML AML
comp=N,2465μm,0.9s
PLLN Pollina 0.75 162 ⇑P Pb 00 51 56.2 -0.1
PLLN AML AML
comp=E,908μm,0.5s
PLLN AML AML
comp=N,2465μm,0.9s
PLLN AML AML
comp=E,908μm,0.5s
PLLN AML AML
comp=N,2465μm,0.9s
PLLN AML AML
comp=E,908μm,0.5s
PLLN AML AML
comp=N,2465μm,0.9s
PLLN AML AML
comp=N,2465μm,0.9s
PLLN AML AML
comp=E,908μm,0.5s
CSLB Castelbuono 0.79 168 P Pb 00 51 56.4 -0.4
CSLB AML AML
comp=N,357μm,0.3s
CSLB AML AML
comp=E,206μm,0.4s
CSLB Castelbuono 0.79 168 ⇑P Pb 00 51 56.4 -0.4
CSLB AML AML
comp=E,206μm,0.4s
CSLB AML AML
comp=N,357μm,0.3s
CSLB AML AML
comp=E,206μm,0.4s
CSLB AML AML
comp=N,357μm,0.3s
CSLB AML AML
comp=E,206μm,0.4s
CSLB AML AML
comp=N,357μm,0.3s
MSFR San Fratello 0.89 139 P Pn 00 51 58.3 -0.3
MSFR AML AML
comp=E,157μm,1.4s
MSFR AML AML
comp=N,184μm,0.4s
MSFR San Fratello 0.89 139 ⇑P Pn 00 51 57.9 -0.8
MSFR AML AML
comp=E,157μm,1.4s
MSFR AML AML
comp=N,184μm,0.4s
MSFR AML AML
comp=E,157μm,1.4s
MSFR AML AML
comp=N,184μm,0.4s
MSFR AML AML
comp=N,184μm,0.4s
MSFR AML AML
comp=E,157μm,1.4s
PETRA Petralia Sopra 0.90 166 P Pb 00 51 58.6 -0.2
PETRA AML AML
comp=E,622μm,0.6s
PETRA AML AML
comp=N,830μm,0.5s
PETRA AML AML
comp=N,829μm,0.5s
PETRA AML AML
comp=E,623μm,0.6s
PETRA Petralia Sopra 0.90 166 P Pb 00 51 58.2 -0.6
PETRA AML AML
comp=E,622μm,0.6s
PETRA AML AML
comp=N,830μm,0.5s
PETRA AML AML
comp=E,623μm,0.6s
PETRA AML AML
comp=N,830μm,0.5s
PETRA AML AML
comp=E,623μm,0.6s
PETRA AML AML
comp=N,829μm,0.5s
PETRA AML AML
comp=N,829μm,0.5s
PETRA AML AML
comp=E,623μm,0.6s
LLI Lipari 0.90 107 P Pb 00 51 58.9 +0.1
LLI AML AML
comp=N,3500μm,0.6s
LLI AML AML
comp=E,3415μm,0.8s
LLI Lipari 0.90 107 ⇑P Pb 00 51 58.9 +0.1
LLI AML AML
comp=E,3415μm,0.8s
LLI AML AML
comp=N,3500μm,0.6s
LLI AML AML
comp=E,3415μm,0.8s
LLI AML AML
comp=N,3500μm,0.6s
LLI AML AML
comp=N,3500μm,0.6s
LLI AML AML
comp=E,3415μm,0.8s
CORL Corleone 0.92 208 P Pb 00 51 59.1 0.0

VPL Vulcano Piano 0.95 110 P Pn 00 51 59.1 -0.3
VPL AML AML
comp=E,1060μm,1.6s
VPL AML AML
comp=N,1250μm,0.6s
VPL Vulcano Piano 0.95 110 ⇑P Pn 00 51 59.2 -0.2
VPL AML AML
comp=E,1060μm,1.6s
VPL AML AML
comp=N,1250μm,0.6s
VPL AML AML
comp=E,1060μm,1.6s
VPL AML AML
comp=N,1250μm,0.6s
VPL AML AML
comp=E,1060μm,1.6s
VPL AML AML
comp=N,1250μm,0.6s
ISTR Stromboli Gino 1.05 85 P Pb 00 52 01.8 +0.4
ISTR AML AML
comp=E,1715μm,0.5s
ISTR AML AML
comp=N,3250μm,0.7s
ISTR AML AML
comp=E,2335μm,1.6s
ISTR AML AML
comp=N,4215μm,0.6s
ISTR Stromboli Gino 1.05 85 ⇓P Pb 00 52 01.8 +0.5
ISTR AML AML
comp=E,1715μm,0.5s
ISTR AML AML
comp=N,3250μm,0.7s
ISTR AML AML
comp=E,2335μm,1.6s
ISTR AML AML
comp=N,4215μm,0.6s
ISTR AML AML
comp=E,2335μm,1.6s
ISTR AML AML
comp=N,4215μm,0.6s
IST3 Stromboli F 1.08 85 P Pb 00 52 01.7 -0.2
IST3 AML AML
comp=E,1865μm,1.6s
IST3 AML AML
comp=N,3165μm,1.2s
IST3 AML AML
comp=E,2250μm,0.9s
IST3 AML AML
comp=N,3160μm,1.2s
IST3 Stromboli F 1.08 85 ⇑P Pb 00 52 01.8 -0.1
IST3 AML AML
comp=E,1865μm,1.6s
IST3 AML AML
comp=N,3165μm,1.2s
IST3 AML AML
comp=E,2250μm,0.9s
IST3 AML AML
comp=N,3160μm,1.2s
IST3 AML AML
comp=N,3160μm,1.2s
IST3 AML AML
comp=E,2250μm,0.9s
GALF Gagliano Caste 1.15 150 P Pb 00 52 03.3 +0.4
GALF AML AML
comp=E,297μm,0.7s
GALF AML AML
comp=N,206μm,0.6s
GALF Gagliano Caste 1.15 150 ⇓P Pb 00 52 03.5 +0.5
GALF AML AML
comp=E,297μm,0.7s
GALF AML AML
comp=N,206μm,0.6s
GALF AML AML
comp=E,297μm,0.7s
GALF AML AML
comp=N,206μm,0.6s
GALF AML AML
comp=E,297μm,0.7s
GALF AML AML
comp=N,206μm,0.6s
MILZ Milazzo 1.17 111 P Pn 00 52 00.0 -2.4
EPZF Pizzo Felice 1.19 138 P Pb 00 52 04.5 +0.8
EPZF AML AML
comp=E,466μm,1.3s
EPZF AML AML
comp=N,520μm,1.4s
EPZF Pizzo Felice 1.19 138 ⇑P Pb 00 52 04.9 +1.2
EPZF AML AML
comp=E,466μm,1.3s
EPZF AML AML
comp=N,520μm,1.4s
EPZF AML AML
comp=E,466μm,1.3s
EPZF AML AML
comp=N,520μm,1.4s
EPZF AML AML
comp=N,520μm,1.4s
EPZF AML AML
comp=E,466μm,1.3s
CAGR Agira 1.20 154 ⇓P Pb 00 52 07.0 +3.2
CAGR AML AML
comp=E,266μm,0.7s
CAGR AML AML
comp=N,262μm,0.6s
CAGR AML AML
comp=E,266μm,0.7s
CAGR AML AML
comp=N,262μm,0.6s
CAGR AML AML
comp=E,266μm,0.7s
CAGR AML AML
comp=N,262μm,0.6s
CAGR Agira 1.20 154 AML AML
comp=E,266μm,0.7s
CAGR AML AML
comp=N,262μm,0.6s
EMSG Monte Spagnolo 1.24 135 P Pb 00 52 05.6 +1.0
MPNC Port Mandanici 1.31 115 P Pn 00 52 04.2 -0.2
MPNC Port Mandanici 1.31 115 ⇑P Pn 00 52 04.2 -0.2
AIO Antillo 1.31 124 P Pn 00 52 04.4 -0.1
AIO AML AML
comp=E,164μm,0.7s
AIO AML AML
comp=N,180μm,0.3s
AIO Antillo 1.31 124 ⇓P Pn 00 52 04.8 +0.4
AIO AML AML
comp=E,164μm,0.7s
AIO AML AML
comp=N,180μm,0.3s
AIO AML AML
comp=E,164μm,0.7s
AIO AML AML
comp=N,180μm,0.3s
AIO AML AML
comp=N,180μm,0.3s
AIO AML AML
comp=E,164μm,0.7s
MSRU Castanea 1.38 108 P Pn 00 52 05.1 -0.2
MSRU AML AML
comp=N,259μm,0.2s
MSRU AML AML
comp=E,223μm,0.9s
MSRU Castanea 1.38 108 P Pn 00 52 05.0 -0.2
MSRU AML AML
comp=E,223μm,0.9s
MSRU AML AML
comp=N,259μm,0.2s
MSRU AML AML
comp=E,223μm,0.9s
MSRU AML AML
comp=N,259μm,0.2s
MSRU AML AML
comp=N,259μm,0.2s
MSRU AML AML
comp=E,223μm,0.9s
CLTA Licata 1.55 177 P Pb 00 52 10.2 +0.4
CLTA Licata 1.55 177 ⇑P Pb 00 52 10.7 +1.0
HLNI Lentini 1.58 149 P Pn 00 52 09.2 +1.1
HLNI AML AML
comp=E,100μm,1.4s
HLNI AML AML
comp=E,100μm,1.4s
HLNI AML AML
comp=N,84μm,1.2s
HLNI Lentini 1.58 149 ⇑P Pb 00 52 10.0 -0.3
HLNI AML AML
comp=E,100μm,1.4s
HLNI AML AML
comp=N,84μm,1.2s
HLNI AML AML
comp=E,100μm,1.4s
HLNI AML AML
comp=N,84μm,1.2s
HLNI AML AML
comp=E,100μm,1.4s
JOPP Joppolo 1.60 93 P Pn 00 52 08.3 0.0
JOPP Joppolo 1.60 93 ⇓P Pn 00 52 08.5 +0.2
MTTG Motta San Giov 1.61 115 P Pn 00 52 09.0 +0.4
MTTG AML AML
comp=E,99μm,1.3s
MTTG AML AML
comp=N,117μm,1.3s
MTTG AML AML
comp=E,99μm,1.3s
MTTG AML AML
comp=N,117μm,1.3s
MTTG Motta San Giov 1.61 115 P Pn 00 52 08.1 -0.4
MTTG AML AML
comp=E,99μm,1.3s
MTTG AML AML
comp=N,117μm,1.3s
MTTG AML AML
comp=E,99μm,1.3s
MTTG AML AML
comp=N,117μm,1.3s
MTTG AML AML
comp=N,117μm,1.3s
MTTG AML AML
comp=E,99μm,1.3s
SSY Sortino 1.83 148 P Pn 00 52 12.7 +1.2
SSY Sortino 1.83 148 ⇑P Pn 00 52 12.9 +1.4
CET2 Cetraro 1.83 63 P Pn 00 52 12.4 +0.8
CET2 AML AML
comp=E,67μm,0.9s
CET2 AML AML
comp=N,86μm,0.9s
CET2 Cetraro 1.83 63 ⇑P Pn 00 52 12.6 +1.0
CET2 AML AML
comp=E,67μm,0.9s
CET2 AML AML
comp=N,86μm,0.9s
CET2 AML AML
comp=N,86μm,0.9s
CET2 AML AML
comp=E,67μm,0.9s
CAR1 CAROLEI 1.92 73 P Pn 00 52 13.5 +0.7
CAR1 AML AML
comp=E,80μm,0.4s
CAR1 AML AML
comp=N,55μm,1.6s
CAR1 CAROLEI 1.92 73 P Pn 00 52 13.1 +0.3
CAR1 AML AML
comp=E,80μm,0.4s
CAR1 AML AML
comp=N,55μm,1.6s
CAR1 AML AML
comp=N,55μm,1.6s
CAR1 AML AML
comp=E,80μm,0.4s
PLAC Placanica 2.05 96 P Pn 00 52 15.3 +0.8
PLAC Placanica 2.05 96 ⇓P Pn 00 52 15.5 +1.0
CGL Cagliari Serpe 3.60 282 S Sb 00 53 27.0 -1.1

ROM 24 00:52:40.8±0.1, 42°.989N±0°.003×12°.913E±0°.005, h9km, ML1.2/2, 3C-1D, Error ellipse: s-maj=0.4km s-min=0.2km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.14**	**70**	S		Sg	00 52 46.9	+0.8
FDMO						AML AML		
	comp=E,138μm,0.8s							
FDMO						AML AML		
	comp=N,142μm,0.3s							
ASSB	**Assisi San Ben**	**0.19**	**286**	S		Sg	00 52 48.9	+1.3
ASSB						AML AML		
	comp=N,100μm,0.2s							
ASSB						AML AML		
	comp=E,116μm,0.3s							
NRCA	**Norcia**	**0.21**	**136**	⇑P		Pg	00 52 46.0	+0.8
NRCA	**Norcia**	**0.21**	**136**	P		Pg	00 52 46.0	+0.7
NRCA				S		Sg	00 52 49.6	+1.4
SNTG	**Esanatoglia**	**0.27**	**4**	⇑P		Pg	00 52 46.8	+0.6
SNTG	**Esanatoglia**	**0.27**	**4**	P		Pg	00 52 46.7	+0.5
SNTG				S		Sb	00 52 51.6	-0.9
EL6	**Elcito**	**0.37**	**22**	⇑P		Pg	00 52 48.7	+0.6
EL6	**Elcito**	**0.37**	**22**	P		Pg	00 52 48.7	+0.6
EL6				S		Sb	00 52 55.0	-0.5
LNSS	**Leonessa**	**0.40**	**166**	⇓P		Pg	00 52 49.3	+0.7
LNSS	**Leonessa**	**0.40**	**166**	P		Pg	00 52 49.2	+0.6
LNSS				S		Sb	00 52 55.6	-0.7
IFIL	**Filicudi I Eol**	**4.59**	**164**	AML		AML		
	comp=E,8735μm,0.2s							
IFIL				AML		AML		
	comp=N,2120μm,1.2s							

*IDC **24** 01:00:41.8±0.7, 54°.99S×31°.18W, h0km, mb4.0/11, mbtmp4.0/11, MS3.2/4, Error ellipse: s-maj=26.7km s-min=16.8km az=50.0*
*NEIC **24** 01:00:44.7±1.6, 55°.28S±0°.06×31°.8W±0°.2, h10km±1km, mb4.4/19, Error ellipse: s-maj=20.0km s-min=7.3km az=71.0*
ISC 24 01:00:43.7±0.5, 55°.13S±0°.08×31°.65W±0°.09, h10km, n65, σ1§50/58, mb4.4/19, MS3.2/4, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.93**	**285**			**Pn**	**01 01 30.7**	**+0.4**
ORCD	**Orcadas**	**8.94**	**226**	Pn		**Pn**	**01 02 51.0**	**-1.7**
ESPZ	**Base Esperanza**	**15.28**	**227**	Pn		**Pn**	**01 04 13.7**	**-5.5**
VNA1	**Neumayer--Stat**	**18.64**	**156**	P		**Pn**	**01 05 06.4**	**+5.0**
VNA3	**Neumayer Olymp**	**18.75**	**158**	P		**Pn**	**01 05 04.3**	**+1.5**
VNA2	**Neumayer--Watz**	**19.04**	**156**	P		**Pn**	**01 05 08.8**	**+2.5**
	baz=316,slow=12							
SNAA	**Sanae**	**20.64**	**154**	P		**P**	**01 05 23.4**	**+0.3**
SNAA	**Sanae**	**20.64**	**154**	P		**P**	**01 05 23.0**	**0.0**
	2.5nm,0.7s,baz=307,slow=8.4,SNR=13 2.5nm,0.7s							
SNAA	**Sanae**	**20.64**	**154**	P		**P**	**01 05 22.8**	**-0.2**
TROLL	**Troll, Antarti**	**22.22**	**153**	P		**P**	**01 05 40.5**	**+0.5**
BELA	**Belgrano 2**	**22.87**	**182**	P		**P**	**01 05 46.3**	**-0.5**
MG05	**Puerto Natales**	**24.35**	**261**	P		**P**	**01 06 01.2**	**-0.2**
PLCA	**Paso Flores**	**29.34**	**283**	LR		LR	01 19 22.4	
	comp=Z,52nm,18.1s,baz=144,slow=38							
CPUP	**Villa Florida**	**34.35**	**316**	P		**P**	**01 07 30.6**	**+0.2**
	3.2nm,0.8s,baz=187,slow=6.8,SNR=5.9							
CPUP				LR		LR	01 22 32.1	
	comp=Z,45nm,18.0s,baz=181,slow=38 3.2nm,0.8s							
MT09	**Talagante**	**34.62**	**292**	P		**P**	**01 07 33.0**	**+0.1**
MT01	**Popeta**	**34.69**	**291**	P		**P**	**01 07 33.8**	**+0.4**
MT01				IAmb		IAmb	01 08 12.4	
	comp=Z,8.0nm,1.2s							
MT02	**Curacav**	**35.09**	**292**	P		**P**	**01 07 37.5**	**+0.6**
MT02				IAmb		IAmb	01 07 40.9	
	comp=Z,15nm,1.2s							
QSPA	**South Pole Qui**	**35.12**	**180**	P		**P**	**01 07 37.3**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=346,slow=4.8,SNR=2.2 comp=Z,0.7nm,0.7s							
QSPA	**South Pole Qui**	**35.12**	**180**	P		**P**	**01 07 37.4**	**+0.4**
QSPA				IAmb		IAmb	01 07 57.3	
	comp=Z,5.7nm,1.4s							
VA06	**Catapilco**	**35.72**	**293**	P		**P**	**01 07 43.7**	**+1.5**
CO03	**El Pedregal**	**36.75**	**295**	P		**P**	**01 07 53.2**	**+2.0**
CO03				IAmb		IAmb	01 08 20.7	
	comp=Z,13nm,1.4s							
AC05	**El Transito**	**38.15**	**298**	P		**P**	**01 08 03.7**	**+0.6**
AC05				IAmb		IAmb	01 08 05.4	
	comp=Z,3.8nm,0.6s							
GO02	**Mina Guanaco**	**40.84**	**302**	P		**P**	**01 08 27.0**	**+1.3**
GO02				IAmb		IAmb	01 08 27.7	
	comp=Z,4.8nm,0.6s							
MAW	**Mawson**	**42.37**	**145**	P		**P**	**01 08 37.2**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=148,slow=7.7,SNR=3.0 comp=Z,1.5nm,0.7s							
LVC	**Limon Verde**	**42.67**	**304**	P		**P**	**01 08 41.0**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=299,slow=0.7,SNR=5.0							

LVC				LR	LR	01 26 16.9		
	comp=Z,26nm,19.4s,baz=186,slow=36							
	comp=Z,2.9nm,0.5s							
LVC	**Limon Verde**	**42.67**	**304**	P	**P**	**01 08 41.4**	**+0.6**	
PB01	**IPOC Station P**	**44.28**	**305**	P	**P**	**01 08 54.8**	**+1.2**	
PB01				IAmb	IAmb	01 08 55.7		
	comp=Z,7.0nm,1.0s							
GO01	**Chusmiza**	**45.33**	**306**	P	**P**	**01 09 03.7**	**+1.4**	
GO01				IAmb	IAmb	01 09 04.3		
	comp=Z,3.7nm,0.7s							
PB16	**IPOC Station P**	**46.63**	**307**	P	**P**	**01 09 14.1**	**+1.3**	
PB16				IAmb	IAmb	01 09 56.8		
	comp=Z,5.2nm,1.5s							
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**01 09 17.7**	**+0.7**	
	comp=Z,0.3nm,0.8s,baz=254,slow=4.2,SNR=1.5							
	comp=Z,0.3nm,0.8s							
LPAZ	**La Paz**	**47.81**	**310**	P	**P**	**01 09 23.4**	**+1.5**	
	comp=Z,4.2nm,0.6s,baz=128,slow=5.2,SNR=21							
LPAZ				LR	LR	01 31 36.1		
	comp=Z,15nm,18.8s,baz=96,slow=39							
	comp=Z,4.2nm,0.6s							
LPAZ	**La Paz**	**47.81**	**310**	P	**P**	**01 09 23.7**	**+1.8**	
H10S2	**ASCENSION HYDR**	**47.99**	**23**	T	T	02 01 31.2		
	baz=193,slow=74,SNR=6.1							
H10S3	**ASCENSION HYDR**	**47.99**	**23**	T	T	02 01 33.6		
	baz=27,slow=74,SNR=15							
BOSA	**Boshof**	**48.26**	**81**	P	**P**	**01 09 22.3**	**-2.5**	
	comp=Z,2.1nm,0.9s,baz=309,slow=21,SNR=1.7							
	comp=Z,2.1nm,0.9s							
H10N1	**ASCENSION HYDR**	**49.10**	**23**	T	T	02 03 00.4		
	baz=192,slow=75,SNR=18							
H10N3	**ASCENSION HYDR**	**49.10**	**23**	T	T	02 02 47.3		
	baz=192,slow=75,SNR=28							
H10N2	**ASCENSION HYDR**	**49.12**	**23**	T	T	02 02 54.8		
	baz=192,slow=75,SNR=26							
LBTB	**Lobatse**	**51.23**	**78**	P	**P**	**01 09 44.5**	**-2.9**	
	comp=Z,1.5nm,0.8s,baz=335,slow=9.3,SNR=1.1							
	comp=Z,1.5nm,0.8s							
ROSC	**El Rosal**	**69.38**	**314**	P	**P**	**01 11 51.6**	**-0.4**	
	comp=Z,5.4nm,0.4s,baz=183,slow=18,SNR=2.5							
	comp=Z,5.4nm,0.4s							
TOA0	**Torodi Ar. Sit**	**73.60**	**34**	P	**P**	**01 12 19.1**	**+2.2**	
TOA0				IAmb	IAmb	01 12 52.4		
	comp=Z,8.0nm,1.5s							
TORD	**Torodi Ar. Bea**	**73.60**	**34**	P	**P**	**01 12 15.4**	**-1.5**	
	comp=Z,0.7nm,0.9s,baz=199,slow=6.0,SNR=6.5							
	comp=Z,0.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.60**	**34**	P	**P**	**01 12 16.5**	**-0.4**	
TORD				IAmb	IAmb	01 12 23.3		
	comp=Z,3.5nm,1.4s							
GCMT	**Greycliff**	**120.10**	**308**	PKPdf	**PKiKP**	**01 19 36.2**	**+2.3**	
FINES	**FINESS Array B**	**124.79**	**30**	PKP	**PKPdf**	**01 19 39.9**	**-2.2**	
	comp=Z,0.8nm,0.7s,baz=158,slow=1.0,SNR=4.1							
RES	**Resolute Bay**	**136.10**	**340**	PKPdf	**PKiKP**	**01 20 04.8**	**0.0**	
ZALV	**Zalesovo Beam**	**144.25**	**65**	PKiKP	PKPpre	01 20 14.8		
	comp=Z,0.8nm,0.5s,baz=255,slow=4.1,SNR=3.6							
DAWY	**Dawson**	**144.31**	**314**	PKPdf	**PKPab**	**01 20 16.7**	**+0.2**	
M27K	**Edge Creek, AK**	**144.76**	**311**	PKPdf	**PKPab**	**01 20 18.6**	**+0.3**	
BCAR	**Beaver Creek A**	**144.97**	**312**		**PKPbc**	**01 20 19.0**	**0.0**	
L27K	**Beaver Creek,**	**144.99**	**312**		**PKPbc**	**01 20 19.2**	**+0.2**	
K27K	**Chicken**	**145.41**	**313**	PKPdf	**PKPab**	**01 20 21.1**	**+0.6**	
SCRK	**Sand Creek**	**146.20**	**313**	PKPdf	**PKPab**	**01 20 23.6**	**0.0**	
I26K	**Coal Creek Min**	**146.24**	**315**	PKPdf	**PKPbc**	**01 20 22.8**	**0.0**	
BMAR	**Burnt Mountain**	**147.31**	**319**	PKPdf	**PKPbc**	**01 20 25.8**	**0.0**	
ILAR	**Eielson Array**	**147.63**	**314**	PKPbc	**PKPbc**	**01 20 26.7**	**0.0**	
	comp=Z,1.7nm,0.8s,baz=136,slow=2.1,SNR=18							
ILAR	**Eielson Array**	**147.63**	**314**	PKPdf	**PKPbc**	**01 20 26.5**	**-0.3**	
OHAK	**Old Harbor**	**148.30**	**298**		**PKPbc**	**01 20 28.8**	**+0.1**	
SKT	**Skwentna**	**148.95**	**307**	PKPbc	**PKPbc**	**01 20 30.9**	**+0.6**	
BPAW	**Bear Paw Mtn.**	**149.21**	**312**	PKPbc	**PKPbc**	**01 20 30.8**	**-0.1**	
TOLK	**Toolik Lake Re**	**149.35**	**321**	PKPbc	**PKPbc**	**01 20 31.5**	**+0.4**	
O18K	**Koktuh Hills**	**150.11**	**302**	PKPbc	**PKPbc**	**01 20 32.8**	**-0.4**	
K20K	**Telida**	**150.41**	**310**	PKPbc	**PKPbc**	**01 20 32.2**	**-1.7**	
IMAR	**Indian Mountai**	**150.67**	**315**	PKPbc	**PKPbc**	**01 20 34.5**	**+0.2**	
SONM	**Songino Array**	**153.21**	**88**	PKPbc	**PKPbc**	**01 20 40.3**	**-0.6**	
	comp=Z,0.8nm,0.5s,baz=242,slow=3.0,SNR=4.5							

*BGR **24** 01:36:27.7±0.5, 42.°19N×13.°65E, h5km, ML6.6/20, Error ellipse: s-maj=10.0km s-min=5.6km az=91.0*
*BJI **24** 01:36:30.5±0.0, 42.°65N×13.°00E, h10km, mb5.5/62, mB6.4/56, Ms6.5/55, Ms7 6.4/61*
*RHSSO **24** 01:36:31.8±0.5, 42.°67N×13.°02E, h7km±5km, ML6.3/17*
*MOS **24** 01:36:31.7±0.9, 42.°79N×13.°19E, h7km, mb6.1/77, MS6.1/71, Error ellipse: s-maj=4.8km s-min=2.8km az=68.6*
*BEO **24** 01:36:31.6±0.5, 42.°73N×12.°92E, h10km, ML6.0/9*
*CRAAG **24** 01:36:32.3, 42.°71N×13.°22E, Mw6.2*
*NEIC **24** 01:36:32.9±1.4, 42.°72N±0.°04×13.°19E±0.°06, h4km±2km, mb6.0/596, Ms_20 6.1/406, Mwb6.1/122, Mwr6.2/102, Mww6.2, Mwr6.0(ROM), Mwr6.0(VIE), Error ellipse: s-maj=7.1km s-min=4.6km az=50.0*
*MED_RC **24** 01:36:32.0±0.1, 42.°70N×13.°19E, h10km, MW6.2/40, Moment Tensor Solution. Body waves: s22,c42;Mantle waves: s40,c103; Duration: 2≥8 Moment tensor: Scale 10¹⁸Nm; Mrr-2.29±.02; Mθθ0.47±.02; Mφφ 1.82±.02; Mrθ-0.12±.07; Mθφ-0.93±.02; Mφr-0.42±.08; Best double couple: M◻2.33000×10¹⁸ NP1:φs340.00000°, δ49.00000°, λ-80.00000°. NP2:φs146.00000°, δ42.00000°, λ-101.00000°. Principal axes: T 2.3200, Plg4.0000°, Azm63.0000°; N 0.0400, Plg7.0000°, Azm154.0000°; P -2.3500, Plg82.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*LDG **24** 01:36:32.3±0.1, 42.°65N×13.°22E, h4km, Md5.5/7, Ml5.8/44, ms5.9 Error ellipse: s-maj=5.0km s-min=2.9km az=37.0*
*PDG **24** 01:36:32.5±1.0, 42.°73N×13.°24E, h11km±1km, MD6.2/11, ML6.2/9, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*ROM **24** 01:36:32.0±0.0, 42.°698N±0.°001×13.°234E±0.°002, h8km, ML6.0/159, Mw6.0, Mw6.0, Mw6.0, Error ellipse: s-maj=0.2km s-min=0.1km az=76.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.06; Mθθ0.23; Mθφ 0.83; Mrθ-0.03; Mθφ-0.42; Mφr0.14; Fault plane solution: M◻1.06622×10¹⁸ NP1:φs331.00000°, δ41.00000°, λ-93.00000°. NP2:φs155.00000°, δ49.00000°, λ-87.00000°. Moment Tensor Solution. Moment tensor: Scale 10¹⁸ Nm; Mrr-1.06; Mθθ0.23; Mθφ 0.83; Mrθ-0.03; Mθφ-0.42; Mφr0.14; Fault plane solution: M◻1.06622×10¹⁸ NP1:φs331.00000°, δ41.00000°, λ-93.00000°. NP2: φs155.00000°, δ49.00000°, λ-87.00000°.*
*IDC **24** 01:36:32.3±0.3, 42.°75N×13.°17E, h0km, mb5.5/39, mbtmp5.5/50, ML4.9/10, MS6.1/96 Error ellipse: s-maj=7.6km s-min=6.6km az=142.0*
*NEIC **24** 01:36:32.9, 42.°73N×13.°19E, h6km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.34; Mθθ0.18; Mθφ 1.17; Mrθ0.50; Mθφ-0.66; Mφr0.09; Fault plane solution: M◻1.51000×10¹⁸ NP1:φs314.68000°, δ51.07000°, λ-115.57000°. NP2:φs171.96000°, δ45.44000°, λ-61.89000°. Principal axes: T 1.5055, Plg3.0000°, Azm62.0000°; N 0.0178, Plg20.0000°, Azm331.0000°; P -1.5233, Plg70.0000°, Azm161.0000°;*
*NEIC **24** 01:36:32.8, 42.°72N×13.°19E, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-2.46; Mθθ0.58; Mθφ 1.88; Mrθ 1.02; Mθφ-0.64; Mφr-0.35; Fault plane solution: M◻2.56000×10¹⁸ NP1:φs321.96000°, δ55.56000°, λ-106.77000°. NP2:φs170.02000°, δ37.85000°, λ-67.18000°. Principal axes: T 2.2595, Plg9.0000°, Azm64.0000°; N 0.5159, Plg14.0000°, Azm332.0000°; P -2.7754, Plg73.0000°, Azm186.0000°;*
*PRU **24** 01:36:33.3±0.0, 42.°78N×12.°96E, h0km, M6.0, Devastating Earthquake*
*BGS **24** 01:36:33.1±2.5, 42.°72N×13.°02E, h5km, MW6.2(NEIC)*
*STR **24** 01:36:35.2±0.2, 43.°N±3.°×1.°3E±.°, h10km, Mwp5.9/36*
*BNS **24** 01:36:35.6±0.3, 42.°70N×13.°27E, h10km, ML6.1*
*TIR **24** 01:36:35.1, 42.°73N×13.°60E, h13km, Md6.2*
*GCMT **24** 01:36:35.9±0.0, 42.°64N×13.°22E, h12km, MW6.2/171, Moment Tensor Solution. s150,c358; s171,c679; Duration: 3≥1 Moment tensor: Scale 10¹⁸Nm; Mrr-2.40±.01; Mθθ0.53±.01; Mφφ 1.86±.01; Mrθ0.02±.03; Mθφ-0.98±.01; Mφr-0.66±.03; Best double couple: M◻2.48100×10¹⁸ NP1:φs339.00000°, δ52.00000°, λ-82.00000°. NP2:φs145.00000°, δ38.00000°, λ-101.00000°. Principal axes: T 2.4560, Plg7.0000°, Azm63.0000°; N 0.0430, Plg7.0000°, Azm154.0000°; P -2.5060, Plg80.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **24** 01:36:39, 42.°71N×13.°17E, h12km, Moment Tensor Solution. Duration: 12≥0 Moment tensor: Scale 10¹⁸Nm; Mrr-2.45; Mθθ0.46; Mφφ 1.99; Mrθ0.29; Mθφ-0.82; Mφr0.38; Fault plane solution: M◻2.45000×10¹⁸ NP1: φs328.00000°, δ43.00000°, λ-103.00000°. NP2: φs165.00000°, δ48.00000°, λ-78.00000°. Principal axes: T 2.3594, Plg3.0000°, Azm247.0000°; N 0.1715, Plg9.0000°, Azm337.0000°; P -2.5309, Plg81.0000°, Azm140.0000°;*
*BUG **24** 01:36:39.4±0.0, 42.°93N×13.°32E, h34km±26km, ML7.1/6*
ISC 24 01:36:33.7±0.3, 42.°68N±0.°01×13.°20E±0.°01, h12km±1km, h12km:pP-P, n3111, σ1980/3735, mb5.9/451, MS6.1/336, 271C-237D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
SMA1	**SAN MARTINO**	**0.11**	**114**	↑P	**Pg**	**01 36 34.9**	**-1.9**	
LNSS	**Leonessa**	**0.14**	**237**	↑P	**Pg**	**01 36 36.5**	**-0.6**	
LNSS				S	**Sg**	**01 36 38.7**	**-0.9**	
NRCA	**Norcia**	**0.17**	**339**		**Pg**	**01 36 35.3**	**-2.3**	
NRCA	**Norcia**	**0.17**	**339**	↑P	**Pg**	**01 36 36.0**	**-1.6**	
RM33	**Pellescritta (**	**0.17**	**175**	P	**Pg**	**01 36 36.8**	**-0.8**	
RM33				S	**Sg**	**01 36 40.1**	**-0.2**	
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
FEMA	**Monte Fema**	**0.30**	**339**	P	**Pg**	**01 36 38.7**	**-1.3**	
FEMA				S	**Sg**	**01 36 43.9**	**-0.3**	
FEMA				AML	AML			
FEMA				AML	AML			
FEMA				AML	AML			
FEMA				AML	AML			
TERO	**Teramo**	**0.30**	**100**	↑P	**Pg**	**01 36 37.8**	**-2.2**	
TERO				S	**Sg**	**01 36 42.9**	**-1.2**	
TERO				AML	AML			
TERO				AML	AML			
ARRO	**Arrone**	**0.33**	**253**	↑P	**Pg**	**01 36 39.8**	**-0.7**	
ARRO				AML	AML			
ARRO				AML	AML			
ARRO				AML	AML			
AQU	**L'Aquila**	**0.36**	**155**	Pg	**Pg**	**01 36 39.6**	**-1.3**	
AQU				Sg	**Sg**	**01 36 45.9**	**+0.3**	
AQU	**L'Aquila**	**0.36**	**155**	↓*i*Pg	**Pg**	**01 36 40.0**	**-0.9**	
AQU				*e*Sg	**Sg**	**01 36 46.4**	**+0.7**	
AQU	**L'Aquila**	**0.36**	**155**	↓P	**Pg**	**01 36 39.6**	**-1.3**	
AQU				S	**Sg**	**01 36 46.0**	**+0.3**	
AQU				AML	AML			
AQU				AML	AML			
GIGS	**Gran Sasso**	**0.36**	**129**	P	**Pg**	**01 36 39.3**	**-1.6**	
GIGS				S	**Sg**	**01 36 45.6**	**-0.1**	
GIGS				AML	AML			
GIGS				AML	AML			
GIGS				AML	AML			
FDMO	**Fiordimonte**	**0.37**	**347**	P	**Pg**	**01 36 39.6**	**-1.5**	
FDMO				S	**Sg**	**01 36 45.5**	**-0.6**	
CESI	**CESI - Serrava**	**0.39**	**327**	↑P	**Pg**	**01 36 40.1**	**-1.4**	
CESI				S	**Sg**	**01 36 47.1**	**+0.3**	
GUMA	**Gualdo di Mace**	**0.40**	**15**	↑P	**Pg**	**01 36 40.0**	**-1.7**	
FIAM	**Fiamignano**	**0.41**	**188**	↑P	**Pg**	**01 36 41.2**	**-0.7**	
FIAM				S	**Sb**	**01 36 48.7**	**-0.6**	
OFFI	**Offida**	**0.44**	**54**	↑P	**Pg**	**01 36 41.1**	**-1.4**	
CESX	**Cesi**	**0.46**	**262**	↑P	**Pg**	**01 36 42.0**	**-0.8**	
FAGN	**Fagnano**	**0.50**	**145**	↓P	**Pg**	**01 36 42.0**	**-1.5**	
MNTP	**Montappone**	**0.50**	**23**	P	**Pg**	**01 36 42.1**	**-1.4**	
MNTP				AML	AML			
MNTP				AML	AML			
MDAR	**Monte D'Aria**	**0.52**	**356**	P	**Pg**	**01 36 42.1**	**-1.8**	
MDAR				AML	AML			
MDAR				AML	AML			
ASSB	**Assisi San Ben**	**0.54**	**313**	↑P	**Pg**	**01 36 43.0**	**-1.2**	
TRTR	**Tortoreto Alta**	**0.54**	**76**	↑P	**Pg**	**01 36 43.2**	**-1.1**	
FIU1	**Fiuminata**	**0.55**	**339**	P	**Pg**	**01 36 43.1**	**-1.3**	
FIU1				AML	AML			
FIU1				AML	AML			
SSM1	**San Severino M**	**0.55**	**359**	↑P	**Pg**	**01 36 42.8**	**-1.7**	
VCEL	**Villa Celiera**	**0.55**	**120**	↑P	**Pg**	**01 36 43.4**	**-1.1**	
VCEL				AML	AML			
VCEL				AML	AML			
VCEL				AML	AML			
GAG1	**Gagliole**	**0.57**	**350**	P	**Pg**	**01 36 43.5**	**-1.4**	
GAG1				AML	AML			
GAG1				AML	AML			
GAG1				AML	AML			
MTL1	**Matelica**	**0.60**	**347**	P	**Pg**	**01 36 43.6**	**-1.7**	
MTL1				AML	AML			
MTL1				AML	AML			
MTL1				AML	AML			
MTL1				AML	AML			
SNTG	**Esanatoglia**	**0.61**	**342**	↑P	**Pg**	**01 36 43.6**	**-2.0**	
SNTG				AML	AML			
	comp=N,29300μm,0.8s							
SNTG				AML	AML			
SNTG				AML	AML			
	comp=E,15200μm,0.5s							
SNTG				AML	AML			
SNTG				AML	AML			
SNTG				AML	AML			
	comp=N,26950μm,1.1s							
T0110	**Collepietro**	**0.62**	**136**	↓P	**Pg**	**01 36 44.3**	**-1.6**	
T0110				AML	AML			
T0110				AML	AML			
TRE1	**Treia**	**0.64**	**8**	↑P	**Pg**	**01 36 44.8**	**-1.4**	
TRE1				AML	AML			
TRE1				AML	AML			
TRE1				AML	AML			
TRE1				AML	AML			
ATCC	**AVT- Casa Cast**	**0.65**	**321**	↑P	**Pg**	**01 36 44.8**	**-1.6**	
ATCC				AML	AML			
ATCC				AML	AML			
ATCC				AML	AML			
EL6	**Elcito**	**0.66**	**354**	↑P	**Pg**	**01 36 44.7**	**-1.8**	
EL6				AML	AML			
EL6				AML	AML			
EL6				AML	AML			
EL6				AML	AML			
CADA	**Capodarco di F**	**0.66**	**39**	AML	AML			
CADA				AML	AML			
PTQP	**Pietraquaria**	**0.67**	**167**	↑P	**Pg**	**01 36 46.2**	**-0.6**	
PTQP				AML	AML			
PTQP				AML	AML			
SRES	**S.Oreste - Sor**	**0.67**	**229**	↑P	**Pg**	**01 36 45.8**	**-1.0**	
SRES				AML	AML			
SRES				AML	AML			
FOSV	**Fossato di Vic**	**0.69**	**333**	↑P	**Pg**	**01 36 45.7**	**-1.5**	
FOSV				AML	AML			
FOSV				AML	AML			
FOSV				AML	AML			
FOSV				AML	AML			
CING	**Cingoli**	**0.70**	**360**	↑P	**Pg**	**01 36 45.3**	**-2.0**	
CIMA	**Civitanova Mar**	**0.72**	**29**	P	**Pg**	**01 36 46.9**	**-0.8**	
CIMA				AML	AML			
CIMA				AML	AML			
MTCE	**Montecelio**	**0.73**	**207**	↑P	**Pg**	**01 36 47.1**	**-0.9**	
MTCE				AML	AML			
MTCE				AML	AML			
MTCE				AML	AML			
MTCE				AML	AML			
CERT	**Cerreto**	**0.74**	**192**	↑P	**Pg**	**01 36 47.3**	**-0.8**	
CERT				AML	AML			
CERT				AML	AML			
PP3	**Marolino**	**0.76**	**23**	↑P	**Pg**	**01 36 47.0**	**-1.5**	
PP3				AML	AML			
PP3				AML	AML			
PP3				AML	AML			
PP3				AML	AML			
PP3				AML	AML			
PP3				AML	AML			
MURB	**Monte Urbino**	**0.77**	**320**		**Pg**	**01 36 47.0**	**-1.6**	
MURB	**Monte Urbino**	**0.77**	**320**	↑P	**Pg**	**01 36 47.1**	**-1.4**	
MURB				AML	AML			
MURB				AML	AML			
MMUR	**Monte Murano**	**0.78**	**349**	P	**Pg**	**01 36 47.4**	**-1.4**	
MMUR				AML	AML			
MMUR				AML	AML			
MMUR				AML	AML			
MMUR				AML	AML			
ATTE	**AVT- Monte Tez**	**0.81**	**310**	↑P	**Pg**	**01 36 48.1**	**-1.3**	
SSFR	**Montelago di S**	**0.82**	**338**	P	**Pg**	**01 36 47.9**	**-1.7**	
SSFR				AML	AML			
SSFR				AML	AML			
ATFO	**Monte Foce - G**	**0.83**	**327**	↑P	**Pg**	**01 36 48.4**	**-1.4**	
MGAB	**Montegabbione**	**0.83**	**287**	↑P	**Pg**	**01 36 48.9**	**-1.0**	
MGAB				AML	AML			
MGAB				AML	AML			
ARVD	**Arcevia**	**0.84**	**347**	↑P	**Pg**	**01 36 48.1**	**-1.9**	
INTR	**Introdacqua**	**0.85**	**141**	↓P	**Pg**	**01 36 47.8**	**-2.3**	
INTR				AML	AML			
	comp=E,1105μm,1.4s							
INTR				AML	AML			
	comp=N,1445μm,0.9s							
INTR				AML	AML			
	comp=E,1105μm,1.5s							
INTR				AML	AML			
	comp=N,1445μm,0.9s							
RCAV	**Rocca di Cave**	**0.85**	**193**	↑P	**Pg**	**01 36 49.0**	**-1.1**	
RCAV				AML	AML			
RCAV				AML	AML			
RCAV				AML	AML			
RCAV				AML	AML			
ATLO	**AVT- Montelove**	**0.86**	**318**	↑P	**Pg**	**01 36 48.5**	**-1.9**	
VVLD	**Villa Vallelon**	**0.86**	**158**	↓P	**Pg**	**01 36 48.5**	**-2.0**	
GUAR	**Guarcino**	**0.89**	**174**	P	**Pg**	**01 36 49.0**	**-1.8**	
ATVA	**AVT- Monte Val**	**0.90**	**312**	↑P	**Pg**	**01 36 49.6**	**-1.5**	
TB01	**Gubbio**	**0.90**	**322**	↑P	**Pg**	**01 36 49.1**	**-2.0**	
TB02	**Pietralunga**	**0.90**	**320**	↑P	**Pg**	**01 36 49.3**	**-1.9**	
FRON	**Frontone**	**0.91**	**338**	P	**Pg**	**01 36 49.4**	**-1.9**	
FRON				AML	AML			
FRON				AML	AML			
ATVO	**AVT- Monte Val**	**0.91**	**321**	↑P	**Pg**	**01 36 49.6**	**-1.8**	
AOI	**Ancona**	**0.92**	**19**	↑P	**Pg**	**01 36 49.6**	**-1.9**	
ATBU	**Serra di Buran**	**0.93**	**329**	↑P	**Pg**	**01 36 49.7**	**-1.9**	
RMP	**Rome, Mte Porz**	**0.94**	**203**	↑P	**Pg**	**01 36 50.7**	**-1.1**	
RMP				AML	AML			
RMP				AML	AML			
ATMI	**Monte Miggiano**	**0.95**	**314**	↑P	**Pg**	**01 36 50.5**	**-1.5**	
SACS	**San Casciano d**	**0.96**	**281**	↑P	**Pg**	**01 36 51.6**	**-0.7**	
SACS				P	AML			
SACS				AML	AML			
SACS				AML	AML			
SACS				AML	AML			
COR1	**Corinaldo**	**0.96**	**352**	P	**Pg**	**01 36 51.2**	**-1.1**	
COR1				AML	AML			
COR1				AML	AML			
COR1				AML	AML			
COR1				AML	AML			
LPEL	**Lama dei Pelig**	**0.96**	**130**	P	**Pg**	**01 36 49.8**	**-2.5**	
ATPI	**Pietralunga -**	**0.97**	**323**	↑P	**Pg**	**01 36 50.5**	**-1.9**	
ATPI				AML	AML			
ATPI				AML	AML			
ATPI				AML	AML			
ATPC	**Poggio Castell**	**0.97**	**326**	↑P	**Pg**	**01 36 50.3**	**-2.1**	
VIVA	**Pratoni del Vi**	**0.98**	**199**	↑P	**Pg**	**01 36 51.4**	**-1.2**	
VIVA				AML	AML			
VIVA				AML	AML			
RDP	**Rocca di Papa**	**0.98**	**201**	↑P	**Pg**	**01 36 51.5**	**-1.2**	
PIEI	**Pieia**	**0.99**	**331**	↑P	**Pg**	**01 36 50.8**	**-2.0**	
ROM9	**Roma**	**0.99**	**211**	P	**Pg**	**01 36 52.6**	**-0.1**	
ROM9				AML	AML			
ROM9				AML	AML			
MA9	**Marino**	**0.99**	**204**	↑P	**Pg**	**01 36 51.3**	**-1.5**	
MA9				AML	AML			
MA9				AML	AML			
SAMA	**S.Maria delle**	**1.00**	**207**	P	**Pg**	**01 36 51.9**	**-1.1**	
MPAG	**Monte Paganucc**	**1.00**	**342**	↑P	**Pg**	**01 36 50.8**	**-2.3**	
SENI	**Senigallia**	**1.03**	**1**	P	**Pb**	**01 36 52.3**	**-1.2**	
LATE	**Laterza**	**1.03**	**267**	Pg	**Pb**	**01 36 52.7**	**-0.8**	
LATE	**Laterza**	**1.03**	**267**	↑P	**Pb**	**01 36 52.5**	**-1.1**	
POFI	**Posta Fibreno**	**1.03**	**158**	↓P	**Pb**	**01 36 51.3**	**-2.4**	
POFI				AML	AML			
POFI				AML	AML			
NARO	**Abbazia di Nar**	**1.04**	**334**	↑P	**Pb**	**01 36 51.6**	**-2.1**	
APEC	**Apecchio**	**1.05**	**327**	P	**Pb**	**01 36 52.2**	**-1.7**	
APEC				AML	AML			
APEC				AML	AML			
CDCA	**Citt' di Caste**	**1.05**	**318**	AML	AML			
CDCA				AML	AML			
FSSB	**Fossombrone**	**1.06**	**343**	↑P	**Pb**	**01 36 52.1**	**-2.0**	
FSSB				AML	AML			
FSSB				AML	AML			
ATMC	**Monte Cedrone**	**1.06**	**317**	↑P	**Pb**	**01 36 52.6**	**-1.6**	
LAV9	**Lanuvio**	**1.06**	**200**	↑P	**Pb**	**01 36 53.2**	**-0.9**	
LAV9				AML	AML			
LAV9				AML	AML			
LRP	**Arpino**	**1.07**	**164**	↑P	**Pb**	**01 36 53.1**	**-1.1**	
LRP				AML	AML			
LRP				AML	AML			
TOLF	**Tolfa**	**1.08**	**236**	↑P	**Pb**	**01 36 53.5**	**-0.8**	
TOLF				AML	AML			
TOLF				AML	AML			
BADI	**Badiali**	**1.09**	**320**	AML	AML			
BADI				AML	AML			
CAFI	**Castiglion Fio**	**1.11**	**306**	↑P	**Pb**	**01 36 53.5**	**-1.5**	
GIUL	**Giuliano Di Ro**	**1.12**	**178**	↑P	**Pb**	**01 36 53.5**	**-1.5**	
GIUL				AML	AML			
GIUL				AML	AML			
SF03	**Valle Cupa**	**1.12**	**277**	↑P	**Pb**	**01 36 53.9**	**-1.2**	
MCIV	**Monte Civitell**	**1.12**	**276**	↑P	**Pb**	**01 36 54.1**	**-1.1**	
MCIV				AML	AML			
MCIV				AML	AML			
SF11	**Podere del Sol**	**1.13**	**280**	↑P	**Pb**	**01 36 53.9**	**-1.4**	
PE3	**Peglio**	**1.14**	**334**	P	**Pb**	**01 36 53.9**	**-1.5**	
PE3				AML	AML			
	comp=E,3025μm,0.6s							
PE3				AML	AML			
SF04	**Casetta**	**1.14**	**279**	↑P	**Pb**	**01 36 54.3**	**-1.1**	
SF04				AML	AML			
SF04				AML	AML			
SF14	**Selvena**	**1.17**	**274**	↑P	**Pb**	**01 36 54.9**	**-1.0**	
SF13	**Bagnolo**	**1.17**	**277**	↑P	**Pb**	**01 36 54.8**	**-1.2**	
SSP9	**Sansepolcro**	**1.19**	**319**	↑P	**Pn**	**01 36 54.9**	**-1.3**	
SSP9				AML	AML			
SSP9				AML	AML			
PARC	**Parchiule**	**1.20**	**325**	↑P	**Pn**	**01 36 55.0**	**-1.4**	
LIK	**San Giovanni I**	**1.20**	**167**	P	**Pn**	**01 36 55.3**	**-1.1**	
LIK				AML	AML			
LIK				AML	AML			
RNI2	**Rionero Sannit**	**1.21**	**144**	P	**Pn**	**01 36 55.4**	**-1.2**	
RNI2				AML	AML			
RNI2				AML	AML			
SF01	**Poggio Pratacc**	**1.21**	**277**	↑P	**Pn**	**01 36 55.7**	**-0.9**	

ASQU				AML	AML				
ASQU				AML	AML				
BSSO	**Busso**	**1.54**	**137**	P	**Pb**	**01**	**37**	**02.4**	**+0.2**
BSSO				AML	AML				
BSSO				AML	AML				
BSSO				AML	AML				
BSSO				AML	AML				
BLLA	**Bellaria**	**1.56**	**340**	P	**Pb**	**01**	**37**	**02.7**	**+0.2**
BLLA				AML	AML				
BLLA				AML	AML				
SGG	**Gregorio Mates**	**1.56**	**145**	⇓P	**Pb**	**01**	**37**	**02.4**	**-0.3**
SGG				AML	AML				
	comp=N,1µm,1.5s								
SGG				AML	AML				
SGG				AML	AML				
	comp=E,1µm,1.2s								
SGG				AML	AML				
SFI	**Santa Sofia**	**1.57**	**322**	P	**Pg**	**01**	**37**	**04.1**	**+0.1**
SFI				AML	AML				
SFI				AML	AML				
SFI				AML	AML				
SFI				AML	AML				
FROS	**Frosini**	**1.59**	**290**	⇑P	**Pn**	**01**	**37**	**01.6**	**-0.2**
FROS				AML	AML				
FROS				AML	AML				
CSNT	**Castellina Chi**	**1.61**	**300**	⇑P	**Pn**	**01**	**37**	**01.6**	**-0.4**
CSNT				AML	AML				
CSNT				AML	AML				
MODR	**Mondragone**	**1.61**	**161**	⇓P	**Pn**	**01**	**37**	**01.7**	**-0.4**
MODR				AML	AML				
MODR				AML	AML				
CIGN	**Sant'Elia a Pi**	**1.63**	**128**	⇓P	**Pb**	**01**	**37**	**03.1**	**-0.7**
CIGN				AML	AML				
CIGN				AML	AML				
PIGN	**Pignataro Magg**	**1.65**	**153**	⇓P	**Pn**	**01**	**37**	**02.9**	**+0.3**
PIGN				AML	AML				
PIGN				AML	AML				
PIGN				AML	AML				
PIGN				AML	AML				
OSSC	**Osservatorio P**	**1.66**	**301**		**Pn**	**01**	**37**	**01.7**	**-1.0**
OSSC	**Osservatorio P**	**1.66**	**301**	⇑P	**Pn**	**01**	**37**	**02.4**	**-0.3**
OSSC				AML	AML				
OSSC				AML	AML				
OSSC				AML	AML				
OSSC				AML	AML				
RUFI	**Rufina**	**1.69**	**314**	P	**Pn**	**01**	**37**	**03.5**	**+0.3**
RUFI				AML	AML				
RUFI				AML	AML				
SACR	**S. Croce Del S**	**1.70**	**138**	⇓P	**Pb**	**01**	**37**	**04.4**	**-0.6**
SACR				AML	AML				
SACR				AML	AML				
CASP	**Castiglione de**	**1.72**	**275**	Pn	**Pn**	**01**	**37**	**03.2**	**-0.4**
CASP	**Castiglione de**	**1.72**	**275**	⇑P	**Pn**	**01**	**37**	**03.4**	**-0.2**
CASP				AML	AML				
	comp=E,63150µm,1.6s								
CASP				AML	AML				
	comp=N,74200µm,1.6s								
GATE	**Gambatesa**	**1.73**	**132**	⇓P	**Pb**	**01**	**37**	**05.2**	**-0.2**
GATE				AML	AML				
GATE				AML	AML				
GATE				AML	AML				
GATE				AML	AML				
MELA	**Melanico ??? S**	**1.73**	**123**	⇓P	**Pn**	**01**	**37**	**04.2**	**+0.5**
MELA				AML	AML				
MELA				AML	AML				
MELA				AML	AML				
MELA				AML	AML				
TRIF	**Trifonti**	**1.74**	**285**	⇑P	**Pn**	**01**	**37**	**03.9**	**+0.1**
TRIF				AML	AML				
TRIF				AML	AML				
LMD	**Lutirano**	**1.77**	**323**	⇑P	**Pn**	**01**	**37**	**04.1**	**-0.2**
LMD				AML	AML				
LMD				AML	AML				
TREM	**Isole Tremiti**	**1.80**	**107**	⇑P	**Pn**	**01**	**37**	**04.6**	**0.0**
TREM				AML	AML				
TREM				AML	AML				
VITU	**Vitulano (BN)**	**1.84**	**144**	⇓P	**Pn**	**01**	**37**	**05.6**	**+0.4**
VITU				AML	AML				
VITU				AML	AML				
VITU				AML	AML				
VITU				AML	AML				
PSB1	**Pescosannita**	**1.89**	**140**	⇓P	**Pb**	**01**	**37**	**07.1**	**-1.0**
PSB1				AML	AML				
PSB1				AML	AML				
PSB1				AML	AML				
PSB1				AML	AML				
VENT	**Ventotene**	**1.89**	**175**	⇓P	**Pn**	**01**	**37**	**05.5**	**-0.3**
VENT				AML	AML				
VENT				AML	AML				
DUGI	**Dugi Otok**	**1.89**	**45**	*i* Pn	**Pn**	**01**	**37**	**04.2**	**-1.6**
BRIS	**BRISIGHELLA**	**1.92**	**321**	⇑P	**Pn**	**01**	**37**	**06.2**	**0.0**
SEI	**Scarperia**	**1.92**	**316**	P	**Pn**	**01**	**37**	**06.9**	**+0.5**
SEI				AML	AML				
SEI				AML	AML				
PAOL	**Paolisi**	**1.94**	**148**	Pn	**Pn**	**01**	**37**	**07.2**	**+0.6**
PAOL	**Paolisi**	**1.94**	**148**	⇓P	**Pn**	**01**	**37**	**06.9**	**+0.3**
PAOL				AML	AML				
PAOL				AML	AML				
PAOL				AML	AML				
PAOL				AML	AML				
MOCO	**Biccari - m.te**	**1.96**	**131**	⇓P	**Pn**	**01**	**37**	**08.2**	**+1.3**
MOCO				AML	AML				
MOCO				AML	AML				
MOCO				AML	AML				
MOCO				AML	AML				
APRC	**Apricena**	**1.97**	**117**	⇓P	**Pn**	**01**	**37**	**07.1**	**+0.1**
APRC				AML	AML				
APRC				AML	AML				
APRC				AML	AML				
	comp=N,75200µm,0.6s								
APRC				AML	AML				
CRMI	**Carmignano**	**1.97**	**305**	AML	AML				
CRMI				AML	AML				
A318A	**Donoratico (LI**	**1.98**	**284**	⇑P	**Pn**	**01**	**37**	**06.8**	**-0.2**
IMOL	**Imola, Italy**	**1.99**	**328**	P	**Pb**	**01**	**37**	**09.6**	**-0.2**
IMOL				AML	AML				
IMOL				AML	AML				
MPPT	**Montemurlo**	**2.00**	**310**	P	**Pn**	**01**	**37**	**08.0**	**+0.5**
MPPT				AML	AML				
MPPT				AML	AML				
MRB1	**Monte Rocchett**	**2.04**	**139**	⇓P	**Pn**	**01**	**37**	**09.0**	**+1.0**
MRB1				AML	AML				
MRB1				AML	AML				
MRB1				AML	AML				
MRB1				AML	AML				
VVDG	**Vesuvio Valle**	**2.06**	**153**	⇓P	**Pn**	**01**	**37**	**08.4**	**+0.2**
VVDG				AML	AML				
VVDG				AML	AML				
BIOG	**Biogem**	**2.06**	**135**	⇓P	**Pb**	**01**	**37**	**10.7**	**-0.5**
BIOG				AML	AML				
BIOG				AML	AML				
BIOG				AML	AML				
BIOG				AML	AML				
A319A	**Santa Luce (PI**	**2.08**	**294**	⇑P	**Pn**	**01**	**37**	**08.4**	**0.0**
VTIR	**Vesuvio Tirone**	**2.08**	**153**	⇓P	**Pn**	**01**	**37**	**09.2**	**+0.6**
VTIR				AML	AML				
VTIR				AML	AML				
	comp=N,83900µm,1.0s								
A308A	**Longastrino (F**	**2.09**	**336**	P	**Pb**	**01**	**37**	**10.7**	**-0.9**
MTCR	**Monte La Croce**	**2.10**	**311**	P	**Pn**	**01**	**37**	**08.2**	**-0.6**
MTCR				AML	AML				
MTCR				AML	AML				
SGRT	**San Giovanni R**	**2.10**	**115**	Pn	**Pn**	**01**	**37**	**09.0**	**+0.1**
SGRT	**San Giovanni R**	**2.10**	**115**	P	**Pn**	**01**	**37**	**09.2**	**+0.3**
	baz=120								
SGRT				S	**Sn**	**01**	**37**	**35.2**	**+0.1**
	baz=120								
SGRT	**San Giovanni R**	**2.10**	**115**	⇓P	**Pn**	**01**	**37**	**09.0**	**+0.1**
SGRT				AML	AML				
SGRT				AML	AML				
VIRC	**Vir**	**2.11**	**39**	*i* Pn	**Pn**	**01**	**37**	**07.4**	**-1.4**
MTRZ	**Monterenzio**	**2.11**	**324**	⇑P	**Pn**	**01**	**37**	**10.0**	**+1.0**
MTRZ				AML	AML				
MTRZ				AML	AML				
FNVD	**Fontana Vidola**	**2.12**	**315**	P	**Pn**	**01**	**37**	**08.4**	**-0.7**
FNVD				AML	AML				
FNVD				AML	AML				
CMPO	**Campotto Po**	**2.15**	**333**	P	**Pb**	**01**	**37**	**12.1**	**-0.6**
MORI	**Morici**	**2.19**	**56**	*i* Pn	**Pn**	**01**	**37**	**09.0**	**-1.0**
CELB	**S.Piero in Cam**	**2.20**	**273**	⇑P	**Pn**	**01**	**37**	**09.8**	**-0.4**
CELB				AML	AML				
	comp=N,38300µm,1.5s								
CELB				AML	AML				
	comp=E,29750µm,1.6s								
PII	**Pisa**	**2.21**	**299**	⇑P	**Pn**	**01**	**37**	**09.9**	**-0.4**
PII				AML	AML				
	comp=N,90750µm,0.7s								
PII				AML	AML				
	comp=E,90100µm,1.3s								
MSAG	**Monte S. Angel**	**2.23**	**115**	⇓P	**Pn**	**01**	**37**	**11.0**	**+0.3**
MSAG				AML	AML				
MSAG				AML	AML				
MSAG				AML	AML				
MSAG				AML	AML				
SGTA	**Sant Agata di**	**2.23**	**133**	⇓P	**Pn**	**01**	**37**	**11.6**	**+1.0**
SGTA				AML	AML				
SGTA				AML	AML				
SGTA				AML	AML				
SGTA				AML	AML				
CAFE	**Carife**	**2.24**	**137**	⇓P	**Pn**	**01**	**37**	**12.4**	**+1.5**
CAFE				AML	AML				
CAFE				AML	AML				
CAFE				AML	AML				
CAFE				AML	AML				
NVLJ	**Novalja**	**2.24**	**32**	*i* Pn	**Pn**	**01**	**37**	**09.4**	**-1.3**
POPM	**Popiglio**	**2.24**	**308**	⇑P	**Pn**	**01**	**37**	**10.1**	**-0.6**
POPM				AML	AML				
	comp=E,94650µm,1.6s								
POPM				AML	AML				
RSF3	**Rocca San Feli**	**2.26**	**138**	⇓P	**Pn**	**01**	**37**	**11.8**	**+0.8**
BRJN	**Brijuni**	**2.26**	**10**	*e*Pn	**Pn**	**01**	**37**	**11.4**	**+0.4**
BRJN	**Brijuni**	**2.26**	**10**	⇑P	**Pn**	**01**	**37**	**09.9**	**-1.1**
SNAL	**S. Angelo Dei**	**2.31**	**139**	⇓P	**Pn**	**01**	**37**	**12.4**	**+0.7**
SNAL				AML	AML				
SNAL				AML	AML				
SNAL				AML	AML				
SNAL				AML	AML				
LIO3	**Lioni**	**2.32**	**140**	⇓P	**Pn**	**01**	**37**	**12.7**	**+1.0**
FIU	**Minerbio Fiu**	**2.32**	**328**	P	**Pb**	**01**	**37**	**14.1**	**-1.4**
FIU				AML	AML				
FIU				AML	AML				
ZCCA	**Zocca**	**2.33**	**317**	Pn	**Pn**	**01**	**37**	**12.0**	**+0.1**
ZCCA	**Zocca**	**2.33**	**317**	⇑P	**Pn**	**01**	**37**	**13.3**	**+1.4**
ZCCA				AML	AML				
ZCCA				AML	AML				
ZCCA				AML	AML				
ZCCA				AML	AML				
MAIM	**Mastiano**	**2.33**	**303**	⇑P	**Pn**	**01**	**37**	**11.7**	**-0.2**
MAIM				AML	AML				
	comp=E,80600µm,1.3s								
MAIM				AML	AML				
	comp=N,76800µm,1.6s								
BDI	**Bagni Di Lucca**	**2.35**	**307**	⇑P	**Pn**	**01**	**37**	**11.4**	**-0.8**
BDI				AML	AML				
BDI				AML	AML				
	comp=E,50900µm,1.6s								
BDI				AML	AML				
	comp=N,53450µm,1.4s								
BDI				AML	AML				
RABC	**Rab**	**2.37**	**28**	*e*Pn	**Pn**	**01**	**37**	**11.3**	**-1.1**
CARD	**Cardoso**	**2.40**	**305**	⇑P	**Pn**	**01**	**37**	**12.2**	**-0.6**
CARD				AML	AML				
	comp=N,79850µm,1.0s								
CARD				AML	AML				
	comp=E,84550µm,1.6s								
MCRV	**Calabrutti - M**	**2.40**	**141**	⇓P	**Pn**	**01**	**37**	**13.6**	**+0.6**
SMRN	**Sveta Marina**	**2.46**	**16**	*i* Pn	**Pn**	**01**	**37**	**13.3**	**-0.3**
CAPA	**Cerignola FG**	**2.48**	**127**	AML	AML				
CAPA				AML	AML				
VULT	**Monte Vulture**	**2.50**	**133**	⇓P	**Pn**	**01**	**37**	**15.3**	**+1.0**
VULT				AML	AML				
VULT				AML	AML				
VULT				AML	AML				
VULT				AML	AML				
RDM3	**Ruvo Del Monte**	**2.51**	**135**	⇓P	**Pn**	**01**	**37**	**16.2**	**+1.7**
VLC	**Villacollemand**	**2.53**	**307**		**Pn**	**01**	**37**	**13.7**	**-1.0**
VLC	**Villacollemand**	**2.53**	**307**	⇑P	**Pn**	**01**	**37**	**13.8**	**-0.8**
VLC				AML	AML				
	comp=E,87600µm,1.2s								
VLC				AML	AML				
VLC				AML	AML				
	comp=E,84800µm,1.2s								
VLC				AML	AML				
FERS	**Ferrara-Casagl**	**2.53**	**332**	AML	AML				
FERS				AML	AML				
GSCL	**Gusciola**	**2.53**	**312**	AML	AML				
GSCL				AML	AML				
GROG	**Isola di Gorgo**	**2.54**	**288**	⇑P	**Pn**	**01**	**37**	**14.6**	**-0.1**
GROG				AML	AML				
	comp=E,37300µm,1.6s								
GROG				AML	AML				
	comp=N,37050µm,1.6s								
RAVA	**Ravarino**	**2.57**	**325**	P	**Pb**	**01**	**37**	**17.6**	**-2.1**
RAVA				AML	AML				
RAVA				AML	AML				
MRLC	**Muro Lucano**	**2.57**	**137**	⇓P	**Pn**	**01**	**37**	**16.1**	**+0.8**
MRLC				AML	AML				
	comp=E,76950µm,1.6s								
MRLC				AML	AML				
	comp=N,68100µm,1.6s								
MRLC				AML	AML				
	comp=E,74850µm,1.6s								
MRLC				AML	AML				
	comp=N,72300µm,1.6s								
UDBI	**Udbina**	**2.63**	**44**	*i* Pn	**Pn**	**01**	**37**	**16.0**	**0.0**
A306A	**Viano (RE)**	**2.65**	**315**	⇑P	**Pn**	**01**	**37**	**18.6**	**+2.2**
EQUI	**Equi**	**2.67**	**305**	⇑P	**Pn**	**01**	**37**	**16.0**	**-0.6**
EQUI				AML	AML				
	comp=N,51950µm,1.6s								
EQUI				AML	AML				
	comp=E,59400µm,1.6s								
KIJV	**Kijevo**	**2.69**	**59**	*i* Pn	**Pn**	**01**	**37**	**16.7**	**-0.2**
PALZ	**Palazzo San Ge**	**2.69**	**129**	⇓P	**Pn**	**01**	**37**	**17.7**	**+0.7**
PALZ				AML	AML				
PALZ				AML	AML				
CDRU	**Civita di Ruta**	**2.70**	**143**	⇓P	**Pn**	**01**	**37**	**17.1**	**+0.1**
CAVE	**Cavezzo**	**2.70**	**325**	AML	AML				
CAVE				AML	AML				
A250A	**Rusevo Krmpots**	**2.71**	**27**	*i* Pn	**Pn**	**01**	**37**	**16.3**	**-0.9**
SERM	**Sermide**	**2.71**	**330**	AML	AML				
SERM				AML	AML				
SERM				AML	AML				
SERM				AML	AML				
LSTV	**Lastovo**	**2.73**	**87**	*i* Pn	**Pn**	**01**	**37**	**16.3**	**-1.1**
MRVN	**Minervino Murg**	**2.76**	**125**	⇓P	**Pn**	**01**	**37**	**18.1**	**+0.2**
MRVN				AML	AML				
	comp=N,49800µm,1.5s								
MRVN				AML	AML				
	comp=E,52950µm,1.6s								
ACER	**Acerenza**	**2.79**	**132**	⇓P	**Pn**	**01**	**37**	**19.2**	**+0.9**
ACER				AML	AML				
ACER				AML	AML				
ACER				AML	AML				
ACER				AML	AML				
PLMA	**Palmaria, Port**	**2.80**	**300**	⇑P	**Pn**	**01**	**37**	**18.4**	**0.0**
PLMA				AML	AML				
	comp=N,30000µm,0.8s								
PLMA				AML	AML				
	comp=E,35450µm,1.5s								
RIY	**Rijeka**	**2.81**	**19**	*e*Pn	**Pn**	**01**	**37**	**18.2**	**-0.2**
PLIT	**Plitvice**	**2.82**	**38**	*e*Pn	**Pn**	**01**	**37**	**19.4**	**+0.8**
PZUN	**Potenza**	**2.82**	**135**	⇓P	**Pn**	**01**	**37**	**19.8**	**+1.2**
PZUN				AML	AML				
	comp=E,92300µm,1.6s								
PZUN				AML	AML				
PZUN				AML	AML				
	comp=E,95300µm,1.6s								
PZUN				AML	AML				
CMPR	**Campora**	**2.84**	**145**	⇓P	**Pn**	**01**	**37**	**19.0**	**0.0**
CMPR				AML	AML				
	comp=E,41900µm,1.2s								
CMPR				AML	AML				
	comp=N,33600µm,1.3s								
MAKA	**Makarska**	**2.87**	**76**	*i* Pn	**Pn**	**01**	**37**	**18.6**	**-0.7**
SBPO	**S.Benedetto Po**	**2.89**	**326**	AML	AML				
SBPO				AML	AML				
TEOL	**Teolo**	**2.90**	**338**	Pn	**Pn**	**01**	**37**	**19.6**	**-0.2**
TEOL	**Teolo**	**2.90**	**338**	P	**Pn**	**01**	**37**	**19.8**	**+0.1**
TEOL				AML	AML				
TEOL				AML	AML				
GRAM	**Graiana**	**2.91**	**310**	⇑P	**Pn**	**01**	**37**	**20.4**	**+0.5**
GRAM				AML	AML				
GRAM				AML	AML				
SKDS	**Skadanscina**	**2.93**	**11**	⇑*i*Pn	**Pn**	**01**	**37**	**19.0**	**-1.2**
SKDS				*e*Sn	**Sn**	**01**	**37**	**55.4**	**+0.1**
SKDS	**Skadanscina**	**2.93**	**11**	⇑*e*Pn	**Pn**	**01**	**37**	**19.0**	**-1.2**
SKDS				*i* Sn	**Sn**	**01**	**37**	**53.4**	**-1.9**
SKDS				IAML		01	38	38.8	
	comp=Z,230µm,3.0s								
PRMA	**PARMA**	**2.95**	**316**	Pn	**Pn**	**01**	**37**	**22.6**	**+2.1**
SMPL	**Sampolo**	**2.96**	**260**	⇑P	**Pn**	**01**	**37**	**20.3**	**-0.2**
KNDS	**Knezji Dol**	**2.98**	**16**	⇑*i*Pn	**Pn**	**01**	**37**	**20.0**	**-0.9**
KNDS				*e*Sn	**Sn**	**01**	**37**	**54.3**	**-2.3**
KNDS				IAML		01	38	19.0	
	comp=Z,199µm,1.8s								
RICI	**Ricice**	**3.00**	**73**	*i* Pn	**Pn**	**01**	**37**	**20.9**	**-0.2**
OPPE	**Oppeano**	**3.01**	**332**	⇑P	**Pn**	**01**	**37**	**22.1**	**+0.9**
OPPE				AML	AML				
OPPE				AML	AML				
A050A	**Klekovaca**	**3.02**	**52**	⇑*i*Pn	**Pn**	**01**	**37**	**21.8**	**+0.3**
A050A				*e*Sn	**Sn**	**01**	**37**	**58.1**	**+0.4**
MNTV	**Mantova**	**3.02**	**326**	AML	AML				
MNTV				AML	AML				
ZOVE	**Zovencedo**	**3.04**	**337**	P	**Pn**	**01**	**37**	**21.8**	**+0.2**
PTRP	**Pietrapertosa**	**3.04**	**134**	AML	AML				
PTRP				AML	AML				
MCEL	**Monticello**	**3.06**	**139**	⇓P	**Pn**	**01**	**37**	**23.4**	**+1.4**
MCEL				AML	AML				
	comp=N,52700µm,1.3s								
MCEL				AML	AML				
	comp=N,51350µm,1.3s								
MCEL				AML	AML				
	comp=E,92600µm,1.6s								
MCEL				AML	AML				
	comp=E,94150µm,1.6s								
TRI	**Trieste**	**3.06**	**7**		**Pn**	**01**	**37**	**20.6**	**-1.3**
TRI	**Trieste**	**3.06**	**7**	P	**Pn**	**01**	**37**	**20.6**	**-1.3**
BULG	**Bulgheria - Ca**	**3.07**	**147**	⇓P	**Pn**	**01**	**37**	**22.6**	**+0.5**
MTSN	**Montesano sull**	**3.08**	**141**	⇓P	**Pn**	**01**	**37**	**23.6**	**+1.3**
MGR	**Morigerati**	**3.10**	**144**	⇓P	**Pn**	**01**	**37**	**22.9**	**+0.5**
MGR				AML	AML				
	comp=E,20270µm,1.1s								
MGR				AML	AML				
	comp=N,24550µm,1.3s								
MGR				AML	AML				
	comp=E,20700µm,1.6s								
MGR				AML	AML				
	comp=N,26850µm,1.1s								
AMUR	**Altamura**	**3.10**	**124**	⇓P	**Pn**	**01**	**37**	**23.0**	**+0.5**
AMUR				AML	AML				
	comp=N,69300µm,1.4s								
AMUR				AML	AML				
	comp=E,63050µm,1.2s								
PGF	**Pioggiola**	**3.10**	**269**	*e*P	**Pn**	**01**	**37**	**22.7**	**+0.1**
PGF				*e*Sn	**Sn**	**01**	**37**	**55.9**	**-3.8**
	comp=E,9µm,1.1s								
MSSA	**Maissana**	**3.14**	**303**	Pn	**Pn**	**01**	**37**	**22.7**	**-0.4**
MSSA	**Maissana**	**3.14**	**303**	⇑P	**Pn**	**01**	**37**	**23.0**	**-0.1**
MSSA				AML	AML				
	comp=N,56400µm,1.6s								
MSSA				AML	AML				
	comp=E,44750µm,1.6s								
CEY	**Cerknica**	**3.19**	**16**	⇑*i*Pn	**Pn**	**01**	**37**	**22.8**	**-0.9**
CEY				*e*Sn	**Sn**	**01**	**38**	**01.1**	**-0.6**
BOJS	**Bojanci**	**3.19**	**27**	⇑*i*Pn	**Pn**	**01**	**37**	**22.9**	**-0.8**
BOJS				*e*Sn	**Sn**	**01**	**38**	**02.2**	**+0.5**
BOJS	**Bojanci**	**3.19**	**27**	⇑*e*Pn	**Pn**	**01**	**37**	**23.8**	**0.0**
BOJS				*e*Sn	**Sn**	**01**	**38**	**02.9**	**+1.2**
BOJS				IAML		01	38	31.7	
	comp=Z,169µm,2.2s								
MIGL	**Miglionico**	**3.19**	**129**	⇓P	**Pn**	**01**	**37**	**24.6**	**+0.8**
MIGL				AML	AML				
MIGL				AML	AML				
SIRI	**Monte Sirino -**	**3.20**	**140**	⇓P	**Pn**	**01**	**37**	**25.6**	**+1.6**
SIRI				AML	AML				
	comp=N,37150µm,1.6s								
SIRI				AML	AML				
	comp=N,37950µm,1.6s								
SIRI				AML	AML				
	comp=E,51950µm,1.6s								
SIRI				AML	AML				
	comp=E,50800µm,1.6s								
TREG	**Tregnago**	**3.20**	**333**	P	**Pn**	**01**	**37**	**24.4**	**+0.5**
SRKY	**Kupres RS**	**3.21**	**63**	⇑*i*Pn	**Pn**	**01**	**37**	**24.6**	**+0.5**
SRKY				*e*Sn	**Sn**	**01**	**38**	**03.4**	**+1.0**
JAVS	**Javornik**	**3.28**	**11**	⇑*i*Pn	**Pn**	**01**	**37**	**23.7**	**-1.3**
SCHR	**S. Chirico Rap**	**3.29**	**138**	P	**Pn**	**01**	**37**	**26.4**	**+1.2**
SCHR				AML	AML				
	comp=E,26500µm,1.6s								
SCHR				AML	AML				
	comp=N,37000µm,1.6s								
A251A	**Rujevac**	**3.31**	**41**	*e*Pn	**Pn**	**01**	**37**	**25.0**	**-0.3**
SABO	**M.te Sabotino**	**3.31**	**5**	Pn	**Pn**	**01**	**37**	**24.9**	**-0.6**
SABO	**M.te Sabotino**	**3.31**	**5**	⇑P	**Pn**	**01**	**37**	**24.6**	**-0.9**
SABO				AML	AML				
SABO				AML	AML				
SABO				AML	AML				
SABO				AML	AML				
MATE	**Matera**	**3.32**	**126**	⇓P	**Pn**	**01**	**37**	**26.2**	**+0.7**
MATE				AML	AML				
	comp=E,63100µm,1.1s								
MATE				AML	AML				
	comp=N,70800µm,0.8s								
MGRS	**Mrkonjic Grad**	**3.32**	**57**	⇑*i*Pn	**Pn**	**01**	**37**	**26.3**	**+0.8**
MGRS				*e*Sn	**Sn**	**01**	**38**	**06.2**	**+1.3**
STON	**Ston**	**3.32**	**85**	*e*Sn	**Sn**	**01**	**38**	**06.0**	**+1.1**
STON	**Ston**	**3.32**	**85**	*i* Pn	**Pn**	**01**	**37**	**23.4**	**-2.1**
STON	**Ston**	**3.32**	**85**	*e*Pn	**Pn**	**01**	**37**	**24.5**	**-1.0**
STON				*e*Sn	**Sn**	**01**	**38**	**07.1**	**+2.2**
STON	**Ston**	**3.32**	**85**	AML	AML				
	comp=N,37850µm,1.6s								
STON				AML	AML				
	comp=E,23600µm,1.4s								
CUC	**Castrocucco**	**3.33**	**143**	Pn	**Pn**	**01**	**37**	**26.5**	**+0.8**
CUC	**Castrocucco**	**3.33**	**143**	⇓P	**Pn**	**01**	**37**	**26.3**	**+0.6**
CUC				AML	AML				
	comp=E,37800µm,1.6s								
CUC				AML	AML				
	comp=N,34850µm,1.6s								
CUC				AML	AML				
	comp=E,46200µm,1.6s								
CUC				AML	AML				
	comp=N,28350µm,1.6s								
ROVR	**Rover Verones**	**3.34**	**333**	⇑P	**Pn**	**01**	**37**	**26.1**	**+0.2**
CRAC	**Craco**	**3.35**	**132**	⇓P	**Pn**	**01**	**37**	**27.2**	**+1.2**
CRAC				AML	AML				
CRAC				AML	AML				
CGRP	**Cima Grappa**	**3.36**	**343**	⇑P	**Pn**	**01**	**37**	**26.5**	**+0.3**
CGRP				AML	AML				
CGRP				AML	AML				
CGRP				AML	AML				
CGRP				AML	AML				
OZLJ	**Ozalj**	**3.36**	**28**	*i* Pn	**Pn**	**01**	**37**	**25.2**	**-0.8**
AJAC	**Base Areonaval**	**3.37**	**259**	⇑P	**Pn**	**01**	**37**	**27.2**	**+1.0**
GBAS	**Gorenja Brezov**	**3.38**	**15**	⇑*i*Pn	**Pn**	**01**	**37**	**25.7**	**-0.6**
VOJS	**Vojsko**	**3.39**	**8**	⇑*i*Pn	**Pn**	**01**	**37**	**25.3**	**-1.3**
FRE8	**Fregona**	**3.39**	**350**	AML	AML				
FRE8				AML	AML				
VARN	**Col Varnada, M**	**3.41**	**347**	P	**Pn**	**01**	**37**	**26.5**	**-0.3**
VARN				AML	AML				
VARN				AML	AML				
VARN				AML	AML				
VARN				AML	AML				
LTRZ	**Laterza**	**3.42**	**126**	AML	AML				
	comp=E,52950µm,1.1s								
LTRZ				AML	AML				
	comp=N,65150µm,1.6s								
BOB	**Bobbio (Coli)**	**3.43**	**309**	AML	AML				
	comp=N,92

NOCI AML AML
comp=E,37000µm,0.9s
CRNS Crni Vrh 3.49 12⇑ *i*Pn **Pn 01 37 26.9 -0.9**
MMN Mormanno 3.49 142 ⇓P **Pn 01 37 28.6 +0.8**
MMN AML AML
comp=N,16100µm,1.4s
MMN AML AML
comp=E,7655µm,1.6s
LJU Ljubljana 3.50 15⇑ *i*Pn **Pn 01 37 27.7 -0.3**
LJU *i* 01 37 30.4
LJU *e* 01 37 38.0
LJU *e*Sn **Sn 01 38 09.5 +0.1**
LJU *e* 01 38 31.4
LJU IAML 01 38 36.0
comp=Z,218µm,2.3s
LJU Ljubljana 3.50 15 AML AML
LJU AML AML
DRE Drenchia 3.51 5 ⇑P **Pn 01 37 27.1 -1.1**
DOSS Dosso del Somm 3.51 336 P **Pn 01 37 28.7 +0.4**
DOSS AML AML
comp=E,84450µm,0.7s
DOSS AML AML
comp=N,88250µm,0.6s
DOSS AML AML
comp=N,85400µm,1.5s
DOSS AML AML
comp=E,89000µm,1.5s
SALO Salr 3.51 328 **Pn 01 37 28.5 +0.3**
SALO Salr 3.51 328 P **Pn 01 37 28.4 +0.3**
SALO AML AML
SALO AML AML
SALO AML AML
SALO AML AML
CRES Cresnjev 3.54 27 *e*Pn **Pn 01 37 27.9 -0.7**
CRES *e*Sn **Sn 01 38 10.1 -0.3**
CRES Cresnjev 3.54 27⇑ *i*Pn **Pn 01 37 27.9 -0.7**
BLY Banja Luka 3.56 53⇑ *i*Pn **Pn 01 37 28.7 0.0**
BLY *e*Sn **Sn 01 38 11.5 +0.8**
BLY Banja Luka 3.56 53 *e*Pn **Pn 01 37 28.7 0.0**
BLY Banja Luka 3.56 53 ⇑P **Pn 01 37 28.8 0.0**
BLY AML AML
comp=E,75850µm,1.6s
BLY AML AML
comp=E,75800µm,1.6s
BLY AML AML
comp=N,53900µm,1.2s
BLY AML AML
comp=N,55100µm,1.2s
A051A Mrakovica 3.56 48⇑ *i*Pn **Pn 01 37 28.5 -0.4**
A051A *e*Sn **Sn 01 38 11.8 +0.9**
BAD Bernadia 3.56 1 P **Pn 01 37 27.3 -1.6**
MPRI Monte Prat 3.57 358 AML AML
MPRI AML AML
MPRI AML AML
MPRI AML AML
RNCA Ronca, Sant'Ol 3.57 302 ⇑P **Pn 01 37 28.9 0.0**
RNCA AML AML
comp=N,19850µm,1.6s
RNCA AML AML
comp=E,15150µm,1.6s
CADS Cadrg 3.57 6⇑ *i*Pn **Pn 01 37 27.9 -1.1**
ORI Oriolo Calabro 3.58 136 ⇓P **Pn 01 37 31.1 +2.0**
ORI AML AML
comp=E,49300µm,1.6s
ORI AML AML
comp=N,49500µm,1.2s
STAL STALIGIAL 3.60 355 ⇑P **Pn 01 37 28.7 -0.7**
STAL AML AML
comp=N,96300µm,1.2s
STAL AML AML
STAL AML AML
STAL AML AML
comp=E,82650µm,0.9s
ORZI Orzinuovi 3.60 320 ⇑P **Pn 01 37 31.1 +1.8**
MAGA Magasa 3.61 330 ⇑P **Pn 01 37 29.6 0.0**
MAGA AML AML
MAGA AML AML
GCIS Gornji Cirnik 3.64 28⇑ *i*Pn **Pn 01 37 29.1 -0.7**
DBRK Dubrovnik 3.65 88 *i*Pn **Pn 01 37 28.7 -1.4**
LUSI Trento, Gardas 3.66 335 ⇑P **Pn 01 37 30.5 +0.3**
LUSI AML AML
comp=E,88650µm,0.8s
LUSI AML AML
comp=N,78650µm,0.9s
SALB San Lorenzo Be 3.67 139 ⇓P **Pn 01 37 32.0 +1.6**
CIMO Cimolais 3.67 352 Pn **Pn 01 37 29.4 -1.0**
CIMO Cimolais 3.67 352 ⇑P **Pn 01 37 29.8 -0.6**
CIMO AML AML
comp=N,47200µm,1.0s
CIMO AML AML
comp=E,48850µm,1.6s
CIMO AML AML
comp=E,48150µm,1.6s
CIMO AML AML
comp=N,46150µm,1.1s
CESS Cesta pri Krsk 3.67 25⇑ *i*Pn **Pn 01 37 29.9 -0.5**
GORS Gorjuse 3.68 9⇑ *i*Pn **Pn 01 37 29.4 -1.2**
MOZS Mozjanca 3.73 13⇑ *i*Pn **Pn 01 37 30.3 -0.8**
MOZS *e*Sn **Sn 01 38 16.9 +1.9**
MOZS IAML 01 38 50.9
comp=Z,91µm,1.4s
PTCC Patocco-Chiusa 3.73 2 ⇑P **Pn 01 37 30.1 -1.1**
PTCC AML AML
comp=E,46800µm,0.9s
PTCC AML AML
comp=N,47700µm,0.7s
ZAG Zagreb 3.73 32 *i*Pn **Pn 01 37 30.3 -0.9**
FUSE Fusea 3.74 358 ⇑P **Pn 01 37 30.5 -0.8**
GOLS Golise 3.76 27⇑ *i*Pn **Pn 01 37 30.8 -0.8**
GAGG Gaggia 3.77 336 P **Pn 01 37 32.3 +0.5**
GAGG AML AML
GAGG AML AML
GAGG AML AML
GAGG AML AML
CET2 Cetraro 3.77 146 ⇓P **Pn 01 37 32.5 +0.7**
CET2 AML AML
comp=N,27350µm,1.6s
CET2 AML AML
comp=E,44150µm,1.6s
PRED Cave del Predi 3.77 4 **Pn 01 37 30.1 -1.7**
PRED Cave del Predi 3.77 4 ⇑P **Pn 01 37 30.8 -1.0**
CLUD Cludinico 3.79 357 ⇑P **Pn 01 37 31.3 -0.7**
PTJ Puntijarka 3.79 31 *i*Pn **Pn 01 37 30.6 -1.5**
ZONE Zone 3.80 325 ⇑P **Pn 01 37 32.1 0.0**
ZONE AML AML
comp=E,11420µm,1.6s
ZONE AML AML
comp=N,10095µm,0.9s
ZONE AML AML
comp=N,40200µm,0.9s
ZONE AML AML
comp=E,46500µm,1.6s
SARZ Sarezzano 3.80 307 P **Pn 01 37 34.1 +2.0**
SARZ AML AML
SARZ AML AML
SARZ AML AML
SARZ AML AML
TDS Terranova Siba 3.84 141 ⇓P **Pn 01 37 34.0 +1.3**
PCP Piancastagn 3.86 300 ⇑P **Pn 01 37 32.3 -0.7**
PCP AML AML
comp=N,18035µm,1.6s
PCP AML AML
comp=E,15400µm,1.6s
PLRO Paularo 3.87 360 ⇑P **Pn 01 37 32.5 -0.7**
ACOM Acomizza, Ital 3.88 3 ⇑P **Pn 01 37 32.7 -0.7**
ACOM AML AML
ACOM AML AML
comp=N,97550µm,1.0s
ACOM AML AML
ACOM AML AML
ZOU Zoufplan 3.88 358 ⇑P **Pn 01 37 32.9 -0.6**
ZOU AML AML
ZOU AML AML
ZOU AML AML
ZOU AML AML
MABI Malga Bissina 3.89 331 ⇑P **Pn 01 37 33.9 +0.4**
MABI AML AML
comp=E,19300µm,1.5s
MABI AML AML
comp=N,21950µm,1.4s
QLNO Quiliano 3.89 297 ⇑P **Pn 01 37 33.5 0.0**
QLNO AML AML
comp=E,14595µm,1.5s
QLNO AML AML
comp=N,26350µm,1.6s
MOSL Moslavina 3.90 40 *i*Pn **Pn 01 37 31.7 -1.7**
HCY Herceg Novi 3.92 92 *e*Pn **Pn 01 37 34.4 +0.6**
HCY *e*Sn **Sn 01 38 20.5 +0.8**
HCY Herceg Novi 3.92 92⇑ *i*Pn **Pn 01 37 33.6 -0.2**
HCY *i* Sn **Sn 01 38 20.0 +0.3**
CANO Canova, Maglio 3.92 295 ⇑P **Pn 01 37 33.6 -0.2**
CANO AML AML
comp=E,44500µm,1.1s
CANO AML AML
comp=N,33700µm,1.2s
BRY Bratogost 3.94 85⇑ *i*Pn **Pn 01 37 34.0 -0.2**
BRY *e*Sn **Sn 01 38 21.0 +0.6**
BRY Bratogost 3.94 85⇓ *i*Pn **Pn 01 37 33.8 -0.4**
BRY *i* Sn **Sn 01 38 20.4 0.0**
OBKA Obir 3.95 14⇑ *i*Pn **Pn 01 37 33.4 -0.9**
OBKA *e*Sn **Sn 01 38 19.6 -1.0**
OBKA Obir 3.95 14 *e*Pn **Pn 01 37 33.6 -0.7**
comp=N,292nm,0.5s,SNR=278
OBKA Sn **Sn 01 38 22.5 +1.8**
comp=N,5µm,0.6s
OBKA Obir 3.95 14 *e*Pn **Pn 01 37 33.3 -1.0**
OBKA *e*Pg **Pg 01 37 48.7 -0.7**
OBKA *e*Sg **Sg 01 38 45.4 +4.8**
MYKA Terra Mystica 3.96 4 *e*Pn **Pn 01 37 34.2 -0.2**
comp=N,1µm,0.6s,SNR=550
MYKA Sn **Sn 01 38 18.1 -2.9**
comp=N,2µm,0.5s
USI Ustica 3.96 180 ⇑P **Pn 01 37 37.0 +2.6**
KOSI Kohlern 4.00 342 AML AML
KOSI AML AML
RORO Rocca Rossa 4.00 293 ⇓P **Pn 01 37 34.7 -0.2**
LOBO Lobor 4.04 30 *i*Pn **Pn 01 37 33.9 -1.6**
BOSI Bolzano 4.05 341 P **Pn 01 37 36.5 +1.0**
BOSI AML AML
BOSI AML AML
APPI Appiano 4.05 340 P **Pn 01 37 35.9 +0.2**
APPI AML AML
comp=E,62100µm,1.2s
APPI AML AML
comp=N,61550µm,1.0s
IMI Imperia 4.06 289 ⇑P **Pn 01 37 35.8 0.0**
IMI AML AML
comp=E,7110µm,1.5s
IMI AML AML
comp=N,12985µm,1.6s
ABTA Abfaltersbach 4.10 353 *e*Pn **Pn 01 37 36.6 +0.3**
comp=N,1µm,0.5s,SNR=3893
ABTA *e*Sn **Sn 01 38 27.9 +3.7**
comp=N,9µm,0.5s
DOB Doboj 4.11 58 *e*Pn **Pn 01 37 35.6 -0.7**
DOB *e*Sn **Sn 01 38 24.7 +0.4**
CAR1 CAROLEI 4.11 145 ⇓P **Pn 01 37 36.6 +0.1**
CAR1 AML AML
comp=E,18200µm,1.0s
CAR1 AML AML
comp=N,21300µm,1.6s
CAR1 AML AML
comp=N,19500µm,1.6s
CAR1 AML AML
comp=E,18850µm,1.0s
CELI Celico 4.12 141 ⇓P **Pn 01 37 37.9 +1.3**
GROS Grobnik 4.13 23⇑ *i*Pn **Pn 01 37 35.5 -1.1**
GROS *i* Sn **Sn 01 38 23.1 -1.8**
GROS IAML 01 39 08.2
comp=Z,337µm,3.4s
ROTM Rocchetta Tana 4.13 303 P **Pn 01 37 37.9 +1.3**
ROTM AML AML
ROTM AML AML
SPS2 Spezzano della 4.13 144 ⇓P **Pn 01 37 37.2 +0.5**
BRES Bressanone 4.15 346 AML AML
BRES AML AML
comp=N,96550µm,1.3s
MGRO Montegrosso 4.16 291 ⇑P **Pn 01 37 37.5 +0.3**
KALN Kalnik 4.17 33 *i*Pn **Pn 01 37 35.4 -1.8**
ISTR Stromboli Gino 4.17 158 ⇓P **Pn 01 37 38.3 +1.1**
PERS Pernice 4.19 18⇑ *e*Pn **Pn 01 37 36.9 -0.7**
PERS *e*Sn **Sn 01 38 25.6 -0.8**
PERS IAML 01 39 03.0
comp=Z,169µm,2.3s
PIPA Pietrapaola 4.20 138 ⇓P **Pn 01 37 39.9 +2.2**
SOKA Soboth 4.21 17 *e*Pn **Pn 01 37 37.1 -0.7**
comp=Z,274nm,0.6s,SNR=256
SOKA Sn **Sn 01 38 32.3 +5.3**
comp=Z,2µm,0.5s
UPM Unac-Piva 4.22 81⇑ *i*Pn **Pn 01 37 38.8 +0.7**
UPM *e*Sn **Sn 01 38 27.8 +0.3**
UPM Unac-Piva 4.22 81⇑ *i*Pn **Pn 01 37 37.7 -0.4**
UPM *i* Sn **Sn 01 38 27.2 -0.3**
CEME Cevo 4.22 90⇑ *i*Pn **Pn 01 37 37.8 -0.2**
CEME *i* Sn **Sn 01 38 27.2 -0.1**
BUM Brajici-Budva 4.23 93⇓ *i*Pn **Pn 01 37 38.0 -0.1**
BUM *i* Sn **Sn 01 38 27.6 +0.1**
IACL Alicudi 4.23 168 ⇓P **Pn 01 37 39.4 +1.3**
IFIL Filicudi I Eol 4.24 165 ⇓P **Pn 01 37 39.3 +1.2**
NKME Niksic 4.24 87⇓ *i*Pn **Pn 01 37 38.1 -0.1**
NKME *i* Sn **Sn 01 38 27.6 -0.1**
NKY Niksic 4.27 86⇑ *i*Pn **Pn 01 37 38.3 -0.4**
NKY *i* Sn **Sn 01 38 28.3 -0.2**
VSL Villasalto 4.29 224 ⇑P **Pn 01 37 39.4 +0.5**
VSL AML AML
VSL AML AML
BRMO Bormio 4.30 333 AML AML
comp=N,21200µm,1.0s
BRMO AML AML
comp=E,24300µm,1.6s
A252A Venje 4.34 49 *i*Pn **Pn 01 37 38.1 -1.4**
RISI Rein 4.34 350 ⇑P **Pn 01 37 40.5 +0.7**
RISI AML AML
RISI AML AML
KOGS Kog 4.36 29⇑ *i*Pn **Pn 01 37 38.3 -1.4**
KOGS IAML 01 39 28.4
comp=Z,180µm,1.9s
KOGS Kog 4.36 29 AML AML
KOGS AML AML
MOSI Grossmontoni 4.37 335 ⇑P **Pn 01 37 41.9 +1.7**
BERNI Berninapass 4.37 330 ⇑P **Pn 01 37 41.0 +0.8**
BERNI AML AML
comp=N,19000µm,1.1s
BERNI AML AML
comp=E,23700µm,1.3s
SBF Sospel 4.37 288 *e*P **Pn 01 37 39.9 -0.1**
SBF *e*Sn **Sn 01 38 30.0 -0.9**
comp=E,7µm,0.5s
KBA Koelnbreinsper 4.40 1 *e*Pn **Pn 01 37 40.6 +0.1**
comp=E,2µm,0.6s,SNR=660
KBA *e*Sn **Sn 01 38 32.0 +0.1**
comp=E,7µm,0.6s
KBA Koelnbreinsper 4.40 1 *e*Pn **Pn 01 37 40.5 0.0**
KBA *e*Sg **Sg 01 39 03.3 +8.2**
MUGIO Muggio 4.41 319 AML AML
comp=N,18790µm,1.6s
MUGIO AML AML
comp=E,18150µm,1.3s
LLI Lipari 4.43 162 ⇓P **Pn 01 37 42.4 +1.5**
CGL Cagliari Serpe 4.43 223 ⇑P **Pn 01 37 41.4 +0.5**
ROSI Rosskopf 4.44 344 P **Pn 01 37 41.8 +0.8**
LADO San Nicola del 4.44 139 ⇓P **Pn 01 37 43.1 +2.2**
DRME Dracevica, Mon 4.46 94⇑ *i*Pn **Pn 01 37 41.5 +0.3**
DRME *e*Sn **Sn 01 38 33.8 +0.8**
DRME Dracevica, Mon 4.46 94⇑ *i*Pn **Pn 01 37 41.2 0.0**
DRME *i* Sn **Sn 01 38 33.2 +0.2**
FUORN Ofenpass-Fuorn 4.46 333 P **Pn 01 37 43.0 +1.5**
ENR Entracque 4.48 292 ⇑P **Pn 01 37 42.5 +1.0**
PDG Podgorica 4.48 91 ⇑P **Pn 01 37 41.8 +0.3**
PDG Podgorica 4.48 91 *e*P **Pn 01 37 41.9 +0.4**
PDG Podgorica 4.48 91 Pn **Pn 01 37 41.4 -0.1**
PDG Podgorica 4.48 91 *e*Pn **Pn 01 37 42.2 +0.7**
PDG *e*Sn **Sn 01 38 36.3 +2.7**
TTG Podgorica 4.48 91⇑ *i*Pn **Pn 01 37 41.6 +0.1**
TTG *i* Sn **Sn 01 38 33.5 -0.1**
VARE Varese 4.50 317 ⇑P **Pn 01 37 41.6 -0.2**
VARE AML AML
comp=E,34450µm,1.6s
VARE AML AML
comp=N,41250µm,1.6s
VPL Vulcano Piano 4.50 162 ⇓P **Pn 01 37 43.6 +1.8**
MPG Monte Pellegri 4.51 178 ⇑P **Pn 01 37 43.8 +1.8**
ULC Ulcinj 4.54 97⇑ *i*Pn **Pn 01 37 42.2 -0.1**
ULC *i* Sn **Sn 01 38 35.2 +0.1**
JOPP Joppolo 4.55 152 ⇓P **Pn 01 37 43.6 +1.2**
STV Sant Anna di V 4.55 292 ⇑P **Pn 01 37 43.5 +1.0**
PLE Pljevlja 4.59 80⇑ *i*Pn **Pn 01 37 42.9 -0.2**
PLE *i* Sn **Sn 01 38 36.0 -0.4**
RUDO Rudo 4.61 76 *e*Pn **Pn 01 37 43.2 -0.1**
RUDO *e*Sn **Sn 01 38 37.2 +0.4**
KOME Kolasin 4.66 86⇑ *i*Pn **Pn 01 37 43.9 -0.1**
KOME *i* Sn **Sn 01 38 37.7 -0.3**
MILZ Milazzo 4.67 160 ⇓P **Pn 01 37 45.3 +1.3**
FETA Feichten 4.68 339 *i*Pn **Pn 01 37 45.5 +1.1**
comp=N,518nm,0.8s,SNR=1753
FETA *e*Sn **Sn 01 38 41.0 +2.2**
comp=N,1µm,0.5s
BBLS Lazići 4.69 73 *e*Pn **Pn 01 37 44.8 +0.4**
WTTA Wattenberg 4.72 347 *e*Pn **Pn 01 37 45.9 +1.0**
comp=N,76nm,0.2s,SNR=1439
WTTA *e*Sn **Sn 01 38 39.6 -0.1**
comp=N,7µm,0.5s
WTTA Wattenberg 4.72 347 *e*Pn **Pn 01 37 45.7 +0.8**
WTTA *e*Sg Sg 01 39 16.5 +11
GIB Gibilmanna 4.72 172 ⇓P **Pn 01 37 47.0 +2.1**
DAVOX Davos/Dischmat 4.74 331 Pn **Pn 01 37 46.9 +1.8**
comp=N,233nm,0.3s,baz=148,slow=14,SNR=712
DAVOX Sn **Sn 01 38 39.8 -0.2**
comp=N,180nm,0.3s,baz=72,slow=5.8,SNR=3.9
DAVOX Lg Lg 01 39 06.1
baz=80,slow=16
DAVOX Davos/Dischmat 4.74 331 ⇓P **Pn 01 37 47.3 +2.2**
PLLN Pollina 4.74 171 ⇓P **Pn 01 37 47.1 +2.1**
SCTE Santa Cesarea 4.74 122 Pn **Pn 01 37 45.5 +0.4**
SCTE Santa Cesarea 4.74 122 P **Pn 01 37 46.5 +1.4**
baz=124
SCTE S **Sn 01 38 41.3 +1.3**
baz=124
MSRU Castanea 4.75 157 ⇓P **Pn 01 37 46.4 +1.2**
SQTA Sankt Quirin 4.76 343 **Pn 01 37 46.7 +1.3**
SQTA **Sn 01 38 43.8 +3.3**
SQTA Sankt Quirin 4.76 343 *i*Pn **Pn 01 37 46.7 +1.3**
comp=N,453nm,0.3s,SNR=989
SQTA *e*Sn **Sn 01 38 43.8 +3.3**
comp=N,2µm,0.5s
MSFR San Fratello 4.76 167 ⇓P **Pn 01 37 47.2 +1.8**
PZZ Stroppo 4.78 295 ⇑P **Pn 01 37 46.0 +0.2**
WATA Walderalm 4.80 347 **Pn 01 37 47.6 +1.6**
WATA **Sn 01 38 45.1 +3.5**
WATA Walderalm 4.80 347 *e*Pn **Pn 01 37 47.6 +1.6**
comp=N,428nm,0.3s,SNR=940
WATA *e*Sn **Sn 01 38 45.1 +3.5**
comp=N,3µm,0.4s
BHB Bricherasio 4.81 299 ⇑P **Pn 01 37 46.0 0.0**
MPNC Port Mandanici 4.82 159 ⇓P **Pn 01 37 47.2 +1.1**
TRAV Traversella 4.84 308 P **Pn 01 37 45.5 -1.0**
ARSA Arzberg 4.86 19⇑ *i*Pn **Pn 01 37 45.7 -1.0**
ARSA *e*Sn **Sn 01 38 40.6 -2.4**
ARSA Arzberg 4.86 19 *i*Pn **Pn 01 37 45.8 -1.0**
comp=N,461nm,0.6s,SNR=630
ARSA *e*Sn **Sn 01 38 39.4 -3.6**
comp=N,734nm,0.3s
ARSA Arzberg 4.86 19 *e*Pn **Pn 01 37 45.7 -1.0**
CEL Celeste 4.87 154 Pn **Pn 01 37 47.8 +0.9**
CEL Celeste 4.87 154 ⇓P **Pn 01 37 48.1 +1.2**
BLJ Bijeljina 4.88 62 *e*Pn **Pn 01 37 45.3 -1.6**
BLJ *e*Sn **Sn 01 38 41.7 -1.6**
PLAC Placanica 4.89 149 ⇓P **Pn 01 37 48.6 +1.5**
KOVH Kovagotottos 4.90 44 P **Pn 01 37 45.3 -1.8**
KOVH S **Sn 01 38 40.1 -3.7**
MOTA Moosalm 4.90 343 **Pn 01 37 48.9 +1.6**
MOTA **Sn 01 38 43.1 -0.9**
MOTA Moosalm 4.90 343 *i* P **Pn 01 37 48.9 +1.6**
comp=N,1µm,0.7s,SNR=1197
MOTA *e*Sn **Sn 01 38 43.1 -0.9**
comp=N,1µm,0.5s
IVA Berane 4.93 85⇑ *i*Pn **Pn 01 37 47.6 -0.2**
IVA *i* Sn **Sn 01 38 44.3 -0.5**
RSP Reno Superiore 4.95 302 ⇑P **Pn 01 37 46.9 -1.1**
LMR La Mourre 4.95 280 *e*P **Pn 01 37 47.4 -0.5**
LMR *e*Sn **Sn 01 38 42.6 -2.4**
comp=N,940nm,0.6s
TEKS Tekeris 4.96 66 *e*Pn **Pn 01 37 47.4 -0.7**
FUSIO Fusio 4.97 321 ⇑P **Pn 01 37 48.1 -0.3**
PVY Plav 4.99 89⇓ *i*Pn **Pn 01 37 48.5 -0.1**
PVY *i* Sn **Sn 01 38 45.7 -0.6**
ZUGS Zugspitze, Sch 4.99 342 *e*Pn **Pn 01 37 50.5 +1.7**
ZUGS *e*Sg Sg 01 39 24.4 +10
SJES Sjenica 5.01 81 *e*Pn **Pn 01 37 49.0 +0.2**
SJES *e*Sn **Sn 01 38 46.5 -0.2**
SJES Sjenica 5.01 81 *e*Pn **Pn 01 37 49.7 +0.9**
SJES *e*Sn **Sn 01 38 46.4 -0.2**
BIOA Bad Ischl, Aus 5.02 3 **Pn 01 37 48.8 -0.1**
BIOA **Sn 01 38 49.2 +2.2**
BIOA Bad Ischl, Aus 5.02 3 *i*Pn **Pn 01 37 48.8 -0.1**
comp=N,851nm,0.3s,SNR=942
BIOA *e*Sn **Sn 01 38 49.2 +2.2**
comp=N,6µm,0.7s
PART Garmisch-Parte 5.04 344 *e*Pn **Pn 01 37 51.2 +2.0**
MMK Mattmark 5.04 314 P **Pn 01 37 48.3 -1.1**
MTTG Motta San Giov 5.04 157 ⇓P **Pn 01 37 50.6 +1.3**
RJOB Jochberg 5.07 357 *e*Pn **Pn 01 37 49.7 +0.1**
BCI Bajram Curri 5.09 91 P **Pn 01 37 51.4 +1.6**
baz=92
BCI S **Sn 01 38 50.1 +1.5**
baz=92
MBDF Montbardon 5.09 296 *e*P **Pn 01 37 50.1 +0.1**
MBDF *e*Sn **Sn 01 38 45.9 -2.8**
comp=N,6µm,0.9s
SOI Samo 5.09 154 ⇓P **Pn 01 37 51.3 +1.4**
CLTB Caltabellotta 5.09 180 Pn **Pn 01 37 52.5 +2.5**
RETA Reutte 5.11 341 *i*Pn **Pn 01 37 51.7 +1.5**
comp=N,286nm,0.3s,SNR=852
RETA *e*Sn **Sn 01 38 51.3 +2.1**
comp=N,5µm,0.8s
TIR Tirane 5.14 103 ⇑P **Pn 01 37 50.7 +0.2**
TIR Tirane 5.14 103 P **Pn 01 37 50.8 +0.2**
TIR S **Sn 01 38 46.6 -3.3**
TIR Tirane 5.14 103 **Pn 01 37 51.2 +0.6**
TIR Tirane 5.14 103 P **Pn 01 37 51.2 +0.6**
TIR Tirane 5.14 103 *e*Pn **Pn 01 37 50.8 +0.2**
TIR *e*Sn **Sn 01 38 50.0 +0.1**
TIR Tirane 5.14 103 P **Pn 01 37 51.8 +1.2**
baz=104
TIR S **Sn 01 38 50.7 +0.8**
baz=104
PLONS Plons/SG 5.14 330 *e*Pn **Pn 01 37 52.4 +1.8**
DIVS Divibare 5.15 72 **Pn 01 37 50.8 0.0**
DIVS Divibare 5.15 72⇑ *i*Pn **Pn 01 37 50.6 -0.6**
DIVS *e*Sn **Sn 01 38 49.7 -0.5**
DIVS Divibare 5.15 72 *e*Pn **Pn 01 37 50.4 -0.4**
OBER Oberstdorf 5.16 337 *e*Pn **Pn 01 37 52.3 +1.4**
OBER *e*Pg **Pg 01 38 13.3 +0.8**
OBER *e*Sg Sg 01 39 29.0 +10
IVAS Ivanjica 5.17 78 *e*Pn **Pn 01 37 50.8 -0.2**
IVAS *e*Sn **Sn 01 38 49.8 -0.8**
DAVA Damuels 5.17 334 *i*Pn **Pn 01 37 53.0 +1.9**
comp=N,920nm,0.6s,SNR=1453
DAVA *e*Sn **Sn 01 38 53.8 +3.0**
comp=N,4µm,0.6s
DAVA Damuels 5.17 334 *e*Pn **Pn 01 37 52.9 +1.7**
VLO Vlora 5.21 113 P **Pn 01 37 52.6 +1.1**
VLO S **Sn 01 38 51.1 -0.5**
VLO Vlora 5.21 113 P **Pn 01 37 53.3 +1.8**
baz=115
VLO S **Sn 01 38 53.0 +1.4**
baz=115
MOA Molln 5.23 8 *e*Pn **Pn 01 37 51.9 +0.1**
MOA *e*Sn **Sn 01 38 46.2 -5.8**
MOA Molln 5.23 8 *i*Pn **Pn 01 37 51.5 -0.3**
comp=N,2µm,0.8s,SNR=304
MOA *e*Sn **Sn 01 38 54.4 +2.4**
comp=N,2µm,0.4s
MOA Molln 5.23 8 *e*Pn **Pn 01 37 51.4 -0.4**
MORH Mrgy, Hungar 5.26 46⇑ P **Pn 01 37 50.5 -1.7**
MORH Mrgy, Hungar 5.26 46 *e*Pn **Pn 01 37 51.2 -1.0**
MORH *e*Sn **Sn 01 38 51.8 -1.0**
MORH Mrgy, Hungar 5.26 46 *e*Pn **Pn 01 37 50.6 -1.6**
MORH Mrgy, Hungar 5.26 46 P **Pn 01 37 52.5 +0.3**
VAE Valguarnera 5.28 169 Pn **Pn 01 37 53.5 +1.1**
comp=N,0.5nm,0.3s,baz=168,slow=22,SNR=2.2
BNI Bardonecchia 5.28 299 Pn **Pn 01 37 52.1 -0.5**
BNI Bardonecchia 5.28 299 P **Pn 01 37 52.1 -0.5**
BNI Bardonecchia 5.28 299 P **Pn 01 37 53.5 +0.9**
DIX Grande Dixence 5.37 311 P **Pn 01 37 54.8 +1.0**
REMY Saint-Rhmy-en 5.37 308 P **Pn 01 37 53.1 -0.8**
FRGS Fruska Gora 5.38 60⇑ P **Pn 01 37 52.8 -1.1**
FRGS Fruska Gora 5.38 60⇑ *i*Pn **Pn 01 37 52.9 -1.0**
FRGS *e*Sn **Sn 01 38 55.3 -0.5**

FRGS	**Fruska Gora**	**5.38**	**60**	*e*Pn	**Pn**	**01 37 52.8**	**-1.1**
TIH	**Tihany**	**5.38**	**37**	P	**Pn**	**01 37 54.0**	**+0.1**
BNALP	**Bannalp**	**5.39**	**323**	P	**Pn**	**01 37 55.6**	**+1.4**
LPG	**La Plagne**	**5.43**	**303**	*e*P	**Pn**	**01 37 54.6**	**-0.2**
LPG				*e*Sn	**Sn**	**01 38 54.4**	**-3.0**
	comp=N,11µm,1.2s						
MPLH	**Magyarpolny**	**5.45**	**33**	P	**Pn**	**01 37 53.4**	**-1.4**
LPL	**La Plagne**	**5.45**	**304**	*e*P	**Pn**	**01 37 54.8**	**-0.2**
LPL				*e*Sn	**Sn**	**01 38 51.6**	**-6.2**
	comp=N,5µm,0.8s						
UBR	**Ueberruh**	**5.46**	**337**	*e*Pn	**Pn**	**01 37 55.8**	**+0.8**
TRUS	**Trudelj**	**5.47**	**71**	*e*Pn	**Pn**	**01 37 54.7**	**-0.4**
PHP	**Peshkopia**	**5.47**	**98**	P	**Pn**	**01 37 56.6**	**+1.4**
PHP				S	**Sn**	**01 38 56.8**	**-1.3**
PHP	**Peshkopia**	**5.47**	**98**	P	**Pn**	**01 37 57.6**	**+2.5**
	baz=99						
PHP				S	**Sn**	**01 38 58.3**	**+0.2**
	baz=99						
RONA	**Rosalia, Austr**	**5.48**	**22**		**Pn**	**01 37 54.4**	**-0.9**
RONA					**Sn**	**01 38 50.0**	**-8.2**
RONA	**Rosalia, Austr**	**5.48**	**22**	*i* Pn	**Pn**	**01 37 54.3**	**-0.9**
	comp=N,671nm,0.6s,SNR=1023						
RONA				*e*Sn	**Sn**	**01 38 50.0**	**-8.2**
	comp=N,2µm,0.8s						
SOP	**Sopron**	**5.54**	**24**	P	**Pn**	**01 37 54.8**	**-1.2**
SOP				S	**Sn**	**01 38 57.0**	**-2.6**
EGYH	**Egyhazaskeszo**	**5.57**	**30**	P	**Pn**	**01 37 58.0**	**+1.5**
CONA	**Conrad Observa**	**5.58**	**19**	*i* Pn	**Pn**	**01 37 55.8**	**-0.8**
	comp=N,2µm,0.9s,SNR=1524						
CONA				*e*Sn	**Sn**	**01 38 53.0**	**-7.7**
	comp=N,2µm,0.8s						
GRUS	**Gruza**	**5.62**	**75**	*e*Pn	**Pn**	**01 37 57.1**	**0.0**
GRUS				*e*Sn	**Sn**	**01 39 02.9**	**+1.3**
WILA	**Wila**	**5.63**	**329**	*e*Pn	**Pn**	**01 37 58.1**	**+0.8**
FUR	**Furstenfeldbru**	**5.65**	**347**	*e*Pn	**Pn**	**01 37 58.2**	**+0.6**
BEO	**Beograd**	**5.69**	**66**	*e*Pn	**Pn**	**01 37 56.7**	**-1.3**
SMRF	**Simiane la Rot**	**5.71**	**286**	*e*P	**Pn**	**01 37 59.5**	**+1.1**
SMRF				*e*Sn	**Sn**	**01 39 01.0**	**-2.9**
	comp=N,1µm,0.6s						
ORIF	**Oris-en-Rattie**	**5.75**	**295**	*e*P	**Pn**	**01 38 01.1**	**+2.1**
ORIF				*e*Sn	**Sn**	**01 39 00.8**	**-4.1**
	comp=N,7µm,1.0s						
SRN	**Sarande**	**5.84**	**116**	P	**Pn**	**01 38 00.9**	**+0.8**
SRN	**Sarande**	**5.84**	**116**	P	**Pn**	**01 38 01.2**	**+1.1**
	baz=118						
SRN				S	**Sn**	**01 39 07.9**	**+1.0**
	baz=118						
SELS	**Selova**	**5.84**	**82**	*e*Pn	**Pn**	**01 37 59.7**	**-0.5**
SELS				*e*Sn	**Sn**	**01 39 06.2**	**-0.9**
CSKK	**Cskako**	**5.90**	**36**	P	**Pn**	**01 38 00.3**	**-0.7**
SULZ	**Cheisacher**	**6.04**	**325**	*e*Pn	**Pn**	**01 38 03.2**	**+0.3**
KBN	**Korca**	**6.04**	**107**	P	**Pn**	**01 38 04.2**	**+1.2**
KBN	**Korca**	**6.04**	**107**	P	**Pn**	**01 38 05.8**	**+2.7**
	baz=108						
KBN				S	**Sn**	**01 39 13.5**	**+1.3**
	baz=108						
SVIS	**Svilajnac**	**6.05**	**72**	*e*Pn	**Pn**	**01 38 04.2**	**+1.2**
BALST	**Balsthal**	**6.07**	**322**	*e*Pn	**Pn**	**01 38 03.2**	**-0.2**
SLE	**Schleitheim**	**6.08**	**328**	*e*Pn	**Pn**	**01 38 03.3**	**-0.1**
LSK	**Leskovik**	**6.11**	**112**	P	**Pn**	**01 38 04.7**	**+0.7**
LSK				S	**Sn**	**01 39 12.4**	**-1.5**
LSK	**Leskovik**	**6.11**	**112**	P	**Pn**	**01 38 06.0**	**+2.1**
	baz=113						
LSK				S	**Sn**	**01 39 14.5**	**+0.7**
	baz=113						
SKO	**Skopje**	**6.15**	**94**	*i* Pn	**Pn**	**01 38 05.1**	**+0.7**
ZST	**Bratislava**	**6.17**	**25**	*e*P	**Pn**	**01 38 03.7**	**-0.9**
ZST				*e*		01 39 09.5	
ZST				MLR	MLR		
	comp=Z,725µm,5.7s						
ZST	**Bratislava**	**6.17**	**25**	*e*PN	**Pn**	**01 38 03.7**	**-0.9**
ZST				*e*PG	**Pg**	**01 38 30.4**	**-1.3**
ZST				*e*SN	**Sn**	**01 39 09.5**	**-5.5**
ZST				*e*SG	**Sg**	**01 39 46.8**	**-4.7**
ZST				*e*LG	Lg	01 40 29.8	
GEC2	**GERESS Array S**	**6.18**	**3**	*e*Pn	**Pn**	**01 38 03.6**	**-1.3**
GEC2				Sn	**Sn**	**01 39 14.5**	**-1.0**
	comp=Z,1µm,0.7s						
GEC2				*e*Sg	**Sg**	**01 39 59.1**	**+7.1**
GERES	**GERESS Array B**	**6.18**	**3**	Pn	**Pn**	**01 38 04.5**	**-0.4**
	comp=Z,35nm,0.3s,baz=186,slow=12,SNR=281						
GERES				Sn	**Sn**	**01 39 15.3**	**-0.2**
	comp=Z,528nm,0.3s,baz=170,slow=24,SNR=13						
GERES				Lg	Lg	01 39 53.0	
	baz=186,slow=28						
GERES				LR	LR	01 41 03.1	
	comp=Z,135µm,19.8s,baz=185,slow=44						
	comp=Z,363nm,0.7s						
I26DE	**FREYUNG INFRAS**	**6.19**	**3**	Pg	**Pb**	**01 38 23.1**	**+1.7**
	baz=184,slow=26						
I26DE				Lg	Lg	01 39 45.6	
	baz=113,slow=321						
I26DE				*i*		02 10 50.0	
	baz=187,slow=320,SNR=6.5						
CKRC	**Cesky Krumlov**	**6.19**	**7**	*e*PN	**Pn**	**01 38 04.0**	**-1.0**
CKRC				*e*SN	**Sn**	**01 39 12.7**	**-3.0**
BOVS	**Bovan**	**6.30**	**78**	⇑P	**Pn**	**01 38 05.5**	**-0.8**
BOVS	**Bovan**	**6.30**	**78**	*e*Pn	**Pn**	**01 38 05.6**	**-0.8**
NORI	**Noerdlinger Ri**	**6.31**	**344**	*e*Pn	**Pn**	**01 38 06.1**	**-0.4**
NEST	**Nestorio**	**6.31**	**108**	P	**Pn**	**01 38 08.7**	**+2.0**
BANR	**Banloc**	**6.33**	**62**	⇑P	**Pn**	**01 38 06.2**	**-0.6**
BUD	**Budapest**	**6.33**	**39**	P	**Pn**	**01 38 07.3**	**+0.4**
BARS	**Barje**	**6.35**	**86**	*e*Pn	**Pn**	**01 38 07.0**	**-0.1**
BARS				*e*Sn	**Sn**	**01 39 20.1**	**+0.5**
MODS	**Modra-Piesok**	**6.38**	**25**	*e*P	**Pn**	**01 38 06.9**	**-0.6**
MODS				*e*		01 39 19.0	
MODS				MLR	MLR		
	comp=Z,141µm,2.9s						
MODS	**Modra-Piesok**	**6.38**	**25**	*e*PN	**Pn**	**01 38 06.9**	**-0.6**
MODS				*e*PG	Pg	01 38 45.2	+9.4
MODS				*e*SN	**Sn**	**01 39 19.0**	**-1.3**
MODS				*e*LG	Lg	01 40 34.5	
KUBS	**Kucevo**	**6.40**	**71**	*e*Pn	**Pn**	**01 38 07.8**	**-0.1**
CABF	**La Chapelle**	**6.42**	**310**	*e*Pn	**Pn**	**01 38 08.0**	**-0.1**
CABF				*e*Sn	**Sn**	**01 39 15.6**	**-5.8**
	comp=Z,9µm,1.1s						
KHC	**Kasperske Hory**	**6.46**	**2**	*e*P	**Pn**	**01 38 08.2**	**-0.5**
KHC				*e*		01 39 17.7	
KHC				MLR	MLR		
	comp=Z,174µm,12.8s						
KHC	**Kasperske Hory**	**6.46**	**2**	*e*PN	**Pn**	**01 38 08.2**	**-0.5**
KHC				*e*SN	**Sn**	**01 39 17.7**	**-4.7**
KHC				AMS	AMS	01 40 50.0	
	comp=Z,174µm,12.8s						
WET	**Wettzell**	**6.47**	**358**	*e*Pn	**Pn**	**01 38 07.4**	**-1.5**
WET				Sn	**Sn**	**01 39 20.5**	**-2.1**
	comp=Z,1µm,1.0s						
JAN	**Janina**	**6.52**	**115**	P	**Pn**	**01 38 10.2**	**+0.7**
JAN				S	**Sn**	**01 39 20.1**	**-3.6**
MDVR	**Moldovita**	**6.52**	**68**	⇑P	**Pn**	**01 38 08.3**	**-1.2**
TIM	**Timisoara**	**6.53**	**59**	⇓P	**Pn**	**01 38 10.8**	**+1.3**
VIVF	**Saint-Julien-l**	**6.54**	**292**	*e*P	**Pn**	**01 38 10.6**	**+0.7**
VIVF				*e*Sn	**Sn**	**01 39 21.6**	**-2.8**
	comp=Z,1µm,0.9s						
SMOL	**Smolenice**	**6.55**	**25**	*e*P	**Pn**	**01 38 10.1**	**+0.2**
SMOL				*e*		01 39 26.0	
SMOL				MLR	MLR		
	comp=Z,23µm,3.1s						
PRVS	**Prvonek**	**6.56**	**88**	*e*Pn	**Pn**	**01 38 10.0**	**0.0**
PRVS				*e*Sn	**Sn**	**01 39 25.2**	**+0.5**
BFO	**Black Forest**	**6.61**	**331**		**Pn**	**01 38 10.4**	**-0.3**
BFO	**Black Forest**	**6.61**	**331**	P	**Pn**	**01 38 10.4**	**-0.3**
BFO	**Black Forest**	**6.61**	**331**	P	**Pn**	**01 38 10.2**	**-0.6**
BFO	**Black Forest**	**6.61**	**331**	*e*Pn	**Pn**	**01 38 10.1**	**-0.6**
BFO				Sn	**Sn**	**01 39 26.8**	**+0.9**
	comp=Z,2µm,0.9s						
ZAGS	**Zajecar**	**6.70**	**77**	*e*Pn	**Pn**	**01 38 11.1**	**-0.8**
ZAGS				*e*Sn	**Sn**	**01 39 27.1**	**-1.0**
STU	**Stuttgart**	**6.71**	**337**	*e*Pn	**Pn**	**01 38 12.5**	**+0.5**
BZS	**Buzias**	**6.73**	**61**	⇑P	**Pn**	**01 38 11.2**	**-1.2**
BZS	**Buzias**	**6.73**	**61**	*e*P	**Pn**	**01 38 14.4**	**+2.0**
BZS	**Buzias**	**6.73**	**61**	*e*Pn	**Pn**	**01 38 11.1**	**-1.3**
STIP	**Stip**	**6.75**	**95**	*i* Pn	**Pn**	**01 38 14.6**	**+1.9**
KRUC	**Moravsky**	**6.76**	**18**	⇑*i*PN	**Pn**	**01 38 11.1**	**-1.7**
KRUC				*e*SN	**Sn**	**01 39 25.9**	**-3.9**
KRUC				*e*SG	**Sg**	**01 40 02.5**	**-8.2**
TREC	**Trest**	**6.81**	**13**	*e*P	**Pn**	**01 38 12.8**	**-0.7**
TREC				*e*		01 39 27.3	
TREC				MLR	MLR		
	comp=Z,250µm,14.4s						
TREC	**Trest**	**6.81**	**13**	*e*PN	**Pn**	**01 38 12.8**	**-0.7**
TREC				*e*SN	**Sn**	**01 39 27.3**	**-3.6**
TREC				AMS	AMS	01 41 00.0	
	comp=Z,250µm,14.4s						
HINF	**Hinteralfeld**	**6.81**	**321**	*e*Pn	**Pn**	**01 38 12.5**	**-1.1**
HINF				*e*Sn	**Sn**	**01 39 27.5**	**-3.6**
	comp=Z,3µm,0.5s						
BSZH	**Besenyszg**	**6.82**	**45**	⇑P	**Pn**	**01 38 12.6**	**-0.9**
BSZH	**Besenyszg**	**6.82**	**45**	P	**Pn**	**01 38 15.0**	**+1.5**
TSLK	**Tsoukalades, L**	**6.85**	**122**	P	**Pn**	**01 38 14.8**	**+0.8**
TSLK				S	**Sn**	**01 39 28.4**	**-3.4**
BOSS	**Bosilegrad**	**6.86**	**88**	*e*Pn	**Pn**	**01 38 13.9**	**-0.2**
BOSS				*e*Sn	**Sn**	**01 39 30.1**	**-2.0**
KZN	**Kozani**	**6.86**	**107**	P	**Pn**	**01 38 14.9**	**+0.7**
LKD2	**Lefkada island**	**6.87**	**122**	P	**Pn**	**01 38 14.8**	**+0.5**
DRAG	**Dragano-Lefkad**	**6.88**	**123**	P	**Pn**	**01 38 15.2**	**+0.7**
JAVC	**Velka Javorina**	**6.93**	**25**	⇑*i*PN	**Pn**	**01 38 14.2**	**-0.9**
NYDR	**Nydri-Lefkada**	**6.94**	**122**	P	**Pn**	**01 38 15.8**	**+0.6**
LASF	**Ste Croix**	**6.95**	**285**	*e*P	**Pn**	**01 38 15.6**	**+0.2**
LASF				*e*Sn	**Sn**	**01 39 27.7**	**-6.7**
	comp=Z,8µm,1.9s						
ZAPS	**Zavoj**	**6.95**	**82**	*e*Pn	**Pn**	**01 38 15.3**	**-0.1**
ZAPS				*e*Sn	**Sn**	**01 39 33.0**	**-1.4**
EVGI	**Lefkada island**	**6.97**	**123**	P	**Pn**	**01 38 17.4**	**+1.7**
ECH	**Echery**	**6.98**	**325**		**Pn**	**01 38 14.0**	**-1.8**
ECH	**Echery**	**6.98**	**325**	P	**Pn**	**01 38 14.0**	**-1.8**
BLKB	**Belogradchik**	**7.00**	**79**	⇓P	**Pn**	**01 38 16.1**	**0.0**
FSK	**Fiskardo**	**7.01**	**124**	P	**Pn**	**01 38 17.7**	**+1.5**
HERR	**Herculane**	**7.03**	**69**	⇑P	**Pn**	**01 38 15.7**	**-0.7**
VYHS	**Vyhne**	**7.03**	**32**	*e*P	**Pn**	**01 38 17.9**	**+1.4**
VYHS				*e*		01 39 35.2	
VYHS				MLR	MLR		
	comp=Z,391µm,7.7s						
VYHS	**Vyhne**	**7.03**	**32**	*e*PN	**Pn**	**01 38 17.9**	**+1.4**
VYHS				*e*PG	Pg	01 38 54.3	+6.0
VYHS				*e*SN	**Sn**	**01 39 35.2**	**-1.2**
VYHS				*e*SG	**Sg**	**01 40 16.2**	**-3.1**
VYHS				*e*LG	Lg	01 41 12.0	
SIRR	**Siria**	**7.04**	**56**	⇓P	**Pn**	**01 38 15.8**	**-0.8**
DMLN	**Damoulianata-K**	**7.04**	**127**	P	**Pn**	**01 38 18.1**	**+1.4**
VRAC	**Vranov**	**7.04**	**18**	⇑P	**Pn**	**01 38 14.9**	**-1.7**
VRAC	**Vranov**	**7.04**	**18**	Pn	**Pn**	**01 38 16.3**	**-0.3**
	comp=Z,12nm,0.3s,baz=200,slow=13,SNR=101						
VRAC				Sn	**Sn**	**01 39 31.7**	**-4.8**
	comp=Z,24nm,0.3s,baz=203,slow=16,SNR=3.3						
VRAC				Lg	Lg	01 40 17.8	
	comp=Z,19nm,0.3s,baz=118,slow=22,SNR=4.6						
VRAC				LR	LR	01 41 14.7	
	comp=Z,149µm,19.2s,baz=206,slow=40						
	comp=Z,247nm,0.7s						
VRAC	**Vranov**	**7.04**	**18**	⇑*i*PN	**Pn**	**01 38 14.8**	**-1.8**
VRAC				*e*SN	**Sn**	**01 39 34.0**	**-2.6**
VRAC				*e*SG	**Sg**	**01 40 11.0**	**-8.6**
DJES	**Djerdap**	**7.05**	**70**	⇑P	**Pn**	**01 38 16.4**	**-0.4**
DJES	**Djerdap**	**7.05**	**70**	*e*Pn	**Pn**	**01 38 16.3**	**-0.4**
DJES				*e*Sn	**Sn**	**01 39 34.3**	**-2.5**
PSZ	**Piszkesteto**	**7.05**	**40**	⇑P	**Pn**	**01 38 15.1**	**-1.8**
PSZ	**Piszkesteto**	**7.05**	**40**	Pn	**Pn**	**01 38 15.3**	**-1.6**
PSZ	**Piszkesteto**	**7.05**	**40**	P	**Pn**	**01 38 15.3**	**-1.6**
PSZ	**Piszkesteto**	**7.05**	**40**	P	**Pn**	**01 38 15.3**	**-1.6**
CDF	**Champ du Feu**	**7.08**	**326**	*e*Pn	**Pn**	**01 38 15.6**	**-1.7**
CDF				*e*Sn	**Sn**	**01 39 33.4**	**-4.3**
	comp=Z,3µm,0.6s						
GRG	**Griva**	**7.09**	**101**	*e*P	**Pn**	**01 38 18.7**	**+1.4**
VAY	**Valandovo**	**7.11**	**98**	*i* Pn	**Pn**	**01 38 17.5**	**-0.1**
GRFO	**Grafenberg**	**7.15**	**350**	Pn	**Pn**	**01 38 17.2**	**-0.9**
GRFO	**Grafenberg**	**7.15**	**350**	P	**Pn**	**01 38 17.2**	**-0.9**
GRF	**Grafenberg Arr**	**7.15**	**350**	*e*Pn	**Pn**	**01 38 17.1**	**-1.1**
HAU	**Haudompre**	**7.19**	**320**	*e*Pn	**Pn**	**01 38 17.8**	**-0.8**
HAU				*e*Sn	**Sn**	**01 39 36.2**	**-4.0**
	comp=Z,5µm,0.5s						
VLS	**Valsamata**	**7.21**	**126**	P	**Pn**	**01 38 20.0**	**+1.0**
PSDA	**Pessada-Kefalo**	**7.25**	**126**	P	**Pn**	**01 38 19.8**	**+0.3**
PSDA				S	**Sn**	**01 39 41.2**	**-0.5**
PUNG	**Punghina**	**7.26**	**74**	⇑P	**Pn**	**01 38 19.4**	**-0.2**
MAHO	**Mahon**	**7.28**	**251**	P	**Pn**	**01 38 16.9**	**-3.0**
MAHO				S	**Sb**	**01 40 02.5**	**-4.2**
MAHO	**Mahon**	**7.28**	**251**	Pn	**Pn**	**01 38 19.6**	**-0.2**
THL	**Klokotos Trika**	**7.35**	**112**	P	**Pn**	**01 38 22.5**	**+1.7**
THL				S	**Sn**	**01 39 40.5**	**-3.6**
PRU	**Pruhonice**	**7.37**	**7**	*e*P	**Pn**	**01 38 19.7**	**-1.5**
PRU				*e*		01 39 39.7	
PRU				MLR	MLR		
	comp=Z,147µm,14.7s						
PRU	**Pruhonice**	**7.37**	**7**	*e*PN	**Pn**	**01 38 19.7**	**-1.5**
PRU				*e*SN	**Sn**	**01 39 39.7**	**-5.0**
PRU				AMS	AMS	01 41 10.0	
	comp=Z,147µm,14.7s						
KKB	**Krupnik**	**7.38**	**93**	P	**Pn**	**01 38 22.8**	**+1.5**
KNT	**Kendrikon**	**7.39**	**99**	P	**Pn**	**01 38 21.7**	**+0.2**
KNT				S	**Sn**	**01 39 43.2**	**-2.1**
VTS	**Vitosha**	**7.40**	**87**	⇑P	**Pn**	**01 38 21.7**	**-0.1**
VTS	**Vitosha**	**7.40**	**87**	*e*P	**Pn**	**01 38 22.9**	**+1.2**
VTS	**Vitosha**	**7.40**	**87**	Pn	**Pn**	**01 38 22.0**	**+0.2**
VTS	**Vitosha**	**7.40**	**87**	P	**Pn**	**01 38 22.0**	**+0.2**
VTS	**Vitosha**	**7.40**	**87**	*e*Pn	**Pn**	**01 38 21.9**	**+0.2**
VTS				*e*Sn	**Sn**	**01 39 45.0**	**-0.7**
VTS	**Vitosha**	**7.40**	**87**	P	**Pn**	**01 38 23.9**	**+2.2**
GZR	**Gura Zlata**	**7.42**	**65**	⇑P	**Pn**	**01 38 22.5**	**-0.3**
LIT	**Litokhoron**	**7.45**	**107**	P	**Pn**	**01 38 22.2**	**0.0**
LIT				S	**Sn**	**01 39 42.8**	**-3.8**
I48TN	**KESRA INFRASON**	**7.49**	**205**	*i*		02 17 10.0	
	baz=26,slow=319,SNR=0.5						
CMAH	**Djebel Manchou**	**7.51**	**218**	P	**Pn**	**01 38 26.9**	**+3.8**
BAIL	**Bailesti**	**7.52**	**76**	⇑P	**Pn**	**01 38 23.1**	**0.0**
PVO	**Paravola**	**7.52**	**120**	P	**Pn**	**01 38 25.0**	**+1.8**
SRE	**Strehaia**	**7.52**	**71**	⇓P	**Pn**	**01 38 23.1**	**-0.2**
BORR	**Bors**	**7.53**	**51**	⇑P	**Pn**	**01 38 23.7**	**+0.4**
EVR	**Evrytania**	**7.54**	**117**	P	**Pn**	**01 38 26.1**	**+2.6**
KEST	**Kesra**	**7.55**	**205**	Pn	**Pn**	**01 38 28.4**	**+4.6**
	comp=Z,40nm,0.3s,baz=314,slow=4.6,SNR=185						
KEST				Sn	**Sn**	**01 39 50.7**	**+1.4**
	baz=260,slow=11						
KEST				LR	LR	01 41 36.6	
	comp=Z,234µm,18.5s,baz=350,slow=40						
LRSO	**Larissa Observ**	**7.56**	**110**	P	**Pn**	**01 38 23.9**	**+0.2**
THE	**Thessaloniki**	**7.59**	**102**	P	**Pn**	**01 38 23.8**	**-0.4**
DEV	**Deva**	**7.67**	**62**	⇓P	**Pn**	**01 38 24.2**	**-1.0**
LTHK	**Lithakia**	**7.67**	**128**	P	**Pn**	**01 38 26.5**	**+1.3**
MAKR	**Makrakomi, Fth**	**7.70**	**115**	P	**Pn**	**01 38 27.6**	**+1.9**
MAKR				S	**Sn**	**01 39 50.4**	**-2.4**
HORT	**Hortiatis**	**7.70**	**102**	*e*P	**Pn**	**01 38 26.9**	**+1.1**
MORC	**Moravsky Berou**	**7.71**	**21**	⇑P	**Pn**	**01 38 23.8**	**-2.0**
MORC	**Moravsky Berou**	**7.71**	**21**	Pn	**Pn**	**01 38 25.6**	**-0.3**
MORC	**Moravsky Berou**	**7.71**	**21**	P	**Pn**	**01 38 25.6**	**-0.3**
MORC	**Moravsky Berou**	**7.71**	**21**	⇑*i*PN	**Pn**	**01 38 24.5**	**-1.4**
LTVH	**Ltavrtes, Hu**	**7.75**	**50**	⇑P	**Pn**	**01 38 26.2**	**-0.2**
LTVH	**Ltavrtes, Hu**	**7.75**	**50**	P	**Pn**	**01 38 27.5**	**+1.1**
MPEP	**Malo Peshtene**	**7.76**	**81**	P	**Pn**	**01 38 29.9**	**+3.4**
SMF	**Signal de Mont**	**7.76**	**304**	*e*Pn	**Pn**	**01 38 25.5**	**-1.0**
SMF				*e*Sn	**Sn**	**01 39 49.3**	**-5.0**
	comp=Z,3µm,0.8s						
ABSA	**Djebel Ababsia**	**7.77**	**217**	P	Pn	01 38 31.7	+4.9
ANX	**Ano Chora**	**7.79**	**119**	P	**Pn**	**01 38 28.6**	**+1.6**
KRLC	**Kraliky**	**7.80**	**17**	*e*P	**Pn**	**01 38 26.3**	**-0.8**
KRLC				*e*		01 39 52.0	
KRLC				MLR	MLR		
	comp=Z,170µm,14.7s						
KRLC	**Kraliky**	**7.80**	**17**	*e*PN	**Pn**	**01 38 26.3**	**-0.8**
KRLC				*e*SN	**Sn**	**01 39 52.0**	**-3.4**
KRLC				AMS	AMS	01 41 50.0	
	comp=Z,170µm,14.7s						
LANS	**Liptovska Anna**	**7.81**	**32**	*e*P	**Pn**	**01 38 28.6**	**+1.4**
LANS				*e*		01 39 50.3	
LANS	**Liptovska Anna**	**7.81**	**32**	*e*PN	**Pn**	**01 38 28.6**	**+1.4**
LANS				*e*PG	**Pg**	**01 39 00.5**	**-2.7**
LANS				*e*SN	**Sn**	**01 39 50.3**	**-5.3**
LANS				*e*SG	**Sb**	**01 40 23.2**	**+1.2**
LANS				*e*LG	Lg	01 41 34.7	
RLS	**Riolos of Patr**	**7.82**	**123**	P	**Pn**	**01 38 29.2**	**+1.9**
PAGF	**Fort de Pagny**	**7.87**	**321**	*e*Pn	**Pn**	**01 38 27.5**	**-0.5**
	baz=148						
PAGF				*e*Sn	**Sn**	**01 39 52.5**	**-4.5**
	comp=Z,11µm,1.0s						
EFP	**Efpalio**	**7.87**	**120**	P	**Pn**	**01 38 30.2**	**+2.2**
UPR	**University Cam**	**7.88**	**121**	P	**Pn**	**01 38 31.2**	**+3.1**
MMB	**Musomiste**	**7.90**	**94**	P	**Pn**	**01 38 29.5**	**+1.0**
PVCC	**Panska Ves**	**7.91**	**6**	*e*P	**Pn**	**01 38 26.6**	**-1.9**
PVCC				MLR	MLR		
	comp=Z,112µm,18.9s						
PVCC	**Panska Ves**	**7.91**	**6**	*e*PN	**Pn**	**01 38 26.6**	**-1.9**
PVCC				AMS	AMS	01 41 30.0	
	comp=Z,112µm,18.9s						
SRS	**Serrai**	**7.91**	**98**	P	**Pn**	**01 38 29.2**	**+0.6**
SRS	**Serrai**	**7.91**	**98**	*e*Pn	**Pn**	**01 38 28.1**	**-0.5**
SRS				*e*Sn	**Sn**	**01 39 55.7**	**-2.3**
DRGR		**7.92**	**55**	⇑P	**Pn**	**01 38 28.7**	**-0.1**
DRGR		**7.92**	**55**	*e*Pn	**Pn**	**01 38 28.0**	**-0.8**
DRGR				*e*Sn	**Sn**	**01 39 55.9**	**-2.5**
OKC	**Ostrava-Krasne**	**7.94**	**24**	*e*P	**Pn**	**01 38 28.5**	**-0.4**
OKC				*e*		01 39 54.9	
OKC				MLR	MLR		
	comp=Z,189µm,12.4s						
OKC	**Ostrava-Krasne**	**7.94**	**24**	*e*PN	**Pn**	**01 38 28.5**	**-0.4**
OKC				*e*SN	**Sn**	**01 39 54.9**	**-3.7**
OKC				AMS	AMS	01 41 50.0	
	comp=Z,189µm,12.4s						
SFTF	**Sexfontaines**	**7.96**	**317**	*e*Pn	**Pn**	**01 38 28.6**	**-0.7**
	baz=131						
SFTF				*e*Sn	**Sn**	**01 39 54.3**	**-5.0**
	comp=Z,4µm,0.9s						
DPC	**Dobruska-Polom**	**7.97**	**15**	*e*P	**Pn**	**01 38 28.0**	**-1.4**
DPC				MLR	MLR		
	comp=Z,229µm,14.3s						
DPC	**Dobruska-Polom**	**7.97**	**15**	*e*PN	**Pn**	**01 38 28.0**	**-1.4**
DPC				AMS	AMS	01 41 40.0	
	comp=Z,229µm,14.3s						
SERG	**Sergoula**	**7.98**	**119**	P	**Pn**	**01 38 31.3**	**+1.8**
CKFL	**Kef-Lekhel**	**8.02**	**221**	P	**Pn**	**01 38 34.3**	**+4.1**
LAKA	**Lakka**	**8.03**	**121**	P	**Pn**	**01 38 32.4**	**+2.2**
MOX	**Moxa**	**8.04**	**353**	*e*Pn	**Pn**	**01 38 28.8**	**-1.6**
MOX				Sn	**Sn**	**01 39 58.4**	**-2.9**
	comp=Z,1µm,1.0s						
NVR	**Nevrokopi**	**8.05**	**96**	P	**Pn**	**01 38 30.9**	**+0.3**
LOR	**Lormes**	**8.05**	**308**	*e*Pn	**Pn**	**01 38 29.5**	**-1.0**
	baz=127						
LOR				*e*Sn	**Sn**	**01 39 56.4**	**-5.1**
	comp=Z,1µm,0.6s						
UPC	**Upice**	**8.07**	**13**	*e*P	**Pn**	**01 38 30.1**	**-0.6**
UPC				*e*		01 39 58.0	
UPC				MLR	MLR		
	comp=Z,228µm,13.0s						
UPC	**Upice**	**8.07**	**13**	*e*PN	**Pn**	**01 38 30.1**	**-0.6**
UPC				*e*SN	**Sn**	**01 39 58.0**	**-3.8**
UPC				AMS	AMS	01 41 40.0	
	comp=Z,228µm,13.0s						
MTLF	**Montolieu**	**8.07**	**278**	*e*Pn	**Pn**	**01 38 29.7**	**-1.1**
MTLF				*e*Sn	**Sn**	**01 39 54.6**	**-7.4**
	comp=Z,477nm,0.7s						
PGB	**Panagyurishte**	**8.09**	**87**	P	**Pn**	**01 38 33.0**	**+1.9**
ALIK	**Aliki, Aigiali**	**8.10**	**120**	P	**Pn**	**01 38 33.7**	**+2.5**
LOT	**Lotru**	**8.10**	**66**	⇓P	**Pn**	**01 38 31.6**	**+0.3**
LOT	**Lotru**	**8.10**	**66**	*e*P	**Pn**	**01 38 32.1**	**+0.8**
AVF	**Avril sur Loir**	**8.12**	**304**	*e*Pn	**Pn**	**01 38 30.4**	**-1.1**
AVF				*e*Sn	**Sn**	**01 39 58.7**	**-4.5**
	comp=Z,2µm,1.0s						
OSTC	**Ostas**	**8.15**	**14**	*e*PN

CLL eSg Sg 01 41 09.0 -1.6
comp=Z,10µm,1.3s
CLL Lmax 01 42 00.0
CLL Collm 8.64 359 Pn **Pn 01 38 37.6 -0.9**
TCF Toulx Ste Croi 8.64 298 ePn **Pn 01 38 38.5 -0.1**
TCF eSn **Sn 01 40 10.0 -6.0**
comp=Z,820nm,0.8s
ITM Ithomi 8.66 126 eP **Pn 01 38 39.7 +0.8**
ITM Ithomi 8.66 126 P **Pn 01 38 41.3 +2.4**
ARR Arges 8.67 68 ⇓P **Pn 01 38 40.1 +1.1**
UZH Uzhgorod 8.72 44 eP **Pn 01 38 42.3 +2.7**
UZH eS **Sn 01 40 22.6 +4.9**
UZH MLR MLR
comp=Z,23µm,13.0s
HUMR Humele 8.75 74 ⇑P **Pn 01 38 39.7 -0.4**
PYL PYLOS 8.75 128 P **Pn 01 38 41.5 +1.4**
HYF Humbligny 8.78 305 ePn **Pn 01 38 39.5 -0.9**
HYF eSn **Sn 01 40 13.6 -5.7**
LTK Loutraki 8.79 119 P **Pn 01 38 42.5 +1.9**
STFAR Stefanesti-Arg 8.79 72 ⇓P **Pn 01 38 41.0 +0.4**
OJC Ojcow 8.81 29 eP **Pn 01 38 40.6 -0.2**
OJC eS **Sn 01 40 28.7 +8.6**
OJC eL L 01 41 37.5
comp=Z,93µm,29.4s
LOUT Loutraki 8.81 119 P **Pn 01 38 42.6 +1.6**
RJF Les Rejaudoux 8.82 291 ePn **Pn 01 38 42.4 +1.3**
RJF eSn **Sn 01 40 12.0 -8.4**
comp=Z,5µm,1.9s
BMR Baia Mare 8.82 52 ⇑P **Pn 01 38 41.3 +0.3**
SET Setif 8.84 226 P **Pn 01 38 46.0 +4.6**
HILG Hillesheim 8.84 332 ePn **Pn 01 38 42.9 +1.6**
THAS Thassos island 8.87 100 P **Pn 01 38 42.6 +0.8**
KOLS Kolonicke sedl 8.90 42 eP **Pn 01 38 45.3 +3.1**
KOLS e 01 40 14.2
KOLS Kolonicke sedl 8.90 42 ePN **Pn 01 38 45.3 +3.1**
KOLS ePG **Pg 01 39 22.4 -1.6**
KOLS eSN **Sn 01 40 14.2 -8.2**
KOLS eLG Lg 01 42 23.7
AHRW Bad Neuenahr-A 8.92 334 Pn **Pn 01 38 43.1 +0.7**
PVL Pavlikeni 8.92 82 P **Pn 01 38 42.1 -0.3**
VILL Villia 8.93 117 P **Pn 01 38 44.1 +1.4**
VOIR 8.97 68 ⇑P **Pn 01 38 44.3 +1.2**
STB Steinbach 9.04 333 ePn **Pn 01 38 44.9 +0.9**
ARCR ARCALIA 9.06 57 ⇓P **Pn 01 38 44.3 0.0**
EPID Epidavros 9.12 120 P **Pn 01 38 46.9 +1.7**
KASTN Kahler Asten 9.13 341 Pn **Pn 01 38 45.1 -0.2**
KDZ Kurdzhali 9.13 92 eP **Pn 01 38 45.1 -0.3**
KDZ Kurdzhali 9.13 92 P **Pn 01 38 46.4 +1.0**
BHOU Houvegnez 9.14 330 dP **Pn 01 38 46.0 +0.6**
DIM Dimitrovgrad 9.16 90 P **Pn 01 38 46.7 +1.1**
KYMI Kymi, Euboea I 9.22 112 P **Pn 01 38 47.6 +1.1**
HOBG Hohbusch 9.23 336 ePn **Pn 01 38 47.9 +1.3**
HOBG eSn **Sn 01 40 28.6 -1.7**
comp=Z,2µm,1.1s
BNS Bensberg 9.26 336 ePn **Pn 01 38 48.3 +1.3**
KLL Kalltalsperre 9.27 332 ePn **Pn 01 38 48.2 +1.1**
BTNL Ternell 9.28 331 dP **Pn 01 38 48.0 +0.6**
BTNL dS **Sn 01 40 30.2 -1.5**
RCHB Rochefort 9.28 326 dP **Pn 01 38 46.8 -0.5**
RCHB dS **Sn 01 40 31.2 -0.4**
KRND KRANIDI 9.28 121 P **Pn 01 38 49.2 +1.8**
LFF La Frestale 9.29 288 ePn **Pn 01 38 48.7 +1.3**
LFF eSn Sn 01 40 22.6 -9.2
comp=Z,1µm,1.2s
ATH Athens Observa 9.30 117 P **Pn 01 38 49.2 +1.5**
DREG Dreilaegerbach 9.31 332 ePn **Pn 01 38 49.2 +1.5**
RDO Rodhopi 9.33 95 eP **Pn 01 38 48.6 +0.6**
RDO Rodhopi 9.33 95 P **Pn 01 38 48.6 +0.6**
DOPR Dopca 9.34 65 ⇓P **Pn 01 38 49.2 +1.0**
MEM Membach 9.34 331 dP **Pn 01 38 48.9 +0.7**
SZH Strazhica 9.36 82 P **Pn 01 38 49.6 +1.2**
CLZ Clausthal 9.37 349 Pn **Pn 01 38 47.3 -1.2**
GIVF Givet 9.41 325 ePn **Pn 01 38 49.0 +0.1**
GIVF eSn **Sn 01 40 27.3 -7.4**
comp=Z,1µm,0.9s
SKY Skiros Island 9.41 110 P **Pn 01 38 50.4 +1.3**
SGRR Singureni 9.42 76 ⇓P **Pn 01 38 49.2 -0.1**
VLY Voula,Athens 9.42 117 P **Pn 01 38 51.0 +1.7**
EPF Esparros 9.45 276 ePn **Pn 01 38 49.0 -0.7**
EPF eSn Sn 01 40 26.8 -9.1
comp=Z,4µm,2.3s
BCLA Clavier 9.46 328 dP **Pn 01 38 50.6 +0.8**
BCLA dS **Sn 01 40 32.3 -3.7**
BUC1 Bucharest 9.47 75 ⇓P **Pn 01 38 49.3 -0.6**
BSTI Sart Tilman 9.49 329 dP **Pn 01 38 51.0 +0.9**
HGN Heimansgroeve 9.50 331 Pn **Pn 01 38 50.9 +0.6**
DOU Dourbes 9.50 324 dP **Pn 01 38 49.7 -0.7**
DOU dS **Sn 01 40 36.3 -0.7**
VLI Veliai 9.57 125 P **Pn 01 38 52.5 +1.1**
KWP Kalwaria Pacla 9.58 40 eP **Pn 01 38 53.0 +1.6**
KWP eS Sn 01 40 50.3 +11
KWP eL L 01 42 56.9
comp=Z,197µm,18.2s
BMRD Maredsous 9.58 326 dP **Pn 01 38 51.5 +0.1**
BMRD dS **Sn 01 40 37.7 -1.4**
SECR 9.59 71 ⇓P **Pn 01 38 52.0 +0.4**
MLR Muntele Rosu 9.60 69 ⇑P **Pn 01 38 53.0 +1.2**
MLR Muntele Rosu 9.60 69 Pn **Pn 01 38 53.1 +1.2**
comp=Z,8.1nm,0.3s,baz=201,slow=7.0,SNR=126
MLR Sn **Sn 01 40 34.6 -5.0**
comp=Z,3.1nm,0.3s,baz=158,slow=18,SNR=0.8
MLR Lg Lg 01 41 43.6
baz=279,slow=23
MLR LR LR 01 43 27.0
comp=Z,370µm,21.4s,baz=244,slow=43
comp=Z,214nm,0.9s
MLR Muntele Rosu 9.60 69 eP **Pn 01 38 52.6 +0.8**
MLR Muntele Rosu 9.60 69 Pn **Pn 01 38 52.1 +0.3**
BEBN Eben Emael 9.62 330 dP **Pn 01 38 53.2 +1.3**
BEBN dS **Sn 01 40 41.0 +1.2**
OZUR 9.64 65 ⇓P **Pn 01 38 53.3 +1.0**
BKLB Ruhr-Universit 9.65 337 Pn **Pn 01 38 53.8 +1.4**
BUG Bochum--Univer 9.65 337 Pn **Pn 01 38 53.6 +1.2**
BTEZ Ruhr-Universit 9.66 337 Pn **Pn 01 38 53.9 +1.5**
BULI Ruhr-Universit 9.67 337 Pn **Pn 01 38 54.0 +1.4**
LAUG Laupendahl 9.67 336 ePn **Pn 01 38 53.9 +1.3**
SULR 9.67 74 ⇑P **Pn 01 38 52.8 +0.1**
HMES Hamm, Michael- 9.72 339 Pn **Pn 01 38 55.4 +2.1**
HMES Sn **Sn 01 40 41.6 -0.8**
comp=Z,102nm,0.7s
RAZG Razgrad 9.78 80 ⇓P **Pn 01 38 54.5 +0.4**
BURAR Bucovina Array 9.82 56 ⇑P **Pn 01 38 56.3 +1.5**
NEHR Nehoiu 9.82 69 ⇑P **Pn 01 38 56.0 +1.2**
COVR Voineasa-Covas 9.86 67 ⇑P **Pn 01 38 56.6 +1.4**
GADA Gvkgeada 9.86 100 eP **Pn 01 38 56.9 +1.6**
JMB Yambol 9.88 87 P **Pn 01 38 57.3 -2.4**
ENEZ Enez 9.88 97 eP **Pn 01 38 56.3 +0.7**
BZER Hlnxe 9.93 337 Pn **Pn 01 38 59.7 +3.6**
ISR Istrita 9.94 71 ⇓P **Pn 01 38 57.1 +0.7**
KTHA Kythira Island 9.96 127 eP **Pn 01 38 57.6 +0.9**
KTHA Kythira Island 9.96 127 P **Pn 01 38 58.6 +1.9**
NRDL Niedersach Rie 10.04 349 Pn **Pn 01 38 58.6 +1.0**
LEHL Lehliu 10.05 75 ⇑P **Pn 01 38 57.7 -0.2**
EDRB Edirne 10.08 90 eP **Pn 01 38 59.3 +1.0**
BOZC Bozcaada 10.09 102 eP **Pn 01 38 59.1 +0.7**
ETSF Etsaut 10.12 276 ePn **Pn 01 39 00.5 +1.6**
UKOP Uzunkopru-Edir 10.14 94 eP **Pn 01 39 00.0 +0.9**
PLOR Plostina 10.16 67 ⇓P **Pn 01 38 59.9 +0.5**
SIGR SIGRI 10.18 106 eP **Pn 01 39 00.7 +1.0**
SIGR SIGRI 10.18 106 P **Pn 01 38 59.6 -0.1**
GELI Tayfur-Gelibol 10.21 98 eP **Pn 01 39 00.7 +0.6**
VRI Vrincioaia 10.21 67 ⇑P **Pn 01 39 00.5 +0.4**
VRI Vrincioaia 10.21 67 eP **Pn 01 39 01.0 +0.8**
PGOR Pogoanele 10.22 73 ⇑P **Pn 01 39 01.2 +1.0**
RASA Rasa 10.27 77 ⇓P **Pn 01 39 00.2 -0.6**
MFF Saint Martin d 10.29 297 ePn **Pn 01 39 00.6 -0.5**
MFF eSn **Sn 01 40 49.0 -7.3**
comp=Z,2µm,1.4s
EZN Ezine 10.29 102 eP **Pn 01 39 01.5 +0.4**
EZN Ezine 10.29 102 P **Pn 01 39 01.7 +0.6**
IBBS Ibbenbueren So 10.29 341 Pn **Pn 01 39 03.0 +1.9**
IBBE Ibbenbueren Ea 10.29 341 Pn **Pn 01 39 02.4 +1.2**
IBBN Ibbenbueren 10.31 341 Pn **Pn 01 39 02.8 +1.4**
TESR Tescani 10.33 64 ⇑P **Pn 01 39 02.8 +1.0**
LVV L'vov 10.35 43 eP **Pn 01 39 05.1 +3.1**
LVV eS **Sn 01 41 04.3 +6.4**
LVV pmax pmax
comp=Z,4µm,1.8s
LVV smax smax
comp=E,25µm,6.7s
LVV smax smax
comp=N,10µm,6.0s
LVV MLR MLR
comp=E,104µm,10.0s
LVV MLR MLR
comp=N,152µm,9.6s
LVV MLR MLR
comp=Z,181µm,9.6s
ANKY Antikythira Is 10.37 128 P **Pn 01 39 03.3 +1.0**
CLNZ Clenze 10.38 352 Pn **Pn 01 39 04.1 +1.8**
AMRR Amara 10.43 75 ⇓P **Pn 01 39 02.8 -0.2**
PRD Provadia 10.43 82 P **Pn 01 39 04.0 +0.9**
PRK Paraskevi 10.46 105 P **Pn 01 39 04.5 +0.9**
MHLO Agia Marina, M 10.50 121 P **Pn 01 39 06.7 +2.7**
BEL Belsk 10.51 27 eP **Pn 01 39 06.5 +2.4**
BEL eS Sn 01 41 13.0 +11
BEL eL L 01 43 49.7
comp=Z,124µm,18.0s
SJPF Ste Jean 10.59 277 ePn **Pn 01 39 06.4 +1.0**
SJPF eSn **Sn 01 40 55.6 -8.3**
comp=Z,960nm,1.7s
RKY Sarkoy-Tekirda 10.65 96 eP **Pn 01 39 06.8 +0.7**
CHOS Chios Island 10.68 109 eP **Pn 01 39 06.8 +0.2**
PHSR Pinarhisar 10.69 91 eP **Pn 01 39 07.4 +0.7**
GHRR 10.72 67 ⇑P **Pn 01 39 08.5 +1.4**
ICOR Ion Corvin 10.73 77 ⇓P **Pn 01 39 06.5 -0.7**
TUDR 10.80 69 ⇓P **Pn 01 39 06.8 -1.4**
RODP Rodopos 10.85 127 P **Pn 01 39 11.5 +2.7**
HARR Harsova 10.86 74 ⇓P **Pn 01 39 09.6 +0.6**
SLCR Slobozia Conac 10.87 69 ⇑P **Pn 01 39 08.9 -0.3**
SCHL Schela 10.90 70 ⇓P **Pn 01 39 10.1 +0.6**
CVDA Cernavoda 10.91 76 ⇑P **Pn 01 39 10.2 +0.6**
TLBR Topalu 10.93 75 ⇓P **Pn 01 39 09.8 -0.1**
GKP Gorka Klasztor 10.94 13 eP **Pn 01 39 10.1 +0.1**
GKP eS Sn 01 41 23.5 +11
GKP eL L 01 43 58.8
comp=Z,147µm,17.6s
CRLT Corlu 10.95 93 eP **Pn 01 39 11.5 +1.3**
DKL Dikili 10.99 105 eP **Pn 01 39 11.5 +0.8**
ZARR Zarrentin 10.99 353 Pn **Pn 01 39 11.8 +1.1**
PSN Preselentsi 10.99 80 P **Pn 01 39 11.3 +0.5**
APE Apeiranthos 11.01 116 ⇓P **Pn 01 39 10.8 -0.3**
APE Apeiranthos 11.01 116 eP **Pn 01 39 11.1 +0.1**
APE Apeiranthos 11.01 116 P **Pn 01 39 11.4 +0.4**
APE Apeiranthos 11.01 116 *i*P **Pn 01 39 10.7 -0.3**
APE MLR MLR
comp=Z,57µm,13.0s
EBNR Beni Rached 11.04 239 P **Pn 01 39 15.1 +3.6**
LDF La Druitiere 11.04 307 ePn **Pn 01 39 11.2 -0.2**
LDF eSn **Sn 01 41 06.5 -8.2**
comp=Z,875nm,1.0s
SCTR Scanteiesti 11.04 69 ⇓P **Pn 01 39 11.0 -0.5**
IMMV Iera Moni Meta 11.05 127 eP **Pn 01 39 11.4 -0.2**
CFR Carcaliu 11.06 72 ⇑P **Pn 01 39 10.1 -1.6**
TATR Tatarca 11.07 70 ⇓P **Pn 01 39 11.2 -0.6**
URLA Izmir 11.07 108 eP **Pn 01 39 10.5 -1.4**
IAS Iasi 11.13 61 ⇓P **Pn 01 39 13.2 +0.5**
VLDR Vladesti 11.13 68 ⇑P **Pn 01 39 13.5 +0.8**
TIRR Tirgusor 11.19 76 ⇑P **Pn 01 39 12.6 -0.8**
TIRR Tirgusor 11.19 76 ⇑P **Pn 01 39 12.6 -0.8**
TIRR Tirgusor 11.19 76 eP **Pn 01 39 14.2 +0.8**
TIRR Tirgusor 11.19 76 Pn **Pn 01 39 12.8 -0.6**
TIRR Tirgusor 11.19 76 P **Pn 01 39 12.8 -0.6**
TPGR Topolog 11.22 74 ⇑P **Pn 01 39 13.4 -0.6**
ECHA Ech Chlef 11.23 238 P **Pn 01 39 14.7 +0.7**
EDC Edincik 11.24 97 eP **Pn 01 39 15.5 +1.3**
SLVT Silivri 11.28 92 eP **Pn 01 39 14.5 -0.2**
CTYL Yalikoy Yolu 11.29 91 eP **Pn 01 39 16.0 +1.2**
EFOR EFORIE 11.32 78 ⇑P **Pn 01 39 14.9 -0.4**
FLN La Foliniere 11.33 307 ePn **Pn 01 39 13.0 -2.3**
baz=124
FLN eSn **Sn 01 41 13.7 -8.1**
comp=Z,590nm,0.8s
SANT Santorini 11.37 120 ⇑P **Pn 01 39 16.1 +0.1**
SANT Santorini 11.37 120 eP **Pn 01 39 15.8 -0.2**
SANT Santorini 11.37 120 Pn **Pn 01 39 15.6 -0.4**
BLCB Balcova 11.37 108 eP **Pn 01 39 16.2 +0.2**
GRR Gorron 11.39 305 ePn **Pn 01 39 13.8 -2.3**
GRR eSn **Sn 01 41 14.7 -8.5**
comp=Z,588nm,1.0s
BSEG Bad Segeberg 11.43 351 Pn **Pn 01 39 16.0 -0.6**
CTKS Kestanelik-??a 11.49 92 eP **Pn 01 39 18.2 +0.6**
EANR 'Ain N'Sour 11.52 238 P **Pn 01 39 20.1 +2.0**
TLCR 11.54 72 ⇑P **Pn 01 39 18.3 +0.1**
GVDS Gavdos 11.55 129 eP **Pn 01 39 18.6 +0.2**
GVD Gavdhos 11.55 129 eP **Pn 01 39 18.5 +0.1**
IDI Anoyia 11.71 125 ⇓P **Pn 01 39 19.9 -0.7**
IDI Anoyia 11.71 125 Pn **Pn 01 39 22.3 +1.6**
comp=Z,14nm,0.3s,baz=312,slow=14,SNR=27
IDI Sn **Sn 01 41 24.0 -7.3**
comp=Z,9.8nm,0.3s,baz=60,slow=5.8,SNR=4.6
IDI Lg Lg 01 42 40.7
baz=355,slow=21
IDI LR LR 01 45 16.9
comp=Z,42µm,18.1s,baz=311,slow=45
comp=Z,67nm,0.5s
IDI Anoyia 11.71 125 eP **Pn 01 39 20.9 +0.2**
IDI Anoyia 11.71 125 Pn **Pn 01 39 20.6 -0.1**
ELSH Elham, Standar 11.81 320 eP **Pn 01 39 21.2 -0.7**
ELSH IAMs_20 IAMs_20 01 44 43.4
comp=Z,118µm,13.6s
HRKL Herakleio 11.82 125 eP **Pn 01 39 22.6 +0.5**
GCAM G?zelcaml? 11.83 110 eP **Pn 01 39 23.9 +1.7**
MILM Milestii Mici 11.87 64 ⇑P **Pn 01 39 22.7 0.0**
MILM Milestii Mici 11.87 64 *i*P **Pn 01 39 22.8 0.0**
comp=Z,12µm,4.4s
MILM eS **Sn 01 41 36.0 +0.8**
MILM eLi 01 42 26.0
MILM eLq LQ 01 42 36.0
MILM eRq 01 44 04.0
MILM LRM MLR 01 44 57.0
comp=Z,219µm,13.0s
MILM Milestii Mici 11.87 64 *c i*P **Pn 01 39 22.8 0.0**
MILM eS **Sn 01 41 36.0 +0.8**
MILM pmax pmax
comp=Z,12µm,4.4s
MILM MLR MLR
comp=Z,219µm,13.0s
MILM MLR MLR
comp=E,85µm,11.5s
RGN Rugen 11.88 0 Pn **Pn 01 39 22.0 -0.9**
KLYT Kilyos 11.88 92 eP **Pn 01 39 23.6 +0.6**
KIS Kishinev 11.90 63 ⇓P **Pn 01 39 23.0 -0.1**
KIS Kishinev 11.90 63 eP **Pn 01 39 22.9 -0.3**
comp=E,35nm,0.3s
KIS eS **Sn 01 41 35.0 -0.8**
KIS eL L 01 44 08.0
KIS LRM MLR 01 44 57.0
comp=E,96µm,14.0s
KIS Kishinev 11.90 63 eP **Pn 01 39 22.9 -0.3**
KIS eS **Sn 01 41 35.0 -0.8**
KIS pmax pmax
comp=Z,3µm,4.0s
KIS MLR MLR
comp=Z,96µm,14.0s
KIS MLR MLR
comp=E,81µm,11.0s
ARMT Armutlu 11.91 95 eP **Pn 01 39 24.3 +0.9**
ISK Istanbul-Kandi 11.94 92 eP **Pn 01 39 24.3 +0.6**
KAVV Kandilli-Istan 11.94 92 eP **Pn 01 39 23.9 +0.2**
SORM Soroca 11.96 58 ⇓P **Pn 01 39 22.9 -1.1**
MDNY Mudanya-Bursa 11.98 96 eP **Pn 01 39 24.6 +0.2**
CART Cartagena 11.99 250 P **Pn 01 39 23.7 -0.8**
CART S Sn 01 42 08.2 +30
CART Cartagena 11.99 250 Pn **Pn 01 39 25.1 +0.6**
HMNX Herstmonceux 12.02 317 eP **Pn 01 39 24.9 +0.2**
HMNX IAMs_20 IAMs_20 01 45 42.2
comp=Z,232µm,8.4s
KOSK Kos Island 12.14 115 eP **Pn 01 39 27.0 +0.5**
AYDB Zeytinkoy-Aydi 12.17 108 eP **Pn 01 39 27.0 0.0**
GEMT Gemlik 12.19 95 eP **Pn 01 39 27.7 +0.5**
BODT Bodrum 12.20 113 eP **Pn 01 39 28.1 +0.7**
YLV Yalova 12.29 94 eP **Pn 01 39 29.0 +0.4**
SKMB Sankelmark Bun 12.30 350 Pn **Pn 01 39 28.9 +0.3**
SILT Sile 12.35 92 eP **Pn 01 39 30.4 +1.1**
NIS1 Nisyros Isl. 12.36 115 eP **Pn 01 39 30.7 +1.2**
SGMF Saint Gilles 12.38 302 ePn **Pn 01 39 27.8 -1.9**
SGMF eSn Sn 01 41 37.5 -10
comp=Z,354nm,1.1s
MANT Manisa 12.40 105 Pn **Pn 01 39 30.8 +0.5**
HRT Hereke 12.44 93 eP **Pn 01 39 31.1 +0.4**
KULA Kula-Manisa 12.47 104 eP **Pn 01 39 32.0 +1.0**
PURM Purcari 12.49 66 ⇑P **Pn 01 39 30.3 -0.9**

JSA Saint Aubin 12.51 307 eP **Pn 01 39 30.5 -1.0**
JSA IAMs_20 IAMs_20 01 45 22.9
comp=Z,117µm,8.5s
ELMS Elmsett, Ipswi 12.52 323 eP **Pn 01 39 30.7 -0.9**
ELMS IAMs_20 IAMs_20 01 45 36.2
comp=Z,121µm,10.1s
JVM Valle D.L. Mar 12.55 307 eP **Pn 01 39 31.7 -0.3**
UCM Universidad Co 12.55 265 P **Pn 01 39 30.2 -2.0**
UCM S Sn 01 42 11.0 +19
ADVT Abdulvahap 12.60 95 eP **Pn 01 39 33.1 +0.4**
ZKR Zakros 12.63 122 eP **Pn 01 39 33.4 +0.1**
QUIF Quistinic 12.65 300 ePn **Pn 01 39 31.9 -1.5**
QUIF eSn Sn 01 41 44.4 -10
comp=Z,240nm,0.8s
TVSB Tavsanli 12.69 99 eP **Pn 01 39 34.1 0.0**
CAVI Cavuskoy 12.73 96 eP **Pn 01 39 36.1 +1.5**
KLNR Kaliningrad 12.80 19 *c i*P **Pn 01 39 35.7 +0.4**
KLNR pmax pmax
comp=Z,419nm,1.1s
KLNR MLR MLR
comp=Z,95µm,14.0s
GEDZ Gediz 12.80 101 eP **Pn 01 39 36.1 +0.5**
YER Yerkesik 12.83 111 eP **Pn 01 39 36.5 +0.5**
ROSF Rostrenen 12.86 302 ePn **Pn 01 39 33.4 -2.8**
ROSF eSn Sn 01 41 49.9 -9.3
comp=Z,708nm,1.2s
SAUV Serdivan-Sakar 12.95 93 eP **Pn 01 39 37.1 -0.4**
KARP Karpathos 12.96 119 eP **Pn 01 39 37.3 -0.5**
KARP Karpathos 12.96 119 Pn **Pn 01 39 37.8 0.0**
TURN Turunc 12.99 112 eP **Pn 01 39 38.5 +0.4**
COP Copenhagen 13.03 358 ⇑ *i*P **Pn 01 39 38.0 -0.5**
COP IVmB_BB 01 39 43.0
comp=Z,10µm,4.0s
COP IAmb IAmb 01 39 45.5
comp=Z,638nm,1.1s
COP IAMs_20 IAMs_20 01 45 27.0
comp=Z,160µm,17.2s
WACR West Acre 13.12 324 eP **Pn 01 39 39.7 -0.1**
WACR IAmb IAmb 01 39 59.7
comp=Z,771nm,1.1s
GULT Gulveren 13.17 94 eP **Pn 01 39 40.8 +0.2**
ARG Arkhangelos 13.21 114 eP **Pn 01 39 41.5 +0.4**
DALY Dalyan (Mula) 13.25 111 eP **Pn 01 39 41.9 +0.3**
ESBB Sonseca Array 13.27 263 **Pn 01 39 39.6 -2.4**
ESDC Sonseca Array 13.27 263 Pn **Pn 01 39 41.6 -0.4**
comp=Z,1.7nm,0.3s,baz=71,slow=13,SNR=104
ESDC Sn **Sn 01 42 07.9 -1.6**
comp=Z,0.1nm,0.3s,baz=54,slow=24,SNR=1.0
ESDC Lg Lg 01 43 20.9
baz=67,slow=6.5
ESDC LR LR 01 44 55.8
comp=Z,92µm,19.0s,baz=68,slow=38
comp=Z,58nm,0.7s
SRCK Saricakaya, Es 13.36 95 eP **Pn 01 39 43.2 +0.1**
APMY Acipayam-Deniz 13.38 107 eP **Pn 01 39 43.2 -0.3**
SWN1 Swindon 13.49 316 eP **Pn 01 39 44.1 -0.7**
SWN1 IAmb IAmb 01 39 48.0
comp=Z,1µm,1.1s
SWN1 IAMs_20 IAMs_20 01 46 35.5
comp=Z,116µm,11.0s
PAB San Pablo 13.59 263 **Pn 01 39 43.4 -3.0**
PAB San Pablo 13.59 263 P **Pn 01 39 43.4 -3.0**
PAB San Pablo 13.59 263 P **Pn 01 39 44.3 -2.2**
AKASG Malin Array Be 13.60 48 Pn **Pn 01 39 46.4 +0.1**
comp=Z,1.1nm,0.3s,baz=243,slow=12,SNR=22
AKASG Lg Lg 01 43 32.4
baz=163,slow=18
AKASG LR LR 01 45 43.7
comp=Z,117µm,18.6s,baz=240,slow=41
comp=Z,17nm,0.7s
AKASG Malin Array Be 13.60 48 *ceP* **Pn 01 39 44.7 -1.6**
AKASG pmax pmax
comp=Z,12nm,0.8s
AKBB Malin Array Si 13.60 48 Pn **Pn 01 39 45.0 -1.3**
AKBB Malin Array Si 13.60 48 *c i*P **Pn 01 39 45.4 -0.9**
CAME Cameli-Denizli 13.63 109 eP **Pn 01 39 46.6 -0.4**
FETY Fethiye 13.64 111 eP **Pn 01 39 47.3 +0.3**
KDZE Karadeniz Ereo 13.64 90 eP **Pn 01 39 46.9 -0.1**
MDUB Mudurnu 13.66 93 eP **Pn 01 39 47.6 +0.3**
BASM Basmaki-Afyon 13.71 105 eP **Pn 01 39 47.3 -0.4**
SHUT Suhut-Afyon 13.81 102 eP **Pn 01 39 49.9 +0.5**
DEL Delary 13.81 2 ⇑ *i*P **Pn 01 39 48.3 -0.9**
DEL IAMs_20 IAMs_20 01 45 31.9
comp=Z,37µm,19.5s
CIFT Cifteler, Eski 13.89 98 eP **Pn 01 39 50.3 -0.2**
OLDB Oldbury-Upon-S 13.96 315 eP **Pn 01 39 47.4 -3.8**
CWF Charnwood Fore 14.00 321 eP **Pn 01 39 50.3 -1.4**
CWF IAMs_20 IAMs_20 01 46 02.0
comp=Z,85µm,12.6s
MUD Monsted U'grnd 14.03 351 ⇑ *i*P **Pn 01 39 51.8 -0.4**
MUD IAmb IAmb 01 39 56.8
comp=Z,268nm,1.4s
MUD IAMs_20 IAMs_20 01 46 10.6
comp=Z,100µm,20.5s
YUVA Yuva-Kibriscik 14.04 93 eP **Pn 01 39 52.7 +0.2**
LMK Market Rasen 14.05 325 eP **Pn 01 39 51.5 -0.9**
DYA Yadsworthy 14.09 309 eP **Pn 01 39 50.1 -2.9**
DYA IAMs_20 IAMs_20 01 46 20.3
comp=Z,105µm,10.4s
ISP Isparta 14.09 104 eP **Pn 01 39 53.7 +0.5**
ISP Isparta 14.09 104 *ceP* **Pn 01 39 54.9 +1.7**
ISP MLR MLR
comp=Z,59µm,13.0s
ELL Elmali 14.15 109 eP **Pn 01 39 54.3 +0.2**
MONM Monmouth 14.19 316 eP **Pn 01 39 51.6 -2.7**
MONM IAmb IAmb 01 40 06.3
comp=Z,473nm,1.1s
SVRH Sivrihisar-ESK 14.20 97 eP **Pn 01 39 54.7 0.0**
AKAS Kas 14.21 111 eP **Pn 01 39 54.0 -0.9**
CHAS Isla Isabel II 14.27 244 P **Pn 01 39 53.3 -2.2**
CHAS S **S 01 42 47.7 -6.6**
BCK Bucak 14.29 106 eP **Pn 01 39 56.4 +0.4**
KORT Korkueli 14.34 108 eP **Pn 01 39 56.4 -0.3**
MCH1 Michaelchurch 14.38 316 eP **Pn 01 39 55.1 -1.9**
MCH1 IAmb IAmb 01 40 08.5
comp=Z,323nm,1.1s
KURC Kurucasile-Bar 14.50 87 eP **Pn 01 39 59.1 +0.4**
PBUR Paburge 14.50 20 eP **Pn 01 39 59.9 +1.3**
WMELI Melilla 14.54 245 P **Pn 01 39 58.1 -1.1**
WMELI S **S 01 42 55.5 -4.3**
SUTC Sutluce-Ispart 14.58 105 eP **Pn 01 39 59.7 -0.3**
GOET G??ttrup 14.60 351 ⇑ *i*P **Pn 01 39 59.3 -0.6**
GOET IAmb IAmb 01 40 12.1
comp=Z,2µm,2.2s
ANTB Antalya 14.60 107 eP **Pn 01 39 59.7 -0.4**
HLM1 Long Mynd 14.62 318 eP **Pn 01 39 58.4 -1.8**
HLM1 IAMs_20 IAMs_20 01 46 49.8
comp=Z,89µm,8.8s
PABE Paberze 14.62 25 **Pn 01 39 58.4 -1.9**
PABE Paberze 14.62 25 eP **Pn 01 40 00.7 +0.3**
PABE IAmb IAmb 01 40 15.5
comp=Z,1µm,1.4s
STNC Stoke 14.64 321 eP **Pn 01 39 58.9 -1.7**
KIZT Kizilcal 14.65 99 eP **Pn 01 40 00.4 -0.5**
ONAU Onsala 14.76 357 ⇑ *i*P **Pn 01 40 00.6 -1.6**
PBRG Braganca 14.80 273 ePn **Pn 01 40 02.4 -0.4**
PBRG A A 01 40 16.3
comp=Z,542nm,1.4s
JBK JBK 14.87 241 P **P 01 40 07.0 -2.8**
GDLE Glaisdale, N Y 14.94 327 eP **Pn 01 40 04.8 +0.2**
GDLE IAMs_20 IAMs_20 01 47 14.6
comp=Z,74µm,10.3s
HPK Haverah Park 14.95 324 eP **Pn 01 40 02.5 -2.3**
HPK IAMs_20 IAMs_20 01 47 05.8
comp=Z,70µm,9.5s
LOD Lodumlu 14.97 94 eP **Pn 01 40 04.8 -0.4**
FOEL Foel Wylfa 14.99 319 eP **Pn 01 40 02.8 -2.5**
FOEL IAMs_20 IAMs_20 01 47 02.7
comp=Z,133µm,9.1s
ANTO Ankara 15.00 94 eP **Pn 01 40 05.6 0.0**
ANTO Ankara 15.00 94 P **Pn 01 40 07.8 +2.2**
ANTO P **Pn 01 40 07.8 +2.2**
ANTO P **Pn 01 40 07.8 +2.2**
VSVD Vaisvydziai 15.02 24 eP **Pn 01 40 07.7 +2.1**
NACGM Naroch 15.12 31 ⇑ *i*P **Pn 01 40 05.2 -1.9**
MVO Moncorvo 15.13 271 ePn **Pn 01 40 06.9 -0.5**
MVO A A 01 40 27.4
comp=Z,712nm,1.6s
MVO eLR LR 01 44 24.2
comp=Z,91µm,20.0s
LADK Ladik-KONYA 15.26 101 eP **Pn 01 40 08.9 -0.2**
RSBS Rosebush, Pemb 15.27 314 eP **Pn 01 40 06.8 -2.1**
RSBS IAmb IAmb 01 40 18.6
comp=Z,3µm,2.7s

RSBS IAMs_20 IAMs_20 01 47 04.1
comp=Z,141µm,10.3s
SIM Simferopol' 15.27 74 *e*P **Pn 01 40 08.0 -1.1**
SIM pmax pmax
comp=Z,207nm,1.5s
SIM MLR MLR
comp=Z,60µm,17.3s
MNK Minsk 15.27 34 *i* P **Pn 01 40 04.4 -4.6**
MNK *i* S **Sn 01 42 53.7 -4.2**
MNK pmax pmax
comp=E,43nm,1.1s
MNK pmax pmax
comp=Z,217nm,1.1s
MNK pmax pmax
comp=N,8.0nm,1.0s
MNK MLR MLR
comp=Z,95µm,20.0s
MNK Minsk 15.27 34 *i* P **Pn 01 40 04.5 -4.6**
comp=E,43nm,1.1s
MNK *i* P **Pn 01 40 04.5 -4.6**
comp=N,8.0nm,1.0s
MNK *i* P **Pn 01 40 04.5 -4.6**
comp=Z,217nm,1.1s,baz=46
MNK *i* PP **P 01 40 12.5 -1.3**
MNK *i* PPP PPP 01 40 20.3
MNK *i* S **Sn 01 42 53.8 -4.2**
MNK *i* SS **SnSn 01 43 07.8 -2.8**
MNK *i* SSS SSS 01 43 20.4
MNK *i* LQ LQ 01 44 32.4
MNK *i* LR LR 01 45 41.8
MNK *i* LRM MLR 01 46 38.3
comp=N,38nm,20.4s
MNK *i* LRM MLR 01 46 38.3
comp=Z,95µm,19.5s
MNK *i* LRM MLR 01 46 43.0
comp=E,10µm,17.0s
KONT Konya--Tatoy 15.36 102 *e*P **Pn 01 40 10.2 -0.1**
ISAL Salakas 15.39 29 *e*P **Pn 01 40 09.6 -1.1**
ISAL IAmb IAmb 01 40 24.4
comp=Z,202nm,1.1s
CANT Cankiri 15.41 91 *e*P **Pn 01 40 10.9 -0.1**
BZK Bozkurt 15.41 86 *e*P **Pn 01 40 07.6 -3.3**
CHBY Cihanbeyli 15.50 99 *e*P **Pn 01 40 12.6 +0.4**
PVLZ Peæn de 15.53 247 P **Pn 01 40 11.0 -1.5**
PVLZ S **S 01 43 13.5 -6.6**
FIGM Figuig 15.56 232 P **Pn 01 40 15.0 +1.9**
YLL Llanberis 15.61 318 *e*P **Pn 01 40 09.7 -3.8**
PVRL Vila Real 15.62 272 *e*Pn **Pn 01 40 14.1 +0.4**
PVRL A A 01 40 26.3
comp=Z,800nm,1.5s
POLO Lamas de Olo 15.65 272 *e*Pn **Pn 01 40 13.9 -0.3**
POLO A A 01 40 26.7
comp=Z,417nm,1.8s
BR131 Keskin Array S 15.66 94*c i*P **Pn 01 40 16.2 +1.8**
BRTR Keskin Array B 15.66 94 Pn **P 01 40 16.5 -2.0**
comp=Z,0.9nm,0.3s,baz=284,slow=11,SNR=26
BRTR Sn **Sn 01 43 05.5 -2.5**
comp=Z,0.3nm,0.3s,baz=310,slow=37,SNR=0.8
BRTR Lg Lg 01 44 49.9
comp=Z,0.1nm,0.3s,baz=129,slow=1.8,SNR=1.2
BRTR LR LR 01 47 22.5
comp=Z,195µm,18.3s,baz=295,slow=41
BRTR ScP **ScP 01 48 51.7 +2.7**
comp=Z,4.2nm,1.0s,baz=186,slow=2.4,SNR=3.7
comp=Z,36nm,0.9s
BRTR Keskin Array B 15.66 94 *e*P **Pn 01 40 14.6 +0.2**
BRTR Keskin Array B 15.66 94*ce*P **P 01 40 16.5 -2.0**
BRTR pmax pmax
comp=Z,36nm,0.9s
MTE Manteigas 15.70 269 *e*Pn **Pn 01 40 14.2 -0.5**
MTE A A 01 40 25.3
comp=Z,725nm,1.2s
MTE *e*LR LR 01 44 35.9
comp=Z,82µm,18.0s
EDMD Edmundbyers 15.70 326 *e*P **Pn 01 40 12.6 -2.0**
EDMD IAMs_20 IAMs_20 01 48 07.1
comp=Z,60µm,9.3s
PCAB Cabril 15.76 274 *e*Pn **Pn 01 40 16.6 +1.1**
PCAB A A 01 40 27.0
comp=Z,783nm,2.0s
PCBR Castelo Branco 15.80 267 *e*Pn **Pn 01 40 13.0 -3.0**
PCBR A A 01 40 29.1
comp=Z,319nm,1.3s
WLF1 Llynfaes 15.81 318 *e*P **Pn 01 40 13.5 -2.5**
WLF1 IAmb IAmb 01 40 29.3
comp=Z,525nm,1.0s
WME Myndd Eilian 15.83 319 *e*P **Pn 01 40 14.0 -2.2**
KAMT Kaman 15.83 95 *e*P **Pn 01 40 17.6 +1.1**
SERE Sereflikochisa 15.86 97 *e*P **Pn 01 40 17.6 +0.7**
PMRV Marv??o 15.86 265 *e*Pn **Pn 01 40 16.6 -0.3**
PMRV A A 01 40 27.4
comp=Z,519nm,2.0s
PMRV *e*LR LR 01 44 46.7
comp=Z,82µm,18.0s
PVIS Viseu 15.87 270 A A 01 40 28.0
comp=Z,602nm,2.0s
CEU Ceuta 15.88 251 P **Pn 01 40 15.2 -1.8**
CEU S **S 01 43 20.4 -6.8**
HOMB Homborsund 15.89 351 *e*P **Pn 01 40 17.1 +0.1**
HOMB IVmB_BB 01 40 26.9
comp=Z,7µm,3.1s
HOMB *e* 01 43 29.1
HOMB IVMs_BB IVMs_BB 01 47 33.8
comp=Z,55µm,13.2s
PGAV Gavieira, Arco 15.89 275 A A 01 40 28.7
comp=Z,824nm,1.7s
PGAV *e*LR LR 01 44 46.5
comp=Z,93µm,20.0s
WPS Cemaes, Angles 15.93 318 *e*P **Pn 01 40 14.7 -2.8**
WPS IAmb IAmb 01 40 25.1
comp=Z,646nm,1.0s
KESW Keswick, Cumbr 16.02 324 *e*P **Pn 01 40 18.0 -0.7**
KESW IAMs_20 IAMs_20 01 47 24.9
comp=Z,52µm,12.3s
SLIT Slitere, Latvi 16.04 18 *e*P **Pn 01 40 18.7 -0.2**
PBAR Barrancos 16.04 261 *e*Pn **Pn 01 40 20.3 +1.1**
PBAR A A 01 40 32.2
comp=Z,882nm,1.9s
YAYX Yaylak 16.04 97 *e*P **Pn 01 40 19.7 +0.4**
GAZI Gazipasa 16.09 107 *e*P **Pn 01 40 20.3 +0.5**
SULT Sultanhani-AKS 16.10 99 *e*P **Pn 01 40 20.7 +0.8**
SNART Snartemo 16.12 349 *e*P **Pn 01 40 20.9 +0.9**
SNART IVmBBB 01 40 28.6
comp=Z,13µm,2.7s
SNART *e* 01 43 38.0
PESTR Estremoz 16.19 263 *e*Pn **Pn 01 40 21.4 +0.3**
PESTR A A 01 40 33.0
comp=Z,614nm,1.6s
CORM Corum 16.27 92 *e*P **Pn 01 40 23.2 +1.1**
KRMN Karaman 16.33 103 *e*P **Pn 01 40 24.4 +1.4**
COI Coimbra 16.39 269 A A 01 40 34.0
comp=Z,1µm,2.2s
DIKM Dikmen 16.39 86 ⇑P **Pn 01 40 22.9 -0.6**
DIKM Dikmen 16.39 86 *e*P **Pn 01 40 22.9 -0.6**
WIM Isle of Man 16.45 320 *e*P **Pn 01 40 23.6 -0.7**
IOMK Kirk Michael 16.47 321 *e*P **Pn 01 40 23.0 -1.4**
IOMK IAMs_20 IAMs_20 01 48 08.4
comp=Z,263µm,9.4s
PCAS Casmilo, Conde 16.49 268 A A 01 40 35.3
comp=Z,917nm,2.0s
EKA Eskdalemuir Ar 16.54 326 Pn **Pn 01 40 24.9 -0.5**
baz=132,slow=15
EKA Sn **Sn 01 43 21.4 -7.5**
baz=126,slow=24
EKA Lg Lg 01 45 21.9
baz=131,slow=27
EKA LR LR 01 47 43.2
comp=Z,28µm,18.0s,baz=142,slow=41
comp=Z,111nm,1.0s
ESK Eskdalemuir 16.55 325 *e*P **Pn 01 40 24.7 -0.8**
ESK IAMs_20 IAMs_20 01 47 45.3
comp=Z,52µm,14.6s
ESK Eskdalemuir 16.55 325 Pn **Pn 01 40 24.5 -1.0**
ESK Eskdalemuir 16.55 325 P **Pn 01 40 24.5 -1.0**
ESK pmax pmax
comp=Z,187nm,0.9s
ESK Eskdalemuir 16.55 325 P **Pn 01 40 26.6 +1.1**
IWEX Carrickbyrne, 16.56 313 *e*P **Pn 01 40 23.3 -2.4**
GULA Gulagac 16.57 98 *e*P **Pn 01 40 27.1 +1.1**
PMTG Montargil 16.59 265 *e*Pn **Pn 01 40 26.1 -0.1**
PMTG A A 01 40 37.0
comp=Z,835nm,1.9s
EVO Evora 16.62 263 P **Pn 01 40 23.1 -3.5**
EVO S **S 01 43 44.5 +2.0**
EVO Evora 16.62 263 A A 01 40 37.5
comp=Z,492nm,1.5s
BERE Bereket-Mersin 16.68 106 *e*P **Pn 01 40 28.6 +1.2**
TEKE Tekeli-Mersin 16.70 106 *e*P **Pn 01 40 27.8 +0.2**
PBEJ Beja 16.70 261 *e*Pn **Pn 01 40 27.0 -0.6**
KOZK Kozakli-Nevseh 16.73 95 *e*P **P 01 40 29.8 -0.5**
ESY Stoneypath 16.73 328 *e*P **Pn 01 40 27.2 -0.7**
TEVE Tevekalti-Mers 16.80 105 *e*P **Pn 01 40 29.8 +1.0**
EBL Broad Law 16.80 327 *e*P **Pn 01 40 28.1 -0.5**
PVAQ Vaqueiros 16.85 259 A A 01 40 41.0
comp=Z,534nm,1.4s
PVAQ *e*LR LR 01 43 43.0
comp=Z,94µm,20.0s
NEWG New Galloway 16.86 324 *e*P **Pn 01 40 28.8 -0.5**
NEWG IAmb IAmb 01 40 36.2
comp=Z,3µm,2.7s
PSBE So Bento 16.87 267 *e*P **P 01 40 30.9 -0.9**
comp=Z,1µm,2.1s
YOZ Yozgat 16.93 93 *e*P **Pn 01 40 30.8 +0.2**
EDI Edinburgh 16.96 327 *e*P **Pn 01 40 30.7 0.0**
EDI IAMs_20 IAMs_20 01 49 01.2
comp=Z,45µm,13.3s
KEBE Keben-Mersin 16.98 105 *e*P **Pn 01 40 31.8 +0.6**
PCVE Castro Verde 16.98 260 A A 01 40 42.6
comp=Z,441nm,1.7s
AKKU Akkuyu-Mersin 17.00 106 *e*P **P 01 40 32.8 -0.4**
MESJ Messejana 17.03 261 *e*P **Pn 01 40 31.6 -0.1**
MESJ *e*S **Sn 01 43 43.0 +2.0**
MESJ IAMs_20 IAMs_20 01 45 57.3
comp=Z,86µm,24.3s
MESJ Messejana 17.03 261 *e*P **Pn 01 40 31.6 -0.1**
MESJ *e*S **Sn 01 43 42.9 +2.0**
MESJ Messejana 17.03 261 *e*Pn **Pn 01 40 31.9 +0.2**
IFR Ifrane 17.05 244 P **Pn 01 40 32.0 -0.2**
IFR S **S 01 43 49.6 -2.0**
IKL Isikli 17.06 105 *e*P **Pn 01 40 32.9 +0.8**
LEF Lefka 17.06 110 *e*P **Pn 01 40 30.8 -1.3**
PBDV Barranco-do-Ve 17.07 259 *e*Pn **Pn 01 40 32.7 +0.5**
PBDV A A 01 40 43.1
comp=Z,644nm,1.4s
KVT Kavak 17.09 88 *e*P **Pn 01 40 33.3 +0.9**
GMM Mts of Mourne 17.11 319 *e*P **Pn 01 40 31.6 -0.9**
KONO Kongsberg 17.14 354 **Pn 01 40 33.1 +0.2**
KONO Kongsberg 17.14 354*c i*P **Pn 01 40 32.8 -0.1**
KONO pmax pmax
comp=Z,78nm,1.4s
KONO MLR MLR
comp=Z,57µm,11.0s
KONO Kongsberg 17.14 354 *e*P **Pn 01 40 32.6 -0.3**
KONO IVmBBB 01 40 38.4
comp=Z,5µm,3.1s
KONO *e* 01 43 55.3
KONO Kongsberg 17.14 354 P **P 01 40 35.3 +0.7**
PACT Alcochete 17.14 264 A A 01 40 45.3
comp=Z,834nm,2.1s
MDT Midelt 17.15 241 P **P 01 40 35.0 +0.1**
comp=Z,21nm,1.0s,baz=73,slow=12,SNR=25
MDT S **S 01 43 52.3 -1.2**
comp=Z,11nm,1.0s,baz=143,slow=16,SNR=1.3
MDT LR LR 01 46 28.7
comp=Z,17µm,18.7s,baz=44,slow=35
MDT Midelt 17.15 241 P **P 01 40 35.1 +0.1**
PNCL Nicolau / Gran 17.15 262 *e*P **P 01 40 34.8 -0.1**
comp=Z,198nm,2.5s
SILI Silifke-Mersin 17.17 105 *e*P **P 01 40 35.9 +0.8**
KIZK Mersin 17.27 104 *e*P **P 01 40 36.2 0.0**
KMY Karmoy 17.27 346 *e*P **P 01 40 35.6 -0.5**
KMY IVmBBB 01 40 40.1
comp=Z,5µm,2.6s
KMY *e*S **S 01 43 56.5 +1.0**
BLS5 Blasjo 17.28 348 *e*P **P 01 40 35.5 -0.7**
BLS5 IVmBBB 01 40 37.8
comp=Z,5µm,3.5s
BLS5 *e*S **S 01 43 56.4 +0.8**
BLS5 IVMs_BB IVMs_BB 01 48 27.8
comp=Z,50µm,16.4s
OSL Oslo 17.35 356 *e*P **Pn 01 40 35.9 +0.4**
OSL IVmBBB 01 40 37.9
comp=Z,10µm,3.3s
OSL *e*S **S 01 43 54.6 -2.4**
MTSE Matsula 17.37 19 *e*P **Pn 01 40 35.0 -0.8**
MERS Mersin 17.37 102 *e*P **P 01 40 37.6 +0.2**
CMRD Camardi-Nigde 17.38 99 *e*P **P 01 40 37.9 +0.4**
LIS Lisbon 17.39 264 *e*P **Pn 01 40 36.1 -0.1**
LIS *e*S **Sn 01 43 51.7 +2.1**
LIS IAMs_20 IAMs_20 01 47 00.5
comp=N,161µm,15.1s
LIS Lisbon 17.39 264 *e*P **Pn 01 40 36.0 -0.1**
LIS *e*S **Sn 01 43 51.7 +2.1**
PMAFR Mafra 17.41 265 A A 01 40 47.1
comp=N,527nm,2.1s
PMST Lisbon--Monsan 17.41 264 *e*P **P 01 40 37.2 -0.5**
comp=N,519nm,1.3s
DRUM Mains of Drumt 17.41 330 *e*P **Pn 01 40 36.2 -0.2**
DRUM IAMs_20 IAMs_20 01 49 31.5
comp=Z,52µm,17.1s
PGBU Glenifferbraes 17.42 325 *e*P **Pn 01 40 36.3 -0.1**
PGBU IAmb IAmb 01 40 51.2
comp=Z,452nm,1.3s
PGBU IAMs_20 IAMs_20 01 48 39.5
comp=Z,51µm,9.1s
LFK Lefkose 17.43 108 *e*P **P 01 40 37.6 -0.4**
CSS Mathiatis 17.45 110 *e*P **Pn 01 40 36.1 -0.9**
CSS Mathiatis 17.45 110 Pn **Pn 01 40 36.1 -0.9**
HFS Hagfors 17.48 1 P **Pn 01 40 36.4 -0.8**
comp=Z,2.7nm,0.3s,baz=199,slow=4.1,SNR=53
HFS S **Sn 01 43 46.3 -5.3**
comp=Z,14nm,0.8s,baz=109,slow=17,SNR=1.6
HFS Lg Lg 01 45 49.2
comp=Z,0.3nm,0.3s,baz=178,slow=22,SNR=1.9
HFS LR LR 01 48 02.5
comp=Z,55µm,20.0s,baz=184,slow=40
comp=Z,88nm,0.7s
PTEO Sao Teotonio 17.52 260 A A 01 40 48.7
comp=Z,607nm,1.7s
MORF Marmelete 17.56 260 *e*P **Pn 01 40 38.3 -0.2**
MORF *e*S **Sn 01 43 55.8 +1.9**
MORF IAMs_20 IAMs_20 01 47 17.9
comp=E,83µm,22.8s
MORF Marmelete 17.56 260 *e*P **Pn 01 40 38.2 -0.2**
MORF *e*S **Sn 01 43 55.8 +1.9**
MORF Marmelete 17.56 260 A A 01 40 49.1
comp=E,502nm,1.7s
BNN Bunyan 17.57 95 *e*P **P 01 40 40.3 +0.7**
ANN Anapa 17.63 75 *e*P **Pn 01 40 37.4 -1.7**
ANN pmax pmax
comp=Z,583nm,1.1s
TOKT Tokat 17.64 90 *e*P **P 01 40 41.3 +1.0**
INVG Invergeldie, C 17.66 327 *e*P **Pn 01 40 39.1 -0.3**
INVG IAMs_20 IAMs_20 01 48 52.9
comp=Z,44µm,10.2s
CLGH Cloghs, Cushen 17.68 321 *e*P **Pn 01 40 39.1 -0.6**
CLGH IAMs_20 IAMs_20 01 48 33.8
comp=Z,112µm,10.4s
ODD1 Odda 17.73 349 *e*P **P 01 40 43.4 +2.3**
ODD1 IVmB_BB 01 40 44.1
comp=Z,11µm,3.1s
EREN Erenkoy 17.75 107 *e*P **P 01 40 42.3 +0.8**
PFVI Vila Bisbo 17.76 259 P **P 01 40 44.9 +3.3**
PFVI Vila Bisbo 17.76 259 A A 01 40 50.7
comp=Z,571nm,1.5s
VSU Vasula 17.93 24*ce*P **Pn 01 40 41.7 -1.0**
VSU pmax pmax
comp=Z,3µm,1.0s
VSU MLR MLR
comp=Z,175µm,12.0s
VSU Vasula 17.93 24 *e*P **Pn 01 40 41.7 -1.0**
KOZT Kozan 18.06 99 *e*P **P 01 40 45.7 +0.8**
SVSK Karacayir 18.08 91 *e*P **P 01 40 47.4 +2.3**
LAWE Loch Awe, Argy 18.11 325 *e*P **P 01 40 45.1 -0.1**
LAWE IAMs_20 IAMs_20 01 48 42.4
comp=Z,48µm,13.5s
NC602 NORSAR Array S 18.11 357 IAmb IAmb 01 40 51.3
comp=Z,1µm,1.4s
KRTS Karatas 18.12 102 *e*P **Pn 01 40 45.1 -0.1**
SARI SarD1z-Kayseri 18.14 96 *e*P **P 01 40 47.2 +1.2**
MCD Coleburn Disti 18.19 331 *e*P **P 01 40 46.4 +0.2**
RSDY Resadiye-TOKAT 18.20 89 *e*P **P 01 40 48.6 +2.2**
CEYT Ceyhan 18.20 101 *e*P **P 01 40 47.3 +0.9**
NAO01 NORSAR Array S 18.25 356 *e*P **Pn 01 40 46.6 -0.1**
NAO01 IVmBBB 01 40 48.7
comp=Z,6µm,2.8s
SKAR Skarslia 18.27 352 *e*P **Pn 01 40 47.0 +0.1**
SKAR *e*S **S 01 44 16.7 +0.8**
BER Bergen 18.37 348 *e*P **P 01 40 49.4 +1.3**
BER IVmBBB 01 40 56.4
comp=Z,8µm,4.1s
BER *e*S **S 01 44 19.2 +1.6**
BER IVMs_BB IVMs_BB 01 49 45.7
comp=Z,40µm,11.6s
NB2 NORSAR Subarra 18.43 357 P **P 01 40 47.9 -0.9**
comp=Z,4µm,3.3s,baz=175,slow=11
NB2 NORSAR Subarra 18.43 357 P **P 01 40 47.9 -0.9**
baz=175,slow=11
NOA NORSAR Array B 18.43 357 P **P 01 40 47.1 -1.7**
comp=Z,0.4nm,0.3s,baz=175,slow=11,SNR=157
NOA S **Sn 01 44 05.2 -9.3**
comp=Z,3.9nm,0.8s,baz=154,slow=10,SNR=1.6
NOA Lg Lg 01 46 14.3
baz=162,slow=10
NOA LR LR 01 48 42.5
comp=Z,51µm,19.6s,baz=175,slow=40
comp=Z,42nm,0.7s
NBO00 NORSAR Array S 18.44 356 IAmb IAmb 01 40 59.0
comp=Z,3µm,1.9s
ASK Askoy 18.49 347 *e*P **Pn 01 40 50.4 +0.9**
ASK IVmBBB 01 40 57.9
comp=Z,17µm,4.2s
ASK *e*S **S 01 44 20.0 0.0**
NC204 NORSAR Array S 18.69 356 P **P 01 40 50.5 -1.1**
NC204 IAmb IAmb 01 41 01.7
comp=Z,676nm,1.0s
AVE Averroes 18.71 247 P **P 01 40 51.8 -0.3**
AVE S **S 01 44 24.1 -0.9**
AVE Averroes 18.71 247 IAmb IAmb 01 41 01.8
comp=Z,632nm,1.0s
AVE Averroes 18.71 247 P **Pn 01 40 55.1 +2.7**
MLA1 Latheron 18.77 332 *e*P **Pn 01 40 53.2 +0.1**
TAHT Tahtakopru-Hat 18.79 102 *e*P **P 01 40 51.6 -1.3**
KMRS Kahramanmaras 18.83 98 *e*P **P 01 40 52.6 -0.8**
MEF Metsahovi 18.85 17 *e*P **P 01 40 53.1 -0.2**
MEF IAmb IAmb 01 41 07.8
comp=Z,888nm,1.4s
DARE Darende-Malaty 18.87 94 *e*P **P 01 40 53.6 -0.3**
KPL Plockton 18.93 327 *e*P **P 01 40 54.1 -0.1**
KPL IAMs_20 IAMs_20 01 49 40.0
comp=Z,37µm,9.8s
HYA Hoyanger 18.99 350 *e*P **Pn 01 40 56.6 +0.9**
HYA IVmB_BB 01 40 59.3
comp=Z,13µm,3.9s
HYA *e*S **S 01 44 37.6 +7.4**
RAF Rauma 19.09 13 *e*P **P 01 40 56.0 0.0**
ESPY Espiye-Giresun 19.10 87 *e*P **Pn 01 40 57.9 +0.8**
SUE Sulen 19.10 347 *e*P **Pn 01 40 57.6 +0.7**
SUE IVmBBB 01 41 00.3
comp=Z,14µm,4.4s
SUE IVMs_BB IVMs_BB 01 50 14.1
comp=Z,41µm,11.4s
BIGH Upper Bighouse 19.11 332 *e*P **P 01 40 54.8 -1.4**
BIGH IAMs_20 IAMs_20 01 49 04.7
comp=Z,54µm,13.3s
LINV Loch Inver, As 19.32 330 *e*P **P 01 40 57.1 -1.4**
ARPR Arapgir-MALATY 19.32 92 *e*P **Pn 01 41 00.8 +0.9**
SOC Sochi 19.35 78*c i*P **P 01 40 58.4 -0.7**
SOC *e* 01 44 35.5
SOC pmax pmax
comp=Z,495nm,1.1s
SOC MLR MLR
comp=Z,25µm,17.0s
DOMB Dombas 19.55 354 *e*P **P 01 41 01.5 +0.4**
DOMB IVmB_BB 01 41 05.9
comp=Z,11µm,5.1s
DOMB IVMs_BB IVMs_BB 01 50 22.3
comp=Z,40µm,8.6s
LRW Lerwick 19.57 338 *e*P **P 01 41 00.6 -0.6**
FOO Floro 19.57 348 *e*P **Pn 01 41 02.8 +0.3**
FOO IVmB_BB 01 41 07.7
comp=Z,13µm,5.6s
FOO *e*S **Sn 01 44 43.5 +1.6**
FOO IVMs_BB IVMs_BB 01 50 30.3
comp=Z,49µm,11.3s
VSR Storozhevoye 19.60 55 *e*P **P 01 41 00.5 -1.1**
VSR *e*S **S 01 44 35.7 -6.9**
VSR pmax pmax
comp=Z,210nm,0.8s
VSR smax smax
comp=N,9µm,5.0s
VSR MLR MLR
comp=Z,128µm,17.0s
BHL Bhannes 19.64 109 *e*P **P 01 41 02.6 +0.2**
HWQ Hawqa 19.64 108 *e*P **P 01 41 02.7 +0.3**
VORR Voronezh 19.75 54 *e*P **P 01 41 01.9 -1.4**
VORR *e*S **S 01 44 38.2 -7.4**
VORR pmax pmax
comp=Z,300nm,0.9s
VORR smax smax
comp=N,5µm,3.4s
KTUT Trabzon 19.85 86 *e*P **Pn 01 41 06.2 +0.2**
QRWL Qaraoun 19.86 110 *e*P **Pn 01 41 05.5 -0.8**
AKN Aaknes 19.88 351 *e*P **Pn 01 41 05.9 -0.4**
AKN IVmBBB 01 41 09.1
comp=Z,13µm,6.0s
AKN *e* 01 44 48.3
AKN IVMs_BB IVMs_BB 01 49 56.0
comp=Z,34µm,12.3s
LPSR Galich'ya Gora 19.88 51 *e*P **P 01 41 03.2 -1.5**
LPSR *e*S **S 01 44 39.6 -8.5**
LPSR pmax pmax
comp=Z,380nm,0.9s
LPSR smax smax
comp=N,12µm,8.4s
LPSR MLR MLR
comp=Z,74µm,19.0s
LEWI Lewis, Hebride 19.96 328 *e*P **P 01 41 05.0 -0.6**
MMAI Mount Meron Ar 19.96 112 P **Pn 01 41 07.0 -0.5**
comp=Z,135nm,0.7s,baz=319,slow=8.8,SNR=128
MMAI S **S 01 44 50.2 -0.1**
comp=Z,4.3nm,0.6s,baz=318,slow=23,SNR=1.4
MMAI LR LR 01 50 43.6
comp=Z,39µm,20.0s,baz=128,slow=42
comp=Z,135nm,0.7s
RCY Rachaya 19.99 110 *e*P **P 01 41 06.8 +0.6**
PUL Pulkovo 20.09 26*ij e*P **P 01 41 07.0 +0.1**
PUL pmax pmax
comp=Z,994nm,1.0s
PUL MLR MLR
comp=Z,94µm,14.0s
PTK Pertek 20.16 92 *e*P **P 01 41 07.9 -0.3**
ERZN Erzincan 20.19 90 *e*P Pn 01 41 10.0 -0.2
MOL Molde 20.20 352 *e*P **P 01 41 08.9 +0.8**
MOL IVmB_BB 01 41 14.8
comp=Z,10µm,3.0s
MOL IVMs_BB IVMs_BB 01 49 55.3
comp=Z,34µm,18.3s
URFA Urfa 20.26 96 *e*P **P 01 41 05.9 -3.2**
OUK Oukaimeden 20.30 243 P Pn 01 41 13.0 +1.1
MMLI Mount Malkishu 20.32 113 *e*P **P 01 41 09.7 0.0**
FINES FINESS Array B 20.32 18 P **P 01 41 08.6 -0.8**
comp=Z,336nm,0.8s,baz=191,slow=7.8,SNR=111
FINES S S 01 44 45.4 -11
comp=Z,19nm,0.9s,baz=210,slow=19,SNR=1.6
FINES Lg Lg 01 47 17.6
baz=222,slow=24
FINES LR LR 01 49 43.8
comp=Z,81µm,18.4s,baz=206,slow=39
comp=Z,336nm,0.8s
FIA1 FINESS Array S 20.32 18 P **P 01 41 08.1 -1.4**
FIA1 IAmb IAmb 01 41 13.9
comp=Z,484nm,0.9s
ARXR Arkhyz 20.48 78 *i* P Pn 01 41 13.7 0.0
MOS Moscow 20.49 42*α i*P **P 01 41 10.6 -0.7**
MOS *e* 01 41 28.2
MOS *i* S **S 01 44 56.4 -3.8**
MOS *e*SS **SnSn 01 45 18.7 +0.1**
MOS pmax pmax
comp=Z,14µm,3.8s
MOS pmax pmax
comp=N,8µm,4.0s
MOS pmax pmax
comp=E,16µm,4.0s
MOS pmax pmax
comp=N,262nm,1.0s
MOS pmax pmax
comp=E,1µm,1.5s
MOS pmax pmax
comp=Z,2µm,1.4s
MOS smax smax
comp=N,35µm,7.8s
MOS smax smax
comp=E,26µm,4.6s

MOS MLR MLR
comp=Z,73µm,12.0s
MOS MLR MLR
comp=N,45µm,11.0s
MOS MLR MLR
comp=E,43µm,11.0s
CHOM Cayeli-Rize 20.55 85 *e*P **P 01 41 12.9 +0.7**
KOPT Kop Dagi 20.64 88 P Pn 01 41 15.1 -0.5
KOPT IAmb IAmb 01 41 22.3
comp=Z,1µm,1.2s
UJAP Al Uja 20.64 114 *e*P Pn 01 41 14.6 -0.7
TBLU Trondheim 20.68 356 *e*P Pn 01 41 15.0 -0.7
TBLU IVmBBB 01 41 20.6
comp=Z,8µm,1.4s
TBLU *e*S Sn 01 45 07.8 -0.9
DOMR Dombai 20.77 79 *i* P Pn 01 41 16.5 -0.6
TAM Tamanrasset 20.84 200 IAMs_20 IAMs_20 01 50 24.0
comp=Z,80µm,18.0s
DYBB Diyarbakir 21.04 94 *e*P **P 01 41 19.1 +1.6**
BNGB Bingl 21.08 91 *e*P **P 01 41 20.2 +2.2**
GHAJ Ghor Haditha 21.10 115 P **P 01 41 19.2 +1.1**
GHAJ IAmb IAmb 01 41 34.1
comp=Z,699nm,1.1s
BCA Borcka 21.10 84 *e*P **P 01 41 19.2 +1.1**
VRH Novokhopyorsk 21.15 56 *e*P **P 01 41 17.5 -1.0**
VRH *e*S **S 01 45 08.8 -4.7**
VRH pmax pmax
comp=Z,770nm,0.9s
VRH smax smax
comp=N,8µm,3.3s
VRH MLR MLR
comp=Z,113µm,15.0s
KARO Karliova-Bingo 21.25 90 *e*P **P 01 41 21.9 +2.0**
KIV Kislovodsk 21.45 76 *e*P **P 01 41 19.2 -2.7**
KIV Kislovodsk 21.45 76 P **P 01 41 22.1 +0.3**
KIV IAmb IAmb 01 41 26.5
comp=Z,960nm,1.1s
KIV Kislovodsk 21.45 76 *e*P **P 01 41 22.6 +0.7**
KIV *e*S **S 01 45 20.9 +1.3**
KIV pmax pmax
comp=Z,1µm,3.7s
KIV pmax pmax
comp=Z,880nm,1.1s
KIV MLR MLR
comp=Z,24µm,14.0s
KIV Kislovodsk 21.45 76 P **P 01 41 23.1 +1.3**
KIV P **P 01 41 23.1 +1.3**
KIV P **P 01 41 23.1 +1.3**
KIV Kislovodsk 21.45 76 *i* P **P 01 41 21.9 0.0**
SNR=176
KIV Kislovodsk 21.45 76 P **P 01 41 22.8 +0.9**
MAZI Mazidag 21.45 95 *e*P **P 01 41 22.9 +0.9**
KVAR Kislovodsk Arr 21.45 76 P **P 01 41 22.4 +0.4**
comp=Z,98nm,1.0s,baz=236,slow=22,SNR=44
KVAR LR LR 01 53 19.2
comp=Z,25µm,18.0s,baz=242,slow=47
KVAR P3KPbc 02 15 06.4
comp=Z,2.7nm,0.9s,baz=22,slow=11,SNR=2.1
comp=Z,98nm,1.0s
SHA1 Shidzhatmaz 21.45 77*d i*P **P 01 41 23.0 +0.9**
ASF Jabal al Asfar 21.48 111 P **P 01 41 24.3 +2.0**
comp=Z,82nm,0.7s,baz=316,slow=4.9,SNR=49
ASF S **S 01 45 18.4 -2.0**
comp=Z,11nm,1.0s,baz=296,slow=17,SNR=0.9
ASF LR LR 01 52 00.8
comp=Z,37µm,18.3s,baz=329,slow=43
comp=Z,82nm,0.7s
VALR Valaam 21.51 24*c i*P **P 01 41 21.5 -0.7**
VALR pmax pmax
comp=Z,796nm,0.9s
VALR MLR MLR
comp=Z,34µm,14.0s
GOF Gofitskoye 21.59 73⇑ *e*P **P 01 41 23.4 +0.1**
GOF pmax pmax
comp=Z,477nm,0.9s
VRTB Varto-Mus 21.60 90 *e*P **P 01 41 25.6 +2.0**
KBZ Khabaz 21.63 77 P **P 01 41 25.2 +1.6**
comp=Z,444nm,0.9s,baz=300,slow=8.0,SNR=217
KBZ S **S 01 45 21.0 -1.9**
comp=Z,10nm,0.9s,baz=173,slow=14,SNR=1.0
KBZ LR LR 01 52 19.8
comp=Z,43µm,18.7s,baz=288,slow=44
comp=Z,444nm,0.9s
KBZ Khabaz 21.63 77*d i*P **P 01 41 25.0 +1.3**
KBZ pmax pmax
comp=Z,607nm,0.9s
KBZ MLR MLR
comp=Z,58µm,24.0s
KOPR Koprukoy-ERZUR 21.64 87 *e*P **P 01 41 25.0 +0.9**
PYA1 Pyatigorsk 21.73 76*c i*P **P 01 41 25.9 +1.1**
SVAN Silvan-Diyarba 21.75 93 *e*P **P 01 41 28.5 +3.4**
MARD Mardin 21.75 95 P **P 01 41 26.0 +0.8**
EIL Elat 21.76 120 P **P 01 41 25.8 +0.6**
comp=Z,43nm,0.9s,baz=324,slow=9.5,SNR=24
EIL S **S 01 45 18.1 -7.6**
comp=Z,22nm,0.7s,baz=359,slow=23,SNR=1.5
EIL LR LR 01 52 53.4
comp=Z,13µm,21.5s,baz=314,slow=45
comp=Z,43nm,0.9s
EIL Elat 21.76 120 *e*P **P 01 41 26.2 +1.0**
SENK Senkaya-Erzuru 21.85 86 *e*P **P 01 41 25.4 -1.0**
NSS Namsos 21.91 359 *e*P **P 01 41 26.1 -0.4**
NSS IVmB_BB 01 41 33.5
comp=Z,9µm,4.1s
GURO Guroymak-BITLI 22.22 91 *e*P **P 01 41 29.8 -0.5**
GURO Guroymak-BITLI 22.22 91 IAmb IAmb 01 41 43.4
comp=Z,497nm,1.1s
KARS Kars 22.37 85 *e*P **P 01 41 32.2 +0.3**
MLAZ Malazgirt-MUS 22.41 89 *e*P **P 01 41 31.8 -0.5**
ZEI Tsey 22.50 79 *e*P **P 01 41 33.2 -0.1**
ZEI pmax pmax
comp=Z,657nm,1.4s
AGRB Hanur-Agry 22.60 88 *e*P **P 01 41 35.6 +1.2**
GEVA Gevas 23.06 91 IAmb IAmb 01 42 02.7
comp=Z,558nm,1.3s
VANB Van 23.21 90 *e*P **P 01 41 41.6 +0.9**
TASB TASBURUN-IGDIR 23.40 86 *e*P **P 01 41 42.4 -0.1**
CLDR Caldiran 23.42 88 *e*P **P 01 41 42.1 -0.8**
MOR8 Moi Rana 23.55 1 *e*P **P 01 41 44.6 +0.8**
MOR8 IVmBBB 01 41 52.1
comp=Z,14µm,3.3s
MOR8 *e*S **S 01 45 59.7 +2.4**
GNI Garni 23.72 85 P **P 01 41 46.7 +0.9**
comp=Z,74nm,0.9s,baz=356,slow=2.7,SNR=39
GNI S **S 01 46 05.8 +5.0**
comp=Z,22nm,1.1s,baz=20,slow=20,SNR=1.5
GNI LR LR 01 54 36.2
comp=Z,23µm,18.0s,baz=300,slow=46
comp=Z,74nm,0.9s
GNI Garni 23.72 85 P **P 01 41 46.1 +0.3**
GNI IAmb IAmb 01 42 00.8
comp=Z,528nm,1.2s
GNI Garni 23.72 85*ce*P **P 01 41 46.3 +0.5**
GNI pmax pmax
comp=Z,563nm,1.2s
GNI MLR MLR
comp=Z,17µm,18.0s
GNI Garni 23.72 85 P **P 01 41 47.4 +1.6**
GNI P **P 01 41 47.4 +1.6**
GNI P **P 01 41 47.4 +1.6**
GNI Garni 23.72 85 P **P 01 41 46.3 +0.5**
GNI Garni 23.72 85 P **P 01 41 46.7 +0.9**
GROC Groznyy 23.79 78 *e*P **P 01 41 47.3 +1.1**
GROC *e* 01 42 14.4
GROC *e* 01 45 24.1
GROC *e*S **S 01 46 05.8 +4.3**
GROC pmax pmax
comp=Z,438nm,1.0s
CUKT Cukurca 23.86 93 *e*P **P 01 41 44.4 -2.7**
KONS Konsvik 23.87 360 *e*P **P 01 41 47.9 +1.1**
KONS IVmB_BB 01 41 50.2
comp=Z,12µm,5.1s
KONS *e*S **S 01 46 01.6 -0.7**
DVE Vedeno 24.08 78*de*P **P 01 41 49.4 +0.4**
DVE pmax pmax
comp=Z,221nm,0.8s
KLMR Klimovskoe 24.14 32 *e*P **P 01 41 48.0 -1.4**
KLMR *e*S **S 01 46 05.8 -1.0**
KLMR pmax pmax
comp=Z,827nm,1.2s
KLMR MLR MLR
comp=Z,93µm,16.0s
KLMR Klimovskoe 24.14 32 *e*P **P 01 41 48.0 -1.4**
KLMR AMP 01 42 00.8
comp=Z,827nm,1.2s
KLMR *e*S **S 01 46 05.8 -1.0**
KLMR *e*S **S 01 46 05.8 -1.0**
KLMR LQ LQ 01 49 13.9
KLMR LQ LQ 01 49 13.9
KLMR LR LR 01 50 59.8
KLMR AMP 01 52 15.6
comp=Z,93µm,16.0s
FAUS Fauske 24.79 2 *e*P **P 01 41 54.7 -0.4**
FAUS IVmBBB 01 42 03.0
comp=Z,6µm,2.0s
FAUS *e*S **S 01 46 19.1 +2.1**
FAUS IVMs_BB IVMs_BB 01 53 07.5
comp=Z,27µm,8.5s
BELG Belogornoye 24.98 55 P **P 01 41 57.2 +0.2**
comp=Z,923nm,1.0s,baz=1.0,slow=0.3,SNR=138
BELG S **S 01 46 20.8 +0.5**
comp=Z,30nm,1.0s,baz=97,slow=16,SNR=0.8
BELG LR LR 01 52 40.5
comp=Z,100µm,20.4s,baz=255,slow=39
comp=Z,923nm,1.0s
BELG Belogornoye 24.98 55*d i*P **P 01 41 56.8 -0.2**
BELG pmax pmax
comp=Z,303nm,1.0s
BELG MLR MLR
comp=Z,15µm,18.0s
MAK Makhachkala 25.07 78 *e*P **P 01 41 53.7 -4.2**
MAK *e*S **S 01 46 16.9 -5.1**
MAK pmax pmax
comp=Z,2µm,1.2s
MAK MLR MLR
comp=Z,50µm,14.0s
PMPST Porto Santo, M 25.09 257 *ep*P **pP 01 42 00.2 -1.9**
PMPST A A 01 42 07.3
comp=Z,944nm,1.9s
PMPS Porto Santo 25.10 257 *ep*P **pP 01 42 00.4 -1.8**
PMPS A A 01 42 07.0
comp=Z,812nm,1.9s
STEI Steigen 25.33 2 *e*P **P 01 41 59.6 -0.5**
STEI IVmBBB 01 42 08.2
comp=Z,5µm,1.7s
STEI *e*S **S 01 46 23.9 -1.9**
LOF Lofoten 25.51 0 *e*P **P 01 42 00.6 -1.0**
LOF IVmBBB 01 42 09.4
comp=Z,6µm,2.4s
LOF *e*S **S 01 46 27.3 -1.3**
PMAR Madeira 25.69 257 *ep*P **pP 01 42 06.0 -1.8**
PMAR A A 01 42 19.8
comp=Z,2µm,1.7s
FUL Funchal 25.72 257 *ep*P **pP 01 42 06.5 -1.3**
FUL A A 01 42 12.7
comp=Z,913nm,1.3s
PMOZ Porto Moniz, M 25.85 258 P **P 01 42 08.8 +3.6**
PMOZ Porto Moniz, M 25.85 258 *ep*P **P 01 42 07.1 +1.9**
PMOZ A A 01 42 14.8
comp=Z,1µm,1.3s
PMOZ *e*LR LR 01 46 43.0
comp=Z,16µm,20.0s
KTK1 Kautokeino 26.92 8 *e*P **P 01 42 13.4 -1.0**
KTK1 IVmBBB 01 42 18.6
comp=Z,2µm,1.2s
KTK1 *e*S **S 01 46 51.5 +0.7**
KTK1 IVMs_BB IVMs_BB 01 55 55.7
comp=Z,34µm,8.3s
PRGR Permogore 27.05 34 *e*P **P 01 42 14.7 -0.9**
TRO Tromso 27.18 4 *e*P **P 01 42 16.5 -0.2**
TRO IVmBBB 01 42 26.6
comp=Z,4µm,2.0s
TRO *e*S **S 01 46 53.9 -1.0**
JETT Jettan, Norway 27.20 6 *e*P **P 01 42 16.6 -0.4**
JETT IVmBBB 01 42 26.8
comp=Z,4µm,2.9s
JETT *e*S **S 01 46 57.5 +2.2**
JETT IVMs_BB IVMs_BB 01 55 18.4
comp=Z,34µm,9.9s
APA Apatity 27.22 17⇑ *i*P **P 01 42 16.1 -1.0**
APA *i* S **S 01 46 50.0 -5.5**
APA pmax pmax
comp=Z,36nm,0.8s
APA MLR MLR
comp=Z,95µm,15.0s
KIRV Kirov 27.51 42 P **P 01 42 18.9 -0.9**
comp=Z,33nm,0.4s,baz=261,slow=4.5,SNR=21
KIRV S **S 01 46 56.2 -4.0**
comp=Z,14nm,0.8s,baz=104,slow=20,SNR=1.3
KIRV LR LR 01 54 13.2
comp=Z,94µm,19.9s,baz=249,slow=39
comp=Z,33nm,0.4s
ARCES ARCESS Array B 27.67 9 P **P 01 42 20.2 -0.9**
comp=Z,44nm,0.8s,baz=184,slow=8.7,SNR=26
ARCES PcP **PcP 01 45 36.5 -1.3**
comp=Z,19nm,0.8s,baz=198,slow=0.9,SNR=1.9
ARCES Lg Lg 01 50 56.5
comp=Z,0.1nm,0.3s,baz=192,slow=30,SNR=2.6
ARCES LR LR 01 55 17.1
comp=Z,27µm,18.6s,baz=202,slow=41
comp=Z,44nm,0.8s
ARCES ARCESS Array B 27.67 9 IAmb IAmb 01 42 26.6
comp=Z,359nm,1.7s
LVZ Lovozero 27.76 17 P **P 01 42 21.6 -0.5**
LVZ IAmb IAmb 01 42 45.1
comp=Z,337nm,1.2s
LVZ IAMs_20 IAMs_20 01 53 49.7
comp=Z,58µm,18.0s
LVZ Lovozero 27.76 17*de*P **P 01 42 22.0 0.0**
LVZ pmax pmax
comp=Z,177nm,1.2s
LVZ MLR MLR
comp=Z,58µm,16.0s
LVZ Lovozero 27.76 17 P **P 01 42 23.4 +1.3**
KEV Kevo 28.06 10 IAMs_20 IAMs_20 01 54 13.8
comp=Z,51µm,20.0s
KEV Kevo 28.06 10 P **P 01 42 26.6 +1.9**
HAMF Hammerfest 28.53 7 *e*P **P 01 42 27.3 -1.5**
HAMF IVmB_BB 01 42 31.6
comp=Z,3µm,3.9s
HAMF *e*S **S 01 47 14.8 -1.3**
HAMF IVMs_BB IVMs_BB 01 56 34.9
comp=Z,41µm,7.3s
BORG Borgarnes 29.46 330 P **P 01 42 37.0 0.0**
comp=Z,34nm,1.2s,baz=359,slow=8.2,SNR=4.1
BORG LR LR 01 54 31.9
comp=Z,16µm,20.9s,baz=132,slow=37
comp=Z,34nm,1.2s
BORG Borgarnes 29.46 330 P P 01 42 46.4 +9.4
BART Pico Bartolome 29.52 274 *e*P **P 01 42 38.0 -0.1**
comp=Z,366nm,1.4s
BART *e*LR LR 01 51 01.2
comp=Z,24µm,22.2s
PGRON Lagoa das Cont 29.68 274 *e*P **P 01 42 43.0 +3.6**
PGRON -Mb 01 42 45.5
PSMN Pico do Norte, 29.74 272 *e*P **P 01 42 39.5 -0.4**
comp=Z,348nm,1.5s
PSMN *e*LR LR 01 51 02.3
comp=Z,19µm,20.7s
CMLA Cha da Macela 29.79 274 IAMs_20 IAMs_20 01 52 50.8
comp=Z,53µm,21.0s
CMLA Cha da Macela 29.79 274 P P 01 42 45.3 +5.0
PSMA Santa Maria 29.79 272 *e*P **P 01 42 42.6 +2.3**
comp=Z,391nm,1.3s
PSET Sete Cidades 29.91 274 *e*P **P 01 42 42.6 +1.2**
comp=Z,335nm,1.6s
PSET *e*LR LR 01 51 10.7
comp=Z,23µm,24.5s
JMIC Jan Mayen 30.38 346 LR LR 01 56 47.2
comp=Z,14µm,18.1s,baz=140,slow=40
JMIC Jan Mayen 30.38 346 *e*P **P 01 42 45.7 +0.5**
JMIC *e* 01 43 47.1
PSCM Serra do Cume 30.62 276 *e*P **P 01 42 49.1 +1.4**
comp=Z,376nm,1.5s
PAGU Agualva, Azore 30.65 276 *e*P **P 01 42 49.5 +1.6**
comp=Z,318nm,1.6s
PAGU *e*LR LR 01 51 16.9
comp=Z,15µm,18.1s
TOA0 Torodi Ar. Sit 31.06 202 P **P 01 42 51.6 -0.1**
TOA0 IAmb IAmb 01 42 57.3
comp=Z,191nm,0.9s
TORD Torodi Ar. Bea 31.06 202 P **P 01 42 52.5 +0.8**
comp=Z,184nm,0.9s,baz=18,slow=5.9,SNR=342
TORD PcP **PcP 01 45 47.8 +0.5**
comp=Z,7.7nm,0.7s,baz=11,slow=2.9,SNR=2.5
TORD S **S 01 47 57.6 +0.9**
comp=Z,5.2nm,1.0s,baz=12,slow=7.4,SNR=2.0
TORD LR LR 01 56 45.3
comp=Z,62µm,19.1s,baz=15,slow=39
TORD P3KPbc 02 14 35.5
comp=Z,1.4nm,1.0s,baz=202,slow=4.3,SNR=3.1
comp=Z,184nm,0.9s
TORD Torodi Ar. Bea 31.06 202 IAmb IAmb 01 42 57.3
comp=Z,188nm,0.9s
PGRA Graciosa 31.14 277 *e*P **P 01 42 54.5 +2.2**
comp=Z,298nm,1.3s
PGRA *e*LR LR 01 51 02.5
comp=Z,9µm,24.8s
I42PT GRACIOSA ISLAN 31.15 277 *i* 04 44 00.0
baz=71,slow=316,SNR=0.9
PMAN Manadas 31.36 277 *e*P **P 01 42 55.3 +1.1**
comp=Z,366nm,1.6s
AKTO Aktyubinsk 31.38 60 LR LR 01 57 23.7
comp=Z,51µm,18.7s,baz=276,slow=40
AKTO Aktyubinsk 31.38 60 P **P 01 42 53.6 -0.6**
ROSA Rosais 31.44 277 *e*P **P 01 42 54.1 -0.8**
comp=Z,269nm,1.6s
ROSA *e*LR LR 01 51 49.5
comp=Z,6µm,18.1s
PID Ribeirinha 31.45 276 *e*P **P 01 42 57.2 +2.2**
comp=Z,350nm,1.1s
PPNO Prainha do Nor 31.54 277 *e*P **P 01 42 58.4 +2.5**
comp=Z,364nm,1.4s
PICO Pico 31.65 277 *e*P **P 01 42 58.0 +1.2**
comp=Z,279nm,1.6s
PICO *e*LR LR 01 51 19.6
comp=Z,4µm,17.3s
PCAN Candelaria 31.71 277 *e*P P 01 43 02.6 +5.3
comp=Z,265nm,1.2s
KOWA Kowa 31.76 213 P **P 01 42 57.3 -0.5**
KOWA IAMs_20 IAMs_20 01 55 54.1
comp=Z,38µm,21.0s
KOWA Kowa 31.76 213 P **P 01 42 59.1 +1.3**
PCED Cedros 31.81 277 *e*P **P 01 42 59.1 +1.0**
comp=Z,269nm,1.0s
CALA Caldeira 31.82 277 *e*P **P 01 42 59.5 +1.1**
comp=Z,560nm,1.6s
CALA *e*LR LR 01 50 34.3
ARU Arti 31.85 49 LR LR 01 57 09.7
comp=Z,73µm,18.2s,baz=256,slow=39
ARU Arti 31.85 49 P **P 01 42 57.0 -1.3**
ARU Arti 31.85 49*d i*P **P 01 42 57.8 -0.5**
ARU PPP PPP 01 44 08.2
ARU S **S 01 48 09.7 +1.2**
ARU pmax pmax
comp=Z,477nm,1.1s
ARU MLR MLR
comp=Z,68µm,15.0s
JAWL J.Aulia 31.98 143 *i* P **P 01 43 00.4 +0.6**
JAWL *i* 01 43 02.0
baz=254,slow=8.6
BJO1 Bjornoya 32.03 3 *e*P **P 01 43 00.3 +0.7**
BJO1 IVmBBB 01 43 04.4
comp=Z,3µm,2.0s
BJO1 *e*S **S 01 48 07.2 -3.6**
BJO1 *e*S S 01 48 12.6 +1.8
BJO1 *e*S S 01 48 12.7 +1.9
AB31 Akbulak array 32.72 62 *i* P **P 01 43 05.7 -0.3**
ABKAR Akbulak array 32.72 62 P **P 01 43 05.2 -0.9**
RAYN Ar Rayn 32.84 115 P **P 01 43 07.0 -0.4**
RAYN Ar Rayn 32.84 115 P **P 01 43 07.0 -0.4**
RAYN pmax pmax
comp=Z,166nm,1.9s
RAYN MLR MLR
comp=Z,14µm,21.0s
RAYN Ar Rayn 32.84 115 P **P 01 43 09.4 +1.9**
RAYN Ar Rayn 32.84 115 *i* P **P 01 43 07.7 +0.3**
SNR=22
RAYN Ar Rayn 32.84 115 P **P 01 43 08.6 +1.2**
SCO Scoresbysund 32.99 339 P **P 01 43 09.2 +1.1**
SCO IAmb IAmb 01 43 15.0
comp=Z,540nm,1.9s
SCO Scoresbysund 32.99 339 P **P 01 43 09.2 +1.1**
SCO pmax pmax
comp=Z,541nm,1.9s
SCO MLR MLR
comp=Z,18µm,21.0s
SCO Scoresbysund 32.99 339⇓ *i*P **P 01 43 10.0 +1.8**
SCO IAmb IAmb 01 43 14.6
comp=Z,475nm,1.8s
H07N1 FLORES T-PHASE 33.20 280 *e*P **P 01 43 14.1 +3.7**
H07S1 FLORES T-PHASE 33.37 280 *e*P **P 01 43 14.1 +2.2**
GEYT Alibeck 34.27 83 P **P 01 43 20.4 +0.6**
comp=Z,71nm,0.9s,baz=283,slow=9.0,SNR=74
GEYT S **S 01 48 44.5 -2.1**
comp=Z,3.4nm,0.9s,baz=265,slow=16,SNR=1.4
GEYT LR LR 02 00 44.8
comp=Z,21µm,20.5s,baz=316,slow=42
comp=Z,71nm,0.9s
GEYT Alibeck 34.27 83 IAmb IAmb 01 43 29.4
comp=Z,165nm,0.9s
GYA0 ALIBECK ARRAY 34.27 83 P **P 01 43 19.7 -0.1**
GYA0B ALIBECK ARRAY 34.27 83 IAmb IAmb 01 43 29.4
comp=Z,163nm,1.0s
HOPEN Hopen 34.31 5 *e*P **P 01 43 19.9 +0.3**
HOPEN *e*S **S 01 48 42.9 -3.4**
HOPEN IVMsBB 01 58 09.8
comp=Z,15µm,16.3s
HSPB Hornsund (broa 34.45 1 *e*P **P 01 43 22.8 +2.1**
HSPB *e*S **S 01 48 50.2 +1.9**
HSPB *e*SS **SS 01 51 16.7 -0.5**
HSPB *e*L L 01 56 46.5
comp=Z,25µm,22.6s
HSPB Hornsund (broa 34.45 1 *e*P **P 01 43 22.8 +2.1**
HSPB IVmBBB 01 43 28.6
comp=Z,3µm,1.6s
SOEG Soedalen 34.64 333 *i* P **P 01 43 24.7 +2.2**
SOEG IAmb IAmb 01 43 29.3
comp=Z,133nm,1.2s
SHMA Al-Shehemyia 35.09 106 P **P 01 43 27.9 +1.1**
DBG Daneborg 35.17 345 *e*P **P 01 43 28.9 +1.9**
DBG IAmb IAmb 01 43 33.2
comp=Z,493nm,2.1s
SPB2 Spitsbergen Ar 35.63 1 P **P 01 43 31.1 +0.1**
SPA0 Spitsbergen Ar 35.64 1 *e*P **P 01 43 31.6 +0.5**
SPA0 IVmBBB 01 43 38.1
comp=Z,4µm,1.4s
SPA0 *e*PP **PP 01 44 55.9 +4.1**
SPA0 *e*S **S 01 49 11.3 +4.6**
SPA0 *e*SS **SS 01 51 44.8 +3.3**
SPITS Spitsbergen Ar 35.64 1 LR LR 01 57 48.5
comp=Z,32µm,21.9s,baz=154,slow=36
SMRA Abu-Samra 35.69 108 P **P 01 43 32.2 +0.2**
ANGG Ammassalik, Gr 36.12 327 IAMs_20 IAMs_20 01 59 28.7
comp=Z,29µm,18.0s
ANGG Ammassalik, Gr 36.12 327 *i* P **P 01 43 36.0 +0.8**
ANGG IAmb IAmb 01 43 40.6
comp=Z,172nm,1.6s
KBS Kingsbay 36.37 360 IAMs_20 IAMs_20 01 58 21.8
comp=Z,26µm,21.0s
KBS Kingsbay 36.37 360*de*P **P 01 43 38.5 +1.2**
KBS pmax pmax
comp=Z,377nm,1.6s
KBS MLR MLR
comp=Z,24µm,20.0s
KBS Kingsbay 36.37 360⇓ *i*P **P 01 43 38.1 +0.8**
KBS Kingsbay 36.37 360 *e*P **P 01 43 38.2 +0.9**
KBS IVmBBB 01 43 42.9
comp=Z,4µm,2.2s
KBS *e*S **S 01 49 20.1 +2.3**
KBS *e*SS **SS 01 51 59.0 +2.7**
KBS Kingsbay 36.37 360 P **P 01 43 41.5 +4.2**
DAG Danmarks Havn 36.73 348 *i* P **P 01 43 40.5 +0.2**
DAG IAmb IAmb 01 43 47.0
comp=Z,81nm,1.0s
JRN Qarnain Island 36.99 106 P **P 01 43 45.5 +2.3**
SNR=15
JRN P **P 01 43 45.5 +2.3**
SNR=15
ICESG Greenland Ices 37.79 332 *i* P **P 01 43 51.1 +1.3**
ICESG IAmb IAmb 01 43 55.8
comp=Z,363nm,1.3s
BBTS Babate 37.84 231 LR LR 01 59 25.9
comp=Z,41µm,21.2s,baz=44,slow=36
EKNA AfricaArray - 38.43 186⇓ *i*P **P 01 43 58.3 +2.9**
SUMG Summit 38.57 338 P **P 01 43 56.6 +0.2**
SUMG IAMs_20 IAMs_20 02 02 10.3
comp=Z,17µm,18.0s
SUMG Summit 38.57 338 P **P 01 43 56.6 +0.2**
SUMG pmax pmax
comp=Z,210nm,1.3s
SUMG MLR MLR
comp=Z,17µm,18.0s
SUMG Summit 38.57 338⇓ *i*P **P 01 43 57.2 +0.8**
SUMG IAmb IAmb 01 44 02.9
comp=Z,314nm,1.5s

UMQ	**Umm Al-Quwin**	**38.65**	**102**	P		**P**		**01 43 59.4**	**+2.2**
	SNR=31								
UMQ				P		**P**		**01 43 59.4**	**+2.2**
	SNR=31								
UMQ				P		**P**		**01 43 59.4**	**+2.2**
	SNR=31								
UMQ	**Umm Al-Quwin**	**38.65**	**102**	*i* P		**P**		**01 43 57.8**	**+0.7**
	SNR=33								
MZR	**Muzera**	**38.67**	**108**	P		**P**		**01 43 58.0**	**+0.7**
	SNR=22								
MZR				P		**P**		**01 43 58.0**	**+0.7**
	SNR=22								
MZR	**Muzera**	**38.67**	**108**	*i* P		**P**		**01 43 56.5**	**-0.9**
	SNR=16								
SHME	**Shamm**	**38.68**	**101**	P		**P**		**01 43 58.8**	**+1.3**
	SNR=35								
SHME				P		**P**		**01 43 58.8**	**+1.3**
	SNR=35								
SHME				P		**P**		**01 43 58.8**	**+1.3**
	SNR=35								
SHME	**Shamm**	**38.68**	**101**	*i* P		**P**		**01 43 56.5**	**-0.9**
	SNR=24								
BRVK	**Borovoye**	**38.71**	**54**	P		**P**		**01 43 57.1**	**-0.3**
BRVK	**Borovoye**	**38.71**	**54**	*d* iP		**P**		**01 43 58.0**	**+0.6**
BRVK				pmax	pmax				
	comp=Z,595nm,1.0s								
BRVK				MLR	MLR				
	comp=Z,70µm,19.0s								
BRVK	**Borovoye**	**38.71**	**54**	P		**P**		**01 43 59.0**	**+1.7**
BRVK				P		**P**		**01 43 59.0**	**+1.7**
BRVK				P		**P**		**01 43 59.0**	**+1.7**
BRVK	**Borovoye**	**38.71**	**54**	P		**P**		**01 43 57.9**	**+0.6**
AJN	**Ajban**	**38.75**	**104**	P		**P**		**01 43 58.9**	**+0.9**
	SNR=28								
AJN				P		**P**		**01 43 58.9**	**+0.9**
	SNR=28								
AJN	**Ajban**	**38.75**	**104**	*i* P		**P**		**01 43 57.0**	**-1.0**
	SNR=33								
BVA0	**Borovoye Array**	**38.77**	**54**	*i* P		**P**		**01 43 58.7**	**+0.8**
BVAR	**Borovoye Array**	**38.77**	**54**	LR		LR		02 01 15.1	
	comp=Z,74µm,19.7s,baz=279,slow=38								
ASUD	**Al Ashush, Dub**	**38.96**	**104**	P		**P**		**01 44 01.0**	**+1.2**
	SNR=53								
ASUD				P		**P**		**01 44 01.0**	**+1.2**
	SNR=53								
ASUD	**Al Ashush, Dub**	**38.96**	**104**	*i* P		**P**		**01 43 59.5**	**-0.3**
	SNR=56								
NAZ	**Nazwa, Dubai**	**38.98**	**103**	P		**P**		**01 44 01.0**	**+1.1**
	SNR=52								
NAZ				P		**P**		**01 44 01.0**	**+1.1**
	SNR=52								
NAZ				P		**P**		**01 44 01.0**	**+1.1**
	SNR=52								
NAZ	**Nazwa, Dubai**	**38.98**	**103**	*i* P		**P**		**01 43 59.5**	**-0.4**
	SNR=29								
NRS	**Narsarsuaq**	**39.02**	**319**	P		**P**		**01 43 59.3**	**-0.5**
NRS				IAMs_20	IAMs_20			02 00 08.6	
	comp=Z,24µm,19.0s								
NRS	**Narsarsuaq**	**39.02**	**319**	P		**P**		**01 43 59.3**	**-0.5**
NRS				pmax	pmax				
	comp=Z,107nm,1.0s								
NRS				MLR	MLR				
	comp=Z,24µm,19.0s								
NRS	**Narsarsuaq**	**39.02**	**319**	*e*P		**P**		**01 43 59.9**	**+0.1**
NRS				IAmb	IAmb			01 44 07.6	
	comp=Z,248nm,1.6s								
FAQ	**Al Faqa, Dubai**	**39.07**	**103**	P		**P**		**01 44 01.2**	**+0.4**
	SNR=34								
FAQ				P		**P**		**01 44 01.2**	**+0.4**
	SNR=34								
FAQ				P		**P**		**01 44 01.2**	**+0.4**
	SNR=34								
FAQ	**Al Faqa, Dubai**	**39.07**	**103**	*i* P		**P**		**01 44 01.0**	**+0.3**
	SNR=33								
MASF	**Masafi**	**39.10**	**102**	P		**P**		**01 44 02.6**	**+1.6**
	SNR=31								
MASF				P		**P**		**01 44 02.6**	**+1.6**
	SNR=31								
MASF				P		**P**		**01 44 02.6**	**+1.6**
	SNR=31								
MSFE	**Esma-Masafi**	**39.11**	**102**	*i* P		**P**		**01 44 00.2**	**-0.8**
	SNR=37								
DBIC	**Dimbokro**	**39.25**	**209**	P		**P**		**01 44 02.6**	**+0.4**
	comp=Z,135nm,1.0s,baz=30,slow=8.6,SNR=58								
DBIC				PP		**PnPn**		**01 45 35.3**	**+0.3**
	comp=Z,17nm,0.8s,baz=30,slow=12,SNR=4.6								
DBIC				S		S		01 49 50.7	-12
	comp=Z,6.1nm,0.9s,baz=9.1,slow=9.6,SNR=1.4								
DBIC				LR		LR		02 00 43.0	
	comp=Z,37µm,21.5s,baz=23,slow=37								
	comp=Z,135nm,1.0s								
DBIC	**Dimbokro**	**39.25**	**209**	P		**P**		**01 44 01.6**	**-0.5**
DBIC	**Dimbokro**	**39.25**	**209**	⇓*i* P		**P**		**01 44 02.8**	**+0.6**
TIC	**Toumodi**	**39.33**	**209**	*e*P		**P**		**01 44 02.7**	**-0.2**
	comp=Z,104nm,1.0s								
UOSS	**Minazif**	**39.39**	**103**	P		**P**		**01 44 02.6**	**-0.8**
UOSS				IAmb	IAmb			01 44 10.2	
	comp=Z,633nm,1.4s								
UOSS	**Minazif**	**39.39**	**103**	IAMs_20	IAMs_20			02 02 06.2	
	comp=Z,20µm,20.0s								
UOSS	**Minazif**	**39.39**	**103**	P		**P**		**01 44 03.2**	**-0.2**
UOSS				P		**P**		**01 44 03.2**	**-0.2**
UOSS	**Minazif**	**39.39**	**103**	*i* P		**P**		**01 44 02.6**	**-0.8**
	SNR=33								
UOSS	**Minazif**	**39.39**	**103**	P		**P**		**01 44 03.2**	**-0.2**
HATD	**Hatta, Dubai**	**39.41**	**103**	P		**P**		**01 44 04.0**	**+0.4**
	SNR=87								
HATD				P		**P**		**01 44 04.0**	**+0.4**
	SNR=87								
HATD				P		**P**		**01 44 04.0**	**+0.4**
	SNR=87								
HATD	**Hatta, Dubai**	**39.41**	**103**	*i* P		**P**		**01 44 03.3**	**-0.3**
	SNR=42								
ASHO	**Ashiyiah**	**39.45**	**103**	P		**P**		**01 44 04.0**	**+0.1**
	SNR=86								
ASHO				P		**P**		**01 44 04.0**	**+0.1**
	SNR=86								
ASHO				P		**P**		**01 44 04.0**	**+0.1**
	SNR=86								
ASHO	**Ashiyiah**	**39.45**	**103**	*i* P		**P**		**01 44 03.2**	**-0.7**
	SNR=134								
KIC	**Kosan Boka**	**39.50**	**209**	*e*P		**P**		**01 44 04.0**	**-0.3**
	comp=Z,158nm,0.9s								
ALNE	**Al Ain**	**39.61**	**104**	P		**P**		**01 44 05.9**	**+0.7**
	SNR=58								
ALNE				P		**P**		**01 44 05.9**	**+0.7**
	SNR=58								
ALNE	**Al Ain**	**39.61**	**104**	*i* P		**P**		**01 44 04.8**	**-0.5**
	SNR=31								
LIC	**Lamto**	**39.72**	**209**	*e*P		**P**		**01 44 05.5**	**-0.7**
	comp=Z,230nm,0.7s								
LIC				*e*R					
	comp=Z,61µm,23.5s								
LIC	**Lamto**	**39.72**	**209**	*e*P		**P**		**01 44 06.2**	**0.0**
	comp=Z,463nm,0.9s								
DY2G	**Dye2**	**39.73**	**327**	⇓*i* P		**P**		**01 44 07.1**	**+1.1**
DY2G				IAmb	IAmb			01 44 11.3	
	comp=Z,1µm,1.7s								
JASK	**Jask - Hormozg**	**40.04**	**100**	P		**P**		**01 44 11.0**	**+2.2**
	SNR=31								
ANKE	**Ethiopia-Afar**	**40.32**	**137**	*e*P		**P**		**01 44 12.6**	**+1.1**
ANKE				*e*S		S		01 50 37.8	+18
ANKE	**Ethiopia-Afar**	**40.32**	**137**	*e*P		**P**		**01 44 12.8**	**+1.3**
AAE	**Adis Abeba**	**40.32**	**139**	*i* P		**P**		**01 44 13.3**	**+1.8**
AAE				*e*S		S		01 50 05.7	-14
AAE	**Adis Abeba**	**40.32**	**139**	*e*P		**P**		**01 44 13.9**	**+2.4**
AAE				*e*S		S		01 50 40.6	+21
AAE	**Adis Abeba**	**40.32**	**139**	*e*P		P		01 43 58.8	-13
AAE	**Adis Abeba**	**40.32**	**139**	*e*P		**P**		**01 44 12.8**	**+1.3**
AAE	**Adis Abeba**	**40.32**	**139**	*e*P		**P**		**01 44 13.2**	**+1.6**
AAE				*e*S		**S**		**01 50 17.4**	**-2.0**
ATD	**Arta Tunnel**	**40.34**	**131**	LR		LR		02 01 57.2	
	comp=Z,3µm,20.4s,baz=337,slow=38								
ATD	**Arta Tunnel**	**40.34**	**131**	*i* P		**P**		**01 44 12.4**	**+1.1**
ATD				*e*S		**S**		**01 50 21.2**	**+2.1**
ATD	**Arta Tunnel**	**40.34**	**131**	*e*P		**P**		**01 44 13.2**	**+1.8**
ATD	**Arta Tunnel**	**40.34**	**131**	*e*P		**P**		**01 44 12.0**	**+0.7**
ATD	**Arta Tunnel**	**40.34**	**131**	*e*P		**P**		**01 44 12.4**	**+1.1**
ATD				*e*S		**S**		**01 50 21.2**	**+2.1**
NOR	**Nord**	**40.35**	**354**	*i* P		**P**		**01 44 10.9**	**+0.2**
NOR				IAmb	IAmb			01 44 15.8	
	comp=Z,314nm,1.5s								
IVI	**Ivigtut**	**40.35**	**319**	P		**P**		**01 44 10.0**	**-0.9**
IVI				IAmb	IAmb			01 44 19.5	
	comp=Z,249nm,1.1s								
IVI	**Ivigtut**	**40.35**	**319**	⇓*i* P		**P**		**01 44 10.7**	**-0.2**
IVI				IAmb	IAmb			01 44 19.1	
	comp=Z,210nm,1.0s								
FURI	**Furi**	**40.40**	**139**	*e*P		**P**		**01 44 13.2**	**+1.1**
FURI				*e*S		**S**		**01 50 22.5**	**+2.0**
FURI	**Furi**	**40.40**	**139**	*e*P		**P**		**01 44 14.8**	**+2.7**
FURI	**Furi**	**40.40**	**139**	*e*P		P		01 43 59.5	-13
FURI	**Furi**	**40.40**	**139**	*e*P		**P**		**01 44 13.9**	**+1.8**
FURI	**Furi**	**40.40**	**139**	*e*P		**P**		**01 44 13.2**	**+1.1**
FURI				*e*S		**S**		**01 50 22.5**	**+2.0**
FURI	**Furi**	**40.40**	**139**	P		**P**		**01 44 16.5**	**+4.3**
ARQ	**Araqi**	**40.61**	**104**	P		**P**		**01 44 15.0**	**+1.4**
	SNR=26								
ARQ				P		**P**		**01 44 15.0**	**+1.4**
	SNR=26								
ARQ				P		**P**		**01 44 15.0**	**+1.4**
	SNR=26								
BRZS	**Berezniki**	**40.75**	**58**	*d* iP		**P**		**01 44 14.2**	**-0.2**
BRZS				*i*				01 45 47.7	
BRZS				*e*S		**S**		**01 50 25.8**	**+1.2**
BRZS				pmax	pmax				
	comp=Z,176nm,2.3s								
BRZS				smax	smax				
	comp=E,328nm,4.8s								
BRZS	**Berezniki**	**40.75**	**58**	⇓*i* P		**P**		**01 44 14.2**	**-0.2**
	comp=E,176nm,2.3s,baz=58								
BRZS				*i* PP		**PP**		**01 45 47.8**	**-0.4**
	baz=58								
BRZS				*e*S		**S**		**01 50 25.9**	**+1.2**
	comp=E,328nm,4.8s,baz=58								
HOQ	**Hoqain**	**41.02**	**103**	P		**P**		**01 44 17.2**	**+0.3**
	SNR=49								
HOQ				P		**P**		**01 44 17.2**	**+0.3**
	SNR=49								
HOQ				P		**P**		**01 44 17.2**	**+0.3**
	SNR=49								
TAS	**Tashkent**	**41.05**	**72**	P		**P**		**01 44 17.6**	**+0.6**
TAS				IAmb	IAmb			01 44 23.7	
	comp=Z,172nm,0.9s								
TAS	**Tashkent**	**41.05**	**72**	P		**P**		**01 44 17.6**	**+0.6**
TAS				pmax	pmax				
	comp=Z,172nm,0.9s								
IUG	**Iuzhnay**	**41.27**	**71**	*i* P		**P**		**01 44 19.4**	**+0.5**
IUG				*e*S		**S**		**01 50 34.1**	**+1.4**
IUG				smax	smax				
	comp=E,515nm,3.6s								
IUG	**Iuzhnay**	**41.27**	**71**	*i* P		**P**		**01 44 19.5**	**+0.5**
	baz=71								
IUG				*e*S		**S**		**01 50 34.1**	**+1.4**
	comp=E,515nm,3.6s,baz=71								
KK31	**Karatay Array**	**41.28**	**69**	IAmb		IAmb		01 44 26.5	
	comp=Z,184nm,0.8s								
KK31	**Karatay Array**	**41.28**	**69**	*i* P		**P**		**01 44 19.5**	**+0.7**
KKAR	**Karatay Array**	**41.28**	**69**	IAmb		IAmb		01 44 26.5	
	comp=Z,184nm,0.8s								
BSY	**Bisya**	**41.47**	**104**	P		**P**		**01 44 22.0**	**+1.4**
	SNR=24								
BSY				P		**P**		**01 44 22.0**	**+1.4**
	SNR=24								
BSY				P		**P**		**01 44 22.0**	**+1.4**
	SNR=24								
SFJD	**Kangerlussuaq**	**41.50**	**328**	LR		LR		02 02 36.6	
	comp=Z,19µm,19.2s,baz=93,slow=38								
SFJD	**Kangerlussuaq**	**41.50**	**328**	P		**P**		**01 44 19.8**	**-0.5**
SFJD				IAmb		IAmb		01 44 24.7	
	comp=Z,210nm,0.8s								
SFJD	**Kangerlussuaq**	**41.50**	**328**	IAMs_20	IAMs_20			02 04 06.0	
	comp=Z,24µm,18.0s								
SFJD	**Kangerlussuaq**	**41.50**	**328**	P		**P**		**01 44 19.8**	**-0.5**
SFJD				pmax	pmax				
	comp=Z,210nm,0.8s								
SFJD				MLR	MLR				
	comp=Z,24µm,18.0s								
SFJD	**Kangerlussuaq**	**41.50**	**328**	*e*P		**P**		**01 44 20.8**	**+0.5**
SFJD				IAmb	IAmb			01 44 24.5	
	comp=Z,234nm,0.8s								
SFJD	**Kangerlussuaq**	**41.50**	**328**	P		**P**		**01 44 21.2**	**+0.9**
BIDO	**Bidbid**	**41.65**	**103**	P		**P**		**01 44 24.0**	**+1.9**
	SNR=18								
BIDO				P		**P**		**01 44 24.0**	**+1.9**
	SNR=18								
BIDO				P		**P**		**01 44 24.0**	**+1.9**
	SNR=18								
ILULI	**Ilulissat**	**41.84**	**331**	P		**P**		**01 44 23.1**	**+0.1**
ILULI				IAMs_20	IAMs_20			02 03 01.7	
	comp=Z,18µm,21.0s								
ILULI	**Ilulissat**	**41.84**	**331**	P		**P**		**01 44 23.1**	**+0.1**
ILULI				pmax	pmax				
	comp=Z,1µm,1.7s								
ILULI				MLR	MLR				
	comp=Z,18µm,21.0s								
ILULI	**Ilulissat**	**41.84**	**331**	*i* P		**P**		**01 44 23.4**	**+0.4**
ILULI				IAmb	IAmb			01 44 27.6	
	comp=Z,1µm,1.7s								
SMDO	**Samad**	**41.88**	**103**	P		**P**		**01 44 24.0**	**-0.1**
	SNR=42								
SMDO				P		**P**		**01 44 24.0**	**-0.1**
	SNR=42								
SMDO				P		**P**		**01 44 24.0**	**-0.1**
	SNR=42								
DZA	**Taraz**	**41.91**	**69**	*e*P		**P**		**01 44 24.4**	**+0.4**
DZA				*e*S		**S**		**01 50 42.9**	**+0.8**
DZA	**Taraz**	**41.91**	**69**	*e*P		**P**		**01 44 24.5**	**+0.4**
	baz=69								
DZA				*e*S		**S**		**01 50 43.0**	**+0.8**
	baz=69								
NUUK	**Nuuk**	**41.92**	**324**	*e*P		**P**		**01 44 23.5**	**-0.3**
NUUK				IAmb	IAmb			01 44 31.7	
	comp=Z,502nm,1.8s								
CHGR	**Chuyangaron**	**41.98**	**76**	IAmb		IAmb		01 44 32.7	
	comp=Z,288nm,0.9s								
WSAR	**Wadi Sarin**	**42.19**	**103**	LR		LR		02 06 09.7	
	comp=Z,19µm,20.4s,baz=336,slow=42								
WHFO	**Wadi Hawf**	**42.28**	**113**	P		**P**		**01 44 27.2**	**-0.2**
WHFO				P		**P**		**01 44 27.2**	**-0.2**
JMDO	**Jabal Madar**	**42.35**	**104**	P		**P**		**01 44 28.0**	**+0.2**
	SNR=24								
JMDO				P		**P**		**01 44 28.0**	**+0.2**
	SNR=24								
JMDO				P		**P**		**01 44 28.0**	**+0.2**
	SNR=24								
ABTO	**Aybut**	**42.36**	**114**	P		**P**		**01 44 30.2**	**+2.2**
	SNR=5.5								
GAR	**Garm**	**42.67**	**75**	IAmb		IAmb		01 44 49.6	
	comp=Z,424nm,1.0s								
NUUG	**Nuugaatsiaq**	**42.75**	**335**	*i* P		**P**		**01 44 31.1**	**+0.6**
NUUG				IAmb	IAmb			01 44 39.8	
	comp=Z,253nm,1.6s								
WBK	**Wadi Bani Khal**	**42.82**	**103**	P		**P**		**01 44 32.3**	**+0.6**
WBK				P		**P**		**01 44 32.3**	**+0.6**
WBK				P		**pP**		**01 44 34.1**	**-1.6**
	SNR=20								
WBK				P		**pP**		**01 44 34.1**	**-1.6**
	SNR=20								
RBK	**Rabkut**	**42.87**	**113**	P		**P**		**01 44 32.1**	**+0.1**
RBK				P		**P**		**01 44 32.1**	**+0.1**
RBK				P		**pP**		**01 44 35.1**	**-1.1**
	SNR=7.3								
RBK				P		**pP**		**01 44 35.1**	**-1.1**
	SNR=7.3								
BTLS	**Baital**	**43.03**	**65**	*d* iP		**P**		**01 44 33.4**	**+0.4**
BTLS				*e*				01 46 13.4	
BTLS				*e*S		**S**		**01 50 59.2**	**+0.8**
BTLS				pmax	pmax				
	comp=Z,225nm,2.6s								
BTLS				smax	smax				
	comp=E,365nm,5.0s								
BTLS	**Baital**	**43.03**	**65**	⇓*i* P		**P**		**01 44 33.5**	**+0.4**
	comp=E,225nm,2.6s,baz=65								
BTLS				*e*PP		**PP**		**01 46 13.4**	**+0.6**
	baz=65								
BTLS				*e*S		**S**		**01 50 59.2**	**+0.8**
	comp=E,364nm,5.0s,baz=65								
BTLS				*e*SS		**SS**		**01 54 13.3**	**+3.1**
	baz=65								
MHTO	**MHTO**	**43.14**	**106**	P		**P**		**01 44 34.5**	**+0.3**
MHTO				P		**P**		**01 44 34.5**	**+0.3**
MHTO				P		**P**		**01 44 34.5**	**+0.3**
MHTO				P		**pP**		**01 44 35.0**	**-3.3**
	SNR=15								
MHTO				P		**pP**		**01 44 35.0**	**-3.3**
	SNR=15								
MHTO				P		**pP**		**01 44 35.0**	**-3.3**
	SNR=15								
NEEM	**North Greenlan**	**43.19**	**343**	⇓*i* P		**P**		**01 44 34.6**	**+0.3**
NEEM				IAmb	IAmb			01 44 40.5	
	comp=Z,374nm,1.1s								
DMTO	**DMTO**	**43.22**	**112**	P		**P**		**01 44 34.7**	**-0.2**
SHAO	**Shalim**	**43.48**	**111**	P		**P**		**01 44 39.5**	**+2.5**
SHAO				P		**P**		**01 44 39.5**	**+2.5**
SHAO	**Shalim**	**43.48**	**111**	P		**P**		**01 44 35.6**	**-1.4**
DQM	**DQM**	**43.53**	**107**	P		**P**		**01 44 38.4**	**+1.0**
	SNR=11								
DQM				P		**P**		**01 44 38.4**	**+1.0**
	SNR=11								
DQM				P		**P**		**01 44 38.4**	**+1.0**
	SNR=11								
EKS2	**Erkin-Say**	**43.68**	**68**	P		**P**		**01 44 39.6**	**+1.1**
	SNR=116								
KBL	**Kabul**	**43.70**	**81**	P		**P**		**01 44 38.7**	**-0.2**
KBL	**Kabul**	**43.70**	**81**	P		**P**		**01 44 38.7**	**-0.2**
KBL				pmax	pmax				
	comp=Z,69nm,1.2s								
KBL	**Kabul**	**43.70**	**81**	P		**P**		**01 44 39.9**	**+1.1**
	SNR=33								
KBL				P		**P**		**01 44 39.9**	**+1.1**
	SNR=33								
UPNV	**Upernavik**	**43.76**	**336**	*i* P		**P**		**01 44 39.5**	**+1.0**
UPNV				IAmb	IAmb			01 44 44.4	
	comp=Z,129nm,0.9s								
LODK	**Lodwar**	**43.80**	**147**	P		**P**		**01 44 39.9**	**+0.2**
LODK	**Lodwar**	**43.80**	**147**	P		**P**		**01 44 40.8**	**+1.2**
	SNR=28								
LODK	**Lodwar**	**43.80**	**147**	*i* P		**P**		**01 44 39.8**	**+0.2**
LODK				*e*S		**S**		**01 51 08.8**	**-1.4**
LODK	**Lodwar**	**43.80**	**147**	*e*S		S		01 51 00.6	-10
LODK	**Lodwar**	**43.80**	**147**	*e*P		**P**		**01 44 40.2**	**+0.6**
LODK	**Lodwar**	**43.80**	**147**	*i* P		**P**		**01 44 39.8**	**+0.2**
LODK				*e*S		**S**		**01 51 08.8**	**-1.4**
AML	**Almayashu**	**43.82**	**69**	P		**P**		**01 44 41.3**	**+1.3**
	SNR=58								
USP	**Ospenovka**	**43.95**	**67**	P		**P**		**01 44 42.3**	**+1.7**
	SNR=39								
SGDS	**Sogindy**	**43.97**	**67**	*de*P		**P**		**01 44 40.5**	**-0.3**
SGDS				*e*				01 46 24.1	
SGDS				pmax	pmax				
	comp=Z,320nm,3.0s								
SGDS	**Sogindy**	**43.97**	**67**	⇓*e*P		**P**		**01 44 40.6**	**-0.3**
	comp=Z,320nm,3.0s,baz=67								
SGDS				*e*PP		**PP**		**01 46 24.1**	**+1.1**
	baz=67								
AAK	**Ala-Archa**	**44.18**	**68**	P		**P**		**01 44 43.9**	**+1.3**
	SNR=65								
AAK	**Ala-Archa**	**44.18**	**68**	P		**P**		**01 44 42.9**	**+0.3**
AAK				IAmb	IAmb			01 44 47.2	
	comp=Z,144nm,1.1s								
AAK	**Ala-Archa**	**44.18**	**68**	*de*P		**P**		**01 44 43.6**	**+1.0**
AAK				pmax	pmax				
	comp=Z,183nm,1.2s								
AAK				MLR	MLR				
	comp=Z,57µm,19.0s								
AAK	**Ala-Archa**	**44.18**	**68**	P		**P**		**01 44 44.8**	**+2.2**
AAK				P		**P**		**01 44 44.8**	**+2.2**
AAK				P		**P**		**01 44 44.8**	**+2.2**
AAK	**Ala-Archa**	**44.18**	**68**	*i* P		**P**		**01 44 43.3**	**+0.7**
	SNR=43								
AAK	**Ala-Archa**	**44.18**	**68**	P		**P**		**01 44 43.9**	**+1.3**
KURBB	**Kurchatov Arra**	**44.22**	**56**	LR		LR		02 04 38.5	
	comp=Z,62µm,19.2s,baz=268,slow=38								
KURBB	**Kurchatov Arra**	**44.22**	**56**	P		**P**		**01 44 41.2**	**-1.3**
CHMS	**Chumysh**	**44.22**	**68**	P		**P**		**01 44 44.2**	**+1.4**
	SNR=26								
KURK	**Kurchatov**	**44.25**	**56**	P		**P**		**01 44 41.7**	**-1.1**
KURK				IAmb	IAmb			01 44 45.9	
	comp=Z,170nm,1.0s								
KURK	**Kurchatov**	**44.25**	**56**	*d* iP		**P**		**01 44 42.6**	**-0.1**
KURK				pmax	pmax				
	comp=Z,192nm,1.1s								
KURK				MLR	MLR				
	comp=Z,61µm,18.0s								
KURK	**Kurchatov**	**44.25**	**56**	P		**P**		**01 44 43.0**	**+0.2**
KURK				P		**P**		**01 44 43.0**	**+0.2**
KURK				P		**P**		**01 44 43.0**	**+0.2**
KURK	**Kurchatov**	**44.25**	**56**	P		**P**		**01 44 42.7**	**-0.1**
UCH	**Uchtor**	**44.35**	**69**	P		**P**		**01 44 45.7**	**+1.4**
	SNR=37								
KBK	**Karagaybulak**	**44.48**	**68**	P		**P**		**01 44 46.2**	**+1.2**
	SNR=22								
TKM2	**Tokmak 2**	**44.83**	**67**	P		**P**		**01 44 48.3**	**+0.5**
	SNR=39								
TKM2	**Tokmak 2**	**44.83**	**67**	P		**P**		**01 44 47.1**	**-0.7**
KUU	**Kurty**	**44.97**	**66**	*d* iP		**P**		**01 44 49.0**	**+0.3**
KUU				*e*S		**S**		**01 51 27.9**	**+1.2**
KUU				pmax	pmax				
	comp=Z,684nm,2.4s								
KUU				smax	smax				
	comp=E,1µm,6.4s								
KUU				MLR	MLR				
	comp=Z,20µm,16.0s								
KUU	**Kurty**	**44.97**	**66**	⇓*i* P		**P**		**01 44 49.1**	**+0.3**
	comp=Z,684nm,2.4s,baz=66								
KUU				*e*S		**S**		**01 51 27.9**	**+1.2**
	comp=Z,1µm,6.4s,baz=66								
KUU				LR	LR			02 03 28.5	
	comp=Z,20µm,16.3s,baz=66								
SEM	**Semipalatinsk**	**45.33**	**56**	*de*P		**P**		**01 44 51.2**	**-0.5**
SEM				*e*S		**S**		**01 51 32.2**	**0.0**
SEM				smax	smax				
	comp=E,4µm,18.2s								
SEM				MLR	MLR				
	comp=Z,15µm,19.0s								
SEM	**Semipalatinsk**	**45.33**	**56**	⇓*e*P		**P**		**01 44 51.3**	**-0.5**
	comp=Z,563nm,4.3s,baz=56								
SEM				*e*S		**S**		**01 51 32.3**	**0.0**
	comp=Z,4µm,18.2s,baz=56								
SEM				LR	LR			02 03 57.6	
	comp=Z,15µm,19.0s,baz=56								
NRIK	**Noril'sk**	**45.41**	**29**	P		**P**		**01 44 52.1**	**+0.3**
	comp=Z,60nm,1.0s,baz=272,slow=5.0,SNR=23								
NRIK				S		**S**		**01 51 31.8**	**-0.6**

TDK LR LR 02 04 15.8
comp=Z,22µm,17.2s,baz=64
KSH Kashi 46.45 72 P **P** **01 45 00.6 0.0**
KSH pP pP 01 45 02.5 -2.1
KSH S **S** **01 51 48.8 +0.4**
KSH pmax pmax
comp=Z,270nm,0.9s
KSH LR LR
comp=Z,17µm,19.7s
KSH LR LR
comp=Z,33µm,16.2s
KSH LR LR
comp=Z,28µm,18.1s
ZHN Zhinishke 46.65 66 *e*P **P** **01 45 01.9 -0.2**
ZHN *e*S **S** **01 51 52.3 +1.1**
ZHN smax smax
comp=E,232nm,5.1s
ZHN Zhinishke 46.65 66 *e*P **P** **01 45 02.0 -0.2**
baz=66
ZHN *e*S **S** **01 51 52.4 +1.1**
comp=E,232nm,5.1s,baz=66
SATY Saty 46.68 66*d i*P **P** **01 45 02.7 +0.4**
SATY *e*S **S** **01 51 52.6 +1.0**
SATY pmax pmax
comp=Z,332nm,3.1s
SATY smax smax
comp=E,283nm,5.4s
SATY Saty 46.68 66⇓ *i*P **P** **01 45 02.7 +0.4**
comp=E,332nm,3.1s,baz=66
SATY *e*S **S** **01 51 52.6 +1.0**
comp=E,283nm,5.4s,baz=66
KPKS Kokpek 46.71 66 *i*P **P** **01 45 02.6 +0.1**
KPKS *e*S **S** **01 51 53.1 +1.2**
KPKS pmax pmax
comp=Z,317nm,2.8s
KPKS smax smax
comp=E,396nm,6.2s
KPKS Kokpek 46.71 66 *i*P **P** **01 45 02.6 +0.1**
comp=E,317nm,2.8s,baz=66
KPKS *e*S **S** **01 51 53.2 +1.3**
comp=E,396nm,6.2s,baz=66
KPKS *e*SS **SS** **01 55 20.1 +2.2**
baz=66
ZAA0 Zalesovo Array 46.98 50 P **P** **01 45 04.0 -0.4**
ZAA0 IAmb IAmb 01 45 07.2
comp=Z,108nm,1.0s
ZALV Zalesovo Beam 46.98 50 P **P** **01 45 04.6 +0.2**
comp=Z,81nm,0.8s,baz=292,slow=7.8,SNR=115
ZALV PP **PP** **01 46 54.6 0.0**
comp=Z,24nm,0.9s,baz=294,slow=11,SNR=2.6
ZALV S **S** **01 51 50.5 -4.9**
comp=Z,0.7nm,0.4s,baz=295,slow=20,SNR=1.6
ZALV LR LR 02 06 40.7
comp=Z,43µm,18.7s,baz=278,slow=38
comp=Z,81nm,0.8s
UZB Uzynbulak 47.06 66*de*P **P** **01 45 05.2 -0.1**
UZB *e*S **S** **01 51 57.8 +0.7**
UZB pmax pmax
comp=Z,101nm,2.6s
UZB smax smax
comp=E,240nm,4.2s
UZB Uzynbulak 47.06 66⇓ *e*P **P** **01 45 05.3 -0.1**
comp=E,101nm,2.6s,baz=66
UZB *e*S **S** **01 51 57.9 +0.8**
comp=E,240nm,4.2s,baz=66
TULEG Thule 47.11 342 P **P** **01 45 04.8 -0.2**
TULEG IAMs_20 IAMs_20 02 06 38.9
comp=Z,23µm,19.0s
TULEG Thule 47.11 342 *i*P **P** **01 45 05.0 -0.1**
TULEG IAmb IAmb 01 45 10.5
comp=Z,830nm,1.7s
NIL Nilore 47.19 80 P **P** **01 45 07.2 +0.9**
NIL Nilore 47.19 80 IAMs_20 IAMs_20 02 07 50.2
comp=Z,20µm,21.0s
NIL Nilore 47.19 80 P **P** **01 45 07.2 +0.9**
NIL pmax pmax
comp=Z,572nm,1.4s
NIL MLR MLR
comp=Z,20µm,21.0s
NIL Nilore 47.19 80 P **P** **01 45 07.5 +1.2**
SHLS Shalkode 47.35 66*d i*P **P** **01 45 10.3 +2.7**
SHLS pmax pmax
comp=Z,348nm,3.3s
SHLS Shalkode 47.35 66⇓ *i*P **P** **01 45 10.3 +2.7**
comp=Z,348nm,3.3s,baz=66
MAKZ Makanchi 47.61 60 P **P** **01 45 08.7 -0.7**
MAKZ IAmb IAmb 01 45 12.9
comp=Z,104nm,1.1s
MAKZ Makanchi 47.61 60 P **P** **01 45 08.9 -0.5**
MAKZ Makanchi 47.61 60 P **P** **01 45 09.8 +0.4**
MK31 Makanchi Array 47.81 60 IAmb IAmb 01 45 14.2
comp=Z,134nm,1.0s
MK31 Makanchi Array 47.81 60*d i*P **P** **01 45 10.7 -0.3**
MKAR Makanchi Array 47.81 60 P **P** **01 45 11.2 +0.3**
comp=Z,177nm,0.9s,baz=290,slow=5.0,SNR=224
MKAR S **S** **01 52 06.0 -1.5**
comp=Z,1.7nm,1.0s,baz=271,slow=9.5,SNR=1.3
MKAR LR LR 02 09 23.5
comp=Z,46µm,18.8s,baz=297,slow=41
comp=Z,177nm,0.9s
MKAR Makanchi Array 47.81 60*ce*P **P** **01 45 11.3 +0.3**
MKAR pmax pmax
comp=Z,178nm,0.9s
DRLN Deer Lake 47.94 304 P **P** **01 45 11.1 -0.8**
DRLN IAmb IAmb 01 45 16.7
comp=Z,102nm,0.8s
KMBO Kilima Mbogo 48.69 147 P **P** **01 45 19.5 +1.2**
comp=Z,20nm,1.1s,baz=322,slow=7.4,SNR=18
KMBO S **S** **01 52 21.9 +1.1**
comp=Z,0.5nm,0.4s,baz=198,slow=23,SNR=1.0
KMBO LR LR 02 07 37.2
comp=Z,7µm,20.0s,baz=322,slow=38
comp=Z,20nm,1.1s
KMBO Kilima Mbogo 48.69 147 P **P** **01 45 18.1 -0.2**
KMBO Kilima Mbogo 48.69 147 P **P** **01 45 18.1 -0.2**
KMBO pmax pmax
comp=Z,32nm,1.1s
KMBO Kilima Mbogo 48.69 147 P **P** **01 45 19.7 +1.4**
KMBO P **P** **01 45 19.7 +1.4**
KMBO P **P** **01 45 19.7 +1.4**
KMBO Kilima Mbogo 48.69 147 P **P** **01 45 16.8 -1.5**
KMBO eS **S** **01 52 19.7 -1.2**
KMBO Kilima Mbogo 48.69 147 *e*P **P** **01 45 18.8 +0.5**
KMBO Kilima Mbogo 48.69 147 *e*P **P** **01 45 19.2 +0.8**
KMBO Kilima Mbogo 48.69 147 *e*P **P** **01 45 13.8 -4.6**
KMBO *e*S S 01 52 07.8 -13
KMBO Kilima Mbogo 48.69 147 *i*P **P** **01 45 19.3 +1.0**
SNR=19
KMBO Kilima Mbogo 48.69 147 P **P** **01 45 19.7 +1.4**
JMU Jammu 48.85 80 *e*P **P** **01 45 18.3 -0.8**
JMU *i* x x 01 47 17.5
JASL Jaisalmer 49.01 89 *e*P **P** **01 45 20.9 +0.5**
ZSN Zaisan 49.20 58*d i*P **P** **01 45 22.2 +0.6**
ZSN *e*S **S** **01 52 28.5 +1.5**
ZSN pmax pmax
comp=Z,517nm,2.7s
ZSN smax smax
comp=E,1µm,6.9s
ZSN Zaisan 49.20 58⇓ *i*P **P** **01 45 22.3 +0.6**
comp=E,517nm,2.7s,baz=58
ZSN *e*S **S** **01 52 28.5 +1.5**
comp=E,1µm,6.9s,baz=58
FRB Frobisher Bay 49.30 325 S **S** **01 52 22.4 -5.5**
comp=E,12nm,1.0s,baz=176,slow=7.5,SNR=2.5
FRB LR LR 02 07 11.2
comp=E,33µm,18.1s,baz=72,slow=37
THN Thein Dam 49.59 80 *e*P **P** **01 45 25.0 +0.3**
KIBK Kibwezi 50.12 147 P **P** **01 45 30.8 +1.8**
SNR=10.0
BHK Bhakra 50.62 81 *e*P **P** **01 45 31.9 -0.8**
SMLA Simla 51.32 81 *e*P **P** **01 45 36.3 -1.6**
SCHQ Schefferville 51.34 313 P **P** **01 45 37.1 -0.6**
comp=E,58nm,0.7s,baz=59,slow=5.5,SNR=24
SCHQ S **S** **01 52 51.5 -5.1**
comp=E,2.7nm,0.7s,baz=302,slow=14,SNR=1.3
SCHQ LR LR 02 05 09.3
comp=E,13µm,19.9s,baz=67,slow=34
comp=E,58nm,0.7s
SCHQ Schefferville 51.34 313 IAmb IAmb 01 45 48.1
comp=Z,108nm,0.9s
GBN Guysborough 51.95 300 IAmb IAmb 01 45 54.1
comp=Z,138nm,1.2s
AJM Ajmer 52.02 87 *i*P **P** **01 45 42.2 -1.0**
DDI Dehra Dun 52.40 81 *e*P **P** **01 45 42.9 -3.1**
WMQ Urumqi 52.51 62 P **P** **01 45 48.0 +1.3**
WMQ PP **PP** **01 47 50.2 +4.9**
WMQ S **S** **01 53 15.8 +2.8**
WMQ pmax pmax
comp=Z,120nm,1.1s
WMQ pmax pmax
comp=Z,5µm,6.3s
WMQ LR LR
comp=Z,28µm,19.7s
HAL Halifax 53.61 300 IAmb IAmb 01 46 06.5
comp=Z,190nm,1.3s
RES Resolute Bay 53.83 342 S **S** **01 53 27.2 -2.8**
comp=Z,3.7nm,0.8s,baz=68,slow=11,SNR=1.2
RES LR LR 02 09 25.4
comp=Z,8µm,21.3s,baz=66,slow=37
RES Resolute Bay 53.83 342 IAmb IAmb 01 46 02.8
comp=Z,141nm,1.3s
LMN Caledonia Moun 53.83 302 P **P** **01 45 55.4 -1.0**
BATG Bathurst New B 53.97 304 IAmb IAmb 01 46 46.0
comp=Z,110nm,1.2s
PTH Pithoragarh 54.39 81 *e*P **P** **01 45 59.9 -0.9**
LGTI Lohaghat 54.47 81 *e*P **P** **01 45 59.6 -1.5**
PQI Presque Isle 55.44 304 IAMs_20 IAMs_20 02 08 22.7
comp=Z,12µm,20.0s
KNGR Kungurtug, Tuv 55.46 50*ce*P **P** **01 46 09.5 +1.3**
KNGR pmax pmax
comp=Z,246nm,1.6s
KNGR MLR MLR
comp=Z,9µm,13.0s
JHNI Jhansi 55.46 86 *e*P **P** **01 46 07.2 -1.2**
E63A Oxbow 55.80 304 P **P** **01 46 09.7 -0.8**
baz=62,SNR=5.6
E63A P **P** **01 46 09.7 -0.8**
baz=62,SNR=5.6
E63A S **S** **01 53 53.8 -3.5**
baz=62
E63A S **S** **01 53 53.8 -3.5**
baz=62
G65A Princeton 55.85 303 P **P** **01 46 10.3 -0.6**
baz=62
G65A P **P** **01 46 10.3 -0.6**
baz=62
G65A S **S** **01 53 55.5 -2.4**
baz=62
G65A S **S** **01 53 55.5 -2.4**
baz=62
D62A Allapoint, All 55.87 305 P **P** **01 46 10.4 -0.6**
baz=62
D62A P **P** **01 46 10.4 -0.6**
baz=62
D62A S **S** **01 53 56.3 -1.9**
baz=62
D62A S **S** **01 53 56.3 -1.9**
baz=62
BHPL Bhopal 55.95 89 *e*P **P** **01 46 08.5 -3.5**
EMMW East Machias 56.02 302 IAMs_20 IAMs_20 02 07 56.2
comp=Z,13µm,21.0s
F64A Sherman 56.02 304 P **P** **01 46 11.3 -0.9**
baz=62
F64A P **P** **01 46 11.3 -0.9**
baz=62
F64A S **S** **01 53 57.6 -2.6**
baz=62
F64A S **S** **01 53 57.6 -2.6**
baz=62
E62A Clayton Lake 56.38 305 P **P** **01 46 13.3 -1.4**
baz=61,SNR=8.6
E62A P **P** **01 46 13.3 -1.4**
baz=61,SNR=8.6
E62A S **S** **01 54 01.6 -3.3**
baz=61
E62A S **S** **01 54 01.6 -3.3**
baz=61
BRCI Bahraich 56.49 82 *e*P **P** 01 46 10.3 -5.5
F63A Nahmakanta, Br 56.56 304 P **P** **01 46 14.3 -1.7**
baz=61
F63A P **P** **01 46 14.3 -1.7**
baz=61
F63A S **S** **01 54 04.8 -2.5**
baz=61
F63A S **S** **01 54 04.8 -2.5**
baz=61
PKME Peaks-Kenny Pk 56.89 303 IAMs_20 IAMs_20 02 08 29.8
comp=Z,16µm,20.0s
PKME Peaks-Kenny Pk 56.89 303 P **P** **01 46 17.7 -0.6**
baz=61
PKME Peaks-Kenny Pk 56.89 303 P **P** **01 46 17.4 -0.9**
baz=61
PKME S **S** **01 54 08.0 -3.7**
baz=61
MOY Mondy 56.90 48 *e*P **P** **01 46 19.6 +1.1**
MOY pmax pmax
comp=Z,297nm,2.8s
F62A Pittston Farm, 56.99 304 P **P** **01 46 18.2 -0.9**
baz=61
F62A P **P** **01 46 18.2 -0.9**
baz=61
F62A S **S** **01 54 10.6 -2.5**
baz=61
F62A S **S** **01 54 10.6 -2.5**
baz=61
AKL Akola 57.18 91 *e*P **P** **01 46 17.9 -2.8**
TIXI Tiksi 57.35 20 LR LR 02 14 50.3
comp=Z,26µm,18.5s,baz=354,slow=40
TIXI Tiksi 57.35 20 P **P** **01 46 21.6 +0.4**
TIXI Tiksi 57.35 20*d i*P **P** **01 46 21.5 +0.3**
TIXI pmax pmax
comp=Z,303nm,1.8s
TIXI MLR MLR
comp=Z,24µm,16.0s
TIXI Tiksi 57.35 20 P **P** **01 46 24.0 +2.8**
WVL Waterville 57.46 303 IAMs_20 IAMs_20 02 10 12.4
comp=Z,13µm,19.0s
DANN Dangsing 57.63 80 *e*P **P** **01 46 24.1 -0.1**
comp=Z,283nm,0.8s
G62A West of Eustis 57.67 304 P **P** **01 46 23.0 -0.9**
baz=60
G62A P **P** **01 46 23.0 -0.9**
baz=60
G62A S **S** **01 54 21.2 -0.9**
baz=60
G62A S **S** **01 54 21.2 -0.9**
baz=60
ALBI Allahabad 57.96 84 *e*P **P** **01 46 22.9 -3.2**
GOA Goa 58.13 98 *e*P **P** **01 46 24.4 -3.0**
I63A Otisfield 58.29 303 P **P** **01 46 28.2 -0.1**
baz=59
I63A P **P** **01 46 28.2 -0.1**
baz=59
I63A S **S** **01 54 29.1 -1.0**
baz=59
I63A S **S** **01 54 29.1 -1.0**
baz=59
VLK Valmikinagar 58.30 81 *e*P **P** **01 46 26.8 -1.7**
H62A Milan 58.38 303 P **P** **01 46 28.3 -0.6**
baz=59
H62A P **P** **01 46 28.3 -0.6**
baz=59
H62A S **S** **01 54 30.9 -0.4**
baz=59
H62A S **S** **01 54 30.9 -0.4**
baz=59
IRK Irkutsk 58.39 46 *e*P **P** **01 46 28.8 0.0**
IRK *e*S **S** **01 54 24.4 -6.9**
IRK pmax pmax
comp=Z,467nm,2.4s
GKN Gorkha 58.47 80 *e*P **P** **01 46 29.0 -0.9**
comp=Z,732nm,1.1s
ZAK Zakamensk 58.79 48 *e*P **P** **01 46 32.9 +1.1**
ZAK pmax pmax
comp=Z,80nm,1.3s
VAR Varanasi 58.85 83 *e*P **P** **01 46 29.3 -3.1**
I62A Tamworth 58.85 303 P **P** **01 46 32.0 -0.1**
baz=59
I62A P **P** **01 46 32.0 -0.1**
baz=59
I62A S **S** **01 54 37.5 +0.1**
baz=59
I62A S **S** **01 54 37.5 +0.1**
baz=59
UNH University of 58.96 302 P **P** **01 46 31.9 -0.9**
baz=59
UNH S **S** **01 54 38.9 +0.1**
baz=59
LBNH Lisbon 59.03 303 IAMs_20 IAMs_20 02 11 03.3
comp=Z,17µm,20.0s
LBNH Lisbon 59.03 303 P **P** **01 46 33.1 -0.3**
baz=59
LBNH Lisbon 59.03 303 P **P** **01 46 33.0 -0.3**
baz=59
LBNH S **S** **01 54 37.6 -2.1**
baz=59
DMN Daman 59.03 80 *e*P **P** **01 46 33.4 -0.6**
comp=Z,459nm,0.8s
KKN Kakani 59.05 79 *e*P **P** **01 46 32.8 -1.3**
FFD Franklin Falls 59.26 302 IAMs_20 IAMs_20 02 09 31.8
comp=Z,13µm,22.0s
PKIN Phulchoki 59.26 80 *e*P **P** **01 46 34.9 -0.7**
comp=Z,227nm,0.9s
PKI Pulchoki 59.27 80 *e*P **P** **01 46 34.8 -0.9**
LSZ Lusaka 59.29 163 LR LR 02 15 38.4
comp=Z,8µm,18.0s,baz=358,slow=40
LSZ Lusaka 59.29 163 IAMs_20 IAMs_20 02 12 29.9
comp=Z,10µm,21.0s
GUN Gumba 59.42 79 *e*P **P** **01 46 36.4 -0.3**
comp=Z,287nm,0.8s
VT1 Waterbury 59.49 304 IAMs_20 IAMs_20 02 11 09.0
comp=Z,17µm,20.0s
HNH Hanover 59.53 303 IAMs_20 IAMs_20 02 12 03.0
comp=Z,16µm,18.0s
L64A Middleborough 59.55 301 P **P** **01 46 36.7 -0.2**
baz=58
L64A P **P** **01 46 36.7 -0.2**
baz=58
L64A S **S** **01 54 45.3 -1.2**
baz=58
L64A S **S** **01 54 45.3 -1.2**
baz=58
WES Weston 59.62 301 IAMs_20 IAMs_20 02 12 57.4
comp=Z,10µm,18.0s
HRV Adam Dziewonsk 59.70 301 IAMs_20 IAMs_20 02 13 00.3
comp=Z,12µm,18.0s
HRV Adam Dziewonsk 59.70 301 P **P** **01 46 37.5 -0.5**
baz=58
HRV Adam Dziewonsk 59.70 301 P **P** **01 46 37.9 -0.1**
baz=58
HRV S **S** **01 54 46.4 -2.1**
baz=58
HRV Adam Dziewonsk 59.70 301 P P 01 46 52.7 +15
JIRN Jiri 59.79 79 *e*P **P** **01 46 38.9 -0.4**
comp=Z,178nm,0.7s
MCVT Middlebury Col 59.83 304 P **P** **01 46 38.6 -0.3**
baz=58
MCVT S **S** **01 54 49.9 -0.3**
baz=58
J61A Chester 59.88 303 P **P** **01 46 39.2 -0.1**
baz=58
J61A P **P** **01 46 39.2 -0.1**
baz=58
J61A S **S** **01 54 50.6 -0.1**
baz=58
J61A S **S** **01 54 50.6 -0.1**
baz=58
BRYW Bryant College 60.00 301 IAMs_20 IAMs_20 02 08 58.6
comp=Z,13µm,22.0s
K62A Royalston 60.04 302 P **P** **01 46 39.6 -0.8**
baz=58
K62A P **P** **01 46 39.6 -0.8**
baz=58
K62A S **S** **01 54 52.1 -0.7**
baz=58
K62A S **S** **01 54 52.1 -0.7**
baz=58
BLSP Bilaspur 60.09 87 *e*P **P** **01 46 38.7 -2.3**
BOD Bodaibo 60.23 37 *e*P **P** **01 46 40.3 -1.1**
BOD pmax pmax
comp=Z,216nm,1.3s
VLDQ Val d'Or 60.28 310 P **P** **01 46 42.3 +0.4**
BMNY Brushton-Moira 60.29 305 P **P** **01 46 41.1 -0.9**
baz=58
BMNY S **S** **01 54 54.1 -1.8**
baz=58
QUA2 Belchertown 60.32 302 P **P** **01 46 42.8 +0.6**
QUA2 IAmb IAmb 01 47 33.2
comp=Z,313nm,2.0s
QUA2 IAMs_20 IAMs_20 02 13 19.0
comp=Z,12µm,18.0s
HYBB Hyderabad (bro 60.36 93 *e*P P 01 46 37.3 -5.7
HYBB IVmB_BB 01 46 44.1
comp=Z,1µm,4.6s
HYBB *e*PP **PP** **01 48 56.8 +0.9**
HYBB *e*S **S** **01 54 58.9 +1.3**
HYBB *e*ScS **ScS** **01 56 35.3 +1.5**
HYBB *e*SS **SS** **01 59 03.4 +8.3**
HYBB IVMs_BB IVMs_BB 02 14 50.1
comp=Z,2µm,21.1s
HYB Hyderabad 60.36 93 *e*P **P** **01 46 40.0 -2.9**
HYB eS S 01 55 10.0 +12
LONY Lake Ozonia 60.45 305 IAMs_20 IAMs_20 02 10 42.9
comp=Z,11µm,20.0s
LONY Lake Ozonia 60.45 305 P **P** **01 46 42.8 -0.4**
baz=58
LONY S **S** **01 54 57.3 -0.8**
baz=58
RAMN Ramite 60.50 79 *e*P **P** **01 46 43.2 -0.8**
comp=Z,518nm,0.8s
ACCN Adirondack Com 60.55 303 P **P** **01 46 43.0 -0.9**
baz=58
ACCN S **S** **01 54 59.1 -0.3**
baz=58
NCB Newcomb 60.58 304 P **P** **01 46 43.0 -1.1**
baz=58
NCB S **S** **01 54 59.7 0.0**
baz=58
M63A Gales Ferry 60.59 301 P **P** **01 46 43.7 -0.5**
baz=57
M63A P **P** **01 46 43.7 -0.5**
baz=57
M63A S **S** **01 54 59.7 -0.2**
baz=57
M63A S **S** **01 54 59.7 -0.2**
baz=57
BBSR BB Station 60.61 288 P **P** **01 46 43.5 -0.9**
BBSR BB Station 60.61 288 IAMs_20 IAMs_20 02 09 05.1
comp=Z,11µm,20.0s
BBSR BB Station 60.61 288 P **P** **01 46 43.9 -0.4**
baz=56
BBSR BB Station 60.61 288 P **P** **01 46 48.0 +3.6**
MSEY Mahe Island 60.72 130 P **P** **01 46 45.0 -0.3**
SHEL Horse Pasture 60.89 201 IAMs_20 IAMs_20 02 11 21.2
comp=Z,21µm,22.0s
TRY Troy 60.90 303 IAMs_20 IAMs_20 02 11 53.3
comp=Z,13µm,19.0s
J59A Piesco 61.02 304 P **P** **01 46 47.3 +0.2**
baz=57
J59A P **P** **01 46 47.3 +0.2**
baz=57
J59A S **S** **01 55 05.3 -0.2**
baz=57
J59A S **S** **01 55 05.3 -0.2**
baz=57
GOMU GeErMu 61.05 66 P **P** **01 46 47.8 -0.1**
GOMU pP pP 01 46 50.1 -1.9
GOMU sP sP 01 46 53.9 +0.4
GOMU S **S** **01 55 02.4 -4.3**
GOMU ScS **ScS** **01 56 39.3 0.0**
GOMU pmax pmax
comp=Z,11nm,0.5s
GOMU LR LR
comp=N,9µm,16.4s
GOMU LR LR
comp=E,12µm,16.0s
GOMU LR LR
comp=Z,5µm,16.5s
GOMU GeErMu 61.05 66 P **P** **01 46 47.7 -0.1**
GOMU pP pP 01 46 50.1 -1.9
GOMU sP sP 01 46 53.9 +0.4
GOMU S **S** **01 55 02.4 -4.3**
GOMU ScS **ScS** **01 56 39.2 0.0**
GOMU LR LR
comp=Z,9µm,16.4s
GOMU LR LR
comp=Z,12µm,16.0s
GOMU LR LR
comp=Z,5µm,16.5s
TAPN Taplejung 61.07 78 *e*P **P** **01 46 47.3 -0.7**
ODAN Odare 61.12 79 *e*P **P** **01 46 46.6 -1.7**
comp=Z,102nm,1.4s
YLE Yale 61.20 301 IAMs_20 IAMs_20 02 09 44.2
comp=Z,12µm,22.0s
HCNY Howe Caverns 61.37 303 P **P** **01 46 49.8 +0.4**
baz=57
HCNY S **S** **01 55 09.5 -0.4**
baz=57
WCNY West Carthage 61.44 305 P **P** **01 46 49.9 0.0**
baz=57,SNR=8.3

WCNY S **S** **01 55 10.2 -0.5**
baz=57
JHSG JHARSUGUGA 61.52 86 *e*P **P** **01 46 48.9 -1.8**
J58A Remsen 61.55 304 IAmb IAmb 01 47 37.7
comp=Z,192nm,1.9s
J58A Remsen 61.55 304 P **P** **01 46 49.6 -1.1**
baz=57,SNR=5.1
J58A P **P** **01 46 49.6 -1.1**
baz=57,SNR=5.1
J58A S **S** **01 55 11.6 -0.7**
baz=57
J58A S **S** **01 55 11.6 -0.7**
baz=57
TSUM Tsumeb 61.70 175 LR LR 02 15 17.9
comp=Z,12µm,18.8s,baz=354,slow=38
TSUM Tsumeb 61.70 175 P **P** **01 46 51.4 -0.5**
TSUM Tsumeb 61.70 175 IAMs_20 IAMs_20 02 14 57.1
comp=Z,12µm,20.0s
TSUM Tsumeb 61.70 175⇓*i*P **P** **01 46 51.9 0.0**
TSUM IAmb IAmb 01 46 53.3
comp=Z,793nm,2.9s
TSUM Tsumeb 61.70 175 P **P** **01 46 52.8 +0.9**
NPNY Mohonk Preserv 61.73 302 P **P** **01 46 50.9 -1.0**
baz=57
GTK Tadong 61.73 78⇓*i*P **P** **01 46 51.4 -0.8**
N62A Caumsett State 61.75 301 P **P** **01 46 51.2 -0.8**
baz=56
N62A P **P** **01 46 51.2 -0.8**
baz=56
N62A S **S** **01 55 12.6 -2.1**
baz=56
N62A S **S** **01 55 12.6 -2.1**
baz=56
BRNY Black Rk. Fore 61.83 302 P **P** **01 46 51.7 -0.9**
baz=56
BRNY S **S** **01 55 15.0 -0.7**
baz=56
BOK Bokaro 61.84 83⇓*i*P **P** **01 46 51.7 -1.2**
BOK IAmb IAmb 01 46 58.5
comp=Z,317nm,1.3s
SONM Songino Array 61.88 50 P **P** **01 46 53.7 +0.8**
comp=Z,141nm,0.9s,baz=292,slow=7.5,SNR=232
SONM S **S** **01 55 17.3 +0.9**
comp=Z,0.7nm,0.4s,baz=284,slow=30,SNR=2.5
SONM LR LR 02 15 43.8
comp=Z,48µm,19.6s,baz=308,slow=38
comp=Z,141nm,0.9s
A36M Sachs Harbour 61.95 346 P **P** **01 46 53.3 +0.4**
A36M IAMs_20 IAMs_20 02 14 06.2
comp=Z,9µm,21.0s
A36M Sachs Harbour 61.95 346 P **P** **01 46 53.6 +0.7**
baz=34,SNR=15
A36M S **S** **01 55 17.5 +1.2**
baz=34
SLGI Shiliguri 61.96 79 *e*P **P** **01 46 51.4 -2.2**
J57A Williamstown 61.96 304 P **P** **01 46 52.1 -1.3**
baz=56,SNR=6.2
J57A P **P** **01 46 52.1 -1.3**
baz=56,SNR=6.2
J57A S **S** **01 55 16.8 -0.5**
baz=56
J57A S **S** **01 55 16.8 -0.5**
baz=56
PAL Palisades 61.99 301 IAMs_20 IAMs_20 02 14 19.9
comp=Z,12µm,19.0s
PAL Palisades 61.99 301 P **P** **01 46 52.9 -0.7**
baz=56
PAL S **S** **01 55 16.8 -0.9**
baz=56
PAL Palisades 61.99 301 P **P** **01 46 53.3 -0.3**
baz=56
PAL S **S** **01 55 14.2 -3.4**
baz=56
L59A Walton 62.05 303 P **P** **01 46 53.4 -0.7**
baz=56
L59A P **P** **01 46 53.4 -0.7**
baz=56
L59A S **S** **01 55 18.5 0.0**
baz=56
L59A S **S** **01 55 18.5 0.0**
baz=56
FOR Fordham 62.05 301 P **P** **01 46 53.7 -0.3**
baz=56
FOR S **S** **01 55 17.5 -1.0**
baz=56
LSA Lhasa 62.17 74 IAmb IAmb 01 47 03.2
comp=Z,86nm,0.9s
LSA IAMs_20 IAMs_20 02 18 52.3
comp=Z,15µm,21.0s
LSA Lhasa 62.17 74 P **P** **01 46 55.9 +0.3**
LSA S **S** **01 55 20.9 -0.4**
LSA LR LR
comp=Z,10µm,21.0s
LSA LR LR
comp=Z,9µm,24.2s
LSA LR LR
comp=Z,10µm,24.6s
LSA Lhasa 62.17 74 P **P** **01 46 55.8 +0.2**
ULN Ulaanbaatar 62.23 49 P **P** **01 46 55.2 -0.2**
ULN Ulaanbaatar 62.23 49*d*/*i*P **P** **01 46 56.0 +0.7**
ULN pmax pmax
comp=Z,165nm,1.3s
ULN MLR MLR
comp=Z,32µm,18.0s
ULN Ulaanbaatar 62.23 49 P **P** **01 46 56.5 +1.1**
ULN P **P** **01 46 56.5 +1.1**
ULN P **P** **01 46 56.5 +1.1**
ULN Ulaanbaatar 62.23 49 P **P** **01 46 56.2 +0.9**
PECO Prince Edward 62.28 305 IAmb IAmb 01 47 42.2
comp=Z,204nm,1.9s
DELO Deloro Mine 62.33 306 IAmb IAmb 01 47 42.6
comp=Z,214nm,1.9s
ODNJ Ogdensburg 62.38 302 P **P** **01 46 56.0 -0.3**
baz=56
ODNJ S **S** **01 55 22.0 -0.7**
baz=56
VJD Vijayawada 62.48 93 *e*P **P** **01 46 54.8 -2.4**
J56A Wolcott 62.56 305 P **P** **01 46 56.6 -0.7**
baz=56,SNR=6.5
J56A P **P** **01 46 56.6 -0.7**
baz=56,SNR=6.5
J56A S **S** **01 55 24.1 -0.7**
baz=56
J56A S **S** **01 55 24.1 -0.7**
baz=56
GTA Gaotai 62.56 61⇓P **P** **01 46 58.1 +0.4**
GTA pP sP 01 47 03.4 0.0
GTA sP pP 01 47 07.0 +5.2
GTA PP **PP** **01 49 16.5 +1.5**
GTA S **S** **01 55 27.5 +2.2**
GTA Gaotai 62.56 61 SS SS 01 59 27.1 -1.8
GTA pmax pmax
comp=Z,55nm,0.9s
GTA pmax pmax
comp=Z,4µm,6.9s
GTA LR LR
comp=N,24µm,19.3s
GTA LR LR
comp=E,21µm,19.6s
GTA LR LR
comp=Z,35µm,20.0s
BRNJ Basking Ridge 62.58 301 P **P** **01 46 57.6 0.0**
baz=56
BRNJ S **S** **01 55 26.5 +1.4**
baz=56
BINY Binghamton 62.62 303 IAMs_20 IAMs_20 02 12 44.6
comp=Z,12µm,20.0s
BINY Binghamton 62.62 303 P **P** **01 46 57.4 -0.5**
baz=56
BINY Binghamton 62.62 303 P **P** **01 46 57.7 -0.2**
baz=56
BINY S **S** **01 55 23.7 -2.1**
baz=56
K57A Scipio Center 62.65 304 IAmb IAmb 01 47 49.2
comp=Z,100nm,1.2s
K57A Scipio Center 62.65 304 P **P** **01 46 58.3 +0.2**
baz=56
K57A S **S** **01 55 25.9 -0.3**
baz=56
RAGD RAYAGADA 62.83 88 *e*P **P** **01 46 58.2 -1.4**
PANJ Princeton 62.84 301 P **P** **01 46 58.2 -1.2**
baz=56
PANJ S **S** **01 55 29.7 +1.2**
baz=56
KSPA Keystone Colle 62.85 303 P **P** **01 46 59.6 +0.3**
baz=56
KSPA S **S** **01 55 30.0 +1.4**
baz=56
SADO Sadowa 63.09 307 LR LR 02 13 47.8
comp=Z,11µm,18.4s,baz=44,slow=36
SADO Sadowa 63.09 307 IAmb IAmb 01 47 05.9
comp=Z,125nm,1.4s
LUPA Lehigh Univers 63.14 301 IAmb IAmb 01 47 33.4
comp=Z,133nm,1.5s
J55A Hilton 63.15 305 P **P** **01 47 01.4 +0.2**
baz=56,SNR=7.2
J55A P **P** **01 47 01.4 +0.2**
baz=56,SNR=7.2
J55A S **S** **01 55 31.1 -1.1**
baz=56
J55A S **S** **01 55 31.1 -1.1**
baz=56
PCHI Peechi 63.24 101 *e*P **P** **01 46 57.6 -4.7**
PCHI *e*S **S** **01 55 29.1 -5.0**
TUPA Temple Univers 63.26 301 P **P** **01 47 01.0 -1.1**
baz=56
P61A Hammonton 63.29 300 P **P** **01 47 02.5 +0.2**
baz=55
P61A P **P** **01 47 02.5 +0.2**
baz=55
P61A S **S** **01 55 34.6 +0.5**
baz=55
P61A S **S** **01 55 34.6 +0.5**
baz=55
PSUB Penn St. - Bra 63.57 301 P **P** **01 47 03.5 -0.6**
baz=55
L56A Greenwood 63.63 304 P **P** **01 47 04.2 -0.4**
baz=55
L56A P **P** **01 47 04.2 -0.4**
baz=55
L56A S **S** **01 55 39.1 +0.7**
baz=55
L56A S **S** **01 55 39.1 +0.7**
baz=55
J54A Appleton 63.64 305 P **P** **01 47 04.1 -0.4**
baz=55
J54A P **P** **01 47 04.1 -0.4**
baz=55
J54A S **S** **01 55 38.4 +0.1**
baz=55
J54A S **S** **01 55 38.4 +0.1**
baz=55
GEDE Greenville 63.75 301 P **P** **01 47 05.2 -0.1**
baz=55
GEDE S **S** **01 55 39.4 -0.4**
baz=55
M57A Sunshine Farm, 63.82 303 IAmb IAmb 01 47 35.0
comp=Z,184nm,1.4s
M57A Sunshine Farm, 63.82 303 P **P** **01 47 05.7 -0.1**
baz=55,SNR=16
M57A P **P** **01 47 05.7 -0.1**
baz=55,SNR=16
M57A S **S** **01 55 41.5 +0.9**
baz=55
M57A S **S** **01 55 41.5 +0.9**
baz=55
N58A Sunbury 63.84 302 IAmb IAmb 01 47 37.9
comp=Z,71nm,1.1s
N58A Sunbury 63.84 302 P **P** **01 47 05.8 -0.2**
baz=55
N58A P **P** **01 47 05.8 -0.2**
baz=55
N58A S **S** **01 55 42.4 +1.4**
baz=55
N58A S **S** **01 55 42.4 +1.4**
baz=55
YAK Yakutsk 63.86 28 LR LR 02 18 33.8
comp=Z,17µm,18.9s,baz=316,slow=40
YAK Yakutsk 63.86 28 P **P** **01 47 05.0 -0.6**
YAK Yakutsk 63.86 28 *e*P **P** **01 47 04.8 -0.9**
YAK *e*S **S** **01 55 38.8 -1.7**
YAK pmax pmax
comp=Z,269nm,0.8s
YAK pmax pmax
comp=N,149nm,1.1s
YAK pmax pmax
comp=E,143nm,1.0s
YAK pmax pmax
comp=Z,374nm,3.0s
YAK pmax pmax
comp=N,302nm,2.9s
YAK smax smax
comp=E,1µm,5.7s
YAK smax smax
comp=N,1µm,5.4s
YAK MLR MLR
comp=Z,21µm,20.0s
YAK MLR MLR
comp=N,9µm,14.0s
YAK MLR MLR
comp=E,13µm,20.0s
YAK Yakutsk 63.86 28 P **P** **01 47 06.1 +0.4**
BWNR Bhubaneshwar 63.91 86⇓*i*P **P** **01 47 05.7 -0.9**
C36M Paulatuk 63.94 344 IAMs_20 IAMs_20 02 17 05.6
comp=Z,14µm,19.0s
C36M Paulatuk 63.94 344 P **P** **01 47 06.0 -0.1**
baz=34,SNR=12
C36M S **S** **01 55 41.3 0.0**
baz=34
MIDE Milford 64.08 300 P **P** **01 47 07.3 -0.3**
baz=55
MIDE S **S** **01 55 45.7 +1.8**
baz=55
BLWY Bulawayo 64.10 164⇓*i*P **P** **01 47 07.9 +0.1**
BLWY IAmb IAmb 01 47 16.4
comp=Z,173nm,1.1s
BLWY Bulawayo 64.10 164 *i* P **P** **01 47 08.6 +0.7**
BLWY Bulawayo 64.10 164 *i* P **P** **01 47 08.6 +0.7**
WVNY West Valley, N 64.11 305 IAmb IAmb 01 47 39.8
comp=Z,63nm,0.9s
WVNY West Valley, N 64.11 305 P **P** **01 47 07.5 -0.2**
baz=55,SNR=15
WVNY S **S** **01 55 45.0 +0.7**
baz=55
MATP Matopo 64.36 164 LR LR 02 16 50.7
comp=Z,8µm,21.0s,baz=340,slow=38
MATP Matopo 64.36 164⇓*i*P **P** **01 47 09.6 +0.1**
MATP IAmb IAmb 01 47 17.7
comp=Z,267nm,1.4s
MATP Matopo 64.36 164 *i* P **P** **01 47 10.1 +0.6**
MATP Matopo 64.36 164 *i* P **P** **01 47 10.1 +0.6**
R61A Willards 64.41 299 P **P** **01 47 09.8 +0.1**
baz=55
R61A P **P** **01 47 09.8 +0.1**
baz=55
R61A S **S** **01 55 49.6 +1.6**
baz=55
R61A S **S** **01 55 49.6 +1.6**
baz=55
GUWA GUWAHATI 64.62 77 *e*P **P** **01 47 09.7 -1.6**
SSPA Standing Stone 64.69 303 P **P** **01 47 10.6 -1.0**
SSPA IAmb IAmb 01 47 43.7
comp=Z,82nm,1.1s
SSPA Standing Stone 64.69 303 IAMs_20 IAMs_20 02 15 01.6
comp=Z,12µm,19.0s
SSPA Standing Stone 64.69 303 P **P** **01 47 11.2 -0.3**
baz=54,SNR=18
SSPA Standing Stone 64.69 303 P **P** **01 47 11.4 -0.1**
baz=54
SSPA S **S** **01 55 49.6 -1.8**
baz=54
SSPA Standing Stone 64.69 303 P **P** **01 47 13.4 +1.9**
SDMD Soldier's Deli 64.74 301 P **P** **01 47 11.4 -0.5**
baz=54
M55A Ridgway 64.75 304 IAmb IAmb 01 47 44.0
comp=Z,122nm,1.4s
M55A Ridgway 64.75 304 P **P** **01 47 11.7 -0.2**
baz=54,SNR=11
M55A P **P** **01 47 11.7 -0.2**
baz=54,SNR=11
M55A S **S** **01 55 53.0 +0.8**
baz=54
M55A S **S** **01 55 53.0 +0.8**
baz=54
S61A Accomac 65.00 299 P **P** **01 47 13.5 -0.1**
baz=54
S61A P **P** **01 47 13.5 -0.1**
baz=54
S61A S **S** **01 55 57.9 +2.6**
baz=54
S61A S **S** **01 55 57.9 +2.6**
baz=54
ERPA Erie 65.11 305 IAmb IAmb 01 47 46.1
comp=Z,218nm,1.6s
ERPA IAMs_20 IAMs_20 02 14 29.8
comp=Z,11µm,21.0s
ERPA Erie 65.11 305 P **P** **01 47 14.3 0.0**
baz=54,SNR=8.4
ERPA Erie 65.11 305 P **P** **01 47 14.4 +0.1**
baz=54,SNR=8.4
ERPA S **S** **01 55 53.5 -3.1**
baz=54
E46A Sault Ste Mari 65.13 311 IAmb IAmb 01 47 48.9
comp=Z,140nm,1.3s
E46A Sault Ste Mari 65.13 311 P **P** **01 47 13.8 -0.5**
baz=54,SNR=7.2
E46A S **S** **01 55 57.2 +0.6**
baz=54
SHL Shillong 65.13 77 P **P** **01 47 14.9 0.0**
SNR=78
SHL Shillong 65.13 77 *e*P **P** **01 47 13.1 -1.7**
SHL IAmb IAmb 01 47 19.5
comp=Z,129nm,1.0s
TEZP TEZPUR 65.16 76 *e*P **P** **01 47 13.4 -1.4**
TEZP IAmb IAmb 01 47 20.8
comp=Z,241nm,1.0s
ZIRO ZIRO 65.36 75 *e*P **P** **01 47 15.2 -1.1**
ZIRO IAmb IAmb 01 47 19.1
comp=Z,59nm,0.7s
P57A Homestead Farm 65.44 302 IAmb IAmb 01 47 48.6
comp=Z,84nm,1.2s
P57A Homestead Farm 65.44 302 P **P** **01 47 16.4 0.0**
baz=54,SNR=6.5
P57A P **P** **01 47 16.4 0.0**
baz=54,SNR=6.5
P57A S **S** **01 56 02.4 +1.7**
baz=54
P57A S **S** **01 56 02.4 +1.7**
baz=54
ALLY Alegheny Colle 65.48 305 P **P** **01 47 16.4 -0.3**
ALLY IAmb IAmb 01 47 48.5
comp=Z,140nm,1.4s
ALLY Alegheny Colle 65.48 305 P **P** **01 47 16.2 -0.4**
baz=54,SNR=5.1
ALLY S **S** **01 56 01.4 +0.2**
baz=54
ITAN ITANAGAR 65.50 75 *e*P **P** **01 47 17.1 +0.1**
RCBR Riachuelo 65.65 236 LR LR 02 12 39.7
comp=Z,13µm,21.0s,baz=199,slow=33
RCBR Riachuelo 65.65 236 IAMs_20 IAMs_20 02 12 28.8
comp=Z,10µm,20.0s
RCBR Riachuelo 65.65 236 P **P** **01 47 20.8 +2.7**
RCBR Riachuelo 65.65 236 *e*P **P** **01 47 18.5 +0.5**
AGT Agartala 65.69 79 *ex* x 01 47 14.4
I49A Point Hope 65.72 308 P **P** **01 47 17.5 -0.7**
baz=53
I49A P **P** **01 47 17.5 -0.7**
baz=53
I49A S **S** **01 56 03.2 -0.9**
baz=53
I49A S **S** **01 56 03.2 -0.9**
baz=53
CBN Corbin Frederi 65.78 300 IAMs_20 IAMs_20 02 15 00.7
comp=Z,14µm,20.0s
CBN Corbin Frederi 65.78 300 P **P** **01 47 18.3 -0.4**
baz=54
CBN Corbin Frederi 65.78 300 P **P** **01 47 18.1 -0.5**
baz=54
CBN S **S** **01 56 03.8 -1.1**
baz=54
M53A WI Miller and 65.93 305 IAmb IAmb 01 47 51.3
comp=Z,132nm,1.4s
M53A IAMs_20 IAMs_20 02 15 04.3
comp=Z,10µm,20.0s
M53A WI Miller and 65.93 305 P **P** **01 47 19.7 +0.1**
baz=54,SNR=9.8
M53A S **S** **01 56 04.1 -2.6**
baz=54
T60A Surry 66.00 299 P **P** **01 47 20.1 0.0**
baz=54
T60A P **P** **01 47 20.1 0.0**
baz=54
T60A S **S** **01 56 06.6 -0.9**
baz=54
T60A S **S** **01 56 06.6 -0.9**
baz=54
A21K Barrow 66.08 356 IAMs_20 IAMs_20 02 18 55.0
comp=Z,9µm,18.0s
A21K Barrow 66.08 356 P **P** **01 47 21.7 +1.7**
baz=8.2
A21K S **S** **01 56 09.1 +1.7**
baz=8.2
JORH JORHAT 66.12 75 *ex* x 01 47 16.9
GLMI Grayling 66.22 310 IAmb IAmb 01 47 28.2
comp=Z,86nm,0.8s
GLMI IAMs_20 IAMs_20 02 13 56.8
comp=Z,11µm,20.0s
GLMI Grayling 66.22 310 P **P** **01 47 21.4 0.0**
baz=53
GLMI Grayling 66.22 310 P **P** **01 47 21.2 -0.2**
baz=53
GLMI S **S** **01 56 07.0 -3.1**
baz=53
R58B Mineral 66.25 300 IAmb IAmb 01 47 55.8
comp=Z,62nm,1.1s
R58B Mineral 66.25 300 P **P** **01 47 21.3 -0.3**
baz=54,SNR=13
R58B P **P** **01 47 21.3 -0.3**
baz=54,SNR=13
R58B S **S** **01 56 10.1 -0.4**
baz=54
R58B S **S** **01 56 10.1 -0.4**
baz=54
M52A Chesterland 66.28 305 IAmb IAmb 01 47 28.8
comp=Z,69nm,0.7s
M52A Chesterland 66.28 305 P **P** **01 47 21.7 -0.1**
baz=53,SNR=18
M52A P **P** **01 47 21.7 -0.1**
baz=53,SNR=18
M52A S **S** **01 56 09.4 -1.5**
baz=53
M52A S **S** **01 56 09.4 -1.5**
baz=53
K50A Casco 66.30 307 P **P** **01 47 21.8 -0.1**
baz=53
K50A P **P** **01 47 21.8 -0.1**
baz=53
K50A S **S** **01 56 11.9 +0.8**
baz=53
K50A S **S** **01 56 11.9 +0.8**
baz=53
N53A Lisbon 66.40 304 IAmb IAmb 01 47 54.6
comp=Z,172nm,1.4s
N53A Lisbon 66.40 304 P **P** **01 47 22.6 0.0**
baz=53,SNR=17
N53A P **P** **01 47 22.6 0.0**
baz=53,SNR=17
N53A S **S** **01 56 11.9 -0.6**
baz=53
N53A S **S** **01 56 11.9 -0.6**
baz=53
MUSN Musina, Limpop 66.44 163⇓*i*P **P** **01 47 23.8 +0.9**
MUSN IAmb IAmb 01 47 30.6
comp=Z,90nm,0.8s
MUSN Musina, Limpop 66.44 163 *i* P **P** **01 47 22.9 0.0**
MUSN Musina, Limpop 66.44 163 *i* P **P** **01 47 22.9 0.0**
MCWV Mont Chateau 66.48 303 IAmb IAmb 01 47 55.2
comp=Z,88nm,1.1s
MCWV IAMs_20 IAMs_20 02 15 13.9
comp=Z,11µm,19.0s
MCWV Mont Chateau 66.48 303 P **P** **01 47 23.4 +0.3**
baz=53,SNR=7.6
MCWV Mont Chateau 66.48 303 P **P** **01 47 23.6 +0.5**
baz=53,SNR=7.6
MCWV S **S** **01 56 12.7 -0.6**
baz=53
O54A Avella 66.49 304 P **P** **01 47 22.7 -0.5**
baz=53
O54A P **P** **01 47 22.7 -0.5**
baz=53
O54A S **S** **01 56 14.7 +1.1**
baz=53
O54A S **S** **01 56 14.7 +1.1**
baz=53
INK Inuvik 66.56 347 LR LR 02 17 49.6
comp=Z,6µm,22.0s,baz=24,slow=37
INK Inuvik 66.56 347 P **P** **01 47 22.2 -0.8**
INK Inuvik 66.56 347 P **P** **01 47 22.3 -0.8**
INK pmax pmax
comp=Z,299nm,1.4s
INK Inuvik 66.56 347 P **P** **01 47 23.1 0.0**
baz=26,SNR=56
INK S **S** **01 56 11.6 -1.8**

baz=26
MOKO MOKOCHONG 66.56 75 *e*P **P** **01 47 23.2 -0.8**
MOKO IAmb IAmb 01 47 29.9
comp=Z,139nm,0.5s
C26K Camden Bay 66.58 352 P **P** **01 47 24.4 +1.2**
baz=17
C26K S **S** **01 56 14.7 +1.0**
baz=17
E43A Lone Tree Farm 66.61 312 P **P** **01 47 23.9 +0.1**
baz=52
E43A S **S** **01 56 13.3 -1.5**
baz=52
T59A Double "B" Far 66.63 299 P **P** **01 47 23.8 -0.3**
baz=53
T59A P **P** **01 47 23.8 -0.3**
baz=53
T59A S **S** **01 56 14.7 -0.5**
baz=53
T59A S **S** **01 56 14.7 -0.5**
baz=53
KOHI KOHIMA 66.64 76 *e*P **P** **01 47 23.4 -1.1**
KOHI IAmb IAmb 01 47 30.5
comp=Z,102nm,0.9s
G45A Suttons Bay 66.68 310 IAmb IAmb 01 47 30.8
comp=Z,90nm,0.8s
G45A Suttons Bay 66.68 310 P **P** **01 47 23.8 -0.5**
baz=52
G45A P **P** **01 47 23.8 -0.5**
baz=52
G45A S **S** **01 56 16.1 +0.4**
baz=52
G45A S **S** **01 56 16.1 +0.4**
baz=52
V61A Roper 66.70 298 P **P** **01 47 24.2 -0.3**
baz=53
V61A P **P** **01 47 24.2 -0.3**
baz=53
V61A S **S** **01 56 18.1 +2.1**
baz=53
V61A S **S** **01 56 18.1 +2.1**
baz=53
C27K Jago River 66.73 351 P **P** **01 47 25.5 +1.3**
baz=18,SNR=58
C27K S **S** **01 56 15.6 +0.1**
baz=18
O53A New Philadelph 66.97 304 IAmb IAmb 01 47 58.3
comp=Z,111nm,1.1s
O53A IAMs_20 IAMs_20 02 15 30.8
comp=Z,14μm,20.0s
O53A New Philadelph 66.97 304 P **P** **01 47 26.4 +0.2**
baz=53,SNR=18
O53A S **S** **01 56 16.6 -2.7**
baz=53
D41A Chassel 67.04 313 IAmb IAmb 01 47 33.3
comp=Z,124nm,1.0s
D41A Chassel 67.04 313 P **P** **01 47 26.4 -0.2**
baz=52,SNR=13
D41A S **S** **01 56 20.2 +0.3**
baz=52
S57A Dark Hollow, R 67.05 301 P **P** **01 47 26.4 -0.4**
baz=53
S57A P **P** **01 47 26.4 -0.4**
baz=53
S57A S **S** **01 56 20.2 -0.1**
baz=53
S57A S **S** **01 56 20.2 -0.1**
baz=53
IMP Imphal 67.06 77⇓*i*P **P** **01 47 25.6 -1.5**
LZH Lanzhou 67.09 62 ⇓P **P** **01 47 28.3 +1.0**
LZH pP sP 01 47 33.6 +0.6
LZH sP pP 01 47 36.5 +5.1
LZH PP **PP** **01 49 51.9 -2.8**
LZH S **S** **01 56 19.8 -1.4**
LZH Lanzhou 67.09 62 SS SS 02 00 34.3 -5.2
LZH pmax pmax
comp=Z,62nm,1.7s
LZH pmax pmax
comp=Z,4μm,7.4s
LZH LR LR
comp=N,36μm,16.5s
LZH LR LR
comp=E,26μm,16.8s
LZH LR LR
comp=Z,42μm,18.4s
LZH Lanzhou 67.09 62 ⇓P **P** **01 47 28.2 +1.0**
LZH pP sP 01 47 33.6 +0.6
LZH sP pP 01 47 36.5 +5.1
LZH PP **PP** **01 49 51.9 -2.8**
LZH S **S** **01 56 19.7 -1.4**
LZH pmax pmax
comp=Z,62nm,1.7s
LZH pmax pmax
comp=Z,4μm,7.4s
C24K Franklin Bluff 67.13 353 P **P** **01 47 27.9 +1.2**
baz=14
C24K S **S** **01 56 22.3 +2.0**
baz=14
U59A Littleton 67.15 299 IAmb IAmb 01 47 32.8
comp=Z,78nm,1.1s
U59A Littleton 67.15 299 P **P** **01 47 27.4 0.0**
baz=53,SNR=12
U59A P **P** **01 47 27.4 0.0**
baz=53,SNR=12
U59A S **S** **01 56 23.0 +1.5**
baz=53
U59A S **S** **01 56 23.0 +1.5**
baz=53
YKA Yellowknife Ar 67.15 337 P **P** **01 47 27.3 +0.3**
comp=Z,140nm,0.9s,baz=43,slow=6.4,SNR=122
YKA S **S** **01 56 21.1 +0.4**
comp=Z,1.2nm,0.8s,baz=41,slow=11,SNR=2.4
YKA PKPPKP P'P'df 02 15 53.1 -8.1
comp=Z,4.3nm,1.0s,baz=207,slow=2.6,SNR=6.6
YKA LR LR 02 17 03.9
comp=Z,8μm,20.1s,baz=43,slow=36
comp=Z,140nm,0.9s
C23K Itkillik River 67.17 354 P **P** **01 47 28.6 +1.5**
baz=13,SNR=34
C23K S **S** **01 56 23.7 +2.9**
baz=13
AAM Ann Arbor 67.19 307 P **P** **01 47 27.2 -0.4**
baz=52
AAM Ann Arbor 67.19 307 P **P** **01 47 27.2 -0.4**
baz=52
AAM S **S** **01 56 17.9 -4.0**
baz=52
N51A Ashland 67.27 305 IAmb IAmb 01 47 32.2
comp=Z,109nm,1.1s
N51A Ashland 67.27 305 P **P** **01 47 27.7 -0.4**
baz=53,SNR=17
N51A P **P** **01 47 27.7 -0.4**
baz=53,SNR=17
N51A S **S** **01 56 22.0 -0.9**
baz=53
N51A S **S** **01 56 22.0 -0.9**
baz=53
ANWB Willy Bob 67.30 273 IAMs_20 IAMs_20 02 10 35.7
comp=Z,12μm,22.0s
ANWB Willy Bob 67.30 273 *e* **P** **01 47 27.7 -0.9**
D25K Kavik River 67.30 352 P **P** **01 47 29.0 +1.1**
baz=16
D25K S **S** **01 56 22.8 +0.2**
baz=16
J47A Sunmer 67.30 308 IAmb IAmb 01 47 34.9
comp=Z,84nm,0.9s
J47A Sunmer 67.30 308 P **P** **01 47 28.2 -0.1**
baz=52,SNR=13
J47A P **P** **01 47 28.2 -0.1**
baz=52,SNR=13
J47A S **S** **01 56 23.0 -0.2**
baz=52
J47A S **S** **01 56 23.0 -0.2**
baz=52
M50A Fremont 67.38 306 P **P** **01 47 28.5 -0.3**
baz=52
M50A P **P** **01 47 28.5 -0.3**
baz=52
M50A S **S** **01 56 22.7 -1.4**
baz=52
M50A S **S** **01 56 22.7 -1.4**
baz=52
O52A Adamsville 67.43 304 IAmb IAmb 01 48 08.0
comp=Z,75nm,0.9s
O52A Adamsville 67.43 304 P **P** **01 47 28.8 -0.3**
baz=53,SNR=19
O52A P **P** **01 47 28.8 -0.3**
baz=53,SNR=19
O52A S **S** **01 56 23.7 -1.1**
baz=53
O52A S **S** **01 56 23.7 -1.1**
baz=53
R55A Marlinton 67.47 302 IAmb IAmb 01 48 04.6
comp=Z,236nm,1.6s
R55A Marlinton 67.47 302 P **P** **01 47 29.8 +0.2**
baz=53
R55A P **P** **01 47 29.8 +0.2**
baz=53
R55A S **S** **01 56 26.9 +1.3**
baz=53
R55A S **S** **01 56 26.9 +1.3**
baz=53
Q54A Coxs Mills 67.50 303 P **P** **01 47 28.6 -1.0**
baz=53
Q54A P **P** **01 47 28.6 -1.0**
baz=53
Q54A S **S** **01 56 26.2 +0.5**
baz=53
Q54A S **S** **01 56 26.2 +0.5**
baz=53
P53A Whipple 67.53 303 P **P** **01 47 30.3 +0.5**
baz=52,SNR=18
P53A P **P** **01 47 30.3 +0.5**
baz=52,SNR=18
P53A S **S** **01 56 25.5 -0.6**
baz=52
P53A S **S** **01 56 25.5 -0.6**
baz=52
LEPH Lephalale, Lim 67.56 166⇓*i*P **P** **01 47 30.3 +0.2**
LEPH IAmb IAmb 01 47 38.9
comp=Z,54nm,1.0s
F42A Maple Grove Fa 67.61 312 P **P** **01 47 29.8 -0.4**
baz=51
F42A S **S** **01 56 26.2 -0.7**
baz=51
I45A Fountain 67.62 310 P **P** **01 47 30.0 -0.3**
baz=52
I45A P **P** **01 47 30.0 -0.3**
baz=52
I45A S **S** **01 56 26.5 -0.5**
baz=52
I45A S **S** **01 56 26.5 -0.5**
baz=52
GDSD La Dsirade Is 67.63 272 IAMs_20 IAMs_20 02 11 47.5
comp=Z,9μm,21.0s
ANBD Bethesda, Anti 67.68 273 *e* P 01 47 25.4 -5.6
D24K Happy Valley 67.69 353 P **P** **01 47 31.6 +1.3**
baz=14
D24K S **S** **01 56 29.3 +2.2**
baz=14
T57A Hurt 67.70 300 IAmb IAmb 01 48 06.1
comp=Z,156nm,1.6s
T57A Hurt 67.70 300 P **P** **01 47 30.9 0.0**
baz=53,SNR=5.0
T57A P **P** **01 47 30.9 0.0**
baz=53,SNR=5.0
T57A S **S** **01 56 28.6 +0.4**
baz=53
T57A S **S** **01 56 28.6 +0.4**
baz=53
BILL Bilibino 67.76 11 P **P** **01 47 31.1 +0.3**
BILL IAMs_20 IAMs_20 02 17 08.7
comp=Z,10μm,20.0s
BILL Bilibino 67.76 11*c i*P **P** **01 47 31.4 +0.6**
BILL *e* 01 47 34.7
BILL 01 47 57.0
BILL *i* 01 50 02.7
BILL *i*S **S** **01 56 27.9 0.0**
BILL SS **SS** **02 00 50.0 +2.0**
BILL pmax pmax
comp=Z,2μm,4.0s
BILL pmax pmax
comp=Z,235nm,1.4s
BILL MLR MLR
comp=Z,9μm,15.0s
ABD La Joyeuse, An 67.84 272 IAMs_20 IAMs_20 02 11 53.0
comp=Z,11μm,22.0s
ABD La Joyeuse, An 67.84 272 *e* **P** **01 47 30.7 -1.3**
E27K Coleen River 67.85 350 P **P** **01 47 32.3 +0.9**
baz=20,SNR=78
E27K S **S** **01 56 29.7 +0.6**
baz=20
L48A N Adams 67.87 307 IAmb IAmb 01 47 38.2
comp=Z,92nm,0.8s
L48A N Adams 67.87 307 P **P** **01 47 31.2 -0.7**
baz=52,SNR=24
L48A P **P** **01 47 31.2 -0.7**
baz=52,SNR=24
L48A S **S** **01 56 29.0 -1.1**
baz=52
L48A S **S** **01 56 29.0 -1.1**
baz=52
CNNC Cliffs of the 67.88 298 P **P** **01 47 31.6 -0.5**
baz=53
CNNC Cliffs of the 67.88 298 P **P** **01 47 32.0 -0.1**
baz=53
CNNC S **S** **01 56 29.5 -0.9**
baz=53
P52A Corning 67.90 304 IAmb IAmb 01 48 10.8
comp=Z,83nm,1.0s
P52A IAMs_20 IAMs_20 02 16 07.5
comp=Z,13μm,20.0s
P52A Corning 67.90 304 P **P** **01 47 31.5 -0.6**
baz=52,SNR=20
P52A S **S** **01 56 28.3 -2.2**
baz=52
COWI Conover 67.95 313 IAmb IAmb 01 47 37.3
comp=Z,126nm,1.2s
COWI Conover 67.95 313 P **P** **01 47 32.1 -0.3**
baz=51
MOPA Mopani 67.97 162⇓*i*P **P** **01 47 34.1 +1.5**
MOPA IAmb IAmb 01 47 39.8
comp=Z,240nm,1.8s
MOPA Mopani 67.97 162 *i*P **P** **01 47 32.9 +0.3**
MOPA Mopani 67.97 162 *i*P **P** **01 47 32.9 +0.3**
SMRT St. Maarten 68.00 275 *e* **P** **01 47 35.8 +2.7**
MAGL Barre de l'ile 68.02 272 *e* **P** **01 47 34.5 +1.3**
EYMN Ely 68.02 315 P **P** **01 47 32.3 -0.5**
EYMN Ely 68.02 315 IAMs_20 IAMs_20 02 14 37.0
comp=Z,10μm,21.0s
EYMN Ely 68.02 315 P **P** **01 47 31.6 -1.1**
baz=50,SNR=20
EYMN Ely 68.02 315 P **P** **01 47 32.2 -0.5**
baz=50,SNR=20
EYMN S **S** **01 56 30.2 -1.5**
baz=50
D23K Nanushuk River 68.03 354 P **P** **01 47 34.0 +1.5**
baz=13,SNR=54
D23K S **S** **01 56 30.9 -0.3**
baz=13
ACSO Alum Creek Sta 68.05 305 IAmb IAmb 01 48 11.7
comp=Z,80nm,1.0s
ACSO IAMs_20 IAMs_20 02 14 02.5
comp=Z,16μm,22.0s
ACSO Alum Creek Sta 68.05 305 P **P** **01 47 33.1 0.0**
baz=52,SNR=18
ACSO Alum Creek Sta 68.05 305 P **P** **01 47 32.9 -0.2**
baz=52,SNR=18
ACSO S **S** **01 56 28.1 -4.2**
baz=52
HIA Hailar 68.11 43*d i*P **P** **01 47 34.2 +0.8**
HIA pmax pmax
comp=Z,153nm,1.5s
HIA MLR MLR
comp=Z,48μm,18.0s
GDHS Morne Mazeau, 68.17 272 IAmb IAmb 01 47 36.4
comp=Z,90nm,0.9s
GDHS IAMs_20 IAMs_20 02 12 01.8
comp=Z,10μm,22.0s
CBE Ff, Capester 68.18 272 P **P** **01 47 34.2 -0.1**
CBE IAmb IAmb 01 47 36.5
comp=Z,118nm,0.8s
CBE IAMs_20 IAMs_20 02 12 02.3
comp=Z,10μm,22.0s
CBE Ff, Capester 68.18 272 *e* **P** **01 47 33.4 -0.9**
SKI Saint Kitts 68.21 274 *e* **P** **01 47 37.2 +2.8**
BTO Baotou 68.21 55 *e*P **P** **01 47 33.5 -0.7**
BTO S **S** **01 56 32.2 -2.2**
H43A Windswept, Lux 68.22 311 P **P** **01 47 34.3 +0.3**
baz=51
H43A S **S** **01 56 34.5 +0.4**
baz=51
TOLK Toolik Lake Re 68.26 353 P **P** **01 47 35.2 +1.3**
baz=14,SNR=49
TOLK S **S** **01 56 35.2 +1.2**
baz=14
BLA Blacksburg 68.31 301 IAMs_20 IAMs_20 02 16 39.6
comp=Z,9μm,20.0s
BLA Blacksburg 68.31 301 P **P** **01 47 34.4 -0.4**
baz=52
BLA Blacksburg 68.31 301 P **P** **01 47 34.4 -0.4**
baz=52
BLA S **S** **01 56 34.9 -0.7**
baz=52
LBTB Lobatse 68.32 168 LR LR 02 20 43.5
comp=Z,7μm,18.6s,baz=350,slow=39
LBTB Lobatse 68.32 168⇓*i*P **P** **01 47 35.3 +0.4**
LBTB IAmb IAmb 01 47 44.0
comp=Z,368nm,1.9s
LBTB Lobatse 68.32 168 *i*P **P** **01 47 35.9 +1.1**
LBTB Lobatse 68.32 168 *i*P **P** **01 47 35.9 +1.1**
MDVC Dominica, Viel 68.33 272 *e* **P** **01 47 36.5 +1.4**
V58A Windy Hill, Pi 68.34 299 P **P** **01 47 35.1 +0.1**
baz=52
V58A P **P** **01 47 35.1 +0.1**
baz=52
V58A S **S** **01 56 35.6 -0.3**
baz=52
V58A S **S** **01 56 35.6 -0.3**
baz=52
TDBA Terre de Bas, 68.34 272 IAmb IAmb 01 48 35.4
comp=Z,147nm,1.3s
TDBA IAMs_20 IAMs_20 02 13 56.4
comp=Z,8μm,19.0s
TDBA Terre de Bas, 68.34 272 *e* **P** **01 47 36.1 +0.9**
N49A Columbus Grove 68.35 306 IAmb IAmb 01 47 41.1
comp=Z,94nm,0.9s
N49A Columbus Grove 68.35 306 P **P** **01 47 33.9 -1.0**
baz=52,SNR=26
N49A P **P** **01 47 33.9 -1.0**
baz=52,SNR=26
N49A S **S** **01 56 34.2 -1.6**
baz=52
N49A S **S** **01 56 34.2 -1.6**
baz=52
E25K Arctic Village 68.38 352 P **P** **01 47 35.5 +0.8**
baz=17,SNR=70
E25K S **S** **01 56 35.9 +0.6**
baz=17
DLPL La Plaine 68.39 271 *e* **P** **01 47 37.1 +1.6**
Q52A Bidwell 68.39 303 IAmb IAmb 01 48 13.9
comp=Z,72nm,0.8s
Q52A Bidwell 68.39 303 P **P** **01 47 34.8 -0.4**
baz=52,SNR=16
Q52A P **P** **01 47 34.8 -0.4**
baz=52,SNR=16
Q52A S **S** **01 56 36.3 -0.1**
baz=52
Q52A S **S** **01 56 36.3 -0.1**
baz=52
DSLB Salisbury 68.45 271 *e* **P** **01 47 38.0 +2.2**
ILAM Ilet Lapin Mar 68.47 270 *e* **P** **01 47 36.5 +0.5**
MDN Morne-Daniel 68.50 271 *e* **P** **01 47 38.0 +1.8**
S54A Dingess, Beckl 68.51 302 P **P** **01 47 35.7 -0.3**
baz=52
S54A P **P** **01 47 35.7 -0.3**
baz=52
S54A S **S** **01 56 37.0 -1.0**
baz=52
S54A S **S** **01 56 37.0 -1.0**
baz=52
OPO Ambohidratompo 68.52 145 LR LR 02 19 42.7
comp=Z,μm,18.8s,baz=180,slow=38
BBGH Gun Hill 68.56 268 *e* **P** **01 47 38.5 +1.9**
P51A Williamsport 68.56 304 P **P** **01 47 35.9 -0.4**
baz=52,SNR=10
P51A P **P** **01 47 35.9 -0.4**
baz=52,SNR=10
P51A S **S** **01 56 36.6 -1.7**
baz=52
P51A S **S** **01 56 36.6 -1.7**
baz=52
R53A Hurricane 68.59 303 IAmb IAmb 01 47 43.1
comp=Z,67nm,0.8s
R53A Hurricane 68.59 303 P **P** **01 47 35.8 -0.6**
baz=52,SNR=19
R53A P **P** **01 47 35.8 -0.6**
baz=52,SNR=19
R53A S **S** **01 56 37.7 -1.1**
baz=52
R53A S **S** **01 56 37.7 -1.1**
baz=52
PALK Pallekele 68.60 100 LR LR 02 22 19.7
comp=Z,6μm,19.7s,baz=57,slow=40
PALK Pallekele 68.60 100 P **P** **01 47 33.2 -3.7**
PALK IAmb IAmb 01 47 46.7
comp=Z,93nm,1.1s
PALK Pallekele 68.60 100 IAMs_20 IAMs_20 02 21 26.1
comp=Z,8μm,21.0s
PALK Pallekele 68.60 100 P **P** **01 47 33.2 -3.7**
PALK pmax pmax
comp=Z,93nm,1.1s
PALK MLR MLR
comp=Z,8μm,21.0s
PALK Pallekele 68.60 100 P **P** **01 47 36.9 0.0**
PALK P **P** **01 47 36.9 0.0**
PALK P **P** **01 47 36.9 0.0**
PALK Pallekele 68.60 100 P **P** **01 47 38.1 +1.2**
ZEA Zeya 68.61 36*de*P **P** **01 47 37.2 +0.9**
ZEA *e* 01 47 37.2
ZEA *e* 01 50 05.7
ZEA *e* 01 51 47.1
ZEA *e*S **S** **01 56 39.8 +1.3**
ZEA *e* 01 56 57.1
ZEA *e*SS **SS** **02 01 04.9 +3.2**
ZEA pmax pmax
comp=E,600nm,5.3s
ZEA pmax pmax
comp=N,400nm,5.0s
ZEA pmax pmax
comp=Z,2μm,5.9s
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA pmax pmax
comp=E,300nm,6.1s
ZEA pmax pmax
comp=N,300nm,7.1s
ZEA pmax pmax
comp=Z,600nm,8.3s
ZEA smax smax
comp=N,1μm,8.3s
ZEA smax smax
comp=E,2μm,8.8s
ZEA MLR MLR
comp=E,20μm,17.0s
ZEA MLR MLR
comp=N,21μm,16.0s
ZEA MLR MLR
comp=Z,38μm,17.0s
F26K Sheenjek River 68.62 351 P **P** **01 47 37.8 +1.6**
baz=18,SNR=95
F26K S **S** **01 56 41.0 +2.6**
baz=18
ROSB Rosrio 68.67 244 *e*P **P** **01 47 38.2 +1.0**
MPOM Morne Pois Mar 68.67 270 IAmb IAmb 01 47 39.7
comp=Z,83nm,0.9s
MPOM Morne Pois Mar 68.67 270 *e* **P** **01 47 36.0 -1.3**
FDF Fort de France 68.70 271 IAmb IAmb 01 47 42.6
comp=Z,66nm,0.8s
FDF Fort de France 68.70 271 *e* **P** **01 47 38.2 +0.7**
ULM Lac du Bonnet 68.71 319 P **P** **01 47 37.0 0.0**
comp=Z,37nm,0.7s,baz=56,slow=6.0,SNR=32
ULM S **S** **01 56 32.8 -6.9**
comp=Z,5.4nm,1.1s,baz=350,slow=12,SNR=1.7
ULM LR LR 02 15 58.6
comp=Z,15μm,20.9s,baz=54,slow=34
comp=Z,37nm,0.7s
ULM Lac du Bonnet 68.71 319*d i*P **P** **01 47 36.2 -0.8**
E24K Your Creek 68.71 353 P **P** **01 47 37.8 +1.0**
baz=14
E24K S **S** **01 56 41.0 +1.5**
baz=14
BIM Bigot 68.78 270 *e* **P** **01 47 39.1 +1.1**
U56A King 68.81 300 P **P** **01 47 37.5 -0.5**
baz=52
U56A P **P** **01 47 37.5 -0.5**
baz=52
U56A S **S** **01 56 41.2 -0.4**
baz=52
U56A S **S** **01 56 41.2 -0.4**
baz=52

EPYK Eagle Plains 68.85 347 IAmb IAmb 01 47 42.4
comp=Z,111nm,0.9s
EPYK IAMs_20 IAMs_20 02 21 53.4
comp=Z,9µm,18.0s
EPYK Eagle Plains 68.85 347 P **P** **01 47 37.6 0.0**
baz=23,SNR=42
EPYK S **S** **01 56 42.4 +1.4**
baz=23
Y60A Bolivia 68.85 297 P **P** **01 47 38.0 -0.1**
baz=52
Y60A P **P** **01 47 38.0 -0.1**
baz=52
Y60A S **S** **01 56 43.9 +2.1**
baz=52
Y60A S **S** **01 56 43.9 +2.1**
baz=52
MDP Montagnes des 68.88 257 P **P** **01 47 40.3 +1.7**
comp=Z,22nm,0.9s,baz=43,slow=7.9,SNR=14
MDP S **S** **01 56 44.9 +2.1**
baz=83,slow=16
comp=Z,22nm,0.9s
F25K Christian Rive 68.89 351 P **P** **01 47 39.2 +1.3**
baz=17,SNR=47
F25K S **S** **01 56 44.4 +2.8**
baz=17
B35A Bob, Littlefor 68.89 317 IAmb IAmb 01 47 43.2
comp=Z,247nm,1.6s
B35A Bob, Littlefor 68.89 317 P **P** **01 47 37.6 -0.6**
baz=49,SNR=21
B35A S **S** **01 56 40.5 -1.6**
baz=49
O49A Covington 68.89 306 IAmb IAmb 01 47 44.3
comp=Z,76nm,0.9s
O49A Covington 68.89 306 P **P** **01 47 37.2 -1.1**
baz=52,SNR=23
O49A P **P** **01 47 37.2 -1.1**
baz=52,SNR=23
O49A S **S** **01 56 39.1 -3.3**
baz=52
O49A S **S** **01 56 39.1 -3.3**
baz=52
NBAN Anadia - AL 68.91 233 *eP* **P** **01 47 40.0 +1.3**
E38A The Farm, Brul 68.91 314 IAmb IAmb 01 47 43.1
comp=Z,183nm,1.6s
E38A The Farm, Brul 68.91 314 P **P** **01 47 37.1 -1.2**
baz=50,SNR=9.7
E38A S **S** **01 56 41.5 -0.9**
baz=50
L46A Eue Claire 68.92 308 IAmb IAmb 01 47 59.8
comp=Z,91nm,1.2s
L46A Eue Claire 68.92 308 P **P** **01 47 37.3 -1.1**
baz=51
L46A P **P** **01 47 37.3 -1.1**
baz=51
L46A S **S** **01 56 41.2 -1.3**
baz=51
L46A S **S** **01 56 41.2 -1.3**
baz=51
BMAR Burnt Mountain 68.93 351 P **P** **01 47 39.2 +1.0**
ABPO Ambohimpanom 68.93 145 P **P** **01 47 42.6 +3.7**
E22K Anaktuvuk Pass 68.94 354 P **P** **01 47 39.1 +0.9**
baz=12
E22K S **S** **01 56 43.5 +1.5**
baz=12
WRGLY Wrigley 68.94 341 P **P** **01 47 39.4 +1.2**
baz=33,SNR=62
WRGLY S **S** **01 56 43.0 +0.9**
baz=33
Q51A Peebles 69.02 304 IAmb IAmb 01 47 45.3
comp=Z,63nm,0.8s
Q51A Peebles 69.02 304 P **P** **01 47 38.2 -1.0**
baz=52,SNR=16
Q51A P **P** **01 47 38.2 -1.0**
baz=52,SNR=16
Q51A S **S** **01 56 41.9 -2.0**
baz=52
Q51A S **S** **01 56 41.9 -2.0**
baz=52
SLBI Saint Lucia, B 69.03 270 *e* **P** **01 47 39.2 -0.3**
G40A Rib Lake 69.05 313 P **P** **01 47 38.6 -0.7**
baz=50,SNR=15
G40A S **S** **01 56 42.2 -1.8**
baz=50
G27K Doyon Strip 69.16 350 P **P** **01 47 40.6 +1.0**
baz=20,SNR=79
G27K S **S** **01 56 45.5 +0.8**
baz=20
F24K Squaw Lake 69.20 352 P **P** **01 47 41.4 +1.6**
baz=15,SNR=55
F24K S **S** **01 56 46.9 +1.7**
baz=15
MCLT Moule a Chique 69.21 270 *e* **P** **01 47 40.9 +0.3**
I42A Draeger Farm, 69.22 311 IAmb IAmb 01 47 44.6
comp=Z,93nm,1.3s
I42A Draeger Farm, 69.22 311 P **P** **01 47 40.5 +0.2**
baz=50
I42A S **S** **01 56 43.9 -2.1**
baz=50
X58A Rowland 69.24 298 P **P** **01 47 40.5 0.0**
baz=52
X58A P **P** **01 47 40.5 0.0**
baz=52
X58A S **S** **01 56 45.7 -0.9**
baz=52
X58A S **S** **01 56 45.7 -0.9**
baz=52
N47A Urbana 69.27 307 IAmb IAmb 01 47 46.5
comp=Z,75nm,0.8s
N47A Urbana 69.27 307 P **P** **01 47 39.3 -1.3**
baz=51,SNR=27
N47A P **P** **01 47 39.3 -1.3**
baz=51,SNR=27
N47A S **S** **01 56 44.3 -2.5**
baz=51
N47A S **S** **01 56 44.3 -2.5**
baz=51
Y59A Loris 69.29 297 P **P** **01 47 40.8 0.0**
baz=52
Y59A P **P** **01 47 40.8 0.0**
baz=52
Y59A S **S** **01 56 46.0 -1.0**
baz=52
Y59A S **S** **01 56 46.0 -1.0**
baz=52
G26K Porcupine Rive 69.29 351 P **P** **01 47 41.9 +1.6**
baz=18,SNR=138
G26K S **S** **01 56 50.4 +4.3**
baz=18
W57A Gilead 69.30 299 IAmb IAmb 01 48 01.4
comp=Z,104nm,1.6s
W57A Gilead 69.30 299 P **P** **01 47 40.4 -0.5**
baz=52
W57A P **P** **01 47 40.4 -0.5**
baz=52
W57A S **S** **01 56 46.7 -0.5**
baz=52
W57A S **S** **01 56 46.7 -0.5**
baz=52
O48B Farmland 69.34 306 P **P** **01 47 40.0 -1.1**
baz=51,SNR=22
O48B S **S** **01 56 45.3 -2.3**
baz=51
O48B Farmland 69.34 306 P **P** **01 47 40.1 -1.1**
baz=51,SNR=22
O48B S **S** **01 56 42.6 -5.1**
baz=51
KSR Koster 69.35 167 *eP* **P** **01 47 42.1 +0.8**
KSR IAmb IAmb 01 47 50.9
comp=Z,266nm,1.7s
CDVI St. Croix 69.44 275 P **P** **01 47 42.1 +0.1**
CDVI IAmb IAmb 01 47 47.2
comp=Z,79nm,0.8s
CDVI St. Croix 69.44 275 *e* **P** **01 47 41.3 -0.7**
CUPR Culebra, Puert 69.46 276 P **P** **01 47 41.3 -0.8**
SLR Silverton 69.48 165 *eP* **P** **01 47 42.5 +0.4**
SLR IAmb IAmb 01 47 44.9
comp=Z,76nm,1.1s
HRAO HartRAO 69.52 166 *⇓iP* **P** **01 47 43.4 +1.0**
P49A Miami Univ. Ec 69.53 305 IAMs_20 IAMs_20 02 18 12.6
comp=Z,11µm,19.0s
P49A Miami Univ. Ec 69.53 305 P **P** **01 47 41.0 -1.3**
baz=51,SNR=16
P49A S **S** **01 56 47.4 -2.4**
baz=51
P49A Miami Univ. Ec 69.53 305 P **P** **01 47 41.6 -0.7**
baz=51,SNR=16
P49A S **S** **01 56 43.7 -6.1**
baz=51

RDOG Red Dog Mine 69.56 358 P **P** **01 47 39.9 -2.1**
baz=3.1
F22K John River 69.58 354 P **P** **01 47 43.5 +1.3**
baz=11
F22K S **S** **01 56 50.5 +0.8**
baz=11
U54A Nelsons Funny 69.62 301 P **P** **01 47 42.3 -0.7**
baz=51,SNR=11
U54A P **P** **01 47 42.3 -0.7**
baz=51,SNR=11
U54A S **S** **01 56 50.6 -0.6**
baz=51
U54A S **S** **01 56 50.6 -0.6**
baz=51
XLT XiLinHaoTe 69.65 49 *eP* **P** **01 47 43.8 +0.7**
XLT pP sP 01 47 49.7 +0.9
XLT sP pP 01 47 51.7 +4.5
XLT S **S** **01 56 56.0 +4.7**
XLT pmax pmax
comp=Z,74nm,1.0s
XLT pmax pmax
comp=Z,4µm,5.5s
K43A Burlington 69.65 310 IAmb IAmb 01 48 04.6
comp=Z,159nm,1.1s
K43A Burlington 69.65 310 P **P** **01 47 42.8 -0.1**
baz=50,SNR=11
K43A S **S** **01 56 49.5 -1.6**
baz=50
V55A Taylorsville 69.65 300 IAmb IAmb 01 48 23.1
comp=Z,206nm,1.9s
V55A Taylorsville 69.65 300 P **P** **01 47 42.8 -0.3**
baz=52,SNR=12
V55A P **P** **01 47 42.8 -0.3**
baz=52,SNR=12
V55A S **S** **01 56 50.2 -1.2**
baz=52
V55A S **S** **01 56 50.2 -1.2**
baz=52
H27K Steamboat Moun 69.69 349 P **P** **01 47 44.3 +1.4**
baz=20,SNR=120
H27K S **S** **01 56 55.2 +4.2**
baz=20
SVB Belmont 69.72 270 IAmb IAmb 01 47 46.1
comp=Z,98nm,0.8s
SVB Belmont 69.72 270 *e* **P** **01 47 44.4 +0.6**
L44A Lake County Fo 69.75 309 IAMs_20 IAMs_20 02 17 53.0
comp=Z,10µm,21.0s
L44A Lake County Fo 69.75 309 P **P** **01 47 43.2 -0.3**
baz=50,SNR=9.9
L44A S **S** **01 56 51.3 -1.0**
baz=50
L44A Lake County Fo 69.75 309 P **P** **01 47 42.9 -0.7**
baz=50,SNR=9.9
L44A S **S** **01 56 49.1 -3.2**
baz=50
SEY Seymchan 69.80 19 LR LR 02 22 07.1
comp=Z,9µm,20.6s,baz=330,slow=39
SEY Seymchan 69.80 19 *⇓eP* **P** **01 47 44.3 +0.8**
SEY pmax pmax
comp=Z,235nm,2.5s
SEY MLR MLR
comp=Z,16µm,21.0s
Y58A Scranton 69.86 298 P **P** **01 47 43.9 -0.5**
baz=52
Y58A P **P** **01 47 43.9 -0.5**
baz=52
Y58A S **S** **01 56 51.6 -2.2**
baz=52
Y58A S **S** **01 56 51.6 -2.2**
baz=52
CBYP Canovanas 69.91 277 P **P** **01 47 45.5 +0.6**
G24K Hadweenzic Riv 69.95 352 P **P** **01 47 45.8 +1.4**
baz=15,SNR=69
G24K S **S** **01 56 58.5 +4.5**
baz=15
HQIL Hanson Quary C 69.95 309 IAMs_20 IAMs_20 02 16 50.5
comp=Z,14µm,20.0s
F21K Alatna River 69.96 355 P **P** **01 47 45.9 +1.4**
baz=10,SNR=163
F21K S **S** **01 56 56.8 +2.7**
baz=10
HUMP Col San Antoni 69.98 276 IAmb IAmb 01 47 49.8
comp=Z,79nm,1.0s
AGMN Agassiz Nation 70.00 318 IAmb IAmb 01 47 50.3
comp=Z,162nm,1.6s
AGMN Agassiz Nation 70.00 318 P **P** **01 47 44.5 -0.6**
baz=48,SNR=16
AGMN Agassiz Nation 70.00 318 P **P** **01 47 44.6 -0.4**
baz=48,SNR=16
AGMN S **S** **01 56 55.1 0.0**
baz=48
P48A Milroy 70.00 305 P **P** **01 47 44.0 -1.2**
baz=51,SNR=16
P48A P **P** **01 47 44.0 -1.2**
baz=51,SNR=16
P48A S **S** **01 56 52.3 -3.1**
baz=51
P48A S **S** **01 56 52.3 -3.1**
baz=51
S51A Beattyville 70.03 303 IAmb IAmb 01 48 36.3
comp=Z,159nm,1.9s
S51A Beattyville 70.03 303 P **P** **01 47 44.8 -0.6**
baz=51,SNR=6.6
S51A P **P** **01 47 44.8 -0.6**
baz=51,SNR=6.6
S51A S **S** **01 56 53.7 -2.1**
baz=51
S51A S **S** **01 56 53.7 -2.1**
baz=51
I29M Ogilvie Camp, 70.03 348 IAmb IAmb 01 47 49.9
comp=Z,158nm,1.0s
I29M IAMs_20 IAMs_20 02 23 11.7
comp=Z,9µm,19.0s
I29M Ogilvie Camp, 70.03 348 P **P** **01 47 45.0 0.0**
baz=22,SNR=96
GCPR Guaynabo City 70.05 277 IAmb IAmb 01 47 47.3
comp=Z,61nm,0.8s
CRLN Carolina, Mapu 70.07 164 *eP* **P** **01 47 46.6 +0.8**
CRLN IAmb IAmb 01 47 52.5
comp=Z,119nm,1.8s
R50A Paris 70.08 304 P **P** **01 47 44.9 -0.8**
baz=51,SNR=10
R50A P **P** **01 47 44.9 -0.8**
baz=51,SNR=10
R50A S **S** **01 56 52.7 -3.7**
baz=51
R50A S **S** **01 56 52.7 -3.7**
baz=51
G22K Bettles 70.11 354 P **P** **01 47 46.1 +0.8**
baz=12
G22K S **S** **01 56 58.9 +3.2**
baz=12
I40A Norwalk 70.17 312 IAmb IAmb 01 47 50.4
comp=Z,91nm,1.2s
I40A Norwalk 70.17 312 P **P** **01 47 46.1 -0.1**
baz=50,SNR=16
I40A S **S** **01 56 56.5 -0.7**
baz=50
KMSC Kings Mountain 70.17 300 P **P** **01 47 45.7 -0.5**
baz=51,SNR=8.4
KMSC S **S** **01 56 57.2 -0.3**
baz=51
KMSC Kings Mountain 70.17 300 P **P** **01 47 46.1 -0.2**
baz=51,SNR=8.4
KMSC S **S** **01 56 54.2 -3.2**
baz=51
CD2 Chengdu 70.18 66 *⇓P* **P** **01 47 47.3 +0.7**
CD2 pP pP 01 47 49.0 -1.7
CD2 PP **PP** **01 50 22.1 +0.6**
CD2 S **S** **01 56 57.0 -0.9**
CD2 sS sS 01 57 05.4 +0.6
CD2 Chengdu 70.18 66 SS SS 02 01 36.0 +8.7
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,3µm,5.0s
CD2 LR LR
comp=N,13µm,17.1s
CD2 LR LR
comp=E,19µm,18.1s
CD2 LR LR
comp=Z,16µm,20.1s
CD2 Chengdu 70.18 66 *⇓P* **P** **01 47 47.2 +0.7**
CD2 pP pP 01 47 49.0 -1.7
CD2 PP **PP** **01 50 22.1 +0.6**
CD2 S **S** **01 56 57.0 -0.9**
CD2 sS sS 01 57 05.4 +0.6

CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,3µm,5.0s
CD2 LR LR
comp=Z,16µm,20.1s
G23K Bananza Creek 70.19 353 P **P** **01 47 47.0 +1.1**
baz=13,SNR=77
G23K S **S** **01 57 00.4 +3.6**
baz=13
H25K Birch Creek 70.19 351 P **P** **01 47 47.9 +2.0**
baz=16,SNR=85
H25K S **S** **01 57 00.6 +3.9**
baz=16
SJG San Juan 70.22 277 LR LR 02 13 41.7
comp=Z,11µm,22.0s,baz=83,slow=32
SJG San Juan 70.22 277 P **P** **01 47 47.1 +0.3**
SJG San Juan 70.22 277 IAMs_20 IAMs_20 02 13 07.0
comp=Z,11µm,22.0s
SJG San Juan 70.22 277 P **P** **01 47 47.1 +0.3**
SJG pmax pmax
comp=Z,47nm,1.1s
SJG San Juan 70.22 277 *e* **P** **01 47 46.1 -0.7**
SJG San Juan 70.22 277 P **P** **01 47 49.7 +2.9**
Y57A Sumter 70.26 298 IAmb IAmb 01 48 00.6
comp=Z,103nm,1.3s
I27K Kandik River 70.29 349 P **P** **01 47 47.4 +0.8**
baz=19,SNR=77
I27K S **S** **01 57 00.1 +2.0**
baz=19
M44A Midewin, Midew 70.32 308 P **P** **01 47 46.5 -0.7**
baz=50
M44A S **S** **01 56 56.5 -2.6**
baz=50
GCMP Grenada, Carri 70.36 269 *e* **P** **01 47 48.8 +1.1**
SWZ Schweizer 70.41 169 *eP* **P** **01 47 47.2 -0.5**
SWZ IAmb IAmb 01 47 56.3
comp=Z,464nm,2.0s
SFIN Lafayette 70.42 307 P **P** **01 47 46.6 -1.1**
baz=50,SNR=11
SFIN S **S** **01 56 56.8 -3.3**
baz=50
SFIN Lafayette 70.42 307 P **P** **01 47 47.2 -0.5**
baz=50,SNR=11
SFIN S **S** **01 56 55.0 -5.2**
baz=50
F36A Milaca 70.44 315 IAmb IAmb 01 47 52.6
comp=Z,127nm,1.4s
F36A Milaca 70.44 315 P **P** **01 47 47.1 -0.7**
baz=48,SNR=25
F36A S **S** **01 56 59.3 -1.0**
baz=48
SPMN Marine on St. 70.48 314 IAmb IAmb 01 47 53.0
comp=Z,207nm,1.6s
SPMN Marine on St. 70.48 314 P **P** **01 47 47.5 -0.5**
baz=49,SNR=20
SPMN S **S** **01 56 60.0 -0.8**
baz=49
SPMN Marine on St. 70.48 314 P **P** **01 47 47.9 -0.2**
baz=49,SNR=20
SPMN S **S** **01 56 58.1 -2.6**
baz=49
PRYS Parys 70.48 167 *⇓iP* **P** **01 47 48.2 +0.1**
PRYS IAmb IAmb 01 48 01.0
comp=Z,155nm,1.9s
TOSP Speyside 70.48 267 *e* **P** **01 47 49.6 +1.2**
AOPR Arecibo Observ 70.52 277 *e* **P** **01 47 49.0 +0.3**
R49A Shelbyville 70.59 304 P **P** **01 47 47.7 -1.1**
baz=50,SNR=8.9
R49A P **P** **01 47 47.7 -1.1**
baz=50,SNR=8.9
R49A S **S** **01 57 01.4 -0.9**
baz=50
R49A S **S** **01 57 01.4 -0.9**
baz=50
JFWS Jewell Farm 70.59 311 P **P** **01 47 47.7 -1.0**
baz=49
JFWS Jewell Farm 70.59 311 P **P** **01 47 48.4 -0.4**
baz=49
JFWS S **S** **01 56 58.9 -3.3**
baz=49
OBIP Obispado Ponce 70.60 277 IAmb IAmb 01 47 52.3
comp=Z,104nm,1.2s
JSC Jenkinsville 70.66 299 IAmb IAmb 01 48 24.5
comp=Z,102nm,1.4s
JSC Jenkinsville 70.66 299 P **P** **01 47 49.1 -0.2**
baz=51,SNR=12
G21K Allakaket 70.66 354 P **P** **01 47 50.1 +1.3**
baz=10,SNR=104
G21K S **S** **01 57 07.0 +4.7**
baz=10
NHSC New Hope 70.69 297 IAMs_20 IAMs_20 02 17 34.8
comp=Z,7µm,20.0s
NHSC New Hope 70.69 297 P **P** **01 47 50.0 +0.5**
baz=51,SNR=6.0
NHSC New Hope 70.69 297 P **P** **01 47 50.0 +0.5**
baz=51,SNR=6.0
NHSC S **S** **01 57 03.9 +0.4**
baz=51
TZTN Tazewell 70.69 302 IAmb IAmb 01 48 24.4
comp=Z,134nm,1.6s
TZTN IAMs_20 IAMs_20 02 16 26.5
comp=Z,11µm,22.0s
TZTN Tazewell 70.69 302 P **P** **01 47 49.0 -0.5**
baz=51
TZTN Tazewell 70.69 302 P **P** **01 47 49.2 -0.3**
baz=51
TZTN S **S** **01 57 01.1 -2.5**
baz=51
GRGR Grenville 70.76 269 *e* **P** **01 47 50.2 +0.1**
V53A Saluda 70.78 301 P **P** **01 47 48.5 -1.5**
baz=51,SNR=12
V53A P **P** **01 47 48.5 -1.5**
baz=51,SNR=12
V53A S **S** **01 57 03.1 -1.6**
baz=51
V53A S **S** **01 57 03.1 -1.6**
baz=51
I26K Coal Creek Min 70.78 350 IAMs_20 IAMs_20 02 23 53.5
comp=Z,6µm,18.0s
I26K Coal Creek Min 70.78 350 P **P** **01 47 50.7 +1.2**
baz=18
I26K S **S** **01 57 08.3 +4.6**
baz=18
H24K Noodor Dome 70.83 352 IAmb IAmb 01 47 56.5
comp=Z,287nm,1.7s
H24K Noodor Dome 70.83 352 P **P** **01 47 51.0 +1.1**
baz=15,SNR=79
H24K S **S** **01 57 05.7 +1.3**
baz=15
BLO Bloomington 70.84 306 P **P** **01 47 49.9 -0.5**
BLO IAmb IAmb 01 47 56.2
comp=Z,62nm,0.8s
BLO Bloomington 70.84 306 P **P** **01 47 49.9 -0.5**
BLO pmax pmax
comp=Z,62nm,0.8s
L42A Oliver, Polo 70.86 310 P **P** **01 47 49.9 -0.5**
baz=49,SNR=12
L42A S **S** **01 57 03.5 -1.8**
baz=49
J29M Klondike Camp 70.86 347 IAMs_20 IAMs_20 02 21 49.7
comp=Z,8µm,18.0s
J29M Klondike Camp 70.86 347 P **P** **01 47 51.4 +1.3**
baz=22
J29M S **S** **01 57 08.4 +3.5**
baz=22
PRP Porcupine Dome 70.88 351 P **P** **01 47 51.5 +1.2**
baz=16,SNR=61
PRP S **S** **01 57 07.1 +2.0**
baz=16
PRSN Puerto Rico Se 70.89 277 IAmb IAmb 01 47 54.2
comp=Z,86nm,0.9s
TMAB Tom-Au,PA,Br 70.96 248 *eP* **P** **01 47 53.2 +1.9**
P46A Rosedale 70.97 307 IAmb IAmb 01 47 56.8
comp=Z,68nm,0.9s
P46A Rosedale 70.97 307 P **P** **01 47 50.3 -0.8**
baz=50,SNR=15
MLPR Magueyes Islan 70.97 277 IAmb IAmb 01 47 54.7
comp=Z,122nm,1.2s
CRPR Cabo Rojo, PR 70.99 277 IAmb IAmb 01 47 53.6
comp=Z,108nm,0.9s
H23K Yukon River 71.01 353 P **P** **01 47 52.3 +1.4**
baz=13,SNR=78
H23K S **S** **01 57 09.1 +2.7**
baz=13
EGAK Eagle 71.01 349 IAmb IAmb 01 47 58.0
comp=Z,199nm,1.4s
EGAK IAMs_20 IAMs_20 02 24 00.6

comp=Z,7µm,18.0s
EGAK Eagle 71.01 349 P **P** 01 47 51.6 +0.6
baz=20,SNR=58
EGAK S **S** 01 57 10.2 +3.9
baz=20
UPI Upington 71.08 172 ⇓*i*P **P** 01 47 51.7 0.0
UPI IAmb IAmb 01 48 04.9
comp=Z,153nm,1.8s
H22K Ishtalitna Cre 71.11 353 P **P** 01 47 53.3 +1.8
baz=12,SNR=90
H22K S **S** 01 57 12.5 +5.0
baz=12
V52A Sevierville 71.16 302 P **P** 01 47 51.5 -0.8
baz=50,SNR=6.6
V52A S **S** 01 57 07.6 -1.4
baz=50
T50A Nancy 71.19 303 P **P** 01 47 51.4 -1.1
baz=50
T50A P **P** 01 47 51.4 -1.1
baz=50
T50A S **S** 01 57 07.6 -1.7
baz=50
T50A S **S** 01 57 07.6 -1.7
baz=50
IMAR Indian Mountai 71.20 354 P **P** 01 47 53.0 +1.0
AUGR Augrabies 71.22 173 *e*P **P** 01 47 52.2 -0.4
AUGR IAmb IAmb 01 48 01.0
comp=Z,355nm,2.0s
MMPY Sheldon Lake, 71.25 344 P **P** 01 47 54.4 +1.9
baz=27,SNR=62
MMPY S **S** 01 57 14.1 +4.8
baz=27
MAYO Mayo, Yukon 71.26 346 P **P** 01 47 53.8 +1.3
baz=24
CASEE Lake Jocassee 71.28 300 P **P** 01 47 52.1 -1.0
baz=51,SNR=9.2
K29M Barlow Dome 71.32 347 P **P** 01 47 54.0 +1.1
baz=22,SNR=92
K29M S **S** 01 57 13.2 +3.1
baz=22
HODGE Hodges 71.33 299 P **P** 01 47 52.8 -0.5
baz=51,SNR=6.7
VOI Vohitsoka 71.34 147 P **P** 01 47 53.5 0.0
VOI Vohitsoka 71.34 147 P **P** 01 47 54.4 +0.8
SNR=5.6
VOI Vohitsoka 71.34 147 P **P** 01 47 54.8 +1.3
D32B Dogwood Acres, 71.36 317 P **P** 01 47 52.6 -0.8
baz=47
D32B S **S** 01 57 11.5 +0.5
baz=47
D32A Dogwood Acres, 71.36 317 IAmb IAmb 01 47 58.4
comp=Z,182nm,1.4s
O44A Mansfield 71.36 308 P **P** 01 47 53.1 -0.4
baz=50,SNR=12
O44A S **S** 01 57 09.0 -2.2
baz=50
KEIM Keimoes 71.39 173 ⇓*i*P **P** 01 47 53.7 +0.1
KEIM IAmb IAmb 01 48 02.2
comp=Z,165nm,1.7s
TKL Tuckaleechee C 71.39 301 LR LR 02 17 24.1
comp=Z,6µm,20.7s,baz=62,slow=34
TKL Tuckaleechee C 71.39 301 P **P** 01 47 52.8 -0.9
baz=50,SNR=7.9
TKL S **S** 01 57 10.4 -1.3
baz=50
DAWY Dawson 71.41 348 P **P** 01 47 54.5 +1.0
baz=21,SNR=167
DAWY S **S** 01 57 14.7 +3.5
baz=21
H21K Melozitna Rive 71.45 354 P **P** 01 47 55.7 +2.1
baz=11,SNR=393
H21K S **S** 01 57 14.7 +3.2
baz=11
HAW Hawthorne Fire 71.46 298 P **P** 01 47 53.9 -0.3
baz=51,SNR=12
FLDN Fort Liard 71.48 339 P **P** 01 47 55.2 +1.5
baz=32,SNR=20
FLDN S **S** 01 57 14.3 +2.5
baz=32
POKR Poker Plat Res 71.48 351 IAMs_20 IAMs_20 02 19 02.0
comp=Z,7µm,21.0s
POKR Poker Plat Res 71.48 351 P **P** 01 47 55.0 +1.2
baz=15,SNR=44
POKR S **S** 01 57 15.1 +3.3
baz=15
TIY Taiyuan 71.49 56 P **P** 01 47 55.8 +1.4
TIY PP **PP** 01 50 33.8 +1.3
TIY S **S** 01 57 14.6 +1.7
TIY Taiyuan 71.49 56 SS SS 02 01 43.3 -3.7
TIY pmax pmax
comp=Z,50nm,0.5s
TIY pmax pmax
comp=Z,3µm,5.9s
TIY LR LR
comp=N,32µm,17.2s
TIY LR LR
comp=E,21µm,15.8s
TIY LR LR
comp=Z,12µm,22.7s
TIY Taiyuan 71.49 56 P **P** 01 47 55.7 +1.4
TIY PP **PP** 01 50 33.8 +1.3
TIY S **S** 01 57 14.6 +1.7
TIY pmax pmax
comp=Z,50nm,0.5s
TIY pmax pmax
comp=Z,3µm,5.9s
TIY LR LR
comp=Z,12µm,22.7s
PZH PanZhiHua 71.55 71 P **P** 01 47 54.8 -0.2
PZH pP **pP** 01 47 56.5 -2.7
PZH sP **sP** 01 48 00.3 -0.4
PZH PP **PP** 01 50 35.5 +2.1
PZH S **S** 01 57 12.9 -1.1
PZH sS **pS** 01 57 19.3 +0.1
PZH PanZhiHua 71.55 71 P **P** 01 47 54.7 -0.2
PZH pP **pP** 01 47 56.5 -2.7
PZH sP **sP** 01 48 00.2 -0.4
PZH PP **PP** 01 50 35.5 +2.1
PZH S **S** 01 57 12.9 -1.1
PZH SS **SS** 02 01 53.6 +5.0
PZH pmax pmax
comp=Z,540nm,1.3s
PZH pmax pmax
comp=Z,3µm,7.8s
PZH LR LR
comp=Z,14µm,20.1s
PZH LR LR
comp=Z,12µm,21.4s
PZH LR LR
comp=Z,13µm,21.8s
TRN Trinidad (W) 71.55 268 *e* **P** 01 47 57.0 +2.1
TGTN Hyland Airport 71.56 342 P **P** 01 47 56.5 +2.1
baz=29,SNR=57
TGTN S **S** 01 57 18.9 +6.0
baz=29
HDIL Hopedale 71.58 308 IAmb IAmb 01 48 00.7
comp=Z,100nm,0.9s
HDIL Hopedale 71.58 308 P **P** 01 47 54.2 -0.6
baz=49,SNR=15
HDIL Hopedale 71.58 308 P **P** 01 47 54.7 -0.1
baz=49,SNR=15
HDIL S **S** 01 57 09.6 -4.1
baz=49
I37B Waseca 71.60 313 P **P** 01 47 54.0 -0.9
baz=48
I37B S **S** 01 57 14.6 +0.8
baz=48
J26L Joseph Creek 71.61 350 P **P** 01 47 55.6 +0.9
baz=18,SNR=188
J26L S **S** 01 57 17.3 +3.8
baz=18
XAN Xi'an 71.62 61 ⇓P **P** 01 47 55.6 +0.4
XAN pP sP 01 48 01.1 +0.1
XAN sP pP 01 48 04.3 +4.9
XAN PP **PP** 01 50 38.4 +4.6
XAN S **S** 01 57 16.3 +1.8
XAN Xi'an 71.62 61 SS SS 02 02 02.8 +14
XAN pmax pmax
comp=Z,55nm,1.1s
XAN pmax pmax
comp=Z,5µm,5.9s
XAN LR LR
comp=N,21µm,17.5s
XAN LR LR
comp=E,19µm,17.8s
XAN LR LR
comp=Z,32µm,18.1s

I23K Minto, Yukon-K 71.65 352 P **P** 01 47 56.0 +1.3
baz=13,SNR=64
I23K S **S** 01 57 16.5 +2.8
baz=13
V51A Loudon 71.66 302 P **P** 01 47 54.4 -0.9
baz=50,SNR=15
V51A S **S** 01 57 13.1 -1.8
baz=50
L40A Anamosa 71.69 311 IAmb IAmb 01 48 01.3
comp=Z,65nm,0.8s
L40A Anamosa 71.69 311 P **P** 01 47 54.2 -1.3
baz=49,SNR=24
L40A S **S** 01 57 12.8 -2.2
baz=49
J25K Salcha River, 71.73 350 IAmb IAmb 01 48 01.8
comp=Z,304nm,1.7s
J25K Salcha River, 71.73 350 P **P** 01 47 55.8 +0.5
baz=16,SNR=61
J25K S **S** 01 57 18.0 +3.2
baz=16
NWCL Newcastle 71.73 164 ⇓*i*P **P** 01 47 55.9 +0.1
NWCL IAmb IAmb 01 48 09.4
comp=Z,144nm,1.6s
POGA Pongola 71.73 163 IAmb IAmb 01 48 05.7
comp=Z,108nm,1.4s
POGA Pongola 71.73 163 ⇓*i*P **P** 01 47 56.5 +0.9
POGA IAmb IAmb 01 48 05.3
comp=Z,116nm,1.4s
ILAR Eielson Array 71.75 351 P **P** 01 47 56.3 +0.8
comp=Z,66nm,1.1s,baz=7.5,slow=5.1,SNR=102
ILAR S **S** 01 57 16.2 +1.2
comp=Z,0.4nm,0.9s,baz=17,slow=16,SNR=2.1
ILAR PKP2ab 02 15 37.9
comp=Z,1.1nm,1.0s,baz=199,slow=3.9,SNR=5.2
comp=Z,66nm,1.1s
ILAR Eielson Array 71.75 351 P **P** 01 47 55.8 +0.4
ILAR Eielson Array 71.75 351 P **P** 01 47 55.8 +0.4
COLA College 71.76 352 P **P** 01 47 55.5 +0.1
COLA College 71.76 352 *d*P **P** 01 47 55.9 +0.5
COLA pmax pmax
comp=Z,182nm,1.5s
COLA MLR MLR
comp=Z,5µm,20.0s
COLA College 71.76 352 P **P** 01 47 56.3 +0.9
baz=15
COLA S **S** 01 57 16.0 +1.0
baz=15
COLA College 71.76 352 P **P** 01 47 57.1 +1.7
TCOL CIGO, UAF Yank 71.76 352 P **P** 01 47 56.5 +1.0
baz=15
TCOL S **S** 01 57 16.6 +1.6
baz=15
BOSA Boshof 71.80 169 P **P** 01 47 56.3 +0.1
comp=Z,53nm,0.9s,baz=347,slow=6.4,SNR=40
BOSA LR LR 02 22 50.2
comp=Z,13µm,18.1s,baz=353,slow=39
comp=Z,53nm,0.9s
BOSA Boshof 71.80 169 P **P** 01 47 55.4 -0.8
BOSA IAmb IAmb 01 48 06.0
comp=Z,86nm,1.0s
BOSA Boshof 71.80 169 ⇓*i*P **P** 01 47 56.1 0.0
BOSA IAmb IAmb 01 48 04.8
comp=Z,362nm,1.8s
BOSA Boshof 71.80 169 *i*P **P** 01 47 56.8 +0.7
BOSA Boshof 71.80 169 *i*P **P** 01 47 56.8 +0.7
W52A Murphy 71.85 301 P **P** 01 47 55.5 -1.1
baz=50,SNR=9.4
W52A S **S** 01 57 15.9 -1.1
baz=50
K27K Chicken 71.85 349 IAMs_20 IAMs_20 02 24 27.8
comp=Z,7µm,19.0s
K27K Chicken 71.85 349 P **P** 01 47 57.4 +1.3
baz=19
K27K S **S** 01 57 18.9 +2.8
baz=19
I21K Tanana 71.86 353 P **P** 01 47 57.8 +1.8
baz=11,SNR=110
I21K S **S** 01 57 20.9 +4.8
baz=11
SNKL Senekal, Frees 71.87 166 *e*P **P** 01 47 56.8 +0.2
SNKL IAmb IAmb 01 48 05.7
comp=Z,462nm,1.8s
F33A 5 Mile Ranch, 71.88 316 IAmb IAmb 01 48 01.5
comp=Z,245nm,1.6s
F33A 5 Mile Ranch, 71.88 316 P **P** 01 47 56.1 -0.4
baz=47,SNR=13
F33A S **S** 01 57 14.6 -2.5
baz=47
MLY Manley 71.90 353 P **P** 01 47 57.7 +1.4
baz=12,SNR=115
MLY S **S** 01 57 21.9 +5.2
baz=12
257A Skidaway Islan 71.95 297 P **P** 01 47 57.6 +0.4
baz=50
257A S **S** 01 57 18.5 +0.2
baz=50
CCB Clear Creek Bu 71.98 352 IAmb IAmb 01 48 02.8
comp=Z,249nm,1.7s
FARO Faro, Yukon 72.03 344 P **P** 01 47 59.0 +1.9
baz=25,SNR=137
FARO S **S** 01 57 22.9 +4.6
baz=25
OLIL Olney 72.07 306 IAmb IAmb 01 48 03.4
comp=Z,76nm,0.9s
OLIL Olney 72.07 306 P **P** 01 47 56.5 -1.2
baz=49,SNR=16
OLIL S **S** 01 57 15.7 -3.7
baz=49
TNA Tin City 72.10 0 P **P** 01 47 58.4 +1.0
baz=359,SNR=10
TNA S **S** 01 57 20.9 +2.1
baz=359
U49A Red Boiling Sp 72.10 303 P **P** 01 47 56.9 -1.0
baz=50,SNR=23
U49A S **S** 01 57 17.4 -2.4
baz=50
HDA Harding Lake 72.11 351 P **P** 01 47 58.3 +0.7
baz=15,SNR=138
HDA S **S** 01 57 20.8 +1.7
baz=15
HDA S **S** 01 57 20.8 +1.7
baz=15
MDND Maddock 72.14 319 P **P** 01 47 57.7 -0.3
baz=46
MDND S **S** 01 57 18.8 -1.1
baz=46
MDND Maddock 72.14 319 P **P** 01 47 57.5 -0.6
baz=46
MDND S **S** 01 57 17.4 -2.5
baz=46
NEA2 Nenana 72.16 352 P **P** 01 47 58.6 +0.7
baz=14,SNR=58
NEA2 S **S** 01 57 22.7 +3.1
baz=14
SCRK Sand Creek 72.16 350 IAmb IAmb 01 48 04.0
comp=Z,129nm,1.1s
SCRK Sand Creek 72.16 350 P **P** 01 47 59.3 +1.3
baz=18,SNR=94
SCRK S **S** 01 57 23.5 +3.6
baz=18
K38A Parkersburg 72.17 312 IAmb IAmb 01 48 01.6
comp=Z,111nm,1.4s
K38A Parkersburg 72.17 312 P **P** 01 47 57.0 -1.3
baz=48
K38A S **S** 01 57 18.1 -2.3
baz=48
WRH Wood River Hil 72.18 352 IAmb IAmb 01 48 03.2
comp=Z,146nm,1.1s
BJI Beijing 72.20 52 P **P** 01 47 58.8 +0.3
BJI pP **pP** 01 48 03.1 +0.4
BJI sP **sP** 01 48 05.4 +1.2
BJI PP **PP** 01 50 40.3 +1.8
BJI S **S** 01 57 21.9 +1.1
BJI SS **SS** 02 01 58.7 +1.1
BJI pmax pmax
comp=Z,30nm,1.0s
BJI pmax pmax
comp=Z,3µm,5.4s
BJT Baijiatuau 72.21 52 IAmb IAmb 01 48 10.1
comp=Z,66nm,0.9s
M31M Drury Creek, Y 72.26 345 IAMs_20 IAMs_20 02 20 49.7
comp=Z,9µm,20.0s
M31M Drury Creek, Y 72.26 345 P **P** 01 48 00.2 +1.7
baz=24,SNR=74
M31M S **SKiKP** 01 57 27.7 -6.3
baz=24
MA2 Magadan 72.28 21 LR LR 02 23 49.2
comp=Z,25µm,18.5s,baz=332,slow=39

MA2 Magadan 72.28 21 P **P** 01 47 59.4 +0.8
MA2 IAmb IAmb 01 48 09.3
comp=Z,181nm,1.1s
MA2 Magadan 72.28 21 ⇑*e*P **P** 01 47 59.3 +0.7
MA2 pmax pmax
comp=Z,227nm,1.2s
MA2 MLR MLR
comp=Z,24µm,17.0s
MA2 Magadan 72.28 21 P **P** 01 48 00.2 +1.6
MA2 Magadan 72.28 21 P **P** 01 48 01.5 +2.8
USIN University of 72.31 305 IAmb IAmb 01 48 04.8
comp=Z,123nm,0.8s
P43A Skaggs, Pawnee 72.31 308 IAmb IAmb 01 48 05.0
comp=Z,94nm,1.0s
P43A Skaggs, Pawnee 72.31 308 P **P** 01 47 58.4 -0.8
baz=49,SNR=14
M30M Minto, Yukon 72.36 346 IAmb IAmb 01 48 05.8
comp=Z,240nm,1.8s
M30M IAMs_20 IAMs_20 02 22 20.4
comp=Z,9µm,19.0s
M30M Minto, Yukon 72.36 346 P **P** 01 48 00.1 +1.0
baz=23,SNR=21
M30M S **S** 01 57 26.5 +4.4
baz=23
N41A Harden Midland 72.38 309 IAmb IAmb 01 48 03.0
comp=Z,117nm,1.1s
N41A Harden Midland 72.38 309 P **P** 01 47 58.6 -1.0
baz=48
Q44A Meyer Farm, Va 72.50 307 IAmb IAmb 01 48 03.8
comp=Z,100nm,1.1s
Q44A Meyer Farm, Va 72.50 307 P **P** 01 47 59.1 -1.2
baz=49,SNR=11
RIDG Independent Ri 72.50 350 P **P** 01 48 01.5 +1.5
baz=17,SNR=319
RIDG S **S** 01 57 27.3 +3.6
baz=17
K24K Donnelly Dome 72.56 350 P **P** 01 48 01.3 +1.0
baz=16,SNR=13
K24K S **S** 01 57 27.6 +3.3
baz=16
T47A Sharon Grove 72.60 304 IAmb IAmb 01 48 06.9
comp=Z,121nm,0.8s
T47A Sharon Grove 72.60 304 P **P** 01 47 59.8 -1.2
baz=49,SNR=52
T47A S **S** 01 57 22.3 -3.3
baz=49
GOGA Godfrey 72.63 299 IAMs_20 IAMs_20 02 17 06.0
comp=Z,12µm,21.0s
GOGA Godfrey 72.63 299 P **P** 01 48 00.4 -0.7
baz=50,SNR=7.8
GOGA Godfrey 72.63 299 P **P** 01 48 00.6 -0.6
baz=50,SNR=7.8
GOGA S **S** 01 57 25.9 0.0
baz=50
GCSA Galena City Sc 72.63 356 P **P** 01 48 02.3 +1.7
baz=7.7,SNR=20
GCSA S **SKiKP** 01 57 31.1 -3.4
baz=7.7
W50A Signal Mountai 72.65 302 IAmb IAmb 01 48 07.5
comp=Z,74nm,1.0s
W50A Signal Mountai 72.65 302 P **P** 01 48 00.3 -1.1
baz=50,SNR=19
W50A S **S** 01 57 24.7 -1.5
baz=50
CLTN Cedars of Leba 72.71 303 P **P** 01 48 01.3 -0.3
Y52A Lilburn 72.72 300 P **P** 01 48 01.4 -0.3
baz=50,SNR=15
Y52A P **P** 01 48 01.4 -0.3
baz=50,SNR=15
Y52A S **S** 01 57 25.4 -1.6
baz=50
Y52A S **S** 01 57 25.4 -1.6
baz=50
L27K Beaver Creek, 72.73 348 IAMs_20 IAMs_20 02 24 18.1
comp=Z,7µm,20.0s
L27K Beaver Creek, 72.73 348 P **P** 01 48 02.8 +1.5
baz=19,SNR=108
L27K S **SKiKP** 01 57 31.1 -3.7
baz=19
X51A Calhoun 72.77 301 IAmb IAmb 01 48 41.5
comp=Z,182nm,1.9s
X51A Calhoun 72.77 301 P **P** 01 48 01.7 -0.3
baz=50,SNR=8.1
X51A P **P** 01 48 01.7 -0.3
baz=50,SNR=8.1
X51A S **S** 01 57 25.1 -2.5
baz=50
X51A S **S** 01 57 25.1 -2.5
baz=50
M29M Somme Creek 72.78 347 P **P** 01 48 03.1 +1.4
baz=22,SNR=103
M29M S **SKiKP** 01 57 32.1 -2.9
baz=22
BPAW Bear Paw Mtn. 72.83 353 P **P** 01 48 02.2 +0.3
baz=12,SNR=118
BPAW S **S** 01 57 28.9 +1.5
baz=12
154A Montrose 72.91 299 IAmb IAmb 01 48 17.6
comp=Z,78nm,1.0s
154A Montrose 72.91 299 P **P** 01 48 02.4 -0.4
baz=50
154A S **S** 01 57 28.6 -0.6
baz=50
SCIA State Center 72.91 311 IAmb IAmb 01 48 06.3
comp=Z,103nm,1.2s
SCIA State Center 72.91 311 P **P** 01 48 01.9 -0.8
baz=48
SCIA State Center 72.91 311 P **P** 01 48 02.2 -0.5
baz=48
SCIA S **S** 01 57 25.5 -3.4
baz=48
255A Hazlehurst 72.94 298 P **P** 01 48 02.7 -0.3
baz=50
255A S **S** 01 57 29.3 -0.2
baz=50
N32M Quiet Lake 72.95 344 P **P** 01 48 03.9 +1.2
baz=25
N32M S **SKiKP** 01 57 33.6 -1.5
baz=25
L26K Log Cabin Wild 72.99 349 IAMs_20 IAMs_20 02 25 22.8
comp=Z,8µm,20.0s
L26K Log Cabin Wild 72.99 349 P **P** 01 48 04.4 +1.5
baz=18,SNR=87
L26K S **SKiKP** 01 57 34.0 -1.2
baz=18
MCK McKinley 72.99 352 P **P** 01 48 03.3 +0.4
baz=14,SNR=139
MCK S **S** 01 57 30.1 +0.9
baz=14
J20K Nowinta River 73.02 354 P **P** 01 48 04.1 +1.2
baz=9.7,SNR=106
J20K S **SKiKP** 01 57 33.4 -1.7
baz=9.7
HNS HongShan 73.07 55 ⇓P **P** 01 48 04.1 +0.4
HNS PP **PP** 01 50 47.8 +1.9
HNS S **SKiKP** 01 57 33.6 -2.3
HNS pmax pmax
comp=Z,42nm,1.5s
HNS pmax pmax
comp=Z,3µm,6.7s
ANM Nome 73.09 359 P **P** 01 48 04.3 +0.9
baz=1.1
ANM S **SKiKP** 01 57 35.2 0.0
baz=1.1
KMI Kunming 73.11 71 ⇓P **P** 01 48 04.1 -0.4
KMI pP pP 01 48 07.6 -1.1
KMI PP **PP** 01 50 45.2 -1.8
KMI S **S** 01 57 26.1 -6.1
KMI SS **SS** 02 02 15.2 +2.4
KMI pmax pmax
comp=Z,24nm,0.9s
KMI pmax pmax
comp=Z,3µm,6.6s
KMI LR LR
comp=Z,23µm,22.0s
CHUM Lake Minchumin 73.16 353 P **P** 01 48 05.1 +1.3
baz=11,SNR=57
CHUM S **S** 01 57 32.9 +1.8
baz=11
N31M Braeburn, Yuko 73.18 345 IAMs_20 IAMs_20 02 21 49.1
comp=Z,11µm,20.0s
N31M Braeburn, Yuko 73.18 345 P **P** 01 48 05.0 +0.9
baz=23,SNR=52
N31M S **SKiKP** 01 57 35.4 -0.1
baz=23
BVCY Beaver Creek 73.20 348 P **P** 01 48 05.9 +1.7
baz=20,SNR=30
BVCY S **SKiKP** 01 57 37.4 +1.9

baz=20
V48A Smith Brothers 73.24 303 IAmb IAmb 01 48 10.5
comp=Z,234nm,1.9s
V48A Smith Brothers 73.24 303 P **P** **01 48 03.8 -0.9**
baz=49,SNR=21
V48A S **S** **01 57 28.6 -4.3**
baz=49
RND Reindeer 73.30 352 P **P** **01 48 03.2 -1.5**
RND IAmb IAmb 01 48 09.3
comp=Z,102nm,1.1s
RND Reindeer 73.30 352 P **P** **01 48 03.2 -1.5**
RND pmax pmax
comp=Z,102nm,1.1s
RND MLR MLR
comp=Z,5µm,22.0s
PAX Paxson 73.33 350 P **P** **01 48 05.5 +0.6**
baz=16,SNR=53
PAX S **SKiKP** **01 57 36.6 +0.8**
baz=16
KTH Kantishna Hill 73.36 353 IAmb IAmb 01 48 12.2
comp=Z,257nm,1.4s
KTH IAMs_20 IAMs_20 02 19 15.7
comp=Z,7µm,22.0s
SLM Saint Louis 73.39 307 P **P** **01 48 04.7 -0.9**
baz=48
SLM S **S** **01 57 30.3 -4.2**
baz=48
TRF Thorofare Moun 73.40 352 IAMs_20 IAMs_20 02 19 26.8
comp=Z,7µm,21.0s
TRF Thorofare Moun 73.40 352 P **P** **01 48 05.7 +0.3**
baz=13,SNR=47
456A Hilliard 73.41 297 P **P** **01 48 06.3 +0.5**
baz=50
456A S **S** **01 57 34.5 -0.3**
baz=50
M27K Edge Creek, AK 73.41 348 IAMs_20 IAMs_20 02 23 24.0
comp=Z,7µm,19.0s
M27K Edge Creek, AK 73.41 348 P **P** **01 48 07.1 +1.6**
baz=19,SNR=71
M27K S **SKiKP** **01 57 40.0 +4.0**
baz=19
SDDR Presa de Saban 73.41 281 IAmb IAmb 01 48 11.3
comp=Z,195nm,1.1s
SDDR IAMs_20 IAMs_20 02 20 50.2
comp=Z,10µm,18.0s
SDDR Presa de Saban 73.41 281 *eP* **P** **01 48 05.1 -1.0**
S44A Carbondale 73.44 306 P **P** **01 48 04.9 -1.0**
baz=48,SNR=18
S44A S **S** **01 57 29.6 -5.4**
baz=48
N30M Aishikik Lake 73.45 346 P **P** **01 48 07.0 +1.3**
baz=22,SNR=64
N30M S **SKiKP** **01 57 37.5 +1.5**
baz=22
DHY Denali Highway 73.46 351 P **P** **01 48 06.8 +1.0**
baz=15,SNR=239
DHY S **SKiKP** **01 57 37.1 +1.1**
baz=15
ECSD EROS Data Cent 73.50 315 IAmb IAmb 01 48 11.2
comp=Z,272nm,1.7s
ECSD EROS Data Cent 73.50 315 IAMs_20 IAMs_20 02 17 48.9
comp=Z,11µm,22.0s
ECSD EROS Data Cent 73.50 315 P **P** **01 48 05.7 -0.4**
baz=46,SNR=56
ECSD EROS Data Cent 73.50 315 P **P** **01 48 06.0 -0.1**
baz=46,SNR=56
ECSD S **S** **01 57 35.6 +0.1**
baz=46
T45B Paducah 73.52 305 P **P** **01 48 04.4 -1.9**
baz=49
T45B S **S** **01 57 31.7 -4.2**
baz=49
M26K Nabesna, AK 73.53 349 P **P** **01 48 07.7 +1.6**
baz=18,SNR=110
M26K S **SKiKP** **01 57 41.1 +5.1**
baz=18
LYN LuoYang 73.55 58⇓*iP* **P** **01 48 05.8 -0.8**
LYN pP pP 01 48 09.9 -0.9
LYN sP sP 01 48 13.3 +1.0
LYN PP **PP** **01 50 52.3 +2.1**
LYN S **SKiKP** **01 57 38.4 +1.7**
LYN LuoYang 73.55 58 SS SS 02 02 26.3 +7.9
LYN pmax pmax
comp=Z,40nm,2.3s
LYN pmax pmax
comp=Z,3µm,5.7s
LYN LR LR
comp=N,13µm,16.9s
LYN LR LR
comp=E,15µm,17.4s
LYN LR LR
comp=Z,19µm,18.1s
LYN LuoYang 73.55 58⇓*iP* **P** **01 48 05.7 -0.8**
LYN pP pP 01 48 09.9 -0.9
LYN sP sP 01 48 13.3 +1.0
LYN PP **PP** **01 50 52.2 +2.1**
LYN S **SKiKP** **01 57 38.4 +1.7**
LYN SS **SS** **02 02 26.2 +7.8**
LYN pmax pmax
comp=Z,3µm,5.7s
LYN LR LR
comp=Z,13µm,16.9s
LYN LR LR
comp=Z,19µm,18.1s
E28A Huff 73.56 319 P **P** **01 48 06.8 +0.3**
baz=44,SNR=32
CAST Castle Rocks 73.60 353 IAmb IAmb 01 48 12.6
comp=Z,265nm,1.3s
CAST Castle Rocks 73.60 353 P **P** **01 48 06.9 +0.5**
baz=11,SNR=104
WVT Waverly 73.60 304 P **P** **01 48 05.6 -1.3**
WVT Waverly 73.60 304 P **P** **01 48 05.6 -1.3**
WVT pmax pmax
comp=Z,88nm,1.3s
WVT Waverly 73.60 304 P **P** **01 48 05.3 -1.6**
baz=49,SNR=23
WVT Waverly 73.60 304 P **P** **01 48 05.6 -1.3**
baz=49
WVT S **SKiKP** **01 57 31.6 -5.2**
baz=49
WVT Waverly 73.60 304 P **P** **01 48 07.2 +0.3**
N38A Joes South For 73.67 311 IAmb IAmb 01 48 12.9
comp=Z,81nm,0.9s
N38A Joes South For 73.67 311 P **P** **01 48 05.9 -1.4**
baz=47
N38A S **SKiKP** **01 57 33.1 -3.7**
baz=47
YUK3 Moose Creek 73.74 347 P **P** **01 48 09.1 +1.6**
baz=20,SNR=93
YUK3 S **S** **01 57 42.9 +4.8**
baz=20
P33M Teslin, Yukon 73.75 343 IAmb IAmb 01 48 13.2
comp=Z,181nm,1.1s
P33M IAMs_20 IAMs_20 02 23 18.1
comp=Z,11µm,19.0s
P33M Teslin, Yukon 73.75 343 P **P** **01 48 08.6 +1.2**
baz=25,SNR=68
P33M S **S** **01 57 41.3 +3.3**
baz=25
WHY Whitehorse 73.77 344 P **P** **01 48 08.3 +0.7**
baz=24,SNR=39
WHY S **S** **01 57 42.4 +4.1**
baz=24
Z51A Franklin 73.78 300 P **P** **01 48 07.1 -0.9**
baz=49
HVD Gariep Dam 73.80 169 *eP* **P** **01 48 07.7 -0.3**
HVD IAmb IAmb 01 48 17.3
comp=Z,241nm,1.5s
KLR Kul'dur 73.80 37 LR LR 02 24 15.2
comp=Z,47µm,18.2s,baz=320,slow=39
KLR Kul'dur 73.80 37*d iP* **P** **01 48 08.0 +0.2**
KLR pmax pmax
comp=Z,147nm,2.0s
KLR MLR MLR
comp=Z,43µm,17.0s
GAMB Gambell 73.82 2 P **P** **01 48 08.3 +0.7**
baz=356
GAMB S **S** **01 57 40.5 +2.1**
baz=356
K20K Telida 73.83 354 P **P** **01 48 08.9 +1.1**
baz=9.7,SNR=83
K20K S **S** **01 57 42.0 +3.4**
baz=9.7
WAT1 Susitna Watana 73.83 351 P **P** **01 48 08.0 +0.2**
baz=14
WAT1 S **SKiKP** **01 57 37.0 +0.6**
baz=14
HARP HAARP 73.83 350 P **P** **01 48 09.0 +1.2**
baz=16,SNR=15
HARP S **S** **01 57 44.1 +5.3**
baz=16
YUK4 Talbot Arm 73.84 346 P **P** **01 48 08.9 +0.8**
baz=21,SNR=25
YUK4 S **S** **01 57 41.8 +2.5**
baz=21
DGMT Dagmar 73.84 322 IAMs_20 IAMs_20 02 20 32.5
comp=Z,11µm,20.0s
DGMT Dagmar 73.84 322 P **P** **01 48 09.3 +1.2**
baz=43,SNR=19
DGMT Dagmar 73.84 322 P **P** **01 48 09.5 +1.4**
baz=43,SNR=19
DGMT S **S** **01 57 42.9 +3.6**
baz=43
P40A Paris 73.85 309 P **P** **01 48 06.9 -1.3**
baz=48,SNR=22
P40A S **SKiKP** **01 57 35.2 -1.9**
baz=48
O30N Mendenhall 73.90 345 P **P** **01 48 09.2 +0.9**
baz=23,SNR=72
O30N S **S** **01 57 42.9 +3.2**
baz=23
152A Waverly Hall 73.91 300 IAmb IAmb 01 48 13.7
comp=Z,238nm,2.0s
152A Waverly Hall 73.91 300 P **P** **01 48 08.0 -0.7**
baz=49,SNR=13
152A S **S** **01 57 39.0 -1.5**
baz=49
CGM3 Cape Girardeau 73.94 306 IAmb IAmb 01 48 29.5
comp=Z,130nm,1.5s
FVM French Village 73.94 307 P **P** **01 48 08.2 -0.6**
baz=48,SNR=23
FVM S **SKiKP** **01 57 36.9 -0.3**
baz=48
TIGA Tifton 73.97 298 P **P** **01 48 09.1 0.0**
baz=50,SNR=6.5
TIGA Tifton 73.97 298 P **P** **01 48 09.2 +0.1**
baz=50,SNR=6.5
TIGA S **S** **01 57 39.9 -1.3**
baz=50
WAT6 Susitna Watana 73.98 351 P **P** **01 48 09.4 +0.5**
baz=14,SNR=68
WAT6 S **S** **01 57 42.6 +1.9**
baz=14
CVNA Calvinia 74.04 174 *eP* **P** **01 48 09.4 0.0**
CVNA IAmb IAmb 01 48 18.1
comp=Z,259nm,1.8s
GDU01 Guandu, BA 74.07 234 *eP* **P** **01 48 10.3 +0.5**
R33M Jennings River 74.07 342 P **P** **01 48 11.5 +2.1**
baz=27,SNR=169
R33M S **S** **01 57 47.3 +5.5**
baz=27
HYT Haines Junctio 74.12 346 IAmb IAmb 01 48 15.5
comp=Z,171nm,1.1s
HYT Haines Junctio 74.12 346 P **P** **01 48 11.2 +1.5**
baz=22,SNR=66
HYT S **S** **01 57 44.0 +1.8**
baz=22
PPLA Purkeypile 74.12 353 P **P** **01 48 09.8 +0.1**
PPLA IAmb IAmb 01 48 17.1
comp=Z,164nm,1.0s
PPLA Purkeypile 74.12 353 P **P** **01 48 10.6 +0.9**
baz=11,SNR=52
PPLA S **S** **01 57 41.7 -0.6**
baz=11
YUK6 Outpost Mounta 74.16 346 P **P** **01 48 11.6 +1.6**
baz=21,SNR=71
YUK6 S **S** **01 57 44.8 +1.9**
baz=21
FOMA Nahampoana Res 74.18 148 IAMs_20 IAMs_20 02 25 58.1
comp=Z,7µm,19.0s
SUSD Miller 74.21 316 P **P** **01 48 09.0 -1.4**
baz=45
SUSD S **S** **01 57 43.2 -0.4**
baz=45
SUSD Miller 74.21 316 P **P** **01 48 10.0 -0.4**
baz=45
SUSD S **S** **01 57 42.0 -1.6**
baz=45
Y49A Blount Mountai 74.21 301 P **P** **01 48 10.1 -0.5**
baz=49,SNR=9.7
Y49A S **S** **01 57 41.1 -2.8**
baz=49
X48A Hartselle 74.22 302 IAmb IAmb 01 48 16.5
comp=Z,80nm,0.8s
X48A Hartselle 74.22 302 P **P** **01 48 09.9 -0.7**
baz=49,SNR=41
X48A S **SKiKP** **01 57 40.4 +2.7**
baz=49
M24K Tolsona, Glenn 74.25 350 P **P** **01 48 11.2 +0.9**
baz=16,SNR=18
M24K S **S** **01 57 46.5 +3.0**
baz=16
BNX BinXian 74.31 42⇓P **P** **01 48 11.0 +0.1**
BNX pP **pP** **01 48 15.7 +0.6**
BNX sP **sP** **01 48 18.1 +1.5**
BNX PP **PP** **01 50 58.8 +2.5**
BNX S **S** **01 57 46.7 +2.0**
BNX sS **sS** **01 57 55.5 +3.9**
BNX pmax pmax
comp=Z,34nm,1.1s
BNX pmax pmax
comp=Z,3µm,5.1s
CCM Cathedral Cave 74.37 307 P **P** **01 48 10.5 -0.9**
CCM IAmb IAmb 01 48 14.7
comp=Z,123nm,1.3s
CCM Cathedral Cave 74.37 307 P **P** **01 48 10.5 -0.9**
CCM pmax pmax
comp=Z,123nm,1.3s
CCM Cathedral Cave 74.37 307 P **P** **01 48 10.7 -0.6**
baz=48,SNR=52
CCM Cathedral Cave 74.37 307 P **P** **01 48 10.8 -0.5**
baz=48
CCM S **S** **01 57 42.3 -3.2**
baz=48
CCM Cathedral Cave 74.37 307 P **P** **01 48 11.1 -0.2**
TTA Tatalina 74.39 355 P **P** **01 48 12.7 +1.6**
baz=8.2,SNR=45
TTA S **S** **01 57 50.2 +5.2**
baz=8.2
ENH Enshi 74.40 63 IAmb IAmb 01 48 18.9
comp=Z,155nm,1.0s
CUT Chulitna 74.42 352 IAMs_20 IAMs_20 02 26 56.7
comp=Z,6µm,19.0s
CUT Chulitna 74.42 352 P **P** **01 48 10.8 -0.5**
baz=13
KSTD Kokstad 74.42 166 *eP* **P** **01 48 11.1 -0.6**
KSTD IAmb IAmb 01 48 21.5
comp=Z,279nm,2.0s
CHTO Chiang Mai 74.44 79 P **P** **01 48 11.2 -0.8**
CHTO IAmb IAmb 01 48 22.4
comp=Z,136nm,1.1s
CHTO Chiang Mai 74.44 79 IAMs_20 IAMs_20 02 27 29.4
comp=Z,8µm,20.0s
CHTO Chiang Mai 74.44 79 P **P** **01 48 11.2 -0.8**
CHTO pmax pmax
comp=Z,136nm,1.1s
CHTO Chiang Mai 74.44 79 P **P** **01 48 11.8 -0.3**
CHTO P **P** **01 48 11.8 -0.3**
CHTO Chiang Mai 74.44 79 P **P** **01 48 12.1 +0.1**
CHTO Chiang Mai 74.44 79 P **P** **01 48 11.7 -0.3**
P32M Atlin 74.50 343 P **P** **01 48 12.4 +0.5**
baz=25,SNR=20
P32M S **S** **01 57 50.0 +3.5**
baz=25
MCARA McCarthy VSAT 74.51 348 IAMs_20 IAMs_20 02 24 11.1
comp=Z,8µm,19.0s
MCARA McCarthy VSAT 74.51 348 P **P** **01 48 12.9 +1.1**
baz=18,SNR=42
MCARA S **S** **01 57 51.6 +5.3**
baz=18
N25K Chitina, Valde 74.52 349 IAmb IAmb 01 48 18.2
comp=Z,341nm,1.6s
N25K Chitina, Valde 74.52 349 P **P** **01 48 12.9 +0.9**
baz=17,SNR=48
N25K S **S** **01 57 50.4 +3.8**
baz=17
GLB Gilahina Butte 74.57 349 IAmb IAmb 01 48 18.6
comp=Z,394nm,2.0s
L34A Svendsen Farm, 74.59 313 P **P** **01 48 11.6 -1.0**
baz=46
656A Willston 74.62 296 P **P** **01 48 13.0 +0.1**
baz=49
656A S **S** **01 57 48.4 -0.1**
baz=49
GRNR Gornyy 74.62 33⇓*iP* **P** **01 48 13.2 +0.6**
GRNR *eS* **S** **01 57 52.8 +4.8**
GRNR pmax pmax
comp=Z,30nm,1.2s
GRNR smax smax
comp=E,9.0nm,0.7s
GRNR MLR MLR
comp=E,10µm,13.0s
GRNR MLR MLR
comp=N,10µm,18.0s
GRNR MLR MLR
comp=Z,13µm,16.0s
FRAZ Fraserburg 74.62 173⇓*iP* **P** **01 48 12.7 -0.1**
FRAZ IAmb IAmb 01 48 21.0
comp=Z,95nm,1.1s
BRAK Brakfontein 74.63 171⇓*iP* **P** **01 48 13.0 +0.2**
BRAK IAmb IAmb 01 48 14.1
comp=Z,2µm,3.7s
P38A Dawn 74.63 310 IAmb IAmb 01 48 18.9
comp=Z,81nm,0.8s
P38A Dawn 74.63 310 P **P** **01 48 12.3 -0.6**
baz=47,SNR=37
P38A S **S** **01 57 44.3 -4.1**
baz=47
O28M Mount Upton 74.64 347 P **P** **01 48 14.3 +1.4**
baz=20,SNR=56
O28M S **S** **01 57 51.1 +2.7**
baz=20
CTGM Chitina Glacie 74.65 347 P **P** **01 48 13.4 +0.7**
CTGM IAMs_20 IAMs_20 02 24 17.7
comp=Z,7µm,18.0s
CTG Chitna Glacier 74.65 347 P **P** **01 48 14.2 +1.4**
baz=19,SNR=34
SCM Sheep Creek Mo 74.66 351 P **P** **01 48 14.0 +1.3**
baz=15,SNR=81
SCM S **S** **01 57 50.6 +2.5**
baz=15
060A Indiantown 74.66 293 P **P** **01 48 13.8 +0.6**
baz=50
060A S **S** **01 57 50.2 +1.1**
baz=50
CM31 Chiang Mai Arr 74.67 79 IAmb IAmb 01 48 26.9
comp=Z,90nm,0.9s
CMAR Chiang Mai Arr 74.67 79 P **P** **01 48 13.7 +0.4**
comp=Z,42nm,0.8s,baz=305,slow=7.0,SNR=91
CMAR S **S** **01 57 44.8 -4.6**
comp=Z,1.2nm,0.3s,baz=310,slow=10,SNR=1.9
CMAR LR LR 02 28 51.6
comp=Z,6µm,20.3s,baz=315,slow=42
comp=Z,42nm,0.8s
CMAR Chiang Mai Arr 74.67 79*ce*P **P** **01 48 13.0 -0.4**
CMAR pmax pmax
comp=Z,44nm,0.9s
P30M Million Dollar 74.67 345 P **P** **01 48 14.4 +1.6**
baz=22
P30M S **S** **01 57 51.9 +3.6**
baz=22
L20K Farewell, AK 74.68 354 P **P** **01 48 13.2 +0.4**
baz=9.8,SNR=56
L20K S **S** **01 57 48.7 +0.4**
baz=9.8
DWPF Disney Wildern 74.69 294 IAMs_20 IAMs_20 02 15 20.1
comp=Z,11µm,22.0s
DWPF Disney Wildern 74.69 294 P **P** **01 48 13.1 -0.3**
baz=50
DWPF Disney Wildern 74.69 294 P **P** **01 48 13.1 -0.3**
baz=50
DWPF S **S** **01 57 48.3 -1.1**
baz=50
DWPF Disney Wildern 74.69 294 P **P** **01 48 18.0 +4.7**
DLBC Dease Lake 74.71 341 LR LR 02 24 14.3
comp=Z,21µm,18.8s,baz=28,slow=38
DLBC Dease Lake 74.71 341 P **P** **01 48 14.8 +1.7**
baz=27,SNR=44
DLBC S **S** **01 57 53.3 +4.5**
baz=27
CN2 Changchun 74.71 44 *eP* **P** **01 48 13.5 +0.3**
CN2 PP **PP** **01 50 59.3 -0.5**
CN2 *eS* **S** **01 57 50.8 +1.6**
CN2 Changchun 74.71 44 *eP* **P** **01 48 13.0 -0.2**
CN2 PP **PP** **01 50 59.2 -0.5**
CN2 *eS* **S** **01 57 50.8 +1.6**
CN2 SS **SS** **02 02 37.9 +2.3**
CN2 pmax pmax
comp=Z,50nm,1.3s
CN2 pmax pmax
comp=Z,3µm,4.3s
CN2 LR LR
comp=Z,24µm,19.0s
CN2 LR LR
comp=Z,21µm,19.0s
CN2 LR LR
comp=Z,33µm,17.2s
LOGN Logan Glacier 74.72 347 IAMs_20 IAMs_20 02 24 18.8
comp=Z,7µm,18.0s
BFON Badsfontein, M 74.74 171⇓*iP* **P** **01 48 13.5 +0.1**
BFON IAmb IAmb 01 48 22.5
comp=Z,442nm,1.9s
M23K Glacier View 74.74 351 P **P** **01 48 14.0 +0.9**
baz=14,SNR=69
M23K S **S** **01 57 47.6 -1.4**
baz=14
PBMO Poplar Bluff 74.74 306 P **P** **01 48 13.1 -0.4**
baz=48
O29M Mount Kennedy 74.80 346 P **P** **01 48 14.7 +1.1**
baz=21,SNR=29
O29M S **S** **01 57 52.6 +2.7**
baz=21
SML Sawmill 74.80 351 P **P** **01 48 14.4 +0.9**
baz=14,SNR=89
SML S **S** **01 57 50.9 +1.2**
baz=14
R40A Maddies Statio 74.81 308 P **P** **01 48 12.8 -1.1**
baz=47,SNR=48
R40A S **S** **01 57 46.3 -4.1**
baz=47
KLU Klutina 74.81 350 P **P** **01 48 13.6 0.0**
KLU IAmb IAmb 01 48 19.1
comp=Z,226nm,1.1s
KLU Klutina 74.81 350 P **P** **01 48 14.7 +1.1**
baz=16,SNR=58
KLU S **S** **01 57 53.3 +3.4**
baz=16
352A Blakely 74.82 299 P **P** **01 48 12.7 -1.4**
baz=49
352A S **S** **01 57 48.8 -1.9**
baz=49
MALB Monte Alegre 74.88 253 *eP* **P** **01 48 15.6 +1.0**
PRPB Parauapebas 74.89 247 *eP* **P** **01 48 15.3 +0.6**
GHO Glory Hole Cre 74.90 351 IAmb IAmb 01 48 27.6
comp=Z,196nm,1.1s
N35A Tabor 74.96 312 P **P** **01 48 13.7 -1.0**
baz=46
N35A S **S** **01 57 49.1 -2.9**
baz=46
SKAG Skagway 74.96 344 P **P** **01 48 15.6 +1.2**
baz=23,SNR=9.3
SKT Skwentna 74.97 353 IAMs_20 IAMs_20 02 20 27.1
comp=Z,7µm,21.0s
SKT Skwentna 74.97 353 P **P** **01 48 14.2 -0.3**
baz=12
SKT S **S** **01 57 50.7 -0.8**
baz=12
GYA Guiyang 74.97 68⇑P **P** **01 48 15.0 -0.2**
GYA pP pP 01 48 17.1 -2.3
GYA PP **PP** **01 51 06.0 +3.4**
GYA S **S** **01 57 51.9 -0.9**
GYA SS **SS** **02 02 41.7 +0.9**
GYA pmax pmax
comp=Z,34nm,1.2s
GYA pmax pmax
comp=Z,3µm,5.2s
GYA LR LR
comp=Z,11µm,19.4s
GYA LR LR
comp=Z,9µm,18.7s
GYA LR LR
comp=Z,19µm,21.5s
SUR Sutherland 75.02 173 LR LR 02 24 02.7
comp=Z,13µm,18.5s,baz=350,slow=38
SUR Sutherland 75.02 173 P **P** **01 48 13.9 -1.2**
SUR IAmb IAmb 01 48 24.5
comp=Z,312nm,1.9s
SUR Sutherland 75.02 173 P **P** **01 48 16.3 +1.2**
SUR P **P** **01 48 16.3 +1.2**
SUR Sutherland 75.02 173 P P 01 48 22.9 +7.7
GNAR Gosnell 75.04 305 IAmb IAmb 01 48 28.1

	comp=Z,204nm,1.2s						
L19K	**White Mountain**	**75.05**	**354**	IAmb	IAmb	01 48 20.9	
	comp=Z,174nm,1.1s						
L19K	**White Mountain**	**75.05**	**354**	P	**P**	**01 48 16.1**	**+1.2**
	baz=9.1,SNR=78						
L19K				S	**S**	**01 57 56.1**	**+3.7**
	baz=9.1						
M22K	**Willow**	**75.05**	**352**	P	**P**	**01 48 15.4**	**+0.6**
	baz=13,SNR=13						
M22K				S	**S**	**01 57 51.1**	**-1.1**
	baz=13						
GRAN	**Grantham**	**75.07**	**172**	*e*P	**P**	**01 48 16.1**	**+0.9**
GRAN				IAmb	IAmb	01 48 23.9	
	comp=Z,29nm,0.8s						
W45A	**Hickory Valley**	**75.07**	**304**	P	**P**	**01 48 13.7**	**-1.8**
	baz=48,SNR=6.1						
TGL	**Tana Glacier**	**75.08**	**348**	IAMs_20	IAMs_20	02 24 37.2	
	comp=Z,8µm,20.0s						
PMR	**Palmer**	**75.10**	**351**	P	**P**	**01 48 15.7**	**+0.6**
	baz=13,SNR=26						
PMR				S	**S**	**01 57 55.0**	**+2.2**
	baz=13						
TABL	**Table Mountain**	**75.11**	**347**	IAMs_20	IAMs_20	02 24 57.0	
	comp=Z,6µm,18.0s						
LRAL	**Lakeview Retre**	**75.12**	**301**	P	**P**	**01 48 15.2**	**-0.5**
	baz=48,SNR=41						
LRAL	**Lakeview Retre**	**75.12**	**301**	P	**P**	**01 48 15.2**	**-0.5**
	baz=48,SNR=41						
LRAL				S	**S**	**01 57 49.3**	**-4.7**
	baz=48						
SNY	**Shenyang**	**75.12**	**46**	⇓P	**P**	**01 48 15.9**	**+0.3**
SNY				PP	**PP**	**01 51 05.3**	**+2.1**
SNY				S	**S**	**01 57 52.6**	**-1.1**
BMRM	**Bremner River**	**75.14**	**349**	P	**P**	**01 48 16.5**	**+1.0**
	baz=17,SNR=63						
BMRM				S	**S**	**01 57 56.6**	**+3.2**
	baz=17						
DIV	**Divide**	**75.14**	**350**	IAmb	IAmb	01 48 20.9	
	comp=Z,150nm,1.1s						
ISLE	**Juniper Island**	**75.15**	**348**	IAMs_20	IAMs_20	02 24 36.9	
	comp=Z,9µm,20.0s						
PLBC	**Pleasant Camp**	**75.17**	**344**	P	**P**	**01 48 17.2**	**+1.6**
	baz=23,SNR=33						
PLBC				S	**S**	**01 57 58.3**	**+4.6**
	baz=23						
KNK	**Knik Glacier**	**75.20**	**351**	P	**P**	**01 48 16.8**	**+1.0**
	baz=14,SNR=47						
KNK				S	**S**	**01 57 55.5**	**+1.4**
	baz=14						
M20K	**Styx River**	**75.21**	**353**	P	**P**	**01 48 15.9**	**0.0**
	baz=10						
BIRV	**Birongo**	**75.25**	**271**	P	**P**	**01 48 16.4**	**-0.4**
P29M	**Windy Craggy**	**75.27**	**345**	IAMs_20	IAMs_20	02 23 05.4	
	comp=Z,10µm,20.0s						
P29M	**Windy Craggy**	**75.27**	**345**	P	**P**	**01 48 17.8**	**+1.5**
	baz=22,SNR=85						
P29M				S	**S**	**01 57 59.8**	**+4.8**
	baz=22						
YAH	**Yahtse**	**75.28**	**347**	IAMs_20	IAMs_20	02 24 21.6	
	comp=Z,7µm,18.0s						
M19K	**Big River Lodg**	**75.29**	**354**	IAmb	IAmb	01 48 23.1	
	comp=Z,232nm,1.2s						
M19K	**Big River Lodg**	**75.29**	**354**	P	**P**	**01 48 17.0**	**+0.7**
	baz=9.4,SNR=91						
M19K				S	**S**	**01 57 56.0**	**+1.0**
	baz=9.4						
PINM	**Pinnacle**	**75.29**	**347**	P	**P**	**01 48 17.8**	**+1.4**
	baz=20,SNR=30						
PINM				S	**S**	**01 57 57.8**	**+2.6**
	baz=20						
TIA	**Tai'an**	**75.30**	**54**	⇓P	**P**	**01 48 16.6**	**-0.2**
TIA				PP	**PP**	**01 51 06.9**	**+1.9**
TIA				S	**S**	**01 57 56.0**	**0.0**
TIA				SS	**SS**	**02 02 48.4**	**+3.4**
TIA				pmax	pmax		
	comp=Z,68nm,0.9s						
TIA				pmax	pmax		
	comp=Z,3µm,7.9s						
TIA				LR	LR		
	comp=Z,17µm,17.2s						
TIA				LR	LR		
	comp=Z,18µm,20.6s						
TIA				LR	LR		
	comp=Z,36µm,19.1s						
GRAF	**Camdeboo Natio**	**75.31**	**170**	*e*P	**P**	**01 48 17.4**	**+0.7**
GRAF				IAmb	IAmb	01 48 26.3	
	comp=Z,377nm,1.8s						
CMC01	**Camacan, BA**	**75.33**	**233**	*e*P	**P**	**01 48 18.9**	**+1.8**
553A	**Crawfordville**	**75.33**	**297**	P	**P**	**01 48 16.9**	**-0.2**
	baz=49						
553A				S	**S**	**01 57 54.7**	**-1.8**
	baz=49						
250A	**Grady**	**75.35**	**300**	IAmb	IAmb	01 48 21.9	
	comp=Z,235nm,1.6s						
250A	**Grady**	**75.35**	**300**	P	**P**	**01 48 16.3**	**-0.8**
	baz=49,SNR=10						
250A				S	**S**	**01 57 54.0**	**-2.6**
	baz=49						
MERW	**Merweville**	**75.37**	**173**	⇓*i*P	**P**	**01 48 17.1**	**0.0**
MERW				IAmb	IAmb	01 48 25.8	
	comp=Z,634nm,2.2s						
WAX	**Waxell Ridge**	**75.37**	**348**	IAMs_20	IAMs_20	02 24 46.1	
	comp=Z,10µm,18.0s						
SMTB	**Santa Maria do**	**75.38**	**243**	*e*P	**P**	**01 48 18.8**	**+1.3**
K31A	**O'Neill**	**75.39**	**315**	P	**P**	**01 48 16.5**	**-0.8**
	baz=45						
K31A				S	**S**	**01 57 56.1**	**-0.7**
	baz=45						
ROOI	**Rooidraai Farm**	**75.41**	**171**	*e*P	**P**	**01 48 18.3**	**+1.0**
ROOI				IAmb	IAmb	01 48 19.9	
	comp=Z,80nm,1.0s						
S34M	**Telegraph Cree**	**75.44**	**341**	P	**P**	**01 48 19.2**	**+2.0**
	baz=26,SNR=44						
S34M				S	**S**	**01 58 01.6**	**+4.8**
	baz=26						
MESA	**MESA**	**75.49**	**347**	IAMs_20	IAMs_20	02 24 38.0	
	comp=Z,8µm,18.0s						
MESA	**MESA**	**75.49**	**347**	P	**P**	**01 48 19.5**	**+1.8**
	baz=19,SNR=26						
MESA				S	**S**	**01 58 01.9**	**+4.2**
	baz=19						
PNL	**Peninsula**	**75.54**	**346**	P	**P**	**01 48 18.9**	**+1.2**
	baz=20,SNR=35						
PNL				S	**S**	**01 58 02.8**	**+4.8**
	baz=20						
GLI	**Glacier Island**	**75.55**	**350**	P	**P**	**01 48 18.6**	**+0.8**
	baz=15						
GLI				S	**S**	**01 57 57.5**	**-0.4**
	baz=15						
BERG	**Berg Lake**	**75.56**	**348**	IAMs_20	IAMs_20	02 24 44.7	
	comp=Z,9µm,20.0s						
SNH	**Sunshine Point**	**75.63**	**348**	IAMs_20	IAMs_20	02 24 53.7	
	comp=Z,11µm,19.0s						
OXF	**Oxford**	**75.64**	**304**	P	**P**	**01 48 17.3**	**-1.5**
	baz=48						
OXF	**Oxford**	**75.64**	**304**	P	**P**	**01 48 17.1**	**-1.6**
	baz=48						
OXF				S	**S**	**01 57 54.7**	**-5.1**
	baz=48						
RC01	**Rabbit Creek A**	**75.66**	**352**	P	**P**	**01 48 19.1**	**+0.7**
	baz=13,SNR=44						
RC01				S	**S**	**01 57 59.9**	**+0.8**
	baz=13						
Z47A	**Carrollton**	**75.68**	**302**	P	**P**	**01 48 17.5**	**-1.5**
	baz=48,SNR=14						
Z47A				S	**S**	**01 57 54.0**	**-6.3**
	baz=48						
HMT	**Hamilton**	**75.69**	**349**	IAMs_20	IAMs_20	02 25 01.3	
	comp=Z,9µm,20.0s						
EYAK	**Cordova Ski Ar**	**75.70**	**349**	P	**P**	**01 48 19.7**	**+1.2**
	baz=16,SNR=9.7						
EYAK				S	**S**	**01 58 00.7**	**+1.2**
	baz=16						
RAGM	**Ragged Mountai**	**75.70**	**349**	IAMs_20	IAMs_20	02 25 02.7	
	comp=Z,8µm,19.0s						
PWL	**Port Wells**	**75.72**	**351**	P	**P**	**01 48 19.7**	**+0.9**
	baz=14,SNR=15						
PWL				S	**S**	**01 57 58.5**	**-1.4**
	baz=14						
061Z	**Ochoppi**	**75.79**	**292**	P	**P**	**01 48 19.3**	**-0.4**
	baz=49						
061Z				S	**S**	**01 58 03.4**	**+1.8**
	baz=49						
SPCR	**Spurr Chakacha**	**75.80**	**353**	P	**P**	**01 48 19.1**	**-0.2**
	baz=11,SNR=14						
SPCR				S	**S**	**01 58 00.1**	**-0.7**
	baz=11						
S39A	**Bolivar**	**75.83**	**308**	P	**P**	**01 48 19.0**	**-0.8**
	baz=47,SNR=23						
S39A				S	**S**	**01 57 57.8**	**-3.9**
	baz=47						
JIS	**Juneau Island**	**75.85**	**343**	IAMs_20	IAMs_20	02 24 58.6	
	comp=Z,13µm,19.0s						
MATJ	**Matjiesfontein**	**75.88**	**174**	⇓*i*P	**P**	**01 48 20.5**	**+0.6**
MATJ				IAmb	IAmb	01 48 28.3	
	comp=Z,138nm,1.1s						
SOE	**Somerset East**	**75.88**	**169**	IAmb	IAmb	01 51 00.8	
	comp=Z,57nm,0.7s						
CER	**Ceres**	**75.88**	**175**	*e*Pn	P	01 48 11.0	-8.8
CER				IAmb	IAmb	01 48 16.0	
	comp=Z,480nm,2.1s						
451A	**Vernon**	**75.91**	**299**	P	**P**	**01 48 19.4**	**-0.9**
	baz=48						
BGNE	**Belgrade**	**75.93**	**314**	P	**P**	**01 48 19.4**	**-0.9**
BGNE	**Belgrade**	**75.93**	**314**	P	**P**	**01 48 19.8**	**-0.6**
	baz=45,SNR=16						
BGNE				S	**S**	**01 57 59.9**	**-2.9**
	baz=45						
BGNE	**Belgrade**	**75.93**	**314**	P	**P**	**01 48 20.4**	**+0.1**
	baz=45,SNR=16						
BGNE				S	**S**	**01 58 00.2**	**-2.7**
	baz=45						
N33A	**J Bar K, Exete**	**76.03**	**313**	IAmb	IAmb	01 48 27.4	
	comp=Z,88nm,0.9s						
N33B	**J Bar K, Exete**	**76.03**	**313**	P	**P**	**01 48 20.0**	**-0.9**
	baz=45						
N33B				S	**S**	**01 57 59.6**	**-4.3**
	baz=45						
T35M	**Bob Quinn**	**76.06**	**340**	P	**P**	**01 48 22.9**	**+2.1**
	baz=27,SNR=21						
DL2	**Dalian**	**76.08**	**50**	⇓*i*P	**P**	**01 48 20.8**	**-0.4**
DL2				PP	**PP**	**01 51 10.3**	**-1.1**
DL2				S	**S**	**01 58 02.0**	**-2.5**
DL2				pmax	pmax		
	comp=Z,57nm,1.1s						
DL2				pmax	pmax		
	comp=Z,2µm,6.7s						
DL2				LR	LR		
	comp=N,28µm,16.1s						
DL2				LR	LR		
	comp=E,32µm,17.1s						
DL2				LR	LR		
	comp=Z,29µm,17.2s						
DL2	**Dalian**	**76.08**	**50**	⇓*i*P	**P**	**01 48 20.7**	**-0.4**
DL2				PP	**PP**	**01 51 10.3**	**-1.1**
DL2				S	**S**	**01 58 02.0**	**-2.5**
DL2				pmax	pmax		
	comp=Z,57nm,1.1s						
DL2				pmax	pmax		
	comp=Z,2µm,6.7s						
DL2				LR	LR		
	comp=Z,28µm,16.1s						
DL2				LR	LR		
	comp=Z,29µm,17.2s						
LAO	**LASA Array**	**76.08**	**322**	P	**P**	**01 48 22.4**	**+1.2**
	baz=41,SNR=25						
LAO	**LASA Array**	**76.08**	**322**	P	**P**	**01 48 22.5**	**+1.4**
	baz=41,SNR=25						
LAO				S	**S**	**01 58 05.6**	**+1.1**
	baz=41						
KAIM	**Kayak Island**	**76.11**	**349**	IAMs_20	IAMs_20	02 25 14.3	
	comp=Z,9µm,18.0s						
KAIM	**Kayak Island**	**76.11**	**349**	P	**P**	**01 48 22.7**	**+1.8**
	baz=17						
CAPN	**Captain Cook N**	**76.12**	**352**	P	**P**	**01 48 21.2**	**+0.2**
	baz=12						
Y45A	**Yeager Farm, C**	**76.15**	**303**	P	**P**	**01 48 21.0**	**-0.6**
	baz=48,SNR=44						
Y45A				S	**S**	**01 58 01.0**	**-4.5**
	baz=48						
MDJ	**Mudanjiang**	**76.19**	**41**	P	**P**	**01 48 21.6**	**-0.1**
MDJ				pP	pP	01 48 24.8	-1.2
MDJ				sP	sP	01 48 26.2	-1.3
MDJ				S	**S**	**01 58 03.5**	**-2.1**
MDJ				pmax	pmax		
	comp=Z,20nm,2.8s						
MDJ				pmax	pmax		
	comp=Z,4µm,7.0s						
MDJ				LR	LR		
	comp=Z,6µm,18.5s						
MDJ				LR	LR		
	comp=Z,6µm,19.4s						
MDJ				LR	LR		
	comp=Z,7µm,20.0s						
MDJ	**Mudanjiang**	**76.19**	**41**	P	**P**	**01 48 24.4**	**+2.7**
O22K	**Cooper Landing**	**76.25**	**351**	IAMs_20	IAMs_20	02 26 21.0	
	comp=Z,6µm,20.0s						
O22K	**Cooper Landing**	**76.25**	**351**	P	**P**	**01 48 21.1**	**-0.7**
	baz=13						
O22K				S	**S**	**01 58 04.4**	**-1.2**
	baz=13						
SDBA	**SAO DESIDERIO**	**76.32**	**239**	*e*P	**P**	**01 48 22.9**	**+0.1**
FCAR	**Ozark Folk Cen**	**76.35**	**306**	IAmb	IAmb	01 48 29.0	
	comp=Z,185nm,1.4s						
N19K	**Bonanza Creek**	**76.38**	**354**	IAmb	IAmb	01 48 28.1	
	comp=Z,134nm,1.1s						
N19K	**Bonanza Creek**	**76.38**	**354**	P	**P**	**01 48 23.4**	**+0.8**
	baz=9.3,SNR=32						
N19K				S	**S**	**01 58 09.2**	**+2.0**
	baz=9.3						
BRAL	**Brewton**	**76.39**	**300**	IAMs_20	IAMs_20	02 23 02.5	
	comp=Z,7µm,18.0s						
BRAL	**Brewton**	**76.39**	**300**	P	**P**	**01 48 22.8**	**-0.2**
	baz=48						
BRAL	**Brewton**	**76.39**	**300**	P	**P**	**01 48 22.5**	**-0.5**
	baz=48						
BRAL				S	**S**	**01 58 05.5**	**-2.6**
	baz=48						
BOAV	**Boa Vista**	**76.43**	**261**	IAmb	IAmb	01 48 55.3	
	comp=Z,69nm,1.5s						
BOAV	**Boa Vista**	**76.43**	**261**	*e*P	**P**	**01 48 25.0**	**+1.5**
P23K	**Montague Islan**	**76.45**	**350**	P	**P**	**01 48 23.5**	**+0.6**
	baz=15						
GUA01	**Guaratinga, BA**	**76.47**	**232**	*e*P	**P**	**01 48 24.8**	**+1.3**
SEW	**Seward**	**76.59**	**351**	P	**P**	**01 48 23.9**	**+0.2**
	baz=13,SNR=13						
SEW				S	**S**	**01 58 08.7**	**-0.6**
	baz=13						
N18K	**Kilae Creek**	**76.61**	**355**	IAMs_20	IAMs_20	02 28 43.6	
	comp=Z,6µm,19.0s						
N18K	**Kilae Creek**	**76.61**	**355**	P	**P**	**01 48 25.8**	**+1.9**
	baz=8.2,SNR=88						
N18K				S	**S**	**01 58 12.3**	**+2.6**
	baz=8.2						
EGMT	**Eagleton**	**76.62**	**325**	IAMs_20	IAMs_20	02 20 13.0	
	comp=Z,14µm,22.0s						
EGMT	**Eagleton**	**76.62**	**325**	P	**P**	**01 48 25.6**	**+1.4**
	baz=39,SNR=85						
EGMT				S	**S**	**01 58 13.3**	**+2.9**
	baz=39						
146A	**Union**	**76.68**	**302**	IAmb	IAmb	01 48 28.5	
	comp=Z,223nm,1.5s						
146A	**Union**	**76.68**	**302**	P	**P**	**01 48 23.9**	**-0.8**
	baz=48						
KSU1	**Kansas State U**	**76.71**	**311**	P	**P**	**01 48 23.9**	**-0.9**
	baz=45,SNR=30						
KSU1	**Kansas State U**	**76.71**	**311**	P	**P**	**01 48 24.8**	**0.0**
	baz=45,SNR=30						
KSU1				S	**S**	**01 58 08.2**	**-3.3**
	baz=45						
SUJ	**Sinuiju**	**76.83**	**47**	P	**P**	**01 48 25.5**	**+0.2**
SUJ				pP	**PcP**	**01 48 34.7**	**-1.9**
SUJ				S	**S**	**01 58 12.9**	**+0.3**
SUJ				AmB			
	comp=Z,3µm,3.7s						
SUJ				AMS	AMS		
	comp=N,2µm,15.1s						
SUJ				AMS	AMS		
	comp=E,1µm,8.9s						
SUJ				AMS	AMS		
	comp=Z,926nm,5.8s						
Q23K	**Middleton Isla**	**76.86**	**349**	P	**P**	**01 48 25.7**	**+0.5**
	baz=15						
T33K	**Petersburg**	**76.86**	**342**	P	**P**	**01 48 26.9**	**+1.7**
	baz=25						
O20K	**Slope Mountain**	**76.94**	**353**	P	**P**	**01 48 25.1**	**-0.6**
	baz=11,SNR=20						
O20K				S	**S**	**01 58 14.5**	**+1.2**
	baz=11						
RSSD	**Black Hills**	**76.97**	**319**	P	**P**	**01 48 26.3**	**-0.1**
RSSD				IAmb	IAmb	01 48 33.5	
	comp=Z,154nm,1.6s						
RSSD	**Black Hills**	**76.97**	**319**	P	**P**	**01 48 26.3**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,154nm,1.7s						
RSSD				MLR	MLR		
	comp=Z,14µm,19.0s						
RSSD	**Black Hills**	**76.97**	**319**	P	**P**	**01 48 26.7**	**+0.3**
	baz=42,SNR=30						
RSSD	**Black Hills**	**76.97**	**319**	P	**P**	**01 48 27.0**	**+0.6**
	baz=42						
RSSD				S	**S**	**01 58 15.0**	**+0.5**
	baz=42						
RSSD	**Black Hills**	**76.97**	**319**	P	**P**	**01 48 27.6**	**+1.2**
TYV	**Tymovskoe**	**76.97**	**30**	*e*P	**P**	**01 48 28.4**	**+2.4**
TYV				*e*S	**S**	**01 58 19.2**	**+5.4**
TYV				pmax	pmax		
	comp=Z,4µm,4.6s						
TYV				pmax	pmax		
	comp=Z,34nm,1.6s						
TYV				smax	smax		
	comp=N,3µm,10.1s						
TYV				smax	smax		
	comp=E,5µm,10.1s						
O19K	**Port Alsworth**	**76.97**	**354**	IAmb	IAmb	01 48 31.5	
	comp=Z,258nm,1.4s						
O19K	**Port Alsworth**	**76.97**	**354**	P	**P**	**01 48 25.9**	**+0.1**
	baz=9.4,SNR=17						
O19K				S	**S**	**01 58 13.6**	**+0.1**
	baz=9.4						
N16K	**Nishlik Lake**	**77.00**	**356**	P	**P**	**01 48 27.9**	**+1.8**
	baz=6.1,SNR=54						
N16K				S	**S**	**01 58 20.4**	**+6.5**
	baz=6.1						
WRAK	**Wrangell Islan**	**77.08**	**341**	P	**P**	**01 48 28.5**	**+2.0**
	baz=25,SNR=30						
WRAK				S	**S**	**01 58 19.2**	**+4.5**
	baz=25						
BRLK	**Bradley Lake**	**77.08**	**352**	IAmb	IAmb	01 48 33.7	
	comp=Z,282nm,1.5s						
BRSE	**Bradley Lake S**	**77.08**	**352**	P	**P**	**01 48 27.4**	**+0.8**
	baz=12,SNR=11						
BRSE				S	**S**	**01 58 14.8**	**-0.1**
	baz=12						
ROSN	**Rosenhof**	**77.11**	**170**	*e*P	**P**	**01 48 26.6**	**-0.2**
ROSN				IAmb	IAmb	01 48 34.8	
	comp=Z,23nm,0.6s						
ELIM	**Elim**	**77.14**	**174**	*e*P	**P**	**01 48 26.8**	**-0.1**
ELIM				IAmb	IAmb	01 48 35.0	
	comp=Z,66nm,1.1s						
SIT	**Sitka**	**77.17**	**343**	P	**P**	**01 48 28.9**	**+2.0**
	baz=23,SNR=11						
SIT				S	**S**	**01 58 20.3**	**+4.5**
	baz=23						
UALR	**University of**	**77.24**	**306**	IAmb	IAmb	01 48 34.1	
	comp=Z,98nm,1.2s						
HOM	**Homer**	**77.26**	**352**	P	**P**	**01 48 27.5**	**0.0**
	baz=11,SNR=7.1						
HOM				S	**S**	**01 58 18.5**	**+1.9**
	baz=11						
U38A	**Gravette**	**77.30**	**308**	IAmb	IAmb	01 48 33.1	
	comp=Z,175nm,1.3s						
U38A	**Gravette**	**77.30**	**308**	P	**P**	**01 48 27.3**	**-0.9**
	baz=46,SNR=28						
U38A				S	**S**	**01 58 14.6**	**-3.4**
	baz=46						
CNPM	**China Poot**	**77.35**	**352**	IAmb	IAmb	01 48 33.3	
	comp=Z,252nm,1.3s						
O18K	**Koktuh Hills**	**77.38**	**354**	IAMs_20	IAMs_20	02 28 32.9	
	comp=Z,6µm,18.0s						
O18K	**Koktuh Hills**	**77.38**	**354**	P	**P**	**01 48 28.8**	**+0.6**
	baz=8.7						
O18K				S	**S**	**01 58 18.7**	**+0.6**
	baz=8.7						
WHN	**Wuhan**	**77.38**	**60**	⇓P	**P**	**01 48 28.8**	**+0.1**
WHN				sP	**sP**	**01 48 33.9**	**-0.5**
WHN				PP	**PP**	**01 51 25.7**	**+3.1**
WHN				S	**S**	**01 58 15.9**	**-3.0**
WHN				pmax	pmax		
	comp=Z,5µm,5.5s						
WHN				LR	LR		
	comp=Z,23µm,15.3s						
WHN				LR	LR		
	comp=Z,58µm,19.4s						
P19K	**Oil Pt**	**77.42**	**353**	IAMs_20	IAMs_20	02 21 42.9	
	comp=Z,7µm,22.0s						
P19K	**Oil Pt**	**77.42**	**353**	P	**P**	**01 48 28.4**	**-0.1**
	baz=10						
P19K				S	**S**	**01 58 17.8**	**-0.7**
	baz=10						
BAUV	**El Baul**	**77.57**	**271**	IAmb	IAmb	01 48 31.8	
	comp=Z,168nm,1.0s						
O17K	**Koliganek Bris**	**77.60**	**355**	P	**P**	**01 48 30.9**	**+1.6**
	baz=7.3,SNR=64						
O17K				S	**S**	**01 58 23.2**	**+2.9**
	baz=7.3						
NAN01	**Guarapari, ES**	**77.65**	**231**	*e*P	**P**	**01 48 30.9**	**+0.8**
USRK	**Ussuriysk Ar.**	**77.66**	**40**	P	**P**	**01 48 30.6**	**+0.6**
	comp=Z,56nm,0.9s,baz=292,slow=4.3,SNR=34						
USRK				S	**S**	**01 58 21.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=139,slow=20,SNR=1.5						
USRK				LR	LR	02 26 36.7	
	comp=Z,16µm,18.6s,baz=51,slow=39						
	comp=Z,56nm,0.9s						
ITTB	**Itaituba**	**77.69**	**252**	*e*P	**P**	**01 48 31.7**	**+1.2**
346A	**Big Creek Wild**	**77.77**	**301**	IAmb	IAmb	01 48 37.8	
	comp=Z,153nm,0.9s						
346A	**Big Creek Wild**	**77.77**	**301**	P	**P**	**01 48 30.6**	**-0.3**
	baz=47,SNR=8.6						
346A				S	**S**	**01 58 21.2**	**-2.0**
	baz=47						
O16K	**Kokwok River B**	**77.84**	**355**	P	**P**	**01 48 32.1**	**+1.4**
	baz=6.5,SNR=49						
O16K				S	**S**	**01 58 26.7**	**+3.8**
	baz=6.5						
P18K	**Big Mountain,**	**77.84**	**354**	P	**P**	**01 48 30.2**	**-0.6**
	baz=8.7						
P18K				S	**S**	**01 58 23.4**	**+0.3**
	baz=8.7						
RLO	**Rose Lookout**	**77.86**	**308**	IAmb	IAmb	01 48 36.3	
	comp=Z,173nm,1.4s						
VBMS	**Vicksburg**	**77.87**	**303**	IAmb	IAmb	01 49 05.7	
	comp=Z,90nm,0.7s						
VBMS				IAMs_20	IAMs_20	02 19 20.5	
	comp=Z,13µm,22.0s						
VBMS	**Vicksburg**	**77.87**	**303**	P	**P**	**01 48 30.9**	**-0.4**
	baz=47						
VBMS	**Vicksburg**	**77.87**	**303**	P	**P**	**01 48 31.5**	**+0.2**
	baz=47						
VBMS				S	**S**	**01 58 22.2**	**-2.0**
	baz=47						
V35K	**Ketchikan**	**77.89**	**340**	P	**P**	**01 48 32.4**	**+1.3**
	baz=26,SNR=10						
V35K				S	**S**	**01 58 28.2**	**+4.6**
	baz=26						
JANB	**Januaria**	**77.97**	**236**	*e*P	**P**	**01 48 33.5**	**+1.4**
CNSH	**ChangSha**	**78.04**	**63**	⇓P	**P**	**01 48 31.3**	**-1.1**
CNSH				PP	**PP**	**01 51 27.4**	**-0.8**
CNSH				S	**S**	**01 58 27.6**	**+1.5**
CNSH				pmax	pmax		
	comp=Z,3µm,6.7s						
CNSH				LR	LR		
	comp=N,13µm,21.0s						
CNSH				LR	LR		
	comp=E,12µm,18.0s						
CNSH				LR	LR		
	comp=Z,17µm,17.8s						
143A	**Socs Landing,**	**78.09**	**304**	P	**P**	**01 48 32.2**	**-0.3**
	baz=47						
CRAG	**Craig**	**78.13**	**341**	P	**P**	**01 48 33.9**	**+1.6**
	baz=25,SNR=16						
CRAG				S	**S**	**01 58 31.7**	**+5.6**
	baz=25						
P17K	**Kvichak River**	**78.13**	**355**	P	**P**	**01 48 33.1**	**+0.8**
	baz=7.8						
P17K				S	**S**	**01 58 27.2**	**+1.2**
	baz=7.8						
MIAR	**Mount Ida**	**78.14**	**306**	P	**P**	**01 48 32.1**	**-0.7**
MIAR	**Mount Ida**	**78.14**	**306**	P	**P**	**01 48 32.1**	**-0.7**
MIAR				pmax	pmax		
	comp=Z,541nm,2.0s						
MIAR	**Mount Ida**	**78.14**	**306**	P	**P**	**01 48 32.7**	**-0.1**
	baz=46,SNR=59						
MIAR	**Mount Ida**	**78.14**	**306**	P	**P**	**01 48 32.8**	**0.0**
	baz=46,SNR=59						
MIAR				S	**S**	**01 58 25.8**	**-1.3**
	baz=46						
Q19K	**Cape Douglas,**	**78.17**	**353**	IAMs_20	IAMs_20	02 22 17.1	
	comp=Z,7µm,22.0s						
Q19K	**Cape Douglas,**	**78.17**	**353**	P	**P**	**01 48 31.1**	**-1.5**
	baz=9.9						
DABV	**Dabajuro**	**78.17**	**274**	*e*P	**P**	**01 48 31.5**	**-1.8**

T35A Sooner Cattle 78.19 310 IAmb IAmb 01 48 40.2
comp=Z,142nm,0.9s
T35B Sooner Cattle 78.19 310 P **P** **01 48 32.8 -0.3**
baz=45,SNR=28
T35B S **S** **01 58 25.0 -2.6**
baz=45
UGL Uglegorsk 78.20 32 *e*P **P** **01 48 35.8 +2.9**
UGL *e*S **S** **01 58 31.3 +4.2**
UGL *e* 02 06 41.1
UGL pmax pmax
comp=Z,5μm,6.3s
UGL smax smax
comp=E,7μm,9.0s
UGL smax smax
comp=N,5μm,6.8s
UGL MLR MLR
comp=E,23μm,15.0s
UGL MLR MLR
comp=N,38μm,17.0s
UGL MLR MLR
comp=Z,30μm,17.0s
GULI GuiLin 78.25 67 ⇓P **P** **01 48 33.3 -0.3**
GULI LR LR
comp=Z,12μm,18.4s
GULI LR LR
comp=Z,6μm,18.4s
GULI LR LR
comp=Z,17μm,17.3s
PYAG Pyongyang 78.26 47 P **P** **01 48 34.1 +0.7**
OGNE Ogallala 78.30 316 IAMs_20 IAMs_20 02 24 10.9
comp=Z,7μm,20.0s
OGNE Ogallala 78.30 316 P **P** **01 48 34.0 +0.2**
baz=43
OGNE Ogallala 78.30 316 P **P** **01 48 34.6 +0.9**
baz=43
OGNE S **S** **01 58 28.7 -0.1**
baz=43
R32A Long Quarter, 78.35 312 IAmb IAmb 01 48 39.1
comp=Z,342nm,1.8s
R32A Long Quarter, 78.35 312 P **P** **01 48 33.8 -0.2**
baz=44,SNR=6.1
R32A S **S** **01 58 27.5 -1.8**
baz=44
Q20K Shuyak Island 78.37 352 P **P** **01 48 34.6 +0.9**
baz=11,SNR=17
Q20K S **S** **01 58 29.7 +1.0**
baz=11
P16K Nushagak River 78.39 355 P **P** **01 48 35.1 +1.3**
baz=6.6,SNR=10
P16K S **S** **01 58 32.0 +3.2**
baz=6.6
MTDJ Mount Denham 78.40 284 IAMs_20 IAMs_20 02 17 24.2
comp=Z,10μm,21.0s
VLA Vladivostok 78.42 41 *d i*P **P** **01 48 31.3 -2.9**
VLA pmax pmax
comp=Z,84nm,0.9s
VLA MLR MLR
comp=Z,47μm,17.0s
MSHR Mys Shultsa 78.47 42 *de*P **P** **01 48 34.4 -0.1**
MSHR pmax pmax
comp=Z,57nm,1.2s
MSHR MLR MLR
comp=Z,41μm,17.0s
TUL1 Leonard 78.49 308 IAmb IAmb 01 48 40.0
comp=Z,112nm,1.2s
TUL1 IAMs_20 IAMs_20 02 23 48.4
comp=Z,11μm,19.0s
TUL1 Leonard 78.49 308 P **P** **01 48 34.2 -0.5**
baz=45
TUL1 S **S** **01 58 28.2 -2.6**
baz=45
TUL1 Leonard 78.49 308 P **P** **01 48 34.3 -0.5**
baz=45
TUL1 S **S** **01 58 27.9 -2.8**
baz=45
344A Westbrook Farm 78.52 302 P **P** **01 48 35.4 +0.4**
baz=47,SNR=9.8
344A S **S** **01 58 29.2 -2.0**
baz=47
HHU Hamhung 78.57 46 P **P** **01 48 35.5 +0.4**
CBKS Cedar Bluff 78.63 313 P **P** **01 48 35.2 -0.3**
baz=44,SNR=25
CBKS Cedar Bluff 78.63 313 P **P** **01 48 35.3 -0.2**
baz=44,SNR=25
CBKS S **S** **01 58 31.4 -0.9**
baz=44
RLMT Red Lodge 78.65 322 IAmb IAmb 01 48 41.6
comp=Z,149nm,1.3s
RLMT Red Lodge 78.65 322 P **P** **01 48 36.9 +1.1**
baz=39,SNR=56
RLMT S **S** **01 58 34.8 +2.1**
baz=39
Q16K King Salmon 78.66 355 P **P** **01 48 35.1 -0.1**
baz=7.6
URIC Uribia, Colomb 78.66 275 *e*P **P** **01 48 33.9 -2.0**
DEOK Depew 78.94 309 IAmb IAmb 01 48 42.8
comp=Z,154nm,1.3s
SJMB Sao Joao De Ma 78.94 232 *e*P **P** **01 48 38.2 +1.0**
OK034 N. Norfolk Rd. 78.95 309 IAMs_20 IAMs_20 02 23 00.4
comp=Z,9μm,20.0s
HJU Haeju 78.97 48 P **P** **01 48 37.8 +0.4**
HJU pP **PcP** **01 48 46.6 +0.7**
HJU S **S** **01 58 34.9 -0.9**
HJU AmB
comp=Z,1μm,2.0s
HJU AMS AMS
comp=N,4μm,13.7s
HJU AMS AMS
comp=E,4μm,14.0s
HJU AMS AMS
comp=Z,2μm,6.6s
RIB01 Linhares ES 78.97 231 *e*P **P** **01 48 38.0 +0.6**
MC01 Montes Claros 79.02 235 *e*P **P** **01 48 38.8 +0.9**
OK030 Cody Creek RV 79.05 309 IAMs_20 IAMs_20 02 23 03.1
comp=Z,8μm,20.0s
OK031 S. Brethren Rd 79.06 309 IAMs_20 IAMs_20 02 23 03.6
comp=Z,8μm,20.0s
TEY Ternei 79.14 37 ⇑*e*P **P** **01 48 36.8 -1.3**
TEY *e* 01 48 42.4
TEY *e* 01 58 34.0
TEY pmax pmax
comp=E,100nm,5.3s
TEY pmax pmax
comp=N,100nm,6.4s
TEY MLR MLR
comp=N,600nm,14.0s
TEY MLR MLR
comp=E,1μm,14.0s
X37A Clayton 79.17 307 IAmb IAmb 01 48 44.3
comp=Z,150nm,1.2s
X37A Clayton 79.17 307 P **P** **01 48 38.3 -0.2**
baz=45,SNR=30
X37A S **S** **01 58 35.8 -2.2**
baz=45
LLLB Lillooet 79.17 333 IAmb IAmb 01 48 44.6
comp=Z,100nm,1.1s
NJ2 Nanjing 79.18 56 ⇓*i*P **P** **01 48 38.8 +0.2**
NJ2 PcP **PcP** **01 48 48.5 +1.6**
NJ2 PP **PP** **01 51 37.3 -0.3**
NJ2 Nanjing 79.18 56 S **S** **01 58 39.8 +1.6**
NJ2 Nanjing 79.18 56 sS sS 01 58 49.0 +3.7
NJ2 Nanjing 79.18 56 SS SS 02 03 38.5 -5.2
NJ2 pmax pmax
comp=Z,74nm,0.8s
NJ2 pmax pmax
comp=Z,4μm,5.3s
NJ2 LR LR
comp=N,14μm,20.2s
NJ2 LR LR
comp=E,18μm,19.6s
NJ2 LR LR
comp=Z,24μm,16.5s
KDAK Kodiak Island 79.20 352 P **P** **01 48 38.9 +0.7**
KDAK Kodiak Island 79.20 352 IAMs_20 IAMs_20 02 28 32.4
comp=Z,7μm,21.0s
KDAK Kodiak Island 79.20 352 P **P** **01 48 38.9 +0.7**
KDAK pmax pmax
comp=Z,319nm,1.1s
KDAK MLR MLR
comp=Z,7μm,21.0s
KDAK Kodiak Island 79.20 352 P **P** **01 48 39.4 +1.2**
baz=11
KDAK S **S** **01 58 38.9 +1.4**
baz=11
KDAK Kodiak Island 79.20 352 P **P** **01 48 40.0 +1.8**
OK032 Salt Plains WL 79.23 310 IAMs_20 IAMs_20 02 24 27.1
comp=Z,11μm,19.0s

K22A Casper 79.27 319 IAmb IAmb 01 48 45.5
comp=Z,425nm,1.8s
K22A Casper 79.27 319 P **P** **01 48 38.7 -0.5**
baz=40,SNR=43
K22A S **S** **01 58 39.3 +0.1**
baz=40
K22A Casper 79.27 319 P **P** **01 48 39.0 -0.2**
baz=40,SNR=43
K22A S **S** **01 58 38.6 -0.6**
baz=40
MSO Missoula 79.32 326 P **P** **01 48 39.8 +0.5**
baz=37,SNR=92
MSO S **S** **01 58 40.9 +1.4**
baz=37
NPGB Novo Progresso 79.32 250 *e*P **P** **01 48 40.2 +0.6**
BOZ Bozeman (W) 79.32 324 IAMs_20 IAMs_20 02 25 49.5
comp=Z,9μm,18.0s
BOZ Bozeman (W) 79.32 324 P **P** **01 48 40.7 +1.4**
baz=38,SNR=379
BOZ S **S** **01 58 42.0 +2.3**
baz=38
NEW Newport 79.42 329 LR LR 02 25 59.2
comp=Z,12μm,18.0s,baz=42,slow=37
NEW Newport 79.42 329 P **P** **01 48 40.6 +0.9**
baz=35,SNR=90
NEW S **S** **01 58 41.7 +1.4**
baz=35
SDV Santo Domingo 79.52 272 P **P** **01 48 41.1 +0.2**
comp=Z,120nm,0.8s,baz=54,slow=3.4,SNR=72
SDV LR LR 02 20 01.2
comp=Z,5μm,21.5s,baz=46,slow=33
comp=Z,120nm,0.8s
SDV Santo Domingo 79.52 272 P **P** **01 48 40.6 -0.3**
SDV IAmb IAmb 01 48 43.6
comp=Z,113nm,0.8s
SDV Santo Domingo 79.52 272 IAMs_20 IAMs_20 02 18 16.5
comp=Z,6μm,22.0s
SDV Santo Domingo 79.52 272 *e*P **P** **01 48 41.3 +0.4**
OK029 Liberty Lake 79.52 309 IAMs_20 IAMs_20 02 28 20.6
comp=Z,7μm,18.0s
342B Flagon Creek P 79.56 303 P **P** **01 48 40.6 -0.1**
baz=46
342B S **S** **01 58 42.8 +0.5**
baz=46
OK035 E0210 Rd and N 79.58 311 IAMs_20 IAMs_20 02 24 37.2
comp=Z,11μm,18.0s
OK025 Westminster Rd 79.61 309 IAmb IAmb 01 48 46.6
comp=Z,327nm,1.5s
OK025 IAMs_20 IAMs_20 02 20 51.1
comp=Z,8μm,22.0s
R17K Ugashik Creek 79.67 354 P **P** **01 48 40.4 -0.4**
baz=7.8,SNR=8.7
R17K S **S** **01 58 42.2 -0.4**
baz=7.8
BCOK Bluff Creek, N 79.71 309 IAmb IAmb 01 48 48.4
comp=Z,769nm,2.0s
BBB Bella Bella 79.76 337 LR LR 02 25 14.2
comp=Z,7μm,20.7s,baz=30,slow=37
OK038 West end E0370 79.76 311 IAMs_20 IAMs_20 02 24 51.1
comp=Z,10μm,18.0s
PHWY Pilot Hill 79.77 318 IAmb IAmb 01 48 47.3
comp=Z,136nm,1.1s
H17A Grant Village 79.81 323 P **P** **01 48 44.7 +2.6**
baz=38,SNR=72
PEA0B Petropavlovsk- 79.81 21 IAmb IAmb 01 48 47.2
comp=Z,356nm,1.4s
PEA0B Petropavlovsk- 79.81 21 *de*P **P** **01 48 41.5 -0.2**
PETK Petropavlovsk- 79.81 21 P **P** **01 48 41.1 -0.6**
comp=Z,48nm,1.0s,baz=230,slow=1.2,SNR=19
PETK S **S** **01 58 44.1 -0.1**
comp=Z,3.6nm,0.8s,baz=298,slow=16,SNR=2.0
PETK LR LR 02 28 42.1
comp=Z,16μm,19.1s,baz=328,slow=39
comp=Z,48nm,1.0s
OHAK Old Harbor 79.82 353 IAmb IAmb 01 48 49.7
comp=Z,199nm,1.0s
OHAK Old Harbor 79.82 353 P **P** **01 48 42.7 +1.1**
baz=10,SNR=37
OHAK S **S** **01 58 45.5 +1.3**
baz=10
INCN Inchon 79.87 48 P **P** **01 48 42.4 +0.1**
INCN IAmb IAmb 01 48 46.2
comp=Z,143nm,0.9s
INCN Inchon 79.87 48 P **P** **01 48 42.4 +0.1**
INCN pmax pmax
comp=Z,143nm,0.9s
INCN MLR MLR
comp=Z,25μm,20.0s
INCN Inchon 79.87 48 P **P** **01 48 44.2 +1.9**
INCN P **P** **01 48 44.2 +1.9**
INCN Inchon 79.87 48 P **P** **01 48 43.7 +1.4**
INCN Inchon 79.87 48 P **P** **01 48 43.9 +1.6**
Z38A Mt. Pleasant 79.87 306 P **P** **01 48 42.0 -0.4**
baz=45
Z38A S **S** **01 58 46.3 +0.8**
baz=45
U32A Winter Ranch, 79.98 311 P **P** **01 48 43.0 +0.1**
baz=44
U32A S **S** **01 58 47.0 +0.3**
baz=44
DIB Dawson Inlet, 80.03 340 IAmb IAmb 01 48 48.8
comp=Z,210nm,1.2s
KSCO Kaye Shedlock' 80.03 315 P **P** **01 48 44.1 +0.8**
baz=42,SNR=23
KSCO S **S** **01 58 48.7 +1.4**
baz=42
KSCO Kaye Shedlock' 80.03 315 P **P** **01 48 44.2 +0.9**
baz=42,SNR=23
KSCO S **S** **01 58 48.8 +1.4**
baz=42
SOCV Socops 80.08 272 *e*P **P** **01 48 41.7 -2.0**
DIAM Diamantina, MG 80.08 234 *e*P **P** **01 48 45.0 +1.3**
SNDB Serra Nova Dou 80.12 244 *e*P **P** **01 48 44.7 +0.8**
PET Petropavlovsk 80.14 20 P **P** **01 48 41.8 -1.6**
PET IAmb IAmb 01 48 56.7
comp=Z,190nm,1.4s
PET Petropavlovsk 80.14 20 *b i*P **P** **01 48 43.6 +0.2**
PET *e* 01 51 48.1
PET *e*PPP PPP 01 53 34.0
PET *e*S **S** **01 58 42.5 -5.1**
PET *e*PS **PnS** **01 59 24.7 -7.0**
PET *e*PPS PPS 01 59 38.9
PET *e*SS **SS** **02 03 56.7 +0.1**
PET pmax pmax
comp=Z,4μm,6.7s
PET pmax pmax
comp=Z,2μm,13.1s
PET pmax pmax
comp=Z,101nm,1.2s
PET smax smax
comp=E,2μm,10.7s
PET smax smax
comp=E,2μm,13.2s
PET MLR MLR
comp=Z,20μm,19.0s
PET MLR MLR
comp=Z,17μm,19.0s
PET Petropavlovsk 80.14 20 P **P** **01 48 43.7 +0.3**
PET Petropavlovsk 80.14 20 P **P** **01 48 45.3 +2.0**
B08A Colville Reser 80.17 330 IAmb IAmb 01 48 50.0
comp=Z,237nm,1.2s
ALF01 Guarapari-ES 80.19 230 *e*P **P** **01 48 43.8 -0.2**
YSS Yuzh-Sakhalins 80.19 32 P **P** **01 48 43.9 0.0**
YSS Yuzh-Sakhalins 80.19 32 *ke*P **P** **01 48 44.5 +0.7**
YSS *e**SP **sP** **01 48 49.5 -0.1**
YSS *e* 01 51 42.5
YSS *e*PPP PPP 01 53 43.1
YSS *e*S **S** **01 58 47.5 -1.0**
YSS *e*SS **SS** **02 04 06.1 +8.2**
YSS pmax pmax
comp=Z,400nm,1.1s
YSS pmax pmax
comp=Z,4μm,4.8s
YSS pmax pmax
comp=N,1μm,6.2s
YSS pmax pmax
comp=E,1μm,4.9s
YSS pmax pmax
comp=Z,1μm,9.0s
YSS pmax pmax
comp=N,500nm,9.7s
YSS pmax pmax
comp=E,500nm,7.2s
YSS smax smax
comp=N,4μm,9.0s
YSS MLR MLR
comp=Z,36μm,18.0s

YSS MLR MLR
comp=N,18μm,19.0s
YSS MLR MLR
comp=E,18μm,18.0s
YSS Yuzh-Sakhalins 80.19 32 P **P** **01 48 44.9 +1.1**
YSS Yuzh-Sakhalins 80.19 32 P **P** **01 48 44.8 +0.9**
N23A Red Feather La 80.31 318 IAmb IAmb 01 48 51.5
comp=Z,291nm,1.4s
N23A Red Feather La 80.31 318 P **P** **01 48 45.9 +0.9**
baz=41,SNR=90
N23A S **S** **01 58 52.4 +1.8**
baz=41
MACA Manacapuru-AM 80.36 257 *e*P **P** **01 48 46.3 +1.1**
MOOW Moose Ponds 80.39 322 IAmb IAmb 01 48 51.4
comp=Z,164nm,1.4s
SPIA Saint Paul Isl 80.47 2 P **P** **01 48 46.5 +1.4**
baz=357
441A DeRidder 80.53 303 P **P** **01 48 46.6 +0.6**
baz=46
441A S **S** **01 58 54.3 +1.8**
baz=46
SII Sitkinak Islan 80.56 353 P **P** **01 48 45.3 -0.4**
SII IAMs_20 IAMs_20 02 31 21.9
comp=Z,7μm,19.0s
SII Sitkinak Islan 80.56 353 P **P** **01 48 46.1 +0.5**
baz=9.4
SII Sitkinak Islan 80.56 353 P **P** **01 48 47.9 +2.2**
KSRS Korea Array 80.59 47 P **P** **01 48 46.8 +0.6**
comp=Z,61nm,0.9s,baz=326,slow=4.8,SNR=87
KSRS PP **PP** **01 51 48.6 -0.4**
comp=Z,5.0nm,1.0s,baz=313,slow=7.0,SNR=2.5
KSRS S **S** **01 58 52.9 0.0**
comp=Z,0.5nm,0.3s,baz=186,slow=39,SNR=1.4
KSRS LR LR 02 27 16.4
comp=Z,9μm,18.5s,baz=310,slow=38
comp=Z,61nm,0.9s
PDAR Pinedale Array 80.61 321 P **P** **01 48 47.1 +0.6**
comp=Z,32nm,0.9s,baz=51,slow=4.7,SNR=78
PDAR PP **PP** **01 51 48.9 -0.5**
comp=Z,4.8nm,1.0s,baz=51,slow=5.9,SNR=2.4
PDAR S **S** **01 58 57.0 +3.4**
comp=Z,0.2nm,0.4s,baz=56,slow=18,SNR=1.9
PDAR PKKPbc **PKKPbc** **02 07 25.8 +0.6**
comp=Z,0.9nm,0.9s,baz=180,slow=2.4,SNR=3.6
PDAR LR LR 02 24 35.0
comp=Z,11μm,19.6s,baz=46,slow=36
comp=Z,32nm,0.9s
BW06 Boulder Array 80.61 321 P **P** **01 48 46.8 +0.3**
baz=39,SNR=43
BW06 S **S** **01 58 52.9 -0.7**
baz=39
LOOK Love County 80.65 308 IAmb IAmb 01 48 52.1
comp=Z,150nm,1.4s
SMRC Santa Marta, M 80.65 277 *e*P **P** **01 48 47.4 +0.6**
TPAW Teton Pass 80.68 322 IAMs_20 IAMs_20 02 26 13.5
comp=Z,11μm,19.0s
BDFB Brasilia 80.72 239 P **P** **01 48 48.1 +1.0**
comp=Z,130nm,0.9s,baz=45,slow=5.9,SNR=106
BDFB S **S** **01 58 53.2 -1.7**
comp=Z,1.5nm,0.8s,baz=98,slow=21,SNR=1.4
BDFB LR LR 02 24 44.6
comp=Z,5μm,18.3s,baz=51,slow=36
comp=Z,130nm,0.9s
BDFB Brasilia 80.72 239 IAmb IAmb 01 48 50.5
comp=Z,150nm,1.0s
BDFB Brasilia 80.72 239 *e*P **P** **01 48 48.3 +1.1**
NATX Nacogdoches 80.73 305 P **P** **01 48 47.5 +0.5**
baz=45
NATX Nacogdoches 80.73 305 P **P** **01 48 47.8 +0.8**
baz=45
CBB Campbell River 80.81 334 P **P** **01 48 47.9 +0.8**
CBB IAmb IAmb 01 48 53.0
comp=Z,218nm,1.3s
ISCO Idaho Springs 80.98 317 IAmb IAmb 01 48 54.3
comp=Z,195nm,1.4s
ISCO Idaho Springs 80.98 317 P **P** **01 48 49.5 +0.9**
baz=41,SNR=147
ISCO Idaho Springs 80.98 317 P **P** **01 48 49.5 +0.9**
baz=41,SNR=147
ISCO S **S** **01 58 59.5 +1.9**
baz=41
WMOK Wichita Mounta 81.03 309 IAMs_20 IAMs_20 02 21 47.8
comp=Z,7μm,21.0s
WMOK Wichita Mounta 81.03 309 P **P** **01 48 48.7 +0.1**
baz=44,SNR=12
WMOK Wichita Mounta 81.03 309 P **P** **01 48 48.8 +0.2**
baz=44,SNR=12
WMOK S **S** **01 58 57.9 +0.1**
baz=44
KSCHJ Chungju 81.04 47 IAmb IAmb 01 48 58.8
comp=Z,124nm,1.1s
TJN Taejon 81.07 48 *de*P **P** **01 48 48.7 0.0**
TJN Taejon 81.07 48 P **P** **01 48 49.2 +0.5**
D08A Wollman Farm, 81.10 329 IAmb IAmb 01 48 54.2
comp=Z,183nm,1.1s
CHGN Chignik 81.14 355 IAmb IAmb 01 48 53.7
comp=Z,286nm,1.6s
CHGN Chignik 81.14 355 P **P** **01 48 48.4 -0.3**
baz=6.2,SNR=9.3
Z35A Perchaven, San 81.16 307 IAmb IAmb 01 48 54.7
comp=Z,257nm,1.5s
Z35A Perchaven, San 81.16 307 P **P** **01 48 49.2 -0.1**
baz=44
Z35A S **S** **01 58 56.4 -2.7**
baz=44
S14K Fog Glacier 81.22 356 P **P** **01 48 48.8 -0.5**
baz=5.4
LL1C La Loma 1 Cana 81.23 275 *e*P **P** **01 48 50.4 +0.5**
237A Washetta, Mont 81.25 306 P **P** **01 48 50.0 +0.2**
baz=45
237A S **S** **01 58 59.9 -0.1**
baz=45
E09A Wood Farm, Sta 81.25 328 P **P** **01 48 48.9 -0.7**
E09A IAmb IAmb 01 48 52.6
comp=Z,170nm,0.9s
SSE Sheshan 81.27 56 P **P** **01 48 49.4 -0.5**
SSE S **S** **01 58 55.9 -4.4**
SSE SS **SS** **02 04 13.5 -1.4**
SSE pmax pmax
comp=Z,42nm,0.9s
SSE pmax pmax
comp=Z,1μm,4.6s
SSE LR LR
comp=Z,8μm,16.5s
SSE LR LR
comp=Z,7μm,17.9s
SSE LR LR
comp=Z,9μm,16.8s
AHID Auburn Hatcher 81.32 322 IAmb IAmb 01 48 55.7
comp=Z,132nm,1.1s
Q24A Divide 81.37 316 IAmb IAmb 01 48 56.9
comp=Z,389nm,1.9s
Q24A Divide 81.37 316 P **P** **01 48 51.3 +0.5**
baz=41,SNR=56
Q24A S **S** **01 59 04.4 +2.7**
baz=41
CHIR Chirikof Islan 81.42 354 IAMs_20 IAMs_20 02 30 58.9
comp=Z,6μm,18.0s
CHIR Chirikof Islan 81.42 354 P **P** **01 48 51.1 +0.9**
baz=8.3,SNR=7.2
CLRS Cowichan Lake 81.46 333 IAmb IAmb 01 48 56.1
comp=Z,129nm,1.1s
ARGC Ariguani, Magd 81.53 276 *e*P **P** **01 48 52.1 +0.7**
SKR Severo-Kuril's 81.56 23 *e*P **P** **01 48 49.3 -1.7**
SKR *e*PPP PPP 01 51 59.0
SKR *e*SS SS 02 04 17.1 -0.8
SKR pmax pmax
comp=Z,900nm,6.7s
PLID Pearl Lake 81.57 326 IAmb IAmb 01 48 56.5
comp=Z,159nm,1.2s
LTY Liberty 81.58 330 P **P** **01 48 50.7 -0.7**
LTY IAmb IAmb 01 48 58.5
comp=Z,181nm,1.6s
CAM01 Campos-RJ 81.67 230 *e*P **P** **01 48 51.9 -0.1**
OZB Mount Ozzard 81.79 334 IAmb IAmb 01 48 59.8
comp=Z,208nm,1.4s
HAWA Hanford 81.89 329 IAMs_20 IAMs_20 02 27 40.9
comp=Z,10μm,18.0s
PMNB Patos De Minas 81.94 236 *e*P **P** **01 48 54.9 +1.4**
TAMC Tame, Arauca 82.00 271 *e*P **P** **01 48 53.9 -0.1**
O20A White River Ci 82.02 319 P **P** **01 48 54.6 +0.6**
baz=39,SNR=80
O20A S **S** **01 59 10.3 +2.0**
baz=39
QIZ Qiongzhong 82.06 72 P **P** **01 48 53.6 -0.6**
QIZ Qiongzhong 82.06 72 ⇓*i*P **P** **01 48 53.9 -0.3**
QIZ PP **PP** **01 52 03.8 +2.0**

QIZ S **S** **01 59 11.8 +3.1**
QIZ pmax pmax
comp=Z,2µm,6.2s
QIZ LR LR
comp=Z,9µm,17.5s
QIZ LR LR
comp=Z,8µm,17.5s
QIZ LR LR
comp=Z,18µm,21.5s
QIZ Qiongzhong 82.06 72 P **P** **01 48 55.2 +1.0**
SMCO Snowmass 82.13 317 IAmb IAmb 01 49 01.1
comp=Z,238nm,1.8s
HLID Hailey 82.15 324 IAmb IAmb 01 49 01.6
comp=Z,214nm,1.4s
HLID IAMs_20 IAMs_20 02 23 29.0
comp=Z,8µm,20.0s
HLID Hailey 82.15 324 P **P** **01 48 55.8 +1.3**
baz=36,SNR=84
HLID S **S** **01 59 12.6 +3.2**
baz=36
SDPT Sand Point 82.20 356 P **P** **01 48 53.6 -0.7**
baz=4.7
SDPT S **S** **01 59 10.8 +1.8**
baz=4.7
WHTX Lake Whitney, 82.24 307 P **P** **01 48 54.8 -0.2**
baz=44
WHTX S **S** **01 59 09.3 -1.0**
baz=44
WHTX Lake Whitney, 82.24 307 P **P** **01 48 54.8 -0.2**
baz=44
WHTX S **S** **01 59 09.2 -1.0**
baz=44
DUB01 Friburgo-RJ 82.28 231 *eP* **P** **01 48 56.5 +1.3**
CLDB Colider 82.35 248 *eP* **P** **01 48 55.0 -0.7**
T25A Trinidad 82.36 314 IAmb IAmb 01 49 02.2
comp=Z,188nm,1.4s
T25A Trinidad 82.36 314 P **P** **01 48 56.8 +1.0**
baz=41,SNR=71
T25A S **S** **01 59 13.9 +2.1**
baz=41
HWUT Hardware Ranch 82.45 322 IAMs_20 IAMs_20 02 25 36.2
comp=Z,12µm,20.0s
ASAJ Asahikawa 82.45 34 P **P** **01 48 55.3 -0.6**
SDCO Great Sand Dun 82.47 315 IAmb IAmb 01 49 02.5
comp=Z,186nm,1.5s
SDCO IAMs_20 IAMs_20 02 23 25.5
comp=Z,10µm,22.0s
SDCO Great Sand Dun 82.47 315 P **P** **01 48 57.0 +0.5**
baz=41,SNR=115
SDCO Great Sand Dun 82.47 315 P **P** **01 48 57.0 +0.5**
baz=41,SNR=115
SDCO S **S** **01 59 15.5 +2.4**
baz=41
JSH Shimam 82.56 37 P **P** **01 48 56.7 +0.3**
AMTX Amarillo 82.56 311 IAMs_20 IAMs_20 02 25 23.2
comp=Z,10µm,20.0s
AMTX Amarillo 82.56 311 P **P** **01 48 57.0 +0.2**
baz=42
AMTX Amarillo 82.56 311 P **P** **01 48 57.0 +0.2**
baz=42
G08A Pilot Rock 82.59 328 IAmb IAmb 01 49 02.3
comp=Z,173nm,1.2s
IPMB Ipameri, GO 82.61 237 *eP* **P** **01 48 59.0 +2.0**
CHNA Chernabura Isl 82.67 356 P **P** **01 48 57.2 +0.4**
baz=5.3,SNR=8.4
CHNA S **S** **01 59 15.0 +1.2**
baz=5.3
CNBA Chernabura Isl 82.68 356 IAmb IAmb 01 49 02.9
comp=Z,194nm,1.3s
HKT Hockley 82.72 304 P **P** **01 48 57.8 +0.4**
HKT IAmb IAmb 01 49 05.0
comp=Z,185nm,1.9s
HKT Hockley 82.72 304 IAMs_20 IAMs_20 02 23 22.6
comp=Z,11µm,21.0s
HKT Hockley 82.72 304*d i* P **P** **01 48 57.6 +0.2**
HKT Hockley 82.72 304 P **P** **01 48 58.0 +0.5**
baz=44
HKT Hockley 82.72 304 P **P** **01 48 60.0 +2.6**
TCUT Toone Canyon 82.76 321 IAmb IAmb 01 49 17.5
comp=Z,132nm,1.2s
JMP Maruseppu 82.85 34 P **P** **01 48 58.3 +0.3**
BRRC Barranca, Sant 82.97 273 *eP* **P** **01 48 55.9 -3.1**
JEW Eniwo 83.01 36 P **P** **01 48 59.6 +0.8**
VAS01 Vassouras-RJ 83.05 231 *eP* **P** **01 49 00.9 +1.8**
ABTX Abilene, Hawle 83.06 308 IAmb IAmb 01 49 05.1
comp=Z,185nm,1.5s
ABTX Abilene, Hawle 83.06 308 P **P** **01 48 59.1 -0.2**
baz=43,SNR=18
ABTX S **S** **01 59 17.3 -1.4**
baz=43
ABTX Abilene, Hawle 83.06 308 P **P** **01 48 59.3 0.0**
baz=43,SNR=18
ABTX S **S** **01 59 18.4 -0.3**
baz=43
S22A 4UR Ranch, Cre 83.15 316 IAmb IAmb 01 49 06.5
comp=Z,192nm,1.4s
S22A 4UR Ranch, Cre 83.15 316 P **P** **01 49 00.8 +0.8**
baz=40,SNR=115
S22A S **S** **01 59 21.9 +1.8**
baz=40
435B Jarrell 83.18 306 IAmb IAmb 01 49 06.8
comp=Z,206nm,1.9s
435B Jarrell 83.18 306 P **P** **01 48 59.7 -0.3**
baz=44
435B S **S** **01 59 18.4 -1.5**
baz=44
435B Jarrell 83.18 306 P **P** **01 49 00.1 +0.2**
baz=44
435B S **S** **01 59 18.7 -1.2**
baz=44
JLU Jordanelle 83.19 321 P **P** **01 49 00.2 +0.1**
CTU Camp Tracy 83.25 321 IAmb IAmb 01 49 05.5
comp=Z,160nm,1.3s
RUSC La Rusia 83.31 272 *eP* **P** **01 49 00.5 -0.9**
P18A Preston Nutter 83.39 320 IAmb IAmb 01 49 04.1
comp=Z,114nm,1.1s
F04D Rainier, OR 83.43 331 P **P** **01 49 01.9 +1.0**
baz=31
F04D S **S** **01 59 26.2 +4.3**
baz=31
PDRB Porto dos Gac 83.52 248 *eP* **P** **01 49 02.6 +0.9**
G05D Wamic, OR 83.53 330 P **P** **01 49 02.9 +1.4**
baz=32,SNR=21
G05D S **S** **01 59 28.1 +5.1**
baz=32
SHEM Shemya Is, Ala 83.55 12 LR LR 02 30 24.2
comp=Z,3µm,20.0s,baz=338,slow=39
ZARC Zaragoza, Cauc 83.55 274 *eP* **P** **01 49 00.9 -1.1**
KCSI Kotacane, Aceh 83.64 91 P **P** **01 49 03.5 +1.0**
comp=Z,3µmcomp=Z,50nm,1.3s
BGU Big Grassy Mou 83.66 322 P **P** **01 49 02.5 +0.1**
MPU Maple Canyon 83.74 321 IAmb IAmb 01 49 08.9
comp=Z,230nm,1.7s
P17A Butcher Ranch, 83.74 320 IAmb IAmb 01 49 08.6
comp=Z,137nm,1.4s
PV10 Paradox Valley 83.78 318 P **P** **01 49 03.7 +0.5**
MAN01 Angra dos Reis 83.81 231 *eP* **P** **01 49 03.1 +0.1**
YUK Yuzh-Kuril'sk 83.84 32 *eP* **P** **01 48 59.3 -3.7**
YUK *eS* **S** **01 59 18.5 -7.5**
YUK *e*SSS SSS 02 08 14.6
YUK pmax pmax
comp=Z,468nm,1.2s
YUK pmax pmax
comp=E,327nm,1.5s
YUK pmax pmax
comp=N,344nm,0.6s
YUK MLR MLR
comp=Z,21µm,18.0s
YUK MLR MLR
comp=N,19µm,17.0s
MSTX Muleshoe 83.84 311 IAmb IAmb 01 49 10.2
comp=Z,178nm,1.6s
MSTX Muleshoe 83.84 311 P **P** **01 49 02.5 -0.9**
baz=42,SNR=19
MSTX S **S** **01 59 28.5 +1.7**
baz=42
MSTX Muleshoe 83.84 311 P **P** **01 49 03.4 0.0**
baz=42,SNR=19
MSTX S **S** **01 59 29.7 +3.0**
baz=42
UNV Unalaska Valle 83.85 360 IAmb IAmb 01 49 07.0
comp=Z,124nm,1.5s
UNV Unalaska Valle 83.85 360 P **P** **01 49 00.3 -2.6**
baz=0.2
UNV Unalaska Valle 83.85 360 P **P** **01 49 04.8 +1.9**
UREC San Jos de Ur 83.87 275 *eP* **P** **01 49 03.5 -0.2**
PTBC PUERTO BERRIO, 83.89 273 *eP* **P** **01 49 02.2 -1.6**

QZH Quanzhou 83.94 62 *j i* P **P** **01 49 03.4 -0.5**
QZH PP **PP** **01 52 20.5 +3.5**
QZH S **S** **01 59 26.1 -1.6**
QZH SS **SS** **02 04 56.8 +1.9**
QZH pmax pmax
comp=Z,2µm,5.2s
QZH LR LR
comp=Z,6µm,16.4s
QZH LR LR
comp=Z,6µm,18.6s
QZH LR LR
comp=Z,9µm,15.6s
J08A Circle Bar Ran 84.00 327 IAmb IAmb 01 49 08.5
comp=Z,90nm,1.0s
JOT Ohata 84.02 37 P **P** **01 49 04.1 +0.1**
TMUT Trail Mountain 84.11 320 IAmb IAmb 01 49 09.1
comp=Z,78nm,1.0s
DUG Dugway, Tooele 84.14 321 IAMs_20 IAMs_20 02 26 31.2
comp=Z,9µm,20.0s
DUG Dugway, Tooele 84.14 321 P **P** **01 49 05.7 +0.8**
baz=37,SNR=89
DUG S **S** **01 59 30.3 +0.7**
baz=37
SPBC San Pablo de B 84.20 272 *eP* **P** **01 49 04.0 -1.5**
G03D McMinnville, O 84.27 331 IAMs_20 IAMs_20 02 29 45.8
comp=Z,9µm,19.0s
G03D McMinnville, O 84.27 331 P **P** **01 49 06.6 +1.4**
baz=31,SNR=24
G03D S **S** **01 59 29.4 -1.0**
baz=31
I05D Terrebonne, OR 84.30 329 P **P** **01 49 07.0 +1.5**
baz=32,SNR=34
I05D S **S** **01 59 33.8 +2.9**
baz=32
H04A Detroit Lake 84.33 330 IAmb IAmb 01 49 10.9
comp=Z,174nm,1.2s
JEM Erimo 84.41 35 P **P** **01 49 06.8 +0.8**
ERM Erimo 84.41 35 P **P** **01 49 06.1 +0.1**
ERM IAmb IAmb 01 49 08.8
comp=Z,120nm,1.1s
ERM Erimo 84.41 35 P **P** **01 49 06.1 +0.1**
ERM pmax pmax
comp=Z,120nm,1.1s
ERM MLR MLR
comp=Z,33µm,18.0s
MVCO Mesa Verde 84.41 317 P **P** **01 49 07.0 +0.6**
baz=39,SNR=57
MVCO S **S** **01 59 29.7 -2.9**
baz=39
JTM Tenmabayashi 84.51 37 IAmb IAmb 01 49 16.9
comp=Z,154nm,1.2s
JTM Tenmabayashi 84.51 37 P **P** **01 49 06.6 +0.1**
KULM Kulim 84.58 88 IAmb IAmb 01 49 18.4
comp=Z,122nm,1.5s
KULM IAMs_20 IAMs_20 02 33 19.8
comp=Z,5µm,19.0s
TEIG Tepich 84.58 292 IAMs_20 IAMs_20 02 21 47.1
comp=Z,8µm,22.0s
TEIG Tepich 84.58 292 *eP* **P** **01 49 05.7 -1.5**
TEIG Tepich 84.58 292 P **P** **01 49 09.3 +2.1**
JFU Fukue jima 2 84.58 50 P **P** **01 49 09.2 +2.1**
H04D Lebanon 84.67 330 P **P** **01 49 08.2 +0.9**
baz=31,SNR=25
H04D S **S** **01 59 31.4 -2.9**
baz=31
735A Kenedy 84.70 305 P **P** **01 49 08.8 +1.2**
baz=44
735A S **S** **01 59 32.3 -2.9**
baz=44
NIKH Nikolski High 84.71 1 P **P** **01 49 05.0 -2.3**
baz=358
JCT Junction City 84.71 307 P **P** **01 49 08.2 +0.3**
baz=43,SNR=32
JCT Junction City 84.71 307 P **P** **01 49 08.1 +0.3**
baz=43,SNR=32
JCT S **S** **01 59 31.5 -4.0**
baz=43
ELK Elko 84.79 323 LR LR 02 28 04.9
comp=Z,11µm,18.1s,baz=44,slow=36
ELK Elko 84.79 323 IAmb IAmb 01 49 15.2
comp=Z,256nm,1.9s
ELK IAMs_20 IAMs_20 02 27 45.1
comp=Z,10µm,18.0s
COR Corvallis 84.82 330 P **P** **01 49 11.5 +3.5**
WVOR Wild Horse Val 84.84 326 IAmb IAmb 01 49 14.7
comp=Z,233nm,1.6s
NORC Norcasia 84.85 273 *eP* **P** **01 49 07.7 -1.0**
DBBC Dabeiba 84.86 275 *eP* **P** **01 49 10.6 +1.8**
HELC Santa Helena 84.91 274 *eP* **P** **01 49 09.0 -0.4**
ROSC El Rosal 84.93 272 P **P** **01 49 09.4 0.0**
comp=Z,26nm,0.7s,baz=164,slow=0.8,SNR=14
ROSC LR LR 02 23 00.6
comp=Z,22µm,21.9s,baz=46,slow=33
comp=Z,26nm,0.7s
ROSC El Rosal 84.93 272 *eP* **P** **01 49 08.8 -0.7**
PSI Prapat 84.97 91 LR LR 02 34 02.5
comp=Z,3µm,18.1s,baz=308,slow=41
PSI Prapat 84.97 91 P **P** **01 49 09.9 +0.5**
GSI Gunungsitoli 84.98 93 IAMs_20 IAMs_20 02 32 47.8
comp=Z,9µm,18.0s
GSI Gunungsitoli 84.98 93 P P 01 49 17.5 +8.2
GSI Gunungsitoli 84.98 93 P **P** **01 49 10.8 +1.5**
RPSI Rantau Prapat 85.04 91 IAmb IAmb 01 49 37.2
comp=Z,122nm,1.5s
RPSI IAMs_20 IAMs_20 02 30 34.3
comp=Z,10µm,22.0s
ANMO Albuquerque 85.10 314 LR LR 02 25 27.7
comp=Z,21µm,21.1s,baz=44,slow=34
ANMO Albuquerque 85.10 314 P **P** **01 49 10.6 +0.7**
ANMO IAmb IAmb 01 49 15.5
comp=Z,93nm,1.3s
ANMO Albuquerque 85.10 314*de* P **P** **01 49 10.7 +0.8**
ANMO pmax pmax
comp=Z,80nm,1.3s
ANMO Albuquerque 85.10 314 P **P** **01 49 10.3 +0.4**
baz=40,SNR=98
ANMO Albuquerque 85.10 314 P **P** **01 49 10.7 +0.8**
baz=40
ANMO S **S** **01 59 35.7 -3.8**
baz=40
ANMO Albuquerque 85.10 314 P **P** **01 49 11.2 +1.3**
PARB Paraibuna 85.13 232 *eP* **P** **01 49 11.6 +1.8**
J05D Fort Rock, OR 85.16 328 P **P** **01 49 11.8 +1.8**
baz=32,SNR=154
J05D S **S** **01 59 37.4 -2.2**
baz=32
I04A Tendick Farm, 85.17 329 P **P** **01 49 10.2 +0.3**
baz=31,SNR=55
I04A S **S** **01 59 35.4 -4.1**
baz=31
JHS Saijyo 85.20 46 P **P** **01 49 10.4 +0.3**
ITRB Iturama 85.24 238 *eP* **P** **01 49 11.3 +1.0**
ATKA Atka Island 85.28 5 P **P** **01 49 11.1 +0.9**
IPM Ipoh 85.40 88 P **P** **01 49 14.4 +3.0**
comp=Z,35nm,1.3s
JSD Sado 85.42 40 IAmb IAmb 01 49 13.1
comp=Z,66nm,1.0s
JSD Sado 85.42 40 P **P** **01 49 11.2 0.0**
JNU Nakatsue 85.42 48 P **P** **01 49 11.4 +0.1**
ADK Adak 85.43 6 IAMs_20 IAMs_20 02 29 53.8
comp=Z,6µm,19.0s
I02E Swisshome, OR 85.43 330 IAMs_20 IAMs_20 02 29 00.6
comp=Z,10µm,19.0s
I02E Swisshome, OR 85.43 330 P **P** **01 49 12.5 +1.4**
baz=30,SNR=11
I02E S **S** **01 59 39.5 -2.4**
baz=30
GUY2C Guyana, Caldas 85.44 273 *eP* **P** **01 49 11.6 -0.6**
CBOC Ciudad Bolivar 85.49 274 *eP* **P** **01 49 11.2 -0.9**
J04D Umpqua Nationa 85.53 329 IAMs_20 IAMs_20 02 26 56.3
comp=Z,7µm,20.0s
J04D Umpqua Nationa 85.53 329 P **P** **01 49 13.0 +1.2**
baz=31,SNR=32
RCLB Rio Claro- Sao 85.55 234 *eP* **P** **01 49 13.0 +1.1**
I03D Drain, OR 85.60 330 P **P** **01 49 13.1 +1.1**
baz=30,SNR=29
I03D S **S** **01 59 39.6 -4.0**
baz=30
JYA Atsumi 85.66 39 P **P** **01 49 12.3 0.0**
VAO Valinhos 85.66 233 *eP* **P** **01 49 13.8 +1.3**
JOM Ohasama 85.67 38 P **P** **01 49 11.7 -0.7**
KVTX Kingsville 85.69 304 P **P** **01 49 13.8 +1.1**
baz=43
JAD Aida 85.80 45 P **P** **01 49 12.3 -0.8**
DLV T Lat 85.85 78 P **P** **01 49 16.5 +2.6**
SALV Santo Antonio 85.89 244 *eP* **P** **01 49 13.8 +0.1**

BMN Battle Mountai 85.91 324 IAmb IAmb 01 49 20.2
comp=Z,132nm,1.5s
K04D Chiloquin, OR 85.92 328 P **P** **01 49 14.6 +0.9**
baz=31,SNR=11
K04D S **S** **01 59 43.4 -3.8**
baz=31
YHNB Yeheng 85.93 60 IAmb IAmb 01 49 17.2
comp=Z,168nm,1.2s
YHNB Yeheng 85.93 60 P **P** **01 49 16.2 +2.2**
PTAC Punta Ardita, 85.95 276 *eP* **P** **01 49 14.0 -0.1**
PSUT Pine Spring 85.95 321 P **P** **01 49 14.4 +0.3**
PSUT IAmb IAmb 01 49 20.9
comp=Z,170nm,1.5s
UPA Univ. de Panam 85.98 278 *eP* **P** **01 49 15.3 +1.0**
Y22D IRIS PASSCAL I 86.01 314 P **P** **01 49 14.8 +0.4**
baz=40
Y22D IRIS PASSCAL I 86.01 314 P **P** **01 49 15.2 +0.8**
baz=40
833A Chaparral WMA, 86.04 305 P **P** **01 49 15.1 +0.7**
baz=43,SNR=20
833A S **S** **01 59 40.7 -7.8**
baz=43
833A Chaparral WMA, 86.04 305 P **P** **01 49 15.4 +1.0**
baz=43,SNR=20
DBO Dodson Butte 86.06 330 IAmb IAmb 01 49 20.3
comp=Z,241nm,1.8s
PRAC Prado 86.10 271 *eP* **P** **01 49 14.6 -0.3**
C2SB Chapadao do Su 86.11 240 *eP* **P** **01 49 15.3 +0.6**
Y22A Socorro 86.14 314 P **P** **01 49 15.4 +0.3**
baz=40,SNR=39
Y22A S **SKSac** **01 59 37.2 -4.1**
baz=40
JWT Wachi 86.17 44 P **P** **01 49 16.1 +1.2**
J01E Myrtle Point 86.28 330 P **P** **01 49 16.9 +1.6**
baz=30,SNR=21
SSLB Suanglung 86.28 61 P **P** **01 49 17.4 +1.7**
PLMC San Jos del P 86.33 273 *eP* **P** **01 49 15.5 -0.6**
SZCU Shurtz Canyon 86.35 320 IAmb IAmb 01 49 21.7
comp=Z,170nm,1.7s
MACC Macarena, Meta 86.38 270 *eP* **P** **01 49 14.6 -1.6**
HUMO Hull Mountain 86.39 329 IAmb IAmb 01 49 22.0
comp=Z,274nm,1.6s
HUMO IAMs_20 IAMs_20 02 28 27.2
comp=Z,8µm,20.0s
JGN Niukaw 86.39 42 P **P** **01 49 15.5 -0.6**
JSU Suzuyama 86.40 50 P **P** **01 49 16.5 +0.3**
TPUB Ta-pu 86.42 62 IAMs_20 IAMs_20 02 33 03.3
comp=Z,11µm,21.0s
TPUB Ta-pu 86.42 62 P **P** **01 49 19.9 +3.5**
L04D Klamath Falls 86.48 329 IAMs_20 IAMs_20 02 27 10.4
comp=Z,9µm,18.0s
L04D Klamath Falls 86.48 329 P **P** **01 49 17.1 +0.6**
baz=31,SNR=73
MAJO Matsushiro 86.58 41 P **P** **01 49 16.1 -0.9**
MAJO IAmb IAmb 01 49 27.4
comp=Z,85nm,1.2s
MAJO Matsushiro 86.58 41 P **P** **01 49 16.1 -0.9**
MAJO pmax pmax
comp=Z,85nm,1.3s
MAJO MLR MLR
comp=Z,39µm,19.0s
MAJO Matsushiro 86.58 41 P **P** **01 49 17.3 +0.3**
MAJO Matsushiro 86.58 41 P **P** **01 49 17.2 +0.2**
MAT Matsushiro 86.58 41 P **P** **01 49 16.0 -0.9**
JMN Monobe 86.58 46 IAmb IAmb 01 49 33.5
comp=Z,63nm,0.9s
JMN Monobe 86.58 46 P **P** **01 49 18.5 +1.5**
MJAR Matsushiro Arr 86.58 41 P **P** **01 49 16.7 -0.3**
comp=Z,20nm,1.0s,baz=330,slow=4.0,SNR=23
MJAR S **SKSac** **01 59 40.4 -3.2**
comp=Z,0.5nm,0.4s,baz=112,slow=2.8,SNR=1.6
MJAR LR LR 02 31 49.4
comp=Z,41µm,18.6s,baz=328,slow=38
comp=Z,20nm,1.0s
K02D Willamette Mer 86.58 330 P **P** **01 49 18.0 +1.0**
baz=30,SNR=29
W18A Petrified Fore 86.67 316 P **P** **01 49 17.9 +0.3**
baz=38
W18A S **S** **01 59 54.6 -0.2**
baz=38
KNB Kanab 86.69 320 IAmb IAmb 01 49 23.2
comp=Z,129nm,1.9s
JMM Marumori 86.75 39 P **P** **01 49 16.8 -0.9**
PET01 Itanhaem-SP 86.83 233 *eP* **P** **01 49 18.8 +0.7**
VILB Vilhena 86.85 249 IAmb IAmb 01 49 26.4
comp=Z,94nm,1.1s
VILB Vilhena 86.85 249 *eP* **P** **01 49 19.2 +0.7**
R11A Troy Canyon, C 86.90 322 P **P** **01 49 19.4 +0.7**
baz=35,SNR=38
R11A S **S** **02 00 00.2 +3.3**
baz=35
U15A North Rim 86.90 319 IAmb IAmb 01 49 24.7
comp=Z,180nm,1.7s
JGF Kuroka 86.91 42 P **P** **01 49 18.0 -0.6**
INU Inuyama 86.94 43 P **P** **01 49 21.8 +3.1**
YOTC Yotoco, Valle 86.99 273 *eP* **P** **01 49 17.5 -1.9**
MNTX Cornudas Mount 86.99 311 P **P** **01 49 19.2 +0.2**
MNTX IAmb IAmb 01 49 24.8
comp=Z,194nm,1.8s
MNTX IAMs_20 IAMs_20 02 26 20.3
comp=Z,9µm,21.0s
MNTX Cornudas Mount 86.99 311 P **P** **01 49 18.7 -0.4**
baz=40,SNR=61
MNTX Cornudas Mount 86.99 311 P **P** **01 49 18.8 -0.3**
baz=40,SNR=61
MNTX S **S** **01 59 59.2 +1.5**
baz=40
TWG Pinlang 87.04 62 IAMs_20 IAMs_20 02 34 19.1
comp=Z,10µm,20.0s
L02F Cave Junction 87.04 329 P **P** **01 49 20.2 +1.1**
baz=30,SNR=33
L02F S **S** **02 00 00.4 +2.6**
baz=30
YBH Yreka Blue Hor 87.05 329 LR LR 02 28 07.0
comp=Z,8µm,18.8s,baz=26,slow=36
YBH Yreka Blue Hor 87.05 329 IAMs_20 IAMs_20 02 27 46.5
comp=Z,9µm,19.0s
WUAZ Wupatki 87.18 318 IAmb IAmb 01 49 26.4
comp=Z,218nm,1.6s
WUAZ Wupatki 87.18 318 P **P** **01 49 20.8 +0.7**
baz=37,SNR=16
WUAZ S **S** **02 00 01.7 +2.0**
baz=37
PCMB Pacaembu 87.21 237 *eP* **P** **01 49 21.4 +1.3**
AZU Azuero 87.32 278 *eP* **P** **01 49 20.7 -0.2**
JRY Ryogami san 87.34 41 P **P** **01 49 20.5 -0.2**
KSXB Camp Six Broad 87.41 329 IAmb IAmb 01 49 26.2
comp=Z,160nm,1.4s
PAHR Pah Rah Range 87.43 325 IAmb IAmb 01 49 25.9
comp=Z,79nm,1.1s
KIDD KIDD Seismic O 87.56 312 P **P** **01 49 22.3 +0.4**
baz=40
121A Cookes Peak, D 87.66 314 P **P** **01 49 22.2 -0.3**
121A Cookes Peak, D 87.66 314 P **P** **01 49 22.9 +0.4**
baz=39,SNR=24
121A S **SKSac** **01 59 47.3 -3.3**
baz=39
121A Cookes Peak, D 87.66 314 P **P** **01 49 23.4 +0.9**
baz=39,SNR=24
121A S **S** **02 00 05.5 +1.1**
baz=39
JYT Yasato 87.79 40 IAmb IAmb 01 49 32.5
comp=Z,82nm,1.1s
JYT Yasato 87.79 40 P **P** **01 49 22.1 -0.6**
TX31 Lajitas Ar. Si 87.81 309 P **P** **01 49 23.4 +0.2**
TX31 Lajitas Ar. Si 87.81 309 P **P** **01 49 23.2 0.0**
baz=41,SNR=50
TX31 S **SKSac** **01 59 52.5 +1.1**
baz=41
TXAR Lajitas Array 87.81 309 P **P** **01 49 24.4 +1.3**
comp=Z,68nm,1.2s,baz=64,slow=2.9,SNR=73
TXAR S **SKSac** **01 59 53.1 +1.6**
comp=Z,0.1nm,0.8s,baz=28,slow=5.7,SNR=0.9
TXAR PKKPbc **PKKPbc** **02 07 09.4 +1.3**
comp=Z,2.0nm,0.9s,baz=192,slow=3.7,SNR=14
TXAR PKPPKP **P'P'df** **02 15 16.7 -5.8**
comp=Z,0.1nm,0.3s,baz=225,slow=1.5,SNR=4.8
TXAR LR LR 02 27 14.8
comp=Z,4µm,21.6s,baz=46,slow=35
comp=Z,68nm,1.2s
TPH Tonopah 87.86 323 IAmb IAmb 01 49 29.0
comp=Z,104nm,1.3s
PTLB Pontes e Lacer 87.88 247 IAmb IAmb 01 49 30.8
comp=Z,48nm,1.0s
PTLB Pontes e Lacer 87.88 247 *eP* **P** **01 49 23.8 +0.5**
JOD2 Odawara 2 88.03 42 P **P** **01 49 22.9 -1.0**
NVAR Mina Array Bea 88.04 324 P **P** **01 49 24.9 +0.6**

comp=Z,14nm,0.9s,baz=51,slow=4.5,SNR=44
NVAR PP **PP** **01 52 48.5 -1.5**
comp=Z,3.6nm,0.9s,baz=62,slow=5.4,SNR=3.6
NVAR S S 01 59 56.6 -11
comp=Z,0.2nm,0.3s,baz=77,slow=22,SNR=1.3
NVAR PKKPbc **PKKPbc** **02 07 08.6 +0.6**
comp=Z,3.2nm,0.8s,baz=198,slow=4.4,SNR=14
NVAR PKPPKP **P'P'df** **02 15 17.1 -5.9**
comp=Z,0.5nm,0.7s,baz=180,slow=4.4,SNR=4.4
NVAR LR LR 02 29 05.9
comp=Z,11µm,20.5s,baz=42,slow=36
comp=Z,14nm,0.9s
NVAR Mina Array Bea 88.04 324 P **P** **01 49 24.2 0.0**
ACON Acoyapa 88.05 284 IAmb IAmb 01 49 28.4
comp=Z,108nm,1.3s
ACON Acoyapa 88.05 284 *e*P **P** **01 49 23.3 -1.1**
FLOC Florencia 88.09 270 *e*P **P** **01 49 21.1 -3.4**
TGUH Tegucigalpa,Un 88.11 287 IAMs_20 IAMs_20 02 22 50.2
comp=Z,10µm,22.0s
TGUH Tegucigalpa,Un 88.11 287 *e*P **P** **01 49 24.4 -0.3**
POPC Popayan, Colom 88.20 272 *e*P **P** **01 49 22.4 -3.0**
LHV Little Huntoon 88.27 324 IAmb IAmb 01 49 31.4
comp=Z,210nm,1.8s
COVE Coope Vega, Sa 88.34 283 IAmb IAmb 01 49 29.9
comp=Z,109nm,1.2s
JCC Jacoby Creek, 88.34 329 IAMs_20 IAMs_20 02 29 05.7
comp=Z,7µm,19.0s
TPNV Topopah Spring 88.34 322 IAMs_20 IAMs_20 02 28 06.5
comp=Z,8µm,21.0s
TPNV Topopah Spring 88.34 322 P **P** **01 49 25.9 +0.3**
baz=35,SNR=12
TPNV S **S** **02 00 11.8 +1.0**
baz=35
BRU2 Volcan 88.41 280 *e*P **P** **01 49 25.6 -0.7**
GMN Gold Mountain 88.51 323 P **P** **01 49 25.8 -0.7**
SRBA San Rafael, Bu 88.59 281 IAmb IAmb 01 49 32.0
comp=Z,101nm,1.8s
RIMA Rio Macho 88.60 282 IAmb IAmb 01 49 31.7
comp=Z,107nm,1.7s
TIJ01 Guaruva-PR 88.63 233 *e*P **P** **01 49 27.5 +0.7**
JOW Kunigami 88.63 54 P **P** **01 49 29.6 +2.7**
V12A Nelson 88.69 320 IAmb IAmb 01 49 31.6
comp=Z,49nm,1.0s
KMRM Mail Ridge 88.73 328 P **P** **01 49 27.3 0.0**
W13A Hualapai Mount 88.74 319 IAmb IAmb 01 49 33.1
comp=Z,62nm,1.2s
DSP Deep Springs 88.77 323 IAmb IAmb 01 49 34.0
comp=Z,126nm,1.7s
GRAC Grapevine Rang 88.81 323 IAmb IAmb 01 49 34.0
comp=Z,223nm,2.0s
GRAC Grapevine Rang 88.81 323 P **P** **01 49 28.0 +0.3**
baz=34,SNR=39
GRAC S **S** **02 00 15.7 +0.7**
baz=34
CRIN San Cristobal 88.88 286 IAmb IAmb 01 49 30.9
comp=Z,103nm,1.1s
ETMB Extrema 88.90 256 IAmb IAmb 01 49 30.9
comp=Z,24nm,0.8s
ETMB Extrema 88.90 256 *e*P **P** **01 49 28.3 0.0**
MLAC Mammoth, Mammo 88.93 324 P **P** **01 49 29.5 +1.0**
baz=33
MLAC S **S** **02 00 19.4 +2.9**
baz=33
TRCB Terra Rica 88.94 237 *e*P **P** **01 49 29.3 +1.0**
BBAC Balboa, Cauca 88.97 272 *e*P **P** **01 49 27.9 -1.1**
FURC Furnace Creek, 89.02 322 P **P** **01 49 29.1 +0.5**
baz=34,SNR=27
FURC S **S** **02 00 19.5 +2.8**
baz=34
JTS Las Juntas de 89.03 283 IAMs_20 IAMs_20 02 23 39.7
comp=Z,7µm,21.0s
TIN Tinemaha, Big 89.15 323 P **P** **01 49 30.0 +0.6**
baz=33
GWY Greenwater Val 89.16 322 IAmb IAmb 01 49 35.9
comp=Z,217nm,1.7s
AQDB Aquidauana 89.19 241 IAmb IAmb 01 49 36.9
comp=Z,88nm,1.3s
AQDB Aquidauana 89.19 241 *e*P **P** **01 49 30.2 +0.7**
SHOC Shoshone, Teco 89.22 321 P **P** **01 49 30.3 +0.7**
baz=35,SNR=9.2
SHOC S **S** **02 00 22.2 +3.4**
baz=35
CMB Columbia Colle 89.26 325 IAMs_20 IAMs_20 02 28 09.2
comp=Z,10µm,21.0s
MYKOM Kota Tinggi 89.28 88 IAMs_20 IAMs_20 02 36 34.4
comp=Z,6µm,19.0s
MTO3 Montecristo 89.34 289 IAmb IAmb 01 49 34.9
comp=Z,157nm,1.7s
NEE2 Needles Airpor 89.36 319 P **P** **01 49 30.5 +0.2**
baz=36
NEE2 S **S** **02 00 23.7 +3.6**
baz=36
TUC Tucson 89.41 315 P **P** **01 49 30.6 0.0**
TUC IAmb IAmb 01 49 36.9
comp=Z,158nm,1.4s
TUC Tucson 89.41 315 P **P** **01 49 30.6 0.0**
TUC pmax pmax
comp=Z,158nm,1.5s
TUC MLR MLR
comp=Z,26µm,22.0s
TUC Tucson 89.41 315 P **P** **01 49 31.2 +0.5**
baz=38
TUC S **S** **02 00 23.6 +2.8**
baz=38
TUC Tucson 89.41 315 P **P** **01 49 32.2 +1.6**
TUQ Turquoise Moun 89.43 321 P **P** **01 49 31.3 +0.6**
baz=35,SNR=15
TUQ S **S** **02 00 25.8 +4.7**
baz=35
QSM Queen of Sheba 89.44 322 IAmb IAmb 01 49 37.1
comp=Z,97nm,1.4s
PDMCI Parker Dam,Lak 89.51 319 P **P** **01 49 31.7 +0.8**
baz=36,SNR=49
PDMCI S **S** **02 00 24.6 +3.2**
baz=36
GCUF Volcan Galeras 89.58 271 *e*P **P** **01 49 28.1 -4.1**
SIV San Ignacio 89.58 248 P **P** **01 49 31.6 +0.2**
comp=Z,14nm,0.8s,baz=75,slow=5.4,SNR=60
SIV S **SKSac** **02 00 02.8 +1.0**
comp=Z,0.4nm,0.3s,baz=286,slow=23,SNR=1.3
SIV LR LR 02 26 56.9
comp=Z,6µm,20.9s,baz=61,slow=34
comp=Z,14nm,0.8s
CWC Cottonwood Cre 89.59 323 P **P** **01 49 32.1 +0.6**
baz=34
CWC S **S** **02 00 26.2 +3.7**
baz=34
MPMC Manual Prospec 89.64 322 P **P** **01 49 32.2 +0.4**
baz=34,SNR=24
MPMC S **S** **02 00 27.1 +4.0**
baz=34
SNET Serv Nac Est T 89.74 288 IAMs_20 IAMs_20 02 22 57.1
comp=Z,8µm,22.0s
GMRC Granite Mounta 89.84 320 P **P** **01 49 33.5 +0.8**
baz=35,SNR=27
GMRC S **S** **02 00 30.1 +5.2**
baz=35
GSC Goldstone, Bar 89.95 321 P **P** **01 49 33.2 +0.1**
baz=34,SNR=17
PTGB Pitanga 90.01 236 *e*P **P** **01 49 33.9 +0.6**
JHJ Hachijo jima 2 90.09 42 LR LR 02 34 12.4
comp=Z,20µm,18.4s,baz=354,slow=38
IRM Iron Mountain 90.11 319 P **P** **01 49 34.7 +0.9**
baz=35,SNR=52
IRM S **S** **02 00 31.1 +4.0**
baz=35
HEC Hector,Ludlow 90.12 321 P **P** **01 49 34.0 +0.1**
baz=34,SNR=17
HEC S **S** **02 00 33.1 +5.8**
baz=34
KRJI Kerinci 90.12 93 P **P** **01 49 36.9 +2.7**
BLYC Blythe 90.14 319 IAmb IAmb 01 49 40.2
comp=Z,160nm,1.6s
MCCM Marconi Confer 90.19 327 IAMs_20 IAMs_20 02 30 06.9
comp=Z,9µm,20.0s
LRMC Laurel Mtn Rad 90.21 322 P **P** **01 49 34.1 -0.3**
baz=34
BONI La Bonita 90.23 271 *e*P **P** **01 49 34.2 -0.7**
VOG Valley Oaks Go 90.27 324 P **P** **01 49 33.6 -0.8**
baz=33
RRX Edison Barstow 90.39 321 P **P** **01 49 34.8 -0.3**
baz=34
ISA Isabella, Lake 90.41 323 IAmb IAmb 01 49 41.4
comp=Z,99nm,1.4s
ISA Isabella, Lake 90.41 323 P **P** **01 49 35.9 +0.6**
baz=33,SNR=20
ANTJ Antonio Joao (90.49 240 *e*P **P** **01 49 36.1 +0.6**

VES Vestal, Richgr 90.54 323 P **P** **01 49 35.2 -0.5**
baz=33
113A Mohawk Valley, 90.56 318 IAmb IAmb 01 49 40.8
comp=Z,75nm,1.5s
BELC Belle Mtn. Jos 90.64 320 P **P** **01 49 37.5 +1.1**
baz=35,SNR=17
BELC S **S** **02 00 36.6 +4.3**
baz=35
BC3 Big Chuckawall 90.67 319 P **P** **01 49 37.1 +0.6**
baz=35,SNR=20
BC3 S **S** **02 00 37.1 +4.7**
baz=35
214A Organ Pipe Nat 90.73 317 IAmb IAmb 01 49 42.5
comp=Z,124nm,1.7s
214A Organ Pipe Nat 90.73 317 P **P** **01 49 36.1 -0.7**
baz=36,SNR=18
214A S **S** **02 00 36.5 +3.5**
baz=36
SAO San Andreas Ge 90.78 325 IAMs_20 IAMs_20 02 29 08.5
comp=Z,8µm,20.0s
EDW2 Edwards Air Fo 90.85 322 P **P** **01 49 37.9 +0.6**
baz=34,SNR=11
EDW2 S **S** **02 00 37.2 +3.2**
baz=34
GLA Glamis 90.85 319 IAmb IAmb 01 49 43.4
comp=Z,162nm,1.8s
GLA Glamis 90.85 319 P **P** **01 49 37.5 +0.2**
baz=35,SNR=7.9
GLA S **S** **02 00 37.6 +3.6**
baz=35
BBRC Big Bear Solar 90.86 321 P **P** **01 49 37.3 -0.3**
baz=34
CUSE Cuicocha Este 90.97 271 *e*P **P** **01 49 40.5 +1.9**
ARVC Arvin 91.02 322 P **P** **01 49 38.4 +0.4**
baz=33
MCR1 Marechal Candi 91.03 237 *e*P **P** **01 49 38.1 +0.1**
OTAV Otavalo 91.06 271 P **P** **01 49 38.5 -0.5**
OTAV Otavalo 91.06 271 IAMs_20 IAMs_20 02 25 37.2
comp=Z,6µm,22.0s
OTAV Otavalo 91.06 271 P **P** **01 49 38.5 -0.5**
OTAV pmax pmax
comp=Z,25nm,1.0s
OTAV Otavalo 91.06 271 *e*P **P** **01 49 37.1 -1.9**
OTAV Otavalo 91.06 271 P **P** **01 49 40.4 +1.4**
OTAV Otavalo 91.06 271 *e*P **P** **01 49 39.6 +0.6**
PMD Palm Desert 91.11 320 IAmb IAmb 01 49 43.8
comp=Z,86nm,1.3s
TER01 Tubaro-SC 91.12 231 *e*P **P** **01 49 39.1 +0.8**
PFO Pinyon Flats O 91.18 320 LR LR 02 32 52.0
comp=Z,10µm,18.3s,baz=36,slow=37
PFO Pinyon Flats O 91.18 320 P **P** **01 49 39.6 +0.7**
PFO IAmb IAmb 01 49 43.7
comp=Z,72nm,1.1s
PFO Pinyon Flats O 91.18 320 P **P** **01 49 39.6 +0.7**
PFO pmax pmax
comp=Z,72nm,1.2s
PFO MLR MLR
comp=Z,11µm,18.0s
PFO Pinyon Flats O 91.18 320 P **P** **01 49 38.8 -0.1**
baz=34,SNR=35
PFO S **S** **02 00 40.8 +3.7**
baz=34
TPFO Pinon Flats 91.18 320 P **P** **01 49 38.6 -0.3**
baz=34,SNR=52
TPFO S **S** **02 00 40.6 +3.4**
baz=34
BFSC Mount Baldy Ra 91.22 321 P **P** **01 49 39.0 -0.1**
baz=34,SNR=10
BFSC S **S** **02 00 40.3 +2.7**
baz=34
CMIG Matias Romero 91.24 295 S **SKSac** **02 00 03.9 -7.7**
comp=Z,1.2nm,0.8s,baz=26,slow=23,SNR=1.0
CMIG LR LR 02 28 30.9
comp=Z,5µm,20.5s,baz=30,slow=34
SMMC Simmler 91.38 323 P **P** **01 49 40.2 +0.5**
baz=32
OSI Osito Audit: C 91.40 322 P **P** **01 49 39.4 -0.4**
baz=33
SWSC Sam W. Stewart 91.41 319 P **P** **01 49 39.4 -0.4**
baz=35,SNR=14
DECC Green Verdugo 91.52 322 P **P** **01 49 39.3 -1.1**
baz=33
MURC Murrieta 91.54 321 P **P** **01 49 40.6 +0.2**
baz=34,SNR=14
FRBT Francisco Belt 91.55 236 *e*P **P** **01 49 41.4 +1.0**
PKM Mcpherson Peak 91.66 323 P **P** **01 49 42.3 +1.1**
baz=32,SNR=12
MONP2 Monument Peak 91.75 320 P **P** **01 49 42.6 +0.9**
baz=34,SNR=36
IKP In-Ko-Pah, Jac 91.80 319 P **P** **01 49 42.2 +0.5**
baz=35,SNR=14
ITAB Concordia 91.91 234 *e*P **P** **01 49 42.6 +0.7**
FMP Fort Macarthur 91.95 321 P **P** **01 49 42.7 +0.4**
baz=33
SBC Santa Barbara 91.99 323 P **P** **01 49 43.2 +0.8**
baz=33
BAR Barrett 92.05 320 IAmb IAmb 01 49 48.8
comp=Z,96nm,1.4s
109C Camp Elliot, M 92.08 320 P **P** **01 49 42.5 -0.5**
baz=34
CZSB Cruzeiro do Su 92.18 262 *e*P **P** **01 49 44.1 +0.5**
CIS Catalina Islan 92.27 321 P **P** **01 49 44.0 +0.2**
baz=33
CNLB Canela 92.70 232 *e*P **P** **01 49 46.0 +0.4**
SNCC San Nicolas Is 92.91 322 P **P** **01 49 47.1 +0.4**
baz=33
TGY Tagaytay City 93.12 68 LR LR 02 37 16.8
comp=Z,7µm,19.7s,baz=269,slow=39
PMBI Palembang 93.12 91 IAMs_20 IAMs_20 02 35 22.7
comp=Z,5µm,22.0s
CRSM Crissiumal (Br 93.25 235 *e*P **P** **01 49 49.0 +0.9**
BOSC San Juan Bosco 93.36 269 IAmb IAmb 01 49 53.7
comp=Z,119nm,1.8s
COCO West Island 93.54 103 IAMs_20 IAMs_20 02 31 41.3
comp=Z,5µm,21.0s
ALGR Alto Alegre (B 93.60 234 *e*P **P** **01 49 50.6 +0.8**
PPLP Puerto Lpez 93.97 272 *e*P **P** **01 49 50.9 -1.0**
CPUP Villa Florida 94.44 238 P **P** **01 49 53.4 -0.3**
comp=Z,3.7nm,1.0s,baz=56,slow=5.5,SNR=5.2
CPUP S **SKSac** **02 00 22.9 -5.7**
comp=Z,0.7nm,0.5s,baz=188,slow=8.8,SNR=1.7
CPUP LR LR 02 30 08.8
comp=Z,8µm,21.8s,baz=48,slow=34
comp=Z,3.7nm,1.0s
CPUP Villa Florida 94.44 238 P **P** **01 49 53.9 +0.3**
CPUP Villa Florida 94.44 238 P **P** **01 49 53.9 +0.3**
CPUP pmax pmax
comp=Z,47nm,1.8s
CPUP Villa Florida 94.44 238 *e*P **P** **01 49 53.6 0.0**
LPAZ La Paz 94.67 252 P **P** **01 49 55.1 -0.6**
comp=Z,3.8nm,0.8s,baz=85,slow=4.7,SNR=14
LPAZ PP **PP** **01 53 44.6 +0.5**
comp=Z,10.0nm,1.2s,baz=53,slow=6.0,SNR=6.6
LPAZ LR LR 02 31 58.5
comp=Z,3µm,19.2s,baz=26,slow=35
comp=Z,3.8nm,0.8s
LPAZ La Paz 94.67 252 *e*P **P** **01 49 55.3 -0.4**
UNIS Unistalda (Bra 95.02 235 *e*P **P** **01 49 56.3 0.0**
CPSB Cacapava Do Su 95.02 233 *e*P **P** **01 49 56.8 +0.6**
LPIG La Paz 95.61 310 LR LR 02 31 55.6
comp=Z,7µm,21.1s,baz=34,slow=35
SLBS Sierra La Lagu 95.73 310 IAMs_20 IAMs_20 02 37 05.7
comp=Z,5µm,18.0s
ATAH Atahualpa 95.95 266 P **P** **01 50 01.8 +0.3**
baz=69,slow=8.6
ATAH LR LR 02 31 58.7
comp=Z,6µm,19.8s,baz=30,slow=35
RODS Rosario do Sul 96.02 234 *e*P **P** **01 50 00.7 -0.1**
PLTB Pedras Altas 96.11 232 *e*P **P** **01 50 02.2 +1.0**
JCJ Chichijima 96.18 44 LR LR 02 37 26.1
comp=Z,12µm,19.4s,baz=342,slow=38
ITQB Itaqui 96.39 235 *e*P **P** **01 50 02.3 -0.1**
PB16 IPOC Station P 97.02 252 IAmb IAmb 01 50 11.5
comp=Z,25nm,0.8s
LEM Lembang 97.83 92 LR LR 02 39 23.6
comp=Z,2µm,20.4s,baz=320,slow=38
NNA Nana 98.04 261 LR LR 02 30 10.7
comp=Z,5µm,21.9s,baz=18,slow=33
NNA Nana 98.04 261 IAMs_20 IAMs_20 02 32 43.2
comp=Z,8µm,22.0s
PB01 IPOC Station P 98.82 250 IAmb IAmb 01 50 18.3
comp=Z,26nm,1.3s
PB09 IPOC Station P 99.16 249 IAmb IAmb 01 50 33.2
comp=Z,30nm,1.1s
LVC Limon Verde 99.47 248 LR LR 02 33 45.8
comp=Z,3µm,21.6s,baz=21,slow=34
LVC Limon Verde 99.47 248 P **Pdif** **01 50 17.3 +0.3**

LVC Limon Verde 99.47 248 IAMs_20 IAMs_20 02 34 39.9
comp=Z,5µm,22.0s
LVC Limon Verde 99.47 248 P **Pdif** **01 50 17.3 +0.3**
LVC pmax pmax
comp=Z,20nm,1.2s
LVC MLR MLR
comp=Z,5µm,22.0s
LVC Limon Verde 99.47 248 P **Pdif** **01 50 20.4 +3.4**
LVC Limon Verde 99.47 248 *e*P **Pdif** **01 50 17.3 +0.3**
SMRI Semarang 100.06 90 IAMs_20 IAMs_20 02 43 15.3
comp=Z,5µm,21.0s
UGM Wanagama 100.69 91 IAMs_20 IAMs_20 02 44 52.1
comp=Z,4µm,19.0s
LPA La Plata 100.88 232 SSS SSS 02 12 52.8
LPA La Plata 100.88 232 PKIKP **PP** **01 54 30.1 -0.8**
LPA La Plata 100.88 232 PPP PPP 01 56 35.8
LPA La Plata 100.88 232 SKIKP 01 58 18.8
LPA La Plata 100.88 232 PKIKS 01 58 23.8
LPA La Plata 100.88 232 SKS 02 01 13.5
LPA La Plata 100.88 232 SKIKS 02 01 57.1
LPA La Plata 100.88 232 SDIFF 02 02 08.0
LPA La Plata 100.88 232 PS PS 02 03 32.6 +0.4
LPA La Plata 100.88 232 PPS PPS 02 04 14.1
LPA La Plata 100.88 232 SS SS 02 09 01.2 +2.1
BKB Balikpapan 100.92 82 IAMs_20 IAMs_20 02 41 47.4
comp=Z,5µm,21.0s
TOLI2 Tolitoli 102.11 77 IAMs_20 IAMs_20 02 42 02.2
comp=Z,4µm,22.0s
LCO Las Campanas 104.90 244 IAMs_20 IAMs_20 02 39 22.7
comp=Z,6µm,20.0s
LUWI Luwuk 105.03 77 IAMs_20 IAMs_20 02 47 46.6
comp=Z,4µm,20.0s
TRQA Tornquist 105.41 232 IAMs_20 IAMs_20 02 38 03.7
comp=Z,4µm,19.0s
PEL Peldehue 107.55 241 IAMs_20 IAMs_20 02 37 43.8
comp=Z,7µm,22.0s
MMRI Maumere 109.80 83 IAMs_20 IAMs_20 02 47 30.5
comp=Z,4µm,22.0s
SOEI Soe 112.03 83 IAMs_20 IAMs_20 02 49 33.0
comp=Z,4µm,22.0s
PLCA Paso Flores 112.21 235 PKiKP **PKiKP** **01 55 08.9 -0.1**
comp=Z,0.7nm,0.4s,baz=1,slow=9.2,SNR=2.7
FAKI Fak Fak 113.07 72 IAMs_20 IAMs_20 02 49 23.4
comp=Z,5µm,22.0s
WAKE Wake Island 113.67 27 IAMs_20 IAMs_20 02 44 59.6
comp=Z,5µm,22.0s
VNA1 Neumayer--Stat 114.08 188 PKPdf **PKiKP** **01 55 13.3 +1.9**
VNA1 Neumayer--Stat 114.08 188 PP **PP** **01 56 09.6 +2.6**
VNA2 Neumayer--Watz 114.26 187 PKKPbc PKKPbc 02 05 45.9 -7.3
VNA2 Neumayer--Watz 114.26 187 PKPdf **PKiKP** **01 55 12.4 +0.5**
VNA2 Neumayer--Watz 114.26 187 PP **PP** **01 56 09.6 +1.3**
baz=13,slow=7.6
SNAA Sanae 114.61 186 PKPdf **PKiKP** **01 55 13.1 +0.4**
SNAA Sanae 114.61 186 PP **PP** **01 56 12.6 +1.8**
SNAA Sanae 114.61 186 IAMs_20 IAMs_20 02 42 36.4
comp=Z,5µm,19.0s
SNAA Sanae 114.61 186 *e*P **PKiKP** **01 55 13.4 +0.8**
TROLL Troll, Antarti 114.63 184 PKPdf PKPdf 01 55 10.5 -2.2
TROLL Troll, Antarti 114.63 184 PP PP 01 56 15.5 +4.5
VNA3 Neumayer Olymp 114.79 188 PKPdf **PKiKP** **01 55 13.1 +0.2**
KIP Kipapa 115.71 351 IAMs_20 IAMs_20 02 50 12.7
comp=Z,5µm,20.0s
MAW Mawson 116.17 161 PKP **PKPdf** **01 55 15.2 -0.4**
comp=Z,5.1nm,1.0s,baz=326,slow=6.2,SNR=7.3
MAW PKPPbc **PKKPab** **02 05 47.2 +0.1**
comp=Z,6.3nm,1.0s,baz=120,slow=3.8,SNR=3.3
MAW Mawson 116.17 161 **PKiKP** **01 55 16.2 +0.7**
POHA Pohakuloa 117.02 348 IAMs_20 IAMs_20 02 48 41.8
comp=Z,4µm,20.0s
GENI Genyem 118.26 65 PKP **PKiKP** **01 55 24.2 +2.8**
FITZ Fitzroy Crossi 118.45 89 PKPdf **PKPdf** **01 55 21.1 -0.4**
JOHN Johnston Islan 120.83 3 IAMs_20 IAMs_20 02 50 15.4
comp=Z,4µm,20.0s
NWAO Narrogin (SRO) 121.05 108 IAMs_20 IAMs_20 02 49 16.3
comp=Z,3µm,20.0s
PMSA Palmer Station 122.72 210 P **PKiKP** **01 55 35.8 +7.4**
PMSA Palmer Station 122.72 210 *e*P **PKiKP** **01 55 28.6 +0.2**
SMAI San Martin Ant 125.43 207 PKPdf **PKPdf** **01 55 32.5 -0.8**
WRA Warramunga Arr 126.00 84 PKP **PKPdf** **01 55 35.0 -1.0**
comp=Z,14nm,1.0s,baz=312,slow=2.2,SNR=34
WRA PP **PP** **01 57 29.9 +0.2**
comp=Z,8.5nm,1.1s,baz=319,slow=6.5,SNR=6.4
WRA Warramunga Arr 126.00 84 **PKPdf** **01 55 34.0 -2.1**
WRA Warramunga Arr 126.00 84 PKIKP **PKPdf** **01 55 35.0 -1.0**
WRAB Tennant Creek 126.00 84 IAMs_20 IAMs_20 03 02 40.6
comp=Z,3µm,21.0s
WRAB Tennant Creek 126.00 84 P **PKiKP** **01 55 36.3 -0.1**
ASAR Alice Springs 127.94 88 PKP **PKPdf** **01 55 39.0 -0.7**
comp=Z,8.3nm,0.6s,baz=310,slow=1.5,SNR=40
ASAR PP **PP** **01 57 42.4 -0.2**
comp=Z,1.8nm,0.8s,baz=309,slow=5.9,SNR=1.8
ASAR PKKP **PKKPdf** **02 05 49.5 +0.6**
comp=Z,0.7nm,0.9s,baz=122,slow=3.4,SNR=2.2
ASAR Alice Springs 127.94 88 PKIKP **PKPdf** **01 55 39.0 -0.7**
COEN Coen 128.45 72 PKPdf **PKPdf** **01 55 40.8 0.0**
CASY Casey 130.98 148 PKPdf **PKiKP** **01 55 44.6 -0.3**
CASY Casey 130.98 148 IAMs_20 IAMs_20 02 54 46.9
comp=Z,3µm,20.0s
TARA Tarawa 132.51 28 IAMs_20 IAMs_20 02 55 25.5
comp=Z,5µm,20.0s
XMAS Kiritimati 134.69 347 IAMs_20 IAMs_20 02 51 35.2
comp=Z,4µm,20.0s
CTAO Charters Tower 134.74 75 PKPdf **PKPdf** **01 55 51.9 -0.7**
CTAO Charters Tower 134.74 75 IAMs_20 IAMs_20 02 57 50.0
comp=Z,4µm,22.0s
CTAO Charters Tower 134.74 75 PKIKP **PKPdf** **01 55 51.9 -0.7**
CTAO Charters Tower 134.74 75 P **PKiKP** **01 55 53.8 -0.2**
HNR Honiara 135.93 51 IAMs_20 IAMs_20 03 01 53.4
comp=Z,3µm,20.0s
STKA Stephens Creek 138.13 93 PKhKP PKPpre 01 55 47.7
comp=Z,3.4nm,0.7s,baz=310,slow=9.6,SNR=7.0
STKA PKP **PKPdf** **01 55 58.0 -0.5**
comp=Z,10nm,0.8s,baz=321,slow=4.9,SNR=13
TAOE Nuku Hiva Isla 138.99 317 *e*LR LR 02 40 53.9
comp=Z,8µm,22.8s
VNDA Vanda 142.77 169 PKhKP PKPpre 01 56 02.1
comp=Z,4.3nm,0.9s,baz=188,slow=2.8,SNR=18
SBA Scott Base 143.12 171 PKPpre 01 56 02.8
SBA Scott Base 143.12 171 IAMs_20 IAMs_20 02 59 25.2
comp=Z,4µm,20.0s
SBA Scott Base 143.12 171 PKIKP PKPbc 01 56 02.8 -0.3
SBA MLR MLR
comp=Z,4µm,20.0s
SBA Scott Base 143.12 171 P PKPbc 01 56 04.0 +0.9
CAN Canberra 145.19 93 IAMs_20 IAMs_20 03 07 34.0
comp=Z,4µm,20.0s
TAU Tasmania Unive 146.66 106 PKPdf **PKPbc** **01 56 14.2 -0.7**
TAU Tasmania Unive 146.66 106 IAMs_20 IAMs_20 03 16 26.9
comp=Z,3µm,20.0s
TAU Tasmania Unive 146.66 106 PKP2 **PKPbc** **01 56 14.2 -0.7**
TAU Tasmania Unive 146.66 106 P **PKPab** **01 56 15.9 -0.2**
KOUNC Koumac, New Ca 147.21 57 **PKPbc** **01 56 17.5 +0.3**
PMOR Pomariorio Ree 147.99 324 *e*P **PKPdf** **01 56 16.8 +0.5**
comp=Z,156nm,1.0s
VAH Vaihoa 148.08 323 *e*P **PKPdf** **01 56 17.3 +0.9**
comp=Z,161nm,1.1s
LIFNC LIFOU 149.16 53 IAMs_20 IAMs_20 03 09 29.6
comp=Z,3µm,21.0s
DZM Mont Dzumac 149.67 56 PKPbc **PKiKP** **01 56 24.8 +0.2**
comp=Z,103nm,1.0s,baz=66,slow=12,SNR=26
DZM Mont Dzumac 149.67 56 *e*P **PKPdf** **01 56 18.2 -0.8**
comp=Z,1µm,23.9s
DZM Mont Dzumac 149.67 56 *e*LR LR 02 45 54.0
comp=Z,11µm,22.5s
PPT Papeete 150.99 324 PKPbc **PKiKP** **01 56 27.7 +0.3**
comp=Z,54nm,1.0s,baz=249,slow=13,SNR=3.8
PPTF Pamatai, Papee 151.00 324 PKPab **PKPab** **01 56 31.3 -3.0**
PPTF IAMs_20 IAMs_20 03 16 08.1
comp=Z,4µm,20.0s
PPT2 Papeete2 151.01 324 *e*PKIKP **PKPdf** **01 56 20.6 -0.6**
comp=Z,751nm,24.5s
PPT2 Papeete2 151.01 324 *e*P **PKPbc** **01 56 25.4 -1.5**
comp=Z,173nm,1.3s
PPT2 Papeete2 151.01 324 *e*PP **PP** **02 00 03.6 -0.2**
comp=Z,639nm,24.2s
PPT2 Papeete2 151.01 324 *e*LR LR 02 46 30.0
comp=Z,9µm,27.2s
PPT2 *e*LR LR 02 46 30.2
comp=Z,6µm,27.8s
AFI Afiamalu 151.01 10 PKPbc **PKiKP** **01 56 28.1 +0.5**
comp=Z,147nm,0.9s,baz=232,slow=16,SNR=4.8
AFI Afiamalu 151.01 10 IAMs_20 IAMs_20 03 09 58.4
comp=Z,3µm,20.0s
AFI Afiamalu 151.01 10 P **PKiKP** **01 56 29.7 +2.1**
PAE Paea 151.08 324 *e*P **PKiKP** **01 56 30.0 +2.5**
comp=Z,49nm,1.5s

MSVF	**Nonsavu**	**151.99**	**32**	PKPbc	**PKiKP**	**01 56 30.3**	**+0.8**
	comp=Z,46nm,1.0s,baz=209,slow=1.8,SNR=8.8						
MSVF	**Nonsavu**	**151.99**	**32**	IAMs_20	IAMs_20	03 08 09.0	
	comp=Z,4μm,21.0s						
MSVF	**Nonsavu**	**151.99**	**32**	P	**PKiKP**	**01 56 31.7**	**+2.2**
TBI	**Tubuai**	**155.94**	**318**	*e*PKIKP	**PKPdf**	**01 56 27.2**	**-0.8**
	comp=Z,207nm,23.2s						
TBI	**Tubuai**	**155.94**	**318**	*e*PP	**PP**	**02 00 30.9**	**-0.8**
	comp=Z,683nm,25.2s						
TBI	**Tubuai**	**155.94**	**318**	*e*LR	LR	02 48 46.0	
	comp=Z,104μm,24.8s						
TBI				*e*LR	LR	02 48 46.8	
	comp=Z,7μm,26.5s						
RPZ	**Rata Peaks**	**163.82**	**101**	PKPab	**PKPab**	**01 57 25.7**	**-3.2**
	comp=Z,46nm,1.0s,baz=327,slow=23,SNR=4.1						

***ROM* 24 01:37:26.6±0.1, 42°.712N±0°.006×13°.253E±0°.010, h9km±1km, ML4.5/2, Error ellipse: s-maj=0.7km s-min=0.5km az=83.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.19**	**235**	P	Pg	01 37 31.1	+0.5
LNSS				S	Sg	01 37 34.7	+1.3
LNSS				END			
RM33	**Pellescritta (**	**0.20**	**188**	P	Pg	01 37 31.6	+0.7
RM33				S	Sg	01 37 35.1	+1.4
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				END			
TERO	**Teramo**	**0.27**	**109**	P	Pg	01 37 32.7	+0.6
TERO				S	Sg	01 37 37.1	+1.3
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
	comp=E,76510μm,0.1s						
TERO				END			
FDMO	**Fiordimonte**	**0.35**	**339**	P	Pb	01 37 34.2	-0.7
FDMO				S	Sg	01 37 39.1	+1.0
GIGS	**Gran Sasso**	**0.35**	**138**	P	Pg	01 37 34.0	+0.4
GIGS				S	Sb	01 37 39.5	-1.2
AQU	**L'Aquila**	**0.38**	**163**	P	Pg	01 37 34.6	+0.7
AQU				S	Sb	01 37 40.6	-0.8
ARRO	**Arrone**	**0.38**	**250**	P	Pg	01 37 34.5	+0.4
OFFI	**Offida**	**0.39**	**55**	P	Pb	01 37 35.8	+0.2
CESI	**CESI - Serrava**	**0.39**	**319**	P	Pg	01 37 34.5	+0.2
CESI				S	Sg	01 37 40.3	+0.9
MNTP	**Montappone**	**0.45**	**20**	P	Pg	01 37 36.0	+0.6
MNTP				END			
FIAM	**Fiamignano**	**0.46**	**193**	P	Pg	01 37 35.6	+0.2
MDAR	**Monte D'Aria**	**0.49**	**350**	P	Pg	01 37 36.2	+0.1
SSM1	**San Severino M**	**0.52**	**354**	P	Pg	01 37 36.8	+0.1
SSM1				END			
FIU1	**Fiuminata**	**0.53**	**334**	P	Pg	01 37 36.7	-0.2
FIU1				AML	AML		
	comp=N,26831μm,0.1s						
FIU1				AML	AML		
	comp=E,23937μm,0.2s						
FIU1				END			
GAG1	**Gagliole**	**0.54**	**346**	P	Pg	01 37 37.3	+0.2
ASSB	**Assisi San Ben**	**0.55**	**307**	P	Pb	01 37 38.0	-0.4
TRE1	**Treia**	**0.60**	**4**	P	Pb	01 37 38.8	-0.5
CADA	**Capodarco di F**	**0.61**	**38**	P	Pb	01 37 39.8	+0.4
T0110	**Collepietro**	**0.62**	**141**	P	Pg	01 37 38.8	+0.2
ATCC	**AVT- Casa Cast**	**0.65**	**317**	P	Pg	01 37 39.6	+0.4
CIMA	**Civitanova Mar**	**0.67**	**27**	P	Pb	01 37 40.8	+0.4
SRES	**S.Oreste - Sor**	**0.73**	**229**	P	Pb	01 37 41.4	0.0
CERT	**Cerreto**	**0.79**	**195**	P	Pb	01 37 42.7	+0.2
SSFR	**Montelago di S**	**0.80**	**335**	P	Pg	01 37 42.3	+0.3
SACS	**San Casciano d**	**1.00**	**278**	P	Pn	01 37 46.7	-0.2
MCIV	**Monte Civitell**	**1.16**	**274**	P	Pn	01 37 49.9	+0.8
SF13	**Bagnolo**	**1.21**	**276**	P	Pg	01 37 50.7	+1.0

***ROM* 24 01:40:46.6±0.2, 42°.765N±0°.004×13°.172E±0°.010, h10km±1km, ML3.2/3, Error ellipse: s-maj=0.7km s-min=0.5km az=87.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.19**	**211**	P	Pg	01 40 51.3	+0.7
LNSS				S	Sg	01 40 54.8	+1.4
LNSS				AML	AML		
	comp=E,17250μm,0.7s						
LNSS				AML	AML		
	comp=N,39350μm,0.6s						
LNSS				AML	AML		
LNSS				AML	AML		
	comp=E,40400μm,0.2s						
FEMA	**Monte Fema**	**0.22**	**336**	P	Pg	01 40 51.3	+0.2
FEMA				S	Sg	01 40 55.1	+0.8
RM33	**Pellescritta (**	**0.26**	**173**	P	Pg	01 40 52.4	+0.6
RM33				S	Sg	01 40 56.4	+1.0
RM33				AML	AML		
	comp=E,26150μm,1.5s						
RM33				AML	AML		
	comp=E,25450μm,1.5s						
RM33				AML	AML		
	comp=N,21250μm,0.4s						
RM33				AML	AML		
	comp=N,21250μm,0.4s						
FDMO	**Fiordimonte**	**0.28**	**347**	P	Pg	01 40 52.3	0.0
FDMO				S	Sg	01 40 56.8	+0.8
CESI	**CESI - Serrava**	**0.31**	**321**	P	Pg	01 40 53.1	+0.2
CESI				S	Sg	01 40 58.2	+1.2
TERO	**Teramo**	**0.35**	**114**	P	Pg	01 40 53.6	+0.1
TERO				S	Sg	01 40 58.7	+0.6
ARRO	**Arrone**	**0.35**	**238**	P	Pg	01 40 54.0	+0.4
OFFI	**Offida**	**0.41**	**66**	P	Pb	01 40 55.4	-0.6
OFFI				S	Sb	01 41 03.1	+0.7
SEF1	**Sefro**	**0.42**	**337**	P	Pg	01 40 54.7	-0.1
SEF1				S	Sg	01 41 01.4	+1.1
SEF1				AML	AML		
	comp=N,36100μm,1.0s						
SEF1				AML	AML		
	comp=E,32650μm,0.3s						
MDAR	**Monte D'Aria**	**0.43**	**357**	P	Pg	01 40 54.8	-0.2
MDAR				S	Sg	01 41 01.5	+0.8
GIGS	**Gran Sasso**	**0.43**	**137**	P	Pg	01 40 55.0	0.0
GIGS				S	Sg	01 41 01.1	+0.4
MNTP	**Montappone**	**0.43**	**30**	P	Pg	01 40 55.5	+0.5
MNTP				S	Sb	01 41 03.5	+0.6
PIO1	**Pioraco**	**0.44**	**342**	P	Pb	01 40 56.1	-0.3
PIO1				S	Sb	01 41 03.1	0.0
AQU	**L'Aquila**	**0.44**	**157**	P	Pg	01 40 55.3	0.0
AQU				S	Sg	01 41 02.2	+1.1
FIU1	**Fiuminata**	**0.46**	**337**	P	Pg	01 40 55.6	+0.1
FIU1				S	Sb	01 41 02.7	-1.0
CESX	**Cesi**	**0.46**	**251**	P	Pg	01 40 56.0	+0.4
CESX				S	Sb	01 41 03.3	-0.5
SSM1	**San Severino M**	**0.46**	**0**	P	Pg	01 40 55.5	-0.1
SSM1				S	Sg	01 41 02.8	+1.0
ASSB	**Assisi San Ben**	**0.47**	**307**	P	Pg	01 40 55.8	0.0
ASSB				S	Sb	01 41 03.0	-1.0
FIAM	**Fiamignano**	**0.50**	**185**	P	Pg	01 40 56.5	+0.2
FIAM				S	Sb	01 41 03.9	-1.0
MTL1	**Matelica**	**0.51**	**346**	P	Pg	01 40 56.4	-0.1
MTL1				S	Sb	01 41 04.4	-0.7
TRTR	**Tortoreto Alta**	**0.55**	**85**	P	Pb	01 40 58.3	0.0
TRE1	**Treia**	**0.56**	**11**	P	Pg	01 40 57.5	+0.1
TRE1				S	Sb	01 41 06.9	+0.4
EL6	**Elcito**	**0.57**	**355**	P	Pg	01 40 57.5	-0.1
EL6				S	Sb	01 41 06.5	-0.4
ATCC	**AVT- Casa Cast**	**0.57**	**317**	P	Pg	01 40 57.9	+0.2
CADA	**Capodarco di F**	**0.61**	**45**	P	Pb	01 40 59.8	+0.4
FOSV	**Fossato di Vic**	**0.61**	**331**	P	Pg	01 40 58.7	+0.3
VCEL	**Villa Celiera**	**0.62**	**127**	P	Pg	01 40 59.0	+0.5
CIMA	**Civitanova Mar**	**0.65**	**34**	P	Pb	01 41 00.1	0.0
PP3	**Marolino**	**0.69**	**27**	P	Pb	01 41 00.8	0.0
SRES	**S.Oreste - Sor**	**0.72**	**223**	P	Pb	01 41 01.5	+0.3
SSFR	**Montelago di S**	**0.73**	**337**	P	Pg	01 41 00.7	0.0
ATFO	**Monte Foce - G**	**0.75**	**324**	P	Pg	01 41 01.1	+0.1
ARVD	**Arcevia**	**0.75**	**347**	P	Pg	01 41 00.9	-0.2
MGAB	**Montegabbione**	**0.79**	**281**	P	Pb	01 41 03.0	+0.4
FRON	**Frontone**	**0.82**	**337**	P	Pg	01 41 01.8	-0.6
CERT	**Cerreto**	**0.83**	**190**	P	Pn	01 41 04.0	-0.4
AOI	**Ancona**	**0.85**	**22**	P	Pg	01 41 03.1	+0.2
COR1	**Corinaldo**	**0.88**	**352**	P	Pb	01 41 04.2	+0.3
SACS	**San Casciano d**	**0.93**	**276**	P	Pn	01 41 05.6	-0.2
CAFI	**Castiglion Fio**	**1.05**	**303**	P	Pn	01 41 08.3	+0.8
MCIV	**Monte Civitell**	**1.10**	**271**	P	Pn	01 41 08.5	+0.3
TOLF	**Tolfa**	**1.11**	**232**	P	Pb	01 41 08.0	0.0
SF13	**Bagnolo**	**1.14**	**273**	P	Pn	01 41 09.2	+0.5

***ROM* 24 01:41:38.9±0.1, 42°.780N±0°.004×13°.168E±0°.007, h10km, ML3.9/11, Error ellipse: s-maj=0.6km s-min=0.2km az=78.0**
ISC 24 01:41:39.6±0.9, 42°.77N±0°.02×13°.13E±0°.02, h12km±7km, n84, σ0s81/98, 3C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.18**	**202**	P	**Pg**	**01 41 43.6**	**-0.1**
LNSS				S	**Sg**	**01 41 47.2**	**+0.6**
LNSS				AML	AML		
	comp=E,40400μm,0.2s						
LNSS				AML	AML		
FEMA	**Monte Fema**	**0.20**	**342**	P	**Pg**	**01 41 43.5**	**-0.6**
FEMA				S	**Sg**	**01 41 47.0**	**-0.2**
FEMA				AML	AML		
	comp=E,80300μm,0.5s						
FEMA				AML	AML		
	comp=E,80350μm,0.5s						
FEMA				AML	AML		
	comp=N,55900μm,0.3s						
RM33	**Pellescritta (**	**0.27**	**167**	P	**Pg**	**01 41 44.8**	**-0.4**
RM33				S	**Sg**	**01 41 49.3**	**+0.4**
RM33				AML	AML		
	comp=E,35800μm,0.4s						
RM33				AML	AML		
	comp=E,35900μm,0.4s						
RM33				AML	AML		
	comp=N,30450μm,0.2s						
RM33				AML	AML		
	comp=N,29900μm,0.2s						
RM33				AML	AML		
	comp=E,35750μm,0.4s						
FDMO	**Fiordimonte**	**0.27**	**353**	⇑P	**Pg**	**01 41 44.6**	**-0.6**
FDMO				S	**Sg**	**01 41 48.7**	**-0.3**
FDMO				AML	AML		
	comp=E,35050μm,0.2s						
FDMO				AML	AML		
	comp=N,45600μm,0.9s						
FDMO				AML	AML		
	comp=E,35100μm,0.2s						
CESI	**CESI - Serrava**	**0.29**	**325**	P	**Pg**	**01 41 45.2**	**-0.4**
CESI				S	**Sg**	**01 41 50.0**	**+0.4**
CESI				AML	AML		
	comp=E,36050μm,0.2s						
CESI				AML	AML		
	comp=N,67450μm,1.0s						
ARRO	**Arrone**	**0.33**	**235**	⇑P	**Pg**	**01 41 46.2**	**-0.1**
ARRO				S	**Sb**	**01 41 52.7**	**+0.1**
ARRO				AML	AML		
	comp=N,15500μm,1.3s						
ARRO				AML	AML		
	comp=E,14550μm,1.0s						
TERO	**Teramo**	**0.38**	**113**	P	**Pg**	**01 41 46.3**	**-0.8**
TERO				S	**Sg**	**01 41 51.8**	**-0.4**
TERO				AML	AML		
	comp=N,20950μm,0.6s						
TERO				AML	AML		
	comp=E,17950μm,0.3s						
TERO				AML	AML		
	comp=N,23150μm,0.6s						
TERO				AML	AML		
	comp=E,19450μm,0.3s						
SEF1	**Sefro**	**0.40**	**340**	⇑P	**Pg**	**01 41 46.9**	**-0.7**
SEF1				S	**Sg**	**01 41 53.4**	**+0.4**
SEF1				AML	AML		
	comp=E,32650μm,0.3s						
SEF1				AML	AML		
	comp=N,36150μm,1.0s						
SEF1				AML	AML		
	comp=N,36100μm,1.0s						
MDAR	**Monte D'Aria**	**0.42**	**1**	P	**Pg**	**01 41 47.1**	**-0.9**
MDAR				S	**Sg**	**01 41 53.5**	**-0.2**
MDAR				AML	AML		
	comp=E,20850μm,1.4s						
MDAR				AML	AML		
	comp=E,20900μm,1.4s						
MDAR				AML	AML		
	comp=N,22550μm,0.5s						
PIO1	**Pioraco**	**0.42**	**345**	P	**Pg**	**01 41 48.3**	**+0.3**
PIO1				AML	AML		
	comp=E,12045μm,0.5s						
PIO1				AML	AML		
	comp=E,12040μm,0.5s						
PIO1				AML	AML		
	comp=N,20500μm,0.5s						
CESX	**Cesi**	**0.44**	**249**	P	**Pg**	**01 41 47.9**	**-0.3**
OFFI	**Offida**	**0.44**	**68**	P	**Pg**	**01 41 48.1**	**-0.2**
ASSB	**Assisi San Ben**	**0.44**	**308**	P	**Pg**	**01 41 47.9**	**-0.5**
ASSB				S	**Sg**	**01 41 54.9**	**+0.6**
MNTP	**Montappone**	**0.44**	**34**	P	**Pg**	**01 41 47.9**	**-0.4**
FIU1	**Fiuminata**	**0.45**	**341**	P	**Pg**	**01 41 47.6**	**-0.7**
FIU1				S	**Sg**	**01 41 54.6**	**+0.3**
GIGS	**Gran Sasso**	**0.45**	**135**	P	**Pg**	**01 41 47.6**	**-0.9**
GIGS				S	**Sg**	**01 41 54.0**	**-0.6**
AQU	**L'Aquila**	**0.46**	**154**	P	**Pg**	**01 41 48.0**	**-0.6**
SSM1	**San Severino M**	**0.46**	**4**	P	**Pg**	**01 41 47.8**	**-0.9**
GAG1	**Gagliole**	**0.47**	**354**	P	**Pg**	**01 41 48.1**	**-0.7**
GAG1				S	**Sg**	**01 41 55.5**	**+0.3**
GAG1				AML	AML		
	comp=E,34400μm,0.6s						
GAG1				AML	AML		
	comp=N,41600μm,0.3s						
GAG1				AML	AML		
	comp=N,41550μm,0.3s						
GAG1				AML	AML		
	comp=E,34350μm,0.6s						
MTL1	**Matelica**	**0.50**	**349**	P	**Pg**	**01 41 48.6**	**-0.8**
MTL1				AML	AML		
	comp=N,32700μm,0.4s						
MTL1				AML	AML		
	comp=N,32650μm,0.4s						
MTL1				AML	AML		
	comp=E,33150μm,0.5s						
FIAM	**Fiamignano**	**0.50**	**181**	P	**Pg**	**01 41 48.8**	**-0.7**
ATCC	**AVT- Casa Cast**	**0.55**	**319**	P	**Pg**	**01 41 49.9**	**-0.4**
ATCC				S	**Sb**	**01 41 58.7**	**-0.4**
TRE1	**Treia**	**0.56**	**14**	P	**Pg**	**01 41 49.9**	**-0.6**
TRE1				AML	AML		
	comp=E,35500μm,0.6s						
TRE1				AML	AML		
	comp=N,37000μm,0.5s						
TRE1				AML	AML		
	comp=E,35550μm,0.6s						
TRE1				AML	AML		
	comp=N,36950μm,0.5s						
TRTR	**Tortoreto Alta**	**0.58**	**86**	P	**Pg**	**01 41 50.9**	**+0.1**
FOSV	**Fossato di Vic**	**0.59**	**333**	P	**Pg**	**01 41 50.4**	**-0.7**
FAGN	**Fagnano**	**0.60**	**146**	P	**Pg**	**01 41 50.9**	**-0.5**
CING	**Cingoli**	**0.61**	**4**	P	**Pg**	**01 41 50.5**	**-1.0**
CADA	**Capodarco di F**	**0.63**	**47**	P	**Pb**	**01 41 52.0**	**-0.4**
VCEL	**Villa Celiera**	**0.64**	**125**	P	**Pg**	**01 41 51.6**	**-0.5**
CIMA	**Civitanova Mar**	**0.67**	**36**	P	**Pg**	**01 41 52.5**	**0.0**
MURB	**Monte Urbino**	**0.67**	**318**	P	**Pg**	**01 41 52.1**	**-0.4**
MMUR	**Monte Murano**	**0.68**	**352**	P	**Pg**	**01 41 51.8**	**-1.0**
PP3	**Marolino**	**0.70**	**30**	P	**Pg**	**01 41 52.4**	**-0.8**
SRES	**S.Oreste - Sor**	**0.70**	**221**	P	**Pg**	**01 41 52.9**	**-0.3**
ATTE	**AVT- Monte Tez**	**0.71**	**307**	P	**Pg**	**01 41 53.3**	**-0.1**
SSFR	**Montelago di S**	**0.71**	**339**	P	**Pg**	**01 41 52.6**	**-0.9**
T0110	**Collepietro**	**0.72**	**138**	P	**Pg**	**01 41 53.4**	**-0.2**
ATFO	**Monte Foce - G**	**0.73**	**326**	P	**Pg**	**01 41 53.0**	**-0.6**
ARVD	**Arcevia**	**0.74**	**349**	P	**Pg**	**01 41 52.9**	**-1.1**
MGAB	**Montegabbione**	**0.77**	**281**	P	**Pg**	**01 41 54.3**	**-0.1**
PTQR	**Pietraguaria**	**0.77**	**165**	P	**Pg**	**01 41 53.3**	**-1.3**
MTCE	**Montecelio**	**0.80**	**201**	P	**Pg**	**01 41 54.1**	**-0.9**
FRON	**Frontone**	**0.81**	**338**	P	**Pg**	**01 41 54.1**	**-1.1**
ATVO	**AVT- Monte Val**	**0.81**	**319**	P	**Pg**	**01 41 54.4**	**-0.9**
CERT	**Cerreto**	**0.83**	**188**	P	**Pg**	**01 41 54.9**	**-0.6**
ATMI	**Monte Miggiano**	**0.85**	**312**	P	**Pb**	**01 41 56.9**	**+0.7**
AOI	**Ancona**	**0.85**	**24**	P	**Pg**	**01 41 54.9**	**-1.1**
ATPI	**Pietralunga -**	**0.87**	**322**	P	**Pg**	**01 41 55.5**	**-0.8**
COR1	**Corinaldo**	**0.87**	**354**	P	**Pg**	**01 41 55.9**	**-0.4**
PIEI	**Pieia**	**0.88**	**330**	P	**Pg**	**01 41 56.0**	**-0.6**
PIEI				AML	AML		
	comp=E,6150μm,1.5s						
PIEI				AML	AML		
	comp=N,4775μm,1.5s						
PIEI				AML	AML		
	comp=N,4770μm,1.5s						
PIEI				AML	AML		
	comp=E,6155μm,1.5s						
MPAG	**Monte Paganucc**	**0.90**	**342**	P	**Pg**	**01 41 56.0**	**-1.1**
SACS	**San Casciano d**	**0.90**	**276**	P	**Pg**	**01 41 55.3**	**-1.8**
NARO	**Abbazia di Nar**	**0.93**	**335**	P	**Pg**	**01 41 56.4**	**-1.2**
APEC	**Apecchio**	**0.95**	**327**	P	**Pg**	**01 41 57.2**	**-0.6**
INTR	**Introdacqua**	**0.95**	**143**	P	**Pg**	**01 41 55.9**	**-2.0**
FSSB	**Fossombrone**	**0.96**	**344**	P	**Pg**	**01 41 56.9**	**-1.1**
FSSB				AML	AML		
	comp=N,24450μm,0.4s						
FSSB				AML	AML		
	comp=E,16550μm,0.4s						
FSSB				AML	AML		
	comp=N,24400μm,0.4s						
VVLD	**Villa Vallelon**	**0.97**	**158**	P	**Pb**	**01 41 58.4**	**+0.1**
BADI	**Badiali**	**0.99**	**319**	P	**Pg**	**01 41 58.2**	**-0.4**
CAFI	**Castiglion Fio**	**1.02**	**304**	P	**Pg**	**01 41 59.0**	**-0.2**
VIVA	**Pratoni del Vi**	**1.05**	**195**	P	**Pg**	**01 41 59.3**	**-0.6**
RDP	**Rocca di Papa**	**1.06**	**197**	P	**Pg**	**01 41 59.4**	**-0.6**
SF03	**Valle Cupa**	**1.07**	**272**	P	**Pg**	**01 41 59.4**	**-0.7**
MCIV	**Monte Civitell**	**1.07**	**271**	P	**Pg**	**01 41 59.9**	**-0.3**
SF11	**Podere del Sol**	**1.07**	**276**	P	**Pg**	**01 41 60.0**	**-0.3**
SF04	**Casetta**	**1.09**	**274**	P	**Pb**	**01 41 59.3**	**-1.0**
PARC	**Parchiule**	**1.10**	**324**	P	**Pb**	**01 41 59.8**	**-0.7**
TOLF	**Tolfa**	**1.10**	**230**	P	**Pb**	**01 41 59.6**	**-0.9**
SF13	**Bagnolo**	**1.11**	**273**	P	**Pb**	**01 42 00.5**	**-0.3**
SF14	**Selvena**	**1.12**	**270**	P	**Pb**	**01 42 00.5**	**-0.4**
SF01	**Poggio Pratacc**	**1.16**	**273**	P	**Pb**	**01 42 01.2**	**-0.3**
GIUL	**Giuliano Di Ro**	**1.21**	**176**	P	**Pg**	**01 42 03.0**	**+0.1**
ARCI	**Arcidosso**	**1.22**	**274**	P	**Pn**	**01 42 02.7**	**+0.2**
CERA	**Filignano**	**1.34**	**150**	P	**Pg**	**01 42 05.3**	**-0.1**
ASQU	**Asqua**	**1.42**	**317**	P	**Pg**	**01 42 06.6**	**-0.2**
SFI	**Santa Sofia**	**1.47**	**321**	P	**Pb**	**01 42 06.9**	**0.0**
CSNT	**Castellina Chi**	**1.52**	**298**	P	**Pn**	**01 42 07.2**	**+0.6**
OSSC	**Osservatorio P**	**1.57**	**299**	P	**Pn**	**01 42 08.0**	**+0.7**
RUFI	**Rufina**	**1.60**	**313**	P	**Pn**	**01 42 07.9**	**+0.3**
CASP	**Castiglione de**	**1.67**	**272**	P	**Pn**	**01 42 08.3**	**-0.3**
LMD	**Lutirano**	**1.67**	**322**	P	**Pn**	**01 42 09.5**	**+0.8**
OBKA	**Obir**	**3.87**	**15**	*e*Pn	**Pg**	**01 42 51.6**	**-2.1**
	comp=N,195nm,0.9s						
MYKA	**Terra Mystica**	**3.88**	**5**	*e*Pn	**Pn**	**01 42 42.0**	**+3.0**
	comp=N,36nm,0.6s						
ABTA	**Abfaltersbach**	**4.00**	**354**	*e*Pn	**Pn**	**01 42 42.2**	**+1.5**
	comp=N,93nm,0.6s						
SOKA	**Soboth**	**4.14**	**18**	*e*Pn	**Pn**	**01 42 44.4**	**+1.8**
	comp=N,225nm,1.5s						

***ROM* 24 01:42:07.2±0.1, 42°.780N±0°.004×13°.158E±0°.009, h10km, ML3.6/3, 1C, Error ellipse: s-maj=0.7km s-min=0.3km az=78.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.10**	**93**	P	Pg	01 42 10.2	+0.4
AQT1				S	Sg	01 42 12.3	+0.6
MMO1	**Montemonaco**	**0.17**	**46**	P	Pg	01 42 11.3	+0.4
LNSS	**Leonessa**	**0.20**	**206**	⇑P	Pg	01 42 11.9	+0.5
LNSS				S	Sg	01 42 15.4	+1.2
LNSS				AML	AML		
FEMA	**Monte Fema**	**0.20**	**337**	P	Pg	01 42 12.0	+0.6
FEMA				S	Sg	01 42 15.2	+0.9
FDMO	**Fiordimonte**	**0.26**	**349**	P	Pg	01 42 13.0	+0.5
FDMO				S	Sg	01 42 17.4	+1.3
RM33	**Pellescritta (**	**0.27**	**171**	P	Pg	01 42 13.4	+0.7
RM33				S	Sg	01 42 17.7	+1.3
RM33				AML	AML		
	comp=N,26096μm,0.2s						
RM33				AML	AML		
	comp=E,35900μm,0.4s						
RM33				AML	AML		
	comp=E,28890μm,0.4s						
RM33				AML	AML		
	comp=N,24458μm,0.2s						
CESI	**CESI - Serrava**	**0.29**	**321**	P	Pg	01 42 13.2	+0.1
CESI				S	Sg	01 42 18.2	+1.2
ARRO	**Arrone**	**0.35**	**235**	P	Pg	01 42 14.6	+0.5
ARRO				S	Sb	01 42 21.0	-0.2
ARRO				AML	AML		
	comp=E,12249μm,0.2s						
ARRO				AML	AML		
	comp=N,10626μm,0.2s						
TERO	**Teramo**	**0.36**	**115**	P	Pg	01 42 14.5	+0.1
TERO				S	Sg	01 42 19.8	+0.6
TERO				AML	AML		
	comp=E,11649μm,0.3s						
TERO				AML	AML		
	comp=N,15511μm,0.1s						
TERO				AML	AML		
	comp=N,12624μm,0.2s						
TERO				AML	AML		
	comp=E,14059μm,0.2s						
SEF1	**Sefro**	**0.40**	**337**	P	Pg	01 42 15.4	+0.4
MDAR	**Monte D'Aria**	**0.41**	**358**	P	Pg	01 42 15.3	0.0
MDAR				S	Sg	01 42 21.9	+1.1
OFFI	**Offida**	**0.42**	**68**	P	Pb	01 42 16.5	-0.2
MNTP	**Montappone**	**0.42**	**33**	P	Pb	01 42 16.4	-0.4
FIU1	**Fiuminata**	**0.44**	**338**	P	Pb	01 42 17.2	+0.1
FIU1				S	Sb	01 42 23.0	-0.8
GIGS	**Gran Sasso**	**0.45**	**137**	P	Pg	01 42 16.1	+0.2
GIGS				S	Sg	01 42 22.4	+0.5
SSM1	**San Severino M**	**0.45**	**2**	P	Pg	01 42 16.1	+0.1
ASSB	**Assisi San Ben**	**0.45**	**306**	P	Pb	01 42 18.0	+0.7
CESX	**Cesi**	**0.46**	**248**	P	Pg	01 42 16.6	+0.4
AQU	**L'Aquila**	**0.46**	**157**	P	Pg	01 42 16.8	+0.5
AQU				S	Sb	01 42 23.8	-0.6
FIAM	**Fiamignano**	**0.51**	**183**	P	Pg	01 42 17.4	+0.2
FIAM				S	Sb	01 42 24.9	-1.0
VCEL	**Villa Celiera**	**0.64**	**127**	P	Pb	01 42 20.3	-0.2
VCEL				S	Sb	01 42 29.7	+0.3
PP3	**Marolino**	**0.68**	**29**	P	Pb	01 42 21.6	+0.4
PP3				AML	AML		
	comp=E,15652μm,1.6s						
PP3				AML	AML		
	comp=N,21929μm,1.1s						
PP3				AML	AML		
	comp=N,21342μm,0.9s						
MTCE	**Montecelio**	**0.82**	**202**	P	Pg	01 42 23.1	+0.2
CERT	**Cerreto**	**0.84**	**189**	P	Pb	01 42 23.7	-0.2

***ROM* 24** *01:46:12.2±0.1, 42°.765N±0°.003×13°.178E±0°.006, h7km, ML3.7/3, Error ellipse: s-maj=0.4km s-min=0.3km az=241.0*
LDG **24** *01:46:12.0±0.1, 42°.77N×13°.18E, h6km, Md3.4/2, Ml3.1/24, Error ellipse: s-maj=1.9km s-min=1.5km az=52.0*
ISC 24 01:46:11.9±0.8, 42°.70N±0°.02×13°.15E±0°.02, h14km±6km, n106, σ2s92/165, 5C, Central Italy

| Code | Station Name | Δ° | AZ° |

ARRO AML AML
comp=E,12125µm,1.1s
FDMO Fiordimonte 0.34 352 P Pg 01 46 18.4 -0.4
FDMO S Sg 01 46 23.1 -0.4
FDMO AML AML
comp=N,22300µm,0.8s
FDMO AML AML
comp=E,15700µm,0.5s
TERO Teramo 0.34 103 P Pb 01 46 20.0 +0.1
TERO S Sb 01 46 24.4 -0.8
TERO AML AML
comp=E,11275µm,1.0s
TERO AML AML
comp=N,18100µm,0.4s
TERO AML AML
comp=E,11265µm,1.0s
TERO AML AML
comp=N,16350µm,0.4s
TERO AML AML
comp=E,12295µm,1.0s
TERO AML AML
comp=E,12290µm,1.0s
TERO AML AML
comp=E,11305µm,1.0s
CESI CESI - Serrava 0.35 329⇑ *i*P Pg 01 46 19.2 +0.1
CESI S Sg 01 46 24.3 +0.3
CESI AML AML
comp=N,37400µm,0.4s
CESI AML AML
comp=E,15750µm,0.4s
CSP1 Cessapalombo 0.39 6⇑ *i*P Pg 01 46 19.3 -0.6
CSP1 S Sg 01 46 24.5 -0.7
CSP1 AML AML
comp=E,29900µm,0.8s
CSP1 AML AML
comp=N,24800µm,0.8s
AQU L'Aquila 0.40 152 P Pn 01 46 21.6 -1.6
GIGS Gran Sasso 0.40 129 P Pb 01 46 20.6 -0.2
GIGS AML AML
comp=N,2570µm,0.4s
GIGS AML AML
comp=E,2670µm,0.2s
GIGS AML AML
comp=N,2565µm,0.4s
CESX Cesi 0.43 258 P Pb 01 46 21.8 +0.5
CESX S Sb 01 46 29.0 +1.4
CESX AML AML
comp=E,6910µm,0.3s
CESX AML AML
comp=E,6905µm,0.3s
CESX AML AML
comp=N,7480µm,0.4s
FIAM Fiamignano 0.43 183 P Pn 01 46 22.2 -1.6
FIAM S Sn 01 46 29.8 -1.8
FIAM AML AML
comp=E,6920µm,0.5s
FIAM AML AML
comp=N,7015µm,0.2s
OFFI Offida 0.46 59 P Pb 01 46 21.4 -0.3
OFFI S Sb 01 46 29.0 +0.6
OFFI AML AML
comp=N,24700µm,0.6s
OFFI AML AML
comp=E,19850µm,0.7s
SEF1 Sefro 0.47 342 P Pg 01 46 20.9 -0.3
SEF1 S Sg 01 46 27.7 +0.2
SEF1 AML AML
comp=N,17300µm,0.3s
SEF1 AML AML
comp=E,19650µm,0.6s
SEF1 AML AML
comp=N,17350µm,0.3s
MDAR Monte D'Aria 0.49 359 P Pg 01 46 21.0 -0.6
MDAR S Sg 01 46 27.9 -0.3
PIO1 Pioraco 0.49 346 P Pb 01 46 22.2 -0.1
PIO1 S Sb 01 46 29.2 -0.2
MNTP Montappone 0.49 28 P Pg 01 46 21.6 -0.1
MNTP S Sb 01 46 29.4 -0.1
MNTP AML AML
comp=N,13650µm,1.1s
MNTP AML AML
comp=E,21700µm,0.3s
MNTP AML AML
comp=N,13665µm,1.1s
ASSB Assisi San Ben 0.50 313 P Pg 01 46 22.0 +0.3
ASSB S Sg 01 46 29.3 +0.9
ASSB AML AML
comp=E,6935µm,0.8s
ASSB AML AML
comp=N,6035µm,0.7s
ASSB AML AML
comp=E,6940µm,0.8s
FIU1 Fiuminata 0.51 342 P Pg 01 46 21.6 -0.4
FIU1 S Sg 01 46 29.0 +0.1
SSM1 San Severino M 0.53 2 P Pg 01 46 21.6 -0.7
SSM1 S Sg 01 46 29.1 -0.2
GAG1 Gagliole 0.54 354 P Pg 01 46 22.1 -0.4
GAG1 S Sg 01 46 29.7 0.0
GAG1 AML AML
comp=N,23700µm,0.5s
GAG1 AML AML
comp=E,16800µm,0.5s
FAGN Fagnano 0.54 143 P Pn 01 46 24.5 -0.8
MTL1 Matelica 0.56 350 P Pg 01 46 22.6 -0.4
MTL1 S Sg 01 46 30.7 +0.2
MTL1 AML AML
comp=E,11550µm,0.7s
MTL1 AML AML
comp=N,20000µm,0.8s
MTL1 AML AML
comp=E,11580µm,0.7s
SNTG Esanatoglia 0.57 345 P Pg 01 46 22.6 -0.6
SNTG S Sg 01 46 30.8 0.0
SNTG AML AML
comp=E,4395µm,0.6s
SNTG AML AML
comp=N,5655µm,0.3s
TRTR Tortoreto Alta 0.57 79 P Pn 01 46 24.1 -1.6
TRTR AML AML
comp=E,18100µm,0.5s
TRTR AML AML
comp=N,21450µm,0.4s
TRTR AML AML
comp=E,18050µm,0.5s
VCEL Villa Celiera 0.60 121 P Pn 01 46 24.6 -1.5
ATCC AVT- Casa Cast 0.61 322 P Pg 01 46 23.9 0.0
ATCC S Sb 01 46 33.0 +0.1
ATCC AML AML
comp=E,7965µm,0.5s
ATCC AML AML
comp=N,7370µm,0.6s
ATCC AML AML
comp=E,7970µm,0.5s
TRE1 Treia 0.62 11 P Pg 01 46 23.8 -0.3
TRE1 S Sb 01 46 33.3 +0.2
TRE1 AML AML
comp=E,15030µm,0.5s
TRE1 AML AML
comp=N,13030µm,1.5s
TRE1 AML AML
comp=E,15000µm,0.5s
TRE1 AML AML
comp=N,13035µm,1.5s
FOSV Fossato di Vic 0.66 334 P Pg 01 46 24.2 -0.6
FOSV S Sg 01 46 34.0 +0.5
FOSV AML AML
comp=E,5290µm,0.6s
FOSV AML AML
comp=N,4865µm,1.3s
FOSV AML AML
comp=E,5295µm,0.6s
FOSV AML AML
comp=N,4860µm,1.3s
SRES S.Oreste - Sor 0.66 226 P Pn 01 46 27.3 +0.4
CADA Capodarco di F 0.67 42 P Pb 01 46 25.5 +0.2
CADA AML AML
comp=E,14785µm,1.1s
CADA AML AML
comp=N,12700µm,0.9s
CADA AML AML
comp=E,14790µm,1.1s
CADA AML AML
comp=N,12650µm,0.9s
T0110 Collepietro 0.67 135 P Pn 01 46 26.0 -1.0
T0110 AML AML
comp=E,8030µm,0.6s
T0110 AML AML
comp=N,6820µm,0.3s
MURB Monte Urbino 0.72 321 P Pb 01 46 26.1 -0.2
MURB S Sn 01 46 37.5 -1.2
MURB AML AML
comp=E,9100µm,0.2s
MURB AML AML
comp=N,7735µm,1.3s
MURB AML AML
comp=N,8190µm,1.3s
MURB AML AML
comp=E,9105µm,0.2s
MURB AML AML
comp=N,8195µm,1.3s
MURB AML AML
comp=E,9600µm,0.2s
MURB AML AML
comp=N,7740µm,1.3s
MTCE Montecelio 0.74 204 P Pn 01 46 28.7 +0.7
PP3 Marolino 0.76 26 P Pg 01 46 26.5 0.0
CERT Cerreto 0.76 189 AML AML
comp=E,5535µm,1.3s
CERT AML AML
comp=N,3245µm,1.6s
SSFR Montelago di S 0.78 340 P Pb 01 46 26.5 -0.8
SSFR AML AML
comp=N,7275µm,1.6s
SSFR AML AML
comp=E,7605µm,0.2s
SSFR AML AML
comp=N,7100µm,0.2s
SSFR AML AML
comp=E,7685µm,0.2s
ATFO Monte Foce - G 0.79 328 P Pb 01 46 27.2 -0.2
MGAB Montegabbione 0.79 286 P Pn 01 46 28.6 -0.1
ARVD Arcevia 0.81 349 P Pb 01 46 26.8 -1.0
ARVD AML AML
comp=E,2674µm,1.6s
ARVD AML AML
comp=N,2235µm,0.8s
ARVD AML AML
comp=N,2240µm,0.8s
ARVD AML AML
comp=E,2671µm,1.6s
ATVO AVT- Monte Val 0.87 322 P Pb 01 46 28.5 -0.3
FRON Frontone 0.87 339⇑ P Pb 01 46 28.1 -0.8
INTR Introdacqua 0.89 141 P Pn 01 46 29.5 -0.6
AOI Ancona 0.91 21 P Pb 01 46 28.6 -0.9
SACS San Casciano d 0.92 280 P Pn 01 46 30.8 +0.2
ATPI Pietralunga - 0.93 324 P Pb 01 46 29.6 -0.2
COR1 Corinaldo 0.94 353 P Pg 01 46 30.1 +0.1
MPAG Monte Paganucc 0.97 343 P Pb 01 46 30.1 -0.5
VIVA Pratoni del Vi 0.99 197 P Pn 01 46 33.6 +2.2
NARO Abbazia di Nar 1.00 336 P Pb 01 46 30.4 -0.6
LPEL Lama dei Pelig 1.01 130 P Pn 01 46 31.9 +0.2
APEC Apecchio 1.01 328 P Pb 01 46 30.9 -0.2
FSSB Fossombrone 1.03 345 P Pb 01 46 30.8 -0.7
FSSB AML AML
comp=N,7440µm,0.4s
FSSB AML AML
comp=E,6125µm,0.5s
BADI Badiali 1.04 321 P Pn 01 46 32.0 -0.1
TOLF Tolfa 1.06 234 P Pg 01 46 33.6 +1.2
POFI Posta Fibreno 1.07 157 P Pg 01 46 33.9 +1.3
CAFI Castiglion Fio 1.07 306 P Pg 01 46 32.8 +0.3
MCIV Monte Civitell 1.09 275 P Pg 01 46 34.2 +1.4
SF01 Poggio Pratacc 1.17 276 P Pg 01 46 35.7 +1.2
ARCI Arcidosso 1.24 277 P Pg 01 46 37.5 +1.7
PESA Pesaro 1.26 350 P Pg 01 46 35.9 -0.2
FROS Frosini 1.55 290 P Pb 01 46 40.8 +0.4
PGF Pioggiola 3.07 269 *e*P Pn 01 47 02.4 +2.4
PGF *e*Sn **Sn 01 47 34.3 -2.2**
comp=E,9.1nm,0.4s
OBKA Obir 3.94 14 *e*Pn Pb 01 47 20.3 -0.8
comp=E,17nm,0.8s
OBKA *e*Sn **Sg 01 48 16.9 -1.4**
comp=E,24nm,0.5s
MYKA Terra Mystica 3.94 5 *e*Pn Pn 01 47 13.3 +1.3
comp=E,2.1nm,0.2s
MYKA *e*Sn **Sn 01 48 00.5 +2.4**
comp=E,6.6nm,0.3s
ABTA Abfaltersbach 4.07 354 *e*Pn Pn 01 47 15.6 +1.8
comp=E,20nm,0.5s
ABTA *e*Sn **Sn 01 48 02.1 +0.9**
comp=E,14nm,0.4s
SOKA Soboth 4.20 18 *e*Pn Pn 01 47 19.4 +3.9
comp=E,3.9nm,0.4s
SOKA *e*Sn **Sn 01 48 06.6 +2.2**
comp=E,6.9nm,0.5s
SBF Sospel 4.33 287 *e*P Pn 01 47 20.1 +2.7
SBF *e*Sn **Sn 01 48 04.1 -3.6**
comp=E,21nm,0.6s
KBA Koelnbreinsper 4.38 2 *e*Pn Pn 01 47 22.1 +4.0
comp=E,12nm,0.5s
KBA *e*Sn **Sn 01 48 12.7 +3.7**
comp=E,33nm,0.7s
FETA Feichten 4.65 339 *e*Pn Pn 01 47 26.5 +4.7
comp=E,4.7nm,0.5s
FETA *e*Sn **Sn 01 48 19.5 +3.8**
comp=E,8.1nm,0.8s
WTTA Wattenberg 4.69 347 *e*Pn Pn 01 47 26.2 +3.8
comp=E,5.6nm,0.4s
WTTA *e*Sn **Sn 01 48 18.4 +1.8**
comp=E,6.3nm,0.3s
WTTA *e*Sn Sb 01 48 19.6 -11
comp=E,9.5nm,0.3s
SQTA Sankt Quirin 4.72 344 *e*Pn Pn 01 47 26.4 +3.6
comp=E,5.4nm,0.3s
SQTA *e*Sn **Sn 01 48 20.2 +2.8**
comp=E,11nm,0.4s
WATA Walderalm 4.77 347 *e*Pn Pn 01 47 27.3 +3.9
comp=E,1.9nm,0.2s
WATA *e*Sn **Sn 01 48 22.7 +4.2**
comp=E,14nm,0.4s
ARSA Arzberg 4.85 19 *e*Pn Pn 01 47 28.1 +3.6
comp=E,9.0nm,0.6s
ARSA *e*Sn **Sn 01 48 18.4 -2.0**
comp=E,3.0nm,0.3s
MOTA Moosalm 4.86 343 *e*Pn Pn 01 47 29.6 +4.9
comp=E,4.4nm,0.4s
MOTA *e*Sn **Sn 01 48 25.5 +4.6**
comp=E,6.4nm,0.4s
LMR La Mourre 4.91 280 *e*P Pn 01 47 27.2 +2.0
BIOA Bad Ischl, Aus 5.00 4 *e*Pn Pb 01 47 33.1 -6.1
comp=E,6.8nm,0.4s
BIOA *e*Sn **Sn 01 48 27.2 +3.1**
comp=E,9.4nm,0.4s
MBDF Montbardon 5.05 296 *e*P Pn 01 47 30.5 +3.2
MBDF *e*Sn **Sn 01 48 21.1 -4.3**
comp=E,8.8nm,0.7s
RETA Reutte 5.07 341 *e*Pn Pn 01 47 29.8 +2.2
comp=E,0.1nm,0.1s
RETA *e*Sn **Sn 01 48 30.5 +4.5**
comp=E,4.2nm,0.3s
DAVA Damuels 5.14 334 *e*Pn Pn 01 47 32.8 +4.3
comp=E,3.4nm,0.2s
DAVA *e*Sn **Sn 01 48 31.6 +3.9**
comp=E,10nm,0.6s
MOA Molln 5.21 8 *e*Pn Pn 01 47 31.6 +2.2
comp=E,0.9nm,0.2s
MOA *e*Sn **Sn 01 48 30.1 +0.9**
comp=E,3.1nm,0.2s
LPG La Plagne 5.39 303 *e*P Pn 01 47 35.1 +3.0
LPG *e*Sn **Sn 01 48 29.2 -4.8**
comp=E,3.1nm,0.3s
LPL La Plagne 5.41 304 *e*P Pn 01 47 35.4 +3.1
LPL *e*Sn **Sn 01 48 29.6 -4.9**
comp=E,4.5nm,0.4s
RONA Rosalia, Austr 5.47 23 *e*Pn Pn 01 47 34.5 +1.6
comp=E,1.4nm,0.2s
RONA *e*Sn **Sn 01 48 27.5 -8.1**
comp=E,1.9nm,0.3s
CONA Conrad Observa 5.56 19 *e*Pn Pn 01 47 35.5 +1.2
comp=E,1.7nm,0.2s
CONA *e*Sn **Sn 01 48 37.9 -0.2**
comp=E,7.4nm,0.7s
SMRF Simiane la Rot 5.67 286 *e*P Pn 01 47 39.2 +3.5
ORIF Oris-en-Rattie 5.71 295 *e*P Pn 01 47 40.3 +4.0
CABF La Chapelle 6.37 310 *e*P Pn 01 47 48.5 +3.1
CABF *e*Sn **Sn 01 48 52.3 -5.7**
comp=E,1.5nm,0.4s
VIVF Saint-Julien-l 6.50 292 *e*P Pn 01 47 50.7 +3.5
VIVF *e*Sn **Sn 01 48 55.8 -5.3**
comp=E,0.4nm,0.2s
HINF Hinteralfeld 6.77 321 *e*P Pn 01 47 53.9 +3.0
HINF *e*Sn **Sn 01 49 01.8 -6.0**
comp=E,14nm,0.6s
LASF Ste Croix 6.91 285 *e*P Pn 01 47 55.4 +2.7
LASF *e*Sn **Sn 01 49 05.3 -5.8**
comp=E,0.4nm,0.3s
CDF Champ du Feu 7.04 326 *e*P Pn 01 47 55.3 +0.7
CDF *e*Sn **Sn 01 49 08.0 -6.4**
comp=E,6.8nm,0.5s
HAU Haudompre 7.14 320 *e*P Pn 01 47 58.2 +2.2
HAU *e*Sn **Sn 01 49 10.6 -6.3**
comp=E,14nm,0.3s
SMF Signal de Mont 7.72 304 *e*P Pn 01 48 07.4 +3.6
SMF *e*Sn **Sn 01 49 24.5 -6.4**
comp=E,1.9nm,0.4s
PAGF Fort de Pagny 7.83 321 *e*P Pn 01 48 08.9 +3.6
PAGF *e*Sn **Sn 01 49 26.8 -6.9**
comp=E,9.0nm,0.7s
SFTF Sexfontaines 7.92 317 *e*P Pn 01 48 09.0 +2.4
SFTF *e*Sn **Sn 01 49 29.4 -6.6**
comp=E,2.3nm,0.3s
LOR Lormes 8.01 308 *e*P Pn 01 48 11.8 +4.0
LOR *e*Sn **Sn 01 49 31.5 -6.7**
comp=E,4.6nm,0.5s
MTLF Montolieu 8.04 278 *e*P Pn 01 48 13.0 +4.8
MTLF *e*Sn **Sn 01 49 32.7 -6.1**
comp=E,0.5nm,0.3s
AVF Avril sur Loir 8.08 304 *e*P Pn 01 48 12.6 +3.8
AVF *e*Sn **Sn 01 49 33.2 -6.7**
comp=E,0.2nm,0.2s
MEZF Maizieres J'vi 8.11 318 *e*P Pn 01 48 13.2 +4.0
MEZF *e*Sn **Sn 01 49 33.8 -6.8**
comp=E,1.3nm,0.3s
SSF Saint Saulge 8.12 306 *e*P Pn 01 48 13.0 +3.8
SSF *e*Sn **Sn 01 49 34.1 -6.6**
comp=E,1.6nm,0.4s
BGF Bois d'Agland 8.30 301 *e*P Pn 01 48 15.5 +3.8
BGF *e*Sn **Sn 01 49 38.3 -6.9**
comp=E,2.5nm,0.5s
CAF Calviac 8.32 289 *e*P Pn 01 48 15.6 +3.5
CAF *e*Sn **Sn 01 49 39.4 -6.4**
comp=E,0.3nm,0.3s
RJF Les Rejaudoux 8.78 291 *e*P Pn 01 48 22.5 +4.1

ROM 24 01:46:46.0±0.1, 42°.745N±0°.005×13°.210E±0°.009, h12km±2km, ML2.8/4, Error ellipse: s-maj=0.7km s-min=0.5km az=57.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.19**	**221**	P	Pb	01 46 51.0	-0.5
LNSS				S	Sg	01 46 54.1	+0.9
RM33	**Pellescritta (**	**0.23**	**179**	P	Pg	01 46 51.6	+0.6
RM33				S	Sg	01 46 55.5	+1.1
FEMA	**Monte Fema**	**0.25**	**332**	P	Pg	01 46 51.7	+0.4
FEMA				S	Sg	01 46 55.7	+0.8
FEMA				AML	AML		
comp=E,48900µm,0.8s							
FEMA				AML	AML		
comp=N,46650µm,0.6s							
FEMA				AML	AML		
comp=E,48900µm,0.8s							
FEMA				AML	AML		
comp=N,46600µm,0.6s							
FEMA				AML	AML		
comp=E,7419µm,0.5s							
FEMA				AML	AML		
comp=N,46600µm,0.6s							
CAMP	**Campotosto**	**0.26**	**145**	P	Pg	01 46 51.6	+0.2
CAMP				S	Sg	01 46 55.9	+0.8
CAMP				AML	AML		
comp=N,14200µm,0.4s							
CAMP				AML	AML		
comp=E,10900µm,0.3s							
FDMO	**Fiordimonte**	**0.30**	**343**	P	Pg	01 46 52.5	+0.2
FDMO				S	Sg	01 46 57.4	+0.9
FDMO				AML	AML		
comp=N,22300µm,0.8s							
FDMO				AML	AML		
comp=E,15700µm,0.5s							
FDMO				AML	AML		
comp=E,1821µm,1.0s							
FDMO				AML	AML		
comp=N,3426µm,0.2s							
TERO	**Teramo**	**0.32**	**113**	P	Pg	01 46 52.5	+0.1
TERO				S	Sg	01 46 57.5	+0.7
TERO				AML	AML		
comp=E,11275µm,1.0s							
TERO				AML	AML		
comp=E,12295µm,1.0s							
TERO				AML	AML		
comp=E,11265µm,1.0s							
TERO				AML	AML		
comp=N,16350µm,0.4s							
TERO				AML	AML		
comp=E,11305µm,1.0s							
TERO				AML	AML		
comp=E,12290µm,1.0s							
TERO				AML	AML		
comp=N,18100µm,0.4s							
TERO				AML	AML		
comp=N,2900µm,0.1s							
TERO				AML	AML		
comp=N,2521µm,0.1s							
TERO				AML	AML		
comp=E,1844µm,0.1s							
TERO				AML	AML		
comp=E,2106µm,0.1s							
CESI	**CESI - Serrava**	**0.34**	**319**	P	Pg	01 46 53.0	0.0
CESI				S	Sg	01 46 58.3	+0.7
CESI				AML	AML		
comp=E,15750µm,0.4s							
CESI				AML	AML		
comp=N,37400µm,0.4s							
CSP1	**Cessapalombo**	**0.35**	**359**	AML	AML		
comp=N,24800µm,0.8s							
CSP1				AML	AML		
comp=E,29900µm,0.8s							
ARRO	**Arrone**	**0.37**	**243**	P	Pb	01 46 54.3	-0.1
ARRO				AML	AML		
comp=E,12150µm,1.1s							
ARRO				AML	AML		
comp=N,9285µm,0.2s							
ARRO				AML	AML		
comp=E,12125µm,1.1s							
ARRO				AML	AML		
comp=N,9300µm,0.2s							
ARRO				AML	AML		
comp=N,1109µm,0.6s							
ARRO				AML	AML		
comp=E,1505µm,0.8s							
GIGS	**Gran Sasso**	**0.40**	**138**	P	Pg	01 46 53.7	-0.2
GIGS				S	Sg	01 46 59.9	+0.7
GIGS				AML	AML		
comp=E,2670µm,0.2s							
GIGS				AML	AML		
comp=N,2570µm,0.4s							
GIGS				AML	AML		
comp=N,2565µm,0.4s							
OFFI	**Offida**	**0.40**	**61**	P	Pb	01 46 55.0	0.0
OFFI				AML	AML		
comp=E,19850µm,0.7s							
OFFI				AML	AML		
comp=N,24700µm,0.6s							
MNTP	**Montappone**	**0.44**	**26**	AML	AML		
comp=E,21700µm,0.3s							
MNTP				AML	AML		
comp=N,13650µm,1.1s							
MNTP				AML	AML		
comp=N,13665µm,1.1s							
SEF1	**Sefro**	**0.45**	**335**	AML	AML		
comp=N,17350µm,0.3s							
SEF1				AML	AML		
comp=N,17300µm,0.3s							
SEF1				AML	AML		
comp=E,19650µm,0.6s							
SEF1				AML	AML		
comp=N,2187µm,0.3s							
SEF1				AML	AML		
comp=E,2852µm,0.2s							
FIAM	**Fiamignano**	**0.48**	**188**	AML	AML		
comp=N,7015µm,0.2s							
FIAM				AML	AML		
comp=E,6920µm,0.5s							
CESX	**Cesi**	**0.48**	**254**	AML	AML		
comp=N,7480µm,0.4s							
CESX				AML	AML		
comp=E,6910µm,0.3s							

CESX				AML	AML
	comp=E,6905µm,0.3s				
ASSB	**Assisi San Ben**	**0.50**	**307**	AML	AML
	comp=N,636µm,0.7s				
ASSB				AML	AML
	comp=E,6935µm,0.8s				
ASSB				AML	AML
	comp=E,6940µm,0.8s				
ASSB				AML	AML
	comp=N,6035µm,0.7s				
GAG1	**Gagliole**	**0.50**	**348**	AML	AML
	comp=E,16800µm,0.5s				
GAG1				AML	AML
	comp=N,23700µm,0.5s				
TRTR	**Tortoreto Alta**	**0.52**	**83**	AML	AML
	comp=N,21450µm,0.4s				
TRTR				AML	AML
	comp=E,18100µm,0.5s				
TRTR				AML	AML
	comp=E,18050µm,0.5s				
MTL1	**Matelica**	**0.53**	**344**	AML	AML
	comp=E,11580µm,0.7s				
MTL1				AML	AML
	comp=E,11550µm,0.7s				
MTL1				AML	AML
	comp=N,20000µm,0.8s				
SNTG	**Esanatoglia**	**0.55**	**339**	AML	AML
	comp=N,5655µm,0.3s				
SNTG				AML	AML
	comp=E,4395µm,0.6s				
TRE1	**Treia**	**0.57**	**8**	AML	AML
	comp=N,13030µm,1.5s				
TRE1				AML	AML
	comp=E,15030µm,0.5s				
TRE1				AML	AML
	comp=N,13035µm,1.5s				
TRE1				AML	AML
	comp=E,15000µm,0.5s				
CADA	**Capodarco di F**	**0.60**	**42**	AML	AML
	comp=E,14785µm,1.1s				
CADA				AML	AML
	comp=N,12700µm,0.9s				
CADA				AML	AML
	comp=E,14790µm,1.1s				
CADA				AML	AML
	comp=N,12650µm,0.9s				
ATCC	**AVT- Casa Cast**	**0.61**	**317**	AML	AML
	comp=E,7970µm,0.5s				
ATCC				AML	AML
	comp=E,7965µm,0.5s				
ATCC				AML	AML
	comp=N,7370µm,0.6s				
FOSV	**Fossato di Vic**	**0.64**	**329**	AML	AML
	comp=N,4865µm,1.3s				
FOSV				AML	AML
	comp=E,5290µm,0.6s				
FOSV				AML	AML
	comp=N,4860µm,1.3s				
FOSV				AML	AML
	comp=E,5295µm,0.6s				
T0110	**Collepietro**	**0.67**	**141**	AML	AML
	comp=E,8030µm,0.6s				
T0110				AML	AML
	comp=N,6820µm,0.3s				
MURB	**Monte Urbino**	**0.72**	**316**	AML	AML
	comp=E,9600µm,0.2s				
MURB				AML	AML
	comp=E,9100µm,0.2s				
MURB				AML	AML
	comp=N,7735µm,1.3s				
MURB				AML	AML
	comp=N,8190µm,1.3s				
MURB				AML	AML
	comp=N,7740µm,1.3s				
MURB				AML	AML
	comp=E,9105µm,0.2s				
MURB				AML	AML
	comp=N,8195µm,1.3s				
SSFR	**Montelago di S**	**0.76**	**336**	AML	AML
	comp=N,7100µm,0.2s				
SSFR				AML	AML
	comp=N,7275µm,1.6s				
SSFR				AML	AML
	comp=E,7685µm,0.2s				
SSFR				AML	AML
	comp=E,7605µm,0.2s				
ARVD	**Arcevia**	**0.78**	**345**	AML	AML
	comp=E,2674µm,1.6s				
ARVD				AML	AML
	comp=N,2235µm,0.8s				
ARVD				AML	AML
	comp=E,2671µm,1.6s				
ARVD				AML	AML
	comp=N,2240µm,0.8s				
CERT	**Cerreto**	**0.81**	**192**	AML	AML
	comp=E,5535µm,1.3s				
CERT				AML	AML
	comp=N,3245µm,1.6s				
FSSB	**Fossombrone**	**1.00**	**342**	AML	AML
	comp=N,7440µm,0.4s				
FSSB				AML	AML
	comp=E,6125µm,0.5s				

ROM 24 01:52:25.7±0.2, 42°.75N±0°.01×13°.28E±0°.01, h8km±1km, ML2.9/3, Error ellipse: s-maj=1.1km s-min=0.7km az=198.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.23**	**232**	P	Pg	01 52 31.5	+1.2
LNSS				S	Sg	01 52 34.3	+0.9
LNSS				AML	AML		
	comp=N,14650µm,0.2s						
LNSS				AML	AML		
	comp=E,12700µm,0.3s						
LNSS				AML	AML		
	comp=N,18650µm,0.4s						
CAMP	**Campotosto**	**0.23**	**156**	P	Pg	01 52 31.1	+0.7
CAMP				S	Sg	01 52 34.6	+1.1
CAMP				AML	AML		
	comp=E,5300µm,0.2s						
CAMP				AML	AML		
	comp=N,3065µm,0.6s						
RM33	**Pellescritta (**	**0.24**	**192**	P	Pg	01 52 31.3	+0.8
RM33				S	Sg	01 52 35.5	+1.7
RM33				AML	AML		
	comp=E,4475µm,0.3s						
RM33				AML	AML		
	comp=N,2850µm,1.0s						
RM33				AML	AML		
	comp=E,4395µm,0.3s						
RM33				AML	AML		
	comp=N,2890µm,0.4s						
TERO	**Teramo**	**0.27**	**117**	P	Pb	01 52 32.0	-0.8
TERO				S	Sb	01 52 36.3	-1.2
TERO				AML	AML		
	comp=E,5200µm,0.3s						
TERO				AML	AML		
	comp=N,8005µm,0.1s						
TERO				AML	AML		
	comp=E,6310µm,0.3s						
TERO				AML	AML		
	comp=N,9545µm,0.1s						
TERO				AML	AML		
	comp=N,8890µm,0.4s						
TERO				AML	AML		
	comp=E,8025µm,0.4s						
TERO				AML	AML		
	comp=N,9615µm,0.4s						
TERO				AML	AML		
	comp=E,7515µm,0.4s						
TERO				AML	AML		
	comp=N,8905µm,0.4s						
GUMA	**Gualdo di Mace**	**0.32**	**7**	AML	AML		
	comp=N,7460µm,0.5s						
GUMA				AML	AML		
	comp=E,9050µm,0.4s						
GUMA				AML	AML		
	comp=E,11700µm,0.4s						
GUMA				AML	AML		
	comp=N,7710µm,0.4s						
OFFI	**Offida**	**0.35**	**57**	P	Pg	01 52 32.6	0.0
OFFI				AML	AML		
	comp=E,2130µm,0.8s						
OFFI				AML	AML		
	comp=N,2505µm,0.5s						
GIGS	**Gran Sasso**	**0.36**	**144**	P	Pb	01 52 34.3	-0.2
GIGS				S	Sg	01 52 38.8	+1.2
GIGS				AML	AML		
	comp=E,1355µm,0.3s						
GIGS				AML	AML		
	comp=N,770µm,0.5s						
CESI	**CESI - Serrava**	**0.38**	**313**	P	Pb	01 52 34.6	-0.2
CESI				S	Sb	01 52 39.9	-1.0
CESI				AML	AML		
	comp=E,1430µm,0.4s						
CESI				AML	AML		
	comp=N,2870µm,0.3s						
AQU	**L'Aquila**	**0.40**	**167**	P	Pb	01 52 35.0	-0.1
AQU				S	Sg	01 52 40.1	+1.3
ARRO	**Arrone**	**0.42**	**247**	AML	AML		
	comp=E,2370µm,1.4s						
ARRO				AML	AML		
	comp=N,1495µm,1.5s						
ARRO				AML	AML		
	comp=E,2725µm,1.0s						
ARRO				AML	AML		
	comp=N,2840µm,0.6s						
FAGN	**Fagnano**	**0.53**	**155**	AML	AML		
	comp=N,2155µm,1.3s						
FAGN				AML	AML		
	comp=E,2105µm,0.3s						
CESX	**Cesi**	**0.54**	**256**	AML	AML		
	comp=N,932µm,0.4s						
CESX				AML	AML		
	comp=E,786µm,0.7s						
VCEL	**Villa Celiera**	**0.54**	**130**	AML	AML		
	comp=E,1600µm,0.6s						
VCEL				AML	AML		
	comp=N,1568µm,0.4s						
ASSB	**Assisi San Ben**	**0.55**	**303**	AML	AML		
	comp=E,1260µm,0.8s						
ASSB				AML	AML		
	comp=N,1360µm,0.5s						
T0110	**Collepietro**	**0.64**	**145**	P	Pb	01 52 38.7	-0.4
T0110				S	Sb	01 52 48.3	+0.2

*LDG **24** 01:52:42.2±0.1, 42°.65N×13°.24E, h9km, Md3.1/1, Ml2.5/12, Error ellipse: s-maj=2.9km s-min=1.6km az=32.0*
*ROM **24** 01:52:43.2±0.1, 42°.638N±0°.006×13°.231E±0°.007, h11km, ML3.1/7, Error ellipse: s-maj=0.7km s-min=0.4km az=197.0*

ISC 24 01:52:43.4±0.9, 42°.60N±0°.03×13°.18E±0°.02, h18km±3km, n49, σ2.988/85, 3C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.09**	**163**	P	**Pg**	**01 52 47.0**	**-0.1**
RM33				S	**Sg**	**01 52 49.8**	**+0.1**
RM33				AML	AML		
	comp=E,22900µm,0.2s						
RM33				AML	AML		
	comp=N,22950µm,1.0s						
RM33				AML	AML		
	comp=E,22250µm,0.2s						
RM33				AML	AML		
	comp=N,22300µm,1.0s						
RM33				AML	AML		
	comp=N,23000µm,1.0s						
RM33				END			
LNSS	**Leonessa**	**0.10**	**273**	↑P	**Pg**	**01 52 46.9**	**-0.4**
LNSS				S	**Sg**	**01 52 49.7**	**-0.1**
LNSS				END			
CAMP	**Campotosto**	**0.18**	**110**	↑P	**Pg**	**01 52 47.5**	**-0.7**
CAMP				S	**Sg**	**01 52 50.6**	**-0.8**
CAMP				END			
AQU	**L'Aquila**	**0.29**	**146**	P	**Pg**	**01 52 50.1**	**+0.2**
AQU				S	**Sb**	**01 52 54.8**	**+0.2**
ARRO	**Arrone**	**0.30**	**267**	P	**Pg**	**01 52 50.1**	**+0.1**
ARRO				S	**Sg**	**01 52 55.7**	**+1.2**
ARRO				AML	AML		
	comp=E,2725µm,1.0s						
ARRO				AML	AML		
	comp=N,2840µm,0.6s						
TERO	**Teramo**	**0.32**	**85**	↑P	**Pg**	**01 52 48.9**	**-1.4**
TERO				S	**Sg**	**01 52 53.3**	**-1.6**
TERO				AML	AML		
	comp=N,8865µm,0.4s						
TERO				AML	AML		
	comp=E,8025µm,0.4s						
TERO				AML	AML		
	comp=E,7515µm,0.4s						
TERO				AML	AML		
	comp=N,9615µm,0.4s						
TERO				AML	AML		
	comp=N,8905µm,0.4s						
TERO				END			
GIGS	**Gran Sasso**	**0.33**	**117**	P	**Pg**	**01 52 49.8**	**-0.6**
GIGS				S	**Sg**	**01 52 54.9**	**-0.3**
GIGS				AML	AML		
	comp=E,1585µm,0.4s						
GIGS				AML	AML		
	comp=N,880µm,1.0s						
FIAM	**Fiamignano**	**0.33**	**188**	P	**Pg**	**01 52 51.1**	**+0.5**
FIAM				S	**Sb**	**01 52 57.3**	**+1.4**
FIAM				AML	AML		
	comp=N,2185µm,0.8s						
FIAM				AML	AML		
	comp=E,4005µm,0.2s						
CESX	**Cesi**	**0.44**	**272**	P	**Pg**	**01 52 52.2**	**-0.3**
CESX				S	**Sb**	**01 53 00.2**	**+1.2**
CESX				AML	AML		
	comp=N,2335µm,1.5s						
CESX				AML	AML		
	comp=E,1855µm,1.5s						
CESI	**CESI - Serrava**	**0.45**	**334**	P	**Pb**	**01 52 52.5**	**-0.4**
CESI				S	**Sg**	**01 52 58.1**	**-0.8**
OFFI	**Offida**	**0.50**	**48**	P	**Pg**	**01 52 52.5**	**-1.0**
OFFI				AML	AML		
	comp=E,3415µm,0.8s						
OFFI				AML	AML		
	comp=N,4110µm,0.5s						
VCEL	**Villa Celiera**	**0.53**	**112**	P	**Pb**	**01 52 53.9**	**-0.3**
MNTP	**Montappone**	**0.58**	**22**	P	**Pg**	**01 52 53.2**	**-1.7**
MNTP				S	**Sb**	**01 53 02.5**	**-0.4**
TRTR	**Tortoreto Alta**	**0.58**	**69**	P	**Pb**	**01 52 54.4**	**-0.6**
ASSB	**Assisi San Ben**	**0.59**	**319**	P	**Pb**	**01 52 56.1**	**+1.0**
ASSB				S	**Sg**	**01 53 03.0**	**+0.1**
MDAR	**Monte D'Aria**	**0.59**	**358**	P	**Pg**	**01 52 53.7**	**-1.6**
MGAB	**Montegabbione**	**0.84**	**292**	P	**Pg**	**01 53 00.0**	**+0.1**
SF04	**Casetta**	**1.14**	**282**	P	**Pn**	**01 53 05.6**	**+1.1**
PGF	**Pioggiola**	**3.09**	**270**	*e*P	**Pn**	**01 53 33.4**	**+2.1**
PGF				*e*Sn	**Sn**	**01 54 05.4**	**-2.4**
	comp=N,3.1nm,0.4s						
OBKA	**Obir**	**4.03**	**14**	*e*Pn	**Pn**	**01 53 45.2**	**+0.9**
OBKA	comp=N,2.8nm,0.6s			*e*Sn	**Sn**	**01 54 27.3**	**-3.7**
	comp=N,6.7nm,0.7s						
MYKA	**Terra Mystica**	**4.04**	**5**	*e*Pn	**Pn**	**01 53 47.8**	**+3.3**
MYKA	comp=N,2.5nm,0.3s			*e*Sn	**Sn**	**01 54 31.4**	**+0.1**
	comp=N,1.2nm,0.3s						
ABTA	**Abfaltersbach**	**4.18**	**354**	*e*Pn	**Pn**	**01 53 48.0**	**+1.7**
ABTA	comp=N,8.8nm,0.6s			*e*Sn	**Sn**	**01 54 36.9**	**+2.2**
	comp=N,0.8nm,0.2s						
SOKA	**Soboth**	**4.29**	**17**	*e*Pn	**Pn**	**01 53 50.5**	**+2.7**
SOKA	comp=N,0.7nm,0.3s			*e*Sn	**Sn**	**01 54 38.7**	**+1.3**
	comp=N,0.9nm,0.3s						
SBF	**Sospel**	**4.38**	**289**	*e*P	**Pn**	**01 53 50.6**	**+1.5**
SBF				*e*Sn	**Sn**	**01 54 35.7**	**-4.0**
	comp=N,3.4nm,0.3s						
FETA	**Feichten**	**4.75**	**339**	*e*Pn	Pn	01 53 59.7	+5.4
FETA	comp=N,0.7nm,0.3s			*e*Sn	**Sn**	**01 54 49.9**	**+0.9**
	comp=N,1.3nm,0.5s						
WTTA	**Wattenberg**	**4.79**	**347**	*e*Pn	**Pn**	**01 53 56.7**	**+1.9**
WTTA	comp=N,1.2nm,0.3s			*e*Sn	**Sn**	**01 54 53.1**	**+3.1**
	comp=N,3.3nm,0.3s						
SQTA	**Sankt Quirin**	**4.83**	**344**	*e*Pn	**Pn**	**01 53 57.6**	**+2.4**
SQTA	comp=N,1.4nm,0.2s			*e*Sn	**Sn**	**01 54 53.7**	**+2.9**
	comp=N,2.9nm,0.3s						
WATA	**Walderalm**	**4.87**	**347**	*e*Pn	**Pn**	**01 53 58.6**	**+2.8**
WATA	comp=N,0.8nm,0.2s			*e*Sn	**Sn**	**01 54 55.9**	**+4.0**
	comp=N,3.5nm,0.2s						
ARSA	**Arzberg**	**4.94**	**19**	*e*Pn	**Pn**	**01 53 58.0**	**+1.3**
	comp=N,0.6nm,0.4s						
ARSA				*e*Sn	**Sn**	**01 54 46.8**	**-6.6**
	comp=N,0.9nm,0.3s						
LMR	**La Mourre**	**4.95**	**281**	*e*P	**Pn**	**01 53 59.0**	**+2.2**
LMR				*e*Sn	**Sn**	**01 54 49.4**	**-4.1**
	comp=N,0.4nm,0.3s						
MOTA	**Moosalm**	**4.97**	**343**	*e*Pn	**Pn**	**01 53 59.0**	**+1.8**
	comp=N,1.0nm,0.4s						
MOTA				*e*Sn	**Sn**	**01 54 58.2**	**+3.9**
	comp=N,0.7nm,0.2s						
BIOA	**Bad Ischl, Aus**	**5.10**	**4**	*e*Sn	**Sn**	**01 55 00.0**	**+2.7**
	comp=N,4.8nm,0.6s						
MBDF	**Montbardon**	**5.11**	**297**	*e*P	**Pn**	**01 54 01.7**	**+2.5**
MBDF				*e*Sn	**Sn**	**01 54 53.1**	**-4.7**
	comp=N,1.8nm,0.5s						
RETA	**Reutte**	**5.18**	**342**	*e*Pn	**Pn**	**01 54 03.5**	**+3.5**
	comp=N,0.5nm,0.1s						
RETA				*e*Sn	**Sn**	**01 55 03.0**	**+3.7**
	comp=N,0.8nm,0.3s						
DAVA	**Damuels**	**5.24**	**335**	*e*Pn	**Pn**	**01 53 58.1**	**-2.8**
	comp=N,0.9nm,0.4s						
DAVA				*e*Sn	**Sn**	**01 55 04.9**	**+4.0**
	comp=N,2.3nm,0.3s						
MOA	**Molln**	**5.31**	**8**	*e*Pn	**Pn**	**01 54 04.6**	**+2.8**
	comp=N,0.6nm,0.3s						
MOA				*e*Sn	**Sn**	**01 55 00.6**	**-1.8**
	comp=N,1.3nm,0.3s						
LPG	**La Plagne**	**5.46**	**304**	*e*P	**Pn**	**01 54 06.5**	**+2.4**
LPG				*e*Sn	**Sn**	**01 55 01.4**	**-5.2**
	comp=N,0.7nm,0.3s						
LPL	**La Plagne**	**5.48**	**304**	*e*P	**Pn**	**01 54 06.8**	**+2.4**
LPL				*e*Sn	**Sn**	**01 55 01.8**	**-5.3**
	comp=N,1.5nm,0.5s						
RONA	**Rosalia, Austr**	**5.56**	**22**	*e*Pn	**Pn**	**01 54 08.6**	**+3.4**
	comp=N,0.5nm,0.1s						
CONA	**Conrad Observa**	**5.66**	**19**	*e*Pn	**Pn**	**01 54 08.9**	**+2.3**
	comp=N,0.5nm,0.2s						
CONA				*e*Sn	**Sn**	**01 55 11.6**	**+0.5**
	comp=N,0.9nm,0.3s						
SMRF	**Simiane la Rot**	**5.72**	**287**	*e*P	**Pn**	**01 54 10.1**	**+2.7**
SMRF				*e*Sn	**Sn**	**01 55 07.7**	**-4.9**
	comp=N,0.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.77**	**296**	*e*P	**Pn**	**01 54 11.3**	**+3.1**
ORIF				*e*Sn	**Sn**	**01 55 08.7**	**-5.2**
	comp=N,1.3nm,0.4s						
CABF	**La Chapelle**	**6.46**	**311**	*e*P	**Pn**	**01 54 20.1**	**+2.5**
VIVF	**Saint-Julien-l**	**6.56**	**293**	*e*P	**Pn**	**01 54 21.6**	**+2.6**
HINF	**Hinteralfeld**	**6.87**	**322**	*e*P	**Pn**	**01 54 25.7**	**+2.5**
HINF				*e*Sn	**Sn**	**01 55 34.2**	**-6.6**
	comp=N,2.0nm,0.3s						
LASF	**Ste Croix**	**6.96**	**285**	*e*P	**Pn**	**01 54 27.7**	**+3.3**
CDF	**Champ du Feu**	**7.14**	**327**	*e*P	**Pn**	**01 54 28.2**	**+1.3**
CDF				*e*Sn	**Sn**	**01 55 40.3**	**-7.3**
	comp=N,1.3nm,0.3s						
HAU	**Haudompre**	**7.24**	**321**	*e*P	**Pn**	**01 54 31.1**	**+2.9**
SMF	**Signal de Mont**	**7.79**	**304**	*e*P	**Pn**	**01 54 38.9**	**+3.1**
SMF				*e*Sn	**Sn**	**01 55 56.7**	**-6.8**
	comp=N,0.6nm,0.3s						

ROM 24 01:55:20.4±0.1, 42°.790N±0°.004×13°.145E±0°.003, h11km, ML3.0/4, 2C, Error ellipse: s-maj=0.4km s-min=0.2km az=355.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.19**	**338**	P	Pg	01 55 25.1	+0.6
FEMA				S	Sg	01 55 28.3	+0.9
FEMA				AML	AML		
	comp=E,7025µm,0.4s						
FEMA				AML	AML		
	comp=N,6320µm,0.3s						
FEMA				AML	AML		
	comp=E,48200µm,0.4s						
FEMA				AML	AML		
	comp=N,87100µm,0.5s						
FEMA				AML	AML		
FEMA				AML	AML		
LNSS	**Leonessa**	**0.20**	**203**	↑P	Pg	01 55 25.2	+0.5
LNSS				S	Sg	01 55 28.9	+1.1
LNSS				AML	AML		
	comp=E,23250µm,0.3s						
LNSS				AML	AML		
	comp=N,49950µm,0.3s						
LNSS				AML	AML		
	comp=N,41060µm,0.3s						
FDMO	**Fiordimonte**	**0.25**	**350**	P	Pg	01 55 25.9	+0.3
FDMO				S	Sg	01 55 30.0	+0.9
FDMO				AML	AML		
	comp=E,2650µm,0.8s						
FDMO				AML	AML		
	comp=N,3485µm,0.9s						
FDMO				AML	AML		
	comp=E,19850µm,0.5s						
FDMO				AML	AML		
	comp=N,57850µm,0.5s						
FDMO				AML	AML		
	comp=E,41900µm,1.0s						
FDMO				AML	AML		
	comp=N,60300µm,0.5s						
CESI	**CESI - Serrava**	**0.28**	**321**	P	Pg	01 55 26.6	+0.5
CESI				S	Sb	01 55 31.2	-1.0
CESI				AML	AML		
	comp=E,3570µm,0.9s						
CESI				AML	AML		
	comp=N,6215µm,0.3s						
CESI				AML	AML		
	comp=E,14700µm,0.4s						
CESI				AML	AML		
	comp=N,28050µm,0.4s						
CESI				AML	AML		
	comp=E,57850µm,0.8s						
CESI				AML	AML		
	comp=N,87100µm,0.4s						
CESI				AML	AML		
	comp=E,3369µm,0.1s						
CESI				AML	AML		
	comp=N,3437µm,0.2s						
RM33	**Pellescritta (**	**0.28**	**170**	P	Pg	01 55 26.5	+0.2
RM33				S	Sg	01 55 31.1	+1.0
RM33				AML	AML		
	comp=E,9040µm,0.6s						
RM33				AML	AML		
	comp=N,8210µm,0.6s						
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
CAMP	**Campotosto**	**0.32**	**142**	P	Pg	01 55 26.8	-0.1
CAMP				S	Sg	01 55 31.9	+0.7
CAMP				AML	AML		
CAMP				AML	AML		
CAMP				AML	AML		
	comp=E,6271µm,0.2s						
ARRO	**Arrone**	**0.35**	**233**	↑P	Pg	01 55 27.8	+0.4
ARRO				AML	AML		
	comp=N,91500µm,0.8s						
ARRO				AML	AML		
	comp=E,65500µm,0.9s						
ARRO				AML	AML		
	comp=N,91450µm,0.8s						
TERO	**Teramo**	**0.38**	**116**	P	Pg	01 55 27.6	-0.3
TERO				S	Sg	01 55 33.3	+0.4
TERO				AML	AML		
	comp=E,9720µm,0.5s						
TERO				AML	AML		
	comp=N,13900µm,0.6s						
TERO				AML	AML		
	comp=E,10175µm,0.5s						
TERO				AML	AML		
	comp=N,15150µm,0.6s						
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
SEF1	**Sefro**	**0.39**	**338**	P	Pg	01 55 28.4	+0.3
SEF1				S	Sb	01 55 34.4	-0.9
SEF1				AML	AML		
	comp=E,22700µm,0.4s						
SEF1				AML	AML		
	comp=N,20100µm,0.3s						
SEF1				AML	AML		
	comp=E,56900µm,0.6s						
SEF1				AML	AML		

	comp=N,57350µm,0.7s							
MNTP	**Montappone**	**0.42**	**34**	P	Pb	01 55 29.5	-0.4	
OFFI	**Offida**	**0.42**	**70**	P	Pb	01 55 29.5	-0.4	
OFFI				AML	AML			
OFFI				AML	AML			
SSM1	**San Severino M**	**0.44**	**3**	P	Pg	01 55 29.2	+0.1	
CESX	**Cesi**	**0.45**	**247**	P	Pg	01 55 29.5	+0.2	
CESX				AML	AML			
	comp=E,2610µm,0.5s							
CESX				AML	AML			
	comp=N,2805µm,0.5s							
CESX				AML	AML			
	comp=E,39250µm,0.5s							
CESX				AML	AML			
	comp=N,51100µm,0.3s							
CESX				AML	AML			
	comp=E,47150µm,0.5s							
CESX				AML	AML			
	comp=N,55200µm,1.3s							
CESX				AML	AML			
	comp=E,3436µm,0.5s							
GIGS	**Gran Sasso**	**0.46**	**137**	P	Pg	01 55 29.5	0.0	
GIGS				S	Sg	01 55 35.7	+0.1	
GIGS				AML	AML			
	comp=E,947µm,0.5s							
GIGS				AML	AML			
	comp=N,867µm,1.2s							
GIGS				AML	AML			
	comp=N,68950µm,0.7s							
GIGS				AML	AML			
	comp=E,43600µm,1.1s							
AQU	**L'Aquila**	**0.47**	**156**	P	Pg	01 55 30.2	+0.5	
AQU				S	Sb	01 55 37.2	-0.6	
AQU				AML	AML			
AQU				AML	AML			
AQU				AML	AML			
AQU				AML	AML			
FIAM	**Fiamignano**	**0.52**	**182**	P	Pg	01 55 30.2	-0.4	
FIAM				S	Sg	01 55 38.3	+0.8	
TRTR	**Tortoreto Alta**	**0.57**	**88**	P	Pb	01 55 32.3	0.0	
TRTR				AML	AML			
TRTR				AML	AML			
TRTR				AML	AML			
TRTR				AML	AML			
FAGN	**Fagnano**	**0.62**	**148**	P	Pb	01 55 33.1	-0.1	
VCEL	**Villa Celiera**	**0.65**	**127**	P	Pg	01 55 33.2	+0.3	
VCEL				AML	AML			
VCEL				AML	AML			
VCEL				AML	AML			
PP3	**Marolino**	**0.68**	**30**	P	Pb	01 55 34.6	+0.3	
PP3				AML	AML			
	comp=E,9765µm,0.9s							
PP3				AML	AML			
	comp=N,12635µm,1.3s							
PP3				AML	AML			
	comp=E,8660µm,0.9s							
PP3				AML	AML			
	comp=N,12800µm,1.2s							
PP3				AML	AML			
PP3				AML	AML			
PP3				AML	AML			
PP3				AML	AML			
SRES	**S.Oreste - Sor**	**0.72**	**221**	P	Pb	01 55 34.8	-0.3	
SRES				AML	AML			
	comp=E,24600µm,1.1s							
SRES				AML	AML			
	comp=N,13750µm,0.4s							
SRES				AML	AML			
	comp=E,26800µm,1.5s							
SRES				AML	AML			
	comp=N,24600µm,1.1s							
T0110	**Collepietro**	**0.73**	**140**	P	Pg	01 55 34.6	0.0	
T0110				AML	AML			
T0110				AML	AML			
AOI	**Ancona**	**0.83**	**24**	AML	AML			
	comp=E,22000µm,1.5s							
AOI				AML	AML			
	comp=E,7920µm,0.6s							
AOI				AML	AML			
	comp=N,7925µm,0.5s							
AOI				AML	AML			
	comp=N,25650µm,0.5s							
COR1	**Corinaldo**	**0.85**	**353**	AML	AML			
	comp=N,15050µm,0.4s							
COR1				AML	AML			
	comp=E,12230µm,0.5s							
COR1				AML	AML			
	comp=E,52550µm,1.4s							
COR1				AML	AML			
	comp=N,61050µm,1.3s							
COR1				AML	AML			
	comp=E,29350µm,1.4s							
COR1				AML	AML			
	comp=N,60500µm,0.8s							
NARO	**Abbazia di Nar**	**0.92**	**333**	AML	AML			
	comp=E,3045µm,0.7s							
NARO				AML	AML			
	comp=N,3610µm,0.6s							
NARO				AML	AML			
	comp=E,13250µm,0.9s							
NARO				AML	AML			
	comp=N,9605µm,1.6s							
LPEL	**Lama dei Pelig**	**1.07**	**134**	AML	AML			
	comp=N,22200µm,0.7s							
LPEL				AML	AML			
	comp=E,16550µm,0.3s							
LPEL				AML	AML			
	comp=E,27000µm,0.8s							
LAV9	**Lanuvio**	**1.16**	**197**	AML	AML			
	comp=N,40450µm,1.4s							
LAV9				AML	AML			
	comp=E,26450µm,0.8s							
LAV9				AML	AML			
	comp=N,37950µm,1.4s							
LAV9				AML	AML			
	comp=E,26100µm,1.0s							
LAV9				AML	AML			
	comp=E,56350µm,0.5s							
LAV9				AML	AML			
	comp=N,51400µm,0.9s							
LAV9				AML	AML			
	comp=E,60900µm,0.5s							
LAV9				AML	AML			
	comp=N,53850µm,0.9s							
SGTA	**Sant Agata di**	**2.34**	**134**	AML	AML			
	comp=E,4965µm,0.9s							
SGTA				AML	AML			
	comp=N,3045µm,1.6s							
SGTA				AML	AML			
	comp=E,5135µm,1.0s							
SGTA				AML	AML			
	comp=N,3110µm,1.6s							

ROM ***24*** *01:55:44.6±0.1, 42°.722N±0°.004×13°.250E±0°.007, h6km, ML3.5/3, Error ellipse: s-maj=0.6km s-min=0.3km az=241.0*

LDG ***24*** *01:55:46.8±0.9, 42°.61N×13°.27E, h2km, Ml3.8/4, Error ellipse: s-maj=20.2km s-min=7.6km az=127.0*

ISC 24 01:55:45.4±0.8, 42°.71N±0°.02×13°.26E±0°.03, h14km±6km, n55, σ1§14/75, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.19**	**237**	P	**Pg**	**01 55 49.4**	**-0.5**
LNSS				S	**Sg**	**01 55 52.8**	**-0.1**
LNSS				AML	AML		
	comp=N,29373µm,0.3s						
LNSS				END			
RM33	**Pellescritta (**	**0.20**	**189**	P	**Pg**	**01 55 49.8**	**-0.2**
RM33				S	**Sg**	**01 55 53.5**	**+0.3**
CAMP	**Campotosto**	**0.20**	**147**	P	**Pg**	**01 55 49.6**	**-0.5**
CAMP				S	**Sg**	**01 55 53.2**	**0.0**
TERO	**Teramo**	**0.27**	**108**	P	**Pg**	**01 55 50.7**	**-0.4**
TERO				S	**Sg**	**01 55 55.0**	**+0.1**
FEMA	**Monte Fema**	**0.30**	**329**	P	**Pg**	**01 55 51.1**	**-0.5**
FEMA				S	**Sg**	**01 55 55.6**	**-0.3**
FDMO	**Fiordimonte**	**0.35**	**339**	P	**Pg**	**01 55 52.0**	**-0.5**
FDMO				S	**Sg**	**01 55 57.5**	**0.0**
OFFI	**Offida**	**0.39**	**54**	P	**Pb**	**01 55 53.6**	**-0.4**
CESI	**CESI - Serrava**	**0.40**	**319**	P	**Pg**	**01 55 52.7**	**-0.7**
CESI				S	**Sg**	**01 55 58.9**	**+0.1**
CESI				AML	AML		
	comp=N,87100µm,0.4s						
CESI				AML	AML		
	comp=E,57850µm,0.8s						
CESI				AML	AML		
	comp=E,10345µm,0.3s						
CESI				AML	AML		
	comp=N,14319µm,0.2s						
FIAM	**Fiamignano**	**0.45**	**193**	P	**Pg**	**01 55 53.7**	**-0.7**
FIAM				S	**Sb**	**01 56 01.3**	**-0.5**
MDAR	**Monte D'Aria**	**0.49**	**350**	P	**Pg**	**01 55 54.3**	**-0.9**
MDAR				S	**Sg**	**01 56 02.1**	**+0.4**
TRTR	**Tortoreto Alta**	**0.49**	**78**	P	**Pb**	**01 55 55.8**	**0.0**
SEF1	**Sefro**	**0.49**	**333**	P	**Pg**	**01 55 54.4**	**-0.8**
SEF1				S	**Sg**	**01 56 02.2**	**+0.4**
CESX	**Cesi**	**0.51**	**259**	P	**Pb**	**01 55 57.1**	**+1.0**
PIO1	**Pioraco**	**0.51**	**337**	P	**Pg**	**01 55 55.5**	**0.0**
SSM1	**San Severino M**	**0.53**	**353**	P	**Pg**	**01 55 54.9**	**-0.8**
SSM1				S	**Sg**	**01 56 03.3**	**+0.6**
FIU1	**Fiuminata**	**0.54**	**334**	P	**Pg**	**01 55 54.9**	**-1.1**
FIU1				S	**Sg**	**01 56 03.5**	**+0.4**
GAG1	**Gagliole**	**0.55**	**345**	P	**Pg**	**01 55 55.8**	**-0.4**
GAG1				S	**Sb**	**01 56 04.3**	**-0.3**
GAG1				AML	AML		
	comp=E,77900µm,0.5s						
GAG1				AML	AML		
	comp=N,92050µm,0.6s						
GAG1				AML	AML		
GAG1				AML	AML		
	comp=N,4506µm,0.2s						
ASSB	**Assisi San Ben**	**0.55**	**307**	P	**Pg**	**01 55 56.2**	**-0.1**
ASSB				S	**Sg**	**01 56 04.0**	**+0.3**
ASSB				AML	AML		
	comp=E,25700µm,1.6s						
ASSB				AML	AML		
	comp=N,30650µm,1.2s						
ASSB				AML	AML		
	comp=E,42600µm,1.4s						
ASSB				AML	AML		
	comp=N,36000µm,1.6s						
ASSB				AML	AML		
	comp=N,5890µm,0.2s						
ASSB				AML	AML		
	comp=E,5200µm,0.2s						
SNTG	**Esanatoglia**	**0.59**	**337**	P	**Pg**	**01 55 56.3**	**-0.7**
SNTG				AML	AML		
	comp=E,1905µm,0.6s						
SNTG				AML	AML		
	comp=N,1790µm,0.6s						
SNTG				AML	AML		
	comp=E,15150µm,0.6s						
SNTG				AML	AML		
	comp=N,14850µm,0.6s						
SNTG				AML	AML		
	comp=E,2410µm,0.7s						
SNTG				AML	AML		
	comp=N,3040µm,0.7s						
SNTG				AML	AML		
	comp=E,18600µm,0.7s						
SNTG				AML	AML		
	comp=N,25000µm,0.7s						
TRE1	**Treia**	**0.60**	**4**	P	**Pg**	**01 55 57.1**	**-0.1**
CADA	**Capodarco di F**	**0.61**	**37**	P	**Pb**	**01 55 58.1**	**+0.2**
ATCC	**AVT- Casa Cast**	**0.66**	**317**	P	**Pg**	**01 55 57.3**	**-1.0**
ATCC				S	**Sb**	**01 56 07.6**	**-0.1**
ATCC				AML	AML		
	comp=E,40450µm,1.3s						
ATCC				AML	AML		
	comp=N,37700µm,1.4s						
ATCC				AML	AML		
	comp=E,41800µm,0.6s						
ATCC				AML	AML		
	comp=N,39850µm,1.1s						
SRES	**S.Oreste - Sor**	**0.73**	**230**	P	**Pg**	**01 55 59.0**	**-0.5**
MURB	**Monte Urbino**	**0.77**	**316**	P	**Pg**	**01 55 59.4**	**-1.0**
ARVD	**Arcevia**	**0.82**	**344**	P	**Pg**	**01 56 00.6**	**-0.8**
ARVD				AML	AML		
	comp=E,19750µm,1.4s						
ARVD				AML	AML		
	comp=N,15200µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.83**	**307**	P	**Pb**	**01 56 01.6**	**0.0**
ATFO	**Monte Foce - G**	**0.83**	**323**	P	**Pg**	**01 56 00.8**	**-0.7**
ATFO				AML	AML		
	comp=E,23100µm,1.6s						
ATFO				AML	AML		
	comp=N,28600µm,0.8s						
MGAB	**Montegabbione**	**0.87**	**284**	P	**Pb**	**01 56 02.3**	**0.0**
AOI	**Ancona**	**0.88**	**16**	P	**Pb**	**01 56 01.9**	**-0.5**
AOI				AML	AML		
	comp=E,22000µm,1.5s						
AOI				AML	AML		
	comp=N,25650µm,0.5s						
PGF	**Pioggiola**	**3.15**	**269**	*e*Pn	**Pn**	**01 56 35.2**	**+0.6**
PGF				*e*Sn	**Sn**	**01 57 11.0**	**-1.0**
	comp=N,41nm,0.3s						
SBF	**Sospel**	**4.41**	**287**	*e*Pn	**Pn**	**01 56 52.6**	**+0.7**
SBF				*e*Sn	**Sn**	**01 57 42.0**	**-1.0**
	comp=N,74nm,0.5s						
LMR	**La Mourre**	**4.99**	**279**	*e*Pn	**Pn**	**01 57 00.1**	**+0.3**
LMR				*e*Sn	**Sn**	**01 57 55.7**	**-1.6**
	comp=N,12nm,0.4s						
MBDF	**Montbardon**	**5.12**	**295**	*e*Pn	**Pn**	**01 57 03.3**	**+1.6**
MBDF				*e*Sn	**Sn**	**01 57 56.7**	**-4.0**
	comp=N,44nm,0.5s						
LPG	**La Plagne**	**5.45**	**303**	*e*Pn	**Pn**	**01 57 07.7**	**+1.2**
LPL	**La Plagne**	**5.47**	**303**	*e*Pn	**Pn**	**01 57 08.8**	**+2.1**
SMRF	**Simiane la Rot**	**5.75**	**285**	*e*Pn	**Pn**	**01 57 12.2**	**+1.9**
ORIF	**Oris-en-Rattie**	**5.78**	**295**	*e*Pn	**Pn**	**01 57 13.6**	**+2.8**
CABF	**La Chapelle**	**6.43**	**310**	*e*Pn	**Pn**	**01 57 21.2**	**+1.5**
VIVF	**Saint-Julien-l**	**6.58**	**292**	*e*Pn	**Pn**	**01 57 23.5**	**+1.9**
HINF	**Hinteralfeld**	**6.82**	**321**	*e*Pn	**Pn**	**01 57 25.9**	**+0.9**
LASF	**Ste Croix**	**6.99**	**284**	*e*Pn	**Pn**	**01 57 28.0**	**+0.7**
CDF	**Champ du Feu**	**7.08**	**326**	*e*Pn	**Pn**	**01 57 30.1**	**+1.5**
HAU	**Haudompre**	**7.19**	**320**	*e*Pn	**Pn**	**01 57 31.3**	**+1.2**
HAU				*e*Sn	**Sn**	**01 58 53.7**	**+2.1**
SMF	**Signal de Mont**	**7.78**	**304**	*e*Pn	**Pn**	**01 57 39.3**	**+1.2**
PAGF	**Fort de Pagny**	**7.88**	**321**	*e*Pn	**Pn**	**01 57 40.5**	**+1.1**
SFTF	**Sexfontaines**	**7.97**	**316**	*e*Pn	**Pn**	**01 57 42.4**	**+1.6**
LOR	**Lormes**	**8.07**	**308**	*e*Pn	**Pn**	**01 57 43.2**	**+1.0**
AVF	**Avril sur Loir**	**8.15**	**303**	*e*Pn	**Pn**	**01 57 43.1**	**0.0**
MEZF	**Maizieres J'vi**	**8.16**	**318**	*e*Pn	**Pn**	**01 57 44.5**	**+1.1**
SAVF	**Savonnieres en**	**8.20**	**319**	*e*Pn	**Pn**	**01 57 46.7**	**+2.8**
CAF	**Calviac**	**8.39**	**289**	*e*Pn	**Pn**	**01 57 48.4**	**+1.8**
KOLS	**Kolonicke sedl**	**8.85**	**42**	*e*SN	**Sn**	**01 59 32.0**	**-0.3**
RJF	**Les Rejaudoux**	**8.85**	**291**	*e*Pn	**Pn**	**01 57 54.3**	**+1.4**
GIVF	**Givet**	**9.41**	**325**	*e*Pn	**Pn**	**01 58 01.9**	**+1.4**
EPF	**Esparros**	**9.49**	**276**	*e*Pn	**Pn**	**01 58 02.7**	**+1.0**

TIR ***24*** *01:55:56.8, 42°.90N×13°.40E, h7km, Md4.7*

ROM ***24*** *01:56:00.6±0.1, 42°.601N±0°.003×13°.276E±0°.004, h8km, ML4.5/99, Mw4.3, Mw4.3, Error ellipse: s-maj=0.3km s-min=0.2km az=67.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.93; $M_{\theta\theta}$0.49; $M_{\phi\phi}$2.44; $M_{r\theta}$-1.93; $M_{\theta\phi}$-2.36; $M_{\phi r}$-0.01; Fault plane solution: M_o4.08706×10^{15} NP1:ϕ_s353.00000°, δ43.00000°, λ-47.00000°. NP2:ϕ_s120.00000°, δ60.00000°, λ-123.00000°.*

BJI ***24*** *01:56:00.0±0.0, 42°.70N×13°.20E, h5km, mb4.6/14*

IDC ***24*** *01:56:01.0±0.5, 42°.74N×13°.12E, h0km, mb4.3/30, mbtmp4.3/43, ML4.0/10, Error ellipse: s-maj=10.2km s-min=7.9km az=101.0*

NEIC ***24*** *01:56:01.9±2.3, 42°.64N±0°.04×13°.20E±0°.06, h10km±1km, mb4.6/58, ML4.4(ROM), Error ellipse: s-maj=8.5km s-min=4.2km az=53.0*

MOS ***24*** *01:56:01.3±1.0, 42°.73N×13°.24E, h17km, mb4.8/27, Error ellipse: s-maj=5.3km s-min=3.1km az=80.7*

PDG ***24*** *01:56:01.5±0.7, 42°.62N×13°.29E, h11km±1km, MD4.8/1, ML4.8/14, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*

LDG ***24*** *01:56:02.5±0.1, 42°.49N×13°.13E, h10km, Ml4.0/39, Error ellipse: s-maj=4.7km s-min=2.9km az=43.0*

STR ***24*** *01:56:02.4±0.8, 43°.N±6°×1°.3E±°, h5km, mb4.3/30, Error ellipse: s-maj=0.0km s-min=0.0km az=136.6, preliminary*

PRU ***24*** *01:56:02.4±0.0, 42°.72N×13°.15E, h0km, M4.8*

BEO ***24*** *01:56:02.2±0.5, 42°.64N×13°.27E, h0km, ML4.5/10*

BGR ***24*** *01:56:05.5±0.0, 42°.71N×13°.22E, h5km, ML4.6/11*

ISC 24 01:56:01.6±0.5, 42°.62N±0°.02×13°.24E±0°.02, h9km±3km, n767, σ1§92/902, mb4.6/70, 46C-58D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.11**	**188**	P	**Pg**	**01 56 03.9**	**-0.5**
RM33				S	**Sg**	**01 56 06.0**	**-0.3**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
LNSS	**Leonessa**	**0.14**	**263**	P	**Pg**	**01 56 05.0**	**+0.1**
LNSS				S	**Sg**	**01 56 07.9**	**+0.8**
CAMP	**Campotosto**	**0.15**	**124**	P	**Pg**	**01 56 03.8**	**-1.2**
CAMP				S	**Sg**	**01 56 05.8**	**-1.6**
CAMP				AML	AML		
CAMP				AML	AML		
TERO	**Teramo**	**0.27**	**90**	P	**Pg**	**01 56 05.6**	**-1.5**
TERO				S	**Sg**	**01 56 09.4**	**-1.4**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
AQU	**L'Aquila**	**0.29**	**155**	Pg	**Pg**	**01 56 06.5**	**-1.0**
AQU	**L'Aquila**	**0.29**	**155**	P	**Pg**	**01 56 06.5**	**-1.0**
AQU	**L'Aquila**	**0.29**	**155**	P	**Pg**	**01 56 06.6**	**-0.9**
AQU				S	**Sg**	**01 56 11.3**	**-0.2**
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
GIGS	**Gran Sasso**	**0.30**	**125**	P	**Pg**	**01 56 06.3**	**-1.3**
GIGS				S	**Sg**	**01 56 10.6**	**-1.1**
GIGS				AML	AML		
	comp=E,43600µm,1.1s						
GIGS				AML	AML		
	comp=N,68950µm,0.7s						
ARRO	**Arrone**	**0.35**	**263**	P	**Pg**	**01 56 08.4**	**-0.1**
ARRO				S	**Sg**	**01 56 14.5**	**+1.3**
ARRO				AML	AML		
	comp=E,65500µm,0.9s						
ARRO				AML	AML		
	comp=N,91250µm,0.8s						
ARRO				AML	AML		
	comp=N,91500µm,0.8s						
ARRO				AML	AML		
	comp=N,91450µm,0.8s						
ARRO				AML	AML		
	comp=N,91350µm,0.8s						
FIAM	**Fiamignano**	**0.36**	**194**	P	**Pg**	**01 56 08.2**	**-0.7**
FIAM				S	**Sg**	**01 56 13.6**	**0.0**
FIAM				AML	AML		
FIAM				AML	AML		
FEMA	**Monte Fema**	**0.37**	**338**	P	**Pg**	**01 56 08.9**	**0.0**
FEMA				S	**Sb**	**01 56 15.3**	**-1.0**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FDMO	**Fiordimonte**	**0.43**	**345**	P	**Pg**	**01 56 09.8**	**-0.2**
FDMO				S	**Sb**	**01 56 16.9**	**-1.1**
FDMO				AML	AML		
	comp=E,41900µm,1.0s						
FDMO				AML	AML		
	comp=N,60300µm,0.5s						
FAGN	**Fagnano**	**0.44**	**144**	P	**Pg**	**01 56 09.8**	**-0.5**
FAGN				AML	AML		
FAGN				AML	AML		
CESI	**CESI - Serrava**	**0.45**	**328**	P	**Pg**	**01 56 10.5**	**0.0**
CESI				AML	AML		
	comp=N,87100µm,0.4s						
CESI				AML	AML		
	comp=E,57850µm,0.8s						
OFFI	**Offida**	**0.46**	**47**	P	**Pg**	**01 56 10.4**	**-0.1**
OFFI				S	**Sb**	**01 56 18.2**	**-0.6**
OFFI				AML	AML		
OFFI				AML	AML		
CESX	**Cesi**	**0.48**	**269**	P	**Pg**	**01 56 11.7**	**+0.6**
CESX				AML	AML		
	comp=N,55200µm,1.3s						
CESX				AML	AML		
	comp=E,47150µm,0.5s						
VCEL	**Villa Celiera**	**0.50**	**117**	P	**Pg**	**01 56 10.7**	**-0.7**
VCEL				S	**Sg**	**01 56 18.1**	**+0.1**
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
TRTR	**Tortoreto Alta**	**0.53**	**69**	P	**Pg**	**01 56 11.7**	**-0.3**
TRTR				AML	AML		
TRTR				AML	AML		
MNTP	**Montappone**	**0.54**	**18**	P	**Pg**	**01 56 12.0**	**-0.2**
T0110	**Collepietro**	**0.56**	**134**	P	**Pg**	**01 56 11.4**	**-1.2**
T0110				S	**Sg**	**01 56 19.9**	**-0.1**
SEF1	**Sefro**	**0.57**	**338**	P	**Pg**	**01 56 12.2**	**-0.4**
SEF1				AML	AML		
	comp=E,56900µm,0.6s						
SEF1				AML	AML		
	comp=N,57350µm,0.7s						
SEF1				AML	AML		
	comp=E,56900µm,0.6s						
MDAR	**Monte D'Aria**	**0.57**	**353**	P	**Pg**	**01 56 12.3**	**-0.5**
MDAR				AML	AML		
	comp=E,40100µm,0.5s						
MDAR				AML	AML		
	comp=N,47100µm,0.8s						
MDAR				AML	AML		
	comp=E,40150µm,0.5s						
MDAR				AML	AML		
	comp=N,47050µm,0.9s						
PIO1	**Pioraco**	**0.59**	**342**	P	**Pb**	**01 56 13.7**	**-0.4**
PIO1				AML	AML		
	comp=E,50050µm,0.6s						
PIO1				AML	AML		
	comp=N,77850µm,0.6s						
PIO1				AML	AML		
	comp=E,50100µm,0.6s						
PIO1				AML	AML		
	comp=N,77800µm,0.6s						
ASSB	**Assisi San Ben**	**0.60**	**315**	P	**Pg**	**01 56 13.7**	**+0.4**
ASSB				AML	AML		
	comp=E,42600µm,1.4s						
ASSB				AML	AML		
	comp=N,36000µm,1.6s						
SSM1	**San Severino M**	**0.61**	**356**	P	**Pg**	**01 56 13.1**	**-0.3**
SSM1				S	**Sb**	**01 56 22.8**	**-0.3**
FIU1	**Fiuminata**	**0.61**	**339**	P	**Pg**	**01 56 13.2**	**-0.2**
FIU1				S	**Sb**	**01 56 23.4**	**+0.2**
FIU1				AML	AML		
	comp=E,33900µm,0.6s						
FIU1				AML	AML		
	comp=N,22500µm,1.4s						
FIU1				AML	AML		
	comp=E,33900µm,0.6s						
FIU1				AML	AML		
	comp=N,22500µm,1.4s						
PTQR	**Pietraquaria**	**0.61**	**168**	P	**Pg**	**01 56 11.8**	**-1.7**
PTQR				AML	AML		
	comp=N,23450µm,1.6s						
PTQR				AML	AML		
	comp=E,28150µm,1.1s						
GAG1	**Gagliole**	**0.63**	**349**	P	**Pg**	**01 56 13.5**	**-0.3**
GAG1				S	**Sb**	**01 56 23.9**	**+0.2**
GAG1				AML	AML		
	comp=N,92050µm,0.6s						
GAG1				AML	AML		
GAG1				AML	AML		
SRES	**S.Oreste - Sor**	**0.66**	**235**	P	**Pg**	**01 56 13.6**	**-0.8**
SRES				AML	AML		
	comp=E,26800µm,1.5s						
SRES				AML	AML		
	comp=N,24600µm,1.1s						
SNTG	**Esanatoglia**	**0.67**	**341**	P	**Pg**	**01 56 14.1**	**-0.5**
SNTG				AML	AML		
	comp=E,2410µm,0.7s						
SNTG				AML	AML		
	comp=E,18600µm,0.7s						
SNTG				AML	AML		
	comp=N,3040µm,0.7s						
SNTG				AML	AML		
	comp=N,3045µm,0.7s						
SNTG				AML	AML		
	comp=N,25000µm,0.7s						
CADA	**Capodarco di F**	**0.69**	**34**	P	**Pb**	**01 56 15.5**	**-0.4**
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
TRE1	**Treia**	**0.69**	**5**	P	**Pg**	**01 56 15.1**	**+0.1**

TRE1 AML AML
TRE1 AML AML
TRE1 AML AML
TRE1 AML AML
CERT Cerreto 0.70 196 P **Pg 01 56 13.7 -1.4**
CERT AML AML
comp=E,52400µm,1.2s
CERT AML AML
comp=N,39650µm,1.3s
MTCE Montecelio 0.70 212 ⇑P **Pg 01 56 13.8 -1.3**
INTR Introdacqua 0.79 141 P **Pg 01 56 14.5 -2.3**
INTR AML AML
comp=N,33µm,0.7s
INTR AML AML
comp=E,36750µm,1.3s
INTR AML AML
comp=N,49900µm,0.7s
INTR AML AML
comp=E,37µm,1.3s
RCAV Rocca di Cave 0.80 196 P **Pg 01 56 16.7 -0.4**
VVLD Villa Vallelon 0.80 159 P **Pg 01 56 16.4 -0.7**
VVLD AML AML
comp=N,26650µm,1.6s
VVLD AML AML
comp=E,25800µm,1.1s
PP3 Marolino 0.80 20 P **Pg 01 56 16.9 -0.2**
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
MURB Monte Urbino 0.83 321 Pg **Pg 01 56 17.1 -0.5**
GUAR Guarcino 0.83 176 P **Pg 01 56 16.8 -0.8**
GUAR AML AML
comp=N,31700µm,1.2s
GUAR AML AML
comp=E,31500µm,1.2s
ATTE AVT- Monte Tez 0.87 312 P **Pg 01 56 18.1 -0.2**
ATFO Monte Foce - G 0.89 327 P **Pg 01 56 18.5 -0.2**
ATFO AML AML
comp=N,28600µm,0.8s
ATFO AML AML
comp=E,23100µm,1.6s
RMP Rome, Mte Porz 0.90 206 P **Pg 01 56 18.6 -0.3**
RMP AML AML
comp=E,47200µm,1.6s
RMP AML AML
comp=N,59300µm,0.8s
LPEL Lama dei Pelig 0.91 129 P **Pg 01 56 17.1 -2.0**
LPEL AML AML
comp=N,22200µm,0.7s
LPEL AML AML
comp=E,27000µm,0.8s
VIVA Pratoni del Vi 0.94 202 P **Pg 01 56 18.7 -0.9**
VIVA AML AML
comp=E,69050µm,1.4s
VIVA AML AML
comp=N,52500µm,0.4s
RDP Rocca di Papa 0.94 204 P **Pg 01 56 18.1 -1.7**
RDP AML AML
comp=N,86450µm,1.5s
RDP AML AML
comp=E,60550µm,0.6s
MA9 Marino 0.95 207 P **Pg 01 56 19.2 -0.7**
MA9 AML AML
comp=N,64900µm,0.9s
MA9 AML AML
comp=E,64800µm,0.8s
AOI Ancona 0.97 16 P **Pg 01 56 19.6 -0.6**
AOI AML AML
comp=N,25650µm,0.5s
AOI AML AML
comp=E,22000µm,1.5s
AOI AML AML
comp=N,25600µm,0.5s
SAMA S.Maria delle 0.97 210 P **Pg 01 56 18.4 -1.8**
FRON Frontone 0.97 338 P **Pg 01 56 19.4 -0.9**
POFI Posta Fibreno 0.97 158 P **Pg 01 56 18.2 -2.1**
POFI AML AML
comp=N,17550µm,0.9s
POFI AML AML
comp=E,20850µm,0.8s
POFI AML AML
comp=N,17300µm,0.9s
POFI AML AML
comp=E,19050µm,0.7s
SACS San Casciano d 1.00 284 P **Pg 01 56 21.0 +0.1**
SACS AML AML
comp=N,28700µm,0.9s
SACS AML AML
comp=E,17800µm,1.1s
SACS AML AML
comp=N,28350µm,0.9s
SACS AML AML
comp=E,19150µm,1.0s
LRP Arpino 1.01 165 P **Pg 01 56 20.4 -0.6**
LRP AML AML
comp=N,14300µm,1.3s
LRP AML AML
comp=E,14900µm,1.0s
COR1 Corinaldo 1.02 350 P **Pg 01 56 19.8 -1.5**
COR1 AML AML
comp=E,52550µm,1.4s
COR1 AML AML
comp=N,61050µm,1.3s
COR1 AML AML
comp=E,29350µm,1.4s
COR1 AML AML
comp=E,52550µm,1.4s
COR1 AML AML
comp=E,29150µm,1.4s
COR1 AML AML
comp=N,60500µm,0.8s
COR1 AML AML
comp=N,61050µm,1.3s
LAV9 Lanuvio 1.02 203 P **Pg 01 56 20.7 -0.6**
ATPI Pietralunga - 1.03 324 P **Pg 01 56 20.9 -0.5**
ATPI AML AML
comp=N,17850µm,0.6s
ATPI AML AML
comp=E,20550µm,1.6s
LATE Laterza 1.06 270 Pg **Pg 01 56 21.6 -0.3**
LATE Laterza 1.06 270 P **Pg 01 56 22.1 +0.2**
GIUL Giuliano Di Ro 1.06 179 P **Pg 01 56 21.1 -1.0**
GIUL AML AML
comp=N,18800µm,1.1s
GIUL AML AML
comp=E,18400µm,1.6s
MPAG Monte Paganucc 1.06 341 P **Pg 01 56 21.5 -0.6**
MPAG AML AML
comp=N,25150µm,0.6s
MPAG AML AML
comp=E,20350µm,0.5s
MPAG AML AML
comp=N,26200µm,0.6s
MPAG AML AML
comp=E,20550µm,0.5s
TOLF Tolfa 1.07 239 P **Pg 01 56 21.1 -1.2**
TOLF AML AML
comp=N,26700µm,1.0s
TOLF AML AML
comp=E,20350µm,0.8s
SENI Senigallia 1.08 360 P **Pg 01 56 22.2 -0.3**
SENI AML AML
comp=N,32400µm,0.9s
SENI AML AML
SENI AML AML
comp=E,92350µm,0.6s
SENI AML AML
comp=E,33250µm,0.8s
NARO Abbazia di Nar 1.10 334 P **Pg 01 56 20.9 -1.8**
NARO AML AML
comp=N,11300µm,0.8s
NARO AML AML
comp=E,13250µm,0.9s
APEC Apecchio 1.11 328 P **Pg 01 56 22.4 -0.6**
APEC AML AML
comp=N,23950µm,0.8s
APEC AML AML
comp=E,18050µm,1.6s
APEC AML AML
comp=N,4985µm,0.8s
APEC AML AML

comp=E,3410µm,1.6s
FSSB Fossombrone 1.12 343 P **Pg 01 56 21.7 -1.5**
FSSB AML AML
comp=E,32600µm,0.4s
FSSB AML AML
comp=N,75350µm,0.4s
LIK San Giovanni I 1.14 168 P **Pb 01 56 22.4 -1.1**
LIK San Giovanni I 1.14 168 AML AML
comp=E,34700µm,1.3s
LIK AML AML
comp=N,30900µm,1.5s
RNI2 Rionero Sannit 1.14 143 P **Pg 01 56 22.1 -1.4**
BADI Badiali 1.15 321 P **Pg 01 56 23.4 -0.2**
SF03 Valle Cupa 1.16 280 P **Pb 01 56 23.7 -0.1**
MCIV Monte Civitell 1.16 278 P **Pb 01 56 23.7 -0.2**
MCIV AML AML
comp=N,11050µm,1.0s
MCIV AML AML
comp=E,8630µm,0.8s
CAFI Castiglion Fio 1.17 308 P **Pb 01 56 23.3 -0.7**
CAFI AML AML
comp=E,13800µm,0.8s
CAFI AML AML
comp=N,11390µm,1.1s
CAFI AML AML
comp=E,13450µm,0.8s
CAFI AML AML
comp=N,11720µm,1.1s
SF11 Podere del Sol 1.17 283 P **Pb 01 56 23.9 -0.2**
CERA Filignano 1.18 150 P **Pb 01 56 22.4 -1.8**
SF04 Casetta 1.18 281 P **Pb 01 56 23.4 -0.9**
SF04 AML AML
comp=E,9670µm,1.2s
SF04 AML AML
comp=N,10690µm,1.1s
PE3 Peglio 1.20 334 P **Pb 01 56 23.8 -0.8**
PE3 AML AML
comp=E,74µm,0.4s
PE3 AML AML
comp=N,133µm,0.4s
SF14 Selvena 1.20 277 P **Pb 01 56 24.6 0.0**
SF13 Bagnolo 1.21 280 P **Pb 01 56 24.4 -0.3**
SF01 Poggio Pratacc 1.25 279 P **Pn 01 56 25.4 +0.1**
SF01 AML AML
comp=N,20100µm,0.8s
SF01 AML AML
comp=E,17000µm,0.9s
SSP9 Sansepolcro 1.25 320 P **Pn 01 56 25.3 0.0**
PARC Parchiule 1.26 325 P **Pn 01 56 25.5 0.0**
PARC AML AML
comp=E,18750µm,0.6s
PARC AML AML
comp=N,13800µm,0.7s
TRIV Trivento 1.30 131 P **Pn 01 56 25.4 -0.6**
TRIV AML AML
comp=E,13600µm,1.0s
TRIV AML AML
comp=E,15200µm,0.9s
TRIV AML AML
comp=N,14500µm,1.0s
TRIV AML AML
comp=N,15650µm,1.1s
ARCI Arcidosso 1.32 281 P **Pn 01 56 26.5 +0.2**
ARCI AML AML
comp=E,3470µm,0.9s
ARCI AML AML
comp=N,5915µm,1.0s
PESA Pesaro 1.35 348 P **Pn 01 56 26.4 -0.3**
PESA AML AML
comp=E,27300µm,1.3s
PESA AML AML
comp=N,31250µm,1.1s
CRE Caprese Michel 1.37 317 P **Pb 01 56 27.4 -0.1**
CRE AML AML
comp=E,7800µm,1.3s
CRE AML AML
comp=N,6040µm,0.7s
VAGA Valle Agricola 1.42 148 P **Pn 01 56 27.2 -0.4**
VAGA AML AML
comp=E,7725µm,1.0s
VAGA AML AML
comp=E,7395µm,1.0s
VAGA AML AML
comp=N,9340µm,1.3s
VAGA AML AML
comp=N,9615µm,1.3s
BSSO Busso 1.48 136 P **Pn 01 56 28.1 -0.3**
BSSO AML AML
comp=E,11620µm,1.1s
BSSO AML AML
comp=N,5280µm,1.6s
BSSO AML AML
comp=N,13450µm,1.4s
BSSO AML AML
comp=E,4730µm,1.2s
MODR Mondragone 1.55 162 P **Pn 01 56 28.9 -0.6**
MODR AML AML
comp=E,6385µm,1.6s
MODR AML AML
comp=N,7420µm,0.9s
CIGN Sant'Elia a Pi 1.57 127 P **Pn 01 56 29.3 -0.5**
PTRJ Pietraroja 1.58 142 AML AML
comp=E,13850µm,1.1s
PTRJ AML AML
comp=E,15700µm,1.1s
PTRJ AML AML
comp=N,8055µm,1.2s
PTRJ AML AML
comp=N,7150µm,1.2s
PIGN Pignataro Magg 1.59 153 P **Pn 01 56 29.9 0.0**
PIGN AML AML
comp=E,5090µm,1.6s
PIGN AML AML
comp=E,5635µm,1.6s
PIGN AML AML
comp=N,6950µm,1.4s
PIGN AML AML
comp=N,6780µm,1.4s
SFI Santa Sofia 1.64 322 P **Pb 01 56 31.5 -0.5**
FROS Frosini 1.64 292 P **Pn 01 56 30.6 0.0**
SACR S. Croce Del S 1.64 138 P **Pb 01 56 32.2 +0.1**
SACR AML AML
SACR AML AML
comp=E,6480µm,1.2s
SACR AML AML
comp=N,8030µm,1.5s
SACR AML AML
CSNT Castellina Chi 1.66 301 P **Pn 01 56 31.1 +0.2**
CSNT AML AML
comp=E,3990µm,1.3s
CSNT AML AML
comp=N,3075µm,0.9s
MELA Melanico ??? S 1.68 122 P **Pn 01 56 30.8 -0.4**
OSSC Osservatorio P 1.71 302 Pn **Pn 01 56 31.7 +0.1**
OSSC Osservatorio P 1.71 302 P **Pn 01 56 31.8 +0.1**
OSSC AML AML
comp=N,3745µm,0.9s
OSSC AML AML
comp=E,3290µm,1.0s
OSSC AML AML
comp=E,3800µm,0.9s
OSSC AML AML
comp=N,3265µm,1.0s
RUFI Rufina 1.75 315 P **Pn 01 56 33.1 +0.9**
CASP Castiglione de 1.75 276 **Pn 01 56 32.0 -0.2**
CASP Castiglione de 1.75 276 P **Pn 01 56 32.2 -0.1**
CASP AML AML
comp=E,1380µm,1.6s
CASP AML AML
comp=N,1620µm,1.0s
TREM Isole Tremiti 1.76 106 P **Pn 01 56 32.7 +0.4**
TREM AML AML
comp=E,19100µm,0.7s
TREM AML AML
comp=N,20700µm,0.7s
TRIF Trifonti 1.78 287 P **Pn 01 56 32.9 +0.2**
TRIF AML AML
comp=N,2420µm,1.5s
TRIF AML AML
comp=E,2625µm,1.6s
VENT Ventotene 1.83 176 P **Pn 01 56 33.5 +0.2**
VENT AML AML
comp=N,7180µm,1.6s
VENT AML AML
comp=E,9420µm,1.6s
PAOL Paolisi 1.88 147 Pn **Pn 01 56 34.2 +0.3**

PAOL Paolisi 1.88 147 P **Pn 01 56 34.7 +0.7**
PAOL AML AML
comp=E,2530µm,1.3s
PAOL AML AML
comp=N,4035µm,1.6s
PAOL AML AML
comp=N,4245µm,1.6s
PAOL AML AML
comp=E,2470µm,1.3s
DUGI Dugi Otok 1.91 44 *e*Pn **Pn 01 56 33.8 -0.6**
IMOL Imola, Italy 2.05 328 AML AML
comp=N,9110µm,1.2s
IMOL AML AML
comp=E,9440µm,1.4s
SGRT San Giovanni R 2.06 114 Pn **Pn 01 56 36.9 +0.4**
SGRT San Giovanni R 2.06 114 P **Pg 01 56 40.6 -0.4**
baz=122
SGRT S **Sb 01 57 04.5 -0.3**
baz=122
MPPT Montemurlo 2.06 311 P **Pn 01 56 36.9 +0.5**
MPPT AML AML
comp=N,3525µm,1.4s
MPPT AML AML
comp=E,3515µm,1.0s
VIRC Vir 2.13 38 *e*Pn **Pn 01 56 37.0 -0.4**
FNVD Fontana Vidola 2.18 316 P **Pn 01 56 39.0 +0.8**
FNVD AML AML
comp=E,4595µm,1.1s
FNVD AML AML
comp=N,4610µm,0.8s
MSAG Monte S. Angel 2.19 114 P **Pn 01 56 39.2 +1.0**
MSAG AML AML
comp=N,15000µm,1.0s
MSAG AML AML
comp=E,5715µm,1.0s
MSAG AML AML
comp=E,6115µm,0.7s
MSAG AML AML
comp=N,14700µm,1.0s
MORI Morici 2.19 55 *e*Pn **Pn 01 56 37.8 -0.4**
CELB S.Piero in Cam 2.23 274 P **Pn 01 56 38.6 -0.3**
CELB AML AML
comp=N,1147µm,1.6s
CELB AML AML
comp=E,662µm,1.6s
SNAL S. Angelo Dei 2.25 138 AML AML
comp=N,7170µm,1.3s
SNAL AML AML
comp=N,6755µm,1.2s
SNAL AML AML
comp=E,5385µm,1.6s
SNAL AML AML
comp=E,5335µm,1.2s
PII Pisa 2.27 300 P **Pn 01 56 40.2 +0.9**
NVLJ Novalja 2.28 31 *e*Pn **Pn 01 56 38.9 -0.5**
POPM Popiglio 2.30 309 P **Pn 01 56 39.8 +0.1**
POPM AML AML
comp=N,1850µm,1.4s
POPM AML AML
comp=E,1625µm,1.3s
BRJN Brijuni 2.31 9 *e*Pn **Pn 01 56 39.9 0.0**
BRJN Brijuni 2.31 9 P **Pn 01 56 40.3 +0.4**
ZCCA Zocca 2.38 317 Pn **Pn 01 56 38.7 -2.2**
RABC Rab 2.41 27 *e*Pn **Pn 01 56 40.5 -0.6**
CAPA Cerignola FG 2.42 126 AML AML
comp=E,8620µm,1.3s
CAPA AML AML
comp=N,9830µm,1.1s
CARD Cardoso 2.45 306 P **Pn 01 56 42.1 +0.3**
CARD AML AML
comp=N,1850µm,0.7s
CARD AML AML
comp=E,1530µm,1.0s
SMRN Sveta Marina 2.50 15 *e*Pn **Pn 01 56 41.4 -1.1**
VLC Villacollemand 2.58 307 Pn **Pn 01 56 42.6 -1.1**
VLC Villacollemand 2.58 307 AML AML
comp=E,1096µm,1.6s
VLC AML AML
comp=N,1820µm,1.0s
VLC AML AML
comp=E,1054µm,1.6s
VLC AML AML
comp=N,1780µm,1.0s
GSCL Gusciola 2.59 313 P **Pn 01 56 43.5 -0.2**
GSCL AML AML
comp=N,2395µm,1.1s
GSCL AML AML
comp=E,2990µm,1.3s
PALZ Palazzo San Ge 2.64 129 P **Pn 01 56 44.9 +0.5**
PALZ AML AML
comp=N,5995µm,1.5s
PALZ AML AML
comp=E,6735µm,1.3s
UDBI Udbina 2.65 43 *e*Pn **Pn 01 56 45.1 +0.6**
LSTV Lastovo 2.70 86 *e*Pn **Pn 01 56 44.6 -0.5**
ACER Acerenza 2.73 131 AML AML
comp=E,3030µm,1.2s
ACER AML AML
comp=N,2520µm,1.0s
ACER AML AML
comp=N,2640µm,1.0s
ACER AML AML
comp=E,3245µm,1.2s
CAVE Cavezzo 2.77 325 P **Pb 01 56 48.8 -2.4**
CAVE AML AML
comp=N,2895µm,0.9s
CAVE AML AML
comp=E,4020µm,1.3s
PLIT Plitvice 2.84 37 *e*Pn **Pn 01 56 48.5 +1.3**
RIY Rijeka 2.85 18 *e*Pn **Pn 01 56 47.2 -0.1**
PLMA Palmaria, Port 2.85 301 P **Pn 01 56 48.1 +0.8**
PLMA AML AML
comp=N,732µm,0.9s
PLMA AML AML
comp=E,642µm,0.7s
TEOL Teolo 2.96 338 Pn **Pn 01 56 48.5 -0.3**
SMPL Sampolo 2.98 261 P **Pn 01 56 49.2 +0.2**
SMPL S **Sn 01 57 24.9 +0.1**
SKDS Skadanscina 2.98 11 *e*Pn **Pn 01 56 48.4 -0.7**
SKDS Skadanscina 2.98 11 *e*Pn **Pn 01 56 48.7 -0.4**
SKDS *e*Sn **Sn 01 57 24.0 -0.9**
SKDS IAML 01 57 46.0
comp=Z,958nm,0.6s
PRMA PARMA 3.01 316 **Pn 01 56 50.1 +0.6**
A050A Klekovaca 3.03 51 *e*Pn **Pn 01 56 50.8 +0.9**
AMUR Altamura 3.05 123 P **Pn 01 56 50.4 +0.4**
AMUR AML AML
comp=E,1410µm,0.6s
AMUR AML AML
comp=N,1620µm,1.3s
OPPE Oppeano 3.07 332 P **Pn 01 56 51.7 +1.4**
TRI Trieste 3.11 7 Pn **Pn 01 56 49.8 -1.0**
TRI Trieste 3.11 7 P **Pn 01 56 49.8 -1.0**
PGF Pioggiola 3.13 270 *e*P **Pn 01 56 52.0 +0.8**
PGF *e*Sn **Sn 01 57 24.9 -3.8**
comp=N,364nm,0.9s
PGF Pioggiola 3.13 270 P **Pn 01 56 52.2 +0.9**
PGF Pioggiola 3.13 270 S **Sn 01 57 31.0 +2.2**
MSSA Maissana 3.19 303 Pn **Pn 01 56 52.6 +0.5**
MSSA Maissana 3.19 303 P **Pn 01 56 53.0 +1.0**
MSSA AML AML
comp=N,1240µm,0.7s
MSSA AML AML
comp=E,680µm,0.8s
SRKY Kupres RS 3.21 62 *e*Pn **Pn 01 56 53.1 +0.8**
BOJS Bojanci 3.23 26 *e*Pn **Pn 01 56 53.1 +0.6**
CEY Cerknica 3.23 15 *e*Pn **Pn 01 56 52.9 +0.3**
MATE Matera 3.26 126 ⇓P **Pn 01 56 53.8 +0.8**
CUC Castrocucco 3.27 143 Pn **Pn 01 56 53.2 +0.2**
STON Ston 3.30 84 *e*Pn **Pn 01 56 51.9 -1.5**
STON Ston 3.30 84 *e*Pn **Pn 01 56 51.9 -1.5**
STON Ston 3.30 84 *e*Pn **Pn 01 56 53.3 -0.1**
STON *e*Sn **Sn 01 57 32.6 -0.1**
MGRS Mrkonjic Grad 3.33 56 *e*Pn **Pn 01 56 54.8 +1.0**
A251A Rujevac 3.33 40 *e*Pn **Pn 01 56 54.2 +0.4**
LTRZ Laterza 3.36 126 P **Pn 01 56 55.1 +0.8**
SABO M.te Sabotino 3.37 4 Pn **Pn 01 56 53.7 -0.7**
SABO M.te Sabotino 3.37 4 P **Pn 01 56 53.8 -0.7**
SABO AML AML
comp=E,17900µm,0.6s
SABO AML AML
comp=E,4445µm,0.6s
SABO AML AML
comp=N,3520µm,0.8s
SABO AML AML

comp=N,14250µm,0.8s
AJAC Base Areonaval 3.39 260 P Pn 01 56 55.6 +0.9
AJAC S Sn 01 57 37.3 +2.3
AJAC Base Areonaval 3.39 260 P Pn 01 56 55.4 +0.8
AJAC AML AML
comp=N,486µm,0.6s
AJAC AML AML
comp=E,982µm,1.1s
OZLJ Ozalj 3.40 27 ePn Pn 01 56 54.7 -0.1
ROVR Rover Verones 3.40 333 P Pn 01 56 55.8 +0.8
ROVR AML AML
comp=E,1365µm,0.6s
ROVR AML AML
comp=N,548µm,1.4s
ROVR AML AML
comp=N,1398µm,0.8s
ROVR AML AML
comp=E,550µm,0.6s
NOCI Noci 3.40 121 P Pn 01 56 56.8 +1.9
baz=126
NOCI S Sb 01 57 41.2 -2.4
baz=126
NOCI Noci 3.40 121 P Pn 01 56 55.6 +0.7
NOCI AML AML
comp=E,1475µm,0.9s
NOCI AML AML
comp=N,1445µm,1.1s
CGRP Cima Grappa 3.42 343 P Pn 01 56 55.4 +0.2
CGRP AML AML
comp=N,3060µm,0.7s
CGRP AML AML
comp=N,3035µm,0.7s
CGRP AML AML
comp=E,2945µm,1.0s
CGRP AML AML
comp=E,2900µm,1.0s
PRIJ Prijedor 3.45 46 ePn Pn 01 56 56.7 +1.2
VARN Col Varnada, M 3.47 347 P Pn 01 56 56.1 +0.3
VARN AML AML
comp=N,3690µm,0.7s
VARN AML AML
comp=N,3680µm,0.7s
VARN AML AML
comp=E,3370µm,0.7s
VARN AML AML
comp=E,3385µm,0.6s
LJU Ljubljana 3.54 15 P Pn 01 56 57.3 +0.5
LJU AML AML
comp=E,14250µm,0.8s
LJU AML AML
comp=N,18250µm,0.7s
BLY Banja Luka 3.57 52 ePn Pn 01 56 56.8 -0.3
BLY Banja Luka 3.57 52 ePn Pn 01 56 58.7 +1.6
A051A Mrakovica 3.57 47 ePn Pn 01 56 54.0 -3.3
DOSS Dosso del Somm 3.58 336 P Pn 01 56 58.2 +0.8
DOSS AML AML
comp=E,1850µm,0.9s
DOSS AML AML
comp=N,1670µm,1.6s
DOSS AML AML
comp=E,1740µm,1.6s
DOSS AML AML
comp=N,1845µm,0.9s
SALO Salr 3.58 328 Pn Pn 01 56 58.2 +0.9
SALO Salr 3.58 328 P Pn 01 56 58.3 +1.0
SALO AML AML
comp=N,2375µm,0.6s
SALO AML AML
comp=E,2305µm,1.0s
SALO AML AML
comp=E,2350µm,1.0s
SALO AML AML
comp=N,2320µm,0.6s
CRES Cresnjev 3.58 26 ePn Pn 01 56 58.1 +0.8
MPRI Monte Prat 3.62 357 P Pn 01 56 57.7 -0.2
MPRI AML AML
comp=N,2390µm,0.6s
MPRI AML AML
comp=E,2675µm,1.0s
MPRI AML AML
comp=N,3165µm,0.6s
MPRI AML AML
comp=E,2050µm,1.0s
STAL STALIGIAL 3.66 354 Pn Pn 01 56 58.0 -0.4
STAL STALIGIAL 3.66 354 P Pn 01 56 58.3 -0.1
STAL AML AML
comp=E,1940µm,0.7s
STAL AML AML
comp=N,1355µm,1.4s
STAL AML AML
comp=N,1710µm,0.9s
STAL AML AML
comp=E,2380µm,0.8s
MAGA Magasa 3.67 330 P Pn 01 56 59.2 +0.6
MAGA AML AML
comp=N,2905µm,0.5s
MAGA AML AML
comp=E,4390µm,0.6s
LUSI Trento, Gardas 3.72 335 P Pn 01 56 59.8 +0.5
LUSI AML AML
comp=E,1375µm,1.2s
LUSI AML AML
comp=N,1640µm,0.7s
CIMO Cimolais 3.73 352 Pn 01 56 59.0 -0.4
CIMO Cimolais 3.73 352 P Pn 01 56 59.0 -0.4
CIMO AML AML
comp=N,556µm,0.9s
CIMO AML AML
comp=E,802µm,0.9s
CIMO AML AML
comp=N,550µm,0.9s
CIMO AML AML
comp=E,815µm,0.9s
ZAG Zagreb 3.77 31 ePn Pn 01 57 01.2 +1.4
PTJ Puntijarka 3.83 30 ePn Pn 01 57 02.0 +1.2
GAGG Gaggia 3.83 336 AML AML
comp=N,2495µm,0.9s
GAGG AML AML
comp=N,2195µm,1.0s
GAGG AML AML
comp=E,2175µm,1.0s
GAGG AML AML
comp=E,2575µm,0.9s
PRED Cave del Predi 3.83 3 Pn Pn 01 57 01.3 +0.5
CLUD Cludinico 3.84 356 Pn Pn 01 57 00.1 -0.9
ZONE Zone 3.86 326 AML AML
comp=E,945µm,0.4s
ZONE AML AML
comp=E,280µm,0.4s
ZONE AML AML
comp=N,1350µm,0.5s
ZONE AML AML
comp=N,353µm,0.5s
HCY Herceg Novi 3.89 91 ePn Pn 01 57 01.5 -0.1
HCY Herceg Novi 3.89 91 ⇓iPn Pn 01 57 01.8 +0.2
HCY iSn Sn 01 57 48.4 +1.0
BRY Bratogost 3.92 84 ePn Pn 01 57 02.5 +0.4
BRY Bratogost 3.92 84 ⇓iPn Pn 01 57 02.4 +0.4
BRY iSn Sn 01 57 49.1 +0.9
MOSL Moslavina 3.92 39 ePn Pn 01 57 01.0 -1.0
ZOU Zoufplan 3.94 357 AML AML
comp=N,1575µm,1.2s
ZOU AML AML
comp=E,1250µm,1.2s
ZOU AML AML
comp=E,1256µm,1.2s
ZOU AML AML
comp=N,1565µm,1.2s
MABI Malga Bissina 3.95 331 AML AML
comp=N,504µm,0.4s
MABI AML AML
comp=E,471µm,0.6s
OBKA Obir 4.00 13 ePn Pn 01 57 03.1 -0.1
OBKA Obir 4.00 13 ePn Pn 01 57 04.7 +1.6
comp=E,47nm,0.5s,SNR=9.9
OBKA eSn Sn 01 57 49.7 -0.5
comp=E,369nm,0.8s
OBKA Obir 4.00 13 ePn Pn 01 57 04.7 +1.6
MYKA Terra Mystica 4.02 4 ePn Pn 01 57 04.0 +0.6
comp=E,113nm,0.5s,SNR=22
MYKA eSn Sn 01 57 54.0 +3.3
comp=E,169nm,0.5s
KOSI Kohlern 4.06 342 AML AML
comp=E,2930µm,0.8s
KOSI AML AML
comp=N,1585µm,1.5s

LOBO Lobor 4.08 29 ePn Pn 01 57 04.8 +0.7
DOB Doboj 4.11 57 ePn Pn 01 57 03.7 -0.9
ABTA Abfaltersbach 4.16 353 ePn Pn 01 57 06.3 +0.9
comp=N,384nm,0.5s,SNR=55
ABTA eSn Sn 01 57 54.3 +0.2
comp=N,194nm,0.6s
CEME Cevo 4.20 89 ⇑iPn Pn 01 57 05.9 0.0
CEME iSn Sn 01 57 55.3 +0.3
BUM Brajici-Budva 4.20 92 ⇓iPn Pn 01 57 06.4 +0.5
BUM iSn Sn 01 57 55.4 +0.3
KALN Kalnik 4.20 32 ePn Pn 01 57 05.8 0.0
UPM Unac-Piva 4.21 80 ePn Pn 01 57 07.5 +1.4
UPM Unac-Piva 4.21 80 ⇓iPn Pn 01 57 06.6 +0.5
UPM iSn Sn 01 57 56.0 +0.6
BRES Bressanone 4.21 346 AML AML
comp=N,1188µm,1.3s
BRES AML AML
comp=E,1375µm,1.3s
NKME Niksic 4.22 86 ⇑iPn Pn 01 57 06.6 +0.5
NKME iSn Sn 01 57 56.5 +1.0
NKY Niksic 4.25 85 ⇑iPn Pn 01 57 07.0 +0.4
NKY iSn Sn 01 57 57.0 +0.7
SOKA Soboth 4.25 17 ePn Pn 01 57 08.5 +1.9
comp=E,2.7nm,0.2s,SNR=10
SOKA eSn Sn 01 57 56.7 +0.2
comp=E,89nm,0.7s
A252A Venje 4.36 48 ePn Pn 01 57 09.3 +1.4
BRMO Bormio 4.36 333 AML AML
comp=N,356µm,1.0s
BRMO AML AML
comp=E,412µm,0.7s
SBF Sospel 4.42 288 eP Pn 01 57 09.6 +0.7
SBF eSn Sn 01 57 55.9 -4.5
comp=E,182nm,0.6s
DRME Dracevica, Mon 4.43 94 ePn Pn 01 57 08.9 -0.1
DRME Dracevica, Mon 4.43 94 ⇓iPn Pn 01 57 09.5 +0.5
DRME iSn Sn 01 58 01.0 +0.4
MOSI Grossmontoni 4.43 335 AML AML
comp=N,2345µm,1.3s
MOSI AML AML
comp=E,2310µm,1.0s
ESCA l'Escarene 4.45 288 P Pn 01 57 09.9 +0.6
PDG Podgorica 4.45 90 ⇓P Pn 01 57 10.1 +0.8
PDG Podgorica 4.45 90 Pn Pn 01 57 08.9 -0.4
PDG Podgorica 4.45 90 ePn Pn 01 57 10.4 +1.1
PDG eSn Sn 01 58 02.2 +1.0
PDG Podgorica 4.45 90 AML AML
comp=E,812µm,0.9s
PDG AML AML
comp=N,1134µm,1.0s
PDG AML AML
comp=E,1032µm,0.8s
PDG AML AML
comp=N,1475µm,1.0s
TTG Podgorica 4.45 90 ⇓iPn Pn 01 57 09.7 +0.4
TTG iSn Sn 01 58 01.5 +0.3
KBA Koelnbreinsper 4.46 1 iPn Pn 01 57 10.8 +1.3
comp=N,94nm,0.5s,SNR=24
KBA eSn Sn 01 57 57.7 -3.9
comp=N,154nm,0.6s
KBA Koelnbreinsper 4.46 1 ePn Pn 01 57 10.5 +1.0
MUGIO Muggio 4.47 319 AML AML
comp=E,378µm,1.6s
MUGIO AML AML
comp=N,472µm,0.4s
TURF col de Turini 4.47 290 P Pn 01 57 10.8 +1.0
ULC Ulcinj 4.51 96 ⇑iPn Pn 01 57 10.8 +0.7
ULC iSn Sn 01 58 02.5 -0.1
FUORN Ofenpass-Fuorn 4.53 333 Pn Pn 01 57 10.7 +0.1
VARE Varese 4.56 317 AML AML
comp=N,642µm,1.3s
VARE AML AML
comp=E,794µm,1.3s
PLE Pljevlja 4.57 79 ⇑iPn Pn 01 57 12.0 +1.0
PLE iSn Sn 01 58 04.6 +0.3
RUDO Rudo 4.60 75 ePn Pn 01 57 11.4 +0.1
SPIF crte de Spivo 4.60 290 P Pn 01 57 12.9 +1.4
MVIF Mont Vial 4.62 288 P Pn 01 57 12.8 +1.0
KOME Kolasin 4.63 85 ⇓iPn Pn 01 57 12.8 +0.9
KOME iSn Sn 01 58 06.2 +0.4
BBLS Lazići 4.68 72 ePn Pn 01 57 13.3 +0.9
BBLS eSn Sn 01 58 07.2 +0.4
SCTE Santa Cesarea 4.69 121 Pn Pn 01 57 12.2 -0.4
SCTE Santa Cesarea 4.69 121 P Pn 01 57 14.8 +2.3
baz=124
SCTE S Sg 01 58 29.1 -3.1
baz=124
FETA Feichten 4.75 339 iPn Pn 01 57 15.6 +2.1
comp=E,74nm,0.7s,SNR=23
FETA eSn Sb 01 58 16.3 -6.0
comp=E,58nm,0.5s
CALF Calern 4.75 286 P Pn 01 57 14.4 +0.9
ISO Isola 4.77 291 P Pn 01 57 15.7 +2.0
WTTA Wattenberg 4.78 347 iPn Pn 01 57 16.1 +2.2
comp=E,71nm,0.5s,SNR=23
WTTA eSn Sn 01 58 11.1 +1.5
comp=E,126nm,0.5s
WTTA Wattenberg 4.78 347 ePn Pn 01 57 15.7 +1.8
DAVOX Davos/Dischmat 4.80 331 Pn Pn 01 57 16.6 +2.4
comp=E,19nm,0.3s,baz=153,slow=18,SNR=57
DAVOX Sn Sn 01 58 09.0 -1.0
comp=E,16nm,0.3s,baz=116,slow=21,SNR=2.8
CEL Celeste 4.81 154 Pn 01 57 14.7 +0.4
SQTA Sankt Quirin 4.82 343 Pn 01 57 16.4 +2.0
SQTA Sn 01 58 07.3 -3.2
SQTA Sankt Quirin 4.82 343 iPn Pn 01 57 16.4 +2.0
comp=E,163nm,0.6s,SNR=25
SQTA eSn Sn 01 58 07.3 -3.2
comp=E,155nm,0.8s
WATA Walderalm 4.86 347 Pn 01 57 17.3 +2.3
WATA Sn 01 58 13.2 +1.8
WATA Walderalm 4.86 347 iPn Pn 01 57 17.3 +2.3
comp=E,156nm,0.5s,SNR=32
WATA eSn Sn 01 58 13.2 +1.8
comp=E,225nm,0.6s
BLJ Bijeljina 4.88 62 ePn Pn 01 57 13.8 -1.3
ARSA Arzberg 4.91 19 iPn Pn 01 57 15.7 +0.1
comp=E,28nm,0.4s,SNR=14
ARSA eSn Sn 01 58 11.0 -1.4
comp=E,68nm,0.5s
ARSA Arzberg 4.91 19 ePn Pn 01 57 16.5 +0.9
ARSA eSg Sg 01 58 38.0 -1.0
IVA Berane 4.91 85 ⇑iPn Pn 01 57 16.4 +0.7
IVA iSn Sn 01 58 12.5 -0.1
KOVH Kovagotottos 4.92 44 P Pn 01 57 15.2 -0.5
MOTA Moosalm 4.96 343 Pn 01 57 18.2 +1.8
MOTA Sn 01 58 10.6 -3.3
MOTA Moosalm 4.96 343 P Pn 01 57 18.2 +1.8
MOTA 01 58 10.6
MOTA Moosalm 4.96 343 iPn Pn 01 57 18.2 +1.8
comp=E,68nm,0.6s,SNR=33
MOTA eSn Sn 01 58 10.6 -3.3
comp=E,102nm,0.8s
TEKS Tekeris 4.96 65 ePn Pn 01 57 17.8 +1.5
PVY Plav 4.96 88 ⇓iPn Pn 01 57 16.9 +0.5
PVY iSn Sn 01 58 14.0 0.0
LMR La Mourre 4.99 280 eP Pn 01 57 16.8 +0.2
LMR eSn Sn 01 58 09.2 -5.2
comp=E,25nm,0.6s
SJES Sjenica 4.99 80 ePn Pn 01 57 18.3 +1.5
SJES eSn Sn 01 58 12.5 -2.1
CLTB Caltabellotta 5.04 180 Pn Pn 01 57 17.1 -0.3
ZUGS Zugspitze, Sch 5.05 342 ePn Pn 01 57 20.1 +2.3
BCI Bajram Curri 5.06 91 P Pn 01 57 19.8 +2.2
baz=93
BCI S Sn 01 58 18.8 +2.6
baz=93
BIOA Bad Ischl, Aus 5.08 3 Pn 01 57 19.5 +1.6
BIOA Sn 01 58 18.1 +1.4
BIOA Bad Ischl, Aus 5.08 3 iPn Pn 01 57 19.5 +1.6
comp=E,50nm,0.4s,SNR=21
BIOA eSn Sn 01 58 18.1 +1.4
comp=E,190nm,0.6s
PART Garmisch-Parte 5.10 344 ePn Pn 01 57 20.3 +2.0
PART eSg Sg 01 58 44.5 -0.9
TIR Tirane 5.10 102 ⇓P Pn 01 57 18.5 +0.2
TIR Tirane 5.10 102 P Pn 01 57 18.6 +0.4
TIR S Sn 01 58 17.4 +0.1
TIR Tirane 5.10 102 Pn Pn 01 57 18.2 0.0
TIR Tirane 5.10 102 P Pn 01 57 18.2 0.0
TIR Tirane 5.10 102 ePn Pn 01 57 18.6 +0.4
TIR eSn Sn 01 58 17.7 +0.4
TIR Tirane 5.10 102 P Pn 01 57 18.8 +0.6
baz=105

TRIGF Trigance 5.12 285 P Pn 01 57 20.0 +1.5
RJOB Jochberg 5.12 357 ePn Pn 01 57 19.7 +1.1
MBDF Montbardon 5.14 296 eP Pn 01 57 20.0 +1.1
MBDF eSn Sn 01 58 13.1 -5.3
comp=E,98nm,0.8s
DIVS Divibare 5.14 71 Pn Pn 01 57 18.6 -0.3
DIVS Divibare 5.14 71 ePn Pn 01 57 18.5 -0.3
DIVS Divibare 5.14 71 ePn Pn 01 57 20.4 +1.5
IVAS Ivanjica 5.15 77 ePn Pn 01 57 19.3 +0.3
IVAS eSn Sn 01 58 17.4 -1.2
VLO Vlora 5.17 113 Pn 01 57 20.3 +1.2
VLO Vlora 5.17 113 P Pn 01 57 20.3 +1.2
VLO Vlora 5.17 113 P Pn 01 57 20.6 +1.5
baz=115
RETA Reutte 5.17 341 iPn Pn 01 57 21.3 +2.0
comp=E,25nm,0.3s,SNR=23
RETA eSn Sn 01 58 21.1 +2.1
comp=E,122nm,0.7s
FLAF Flassans-sur-I 5.17 281 P Pn 01 57 20.1 +0.9
OGAG Argentiere 5.20 293 P Pn 01 57 24.0 +4.3
PLONS Plons/SG 5.21 330 ePn Pn 01 57 22.2 +2.4
VAE Valguarnera 5.22 170 Pn Pn 01 57 23.8 +3.9
comp=E,23nm,1.0s,baz=306,slow=21,SNR=3.0
OBER Oberstdorf 5.22 337 ePn Pn 01 57 22.7 +2.8
DAVA Damuels 5.24 334 iPn Pn 01 57 22.6 +2.3
comp=E,54nm,0.5s,SNR=20
DAVA eSn Sn 01 58 23.3 +2.5
comp=E,86nm,0.6s
DAVA Damuels 5.24 334 ePn Pn 01 57 22.5 +2.3
MOA Molln 5.28 8 ePn Pn 01 57 21.9 +1.2
MOA eSn Sn 01 58 22.5 +0.9
MOA Molln 5.28 8 iPn Pn 01 57 21.7 +1.1
comp=E,58nm,0.6s,SNR=15
MOA eSn Sn 01 58 22.7 +1.1
comp=E,107nm,0.4s
MOA Molln 5.28 8 ePn Pn 01 57 22.5 +1.8
EMBD Embd, Matterta 5.28 315 P Pn 01 57 22.5 +1.7
MORH Mrgy, Hungar 5.28 45 ⇓P Pn 01 57 22.4 +1.8
MORH Mrgy, Hungar 5.28 45 ePn Pn 01 57 20.0 -0.7
MORH eSn Sn 01 58 20.7 -0.9
MORH Mrgy, Hungar 5.28 45 P Pn 01 57 22.9 +2.2
BNI Bardonecchia 5.33 299 Pn Pn 01 57 20.2 -1.3
BNI Bardonecchia 5.33 299 P Pn 01 57 20.2 -1.3
FRGS Fruska Gora 5.38 60 ePn Pn 01 57 20.3 -1.8
FRGS Fruska Gora 5.38 60 ePn Pn 01 57 21.7 -0.4
TIH Tihany 5.41 36 P Pn 01 57 23.5 +1.0
BLAF les Blancs 5.41 287 P Pn 01 57 24.4 +1.9
DIX Grande Dixence 5.42 312 P Pn 01 57 24.6 +1.7
PHP Peshkopia 5.44 97 P Pn 01 57 24.2 +1.3
PHP S Sn 01 58 26.2 +0.6
PHP Peshkopia 5.44 97 P Pn 01 57 24.4 +1.5
baz=100
PHP S Sn 01 58 28.9 +3.3
baz=100
TRUS Trudelj 5.46 71 ePn Pn 01 57 23.1 -0.1
TRUS eSn Sn 01 58 23.6 -2.5
MPLH Magyarpolny 5.48 32 P Pn 01 57 24.0 +0.6
LPG La Plagne 5.49 304 eP Pn 01 57 25.6 +1.8
LPG eSn Sn 01 58 21.4 -5.7
comp=E,78nm,0.7s
LPL La Plagne 5.51 304 eP Pn 01 57 25.6 +1.6
LPL eSn Sn 01 58 21.8 -5.7
comp=E,122nm,0.7s
RONA Rosalia, Austr 5.52 22 Pn 01 57 24.2 +0.2
RONA Sn 01 58 24.9 -2.7
RONA Rosalia, Austr 5.52 22 iPn Pn 01 57 24.2 +0.2
comp=E,40nm,0.6s,SNR=25
RONA eSn Sn 01 58 24.9 -2.7
comp=E,14nm,0.5s
UBR Ueberruh 5.52 337 ePn Pn 01 57 25.6 +1.5
ARTF Artigues 5.53 283 P Pn 01 57 25.3 +1.2
SOP Sopron 5.58 24 P Pn 01 57 25.0 +0.3
EGYH Egyhazaskeszo 5.61 30 P Pn 01 57 28.3 +3.2
GRUS Gruza 5.61 74 ePn Pn 01 57 25.4 +0.2
GRUS eSn Sn 01 58 28.1 -1.6
MLYF Mely 5.62 287 P Pn 01 57 27.8 +2.4
CONA Conrad Observa 5.62 18 iPn Pn 01 57 25.0 -0.4
comp=E,69nm,0.5s,SNR=17
CONA eSn Sn 01 58 28.2 -2.0
comp=E,79nm,0.5s
RSL Roselend 5.66 305 P Pn 01 57 28.4 +2.4
SENIN Lac Senin/Sane 5.66 313 Pn Pn 01 57 25.1 -1.0
BSTF la Bastide-des 5.68 285 P Pn 01 57 27.5 +1.3
WILA Wila 5.69 329 ePn Pn 01 57 27.5 +1.2
FUR Furstenfeldbru 5.71 347 ePn Pn 01 57 28.2 +1.5
KEK Kerkira 5.74 118 P Pn 01 57 29.0 +2.0
KEK S Sn 01 58 33.2 +0.2
KEK Kerkira 5.74 118 Pn Pn 01 57 27.1 +0.1
SMRF Simiane la Rot 5.75 286 eP Pn 01 57 29.2 +2.0
SMRF eSn Sn 01 58 27.6 -5.7
comp=E,89nm,0.9s
GDM Grand'Maison 5.75 299 P Pn 01 57 31.4 +4.1
ZUR Degenried 5.78 327 P Pn 01 57 28.6 +1.1
OGSI Sixt 5.78 309 P Pn 01 57 29.3 +1.7
SRN Sarande 5.79 116 P Pn 01 57 30.5 +2.8
baz=119
ORIF Oris-en-Rattie 5.80 296 eP Pn 01 57 30.4 +2.5
ORIF eSn Sn 01 58 28.9 -5.7
comp=E,89nm,0.9s
ORIF Oris-en-Rattie 5.80 296 P Pn 01 57 31.3 +3.4
RUSF Rustrel 5.81 286 P Pn 01 57 29.7 +1.7
SELS Selova 5.82 81 ePn Pn 01 57 28.0 -0.1
SELS eSn Sn 01 58 33.4 -1.6
AIGLE Aigle 5.83 312 P Pn 01 57 29.9 +1.5
ARBF Arbois 5.86 281 P Pn 01 57 30.0 +1.4
CSKK Cskako 5.93 35 P Pn 01 57 33.6 +4.1
KBN Korca 6.00 107 P Pn 01 57 31.5 +0.8
KBN S Sn 01 58 39.3 -0.2
KBN Korca 6.00 107 Pn Pn 01 57 30.6 -0.1
KBN Korca 6.00 107 P Pn 01 57 30.6 -0.1
KBN Korca 6.00 107 P Pn 01 57 32.3 +1.6
baz=109
GRN Grenoble 6.01 298 P Pn 01 57 34.1 +3.3
LSK Leskovik 6.06 112 P Pn 01 57 31.8 +0.3
LSK S Sn 01 58 41.3 +0.2
LSK Leskovik 6.06 112 P Pn 01 57 32.8 +1.2
baz=114
SAUF chteau de Sau 6.08 285 P Pn 01 57 33.2 +1.6
SULZ Cheisacher 6.10 325 P Pn 01 57 32.7 +0.8
SULZ Cheisacher 6.10 325 ePn Pn 01 57 32.4 +0.4
TORNY Torny/Romont 6.10 315 P Pn 01 57 33.1 +1.1
BALST Balsthal 6.13 322 P Pn 01 57 33.1 +0.6
BALST Balsthal 6.13 322 ePn Pn 01 57 33.3 +0.8
SLE Schleitheim 6.14 329 P Pn 01 57 32.9 +0.4
SLE Schleitheim 6.14 329 ePn Pn 01 57 32.8 +0.4
OGSM Saint Maurice 6.19 301 P Pn 01 57 35.3 +2.1
ZST Bratislava 6.20 25 eP Pn 01 57 33.4 +0.1
ZST e 01 58 42.9
ZST Bratislava 6.20 25 ePN Pn 01 57 33.4 +0.1
ZST eSN Sn 01 58 42.9 -1.4
GEC2 GERESS Array S 6.23 3 Pn Pn 01 57 33.0 -0.8
GEC2 GERESS Array S 6.23 3 ePn Pn 01 57 33.4 -0.4
GERES GERESS Array B 6.23 3 Pn Pn 01 57 33.4 -0.4
comp=E,3.5nm,0.3s,baz=169,slow=12,SNR=30
GERES Sn Sn 01 58 44.5 -0.7
comp=E,13nm,0.3s,baz=170,slow=23,SNR=8.0
GERES Lg Lg 01 59 28.4
comp=E,2.7nm,0.3s,baz=177,slow=28,SNR=4.1
comp=E,20nm,0.6s
GERES GERESS Array B 6.23 3 Pn Pn 01 57 32.8 -1.0
CKRC Cesky Krumlov 6.24 7 ePN Pn 01 57 33.2 -0.7
CKRC eSN Sn 01 58 42.9 -2.5
BOVS Bovan 6.28 78 ⇓P Pn 01 57 34.1 +0.5
BOVS Bovan 6.28 78 ePn Pn 01 57 34.1 -0.3
BOVS eSn Sn 01 58 45.1 -1.2
BARS Barje 6.32 85 ePn Pn 01 57 35.3 +0.3
BARS eSn Sn 01 58 45.0 -2.4
GIMEL St. Georges / 6.33 311 P Pn 01 57 36.1 +0.9
BUD Budapest 6.36 38 P Pn 01 57 35.4 0.0
NORI Noerdlinger Ri 6.37 344 ePn Pn 01 57 35.4 -0.2
BOURR Bourrignon 6.39 320 P Pn 01 57 36.5 +0.5
MODS Modra-Piesok 6.41 25 eP Pn 01 57 35.4 -0.9
MODS e 01 58 47.8
MODS Modra-Piesok 6.41 25 ePN Pn 01 57 35.4 -0.9
MODS eSN Sn 01 58 47.8 -1.8
FELD Feldberg im Sc 6.42 327 P Pn 01 57 36.4 -0.1
BRANT Les Verrieres 6.46 314 P Pn 01 57 37.9 +0.9
JAN Janina 6.47 115 P Pn 01 57 37.1 +0.1
OG35 Corcelles 6.47 305 P Pn 01 57 37.8 +0.7
CABF La Chapelle 6.47 310 ePn Pn 01 57 37.6 +0.5
CABF eSn Sn 01 58 45.3 -5.9
MDVR Moldovita 6.51 68 ⇓P Pn 01 57 37.8 +0.1

KHC	**Kasperske Hory**	6.51	2	Pn		**Pn**	01 57 36.1	-1.5
KHC	**Kasperske Hory**	6.51	2	*e*P		**Pn**	01 57 36.5	-1.2
KHC				*e*			01 58 49.4	
KHC	**Kasperske Hory**	6.51	2	*e*PN		**Pn**	01 57 36.5	-1.2
KHC				*e*SN		**Sn**	01 58 49.4	-2.7
KIZ	**Kirchzarten**	6.52	327	P		**Pn**	01 57 37.7	0.0
WET	**Wettzell**	6.53	358	*e*Pn		**Pn**	01 57 37.2	-0.6
PRVS	**Prvonek**	6.53	88	*e*Pn		**Pn**	01 57 38.3	+0.4
SMOL	**Smolenice**	6.59	25	*e*P		**Pn**	01 57 38.1	-0.5
SMOL				*e*			01 58 51.9	
VIVF	**Saint-Julien-l**	6.59	293	*e*P		**Pn**	01 57 40.4	+1.7
VIVF				*e*Sn		**Sn**	01 58 47.8	-6.2
	comp=E,6.1nm,0.5s							
RIVEL	**MONT RIVEL**	6.65	311	P		**Pn**	01 57 40.1	+0.6
BFO	**Black Forest**	6.67	331	Pn		**Pn**	01 57 38.7	-1.0
BFO	**Black Forest**	6.67	331	P		**Pn**	01 57 38.7	-1.0
BFO	**Black Forest**	6.67	331	*e*Pn		**Pn**	01 57 39.8	+0.1
ZAGS	**Zajecar**	6.68	77	*e*Pn		**Pn**	01 57 39.6	-0.3
ZAGS				*e*Sn		**Sn**	01 58 53.7	-2.4
VOGT	**Vogtsburg - To**	6.72	326	P		**Pn**	01 57 41.1	+0.6
BZS	**Buzias**	6.73	61	⇓P		**Pn**	01 57 40.9	+0.3
BZS	**Buzias**	6.73	61	*e*Pn		**Pn**	01 57 40.8	+0.2
BZS				*e*Sn		**Sn**	01 58 55.1	-2.3
STU	**Stuttgart**	6.77	337	Pn		**Pn**	01 57 40.4	-0.7
STU	**Stuttgart**	6.77	337	P		**Pn**	01 57 40.4	-0.7
STU	**Stuttgart**	6.77	337	*e*Pn		**Pn**	01 57 42.3	+1.2
TSLK	**Tsoukalades, L**	6.79	121	P		**Pn**	01 57 42.9	+1.5
KRUC	**Moravsky**	6.81	18	*e*PN		**Pn**	01 57 41.4	-0.2
KRUC				*e*SN		**Sn**	01 58 56.5	-2.7
SSB	**Saint Sauveur**	6.81	296	Pn		**Pn**	01 57 42.0	+0.2
SSB	**Saint Sauveur**	6.81	296	P		**Pn**	01 57 42.0	+0.2
SSB	**Saint Sauveur**	6.81	296	P		**Pn**	01 57 43.2	+1.5
BOSS	**Bosilegrad**	6.83	88	*e*Pn		**Pn**	01 57 41.1	-0.9
BOSS				*e*Sn		**Sn**	01 58 56.5	-3.3
TREC	**Trest**	6.86	12	*e*P		**Pn**	01 57 41.8	-0.5
TREC				*e*			01 58 56.9	
TREC	**Trest**	6.86	12	*e*PN		**Pn**	01 57 41.8	-0.5
TREC				*e*SN		**Sn**	01 58 56.9	-3.5
OPP	**Oppenau**	6.86	331	P		**Pn**	01 57 42.5	+0.2
HINF	**Hinteralfeld**	6.88	321	*e*Pn		**Pn**	01 57 42.8	+0.2
HINF				*e*Sn		**Sn**	01 58 54.5	-6.5
	comp=E,75nm,0.5s							
NYDR	**Nydri-Lefkada**	6.89	122	P		**Pn**	01 57 44.0	+1.3
ZAPS	**Zavoj**	6.93	81	*e*Pn		**Pn**	01 57 43.9	+0.6
JAVC	**Velka Javorina**	6.97	25	*e*PN		**Pn**	01 57 42.9	-1.0
BLKB	**Belogradchik**	6.98	79	⇑P		**Pn**	01 57 44.5	+0.5
LASF	**Ste Croix**	6.99	285	*e*Pn		**Pn**	01 57 44.1	-0.1
LASF				*e*Sn		**Sn**	01 58 57.1	-6.7
	comp=E,27nm,0.9s							
DJES	**Djerdap**	7.04	70	⇓P		**Pn**	01 57 45.2	+0.3
ECH	**Echery**	7.04	325	Pn		**Pn**	01 57 43.6	-1.3
ECH	**Echery**	7.04	325	P		**Pn**	01 57 43.6	-1.3
ECH	**Echery**	7.04	325	P		**Pn**	01 57 44.7	-0.1
ECH	**Echery**	7.04	325	P		**Pn**	01 57 44.8	-0.1
SIRR	**Siria**	7.04	56	⇑P		**Pn**	01 57 45.9	+1.0
VYHS	**Vyhne**	7.07	32	*e*P		**Pn**	01 57 45.5	+0.3
VYHS				*e*			01 59 02.6	
VYHS	**Vyhne**	7.07	32	*e*PN		**Pn**	01 57 45.5	+0.3
VYHS				*e*SN		**Sn**	01 59 02.6	-3.0
PSZ	**Piszkesteto**	7.08	39	⇑P		**Pn**	01 57 47.4	+1.9
PSZ	**Piszkesteto**	7.08	39	Pn		**Pn**	01 57 45.7	+0.3
PSZ	**Piszkesteto**	7.08	39	P		**Pn**	01 57 45.7	+0.3
PSZ	**Piszkesteto**	7.08	39	P		**Pn**	01 57 47.1	+1.7
VRAC	**Vranov**	7.08	18	⇓P		**Pn**	01 57 46.6	+1.2
VRAC	**Vranov**	7.08	18	Pn		**Pn**	01 57 45.1	-0.4
	comp=E,3.1nm,0.3s,baz=206,slow=13,SNR=23							
VRAC				Sn		**Sn**	01 59 03.7	-2.3
	comp=E,2.4nm,0.3s,baz=316,slow=17,SNR=3.7							
VRAC				Lg		Lg	01 59 46.6	
	comp=E,0.5nm,0.3s,baz=18,slow=18,SNR=1.1							
	comp=E,16nm,0.6s							
VRAC	**Vranov**	7.08	18	*e*PN		**Pn**	01 57 45.0	-0.4
VRAC				*e*SN		**Sn**	01 59 03.7	-2.3
WLS	**Welschbruch**	7.11	327	P		**Pn**	01 57 46.1	+0.2
CDF	**Champ du Feu**	7.14	326	*e*Pn		**Pn**	01 57 46.3	0.0
CDF				*e*Sn		**Sn**	01 59 01.2	-6.4
	comp=E,219nm,1.0s							
VLS	**Valsamata**	7.16	126	P		**Pn**	01 57 48.4	+2.0
GRA1	**Grafenberg Arr**	7.21	350	Pn		**Pn**	01 57 45.2	-1.9
GRF	**Grafenberg Arr**	7.21	350	P		**Pn**	01 57 45.2	-1.9
GRF	**Grafenberg Arr**	7.21	350	*e*Pn		**Pn**	01 57 47.2	0.0
GRFO	**Grafenberg**	7.21	350	Pn		**Pn**	01 57 46.0	-1.1
GRFO	**Grafenberg**	7.21	350	P		**Pn**	01 57 46.0	-1.1
HAU	**Haudompre**	7.25	320	*e*Pn		**Pn**	01 57 48.0	+0.3
HAU				*e*Sn		**Sn**	01 59 03.4	-6.7
	comp=E,199nm,0.6s							
PUNG	**Punghina**	7.25	74	⇑P		**Pn**	01 57 48.6	+0.9
MAHO	**Mahon**	7.29	251	Pn		**Pn**	01 57 47.8	-0.3
SUBF	**Surbourg**	7.33	331	P		**Pn**	01 57 49.7	+0.9
VTS	**Vitosha**	7.38	87	⇑P		**Pn**	01 57 50.3	+0.7
VTS	**Vitosha**	7.38	87	Pn		**Pn**	01 57 49.2	-0.4
VTS	**Vitosha**	7.38	87	P		**Pn**	01 57 49.2	-0.4
VTS	**Vitosha**	7.38	87	*e*Pn		**Pn**	01 57 50.1	+0.5
VTS				*e*Sn		**Sn**	01 59 11.8	-1.7
LIT	**Litokhoron**	7.40	107			**Pn**	01 57 49.6	-0.3
LIT	**Litokhoron**	7.40	107	P		**Pn**	01 57 49.6	-0.3
GZR	**Gura Zlata**	7.42	65	⇑P		**Pn**	01 57 49.8	-0.3
PRU	**Pruhonice**	7.42	7	*e*P		**Pn**	01 57 49.8	-0.3
PRU				*e*			01 59 10.2	
PRU	**Pruhonice**	7.42	7	*e*PN		**Pn**	01 57 49.8	-0.3
PRU				*e*SN		**Sn**	01 59 10.2	-4.2
EVR	**Evrytania**	7.49	117	P		**Pn**	01 57 53.1	+2.1
EVR				S		**Sn**	01 59 14.2	-1.9
KEST	**Kesra**	7.51	205	Pn		**Pn**	01 57 54.7	+3.3
	comp=E,7.1nm,0.3s,baz=325,slow=5.4,SNR=35							
KEST				Sn		**Sn**	01 59 17.4	+0.7
	baz=4.5,slow=18							
	comp=E,46nm,0.5s							
KEST	**Kesra**	7.51	205	Pn		**Pn**	01 57 53.7	+2.3
SRE	**Strehaia**	7.51	71	⇓P		**Pn**	01 57 52.5	+1.2
DEV	**Deva**	7.67	62	⇑P		**Pn**	01 57 55.0	+1.6
ANX	**Ano Chora**	7.74	118	P		**Pn**	01 57 57.8	+3.3
ANX				S		**Sn**	01 59 24.9	+2.7
MORC	**Moravsky Berou**	7.75	21	⇓P		**Pn**	01 57 55.0	+0.3
MORC	**Moravsky Berou**	7.75	21	Pn		**Pn**	01 57 54.5	-0.2
MORC	**Moravsky Berou**	7.75	21	P		**Pn**	01 57 54.5	-0.2
MORC	**Moravsky Berou**	7.75	21	*e*PN		**Pn**	01 57 55.3	+0.6
SMF	**Signal de Mont**	7.81	304	*e*Pn		**Pn**	01 57 55.1	-0.4
SMF				*e*Sn		**Sn**	01 59 17.3	-6.7
	comp=E,77nm,0.7s							
EFP	**Efpalio**	7.82	120	P		**Pn**	01 57 57.6	+2.1
EFP				S		**Sn**	01 59 27.3	+3.1
LANS	**Liptovska Anna**	7.84	31	*e*P		**Pn**	01 57 59.2	+3.3
LANS				*e*			01 59 17.3	
LANS	**Liptovska Anna**	7.84	31	*e*PN		**Pn**	01 57 59.2	+3.3
LANS				*e*SN		**Sn**	01 59 17.3	-7.4
LANS				*e*LG		Lg	01 59 46.8	
KRLC	**Kraliky**	7.85	17	*e*P		**Pn**	01 57 56.1	+0.2
KRLC				*e*			01 59 20.3	
KRLC	**Kraliky**	7.85	17	*e*PN		**Pn**	01 57 56.1	+0.2
KRLC				*e*SN		**Sn**	01 59 20.3	-4.6
SRS	**Serrai**	7.88	98	*e*Pn		**Pn**	01 57 56.4	+0.1
SRS				*e*Sn		**Sn**	01 59 24.1	-1.4
FILF	**Fillols**	7.88	273	P		**Pn**	01 57 57.7	+1.3
PAGF	**Fort de Pagny**	7.93	321	*e*Pn		**Pn**	01 57 57.5	+0.5
PAGF				*e*Sn		**Sn**	01 59 19.7	-7.2
	comp=E,133nm,0.7s							
DRGR		7.93	55	⇓P		**Pn**	01 57 58.2	+1.0
DRGR		7.93	55	*e*Pn		**Pn**	01 57 57.4	+0.3
PVCC	**Panska Ves**	7.96	6	*e*P		**Pn**	01 57 57.3	-0.2
PVCC	**Panska Ves**	7.96	6	*e*PN		**Pn**	01 57 57.3	-0.2
OKC	**Ostrava-Krasne**	7.98	24	*e*P		**Pn**	01 57 56.9	-0.8
OKC				*e*			01 59 24.2	
OKC	**Ostrava-Krasne**	7.98	24	*e*PN		**Pn**	01 57 56.9	-0.8
OKC				*e*SN		**Sn**	01 59 24.2	-3.8
DPC	**Dobruska-Polom**	8.02	14	*e*P		**Pn**	01 57 58.2	-0.1
DPC	**Dobruska-Polom**	8.02	14	*e*PN		**Pn**	01 57 58.2	-0.1
SFTF	**Sexfontaines**	8.02	317	*e*Pn		**Pn**	01 57 58.2	-0.1
SFTF				*e*Sn		**Sn**	01 59 21.8	-7.3
	comp=E,35nm,0.6s							
LOT	**Lotru**	8.10	66	⇓P		**Pn**	01 58 00.9	+1.5
MOX	**Moxa**	8.10	353	*e*Pn		**Pn**	01 57 59.1	-0.3
LOR	**Lormes**	8.11	308	*e*Pn		**Pn**	01 57 59.1	-0.4
LOR				*e*Sn		**Sn**	01 59 24.1	-7.2
	comp=E,45nm,0.6s							
LOR	**Lormes**	8.11	308	P		**Pn**	01 57 59.2	-0.3
MTLF	**Montolieu**	8.11	279	*e*P		**Pn**	01 58 02.1	+2.6
MTLF				*e*Sn		**Sn**	01 59 23.9	-7.4
	comp=E,15nm,0.7s							
UPC	**Upice**	8.12	13	*e*P		**Pn**	01 57 59.7	+0.1
UPC	**Upice**	8.12	13	*e*PN		**Pn**	01 57 59.7	+0.1
AVF	**Avril sur Loir**	8.18	304	*e*Pn		**Pn**	01 58 00.4	0.0
AVF				*e*Sn		**Sn**	01 59 25.5	-7.4
	comp=E,49nm,1.0s							
FNEB	**Nbias**	8.19	276	P		**Pn**	01 58 01.8	+1.1
OSTC	**Ostas**	8.20	13	*e*PN		**Pn**	01 58 00.7	0.0
SSF	**Saint Saulge**	8.21	306	*e*Pn		**Pn**	01 58 00.4	-0.5
SSF				*e*Sn		**Sn**	01 59 26.3	-7.5
	comp=E,31nm,0.6s							
MEZF	**Maizieres J'vi**	8.21	319	*e*Pn		**Pn**	01 58 01.7	+0.8
MEZF				*e*Sn		**Sn**	01 59 26.8	-7.0
	comp=E,89nm,0.8s							
MESR	**Meseseni**	8.25	53	⇓P		**Pn**	01 58 02.6	+1.2
SAVF	**Savonnieres en**	8.26	319	*e*P		**Pn**	01 58 02.6	+1.1
SAVF				*e*Sn		**Sn**	01 59 27.7	-7.2
	comp=E,24nm,0.5s							
ABH	**Alteburg**	8.26	333	P		**Pn**	01 58 02.1	+0.5
BRG	**Berggiesshubel**	8.27	3	*e*P		**Pn**	01 58 01.4	-0.3
BRG				Amp			01 58 04.0	
	comp=Z,7.1nm,0.6s							
BRG				*ex*	x		01 59 33.5	
BRG				Amp			02 00 48.0	
	comp=Z,84nm,1.3s							
BRG	**Berggiesshubel**	8.27	3	*e*P		**Pn**	01 58 01.3	-0.3
BRG				*e*			01 59 33.4	
BRG				pmax	pmax			
	comp=Z,7.0nm,0.6s							
BRG				pmax	pmax			
	comp=Z,84nm,1.3s							
TNS	**Taunus Mts**	8.29	338	*e*Pn		**Pn**	01 58 03.4	+1.4
BGF	**Bois d'Agland**	8.39	302	*e*Pn		**Pn**	01 58 03.0	-0.4
BGF				*e*Sn		**Sn**	01 59 31.0	-7.2
	comp=Z,33nm,0.6s							
CAF	**Calviac**	8.41	290	*e*P		**Pn**	01 58 05.1	+1.5
CAF				*e*Sn		**Sn**	01 59 30.8	-7.8
	comp=Z,4.0nm,0.6s							
CBBR	**Cluj-Babes-Bol**	8.44	57	⇑P		**Pn**	01 58 05.2	+1.3
CJR	**Cluj-Napoca**	8.44	57	⇑P		**Pn**	01 58 03.8	-0.3
KSP	**Ksiaz**	8.49	13	*e*P		**Pn**	01 58 05.5	+0.9
KSP				*e*S		**Sn**	01 59 44.0	+3.5
PLD	**Plovdiv**	8.51	90	*e*Pn		**Pn**	01 58 05.2	+0.2
PLD				*e*Sn		**Sn**	01 59 39.1	-2.0
WLF	**Walferdange**	8.59	328	Pn		**Pn**	01 58 06.7	+0.7
WLF	**Walferdange**	8.59	328	P		**Pn**	01 58 06.7	+0.7
WLF	**Walferdange**	8.59	328	P		**Pn**	01 58 07.7	+1.7
WLF	**Walferdange**	8.59	328	*d*P		**Pn**	01 58 07.2	+1.2
WLF	**Walferdange**	8.59	328	*e*Pn		**Pn**	01 58 07.2	+1.2
ITM	**Ithomi**	8.61	126	Pn		**Pn**	01 58 06.9	+0.5
PAND	**Andorre**	8.63	273	P		**Pn**	01 58 07.6	+0.7
ARR	**Arges**	8.66	68	⇓P		**Pn**	01 58 08.9	+1.7
CLL	**Collm**	8.69	359	Pn		**Pn**	01 58 06.3	-1.1
CLL	**Collm**	8.69	359	*e*P		**Pn**	01 58 08.0	+0.6
CLL	**Collm**	8.69	359	*e*Pn		**Pn**	01 58 08.0	+0.6
CLL				*ex*	x		01 58 19.0	
CLL				*e*Pg		**Pg**	01 58 44.0	-3.9
CLL				*ex*	x		01 59 19.0	
CLL				*e*Sn	Sn		01 59 31.0	-14
CLL				*ex*	x		01 59 50.0	
CLL				*e*Sg		**Sg**	02 00 46.0	+5.6
	comp=Z,97nm,1.2s							
TCF	**Toulx Ste Croi**	8.70	299	*e*Pn		**Pn**	01 58 07.9	+0.3
TCF				*e*Sn		**Sn**	01 59 38.7	-7.0
	comp=Z,55nm,1.2s							
UZH	**Uzhgorod**	8.74	43	*e*P		Pn	01 58 13.5	+5.4
HYF	**Humbligny**	8.83	305	*e*P		**Pn**	01 58 12.2	+2.8
HYF				*e*Sn		**Sn**	01 59 41.1	-7.9
OJC	**Ojcow**	8.85	29	Pn		**Pn**	01 58 10.6	+1.0
OJC	**Ojcow**	8.85	29	P		**Pn**	01 58 10.6	+1.0
RJF	**Les Rejaudoux**	8.87	292	*e*P		**Pn**	01 58 12.4	+2.5
RJF				*e*Sn		**Sn**	01 59 42.3	-7.6
	comp=Z,4.2nm,0.7s							
KOLS	**Kolonicke sedl**	8.92	42	*e*P		**Pn**	01 58 10.5	-0.2
KOLS	**Kolonicke sedl**	8.92	42	*e*PN		**Pn**	01 58 10.5	-0.2
KOLS				*e*LG		Lg	01 59 50.6	
MONQ	**Montcuq**	8.93	285	P		**Pn**	01 58 11.9	+1.2
VOIR		8.96	68	⇓P		**Pn**	01 58 13.7	+2.4
ARCR	**ARCALIA**	9.07	57	⇑P		**Pn**	01 58 14.6	+2.0
BHOU	**Houvegnez**	9.20	330	*d*P		**Pn**	01 58 15.6	+1.1
RDO	**Rodhopi**	9.29	95			**Pn**	01 58 15.8	0.0
LFF	**La Frestale**	9.33	289	*e*P		**Pn**	01 58 19.2	+3.0
LFF				*e*Sn		**Sn**	01 59 53.1	-8.2
	comp=Z,5.4nm,0.6s							
DOPR	**Dopca**	9.34	65	⇓P		**Pn**	01 58 17.9	+1.6
BTNL	**Ternell**	9.34	331	*d*P		**Pn**	01 58 17.9	+1.5
RCHB	**Rochefort**	9.34	327	P		**Pn**	01 58 18.1	+1.7
RCHB	**Rochefort**	9.34	327	*d*P		**Pn**	01 58 17.3	+0.9
MEM	**Membach**	9.41	331	*d*P		**Pn**	01 58 18.5	+1.2
CLF	**Chambon-Foret**	9.43	309	Pn		**Pn**	01 58 17.4	-0.2
GIVF	**Givet**	9.47	325	*e*P		**Pn**	01 58 20.7	+2.6
GIVF				*e*Sn		**Sn**	01 59 56.3	-8.3
	comp=Z,26nm,0.7s							
EPF	**Esparros**	9.49	277	*e*P		**Pn**	01 58 21.3	+2.9
EPF				*e*Sn		**Sn**	01 59 56.9	-8.3
	comp=Z,13nm,1.1s							
BCLA	**Clavier**	9.52	328	*d*P		**Pn**	01 58 20.3	+1.5
BCLA				*d*S		**Sn**	02 00 01.9	-3.9
BSTI	**Sart Tilman**	9.55	329	*d*P		**Pn**	01 58 21.1	+1.9
BSTI				*d*S		**Sn**	02 00 03.9	-2.7
DOU	**Dourbes**	9.56	324	P		**Pn**	01 58 19.9	+0.5
DOU	**Dourbes**	9.56	324	*d*P		**Pn**	01 58 20.5	+1.1
DOU				*d*S		**Sn**	02 00 06.5	-0.4
MLR	**Muntele Rosu**	9.59	68	⇑P		**Pn**	01 58 22.1	+2.2
MLR	**Muntele Rosu**	9.59	68	Pn		**Pn**	01 58 22.2	+2.3
	comp=Z,0.9nm,0.3s,baz=130,slow=19,SNR=11							
	comp=Z,9.1nm,0.7s							
MLR	**Muntele Rosu**	9.59	68	Pn		**Pn**	01 58 21.3	+1.4
OZUR		9.64	65	⇑P		**Pn**	01 58 21.0	+0.5
BMRD	**Maredsous**	9.65	326	*d*P		**Pn**	01 58 21.6	+1.1
BMRD				*d*S		**Sn**	02 00 08.7	-0.2
ALN	**Alexandroupoli**	9.73	96	Pn		**Pn**	01 58 22.0	+0.3
ALN	**Alexandroupoli**	9.73	96	P		**Pn**	01 58 22.0	+0.3
NEHR	**Nehoiu**	9.82	69	⇓P		**Pn**	01 58 25.0	+2.1
BURAR	**Bucovina Array**	9.83	55	Pn		**Pn**	01 58 25.9	+2.7
BUR08	**Bucovina Ar. S**	9.83	55	Pn		**Pn**	01 58 26.5	+3.3
COVR	**Voineasa-Covas**	9.85	66	⇑P		**Pn**	01 58 24.6	+1.2
ETSF	**Etsaut**	10.15	276	*e*P		**Pn**	01 58 31.0	+3.4
ETSF				*e*Sn		**Sn**	02 00 12.8	-8.7
	comp=Z,6.5nm,0.8s							
PLOR	**Plostina**	10.15	67	⇓P		**Pn**	01 58 28.9	+1.3
VRI	**Vrincioaia**	10.21	67	⇓P		**Pn**	01 58 29.9	+1.6
MFF	**Saint Martin d**	10.34	297	*e*P		**Pn**	01 58 31.6	+1.6
MFF				*e*Sn		**Sn**	02 00 17.3	-8.6
	comp=Z,1.6nm,0.5s							
SJPF	**Ste Jean**	10.63	278	*e*P		**Pn**	01 58 37.2	+3.1
SJPF				*e*Sn		Sn	02 00 24.0	-9.2
	comp=Z,13nm,1.1s							
APE	**Apeiranthos**	10.96	116	⇑P		**Pn**	01 58 39.6	+1.0
LDF	**La Druitiere**	11.09	307	*e*P		**Pn**	01 58 43.1	+2.7
LDF				*e*Sn		Sn	02 00 35.2	-9.2
	comp=Z,13nm,0.9s							
FLN	**La Foliniere**	11.38	307	*e*P		**Pn**	01 58 47.7	+3.4
FLN				*e*Sn		Sn	02 00 41.9	-10
	comp=Z,4.1nm,0.5s							
GRR	**Gorron**	11.44	305	*e*P		**Pn**	01 58 48.2	+3.1
GRR				*e*Sn		Sn	02 00 43.5	-9.5
	comp=Z,13nm,0.8s							
IDI	**Anoyia**	11.65	125	⇑P		**Pn**	01 58 49.3	+1.2
IDI	**Anoyia**	11.65	125	Pn		**Pn**	01 58 50.4	+2.3
	comp=Z,0.8nm,0.3s,baz=317,slow=16,SNR=8.2							
IDI				Sn		Sn	02 00 48.0	-10
	comp=Z,0.4nm,0.3s,baz=92,slow=17,SNR=2.2							
	comp=Z,3.4nm,0.4s							
IDI	**Anoyia**	11.65	125	Pn		**Pn**	01 58 48.7	+0.6
MILM	**Milestii Mici**	11.87	63	⇓P		**Pn**	01 58 52.8	+1.8
SORM	**Soroca**	11.97	57	⇑P		**Pn**	01 58 53.8	+1.6
SGMF	**Saint Gilles**	12.43	302	*e*Pn		**Pn**	01 58 57.3	-1.3
PURM	**Purcari**	12.49	66	⇑P		**Pn**	01 58 59.6	+0.2
QUIF	**Quistinic**	12.70	300	*e*P		**Pn**	01 59 04.9	+2.6
ROSF	**Rostrenen**	12.91	302	*e*P		**Pn**	01 59 08.3	+3.1
ROSF				*e*Sn		Sn	02 01 19.0	-10
	comp=Z,160nm,1.8s							
ARG	**Arkhangelos**	13.16	114	Pn		**Pn**	01 59 10.0	+1.3
ARG	**Arkhangelos**	13.16	114	P		**Pn**	01 59 10.0	+1.3
ESBB	**Sonseca Array**	13.29	263	Pn		**Pn**	01 59 10.2	-0.3
ESDC	**Sonseca Array**	13.29	263	Pn		**Pn**	01 59 09.5	-1.0
	comp=Z,0.1nm,0.3s,baz=66,slow=13,SNR=11							
	comp=Z,1.5nm,0.7s							
AKASG	**Malin Array Be**	13.61	48	Pn		**Pn**	01 59 13.9	-0.9
	comp=Z,1.8nm,0.8s,baz=239,slow=11,SNR=3.1							
AKBB	**Malin Array Si**	13.61	48	⇑P		**Pn**	01 59 16.5	+1.8
PAB	**San Pablo**	13.62	263	Pn		**Pn**	01 59 12.0	-2.9
PAB	**San Pablo**	13.62	263	P		**Pn**	01 59 12.0	-2.9
MDUB	**Mudurnu**	13.63	93			**Pn**	01 59 16.1	+1.1
ELL	**Elmali**	14.11	109	Pn		**Pn**	01 59 22.7	+1.0
ELL	**Elmali**	14.11	109	P		**Pn**	01 59 22.7	+1.0
PABE	**Paberze**	14.66	25	Pn		**Pn**	01 59 28.8	-0.3
PABE	**Paberze**	14.66	25	*e*P		**Pn**	01 59 31.6	+2.6
NACGM	**Naroch**	15.16	31	*e*P		**P**	01 59 39.3	-1.6
	baz=220							
MNK	**Minsk**	15.30	34	*i* P		**Pn**	01 59 36.4	-1.2
MNK				*i* S		**Sn**	02 02 27.0	0.0
MNK				pmax	pmax			
	comp=Z,18nm,1.2s							
MNK				pmax	pmax			
	comp=E,2.0nm,1.1s							
MNK				pmax	pmax			
	comp=N,8.0nm,0.8s							
MNK				MLR	MLR			
	comp=N,15nm,17.0s							
MNK				MLR	MLR			
	comp=Z,4μm,20.0s							
MNK				MLR	MLR			
	comp=E,980nm,17.0s							
MNK	**Minsk**	15.30	34	*i* P		**Pn**	01 59 36.4	-1.2
	comp=E,2.0nm,1.1s							
MNK				*i* P		**Pn**	01 59 36.4	-1.2
	comp=N,8.0nm,0.8s							
MNK				*i* P		**Pn**	01 59 36.4	-1.2
	comp=Z,18nm,1.2s,baz=45							
MNK				*i* PP		**pP**	01 59 44.6	-0.7
MNK				*i* PPP		PPP	01 59 52.3	
MNK				*i* S		**Sn**	02 02 27.1	0.0
MNK				*i* SS

comp=Z,20nm,0.9s
KBZ Khabaz 21.61 77 eP P 02 00 54.3 +2.5
KBZ pmax pmax
comp=Z,30nm,1.0s
EIL Elat 21.71 119 P P 02 00 54.6 +1.6
comp=Z,2.4nm,0.7s,baz=346,slow=23,SNR=2.1
comp=Z,2.4nm,0.7s
PYA1 Pyatigorsk 21.71 76 eP P 02 00 55.3 +2.3
MARD Mardin 21.72 95 P P 02 00 52.8 -0.4
MARD lAmb lAmb 02 01 02.4
comp=Z,28nm,1.0s
GURO Guroymak-BITLI 22.19 91 P P 02 00 56.4 -1.9
GURO lAmb lAmb 02 01 13.0
comp=Z,22nm,1.2s
ZEI Tsey 22.48 79 eP P 02 01 02.9 +1.5
ZEI pmax pmax
comp=Z,29nm,1.5s
GNI Garni 23.70 85 P P 02 01 16.4 +2.5
comp=Z,6.5nm,0.8s,baz=26,slow=4.7,SNR=4.1
comp=Z,6.5nm,0.8s
GNI Garni 23.70 85 P P 02 01 14.7 +0.9
GNI lAmb lAmb 02 01 23.5
comp=Z,22nm,1.2s
GNI Garni 23.70 85 eP P 02 01 15.9 +2.0
GNI pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 24.18 32 eP P 02 01 15.8 -2.2
KLMR pmax pmax
comp=Z,52nm,1.4s
KLMR Klimovskoe 24.18 32 eP P 02 01 15.9 -2.1
KLMR AMP 02 01 25.7
comp=Z,52nm,1.4s
BELG Belogornoye 24.98 55 P P 02 01 27.4 +2.0
comp=Z,34nm,0.7s,baz=255,slow=4.8,SNR=5.3
comp=Z,34nm,0.7s
BELG Belogornoye 24.98 55 eP P 02 01 25.3 0.0
BELG pmax pmax
comp=Z,4.0nm,0.8s
PRGR Permogore 27.07 34 P P 02 01 40.4 -3.8
KIRV Kirov 27.53 42 eP P 02 01 48.3 +0.1
ARCES ARCESS Array B 27.72 9 P P 02 01 48.3 -1.6
comp=Z,1.0nm,0.7s,baz=190,slow=5.8,SNR=4.0
comp=Z,1.0nm,0.7s
TOA0 Torodi Ar. Sit 31.02 202 P P 02 02 20.0 +0.3
TOA0 lAmb lAmb 02 02 24.7
comp=Z,15nm,1.4s
TORD Torodi Ar. Bea 31.02 202 P P 02 02 20.9 +1.3
comp=Z,2.2nm,0.5s,baz=19,slow=7.7,SNR=19
TORD PcP **PcP 02 05 15.0 -0.5**
comp=Z,0.3nm,0.6s,baz=12,slow=1.7,SNR=1.8
comp=Z,2.2nm,0.5s
TORD Torodi Ar. Bea 31.02 202 P P 02 02 19.6 -0.1
ARU Arti 31.87 48 P P 02 02 25.7 -1.1
ARU Arti 31.87 48 *c iP* **P 02 02 27.0 +0.3**
ARU 02 03 27.6
ARU S **S 02 07 39.1 +1.8**
ARU SS **SnSn 02 09 23.6 -1.2**
ARU pmax pmax
comp=Z,32nm,0.8s
ABKAR Akbulak array 32.72 62 P P 02 02 33.2 -1.1
GEYT Alibeck 34.25 82 P P 02 02 48.4 +0.5
comp=Z,4.0nm,0.8s,baz=263,slow=10.0,SNR=5.0
comp=Z,4.0nm,0.8s
GEYT Alibeck 34.25 82 P P 02 02 46.9 -0.9
GEYT lAmb lAmb 02 02 55.2
comp=Z,5.9nm,1.0s
SPITS Spitsbergen Ar 35.69 1 P P 02 02 59.2 -0.6
comp=Z,12nm,1.0s,baz=141,slow=8.1,SNR=5.6
comp=Z,12nm,1.0s
BRVK Borovoye 38.72 54 P P 02 03 26.0 +0.3
BRVK lAmb lAmb 02 03 29.9
comp=Z,18nm,1.0s
BRVK Borovoye 38.72 54 eP P 02 03 27.2 +1.5
BRVK pmax pmax
comp=Z,18nm,1.0s
DBIC Dimbokro 39.22 209 P P 02 03 32.2 +2.0
comp=Z,4.9nm,0.9s,baz=335,slow=5.6,SNR=3.2
comp=Z,4.9nm,0.9s
UOSS Minazif 39.35 103 P P 02 03 31.1 -0.3
UOSS lAmb lAmb 02 03 35.7
comp=Z,9.4nm,0.8s
KK31 Karatay Array 41.27 69 P P 02 03 48.0 +1.0
KK31 Karatay Array 41.27 69 P P 02 03 48.1 +1.0
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KKAR Karatay Array 41.27 69 P P 02 03 47.5 +0.4
KKAR Karatay Array 41.27 69 P P 02 03 47.5 +0.4
KKAR pmax pmax
comp=Z,7.0nm,1.1s
AAK Ala-Archa 44.17 68 eP P 02 04 11.2 +0.4
AAK pmax pmax
comp=Z,16nm,2.5s
KURK Kurchatov 44.25 56 eP P 02 04 10.5 -0.6
KURK pmax pmax
comp=Z,2.0nm,0.9s
NRIK Noril'sk 45.45 29 P P 02 04 21.5 +1.1
comp=Z,2.4nm,0.4s,baz=249,slow=5.7,SNR=4.3
comp=Z,2.4nm,0.4s
NRIK Noril'sk 45.45 29 eP P 02 04 23.2 +2.8
NRIK pmax pmax
comp=Z,6.0nm,1.0s
KSH Kashi 46.44 72 P P 02 04 32.0 +3.2
KSH pmax pmax
comp=Z,9.0nm,0.9s
ZAA0 Zalesovo Array 47.00 50 P P 02 04 34.2 +1.4
ZAA0 lAmb lAmb 02 04 39.5
comp=Z,4.4nm,0.8s
ZALV Zalesovo Beam 47.00 50 P P 02 04 33.4 +0.5
comp=Z,2.6nm,0.7s,baz=287,slow=7.9,SNR=8.5
comp=Z,2.6nm,0.7s
ZALV Zalesovo Beam 47.00 50 P P 02 04 31.6 -1.2
NIL Nilore 47.17 80 P P 02 04 34.8 +0.3
NIL Nilore 47.17 80 P P 02 04 34.8 +0.3
NIL pmax pmax
comp=Z,9.0nm,0.4s
MAKZ Makanchi 47.61 60 P P 02 04 36.4 -1.3
MAKZ Makanchi 47.61 60 P P 02 04 36.4 -1.3
MK31 Makanchi Array 47.82 60 P P 02 04 39.8 +0.4
MK31 Makanchi Array 47.82 60 eP P 02 04 40.0 +0.7
MKAR Makanchi Array 47.82 60 P P 02 04 39.9 +0.6
comp=Z,1.6nm,0.6s,baz=276,slow=7.8,SNR=14
comp=Z,1.6nm,0.6s
MKAR Makanchi Array 47.82 60 P P 02 04 39.5 +0.2
MKAR Makanchi Array 47.82 60 *ce* **P P 02 04 39.0 -0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
KMBO Kilima Mbogo 48.63 147 P P 02 04 47.6 +1.5
comp=Z,1.0nm,0.7s,baz=241,slow=21,SNR=2.7
comp=Z,1.0nm,0.7s
FRB Frobisher Bay 49.37 325 P P 02 04 51.0 +0.1
comp=Z,12nm,1.0s,baz=82,slow=5.0,SNR=2.2
comp=Z,12nm,1.0s
SCHQ Schefferville 51.40 313 P P 02 05 04.7 -1.8
comp=Z,3.5nm,0.7s,baz=84,slow=6.7,SNR=2.2
comp=Z,3.5nm,0.7s
SCHQ Schefferville 51.40 313 P P 02 05 04.6 -1.9
WMQ Urumqi 52.51 62 eP P 02 05 17.4 +2.4
SONM Songino Array 61.89 50 P P 02 06 22.3 +1.0
comp=Z,3.1nm,0.8s,baz=288,slow=8.2,SNR=11
comp=Z,3.1nm,0.8s
SONM Songino Array 61.89 50 P P 02 06 20.7 -0.7
SONM lAmb lAmb 02 06 28.3
comp=Z,8.3nm,1.3s
LSA Lhasa 62.16 74 P P 02 06 24.2 +0.4
LSA lAmb lAmb 02 06 26.9
comp=Z,6.1nm,0.9s
LSA Lhasa 62.16 74 P P 02 06 24.2 +0.4
LSA pmax pmax
comp=Z,6.0nm,0.9s
ULN Ulaanbaatar 62.24 49 *de* **P P 02 06 25.2 +1.4**
ULN pmax pmax
comp=Z,12nm,2.5s
FCC Fort Churchill 62.53 326 P P 02 06 25.2 0.0
FCC Fort Churchill 62.53 326 P P 02 06 25.2 0.0
FCC pmax pmax
comp=Z,70nm,1.5s
GTA Gaotai 62.56 61 eP P 02 06 28.6 +2.6
GTA pP sP 02 06 32.8 +2.2
GTA sP pP 02 06 35.3 +5.9
GTA pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 66.62 347 P P 02 06 51.8 -0.1
INK lAmb lAmb 02 07 07.3
comp=Z,5.3nm,1.1s
INK Inuvik 66.62 347 P P 02 06 51.8 -0.1
INK pmax pmax
comp=Z,5.0nm,1.2s
YKA Yellowknife Ar 67.21 337 P P 02 06 56.2 +0.5
comp=Z,2.3nm,0.7s,baz=42,slow=6.3,SNR=7.4
comp=Z,2.3nm,0.7s
BILL Bilibino 67.81 11 *de* **P P 02 06 59.7 +0.3**
BILL *e* *PP* **pP 02 07 03.0 +0.3**
BILL *e* *SP* **sP 02 07 04.4 +0.5**
BILL *e* 02 07 21.6
BILL pmax pmax
comp=Z,4.0nm,0.4s
BILL MLR MLR
comp=Z,1μm,18.0s
LBTB Lobatse 68.26 168 P P 02 07 02.6 -0.2
LBTB Lobatse 68.26 168 P P 02 07 02.6 -0.2
LBTB pmax pmax
comp=Z,17nm,1.5s
MPOM Morne Pois Mar 68.70 270 P P 02 07 05.0 -0.7
EPYK Eagle Plains 68.91 348 P P 02 07 07.9 +1.6
EPYK lAmb lAmb 02 07 12.1
comp=Z,6.3nm,1.1s
SEY Seymchan 69.84 19 eP P 02 07 12.2 +0.1
SEY pmax pmax
comp=Z,6.0nm,1.0s
FYU Fort Yukon 69.89 351 P P 02 07 13.1 +0.7
EMPR Esperanza - Ma 70.31 277 P P 02 07 15.8 +0.1
IMAR Indian Mountai 71.26 354 P P 02 07 22.8 +2.1
DAWY Dawson 71.47 348 P P 02 07 23.8 +1.6
DAWY lAmb lAmb 02 07 29.3
comp=Z,5.8nm,1.2s
H21K Melozitna Rive 71.51 354 P P 02 07 24.5 +2.2
H21K lAmb lAmb 02 07 25.6
comp=Z,12nm,1.1s
PZH PanZhiHua 71.54 71 P P 02 07 14.3 -8.9
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,100nm,5.3s
XAN Xi'an 71.63 61 P P 02 07 26.5 +2.9
XAN pP sP 02 07 34.1 +5.9
XAN pmax pmax
comp=Z,8.0nm,0.7s
BOSA Boshof 71.74 169 P P 02 07 24.7 +0.6
comp=Z,2.3nm,0.7s,baz=3.7,slow=7.9,SNR=4.8
comp=Z,2.3nm,0.7s
BOSA Boshof 71.74 169 P P 02 07 24.7 +0.6
ILAR Eielson Array 71.81 351 P P 02 07 24.8 +0.7
comp=Z,1.3nm,0.9s,baz=3.4,slow=5.5,SNR=8.1
comp=Z,1.3nm,0.9s
RIDG Independent Ri 72.56 350 P P 02 07 28.6 -0.1
T47A Sharon Grove 72.66 304 P P 02 07 27.9 -1.7
T47A lAmb lAmb 02 07 30.6
comp=Z,7.7nm,0.8s
BCAR Beaver Creek A 72.78 348 P P 02 07 32.1 +2.1
J20K Nowinta River 73.08 354 P P 02 07 32.7 +1.1
J20K lAmb lAmb 02 07 34.1
comp=Z,5.2nm,1.1s
DHY Denali Highway 73.52 351 P P 02 07 34.9 +0.5
KLR Kul'dur 73.83 37 P P 02 07 36.3 0.0
comp=Z,2.2nm,1.0s,baz=323,slow=7.1,SNR=4.0
comp=Z,2.2nm,1.0s
KLR Kul'dur 73.83 37 eP P 02 07 37.0 +0.7
KLR pmax pmax
comp=Z,12nm,2.5s
K20K Telida 73.88 354 P P 02 07 37.9 +1.5
K20K lAmb lAmb 02 07 40.1
comp=Z,6.6nm,1.1s
PPLA Purkeypile 74.18 353 P P 02 07 39.2 +0.9
PPLA lAmb lAmb 02 07 50.9
comp=Z,6.1nm,1.0s
CTGM Chitina Glacie 74.71 347 P P 02 07 43.6 +2.2
CN2 Changchun 74.73 44 *eP* **P 02 07 42.3 +0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
Y45A Yeager Farm, C 76.21 303 P P 02 07 50.1 -0.2
USRK Ussuriysk Ar. 77.68 40 P P 02 07 59.0 +0.5
USRK Ussuriysk Ar. 77.68 40 P P 02 07 59.0 +0.5
BOZ Bozeman (W) 79.39 324 P P 02 08 09.1 +1.0
BOZ Bozeman (W) 79.39 324 P P 02 08 09.1 +1.0
BOZ pmax pmax
comp=Z,3.0nm,1.0s
LRM Limekiln Ridge 79.56 325 P P 02 08 09.3 +0.2
YSS Yuzh-Sakhalins 80.23 32 eP P 02 08 10.3 -2.0
YSS pmax pmax
comp=Z,30nm,1.1s
MCMT McKenzie Canyo 80.52 324 P P 02 08 14.8 +0.5
KSAR Wonju Array Be 80.59 47 P P 02 08 14.0 -0.5
KSAR Wonju Array Be 80.59 47 P P 02 08 14.0 -0.5
KSRS Korea Array 80.61 47 P P 02 08 15.5 +1.0
comp=Z,0.9nm,0.3s,baz=326,slow=5.6,SNR=5.9
comp=Z,0.9nm,0.3s
PDAR Pinedale Array 80.67 321 P P 02 08 15.5 +0.3
comp=Z,0.4nm,0.6s,baz=67,slow=5.4,SNR=3.8
comp=Z,0.4nm,0.6s
BDFB Brasilia 80.72 239 P P 02 08 16.4 +0.9
comp=Z,3.7nm,0.6s,baz=48,slow=6.5,SNR=6.7
comp=Z,3.7nm,0.6s
ISCO Idaho Springs 81.04 317 P P 02 08 17.4 +0.2
ISCO Idaho Springs 81.04 317 P P 02 08 17.4 +0.2
ISCO pmax pmax
comp=Z,2.0nm,1.0s
BMO Blue Mountains 82.36 327 P P 02 08 23.7 -0.1
BMO lAmb lAmb 02 08 25.4
comp=Z,9.2nm,1.1s
BMO Blue Mountains 82.36 327 P P 02 08 23.7 -0.1
BMO pmax pmax
comp=Z,9.0nm,1.1s
RDMU Red Mountain 82.39 320 P P 02 08 24.1 -0.2
RDMU lAmb lAmb 02 08 31.7
comp=Z,5.8nm,1.0s
HWUT Hardware Ranch 82.51 322 P P 02 08 24.2 -0.6
HWUT lAmb lAmb 02 08 31.3
comp=Z,3.2nm,0.8s
PSI Prapat 84.94 91 P P 02 08 38.6 +1.0
comp=Z,6.3nm,0.8s,baz=153,slow=11,SNR=2.3
comp=Z,6.3nm,0.8s
TXAR Lajitas Array 87.87 309 P P 02 08 52.6 +0.9
comp=Z,2.2nm,0.5s,baz=75,slow=1.9,SNR=5.7
comp=Z,2.2nm,0.5s
LPAZ La Paz 94.68 252 P P 02 09 24.1 0.0
comp=Z,2.4nm,0.7s,baz=109,slow=24,SNR=2.0
comp=Z,2.4nm,0.7s
WRA Warramunga Arr 125.98 84 PKP PKPdf 02 15 03.7 -0.6
comp=Z,0.6nm,0.9s,baz=319,slow=1.7,SNR=2.6
ASAR Alice Springs 127.92 88 PKP PKPdf 02 15 07.1 -0.9
comp=Z,0.4nm,0.3s,baz=320,slow=1.7,SNR=4.7

IDC ***24*** *01:56:43.4±1.5,29°.49S×177°.13W,h0km,mb4.0/5, mbtmp4.0/5,Error ellipse: s-maj=58.5km s-min=23.1km az=14.0*

ISC 24 01:56:47.1±1.3,29°.3S±0°.5×177°.0W±0°.1,h31km,n14, σ0s80/11,mb4.2/5,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.78**	**272**	Pn		**Pn**	**Pn**	**01 57 01.4**	**-0.5**
	280nm,0.3s,baz=88,slow=7.0,SNR=19								
RAO				Sn		**Sn**		**01 57 12.4**	**-0.1**
	667nm,0.3s,baz=103,slow=21,SNR=10								
CTA	**Charters Tower**	**34.48**	**277**	P		**P**		**02 03 34.0**	**+1.6**
	1.3nm,0.4s,baz=108,slow=9.8,SNR=1.8								
	1.3nm,0.4s								
STKA	**Stephens Creek**	**35.57**	**255**	P		**P**		**02 03 41.8**	**+0.1**
	0.7nm,0.2s,baz=124,slow=7.3,SNR=2.8								
	0.7nm,0.2s								
ASAR	**Alice Springs**	**44.03**	**265**	P		**P**		**02 04 51.1**	**-1.0**
	0.8nm,0.8s,baz=115,slow=7.6,SNR=4.9								
	0.8nm,0.8s								
WRA	**Warramunga Arr**	**44.92**	**271**	P		**P**		**02 04 58.8**	**-0.4**
	1.1nm,0.9s,baz=112,slow=7.6,SNR=7.9								
	1.1nm,0.9s								
FITZ	**Fitzroy Crossi**	**53.22**	**269**	P		**P**		**02 06 03.1**	**+0.3**
	3.2nm,0.9s,baz=131,slow=9.3,SNR=2.8								
	3.2nm,0.9s								
H03S2	**Juan Fernandez**	**80.37**	**123**	T		T		03 38 47.2	
	baz=239								
H03S1	**Juan Fernandez**	**80.38**	**123**	T		T		03 38 49.0	
	baz=239								
H03S3	**Juan Fernandez**	**80.39**	**123**	T		T		03 38 44.5	
	baz=239								
BORG	**Borgarnes**	**141.36**	**16**	PKhKP		PKPpre		02 16 12.2	
	16nm,1.1s,baz=271,slow=10.0,SNR=3.4								
FINES	**FINESS Array B**	**144.38**	**341**	PKP		**PKPdf**		**02 16 19.1**	**-0.3**
	0.7nm,0.6s,baz=56,slow=5.2,SNR=1.4								
NB2	**NORSAR Subarra**	**147.77**	**352**	PKP		**PKPab**		**02 16 30.0**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=16,slow=3.2								
NOA	**NORSAR Array B**	**147.77**	**352**	PKPbc		**PKiKP**		**02 16 29.8**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=15,slow=4.6,SNR=2.8								
AKASG	**Malin Array Be**	**150.90**	**325**	PKPbc		**PKiKP**		**02 16 37.5**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=47,slow=2.2,SNR=1.5								

IDC ***24*** *01:58:00.8±0.9,3°.85N×71°.32W,h8km±3km,ML3.7,Mw3.9*

ISC 24 01:57:56.4±1.3,3°.82N±0°.02×71°.20W±0°.03,h0km±9km,n66, σ2s08/138,mb4.0/8,2C,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**1.01**	**292**	*iP*		**Pg**		**01 58 15.2**	**-0.5**
PTGC				*eS*		**Sg**		**01 58 27.5**	**-1.4**
PTGC				*i*				01 58 53.2	
	comp=Z,2μm,0.7s								
GUVC	**San Jose del G**	**1.91**	**229**	*eP*		**Pn**		**01 58 30.5**	**+0.4**
GUVC				*eS*		**Sn**		**01 58 54.4**	**-0.5**
GUVC				*i*				01 58 58.2	
	comp=Z,1μm,0.2s								
VILC	**Villavicencio,**	**2.51**	**277**	*eP*		**Pn**		**01 58 39.5**	**+1.0**
VILC				*eS*		**Sn**		**01 59 09.1**	**-0.8**
VILC				*i*				01 59 19.8	
	comp=Z,1μm,0.3s								
CHIC	**Chingaza**	**2.66**	**288**	*eP*		**Pn**		**01 58 41.5**	**+0.7**
CHIC				*eS*		**Sn**		**01 59 13.2**	**-0.6**
CHIC				*i*				01 59 22.6	
	comp=Z,462nm,0.4s								
TAMC	**Tame, Arauca**	**2.67**	**347**	*eP*		**Pn**		**01 58 42.4**	**+1.7**
TAMC				*ePg*		**Pb**		**01 58 44.8**	**-0.3**
TAMC				*eS*		**Sn**		**01 59 15.4**	**+1.7**
TAMC				*i*				01 59 24.1	
	comp=Z,484nm,0.4s								
RUSC	**La Rusia**	**2.79**	**318**	*eP*		**Pn**		**01 58 43.7**	**+1.0**
RUSC				*ePg*		**Pb**		**01 58 47.7**	**+0.3**
RUSC				*eS*		**Sn**		**01 59 16.5**	**-0.8**
RUSC				*i*				01 59 30.4	
	comp=Z,244nm,0.5s								
MACC	**Macarena, Meta**	**3.12**	**238**	*eP*		**Pn**		**01 58 48.5**	**+1.6**
MACC				*eS*		**Sb**		**01 59 29.1**	**-2.4**
MACC				*i*				01 59 44.6	
	comp=Z,353nm,0.5s								
ROSC	**El Rosal**	**3.28**	**288**	Pg		**Pn**		**01 58 51.5**	**+2.2**
	comp=Z,16nm,0.3s,baz=112,slow=13,SNR=19								
ROSC				Lg		Lg		01 59 31.1	
	comp=Z,24nm,0.3s,baz=47,slow=23,SNR=2.1								
ROSC	**El Rosal**	**3.28**	**288**	Pn		**Pn**		**01 58 51.2**	**+1.9**
ROSC	**El Rosal**	**3.28**	**288**	*eP*		**Pn**		**01 58 51.4**	**+2.0**
ROSC				*ePg*		**Pg**		**01 59 00.6**	**+1.4**
ROSC				*eS*		**Sn**		**01 59 30.4**	**+1.2**
ROSC				*eSg*		**Sg**		**01 59 41.5**	**-0.2**
ROSC				*i*				01 59 48.8	
	comp=Z,147nm,0.5s								
BARC	**Barichara**	**3.39**	**324**	*eP*		**Pn**		**01 58 51.6**	**+0.8**
BARC				*ePg*		**Pb**		**01 58 58.8**	**+1.2**
BARC				*eS*		**Sn**		**01 59 31.8**	**-0.1**
BARC				*eSg*		**Sb**		**01 59 42.2**	**+2.7**
BARC				*i*				01 59 47.1	
	comp=Z,343nm,0.3s								
SPBC	**San Pablo de B**	**3.40**	**303**	*eP*		**Pn**		**01 58 50.8**	**+0.1**
SPBC				*ePg*		**Pb**		**01 58 58.7**	**+1.2**
SPBC				*eS*		**Sn**		**01 59 28.6**	**-3.2**
SPBC				*eSg*		**Sb**		**01 59 39.5**	**+0.1**
SPBC				*i*				01 59 50.8	
	comp=Z,219nm,0.6s								
PRAC	**Prado**	**3.68**	**269**	*eP*		**Pn**		**01 58 56.2**	**+1.6**
PRAC				*ePg*		**Pb**		**01 59 04.1**	**+1.7**
PRAC				*eS*		**Sn**		**01 59 34.9**	**-3.9**
PRAC				*eSg*		**Sb**		**01 59 49.5**	**+1.9**
PRAC				*i*				02 00 02.2	
	comp=Z,138nm,0.6s								
PAMC	**Pamplona, Colo**	**3.81**	**337**	*eP*		**Pn**		**01 58 58.0**	**+1.3**
PAMC				*ePg*		**Pb**		**01 59 05.4**	**+0.7**
PAMC				*eS*		**Sn**		**01 59 41.0**	**-1.5**
PAMC				*eSg*		**Sg**		**01 59 56.2**	**-2.6**
PAMC				*i*				02 00 01.5	
	comp=Z,268nm,0.6s								
NORC	**Norcasia**	**4.05**	**296**	*eP*		**Pn**		**01 59 00.6**	**+0.9**
NORC				*ePg*		**Pb**		**01 59 10.4**	**+1.8**
NORC				*eS*		**Sn**		**01 59 44.4**	**-3.5**
NORC				*eSg*		**Sb**		**01 59 55.0**	**-3.2**
NORC				*i*				02 00 10.8	
	comp=Z,75nm,0.8s								
BRRC	**Barranca, Sant**	**4.12**	**323**	*eP*		**Pn**		**01 59 01.2**	**+0.7**
BRRC				*ePg*		**Pb**		**01 59 09.2**	**-0.6**
BRRC				*eS*		**Sn**		**01 59 48.4**	**-1.0**
BRRC				*eSg*		**Sb**		**02 00 02.5**	**+2.3**
BRRC				*i*				02 00 12.3	
	comp=Z,73nm,0.4s								
PTBC	**PUERTO BERRIO,**	**4.23**	**310**	*eP*		**Pn**		**01 59 01.3**	**-0.8**
PTBC				*ePg*		**Pb**		**01 59 10.2**	**-1.4**
PTBC				*eS*		**Sn**		**01 59 47.1**	**-5.1**
PTBC				*eSg*		**Sb**		**02 00 04.8**	**+1.6**
PTBC				*i*				02 00 14.2	
	comp=Z,71nm,0.3s								
ANIL	**Santa Ana**	**4.25**	**279**	*eP*		**Pn**		**01 59 03.7**	**+1.1**
ANIL				*ePg*		**Pb**		**01 59 12.1**	**0.0**
ANIL				*eS*		**Sn**		**01 59 52.1**	**-1.0**
ANIL				*eSg*		**Sb**		**02 00 06.3**	**+2.2**
ANIL				*i*				02 00 21.5	
	comp=Z,367nm,0.4s								
BETC	**Betania**	**4.38**	**255**	*eP*		**Pn**		**01 59 02.2**	**-2.1**
BETC				*ePg*		**Pb**		**01 59 14.0**	**-0.3**
BETC				*eS*		**Sb**		**02 00 11.3**	**+3.4**
BETC				*i*				02 00 25.9	
	comp=Z,107nm,0.6s								
GUY2C	**Guyana, Caldas**	**4.38**	**289**	*eP*		**Pn**		**01 59 05.4**	**+0.7**
GUY2C				*ePg*		**Pb**		**01 59 14.2**	**-0.4**
GUY2C				*eS*		**Sn**		**01 59 51.6**	**-5.0**
GUY2C				*i*				02 00 25.2	
	comp=Z,69nm,0.5s								
SOCV	**Socops**	**4.45**	**4**	*eP*		**Pn**		**01 59 05.0**	**-0.2**
SOCV				*ePg*		**Pb**		**01 59 15.6**	**+0.2**
SOCV				*eS*		**Sn**		**01 59 58.0**	**+0.2**
SOCV				*eSg*		**Sg**		**02 00 19.2**	**-0.3**
GARC	**Garzon, Huila**	**4.59**	**249**	*eP*		**Pn**		**01 59 07.9**	**+0.6**
GARC				*ePg*		**Pb**		**01 59 16.9**	**-1.0**
GARC				*eS*		**Sn**		**02 00 03.1**	**+1.7**
GARC				*eSg*		**Sb**		**02 00 15.2**	**+1.4**
OCAC	**Ocana**	**4.88**	**334**	*eP*		**Pn**		**01 59 11.5**	**+0.4**
OCAC				*ePg*		**Pb**		**01 59 22.8**	**0.0**
OCAC				*eS*		**Sn**		**02 00 07.4**	**-1.0**
OCAC				*eSg*		**Sb**		**02 00 26.7**	**+4.6**
OCAC				*i*				02 00 35.4	
	comp=Z,245nm,0.4s								
HELC	**Santa Helena**	**4.92**	**299**	*eP*		**Pn**		**01 59 12.4**	**+0.5**
HELC				*eS*		**Sn**		**02 00 08.7**	**-1.0**
FLOC	**Florencia**	**4.97**	**244**	*eP*		**Pn**		**01 59 13.4**	**+1.1**
FLOC				*ePg*		**Pb**		**01 59 23.0**	**-1.3**
FLOC				*eS*		**Sn**		**02 00 13.9**	**+3.3**
FLOC				*eSg*		**Sb**		**02 00 27.2**	**+2.5**
FLOC				*i*				02 00 39.1	
	comp=Z,146nm,0.4s								
SDV	**Santo Domingo**	**5.07**	**6**	Pn		**Pn**		**01 59 12.7**	**-1.1**
	comp=Z,3.5nm,0.3s,baz=191,slow=5.2,SNR=4.3								
SDV				Pg		**Pb**		**01 59 26.5**	**+0.5**
	comp=Z,8.9nm,0.3s,baz=198,slow=19,SNR=7.8								
SDV				Sn		**Sn**		**02 00 10.2**	**-3.0**
	comp=Z,23nm,0.3s,baz=286,slow=18,SNR=4.4								
SDV				Lg		Lg		02 00 37.7	
	comp=Z,32nm,0.3s,baz=248,slow=18,SNR=5.1								
	comp=Z,8.2nm,0.3s								
SDV	**Santo Domingo**	**5.07**	**6**	Pn		**Pn**		**01 59 13.3**	**-0.5**
PTLC	**Puerto Leguiza**	**5.10**	**225**	*eP*		Pn		01 59 20.2	+6.1
PTLC				*ePg*		**Pg**		**01 59 31.8**	**-2.4**
PTLC				*eSg*		**Sg**		**02 00 41.3**	**+0.8**
PTLC				*i*				02 00 50.7	
	comp=Z,157nm,0.4s								
YOTC	**Yotoco, Valle**	**5.14**	**272**	*eP*		**Pn**		**01 59 14.8**	**0.0**
YOTC				*eS*		**Sn**		**02 00 13.8**	**-1.0**
YOTC				*eSg*		**Sb**		**02 00 31.2**	**+1.6**
YOTC				*i*				02 00 43.5	
	comp=Z,23nm,0.5s								
ZARC	**Zaragoza, Cauc**	**5.16**	**315**	*eP*		**Pn**		**01 59 15.7**	**+0.8**
ZARC				*eS*		**Sn**		**02 00 14.7**	**-0.4**
ZARC				*i*				02 00 44.3	

comp=Z,41nm,0.4s
PLMC San Jos del P 5.19 282 *e*P **Pn** **01 59 18.2 +2.9**
PLMC *e*S **Sb** **02 00 32.5 +1.6**
CBOC Ciudad Bolivar 5.21 293 *e*P **Pn** **01 59 16.7 +1.0**
CBOC *e*S **Sn** **02 00 15.5 -1.2**
CBOC *e*Sg **Sb** **02 00 34.8 +3.0**
POPC Popayan, Colom 5.62 257 *e*P **Pn** **01 59 23.5 +2.2**
POPC *e*Pg **Pb** **01 59 34.6 -0.8**
POPC *e*S **Sn** **02 00 26.8 +0.1**
POPC *e*Sg **Sb** **02 00 48.7 +5.2**
POPC *i* 02 00 50.2
comp=Z,17nm,0.3s
UREC San Jos de Ur 5.82 312 *e*P **Pn** **01 59 22.7 -1.3**
UREC *e*S **Sn** **02 00 25.9 -5.6**
UREC *i* 02 00 47.1
comp=Z,15nm,0.3s
DBBC Dabeiba 5.92 303 *e*P **Pn** **01 59 27.2 +1.8**
DBBC *e*S **Sn** **02 00 30.1 -3.9**
DBBC *i* 02 00 42.2
comp=Z,22nm,0.6s
BAUV El Baul 5.98 31 Pn **Pn** **01 59 26.2 0.0**
LL6C La Loma 6 Bece 6.23 341 *e*P **Pn** **01 59 29.4 -0.2**
LL6C *e*S **Sn** **02 00 38.9 -2.7**
LL6C *e*Sg **Sb** **02 01 07.7 +6.7**
LL6C *i* 02 01 23.8
comp=Z,22nm,0.5s
BBAC Balboa, Cauca 6.30 254 *e*P **Pn** **01 59 33.7 +3.0**
BBAC *e*S **Sb** **02 01 01.4 -1.7**
BBAC *i* 02 01 23.7
comp=Z,12nm,0.5s
GCUF Volcan Galeras 6.66 247 *e*P **Pb** **01 59 54.3 +0.9**
GCUF *e*S **Sb** **02 01 11.7 -2.0**
ARGC Ariguani, Magd 6.72 333 *e*P **Pn** **01 59 36.5 +0.1**
DABV Dabajuro 7.08 4 *e*P **Pn** **01 59 41.9 +0.6**
DABV *e*S **Sn** **02 00 57.8 -4.7**
SJCC San Jacinto, C 7.22 327 *e*P **Pn** **01 59 44.0 +0.7**
SJCC *e*Pg **Pb** 01 59 53.9 -8.8
SJCC *e*S **Sn** **02 01 03.4 -2.6**
SJCC *i* 02 01 11.7
comp=Z,13nm,0.5s
CRJC Cerrejon, Guaj 7.35 347 *e*P **Pn** **01 59 44.4 -0.7**
CRJC *e*S **Sn** **02 01 01.2 -8.1**
CRJC *i* 02 01 10.3
comp=Z,38nm,0.5s
URIC Uribia, Colomb 7.87 354 *e*P **Pn** **01 59 51.0 -1.2**
URIC *e*S Sn 02 01 12.0 -10
BIRV Birongo 8.22 36 Pn **Pn** **01 59 57.0 -0.1**
BOAV Boa Vista 10.75 97 Pn **Pn** **02 00 31.4 -0.3**
MACA Manacapuru-AM 12.59 123 Pn **Pn** **02 00 56.2 -0.6**
ATAH Atahualpa 13.04 213 Pn **Pn** **02 01 03.0 -0.3**
comp=Z,0.2nm,0.3s,baz=312,slow=5.5,SNR=1.7
ATAH Sn Sn 02 03 40.2 +11
comp=Z,0.1nm,0.3s,baz=345,slow=19,SNR=1.8
comp=Z,2.2nm,0.6s
MCLT Moule a Chique 14.11 45 P **P** **02 01 26.3 +0.7**
ETMB Extrema 14.42 160 Pn **Pn** **02 01 20.8 -1.2**
CELP Cerrillos 14.88 17 Pn **Pn** **02 01 29.5 +1.4**
MDP Montagnes des 18.54 85 P **Pn** **02 02 15.5 +0.6**
comp=Z,0.4nm,0.3s,baz=277,slow=11,SNR=5.7
MDP Lg Lg 02 07 34.6
comp=Z,0.4nm,0.3s,baz=271,slow=13,SNR=4.0
comp=Z,2.8nm,0.7s
LPAZ La Paz 20.20 171 P Pn 02 02 35.8 +0.4
comp=Z,4.8nm,0.7s,baz=345,slow=11,SNR=16
comp=Z,4.8nm,0.7s
PB16 IPOC Station P 22.07 176 P **P** **02 02 53.6 -0.1**
SIV San Ignacio 22.08 153 P **P** **02 02 54.2 +1.0**
comp=Z,0.8nm,0.3s,baz=313,slow=11,SNR=7.1
SIV Lg Lg 02 09 30.5
baz=235,slow=22,SNR=7.9
comp=Z,0.8nm,0.3s
GO01 Chusmiza 23.42 175 P **P** **02 03 08.1 +0.3**
GO01 IAmb IAmb 02 03 11.6
comp=Z,4.8nm,0.7s
LVC Limon Verde 26.36 175 P **P** **02 03 35.7 +1.0**
comp=Z,2.7nm,0.7s,baz=12,slow=9.3,SNR=2.7
comp=Z,2.7nm,0.7s
AQDB Aquidauana 28.53 148 P **P** **02 03 56.2 +2.3**
TXAR Lajitas Array 39.89 313 P P 02 05 26.8 -5.5
TX31 Lajitas Ar. Si 39.89 313 P P 02 05 27.4 -4.9
TX31 IAmb IAmb 02 05 27.5
comp=Z,1.8nm,0.7s
MNTX Cornudas Mount 42.43 315 P **P** **02 05 53.7 +0.6**
MNTX IAmb IAmb 02 05 54.7
comp=Z,1.7nm,0.8s
TRQA Tornquist 42.53 169 P **P** **02 05 54.0 +0.3**
TRQA IAmb IAmb 02 06 25.3
comp=Z,12nm,1.5s
SCHQ Schefferville 50.98 3 P **P** **02 06 57.8 -1.9**
comp=Z,2.3nm,0.7s,baz=220,slow=7.9,SNR=1.6
comp=Z,2.3nm,0.7s
TORD Torodi Ar. Bea 72.49 77 P **P** **02 09 25.1 -0.5**
comp=Z,0.4nm,0.5s,baz=288,slow=6.2,SNR=11
comp=Z,0.4nm,0.5s
ASAR Alice Springs 148.75 229 PKPbc **PKPdf** **02 17 44.7 +1.8**
comp=Z,0.7nm,0.5s,baz=119,slow=3.8,SNR=5.8
WRA Warramunga Arr 150.39 235 PKP **PKPdf** **02 17 44.0 -1.6**
comp=Z,0.4nm,0.7s,baz=116,slow=2.8,SNR=2.1
WRA PKPbc **PKPbc** **02 17 48.5 -2.3**
comp=Z,0.9nm,0.7s,baz=112,slow=2.3,SNR=11

*LDG **24** 02:01:08.7±0.1, 42.°80N×13.°17E, h9km, Ml3.6/28, Error ellipse: s-maj=4.7km s-min=2.6km az=52.0*
*ROM **24** 02:01:08.1±0.1, 42.°799N±0.°003×13.°241E±0.°006, h7km, ML3.9/97, Error ellipse: s-maj=0.4km s-min=0.2km az=248.0*
*NEIC **24** 02:01:08.9±2.6, 42.°79N±0.°03×13.°15E±0.°06, h8km±6km, mb4.2/5, ML3.9(ROM), Error ellipse: s-maj=7.7km s-min=2.5km az=55.0*
*IDC **24** 02:01:08.6±0.9, 42.°89N×13.°16E, h0km, mb3.9/10, mbtmp3.8/18, ML3.3/7, Error ellipse: s-maj=16.6km s-min=12.1km az=96.0*
*BEO **24** 02:01:09.4±0.6, 42.°78N×13.°18E, h0km, ML4.0/9*
*STR **24** 02:01:10.1±0.8, 43.°N±6.°×1.°3E±.°, h5km, MLv4.5/19, Error ellipse: s-maj=0.0km s-min=0.0km az=68.7, preliminary*
*PRU **24** 02:01:10.5±0.0, 42.°88N×13.°53E, h0km, M4.2*

ISC 24 02:01:09.7±0.8, 42.°77N±0.°01×13.°17E±0.°02, h15km±5km, n331, σ2°28/396, mb4.0/11, 7C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.19**	**211**	P	**Pg**	**02 01 14.1**	**-0.2**
LNSS				S	**Sb**	**02 01 18.5**	**-0.1**
FEMA	**Monte Fema**	**0.21**	**335**	P	**Pg**	**02 01 13.1**	**-1.6**
FEMA				S	**Sg**	**02 01 16.9**	**-1.0**
FEMA				AML	AML		
	comp=N,61150μm,1.5s						
FEMA				AML	AML		
	comp=E,77650μm,0.4s						
RM33	**Pellescritta (**	**0.26**	**173**	⇓P	**Pg**	**02 01 14.9**	**-0.5**
RM33				S	**Sg**	**02 01 19.4**	**+0.2**
RM33				AML	AML		
	comp=E,83350μm,0.9s						
RM33				AML	AML		
	comp=E,81750μm,0.9s						
RM33				AML	AML		
	comp=N,56350μm,0.9s						
RM33				AML	AML		
	comp=E,83350μm,0.9s						
RM33				AML	AML		
	comp=N,56300μm,0.9s						
RM33				AML	AML		
	comp=E,81700μm,0.9s						
RM33				AML	AML		
	comp=N,56000μm,0.9s						
FDMO	**Fiordimonte**	**0.27**	**347**	P	**Pg**	**02 01 14.0**	**-1.5**
FDMO				S	**Sg**	**02 01 18.4**	**-1.1**
FDMO				AML	AML		
	comp=E,20400μm,0.9s						
FDMO				AML	AML		
	comp=N,26000μm,0.3s						
CAMP	**Campotosto**	**0.29**	**143**	P	**Pg**	**02 01 14.3**	**-1.6**
CAMP				S	**Sg**	**02 01 19.4**	**-0.7**
CAMP				AML	AML		
	comp=N,45800μm,0.6s						
CAMP				AML	AML		
	comp=E,40250μm,0.7s						
CESI	**CESI - Serrava**	**0.31**	**320**	P	**Pg**	**02 01 14.9**	**-1.2**
CESI				S	**Sg**	**02 01 20.5**	**0.0**
CESI				AML	AML		
	comp=E,44950μm,0.8s						
CESI				AML	AML		
	comp=N,52200μm,0.2s						
GUMA	**Gualdo di Mace**	**0.32**	**22**	P	**Pg**	**02 01 14.5**	**-1.8**
GUMA	**Gualdo di Mace**	**0.32**	**22**	S	**Sg**	**02 01 19.3**	**-1.5**
TERO	**Teramo**	**0.35**	**115**	P	**Pg**	**02 01 14.8**	**-2.1**
TERO				S	**Sg**	**02 01 20.1**	**-1.6**
TERO				AML	AML		
	comp=E,67450μm,0.5s						
TERO				AML	AML		
TERO				AML	AML		
	comp=E,70250μm,0.6s						
TERO				AML	AML		
TERO				AML	AML		
	comp=E,70200μm,0.6s						
TERO				AML	AML		
TERO				AML	AML		
ARRO	**Arrone**	**0.36**	**238**	P	**Pg**	**02 01 16.9**	**-0.1**
ARRO				S	**Sb**	**02 01 23.7**	**+0.5**
ARRO				AML	AML		
	comp=E,26650μm,1.4s						
ARRO				AML	AML		
	comp=N,20200μm,0.8s						
ARRO				AML	AML		
	comp=N,20250μm,0.8s						
OFFI	**Offida**	**0.41**	**66**	P	**Pg**	**02 01 16.5**	**-1.4**
OFFI				AML	AML		
	comp=N,58950μm,0.6s						
OFFI				AML	AML		
	comp=E,61900μm,0.8s						
SEF1	**Sefro**	**0.41**	**336**	P	**Pg**	**02 01 16.5**	**-1.5**
SEF1				S	**Sg**	**02 01 23.4**	**-0.2**
SEF1				AML	AML		
	comp=E,24350μm,0.2s						
SEF1				AML	AML		
	comp=N,23450μm,0.3s						
SEF1				AML	AML		
	comp=E,24300μm,0.2s						
MDAR	**Monte D'Aria**	**0.42**	**357**	P	**Pg**	**02 01 16.4**	**-1.8**
MDAR				S	**Sg**	**02 01 23.0**	**-1.0**
MDAR				AML	AML		
	comp=N,31350μm,1.4s						
MDAR				AML	AML		
	comp=N,31350μm,1.3s						
MDAR				AML	AML		
	comp=E,16950μm,1.5s						
MNTP	**Montappone**	**0.43**	**30**	P	**Pg**	**02 01 16.7**	**-1.5**
GIGS	**Gran Sasso**	**0.43**	**137**	P	**Pg**	**02 01 16.9**	**-1.5**
GIGS				S	**Sg**	**02 01 23.2**	**-1.0**
GIGS				AML	AML		
	comp=N,6625μm,1.4s						
GIGS				AML	AML		
	comp=E,7525μm,0.7s						
PIO1	**Pioraco**	**0.43**	**341**	P	**Pg**	**02 01 17.8**	**-0.5**
PIO1				AML	AML		
	comp=E,16200μm,1.5s						
PIO1				AML	AML		
	comp=N,20350μm,0.3s						
PIO1				AML	AML		
	comp=E,16200μm,1.5s						
PIO1				AML	AML		
	comp=N,20300μm,0.4s						
AQU	**L'Aquila**	**0.45**	**158**		**Pg**	**02 01 17.1**	**-1.5**
AQU					**Sg**	**02 01 24.1**	**-0.6**
AQU	**L'Aquila**	**0.45**	**158**	⇓P	**Pg**	**02 01 17.6**	**-1.0**
AQU				AML	AML		
	comp=N,26250μm,0.8s						
AQU				AML	AML		
	comp=E,21950μm,1.2s						
AQU				AML	AML		
	comp=N,26100μm,0.8s						
AQU				AML	AML		
	comp=E,21100μm,0.9s						
FIU1	**Fiuminata**	**0.46**	**337**	P	**Pg**	**02 01 17.4**	**-1.4**
FIU1				S	**Sg**	**02 01 24.8**	**-0.1**
FIU1				AML	AML		
	comp=E,8675μm,1.2s						
FIU1				AML	AML		
	comp=N,8590μm,0.7s						
FIU1				AML	AML		
	comp=E,8670μm,1.2s						
FIU1				AML	AML		
	comp=N,8605μm,0.7s						
SSM1	**San Severino M**	**0.46**	**0**	P	**Pg**	**02 01 17.0**	**-1.8**
CESX	**Cesi**	**0.47**	**250**	P	**Pg**	**02 01 18.7**	**-0.3**
CESX				AML	AML		
	comp=E,23100μm,0.9s						
CESX				AML	AML		
	comp=N,20200μm,0.6s						
ASSB	**Assisi San Ben**	**0.47**	**306**	P	**Pg**	**02 01 18.0**	**-1.0**
ASSB				S	**Sg**	**02 01 25.9**	**+0.6**
ASSB				AML	AML		
	comp=E,14000μm,0.7s						
ASSB				AML	AML		
	comp=N,14300μm,1.3s						
GAG1	**Gagliole**	**0.47**	**351**	P	**Pg**	**02 01 17.7**	**-1.4**
GAG1				AML	AML		
	comp=N,36050μm,0.8s						
GAG1				AML	AML		
	comp=E,34600μm,1.6s						
FIAM	**Fiamignano**	**0.50**	**185**	P	**Pg**	**02 01 19.0**	**-0.7**
FIAM				S	**Sb**	**02 01 27.5**	**0.0**
FIAM				AML	AML		
	comp=E,18800μm,0.7s						
FIAM				AML	AML		
	comp=N,15450μm,0.7s						
SNTG	**Esanatoglia**	**0.52**	**341**	P	**Pg**	**02 01 18.3**	**-1.6**
SNTG				S	**Sg**	**02 01 26.3**	**-0.5**
SNTG				AML	AML		
	comp=E,998μm,0.6s						
SNTG				AML	AML		
	comp=N,1345μm,1.0s						
SNTG				AML	AML		
	comp=N,10725μm,1.0s						
SNTG				AML	AML		
	comp=E,998μm,0.6s						
SNTG				AML	AML		
	comp=N,1340μm,1.0s						
SNTG				AML	AML		
	comp=E,7795μm,0.6s						
TRTR	**Tortoreto Alta**	**0.55**	**86**	P	**Pg**	**02 01 18.8**	**-1.6**
TRTR				AML	AML		
TRTR				AML	AML		
	comp=E,85200μm,0.7s						
TRE1	**Treia**	**0.55**	**11**	P	**Pg**	**02 01 18.9**	**-1.6**
TRE1				AML	AML		
	comp=E,28650μm,0.8s						
TRE1				AML	AML		
	comp=N,24300μm,1.0s						
ATCC	**AVT- Casa Cast**	**0.57**	**317**	P	**Pg**	**02 01 19.6**	**-1.3**
ATCC				S	**Sg**	**02 01 29.0**	**+0.4**
FAGN	**Fagnano**	**0.59**	**149**	P	**Pg**	**02 01 19.6**	**-1.6**
FAGN				AML	AML		
	comp=E,25750μm,0.4s						
FAGN				AML	AML		
	comp=N,22050μm,0.4s						
FAGN				AML	AML		
	comp=E,25700μm,0.4s						
CADA	**Capodarco di F**	**0.60**	**45**	P	**Pg**	**02 01 20.9**	**-0.6**
CADA				AML	AML		
	comp=E,42150μm,0.8s						
CADA				AML	AML		
	comp=N,45950μm,0.8s						
FOSV	**Fossato di Vic**	**0.61**	**330**	P	**Pg**	**02 01 20.0**	**-1.5**
FOSV				S	**Sg**	**02 01 29.7**	**0.0**
FOSV				AML	AML		
	comp=E,8995μm,0.3s						
FOSV				AML	AML		
	comp=N,17750μm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**127**	P	**Pg**	**02 01 20.4**	**-1.5**
VCEL				AML	AML		
	comp=E,32300μm,1.0s						
VCEL				AML	AML		
	comp=N,25300μm,1.4s						
MMUR	**Monte Murano**	**0.68**	**349**	P	**Pg**	**02 01 21.3**	**-1.8**
MURB	**Monte Urbino**	**0.69**	**316**	Pg	**Pg**	**02 01 21.3**	**-1.7**
MURB	**Monte Urbino**	**0.69**	**316**	P	**Pg**	**02 01 21.8**	**-1.3**
MURB				AML	AML		
	comp=E,22250μm,0.3s						
MURB				AML	AML		
	comp=N,17450μm,1.5s						
MURB				AML	AML		
	comp=E,25050μm,0.2s						
MURB				AML	AML		
	comp=N,19450μm,1.0s						
MURB				AML	AML		
	comp=E,22300μm,0.3s						
MURB				AML	AML		
	comp=N,17500μm,1.5s						
PP3	**Marolino**	**0.69**	**28**	P	**Pg**	**02 01 22.0**	**-1.1**
PP3				AML	AML		
	comp=E,17250μm,1.2s						
PP3				AML	AML		
	comp=E,18050μm,1.2s						
PP3				AML	AML		
	comp=E,17300μm,1.1s						
PP3				AML	AML		
	comp=N,17900μm,0.5s						
PP3				AML	AML		
	comp=E,18000μm,1.2s						
PP3				AML	AML		
	comp=N,17150μm,0.5s						
T0110	**Collepietro**	**0.70**	**140**	P	**Pg**	**02 01 21.5**	**-1.9**
T0110				AML	AML		
	comp=N,31000μm,0.4s						
T0110				AML	AML		
	comp=E,22250μm,0.4s						
SRES	**S.Oreste - Sor**	**0.72**	**223**	P	**Pg**	**02 01 23.2**	**-0.6**
SRES				AML	AML		
	comp=N,6855μm,0.6s						
SRES				AML	AML		
	comp=E,10495μm,0.5s						
SSFR	**Montelago di S**	**0.73**	**337**	P	**Pg**	**02 01 22.2**	**-1.6**
SSFR				AML	AML		
	comp=E,20350μm,0.2s						
SSFR				AML	AML		
	comp=E,19200μm,0.2s						
SSFR				AML	AML		
	comp=N,11950μm,0.8s						
SSFR				AML	AML		
	comp=N,12100μm,0.7s						
ATTE	**AVT- Monte Tez**	**0.74**	**306**	P	**Pg**	**02 01 22.6**	**-1.5**
ATTE				AML	AML		
	comp=N,4335μm,0.6s						
ATTE				AML	AML		
	comp=E,6395μm,1.1s						
ATFO	**Monte Foce - G**	**0.74**	**324**	P	**Pg**	**02 01 22.6**	**-1.6**
ATFO				AML	AML		
	comp=N,6540μm,1.6s						
ATFO				AML	AML		
	comp=E,8715μm,1.5s						
ATFO				AML	AML		
	comp=N,6535μm,1.6s						
ARVD	**Arcevia**	**0.75**	**347**	P	**Pg**	**02 01 22.6**	**-1.7**
ARVD				AML	AML		
	comp=E,7270μm,0.8s						
ARVD				AML	AML		
	comp=N,3975μm,1.0s						
PTQR	**Pietraquaria**	**0.77**	**167**	P	**Pg**	**02 01 22.9**	**-1.7**
PTQR				AML	AML		
	comp=E,4985μm,0.7s						
PTQR				AML	AML		
	comp=E,4980μm,0.7s						
PTQR				AML	AML		
	comp=N,4165μm,0.7s						
MGAB	**Montegabbione**	**0.79**	**281**	P	**Pg**	**02 01 24.4**	**-0.7**
MGAB				AML	AML		
	comp=E,11005μm,1.6s						
MGAB				AML	AML		
	comp=N,11150μm,0.7s						
MGAB				AML	AML		
	comp=E,10685μm,1.6s						
MGAB				AML	AML		
	comp=N,12150μm,1.1s						
MGAB				AML	AML		
	comp=E,11030μm,1.6s						
MTCE	**Montecelio**	**0.81**	**203**	P	**Pg**	**02 01 24.2**	**-1.2**
MTCE				AML	AML		
	comp=N,8070μm,1.1s						
MTCE				AML	AML		
	comp=E,12900μm,0.7s						
FRON	**Frontone**	**0.82**	**336**	P	**Pg**	**02 01 23.4**	**-2.1**
FRON				AML	AML		
	comp=E,5120μm,0.6s						
FRON				AML	AML		
	comp=N,7120μm,1.0s						
ATVO	**AVT- Monte Val**	**0.83**	**318**	P	**Pg**	**02 01 24.1**	**-1.7**
ATVO				AML	AML		
	comp=E,5865μm,1.5s						
ATVO				AML	AML		
	comp=N,4895μm,1.2s						
CERT	**Cerreto**	**0.83**	**190**	P	**Pg**	**02 01 24.4**	**-1.5**
CERT				AML	AML		
	comp=E,11650μm,0.5s						
CERT				AML	AML		
	comp=N,9755μm,0.4s						
AOI	**Ancona**	**0.84**	**22**	P	**Pg**	**02 01 23.9**	**-2.1**
AOI				AML	AML		
	comp=E,4435μm,0.5s						
AOI				AML	AML		
	comp=N,3470μm,0.4s						
COR1	**Corinaldo**	**0.87**	**352**	P	**Pg**	**02 01 25.0**	**-1.5**
COR1				AML	AML		
	comp=E,23700μm,0.7s						
COR1				AML	AML		
	comp=N,9765μm,1.4s						
COR1				AML	AML		
	comp=N,10050μm,1.3s						
COR1				AML	AML		
	comp=E,12310μm,0.7s						
ATMI	**Monte Miggiano**	**0.87**	**311**	P	**Pg**	**02 01 25.3**	**-1.2**
ATMI				AML	AML		
	comp=N,14800μm,0.9s						
ATMI				AML	AML		
	comp=E,12200μm,1.6s						
ATMI				AML	AML		
	comp=N,14850μm,0.9s						
ATPI	**Pietralunga -**	**0.89**	**321**	P	**Pg**	**02 01 25.2**	**-1.7**
ATPI				AML	AML		
	comp=N,5195μm,1.6s						
ATPI				AML	AML		
	comp=E,6395μm,1.2s						
PIEI	**Pieia**	**0.90**	**329**	P	**Pg**	**02 01 25.1**	**-1.9**
PIEI				AML	AML		
	comp=E,3300μm,1.5s						
PIEI				AML	AML		
	comp=N,4010μm,1.2s						
PIEI				AML	AML		
	comp=E,3295μm,1.5s						
PIEI				AML	AML		
	comp=N,4015μm,1.2s						
MPAG	**Monte Paganucc**	**0.91**	**341**	P	**Pg**	**02 01 25.5**	**-1.8**
MPAG				AML	AML		
	comp=E,4325μm,0.9s						
MPAG				AML	AML		
	comp=N,5120μm,0.9s						
MPAG				AML	AML		
	comp=E,4310μm,0.9s						
MPAG				AML	AML		
	comp=N,4955μm,0.9s						
INTR	**Introdacqua**	**0.93**	**144**	P	**Pg**	**02 01 25.2**	**-2.5**
INTR				AML	AML		
	comp=E,7μm,0.8s						
INTR				AML	AML		
	comp=N,10265μm,0.7s						
INTR				AML	AML		
	comp=N,7μm,0.7s						
INTR				AML	AML		
	comp=E,7240μm,0.8s						
INTR				AML	AML		
	comp=E,7μm,0.8s						
SACS	**San Casciano d**	**0.93**	**275**	P	**Pg**	**02 01 27.4**	**-0.4**
SACS				AML	AML		
	comp=N,7130μm,0.8s						
SACS				AML	AML		
	comp=N,7405μm,0.8s						
SACS				AML	AML		
	comp=E,8430μm,1.5s						
SACS				AML	AML		
	comp=E,8400μm,1.4s						
RCAV	**Rocca di Cave**	**0.94**	**191**	P	**Pg**	**02 01 26.4**	**-1.4**
RCAV				AML	AML		
	comp=E,12150μm,0.5s						
RCAV				AML	AML		
	comp=N,16150μm,0.5s						
NARO	**Abbazia di Nar**	**0.95**	**333**	P	**Pg**	**02 01 25.8**	**-2.1**
NARO				AML	AML		
	comp=E,3825μm,1.3s						
NARO				AML	AML		
	comp=N,3725μm,1.1s						
VVLD	**Villa Vallelon**	**0.96**	**160**	P	**Pg**	**02 01 26.6**	**-1.6**
VVLD				AML	AML		
	comp=E,7675μm,1.1s						
VVLD				AML	AML		
	comp=N,7585μm,0.9s						

APEC Apecchio 0.96 325 P Pb 02 01 26.7 -1.4
APEC AML AML
comp=E,1144µm,0.7s
APEC AML AML
comp=E,5820µm,0.8s
APEC AML AML
comp=N,1185µm,0.9s
APEC AML AML
comp=N,6235µm,1.0s
FSSB Fossombrone 0.97 343 P Pg 02 01 26.4 -1.9
FSSB AML AML
comp=E,8240µm,0.4s
FSSB AML AML
comp=N,10000µm,0.5s
GUAR Guarcino 0.98 174 P Pb 02 01 27.6 -0.8
GUAR AML AML
comp=N,6965µm,0.7s
GUAR AML AML
comp=E,7270µm,0.8s
BADI Badiali 1.00 318 P Pb 02 01 27.4 -1.4
RMP Rome, Mte Porz 1.02 200 P Pb 02 01 28.5 -0.6
LATE Laterza 1.02 262 Pg Pb 02 01 28.3 -0.8
LPEL Lama dei Pelig 1.04 134 P Pb 02 01 27.0 -2.4
LPEL AML AML
comp=E,4950µm,0.5s
LPEL AML AML
comp=N,5315µm,1.3s
CAFI Castiglion Fio 1.05 303 P Pb 02 01 28.6 -1.0
CAFI AML AML
comp=N,2910µm,1.1s
CAFI AML AML
comp=N,3045µm,1.1s
CAFI AML AML
comp=E,4660µm,0.9s
CAFI AML AML
comp=E,4795µm,0.9s
VIVA Pratoni del Vi 1.06 197 P Pb 02 01 28.9 -0.9
VIVA AML AML
comp=E,14550µm,0.5s
VIVA AML AML
comp=N,16750µm,0.5s
RDP Rocca di Papa 1.07 199 P Pb 02 01 28.8 -1.1
RDP AML AML
comp=E,18450µm,0.5s
RDP AML AML
comp=N,22900µm,0.7s
MA9 Marino 1.07 201 P Pb 02 01 29.4 -0.5
MA9 AML AML
comp=E,12800µm,0.5s
MA9 AML AML
comp=N,12500µm,0.6s
SAMA S.Maria delle 1.08 204 P Pb 02 01 29.2 -0.8
SF03 Valle Cupa 1.10 272 P Pb 02 01 30.4 0.0
MCIV Monte Civitell 1.10 271 P Pb 02 01 30.0 -0.5
MCIV AML AML
comp=N,2110µm,0.9s
MCIV AML AML
comp=E,2615µm,0.8s
SF11 Podere del Sol 1.10 276 P Pn 02 01 31.1 +0.4
SSP9 Sansepolcro 1.11 317 P Pb 02 01 29.7 -0.9
SSP9 AML AML
comp=N,6225µm,1.4s
SSP9 AML AML
comp=E,6895µm,1.5s
PARC Parchiule 1.11 322 P Pb 02 01 29.1 -1.5
PARC AML AML
comp=E,4060µm,0.6s
PARC AML AML
comp=N,4685µm,0.8s
SF04 Casetta 1.12 274 P Pb 02 01 30.7 0.0
SF04 AML AML
comp=E,2460µm,1.0s
SF04 AML AML
comp=N,2410µm,0.8s
TOLF Tolfa 1.12 231 P Pb 02 01 30.5 -0.3
TOLF AML AML
comp=E,5245µm,1.4s
TOLF AML AML
comp=N,5765µm,1.0s
POFI Posta Fibreno 1.12 159 P Pb 02 01 29.3 -1.6
POFI AML AML
comp=E,5825µm,0.7s
POFI AML AML
comp=N,2890µm,0.6s
POFI AML AML
comp=E,5825µm,0.7s
POFI AML AML
comp=N,3245µm,1.5s
SF13 Bagnolo 1.15 273 P Pb 02 01 31.2 0.0
LAV9 Lanuvio 1.15 198 P Pb 02 01 30.8 -0.4
LAV9 AML AML
comp=E,13550µm,1.3s
LAV9 AML AML
comp=N,15200µm,0.9s
SF14 Selvena 1.15 270 P Pb 02 01 30.9 -0.4
LRP Arpino 1.16 165 P Pb 02 01 30.6 -0.9
LRP AML AML
comp=E,3120µm,1.0s
LRP AML AML
comp=N,3615µm,1.1s
SF01 Poggio Pratacc 1.19 273 P Pn 02 01 31.9 +0.1
SF01 AML AML
comp=E,4755µm,0.7s
SF01 AML AML
comp=N,3450µm,0.7s
PESA Pesaro 1.20 348 P Pn 02 01 30.2 -1.7
PESA AML AML
comp=E,7250µm,1.3s
PESA AML AML
comp=N,6190µm,1.4s
GIUL Giuliano Di Ro 1.21 177 P Pn 02 01 32.1 0.0
GIUL AML AML
comp=N,5150µm,0.7s
GIUL AML AML
comp=E,3335µm,1.6s
CRE Caprese Michel 1.23 314 P Pn 02 01 31.9 -0.6
ARCI Arcidosso 1.25 274 P Pb 02 01 33.5 +0.4
ARCI AML AML
comp=E,1022µm,0.7s
ARCI AML AML
comp=N,1150µm,1.6s
RNI2 Rionero Sannit 1.29 145 P Pb 02 01 34.2 +0.5
RNI2 AML AML
comp=E,5395µm,1.4s
RNI2 AML AML
comp=E,5585µm,1.4s
RNI2 AML AML
comp=N,5845µm,0.8s
RNI2 AML AML
comp=N,5710µm,0.8s
LIK San Giovanni I 1.30 167 P Pn 02 01 33.3 0.0
LIK San Giovanni I 1.30 167 AML AML
comp=N,4525µm,0.7s
LIK AML AML
comp=E,6665µm,1.1s
CERA Filignano 1.33 152 P Pn 02 01 33.4 -0.4
CERA AML AML
comp=N,4045µm,1.0s
CERA AML AML
comp=N,4220µm,0.9s
CERA AML AML
comp=E,6085µm,0.8s
CERA AML AML
comp=E,6280µm,0.8s
FRES Fresagrandinar 1.36 125 P Pb 02 01 35.0 0.0
TRIV Trivento 1.43 134 P Pb 02 01 36.5 +0.4
TRIV AML AML
comp=N,4775µm,0.9s
TRIV AML AML
comp=E,6285µm,0.9s
TRIV AML AML
comp=E,7180µm,0.9s
TRIV AML AML
comp=N,5495µm,0.9s
SFI Santa Sofia 1.49 320 P Pn 02 01 36.6 +0.6
FROS Frosini 1.54 287 P Pn 02 01 37.1 +0.4
CSNT Castellina Chi 1.55 298 P Pn 02 01 37.1 +0.3
CSNT AML AML
comp=E,1045µm,1.1s
CSNT AML AML
comp=N,882µm,1.3s
VAGA Valle Agricola 1.57 149 P Pb 02 01 38.5 +0.1
VAGA AML AML
comp=N,2230µm,0.8s
VAGA AML AML
comp=N,2145µm,0.8s
VAGA AML AML
comp=E,1535µm,0.9s
VAGA AML AML
comp=E,1600µm,0.9s
OSSC Osservatorio P 1.60 299 Pn Pn 02 01 36.8 -0.7
OSSC Osservatorio P 1.60 299 P Pn 02 01 38.2 +0.7
OSSC AML AML
comp=E,1185µm,0.9s
OSSC AML AML
comp=N,1340µm,1.0s
OSSC AML AML
comp=E,1145µm,1.2s
OSSC AML AML
comp=N,1140µm,1.2s
RUFI Rufina 1.62 312 P Pn 02 01 38.0 +0.2
CASP Castiglione de 1.70 271 Pn Pn 02 01 37.8 -1.1
CASP Castiglione de 1.70 271 P Pn 02 01 39.0 +0.2
CIGN Sant'Elia a Pi 1.70 130 P Pb 02 01 40.0 -0.6
TRIF Trifonti 1.70 282 P Pn 02 01 39.4 +0.4
TRIF AML AML
comp=N,912µm,0.6s
TRIF AML AML
comp=E,725µm,0.5s
PIGN Pignataro Magg 1.74 154 P Pn 02 01 40.2 +0.9
MELA Melanico ??? S 1.80 126 P Pn 02 01 40.8 +0.6
MELA AML AML
comp=E,3985µm,0.8s
MELA AML AML
comp=N,4375µm,0.6s
MELA AML AML
comp=N,4160µm,0.6s
MELA AML AML
comp=E,4130µm,0.8s
BRIS BRISIGHELLA 1.84 319 P Pb 02 01 42.1 -0.9
DUGI Dugi Otok 1.84 48 ePn Pn 02 01 40.6 -0.1
MPPT Montemurlo 1.93 309 P Pn 02 01 42.7 +0.7
MPPT AML AML
comp=E,1100µm,1.2s
MPPT AML AML
comp=N,1235µm,1.3s
PAOL Paolisi 2.02 149 Pn Pn 02 01 43.2 -0.1
APRC Apricena 2.03 119 P Pn 02 01 43.8 +0.4
APRC AML AML
comp=N,2410µm,0.7s
APRC AML AML
comp=E,1920µm,0.6s
VIRC Vir 2.05 41 ePn Pn 02 01 42.9 -0.6
MORI Morici 2.15 58 ePn Pn 02 01 45.0 0.0
SGRT San Giovanni R 2.16 117 Pn Pn 02 01 44.0 -1.2
SGRT San Giovanni R 2.16 117 P Pn 02 01 45.6 +0.4
SGRT AML AML
comp=N,1505µm,0.5s
SGRT AML AML
comp=E,1710µm,0.7s
NVLJ Novalja 2.17 34 ePn Pn 02 01 44.5 -0.8
BRJN Brijuni 2.18 11 ePn Pn 02 01 44.9 -0.5
RABC Rab 2.30 30 ePn Pn 02 01 46.6 -0.5
SMRN Sveta Marina 2.37 17 ePn Pn 02 01 47.4 -0.7
VLC Villacollemand 2.46 305 Pn Pn 02 01 48.9 -0.4
UDBI Udbina 2.57 46 ePn Pn 02 01 51.7 +0.8
KIJV Kijevo 2.66 61 ePn Pn 02 01 52.2 +0.2
LSTV Lastovo 2.74 89 ePn Pn 02 01 52.7 -0.3
PLIT Plitvice 2.75 39 ePn Pn 02 01 53.3 -0.1
PALZ Palazzo San Ge 2.77 130 AML AML
comp=N,1800µm,0.9s
PALZ AML AML
comp=E,1815µm,1.4s
TEOL Teolo 2.81 338 Pn Pn 02 01 53.7 -0.3
GRAM Graiana 2.84 308 AML AML
comp=N,672µm,1.6s
GRAM AML AML
comp=E,699µm,1.0s
ACER Acerenza 2.87 133 AML AML
comp=N,1032µm,0.9s
ACER AML AML
comp=E,845µm,0.6s
ACER AML AML
comp=E,908µm,0.6s
ACER AML AML
comp=N,964µm,0.7s
MAKA Makarska 2.87 78 ePn Pn 02 01 55.0 +0.2
PRMA PARMA 2.88 315 Pn Pn 02 01 55.3 +0.4
SMPL Sampolo 2.96 258 P Pn 02 01 58.0 +1.8
TRI Trieste 2.97 8 Pn Pn 02 01 54.9 -1.3
RICI Ricice 2.99 75 ePn Pn 02 01 57.0 +0.5
MSSA Maissana 3.08 301 Pn Pn 02 01 58.5 +0.7
PGF Pioggiola 3.09 267 eP Pn 02 01 59.3 +1.3
PGF eSn Sn 02 02 31.6 -3.1
comp=N,58nm,0.7s
PGF Pioggiola 3.09 267 P Pn 02 01 59.2 +1.3
SABO M.te Sabotino 3.22 5 Pn Pn 02 01 59.3 -0.5
A251A Rujevac 3.25 42 ePn Pn 02 02 00.1 0.0
ROVR Rover Verones 3.25 333 P Pn 02 02 01.9 +1.6
CGRP Cima Grappa 3.26 343 P Pn 02 02 01.1 +0.6
CGRP AML AML
comp=E,836µm,1.1s
CGRP AML AML
comp=E,848µm,1.1s
CGRP AML AML
comp=N,843µm,1.4s
CGRP AML AML
comp=N,802µm,1.4s
OZLJ Ozalj 3.29 29 ePn Pn 02 02 01.0 +0.4
STON Ston 3.33 87 ePn Pn 02 01 59.8 -1.4
STON Ston 3.33 87 ePn Pn 02 02 00.7 -0.5
STON eSn Sn 02 02 41.2 +0.7
STON Ston 3.33 87 P Pn 02 01 60.0 -1.3
STON AML AML
comp=N,232µm,0.7s
STON AML AML
comp=E,200µm,0.7s
AJAC Base Areonaval 3.38 257 P Pn 02 02 03.4 +1.6
MATE Matera 3.39 128 ⇑P Pn 02 02 02.9 +0.9
MATE Matera 3.39 128 P Pn 02 02 03.2 +1.3
MATE AML AML
comp=E,469µm,0.8s
MATE AML AML
comp=N,464µm,0.6s
DOSS Dosso del Somm 3.42 336 AML AML
comp=E,488µm,0.9s
DOSS AML AML
comp=N,524µm,0.9s
DOSS AML AML
comp=N,413µm,0.7s
DOSS AML AML
comp=E,398µm,0.6s
SALO Salr 3.43 327 Pn Pn 02 02 04.1 +1.5
SALO Salr 3.43 327 P Pn 02 02 04.3 +1.7
MPRI Monte Prat 3.47 358 P Pn 02 02 03.2 -0.1
MPRI AML AML
comp=E,846µm,1.6s
MPRI AML AML
comp=N,776µm,0.9s
STAL STALIGIAL 3.51 355 Pn Pn 02 02 03.0 -0.6
BLY Banja Luka 3.51 54 ePn Pn 02 02 05.4 +1.6
MAGA Magasa 3.52 330 AML AML
comp=N,532µm,0.4s
MAGA AML AML
comp=E,862µm,0.6s
NOCI Noci 3.52 123 AML AML
comp=E,428µm,0.6s
NOCI AML AML
comp=N,475µm,1.2s
LUSI Trento, Gardas 3.57 334 P Pn 02 02 05.8 +1.3
LUSI AML AML
comp=N,399µm,0.7s
LUSI AML AML
comp=E,358µm,0.7s
CIMO Cimolais 3.58 352 Pn Pn 02 02 04.5 -0.2
DBRK Dubrovnik 3.67 90 ePn Pn 02 02 05.2 -0.7
PRED Cave del Predi 3.68 4 Pn Pn 02 02 04.3 -1.9
CLUD Cludinico 3.69 357 Pn Pn 02 02 05.2 -1.1
ZONE Zone 3.71 325 AML AML
comp=N,269µm,0.6s
ZONE AML AML
comp=E,186µm,1.5s
ACOM Acomizza, Ital 3.79 4 AML AML
comp=N,453µm,1.1s
ACOM AML AML
comp=N,464µm,1.1s
ACOM AML AML
comp=E,548µm,1.1s
ACOM AML AML
comp=E,510µm,1.2s
MABI Malga Bissina 3.80 331 P Pn 02 02 09.6 +1.8
MABI AML AML
comp=N,128µm,1.6s
MABI AML AML
comp=E,120µm,1.2s
OBKA Obir 3.87 14 ePn Pn 02 02 08.9 +0.2
comp=E,3.5nm,0.3s
OBKA eSn Sn 02 02 56.4 +2.5
comp=E,43nm,0.8s
MYKA Terra Mystica 3.87 5 ePn Pn 02 02 09.2 +0.4
comp=E,1.6nm,0.2s
MYKA eSn Sn 02 02 54.0 -0.1
comp=E,15nm,0.4s
KOSI Kohlern 3.91 341 P Pn 02 02 10.7 +1.3
LOBO Lobor 3.97 30 ePn Pn 02 02 09.4 -0.6
ABTA Abfaltersbach 4.00 353 ePn Pn 02 02 11.4 +0.8
comp=E,50nm,0.6s
ABTA eSn Sn 02 03 01.5 +4.2
comp=E,72nm,0.6s
SOKA Soboth 4.13 18 ePn Pn 02 02 14.0 +1.8
comp=E,3.0nm,0.3s
SOKA eSn Sn 02 03 01.8 +1.5
comp=E,18nm,0.8s
RISI Rein 4.25 350 AML AML
comp=E,526µm,1.5s
RISI AML AML
comp=N,561µm,0.5s
KBA Koelnbreinsper 4.31 2 ePn Pn 02 02 16.0 +1.1
comp=N,21nm,0.3s
KBA eSn Sn 02 03 05.0 0.0
comp=N,26nm,0.5s
SBF Sospel 4.33 287 eP Pn 02 02 16.3 +1.3
SBF eSn Sn 02 03 01.0 -4.3
comp=N,38nm,0.5s
ESCA l'Escarene 4.36 286 P Pn 02 02 15.6 +0.1
TURF col de Turini 4.38 288 P Pn 02 02 17.2 +1.3
PDG Podgorica 4.50 92 ⇑P Pn 02 02 19.1 +1.8
PDG Podgorica 4.50 92 ePn Pn 02 02 18.4 +1.1
PDG eSn Sn 02 03 10.3 +0.9
SPIF crte de Spivo 4.51 289 P Pn 02 02 20.1 +2.5
MVIF Mont Vial 4.54 286 P Pn 02 02 20.2 +2.3
FETA Feichten 4.59 339 ePn Pn 02 02 21.6 +2.9
comp=N,2.7nm,0.3s
FETA eSn Sn 02 03 16.8 +4.9
comp=N,11nm,0.6s
WTTA Wattenberg 4.62 347 ePn Pn 02 02 21.7 +2.5
comp=N,0.4nm,0.2s
WTTA eSn Sn 02 03 17.1 +4.3
comp=N,60nm,0.8s
DAVOX Davos/Dischmat 4.65 331 Pn Pn 02 02 21.5 +2.0
comp=N,5.6nm,0.3s,baz=147,slow=17,SNR=9.6
DAVOX Sn Sn 02 03 17.5 +4.2
comp=N,2.0nm,0.3s,baz=153,slow=9.0,SNR=2.2
SQTA Sankt Quirin 4.66 343 i Pn Pn 02 02 21.3 +1.7
comp=N,2.9nm,0.2s,SNR=5.0
SQTA eSn Sn 02 03 17.8 +4.2
comp=N,21nm,0.4s
CALF Calern 4.67 284 P Pn 02 02 21.4 +1.6
ISO Isola 4.67 290 P Pn 02 02 23.0 +3.2
BBLS Lazići 4.68 74 ePn Pn 02 02 21.5 +1.7
WATA Walderalm 4.70 347 i Pn Pn 02 02 22.8 +2.5
comp=N,29nm,0.6s,SNR=8.9
WATA eSn Sn 02 03 17.3 +2.7
comp=N,7.8nm,0.3s
ARSA Arzberg 4.78 20 ePn Pn 02 02 20.7 -0.5
comp=N,5.4nm,0.5s
ARSA eSn Sn 02 03 13.9 -2.4
comp=N,5.2nm,0.4s
MOTA Moosalm 4.80 343 i Pn Pn 02 02 24.0 +2.4
comp=N,15nm,0.8s,SNR=4.7
MOTA eSn Sn 02 03 23.0 +5.9
comp=N,15nm,0.4s
LMR La Mourre 4.92 279 eP Pn 02 02 23.4 +0.4
LMR eSn Sn 02 03 15.0 -4.6
comp=N,7.5nm,0.6s
BIOA Bad Ischl, Aus 4.93 4 Pn Pn 02 02 25.0 +1.7
comp=N,4.9nm,0.3s,SNR=6.6
BIOA eSn Sn 02 03 24.1 +4.0
comp=N,44nm,0.7s
SJES Sjenica 5.01 82 ePn Pn 02 02 26.2 +1.8
SJES eSn Sn 02 03 22.0 -0.1
RETA Reutte 5.02 341 ePn Pn 02 02 26.8 +2.3
comp=N,9.3nm,0.6s
RETA eSn Sn 02 03 23.0 +0.7
comp=N,11nm,0.5s
MBDF Montbardon 5.03 295 eP Pn 02 02 26.4 +1.6
MBDF eSn Sn 02 03 17.9 -4.9
comp=N,51nm,1.0s
TRIGF Trigance 5.04 283 P Pn 02 02 26.6 +1.8
DAVA Damuels 5.08 334 ePn Pn 02 02 27.1 +1.7
comp=N,2.0nm,0.5s
DAVA eSn Sn 02 03 27.7 +3.7
comp=N,35nm,0.5s
OGAG Argentiere 5.10 292 P Pn 02 02 31.7 +6.0
FLAF Flassans-sur-l 5.11 279 P Pn 02 02 27.3 +1.6
MOA Molln 5.14 8 ePn Pn 02 02 26.4 +0.3
MOA eSn Sn 02 03 26.2 +1.1
MOA Molln 5.14 8 ePn Pn 02 02 26.8 +0.7
comp=N,0.1nm,0.1s
MOA eSn Sn 02 03 19.1 -6.1
comp=N,9.1nm,0.8s
DIVS Divibare 5.14 73 ePn Pn 02 02 28.0 +1.8
DIVS eSn Sn 02 03 25.6 +0.3
IVAS Ivanjica 5.17 79 ePn Pn 02 02 26.7 +0.2
IVAS eSn Sn 02 03 25.5 -0.4
TIR Tirane 5.18 104 ⇓P Pn 02 02 27.1 +0.4
TIR Tirane 5.18 104 Pn Pn 02 02 25.8 -0.9
TIR Tirane 5.18 104 ePn Pn 02 02 27.4 +0.8
TIR eSn Sn 02 03 27.0 +0.9
MORH Mrgy, Hungar 5.21 47 ePn Pn 02 02 26.7 -0.4
DIX Grande Dixence 5.29 311 P Pn 02 02 32.2 +3.8
FRGS Fruska Gora 5.35 61 ⇑P Pg 02 02 58.1 +6.0
FRGS Fruska Gora 5.35 61 ePn Pn 02 02 28.8 -0.2
LPG La Plagne 5.37 303 eP Pn 02 02 31.3 +1.8
LPG eSn Sn 02 03 25.8 -5.4
comp=N,40nm,0.9s
VAE Valguarnera 5.37 169 Pn Pb 02 02 37.4 -5.8
comp=N,0.4nm,0.3s,baz=0.0,slow=20,SNR=2.9
LPL La Plagne 5.39 303 eP Pn 02 02 31.6 +1.9
LPL eSn Sn 02 03 25.9 -5.7
comp=N,38nm,1.0s
RONA Rosalia, Austr 5.40 23 ePn Pn 02 02 29.8 +0.1
comp=N,0.9nm,0.2s
RONA eSn Sn 02 03 30.1 -1.6
comp=N,15nm,0.7s
ARTF Artigues 5.45 281 P Pn 02 02 32.1 +1.7
TRUS Trudelj 5.46 72 ePn Pn 02 02 31.3 +0.8
CONA Conrad Observa 5.50 19 ePn Pn 02 02 29.7 -1.4
comp=N,11nm,0.5s
CONA eSn Sn 02 03 33.6 -0.5
comp=N,13nm,0.6s
SENIN Lac Senin/Sane 5.52 313 Pn Pn 02 02 32.9 +1.3
RSL Roselend 5.54 304 P Pn 02 02 34.9 +3.2
BSTF la Bastide-des 5.60 284 P Pn 02 02 34.4 +1.9
GRUS Gruza 5.61 76 ePn Pn 02 02 32.8 +0.2
GRUS eSn Sn 02 03 37.4 +0.6
SMRF Simiane la Rot 5.67 285 eP Pn 02 02 35.7 +2.3
SMRF eSn Sn 02 03 33.2 -5.1
comp=N,29nm,1.0s
ORIF Oris-en-Rattie 5.70 295 eP Pn 02 02 36.6 +2.8
ORIF eSn Sn 02 03 33.6 -5.4
comp=N,22nm,0.7s
ORIF Oris-en-Rattie 5.70 295 P Pn 02 02 37.1 +3.3
AIGLE Aigle 5.70 311 P Pn 02 02 36.4 +2.5
RUSF Rustrel 5.73 284 P Pn 02 02 37.2 +3.0
ARBF Arbois 5.78 280 P Pn 02 02 37.4 +2.4
SELS Selova 5.84 83 ePn Pn 02 02 36.2 +0.4
SELS eSn Sn 02 03 41.9 -0.7
KEK Kerkira 5.85 119 Pn Pn 02 02 37.0 +1.1
TORNY Torny/Romont 5.97 314 P Pn 02 02 39.7 +2.3
SLE Schleitheim 5.99 328 P Pn 02 02 39.0 +1.3
BALST Balsthal 5.99 322 P Pn 02 02 39.5 +1.7
GEC2 GERESS Array S 6.09 3 Pn Pn 02 02 38.0 -1.2
GERES GERESS Array B 6.09 3 Pn Pn 02 02 38.9 -0.3
comp=N,0.8nm,0.3s,baz=174,slow=13,SNR=9.1
GERES Sn Sn 02 03 46.6 -2.0
comp=N,2.1nm,0.3s,baz=185,slow=27,SNR=6.7
comp=N,1.9nm,0.3s
GERES GERESS Array B 6.09 3 Pn Pn 02 02 37.4 -1.8
KBN Korca 6.09 108 Pn Pn 02 02 40.2 +1.0
CKRC Cesky Krumlov 6.10 7 ePN Pn 02 02 38.4 -0.9
CKRC eSN Sn 02 03 46.9 -2.0
SKO Skopje 6.17 95 i Pn Pn 02 02 41.4 +1.1
GIMEL St. Georges / 6.20 310 P Pn 02 02 43.1 +2.3
GIMEL St. Georges / 6.20 310 S Sn 02 03 55.3 +3.9
BOURR Bourrignon 6.25 320 P Pn 02 02 42.9 +1.5

FELD	**Feldberg im Sc**	**6.27**	**326**	P		**Pn**	**02 02 42.9**	**+1.1**
BOVS	**Bovan**	**6.29**	**79**	⇑P		**Pn**	**02 02 41.4**	**-0.6**
BOVS	**Bovan**	**6.29**	**79**	*e*Pn		**Pn**	**02 02 41.6**	**-0.4**
CABF	**La Chapelle**	**6.34**	**310**	*e*P		**Pn**	**02 02 46.0**	**+3.3**
CABF				*e*Sn		**Sn**	**02 03 48.8**	**-6.2**
	comp=N,69nm,1.2s							
BARS	**Barje**	**6.36**	**87**	*e*Pn		**Pn**	**02 02 43.5**	**+0.7**
BARS				*e*Sn		**Sn**	**02 03 54.2**	**-1.0**
KHC	**Kasperske Hory**	**6.37**	**2**	Pn		**Pn**	**02 02 40.6**	**-2.4**
KHC	**Kasperske Hory**	**6.37**	**2**	*e*PN		**Pn**	**02 02 42.2**	**-0.8**
KHC				*e*SN		**Sn**	**02 03 52.2**	**-3.3**
KIZ	**Kirchzarten**	**6.37**	**326**	S		**Sn**	**02 03 55.0**	**-0.5**
KIZ	**Kirchzarten**	**6.37**	**326**	P		**Pn**	**02 02 44.1**	**+1.1**
VIVF	**Saint-Julien-l**	**6.50**	**292**	*e*P		**Pn**	**02 02 47.4**	**+2.7**
VIVF				*e*Sn		**Sn**	**02 03 52.5**	**-6.1**
	comp=N,6.2nm,0.7s							
BFO	**Black Forest**	**6.52**	**330**	Pn		**Pn**	**02 02 45.4**	**+0.3**
PRVS	**Prvonek**	**6.57**	**89**	*e*Pn		**Pn**	**02 02 46.1**	**+0.3**
PRVS				*e*Sn		**Sn**	**02 03 59.5**	**-1.0**
VOGT	**Vogtsburg - To**	**6.57**	**326**	P		**Pn**	**02 02 47.0**	**+1.2**
ZAGS	**Zajecar**	**6.69**	**78**	*e*Pn		**Pn**	**02 02 47.5**	**+0.1**
BZS	**Buzias**	**6.70**	**62**	*e*Pn		**Pn**	**02 02 47.8**	**+0.3**
OPP	**Oppenau**	**6.71**	**330**	P		**Pn**	**02 02 49.9**	**+2.3**
HINF	**Hinteralfeld**	**6.73**	**321**	*e*P		**Pn**	**02 02 49.5**	**+1.5**
HINF				*e*Sn		**Sn**	**02 03 57.8**	**-6.6**
	comp=N,56nm,0.9s							
STIP	**Stip**	**6.78**	**96**	*i* Pn		**Pn**	**02 02 50.7**	**+2.2**
BOSS	**Bosilegrad**	**6.87**	**89**	*e*Pn		**Pn**	**02 02 50.8**	**+0.9**
BOSS				*e*Sn		**Sn**	**02 04 06.3**	**-1.5**
ECH	**Echery**	**6.89**	**324**	Pn		**Pn**	**02 02 50.8**	**+0.6**
ECH	**Echery**	**6.89**	**324**	P		**Pn**	**02 02 51.0**	**+0.8**
ECH	**Echery**	**6.89**	**324**	P		**Pn**	**02 02 51.0**	**+0.8**
ECH				S		**Sn**	**02 04 08.8**	**+0.5**
LASF	**Ste Croix**	**6.91**	**284**	*e*P		**Pn**	**02 02 51.4**	**+1.0**
LASF				*e*Sn		**Sn**	**02 04 02.7**	**-6.1**
	comp=N,9.1nm,0.9s							
ZAPS	**Zavoj**	**6.95**	**83**	*e*Pn		**Pn**	**02 02 51.7**	**+0.7**
ZAPS				*e*Sn		**Sn**	**02 04 08.0**	**-1.8**
VRAC	**Vranov**	**6.96**	**19**	Pn		**Pn**	**02 02 51.2**	**+0.1**
	comp=N,0.3nm,0.3s,baz=186,slow=9.7,SNR=1.3							
VRAC				Sn		**Sn**	**02 04 06.7**	**-3.2**
	comp=N,0.5nm,0.3s,baz=231,slow=6.5,SNR=2.5							
	comp=N,2.8nm,0.6s							
WLS	**Welschbruch**	**6.96**	**326**	P		**Pn**	**02 02 52.1**	**+0.9**
PSZ	**Piszkesteto**	**6.99**	**40**	Pn		**Pn**	**02 02 50.5**	**-1.1**
CDF	**Champ du Feu**	**7.00**	**326**	*e*P		**Pn**	**02 02 52.6**	**+0.9**
CDF				*e*Sn		**Sn**	**02 04 04.0**	**-7.0**
	comp=N,33nm,0.8s							
BLKB	**Belogradchik**	**7.00**	**80**	⇓P		**Pn**	**02 02 52.0**	**+0.4**
HAU	**Haudompre**	**7.11**	**320**	*e*P		**Pn**	**02 02 54.1**	**+1.0**
HAU				*e*Sn		**Sn**	**02 04 06.6**	**-7.0**
	comp=N,25nm,0.4s							
VAY	**Valandovo**	**7.14**	**99**	*i* Pn		**Pn**	**02 02 54.3**	**+0.7**
VTS	**Vitosha**	**7.41**	**88**	⇑P		**Pn**	**02 02 58.2**	**+0.8**
VTS	**Vitosha**	**7.41**	**88**	Pn		**Pn**	**02 02 56.5**	**-1.0**
VTS	**Vitosha**	**7.41**	**88**	*e*Pn		**Pn**	**02 02 58.3**	**+0.8**
LIT	**Litokhoron**	**7.49**	**108**	Pn		**Pn**	**02 02 59.2**	**+0.8**
KEST	**Kesra**	**7.63**	**204**	Pn		Pn	02 03 05.8	+5.4
	comp=N,1.1nm,0.3s,baz=328,slow=4.4,SNR=18							
SMF	**Signal de Mont**	**7.69**	**303**	*e*P		**Pn**	**02 03 02.7**	**+1.5**
SMF				*e*Sn		**Sn**	**02 04 20.9**	**-7.1**
	comp=N,14nm,0.7s							
PAGF	**Fort de Pagny**	**7.79**	**321**	*e*P		**Pn**	**02 03 04.6**	**+2.2**
PAGF				*e*Sn		**Sn**	**02 04 22.5**	**-7.8**
	comp=N,53nm,0.9s							
SFTF	**Sexfontaines**	**7.88**	**316**	*e*P		**Pn**	**02 03 05.5**	**+1.7**
SFTF				*e*Sn		**Sn**	**02 04 25.1**	**-7.6**
	comp=N,32nm,0.9s							
SRS	**Serrai**	**7.94**	**98**	*e*Pn		**Pn**	**02 03 05.7**	**+1.1**
SRS				*e*Sn		**Sn**	**02 04 31.9**	**-2.2**
LOR	**Lormes**	**7.98**	**307**	*e*P		**Pn**	**02 03 06.7**	**+1.5**
	baz=124							
LOR				*e*Sn		**Sn**	**02 04 27.8**	**-7.4**
	comp=N,15nm,0.7s							
LOR	**Lormes**	**7.98**	**307**	P		**Pn**	**02 03 06.5**	**+1.4**
MTLF	**Montolieu**	**8.05**	**278**	*e*P		**Pn**	**02 03 08.8**	**+2.8**
MTLF				*e*Sn		**Sn**	**02 04 29.7**	**-7.0**
	comp=N,2.2nm,0.5s							
AVF	**Avril sur Loir**	**8.06**	**303**	*e*P		**Pn**	**02 03 07.6**	**+1.4**
AVF				*e*Sn		**Sn**	**02 04 29.8**	**-7.2**
	comp=N,18nm,1.1s							
MEZF	**Maizieres J'vi**	**8.07**	**318**	*e*P		**Pn**	**02 03 09.2**	**+2.8**
MEZF				*e*Sn		**Sn**	**02 04 29.7**	**-7.7**
	comp=N,29nm,0.9s							
SSF	**Saint Saulge**	**8.09**	**305**	*e*P		**Pn**	**02 03 07.3**	**+0.7**
SSF				*e*Sn		**Sn**	**02 04 30.7**	**-7.1**
	comp=N,19nm,1.0s							
SAVF	**Savonnieres en**	**8.12**	**319**	*e*P		**Pn**	**02 03 09.2**	**+2.3**
SAVF				*e*Sn		**Sn**	**02 04 30.5**	**-7.9**
	comp=N,22nm,0.9s							
BRG	**Berggiesshubel**	**8.12**	**3**	*e*(P)		Pn	02 03 16.1	+9.0
BRG				Amp			02 03 17.2	
	comp=Z,20nm,1.4s							
BRG				*ex*		x	02 04 46.2	
BRG				*ex*		x	02 05 35.6	
BRG				Amp			02 06 04.7	
	comp=Z,59nm,1.7s							
BGF	**Bois d'Agland**	**8.28**	**301**	*e*P		**Pn**	**02 03 11.1**	**+1.9**
BGF				*e*Sn		**Sn**	**02 04 35.0**	**-7.4**
	comp=Z,5.6nm,0.5s							
CAF	**Calviac**	**8.31**	**289**	*e*P		**Pn**	**02 03 11.9**	**+2.2**
CLL	**Collm**	**8.54**	**359**	Pn		**Pn**	**02 03 12.3**	**-0.5**
CLL	**Collm**	**8.54**	**359**	*e*Pn		**Pn**	**02 03 14.0**	**+1.2**
CLL				*ex*		x	02 04 49.0	
CLL				*e*Sg		**Sg**	**02 05 48.0**	**+4.5**
PAND	**Andorre**	**8.58**	**272**	P		**Pn**	**02 03 15.9**	**+2.5**
TCF	**Toulx Ste Croi**	**8.59**	**298**	*e*P		**Pn**	**02 03 15.6**	**+2.2**
TCF				*e*Sn		**Sn**	**02 04 42.4**	**-7.6**
	comp=Z,11nm,1.0s							
ARR	**Arges**	**8.65**	**69**	⇓P		**Pn**	**02 03 17.1**	**+2.8**
ITM	**Ithomi**	**8.73**	**127**	Pn		**Pn**	**02 03 16.5**	**+1.1**
RJF	**Les Rejaudoux**	**8.77**	**291**	*e*P		**Pn**	**02 03 19.1**	**+3.1**
MONQ	**Montcuq**	**8.84**	**284**	P		**Pn**	**02 03 19.4**	**+2.5**
VOIR		**8.95**	**69**	⇑P		**Pn**	**02 03 20.0**	**+1.6**
LFF	**La Frestale**	**9.24**	**288**	*e*P		**Pn**	**02 03 24.2**	**+1.8**
RDO	**Rodhopi**	**9.35**	**96**	Pn		**Pn**	**02 03 24.5**	**+0.6**
EPF	**Esparros**	**9.43**	**276**	*e*P		**Pn**	**02 03 28.2**	**+3.2**
MLR	**Muntele Rosu**	**9.58**	**69**	Pn		**Pn**	**02 03 27.5**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=278,slow=17,SNR=1.8							
	comp=Z,3.4nm,0.9s							
ETSF	**Etsaut**	**10.09**	**275**	*e*P		**Pn**	**02 03 36.9**	**+2.8**
PANC	**Panciu**	**10.48**	**68**	⇑P		**Pn**	**02 03 37.0**	**-2.3**
IDI	**Anoyia**	**11.77**	**126**	Sn		**Sn**	**02 06 03.3**	**-5.0**
	comp=Z,0.3nm,0.3s,baz=243,slow=21,SNR=3.1							
ESDC	**Sonseca Array**	**13.27**	**262**	Pn		**Pn**	**02 04 18.5**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=69,slow=13,SNR=7.3							
AKASG	**Malin Array Be**	**13.55**	**49**	Pn		**Pn**	**02 04 21.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=237,slow=36,SNR=1.4							
	comp=Z,0.2nm,0.3s							
ELL	**Elmali**	**14.20**	**109**	P		**P**	**02 04 40.1**	**+2.3**
EKA	**Eskdalemuir Ar**	**16.46**	**325**	Pn		**Pn**	**02 04 59.9**	**0.0**
	baz=93,slow=18							
	comp=Z,0.7nm,0.6s							
HFS	**Hagfors**	**17.39**	**1**	P		**P**	**02 05 12.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=182,slow=36,SNR=1.8							
	comp=Z,1.3nm,0.8s							
NB2	**NORSAR Subarra**	**18.34**	**357**	P		**Pn**	**02 05 22.3**	**-1.0**
	comp=Z,12nm,1.7s,baz=175,slow=11							
NOA	**NORSAR Array B**	**18.34**	**357**	P		**P**	**02 05 23.8**	**+0.5**
	baz=172,slow=12,SNR=3.2							
	comp=Z,0.8nm,1.0s							
MMAI	**Mount Meron Ar**	**20.01**	**112**	P		Pn	02 05 43.9	+0.2
	comp=Z,7.3nm,0.8s,baz=325,slow=11,SNR=13							
	comp=Z,7.3nm,0.8s							
FINES	**FINESS Array B**	**20.24**	**18**	P		**P**	**02 05 44.6**	**+0.5**
	comp=Z,6.6nm,1.0s,baz=205,slow=8.4,SNR=10							
	comp=Z,6.6nm,1.0s							
FINES	**FINESS Array B**	**20.24**	**18**	P		**P**	**02 05 44.8**	**+0.7**
FIA1	**FINESS Array S**	**20.24**	**18**	P		**P**	**02 05 44.5**	**+0.4**
KVAR	**Kislovodsk Arr**	**21.45**	**77**	P		**P**	**02 05 59.8**	**+2.4**
	comp=Z,3.5nm,0.8s,baz=285,slow=16,SNR=2.3							
	comp=Z,3.5nm,0.8s							
ASF	**Jabal al Asfar**	**21.53**	**112**	P		**P**	**02 06 03.3**	**+5.0**
	comp=Z,5.2nm,0.8s,baz=299,slow=5.6,SNR=9.7							
KBZ	**Khabaz**	**21.62**	**77**	P		**P**	**02 06 00.9**	**+1.8**
	comp=Z,5.0nm,0.9s,baz=325,slow=4.4,SNR=6.0							
	comp=Z,5.0nm,0.9s							
TOA0	**Torodi Ar. Sit**	**31.14**	**202**	P		**P**	**02 07 29.5**	**+1.6**
TOA0				IAmb		IAmb	02 08 07.0	
	comp=Z,6.3nm,1.4s							
TORD	**Torodi Ar. Bea**	**31.14**	**202**	P		**P**	**02 07 29.2**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=9.8,slow=6.2,SNR=10							
	comp=Z,1.8nm,0.8s							
TORD	**Torodi Ar. Bea**	**31.14**	**202**	P		**P**	**02 07 29.1**	**+1.3**
TORD				IAmb		IAmb	02 07 34.4	
	comp=Z,2.9nm,1.1s							
ZALV	**Zalesovo Beam**	**46.94**	**50**	P		**P**	**02 09 40.2**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=273,slow=2.7,SNR=2.1							
	comp=Z,0.6nm,0.4s							
MAKZ	**Makanchi**	**47.58**	**60**	P		**P**	**02 09 42.2**	**-2.4**
MAKZ				IAmb		IAmb	02 10 17.3	
	comp=Z,2.4nm,1.0s							
MKAR	**Makanchi Array**	**47.78**	**60**	P		**P**	**02 09 46.4**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=291,slow=5.7,SNR=6.4							
	comp=Z,1.3nm,0.7s							
MKAR	**Makanchi Array**	**47.78**	**60**	P		**P**	**02 09 47.2**	**+1.0**
SONM	**Songino Array**	**61.83**	**50**	P		**P**	**02 11 28.7**	**+0.6**
	comp=Z,2.0nm,1.1s,baz=274,slow=4.3,SNR=6.6							
	comp=Z,2.0nm,1.1s							
INK	**Inuvik**	**66.47**	**347**	P		**P**	**02 11 56.9**	**-1.0**
TXAR	**Lajitas Array**	**87.74**	**309**	P		**P**	**02 13 58.1**	**-0.2**
	comp=Z,0.6nm,1.2s,baz=352,slow=26,SNR=2.1							
	comp=Z,0.6nm,1.2s							
NVAR	**Mina Array Bea**	**87.95**	**324**	P		**P**	**02 14 01.2**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=79,slow=20,SNR=2.3							
	comp=Z,0.2nm,0.3s							

MOS **24** *02:05:54.3±1.8, 42°.65N×13°.13E, h9km, mb4.2/9, Error ellipse: s-maj=6.7km s-min=3.8km az=78.4*
IDC **24** *02:05:55.8±0.9, 42°.74N×13°.21E, h0km, mb3.8/8, mbtmp3.8/20, ML3.5/11, Error ellipse: s-maj=17.0km s-min=10.1km az=87.0*
ROM **24** *02:05:55.9±0.1, 42°.616N±0°.004×13°.281E±0°.005, h7km, ML3.9/114, Error ellipse: s-maj=0.4km s-min=0.2km az=64.0*
NEIC **24** *02:05:55.9±2.5, 42°.64N±0°.04×13°.30E±0°.03, h11km±5km, mb4.1/18, ML3.9(ROM), Error ellipse: s-maj=6.5km s-min=1.4km az=152.0*
PDG **24** *02:05:56.1±0.7, 42°.70N×13°.33E, h5km±2km, ML4.1/13, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0*
BEO **24** *02:05:57.8±0.6, 42°.60N×13°.31E, h0km, ML4.1/6*
PRU **24** *02:05:58.0±0.0, 42°.74N×13°.12E, h0km, M4.3*
STR **24** *02:05:58.0±2.5, 43°.N±16"×1°.3E±1"6, h5km, mb3.9/19, Error ellipse: s-maj=0.0km s-min=0.0km az=133.9, preliminary*
LDG **24** *02:05:58.2±0.1, 42°.64N×13°.10E, h10km, Ml3.6/27, Error ellipse: s-maj=3.8km s-min=1.8km az=11.0*

ISC 24 02:05:56.7±0.7, **42°.61N**±0°.02×**13°.24E**±0°.02, **h13**km±4km, **n502**, σ**2**$/$**22**/**599**, **mb4.0**/20, **53C-27D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**190**	⇑P		**Pg**		**02 05 59.2**	**-0.6**
RM33				S		**Sg**		**02 06 01.4**	**-0.6**
LNSS	**Leonessa**	**0.15**	**267**	⇑P		**Pg**		**02 06 00.3**	**-0.1**
LNSS				S		**Sg**		**02 06 03.5**	**+0.4**
LNSS					AML	AML			
	comp=E,49000μm,0.6s								
LNSS					AML	AML			
	comp=N,85100μm,0.7s								
TERO	**Teramo**	**0.27**	**87**	⇑P		**Pg**		**02 06 00.9**	**-1.5**
TERO				S		**Sg**		**02 06 04.8**	**-1.4**
TERO					AML	AML			
TERO					AML	AML			
	comp=E,77550μm,0.6s								
TERO					AML	AML			
TERO					AML	AML			
	comp=E,80800μm,0.6s								
TERO					AML	AML			
AQU	**L'Aquila**	**0.28**	**155**	Pg		**Pg**		**02 06 01.7**	**-0.9**
AQU	**L'Aquila**	**0.28**	**155**	P		**Pg**		**02 06 01.7**	**-0.9**
AQU	**L'Aquila**	**0.28**	**155**	⇑*e*P		**Pg**		**02 06 01.9**	**-0.7**
AQU				S		**Sg**		**02 06 06.5**	**-0.1**
AQU					AML	AML			
	comp=N,52900μm,0.6s								
AQU					AML	AML			
	comp=E,38750μm,0.8s								
AQU					AML	AML			
	comp=E,38450μm,0.8s								
AQU					AML	AML			
	comp=N,55400μm,0.6s								
GIGS	**Gran Sasso**	**0.29**	**123**	⇑P		**Pg**		**02 06 01.6**	**-1.2**
GIGS				S		**Sg**		**02 06 05.9**	**-1.0**
GIGS					AML	AML			
	comp=E,17850μm,0.3s								
GIGS					AML	AML			
	comp=N,12270μm,0.3s								
ARRO	**Arrone**	**0.35**	**265**	⇑P		**Pg**		**02 06 03.8**	**-0.1**
ARRO				S		**Sg**		**02 06 09.7**	**+1.1**
ARRO					AML	AML			
	comp=E,19700μm,1.1s								
ARRO					AML	AML			
	comp=N,20550μm,0.7s								
ARRO					AML	AML			
	comp=N,20600μm,0.7s								
FIAM	**Fiamignano**	**0.35**	**195**	⇑*i*P		**Pg**		**02 06 03.5**	**-0.4**
FIAM					AML	AML			
	comp=E,26750μm,0.7s								
FIAM					AML	AML			
	comp=N,20700μm,1.3s								
FEMA	**Monte Fema**	**0.38**	**339**	P		**Pg**		**02 06 03.9**	**-0.5**
FEMA				S		**Sb**		**02 06 10.3**	**-1.0**
FEMA					AML	AML			
	comp=N,39650μm,1.0s								
FEMA					AML	AML			
	comp=E,45350μm,0.4s								
FEMA					AML	AML			
	comp=N,39700μm,1.0s								
FAGN	**Fagnano**	**0.43**	**143**	P		**Pg**		**02 06 04.5**	**-0.8**
FAGN					AML	AML			
	comp=N,48950μm,0.4s								
FAGN					AML	AML			
	comp=E,63600μm,0.5s								
FDMO	**Fiordimonte**	**0.44**	**345**	⇓*e*P		**Pg**		**02 06 04.8**	**-0.7**
FDMO				S		**Sg**		**02 06 11.9**	**+0.5**
FDMO					AML	AML			
	comp=E,16150μm,1.2s								
FDMO					AML	AML			
	comp=N,24850μm,0.3s								
OFFI	**Offida**	**0.46**	**45**	⇑P		**Pg**		**02 06 05.5**	**-0.4**
OFFI					AML	AML			
OFFI					AML	AML			
CESI	**CESI - Serrava**	**0.47**	**328**	⇓*e*P		**Pg**		**02 06 05.4**	**-0.5**
CESI				S		**Sb**		**02 06 13.2**	**-0.5**
CESI					AML	AML			
	comp=E,22100μm,0.5s								
CESI					AML	AML			
	comp=N,37100μm,0.4s								
CESX	**Cesi**	**0.49**	**270**	⇑P		**Pg**		**02 06 05.9**	**-0.4**
CESX				S		**Sb**		**02 06 14.1**	**-0.2**
CESX					AML	AML			
	comp=N,15000μm,0.6s								
CESX					AML	AML			
	comp=E,14050μm,0.6s								
VCEL	**Villa Celiera**	**0.49**	**116**	P		**Pg**		**02 06 05.8**	**-0.7**
VCEL				S		**Sg**		**02 06 13.7**	**+0.6**
VCEL					AML	AML			
	comp=N,59800μm,0.9s								
VCEL					AML	AML			
	comp=E,53100μm,0.9s								
TRTR	**Tortoreto Alta**	**0.54**	**68**	⇑*e*P		**Pg**		**02 06 07.0**	**-0.2**
TRTR					AML	AML			
	comp=N,51200μm,0.6s								
TRTR					AML	AML			
	comp=E,58250μm,0.6s								
MNTP	**Montappone**	**0.55**	**18**	P		**Pg**		**02 06 07.2**	**-0.5**
T0110	**Collepietro**	**0.55**	**134**	P		**Pg**		**02 06 06.6**	**-1.0**
T0110				S		**Sg**		**02 06 14.9**	**-0.1**
T0110					AML	AML			
	comp=E,29950μm,0.5s								
T0110					AML	AML			
	comp=N,24200μm,0.4s								
SEF1	**Sefro**	**0.58**	**338**	P		**Pg**		**02 06 07.3**	**-0.8**
SEF1					AML	AML			
	comp=E,24250μm,0.5s								
SEF1					AML	AML			
	comp=N,17950μm,0.9s								
MDAR	**Monte D'Aria**	**0.59**	**353**	P		**Pg**		**02 06 07.2**	**-1.0**
MDAR				S		**Sb**		**02 06 16.7**	**-0.6**
MDAR					AML	AML			
	comp=E,17650μm,1.4s								
MDAR					AML	AML			
	comp=E,17650μm,1.4s								
MDAR					AML	AML			
	comp=N,17950μm,1.2s								
PIO1	**Pioraco**	**0.60**	**342**	P		**Pb**		**02 06 08.7**	**-0.5**
PTQR	**Pietraquaria**	**0.60**	**168**	⇑P		**Pg**		**02 06 07.2**	**-1.3**
PTQR					AML	AML			
	comp=E,5805μm,1.3s								
PTQR					AML	AML			
	comp=N,5105μm,1.4s								
PTQR					AML	AML			
	comp=E,5800μm,1.3s								
ASSB	**Assisi San Ben**	**0.61**	**316**	⇓P		**Pg**		**02 06 08.0**	**-0.7**
ASSB				S		**Sb**		**02 06 17.9**	**+0.1**
ASSB					AML	AML			
	comp=N,13500μm,1.5s								
ASSB					AML	AML			
	comp=E,12800μm,1.5s								
FIU1	**Fiuminata**	**0.62**	**339**	P		**Pg**		**02 06 08.1**	**-0.8**
FIU1					AML	AML			
	comp=E,6735μm,0.3s								
FIU1					AML	AML			
	comp=N,7975μm,0.9s								
SSM1	**San Severino M**	**0.62**	**356**	P		**Pg**		**02 06 07.9**	**-1.0**
GAG1	**Gagliole**	**0.64**	**349**	P		**Pg**		**02 06 08.5**	**-0.8**
SRES	**S.Oreste - Sor**	**0.66**	**236**	⇑*e*P		**Pg**		**02 06 08.8**	**-0.7**
SRES					AML	AML			
	comp=N,4540μm,0.5s								
SRES					AML	AML			
	comp=E,5770μm,0.6s								
MTL1	**Matelica**	**0.67**	**345**	P		**Pg**		**02 06 09.0**	**-0.8**
MTL1					AML	AML			
	comp=N,31200μm,0.6s								
MTL1					AML	AML			
	comp=E,30950μm,0.9s								
SNTG	**Esanatoglia**	**0.68**	**341**	⇓*e*P		**Pg**		**02 06 09.1**	**-0.9**
SNTG					AML	AML			
	comp=E,1001μm,0.5s								
SNTG					AML	AML			
	comp=N,944μm,0.5s								
SNTG					AML	AML			
	comp=N,8405μm,0.5s								
SNTG					AML	AML			
	comp=E,1000μm,0.5s								
SNTG					AML	AML			
	comp=E,7850μm,0.5s								
SNTG					AML	AML			
	comp=N,945μm,0.5s								
CERT	**Certeto**	**0.69**	**196**	P		**Pg**		**02 06 08.9**	**-1.2**
CERT					AML	AML			
	comp=E,13100μm,0.4s								
CERT					AML	AML			
	comp=N,9070μm,0.4s								
MTCE	**Montecelio**	**0.69**	**212**	⇑*e*P		**Pg**		**02 06 09.2**	**-1.0**
MTCE					AML	AML			
	comp=N,7065μm,0.8s								
MTCE					AML	AML			
	comp=E,11200μm,1.1s								
CADA	**Capodarco di F**	**0.70**	**33**	P		**Pb**		**02 06 10.6**	**-0.2**
CADA					AML	AML			
	comp=N,53950μm,0.5s								
CADA					AML	AML			
	comp=E,53150μm,1.2s								
TRE1	**Treia**	**0.70**	**4**	P		**Pg**		**02 06 09.9**	**-0.5**
TRE1					AML	AML			
	comp=E,73450μm,0.4s								
TRE1					AML	AML			
	comp=E,73500μm,0.4s								
TRE1					AML	AML			
	comp=N,41450μm,0.4s								
ATCC	**AVT- Casa Cast**	**0.72**	**323**	⇓P		**Pg**		**02 06 10.0**	**-0.8**
ATCC					AML	AML			
	comp=N,13000μm,0.7s								
ATCC					AML	AML			
	comp=E,15900μm,0.6s								
CIMA	**Civitanova Mar**	**0.77**	**24**	P		**Pb**		**02 06 11.9**	**0.0**
CING	**Cingoli**	**0.77**	**358**	P		**Pg**		**02 06 10.5**	**-1.1**
FOSV	**Fossato di Vic**	**0.77**	**333**	⇓*e*P		**Pg**		**02 06 10.6**	**-1.1**
FOSV					AML	AML			
	comp=E,10335μm,0.7s								
FOSV					AML	AML			
	comp=N,9150μm,0.7s								
FOSV					AML	AML			
	comp=E,10360μm,0.7s								
FOSV					AML	AML			
	comp=N,9155μm,0.7s								
INTR	**Introdacqua**	**0.78**	**140**	P		**Pg**		**02 06 10.1**	**-1.7**
INTR					AML	AML			
	comp=E,9μm,1.5s								
INTR					AML	AML			
	comp=N,8μm,0.8s								
INTR					AML	AML			
	comp=E,8615μm,1.5s								
INTR					AML	AML			
	comp=N,11900μm,0.8s								
INTR					AML	AML			
	comp=E,9μm,1.5s								
INTR					AML	AML			
	comp=N,8μm,0.8s								
VVLD	**Villa Vallelon**	**0.79**	**159**	P		**Pg**		**02 06 10.8**	**-1.3**
VVLD					AML	AML			
	comp=E,5900μm,0.5s								
VVLD					AML	AML			
	comp=N,5470μm,1.6s								
RCAV	**Rocca di Cave**	**0.79**	**196**	P		**Pg**		**02 06 11.8**	**-0.3**
RCAV					AML	AML			
	comp=N,15850μm,0.5s								
RCAV					AML	AML			
	comp=E,13000μm,0.5s								
PP3	**Marolino**	**0.81**	**19**	P		**Pg**		**02 06 12.2**	**-0.3**
PP3					AML	AML			
	comp=N,33100μm,0.9s								
PP3					AML	AML			
	comp=N,37100μm,0.5s								
PP3					AML	AML			
	comp=E,61800μm,0.7s								
PP3					AML	AML			
	comp=E,59600μ

comp=E,19350µm,0.8s
RDP Rocca di Papa 0.94 205 P Pg 02 06 13.7 -1.1
RDP AML AML
comp=N,18700µm,0.5s
RDP AML AML
comp=E,14250µm,0.7s
MA9 Marino 0.94 207 P Pg 02 06 14.7 -0.2
MA9 AML AML
comp=E,16150µm,0.6s
MA9 AML AML
comp=N,9705µm,0.5s
POFI Posta Fibreno 0.96 158 P Pg 02 06 14.3 -1.0
POFI AML AML
comp=E,5610µm,0.9s
POFI AML AML
comp=N,4830µm,0.9s
POFI AML AML
comp=N,4955µm,0.9s
POFI AML AML
comp=E,5755µm,0.9s
SAMA S.Maria delle 0.96 210 P Pg 02 06 14.1 -1.1
AOI Ancona 0.98 16 P Pg 02 06 14.6 -1.0
AOI AML AML
comp=E,8025µm,0.5s
AOI AML AML
comp=N,9245µm,0.5s
FRON Frontone 0.98 338 P Pg 02 06 14.4 -1.3
FRON AML AML
comp=E,6365µm,0.4s
FRON AML AML
comp=N,9285µm,0.6s
ATVO AVT- Monte Val 0.98 322 ⇑P Pg 02 06 14.9 -0.9
ATVO AML AML
comp=N,7325µm,0.6s
ATVO AML AML
comp=E,6180µm,0.8s
LRP Arpino 1.00 165 P Pb 02 06 16.0 +0.1
LRP AML AML
comp=N,4530µm,1.0s
LRP AML AML
comp=E,2410µm,1.1s
SACS San Casciano d 1.01 284 P Pb 02 06 16.1 -0.1
SACS AML AML
comp=E,4480µm,0.9s
SACS AML AML
comp=N,6965µm,0.8s
SACS AML AML
comp=N,6670µm,0.8s
SACS AML AML
comp=E,4270µm,0.9s
LAV9 Lanuvio 1.01 204 P Pb 02 06 16.0 -0.2
LAV9 AML AML
comp=E,13900µm,1.5s
LAV9 AML AML
comp=E,13600µm,1.5s
LAV9 AML AML
comp=N,14800µm,0.7s
LAV9 AML AML
comp=N,15400µm,0.7s
ATMI Monte Miggiano 1.02 316 P Pb 02 06 15.8 -0.4
ATMI AML AML
comp=N,13900µm,0.6s
ATMI AML AML
comp=E,13850µm,0.6s
COR1 Corinaldo 1.04 350 P Pg 02 06 16.6 -0.2
COR1 AML AML
comp=N,18650µm,1.4s
COR1 AML AML
comp=E,10130µm,1.3s
COR1 AML AML
comp=E,19800µm,0.7s
COR1 AML AML
comp=N,19200µm,1.4s
ATPI Pietralunga - 1.04 324 P Pb 02 06 15.6 -1.1
ATPI AML AML
comp=E,7395µm,0.9s
ATPI AML AML
comp=N,5015µm,1.5s
GIUL Giuliano Di Ro 1.05 179 P Pb 02 06 16.3 -0.5
GIUL AML AML
comp=E,4395µm,0.7s
GIUL AML AML
comp=N,5035µm,0.7s
LATE Laterza 1.06 271 Pb 02 06 16.4 -0.5
LATE Laterza 1.06 271 P Pn 02 06 17.6 +0.3
PIEI Pieia 1.06 331 P Pb 02 06 16.2 -0.8
PIEI AML AML
comp=E,3390µm,1.0s
PIEI AML AML
comp=N,3280µm,0.5s
TOLF Tolfa 1.07 240 ⇑*i*P Pb 02 06 16.2 -0.9
TOLF AML AML
comp=E,4885µm,0.7s
TOLF AML AML
comp=N,6460µm,0.9s
MPAG Monte Paganucc 1.08 341 ⇓P Pb 02 06 16.1 -1.2
MPAG AML AML
comp=E,6910µm,0.7s
MPAG AML AML
comp=N,7500µm,0.5s
MPAG AML AML
comp=E,7040µm,0.7s
MPAG AML AML
comp=N,7835µm,0.5s
SENI Senigallia 1.09 360 P Pn 02 06 17.7 -0.1
NARO Abbazia di Nar 1.11 335 P Pb 02 06 16.7 -1.2
NARO AML AML
comp=N,3640µm,0.7s
NARO AML AML
comp=E,3635µm,1.1s
APEC Apecchio 1.12 328 P Pb 02 06 17.5 -0.6
APEC AML AML
comp=N,7500µm,0.8s
APEC AML AML
comp=E,1068µm,0.7s
APEC AML AML
comp=N,1350µm,0.6s
APEC AML AML
comp=E,5380µm,1.1s
LIK San Giovanni I 1.13 168 P Pb 02 06 18.3 +0.2
LIK AML AML
comp=N,5785µm,0.8s
LIK AML AML
comp=E,5690µm,1.0s
RNI2 Rionero Sannit 1.13 143 P Pb 02 06 16.8 -1.4
FSSB Fossombrone 1.13 343 P Pb 02 06 17.1 -1.1
FSSB AML AML
comp=E,12850µm,0.4s
FSSB AML AML
comp=N,17800µm,0.4s
BADI Badiali 1.16 321 P Pb 02 06 17.6 -1.0
SF03 Valle Cupa 1.16 280 P Pb 02 06 18.8 +0.1
MCIV Monte Civitell 1.16 279 P Pb 02 06 18.7 -0.1
MCIV AML AML
comp=E,2400µm,0.7s
MCIV AML AML
comp=N,2995µm,1.0s
CERA Filignano 1.17 150 P Pb 02 06 17.3 -1.5
CERA AML AML
comp=E,6200µm,0.7s
CERA AML AML
comp=N,5515µm,0.8s
CERA AML AML
comp=E,6405µm,0.7s
CERA AML AML
comp=N,5330µm,0.8s
SF11 Podere del Sol 1.18 283 P Pg 02 06 19.6 +0.2
CAFI Castiglion Fio 1.18 308 P Pb 02 06 18.9 -0.1
CAFI AML AML
comp=E,4605µm,0.7s
CAFI AML AML
comp=N,3640µm,0.7s
CAFI AML AML
comp=N,3860µm,0.8s
CAFI AML AML
comp=E,4745µm,0.7s
SF04 Casetta 1.19 282 P Pn 02 06 19.0 -0.1
SF04 AML AML
comp=E,2625µm,0.7s
SF04 AML AML
comp=N,2495µm,1.5s
SF14 Selvena 1.21 277 P Pn 02 06 19.5 +0.1
SF13 Bagnolo 1.21 280 P Pb 02 06 19.9 +0.3
PE3 Peglio 1.21 334 AML AML
comp=N,26µm,0.4s
PE3 AML AML
comp=E,26µm,0.4s

SF01 Poggio Pratacc 1.25 280 P Pg 02 06 20.9 +0.1
SSP9 Sansepolcro 1.26 320 P Pb 02 06 20.3 -0.1
SSP9 AML AML
comp=N,6115µm,0.9s
SSP9 AML AML
comp=E,4855µm,1.2s
PARC Parchiule 1.27 325 P Pn 02 06 20.0 -0.2
PARC AML AML
comp=N,3750µm,0.9s
PARC AML AML
comp=E,4830µm,0.7s
TRIV Trivento 1.29 130 P Pn 02 06 20.6 +0.1
TRIV AML AML
comp=E,3870µm,1.0s
TRIV AML AML
comp=N,4770µm,1.1s
TRIV AML AML
comp=E,4585µm,1.0s
TRIV AML AML
comp=N,4470µm,1.1s
ARCI Arcidosso 1.32 281 P Pg 02 06 22.0 -0.2
PESA Pesaro 1.36 348 P Pb 02 06 22.0 -0.1
PESA AML AML
comp=E,9510µm,1.2s
PESA AML AML
comp=N,7705µm,1.1s
CRE Caprese Michel 1.38 317 P Pb 02 06 22.5 0.0
VAGA Valle Agricola 1.41 148 P Pn 02 06 21.6 -0.5
VAGA AML AML
comp=N,2615µm,1.1s
VAGA AML AML
comp=N,2525µm,1.1s
VAGA AML AML
comp=E,1600µm,0.9s
VAGA AML AML
comp=E,1645µm,0.9s
RSM Repubblica di 1.44 337 ⇑P Pg 02 06 23.9 -0.5
BSSO Busso 1.47 136 P Pb 02 06 24.5 +0.5
BSSO AML AML
comp=E,1680µm,1.3s
BSSO AML AML
comp=N,2465µm,1.6s
BSSO AML AML
comp=E,717µm,1.4s
BSSO AML AML
comp=N,936µm,1.6s
MODR Mondragone 1.54 162 P Pn 02 06 24.5 +0.6
MODR AML AML
comp=N,1314µm,1.2s
MODR AML AML
comp=E,1023µm,1.6s
CIGN Sant'Elia a Pi 1.56 127 P Pb 02 06 25.0 -0.6
PIGN Pignataro Magg 1.57 153 P Pb 02 06 25.5 -0.2
PIGN AML AML
comp=E,891µm,1.0s
PIGN AML AML
comp=N,1190µm,0.9s
PIGN AML AML
comp=E,991µm,1.6s
PIGN AML AML
comp=N,1050µm,0.8s
ASQU Asqua 1.59 319 P Pb 02 06 26.1 +0.1
SACR S. Croce Del S 1.63 137 P Pb 02 06 26.7 0.0
FROS Frosini 1.64 292 P Pn 02 06 26.2 +0.9
SFI Santa Sofia 1.65 322 P Pb 02 06 27.4 +0.4
GATE Gambatesa 1.66 131 P Pg 02 06 28.1 -0.5
CSNT Castellina Chi 1.67 302 P Pn 02 06 26.5 +0.8
CSNT AML AML
comp=N,1210µm,0.7s
CSNT AML AML
comp=E,1094µm,1.0s
MELA Melanico ??? S 1.67 122 P Pn 02 06 26.5 +0.8
MELA AML AML
comp=N,3665µm,0.9s
MELA AML AML
comp=N,3915µm,0.9s
MELA AML AML
comp=E,2825µm,1.3s
MELA AML AML
comp=E,2925µm,1.3s
OSSC Osservatorio P 1.72 303 Pn 02 06 26.4 -0.1
OSSC Osservatorio P 1.72 303 P Pn 02 06 26.9 +0.5
OSSC AML AML
comp=E,1014µm,0.8s
OSSC AML AML
comp=N,962µm,1.0s
OSSC AML AML
comp=E,924µm,1.0s
OSSC AML AML
comp=N,1044µm,0.8s
TREM Isole Tremiti 1.75 105 P Pb 02 06 28.0 -0.7
TREM AML AML
comp=E,3440µm,0.8s
TREM AML AML
comp=N,4180µm,0.6s
CASP Castiglione de 1.76 277 Pn Pn 02 06 27.1 +0.1
CASP Castiglione de 1.76 277 P Pn 02 06 27.4 +0.5
CASP AML AML
comp=E,386µm,0.5s
CASP AML AML
comp=N,382µm,1.0s
RUFI Rufina 1.76 315 P Pn 02 06 27.7 +0.7
RUFI AML AML
comp=E,1550µm,0.9s
RUFI AML AML
comp=N,1620µm,1.2s
VITU Vitulano (BN) 1.76 143 P Pb 02 06 29.0 0.0
TRIF Trifonti 1.79 287 ⇓*i*P Pn 02 06 27.9 +0.5
TRIF AML AML
comp=E,813µm,0.8s
TRIF AML AML
comp=N,871µm,0.9s
PAOL Paolisi 1.86 147 Pn Pn 02 06 28.3 -0.2
PAOL Paolisi 1.86 147 AML AML
comp=N,678µm,1.0s
PAOL AML AML
comp=E,496µm,1.4s
PAOL AML AML
comp=E,544µm,0.9s
PAOL AML AML
comp=N,615µm,1.0s
APRC Apricena 1.91 116 P Pn 02 06 29.3 +0.2
APRC AML AML
comp=N,2070µm,0.6s
APRC AML AML
comp=E,1290µm,0.6s
DUGI Dugi Otok 1.92 43 *e*Pn Pn 02 06 29.2 +0.1
BRIS BRISIGHELLA 1.99 321 P Pb 02 06 32.0 -0.8
SGRT San Giovanni R 2.05 114 Pn Pn 02 06 31.4 +0.4
SGRT San Giovanni R 2.05 114 P Pn 02 06 32.1 +1.1
SGRT AML AML
comp=N,1285µm,0.7s
SGRT AML AML
comp=E,1260µm,1.1s
MPPT Montemurlo 2.07 311 P Pn 02 06 32.2 +1.0
MPPT AML AML
comp=E,942µm,0.9s
MPPT AML AML
comp=N,1042µm,1.4s
VIRC Vir 2.14 38 *e*Pn Pn 02 06 32.1 0.0
MSAG Monte S. Angel 2.18 113 P Pn 02 06 34.1 +1.4
MSAG AML AML
comp=E,1330µm,0.4s
MSAG AML AML
comp=E,1435µm,0.4s
MSAG AML AML
comp=N,2455µm,0.7s
MSAG AML AML
comp=N,2560µm,0.7s
MORI Morici 2.20 54 *i* Pn Pn 02 06 33.2 +0.3
PII Pisa 2.28 300 P Pn 02 06 35.3 +1.3
PII AML AML
comp=E,620µm,0.8s
PII AML AML
comp=N,546µm,0.8s
NVLJ Novalja 2.29 31 *e*Pn Pn 02 06 34.4 +0.3
POPM Popiglio 2.31 309 P Pn 02 06 35.0 +0.4
POPM AML AML
comp=N,636µm,0.8s
POPM AML AML
comp=E,533µm,1.0s
BRJN Brijuni 2.33 9 *e*Pn Pn 02 06 34.8 +0.1
BRJN Brijuni 2.33 9 P Pn 02 06 35.2 +0.5
MAIM Mastiano 2.39 304 P Pn 02 06 36.5 +0.9
ZCCA Zocca 2.40 317 Pn Pn 02 06 36.4 +0.6
BDI Bagni Di Lucca 2.41 308 P Pn 02 06 36.2 +0.2

BDI AML AML
comp=N,255µm,0.7s
BDI AML AML
comp=N,678µm,0.4s
BDI AML AML
comp=E,596µm,1.4s
BDI AML AML
comp=E,234µm,0.8s
RABC Rab 2.42 27 *e*Pn Pn 02 06 35.9 -0.1
SMRN Sveta Marina 2.52 15 *e*Pn Pn 02 06 37.1 -0.2
VLC Villacollemand 2.59 308 Pn 02 06 37.6 -0.9
VLC Villacollemand 2.59 308 P Pn 02 06 38.6 +0.2
VLC AML AML
comp=E,341µm,1.3s
VLC AML AML
comp=N,512µm,0.9s
VLC AML AML
comp=E,358µm,1.4s
VLC AML AML
comp=N,514µm,0.9s
UDBI Udbina 2.65 43 *e*Pn Pn 02 06 40.3 +1.0
LSTV Lastovo 2.70 85 *e*Pn Pn 02 06 40.0 +0.1
KIJV Kijevo 2.70 58 *e*Pn Pn 02 06 41.0 +1.1
A250A Rusevo Krmpots 2.75 25 *e*Pn Pn 02 06 41.0 +0.4
PLIT Plitvice 2.85 36 *e*Pn Pn 02 06 42.9 +0.9
MAKA Makarska 2.86 75 *e*Pn Pn 02 06 42.5 +0.5
RIY Rijeka 2.86 18 *e*Pn Pn 02 06 42.3 +0.3
TEOL Teolo 2.97 338 Pn Pn 02 06 42.1 -1.5
GRAM Graiana 2.98 310 P Pn 02 06 45.7 +2.0
SMPL Sampolo 2.98 261 P Pn 02 06 44.1 +0.4
SMPL S Sn 02 07 22.0 +2.7
RICI Ricice 2.99 71 *e*Pn Pn 02 06 45.0 +1.2
AMUR Altamura 3.04 123 P Pn 02 06 45.4 +0.9
AMUR AML AML
comp=N,432µm,1.6s
AMUR AML AML
comp=E,496µm,1.6s
TRI Trieste 3.12 7 Pn Pn 02 06 43.7 -1.9
TRI Trieste 3.12 7 P Pn 02 06 43.7 -1.9
PGF Pioggiola 3.13 270 *e*P Pn 02 06 47.2 +1.3
PGF *e*Sn Sn 02 07 18.4 -4.8
comp=E,78nm,0.8s
PGF Pioggiola 3.13 270 P Pn 02 06 47.3 +1.4
PGF Pioggiola 3.13 270 S Sn 02 07 25.6 +2.4
MSSA Maissana 3.20 303 Pn Pn 02 06 46.6 -0.3
MSSA Maissana 3.20 303 P Pn 02 06 47.9 +1.0
MSSA AML AML
comp=E,267µm,0.7s
MSSA AML AML
comp=N,296µm,0.7s
BOJS Bojanci 3.24 26 P Pn 02 06 48.0 +0.7
MATE Matera 3.25 126 ⇓P Pn 02 06 49.3 +1.8
CUC Castrocucco 3.26 143 Pn Pn 02 06 48.4 +0.8
STON Ston 3.30 84 *e*Pn Pn 02 06 47.7 -0.3
STON Ston 3.30 84 *e*Pn Pn 02 06 47.8 -0.3
STON *e*Sn Sn 02 07 27.1 0.0
STON Ston 3.30 84 P Pn 02 06 47.6 -0.4
STON AML AML
comp=E,238µm,0.8s
STON AML AML
comp=N,321µm,0.8s
A251A Rujevac 3.34 40 *e*Pn Pn 02 06 49.9 +1.3
SABO M.te Sabotino 3.38 4 Pn Pn 02 06 47.4 -1.9
SABO M.te Sabotino 3.38 4 P Pn 02 06 49.0 -0.3
SABO AML AML
comp=N,4480µm,0.8s
SABO AML AML
comp=E,5285µm,0.5s
SABO AML AML
comp=N,1160µm,0.8s
SABO AML AML
comp=E,1325µm,0.5s
AJAC Base Areonaval 3.39 260 P Pn 02 06 51.1 +1.8
AJAC S Sn 02 07 32.8 +3.4
AJAC Base Areonaval 3.39 260 P Pn 02 06 50.7 +1.3
AJAC AML AML
comp=N,127µm,0.6s
AJAC AML AML
comp=E,249µm,0.7s
NOCI Noci 3.39 121 P Pn 02 06 50.8 +1.4
NOCI AML AML
comp=N,384µm,1.3s
NOCI AML AML
comp=E,348µm,1.4s
OZLJ Ozalj 3.41 27 *e*Pn Pn 02 06 50.3 +0.8
ROVR Rover Verones 3.41 334 P Pn 02 06 50.8 +1.0
ROVR AML AML
comp=E,188µm,0.6s
ROVR AML AML
comp=N,225µm,0.6s
CGRP Cima Grappa 3.43 343 P Pn 02 06 50.7 +0.6
CGRP AML AML
comp=N,1220µm,0.5s
CGRP AML AML
comp=E,830µm,0.6s
VARN Col Varnada, M 3.48 347 P Pn 02 06 51.2 +0.5
VARN AML AML
comp=E,857µm,0.4s
VARN AML AML
comp=N,553µm,0.6s
VARN AML AML
comp=N,547µm,1.0s
VARN AML AML
comp=E,864µm,0.4s
LJU Ljubljana 3.56 15 P Pn 02 06 52.8 +1.1
LJU AML AML
comp=N,5590µm,0.6s
LJU AML AML
comp=E,4485µm,0.8s
BLY Banja Luka 3.57 52 *e*Pn Pn 02 06 53.1 +1.3
DOSS Dosso del Somm 3.59 336 AML AML
comp=N,490µm,0.8s
DOSS AML AML
comp=N,621µm,0.7s
DOSS AML AML
comp=E,501µm,1.2s
DOSS AML AML
comp=E,615µm,0.7s
SALO Salr 3.59 328 Pn Pn 02 06 51.3 -0.8
SALO Salr 3.59 328 P Pn 02 06 53.7 +1.6
SALO AML AML
comp=N,916µm,0.7s
SALO AML AML
comp=N,854µm,0.6s
SALO AML AML
comp=E,698µm,1.5s
SALO AML AML
comp=E,732µm,0.9s
DBRK Dubrovnik 3.62 87 *e*Pn Pn 02 06 52.4 -0.1
MPRI Monte Prat 3.64 357 P Pn 02 06 53.0 +0.2
MPRI AML AML
comp=N,1016µm,0.6s
MPRI AML AML
comp=E,846µm,1.3s
STAL STALIGIAL 3.67 354 Pn Pn 02 06 50.8 -2.5
STAL STALIGIAL 3.67 354 P Pn 02 06 53.4 +0.1
STAL AML AML
comp=E,772µm,0.8s
STAL AML AML
comp=N,504µm,1.1s
STAL AML AML
comp=N,502µm,1.3s
STAL AML AML
comp=E,570µm,0.9s
MAGA Magasa 3.68 330 P Pn 02 06 54.6 +1.2
MAGA AML AML
comp=N,908µm,0.3s
MAGA AML AML
comp=E,1615µm,0.6s
LUSI Trento, Gardas 3.73 335 P Pn 02 06 55.5 +1.4
LUSI AML AML
comp=N,636µm,0.9s
LUSI AML AML
comp=E,486µm,0.7s
CIMO Cimolais 3.74 351 Pn Pn 02 06 53.2 -1.0
CIMO Cimolais 3.74 351 P Pn 02 06 54.5 +0.2
CIMO AML AML
comp=N,188µm,1.0s
CIMO AML AML
comp=N,175µm,1.0s
CIMO AML AML
comp=E,228µm,0.8s
CIMO AML AML
comp=E,222µm,0.8s
GAGG Gaggia 3.84 336 P Pn 02 06 56.8 +1.2

GAGG AML AML
comp=E,604µm,1.1s
GAGG AML AML
comp=E,840µm,1.0s
GAGG AML AML
comp=N,818µm,1.1s
GAGG AML AML
comp=N,638µm,1.1s
PRED Cave del Predi 3.84 3 Pn **Pn** 02 06 54.0 -1.6
CLUD Cludinico 3.85 356 Pn **Pn** 02 06 54.7 -1.1
CLUD Cludinico 3.85 356 AML AML
comp=E,458µm,0.9s
CLUD AML AML
comp=E,411µm,0.9s
CLUD AML AML
comp=N,430µm,0.7s
CLUD AML AML
comp=N,434µm,0.7s
ZONE Zone 3.87 326 AML AML
comp=N,408µm,0.5s
ZONE AML AML
comp=E,367µm,0.4s
HCY Herceg Novi 3.89 91⇑ *i*Pn **Pn** 02 06 56.9 +0.7
HCY *i* Sn **Sn** 02 07 43.2 +1.5
BRY Bratogost 3.91 84⇑ *i*Pn **Pn** 02 06 57.3 +0.6
BRY *i* Sn **Sn** 02 07 43.8 +1.2
MOSL Moslavina 3.93 39 *e*Pn **Pn** 02 06 56.6 -0.1
ACOM Acomizza, Ital 3.94 3 P **Pn** 02 06 57.8 +0.6
ACOM AML AML
comp=N,642µm,1.1s
ACOM AML AML
comp=E,626µm,1.3s
ACOM AML AML
comp=N,600µm,0.7s
ACOM AML AML
comp=E,640µm,1.3s
ZOU Zoufplan 3.95 357 P **Pn** 02 06 57.5 +0.2
ZOU AML AML
comp=E,458µm,1.0s
ZOU AML AML
comp=E,443µm,1.1s
ZOU AML AML
comp=N,509µm,1.4s
ZOU AML AML
comp=N,502µm,1.3s
MABI Malga Bissina 3.96 331 AML AML
comp=N,201µm,0.5s
MABI AML AML
comp=E,168µm,0.8s
OBKA Obir 4.01 13 *e*Pn **Pn** 02 06 59.4 +1.4
comp=E,21nm,0.4s
OBKA *e*Sn **Sn** 02 07 45.8 +0.9
comp=E,156nm,0.8s
MYKA Terra Mystica 4.03 4 *i* Pn **Pn** 02 06 59.4 +1.2
comp=E,64nm,0.7s,SNR=5.8
MYKA *e*Sn **Sn** 02 07 47.6 +2.3
comp=E,36nm,0.4s
LOBO Lobor 4.08 29 *e*Pn **Pn** 02 06 58.8 -0.1
APPI Appiano 4.13 340 AML AML
comp=N,373µm,0.4s
APPI AML AML
comp=E,362µm,0.4s
ABTA Abfaltersbach 4.17 353 *i* Pn **Pn** 02 07 01.2 +1.1
comp=E,165nm,0.6s,SNR=21
ABTA *e*Sn **Sn** 02 07 49.7 +0.9
comp=E,61nm,0.6s
CEME Cevo 4.19 89⇑ *i*Pn **Pn** 02 07 01.1 +0.6
CEME *i* Sn **Sn** 02 07 50.9 +1.5
BUM Brajici-Budva 4.20 92⇓ *i*Pn **Pn** 02 07 01.7 +1.2
BUM *i* Sn **Sn** 02 07 50.8 +1.4
UPM Unac-Piva 4.20 80⇓ *i*Pn **Pn** 02 07 00.8 +0.1
UPM *i* Sn **Sn** 02 07 50.8 +1.0
NKME Niksic 4.21 86⇑ *i*Pn **Pn** 02 07 01.4 +0.7
NKME *i* Sn **Sn** 02 07 51.3 +1.4
SOKA Soboth 4.26 17 *e*Pn **Pn** 02 07 04.7 +3.3
comp=E,13nm,0.5s
SOKA *e*Sn **Sn** 02 07 50.6 -0.5
comp=E,28nm,0.7s
VSL Villasalto 4.26 224 AML AML
VSL AML AML
A252A Venje 4.36 48 *e*Pn **Pn** 02 07 03.0 +0.3
BRMO Bormio 4.38 333 AML AML
comp=E,141µm,1.0s
BRMO AML AML
comp=N,135µm,0.9s
CGL Cagliari Serpe 4.41 224 AML AML
comp=N,124µm,1.6s
CGL AML AML
comp=E,194µm,0.4s
SBF Sospel 4.42 288 *e*P **Pn** 02 07 04.8 +1.2
SBF *e*Sn **Sn** 02 07 49.2 -5.8
comp=E,57nm,0.6s
DRME Dracevica, Mon 4.42 93⇓ *i*Pn **Pn** 02 07 04.5 +0.9
DRME *i* Sn **Sn** 02 07 56.1 +1.2
PDG Podgorica 4.45 90 ⇓P **Pn** 02 07 04.7 +0.8
PDG Podgorica 4.45 90 Pn **Pn** 02 07 03.4 -0.5
PDG Podgorica 4.45 90 *e*Pn **Pn** 02 07 05.4 +1.5
PDG *e*Sn **Sn** 02 07 57.1 +1.6
TTG Podgorica 4.45 90⇑ *i*Pn **Pn** 02 07 04.7 +0.8
TTG *i* Sn **Sn** 02 07 57.2 +1.7
ESCA l'Escarene 4.46 288 P **Pn** 02 07 05.2 +1.2
KBA Koelnbreinsper 4.47 1 *e*Pn **Pn** 02 07 07.1 +2.8
comp=E,42nm,0.6s
KBA *e*Sn **Sn** 02 07 57.4 +1.1
comp=E,38nm,0.4s
TURF col de Turini 4.48 290 P **Pn** 02 07 05.8 +1.3
ULC Ulcinj 4.50 96⇓ *i*Pn **Pn** 02 07 05.4 +0.7
ULC *i* Sn **Sn** 02 07 58.4 +1.5
ROSI Rosskopf 4.51 344 AML AML
comp=N,910µm,0.9s
ROSI AML AML
comp=E,584µm,1.4s
FUORN Ofenpass-Fuorn 4.54 333 Pn **Pn** 02 07 05.3 0.0
PLE Plievlja 4.57 79⇓ *i*Pn **Pn** 02 07 06.0 +0.3
PLE *i* Sn **Sn** 02 07 59.7 +1.0
SPIF crte de Spivo 4.61 290 P **Pn** 02 07 09.0 +2.8
MVIF Mont Vial 4.63 288 P **Pn** 02 07 06.2 -0.3
KOME Kolasin 4.63 85⇑ *i*Pn **Pn** 02 07 07.0 +0.5
KOME *i* Sn **Sn** 02 07 57.1 +1.6
BBLS Lazići 4.68 72 *e*Pn **Pn** 02 07 09.1 +2.0
SCTE Santa Cesarea 4.68 121 Pn **Pn** 02 07 06.1 -1.0
CALF Calern 4.76 286 P **Pn** 02 07 09.7 +1.4
FETA Feichten 4.76 339 *e*Pn **Pn** 02 07 10.5 +2.2
comp=E,23nm,0.4s
FETA *e*Sn **Sn** 02 08 03.9 +0.5
comp=E,26nm,0.9s
ISO Isola 4.78 291 P **Pn** 02 07 11.8 +3.3
WTTA Wattenberg 4.79 347 *e*Pn **Pn** 02 07 11.5 +2.8
comp=E,26nm,0.4s
WTTA *e*Sn **Sn** 02 08 08.5 +4.3
comp=E,45nm,0.4s
DAVOX Davos/Dischmat 4.81 331 Pn **Pn** 02 07 11.3 +2.3
comp=E,4.7nm,0.3s,baz=131,slow=12,SNR=14
DAVOX Sn **Sn** 02 08 06.7 +2.1
comp=E,9.9nm,0.3s,baz=143,slow=15,SNR=5.3
SQTA Sankt Quirin 4.83 343 **Pn** 02 07 11.8 +2.6
SQTA **Sn** 02 08 04.2 -0.9
SQTA Sankt Quirin 4.83 343 *i* Pn **Pn** 02 07 11.8 +2.6
comp=E,8.3nm,0.2s,SNR=6.9
SQTA *e*Sn **Sn** 02 08 04.2 -0.9
comp=E,33nm,0.4s
WATA Walderalm 4.87 347 **Pn** 02 07 12.4 +2.6
WATA **Sn** 02 08 08.4 +2.2
WATA Walderalm 4.87 347 *i* Pn **Pn** 02 07 12.4 +2.6
comp=E,50nm,0.5s,SNR=8.7
WATA *e*Sn **Sn** 02 08 08.4 +2.2
comp=E,39nm,0.6s
IVA Berane 4.91 85⇑ *i*Pn **Pn** 02 07 11.3 +1.0
IVA *i* Sn **Sn** 02 08 07.7 +0.7
ARSA Arzberg 4.92 18 *e*Pn **Pn** 02 07 10.9 +0.6
comp=E,13nm,0.4s
ARSA *e*Sn **Sn** 02 08 02.7 -4.4
comp=E,8.3nm,0.3s
PVY Plav 4.96 88⇑ *i*Pn **Pn** 02 07 11.9 +0.9
PVY *i* Sn **Sn** 02 08 09.3 +1.0
MOTA Moosalm 4.97 343 **Pn** 02 07 13.4 +2.2
MOTA **Sn** 02 08 12.3 +3.7
MOTA Moosalm 4.97 343 *i* Pn **Pn** 02 07 13.4 +2.2
comp=E,25nm,0.5s,SNR=10
MOTA *e*Sn **Sn** 02 08 12.3 +3.7
comp=E,28nm,0.4s
SJES Sjenica 4.99 80 *e*Pn **Pn** 02 07 13.4 +2.0
SJES *e*Sn **Sn** 02 08 09.4 +0.4
LMR La Mourre 4.99 281 *e*P **Pn** 02 07 12.0 +0.7
LMR *e*Sn **Sn** 02 08 02.6 -6.3
comp=E,18nm,0.8s
CLTB Caltabellotta 5.03 180 Pn **Pn** 02 07 11.8 -0.1
BIOA Bad Ischl, Aus 5.09 3 **Pn** 02 07 14.1 +1.3
BIOA **Sn** 02 08 14.9 +3.6
BIOA Bad Ischl, Aus 5.09 3 *i* Pn **Pn** 02 07 14.0 +1.3
comp=E,9.0nm,0.2s,SNR=7.1
BIOA *e*Sn **Sn** 02 08 14.9 +3.6
comp=E,34nm,0.4s
TIR Tirane 5.10 102 ⇓P **Pn** 02 07 13.0 +0.2
TIR Tirane 5.10 102 Pn **Pn** 02 07 09.8 -3.0
TIR Tirane 5.10 102 ⇓P **Pn** 02 07 13.0 +0.2
TIR Tirane 5.10 102 *e*Pn **Pn** 02 07 13.0 +0.2
TIR *e*Sn **Sn** 02 08 11.7 +0.2
TRIGF Trigance 5.12 285 P **Pn** 02 07 15.2 +2.0
DIVS Divibare 5.14 71 Pn **Pn** 02 07 12.5 -1.0
DIVS Divibare 5.14 71 *e*Pn **Pn** 02 07 15.4 +1.9
MBDF Montbardon 5.15 296 *e*P **Pn** 02 07 15.4 +1.8
MBDF *e*Sn **Sn** 02 08 06.7 -6.2
comp=E,25nm,0.6s
IVAS Ivanjica 5.15 77 *e*Pn **Pn** 02 07 14.4 +0.8
IVAS *e*Sn **Sn** 02 08 11.9 -1.1
VLO Vlora 5.16 112 Pn **Pn** 02 07 11.1 -2.5
VLO Vlora 5.16 112 P **Pn** 02 07 11.1 -2.5
FLAF Flassans-sur-I 5.18 281 P **Pn** 02 07 15.4 +1.4
RETA Reutte 5.18 341 *e*Pn **Pn** 02 07 16.5 +2.5
comp=E,12nm,0.4s
RETA *e*Sn **Sn** 02 08 16.4 +2.6
comp=E,19nm,0.5s
VAE Valguarnera 5.20 170 Pn **Pn** 02 07 15.9 +1.6
comp=E,10nm,1.0s,baz=1.9,slow=7.8,SNR=2.0
OGAG Argentiere 5.21 293 P **Pn** 02 07 18.7 +4.3
DAVA Damuels 5.25 334 *i* Pn **Pn** 02 07 17.6 +2.5
comp=E,15nm,0.5s,SNR=8.3
DAVA *e*Sn **Sn** 02 08 17.1 +1.6
comp=E,14nm,0.5s
MORH Mrgy, Hungar 5.29 45 ⇑P **Pb** 02 07 30.7 +1.7
MOA Molln 5.29 8 *e*Pn **Pn** 02 07 16.9 +1.4
MOA *e*Sn **Sn** 02 08 19.3 +3.0
MOA Molln 5.29 8 *e*Pn **Pn** 02 07 12.2 -3.3
comp=E,12nm,0.4s
MOA *e*Sn **Sn** 02 08 17.4 +1.1
comp=E,32nm,0.5s
BNI Bardonecchia 5.34 299 Pn **Pn** 02 07 15.0 -1.2
BNI Bardonecchia 5.34 299 P **Pn** 02 07 15.0 -1.2
FRGS Fruska Gora 5.39 60 ⇑P **Pn** 02 07 17.8 +1.0
FRGS Fruska Gora 5.39 60 *e*Pn **Pn** 02 07 16.7 -0.1
OGMF Fort Saint-Gob 5.40 301 P **Pn** 02 07 21.8 +4.8
BLAF les Blancs 5.42 287 P **Pn** 02 07 19.5 +2.2
DIX Grande Dixence 5.43 312 P **Pn** 02 07 20.1 +2.5
TRUS Trudelj 5.46 70 *e*Pn **Pn** 02 07 18.9 +1.1
LPG La Plagne 5.49 304 *e*P **Pn** 02 07 20.9 +2.4
LPG *e*Sn **Sn** 02 08 15.1 -6.6
comp=E,14nm,0.5s
LPL La Plagne 5.51 304 *e*P **Pn** 02 07 20.2 +1.4
LPL *e*Sn **Sn** 02 08 15.8 -6.3
comp=E,6.9nm,0.3s
ARTF Artigues 5.53 283 P **Pn** 02 07 20.6 +1.8
RONA Rosalia, Austr 5.53 22 **Pn** 02 07 19.4 +0.7
RONA **Sn** 02 08 18.6 -3.7
RONA Rosalia, Austr 5.53 22 *i* Pn **Pn** 02 07 19.4 +0.7
comp=E,1.2nm,0.2s,SNR=7.9
RONA *e*Sn **Sn** 02 08 18.5 -3.7
comp=E,3.2nm,0.3s
GRUS Gruza 5.61 74 *e*Pn **Pn** 02 07 20.9 +1.1
GRUS *e*Sn **Sn** 02 08 23.0 -1.1
MLYF Mely 5.62 287 P **Pn** 02 07 23.3 +3.2
CONA Conrad Observa 5.63 18 *i* Pn **Pn** 02 07 21.0 +0.7
comp=E,21nm,0.5s,SNR=7.0
CONA *e*Sn **Sn** 02 08 22.4 -2.4
comp=E,29nm,0.6s
RSL Roselend 5.67 305 P **Pn** 02 07 23.5 +2.8
SENIN Lac Senin/Sane 5.67 313 Pn **Pn** 02 07 20.3 -0.6
BSTF la Bastide-des 5.69 285 P **Pn** 02 07 22.8 +1.9
KEK Kerkira 5.73 118 Pn **Pn** 02 07 21.3 -0.2
SMRF Simiane la Rot 5.76 286 *e*P **Pn** 02 07 24.2 +2.3
SMRF *e*Sn **Sn** 02 08 20.9 -7.0
comp=E,8.3nm,0.7s
GDM Grand'Maison 5.76 299 P **Pn** 02 07 26.7 +4.6
ZUR Degenried 5.79 327 P **Pn** 02 07 24.0 +1.6
OGSI Sixt 5.79 309 P **Pn** 02 07 25.7 +3.3
ORIF Oris-en-Rattie 5.81 296 *e*P **Pn** 02 07 26.1 +3.5
ORIF *e*Sn **Sn** 02 08 22.2 -6.9
comp=E,29nm,0.6s
ORIF Oris-en-Rattie 5.81 296 P **Pn** 02 07 26.4 +3.8
RUSF Rustrel 5.82 286 P **Pn** 02 07 25.1 +2.4
SELS Selova 5.82 81 *e*Pn **Pn** 02 07 23.3 +0.6
SELS *e*Sn **Sn** 02 08 30.3 +1.0
OHR Ohrid 5.84 102 *i* Pn **Pn** 02 07 25.2 +2.1
AIGLE Aigle 5.84 312 P **Pn** 02 07 25.4 +2.4
KBN Korca 6.00 107 Pn **Pn** 02 07 24.5 -0.7
KBN Korca 6.00 107 P **Pn** 02 07 24.5 -0.7
GRN Grenoble 6.02 298 P **Pn** 02 07 29.0 +3.5
SULZ Cheisacher 6.11 325 P **Pn** 02 07 27.9 +1.2
TORNY Torny/Romont 6.11 315 P **Pn** 02 07 28.3 +1.5
BALST Balsthal 6.15 322 P **Pn** 02 07 28.6 +1.3
SLE Schleitheim 6.15 329 P **Pn** 02 07 27.9 +0.7
ZST Bratislava 6.21 25 *e*P **Pn** 02 07 25.8 -2.3
ZST *e* 02 08 34.9
ZST Bratislava 6.21 25 *e*PN **Pn** 02 07 25.8 -2.3
ZST *e*PG **Pg** 02 08 02.0 +6.4
ZST *e*SN **Sn** 02 08 34.9 -4.0
GEC2 GERESS Array S 6.25 3 Pn **Pn** 02 07 27.2 -1.5
GERES GERESS Array B 6.25 3 Pn **Pn** 02 07 28.5 -0.2
comp=E,1.3nm,0.3s,baz=181,slow=13,SNR=9.1
GERES Sn **Sn** 02 08 37.9 -2.0
comp=E,5.9nm,0.3s,baz=186,slow=26,SNR=11
comp=E,5.5nm,0.6s
GERES GERESS Array B 6.25 3 Pn **Pn** 02 07 26.2 -2.4
GERES GERESS Array B 6.25 3 P **Pn** 02 07 28.5 -0.2
GERES 02 08 37.9
CKRC Cesky Krumlov 6.26 7 *e*PN **Pn** 02 07 28.5 -0.2
CKRC *e*SN **Sn** 02 08 37.1 -3.0
BOVS Bovan 6.28 78 ⇓P **Pn** 02 07 29.1 +0.1
BOVS Bovan 6.28 78 *e*Pn **Pn** 02 07 29.5 +0.5
BOVS *e*Sn **Sn** 02 08 39.3 -1.4
BARS Barje 6.32 85 *e*Pn **Pn** 02 07 30.2 +1.1
BARS *e*Sn **Sn** 02 08 41.3 -0.4
GIMEL St. Georges / 6.34 311 P **Pn** 02 07 32.1 +2.1
BOURR Bourrignon 6.40 320 P **Pn** 02 07 31.5 +0.7
MODS Modra-Piesok 6.42 25 *e*P **Pn** 02 07 29.9 -1.1
MODS *e* 02 08 43.7
MODS Modra-Piesok 6.42 25 *e*PN **Pn** 02 07 29.8 -1.2
MODS *e*SN **Sn** 02 08 43.7 -0.5
FELD Feldberg im Sc 6.43 327 P **Pn** 02 07 31.7 +0.5
CABF La Chapelle 6.48 311 *e*P **Pn** 02 07 34.2 +2.3
MDVR Moldovita 6.51 68 ⇓P **Pn** 02 07 36.4 +4.1
KHC Kasperske Hory 6.53 2 Pn **Pn** 02 07 31.3 -1.1
KHC Kasperske Hory 6.53 2 *e*P **Pn** 02 07 31.9 -0.6
KHC *e* 02 08 44.2
KHC Kasperske Hory 6.53 2 *e*PN **Pn** 02 07 31.9 -0.6
KHC *e*SN **Sn** 02 08 44.2 -2.6
PRVS Prvonek 6.53 88 *e*Pn **Pn** 02 07 33.6 +1.1
PRVS *e*Sn **Sn** 02 08 46.2 -0.6
KIZ Kirchzarten 6.53 327 P **Pn** 02 07 33.0 +0.5
SMOL Smolenice 6.59 25 *e*P **Pn** 02 07 35.0 +1.6
SMOL *e* 02 08 47.0
VIVF Saint-Julien-I 6.60 293 *e*Pn **Pn** 02 07 35.1 +1.6
VIVF *e*Sn **Sn** 02 08 41.1 -7.5
comp=E,4.7nm,0.6s
BFO Black Forest 6.68 331 Pn **Pn** 02 07 33.9 -0.6
BFO Black Forest 6.68 331 P **Pn** 02 07 33.9 -0.6
ZAGS Zajecar 6.68 77 *e*Pn **Pn** 02 07 34.9 +0.4
ZAGS *e*Sn **Sn** 02 08 47.7 -2.8
STIP Stip 6.71 95 *i* Pn **Pn** 02 07 38.3 +3.3
BZS Buzias 6.74 61 ⇑P **Pn** 02 07 36.3 +1.0
BZS Buzias 6.74 61 ⇑P **Pn** 02 07 36.3 +1.0
BZS Buzias 6.74 61 *e*Pn **Pn** 02 07 36.3 +1.0
BZS *e*Sn **Sn** 02 08 50.2 -1.7
KRUC Moravsky 6.82 18 *e*PN **Pn** 02 07 36.6 +0.2
KRUC *e*SN **Sn** 02 08 50.7 -3.2
SSB Saint Sauveur 6.82 296 Pn **Pn** 02 07 35.9 -0.6
SSB Saint Sauveur 6.82 296 P **Pn** 02 07 35.9 -0.6
BOSS Bosilegrad 6.83 88 *e*Pn **Pn** 02 07 37.3 +0.7
BOSS *e*Sn **Sn** 02 08 52.6 -1.5
TREC Trest 6.87 12 *e*SN **Sn** 02 08 52.4 -2.7
HINF Hinteralfeld 6.89 321 *e*P **Pn** 02 07 38.2 +0.8
HINF *e*Sn **Sn** 02 08 48.7 -6.9
comp=E,36nm,0.7s
ZAPS Zavoj 6.93 81 *e*Pn **Pn** 02 07 39.5 +1.5
JAVC Velka Javorina 6.98 25 *e*PN **Pn** 02 07 40.6 +2.0
BLKB Belogradchik 6.98 78 ⇑P **Pn** 02 07 39.5 +0.8
LASF Ste Croix 7.00 285 *e*P **Pn** 02 07 40.3 +1.4
LASF *e*Sn **Sn** 02 08 50.5 -7.8
comp=E,2.1nm,0.5s
HERR Herculane 7.02 68 ⇓P **Pn** 02 07 41.1 +1.8
SIRR Siria 7.05 56 ⇓P **Pn** 02 07 41.9 +2.3
ECH Echery 7.05 325 Pn **Pn** 02 07 39.3 -0.3
ECH Echery 7.05 325 P **Pn** 02 07 39.3 -0.3
VAY Valandovo 7.07 97 *i* Pn **Pn** 02 07 41.4 +1.4
VYHS Vyhne 7.07 32 *e*P **Pn** 02 07 40.3 +0.4
VYHS *e* 02 08 54.5
VYHS Vyhne 7.07 32 *e*PN **Pn** 02 07 40.3 +0.4
VYHS *e*SN **Sn** 02 08 54.5 -5.7
PSZ Piszkesteto 7.08 39 Pn **Pn** 02 07 39.5 -0.7
PSZ Piszkesteto 7.08 39 P **Pn** 02 07 39.5 -0.7
VRAC Vranov 7.09 18 ⇑P **Pn** 02 07 39.5 -0.7
VRAC Vranov 7.09 18 Pn **Pn** 02 07 39.3 -0.9
comp=E,0.8nm,0.3s,baz=211,slow=12,SNR=5.7
VRAC Sn **Sn** 02 08 58.4 -2.3
comp=E,0.6nm,0.3s,baz=198,slow=3.2,SNR=1.6
comp=E,5.1nm,0.6s
VRAC Vranov 7.09 18 ⇑P **Pn** 02 07 39.5 -0.7
VRAC Vranov 7.09 18 *e*PN **Pn** 02 07 40.6 +0.4
VRAC *e*SN **Sn** 02 08 52.8 -7.9
CDF Champ du Feu 7.15 326 *e*P **Pn** 02 07 42.0 +0.9
CDF *e*Sn **Sn** 02 08 55.4 -6.9
comp=E,40nm,0.6s
GRFO Grafenberg 7.22 350 Pn **Pn** 02 07 40.1 -1.8
GRFO Grafenberg 7.22 350 P **Pn** 02 07 40.1 -1.8
GRA1 Grafenberg Arr 7.22 350 Pn **Pn** 02 07 40.4 -1.6
GRF Grafenberg Arr 7.22 350 P **Pn** 02 07 40.4 -1.6
HAU Haudompre 7.26 320 *e*P **Pn** 02 07 43.6 +1.1
HAU *e*Sn **Sn** 02 08 57.4 -7.3
comp=E,62nm,0.5s
VTS Vitosha 7.38 87 ⇑P **Pn** 02 07 44.7 +0.5
VTS Vitosha 7.38 87 Pn **Pn** 02 07 43.0 -1.2
VTS Vitosha 7.38 87 ⇑P **Pn** 02 07 44.7 +0.5
VTS Vitosha 7.38 87 *e*Pn **Pn** 02 07 45.8 +1.6
VTS *e*Sn **Sn** 02 09 04.9 -2.9
GZR Gura Zlata 7.42 65 ⇑P **Pn** 02 07 46.1 +1.4
PRU Pruhonice 7.43 7 *e*P **Pn** 02 07 44.9 0.0
PRU *e* 02 09 06.1
PRU Pruhonice 7.43 7 *e*PN **Pn** 02 07 44.9 0.0
PRU *e*SN **Sn** 02 09 06.1 -2.9
KEST Kesra 7.50 205 Pn **Pn** 02 07 49.2 +3.2
comp=E,1.3nm,0.3s,baz=296,slow=6.6,SNR=15
comp=E,6.1nm,0.6s
MORC Moravsky Berou 7.76 21 ⇓P Pn 02 07 55.0 +5.6
MORC Moravsky Berou 7.76 21 Pn **Pn** 02 07 45.9 -3.6
MORC Moravsky Berou 7.76 21 ⇓P Pn 02 07 55.0 +5.6
MORC Moravsky Berou 7.76 21 *e*PN **Pn** 02 07 51.5 +2.1
SMF Signal de Mont 7.82 304 *e*P **Pn** 02 07 52.9 +2.7
SMF *e*Sn **Sn** 02 09 10.6 -8.0
comp=E,21nm,0.7s
LANS Liptovska Anna 7.85 31 *e*P **Pn** 02 07 49.4 -1.2
LANS Liptovska Anna 7.85 31 *e*PN **Pn** 02 07 49.4 -1.2
LANS *e*SN Sn 02 09 05.4 -14
KRLC Kraliky 7.86 17 *e*P **Pn** 02 07 51.4 +0.7
KRLC *e* 02 09 15.4
KRLC Kraliky 7.86 17 *e*PN **Pn** 02 07 51.4 +0.7
KRLC *e*SN **Sn** 02 09 15.4 -4.1
SRS Serrai 7.87 97 *e*Pn **Pn** 02 07 52.0 +1.1
SRS *e*Sn **Sn** 02 09 18.4 -1.4
DRGR 7.94 55 ⇑P **Pn** 02 07 54.6 +2.7
DRGR 7.94 55 ⇑P **Pn** 02 07 54.6 +2.7
DRGR 7.94 55 *e*Pn **Pn** 02 07 53.3 +1.5
PAGF Fort de Pagny 7.94 321 *e*P **Pn** 02 07 53.0 +1.2
PAGF *e*Sn **Sn** 02 09 13.8 -7.7
comp=E,22nm,0.6s
DPC Dobruska-Polom 8.03 14 *e*P **Pn** 02 07 53.8 +0.7
DPC Dobruska-Polom 8.03 14 *e*PN **Pn** 02 07 53.8 +0.7
SFTF Sexfontaines 8.03 317 *e*P **Pn** 02 07 55.1 +2.0
SFTF *e*Sn **Sn** 02 09 15.9 -7.9
comp=E,11nm,0.4s
LOT Lotru 8.10 66 ⇑P Pn 02 07 59.1 +4.9
MTLF Montolieu 8.12 279 *e*P **Pn** 02 07 57.5 +3.2
LOR Lormes 8.12 308 *e*P **Pn** 02 07 57.3 +3.0
LOR *e*Sn **Sn** 02 09 17.8 -8.1
comp=E,8.7nm,0.5s
UPC Upice 8.13 13 *e*P **Pn** 02 07 55.1 +0.7
UPC Upice 8.13 13 *e*PN **Pn** 02 07 55.1 +0.7
AVF Avril sur Loir 8.19 304 *e*P **Pn** 02 07 57.5 +2.3
AVF *e*Sn **Sn** 02 09 19.0 -8.5
comp=E,1.7nm,0.3s
OSTC Ostas 8.21 13 *e*PN **Pn** 02 07 55.6 +0.1
SSF Saint Saulge 8.22 306 *e*P **Pn** 02 07 57.3 +1.6
SSF *e*Sn **Sn** 02 09 20.4 -8.0
comp=E,9.7nm,0.6s
MEZF Maizieres J'vi 8.23 319 *e*P **Pn** 02 07 58.1 +2.4
MEZF *e*Sn **Sn** 02 09 20.6 -7.9
comp=E,19nm,0.6s
MESR Meseseni 8.25 53 ⇑P **Pn** 02 07 57.9 +1.8
SAVF Savonnieres en 8.27 319 *e*P **Pn** 02 07 59.6 +3.3
SAVF *e*Sn **Sn** 02 09 21.4 -8.1
comp=E,7.1nm,0.4s
BRG Berggiesshubel 8.28 3 *e*P **Pn** 02 07 57.5 +1.1
BRG Amp 02 08 05.9
comp=E,3.6nm,0.7s
BRG *ex* x 02 09 26.7
BRG Amp 02 10 41.3
comp=E,31nm,1.4s
BRG Berggiesshubel 8.28 3 *e*P **Pn** 02 07 57.5 +1.1
BRG *e* 02 09 26.7
BRG pmax pmax
comp=E,4.0nm,0.7s
BRG pmax pmax
comp=E,31nm,1.4s
BGF Bois d'Agland 8.40 302 *e*P **Pn** 02 08 00.7 +2.6
BGF *e*Sn **Sn** 02 09 24.5 -8.3
comp=E,33nm,0.8s
CAF Calviac 8.41 290 *e*P **Pn** 02 08 00.5 +2.2
ITM Ithomi 8.60 126 Pn **Pn** 02 07 57.0 -3.9
ARR Arges 8.67 68 ⇑P **Pn** 02 08 05.0 +3.1
CLL Collm 8.70 359 Pn **Pn** 02 08 01.3 -1.0
CLL Collm 8.70 359 *e*P **Pn** 02 08 03.0 +0.8
CLL Collm 8.70 359 *e*Pn **Pn** 02 08 03.0 +0.8
CLL *e*Sn Sn 02 09 31.0 -9.2
CLL *ex* x 02 09 52.0
CLL *e*Sg **Sg** 02 10 41.0 +5.2
comp=E,36nm,1.1s
TCF Toulx Ste Croi 8.70 299 *e*P **Pn** 02 08 05.5 +3.2
TCF *e*Sn **Sn** 02 09 31.8 -8.5
comp=E,10nm,0.8s
HYF Humbligny 8.84 305 *e*P **Pn** 02 08 07.5 +3.3
RJF Les Rejaudoux 8.88 292 *e*P **Pn** 02 08 07.9 +3.3
KOLS Kolonicke sedl 8.93 42 *e*P **Pn** 02 08 06.0 +0.6
KOLS Kolonicke sedl 8.93 42 *e*PN **Pn** 02 08 06.0 +0.6
VOIR 8.97 68 ⇓P **Pn** 02 08 10.6 +4.6
VOIR 8.97 68 ⇓P **Pn** 02 08 10.6 +4.6
RDO Rodhopi 9.29 95 Pn **Pn** 02 08 07.9 -2.4
LFF La Frestale 9.34 289 *e*P **Pn** 02 08 14.4 +3.4
LFF *e*Sn Sn 02 09 46.7 -9.1
comp=E,24nm,1.1s
GIVF Givet 9.48 325 *e*P **Pn** 02 08 16.2 +3.3
EPF Esparros 9.49 277 *e*P **Pn** 02 08 16.7 +3.6
MLR Muntele Rosu 9.59 68 ⇑P **Pn** 02 08 17.1 +2.5
MLR Muntele Rosu 9.59 68 Pn **Pn** 02 08 15.9 +1.3
comp=E,0.2nm,0.3s,baz=311,slow=19,SNR=3.0
comp=E,1.3nm,0.5s
MLR Muntele Rosu 9.59 68 ⇑P **Pn** 02 08 17.1 +2.5
ALN Alexandroupoli 9.72 96 Pn **Pn** 02 08 16.4 +0.1
ALN Alexandroupoli 9.72 96 P **Pn** 02 08 16.4 +0.1
MFF Saint Martin d 10.34 297 *e*P **Pn** 02 08 28.5 +3.7
APE Apeiranthos 10.95 116 *e*P **Pn** 02 08 37.7 +4.6
FLN La Foliniere 11.39 307 *e*P **Pn** 02 08 42.6 +3.5
GRR Gorron 11.45 305 *e*P **Pn** 02 08 43.5 +3.6
IDI Anoyia 11.64 125 Pn **Pn** 02 08 44.0 +1.3
comp=Z,0.2nm,0.3s,baz=331,slow=7.6,SNR=2.4
comp=Z,6.7nm,0.9s
IDI Anoyia 11.64 125 Pn **Pn** 02 08 42.8 +0.1
QUIF Quistinic 12.71 300 *e*P **Pn** 02 09 00.1 +3.0
KLNR Kaliningrad 12.85 19⇑ *e*P **Pn** 02 08 59.6 +0.7
KLNR pmax pmax
comp=Z,68nm,0.8s
ESDC Sonseca Array 13.29 263 Pn **Pn** 02 09 04.8 -0.4
baz=70,slow=13,SNR=2.6
comp=Z,0.4nm,0.7s
AKASG Malin Array Be 13.62 48 Pn **Pn** 02 09 12.2 +2.8
baz=243,slow=12
MNK Minsk 15.31 34 *i* P **Pn** 02 09 32.0 -0.3
MNK *i* S **Sn** 02 12 21.7 +0.1
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=N,9.0nm,0.9s

MNK pmax pmax
comp=Z,5.0nm,0.7s
MNK MLR MLR
comp=Z,3µm,16.0s
MNK MLR MLR
comp=E,276nm,14.0s
MNK MLR MLR
comp=N,74nm,21.0s
MNK Minsk 15.31 34 *i* P **Pn 02 09 32.1 -0.3**
comp=E,2.0nm,0.8s
MNK *i* P **Pn 02 09 32.1 -0.3**
comp=N,9.0nm,0.9s
MNK *i* P **Pn 02 09 32.1 -0.3**
comp=Z,5.0nm,0.7s,baz=226
MNK *i* PP **PnPn 02 09 40.2 -0.2**
MNK *i* PPP PPP 02 09 47.9
MNK *i* S **Sn 02 12 21.8 +0.1**
MNK *i* SS **SnSn 02 12 35.7 +1.4**
MNK *i* SSS SSS 02 12 48.4
MNK *i* LQ LQ 02 13 51.5
MNK *i* LR LR 02 15 10.1
MNK *i* LRM MLR 02 16 18.6
comp=Z,3µm,15.7s
MNK *i* LRM MLR 02 16 21.2
comp=E,276nm,14.4s
MNK *i* LRM MLR 02 16 34.7
comp=N,74nm,20.8s
BRTR Keskin Array B 15.63 94 Pn **P 02 09 39.2 -1.7**
comp=N,0.1nm,0.3s,baz=292,slow=12,SNR=1.8
comp=N,0.5nm,0.5s
BRTR Keskin Array B 15.63 94 P **P 02 09 39.3 -1.7**
EKA Eskdalemuir Ar 16.62 326 Pn **Pn 02 09 48.7 -0.5**
baz=132,slow=14
comp=N,1.8nm,0.8s
EKA Eskdalemuir Ar 16.62 326 P **Pn 02 09 48.7 -0.5**
HFS Hagfors 17.55 1 P **Pn 02 10 01.1 +0.2**
comp=N,0.1nm,0.3s,baz=162,slow=11,SNR=6.1
comp=N,1.3nm,0.7s
HFS Hagfors 17.55 1 P **Pn 02 10 01.1 +0.2**
TOKA Tokat 17.56 90 Pn **Pn 02 09 58.7 -2.5**
VSU Vasula 17.98 23⇑ *e*P **P 02 10 08.7 +2.0**
VSU pmax pmax
comp=Z,38nm,1.0s
NC602 NORSAR Array S 18.18 357 Pn 02 10 06.6 -2.1
NC602 IAmb IAmb 02 10 10.8
comp=Z,15nm,0.8s
NAO01 NORSAR Array S 18.32 356 Pn 02 10 10.2 -0.2
NAO01 IAmb IAmb 02 10 30.5
comp=Z,19nm,1.4s
NB2 NORSAR Subarra 18.50 357 P **P 02 10 12.3 -0.1**
comp=Z,1.8nm,0.7s,baz=187,slow=14
NOA NORSAR Array B 18.50 357 P **P 02 10 11.4 -1.0**
baz=175,slow=11,SNR=16
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 18.50 357 P **P 02 10 11.4 -1.0**
NC303 NORSAR Array S 18.68 357 P **P 02 10 13.0 -1.3**
NC303 IAmb IAmb 02 10 21.0
comp=Z,11nm,1.2s
NC204 NORSAR Array S 18.75 356 P **P 02 10 15.2 0.0**
NC204 IAmb IAmb 02 10 19.0
comp=Z,20nm,1.0s
VORR Voronezh 19.77 54 *e*P **Pn 02 10 29.7 +1.9**
VORR pmax pmax
comp=Z,30nm,0.6s
MMAI Mount Meron Ar 19.91 111 P **Pn 02 10 29.9 +0.1**
comp=Z,0.3nm,0.3s,baz=309,slow=11,SNR=2.2
comp=Z,0.9nm,0.6s
FINES FINESS Array B 20.38 18 P **P 02 10 33.0 +0.2**
comp=Z,3.8nm,0.6s,baz=202,slow=8.2,SNR=11
comp=Z,3.8nm,0.6s
FINES FINESS Array B 20.38 18 P **P 02 10 33.2 +0.3**
FINES FINESS Array B 20.38 18 P **P 02 10 33.2 +0.3**
FIA1 FINESS Array S 20.38 18 P **P 02 10 33.0 +0.1**
FIA1 IAmb IAmb 02 10 38.6
comp=Z,7.3nm,0.8s
ASF Jabal al Asfar 21.43 111 P **P 02 10 46.5 +1.9**
comp=Z,1.2nm,0.6s,baz=14,slow=9.0,SNR=3.0
comp=Z,1.2nm,0.6s
ASF Jabal al Asfar 21.43 111 P **P 02 10 46.5 +1.9**
KIV Kislovodsk 21.43 76 P **P 02 10 42.7 -1.9**
KIV IAmb IAmb 02 10 55.2
comp=Z,12nm,1.1s
KIV Kislovodsk 21.43 76 *e*P **P 02 10 48.8 +4.2**
KIV pmax pmax
comp=Z,11nm,1.1s
VALR Valaam 21.56 23*de*P **P 02 10 47.2 +1.6**
VALR pmax pmax
comp=Z,27nm,0.9s
KBZ Khabaz 21.61 77 P **P 02 10 47.7 +1.4**
comp=Z,5.3nm,0.9s,baz=286,slow=8.1,SNR=8.0
comp=Z,5.3nm,0.9s
KBZ Khabaz 21.61 77⇑ *e*P **P 02 10 50.4 +4.1**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
MARD Mardin 21.71 95 P **P 02 10 46.1 -1.6**
MARD IAmb IAmb 02 10 57.6
comp=Z,4.6nm,0.8s
GURO Guroymak-BITLI 22.19 91 P **P 02 10 50.2 -2.6**
KLMR Klimovskoe 24.18 32 *e*P **P 02 11 09.0 -3.6**
KLMR pmax pmax
comp=Z,11nm,1.2s
KLMR Klimovskoe 24.18 32 *e*P **P 02 11 09.0 -3.6**
KLMR AMP 02 11 14.1
comp=Z,11nm,1.2s
BELG Belogornoye 24.99 55⇓ *e*P **P 02 11 22.4 +2.5**
BELG pmax pmax
comp=Z,2.0nm,1.0s
TOA0 Torodi Ar. Sit 31.01 202 P **P 02 12 12.6 -1.5**
TOA0 IAmb IAmb 02 12 23.2
comp=Z,4.4nm,1.3s
TORD Torodi Ar. Bea 31.01 202 P **P 02 12 15.4 +1.3**
comp=Z,0.6nm,0.6s,baz=22,slow=8.0,SNR=11
comp=Z,0.6nm,0.6s
TORD Torodi Ar. Bea 31.01 202 P **P 02 12 11.8 -2.3**
ARU Arti 31.87 48 P **P 02 12 19.3 -2.0**
ARU Arti 31.87 48*c i*P **P 02 12 21.8 +0.5**
ARU 02 13 23.9
ARU S **S 02 17 33.2 +1.7**
ARU SS **SnSn 02 19 20.2 +0.9**
ARU pmax pmax
comp=Z,8.0nm,0.7s
ABKAR Akbulak array 32.72 62 P **P 02 12 24.5 -4.3**
GEYT Alibeck 34.25 82 P **P 02 12 42.9 +0.5**
comp=Z,1.3nm,0.6s,baz=276,slow=4.2,SNR=2.3
comp=Z,1.3nm,0.6s
BRVK Borovoye 38.72 54 P **P 02 13 19.3 -1.0**
BRVK IAmb IAmb 02 13 22.8
comp=Z,3.5nm,0.9s
BRVK Borovoye 38.72 54⇑ *e*P **P 02 13 21.9 +1.6**
BRVK pmax pmax
comp=Z,7.0nm,1.1s
KK31 Karatay Array 41.27 69 P **P 02 13 39.4 -2.2**
KK31 IAmb IAmb 02 13 50.5
comp=Z,2.3nm,1.1s
KK31 Karatay Array 41.27 69 P **P 02 13 39.4 -2.2**
KK31 pmax pmax
comp=Z,2.0nm,1.1s
KKAR Karatay Array 41.27 69 P **P 02 13 39.0 -2.6**
KKAR Karatay Array 41.27 69 P **P 02 13 39.0 -2.6**
KURK Kurchatov 44.26 56⇑ *e*P **P 02 14 08.4 +2.7**
KURK pmax pmax
comp=Z,1.0nm,0.9s
ZALV Zalesovo Beam 47.00 50 P **P 02 14 28.1 +0.8**
comp=Z,0.6nm,0.4s,baz=305,slow=10,SNR=3.9
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 47.00 50 P **P 02 14 27.0 -0.3**
ZALV Zalesovo Beam 47.00 50 P **P 02 14 28.1 +0.8**
MKAR Makanchi Array 47.82 60 P **P 02 14 34.4 +0.5**
comp=Z,1.0nm,0.8s,baz=281,slow=6.0,SNR=5.3
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 47.82 60 P **P 02 14 33.2 -0.7**
MKAR Makanchi Array 47.82 60 *i* P **P 02 14 35.0 +1.1**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
WMQ Urumqi 52.51 62 *e*P **P 02 15 13.4 +3.9**
SONM Songino Array 61.90 50 P **P 02 16 17.0 +1.1**
comp=Z,0.9nm,0.7s,baz=297,slow=6.3,SNR=3.9
comp=Z,0.9nm,0.7s
SONM Songino Array 61.90 50 P **P 02 16 17.0 +1.1**
ULN Ulaanbaatar 62.25 49⇑ *e*P **P 02 16 19.4 +1.1**
ULN pmax pmax
comp=Z,2.0nm,1.1s
SEY Seymchan 69.86 19⇑ *e*P **P 02 17 07.8 +1.1**
SEY pmax pmax
comp=Z,9.0nm,1.3s
IMAR Indian Mountai 71.27 354 P **P 02 17 13.7 -1.7**
H21K Melozitna Rive 71.53 354 P **P 02 17 17.3 +0.5**
PZH PanZhiHua 71.54 71 P **P 02 17 19.1 +1.4**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,4.7s
SCRK Sand Creek 72.24 350 P **P 02 17 20.4 -0.8**
BCAR Beaver Creek A 72.80 348 P **P 02 17 22.1 -2.4**

*IDC **24** 02:07:30.9±0.9, 42.˚74N×13.˚17E, h0km, mb3.9/8, mbtmp3.9/15, ML3.4/6, Error ellipse: s-maj=18.0km s-min=13.6km az=108.0*
*LDG **24** 02:07:30.0±0.1, 42.˚67N×13.˚29E, h8km, Ml3.4/17, Error ellipse: s-maj=2.6km s-min=1.8km az=49.0*
*ROM **24** 02:07:30.3±0.1, 42.˚663N±0.˚004×13.˚296E±0.˚006, h6km, ML3.8/58, Error ellipse: s-maj=0.5km s-min=0.2km az=66.0*
*NEIC **24** 02:07:31.1±2.1, 42.˚62N±0.˚08×13.˚18E±0.˚07, h3km±5km, mb4.2/9, ML3.8(ROM), Error ellipse: s-maj=11.8km s-min=7.0km az=190.0*

ISC 24 02:07:31.9±0.7, 42.˚65N±0.˚02×13.˚23E±0.˚02, h12km±5km, n179, σ2s33/217, mb4.1/9, 1C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.14**	**185**	⇓P		**Pg**	**02 07 34.8**	**-0.5**
RM33				S		**Sg**	**02 07 38.0**	**+0.3**
RM33					AML	AML		
	comp=N,83850µm,0.7s							
RM33					AML	AML		
	comp=N,78000µm,0.6s							
RM33					AML	AML		
RM33					AML	AML		
RM33					AML	AML		
	comp=N,83800µm,0.7s							
RM33					AML	AML		
RM33					AML	AML		
	comp=N,78050µm,0.6s							
RM33					AML	AML		
LNSS	**Leonessa**	**0.15**	**253**	⇓P		**Pg**	**02 07 35.4**	**0.0**
LNSS				S		**Sg**	**02 07 39.2**	**+1.2**
LNSS					AML	AML		
	comp=E,60050µm,0.5s							
LNSS					AML	AML		
CAMP	**Campotosto**	**0.17**	**130**	⇓P		**Pg**	**02 07 34.1**	**-1.7**
CAMP				S		**Sg**	**02 07 36.7**	**-1.9**
CAMP					AML	AML		
	comp=E,37150µm,1.0s							
CAMP					AML	AML		
	comp=N,36450µm,0.7s							
TERO	**Teramo**	**0.28**	**95**	P		**Pg**	**02 07 35.5**	**-2.1**
TERO				S		**Sg**	**02 07 39.2**	**-2.2**
TERO					AML	AML		
	comp=E,55500µm,0.7s							
TERO					AML	AML		
	comp=E,51200µm,0.7s							
TERO					AML	AML		
	comp=N,83450µm,0.6s							
TERO					AML	AML		
	comp=N,77900µm,0.6s							
GIGS	**Gran Sasso**	**0.32**	**128**	P		**Pg**	**02 07 36.4**	**-1.9**
GIGS				S		**Sg**	**02 07 41.1**	**-1.5**
GIGS					AML	AML		
	comp=N,4985µm,0.8s							
GIGS					AML	AML		
	comp=E,5760µm,0.6s							
AQU	**L'Aquila**	**0.32**	**156**	Pg		**Pg**	**02 07 37.2**	**-1.2**
AQU	**L'Aquila**	**0.32**	**156**	⇓P		**Pg**	**02 07 37.3**	**-1.0**
AQU				S		**Sg**	**02 07 43.5**	**+0.8**
AQU					AML	AML		
	comp=E,25000µm,0.9s							
AQU					AML	AML		
	comp=N,29000µm,1.6s							
AQU					AML	AML		
	comp=E,24050µm,0.7s							
AQU					AML	AML		
	comp=N,30900µm,1.6s							
AQU					AML	AML		
	comp=N,29050µm,1.6s							
FEMA	**Monte Fema**	**0.34**	**337**	P		**Pg**	**02 07 38.0**	**-0.8**
FEMA				S		**Sg**	**02 07 43.5**	**0.0**
ARRO	**Arrone**	**0.35**	**259**	P		**Pg**	**02 07 38.8**	**-0.1**
ARRO				S		**Sb**	**02 07 45.4**	**-0.1**
ARRO					AML	AML		
	comp=E,10410µm,1.5s							
ARRO					AML	AML		
	comp=N,14850µm,1.1s							
ARRO					AML	AML		
	comp=E,10430µm,1.5s							
FIAM	**Fiamignano**	**0.39**	**193**	P		**Pg**	**02 07 39.1**	**-0.5**
FIAM					AML	AML		
	comp=E,20500µm,0.8s							
FIAM					AML	AML		
	comp=N,18600µm,0.7s							
FDMO	**Fiordimonte**	**0.41**	**345**	P		**Pg**	**02 07 38.6**	**-1.3**
FDMO				S		**Sg**	**02 07 45.0**	**-0.3**
FDMO					AML	AML		
	comp=N,22350µm,0.2s							
FDMO					AML	AML		
	comp=E,19100µm,0.6s							
CESI	**CESI - Serrava**	**0.43**	**326**	⇓P		**Pg**	**02 07 39.6**	**-0.9**
CESI				S		**Sg**	**02 07 46.8**	**+0.6**
CESI					AML	AML		
	comp=E,24550µm,0.4s							
CESI					AML	AML		
	comp=N,49300µm,0.3s							
OFFI	**Offida**	**0.44**	**49**	P		**Pg**	**02 07 39.2**	**-1.4**
OFFI				S		**Sg**	**02 07 46.7**	**+0.2**
OFFI					AML	AML		
	comp=N,55700µm,0.5s							
OFFI					AML	AML		
	comp=E,62500µm,0.6s							
FAGN	**Fagnano**	**0.46**	**145**	P		**Pg**	**02 07 39.7**	**-1.2**
FAGN					AML	AML		
	comp=E,26950µm,0.5s							
FAGN					AML	AML		
	comp=E,26900µm,0.5s							
FAGN					AML	AML		
	comp=N,19850µm,0.4s							
CESX	**Cesi**	**0.48**	**266**	⇑P		**Pg**	**02 07 41.0**	**-0.3**
CESX					AML	AML		
	comp=E,13700µm,0.6s							
CESX					AML	AML		
	comp=N,12000µm,0.4s							
VCEL	**Villa Celiera**	**0.52**	**119**	P		**Pg**	**02 07 40.5**	**-1.5**
VCEL				S		**Sg**	**02 07 48.6**	**-0.2**
VCEL					AML	AML		
	comp=E,17600µm,0.7s							
VCEL					AML	AML		
	comp=N,21450µm,0.7s							
MNTP	**Montappone**	**0.52**	**20**	P		**Pg**	**02 07 40.8**	**-1.3**
TRTR	**Tortoreto Alta**	**0.53**	**72**	P		**Pg**	**02 07 41.3**	**-0.9**
TRTR					AML	AML		
	comp=E,35900µm,1.3s							
TRTR					AML	AML		
	comp=N,33700µm,0.6s							
SEF1	**Sefro**	**0.54**	**338**	P		**Pg**	**02 07 41.4**	**-1.1**
SEF1				S		**Sg**	**02 07 49.9**	**+0.2**
SEF1					AML	AML		
	comp=E,31450µm,0.7s							
SEF1					AML	AML		
	comp=N,20400µm,0.3s							
SEF1					AML	AML		
	comp=E,31500µm,0.7s							
SEF1					AML	AML		
	comp=N,20400µm,0.2s							
MDAR	**Monte D'Aria**	**0.55**	**353**	P		**Pg**	**02 07 41.1**	**-1.6**
PIO1	**Pioraco**	**0.56**	**341**	P		**Pg**	**02 07 42.6**	**-0.3**
ASSB	**Assisi San Ben**	**0.58**	**314**	P		**Pg**	**02 07 42.3**	**-0.8**
ASSB				S		**Sb**	**02 07 52.0**	**-0.2**
ASSB					AML	AML		
	comp=E,12450µm,1.5s							
ASSB					AML	AML		
	comp=N,9710µm,1.2s							
T0110	**Collepietro**	**0.58**	**136**	P		**Pg**	**02 07 41.4**	**-1.8**
T0110				S		**Sg**	**02 07 51.2**	**+0.2**
T0110					AML	AML		
	comp=E,15350µm,0.6s							
T0110					AML	AML		
	comp=N,14200µm,0.7s							
SSM1	**San Severino M**	**0.58**	**356**	P		**Pg**	**02 07 41.8**	**-1.5**
SSM1				S		**Sg**	**02 07 50.9**	**-0.1**
FIU1	**Fiuminata**	**0.59**	**338**	P		**Pg**	**02 07 42.2**	**-1.1**
GAG1	**Gagliole**	**0.60**	**349**	P		**Pg**	**02 07 42.2**	**-1.4**
GAG1				S		**Sg**	**02 07 51.9**	**+0.3**
MTL1	**Matelica**	**0.63**	**345**	P		**Pg**	**02 07 42.8**	**-1.4**
PTQR	**Pietraquaria**	**0.64**	**169**	P		**Pg**	**02 07 42.6**	**-1.6**
PTQR					AML	AML		
	comp=E,3725µm,1.6s							
PTQR					AML	AML		
	comp=N,3300µm,0.8s							
SNTG	**Esanatoglia**	**0.65**	**341**	P		**Pg**	**02 07 42.9**	**-1.5**
SNTG				S		**Sg**	**02 07 53.2**	**+0.3**
TRE1	**Treia**	**0.67**	**5**	P		**Pg**	**02 07 43.9**	**-1.0**
TRE1				S		**Sb**	**02 07 54.2**	**-0.5**
SRES	**S.Oreste - Sor**	**0.67**	**233**	P		**Pg**	**02 07 44.4**	**-0.4**
SRES					AML	AML		
	comp=N,3875µm,1.2s							
SRES					AML	AML		
	comp=E,4595µm,1.0s							
CADA	**Capodarco di F**	**0.67**	**35**	P		**Pg**	**02 07 44.3**	**-0.6**
ATCC	**AVT- Casa Cast**	**0.69**	**321**	P		**Pg**	**02 07 44.1**	**-1.2**
ATCC					AML	AML		
	comp=E,11800µm,0.9s							
ATCC					AML	AML		
	comp=N,11150µm,0.7s							
CERT	**Cerreto**	**0.72**	**195**	P		**Pg**	**02 07 45.0**	**-0.8**
CERT					AML	AML		
	comp=E,6005µm,1.5s							
CERT					AML	AML		
	comp=N,4625µm,0.8s							
MTCE	**Montecelio**	**0.72**	**210**	P		**Pg**	**02 07 44.6**	**-1.2**
MTCE					AML	AML		
	comp=E,5550µm,0.7s							
MTCE					AML	AML		
	comp=N,4440µm,1.4s							
CIMA	**Civitanova Mar**	**0.73**	**26**	P		**Pg**	**02 07 45.9**	**-0.2**
FOSV	**Fossato di Vic**	**0.73**	**332**	P		**Pg**	**02 07 44.6**	**-1.5**
FOSV				S		**Sb**	**02 07 56.2**	**-0.5**
FOSV					AML	AML		
	comp=E,7625µm,1.0s							
FOSV					AML	AML		
	comp=N,10135µm,0.6s							
PP3	**Marolino**	**0.78**	**21**	P		**Pg**	**02 07 46.0**	**-1.0**
PP3					AML	AML		
	comp=E,14550µm,0.5s							
PP3					AML	AML		
	comp=E,13700µm,0.5s							
PP3					AML	AML		
	comp=N,17250µm,0.5s							
PP3					AML	AML		
	comp=E,13750µm,0.5s							
PP3					AML	AML		
	comp=N,16700µm,0.5s							
MURB	**Monte Urbino**	**0.81**	**320**	Pg		**Pg**	**02 07 45.7**	**-1.8**
MURB	**Monte Urbino**	**0.81**	**320**	P		**Pg**	**02 07 46.6**	**-0.8**
MURB					AML	AML		
	comp=E,18350µm,1.2s							
MURB					AML	AML		
	comp=N,19050µm,0.9s							
MURB					AML	AML		
	comp=E,19050µm,1.2s							
MURB					AML	AML		
	comp=N,19800µm,0.8s							
INTR	**Introdacqua**	**0.81**	**141**	P		**Pg**	**02 07 45.0**	**-2.4**
INTR					AML	AML		
	comp=N,5µm,0.8s							
INTR					AML	AML		
	comp=E,3730µm,0.7s							
INTR					AML	AML		
	comp=N,5µm,0.8s							
INTR					AML	AML		
	comp=N,7530µm,0.8s							
INTR					AML	AML		
	comp=E,4µm,0.7s							
RCAV	**Rocca di Cave**	**0.82**	**195**	P		**Pg**	**02 07 47.0**	**-0.8**
VVLD	**Villa Vallelon**	**0.83**	**159**	P		**Pg**	**02 07 46.1**	**-1.7**
ATTE	**AVT- Monte Tez**	**0.85**	**311**	P		**Pg**	**02 07 47.8**	**-0.5**
ATTE					AML	AML		
	comp=N,4450µm,0.8s							
ATTE					AML	AML		
	comp=E,4020µm,0.6s							
GUAR	**Guarcino**	**0.85**	**176**	P		**Pb**	**02 07 48.5**	**-0.1**
GUAR					AML	AML		
	comp=N,4805µm,0.7s							
GUAR					AML	AML		
	comp=N,4800µm,0.7s							
GUAR					AML	AML		
	comp=E,3735µm,0.9s							
SSFR	**Montelago di S**	**0.86**	**338**	P		**Pg**	**02 07 46.8**	**-1.6**
MGAB	**Montegabbione**	**0.87**	**288**	P		**Pg**	**02 07 48.7**	**+0.1**
MGAB					AML	AML		
	comp=N,8540µm,1.3s							
MGAB					AML	AML		
	comp=N,8745µm,0.5s							
MGAB					AML	AML		
	comp=E,10110µm,0.9s							
MGAB					AML	AML		
	comp=E,9605µm,0.8s							
ATFO	**Monte Foce - G**	**0.87**	**326**	P		**Pg**	**02 07 47.3**	**-1.4**
ATFO					AML	AML		
	comp=E,8030µm,1.2s							
ATFO					AML	AML		
	comp=N,6225µm,0.8s							
ARVD	**Arcevia**	**0.88**	**346**	P		**Pg**	**02 07 47.1**	**-1.7**
ARVD					AML	AML		
	comp=N,5745µm,0.8s							
ARVD					AML	AML		
	comp=E,4755µm,0.7s							
RMP	**Rome, Mte Porz**	**0.92**	**205**	P		**Pg**	**02 07 49.3**	**-0.3**
RMP					AML	AML		
	comp=E,8160µm,0.9s							
RMP					AML	AML		
	comp=N,8390µm,0.8s							
LPEL	**Lama dei Pelig**	**0.93**	**130**	P		**Pg**	**02 07 47.0**	**-2.7**
LPEL					AML	AML		
	comp=E,4360µm,0.7s							
LPEL					AML	AML		
	comp=N,3230µm,0.5s							
AOI	**Ancona**	**0.94**	**17**	P		**Pg**	**02 07 48.3**	**-1.7**
AOI					AML	AML		
	comp=N,5090µm,0.9s							
AOI					AML	AML		
	comp=E,4645µm,0.5s							
FRON	**Frontone**	**0.95**	**337**	P		**Pg**	**02 07 48.3**	**-1.8**
FRON					AML	AML		
	comp=N,5240µm,0.7s							
FRON					AML	AML		
	comp=E,8200µm,0.9s							
ATVO	**AVT- Monte Val**	**0.95**	**321**	P		**Pg**	**02 07 48.8**	**-1.4**
ATVO					AML	AML		
	comp=N,5000µm,0.9s							
ATVO					AML	AML		
	comp=E,4835µm,1.1s							
VIVA	**Pratoni del Vi**	**0.96**	**201**		AML	AML		
	comp=N,9765µm,0.6s							
VIVA					AML	AML		
	comp=E,7950µm,0.6s							
RDP	**Rocca di Papa**	**0.96**	**203**	P		**Pg**	**02 07 49.5**	**-1.0**
RDP					AML	AML		
	comp=N,12640µm,0.6s							
RDP					AML	AML		
	comp=E,10175µm,0.7s							
MA9	**Marino**	**0.97**	**206**	P		**Pg**	**02 07 49.1**	**-1.4**
ATMI	**Monte Miggiano**	**0.99**	**315**	AML		AML		
	comp=E,12600µm,0.6s							
ATMI					AML	AML		
	comp=N,12450µm,1.4s							
POFI	**Posta Fibreno**	**0.99**	**159**	P		**Pg**	**02 07 50.2**	**-0.8**
POFI					AML	AML		
	comp=E,3300µm,0.7s							
POFI					AML	AML		
	comp=N,3205µm,0.9s							
POFI					AML	AML		
	comp=E,3455µm,0.7s							
POFI					AML	AML		
	comp=N,3105µm,0.9s							
SACS	**San Casciano d**	**0.99**	**282**	P		**Pg**	**02 07 50.5**	**-0.5**
SACS					AML	AML		
	comp=E,4855µm,1.1s							
SACS					AML	AML		
	comp=N,4705µm,0.9s							
SACS					AML	AML		
	comp=E,4740µm,1.2s							
SACS					AML	AML		
	comp=N,4590µm,0.9s							
COR1	**Corinaldo**	**1.00**	**350**	P		**Pg**	**02 07 49.2**	**-2.0**
COR1					AML	AML		
	comp=N,10550µm,0.8s							

COR1					AML	AML		
	comp=N,10155µm,0.8s							
COR1					AML	AML		
	comp=E,12900µm,0.7s							
COR1					AML	AML		
	comp=E,6550µm,0.7s							
ATPI	**Pietralunga -**	**1.01**	**323**	P	**Pg**		02 07 50.1	-1.2
PIEI	**Pieia**	**1.03**	**330**	P	**Pg**		02 07 50.2	-1.4
PIEI					AML	AML		
	comp=E,3955µm,0.4s							
PIEI					AML	AML		
	comp=N,2875µm,1.0s							
MPAG	**Monte Paganucc**	**1.04**	**341**	P	**Pg**		02 07 50.2	-1.8
MPAG					AML	AML		
	comp=E,5485µm,0.7s							
MPAG					AML	AML		
	comp=N,4685µm,0.8s							
MPAG					AML	AML		
	comp=N,4825µm,0.8s							
MPAG					AML	AML		
	comp=E,5380µm,0.8s							
LAV9	**Lanuvio**	**1.04**	**202**		AML	AML		
	comp=E,8410µm,0.6s							
LAV9					AML	AML		
	comp=E,8545µm,0.6s							
LAV9					AML	AML		
	comp=N,7400µm,1.6s							
LAV9					AML	AML		
	comp=N,7810µm,1.6s							
LATE	**Laterza**	**1.05**	**269**	Pg	**Pb**		02 07 50.8	-1.2
LATE	**Laterza**	**1.05**	**269**	P	**Pb**		02 07 51.9	-0.2
SENI	**Senigallia**	**1.06**	**0**	P	**Pb**		02 07 50.6	-1.5
SENI					AML	AML		
	comp=E,22550µm,0.5s							
SENI					AML	AML		
	comp=N,21100µm,0.4s							
NARO	**Abbazia di Nar**	**1.08**	**334**	P	**Pb**		02 07 50.6	-1.8
NARO					AML	AML		
	comp=E,2700µm,0.8s							
NARO					AML	AML		
	comp=N,2650µm,0.6s							
TOLF	**Tolfa**	**1.08**	**238**	P	**Pb**		02 07 51.8	-0.7
TOLF					AML	AML		
	comp=N,2400µm,0.7s							
TOLF					AML	AML		
	comp=E,2860µm,0.6s							
GIUL	**Giuliano Di Ro**	**1.09**	**179**	P	**Pb**		02 07 51.6	-1.0
GIUL					AML	AML		
	comp=E,2035µm,1.2s							
GIUL					AML	AML		
	comp=N,3215µm,0.7s							
APEC	**Apecchio**	**1.09**	**327**	P	**Pb**		02 07 51.8	-0.9
FSSB	**Fossombrone**	**1.10**	**343**	P	**Pb**		02 07 51.1	-1.7
FSSB					AML	AML		
	comp=E,9080µm,0.3s							
FSSB					AML	AML		
	comp=N,21200µm,0.4s							
BADI	**Badiali**	**1.13**	**320**	P	**Pb**		02 07 52.6	-0.7
SF03	**Valle Cupa**	**1.15**	**278**	P	**Pb**		02 07 53.1	-0.6
CAFI	**Castiglion Fio**	**1.15**	**307**	P	**Pb**		02 07 52.2	-1.5
CAFI					AML	AML		
	comp=N,3715µm,0.8s							
CAFI					AML	AML		
	comp=E,2405µm,0.6s							
CAFI					AML	AML		
	comp=N,3905µm,0.8s							
CAFI					AML	AML		
	comp=E,2330µm,0.6s							
MCIV	**Monte Civitell**	**1.15**	**277**	P	**Pb**		02 07 52.3	-1.5
MCIV					AML	AML		
	comp=E,1375µm,0.6s							
MCIV					AML	AML		
	comp=N,1865µm,1.0s							
SF11	**Podere del Sol**	**1.16**	**282**	P	**Pb**		02 07 53.5	-0.5
PE3	**Peglio**	**1.18**	**333**	P	**Pb**		02 07 53.9	-0.3
CERA	**Filignano**	**1.20**	**150**	P	**Pn**		02 07 53.5	-1.1
PARC	**Parchiule**	**1.24**	**324**	P	**Pn**		02 07 54.2	-0.9
ARCI	**Arcidosso**	**1.31**	**280**	P	**Pn**		02 07 55.8	-0.3
ARCI					AML	AML		
	comp=N,925µm,1.0s							
ARCI					AML	AML		
	comp=E,873µm,0.8s							
PESA	**Pesaro**	**1.33**	**348**	P	**Pn**		02 07 55.6	-0.6
PESA					AML	AML		
	comp=N,5595µm,1.2s							
PESA					AML	AML		
	comp=E,6075µm,0.6s							
CRE	**Caprese Michel**	**1.35**	**317**	P	**Pn**		02 07 55.7	-1.0
MODR	**Mondragone**	**1.57**	**162**	P	**Pn**		02 07 59.8	+0.2
PIGN	**Pignataro Magg**	**1.61**	**154**	P	**Pn**		02 08 00.1	0.0
SFI	**Santa Sofia**	**1.61**	**322**	P	**Pb**		02 08 01.2	-0.4
FROS	**Frosini**	**1.62**	**291**	P	**Pn**		02 08 00.5	+0.2
CSNT	**Castellina Chi**	**1.64**	**301**	P	**Pn**		02 08 00.6	0.0
CSNT					AML	AML		
	comp=N,867µm,0.7s							
CSNT					AML	AML		
	comp=E,733µm,0.7s							
SACR	**S. Croce Del S**	**1.66**	**138**	P	**Pb**		02 08 02.4	-0.1
OSSC	**Osservatorio P**	**1.70**	**302**		**Pn**		02 08 01.4	+0.1
OSSC	**Osservatorio P**	**1.70**	**302**	P	**Pn**		02 08 01.6	+0.2
RUFI	**Rufina**	**1.73**	**314**	P	**Pn**		02 08 01.5	-0.3
CASP	**Castiglione de**	**1.75**	**276**	Pn	**Pn**		02 08 01.4	-0.6
CASP	**Castiglione de**	**1.75**	**276**	P	**Pn**		02 08 01.9	-0.1
TRIF	**Trifonti**	**1.77**	**286**	P	**Pn**		02 08 02.8	+0.4
TRIF					AML	AML		
	comp=E,721µm,0.7s							
TRIF					AML	AML		
	comp=N,533µm,1.4s							
CELB	**S.Piero in Cam**	**2.23**	**274**	P	**Pn**		02 08 08.5	-0.2
CELB					AML	AML		
	comp=E,144µm,0.6s							
CELB					AML	AML		
	comp=N,183µm,0.8s							
VLC	**Villacollemand**	**2.57**	**307**	Pn	**Pn**		02 08 12.6	-0.7
PGF	**Pioggiola**	**3.12**	**270**	*e*P	**Pn**		02 08 21.8	+0.8
PGF				*e*Sn	**Sn**		02 08 54.6	-3.8
	comp=N,56nm,0.8s							
MSSA	**Maissana**	**3.18**	**303**	Pn	**Pn**		02 08 20.3	-1.5
SALO	**Salr**	**3.55**	**328**	Pn	**Pn**		02 08 27.7	+0.9
SALO	**Salr**	**3.55**	**328**	P	**Pn**		02 08 28.2	+1.3
MAGA	**Magasa**	**3.65**	**330**	P	**Pn**		02 08 28.5	+0.3
APPI	**Appiano**	**4.09**	**340**	P	**Pn**		02 08 34.9	+0.6
VSL	**Villasalto**	**4.29**	**224**	P	**Pn**		02 08 38.6	+1.6
SBF	**Sospel**	**4.41**	**288**	*e*P	**Pn**		02 08 39.1	+0.5
SBF				*e*Sn	**Sn**		02 09 24.8	-5.0
	comp=N,41nm,0.5s							
PDG	**Podgorica**	**4.46**	**91**	Pn	**Pn**		02 08 39.7	+0.5
DAVOX	**Davos/Dischmat**	**4.77**	**331**	Pn	**Pn**		02 08 44.4	+0.6
	comp=N,4.1nm,0.3s,baz=164,slow=23,SNR=1.6							
DAVOX				Sn	**Sn**		02 09 44.2	+5.1
	comp=N,1.8nm,0.3s,baz=180,slow=20,SNR=2.5							
	comp=N,38nm,0.8s							
LMR	**La Mourre**	**4.98**	**280**	*e*P	**Pn**		02 08 46.4	0.0
LMR				*e*Sn	**Sn**		02 09 38.2	-5.7
	comp=N,17nm,0.8s							
TIR	**Tirane**	**5.11**	**102**	Pn	**Pn**		02 08 47.5	-0.8
MBDF	**Montbardon**	**5.12**	**296**	*e*P	**Pn**		02 08 49.5	+0.9
MBDF				*e*Sn	**Sn**		02 09 41.7	-6.0
	comp=N,19nm,0.6s							
BNI	**Bardonecchia**	**5.31**	**299**	Pn	**Pn**		02 08 53.5	+2.3
LPG	**La Plagne**	**5.47**	**304**	*e*P	**Pn**		02 08 54.3	+0.9
LPG				*e*Sn	**Sn**		02 09 50.0	-6.4
	comp=N,25nm,0.7s							
LPL	**La Plagne**	**5.49**	**304**	*e*P	**Pn**		02 08 55.1	+1.5
LPL				*e*Sn	**Sn**		02 09 50.1	-6.7
	comp=N,14nm,0.5s							
SMRF	**Simiane la Rot**	**5.74**	**286**	*e*P	**Pn**		02 08 58.0	+1.1
SMRF				*e*Sn	**Sn**		02 09 56.7	-6.1
	comp=N,19nm,1.1s							
ORIF	**Oris-en-Rattie**	**5.79**	**296**	*e*P	**Pn**		02 08 58.9	+1.3
ORIF				*e*Sn	**Sn**		02 09 57.3	-6.6
	comp=N,11nm,0.6s							
ZST	**Bratislava**	**6.18**	**25**	*e*PN	**Pn**		02 09 00.2	-2.7
ZST				*e*PG	**Pg**		02 09 32.8	+2.6
ZST				*e*SG	Sg		02 11 02.1	+12
GERES	**GERESS Array B**	**6.21**	**3**	Pn	**Pn**		02 09 02.6	-0.8
	comp=N,1.2nm,0.3s,baz=196,slow=33,SNR=1.7							
GERES				Sn	**Sn**		02 10 12.5	-1.8
	comp=N,2.3nm,0.3s,baz=167,slow=24,SNR=1.8							
	comp=N,7.1nm,0.6s							
MODS	**Modra-Piesok**	**6.39**	**25**	*e*PN	**Pn**		02 09 09.2	+3.3
MODS				*e*PG	**Pg**		02 09 38.1	+3.9
MODS				*e*SN	**Sn**		02 10 19.1	+0.3
CABF	**La Chapelle**	**6.46**	**310**	*e*P	**Pn**		02 09 07.6	+0.8
VIVF	**Saint-Julien-l**	**6.58**	**293**	*e*P	**Pn**		02 09 10.2	+1.8
VIVF				*e*Sn	**Sn**		02 10 16.3	-7.1
	comp=N,2.3nm,0.5s							
KRUC	**Moravsky**	**6.79**	**18**	*e*PN	**Pn**		02 09 10.2	-1.0
SSB	**Saint Sauveur**	**6.80**	**296**	Pn	**Pn**		02 09 11.9	+0.5
HINF	**Hinteralfeld**	**6.86**	**321**	*e*P	**Pn**		02 09 13.1	+0.9
HINF				*e*Sn	**Sn**		02 10 22.2	-7.9
	comp=N,15nm,0.5s							
LASF	**Ste Croix**	**6.98**	**285**	*e*P	**Pn**		02 09 14.5	+0.6
LASF				*e*Sn	**Sn**		02 10 26.2	-7.0
	comp=N,3.6nm,0.8s							
ECH	**Echery**	**7.02**	**325**	Pn	**Pn**		02 09 14.4	0.0
VYHS	**Vyhne**	**7.05**	**32**	*e*PN	**Pn**		02 09 11.2	-3.6
VRAC	**Vranov**	**7.06**	**18**	*e*PN	**Pn**		02 09 13.8	-1.2
CDF	**Champ du Feu**	**7.12**	**326**	*e*P	**Pn**		02 09 16.3	+0.4
HAU	**Haudompre**	**7.23**	**320**	*e*P	**Pn**		02 09 18.1	+0.8
HAU				*e*Sn	**Sn**		02 10 31.1	-8.2
	comp=N,28nm,0.5s							
KEST	**Kesra**	**7.53**	**205**	Pn	**Pn**		02 09 25.1	+3.5
	comp=N,1.1nm,0.3s,baz=26,slow=11,SNR=6.0							
KEST				Sn	**Sn**		02 10 49.6	+2.7
	baz=322,slow=20							
	comp=N,5.3nm,0.6s							
SMF	**Signal de Mont**	**7.80**	**304**	*e*P	**Pn**		02 09 26.7	+1.6
PAGF	**Fort de Pagny**	**7.91**	**321**	*e*P	**Pn**		02 09 27.9	+1.3
SFTF	**Sexfontaines**	**8.00**	**317**	*e*P	**Pn**		02 09 29.4	+1.5
LOR	**Lormes**	**8.09**	**308**	*e*Pn	**Pn**		02 09 25.5	-3.7
	baz=124							
LOR				*e*Sn	**Sn**		02 10 52.4	-8.2
	comp=N,5.2nm,0.5s							
MTLF	**Montolieu**	**8.10**	**279**	*e*P	**Pn**		02 09 31.7	+2.4
AVF	**Avril sur Loir**	**8.16**	**304**	*e*P	**Pn**		02 09 31.6	+1.5
MEZF	**Maizieres J'vi**	**8.20**	**318**	*e*P	**Pn**		02 09 32.0	+1.5
MEZF				*e*Sn	**Sn**		02 10 54.4	-8.6
	comp=N,3.6nm,0.4s							
SSF	**Saint Saulge**	**8.20**	**306**	*e*P	**Pn**		02 09 32.3	+1.7
SAVF	**Savonnieres en**	**8.24**	**319**	*e*P	**Pn**		02 09 32.5	+1.4
SAVF				*e*Sn	**Sn**		02 10 55.4	-8.7
	comp=N,3.6nm,0.4s							
BGF	**Bois d'Agland**	**8.38**	**301**	*e*P	**Pn**		02 09 33.6	+0.6
CAF	**Calviac**	**8.39**	**290**	*e*P	**Pn**		02 09 35.2	+1.9
CLL	**Collm**	**8.67**	**359**	Pn	**Pn**		02 09 37.4	+0.4
CLL	**Collm**	**8.67**	**359**	*e*Sg	**Sg**		02 12 11.0	+1.2
	comp=Z,19nm,1.0s							
TCF	**Toulx Ste Croi**	**8.68**	**299**	*e*P	**Pn**		02 09 39.2	+2.0
TCF				*e*Sn	**Sn**		02 11 06.5	-8.5
	comp=Z,1.1nm,0.3s							
RJF	**Les Rejaudoux**	**8.86**	**291**	*e*P	**Pn**		02 09 41.9	+2.3
RDO	**Rodhopi**	**9.30**	**95**	Pn	**Pn**		02 09 45.8	+0.1
LFF	**La Frestale**	**9.32**	**288**	*e*P	**Pn**		02 09 48.1	+2.1
MLR	**Muntele Rosu**	**9.58**	**68**	Pn	**Pn**		02 09 52.3	+2.6
	comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=3.7							
	comp=Z,4.3nm,0.8s							
ALN	**Alexandroupoli**	**9.73**	**96**	Pn	**Pn**		02 09 51.7	0.0
BURAR	**Bucovina Array**	**9.82**	**55**	Pn	**Pn**		02 09 53.7	+0.9
ETSF	**Etsaut**	**10.15**	**276**	*e*P	**Pn**		02 09 59.8	+2.4
SJPF	**Ste Jean**	**10.62**	**277**	*e*P	**Pn**		02 10 06.4	+2.6
ESDC	**Sonseca Array**	**13.29**	**263**	Pn	**Pn**		02 10 40.3	-0.1
	baz=68,slow=13,SNR=6.8							
	comp=Z,1.0nm,0.7s							
BR231	**Keskin MP Arra**	**14.97**	**94**	Pn	**Pn**		02 11 04.4	+1.1
HFS	**Hagfors**	**17.52**	**1**	P	**Pn**		02 11 35.9	+0.2
	comp=Z,1.2nm,0.8s,baz=213,slow=7.1,SNR=1.9							
NC602	**NORSAR Array S**	**18.15**	**357**		**P**		02 11 44.5	+0.8
NC602				IAmb	IAmb		02 12 02.0	
	comp=Z,28nm,1.4s							
NAO01	**NORSAR Array S**	**18.28**	**356**		**P**		02 11 45.3	+0.1
NAO01				IAmb	IAmb		02 11 51.3	
	comp=Z,27nm,1.4s							
NB2	**NORSAR Subarra**	**18.46**	**357**	P	**Pn**		02 11 48.8	+1.4
	comp=Z,1.7nm,0.8s,baz=189,slow=11							
NOA	**NORSAR Array B**	**18.46**	**357**	P	**Pn**		02 11 47.7	+0.4
	baz=176,slow=12,SNR=4.0							
	comp=Z,0.8nm,0.8s							
FINES	**FINESS Array B**	**20.34**	**18**	P	**P**		02 12 07.7	-0.1
	comp=Z,2.4nm,0.8s,baz=204,slow=8.4,SNR=3.5							
	comp=Z,2.4nm,0.8s							
FINES	**FINESS Array B**	**20.34**	**18**	P	**P**		02 12 07.3	-0.5
KBZ	**Khabaz**	**21.61**	**77**	P	**P**		02 12 22.9	+1.3
	comp=Z,3.4nm,0.8s,baz=292,slow=8.8,SNR=4.6							
	comp=Z,3.4nm,0.8s							
TOA0	**Torodi Ar. Sit**	**31.04**	**202**	P	**P**		02 13 50.5	+0.8
TOA0				IAmb	IAmb		02 13 53.7	
	comp=Z,4.5nm,1.1s							
TORD	**Torodi Ar. Bea**	**31.04**	**202**	P	**P**		02 13 50.6	+1.0
	comp=Z,1.0nm,0.8s,baz=16,slow=9.3,SNR=7.3							
	comp=Z,1.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**31.04**	**202**	P	**P**		02 13 50.9	+1.2
TORD				IAmb	IAmb		02 13 53.7	
	comp=Z,3.6nm,1.2s							
ARU	**Arti**	**31.85**	**48**	P	**P**		02 13 56.4	0.0
ABKAR	**Akbulak array**	**32.71**	**62**	P	**P**		02 14 03.8	-0.3
BRVK	**Borovoye**	**38.70**	**54**	P	**P**		02 14 56.8	+1.4
BRVK				IAmb	IAmb		02 14 57.4	
	comp=Z,8.3nm,1.1s							
ZALV	**Zalesovo Beam**	**46.98**	**50**	P	**P**		02 16 01.4	-1.1
	comp=Z,0.4nm,0.4s,baz=330,slow=2.9,SNR=2.0							
ZALV	**Zalesovo Beam**	**46.98**	**50**					
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**47.81**	**60**	P	**P**		02 16 08.9	-0.1
	comp=Z,1.2nm,0.8s,baz=292,slow=4.8,SNR=4.1							
	comp=Z,1.2nm,0.8s							
MKAR	**Makanchi Array**	**47.81**	**60**	P	**P**		02 16 10.0	+0.9
SCHQ	**Schefferville**	**51.38**	**313**	P	**P**		02 16 35.4	-0.7
	comp=Z,5.1nm,0.8s,baz=111,slow=6.1,SNR=2.8							
	comp=Z,5.1nm,0.8s							
SCHQ	**Schefferville**	**51.38**	**313**	P	**P**		02 16 37.3	+1.2
SONM	**Songino Array**	**61.88**	**50**	P	**P**		02 17 51.7	+0.7
	comp=Z,1.2nm,0.8s,baz=292,slow=7.9,SNR=4.3							
	comp=Z,1.2nm,0.8s							
SONM	**Songino Array**	**61.88**	**50**	P	**P**		02 17 50.5	-0.5
YKA	**Yellowknife Ar**	**67.19**	**337**	P	**P**		02 18 26.3	+1.0
	comp=Z,1.5nm,0.8s,baz=35,slow=6.1,SNR=4.5							
	comp=Z,1.5nm,0.8s							
IMAR	**Indian Mountai**	**71.24**	**354**	P	**P**		02 18 52.1	+1.7

***ROM* 24 02:09:08.8±0.1, 42°.623N±0°.006×13°.267E±0°.006, h10km, Md1.5/4, ML2.7/7, Error ellipse: s-maj=0.6km s-min=0.4km az=210.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**199**	P	P	Pg	02 09 12.1	+0.3
RM33				S	S	Sg	02 09 14.8	+0.9
RM33				AML	AML			
	comp=N,4660µm,0.7s							
RM33				AML	AML			
	comp=E,6235µm,0.2s							
RM33				AML	AML			
	comp=N,4430µm,0.7s							
RM33				AML	AML			
	comp=E,6165µm,0.2s							
RM33				AML	AML			
	comp=E,6342µm,0.2s							
RM33				AML	AML			
	comp=E,6222µm,0.2s							
RM33				AML	AML			
	comp=N,4368µm,0.3s							
RM33				AML	AML			
	comp=N,4613µm,0.3s							
RM33				END				
CAMP	**Campotosto**	**0.14**	**130**	P	P	Pg	02 09 12.6	+0.5
CAMP				S	S	Sg	02 09 15.2	+0.9
CAMP				AML	AML			
	comp=E,1455µm,0.9s							
CAMP				AML	AML			
	comp=N,1280µm,0.4s							
CAMP				AML	AML			
	comp=E,6675µm,0.2s							
CAMP				AML	AML			
	comp=N,4570µm,0.3s							
CAMP				AML	AML			
	comp=N,1270µm,0.4s							
CAMP				AML	AML			
	comp=E,1506µm,0.9s							
CAMP				END				
LNSS	**Leonessa**	**0.17**	**263**	P	P	Pg	02 09 12.7	+0.2
LNSS				S	S	Sg	02 09 15.6	+0.5
TERO	**Teramo**	**0.25**	**90**	P	P	Pg	02 09 14.1	+0.1
TERO				S	S	Sg	02 09 17.8	+0.4
TERO				AML	AML			
	comp=E,2780µm,0.1s							
TERO				AML	AML			
	comp=N,3830µm,1.0s							
TERO				AML	AML			
	comp=E,3305µm,0.1s							
TERO				AML	AML			
	comp=N,4450µm,0.1s							
TERO				AML	AML			
	comp=E,3275µm,0.5s							
TERO				AML	AML			
	comp=N,4375µm,0.5s							
TERO				AML	AML			
	comp=E,3890µm,0.5s							
TERO				AML	AML			
	comp=N,4705µm,0.6s							
TERO				AML	AML			
	comp=N,3566µm,0.1s							
TERO				AML	AML			
	comp=N,4442µm,0.1s							
TERO				AML	AML			
	comp=E,3339µm,0.1s							
TERO				AML	AML			
	comp=E,2835µm,0.1s							
TERO				END				
GIGS	**Gran Sasso**	**0.28**	**128**	P	Pg		02 09 15.1	+0.6
GIGS				S	Sg		02 09 19.3	+0.9
GIGS				AML	AML			
	comp=E,992µm,1.3s							
GIGS				AML	AML			
	comp=N,572µm,0.2s							
GIGS				AML	AML			
	comp=E,322µm,0.2s							
GIGS				AML	AML			
	comp=N,273µm,0.2s							
GIGS				END				
AQU	**L'Aquila**	**0.29**	**160**	P	Pg		02 09 15.3	+0.7
AQU				S	Sb		02 09 20.3	-0.7
FIAM	**Fiamignano**	**0.37**	**197**	P	Pg		02 09 16.4	+0.2
FIAM				S	Sb		02 09 22.4	-1.0
ARRO	**Arrone**	**0.37**	**263**	P	Pg		02 09 15.9	-0.2
FEMA	**Monte Fema**	**0.38**	**335**	P	Pb		02 09 17.0	-0.6
FAGN	**Fagnano**	**0.43**	**147**	P	Pb		02 09 17.9	-0.6
FAGN				S	Sb		02 09 24.4	-0.6
FDMO	**Fiordimonte**	**0.43**	**342**	P	Pb		02 09 18.0	-0.6
FDMO				AML	AML			
	comp=E,1245µm,0.2s							
FDMO				AML	AML			
	comp=N,1088µm,0.2s							
FDMO				AML	AML			
	comp=E,4185µm,0.2s							
FDMO				AML	AML			
	comp=N,7250µm,0.3s							
FDMO				AML	AML			
	comp=E,983µm,0.5s							
FDMO				AML	AML			
	comp=N,1117µm,0.3s							
OFFI	**Offida**	**0.44**	**45**	P	Pb		02 09 18.2	-0.5
OFFI				AML	AML			
	comp=E,5470µm,0.4s							
OFFI				AML	AML			
	comp=N,12750µm,0.4s							
OFFI				AML	AML			
	comp=N,2226µm,0.9s							
OFFI				AML	AML			
	comp=E,2276µm,1.6s							
CESI	**CESI - Serrava**	**0.47**	**325**	P	Pb		02 09 18.8	-0.4
CESI				AML	AML			
	comp=E,1770µm,0.5s							
CESI				AML	AML			
	comp=N,3155µm,0.5s							
CESI				AML	AML			
	comp=E,4235µm,1.0s							
CESI				AML	AML			
	comp=N,7360µm,0.2s							
CESI				AML	AML			
	comp=N,3199µm,0.2s							
CESI				AML	AML			
	comp=E,1821µm,0.5s							
VCEL	**Villa Celiera**	**0.48**	**118**	P	Pb		02 09 18.9	-0.6
CESX	**Cesi**	**0.51**	**269**	P	Pg		02 09 18.0	-0.7
CESX				S	Sb		02 09 26.4	-0.9
TRTR	**Tortoreto Alta**	**0.51**	**69**	P	Pb		02 09 19.5	-0.4
MNTP	**Montappone**	**0.54**	**16**	P	Pg		02 09 19.4	+0.2
T0110	**Collepietro**	**0.55**	**136**	P	Pb		02 09 20.1	-0.5
T0110				S	Sb		02 09 29.0	+0.5
SSM1	**San Severino M**	**0.61**	**354**	P	Pb		02 09 21.2	-0.4
ASSB	**Assisi San Ben**	**0.61**	**313**	P	Pg		02 09 21.1	+0.3
SRES	**S.Oreste - Sor**	**0.68**	**236**	P	Pg		02 09 22.2	+0.3
ATCC	**AVT- Casa Cast**	**0.73**	**321**	P	Pg		02 09 23.0	+0.1
MGAB	**Montegabbione**	**0.90**	**289**	P	Pg		02 09 26.1	0.0
SACS	**San Casciano d**	**1.02**	**283**	P	Pg		02 09 27.8	-0.7

ROM ***24*** *02:09:56.6±0.3, 42°.735N±0°.005×13°.19E±0°.01, h11km±1km, ML2.9/20, Error ellipse: s-maj=1.0km s-min=0.2km az=62.0*

ISC 24 02:09:56.8±0.9, 42°.74N±0°.02×13°.20E±0°.03, h14km±8km, n29, σ0°.940/42, 2C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.23**	**177**	P	**P**	**Pg**	**02 10 02.0**	**+0.1**
RM33				S	**S**	**Sg**	**02 10 05.7**	**+0.5**
RM33				AML	AML			
	comp=E,13200µm,0.9s							
RM33				AML	AML			
	comp=N,15850µm,1.3s							
RM33				AML	AML			
	comp=E,13150µm,0.9s							
RM33				AML	AML			
	comp=N,15450µm,1.3s							
RM33				AML	AML			
	comp=E,24450µm,1.4s							
RM33				AML	AML			
	comp=E,24200µm,1.3s							
RM33				AML	AML			
	comp=N,15900µm,1.3s							
RM33				AML	AML			
	comp=N,1197µm,0.3s							
RM33				AML	AML			
	comp=E,672µm,0.4s							
RM33				AML	AML			
	comp=E,3249µm,0.4s							
RM33				AML	AML			
	comp=E,3067µm,0.3s							
RM33				AML	AML			
	comp=E,1675µm,0.4s							
RM33				AML	AML			
	comp=N,904µm,0.3s							
RM33				AML	AML			
	comp=N,3518µm,0.3s							
RM33				AML	AML			
	comp=N,3242µm,0.3s							
FEMA	**Monte Fema**	**0.25**	**335**	P	**P**	**Pg**	**02 10 02.1**	**-0.2**
FEMA				S	**S**	**Sg**	**02 10 06.1**	**+0.1**
CAMP	**Campotosto**	**0.25**	**142**	S	**S**	**Sg**	**02 10 06.0**	**-0.1**
CAMP				AML	AML			
	comp=E,7280µm,0.8s							
CAMP				AML	AML			
	comp=E,16500µm,1.1s							
CAMP				AML	AML			
	comp=N,12150µm,0.3s							
CAMP				AML	AML			
	comp=N,5150µm,0.3s							
CAMP				AML	AML			
	comp=E,7113µ

	comp=N,8225µm,0.4s							
TERO				AML	AML			
	comp=N,19850µm,0.7s							
TERO				AML	AML			
	comp=E,14350µm,0.8s							
TERO				AML	AML			
	comp=E,13800µm,1.5s							
TERO				AML	AML			
	comp=N,20700µm,0.7s							
TERO				AML	AML			
	comp=E,3740µm,0.2s							
TERO				AML	AML			
	comp=N,4574µm,0.6s							
TERO				AML	AML			
	comp=E,3331µm,0.2s							
TERO				AML	AML			
	comp=N,4565µm,0.3s							
CESI	**CESI - Serrava**	**0.34**	**322**	P	**Pg**	**02 10 03.7**	**-0.2**	
CESI				S	**Sg**	**02 10 09.0**	**+0.3**	
CESI				AML	AML			
	comp=E,4235µm,1.0s							
CESI				AML	AML			
	comp=N,7360µm,0.2s							
CESI				AML	AML			
	comp=E,6430µm,0.5s							
CESI				AML	AML			
	comp=N,7445µm,0.5s							
CESI				AML	AML			
	comp=N,18500µm,0.5s							
CESI				AML	AML			
	comp=E,13750µm,1.0s							
CESI				AML	AML			
	comp=N,7546µm,0.2s							
CESI				AML	AML			
	comp=E,4043µm,0.3s							
ARRO	**Arrone**	**0.35**	**244**	P	**Pb**	**02 10 04.8**	**-0.1**	
CSP1	**Cessapalombo**	**0.36**	**1** ⇑	*i*P	**Pg**	**02 10 03.6**	**-0.5**	
CSP1				S	**Sg**	**02 10 09.0**	**0.0**	
GIGS	**Gran Sasso**	**0.40**	**136**	P	**Pg**	**02 10 04.4**	**-0.4**	
GIGS				S	**Sg**	**02 10 10.1**	**-0.2**	
GIGS				AML	AML			
	comp=E,992µm,1.3s							
GIGS				AML	AML			
	comp=N,572µm,0.2s							
GIGS				AML	AML			
	comp=E,1905µm,0.3s							
GIGS				AML	AML			
	comp=N,1465µm,0.4s							
GIGS				AML	AML			
	comp=E,3520µm,1.1s							
GIGS				AML	AML			
	comp=N,2350µm,0.8s							
GIGS				AML	AML			
	comp=N,10µm,0.2s							
GIGS				AML	AML			
	comp=E,1006µm,0.2s							
AQU	**L'Aquila**	**0.41**	**158**	P	**Pg**	**02 10 04.9**	**-0.1**	
AQU				S	**Sb**	**02 10 11.3**	**-0.7**	
AQU				AML	AML			
	comp=E,2245µm,0.6s							
AQU				AML	AML			
	comp=N,2140µm,0.3s							
AQU				AML	AML			
	comp=E,2215µm,0.6s							
AQU				AML	AML			
	comp=N,2015µm,0.3s							
AQU				AML	AML			
	comp=N,8630µm,1.5s							
AQU				AML	AML			
	comp=E,9775µm,1.1s							
AQU				AML	AML			
	comp=N,8440µm,1.2s							
AQU				AML	AML			
	comp=E,10000µm,1.1s							
AQU				AML	AML			
	comp=E,1399µm,0.5s							
AQU				AML	AML			
	comp=E,1286µm,0.3s							
AQU				AML	AML			
	comp=N,965µm,0.5s							
AQU				AML	AML			
	comp=N,1151µm,0.3s							
OFFI	**Offida**	**0.41**	**61**	P	**Pg**	**02 10 05.2**	**+0.2**	
OFFI				S	**Sb**	**02 10 12.3**	**+0.4**	
OFFI				AML	AML			
	comp=E,20000µm,0.5s							
OFFI				AML	AML			
	comp=N,17550µm,0.4s							
OFFI				AML	AML			
	comp=E,55400µm,0.8s							
OFFI				AML	AML			
	comp=N,61150µm,0.7s							
OFFI				AML	AML			
	comp=E,5649µm,0.4s							
OFFI				AML	AML			
	comp=N,13763µm,0.4s							
SEF1	**Sefro**	**0.45**	**336**	*e*P	**Pg**	**02 10 05.3**	**-0.4**	
SEF1				S	**Sg**	**02 10 12.3**	**+0.4**	
SEF1				AML	AML			
	comp=N,2700µm,0.2s							
SEF1				AML	AML			
	comp=E,3660µm,1.3s							
SEF1				AML	AML			
	comp=N,2700µm,0.2s							
SEF1				AML	AML			
	comp=E,13900µm,0.3s							
SEF1				AML	AML			
	comp=N,9260µm,1.3s							
SEF1				AML	AML			
	comp=E,3649µm,0.3s							
SEF1				AML	AML			
	comp=N,2718µm,0.2s							
FIAM	**Fiamignano**	**0.47**	**187**	P	**Pg**	**02 10 06.2**	**0.0**	
FIAM				AML	AML			
	comp=E,2360µm,0.8s							
FIAM				AML	AML			
	comp=N,3125µm,0.7s							
FIAM				AML	AML			
	comp=E,4780µm,0.6s							
FIAM				AML	AML			
	comp=N,5230µm,1.2s							
FIAM				AML	AML			
	comp=N,624µm,0.8s							
FIAM				AML	AML			
	comp=E,459µm,0.5s							
SSM1	**San Severino M**	**0.49**	**358**	*e*P	**Pg**	**02 10 06.0**	**-0.6**	
TRTR	**Tortoreto Alta**	**0.53**	**82** ⇓	*e*P	**Pg**	**02 10 07.7**	**+0.4**	
TRTR				AML	AML			
	comp=E,6125µm,1.5s							
TRTR				AML	AML			
	comp=N,5325µm,0.3s							
TRTR				AML	AML			
	comp=N,25400µm,1.1s							
TRTR				AML	AML			
	comp=E,15800µm,1.1s							
TRTR				AML	AML			
	comp=N,2862µm,0.3s							
TRTR				AML	AML			
	comp=E,3020µm,0.4s							
SNTG	**Esanatoglia**	**0.55**	**340**	P	**Pg**	**02 10 07.0**	**-0.7**	
SNTG				S	**Sg**	**02 10 15.4**	**+0.4**	
SNTG				AML	AML			
	comp=E,757µm,1.4s							
SNTG				AML	AML			
	comp=E,764µm,0.5s							
SNTG				AML	AML			
	comp=N,1082µm,0.2s							
SNTG				AML	AML			
	comp=E,470µm,0.5s							
SNTG				AML	AML			
	comp=N,644µm,1.5s							
SNTG				AML	AML			
	comp=N,4820µm,0.9s							
SNTG				AML	AML			
	comp=E,3475µm,1.5s							
SNTG				AML	AML			
	comp=E,105µm,0.5s							
SNTG				AML	AML			
	comp=E,613µm,0.1s							
SNTG				AML	AML			
	comp=N,150µm,0.1s							
SNTG				AML	AML			
	comp=N,1106µm,0.2s							
VCEL	**Villa Celiera**	**0.59**	**125**	*e*P	**Pg**	**02 10 08.1**	**-0.3**	
VCEL				S	**Sb**	**02 10 17.1**	**0.0**	
VCEL				AML	AML			
	comp=E,3365µm,0.6s							
VCEL				AML	AML			
	comp=N,4670µm,0.3s							
VCEL				AML	AML			
	comp=E,8375µm,1.1s							
VCEL				AML	AML			
	comp=N,8145µm,1.2s							
VCEL				AML	AML			
	comp=E,1986µm,0.4s							
VCEL				AML	AML			
	comp=N,1960µm,0.4s							
ATCC	**AVT- Casa Cast**	**0.61**	**318**	*e*P	**Pg**	**02 10 08.6**	**-0.1**	
ATCC				S	**Sb**	**02 10 17.7**	**+0.1**	
ATCC				AML	AML			
	comp=E,5820µm,1.4s							
ATCC				AML	AML			
	comp=N,6350µm,0.6s							
ATCC				AML	AML			
	comp=E,854µm,0.5s							
ATCC				AML	AML			
	comp=N,1037µm,1.0s							
CADA	**Capodarco di F**	**0.62**	**42**	*e*P	**Pb**	**02 10 09.5**	**+0.2**	
CADA				AML	AML			
	comp=E,15750µm,1.6s							
CADA				AML	AML			
	comp=N,15450µm,1.3s							
CADA				AML	AML			
	comp=N,2694µm,0.6s							
CADA				AML	AML			
	comp=E,2821µm,0.5s							
T0110	**Collepietro**	**0.67**	**140**	*e*P	**Pb**	**02 10 10.3**	**+0.1**	
T0110				S	**Sg**	**02 10 18.8**	**+0.2**	
T0110				AML	AML			
	comp=E,2250µm,0.5s							
T0110				AML	AML			
	comp=N,2375µm,0.3s							
T0110				AML	AML			
	comp=N,7640µm,0.5s							
T0110				AML	AML			
	comp=E,4285µm,0.4s							
T0110				AML	AML			
	comp=E,2405µm,0.5s							
T0110				AML	AML			
	comp=N,1844µm,0.5s							
PP3	**Marolino**	**0.71**	**25**	P	**Pg**	**02 10 10.7**	**+0.1**	
PP3				AML	AML			
	comp=E,4935µm,0.6s							
PP3				AML	AML			
	comp=N,4205µm,0.4s							
PP3				AML	AML			
	comp=E,4985µm,0.6s							
PP3				AML	AML			
	comp=N,4205µm,0.4s							
PP3				AML	AML			
	comp=E,8490µm,0.5s							
PP3				AML	AML			
	comp=E,9250µm,0.5s							
PP3				AML	AML			
	comp=N,13100µm,0.6s							
PP3				AML	AML			
	comp=N,13150µm,0.6s							
PP3				AML	AML			
	comp=N,2523µm,0.4s							
PP3				AML	AML			
	comp=E,2004µm,0.4s							
PP3				AML	AML			
	comp=E,1963µm,0.4s							
PP3				AML	AML			
	comp=N,2456µm,0.4s							
ARVD	**Arcevia**	**0.78**	**346**	*e*P	**Pg**	**02 10 11.3**	**-0.8**	
ARVD				S	**Sb**	**02 10 23.1**	**+0.4**	
ARVD				AML	AML			
	comp=E,423µm,0.6s							
ARVD				AML	AML			
	comp=N,342µm,0.7s							
ARVD				AML	AML			
	comp=N,2125µm,0.7s							
ARVD				AML	AML			
	comp=E,2240µm,1.4s							
ARVD				AML	AML			
	comp=E,7µm,0.8s							
ARVD				AML	AML			
	comp=N,359µm,0.8s							
ARVD	**Arcevia**	**0.78**	**346**	AML	AML			
	comp=E,2245µm,1.4s							
ARVD	**Arcevia**	**0.78**	**346**	AML	AML			
	comp=N,2160µm,0.9s							
MGAB	**Montegabbione**	**0.82**	**283**	P	**Pg**	**02 10 12.3**	**-0.4**	
AOI	**Ancona**	**0.87**	**20**	*e*P	**Pg**	**02 10 12.8**	**-0.8**	
AOI				AML	AML			
	comp=E,660µm,1.1s							
AOI				AML	AML			
	comp=N,536µm,0.4s							
AOI				AML	AML			
	comp=E,2080µm,0.5s							
AOI				AML	AML			
	comp=N,2720µm,1.1s							
AOI				AML	AML			
	comp=E,392µm,0.1s							
AOI				AML	AML			
	comp=N,397µm,0.3s							
COR1	**Corinaldo**	**0.91**	**351**	P	**Pb**	**02 10 14.7**	**+0.4**	
COR1				AML	AML			
	comp=E,3985µm,1.1s							
COR1				AML	AML			
	comp=N,5490µm,0.9s							
COR1				AML	AML			
	comp=E,1200µm,0.8s							
COR1				AML	AML			
	comp=N,987µm,0.4s							
COR1				AML	AML			
	comp=E,501µm,0.9s							
COR1				AML	AML			
	comp=N,1594µm,1.7s							
PIEI	**Piela**	**0.94**	**329**	P	**Pg**	**02 10 15.0**	**+0.1**	
MPAG	**Monte Paganucc**	**0.95**	**340**	P	**Pg**	**02 10 14.4**	**-0.7**	

ROM 24 02:10:37.8±0.1, **42°.718N**±0°.004×**13°.289E**±0°.006, **h10km**, **ML2.7**/4, **Error ellipse: s-maj=0.5km s-min=0.4km az=74.0**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.20**	**154**	S	Sg	02 10 46.7	+1.6
CAMP	**Campotosto**	**0.20**	**154**	P	Pg	02 10 42.7	+0.7
LNSS	**Leonessa**	**0.22**	**238**	END			
LNSS	**Leonessa**	**0.22**	**238**	P	Pg	02 10 43.0	+0.6
LNSS	**Leonessa**	**0.22**	**238**	S	Sg	02 10 47.2	+1.8
RM33	**Pellescritta (**	**0.22**	**195**	S	Sg	02 10 46.9	+1.5
RM33	**Pellescritta (**	**0.22**	**195**	P	Pg	02 10 43.0	+0.7
TERO	**Teramo**	**0.25**	**112**	P	Pg	02 10 43.4	+0.4
TERO	**Teramo**	**0.25**	**112**	S	Sb	02 10 47.8	-1.2
FEMA	**Monte Fema**	**0.30**	**324**	END			
FEMA	**Monte Fema**	**0.30**	**324**	P	Pg	02 10 44.1	+0.2
FEMA	**Monte Fema**	**0.30**	**324**	S	Sb	02 10 49.4	-1.1
GIGS	**Gran Sasso**	**0.34**	**142**	S	Sg	02 10 50.2	+1.1
GIGS	**Gran Sasso**	**0.34**	**142**	P	Pg	02 10 44.7	+0.1
GUMA	**Gualdo di Mace**	**0.35**	**6**	P	Pg	02 10 45.3	+0.6
GUMA	**Gualdo di Mace**	**0.35**	**6**	S	Sb	02 10 51.3	-0.4
FDMO	**Fiordimonte**	**0.35**	**335**	P	Pg	02 10 45.1	+0.3
FDMO	**Fiordimonte**	**0.35**	**335**	S	Sg	02 10 50.6	+1.2
OFFI	**Offida**	**0.36**	**53**	P	Pb	02 10 46.1	-0.3
CESI	**CESI - Serrava**	**0.40**	**316**	P	Pg	02 10 45.9	+0.2
CESI	**CESI - Serrava**	**0.40**	**316**	S	Sb	02 10 52.3	-1.1
ARRO	**Arrone**	**0.41**	**250**	P	Pg	02 10 46.3	+0.5
ARRO	**Arrone**	**0.41**	**250**	S	Sb	02 10 52.7	-0.7
FIAM	**Fiamignano**	**0.47**	**196**	S	Sb	02 10 54.2	-1.0
FIAM	**Fiamignano**	**0.47**	**196**	P	Pb	02 10 48.2	+0.1
TRTR	**Tortoreto Alta**	**0.47**	**79**	P	Pb	02 10 48.1	0.0
VCEL	**Villa Celiera**	**0.52**	**128**	S	Sb	02 10 56.5	-0.2
VCEL	**Villa Celiera**	**0.52**	**128**	P	Pg	02 10 47.9	0.0
SNTG	**Esanatoglia**	**0.59**	**335**	AML	AML		
	comp=N,644µm,1.5s						
SNTG				AML	AML		
	comp=E,3475µm,1.5s						
SNTG				AML	AML		
	comp=N,4820µm,0.9s						
SNTG				AML	AML		
	comp=E,470µm,0.5s						
MTCE	**Montecelio**	**0.80**	**210**	P	Pg	02 10 53.0	-0.2
MGAB	**Montegabbione**	**0.89**	**283**	AML	AML		
	comp=N,4490µm,0.8s						
MGAB				AML	AML		
	comp=E,4235µm,1.0s						
MGAB				AML	AML		
	comp=N,4350µm,0.8s						
MGAB				AML	AML		
	comp=E,4230µm,1.0s						
MGAB				AML	AML		
	comp=N,4345µm,0.8s						
MGAB				AML	AML		
	comp=E,4820µm,1.0s						

IDC ***24*** *02:10:52.4±1.1, 42°.95N×13°.16E, h0km, mb3.7/6, mbtmp3.6/12, ML3.5/5, Error ellipse: s-maj=20.3km s-min=13.1km az=92.0*
PRU ***24*** *02:10:53.4±0.0, 42°.84N×13°.42E, h0km*
VIE ***24*** *02:10:53.0, 42°.87N×13°.14E, h0km, mb3.7/5, ML3.5/1 121 km NNE of Rome*
LDG ***24*** *02:10:53.4±0.1, 42°.88N×13°.16E, h10km, Ml3.1/14, Error ellipse: s-maj=3.2km s-min=1.4km az=53.0*
ROM ***24*** *02:10:56.0±0.1, 42°.756N±0°.004×13°.193E±0°.007, h10km, ML3.6/6, Error ellipse: s-maj=0.5km s-min=0.5km az=230.0*

ISC 24 02:10:55.3±0.7, **42°.83N**±0°.03×**13°.13E**±0°.03, **h29**km±5km, **n80**, **σ2s83**/102, **mb3.7**/4, **2C-2D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.14**	**337**	S	**Sb**	**02 11 05.1**	**+0.3**
FDMO	**Fiordimonte**	**0.21**	**352**	P	**Pn**	**02 11 03.3**	**+0.8**
FDMO				S	**Sb**	**02 11 06.9**	**+1.2**
LNSS	**Leonessa**	**0.24**	**196**	P	**Pb**	**02 11 00.8**	**-1.1**
LNSS				S	**Sb**	**02 11 04.2**	**-2.2**
CESI	**CESI - Serrava**	**0.24**	**317**	P	**Pn**	**02 11 03.0**	**0.0**
CESI				S	**Sb**	**02 11 08.3**	**+1.9**
GUMA	**Gualdo di Mace**	**0.28**	**33** ⇓	P	**Pn**	**02 11 03.3**	**-0.2**
GUMA	**Gualdo di Mace**	**0.28**	**33**	S	**Sn**	**02 11 09.0**	**+0.2**
RM33	**Pellescritta (**	**0.33**	**169**	P	**Pb**	**02 11 01.9**	**-1.2**
RM33				S	**Sb**	**02 11 06.1**	**-2.3**
CAMP	**Campotosto**	**0.36**	**145**	P	**Pb**	**02 11 02.1**	**-1.5**
CAMP				S	**Sb**	**02 11 06.7**	**-2.5**
ARRO	**Arrone**	**0.37**	**227**	P	**Pb**	**02 11 04.0**	**+0.5**
TERO	**Teramo**	**0.41**	**120**	P	**Pb**	**02 11 02.9**	**-1.3**
TERO				S	**Sb**	**02 11 08.3**	**-2.0**
OFFI	**Offida**	**0.42**	**76**	P	**Pn**	**02 11 05.2**	**-0.2**
CESX	**Cesi**	**0.46**	**241**	P	**Pn**	**02 11 06.0**	**+0.1**
GIGS	**Gran Sasso**	**0.50**	**139**	P	**Pb**	**02 11 04.7**	**-1.0**
FIAM	**Fiamignano**	**0.56**	**181**	P	**Pb**	**02 11 06.4**	**-0.3**
ATFO	**Monte Foce - G**	**0.67**	**323**	AML	AML		
	comp=N,2795µm,0.5s						
ATFO				AML	AML		
	comp=E,3805µm,1.0s						
VCEL	**Villa Celiera**	**0.68**	**129**	P	**Pb**	**02 11 07.9**	**-0.9**
MGAB	**Montegabbione**	**0.75**	**277**	P	**Pn**	**02 11 11.0**	**+1.1**
MTCE	**Montecelio**	**0.86**	**200**	P	**Pn**	**02 11 11.1**	**-0.3**
CERT	**Cerreto**	**0.89**	**187**	P	**Pn**	**02 11 11.8**	**-0.1**
SACS	**San Casciano d**	**0.90**	**272**	P	**Pb**	**02 11 13.2**	**+1.0**
MSAG	**Monte S. Angel**	**2.35**	**117** ⇑	P	**Pn**	**02 11 34.6**	**+2.6**
PGF	**Pioggiola**	**3.06**	**266**	*e*P	**Pn**	**02 11 43.5**	**+1.8**
ZONE	**Zone**	**3.64**	**325** ⇓	P	**Pn**	**02 11 52.0**	**+2.2**
OBKA	**Obir**	**3.81**	**15**	*e*Pn	**Pn**	**02 11 54.5**	**+2.4**
	comp=E,4.0nm,0.3s						
MYKA	**Terra Mystica**	**3.82**	**5**	*e*Pn	**Pn**	**02 11 53.4**	**+1.3**
	comp=E,3.9nm,0.2s						
ABTA	**Abfaltersbach**	**3.94**	**354**	*e*Pn	**Pn**	**02 11 54.9**	**+1.0**
	comp=E,38nm,0.4s						
BRES	**Bressanone**	**3.99**	**346** ⇑	P	**Pn**	**02 11 50.5**	**-4.2**
SOKA	**Soboth**	**4.08**	**19**	*e*Pn	**Pn**	**02 11 56.0**	**+0.3**
	comp=E,1.2nm,0.2s						
KBA	**Koelnbreinsper**	**4.25**	**2**	*e*Pn	**Pn**	**02 11 58.8**	**+0.7**
	comp=E,6.1nm,0.3s						
SBF	**Sospel**	**4.28**	**286**	*e*P	**Pn**	**02 12 00.5**	**+2.0**
SBF				*e*Sn	**Sn**	**02 12 44.0**	**-3.4**
	comp=E,3.5nm,0.3s						
FETA	**Feichten**	**4.52**	**339**	*e*Pn	**Pn**	**02 12 04.7**	**+2.8**
	comp=E,9.9nm,0.8s						
WTTA	**Wattenberg**	**4.56**	**347**	*e*Pn	**Pn**	**02 12 05.3**	**+2.9**
	comp=E,2.2nm,0.2s						
DAVOX	**Davos/Dischmat**	**4.58**	**331**	Pn	**Pn**	**02 12 05.6**	**+2.9**
	comp=E,2.3nm,0.3s,baz=152,slow=15,SNR=5.2						
DAVOX				Sn	**Sb**	**02 13 03.9**	**-5.7**
	comp=E,0.9nm,0.3s,baz=12,slow=20,SNR=1.4						
SQTA	**Sankt Quirin**	**4.59**	**343**	*e*Pn	**Pn**	**02 12 05.1**	**+2.2**
	comp=E,6.8nm,0.3s						
WATA	**Walderalm**	**4.64**	**347**	*e*Pn	**Pn**	**02 12 06.4**	**+2.9**
	comp=E,5.2nm,0.5s						
SERS	**Sersale**	**4.65**	**143**	P	**Pn**	**02 12 07.5**	**+3.8**
ARSA	**Arzberg**	**4.73**	**20**	*e*Pn	**Pn**	**02 12 05.3**	**+0.6**
	comp=E,2.5nm,0.3s						
MOTA	**Moosalm**	**4.74**	**343**	*e*Pn	**Pn**	**02 12 08.2**	**+3.3**
	comp=E,4.5nm,0.5s						
LMR	**La Mourre**	**4.87**	**278**	*e*P	**Pn**	**02 12 08.5**	**+1.9**
LMR				*e*Sn	**Sn**	**02 12 58.5**	**-3.5**
	comp=E,1.2nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.87**	**4**	*e*Pn	**Pn**	**02 12 07.6**	**+0.9**
	comp=E,4.6nm,0.3s						
RETA	**Reutte**	**4.95**	**341**	*e*Pn	**Pn**	**02 12 09.4**	**+1.7**
	comp=E,2.8nm,0.4s						
MBDF	**Montbardon**	**4.98**	**295**	*e*P	**Pn**	**02 12 10.4**	**+2.3**
DAVA	**Damuels**	**5.01**	**334**	*e*Pn	**Pn**	**02 12 11.9**	**+3.2**
	comp=E,17nm,0.6s						
MOA	**Molln**	**5.08**	**9**	*e*Pn	**Pn**	**02 12 10.2**	**+0.7**
	comp=E,2.8nm,0.4s						
LPG	**La Plagne**	**5.30**	**302**	*e*P	**Pn**	**02 12 15.1**	**+2.3**
RONA	**Rosalia, Austr**	**5.36**	**24**	*e*Pn	**Pn**	**02 12 11.6**	**-1.7**
	comp=E,1.7nm,0.3s						
CONA	**Conrad Observa**	**5.45**	**20**	*e*Pn	**Pn**	**02 12 14.9**	**+0.4**
	comp=E,2.1nm,0.2s						
SMRF	**Simiane la Rot**	**5.62**	**284**	*e*P	**Pn**	**02 12 19.6**	**+2.7**
SMRF				*e*Sn	**Sn**	**02 13 16.1**	**-4.4**
	comp=E,2.8nm,0.6s						
ORIF	**Oris-en-Rattie**	**5.64**	**294**	*e*P	**Pn**	**02 12 19.9**	**+2.7**
ORIF				*e*Sn	**Sn**	**02 13 16.5**	**-4.5**
	comp=E,2.1nm,0.3s						
OHR	**Ohrid**	**5.97**	**104**	*i* Pn	**Pn**	**02 12 22.4**	**+0.7**
GERES	**GERESS Array B**	**6.03**	**4**	Pn	**Pn**	**02 12 22.4**	**-0.2**
	comp=E,0.7nm,0.3s,baz=174,slow=14,SNR=6.6						
GERES				Sn	**Sn**	**02 13 29.6**	**-0.9**
	comp=E,1.7nm,0.3s,baz=186,slow=26,SNR=3.9						
	comp=E,1.4nm,0.3s						
CKRC	**Cesky Krumlov**	**6.05**	**7**	*e*PN	**Pn**	**02 12 21.8**	**-0.9**
CKRC				*e*SN	**Sn**	**02 13 30.6**	**-0.3**
CABF	**La Chapelle**	**6.28**	**309**	*e*P	**Pn**	**02 12 28.5**	**+2.5**
CABF				*e*Sn	**Sn**	**02 13 31.4**	**-5.3**
	comp=E,1.7nm,0.5s						
KHC	**Kasperske Hory**	**6.31**	**3**	*e*PN	**Pn**	**02 12 26.0**	**-0.3**
KHC				*e*SN	**Sn**	**02 13 36.0**	**-1.4**
VIVF	**Saint-Julien-l**	**6.44**	**291**	*e*P	**Pn**	**02 12 31.0**	**+2.9**
HINF	**Hinteralfeld**	**6.66**	**321**	*e*P	**Pn**	**02 12 33.2**	**+2.0**
HINF				*e*Sn	**Sn**	**02 13 40.2**	**-5.9**
	comp=E,6.2nm,0.3s						
STIP	**Stip**	**6.82**	**97**	*i* Pn	**Pn**	**02 12 34.9**	**+1.6**
LASF	**Ste Croix**	**6.86**	**284**	*e*P	**Pn**	**02 12 36.9**	**+3.0**
VRAC	**Vranov**	**6.91**	**19**	Pn	**Pn**	**02 12 33.3**	**-1.2**
	comp=E,0.4nm,0.3s,baz=166,slow=18,SNR=1.1						
	comp=E,1.7nm,0.6s						
CDF	**Champ du Feu**	**6.92**	**326**	*e*P	**Pn**	**02 12 36.8**	**+2.0**
CDF				*e*Sn	**Sn**	**02 13 46.5**	**-6.1**
	comp=E,2.6nm,0.1s						
HAU	**Haudompre**	**7.04**	**320**	*e*P	**Pn**	**02 12 38.6**	**+2.3**
HAU				*e*Sn	**Sn**	**02 13 49.3**	**-6.0**
	comp=E,9.3nm,0.4s						
VAY	**Valandovo**	**7.19**	**99**	*i* Pn	**Pn**	**02 12 38.6**	**+0.3**
KEST	**Kesra**	**7.67**	**204**	Pn	**Pn**	**02 12 46.2**	**+1.1**
	comp=E,0.1nm,0.3s,baz=32,slow=9.9,SNR=1.6						
	comp=E,3.6nm,1.0s						
PAGF	**Fort de Pagny**	**7.72**	**320**	*e*P	**Pn**	**02 12 48.5**	**+2.9**
PAGF				*e*Sn	**Sn**	**02 14 05.4**	**-6.6**
	comp=E,0.7nm,0.2s						
SFTF	**Sexfontaines**	**7.82**	**316**	*e*P	**Pn**	**02 12 50.5**	**+3.5**
SFTF				*e*Sn	**Sn**	**02 14 07.9**	**-6.5**
	comp=E,2.7nm,0.2s						
LOR	**Lormes**	**7.92**	**307**	*e*P	**Pn**	**02 12 51.2**	**+2.8**
	baz=123						
LOR				*e*Sn	**Sn**	**02 14 10.5**	**-6.5**
	comp=E,1.0nm,0.2s						
AVF	**Avril sur Loir**	**8.00**	**303**	*e*P	**Pn**	**02 12 52.5**	**+3.1**
MTLF	**Montolieu**	**8.00**	**277**	*e*P	**Pn**	**02 12 53.1**	**+3.5**
MEZF	**Maizieres J'vi**	**8.01**	**318**	*e*P	**Pn**	**02 12 52.0**	**+2.4**
MEZF				*e*Sn	**Sn**	**02 14 12.5**	**-6.6**
	comp=E,2.5nm,0.2s						
SSF	**Saint Saulge**	**8.03**	**305**	*e*P	**Pn**	**02 12 52.9**	**+3.0**
SAVF	**Savonnieres en**	**8.05**	**319**	*e*P	**Pn**	**02 12 53.3**	**+3.2**
	baz=139						
SAVF				*e*Sn	**Sn**	**02 14 13.4**	**-6.7**
	comp=E,3.5nm,0.3s						
MLR	**Muntele Rosu**	**9.59**	**70**	Pn	**Pn**	**02 13 12.8**	**+1.4**
	comp=E,0.2nm,0.3s,baz=253,slow=20,SNR=4.2						

comp=E,3.8nm,0.9s
IDI Anoyia 11.84 126 Pn **Pn 02 13 43.2 +1.1**
comp=E,0.1nm,0.3s,baz=345,slow=16,SNR=1.6
comp=E,2.0nm,0.6s
ESDC Sonseca Array 13.24 262 Pn **Pn 02 14 01.9 +0.6**
comp=E,0.1nm,0.3s,baz=100,slow=23,SNR=1.9
MMAI Mount Meron Ar 20.07 112 P **P 02 15 27.8 +1.4**
comp=E,2.6nm,0.6s,baz=326,slow=13,SNR=6.9
comp=E,2.6nm,0.6s
FINES FINESS Array B 20.19 18 P **P 02 15 25.6 -1.7**
comp=E,1.5nm,0.8s,baz=198,slow=18,SNR=4.7
comp=E,1.5nm,0.8s
KBZ Khabaz 21.64 77 P **P 02 15 42.1 -1.0**
comp=E,3.0nm,0.8s,baz=286,slow=7.7,SNR=4.8
comp=E,3.0nm,0.8s
TORD Torodi Ar. Bea 31.19 202 P **P 02 17 14.6 +2.7**
comp=E,1.0nm,0.8s,baz=17,slow=9.3,SNR=5.2
comp=E,1.0nm,0.8s
MKAR Makanchi Array 47.78 60 P **P 02 19 30.1 +0.4**
comp=E,0.6nm,0.7s,baz=295,slow=6.6,SNR=4.2
comp=E,0.6nm,0.7s
SONM Songino Array 61.82 50 P **P 02 21 13.0 +1.5**
comp=E,1.2nm,0.9s,baz=302,slow=8.5,SNR=4.2
comp=E,1.2nm,0.9s

ROM 24 02:11:17.7±0.1, 42°274N±0°004×13°391E±0°007, h9km, ML3.0/4, Error ellipse: s-maj=0.5km s-min=0.4km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**6**	P	Pg	02 11 20.3	+0.3
AQU				S	Sg	02 11 22.3	+0.6
FAGN	**Fagnano**	**0.14**	**93**	P	Pg	02 11 21.5	+0.6
FAGN				S	Sg	02 11 24.1	+0.9
FIAM	**Fiamignano**	**0.20**	**268**	P	Pg	02 11 22.6	+0.6
FIAM				S	Sg	02 11 26.5	+1.6
GIGS	**Gran Sasso**	**0.22**	**37**	P	Pg	02 11 22.9	+0.6
GIGS				S	Sg	02 11 27.0	+1.6
PTQR	**Pietraquaria**	**0.25**	**178**	P	Pg	02 11 23.5	+0.6
PTQR				S	Sb	02 11 28.0	-1.0
CAMP	**Campotosto**	**0.26**	**3**	P	Pg	02 11 23.6	+0.5
CAMP				S	Sb	02 11 28.3	-1.0
CAMP				AML	AML		
	comp=E,16500μm,1.1s						
CAMP				AML	AML		
	comp=N,12150μm,0.3s						
RM33	**Pellescritta (**	**0.27**	**331**	P	Pg	02 11 23.5	+0.3
RM33				S	Sb	02 11 29.1	-0.5
RM33				AML	AML		
	comp=E,25000μm,1.0s						
RM33				AML	AML		
	comp=N,21000μm,1.2s						
RM33				AML	AML		
	comp=E,24800μm,1.0s						
RM33				AML	AML		
	comp=N,20600μm,1.2s						
T0110	**Collepietro**	**0.29**	**99**	P	Pb	02 11 24.6	-0.5
T0110				S	Sb	02 11 29.5	-0.7
VCEL	**Villa Celiera**	**0.35**	**70**	P	Pb	02 11 25.6	-0.6
VCEL				S	Sb	02 11 31.9	-0.1
TERO	**Teramo**	**0.38**	**24**	P	Pg	02 11 25.4	+0.1
TERO				S	Sg	02 11 31.1	+0.8
TERO				AML	AML		
	comp=E,8490μm,1.4s						
TERO				AML	AML		
	comp=N,7490μm,0.4s						
TERO				AML	AML		
	comp=E,9215μm,1.4s						
TERO				AML	AML		
	comp=N,8225μm,0.4s						
TERO				AML	AML		
	comp=N,19900μm,0.7s						
TERO				AML	AML		
	comp=N,20700μm,0.7s						
TERO				AML	AML		
	comp=E,13800μm,1.5s						
TERO				AML	AML		
	comp=N,19850μm,0.7s						
TERO				AML	AML		
	comp=E,14350μm,0.8s						
TERO				AML	AML		
	comp=N,1484μm,0.1s						
TERO				AML	AML		
	comp=E,614μm,0.3s						
TERO				AML	AML		
	comp=N,1171μm,0.1s						
VVLD	**Villa Vallelon**	**0.44**	**157**	P	Pg	02 11 26.5	+0.2
VVLD				S	Sg	02 11 33.0	+0.9
CERT	**Cerreto**	**0.45**	**223**	P	Pg	02 11 26.6	+0.1
INTR	**Introdacqua**	**0.46**	**124**	P	Pb	02 11 27.0	-1.1
INTR				S	Sb	02 11 34.7	-0.4
GUAR	**Guarcino**	**0.48**	**187**	P	Pb	02 11 28.6	+0.2
MTCE	**Montecelio**	**0.54**	**243**	P	Pb	02 11 29.5	+0.1
ARRO	**Arrone**	**0.55**	**304**	P	Pg	02 11 28.7	+0.2
ARRO				AML	AML		
	comp=E,2650μm,0.2s						
ARRO				AML	AML		
	comp=N,2050μm,0.6s						
ARRO				AML	AML		
	comp=N,7235μm,1.0s						
ARRO				AML	AML		
	comp=E,7225μm,1.1s						
ARRO				AML	AML		
	comp=N,1504μm,1.5s						
LPEL	**Lama dei Pelig**	**0.63**	**111**	P	Pg	02 11 29.8	-0.1
LPEL				S	Sb	02 11 39.6	-0.3
LPEL				AML	AML		
	comp=N,4920μm,1.1s						
LPEL				AML	AML		
	comp=E,5130μm,0.4s						
CESX	**Cesi**	**0.69**	**299**	P	Pg	02 11 30.6	-0.4
CESX				AML	AML		
	comp=E,2325μm,1.0s						
CESX				AML	AML		
	comp=N,2395μm,0.4s						
CESX				AML	AML		
	comp=E,7775μm,0.8s						
CESX				AML	AML		
	comp=N,5625μm,1.4s						
CESX				AML	AML		
	comp=N,399μm,0.3s						
OFFI	**Offida**	**0.69**	**18**	P	Pb	02 11 31.8	-0.2
FEMA	**Monte Fema**	**0.73**	**340**	AML	AML		
	comp=E,27350μm,0.8s						
FEMA				AML	AML		
	comp=E,8040μm,0.9s						
FEMA				AML	AML		
	comp=N,18400μm,0.5s						
FEMA				AML	AML		
	comp=E,27400μm,0.8s						
FEMA				AML	AML		
	comp=N,29100μm,1.1s						
FDMO	**Fiordimonte**	**0.79**	**344**	AML	AML		
	comp=N,14900μm,1.2s						
FDMO				AML	AML		
	comp=E,6835μm,0.2s						
FDMO				AML	AML		
	comp=N,11600μm,0.2s						
FDMO				AML	AML		
	comp=E,14700μm,1.5s						
CESI	**CESI - Serrava**	**0.81**	**334**	AML	AML		
	comp=E,6435μm,0.5s						
CESI				AML	AML		
	comp=N,7445μm,0.5s						
CESI				AML	AML		
	comp=E,13750μm,1.0s						
CESI				AML	AML		
	comp=N,18500μm,0.5s						
SEF1	**Sefro**	**0.93**	**340**	AML	AML		
	comp=E,13950μm,0.3s						
SEF1				AML	AML		
	comp=E,13900μm,0.3s						
SEF1				AML	AML		
	comp=N,9255μm,1.3s						
SEF1				AML	AML		
	comp=N,9260μm,1.3s						
ASSB	**Assisi San Ben**	**0.94**	**325**	AML	AML		
	comp=N,6775μm,0.8s						
ASSB				AML	AML		
	comp=E,6735μm,1.4s						
SNTG	**Esanatoglia**	**1.03**	**341**	AML	AML		
	comp=E,3475μm,1.5s						
SNTG				AML	AML		
	comp=E,470μm,0.5s						
SNTG				AML	AML		
	comp=N,4820μm,0.9s						
SNTG				AML	AML		
	comp=N,644μm,1.5s						
FOSV	**Fossato di Vic**	**1.12**	**336**	AML	AML		
	comp=N,8075μm,0.5s						
FOSV				AML	AML		
	comp=N,8110μm,0.5s						
FOSV				AML	AML		
	comp=E,4370μm,0.9s						
MGAB	**Montegabbione**	**1.14**	**304**	AML	AML		
	comp=N,4345μm,0.8s						
MGAB				AML	AML		
	comp=E,4235μm,1.0s						
MGAB				AML	AML		
	comp=N,4350μm,0.8s						
MGAB				AML	AML		
	comp=E,4820μm,1.0s						
MGAB				AML	AML		
	comp=N,4490μm,0.8s						
MGAB				AML	AML		
	comp=E,4230μm,1.0s						
MODR	**Mondragone**	**1.19**	**162**	AML	AML		
	comp=E,539μm,1.6s						
MODR				AML	AML		
	comp=N,460μm,1.6s						

ROM 24 02:11:51.6±0.1, 42°720N±0°004×13°212E±0°005, h11km, ML2.4/6, Error ellipse: s-maj=0.5km s-min=0.1km az=228.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.17**	**227**	P	Pg	02 11 56.0	+0.6
LNSS				S	Sg	02 11 59.2	+1.1
LNSS				AML	AML		
LNSS				AML	AML		
	comp=N,77250μm,0.2s						
LNSS				AML	AML		
	comp=N,6848μm,0.2s						
LNSS				AML	AML		
	comp=E,12082μm,0.2s						
LNSS				END			
RM33	**Pellescritta (**	**0.21**	**179**	P	Pb	02 11 56.9	-0.7
RM33				S	Sg	02 12 00.4	+1.2
RM33				AML	AML		
	comp=E,9630μm,1.5s						
RM33				AML	AML		
	comp=N,8940μm,1.4s						
RM33				AML	AML		
	comp=E,9335μm,1.5s						
RM33				AML	AML		
	comp=N,8920μm,1.4s						
RM33				AML	AML		
	comp=E,9630μm,1.4s						
RM33				AML	AML		
	comp=N,8935μm,1.4s						
RM33				AML	AML		
	comp=E,9330μm,1.5s						
RM33				AML	AML		
	comp=N,8960μm,1.4s						
RM33				AML	AML		
	comp=E,4485μm,0.7s						
RM33				AML	AML		
	comp=E,444μm,0.2s						
RM33				AML	AML		
	comp=N,488μm,0.3s						
RM33				AML	AML		
	comp=N,250μm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.23**	**142**	P	Pg	02 11 57.0	+0.4
CAMP				S	Sg	02 12 00.8	+0.9
CAMP				END			
FEMA	**Monte Fema**	**0.27**	**334**	P	Pg	02 11 57.3	+0.1
FEMA				S	Sg	02 12 01.6	+0.7
TERO	**Teramo**	**0.30**	**108**	P	Pg	02 11 57.9	0.0
TERO				S	Sg	02 12 02.9	+0.9
TERO				AML	AML		
	comp=N,9410μm,0.5s						
TERO				AML	AML		
	comp=E,11650μm,0.4s						
TERO				AML	AML		
	comp=N,9905μm,0.5s						
TERO				AML	AML		
	comp=E,11000μm,0.4s						
TERO				AML	AML		
	comp=N,9875μm,0.5s						
TERO				AML	AML		
	comp=N,10200μm,0.5s						
TERO				AML	AML		
	comp=E,2274μm,0.3s						
TERO				AML	AML		
	comp=E,229μm,0.3s						
TERO				AML	AML		
	comp=N,1145μm,0.1s						
TERO				AML	AML		
	comp=N,2207μm,0.1s						
TERO				END			
FDMO	**Fiordimonte**	**0.33**	**344**	P	Pg	02 11 58.6	+0.3
FDMO				S	Sg	02 12 03.4	+0.7
ARRO	**Arrone**	**0.36**	**247**	P	Pg	02 11 59.2	+0.4
ARRO				S	Sb	02 12 05.1	-0.5
ARRO				AML	AML		
	comp=E,7825μm,0.6s						
ARRO				AML	AML		
	comp=N,9430μm,0.8s						
ARRO				AML	AML		
	comp=E,7795μm,0.6s						
ARRO				AML	AML		
	comp=N,9435μm,0.8s						
ARRO				AML	AML		
	comp=N,643μm,0.2s						
ARRO				AML	AML		
	comp=E,537μm,0.3s						
CESI	**CESI - Serrava**	**0.36**	**322**	P	Pg	02 11 59.0	+0.1
CESI				S	Sg	02 12 04.5	+0.7
CESI				AML	AML		
	comp=E,27850μm,0.2s						
CESI				AML	AML		
	comp=N,63950μm,0.3s						
CESI				AML	AML		
	comp=N,2689μm,0.3s						
CESI				AML	AML		
	comp=E,459μm,0.2s						
CESI				END			
CSP1	**Cessapalombo**	**0.37**	**359**	P	Pg	02 11 59.6	+0.5
CSP1				S	Sg	02 12 04.9	+0.9
CSP1				END			
GIGS	**Gran Sasso**	**0.38**	**135**	P	Pg	02 11 58.6	-0.6
GIGS				S	Sg	02 12 04.8	+0.7
AQU	**L'Aquila**	**0.39**	**159**	P	Pg	02 11 59.7	+0.3
AQU				S	Sb	02 12 05.9	-0.8
OFFI	**Offida**	**0.41**	**58**	P	Pb	02 12 00.7	-0.3
FIAM	**Fiamignano**	**0.46**	**189**	P	Pg	02 12 00.9	+0.3
FIAM				S	Sb	02 12 07.8	-0.8
FIAM				END			
SEF1	**Sefro**	**0.47**	**336**	P	Pg	02 12 00.8	0.0
SEF1				S	Sb	02 12 08.2	-0.7
CESX	**Cesi**	**0.48**	**257**	P	Pg	02 12 01.4	+0.4
PIO1	**Pioraco**	**0.49**	**340**	P	Pb	02 12 01.9	-0.4
PIO1				S	Sb	02 12 09.8	+0.3
ASSB	**Assisi San Ben**	**0.52**	**309**	P	Pg	02 12 01.7	-0.1
TRTR	**Tortoreto Alta**	**0.53**	**80**	P	Pb	02 12 03.0	+0.1
GAG1	**Gagliole**	**0.53**	**349**	P	Pg	02 12 02.2	+0.3
GAG1				AML	AML		
	comp=E,15550μm,0.3s						
GAG1				AML	AML		
	comp=N,16150μm,1.3s						
GAG1				AML	AML		
	comp=N,16150μm,1.3s						
GAG1				AML	AML		
	comp=E,543μm,1.0s						
GAG1				AML	AML		
	comp=N,352μm,0.8s						
VCEL	**Villa Celiera**	**0.57**	**125**	P	Pb	02 12 03.3	-0.4
ATCC	**AVT- Casa Cast**	**0.63**	**318**	P	Pg	02 12 03.8	-0.1
T0110	**Collepietro**	**0.65**	**139**	P	Pg	02 12 04.3	+0.1
SRES	**S.Oreste - Sor**	**0.71**	**227**	P	Pb	02 12 05.9	-0.2
MGAB	**Montegabbione**	**0.83**	**284**	P	Pb	02 12 07.9	-0.2

ROM 24 02:12:12.2±0.1, 42°807N±0°003×13°149E±0°006, h9km, ML3.5/15, 1D, Error ellipse: s-maj=0.4km s-min=0.3km az=257.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.17**	**335**	*i*P	Pg	02 12 16.7	+0.8
FEMA				S	Sg	02 12 19.3	+0.8
LNSS	**Leonessa**	**0.22**	**201**	P	Pg	02 12 18.3	+1.6
LNSS				S	Sg	02 12 21.4	+1.6
FDMO	**Fiordimonte**	**0.23**	**349**	P	Pg	02 12 17.7	+0.7
FDMO				S	Sg	02 12 21.3	+1.1
CESI	**CESI - Serrava**	**0.27**	**318**	P	Pg	02 12 18.3	+0.7
CESI				S	Sg	02 12 22.4	+1.2
CESI				AML	AML		
	comp=E,27850μm,0.2s						
CESI				AML	AML		
	comp=N,63950μm,0.3s						
CSP1	**Cessapalombo**	**0.29**	**8**	P	Pg	02 12 18.4	+0.4
CSP1				S	Sg	02 12 23.1	+1.2
RM33	**Pellescritta (**	**0.30**	**171**	P	Pg	02 12 18.5	+0.2
RM33				S	Sb	02 12 23.7	-1.3
CAMP	**Campotosto**	**0.33**	**145**	P	Pg	02 12 19.2	+0.4
CAMP				S	Sg	02 12 24.4	+1.1
ARRO	**Arrone**	**0.36**	**231**	P	Pg	02 12 20.1	+0.7
ARRO				S	Sb	02 12 25.4	-1.2
SEF1	**Sefro**	**0.37**	**337**	P	Pg	02 12 19.9	+0.4
SEF1				S	Sg	02 12 25.6	+1.2
SEF1				AML	AML		
	comp=E,17200μm,1.6s						
SEF1				AML	AML		
	comp=N,24950μm,0.2s						
SEF1				AML	AML		
	comp=E,17200μm,1.6s						
SEF1				AML	AML		
	comp=N,25000μm,0.2s						
SEF1				AML	AML		
	comp=N,24950μm,0.2s						
TERO	**Teramo**	**0.38**	**119**	P	Pg	02 12 20.2	+0.5
TERO				S	Sg	02 12 25.6	+0.9
MDAR	**Monte D'Aria**	**0.39**	**359**	P	Pg	02 12 20.1	+0.3
MDAR				S	Sb	02 12 26.3	-1.1
MDAR				AML	AML		
	comp=N,7035μm,1.6s						
MDAR				AML	AML		
	comp=N,7040μm,1.6s						
MDAR				AML	AML		
	comp=E,6340μm,0.5s						
PIO1	**Pioraco**	**0.39**	**342**	P	Pb	02 12 21.2	-0.1
PIO1				S	Sb	02 12 27.6	+0.1
MNTP	**Montappone**	**0.41**	**35**	P	Pb	02 12 20.9	-0.7
FIU1	**Fiuminata**	**0.41**	**337**	*e*P	Pg	02 12 20.7	+0.3
FIU1				S	Sb	02 12 27.2	-0.9
FIU1				AML	AML		
	comp=N,7645μm,0.1s						
FIU1				AML	AML		
	comp=E,8055μm,0.7s						
FIU1				AML	AML		
	comp=N,7650μm,0.1s						
FIU1				AML	AML		
	comp=E,8060μm,0.7s						
OFFI	**Offida**	**0.41**	**72**	*e*P	Pb	02 12 21.5	-0.2
OFFI				S	Sb	02 12 28.8	+0.6
SSM1	**San Severino M**	**0.42**	**3**	P	Pg	02 12 20.7	+0.3
SSM1				S	Sb	02 12 27.4	-1.0
ASSB	**Assisi San Ben**	**0.43**	**303**	P	Pg	02 12 20.8	+0.2
ASSB				S	Sg	02 12 27.2	+0.9
ASSB				AML	AML		
	comp=E,13600μm,1.1s						
ASSB				AML	AML		
	comp=N,16600μm,0.9s						
GAG1	**Gagliole**	**0.43**	**352**	*e*P	Pg	02 12 21.1	+0.4
GAG1				S	Sb	02 12 28.1	-0.7
GAG1				AML	AML		
	comp=N,16150μm,1.3s						
GAG1				AML	AML		
	comp=E,15550μm,0.3s						
GAG1				AML	AML		
	comp=N,16100μm,1.3s						
MTL1	**Matelica**	**0.46**	**347**	P	Pg	02 12 21.4	+0.2
MTL1				S	Sb	02 12 29.0	-0.5
CESX	**Cesi**	**0.46**	**245**	*e*P	Pg	02 12 21.9	+0.6
CESX				S	Sg	02 12 27.9	+0.6
GIGS	**Gran Sasso**	**0.47**	**139**	*e*P	Pb	02 12 23.5	+0.7
GIGS				S	Sg	02 12 28.5	+0.8
SNTG	**Esanatoglia**	**0.47**	**341**	*e*P	Pg	02 12 21.8	+0.3
SNTG				S	Sb	02 12 29.1	-0.8
SNTG				AML	AML		
	comp=E,470μm,0.6s						
SNTG				AML	AML		
	comp=N,605μm,1.1s						
SNTG				AML	AML		
	comp=N,4485μm,0.6s						
SNTG				AML	AML		
	comp=E,470μm,0.6s						
SNTG				AML	AML		
	comp=E,3835μm,0.6s						
SNTG				AML	AML		
	comp=N,604μm,1.2s						
AQU	**L'Aquila**	**0.49**	**157**	P	Pg	02 12 21.8	+0.1
AQU				S	Sb	02 12 30.2	-0.1
TRE1	**Treia**	**0.52**	**13**	P	Pb	02 12 23.1	-0.5
TRE1				S	Sb	02 12 31.8	+0.6
ATCC	**AVT- Casa Cast**	**0.53**	**316**	*e*P	Pg	02 12 22.8	+0.3
ATCC				S	Sb	02 12 31.1	-0.4
ATCC				AML	AML		
	comp=N,11200μm,1.0s						
ATCC				AML	AML		
	comp=E,11500μm,0.7s						
ATCC				AML	AML		
	comp=N,11160μm,1.0s						
FIAM	**Fiamignano**	**0.54**	**182**	P	Pb	02 12 24.9	+1.0
FIAM				S	Sb	02 12 30.9	-0.9
TRTR	**Tortoreto Alta**	**0.56**	**90**	P	Pb	02 12 24.6	+0.3
FOSV	**Fossato di Vic**	**0.56**	**330**	*e*P	Pg	02 12 23.3	+0.2
FOSV				S	Sb	02 12 31.9	-0.6
FOSV				AML	AML		
	comp=E,5295μm,0.2s						
FOSV				AML	AML		
	comp=N,5425μm,0.3s						
CADA	**Capodarco di F**	**0.59**	**49**	P	Pb	02 12 25.3	+0.5
MMUR	**Monte Murano**	**0.64**	**350**	P	Pg	02 12 24.7	0.0
MMUR				S	Sb	02 12 35.3	+0.4
MURB	**Monte Urbino**	**0.65**	**315**	P	Pg	02 12 24.9	+0.1
MURB				S	Sb	02 12 35.2	+0.3
VCEL	**Villa Celiera**	**0.66**	**129**	P	Pb	02 12 26.0	+0.1
SSFR	**Montelago di S**	**0.68**	**337**	P	Pg	02 12 25.9	+0.4
SSFR				S	Sb	02 12 36.1	+0.1
ATFO	**Monte Foce - G**	**0.70**	**323**	P	Pb	02 12 26.4	-0.3
ATFO				S	Sb	02 12 36.6	+0.2
ATTE	**AVT- Monte Tez**	**0.70**	**304**	P	Pn	02 12 28.7	+0.3
ATTE				S	Sb	02 12 37.1	+0.6
ATSC	**Scheggia e Pas**	**0.70**	**331**	P	Pb	02 12 26.5	-0.2
ATSC				S	Sb	02 12 36.5	-0.1
ARVD	**Arcevia**	**0.71**	**348**	P	Pg	02 12 26.3	+0.4
ARVD				S	Sb	02 12 37.4	+0.8
SRES	**S.Oreste - Sor**	**0.74**	**220**	P	Pn	02 12 28.1	-0.7
SRES				S	Sb	02 12 38.3	+0.8
ATLO	**AVT- Montelove**	**0.74**	**313**	P	Pg	02 12 26.2	-0.3
ATLO				S	Sb	02 12 37.8	+0.1
MGAB	**Montegabbione**	**0.77**	**278**	P	Pb	02 12 28.2	+0.4
FRON	**Frontone**	**0.78**	**337**	*e*P	Pg	02 12 27.1	-0.1
FRON				S	Sb	02 12 38.8	+0.3
FRON				AML	AML		
	comp=E,2230μm,0.4s						
FRON				AML	AML		
	comp=N,3000μm,1.3s						
TB01	**Gubbio**	**0.78**	**318**	P	Pg	02 12 27.0	-0.2
TB01				S	Sb	02 12 39.1	+0.5
TB02	**Pietralunga**	**0.78**	**316**	P	Pg	02 12 26.4	-0.9
TB02				S	Sb	02 12 39.1	+0.4
ATVA	**AVT- Monte Val**	**0.79**	**307**	P	Pn	02 12 29.5	-0.1
ATVA				S	Sb	02 12 38.6	-0.4
ATVO	**AVT- Monte Val**	**0.79**	**317**	P	Pg	02 12 27.6	+0.1
ATVO				S	Sb	02 12 39.5	+0.4
ATVO				AML	AML		
	comp=E,2540μm,0.4s						
ATVO				AML	AML		
	comp=N,2425μm,0.3s						
ATBU	**Serra di Buran**	**0.80**	**327**	P	Pg	02 12 27.4	-0.2
ATBU				S	Sn	02 12 41.4	-0.5
TB03	**Pietralunga**	**0.80**	**318**	P	Pg	02 12 27.7	0.0
TB03				S	Sb	02 12 39.8	+0.4
AOI	**Ancona**	**0.81**	**24**	*e*P	Pb	02 12 28.8	+0.2
AOI				AML	AML		
	comp=E,3315μm,0.4s						
AOI				AML	AML		

comp=N,2815µm,0.6s
COR1 Corinaldo 0.83 353 P Pn 02 12 29.5 -0.6
ATPC Poggio Castell 0.84 323 P Pn 02 12 30.9 +0.5
ATPC S Sn 02 12 41.9 -0.9
ATPI Pietralunga - 0.84 320 P Pg 02 12 28.7 +0.2
ATPI AML AML
comp=N,1735µm,0.9s
ATPI AML AML
comp=E,1555µm,0.6s
ATPI AML AML
comp=N,1730µm,0.9s
PIEI Pieia 0.86 329 P Pg 02 12 24.5 -4.2
PIEI S Sg 02 12 39.8 0.0
MPAG Monte Paganucc 0.87 341 P Pg 02 12 29.0 0.0
MPAG S Sn 02 12 42.6 -1.0
MPAG AML AML
comp=N,1970µm,0.5s
MPAG AML AML
comp=E,2050µm,0.7s
MPAG AML AML
comp=E,2010µm,0.7s
MPAG AML AML
comp=N,1870µm,0.5s
NARO Abbazia di Nar 0.91 333 AML AML
comp=E,1135µm,0.8s
NARO AML AML
comp=N,1190µm,1.2s
SACS San Casciano d 0.91 273 P Pn 02 12 31.6 +0.3
APEC Apecchio 0.92 325 P Pg 02 12 30.0 +0.1
FSSB Fossombrone 0.93 343 P Pg 02 12 27.0 -3.0
FSSB S Sn 02 12 44.0 -0.8
ATMC Monte Cedrone 0.95 313 P Pn 02 12 31.8 0.0
LATE Laterza 1.01 259 P Pg 02 12 31.7 +0.1
CAFI Castiglion Fio 1.01 301 P Pb 02 12 32.2 +0.3
SSP9 Sansepolcro 1.07 316 P Pn 02 12 36.3 +2.9
SF03 Valle Cupa 1.08 270 P Pn 02 12 33.7 +0.1
SF11 Podere del Sol 1.08 274 P Pn 02 12 34.0 +0.3
MCIV Monte Civitell 1.08 269 P Pn 02 12 34.2 +0.5
SF04 Casetta 1.09 272 P Pn 02 12 34.2 +0.4
SF13 Bagnolo 1.12 271 P Pn 02 12 34.6 +0.4
SF13 S Sn 02 12 49.8 0.0
SF14 Selvena 1.13 268 P Pn 02 12 34.4 +0.1
PESA Pesaro 1.16 349 P Pn 02 12 35.4 +0.8
PESA S Sn 02 12 54.1 +3.6
SF01 Poggio Pratacc 1.17 271 P Pn 02 12 35.0 +0.2
ARCI Arcidosso 1.23 273 P Pg 02 12 36.9 +1.0
LATB Latina 1.32 186 P Pg 02 12 38.3 +0.8
SFI Santa Sofia 1.45 320 P Pg 02 12 42.7 +2.6
TRIV Trivento 1.47 135 P Pg 02 12 43.1 +2.7
CSNT Castellina Chi 1.51 297 P Pn 02 12 39.6 +0.1
FROS Frosini 1.52 286 P Pn 02 12 39.7 +0.1
RUFI Rufina 1.58 311 P Pb 02 12 41.4 -0.2
TRIF Trifonti 1.68 281 P Pn 02 12 42.3 +0.5
CASP Castiglione de 1.68 270 P Pn 02 12 41.7 -0.1

IDC 24 02:13:41.9±2.7, 18°48N×147°21E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=122.3km s-min=24.6km az=87.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**18.47**	**87**	T	T	02 37 34.1	
	baz=272,slow=73						
H11S1	**WAKE ISLAND Hy**	**18.48**	**87**	T	T	02 37 31.7	
	baz=272,slow=73						
H11S2	**WAKE ISLAND Hy**	**18.49**	**87**	T	T	02 37 38.4	
	baz=272,slow=73						
WRA	**Warramunga Arr**	**40.22**	**199**	P	P	02 21 19.6	-0.8
	0.9nm,0.8s,baz=28,slow=8.5,SNR=6.0						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**43.85**	**198**	P	P	02 21 50.8	+0.7
	0.3nm,0.5s,baz=18,slow=6.9,SNR=4.4						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**59.07**	**322**	P	P	02 23 43.3	-0.5
	0.5nm,0.4s,baz=91,slow=7.4,SNR=2.0						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.65**	**314**	P	P	02 23 48.3	+0.3
	0.6nm,0.7s,baz=76,slow=10,SNR=4.0						
	0.6nm,0.7s						
ARCES	**ARCESS Array B**	**83.14**	**342**	P	P	02 26 09.6	+0.2
	2.4nm,0.8s,baz=59,slow=7.2,SNR=4.7						
	2.4nm,0.8s						
FINES	**FINESS Array B**	**87.68**	**336**	P	P	02 26 32.0	-0.1
	0.7nm,0.6s,baz=72,slow=6.2,SNR=5.3						
	0.7nm,0.6s						

PRU ***24*** *02:13:56.3±0.0, 42°.71N×13°.65E, h0km*
LDG ***24*** *02:13:56.6±0.1, 42°.78N×13°.15E, h10km, Ml3.5/20, Error ellipse: s-maj=1.7km s-min=1.1km az=41.0*
IDC ***24*** *02:13:57.2±1.2, 42°.85N×13°.11E, h0km, mb3.7/5, mbtmp3.6/9, ML3.1/4, Error ellipse: s-maj=26.7km s-min=14.8km az=88.0*
ROM ***24*** *02:13:57.3±0.1, 42°.768N±0°.002×13°.154E±0°.005, h9km, Md2.3/1, ML3.8/98, Error ellipse: s-maj=0.3km s-min=0.2km az=86.0*
BEO ***24*** *02:13:59.7±0.7, 42°.81N×13°.18E, h9km±2km, ML3.8/7*
ISC 24 02:13:58.4±0.8, 42°.78N±0°.01×13°.13E±0°.01, h13km±5km, n235, σ1§96/327, mb3.9/3, 17C-11D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.18**	**201**	*iP*	**Pg**	**02 14 02.2**	**-0.4**
LNSS				S	**Sg**	**02 14 05.7**	**+0.2**
LNSS				AML	AML		
	comp=E,94750µm,0.4s						
LNSS				AML	AML		
LNSS				AML	AML		
	comp=E,94800µm,0.4s						
FEMA	**Monte Fema**	**0.20**	**343**	*eP*	**Pg**	**02 14 02.2**	**-0.6**
FEMA				S	**Sg**	**02 14 05.5**	**-0.5**
FEMA				AML	AML		
	comp=N,51250µm,1.0s						
FEMA				AML	AML		
	comp=N,51200µm,1.0s						
FEMA				AML	AML		
	comp=E,63150µm,1.0s						
FEMA				END			
FDMO	**Fiordimonte**	**0.26**	**354**	*eP*	**Pg**	**02 14 03.2**	**-0.8**
FDMO				S	**Sg**	**02 14 07.5**	**-0.2**
FDMO				AML	AML		
	comp=E,29400µm,1.5s						
FDMO				AML	AML		
	comp=N,41200µm,1.0s						
RM33	**Pellescritta (**	**0.27**	**166**	*eP*	**Pg**	**02 14 03.4**	**-0.8**
RM33				S	**Sg**	**02 14 08.0**	**0.0**
RM33				AML	AML		
	comp=E,27150µm,1.5s						
RM33				AML	AML		
	comp=E,27100µm,1.5s						
RM33				AML	AML		
	comp=N,20450µm,0.3s						
RM33				AML	AML		
	comp=E,26800µm,1.5s						
RM33				AML	AML		
	comp=N,20350µm,0.3s						
RM33				AML	AML		
	comp=N,20400µm,0.3s						
RM33				AML	AML		
	comp=E,26750µm,1.5s						
CESI	**CESI - Serrava**	**0.28**	**325**	*eP*	**Pg**	**02 14 03.8**	**-0.5**
CESI				S	**Sg**	**02 14 08.7**	**+0.4**
CESI				AML	AML		
	comp=N,65050µm,0.3s						
CESI				AML	AML		
	comp=E,56050µm,0.5s						
CAMP	**Campotosto**	**0.32**	**139**	*iP*	**Pg**	**02 14 03.7**	**-1.2**
CAMP				S	**Sg**	**02 14 08.5**	**-0.8**
CAMP				AML	AML		
	comp=E,12875µm,1.0s						
CAMP				AML	AML		
	comp=N,12300µm,0.6s						
GUMA	**Gualdo di Mace**	**0.33**	**28**	*iP*	**Pg**	**02 14 04.3**	**-0.8**
GUMA	**Gualdo di Mace**	**0.33**	**28**	S	**Sg**	**02 14 09.7**	**+0.2**
ARRO	**Arrone**	**0.33**	**234**	*iP*	**Pg**	**02 14 04.9**	**-0.3**
ARRO				S	**Sb**	**02 14 10.7**	**-0.7**
TERO	**Teramo**	**0.38**	**113**	P	**Pg**	**02 14 04.5**	**-1.5**
TERO				S	**Sg**	**02 14 10.0**	**-1.2**
TERO				AML	AML		
	comp=N,23000µm,0.5s						
TERO				AML	AML		
	comp=N,24500µm,0.5s						
TERO				AML	AML		
	comp=N,22950µm,0.5s						
TERO				AML	AML		
	comp=E,18400µm,0.7s						
TERO				AML	AML		
	comp=E,19600µm,0.7s						
SEF1	**Sefro**	**0.40**	**341**	*eP*	**Pg**	**02 14 05.7**	**-0.6**
SEF1				S	**Sg**	**02 14 12.1**	**+0.5**
SEF1				AML	AML		
	comp=E,41700µm,0.3s						
SEF1				AML	AML		
	comp=N,32350µm,1.0s						
SEF1				AML	AML		
	comp=E,41750µm,0.3s						
SEF1				AML	AML		
	comp=N,32350µm,1.0s						
PIO1	**Pioraco**	**0.42**	**345**	*eP*	**Pg**	**02 14 07.0**	**+0.2**
PIO1				S	**Sb**	**02 14 13.6**	**-0.3**
PIO1				AML	AML		
	comp=E,11165µm,0.7s						
PIO1				AML	AML		
	comp=N,23050µm,0.6s						
PIO1				AML	AML		
	comp=E,11180µm,0.7s						
PIO1				AML	AML		
	comp=N,23100µm,0.6s						
MDAR	**Monte D'Aria**	**0.42**	**2**	*eP*	**Pg**	**02 14 05.8**	**-0.9**
MDAR				S	**Sg**	**02 14 12.3**	**-0.1**
MDAR				AML	AML		
	comp=E,18900µm,0.4s						
MDAR				AML	AML		
	comp=N,23150µm,0.5s						
MDAR				AML	AML		
	comp=N,23100µm,0.5s						
ASSB	**Assisi San Ben**	**0.44**	**308**	*eP*	**Pg**	**02 14 06.6**	**-0.5**
ASSB				S	**Sg**	**02 14 13.4**	**+0.5**
ASSB				AML	AML		
	comp=N,14550µm,0.5s						
ASSB				AML	AML		
	comp=E,18450µm,0.3s						
CESX	**Cesi**	**0.44**	**248**	*eP*	**Pg**	**02 14 06.5**	**-0.5**
CESX				S	**Sg**	**02 14 13.7**	**+0.8**
CESX				AML	AML		
	comp=N,15500µm,0.5s						
CESX				AML	AML		
	comp=E,11850µm,0.6s						
FIU1	**Fiuminata**	**0.44**	**341**	*eP*	**Pg**	**02 14 06.3**	**-0.8**
FIU1				S	**Sg**	**02 14 13.3**	**+0.3**
FIU1				AML	AML		
	comp=N,9370µm,0.4s						
FIU1				AML	AML		
	comp=N,9340µm,0.4s						
FIU1				AML	AML		
	comp=E,13050µm,0.3s						
MNTP	**Montappone**	**0.44**	**35**	P	**Pg**	**02 14 06.5**	**-0.6**
MNTP				S	**Sb**	**02 14 14.1**	**-0.5**
OFFI	**Offida**	**0.44**	**68**	*iP*	**Pg**	**02 14 06.5**	**-0.6**
OFFI				S	**Sb**	**02 14 14.4**	**-0.2**
OFFI				AML	AML		
	comp=E,36900µm,0.5s						
OFFI				AML	AML		
	comp=N,43100µm,0.6s						
SSM1	**San Severino M**	**0.46**	**5**	*eP*	**Pg**	**02 14 06.5**	**-0.9**
SSM1				S	**Sg**	**02 14 13.6**	**+0.1**
GIGS	**Gran Sasso**	**0.46**	**135**	*eP*	**Pg**	**02 14 05.9**	**-1.6**
GIGS				S	**Sg**	**02 14 12.5**	**-1.2**
GIGS				AML	AML		
	comp=E,3270µm,1.0s						
GIGS				AML	AML		
	comp=N,2625µm,0.5s						
GIGS				AML	AML		
	comp=N,2620µm,0.5s						
GAG1	**Gagliole**	**0.47**	**355**	*eP*	**Pg**	**02 14 06.8**	**-0.8**
GAG1				S	**Sg**	**02 14 14.2**	**+0.4**
GAG1				AML	AML		
	comp=E,53250µm,0.6s						
GAG1				AML	AML		
	comp=N,36700µm,0.4s						
GAG1				AML	AML		
	comp=N,36700µm,0.4s						
AQU	**L'Aquila**	**0.47**	**154**	*eP*	**Pg**	**02 14 06.8**	**-0.8**
AQU				S	**Sb**	**02 14 15.3**	**-0.1**
AQU				AML	AML		
	comp=E,12225µm,1.5s						
AQU				AML	AML		
	comp=N,12000µm,1.1s						
AQU				AML	AML		
	comp=N,11750µm,1.3s						
AQU				AML	AML		
	comp=E,12050µm,1.2s						
AQU				AML	AML		
	comp=E,12220µm,1.5s						
MTL1	**Matelica**	**0.49**	**350**	*eP*	**Pg**	**02 14 07.2**	**-0.9**
MTL1				S	**Sg**	**02 14 14.9**	**+0.3**
MTL1				AML	AML		
	comp=E,32200µm,1.5s						
MTL1				AML	AML		
	comp=E,32200µm,1.5s						
MTL1				AML	AML		
	comp=N,27900µm,0.4s						
SNTG	**Esanatoglia**	**0.50**	**344**	*eP*	**Pg**	**02 14 07.5**	**-0.8**
SNTG				S	**Sg**	**02 14 15.3**	**+0.4**
SNTG				AML	AML		
	comp=E,1204µm,0.5s						
SNTG				AML	AML		
	comp=N,1016µm,1.1s						
SNTG				AML	AML		
	comp=E,9450µm,0.5s						
SNTG				AML	AML		
	comp=N,8415µm,0.6s						
SNTG				AML	AML		
	comp=N,1014µm,1.1s						
SNTG				AML	AML		
	comp=E,1205µm,0.5s						
FIAM	**Fiamignano**	**0.51**	**181**	*eP*	**Pg**	**02 14 07.4**	**-1.0**
FIAM				S	**Sg**	**02 14 14.8**	**-0.3**
FIAM				AML	AML		
	comp=N,6810µm,0.9s						
FIAM				AML	AML		
	comp=E,7520µm,0.8s						
ATCC	**AVT- Casa Cast**	**0.54**	**319**	*eP*	**Pg**	**02 14 08.4**	**-0.6**
ATCC				S	**Sb**	**02 14 17.2**	**-0.4**
ATCC				AML	AML		
	comp=E,15800µm,1.3s						
ATCC				AML	AML		
	comp=N,12935µm,0.4s						
ATCC				AML	AML		
	comp=N,12925µm,0.4s						
ATCC				AML	AML		
	comp=E,15750µm,1.3s						
TRE1	**Treia**	**0.55**	**14**	*eP*	**Pg**	**02 14 08.6**	**-0.7**
TRE1				S	**Sb**	**02 14 17.6**	**-0.3**
TRE1				AML	AML		
	comp=N,37750µm,0.5s						
TRE1				AML	AML		
	comp=E,38400µm,0.4s						
EL6	**Elcito**	**0.56**	**358**	*eP*	**Pg**	**02 14 08.3**	**-1.0**
EL6				S	**Sg**	**02 14 17.0**	**+0.3**
EL6				AML	AML		
	comp=N,19100µm,1.0s						
EL6				AML	AML		
	comp=E,22700µm,0.2s						
TRTR	**Tortoreto Alta**	**0.58**	**86**	P	**Pg**	**02 14 09.3**	**-0.5**
TRTR				S	**Sb**	**02 14 19.8**	**+1.2**
TRTR				AML	AML		
	comp=N,27350µm,0.6s						
TRTR				AML	AML		
	comp=E,29400µm,0.5s						
FOSV	**Fossato di Vic**	**0.58**	**333**	P	**Pg**	**02 14 09.1**	**-0.7**
FOSV				S	**Sg**	**02 14 18.2**	**+0.6**
FOSV				AML	AML		
	comp=E,10065µm,1.0s						
FOSV				AML	AML		
	comp=N,8830µm,0.5s						
CING	**Cingoli**	**0.60**	**5**	P	**Pg**	**02 14 09.2**	**-1.0**
CING				S	**Sg**	**02 14 18.6**	**+0.4**
FAGN	**Fagnano**	**0.61**	**146**	*eP*	**Pg**	**02 14 10.0**	**-0.3**
FAGN				AML	AML		
	comp=N,8975µm,0.4s						
FAGN				AML	AML		
	comp=E,18000µm,0.6s						
CADA	**Capodarco di F**	**0.63**	**48**	*eP*	**Pg**	**02 14 10.6**	**0.0**
CADA				AML	AML		
	comp=E,32750µm,0.9s						
CADA				AML	AML		
	comp=N,28000µm,1.0s						
CADA				AML	AML		
	comp=E,32700µm,0.9s						
CADA				AML	AML		
	comp=N,28050µm,1.0s						
VCEL	**Villa Celiera**	**0.65**	**126**	*eP*	**Pg**	**02 14 09.9**	**-1.2**
VCEL				S	**Sg**	**02 14 19.1**	**-0.5**
VCEL				AML	AML		
	comp=E,7685µm,0.5s						
VCEL				AML	AML		
	comp=N,9670µm,0.8s						
VCEL				AML	AML		
	comp=E,7690µm,0.5s						
VCEL				AML	AML		
	comp=N,9680µm,0.8s						
MURB	**Monte Urbino**	**0.66**	**318**	*eP*	**Pg**	**02 14 10.6**	**-0.6**
MURB				S	**Sb**	**02 14 21.3**	**+0.4**
MURB				AML	AML		
	comp=E,19800µm,1.1s						
MURB				AML	AML		
	comp=N,19450µm,0.3s						
MURB				AML	AML		
	comp=E,19850µm,1.1s						
MURB				AML	AML		
	comp=N,20050µm,0.3s						
MURB				AML	AML		
	comp=E,21300µm,0.4s						
CIMA	**Civitanova Mar**	**0.66**	**37**	P	**Pg**	**02 14 11.2**	**-0.1**
CIMA				S	**Sn**	**02 14 23.2**	**-0.6**
MMUR	**Monte Murano**	**0.67**	**352**	P	**Pg**	**02 14 10.7**	**-0.8**
MMUR				S	**Sb**	**02 14 21.1**	**-0.3**
MMUR				AML	AML		
	comp=N,14150µm,0.7s						
MMUR				AML	AML		
	comp=E,14000µm,1.0s						
PP3	**Marolino**	**0.70**	**30**	*eP*	**Pg**	**02 14 11.4**	**-0.6**
PP3				S	**Sb**	**02 14 23.1**	**+1.1**
PP3				AML	AML		
	comp=E,47300µm,0.4s						
PP3				AML	AML		
	comp=N,51150µm,1.2s						
PP3				AML	AML		
	comp=N,47800µm,1.2s						
PP3				AML	AML		
	comp=E,47350µm,0.4s						
PP3				AML	AML		
	comp=E,47950µm,0.4s						
SRES	**S.Oreste - Sor**	**0.70**	**221**	*eP*	**Pg**	**02 14 11.1**	**-0.9**
SRES				S	**Sb**	**02 14 23.2**	**+1.0**
SRES				AML	AML		
	comp=E,4105µm,1.0s						
SRES				AML	AML		
	comp=N,2755µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.71**	**307**	*eP*	**Pg**	**02 14 12.2**	**0.0**
ATTE				S	**Sb**	**02 14 23.4**	**+1.0**
ATTE				AML	AML		
	comp=N,5775µm,1.5s						
ATTE				AML	AML		
	comp=E,8135µm,0.5s						
SSFR	**Montelago di S**	**0.71**	**339**	*eP*	**Pg**	**02 14 11.4**	**-0.8**
SSFR				S	**Sb**	**02 14 22.4**	**0.0**
SSFR				AML	AML		
	comp=E,13650µm,0.2s						
SSFR				AML	AML		
	comp=N,15950µm,0.2s						
SSFR				AML	AML		
	comp=N,15950µm,0.2s						
SSFR				AML	AML		
	comp=E,13650µm,0.2s						
SSFR				AML	AML		
	comp=E,13150µm,0.2s						
SSFR				AML	AML		
	comp=N,14250µm,0.2s						
ATFO	**Monte Foce - G**	**0.72**	**326**	*eP*	**Pg**	**02 14 11.8**	**-0.6**
ATFO				S	**Sb**	**02 14 23.4**	**+0.7**
ATFO				AML	AML		
	comp=E,6775µm,0.4s						
ATFO				AML	AML		
	comp=N,7275µm,0.6s						
ATFO				AML	AML		
	comp=N,7280µm,0.6s						
T0110	**Collepietro**	**0.73**	**138**	*eP*	**Pg**	**02 14 11.3**	**-1.3**
T0110				S	**Sg**	**02 14 22.0**	**-0.2**
T0110				AML	AML		
	comp=E,7520µm,1.0s						
T0110				AML	AML		
	comp=N,7045µm,0.8s						
T0110				AML	AML		
	comp=E,7525µm,1.0s						
T0110				AML	AML		
	comp=N,7050µm,0.8s						
ARVD	**Arcevia**	**0.74**	**349**	*eP*	**Pg**	**02 14 11.7**	**-1.0**
ARVD				S	**Sb**	**02 14 22.9**	**-0.2**
ARVD				AML	AML		
	comp=E,4960µm,0.6s						
ARVD				AML	AML		
	comp=N,4370µm,1.1s						
MGAB	**Montegabbione**	**0.76**	**281**	*eP*	**Pg**	**02 14 13.0**	**-0.1**
MGAB				S	**Sb**	**02 14 24.1**	**+0.3**
MGAB				AML	AML		
	comp=E,17900µm,0.7s						
MGAB				AML	AML		
	comp=N,13850µm,0.5s						
MGAB				AML	AML		
	comp=E,16450µm,0.8s						
MGAB				AML	AML		
	comp=N,11400µm,0.5s						
PTQR	**Pietraquaria**	**0.78**	**165**	P	**Pg**	**02 14 12.5**	**-1.0**
PTQR				AML	AML		
	comp=E,1935µm,1.2s						
PTQR				AML	AML		
	comp=N,2110µm,1.2s						
FRON	**Frontone**	**0.80**	**339**	*eP*	**Pg**	**02 14 12.8**	**-1.1**
FRON				S	**Sb**	**02 14 25.1**	**+0.2**
FRON				AML	AML		
	comp=E,6015µm,0.5s						
FRON				AML	AML		
	comp=N,9340µm,0.6s						
MTCE	**Montecelio**	**0.80**	**201**	*eP*	**Pg**	**02 14 12.4**	**-1.5**
MTCE				S	**Sn**	**02 14 28.0**	**+0.7**
MTCE				AML	AML		
	comp=N,3295µm,0.9s						
MTCE				AML	AML		
	comp=E,5075µm,0.7s						
ATVO	**AVT- Monte Val**	**0.81**	**319**	*eP*	**Pg**	**02 14 13.2**	**-0.8**
ATVO				S	**Sb**	**02 14 25.4**	**+0.3**
ATVO				AML	AML		
	comp=E,6305µm,1.1s						
ATVO				AML	AML		
	comp=N,6150µm,0.6s						
CERT	**Cerreto**	**0.83**	**187**	P	**Pg**	**02 14 13.2**	**-1.4**
CERT				S	**Sn**	**02 14 27.7**	**-0.4**
CERT				AML	AML		
	comp=N,4580µm,0.6s						
CERT				AML	AML		
	comp=E,5830µm,0.8s						
ATMI	**Monte Miggiano**	**0.84**	**312**	*eP*	**Pn**	**02 14 15.6**	**-0.4**
ATMI				AML	AML		
	comp=E,15000µm,0.5s						
ATMI				AML	AML		
	comp=N,19350µm,0.5s						
AOI	**Ancona**	**0.85**	**24**	*eP*	**Pg**	**02 14 13.6**	**-1.2**
AOI				S	**Sb**	**02 14 26.9**	**+0.5**
AOI				AML	AML		
	comp=E,7230µm,0.2s						
AOI				AML	AML		
	comp=N,6750µm,0.4s						
ATPI	**Pietralunga -**	**0.86**	**322**	*eP*	**Pg**	**02 14 14.2**	**-0.8**
ATPI				S	**Sb**	**02 14 27.1**	**+0.4**
ATPI				AML	AML		
	comp=E,4865µm,0.5s						
ATPI				AML	AML		
	comp=N,5090µm,0.7s						
ATPI				AML	AML		
	comp=E,4860µm,0.5s						
COR1	**Corinaldo**	**0.86**	**354**	*eP*	**Pg**	**02 14 14.9**	**-0.2**
COR1				AML	AML		
	comp=N,14400µm,1.2s						
COR1				AML	AML		
	comp=N,13650µm,1.2s						
COR1				AML	AML		
	comp=E,8080µm,0.4s						
COR1				AML	AML		
	comp=E,15800µm,0.4s						
PIEI	**Pieia**	**0.88**	**331**	*eP*	**Pg**	**02 14 14.5**	**-0.8**
PIEI				S	**Sb**	**02 14 28.1**	**+0.9**
PIEI				AML	AML		
	comp=E,3565µm,1.2s						

PIEI AML AML
comp=N,4365µm,0.6s
MPAG Monte Paganucc 0.90 343 *e*P **Pg 02 14 14.8 -0.9**
MPAG S **Sb 02 14 28.7 +0.9**
MPAG AML AML
comp=N,5760µm,0.8s
MPAG AML AML
comp=N,5990µm,0.8s
MPAG AML AML
comp=E,5560µm,0.3s
MPAG AML AML
comp=E,5410µm,0.3s
SACS San Casciano d 0.90 275 *e*P **Pg 02 14 15.2 -0.6**
SACS S **Sn 02 14 29.0 -0.8**
SACS AML AML
comp=E,7155µm,0.8s
SACS AML AML
comp=N,6720µm,0.9s
NARO Abbazia di Nar 0.93 335 P **Pg 02 14 15.0 -1.3**
NARO AML AML
comp=N,4055µm,0.7s
NARO AML AML
comp=E,3860µm,0.7s
SENI Senigallia 0.93 5 P **Pg 02 14 16.0 -0.5**
SENI S **Sn 02 14 33.0 +2.5**
RCAV Rocca di Cave 0.94 188 *e*P **Pg 02 14 16.4 -0.1**
APEC Apecchio 0.94 327 P **Pg 02 14 15.7 -0.8**
APEC S **Sn 02 14 31.3 +0.6**
APEC AML AML
comp=N,1190µm,0.6s
APEC AML AML
comp=N,5020µm,0.6s
APEC AML AML
comp=E,976µm,0.6s
APEC AML AML
comp=E,4770µm,0.5s
FSSB Fossombrone 0.95 345 *e*P **Pg 02 14 15.5 -1.3**
FSSB S **Sb 02 14 29.7 +0.3**
FSSB AML AML
comp=N,17950µm,0.4s
FSSB AML AML
comp=E,14300µm,0.4s
INTR Introdacqua 0.96 143 *e*P **Pg 02 14 14.5 -2.3**
INTR AML AML
comp=E,3µm,0.9s
INTR AML AML
comp=N,5µm,1.0s
INTR AML AML
comp=N,6625µm,1.0s
INTR AML AML
comp=E,3470µm,0.9s
INTR AML AML
comp=E,3µm,0.9s
VVLD Villa Vallelon 0.97 158 *e*P **Pg 02 14 15.9 -1.3**
VVLD AML AML
comp=E,2795µm,0.8s
VVLD AML AML
comp=N,2230µm,1.3s
BADI Badiali 0.98 319 *e*P **Pg 02 14 16.6 -0.7**
GUAR Guarcino 0.99 172 *e*P **Pb 02 14 17.5 0.0**
GUAR S **Sn 02 14 34.3 +2.4**
GUAR AML AML
comp=E,4155µm,0.8s
GUAR AML AML
comp=N,5595µm,0.7s
LATE Laterza 0.99 261 P **Pg 02 14 16.9 -0.6**
RMP Rome, Mte Porz 1.01 198 *e*P **Pb 02 14 17.0 -0.9**
RMP S **Sn 02 14 33.6 +1.1**
RMP AML AML
comp=E,3640µm,1.0s
RMP AML AML
comp=N,4305µm,1.1s
CAFI Castiglion Fio 1.02 303 *e*P **Pb 02 14 17.4 -0.5**
CAFI S **Sn 02 14 32.5 -0.1**
CAFI AML AML
comp=E,4420µm,0.6s
CAFI AML AML
comp=N,6900µm,1.0s
CAFI AML AML
comp=N,6575µm,1.0s
CAFI AML AML
comp=E,4315µm,0.6s
PE3 Peglio 1.03 334 *e*P **Pb 02 14 17.7 -0.5**
PE3 AML AML
comp=E,25µm,0.3s
PE3 AML AML
comp=N,25µm,0.3s
VIVA Pratoni del Vi 1.06 195 *e*P **Pb 02 14 18.1 -0.5**
VIVA S **Sn 02 14 35.1 +1.5**
VIVA AML AML
comp=E,5915µm,0.5s
VIVA AML AML
comp=N,7115µm,0.7s
RDP Rocca di Papa 1.06 197 *e*P **Pb 02 14 17.9 -0.8**
RDP S **Sn 02 14 35.4 +1.7**
RDP AML AML
comp=N,7365µm,0.7s
RDP AML AML
comp=E,6205µm,0.7s
MA9 Marino 1.06 199 *e*P **Pb 02 14 18.1 -0.6**
MA9 S **Sn 02 14 34.9 +1.2**
MA9 AML AML
comp=N,3940µm,0.6s
MA9 AML AML
comp=E,4540µm,0.5s
LPEL Lama dei Pelig 1.07 133 *e*P **Pb 02 14 16.5 -2.3**
LPEL AML AML
comp=E,4025µm,1.0s
LPEL AML AML
comp=N,2545µm,0.8s
MCIV Monte Civitell 1.07 271 P **Pb 02 14 18.8 0.0**
MCIV AML AML
comp=E,2360µm,0.7s
MCIV AML AML
comp=N,1665µm,0.6s
SF04 Casetta 1.08 274 *e*P **Pb 02 14 18.8 -0.3**
SSP9 Sansepolcro 1.08 318 *e*P **Pg 02 14 19.2 0.0**
SSP9 AML AML
comp=E,3120µm,0.8s
SSP9 AML AML
comp=N,3570µm,1.6s
PARC Parchiule 1.09 324 *e*P **Pb 02 14 18.8 -0.4**
PARC AML AML
comp=E,3885µm,0.9s
PARC AML AML
comp=N,4540µm,0.7s
TOLF Tolfa 1.10 230 *e*P **Pb 02 14 18.2 -1.0**
TOLF S **Sn 02 14 35.1 +0.6**
TOLF AML AML
comp=N,2445µm,1.0s
TOLF AML AML
comp=E,2370µm,1.0s
LAV9 Lanuvio 1.14 196 *e*P **Pg 02 14 20.3 -0.1**
LAV9 AML AML
comp=E,5440µm,1.4s
LAV9 AML AML
comp=E,5210µm,0.5s
LAV9 AML AML
comp=N,5065µm,0.9s
LAV9 AML AML
comp=N,4825µm,0.9s
SF01 Poggio Pratacc 1.15 272 *e*P **Pb 02 14 20.2 0.0**
SF01 S **Sn 02 14 37.7 +1.7**
SF01 AML AML
comp=E,3680µm,0.6s
SF01 AML AML
comp=N,3875µm,0.7s
LRP Arpino 1.18 163 *e*P **Pg 02 14 21.2 +0.1**
LRP AML AML
comp=E,976µm,1.6s
LRP AML AML
comp=N,2035µm,1.3s
PESA Pesaro 1.19 350 *e*P **Pn 02 14 20.4 -0.3**
PESA AML AML
comp=N,6820µm,0.4s
PESA AML AML
comp=E,7560µm,0.5s
CRE Caprese Michel 1.21 315 *e*P **Pg 02 14 21.7 0.0**
CRE AML AML
comp=N,2040µm,1.0s
CRE AML AML
comp=E,2085µm,0.7s
GIUL Giuliano Di Ro 1.22 176 *e*P **Pn 02 14 20.6 -0.6**
GIUL S **Sn 02 14 40.5 +2.9**
GIUL AML AML
comp=E,2080µm,1.1s
GIUL AML AML
comp=N,1360µm,0.8s
LATB Latina 1.29 186 P **Pn 02 14 21.6 -0.5**
LIK San Giovanni I 1.31 166 P **Pg 02 14 23.7 +0.1**
TRIV Trivento 1.46 133 *e*P **Pb 02 14 25.9 +0.4**
TRIV AML AML
comp=E,2505µm,1.0s
TRIV AML AML
comp=E,2200µm,0.9s
TRIV AML AML
comp=N,2050µm,1.0s
TRIV AML AML
comp=N,2105µm,1.0s
FROS Frosini 1.51 287 P **Pn 02 14 25.5 +0.3**
CSNT Castellina Chi 1.51 298 *e*P **Pn 02 14 25.7 +0.4**
CSNT AML AML
comp=N,772µm,0.9s
CSNT AML AML
comp=E,791µm,0.7s
OSSC Osservatorio P 1.57 299 *e*P **Pn 02 14 26.5 +0.5**
OSSC AML AML
comp=N,1021µm,1.0s
OSSC AML AML
comp=E,1740µm,0.8s
OSSC AML AML
comp=N,1710µm,0.8s
OSSC AML AML
comp=E,721µm,0.6s
RUFI Rufina 1.59 313 *e*P **Pn 02 14 26.3 0.0**
CASP Castiglione de 1.67 271 *e*P **Pn 02 14 26.9 -0.4**
CASP AML AML
comp=E,350µm,1.6s
CASP AML AML
comp=N,352µm,1.2s
TRIF Trifonti 1.67 283 *e*P **Pn 02 14 27.4 0.0**
TRIF AML AML
comp=E,695µm,0.7s
TRIF AML AML
comp=N,932µm,0.7s
MODR Mondragone 1.72 161 AML AML
comp=E,600µm,1.5s
MODR AML AML
comp=N,474µm,1.3s
PIGN Pignataro Magg 1.76 153 *e*P **Pb 02 14 29.7 -0.8**
BRIS BRISIGHELLA 1.81 320 *e*P **Pb 02 14 31.9 +0.5**
DUGI Dugi Otok 1.86 49 *e*Pn **Pn 02 14 29.4 -0.6**
VENT Ventotene 1.99 174 ⇓P **Pn 02 14 30.7 -1.1**
PAOL Paolisi 2.05 148 P **Pb 02 14 35.3 -0.2**
VIRC Vir 2.06 42 *e*Pn **Pn 02 14 32.1 -0.7**
POPM Popiglio 2.14 307 *e*P **Pn 02 14 33.6 -0.3**
POPM AML AML
comp=N,544µm,0.8s
POPM AML AML
comp=E,383µm,0.9s
CELB S.Piero in Cam 2.15 270 *e*P **Pn 02 14 33.9 -0.1**
CELB AML AML
comp=E,204µm,0.7s
CELB AML AML
comp=N,228µm,0.8s
MORI Morici 2.18 59 *e*Pn **Pn 02 14 34.1 -0.2**
NVLJ Novalja 2.19 35 *e*Pn **Pn 02 14 33.9 -0.6**
SGRT San Giovanni R 2.19 117 *e*P **Pn 02 14 35.0 +0.3**
SGRT AML AML
comp=N,794µm,0.8s
SGRT AML AML
comp=E,784µm,0.9s
MAIM Mastiano 2.23 302 *e*P **Pn 02 14 35.3 +0.2**
MAIM AML AML
comp=E,514µm,0.8s
MAIM AML AML
comp=N,435µm,1.0s
RABC Rab 2.31 31 *e*Pn **Pn 02 14 35.6 -0.5**
UDBI Udbina 2.59 47 *i* Pn **Pn 02 14 40.8 +0.6**
A250A Rusevo Krmpots 2.64 29 *e*Pn **Pn 02 14 40.6 -0.2**
KIJV Kijevo 2.69 62 *i* Pn **Pn 02 14 41.9 +0.5**
PLMA Palmaria, Port 2.71 299 *e*P **Pn 02 14 41.6 0.0**
PLMA AML AML
comp=E,206µm,0.7s
PLMA AML AML
comp=N,220µm,0.7s
RIY Rijeka 2.73 21 *e*Pn **Pn 02 14 41.6 -0.3**
LSTV Lastovo 2.77 89 *e*Pn **Pn 02 14 42.0 -0.5**
PLIT Plitvice 2.77 40 *e*Pn **Pn 02 14 42.7 +0.1**
MAKA Makarska 2.90 78 *e*Pn **Pn 02 14 44.5 +0.2**
RICI Ricice 3.02 75 *e*Pn **Pn 02 14 46.3 +0.4**
PGF Pioggiola 3.05 267 *e*P **Pn 02 14 47.1 +0.6**
PGF *e*Sn **Sn 02 15 17.9 -5.1**
comp=N,6.3nm,0.3s
BOJS Bojanci 3.13 29 *e*P **Pn 02 14 48.2 +0.8**
AMUR Altamura 3.20 125 *e*P **Pn 02 14 48.8 +0.3**
AMUR AML AML
comp=E,283µm,0.6s
AMUR AML AML
comp=N,254µm,1.1s
ROVR Rover Verones 3.23 333 *e*P **Pn 02 14 50.6 +1.7**
CGRP Cima Grappa 3.25 343 *e*P **Pn 02 14 50.1 +0.9**
CGRP AML AML
comp=N,808µm,0.7s
CGRP AML AML
comp=N,812µm,0.7s
CGRP AML AML
comp=E,832µm,0.8s
CGRP AML AML
comp=E,789µm,0.8s
A251A Rujevac 3.27 43 *e*Pn **Pn 02 14 49.5 +0.2**
OZLJ Ozalj 3.30 30 *e*Pn **Pn 02 14 50.3 +0.5**
STON Ston 3.37 87 *e*Pn **Pn 02 14 49.5 -1.2**
STON Ston 3.37 87 *e*Pn **Pn 02 14 50.4 -0.2**
STON *e*Sn **Sn 02 15 29.5 -0.9**
STON Ston 3.37 87 P **Pn 02 14 49.7 -1.0**
STON AML AML
comp=E,129µm,1.1s
STON AML AML
comp=N,150µm,0.8s
DOSS Dosso del Somm 3.40 337 *e*P **Pn 02 14 52.6 +1.3**
DOSS AML AML
comp=N,389µm,0.8s
DOSS AML AML
comp=E,355µm,1.6s
SALO Salr 3.40 328 *e*P **Pn 02 14 52.5 +1.3**
SALO AML AML
comp=E,382µm,0.8s
SALO AML AML
comp=N,535µm,0.9s
MATE Matera 3.42 127 ⇓P **Pn 02 14 52.5 +1.1**
MPRI Monte Prat 3.47 358 *e*P **Pn 02 14 52.1 -0.1**
MPRI AML AML
comp=E,670µm,1.2s
MPRI AML AML
comp=N,908µm,0.8s
MAGA Magasa 3.50 330 *e*P **Pn 02 14 53.6 +1.0**
MAGA AML AML
comp=N,526µm,0.4s
MAGA AML AML
comp=E,1245µm,0.6s
STAL STALIGIAL 3.50 355 *e*P **Pn 02 14 52.3 -0.2**
STAL AML AML
comp=E,610µm,0.8s
STAL AML AML
comp=N,452µm,1.4s
STAL AML AML
comp=N,391µm,1.3s
STAL AML AML
comp=E,515µm,0.7s
BLY Banja Luka 3.54 55 *e*Pn **Pn 02 14 55.3 +2.2**
LUSI Trento, Gardas 3.55 335 *e*P **Pn 02 14 54.2 +1.0**
LUSI AML AML
comp=E,335µm,0.7s
LUSI AML AML
comp=N,478µm,0.8s
NOCI Noci 3.55 123 *e*P **Pn 02 14 53.5 +0.3**
NOCI AML AML
comp=N,206µm,1.1s
NOCI AML AML
comp=E,174µm,0.9s
CIMO Cimolais 3.57 352 *e*P **Pn 02 14 53.0 -0.5**
CIMO AML AML
comp=E,160µm,0.7s
CIMO AML AML
comp=N,146µm,0.5s
CIMO AML AML
comp=E,162µm,0.7s
CIMO AML AML
comp=N,154µm,0.6s
ZONE Zone 3.69 325 *e*P **Pn 02 14 55.7 +0.6**
ZONE AML AML
comp=N,228µm,0.3s
ZONE AML AML
comp=E,265µm,1.0s
ACOM Acomizza, Ital 3.78 4 *e*P **Pn 02 14 57.6 +1.0**
ACOM AML AML
comp=N,631µm,0.7s
ACOM AML AML
comp=E,491µm,1.6s
ACOM AML AML
comp=N,574µm,0.7s
ACOM AML AML
comp=E,472µm,1.6s
MOSL Moslavina 3.85 41 *i* Pn **Pn 02 14 55.5 -1.9**
OBKA Obir 3.87 15 *e*Pn **Pn 02 14 58.2 +0.5**
comp=E,17nm,0.5s
MYKA Terra Mystica 3.87 5 *e*Pn **Pn 02 14 58.7 +0.9**
comp=E,4.9nm,0.4s
KOSI Kohlern 3.89 342 *e*P **Pn 02 14 59.4 +1.3**
KOSI AML AML
comp=N,392µm,0.9s
KOSI AML AML
comp=E,570µm,1.0s
APPI Appiano 3.94 341 *e*P **Pn 02 15 00.1 +1.4**
LOBO Lobor 3.98 31 *e*Pn **Pn 02 14 58.4 -0.8**
ABTA Abfaltersbach 4.00 354 *e*Pn **Pn 02 15 00.7 +1.3**
comp=E,14nm,0.3s
SOKA Soboth 4.13 19 *e*Pn **Pn 02 15 02.6 +1.3**
comp=E,2.7nm,0.2s
SBF Sospel 4.29 287 *e*P **Pn 02 15 04.1 +0.6**
SBF *e*Sn **Sn 02 15 47.5 -6.0**
comp=E,28nm,0.4s
MUGIO Muggio 4.30 318 *e*P **Pn 02 15 03.9 +0.3**
MUGIO AML AML
comp=E,126µm,0.7s
MUGIO AML AML
comp=N,100µm,0.5s
KBA Koelnbreinsper 4.31 2 *e*Pn **Pn 02 15 04.5 +0.7**
comp=N,5.4nm,0.2s
A252A Venje 4.32 50 *e*Pn **Pn 02 15 03.3 -0.4**
ROSI Rosskopf 4.33 344 *e*P **Pn 02 15 06.0 +1.9**
VSL Villasalto 4.33 222 *e*P **Pn 02 15 04.9 +1.0**
VSL AML AML
VSL AML AML
PDG Podgorica 4.54 92 ⇓P **Pn 02 15 07.9 +1.2**
PDG Podgorica 4.54 92 *e*Pn **Pn 02 15 08.2 +1.4**
PDG *e*Sn **Sn 02 15 59.2 -0.1**
PDG Podgorica 4.54 92 *e*P **Pn 02 15 07.9 +1.2**
FETA Feichten 4.58 339 *e*Pn **Pn 02 15 10.5 +3.0**
comp=N,9.2nm,0.5s
WTTA Wattenberg 4.61 347 *e*Pn **Pn 02 15 10.7 +2.7**
comp=N,19nm,0.5s
DAVOX Davos/Dischmat 4.62 331 Pn **Pn 02 15 09.6 +1.4**
comp=N,2.6nm,0.3s,baz=148,slow=22,SNR=1.7
DAVOX Sn **Sn 02 16 02.5 +0.7**
comp=N,1.6nm,0.3s,baz=352,slow=23,SNR=1.1
comp=N,11nm,0.5s
SQTA Sankt Quirin 4.65 344 *e*Pn **Pn 02 15 11.3 +2.8**
comp=N,3.4nm,0.2s
WATA Walderalm 4.69 347 *e*Pn **Pn 02 15 11.8 +2.8**
comp=N,6.9nm,0.3s
ARSA Arzberg 4.79 20 *e*Pn **Pn 02 15 11.8 +1.6**
comp=N,1.6nm,0.2s
MOTA Moosalm 4.79 343 *e*Pn **Pn 02 15 13.8 +3.4**
comp=N,9.2nm,0.6s
LMR La Mourre 4.88 279 *e*P **Pn 02 15 11.9 +0.4**
LMR *e*Sn **Sn 02 16 01.5 -6.4**
comp=N,1.0nm,0.3s
BIOA Bad Ischl, Aus 4.93 4 *e*Pn **Pn 02 15 13.5 +1.3**
comp=N,1.3nm,0.2s
RETA Reutte 5.00 341 *e*Pn **Pn 02 15 16.0 +2.8**
comp=N,1.5nm,0.2s
MBDF Montbardon 5.00 295 *e*P **Pn 02 15 14.2 +0.9**
MBDF *e*Sn **Sn 02 16 04.6 -6.4**
comp=N,26nm,0.7s
SJES Sjenica 5.04 82 *e*Pn **Pn 02 15 15.2 +1.4**
SJES *e*Sn **Sn 02 16 10.7 -1.3**
DAVA Damuels 5.06 334 *e*Pn **Pn 02 15 16.6 +2.4**
comp=N,6.0nm,0.4s
MOA Molln 5.14 9 *e*Pn **Pn 02 15 15.9 +0.8**
MOA *e*Sn **Sn 02 16 12.9 -1.3**
MOA Molln 5.14 9 *e*Pn **Pn 02 15 16.4 +1.3**
comp=N,7.2nm,0.6s
DIVS Divibare 5.17 73 *e*Pn **Pn 02 15 17.1 +1.5**
IVAS Ivanjica 5.20 79 *e*Pn **Pn 02 15 16.2 +0.3**
IVAS *e*Sn **Sn 02 16 15.0 -0.8**
TIR Tirane 5.21 104 ⇑P **Pn 02 15 15.0 -1.1**
TIR Tirane 5.21 104 *e*Pn **Pn 02 15 16.0 -0.1**
TIR *e*Sn **Sn 02 16 15.9 -0.2**
TIR Tirane 5.21 104 *e*P **Pn 02 15 16.1 0.0**
LPG La Plagne 5.33 303 *e*P **Pn 02 15 19.0 +1.0**
LPG *e*Sn **Sn 02 16 12.7 -6.8**
comp=N,15nm,0.6s
LPL La Plagne 5.36 303 *e*P **Pn 02 15 20.1 +1.9**
LPL *e*Sn **Sn 02 16 13.1 -6.8**
comp=N,13nm,0.7s
FRGS Fruska Gora 5.38 61 ⇓P **Pg 02 15 44.4 +3.0**
FRGS Fruska Gora 5.38 61 *e*Pn **Pn 02 15 18.1 -0.3**
RONA Rosalia, Austr 5.41 23 *e*Pn **Pn 02 15 18.8 0.0**
comp=N,2.5nm,0.2s
TRUS Trudelj 5.49 72 *e*Pn **Pn 02 15 20.9 +1.0**
CONA Conrad Observa 5.50 20 *e*Pn **Pn 02 15 20.2 +0.1**
comp=N,3.6nm,0.2s
SMRF Simiane la Rot 5.63 285 *e*P **Pn 02 15 23.8 +1.9**
GRUS Gruza 5.64 76 *e*Pn **Pn 02 15 22.4 +0.4**
GRUS *e*Sn **Sn 02 16 24.9 -1.8**
ORIF Oris-en-Rattie 5.66 295 *e*P **Pn 02 15 25.2 +2.9**
SELS Selova 5.88 83 *e*Pn **Pn 02 15 25.3 +0.1**
GERES GERESS Array B 6.08 4 Pn **Pn 02 15 27.8 -0.4**
comp=N,0.8nm,0.3s,baz=173,slow=13,SNR=5.6
GERES Sn **Sn 02 16 36.4 -1.2**
comp=N,3.3nm,0.3s,baz=301,slow=23,SNR=6.8
comp=N,1.7nm,0.4s
CKRC Cesky Krumlov 6.10 7 *e*PN **Pn 02 15 26.5 -1.8**
CKRC *e*SN **Sn 02 16 35.5 -2.5**
MODS Modra-Piesok 6.31 26 *e*PN **Pn 02 15 30.9 -0.2**
MODS *e*SN **Sn 02 16 39.9 -3.2**
MODS *e*SG Sg 02 17 34.0 +13
CABF La Chapelle 6.32 310 *e*P **Pn 02 15 32.6 +1.3**
CABF *e*Sn **Sn 02 16 36.0 -7.3**
comp=N,7.9nm,0.6s
BOVS Bovan 6.33 79 ⇑P **Pn 02 15 31.7 +0.3**
BOVS Bovan 6.33 79 *e*Pn **Pn 02 15 31.4 0.0**
BOVS *e*Sn **Sn 02 16 42.1 -1.4**
KHC Kasperske Hory 6.37 3 *e*PN **Pn 02 15 31.3 -0.6**
KHC *e*SN **Sn 02 16 42.8 -1.7**
BARS Barje 6.39 87 *e*Pn **Pn 02 15 32.9 +0.6**
BARS *e*Sn **Sn 02 16 42.1 -3.0**
VIVF Saint-Julien-l 6.46 292 *e*P **Pn 02 15 35.0 +1.8**
MDVR Moldovita 6.53 69 ⇓P **Pn 02 15 34.1 -0.1**
PRVS Prvonek 6.61 89 *e*Pn **Pn 02 15 36.1 +0.9**
PRVS *e*Sn **Sn 02 16 48.8 -1.6**
KRUC Moravsky 6.69 19 *e*PN **Pn 02 15 40.8 +4.5**
HINF Hinteralfeld 6.71 321 *e*P **Pn 02 15 37.5 +0.9**
HINF *e*Sn **Sn 02 16 45.3 -7.6**
comp=N,44nm,0.7s
ZAGS Zajecar 6.72 78 *e*Pn **Pn 02 15 37.0 +0.2**
BZS Buzias 6.73 62 ⇑P **Pn 02 15 35.9 -1.0**
BZS Buzias 6.73 62 *e*Pn **Pn 02 15 36.4 -0.5**
LASF Ste Croix 6.87 284 *e*P **Pn 02 15 39.9 +1.0**
BOSS Bosilegrad 6.90 89 *e*Pn **Pn 02 15 40.1 +0.8**
BOSS *e*Sn **Sn 02 16 54.2 -3.5**
VRAC Vranov 6.96 19 *e*PN **Pn** 02 15 45.5 +5.4
CDF Champ du Feu 6.97 326 *e*P **Pn 02 15 40.5 +0.2**
CDF *e*Sn **Sn 02 16 51.5 -8.0**
comp=N,43nm,0.6s
VYHS Vyhne 6.98 33 *e*PN **Pn 02 15 38.9 -1.4**
VYHS *e*SN **Sn 02 16 59.2 -0.3**
ZAPS Zavoj 6.99 83 *e*Pn **Pn 02 15 41.3 +0.9**
ZAPS *e*Sn **Sn 02 16 57.2 -2.6**
BLKB Belogradchik 7.03 80 ⇑P **Pn 02 15 41.5 +0.4**
HERR Herculane 7.04 69 ⇓P **Pn 02 15 41.3 +0.2**
HAU Haudompre 7.08 320 *e*P **Pn 02 15 42.6 +0.9**
HAU *e*Sn **Sn 02 16 54.0 -8.0**
comp=N,51nm,0.5s
GZR Gura Zlata 7.42 66 ⇑P **Pn 02 15 46.2 -0.3**
KEST Kesra 7.62 204 Pn Pn 02 15 55.0 +5.8
comp=N,0.2nm,0.3s,baz=315,slow=4.3,SNR=2.7
SMF Signal de Mont 7.66 304 *e*P **Pn 02 15 50.8 +1.1**
SMF *e*Sn **Sn 02 17 08.1 -8.3**
comp=N,12nm,0.5s
PAGF Fort de Pagny 7.76 321 *e*P **Pn 02 15 52.5 +1.5**
SFTF Sexfontaines 7.86 316 *e*P **Pn 02 15 53.8 +1.4**
LOR Lormes 7.95 308 *e*P **Pn 02 15 55.2 +1.5**

baz=123
LOR eSn Sn 02 17 14.9 -8.6
comp=N,15nm,0.6s
SRS Serrai 7.97 98 ePn Pn 02 15 54.6 +0.6
SRS eSn Sn 02 17 20.9 -3.2
MTLF Montolieu 8.01 278 eP Pn 02 15 56.1 +1.6
AVF Avril sur Loir 8.03 303 eP Pn 02 15 56.4 +1.7
AVF eSn Sn 02 17 16.9 -8.4
comp=N,10nm,0.8s
MEZF Maizieres J'vi 8.05 318 eP Pn 02 15 56.7 +1.7
MEZF eSn Sn 02 17 17.1 -8.7
comp=N,23nm,0.8s
SSF Saint Saulge 8.06 305 eP Pn 02 15 56.7 +1.6
SSF eSn Sn 02 17 17.3 -8.8
comp=N,8.9nm,0.6s
SAVF Savonnieres en 8.09 319 eP Pn 02 15 57.2 +1.7
BGF Bois d'Agland 8.24 301 eP Pn 02 15 59.5 +1.8
BGF eSn Sn 02 17 21.6 -9.1
comp=N,5.2nm,0.4s
CAF Calviac 8.28 289 eP Pn 02 16 00.0 +1.8
RJF Les Rejaudoux 8.74 291 eP Pn 02 16 06.4 +1.9
ESDC Sonseca Array 13.23 262 Pn Pn 02 17 06.1 0.0
baz=108,slow=4.2,SNR=4.3
comp=N,0.4nm,0.7s
NB2 NORSAR Subarra 18.33 357 P P 02 18 14.1 +1.9
comp=Z,13nm,0.7s,baz=175,slow=11
NOA NORSAR Array B 18.33 357 P P 02 18 13.5 +1.3
baz=172,slow=14,SNR=3.0
comp=Z,0.6nm,0.9s
MMAI Mount Meron Ar 20.05 112 P Pn 02 18 33.7 +0.6
comp=Z,5.7nm,0.9s,baz=280,slow=12,SNR=5.5
comp=Z,5.7nm,0.9s
FINES FINESS Array B 20.25 18 P P 02 18 32.5 -0.6
comp=Z,1.7nm,0.8s,baz=297,slow=13,SNR=2.7
comp=Z,1.7nm,0.8s
TORD Torodi Ar. Bea 31.14 202 P P 02 20 17.8 +1.0
comp=Z,0.8nm,0.7s,baz=10,slow=9.5,SNR=4.8
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 47.81 60 P P 02 22 36.2 +0.7
comp=Z,0.9nm,0.8s,baz=281,slow=7.3,SNR=4.8
comp=Z,0.9nm,0.8s
SONM Songino Array 61.85 50 P P 02 24 17.1 -0.2
comp=Z,0.9nm,0.6s,baz=294,slow=7.4,SNR=3.9
comp=Z,0.9nm,0.6s

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*IDC **24** 02:15:11.5±2.2, 42°.91N×14°.46E, h0km, mb3.7/1, mbtmp3.6/6, ML3.4/5, Error ellipse: s-maj=46.7km s-min=23.5km az=92.0*
*LDG **24** 02:15:14.6±0.1, 42°.80N×13°.18E, h10km, Md3.8/1, Ml3.3/21, Error ellipse: s-maj=1.5km s-min=0.9km az=47.0*
*ROM **24** 02:15:15.4±0.1, 42°.800N±0°.004×13°.166E±0°.007, h8km, ML3.7/59, Error ellipse: s-maj=0.5km s-min=0.3km az=78.0*

ISC 24 02:15:14.6±0.6, 42°.81N±0°.02×13°.13E±0°.02, h11km, n122, σ2s 71/150, 17C, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.16**	**338**	P	**Pb**	**02 15 20.0**	**+0.2**
FEMA				S	**Sg**	**02 15 23.1**	**+2.1**
FEMA				AML	AML		
	comp=E,79750μm,1.5s						
FEMA				AML	AML		
	comp=N,59850μm,0.4s						
FEMA				AML	AML		
	comp=N,59850μm,0.4s						
FEMA				AML	AML		
	comp=E,79750μm,1.5s						
LNSS	**Leonessa**	**0.22**	**198**	↑P	**Pb**	**02 15 20.7**	**0.0**
LNSS				S	**Sg**	**02 15 24.5**	**+2.1**
LNSS				AML	AML		
LNSS				AML	AML		
FDMO	**Fiordimonte**	**0.23**	**351**	↑P	**Pb**	**02 15 20.9**	**+0.1**
FDMO				S	**Sg**	**02 15 24.9**	**+2.2**
FDMO				AML	AML		
	comp=E,20150μm,1.3s						
FDMO				AML	AML		
	comp=N,30700μm,1.5s						
CESI	**CESI - Serrava**	**0.26**	**319**	↑P	**Pb**	**02 15 21.7**	**+0.4**
CESI				S	**Sb**	**02 15 26.0**	**+0.2**
CESI				AML	AML		
	comp=N,64200μm,0.3s						
CESI				AML	AML		
	comp=E,20600μm,0.9s						
GUMA	**Gualdo di Mace**	**0.29**	**30**	↑P	**Pb**	**02 15 22.1**	**+0.2**
GUMA				AML	AML		
	comp=E,61900μm,0.7s						
GUMA				AML	AML		
	comp=E,55850μm,0.9s						
GUMA				AML	AML		
	comp=N,91100μm,0.4s						
GUMA				AML	AML		
	comp=N,80850μm,0.5s						
RM33	**Pellescritta (**	**0.31**	**169**	↑P	**Pb**	**02 15 21.9**	**-0.3**
RM33				S	**Sb**	**02 15 26.8**	**-0.5**
RM33				AML	AML		
	comp=N,23850μm,0.3s						
RM33				AML	AML		
	comp=E,39250μm,1.0s						
RM33				AML	AML		
	comp=N,24700μm,0.3s						
RM33				AML	AML		
	comp=E,39050μm,1.0s						
RM33				AML	AML		
	comp=N,23850μm,0.3s						
CAMP	**Campotosto**	**0.34**	**143**	↑P	**Pb**	**02 15 22.4**	**-0.4**
CAMP				S	**Sg**	**02 15 27.3**	**+1.2**
CAMP				AML	AML		
	comp=E,10165μm,0.6s						
CAMP				AML	AML		
	comp=N,8530μm,0.5s						
ARRO	**Arrone**	**0.36**	**230**	↑P	**Pb**	**02 15 23.2**	**+0.3**
ARRO				AML	AML		
	comp=E,16550μm,0.2s						
ARRO				AML	AML		
	comp=N,13450μm,0.9s						
ARRO				AML	AML		
	comp=E,16600μm,0.2s						
SEF1	**Sefro**	**0.36**	**338**	↑P	**Pb**	**02 15 23.3**	**+0.2**
SEF1				S	**Sb**	**02 15 29.5**	**+0.7**
SEF1				AML	AML		
	comp=N,17350μm,1.2s						
SEF1				AML	AML		
	comp=E,22350μm,0.5s						
MDAR	**Monte D'Aria**	**0.38**	**1**	↑P	**Pb**	**02 15 23.5**	**0.0**
MDAR				S	**Sb**	**02 15 29.8**	**+0.4**
MDAR				AML	AML		
	comp=E,10180μm,1.2s						
MDAR				AML	AML		
	comp=N,12900μm,0.5s						
MDAR				AML	AML		
	comp=E,10185μm,1.2s						
PIO1	**Pioraco**	**0.38**	**343**	↑P	**Pb**	**02 15 24.8**	**+1.3**
PIO1				AML	AML		
	comp=E,12550μm,0.6s						
PIO1				AML	AML		
	comp=N,17150μm,0.6s						
TERO	**Teramo**	**0.39**	**118**	P	**Pg**	**02 15 23.0**	**+0.6**
TERO				S	**Sg**	**02 15 28.8**	**+1.1**
TERO				AML	AML		
	comp=E,12900μm,0.6s						
TERO				AML	AML		
	comp=E,12950μm,0.6s						
TERO				AML	AML		
	comp=E,14100μm,0.6s						
TERO				AML	AML		
	comp=N,13550μm,0.4s						
TERO				AML	AML		
	comp=N,12750μm,0.4s						
FIU1	**Fiuminata**	**0.41**	**339**	P	**Pb**	**02 15 24.1**	**+0.2**
MNTP	**Montappone**	**0.41**	**37**	P	**Pb**	**02 15 24.4**	**+0.5**
ASSB	**Assisi San Ben**	**0.42**	**304**	↑P	**Pb**	**02 15 24.4**	**+0.4**
ASSB				S	**Sb**	**02 15 31.4**	**+1.0**
ASSB				AML	AML		
	comp=E,13500μm,0.3s						
ASSB				AML	AML		
	comp=N,11100μm,0.2s						
SSM1	**San Severino M**	**0.42**	**4**	P	**Pb**	**02 15 24.2**	**+0.1**
OFFI	**Offida**	**0.42**	**73**	↑P	**Pb**	**02 15 24.8**	**+0.7**
OFFI				AML	AML		
	comp=E,23000μm,0.7s						
OFFI				AML	AML		
	comp=N,26450μm,1.0s						
GAG1	**Gagliole**	**0.43**	**354**	P	**Pb**	**02 15 24.5**	**+0.3**
GAG1				AML	AML		
	comp=E,28000μm,0.5s						
GAG1				AML	AML		
	comp=N,31300μm,0.4s						
CESX	**Cesi**	**0.46**	**244**	↑P	**Pb**	**02 15 24.9**	**+0.2**
CESX				AML	AML		
	comp=E,11550μm,1.0s						
CESX				AML	AML		
	comp=N,16100μm,0.3s						
MTL1	**Matelica**	**0.46**	**349**	P	**Pb**	**02 15 25.0**	**+0.4**
MTL1				AML	AML		
	comp=E,21950μm,0.5s						
MTL1				AML	AML		
	comp=N,24950μm,0.5s						
MTL1				AML	AML		
	comp=E,21900μm,0.5s						
SNTG	**Esanatoglia**	**0.47**	**342**	↑P	**Pb**	**02 15 25.1**	**+0.2**
SNTG				S	**Sb**	**02 15 32.6**	**+0.8**
SNTG				AML	AML		
	comp=E,566μm,1.1s						
SNTG				AML	AML		
	comp=N,816μm,0.6s						
SNTG				AML	AML		
	comp=E,4175μm,0.7s						
SNTG				AML	AML		
	comp=N,5915μm,0.6s						
SNTG				AML	AML		
	comp=E,566μm,1.1s						
SNTG				AML	AML		
	comp=N,815μm,0.6s						
GIGS	**Gran Sasso**	**0.48**	**138**	P	**Pg**	**02 15 24.6**	**+0.6**
GIGS				AML	AML		
	comp=E,2035μm,0.6s						
GIGS				AML	AML		
	comp=N,1665μm,0.5s						
AQU	**L'Aquila**	**0.50**	**156**	P	**Pb**	**02 15 25.5**	**+0.1**
AQU				AML	AML		
	comp=E,7955μm,0.6s						
AQU				AML	AML		
	comp=E,7500μm,0.6s						
AQU				AML	AML		
	comp=N,8460μm,0.9s						
AQU				AML	AML		
	comp=N,8555μm,1.6s						
TRE1	**Treia**	**0.52**	**15**	P	**Pb**	**02 15 26.3**	**+0.6**
TRE1				AML	AML		
	comp=N,13850μm,0.6s						
TRE1				AML	AML		
	comp=E,15950μm,1.6s						
EL6	**Elcito**	**0.52**	**357**	↑P	**Pb**	**02 15 26.0**	**+0.2**
EL6				S	**Sb**	**02 15 34.8**	**+1.4**
EL6				AML	AML		
	comp=E,10345μm,0.8s						
EL6				AML	AML		
	comp=N,13950μm,1.1s						
EL6				AML	AML		
	comp=N,13975μm,1.1s						
EL6				AML	AML		
	comp=E,10335μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.52**	**316**	P	**Pb**	**02 15 26.4**	**+0.6**
ATCC				AML	AML		
	comp=N,8955μm,1.2s						
ATCC				AML	AML		
	comp=E,8495μm,1.5s						
FIAM	**Fiamignano**	**0.54**	**181**	↑P	**Pg**	**02 15 25.9**	**+0.7**
FIAM				S	**Sb**	**02 15 33.9**	**-0.1**
FIAM				AML	AML		
	comp=E,10915μm,0.8s						
FIAM				AML	AML		
	comp=N,9970μm,1.2s						
FOSV	**Fossato di Vic**	**0.56**	**331**	P	**Pb**	**02 15 26.8**	**+0.4**
FOSV				AML	AML		
	comp=E,4060μm,0.4s						
FOSV				AML	AML		
	comp=N,8915μm,0.4s						
FOSV				AML	AML		
	comp=E,4055μm,0.4s						
CING	**Cingoli**	**0.57**	**5**	P	**Pb**	**02 15 26.7**	**+0.2**
TRTR	**Tortoreto Alta**	**0.57**	**90**	P	**Pb**	**02 15 27.6**	**+0.9**
TRTR				AML	AML		
	comp=N,21050μm,0.8s						
TRTR				AML	AML		
	comp=E,25600μm,1.0s						
CADA	**Capodarco di F**	**0.60**	**50**	P	**Pn**	**02 15 28.6**	**-0.5**
CADA				AML	AML		
	comp=N,26150μm,0.4s						
CADA				AML	AML		
	comp=E,21650μm,0.6s						
MURB	**Monte Urbino**	**0.64**	**316**	P	**Pb**	**02 15 28.5**	**+0.7**
MURB				AML	AML		
	comp=E,13950μm,1.5s						
MURB				AML	AML		
	comp=N,11600μm,1.1s						
MURB				AML	AML		
	comp=N,11615μm,1.1s						
MURB				AML	AML		
	comp=E,15450μm,1.5s						
MURB				AML	AML		
	comp=N,12670μm,0.4s						
FAGN	**Fagnano**	**0.64**	**148**	P	**Pb**	**02 15 27.9**	**+0.1**
FAGN				AML	AML		
	comp=E,14450μm,0.5s						
FAGN				AML	AML		
	comp=N,9495μm,0.4s						
PP3	**Marolino**	**0.67**	**31**	P	**Pn**	**02 15 29.3**	**-0.7**
PP3				AML	AML		
	comp=N,26600μm,0.3s						
PP3				AML	AML		
	comp=N,26650μm,0.3s						
PP3				AML	AML		
	comp=E,26450μm,0.4s						
PP3				AML	AML		
	comp=N,26600μm,0.3s						
PP3				AML	AML		
	comp=E,25850μm,0.4s						
PP3				AML	AML		
	comp=N,26650μm,0.3s						
VCEL	**Villa Celiera**	**0.67**	**128**	P	**Pb**	**02 15 28.5**	**+0.2**
SSFR	**Montelago di S**	**0.68**	**338**	P	**Pb**	**02 15 29.0**	**+0.5**
SSFR				AML	AML		
	comp=N,7415μm,1.0s						
SSFR				AML	AML		
	comp=N,6785μm,0.3s						
SSFR				AML	AML		
	comp=E,6390μm,0.2s						
SSFR				AML	AML		
	comp=E,7385μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.69**	**304**	AML	AML		
	comp=N,2985μm,0.5s						
ATTE				AML	AML		
	comp=E,2925μm,0.4s						
ATFO	**Monte Foce - G**	**0.69**	**324**	P	**Pb**	**02 15 29.5**	**+0.8**
ATFO				AML	AML		
	comp=E,3565μm,0.8s						
ATFO				AML	AML		
	comp=N,3955μm,0.5s						
ARVD	**Arcevia**	**0.70**	**349**	↑P	**Pb**	**02 15 29.2**	**+0.4**
ARVD				S	**Sn**	**02 15 40.4**	**-1.0**
ARVD				AML	AML		
	comp=N,2220μm,0.7s						
ARVD				AML	AML		
	comp=E,2815μm,1.2s						
SRES	**S.Oreste - Sor**	**0.74**	**219**	P	**Pb**	**02 15 29.9**	**+0.4**
SRES				AML	AML		
	comp=E,3650μm,0.7s						
SRES				AML	AML		
	comp=N,3370μm,0.4s						
T0110	**Collepietro**	**0.75**	**141**	P	**Pb**	**02 15 29.8**	**0.0**
T0110				AML	AML		
	comp=N,6260μm,0.4s						
T0110				AML	AML		
	comp=E,8565μm,0.6s						
MGAB	**Montegabbione**	**0.76**	**278**	P	**Pn**	**02 15 31.1**	**-0.1**
MGAB				AML	AML		
	comp=E,9695μm,0.9s						
MGAB				AML	AML		
	comp=N,11300μm,0.4s						
MGAB				AML	AML		
	comp=N,10060μm,0.4s						
MGAB				AML	AML		
	comp=E,10850μm,0.9s						
FRON	**Frontone**	**0.77**	**337**	P	**Pb**	**02 15 30.4**	**+0.4**
FRON				AML	AML		
	comp=E,2710μm,0.6s						
FRON				AML	AML		
	comp=N,4205μm,0.6s						
ATVO	**AVT- Monte Val**	**0.78**	**317**	P	**Pn**	**02 15 31.1**	**-0.5**
ATVO				AML	AML		
	comp=N,2780μm,1.4s						
ATVO				AML	AML		
	comp=E,2505μm,0.8s						
PTQR	**Pietraquaria**	**0.81**	**166**	P	**Pg**	**02 15 30.4**	**+0.1**
AOI	**Ancona**	**0.81**	**25**	P	**Pb**	**02 15 31.5**	**+0.7**
AOI				AML	AML		
	comp=E,2975μm,1.5s						
AOI				AML	AML		
	comp=N,2990μm,0.5s						
COR1	**Corinaldo**	**0.83**	**353**	P	**Pn**	**02 15 32.4**	**+0.2**
ATPI	**Pietralunga -**	**0.83**	**320**	P	**Pn**	**02 15 32.0**	**-0.3**
MTCE	**Montecelio**	**0.84**	**200**	P	**Pg**	**02 15 30.9**	**+0.1**
MTCE				AML	AML		
	comp=N,2745μm,1.0s						
MTCE				AML	AML		
	comp=E,5355μm,0.7s						
PIEI	**Pieia**	**0.85**	**329**	P	**Pn**	**02 15 32.2**	**-0.3**
PIEI				AML	AML		
	comp=N,2150μm,0.8s						
PIEI				AML	AML		
	comp=E,2185μm,0.3s						
MPAG	**Monte Paganucc**	**0.86**	**342**	P	**Pb**	**02 15 32.3**	**+0.6**
MPAG				AML	AML		
	comp=N,2590μm,0.5s						
MPAG				AML	AML		
	comp=N,2320μm,0.5s						
MPAG				AML	AML		
	comp=E,3075μm,0.4s						
MPAG				AML	AML		
	comp=E,3105μm,1.5s						
CERT	**Cerreto**	**0.87**	**187**	P	**Pg**	**02 15 31.6**	**+0.3**
CERT				AML	AML		
	comp=E,6895μm,0.4s						
CERT				AML	AML		
	comp=N,5225μm,0.9s						
NARO	**Abbazia di Nar**	**0.90**	**333**	P	**Pn**	**02 15 32.8**	**-0.4**
NARO				AML	AML		
	comp=N,2225μm,1.2s						
NARO				AML	AML		
	comp=E,1745μm,1.4s						
SENI	**Senigallia**	**0.90**	**5**	P	**Pn**	**02 15 34.5**	**+1.4**
SENI				AML	AML		
	comp=E,14000μm,0.4s						
SENI				AML	AML		
	comp=N,9150μm,0.4s						
SACS	**San Casciano d**	**0.90**	**273**	P	**Pn**	**02 15 33.6**	**+0.3**
SACS				AML	AML		
	comp=E,3630μm,0.7s						
SACS				AML	AML		
	comp=E,3620μm,0.6s						
SACS				AML	AML		
	comp=N,3650μm,0.8s						
SACS				AML	AML		
	comp=N,3480μm,1.4s						
APEC	**Apecchio**	**0.91**	**325**	P	**Pn**	**02 15 33.9**	**+0.5**
FSSB	**Fossombrone**	**0.92**	**344**	P	**Pn**	**02 15 33.4**	**-0.1**
FSSB				AML	AML		
	comp=E,7065μm,0.5s						
FSSB				AML	AML		
	comp=N,10115μm,0.4s						
FSSB				AML	AML		
	comp=E,7070μm,0.5s						
BADI	**Badiali**	**0.95**	**317**	P	**Pn**	**02 15 34.5**	**+0.5**
INTR	**Introdacqua**	**0.98**	**144**	P	**Pg**	**02 15 33.6**	**+0.1**
INTR				AML	AML		
	comp=E,3μm,0.7s						
INTR				AML	AML		
	comp=N,3μm,0.7s						
INTR				AML	AML		
	comp=E,3165μm,0.7s						
INTR				AML	AML		
	comp=N,3μm,0.7s						
INTR				AML	AML		
	comp=N,4965μm,0.7s						
INTR				AML	AML		
	comp=E,3μm,0.7s						
CAFI	**Castiglion Fio**	**1.00**	**302**	P	**Pn**	**02 15 35.6**	**+1.0**
CAFI				AML	AML		
	comp=E,2750μm,0.5s						
CAFI				AML	AML		
	comp=N,3255μm,0.7s						
CAFI				AML	AML		
	comp=E,2670μm,0.5s						
CAFI				AML	AML		
	comp=N,3100μm,0.7s						
LATE	**Laterza**	**1.00**	**259**	P	**Pn**	**02 15 35.5**	**+0.9**
PE3	**Peglio**	**1.00**	**332**	P	**Pn**	**02 15 35.4**	**+0.8**
VVLD	**Villa Vallelon**	**1.01**	**159**	P	**Pn**	**02 15 35.3**	**+0.6**
GUAR	**Guarcino**	**1.02**	**173**	AML	AML		
	comp=E,4305μm,1.6s						
GUAR				AML	AML		
	comp=N,5435μm,0.7s						
RMP	**Rome, Mte Porz**	**1.05**	**198**	P	**Pn**	**02 15 35.4**	**+0.1**
RMP				AML	AML		
	comp=N,4765μm,0.9s						
RMP				AML	AML		
	comp=E,4230μm,1.0s						
SF11	**Podere del Sol**	**1.07**	**274**	P	**Pn**	**02 15 37.1**	**+1.5**
MCIV	**Monte Civitell**	**1.07**	**269**	P	**Pn**	**02 15 36.7**	**+1.1**
LPEL	**Lama dei Pelig**	**1.09**	**134**	P	**Pb**	**02 15 35.2**	**-0.3**
LPEL				AML	AML		
	comp=E,2425μm,0.4s						
LPEL				AML	AML		
	comp=N,2005μm,1.1s						
VIVA	**Pratoni del Vi**	**1.09**	**194**	P	**Pn**	**02 15 36.2**	**+0.4**
VIVA				AML	AML		
	comp=E,9070μm,0.5s						
VIVA				AML	AML		
	comp=N,7330μm,0.4s						
RDP	**Rocca di Papa**	**1.10**	**197**	P	**Pn**	**02 15 36.6**	**+0.6**
RDP				AML	AML		
	comp=N,7245μm,0.5s						
RDP				AML	AML		
	comp=E,8815μm,0.6s						
SF13	**Bagnolo**	**1.11**	**271**	P	**Pn**	**02 15 37.7**	**+1.5**
SF14	**Selvena**	**1.12**	**268**	P	**Pn**	**02 15 37.1**	**+0.9**
TOLF	**Tolfa**	**1.12**	**229**	P	**Pn**	**02 15 36.6**	**+0.3**
TOLF				AML	AML		
	comp=N,2080μm,0.6s						
TOLF				AML	AML		
	comp=E,2415μm,0.7s						
PESA	**Pesaro**	**1.15**	**349**	P	**Pg**	**02 15 38.3**	**+1.6**
POFI	**Posta Fibreno**	**1.17**	**158**	P	**Pg**	**02 15 39.2**	**+2.0**
LAV9	**Lanuvio**	**1.18**	**196**	AML	AML		
	comp=N,5355μm,0.9s						
LAV9				AML	AML		
	comp=N,5300μm,0.9s						
LAV9				AML	AML		
	comp=E,4985μm,1.3s						
LAV9				AML	AML		
	comp=E,5385μm,0.5s						
ARCI	**Arcidosso**	**1.22**	**272**	P	**Pg**	**02 15 39.7**	**+1.6**
GIUL	**Giuliano Di Ro**	**1.25**	**176**	P	**Pg**	**02 15 39.2**	**+0.5**
GIUL				AML	AML		
	comp=N,1615μm,1.4s						
GIUL				AML	AML		
	comp=E,1665μm,0.7s						
LIK	**San Giovanni I**	**1.34**	**166**	P	**Pg**	**02 15 42.1**	**+1.7**
CERA	**Filignano**	**1.38**	**151**	P	**Pg**	**02 15 42.4**	**+1.3**
CSNT	**Castellina Chi**	**1.50**	**297**	P	**Pg**	**02 15 43.8**	**+0.4**
FROS	**Frosini**	**1.50**	**286**	P	**Pg**	**02 15 43.4**	**0.0**
OSSC	**Osservatorio P**	**1.55**	**298**	P	**Pg**	**02 15 44.9**	**+0.5**
RUFI	**Rufina**	**1.57**	**312**	P	**Pg**	**02 15 44.6**	**-0.1**
VAGA	**Valle Agricola**	**1.62**	**149**	P	**Pg**	**02 15 46.9**	**+1.3**
CASP	**Castiglione de**	**1.67**	**270**	AML	AML		
	comp=E,228μm,1.1s						
CASP				AML	AML		
	comp=N,240μm,0.8s						
SMPL	**Sampolo**	**2.94**	**257**	P	**Pn**	**02 16 03.6**	**+2.3**
PGF	**Pioggiola**	**3.06**	**266**	eP	**Pn**	**02 16 05.5**	**+2.5**
PGF				eSn	**Sn**	**02 16 36.5**	**-3.1**
	comp=N,36nm,0.8s						
SBF	**Sospel**	**4.29**	**286**	eP	**Pn**	**02 16 22.3**	**+2.5**
SBF				eSn	**Sn**	**02 17 05.8**	**-4.1**
	comp=N,33nm,0.5s						
DAVOX	**Davos/Dischmat**	**4.59**	**331**	Pn	Pn	02 16 29.5	+5.4
	comp=N,4.9nm,0.3s,baz=156,slow=20,SNR=1.9						
DAVOX				Sn	**Sb**	**02 17 26.7**	**-4.0**
	comp=N,2.2nm,0.3s,baz=142,slow=12,SNR=1.5						
	comp=N,20nm,0.5s						
LMR	**La Mourre**	**4.88**	**278**	eP	**Pn**	**02 16 29.6**	**+1.7**
LMR				eSn	**Sn**	**02 17 20.0**	**-4.4**
	comp=N,1.9nm,0.4s						
MBDF	**Montbardon**	**4.99**	**295**	eP	**Pn**	**02 16 32.4**	**+2.8**
MBDF				eSn	**Sn**	**02 17 22.7**	**-4.6**

	comp=N,10nm,0.7s								
LPL	**La Plagne**	**5.34**	**303**	*e*P		**Pn**		**02 16 37.3**	**+2.9**
SMRF	**Simiane la Rot**	**5.63**	**285**	*e*P		**Pn**		**02 16 41.0**	**+2.8**
SMRF				*e*Sn		**Sn**		**02 17 37.8**	**-5.1**
	comp=N,6.2nm,0.8s								
ORIF	**Oris-en-Rattie**	**5.65**	**294**	*e*P		**Pn**		**02 16 41.6**	**+3.0**
ORIF				*e*Sn		**Sn**		**02 17 38.5**	**-5.0**
	comp=N,16nm,0.8s								
CABF	**La Chapelle**	**6.29**	**310**	*e*P		**Pn**		**02 16 49.0**	**+1.6**
VIVF	**Saint-Julien-l**	**6.45**	**291**	*e*P		**Pn**		**02 16 52.7**	**+3.2**
HINF	**Hinteralfeld**	**6.68**	**321**	*e*Pn		**Sn**		**02 16 51.3**	**-1.4**
HINF				*e*Sn		**Sn**		**02 18 03.3**	**-5.5**
	comp=N,20nm,0.5s								
LASF	**Ste Croix**	**6.87**	**284**	*e*P		**Pn**		**02 16 58.1**	**+2.8**
LASF				*e*Sn		**Sn**		**02 18 07.6**	**-5.8**
	comp=N,1.2nm,0.4s								
CDF	**Champ du Feu**	**6.94**	**326**	*e*P		**Pn**		**02 16 59.0**	**+2.7**
CDF				*e*Sn		**Sn**		**02 18 09.4**	**-5.9**
	comp=N,29nm,0.8s								
HAU	**Haudompre**	**7.05**	**320**	*e*P		**Pn**		**02 17 01.1**	**+3.3**
HAU				*e*Sn		**Sn**		**02 18 12.0**	**-5.9**
	comp=N,40nm,0.8s								
SMF	**Signal de Mont**	**7.65**	**303**	*e*P		**Pn**		**02 17 09.4**	**+3.5**
SMF				*e*Sn		**Sn**		**02 18 26.2**	**-6.3**
	comp=N,12nm,0.8s								
KEST	**Kesra**	**7.65**	**204**	Pn		Pn		02 17 11.9	+5.8
	comp=N,0.7nm,0.3s,baz=351,slow=13,SNR=6.0								
	comp=N,3.4nm,0.5s								
PAGF	**Fort de Pagny**	**7.74**	**320**	*e*P		**Pn**		**02 17 10.4**	**+3.3**
PAGF				*e*Sn		**Sn**		**02 18 28.3**	**-6.4**
	comp=N,7.1nm,0.6s								
PAGF	**Fort de Pagny**	**7.74**	**320**	*e*Sn		**Pn**		**02 17 10.5**	**+3.3**
	comp=N,10nm,0.4s								
SFTF	**Sexfontaines**	**7.83**	**316**	*e*P		**Pn**		**02 17 11.9**	**+3.4**
SFTF				*e*Sn		**Sn**		**02 18 30.8**	**-6.3**
	comp=N,5.5nm,0.5s								
SFTF	**Sexfontaines**	**7.83**	**316**	*e*Sn		**Pn**		**02 17 12.4**	**+3.9**
	comp=N,7.9nm,0.4s								
LOR	**Lormes**	**7.94**	**307**	*e*P		**Pn**		**02 17 13.6**	**+3.7**
	baz=122								
LOR				*e*Sn		**Sn**		**02 18 33.2**	**-6.4**
	comp=N,4.6nm,0.4s								
MTLF	**Montolieu**	**8.01**	**278**	*e*P		**Pn**		**02 17 14.4**	**+3.5**
MTLF				*e*Sn		**Sn**		**02 18 34.6**	**-6.8**
	comp=N,1.2nm,0.5s								
AVF	**Avril sur Loir**	**8.01**	**303**	*e*P		**Pn**		**02 17 14.6**	**+3.7**
MEZF	**Maizieres J'vi**	**8.02**	**318**	*e*P		**Pn**		**02 17 15.0**	**+4.0**
MEZF				*e*Sn		**Sn**		**02 18 35.0**	**-6.7**
	comp=N,6.6nm,0.6s								
SSF	**Saint Saulge**	**8.04**	**305**	*e*P		**Pn**		**02 17 15.4**	**+4.1**
SSF				*e*Sn		**Sn**		**02 18 35.6**	**-6.6**
	comp=N,6.3nm,0.7s								
SAVF	**Savonnieres en**	**8.07**	**319**	*e*P		**Pn**		**02 17 15.3**	**+3.7**
BRG	**Berggiesshubel**	**8.09**	**4**	*e*(P)		**Pn**		**02 17 16.1**	**+4.2**
BRG				Amp				02 17 22.4	
	comp=Z,5.8nm,0.7s								
BRG				*ex*		x		02 18 30.5	
BRG				Amp				02 18 51.2	
	comp=Z,26nm,1.5s								
BRG				*ex*		x		02 24 28.3	
BRG				Amp				02 24 31.8	
	comp=Z,3.5nm,1.0s								
BRG				*ex*		x		02 27 20.7	
BRG				Amp				02 27 22.8	
	comp=Z,3.2nm,0.8s								
BRG				*ex*		x		02 27 49.8	
BRG				*ex*		x		02 28 19.6	
BRG				Amp				02 28 50.1	
	comp=Z,8.6nm,1.3s								
BGF	**Bois d'Agland**	**8.23**	**301**	*e*P		**Pn**		**02 17 17.8**	**+3.9**
BGF				*e*Sn		**Sn**		**02 18 40.1**	**-6.7**
	comp=Z,3.1nm,0.4s								
CAF	**Calviac**	**8.27**	**289**	*e*P		**Pn**		**02 17 18.1**	**+3.6**
CAF				*e*Sn		**Sn**		**02 18 41.0**	**-6.9**
	comp=Z,0.4nm,0.3s								
TCF	**Toulx Ste Croi**	**8.54**	**298**	*e*P		**Pn**		**02 17 22.2**	**+4.0**
RJF	**Les Rejaudoux**	**8.73**	**291**	*e*P		**Pn**		**02 17 24.8**	**+4.1**
ESDC	**Sonseca Array**	**13.24**	**262**	Pn		**P**		**02 18 33.7**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=74,slow=14,SNR=1.6								
	comp=Z,0.2nm,0.5s								
EKA	**Eskdalemuir Ar**	**16.41**	**325**	Pn		**P**		**02 19 09.4**	**+1.9**
	baz=124,slow=26								
	comp=Z,1.1nm,0.8s								
FINES	**FINESS Array B**	**20.21**	**18**	P		**P**		**02 19 43.8**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=200,slow=10.0,SNR=2.5								
	comp=Z,1.8nm,1.0s								
TORD	**Torodi Ar. Bea**	**31.17**	**202**	P		**P**		**02 21 36.1**	**+2.5**
	comp=Z,0.8nm,0.7s,baz=15,slow=9.6,SNR=5.6								
	comp=Z,0.8nm,0.7s								

PRU **24** *02:19:41.9±0.0, 42°.62N×13°.19E, h0km, M4.0*
LDG **24** *02:19:42.7±0.1, 42°.66N×13°.28E, h8km, Ml3.1/26, Error ellipse: s-maj=3.5km s-min=1.6km az=46.0*
ROM **24** *02:19:44.0±0.1, 42°.640N±0°.004×13°.236E±0°.005, h10km, ML3.8/7, Error ellipse: s-maj=0.4km s-min=0.2km az=67.0*
IDC **24** *02:19:43.6±1.1, 42°.78N×13°.20E, h0km, mb3.6/4, mbtmp3.5/12, ML3.1/8, Error ellipse: s-maj=20.4km s-min=13.1km az=92.0*
PDG **24** *02:19:44.2±0.3, 42°.62N×13°.20E, h15km, ML4.0/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
NEIC **24** *02:19:44.2±1.7, 42°.68N±0°.06×13°.17E±0°.07, h4km±6km, mb4.0/5, ML3.8(ROM), Error ellipse: s-maj=9.7km s-min=5.9km az=216.0*
BEO **24** *02:19:45.2±0.6, 42°.63N×13°.29E, h0km, ML3.7/10*

ISC 24 02:19:44.7±0.7, 42°.64N±0°.01×13°.20E±0°.02, h15km±4km, n308, σ1=95/379, mb3.9/4, 23C-15D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**251**	⇑P		**Pg**		**02 19 47.8**	**-0.7**
LNSS				S		**Sg**		**02 19 50.9**	**0.0**
LNSS				AML	AML				
	comp=E,74950μm,0.3s								
LNSS				AML	AML				
	comp=N,60250μm,0.3s								
RM33	**Pellescritta (**	**0.14**	**176**	⇑P		**Pg**		**02 19 47.7**	**-0.9**
RM33				S		**Sg**		**02 19 50.4**	**-0.7**
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
CAMP	**Campotosto**	**0.19**	**125**	⇑P		**Pg**		**02 19 48.0**	**-1.3**
CAMP				S		**Sg**		**02 19 50.9**	**-1.4**
TERO	**Teramo**	**0.30**	**94**	⇑P		**Pg**		**02 19 49.4**	**-1.6**
TERO				S		**Sg**		**02 19 53.6**	**-1.7**
AQU	**L'Aquila**	**0.33**	**153**			**Pg**		**02 19 50.7**	**-0.8**
AQU				Sg		**Sg**		**02 19 55.6**	**-0.5**
AQU	**L'Aquila**	**0.33**	**153**	⇑P		**Pg**		**02 19 50.6**	**-0.9**
AQU				S		**Sg**		**02 19 55.9**	**-0.2**
ARRO	**Arrone**	**0.33**	**259**	⇑P		**Pg**		**02 19 51.1**	**-0.4**
ARRO				S		**Sb**		**02 19 56.8**	**-0.5**
GIGS	**Gran Sasso**	**0.33**	**125**	⇑P		**Pg**		**02 19 50.2**	**-1.4**
GIGS				S		**Sg**		**02 19 55.0**	**-1.4**
FEMA	**Monte Fema**	**0.34**	**341**	P		**Pg**		**02 19 51.2**	**-0.6**
FEMA				S		**Sg**		**02 19 56.6**	**0.0**
FIAM	**Fiamignano**	**0.38**	**190**	⇑P		**Pg**		**02 19 51.8**	**-0.7**
FIAM				S		**Sg**		**02 19 58.0**	**+0.2**
FDMO	**Fiordimonte**	**0.40**	**348**	P		**Pg**		**02 19 51.7**	**-1.1**
FDMO				S		**Sg**		**02 19 58.1**	**-0.3**
CESI	**CESI - Serrava**	**0.42**	**329**	P		**Pg**		**02 19 52.4**	**-0.8**
GUMA	**Gualdo di Mace**	**0.43**	**13**	S		**Sg**		**02 19 59.2**	**0.0**
GUMA	**Gualdo di Mace**	**0.43**	**13**	⇑P		**Pg**		**02 19 52.4**	**-0.9**
CESX	**Cesi**	**0.46**	**266**	⇑P		**Pg**		**02 19 53.2**	**-0.7**
CESX				S		**Sb**		**02 20 00.8**	**-0.3**
OFFI	**Offida**	**0.46**	**51**	⇑P		**Pg**		**02 19 53.2**	**-0.7**
FAGN	**Fagnano**	**0.47**	**143**	P		**Pg**		**02 19 52.9**	**-1.2**
MNTP	**Montappone**	**0.53**	**22**	P		**Pg**		**02 19 54.4**	**-0.8**
VCEL	**Villa Celiera**	**0.53**	**118**	P		**Pg**		**02 19 54.3**	**-1.0**
VCEL				S		**Sg**		**02 20 02.5**	**0.0**
SEF1	**Sefro**	**0.54**	**340**	P		**Pg**		**02 19 54.6**	**-0.7**
SEF1				S		**Sb**		**02 20 03.1**	**-0.3**
TRTR	**Tortoreto Alta**	**0.55**	**72**	⇑P		**Pg**		**02 19 55.1**	**-0.4**
TRTR				AML	AML				
	comp=N,16550μm,0.6s								
TRTR				AML	AML				
	comp=E,16550μm,0.4s								
ASSB	**Assisi San Ben**	**0.56**	**315**	P		**Pg**		**02 19 55.5**	**-0.4**
ASSB				S		**Sb**		**02 20 04.2**	**0.0**
FIU1	**Fiuminata**	**0.58**	**340**	P		**Pg**		**02 19 55.4**	**-0.8**
FIU1				S		**Sg**		**02 20 04.2**	**+0.3**
SSM1	**San Severino M**	**0.58**	**358**	P		**Pg**		**02 19 55.0**	**-1.2**
T0110	**Collepietro**	**0.60**	**134**	P		**Pg**		**02 19 55.0**	**-1.4**
T0110				S		**Sg**		**02 20 04.5**	**+0.1**
PTQR	**Pietraquaria**	**0.64**	**167**	P		**Pg**		**02 19 55.5**	**-1.8**
SNTG	**Esanatoglia**	**0.64**	**343**	P		**Pg**		**02 19 56.0**	**-1.3**
SRES	**S.Oreste - Sor**	**0.65**	**232**	P		**Pg**		**02 19 56.4**	**-1.1**
TRE1	**Treia**	**0.67**	**7**	P		**Pg**		**02 19 57.1**	**-0.7**
ATCC	**AVT- Casa Cast**	**0.68**	**323**	P		**Pg**		**02 19 56.9**	**-1.1**
CADA	**Capodarco di F**	**0.69**	**37**	P		**Pg**		**02 19 57.9**	**-0.2**
EL6	**Elcito**	**0.69**	**354**	P		**Pg**		**02 19 56.9**	**-1.4**
MTCE	**Montecelio**	**0.71**	**209**	⇑P		**Pg**		**02 19 57.2**	**-1.3**
CERT	**Cerreto**	**0.71**	**193**	P		**Pg**		**02 19 57.1**	**-1.5**
FOSV	**Fossato di Vic**	**0.73**	**334**	P		**Pg**		**02 19 57.9**	**-1.0**
CIMA	**Civitanova Mar**	**0.74**	**27**	P		**Pg**		**02 19 58.9**	**-0.4**
PP3	**Marolino**	**0.79**	**22**	P		**Pg**		**02 19 59.2**	**-0.9**
MURB	**Monte Urbino**	**0.79**	**321**			**Pg**		**02 19 59.0**	**-1.2**
MURB					Sg	**Sg**		**02 20 09.5**	**-1.1**
MURB	**Monte Urbino**	**0.79**	**321**	P		**Pg**		**02 19 59.9**	**-0.3**
INTR	**Introdacqua**	**0.82**	**140**	P		**Pg**		**02 19 58.6**	**-2.0**
RCAV	**Rocca di Cave**	**0.82**	**194**	P		**Pg**		**02 19 59.0**	**-1.6**
ATTE	**AVT- Monte Tez**	**0.83**	**312**	P		**Pn**		**02 20 01.5**	**-0.5**
VVLD	**Villa Vallelon**	**0.83**	**158**	P		**Pg**		**02 19 59.7**	**-1.2**
MGAB	**Montegabbione**	**0.85**	**289**	P		**Pg**		**02 20 00.3**	**-0.8**
SSFR	**Montelago di S**	**0.85**	**339**	P		**Pg**		**02 20 00.1**	**-1.1**
GUAR	**Guarcino**	**0.85**	**174**	P		**Pg**		**02 20 00.8**	**-0.5**
ARVD	**Arcevia**	**0.88**	**347**	P		**Pb**		**02 20 00.5**	**-1.1**
ARVD					AML	AML			
	comp=E,2255μm,0.4s								
ARVD					AML	AML			
	comp=N,1360μm,1.6s								
ATLO	**AVT- Montelove**	**0.89**	**319**	P		**Pb**		**02 20 00.9**	**-0.9**
RMP	**Rome, Mte Porz**	**0.91**	**204**	P		**Pb**		**02 20 00.8**	**-1.4**
ATVA	**AVT- Monte Val**	**0.93**	**314**	P		**Pb**		**02 20 01.8**	**-0.6**
ATVO	**AVT- Monte Val**	**0.94**	**322**	P		**Pb**		**02 20 01.7**	**-1.0**
FRON	**Frontone**	**0.94**	**338**	P		**Pb**		**02 20 01.5**	**-1.2**
LPEL	**Lama dei Pelig**	**0.94**	**129**	P		**Pb**		**02 20 00.6**	**-2.1**
VIVA	**Pratoni del Vi**	**0.95**	**200**	P		**Pb**		**02 20 01.3**	**-1.6**
AOI	**Ancona**	**0.95**	**18**	P		**Pb**		**02 20 00.0**	**-2.9**
RDP	**Rocca di Papa**	**0.96**	**202**	P		**Pb**		**02 20 01.5**	**-1.4**
ATBU	**Serra di Buran**	**0.96**	**330**	P		**Pb**		**02 20 02.1**	**-1.0**
MA9	**Marino**	**0.96**	**205**	P		**Pb**		**02 20 01.8**	**-1.2**
ATMI	**Monte Miggiano**	**0.97**	**316**	P		**Pn**		**02 20 03.9**	**+0.1**
SACS	**San Casciano d**	**0.97**	**283**	P		**Pb**		**02 20 02.5**	**-0.8**
ATPI	**Pietralunga -**	**1.00**	**324**	P		**Pb**		**02 20 03.2**	**-0.5**
COR1	**Corinaldo**	**1.00**	**352**	P		**Pb**		**02 20 02.3**	**-1.3**
ATPC	**Poggio Castell**	**1.00**	**327**	P		**Pb**		**02 20 02.9**	**-0.8**
POFI	**Posta Fibreno**	**1.00**	**158**	P		**Pb**		**02 20 02.9**	**-0.8**
PIEI	**Pieia**	**1.02**	**332**	P		**Pb**		**02 20 03.2**	**-0.9**
LATE	**Laterza**	**1.03**	**269**			**Pb**		**02 20 03.8**	**-0.4**
LATE	**Laterza**	**1.03**	**269**	P		**Pb**		**02 20 04.1**	**-0.2**
LAV9	**Lanuvio**	**1.04**	**201**	P		**Pb**		**02 20 03.0**	**-1.3**
LAV9					AML	AML			
	comp=E,7380μm,0.5s								
LAV9					AML	AML			
	comp=N,5360μm,0.4s								
LAV9					AML	AML			
	comp=E,7805μm,0.5s								
LAV9					AML	AML			
	comp=N,5745μm,0.5s								
LRP	**Arpino**	**1.04**	**164**	P		**Pg**		**02 20 04.5**	**-0.2**
MPAG	**Monte Paganucc**	**1.04**	**342**	P		**Pb**		**02 20 03.3**	**-1.1**
SENI	**Senigallia**	**1.06**	**1**	P		**Pb**		**02 20 04.5**	**-0.2**
TOLF	**Tolfa**	**1.06**	**237**	⇑P		**Pb**		**02 20 03.9**	**-0.9**
NARO	**Abbazia di Nar**	**1.07**	**335**	P		**Pb**		**02 20 03.6**	**-1.3**
APEC	**Apecchio**	**1.08**	**328**	P		**Pb**		**02 20 05.0**	**-0.1**
GIUL	**Giuliano Di Ro**	**1.09**	**178**	P		**Pb**		**02 20 04.1**	**-1.0**
ATMC	**Monte Cedrone**	**1.09**	**318**	P		**Pb**		**02 20 05.2**	**-0.1**
FSSB	**Fossombrone**	**1.09**	**344**	P		**Pb**		**02 20 04.4**	**-0.9**
MCIV	**Monte Civitell**	**1.13**	**277**	P		**Pb**		**02 20 05.9**	**-0.1**
MCIV					AML	AML			
	comp=E,428μm,0.3s								
MCIV					AML	AML			
	comp=N,250μm,0.4s								
MCIV					AML	AML			
	comp=E,1375μm,0.5s								
MCIV					AML	AML			
	comp=N,994μm,0.6s								
CAFI	**Castiglion Fio**	**1.14**	**307**	P		**Pb**		**02 20 05.8**	**-0.2**
SF11	**Podere del Sol**	**1.14**	**282**	P		**Pb**		**02 20 06.0**	**-0.2**
LATB	**Latina**	**1.16**	**189**	P		**Pn**		**02 20 04.6**	**-1.8**
LIK	**San Giovanni I**	**1.17**	**167**	P		**Pg**		**02 20 07.2**	**-0.1**
PE3	**Peglio**	**1.17**	**334**	P		**Pg**		**02 20 07.1**	**-0.2**
RNI2	**Rionero Sannit**	**1.18**	**143**	P		**Pg**		**02 20 07.2**	**-0.2**
SF13	**Bagnolo**	**1.18**	**279**	P		**Pn**		**02 20 06.7**	**-0.1**
CERA	**Filignano**	**1.21**	**150**	P		**Pn**		**02 20 05.8**	**-1.2**
SSP9	**Sansepolcro**	**1.22**	**320**	P		**Pb**		**02 20 07.4**	**0.0**
SF01	**Poggio Pratacc**	**1.22**	**278**	P		**Pb**		**02 20 07.3**	**-0.1**
PARC	**Parchiule**	**1.23**	**325**	P		**Pb**		**02 20 07.5**	**-0.1**
ARCI	**Arcidosso**	**1.29**	**280**	P		**Pb**		**02 20 08.7**	**0.0**
PESA	**Pesaro**	**1.32**	**349**	P		**Pb**		**02 20 09.2**	**0.0**
TRIV	**Trivento**	**1.33**	**131**	P		**Pn**		**02 20 09.0**	**+0.3**
VAGA	**Valle Agricola**	**1.45**	**148**	P		**Pb**		**02 20 10.9**	**-0.5**
BSSO	**Busso**	**1.51**	**136**	P		**Pn**		**02 20 11.4**	**+0.2**
SFI	**Santa Sofia**	**1.60**	**322**	P		**Pn**		**02 20 12.2**	**-0.3**
FROS	**Frosini**	**1.60**	**291**	P		**Pn**		**02 20 12.9**	**+0.4**
CIGN	**Sant'Elia a Pi**	**1.61**	**127**	P		**Pb**		**02 20 14.6**	**+0.6**
PTRJ	**Pietraroja**	**1.62**	**142**	AML	AML				
	comp=E,1445μm,0.1s								
PTRJ				AML	AML				
	comp=E,1820μm,1.0s								
PTRJ				AML	AML				
	comp=N,3090μm,0.3s								
PTRJ				AML	AML				
	comp=N,2475μm,0.3s								
CSNT	**Castellina Chi**	**1.63**	**301**	P		**Pb**		**02 20 13.6**	**-0.8**
SACR	**S. Croce Del S**	**1.68**	**138**	P		**Pb**		**02 20 15.8**	**+0.6**
OSSC	**Osservatorio P**	**1.68**	**302**			**Pn**		**02 20 13.5**	**-0.1**
OSSC	**Osservatorio P**	**1.68**	**302**	P		**Pn**		**02 20 14.3**	**+0.8**
MELA	**Melanico ??? S**	**1.71**	**123**	P		**Pb**		**02 20 14.9**	**-0.8**
MELA					AML	AML			
	comp=E,1660μm,0.7s								
MELA					AML	AML			
	comp=N,1635μm,0.9s								
MELA					AML	AML			
	comp=E,1775μm,0.7s								
MELA					AML	AML			
	comp=N,1565μm,0.9s								
RUFI	**Rufina**	**1.72**	**315**	P		**Pn**		**02 20 14.0**	**0.0**
CASP	**Castiglione de**	**1.73**	**276**			**Pn**		**02 20 14.0**	**-0.2**
TRIF	**Trifonti**	**1.75**	**286**	P		**Pn**		**02 20 14.8**	**+0.2**
PSB1	**Pescosannita**	**1.86**	**139**	P		**Pb**		**02 20 18.2**	**-0.2**
PAOL	**Paolisi**	**1.91**	**147**	P		**Pb**		**02 20 18.7**	**-0.5**
DUGI	**Dugi Otok**	**1.91**	**45**	*e*Pn		**Pn**		**02 20 16.4**	**-0.2**
BRIS	**BRISIGHELLA**	**1.95**	**321**	P		**Pb**		**02 20 19.8**	**0.0**
MPPT	**Montemurlo**	**2.02**	**311**	P		**Pn**		**02 20 18.8**	**+0.5**
SGRT	**San Giovanni R**	**2.09**	**114**	Pn		**Pn**		**02 20 20.1**	**+0.9**
SGRT	**San Giovanni R**	**2.09**	**114**	P		**Pn**		**02 20 20.1**	**+0.9**
VIRC	**Vir**	**2.13**	**39**	*e*Pn		**Pn**		**02 20 19.3**	**-0.3**
FNVD	**Fontana Vidola**	**2.15**	**316**	P		**Pn**		**02 20 20.6**	**+0.6**
MORI	**Morici**	**2.20**	**55**	*e*Pn		**Pn**		**02 20 20.5**	**-0.1**
MSAG	**Monte S. Angel**	**2.22**	**114**	P		**Pn**		**02 20 21.7**	**+0.7**
POPM	**Popiglio**	**2.27**	**309**	P		**Pn**		**02 20 21.5**	**-0.1**
NVLJ	**Novalja**	**2.27**	**32**	*e*Pn		**Pn**		**02 20 21.0**	**-0.6**
BRJN	**Brijuni**	**2.30**	**10**	*e*Pn		**Pn**		**02 20 22.8**	**+0.9**
MAIM	**Mastiano**	**2.35**	**304**	P		**Pn**		**02 20 23.3**	**+0.6**
ZCCA	**Zocca**	**2.35**	**317**	Pn		**Pn**		**02 20 23.1**	**+0.3**
BDI	**Bagni Di Lucca**	**2.37**	**308**	P		**Pn**		**02 20 22.8**	**-0.3**
MCRV	**Calabrutti - M**	**2.37**	**141**	AML	AML				
	comp=E,130μm,0.6s								
MCRV				AML	AML				
	comp=N,125μm,1.3s								
RABC	**Rab**	**2.40**	**28**	*e*Pn		**Pn**		**02 20 23.1**	**-0.2**
CARD	**Cardoso**	**2.42**	**306**	P		**Pn**		**02 20 23.5**	**-0.1**
SMRN	**Sveta Marina**	**2.49**	**16**	*e*Pn		**Pn**		**02 20 24.4**	**-0.2**
VLC	**Villacollemand**	**2.55**	**307**	Pn		**Pn**		**02 20 25.1**	**-0.4**
VLC	**Villacollemand**	**2.55**	**307**	P		**Pn**		**02 20 25.3**	**-0.2**
GSCL	**Gusciola**	**2.56**	**313**	P		**Pn**		**02 20 26.1**	**+0.6**
UDBI	**Udbina**	**2.65**	**44**	*e*Pn		**Pn**		**02 20 27.9**	**+1.1**
EQUI	**Equi**	**2.69**	**305**	P		**Pn**		**02 20 27.6**	**+0.1**
KIJV	**Kijevo**	**2.70**	**59**	*e*Pn		**Pn**		**02 20 28.4**	**+0.8**
LSTV	**Lastovo**	**2.72**	**86**	*e*Pn		**Pn**		**02 20 27.2**	**-0.6**
A250A	**Rusevo Krmpots**	**2.73**	**26**	*e*Pn		**Pn**		**02 20 28.2**	**+0.2**
TEOL	**Teolo**	**2.93**	**338**	Pn		**Pn**		**02 20 31.0**	**+0.3**
TEOL	**Teolo**	**2.93**	**338**	P		**Pn**		**02 20 31.3**	**+0.6**
SKDS	**Skadanscina**	**2.96**	**11**	*i* Pn		**Pn**		**02 20 30.7**	**-0.4**
SKDS				*e*Sn		**Sn**		**02 21 06.4**	**+0.1**
RICI	**Ricice**	**3.00**	**72**	*e*Pn		**Pn**		**02 20 32.9**	**+1.2**
ZOVE	**Zovencedo**	**3.07**	**337**	P		**Pn**		**02 20 33.2**	**+0.6**
TRI	**Trieste**	**3.09**	**7**	Pn		**Pn**		**02 20 31.7**	**-1.2**
PGF	**Pioggiola**	**3.10**	**270**	*e*P		**Pn**		**02 20 34.3**	**+1.1**
PGF				*e*Sn		**Sn**		**02 21 07.4**	**-2.6**
	comp=N,7.6nm,0.4s								
MSSA	**Maissana**	**3.16**	**303**	Pn		**Pn**		**02 20 33.7**	**-0.2**
CUC	**Castrocucco**	**3.30**	**143**	Pn		**Pn**		**02 20 37.5**	**+1.7**
MARN	**Marana (Italy)**	**3.32**	**335**	P		**Pn**		**02 20 36.6**	**+0.5**
STON	**Ston**	**3.32**	**85**	*i* Pn		**Pn**		**02 20 35.2**	**-0.8**
STON	**Ston**	**3.32**	**85**	*e*Pn		**Pn**		**02 20 35.4**	**-0.6**
STON				*e*Sn		**Sn**		**02 21 15.8**	**+0.6**
A251A	**Rujevac**	**3.33**	**41**	*e*Pn		**Pn**		**02 20 36.9**	**+0.7**
SABO	**M.te Sabotino**	**3.35**	**5**	Pn		**Pn**		**02 20 36.0**	**-0.4**
AJAC	**Base Areonaval**	**3.37**	**259**	P		**Pn**		**02 20 38.2**	**+1.5**
ROVR	**Rover Verones**	**3.37**	**334**	P		**Pn**		**02 20 37.7**	**+0.8**
OZLJ	**Ozalj**	**3.39**	**28**	*e*Pn		**Pn**		**02 20 37.6**	**+0.6**
SALO	**Salr**	**3.54**	**328**	Pn		**Pn**		**02 20 40.2**	**+1.0**
SALO	**Salr**	**3.54**	**328**	P		**Pn**		**02 20 40.1**	**+1.0**
DGI	**Dorgali Grotta**	**3.56**	**230**	P		**Pn**		**02 20 40.1**	**+0.7**
BLY	**Banja Luka**	**3.57**	**53**	*e*Pn		**Pn**		**02 20 41.2**	**+1.7**
MPRI	**Monte Prat**	**3.60**	**358**	P		**Pn**		**02 20 40.4**	**+0.4**
GEPF	**Gemona**	**3.63**	**359**	P		**Pn**		**02 20 40.5**	**+0.2**
STAL	**STALIGIAL**	**3.63**	**355**	Pn		**Pn**		**02 20 39.1**	**-1.3**
STAL	**STALIGIAL**	**3.63**	**355**	P		**Pn**		**02 20 40.5**	**+0.1**
DBRK	**Dubrovnik**	**3.65**	**88**	*e*Pn		**Pn**		**02 20 40.1**	**-0.5**
CIMO	**Cimolais**	**3.71**	**352**	Pn		**Pn**		**02 20 41.1**	**-0.3**
CIMO	**Cimolais**	**3.71**	**352**	P		**Pn**		**02 20 41.5**	**+0.1**
AGOR	**Agordo**	**3.73**	**348**	P		**Pn**		**02 20 41.8**	**+0.1**
PRED	**Cave del Predi**	**3.81**	**4**	Pn		**Pn**		**02 20 43.7**	**+0.9**
CLUD	**Cludinico**	**3.82**	**357**	Pn		**Pn**		**02 20 43.0**	**+0.1**
HCY	**Herceg Novi**	**3.92**	**91**	⇓*i* Pn		**Pn**		**02 20 44.8**	**+0.6**
HCY				*i* Sn		**Sn**		**02 21 31.4**	**+1.5**
ZOU	**Zoufplan**	**3.92**	**358**	P		**Pn**		**02 20 44.9**	**+0.4**
OBKA	**Obir**	**3.98**	**14**	*e*Pn		**Pn**		**02 20 46.1**	**+0.8**
	comp=N,0.8nm,0.2s								
MYKA	**Terra Mystica**	**4.00**	**4**	*e*Pn		**Pn**		**02 20 46.3**	**+0.8**
	comp=N,2.6nm,0.4s								
LOBO	**Lobor**	**4.07**	**29**	*e*Pn		**Pn**		**02 20 46.5**	**+0.1**
ABTA	**Abfaltersbach**	**4.13**	**353**	Pn		**Pn**		**02

MODS eSN Sn 02 22 30.5 -0.7
CABF La Chapelle 6.44 310 eP Pn 02 21 20.9 +1.9
CABF eSn Sn 02 22 26.2 -6.0
comp=N,13nm,0.9s
KHC Kasperske Hory 6.49 2 Pn Pn 02 21 19.6 -0.1
KHC Kasperske Hory 6.49 2 ePN Pn 02 21 19.5 -0.1
KHC eSN Sn 02 22 30.7 -2.7
MDVR Moldovita 6.53 68 ⇑P Pn 02 21 19.4 -0.8
PRVS Prvonek 6.55 88 ePn Pn 02 21 21.3 +0.8
PRVS eSn Sn 02 22 34.3 -0.6
VIVF Saint-Julien-l 6.56 293 eP Pn 02 21 22.9 +2.3
VIVF eSn Sn 02 22 29.2 -5.9
comp=N,0.7nm,0.4s
BFO Black Forest 6.64 331 Pn Pn 02 21 20.8 -0.8
ZAGS Zajecar 6.70 77 ePn Pn 02 21 22.4 -0.1
STIP Stip 6.74 95 *i* Pn Pn 02 21 26.0 +2.9
BZS Buzias 6.74 61 ⇑P Pn 02 21 22.7 -0.3
BZS Buzias 6.74 61 ePn Pn 02 21 23.1 0.0
KRUC Moravsky 6.79 18 ePN Pn 02 21 24.1 +0.3
HINF Hinteralfeld 6.84 321 eP Pn 02 21 25.0 +0.5
HINF eSn Sn 02 22 35.2 -6.8
comp=N,14nm,0.7s
BOSS Bosilegrad 6.85 88 ePn Pn 02 21 25.2 +0.6
BOSS eSn Sn 02 22 39.6 -2.7
ZAPS Zavoj 6.95 82 ePn Pn 02 21 26.9 +1.0
ZAPS eSn Sn 02 22 42.8 -1.9
LASF Ste Croix 6.96 285 eP Pn 02 21 28.0 +1.9
LASF eSn Sn 02 22 39.0 -5.9
comp=N,1.0nm,0.4s
BLKB Belogradchik 7.00 79 ⇓P Pn 02 21 27.4 +0.8
ECH Echery 7.01 325 Pn Pn 02 21 26.2 -0.5
HERR Herculane 7.04 68 ⇑P Pn 02 21 28.0 +0.9
VYHS Vyhne 7.06 32 ePN Pn 02 21 27.6 +0.2
VYHS eSN Sn 02 22 52.9 +5.6
VRAC Vranov 7.07 18 ePN Pn 02 21 27.6 0.0
VAY Valandovo 7.11 98 *i* Pn Pn 02 21 29.0 +1.0
CDF Champ du Feu 7.11 326 eP Pn 02 21 28.8 +0.6
CDF eSn Sn 02 22 41.4 -7.3
comp=N,5.7nm,0.5s
GRFO Grafenberg 7.18 350 Pn Pn 02 21 29.5 +0.4
GRA1 Grafenberg Arr 7.18 350 Pn Pn 02 21 29.5 +0.4
HAU Haudompre 7.21 320 eP Pn 02 21 29.9 +0.4
HAU eSn Sn 02 22 44.0 -7.2
comp=N,8.7nm,0.4s
VTS Vitosha 7.40 87 ⇓P Pn 02 21 32.5 +0.3
VTS Vitosha 7.40 87 Pn Pn 02 21 33.3 +1.1
KEST Kesra 7.52 205 Pn Pn 02 21 37.5 +3.6
comp=N,0.5nm,0.3s,baz=312,slow=6.8,SNR=8.6
comp=N,2.5nm,0.6s
SMF Signal de Mont 7.78 304 eP Pn 02 21 38.5 +1.2
SMF eSn Sn 02 22 58.2 -6.9
comp=N,3.7nm,0.6s
PAGF Fort de Pagny 7.90 321 eP Pn 02 21 41.1 +2.2
baz=133
PAGF eSn Sn 02 23 00.1 -7.8
comp=N,9.9nm,0.8s
SRS Serrai 7.90 98 ePn Pn 02 21 39.8 +0.8
SRS eSn Sn 02 23 05.9 -2.2
LOR Lormes 8.08 308 eP Pn 02 21 43.3 +1.9
baz=123
LOR eSn Sn 02 23 05.2 -7.2
comp=N,1.7nm,0.3s
MTLF Montolieu 8.08 279 eP Pn 02 21 44.3 +2.8
AVF Avril sur Loir 8.15 304 eP Pn 02 21 44.6 +2.3
AVF eSn Sn 02 23 09.2 -4.8
comp=N,1.3nm,0.4s
SSF Saint Saulge 8.18 306 eP Pn 02 21 45.1 +2.3
SSF eSn Sn 02 23 09.6 -5.3
comp=N,2.2nm,0.5s
MEZF Maizieres J'vi 8.18 319 eP Pn 02 21 44.5 +1.7
baz=130
MEZF eSn Sn 02 23 07.0 -7.9
comp=N,2.0nm,0.4s
SAVF Savonnieres en 8.22 319 eP Pn 02 21 45.2 +1.8
SAVF eSn Sn 02 23 12.2 -3.7
comp=N,1.9nm,0.2s
BGF Bois d'Agland 8.36 301 eP Pn 02 21 47.5 +2.3
BGF eSn Sn 02 23 12.0 -7.3
comp=N,1.8nm,0.3s
CAF Calviac 8.38 290 eP Pn 02 21 48.7 +3.2
ITM Ithomi 8.64 126 Pn Pn 02 21 51.4 +2.3
TCF Toulx Ste Croi 8.66 299 eP Pn 02 21 52.0 +2.6
TCF eSn Sn 02 23 19.3 -7.5
comp=N,0.1nm,0.2s
CLL Collm 8.67 359 eSg 02 24 23.0
RJF Les Rejaudoux 8.84 291 eP Pn 02 21 54.6 +2.8
VOIR 8.98 68 ⇑P Pn 02 21 56.3 +2.5
LFF La Frestale 9.30 289 eP Pn 02 22 00.3 +2.2
RDO Rodhopi 9.32 95 Pn Pn 02 21 59.0 +0.6
MLR Muntele Rosu 9.61 68 Pn Pn 02 22 03.5 +1.1
comp=N,0.2nm,0.3s,baz=234,slow=8.7,SNR=2.1
comp=N,1.5nm,0.6s
ALN Alexandroupoli 9.76 96 Pn Pn 02 22 05.0 +0.7
IDI Anoyia 11.69 125 Pn Pn 02 22 33.2 +2.3
comp=N,0.2nm,0.3s,baz=270,slow=14,SNR=1.9
IDI Sn Sn 02 24 33.7 -7.4
comp=N,0.2nm,0.3s,baz=260,slow=24,SNR=1.8
comp=N,1.6nm,0.6s
ESDC Sonseca Array 13.27 263 Pn Pn 02 22 52.7 +0.2
baz=84,slow=12,SNR=2.0
comp=N,0.3nm,0.9s
HFS Hagfors 17.52 1 P Pn 02 23 47.4 -0.7
comp=N,0.1nm,0.3s,baz=188,slow=8.7,SNR=1.2
comp=N,0.4nm,0.6s
NB2 NORSAR Subarra 18.46 357 P Pn 02 24 00.9 +1.1
comp=Z,0.8nm,0.7s,baz=176,slow=11
NOA NORSAR Array B 18.46 357 P P 02 23 58.8 -0.8
baz=175,slow=11,SNR=5.3
comp=Z,0.3nm,0.8s
NB201 NORSAR Array S 18.47 357 P P 02 23 59.8 +0.1
NB201 IAmb IAmb 02 24 27.6
comp=Z,15nm,1.4s
NC405 NORSAR Array S 18.52 358 P P 02 23 59.9 -0.4
FINES FINESS Array B 20.35 18 P P 02 24 19.8 -0.4
comp=Z,1.1nm,0.9s,baz=182,slow=32,SNR=1.3
comp=Z,1.1nm,0.9s
FINES FINESS Array B 20.35 18 P Pn 02 24 21.4 -0.9
TOA0 Torodi Ar. Sit 31.04 202 P P 02 26 02.5 +0.7
TORD Torodi Ar. Bea 31.04 202 P P 02 26 03.2 +1.3
comp=Z,1.1nm,0.8s,baz=17,slow=8.7,SNR=7.6
comp=Z,1.1nm,0.8s
TORD Torodi Ar. Bea 31.04 202 P P 02 26 03.2 +1.3
TORD IAmb IAmb 02 26 04.6
comp=Z,2.5nm,1.2s
SUMG Summit 38.60 338 P P 02 27 08.1 +1.1
SUMG IAmb IAmb 02 27 17.7
comp=Z,4.3nm,1.0s
MKAR Makanchi Array 47.83 60 P P 02 28 22.1 +0.6
comp=Z,0.8nm,0.8s,baz=353,slow=11,SNR=3.9
comp=Z,0.8nm,0.8s
MKAR Makanchi Array 47.83 60 P P 02 28 23.0 +1.5
SONM Songino Array 61.90 50 P P 02 30 04.7 +1.3
comp=Z,0.6nm,0.6s,baz=256,slow=5.8,SNR=2.5
comp=Z,0.6nm,0.6s
IMAR Indian Mountai 71.24 354 P P 02 31 04.9 +2.2

*IDC **24** 02:23:37.5±1.3, 42.°84N×14.°09E, h0km, mb3.6/4, mbtmp3.5/10, ML3.1/6, Error ellipse: s-maj=27.3km s-min=14.8km az=74.0*
*PRU **24** 02:23:38.6±0.0, 42.°67N×13.°95E, h1km*
*ROM **24** 02:23:40.5±0.1, 42.°827N±0.°004×13.°244E±0.°009, h8km, ML3.3/13, Error ellipse: s-maj=0.6km s-min=0.3km az=247.0*
*VIE **24** 02:23:42.4, 42.°46N×13.°48E, h0km, mb3.5/4, ML3.5/1 103 km NE of Rome*

ISC 24 02:23:40.9±0.9, 42.°83N±0.°02×13.°26E±0.°03, h15km±6km, n62, σ1°92/64, mb3.6/4, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.20**	**310**	P	**Pg**		**02 23 45.2**	**-0.6**
FEMA				S	**Sg**		**02 23 48.7**	**-0.4**
FEMA				AML	AML			
	comp=E,10880μm,0.3s							
FEMA				AML	AML			
	comp=N,9200μm,0.7s							
FDMO	**Fiordimonte**	**0.24**	**328**	P	**Pg**		**02 23 45.7**	**-0.6**
FDMO				S	**Sg**		**02 23 50.1**	**+0.2**
FDMO				AML	AML			
	comp=E,2735μm,0.4s							
FDMO				AML	AML			
	comp=N,3930μm,0.2s							
LNSS	**Leonessa**	**0.28**	**216**	P	**Pg**		**02 23 46.6**	**-0.4**
LNSS				S	**Sb**		**02 23 52.0**	**-0.3**
LNSS				AML	AML			
	comp=E,20200μm,0.4s							
LNSS				AML	AML			
	comp=N,16750μm,0.7s							
LNSS				AML	AML			
	comp=E,20150μm,0.4s							
CAMP	**Campotosto**	**0.32**	**160**	P	**Pg**		**02 23 47.1**	**-0.4**
CAMP				S	**Sb**		**02 23 53.2**	**-0.1**
CAMP				AML	AML			
	comp=E,8230μm,0.8s							
CAMP				AML	AML			
	comp=N,6250μm,0.5s							
CESI	**CESI - Serrava**	**0.32**	**303**	P	**Pg**		**02 23 47.1**	**-0.4**
CESI				S	**Sb**		**02 23 52.5**	**-0.7**
CESI				AML	AML			
	comp=E,4310μm,0.5s							
CESI				AML	AML			
	comp=N,7110μm,0.5s							
RM33	**Pellescritta (**	**0.33**	**187**	P	**Pg**		**02 23 47.6**	**-0.1**
RM33				S	**Sb**		**02 23 53.4**	**-0.1**
OFFI	**Offida**	**0.33**	**71**	P	**Pb**		**02 23 49.1**	**+0.7**
OFFI				AML	AML			
	comp=E,9275μm,0.9s							
OFFI				AML	AML			
	comp=N,9010μm,0.4s							
TERO	**Teramo**	**0.33**	**130**	P	**Pg**		**02 23 47.6**	**-0.1**
TERO				S	**Sb**		**02 23 53.8**	**+0.3**
TERO				AML	AML			
	comp=E,11450μm,0.7s							
TERO				AML	AML			
	comp=N,12745μm,0.6s							
TERO				AML	AML			
	comp=E,11900μm,0.6s							
TERO				AML	AML			
	comp=N,12765μm,0.6s							
TERO				AML	AML			
	comp=N,13300μm,0.6s							
MNTP	**Montappone**	**0.34**	**26**	AML	AML			
	comp=E,9755μm,0.2s							
MNTP				AML	AML			
	comp=N,8180μm,1.0s							
MDAR	**Monte D'Aria**	**0.37**	**346**	P	**Pb**		**02 23 48.8**	**-0.4**
MDAR				S	**Sb**		**02 23 54.6**	**-0.2**
SSM1	**San Severino M**	**0.40**	**351**	P	**Pg**		**02 23 48.7**	**-0.3**
SSM1				S	**Sb**		**02 23 55.7**	**0.0**
GAG1	**Gagliole**	**0.43**	**340**	P	**Pb**		**02 23 49.8**	**-0.4**
GAG1				S	**Sb**		**02 23 56.6**	**+0.1**
FIU1	**Fiuminata**	**0.43**	**326**	AML	AML			
	comp=E,1562μm,1.6s							
FIU1				AML	AML			
	comp=N,3535μm,1.6s							
GIGS	**Gran Sasso**	**0.44**	**149**	P	**Pg**		**02 23 49.6**	**-0.2**
GIGS				S	**Sb**		**02 23 57.0**	**+0.1**
GIGS				AML	AML			
	comp=E,1220μm,0.9s							
GIGS				AML	AML			
	comp=N,1111μm,0.8s							
ARRO	**Arrone**	**0.45**	**236**	P	**Pg**		**02 23 49.1**	**-0.7**
ARRO				S	**Sb**		**02 23 57.1**	**+0.2**
ARRO				AML	AML			
	comp=E,3940μm,1.1s							
ARRO				AML	AML			
	comp=N,3705μm,0.8s							
SNTG	**Esanatoglia**	**0.48**	**331**	P	**Pg**		**02 23 50.4**	**-0.2**
SNTG				S	**Sb**		**02 23 58.1**	**+0.1**
ASSB	**Assisi San Ben**	**0.49**	**296**	P	**Pg**		**02 23 50.2**	**-0.5**
ASSB				S	**Sb**		**02 23 58.1**	**-0.2**
ASSB				AML	AML			
	comp=E,1580μm,0.5s							
ASSB				AML	AML			
	comp=N,1770μm,0.5s							
CADA	**Capodarco di F**	**0.51**	**45**	AML	AML			
	comp=E,4690μm,1.2s							
CADA				AML	AML			
	comp=N,3565μm,0.2s							
CESX	**Cesi**	**0.55**	**246**	P	**Pb**		**02 23 52.4**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.58**	**308**	P	**Pg**		**02 23 51.6**	**-0.8**
ATCC				S	**Sb**		**02 24 01.4**	**+0.6**
ATCC				AML	AML			
	comp=E,1555μm,0.3s							
ATCC				AML	AML			
	comp=N,1123μm,0.3s							
FOSV	**Fossato di Vic**	**0.59**	**322**	P	**Pg**		**02 23 52.0**	**-0.5**
FOSV				S	**Sb**		**02 24 01.6**	**+0.4**
VCEL	**Villa Celiera**	**0.61**	**136**	P	**Pb**		**02 23 53.5**	**+0.2**
VCEL				AML	AML			
	comp=E,5015μm,0.9s							
VCEL				AML	AML			
	comp=N,4865μm,0.7s							
MURB	**Monte Urbino**	**0.69**	**309**	AML	AML			
	comp=N,1530μm,0.2s							
MURB				AML	AML			
	comp=E,2095μm,0.2s							
MURB				AML	AML			
	comp=N,1490μm,0.4s							
MURB				AML	AML			
	comp=E,2335μm,0.3s							
SSFR	**Montelago di S**	**0.70**	**330**	AML	AML			
	comp=E,1760μm,0.3s							
SSFR				AML	AML			
	comp=N,1190μm,0.2s							
ATFO	**Monte Foce - G**	**0.74**	**317**	AML	AML			
	comp=E,456μm,0.6s							
ATFO				AML	AML			
	comp=N,578μm,0.4s							
AOI	**Ancona**	**0.76**	**19**	AML	AML			
	comp=N,690μm,0.4s							
AOI				AML	AML			
	comp=E,614μm,0.6s							
SRES	**S.Oreste - Sor**	**0.81**	**223**	P	**Pn**		**02 23 57.6**	**-0.2**
SRES				AML	AML			
	comp=E,852μm,0.8s							
SRES				AML	AML			
	comp=N,1048μm,1.1s							
CERT	**Cerreto**	**0.91**	**193**	AML	AML			
	comp=N,2250μm,0.7s							
CERT				AML	AML			
	comp=E,1645μm,1.6s							
LPEL	**Lama dei Pelig**	**1.04**	**139**	AML	AML			
	comp=E,980μm,0.7s							
LPEL				AML	AML			
	comp=N,846μm,1.3s							
RDP	**Rocca di Papa**	**1.15**	**201**	AML	AML			
	comp=N,2665μm,1.1s							
RDP				AML	AML			
	comp=E,2490μm,0.7s							
PESA	**Pesaro**	**1.15**	**345**	P	**Pg**		**02 24 00.4**	**-2.7**
PESA				AML	AML			
	comp=N,1905μm,0.4s							
PESA				AML	AML			
	comp=E,2335μm,1.2s							
TOLF	**Tolfa**	**1.21**	**231**	AML	AML			
	comp=N,522μm,1.3s							
TOLF				AML	AML			
	comp=E,748μm,0.8s							
GIUL	**Giuliano Di Ro**	**1.27**	**180**	AML	AML			
	comp=E,568μm,0.8s							
GIUL				AML	AML			
	comp=N,670μm,0.6s							
OBKA	**Obir**	**3.79**	**14**	*e*Pn	**Pn**		**02 24 42.8**	**+4.0**
	comp=N,4.5nm,0.6s							
MYKA	**Terra Mystica**	**3.81**	**4**	*e*Pn	**Pn**		**02 24 40.7**	**+1.7**
	comp=N,3.4nm,0.5s							
ABTA	**Abfaltersbach**	**3.95**	**352**	*e*Pn	**Pn**		**02 24 43.2**	**+2.2**
	comp=N,34nm,0.5s							
SOKA	**Soboth**	**4.05**	**18**	*e*Pn	Pn		02 24 47.4	+5.1
	comp=N,1.7nm,0.4s							
KBA	**Koelnbreinsper**	**4.25**	**1**	*e*Pn	**Pn**		**02 24 47.4**	**+2.2**
	comp=N,5.0nm,0.3s							
FETA	**Feichten**	**4.56**	**338**	*e*Pn	Pn		02 24 55.1	+5.7
	comp=N,5.3nm,0.5s							
WTTA	**Wattenberg**	**4.58**	**346**	*e*Pn	**Pn**		**02 24 52.5**	**+2.8**
	comp=N,4.8nm,0.6s							
DAVOX	**Davos/Dischmat**	**4.62**	**330**	Pn	**Pn**		**02 24 53.4**	**+3.0**
	comp=N,2.1nm,0.3s,baz=158,slow=20,SNR=7.7							
DAVOX				Sn	**Sn**		**02 25 49.9**	**+6.1**
	comp=N,0.7nm,0.3s,baz=80,slow=18,SNR=3.5							
	comp=N,7.1nm,0.4s							
SQTA	**Sankt Quirin**	**4.62**	**342**	*e*Pn	**Pn**		**02 24 53.0**	**+2.7**
	comp=N,6.2nm,0.4s							
WATA	**Walderalm**	**4.66**	**346**	*e*Pn	**Pn**		**02 24 55.5**	**+4.7**
	comp=N,8.2nm,0.5s							
ARSA	**Arzberg**	**4.70**	**19**	*e*Pn	**Pn**		**02 24 54.5**	**+3.2**
	comp=N,1.9nm,0.4s							
MOTA	**Moosalm**	**4.76**	**342**	*e*Pn	**Pn**		**02 24 56.3**	**+4.1**
	comp=N,2.3nm,0.4s							
BIOA	**Bad Ischl, Aus**	**4.87**	**3**	*e*Pn	**Pn**		**02 24 55.8**	**+2.2**
	comp=N,2.3nm,0.2s							
RETA	**Reutte**	**4.98**	**340**	*e*Pn	**Pn**		**02 24 58.4**	**+3.3**
	comp=N,1.7nm,0.2s							
DAVA	**Damuels**	**5.06**	**333**	*e*Pn	**Pn**		**02 24 59.7**	**+3.4**
	comp=N,2.4nm,0.3s							
MOA	**Molln**	**5.07**	**8**	*e*Pn	**Pn**		**02 24 58.5**	**+2.3**
	comp=N,1.8nm,0.4s							
RONA	**Rosalia, Austr**	**5.32**	**23**	*e*Pn	Pn		02 25 05.7	+6.0
	comp=N,0.6nm,0.2s							
CONA	**Conrad Observa**	**5.42**	**19**	*e*Pn	**Pn**		**02 25 03.5**	**+2.4**
	comp=N,3.0nm,0.4s							
GERES	**GERESS Array B**	**6.02**	**3**	Pn	**Pn**		**02 25 09.0**	**-0.4**
	comp=N,0.3nm,0.3s,baz=174,slow=12,SNR=6.3							
GERES				Sn	**Sn**		**02 26 15.1**	**-3.0**
	comp=N,0.2nm,0.3s,baz=188,slow=19,SNR=1.3							
	comp=N,1.6nm,0.6s							
CKRC	**Cesky Krumlov**	**6.03**	**7**	*e*PN	**Pn**		**02 25 10.2**	**+0.7**
CKRC				*e*SN	**Sn**		**02 26 18.5**	**+0.2**
KHC	**Kasperske Hory**	**6.30**	**2**	*e*PN	**Pn**		**02 25 13.8**	**+0.5**
KHC				*e*SN	**Sn**		**02 26 25.5**	**+0.5**
EKA	**Eskdalemuir Ar**	**16.44**	**325**	Pn	**P**		**02 27 34.3**	**+0.8**
	baz=135,slow=14							
	comp=N,0.5nm,0.7s							
HFS	**Hagfors**	**17.33**	**1**	P	**Pn**		**02 27 41.4**	**-0.5**
	baz=165,slow=13,SNR=1.4							
	comp=N,0.9nm,0.9s							
MMAI	**Mount Meron Ar**	**19.98**	**112**	P	P		02 28 03.9	-8.7
	comp=N,0.2nm,0.3s,baz=16,slow=42,SNR=2.4							
	comp=N,1.6nm,0.8s							
FINES	**FINESS Array B**	**20.16**	**18**	P	**P**		**02 28 11.4**	**-2.9**
	comp=N,0.1nm,0.3s,baz=196,slow=13,SNR=1.5							
	comp=N,0.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**31.23**	**202**	P	**P**		**02 30 00.4**	**+0.7**
	comp=N,0.7nm,0.8s,baz=12,slow=7.1,SNR=5.0							
	comp=N,0.7nm,0.8s							
GEYT	**Alibeck**	**34.20**	**83**	P	P		02 30 18.3	-7.4
	comp=N,1.0nm,0.5s,baz=297,slow=8.2,SNR=2.1							
	comp=N,1.0nm,0.5s							
MKAR	**Makanchi Array**	**47.69**	**60**	P	P		02 32 11.9	-4.7
	comp=N,0.2nm,0.7s,baz=297,slow=8.0,SNR=1.1							
	comp=N,0.2nm,0.7s							
SONM	**Songino Array**	**61.74**	**50**	P	**P**		**02 33 55.6**	**-2.9**
	comp=N,0.2nm,0.4s,baz=320,slow=4.3,SNR=1.5							
	comp=N,0.2nm,0.4s							

ROM 24 02:27:51.4±0.1, 42.°796N±0.°004×13.°226E±0.°007, h7km, ML3.0/7, Error ellipse: s-maj=0.6km s-min=0.1km az=254.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.21**	**322**	P	Pg		02 27 56.4	+0.7
FEMA				S	Sg		02 28 00.3	+1.7
FEMA				AML	AML			
	comp=E,16150μm,0.5s							
FEMA				AML	AML			
	comp=N,13100μm,0.5s							
FEMA				AML	AML			
	comp=E,16100μm,0.5s							
FEMA				AML	AML			
	comp=E,5689μm,0.3s							
FEMA				END				
LNSS	**Leonessa**	**0.24**	**216**	P	Pg		02 27 56.9	+0.7
LNSS				S	Sg		02 28 01.4	+2.1
LNSS				AML	AML			
	comp=N,18750μm,0.7s							
LNSS				AML	AML			
	comp=E,25000μm,0.2s							
LNSS				AML	AML			
	comp=E,49700μm,0.4s							
LNSS				AML	AML			
	comp=N,34100μm,0.2s							
FDMO	**Fiordimonte**	**0.26**	**337**	P	Pg		02 27 57.3	+0.6
FDMO				S	Sg		02 28 01.6	+1.5
FDMO				AML	AML			
	comp=E,5635μm,0.3s							
FDMO				AML	AML			
	comp=N,4640μm,0.2s							
GUMA	**Gualdo di Mace**	**0.28**	**17**	P	Pg		02 27 57.9	+0.9
GUMA				S	Sb		02 28 02.9	-0.9
GUMA				AML	AML			
	comp=E,15200μm,0.4s							
GUMA				AML	AML			
	comp=N,17350μm,0.3s							
GUMA				AML	AML			
	comp=N,18950μm,1.6s							
GUMA				AML	AML			
	comp=E,15250μm,0.4s							
GUMA				AML	AML			
	comp=N,17300μm,0.3s							
GUMA				AML	AML			
	comp=E,15700μm,0.4s							
GUMA				AML	AML			
	comp=E,10962μm,0.3s							
GUMA				AML	AML			
	comp=N,9443μm,0.3s							
RM33	**Pellescritta (**	**0.29**	**182**	P	Pg		02 27 57.9	+0.8
RM33				S	Sb		02 28 03.1	-0.9
CESI	**CESI - Serrava**	**0.32**	**312**	P	Pg		02 27 58.3	+0.7
CESI				S	Sb		02 28 03.6	-1.3
CESI				AML	AML			
	comp=N,18850μm,0.2s							
CESI				AML	AML			
	comp=E,10045μm,0.2s							
CESI				AML	AML			
	comp=E,3278μm,0.2s							
CESI				AML	AML			
	comp=N,2474μm,0.3s							
TERO	**Teramo**	**0.33**	**122**	P	Pg		02 27 58.4	+0.5
TERO				S	Sg		02 28 03.6	+1.4
TERO				AML	AML			
	comp=E,5495μm,0.2s							
TERO				AML	AML			
	comp=N,7490μm,0.5s							
TERO				AML	AML			
	comp=N,7980μm,0.5s							
TERO				AML	AML			
	comp=E,5500μm,0.2s							
TERO				AML	AML			
	comp=N,7620μm,1.2s							
TERO				AML	AML			
	comp=E,6070μm,0.2s							
TERO				AML	AML			
	comp=N,8045μm,1.2s							
TERO				AML	AML			
	comp=E,8545μm,0.4s							
TERO				AML	AML			
	comp=N,11520μm,0.5s							
TERO				AML	AML			
	comp=E,9140μm,0.4s							
TERO				AML	AML			
	comp=N,12100μm,0.5s							
TERO				AML	AML			
	comp=N,6274μm,0.2s							
TERO				AML	AML			
	comp=E,5082μm,0.2s							
OFFI	**Offida**	**0.36**	**67**	P	Pb		02 27 60.0	-0.3
OFFI				AML	AML			
	comp=E,5510μm,0.4s							
OFFI				AML	AML			
	comp=N,5990μm,0.6s							
OFFI				AML	AML			
	comp=N,4181μm,0.7s							
MNTP	**Montappone**	**0.39**	**27**	P	Pb		02 28 00.2	-0.5
MNTP				S	Sb		02 28 07.4	+0.6
MDAR	**Monte D'Aria**	**0.40**	**351**	P	Pg		02 27 59.8	+0.5
MDAR				S	Sb		02 28 06.5	-0.8
ARRO	**Arrone**	**0.40**	**238**	P	Pb		02 28 00.1	-0.8
ARRO				S	Sb		02 28 06.8	-0.4
ARRO				AML	AML			
	comp=E,3165μm,0.2s							
ARRO				AML	AML			
	comp=N,3890μm,0.2s							
ARRO				AML	AML			
	comp=E,3415μm,1.4s							
ARRO				AML	AML			
	comp=N,4135μm,1.0s							
SEF1	**Sefro**	**0.41**	**330**	P	Pg		02 27 59.9	+0.5
SEF1				S	Sb		02 28 06.5	-0.9
SEF1				AML	AML			
	comp=E,4520μm,0.7s							
SEF1				AML	AML			
	comp=N,4275μm,1.5s							
SEF1				AML	AML			
	comp=E,4525μm,0.7s							

SEF1				AML	AML			
	comp=N,4275μm,1.5s							
SEF1				AML	AML			
	comp=E,4525μm,0.7s							
SEF1				AML	AML			
	comp=N,2215μm,0.2s							
GIGS	**Gran Sasso**	**0.43**	**144**	P	Pg	02 28 00.3	+0.6	
GIGS				AML	AML			
	comp=E,859μm,1.3s							
GIGS				AML	AML			
	comp=N,1150μm,1.6s							
GIGS				AML	AML			
	comp=N,1150μm,1.6s							
GIGS				AML	AML			
	comp=E,1395μm,0.4s							
GIGS				AML	AML			
	comp=N,1152μm,1.6s							
SSM1	**San Severino M**	**0.43**	**355**	P	Pg	02 28 00.6	+0.7	
FIU1	**Fiuminata**	**0.45**	**331**	P	Pg	02 28 00.8	+0.7	
FIU1				S	Sb	02 28 08.1	-0.6	
AQU	**L'Aquila**	**0.46**	**164**	P	Pg	02 28 01.1	+0.7	
AQU				AML	AML			
	comp=E,3510μm,0.4s							
AQU				AML	AML			
	comp=N,4070μm,0.4s							
AQU				AML	AML			
	comp=N,3860μm,0.4s							
AQU				AML	AML			
	comp=E,3535μm,0.4s							
AQU				AML	AML			
	comp=N,4065μm,0.4s							
AQU				AML	AML			
	comp=E,3470μm,0.6s							
AQU				AML	AML			
	comp=N,4040μm,0.3s							
ASSB	**Assisi San Ben**	**0.48**	**301**	P	Pg	02 28 01.2	+0.4	
ASSB				S	Sb	02 28 09.0	-0.8	
ASSB				AML	AML			
	comp=E,3450μm,0.2s							
ASSB				AML	AML			
	comp=N,2845μm,0.2s							
MTL1	**Matelica**	**0.49**	**341**	P	Pg	02 28 01.5	+0.6	
SNTG	**Esanatoglia**	**0.51**	**336**	P	Pg	02 28 01.4	+0.2	
SNTG				S	Sb	02 28 09.7	-0.6	
SNTG				AML	AML			
	comp=E,1170μm,1.4s							
SNTG				AML	AML			
	comp=N,1215μm,0.2s							
SNTG				AML	AML			
	comp=E,489μm,0.2s							
TRTR	**Tortoreto Alta**	**0.51**	**88**	P	Pb	02 28 02.9	+0.2	
CESX	**Cesi**	**0.51**	**249**	P	Pb	02 28 02.4	-0.4	
FIAM	**Fiamignano**	**0.53**	**189**	P	Pg	02 28 02.1	+0.4	
FIAM				S	Sb	02 28 10.6	-0.5	
EL6	**Elcito**	**0.54**	**350**	P	Pg	02 28 02.4	+0.5	
CADA	**Capodarco di F**	**0.56**	**44**	P	Pb	02 28 04.4	+0.8	
ATCC	**AVT- Casa Cast**	**0.58**	**312**	P	Pg	02 28 03.0	+0.4	
ATCC				S	Sb	02 28 12.4	0.0	
ATCC				AML	AML			
	comp=E,2270μm,0.8s							
ATCC				AML	AML			
	comp=N,2410μm,0.5s							
ATCC				AML	AML			
	comp=E,2265μm,0.8s							
FAGN	**Fagnano**	**0.59**	**153**	P	Pg	02 28 02.6	-0.3	
FOSV	**Fossato di Vic**	**0.60**	**326**	P	Pg	02 28 03.5	+0.4	
FOSV				AML	AML			
	comp=E,1345μm,0.3s							
FOSV				AML	AML			
	comp=N,1715μm,0.3s							
FOSV				AML	AML			
	comp=E,1350μm,0.3s							
FOSV				AML	AML			
	comp=N,1713μm,0.3s							
VCEL	**Villa Celiera**	**0.60**	**131**	P	Pg	02 28 03.5	+0.4	
PP3	**Marolino**	**0.65**	**26**	P	Pb	02 28 05.4	+0.3	
PP3				AML	AML			
	comp=E,5805μm,0.7s							
PP3				AML	AML			
	comp=N,6175μm,0.3s							
PP3				AML	AML			
	comp=E,5535μm,0.7s							
PP3				AML	AML			
	comp=N,6695μm,0.5s							
PP3				AML	AML			
	comp=E,5810μm,0.7s							
PP3				AML	AML			
	comp=E,5540μm,0.7s							
PP3				AML	AML			
	comp=N,6700μm,0.5s							
MURB	**Monte Urbino**	**0.69**	**312**	P	Pg	02 28 05.3	+0.4	
MURB				AML	AML			
	comp=E,2830μm,0.3s							
MURB				AML	AML			
	comp=N,2995μm,1.0s							
MURB				AML	AML			
	comp=N,3140μm,1.0s							
MURB				AML	AML			
	comp=E,2825μm,0.4s							
MURB				AML	AML			
	comp=N,2990μm,1.0s							
MURB				AML	AML			
	comp=E,3130μm,0.4s							
T0110	**Collepietro**	**0.70**	**144**	P	Pg	02 28 04.6	-0.3	
ARVD	**Arcevia**	**0.73**	**344**	P	Pg	02 28 06.0	+0.4	
ARVD				AML	AML			
	comp=E,558μm,0.2s							
ARVD				AML	AML			
	comp=N,541μm,0.6s							
ATFO	**Monte Foce - G**	**0.75**	**320**	P	Pg	02 28 05.9	+0.1	
ATTE	**AVT- Monte Tez**	**0.76**	**302**	P	Pb	02 28 07.3	+0.3	
SRES	**S.Oreste - Sor**	**0.77**	**224**	P	Pg	02 28 06.5	+0.3	
AOI	**Ancona**	**0.80**	**20**	P	Pb	02 28 07.4	-0.3	
MGAB	**Montegabbione**	**0.83**	**279**	P	Pb	02 28 08.5	+0.3	
MGAB				AML	AML			
	comp=E,1450μm,0.8s							
MGAB				AML	AML			
	comp=N,1395μm,0.5s							
MGAB				AML	AML			
	comp=E,1520μm,1.2s							
MGAB				AML	AML			
	comp=E,1445μm,0.8s							
MGAB				AML	AML			
	comp=N,1390μm,0.5s							
MGAB				AML	AML			
	comp=N,1480μm,1.2s							
ATVO	**AVT- Monte Val**	**0.84**	**315**	P	Pg	02 28 07.5	-0.1	
CERT	**Cerreto**	**0.86**	**192**	P	Pb	02 28 09.0	+0.1	
CERT				AML	AML			
	comp=N,974μm,0.4s							
CERT				AML	AML			
	comp=E,1335μm,0.4s							
MPAG	**Monte Paganucc**	**0.90**	**338**	P	Pb	02 28 09.2	-0.3	
NARO	**Abbazia di Nar**	**0.94**	**330**	P	Pg	02 28 09.2	-0.3	
SACS	**San Casciano d**	**0.97**	**274**	P	Pb	02 28 10.6	0.0	
GUAR	**Guarcino**	**1.00**	**176**	P	Pn	02 28 12.0	0.0	
CAFI	**Castiglion Fio**	**1.07**	**300**	P	Pg	02 28 11.9	0.0	
MCIV	**Monte Civitell**	**1.14**	**270**	P	Pn	02 28 14.2	+0.2	
TRIF	**Trifonti**	**1.73**	**281**	AML	AML			
	comp=N,101μm,1.1s							
TRIF				AML	AML			
	comp=E,95μm,0.6s							

ROM 24 02:28:02.2±0.1, 42°.798N±0°.004×13°.161E±0°.009, h8km, ML3.1/17, Error ellipse: s-maj=0.5km s-min=0.5km az=253.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FEMA	**Monte Fema**	**0.18**	**334**	P	Pg	02 28 06.6	+0.6
FEMA				S	Sg	02 28 09.8	+1.1
FEMA				AML	AML		
	comp=E,16150μm,0.5s						
FEMA				AML	AML		
	comp=N,13100μm,0.5s						
FEMA				AML	AML		
	comp=E,16100μm,0.5s						
LNSS	**Leonessa**	**0.21**	**205**	P	Pg	02 28 07.5	+0.9
LNSS				S	Sg	02 28 11.5	+2.0
LNSS				AML	AML		
	comp=E,25000μm,0.2s						
LNSS				AML	AML		
	comp=N,18750μm,0.7s						
LNSS				AML	AML		
	comp=E,49700μm,0.4s						
LNSS				AML	AML		
	comp=N,34100μm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**347**	P	Pg	02 28 07.6	+0.4
FDMO				S	Sg	02 28 11.5	+1.1
FDMO				AML	AML		
	comp=N,4640μm,0.2s						
FDMO				AML	AML		
	comp=E,5635μm,0.3s						
CESI	**CESI - Serrava**	**0.28**	**318**	P	Pg	02 28 08.6	+0.8
CESI				S	Sg	02 28 13.0	+1.4
CESI				AML	AML		
	comp=E,10045μm,0.2s						
CESI				AML	AML		
	comp=N,18850μm,0.2s						
RM33	**Pellescritta (**	**0.29**	**172**	P	Pb	02 28 09.1	-0.7
RM33				S	Sb	02 28 13.6	-1.2
GUMA	**Gualdo di Mace**	**0.29**	**26**	P	Pg	02 28 08.8	+0.7
GUMA				S	Sb	02 28 13.7	-1.2
GUMA				AML	AML		
	comp=E,15200μm,0.4s						
GUMA				AML	AML		
	comp=N,17350μm,0.3s						
GUMA				AML	AML		
	comp=N,17300μm,0.4s						
GUMA				AML	AML		
	comp=E,15700μm,0.4s						
GUMA				AML	AML		
	comp=N,18950μm,1.6s						
GUMA				AML	AML		
	comp=E,15250μm,0.4s						
ARRO	**Arrone**	**0.36**	**233**	P	Pg	02 28 10.0	+0.6
ARRO				AML	AML		
	comp=E,3165μm,0.2s						
ARRO				AML	AML		
	comp=N,3890μm,0.2s						
ARRO				AML	AML		
	comp=E,3415μm,1.4s						
ARRO				AML	AML		
	comp=N,4135μm,1.0s						
TERO	**Teramo**	**0.37**	**118**	P	Pg	02 28 09.7	+0.2
TERO				S	Sg	02 28 15.3	+1.0
TERO				AML	AML		
	comp=E,5495μm,0.2s						
TERO				AML	AML		
	comp=N,7490μm,0.5s						
TERO				AML	AML		
	comp=E,6070μm,0.2s						
TERO				AML	AML		
	comp=N,7980μm,0.5s						
TERO				AML	AML		
	comp=E,5500μm,0.2s						
TERO				AML	AML		
	comp=N,7620μm,1.2s						
TERO				AML	AML		
	comp=N,8045μm,1.2s						
TERO				AML	AML		
	comp=N,11520μm,0.5s						
TERO				AML	AML		
	comp=E,9140μm,0.4s						
TERO				AML	AML		
	comp=E,8545μm,0.4s						
TERO				AML	AML		
	comp=N,12100μm,0.5s						
SEF1	**Sefro**	**0.38**	**336**	P	Pg	02 28 10.2	+0.5
SEF1				S	Sg	02 28 16.1	+1.3
SEF1				AML	AML		
	comp=E,4520μm,0.7s						
SEF1				AML	AML		
	comp=E,4525μm,0.7s						
SEF1				AML	AML		
	comp=N,4275μm,1.5s						
SEF1				AML	AML		
	comp=E,4525μm,0.7s						
SEF1				AML	AML		
	comp=N,4275μm,1.5s						
MDAR	**Monte D'Aria**	**0.40**	**358**	P	Pg	02 28 10.2	+0.2
MDAR				S	Sg	02 28 16.4	+1.2
PIO1	**Pioraco**	**0.40**	**341**	P	Pb	02 28 11.5	-0.1
PIO1				S	Sb	02 28 18.2	+0.2
MNTP	**Montappone**	**0.41**	**34**	P	Pb	02 28 11.1	-0.6
MNTP				S	Sb	02 28 18.6	+0.5
OFFI	**Offida**	**0.41**	**70**	P	Pb	02 28 11.3	-0.4
OFFI				AML	AML		
	comp=E,5510μm,0.4s						
OFFI				AML	AML		
	comp=N,5990μm,0.6s						
SSM1	**San Severino M**	**0.43**	**2**	P	Pg	02 28 11.0	+0.4
ASSB	**Assisi San Ben**	**0.44**	**304**	P	Pg	02 28 11.1	+0.3
ASSB				S	Sb	02 28 18.2	-1.0
ASSB				AML	AML		
	comp=N,2845μm,0.2s						
ASSB				AML	AML		
	comp=E,3450μm,0.2s						
GIGS	**Gran Sasso**	**0.46**	**139**	P	Pg	02 28 11.4	+0.3
GIGS				AML	AML		
	comp=N,1150μm,1.6s						
GIGS				AML	AML		
	comp=E,859μm,1.3s						
GIGS				AML	AML		
	comp=N,1150μm,1.6s						
GIGS				AML	AML		
	comp=E,1395μm,0.4s						
GIGS				AML	AML		
	comp=N,1152μm,1.6s						
AQU	**L'Aquila**	**0.48**	**158**	P	Pg	02 28 11.9	+0.4
AQU				AML	AML		
	comp=E,3510μm,0.4s						
AQU				AML	AML		
	comp=N,4070μm,0.4s						
AQU				AML	AML		
	comp=N,3860μm,0.4s						
AQU				AML	AML		
	comp=E,3535μm,0.4s						
AQU				AML	AML		
	comp=N,4065μm,0.4s						
AQU				AML	AML		
	comp=E,3470μm,0.6s						
AQU				AML	AML		
	comp=N,4040μm,0.3s						
SNTG	**Esanatoglia**	**0.48**	**341**	P	Pg	02 28 11.7	+0.1
SNTG				S	Sb	02 28 19.9	-0.5
SNTG				AML	AML		
	comp=E,1170μm,1.4s						
SNTG				AML	AML		
	comp=N,1215μm,0.2s						
TRE1	**Treia**	**0.53**	**12**	P	Pg	02 28 12.3	-0.1
FIAM	**Fiamignano**	**0.53**	**184**	P	Pg	02 28 12.8	+0.3
FIAM				S	Sb	02 28 20.7	-1.0
EL6	**Elcito**	**0.53**	**355**	P	Pg	02 28 13.1	+0.5
ATCC	**AVT- Casa Cast**	**0.54**	**316**	P	Pg	02 28 13.4	+0.6
ATCC				S	Sb	02 28 22.1	0.0
ATCC				AML	AML		
	comp=E,2270μm,0.8s						
ATCC				AML	AML		
	comp=N,2410μm,0.5s						
ATCC				AML	AML		
	comp=N,2415μm,0.5s						
TRTR	**Tortoreto Alta**	**0.55**	**89**	P	Pb	02 28 14.1	-0.1
FOSV	**Fossato di Vic**	**0.58**	**330**	P	Pg	02 28 13.0	-0.4
FOSV				S	Sb	02 28 22.6	-0.4
FOSV				AML	AML		
	comp=E,1345μm,0.3s						
FOSV				AML	AML		
	comp=N,1715μm,0.3s						
FOSV				AML	AML		
	comp=E,1350μm,0.3s						
FOSV				AML	AML		
	comp=N,1712μm,0.3s						
CADA	**Capodarco di F**	**0.59**	**48**	P	Pb	02 28 15.2	+0.3
CIMA	**Civitanova Mar**	**0.63**	**36**	P	Pb	02 28 15.8	+0.3
MURB	**Monte Urbino**	**0.66**	**315**	P	Pg	02 28 15.3	+0.3
MURB				AML	AML		
	comp=E,2830μm,0.3s						
MURB				AML	AML		
	comp=N,2995μm,1.0s						
MURB				AML	AML		
	comp=E,2825μm,0.3s						
MURB				AML	AML		
	comp=N,2990μm,1.0s						
MURB				AML	AML		
	comp=N,3140μm,1.0s						
MURB				AML	AML		
	comp=E,3130μm,0.4s						
MURB				AML	AML		
	comp=E,2825μm,0.4s						
PP3	**Marolino**	**0.67**	**29**	P	Pb	02 28 16.1	0.0
PP3				AML	AML		
	comp=E,5805μm,0.7s						
PP3				AML	AML		
	comp=N,6175μm,0.3s						
PP3				AML	AML		
	comp=E,5535μm,0.7s						
PP3				AML	AML		
	comp=N,6695μm,0.5s						
PP3				AML	AML		
	comp=N,6175μm,0.4s						
PP3				AML	AML		
	comp=E,5540μm,0.7s						
PP3				AML	AML		
	comp=N,6700μm,0.5s						
PP3				AML	AML		
	comp=E,5810μm,0.7s						
SSFR	**Montelago di S**	**0.70**	**337**	P	Pg	02 28 15.7	+0.1
ATFO	**Monte Foce - G**	**0.71**	**323**	P	Pb	02 28 16.8	-0.2
ARVD	**Arcevia**	**0.72**	**347**	AML	AML		
	comp=E,558μm,0.2s						
ARVD				AML	AML		
	comp=N,541μm,0.6s						
ARVD				AML	AML		
	comp=N,542μm,0.6s						
SRES	**S.Oreste - Sor**	**0.74**	**221**	P	Pg	02 28 16.6	+0.2
MGAB	**Montegabbione**	**0.78**	**279**	P	Pb	02 28 17.9	-0.2
MGAB				AML	AML		
	comp=E,1450μm,0.8s						
MGAB				AML	AML		
	comp=N,1395μm,0.5s						
MGAB				AML	AML		
	comp=E,1445μm,0.8s						
MGAB				AML	AML		
	comp=N,1480μm,1.2s						
MGAB				AML	AML		
	comp=E,1520μm,1.2s						
MGAB				AML	AML		
	comp=N,1390μm,0.5s						
ATVO	**AVT- Monte Val**	**0.80**	**317**	P	Pb	02 28 18.2	-0.3
AOI	**Ancona**	**0.82**	**23**	P	Pb	02 28 18.4	-0.3
ATPI	**Pietralunga -**	**0.86**	**320**	P	Pb	02 28 19.3	-0.1
CERT	**Cerreto**	**0.86**	**189**	P	Pb	02 28 19.2	-0.2
CERT				AML	AML		
	comp=E,1335μm,0.4s						
CERT				AML	AML		
	comp=N,974μm,0.4s						
MPAG	**Monte Paganucc**	**0.88**	**341**	P	Pg	02 28 19.4	+0.3
SACS	**San Casciano d**	**0.92**	**274**	P	Pb	02 28 20.6	+0.1
TRIF	**Trifonti**	**1.69**	**282**	AML	AML		
	comp=E,95μm,0.6s						
TRIF				AML	AML		
	comp=N,101μm,1.1s						

ROM 24 02:28:58.3±0.1, 42°.620N±0°.005×13°.266E±0°.009, h11km, ML3.2/7, 6C, Error ellipse: s-maj=0.6km s-min=0.5km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.12**	**199**	⇑P	Pg	02 29 01.7	+0.5
RM33				S	Sg	02 29 04.2	+0.8
RM33				AML	AML		
	comp=E,33500μm,0.7s						
RM33				AML	AML		
	comp=N,31600μm,0.7s						
RM33				AML	AML		
	comp=N,30600μm,0.7s						
RM33				AML	AML		
	comp=N,30600μm,0.7s						
RM33				AML	AML		
	comp=E,32400μm,0.6s						
RM33				AML	AML		
	comp=N,31550μm,0.7s						
RM33				AML	AML		
	comp=E,23204μm,0.3s						
RM33				AML	AML		
	comp=E,23826μm,0.2s						
RM33				AML	AML		
	comp=N,23011μm,0.2s						
RM33				AML	AML		
	comp=N,25692μm,0.2s						
LNSS	**Leonessa**	**0.17**	**264**	⇑P	Pg	02 29 02.4	+0.3
LNSS				S	Sg	02 29 05.5	+0.8
LNSS				AML	AML		
	comp=N,34100μm,0.2s						
LNSS				AML	AML		
	comp=E,49700μm,0.4s						
TERO	**Teramo**	**0.25**	**89**	P	Pg	02 29 03.4	0.0
TERO				S	Sg	02 29 07.2	+0.3
TERO				AML	AML		
	comp=E,8545μm,0.4s						
TERO				AML	AML		
	comp=N,11535μm,0.5s						
TERO				AML	AML		
	comp=E,9140μm,0.4s						
TERO				AML	AML		
	comp=N,11540μm,0.5s						
TERO				AML	AML		
	comp=N,12100μm,0.5s						
TERO				AML	AML		
	comp=N,11520μm,0.5s						
TERO				AML	AML		
	comp=N,11550μm,0.5s						
TERO				AML	AML		
	comp=E,6015μm,0.2s						
TERO				AML	AML		
	comp=N,7028μm,0.5s						
GIGS	**Gran Sasso**	**0.28**	**127**	P	Pg	02 29 04.0	0.0
GIGS				S	Sg	02 29 08.5	+0.6
GIGS				AML	AML		
	comp=E,1400μm,0.4s						
GIGS				AML	AML		
	comp=N,1162μm,0.6s						
GIGS				AML	AML		
	comp=N,1164μm,0.6s						
GIGS				AML	AML		
	comp=N,1163μm,0.6s						
GIGS				AML	AML		
	comp=E,1395μm,0.4s						
AQU	**L'Aquila**	**0.28**	**159**	P	Pg	02 29 04.4	+0.3
AQU				S	Sb	02 29 09.3	-0.9
AQU				AML	AML		
	comp=E,3510μm,0.6s						
AQU				AML	AML		
	comp=N,4020μm,0.3s						
AQU				AML	AML		
	comp=E,3590μm,0.6s						
AQU				AML	AML		
	comp=N,4040μm,0.3s						
AQU				AML	AML		
	comp=N,3181μm,0.3s						
FIAM	**Fiamignano**	**0.37**	**197**	P	Pg	02 29 05.8	+0.2
FIAM				S	Sg	02 29 11.4	+0.8
FIAM				AML	AML		
	comp=E,3600μm,0.8s						
FIAM				AML	AML		
	comp=N,3200μm,0.6s						
ARRO	**Arrone**	**0.37**	**264**	⇑P	Pg	02 29 05.7	+0.1
ARRO				AML	AML		
	comp=E,4180μm,1.6s						
ARRO				AML	AML		
	comp=N,4995μm,0.2s						
ARRO				AML	AML		
	comp=E,4185μm,1.6s						
ARRO				AML	AML		
	comp=E,2814μm,0.2s						
ARRO				AML	AML		
	comp=N,4135μm,1.0s						
FEMA	**Monte Fema**	**0.38**	**335**	P	Pg	02 29 05.5	-0.4
FEMA				S	Sg	02 29 11.5	+0.6
FDMO	**Fiordimonte**	**0.44**	**343**	P	Pg	02 29 06.5	-0.4
FDMO				S	Sg	02 29 13.3	+0.6
FDMO				AML	AML		
	comp=N,2290μm,0.5s						
FDMO				AML	AML		
	comp=E,2405μm,0.2s						
OFFI	**Offida**	**0.44**	**44**	⇑P	Pb	02 29 07.6	-0.5
OFFI				AML	AML		
	comp=N,9485μm,0.7s						
OFFI				AML	AML		
	comp=E,10770μm,0.5s						
OFFI				AML	AML		
	comp=E,8378μm,0.2s						
GUMA	**Gualdo di Mace**	**0.45**	**7**	⇑P	Pg	02 29 07.1	+0.1
GUMA				S	Sb	02 29 14.2	-0.8
GUMA				AML	AML		

comp=E,19450µm,1.0s
GUMA AML AML
comp=N,17600µm,0.6s
GUMA AML AML
comp=E,26700µm,0.4s
GUMA AML AML
comp=N,20500µm,0.4s
GUMA AML AML
comp=E,19500µm,1.0s
GUMA AML AML
comp=N,17550µm,0.6s
GUMA AML AML
comp=E,18321µm,0.4s
CESI CESI - Serrava 0.47 325 P Pg 02 29 07.4 -0.1
CESI S Sg 02 29 14.6 +0.9
CESI AML AML
comp=N,3155µm,1.4s
CESI AML AML
comp=E,2070µm,0.4s
VCEL Villa Celiera 0.48 118 P Pg 02 29 08.0 +0.3
VCEL S Sb 02 29 16.1 +0.1
VCEL AML AML
comp=E,4670µm,0.4s
VCEL AML AML
comp=N,3810µm,0.3s
VCEL AML AML
comp=E,4675µm,0.4s
CESX Cesi 0.51 269 P Pg 02 29 07.8 -0.4
CESX S Sb 02 29 15.9 -0.7
CESX AML AML
comp=N,3250µm,0.2s
CESX AML AML
comp=E,1985µm,1.3s
CESX AML AML
comp=N,2519µm,0.2s
TRTR Tortoreto Alta 0.51 68 ⇑P Pb 02 29 09.3 0.0
TRTR AML AML
comp=E,8855µm,0.4s
TRTR AML AML
comp=N,7480µm,0.5s
MNTP Montappone 0.54 16 P Pg 02 29 08.9 +0.2
T0110 Collepietro 0.55 136 P Pg 02 29 09.2 +0.3
T0110 S Sb 02 29 17.4 -0.5
T0110 AML AML
comp=E,2965µm,0.5s
T0110 AML AML
comp=N,3105µm,0.3s
SEF1 Sefro 0.58 336 P Pg 02 29 08.5 -1.0
MDAR Monte D'Aria 0.58 351 P Pg 02 29 08.9 -0.7
ASSB Assisi San Ben 0.61 314 P Pg 02 29 09.9 -0.3
ASSB S Sb 02 29 19.1 -0.7
ASSB AML AML
comp=E,1680µm,0.1s
ASSB AML AML
comp=N,1805µm,1.4s
SRES S.Oreste - Sor 0.68 236 P Pg 02 29 11.2 -0.2
SRES AML AML
comp=E,1046µm,0.4s
SRES AML AML
comp=N,946µm,0.6s
SNTG Esanatoglia 0.68 339 P Pg 02 29 10.9 -0.5
SNTG AML AML
comp=E,946µm,0.6s
SNTG AML AML
comp=N,852µm,0.8s
CADA Capodarco di F 0.68 32 P Pb 02 29 12.6 +0.4
CERT Cerreto 0.70 198 P Pg 02 29 11.6 -0.2
CERT AML AML
comp=E,2640µm,0.6s
CERT AML AML
comp=N,1945µm,0.9s
MTCE Montecelio 0.71 213 P Pg 02 29 11.6 -0.5
MTCE AML AML
comp=E,1760µm,0.5s
MTCE AML AML
comp=N,1049µm,0.7s
EL6 Elcito 0.72 350 P Pg 02 29 11.6 -0.7
EL6 S Sb 02 29 23.7 +0.8
ATCC AVT- Casa Cast 0.73 321 P Pg 02 29 12.2 -0.1
ATCC AML AML
comp=E,1550µm,0.4s
ATCC AML AML
comp=N,1615µm,0.6s
CIMA Civitanova Mar 0.75 23 P Pb 02 29 13.6 +0.3
FOSV Fossato di Vic 0.77 331 AML AML
comp=E,678µm,0.3s
FOSV AML AML
comp=E,678µm,0.3s
FOSV AML AML
comp=N,10870µm,0.5s
FOSV AML AML
comp=N,10875µm,0.5s
PP3 Marolino 0.80 18 P Pg 02 29 13.8 +0.1
PP3 AML AML
comp=E,5075µm,0.4s
PP3 AML AML
comp=E,4910µm,0.4s
PP3 AML AML
comp=N,3870µm,1.3s
PP3 AML AML
comp=N,3875µm,1.3s
PP3 AML AML
comp=N,3755µm,0.4s
SSFR Montelago di S 0.89 337 P Pb 02 29 16.1 +0.2
MGAB Montegabbione 0.90 289 P Pb 02 29 16.1 +0.2
MGAB AML AML
comp=E,1815µm,0.5s
MGAB AML AML
comp=N,1345µm,0.3s
MGAB AML AML
comp=N,1720µm,0.3s
MGAB AML AML
comp=E,2105µm,0.5s
ATFO Monte Foce - G 0.90 326 P Pg 02 29 15.4 -0.3
ARVD Arcevia 0.91 345 P Pg 02 29 15.2 -0.6
ARVD AML AML
comp=N,692µm,0.3s
ARVD AML AML
comp=E,760µm,0.7s
ARVD AML AML
comp=N,693µm,0.3s
RMP Rome, Mte Porz 0.91 208 P Pn 02 29 16.9 -0.2
RMP AML AML
comp=N,1710µm,0.5s
RMP AML AML
comp=E,1560µm,0.6s
VIVA Pratoni del Vi 0.94 203 AML AML
comp=N,3485µm,0.5s
VIVA AML AML
comp=E,2655µm,0.4s
AOI Ancona 0.96 15 P Pg 02 29 16.3 -0.5
AOI AML AML
comp=E,986µm,1.6s
AOI AML AML
comp=N,1150µm,1.6s
AOI AML AML
comp=E,986µm,1.6s
ATVA AVT- Monte Val 0.98 313 P Pb 02 29 17.4 +0.1
FRON Frontone 0.98 336 P Pg 02 29 16.4 -0.8
SACS San Casciano d 1.02 283 P Pn 02 29 18.8 +0.1
SACS AML AML
comp=E,861µm,0.7s
SACS AML AML
comp=N,994µm,0.4s
GIUL Giuliano Di Ro 1.06 180 P Pn 02 29 19.6 +0.4
GIUL AML AML
comp=N,587µm,0.7s
GIUL AML AML
comp=E,382µm,0.5s
MPAG Monte Paganucc 1.07 340 P Pg 02 29 18.4 -0.6
TOLF Tolfa 1.09 240 P Pb 02 29 18.7 -0.5
TOLF AML AML
comp=N,510µm,0.5s
TOLF AML AML
comp=E,560µm,0.5s
FSSB Fossombrone 1.13 342 P Pb 02 29 19.1 -0.7
FSSB AML AML
comp=E,2455µm,0.5s
FSSB AML AML
comp=N,2885µm,0.4s
MCIV Monte Civitell 1.18 278 P Pb 02 29 20.6 -0.2
MCIV AML AML
comp=N,314µm,1.0s
MCIV AML AML
comp=E,452µm,0.3s
CAFI Castiglion Fio 1.19 307 P Pn 02 29 21.0 0.0

SF04 Casetta 1.20 281 P Pb 02 29 21.0 -0.1
SF04 AML AML
comp=E,796µm,0.3s
SF04 AML AML
comp=N,564µm,0.3s
ARCI Arcidosso 1.34 281 P Pg 02 29 23.8 -0.2
TRIF Trifonti 1.81 287 P Pn 02 29 30.1 +0.6

ROM ***24*** *02:30:50.1±0.1, 42°.832N±0°.004×13°.144E±0°.009, h8km, ML3.3/44, Error ellipse: s-maj=0.7km s-min=0.2km az=92.0*
PRU ***24*** *02:30:51.5±0.0, 42°.85N×13°.63E, h0km*
ISC 24 02:30:50.6±0.9, 42°.83N±0°.02×13°.14E±0°.03, h14km±6km, n86, σ1.68/95, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.15**	**334**	*eP*	**Pg**	**02 30 53.8**	**-0.8**
FEMA				S	**Sg**	**02 30 57.0**	**-0.3**
FEMA				AML	AML		
	comp=N,46350µm,0.6s						
FEMA				AML	AML		
	comp=E,56550µm,1.5s						
FDMO	**Fiordimonte**	**0.21**	**350**	*eP*	**Pg**	**02 30 54.8**	**-0.6**
FDMO				S	**Sg**	**02 30 58.7**	**-0.1**
FDMO				AML	AML		
	comp=E,13100µm,0.7s						
FDMO				AML	AML		
	comp=N,22950µm,0.7s						
LNSS	**Leonessa**	**0.23**	**198**	P	**Pg**	**02 30 55.4**	**-0.4**
LNSS				S	**Sg**	**02 30 59.9**	**+0.6**
CESI	**CESI - Serrava**	**0.25**	**316**	*eP*	**Pg**	**02 30 55.6**	**-0.4**
CESI				S	**Sg**	**02 31 00.2**	**+0.5**
CESI				AML	AML		
	comp=E,14700µm,0.5s						
CESI				AML	AML		
	comp=N,33950µm,0.3s						
CSP1	**Cessapalombo**	**0.27**	**10**	*eP*	**Pg**	**02 30 56.0**	**-0.4**
CSP1				S	**Sg**	**02 31 00.2**	**-0.1**
RM33	**Pellescritta (**	**0.32**	**170**	AML	AML		
	comp=E,6325µm,0.9s						
RM33				AML	AML		
	comp=N,5845µm,0.3s						
RM33				AML	AML		
	comp=E,6445µm,0.9s						
RM33				AML	AML		
	comp=N,5645µm,1.5s						
SEF1	**Sefro**	**0.35**	**336**	*eP*	**Pg**	**02 30 57.3**	**-0.5**
SEF1				AML	AML		
	comp=E,17600µm,0.6s						
SEF1				AML	AML		
	comp=N,14500µm,0.3s						
SEF1				AML	AML		
	comp=N,14450µm,0.3s						
MDAR	**Monte D'Aria**	**0.37**	**0**	P	**Pg**	**02 30 57.5**	**-0.6**
MDAR				S	**Sg**	**02 31 03.7**	**+0.5**
ARRO	**Arrone**	**0.37**	**228**	*eP*	**Pg**	**02 30 58.3**	**+0.2**
PIO1	**Pioraco**	**0.37**	**342**	*eP*	**Pb**	**02 30 58.7**	**-0.2**
FIU1	**Fiuminata**	**0.39**	**337**	*eP*	**Pg**	**02 30 58.3**	**-0.3**
MNTP	**Montappone**	**0.39**	**38**	*eP*	**Pg**	**02 30 58.6**	**+0.1**
SSM1	**San Severino M**	**0.40**	**4**	*eP*	**Pg**	**02 30 58.2**	**-0.5**
ASSB	**Assisi San Ben**	**0.41**	**302**	*eP*	**Pg**	**02 30 58.5**	**-0.4**
ASSB				S	**Sb**	**02 31 05.4**	**-0.4**
ASSB				AML	AML		
	comp=N,4370µm,0.7s						
ASSB				AML	AML		
	comp=N,4365µm,0.7s						
ASSB				AML	AML		
	comp=E,6120µm,0.8s						
GAG1	**Gagliole**	**0.42**	**353**	*eP*	**Pg**	**02 30 58.6**	**-0.3**
GAG1				AML	AML		
	comp=N,21900µm,0.5s						
GAG1				AML	AML		
	comp=N,21900µm,0.5s						
GAG1				AML	AML		
	comp=E,16000µm,0.9s						
OFFI	**Offida**	**0.42**	**75**	*eP*	**Pg**	**02 30 58.9**	**0.0**
OFFI				AML	AML		
	comp=E,6690µm,1.1s						
OFFI				AML	AML		
	comp=N,8680µm,1.6s						
SNTG	**Esanatoglia**	**0.45**	**341**	*eP*	**Pg**	**02 30 59.1**	**-0.5**
SNTG				S	**Sb**	**02 31 06.7**	**-0.3**
SNTG				AML	AML		
	comp=E,634µm,1.6s						
SNTG				AML	AML		
	comp=N,522µm,0.3s						
SNTG				AML	AML		
	comp=E,634µm,1.6s						
SNTG				AML	AML		
	comp=N,4510µm,0.3s						
SNTG				AML	AML		
	comp=E,4045µm,1.0s						
SNTG				AML	AML		
	comp=N,522µm,0.3s						
CESX	**Cesi**	**0.47**	**243**	*eP*	**Pg**	**02 30 59.5**	**-0.4**
CESX				AML	AML		
	comp=N,3070µm,0.7s						
CESX				AML	AML		
	comp=E,3030µm,0.6s						
GIGS	**Gran Sasso**	**0.49**	**140**	*eP*	**Pg**	**02 31 00.1**	**-0.3**
TRE1	**Treia**	**0.50**	**15**	*eP*	**Pb**	**02 31 01.4**	**+0.3**
EL6	**Elcito**	**0.50**	**357**	*eP*	**Pg**	**02 31 00.1**	**-0.5**
EL6				AML	AML		
	comp=E,6910µm,0.5s						
EL6				AML	AML		
	comp=N,7020µm,0.6s						
EL6				AML	AML		
	comp=N,7025µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.51**	**315**	*eP*	**Pg**	**02 31 00.4**	**-0.4**
ATCC				AML	AML		
	comp=E,8635µm,0.9s						
ATCC				AML	AML		
	comp=N,6235µm,0.7s						
ATCC				AML	AML		
	comp=E,8670µm,0.9s						
FOSV	**Fossato di Vic**	**0.55**	**329**	*eP*	**Pg**	**02 31 00.8**	**-0.5**
FOSV				AML	AML		
	comp=E,5430µm,0.8s						
FOSV				AML	AML		
	comp=N,3985µm,0.6s						
FIAM	**Fiamignano**	**0.56**	**182**	*eP*	**Pg**	**02 31 00.8**	**-0.7**
MMUR	**Monte Murano**	**0.62**	**350**	*eP*	**Pg**	**02 31 02.6**	**-0.2**
MURB	**Monte Urbino**	**0.63**	**314**	*eP*	**Pg**	**02 31 02.5**	**-0.4**
MURB				AML	AML		
	comp=E,6895µm,0.9s						
MURB				AML	AML		
	comp=N,6400µm,1.5s						
MURB				AML	AML		
	comp=N,7025µm,1.5s						
MURB				AML	AML		
	comp=E,6900µm,0.9s						
MURB				AML	AML		
	comp=E,7090µm,0.9s						
PP3	**Marolino**	**0.65**	**32**	*eP*	**Pg**	**02 31 03.4**	**+0.1**
PP3				AML	AML		
	comp=N,7615µm,0.4s						
PP3				AML	AML		
	comp=E,5905µm,0.5s						
PP3				AML	AML		
	comp=N,7610µm,0.4s						
PP3				AML	AML		
	comp=E,5835µm,0.5s						
PP3				AML	AML		
	comp=N,7200µm,0.4s						
SSFR	**Montelago di S**	**0.66**	**337**	*eP*	**Pg**	**02 31 03.1**	**-0.5**
SSFR				AML	AML		
	comp=N,3660µm,0.7s						
SSFR				AML	AML		
	comp=E,3480µm,0.2s						
SSFR				AML	AML		
	comp=E,3730µm,0.6s						
SSFR				AML	AML		
	comp=N,2925µm,0.2s						
ATFO	**Monte Foce - G**	**0.68**	**323**	*eP*	**Pg**	**02 31 03.4**	**-0.6**
ATFO				AML	AML		
	comp=N,2850µm,0.5s						
ATFO				AML	AML		
	comp=E,3150µm,0.7s						
ARVD	**Arcevia**	**0.69**	**348**	*eP*	**Pg**	**02 31 03.2**	**-0.8**
ARVD				AML	AML		
	comp=N,1775µm,1.0s						
ARVD				AML	AML		
	comp=E,1790µm,0.5s						
FRON	**Frontone**	**0.76**	**336**	⇑*i*P	**Pg**	**02 31 04.5**	**-0.8**
FRON				AML	AML		
	comp=N,2720µm,0.6s						
FRON				AML	AML		
	comp=E,1715µm,0.6s						
MGAB	**Montegabbione**	**0.76**	**277**	P	**Pb**	**02 31 05.7**	**+0.1**
MGAB				AML	AML		
	comp=E,3810µm,1.6s						
MGAB				AML	AML		
	comp=N,3405µm,0.6s						
MGAB				AML	AML		
	comp=E,3510µm,1.6s						
MGAB				AML	AML		
	comp=N,3355µm,0.6s						
ATVO	**AVT- Monte Val**	**0.77**	**316**	P	**Pg**	**02 31 04.8**	**-0.8**
ATVO				AML	AML		
	comp=E,1695µm,0.9s						
ATVO				AML	AML		
	comp=N,1675µm,0.7s						
COR1	**Corinaldo**	**0.81**	**353**	*eP*	**Pg**	**02 31 06.3**	**0.0**
COR1				AML	AML		
	comp=E,4450µm,0.6s						
COR1				AML	AML		
	comp=E,2358µm,0.6s						
COR1				AML	AML		
	comp=N,5125µm,0.7s						
COR1				AML	AML		
	comp=N,5215µm,0.7s						
ATPI	**Pietralunga -**	**0.83**	**319**	*eP*	**Pg**	**02 31 05.7**	**-0.9**
ATPI				AML	AML		
	comp=E,1880µm,0.6s						
ATPI				AML	AML		
	comp=N,1775µm,0.5s						
ATPI				AML	AML		
	comp=N,1780µm,0.5s						
ATPI				AML	AML		
	comp=E,1875µm,0.6s						
PIEI	**Pieia**	**0.84**	**328**	*eP*	**Pg**	**02 31 06.3**	**-0.5**
PIEI				AML	AML		
	comp=E,878µm,1.6s						
PIEI				AML	AML		
	comp=E,877µm,1.6s						
PIEI				AML	AML		
	comp=N,1325µm,1.6s						
MPAG	**Monte Paganucc**	**0.85**	**341**	*eP*	**Pg**	**02 31 06.4**	**-0.7**
MPAG				AML	AML		
	comp=E,1705µm,0.7s						
MPAG				AML	AML		
	comp=N,2370µm,0.6s						
MPAG				AML	AML		
	comp=N,2395µm,0.6s						
MPAG				AML	AML		
	comp=E,1715µm,0.8s						
MPAG				AML	AML		
	comp=N,2390µm,0.6s						
MPAG				AML	AML		
	comp=N,2365µm,0.5s						
NARO	**Abbazia di Nar**	**0.89**	**333**	*eP*	**Pg**	**02 31 06.9**	**-0.9**
NARO				AML	AML		
	comp=N,900µm,0.8s						
NARO				AML	AML		
	comp=N,901µm,0.8s						
NARO				AML	AML		
	comp=E,894µm,0.8s						
APEC	**Apecchio**	**0.90**	**325**	*eP*	**Pg**	**02 31 07.5**	**-0.5**
APEC				AML	AML		
	comp=N,2050µm,1.5s						
APEC				AML	AML		
	comp=N,2055µm,1.5s						
APEC				AML	AML		
	comp=E,2145µm,0.6s						
FSSB	**Fossombrone**	**0.91**	**343**	*eP*	**Pg**	**02 31 07.4**	**-0.7**
FSSB				AML	AML		
	comp=E,3540µm,0.4s						
FSSB				AML	AML		
	comp=N,4550µm,0.4s						
PE3	**Peglio**	**0.99**	**332**	*eP*	**Pb**	**02 31 09.4**	**-0.1**
CAFI	**Castiglion Fio**	**1.00**	**301**	*eP*	**Pb**	**02 31 09.6**	**0.0**
CAFI				AML	AML		
	comp=E,1195µm,0.8s						
CAFI				AML	AML		
	comp=N,1305µm,1.0s						
SSP9	**Sansepolcro**	**1.05**	**316**	*eP*	**Pn**	**02 31 10.9**	**+0.1**
PESA	**Pesaro**	**1.14**	**349**	*eP*	**Pb**	**02 31 11.3**	**-0.7**
PESA				AML	AML		
	comp=E,2485µm,0.9s						
PESA				AML	AML		
	comp=N,1650µm,1.0s						
POFI	**Posta Fibreno**	**1.19**	**159**	*eP*	**Pg**	**02 31 13.6**	**+0.1**
POFI				AML	AML		
	comp=E,532µm,1.0s						
POFI				AML	AML		
	comp=N,346µm,1.2s						
GIUL	**Giuliano Di Ro**	**1.27**	**176**	P	**Pg**	**02 31 15.1**	**+0.1**
GIUL				AML	AML		
	comp=E,312µm,1.3s						
GIUL				AML	AML		
	comp=N,534µm,1.0s						
CSNT	**Castellina Chi**	**1.50**	**296**	*eP*	**Pb**	**02 31 18.5**	**+0.3**
CSNT				AML	AML		
	comp=N,296µm,1.4s						
CSNT				AML	AML		
	comp=E,288µm,1.2s						
TRIF	**Trifonti**	**1.67**	**281**	*eP*	**Pb**	**02 31 20.4**	**-0.7**
TRIF				AML	AML		
	comp=N,194µm,1.1s						
TRIF				AML	AML		
	comp=E,169µm,1.0s						
SNAL	**S. Angelo Dei**	**2.45**	**140**	*eP*	**Pb**	**02 31 33.9**	**-0.5**
ROVR	**Rover Verones**	**3.19**	**333**	P	**Pn**	**02 31 42.6**	**+2.3**
DOSS	**Dosso del Somm**	**3.36**	**336**	*eP*	**Pn**	**02 31 45.2**	**+2.5**
SALO	**Salr**	**3.37**	**327**	*eP*	**Pn**	**02 31 45.4**	**+2.7**
LJU	**Ljubljana**	**3.37**	**17**	*eP*	**Pn**	**02 31 44.3**	**+1.6**
LJU				S	**Sb**	**02 32 27.0**	**-3.8**
LJU				AML	AML		
	comp=N,971µm,0.7s						
LJU				AML	AML		
	comp=E,767µm,0.7s						
MPRI	**Monte Prat**	**3.42**	**358**	*eP*	**Pn**	**02 31 44.6**	**+1.2**
MPRI				AML	AML		
	comp=E,164µm,0.8s						
MPRI				AML	AML		
	comp=N,316µm,0.5s						
STAL	**STALIGIAL**	**3.45**	**355**	*eP*	**Pn**	**02 31 44.6**	**+0.8**
STAL				AML	AML		
	comp=E,173µm,0.9s						
STAL				AML	AML		
	comp=N,131µm,0.8s						
MAGA	**Magasa**	**3.46**	**329**	*eP*	**Pn**	**02 31 46.0**	**+1.9**
MAGA				AML	AML		
	comp=N,154µm,1.3s						
MAGA				AML	AML		
	comp=E,360µm,0.7s						
CIMO	**Cimolais**	**3.52**	**352**	*eP*	**Pn**	**02 31 45.4**	**+0.6**
CIMO				AML	AML		
	comp=E,47µm,1.2s						
CIMO				AML	AML		
	comp=N,59µm,0.8s						
PTCC	**Patocco-Chiusa**	**3.58**	**2**	*eP*	**Pn**	**02 31 46.4**	**+0.7**
PTCC				AML	AML		
	comp=E,68µm,0.6s						
PTCC				AML	AML		
	comp=N,75µm,0.7s						
GAGG	**Gaggia**	**3.61**	**335**	*eP*	**Pn**	**02 31 48.7**	**+2.5**
ORI	**Oriolo Calabro**	**3.71**	**137**	P	**Pn**	**02 31 50.8**	**+3.3**
ORI				AML	AML		
	comp=E,224µm,0.2s						
ORI				AML	AML		
	comp=N,164µm,0.6s						
ACOM	**Acomizza, Ital**	**3.73**	**4**	*eP*	**Pn**	**02 31 49.6**	**+1.8**
ACOM				AML	AML		
	comp=E,111µm,0.4s						
ACOM				AML	AML		
	comp=N,118µm,0.7s						
ZOU	**Zoufplan**	**3.73**	**358**	*eP*	**Pn**	**02 31 49.0**	**+1.1**
ZOU				AML	AML		
	comp=E,176µm,0.9s						
ZOU				AML	AML		
	comp=E,174µm,1.0s						
ZOU				AML	AML		
	comp=N,176µm,1.0s						
ZOU				AML	AML		
	comp=N,156µm,1.3s						
OBKA	**Obir**	**3.82**	**15**	*ePn*	**Pn**	**02 31 48.5**	**-0.4**
	comp=N,12nm,0.6s						
MYKA	**Terra Mystica**	**3.82**	**5**	*ePn*	**Pn**	**02 31 50.7**	**+1.7**
	comp=N,0.8nm,0.2s						
KOSI	**Kohlern**	**3.85**	**342**	*eP*	**Pn**	**02 31 51.3**	**+1.9**

KOSI					AML	AML			
	comp=E,135µm,1.1s								
KOSI					AML	AML			
	comp=N,104µm,1.1s								
ABTA	**Abfaltersbach**	**3.95**	**354**		Pn	**Pn**	**02**	**31**	**52.7 +2.0**
	comp=N,22nm,0.5s,SNR=6.1								
SOKA	**Soboth**	**4.08**	**19**	*e*Pn		**Pn**	**02**	**31**	**54.5 +1.9**
	comp=N,1.6nm,0.4s								
RISI	**Rein**	**4.19**	**350**	*e*P		**Pn**	**02**	**31**	**57.2 +3.0**
KBA	**Koelnbreinsper**	**4.25**	**2**	*e*Pn		**Pn**	**02**	**31**	**57.3 +2.3**
	comp=N,0.3nm,0.1s								
MUGIO	**Muggio**	**4.27**	**318**	*e*P		**Pn**	**02**	**31**	**57.0 +1.9**
MUGIO					AML	AML			
	comp=N,28µm,1.5s								
MUGIO					AML	AML			
	comp=E,26µm,1.6s								
FETA	**Feichten**	**4.53**	**339**	*e*Pn		**Pn**	**02**	**32**	**03.4 +4.5**
	comp=E,4.4nm,0.6s								
WTTA	**Wattenberg**	**4.56**	**347**	*e*Pn		**Pn**	**02**	**32**	**02.7 +3.4**
	comp=E,9.0nm,0.5s								
SQTA	**Sankt Quirin**	**4.60**	**343**	*e*Pn		**Pn**	**02**	**32**	**03.8 +4.0**
	comp=E,2.8nm,0.3s								
SERS	**Sersale**	**4.64**	**143**	P		**Pn**	**02**	**32**	**04.0 +3.7**
WATA	**Walderalm**	**4.64**	**347**	Pn		**Pn**	**02**	**32**	**04.6 +4.3**
	comp=E,11nm,0.6s,SNR=6.7								
ARSA	**Arzberg**	**4.74**	**20**	*e*Pn		**Pn**	**02**	**32**	**02.0 +0.5**
	comp=E,2.6nm,0.4s								
MOTA	**Moosalm**	**4.74**	**343**	*e*Pn		**Pn**	**02**	**32**	**05.2 +3.5**
	comp=E,14nm,0.7s								
ERC	**Erice**	**4.80**	**185**	P		**Pg**	**02**	**32**	**18.6 -3.9**
BIOA	**Bad Ischl, Aus**	**4.88**	**4**	*e*Pn		**Pn**	**02**	**32**	**05.6 +2.1**
	comp=E,8.9nm,0.3s								
RETA	**Reutte**	**4.96**	**341**	*e*Pn		**Pn**	**02**	**32**	**07.7 +3.1**
	comp=E,0.7nm,0.2s								
DAVA	**Damuels**	**5.02**	**334**	*e*Pn		**Pn**	**02**	**32**	**08.7 +3.2**
	comp=E,5.1nm,0.5s								
MOA	**Molln**	**5.09**	**9**	*e*Pn		**Pn**	**02**	**32**	**08.4 +2.1**
	comp=E,6.1nm,0.6s								
RONA	**Rosalia, Austr**	**5.36**	**23**	*e*Pn		**Pn**	**02**	**32**	**12.1 +2.1**
	comp=E,0.6nm,0.2s								
CONA	**Conrad Observa**	**5.45**	**20**	*e*Pn		**Pn**	**02**	**32**	**13.1 +1.7**
	comp=E,1.0nm,0.2s								
CKRC	**Cesky Krumlov**	**6.05**	**7**	*e*SN		**Sn**	**02**	**33**	**28.2 -0.4**
KHC	**Kasperske Hory**	**6.31**	**3**	*e*PN		**Pn**	**02**	**32**	**24.5 +1.3**
KHC				*e*SN		**Sn**	**02**	**33**	**33.6 -1.5**

LJU 24 02:31:20.4, 45°.85N×15°.53E, h5km, ML0.2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CRES	**Cresnjev**	**0.06**	**242**	*i* Pg	Pg	02	31	21.9	0.0
CRES				*i* Sg	Sg	02	31	23.1	+0.2
CRES				IAML		02	31	23.4	
	comp=Z,3.6nm,0.0s								
GCIS	**Gornji Cirnik**	**0.07**	**79**	*i* Pg	Pg	02	31	22.1	+0.1
GCIS				*i* Sg	Sg	02	31	23.2	+0.1
GCIS				IAML		02	31	23.5	
	comp=Z,3.0nm,0.0s								
CESS	**Cesta pri Krsk**	**0.13**	**338**	*i* Sg	Sg	02	31	25.1	+0.3
CESS				IAML		02	31	25.3	
	comp=Z,2.8nm,0.1s								

ROM 24 02:31:39.1±0.1, 42°.803N±0°.004×13°.231E±0°.007, h9km, ML3.1/9, Error ellipse: s-maj=0.6km s-min=0.2km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
FEMA	**Monte Fema**	**0.21**	**320**	P	Pg	02	31	44.0	+0.6
FEMA				S	Sg	02	31	47.6	+1.2
FEMA				AML	AML				
	comp=E,16500µm,0.2s								
FEMA				AML	AML				
	comp=N,8655µm,0.4s								
FEMA				AML	AML				
	comp=E,36150µm,0.2s								
FEMA				AML	AML				
	comp=N,29150µm,1.4s								
FEMA				AML	AML				
	comp=E,16334µm,0.2s								
FEMA				END					
LNSS	**Leonessa**	**0.24**	**215**	P	Pg	02	31	45.1	+1.0
LNSS				S	Sg	02	31	49.7	+2.3
FDMO	**Fiordimonte**	**0.26**	**336**	P	Pg	02	31	44.9	+0.6
FDMO				S	Sg	02	31	49.0	+1.2
GUMA	**Gualdo di Mace**	**0.27**	**16**	S	Sb	02	31	50.2	-0.8
GUMA	**Gualdo di Mace**	**0.27**	**16**	P	Pg	02	31	45.3	+0.7
RM33	**Pellescritta (**	**0.29**	**182**	P	Pb	02	31	46.4	-0.3
RM33				S	Sb	02	31	50.8	-0.9
CESI	**CESI - Serrava**	**0.31**	**310**	P	Pg	02	31	45.9	+0.5
CESI				S	Sb	02	31	51.0	-1.3
CESI				AML	AML				
	comp=E,9210µm,0.6s								
CESI				AML	AML				
	comp=N,17100µm,0.2s								
CESI				AML	AML				
	comp=E,26200µm,0.5s								
CESI				AML	AML				
	comp=N,26750µm,0.6s								
CESI				AML	AML				
	comp=N,17014µm,0.3s								
CESI				END					
TERO	**Teramo**	**0.33**	**123**	P	Pg	02	31	46.0	+0.4
TERO				S	Sg	02	31	51.3	+1.3
TERO				AML	AML				
	comp=E,4580µm,0.8s								
TERO				AML	AML				
	comp=N,8345µm,0.5s								
TERO				AML	AML				
	comp=E,4980µm,0.8s								
TERO				AML	AML				
	comp=N,8925µm,0.5s								
TERO				AML	AML				
	comp=E,8755µm,0.4s								
TERO				AML	AML				
	comp=N,8500µm,0.5s								
TERO				AML	AML				
	comp=E,9715µm,0.4s								
TERO				AML	AML				
	comp=N,9205µm,0.5s								
TERO				AML	AML				
	comp=E,3861µm,0.2s								
TERO				END					
OFFI	**Offida**	**0.36**	**68**	P	Pb	02	31	47.5	-0.3
OFFI				AML	AML				
	comp=E,8965µm,0.7s								
OFFI				AML	AML				
	comp=N,12500µm,0.6s								
GAG1	**Gagliole**	**0.45**	**345**	P	Pg	02	31	48.5	+0.5
GAG1				S	Sb	02	31	55.9	-0.3
AQU	**L'Aquila**	**0.47**	**164**	P	Pg	02	31	48.4	+0.2
ASSB	**Assisi San Ben**	**0.48**	**300**	P	Pg	02	31	48.8	+0.2
ASSB				S	Sb	02	31	56.4	-0.7
ASSB				AML	AML				
	comp=E,4435µm,1.0s								
ASSB				AML	AML				
	comp=N,2950µm,1.2s								
ASSB				AML	AML				
	comp=E,5355µm,0.8s								
ASSB				AML	AML				
	comp=N,5525µm,0.5s								
ASSB				AML	AML				
	comp=E,4049µm,0.2s								
ASSB				END					
SNTG	**Esanatoglia**	**0.50**	**335**	P	Pg	02	31	49.1	+0.2
SNTG				S	Sb	02	31	57.0	-0.6
SNTG				AML	AML				
	comp=E,1565µm,1.5s								
SNTG				AML	AML				
	comp=N,1650µm,1.6s								
SNTG				AML	AML				
	comp=N,835µm,0.3s								
TRTR	**Tortoreto Alta**	**0.50**	**89**	P	Pb	02	31	50.3	+0.1
EL6	**Elcito**	**0.54**	**350**	P	Pg	02	31	49.8	+0.3
EL6				S	Sb	02	31	58.7	+0.1
EL6				AML	AML				
	comp=E,4285µm,1.4s								
EL6				AML	AML				
	comp=N,4370µm,1.2s								
EL6				AML	AML				
	comp=E,2065µm,0.2s								
ATCC	**AVT- Casa Cast**	**0.58**	**312**	P	Pg	02	31	50.5	+0.2
ATCC				S	Sb	02	31	59.9	+0.1
ATCC				AML	AML				
	comp=E,3580µm,0.5s								
ATCC				AML	AML				
	comp=N,3520µm,0.6s								
ATCC				AML	AML				
	comp=E,1634µm,0.2s								
FOSV	**Fossato di Vic**	**0.60**	**325**	P	Pg	02	31	50.9	+0.1
FOSV				S	Sb	02	31	59.8	-0.7
VCEL	**Villa Celiera**	**0.61**	**132**	P	Pg	02	31	51.5	-0.5
MURB	**Monte Urbino**	**0.69**	**312**	P	Pg	02	31	52.7	+0.2
MURB				AML	AML				
	comp=E,5810µm,0.3s								
MURB				AML	AML				
	comp=N,4935µm,0.3s								
MURB				AML	AML				
	comp=E,6345µm,0.3s								
MURB				AML	AML				
	comp=N,5550µm,0.8s								
MURB				AML	AML				
	comp=E,2910µm,0.3s								
T0110	**Collepietro**	**0.70**	**145**	P	Pg	02	31	52.7	0.0
SSFR	**Montelago di S**	**0.71**	**333**	P	Pg	02	31	53.1	+0.2
SSFR				AML	AML				
	comp=E,3340µm,0.2s								
SSFR				AML	AML				
	comp=N,2670µm,1.3s								
SSFR				AML	AML				
	comp=E,3360µm,0.2s								
SSFR				AML	AML				
	comp=N,2925µm,0.2s								
ARVD	**Arcevia**	**0.73**	**343**	P	Pg	02	31	53.2	0.0
ARVD				AML	AML				
	comp=N,347µm,0.2s								
PIEI	**Pieia**	**0.89**	**325**	P	Pg	02	31	56.3	0.0

ROM 24 02:32:29.0±0.1, 42°.812N±0°.004×13°.144E±0°.007, h9km±1km, Md2.5/8, ML2.8/37, 7C-5D, Error ellipse: s-maj=0.7km s-min=0.1km az=263.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
FEMA	**Monte Fema**	**0.17**	**335**	*e*P	Pg	02	32	32.7	+0.1
FEMA				S	Sg	02	32	36.5	+1.3
FEMA				AML	AML				
	comp=E,36150µm,0.2s								
FEMA				AML	AML				
	comp=N,29150µm,1.4s								
FEMA				AML	AML				
FEMA				AML	AML				
FEMA				AML	AML				
	comp=E,24938µm,0.2s								
FEMA				END					
LNSS	**Leonessa**	**0.22**	**200**	*e*P	Pg	02	32	34.6	+1.0
LNSS				S	Sg	02	32	38.7	+2.0
LNSS				END					
FDMO	**Fiordimonte**	**0.23**	**350** ⇓	*e*P	Pg	02	32	34.4	+0.6
FDMO				S	Sg	02	32	38.3	+1.4
FDMO				AML	AML				
	comp=E,8515µm,0.5s								
FDMO				AML	AML				
	comp=N,9860µm,0.3s								
FDMO				AML	AML				
FDMO				AML	AML				
FDMO				AML	AML				
	comp=N,6249µm,0.3s								
FDMO				END					
CESI	**CESI - Serrava**	**0.26**	**318** ⇑	*e*P	Pb	02	32	35.2	-0.7
CESI				S	Sb	02	32	39.6	-1.0
CESI				AML	AML				
	comp=E,26200µm,0.5s								
CESI				AML	AML				
	comp=N,26750µm,0.6s								
CESI				END					
RM33	**Pellescritta (**	**0.31**	**170**	*e*P	Pg	02	32	35.8	+0.6
RM33				S	Sb	02	32	40.7	-1.2
RM33				AML	AML				
	comp=E,9000µm,0.2s								
RM33				AML	AML				
	comp=N,8155µm,1.5s								
RM33				AML	AML				
	comp=E,9000µm,0.2s								
RM33				AML	AML				
	comp=N,8090µm,1.5s								
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
	comp=E,4347µm,0.2s								
RM33				AML	AML				
	comp=E,1979µm,0.2s								
RM33				END					
ARRO	**Arrone**	**0.36**	**230**	P	Pb	02	32	37.1	-0.5
ARRO				S	Sb	02	32	43.1	-0.3
ARRO				AML	AML				
	comp=E,6380µm,0.3s								
ARRO				AML	AML				
	comp=N,8250µm,0.6s								
ARRO				AML	AML				
ARRO				AML	AML				
ARRO				AML	AML				
	comp=N,1348µm,0.6s								
ARRO				AML	AML				
	comp=E,4033µm,0.3s								
SEF1	**Sefro**	**0.36**	**337**	*e*P	Pg	02	32	36.8	+0.6
SEF1				S	Sb	02	32	42.9	-0.6
SEF1				AML	AML				
	comp=E,9615µm,0.3s								
SEF1				AML	AML				
	comp=N,7375µm,0.2s								
SEF1				AML	AML				
SEF1				AML	AML				
SEF1				AML	AML				
SEF1				AML	AML				
SEF1				AML	AML				
	comp=N,4484µm,0.2s								
SEF1				END					
TERO	**Teramo**	**0.39**	**119**	*e*P	Pg	02	32	37.1	+0.5
TERO				S	Sg	02	32	42.6	+0.8
TERO				AML	AML				
	comp=E,8750µm,0.4s								
TERO				AML	AML				
	comp=N,8500µm,0.5s								
TERO				AML	AML				
	comp=E,9710µm,0.4s								
TERO				AML	AML				
	comp=N,9205µm,0.5s								
TERO				AML	AML				
	comp=E,8755µm,0.4s								
TERO				AML	AML				
	comp=E,9715µm,0.4s								
TERO				AML	AML				
	comp=N,9210µm,0.5s								
TERO				AML	AML				
TERO				AML	AML				
TERO				AML	AML				
	comp=E,5928µm,0.4s								
TERO				END					
OFFI	**Offida**	**0.42**	**73** ⇑	*i*P	Pb	02	32	38.2	-0.3
OFFI				S	Sb	02	32	45.9	+0.9
OFFI				AML	AML				
	comp=E,8970µm,0.7s								
OFFI				AML	AML				
	comp=N,12500µm,0.6s								
SSM1	**San Severino M**	**0.42**	**3**	*e*P	Pg	02	32	37.8	+0.6
SSM1				S	Sb	02	32	44.3	-0.7
ASSB	**Assisi San Ben**	**0.42**	**303**	*e*P	Pg	02	32	38.0	+0.7
ASSB				S	Sb	02	32	44.7	-0.6
ASSB				AML	AML				
	comp=E,5355µm,0.8s								
ASSB				AML	AML				
	comp=N,5525µm,0.5s								
GAG1	**Gagliole**	**0.43**	**353**	*e*P	Pb	02	32	38.2	-0.6
GAG1				S	Sb	02	32	44.8	-0.6
GAG1				AML	AML				
	comp=E,8700µm,0.3s								
GAG1				AML	AML				
	comp=N,10245µm,1.0s								
GAG1				AML	AML				
GAG1				AML	AML				
GAG1				AML	AML				
	comp=E,2297µm,0.3s								
CESX	**Cesi**	**0.46**	**244** ⇑	*i*P	Pb	02	32	38.7	-0.6
CESX				S	Sb	02	32	46.0	-0.3
CESX				AML	AML				
	comp=E,6225µm,0.4s								
CESX				AML	AML				
	comp=N,4640µm,0.4s								
CESX				AML	AML				
	comp=E,6220µm,0.4s								
CESX				AML	AML				
CESX				AML	AML				
CESX				AML	AML				
	comp=E,758µm,0.4s								
CESX				AML	AML				
	comp=N,67µm,0.5s								
SNTG	**Esanatoglia**	**0.47**	**341**	*e*P	Pb	02	32	38.9	-0.6
SNTG				S	Sb	02	32	46.0	-0.5
SNTG				AML	AML				
	comp=E,1565µm,1.5s								
SNTG				AML	AML				
	comp=N,1655µm,1.6s								
SNTG				AML	AML				
	comp=E,20000µm,0.8s								
SNTG				AML	AML				
SNTG				AML	AML				
SNTG				AML	AML				
	comp=N,25800µm,0.9s								
SNTG				AML	AML				
	comp=E,1009µm,0.2s								
SNTG				AML	AML				
	comp=N,179µm,0.9s								
SNTG				AML	AML				
	comp=N,296µm,0.3s								
GIGS	**Gran Sasso**	**0.48**	**139**	*e*P	Pg	02	32	38.4	0.0
GIGS				S	Sg	02	32	45.2	+0.6
GIGS				AML	AML				
	comp=E,1140µm,1.0s								
GIGS				AML	AML				
	comp=N,1035µm,0.6s								
GIGS				AML	AML				
	comp=E,1135µm,1.0s								
GIGS				AML	AML				
	comp=N,1040µm,0.6s								
GIGS				AML	AML				
GIGS				AML	AML				
GIGS				AML	AML				
	comp=E,758µm,0.4s								
GIGS				AML	AML				
	comp=N,211µm,0.1s								
AQU	**L'Aquila**	**0.49**	**157**	*e*P	Pb	02	32	39.8	-0.1
AQU				S	Sb	02	32	47.0	-0.2
AQU				AML	AML				
	comp=E,3185µm,0.7s								
AQU				AML	AML				
	comp=N,2630µm,0.3s								
AQU				AML	AML				
	comp=E,3150µm,0.6s								
AQU				AML	AML				
	comp=N,2610µm,0.3s								
AQU				AML	AML				
AQU				AML	AML				
AQU				AML	AML				
	comp=E,2176µm,0.7s								
AQU				AML	AML				
	comp=N,1424µm,0.3s								
TRE1	**Treia**	**0.52**	**14**	*e*P	Pb	02	32	40.0	-0.2
TRE1				S	Sb	02	32	48.4	+0.5
TRE1				AML	AML				
	comp=E,7550µm,0.5s								
TRE1				AML	AML				
	comp=N,8415µm,1.6s								
TRE1				AML	AML				
TRE1				AML	AML				
EL6	**Elcito**	**0.52**	**357**	*e*P	Pg	02	32	39.6	+0.5
EL6				S	Sb	02	32	47.6	-0.4
EL6				AML	AML				
EL6				AML	AML				
ATCC	**AVT- Casa Cast**	**0.53**	**315**	*e*P	Pb	02	32	40.0	-0.5
ATCC				S	Sb	02	32	48.0	-0.1
ATCC				AML	AML				
	comp=E,3580µm,0.5s								
ATCC				AML	AML				
	comp=N,3520µm,0.6s								
ATCC				AML	AML				
ATCC				AML	AML				
ATCC				AML	AML				
	comp=E,3397µm,0.5s								
FIAM	**Fiamignano**	**0.54**	**182**	*e*P	Pg	02	32	39.9	+0.3
FIAM				S	Sb	02	32	47.9	-0.8
FIAM				AML	AML				
	comp=E,2400µm,0.3s								
FIAM				AML	AML				
	comp=N,2795µm,0.4s								
FIAM				AML	AML				
FIAM				AML	AML				
FIAM				AML	AML				
	comp=N,480µm,0.4s								
FOSV	**Fossato di Vic**	**0.56**	**330** ⇓	*i*P	Pb	02	32	40.5	-0.5
FOSV				S	Sb	02	32	48.4	-0.7
FOSV				AML	AML				
	comp=E,1555µm,0.5s								
FOSV				AML	AML				
	comp=N,99250µm,0.5s								
FOSV				AML	AML				
FOSV				AML	AML				
TRTR	**Tortoreto Alta**	**0.57**	**90** ⇑	*i*P	Pb	02	32	41.2	+0.1
TRTR				AML	AML				
	comp=E,8810µm,0.6s								
TRTR				AML	AML				
	comp=N,10450µm,0.4s								
CADA	**Capodarco di F**	**0.59**	**50**	AML	AML				
	comp=E,7895µm,0.8s								
CADA				AML	AML				
	comp=N,11650µm,0.6s								
CADA				AML	AML				
CADA				AML	AML				
FAGN	**Fagnano**	**0.64**	**149**	AML	AML				
	comp=E,5240µm,1.4s								
FAGN				AML	AML				
	comp=N,3865µm,0.3s								
MURB	**Monte Urbino**	**0.64**	**315**	AML	AML				
	comp=N,5555µm,0.8s								
MURB				AML	AML				
	comp=E,5810µm,0.3s								
MURB				AML	AML				
	comp=N,4930µm,0.3s								
MURB				AML	AML				
	comp=E,6345µm,0.3s								
MURB				AML	AML				
MURB				AML	AML				
MURB				AML	AML				
MURB				AML	AML				
PP3	**Marolino**	**0.66**	**31**	AML	AML				
	comp=E,15000µm,0.3s								
PP3				AML	AML				
	comp=N,9885µm,0.4s								
PP3				AML	AML				
	comp=E,15200µm,0.4s								
PP3				AML	AML				
	comp=N,9595µm,0.4s								
PP3				AML	AML				
PP3				AML	AML				
PP3				AML	AML				
PP3				AML	AML				
SSFR	**Montelago di S**	**0.68**	**337**	AML	AML				
SSFR				AML	AML				
SSFR				AML	AML				
SSFR				AML	AML				
SSFR				AML	AML				
ATFO	**Monte Foce - G**	**0.69**	**323**	AML	AML				
	comp=E,9390µm,1.5s								
ATFO				AML	AML				
	comp=E,1345µm,1.3s								
ATFO				AML	AML				
	comp=N,1325µm,0.4s								
ATFO				AML	AML				
ARVD	**Arcevia**	**0.70**	**348**	AML	AML				
	comp=N,994µm,0.7s								
ARVD				AML	AML				
	comp=E,805µm,1.3s								
ARVD				AML	AML				
	comp=N,69200µm,0.6s								
ARVD				AML	AML				
	comp=E,92400µm,1.5s								
SRES	**S.Oreste - Sor**	**0.74**	**219**	AML	AML				
	comp=E,97550µm,1.3s								
SRES				AML	AML				

	comp=E,1380μm,0.4s								
SRES					AML	AML			
	comp=N,1530μm,0.3s								
SRES					AML	AML			
T0110	**Collepietro**	**0.75**	**141**		AML	AML			
T0110					AML	AML			
MGAB	**Montegabbione**	**0.77**	**278**	*e*P		Pb	02 32 44.5	-0.1	
MGAB					AML	AML			
	comp=E,3415μm,1.5s								
MGAB					AML	AML			
	comp=N,3065μm,0.4s								
MGAB					AML	AML			
	comp=E,3750μm,1.5s								
MGAB					AML	AML			
	comp=N,3565μm,0.4s								
MGAB					AML	AML			
	comp=E,86000μm,1.3s								
MGAB					AML	AML			
	comp=N,87700μm,0.3s								
MGAB					AML	AML			
	comp=N,85750μm,0.4s								
MGAB					AML	AML			
	comp=E,89700μm,0.5s								
MGAB					AML	AML			
	comp=E,2181μm,1.4s								
MGAB					AML	AML			
	comp=N,1887μm,0.4s								
MGAB					AML	AML			
	comp=E,2517μm,0.7s								
MGAB					AML	AML			
	comp=N,2759μm,0.4s								
FRON	**Frontone**	**0.77**	**337**		AML	AML			
FRON					AML	AML			
ATVO	**AVT- Monte Val**	**0.79**	**317**		AML	AML			
	comp=N,58000μm,0.5s								
ATVO					AML	AML			
	comp=E,61350μm,1.5s								
AOI	**Ancona**	**0.81**	**24**	*e*P		Pb	02 32 45.1	-0.2	
AOI				S		Sn	02 32 58.3	-0.6	
AOI					AML	AML			
	comp=E,1300μm,0.4s								
AOI					AML	AML			
	comp=N,1640μm,0.4s								
AOI					AML	AML			
	comp=E,51150μm,0.7s								
AOI					AML	AML			
AOI					AML	AML			
	comp=E,561μm,0.4s								
AOI					AML	AML			
	comp=N,1258μm,0.3s								
PTQR	**Pietraquaria**	**0.81**	**166**	*e*P		Pg	02 32 44.8	+0.1	
PTQR					AML	AML			
	comp=E,808μm,1.5s								
PTQR					AML	AML			
	comp=N,790μm,0.4s								
PTQR					AML	AML			
	comp=N,62000μm,0.4s								
PTQR					AML	AML			
	comp=E,90750μm,0.9s								
PTQR					AML	AML			
	comp=N,696μm,0.3s								
COR1	**Corinaldo**	**0.83**	**353**	*e*P		Pb	02 32 46.0	+0.5	
COR1				S		Sn	02 32 60.0	+0.8	
COR1					AML	AML			
COR1					AML	AML			
	comp=N,70600μm,1.5s								
COR1					AML	AML			
	comp=N,937μm,0.7s								
COR1					AML	AML			
	comp=N,1627μm,0.7s								
COR1					AML	AML			
	comp=E,1157μm,1.6s								
MTCE	**Montecelio**	**0.84**	**201**	*e*P		Pg	02 32 45.2	0.0	
MTCE					AML	AML			
	comp=E,1490μm,1.5s								
MTCE					AML	AML			
	comp=N,1054μm,0.5s								
MTCE					AML	AML			
MTCE					AML	AML			
	comp=N,80700μm,0.9s								
PIEI	**Pieia**	**0.85**	**329**		AML	AML			
	comp=N,680μm,0.5s								
PIEI					AML	AML			
	comp=E,902μm,0.4s								
PIEI					AML	AML			
	comp=E,97400μm,0.3s								
PIEI					AML	AML			
	comp=N,59450μm,0.5s								
MPAG	**Monte Paganucc**	**0.86**	**341**	*e*P		Pb	02 32 46.1	-0.1	
MPAG				S		Sn	02 32 59.3	-0.9	
MPAG					AML	AML			
MPAG					AML	AML			
MPAG					AML	AML			
MPAG					AML	AML			
MPAG					AML	AML			
	comp=E,766μm,0.9s								
MPAG					AML	AML			
	comp=E,424μm,0.7s								
MPAG					AML	AML			
	comp=N,1122μm,1.0s								
CERT	**Cerreto**	**0.87**	**188**	*e*P		Pb	02 32 46.2	-0.1	
CERT					AML	AML			
CERT					AML	AML			
CERT					AML	AML			
	comp=N,1026μm,0.4s								
CERT					AML	AML			
	comp=E,233μm,0.5s								
NARO	**Abbazia di Nar**	**0.90**	**333**	*e*P		Pg	02 32 46.2	-0.1	
NARO					AML	AML			
	comp=N,25450μm,0.5s								
NARO					AML	AML			
	comp=E,27600μm,0.8s								
NARO					AML	AML			
	comp=N,106μm,0.4s								
SACS	**San Casciano d**	**0.91**	**273**	*e*P		Pb	02 32 47.3	+0.3	
SACS					AML	AML			
	comp=N,70150μm,0.8s								
SACS					AML	AML			
	comp=N,68300μm,0.8s								
SACS					AML	AML			
	comp=E,69200μm,0.7s								
SACS					AML	AML			
	comp=E,68450μm,0.7s								
SACS					AML	AML			
	comp=E,203μm,1.5s								
APEC	**Apecchio**	**0.92**	**325**	*e*P		Pb	02 32 47.0	0.0	
APEC					AML	AML			
	comp=N,7260μm,0.3s								
APEC					AML	AML			
	comp=N,41600μm,0.4s								
APEC					AML	AML			
	comp=E,45750μm,0.9s								
APEC					AML	AML			
	comp=E,9375μm,0.4s								
APEC					AML	AML			
	comp=N,145μm,0.9s								
FSSB	**Fossombrone**	**0.92**	**343**	*e*P		Pb	02 32 47.0	-0.1	
FSSB				S		Sn	02 33 02.0	+0.5	
FSSB					AML	AML			
FSSB					AML	AML			
FSSB					AML	AML			
	comp=N,334μm,0.4s								
FSSB					AML	AML			
	comp=E,346μm,0.4s								
BADI	**Badiali**	**0.96**	**317**	*e*P		Pb	02 32 47.9	+0.1	
BADI					AML	AML			
	comp=E,2735μm,1.1s								
BADI					AML	AML			
	comp=N,37750μm,0.6s								
INTR	**Introdacqua**	**0.98**	**145**	*e*P		Pg	02 32 47.0	-0.8	
INTR					AML	AML			
	comp=E,1μm,0.7s								
INTR					AML	AML			
	comp=N,2μm,1.0s								
INTR					AML	AML			
	comp=E,1310μm,0.7s								
INTR					AML	AML			
	comp=N,3055μm,1.0s								
INTR					AML	AML			
	comp=N,108μm,1.0s								
INTR					AML	AML			
	comp=E,102μm,0.9s								
INTR					AML	AML			
INTR					AML	AML			
INTR					AML	AML			
	comp=N,1μm,1.0s								
INTR					AML	AML			
	comp=E,299μm,0.7s								
PE3	**Peglio**	**1.00**	**332**	*e*P		Pn	02 32 50.1	+0.8	
PE3					AML	AML			
	comp=N,50200μm,0.4s								
PE3					AML	AML			
	comp=E,160μm,0.2s								
CAFI	**Castiglion Fio**	**1.01**	**301**	*e*P		Pb	02 32 48.6	0.0	
CAFI					AML	AML			
CAFI					AML	AML			
CAFI					AML	AML			
CAFI					AML	AML			
CAFI					AML	AML			
	comp=N,756μm,0.8s								
RMP	**Rome, Mte Porz**	**1.05**	**198**	*e*P		Pn	02 32 50.8	+0.9	
RMP					AML	AML			
RMP					AML	AML			
	comp=E,84150μm,1.1s								
RMP					AML	AML			
	comp=E,1352μm,0.4s								
RMP					AML	AML			
	comp=N,1253μm,0.9s								
MCIV	**Monte Civitell**	**1.08**	**269**	*e*P		Pn	02 32 50.4	0.0	
MCIV					AML	AML			
	comp=E,28600μm,0.9s								
MCIV					AML	AML			
	comp=N,25750μm,1.5s								
MCIV					AML	AML			
	comp=N,127μm,0.7s								
LPEL	**Lama dei Pelig**	**1.08**	**134**	*e*P		Pg	02 32 48.8	-1.1	
LPEL					AML	AML			
	comp=E,65500μm,0.7s								
LPEL					AML	AML			
	comp=N,55100μm,1.2s								
LPEL					AML	AML			
	comp=E,723μm,0.4s								
SF04	**Casetta**	**1.09**	**272**	*e*P		Pn	02 32 51.5	+1.0	
SF04					AML	AML			
	comp=E,34950μm,1.1s								
SF04					AML	AML			
	comp=N,42450μm,1.3s								
VIVA	**Pratoni del Vi**	**1.10**	**195**	*e*P		Pn	02 32 52.2	+1.6	
VIVA				S		Sn	02 33 08.4	+2.6	
RDP	**Rocca di Papa**	**1.10**	**197**	*e*P		Pn	02 32 51.8	+1.1	
RDP				S		Sn	02 33 08.0	+2.1	
RDP					AML	AML			
RDP					AML	AML			
RDP					AML	AML			
	comp=N,2226μm,0.5s								
PESA	**Pesaro**	**1.15**	**349**	*e*P		Pn	02 32 52.1	+0.8	
PESA					AML	AML			
	comp=N,79900μm,1.0s								
PESA					AML	AML			
	comp=E,80900μm,0.6s								
PESA					AML	AML			
	comp=N,366μm,0.4s								
PESA					AML	AML			
	comp=E,1730μm,0.4s								
POFI	**Posta Fibreno**	**1.17**	**159**	*e*P		Pn	02 32 53.7	+2.0	
POFI					AML	AML			
	comp=E,38500μm,0.5s								
POFI					AML	AML			
	comp=E,40150μm,0.5s								
POFI					AML	AML			
	comp=N,39300μm,0.8s								
POFI					AML	AML			
	comp=N,38650μm,0.8s								
POFI					AML	AML			
	comp=E,231μm,0.5s								
GIUL	**Giuliano Di Ro**	**1.25**	**176**	*e*P		Pn	02 32 51.7	-1.1	
GIUL					AML	AML			
	comp=E,49250μm,0.6s								
GIUL					AML	AML			
	comp=N,40600μm,0.6s								
RUFI	**Rufina**	**1.57**	**311**	*e*P		Pg	02 32 58.8	-0.4	
RUFI					AML	AML			
	comp=E,119μm,0.6s								
TRIF	**Trifonti**	**1.67**	**281**	*e*P		Pn	02 32 59.2	+0.7	
TRIF					AML	AML			
	comp=N,16900μm,1.0s								
TRIF					AML	AML			
	comp=E,18450μm,1.3s								
CASP	**Castiglione de**	**1.68**	**270**	*e*P		Pn	02 32 58.8	+0.3	
CASP					AML	AML			
	comp=E,12085μm,0.7s								
CASP					AML	AML			
	comp=N,4930μm,0.7s								
CASP					AML	AML			
	comp=E,57μm,1.0s								
PLMA	**Palmaria, Port**	**2.70**	**298**		AML	AML			
	comp=N,2μm,1.2s								
PLMA					AML	AML			
	comp=E,4400μm,1.6s								
PLMA					AML	AML			
	comp=N,5595μm,0.9s								
AMUR	**Altamura**	**3.21**	**125**	⇑P		Pn	02 33 21.1	+1.5	
AMUR					AML	AML			
	comp=E,14350μm,0.5s								
AMUR					AML	AML			
	comp=N,11680μm,1.2s								
AMUR					AML	AML			
	comp=N,66μm,1.6s								
AMUR					AML	AML			
	comp=E,54μm,3.4s								
DOSS	**Dosso del Somm**	**3.37**	**336**	⇑P		Pb	02 33 26.5	-2.6	
MAGA	**Magasa**	**3.47**	**330**	⇓P		Pn	02 33 25.1	+1.8	
MAGA					AML	AML			
	comp=N,19250μm,0.5s								
MAGA					AML	AML			
	comp=E,28050μm,0.6s								
MAGA					AML	AML			
	comp=N,33μm,0.6s								
LUSI	**Trento, Gardas**	**3.52**	**334**	⇓P		Pn	02 33 26.7	+2.8	
LUSI					AML	AML			
	comp=N,8420μm,0.6s								
LUSI					AML	AML			
	comp=E,5785μm,0.7s								
LTRZ	**Laterza**	**3.53**	**127**	S		Sb	02 34 15.0	+0.5	
NOCI	**Noci**	**3.56**	**123**	⇑P		Pn	02 33 25.9	+1.5	
NOCI					AML	AML			
	comp=N,9375μm,0.4s								
NOCI					AML	AML			
	comp=E,7930μm,0.5s								
ZONE	**Zone**	**3.67**	**325**	⇓P		Pn	02 33 29.5	+3.6	
MYKA	**Terra Mystica**	**3.83**	**5**	*e*Pn		Pn	02 33 31.9	+3.7	
	comp=E,0.8nm,0.2s								
ABTA	**Abfaltersbach**	**3.96**	**354**	*e*Pn		Pn	02 33 33.8	+3.8	
	comp=E,2.1nm,0.1s								
BRG	**Berggiesshubel**	**8.08**	**4**	*e*P		Pn	02 34 30.0	+3.5	
BRG				Amp			02 34 31.1		
	comp=Z,3.7nm,0.8s								

SIGU 24 02:32:31.3, 44°.02N × 33°.76E, h28km, 1C-2D, Black Sea region 1, Crimea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEV	**Sevastopol'**	**0.53**	**353**	Sgm		02 32 53.3	
	comp=E,106nm,0.4s						
SEV	**Sevastopol'**	**0.53**	**353**	⇓*e*Pg	Pb	02 32 42.2	+0.1
SEV	**Sevastopol'**	**0.53**	**353**	⇑ Pgm		02 32 44.1	
	comp=Z,47nm,0.2s						
SEV	**Sevastopol'**	**0.53**	**353**	*e*Sg	Sb	02 32 50.2	+0.7
SEV	**Sevastopol'**	**0.53**	**353**	Sgm		02 32 52.7	
	comp=N,82nm,0.4s						
YAL	**Yalta**	**0.55**	**31**	Sgm		02 32 53.4	
	comp=E,42nm,0.2s						
YAL	**Yalta**	**0.55**	**31**	⇓*e*Pg	Pn	02 32 43.8	+0.6
YAL	**Yalta**	**0.55**	**31**	⇑ *i*Pg	Pn	02 32 43.9	+0.7
YAL	**Yalta**	**0.55**	**31**	Pgm		02 32 44.6	
	comp=Z,14nm,0.2s						
YAL	**Yalta**	**0.55**	**31**	*i* Sg	Sn	02 32 52.0	+0.6
YAL	**Yalta**	**0.55**	**31**	Sgm		02 32 52.6	
	comp=N,100nm,0.3s						
ALU	**Alushta**	**0.81**	**35**	Sgm		02 33 02.4	
	comp=N,144nm,0.2s						
ALU	**Alushta**	**0.81**	**35**	*e*Pg	Pn	02 32 48.4	+1.6
ALU	**Alushta**	**0.81**	**35**	Pgm		02 32 48.5	
	comp=Z,7.0nm,0.2s						
ALU	**Alushta**	**0.81**	**35**	*e*(Sg)	Sn	02 32 59.3	+1.5
ALU	**Alushta**	**0.81**	**35**	*e*Sg	Sn	02 33 00.1	+2.3
ALU	**Alushta**	**0.81**	**35**	Sgm		02 33 01.7	
	comp=E,108nm,0.4s						
SIM	**Simferopol'**	**0.96**	**15**	Sgm		02 33 08.4	
	comp=E,74nm,0.9s						
SIM	**Simferopol'**	**0.96**	**15**	*e*Sg	Sb	02 33 03.9	+2.1
SIM	**Simferopol'**	**0.96**	**15**	Sgm		02 33 08.2	
	comp=N,42nm,0.5s						
SUDU	**Sudak**	**1.24**	**45**	Sgm		02 33 14.5	
	comp=N,48nm,0.4s						
SUDU	**Sudak**	**1.24**	**45**	*e*Pg	Pb	02 32 56.5	+2.4
SUDU	**Sudak**	**1.24**	**45**	Pgm		02 33 01.2	
	comp=Z,34nm,0.2s						
SUDU	**Sudak**	**1.24**	**45**	*e*Sg	Sb	02 33 13.8	+4.1
SUDU	**Sudak**	**1.24**	**45**	Sgm		02 33 14.4	
	comp=E,49nm,0.4s						
FEO	**Feodosiya**	**1.54**	**49**	*e*(Sn)	Sb	02 33 22.4	+4.3
FEO				Snm		02 33 22.5	
	comp=N,30nm,0.2s						
FEO				Snm		02 33 24.9	
	comp=E,10.0nm,0.2s						

TIR ***24*** *02:33:24.1, 43°.02N × 13°.11E, h18km, Md5.8*

BJI ***24*** *02:33:25.3±0.0, 42°.64N × 12°.92E, h5km, mb5.2/50, mB5.9/16, Ms5.5/19, Ms7 5.3/19*

BGR ***24*** *02:33:26.1±0.7, 42°.40N × 13°.53E, h5km, ML5.7/17, Error ellipse: s-maj=11.1km s-min=7.8km az=122.0*

IDC ***24*** *02:33:28.0±0.4, 42°.84N × 13°.14E, h0km, mb5.1/37, mbtmp5.0/48, ML4.5/10, MS5.1/79, Error ellipse: s-maj=8.6km s-min=7.9km az=108.0*

ROM ***24*** *02:33:28.9±0.0, 42°.792N±0°.002 × 13°.151E±0°.004, h8km, ML5.4/132, Mw5.3, Mw5.4, Mw5.4, Error ellipse: s-maj=0.3km s-min=0.1km az=253.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr=1.35; Mθθ=0.54; Mϕϕ=0.81; Mrθ=-0.18; Mϕθ=-0.60; Mϕr=-0.02; Fault plane solution: M₀ 1.33480×10¹⁷ NP1: ϕs 327.00000°, δ 43.00000°, λ -81.00000°. NP2: ϕs 135.00000°, δ 47.00000°, λ -98.00000°. Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr=1.35; Mθθ=0.54; Mϕϕ=0.81; Mrθ=-0.18; Mϕθ=-0.60; Mϕr=-0.02; Fault plane solution: M₀ 1.33480×10¹⁷ NP1: ϕs 327.00000°, δ 43.00000°, λ -81.00000°. NP2: ϕs 135.00000°, δ 47.00000°, λ -98.00000°.*

LDG ***24*** *02:33:28.4±0.1, 42°.78N × 13°.14E, h6km, Ml4.6/45 Error ellipse: s-maj=2.9km s-min=1.4km az=44.0*

MOS ***24*** *02:33:28.7±0.9, 42°.87N × 13°.14E, h13km, mb5.6/83, MS5.0/29, Error ellipse: s-maj=4.3km s-min=2.7km az=73.7*

BGS ***24*** *02:33:28.3±3.2, 42°.72N × 12°.99E, h5km, MW5.6(NEIC)*

MED_RC ***24*** *02:33:29.0±0.1, 42°.72N × 13°.08E, h9km, MW5.5/29, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s29,c71; Duration: 1s4 Moment tensor: Scale 10¹⁷Nm; Mrr-2.56±.07; Mθθ1.08±.04; Mϕϕ1.48±.04; Mrθ-0.69±.19; Mϕϕ-0.88±.02; Mϕr0.50±.17; Best double couple: M₀ 2.52000×10¹⁷ NP1: ϕs 137.00000°, δ 55.00000°, λ -95.00000°. NP2: ϕs 325.00000°, δ 36.00000°, λ -83.00000°. Principal axes: T 2.3200, Plg10.0000°, Azm230.0000°; N 0.3900, Plg4.0000°, Azm140.0000°; P -2.7100, Plg80.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

PDG ***24*** *02:33:29.5±0.7, 42°.83N × 13°.15E, h13km, MD5.5/14, ML5.5/14 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

CRAAG ***24*** *02:33:29.4, 42°.79N × 13°.15E, Mw5.5*

PRU ***24*** *02:33:29.7±0.0, 42°.88N × 12°.98E, h0km, M5.5*

NEIC ***24*** *02:33:29.4±1.7, 42°.84N±0°.04 × 13°.15E±0°.05, h3km±2km, mb5.5/247, Mwr5.4/45, Mww5.6, Mwr5.3(ROM), Mwr5.5(VIE), Error ellipse: s-maj=5.5km s-min=4.7km az=50.0*

NEIC ***24*** *02:33:29.5, 42°.84N × 13°.12E, h5km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.38; Mθθ0.52; Mϕϕ0.86; Mrθ0.34; Mϕθ-0.47; Mϕr-0.15; Fault plane solution: M₀ 1.35000×10¹⁷ NP1: ϕs 151.05000°, δ 38.37000°, λ -79.82000°. NP2: ϕs 318.14000°, δ 52.34000°, λ -97.97000°. Principal axes: T 1.2336, Plg7.0000°, Azm54.0000°; N 0.2060, Plg6.0000°, Azm323.0000°; P -1.4396, Plg81.0000°, Azm192.0000°;*

BEO ***24*** *02:33:30.8±0.6, 42°.92N × 13°.20E, h0km, ML5.5/13*

STR ***24*** *02:33:31.6±0.2, 43°.N±.4 × 1°.3E±°, h10km, mb5.4/33*

GCMT ***24*** *02:33:31.5±0.1, 42°.68N±0°.01 × 13°.15E±0°.01, h12km, MW5.6/163, Moment Tensor Solution. s98,c153; s163,c318; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr-2.81±.03; Mθθ1.18±.03; Mϕϕ1.63±.03; Mrθ-0.28±.11; Mϕϕ-1.11±.02; Mϕr-0.93±.10; Best double couple: M₀ 2.82600×10¹⁷ NP1: ϕs 335.00000°, δ 52.00000°, λ -73.00000°. NP2: ϕs 128.00000°, δ 41.00000°, λ -111.00000°. Principal axes: T 2.5940, Plg6.0000°, Azm53.0000°; N 0.4640, Plg13.0000°, Azm144.0000°; P -3.0580, Plg75.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *02:33:33, 42°.72N × 13°.13E, h12km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10¹⁷Nm; Mrr-2.75; Mθθ1.23; Mϕϕ1.52; Mrθ-0.91; Mϕθ-0.92; Mϕr0.58; Fault plane solution: M₀ 2.78000×10¹⁷ NP1: ϕs 324.00000°, δ 34.00000°, λ -81.00000°. NP2: ϕs 134.00000°, δ 56.00000°, λ -95.00000°. Principal axes: T 2.5113, Plg11.0000°, Azm228.0000°; N 0.4731, Plg5.0000°, Azm137.0000°; P -2.9844, Plg78.0000°, Azm24.0000°;*

ISC 24 02:33:30.1±0.4, 42°.78N±0°.01 × 13°.12E±0°.02, h11km±2km, h12km: pP-P, n2009, σ1°59/2149, mb5.4/251, MS5.1/91, 153C-116D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.19**	**198**	⇑P	**Pg**	**02 33 34.0**	**-0.2**
FEMA	**Monte Fema**	**0.19**	**344**	⇑P	**Pg**	**02 33 33.5**	**-0.8**
FEMA				S	**Sg**	**02 33 37.0**	**-0.2**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FDMO	**Fiordimonte**	**0.26**	**355**	⇑P	**Pg**	**02 33 34.5**	**-0.9**
FDMO				S	**Sg**	**02 33 38.5**	**-0.5**
FDMO				AML	AML		
FDMO				AML	AML		
CESI	**CESI - Serrava**	**0.28**	**325**	⇑P	**Pg**	**02 33 35.2**	**-0.6**
CESI				S	**Sg**	**02 33 40.1**	**+0.5**
RM33	**Pellescritta (**	**0.28**	**165**	⇑P	**Pg**	**02 33 35.4**	**-0.4**
RM33				S	**Sg**	**02 33 40.6**	**+0.9**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
ARRO	**Arrone**	**0.33**	**233**	⇑P	**Pg**	**02 33 36.7**	**0.0**
ARRO				AML	AML		
ARRO				AML	AML		
ARRO				AML	AML		
SEF1	**Sefro**	**0.39**	**341**	P	**Pg**	**02 33 36.9**	**-0.9**
SEF1				S	**Sg**	**02 33 43.3**	**+0.3**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
TERO	**Teramo**	**0.39**	**114**	⇑P	**Pg**	**02 33 36.7**	**-1.1**
TERO				S	**Sg**	**02 33 42.6**	**-0.5**
TERO				AML	AML		
TERO				AML	AML		
PIO1	**Pioraco**	**0.41**	**346**	⇑P	**Pg**	**02 33 38.3**	**+0.1**
PIO1				S	**Sb**	**02 33 45.0**	**-0.7**
PIO1				AML	AML		
PIO1				AML	AML		
MDAR	**Monte D'Aria**	**0.41**	**2**	P	**Pg**	**02 33 37.2**	**-1.1**
MDAR				S	**Sg**	**02 33 43.4**	**-0.4**
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
MDAR				AML	AML		
ASSB	**Assisi San Ben**	**0.43**	**308**	P	**Pg**	**02 33 38.0**	**-0.6**
ASSB				S	**Sb**	**02 33 45.3**	**-0.9**
FIU1	**Fiuminata**	**0.43**	**341**	P	**Pg**	**02 33 37.7**	**-1.0**
FIU1				S	**Sg**	**02 33 44.7**	**+0.3**
FIU1				AML	AML		

FIU1				AML	AML		
FIU1				AML	AML		
FIU1				AML	AML		
FIU1				AML	AML		
CESX	**Cesi**	**0.43**	**247**	⇑P	**Pg**	**02 33 38.3**	**-0.3**
CESX				S	**Sb**	**02 33 46.0**	**-0.3**
CESX				AML	AML		
CESX				AML	AML		
MNTP	**Montappone**	**0.44**	**36**	P	**Pg**	**02 33 38.1**	**-0.7**
MNTP				AML	AML		
MNTP				AML	AML		
OFFI	**Offida**	**0.45**	**69**	⇑P	**Pg**	**02 33 38.3**	**-0.5**
SSM1	**San Severino M**	**0.45**	**5**	⇓P	**Pg**	**02 33 37.8**	**-1.1**
SSM1				S	**Sg**	**02 33 44.7**	**-0.3**
GAG1	**Gagliole**	**0.46**	**355**	P	**Pg**	**02 33 38.2**	**-1.0**
GAG1				S	**Sg**	**02 33 45.4**	**+0.1**
GAG1				AML	AML		
GAG1				AML	AML		
GIGS	**Gran Sasso**	**0.47**	**135**	P	**Pg**	**02 33 38.2**	**-1.1**
GIGS				S	**Sg**	**02 33 45.3**	**-0.2**
GIGS				AML	AML		
GIGS				AML	AML		
AQU	**L'Aquila**	**0.47**	**154**	Pg	**Pg**	**02 33 38.6**	**-0.8**
AQU				Sg	**Sg**	**02 33 46.4**	**+0.7**
AQU	**L'Aquila**	**0.47**	**154**	P	**Pg**	**02 33 38.6**	**-0.8**
AQU						02 33 46.4	
AQU	**L'Aquila**	**0.47**	**154**	⇑P	**Pg**	**02 33 38.7**	**-0.8**
AQU				S	**Sb**	**02 33 47.0**	**-0.5**
AQU				AML	AML		
AQU				AML	AML		
MTL1	**Matelica**	**0.48**	**350**	⇓P	**Pg**	**02 33 38.6**	**-1.0**
MTL1				S	**Sg**	**02 33 46.3**	**+0.3**
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
SNTG	**Esanatoglia**	**0.49**	**345**	⇑P	**Pg**	**02 33 38.6**	**-1.1**
SNTG				S	**Sg**	**02 33 46.5**	**+0.2**
SNTG				AML	AML		
	comp=N,28050µm,1.5s						
SNTG				AML	AML		
SNTG				AML	AML		
	comp=E,35300µm,0.6s						
SNTG				AML	AML		
FIAM	**Fiamignano**	**0.51**	**180**	⇑P	**Pg**	**02 33 39.3**	**-0.8**
FIAM				S	**Sb**	**02 33 47.8**	**-0.8**
FIAM				AML	AML		
FIAM				AML	AML		
ATCC	**AVT- Casa Cast**	**0.54**	**319**	⇓P	**Pg**	**02 33 40.0**	**-0.6**
ATCC				S	**Sb**	**02 33 48.6**	**-0.7**
ATCC				AML	AML		
ATCC				AML	AML		
EL6	**Elcito**	**0.55**	**359**	⇑P	**Pg**	**02 33 39.7**	**-1.2**
EL6				S	**Sg**	**02 33 48.1**	**-0.1**
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
TRE1	**Treia**	**0.55**	**15**	⇑P	**Pg**	**02 33 40.0**	**-0.8**
TRE1				AML	AML		
TRE1				AML	AML		
FOSV	**Fossato di Vic**	**0.58**	**333**	P	**Pg**	**02 33 40.5**	**-0.9**
FOSV				S	**Sg**	**02 33 49.5**	**+0.5**
FOSV				AML	AML		
FOSV				AML	AML		
FOSV				AML	AML		
TRTR	**Tortoreto Alta**	**0.59**	**87**	⇑P	**Pg**	**02 33 41.2**	**-0.3**
CING	**Cingoli**	**0.60**	**5**	P	**Pg**	**02 33 40.3**	**-1.4**
FAGN	**Fagnano**	**0.62**	**146**	⇑P	**Pg**	**02 33 40.9**	**-1.2**
CADA	**Capodarco di F**	**0.63**	**48**	⇑P	**Pg**	**02 33 42.1**	**-0.2**
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
MURB	**Monte Urbino**	**0.65**	**318**		**Pg**	**02 33 42.0**	**-0.8**
MURB	**Monte Urbino**	**0.65**	**318**	P	**Pg**	**02 33 42.0**	**-0.8**
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
VCEL	**Villa Celiera**	**0.66**	**126**	⇑P	**Pg**	**02 33 41.8**	**-1.1**
VCEL				AML	AML		
VCEL				AML	AML		
CIMA	**Civitanova Mar**	**0.66**	**37**	P	**Pg**	**02 33 42.4**	**-0.5**
CIMA				AML	AML		
CIMA				AML	AML		
MMUR	**Monte Murano**	**0.67**	**352**	P	**Pg**	**02 33 41.9**	**-1.2**
MMUR				AML	AML		
MMUR				AML	AML		
PP3	**Marolino**	**0.70**	**31**	⇑P	**Pg**	**02 33 42.9**	**-0.7**
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
ATTE	**AVT- Monte Tez**	**0.70**	**307**	⇑P	**Pg**	**02 33 42.9**	**-0.8**
ATTE				AML	AML		
ATTE				AML	AML		
SSFR	**Montelago di S**	**0.70**	**340**	P	**Pg**	**02 33 42.6**	**-1.1**
SSFR				AML	AML		
SSFR				AML	AML		
SSFR				AML	AML		
SSFR				AML	AML		
SSFR				AML	AML		
SSFR				AML	AML		
SRES	**S.Oreste - Sor**	**0.70**	**220**	⇑P	**Pg**	**02 33 43.2**	**-0.5**
SRES				AML	AML		
SRES				AML	AML		
ATFO	**Monte Foce - G**	**0.71**	**326**	⇑P	**Pg**	**02 33 42.9**	**-1.0**
ATFO				AML	AML		
ATFO				AML	AML		
ATSC	**Scheggia e Pas**	**0.72**	**334**	⇓P	**Pg**	**02 33 42.7**	**-1.3**
ARVD	**Arcevia**	**0.73**	**350**	⇑P	**Pg**	**02 33 42.9**	**-1.4**
ARVD				AML	AML		
ARVD				AML	AML		
T0110	**Collepietro**	**0.74**	**138**	⇑P	**Pg**	**02 33 42.9**	**-1.5**
T0110				AML	AML		
T0110				AML	AML		
ATLO	**AVT- Montelove**	**0.75**	**316**	P	**Pg**	**02 33 43.5**	**-1.1**
MGAB	**Montegabbione**	**0.75**	**281**	⇑P	**Pg**	**02 33 44.4**	**-0.3**
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
MGAB				AML	AML		
TB01	**Gubbio**	**0.78**	**320**	P	**Pg**	**02 33 44.1**	**-1.1**
PTQR	**Pietraquaria**	**0.79**	**165**	⇑P	**Pg**	**02 33 44.0**	**-1.3**
PTQR				AML	AML		
PTQR				AML	AML		
ATVA	**AVT- Monte Val**	**0.79**	**309**	⇑P	**Pg**	**02 33 44.5**	**-0.9**
FRON	**Frontone**	**0.79**	**339**	⇑P	**Pg**	**02 33 44.1**	**-1.4**
FRON				AML	AML		
FRON				AML	AML		
ATVO	**AVT- Monte Val**	**0.80**	**319**	⇑P	**Pg**	**02 33 44.5**	**-1.0**
ATVO				AML	AML		
ATVO				AML	AML		
MTCE	**Montecelio**	**0.81**	**200**	⇑P	**Pg**	**02 33 44.5**	**-1.2**
MTCE				AML	AML		
MTCE				AML	AML		
ATBU	**Serra di Buran**	**0.81**	**329**	P	**Pg**	**02 33 44.8**	**-1.0**
ATMI	**Monte Miggiano**	**0.83**	**312**	P	**Pg**	**02 33 45.5**	**-0.7**
ATMI				AML	AML		
ATMI				AML	AML		
CERT	**Cerreto**	**0.84**	**187**	⇑P	**Pg**	**02 33 45.0**	**-1.3**
CERT				AML	AML		
CERT				AML	AML		
AOI	**Ancona**	**0.85**	**24**	⇑P	**Pg**	**02 33 45.1**	**-1.4**
AOI				AML	AML		
AOI				AML	AML		
ATPC	**Poggio Castell**	**0.85**	**326**	P	**Pg**	**02 33 45.5**	**-1.1**
ATPI	**Pietralunga -**	**0.85**	**322**	P	**Pg**	**02 33 45.4**	**-1.2**
ATPI				AML	AML		
ATPI				AML	AML		
ATPI				AML	AML		
COR1	**Corinaldo**	**0.86**	**354**	⇑P	**Pg**	**02 33 45.9**	**-0.7**
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
PIEI	**Pieia**	**0.87**	**331**	⇑P	**Pg**	**02 33 45.6**	**-1.2**
PIEI				AML	AML		

PIEI				AML	AML		
MPAG	**Monte Paganucc**	**0.89**	**343**	⇑P	**Pg**	**02 33 45.7**	**-1.5**
MPAG				AML	AML		
MPAG				AML	AML		
MPAG				AML	AML		
MPAG				AML	AML		
SACS	**San Casciano d**	**0.89**	**275**	⇑P	**Pg**	**02 33 47.1**	**-0.2**
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
SACS				AML	AML		
NARO	**Abbazia di Nar**	**0.92**	**335**	P	**Pg**	**02 33 46.3**	**-1.6**
NARO				AML	AML		
NARO				AML	AML		
SENI	**Senigallia**	**0.93**	**5**	⇑P	**Pg**	**02 33 47.1**	**-0.9**
SENI				AML	AML		
SENI				AML	AML		
APEC	**Apecchio**	**0.93**	**327**	P	**Pg**	**02 33 47.0**	**-1.1**
APEC				AML	AML		
	comp=E,43050µm,1.2s						
APEC				AML	AML		
APEC				AML	AML		
APEC				AML	AML		
	comp=N,36400µm,0.4s						
RCAV	**Rocca di Cave**	**0.94**	**188**	⇓P	**Pg**	**02 33 47.1**	**-1.1**
FSSB	**Fossombrone**	**0.95**	**345**	⇑P	**Pg**	**02 33 46.9**	**-1.4**
FSSB				AML	AML		
FSSB				AML	AML		
ATMC	**Monte Cedrone**	**0.95**	**315**	P	**Pg**	**02 33 47.1**	**-1.3**
INTR	**Introdacqua**	**0.96**	**143**	P	**Pg**	**02 33 46.8**	**-1.9**
INTR				AML	AML		
	comp=N,435µm,1.2s						
INTR				AML	AML		
	comp=E,326µm,0.8s						
BADI	**Badiali**	**0.97**	**319**	P	**Pg**	**02 33 47.7**	**-1.1**
BADI				AML	AML		
BADI				AML	AML		
	comp=E,13750µm,1.3s						
VVLD	**Villa Vallelon**	**0.98**	**158**	⇑P	**Pg**	**02 33 47.2**	**-1.8**
VVLD				AML	AML		
VVLD				AML	AML		
LATE	**Laterza**	**0.98**	**261**		**Pg**	**02 33 48.4**	**-0.6**
LATE	**Laterza**	**0.98**	**261**	⇑P	**Pg**	**02 33 48.6**	**-0.5**
GUAR	**Guarcino**	**0.99**	**172**	⇑P	**Pg**	**02 33 47.4**	**-1.8**
GUAR				AML	AML		
GUAR				AML	AML		
CAFI	**Castiglion Fio**	**1.01**	**303**	⇑P	**Pg**	**02 33 48.5**	**-1.0**
CAFI				AML	AML		
CAFI				AML	AML		
CAFI				AML	AML		
CAFI				AML	AML		
RMP	**Rome, Mte Porz**	**1.02**	**198**	⇑P	**Pg**	**02 33 48.0**	**-1.6**
RMP				AML	AML		
RMP				AML	AML		
PE3	**Peglio**	**1.02**	**334**	P	**Pg**	**02 33 48.6**	**-1.2**
PE3				AML	AML		
PE3				AML	AML		
	comp=E,767µm,1.3s						
ROM9	**Roma**	**1.05**	**205**	P	**Pb**	**02 33 49.7**	**-0.5**
ROM9				AML	AML		
ROM9				AML	AML		
SF03	**Valle Cupa**	**1.06**	**272**	⇑P	**Pb**	**02 33 49.5**	**-1.0**
VIVA	**Pratoni del Vi**	**1.06**	**194**	⇑P	**Pb**	**02 33 48.9**	**-1.6**
VIVA				AML	AML		
VIVA				AML	AML		
MCIV	**Monte Civitell**	**1.06**	**270**	⇑P	**Pb**	**02 33 49.6**	**-0.9**
MCIV				AML	AML		
MCIV				AML	AML		
	comp=N,83400µm,1.1s						
SF11	**Podere del Sol**	**1.06**	**275**	⇑P	**Pb**	**02 33 49.7**	**-0.8**
RDP	**Rocca di Papa**	**1.06**	**196**	⇑P	**Pb**	**02 33 49.0**	**-1.5**
RDP				AML	AML		
RDP				AML	AML		
MA9	**Marino**	**1.06**	**199**	P	**Pb**	**02 33 49.1**	**-1.4**
MA9				AML	AML		
MA9				AML	AML		
SAMA	**S.Maria delle**	**1.07**	**202**	⇑P	**Pb**	**02 33 49.1**	**-1.6**
SAMA				AML	AML		
SAMA				AML	AML		
SSP9	**Sansepolcro**	**1.07**	**318**	P	**Pg**	**02 33 50.8**	**+0.1**
SSP9				AML	AML		
SSP9				AML	AML		
SF04	**Casetta**	**1.07**	**273**	P	**Pb**	**02 33 50.0**	**-0.7**
SF04				AML	AML		
	comp=E,66250µm,1.1s						
SF04				AML	AML		
LPEL	**Lama dei Pelig**	**1.08**	**133**	⇑P	**Pb**	**02 33 48.1**	**-2.7**
LPEL				AML	AML		
LPEL				AML	AML		
PARC	**Parchiule**	**1.08**	**324**	P	**Pb**	**02 33 49.6**	**-1.3**
PARC				AML	AML		
PARC				AML	AML		
TOLF	**Tolfa**	**1.09**	**230**	⇑P	**Pb**	**02 33 50.4**	**-0.7**
TOLF				AML	AML		
TOLF				AML	AML		
	comp=N,85800µm,1.5s						
SF13	**Bagnolo**	**1.10**	**273**	⇑P	**Pb**	**02 33 50.4**	**-0.8**
SF14	**Selvena**	**1.11**	**269**	⇑P	**Pb**	**02 33 50.5**	**-0.8**
LAV9	**Lanuvio**	**1.15**	**196**	⇑P	**Pb**	**02 33 50.5**	**-1.4**
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
SF01	**Poggio Pratacc**	**1.15**	**272**	⇑P	**Pb**	**02 33 51.1**	**-0.9**
SF01				AML	AML		
SF01				AML	AML		
POFI	**Posta Fibreno**	**1.15**	**157**	P	**Pb**	**02 33 49.9**	**-2.1**
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
CPGN	**Carpegna, Ital**	**1.18**	**331**	P	**Pb**	**02 33 52.4**	**-0.2**
PESA	**Pesaro**	**1.18**	**350**	P	**Pb**	**02 33 51.6**	**-0.9**
PESA				AML	AML		
PESA				AML	AML		
LRP	**Arpino**	**1.18**	**163**	⇑P	**Pb**	**02 33 51.5**	**-1.0**
LRP				AML	AML		
LRP				AML	AML		
CRE	**Caprese Michel**	**1.20**	**315**	P	**Pb**	**02 33 52.1**	**-0.8**
CRE				AML	AML		
	comp=E,74200µm,1.6s						
CRE				AML	AML		
	comp=N,57350µm,1.2s						
ARCI	**Arcidosso**	**1.21**	**274**	⇑P	**Pn**	**02 33 52.5**	**-0.6**
ARCI				AML	AML		
	comp=N,41250µm,1.4s						
ARCI				AML	AML		
	comp=E,35950µm,1.3s						
GIUL	**Giuliano Di Ro**	**1.23**	**175**	⇑P	**Pn**	**02 33 52.1**	**-1.1**
GIUL				AML	AML		
GIUL				AML	AML		
RSM	**Repubblica di**	**1.25**	**337**	⇑P	**Pn**	**02 33 53.5**	**-0.1**
RSM				AML	AML		
RSM				AML	AML		
LIK	**San Giovanni I**	**1.31**	**165**	P	**Pn**	**02 33 54.3**	**-0.1**
LIK	**San Giovanni I**	**1.31**	**165**	AML	AML		
LIK				AML	AML		
RNI2	**Rionero Sannit**	**1.32**	**144**	P	**Pn**	**02 33 54.6**	**+0.1**
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
CERA	**Filignano**	**1.36**	**150**	P	**Pb**	**02 33 55.8**	**+0.2**
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
ASQU	**Asqua**	**1.41**	**317**	P	**Pb**	**02 33 56.2**	**-0.2**
ASQU				AML	AML		
	comp=E,48300µm,1.4s						
ASQU				AML	AML		
	comp=N,70100µm,1.4s						
BLLA	**Bellaria**	**1.44**	**341**	P	**Pg**	**02 33 57.7**	**-0.1**
BLLA				AML	AML		
BLLA				AML	AML		
SFI	**Santa Sofia**	**1.46**	**321**	P	**Pg**	**02 33 58.0**	**-0.2**
SFI				AML	AML		
	comp=N,62400µm,1.6s						
SFI				AML	AML		
	comp=E,56500µm,1.1s						
SFI				AML	AML		

	comp=E,56900µm,1.1s						
SFI				AML	AML		
	comp=N,63550µm,1.6s						
TRIV	**Trivento**	**1.47**	**133**	P	**Pb**	**02 33 57.5**	**+0.1**
TRIV				AML	AML		
TRIV				AML	AML		
TRIV				AML	AML		
TRIV				AML	AML		
FROS	**Frosini**	**1.50**	**287**	⇑P	**Pn**	**02 33 56.9**	**-0.1**
FROS				AML	AML		
	comp=E,58000µm,0.9s						
FROS				AML	AML		
	comp=N,56300µm,1.0s						
CSNT	**Castellina Chi**	**1.51**	**298**	P	**Pn**	**02 33 56.8**	**-0.3**
CSNT				AML	AML		
	comp=N,29600µm,1.1s						
CSNT				AML	AML		
	comp=E,29300µm,1.2s						
OSSC	**Osservatorio P**	**1.56**	**299**		**Pn**	**02 33 57.5**	**-0.3**
OSSC	**Osservatorio P**	**1.56**	**299**	P	**Pn**	**02 33 58.0**	**+0.2**
OSSC				AML	AML		
	comp=E,59700µm,1.1s						
OSSC				AML	AML		
	comp=E,30750µm,1.6s						
OSSC				AML	AML		
	comp=N,30650µm,1.6s						
OSSC				AML	AML		
	comp=N,59000µm,1.1s						
RUFI	**Rufina**	**1.58**	**313**	P	**Pn**	**02 33 57.9**	**-0.1**
RUFI				AML	AML		
	comp=N,55950µm,1.3s						
RUFI				AML	AML		
	comp=E,39350µm,1.6s						
VAGA	**Valle Agricola**	**1.60**	**148**	P	**Pn**	**02 33 57.6**	**-0.7**
VAGA				AML	AML		
VAGA				AML	AML		
	comp=E,93350µm,1.3s						
VAGA				AML	AML		
VAGA				AML	AML		
	comp=E,96450µm,1.3s						
BSSO	**Busso**	**1.65**	**138**	⇑P	**Pb**	**02 34 00.2**	**-0.4**
BSSO				AML	AML		
	comp=E,47000µm,1.2s						
BSSO				AML	AML		
	comp=N,53400µm,1.6s						
BSSO				AML	AML		
BSSO				AML	AML		
LMD	**Lutirano**	**1.66**	**322**	P	**Pb**	**02 34 00.3**	**-0.3**
LMD				AML	AML		
	comp=E,46400µm,1.0s						
LMD				AML	AML		
	comp=N,44700µm,1.3s						
CASP	**Castiglione de**	**1.66**	**271**	Pn	**Pn**	**02 33 58.2**	**-0.9**
CASP	**Castiglione de**	**1.66**	**271**	⇑P	**Pn**	**02 33 58.6**	**-0.5**
CASP				AML	AML		
	comp=N,16950µm,1.2s						
CASP				AML	AML		
	comp=E,14850µm,1.0s						
TRIF	**Trifonti**	**1.66**	**282**	P	**Pn**	**02 33 59.0**	**-0.2**
TRIF				AML	AML		
	comp=E,29600µm,0.6s						
TRIF				AML	AML		
	comp=E,26450µm,0.8s						
MODR	**Mondragone**	**1.73**	**161**	⇑P	**Pb**	**02 34 01.2**	**-0.6**
MODR				AML	AML		
	comp=N,85750µm,1.1s						
MODR				AML	AML		
CIGN	**Sant'Elia a Pi**	**1.74**	**130**	P	**Pn**	**02 34 00.6**	**+0.3**
CIGN				AML	AML		
	comp=E,62250µm,1.6s						
CIGN				AML	AML		
	comp=E,95650µm,1.6s						
PIGN	**Pignataro Magg**	**1.77**	**153**	P	**Pn**	**02 34 01.4**	**+0.8**
PIGN				AML	AML		
	comp=N,73000µm,1.4s						
PIGN				AML	AML		
	comp=E,94150µm,1.5s						
PIGN				AML	AML		
	comp=N,74400µm,1.4s						
PIGN				AML	AML		
	comp=E,86750µm,1.5s						
BRIS	**BRISIGHELLA**	**1.80**	**320**	P	**Pb**	**02 34 02.8**	**-0.3**
BRIS				AML	AML		
	comp=N,76600µm,1.0s						
BRIS				AML	AML		
	comp=E,32700µm,1.6s						
SEI	**Scarperia**	**1.81**	**315**	P	**Pb**	**02 34 03.0**	**-0.2**
SEI				AML	AML		
	comp=E,57000µm,0.5s						
SEI				AML	AML		
	comp=N,72550µm,0.5s						
SACR	**S. Croce Del S**	**1.82**	**139**	P	**Pb**	**02 34 02.7**	**-0.7**
SACR				AML	AML		
SACR				AML	AML		
	comp=N,77700µm,1.5s						
SACR				AML	AML		
SACR				AML	AML		
GATE	**Gambatesa**	**1.84**	**133**	P	**Pb**	**02 34 03.4**	**-0.3**
GATE				AML	AML		
	comp=E,56350µm,1.6s						
GATE				AML	AML		
	comp=N,61250µm,1.6s						
GATE				AML	AML		
	comp=N,62350µm,1.6s						
GATE				AML	AML		
	comp=E,60200µm,1.6s						
MELA	**Melanico ??? S**	**1.84**	**125**	⇓P	**Pn**	**02 34 02.3**	**+0.8**
MELA				AML	AML		
MELA				AML	AML		
MELA				AML	AML		
MELA				AML	AML		
DUGI	**Dugi Otok**	**1.86**	**49**	iPn	**Pn**	**02 34 01.0**	**-0.9**
CRMI	**Carmignano**	**1.87**	**303**	P	**Pn**	**02 34 02.6**	**+0.6**
CRMI				AML	AML		
	comp=N,20200µm,1.4s						
CRMI				AML	AML		
	comp=N,2705µm,1.5s						
CRMI				AML	AML		
	comp=E,17850µm,1.2s						
CRMI				AML	AML		
	comp=E,2375µm,1.2s						
IMOL	**Imola, Italy**	**1.87**	**328**	P	**Pg**	**02 34 05.2**	**-0.8**
IMOL				AML	AML		
IMOL				AML	AML		
	comp=N,90500µm,1.3s						
TREM	**Isole Tremiti**	**1.89**	**110**	⇑P	**Pn**	**02 34 03.0**	**+0.7**
TREM				AML	AML		
TREM				AML	AML		
MPPT	**Montemurlo**	**1.89**	**309**	P	**Pn**	**02 34 02.8**	**+0.4**
MPPT				AML	AML		
	comp=E,37800µm,1.1s						
MPPT				AML	AML		
	comp=N,30500µm,1.5s						
VITU	**Vitulano (BN)**	**1.95**	**144**	P	**Pb**	**02 34 04.6**	**-1.1**
VITU				AML	AML		
	comp=E,34200µm,1.3s						
VITU				AML	AML		
	comp=N,63050µm,0.9s						
VITU				AML	AML		
	comp=N,61650µm,1.0s						
VITU				AML	AML		
	comp=E,53650µm,0.8s						
MTCR	**Monte La Croce**	**1.99**	**310**	P	**Pn**	**02 34 03.6**	**-0.2**
MTCR				AML	AML		
	comp=E,28500µm,1.4s						
MTCR				AML	AML		
	comp=N,42050µm,1.5s						
MTRZ	**Monterenzio**	**2.00**	**324**	P	**Pb**	**02 34 06.7**	**+0.2**
MTRZ				AML	AML		
	comp=E,95250µm,1.0s						
MTRZ				AML	AML		
	comp=E,98750µm,1.0s						
MTRZ				AML	AML		
	comp=N,95000µm,1.4s						
MTRZ				AML	AML		
	comp=N,98050µm,1.5s						
PSB1	**Pescosannita**	**2.00**	**140**	AML	AML		
PSB1				AML	AML		
PSB1				AML	AML		
	comp=N,82250µm,1.5s						
PSB1				AML	AML		
	comp=N,82300µm,1.5s						
FNVD	**Fontana Vidola**	**2.01**	**314**	P	**Pn**	**02 34 04.7**	**+0.7**
FNVD				AML	AML		
	comp=N,40450µm,0.8s						
FNVD				AML	AML		

PAOL Paolisi 2.06 148 Pn 02 34 05.1 +0.5
PAOL Paolisi 2.06 148 P Pn 02 34 05.3 +0.7
VIRC Vir 2.06 42 *e*Pn Pn 02 34 03.9 -0.8
APRC Apricena 2.07 119 P Pn 02 34 05.1 +0.3
APRC AML AML
comp=E,56500µm,0.7s
APRC AML AML
comp=N,29800µm,1.0s
APRC AML AML
comp=E,59000µm,0.7s
APRC AML AML
comp=N,84650µm,1.0s
MOCO Biccari - m.te 2.07 132 P Pb 02 34 06.4 -1.3
MOCO AML AML
comp=E,41200µm,1.3s
MOCO AML AML
comp=E,41400µm,1.3s
MOCO AML AML
comp=N,35300µm,1.6s
MOCO AML AML
comp=N,34900µm,1.6s
PII Pisa 2.12 297 P Pn 02 34 05.6 +0.2
PII AML AML
comp=E,16100µm,0.7s
PII AML AML
comp=N,17350µm,0.8s
POPM Popiglio 2.14 307 P Pn 02 34 05.9 +0.2
POPM AML AML
comp=E,17900µm,1.0s
POPM AML AML
comp=N,17400µm,1.3s
CELB S.Piero in Cam 2.14 270 ⇑P Pn 02 34 05.3 -0.5
CELB AML AML
comp=E,6410µm,0.7s
CELB AML AML
comp=N,6565µm,1.6s
MRB1 Monte Rocchett 2.15 139 P Pb 02 34 08.2 -0.9
MRB1 AML AML
comp=E,88350µm,1.1s
MRB1 AML AML
comp=N,98500µm,1.3s
MRB1 AML AML
MRB1 AML AML
comp=E,90300µm,1.1s
BRJN Brijuni 2.17 12 *i* Pn Pn 02 34 05.3 -0.8
BRJN Brijuni 2.17 12 P Pn 02 34 05.2 -0.9
VVDG Vesuvio Valle 2.17 153 P Pb 02 34 08.4 -1.1
VVDG AML AML
comp=N,78500µm,1.6s
VVDG AML AML
comp=E,55000µm,1.2s
BIOG Biogem 2.18 136 P Pb 02 34 08.9 -0.7
BIOG AML AML
BIOG AML AML
BIOG AML AML
BIOG AML AML
MORI Morici 2.18 59 *e*Pn Pn 02 34 06.1 -0.1
NVLJ Novalja 2.19 35 *e*Pn Pn 02 34 05.4 -1.0
SGRT San Giovanni R 2.20 117 Pn Pn 02 34 06.3 -0.4
SGRT San Giovanni R 2.20 117 P Pn 02 34 07.6 +1.0
baz=121
SGRT S Sb 02 34 35.8 -1.5
baz=121
SGRT San Giovanni R 2.20 117 P Pn 02 34 07.0 +0.4
SGRT AML AML
comp=E,63250µm,0.7s
SGRT AML AML
comp=N,53400µm,1.3s
FIU Minerbio Fiu 2.20 328 P Pb 02 34 09.4 -0.5
ZCCA Zocca 2.21 316 Pn 02 34 07.9 +1.1
ZCCA Zocca 2.21 316 P Pb 02 34 09.6 -0.5
ZCCA AML AML
comp=N,38650µm,1.6s
ZCCA AML AML
comp=N,38200µm,1.6s
ZCCA AML AML
comp=E,30350µm,1.2s
ZCCA AML AML
comp=E,28900µm,1.3s
MAIM Mastiano 2.23 302 P Pn 02 34 07.2 +0.3
MAIM AML AML
comp=E,12000µm,0.8s
MAIM AML AML
comp=N,13850µm,1.1s
BDI Bagni Di Lucca 2.24 306 P Pn 02 34 07.1 -0.1
BDI AML AML
comp=E,18800µm,1.1s
BDI AML AML
comp=N,16000µm,1.1s
BDI AML AML
comp=N,8415µm,0.8s
BDI AML AML
comp=E,6215µm,1.1s
CARD Cardoso 2.29 304 P Pn 02 34 07.7 -0.1
CARD AML AML
comp=N,16550µm,0.6s
CARD AML AML
comp=E,13250µm,1.1s
RABC Rab 2.31 31 *i* Pn Pn 02 34 07.4 -0.6
MSAG Monte S. Angel 2.33 116 P Pn 02 34 08.3 -0.1
MSAG AML AML
MSAG AML AML
comp=E,65400µm,1.1s
MSAG AML AML
MSAG AML AML
comp=E,67550µm,1.0s
SGTA Sant Agata di 2.35 134 P Pn 02 34 08.1 -0.6
SGTA AML AML
comp=N,38750µm,1.6s
SGTA AML AML
comp=E,56700µm,1.1s
SGTA AML AML
comp=N,39000µm,1.6s
SGTA AML AML
comp=E,55100µm,1.1s
CAFE Carife 2.36 137 P Pn 02 34 10.5 +1.7
CAFE AML AML
comp=N,53350µm,1.6s
CAFE AML AML
comp=N,55000µm,1.6s
CAFE AML AML
comp=E,61450µm,1.6s
CAFE AML AML
comp=E,62750µm,1.6s
SMRN Sveta Marina 2.38 18 *i* Pn Pn 02 34 07.9 -1.1
GSCL Gusciola 2.42 311 P Pn 02 34 10.6 +1.0
GSCL AML AML
comp=N,20150µm,1.5s
GSCL AML AML
comp=E,19750µm,1.0s
VLC Villacollemand 2.42 306 Pn Pn 02 34 08.4 -1.2
VLC Villacollemand 2.42 306 P Pn 02 34 09.9 +0.2
VLC AML AML
comp=E,12300µm,1.4s
VLC AML AML
comp=N,12850µm,1.2s
VLC AML AML
comp=N,12500µm,1.2s
VLC AML AML
comp=E,12050µm,1.4s
SNAL S. Angelo Dei 2.42 139 P Pb 02 34 11.8 -1.9
SNAL AML AML
comp=E,82900µm,1.6s
SNAL AML AML
comp=N,93000µm,1.6s
SNAL AML AML
comp=N,89700µm,1.6s
SNAL AML AML
comp=E,89000µm,1.6s
GROG Isola di Gorgo 2.45 286 P Pn 02 34 10.3 +0.3
GROG AML AML
comp=N,4510µm,1.6s
GROG AML AML
comp=E,5105µm,0.7s
RAVA Ravarino 2.45 324 P Pb 02 34 13.1 -1.0
EQUI Equi 2.57 304 P Pn 02 34 11.8 +0.2
EQUI AML AML
comp=N,7485µm,1.5s
EQUI AML AML
comp=E,9465µm,1.0s
CAPA Cerignola FG 2.58 128 P Pn 02 34 11.4 -0.4
CAPA AML AML
comp=N,94700µm,0.9s
CAPA AML AML
comp=E,93100µm,1.1s

CAVE Cavezzo 2.59 324 ⇓P Pn 02 34 13.5 +1.6
CAVE AML AML
comp=E,34150µm,1.3s
CAVE AML AML
comp=N,47450µm,1.2s
SERM Sermide 2.59 330 ⇓P Pn 02 34 13.4 +1.6
SERM AML AML
comp=N,24700µm,0.8s
SERM AML AML
comp=E,36050µm,0.6s
UDBI Udbina 2.60 47 *i* Pn Pn 02 34 12.5 +0.4
VULT Monte Vulture 2.61 134 ⇓P Pn 02 34 13.2 +0.9
VULT AML AML
comp=E,36400µm,1.6s
VULT AML AML
comp=N,77400µm,1.2s
VULT AML AML
comp=N,74750µm,1.2s
VULT AML AML
comp=E,35100µm,1.6s
A250A Rusevo Krmpots 2.64 29 *e*Pn Pn 02 34 12.3 -0.4
MRLC Muro Lucano 2.69 138 ⇓P Pn 02 34 14.5 +1.2
MRLC AML AML
comp=E,20400µm,1.6s
MRLC AML AML
comp=N,27550µm,1.6s
MRLC AML AML
comp=E,17850µm,1.6s
MRLC AML AML
comp=N,26100µm,1.6s
KIJV Kijevo 2.69 62 *i* Pn Pn 02 34 13.8 +0.4
PLMA Palmaria, Port 2.70 299 P Pn 02 34 13.0 -0.4
PLMA AML AML
comp=E,4400µm,1.6s
PLMA AML AML
comp=N,6765µm,1.2s
RIY Rijeka 2.73 21 *e*Pn Pn 02 34 13.3 -0.5
PLIT Plitvice 2.77 40 *e*Pn Pn 02 34 14.3 -0.2
LSTV Lastovo 2.78 89 *e*Pn Pn 02 34 14.0 -0.5
TEOL Teolo 2.78 338 Pn Pn 02 34 13.8 -0.8
TEOL Teolo 2.78 338 ⇓P Pn 02 34 14.9 +0.3
TEOL AML AML
comp=N,77150µm,0.8s
TEOL AML AML
comp=E,93250µm,0.9s
GRAM Graiana 2.80 309 AML AML
comp=N,21350µm,1.2s
GRAM AML AML
comp=E,23700µm,1.3s
PALZ Palazzo San Ge 2.81 130 P Pn 02 34 15.6 +0.7
PALZ AML AML
comp=N,77900µm,1.5s
PALZ AML AML
comp=E,67050µm,1.1s
CDRU Civita di Ruta 2.81 144 P Pn 02 34 16.0 +0.9
PRMA PARMA 2.84 315 Pn Pn 02 34 16.3 +0.9
SKDS Skadanscina 2.84 13 *e*Pn Pn 02 34 14.4 -1.0
SKDS Skadanscina 2.84 13 *i*Pn Pn 02 34 14.4 -1.0
SKDS *e*Sn Sn 02 34 48.4 -1.2
SKDS IAML 02 35 32.0
comp=Z,16µm,1.4s
MRVN Minervino Murg 2.87 126 AML AML
comp=E,12950µm,1.0s
MRVN AML AML
comp=N,15550µm,1.2s
OPPE Oppeano 2.89 332 ⇓P Pn 02 34 16.9 +0.9
OPPE AML AML
comp=E,44650µm,1.2s
OPPE AML AML
comp=N,36750µm,1.5s
ACER Acerenza 2.90 132 P Pn 02 34 16.5 +0.2
ACER AML AML
comp=N,32600µm,1.3s
ACER AML AML
comp=E,34700µm,0.8s
ACER AML AML
comp=E,36500µm,0.8s
ACER AML AML
comp=N,31100µm,1.3s
MAKA Makarska 2.90 79 *i* Pn Pn 02 34 16.1 -0.1
SMPL Sampolo 2.92 258 AML AML
comp=N,2020µm,1.4s
SMPL AML AML
comp=E,2120µm,0.8s
PZUN Potenza 2.93 136 AML AML
comp=E,28450µm,1.6s
PZUN AML AML
comp=N,24700µm,1.6s
PZUN AML AML
comp=E,27250µm,1.6s
PZUN AML AML
comp=N,23950µm,1.6s
CMPR Campora 2.96 146 P Pn 02 34 18.4 +1.4
CMPR AML AML
comp=N,8465µm,1.0s
CMPR AML AML
comp=E,12065µm,1.6s
TRI Trieste 2.96 9 Pn Pn 02 34 15.3 -1.8
TRI Trieste 2.96 9 P Pn 02 34 15.3 -1.8
A050A Klekovaca 3.00 54 *e*Pn Pn 02 34 18.0 +0.3
RICI Ricice 3.02 75 *i* Pn Pn 02 34 18.2 +0.3
MSSA Maissana 3.04 302 Pn Pn 02 34 18.0 -0.1
MSSA Maissana 3.04 302 P Pn 02 34 18.3 +0.2
MSSA AML AML
comp=N,8510µm,0.6s
MSSA AML AML
comp=E,5965µm,0.6s
PGF Pioggiola 3.05 267 *e*P Pn 02 34 19.2 +0.9
PGF *e*Sn Sn 02 34 51.1 -3.7
comp=E,393nm,0.5s
CEY Cerknica 3.10 17 *e*Pn Pn 02 34 18.2 -0.8
BOJS Bojanci 3.13 29 *e*Pn Pn 02 34 18.5 -0.8
BOJS Bojanci 3.13 29 ⇑*e*Pn Pn 02 34 19.5 +0.2
BOJS IAML 02 35 34.7
comp=Z,11µm,1.2s
ASOL Asolo 3.14 344 AML AML
comp=N,35550µm,1.5s
ASOL AML AML
comp=E,48250µm,1.2s
PTRP Pietrapertosa 3.15 135 AML AML
comp=E,33300µm,0.9s
PTRP AML AML
comp=N,31350µm,0.9s
MARN Marana (Italy) 3.17 335 ⇓P Pn 02 34 20.1 +0.2
MCEL Monticello 3.17 140 AML AML
comp=N,23900µm,1.6s
MCEL AML AML
comp=N,23300µm,1.6s
MCEL AML AML
comp=E,16250µm,1.2s
MCEL AML AML
comp=E,16500µm,1.2s
MTSN Montesano sull 3.19 141 AML AML
comp=E,12550µm,1.6s
MTSN AML AML
comp=N,10065µm,1.5s
AMUR Altamura 3.21 125 P Pn 02 34 20.9 +0.5
AMUR AML AML
comp=N,13920µm,0.9s
AMUR AML AML
comp=E,17600µm,0.7s
MGR Morigerati 3.21 144 P Pn 02 34 22.3 +1.9
MGR AML AML
comp=E,10185µm,1.6s
MGR AML AML
comp=N,9130µm,1.6s
MGR AML AML
comp=N,8320µm,1.6s
MGR AML AML
comp=E,10645µm,1.6s
SRKY Kupres RS 3.22 65 *e*Pn Pn 02 34 21.3 +0.7
SABO M.te Sabotino 3.22 6 Pn Pn 02 34 19.5 -1.1
SABO M.te Sabotino 3.22 6 ⇑P Pn 02 34 19.9 -0.7
SABO AML AML
SABO AML AML
comp=E,36100µm,1.2s
SABO AML AML
comp=N,42300µm,1.2s
SABO AML AML
ROVR Rover Verones 3.22 334 ⇓P Pn 02 34 20.9 +0.2
ROVR AML AML
comp=E,13950µm,0.8s
ROVR AML AML
comp=N,15850µm,1.0s
ROVR AML AML
comp=N,6230µm,1.0s

ROVR AML AML
comp=E,5600µm,0.8s
CGRP Cima Grappa 3.24 343 ⇓P Pn 02 34 21.2 +0.1
CGRP AML AML
comp=N,29950µm,0.8s
CGRP AML AML
comp=E,33300µm,1.1s
CGRP AML AML
comp=N,29900µm,0.8s
CGRP AML AML
comp=E,33650µm,1.1s
A251A Rujevac 3.27 43 *e*Pn Pn 02 34 21.3 +0.1
VARN Col Varnada, M 3.29 348 AML AML
comp=N,27700µm,1.4s
VARN AML AML
comp=E,36600µm,0.9s
VARN AML AML
comp=E,36850µm,0.9s
VARN AML AML
comp=N,27750µm,1.4s
OZLJ Ozalj 3.30 30 *e*Pn Pn 02 34 21.6 -0.1
MIGL Miglionico 3.30 130 P Pn 02 34 22.9 +1.2
MIGL AML AML
comp=E,76450µm,1.2s
MIGL AML AML
comp=N,77050µm,1.4s
MGRS Mrkonjic Grad 3.31 59 *e*Pn Pn 02 34 22.8 +0.9
SIRI Monte Sirino - 3.32 141 ⇑P Pn 02 34 24.0 +2.0
SIRI AML AML
comp=E,15950µm,1.6s
SIRI AML AML
comp=N,15100µm,1.5s
SIRI AML AML
comp=E,16250µm,1.6s
SIRI AML AML
comp=N,15350µm,1.5s
BOB Bobbio (Coli) 3.32 308 P Pn 02 34 24.7 +2.6
GORR Gorreto 3.32 305 AML AML
comp=N,7670µm,1.5s
GORR AML AML
comp=E,7480µm,1.0s
AJAC Base Areonaval 3.34 257 ⇑P Pn 02 34 23.1 +0.9
STON Ston 3.37 87 *e*Pn Pn 02 34 21.6 -1.0
STON Ston 3.37 87 *e*Pn Pn 02 34 21.4 -1.2
STON Ston 3.37 87 *e*Pn Pn 02 34 22.1 -0.5
STON *e*Sn Sn 02 35 01.6 -1.0
STON Ston 3.37 87 AML AML
comp=N,10040µm,1.3s
STON AML AML
comp=E,8060µm,1.0s
DOSS Dosso del Somm 3.40 337 ⇓P Pn 02 34 23.3 +0.2
DOSS AML AML
comp=E,15350µm,1.0s
DOSS AML AML
comp=N,17750µm,0.8s
DOSS AML AML
comp=N,15500µm,1.0s
DOSS AML AML
comp=E,18250µm,0.8s
SALO Salr 3.40 328 Pn Pn 02 34 23.1 +0.1
SALO Salr 3.40 328 ⇓P Pn 02 34 23.8 +0.7
SALO AML AML
comp=E,17400µm,0.7s
SALO AML AML
comp=N,22900µm,1.6s
SALO AML AML
comp=E,17800µm,1.2s
SALO AML AML
comp=N,21900µm,1.6s
PRIJ Prijedor 3.40 49 *e*Pn Pn 02 34 23.9 +0.8
SCHR S. Chirico Rap 3.40 138 P Pn 02 34 24.5 +1.4
SCHR AML AML
comp=N,10850µm,1.6s
SCHR AML AML
comp=E,8695µm,1.4s
LJU Ljubljana 3.42 17 ⇑*i*Pn Pn 02 34 23.3 0.0
LJU *i* Sn Sn 02 35 03.7 -0.1
LJU IAML 02 35 35.7
comp=Z,15µm,1.2s
LJU Ljubljana 3.42 17 AML AML
LJU AML AML
MATE Matera 3.42 127 ⇓P Pn 02 34 23.6 +0.2
MATE Matera 3.42 127 AML AML
comp=N,14700µm,1.0s
MATE AML AML
comp=E,13950µm,0.7s
CUC Castrocucco 3.44 143 Pn 02 34 25.6 +1.8
CUC Castrocucco 3.44 143 ⇑P Pn 02 34 25.4 +1.7
CUC AML AML
comp=E,13600µm,1.6s
CUC AML AML
comp=E,11240µm,1.6s
CUC AML AML
comp=N,7780µm,1.6s
CUC AML AML
comp=N,9490µm,1.5s
BAD Bernadia 3.46 1 ⇑P Pn 02 34 23.3 -0.6
MPRI Monte Prat 3.46 358 AML AML
comp=E,27750µm,1.3s
MPRI AML AML
comp=E,20950µm,1.2s
MPRI AML AML
comp=N,29550µm,1.3s
MPRI AML AML
comp=N,22250µm,1.3s
CRAC Craco 3.46 133 AML AML
comp=N,37800µm,1.5s
CRAC AML AML
comp=E,30700µm,1.4s
RNCA Ronca, Sant'Ol 3.47 301 AML AML
comp=N,2140µm,1.6s
RNCA AML AML
comp=E,1985µm,1.5s
CRES Cresnjev 3.48 28 *e*Pn Pn 02 34 24.0 -0.1
VINO Villanova 3.48 2 ⇑P Pn 02 34 23.5 -0.7
MAGA Magasa 3.49 330 ⇓P Pn 02 34 24.6 +0.2
MAGA AML AML
comp=E,34000µm,0.8s
MAGA AML AML
comp=N,23250µm,0.5s
ORZI Orzinuovi 3.49 320 ⇓P Pn 02 34 26.0 +1.8
ORZI AML AML
comp=E,22600µm,1.4s
ORZI AML AML
comp=N,23400µm,1.5s
STAL STALIGIAL 3.49 355 Pn Pn 02 34 23.2 -1.1
STAL STALIGIAL 3.49 355 ⇓P Pn 02 34 24.0 -0.3
STAL AML AML
comp=E,15450µm,0.6s
STAL AML AML
comp=N,13050µm,0.8s
STAL AML AML
comp=E,20750µm,1.2s
STAL AML AML
comp=N,17800µm,0.8s
GEPF Gemona 3.50 0 P Pn 02 34 23.8 -0.5
LTRZ Laterza 3.52 127 AML AML
comp=E,10035µm,0.9s
LTRZ AML AML
comp=N,13700µm,0.8s
A051A Mrakovica 3.53 50 *e*Pn Pn 02 34 24.8 -0.1
LUSI Trento, Gardas 3.54 335 ⇓P Pn 02 34 25.4 +0.3
LUSI AML AML
comp=N,14250µm,1.3s
LUSI AML AML
comp=E,15350µm,1.1s
BLY Banja Luka 3.54 55 *e*Pn Pn 02 34 25.1 +0.1
BLY Banja Luka 3.54 55 *e*Pn Pn 02 34 25.8 +0.8
BLY Banja Luka 3.54 55 P Pn 02 34 25.0 +0.1
NOCI Noci 3.56 123 P Pn 02 34 26.0 +0.7
baz=125
NOCI S Sn 02 35 10.4 +3.1
baz=125
NOCI Noci 3.56 123 P Pn 02 34 25.6 +0.4
NOCI AML AML
comp=E,10400µm,1.3s
NOCI AML AML
comp=N,24300µm,0.8s
CIMO Cimolais 3.56 352 Pn 02 34 24.9 -0.5
CIMO Cimolais 3.56 352 P Pn 02 34 24.9 -0.5
CIMO AML AML
comp=N,6070µm,1.4s
CIMO AML AML
comp=E,7035µm,1.0s
CIMO AML AML
comp=E,7120µm,0.9s

CIMO AML AML
comp=N,5925µm,1.4s
AGOR Agordo 3.59 348 ⇓P Pn 02 34 25.7 +0.1
AGOR AML AML
comp=E,9620µm,1.2s
AGOR AML AML
comp=N,13050µm,1.3s
AGOR AML AML
comp=N,10070µm,1.3s
AGOR AML AML
comp=E,7560µm,1.2s
DGI Dorgali Grotta 3.60 228 ⇑P Pn 02 34 26.3 +0.4
MMN Mormanno 3.61 142 P Pn 02 34 27.6 +1.7
PTCC Patocco-Chiusa 3.63 3 ⇑P Pn 02 34 25.4 -0.9
PTCC AML AML
comp=E,11550µm,0.9s
PTCC AML AML
comp=N,11390µm,1.4s
FUSE Fusea 3.63 359 ⇑P Pn 02 34 25.6 -0.7
GAGG Gaggia 3.65 336 P Pn 02 34 26.7 +0.1
GAGG AML AML
comp=N,18600µm,1.2s
GAGG AML AML
comp=N,13300µm,1.2s
GAGG AML AML
comp=E,12650µm,1.2s
GAGG AML AML
comp=E,18850µm,1.2s
PRED Cave del Predi 3.68 5 Pn 02 34 26.1 -0.8
ZAG Zagreb 3.68 33 ePn Pn 02 34 26.1 -0.8
CLUD Cludinico 3.68 357 Pn Pn 02 34 25.9 -1.0
ZONE Zone 3.68 325 AML AML
comp=E,1655µm,0.9s
ZONE AML AML
comp=N,9400µm,0.6s
ZONE AML AML
comp=N,2220µm,0.6s
ZONE AML AML
comp=E,6875µm,0.9s
SARZ Sarezzano 3.69 306 AML AML
comp=N,22400µm,1.3s
SARZ AML AML
comp=E,19000µm,1.4s
SARZ AML AML
comp=E,18600µm,1.4s
SARZ AML AML
comp=N,22950µm,1.3s
DBRK Dubrovnik 3.71 90 ePn Pn 02 34 26.1 -1.1
PTJ Puntijarka 3.73 32 ePn Pn 02 34 26.6 -1.1
PCP Piancastagn 3.76 300 P Pn 02 34 27.5 -0.5
PCP AML AML
comp=E,2510µm,1.6s
PCP AML AML
comp=N,2210µm,1.5s
MABI Malga Bissina 3.77 331 ⇓P Pn 02 34 28.7 +0.4
MABI AML AML
comp=N,3490µm,1.4s
MABI AML AML
comp=E,4460µm,0.6s
ACOM Acomizza, Ital 3.78 4 P Pn 02 34 28.2 -0.3
ACOM AML AML
comp=N,18600µm,0.8s
ACOM AML AML
comp=N,18750µm,0.8s
ACOM AML AML
comp=E,19200µm,1.3s
ACOM AML AML
comp=E,18550µm,1.3s
ZOU Zoufplan 3.78 358 P Pn 02 34 28.2 -0.3
ZOU AML AML
comp=E,22750µm,1.4s
ZOU AML AML
comp=N,19400µm,1.3s
ZOU AML AML
comp=N,19150µm,1.3s
ZOU AML AML
comp=E,22250µm,1.4s
SALB San Lorenzo Be 3.78 139 P Pn 02 34 30.3 +1.9
SALB AML AML
comp=E,6850µm,1.4s
SALB AML AML
comp=E,7015µm,1.4s
SALB AML AML
comp=N,4595µm,1.6s
SALB AML AML
comp=N,4330µm,1.6s
QLNO Quiliano 3.80 296 AML AML
comp=N,4415µm,1.1s
QLNO AML AML
comp=E,2085µm,1.2s
CANO Canova, Maglio 3.83 294 AML AML
comp=E,12850µm,1.1s
CANO AML AML
comp=N,4865µm,1.2s
MOSL Moslavina 3.85 41 ePn Pn 02 34 28.0 -1.3
OBKA Obir 3.87 15 ePn Pn 02 34 28.6 -1.0
OBKA Obir 3.87 15 i Pn Pn 02 34 29.5 -0.1
comp=N,230nm,0.5s,SNR=27
OBKA eSn Sn 02 35 15.3 +0.3
comp=N,2µm,0.7s
OBKA Obir 3.87 15 ePn Pn 02 34 29.5 -0.1
MYKA Terra Mystica 3.87 5 i Pn Pn 02 34 29.6 0.0
comp=N,695nm,0.6s,SNR=141
MYKA eSn Sn 02 35 14.5 -0.5
comp=N,896nm,0.6s
KOSI Kohlern 3.89 342 ⇓P Pn 02 34 30.6 +0.7
KOSI AML AML
comp=E,19150µm,1.3s
KOSI AML AML
comp=N,16400µm,1.6s
CET2 Cetraro 3.89 146 AML AML
comp=E,9265µm,1.4s
CET2 AML AML
comp=N,8915µm,1.4s
RORO Rocca Rossa 3.91 292 AML AML
comp=E,1070µm,0.9s
RORO AML AML
comp=N,996µm,1.3s
BOSI Bolzano 3.93 342 AML AML
comp=N,49200µm,1.1s
BOSI AML AML
comp=E,41600µm,1.0s
APPI Appiano 3.94 341 ⇓P Pn 02 34 31.2 +0.7
APPI AML AML
comp=E,10020µm,0.8s
APPI AML AML
comp=N,9535µm,0.7s
HCY Herceg Novi 3.98 93 ePn Pn 02 34 31.5 +0.4
HCY Herceg Novi 3.98 93 ⇓i Pn Pn 02 34 31.4 +0.4
HCY i Sn Sn 02 35 18.3 +0.6
BRY Bratogost 3.99 86 ePn Pn 02 34 31.7 +0.4
BRY Bratogost 3.99 86 ⇑i Pn Pn 02 34 31.4 +0.1
BRY i Sn Sn 02 35 18.1 0.0
ABTA Abfaltersbach 3.99 354 i Pn Pn 02 34 31.9 +0.6
comp=N,2µm,0.7s,SNR=320
ABTA eSn Sn 02 35 15.6 -2.5
comp=N,3µm,0.8s
ROTM Rocchetta Tana 4.02 303 AML AML
comp=E,16850µm,1.5s
ROTM AML AML
comp=N,19300µm,1.6s
BRES Bressanone 4.04 346 AML AML
comp=E,12900µm,1.3s
BRES AML AML
comp=N,13100µm,1.2s
DOB Doboj 4.10 60 ePn Pn 02 34 31.9 -0.8
PERS Pernice 4.11 20 ⇑ePn Pn 02 34 32.4 -0.5
PERS IAML 02 36 05.3
comp=Z,10µm,1.2s
SOKA Soboth 4.13 19 i Pn Pn 02 34 33.1 -0.1
comp=Z,45nm,0.4s,SNR=27
SOKA eSn Sn 02 35 19.8 -1.7
comp=Z,1µm,1.1s
BRMO Bormio 4.18 333 ⇓P Pn 02 34 35.2 +1.2
BRMO AML AML
comp=E,4730µm,1.2s
BRMO AML AML
comp=N,3545µm,1.2s
MOSI Grossmontoni 4.25 335 AML AML
comp=E,20700µm,1.0s
MOSI AML AML
comp=N,23550µm,1.1s
BERNI Berninapass 4.25 330 AML AML
comp=N,3970µm,0.7s
BERNI AML AML
comp=E,4940µm,0.7s
UPM Unac-Piva 4.27 82 ePn Pn 02 34 36.6 +1.5
UPM Unac-Piva 4.27 82 ⇑i Pn Pn 02 34 35.1 0.0
UPM i Sn Sn 02 35 25.1 +0.1
CEME Cevo 4.28 91 ⇑i Pn Pn 02 34 35.7 +0.4
CEME i Sn Sn 02 35 25.7 +0.5
SBF Sospel 4.29 287 eP Pn 02 34 35.8 +0.5
SBF eSn Sn 02 35 20.4 -4.9
comp=E,2µm,0.7s
BUM Brajici-Budva 4.29 94 ⇓i Pn Pn 02 34 35.7 +0.3
BUM i Sn Sn 02 35 25.4 -0.1
NKME Niksic 4.29 88 ⇑i Pn Pn 02 34 35.5 +0.1
NKME i Sn Sn 02 35 25.8 +0.3
KBA Koelnbreinsper 4.30 2 i Pn Pn 02 34 35.9 +0.3
comp=E,2µm,0.7s,SNR=195
KBA eSn Sn 02 35 25.0 -0.8
comp=E,1µm,0.5s
KBA Koelnbreinsper 4.30 2 ePn Pn 02 34 36.0 +0.3
KBA eSn Sn 02 35 24.8 -1.0
A252A Venje 4.32 50 ePn Pn 02 34 34.7 -1.0
NKY Niksic 4.32 88 ⇓i Pn Pn 02 34 36.1 +0.3
NKY i Sn Sn 02 35 26.8 +0.5
VSL Villasalto 4.33 222 ⇑P Pn 02 34 36.2 +0.4
VSL AML AML
VSL AML AML
FUORN Ofenpass-Fuorn 4.35 333 Pn 02 34 36.9 +0.6
VARE Varese 4.39 316 AML AML
comp=N,5735µm,0.7s
VARE AML AML
comp=E,4895µm,0.8s
MONC Moncucco Torin 4.40 303 AML AML
comp=N,4880µm,1.0s
MONC AML AML
comp=E,5775µm,1.2s
STV Sant Anna di V 4.46 291 AML AML
comp=E,1280µm,0.7s
STV AML AML
comp=N,1056µm,0.7s
CGL Cagliari Serpe 4.47 222 ⇑P Pn 02 34 38.4 +0.5
CGL AML AML
comp=E,5470µm,0.4s
CGL AML AML
comp=N,5550µm,1.0s
DRME Dracevica, Mon 4.53 95 ePn Pn 02 34 39.6 +1.1
DRME Dracevica, Mon 4.53 95 ⇑i Pn Pn 02 34 39.2 +0.7
DRME i Sn Sn 02 35 31.5 +0.4
PDG Podgorica 4.54 92 ⇑P Pn 02 34 39.6 +0.9
PDG Podgorica 4.54 92 Pn Pn 02 34 38.8 0.0
PDG Podgorica 4.54 92 ePn Pn 02 34 39.6 +0.9
PDG eSn Sn 02 35 32.1 +0.6
PDG Podgorica 4.54 92 AML AML
comp=N,10470µm,1.4s
PDG AML AML
comp=N,8105µm,1.5s
PDG AML AML
comp=E,9295µm,1.2s
PDG AML AML
comp=E,7275µm,1.2s
TTG Podgorica 4.54 92 ⇑i Pn Pn 02 34 39.3 +0.6
TTG i Sn Sn 02 35 31.8 +0.3
FETA Feichten 4.57 339 i Pn Pn 02 34 40.9 +1.6
comp=E,362nm,0.8s,SNR=134
FETA eSn Sn 02 35 33.8 +1.4
comp=E,418nm,0.6s
WTTA Wattenberg 4.61 347 i Pn Pn 02 34 41.3 +1.5
comp=E,444nm,0.6s,SNR=81
WTTA eSn Sn 02 35 34.3 +1.0
comp=E,2µm,0.6s
WTTA Wattenberg 4.61 347 AML AML
comp=E,11100µm,1.0s
WTTA AML AML
comp=N,9320µm,1.2s
WTTA Wattenberg 4.61 347 ePn Pn 02 34 41.5 +1.7
ULC Ulcinj 4.61 98 ⇑i Pn Pn 02 34 40.0 +0.3
ULC i Sn Sn 02 35 33.7 +0.4
DAVOX Davos/Dischmat 4.62 331 Pn Pn 02 34 41.4 +1.4
comp=N,214nm,0.3s,baz=157,slow=14,SNR=161
DAVOX Sn Sn 02 35 34.4 +0.8
comp=N,102nm,0.3s,baz=146,slow=19,SNR=2.3
PLE Pljevlja 4.63 81 ⇑i Pn Pn 02 34 39.9 -0.1
PLE i Sn Sn 02 35 33.9 +0.1
SQTA Sankt Quirin 4.64 344 Pn 02 34 42.0 +1.7
SQTA Sn 02 35 35.3 +1.1
SQTA Sankt Quirin 4.64 344 P Pn 02 34 42.0 +1.7
SQTA 02 35 35.3
SQTA Sankt Quirin 4.64 344 i Pn Pn 02 34 41.9 +1.7
comp=N,918nm,0.6s,SNR=106
SQTA eSn Sn 02 35 35.3 +1.1
comp=N,1µm,0.4s
RUDO Rudo 4.65 77 ePn Pn 02 34 40.4 +0.2
WATA Walderalm 4.69 347 Pn 02 34 42.5 +1.6
WATA Sn 02 35 35.9 +0.7
WATA Walderalm 4.69 347 P Pn 02 34 42.5 +1.6
WATA 02 35 35.9
WATA Walderalm 4.69 347 i Pn Pn 02 34 42.5 +1.6
comp=N,201nm,0.3s,SNR=167
WATA eSn Sn 02 35 35.9 +0.7
comp=N,2µm,0.6s
PZZ Stroppo 4.69 294 AML AML
comp=E,1690µm,1.4s
PZZ AML AML
comp=N,2020µm,1.3s
KOME Kolasin 4.71 87 ⇑i Pn Pn 02 34 41.7 +0.6
KOME i Sn Sn 02 35 35.6 -0.1
BBLS Lazići 4.71 75 ePn Pn 02 34 41.5 +0.3
BBLS eSn Sn 02 35 33.9 -1.9
MOTA Moosalm 4.78 343 Pn 02 34 44.0 +1.8
MOTA Sn 02 35 36.6 -1.0
MOTA Moosalm 4.78 343 i Pn Pn 02 34 44.0 +1.8
comp=N,407nm,0.8s,SNR=153
MOTA eSn Sn 02 35 36.7 -1.0
comp=N,707nm,0.5s
ARSA Arzberg 4.78 20 i Pn Pn 02 34 41.2 -0.9
comp=N,53nm,0.4s,SNR=65
ARSA eSn Sn 02 35 35.0 -2.5
comp=N,439nm,0.5s
ARSA Arzberg 4.78 20 ePn Pn 02 34 41.2 -0.9
ARSA eSn Sn 02 35 34.4 -3.1
SCTE Santa Cesarea 4.84 122 Pn Pn 02 34 43.4 +0.4
SCTE Santa Cesarea 4.84 122 P Pn 02 34 44.1 +1.2
baz=124
SCTE S Sb 02 35 47.9 -5.3
baz=124
FUSIO Fusio 4.86 321 AML AML
comp=N,3770µm,1.2s
FUSIO AML AML
comp=E,5060µm,1.0s
KOVH Kovagotottos 4.86 45 P Pn 02 34 42.0 -1.2
KOVH S Sn 02 35 35.7 -3.8
LMR La Mourre 4.88 279 eP Pn 02 34 43.2 -0.1
LMR eSn Sn 02 35 34.7 -5.0
comp=E,56nm,0.3s
ZUGS Zugspitze, Sch 4.88 343 ePn Pn 02 34 45.7 +2.1
BLJ Bijeljina 4.88 64 ePn Pn 02 34 41.7 -1.7
BIOA Bad Ischl, Aus 4.92 4 Pn 02 34 44.2 +0.2
BIOA Sn 02 35 41.1 +0.1
BIOA Bad Ischl, Aus 4.92 4 i Pn Pn 02 34 44.2 +0.2
comp=E,824nm,0.4s,SNR=301
BIOA eSn Sn 02 35 41.1 +0.1
comp=E,2µm,0.5s
PART Garmisch-Parte 4.93 344 ePn Pn 02 34 46.0 +2.0
MMK Mattmark 4.93 313 AML AML
comp=N,2050µm,0.6s
MMK AML AML
comp=E,1815µm,0.5s
RJOB Jochberg 4.96 357 ePn Pn 02 34 45.6 +1.0
RJOB eSn Sn 02 35 43.5 +1.5
TEKS Tekeris 4.97 67 ePn Pn 02 34 43.8 -0.9
IVA Berane 4.98 87 ⇑i Pn Pn 02 34 45.5 +0.6
IVA i Sn Sn 02 35 43.0 +0.5
CEL Celeste 4.99 154 Pn 02 34 46.2 +1.3
MBDF Montbardon 4.99 295 eP Pn 02 34 45.9 +0.8
MBDF eSn Sn 02 35 37.4 -5.5
comp=E,182nm,0.5s
RETA Reutte 4.99 341 i Pn Pn 02 34 46.7 +1.7
comp=E,61nm,0.3s,SNR=128
RETA eSn Sn 02 35 45.2 +2.4
comp=E,746nm,0.6s
PLONS Plons/SG 5.03 329 ePn Pn 02 34 48.2 +2.8
OBER Oberstdorf 5.04 338 ePn Pn 02 34 48.0 +2.4
OBER eSn Sn 02 35 46.4 +2.5
PVY Plav 5.04 90 ⇑i Pn Pn 02 34 46.0 +0.2
PVY i Sn Sn 02 35 43.9 -0.2
SJES Sjenica 5.05 82 ePn Pn 02 34 46.9 +1.1
SJES eSn Sn 02 35 43.3 -0.9
DAVA Damuels 5.06 334 i Pn Pn 02 34 48.1 +2.1
comp=E,893nm,0.6s,SNR=241
DAVA eSn Sn 02 35 46.7 +2.3
comp=E,550nm,0.5s
DAVA Damuels 5.06 334 ePn Pn 02 34 48.1 +2.1
MOA Molln 5.13 9 ePn Pn 02 34 46.9 0.0
MOA eSn Sn 02 35 43.2 -2.9
MOA Molln 5.13 9 i Pn Pn 02 34 47.1 +0.2
comp=E,293nm,0.4s,SNR=128
MOA eSn Sn 02 35 44.3 -1.8
comp=E,552nm,0.5s
MOA Molln 5.13 9 ePn Pn 02 34 47.0 0.0
MOA eSn Sn 02 35 45.0 -1.1
BCI Bajram Curri 5.15 92 P Pn 02 34 48.6 +1.5
baz=94
BCI S Sn 02 35 50.8 +4.3
baz=94
DIVS Divibare 5.17 73 Pn Pn 02 34 47.3 -0.3
DIVS Divibare 5.17 73 ePn Pn 02 34 47.2 -0.3
DIVS Divibare 5.17 73 ePn Pn 02 34 47.1 -0.4
BNI Bardonecchia 5.18 298 Pn Pn 02 34 48.2 +0.6
BNI Bardonecchia 5.18 298 P Pn 02 34 48.2 +0.6
CLTB Caltabellotta 5.20 179 Pn 02 34 50.9 +3.0
IVAS Ivanjica 5.21 79 ePn Pn 02 34 47.9 0.0
IVAS eSn Sn 02 35 46.8 -1.1
TIR Tirane 5.22 104 ⇑P Pn 02 34 48.7 +0.6
TIR Tirane 5.22 104 P Pn 02 34 48.7 +0.6
TIR S Sn 02 35 45.1 -3.2
TIR Tirane 5.22 104 Pn 02 34 48.7 +0.6
TIR Tirane 5.22 104 P Pn 02 34 48.7 +0.6
TIR Tirane 5.22 104 ePn Pn 02 34 48.8 +0.7
TIR eSn Sn 02 35 47.5 -0.8
TIR Tirane 5.22 104 P Pn 02 34 48.5 +0.4
baz=106
TIR S Sn 02 35 48.2 -0.1
baz=106
MORH Mrgy, Hungar 5.24 47 ePn Pn 02 34 47.3 -0.9
MORH Mrgy, Hungar 5.24 47 P Pn 02 34 47.3 -0.9
VLO Vlora 5.31 114 P Pn 02 34 50.5 +1.3
VLO S Sn 02 35 47.7 -2.6
VLO Vlora 5.31 114 Pn 02 34 50.3 +1.1
VLO Vlora 5.31 114 P Pn 02 34 50.3 +1.1
VLO Vlora 5.31 114 P Pn 02 34 50.6 +1.3
baz=115
VLO S Sb 02 36 01.8 -4.7
baz=115
LPG La Plagne 5.33 303 eP Pn 02 34 51.3 +1.5
LPG eSn Sn 02 35 45.5 -5.8
comp=E,571nm,0.5s
TIH Tihany 5.34 38 P Pn 02 34 50.5 +0.9
UBR Ueberruh 5.34 338 ePn Pn 02 34 51.2 +1.4
LPL La Plagne 5.35 303 eP Pn 02 34 51.4 +1.4
LPL eSn Sn 02 35 45.9 -5.8
comp=E,452nm,0.5s
FRGS Fruska Gora 5.38 62 ⇓P Pn 02 34 49.8 -0.5
FRGS Fruska Gora 5.38 62 ePn Pn 02 34 49.4 -0.9
FRGS Fruska Gora 5.38 62 ePn Pn 02 34 49.3 -1.0
VAE Valguarnera 5.39 169 Pn Pn 02 34 54.1 +3.7
comp=E,2.7nm,0.3s,baz=29,slow=3.9,SNR=37
MPLH Magyarpolny 5.39 34 P Pn 02 34 49.2 -1.3
MPLH S Sn 02 35 52.6 +0.1
RONA Rosalia, Austr 5.41 23 Pn 02 34 50.0 -0.3
RONA Sn 02 35 51.5 -1.4
RONA Rosalia, Austr 5.41 23 i Pn Pn 02 34 50.4 -0.3
comp=E,27nm,0.2s,SNR=111
RONA eSn Sn 02 35 51.5 -1.4
comp=E,251nm,0.4s
SOP Sopron 5.47 25 P Pn 02 34 51.0 -0.6
SOP S Sn 02 35 53.1 -1.3
SENIN Lac Senin/Sane 5.49 313 Pn 02 34 52.9 +0.9
TRUS Trudelj 5.49 72 ePn Pn 02 34 52.0 +0.2
CONA Conrad Observa 5.50 20 i Pn Pn 02 34 51.6 -0.4
comp=E,159nm,0.6s,SNR=126
CONA eSn Sn 02 35 54.7 -0.5
comp=E,430nm,0.4s
WILA Wila 5.51 329 ePn Pn 02 34 53.4 +1.3
EGYH Egyhazaskeszo 5.51 31 P Pn 02 34 51.6 -0.5
FUR Furstenfeldbru 5.54 347 ePn Pn 02 34 53.3 +0.8
PHP Peshkopia 5.54 99 P Pn 02 34 53.8 +1.2
PHP S Sn 02 35 57.9 +1.6
PHP Peshkopia 5.54 99 P Pn 02 34 54.2 +1.6
baz=101
PHP S Sn 02 35 58.2 +1.9
baz=101
SMRF Simiane la Rot 5.63 285 eP Pn 02 34 55.5 +1.8
SMRF eSn Sn 02 35 52.3 -6.0
comp=E,126nm,0.7s
GRUS Gruza 5.65 76 ePn Pn 02 34 54.0 0.0
ORIF Oris-en-Rattie 5.65 295 eP Pn 02 34 56.8 +2.7
ORIF eSn Sn 02 35 53.2 -5.9
comp=E,180nm,0.5s
BEO Beograd 5.70 67 ePn Pn 02 34 53.6 -1.0
CSKK Cskako 5.85 37 P Pn 02 34 58.1 +1.4
SELS Selova 5.88 83 ePn Pn 02 34 57.0 -0.2
SELS eSn Sn 02 36 02.0 -2.6
KEK Kerkira 5.89 119 P Pn 02 34 58.1 +0.7
KEK S Sn 02 36 00.0 -4.8
KEK Kerkira 5.89 119 Pn 02 34 58.0 +0.7
SULZ Cheisacher 5.92 325 ePn Pn 02 34 58.3 +0.6
SRN Sarande 5.93 117 P Pn 02 34 58.5 +0.6
SRN Sarande 5.93 117 P Pn 02 34 58.1 +0.2
baz=118
SRN S Sn 02 36 14.0 +8.2
baz=118
BALST Balsthal 5.96 322 ePn Pn 02 34 58.7 +0.4
SLE Schleitheim 5.96 328 ePn Pn 02 34 58.4 +0.2
SLE eSn Sn 02 36 07.5 +1.0
OHR Ohrid 5.96 104 i Pn Pn 02 35 00.1 +1.7
SVIS Svilajnac 6.07 73 ePn Pn 02 35 00.3 +0.6
GEC2 GERESS Array S 6.08 4 Pn 02 34 59.2 -0.7
GEC2 GERESS Array S 6.08 4 ePn Pn 02 34 59.1 -0.9
GEC2 eSn Sn 02 36 07.9 -1.7
GERES GERESS Array B 6.08 4 Pn Pn 02 34 58.8 -1.2
comp=E,24nm,0.3s,baz=174,slow=13,SNR=135
GERES Sn Sn 02 36 07.2 -2.4
comp=E,120nm,0.3s,baz=160,slow=24,SNR=12
comp=E,213nm,0.7s
GERES GERESS Array B 6.08 4 Pn 02 34 59.1 -0.9
GERES GERESS Array B 6.08 4 P Pn 02 34 59.1 -0.9
I26DE FREYUNG INFRAS 6.09 4 i 03 13 30.0
baz=184,slow=310,SNR=1.1
ZST Bratislava 6.10 26 eP Pn 02 34 59.1 -1.0
ZST e 02 36 05.1
ZST Bratislava 6.10 26 ePN Pn 02 34 59.1 -1.0
ZST eSN Sn 02 36 05.1 -4.7
CKRC Cesky Krumlov 6.10 7 ePN Pn 02 34 58.9 -1.2
CKRC eSN Sn 02 36 06.0 -3.9
KBN Korca 6.13 108 P Pn 02 35 01.9 +1.3
KBN S Sn 02 36 08.2 -2.6
KBN Korca 6.13 108 Pn Pn 02 35 01.1 +0.5
KBN Korca 6.13 108 P Pn 02 35 01.1 +0.5
KBN Korca 6.13 108 P Pn 02 35 02.0 +1.3
baz=110
KBN S Sn 02 36 10.9 +0.1
baz=110
NORI Noerdlinger Ri 6.19 345 ePn Pn 02 35 01.0 -0.4
NORI eSn Sn 02 36 10.9 -1.3
LSK Leskovik 6.20 113 P Pn 02 35 02.6 +0.9
LSK S Sn 02 36 07.7 -4.9
LSK Leskovik 6.20 113 P Pn 02 35 02.9 +1.2
baz=114
LSK S Sn 02 36 13.9 +1.3
baz=114
SKO Skopje 6.21 95 i Pn Pn 02 35 02.6 +0.9
BUD Budapest 6.29 40 P Pn 02 35 03.3 +0.5
CABF La Chapelle 6.31 310 eP Pn 02 35 04.5 +1.4
CABF eSn Sn 02 36 08.7 -6.4
comp=E,201nm,0.5s
MODS Modra-Piesok 6.31 26 eP Pn 02 35 02.2 -0.8
MODS e 02 36 13.2
MODS MLR MLR
comp=Z,1µm,0.9s
MODS Modra-Piesok 6.31 26 ePN Pn 02 35 02.2 -0.8
MODS eSN Sn 02 36 13.2 -1.9
MODS eLG Lg 02 36 18.8
BANR Banloc 6.33 63 ⇑P Pn 02 35 03.5 +0.1
BOVS Bovan 6.33 79 ePn Pn 02 35 02.6 -0.7
BOVS eSn Sn 02 36 12.8 -2.8
KHC Kasperske Hory 6.36 3 Pn Pn 02 35 02.5 -1.3
KHC Kasperske Hory 6.36 3 eP Pn 02 35 02.8 -1.0
KHC e 02 36 13.2
KHC MLR MLR
comp=Z,17µm,9.0s
KHC Kasperske Hory 6.36 3 ePN Pn 02 35 02.8 -1.0

KHC eSN Sn 02 36 13.2 -3.2
KHC AMS AMS 02 37 50.0
comp=Z,17µm,9.0s
WET Wettzell 6.37 359 ePn Pn 02 35 02.7 -1.2
NEST Nestorio 6.40 109 P Pn 02 35 05.9 +1.6
NEST S Sn 02 36 13.1 -4.3
BARS Barje 6.40 87 ePn Pn 02 35 04.5 +0.2
BARS eSn Sn 02 36 16.1 -1.2
KUBS Kucevo 6.42 72 ePn Pn 02 35 03.7 -0.9
VIVF Saint-Julien-l 6.45 292 eP Pn 02 35 07.1 +2.1
VIVF eSn Sn 02 36 12.2 -6.5
comp=Z,22nm,0.4s
SMOL Smolenice 6.48 26 eP Pn 02 35 04.5 -0.9
SMOL e 02 36 16.0
SMOL MLR MLR
comp=Z,200nm,0.9s
BFO Black Forest 6.49 330 Pn 02 35 05.6 +0.1
BFO Black Forest 6.49 330 P Pn 02 35 05.6 +0.1
BFO Black Forest 6.49 330 P Pn 02 35 05.8 +0.3
BFO Black Forest 6.49 330 ePn Pn 02 35 05.8 +0.3
MDVR Moldovita 6.53 69 ⇑P Pn 02 35 05.6 -0.5
STU Stuttgart 6.59 337 Pn 02 35 06.4 -0.5
STU Stuttgart 6.59 337 P Pn 02 35 06.4 -0.5
STU Stuttgart 6.59 337 ePn Pn 02 35 07.3 +0.4
JAN Janina 6.61 116 P Pn 02 35 07.3 +0.1
PRVS Prvonek 6.61 89 ePn Pn 02 35 07.7 +0.5
PRVS eSn Sn 02 35 21.5 -1.1
SSB Saint Sauveur 6.67 295 Pn 02 35 08.3 +0.3
SSB Saint Sauveur 6.67 295 P Pn 02 35 08.3 +0.3
KRUC Moravsky 6.69 19 ePN Pn 02 35 07.0 -1.2
KRUC eSN Sn 02 36 20.7 -3.6
HINF Hinteralfeld 6.70 321 eP Pn 02 35 08.8 +0.4
HINF eSn Sn 02 36 17.9 -6.8
comp=Z,449nm,0.4s
TREC Trest 6.72 13 eP Pn 02 35 07.6 -1.1
TREC e 02 36 21.3
TREC MLR MLR
comp=Z,20µm,8.6s
TREC Trest 6.72 13 ePN Pn 02 35 07.6 -1.1
TREC eSN Sn 02 36 21.3 -3.9
TREC AMS AMS 02 38 00.0
comp=Z,20µm,8.6s
ZAGS Zajecar 6.73 78 ePn Pn 02 35 08.1 -0.7
ZAGS eSn Sn 02 36 22.3 -3.1
BZS Buzias 6.73 62 ePn Pn 02 35 08.0 -0.8
BSZH Besenyszg 6.79 46 ⇓P Pn 02 35 08.8 -0.7
BSZH Besenyszg 6.79 46 P Pn 02 35 10.2 +0.7
BSZH S Sn 02 36 24.2 -2.5
STIP Stip 6.82 96 *i* Pn Pn 02 35 12.1 +2.1
JAVC Velka Javorina 6.86 26 ePN Pn 02 35 10.2 -0.4
ECH Echery 6.86 324 Pn Pn 02 35 11.0 +0.4
ECH Echery 6.86 324 P Pn 02 35 11.0 +0.4
LASF Ste Croix 6.87 284 eP Pn 02 35 11.4 +0.7
LASF eSn Sn 02 36 22.0 -6.8
comp=Z,26nm,0.3s
BOSS Bosilegrad 6.91 89 ePn Pn 02 35 11.7 +0.4
BOSS eSn Sn 02 36 26.9 -3.0
KZN Kozani 6.95 108 P Pn 02 35 12.4 +0.6
KZN S Sn 02 36 26.8 -4.0
TSLK Tsoukalades, L 6.95 122 P Pn 02 35 12.9 +1.1
VRAC Vranov 6.96 19 ⇓P Pn 02 35 10.9 -1.2
VRAC Vranov 6.96 19 Pn Pn 02 35 11.0 -1.0
comp=Z,10.0nm,0.3s,baz=206,slow=14,SNR=34
VRAC Sn Sn 02 36 25.2 -5.9
comp=Z,14nm,0.3s,baz=232,slow=19,SNR=1.1
VRAC LR LR 02 38 19.0
comp=Z,12µm,19.0s,baz=202,slow=42
comp=Z,92nm,0.6s
VRAC Vranov 6.96 19 ePN Pn 02 35 10.8 -1.2
VRAC eSN Sn 02 36 27.7 -3.4
CDF Champ du Feu 6.96 326 eP Pn 02 35 13.3 +1.2
CDF eSn Sn 02 36 24.3 -7.0
comp=Z,166nm,0.3s
LKD2 Lefkada island 6.97 122 P Pn 02 35 13.1 +0.9
LKD2 S Sn 02 36 30.6 -0.8
VYHS Vyhne 6.98 33 eP Pn 02 35 11.7 -0.5
VYHS e 02 36 27.1
VYHS Vyhne 6.98 33 ePN Pn 02 35 11.7 -0.5
VYHS ePG Pg 02 35 44.2 +0.6
VYHS eSN Sn 02 36 27.1 -4.4
DRAG Dragano-Lefkad 6.98 123 P Pn 02 35 12.9 +0.8
ZAPS Zavoj 6.99 83 ePn Pn 02 35 12.9 +0.5
PSZ Piszkesteto 7.01 41 Pn 02 35 12.1 -0.6
PSZ Piszkesteto 7.01 41 P Pn 02 35 12.1 -0.6
PSZ Piszkesteto 7.01 41 P Pn 02 35 14.0 +1.3
PSZ S Sn 02 36 31.0 -1.4
BLKB Belogradchik 7.03 80 ⇓P Pn 02 35 13.3 +0.2
GRFO Grafenberg 7.04 350 Pn Pn 02 35 11.3 -1.7
GRFO Grafenberg 7.04 350 P Pn 02 35 11.3 -1.7
GRF Grafenberg Arr 7.04 350 ePn Pn 02 35 11.8 -1.3
NYDR Nydri-Lefkada 7.04 123 P Pn 02 35 13.8 +0.7
HERR Herculane 7.04 69 ⇑P Pn 02 35 13.5 +0.4
DJES Djerdap 7.07 71 ⇓P Pn 02 35 13.9 +0.4
DJES Djerdap 7.07 71 ePn Pn 02 35 13.7 +0.3
HAU Haudompre 7.07 320 eP Pn 02 35 13.8 +0.3
HAU eSn Sn 02 36 26.9 -6.9
comp=Z,988nm,0.5s
EVGI Lefkada island 7.07 123 P Pn 02 35 14.6 +1.1
FSK Fiskardo 7.12 125 P Pn 02 35 16.0 +1.9
DMLN Damoulianata-K 7.15 127 P Pn 02 35 15.8 +1.2
KEF3 Kipouria, Keph 7.16 127 P Pn 02 35 15.8 +1.1
GRG Griva 7.16 102 P Pn 02 35 14.8 0.0
GRG S Sn 02 36 29.6 -6.6
KEF4 Livadi, Kephal 7.17 127 P Pn 02 35 16.4 +1.6
VAY Valandovo 7.18 99 *i* Pn Pn 02 35 15.3 +0.3
MAHO Mahon 7.26 250 P Pn 02 35 15.0 -1.0
MAHO S Sb 02 36 56.1 -6.4
MAHO Mahon 7.26 250 Pn Pn 02 35 15.8 -0.2
PRU Pruhonice 7.28 7 eP Pn 02 35 14.5 -1.8
PRU e 02 36 34.3
PRU MLR MLR
comp=Z,10µm,11.9s
PRU Pruhonice 7.28 7 ePN Pn 02 35 14.5 -1.8
PRU eSN Sn 02 36 34.3 -4.5
PRU AMS AMS 02 38 20.0
comp=Z,10µm,11.9s
PUNG Punghina 7.29 75 ⇓P Pn 02 35 17.3 +0.8
VLS Valsamata 7.32 126 P Pn 02 35 18.2 +1.3
PSDA Pessada-Kefalo 7.36 127 P Pn 02 35 18.7 +1.3
GZR Gura Zlata 7.43 66 ⇓P Pn 02 35 18.8 +0.3
THL Klokotos Trika 7.44 113 P Pn 02 35 19.0 +0.5
THL S Sn 02 36 39.8 -3.0
KKB Krupnik 7.44 94 P Pn 02 35 20.4 +1.8
VTS Vitosha 7.46 88 ⇓P Pn 02 35 19.2 +0.4
VTS Vitosha 7.46 88 P Pn 02 35 19.6 +0.7
KNT Kendrikon 7.46 99 P Pn 02 35 18.8 -0.1
BORR Bors 7.51 52 ⇑P Pn 02 35 19.9 +0.5
LIT Litokhoron 7.53 108 P Pn 02 36 42.6 -2.6
LIT S Sn 02 36 42.6 -2.6
SRE Strehaia 7.54 72 ⇑P Pn 02 35 20.6 +0.6
BAIL Bailesti 7.55 77 ⇓P Pn 02 35 20.8 +0.8
CMAH Djebel Manchou 7.55 217 P Pn 02 35 24.4 +4.2
PVO Paravola 7.62 120 P Pn 02 35 22.4 +1.4
KEST Kesra 7.62 204 Pn Pn 02 35 24.8 +3.6
comp=Z,31nm,0.3s,baz=314,slow=3.0,SNR=184
KEST Sn Sn 02 36 49.9 +2.4
baz=126,slow=20
KEST LR LR 02 38 32.9
comp=Z,22µm,18.2s,baz=354,slow=40
KEST Kesra 7.62 204 Pn 02 35 24.4 +3.3
EVR Evrytania 7.63 117 P Pn 02 35 22.9 +1.6
MORC Moravsky Berou 7.64 22 ⇓P Pn 02 35 20.9 -0.4
MORC Moravsky Berou 7.64 22 Pn Pn 02 35 20.6 -0.7
MORC Moravsky Berou 7.64 22 P Pn 02 35 20.6 -0.7
MORC Moravsky Berou 7.64 22 ePN Pn 02 35 20.6 -0.7
SMF Signal de Mont 7.65 303 eP Pn 02 35 22.1 +0.6
SMF eSn Sn 02 36 40.4 -7.8
comp=Z,223nm,0.5s
DEV Deva 7.67 63 ⇑P Pn 02 35 22.3 +0.7
THE Thessaloniki 7.67 103 P Pn 02 35 21.1 -0.6
KRLC Kraliky 7.72 18 eP Pn 02 35 21.6 -0.8
KRLC MLR MLR
comp=Z,17µm,9.1s
KRLC Kraliky 7.72 18 ePN Pn 02 35 21.6 -0.8
KRLC AMS AMS 02 38 40.0
comp=Z,17µm,9.1s
LTVH Ltavrtes, Hu 7.73 50 ⇑P Pn 02 35 24.0 +1.5
LTVH Ltavrtes, Hu 7.73 50 P Pn 02 35 23.7 +1.2
LTVH S Sn 02 36 47.0 -3.0
LANS Liptovska Anna 7.75 33 eP Pn 02 35 23.5 +0.6
LANS e 02 36 49.8

LANS Liptovska Anna 7.75 33 ePN Pn 02 35 23.5 +0.6
LANS ePG Pg 02 36 02.0 +3.5
LANS eSN Sn 02 36 49.8 -0.8
LANS eLG Lg 02 37 14.0
PAGF Fort de Pagny 7.75 321 eP Pn 02 35 24.0 +1.2
PAGF eSn Sn 02 36 42.8 -7.8
comp=Z,164nm,0.4s
LTHK Lithakia 7.78 128 P Pn 02 35 24.2 +1.1
HORT Hortiatis 7.78 103 P Pn 02 35 22.6 -0.7
MAKR Makrakomi, Fth 7.79 116 P Pn 02 35 25.4 +2.0
MPEP Malo Peshtene 7.80 82 P Pn 02 35 24.3 +0.8
PVCC Panska Ves 7.81 7 eP Pn 02 35 22.6 -1.1
PVCC MLR MLR
comp=Z,9µm,13.3s
PVCC Panska Ves 7.81 7 ePN Pn 02 35 22.6 -1.1
PVCC AMS AMS 02 38 50.0
comp=Z,9µm,13.3s
ABSA Djebel Ababsia 7.82 216 P Pn 02 35 28.1 +4.2
SFTF Sexfontaines 7.85 316 eP Pn 02 35 25.1 +0.9
baz=134
SFTF eSn Sn 02 36 45.3 -7.7
comp=Z,366nm,0.6s
OKC Ostrava-Krasne 7.87 24 eP Pn 02 35 23.9 -0.5
OKC e 02 36 49.5
OKC MLR MLR
comp=Z,14µm,18.1s
OKC Ostrava-Krasne 7.87 24 ePN Pn 02 35 23.9 -0.5
OKC eSN Sn 02 36 49.5 -3.9
OKC AMS AMS 02 38 50.0
comp=Z,14µm,18.1s
ANX Ano Chora 7.89 119 P Pn 02 35 27.1 +2.3
DPC Dobruska-Polom 7.89 15 eP Pn 02 35 23.2 -1.5
DPC MLR MLR
comp=Z,15µm,11.6s
DPC Dobruska-Polom 7.89 15 ePN Pn 02 35 23.2 -1.5
DPC AMS AMS 02 38 40.0
comp=Z,15µm,11.6s
SOH Sokhos 7.89 101 P Pn 02 35 24.7 -0.1
DRGR 7.91 56 ⇑P Pn 02 35 25.9 +0.8
DRGR 7.91 56 ePn Pn 02 35 25.2 +0.1
RLS Riolos of Patr 7.92 124 P Pn 02 35 27.3 +2.1
MOX Moxa 7.94 353 ePn Pn 02 35 23.4 -1.9
MOX eSn Sn 02 36 51.0 -4.1
LOR Lormes 7.95 308 ePn Pn 02 35 23.3 -2.2
baz=124
LOR eSn Sn 02 36 47.7 -7.6
comp=Z,135nm,0.4s
MMB Musomiste 7.97 95 P Pn 02 35 27.1 +1.3
EFP Efpalio 7.97 120 P Pn 02 35 28.0 +2.2
SRS Serrai 7.98 98 P Pn 02 35 26.0 0.0
SRS Serrai 7.98 98 ePn Pn 02 35 25.9 0.0
SRS eSn Sn 02 36 54.0 -2.2
UPC Upice 7.98 13 eP Pn 02 35 25.3 -0.7
UPC MLR MLR
comp=Z,21µm,10.6s
UPC Upice 7.98 13 ePN Pn 02 35 25.3 -0.7
UPC AMS AMS 02 38 50.0
comp=Z,21µm,10.6s
MTLF Montolieu 8.00 278 eP Pn 02 35 27.3 +1.0
MTLF eSn Sn 02 36 49.1 -7.7
comp=Z,35nm,0.5s
AVF Avril sur Loir 8.02 303 eP Pn 02 35 27.4 +0.9
AVF eSn Sn 02 36 49.8 -7.3
comp=Z,67nm,0.4s
MEZF Maizieres J'vi 8.04 318 eP Pn 02 35 27.9 +1.1
MEZF eSn Sn 02 36 50.0 -7.6
comp=Z,109nm,0.5s
SSF Saint Saulge 8.05 305 ePn Pn 02 35 25.0 -1.9
SSF eSn Sn 02 36 49.9 -8.0
comp=Z,105nm,0.3s
CKFL Kef-Lekhel 8.06 220 P Pn 02 35 31.2 +4.0
OSTC Ostas 8.06 14 ePN Pn 02 35 25.6 -1.5
OSTC AMS AMS 02 38 40.0
comp=Z,18µm,10.3s
SERG Sergoula 8.08 120 P Pn 02 35 29.6 +2.3
SAVF Savonnieres en 8.08 319 eP Pn 02 35 28.9 +1.6
SAVF eSn Sn 02 36 50.5 -8.1
comp=Z,225nm,0.7s
TNS Taunus Mts 8.11 338 ePn Pn 02 35 27.7 -0.1
BRG Berggiesshubel 8.12 4 *i* P Pn 02 35 25.6 -2.2
BRG Amp 02 35 26.9
comp=Z,17nm,0.9s
BRG ex x 02 35 28.4
BRG Amp 02 35 29.8
comp=Z,43nm,0.6s
BRG ex x 02 35 34.8
BRG Amp 02 35 42.7
comp=Z,111nm,0.6s
BRG ex x 02 36 36.9
BRG ex x 02 36 53.3
BRG ex x 02 38 00.9
BRG Amp 02 38 21.2
comp=Z,1µm,1.4s
BRG Amp 02 39 30.0
comp=Z,14nm,11.0s
BRG Amp 02 39 33.0
comp=E,5.6nm,9.3s
BRG Amp 02 39 33.0
comp=N,14nm,10.4s
BRG ex x 02 50 54.8
BRG Amp 02 51 22.0
comp=Z,5.0nm,1.2s
BRG Berggiesshubel 8.12 4 *i* P Pn 02 35 25.6 -2.2
BRG e 02 36 53.3
BRG pmax pmax
comp=Z,17nm,0.9s
BRG MLR MLR
comp=Z,14µm,11.0s
BRG MLR MLR
comp=E,6µm,9.3s
BRG MLR MLR
comp=N,14µm,10.4s
NVR Nevrokopi 8.12 97 P Pn 02 35 28.5 +0.6
LAKA Lakka 8.13 121 P Pn 02 35 30.1 +2.1
DRO Drossia 8.14 123 P Pn 02 35 30.3 +2.1
PGB Panagyurishte 8.15 88 P Pn 02 35 29.9 +1.6
MESR Meseneni 8.22 55 ⇓P Pn 02 35 30.3 +1.0
BGF Bois d'Agland 8.24 301 ePn Pn 02 35 27.7 -1.8
BGF eSn Sn 02 36 54.7 -7.8
comp=N,173nm,0.4s
CAF Calviac 8.27 289 eP Pn 02 35 31.7 +1.7
CAF eSn Sn 02 36 55.6 -7.8
comp=N,47nm,0.7s
CASM Ain Smara 8.28 220 P Pn 02 35 33.6 +3.4
NIE Niedzica 8.30 34 eP Pn 02 35 32.0 +1.7
NIE eS Sn 02 37 11.4 +7.3
NIE eL L 02 39 11.0
comp=N,8µm,21.2s
VLAD Vladila 8.31 78 ⇓P Pn 02 35 30.9 +0.4
XOR Xorichti 8.34 111 P Pn 02 35 30.4 -0.5
KSP Ksiaz 8.35 14 eP Pn 02 35 31.0 -0.1
KSP eS Sn 02 37 14.8 +10
KSP eL L 02 38 15.8
comp=N,8µm,26.7s
KLV Kalavryta, Ach 8.36 121 P Pn 02 35 32.9 +1.7
KOKK Kokkinochori, 8.36 100 P Pn 02 35 30.9 -0.3
DFRA Djebel Bou Aff 8.36 224 P Pn 02 35 36.5 +5.2
WLF Walferdange 8.41 327 *dP* Pn 02 35 32.2 +0.5
WLF Walferdange 8.41 327 ePn Pn 02 35 33.0 +1.2
CBBR Cluj-Babes-Bol 8.42 58 ⇑P Pn 02 35 34.2 +2.2
CJR Cluj-Napoca 8.43 59 ⇓P Pn 02 35 33.2 +1.0
CLL Collm 8.53 360 Pn Pn 02 35 32.3 -1.2
CLL Collm 8.53 360 eP Pn 02 35 32.0 -1.5
CLL e 02 37 20.0
CLL pmax pmax
comp=Z,146nm,0.6s
CLL Collm 8.53 360 ePn Pn 02 35 32.0 -1.5
comp=Z,146nm,0.6s
CLL ePg Pg 02 36 10.0 -3.3
CLL eSn Sn 02 36 53.0 -17
CLL ex x 02 37 08.0
CLL ex x 02 37 20.0
CLL eSb Sg 02 37 46.0 -18
CLL eSg Sg 02 38 07.0 +3.3
comp=Z,1µm,1.2s
CLL Lmax 02 39 00.0
TCF Toulx Ste Croi 8.54 298 ePn Pn 02 35 31.6 -2.1
TCF eSn Sn 02 37 02.2 -7.9
comp=Z,169nm,0.8s
PLD Plovdiv 8.59 91 ePn Pn 02 35 35.6 +1.2
PLD Plovdiv 8.59 91 P Pn 02 35 35.9 +1.5
HYF Humbligny 8.67 305 eP Pn 02 35 36.7 +1.3
HYF eSn Sn 02 37 05.0 -8.2
comp=Z,713nm,0.6s

RZN Rozhen 8.67 93 P Pn 02 35 36.9 +1.2
UZH Uzhgorod 8.68 44 eP Pn 02 35 38.6 +3.1
UZH eS Sn 02 37 17.5 +4.1
UZH MLR MLR
comp=Z,2µm,13.0s
ARR Arges 8.68 69 ⇓P Pn 02 35 37.0 +1.3
RJF Les Rejaudoux 8.73 291 eP Pn 02 35 38.9 +2.6
RJF eSn Sn 02 37 06.4 -8.2
comp=Z,6.3nm,0.3s
OJC Ojcow 8.75 29 eP Pn 02 35 38.3 +1.8
OJC eS Sg 02 37 46.4 -24
OJC eL L 02 38 29.1
comp=Z,9µm,30.4s
OJC Ojcow 8.75 29 Pn 02 35 36.8 +0.3
OJC Ojcow 8.75 29 P Pn 02 35 36.8 +0.3
ITM Ithomi 8.77 127 Pn 02 35 37.9 +1.1
HUMR Humele 8.78 74 ⇑P Pn 02 35 38.0 +1.1
BMR Baia Mare 8.80 53 ⇑P Pn 02 35 39.1 +1.9
STFAR Stefanesti-Arg 8.81 72 ⇓P Pn 02 35 39.3 +2.0
KOLS Kolonicke sedl 8.87 43 eP Pn 02 35 40.3 +2.2
KOLS e 02 37 12.8
KOLS MLR MLR
comp=Z,200nm,1.0s
KOLS Kolonicke sedl 8.87 43 ePN Pn 02 35 40.2 +2.2
KOLS ePG Pg 02 36 22.1 +2.4
KOLS eSN Sn 02 37 12.8 -5.1
KOLS eLG Lg 02 37 41.6
SET Setif 8.87 225 P Pn 02 35 43.0 +4.7
COPA Copaceanca 8.90 77 ⇑P Pn 02 35 38.9 +0.3
TGMR Targu Mures 8.95 61 ⇑P Pn 02 35 40.7 +1.5
PVL Pavlikeni 8.96 83 P Pn 02 35 38.7 -0.7
VOIR 8.98 69 ⇑P Pn 02 35 41.3 +1.5
BHOU Houvegnez 9.02 330 *dP* Pn 02 35 41.3 +1.2
BHOU *dS* Sn 02 37 20.6 -1.0
ARCR ARCALIA 9.05 58 ⇑P Pn 02 35 41.6 +0.9
BTNL Ternell 9.16 331 *dP* Pn 02 35 43.1 +1.0
BTNL *dS* Sn 02 37 26.3 +1.1
RCHB Rochefort 9.16 326 *dP* Pn 02 35 42.2 0.0
RCHB *dS* Sn 02 37 20.1 -5.1
KDZ Kurdzhali 9.20 93 P Pn 02 35 43.9 +1.2
LFF La Frestale 9.20 288 eP Pn 02 35 44.2 +1.5
LFF eSn Sn 02 37 17.7 -8.4
comp=Z,48nm,0.6s
DIM Dimitrovgrad 9.21 90 P Pn 02 35 44.1 +1.2
MEM Membach 9.23 331 *dP* Pn 02 35 44.2 +1.2
CLF Chambon-Foret 9.26 308 Pn Pn 02 35 44.3 +0.8
GIVF Givet 9.29 325 eP Pn 02 35 46.8 +2.9
GIVF eSn Sn 02 37 19.4 -8.9
comp=Z,66nm,0.4s
BCLA Clavier 9.34 328 *dP* Pn 02 35 45.2 +0.6
BCLA *dS* Sn 02 37 28.5 -1.0
DOPR Dopca 9.35 66 ⇓P Pn 02 35 46.0 +1.3
BSTI Sart Tilman 9.37 329 *dP* Pn 02 35 46.9 +1.9
EPF Esparros 9.38 276 eP Pn 02 35 47.0 +1.7
EPF eSn Sn 02 37 22.3 -8.4
comp=Z,17nm,0.7s
DOU Dourbes 9.38 324 *dP* Pn 02 35 44.8 -0.4
RDO Rodhopi 9.39 96 Pn 02 35 45.4 +0.1
SZH Strazhica 9.40 83 P Pn 02 35 46.5 +1.1
SGRR Singureni 9.46 77 ⇓P Pn 02 35 46.5 +0.4
BMRD Maredsous 9.47 326 *dP* Pn 02 35 46.7 +0.4
BMRD *dS* Sn 02 37 30.1 -2.5
KWP Kalwaria Pacla 9.54 41 eP Pn 02 35 49.4 +2.0
KWP eS Sn 02 37 35.3 +0.8
KWP eL L 02 40 12.7
comp=Z,24µm,14.4s
KWP Kalwaria Pacla 9.54 41 Pn Pn 02 35 47.1 -0.2
KWP Kalwaria Pacla 9.54 41 P Pn 02 35 47.1 -0.2
MLR Muntele Rosu 9.61 69 ⇓P Pn 02 35 50.4 +2.0
MLR Muntele Rosu 9.61 69 Pn Pn 02 35 48.8 +0.3
comp=Z,3.0nm,0.3s,baz=169,slow=7.6,SNR=41
MLR LR LR 02 40 34.6
comp=Z,20µm,20.0s,baz=254,slow=44
comp=Z,41nm,0.8s
MLR Muntele Rosu 9.61 69 Pn 02 35 48.6 +0.2
SECR 9.62 72 ⇓P Pn 02 35 50.0 +1.6
SULR 9.70 74 ⇓P Pn 02 35 49.7 +0.3
BURAR Bucovina Array 9.81 56 ⇑P Pn 02 35 52.9 +1.8
RAZG Razgrad 9.82 81 ⇓P Pn 02 35 52.5 +1.4
ALN Alexandroupoli 9.83 97 Pn Pn 02 35 51.4 +0.1
ALN Alexandroupoli 9.83 97 P Pn 02 35 51.4 +0.1
NEHR Nehoiu 9.84 70 ⇑P Pn 02 35 53.4 +1.9
COVR Voinеasa-Covas 9.87 67 ⇑P Pn 02 35 53.7 +1.9
JMB Yambol 9.93 87 P Pn 02 35 49.8 -2.9
ISR Istrita 9.96 72 ⇑P Pn 02 35 55.0 +1.8
ETSF Etsaut 10.05 275 eP Pn 02 35 58.2 +3.8
ETSF eSn Sn 02 37 37.9 -9.2
comp=Z,14nm,0.6s
LEHL Lehliu 10.08 76 ⇑P Pn 02 35 55.0 +0.3
PLOR Plostina 10.17 68 ⇑P Pn 02 35 56.8 +0.8
MFF Saint Martin d 10.19 297 eP Pn 02 35 57.2 +1.0
MFF eSn Sn 02 37 41.3 -9.1
comp=Z,12nm,0.3s
VRI Vrincioaia 10.23 68 ⇓P Pn 02 35 57.8 +1.1
LVV L'vov 10.32 43 eP Pn 02 36 01.5 +3.6
LVV eS Sn 02 37 58.8 +5.3
LVV pmax pmax
comp=Z,1µm,1.6s
LVV MLR MLR
comp=E,16µm,9.5s
LVV MLR MLR
comp=N,12µm,9.0s
LVV MLR MLR
comp=Z,19µm,9.0s
TESR Tescani 10.34 64 ⇑P Pn 02 36 00.3 +2.1
BEL Belsk 10.44 27 eP Pn 02 36 03.6 +4.0
BEL eS Sn 02 38 40.4 +44
BEL eL L 02 39 20.8
comp=Z,7µm,32.8s
PRD Provadia 10.47 83 P Pn 02 36 01.2 +1.1
SJPF Ste Jean 10.53 277 eP Pn 02 36 02.6 +1.8
SJPF eSn Sn 02 37 49.3 -9.4
comp=Z,34nm,0.9s
GHRR 10.73 67 ⇑P Pn 02 36 05.8 +2.1
ICOR Ion Corvin 10.76 78 ⇑P Pn 02 36 04.2 +0.2
GKP Gorka Klasztor 10.85 13 eP Pn 02 36 06.6 +1.4
GKP eS Sn 02 38 38.4 +32
GKP eL L 02 40 42.1
comp=Z,9µm,18.7s
HARR Harsova 10.89 75 ⇑P Pn 02 36 07.1 +1.3
LDF La Druitiere 10.93 307 ePn Pn 02 36 04.4 -1.9
LDF eSn Sn 02 38 00.5 -8.0
comp=Z,20nm,0.5s
TLBR Topalu 10.96 76 ⇑P Pn 02 36 08.7 +1.9
CFR Carcaliu 11.09 72 ⇓P Pn 02 36 09.4 +1.0
APE Apeiranthos 11.10 117 ⇓P Pn 02 36 08.5 -0.3
APE Apeiranthos 11.10 117 *deP* Pn 02 36 09.5 +0.7
APE pmax pmax
comp=Z,88nm,0.9s
VLDR Vladesti 11.15 69 ⇑P Pn 02 36 09.8 +0.4
TIRR Tirgusor 11.22 76 ⇓P Pn 02 36 10.7 +0.4
TIRR Tirgusor 11.22 76 ⇓P Pn 02 36 10.7 +0.4
TIRR Tirgusor 11.22 76 Pn Pn 02 36 10.4 +0.2
TIRR Tirgusor 11.22 76 P Pn 02 36 10.4 +0.2
FLN La Foliniere 11.22 307 ePn Pn 02 36 07.5 -2.8
FLN La Foliniere 11.22 307 eP Pn 02 36 12.9 +2.6
baz=122
FLN eSn Sn 02 38 06.2 -9.4
comp=Z,47nm,0.6s
TPGR Topolog 11.25 74 ⇑P Pn 02 36 11.3 +0.6
GRR Gorron 11.28 305 ePn Pn 02 36 09.1 -2.0
GRR eSn Sn 02 38 07.4 -10
comp=Z,22nm,0.4s
SANT Santorini 11.47 120 ⇑P Pn 02 36 14.5 +0.7
SANT Santorini 11.47 120 Pn Pn 02 36 14.0 +0.3
TLCR 11.56 73 ⇑P Pn 02 36 15.5 +0.5
ELSH Elham, Standar 11.70 320 eP Pn 02 36 16.7 -0.1
RGN Rugen 11.78 1 Pn 02 36 17.2 -0.7
IDI Anoyia 11.81 125 ⇑P Pn 02 36 18.7 +0.2
IDI Anoyia 11.81 125 Pn Pn 02 36 18.0 -0.5
comp=Z,3.7nm,0.3s,baz=321,slow=15,SNR=27
IDI Sn Sn 02 38 20.6 -10
comp=Z,4.5nm,0.3s,baz=339,slow=20,SNR=2.7
IDI LR LR 02 42 15.8
comp=Z,3µm,20.7s,baz=314,slow=45
comp=Z,29nm,0.6s
IDI Anoyia 11.81 125 Pn 02 36 17.4 -1.1
MILM Milestii Mici 11.88 64 ⇑P Pn 02 36 20.3 +1.0
MILM Milestii Mici 11.88 64 ⇑*iP* Pn 02 36 19.2 -0.1
comp=Z,2µm,4.1s
MILM eLq LQ 02 39 42.0
MILM LRM MLR 02 41 55.0
comp=Z,13µm,12.0s

MILM	**Milestii Mici**	**11.88**	**64**	*c*	*i*P		**Pn**	**02 36 19.2**	**-0.1**
MILM					*e*			02 38 36.0	
MILM						pmax	pmax		
	comp=Z,2µm,4.1s								
MILM						MLR	MLR		
	comp=Z,13µm,12.0s								
KIS	**Kishinev**	**11.90**	**64**		*e*P		**Pn**	**02 36 19.4**	**-0.3**
	comp=Z,640nm,5.9s								
KIS					*e*L		L	02 41 05.0	
KIS						LRM	MLR	02 41 53.0	
	comp=Z,5µm,10.0s								
KIS	**Kishinev**	**11.90**	**64**		*e*P		**Pn**	**02 36 19.4**	**-0.3**
KIS					*e*			02 38 38.0	
KIS						pmax	pmax		
	comp=Z,640nm,5.9s								
KIS						MLR	MLR		
	comp=E,5µm,10.0s								
KIS						MLR	MLR		
	comp=Z,6µm,10.0s								
CART	**Cartagena**	**11.98**	**249**		P		**Pn**	**02 36 21.8**	**+1.1**
CART					S		**Sn**	**02 38 42.9**	**+8.7**
CART	**Cartagena**	**11.98**	**249**				**Pn**	**02 36 20.3**	**-0.4**
SGMF	**Saint Gilles**	**12.28**	**302**		*e*P		**Pn**	**02 36 26.7**	**+2.0**
SGMF					*e*Sn		**Sn**	**02 38 33.7**	**-7.8**
	comp=Z,14nm,0.5s								
MANT	**Manisa**	**12.48**	**105**				**Pn**	**02 36 27.4**	**-0.5**
UCM	**Universidad Co**	**12.51**	**264**		P		**Pn**	**02 36 27.2**	**-0.8**
UCM					S		Sn	02 38 56.8	+9.5
QUIF	**Quistinic**	**12.55**	**300**		*e*P		**Pn**	**02 36 30.1**	**+1.7**
QUIF					*e*Sn		Sn	02 38 37.7	-10
	comp=Z,7.7nm,0.4s								
KLNR	**Kaliningrad**	**12.72**	**19**	*de*	P		**Pn**	**02 36 32.7**	**+2.0**
ROSF	**Rostrenen**	**12.75**	**301**		*e*Pn		**Pn**	**02 36 29.3**	**-2.0**
ROSF					*e*Sn		Sn	02 38 42.6	-11
	comp=Z,5.9nm,0.4s								
ROSF	**Rostrenen**	**12.75**	**301**		*e*P		**Pn**	**02 36 30.1**	**-1.2**
WOL	**Wolverton**	**12.96**	**316**		*e*P		**Pn**	**02 36 33.6**	**-0.5**
KARP	**Karpathos**	**13.06**	**119**				**Pn**	**02 36 35.0**	**-0.5**
ESBB	**Sonseca Array**	**13.23**	**262**		Pn		**Pn**	**02 36 37.7**	**-0.1**
ESDC	**Sonseca Array**	**13.23**	**262**		Pn		**Pn**	**02 36 35.6**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=71,slow=11,SNR=76								
ESDC						LR	LR	02 41 28.7	
	comp=Z,9µm,21.6s,baz=72,slow=36								
	comp=Z,21nm,0.9s								
ESDC	**Sonseca Array**	**13.23**	**262**		Pn		**Pn**	**02 36 38.3**	**+0.4**
ARG	**Arkhangelos**	**13.30**	**115**		Pn		**Pn**	**02 36 39.6**	**+0.8**
ARG	**Arkhangelos**	**13.30**	**115**		P		**Pn**	**02 36 39.6**	**+0.8**
BORA	**Eskisehir**	**13.35**	**97**		Pn		**Pn**	**02 36 39.4**	**-0.1**
SWN1	**Swindon**	**13.37**	**316**		*e*P		**Pn**	**02 36 37.9**	**-1.7**
PAB	**San Pablo**	**13.55**	**262**		Pn		**Pn**	**02 36 42.0**	**-0.3**
PAB	**San Pablo**	**13.55**	**262**		P		**Pn**	**02 36 42.0**	**-0.3**
PAB	**San Pablo**	**13.55**	**262**		P		**Pn**	**02 36 43.1**	**+0.8**
PAB	**San Pablo**	**13.55**	**262**		P		**Pn**	**02 36 41.9**	**-0.4**
AKASG	**Malin Array Be**	**13.57**	**49**		Pn		**Pn**	**02 36 39.8**	**-2.6**
	comp=Z,0.5nm,0.3s,baz=240,slow=12,SNR=9.8								
AKASG						LR	LR	02 42 30.1	
	comp=Z,9µm,18.7s,baz=239,slow=40								
	comp=Z,6.2nm,0.9s								
AKASG	**Malin Array Be**	**13.57**	**49**		Pn		**Pn**	**02 36 44.6**	**+2.2**
AKASG	**Malin Array Be**	**13.57**	**49**	*i*	P		**Pn**	**02 36 39.7**	**-2.7**
AKASG						pmax	pmax		
	comp=Z,4.0nm,0.8s								
AKBB	**Malin Array Si**	**13.57**	**49**		Pn		**Pn**	**02 36 41.2**	**-1.2**
AKBB	**Malin Array Si**	**13.57**	**49**	‖	*e*P		**Pn**	**02 36 40.9**	**-1.5**
MDUB	**Mudurnu**	**13.72**	**94**		Pn		**Pn**	**02 36 45.2**	**+0.6**
OLDB	**Oldbury-Upon-S**	**13.84**	**315**		*e*P		**Pn**	**02 36 44.3**	**-1.8**
CWF	**Charnwood Fore**	**13.88**	**321**		*e*P		**Pn**	**02 36 44.3**	**-2.3**
CWF						IAmb	IAmb	02 36 57.1	
	comp=Z,62nm,0.9s								
CWF						IAMs_20	IAMs_20	02 43 34.6	
	comp=Z,8µm,11.7s								
MUD	**Monsted U'grnd**	**13.92**	**351**	*i*	P		**Pn**	**02 36 46.0**	**-1.1**
DYA	**Yadsworthy**	**13.98**	**309**		*e*P		**Pn**	**02 36 45.3**	**-2.7**
DYA						IAMs_20	IAMs_20	02 43 09.7	
	comp=Z,7µm,12.8s								
MONM	**Monmouth**	**14.07**	**316**		*e*P		**Pn**	**02 36 46.4**	**-2.9**
ISP	**Isparta**	**14.17**	**105**	*ce*	P		**Pn**	**02 36 50.7**	**0.0**
ISP						pmax	pmax		
	comp=Z,23nm,1.1s								
ELL	**Elmali**	**14.24**	**109**				**Pn**	**02 36 52.9**	**+1.1**
ELL	**Elmali**	**14.24**	**109**		P		**Pn**	**02 36 52.9**	**+1.1**
MCH1	**Michaelchurch**	**14.26**	**316**		*e*P		**Pn**	**02 36 48.9**	**-2.9**
MCH1						IAMs_20	IAMs_20	02 44 03.6	
	comp=Z,7µm,15.8s								
CHAS	**Isla Isabel II**	**14.26**	**243**		P		**Pn**	**02 36 53.0**	**+1.1**
CHAS					S		**S**	**02 39 47.8**	**-2.9**
AKAS	**Kas**	**14.30**	**112**		Pn		**Pn**	**02 36 54.7**	**+2.1**
PBUR	**Paburge**	**14.43**	**20**		*e*P		**P**	**02 37 01.8**	**+0.9**
HLM1	**Long Mynd**	**14.50**	**318**		*e*P		**Pn**	**02 36 52.4**	**-2.7**
HLM1						IAmb	IAmb	02 36 59.9	
	comp=Z,50nm,0.9s								
HLM1						IAMs_20	IAMs_20	02 45 03.2	
	comp=Z,11µm,7.9s								
STNC	**Stoke**	**14.53**	**321**		*e*P		**Pn**	**02 36 56.0**	**+0.6**
WMELI	**Melilla**	**14.53**	**244**		P		**Pn**	**02 36 55.5**	**-0.1**
WMELI					S		**S**	**02 39 52.2**	**-3.9**
PABE	**Paberze**	**14.56**	**25**		Pn		**Pn**	**02 36 57.1**	**+1.3**
PABE	**Paberze**	**14.56**	**25**		*e*P		**Pn**	**02 36 55.8**	**0.0**
PBRG	**Braganca**	**14.73**	**273**		*e*Pn		**Pn**	**02 36 59.0**	**+0.6**
PBRG					A		A	02 37 18.1	
	comp=Z,118nm,1.3s								
HPK	**Haverah Park**	**14.83**	**324**		*e*P		**Pn**	**02 36 58.9**	**-0.7**
HPK						IAMs_20	IAMs_20	02 43 39.3	
	comp=Z,6µm,17.2s								
JBK	**JBK**	**14.87**	**241**		P		**Pn**	**02 37 03.1**	**+2.6**
FOEL	**Foel Wylfa**	**14.88**	**318**		*e*P		**Pn**	**02 36 57.3**	**-3.0**
FOEL						IAmb	IAmb	02 37 11.0	
	comp=Z,142nm,0.9s								
FOEL						IAMs_20	IAMs_20	02 43 47.3	
	comp=Z,9µm,10.2s								
VSVD	**Vaisvydziai**	**14.94**	**24**		*e*P		**Pn**	**02 37 01.0**	**0.0**
VSVD						IAmb	IAmb	02 37 15.4	
	comp=Z,22nm,0.6s								
BR231	**Keskin MP Arra**	**15.06**	**95**				**Pn**	**02 37 02.6**	**-0.3**
ANTO	**Ankara**	**15.06**	**94**				**Pn**	**02 37 02.6**	**-0.3**
ANTO	**Ankara**	**15.06**	**94**		P		**Pn**	**02 37 02.6**	**-0.3**
ANTO						pmax	pmax		
	comp=Z,24nm,1.2s								
ANTO	**Ankara**	**15.06**	**94**		P		**P**	**02 37 09.6**	**+1.3**
ANTO					P		**P**	**02 37 09.6**	**+1.3**
NACGM	**Naroch**	**15.07**	**32**	⇑	*i*P		**Pn**	**02 37 02.1**	**-0.6**
	baz=221								
MVO	**Moncorvo**	**15.07**	**271**		*e*Pn		**Pn**	**02 37 03.4**	**+0.4**
MVO					A		A	02 37 18.5	
	comp=Z,150nm,1.7s								
MVO					*e*LR		LR	02 41 13.5	
	comp=Z,7µm,18.0s								
RSBS	**Rosebush, Pemb**	**15.15**	**313**		*e*P		**Pn**	**02 37 01.6**	**-2.3**
MNK	**Minsk**	**15.22**	**34**	*i*	P		**Pn**	**02 37 04.6**	**-0.1**
MNK				*i*	S		**Sn**	**02 39 54.1**	**+1.0**
MNK						pmax	pmax		
	comp=E,40nm,1.3s								
MNK						pmax	pmax		
	comp=Z,186nm,1.3s								
MNK						pmax	pmax		
	comp=N,7.0nm,0.9s								
MNK						MLR	MLR		
	comp=Z,8µm,20.0s								
MNK	**Minsk**	**15.22**	**34**	*i*	P		**Pn**	**02 37 04.6**	**-0.1**
	comp=E,40nm,1.3s								
MNK				*i*	P		**Pn**	**02 37 04.6**	**-0.1**
	comp=N,7.0nm,0.9s								
MNK				*i*	P		**Pn**	**02 37 04.6**	**-0.1**
	comp=Z,186nm,1.2s,baz=46								
MNK				*i*	PP		**PnPn**	**02 37 12.7**	**-0.1**
MNK				*i*	PPP		PPP	02 37 20.4	
MNK				*i*	S		**Sn**	**02 39 54.1**	**+1.0**
MNK				*i*	SS		**S**	**02 40 08.1**	**-1.9**
MNK				*i*	SSS		SSS	02 40 20.8	
MNK				*i*	LQ		LQ	02 41 32.9	
MNK				*i*	LR		LR	02 42 42.4	
MNK				*i*	LRM		MLR	02 43 43.0	
	comp=E,798nm,18.6s								
MNK				*i*	LRM		MLR	02 43 47.3	
	comp=Z,8µm,19.9s								
MNK				*i*	LRM		MLR	02 43 55.3	
	comp=N,4.0nm,16.5s								
SIM	**Simferopol'**	**15.30**	**75**		*e*P		**Pn**	**02 37 02.6**	**-3.3**
SIM						pmax	pmax		
	comp=Z,133nm,1.1s								
SIM						MLR	MLR		
	comp=Z,5µm,20.8s								
ISAL	**Salakas**	**15.33**	**29**		*e*P		**Pn**	**02 37 05.8**	**-0.4**
ISAL						IAmb	IAmb	02 37 17.4	
	comp=Z,52nm,1.0s								
ILGA	**Ilgaz**	**15.43**	**89**				**Pn**	**02 37 07.1**	**-0.8**
BZK	**Bozkurt**	**15.46**	**86**	⇑	P		**Pn**	**02 37 09.1**	**+1.1**
BZK	**Bozkurt**	**15.46**	**86**				**Pn**	**02 37 08.0**	**+0.1**
BZK						IAmb	IAmb	02 37 12.9	
	comp=Z,153nm,0.6s								
YLL	**Llanberis**	**15.50**	**318**		*e*P		**Pn**	**02 37 05.4**	**-3.0**
PVLZ	**Peæn de**	**15.52**	**246**		P		**Pn**	**02 37 09.4**	**+0.7**
PVLZ					S		**S**	**02 40 10.5**	**-5.8**
PVRL	**Vila Real**	**15.56**	**272**		*e*Pn		**Pn**	**02 37 08.9**	**-0.4**
PVRL					A		A	02 37 24.3	
	comp=Z,140nm,1.3s								
FIGM	**Figuig**	**15.58**	**232**		P		**P**	**02 37 12.0**	**-2.0**
EDMD	**Edmundbyers**	**15.58**	**326**		*e*P		**Pn**	**02 37 08.2**	**-1.3**
EDMD						IAMs_20	IAMs_20	02 44 05.2	
	comp=Z,6µm,14.4s								
POLO	**Lamas de Olo**	**15.59**	**272**		*e*Pn		**Pn**	**02 37 11.4**	**+1.5**
POLO					A		A	02 37 36.5	
	comp=Z,75nm,1.5s								
MTE	**Manteigas**	**15.64**	**268**				**Pn**	**02 37 09.7**	**-0.8**
MTE	**Manteigas**	**15.64**	**268**		*e*Pn		**Pn**	**02 37 10.1**	**-0.4**
MTE					A		A	02 37 21.6	
	comp=Z,172nm,1.1s								
MTE					*e*LR		LR	02 41 28.5	
	comp=Z,7µm,20.0s								
WLF1	**Llynfaes**	**15.70**	**318**		*e*P		**Pn**	**02 37 08.0**	**-3.0**
WME	**Myndd Eilian**	**15.71**	**319**		*e*P		**Pn**	**02 37 08.9**	**-2.3**
BR131	**Keskin Array S**	**15.73**	**94**				**Pn**	**02 37 11.9**	**+0.2**
BR131	**Keskin Array S**	**15.73**	**94**		P		**Pn**	**02 37 11.9**	**+0.2**
BR131						pmax	pmax		
	comp=Z,44nm,0.9s								
BRTR	**Keskin Array B**	**15.73**	**94**		Pn		**Pn**	**02 37 11.5**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=281,slow=12,SNR=20								
BRTR						LR	LR	02 44 11.5	
	comp=Z,11µm,19.7s,baz=296,slow=41								
	comp=Z,11nm,0.9s								
BRTR	**Keskin Array B**	**15.73**	**94**		Pn		**Pn**	**02 37 11.2**	**-0.4**
BRTR	**Keskin Array B**	**15.73**	**94**	*i*	P		**P**	**02 37 14.3**	**-1.4**
BRTR						pmax	pmax		
	comp=Z,29nm,1.0s								
PCBR	**Castelo Branco**	**15.75**	**266**		*e*Pn		**Pn**	**02 37 13.2**	**+1.4**
PCBR					A		A	02 37 38.8	
	comp=Z,102nm,1.5s								
HOMB	**Homborsund**	**15.78**	**351**		*e*P		**P**	**02 37 14.5**	**-1.4**
WPS	**Cemaes, Angles**	**15.81**	**318**		*e*P		**Pn**	**02 37 10.2**	**-2.2**
PMRV	**Marv??o**	**15.82**	**265**		*e*Pn		**Pn**	**02 37 12.6**	**-0.1**
PMRV					A		A	02 37 19.2	
	comp=Z,89nm,1.9s								
PMRV					*e*LR		LR	02 41 40.4	
	comp=Z,5µm,18.0s								
PVIS	**Viseu**	**15.82**	**270**		*e*Pn		**Pn**	**02 37 12.3**	**-0.4**
PVIS					A		A	02 37 23.6	
	comp=Z,120nm,1.2s								
PGAV	**Gavieira, Arco**	**15.83**	**274**		*e*Pn		**Pn**	**02 37 14.4**	**+1.5**
PGAV					A		A	02 37 24.3	
	comp=Z,168nm,1.6s								
PGAV					*e*LR		LR	02 41 35.1	
	comp=Z,8µm,18.0s								
CEU	**Ceuta**	**15.86**	**250**		P		**P**	**02 37 16.4**	**-0.5**
CEU					S		**S**	**02 40 18.8**	**-4.5**
KESW	**Keswick, Cumbr**	**15.90**	**324**		*e*P		**Pn**	**02 37 12.0**	**-1.7**
SLIT	**Slitere, Latvi**	**15.96**	**18**		*e*P		**P**	**02 37 17.6**	**-0.3**
PBAR	**Barrancos**	**16.00**	**260**		*e*Pn		**Pn**	**02 37 14.1**	**-1.0**
PBAR					A		A	02 37 30.6	
	comp=Z,161nm,1.5s								
SNART	**Snartemo**	**16.01**	**349**		*e*P		**P**	**02 37 20.8**	**+2.3**
SNART						IAmb	IAmb	02 37 25.0	
	comp=Z,271nm,1.2s								
PESTR	**Estremoz**	**16.15**	**263**				**Pn**	**02 37 16.4**	**-0.6**
PESTR	**Estremoz**	**16.15**	**263**		*e*Pn		**P**	**02 37 19.2**	**-1.0**
PESTR					A		A	02 37 32.1	
	comp=Z,185nm,1.8s								
COI	**Coimbra**	**16.33**	**268**				**Pn**	**02 37 19.4**	**+0.2**
COI	**Coimbra**	**16.33**	**268**		P		**Pn**	**02 37 19.5**	**+0.2**
COI						pmax	pmax		
	comp=Z,78nm,0.9s								
COI	**Coimbra**	**16.33**	**268**		*e*Pn		**Pn**	**02 37 20.4**	**+1.1**
COI					A		A	02 37 28.9	
	comp=Z,275nm,1.3s								
IOMK	**Kirk Michael**	**16.35**	**321**		*e*P		**Pn**	**02 37 17.7**	**-1.8**
IOMK						IAmb	IAmb	02 37 24.7	
	comp=Z,239nm,1.3s								
IOMK						IAMs_20	IAMs_20	02 44 29.4	
	comp=Z,16µm,11.1s								
EKA	**Eskdalemuir Ar**	**16.43**	**326**		Pn		**Pn**	**02 37 18.1**	**-2.3**
	baz=139,slow=14								
EKA						LR	LR	02 44 28.5	
	comp=Z,3µm,18.5s,baz=140,slow=40								
	comp=Z,29nm,1.1s								
ESK	**Eskdalemuir**	**16.43**	**325**		*e*P		**Pn**	**02 37 19.2**	**-1.2**
ESK						IAMs_20	IAMs_20	02 44 40.0	
	comp=Z,6µm,14.1s								
ESK	**Eskdalemuir**	**16.43**	**325**		Pn		**Pn**	**02 37 19.4**	**-1.1**
ESK	**Eskdalemuir**	**16.43**	**325**		P		**Pn**	**02 37 19.4**	**-1.1**
ESK						pmax	pmax		
	comp=Z,171nm,1.7s								
ESK	**Eskdalemuir**	**16.43**	**325**		P		**Pn**	**02 37 20.7**	**+0.2**
PCAS	**Casmilo, Conde**	**16.44**	**268**		*e*Pn		**Pn**	**02 37 20.9**	**+0.2**
PCAS					A		A	02 37 30.2	
	comp=Z,204nm,1.4s								
PMTG	**Montargil**	**16.55**	**264**		*e*Pn		**P**	**02 37 24.1**	**-0.5**
PMTG					A		A	02 37 31.0	
	comp=Z,208nm,1.4s								
EVO	**Evora**	**16.58**	**262**		P		**P**	**02 37 23.9**	**-1.1**
EVO					S		**S**	**02 40 39.3**	**+1.2**
EVO	**Evora**	**16.58**	**262**		*e*Pn		**Pn**	**02 37 23.3**	**+0.9**
EVO					A		A	02 37 32.4	
	comp=Z,92nm,1.5s								
PBEJ	**Beja**	**16.66**	**260**		*e*Pn		**Pn**	**02 37 23.5**	**0.0**
PBEJ					A		A	02 37 33.4	
	comp=Z,64nm,1.8s								
EBL	**Broad Law**	**16.68**	**327**		*e*P		**Pn**	**02 37 24.0**	**+0.3**
NEWG	**New Galloway**	**16.74**	**324**		*e*P		**Pn**	**02 37 23.6**	**-0.7**
PVAQ	**Vaqueiros**	**16.81**	**258**				**Pn**	**02 37 25.0**	**-0.4**
PVAQ	**Vaqueiros**	**16.81**	**258**		*e*Pn		**Pn**	**02 37 25.6**	**+0.2**
PVAQ					A		A	02 37 36.9	
	comp=Z,113nm,1.6s								
PVAQ					*e*LR		LR	02 41 57.6	
	comp=Z,8µm,18.0s								
PSBE	**So Bento**	**16.82**	**266**		*e*Pn		**P**	**02 37 26.8**	**-0.8**
PSBE					A		A	02 37 34.6	
	comp=Z,173nm,1.4s								
EDI	**Edinburgh**	**16.85**	**327**		*e*P		**Pn**	**02 37 26.5**	**+0.8**
EDI						IVmB_BB		02 37 33.8	
	comp=Z,4µm,1.3s								
EDI						IAMs_20	IAMs_20	02 45 38.5	
	comp=Z,5µm,13.5s								
KONO	**Kongsberg**	**17.03**	**354**		Pn		**Pn**	**02 37 26.9**	**-1.1**
KONO	**Kongsberg**	**17.03**	**354**		P		**Pn**	**02 37 26.9**	**-1.1**
KONO						pmax	pmax		
	comp=Z,212nm,1.5s								
KONO	**Kongsberg**	**17.03**	**354**		*e*P		**Pn**	**02 37 27.9**	**-0.1**
KONO	**Kongsberg**	**17.03**	**354**		P		**P**	**02 37 30.2**	**+0.4**
PBDV	**Barranco-do-Ve**	**17.03**	**258**		*e*Pn		**P**	**02 37 30.1**	**+0.1**
PBDV					A		A	02 37 57.8	
	comp=Z,135nm,1.6s								
IFR	**Ifrane**	**17.05**	**243**		P		**P**	**02 37 29.9**	**-0.4**
IFR					S		**S**	**02 40 45.3**	**-2.6**
PACT	**Alcochete**	**17.09**	**264**		*e*Pn		**P**	**02 37 30.1**	**-0.5**
PACT					A		A	02 37 41.3	
	comp=Z,244nm,1.4s								
PNCL	**Nicolau / Gran**	**17.11**	**261**		*e*Pn		**P**	**02 37 31.9**	**+1.1**
PNCL					A		A	02 37 56.3	
	comp=Z,71nm,1.8s								
MDT	**Midelt**	**17.15**	**240**		P		**P**	**02 37 30.7**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=70,slow=12,SNR=21								
MDT						LR	LR	02 44 25.6	
	comp=Z,3µm,18.0s,baz=37,slow=38								
	comp=Z,6.0nm,1.0s								
KMY	**Karmoy**	**17.16**	**346**		*e*P		**P**	**02 37 31.6**	**+0.4**
KMY						IAmb	IAmb	02 37 36.4	
	comp=Z,195nm,1.4s								
BLS5	**Blasjo**	**17.17**	**348**		*e*P		**P**	**02 37 32.5**	**+1.2**
BLS5						IAmb	IAmb	02 37 47.3	
	comp=Z,92nm,1.2s								
OSL	**Oslo**	**17.25**	**356**		*e*P		**Pn**	**02 37 29.6**	**-1.0**
OSL						IAmb	IAmb	02 37 35.0	
	comp=Z,356nm,1.4s								
MTSE	**Matsula**	**17.29**	**19**		*e*P		**Pn**	**02 37 30.0**	**-1.2**
DRUM	**Mains of Drumt**	**17.30**	**330**		*e*P		**P**	**02 37 32.3**	**-0.4**
DRUM						IAmb	IAmb	02 37 38.5	
	comp=Z,194nm,1.2s								
PMAFR	**Mafra**	**17.36**	**265**		*e*Pn		**P**	**02 37 33.0**	**-0.6**
PMAFR					A		A	02 37 41.7	
	comp=Z,121nm,1.4s								
HFS	**Hagfors**	**17.38**	**1**		P		**Pn**	**02 37 30.0**	**-2.4**
	comp=Z,14nm,0.9s,baz=172,slow=12,SNR=23								
HFS						LR	LR	02 44 56.1	
	comp=Z,7µm,19.3s,baz=185,slow=40								
PTEO	**Sao Teotonio**	**17.48**	**260**		*e*Pn		**Pn**	**02 37 33.5**	**-0.2**
PTEO					A		A	02 38 05.0	
	comp=Z,116nm,1.7s								
MORF	**Marmelete**	**17.53**	**259**		*e*Pn		**Pn**	**02 37 33.8**	**-0.6**
MORF					A		A	02 37 46.6	
	comp=Z,158nm,2.0s								
CSS	**Mathiatis**	**17.54**	**110**				**Pn**	**02 37 33.5**	**-1.0**
INVG	**Invergeldie, C**	**17.54**	**327**		*e*P		**P**	**02 37 36.5**	**+1.1**
ODD1	**Odda**	**17.61**	**349**		*e*P		**P**	**02 37 36.3**	**0.0**
ODD1						IAmb	IAmb	02 37 43.3	
	comp=Z,375nm,1.7s								
BNN	**Bunyan**	**17.63**	**95**		P		**P**	**02 37 37.2**	**+0.5**
BNN						IAmb	IAmb	02 37 42.5	
	comp=Z,448nm,1.8s								
TOKA	**Tokat**	**17.65**	**90**		P		**P**	**02 37 36.7**	**-0.1**
ANN	**Anapa**	**17.66**	**75**		*e*P		**Pn**	**02 37 35.6**	**-0.3**
ANN					*e*S		**Sn**	**02 40 47.9**	**-4.5**
ANN						pmax	pmax		
	comp=Z,498nm,1.6s								
ANN						MLR	MLR		
	comp=E,2µm,9.0s								
ANN						MLR	MLR		
	comp=N,13µm,23.0s								
ANN						MLR	MLR		
	comp=Z,10µm,24.0s								
PFVI	**Vila Bisbo**	**17.73**	**259**		*e*Pn		**Pn**	**02 37 37.1**	**+0.3**
PFVI					A		A	02 38 06.6	
	comp=Z,186nm,1.9s								
VSU	**Vasula**	**17.86**	**24**	*ce*	P		**Pn**	**02 37 36.5**	**-1.8**
VSU						pmax	pmax		
	comp=Z,365nm,0.9s								
VSU	**Vasula**	**17.86**	**24**		*e*P		**Pn**	**02 37 37.0**	**-1.3**
LAWE	**Loch Awe, Argy**	**17.99**	**325**		*e*P		**P**	**02 37 41.0**	**+0.6**
NC602	**NORSAR Array S**	**18.01**	**357**		P		**Pn**	**02 37 38.9**	**-1.2**
NC602	**NORSAR Array S**	**18.01**	**357**		*e*P		**P**	**02 37 40.5**	**-0.1**
NC602						IAmb	IAmb	02 37 44.9	
	comp=Z,185nm,1.5s								
ZHG	**ZHG**	**18.09**	**246**		P		**P**	**02 37 44.0**	**+2.2**
NAO01	**NORSAR Array S**	**18.14**	**356**				**Pn**	**02 37 41.4**	**-0.4**
BER	**Bergen**	**18.26**	**348**		*e*P		**Pn**	**02 37 43.2**	**0.0**
BER						IAmb	IAmb	02 37 50.1	
	comp=Z,67nm,1.4s								
NB2	**NORSAR Subarra**	**18.32**	**357**		P		**Pn**	**02 37 42.3**	**-1.7**
	comp=Z,388nm,1.7s,baz=174,slow=12								
NB2	**NORSAR Subarra**	**18.32**	**357**		P		**Pn**	**02 37 42.3**	**-1.7**
	baz=174,slow=12								
NOA	**NORSAR Array B**	**18.32**	**357**		P		**Pn**	**02 37 41.7**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=174,slow=11,SNR=38								
NOA					PcP		**PcP**	**02 42 14.9**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=146,slow=1.6,SNR=3.7								
NOA						LR	LR	02 45 44.8	
	comp=Z,4µm,18.9s,baz=175,slow=40								
	comp=Z,13nm,1.0s								
NB201	**NORSAR Array S**	**18.33**	**357**		P		**Pn**	**02 37 42.4**	**-1.8**
NBO00	**NORSAR Array S**	**18.33**	**356**		P		**Pn**	**02 37 43.0**	**-1.1**
NBO00						IAmb	IAmb	02 37 48.9	
	comp=Z,818nm,1.8s								
ASK	**Askoy**	**18.37**	**347**		*e*P		**P**	**02 37 47.7**	**+3.2**
NC405	**NORSAR Array S**	**18.38**	**358**				**Pn**	**02 37 42.8**	**-1.9**
NC405						IAmb	IAmb	02 37 52.5	
	comp=Z,344nm,1.4s								
MDO	**Dochfour**	**18.38**	**329**		*e*P		**P**	**02 37 44.8**	**+0.1**
NC303	**NORSAR Array S**	**18.50**	**357**				**P**	**02 37 44.3**	**-1.8**
NC204	**NORSAR Array S**	**18.58**	**356**		P		**P**	**02 37 45.2**	**-1.7**
NC204						IAmb	IAmb	02 37 53.1	
	comp=Z,250nm,1.1s								
MLA1	**Latheron**	**18.66**	**332**		*e*P		**P**	**02 37 47.5**	**-0.2**
**AVE

TAM Tamanrasset 20.91 200 P P 02 38 09.8 -3.0
TAM IAmb IAmb 02 38 21.1
comp=Z,212nm,1.4s
TAM Tamanrasset 20.91 200 P P 02 38 09.8 -3.0
TAM pmax pmax
comp=Z,212nm,1.4s
TTIG Tnine Tigouga, 21.10 242 P P 02 38 17.0 +2.2
VRH Novokhopyorsk 21.14 57 *eP* **P 02 38 14.0 -0.9**
VRH *eS* **S 02 42 07.8 -2.0**
VRH pmax pmax
comp=Z,400nm,0.8s
VRH smax smax
comp=E,2μm,8.7s
VRH MLR MLR
comp=Z,7μm,14.0s
GHAJ Ghor Haditha 21.20 115 P P 02 38 15.2 -0.4
GHAJ IAmb IAmb 02 38 34.5
comp=Z,130nm,0.7s
VALR Valaam 21.44 24*c iP* **P 02 38 16.9 -1.0**
VALR pmax pmax
comp=Z,149nm,1.0s
KIV Kislovodsk 21.48 77 P P 02 38 18.4 -0.3
KIV IAmb IAmb 02 38 27.2
comp=Z,224nm,1.0s
KIV Kislovodsk 21.48 77 *eP* **P 02 38 19.2 +0.5**
KIV *eS* **S 02 42 18.2 +1.5**
KIV pmax pmax
comp=Z,107nm,4.0s
KIV pmax pmax
comp=Z,258nm,1.1s
KIV MLR MLR
comp=Z,1μm,14.0s
KIV Kislovodsk 21.48 77 P P 02 38 20.1 +1.4
KIV Kislovodsk 21.48 77 *i P* **P 02 38 19.3 +0.6**
SNR=32
KIV Kislovodsk 21.48 77 P P 02 38 19.7 +1.0
KVAR Kislovodsk Arr 21.49 77 LR LR 02 47 33.6
comp=Z,3μm,19.8s,baz=282,slow=39
SHA1 Shidzhatmaz 21.49 77*d iP* **P 02 38 19.5 +0.6**
ASF Jabal al Asfar 21.57 112 P P 02 38 18.4 -1.4
comp=Z,12nm,0.8s,baz=294,slow=4.3,SNR=16
comp=Z,12nm,0.8s
GOF Gofitskoye 21.62 74⇑ *eP* **P 02 38 19.7 -0.4**
GOF *eS* Sn 02 42 48.2 +20
GOF pmax pmax
comp=Z,334nm,1.4s
KBZ Khabaz 21.66 77 P P 02 38 20.3 -0.2
comp=Z,49nm,0.9s,baz=289,slow=9.2,SNR=73
KBZ PcP **PcP 02 42 21.1 -0.4**
comp=Z,9.2nm,0.9s,baz=225,slow=5.7,SNR=3.2
KBZ LR LR 02 49 25.4
comp=Z,2μm,18.5s,baz=288,slow=44
comp=Z,49nm,0.9s
KBZ Khabaz 21.66 77*d iP* **P 02 38 21.7 +1.2**
KBZ pmax pmax
comp=Z,114nm,0.9s
NSS Namsos 21.80 359 *eP* **P 02 38 21.3 -0.5**
NSS IAmb IAmb 02 38 25.9
comp=Z,51nm,0.8s
MARD Mardin 21.82 95 P P 02 38 23.0 +0.6
MARD IAmb IAmb 02 38 39.0
comp=Z,219nm,1.2s
EIL Elat 21.86 120 P P 02 38 23.3 +0.5
comp=Z,43nm,1.1s,baz=329,slow=8.3,SNR=12
EIL LR LR 02 49 49.9
comp=Z,1μm,21.3s,baz=334,slow=45
comp=Z,43nm,1.1s
ONI Oni 22.25 80 P P 02 38 28.4 +1.6
ONI Oni 22.25 80 P P 02 38 28.5 +1.6
ONI pmax pmax
comp=Z,81nm,0.9s
GURO Guroymak-BITLI 22.28 91 P P 02 38 27.5 +0.1
GURO IAmb IAmb 02 38 40.8
comp=Z,139nm,1.2s
KARS Kars 22.42 85 P P 02 38 29.6 +0.8
KARS Kars 22.42 85 P P 02 38 29.6 +0.8
KARS pmax pmax
comp=Z,544nm,1.2s
ZEI Tsey 22.54 79 *eP* **P 02 38 30.7 +0.6**
ZEI pmax pmax
comp=Z,72nm,0.9s
GEVA Gevas 23.12 91 P P 02 38 36.5 +0.3
GEVA IAmb IAmb 02 38 54.9
comp=Z,125nm,1.1s
MOR8 Moi Rana 23.45 1 *eP* **P 02 38 40.4 +1.3**
MOR8 IAmb IAmb 02 38 47.3
comp=Z,105nm,1.2s
KONS Konsvik 23.77 0 *eP* **P 02 38 42.6 +0.4**
KONS IAmb IAmb 02 38 49.2
comp=Z,227nm,1.8s
GNI Garni 23.77 86 P P 02 38 42.9 +0.2
comp=Z,45nm,1.0s,baz=222,slow=1.2,SNR=32
GNI LR LR 02 50 16.1
comp=Z,2μm,19.1s,baz=326,slow=42
comp=Z,45nm,1.0s
GNI Garni 23.77 86 P P 02 38 42.3 -0.4
GNI IAmb IAmb 02 39 01.2
comp=Z,143nm,1.1s
GNI Garni 23.77 86*de***P P 02 38 43.5 +0.8**
GNI pmax pmax
comp=Z,153nm,1.7s
GNI Garni 23.77 86 P P 02 38 43.8 +1.1
GNI Garni 23.77 86 P P 02 38 43.4 +0.8
GNI Garni 23.77 86 P P 02 38 43.5 +0.8
GROC Groznyy 23.83 78 *eP* **P 02 38 42.4 -0.6**
GROC *e* 02 39 09.9
GROC *eS* **S 02 42 59.0 +0.4**
GROC MLR MLR
comp=Z,535nm,10.0s
KLMR Klimovskoe 24.09 32 *eP* **P 02 38 42.7 -2.6**
KLMR *e* 02 42 22.6
KLMR *eS* **S 02 43 01.9 -0.5**
KLMR pmax pmax
comp=Z,493nm,1.3s
KLMR MLR MLR
comp=Z,3μm,10.0s
KLMR Klimovskoe 24.09 32 *eP* **P 02 38 42.7 -2.6**
KLMR AMP 02 38 51.3
comp=Z,493nm,1.3s
KLMR *e*PcP **PcP 02 42 22.6 -3.6**
KLMR *eS* **S 02 43 01.9 -0.5**
KLMR *eS* **S 02 43 01.9 -0.5**
KLMR LQ LQ 02 46 02.6
KLMR LQ LQ 02 46 02.6
KLMR LR LR 02 47 34.7
KLMR AMP 02 49 47.2
comp=Z,3μm,10.3s
FAUS Fauske 24.68 2 *eP* **P 02 38 49.9 -0.7**
FAUS IAmb IAmb 02 39 03.4
comp=Z,61nm,1.0s
BELG Belogornoye 24.96 55 P **P 02 38 52.2 -1.1**
comp=Z,243nm,0.9s,baz=265,slow=2.0,SNR=35
BELG LR LR 02 49 45.2
comp=Z,5μm,18.4s,baz=258,slow=39
comp=Z,243nm,0.9s
BELG Belogornoye 24.96 55*d iP* **P 02 38 53.2 -0.1**
BELG pmax pmax
comp=Z,26nm,0.9s
PMPST Porto Santo, M 25.06 257 *e*Pn **P 02 38 56.4 +2.0**
PMPST A A 02 39 02.9
comp=Z,232nm,1.4s
PMPS Porto Santo 25.07 257 *e*Pn **P 02 38 55.2 +0.7**
PMPS A A 02 39 03.7
comp=Z,267nm,1.4s
MAK Makhachkala 25.10 78 *eP* **P 02 38 49.6 -5.1**
MAK *eS* **S 02 43 11.8 -7.2**
MAK *eSS* **SnSn 02 44 08.3 0.0**
MAK pmax pmax
comp=Z,733nm,1.0s
STEI Steigen 25.23 2 *eP* **P 02 38 55.0 -0.6**
STEI IAmb IAmb 02 39 02.0
comp=Z,75nm,1.0s
LOF Lofoten 25.41 0 *eP* **P 02 38 56.9 -0.3**
LOF IAmb IAmb 02 39 06.0
comp=Z,224nm,1.7s
PMAR Madeira 25.66 257 *e*Pn **P 02 39 02.2 +2.1**
PMAR A A 02 39 10.3
comp=Z,410nm,1.4s
FUL Funchal 25.69 257 *e*Pn **P 02 39 02.0 +1.9**
FUL A A 02 39 09.4
comp=Z,181nm,1.5s
PMOZ Porto Moniz, M 25.81 257 P **P 02 39 02.1 +0.8**
PMOZ Porto Moniz, M 25.81 257 *e*Pn **P 02 39 03.7 +2.3**
PMOZ A A 02 39 11.4
comp=Z,243nm,1.2s

KTK1 Kautokeino 26.82 8 *eP* **P 02 39 09.6 -0.4**
KTK1 IAmb IAmb 02 39 17.0
comp=Z,59nm,1.0s
PRGR Permogore 26.99 34 *eP* **P 02 39 09.6 -2.0**
TRO Tromso 27.09 4 *eP* **P 02 39 11.7 -0.6**
TRO IAmb IAmb 02 39 35.1
comp=Z,165nm,1.5s
JETT Jettan, Norway 27.11 6 *eP* **P 02 39 12.3 -0.3**
JETT IAmb IAmb 02 39 34.2
comp=Z,117nm,1.4s
APA Apatity 27.14 17⇑ *iP* **P 02 39 13.9 +1.1**
APA *i* 02 40 07.0
APA *i* S **S 02 43 49.0 -1.7**
APA pmax pmax
comp=Z,25nm,1.0s
APA MLR MLR
comp=Z,7μm,11.0s
KIRV Kirov 27.47 42 P **P 02 39 14.0 -1.9**
comp=Z,29nm,0.8s,baz=258,slow=11,SNR=18
KIRV LR LR 02 51 09.1
comp=Z,7μm,19.7s,baz=242,slow=39
comp=Z,29nm,0.8s
KIRV Kirov 27.47 42*d iP* **P 02 39 14.5 -1.4**
ARA0 ARCESS Array S 27.58 9 *eP* **P 02 39 15.3 -1.4**
ARCES ARCESS Array B 27.58 9 P **P 02 39 14.4 -2.3**
comp=Z,8.8nm,0.7s,baz=202,slow=5.4,SNR=25
ARCES PcP **PcP 02 42 32.8 -1.2**
comp=Z,8.2nm,0.8s,baz=240,slow=2.4,SNR=4.7
comp=Z,8.8nm,0.7s
ARCES ARCESS Array B 27.58 9 P **P 02 39 15.6 -1.2**
ARCES ARCESS Array B 27.58 9 P **P 02 39 15.6 -1.2**
ARCES pmax pmax
comp=Z,52nm,1.4s
LVZ Lovozero 27.68 17⇑ *eP* **P 02 39 17.1 -0.7**
LVZ pmax pmax
comp=Z,93nm,1.7s
KEV Kevo 27.97 10 P **P 02 39 19.9 -0.3**
KEV Kevo 27.97 10 P **P 02 39 19.9 -0.3**
KEV pmax pmax
comp=Z,41nm,1.2s
BORG Borgarnes 29.34 330 P **P 02 39 31.3 -1.2**
comp=Z,12nm,1.0s,baz=39,slow=6.6,SNR=2.4
BORG LR LR 02 51 23.2
comp=Z,2μm,20.3s,baz=115,slow=37
comp=Z,12nm,1.0s
BORG Borgarnes 29.34 330 P P 02 39 32.2 -0.3
BORG IAmb IAmb 02 40 27.7
comp=Z,167nm,1.9s
BORG Borgarnes 29.34 330 P P 02 39 32.2 -0.3
BORG pmax pmax
comp=Z,167nm,1.9s
BART Pico Bartolome 29.46 273 *e*LR LR 02 48 42.8
comp=Z,2μm,17.5s
PSMN Pico do Norte, 29.68 272 *e*LR LR 02 47 43.9
comp=Z,3μm,21.4s
PSET Sete Cidades 29.85 274 *e*LR LR 02 47 56.3
comp=Z,4μm,19.7s
JMIC Jan Mayen 30.27 346 LR LR 02 52 40.8
comp=Z,1μm,18.1s,baz=120,slow=38
JMIC Jan Mayen 30.27 346 *eP* **P 02 39 43.9 +3.2**
PAGU Agualva, Azore 30.58 276 *e*LR LR 02 48 25.8
comp=Z,1μm,23.9s
PGRA Graciosa 31.07 277 *e*LR LR 02 48 34.9
comp=Z,1μm,22.7s
TOA0 Torodi Ar. Sit 31.14 202 P **P 02 39 48.7 -0.1**
TOA0 IAmb IAmb 02 39 56.2
comp=Z,61nm,0.8s
TORD Torodi Ar. Bea 31.14 202 P **P 02 39 48.8 0.0**
comp=Z,40nm,0.8s,baz=20,slow=7.6,SNR=109
TORD PcP **PcP 02 42 43.6 -0.3**
comp=Z,3.4nm,0.6s,baz=349,slow=1.6,SNR=2.1
TORD LR LR 02 53 41.7
comp=Z,6μm,18.1s,baz=12,slow=39
comp=Z,40nm,0.8s
TORD Torodi Ar. Bea 31.14 202 P **P 02 39 49.5 +0.7**
TORD IAmb IAmb 02 39 55.6
comp=Z,130nm,1.4s
ROSA Rosais 31.37 277 *e*LR LR 02 48 20.2
comp=Z,1μm,18.4s
AKTO Aktyubinsk 31.38 60 LR LR 02 55 44.9
comp=Z,3μm,19.7s,baz=266,slow=43
AKTO Aktyubinsk 31.38 60 P **P 02 39 49.0 -1.7**
PICO Pico 31.58 276 *e*LR LR 02 48 42.8
comp=Z,910nm,23.5s
KOWA Kowa 31.81 213 P **P 02 39 55.0 +0.2**
KOWA Kowa 31.81 213 P **P 02 39 56.4 +1.6**
ARU Arti 31.82 49 LR LR 02 54 06.1
comp=Z,4μm,21.3s,baz=254,slow=39
ARU Arti 31.82 49 P **P 02 39 53.6 -1.0**
ARU Arti 31.82 49*d iP* **P 02 39 53.9 -0.6**
ARU 02 40 52.8
ARU PPP PPP 02 41 10.6
ARU 02 42 40.3
ARU S **S 02 45 04.9 +0.3**
ARU SS **SnSn 02 46 54.0 +2.1**
ARU pmax pmax
comp=Z,307nm,1.8s
BJO1 Bjornoya 31.93 3 *eP* **P 02 39 55.3 +0.1**
BJO1 IAmb IAmb 02 39 59.8
comp=Z,130nm,0.9s
JAWL J.Aulia 32.09 143 *i* P **P 02 39 58.3 +1.0**
JAWL *e* 02 40 05.9
baz=269,slow=10
JAWL *i* S **S 02 45 10.3 +0.9**
AB31 Akbulak array 32.72 62 *i* P **P 02 40 01.3 -1.2**
ABKAR Akbulak array 32.72 62 P **P 02 40 01.5 -1.0**
SCO Scoresbysund 32.87 339 P **P 02 40 03.6 +0.1**
SCO IAmb IAmb 02 40 06.4
comp=Z,51nm,1.1s
SCO Scoresbysund 32.87 339 P **P 02 40 03.7 +0.1**
SCO pmax pmax
comp=Z,51nm,1.1s
RAYN Ar Rayn 32.94 115 P **P 02 40 05.3 +0.6**
RAYN Ar Rayn 32.94 115 P **P 02 40 05.4 +0.6**
RAYN pmax pmax
comp=Z,30nm,1.3s
RAYN Ar Rayn 32.94 115 P **P 02 40 05.9 +1.2**
RAYN Ar Rayn 32.94 115 *i* P **P 02 40 05.3 +0.6**
SNR=11
RAYN Ar Rayn 32.94 115 P **P 02 40 06.4 +1.7**
GEYT Alibeck 34.32 83 P **P 02 40 16.4 -0.2**
comp=Z,29nm,0.8s,baz=280,slow=8.9,SNR=36
GEYT PcP **PcP 02 42 52.8 +0.3**
comp=Z,7.0nm,0.9s,baz=224,slow=8.3,SNR=2.6
GEYT LR LR 02 57 01.1
comp=Z,984nm,21.7s,baz=296,slow=41
comp=Z,29nm,0.8s
GEYT Alibeck 34.32 83 P **P 02 40 17.8 +1.2**
GEYT IAmb IAmb 02 40 21.3
comp=Z,128nm,1.6s
GYA0 ALIBECK ARRAY 34.32 83 P **P 02 40 16.7 +0.1**
GYA0B ALIBECK ARRAY 34.32 83 P **P 02 40 16.8 +0.2**
GYA0B IAmb IAmb 02 40 46.8
comp=Z,47nm,0.9s
HSPB Hornsund (broa 34.34 1 *eP* **P 02 40 17.9 +1.6**
SHMA Al-Shehemyia 35.18 106 P **P 02 40 25.3 +1.3**
SPB2 Spitsbergen Ar 35.53 1 P **P 02 40 26.7 +0.1**
SPB2 IAmb IAmb 02 40 30.3
comp=Z,61nm,1.0s
SPA0 Spitsbergen Ar 35.54 1 *eP* **P 02 40 27.2 +0.6**
SPA0 IAmb IAmb 02 40 30.1
comp=Z,100nm,1.1s
SPITS Spitsbergen Ar 35.54 1 P **P 02 40 25.7 -0.9**
comp=Z,41nm,0.8s,baz=153,slow=9.4,SNR=20
SPITS LR LR 02 54 53.5
comp=Z,3μm,21.7s,baz=147,slow=36
comp=Z,41nm,0.8s
SPITS Spitsbergen Ar 35.54 1 P **P 02 40 25.7 -0.9**
SPITS 02 40 26.8
SMRA Abu-Samra 35.77 108 P **P 02 40 30.1 +0.9**
KBS Kingsbay 36.27 360 P **P 02 40 34.1 +1.3**
KBS IAmb IAmb 02 40 38.9
comp=Z,91nm,1.3s
KBS Kingsbay 36.27 360*de***P P 02 40 33.1 +0.3**
KBS pmax pmax
comp=Z,57nm,1.1s
KBS Kingsbay 36.27 360 *eP* **P 02 40 31.6 -1.2**
KBS Kingsbay 36.27 360 *eP* **P 02 40 33.0 +0.2**
KBS Kingsbay 36.27 360 P P 02 40 38.2 +5.4
JRN Qarnain Island 37.08 106 P **P 02 40 41.4 +1.1**
ICESG Greenland Ices 37.67 332 *eP* **P 02 40 46.3 +1.0**
ICESG IAmb IAmb 02 40 47.0
comp=Z,67nm,1.0s
BBTS Babate 37.87 231 LR LR 02 56 39.5
comp=Z,3μm,18.0s,baz=48,slow=37

SUMG Summit 38.45 338 P P 02 40 52.5 +0.6
SUMG Summit 38.45 338 P P 02 40 52.5 +0.6
SUMG pmax pmax
comp=Z,80nm,1.4s
SUMG Summit 38.45 338 *i* P **P 02 40 52.4 +0.6**
SUMG IAmb IAmb 02 40 57.0
comp=Z,43nm,1.1s
EKNA AfricaArray - 38.53 186⇑ *eP* **P 02 40 57.3 +4.7**
BRVK Borovoye 38.69 54 P P 02 40 53.8 +0.2
BRVK Borovoye 38.69 54*de***P P 02 40 53.9 +0.2**
BRVK pmax pmax
comp=Z,87nm,0.7s
BRVK Borovoye 38.69 54 P P 02 40 54.9 +1.2
BRVK P **P 02 40 54.9 +1.2**
BRVK Borovoye 38.69 54 P P 02 40 54.3 +0.6
UMQ Umm Al-Quwin 38.73 102 P P 02 40 55.1 +0.9
SNR=7.7
UMQ Umm Al-Quwin 38.73 102 *i* P **P 02 40 55.4 +1.1**
SNR=8.8
MZR Muzera 38.75 108 P P 02 40 56.9 +2.4
SNR=7.3
SHME Shamm 38.76 101 P P 02 40 54.4 -0.2
SNR=7.8
SHME Shamm 38.76 101 *i* P **P 02 40 53.8 -0.7**
SNR=18
BVA0 Borovoye Array 38.76 54 *i* P **P 02 40 52.7 -1.6**
BVAR Borovoye Array 38.76 54 LR LR 02 58 10.2
comp=Z,5μm,19.2s,baz=297,slow=38
AJN Ajban 38.83 104 P P 02 40 56.1 +1.0
SNR=9.1
AJN P **P 02 40 56.1 +1.0**
SNR=9.1
AJN Ajban 38.83 104 *i* P **P 02 40 56.0 +0.9**
SNR=11
HRA Herat 38.84 86 P P 02 40 54.8 -0.5
ASUD Al Ashush, Dub 39.04 104 P P 02 40 57.7 +0.9
SNR=14
ASUD Al Ashush, Dub 39.04 104 *i* P **P 02 40 58.0 +1.1**
SNR=24
NAZ Nazwa, Dubai 39.05 103 P P 02 40 57.6 +0.6
SNR=21
NAZ Nazwa, Dubai 39.05 103 *i* P **P 02 40 57.2 +0.2**
SNR=32
FAQ Al Faqa, Dubai 39.15 103 P P 02 40 58.0 +0.2
SNR=12
FAQ Al Faqa, Dubai 39.15 103 *i* P **P 02 40 58.0 +0.2**
SNR=15
MASF Masafi 39.18 102 P P 02 40 58.3 +0.2
SNR=7.5
MSFE Esma-Masafi 39.19 102 *i* P **P 02 40 58.2 +0.1**
SNR=14
DBIC Dimbokro 39.31 209 P P 02 40 58.7 -0.5
comp=Z,8.3nm,0.7s,baz=38,slow=9.1,SNR=13
DBIC LR LR 02 58 43.3
comp=Z,3μm,18.3s,baz=23,slow=38
comp=Z,8.3nm,0.7s
DBIC Dimbokro 39.31 209 P P 02 40 59.0 -0.2
DBIC IAmb IAmb 02 41 05.5
comp=Z,112nm,1.5s
DBIC Dimbokro 39.31 209⇓ *iP* **P 02 41 00.6 +1.4**
TIC Toumodi 39.39 209 *eP* **P 02 40 59.3 -0.6**
comp=Z,121nm,1.4s
UOSS Minazif 39.47 103 P P 02 40 59.6 -0.9
UOSS IAmb IAmb 02 41 03.8
comp=Z,79nm,0.8s
UOSS Minazif 39.47 103 P P 02 41 00.3 -0.2
UOSS Minazif 39.47 103 *i* P **P 02 41 00.1 -0.4**
SNR=31
UOSS Minazif 39.47 103 P P 02 41 00.0 -0.4
HATD Hatta, Dubai 39.49 103 P P 02 41 01.0 +0.3
SNR=17
HATD Hatta, Dubai 39.49 103 *i* P **P 02 41 00.7 0.0**
SNR=43
ASHO Ashiyiah 39.52 103 P P 02 41 01.0 0.0
SNR=19
ASHO Ashiyiah 39.52 103 *i* P **P 02 41 01.0 0.0**
SNR=10
KIC Kosan Boka 39.56 209 *eP* **P 02 41 01.1 -0.1**
comp=Z,61nm,1.0s
DY2G Dye2 39.62 327 *i* P **P 02 41 02.7 +1.2**
DY2G IAmb IAmb 02 41 03.2
comp=Z,68nm,0.8s
ALNE Al Ain 39.69 104 P P 02 41 02.9 +0.6
SNR=24
ALNE Al Ain 39.69 104 *i* P **P 02 41 03.0 +0.6**
SNR=9.8
LIC Lamto 39.79 209 *eP* **P 02 41 02.5 -0.6**
comp=Z,163nm,1.0s
IVI Ivigtut 40.24 319 P P 02 41 06.2 -0.2
IVI Ivigtut 40.24 319 *eP* **P 02 41 05.6 -0.8**
NOR Nord 40.24 354 *i* P **P 02 41 09.4 +3.1**
FURI Furi 40.51 139 P P 02 41 11.3 +1.7
FURI IAmb IAmb 02 41 15.6
comp=Z,100nm,1.1s
FURI Furi 40.51 139 P P 02 41 14.7 +5.2
ARQ Araqi 40.69 104 P P 02 41 11.3 +0.6
SNR=15
BRZS Berezniki 40.74 59*c iP* **P 02 41 10.6 -0.2**
BRZS *eS* **S 02 47 21.5 +0.5**
BRZS pmax pmax
comp=Z,105nm,2.8s
BRZS smax smax
comp=E,53nm,3.9s
BRZS Berezniki 40.74 59⇑ *iP* **P 02 41 10.6 -0.2**
comp=E,105nm,2.8s,baz=58
BRZS *eS* **S 02 47 21.6 +0.5**
comp=E,53nm,3.9s,baz=58
TAS Tashkent 41.08 72 P P 02 41 14.2 +0.6
TAS IAmb IAmb 02 41 21.4
comp=Z,175nm,1.4s
TAS Tashkent 41.08 72 P P 02 41 14.2 +0.6
TAS pmax pmax
comp=Z,175nm,1.4s
HOQ Hoqain 41.10 103 P P 02 41 14.3 +0.3
SNR=11
IUG Iuzhnay 41.29 71*d iP* **P 02 41 16.1 +0.6**
IUG *eS* **S 02 47 30.7 +1.2**
IUG smax smax
comp=E,154nm,4.0s
IUG Iuzhnay 41.29 71⇓ *iP* **P 02 41 16.2 +0.6**
baz=71
IUG *eS* **S 02 47 30.7 +1.2**
comp=E,154nm,4.0s,baz=71
KK31 Karatay Array 41.29 69 P P 02 41 15.5 +0.1
KK31 IAmb IAmb 02 41 22.3
comp=Z,133nm,1.4s
KK31 Karatay Array 41.29 69 *i* P **P 02 41 15.4 0.0**
KKAR Karatay Array 41.29 69 P P 02 41 15.5 +0.1
KKAR Karatay Array 41.29 69 P P 02 41 15.5 +0.1
SFJD Kangerlussuaq 41.38 328 P P 02 41 15.8 0.0
SFJD IAmb IAmb 02 41 17.0
comp=Z,60nm,0.9s
SFJD Kangerlussuaq 41.38 328 P P 02 41 15.8 0.0
SFJD pmax pmax
comp=Z,60nm,0.9s
SFJD Kangerlussuaq 41.38 328 P P 02 41 16.4 +0.6
BSY Bisya 41.55 104 P P 02 41 17.8 0.0
SNR=6.3
ILULI Ilulissat 41.72 331 P P 02 41 18.1 -0.4
ILULI IAmb IAmb 02 41 19.9
comp=Z,95nm,0.8s
ILULI Ilulissat 41.72 331 P P 02 41 18.1 -0.4
ILULI pmax pmax
comp=Z,95nm,0.8s
BIDO Bidbid 41.73 103 P P 02 41 19.3 +0.2
SNR=7.1
BIDO P **P 02 41 19.3 +0.2**
SNR=7.1
DZA Taraz 41.93 69 *eP* **P 02 41 20.8 +0.1**
DZA Taraz 41.93 69 *eP* **P 02 41 20.8 +0.1**
baz=69
SMDO Samad 41.96 103 P P 02 41 21.5 +0.4
SNR=9.6
CHGR Chuyangaron 42.01 76 P P 02 41 21.6 +0.1
CHGR Chuyangaron 42.01 76 P P 02 41 21.6 +0.1
CHGR pmax pmax
comp=Z,184nm,1.1s
WSAR Wadi Sarin 42.26 103 LR LR 03 03 06.6
comp=Z,1μm,18.3s,baz=344,slow=42
WHFO Wadi Hawf 42.37 113 P P 02 41 24.3 -0.2
JMDO Jabal Madar 42.43 104 P P 02 41 25.0 +0.1
SNR=5.8
ABTO Aybut 42.45 114 P P 02 41 25.4 +0.2
GAR Garm 42.70 75 P P 02 41 27.4 +0.3
NGCH Negor - Chabah 42.79 98 P P 02 41 28.5 +0.7
WBK Wadi Bani Khal 42.90 103 P P 02 41 30.2 +1.4

RBK **Rabkut** 42.96 113 P **P** 02 41 29.8 +0.6
BTLS **Baital** 43.04 65*d* iP **P** 02 41 29.9 +0.3
BTLS *eS* **S** 02 47 56.1 +1.1
BTLS pmax pmax
comp=Z,47nm,2.0s
BTLS smax smax
comp=E,64nm,5.4s
BTLS **Baital** 43.04 65⇓ *i* P **P** 02 41 29.9 +0.3
comp=E,47nm,2.0s,baz=65
BTLS *eS* **S** 02 47 56.1 +1.1
comp=E,64nm,5.4s,baz=65
MHTO **MHTO** 43.22 106 P **P** 02 41 31.8 +0.5
MHTO P **pP** 02 41 34.0 -1.3
SNR=6.1
DMTO **DMTO** 43.31 112 P **P** 02 41 32.1 0.0
SHAO **Shalim** 43.57 111 P **P** 02 41 35.4 +1.3
SHAO **Shalim** 43.57 111 P **P** 02 41 35.1 +1.0
DQM **DQM** 43.61 107 P **P** 02 41 37.0 +2.5
EKS2 **Erkin-Say** 43.69 69 P **P** 02 41 36.5 +1.4
SNR=65
KBL **Kabul** 43.74 81 P **P** 02 41 35.3 -0.4
KBL **Kabul** 43.74 81 P **P** 02 41 35.3 -0.4
KBL **Kabul** 43.74 81 P **P** 02 41 36.5 +0.9
SNR=10
AML **Almayashu** 43.84 69 P **P** 02 41 37.8 +1.2
SNR=30
LODK **Lodwar** 43.91 147 P **P** 02 41 37.2 +0.2
LODK IAmb IAmb 02 41 40.7
comp=Z,171nm,2.0s
LODK **Lodwar** 43.91 147 P **P** 02 41 38.6 +1.6
SNR=14
USP **Ospenovka** 43.97 67 P **P** 02 41 37.4 +0.2
SNR=19
SGDS **Sogindy** 43.99 67 *e*P **P** 02 41 37.5 +0.2
SGDS **Sogindy** 43.99 67 *e*P **P** 02 41 37.5 +0.2
baz=67
AAK **Ala-Archa** 44.19 68 P **P** 02 41 40.4 +1.2
SNR=24
AAK **Ala-Archa** 44.19 68 P **P** 02 41 39.4 +0.3
AAK IAmb IAmb 02 41 46.7
comp=Z,103nm,1.2s
AAK **Ala-Archa** 44.19 68*de*P **P** 02 41 40.5 +1.4
AAK pmax pmax
comp=Z,72nm,1.0s
AAK **Ala-Archa** 44.19 68 P **P** 02 41 40.7 +1.6
AAK **Ala-Archa** 44.19 68 *i* P **P** 02 41 40.4 +1.2
SNR=36
AAK **Ala-Archa** 44.19 68 P **P** 02 41 40.3 +1.1
KURBB **Kurchatov Arra** 44.21 56 LR LR 03 01 34.8
comp=Z,5μm,18.9s,baz=266,slow=38
CHMS **Chumysh** 44.23 68 *i* P **P** 02 41 39.6 +0.3
CHMS pmax pmax
comp=Z,44nm,1.2s
KURK **Kurchatov** 44.24 56 P **P** 02 41 38.7 -0.5
KURK IAmb IAmb 02 41 43.7
comp=Z,129nm,1.2s
KURK **Kurchatov** 44.24 56 P **P** 02 41 38.7 -0.5
KURK pmax pmax
comp=Z,129nm,1.3s
KURK **Kurchatov** 44.24 56 P **P** 02 41 39.3 +0.1
KURK **Kurchatov** 44.24 56 P **P** 02 41 38.9 -0.2
UCH **Uchtor** 44.36 69 P **P** 02 41 42.3 +1.5
SNR=14
KBK **Karagaybulak** 44.50 68 P **P** 02 41 46.2 +4.6
SNR=5.8
TKM2 **Tokmak 2** 44.84 67 P **P** 02 41 44.9 +0.5
SNR=11
TKM2 **Tokmak 2** 44.84 67 *i* P **P** 02 41 43.9 -0.5
TKM2 pmax pmax
comp=Z,44nm,1.4s
KUU **Kurty** 44.98 66*d* iP **P** 02 41 45.8 +0.6
KUU *eS* **S** 02 48 25.2 +1.8
KUU pmax pmax
comp=Z,156nm,1.5s
KUU smax smax
comp=E,257nm,5.7s
KUU **Kurty** 44.98 66⇓ iP **P** 02 41 45.8 +0.6
comp=E,156nm,1.5s,baz=66
KUU *eS* **S** 02 48 25.2 +1.8
comp=E,257nm,5.7s,baz=66
NRIK **Noril'sk** 45.35 29 P **P** 02 41 47.7 -0.1
comp=E,25nm,0.8s,baz=266,slow=7.4,SNR=8.2
NRIK LR LR 03 03 40.0
comp=E,2μm,20.0s,baz=271,slow=40
comp=E,25nm,0.8s
NRIK **Noril'sk** 45.35 29 P **P** 02 41 48.1 +0.3
NRIK IAmb IAmb 02 41 53.5
comp=Z,58nm,1.1s
NRIK **Noril'sk** 45.35 29*d* iP **P** 02 41 48.6 +0.8
NRIK pmax pmax
comp=Z,16nm,0.9s
NRIK MLR MLR
comp=Z,2μm,19.0s
MDOK **Medeo** 45.73 67 *i* P **P** 02 41 52.3 +0.9
MDOK **Medeo** 45.73 67 *i* P **P** 02 41 52.3 +0.9
baz=67
TDK **Taldyqorghan** 45.95 64 *e*P **P** 02 41 52.5 -0.4
TDK **Taldyqorghan** 45.95 64 *e*P **P** 02 41 52.6 -0.4
baz=64
MBAR **Mbarara** 46.00 155 P **P** 02 41 53.6 -0.1
MBAR IAmb IAmb 02 41 56.6
comp=Z,134nm,1.9s
MBAR **Mbarara** 46.00 155*d* iP **P** 02 41 53.4 -0.3
MBAR **Mbarara** 46.00 155 P **P** 02 41 54.5 +0.7
MBAR **Mbarara** 46.00 155 P **P** 02 41 54.4 +0.6
KSH **Kashi** 46.47 72 P **P** 02 41 57.5 +0.3
KSH pP pP 02 42 00.8 -0.3
KSH pmax pmax
comp=Z,130nm,1.1s
KSH LR LR
comp=N,3μm,17.8s
KSH LR LR
comp=E,850nm,17.8s
KSH LR LR
comp=Z,3μm,20.9s
ZHN **Zhinishke** 46.66 66 *e*P **P** 02 41 58.8 +0.1
ZHN **Zhinishke** 46.66 66 *e*P **P** 02 41 58.8 +0.1
baz=66
SATY **Saty** 46.69 66 *e*P **P** 02 41 59.5 +0.6
SATY pmax pmax
comp=Z,54nm,1.5s
SATY **Saty** 46.69 66 *e*P **P** 02 41 59.5 +0.6
comp=Z,54nm,1.5s,baz=66
KPKS **Kokpek** 46.72 66 *e*P **P** 02 41 59.2 +0.2
KPKS pmax pmax
comp=Z,44nm,1.5s
KPKS **Kokpek** 46.72 66 *e*P **P** 02 41 59.2 +0.2
comp=Z,44nm,1.5s,baz=66
ZAA0 **Zalesovo Array** 46.96 50 P **P** 02 42 00.2 -0.4
ZALV **Zalesovo Beam** 46.96 50 P **P** 02 42 00.3 -0.4
comp=Z,28nm,0.7s,baz=292,slow=7.9,SNR=48
ZALV LR LR 03 03 26.3
comp=Z,3μm,19.2s,baz=277,slow=38
comp=Z,28nm,0.7s
ZALV **Zalesovo Beam** 46.96 50 P **P** 02 42 00.5 -0.2
UZB **Uzynbulak** 47.07 66 *e*P **P** 02 42 01.8 0.0
UZB **Uzynbulak** 47.07 66 *e*P **P** 02 42 01.9 0.0
baz=66
NIL **Nilore** 47.23 80 P **P** 02 42 03.7 +0.6
NIL **Nilore** 47.23 80 P **P** 02 42 03.7 +0.6
NIL pmax pmax
comp=Z,180nm,1.2s
NIL **Nilore** 47.23 80 P **P** 02 42 04.2 +1.1
SHLS **Shalkode** 47.36 66*d* iP **P** 02 42 07.1 +3.0
SHLS pmax pmax
comp=Z,23nm,0.7s
SHLS **Shalkode** 47.36 66⇓ *i* P **P** 02 42 07.1 +3.0
comp=Z,23nm,0.7s,baz=66
MAKZ **Makanchi** 47.61 60 P **P** 02 42 05.6 -0.3
MAKZ **Makanchi** 47.61 60 P **P** 02 42 05.2 -0.6
MAKZ **Makanchi** 47.61 60 P **P** 02 42 06.4 +0.5
MK31 **Makanchi Array** 47.81 60*d* iP **P** 02 42 07.2 -0.2
MK31 pmax pmax
comp=Z,65nm,0.8s
MKAR **Makanchi Array** 47.81 60 P **P** 02 42 07.6 +0.2
comp=Z,71nm,0.9s,baz=287,slow=6.2,SNR=135
MKAR LR LR 03 06 11.4
comp=Z,3μm,19.2s,baz=316,slow=41
comp=Z,71nm,0.9s
MKAR **Makanchi Array** 47.81 60 P **P** 02 42 06.9 -0.6
MKAR **Makanchi Array** 47.81 60 P **P** 02 42 06.9 -0.6
KMBO **Kilima Mbogo** 48.81 147 P **P** 02 42 15.7 0.0
comp=Z,16nm,1.0s,baz=352,slow=8.7,SNR=20
KMBO LR LR 03 02 40.5
comp=Z,1μm,21.9s,baz=294,slow=36
comp=Z,16nm,1.0s

KMBO **Kilima Mbogo** 48.81 147 P **P** 02 42 16.4 +0.7
KMBO **Kilima Mbogo** 48.81 147 *d* iP **P** 02 42 16.7 +1.0
KMBO pmax pmax
comp=Z,16nm,1.0s
KMBO **Kilima Mbogo** 48.81 147 P **P** 02 42 17.1 +1.5
KMBO **Kilima Mbogo** 48.81 147 *i* P **P** 02 42 16.9 +1.2
SNR=16
KMBO **Kilima Mbogo** 48.81 147 P **P** 02 42 17.1 +1.5
JASL **Jaisalmer** 49.06 89 *e*P **P** 02 42 17.6 +0.3
FRB **Frobisher Bay** 49.19 324 P **P** 02 42 17.5 -0.2
comp=Z,26nm,0.6s,baz=72,slow=7.7,SNR=26
FRB LR LR 03 04 13.5
comp=Z,2μm,18.2s,baz=45,slow=38
comp=Z,26nm,0.6s
ZSN **Zaisan** 49.19 58*d* iP **P** 02 42 18.8 +0.7
ZSN *eS* **S** 02 49 25.1 +1.7
ZSN pmax pmax
comp=Z,101nm,1.6s
ZSN **Zaisan** 49.19 58⇓ *i* P **P** 02 42 18.8 +0.7
comp=Z,101nm,1.6s,baz=58
ZSN *eS* **S** 02 49 25.1 +1.7
baz=58
EUNU **Eureka** 49.82 347 P **P** 02 42 23.2 +0.8
KIBK **Kibwezi** 50.23 147 P **P** 02 42 26.6 +0.2
KIBK **Kibwezi** 50.23 147 P **P** 02 42 27.3 +1.0
BHK **Bhakra** 50.66 81 *ex* x 02 42 32.3
SCHQ **Schefferville** 51.22 313 P **P** 02 42 32.0 -1.4
comp=Z,28nm,0.7s,baz=74,slow=6.9,SNR=20
SCHQ LR LR 03 01 00.6
comp=Z,1μm,22.0s,baz=37,slow=32
comp=Z,28nm,0.7s
SCHQ **Schefferville** 51.22 313 P **P** 02 42 31.8 -1.5
SCHQ IAmb IAmb 02 42 46.2
comp=Z,39nm,0.9s
SMLA **Simla** 51.36 81 *e*P **P** 02 42 33.9 -0.7
SMLA IAmb IAmb 02 42 38.2
comp=Z,78nm,0.9s
AJM **Ajmer** 52.07 87 *e*P **P** 02 42 40.4 +0.4
KUDL **Kundal** 52.49 84 *e*P **P** 02 42 42.6 -0.5
WMQ **Urumqi** 52.51 62 *e*P **P** 02 42 44.5 +1.4
WMQ pP pP 02 42 47.5 +0.4
WMQ PcP **PcP** 02 43 59.4 +5.9
WMQ pmax pmax
comp=Z,53nm,1.1s
WMQ LR LR
comp=N,6μm,16.1s
WMQ LR LR
comp=E,5μm,14.3s
WMQ LR LR
comp=Z,2μm,19.5s
HAL **Halifax** 53.51 300 P **P** 02 42 49.7 -0.7
HAL **Halifax** 53.51 300 P **P** 02 42 49.7 -0.7
HAL pmax pmax
comp=Z,23nm,0.9s
RES **Resolute Bay** 53.71 342 LR LR 03 05 16.0
comp=Z,1μm,21.8s,baz=51,slow=36
RES **Resolute Bay** 53.71 342 P **P** 02 42 52.0 +0.6
RES **Resolute Bay** 53.71 342 P **P** 02 42 52.0 +0.6
RES pmax pmax
comp=Z,27nm,1.0s
PTH **Pithoragarh** 54.43 81 *e*P **P** 02 42 57.1 -0.5
LGTI **Lohaghat** 54.51 81 *e*P **P** 02 42 57.1 -0.8
PQI **Presque Isle** 55.33 304 P **P** 02 43 02.3 -1.4
KNGR **Kungurtug, Tuv** 55.44 50⇓ *e*P **P** 02 43 05.4 +0.9
KNGR pmax pmax
comp=Z,35nm,0.9s
JHNI **Jhansi** 55.51 86 *e*P **P** 02 43 04.1 -1.1
D62A **Allapoint, All** 55.77 305 P **P** 02 43 05.7 -1.1
E62A **Clayton Lake** 56.27 305 P **P** 02 43 09.5 -0.9
E62A IAmb IAmb 02 43 13.0
comp=Z,62nm,1.7s
MOY **Mondy** 56.88 48 *e*P **P** 02 43 16.0 +1.2
MOY pmax pmax
comp=Z,109nm,2.1s
TIXI **Tiksi** 57.28 20 LR LR 03 11 02.5
comp=Z,2μm,18.3s,baz=356,slow=39
TIXI **Tiksi** 57.28 20 P **P** 02 43 16.4 -0.7
TIXI **Tiksi** 57.28 20⇑ *e*P **P** 02 43 17.1 0.0
TIXI pmax pmax
comp=Z,62nm,2.0s
TIXI MLR MLR
comp=Z,2μm,17.0s
TIXI **Tiksi** 57.28 20 P P 02 43 22.2 +5.1
DANN **Dangsing** 57.67 80 *e*P **P** 02 43 20.7 -0.2
comp=Z,81nm,0.6s
IRK **Irkutsk** 58.36 46 *e*P **P** 02 43 22.3 -2.8
IRK pmax pmax
comp=Z,180nm,2.1s
GKN **Gorkha** 58.50 80 *e*P **P** 02 43 26.0 -0.6
comp=Z,80nm,0.8s
ZAK **Zakamensk** 58.77 48 *e*P **P** 02 43 28.9 +0.9
ZAK pmax pmax
comp=Z,30nm,1.3s
LBNH **Lisbon** 58.92 303 P **P** 02 43 28.0 -1.1
baz=59
DMN **Daman** 59.07 80 *e*P **P** 02 43 30.1 -0.6
comp=Z,129nm,0.7s
KKN **Kakani** 59.09 79 *e*P **P** 02 43 30.0 -0.8
PKIN **Phulchoki** 59.30 80 *e*P **P** 02 43 31.6 -0.7
PKI **Pulchoki** 59.31 80 *e*P **P** 02 43 31.5 -0.9
LSZ **Lusaka** 59.41 163 LR LR 03 12 19.3
comp=Z,1μm,18.1s,baz=359,slow=39
GUN **Gumba** 59.45 79 *e*P **P** 02 43 33.1 -0.3
TRQ **Mont Tremblant** 59.48 306 P **P** 02 43 30.7 -2.3
JIRN **Jiri** 59.82 79 *e*P **P** 02 43 35.6 -0.4
comp=Z,124nm,0.7s
VLDQ **Val d'Or** 60.18 309 P **P** 02 43 37.6 -0.1
VLDQ IAmb IAmb 02 43 39.5
comp=Z,37nm,1.4s
BOD **Bodaibo** 60.18 37 *e*P **P** 02 43 36.6 -0.9
BOD pmax pmax
comp=Z,64nm,1.7s
LONY **Lake Ozonia** 60.34 305 P **P** 02 43 38.6 -0.3
baz=58
HYBB **Hyderabad (bro** 60.42 93 *e*P P 02 43 32.6 -7.2
RAMN **Ramite** 60.53 79 *e*P **P** 02 43 39.9 -0.8
comp=Z,185nm,0.7s
GOMU **GeErMu** 61.06 66 P **P** 02 43 46.3 +2.0
GOMU pP pP 02 43 47.6 -0.6
GOMU sP sP 02 43 48.8 -0.9
GOMU PcP **PcP** 02 44 29.1 +1.7
GOMU pmax pmax
comp=Z,15nm,0.5s
GOMU pmax pmax
comp=Z,540nm,6.0s
TAPN **Taplejung** 61.10 78 *e*P **P** 02 43 44.3 -0.4
comp=Z,84nm,0.6s
ODAN **Odare** 61.16 79 *e*P **P** 02 43 44.4 -0.6
GTK **Tadong** 61.76 78 *e*P **P** 02 43 49.0 +0.1
GTK IAmb IAmb 02 43 52.0
comp=Z,72nm,1.0s
TSUM **Tsumeb** 61.81 175 LR LR 03 11 35.0
comp=Z,2μm,19.0s,baz=354,slow=37
TSUM **Tsumeb** 61.81 175 P **P** 02 43 48.8 -0.3
TSUM **Tsumeb** 61.81 175 P **P** 02 43 50.2 +1.1
A36M **Sachs Harbour** 61.84 346 P **P** 02 43 49.2 +0.7
A36M **Sachs Harbour** 61.84 346 P **P** 02 43 48.7 +0.1
baz=34,SNR=6.7
SONM **Songino Array** 61.85 50 P **P** 02 43 49.2 -0.1
comp=Z,94nm,1.0s,baz=293,slow=8.5,SNR=168
SONM LR LR 03 12 39.2
comp=Z,3μm,20.6s,baz=314,slow=38
comp=Z,94nm,1.0s
SONM **Songino Array** 61.85 50 P **P** 02 43 49.3 +0.1
BOK **Bokaro** 61.88 83 *e*P **P** 02 43 48.3 -1.3
BOK IAmb IAmb 02 43 51.7
comp=Z,45nm,0.5s
LSA **Lhasa** 62.20 74 P **P** 02 43 52.0 -0.2
LSA IAmb IAmb 02 43 57.2
comp=Z,32nm,0.8s
LSA **Lhasa** 62.20 74 P **P** 02 43 52.0 -0.2
LSA pmax pmax
comp=Z,32nm,0.8s
LSA **Lhasa** 62.20 74 P **P** 02 43 52.9 +0.7
ULN **Ulaanbaatar** 62.20 49 P **P** 02 43 51.8 +0.1
ULN **Ulaanbaatar** 62.20 49 *d* iP **P** 02 43 52.4 +0.8
ULN pmax pmax
comp=Z,55nm,1.0s
ULN **Ulaanbaatar** 62.20 49 P **P** 02 43 53.1 +1.4
ULN **Ulaanbaatar** 62.20 49 P **P** 02 43 52.4 +0.8
DELO **Deloro Mine** 62.22 306 P **P** 02 43 52.4 +0.8
DELO IAmb IAmb 02 43 52.8
comp=Z,52nm,1.7s
GTA **Gaotai** 62.56 61 ⇓P **P** 02 43 54.8 +0.7
GTA pP pP 02 43 57.0 -1.0

GTA sP sP 02 44 00.8 +1.3
GTA pmax pmax
comp=Z,22nm,0.7s
SADO **Sadowa** 62.98 307 LR LR 03 08 15.6
comp=Z,1μm,21.6s,baz=21,slow=33
SADO **Sadowa** 62.98 307 P **P** 02 43 55.8 -0.9
SADO IAmb IAmb 02 44 29.4
comp=Z,69nm,1.6s
CIT **Chita** 63.28 43 *e*P **P** 02 43 59.0 +0.4
CIT *e* 02 44 07.6
CIT *e* 02 44 39.4
CIT pmax pmax
comp=Z,175nm,2.6s
M57A **Sunshine Farm,** 63.71 303 P **P** 02 44 00.8 -0.7
M57A IAmb IAmb 02 44 39.3
comp=Z,20nm,0.9s
YAK **Yakutsk** 63.80 28 LR LR 03 15 30.3
comp=Z,1μm,19.7s,baz=314,slow=40
YAK **Yakutsk** 63.80 28 P **P** 02 44 01.1 -0.7
YAK **Yakutsk** 63.80 28 *e*P **P** 02 44 01.3 -0.4
YAK pmax pmax
comp=Z,81nm,0.8s
YAK pmax pmax
comp=N,28nm,1.0s
YAK pmax pmax
comp=E,19nm,1.0s
YAK **Yakutsk** 63.80 28 P **P** 02 44 02.2 +0.5
C36M **Paulatuk** 63.83 344 P **P** 02 44 01.8 0.0
C36M **Paulatuk** 63.83 344 P **P** 02 44 00.9 -0.9
baz=34,SNR=6.6
BLWY **Bulawayo** 64.21 164 *e*P **P** 02 44 05.7 +0.6
BLWY IAmb IAmb 02 44 08.8
comp=Z,101nm,0.9s
MATP **Matopo** 64.47 164 LR LR 03 13 48.0
comp=Z,2μm,19.3s,baz=1.5,slow=38
MATP **Matopo** 64.47 164 *e*P **P** 02 44 06.4 -0.4
MATP IAmb IAmb 02 44 09.5
comp=Z,72nm,1.0s
SSPA **Standing Stone** 64.59 303 P **P** 02 44 05.6 -1.7
SSPA IAmb IAmb 02 44 27.1
comp=Z,32nm,1.2s
SSPA **Standing Stone** 64.59 303 P **P** 02 44 06.9 -0.4
baz=54
SSPA **Standing Stone** 64.59 303 P **P** 02 44 08.8 +1.5
ERPA **Erie** 65.01 305 P **P** 02 44 09.8 -0.2
ERPA IAmb IAmb 02 44 13.1
comp=Z,26nm,1.1s
SHL **Shillong** 65.16 77 P **P** 02 44 10.5 -1.1
SNR=23
SHL **Shillong** 65.16 77 *e*P **P** 02 44 10.4 -1.1
SHL IAmb IAmb 02 44 13.5
comp=Z,74nm,1.2s
TEZP **TEZPUR** 65.19 76 *e*P **P** 02 44 10.7 -0.7
TEZP IAmb IAmb 02 44 11.9
comp=Z,37nm,0.5s
SBV **Sambava** 65.35 140 P **P** 02 44 13.1 +0.7
RCBR **Riachuelo** 65.66 236 LR LR 03 10 34.0
comp=Z,1μm,19.6s,baz=159,slow=34
RCBR **Riachuelo** 65.66 236 P **P** 02 44 13.9 -0.7
RCBR IAmb IAmb 02 44 21.8
comp=Z,19nm,0.8s
RCBR **Riachuelo** 65.66 236 P **P** 02 44 13.9 -0.7
RCBR pmax pmax
comp=Z,19nm,0.8s
RCBR **Riachuelo** 65.66 236 *e*P **P** 02 44 17.1 +2.5
M53A **WI Miller and** 65.82 305 P **P** 02 44 15.4 0.0
baz=54
A21K **Barrow** 65.97 356 P **P** 02 44 15.1 -0.6
baz=8.2
MCWV **Mont Chateau** 66.37 303 P **P** 02 44 19.1 +0.2
baz=53
INK **Inuvik** 66.45 347 LR LR 03 15 44.4
comp=Z,859nm,18.8s,baz=26,slow=38
INK **Inuvik** 66.45 347 P **P** 02 44 18.8 0.0
INK **Inuvik** 66.45 347 P **P** 02 44 18.8 0.0
INK pmax pmax
comp=Z,67nm,1.2s
INK **Inuvik** 66.45 347 P **P** 02 44 19.0 +0.1
baz=26,SNR=23
C26K **Camden Bay** 66.47 352 P **P** 02 44 18.4 -0.6
baz=17
MUSN **Musina, Limpop** 66.56 163 *e*P **P** 02 44 20.3 +0.2
MUSN IAmb IAmb 02 44 23.3
comp=Z,241nm,1.7s
MOKO **MOKOCHONG** 66.59 75 *e*P **P** 02 44 20.5 -0.1
C27K **Jago River** 66.62 351 P **P** 02 44 20.3 +0.3
baz=18,SNR=30
KOHI **KOHIMA** 66.67 76 *e*P **P** 02 44 20.6 -0.5
O53A **New Philadelph** 66.86 304 P **P** 02 44 20.7 -1.3
baz=53
C24K **Franklin Bluff** 67.02 353 P **P** 02 44 22.4 -0.1
baz=14
YKA **Yellowknife Ar** 67.03 336 P **P** 02 44 23.2 +0.5
comp=Z,30nm,0.8s,baz=42,slow=6.4,SNR=85
YKA LR LR 03 13 46.6
comp=Z,1μm,21.4s,baz=22,slow=36
comp=Z,30nm,0.8s
YKA **Yellowknife Ar** 67.03 336 P **P** 02 44 23.0 +0.3
U59A **Littleton** 67.05 299 P **P** 02 44 23.3 +0.1
U59A IAmb IAmb 02 44 37.9
comp=Z,25nm,1.1s
C23K **Itkillik River** 67.07 354 P **P** 02 44 23.0 +0.2
baz=13,SNR=18
LZH **Lanzhou** 67.09 62 ⇓P **P** 02 44 24.8 +1.1
LZH sP sP 02 44 34.0 +4.9
LZH pmax pmax
comp=Z,72nm,1.4s
LZH LR LR
comp=N,2μm,18.0s
LZH LR LR
comp=E,2μm,17.5s
LZH LR LR
comp=Z,3μm,19.2s
IMP **Imphal** 67.09 77 *e*P **P** 02 44 24.2 +0.4
IMP IAmb IAmb 02 44 29.1
comp=Z,101nm,1.1s
N51A **Ashland** 67.16 305 P **P** 02 44 23.0 -0.9
N51A IAmb IAmb 02 44 37.6
comp=Z,44nm,1.2s
D25K **Kavik River** 67.19 352 P **P** 02 44 24.5 +0.8
baz=16
J47A **Sunmer** 67.19 308 P **P** 02 44 24.0 0.0
J47A IAmb IAmb 02 44 25.4
comp=Z,37nm,1.2s
NBRF **Rio Formoso -** 67.46 233 *e*P **P** 02 44 25.3 -0.7
D24K **Happy Valley** 67.58 353 P **P** 02 44 26.1 0.0
baz=14
BILL **Bilibino** 67.67 11 P **P** 02 44 26.4 -0.3
BILL **Bilibino** 67.67 11 *c* iP **P** 02 44 27.3 +0.6
BILL *i* *PP **pP** 02 44 29.8 -0.8
BILL *i* *SP **sP** 02 44 31.3 -0.8
BILL *e* 02 44 48.3
BILL S **S** 02 53 22.0 -1.4
BILL pmax pmax
comp=Z,46nm,1.0s
BILL MLR MLR
comp=Z,789nm,16.0s
LEPH **Lephalale, Lim** 67.67 165 *e*P **P** 02 44 25.8 -1.4
LEPH IAmb IAmb 02 44 29.9
comp=Z,35nm,1.1s
E27K **Coleen River** 67.74 350 P **P** 02 44 27.4 +0.3
baz=20,SNR=24
L48A **N Adams** 67.76 307 P **P** 02 44 27.0 -0.7
baz=52,SNR=7.9
L48A P **P** 02 44 27.0 -0.7
baz=52,SNR=7.9
P52A **Corning** 67.80 304 P **P** 02 44 28.3 +0.4
baz=52
COWI **Conover** 67.83 313 P **P** 02 44 27.6 -0.5
COWI IAmb IAmb 02 44 36.8
comp=Z,19nm,0.9s
EYMN **Ely** 67.91 315 P **P** 02 44 28.5 -0.1
baz=50,SNR=6.4
EYMN **Ely** 67.91 315 P **P** 02 44 27.9 -0.6
baz=50,SNR=6.4
D23K **Nanushuk River** 67.92 354 P **P** 02 44 29.4 +1.2
baz=13,SNR=27
ACSO **Alum Creek Sta** 67.95 305 P **P** 02 44 28.1 -0.8
baz=52
KAAM **Kaadhehdhoo** 67.96 111 P **P** 02 44 30.7 +1.5
HIA **Hailar** 68.08 43⇓ *e*P **P** 02 44 30.3 +0.7
HIA pmax pmax
comp=Z,32nm,0.8s
MOPA **Mopani** 68.09 162 *e*P **P** 02 44 30.9 +1.1
MOPA IAmb IAmb 02 44 33.4
comp=Z,204nm,1.8s

TOLK **Toolik Lake Re** 68.15 353 P **P** 02 44 30.3 +0.5
TOLK **Toolik Lake Re** 68.15 353 P **P** 02 44 28.8 -0.9
baz=14,SNR=23
BTO **Baotou** 68.20 54 *e*P **P** 02 44 30.5 -0.1
BLA **Blacksburg** 68.21 301 P **P** 02 44 30.5 -0.1
baz=52
N49A **Columbus Grove** 68.24 306 P **P** 02 44 30.4 -0.3
baz=52,SNR=6.5
N49A P **P** 02 44 30.4 -0.3
baz=52,SNR=6.5
E25K **Arctic Village** 68.27 352 P **P** 02 44 30.2 -0.2
baz=17,SNR=20
Q52A **Bidwell** 68.29 303 P **P** 02 44 30.4 -0.6
Q52A IAmb IAmb 02 44 57.4
comp=Z,27nm,1.0s
LBTB **Lobatse** 68.43 168 LR LR 03 14 43.0
comp=Z,1µm,20.8s,baz=350,slow=36
LBTB **Lobatse** 68.43 168 P **P** 02 44 31.5 -0.5
LBTB **Lobatse** 68.43 168 P **P** 02 44 31.5 -0.5
LBTB pmax pmax
comp=Z,100nm,1.2s
LBTB **Lobatse** 68.43 168 ⇓*i*P **P** 02 44 32.1 +0.1
LBTB IAmb IAmb 02 44 35.5
comp=Z,89nm,1.1s
F26K **Sheenjek River** 68.51 351 P **P** 02 44 32.1 +0.1
baz=18,SNR=53
ZEA **Zeya** 68.56 36 *e*P **P** 02 44 33.5 +1.0
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,1µm,15.0s
ZEA MLR MLR
comp=N,1µm,16.0s
ZEA MLR MLR
comp=Z,2µm,17.0s
ULM **Lac du Bonnet** 68.59 319 P **P** 02 44 32.3 -0.4
comp=Z,27nm,0.7s,baz=54,slow=6.2,SNR=25
ULM LR LR 03 14 15.3
comp=Z,1µm,18.5s,baz=48,slow=36
comp=Z,27nm,0.7s
ULM **Lac du Bonnet** 68.59 319 P **P** 02 44 31.8 -0.9
ULM IAmb IAmb 02 44 34.6
comp=Z,39nm,0.8s
ULM **Lac du Bonnet** 68.59 319 *c i*P **P** 02 44 33.0 +0.3
E24K **Your Creek** 68.60 353 P **P** 02 44 32.3 -0.3
baz=14
ROSB **Rosrio** 68.66 244 *e*P **P** 02 44 35.8 +2.2
PALK **Pallekele** 68.68 100 P **P** 02 44 33.1 -0.7
PALK IAmb IAmb 02 44 39.6
comp=Z,27nm,1.0s
PALK **Pallekele** 68.68 100 P **P** 02 44 33.1 -0.7
PALK pmax pmax
comp=Z,27nm,1.0s
PALK **Pallekele** 68.68 100 P **P** 02 44 34.6 +0.8
PALK **Pallekele** 68.68 100 P **P** 02 44 37.4 +3.6
EPYK **Eagle Plains** 68.73 347 P **P** 02 44 33.3 -0.1
EPYK **Eagle Plains** 68.73 347 P **P** 02 44 33.3 -0.1
baz=23,SNR=20
B35A **Bob, Littlefor** 68.78 317 P **P** 02 44 33.8 -0.1
baz=49,SNR=7.0
F25K **Christian Rive** 68.78 351 P **P** 02 44 34.6 +0.9
baz=17,SNR=20
O49A **Covington** 68.79 305 P **P** 02 44 33.9 -0.3
baz=51,SNR=7.7
O49A P **P** 02 44 33.9 -0.3
baz=51,SNR=7.7
E38A **The Farm, Brul** 68.80 314 P **P** 02 44 33.7 -0.4
baz=50,SNR=6.0
BMAR **Burnt Mountain** 68.82 351 P **P** 02 44 35.3 +1.4
WRGLY **Wrigley** 68.83 340 P **P** 02 44 35.0 +1.0
baz=33,SNR=20
E22K **Anaktuvuk Pass** 68.83 354 P **P** 02 44 34.6 +0.6
baz=12
NBAN **Anadia - AL** 68.93 233 *e*P **P** 02 44 34.3 -0.9
G40A **Rib Lake** 68.94 313 P **P** 02 44 34.2 -0.8
baz=50,SNR=7.7
G27K **Doyon Strip** 69.05 350 P **P** 02 44 36.0 +0.6
baz=20,SNR=24
F24K **Squaw Lake** 69.09 352 P **P** 02 44 36.9 +1.3
baz=15,SNR=29
G26K **Porcupine Rive** 69.18 350 P **P** 02 44 37.5 +1.4
baz=18,SNR=55
O48B **Farmland** 69.24 306 P **P** 02 44 35.6 -1.3
baz=51
P49A **Miami Univ. Ec** 69.43 305 P **P** 02 44 38.5 +0.4
baz=51
KSR **Koster** 69.46 167 *e*P **P** 02 44 39.2 +0.8
KSR IAmb IAmb 02 44 41.1
comp=Z,224nm,1.8s
F22K **John River** 69.47 354 P **P** 02 44 38.4 +0.5
baz=12
H27K **Steamboat Moun** 69.58 349 P **P** 02 44 39.7 +1.1
baz=20,SNR=49
SLR **Silverton** 69.59 165 ⇓*i*P **P** 02 44 39.4 +0.2
SLR IAmb IAmb 02 44 43.1
comp=Z,39nm,0.8s
XLT **XiLinHaoTe** 69.62 49 *e*P **P** 02 44 40.0 +0.6
XLT pP sP 02 44 44.5 -0.3
XLT sP pP 02 44 48.0 +4.7
XLT PcP **PcP** 02 45 00.8 -1.5
XLT S **S** 02 53 51.5 +4.0
XLT sS sS 02 53 59.5 +5.4
XLT pmax pmax
comp=Z,38nm,0.9s
XLT pmax pmax
comp=Z,1µm,10.0s
XLT LR LR
comp=Z,300nm,18.5s
XLT LR LR
comp=Z,2µm,17.7s
XLT LR LR
comp=Z,3µm,21.1s
L44A **Lake County Fo** 69.64 309 P **P** 02 44 39.2 -0.1
baz=50
FYU **Fort Yukon** 69.72 351 P **P** 02 44 40.5 +1.0
SEY **Seymchan** 69.72 19 *de*P **P** 02 44 40.6 +1.1
SEY pmax pmax
comp=Z,55nm,1.0s
G24K **Hadweenzic Riv** 69.84 352 P **P** 02 44 40.2 0.0
baz=15,SNR=25
F21K **Alatna River** 69.85 354 P **P** 02 44 41.6 +1.3
baz=10,SNR=87
AGMN **Agassiz Nation** 69.89 318 P **P** 02 44 40.4 -0.4
AGMN IAmb IAmb 02 44 42.0
comp=Z,72nm,1.7s
AGMN **Agassiz Nation** 69.89 318 P **P** 02 44 40.7 -0.1
baz=48,SNR=7.0
AGMN **Agassiz Nation** 69.89 318 P **P** 02 44 40.6 -0.2
baz=48,SNR=7.0
I29M **Ogilvie Camp,** 69.92 348 P **P** 02 44 41.2 +0.5
baz=22,SNR=53
G22K **Bettles** 70.00 354 P **P** 02 44 42.0 +0.8
baz=12,SNR=13
I40A **Norwalk** 70.05 312 P **P** 02 44 41.9 -0.1
KMSC **Kings Mountain** 70.07 300 P **P** 02 44 40.9 -1.2
baz=51
G23K **Bananza Creek** 70.08 353 P **P** 02 44 42.3 +0.6
baz=13,SNR=52
H25K **Birch Creek** 70.08 351 P **P** 02 44 42.8 +1.2
baz=16,SNR=35
SJG **San Juan** 70.16 277 LR LR 03 10 35.7
comp=Z,931nm,21.6s,baz=56,slow=32
I27K **Kandik River** 70.18 349 P **P** 02 44 43.3 +0.9
baz=20,SNR=33
CRLN **Carolina, Mapu** 70.19 164 *e*P **P** 02 44 43.5 +0.5
CRLN IAmb IAmb 02 44 46.1
comp=Z,126nm,1.9s
CD2 **Chengdu** 70.19 66 P **P** 02 44 43.4 +0.4
CD2 pmax pmax
comp=Z,30nm,0.8s
SFIN **Lafayette** 70.31 307 P **P** 02 44 42.9 -0.6
baz=50
F36A **Milaca** 70.32 315 P **P** 02 44 43.2 -0.3
baz=48,SNR=10
SPMN **Marine on St.** 70.36 314 P **P** 02 44 43.3 -0.4
SPMN **Marine on St.** 70.36 314 P **P** 02 44 43.4 -0.4
baz=49
JFWS **Jewell Farm** 70.48 311 P **P** 02 44 43.7 -0.9
JFWS **Jewell Farm** 70.48 311 P **P** 02 44 43.7 -0.9
JFWS pmax pmax
comp=Z,17nm,1.0s
JFWS **Jewell Farm** 70.48 311 P **P** 02 44 44.5 0.0
baz=49
R49A **Shelbyville** 70.48 304 P **P** 02 44 43.7 -0.9
G21K **Allakaket** 70.55 354 P **P** 02 44 45.4 +0.8
baz=10,SNR=62

TZTN **Tazewell** 70.59 302 P **P** 02 44 46.1 +0.8
baz=51
NHSC **New Hope** 70.59 297 P **P** 02 44 45.1 -0.3
baz=51
I26K **Coal Creek Min** 70.67 350 P **P** 02 44 46.0 +0.7
baz=18
H24K **Noodor Dome** 70.72 352 P **P** 02 44 46.1 +0.4
baz=15,SNR=26
L42A **Oliver, Polo** 70.75 310 P **P** 02 44 45.4 -0.7
L42A IAmb IAmb 02 44 53.9
comp=Z,22nm,0.9s
PRP **Porcupine Dome** 70.77 351 P **P** 02 44 47.2 +1.1
baz=16,SNR=19
EGAK **Eagle** 70.90 349 P **P** 02 44 46.7 0.0
EGAK IAmb IAmb 02 44 52.3
comp=Z,52nm,1.3s
EGAK **Eagle** 70.90 349 P **P** 02 44 47.4 +0.7
baz=20,SNR=27
H23K **Yukon River** 70.90 353 P **P** 02 44 47.8 +1.1
baz=13,SNR=33
TMAB **Tom-Au,PA,Br** 70.95 248 *e*P **P** 02 44 48.6 +0.9
H22K **Ishtalitna Cre** 71.00 353 P **P** 02 44 48.6 +1.3
baz=12,SNR=39
IMAR **Indian Mountai** 71.09 354 P **P** 02 44 48.6 +0.7
MMPY **Sheldon Lake,** 71.14 343 P **P** 02 44 49.5 +1.2
baz=27,SNR=19
MAYO **Mayo, Yukon** 71.15 346 P **P** 02 44 49.4 +1.1
baz=24,SNR=7.7
K29M **Barlow Dome** 71.20 347 P **P** 02 44 49.5 +0.8
baz=22,SNR=24
TKL **Tuckaleechee C** 71.29 301 LR LR 03 14 33.7
comp=Z,794nm,18.3s,baz=36,slow=35
DAWY **Dawson** 71.30 348 P **P** 02 44 49.6 +0.4
DAWY **Dawson** 71.30 348 P **P** 02 44 50.2 +1.0
baz=21,SNR=56
H21K **Melozitna Rive** 71.35 354 P **P** 02 44 51.5 +2.1
baz=11,SNR=159
FLDN **Fort Liard** 71.36 339 P **P** 02 44 50.7 +1.2
baz=32
HAW **Hawthorne Fire** 71.36 298 P **P** 02 44 49.4 -0.6
baz=51,SNR=7.2
POKR **Poker Plat Res** 71.37 351 P **P** 02 44 50.7 +1.1
POKR **Poker Plat Res** 71.37 351 P **P** 02 44 50.9 +1.3
baz=15,SNR=11
TGTN **Hyland Airport** 71.44 342 P **P** 02 44 51.4 +1.2
baz=29,SNR=16
VOI **Vohitsoka** 71.46 147 P **P** 02 44 50.2 -0.4
VOI IAmb IAmb 02 44 53.5
comp=Z,67nm,1.5s
VOI **Vohitsoka** 71.46 147 P **P** 02 44 50.9 +0.2
VOI **Vohitsoka** 71.46 147 P **P** 02 44 53.9 +3.2
HDIL **Hopedale** 71.48 308 P **P** 02 44 50.1 -0.5
baz=49
J26L **Joseph Creek** 71.50 350 P **P** 02 44 51.5 +1.1
baz=18,SNR=52
KEIM **Keimoes** 71.50 173 *e*P **P** 02 44 50.6 -0.1
KEIM IAmb IAmb 02 44 51.3
comp=Z,182nm,2.1s
I23K **Minto, Yukon-K** 71.54 352 P **P** 02 44 51.6 +1.0
baz=14,SNR=35
PZH **PanZhiHua** 71.57 71 P **P** 02 44 51.3 -0.2
PZH pmax pmax
comp=Z,30nm,1.2s
PZH pmax pmax
comp=Z,100nm,5.3s
L40A **Anamosa** 71.58 311 P **P** 02 44 50.6 -0.6
baz=49,SNR=5.5
MDM **Murphy Dome** 71.61 352 P **P** 02 44 51.2 +0.1
J25K **Salcha River,** 71.62 350 P **P** 02 44 51.9 +0.7
baz=16,SNR=16
XAN **Xi'an** 71.62 61 ⇓P **P** 02 44 51.9 +0.2
XAN pP sP 02 44 58.0 +0.9
XAN sP pP 02 45 01.8 +6.2
XAN pmax pmax
comp=Z,54nm,1.5s
IL31 71.64 351 P **P** 02 44 51.4 +0.2
IL31 IAmb IAmb 02 44 56.8
comp=Z,79nm,1.6s
ILAR **Eielson Array** 71.64 351 P **P** 02 44 51.6 +0.4
comp=Z,16nm,0.9s,baz=6.1,slow=5.8,SNR=73
comp=Z,16nm,0.9s
COLA **College** 71.65 352 P **P** 02 44 52.3 +1.1
COLA IAmb IAmb 02 44 53.4
comp=Z,48nm,1.2s
COLA **College** 71.65 352 *de*P **P** 02 44 51.8 +0.6
COLA pmax pmax
comp=Z,21nm,1.0s
COLA **College** 71.65 352 P **P** 02 44 51.6 +0.4
baz=15
COLA **College** 71.65 352 P **P** 02 44 52.7 +1.5
TCOL **CIGO, UAF Yank** 71.65 352 P **P** 02 44 52.3 +1.1
TCOL IAmb IAmb 02 44 53.4
comp=Z,44nm,1.2s
TCOL **CIGO, UAF Yank** 71.65 352 P **P** 02 44 51.4 +0.2
baz=15
K27K **Chicken** 71.74 349 P **P** 02 44 52.8 +1.0
K27K **Chicken** 71.74 349 P **P** 02 44 53.1 +1.3
baz=19
I21K **Tanana** 71.75 353 P **P** 02 44 52.6 +0.7
I21K **Tanana** 71.75 353 P **P** 02 44 53.1 +1.3
comp=Z,12,SNR=44
F33A **5 Mile Ranch,** 71.77 316 P **P** 02 44 52.3 0.0
baz=47,SNR=12
MLY **Manley** 71.79 353 P **P** 02 44 53.5 +1.4
baz=12,SNR=53
NWCL **Newcastle** 71.85 164 *e*P **P** 02 44 52.9 0.0
NWCL IAmb IAmb 02 44 56.0
comp=Z,49nm,1.1s
BOSA **Boshof** 71.91 169 P **P** 02 44 53.0 -0.2
comp=Z,40nm,0.9s,baz=354,slow=6.6,SNR=29
BOSA LR LR 03 20 09.7
comp=Z,1µm,18.3s,baz=356,slow=39
comp=Z,40nm,0.9s
BOSA **Boshof** 71.91 169 P **P** 02 44 52.2 -1.1
BOSA IAmb IAmb 02 44 56.6
comp=Z,49nm,0.8s
BOSA **Boshof** 71.91 169 ⇓*i*P **P** 02 44 52.6 -0.7
BOSA IAmb IAmb 02 44 56.4
comp=Z,48nm,0.8s
FARO **Faro, Yukon** 71.91 344 P **P** 02 44 54.7 +1.8
baz=25,SNR=30
TNA **Tin City** 71.99 0 P **P** 02 44 52.8 -0.5
baz=359
HDA **Harding Lake** 72.00 351 P **P** 02 44 53.3 0.0
baz=15,SNR=34
MDND **Maddock** 72.02 319 P **P** 02 44 53.2 -0.6
baz=45
SCRK **Sand Creek** 72.05 350 P **P** 02 44 54.5 +0.6
baz=18,SNR=33
NEA2 **Nenana** 72.05 352 P **P** 02 44 54.2 +0.5
baz=14,SNR=26
M31M **Drury Creek, Y** 72.14 345 P **P** 02 44 56.1 +1.8
baz=24,SNR=17
BJI **Beijing** 72.18 52 P **P** 02 44 55.8 +1.0
BJI pP **sP** 02 45 00.3 0.0
BJI sP **pP** 02 45 02.8 +4.0
BJI S **S** 02 54 16.1 -1.0
BJI pmax pmax
comp=Z,45nm,1.5s
BJI LR LR
comp=Z,530nm,18.0s
BJI LR LR
comp=Z,2µm,18.0s
BJI LR LR
comp=Z,3µm,18.6s
BJT **Baijiatuao** 72.19 52 P **P** 02 44 55.0 +0.1
BJT IAmb IAmb 02 44 58.7
comp=Z,59nm,1.2s
BJT **Baijiatuao** 72.19 52 P **P** 02 44 55.0 +0.1
BJT pmax pmax
comp=Z,59nm,1.2s
MA2 **Magadan** 72.20 21 LR LR 03 20 52.9
comp=Z,1µm,18.0s,baz=328,slow=39
MA2 **Magadan** 72.20 21 P **P** 02 44 55.8 +1.2
MA2 **Magadan** 72.20 21 *ce*P **P** 02 44 56.1 +1.4
MA2 pmax pmax
comp=Z,161nm,1.3s
MA2 MLR MLR
comp=Z,1µm,17.0s
MA2 **Magadan** 72.20 21 P **P** 02 44 56.4 +1.7
MA2 **Magadan** 72.20 21 P **P** 02 44 59.1 +4.5
M30M **Minto, Yukon** 72.25 346 P **P** 02 44 55.9 +0.9
baz=23,SNR=9.3
Q44A **Meyer Farm, Va** 72.39 307 P **P** 02 44 55.6 -0.5
Q44A IAmb IAmb 02 44 57.4
comp=Z,46nm,1.4s

RIDG **Independent Ri** 72.39 350 P **P** 02 44 56.7 +0.9
RIDG **Independent Ri** 72.39 350 P **P** 02 44 57.1 +1.4
baz=17,SNR=62
K24K **Donnelly Dome** 72.45 350 P **P** 02 44 56.7 +0.6
baz=16
T47A **Sharon Grove** 72.50 304 P **P** 02 44 55.7 -1.1
baz=49,SNR=18
BWN **Browne** 72.51 352 P **P** 02 44 56.6 +0.2
GCSA **Galena City Sc** 72.53 356 P **P** 02 44 57.3 +0.8
baz=7.7
GOGA **Godfrey** 72.53 299 P **P** 02 44 58.1 +1.0
baz=50
W50A **Signal Mountai** 72.55 302 P **P** 02 44 56.6 -0.6
baz=50,SNR=7.7
BCAR **Beaver Creek A** 72.61 348 P **P** 02 44 58.1 +1.0
L27K **Beaver Creek,** 72.62 348 P **P** 02 44 58.8 +1.6
baz=19,SNR=30
M29M **Somme Creek** 72.67 347 P **P** 02 44 59.3 +1.8
baz=22,SNR=28
X51A **Calhoun** 72.67 301 P **P** 02 44 59.2 +1.4
BPAW **Bear Paw Mtn.** 72.72 353 P **P** 02 44 57.4 -0.4
BPAW IAmb IAmb 02 45 01.7
comp=Z,57nm,1.0s
BPAW **Bear Paw Mtn.** 72.72 353 P **P** 02 44 58.1 +0.4
baz=12,SNR=47
N32M **Quiet Lake** 72.84 344 P **P** 02 44 58.7 +0.2
baz=25
L26K **Log Cabin Wild** 72.88 349 P **P** 02 44 59.6 +0.9
baz=18,SNR=15
MCK **McKinley** 72.88 352 P **P** 02 44 58.7 +0.1
baz=14,SNR=23
J20K **Nowinta River** 72.91 354 P **P** 02 45 00.3 +1.5
baz=9.8,SNR=46
HNS **HongShan** 73.05 55 ⇑P **P** 02 45 00.9 +0.8
HNS S **S** 02 54 25.6 -1.5
HNS pmax pmax
comp=Z,28nm,1.3s
HNS LR LR
comp=Z,2µm,18.1s
HNS LR LR
comp=Z,2µm,19.6s
CHUM **Lake Minchumin** 73.06 353 P **P** 02 45 00.1 +0.5
baz=11,SNR=36
N31M **Braeburn, Yuko** 73.07 345 P **P** 02 45 00.5 +0.6
N31M IAmb IAmb 02 45 04.8
comp=Z,41nm,1.0s
N31M **Braeburn, Yuko** 73.07 345 P **P** 02 45 00.4 +0.6
baz=23,SNR=12
BVCY **Beaver Creek** 73.09 348 P **P** 02 45 01.2 +1.2
baz=20,SNR=8.3
KMI **Kunming** 73.13 71 ⇑P **P** 02 45 01.6 +0.6
KMI pP pP 02 45 05.3 +0.3
KMI pmax pmax
comp=Z,18nm,1.3s
V48A **Smith Brothers** 73.13 303 P **P** 02 44 59.5 -1.1
V48A **Smith Brothers** 73.13 303 P **P** 02 45 00.1 -0.5
baz=49,SNR=7.7
PAX **Paxson** 73.21 350 P **P** 02 45 01.6 +0.9
PAX **Paxson** 73.21 350 P **P** 02 45 01.6 +0.9
PAX pmax pmax
comp=Z,29nm,1.2s
PAX **Paxson** 73.21 350 P **P** 02 45 00.6 -0.2
baz=16,SNR=9.7
KTH **Kantishna Hill** 73.25 353 P **P** 02 45 00.5 -0.4
KTH IAmb IAmb 02 45 04.7
comp=Z,56nm,1.3s
TRF **Thorofare Moun** 73.29 352 P **P** 02 45 01.0 -0.3
baz=13,SNR=9.1
M27K **Edge Creek, AK** 73.30 348 P **P** 02 45 02.2 +0.9
baz=19,SNR=18
S44A **Carbondale** 73.33 306 P **P** 02 45 01.0 -0.7
baz=48,SNR=7.1
N30M **Aishikik Lake** 73.34 346 P **P** 02 45 02.2 +0.7
baz=22,SNR=18
SDDR **Presa de Saban** 73.34 281 *e*P **P** 02 45 02.7 +0.6
DHY **Denali Highway** 73.35 351 P **P** 02 45 02.1 +0.5
DHY **Denali Highway** 73.35 351 P **P** 02 45 02.0 +0.5
baz=15,SNR=102
ECSD **EROS Data Cent** 73.38 315 P **P** 02 45 01.3 -0.6
ECSD IAmb IAmb 02 45 10.9
comp=Z,23nm,0.8s
ECSD **EROS Data Cent** 73.38 315 P **P** 02 45 01.8 -0.2
baz=46,SNR=23
ECSD **EROS Data Cent** 73.38 315 P **P** 02 45 01.6 -0.4
baz=46,SNR=23
M26K **Nabesna, AK** 73.42 349 P **P** 02 45 02.8 +0.9
baz=18,SNR=14
E28A **Huff** 73.45 319 P **P** 02 45 02.9 +0.6
baz=44,SNR=16
CAST **Castle Rocks** 73.49 353 P **P** 02 45 02.5 +0.3
baz=11,SNR=39
WVT **Waverly** 73.50 304 P **P** 02 45 00.9 -1.8
WVT **Waverly** 73.50 304 P **P** 02 45 01.0 -1.8
WVT pmax pmax
comp=Z,14nm,1.0s
WVT **Waverly** 73.50 304 P **P** 02 45 01.3 -1.4
baz=49,SNR=12
WVT **Waverly** 73.50 304 P **P** 02 45 01.3 -1.4
baz=49
WVT **Waverly** 73.50 304 P **P** 02 45 02.1 -0.7
LYN **LuoYang** 73.54 58 ⇓P **P** 02 45 02.4 -0.6
LYN pP pP 02 45 06.8 -0.2
LYN sP sP 02 45 09.6 +1.1
LYN pmax pmax
comp=Z,10.0nm,0.7s
LYN pmax pmax
comp=Z,2µm,9.7s
LYN LR LR
comp=Z,1µm,17.6s
LYN LR LR
comp=Z,1µm,20.8s
YUK3 **Moose Creek** 73.63 347 P **P** 02 45 03.8 +0.5
baz=20,SNR=21
P33M **Teslin, Yukon** 73.63 343 P **P** 02 45 03.9 +0.7
baz=25,SNR=17
WHY **Whitehorse** 73.65 344 P **P** 02 45 04.2 +0.8
baz=24,SNR=10.0
K20K **Telida** 73.72 354 P **P** 02 45 04.8 +1.2
baz=9.8,SNR=50
WAT1 **Susitna Watana** 73.72 351 P **P** 02 45 03.7 +0.1
baz=14
GAMB **Gambell** 73.72 2 P **P** 02 45 03.5 0.0
baz=356
DGMT **Dagmar** 73.72 322 P **P** 02 45 05.0 +1.1
DGMT **Dagmar** 73.72 322 P **P** 02 45 04.3 +0.3
baz=43
YUK4 **Talbot Arm** 73.72 346 P **P** 02 45 04.2 +0.3
baz=21,SNR=11
KLR **Kul'dur** 73.75 37 LR LR 03 21 10.6
comp=Z,4µm,18.4s,baz=316,slow=39
KLR **Kul'dur** 73.75 37 *de*P **P** 02 45 04.2 +0.2
KLR pmax pmax
comp=Z,69nm,1.7s
KLR MLR MLR
comp=Z,3µm,18.0s
O30N **Mendenhall** 73.79 345 P **P** 02 45 04.0 -0.1
baz=23,SNR=15
FVM **French Village** 73.83 307 P **P** 02 45 04.0 -0.7
baz=48,SNR=9.4
WAT6 **Susitna Watana** 73.87 351 P **P** 02 45 04.6 -0.1
baz=14,SNR=17
TIGA **Tifton** 73.88 298 P **P** 02 45 04.1 -0.9
baz=49
EDM **Edmonton** 73.88 330 P **P** 02 45 05.0 +0.2
EDM **Edmonton** 73.88 330 P **P** 02 45 05.0 +0.2
EDM pmax pmax
comp=Z,99nm,1.2s
HVD **Gariep Dam** 73.91 169 *e*P **P** 02 45 04.8 -0.3
HVD IAmb IAmb 02 45 08.0
comp=Z,176nm,1.6s
R33M **Jennings River** 73.96 342 P **P** 02 45 07.3 +2.1
baz=27,SNR=21
HYT **Haines Junctio** 74.00 346 P **P** 02 45 06.1 +0.6
baz=22,SNR=26
PPLA **Purkeypile** 74.02 353 P **P** 02 45 05.1 -0.4
baz=11,SNR=20
YUK6 **Outpost Mounta** 74.05 346 P **P** 02 45 06.7 +0.8
baz=21,SNR=21
GDU01 **Guandu, BA** 74.09 233 *e*P **P** 02 45 05.7 -0.6
SUSD **Miller** 74.10 316 P **P** 02 45 05.6 -0.6
baz=45
X48A **Hartselle** 74.11 302 P **P** 02 45 05.6 -0.8
baz=49,SNR=18
M24K **Tolsona, Glenn** 74.14 350 P **P** 02 45 06.3 +0.2
baz=16
CVNA **Calvinia** 74.15 174 *e*P **P** 02 45 06.3 -0.1
CVNA IAmb IAmb 02 45 11.2

comp=Z,44nm,1.1s
CCM Cathedral Cave 74.26 307 P P 02 45 05.8 -1.3
CCM Cathedral Cave 74.26 307 P P 02 45 05.9 -1.3
CCM pmax pmax
comp=Z,18nm,0.8s
CCM Cathedral Cave 74.26 307 P P 02 45 06.0 -1.2
baz=48,SNR=15
CCM Cathedral Cave 74.26 307 P P 02 45 06.4 -0.8
baz=48
CCM Cathedral Cave 74.26 307 P P 02 45 06.6 -0.6
BNX BinXian 74.28 42 ⇓P P 02 45 07.3 +0.2
BNX pmax pmax
comp=Z,28nm,0.6s
BNX pmax pmax
comp=Z,1µm,12.0s
TTA Tatalina 74.28 355 P P 02 45 08.0 +1.0
baz=8.3,SNR=8.0
P32M Atlin 74.39 343 P P 02 45 07.7 +0.1
baz=25
MCARA McCarthy VSAT 74.40 348 P P 02 45 08.0 +0.4
baz=18,SNR=6.8
ENH Enshi 74.41 63 P P 02 45 07.7 -0.5
N25K Chitina, Valde 74.41 349 P P 02 45 07.8 0.0
baz=17,SNR=10
CHTO Chiang Mai 74.47 79 P P 02 45 07.6 -1.1
CHTO IAmb IAmb 02 45 13.0
comp=Z,96nm,1.4s
CHTO Chiang Mai 74.47 79 P P 02 45 07.6 -1.1
CHTO pmax pmax
comp=Z,95nm,1.4s
CHTO Chiang Mai 74.47 79 P P 02 45 08.5 -0.2
CHTO Chiang Mai 74.47 79 P P 02 45 08.2 -0.5
CHTO Chiang Mai 74.47 79 P P 02 45 08.3 -0.5
P38A Dawn 74.52 310 P P 02 45 07.9 -0.7
baz=47,SNR=14
O28M Mount Upton 74.53 347 P P 02 45 09.5 +0.8
baz=20,SNR=15
CTG Chitna Glacier 74.53 347 P P 02 45 09.3 +0.8
baz=19,SNR=12
SCM Sheep Creek Mo 74.55 351 P P 02 45 09.2 +0.7
baz=15,SNR=18
P30M Million Dollar 74.56 345 P P 02 45 09.8 +1.2
baz=22
GRNR Gornyy 74.57 33 ⇓*i*P P 02 45 09.3 +0.5
GRNR *e*S S 02 54 49.0 +5.1
GRNR pmax pmax
comp=Z,30nm,1.3s
GRNR smax smax
comp=N,6.0nm,0.6s
GRNR MLR MLR
comp=E,930nm,13.0s
GRNR MLR MLR
comp=N,770nm,11.0s
GRNR MLR MLR
comp=Z,1µm,11.0s
L20K Farewell, AK 74.57 354 P P 02 45 08.5 -0.1
baz=9.9,SNR=19
CRAI Chiangrai 74.59 77 P P 02 45 08.5 -0.8
CRAI IAmb IAmb 02 45 12.2
comp=Z,48nm,1.4s
DLBC Dease Lake 74.59 341 LR LR 03 20 58.3
comp=Z,1µm,19.7s,baz=26,slow=38
DLBC Dease Lake 74.59 341 P P 02 45 10.5 +1.7
DLBC IAmb IAmb 02 45 12.2
comp=Z,50nm,1.4s
DLBC Dease Lake 74.59 341 P P 02 45 10.4 +1.5
baz=27,SNR=6.7
DWPF Disney Wildern 74.60 294 P P 02 45 10.6 +1.4
baz=49
M23K Glacier View 74.63 351 P P 02 45 09.2 +0.3
baz=14,SNR=15
CN2 Changchun 74.68 44 *e*P P 02 45 09.8 +0.3
CN2 pmax pmax
comp=Z,40nm,1.2s
O29M Mount Kennedy 74.69 346 P P 02 45 09.9 +0.5
baz=21
SML Sawmill 74.69 351 P P 02 45 10.1 +0.8
SML IAmb IAmb 02 45 11.4
comp=Z,68nm,1.0s
SML Sawmill 74.69 351 P P 02 45 09.7 +0.4
baz=14,SNR=13
KLU Klutina 74.70 350 P P 02 45 10.1 +0.7
baz=16,SNR=12
R40A Maddies Statio 74.70 308 P P 02 45 08.4 -1.3
R40A Maddies Statio 74.70 308 P P 02 45 09.0 -0.7
baz=47,SNR=12
CM31 Chiang Mai Arr 74.70 79 P P 02 45 08.9 -1.1
CM31 IAmb IAmb 02 45 17.0
comp=Z,44nm,0.9s
CMAR Chiang Mai Arr 74.70 79 P P 02 45 08.6 -1.5
comp=Z,12nm,0.7s,baz=306,slow=7.3,SNR=32
CMAR LR LR 03 25 02.5
comp=Z,534nm,20.1s,baz=100,slow=41
comp=Z,12nm,0.7s
CMAR Chiang Mai Arr 74.70 79 P P 02 45 08.9 -1.1
CMAR Chiang Mai Arr 74.70 79 *ce*P P 02 45 09.6 -0.4
CMAR pmax pmax
comp=Z,15nm,0.7s
FRAZ Fraserburg 74.73 173 *e*P P 02 45 10.5 +0.7
FRAZ IAmb IAmb 02 45 12.4
comp=Z,203nm,1.8s
BRAK Brakfontein 74.74 171 *e*P P 02 45 10.1 +0.2
BRAK IAmb IAmb 02 45 10.9
comp=Z,272nm,2.1s
GHO Glory Hole Cre 74.79 351 P P 02 45 10.0 +0.1
SKAG Skagway 74.84 344 P P 02 45 11.3 +1.1
SKAG IAmb IAmb 02 45 15.1
comp=Z,34nm,0.9s
BFON Badsfontein, M 74.85 171 *e*P P 02 45 11.5 +1.0
BFON IAmb IAmb 02 45 13.2
comp=Z,189nm,1.7s
MALB Monte Alegre 74.86 253 *e*P P 02 45 13.1 +2.2
SKT Skwentna 74.86 353 P P 02 45 09.8 -0.4
baz=12
PRPB Parauapebas 74.88 247 *e*P P 02 45 12.8 +1.7
L19K White Mountain 74.94 354 P P 02 45 11.6 +0.9
baz=9.1,SNR=23
GYA Guiyang 74.98 68 ⇑P P 02 45 12.3 +0.6
GYA pP pP 02 45 16.3 +0.6
GYA pmax pmax
comp=Z,19nm,1.1s
PMR Palmer 74.99 351 P P 02 45 10.7 -0.2
PMR IAmb IAmb 02 45 15.2
comp=Z,30nm,0.9s
PMR Palmer 74.99 351 P P 02 45 10.7 -0.2
PMR pmax pmax
comp=Z,30nm,0.9s
PMR Palmer 74.99 351 P P 02 45 11.4 +0.5
baz=13,SNR=11
LRAL Lakeview Retre 75.02 301 P P 02 45 10.8 -0.9
baz=48,SNR=12
LRAL Lakeview Retre 75.02 301 P P 02 45 11.1 -0.5
baz=48,SNR=12
BMRM Bremner River 75.02 349 P P 02 45 11.7 +0.4
baz=17,SNR=25
PLBC Pleasant Camp 75.06 344 P P 02 45 13.1 +1.7
baz=23,SNR=8.6
KNK Knik Glacier 75.09 351 P P 02 45 12.0 +0.4
baz=14,SNR=8.1
M20K Styx River 75.10 353 P P 02 45 11.2 -0.5
baz=10
SUR Sutherland 75.13 173 LR LR 03 20 51.6
comp=Z,2µm,18.3s,baz=350,slow=38
SUR Sutherland 75.13 173 P P 02 45 12.4 +0.2
SUR Sutherland 75.13 173 P P 02 45 18.0 +5.8
P29M Windy Craggy 75.16 345 P P 02 45 13.3 +1.3
baz=22,SNR=24
YAH Yahtse 75.17 347 P P 02 45 13.3 +1.0
PINM Pinnacle 75.17 347 P P 02 45 12.7 +0.5
baz=20,SNR=11
GRAN Grantham 75.18 172 *e*P P 02 45 12.8 +0.5
GRAN IAmb IAmb 02 45 17.8
comp=Z,22nm,1.1s
M19K Big River Lodg 75.18 354 P P 02 45 12.5 +0.4
M19K IAmb IAmb 02 45 17.4
comp=Z,52nm,0.9s
M19K Big River Lodg 75.18 354 P P 02 45 12.4 +0.3
baz=9.4,SNR=32
TIA Tai'an 75.29 54 ⇓P P 02 45 13.3 +0.1
TIA pmax pmax
comp=Z,27nm,1.4s
TIA LR LR
comp=Z,940nm,15.7s
TIA LR LR
comp=Z,900nm,24.5s
TIA LR LR
comp=Z,2µm,26.0s
S34M Telegraph Cree 75.33 341 P P 02 45 14.5 +1.5
baz=26,SNR=9.6
CMC01 Camacan, BA 75.35 232 *e*P P 02 45 14.9 +1.3
MESA MESA 75.38 347 P P 02 45 14.4 +0.9
baz=19
SMTB Santa Maria do 75.38 243 *e*P P 02 45 15.1 +1.2
PNL Peninsula 75.43 346 P P 02 45 14.4 +0.8
baz=20,SNR=11
GLI Glacier Island 75.44 350 P P 02 45 13.6 -0.1
baz=15
FID Port Fidalgo 75.49 350 P P 02 45 15.3 +1.4
OXF Oxford 75.53 304 P P 02 45 14.6 0.0
baz=48
RC01 Rabbit Creek A 75.55 351 P P 02 45 14.5 +0.3
baz=13,SNR=15
EYAK Cordova Ski Ar 75.59 349 P P 02 45 14.4 0.0
baz=16
PWL Port Wells 75.61 351 P P 02 45 14.7 +0.1
baz=14
SPCR Spurr Chakacha 75.69 353 P P 02 45 15.3 +0.2
baz=11
S39A Bolivar 75.72 308 P P 02 45 14.9 -0.7
baz=47,SNR=6.3
BGNE Belgrade 75.82 314 P P 02 45 15.9 -0.2
BGNE Belgrade 75.82 314 P P 02 45 16.3 +0.1
baz=45,SNR=5.9
BGNE Belgrade 75.82 314 P P 02 45 15.9 -0.2
baz=45,SNR=5.9
T35M Bob Quinn 75.95 340 P P 02 45 17.0 +0.4
baz=27
LAO LASA Array 75.97 322 P P 02 45 18.1 +1.1
LAO LASA Array 75.97 322 P P 02 45 18.9 +1.9
baz=41,SNR=27
LAO LASA Array 75.97 322 P P 02 45 18.1 +1.1
baz=41,SNR=27
KAIM Kayak Island 76.00 349 P P 02 45 15.6 -1.2
baz=17
Y45A Yeager Farm, C 76.05 303 P P 02 45 16.6 -0.9
baz=48,SNR=20
MDJ Mudanjiang 76.16 41 P P 02 45 19.6 +1.6
N19K Bonanza Creek 76.27 354 P P 02 45 18.8 +0.3
baz=9.3,SNR=10
SDBA SAO DESIDERIO 76.32 239 *e*P P 02 45 20.6 +1.3
BOAV Boa Vista 76.39 261 *e*P P 02 45 21.0 +1.2
SEW Seward 76.48 351 P P 02 45 19.6 +0.2
baz=13
GUA01 Guaratinga, BA 76.49 232 *e*P P 02 45 22.6 +2.6
N18K Kilae Creek 76.50 354 P P 02 45 20.5 +0.7
baz=8.3,SNR=18
EGMT Eagleton 76.51 325 P P 02 45 20.7 +0.6
EGMT Eagleton 76.51 325 P P 02 45 20.6 +0.6
baz=39,SNR=8.1
KSU1 Kansas State U 76.60 311 P P 02 45 19.8 -0.8
KSU1 Kansas State U 76.60 311 P P 02 45 20.3 -0.4
baz=45,SNR=16
KSU1 Kansas State U 76.60 311 P P 02 45 20.5 -0.1
baz=45,SNR=16
O20K Slope Mountain 76.83 353 P P 02 45 20.8 -0.8
baz=11
RSSD Black Hills 76.85 319 P P 02 45 22.5 +0.3
RSSD Black Hills 76.85 319 P P 02 45 22.5 +0.3
RSSD pmax pmax
comp=Z,18nm,0.8s
RSSD Black Hills 76.85 319 P P 02 45 22.5 +0.3
baz=42,SNR=16
RSSD Black Hills 76.85 319 P P 02 45 21.9 -0.4
baz=42
RSSD Black Hills 76.85 319 P P 02 45 23.4 +1.1
O19K Port Alsworth 76.87 354 P P 02 45 21.3 -0.3
baz=9.4
N16K Nishlik Lake 76.89 356 P P 02 45 22.8 +0.9
baz=6.1,SNR=12
WRAK Wrangell Islan 76.96 341 P P 02 45 23.0 +0.7
baz=25,SNR=8.9
BRSE Bradley Lake S 76.97 352 P P 02 45 22.2 -0.2
baz=12
SIT Sitka 77.06 343 P P 02 45 23.1 +0.4
baz=23
UALR University of 77.14 306 P P 02 45 23.1 -0.5
HOM Homer 77.15 352 P P 02 45 23.4 +0.1
baz=11
U38A Gravette 77.19 308 P P 02 45 23.2 -0.8
baz=46,SNR=19
O18K Koktuh Hills 77.27 354 P P 02 45 24.3 +0.2
baz=8.8
P19K Oil Pt 77.31 353 P P 02 45 24.5 +0.2
baz=10
WHN Wuhan 77.38 60 P P 02 45 25.1 0.0
WALA Waterton Lakes 77.41 327 P P 02 45 25.2 +0.1
O17K Koliganek Bris 77.49 355 P P 02 45 26.3 +1.1
baz=7.3,SNR=13
USA0B Ussuriysk Arra 77.61 40 P P 02 45 25.9 -0.3
USA0B Ussuriysk Arra 77.61 40 P P 02 45 25.9 -0.3
USA0B pmax pmax
comp=Z,39nm,1.7s
USRK Ussuriysk Ar. 77.61 40 P P 02 45 26.0 -0.2
comp=Z,14nm,0.7s,baz=292,slow=5.1,SNR=27
USRK LR LR 03 23 23.0
comp=Z,1µm,19.6s,baz=48,slow=39
comp=Z,14nm,0.7s
USRK Ussuriysk Ar. 77.61 40 P P 02 45 25.4 -0.7
USRK Ussuriysk Ar. 77.61 40 P P 02 45 25.5 -0.7
ITTB Itaituba 77.66 252 *e*P P 02 45 28.1 +1.3
346A Big Creek Wild 77.67 301 P P 02 45 26.4 -0.3
NAN01 Guarapari, ES 77.67 231 *e*P P 02 45 28.5 +1.8
O16K Kokwok River B 77.73 355 P P 02 45 27.3 +0.8
baz=6.6,SNR=6.9
P18K Big Mountain, 77.73 354 P P 02 45 25.9 -0.8
baz=8.7
RLO Rose Lookout 77.75 308 P P 02 45 26.9 -0.3
RLO IAmb IAmb 02 45 36.3
comp=Z,28nm,0.9s
V35K Ketchikan 77.77 340 P P 02 45 27.7 +0.9
baz=26
JANB Januaria 77.98 236 *e*P P 02 45 29.9 +1.3
CRAG Craig 78.01 341 P P 02 45 29.2 +1.0
baz=25
P17K Kvichak River 78.02 355 P P 02 45 28.0 -0.2
baz=7.8
MIAR Mount Ida 78.03 306 P P 02 45 28.4 -0.3
MIAR IAmb IAmb 02 45 38.6
comp=Z,28nm,0.8s
MIAR Mount Ida 78.03 306 P P 02 45 28.4 -0.3
MIAR pmax pmax
comp=Z,28nm,0.9s
MIAR Mount Ida 78.03 306 P P 02 45 28.7 0.0
baz=46,SNR=23
MIAR Mount Ida 78.03 306 P P 02 45 28.8 +0.1
baz=46,SNR=23
CNSH ChangSha 78.04 63 ⇓P P 02 45 28.8 0.0
Q19K Cape Douglas, 78.06 353 P P 02 45 27.9 -0.6
baz=9.9
T35B Sooner Cattle 78.08 310 P P 02 45 28.9 -0.1
baz=45,SNR=20
OGNE Ogallala 78.19 316 P P 02 45 29.4 -0.2
baz=43
GCMT Greycliff 78.20 323 P P 02 45 30.8 +1.1
R32A Long Quarter, 78.24 312 P P 02 45 29.5 -0.4
baz=44,SNR=8.7
Q20K Shrak Island 78.26 352 P P 02 45 30.0 +0.5
baz=11
GULI GuiLin 78.26 67 P P 02 45 29.8 -0.3
P16K Nushagak River 78.28 355 P P 02 45 30.1 +0.5
baz=6.7
VLA Vladivostok 78.38 41 ⇑*e*P P 02 45 30.9 +0.5
VLA pmax pmax
comp=Z,47nm,1.2s
TUL1 Leonard 78.38 308 P P 02 45 29.9 -0.7
TUL1 IAmb IAmb 02 45 34.4
comp=Z,31nm,1.0s
TUL1 Leonard 78.38 308 P P 02 45 30.2 -0.4
baz=45,SNR=11
TUL1 Leonard 78.38 308 P P 02 45 30.7 +0.1
baz=45,SNR=11
344A Westbrook Farm 78.42 302 P P 02 45 31.2 +0.3
baz=47,SNR=10
CBKS Cedar Bluff 78.52 313 P P 02 45 31.5 +0.1
baz=44,SNR=8.9
CBKS Cedar Bluff 78.52 313 P P 02 45 31.3 -0.1
baz=44,SNR=8.9
RLMT Red Lodge 78.54 322 P P 02 45 32.2 +0.6
baz=39,SNR=25
KAN08 Anthony NE Sta 78.69 311 P P 02 45 32.0 -0.3
SJMB Sao Joao De Ma 78.96 232 *e*P P 02 45 36.0 +2.1
RIB01 Linhares ES 78.99 231 *e*P P 02 45 35.6 +1.6

MC01 Montes Claros 79.03 235 *e*P P 02 45 36.2 +1.9
X37A Clayton 79.06 307 P P 02 45 34.8 +0.4
baz=45,SNR=15
KDAK Kodiak Island 79.09 352 P P 02 45 34.4 +0.3
KDAK IAmb IAmb 02 45 38.4
comp=Z,46nm,0.8s
KDAK Kodiak Island 79.09 352 P P 02 45 34.4 +0.3
KDAK pmax pmax
comp=Z,47nm,0.9s
KDAK Kodiak Island 79.09 352 P P 02 45 34.4 +0.3
baz=11
KDAK Kodiak Island 79.09 352 P P 02 45 35.9 +1.8
TEY Ternei 79.09 37 ⇓*e*P P 02 45 33.3 -1.0
TEY pmax pmax
comp=Z,10.0nm,1.8s
TEY pmax pmax
comp=N,100nm,1.8s
K22A Casper 79.15 319 P P 02 45 35.3 +0.3
baz=40,SNR=16
K22A Casper 79.15 319 P P 02 45 34.8 -0.1
baz=40,SNR=16
NJ2 Nanjing 79.17 56 *e*P P 02 45 35.3 +0.3
NJ2 pmax pmax
comp=N,33nm,0.7s
MSO Missoula 79.20 326 P P 02 45 35.1 +0.1
baz=37,SNR=30
BOZ Bozeman (W) 79.21 324 P P 02 45 35.5 +0.3
baz=38,SNR=85
NEW Newport 79.30 329 LR LR 03 21 15.3
comp=N,954nm,19.5s,baz=28,slow=36
NEW Newport 79.30 329 P P 02 45 36.3 +0.8
baz=35,SNR=27
NPGB Novo Progresso 79.30 250 *e*P P 02 45 37.2 +1.3
SDV Santo Domingo 79.45 272 P P 02 45 36.4 -0.6
SDV IAmb IAmb 02 45 41.1
comp=Z,54nm,1.1s
SDV Santo Domingo 79.45 272 *e*P P 02 45 37.2 +0.2
342A Flagon Creek P 79.46 303 P P 02 45 37.1 +0.5
342A IAmb IAmb 02 46 03.8
comp=Z,34nm,0.9s
342B Flagon Creek P 79.46 303 P P 02 45 37.3 +0.8
baz=46,SNR=6.0
YNR Norris Junctio 79.48 323 P P 02 45 37.9 +1.0
YNR IAmb IAmb 02 45 41.9
comp=Z,43nm,1.2s
R17K Ugashik Creek 79.56 354 P P 02 45 37.1 +0.4
baz=7.8
YHL Hebgen Lake 79.60 323 P P 02 45 38.7 +1.2
YHL IAmb IAmb 02 45 40.5
comp=Z,64nm,1.2s
BBB Bella Bella 79.64 337 LR LR 03 23 26.5
comp=Z,1µm,18.1s,baz=16,slow=38
H17A Grant Village 79.69 323 P P 02 45 40.0 +2.1
baz=38,SNR=32
OHAK Old Harbor 79.71 353 P P 02 45 37.9 +0.4
OHAK IAmb IAmb 02 45 41.7
comp=Z,48nm,1.0s
OHAK Old Harbor 79.71 353 P P 02 45 37.6 +0.1
baz=10
PEA0B Petropavlovsk- 79.74 21 P P 02 45 37.2 -0.6
PEA0B Petropavlovsk- 79.74 21 *ce*P P 02 45 38.1 +0.4
PETK Petropavlovsk- 79.74 21 P P 02 45 36.5 -1.3
comp=Z,24nm,0.9s,baz=292,slow=0.8,SNR=10
PETK LR LR 03 23 30.5
comp=Z,1µm,20.8s,baz=327,slow=38
comp=Z,24nm,0.9s
PETK Petropavlovsk- 79.74 21 P P 02 45 36.8 -1.0
FNO Franklin 79.77 309 P P 02 45 38.5 +0.2
FNO IAmb IAmb 02 45 39.9
comp=Z,79nm,1.6s
INCN Inchon 79.84 48 P P 02 45 38.9 +0.3
INCN Inchon 79.84 48 P P 02 45 38.9 +0.3
INCN pmax pmax
comp=Z,95nm,1.0s
INCN Inchon 79.84 48 P P 02 45 39.9 +1.3
INCN Inchon 79.84 48 P P 02 45 40.5 +1.9
U32A Winter Ranch, 79.87 311 P P 02 45 39.6 +0.8
U32A IAmb IAmb 02 45 43.4
comp=Z,87nm,1.1s
DIB Dawson Inlet, 79.91 340 P P 02 45 39.5 +0.9
DIB IAmb IAmb 02 45 41.3
comp=Z,52nm,1.3s
KSCO Kaye Shedlock' 79.92 315 P P 02 45 39.8 +0.7
KSCO Kaye Shedlock' 79.92 315 P P 02 45 40.5 +1.3
baz=42,SNR=15
KSCO Kaye Shedlock' 79.92 315 P P 02 45 40.0 +0.8
baz=42,SNR=15
FLWY Flagg Ranch 79.99 323 P P 02 45 40.7 +1.1
FLWY IAmb IAmb 02 45 47.1
comp=Z,58nm,1.0s
B08A Colville Reser 80.05 330 P P 02 45 40.3 +0.8
PET Petropavlovsk 80.06 20 P P 02 45 39.7 +0.3
PET IAmb IAmb 02 45 42.4
comp=Z,59nm,1.2s
PET Petropavlovsk 80.06 20 *e*P P 02 45 39.2 -0.2
PET MLR MLR
comp=Z,2µm,20.0s
DIAM Diamantina, MG 80.10 234 *e*P P 02 45 42.0 +1.7
SNDB Serra Nova Dou 80.12 244 *e*P P 02 45 41.7 +1.5
C09A Chrisman Ranch 80.12 329 P P 02 45 40.3 +0.4
YSS Yuzh-Sakhalins 80.14 32 P P 02 45 39.4 -0.6
YSS Yuzh-Sakhalins 80.14 32 ⇑*e*P P 02 45 39.1 -0.9
YSS *e* 02 45 47.2
YSS MLR MLR
comp=Z,2µm,20.0s
YSS MLR MLR
comp=N,1µm,15.0s
YSS MLR MLR
comp=E,1µm,20.0s
YSS Yuzh-Sakhalins 80.14 32 P P 02 45 41.3 +1.3
YSS Yuzh-Sakhalins 80.14 32 P P 02 45 40.7 +0.8
SEHB SEOHWA 80.14 46 P P 02 45 40.9 +0.7
SEHB IAmb IAmb 02 45 45.8
comp=Z,45nm,1.0s
N23A Red Feather La 80.20 318 P P 02 45 41.1 +0.3
baz=41,SNR=20
ALF01 Guarapari-ES 80.21 230 *e*P P 02 45 42.4 +1.8
MOOW Moose Ponds 80.27 322 P P 02 45 42.2 +1.1
ELIS Ellis County 80.33 311 P P 02 45 41.9 +0.6
ELIS IAmb IAmb 02 45 45.9
comp=Z,45nm,1.0s
MACA Manacapuru-AM 80.33 257 *e*P P 02 45 42.5 +1.0
SII Sitkinak Islan 80.45 353 P P 02 45 42.3 +0.7
SII Sitkinak Islan 80.45 353 P P 02 45 40.8 -0.8
baz=9.4
X34A Smith Ranch, M 80.48 309 P P 02 45 42.5 +0.4
X34A IAmb IAmb 02 45 44.4
comp=Z,83nm,1.5s
FXWY Fox Creek 80.48 322 P P 02 45 43.9 +1.7
FXWY IAmb IAmb 02 45 47.2
comp=Z,115nm,1.8s
BW06 Boulder Array 80.50 321 P P 02 45 42.1 -0.2
BW06 Boulder Array 80.50 321 P P 02 45 42.1 -0.2
baz=39,SNR=20
KS19 Wonju Array Si 80.50 47 P P 02 45 42.5 +0.4
KS19 IAmb IAmb 02 45 46.8
comp=Z,46nm,1.1s
PD31 Pinedale Array 80.50 321 P P 02 45 42.1 -0.3
PDAR Pinedale Array 80.50 321 P P 02 45 42.1 -0.3
comp=Z,12nm,0.9s,baz=52,slow=4.4,SNR=62
PDAR LR LR 03 22 14.3
comp=Z,931nm,18.1s,baz=37,slow=36
comp=Z,12nm,0.9s
SNOW Snow King Moun 80.50 322 P P 02 45 43.6 +1.2
LOOK Love County 80.54 308 P P 02 45 42.8 +0.4
LOOK IAmb IAmb 02 45 51.8
comp=Z,35nm,0.9s
KSAR Wonju Array Be 80.55 47 P P 02 45 42.4 0.0
KSAR Wonju Array Be 80.55 47 P P 02 45 42.4 0.0
KSRS Korea Array 80.56 47 P P 02 45 43.0 +0.5
comp=Z,24nm,0.8s,baz=325,slow=5.0,SNR=37
KSRS LR LR 03 26 16.5
comp=Z,1µm,18.1s,baz=310,slow=39
comp=Z,24nm,0.8s
KSRS Korea Array 80.56 47 P P 02 45 43.0 +0.5
TPAW Teton Pass 80.57 322 P P 02 45 43.0 +0.3
TPAW IAmb IAmb 02 45 48.1
comp=Z,32nm,0.8s
NATX Nacogdoches 80.62 305 P P 02 45 42.9 0.0
baz=45
REDW Red Top Meadow 80.62 322 P P 02 45 43.9 +0.9
REDW IAmb IAmb 02 45 46.5
comp=Z,110nm,1.6s
CBB Campbell River 80.69 334 P P 02 45 43.5 +0.6
BDFB Brasilia 80.73 239 P P 02 45 44.0 +0.4

comp=Z,31nm,0.7s,baz=35,slow=6.4,SNR=53
BDFB LR LR 03 19 06.7
comp=Z,649nm,21.1s,baz=47,slow=34
comp=Z,31nm,0.7s
BDFB Brasilia 80.73 239 P **P** **02 45 44.0 +0.4**
BDFB Brasilia 80.73 239 *eP* **P** **02 45 44.2 +0.5**
ISCO Idaho Springs 80.86 317 P **P** **02 45 44.5 0.0**
ISCO IAmb IAmb 02 45 46.9
comp=Z,30nm,0.9s
ISCO Idaho Springs 80.86 317 P **P** **02 45 44.5 0.0**
ISCO pmax pmax
comp=Z,30nm,1.0s
ISCO Idaho Springs 80.86 317 P **P** **02 45 45.7 +1.2**
baz=41,SNR=50
ISCO Idaho Springs 80.86 317 P **P** **02 45 45.0 +0.6**
baz=41,SNR=50
WMOK Wichita Mounta 80.93 309 P **P** **02 45 45.0 +0.5**
baz=44,SNR=28
WMOK Wichita Mounta 80.93 309 P **P** **02 45 45.0 +0.5**
baz=44,SNR=28
D08A Wollman Farm, 80.98 329 P **P** **02 45 45.5 +0.9**
D08A IAmb IAmb 02 45 46.8
comp=Z,52nm,1.2s
CHGN Chignik 81.03 355 P **P** **02 45 44.4 -0.2**
baz=6.3
TJN Taejon 81.05 48 *ceP* **P** **02 45 45.7 +0.6**
TJN Taejon 81.05 48 *eP* **P** **02 45 45.9 +0.8**
ECR Eagle Creek 81.10 322 P **P** **02 45 46.5 +1.0**
S14K Fog Glacier 81.11 356 P **P** **02 45 45.3 +0.1**
baz=5.4
E09A Wood Farm, Sta 81.14 328 P **P** **02 45 46.0 +0.7**
E09A IAmb IAmb 02 45 47.3
comp=Z,61nm,0.8s
AHID Auburn Hatcher 81.20 322 P **P** **02 45 46.7 +0.6**
AHID IAmb IAmb 02 45 49.0
comp=Z,57nm,1.2s
Q24A Divide 81.26 316 P **P** **02 45 46.3 -0.3**
baz=41,SNR=12
PGC Sidney 81.26 333 P **P** **02 45 46.5 +0.6**
PGC IAmb IAmb 02 45 47.9
comp=Z,51nm,0.9s
PLID Pearl Lake 81.46 326 P **P** **02 45 47.2 -0.2**
CAM01 Campos-RJ 81.70 230 *eP* **P** **02 45 49.9 +1.4**
HAWA Hanford 81.77 329 P **P** **02 45 49.8 +1.1**
HAWA IAmb IAmb 02 45 51.3
comp=Z,43nm,0.9s
B04A Port Angeles 81.79 332 P **P** **02 45 49.8 +1.0**
B04A IAmb IAmb 02 45 54.2
comp=Z,38nm,0.8s
O20A White River Ci 81.91 319 P **P** **02 45 50.2 +0.3**
baz=39,SNR=22
PMNB Patos De Minas 81.95 236 *eP* **P** **02 45 51.2 +1.2**
SMCO Snowmass 82.02 317 P **P** **02 45 51.2 +0.5**
HLID Hailey 82.03 324 P **P** **02 45 51.0 +0.6**
baz=36,SNR=36
QIZ Qiongzhong 82.08 72 P **P** **02 45 50.4 -0.4**
QIZ S **S** **02 56 09.4 +3.9**
QIZ pmax pmax
comp=Z,29nm,1.6s
QIZ LR LR
comp=Z,780nm,24.5s
QIZ LR LR
comp=Z,800nm,22.3s
QIZ LR LR
comp=Z,1µm,16.7s
QIZ Qiongzhong 82.08 72 P **P** **02 45 51.6 +0.8**
WHTX Lake Whitney, 82.13 307 P **P** **02 45 50.2 -0.7**
baz=44
BMO Blue Mountains 82.18 327 P **P** **02 45 51.0 -0.1**
BMO Blue Mountains 82.18 327 P **P** **02 45 51.0 -0.1**
BMO pmax pmax
comp=Z,128nm,0.9s
T25A Trinidad 82.25 314 P **P** **02 45 51.4 -0.3**
baz=41,SNR=27
DUB01 Friburgo-RJ 82.30 230 *eP* **P** **02 45 54.3 +2.5**
HWUT Hardware Ranch 82.33 322 P **P** **02 45 52.9 +0.9**
CLDB Colider 82.34 248 *eP* **P** **02 45 53.4 +1.3**
SDCO Great Sand Dun 82.36 315 P **P** **02 45 51.0 -1.3**
SDCO IAmb IAmb 02 45 56.8
comp=Z,21nm,0.8s
SDCO Great Sand Dun 82.36 315 P **P** **02 45 52.1 -0.3**
baz=40,SNR=48
SDCO Great Sand Dun 82.36 315 P **P** **02 45 52.6 +0.3**
baz=40,SNR=48
HKT Hockley 82.61 304 P **P** **02 45 54.1 +0.8**
HKT Hockley 82.61 304 P **P** **02 45 54.2 +0.8**
HKT pmax pmax
comp=Z,20nm,1.3s
HKT Hockley 82.61 304 P **P** **02 45 55.5 +2.2**
IPMB Ipameri, GO 82.62 237 *eP* **P** **02 45 54.5 +1.0**
TCUT Toone Canyon 82.64 321 P **P** **02 45 53.6 -0.2**
TCUT IAmb IAmb 02 45 58.2
comp=Z,39nm,1.0s
ABTX Abilene, Hawle 82.95 308 P **P** **02 45 56.3 +1.1**
baz=43,SNR=7.2
ABTX Abilene, Hawle 82.95 308 P **P** **02 45 54.9 -0.3**
baz=43,SNR=7.2
S22A 4UR Ranch, Cre 83.04 316 P **P** **02 45 55.8 -0.1**
baz=40,SNR=34
VAS01 Vassouras-RJ 83.07 231 *eP* **P** **02 45 58.3 +2.5**
435B Jarrell 83.07 306 P **P** **02 45 55.6 -0.2**
435B IAmb IAmb 02 46 00.0
comp=Z,58nm,1.6s
435B Jarrell 83.07 306 P **P** **02 45 55.4 -0.4**
baz=44
CTU Camp Tracy 83.14 321 P **P** **02 45 56.6 +0.4**
CTU IAmb IAmb 02 46 00.2
comp=Z,26nm,0.9s
P18A Preston Nutter 83.27 319 P **P** **02 45 57.4 +0.3**
P18A IAmb IAmb 02 45 58.9
comp=Z,49nm,1.2s
G05D Wamic, OR 83.41 329 P **P** **02 45 58.5 +1.1**
baz=32
SHEM Shemya Is, Ala 83.46 12 LR LR 03 27 16.1
comp=Z,485nm,18.6s,baz=318,slow=39
HOOD Mount Hood Mea 83.47 330 P **P** **02 45 58.8 +1.0**
PDRB Porto dos Gac 83.50 248 *eP* **P** **02 45 59.2 +1.0**
PV23 Carpenter Ridg 83.59 318 P **P** **02 45 59.0 +0.3**
KCSI Kotacane, Aceh 83.70 91 P **P** **02 45 59.1 -0.1**
comp=Z,36nm,1.4s
MSTX Muleshoe 83.73 311 P **P** **02 46 00.2 +0.9**
baz=42,SNR=9.1
MSTX Muleshoe 83.73 311 P **P** **02 45 59.5 +0.2**
baz=42,SNR=9.1
MAN01 Angra dos Reis 83.83 231 *eP* **P** **02 46 01.0 +1.4**
J08A Circle Bar Ran 83.89 327 P **P** **02 46 00.2 +0.3**
J08A IAmb IAmb 02 46 02.4
comp=Z,21nm,0.9s
DUG Dugway, Tooele 84.03 321 P **P** **02 46 01.3 +0.5**
baz=37,SNR=45
G03D McMinnville, O 84.15 331 P **P** **02 46 01.6 +0.5**
baz=31,SNR=7.0
I05D Terrebonne, OR 84.19 329 P **P** **02 46 02.0 +0.6**
baz=32,SNR=9.0
MVCO Mesa Verde 84.30 317 P **P** **02 46 03.0 +0.7**
baz=39,SNR=28
ERM Erimo 84.36 35 P **P** **02 46 02.2 +0.1**
ERM Erimo 84.36 35 P **P** **02 46 02.2 +0.1**
ERM pmax pmax
comp=Z,106nm,0.9s
H04D Lebanon 84.55 330 P **P** **02 46 04.5 +1.3**
baz=31
JCT Junction City 84.61 307 P **P** **02 46 05.2 +1.4**
baz=43,SNR=13
JCT Junction City 84.61 307 P **P** **02 46 05.8 +2.0**
baz=43,SNR=13
ELK Elko 84.67 323 LR LR 03 24 09.1
comp=Z,554nm,18.5s,baz=30,slow=36
NORC Norcasia 84.78 273 *eP* **P** **02 46 05.3 +0.5**
ROSC El Rosal 84.86 272 P **P** **02 46 05.3 -0.3**
comp=Z,6.1nm,0.5s,baz=50,slow=21,SNR=5.3
ROSC LR LR 03 19 31.9
comp=Z,2µm,21.7s,baz=43,slow=33
comp=Z,6.1nm,0.5s
ROSC El Rosal 84.86 272 *eP* **P** **02 46 04.0 -1.6**
ANMO Albuquerque 84.99 314 LR LR 03 22 20.2
comp=Z,1µm,20.3s,baz=38,slow=34
ANMO Albuquerque 84.99 314 P **P** **02 46 06.6 +0.8**
ANMO IAmb IAmb 02 46 10.8
comp=Z,18nm,0.9s
ANMO Albuquerque 84.99 314 *ceP* **P** **02 46 07.6 +1.8**
ANMO pmax pmax
comp=Z,22nm,1.0s
ANMO Albuquerque 84.99 314 P **P** **02 46 07.5 +1.7**
baz=40,SNR=35
ANMO Albuquerque 84.99 314 P **P** **02 46 06.5 +0.8**
baz=40
ANMO Albuquerque 84.99 314 P **P** **02 46 07.3 +1.5**
PSI Prapat 85.03 91 P **P** **02 46 05.6 -0.5**
J05D Fort Rock, OR 85.04 328 P **P** **02 46 07.5 +1.6**
baz=32,SNR=42
GSI Gunungsitoli 85.04 93 P **P** **02 46 05.9 -0.2**
comp=Z,49nm,1.2s
I04A Tendick Farm, 85.05 329 P **P** **02 46 05.3 -0.4**
baz=31,SNR=11
PARB Paraibuna 85.15 232 *eP* **P** **02 46 08.3 +1.9**
ITRB Iturama 85.24 238 *eP* **P** **02 46 06.7 -0.1**
I02E Swisshome, OR 85.31 330 P **P** **02 46 08.1 +1.2**
baz=30
J04D Umppqua Nationa 85.41 329 P **P** **02 46 08.0 +0.2**
baz=31,SNR=7.3
CBOC Ciudad Bolivar 85.42 274 *eP* **P** **02 46 08.8 +0.6**
IPM Ipoh 85.45 88 P **P** **02 46 08.7 +0.6**
I03D Drain, OR 85.48 330 P **P** **02 46 08.3 +0.5**
baz=30,SNR=5.4
RCLB Rio Claro- Sao 85.57 234 *eP* **P** **02 46 10.3 +1.9**
VAO Valinhos 85.68 233 *eP* **P** **02 46 11.6 +2.6**
BNM Barren Site 85.69 314 P **P** **02 46 10.1 +0.7**
K04D Chiloquin, OR 85.80 328 P **P** **02 46 10.6 +1.0**
baz=31
SALV Santo Antonio 85.88 244 *eP* **P** **02 46 11.3 +1.3**
833A Chaparral WMA, 85.94 305 P **P** **02 46 12.0 +1.7**
baz=43,SNR=6.3
833A Chaparral WMA, 85.94 305 P **P** **02 46 11.0 +0.7**
baz=43,SNR=6.3
Y22A Socorro 86.03 314 P **P** **02 46 12.3 +1.4**
baz=40,SNR=12
C2SB Chapadao do Su 86.11 240 *eP* **P** **02 46 13.7 +2.5**
J01E Myrtle Point 86.16 330 P **P** **02 46 11.5 +0.4**
baz=30
SZCU Shurtz Canyon 86.23 320 P **P** **02 46 12.4 +0.4**
L04D Klamath Falls 86.36 329 P **P** **02 46 12.9 +0.5**
baz=31,SNR=20
K02D Willamette Mer 86.47 330 P **P** **02 46 13.9 +1.1**
baz=30,SNR=5.7
MAJO Matsushiro 86.54 41 P **P** **02 46 12.4 -0.8**
MAJO Matsushiro 86.54 41 P **P** **02 46 12.4 -0.8**
MAJO pmax pmax
comp=Z,152nm,1.0s
MAJO Matsushiro 86.54 41 P **P** **02 46 13.0 -0.2**
MAJO Matsushiro 86.54 41 P **P** **02 46 13.4 +0.2**
MJAR Matsushiro Arr 86.54 41 P **P** **02 46 11.3 -1.9**
comp=Z,13nm,1.0s,baz=320,slow=6.2,SNR=25
MJAR LR LR 03 28 35.4
comp=Z,3µm,19.1s,baz=27,slow=38
comp=Z,13nm,1.0s
W18A Petrified Fore 86.55 316 P **P** **02 46 13.8 +0.2**
baz=38
R11A Troy Canyon, C 86.78 322 P **P** **02 46 14.4 -0.2**
baz=35,SNR=11
VILB Vilhena 86.83 249 *eP* **P** **02 46 16.6 +1.8**
PET01 Itanhaem-SP 86.84 233 *eP* **P** **02 46 16.5 +1.8**
MNTX Cornudas Mount 86.88 311 P **P** **02 46 14.4 -0.6**
MNTX Cornudas Mount 86.88 311 P **P** **02 46 15.5 +0.5**
baz=40,SNR=23
MNTX Cornudas Mount 86.88 311 P **P** **02 46 14.7 -0.3**
baz=40,SNR=23
L02F Cave Junction 86.93 329 P **P** **02 46 15.7 +0.6**
baz=30,SNR=6.1
YOTC Yotoco, Valle 86.93 273 *eP* **P** **02 46 15.8 +0.3**
WUAZ Wupatki 87.06 318 P **P** **02 46 16.9 +0.9**
baz=37,SNR=12
PCMB Pacaembu 87.22 237 *eP* **P** **02 46 18.1 +1.6**
121A Cookes Peak, D 87.55 313 P **P** **02 46 19.5 +1.1**
baz=39,SNR=12
121A Cookes Peak, D 87.55 313 P **P** **02 46 18.5 +0.1**
baz=39,SNR=12
TX31 Lajitas Ar. Si 87.70 309 P **P** **02 46 19.8 +0.7**
TX31 Lajitas Ar. Si 87.70 309 P **P** **02 46 20.3 +1.2**
baz=41,SNR=28
TXAR Lajitas Array 87.70 309 P **P** **02 46 19.7 +0.6**
comp=Z,8.3nm,0.9s,baz=64,slow=3.2,SNR=69
TXAR LR LR 03 23 06.8
comp=Z,878nm,21.1s,baz=14,slow=34
comp=Z,8.3nm,0.9s
JYT Yasato 87.75 40 P **P** **02 46 17.7 -1.3**
YERR Yerington 87.86 325 P **P** **02 46 19.8 0.0**
YERR IAmb IAmb 02 46 21.8
comp=Z,29nm,0.9s
PTLB Pontes e Lacer 87.87 247 *eP* **P** **02 46 21.3 +1.6**
NVAR Mina Array Bea 87.92 324 P **P** **02 46 20.2 +0.1**
comp=Z,3.6nm,0.7s,baz=54,slow=4.4,SNR=24
NVAR LR LR 03 27 47.1
comp=Z,616nm,18.3s,baz=18,slow=37
comp=Z,3.6nm,0.7s
TPNV Topopah Spring 88.23 322 P **P** **02 46 22.8 +1.2**
baz=35
PTLC Puerto Leguiza 88.35 269 *eP* **P** **02 46 24.3 +2.0**
TIJ01 Guaruva-PR 88.64 233 *eP* **P** **02 46 25.6 +2.2**
DSP Deep Springs 88.65 323 P **P** **02 46 24.7 +1.4**
GRAC Grapevine Rang 88.69 322 P **P** **02 46 24.1 +0.5**
baz=34
ETMB Extrema 88.87 256 *eP* **P** **02 46 25.3 +0.7**
FURC Furnace Creek, 88.90 322 P **P** **02 46 25.6 +1.1**
baz=34,SNR=8.1
TRCB Terra Rica 88.95 237 *eP* **P** **02 46 26.5 +1.7**
AQDB Aquidauana 89.19 241 P **P** **02 46 26.3 +0.4**
AQDB IAmb IAmb 02 46 39.8
comp=Z,24nm,1.2s
AQDB Aquidauana 89.19 241 *eP* **P** **02 46 27.9 +2.0**
319A Douglas 89.24 314 P **P** **02 46 25.9 -0.5**
319A IAmb IAmb 02 46 31.1
comp=Z,17nm,0.9s
TUC Tucson 89.30 315 P **P** **02 46 26.9 +0.3**
TUC IAmb IAmb 02 46 29.4
comp=Z,64nm,1.6s
TUC Tucson 89.30 315 P **P** **02 46 26.9 +0.3**
TUC pmax pmax
comp=Z,64nm,1.6s
TUC Tucson 89.30 315 P **P** **02 46 27.1 +0.5**
baz=38
TUC Tucson 89.30 315 P **P** **02 46 27.7 +1.1**
TUQ Turquoise Moun 89.32 321 P **P** **02 46 27.8 +1.1**
baz=35,SNR=7.8
PDMCI Parker Dam,Lak 89.39 319 P **P** **02 46 27.3 +0.5**
baz=36,SNR=17
CWC Cottonwood Cre 89.47 323 P **P** **02 46 27.8 +0.3**
baz=34
MPMC Manual Prospec 89.53 322 P **P** **02 46 28.9 +1.2**
baz=34,SNR=10.0
GMRC Granite Mounta 89.73 320 P **P** **02 46 30.0 +1.4**
baz=35,SNR=7.0
GSC Goldstone, Bar 89.84 321 P **P** **02 46 30.2 +1.1**
baz=34
IRM Iron Mountain 89.99 319 P **P** **02 46 31.0 +1.3**
baz=35,SNR=14
HEC Hector,Ludlow 90.01 321 P **P** **02 46 30.5 +0.6**
baz=34
PTGB Pitanga 90.02 236 *eP* **P** **02 46 30.8 +1.0**
JHJ Hachijo jima 2 90.05 42 LR LR 03 31 08.3
comp=Z,1µm,18.6s,baz=46,slow=38
LRMC Laurel Mtn Rad 90.09 322 P **P** **02 46 31.4 +1.1**
baz=34
ISA Isabella, Lake 90.30 322 P **P** **02 46 32.4 +1.2**
baz=33,SNR=8.3
VES Vestal, Richgr 90.42 323 P **P** **02 46 32.2 +0.6**
baz=33
ANTJ Antonio Joao (90.49 240 *eP* **P** **02 46 33.4 +1.4**
BELC Belle Mtn. Jos 90.53 320 P **P** **02 46 33.6 +1.3**
baz=35,SNR=9.4
BC3 Big Chuckawall 90.55 319 P **P** **02 46 33.8 +1.4**
baz=35,SNR=7.3
214A Organ Pipe Nat 90.62 317 P **P** **02 46 32.6 -0.1**
baz=36,SNR=6.0
EDW2 Edwards Air Fo 90.73 322 P **P** **02 46 33.2 0.0**
baz=34
GLA Glamis 90.74 319 P **P** **02 46 33.4 +0.2**
baz=35
OTAV Otavalo 91.00 271 P **P** **02 46 34.6 -0.6**
OTAV IAmb IAmb 02 46 42.8
comp=Z,30nm,1.5s
OTAV Otavalo 91.00 271 P **P** **02 46 34.6 -0.6**
OTAV pmax pmax
comp=Z,29nm,1.5s
OTAV Otavalo 91.00 271 *eP* **P** **02 46 35.2 0.0**
OTAV Otavalo 91.00 271 P **P** **02 46 37.1 +1.9**
OTAV Otavalo 91.00 271 *eP* **P** **02 46 35.7 +0.5**
PFO Pinyon Flats O 91.07 320 P **P** **02 46 34.3 -0.5**
PFO IAmb IAmb 02 46 37.0
comp=Z,19nm,0.9s
PFO Pinyon Flats O 91.07 320 P **P** **02 46 34.3 -0.5**
PFO pmax pmax
comp=Z,19nm,0.9s
PFO Pinyon Flats O 91.07 320 P **P** **02 46 35.8 +0.9**
baz=34,SNR=13
TPFO Pinon Flats 91.07 320 P **P** **02 46 35.1 +0.2**
baz=34,SNR=13
BFSC Mount Baldy Ra 91.11 321 P **P** **02 46 35.4 +0.4**
baz=34
TER01 Tubaro-SC 91.14 231 *eP* **P** **02 46 37.1 +2.2**
CMIG Matias Romero 91.14 295 LR LR 03 22 26.5
comp=Z,483nm,21.8s,baz=12,slow=32
SWSC Sam W. Stewart 91.30 319 P **P** **02 46 35.5 -0.2**
baz=35
MURC Murrieta 91.42 320 P **P** **02 46 37.2 +0.9**
baz=34
PKM Mcpherson Peak 91.54 323 P **P** **02 46 37.2 +0.1**
baz=32
FRBT Francisco Belt 91.56 235 *eP* **P** **02 46 39.1 +2.2**
MONP2 Monument Peak 91.64 320 P **P** **02 46 38.3 +0.6**
baz=34,SNR=9.4
IKP In-Ko-Pah, Jac 91.69 319 P **P** **02 46 38.3 +0.6**
baz=35
ITAB Concordia 91.93 234 *eP* **P** **02 46 40.3 +1.8**
CZSB Cruzeiro do Su 92.14 262 *eP* **P** **02 46 39.1 -0.7**
CNLB Canela 92.72 232 *eP* **P** **02 46 43.8 +1.6**
TGY Tagaytay City 93.14 68 LR LR 03 34 24.3
comp=Z,523nm,19.8s,baz=181,slow=39
CRSM Crissiumal (Br 93.26 235 *eP* **P** **02 46 46.2 +1.5**
ALGR Alto Alegre (B 93.61 234 *eP* **P** **02 46 47.9 +1.5**
CPUP Villa Florida 94.44 238 P **P** **02 46 49.0 -1.1**
comp=Z,1.2nm,0.7s,baz=38,slow=1.0,SNR=2.9
CPUP LR LR 03 29 47.4
comp=Z,471nm,18.0s,baz=51,slow=36
comp=Z,1.2nm,0.7s
CPUP Villa Florida 94.44 238 *eP* **P** **02 46 51.3 +1.2**
KLI Kotabumi 94.54 92 P **P** **02 46 50.6 -0.3**
LPAZ La Paz 94.65 252 P **P** **02 46 50.1 -2.0**
comp=Z,1.5nm,0.8s,baz=22,slow=14,SNR=5.3
comp=Z,1.5nm,0.8s
LPAZ La Paz 94.65 252 P **P** **02 46 50.6 -1.5**
LPAZ La Paz 94.65 252 *eP* **P** 02 46 46.7 -5.4
LPAZ La Paz 94.65 252 *eP* **P** **02 46 52.1 0.0**
UNIS Unistalda (Bra 95.03 235 *eP* **P** **02 46 53.6 +0.9**
CPSB Cacapava Do Su 95.03 233 *eP* **P** **02 46 53.5 +0.8**
LPIG La Paz 95.50 310 LR LR 03 28 35.0
comp=Z,616nm,18.7s,baz=324,slow=35
ATAH Atahualpa 95.90 266 LR LR 03 25 50.9
comp=Z,641nm,21.6s,baz=24,slow=33
PLTB Pedras Altas 96.12 232 *eP* **P** **02 46 59.0 +1.3**
ITQB Itaqui 96.40 235 *eP* **P** **02 47 00.3 +1.3**
PB16 IPOC Station P 97.00 252 P **P** **02 47 02.2 -0.4**
PB16 IAmb IAmb 02 47 05.0
comp=Z,12nm,1.0s
NNA Nana 98.00 261 LR LR 03 29 51.1
comp=Z,372nm,19.7s,baz=4.0,slow=34
MTKI Muara Teweh, K 99.28 83 P **Pdif** **02 47 11.2 -1.2**
LVC Limon Verde 99.46 248 *eP* **Pdif** **02 47 14.5 +1.1**
VNA2 Neumayer--Watz 114.36 187 PP PKiKP 02 53 07.5 +59
VNA2 SKS SKSdf 02 59 50.1 +30
SNAA Sanae 114.71 185 PP PP 02 53 16.2 +8.3
TROLL Troll, Antarti 114.73 184 PP PP 02 53 14.4 +6.2
VNA3 Neumayer Olymp 114.88 188 PP PP 02 53 10.9 +1.7
WB0 Warramunga Arr 125.98 84 PKPdf **PKPdf** **02 52 30.8 -1.7**
WRA Warramunga Arr 126.05 84 PKP **PKPdf** **02 52 31.1 -1.5**
comp=Z,6.2nm,1.0s,baz=311,slow=2.2,SNR=15
WRA PP **PP** **02 54 22.7 -3.8**
comp=Z,1.3nm,1.0s,baz=314,slow=6.2,SNR=5.1
WRAB Tennant Creek 126.05 84 P **PKiKP** **02 52 35.7 +2.7**
WB2 Warramunga Arr 126.06 84 PKPdf **PKPdf** **02 52 30.8 -1.7**
AS31 Alice Springs 128.00 88 PKPdf **PKPdf** **02 52 34.9 -1.3**
ASAR Alice Springs 128.00 88 PKP **PKPdf** **02 52 33.7 -2.5**
comp=Z,4.4nm,0.8s,baz=328,slow=1.3,SNR=26
ASAR Alice Springs 128.00 88 **PKPdf** **02 52 34.5 -1.7**
COEN Coen 128.47 72 PKPdf **PKPdf** **02 52 36.5 -0.8**
CTAO Charters Tower 134.76 75 PKPdf **PKPdf** **02 52 48.9 -0.2**
CTAO Charters Tower 134.76 75 PKIKP **PKPdf** **02 52 48.9 -0.2**
CTAO Charters Tower 134.76 75 P **PKiKP** **02 52 50.3 -0.2**
STKA Stephens Creek 138.19 92 PKP **PKPdf** **02 52 53.3 -1.8**
comp=Z,3.7nm,0.8s,baz=18,slow=4.8,SNR=4.3
STKA Stephens Creek 138.19 92 PKPdf **PKPdf** **02 52 54.0 -1.1**
VNDA Vanda 142.88 169 PKP **PKPdf** **02 52 59.3 -2.9**
comp=Z,1.5nm,0.7s,baz=273,slow=5.9,SNR=6.7
VNDA Vanda 142.88 169 PKPpre 02 52 57.7
SBA Scott Base 143.24 171 PKPpre PKPpre 02 52 58.5
SBA Scott Base 143.24 171 PKIKP PKPab 02 52 58.5 -0.1
SBA Scott Base 143.24 171 P PKPbc 02 53 01.2 +1.3
ARMA Armidale 144.82 83 **PKPab** **02 53 05.8 -0.4**
CAN Canberra 145.26 93 **PKPbc** **02 53 06.4 -1.0**
CAN Canberra 145.26 93 PKIKP **PKPbc** **02 53 06.4 -1.0**
TAU Tasmania Unive 146.74 106 PKPdf **PKPdf** **02 53 10.2 +0.3**
TAU Tasmania Unive 146.74 106 PKP2 **PKPdf** **02 53 10.2 +0.3**
TAU Tasmania Unive 146.74 106 P **PKPab** **02 53 13.0 +0.1**
NOUC Port Laguerre 149.60 56 P **PKiKP** **02 53 20.8 0.0**
DZM Mont Dzumac 149.66 56 eLR LR 03 42 49.8
comp=Z,925nm,28.9s
DZM Mont Dzumac 149.66 56 P **PKiKP** **02 53 21.0 -0.1**
ONTNC Ouen Toro 149.85 56 P **PKiKP** **02 53 21.0 -0.3**
YATNC Mamie plateau, 149.92 55 P **PKiKP** **02 53 21.9 +0.4**
OUENC Ouen Island, N 150.16 55 P **PKiKP** **02 53 21.9 -0.1**
PPT Papeete 150.88 324 PKPbc **PKiKP** **02 53 24.8 +1.2**
comp=Z,35nm,0.9s,baz=29,slow=5.7,SNR=2.7
PPT2 Papeete2 150.89 324 eLR LR 03 43 23.9
comp=Z,898nm,25.8s
MSVF Nonsavu 151.94 32 P **PKiKP** **02 53 29.9 +4.0**
TBI Tubuai 155.83 318 eLR LR 03 45 41.7
comp=Z,534nm,24.5s

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*NEIC **24** 02:37:50.5±2.5,20˚0S±0.˚1×177˚5W±0.˚1, h513km±7km, mb4.4/53, Error ellipse: s-maj=17.9km s-min=15.0km az=139.0*
*NOU **24** 02:37:52.6, 19˚.84S×177˚.35W, h562km, mb4.5/17, Fiji Islands Region*
*IDC **24** 02:37:53.7±1.5, 19˚.88S×177˚.67W, h542km±14km, mb3.5/11, mbtmp4.4/13, Error ellipse: s-maj=20.1km s-min=14.2km az=126.0*

ISC 24 02:37:53.0±0.4, 20˚.01S±0˚.08×177˚.58W±0˚.07, h550km, n134, σ1s21/133, mb4.4/35, 8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.72**	**298**	P	**P**	**02 39 18.7**	**-2.0**
	44nm,0.4s,baz=85,slow=22,SNR=75						
MSVF				S	**S**	**02 40 31.3**	**-0.8**
	41nm,1.1s,baz=157,slow=19,SNR=1.3						
MSVF	**Nonsavu**	**4.72**	**298**	P	**P**	**02 39 18.5**	**-2.2**
NIUE	**Niue**	**7.27**	**84**	P	**P**	**02 39 39.7**	**-4.0**
AFI	**Afiamalu**	**8.22**	**43**	P	P	02 39 47.5	-5.7
	62nm,0.4s,baz=213,slow=3.1,SNR=4.8						
AFI				S	S	02 41 19.0	-12
	46nm,0.4s,baz=90,slow=23,SNR=2.5						
AFI	**Afiamalu**	**8.22**	**43**	P	P	02 39 47.1	-6.0
MARNC	**Mare, Loyalty**	**13.55**	**261**	P	**P**	**02 40 46.5**	**-1.1**
PINNC	**Pines Island,**	**14.20**	**257**	P	**P**	**02 40 52.9**	**-1.4**
DZM	**Mont Dzumac**	**15.06**	**259**	P	**P**	**02 41 03.4**	**+0.1**
	8.6nm,0.6s,baz=84,slow=19,SNR=13						
DZM	**Mont Dzumac**	**15.06**	**259**	P	**P**	**02 41 02.4**	**-0.9**
DZM				IAmb	IAmb	02 41 06.8	
	comp=Z,11nm,0.8s						
KOUNC	**Koumac, New Ca**	**17.03**	**265**	P	**P**	**02 41 23.9**	**+1.8**
KOUNC				IAmb	IAmb	02 41 26.4	
	comp=Z,19nm,1.0s						
OUZ	**Omahuta**	**17.04**	**205**	P	**P**	**02 41 23.9**	**+1.9**
OUZ				IAmb	IAmb	02 41 25.1	
	comp=Z,29nm,1.4s						
URZ	**Urewera**	**18.77**	**193**	P	**P**	**02 41 36.4**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=287,slow=6.2,SNR=7.5						
URZ				S	**S**	**02 44 34.6**	**-5.7**
	comp=Z,5.4nm,0.9s,baz=14,slow=23,SNR=1.9						
URZ	**Urewera**	**18.77**	**193**	P	**P**	**02 41 35.9**	**-1.8**
URZ				IAmb	IAmb	02 42 13.5	
	comp=Z,14nm,1.2s						
BFZ	**Birch Farm**	**21.27**	**193**	P	**P**	**02 41 58.6**	**-1.9**
QRZ	**Quartz Range**	**22.41**	**200**	P	**P**	**02 42 10.7**	**+0.1**
NNZ	**Nelson**	**22.50**	**198**	P	**P**	**02 42 10.9**	**-0.6**
BSWZ	**Blackbirch Sta**	**22.83**	**197**	P	**P**	**02 42 12.8**	**-1.5**
THZ	**Tophouse**	**23.14**	**198**	P	**P**	**02 42 17.3**	**0.0**
LTZ	**Lake Taylor**	**24.27**	**198**	P	**P**	**02 42 25.9**	**-1.3**
MLZ	**Mavora Lakes**	**27.92**	**202**	P	**P**	**02 43 00.2**	**+0.9**
WHZ	**Wether Hill Ro**	**28.44**	**202**	P	**P**	**02 43 04.5**	**+0.7**
EIDS	**Eidsvold**	**29.36**	**254**	P	**P**	**02 43 12.1**	**0.0**
EIDS				IAmb	IAmb	02 43 54.8	
	comp=Z,12nm,1.2s						
ARMA	**Armidale**	**29.64**	**243**	P	**P**	**02 43 14.9**	**+0.3**

ARMA				IAmb	IAmb	02 43 16.6
	comp=Z,16nm,0.8s					
RMQ	**Roma**	**31.54**	**252**	P	**P**	**02 43 32.1 +1.3**
CTA	**Charters Tower**	**33.94**	**264**	P	**P**	**02 43 51.4 +0.2**
CTAO	**Charters Tower**	**33.94**	**264**	P	**P**	**02 43 51.5 +0.3**
CTAO				IAmb	IAmb	02 43 52.2
	comp=Z,12nm,0.7s					
CTAO	**Charters Tower**	**33.94**	**264**	P	**P**	**02 43 51.4 +0.2**
CMSA	**Cobar Meteorol**	**34.86**	**243**	P	**P**	**02 43 59.3 +0.6**
QLP	**Quilpie**	**35.59**	**252**	P	**P**	**02 44 05.9 +1.1**
MTSU	**Mount Surprise**	**36.02**	**266**	P	**P**	**02 44 09.3 +0.8**
TOO	**Toolangi**	**36.51**	**233**	P	**P**	**02 44 12.6 +0.3**
TOO				IAmb	IAmb	02 44 13.8
	comp=Z,11nm,0.7s					
BRAT	**Ballarat**	**37.69**	**234**	P	**P**	**02 44 23.3 +1.4**
COEN	**Coen**	**37.95**	**273**	P	**P**	**02 44 24.4 0.0**
COEN				IAmb	IAmb	02 44 25.9
	comp=Z,6.2nm,0.8s					
COEN	**Coen**	**37.95**	**273**	P	**P**	**02 44 25.0 +0.6**
STKA	**Stephens Creek**	**38.36**	**244**	P	**P**	**02 44 28.4 +0.9**
	comp=Z,14nm,0.8s,baz=92,slow=9.9,SNR=28					
	comp=Z,14nm,0.8s					
STKA	**Stephens Creek**	**38.36**	**244**	P	**P**	**02 44 28.1 +0.6**
STKA	**Stephens Creek**	**38.36**	**244**	P	**P**	**02 44 28.5 +0.9**
ARPS	**Mount Arapiles**	**39.09**	**236**	P	**P**	**02 44 33.5 +0.2**
HTT	**Hallett**	**40.81**	**242**	P	**P**	**02 44 47.9 +0.7**
LCRK	**Leigh Creek**	**41.10**	**246**	P	**P**	**02 44 50.4 +0.9**
WHYH	**Whyalla**	**41.88**	**243**	P	**P**	**02 44 56.3 +0.7**
BBOO	**Buckleboo**	**43.12**	**243**	P	**P**	**02 45 05.8 +0.5**
BBOO	**Buckleboo**	**43.12**	**243**	P	**P**	**02 45 06.0 +0.6**
OOD	**Oodnadatta**	**43.22**	**250**	P	**P**	**02 45 07.3 +1.1**
MULG	**Mulgathing**	**44.68**	**247**	P	**P**	**02 45 17.8 +0.4**
AS31	**Alice Springs**	**45.02**	**256**	P	**P**	**02 45 20.7 +0.5**
AS31				IAmb	IAmb	02 45 21.9
	comp=Z,5.3nm,0.8s					
ASAR	**Alice Springs**	**45.02**	**256**	P	**P**	**02 45 20.6 +0.4**
	comp=Z,20nm,0.8s,baz=87,slow=8.6,SNR=160					
ASAR				PcP	**PcP**	**02 46 50.4 +0.9**
	comp=Z,3.1nm,0.6s,baz=94,slow=4.9,SNR=9.0					
ASAR				S	**S**	**02 51 17.6 -1.7**
	comp=Z,0.5nm,0.7s,baz=96,slow=16,SNR=4.7					
	comp=Z,20nm,0.8s					
WB0	**Warramunga Arr**	**45.04**	**262**	P	**P**	**02 45 20.1 -0.3**
WB0				IAmb	IAmb	02 45 21.0
	comp=Z,12nm,0.6s					
WB2	**Warramunga Arr**	**45.05**	**261**	P	**P**	**02 45 20.2 -0.3**
WB2				IAmb	IAmb	02 45 21.2
	comp=Z,17nm,1.1s					
WRAB	**Tennant Creek**	**45.06**	**261**	P	**P**	**02 45 20.6 +0.1**
WRA	**Warramunga Arr**	**45.07**	**261**	P	**P**	**02 45 20.4 -0.2**
	comp=Z,7.2nm,0.5s,baz=96,slow=6.8,SNR=59					
WRA				PcP	**PcP**	**02 46 50.7 +1.1**
	comp=Z,1.4nm,0.8s,baz=93,slow=2.0,SNR=5.1					
	comp=Z,7.2nm,0.5s					
MTN	**Manton Dam**	**49.56**	**270**	P	**P**	**02 45 53.6 -0.7**
MTN				IAmb	IAmb	02 45 55.0
	comp=Z,10nm,0.7s					
FORT	**Forrest**	**49.86**	**246**	P	**P**	**02 45 56.4 +0.1**
KNRA	**Kununurra**	**51.09**	**266**	P	**P**	**02 46 05.5 0.0**
KNRA				IAmb	IAmb	02 46 27.3
	comp=Z,28nm,1.4s					
FITZ	**Fitzroy Crossi**	**53.49**	**262**	P	**P**	**02 46 23.3 +0.6**
PSA00	**Pilbara Seismi**	**58.17**	**257**	P	**P**	**02 46 54.3 -0.7**
MBWA	**Marble Bar**	**58.35**	**257**	P	**P**	**02 46 56.2 -0.1**
MBWA				IAmb	IAmb	02 47 01.9
	comp=Z,18nm,1.1s					
SBA	**Scott Base**	**58.39**	**184**	P	**P**	**02 46 58.5 +3.0**
SBA				IAmb	IAmb	02 46 59.7
	comp=Z,9.7nm,1.1s					
VNDA	**Vanda**	**58.44**	**185**	P	**P**	**02 46 58.3 +2.5**
	comp=Z,1.3nm,0.7s,baz=357,slow=7.9,SNR=13					
	comp=Z,1.3nm,0.7s					
VNDA	**Vanda**	**58.44**	**185**	P	**P**	**02 46 57.5 +1.7**
MORW	**Morawa**	**60.38**	**247**	P	**P**	**02 47 10.2 +0.5**
MORW				IAmb	IAmb	02 47 25.6
	comp=Z,23nm,1.4s					
GIRL	**Giralia**	**63.07**	**254**	P	**P**	**02 47 28.9 +1.7**
UGM	**Wanagama**	**70.37**	**269**	P	**P**	**02 48 12.8 +0.3**
ADK	**Adak**	**71.58**	**1**	P	**P**	**02 48 18.1 -0.5**
UNV	**Unalaska Valle**	**74.16**	**7**	P	**P**	**02 48 32.6 -0.7**
UNV				IAmb	IAmb	02 49 08.0
	comp=Z,34nm,1.3s					
KSRS	**Korea Array**	**76.78**	**318**	P	**P**	**02 48 49.3 +0.9**
	comp=Z,0.8nm,0.7s,baz=119,slow=5.0,SNR=1.6					
	comp=Z,0.8nm,0.7s					
KMRM	**Mail Ridge**	**78.12**	**39**	P	**P**	**02 48 57.7 +2.0**
KMRM				IAmb	IAmb	02 49 18.4
	comp=Z,17nm,1.2s					
SMAI	**San Martin Ant**	**78.92**	**159**	P	**P**	**02 49 00.2 +0.8**
OHAK	**Old Harbor**	**79.58**	**13**	P	**P**	**02 49 03.3 +0.4**
OHAK				IAmb	IAmb	02 49 45.2
	comp=Z,28nm,1.4s					
BEKR	**Beckworth**	**79.94**	**41**	P	**P**	**02 49 06.6 +1.1**
PNTR	**Pine Nut**	**79.95**	**42**	P	**P**	**02 49 06.8 +1.2**
BELA	**Belgrano 2**	**79.99**	**173**	P	**P**	**02 49 04.9 -0.1**
DSP	**Deep Springs**	**80.01**	**44**	P	**P**	**02 49 07.2 +1.6**
NVAR	**Mina Array Bea**	**80.39**	**43**	P	**P**	**02 49 09.3 +1.4**
	comp=Z,1.0nm,0.6s,baz=226,slow=8.0,SNR=5.3					
	comp=Z,1.0nm,0.6s					
K05A	**Summer Lake**	**81.33**	**39**	P	**P**	**02 49 14.4 +1.8**
MAW	**Mawson**	**82.16**	**200**	P	**P**	**02 49 17.5 +1.3**
	comp=Z,2.2nm,0.6s,baz=109,slow=12,SNR=3.3					
	comp=Z,2.2nm,0.6s					
MAW	**Mawson**	**82.16**	**200**	P	**P**	**02 49 17.0 +0.8**
N19K	**Bonanza Creek**	**82.67**	**11**	P	**P**	**02 49 18.3 -0.6**
N19K				IAmb	IAmb	02 49 36.1
	comp=Z,9.3nm,1.2s					
I07A	**Izee**	**82.95**	**38**	P	**P**	**02 49 22.1 +1.4**
U15A	**North Rim**	**83.34**	**48**	P	**P**	**02 49 24.8 +1.8**
U15A				IAmb	IAmb	02 49 25.8
	comp=Z,4.8nm,0.7s					
IPM	**Ipoh**	**83.46**	**277**	P	**P**	**02 49 25.1 +1.3**
M19K	**Big River Lodg**	**83.70**	**11**	P	**P**	**02 49 24.1 +0.3**
M19K				IAmb	IAmb	02 49 49.2
	comp=Z,8.4nm,1.2s					
L19K	**White Mountain**	**83.88**	**10**	P	**P**	**02 49 25.1 +0.4**
GHO	**Glory Hole Cre**	**84.65**	**13**	P	**P**	**02 49 28.9 +0.3**
GHO				IAmb	IAmb	02 49 29.7
	comp=Z,8.8nm,0.6s					
SCM	**Sheep Creek Mo**	**85.06**	**14**	P	**P**	**02 49 30.1 -0.5**
SCM				IAmb	IAmb	02 49 32.2
	comp=Z,13nm,0.9s					
TXAR	**Lajitas Array**	**86.45**	**57**	P	**P**	**02 49 40.2 +2.1**
	comp=Z,1.4nm,0.7s,baz=215,slow=9.2,SNR=8.7					
	comp=Z,1.4nm,0.7s					
HDA	**Harding Lake**	**87.42**	**13**	P	**P**	**02 49 41.3 -0.3**
HDA				IAmb	IAmb	02 49 42.7
	comp=Z,5.3nm,0.6s					
CCB	**Clear Creek Bu**	**87.45**	**12**	P	**P**	**02 49 40.9 -0.8**
CCB				IAmb	IAmb	02 49 42.2
	comp=Z,6.0nm,0.5s					
ILAR	**Eielson Array**	**87.75**	**13**	P	**P**	**02 49 43.0 -0.2**
	comp=Z,1.2nm,0.5s,baz=221,slow=5.9,SNR=14					
	comp=Z,1.2nm,0.5s					
TROLL	**Troll, Antarti**	**88.22**	**180**	P	**P**	**02 49 46.4 +0.8**
PDAR	**Pinedale Array**	**88.33**	**43**	P	**P**	**02 49 47.6 +0.9**
	comp=Z,1.3nm,0.6s,baz=219,slow=2.7,SNR=6.3					
	comp=Z,1.3nm,0.6s					
SNAA	**Sanae**	**88.49**	**178**	P	**P**	**02 49 46.0 -0.8**
VNA3	**Neumayer Olymp**	**88.61**	**176**	P	**P**	**02 49 47.5 +0.3**
VNA2	**Neumayer--Watz**	**89.05**	**177**	P	**P**	**02 49 49.9 +0.5**
	baz=177,slow=4.3					
VNA2	**Neumayer--Watz**	**89.05**	**177**	pP	pP	02 51 45.7 -3.1
VNA1	**Neumayer--Stat**	**89.28**	**176**	P	**P**	**02 49 51.5 +1.1**
VNA1	**Neumayer--Stat**	**89.28**	**176**	PP	PP	02 53 22.9 -7.4
CMAR	**Chiang Mai Arr**	**90.33**	**289**	P	**P**	**02 49 57.4 +1.2**
	comp=Z,1.2nm,0.4s,baz=103,slow=3.1,SNR=5.5					
	comp=Z,1.2nm,0.4s					
PZH	**PanZhiHua**	**90.83**	**298**	P	P	02 50 03.1 +4.6
PZH				pmax	pmax	
	comp=Z,10.0nm,1.0s					
PZH				pmax	pmax	
	comp=Z,100nm,4.7s					
KK31	**Karatay Array**	**119.25**	**309**		**PKPdf**	**02 55 37.8 -2.2**
KKAR	**Karatay Array**	**119.25**	**309**	PKPdf	**PKPdf**	**02 55 37.6 -2.5**
ARCES	**ARCESS Array B**	**128.51**	**350**	PKP	**PKiKP**	**02 55 56.9 -0.8**
	comp=Z,3.3nm,0.9s,baz=37,slow=1.8,SNR=14					
NOA	**NORSAR Array B**	**138.54**	**354**	PKhKP	PKPpre	02 56 09.5
	comp=Z,0.3nm,0.7s,baz=21,slow=2.5,SNR=4.6					
NOA				PKP	**PKiKP**	**02 56 17.1 -1.3**
	comp=Z,0.5nm,0.5s,baz=14,slow=4.0,SNR=3.9					
HFS	**Hagfors**	**139.12**	**351**	PKhKP	PKPpre	02 56 08.5
	comp=Z,1.4nm,0.6s,baz=67,slow=3.9,SNR=12					
AKASG	**Malin Array Be**	**142.77**	**332**	PKhKP	PKPpre	02 56 21.1
	comp=Z,1.4nm,0.3s,baz=43,slow=4.6,SNR=20					

EKA	**Eskdalemuir Ar**	**144.48**	**5**	PKP	**PKPab**	**02 56 27.1 -0.2**
	comp=Z,0.7nm,0.3s,baz=337,slow=2.8,SNR=20					
BNN	**Bunyan**	**145.62**	**310**	PKPdf	**PKPdf**	**02 56 27.8 -1.6**
BRTR	**Keskin Array B**	**146.80**	**313**	PKPbc	**PKiKP**	**02 56 34.7 -1.4**
	comp=Z,3.7nm,0.7s,baz=137,slow=2.7,SNR=7.2					
ASF	**Jabal al Asfar**	**146.90**	**298**	PKPbc	**PKiKP**	**02 56 35.4 -1.1**
	comp=Z,5.0nm,0.7s,baz=96,slow=2.8,SNR=8.6					
CLL	**Collm**	**147.67**	**348**	*i* PKPbc	**PKiKP**	**02 56 36.6 -0.7**
	comp=Z,16nm,0.7s					
OKC	**Ostrava-Krasne**	**147.70**	**341**	*e*PKP	**PKPbc**	**02 56 35.9 0.0**
BRG	**Berggiesshubel**	**147.88**	**346**	*i* PKP	**PKiKP**	**02 56 37.8 +0.1**
BRG				Amp		02 56 38.8
	comp=Z,5.1nm,0.5s					
BRG				*ex*	x	02 59 20.4
BRG				Amp		02 59 21.9
	comp=Z,6.3nm,1.0s					
BRG				*ex*	x	03 00 10.7
BRG				Amp		03 00 39.7
	comp=Z,14nm,1.5s					
MMAI	**Mount Meron Ar**	**147.91**	**301**	PKPbc	**PKiKP**	**02 56 38.9 +0.4**
	comp=Z,4.3nm,0.5s,baz=64,slow=5.7,SNR=12					
MORC	**Moravsky Berou**	**147.94**	**341**	*e*PKP	**PKiKP**	**02 56 37.1 -0.9**
MLR	**Muntele Rosu**	**148.02**	**328**	PKPbc	**PKiKP**	**02 56 37.8 -0.6**
	comp=Z,2.9nm,0.5s,baz=360,slow=11,SNR=9.0					
PRU	**Pruhonice**	**148.56**	**345**	*e*PKP	**PKiKP**	**02 56 39.3 +0.1**
VRAC	**Vranov**	**148.64**	**342**	*e*PKP	**PKiKP**	**02 56 39.6 +0.2**
JAVC	**Velka Javorina**	**148.71**	**340**	*e*PKP	**PKiKP**	**02 56 40.8 +1.2**
KRUC	**Moravsky**	**148.92**	**342**	*e*PKP	**PKiKP**	**02 56 40.2 +0.2**
TREC	**Trest**	**148.96**	**343**	*e*PKP	**PKiKP**	**02 56 39.9 -0.2**
EIL	**Elat**	**149.04**	**295**	PKPbc	**PKiKP**	**02 56 41.0 +0.2**
	comp=Z,5.0nm,0.7s,baz=92,slow=7.0,SNR=3.9					
MEM	**Membach**	**149.33**	**356**	*d*PKiKP	**PKiKP**	**02 56 41.0 +0.3**
BTNL	**Ternell**	**149.34**	**355**	*d*PKiKP	**PKiKP**	**02 56 40.9 +0.1**
BSTI	**Sart Tilman**	**149.39**	**356**	*d*PKiKP	**PKiKP**	**02 56 41.2 +0.3**
BCLA	**Clavier**	**149.57**	**356**	*d*PKiKP	**PKiKP**	**02 56 40.6 -0.6**
KHC	**Kasperske Hory**	**149.59**	**345**	*e*PKP	**PKiKP**	**02 56 41.9 +0.5**
CKRC	**Cesky Krumlov**	**149.70**	**344**	*e*PKP	**PKiKP**	**02 56 41.3 -0.3**
BMRD	**Maredsous**	**149.71**	**357**	*d*PKiKP	**PKiKP**	**02 56 41.6 +0.1**
GERES	**GERESS Array B**	**149.83**	**345**	PKPbc	**PKiKP**	**02 56 42.3 +0.3**
	comp=Z,3.0nm,0.6s,baz=48,slow=2.0,SNR=11					
RCHB	**Rochefort**	**149.83**	**356**	*d*PKiKP	**PKiKP**	**02 56 42.1 +0.3**
DOU	**Dourbes**	**149.93**	**357**	*d*PKiKP	**PKiKP**	**02 56 42.4 +0.4**
WLF	**Walferdange**	**150.26**	**355**	*d*PKiKP	**PKiKP**	**02 56 43.5 +0.8**
PDG	**Podgorica**	**153.51**	**331**		**PKPbc**	**02 56 48.4 -1.2**
TORD	**Torodi Ar. Bea**	**173.14**	**174**	PKP	**PKPdf**	**02 56 59.5 -0.7**
	comp=Z,1.3nm,0.9s,baz=253,slow=1.4,SNR=5.2					
TORD				PKPab	**PKPab**	**02 58 32.7 +1.3**
	comp=Z,0.6nm,0.6s,baz=184,slow=3.1,SNR=5.3					

*ROM **24** 02:46:26.3±0.1, 42.°721N±0.°007×13.°20E±0.°01, h10km, ML3.4/8, Error ellipse: s-maj=1.2km s-min=0.4km az=238.0*

*IDC **24** 02:46:27.2±1.5, 42.°76N×13.°27E, h0km, mb3.5/3, mbtmp3.4/7, ML3.5/4, Error ellipse: s-maj=32.0km s-min=19.5km az=100.0*

*PRU **24** 02:46:28.3±0.0, 42.°85N×13.°04E, h0km*

ISC 24 02:46:27.0±0.9, 42.73N±0.°02×13.22E±0.°03, h9km±6km, n45, σ1.930/61, 2C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**322**	P		P	**Pg**	**02 46 29.7**	**-0.3**
NRCA				S		S	**Sg**	**02 46 31.9**	**-0.2**
NRCA				AML		AML	AML		
RM33	**Pellescritta (**	**0.22**	**182**	P		P	**Pg**	**02 46 31.7**	**+0.1**
RM33				S		S	**Sg**	**02 46 35.6**	**+0.9**
RM33				AML		AML	AML		
	comp=E,19250μm,0.6s								
RM33				AML		AML	AML		
	comp=E,18750μm,1.6s								
RM33				AML		AML	AML		
	comp=N,15850μm,0.8s								
RM33				AML		AML	AML		
	comp=N,15350μm,0.8s								
CAMP	**Campotosto**	**0.24**	**145**	P		P	**Pg**	**02 46 31.7**	**-0.2**
CAMP				S		S	**Sg**	**02 46 35.6**	**+0.4**
FEMA	**Monte Fema**	**0.26**	**331**	P		P	**Pg**	**02 46 32.1**	**-0.3**
FEMA				S		S	**Sg**	**02 46 36.5**	**+0.5**
TERO	**Teramo**	**0.30**	**111**	P		P	**Pg**	**02 46 32.7**	**-0.3**
TERO				S		S	**Sg**	**02 46 37.5**	**+0.5**
TERO				AML		AML	AML		
	comp=E,10250μm,0.2s								
TERO				AML		AML	AML		
	comp=N,16950μm,0.6s								
TERO				AML		AML	AML		
	comp=E,10240μm,0.2s								
TERO				AML		AML	AML		
	comp=E,11200μm,0.2s								
TERO				AML		AML	AML		
	comp=N,17700μm,0.6s								
FDMO	**Fiordimonte**	**0.32**	**342**	P		P	**Pg**	**02 46 33.5**	**+0.1**
FDMO				S		S	**Sg**	**02 46 38.1**	**+0.4**
CESI	**CESI - Serrava**	**0.36**	**320**	P		P	**Pg**	**02 46 33.7**	**-0.4**
CESI				S		S	**Sg**	**02 46 39.4**	**+0.5**
GIGS	**Gran Sasso**	**0.38**	**138**	P		P	**Pg**	**02 46 34.2**	**-0.3**
GIGS				AML		AML	AML		
	comp=E,1780μm,0.7s								
GIGS				AML		AML	AML		
	comp=E,1775μm,0.7s								
GIGS				AML		AML	AML		
	comp=N,1760μm,0.4s								
OFFI	**Offida**	**0.40**	**59**	P		P	**Pb**	**02 46 35.3**	**-1.0**
OFFI				AML		AML	AML		
	comp=E,29950μm,0.5s								
OFFI				AML		AML	AML		
	comp=N,36200μm,0.4s								
AQU	**L'Aquila**	**0.40**	**161**	P		P	**Pg**	**02 46 34.9**	**0.0**
SEF1	**Sefro**	**0.46**	**334**	P		P	**Pg**	**02 46 35.4**	**-0.6**
SEF1				S		S	**Sg**	**02 46 42.9**	**+0.8**
MDAR	**Monte D'Aria**	**0.46**	**353**	P		P	**Pg**	**02 46 35.8**	**-0.4**
MDAR				S		S	**Sg**	**02 46 42.7**	**+0.5**
PIO1	**Pioraco**	**0.48**	**339**	P		P	**Pb**	**02 46 37.5**	**-0.1**
PIO1				S		S	**Sb**	**02 46 44.7**	**-0.2**
SSM1	**San Severino M**	**0.50**	**356**	P		P	**Pg**	**02 46 36.0**	**-0.7**
SSM1				S		S	**Sg**	**02 46 43.8**	**+0.6**
TRTR	**Tortoreto Alta**	**0.52**	**81**	P		P	**Pb**	**02 46 37.8**	**-0.4**
ASSB	**Assisi San Ben**	**0.52**	**307**	P		P	**Pg**	**02 46 37.4**	**+0.3**
ASSB				S		S	**Sg**	**02 46 44.4**	**+0.5**
GAG1	**Gagliole**	**0.52**	**347**	P		P	**Pg**	**02 46 37.0**	**-0.1**
GAG1				S		S	**Sb**	**02 46 45.0**	**-1.0**
VCEL	**Villa Celiera**	**0.57**	**126**	P		P	**Pg**	**02 46 38.2**	**+0.1**
TRE1	**Treia**	**0.58**	**6**	P		P	**Pg**	**02 46 38.4**	**0.0**
TRE1				S		S	**Sb**	**02 46 48.0**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.62**	**317**	P		P	**Pg**	**02 46 38.6**	**-0.5**
PP3	**Marolino**	**0.70**	**24**	P		P	**Pb**	**02 46 41.2**	**-0.3**
PP3				AML		AML			
	comp=E,30300μm,0.5s								
PP3				AML		AML			
	comp=N,23850μm,0.5s								
PP3				AML		AML			
	comp=N,24500μm,0.5s								
PP3				AML		AML			
	comp=E,28800μm,0.5s								
PP3				AML		AML			
	comp=N,23800μm,0.5s								
PP3				AML		AML			
	comp=N,24550μm,0.5s								
PP3				AML		AML			
	comp=E,30250μm,0.5s								
AOI	**Ancona**	**0.86**	**19**	P		P	**Pg**	**02 46 43.5**	**-0.2**
MPAG	**Monte Paganucc**	**0.96**	**339**	P		P	**Pg**	**02 46 45.2**	**-0.2**
SACS	**San Casciano d**	**0.97**	**277**	P		P	**Pg**	**02 46 44.8**	**-1.0**
SENI	**Senigallia**	**0.97**	**0**	AML		AML			
	comp=N,12500μm,0.5s								
SENI				AML		AML			
	comp=E,12450μm,0.3s								
APEC	**Apecchio**	**1.01**	**325**	AML		AML			
	comp=E,2085μm,0.6s								
APEC				AML		AML			
	comp=N,2300μm,0.5s								
CAFI	**Castiglion Fio**	**1.10**	**303**	P		P	**Pg**	**02 46 46.5**	**-1.6**
GIUL	**Giuliano Di Ro**	**1.17**	**179**	⇓P		P	**Pn**	**02 46 51.2**	**+1.6**
MODR	**Mondragone**	**1.66**	**163**	⇓P		P	**Pn**	**02 46 55.4**	**-1.0**
MODR				AML		AML			
	comp=E,241μm,1.6s								
MODR				AML		AML			
	comp=N,258μm,1.5s								
VITU	**Vitulano (BN)**	**1.87**	**145**	S		S	**Sn**	**02 47 23.0**	**-0.1**
PAOL	**Paolisi**	**1.97**	**149**	S		S	**Sn**	**02 47 23.0**	**-2.6**
CGRP	**Cima Grappa**	**3.31**	**343**	⇑P		P	**Pn**	**02 47 19.7**	**+0.5**
CGRP				AML		AML			
	comp=N,353μm,0.5s								
CGRP				AML		AML			
	comp=E,301μm,0.6s								
LUSI	**Trento, Gardas**	**3.62**	**334**	⇑P		P	**Pn**	**02 47 24.7**	**+1.3**
KOSI	**Kohlern**	**3.96**	**341**	⇓P		P	**Pn**	**02 47 28.8**	**+0.8**
DAVOX	**Davos/Dischmat**	**4.70**	**331**	Pn		P	**Pn**	**02 47 37.8**	**-0.5**
	comp=E,1.1nm,0.3s,baz=150,slow=12,SNR=4.6								
DAVOX				Sn		**Sn**		**02 48 37.6**	**+4.6**
	comp=E,2.1nm,0.3s,baz=122,slow=22,SNR=3.8								
	comp=E,5.8nm,0.5s								
PETRA	**Petralia Sopra**	**4.94**	**172**	P		P	**Pb**	**02 47 50.9**	**-2.9**
GERES	**GERESS Array B**	**6.12**	**3**	Pn		P	**Pn**	**02 47 59.5**	**+1.8**
	comp=E,0.7nm,0.3s,baz=171,slow=12,SNR=8.8								
GERES				Sn		**Sn**		**02 49 04.4**	**-3.6**
	comp=E,1.7nm,0.3s,baz=170,slow=23,SNR=6.0								
	comp=E,1.1nm,0.3s								
CKRC	**Cesky Krumlov**	**6.14**	**7**	*e*PN		**Pn**		**02 47 58.6**	**+0.7**
CKRC				*e*SN		**Sn**		**02 49 06.0**	**-2.2**
KHC	**Kasperske Hory**	**6.41**	**2**	*e*PN		**Pn**		**02 48 01.3**	**-0.3**
KHC				*e*SN		**Sn**		**02 49 11.1**	**-3.7**
KRLC	**Kraliky**	**7.75**	**17**	*e*PN		**Pn**		**02 48 20.3**	**+0.3**
ESDC	**Sonseca Array**	**13.30**	**263**	Pn		**Pn**		**02 49 35.9**	**-0.1**
	baz=74,slow=5.9,SNR=2.5								
	comp=E,0.5nm,0.9s								
EKA	**Eskdalemuir Ar**	**16.51**	**325**	Pn		**P**		**02 50 20.8**	**-0.5**
	baz=138,slow=14								
	comp=E,0.2nm,0.4s								
FINES	**FINESS Array B**	**20.27**	**18**	P		**P**		**02 51 02.6**	**+0.1**
	comp=E,1.0nm,0.8s,baz=219,slow=11,SNR=1.6								
	comp=E,1.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**31.12**	**202**	P		**P**		**02 52 48.5**	**+2.6**
	comp=E,0.7nm,0.7s,baz=21,slow=8.7,SNR=4.6								
	comp=E,0.7nm,0.7s								
MKAR	**Makanchi Array**	**47.77**	**60**	P		**P**		**02 55 04.9**	**+0.5**
	comp=E,0.6nm,0.8s,baz=280,slow=8.6,SNR=2.4								
	comp=E,0.6nm,0.8s								

ROM 24 02:48:08.0±0.1, 42.°657N±0.°005×13.°231E±0.°009, h10km, ML2.3/6, 1C, Error ellipse: s-maj=0.7km s-min=0.4km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.15**	**185**	P		P	Pg	02 48 12.0	+0.6
RM33				S		S	Sg	02 48 15.0	+1.2
RM33				AML		AML	AML		
	comp=E,5650μm,0.2s								
RM33				AML		AML	AML		
	comp=N,5675μm,0.3s								
RM33				AML		AML	AML		
	comp=E,5510μm,0.2s								
RM33				AML		AML	AML		
	comp=N,5610μm,0.3s								
RM33				AML		AML	AML		
	comp=E,6585μm,1.5s								
RM33				AML		AML	AML		
	comp=N,6115μm,1.0s								
RM33				AML		AML	AML		
	comp=E,6640μm,1.5s								
RM33				AML		AML	AML		
	comp=N,6060μm,1.0s								
RM33				AML		AML	AML		
	comp=E,3417μm,2.7s								
RM33				AML		AML	AML		
	comp=E,3478μm,1.0s								
RM33				AML		AML	AML		
	comp=N,3462μm,0.3s								
RM33				AML		AML	AML		
	comp=N,3494μm,0.3s								
CAMP	**Campotosto**	**0.18**	**133**	P		P	Pg	02 48 12.5	+0.6
CAMP				S		S	Sg	02 48 15.7	+1.0
NRCA	**Norcia**	**0.20**	**334**	P		P	Pb	02 48 13.0	-0.7
NRCA				S		S	Sg	02 48 15.3	+0.2
NRCA				AML		AML	AML		
	comp=E,29850μm,0.2s								
NRCA				AML		AML	AML		
	comp=N,39050μm,0.1s								
NRCA				AML		AML	AML		
	comp=E,32800μm,0.1s								
NRCA				AML		AML	AML		
	comp=N,42400μm,0.2s								
NRCA				AML		AML	AML		
NRCA				AML		AML	AML		
	comp=E,91700μm,0.2s								
NRCA				AML		AML	AML		
NRCA				AML		AML	AML		
	comp=E,82300μm,1.2s								
NRCA				AML		AML	AML		
	comp=E,13262μm,0.2s								
NRCA				AML		AML	AML		
	comp=N,6845μm,0.8s								
TERO	**Teramo**	**0.28**	**97**	P		P	Pg	02 48 13.7	+0.1
TERO				S		S	Sg	02 48 18.1	+0.7
TERO				AML		AML	AML		
	comp=E,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**308**	P	Pg	02 48 55.5	+0.4
NRCA				S	Sg	02 48 56.9	+0.3
NRCA				AML	AML		
	comp=E,82300µm,1.2s						
NRCA				AML	AML		
	comp=E,91700µm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.17**	**333**	P	Pg	02 48 57.2	+0.5
FEMA				S	Sg	02 49 00.1	+0.6
FEMA				AML	AML		
	comp=N,31050µm,0.4s						
FEMA				AML	AML		
	comp=E,24450µm,0.3s						
FEMA				AML	AML		
	comp=N,31000µm,0.4s						
FEMA				AML	AML		
	comp=N,31000µm,0.4s						
FEMA				AML	AML		
	comp=E,24500µm,0.3s						
FDMO	**Fiordimonte**	**0.23**	**348**	P	Pg	02 48 58.2	+0.4
FDMO				S	Sg	02 49 01.9	+0.8
FDMO				AML	AML		
	comp=E,10200µm,0.3s						
FDMO				AML	AML		
	comp=N,9710µm,0.3s						
CESI	**CESI - Serrava**	**0.27**	**317**	P	Pg	02 48 58.8	+0.4
CESI				S	Sg	02 49 03.1	+0.9
CESI				AML	AML		
	comp=E,11405µm,0.2s						
CESI				AML	AML		
	comp=N,16700µm,0.2s						
GUMA	**Gualdo di Mace**	**0.28**	**28**	P	Pg	02 48 59.4	+0.6
GUMA				S	Sb	02 49 04.4	-0.7
GUMA				AML	AML		
	comp=E,13250µm,0.4s						
GUMA				AML	AML		
	comp=N,17200µm,0.5s						
GUMA				AML	AML		
	comp=E,13300µm,0.4s						
GUMA				AML	AML		
	comp=N,17150µm,0.5s						
GUMA				AML	AML		
	comp=E,16450µm,0.3s						
GUMA				AML	AML		
	comp=N,14450µm,0.5s						
RM33	**Pellescritta (**	**0.30**	**172**	P	Pg	02 48 59.7	+0.5
RM33				S	Sb	02 49 04.7	-0.9
RM33				AML	AML		
	comp=N,6115µm,1.0s						
RM33				AML	AML		
	comp=E,6585µm,1.5s						
RM33				AML	AML		
	comp=E,6640µm,1.5s						
RM33				AML	AML		
	comp=E,6590µm,1.5s						
RM33				AML	AML		
	comp=N,6060µm,1.0s						
CAMP	**Campotosto**	**0.33**	**146**	P	Pg	02 49 00.1	+0.4
CAMP				S	Sb	02 49 05.5	-1.0
CAMP				AML	AML		
	comp=E,4955µm,0.5s						
CAMP				AML	AML		
	comp=N,3890µm,0.4s						
ARRO	**Arrone**	**0.37**	**231**	P	Pg	02 49 00.9	+0.6
ARRO				S	Sb	02 49 06.8	-0.5
ARRO				AML	AML		
	comp=E,1485µm,1.5s						
ARRO				AML	AML		
	comp=N,1590µm,0.2s						
SEF1	**Sefro**	**0.37**	**336**	P	Pg	02 49 00.6	+0.3
SEF1				S	Sg	02 49 06.1	+0.9
SEF1				AML	AML		
	comp=E,6180µm,0.3s						
SEF1				AML	AML		
	comp=N,5310µm,1.2s						
SEF1				AML	AML		
	comp=N,5305µm,1.2s						
SEF1				AML	AML		
	comp=E,6185µm,0.2s						
TERO	**Teramo**	**0.38**	**119**	P	Pg	02 49 00.8	+0.3
TERO				S	Sb	02 49 06.9	-0.9
TERO				AML	AML		
	comp=E,4690µm,0.1s						
TERO				AML	AML		
	comp=N,3940µm,0.4s						
TERO				AML	AML		
	comp=N,4555µm,0.4s						
TERO				AML	AML		
	comp=E,4695µm,0.1s						
TERO				AML	AML		
	comp=E,5390µm,0.1s						
TERO				AML	AML		
	comp=N,3945µm,0.4s						
MDAR	**Monte D'Aria**	**0.38**	**359**	P	Pg	02 49 00.7	+0.1
MDAR				S	Sg	02 49 06.7	+1.0
MDAR				AML	AML		
	comp=E,3495µm,0.3s						
MDAR				AML	AML		
	comp=N,4230µm,1.4s						
MDAR				AML	AML		
	comp=E,3500µm,0.3s						
MDAR				AML	AML		
	comp=N,4235µm,1.4s						
PIO1	**Pioraco**	**0.39**	**341**	P	Pb	02 49 02.0	0.0
PIO1				S	Sb	02 49 08.1	+0.1
PIO1				AML	AML		
	comp=E,2175µm,1.6s						
PIO1				AML	AML		
	comp=N,3450µm,1.3s						
MNTP	**Montappone**	**0.40**	**35**	P	Pb	02 49 01.8	-0.3
OFFI	**Offida**	**0.41**	**72**	P	Pb	02 49 01.7	-0.6
OFFI				AML	AML		
	comp=E,3645µm,0.4s						
OFFI				AML	AML		
	comp=N,4180µm,0.7s						
FIU1	**Fiuminata**	**0.41**	**337**	P	Pg	02 49 01.3	+0.2
FIU1				S	Sb	02 49 07.7	-1.0
SSM1	**San Severino M**	**0.42**	**2**	P	Pg	02 49 01.4	+0.2
SSM1				S	Sb	02 49 07.9	-0.9
ASSB	**Assisi San Ben**	**0.43**	**303**	P	Pb	02 49 02.1	-0.6
ASSB				S	Sg	02 49 08.1	+0.9
GAG1	**Gagliole**	**0.43**	**352**	P	Pg	02 49 01.7	+0.3
GAG1				AML	AML		
	comp=N,7440µm,0.4s						
GAG1				AML	AML		
	comp=E,7105µm,0.4s						
CESX	**Cesi**	**0.47**	**245**	P	Pg	02 49 02.4	+0.3
CESX				AML	AML		
	comp=E,1265µm,0.4s						
CESX				AML	AML		
	comp=N,1845µm,1.6s						
SNTG	**Esanatoglia**	**0.47**	**341**	P	Pg	02 49 02.4	+0.2
SNTG				S	Sb	02 49 09.5	-0.9
SNTG				AML	AML		
	comp=N,1300µm,0.3s						
SNTG				AML	AML		
	comp=E,1260µm,0.4s						
GIGS	**Gran Sasso**	**0.47**	**139**	P	Pg	02 49 02.3	0.0
GIGS				S	Sg	02 49 09.2	+0.7
GIGS				AML	AML		
	comp=N,666µm,1.4s						
GIGS				AML	AML		
	comp=E,840µm,0.5s						
AQU	**L'Aquila**	**0.49**	**158**	P	Pg	02 49 03.0	+0.4
AQU				AML	AML		
	comp=E,1875µm,1.5s						
AQU				AML	AML		
	comp=E,1840µm,1.5s						
AQU				AML	AML		
	comp=N,1950µm,1.2s						
AQU				AML	AML		
	comp=N,2050µm,1.2s						
EL6	**Elcito**	**0.52**	**356**	P	Pg	02 49 03.2	+0.1
EL6				AML	AML		
	comp=E,2665µm,0.3s						
EL6				AML	AML		
	comp=N,3015µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.53**	**315**	P	Pg	02 49 03.1	-0.2
ATCC				AML	AML		
	comp=E,2445µm,0.4s						
ATCC				AML	AML		
	comp=N,1900µm,0.9s						
ATCC				AML	AML		
	comp=E,2450µm,0.4s						
FIAM	**Fiamignano**	**0.54**	**183**	P	Pg	02 49 03.6	0.0
FIAM				S	Sb	02 49 12.4	-0.1
FIAM				AML	AML		
	comp=N,1695µm,0.4s						
FIAM				AML	AML		
	comp=E,2170µm,0.2s						
TRTR	**Tortoreto Alta**	**0.56**	**90**	P	Pb	02 49 05.2	+0.4
TRTR				AML	AML		
	comp=E,3070µm,1.4s						
TRTR				AML	AML		
	comp=N,4145µm,0.4s						
FOSV	**Fossato di Vic**	**0.56**	**329**	P	Pg	02 49 04.0	+0.1
FOSV				S	Sb	02 49 12.3	-0.7
FOSV				AML	AML		
	comp=E,1435µm,0.8s						
FOSV				AML	AML		
	comp=N,2020µm,0.3s						
FAGN	**Fagnano**	**0.63**	**150**	P	Pg	02 49 05.0	-0.1
MURB	**Monte Urbino**	**0.65**	**315**	P	Pg	02 49 05.8	+0.2
MURB				AML	AML		
	comp=E,3115µm,0.3s						
MURB				AML	AML		
	comp=E,3410µm,0.3s						
MURB				AML	AML		
	comp=N,2455µm,0.3s						
MURB				AML	AML		
	comp=N,2575µm,0.3s						
MURB				AML	AML		
	comp=E,3110µm,0.3s						
VCEL	**Villa Celiera**	**0.66**	**129**	P	Pg	02 49 05.9	+0.2
VCEL				AML	AML		
	comp=E,2215µm,0.3s						
VCEL				AML	AML		
	comp=E,2220µm,0.3s						
VCEL				AML	AML		
	comp=N,2445µm,0.4s						
PP3	**Marolino**	**0.66**	**30**	P	Pb	02 49 06.3	-0.2
PP3				AML	AML		
	comp=E,2555µm,0.7s						
PP3				AML	AML		
	comp=N,3170µm,0.4s						
PP3				AML	AML		
	comp=N,2940µm,0.4s						
PP3				AML	AML		
	comp=E,2800µm,0.7s						
PP3				AML	AML		
	comp=N,3165µm,0.4s						
PP3				AML	AML		
	comp=N,2945µm,0.4s						
PP3				AML	AML		
	comp=E,2550µm,0.7s						
SSFR	**Montelago di S**	**0.68**	**337**	P	Pb	02 49 06.7	-0.3
ATFO	**Monte Foce - G**	**0.70**	**323**	P	Pg	02 49 06.7	+0.1
ATFO				AML	AML		
	comp=E,893µm,1.2s						
ATFO				AML	AML		
	comp=E,894µm,1.2s						
ATFO				AML	AML		
	comp=N,772µm,0.8s						
ARVD	**Arcevia**	**0.70**	**347**	P	Pg	02 49 06.5	-0.2
ARVD				S	Sb	02 49 17.3	+0.2
ARVD				AML	AML		
	comp=N,539µm,0.8s						
ARVD				AML	AML		
	comp=E,657µm,0.9s						
ARVD				AML	AML		
	comp=N,540µm,0.8s						
SRES	**S.Oreste - Sor**	**0.74**	**220**	P	Pb	02 49 07.9	-0.1
SRES				AML	AML		
	comp=N,380µm,0.4s						
SRES				AML	AML		
	comp=E,404µm,0.9s						
T0110	**Collepietro**	**0.74**	**141**	P	Pg	02 49 06.9	-0.4
T0110				AML	AML		
	comp=E,1640µm,0.3s						
T0110				AML	AML		
	comp=N,2380µm,0.7s						
MGAB	**Montegabbione**	**0.77**	**278**	P	Pg	02 49 07.5	-0.3
ATVO	**AVT- Monte Val**	**0.79**	**316**	P	Pb	02 49 08.6	-0.3
ATVO				AML	AML		
	comp=E,414µm,0.9s						
ATVO				AML	AML		
	comp=N,512µm,0.4s						
ATVO				AML	AML		
	comp=E,414µm,0.9s						
ATVO				AML	AML		
	comp=N,513µm,0.4s						
AOI	**Ancona**	**0.81**	**24**	P	Pg	02 49 08.3	-0.2
AOI				AML	AML		
	comp=E,666µm,0.3s						
AOI				AML	AML		
	comp=N,582µm,0.4s						
AOI				AML	AML		
	comp=N,582µm,0.4s						
AOI				AML	AML		
	comp=E,666µm,0.3s						
PTQR	**Pietraquaria**	**0.81**	**167**	P	Pg	02 49 07.5	-1.1
COR1	**Corinaldo**	**0.83**	**352**	AML	AML		
	comp=N,1645µm,0.4s						
COR1				AML	AML		
	comp=E,828µm,0.4s						
MTCE	**Montecelio**	**0.84**	**201**	P	Pg	02 49 08.8	-0.4
MTCE				AML	AML		
	comp=E,428µm,0.6s						
MTCE				AML	AML		
	comp=N,337µm,0.3s						
MPAG	**Monte Paganucc**	**0.87**	**341**	P	Pg	02 49 09.2	-0.5
MPAG				AML	AML		
	comp=N,570µm,0.3s						
MPAG				AML	AML		
	comp=E,716µm,0.4s						
CERT	**Cerreto**	**0.87**	**188**	P	Pb	02 49 10.1	-0.1
CERT				AML	AML		
	comp=E,1075µm,0.4s						
CERT				AML	AML		
	comp=N,888µm,0.4s						
NARO	**Abbazia di Nar**	**0.90**	**333**	P	Pg	02 49 10.4	0.0
NARO				AML	AML		
	comp=E,356µm,0.7s						
NARO				AML	AML		
	comp=N,281µm,0.7s						
FSSB	**Fossombrone**	**0.92**	**343**	P	Pg	02 49 10.7	-0.1
FSSB				AML	AML		
	comp=N,4210µm,0.4s						
FSSB				AML	AML		
	comp=N,4205µm,0.4s						
FSSB				AML	AML		
	comp=E,2305µm,0.3s						
INTR	**Introdacqua**	**0.97**	**145**	P	Pg	02 49 10.0	-1.7
INTR				AML	AML		
	comp=E,444nm,0.8s						
INTR				AML	AML		
	comp=N,819nm,0.6s						
INTR				AML	AML		
	comp=E,421µm,0.8s						
INTR				AML	AML		
	comp=N,1140µm,0.6s						
INTR				AML	AML		
	comp=E,420µm,0.8s						
RMP	**Rome, Mte Porz**	**1.05**	**199**	AML	AML		
	comp=N,962µm,0.9s						
RMP				AML	AML		
	comp=E,778µm,0.5s						
SSP9	**Sansepolcro**	**1.07**	**316**	AML	AML		
	comp=E,285µm,1.6s						
SSP9				AML	AML		
	comp=N,320µm,0.7s						
MYKA	**Terra Mystica**	**3.83**	**5**	*e*Pn	Pn	02 49 52.0	-0.1
	comp=N,2.5nm,0.4s						
ABTA	**Abfaltersbach**	**3.96**	**354**	*e*Pn	Pn	02 49 55.6	+1.7
	comp=N,8.0nm,0.4s						

ROM 24 02:50:41.3±0.1, 42.750N±0.005 13.200E±0.010, h8km, ML2.9/9, 1C-1D, Error ellipse: s-maj=0.9km s-min=0.2km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**323**	P	Pg	02 50 44.3	+0.4
NRCA				S	Sg	02 50 46.0	+0.3
FEMA	**Monte Fema**	**0.24**	**333**	P	Pg	02 50 46.6	+0.4
FEMA				S	Sg	02 50 50.4	+0.9
FEMA				AML	AML		
	comp=E,6430µm,1.6s						
FEMA				AML	AML		
	comp=N,5865µm,1.1s						
FEMA				AML	AML		
	comp=E,45750µm,0.3s						
FEMA				AML	AML		
	comp=N,37200µm,0.6s						
FEMA				AML	AML		
	comp=E,45800µm,0.3s						
FEMA				AML	AML		
	comp=N,37150µm,0.6s						
FEMA				AML	AML		
	comp=N,4697µm,0.3s						
RM33	**Pellescritta (**	**0.24**	**177**	P	Pg	02 50 47.3	+1.1
RM33				S	Sg	02 50 51.3	+1.8
RM33				AML	AML		
	comp=E,2910µm,0.2s						
RM33				AML	AML		
	comp=N,2435µm,0.3s						
RM33				AML	AML		
	comp=E,2865µm,0.2s						
RM33				AML	AML		
	comp=N,2445µm,0.3s						
RM33				AML	AML		
	comp=E,41350µm,1.1s						
RM33				AML	AML		
	comp=N,22750µm,0.5s						
RM33				AML	AML		
	comp=E,41350µm,1.1s						
RM33				AML	AML		
	comp=N,22750µm,0.5s						
RM33				AML	AML		
	comp=E,41100µm,1.1s						
RM33				AML	AML		
	comp=N,22300µm,0.5s						
RM33				AML	AML		
	comp=N,2449µm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.26**	**144**	P	Pg	02 50 47.3	+0.7
CAMP				S	Sb	02 50 51.7	-1.4
TERO	**Teramo**	**0.32**	**113**	P	Pg	02 50 48.2	+0.5
TERO				S	Sb	02 50 53.6	-1.1
TERO				AML	AML		
	comp=E,3355µm,0.2s						
TERO				AML	AML		
	comp=N,2770µm,0.1s						
TERO				AML	AML		
	comp=E,3885µm,0.2s						
TERO				AML	AML		
	comp=N,3370µm,0.1s						
TERO				AML	AML		
	comp=E,26300µm,0.1s						
TERO				AML	AML		
	comp=N,29250µm,0.8s						
TERO				AML	AML		
	comp=E,24650µm,0.6s						
TERO				AML	AML		
	comp=N,27450µm,0.8s						
TERO				AML	AML		
	comp=E,3354µm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**18**	P	Pb	02 50 48.8	-0.6
GUMA				S	Sb	02 50 54.5	-0.4
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				END			
CESI	**CESI - Serrava**	**0.34**	**320**	P	Pg	02 50 48.4	+0.4
CESI				S	Sg	02 50 53.5	+1.1
OFFI	**Offida**	**0.40**	**63**	P	Pb	02 50 50.7	0.0
OFFI				AML	AML		
	comp=E,43450µm,0.5s						
OFFI				AML	AML		
	comp=N,25500µm,0.5s						
OFFI				AML	AML		
	comp=E,44450µm,0.6s						
OFFI				AML	AML		
	comp=N,54700µm,0.5s						
OFFI				AML	AML		
	comp=N,4517µm,0.5s						
GIGS	**Gran Sasso**	**0.41**	**138**	⇑P	Pg	02 50 49.7	+0.4
GIGS				S	Sg	02 50 55.7	+1.1
GIGS				AML	AML		
	comp=E,574µm,0.4s						
GIGS				AML	AML		
	comp=N,526µm,0.5s						
GIGS				AML	AML		
	comp=E,3215µm,0.8s						
GIGS				AML	AML		
	comp=N,2820µm,1.0s						
GIGS				AML	AML		
	comp=E,3630µm,1.3s						
GIGS				AML	AML		
	comp=N,2925µm,0.9s						
GIGS				AML	AML		
	comp=E,574µm,0.4s						
AQU	**L'Aquila**	**0.42**	**159**	P	Pg	02 50 49.9	+0.3
AQU				AML	AML		
	comp=E,12000µm,0.5s						
AQU				AML	AML		
	comp=N,10185µm,0.5s						
AQU				AML	AML		
	comp=E,10900µm,0.5s						
AQU				AML	AML		
	comp=N,10880µm,0.5s						
AQU				AML	AML		
	comp=E,12400µm,1.4s						
AQU				AML	AML		
	comp=N,10850µm,1.3s						
AQU				AML	AML		
	comp=E,12550µm,1.4s						
AQU				AML	AML		
	comp=N,11300µm,1.3s						
CESX	**Cesi**	**0.48**	**253**	P	Pg	02 50 51.1	+0.5
FIAM	**Fiamignano**	**0.49**	**187**	P	Pb	02 50 51.5	-0.6
ASSB	**Assisi San Ben**	**0.49**	**306**	S	Sg	02 50 52.0	-5.4
GAG1	**Gagliole**	**0.50**	**349**	P	Pb	02 50 52.1	-0.2
GAG1				S	Sb	02 50 59.2	-0.5
TRTR	**Tortoreto Alta**	**0.53**	**83**	P	Pb	02 50 53.1	+0.3
TRTR				AML	AML		
	comp=E,8905µm,1.5s						
TRTR				AML	AML		
	comp=N,11550µm,1.5s						
TRTR				AML	AML		
	comp=E,38050µm,0.5s						
TRTR				AML	AML		
	comp=N,31650µm,1.0s						
TRTR				AML	AML		
	comp=E,2700µm,0.2s						
SNTG	**Esanatoglia**	**0.54**	**339**	P	Pg	02 50 52.0	+0.2
VCEL	**Villa Celiera**	**0.59**	**127**	P	Pb	02 50 53.6	-0.4
VCEL				AML	AML		
	comp=E,8145µm,1.1s						
VCEL				AML	AML		
	comp=N,7625µm,1.1s						
VCEL				AML	AML		
	comp=E,8895µm,0.7s						
VCEL				AML	AML		
	comp=N,7620µm,1.1s						
VCEL				AML	AML		
	comp=N,1801µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.60**	**317**	P	Pg	02 50 52.9	0.0
ATCC				S	Sb	02 51 02.1	-0.5
ATCC				AML	AML		
	comp=E,1290µm,0.9s						
ATCC				AML	AML		
	comp=N,1540µm,0.2s						
ATCC				AML	AML		
	comp=E,11095µm,0.6s						
ATCC				AML	AML		
	comp=N,8600µm,0.3s						
ATCC				AML	AML		
	comp=E,1293µm,0.9s						
ATCC				END			
FOSV	**Fossato di Vic**	**0.63**	**330**	P	Pg	02 50 53.5	0.0
FOSV				S	Sb	02 51 03.2	-0.4
T0110	**Collepietro**	**0.68**	**141**	⇓P	Pg	02 50 54.8	+0.4
T0110				AML	AML		
	comp=E,7610µm,1.3s						
T0110				AML	AML		
	comp=N,11700µm,0.4s						
T0110				AML	AML		
	comp=E,7625µm,1.4s						
T0110				AML	AML		
	comp=N,11900µm,0.5s						
T0110				AML	AML		
	comp=E,1020µm,0.6s						
PP3	**Marolino**	**0.69**	**25**	P	Pb	02 50 56.1	+0.5

MURB	**Monte Urbino**	**0.71**	**316**	P	Pg	02 50 55.2	+0.1
SRES	**S.Oreste - Sor**	**0.72**	**225**	P	Pb	02 50 56.4	+0.2
ATFO	**Monte Foce - G**	**0.77**	**323**	P	Pg	02 50 56.2	+0.1
MGAB	**Montegabbione**	**0.82**	**282**	P	Pb	02 50 57.8	+0.1
ATVO	**AVT- Monte Val**	**0.86**	**318**	P	Pg	02 50 57.0	-0.9
INTR	**Introdacqua**	**0.90**	**144**	P	Pg	02 50 58.2	-0.5
INTR				AML	AML		
	comp=E,875nm,0.5s						
INTR				AML	AML		
	comp=N,1μm,0.9s						
INTR				AML	AML		
	comp=E,860μm,0.6s						
INTR				AML	AML		
	comp=N,1735μm,0.9s						
INTR				AML	AML		
	comp=E,3μm,0.7s						
INTR				AML	AML		
	comp=N,4μm,0.7s						
INTR				AML	AML		
	comp=E,2765μm,0.6s						
INTR				AML	AML		
	comp=N,5765μm,0.7s						
ATPI	**Pietralunga -**	**0.91**	**320**	P	Pg	02 50 58.7	-0.2
MPAG	**Monte Paganucc**	**0.94**	**340**	P	Pg	02 50 59.4	0.0
SACS	**San Casciano d**	**0.95**	**276**	P	Pb	02 51 00.1	0.0
APEC	**Apecchio**	**0.99**	**325**	P	Pg	02 51 00.1	-0.3
FSSB	**Fossombrone**	**0.99**	**342**	P	Pg	02 51 00.5	+0.1
LPEL	**Lama dei Pelig**	**1.01**	**134**	P	Pg	02 51 00.1	-0.7
LPEL				AML	AML		
	comp=E,1140μm,0.4s						
LPEL				AML	AML		
	comp=N,1560μm,0.5s						
LPEL				AML	AML		
	comp=E,2035μm,1.5s						
LPEL				AML	AML		
	comp=N,2375μm,1.1s						
CAFI	**Castiglion Fio**	**1.07**	**303**	P	Pg	02 51 01.9	0.0

LDG ***24*** *02:51:25.9±0.1, 42°.77N×13°.25E, h6km, Ml3.1/29, Error ellipse: s-maj=2.8km s-min=1.8km az=38.0*

ROM ***24*** *02:51:26.3±0.1, 42°.775N±0°.003×13°.225E±0°.005, h6km, ML3.7/72, Error ellipse: s-maj=0.3km s-min=0.3km az=69.0*

IDC ***24*** *02:51:26.4±1.1, 42°.87N×13°.09E, h0km, mb3.6/7, mbtmp3.5/14, ML3.3/7, Error ellipse: s-maj=19.7km s-min=15.1km az=100.0*

BGR ***24*** *02:51:26.6±1.0, 42°.52N×13°.51E, h5km±30km, ML3.8/9, Error ellipse: s-maj=64.5km s-min=13.3km az=170.0*

PDG ***24*** *02:51:27.3±0.6, 42°.78N×13°.26E, h8km, ML3.7/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

BEO ***24*** *02:51:27.5±0.6, 42°.75N×13°.17E, h0km, ML3.8/7*

NEIC ***24*** *02:51:27.6±1.7, 42°.76N±0°.05×13°.18E±0°.06, h7km±7km, mb4.1/2, ML3.7(ROM), Error ellipse: s-maj=8.4km s-min=5.5km az=217.0*

PRU ***24*** *02:51:28.5±0.0, 42°.89N×13°.18E, h0km, M4.1*

ISC 24 02:51:27.5±0.7, 42°.77N±0°.01×13°.18E±0°.02, h13km±4km, n304, σ2s03/389, mb3.7/5, 22C-20D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**325**		**Pg**	**02 51 29.5**	**-0.9**
NRCA				Sg	**Sg**	**02 51 31.3**	**-1.1**
NRCA	**Norcia**	**0.08**	**325**	⇑*e*P	**Pg**	**02 51 29.5**	**-0.9**
NRCA				S	**Sg**	**02 51 31.4**	**-1.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.21**	**334**	⇑*e*P	**Pg**	**02 51 31.8**	**-0.5**
FEMA				S	**Sg**	**02 51 35.5**	**-0.1**
FEMA				AML	AML		
	comp=N,37150μm,0.6s						
FEMA				AML	AML		
	comp=E,45750μm,0.3s						
FEMA				AML	AML		
	comp=N,37200μm,0.6s						
FEMA				AML	AML		
	comp=E,45800μm,0.3s						
FEMA				AML	AML		
	comp=E,45750μm,0.3s						
FEMA				AML	AML		
	comp=N,37150μm,0.6s						
RM33	**Pellescritta (**	**0.26**	**174**	⇓*e*P	**Pg**	**02 51 32.6**	**-0.4**
RM33				S	**Sg**	**02 51 37.3**	**+0.6**
RM33				AML	AML		
	comp=N,22700μm,0.5s						
RM33				AML	AML		
	comp=E,41050μm,1.1s						
RM33				AML	AML		
	comp=E,41350μm,1.1s						
RM33				AML	AML		
	comp=N,22750μm,0.5s						
RM33				AML	AML		
	comp=E,41350μm,1.1s						
RM33				AML	AML		
	comp=N,22300μm,0.5s						
RM33				AML	AML		
	comp=N,22750μm,0.5s						
RM33				AML	AML		
	comp=E,41100μm,1.1s						
RM33				AML	AML		
	comp=E,41300μm,1.1s						
FDMO	**Fiordimonte**	**0.28**	**346**	P	**Pg**	**02 51 32.5**	**-0.8**
FDMO				S	**Sg**	**02 51 37.1**	**-0.2**
FDMO				AML	AML		
	comp=N,25350μm,1.1s						
FDMO				AML	AML		
	comp=E,23800μm,1.2s						
CAMP	**Campotosto**	**0.29**	**143**	⇓*i*P	**Pg**	**02 51 32.5**	**-1.0**
CAMP				S	**Sg**	**02 51 37.2**	**-0.4**
CAMP				AML	AML		
	comp=N,15700μm,0.7s						
CAMP				AML	AML		
	comp=E,14300μm,1.0s						
CESI	**CESI - Serrava**	**0.31**	**320**	⇓*e*P	**Pg**	**02 51 33.6**	**-0.4**
CESI				S	**Sb**	**02 51 39.1**	**-0.9**
CESI				AML	AML		
	comp=E,16600μm,0.7s						
CESI				AML	AML		
	comp=N,40150μm,1.2s						
GUMA	**Gualdo di Mace**	**0.32**	**22**	⇑*i*P	**Pg**	**02 51 33.1**	**-1.0**
GUMA				S	**Sg**	**02 51 38.3**	**-0.1**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
CSP1	**Cessapalombo**	**0.32**	**4**	⇑P	**Pg**	**02 51 33.0**	**-1.2**
CSP1				S	**Sg**	**02 51 38.1**	**-0.6**
TERO	**Teramo**	**0.35**	**115**	⇓*e*P	**Pg**	**02 51 33.1**	**-1.4**
TERO				S	**Sg**	**02 51 38.2**	**-1.0**
TERO				AML	AML		
	comp=E,24650μm,0.6s						
TERO				AML	AML		
	comp=N,29250μm,0.8s						
TERO				AML	AML		
	comp=E,26300μm,0.1s						
TERO				AML	AML		
	comp=N,27450μm,0.8s						
TERO				AML	AML		
	comp=E,24700μm,0.6s						
ARRO	**Arrone**	**0.36**	**238**	⇑*e*P	**Pg**	**02 51 34.9**	**+0.2**
ARRO				S	**Sb**	**02 51 41.5**	**+0.2**
OFFI	**Offida**	**0.41**	**66**	⇑*e*P	**Pg**	**02 51 35.0**	**-0.7**
OFFI				S	**Sb**	**02 51 42.2**	**-0.6**
OFFI				AML	AML		
	comp=E,44450μm,0.6s						
OFFI				AML	AML		
	comp=N,54700μm,0.5s						
SEF1	**Sefro**	**0.41**	**336**	P	**Pg**	**02 51 35.3**	**-0.5**
SEF1				S	**Sg**	**02 51 42.0**	**+0.7**
SEF1				AML	AML		
	comp=N,30800μm,0.3s						
SEF1				AML	AML		
	comp=E,29700μm,0.3s						
SEF1				AML	AML		
	comp=N,30750μm,0.3s						
MDAR	**Monte D'Aria**	**0.42**	**357**	P	**Pg**	**02 51 35.1**	**-0.9**
MDAR				S	**Sg**	**02 51 41.8**	**+0.1**
MDAR				AML	AML		
	comp=E,16650μm,0.4s						
MDAR				AML	AML		
	comp=N,24000μm,1.3s						
MDAR				AML	AML		
	comp=N,24050μm,1.3s						
MNTP	**Montappone**	**0.43**	**30**	P	**Pg**	**02 51 35.3**	**-0.8**
MNTP				S	**Sb**	**02 51 43.0**	**-0.3**
GIGS	**Gran Sasso**	**0.43**	**138**	P	**Pg**	**02 51 34.6**	**-1.5**
GIGS				S	**Sg**	**02 51 41.3**	**-0.5**
GIGS				AML	AML		
	comp=N,2925μm,0.9s						
GIGS				AML	AML		
	comp=E,3630μm,1.3s						
PIO1	**Pioraco**	**0.43**	**341**	P	**Pb**	**02 51 36.6**	**-0.4**
PIO1				S	**Sb**	**02 51 43.5**	**0.0**
PIO1				AML	AML		
	comp=E,10010μm,0.4s						
PIO1				AML	AML		
	comp=E,10035μm,0.4s						
PIO1				AML	AML		
	comp=N,16900μm,0.7s						
AQU	**L'Aquila**	**0.45**	**158**		**Pg**	**02 51 35.4**	**-0.9**
AQU	**L'Aquila**	**0.45**	**158**	⇓*e*P	**Pg**	**02 51 35.5**	**-0.9**
AQU				AML	AML		
	comp=E,12400μm,1.4s						
AQU				AML	AML		
	comp=E,12550μm,1.4s						
AQU				AML	AML		
	comp=N,11300μm,1.3s						
AQU				AML	AML		
	comp=N,10850μm,1.3s						
FIU1	**Fiuminata**	**0.46**	**337**	P	**Pg**	**02 51 36.1**	**-0.5**
FIU1				S	**Sb**	**02 51 43.5**	**-0.7**
FIU1				AML	AML		
	comp=E,9415μm,1.1s						
FIU1				AML	AML		
	comp=E,9445μm,1.1s						
FIU1				AML	AML		
	comp=N,8020μm,0.2s						
SSM1	**San Severino M**	**0.46**	**0**	P	**Pg**	**02 51 35.7**	**-1.0**
SSM1				S	**Sg**	**02 51 43.3**	**+0.5**
CESX	**Cesi**	**0.47**	**250**	⇑*e*P	**Pg**	**02 51 36.7**	**-0.1**
CESX				AML	AML		
	comp=E,9195μm,0.5s						
CESX				AML	AML		
	comp=N,7270μm,1.2s						
ASSB	**Assisi San Ben**	**0.47**	**306**	⇑*i*P	**Pg**	**02 51 36.5**	**-0.3**
ASSB				S	**Sb**	**02 51 44.4**	**-0.2**
ASSB				AML	AML		
	comp=E,12065μm,0.3s						
ASSB				AML	AML		
	comp=N,9790μm,0.2s						
GAG1	**Gagliole**	**0.48**	**350**	⇑*i*P	**Pg**	**02 51 36.2**	**-0.7**
GAG1				S	**Sg**	**02 51 43.9**	**+0.6**
GAG1				AML	AML		
	comp=E,33200μm,0.7s						
GAG1				AML	AML		
	comp=N,29400μm,0.5s						
FIAM	**Fiamignano**	**0.50**	**185**	⇓*i*P	**Pg**	**02 51 36.9**	**-0.5**
FIAM				S	**Sb**	**02 51 45.3**	**-0.2**
FIAM				AML	AML		
	comp=E,8350μm,1.1s						
FIAM				AML	AML		
	comp=N,8485μm,1.3s						
SNTG	**Esanatoglia**	**0.52**	**341**	P	**Pg**	**02 51 36.8**	**-0.9**
SNTG				S	**Sg**	**02 51 45.0**	**+0.4**
SNTG				AML	AML		
	comp=E,726μm,0.6s						
SNTG				AML	AML		
	comp=N,851μm,0.5s						
SNTG				AML	AML		
	comp=E,5740μm,0.6s						
SNTG				AML	AML		
	comp=E,726μm,0.6s						
SNTG				AML	AML		
	comp=N,7290μm,0.5s						
TRTR	**Tortoreto Alta**	**0.54**	**86**	P	**Pg**	**02 51 37.9**	**-0.3**
TRTR				AML	AML		
	comp=E,38050μm,0.5s						
TRTR				AML	AML		
	comp=N,31650μm,1.0s						
TRE1	**Treia**	**0.55**	**10**	P	**Pg**	**02 51 37.7**	**-0.7**
TRE1				S	**Sb**	**02 51 47.0**	**+0.1**
EL6	**Elcito**	**0.56**	**354**	P	**Pg**	**02 51 37.5**	**-1.0**
EL6				S	**Sb**	**02 51 47.1**	**-0.2**
ATCC	**AVT- Casa Cast**	**0.57**	**317**	P	**Pg**	**02 51 38.2**	**-0.6**
ATCC				S	**Sb**	**02 51 47.9**	**+0.3**
ATCC				AML	AML		
	comp=E,11115μm,0.6s						
ATCC				AML	AML		
	comp=N,8615μm,0.3s						
ATCC				AML	AML		
	comp=N,8600μm,0.3s						
ATCC				AML	AML		
	comp=N,8605μm,0.3s						
ATCC				AML	AML		
	comp=E,11095μm,0.6s						
CADA	**Capodarco di F**	**0.60**	**45**	P	**Pg**	**02 51 39.2**	**-0.2**
CING	**Cingoli**	**0.61**	**1**	P	**Pg**	**02 51 38.5**	**-0.9**
FOSV	**Fossato di Vic**	**0.61**	**330**	P	**Pg**	**02 51 38.7**	**-0.8**
FOSV				S	**Sb**	**02 51 48.3**	**-0.2**
VCEL	**Villa Celiera**	**0.62**	**127**	⇓*e*P	**Pg**	**02 51 38.4**	**-1.2**
VCEL				S	**Sg**	**02 51 48.1**	**+0.3**
VCEL				AML	AML		
	comp=E,8890μm,0.7s						
VCEL				AML	AML		
	comp=E,8895μm,0.7s						
VCEL				AML	AML		
	comp=N,7620μm,1.1s						
VCEL				AML	AML		
	comp=N,7625μm,1.1s						
CIMA	**Civitanova Mar**	**0.65**	**34**	P	**Pg**	**02 51 39.8**	**-0.3**
MMUR	**Monte Murano**	**0.69**	**349**	P	**Pg**	**02 51 40.6**	**-0.3**
PP3	**Marolino**	**0.69**	**27**	P	**Pg**	**02 51 40.2**	**-0.7**
PP3				S	**Sb**	**02 51 51.9**	**+1.2**
PP3				AML	AML		
	comp=E,17500μm,0.6s						
PP3				AML	AML		
	comp=N,15950μm,0.5s						
PP3				AML	AML		
	comp=E,16450μm,0.6s						
PP3				AML	AML		
	comp=N,15000μm,1.4s						
PP3				AML	AML		
	comp=E,17500μm,0.6s						
PP3				AML	AML		
	comp=N,15900μm,0.5s						
MURB	**Monte Urbino**	**0.69**	**316**		**Pg**	**02 51 40.7**	**-0.2**
MURB				Sg	**Sb**	**02 51 50.5**	**-0.3**
MURB	**Monte Urbino**	**0.69**	**316**	P	**Pg**	**02 51 40.4**	**-0.5**
MURB				S	**Sb**	**02 51 51.8**	**+0.9**
MURB				AML	AML		
	comp=E,12950μm,0.4s						
MURB				AML	AML		
	comp=N,11000μm,0.9s						
MURB				AML	AML		
	comp=N,11050μm,0.8s						
MURB				AML	AML		
	comp=E,14050μm,0.4s						
MURB				AML	AML		
	comp=E,12950μm,0.4s						
MURB				AML	AML		
	comp=N,11500μm,0.8s						
T0110	**Collepietro**	**0.70**	**140**	⇓*e*P	**Pg**	**02 51 39.6**	**-1.6**
T0110				S	**Sb**	**02 51 51.2**	**-0.1**
T0110				AML	AML		
	comp=E,7625μm,1.4s						
T0110				AML	AML		
	comp=N,11900μm,0.5s						
SRES	**S.Oreste - Sor**	**0.72**	**223**	P	**Pg**	**02 51 41.5**	**0.0**
SRES				AML	AML		
	comp=N,2605μm,1.6s						
SRES				AML	AML		
	comp=E,2480μm,1.6s						
SSFR	**Montelago di S**	**0.73**	**337**	P	**Pg**	**02 51 40.5**	**-1.2**
ATTE	**AVT- Monte Tez**	**0.74**	**306**	P	**Pg**	**02 51 41.5**	**-0.4**
ATTE				AML	AML		
	comp=N,2780μm,0.5s						
ATTE				AML	AML		
	comp=E,2955μm,1.0s						
ATFO	**Monte Foce - G**	**0.74**	**324**	P	**Pg**	**02 51 41.2**	**-0.7**
ATFO				AML	AML		
	comp=E,4285μm,0.9s						
ATFO				AML	AML		
	comp=N,3625μm,1.4s						
ATSC	**Scheggia e Pas**	**0.75**	**331**	P	**Pg**	**02 51 41.0**	**-1.1**
ARVD	**Arcevia**	**0.75**	**347**	P	**Pg**	**02 51 41.0**	**-1.0**
PTQR	**Pietraquaria**	**0.76**	**167**	P	**Pg**	**02 51 41.0**	**-1.3**
ATLO	**AVT- Montelove**	**0.79**	**314**	P	**Pg**	**02 51 41.9**	**-0.9**
MGAB	**Montegabbione**	**0.80**	**281**	P	**Pb**	**02 51 43.3**	**+0.1**
MGAB				AML	AML		
	comp=N,6555μm,0.6s						
MGAB				AML	AML		
	comp=N,7125μm,0.4s						
MGAB				AML	AML		
	comp=E,6875μm,1.3s						
MGAB				AML	AML		
	comp=E,7775μm,1.3s						
MTCE	**Montecelio**	**0.81**	**204**	⇑*e*P	**Pg**	**02 51 42.2**	**-1.0**
MTCE				AML	AML		
	comp=N,3080μm,1.1s						
MTCE				AML	AML		
	comp=E,3880μm,0.9s						
FRON	**Frontone**	**0.82**	**336**	⇑*e*P	**Pg**	**02 51 42.2**	**-1.2**
FRON				AML	AML		
	comp=N,6340μm,0.3s						
FRON				AML	AML		
	comp=E,2580μm,0.3s						
TB01	**Gubbio**	**0.82**	**319**	P	**Pg**	**02 51 42.4**	**-1.0**
TB02	**Pietralunga**	**0.82**	**317**	P	**Pg**	**02 51 42.6**	**-0.9**
CERT	**Cerreto**	**0.83**	**190**	P	**Pg**	**02 51 42.3**	**-1.3**
CERT				AML	AML		
	comp=E,6370μm,0.6s						
CERT				AML	AML		
	comp=N,4515μm,0.5s						
ATVO	**AVT- Monte Val**	**0.83**	**318**	P	**Pg**	**02 51 42.5**	**-1.1**
ATVO				AML	AML		
	comp=E,2890μm,0.8s						
ATVO				AML	AML		
	comp=N,2270μm,1.4s						
AOI	**Ancona**	**0.84**	**22**	P	**Pg**	**02 51 42.6**	**-1.2**
AOI				AML	AML		
	comp=E,7025μm,0.4s						
AOI				AML	AML		
	comp=N,6315μm,0.4s						
ATBU	**Serra di Buran**	**0.84**	**327**	P	**Pg**	**02 51 43.3**	**-0.6**
TB03	**Pietralunga**	**0.85**	**319**	P	**Pg**	**02 51 42.9**	**-1.0**
COR1	**Corinaldo**	**0.87**	**352**	P	**Pg**	**02 51 44.2**	**-0.2**
COR1				AML	AML		
	comp=E,9790μm,0.7s						
COR1				AML	AML		
	comp=N,10710μm,0.9s						
COR1				AML	AML		
	comp=E,5350μm,0.7s						
COR1				AML	AML		
	comp=N,9885μm,0.9s						
COR1				AML	AML		
	comp=E,9780μm,0.7s						
COR1				AML	AML		
	comp=N,10690μm,0.9s						
COR1				AML	AML		
	comp=E,5345μm,0.7s						
COR1				AML	AML		
	comp=N,9850μm,0.9s						
ATMI	**Monte Miggiano**	**0.87**	**311**	AML	AML		
	comp=E,8955μm,1.1s						
ATMI				AML	AML		
	comp=N,7225μm,1.6s						
ATPC	**Poggio Castell**	**0.89**	**324**	P	**Pg**	**02 51 44.0**	**-0.7**
ATPI	**Pietralunga -**	**0.89**	**321**	P	**Pg**	**02 51 43.8**	**-0.9**
ATPI				AML	AML		
	comp=E,3295μm,1.6s						
ATPI				AML	AML		
	comp=N,3105μm,1.4s						
PIEI	**Pieia**	**0.90**	**329**	P	**Pg**	**02 51 43.8**	**-1.1**
PIEI				AML	AML		
	comp=E,2735μm,1.0s						
PIEI				AML	AML		
	comp=N,2420μm,1.3s						
PIEI				AML	AML		
	comp=N,2425μm,1.3s						
MPAG	**Monte Paganucc**	**0.91**	**341**	P	**Pg**	**02 51 44.1**	**-1.1**
MPAG				AML	AML		
	comp=E,3390μm,0.4s						
MPAG				AML	AML		
	comp=N,2480μm,1.4s						
MPAG				AML	AML		
	comp=E,3600μm,0.4s						
MPAG				AML	AML		
	comp=E,3390μm,0.4s						
MPAG				AML	AML		
	comp=N,2465μm,1.4s						
INTR	**Introdacqua**	**0.93**	**144**	⇓P	**Pg**	**02 51 43.3**	**-2.2**
INTR				AML	AML		
	comp=E,3μm,0.7s						
INTR				AML	AML		
	comp=N,5765μm,0.7s						
INTR				AML	AML		
	comp=N,4μm,0.7s						
INTR				AML	AML		
	comp=E,3μm,0.7s						
INTR				AML	AML		
	comp=E,2765μm,0.6s						
RCAV	**Rocca di Cave**	**0.94**	**191**	P	**Pg**	**02 51 45.3**	**-0.3**
RCAV				AML	AML		
	comp=E,4725μm,0.7s						
RCAV				AML	AML		
	comp=N,5525μm,0.4s						
SACS	**San Casciano d**	**0.94**	**275**	P	**Pg**	**02 51 45.5**	**-0.1**
SACS				AML	AML		
	comp=N,2875μm,1.0s						
SACS				AML	AML		
	comp=E,2685μm,1.6s						
SACS				AML	AML		
	comp=N,2765μm,1.1s						
SACS				AML	AML		
	comp=E,2735μm,1.6s						
SENI	**Senigallia**	**0.94**	**3**	P	**Pg**	**02 51 45.0**	**-0.6**
NARO	**Abbazia di Nar**	**0.95**	**333**	P	**Pg**	**02 51 44.5**	**-1.4**
NARO				AML	AML		
	comp=E,2180μm,0.7s						
NARO				AML	AML		
	comp=N,2715μm,0.5s						
VVLD	**Villa Vallelon**	**0.95**	**160**	P	**Pg**	**02 51 45.5**	**-0.5**
APEC	**Apecchio**	**0.96**	**325**	P	**Pg**	**02 51 45.5**	**-0.6**
APEC				AML	AML		
	comp=E,659μm,1.6s						
APEC				AML	AML		
	comp=E,661μm,1.6s						
APEC				AML	AML		
	comp=N,3700μm,0.9s						
APEC				AML	AML		
	comp=E,2740μm,0.5s						
APEC				AML	AML		
	comp=N,700μm,0.9s						
FSSB	**Fossombrone**	**0.97**	**343**	P	**Pg**	**02 51 45.2**	**-1.0**
FSSB				AML	AML		
	comp=N,12350μm,0.4s						
FSSB				AML	AML		
	comp=E,8390μm,0.4s						
GUAR	**Guarcino**	**0.98**	**174**	AML	AML		
	comp=E,2800μm,0.7s						
GUAR				AML	AML		
	comp=N,4615μm,0.6s						
ATMC	**Monte Cedrone**	**0.99**	**314**	P	**Pg**	**02 51 46.6**	**0.0**
RMP	**Rome, Mte Porz**	**1.02**	**200**	AML	AML		
	comp=E,5390μm,0.8s						
RMP				AML	AML		
	comp=N,4880μm,0.5s						
LATE	**Laterza**	**1.02**	**262**	Pg	**Pg**	**02 51 46.9**	**-0.3**
LPEL	**Lama dei Pelig**	**1.04**	**134**	⇓P	**Pg**	**02 51 45.1**	**-2.4**
LPEL				AML	AML		
	comp=E,2035μm,1.5s						
LPEL				AML	AML		
	comp=N,2375μm,1.1s						
CAFI	**Castiglion Fio**	**1.05**	**303**	P	**Pg**	**02 51 47.2**	**-0.6**
CAFI				AML	AML		
	comp=N,1620μm,0.8s						
CAFI				AML	AML		
	comp=E,1920μm,1.3s						
PE3	**Peglio**	**1.05**	**332**	AML	AML		
	comp=E,21μm,0.5s						
PE3				AML	AML		
	comp=N,18μm,0.4s						
VIVA	**Pratoni del Vi**	**1.06**	**197**	P	**Pg**	**02 51 48.1**	**+0.2**
VIVA				AML	AML		
	comp=E,5510μm,1.2s						
VIVA				AML	AML		
	comp=N,6135μm,0.5s						
RDP	**Rocca di Papa**	**1.06**	**199**	P	**Pb**	**02 51 47.9**	**+0.1**
RDP				AML	AML		
	comp=E,7150μm,0.5s						
RDP				AML	AML		

comp=N,8075µm,0.6s
MA9 Marino 1.07 201 P **Pb** **02 51 47.4 -0.5**
MA9 AML AML
comp=N,4300µm,0.6s
MA9 AML AML
comp=E,6155µm,0.6s
SF03 Valle Cupa 1.10 272 P **Pg** **02 51 48.8 +0.1**
MCIV Monte Civitell 1.10 271 P **Pb** **02 51 48.7 +0.2**
MCIV AML AML
comp=N,908µm,0.8s
MCIV AML AML
comp=E,1036µm,0.4s
SF11 Podere del Sol 1.11 276 P **Pb** **02 51 48.8 +0.3**
SSP9 Sansepolcro 1.11 317 AML AML
comp=E,2600µm,1.2s
SSP9 AML AML
comp=N,3005µm,1.2s
SF04 Casetta 1.12 274 P **Pn** **02 51 49.7 +0.8**
TOLF Tolfa 1.12 231 P **Pb** **02 51 48.5 -0.2**
TOLF AML AML
comp=N,1625µm,1.1s
TOLF AML AML
comp=E,2000µm,0.4s
POFI Posta Fibreno 1.12 159 AML AML
comp=E,1835µm,0.6s
POFI AML AML
comp=N,1200µm,0.8s
POFI AML AML
comp=N,1255µm,0.8s
POFI AML AML
comp=E,1725µm,0.6s
LAV9 Lanuvio 1.15 198 AML AML
comp=N,4865µm,1.4s
LAV9 AML AML
comp=E,4855µm,1.6s
LAV9 AML AML
comp=E,4595µm,1.6s
LAV9 AML AML
comp=N,4870µm,1.4s
SF13 Bagnolo 1.15 273 P **Pg** **02 51 49.7 +0.1**
SF14 Selvena 1.15 270 P **Pg** **02 51 50.1 +0.4**
LRP Arpino 1.16 165 P **Pb** **02 51 48.8 -0.6**
LRP AML AML
comp=E,1050µm,0.9s
LRP AML AML
comp=N,1360µm,0.7s
SF01 Poggio Pratacc 1.19 273 P **Pg** **02 51 50.7 +0.3**
PESA Pesaro 1.20 348 P **Pb** **02 51 49.7 -0.3**
GIUL Giuliano Di Ro 1.21 177 P **Pn** **02 51 50.1 -0.1**
GIUL AML AML
comp=N,1665µm,0.7s
GIUL AML AML
comp=E,1630µm,0.6s
ARCI Arcidosso 1.25 274 P **Pg** **02 51 51.9 +0.3**
RSM Repubblica di 1.28 336 P **Pg** **02 51 52.0 -0.1**
LATB Latina 1.28 187 P **Pn** **02 51 51.1 0.0**
RNI2 Rionero Sannit 1.29 145 AML AML
comp=N,2065µm,0.6s
RNI2 AML AML
comp=E,2540µm,1.3s
RNI2 AML AML
comp=E,2620µm,1.3s
RNI2 AML AML
comp=N,2020µm,0.6s
TRIV Trivento 1.43 134 P **Pb** **02 51 54.6 +0.6**
TRIV AML AML
comp=N,2435µm,0.8s
TRIV AML AML
comp=E,2540µm,0.8s
TRIV AML AML
comp=N,2520µm,0.8s
TRIV AML AML
comp=E,2700µm,0.9s
ASQU Asqua 1.44 316 P **Pg** **02 51 55.3 0.0**
SFI Santa Sofia 1.49 320 P **Pb** **02 51 55.2 +0.1**
SFI AML AML
comp=E,975µm,1.2s
SFI AML AML
comp=N,1210µm,1.1s
FROS Frosini 1.55 287 P **Pn** **02 51 55.5 +0.7**
CSNT Castellina Chi 1.55 298 P **Pn** **02 51 55.2 +0.3**
CSNT AML AML
comp=E,438µm,0.8s
CSNT AML AML
comp=N,518µm,0.6s
VAGA Valle Agricola 1.56 149 P **Pg** **02 51 57.2 -0.3**
OSSC Osservatorio P 1.60 299 Pn **Pn** **02 51 55.8 +0.3**
OSSC Osservatorio P 1.60 299 P **Pb** **02 51 56.7 -0.2**
OSSC AML AML
comp=N,506µm,1.3s
OSSC AML AML
comp=N,552µm,0.7s
OSSC AML AML
comp=E,570µm,0.8s
OSSC AML AML
comp=E,504µm,0.9s
BSSO Busso 1.61 139 P **Pb** **02 51 57.7 +0.6**
RUFI Rufina 1.62 312 P **Pb** **02 51 56.9 -0.4**
CASP Castiglione de 1.70 272 Pn **Pn** **02 51 56.7 -0.2**
CASP Castiglione de 1.70 272 P **Pn** **02 51 57.2 +0.3**
CASP AML AML
comp=E,250µm,0.9s
CASP AML AML
comp=N,182µm,0.7s
TRIF Trifonti 1.71 282 P **Pn** **02 51 57.5 +0.6**
TRIF AML AML
comp=E,390µm,0.4s
TRIF AML AML
comp=N,393µm,0.4s
PIGN Pignataro Magg 1.74 154 P **Pn** **02 51 58.6 +1.2**
SACR S. Croce Del S 1.78 140 P **Pb** **02 52 00.2 +0.1**
MELA Melanico ??? S 1.80 126 P **Pn** **02 51 59.1 +1.0**
MELA AML AML
comp=N,2300µm,0.6s
MELA AML AML
comp=E,1725µm,0.7s
MELA AML AML
comp=E,1670µm,0.7s
MELA AML AML
comp=N,2365µm,0.6s
VITU Vitulano (BN) 1.92 145 P **Pb** **02 52 02.5 +0.1**
MPPT Montemurlo 1.93 309 P **Pn** **02 52 01.4 +1.3**
PSB1 Pescosannita 1.97 141 P **Pb** **02 52 02.2 -1.0**
MTCR Monte La Croce 2.03 309 P **Pn** **02 52 02.4 +0.9**
SGRT San Giovanni R 2.16 117 Pn **Pn** **02 52 03.4 +0.1**
ZCCA Zocca 2.25 315 Pn **Pn** **02 52 05.9 +1.4**
VLC Villacollemand 2.46 305 Pn **Pn** **02 52 07.1 -0.3**
TEOL Teolo 2.81 338 Pn **Pn** **02 52 12.7 +0.6**
SKDS Skadanscina 2.84 12 *i* Pn **Pn** **02 52 11.7 -0.9**
SKDS *e*Sn **Sn** **02 52 46.8 +0.1**
SKDS IAML 02 53 10.1
comp=Z,185nm,0.6s
ACER Acerenza 2.86 133 P **Pn** **02 52 13.6 +0.7**
ACER AML AML
comp=N,385µm,0.7s
ACER AML AML
comp=E,374µm,0.7s
ACER AML AML
comp=E,396µm,0.7s
ACER AML AML
comp=N,419µm,0.8s
PRMA PARMA 2.88 315 Pn **Pn** **02 52 13.6 +0.5**
TRI Trieste 2.97 8 Pn **Pn** **02 52 13.6 -0.8**
MSSA Maissana 3.08 301 Pn **Pn** **02 52 16.8 +1.0**
PGF Pioggiola 3.09 267 *e*P **Pn** **02 52 17.3 +1.2**
PGF *e*Sn **Sn** **02 52 50.0 -2.9**
comp=N,3.3nm,0.3s
SABO M.te Sabotino 3.23 5 Pn **Pn** **02 52 17.6 -0.3**
ROVR Rover Verones 3.25 333 P **Pn** **02 52 18.3 -0.1**
ROVR AML AML
comp=E,77µm,0.9s
ROVR AML AML
comp=N,134µm,0.5s
STON Ston 3.33 87 *e*Pn **Pn** **02 52 19.3 +0.1**
STON *e*Sn **Sn** **02 53 00.8 +2.2**
GORR Gorreto 3.36 304 P **Pn** **02 52 22.7 +2.9**
MATE Matera 3.38 128 ⇑P **Pn** **02 52 21.5 +1.5**
CUC Castrocucco 3.41 144 Pn **Pn** **02 52 22.1 +1.6**
LJU Ljubljana 3.42 16 P **Pn** **02 52 20.8 +0.3**
LJU AML AML
comp=N,2365µm,0.7s
LJU AML AML
comp=E,2005µm,0.8s
SALO Salr 3.43 327 Pn **Pn** **02 52 21.8 +1.1**
MPRI Monte Prat 3.48 358 P **Pn** **02 52 21.7 +0.3**
MPRI AML AML
comp=E,393µm,1.1s
MPRI AML AML
comp=N,524µm,0.4s
STAL STALIGIAL 3.51 355 Pn **Pn** **02 52 21.3 -0.4**
STAL STALIGIAL 3.51 355 P **Pn** **02 52 21.0 -0.8**
STAL AML AML
comp=E,410µm,0.4s
STAL AML AML
comp=N,264µm,1.2s
BLY Banja Luka 3.51 54 *e*Pn **Pn** **02 52 24.9 +3.1**
BLY *e*Sn **Sn** **02 53 06.7 +3.5**
NOCI Noci 3.52 123 P **Pn** **02 52 21.3 -0.6**
NOCI AML AML
comp=N,187µm,1.1s
NOCI AML AML
comp=E,164µm,0.4s
MAGA Magasa 3.52 330 P **Pn** **02 52 18.9 -3.1**
MAGA AML AML
comp=N,452µm,0.5s
MAGA AML AML
comp=E,636µm,0.5s
CIMO Cimolais 3.58 352 Pn **Pn** **02 52 22.3 -0.5**
GAGG Gaggia 3.68 335 P **Pn** **02 52 24.7 +0.5**
GAGG AML AML
comp=E,394µm,0.8s
GAGG AML AML
comp=N,229µm,0.8s
PRED Cave del Predi 3.69 4 Pn **Pn** **02 52 25.8 +1.6**
CLUD Cludinico 3.69 357 Pn **Pn** **02 52 24.6 +0.3**
ZONE Zone 3.71 325 P **Pn** **02 52 25.3 +0.7**
ZOU Zoufplan 3.79 358 P **Pn** **02 52 23.8 -2.0**
ZOU AML AML
comp=N,218µm,1.6s
ZOU AML AML
comp=E,267µm,1.6s
OBKA Obir 3.87 14 *e*Pn **Pn** **02 52 31.0 +4.2**
comp=E,4.1nm,0.2s
OBKA Obir 3.87 14 *e*Pn **Pn** **02 52 30.2 +3.5**
MYKA Terra Mystica 3.88 5 *e*Pn **Pn** **02 52 27.6 +0.7**
comp=E,5.0nm,0.4s
KOSI Kohlern 3.91 341 P **Pn** **02 52 28.2 +0.8**
KOSI AML AML
comp=E,342µm,0.9s
KOSI AML AML
comp=N,251µm,1.0s
HCY Herceg Novi 3.94 93 ⇓*i*Pn **Pn** **02 52 28.1 +0.5**
HCY *i* Sn **Sn** **02 53 14.8 +1.1**
BRY Bratogost 3.95 86 ⇓*i*Pn **Pn** **02 52 28.3 +0.4**
BRY *i* Sn **Sn** **02 53 15.4 +1.3**
APPI Appiano 3.96 340 P **Pn** **02 52 29.4 +1.4**
APPI AML AML
comp=E,157µm,0.4s
APPI AML AML
comp=N,202µm,0.5s
ABTA Abfaltersbach 4.01 353 Pn **Pn** **02 52 29.6 +0.9**
comp=N,46nm,0.5s,SNR=26
SOKA Soboth 4.13 18 *e*Pn **Pn** **02 52 32.6 +2.3**
comp=N,1.8nm,0.2s
UPM Unac-Piva 4.22 82 ⇓*i*Pn **Pn** **02 52 32.5 +0.7**
UPM *i* Sn **Sn** **02 53 22.2 +1.2**
CEME Cevo 4.24 91 ⇑*i*Pn **Pn** **02 52 32.5 +0.7**
CEME *i* Sn **Sn** **02 53 22.4 +1.2**
BUM Brajici-Budva 4.25 94 ⇓*i*Pn **Pn** **02 52 32.9 +0.9**
BUM *i* Sn **Sn** **02 53 23.0 +1.5**
RISI Rein 4.25 350 P **Pn** **02 52 32.6 +0.5**
RISI AML AML
comp=E,311µm,0.5s
RISI AML AML
comp=N,382µm,0.5s
NKME Niksic 4.25 88 ⇑*i*Pn **Pn** **02 52 32.9 +0.9**
NKME *i* Sn **Sn** **02 53 22.5 +1.0**
KBA Koelnbreinsper 4.31 2 *e*Pn **Pn** **02 52 34.5 +1.6**
comp=N,9.0nm,0.3s
KBA Koelnbreinsper 4.31 2 *e*Sn **Sn** **02 53 22.9 -0.3**
SBF Sospel 4.33 287 *e*P **Pn** **02 52 34.1 +1.0**
SBF *e*Sn **Sn** **02 53 20.0 -3.5**
comp=N,22nm,0.6s
VSL Villasalto 4.35 223 P **Pn** **02 52 34.9 +1.6**
FUORN Ofenpass-Fuorn 4.38 333 Pn **Pn** **02 52 36.4 +2.5**
DRME Dracevica, Mon 4.48 95 ⇓*i*Pn **Pn** **02 52 36.0 +0.9**
DRME *i* Sn **Sn** **02 53 28.4 +1.3**
PDG Podgorica 4.50 92 ⇑P **Pn** **02 52 33.3 -2.1**
PDG Podgorica 4.50 92 Pn **Pn** **02 52 35.5 +0.2**
PDG Podgorica 4.50 92 *e*Pn **Pn** **02 52 36.4 +1.1**
PDG *e*Sn **Sn** **02 53 28.1 +0.6**
TTG Podgorica 4.50 92 ⇓*i*Pn **Pn** **02 52 36.2 +0.9**
TTG *i* Sn **Sn** **02 53 28.5 +1.0**
ULC Ulcinj 4.57 98 ⇑*i*Pn **Pn** **02 52 37.1 +0.8**
ULC *i* Sn **Sn** **02 53 29.7 +0.5**
PLE Pljevlja 4.59 81 ⇓*i*Pn **Pn** **02 52 37.9 +1.2**
PLE *i* Sn **Sn** **02 53 30.5 +0.6**
FETA Feichten 4.59 339 Pn **Pn** **02 52 39.1 +2.3**
comp=N,6.2nm,0.4s,SNR=6.6
WTTA Wattenberg 4.63 347 *e*Pn **Pn** **02 52 39.9 +2.7**
comp=N,0.9nm,0.1s
WTTA Wattenberg 4.63 347 *e*Pn **Pn** **02 52 40.0 +2.7**
DAVOX Davos/Dischmat 4.65 331 Pn **Pn** **02 52 40.1 +2.5**
comp=N,5.6nm,0.3s,baz=141,slow=15,SNR=18
DAVOX Sn **Sn** **02 53 33.9 +2.4**
comp=N,1.5nm,0.3s,baz=200,slow=17,SNR=1.0
KOME Kolasin 4.66 87 ⇑*i*Pn **Pn** **02 52 38.9 +1.2**
KOME *i* Sn **Sn** **02 53 32.8 +1.1**
SQTA Sankt Quirin 4.67 343 **Pn** **02 52 40.2 +2.4**
SQTA Sankt Quirin 4.67 343 Pn **Pn** **02 52 40.2 +2.4**
comp=N,8.8nm,0.3s,SNR=10
BBLS Lazići 4.67 74 *e*Pn **Pn** **02 52 39.3 +1.5**
WATA Walderalm 4.71 347 **Pn** **02 52 40.9 +2.6**
WATA Walderalm 4.71 347 Pn **Pn** **02 52 40.9 +2.6**
comp=N,7.2nm,0.2s,SNR=8.1
ARSA Arzberg 4.78 20 *e*Pn **Pn** **02 52 39.6 +0.3**
comp=N,1.2nm,0.3s
ARSA Arzberg 4.78 20 *e*Pn **Pn** **02 52 39.6 +0.3**
ARSA *e*Sn **Sn** **02 53 32.5 -2.0**
SCTE Santa Cesarea 4.80 122 Pn **Pn** **02 52 40.0 +0.5**
MOTA Moosalm 4.81 343 **Pn** **02 52 43.3 +3.6**
MOTA Moosalm 4.81 343 *i* Pn **Pn** **02 52 43.3 +3.6**
comp=N,16nm,0.8s,SNR=8.2
LMR La Mourre 4.92 279 *e*P **Pn** **02 52 42.2 +1.1**
LMR *e*Sn **Sn** **02 53 33.5 -4.3**
comp=N,3.1nm,0.3s
BIOA Bad Ischl, Aus 4.93 4 **Pn** **02 52 42.1 +0.8**
BIOA Bad Ischl, Aus 4.93 4 *e*Pn **Pn** **02 52 42.1 +0.8**
comp=N,2.8nm,0.2s
IVA Berane 4.94 87 ⇓*i*Pn **Pn** **02 52 42.6 +1.1**
IVA *i* Sn **Sn** **02 53 39.6 +1.0**
RJOB Jochberg 4.98 357 *e*Pn **Pn** **02 52 43.4 +1.5**
PVY Plav 5.00 90 ⇑*i*Pn **Pn** **02 52 43.3 +0.9**
PVY *i* Sn **Sn** **02 53 40.9 +0.8**
SJES Sjenica 5.01 82 *e*Pn **Pn** **02 52 44.1 +1.7**
RETA Reutte 5.02 341 *i* Pn **Pn** **02 52 45.0 +2.5**
comp=N,4.2nm,0.3s,SNR=10.0
MBDF Montbardon 5.04 295 *e*P **Pn** **02 52 44.3 +1.4**
MBDF *e*Sn **Sn** **02 53 36.4 -4.6**
comp=N,11nm,0.6s
PLONS Plons/SG 5.06 329 *e*Pn **Pn** **02 52 46.7 +3.6**
OBER Oberstdorf 5.07 337 *e*Pn **Pn** **02 52 46.8 +3.6**
DAVA Damuels 5.09 334 *i* Pn **Pn** **02 52 46.3 +2.7**
comp=N,6.6nm,0.5s,SNR=8.4
DAVA Damuels 5.09 334 *e*Pn **Pn** **02 52 46.2 +2.7**
DIVS Divibare 5.14 73 Pn **Pn** **02 52 45.1 +0.9**
DIVS Divibare 5.14 73 *e*Pn **Pn** **02 52 45.3 +1.1**
MOA Molln 5.14 8 *e*Pn **Pn** **02 52 44.9 +0.7**
MOA *e*Sn **Sn** **02 53 43.5 +0.2**
MOA Molln 5.14 8 *e*Pn **Pn** **02 52 46.1 +1.9**
comp=N,12nm,0.6s
MOA Molln 5.14 8 *e*Pn **Pn** **02 52 44.6 +0.4**
MOA *e*Sn **Sn** **02 53 43.3 0.0**
IVAS Ivanjica 5.17 79 *e*Pn **Pn** **02 52 45.1 +0.5**
IVAS *e*Sn **Sn** **02 53 43.6 -0.4**
TIR Tirane 5.18 104 ⇓P **Pn** **02 52 45.4 +0.8**
TIR Tirane 5.18 104 Pn **Pn** **02 52 44.7 0.0**
TIR Tirane 5.18 104 *e*Pn **Pn** **02 52 45.4 +0.8**
TIR *e*Sn **Sn** **02 53 45.0 +0.8**
TIR Tirane 5.18 104 P **Pn** **02 52 44.5 -0.2**
TIR AML AML
comp=E,162µm,1.6s
TIR AML AML
comp=N,136µm,1.6s
MORH Mrgy, Hungar 5.21 47 *e*Pn **Pn** **02 52 45.5 +0.4**
BNI Bardonecchia 5.22 298 Pn **Pn** **02 52 47.9 +2.5**
VLO Vlora 5.26 114 Pn **Pn** **02 52 46.8 +1.0**
FRGS Fruska Gora 5.35 61 ⇑P **Pn** **02 52 48.6 +1.5**
FRGS Fruska Gora 5.35 61 *e*Pn **Pn** **02 52 49.1 +2.0**
LPG La Plagne 5.37 303 *e*P **Pn** **02 52 49.8 +2.2**
LPG *e*Sn **Sn** **02 53 44.6 -4.8**
comp=N,6.4nm,0.5s
UBR Ueberruh 5.37 337 *e*Pn **Pn** **02 52 48.6 +1.3**
UBR *e*Sn **Sn** **02 53 51.7 +2.7**
LPL La Plagne 5.39 303 *e*P **Pn** **02 52 50.7 +2.9**
LPL *e*Sn **Sn** **02 53 45.1 -4.7**
comp=N,5.1nm,0.4s
RONA Rosalia, Austr 5.40 23 **Pn** **02 52 47.9 +0.1**
RONA Rosalia, Austr 5.40 23 *e*Pn **Pn** **02 52 47.9 +0.1**
comp=N,1.7nm,0.3s
TRUS Trudelj 5.46 72 *e*Pn **Pn** **02 52 51.1 +2.6**
CONA Conrad Observa 5.50 19 *e*Pn **Pn** **02 52 49.5 +0.3**
comp=N,1.2nm,0.3s
SENIN Lac Senin/Sane 5.53 313 Pn **Pn** **02 52 52.0 +2.3**
GRUS Gruza 5.61 76 *e*Pn **Pn** **02 52 51.1 +0.5**
SMRF Simiane la Rot 5.67 285 *e*P **Pn** **02 52 53.7 +2.2**
SMRF *e*Sn **Sn** **02 53 51.8 -4.7**
comp=N,1.7nm,0.4s
ORIF Oris-en-Rattie 5.70 295 *e*P **Pn** **02 52 54.4 +2.5**
ORIF *e*Sn **Sn** **02 53 52.2 -5.0**
comp=N,14nm,0.8s
SELS Selova 5.84 83 *e*Pn **Pn** **02 52 54.2 +0.4**
KEK Kerkira 5.85 119 Pn **Pn** **02 52 55.0 +1.1**
BALST Balsthal 5.99 322 *e*Pn **Pn** **02 52 57.4 +1.5**
KBN Korca 6.09 108 Pn **Pn** **02 52 57.5 +0.3**
GEC2 GERESS Array S 6.09 3 Pn **Pn** **02 52 57.0 -0.2**
GEC2 GERESS Array S 6.09 3 *e*Pn **Pn** **02 52 57.3 0.0**
GEC2 *e*Sn **Sn** **02 54 04.3 -2.6**
GERES GERESS Array B 6.09 3 Pn **Pn** **02 52 57.0 -0.2**
comp=N,0.8nm,0.3s,baz=174,slow=14,SNR=9.8
GERES Sn **Sn** **02 54 03.0 -3.8**
comp=N,4.5nm,0.3s,baz=169,slow=23,SNR=13
comp=N,1.7nm,0.5s
ZST Bratislava 6.09 26 *e*PN **Pn** **02 52 55.6 -1.6**
ZST *e*SN **Sn** **02 54 02.5 -4.1**
CKRC Cesky Krumlov 6.10 7 *e*PN **Pn** **02 52 56.7 -0.7**
CKRC *e*SN **Sn** **02 54 04.1 -3.0**
BOVS Bovan 6.29 79 ⇓P **Pn** **02 52 59.9 -0.1**
BOVS Bovan 6.29 79 *e*Pn **Pn** **02 53 00.1 +0.1**
MODS Modra-Piesok 6.30 26 *e*PN **Pn** **02 52 58.3 -1.8**
MODS *e*SN **Sn** **02 54 09.3 -2.6**
MODS *e*SG **Sg** **02 54 48.3 -1.3**
CABF La Chapelle 6.35 310 *e*P **Pn** **02 53 02.4 +1.6**
CABF *e*Sn **Sn** **02 54 08.1 -5.1**
comp=N,2.1nm,0.3s
BARS Barje 6.36 87 *e*Pn **Pn** **02 53 01.9 +1.0**
BARS *e*Sn **Sn** **02 54 12.5 -0.8**
KHC Kasperske Hory 6.37 2 Pn **Pn** **02 53 00.8 -0.3**
KHC Kasperske Hory 6.37 2 *e*PN **Pn** **02 53 00.6 -0.5**
KHC *e*SN **Sn** **02 54 10.7 -3.0**
VIVF Saint-Julien-l 6.50 292 *e*P **Pn** **02 53 06.6 +3.8**
VIVF *e*Sn **Sn** **02 54 11.4 -5.4**
comp=N,1.5nm,0.4s
BFO Black Forest 6.52 330 Pn **Pn** **02 53 04.2 +1.1**
BFO Black Forest 6.52 330 *e*Sn **Sn** **02 54 17.1 -0.2**
PRVS Prvonek 6.57 89 *e*Pn **Pn** **02 53 04.6 +0.8**
PRVS *e*Sn **Sn** **02 54 17.5 -1.1**
KRUC Moravsky 6.68 19 *e*PN **Pn** **02 53 05.4 +0.1**
ZAGS Zajecar 6.69 78 *e*Pn **Pn** **02 53 05.7 +0.3**
BZS Buzias 6.70 62 ⇑P **Pn** **02 53 06.4 +0.8**
BZS Buzias 6.70 62 *e*Pn **Pn** **02 53 06.3 +0.7**
HINF Hinteralfeld 6.73 321 *e*P **Pn** **02 53 07.5 +1.4**
HINF *e*Sn **Sn** **02 54 17.2 -5.4**
comp=N,8.1nm,0.4s
BOSS Bosilegrad 6.87 89 *e*Pn **Pn** **02 53 08.6 +0.7**
BOSS *e*Sn **Sn** **02 54 24.5 -1.4**
ECH Echery 6.89 324 **Pn** **02 53 09.2 +1.0**
LASF Ste Croix 6.91 284 *e*P **Pn** **02 53 10.8 +2.3**
LASF *e*Sn **Sn** **02 54 21.3 -5.7**
comp=N,1.1nm,0.6s
ZAPS Zavoj 6.95 83 *e*Pn **Pn** **02 53 10.1 +1.1**
ZAPS *e*Sn **Sn** **02 54 27.0 -1.0**
VRAC Vranov 6.96 19 Pn **Pn** **02 53 08.3 -0.8**
comp=N,0.4nm,0.3s,baz=204,slow=14,SNR=2.1
VRAC Sn **Sn** **02 54 24.2 -3.9**
comp=N,0.2nm,0.3s,baz=135,slow=20,SNR=2.1
comp=N,0.8nm,0.3s
VRAC Vranov 6.96 19 *e*PN **Pn** **02 53 08.6 -0.5**
VYHS Vyhne 6.96 33 *e*PN **Pn** **02 53 10.5 +1.3**
VYHS *e*SN Sn 02 54 16.7 -12
CDF Champ du Feu 7.00 326 *e*P **Pn** **02 53 10.8 +1.1**
CDF *e*Sn **Sn** **02 54 23.3 -5.9**
comp=N,5.7nm,0.4s
HERR Herculane 7.01 69 ⇑P **Pn** **02 53 10.0 +0.2**
HAU Haudompre 7.11 320 *e*P **Pn** **02 53 12.6 +1.4**
HAU *e*Sn **Sn** **02 54 25.9 -5.9**
comp=N,29nm,0.5s
PRU Pruhonice 7.28 7 *e*SN **Sn** **02 54 31.7 -4.3**
GZR Gura Zlata 7.39 66 ⇑P **Pn** **02 53 15.9 +0.8**
VTS Vitosha 7.41 88 Pn **Pn** **02 53 17.8 +2.3**
LIT Litokhoron 7.49 108 Pn **Pn** **02 53 17.0 +0.6**
KEST Kesra 7.63 204 Pn **Pn** **02 53 20.1 +1.7**
comp=N,0.1nm,0.3s,baz=60,slow=20,SNR=1.3
comp=N,1.9nm,0.8s
MORC Moravsky Berou 7.63 22 Pn **Pn** **02 53 20.2 +1.8**
SMF Signal de Mont 7.70 303 *e*P **Pn** **02 53 22.1 +2.9**
SMF *e*Sn **Sn** **02 54 39.8 -6.4**
comp=N,1.6nm,0.4s
KRLC Kraliky 7.72 18 *e*PN **Pn** **02 53 19.5 -0.1**
KRLC *e*SN **Sn** **02 54 43.7 -3.2**
PAGF Fort de Pagny 7.79 321 *e*P **Pn** **02 53 22.1 +1.6**
PAGF *e*Sn **Sn** **02 54 42.1 -6.4**
comp=N,3.4nm,0.3s
SFTF Sexfontaines 7.89 316 *e*P **Pn** **02 53 23.8 +1.9**
SFTF *e*Sn **Sn** **02 54 44.9 -6.0**
comp=N,1.9nm,0.3s
SRS Serrai 7.94 98 *e*Pn **Pn** **02 53 23.3 +0.7**
SRS *e*Sn **Sn** **02 54 49.2 -3.0**
LOR Lormes 7.99 307 *e*P **Pn** **02 53 25.7 +2.5**
baz=123
LOR *e*Sn **Sn** **02 54 47.5 -5.9**
comp=N,2.5nm,0.4s
MTLF Montolieu 8.05 278 *e*P **Pn** **02 53 27.6 +3.5**
MTLF *e*Sn **Sn** **02 54 48.4 -6.5**
comp=N,0.9nm,0.3s
AVF Avril sur Loir 8.06 303 *e*P **Pn** **02 53 25.9 +1.7**
AVF *e*Sn **Sn** **02 54 48.5 -6.7**
comp=N,1.4nm,0.5s
MEZF Maizieres J'vi 8.08 318 *e*P **Pn** **02 53 27.4 +3.0**
MEZF *e*Sn **Sn** **02 54 49.1 -6.5**
comp=N,3.8nm,0.4s
SSF Saint Saulge 8.09 305 *e*P **Pn** **02 53 26.9 +2.2**
SSF *e*Sn **Sn** **02 54 49.4 -6.6**
comp=N,1.3nm,0.4s
SAVF Savonnieres en 8.12 319 *e*P **Pn** **02 53 28.0 +3.0**
SAVF *e*Sn **Sn** **02 54 49.9 -6.7**
comp=N,5.2nm,0.5s
BRG Berggiesshubel 8.12 3 *e*(P) Pb 02 53 37.0 -11
BRG Amp 02 53 40.6
comp=Z,2.1nm,0.5s
BRG *ex* x 02 54 51.4
BRG *ex* x 02 55 44.5
BRG Amp 02 56 09.5
comp=Z,6.5nm,0.8s
BGF Bois d'Agland 8.28 301 *e*P **Pn** **02 53 29.3 +2.1**
BGF *e*Sn **Sn** **02 54 53.8 -6.8**
comp=Z,2.2nm,0.3s
CAF Calviac 8.32 289 *e*P **Pn** **02 53 30.1 +2.3**
CAF *e*Sn **Sn** **02 54 54.7 -6.8**
comp=Z,0.4nm,0.2s
CLL Collm 8.54 359 *e*Pn Pn 02 53 25.0 -5.8
CLL *ex* x 02 53 36.0
CLL *ex* x 02 55 05.0
CLL *ex* x 02 55 23.0
CLL *ex* x 02 55 56.0
comp=Z,16nm,0.7s
CLL *e*Sg Sg 02 56 14.0 +13
TCF Toulx Ste Croi 8.59 298 *e*P **Pn** **02 53 35.7 +4.2**
TCF *e*Sn **Sn** **02 55 01.0 -7.2**
comp=Z,0.4nm,0.3s
ITM Ithomi 8.73 127 Pn **Pn** **02 53 34.9 +1.5**
RDO Rodhopi 9.35 96 Pn **Pn** **02 53 42.5 +0.6**
MLR Muntele Rosu 9.58 69 Pn **Pn** **02 53 47.0 +1.9**
comp=Z,0.1nm,0.3s,baz=177,slow=9.3,SNR=5.0
comp=Z,2.4nm,0.7s
AKASG Malin Array Be 13.55 49 Pn **Pn** **02 54 41.0 +1.8**
comp=Z,0.2nm,0.3s,baz=287,slow=18,SNR=1.3
comp=Z,0.2nm,0.4s
ELL Elmali 14.20 109 P **P** **02 54 57.2 +1.4**
ILGA Ilgaz 15.39 89 Pn **Pn** **02 55 03.4 -1.1**
ILGA IAmb IAmb 02 55 17.6
comp=Z,8.3nm,0.8s
EKA Eskdalemuir Ar 16.46 325 Pn **Pn** **02 55 19.0 +1.0**

baz=51,slow=14
comp=Z,0.3nm,0.6s
NAO01 NORSAR Array S 18.16 356 P **P** 02 55 40.9 +1.5
NAO01 IAmb IAmb 02 56 23.1
comp=Z,20nm,1.3s
NB2 NORSAR Subarra 18.34 357 P **P** 02 55 43.8 +2.4
comp=Z,1.2nm,0.7s,baz=176,slow=10
NOA NORSAR Array B 18.34 357 P **Pn** 02 55 39.8 -1.6
baz=246,slow=11,SNR=2.0
comp=Z,0.2nm,0.6s
MMAI Mount Meron Ar 20.01 112 P Pn 02 56 01.3 -0.4
comp=Z,2.8nm,0.7s,baz=344,slow=8.7,SNR=5.0
comp=Z,2.8nm,0.7s
FINES FINESS Array B 20.24 18 P **P** 02 56 02.2 0.0
comp=Z,2.0nm,0.9s,baz=184,slow=9.4,SNR=5.3
comp=Z,2.0nm,0.9s
KBZ Khabaz 21.62 77 P **P** 02 56 17.7 +0.5
comp=Z,2.8nm,0.8s,baz=274,slow=6.5,SNR=5.2
comp=Z,2.8nm,0.8s
TORD Torodi Ar. Bea 31.14 202 P **P** 02 57 47.4 +1.4
comp=Z,0.9nm,0.8s,baz=14,slow=8.7,SNR=9.0
comp=Z,0.9nm,0.8s
MKAR Makanchi Array 47.78 60 P **P** 03 00 04.8 +0.5
comp=Z,0.7nm,0.8s,baz=282,slow=7.3,SNR=3.9
comp=Z,0.7nm,0.8s
SONM Songino Array 61.83 50 P **P** 03 01 47.7 +1.5
comp=Z,0.8nm,0.7s,baz=305,slow=8.6,SNR=2.4
comp=Z,0.8nm,0.7s
ILAR Eielson Array 71.66 351 P **P** 03 02 48.5 0.0
comp=Z,0.4nm,1.1s,baz=86,slow=12,SNR=2.4
comp=Z,0.4nm,1.1s

ROM 24 02:53:20.4±0.1, 42°.759N±0°.004×13°.150E±0°.006, h8km, ML2.6/5, 3C, Error ellipse: s-maj=0.6km s-min=0.0km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**341**	P	Pg	02 53 23.0	+0.5
NRCA				S	Sg	02 53 24.4	+0.3
NRCA				AML	AML		
	comp=E,20850μm,0.1s						
NRCA				AML	AML		
	comp=N,17250μm,0.1s						
NRCA				AML	AML		
	comp=E,22600μm,0.2s						
NRCA				AML	AML		
	comp=N,18850μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,18834μm,0.1s						
NRCA				END			
RM33	**Pellescritta (**	**0.25**	**169**	P	Pg	02 53 26.0	+0.6
RM33				S	Sb	02 53 30.8	-1.0
FDMO	**Fiordimonte**	**0.28**	**351**	P	Pg	02 53 26.8	+0.8
CAMP	**Campotosto**	**0.29**	**139**	P	Pg	02 53 26.8	+0.6
CAMP				S	Sb	02 53 32.2	-0.8
CESI	**CESI - Serrava**	**0.30**	**324**	⇑P	Pb	02 53 27.6	-0.6
CESI				S	Sg	02 53 31.9	+1.4
CESI				AML	AML		
	comp=E,1380μm,0.2s						
CESI				AML	AML		
	comp=N,1900μm,1.6s						
CESI				AML	AML		
	comp=E,5360μm,0.3s						
CESI				AML	AML		
	comp=N,8350μm,0.3s						
CESI				AML	AML		
	comp=E,1378μm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**24**	P	Pb	02 53 28.1	-0.4
GUMA				AML	AML		
	comp=E,5500μm,0.8s						
GUMA				AML	AML		
	comp=N,5395μm,0.5s						
GUMA				AML	AML		
	comp=E,7485μm,0.3s						
GUMA				AML	AML		
	comp=N,5285μm,0.3s						
ARRO	**Arrone**	**0.34**	**238**	P	Pb	02 53 27.9	-0.7
CSP1	**Cessapalombo**	**0.34**	**7**	⇑P	Pb	02 53 27.9	-0.8
CSP1				S	Sb	02 53 33.1	-1.1
CSP1				AML	AML		
	comp=N,1192μm,1.9s						
CSP1				END			
TERO	**Teramo**	**0.36**	**112**	P	Pg	02 53 27.9	+0.5
TERO				S	Sb	02 53 34.2	-0.7
OFFI	**Offida**	**0.43**	**66**	P	Pb	02 53 29.6	-0.6
CESX	**Cesi**	**0.45**	**251**	⇑P	Pg	02 53 29.4	+0.4
CESX				S	Sb	02 53 36.5	-0.8
CESX				AML	AML		
	comp=E,1130μm,0.4s						
CESX				AML	AML		
	comp=N,1285μm,0.3s						
CESX				AML	AML		
	comp=E,2320μm,0.8s						
CESX				AML	AML		
	comp=N,2010μm,0.5s						
CESX				AML	AML		
	comp=N,1133μm,0.2s						
ASSB	**Assisi San Ben**	**0.46**	**308**	P	Pb	02 53 30.5	-0.3
ASSB				S	Sb	02 53 36.9	-0.9
ASSB				AML	AML		
	comp=E,963μm,0.5s						
ASSB				AML	AML		
	comp=N,1012μm,0.2s						
ASSB				AML	AML		
	comp=E,3190μm,0.4s						
ASSB				AML	AML		
	comp=N,2525μm,0.7s						
ASSB				AML	AML		
	comp=E,1106μm,2.6s						
SNTG	**Esanatoglia**	**0.52**	**343**	P	Pb	02 53 31.2	-0.6
SNTG				S	Sb	02 53 39.3	-0.2
TRTR	**Tortoreto Alta**	**0.56**	**85**	P	Pg	02 53 31.5	+0.2
MGAB	**Montegabbione**	**0.78**	**282**	P	Pb	02 53 36.1	0.0

ROM 24 02:54:14.3±0.1, 42°.741N±0°.004×13°.188E±0°.007, h10km, ML2.8/11, 1D, Error ellipse: s-maj=0.6km s-min=0.3km az=57.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**330**	P	Pg	02 54 17.5	+0.3
NRCA				S	Sg	02 54 19.3	+0.2
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				END			
RM33	**Pellescritta (**	**0.23**	**175**	P	Pg	02 54 20.1	+1.0
RM33				S	Sg	02 54 24.1	+1.7
RM33				AML	AML		
	comp=E,3620μm,1.3s						
RM33				AML	AML		
	comp=N,3145μm,0.2s						
RM33				AML	AML		
	comp=E,3565μm,1.4s						
RM33				AML	AML		
	comp=N,3095μm,0.2s						
FEMA	**Monte Fema**	**0.24**	**335**	P	Pg	02 54 20.0	+0.6
FEMA				S	Sg	02 54 23.6	+0.8
FEMA				AML	AML		
	comp=E,21700μm,1.3s						
FEMA				AML	AML		
	comp=E,21650μm,1.3s						
FEMA				AML	AML		
	comp=N,20050μm,0.4s						
FEMA				END			
CAMP	**Campotosto**	**0.26**	**141**	P	Pg	02 54 20.3	+0.6
CAMP				S	Sg	02 54 24.5	+1.2
CAMP				AML	AML		
	comp=E,4340μm,0.2s						
CAMP				AML	AML		
	comp=N,3505μm,0.7s						
CAMP				AML	AML		
	comp=E,4341μm,0.2s						
CAMP				END			
FDMO	**Fiordimonte**	**0.30**	**346**	P	Pg	02 54 20.8	+0.3
FDMO				S	Sg	02 54 25.5	+0.9
FDMO				AML	AML		
	comp=E,6055μm,0.1s						
FDMO				AML	AML		
	comp=N,6495μm,0.2s						
FDMO				AML	AML		
	comp=N,3645μm,1.5s						
TERO	**Teramo**	**0.33**	**111**	P	Pg	02 54 21.2	+0.3
TERO				S	Sg	02 54 26.3	+1.0
TERO				AML	AML		
	comp=E,7025μm,0.3s						
TERO				AML	AML		
	comp=N,6750μm,0.6s						
TERO				AML	AML		
	comp=N,7390μm,0.6s						
TERO				AML	AML		
	comp=E,7925μm,0.3s						
TERO				AML	AML		
	comp=N,3397μm,0.4s						
CESI	**CESI - Serrava**	**0.34**	**322**	P	Pg	02 54 21.4	+0.4
CESI				S	Sg	02 54 26.6	+1.0
CESI				AML	AML		
	comp=E,8400μm,0.2s						
CESI				AML	AML		
	comp=N,17300μm,0.4s						
CESI				END			
GUMA	**Gualdo di Mace**	**0.34**	**19**	P	Pg	02 54 21.7	+0.6
GUMA				S	Sb	02 54 27.4	-0.6
GUMA				AML	AML		
	comp=E,14950μm,1.5s						
GUMA				AML	AML		
	comp=N,30500μm,0.3s						
GUMA				AML	AML		
	comp=E,32300μm,0.3s						
GUMA				AML	AML		
	comp=N,22950μm,0.6s						
GUMA				AML	AML		
	comp=E,14950μm,1.5s						
GUMA				AML	AML		
	comp=N,30500μm,0.3s						
GUMA				AML	AML		
	comp=N,22928μm,0.6s						
ARRO	**Arrone**	**0.35**	**243**	P	Pg	02 54 21.9	+0.6
ARRO				S	Sb	02 54 27.9	-0.4
ARRO				AML	AML		
	comp=E,2400μm,1.0s						
ARRO				AML	AML		
	comp=N,2040μm,0.7s						
ARRO				AML	AML		
	comp=E,2395μm,1.0s						
ARRO				AML	AML		
	comp=N,2035μm,0.7s						
ARRO				AML	AML		
	comp=N,2038μm,0.7s						
ARRO				AML	AML		
	comp=E,2397μm,1.0s						
GIGS	**Gran Sasso**	**0.41**	**136**	P	Pg	02 54 22.4	+0.1
GIGS				S	Sg	02 54 28.5	+0.8
GIGS				AML	AML		
	comp=E,688μm,0.2s						
GIGS				AML	AML		
	comp=N,790μm,1.0s						
GIGS				AML	AML		
	comp=N,374μm,5.4s						
OFFI	**Offida**	**0.41**	**62**	P	Pb	02 54 23.5	-0.3
OFFI				AML	AML		
	comp=N,4710μm,0.7s						
OFFI				AML	AML		
	comp=E,4800μm,0.7s						
SEF1	**Sefro**	**0.44**	**337**	P	Pg	02 54 23.4	+0.4
SEF1				S	Sb	02 54 30.2	-0.8
CESX	**Cesi**	**0.47**	**254**	P	Pg	02 54 23.7	+0.2
CESX				S	Sb	02 54 31.1	-0.5
CESX				AML	AML		
	comp=E,2320μm,0.8s						
CESX				AML	AML		
	comp=N,2010μm,0.5s						
FIAM	**Fiamignano**	**0.48**	**186**	P	Pg	02 54 24.2	+0.5
FIAM				AML	AML		
	comp=E,996μm,1.3s						
FIAM				AML	AML		
	comp=N,852μm,0.8s						
FIAM				AML	AML		
	comp=N,831μm,4.4s						
SSM1	**San Severino M**	**0.49**	**359**	P	Pg	02 54 24.2	+0.3
SSM1				S	Sb	02 54 31.4	-0.9
TRTR	**Tortoreto Alta**	**0.54**	**83**	P	Pb	02 54 26.1	+0.3
TRTR				AML	AML		
	comp=E,4020μm,0.4s						
TRTR				AML	AML		
	comp=N,5080μm,0.3s						
SNTG	**Esanatoglia**	**0.55**	**341**	P	Pg	02 54 25.4	+0.5
SNTG				S	Sb	02 54 33.3	-0.6
SNTG				AML	AML		
	comp=N,1455μm,0.7s						
SNTG				AML	AML		
	comp=E,1500μm,0.6s						
VCEL	**Villa Celiera**	**0.59**	**125**	AML	AML		
	comp=N,2710μm,1.5s						
VCEL				AML	AML		
	comp=E,2905μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.60**	**318**	P	Pg	02 54 26.0	+0.1
ATCC				S	Sb	02 54 35.1	-0.4
ATCC				AML	AML		
	comp=E,2585μm,0.3s						
ATCC				AML	AML		
	comp=N,2340μm,0.3s						
FOSV	**Fossato di Vic**	**0.64**	**331**	P	Pg	02 54 26.6	-0.1
FOSV				S	Sb	02 54 36.4	-0.2
FOSV				AML	AML		
	comp=E,2260μm,0.3s						
FOSV				AML	AML		
	comp=N,2185μm,0.3s						
T0110	**Collepietro**	**0.68**	**139**	P	Pg	02 54 27.5	+0.1
T0110				AML	AML		
	comp=E,1665μm,0.4s						
T0110				AML	AML		
	comp=N,2505μm,0.6s						
PP3	**Marolino**	**0.71**	**26**	P	Pb	02 54 29.0	+0.2
PP3				AML	AML		
	comp=E,5265μm,0.5s						
PP3				AML	AML		
	comp=N,3655μm,0.8s						
PP3				AML	AML		
	comp=E,5450μm,0.5s						
PP3				AML	AML		
	comp=N,3650μm,0.8s						
PP3				AML	AML		
	comp=N,3520μm,0.9s						
ATFO	**Monte Foce - G**	**0.77**	**324**	P	Pb	02 54 29.8	-0.1
ATFO				AML	AML		
	comp=E,1038μm,0.9s						
ATFO				AML	AML		
	comp=N,904μm,0.2s						
ATFO				AML	AML		
	comp=N,778μm,6.1s						
ARVD	**Arcevia**	**0.78**	**347**	AML	AML		
	comp=N,515μm,3.4s						
ARVD				AML	AML		
	comp=E,724μm,1.0s						
ARVD				AML	AML		
	comp=N,587μm,0.8s						
ARVD				AML	AML		
	comp=N,588μm,0.8s						
MTCE	**Montecelio**	**0.79**	**205**	P	Pb	02 54 29.9	-0.2
MTCE				AML	AML		
	comp=E,749μm,0.6s						
MTCE				AML	AML		
	comp=N,418μm,1.4s						
MGAB	**Montegabbione**	**0.81**	**283**	P	Pb	02 54 30.4	-0.1
AOI	**Ancona**	**0.86**	**20**	P	Pg	02 54 30.9	0.0
AOI				AML	AML		
	comp=E,705μm,0.9s						
AOI				AML	AML		
	comp=N,728μm,1.1s						
AOI				AML	AML		
	comp=E,704μm,0.9s						
AOI				AML	AML		
	comp=N,732μm,2.8s						
COR1	**Corinaldo**	**0.90**	**351**	AML	AML		
	comp=E,2480μm,1.6s						
COR1				AML	AML		
	comp=N,1895μm,1.2s						
COR1				AML	AML		
	comp=E,2475μm,1.6s						
COR1				AML	AML		
	comp=N,1895μm,1.2s						
NARO	**Abbazia di Nar**	**0.98**	**333**	AML	AML		
	comp=E,396μm,0.4s						
NARO				AML	AML		
	comp=N,384μm,0.9s						
NARO				AML	AML		
	comp=N,384μm,0.9s						
FSSB	**Fossombrone**	**1.00**	**343**	AML	AML		
	comp=E,1640μm,0.4s						
FSSB				AML	AML		
	comp=N,2215μm,0.4s						
TRIV	**Trivento**	**1.40**	**133**	S	Sn	02 54 57.0	-1.6
MCRV	**Calabrutti - M**	**2.46**	**142**	P	Pn	02 54 54.2	-0.4
MCRV				AML	AML		
	comp=E,91μm,0.6s						
MCRV				AML	AML		
	comp=N,98μm,0.3s						
SBPO	**S.Benedetto Po**	**2.83**	**325**	⇓P	Pb	02 55 06.6	+1.6
OBKA	**Obir**	**3.89**	**14**	*e*Pn	Pg	02 55 30.7	+1.8
	comp=N,2.2nm,0.3s						
MYKA	**Terra Mystica**	**3.90**	**5**	*e*Pn	Pn	02 55 13.4	-1.0
	comp=N,4.7nm,0.6s						
ABTA	**Abfaltersbach**	**4.04**	**353**	*e*Pn	Pn	02 55 17.8	+1.5
	comp=N,5.2nm,0.5s						
SOKA	**Soboth**	**4.15**	**18**	*e*Pn	Pb	02 55 26.1	-1.4
	comp=N,1.8nm,0.5s						

ROM 24 02:54:28.1±0.1, 42°.799N±0°.005×13°.216E±0°.010, h9km, ML3.0/10, Error ellipse: s-maj=0.9km s-min=0.2km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**295**	P	Pg	02 54 30.9	+0.5
NRCA				S	Sg	02 54 32.4	+0.3
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,74445μm,0.2s						
FEMA	**Monte Fema**	**0.20**	**323**	P	Pg	02 54 33.2	+0.8
FEMA				S	Sg	02 54 36.4	+1.1
FEMA				AML	AML		
	comp=E,21650μm,1.3s						
FEMA				AML	AML		
	comp=N,20050μm,0.4s						
FEMA				AML	AML		
	comp=E,21700μm,1.3s						
FEMA				AML	AML		
	comp=N,20050μm,0.4s						
FEMA				AML	AML		
	comp=E,21676μm,1.3s						
FDMO	**Fiordimonte**	**0.26**	**338**	P	Pg	02 54 33.5	+0.2
FDMO				S	Sg	02 54 37.9	+1.2
FDMO				AML	AML		
	comp=E,6055μm,0.1s						
FDMO				AML	AML		
	comp=N,6495μm,0.2s						
FDMO				AML	AML		
	comp=N,6497μm,0.2s						
FDMO				END			
GUMA	**Gualdo di Mace**	**0.28**	**18**	P	Pb	02 54 34.7	-0.7
GUMA				S	Sb	02 54 39.9	-0.3
GUMA				AML	AML		
	comp=N,30500μm,0.3s						
GUMA				AML	AML		
	comp=E,32300μm,0.3s						
GUMA				AML	AML		
	comp=N,22950μm,0.6s						
GUMA				AML	AML		
	comp=N,30500μm,0.3s						
GUMA				AML	AML		
	comp=E,14950μm,1.5s						
RM33	**Pellescritta (**	**0.29**	**180**	P	Pb	02 54 35.6	0.0
RM33				S	Sb	02 54 39.9	-0.7
RM33				AML	AML		
	comp=N,3095μm,0.2s						
RM33				AML	AML		
	comp=E,3620μm,1.3s						
RM33				AML	AML		
	comp=E,3560μm,1.4s						
RM33				AML	AML		
	comp=E,3615μm,1.3s						
RM33				AML	AML		
	comp=E,3565μm,1.4s						
RM33				AML	AML		
	comp=N,3145μm,0.2s						
RM33				AML	AML		
	comp=E,3617μm,1.3s						
CAMP	**Campotosto**	**0.30**	**152**	P	Pg	02 54 34.8	+0.7
CAMP				S	Sb	02 54 39.6	-1.3
CAMP				AML	AML		
	comp=E,4340μm,0.2s						
CAMP				AML	AML		
	comp=N,3505μm,0.7s						
CAMP				AML	AML		
	comp=E,2392μm,0.6s						
CESI	**CESI - Serrava**	**0.31**	**312**	P	Pg	02 54 34.8	+0.6
CESI				S	Sb	02 54 39.9	-1.2
CESI				AML	AML		
	comp=E,8400μm,0.2s						
CESI				AML	AML		
	comp=N,17300μm,0.4s						
CESI				AML	AML		
	comp=E,8403μm,0.2s						
TERO	**Teramo**	**0.34**	**122**	P	Pg	02 54 35.5	+0.7
TERO				S	Sb	02 54 40.7	-1.2
TERO				AML	AML		
	comp=E,7030μm,0.3s						
TERO				AML	AML		
	comp=N,6755μm,0.6s						
TERO				AML	AML		
	comp=E,7025μm,0.3s						
TERO				AML	AML		
	comp=N,6750μm,0.6s						
TERO				AML	AML		
	comp=N,7390μm,0.6s						
TERO				AML	AML		
	comp=E,7925μm,0.3s						
TERO				AML	AML		
	comp=N,6753μm,0.6s						
OFFI	**Offida**	**0.37**	**68**	P	Pb	02 54 36.9	0.0
OFFI				AML	AML		
	comp=E,4800μm,0.7s						
OFFI				AML	AML		
	comp=N,4710μm,0.7s						
ARRO	**Arrone**	**0.40**	**237**	P	Pb	02 54 37.3	0.0
ARRO				AML	AML		
	comp=E,2395μm,1.0s						
ARRO				AML	AML		
	comp=N,2040μm,0.7s						
ARRO				AML	AML		
	comp=N,2035μm,0.7s						
SEF1	**Sefro**	**0.40**	**331**	P	Pg	02 54 36.6	+0.6
SEF1				S	Sb	02 54 42.8	-0.9
GIGS	**Gran Sasso**	**0.43**	**143**	P	Pg	02 54 37.0	+0.4
GIGS				AML	AML		
	comp=E,688μm,0.2s						
GIGS				AML	AML		
	comp=N,790μm,1.0s						
GIGS				AML	AML		
	comp=E,631μm,1.1s						
SNTG	**Esanatoglia**	**0.50**	**336**	P	Pg	02 54 38.3	+0.5
SNTG				S	Sb	02 54 46.0	-0.5
SNTG				AML	AML		
	comp=E,1500μm,0.6s						
SNTG				AML	AML		
	comp=N,1455μm,0.7s						
SNTG				AML	AML		
	comp=N,230μm,3.5s						
SNTG				AML	AML		
	comp=E,1497μm,0.6s						
CESX	**Cesi**	**0.51**	**248**	AML	AML		
	comp=N,2010μm,0.5s						
CESX				AML	AML		
	comp=E,2320μm,0.8s						
TRTR	**Tortoreto Alta**	**0.51**	**89**	AML	AML		
	comp=N,5080μm,0.3s						
TRTR				AML	AML		
	comp=E,4020μm,0.4s						
FIAM	**Fiamignano**	**0.54**	**188**	AML	AML		

	comp=E,996µm,1.3s							
FIAM				AML	AML			
	comp=N,852µm,0.8s							
FOSV	**Fossato di Vic**	**0.60**	**326**	P	Pb	02 54 40.3	-0.5	
FOSV				S	Sb	02 54 49.3	-0.1	
FOSV				AML	AML			
	comp=E,2255µm,0.3s							
FOSV				AML	AML			
	comp=N,2185µm,0.3s							
FOSV				AML	AML			
	comp=E,2260µm,0.3s							
FOSV				AML	AML			
	comp=N,2185µm,0.3s							
VCEL	**Villa Celiera**	**0.61**	**131**	AML	AML			
	comp=N,2710µm,1.5s							
VCEL				AML	AML			
	comp=E,2905µm,0.2s							
PP3	**Marolino**	**0.65**	**26**	AML	AML			
	comp=N,3650µm,0.8s							
PP3				AML	AML			
	comp=N,3650µm,0.8s							
PP3				AML	AML			
	comp=E,5450µm,0.5s							
PP3				AML	AML			
	comp=N,3515µm,0.9s							
PP3				AML	AML			
	comp=N,3520µm,0.9s							
PP3				AML	AML			
	comp=E,5265µm,0.5s							
T0110	**Collepietro**	**0.71**	**144**	AML	AML			
	comp=N,2505µm,0.6s							
T0110				AML	AML			
	comp=E,1665µm,0.4s							
ARVD	**Arcevia**	**0.73**	**344**	AML	AML			
	comp=E,724µm,1.0s							
ARVD				AML	AML			
	comp=N,587µm,0.8s							
ARVD				AML	AML			
	comp=N,588µm,0.8s							
ATFO	**Monte Foce - G**	**0.74**	**320**	AML	AML			
	comp=E,1038µm,0.9s							
ATFO				AML	AML			
	comp=N,904µm,0.2s							
AOI	**Ancona**	**0.80**	**20**	AML	AML			
	comp=N,728µm,1.1s							
AOI				AML	AML			
	comp=E,705µm,0.9s							
AOI				AML	AML			
	comp=E,704µm,0.9s							
COR1	**Corinaldo**	**0.85**	**349**	AML	AML			
	comp=E,2475µm,1.6s							
COR1				AML	AML			
	comp=E,1072µm,0.5s							
COR1				AML	AML			
	comp=N,1610µm,1.2s							
COR1				AML	AML			
	comp=E,2475µm,1.6s							
COR1				AML	AML			
	comp=N,1895µm,1.2s							
COR1				AML	AML			
	comp=N,1895µm,1.2s							
MTCE	**Montecelio**	**0.85**	**205**	AML	AML			
	comp=N,418µm,1.4s							
MTCE				AML	AML			
	comp=E,749µm,0.6s							
NARO	**Abbazia di Nar**	**0.94**	**330**	AML	AML			
	comp=N,384µm,0.9s							
NARO				AML	AML			
	comp=E,396µm,0.4s							
FSSB	**Fossombrone**	**0.95**	**340**	AML	AML			
	comp=N,2215µm,0.4s							
FSSB				AML	AML			
	comp=E,1640µm,0.4s							
MCRV	**Calabrutti - M**	**2.49**	**143**	AML	AML			
	comp=E,91µm,0.6s							
MCRV				AML	AML			
	comp=N,98µm,0.3s							

ROM ***24*** *02:55:39.9±0.1, 42°.646N±0°.004×13°.309E±0°.006, h8km, ML3.6/71, Error ellipse: s-maj=0.5km s-min=0.4km az=228.0*
PRU ***24*** *02:55:39.3±0.0, 42°.66N×13°.70E, h0km*
LDG ***24*** *02:55:39.7±0.1, 42°.65N×13°.28E, h6km, Ml3.0/26, Error ellipse: s-maj=3.0km s-min=2.0km az=41.0*
IDC ***24*** *02:55:39.4±1.1, 42°.70N×13°.42E, h0km, mb3.7/5, mbtmp3.6/15, ML3.2/9, Error ellipse: s-maj=17.3km s-min=12.8km az=85.0*
STR ***24*** *02:55:40.4±2.0, 43°N±9°×1°3E±1°5, h5km, mb3.8/19, Error ellipse: s-maj=0.0km s-min=0.0km az=112.9, preliminary*
BEO ***24*** *02:55:41.3±0.6, 42°.68N×13°.28E, h0km, ML3.7/11*
PDG ***24*** *02:55:45.7±0.1, 42°.17N×13°.84E, h12km±17km, ML3.8/11, Error ellipse: s-maj=2.8km s-min=27.4km az=0.0*

ISC 24 02:55:40.5±0.7, 42°.65N±0°.02×13°.29E±0°.02, h14km±5km, n272, σ2°33/337, mb3.8/4, 14C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
CAMP	**Campotosto**	**0.15**	**142**	P	**Pg**	**02 55 43.2**			**-1.2**
CAMP				S	**Sg**	**02 55 45.8**			**-1.2**
CAMP				AML	AML				
	comp=E,34250µm,0.8s								
CAMP				AML	AML				
	comp=N,40550µm,0.6s								
RM33	**Pellescritta (**	**0.15**	**200**	P	**Pg**	**02 55 44.0**			**-0.5**
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
NRCA	**Norcia**	**0.22**	**325**	AML	AML				
	comp=E,56450µm,0.1s								
NRCA				AML	AML				
	comp=E,52950µm,0.1s								
NRCA				AML	AML				
	comp=N,32000µm,1.3s								
NRCA				AML	AML				
	comp=N,31950µm,1.3s								
NRCA				AML	AML				
	comp=E,52900µm,0.1s								
NRCA				AML	AML				
	comp=N,34900µm,1.3s								
TERO	**Teramo**	**0.24**	**97**	⇑P	**Pg**	**02 55 44.9**			**-0.8**
TERO				S	**Sg**	**02 55 48.7**			**-0.6**
TERO				AML	AML				
TERO				AML	AML				
	comp=E,96250µm,0.6s								
TERO				AML	AML				
	comp=E,89850µm,0.6s								
TERO				AML	AML				
GIGS	**Gran Sasso**	**0.29**	**134**	P	**Pg**	**02 55 45.9**			**-0.8**
GIGS				S	**Sg**	**02 55 50.6**			**-0.2**
GIGS				AML	AML				
	comp=E,7880µm,0.5s								
GIGS				AML	AML				
	comp=N,5815µm,0.5s								
GIGS				AML	AML				
	comp=N,5810µm,0.5s								
AQU	**L'Aquila**	**0.31**	**164**	P	**Pg**	**02 55 46.6**			**-0.3**
AQU				AML	AML				
	comp=N,23350µm,1.5s								
AQU				AML	AML				
	comp=E,27350µm,0.5s								
AQU				AML	AML				
	comp=N,24950µm,1.5s								
AQU				AML	AML				
	comp=E,28850µm,0.5s								
FEMA	**Monte Fema**	**0.35**	**331**	P	**Pg**	**02 55 47.7**			**-0.1**
FEMA				AML	AML				
	comp=E,22350µm,0.6s								
FEMA				AML	AML				
	comp=N,22950µm,0.4s								
FEMA				AML	AML				
	comp=E,22300µm,0.6s								
FEMA				AML	AML				
	comp=N,22950µm,0.5s								
ARRO	**Arrone**	**0.39**	**259**	P	**Pg**	**02 55 48.3**			**-0.1**
ARRO				AML	AML				
	comp=E,6580µm,0.6s								
ARRO				AML	AML				
	comp=N,9590µm,1.2s								
FIAM	**Fiamignano**	**0.40**	**198**	P	**Pg**	**02 55 48.2**			**-0.4**
OFFI	**Offida**	**0.41**	**46**	P	**Pb**	**02 55 48.7**			**-0.7**
OFFI				AML	AML				
	comp=E,50750µm,0.5s								
OFFI				AML	AML				
	comp=N,43000µm,0.5s								
FDMO	**Fiordimonte**	**0.41**	**339**	P	**Pb**	**02 55 49.1**			**-0.4**
FDMO				S	**Sb**	**02 55 54.9**			**-0.8**
FDMO				AML	AML				
	comp=E,10750µm,0.7s								
FDMO				AML	AML				
	comp=N,11650µm,0.2s								
GUMA	**Gualdo di Mace**	**0.41**	**5**	P	**Pg**	**02 55 48.4**			**-0.3**
GUMA				S	**Sb**	**02 55 55.1**			**-0.6**
GUMA				AML	AML				
	comp=E,63800µm,0.3s								
GUMA				AML	AML				
	comp=N,46350µm,0.3s								
GUMA				AML	AML				
	comp=E,60950µm,1.1s								
GUMA				AML	AML				
	comp=N,49550µm,0.4s								
GUMA				AML	AML				
	comp=E,63800µm,0.3s								
GUMA				AML	AML				
	comp=N,46350µm,0.3s								
FAGN	**Fagnano**	**0.45**	**150**	P	**Pg**	**02 55 49.2**			**-0.2**
CESI	**CESI - Serrava**	**0.45**	**322**	P	**Pg**	**02 55 49.0**			**-0.5**
CESI				S	**Sb**	**02 55 56.3**			**-0.5**
CESI				AML	AML				
	comp=N,14900µm,0.3s								
CESI				AML	AML				
	comp=E,8940µm,0.5s								
VCEL	**Villa Celiera**	**0.48**	**122**	P	**Pg**	**02 55 49.9**			**-0.2**
VCEL				AML	AML				
	comp=N,30050µm,0.9s								
VCEL				AML	AML				
	comp=E,26800µm,1.6s								
VCEL				AML	AML				
	comp=N,30100µm,0.9s								
TRTR	**Tortoreto Alta**	**0.49**	**71**	P	**Pb**	**02 55 50.7**			**-0.2**
TRTR				AML	AML				
	comp=E,38000µm,0.5s								
TRTR				AML	AML				
	comp=N,35600µm,0.5s								
CESX	**Cesi**	**0.52**	**266**	P	**Pg**	**02 55 50.3**			**-0.5**
CESX				AML	AML				
	comp=E,8785µm,0.5s								
CESX				AML	AML				
	comp=N,6775µm,1.2s								
MDAR	**Monte D'Aria**	**0.55**	**349**	P	**Pb**	**02 55 51.7**			**-0.2**
T0110	**Collepietro**	**0.56**	**139**	P	**Pg**	**02 55 50.9**			**-0.6**
T0110				S	**Sg**	**02 55 59.5**			**+0.4**
T0110				AML	AML				
	comp=E,19250µm,0.4s								
T0110				AML	AML				
	comp=N,20800µm,0.4s								
ASSB	**Assisi San Ben**	**0.60**	**310**	P	**Pg**	**02 55 52.3**			**0.0**
ASSB				S	**Sb**	**02 56 01.6**			**+0.4**
ASSB				AML	AML				
	comp=E,8120µm,0.7s								
ASSB				AML	AML				
	comp=N,6110µm,1.3s								
GAG1	**Gagliole**	**0.61**	**345**	P	**Pg**	**02 55 52.0**			**-0.4**
GAG1				S	**Sb**	**02 56 01.6**			**+0.3**
PTQR	**Pietraquaria**	**0.64**	**172**	P	**Pg**	**02 55 52.0**			**-0.9**
PTQR				AML	AML				
	comp=E,3255µm,0.7s								
PTQR				AML	AML				
	comp=N,2830µm,0.6s								
SNTG	**Esanatoglia**	**0.65**	**337**	P	**Pg**	**02 55 52.9**			**-0.4**
EL6	**Elcito**	**0.69**	**349**	P	**Pg**	**02 55 53.7**			**-0.3**
EL6				AML	AML				
	comp=E,9320µm,0.4s								
EL6				AML	AML				
	comp=E,9315µm,0.4s								
EL6				AML	AML				
	comp=N,9805µm,0.3s								
SRES	**S.Oreste - Sor**	**0.71**	**234**	P	**Pg**	**02 55 53.7**			**-0.6**
SRES				AML	AML				
	comp=N,2535µm,1.1s								
SRES				AML	AML				
	comp=E,2375µm,1.2s								
CERT	**Cerreto**	**0.74**	**198**	P	**Pg**	**02 55 54.2**			**-0.6**
CERT				AML	AML				
	comp=N,3855µm,0.5s								
CERT				AML	AML				
	comp=E,6270µm,0.5s								
MTCE	**Montecelio**	**0.75**	**213**	P	**Pg**	**02 55 54.1**			**-0.9**
MTCE				AML	AML				
	comp=N,3055µm,0.6s								
MTCE				AML	AML				
	comp=E,4520µm,0.7s								
FOSV	**Fossato di Vic**	**0.75**	**329**	P	**Pg**	**02 55 54.2**			**-0.9**
PP3	**Marolino**	**0.76**	**18**	P	**Pb**	**02 55 55.3**			**-0.2**
VVLD	**Villa Vallelon**	**0.82**	**162**	P	**Pg**	**02 55 55.7**			**-0.7**
VVLD				AML	AML				
	comp=E,3260µm,0.6s								
VVLD				AML	AML				
	comp=N,3975µm,0.6s								
MURB	**Monte Urbino**	**0.83**	**318**	⇓P	**Pb**	**02 55 56.7**			**0.0**
MURB				AML	AML				
	comp=E,10350µm,1.2s								
MURB				AML	AML				
	comp=N,12500µm,0.9s								
MURB				AML	AML				
	comp=E,10375µm,1.2s								
MURB				AML	AML				
	comp=N,12500µm,0.8s								
MURB				AML	AML				
	comp=N,13450µm,0.8s								
MURB				AML	AML				
	comp=E,11050µm,0.9s								
RCAV	**Rocca di Cave**	**0.84**	**198**	P	**Pg**	**02 55 56.9**			**0.0**
GUAR	**Guarcino**	**0.86**	**179**	P	**Pg**	**02 55 56.5**			**-0.6**
GUAR				AML	AML				
	comp=E,3155µm,0.5s								
GUAR				AML	AML				
	comp=N,4320µm,0.5s								
ATTE	**AVT- Monte Tez**	**0.88**	**309**	P	**Pb**	**02 55 57.3**			**-0.2**
ATFO	**Monte Foce - G**	**0.89**	**324**	P	**Pg**	**02 55 57.1**			**-0.6**
ATFO				AML	AML				
	comp=E,4060µm,1.2s								
ATFO				AML	AML				
	comp=N,3780µm,0.9s								
LPEL	**Lama dei Pelig**	**0.90**	**132**	P	**Pg**	**02 55 56.4**			**-1.5**
LPEL				AML	AML				
	comp=N,3255µm,0.6s								
LPEL				AML	AML				
	comp=E,3640µm,0.6s								
MGAB	**Montegabbione**	**0.90**	**287**	P	**Pb**	**02 55 57.9**			**0.0**
MGAB				AML	AML				
	comp=E,5195µm,0.9s								
MGAB				AML	AML				
	comp=N,4505µm,0.5s								
MGAB				AML	AML				
	comp=E,5835µm,0.9s								
MGAB				AML	AML				
	comp=N,5010µm,0.5s								
MGAB				AML	AML				
	comp=E,5200µm,0.9s								
RMP	**Rome, Mte Porz**	**0.94**	**207**	P	**Pg**	**02 55 58.0**			**-0.7**
RMP				AML	AML				
	comp=E,5280µm,0.6s								
RMP				AML	AML				
	comp=N,7145µm,1.0s								
FRON	**Frontone**	**0.96**	**335**	P	**Pg**	**02 55 58.1**			**-1.0**
FRON				AML	AML				
	comp=E,4310µm,1.0s								
FRON				AML	AML				
	comp=N,3510µm,0.4s								
ATVA	**AVT- Monte Val**	**0.96**	**311**	P	**Pg**	**02 55 58.6**			**-0.5**
ATVO	**AVT- Monte Val**	**0.97**	**319**	⇓P	**Pb**	**02 55 59.1**			**0.0**
ATVO				AML	AML				
	comp=E,2670µm,0.8s								
ATVO				AML	AML				
	comp=N,2755µm,0.7s								
VIVA	**Pratoni del Vi**	**0.98**	**203**	P	**Pg**	**02 55 58.8**			**-0.6**
VIVA				AML	AML				
	comp=E,7530µm,0.6s								
VIVA				AML	AML				
	comp=N,10315µm,0.5s								
POFI	**Posta Fibreno**	**0.99**	**161**	P	**Pg**	**02 55 58.2**			**-1.3**
POFI				AML	AML				
	comp=E,3525µm,0.8s								
POFI				AML	AML				
	comp=E,3745µm,0.8s								
POFI				AML	AML				
	comp=N,2510µm,0.6s								
POFI				AML	AML				
	comp=N,2515µm,0.6s								
POFI				AML	AML				
	comp=E,3530µm,0.8s								
RDP	**Rocca di Papa**	**0.99**	**206**	P	**Pb**	**02 55 59.6**			**+0.2**
RDP				AML	AML				
	comp=E,9950µm,0.5s								
RDP				AML	AML				
	comp=N,14200µm,0.6s								
COR1	**Corinaldo**	**1.00**	**348**	P	**Pb**	**02 55 59.7**			**+0.1**
COR1				AML	AML				
	comp=E,6485µm,0.8s								
COR1				AML	AML				
	comp=E,3320µm,0.5s								
COR1				AML	AML				
	comp=N,6690µm,0.7s								
COR1				AML	AML				
	comp=E,6490µm,0.8s								
COR1				AML	AML				
	comp=E,3320µm,0.5s								
COR1				AML	AML				
	comp=N,6705µm,0.7s								
COR1				AML	AML				
	comp=N,6355µm,1.1s								
ATMI	**Monte Miggiano**	**1.01**	**313**	P	**Pg**	**02 55 59.5**			**-0.5**
ATMI				AML	AML				
	comp=N,7375µm,0.7s								
ATMI				AML	AML				
	comp=E,7075µm,0.7s								
ATPI	**Pietralunga -**	**1.03**	**321**	⇓P	**Pb**	**02 56 00.2**			**+0.1**
ATPI				AML	AML				
	comp=N,2745µm,0.8s								
ATPI				AML	AML				
	comp=E,3290µm,0.7s								
ATPI				AML	AML				
	comp=N,2750µm,0.8s								
PIEI	**Pieia**	**1.04**	**328**	⇓P	**Pb**	**02 56 00.4**			**+0.1**
PIEI				AML	AML				
	comp=N,1415µm,0.7s								
PIEI				AML	AML				
	comp=E,2390µm,0.4s								
MPAG	**Monte Paganucc**	**1.05**	**339**	P	**Pg**	**02 55 59.3**			**-1.5**
LAV9	**Lanuvio**	**1.07**	**204**	P	**Pg**	**02 56 00.3**			**-0.8**
LAV9				AML	AML				
	comp=E,7295µm,0.4s								
LAV9				AML	AML				
	comp=N,7810µm,0.4s								
LAV9				AML	AML				
	comp=E,7290µm,0.4s								
LAV9				AML	AML				
	comp=N,7375µm,0.5s								
LAV9				AML	AML				
	comp=E,7605µm,0.4s								
NARO	**Abbazia di Nar**	**1.09**	**332**	⇓P	**Pg**	**02 56 00.8**			**-0.7**
NARO				AML	AML				
	comp=N,1690µm,0.7s								
NARO				AML	AML				
	comp=E,1885µm,0.8s								
GIUL	**Giuliano Di Ro**	**1.09**	**181**	P	**Pg**	**02 56 00.4**			**-1.2**
GIUL				AML	AML				
	comp=E,2010µm,0.5s								
GIUL				AML	AML				
	comp=N,2715µm,0.7s								
FSSB	**Fossombrone**	**1.10**	**341**	P	**Pg**	**02 56 00.9**			**-0.9**
FSSB				AML	AML				
	comp=N,8210µm,0.5s								
FSSB				AML	AML				
	comp=E,5405µm,1.6s								
FSSB				AML	AML				
	comp=N,8205µm,0.5s								
APEC	**Apecchio**	**1.11**	**325**	P	**Pg**	**02 56 01.2**			**-0.6**
APEC				AML	AML				
	comp=N,790µm,1.2s								
APEC				AML	AML				
	comp=N,3085µm,1.1s								
APEC				AML	AML				
	comp=E,684µm,0.7s								
APEC				AML	AML				
	comp=N,792µm,1.2s								
APEC				AML	AML				
	comp=E,3415µm,0.6s								
TOLF	**Tolfa**	**1.12**	**239**	⇓P	**Pg**	**02 56 01.4**			**-0.7**
TOLF				AML	AML				
	comp=N,1710µm,0.5s								
TOLF				AML	AML				
	comp=E,2185µm,0.7s								
CAFI	**Castiglion Fio**	**1.18**	**305**	P	**Pb**	**02 56 02.7**			**+0.1**
CAFI				AML	AML				
	comp=E,1379µm,0.6s								
CAFI				AML	AML				
	comp=E,1378µm,0.6s								
CAFI				AML	AML				
	comp=N,2510µm,0.8s								
MCIV	**Monte Civitell**	**1.19**	**277**	P	**Pb**	**02 56 03.0**			**+0.1**
MCIV				AML	AML				
	comp=E,1062µm,0.6s								
MCIV				AML	AML				
	comp=N,1215µm,1.4s								
MCIV				AML	AML				
	comp=E,1062µm,0.6s								
TRIV	**Trivento**	**1.29**	**133**	P	**Pn**	**02 56 03.4**			**-0.7**
TRIV				AML	AML				
	comp=E,1170µm,0.9s								
TRIV				AML	AML				
	comp=N,1660µm,0.7s								
TRIV				AML	AML				
	comp=E,1261µm,0.9s								
TRIV				AML	AML				
	comp=E,1260µm,0.9s								
TRIV				AML	AML				
	comp=E,1172µm,0.9s								
TRIV				AML	AML				
	comp=N,1730µm,0.7s								
PIGN	**Pignataro Magg**	**1.60**	**155**	P	**Pb**	**02 56 10.0**			**+0.3**
PIGN				AML	AML				
	comp=E,413µm,0.7s								
PIGN				AML	AML				
	comp=N,432µm,1.6s								
PIGN				AML	AML				
	comp=N,508µm,0.9s								
PIGN				AML	AML				
	comp=E,486µm,0.7s								
CSNT	**Castellina Chi**	**1.68**	**300**	AML	AML				
CSNT	comp=E,478µm,0.6s			AML	AML				
	comp=E,477µm,0.6s								
CSNT				AML	AML				
	comp=N,612µm,0.8s								
OSSC	**Osservatorio P**	**1.73**	**301**	⇓P	**Pb**	**02 56 11.6**			**-0.4**
OSSC				AML	AML				
	comp=E,480µm,1.0s								
OSSC				AML	AML				
	comp=N,479µm,0.9s								
OSSC				AML	AML				
	comp=E,453µm,1.5s								
OSSC				AML	AML				
	comp=N,478µm,0.7s								
OSSC				AML	AML				
	comp=E,481µm,1.0s								
RUFI	**Rufina**	**1.76**	**313**	P	**Pb**	**02 56 11.7**			**-0.7**
VITU	**Vitulano (BN)**	**1.78**	**145**	P	**Pb**	**02 56 13.0**			**+0.2**
CASP	**Castiglione de**	**1.79**	**275**	P	**Pn**	**02 56 11.4**			**+0.5**
CASP				AML	AML				
	comp=N,300µm,1.1s								
CASP				AML	AML				
	comp=N,300µm,1.1s								
CASP				AML	AML				
	comp=E,202µm,1.3s								
TRIF	**Trifonti**	**1.81**	**286**	P	**Pn**	**02 56 12.3**			**+1.1**
TRIF				AML	AML				
	comp=N,348µm,0.9s								
TRIF				AML	AML				
	comp=E,509µm,0.8s								
DUGI	**Dugi Otok**	**1.86**	**43**	*e*Pn	**Pn**	**02 56 12.4**			**+0.5**
BRIS	**BRISIGHELLA**	**1.98**	**320**	P	**Pg**	**02 56 18.0**			**-0.4**
SGRT	**San Giovanni R**	**2.04**	**115**	P	**Pn**	**02 56 15.2**			**+0.9**
SGRT				AML	AML				
	comp=N,736µm,1.1s								
SGRT				AML	AML				
	comp=E,815µm,0.5s								
VIRC	**Vir**	**2.08**	**38**	*e*Pn	**Pn**	**02 56 15.4**			**+0.4**
MORI	**Morici**	**2.15**	**55**	*e*Pn	**Pn**	**02 56 16.7**			**+1.0**
MSAG	**Monte S. Angel**	**2.17**	**115**	P	**Pn**	**02 56 17.0**			**+0.9**
MSAG				AML	AML				
	comp=E,759µm,0.9s								
MSAG				AML	AML				
	comp=E,833µm,0.3s								

MSAG AML AML
comp=N,1605µm,1.5s
MSAG AML AML
comp=N,1655µm,1.5s
NVLJ Novalja 2.23 31 *e*Pn **Pn** 02 56 17.4 +0.4
BRJN Brijuni 2.28 8 *e*Pn **Pn** 02 56 16.6 -0.9
POPM Popiglio 2.31 308 P **Pn** 02 56 19.2 +1.1
POPM AML AML
comp=N,270µm,1.3s
POPM AML AML
comp=E,224µm,1.3s
RABC Rab 2.36 27 *e*Pn **Pn** 02 56 19.7 +0.9
MAIM Mastiano 2.40 303 P **Pn** 02 56 20.3 +1.1
MAIM AML AML
comp=N,230µm,0.7s
MAIM AML AML
comp=E,264µm,1.0s
SMRN Sveta Marina 2.46 14 *e*Pn **Pn** 02 56 20.4 +0.2
UDBI Udbina 2.60 43 *e*Pn **Pn** 02 56 23.8 +1.7
KIJV Kijevo 2.65 58 *e*Pn **Pn** 02 56 24.5 +1.8
LSTV Lastovo 2.66 86 *e*Pn **Pn** 02 56 23.6 +0.7
A250A Rusevo Krmpots 2.70 25 *e*Pn **Pn** 02 56 24.4 +1.0
EQUI Equi 2.74 305 P **Pn** 02 56 26.1 +2.1
EQUI AML AML
comp=E,130µm,0.6s
EQUI AML AML
comp=N,142µm,0.8s
PLIT Plitvice 2.80 36 *e*Pn **Pn** 02 56 26.7 +2.0
RIY Rijeka 2.81 18 *e*Pn **Pn** 02 56 25.6 +0.8
MAKA Makarska 2.81 76 *e*Pn **Pn** 02 56 25.9 +1.0
PLMA Palmaria, Port 2.87 300 P **Pn** 02 56 26.6 +0.9
PLMA AML AML
comp=N,91µm,0.5s
PLMA AML AML
comp=E,91µm,0.7s
RICI Ricice 2.94 72 *e*Pn **Pn** 02 56 28.1 +1.3
GRAM Graiana 2.98 309 P **Pn** 02 56 29.6 +2.3
GRAM AML AML
comp=E,307µm,1.1s
GRAM AML AML
comp=N,312µm,0.7s
SMPL Sampolo 3.02 261 P **Pn** 02 56 28.5 +0.8
SMPL Sampolo 3.02 261 P **Pn** 02 56 26.6 -1.1
SMPL AML AML
comp=N,31µm,1.6s
SMPL AML AML
comp=E,35µm,1.6s
TRI Trieste 3.08 6 P **Pn** 02 56 31.0 +2.4
TRI S **Sn** 02 57 03.0 -2.1
TRI AML AML
comp=E,195µm,1.1s
TRI AML AML
comp=N,126µm,0.5s
SIRI Monte Sirino - 3.14 141 P **Pb** 02 56 33.5 -2.5
SIRI AML AML
comp=N,79µm,1.6s
SIRI AML AML
comp=E,77µm,1.3s
PGF Pioggiola 3.17 270 *e*P **Pn** 02 56 31.4 +1.5
PGF *e*Sn **Sn** 02 57 04.0 -3.5
comp=E,7.0nm,0.4s
PGF Pioggiola 3.17 270 P **Pn** 02 56 31.6 +1.7
BOJS Bojanci 3.18 26 ⇑P **Pn** 02 56 31.8 +1.8
MSSA Maissana 3.21 303 P **Pn** 02 56 31.7 +1.3
MSSA AML AML
comp=E,107µm,0.8s
MSSA AML AML
comp=N,102µm,0.7s
STON Ston 3.26 85 *e*Pn **Pn** 02 56 31.1 +0.1
STON Ston 3.26 85 *e*Pn **Pn** 02 56 31.4 +0.4
STON *e*Sn **Sn** 02 57 10.9 +1.3
STON Ston 3.26 85 ⇑P **Pn** 02 56 31.2 +0.1
STON AML AML
comp=N,141µm,0.7s
STON AML AML
comp=E,126µm,1.0s
A251A Rujevac 3.28 40 *e*Pn **Pn** 02 56 32.7 +1.3
LTRZ Laterza 3.35 127 P **Pn** 02 56 34.5 +2.2
LTRZ AML AML
comp=N,750µm,1.6s
LTRZ AML AML
comp=E,136µm,0.9s
ROVR Rover Verones 3.39 333 P **Pn** 02 56 34.8 +1.7
ROVR AML AML
comp=E,70µm,0.5s
ROVR AML AML
comp=N,117µm,0.5s
AJAC Base Areonaval 3.43 259 P **Pn** 02 56 35.3 +1.9
AJAC Base Areonaval 3.43 259 P **Pn** 02 56 35.4 +2.0
AJAC AML AML
comp=E,229µm,0.2s
AJAC AML AML
comp=N,91µm,0.2s
GORR Gorreto 3.50 305 P **Pn** 02 56 36.4 +2.0
BLY Banja Luka 3.52 52 *e*Pn **Pn** 02 56 36.7 +2.0
DOSS Dosso del Somm 3.56 336 P **Pn** 02 56 37.7 +2.3
DOSS AML AML
comp=E,192µm,0.6s
DOSS AML AML
comp=N,207µm,0.6s
SALO Salr 3.57 327 P **Pn** 02 56 37.5 +2.1
SALO AML AML
comp=N,310µm,0.8s
SALO AML AML
comp=E,318µm,0.7s
DBRK Dubrovnik 3.59 88 *e*Pn **Pn** 02 56 35.9 +0.3
VINO Villanova 3.60 360 P **Pn** 02 56 36.1 +0.3
GEPF Gemona 3.62 358 P **Pn** 02 56 36.5 +0.5
GEPF AML AML
comp=E,148µm,0.6s
GEPF AML AML
comp=N,210µm,0.8s
STAL STALIGIAL 3.63 354 P **Pn** 02 56 37.1 +0.9
STAL AML AML
comp=E,286µm,1.0s
STAL AML AML
comp=N,209µm,0.3s
MAGA Magasa 3.66 329 P **Pn** 02 56 38.1 +1.4
MAGA AML AML
comp=E,523µm,0.8s
MAGA AML AML
comp=N,304µm,1.1s
LUSI Trento, Gardas 3.71 334 P **Pn** 02 56 39.3 +2.0
LUSI AML AML
comp=N,254µm,0.7s
LUSI AML AML
comp=E,180µm,0.7s
PTCC Patocco-Chiusa 3.75 1 P **Pn** 02 56 38.8 +0.9
PTCC AML AML
comp=E,109µm,0.5s
PTCC AML AML
comp=N,117µm,1.0s
GAGG Gaggia 3.81 335 P **Pn** 02 56 40.6 +1.7
GAGG AML AML
comp=E,353µm,1.2s
GAGG AML AML
comp=N,192µm,1.0s
HCY Herceg Novi 3.85 91 ⇓*i*Pn **Pn** 02 56 40.6 +1.3
HCY *i* Sn **Sn** 02 57 22.6 -1.7
MOSL Moslavina 3.87 39 *e*Pn **Pn** 02 56 39.8 +0.2
OBKA Obir 3.96 13 *e*Pn **Pn** 02 56 44.9 +4.1
comp=N,3.0nm,0.2s
QLNO Quiliano 3.96 297 P **Pn** 02 56 41.1 +0.3
MYKA Terra Mystica 3.99 4 *e*Pn **Pn** 02 56 43.9 +2.8
comp=N,18nm,0.4s
LOBO Lobor 4.03 29 *e*Pn **Pn** 02 56 41.9 +0.2
KOSI Kohlern 4.05 341 P **Pn** 02 56 43.8 +1.7
KOSI AML AML
comp=N,244µm,0.7s
KOSI AML AML
comp=E,300µm,1.0s
APPI Appiano 4.10 340 P **Pn** 02 56 44.2 +1.5
ABTA Abfaltersbach 4.13 353 *e*Pn **Pn** 02 56 44.6 +1.4
comp=E,8.9nm,0.2s
CEME Cevo 4.16 90 ⇑*i*Pn **Pn** 02 56 45.2 +1.7
CEME *i* Sn **Sn** 02 57 30.4 -1.5
BUM Brajici-Budva 4.16 93 ⇑*i*Pn **Pn** 02 56 44.8 +1.2
BUM *i* Sn **Sn** 02 57 29.8 -2.2
UPM Unac-Piva 4.16 80 ⇑*i*Pn **Pn** 02 56 46.4 +2.7
UPM *i* Sn **Sn** 02 57 32.8 +0.6
NKME Niksic 4.18 87 ⇑*i*Pn **Pn** 02 56 45.8 +2.0
NKME *i* Sn **Sn** 02 57 31.5 -0.9
NKY Niksic 4.21 86 ⇓*i*Pn **Pn** 02 56 46.3 +2.1
NKY *i* Sn **Sn** 02 57 32.5 -0.7
SOKA Soboth 4.21 17 *e*Pn **Pn** 02 56 46.7 +2.4
comp=E,2.2nm,0.3s
A252A Venje 4.31 48 *e*Pn **Pn** 02 56 46.2 +0.7
DRME Dracevica, Mon 4.39 94 ⇓*i*Pn **Pn** 02 56 47.9 +1.2
DRME *i* Sn **Sn** 02 57 34.8 -2.8
PDG Podgorica 4.42 91 *e*Pn **Pn** 02 56 49.5 +2.5
PDG *e*Sn **Sn** 02 57 40.5 +2.4
PDG Podgorica 4.42 91 P **Pn** 02 56 49.1 +2.2
PDG AML AML
comp=E,154µm,1.0s
PDG AML AML
comp=N,150µm,0.3s
PDG AML AML
comp=E,105µm,0.4s
PDG AML AML
comp=N,202µm,0.3s
TTG Podgorica 4.42 91 ⇑*i*Pn **Pn** 02 56 48.5 +1.5
TTG *i* Sn **Sn** 02 57 36.2 -1.9
KBA Koelnbreinsper 4.43 1 *e*Pn **Pn** 02 56 48.0 +0.7
comp=N,13nm,0.3s
SBF Sospel 4.44 288 *e*P **Pn** 02 56 48.9 +1.5
SBF *e*Sn **Sn** 02 57 34.6 -4.3
comp=N,7.3nm,0.4s
CGL Cagliari Serpe 4.46 224 P **Pn** 02 56 50.2 +2.5
MUGIO Muggio 4.47 318 P **Pn** 02 56 49.4 +1.7
MUGIO AML AML
comp=E,48µm,0.5s
MUGIO AML AML
comp=N,58µm,0.6s
ULC Ulcinj 4.47 97 ⇑*i*Pn **Pn** 02 56 48.6 +0.8
ULC *i* Sn **Sn** 02 57 36.1 -3.5
ESCA l'Escarene 4.48 287 P **Pn** 02 56 49.3 +1.5
ROSI Rosskopf 4.48 343 P **Pn** 02 56 49.7 +1.7
TURF col de Turini 4.50 289 P **Pn** 02 56 49.9 +1.6
PLE Pljevlja 4.53 79 ⇑*i*Pn **Pn** 02 56 51.6 +3.0
PLE *i* Sn **Sn** 02 57 41.8 +0.7
KOME Kolasin 4.59 85 ⇑*i*Pn **Pn** 02 56 51.9 +2.4
KOME *i* Sn **Sn** 02 57 41.9 -0.7
SPIF crte de Spivo 4.63 290 P **Pn** 02 56 52.8 +2.8
BBLS Lazići 4.63 73 *e*Pn **Pn** 02 56 52.2 +2.2
FETA Feichten 4.73 338 *e*Pn **Pn** 02 56 53.9 +2.4
comp=N,4.7nm,0.3s
WTTA Wattenberg 4.76 346 *e*Pn **Pn** 02 56 56.0 +4.1
comp=N,5.4nm,0.2s
WTTA Wattenberg 4.76 346 ⇓P **Pn** 02 56 55.8 +3.9
CALF Calern 4.78 285 ⇑P **Pn** 02 56 53.7 +1.6
DAVOX Davos/Dischmat 4.79 331 Pn **Pn** 02 56 55.1 +2.8
comp=N,4.1nm,0.3s,baz=351,slow=0.8,SNR=9.5
DAVOX Sn **Sn** 02 57 50.2 +2.6
comp=N,1.1nm,0.3s,baz=294,slow=20,SNR=3.3
comp=N,22nm,0.6s
DAVOX Davos/Dischmat 4.79 331 P **Pn** 02 56 55.6 +3.3
ISO Isola 4.79 291 P **Pn** 02 56 56.0 +3.7
SQTA Sankt Quirin 4.80 343 *i* Pn **Pn** 02 56 55.0 +2.7
comp=N,13nm,0.5s,SNR=5.9
WATA Walderalm 4.84 346 *i* Pn **Pn** 02 56 57.0 +4.0
comp=N,4.9nm,0.2s,SNR=5.3
PETRA Petralia Sopra 4.86 172 P Pn 02 56 58.4 +5.2
ARSA Arzberg 4.87 18 *e*Pn **Pn** 02 56 54.0 +0.8
comp=N,4.7nm,0.3s
IVA Berane 4.87 85 ⇑*i*Pn **Pn** 02 56 55.7 +2.4
IVA *i* Sn **Sn** 02 57 48.3 -1.2
PVY Plav 4.92 88 ⇓*i*Pn **Pn** 02 56 56.0 +1.9
PVY *i* Sn **Sn** 02 57 49.0 -1.9
MOTA Moosalm 4.94 343 *e*Pn **Pn** 02 56 56.7 +2.3
comp=N,2.8nm,0.3s
SJES Sjenica 4.95 81 *e*Pn **Pn** 02 56 57.1 +2.7
SJES *e*Sn **Sn** 02 57 54.5 +3.1
LMR La Mourre 5.02 280 *e*P **Pn** 02 56 55.9 +0.7
LMR *e*Sn **Sn** 02 57 48.2 -4.8
comp=N,0.9nm,0.3s
BIOA Bad Ischl, Aus 5.04 3 *e*Pn **Pn** 02 56 57.9 +2.3
comp=N,4.6nm,0.2s
TIR Tirane 5.07 103 *e*Pn **Pn** 02 56 57.9 +1.9
TIR *e*Sn **Sn** 02 57 54.3 -0.1
DIVS Divibare 5.10 71 *e*Pn **Pn** 02 56 57.6 +1.2
IVAS Ivanjica 5.11 77 *e*Pn **Pn** 02 56 58.3 +1.7
IVAS *e*Sn **Sn** 02 57 55.5 +0.1
TRIGF Trigance 5.15 285 P **Pn** 02 56 59.2 +2.1
RETA Reutte 5.15 341 *i* Pn **Pn** 02 57 00.2 +3.0
comp=N,7.3nm,0.3s,SNR=6.6
MBDF Montbardon 5.16 296 *e*P **Pn** 02 56 59.7 +2.4
MBDF *e*Sn **Sn** 02 57 51.9 -4.8
comp=N,23nm,0.9s
FLAF Flassans-sur-I 5.21 280 ⇑P **Pn** 02 56 59.4 +1.6
OGAG Argentiere 5.22 292 P Pn 02 57 03.3 +5.1
DAVA Damuels 5.23 334 *i* Pn **Pn** 02 57 00.9 +2.7
comp=N,3.4nm,0.3s,SNR=5.6
MOA Molln 5.24 7 *e*Pn **Pn** 02 57 00.0 +1.6
MOA *e*Sn **Sn** 02 57 58.6 0.0
MOA Molln 5.24 7 *e*Pn **Pn** 02 56 59.7 +1.4
comp=N,0.4nm,0.1s
FRGS Fruska Gora 5.34 60 *e*Pn **Pn** 02 57 00.4 +0.7
OGMO Fort Saint-Gob 5.41 300 P **Pn** 02 57 03.8 +3.1
TRUS Trudelj 5.42 71 *e*Pn **Pn** 02 57 02.3 +1.5
TRUS *e*Sn **Sn** 02 58 04.7 +1.8
DIX Grande Dixence 5.43 311 P **Pn** 02 57 03.2 +2.0
BLAF les Blancs 5.44 286 P **Pn** 02 57 03.4 +2.3
RONA Rosalia, Austr 5.48 22 *e*Pn **Pn** 02 57 02.6 +1.0
comp=N,3.6nm,0.2s
LPG La Plagne 5.50 303 *e*P **Pn** 02 57 04.7 +2.6
LPG *e*Sn **Sn** 02 58 00.2 -5.1
comp=N,8.5nm,0.7s
LPL La Plagne 5.52 303 *e*P **Pn** 02 57 05.5 +3.1
LPL *e*Sn **Sn** 02 58 00.6 -5.1
comp=N,12nm,0.7s
ARTF Artigues 5.55 282 P **Pn** 02 57 04.6 +1.9
GRUS Gruza 5.56 75 *e*Pn **Pn** 02 57 04.5 +1.7
GRUS *e*Sn **Sn** 02 58 07.9 +1.5
CONA Conrad Observa 5.58 18 *e*Pn **Pn** 02 57 04.5 +1.5
comp=N,2.0nm,0.3s
RSL Roselend 5.67 305 P **Pn** 02 57 07.7 +3.3
BSTF la Bastide-des 5.71 285 P **Pn** 02 57 06.9 +2.1
SELS Selova 5.78 82 *e*Pn **Pn** 02 57 07.2 +1.5
SELS *e*Sn **Sn** 02 58 13.0 +1.2
SMRF Simiane la Rot 5.78 286 *e*P **Pn** 02 57 08.2 +2.4
SMRF *e*Sn **Sn** 02 58 06.8 -5.0
comp=N,1.6nm,0.4s
ORIF Oris-en-Rattie 5.82 295 *e*P **Pn** 02 57 08.8 +2.4
ORIF *e*Sn **Sn** 02 58 07.6 -5.3
comp=N,2.4nm,0.4s
ORIF Oris-en-Rattie 5.82 295 P **Pn** 02 57 10.7 +4.3
RUSF Rustrel 5.84 285 P **Pn** 02 57 09.1 +2.5
AIGLE Aigle 5.84 311 P **Pn** 02 57 09.9 +3.3
ARBF Arbois 5.88 281 P **Pn** 02 57 09.1 +1.9
SAUF chteau de Sau 6.11 285 P **Pn** 02 57 12.3 +2.1
TORNY Torny/Romont 6.11 315 P **Pn** 02 57 12.9 +2.7
SLE Schleitheim 6.13 328 P **Pn** 02 57 11.8 +1.2
BALST Balsthal 6.13 322 P **Pn** 02 57 12.8 +2.2
ZST Bratislava 6.16 25 *e*PN **Pn** 02 57 14.0 +3.1
GUT Gutenstein 6.16 333 P **Pn** 02 57 14.3 +3.3
GERES GERESS Array B 6.20 3 Pn **Pn** 02 57 11.9 +0.3
comp=N,0.7nm,0.3s,baz=181,slow=13,SNR=9.0
GERES Sn **Sn** 02 58 22.6 +0.4
comp=N,1.9nm,0.3s,baz=166,slow=23,SNR=5.3
comp=N,2.3nm,0.5s
CKRC Cesky Krumlov 6.21 6 *e*PN **Pn** 02 57 12.1 +0.5
CKRC *e*SN **Sn** 02 58 21.1 -1.3
BOVS Bovan 6.24 78 *e*Pn **Pn** 02 57 13.4 +1.4
BOVS *e*Sn **Sn** 02 58 23.7 +0.7
BARS Barje 6.28 86 *e*Pn **Pn** 02 57 14.6 +1.9
BARS *e*Sn **Sn** 02 58 23.7 -0.5
GIMEL St. Georges / 6.34 310 P **Pn** 02 57 15.6 +2.1
MODS Modra-Piesok 6.37 25 *e*PN **Pn** 02 57 17.8 +3.9
MODS *e*PG **Pg** 02 57 40.9 -1.5
MODS *e*SN **Sn** 02 58 19.8 -6.5
MODS *e*SG Sg 02 59 19.6 +15
FELD Feldberg im Sc 6.42 326 P **Pn** 02 57 15.7 +1.0
CABF La Chapelle 6.48 310 *e*P **Pn** 02 57 17.7 +2.2
CABF *e*Sn **Sn** 02 58 23.4 -5.8
comp=N,3.1nm,0.5s
KHC Kasperske Hory 6.48 2 *e*PN **Pn** 02 57 16.1 +0.7
KHC *e*SN **Sn** 02 58 26.9 -2.2
OG35 Corcelles 6.49 304 P **Pn** 02 57 17.6 +2.1
PRVS Prvonek 6.49 88 *e*Pn **Pn** 02 57 17.6 +2.1
PRVS *e*Sn **Sn** 02 58 29.1 -0.3
KIZ Kirchzarten 6.51 326 P **Pn** 02 57 16.9 +1.1
VIVF Saint-Julien-l 6.61 292 *e*P **Pn** 02 57 20.3 +3.1
VIVF *e*Sn **Sn** 02 58 26.1 -6.3
comp=N,0.4nm,0.2s
ZAGS Zajecar 6.64 77 *e*Pn **Pn** 02 57 19.6 +2.1
BZS Buzias 6.69 61 *e*Pn **Pn** 02 57 19.5 +1.3
VOGT Vogtsburg - To 6.71 326 Pn **Pn** 02 57 20.0 +1.5
KRUC Moravsky 6.77 18 *e*PN **Pn** 02 57 19.6 +0.3
BOUC Bouclans 6.78 315 P **Pn** 02 57 21.1 +1.7
BOUC S **Sn** 02 58 39.8 +3.4
BOSS Bosilegrad 6.79 88 *e*Pn **Pn** 02 57 21.3 +1.7
BOSS *e*Sn **Sn** 02 58 35.5 -1.2
SSB Saint Sauveur 6.83 296 P **Pn** 02 57 22.4 +2.1
OPP Oppenau 6.85 330 P **Pn** 02 57 21.4 +1.0
HINF Hinteralfeld 6.88 321 *e*P **Pn** 02 57 22.8 +2.0
HINF *e*Sn **Sn** 02 58 32.9 -5.9
comp=N,3.5nm,0.3s
ZAPS Zavoj 6.89 82 *e*Pn **Pn** 02 57 23.0 +2.0
ZAPS *e*Sn **Sn** 02 58 38.5 -0.6
LASF Ste Croix 7.02 285 *e*P **Pn** 02 57 24.4 +1.7
LASF *e*Sn **Sn** 02 58 36.1 -6.2
comp=N,0.3nm,0.2s
VYHS Vyhne 7.02 32 *e*PN **Pn** 02 57 26.4 +3.7
VYHS *e*SN **Sn** 02 58 39.1 -3.2
ECH Echery 7.04 324 P **Pn** 02 57 24.0 +1.0
ECH Echery 7.04 324 P **Pn** 02 57 24.0 +1.0
ECH S **Sn** 02 58 42.5 -0.2
VRAC Vranov 7.04 18 Pn **Pn** 02 57 22.3 -0.7
comp=N,0.3nm,0.3s,baz=314,slow=11,SNR=1.3
comp=N,1.3nm,0.4s
VRAC Vranov 7.04 18 *e*PN **Pn** 02 57 22.8 -0.3
CDF Champ du Feu 7.14 326 *e*P **Pn** 02 57 26.0 +1.6
CDF *e*Sn **Sn** 02 58 39.5 -5.8
comp=N,6.3nm,0.4s
HAU Haudompre 7.25 320 *e*P **Pn** 02 57 27.3 +1.4
HAU *e*Sn **Sn** 02 58 41.7 -6.2
comp=N,7.4nm,0.4s
VTS Vitosha 7.34 87 *e*Pn **Pn** 02 57 29.0 +1.7
VTS *e*Sn **Sn** 02 58 49.5 -0.9
PRU Pruhonice 7.39 6 *e*SN **Sn** 02 58 47.7 -3.6
KEST Kesra 7.56 205 Pn **Pn** 02 57 31.6 +1.4
comp=N,0.1nm,0.3s,baz=29,slow=17,SNR=2.1
comp=N,4.2nm,0.6s
SJAF Saint Jean de 7.68 272 P **Pn** 02 57 31.4 -0.5
KRLC Kraliky 7.81 17 *e*PN **Pn** 02 57 33.0 -0.6
SMF Signal de Mont 7.83 304 *e*P **Pn** 02 57 37.0 +3.2
SMF *e*Sn **Sn** 02 58 55.6 -6.6
comp=N,9.1nm,0.5s
SRS Serrai 7.84 98 *e*Pn **Pn** 02 57 35.9 +1.8
DRGR 7.88 55 *e*Pn **Pn** 02 57 36.8 +2.1
FILF Fillols 7.91 273 P **Pn** 02 57 37.3 +2.3
PAGF Fort de Pagny 7.93 321 *e*P **Pn** 02 57 39.1 +3.9
PAGF *e*Sn **Sn** 02 59 00.6 -4.1
comp=N,1.6nm,0.3s
DPC Dobruska-Polom 7.98 14 *e*PN **Pn** 02 57 36.6 +0.7
SFTF Sexfontaines 8.03 317 *e*P **Pn** 02 57 38.8 +2.2
SFTF *e*Sn **Sn** 02 59 00.5 -6.5
comp=N,2.2nm,0.4s
LOR Lormes 8.12 308 *e*P **Pn** 02 57 40.4 +2.5
baz=122
LOR *e*Sn **Sn** 02 59 02.7 -6.7
comp=N,2.6nm,0.4s
MTLF Montolieu 8.14 279 *e*P **Pn** 02 57 41.1 +2.9
AVF Avril sur Loir 8.19 304 *e*P **Pn** 02 57 40.5 +1.7
AVF *e*Sn **Sn** 02 59 04.6 -6.5
comp=N,0.3nm,0.2s
MEZF Maizieres J'vi 8.22 318 *e*P **Pn** 02 57 42.0 +2.9
MEZF *e*Sn **Sn** 02 59 05.2 -6.5
comp=N,1.3nm,0.3s
SSF Saint Saulge 8.23 306 *e*P **Pn** 02 57 42.4 +3.1
SSF *e*Sn **Sn** 02 59 05.2 -6.7
comp=N,0.6nm,0.3s
SAVF Savonnieres en 8.26 319 *e*P **Pn** 02 57 43.3 +3.6
BGF Bois d'Agland 8.41 301 *e*P **Pn** 02 57 44.9 +3.1
BGF *e*Sn **Sn** 02 59 09.2 -7.2
comp=N,0.5nm,0.2s
CAF Calviac 8.43 289 *e*P **Pn** 02 57 44.5 +2.4
PLD Plovdiv 8.47 90 *e*Pn **Pn** 02 57 45.2 +2.6
CLL Collm 8.66 359 *e*Sn Sn 02 59 11.0 -12
CLL *ex* x 02 59 23.0
CLL *ex* x 02 59 54.0
CLL *e*Sg Sg 03 00 18.0 -0.2
comp=Z,11nm,0.9s
PAND Andorre 8.66 273 P **Pn** 02 57 47.0 +1.5
TCF Toulx Ste Croi 8.71 298 *e*P **Pn** 02 57 49.2 +3.2
TCF *e*Sn **Sn** 02 59 16.6 -7.4
comp=Z,0.4nm,0.3s
RJF Les Rejaudoux 8.89 291 *e*P **Pn** 02 57 51.9 +3.5
MONQ Montcuq 8.95 285 P **Pn** 02 57 50.7 +1.4
LFF La Frestale 9.36 288 *e*P **Pn** 02 57 58.1 +3.3
MLR Muntele Rosu 9.54 68 Pn **Pn** 02 57 57.4 -0.1
comp=Z,1.1nm,0.6s,baz=165,slow=18,SNR=1.8
ESDC Sonseca Array 13.33 263 Pn **Pn** 02 58 50.1 +0.9
baz=68,slow=13,SNR=7.8
comp=Z,0.8nm,0.7s
BRTR Keskin Array B 15.60 94 Pn **Pn** 02 59 20.2 +0.3
comp=Z,0.2nm,0.3s,baz=255,slow=11,SNR=1.8
comp=Z,0.6nm,0.5s
EKA Eskdalemuir Ar 16.60 326 Pn **Pn** 02 59 32.5 -0.1
baz=134,slow=14
comp=Z,0.3nm,0.5s
HFS Hagfors 17.51 1 P **Pn** 02 59 43.7 -0.1
comp=Z,0.1nm,0.3s,baz=169,slow=16,SNR=2.5
comp=Z,1.2nm,0.8s
NB2 NORSAR Subarra 18.46 357 P **Pn** 02 59 57.2 +1.6
comp=Z,1.2nm,1.0s,baz=174,slow=10
NOA NORSAR Array B 18.46 357 P **Pn** 02 59 56.9 +1.3
baz=175,slow=12,SNR=5.0
comp=Z,0.4nm,0.7s
FINES FINESS Array B 20.33 18 P **P** 03 00 16.7 +0.9
comp=Z,1.0nm,0.6s,baz=195,slow=12,SNR=6.6
comp=Z,1.0nm,0.6s
KBZ Khabaz 21.57 77 P **P** 03 00 31.0 +1.6
comp=Z,2.6nm,0.8s,baz=296,slow=10,SNR=5.0
comp=Z,2.6nm,0.8s
TORD Torodi Ar. Bea 31.07 202 P **P** 03 01 59.8 +1.8
comp=Z,0.9nm,0.7s,baz=11,slow=9.5,SNR=8.9
comp=Z,0.9nm,0.7s
MKAR Makanchi Array 47.77 60 P **P** 03 04 16.0 -1.0
comp=Z,1.0nm,0.8s,baz=316,slow=5.1,SNR=4.2
comp=Z,1.0nm,0.8s
SONM Songino Array 61.84 50 P **P** 03 06 01.1 +2.1
comp=Z,0.6nm,0.5s,baz=310,slow=12,SNR=3.0
comp=Z,0.6nm,0.5s

ROM 24 02:59:17.8±0.1, 42°813N±0'.004×13°157E±0'.007,
h10km, ML3.3/5, 1C-1D, Error ellipse: s-maj=0.6km
s-min=0.3km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**303**	⇓P		Pg		02 59 20.1	+0.4
NRCA				S		Sg		02 59 21.4	+0.3
NRCA					AML	AML			
NRCA					AML	AML			
NRCA					AML	AML			
NRCA					AML	AML			
	comp=N,36282µm,0.1s								
NRCA					AML	AML			
	comp=E,61816µm,0.2s								
NRCA					END				
FEMA	**Monte Fema**	**0.17**	**332**		P	Pg		02 59 22.0	+0.5
FEMA					S	Sg		02 59 24.8	+0.8
FDMO	**Fiordimonte**	**0.23**	**347**		P	Pg		02 59 22.9	+0.4
FDMO					S	Sg		02 59 26.6	+0.9
FDMO					AML	AML			
	comp=E,47600µm,0.4s								
FDMO					AML	AML			
	comp=N,85150µm,0.9s								
CESI	**CESI - Serrava**	**0.27**	**316**	⇑P		Pg		02 59 23.8	+0.5
CESI					S	Sb		02 59 28.2	-1.3
CESI					AML	AML			
	comp=E,96600µm,0.4s								
CESI					AML	AML			
CESI					AML	AML			
	comp=N,10461µm,0.2s								
CSP1	**Cessapalombo**	**0.28**	**7**	P		Pg		02 59 23.9	+0.4
CSP1				S		Sg		02 59 28.6	+1.2
CSP1					AML	AML			
CSP1					AML	AML			
RM33	**Pellescritta (**	**0.31**	**172**	P		Pb		02 59 25.1	-0.3
RM33				S		Sb		02 59 29.5	-1.1
CAMP	**Campotosto**	**0.33**	**146**	P		Pg		02 59 25.0	+0.5
CAMP				S		Sg		02 59 30.0	+1.1
SEF1	**Sefro**	**0.37**	**335**	P		Pg		02 59 25.6	+0.5
SEF1				S		Sb		02 59 31.3	-1.0
SEF1					AML	AML			
	comp=E,67550µm,0.7s								
SEF1					AML	AML			
	comp=N,44950µm,0.4s								
SEF1					AML	AML			
	comp=E,67600µm,0.7s								

ARRO	**Arrone**	**0.37**	**231**	P	Pg	02 59 25.6	+0.5
ARRO				S	Sb	02 59 31.7	-0.7
ARRO				AML	AML		
	comp=E,41250μm,0.6s						
ARRO				AML	AML		
	comp=E,41200μm,0.6s						
ARRO				AML	AML		
	comp=N,33150μm,0.7s						
MDAR	**Monte D'Aria**	**0.38**	**358**	P	Pg	02 59 25.5	+0.2
MDAR				S	Sb	02 59 31.6	-1.1
TERO	**Teramo**	**0.38**	**120**	P	Pg	02 59 25.7	+0.4
TERO				S	Sg	02 59 31.2	+0.9
TERO				AML	AML		
	comp=E,41650μm,0.6s						
TERO				AML	AML		
	comp=N,81650μm,0.6s						
TERO				AML	AML		
	comp=E,44650μm,0.6s						
TERO				AML	AML		
	comp=N,86650μm,0.6s						
TERO				AML	AML		
	comp=E,2283μm,0.1s						
MNTP	**Montappone**	**0.40**	**35**	P	Pb	02 59 26.4	-0.5
OFFI	**Offida**	**0.41**	**72**	P	Pb	02 59 26.8	-0.3
OFFI				AML	AML		
	comp=E,75500μm,0.5s						
OFFI				AML	AML		
FIU1	**Fiuminata**	**0.41**	**336**	P	Pb	02 59 26.9	-0.3
SSM1	**San Severino M**	**0.42**	**2**	P	Pg	02 59 26.3	+0.3
GAG1	**Gagliole**	**0.43**	**351**	P	Pg	02 59 26.6	+0.4
GAG1				S	Sb	02 59 33.4	-0.7
GAG1				AML	AML		
	comp=E,74900μm,0.9s						
GAG1				AML	AML		
	comp=N,95350μm,0.5s						
GAG1				AML	AML		
	comp=E,74850μm,0.9s						
GAG1				AML	AML		
	comp=N,95250μm,0.5s						
ASSB	**Assisi San Ben**	**0.43**	**302**	P	Pg	02 59 26.2	0.0
ASSB				S	Sb	02 59 33.3	-0.9
ASSB				AML	AML		
	comp=E,28950μm,0.2s						
ASSB				AML	AML		
	comp=N,29600μm,0.3s						
ASSB				AML	AML		
	comp=E,29000μm,0.2s						
ASSB				AML	AML		
	comp=E,1046μm,0.1s						
SNTG	**Esanatoglia**	**0.47**	**340**	P	Pg	02 59 27.2	+0.3
SNTG				AML	AML		
	comp=N,2690μm,0.6s						
SNTG				AML	AML		
	comp=E,2190μm,0.7s						
SNTG				AML	AML		
	comp=E,17050μm,0.7s						
SNTG				AML	AML		
	comp=N,21900μm,0.6s						
GIGS	**Gran Sasso**	**0.47**	**140**	P	Pg	02 59 27.1	+0.1
TRE1	**Treia**	**0.51**	**13**	P	Pb	02 59 28.7	-0.2
EL6	**Elcito**	**0.52**	**356**	P	Pg	02 59 28.4	+0.5
EL6				AML	AML		
	comp=N,29350μm,1.0s						
EL6				AML	AML		
	comp=E,26000μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.53**	**315**	P	Pg	02 59 28.5	+0.4
ATCC				AML	AML		
	comp=E,26600μm,0.5s						
ATCC				AML	AML		
	comp=N,27200μm,1.0s						
ATCC				AML	AML		
	comp=E,26650μm,0.5s						
ATCC				AML	AML		
	comp=N,27150μm,1.0s						
FIAM	**Fiamignano**	**0.55**	**183**	P	Pg	02 59 28.5	+0.1
TRTR	**Tortoreto Alta**	**0.56**	**90**	P	Pg	02 59 28.0	-0.6
TRTR				AML	AML		
	comp=N,76100μm,0.6s						
TRTR				AML	AML		
	comp=E,84100μm,0.7s						
CADA	**Capodarco di F**	**0.58**	**49**	P	Pb	02 59 30.6	+0.4
MURB	**Monte Urbino**	**0.65**	**314**	P	Pb	02 59 30.8	-0.4
MURB				AML	AML		
	comp=E,38800μm,0.9s						
MURB				AML	AML		
	comp=N,44750μm,1.0s						
MURB				AML	AML		
	comp=N,46800μm,1.0s						
MURB				AML	AML		
	comp=E,38800μm,0.9s						
MURB				AML	AML		
	comp=N,44750μm,1.0s						
MURB				AML	AML		
	comp=E,41950μm,0.9s						
PP3	**Marolino**	**0.66**	**30**	P	Pb	02 59 31.4	+0.1
PP3				AML	AML		
PP3				AML	AML		
	comp=N,75650μm,0.4s						
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
	comp=N,75600μm,0.4s						
PP3				AML	AML		
PP3				AML	AML		
	comp=N,72800μm,0.4s						
VCEL	**Villa Celiera**	**0.66**	**129**	P	Pb	02 59 31.4	0.0
ATFO	**Monte Foce - G**	**0.70**	**322**	AML	AML		
	comp=N,11750μm,0.3s						
ATFO				AML	AML		
	comp=E,10645μm,1.5s						
ATFO				AML	AML		
	comp=E,10640μm,1.5s						
FRON	**Frontone**	**0.77**	**336**	P	Pg	02 59 32.7	0.0
AOI	**Ancona**	**0.81**	**24**	P	Pb	02 59 33.7	-0.3
AOI				AML	AML		
	comp=E,12950μm,0.5s						
AOI				AML	AML		
	comp=N,10700μm,0.4s						
MPAG	**Monte Paganucc**	**0.87**	**341**	P	Pb	02 59 35.1	+0.1
MPAG				AML	AML		
	comp=E,9890μm,0.3s						
MPAG				AML	AML		
	comp=N,11010μm,1.2s						
MPAG				AML	AML		
	comp=E,9985μm,0.3s						
MPAG				AML	AML		
	comp=E,9915μm,0.3s						
MPAG				AML	AML		
	comp=N,11030μm,1.2s						
MPAG				AML	AML		
	comp=E,9945μm,0.3s						
MPAG				AML	AML		
	comp=N,11550μm,1.1s						
NARO	**Abbazia di Nar**	**0.90**	**332**	P	Pg	02 59 35.1	0.0
NARO				AML	AML		
	comp=E,4980μm,0.7s						
NARO				AML	AML		
	comp=N,4755μm,0.7s						
SACS	**San Casciano d**	**0.92**	**273**	P	Pb	02 59 35.9	0.0
SACS				AML	AML		
	comp=E,12900μm,1.5s						
SACS				AML	AML		
	comp=N,10800μm,0.9s						
SACS				AML	AML		
	comp=E,13000μm,1.5s						
SACS				AML	AML		
	comp=N,10790μm,0.9s						
FSSB	**Fossombrone**	**0.92**	**343**	AML	AML		
	comp=N,29500μm,0.4s						
FSSB				AML	AML		
	comp=E,21700μm,0.6s						
CAFI	**Castiglion Fio**	**1.01**	**301**	P	Pb	02 59 37.5	0.0
BOSI	**Bolzano**	**3.91**	**341**	AML	AML		
	comp=N,1455μm,0.6s						
BOSI				AML	AML		
	comp=E,1480μm,1.5s						

IDC ***24*** *02:59:18.0±0.7,7.°17N×72.°24W, h0km, mb3.7/9, mbtmp3.8/13, ML3.4/4, Error ellipse: s-maj=18.4km s-min=11.1km az=125.0*

RSNC ***24*** *02:59:22.6±0.9, 7.°21N×72.°19W, h5km±3km, ML3.7, Mw3.9, Fault plane solution: NP1:φs109.00000°, δ45.00000°, λ78.00000°.*

ISC 24 02:59:20.0±1.3**, 7.°12N**±0.°02×**72.°12W**±0.°03**, h7**km±8km**, n56,**

σ2§29/100, mb3.6/9, 1C-7D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.62**	**291**	⇓*iP*	**Pg**	**02 59 32.0**	**0.0**
PAMC				*eS*	**Sg**	**02 59 39.3**	**-0.9**
PAMC				*i*		02 59 39.7	
	comp=Z,4μm,0.2s						
TAMC	**Tame, Arauca**	**0.75**	**155**	⇓*eP*	**Pn**	**02 59 38.1**	**+1.1**
TAMC				*eS*	**Sn**	**02 59 49.4**	**+0.7**
TAMC				*i*		02 59 52.8	
	comp=Z,3μm,0.3s						
BARC	**Barichara**	**1.18**	**244**	⇓*iP*	**Pg**	**02 59 42.9**	**+0.2**
BARC				*eS*	**Sg**	**02 59 59.0**	**+1.0**
BARC				*i*		03 00 03.5	
	comp=Z,2μm,0.5s						
RUSC	**La Rusia**	**1.55**	**218**	⇓*iP*	**Pn**	**02 59 49.9**	**+1.4**
RUSC				*eS*	**Sn**	**03 00 10.3**	**+1.2**
RUSC				*i*		03 00 15.3	
	comp=Z,524nm,0.3s						
BRRC	**Barranca, Sant**	**1.58**	**270**	⇓*iP*	**Pn**	**02 59 49.9**	**+1.4**
BRRC				*eS*	**Sn**	**03 00 09.4**	**+0.2**
BRRC				*i*		03 00 13.5	
	comp=Z,2μm,0.3s						
OCAC	**Ocana**	**1.63**	**313**	⇓*iP*	**Pn**	**02 59 50.4**	**+1.1**
OCAC				*eS*	**Sn**	**03 00 10.5**	**-0.2**
SOCV	**Socops**	**1.70**	**47**	*ePg*	**Pb**	**02 59 52.4**	**+0.7**
SOCV				*ePg*	**Pg**	**02 59 53.9**	**+1.2**
SOCV				*eS*	**Sb**	**03 00 14.3**	**+0.9**
SDV	**Santo Domingo**	**2.29**	**40**	Pn	**Pn**	**02 59 59.9**	**+1.5**
	comp=Z,66nm,0.3s,baz=239,slow=3.8,SNR=34						
SDV				Lg	Lg	03 00 30.8	
	comp=Z,70nm,0.3s,baz=71,slow=21,SNR=5.7						
	comp=Z,160nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.39**	**256**	⇑*iP*	**Pn**	**03 00 00.5**	**+0.8**
PTBC				*ePg*	**Pb**	**03 00 03.3**	**-0.1**
PTBC				*eS*	**Sn**	**03 00 30.0**	**+0.6**
PTBC				*i*		03 00 35.6	
	comp=Z,853nm,0.3s						
SPBC	**San Pablo de B**	**2.43**	**233**	*eP*	**Pn**	**03 00 01.2**	**+1.0**
SPBC				*eS*	**Sn**	**03 00 33.9**	**+3.6**
SPBC				*i*		03 00 38.5	
	comp=Z,602nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.75**	**278**	*eP*	**Pn**	**03 00 05.8**	**+1.3**
ZARC				*eS*	**Sn**	**03 00 39.1**	**+1.1**
ZARC				*i*		03 00 44.6	
	comp=Z,448nm,0.5s						
LL1C	**La Loma 1 Cana**	**2.80**	**330**	*eP*	**Pn**	**03 00 07.0**	**+1.7**
LL1C				*eS*	**Sn**	**03 00 43.8**	**+4.5**
LL6C	**La Loma 6 Bece**	**2.84**	**336**	*eP*	**Pn**	**03 00 07.3**	**+1.5**
LL6C				*eS*	**Sb**	**03 00 45.9**	**-0.2**
LL6C				*i*		03 00 57.2	
	comp=Z,140nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.90**	**180**	*eP*	**Pn**	**03 00 08.2**	**+1.6**
PTGC				*eS*	**Sn**	**03 00 43.8**	**+2.1**
PTGC				*i*		03 00 58.1	
	comp=Z,673nm,0.3s						
CHIC	**Chingaza**	**2.95**	**213**	*eP*	**Pn**	**03 00 09.7**	**+2.1**
CHIC				*eS*	**Sn**	**03 00 44.4**	**+0.9**
CHIC				*i*		03 00 50.5	
	comp=Z,115nm,0.4s						
NORC	**Norcasia**	**3.14**	**241**	*eP*	**Pn**	**03 00 10.8**	**+0.8**
NORC				*eS*	**Sn**	**03 00 51.1**	**+3.3**
NORC				*i*		03 00 58.8	
	comp=Z,357nm,0.6s						
ROSC	**El Rosal**	**3.15**	**224**	Pg	**Pn**	**03 00 14.1**	**+3.7**
	comp=Z,22nm,0.3s,baz=92,slow=19,SNR=40						
ROSC				Sn	**Sn**	**03 00 46.1**	**-2.4**
	comp=Z,24nm,0.3s,baz=195,slow=22,SNR=4.1						
ROSC				Lg	Lg	03 00 57.2	
	comp=Z,25nm,0.3s,baz=149,slow=21,SNR=5.0						
ROSC	**El Rosal**	**3.15**	**224**	*eP*	**Pn**	**03 00 14.2**	**+3.8**
ROSC				*eS*	**Sn**	**03 00 51.6**	**+3.1**
ROSC				*i*		03 01 10.1	
	comp=Z,82nm,0.6s						
VILC	**Villavicencio,**	**3.37**	**208**	*eP*	**Pn**	**03 00 14.9**	**+1.7**
VILC				*eS*	**Sn**	**03 00 56.1**	**+2.5**
VILC				*i*		03 01 18.9	
	comp=Z,319nm,0.3s						
ARGC	**Ariguani, Magd**	**3.44**	**322**	*eP*	**Pn**	**03 00 15.2**	**+1.0**
ARGC				*eS*	**Sn**	**03 00 57.8**	**+2.6**
ARGC				*i*		03 01 30.8	
	comp=Z,64nm,0.6s						
UREC	**San Jos de Ur**	**3.45**	**281**	*eP*	**Pn**	**03 00 16.2**	**+2.0**
UREC				*eS*	**Sn**	**03 00 58.9**	**+3.6**
UREC				*i*		03 01 01.6	
	comp=Z,214nm,0.2s						
HELC	**Santa Helena**	**3.51**	**255**	*eP*	**Pn**	**03 00 16.6**	**+1.2**
HELC				*eS*	**Sn**	**03 01 01.7**	**+4.2**
HELC				*i*		03 01 13.2	
	comp=Z,102nm,0.3s						
GUY2C	**Guyana, Caldas**	**3.74**	**240**	*eP*	**Pn**	**03 00 20.7**	**+2.1**
GUY2C				*eS*	**Sn**	**03 01 06.2**	**+3.1**
GUY2C				*i*		03 01 21.6	
	comp=Z,108nm,0.4s						
CRJC	**Cerrejon, Guaj**	**3.95**	**349**	*eP*	**Pn**	**03 00 21.7**	**+0.5**
CRJC				*eS*	**Sn**	**03 01 08.6**	**+0.7**
CRJC				*i*		03 01 26.0	
	comp=Z,139nm,0.4s						
DABV	**Dabajuro**	**4.05**	**21**	*eP*	**Pn**	**03 00 23.6**	**+1.1**
DABV				*eS*	**Sn**	**03 01 10.1**	**-0.2**
CBOC	**Ciudad Bolivar**	**4.07**	**252**	*eP*	**Pn**	**03 00 26.2**	**+3.4**
CBOC				*eS*	**Sn**	**03 01 14.8**	**+4.0**
CBOC				*i*		03 01 30.2	
	comp=Z,67nm,0.6s						
SJCC	**San Jacinto, C**	**4.10**	**313**	*eP*	**Pn**	**03 00 25.1**	**+1.9**
SJCC				*ePg*	**Pb**	**03 00 31.8**	**-0.8**
SJCC				*eS*	**Sn**	**03 01 13.2**	**+1.7**
SJCC				*i*		03 01 33.7	
	comp=Z,186nm,0.9s						
ANIL	**Santa Ana**	**4.18**	**232**	*eP*	**Pn**	**03 00 26.5**	**+1.9**
ANIL				*eS*	**Sn**	**03 01 15.2**	**+1.4**
ANIL				*i*		03 01 25.9	
	comp=Z,190nm,0.4s						
PRAC	**Prado**	**4.36**	**219**	⇓*iP*	**Pn**	**03 00 28.4**	**+1.6**
PRAC				*eS*	**Sn**	**03 01 19.9**	**+1.9**
PRAC				*i*		03 01 27.4	
	comp=Z,71nm,0.5s						
LCBC	**Los crdobas,**	**4.55**	**293**	*eP*	**Pn**	**03 00 31.1**	**+1.7**
LCBC				*eS*	**Sn**	**03 01 26.3**	**+3.7**
LCBC				*i*		03 01 32.5	
	comp=Z,59nm,0.5s						
URIC	**Uribia, Colomb**	**4.56**	**2**	*eP*	**Pn**	**03 00 28.9**	**-0.5**
URIC				*eS*	**Sn**	**03 01 25.0**	**+2.3**
URIC				*i*		03 02 03.6	
	comp=Z,44nm,0.5s						
GUVC	**San Jose del G**	**4.57**	**186**	*eP*	**Pn**	**03 00 31.2**	**+1.6**
GUVC				*eS*	**Sn**	**03 01 22.4**	**-0.6**
GUVC				*i*		03 01 41.5	
	comp=Z,155nm,0.3s						
PLMC	**San Jos del P**	**4.69**	**242**	*eP*	**Pn**	**03 00 34.2**	**+2.9**
PLMC				*eS*	**Sn**	**03 01 31.6**	**+5.5**
PLMC				*i*		03 01 59.2	
	comp=Z,40nm,0.6s						
MACC	**Macarena, Meta**	**5.23**	**199**	*eP*	**Pn**	**03 00 39.0**	**+0.3**
MACC				*eS*	**Sn**	**03 01 36.3**	**-3.1**
MACC				*i*		03 01 45.1	
	comp=Z,84nm,0.4s						
YOTC	**Yotoco, Valle**	**5.24**	**234**	*eP*	**Pn**	**03 00 40.8**	**+1.9**
YOTC				*eS*	**Sn**	**03 01 44.1**	**+4.5**
CAPC	**Capurgana**	**5.40**	**287**	*eP*	**Pn**	**03 00 41.7**	**+0.7**
CAPC				*eS*	**Sn**	**03 01 40.1**	**-3.4**
CAPC				*i*		03 01 46.2	
	comp=Z,25nm,0.4s						
BETC	**Betania**	**5.51**	**217**	*eP*	**Pn**	**03 00 41.9**	**-0.7**
BETC				*eS*	**Sn**	**03 01 45.2**	**-1.2**
BETC				*i*		03 01 58.6	
	comp=Z,36nm,0.5s						
GARC	**Garzon, Huila**	**5.94**	**215**	*eP*	**Pn**	**03 00 49.9**	**+1.1**
GARC				*eS*	**Sn**	**03 01 57.2**	**-0.1**
GARC				*i*		03 02 03.6	
	comp=Z,48nm,0.2s						
POPC	**Popayan, Colom**	**6.43**	**225**	*eP*	**Pn**	**03 00 57.7**	**+2.3**
POPC				*eS*	**Sn**	**03 02 12.4**	**+3.2**
FLOC	**Florencia**	**6.53**	**213**	*eP*	**Pn**	**03 00 58.1**	**+1.5**
FLOC				*eS*	**Sn**	**03 02 12.2**	**+0.8**
FLOC				*i*		03 02 16.9	
	comp=Z,9.8nm,0.5s						
BBAC	**Balboa, Cauca**	**7.20**	**226**	*eP*	**Pn**	**03 01 07.3**	**+1.4**
BBAC				*eS*	**Sn**	**03 02 34.2**	**+6.1**
PTLC	**Puerto Leguiza**	**7.40**	**201**	*eP*	**Pn**	**03 01 12.5**	**+3.9**
PTLC				*eS*	**Sb**	**03 02 51.4**	**-5.9**
PTLC				*i*		03 03 52.4	
	comp=Z,19nm,0.4s						
SJG	**San Juan**	**12.38**	**27**	Pn	**Pn**	**03 02 17.1**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=227,slow=19,SNR=3.0						
	comp=Z,4.4nm,0.3s						
ATAH	**Atahualpa**	**15.48**	**204**	Pn	**Pn**	**03 02 60.0**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=64,slow=13,SNR=3.8						
	comp=Z,2.8nm,0.7s						
MDP	**Montagnes des**	**19.47**	**95**	P	**P**	**03 03 48.1**	**+0.5**
	baz=37,slow=20,SNR=2.1						
MDP				Lg	Lg	03 09 31.6	
	comp=Z,0.1nm,0.3s,baz=220,slow=21,SNR=1.7						
	comp=Z,3.3nm,0.9s						
LPAZ	**La Paz**	**23.59**	**170**	P	**P**	**03 04 31.6**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=297,slow=7.6,SNR=4.9						
	comp=Z,0.8nm,0.5s						
SIV	**San Ignacio**	**25.43**	**155**	P	**P**	**03 04 50.1**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=326,slow=8.8,SNR=4.3						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**37.02**	**311**	P	**P**	**03 06 29.5**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=127,slow=7.8,SNR=7.8						
	comp=Z,0.5nm,0.8s						
PLCA	**Paso Flores**	**47.63**	**178**	P	**P**	**03 07 56.0**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=327,slow=9.3,SNR=3.0						
	comp=Z,1.4nm,0.9s						
PDAR	**Pinedale Array**	**48.43**	**323**	P	**P**	**03 08 01.2**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=138,slow=9.2,SNR=3.1						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**63.34**	**339**	P	**P**	**03 09 48.2**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=114,slow=10,SNR=3.2						
	comp=Z,1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.70**	**78**	P	**P**	**03 10 48.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=286,slow=6.7,SNR=12						
	comp=Z,0.2nm,0.3s						
ILAR	**Eielson Array**	**77.12**	**335**	P	**P**	**03 11 12.4**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=116,slow=4.7,SNR=9.1						
	comp=Z,0.5nm,0.7s						
NOA	**NORSAR Array B**	**80.58**	**29**	P	**P**	**03 11 32.7**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=264,slow=5.5,SNR=3.0						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**150.09**	**234**	PKPbc	**PKPdf**	**03 19 10.6**	**+3.1**
	comp=Z,0.8nm,0.8s,baz=159,slow=3.8,SNR=4.5						
WRA	**Warramunga Arr**	**151.35**	**241**	PKPbc	**PKPdf**	**03 19 13.7**	**+4.2**
	comp=Z,0.9nm,0.5s,baz=101,slow=4.0,SNR=16						

STR ***24*** *02:59:33.6±2.6, 43.°14N×1.°3E±1.°8, h5km, mb4.0/29, Error ellipse: s-maj=0.0km s-min=0.0km az=127.6, preliminary*

MOS ***24*** *02:59:33.9±1.2, 42.°85N×13.°18E, h7km, mb4.6/14, Error ellipse: s-maj=6.3km s-min=3.6km az=81.4*

LDG ***24*** *02:59:34.9±0.1, 42.°83N×13.°15E, h6km, Md4.0/1, Ml3.4/32, Error ellipse: s-maj=2.9km s-min=1.9km az=48.0*

NEIC ***24*** *02:59:35.9, 42.°82N×13.°10E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.51; $M_{\theta\theta}$0.58; $M_{\phi\phi}$0.92; $M_{r\theta}$0.53; $M_{\theta\phi}$-0.56; $M_{\phi r}$-0.16; Fault plane solution: M_o1.53000×10^{15} NP1:φs152.60000°, δ37.06000°, λ-73.81000°. NP2:φs312.61000°, δ54.64000°, λ-101.89000°. Principal axes: T 1.4084, Plg9.0000°, Azm51.0000°; N 0.2247, Plg10.0000°, Azm320.0000°; P -1.6331, Plg77.0000°, Azm183.0000°;*

ROM ***24*** *02:59:35.2±0.1, 42.°799N±0.°003×13.°131E±0.°006, h7km, ML4.1/93, Mw3.9 Error ellipse: s-maj=0.5km s-min=0.1km az=251.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-6.93; $M_{\theta\theta}$-0.87; $M_{\phi\phi}$7.79; $M_{r\theta}$2.34; $M_{\theta\phi}$-2.50; $M_{\phi r}$-2.68; Fault plane solution: M_o8.52370×10^{14} NP1:φs179.00000°, δ35.00000°, λ-67.00000°. NP2:φs332.00000°, δ58.00000°, λ-105.00000°.*

IDC ***24*** *02:59:35.2±0.7, 42.°89N×13.°25E, h0km, mb4.0/16, mbtmp3.9/26, ML3.7/9 Error ellipse: s-maj=13.5km s-min=11.1km az=79.0*

PDG ***24*** *02:59:36.1±1.2, 42.°82N×13.°17E, h11km±1km, ML4.2/14, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

BEO ***24*** *02:59:36.5±0.6, 42.°77N×13.°16E, h0km, ML4.1/10*

NEIC ***24*** *02:59:36±1.7, 42.°81N±0.°05×13.°11E±0.°07, h7km±4km, mb4.3/27, Mwr4.1/11, ML4.1(ROM), ML4.1(VIE), Error ellipse: s-maj=7.8km s-min=6.3km az=216.0*

BGR ***24*** *02:59:37.1±1.1, 42.°71N×13.°47E, h5km, ML4.2/11, Error ellipse: s-maj=25.6km s-min=15.6km az=139.0*

PRU ***24*** *02:59:37.5±0.0, 42.°88N×13.°43E, h0km, M4.4*

ISC 24 02:59:36.1±0.7**, 42.°79N**±0.°01×**13.°11E**±0.°02**, h13**km±4km**, n596,** σ1§99/694**, mb4.3**/37**, 51C-27D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**6**	Pg	**Pg**	**02 59 37.6**	**-1.2**
NRCA	**Norcia**	**0.05**	**6**	⇑P	**Pg**	**02 59 37.5**	**-1.2**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.18**	**346**	P	**Pg**	**02 59 39.5**	**-0.9**
FEMA				S	**Sg**	**02 59 42.5**	**-0.8**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FDMO	**Fiordimonte**	**0.25**	**357**	P	**Pg**	**02 59 40.8**	**-0.7**
FDMO				S	**Sg**	**02 59 44.5**	**-0.6**
FDMO				AML	AML		
	comp=N,85150μm,0.9s						
FDMO				AML	AML		
	comp=E,47600μm,0.4s						
CESI	**CESI - Serrava**	**0.26**	**326**	⇑P	**Pg**	**02 59 41.4**	**-0.4**
CESI				S	**Sg**	**02 59 45.9**	**+0.4**
CESI				AML	AML		
	comp=E,96600μm,0.4s						
CESI				AML	AML		
RM33	**Pellescritta (**	**0.29**	**164**	P	**Pg**	**02 59 42.0**	**-0.2**
RM33				S	**Sg**	**02 59 46.7**	**+0.5**
RM33				AML	AML		
	comp=E,56450μm,1.0s						
RM33				AML	AML		
	comp=N,56000μm,0.3s						
RM33				AML	AML		
	comp=N,56100μm,0.3s						
RM33				AML	AML		
	comp=N,56050μm,0.3s						
RM33				AML	AML		
	comp=E,57950μm,1.0s						
RM33				AML	AML		
	comp=E,56400μm,1.0s						
RM33				AML	AML		
	comp=N,56150μm,0.3s						
CSP1	**Cessapalombo**	**0.31**	**13**	⇑P	**Pg**	**02 59 41.8**	**-0.9**
CSP1				S	**Sg**	**02 59 46.5**	**-0.5**
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
ARRO	**Arrone**	**0.33**	**231**	⇑P	**Pg**	**02 59 42.9**	**+0.1**
ARRO				S	**Sb**	**02 59 48.5**	**-0.4**
ARRO				AML	AML		
	comp=E,41250μm,0.6s						
ARRO				AML	AML		
	comp=N,33150μm,0.7s						
CAMP	**Campotosto**	**0.34**	**138**	⇑P	**Pg**	**02 59 42.4**	**-0.6**
CAMP				S	**Sg**	**02 59 47.6**	**0.0**
CAMP				AML	AML		
	comp=N,45350μm,0.5s						
CAMP				AML	AML		
	comp=E,67850μm,0.7s						
SEF1	**Sefro**	**0.38**	**342**	⇑P	**Pg**	**02 59 43.1**	**-0.6**
SEF1				S	**Sg**	**02 59 49.1**	**+0.2**
SEF1				AML	AML		
	comp=E,67600μm,0.7s						
SEF1				AML	AML		
	comp=N,44950μm,0.4s						
SEF1				AML	AML		
	comp=E,67550μm,0.7s						
TERO	**Teramo**	**0.40**	**114**	⇑P	**Pg**	**02 59 43.1**	**-1.0**
TERO				S	**Sg**	**02 59 49.0**	**-0.5**
TERO				AML	AML		
	comp=E,41650μm,0.6s						
TERO				AML	AML		
	comp=N,81650μm,0.6s						
TERO				AML	AML		
	comp=E,44650μm,0.6s						
TERO				AML	AML		
	comp=N,86650μm,0.6s						
PIO1	**Pioraco**	**0.40**	**347**	P	**Pb**	**02 59 44.5**	**-0.6**
PIO1				S	**Sb**	**02 59 50.9**	**-0.3**

PIO1 AML AML
comp=E,29500µm,1.5s
PIO1 AML AML
comp=N,50750µm,0.6s
PIO1 AML AML
comp=E,29500µm,1.4s
MDAR Monte D'Aria 0.41 4 P **Pg 02 59 43.5 -0.8**
MDAR S **Sg 02 59 49.6 -0.2**
MDAR AML AML
comp=E,22350µm,1.0s
MDAR AML AML
comp=E,22300µm,1.0s
MDAR AML AML
comp=N,31300µm,0.8s
ASSB Assisi San Ben 0.42 308 ⇑P **Pg 02 59 44.1 -0.3**
ASSB S **Sg 02 59 50.7 +0.6**
ASSB AML AML
comp=E,29000µm,0.2s
ASSB AML AML
comp=N,29600µm,0.3s
FIU1 Fiuminata 0.42 342 P **Pg 02 59 43.9 -0.6**
FIU1 S **Sg 02 59 50.7 +0.5**
FIU1 AML AML
comp=E,25650µm,1.6s
FIU1 AML AML
comp=N,21550µm,1.1s
FIU1 AML AML
comp=E,25700µm,1.6s
CESX Cesi 0.43 246 ⇑P **Pg 02 59 44.6 0.0**
CESX AML AML
comp=N,33250µm,0.4s
CESX AML AML
comp=E,40550µm,0.5s
MNTP Montappone 0.44 37 P **Pg 02 59 44.4 -0.4**
SSM1 San Severino M 0.45 7 P **Pg 02 59 44.1 -0.8**
SSM1 S **Sg 02 59 51.0 +0.1**
OFFI Offida 0.45 71 ⇑P **Pg 02 59 44.8 -0.3**
OFFI S **Sb 02 59 52.9 +0.4**
OFFI AML AML
OFFI AML AML
comp=E,75500µm,0.5s
GAG1 Gagliole 0.45 356 P **Pg 02 59 44.6 -0.5**
GAG1 S **Sg 02 59 51.4 +0.2**
GAG1 AML AML
comp=E,74900µm,0.9s
GAG1 AML AML
comp=N,95350µm,0.5s
MTL1 Matelica 0.47 351 P **Pg 02 59 44.9 -0.6**
MTL1 S **Sg 02 59 52.3 +0.4**
MTL1 AML AML
comp=N,60400µm,0.5s
MTL1 AML AML
comp=E,59400µm,0.5s
MTL1 AML AML
comp=N,60350µm,0.5s
GIGS Gran Sasso 0.48 135 P **Pg 02 59 44.5 -1.1**
GIGS S **Sg 02 59 51.6 -0.4**
GIGS AML AML
comp=E,14500µm,1.4s
GIGS AML AML
comp=N,7315µm,1.0s
AQU L'Aquila 0.48 153 **Pg 02 59 45.2 -0.5**
AQU L'Aquila 0.48 153 P **Pg 02 59 45.2 -0.5**
AQU L'Aquila 0.48 153 P **Pg 02 59 45.1 -0.5**
AQU S **Sg 02 59 52.8 +0.7**
AQU AML AML
comp=E,21750µm,0.4s
AQU AML AML
comp=N,21150µm,0.5s
AQU AML AML
comp=N,22050µm,0.5s
AQU AML AML
comp=E,21400µm,0.4s
SNTG Esanatoglia 0.48 345 ⇑P **Pg 02 59 44.9 -0.8**
SNTG S **Sg 02 59 52.4 +0.2**
SNTG AML AML
comp=E,2190µm,0.7s
SNTG AML AML
comp=N,2690µm,0.6s
SNTG AML AML
comp=E,17050µm,0.7s
SNTG AML AML
comp=N,2690µm,0.5s
SNTG AML AML
comp=N,21900µm,0.6s
SNTG AML AML
comp=E,2195µm,0.7s
FIAM Fiamignano 0.52 179 P **Pg 02 59 45.4 -0.9**
FIAM S **Sg 02 59 53.9 +0.7**
FIAM AML AML
comp=N,21650µm,0.9s
FIAM AML AML
comp=E,25100µm,1.0s
ATCC AVT- Casa Cast 0.53 319 ⇑P **Pg 02 59 46.0 -0.4**
ATCC S **Sb 02 59 54.3 -0.4**
ATCC AML AML
comp=E,26650µm,0.5s
ATCC AML AML
comp=E,26600µm,0.5s
ATCC AML AML
comp=N,27150µm,1.0s
EL6 Elcito 0.54 360 P **Pg 02 59 46.1 -0.7**
EL6 S **Sb 02 59 54.5 -0.8**
EL6 AML AML
comp=E,26000µm,0.4s
EL6 AML AML
comp=N,29350µm,1.0s
TRE1 Treia 0.55 16 P **Pg 02 59 46.2 -0.6**
TRE1 S **Sb 02 59 55.1 -0.2**
TRE1 AML AML
comp=E,52150µm,1.2s
TRE1 AML AML
comp=N,50750µm,0.7s
CING Cingoli 0.59 6 P **Pg 02 59 46.9 -0.9**
TRTR Tortoreto Alta 0.59 88 ⇑P **Pg 02 59 47.8 0.0**
TRTR AML AML
comp=N,76100µm,0.6s
TRTR AML AML
comp=E,84100µm,0.7s
FAGN Fagnano 0.63 146 P **Pg 02 59 47.5 -0.8**
FAGN AML AML
comp=E,61000µm,0.5s
FAGN AML AML
comp=N,40200µm,1.5s
CADA Capodarco di F 0.63 49 P **Pb 02 59 48.6 -0.4**
CADA AML AML
comp=E,95300µm,0.7s
CADA AML AML
comp=N,85650µm,0.7s
MURB Monte Urbino 0.64 318 **Pg 02 59 48.0 -0.6**
MURB Monte Urbino 0.64 318 ⇑P **Pg 02 59 48.0 -0.6**
MURB AML AML
comp=E,41950µm,0.9s
MURB AML AML
comp=N,46800µm,1.0s
MURB AML AML
comp=N,44750µm,1.0s
MURB AML AML
comp=E,38800µm,0.9s
MMUR Monte Murano 0.66 353 P **Pg 02 59 48.2 -0.8**
CIMA Civitanova Mar 0.66 38 P **Pg 02 59 48.8 -0.2**
VCEL Villa Celiera 0.67 126 ⇑P **Pg 02 59 48.2 -0.9**
VCEL S **Sb 02 59 58.7 -0.2**
VCEL AML AML
comp=E,35100µm,1.0s
VCEL AML AML
comp=N,37600µm,1.4s
ATTE AVT- Monte Tez 0.69 307 P **Pg 02 59 48.9 -0.7**
ATTE AML AML
comp=E,10430µm,0.8s
ATTE AML AML
comp=N,11750µm,1.5s
SSFR Montelago di S 0.69 340 P **Pg 02 59 48.7 -0.9**
SSFR S **Sb 02 59 59.4 -0.1**
SSFR AML AML
comp=E,18600µm,1.5s
SSFR AML AML
comp=E,20950µm,1.5s
SSFR AML AML
comp=N,25500µm,0.2s
SSFR AML AML
comp=N,22650µm,0.8s
PP3 Marolino 0.70 32 ⇑P **Pg 02 59 49.3 -0.4**
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
comp=N,75600µm,0.4s
PP3 AML AML
comp=N,72800µm,0.4s
PP3 AML AML
ATFO Monte Foce - G 0.70 326 P **Pg 02 59 49.0 -0.8**
ATFO S **Sb 03 00 00.2 +0.4**
ATFO AML AML
comp=E,10640µm,1.5s
ATFO AML AML
comp=N,11750µm,0.3s
SRES S.Oreste - Sor 0.70 219 P **Pg 02 59 49.4 -0.4**
SRES AML AML
comp=E,10805µm,0.3s
SRES AML AML
comp=N,8140µm,0.8s
MGAB Montegabbione 0.74 280 P **Pg 02 59 50.3 -0.3**
MGAB AML AML
comp=N,28850µm,0.6s
MGAB AML AML
comp=E,22550µm,1.4s
MGAB AML AML
comp=E,24500µm,1.3s
MGAB AML AML
comp=N,27200µm,0.6s
T0110 Collepietro 0.75 138 P **Pg 02 59 49.6 -1.0**
T0110 AML AML
comp=E,37800µm,0.5s
T0110 AML AML
comp=N,34000µm,0.5s
FRON Frontone 0.78 339 P **Pg 02 59 49.9 -1.4**
FRON S **Sb 03 00 02.2 +0.1**
ATVO AVT- Monte Val 0.79 319 ⇑P **Pg 02 59 50.5 -0.9**
PTQR Pietraquaria 0.80 164 P **Pg 02 59 50.9 -0.6**
PTQR AML AML
comp=N,5240µm,1.4s
PTQR AML AML
comp=E,7080µm,0.5s
MTCE Montecelio 0.81 200 P **Pg 02 59 50.8 -1.0**
MTCE AML AML
comp=E,15500µm,1.6s
MTCE AML AML
comp=N,11170µm,0.6s
ATMI Monte Miggiano 0.82 312 P **Pg 02 59 51.9 -0.2**
ATMI AML AML
comp=E,24050µm,0.5s
ATMI AML AML
comp=N,32350µm,0.7s
ATPI Pietralunga - 0.84 322 ⇑P **Pg 02 59 51.4 -1.0**
ATPI AML AML
comp=N,8115µm,0.7s
ATPI AML AML
comp=E,11340µm,0.5s
CERT Cerreto 0.84 186 P **Pb 02 59 52.7 +0.1**
CERT AML AML
comp=E,20900µm,0.5s
CERT AML AML
comp=N,11350µm,0.5s
AOI Ancona 0.84 25 P **Pg 02 59 51.4 -1.1**
AOI AML AML
comp=E,12950µm,0.5s
AOI AML AML
comp=N,10700µm,0.4s
COR1 Corinaldo 0.85 355 P **Pb 02 59 52.5 -0.2**
PIEI Pieia 0.86 331 P **Pg 02 59 51.9 -0.8**
PIEI AML AML
comp=N,4345µm,1.4s
PIEI AML AML
comp=E,5070µm,0.9s
MPAG Monte Paganucc 0.88 343 P **Pg 02 59 51.9 -1.2**
MPAG AML AML
comp=N,11030µm,1.2s
MPAG AML AML
comp=E,9945µm,0.3s
MPAG AML AML
comp=N,11550µm,1.1s
MPAG AML AML
comp=E,9915µm,0.3s
MPAG AML AML
comp=N,11540µm,1.1s
MPAG AML AML
comp=E,9970µm,0.3s
MPAG AML AML
comp=N,11005µm,1.2s
SACS San Casciano d 0.88 274 P **Pg 02 59 52.8 -0.4**
SACS AML AML
comp=E,12950µm,1.5s
SACS AML AML
comp=E,12900µm,1.5s
SACS AML AML
comp=N,10800µm,0.9s
SACS AML AML
comp=N,10790µm,0.9s
SACS AML AML
comp=N,10850µm,0.9s
SACS AML AML
comp=E,13000µm,1.5s
NARO Abbazia di Nar 0.91 335 P **Pg 02 59 52.4 -1.3**
APEC Apecchio 0.92 327 P **Pg 02 59 53.0 -0.9**
APEC AML AML
comp=E,2310µm,0.6s
APEC AML AML
comp=E,11300µm,0.8s
APEC AML AML
comp=N,2065µm,1.4s
APEC AML AML
comp=N,9235µm,1.4s
SENI Senigallia 0.92 6 P **Pg 02 59 53.7 -0.2**
SENI AML AML
comp=E,12400µm,1.5s
SENI AML AML
comp=E,36150µm,0.3s
SENI AML AML
comp=N,37400µm,0.3s
SENI AML AML
comp=N,8370µm,0.8s
FSSB Fossombrone 0.94 345 P **Pg 02 59 53.1 -1.1**
FSSB AML AML
comp=E,21700µm,0.6s
FSSB AML AML
comp=N,29500µm,0.4s
RCAV Rocca di Cave 0.95 187 P **Pb 02 59 54.7 +0.3**
BADI Badiali 0.96 319 P **Pg 02 59 54.0 -0.7**
BADI AML AML
comp=E,710µm,0.9s
BADI AML AML
comp=N,4705µm,1.2s
INTR Introdacqua 0.97 142 P **Pg 02 59 53.0 -1.9**
INTR AML AML
comp=E,12µm,1.3s
INTR AML AML
comp=N,18µm,0.7s
INTR AML AML
comp=E,11500µm,0.7s
INTR AML AML
comp=N,18µm,0.7s
INTR AML AML
comp=E,11µm,1.3s
INTR AML AML
comp=N,27350µm,0.7s
LATE Laterza 0.98 260 Pg **Pg 02 59 54.6 -0.3**
VVLD Villa Vallelon 0.99 157 P **Pg 02 59 54.4 -0.8**
VVLD AML AML
comp=E,6770µm,0.7s
VVLD AML AML
comp=N,7195µm,0.6s
CAFI Castiglion Fio 1.00 303 AML AML
comp=E,7845µm,0.6s
CAFI AML AML
comp=N,10435µm,0.6s
CAFI AML AML
comp=N,10995µm,0.6s
CAFI AML AML
comp=E,8000µm,0.6s
GUAR Guarcino 1.00 171 P **Pb 02 59 55.8 +0.5**
GUAR AML AML
comp=N,11500µm,0.5s
GUAR AML AML
comp=E,10380µm,0.5s
RMP Rome, Mte Porz 1.02 197 P **Pg 02 59 54.6 -1.2**
RMP AML AML
comp=E,13950µm,0.9s
RMP AML AML
comp=N,20950µm,0.7s
SF03 Valle Cupa 1.05 271 P **Pb 02 59 55.6 -0.5**
MCIV Monte Civitell 1.05 270 P **Pb 02 59 56.1 -0.1**
MCIV AML AML
comp=E,3645µm,0.4s
MCIV AML AML
comp=N,5625µm,0.7s
SSP9 Sansepolcro 1.06 318 P **Pb 02 59 56.3 -0.1**
VIVA Pratoni del Vi 1.07 194 P **Pb 02 59 56.2 -0.2**
VIVA AML AML
comp=N,23050µm,1.6s
VIVA AML AML
comp=E,23350µm,0.4s
RDP Rocca di Papa 1.07 196 P **Pb 02 59 55.7 -0.8**
RDP AML AML
comp=E,38600µm,0.5s
RDP AML AML
comp=N,47050µm,0.4s
MA9 Marino 1.07 198 P **Pg 02 59 56.7 0.0**
MA9 AML AML
comp=E,23600µm,0.5s
MA9 AML AML
comp=N,23100µm,0.6s
PARC Parchiule 1.07 324 P **Pb 02 59 55.6 -0.9**
PARC AML AML
comp=E,8915µm,0.8s
PARC AML AML
comp=N,5475µm,1.6s
LPEL Lama dei Pelig 1.09 133 P **Pb 02 59 55.0 -1.8**
LPEL AML AML
comp=N,8455µm,0.5s
LPEL AML AML
comp=E,10500µm,0.5s
TOLF Tolfa 1.09 229 ⇑P **Pb 02 59 56.3 -0.5**
TOLF AML AML
comp=E,7045µm,1.1s
TOLF AML AML
comp=N,5610µm,1.1s
SF13 Bagnolo 1.10 272 P **Pb 02 59 56.4 -0.6**
SF01 Poggio Pratacc 1.14 272 P **Pb 02 59 57.6 -0.1**
SF01 AML AML
comp=E,8210µm,0.6s
SF01 AML AML
comp=N,5440µm,0.8s
LAV9 Lanuvio 1.15 195 AML AML
comp=N,21800µm,0.5s
LAV9 AML AML
comp=E,18250µm,0.5s
LAV9 AML AML
comp=E,19050µm,0.5s
LAV9 AML AML
comp=N,22950µm,0.5s
POFI Posta Fibreno 1.16 157 P **Pb 02 59 58.0 0.0**
POFI AML AML
comp=E,6305µm,1.1s
POFI AML AML
comp=E,6605µm,1.1s
POFI AML AML
comp=N,4490µm,1.6s
POFI AML AML
comp=N,4665µm,1.6s
PESA Pesaro 1.17 350 P **Pb 02 59 58.0 -0.1**
PESA AML AML
comp=E,10365µm,1.0s
PESA AML AML
comp=N,9595µm,1.0s
CRE Caprese Michel 1.19 315 P **Pb 02 59 58.4 -0.1**
LRP Arpino 1.19 162 AML AML
comp=N,5075µm,1.0s
LRP AML AML
comp=E,3260µm,0.7s
ARCI Arcidosso 1.20 274 P **Pn 02 59 58.7 0.0**
ARCI AML AML
comp=E,1785µm,0.6s
ARCI AML AML
comp=N,1855µm,1.1s
LIK San Giovanni I 1.32 165 P **Pg 03 00 01.5 -0.1**
LIK AML AML
comp=E,8370µm,0.6s
LIK AML AML
comp=N,7010µm,1.1s
RNI2 Rionero Sannit 1.33 144 P **Pn 03 00 00.8 +0.4**
CERA Filignano 1.37 150 P **Pn 03 00 00.7 -0.2**
CERA AML AML
comp=E,7120µm,0.7s
CERA AML AML
comp=E,7325µm,0.7s
CERA AML AML
comp=N,5790µm,0.5s
CERA AML AML
comp=N,5535µm,0.5s
ASQU Asqua 1.40 317 P **Pn 03 00 01.3 0.0**
FRES Fresagrandinar 1.41 125 P **Pb 03 00 02.6 +0.3**
SFI Santa Sofia 1.45 321 P **Pn 03 00 02.0 0.0**
TRIV Trivento 1.48 133 ⇑P **Pb 03 00 03.8 +0.4**
TRIV AML AML
comp=E,7255µm,1.1s
TRIV AML AML
comp=E,8390µm,1.1s
TRIV AML AML
comp=N,5970µm,1.4s
TRIV AML AML
comp=N,6740µm,1.3s
FROS Frosini 1.49 287 P **Pn 03 00 03.1 +0.5**
CSNT Castellina Chi 1.50 298 P **Pn 03 00 03.2 +0.5**
CSNT AML AML
comp=E,1700µm,1.2s
CSNT AML AML
comp=N,1580µm,0.9s
OSSC Osservatorio P 1.55 299 **Pn 03 00 03.7 +0.3**
OSSC Osservatorio P 1.55 299 P **Pn 03 00 04.0 +0.6**
OSSC AML AML
comp=E,2500µm,1.0s
OSSC AML AML
comp=E,2180µm,1.3s
OSSC AML AML
comp=N,2185µm,1.3s
OSSC AML AML
comp=N,2450µm,1.0s
RUFI Rufina 1.57 313 P **Pb 03 00 04.6 -0.4**
RUFI AML AML
comp=N,3330µm,0.7s
RUFI AML AML
comp=E,2674µm,0.8s
VAGA Valle Agricola 1.61 148 P **Pb 03 00 06.3 +0.6**
LMD Lutirano 1.65 322 P **Pb 03 00 06.2 -0.1**
LMD AML AML
comp=E,2310µm,1.2s
LMD AML AML
comp=N,2230µm,0.9s
CASP Castiglione de 1.65 271 Pn **Pn 03 00 04.8 0.0**
CASP Castiglione de 1.65 271 ⇑P **Pn 03 00 04.9 +0.1**
CASP AML AML
comp=E,844µm,0.6s
CASP AML AML
comp=N,663µm,1.6s
TRIF Trifonti 1.65 282 ⇑P **Pn 03 00 05.1 +0.2**
TRIF AML AML
comp=E,1380µm,0.6s
TRIF AML AML
comp=N,1490µm,0.7s
BSSO Busso 1.66 138 P **Pb 03 00 06.5 -0.1**
CIGN Sant'Elia a Pi 1.75 130 P **Pb 03 00 07.9 -0.2**
CIGN AML AML
comp=N,2365µm,0.6s
CIGN AML AML
comp=E,3690µm,1.5s
PIGN Pignataro Magg 1.78 153 AML AML
comp=N,1162µm,1.4s
PIGN AML AML
comp=N,1235µm,0.8s
PIGN AML AML
comp=E,1240µm,1.6s
PIGN AML AML
comp=E,1318µm,1.3s
BRIS BRISIGHELLA 1.79 320 AML AML
comp=E,691µm,1.6s
BRIS AML AML
comp=E,1830µm,0.8s
BRIS AML AML
comp=N,2870µm,0.8s
BRIS AML AML
comp=N,755µm,1.6s
SEI Scarperia 1.80 315 P **Pn 03 00 07.9 +1.1**
MELA Melanico ??? S 1.85 125 P **Pb 03 00 08.7 -1.0**
MELA AML AML
comp=N,9315µm,0.7s
MELA AML AML
comp=N,9625µm,0.7s
MELA AML AML
comp=E,8805µm,1.1s

MELA AML AML
comp=E,9185µm,1.1s
DUGI Dugi Otok 1.86 49 *e*Pn **Pn 03 00 07.4 -0.3**
MPPT Montemurlo 1.88 309 P **Pn 03 00 08.8 +0.9**
MPPT AML AML
comp=E,1450µm,1.5s
MPPT AML AML
comp=N,1465µm,0.9s
VENT Ventotene 2.00 173 AML AML
comp=E,1525µm,1.1s
VENT AML AML
comp=N,1505µm,1.6s
PSB1 Pescosannita 2.01 140 P **Pb 03 00 12.5 0.0**
PSB1 AML AML
comp=E,1745µm,1.5s
PSB1 AML AML
comp=E,1825µm,1.5s
PSB1 AML AML
comp=N,2585µm,1.0s
PSB1 AML AML
comp=N,2630µm,1.0s
PAOL Paolisi 2.06 148 Pn **Pn 03 00 11.3 +0.8**
VIRC Vir 2.07 43 *e*Pn **Pn 03 00 10.0 -0.4**
APRC Apricena 2.08 119 AML AML
comp=N,3805µm,0.6s
APRC AML AML
comp=E,2945µm,0.7s
MOCO Biccari - m.te 2.08 132 P **Pb 03 00 13.1 -0.7**
MOCO AML AML
comp=E,1054µm,0.8s
MOCO AML AML
comp=N,742µm,1.3s
MOCO AML AML
comp=E,1083µm,0.7s
MOCO AML AML
comp=N,787µm,1.3s
POPM Popiglio 2.12 307 P **Pn 03 00 11.4 +0.1**
POPM AML AML
comp=N,875µm,0.9s
POPM AML AML
comp=E,937µm,1.3s
CELB S.Piero in Cam 2.13 270 ⇑P **Pn 03 00 11.6 +0.1**
CELB AML AML
comp=E,290µm,0.7s
CELB AML AML
comp=N,246µm,0.9s
BRJN Brijuni 2.17 12 *e*Pn **Pn 03 00 11.4 -0.4**
BRJN Brijuni 2.17 12 P **Pn 03 00 11.4 -0.4**
MORI Morici 2.18 59 *e*Pn **Pn 03 00 11.4 -0.6**
NVLJ Novalja 2.19 35 *e*Pn **Pn 03 00 11.9 -0.3**
ZCCA Zocca 2.20 316 **Pn 03 00 13.7 +1.3**
SGRT San Giovanni R 2.21 117 Pn **Pn 03 00 12.8 +0.2**
SGRT San Giovanni R 2.21 117 P **Pn 03 00 13.5 +0.9**
SGRT AML AML
comp=E,3870µm,0.6s
SGRT AML AML
comp=N,2690µm,1.0s
MAIM Mastiano 2.22 301 P **Pn 03 00 13.0 +0.5**
MAIM AML AML
comp=N,782µm,0.9s
MAIM AML AML
comp=E,680µm,0.8s
BDI Bagni Di Lucca 2.23 306 AML AML
comp=N,376µm,0.9s
BDI AML AML
comp=E,908µm,1.6s
BDI AML AML
comp=E,330µm,1.2s
BDI AML AML
comp=N,838µm,0.8s
RABC Rab 2.31 31 *e*Pn **Pn 03 00 13.5 -0.2**
MSAG Monte S. Angel 2.34 116 P **Pn 03 00 15.3 +1.0**
MSAG AML AML
comp=E,4445µm,1.4s
MSAG AML AML
comp=E,4175µm,1.4s
MSAG AML AML
comp=N,6865µm,1.5s
MSAG AML AML
comp=N,6650µm,1.5s
SMRN Sveta Marina 2.37 18 *e*Pn **Pn 03 00 13.8 -0.8**
VLC Villacollemand 2.41 306 Pn **Pn 03 00 15.0 -0.3**
VLC Villacollemand 2.41 306 AML AML
comp=E,538µm,1.2s
VLC AML AML
comp=E,536µm,1.3s
VLC AML AML
comp=N,544µm,0.8s
VLC AML AML
comp=N,541µm,0.8s
SNAL S. Angelo Dei 2.43 139 P **Pn 03 00 17.7 +2.1**
SNAL AML AML
comp=N,1375µm,1.0s
SNAL AML AML
comp=N,1390µm,1.0s
SNAL AML AML
comp=E,1855µm,0.8s
SNAL AML AML
comp=E,1785µm,0.7s
EQUI Equi 2.56 304 AML AML
comp=N,392µm,1.5s
EQUI AML AML
comp=E,384µm,0.6s
UDBI Udbina 2.60 47 *e*Pn **Pn 03 00 18.5 +0.7**
A250A Rusevo Krmpots 2.64 29 *e*Pn **Pn 03 00 18.1 -0.3**
KIJV Kijevo 2.69 62 *e*Pn **Pn 03 00 19.9 +0.8**
RIY Rijeka 2.72 21 *i* Pn **Pn 03 00 19.4 -0.1**
PLIT Plitvice 2.77 40 *e*Pn **Pn 03 00 20.5 +0.2**
TEOL Teolo 2.77 339 Pn **Pn 03 00 20.3 +0.1**
LSTV Lastovo 2.79 89 *e*Pn **Pn 03 00 20.2 -0.2**
GRAM Graiana 2.79 309 AML AML
comp=N,904µm,0.8s
GRAM AML AML
comp=E,1295µm,0.7s
PRMA PARMA 2.83 315 Pn **Pn 03 00 21.6 +0.6**
SKDS Skadanscina 2.83 13 *e*Pn **Pn 03 00 20.6 -0.5**
SKDS Skadanscina 2.83 13⇑*e*Pn **Pn 03 00 20.6 -0.5**
SKDS *i* Sn **Sn 03 00 55.4 +0.3**
SKDS IAML 03 01 21.7
comp=Z,289nm,0.5s
MRVN Minervino Murg 2.88 126 P **Pn 03 00 22.6 +0.9**
MRVN AML AML
comp=E,578µm,0.7s
MRVN AML AML
comp=N,604µm,0.7s
MAKA Makarska 2.91 79 *e*Pn **Pn 03 00 22.3 +0.2**
ACER Acerenza 2.91 132 P **Pn 03 00 23.8 +1.6**
ACER AML AML
comp=N,1085µm,0.7s
ACER AML AML
comp=E,1320µm,0.8s
ACER AML AML
comp=N,1085µm,0.7s
ACER AML AML
comp=E,1360µm,0.8s
SMPL Sampolo 2.91 258 P **Pn 03 00 23.2 +1.1**
SMPL S **Sb 03 01 02.0 -1.4**
TRI Trieste 2.96 9 Pn **Pn 03 00 22.0 -0.7**
TRI Trieste 2.96 9 P **Pn 03 00 22.0 -0.7**
TRI Trieste 2.96 9 P **Pn 03 00 22.1 -0.7**
TRI AML AML
comp=N,710µm,0.8s
TRI AML AML
comp=E,769µm,0.7s
A050A Klekovaca 3.01 55 *e*Pn **Pn 03 00 24.3 +0.8**
MSSA Maissana 3.02 302 Pn **Pn 03 00 23.3 -0.4**
RICI Ricice 3.03 75 *e*Pn **Pn 03 00 24.3 +0.6**
PGF Pioggiola 3.04 267 *e*P **Pn 03 00 25.2 +1.2**
PGF *e*Sn **Sn 03 00 57.4 -2.8**
comp=E,105nm,0.7s
PGF Pioggiola 3.04 267 P **Pn 03 00 25.0 +1.0**
CEY Cerknica 3.10 17 *e*Pn **Pn 03 00 24.8 +0.1**
BOJS Bojanci 3.12 29 *e*Pn **Pn 03 00 24.0 -1.0**
BOJS Bojanci 3.12 29⇑*i*Pn **Pn 03 00 26.0 +1.0**
BOJS IAML 03 01 39.3
comp=Z,400nm,1.0s
PTRP Pietrapertosa 3.17 135 AML AML
comp=E,1165µm,1.3s
PTRP AML AML
comp=N,1315µm,1.0s
MTSN Montesano sull 3.21 141 P **Pn 03 00 28.9 +2.6**
MTSN AML AML
comp=E,308µm,1.0s
MTSN AML AML
comp=N,252µm,0.8s
ROVR Rover Verones 3.21 334 AML AML
comp=N,250µm,0.5s
ROVR AML AML
comp=E,240µm,0.8s
SABO M.te Sabotino 3.21 6 Pn **Pn 03 00 25.7 -0.6**
SABO M.te Sabotino 3.21 6 P **Pn 03 00 26.0 -0.3**
SABO AML AML
comp=E,1540µm,1.1s
SABO AML AML
comp=N,1460µm,1.1s
SABO AML AML
comp=N,5625µm,1.1s
SABO AML AML
comp=E,6625µm,1.1s
AMUR Altamura 3.22 125 P **Pn 03 00 27.4 +1.1**
AMUR AML AML
comp=E,1166µm,0.5s
AMUR AML AML
comp=N,980µm,0.7s
SRKY Kupres RS 3.22 65 *e*Pn **Pn 03 00 28.3 +1.8**
CGRP Cima Grappa 3.23 344 P **Pn 03 00 27.9 +1.2**
CGRP AML AML
comp=E,1325µm,0.7s
CGRP AML AML
comp=N,1110µm,0.7s
CGRP AML AML
comp=E,1295µm,0.8s
CGRP AML AML
comp=N,1090µm,0.7s
A251A Rujevac 3.27 43 *e*Pn **Pn 03 00 27.2 +0.2**
OZLJ Ozalj 3.30 30 *e*Pn **Pn 03 00 27.5 +0.1**
MGRS Mrkonjic Grad 3.32 59 *e*Pn **Pn 03 00 29.3 +1.6**
AJAC Base Areonaval 3.33 257 P **Pn 03 00 29.6 +1.7**
AJAC S **Sn 03 01 11.8 +4.5**
STON Ston 3.38 87 *e*Pn **Pn 03 00 27.4 -1.1**
STON Ston 3.38 87 *e*Pn **Pn 03 00 27.4 -1.1**
STON Ston 3.38 87 *e*Pn **Pn 03 00 28.1 -0.4**
STON *e*Sn **Sn 03 01 09.6 +1.2**
DOSS Dosso del Somm 3.39 337 AML AML
comp=E,706µm,0.5s
DOSS AML AML
comp=N,752µm,0.7s
DOSS AML AML
comp=N,700µm,0.5s
DOSS AML AML
comp=E,784µm,0.7s
SALO Salr 3.39 328 **Pn 03 00 30.4 +1.7**
SALO Salr 3.39 328 P **Pn 03 00 30.8 +2.1**
SALO AML AML
comp=E,1035µm,0.9s
SALO AML AML
comp=E,1040µm,0.9s
SALO AML AML
comp=N,1063µm,1.2s
SALO AML AML
comp=N,954µm,1.2s
PRIJ Prijedor 3.41 49 *e*Pn **Pb 03 00 33.1 -3.1**
LJU Ljubljana 3.41 17⇑*i*Pn **Pn 03 00 29.6 +0.6**
LJU *i* Sn **Sn 03 01 10.4 +1.1**
LJU IAML 03 01 41.0
comp=Z,452nm,1.0s
LJU Ljubljana 3.41 17 P **Pn 03 00 29.4 +0.4**
LJU AML AML
comp=N,6205µm,0.6s
LJU AML AML
comp=E,4735µm,1.5s
CUC Castrocucco 3.46 143 Pn **Pn 03 00 31.6 +2.0**
MPRI Monte Prat 3.46 359 P **Pn 03 00 30.3 +0.7**
MPRI AML AML
comp=E,1058µm,0.8s
MPRI AML AML
comp=N,1124µm,0.8s
VINO Villanova 3.47 2 P **Pn 03 00 29.7 -0.1**
VINO AML AML
comp=E,431µm,1.0s
VINO AML AML
comp=N,391µm,1.2s
MAGA Magasa 3.48 330 P **Pn 03 00 31.5 +1.5**
MAGA AML AML
comp=N,1225µm,0.4s
MAGA AML AML
comp=E,2060µm,0.6s
STAL STALIGIAL 3.48 355 Pn **Pn 03 00 29.7 -0.3**
STAL STALIGIAL 3.48 355 AML AML
comp=N,682µm,0.8s
STAL AML AML
comp=E,970µm,0.5s
GEPF Gemona 3.49 0 P **Pn 03 00 30.0 +0.1**
GEPF AML AML
comp=E,478µm,0.8s
GEPF AML AML
comp=N,714µm,0.8s
LUSI Trento, Gardas 3.53 335 AML AML
comp=N,648µm,0.6s
LUSI AML AML
comp=E,553µm,0.6s
A051A Mrakovica 3.53 50 *e*Pn **Pn 03 00 30.9 +0.2**
BLY Banja Luka 3.54 55 *e*Pn **Pn 03 00 31.8 +1.0**
BLY Banja Luka 3.54 55 *e*Pn **Pn 03 00 32.5 +1.7**
CIMO Cimolais 3.56 353 Pn **Pn 03 00 30.6 -0.4**
CIMO Cimolais 3.56 353 AML AML
comp=N,263µm,1.0s
CIMO AML AML
comp=E,266µm,0.7s
CIMO AML AML
comp=E,274µm,0.7s
CIMO AML AML
comp=N,257µm,1.0s
NOCI Noci 3.57 123 AML AML
comp=N,897µm,0.9s
NOCI AML AML
comp=E,461µm,1.2s
PTCC Patocco-Chiusa 3.62 3 P **Pn 03 00 31.8 -0.2**
PTCC AML AML
comp=E,427µm,1.0s
PTCC AML AML
comp=N,368µm,0.7s
GAGG Gaggia 3.64 336 AML AML
comp=N,637µm,1.0s
GAGG AML AML
comp=E,652µm,1.6s
GAGG AML AML
comp=N,967µm,1.0s
GAGG AML AML
comp=E,1012µm,1.0s
PRED Cave del Predi 3.67 5 Pn **Pn 03 00 32.0 -0.6**
ZONE Zone 3.67 325 AML AML
comp=E,434µm,0.5s
ZONE AML AML
comp=N,576µm,0.7s
CLUD Cludinico 3.67 358 Pn **Pn 03 00 32.6 0.0**
CLUD Cludinico 3.67 358 AML AML
comp=E,922µm,1.0s
CLUD AML AML
comp=E,937µm,1.1s
CLUD AML AML
comp=N,630µm,1.2s
CLUD AML AML
comp=N,661µm,0.8s
DBRK Dubrovnik 3.71 90 *e*Pn **Pn 03 00 32.9 -0.2**
PTJ Puntijarka 3.73 32 *e*Pn **Pn 03 00 34.1 +0.6**
MABI Malga Bissina 3.76 331 AML AML
comp=N,222µm,0.8s
MABI AML AML
comp=E,218µm,1.0s
ZOU Zoufplan 3.77 359 AML AML
comp=E,878µm,1.5s
ZOU AML AML
comp=N,930µm,1.5s
ZOU AML AML
comp=E,849µm,1.5s
ZOU AML AML
comp=N,850µm,1.5s
ACOM Acomizza, Ital 3.77 4 AML AML
comp=N,823µm,0.8s
ACOM AML AML
comp=N,850µm,0.6s
ACOM AML AML
comp=E,1006µm,0.9s
ACOM AML AML
comp=E,962µm,0.9s
MOSL Moslavina 3.85 42 *e*Pn **Pn 03 00 34.2 -0.9**
MYKA Terra Mystica 3.86 5 *i* Pn **Pn 03 00 36.0 +0.8**
comp=E,76nm,0.6s,SNR=14
MYKA *e*Sn **Sn 03 01 21.2 +0.8**
comp=E,43nm,0.6s
OBKA Obir 3.86 15 *e*Pn **Pn 03 00 35.1 -0.1**
OBKA Obir 3.86 15 *e*Pn **Pn 03 00 35.8 +0.6**
comp=E,13nm,0.3s
OBKA *e*Sn **Sn 03 01 21.8 +1.3**
comp=E,64nm,0.4s
OBKA Obir 3.86 15 *e*Pg **Pg 03 00 49.5 -0.6**
KOSI Kohlern 3.88 342 AML AML
comp=N,709µm,1.2s
KOSI AML AML
comp=E,869µm,0.8s
APPI Appiano 3.93 341 AML AML
comp=E,506µm,0.5s
APPI AML AML
comp=N,440µm,1.2s
LOBO Lobor 3.98 31 *e*Pn **Pn 03 00 36.2 -0.6**
ABTA Abfaltersbach 3.98 354 *i* Pn **Pn 03 00 38.2 +1.3**
comp=N,185nm,0.6s,SNR=36
ABTA *e*Sn **Sn 03 01 25.2 +1.7**
comp=N,144nm,0.8s
HCY Herceg Novi 3.99 93 *e*Pn **Pn 03 00 37.4 +0.5**
HCY Herceg Novi 3.99 93⇓*i*Pn **Pn 03 00 37.8 +0.9**
HCY *i* Sn **Sn 03 01 24.9 +1.4**
BRY Bratogost 4.00 87 *e*Pn **Pn 03 00 37.5 +0.4**
BRY Bratogost 4.00 87⇑*i*Pn **Pn 03 00 37.7 +0.6**
BRY *i* Sn **Sn 03 01 25.1 +1.2**
DOB Doboj 4.11 60 *e*Pn **Pn 03 00 38.2 -0.3**
PERS Pernice 4.11 20⇑*i*Pn **Pn 03 00 39.2 +0.6**
PERS *e*Sn **Sn 03 01 26.3 -0.1**
PERS IAML 03 02 10.8
comp=Z,201nm,1.0s
KALN Kalnik 4.11 34 *e*Pn **Pn 03 00 37.1 -1.5**
SOKA Soboth 4.12 19 *e*Pn **Pn 03 00 39.9 +1.0**
comp=Z,14nm,0.6s
SOKA *e*Sn **Sn 03 01 27.6 +0.6**
comp=Z,35nm,0.6s
RISI Rein 4.22 350 AML AML
comp=E,969µm,0.6s
RISI AML AML
comp=N,1040µm,0.4s
UPM Unac-Piva 4.27 82 *e*Pn **Pn 03 00 42.7 +1.7**
UPM Unac-Piva 4.27 82⇑*i*Pn **Pn 03 00 41.9 +0.9**
UPM *i* Sn **Sn 03 01 32.0 +1.2**
SBF Sospel 4.28 286 *e*P **Pn 03 00 41.9 +1.0**
SBF *e*Sn **Sn 03 01 26.6 -4.1**
comp=N,43nm,0.5s
MUGIO Muggio 4.28 318 AML AML
comp=N,146µm,1.6s
MUGIO AML AML
comp=E,142µm,0.6s
CEME Cevo 4.29 91⇑*i*Pn **Pn 03 00 41.9 +0.8**
CEME *i* Sn **Sn 03 01 32.4 +1.3**
KOGS Kog 4.29 30 AML AML
comp=N,2295µm,1.5s
KOGS AML AML
comp=E,3290µm,0.9s
KBA Koelnbreinsper 4.29 2 *i* Pn **Pn 03 00 42.7 +1.4**
comp=E,67nm,0.5s,SNR=16
KBA *e*Sn **Sn 03 01 31.5 +0.2**
comp=E,59nm,0.4s
KBA Koelnbreinsper 4.29 2 *e*Pn **Pn 03 00 42.5 +1.2**
KBA *e*Sn **Sn 03 01 30.6 -0.7**
BUM Brajici-Budva 4.30 95⇓*i*Pn **Pn 03 00 42.1 +0.8**
BUM *i* Sn **Sn 03 01 32.5 +1.2**
NKME Niksic 4.30 88⇓*i*Pn **Pn 03 00 42.4 +1.1**
NKME *i* Sn **Sn 03 01 32.5 +1.2**
ESCA l'Escarene 4.31 286 P **Pn 03 00 42.2 +0.8**
ROSI Rosskopf 4.31 344 AML AML
comp=N,953µm,0.9s
ROSI AML AML
comp=E,674µm,0.8s
A252A Venje 4.32 51 *e*Pn **Pn 03 00 41.2 -0.3**
VSL Villasalto 4.33 222 AML AML
VSL AML AML
NKY Niksic 4.33 88⇓*i*Pn **Pn 03 00 42.6 +0.9**
NKY *i* Sn **Sn 03 01 33.5 +1.4**
TURF col de Turini 4.33 288 P **Pn 03 00 42.8 +1.0**
FUORN Ofenpass-Fuorn 4.34 333 Pn **Pn 03 00 42.4 +0.5**
SPIF crte de Spivo 4.46 289 P **Pn 03 00 45.6 +2.1**
MVIF Mont Vial 4.48 286 P **Pn 03 00 46.2 +2.4**
DRME Dracevica, Mon 4.53 96 *e*Pn **Pn 03 00 45.6 +1.2**
DRME Dracevica, Mon 4.53 96⇑*i*Pn **Pn 03 00 45.7 +1.3**
DRME *i* Sn **Sn 03 01 37.7 +0.8**
PDG Podgorica 4.55 92 ⇑P **Pn 03 00 45.6 +1.0**
PDG Podgorica 4.55 92 Pn **Pn 03 00 44.9 +0.3**
PDG Podgorica 4.55 92 *e*Pn **Pn 03 00 45.8 +1.2**
PDG *e*Sn **Sn 03 01 37.9 +0.6**
PDG Podgorica 4.55 92 AML AML
comp=E,322µm,0.6s
PDG AML AML
comp=N,342µm,1.0s
PDG AML AML
comp=N,270µm,0.8s
PDG AML AML
comp=E,247µm,0.6s
TTG Podgorica 4.55 92⇑*i*Pn **Pn 03 00 45.7 +1.0**
TTG *i* Sn **Sn 03 01 38.4 +1.1**
FETA Feichten 4.56 339 *e*Pn **Pn 03 00 48.4 +3.5**
comp=E,17nm,0.7s
FETA *e*Sn **Sn 03 01 37.3 -0.4**
comp=E,29nm,0.8s
WTTA Wattenberg 4.60 347 *e*Pn **Pn 03 00 48.3 +2.8**
comp=E,14nm,0.3s
WTTA *e*Sn **Sn 03 01 39.2 +0.5**
comp=E,47nm,0.4s
WTTA Wattenberg 4.60 347 *e*Pn **Pn 03 00 49.5 +4.1**
DAVOX Davos/Dischmat 4.61 331 Pn **Pn 03 00 48.4 +2.8**
comp=E,9.3nm,0.3s,baz=131,slow=12,SNR=24
DAVOX Sn **Sn 03 01 41.4 +2.4**
baz=135,slow=20
CALF Calern 4.62 284 P **Pn 03 00 47.0 +1.3**
ULC Ulcinj 4.62 98⇓*i*Pn **Pn 03 00 46.7 +1.1**
ULC *i* Sn **Sn 03 01 38.9 -0.2**
ISO Isola 4.62 290 P **Pn 03 00 48.4 +2.7**
SQTA Sankt Quirin 4.63 344 **Pn 03 00 48.9 +3.0**
SQTA **Sn 03 01 41.1 +1.6**
SQTA Sankt Quirin 4.63 344 *i* Pn **Pn 03 00 48.8 +3.0**
comp=E,26nm,0.4s,SNR=13
SQTA *e*Sn **Sn 03 01 41.1 +1.6**
comp=E,48nm,0.5s
PLE Pljevlja 4.63 81⇓*i*Pn **Pn 03 00 47.0 +1.1**
PLE *i* Sn **Sn 03 01 39.9 +0.3**
RUDO Rudo 4.65 78 *e*Pn **Pn 03 00 46.4 +0.4**
WATA Walderalm 4.68 347 **Pn 03 00 49.5 +3.0**
WATA **Sn 03 01 42.3 +1.6**
WATA Walderalm 4.68 347 *i* Pn **Pn 03 00 49.5 +3.0**
comp=E,8.0nm,0.2s,SNR=14
WATA *e*Sn **Sn 03 01 42.3 +1.6**
comp=E,49nm,0.3s
KOME Kolasin 4.71 87⇓*i*Pn **Pn 03 00 48.4 +1.4**
KOME *i* Sn **Sn 03 01 42.7 +1.2**
BBLS Lazi?i 4.72 75 *e*Pn **Pn 03 00 48.5 +1.5**
TRAV Traversella 4.72 307 AML AML
comp=E,149µm,0.9s
TRAV AML AML
comp=N,89µm,0.7s
MOTA Moosalm 4.77 343 **Pn 03 00 51.0 +3.2**
MOTA **Sn 03 01 46.0 +3.0**
MOTA Moosalm 4.77 343 P **Pn 03 00 51.0 +3.2**
MOTA 03 01 46.0
MOTA Moosalm 4.77 343 *i* Pn **Pn 03 00 51.0 +3.2**
comp=N,6.9nm,0.3s,SNR=8.4
MOTA *e*Sn **Sn 03 01 46.0 +3.0**
comp=N,38nm,0.5s
ARSA Arzberg 4.78 20 *e*Pn **Pn 03 00 47.9 +0.1**
comp=N,2.3nm,0.3s
ARSA *e*Sn **Sn 03 01 41.7 -1.4**
comp=N,17nm,0.3s
ARSA Arzberg 4.78 20 *e*Pn **Pn 03 00 49.8 +2.0**
SCTE Santa Cesarea 4.86 122 Pn **Pn 03 00 48.4 -0.4**
KOVH Kovagotottos 4.87 46 P **Pn 03 00 48.0 -0.9**
KOVH S **Sn 03 01 42.3 -2.7**
LMR La Mourre 4.87 279 *e*P **Pn 03 00 49.7 +0.8**
LMR *e*Sn **Sn 03 01 40.5 -4.6**
comp=N,16nm,0.6s
ZUGS Zugspitze, Sch 4.87 343 *e*Pn **Pn 03 00 53.1 +3.8**
BLJ Bijeljina 4.88 64 *e*Pn **Pn 03 00 48.1 -1.1**
PART Garmisch-Parte 4.92 344 *e*Pn **Pn 03 00 53.2 +3.5**
BIOA Bad Ischl, Aus 4.92 4 **Pn 03 00 50.8 +1.1**
BIOA **Sn 03 01 48.3 +1.8**
BIOA Bad Ischl, Aus 4.92 4 *i* Pn **Pn 03 00 50.8 +1.1**
comp=N,72nm,0.6s,SNR=30
BIOA *e*Sn **Sn 03 01 48.3 +1.8**
comp=N,128nm,0.6s
RJOB Jochberg 4.96 358 *e*Pn **Pn 03 00 52.2 +1.9**
MBDF Montbardon 4.98 295 *e*P **Pn 03 00 52.8 +2.1**

MBDF eSn Sn 03 01 43.6 -4.6
comp=N,97nm,1.0s
RETA Reutte 4.98 341 ePn Pn 03 00 53.4 +2.8
comp=N,5.6nm,0.3s
RETA eSn Sn 03 01 49.9 +1.7
comp=N,28nm,0.6s
TRIGF Trigance 4.99 283 P Pn 03 00 52.1 +1.4
IVA Berane 4.99 87⇑ iPn Pn 03 00 51.8 +1.0
IVA iSn Sn 03 01 48.9 +0.6
CEL Celeste 5.00 154 ePn Pn 03 00 52.4 +1.6
PLONS Plons/SG 5.02 329 ePn Pn 03 00 54.5 +3.4
OBER Oberstdorf 5.03 338 ePn Pn 03 00 56.0 +4.7
DAVA Damuels 5.05 334 iPn Pn 03 00 54.6 +3.0
comp=N,10nm,0.5s,SNR=7.9
DAVA eSn Sn 03 01 52.4 +2.6
comp=N,75nm,0.5s
DAVA Damuels 5.05 334 ePn Pn 03 00 55.2 +3.6
OGAG Argentiere 5.05 292 P Pn 03 00 57.4 +5.8
PVY Plav 5.05 90⇓ iPn Pn 03 00 52.8 +1.1
PVY iSn Sn 03 01 51.0 +1.1
FLAF Flassans-sur-l 5.05 279 P Pn 03 00 53.2 +1.6
SJES Sjenica 5.06 82 ePn Pn 03 00 53.5 +1.8
SJES eSn Sn 03 01 51.4 +1.4
EMBD Embd, Matterta 5.10 314 P Pn 03 00 54.6 +2.4
MOA Molln 5.13 9 ePn Pn 03 00 53.2 +0.6
MOA eSn Sn 03 01 53.4 +1.8
MOA Molln 5.13 9 iPn Pn 03 00 53.0 +0.4
comp=N,25nm,0.5s,SNR=10
MOA eSn Sn 03 01 50.7 -0.9
comp=N,5.7nm,0.2s
MOA Molln 5.13 9 ePn Pn 03 00 53.7 +1.1
BNI Bardonecchia 5.17 298 Pn Pn 03 00 53.8 +0.6
BNI Bardonecchia 5.17 298 P Pn 03 00 53.8 +0.6
DIVS Divibare 5.18 73 Pn Pn 03 00 53.9 +0.5
DIVS Divibare 5.18 73 ePn Pn 03 00 51.2 -2.2
DIVS Divibare 5.18 73 ePn Pn 03 00 55.1 +1.7
IVAS Ivanjica 5.21 79 ePn Pn 03 00 54.6 +0.8
IVAS eSn Sn 03 01 54.6 +0.9
TIR Tirane 5.23 104 ⇑P Pn 03 00 54.8 +0.9
TIR Tirane 5.23 104 P Pn 03 00 54.1 +0.1
TIR Tirane 5.23 104 P Pn 03 00 54.1 +0.1
TIR Tirane 5.23 104 ePn Pn 03 00 55.0 +1.0
TIR eSn Sn 03 01 51.9 -2.2
MORH Mrgy, Hungar 5.24 47 ⇓P Pn 03 00 53.4 -0.6
MORH Mrgy, Hungar 5.24 47 ePn Pn 03 00 54.1 +0.1
MORH Mrgy, Hungar 5.24 47 P Pn 03 00 57.4 +3.4
DIX Grande Dixence 5.24 311 P Pn 03 00 57.2 +2.8
BLAF les Blancs 5.28 285 P Pn 03 00 57.6 +2.9
LPG La Plagne 5.32 303 eP Pn 03 00 57.9 +2.5
LPG eSn Sn 03 01 50.7 -5.9
comp=N,45nm,0.9s
VLO Vlora 5.32 114 Pn Pn 03 00 55.9 +0.7
VLO Vlora 5.32 114 P Pn 03 00 55.9 +0.7
UBR Ueberruh 5.33 338 ePn Pn 03 01 00.6 +5.1
LPL La Plagne 5.34 303 eP Pn 03 00 57.8 +2.2
LPL eSn Sn 03 01 52.0 -5.0
comp=N,28nm,0.6s
TIH Tihany 5.34 38 P Pn 03 00 58.9 +3.5
FRGS Fruska Gora 5.39 62 ⇑P Pn 03 00 56.0 -0.1
FRGS Fruska Gora 5.39 62 ePn Pn 03 00 53.6 -2.5
FRGS Fruska Gora 5.39 62 ePn Pn 03 00 56.6 +0.5
MPLH Magyarpolny 5.39 34 P Pn 03 00 58.0 +1.8
VAE Valguarnera 5.40 169 Pn Pn 03 01 02.9 +6.6
comp=N,0.2nm,0.3s,baz=102,slow=11,SNR=2.0
ARTF Artigues 5.40 281 P Pn 03 00 58.0 +1.7
RONA Rosalia, Austr 5.40 24 Pn 03 00 56.7 +0.3
RONA Sn 03 01 59.5 +1.1
RONA Rosalia, Austr 5.40 24 ePn Pn 03 00 56.7 +0.3
comp=N,20nm,0.7s
RONA eSn Sn 03 01 59.5 +1.1
comp=N,10nm,0.3s
SOP Sopron 5.47 25 P Pn 03 00 57.0 -0.2
SENIN Lac Senin/Sane 5.48 313 Pn Pn 03 00 59.9 +2.4
RSL Roselend 5.49 304 P Pn 03 01 00.9 +3.2
CONA Conrad Observa 5.50 20 iPn Pn 03 00 57.9 +0.2
comp=N,6.1nm,0.5s,SNR=10
CONA eSn Sn 03 01 59.9 -0.9
comp=N,24nm,0.8s
TRUS Trudelj 5.50 72 ePn Pn 03 00 59.0 +1.3
WILA Wila 5.50 329 ePn Pn 03 01 03.2 +5.4
FUR Furstenfeldbru 5.53 347 ePn Pn 03 01 01.4 +3.3
BSTF la Bastide-des 5.55 284 P Pn 03 01 00.1 +1.7
OGSI Sixt 5.61 308 P Pn 03 01 01.8 +2.6
SMRF Simiane la Rot 5.62 285 eP Pn 03 01 01.7 +2.4
SMRF eSn Sn 03 01 58.5 -5.2
comp=N,16nm,0.8s
ORIF Oris-en-Rattie 5.64 295 eP Pn 03 01 02.6 +2.9
ORIF eSn Sn 03 01 59.1 -5.3
comp=N,53nm,0.7s
ORIF Oris-en-Rattie 5.64 295 P Pn 03 01 03.7 +3.9
AIGLE Aigle 5.65 311 P Pn 03 01 03.4 +3.6
GRUS Gruza 5.66 76 ePn Pn 03 01 00.7 +0.9
RUSF Rustrel 5.68 284 P Pn 03 01 02.9 +2.7
ARBF Arbois 5.73 280 P Pn 03 01 02.8 +1.9
SELS Selova 5.89 83 ePn Pn 03 01 03.7 +0.6
SELS eSn Sn 03 02 08.4 -2.0
KEK Kerkira 5.90 119 Pn Pn 03 01 03.7 +0.5
SULZ Cheisacher 5.91 325 P Pn 03 01 05.0 +1.7
SULZ Cheisacher 5.91 325 ePn Pn 03 01 05.8 +2.5
TORNY Torny/Romont 5.92 314 P Pn 03 01 05.4 +2.0
SAUF chteau de Sau 5.95 284 P Pn 03 01 06.3 +2.5
BALST Balsthal 5.95 322 P Pn 03 01 05.2 +1.3
BALST Balsthal 5.95 322 ePn Pn 03 01 05.4 +1.5
SLE Schleitheim 5.95 328 P Pn 03 01 04.7 +0.8
SLE Schleitheim 5.95 328 ePn Pn 03 01 05.0 +1.2
OHR Ohrid 5.97 104 iPn Pn 03 01 06.2 +1.9
GEC2 GERESS Array S 6.07 4 Pn 03 01 05.7 +0.1
GEC2 GERESS Array S 6.07 4 ePn Pn 03 01 06.1 +0.5
GERES GERESS Array B 6.07 4 Pn Pn 03 01 04.9 -0.7
comp=N,3.1nm,0.3s,baz=177,slow=13,SNR=20
GERES Sn Sn 03 02 14.5 -0.5
comp=N,6.0nm,0.3s,baz=172,slow=24,SNR=7.4
comp=N,4.2nm,0.3s
GERES GERESS Array B 6.07 4 eP Pn 03 01 05.8 +0.2
GERES pmax pmax
comp=Z,3.0nm,0.3s
CKRC Cesky Krumlov 6.09 8 ePN Pn 03 01 06.0 +0.2
CKRC eSN Sn 03 02 13.6 -1.7
ZST Bratislava 6.09 26 eP Pn 03 01 00.5 -5.3
ZST e 03 02 12.2
ZST Bratislava 6.09 26 ePN Pn 03 01 00.5 -5.3
ZST eSN Sn 03 02 12.2 -3.1
KBN Korca 6.14 108 Pn Pn 03 01 06.9 +0.4
KBN Korca 6.14 108 P Pn 03 01 06.9 +0.4
GIMEL St. Georges / 6.15 310 P Pn 03 01 09.1 +2.4
BOURR Bourrignon 6.21 320 P Pn 03 01 09.4 +1.9
SKO Skopje 6.22 95 iPn Pn 03 01 09.2 +1.5
FELD Feldberg im Sc 6.23 327 P Pn 03 01 08.7 +0.8
BRANT Les Verrieres 6.28 314 P Pn 03 01 10.8 +2.3
CABF La Chapelle 6.30 310 eP Pn 03 01 10.4 +1.7
CABF eSn Sn 03 02 14.4 -6.1
comp=Z,9.2nm,0.5s
OG35 Corcelles 6.30 304 P Pn 03 01 10.3 +1.6
MODS Modra-Piesok 6.31 26 eP Pn 03 01 08.0 -0.7
MODS e 03 02 19.2
MODS Modra-Piesok 6.31 26 ePN Pn 03 01 08.0 -0.7
MODS eSN Sn 03 02 19.2 -1.4
KIZ Kirchzarten 6.33 327 P Pn 03 01 09.9 +0.8
BOVS Bovan 6.34 79 ⇑P Pn 03 01 09.1 -0.1
BOVS Bovan 6.34 79 ePn Pn 03 01 09.4 +0.2
BOVS eSn Sn 03 02 19.5 -1.9
KHC Kasperske Hory 6.35 3 Pn Pn 03 01 08.2 -1.2
KHC Kasperske Hory 6.35 3 eP Pn 03 01 09.6 +0.2
KHC e 03 02 19.3
KHC Kasperske Hory 6.35 3 ePN Pn 03 01 09.6 +0.2
KHC eSN Sn 03 02 19.3 -2.5
WET Wettzell 6.36 359 ePn Pn 03 01 09.0 -0.5
BARS Barje 6.41 87 ePn Pn 03 01 10.8 +0.7
BARS eSn Sn 03 02 22.0 -1.1
VIVF Saint-Julien-l 6.44 292 eP Pn 03 01 12.8 +2.2
VIVF eSn Sn 03 02 18.1 -5.9
comp=Z,6.9nm,0.5s
RIVEL MONT RIVEL 6.47 310 P Pn 03 01 13.1 +2.1
RIVEL S Sn 03 02 23.4 -1.4
BFO Black Forest 6.48 330 Pn 03 01 11.2 +0.1
BFO Black Forest 6.48 330 P Pn 03 01 11.2 +0.1
BFO Black Forest 6.48 330 ePn Pn 03 01 13.3 +2.2
VOGT Vogtsburg - To 6.53 326 P Pn 03 01 12.7 +0.9
MDVR Moldovita 6.54 69 ⇑P Pn 03 01 12.1 +0.1
PRVS Prvonek 6.62 89 ePn Pn 03 01 14.1 +1.0
PRVS eSn Sn 03 02 26.7 -1.7
SSB Saint Sauveur 6.66 295 Pn Pn 03 01 13.7 +0.1

SSB Saint Sauveur 6.66 295 P Pn 03 01 13.7 +0.1
SSB Saint Sauveur 6.66 295 P Pn 03 01 13.9 +0.3
OPP Oppenau 6.67 331 P Pn 03 01 14.6 +0.9
KRUC Moravsky 6.68 19 ePN Pn 03 01 13.3 -0.6
HINF Hinteralfeld 6.69 321 eP Pn 03 01 15.0 +1.0
HINF eSn Sn 03 02 23.2 -6.8
comp=Z,18nm,0.4s
TREC Trest 6.72 13 eP Pn 03 01 13.7 -0.7
TREC e 03 02 28.3
TREC Trest 6.72 13 ePN Pn 03 01 13.7 -0.7
TREC eSN Sn 03 02 28.3 -2.4
ZAES Zajecar 6.74 78 ePn Pn 03 01 14.9 +0.3
BZS Buzias 6.74 62 ⇓P Pn 03 01 16.1 +1.5
BZS Buzias 6.74 62 ePn Pn 03 01 14.6 0.0
STIP Stip 6.83 96 iPn Pn 03 01 18.6 +2.7
ECH Echery 6.85 324 Pn 03 01 16.7 +0.5
ECH Echery 6.85 324 P Pn 03 01 16.7 +0.5
ECH Echery 6.85 324 P Pn 03 01 17.1 +0.9
ECH Echery 6.85 324 P Pn 03 01 17.1 +0.9
JAVC Velka Javorina 6.86 26 ePN Pn 03 01 16.8 +0.5
LASF Ste Croix 6.86 284 eP Pn 03 01 17.5 +1.2
LASF eSn Sn 03 02 28.1 -6.1
comp=Z,2.8nm,0.5s
BOSS Bosilegrad 6.92 89 ePn Pn 03 01 18.0 +0.8
BOSS eSn Sn 03 02 33.6 -2.1
WLS Welschbruch 6.92 326 P Pn 03 01 17.9 +0.7
CDF Champ du Feu 6.95 326 eP Pn 03 01 18.5 +0.8
CDF eSn Sn 03 02 29.4 -7.2
comp=Z,19nm,0.5s
VRAC Vranov 6.96 19 Pn Pn 03 01 15.7 -2.0
comp=Z,0.5nm,0.3s,baz=195,slow=15,SNR=3.7
VRAC Sn Sn 03 02 31.4 -5.2
comp=Z,0.7nm,0.3s,baz=280,slow=21,SNR=2.0
comp=Z,2.7nm,0.6s
VRAC Vranov 6.96 19 ePN Pn 03 01 16.9 -0.8
VYHS Vyhne 6.98 33 eP Pn 03 01 17.3 -0.6
VYHS e 03 02 35.2
VYHS Vyhne 6.98 33 ePN Pn 03 01 17.3 -0.6
VYHS ePG Pg 03 01 47.9 -1.7
VYHS eSN Sn 03 02 35.2 -1.9
ZAPS Zavoj 7.00 83 ePn Pn 03 01 19.4 +1.1
GRFO Grafenberg 7.03 350 Pn Pn 03 01 18.8 +0.2
GRFO Grafenberg 7.03 350 P Pn 03 01 18.8 +0.2
GRA1 Grafenberg Arr 7.03 350 Pn Pn 03 01 19.2 +0.6
GRF Grafenberg Arr 7.03 350 P Pn 03 01 19.2 +0.6
BLKB Belogradchik 7.04 80 ⇑P Pn 03 01 19.6 +0.7
HERR Herculane 7.05 70 ⇓P Pn 03 01 19.7 +0.8
HAU Haudompre 7.06 320 eP Pn 03 01 20.3 +1.2
HAU eSn Sn 03 02 32.4 -6.8
comp=Z,36nm,0.5s
DJES Djerdap 7.07 71 ⇑P Pn 03 01 20.7 +1.4
VAY Valandovo 7.19 99 iPn Pn 03 01 22.2 +1.3
MAHO Mahon 7.25 250 Pn Pn 03 01 22.3 +0.6
PRU Pruhonice 7.27 7 eP Pn 03 01 21.8 -0.2
PRU e 03 02 41.8
PRU Pruhonice 7.27 7 ePN Pn 03 01 21.8 -0.2
PRU eSN Sn 03 02 41.8 -2.5
GZR Gura Zlata 7.43 66 ⇓P Pn 03 01 24.9 +0.7
VTS Vitosha 7.46 88 ⇑P Pn 03 01 25.5 +0.7
VTS Vitosha 7.46 88 Pn Pn 03 01 25.2 +0.4
VTS Vitosha 7.46 88 P Pn 03 01 25.2 +0.4
VTS Vitosha 7.46 88 ePn Pn 03 01 25.8 +1.0
VTS eSn Sn 03 02 45.9 -3.4
LIT Litokhoron 7.54 108 Pn Pn 03 01 26.0 +0.3
LIT Litokhoron 7.54 108 P Pn 03 01 26.0 +0.3
KEST Kesra 7.62 204 Pn Pn 03 01 30.2 +3.3
comp=Z,1.1nm,0.3s,baz=284,slow=4.5,SNR=19
KEST Sn Sn 03 02 54.0 +0.8
baz=37,slow=13
comp=Z,4.9nm,0.5s
KEST Kesra 7.62 204 Pn Pn 03 01 31.9 +5.0
MORC Moravsky Berou 7.63 22 ⇑P Pn 03 01 27.1 +0.1
MORC Moravsky Berou 7.63 22 Pn Pn 03 01 26.5 -0.5
MORC Moravsky Berou 7.63 22 P Pn 03 01 26.5 -0.5
MORC Moravsky Berou 7.63 22 ePN Pn 03 01 26.8 -0.2
SMF Signal de Mont 7.64 303 eP Pn 03 01 28.4 +1.3
SMF eSn Sn 03 02 46.7 -6.8
comp=Z,3.2nm,0.4s
KRLC Kraliky 7.72 18 eP Pn 03 01 28.4 +0.3
KRLC Kraliky 7.72 18 ePN Pn 03 01 28.4 +0.3
PAGF Fort de Pagny 7.74 321 eP Pn 03 01 31.2 +2.8
PAGF eSn Sn 03 02 48.6 -7.3
comp=Z,6.2nm,0.3s
LANS Liptovska Anna 7.75 33 eP Pn 03 01 30.8 +2.2
LANS Liptovska Anna 7.75 33 ePN Pn 03 01 30.8 +2.2
FILF Fillols 7.78 272 P Pn 03 01 30.9 +1.9
SFTF Sexfontaines 7.84 316 eP Pn 03 01 31.9 +2.1
SFTF eSn Sn 03 02 50.9 -7.4
comp=Z,5.1nm,0.5s
DPC Dobruska-Polom 7.88 15 eP Pn 03 01 30.5 +0.1
DPC Dobruska-Polom 7.88 15 ePN Pn 03 01 30.5 +0.1
DRGR 7.92 56 ⇓P Pn 03 01 32.4 +1.5
DRGR 7.92 56 ePn Pn 03 01 32.1 +1.2
MOX Moxa 7.93 353 eSn Sn 03 02 56.8 -3.7
LOR Lormes 7.94 308 eP Pn 03 01 33.6 +2.5
baz=122
LOR eSn Sn 03 02 53.6 -7.1
comp=Z,4.0nm,0.3s
LOR Lormes 7.94 308 P Pn 03 01 30.9 -0.2
SRS Serrai 7.99 99 ePn Pn 03 01 32.9 +1.0
SRS eSn Sn 03 03 00.5 -1.6
MTLF Montolieu 8.00 278 ePn Pn 03 01 34.6 +2.7
MTLF eSn Sn 03 02 55.7 -6.5
comp=Z,5.1nm,0.6s
AVF Avril sur Loir 8.01 303 eP Pn 03 01 34.1 +2.0
AVF eSn Sn 03 02 55.3 -7.2
comp=Z,1.6nm,0.3s
MEZF Maizieres J'vi 8.03 318 eP Pn 03 01 35.0 +2.6
MEZF eSn Sn 03 02 55.5 -7.4
comp=Z,5.5nm,0.4s
SSF Saint Saulge 8.04 305 ePn Pn 03 01 35.0 +2.5
SSF eSn Sn 03 02 55.8 -7.5
comp=Z,3.5nm,0.4s
OSTC Ostas 8.06 14 ePN Pn 03 01 33.3 +0.5
SAVF Savonnieres en 8.07 319 eP Pn 03 01 35.7 +2.8
SAVF eSn Sn 03 02 56.3 -7.7
comp=Z,2.1nm,0.3s
FNEB Nbias 8.09 275 P Pn 03 01 34.9 +1.7
BRG Berggiesshubel 8.11 4 eP Pn 03 01 34.2 +0.8
BRG Amp 03 01 36.2
comp=Z,3.9nm,0.7s
BRG ex x 03 02 59.2
BRG ex x 03 03 31.8
BRG ex x 03 04 02.5
BRG Amp 03 04 35.5
comp=Z,62nm,1.8s
BRG Berggiesshubel 8.11 4 eP Pn 03 01 34.2 +0.8
BRG e 03 02 59.2
BRG pmax pmax
comp=Z,4.0nm,0.7s
BRG pmax pmax
comp=Z,62nm,1.8s
BGF Bois d'Agland 8.23 301 eP Pn 03 01 36.5 +1.4
BGF eSn Sn 03 03 00.5 -7.3
comp=Z,4.4nm,0.3s
CAF Calviac 8.26 289 eP Pn 03 01 37.9 +2.3
CAF eSn Sn 03 03 01.7 -7.1
comp=Z,1.2nm,0.4s
WLF Walferdange 8.40 327 Pn Pn 03 01 37.4 0.0
WLF Walferdange 8.40 327 P Pn 03 01 37.4 0.0
WLF Walferdange 8.40 327 P Pn 03 01 38.5 +1.1
WLF Walferdange 8.40 327 dP Pn 03 01 38.9 +1.5
WLF dS Sn 03 03 12.0 0.0
CLL Collm 8.53 360 Pn Pn 03 01 38.5 -0.6
CLL Collm 8.53 360 eP Pn 03 01 40.0 +0.9
CLL Collm 8.53 360 ePn Pn 03 01 40.0 +0.9
CLL eSn Sn 03 02 54.0 -21
CLL ex x 03 03 13.0
CLL ex x 03 03 26.0
CLL eSg Sg 03 04 13.0 +3.6
comp=Z,54nm,1.2s
PAND Andorre 8.53 272 P Pn 03 01 42.4 +3.0
TCF Toulx Ste Croi 8.53 298 eP Pn 03 01 42.5 +3.2
TCF eSn Sn 03 03 08.2 -7.2
comp=Z,0.1nm,0.2s
PLD Plovdiv 8.60 91 ePn Pn 03 01 40.1 -0.1
HYF Humbligny 8.66 305 eP Pn 03 01 43.9 +2.9
HYF eSn Sn 03 03 11.8 -6.7
ARR Arges 8.69 69 ⇑P Pn 03 01 43.7 +2.2
RJF Les Rejaudoux 8.72 291 eP Pn 03 01 44.6 +2.7
ITM Ithomi 8.78 127 Pn Pn 03 01 43.5 +0.7
MONQ Montcuq 8.79 284 P Pn 03 01 44.8 +2.0

KOLS Kolonicke sedl 8.87 43 eP Pn 03 01 47.0 +3.2
KOLS Kolonicke sedl 8.87 43 ePN Pn 03 01 47.0 +3.2
VOIR 8.99 69 ⇓P Pn 03 01 47.1 +1.4
RCHB Rochefort 9.15 326 P Pn 03 01 50.2 +2.5
RCHB Rochefort 9.15 326 dP Pn 03 01 49.2 +1.5
LFF La Frestale 9.19 288 eP Pn 03 01 50.9 +2.6
LFF eSn Sn 03 03 24.8 -6.7
comp=Z,0.6nm,0.2s
GIVF Givet 9.28 325 eP Pn 03 01 52.5 +3.0
BCLA Clavier 9.33 328 dP Pn 03 01 51.7 +1.5
BCLA dS Sn 03 03 34.1 -0.7
DOU Dourbes 9.37 324 dP Pn 03 01 51.6 +0.8
DOU dS Sn 03 03 36.5 +0.5
EPF Esparros 9.38 276 eP Pn 03 01 54.4 +3.5
RDO Rodhopi 9.40 96 Pn 03 01 51.7 +0.5
BMRD Maredsous 9.46 326 dP Pn 03 01 53.1 +1.2
BMRD dS Sn 03 03 39.9 +1.9
KWP Kalwaria Pacla 9.54 41 Pn Pn 03 01 54.4 +1.3
KWP Kalwaria Pacla 9.54 41 P Pn 03 01 54.4 +1.3
MLR Muntele Rosu 9.62 69 Pn Pn 03 01 52.4 -1.9
comp=Z,0.3nm,0.3s,baz=307,slow=18,SNR=3.4
comp=Z,1.3nm,0.5s
ALN Alexandroupoli 9.84 97 Pn Pn 03 01 57.4 +0.2
ALN Alexandroupoli 9.84 97 P Pn 03 01 57.4 +0.2
ETSF Etsaut 10.04 275 eP Pn 03 02 03.7 +3.7
MFF Saint Martin d 10.18 297 eP Pn 03 02 05.0 +3.2
LVV L'vov 10.32 43 eP Pn 03 02 06.9 +3.2
LDF La Druitiere 10.92 307 eP Pn 03 02 15.5 +3.6
LDF eSn Sn 03 04 05.5 -8.4
comp=Z,0.6nm,0.2s
FLN La Foliniere 11.21 307 eP Pn 03 02 19.2 +3.3
GRR Gorron 11.27 305 eP Pn 03 02 20.3 +3.6
GRR eSn Sn 03 04 13.0 -9.5
comp=Z,0.3nm,0.2s
IDI Anoyia 11.82 125 Pn Pn 03 02 25.2 +0.8
comp=Z,1.3nm,0.3s,baz=33,slow=9.0,SNR=3.0
IDI Sn Sn 03 04 29.4 -6.9
comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=3.6
comp=Z,3.0nm,0.4s
QUIF Quistinic 12.54 300 eP Pn 03 02 36.8 +2.8
ROSF Rostrenen 12.74 301 eP Pn 03 02 38.7 +1.8
ESDC Sonseca Array 13.22 262 Pn Pn 03 02 44.1 +0.6
baz=66,slow=13,SNR=8.1
comp=Z,0.9nm,0.8s
ARG Arkhangelos 13.32 115 Pn Pn 03 02 46.2 +1.5
ARG Arkhangelos 13.32 115 P Pn 03 02 46.3 +1.5
AKASG Malin Array Be 13.57 49 Pn Pn 03 02 46.0 -2.1
comp=Z,0.3nm,0.3s,baz=245,slow=13,SNR=1.3
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 13.57 49⇑ eP Pn 03 02 47.7 -0.5
MDUB Mudurnu 13.73 94 Pn Pn 03 02 50.5 0.0
ELL Elmali 14.25 109 Pn Pn 03 02 58.9 +1.2
ELL Elmali 14.25 109 P Pn 03 02 58.9 +1.2
MNK Minsk 15.22 35 iP Pn 03 03 06.3 -4.2
MNK iS Sn 03 05 55.9 -2.8
MNK pmax pmax
comp=Z,3.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=N,9.0nm,1.0s
MNK MLR MLR
comp=N,13nm,18.0s
MNK MLR MLR
comp=E,119nm,18.0s
MNK MLR MLR
comp=Z,978nm,20.0s
MNK Minsk 15.22 35 iP Pn 03 03 06.3 -4.2
comp=E,1.0nm,0.7s
MNK iP Pn 03 03 06.3 -4.2
comp=N,9.0nm,1.0s
MNK iP Pn 03 03 06.3 -4.2
comp=Z,3.0nm,0.8s,baz=225
MNK iPP P 03 03 14.4 -1.0
MNK iPPP PPP 03 03 22.1
MNK iS Sn 03 05 56.0 -2.8
MNK iSS SnSn 03 06 09.9 -1.4
MNK iSSS SSS 03 06 22.6
MNK iLQ LQ 03 07 44.7
MNK iLR LR 03 08 44.3
MNK iLRM MLR 03 09 41.0
comp=N,13nm,17.8s
MNK iLRM MLR 03 09 51.9
comp=E,119nm,17.8s
MNK iLRM MLR 03 09 56.2
comp=Z,978nm,20.4s
BRTR Keskin Array B 15.74 94 Pn Pn 03 03 17.4 -0.1
comp=Z,0.2nm,0.3s,baz=287,slow=10,SNR=1.7
comp=Z,0.7nm,0.5s
EKA Eskdalemuir Ar 16.41 326 Pn Pn 03 03 26.3 +0.3
baz=57,slow=13
comp=Z,1.0nm,0.8s
ANN Anapa 17.66 75 eP P 03 03 44.3 +1.7
ANN pmax pmax
comp=Z,20nm,0.7s
VSU Vasula 17.86 24⇑ eP P 03 03 45.3 +0.7
VSU pmax pmax
comp=Z,17nm,0.6s
NC602 NORSAR Array S 18.00 358 Pn 03 03 45.2 -0.6
NB2 NORSAR Subarra 18.32 357 P P 03 03 50.5 +0.8
comp=Z,1.1nm,0.5s,baz=177,slow=10
NOA NORSAR Array B 18.32 357 P P 03 03 50.0 +0.2
comp=Z,0.6nm,0.7s,baz=275,slow=4.9,SNR=5.6
NOA NORSAR Array B 18.32 357 P P 03 03 50.0 +0.2
NB201 NORSAR Array S 18.32 357 P 03 03 50.8 +1.0
NC405 NORSAR Array S 18.37 358 P P 03 03 50.6 +0.3
NC405 IAmb IAmb 03 04 09.0
comp=Z,22nm,1.4s
NC303 NORSAR Array S 18.50 357 P Pn 03 03 52.5 +0.7
NC204 NORSAR Array S 18.57 356 P P 03 03 52.6 0.0
VSR Storozhevoye 19.59 55 eP P 03 04 03.5 -0.2
VSR pmax pmax
comp=Z,6.0nm,0.5s
VORR Voronezh 19.74 54 eP P 03 04 04.5 -0.8
VORR pmax pmax
comp=Z,20nm,0.3s
LPSR Galich'ya Gora 19.86 51 eP P 03 04 06.3 -0.4
LPSR pmax pmax
comp=Z,10.0nm,0.9s
MMAI Mount Meron Ar 20.07 112 P Pn 03 04 10.3 -0.6
comp=Z,6.0nm,0.6s,baz=318,slow=11,SNR=10
comp=Z,6.0nm,0.6s
FINES FINESS Array B 20.24 18 P P 03 04 09.7 -1.0
comp=Z,4.0nm,0.6s,baz=181,slow=11,SNR=20
comp=Z,4.0nm,0.6s
FIA1 FINESS Array S 20.24 18 P P 03 04 10.9 +0.3
FIA1 IAmb IAmb 03 04 18.6
comp=Z,9.9nm,0.9s
MOS Moscow 20.45 42 eP P 03 04 12.0 -1.0
MOS pmax pmax
comp=Z,27nm,1.1s
KOPT Kop Dagi 20.70 88 P P 03 04 16.0 -0.2
KOPT IAmb IAmb 03 04 34.9
comp=Z,16nm,1.3s
TAM Tamanrasset 20.92 200 P P 03 04 18.8 +0.3
TAM Tamanrasset 20.92 200 P P 03 04 18.8 +0.3
TAM pmax pmax
comp=Z,3.0nm,1.1s
VRH Novokhopyorsk 21.15 57 eP P 03 04 20.6 0.0
VRH pmax pmax
comp=Z,20nm,1.1s
KIV Kislovodsk 21.49 77 P P 03 04 23.7 -0.7
KIV IAmb IAmb 03 04 31.9
comp=Z,9.9nm,0.9s
KIV Kislovodsk 21.49 77 eP P 03 04 25.1 +0.7
KIV pmax pmax
comp=Z,13nm,1.1s
ASF Jabal al Asfar 21.58 112 P P 03 04 27.2 +1.7
comp=Z,2.9nm,0.8s,baz=312,slow=7.8,SNR=6.5
comp=Z,2.9nm,0.8s
KBZ Khabaz 21.67 77 P P 03 04 26.4 +0.1
comp=Z,5.9nm,0.9s,baz=304,slow=6.1,SNR=8.3
comp=Z,5.9nm,0.9s
KBZ Khabaz 21.67 77⇓ eP P 03 04 27.3 +1.1
KBZ pmax pmax
comp=Z,7.0nm,1.0s
GURO Guroymak-BITLI 22.29 91 P P 03 04 34.4 +1.2
GURO IAmb IAmb 03 04 44.9
comp=Z,12nm,1.5s
KLMR Klimovskoe 24.09 32 eP P 03 04 49.4 -1.6
KLMR pmax pmax
comp=Z,13nm,1.2s
KLMR Klimovskoe 24.09 32 eP P 03 04 49.4 -1.6
KLMR AMP 03 05 03.3
comp=Z,13nm,1.2s

BELG	**Belogornoye**	**24.97**	**55**	P	**P**	**03 04 59.2**	**+0.2**		
	comp=Z,22nm,0.7s,baz=228,slow=3.4,SNR=6.2								
	comp=Z,22nm,0.7s								
BELG	**Belogornoye**	**24.97**	**55**	*e*P	**P**	**03 04 59.5**	**+0.5**		
BELG				pmax	pmax				
	comp=Z,4.0nm,0.8s								
ARCES	**ARCESS Array B**	**27.57**	**9**	P	**P**	**03 05 22.7**	**+0.3**		
	comp=Z,1.8nm,0.9s,baz=145,slow=4.4,SNR=2.1								
	comp=Z,1.8nm,0.9s								
LVZ	**Lovozero**	**27.68**	**17**	*e*P	**P**	**03 05 24.5**	**+1.1**		
LVZ				pmax	pmax				
	comp=Z,26nm,1.2s								
TOA0	**Torodi Ar. Sit**	**31.14**	**202**	P	**P**	**03 05 55.8**	**+1.2**		
TOA0				IAmb	IAmb	03 05 56.3			
	comp=Z,3.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**31.14**	**202**	P	**P**	**03 05 55.6**	**+1.1**		
	comp=Z,4.0nm,0.9s,baz=18,slow=9.0,SNR=24								
	comp=Z,4.0nm,0.9s								
ARU	**Arti**	**31.83**	**49**	P	**P**	**03 05 59.9**	**-0.3**		
ARU	**Arti**	**31.83**	**49**	*c i*P	**P**	**03 06 00.8**	**+0.6**		
ARU						03 06 59.8			
ARU				S	**S**	**03 11 11.9**	**+1.8**		
ARU				pmax	pmax				
	comp=Z,9.0nm,0.6s								
ABKAR	**Akbulak array**	**32.73**	**62**	P	**P**	**03 06 07.3**	**-0.9**		
ABKAR				IAmb	IAmb	03 06 13.9			
	comp=Z,4.9nm,1.5s								
GEYT	**Alibeck**	**34.33**	**83**	P	**P**	**03 06 22.0**	**-0.3**		
	comp=Z,2.5nm,0.8s,baz=257,slow=13,SNR=2.5								
	comp=Z,2.5nm,0.8s								
KBS	**Kingsbay**	**36.26**	**360**	*de*P	**P**	**03 06 40.6**	**+2.2**		
KBS				pmax	pmax				
	comp=Z,26nm,1.3s								
BRVK	**Borovoye**	**38.70**	**54**	P	**P**	**03 07 00.2**	**+0.8**		
BRVK				IAmb	IAmb	03 07 03.5			
	comp=Z,8.2nm,0.7s								
BRVK	**Borovoye**	**38.70**	**54**	⇑*e*P	**P**	**03 07 00.4**	**+1.0**		
BRVK				pmax	pmax				
	comp=Z,7.0nm,0.7s								
KKAR	**Karatay Array**	**41.30**	**69**	P	**P**	**03 07 22.9**	**+1.7**		
KKAR	**Karatay Array**	**41.30**	**69**	P	**P**	**03 07 22.9**	**+1.7**		
KKAR				pmax	pmax				
	comp=Z,2.0nm,1.0s								
KURK	**Kurchatov**	**44.24**	**56**	P	**P**	**03 07 46.9**	**+2.1**		
KURK				IAmb	IAmb	03 07 48.2			
	comp=Z,6.4nm,1.4s								
KURK	**Kurchatov**	**44.24**	**56**	⇓*e*P	**P**	**03 07 46.2**	**+1.4**		
KURK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
NRIK	**Noril'sk**	**45.35**	**29**	⇑*e*P	**P**	**03 07 51.9**	**-1.5**		
NRIK				pmax	pmax				
	comp=Z,7.0nm,1.3s								
MBAR	**Mbarara**	**46.01**	**155**	P	**P**	**03 07 58.7**	**-0.8**		
MBAR				IAmb	IAmb	03 08 04.9			
	comp=Z,3.5nm,0.9s								
MBAR	**Mbarara**	**46.01**	**155**	⇑*e*P	**P**	**03 07 57.9**	**-1.6**		
ZALV	**Zalesovo Beam**	**46.96**	**50**	P	**P**	**03 08 08.0**	**+1.6**		
	comp=Z,1.8nm,0.7s,baz=280,slow=8.9,SNR=6.2								
	comp=Z,1.8nm,0.7s								
ZALV	**Zalesovo Beam**	**46.96**	**50**	P	**P**	**03 08 08.0**	**+1.6**		
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**03 08 13.3**	**+0.1**		
	comp=Z,1.2nm,0.6s,baz=284,slow=7.7,SNR=8.7								
	comp=Z,1.2nm,0.6s								
WMQ	**Urumqi**	**52.51**	**62**	*e*P	**P**	**03 08 52.0**	**+3.2**		
SONM	**Songino Array**	**61.85**	**50**	P	**P**	**03 09 56.1**	**+1.1**		
	comp=Z,2.8nm,0.8s,baz=283,slow=9.4,SNR=7.3								
	comp=Z,2.8nm,0.8s								
SONM	**Songino Array**	**61.85**	**50**	*e*P	**P**	**03 09 57.9**	**+3.0**		
SONM				pmax	pmax				
	comp=Z,3.0nm,0.8s								
ULN	**Ulaanbaatar**	**62.21**	**49**	⇑*e*P	**P**	**03 09 56.3**	**-1.0**		
ULN				pmax	pmax				
	comp=Z,1.0nm,1.0s								
INK	**Inuvik**	**66.44**	**347**	P	**P**	**03 10 26.1**	**+1.6**		
	comp=Z,2.6nm,1.0s,baz=72,slow=3.6,SNR=4.3								
	comp=Z,2.6nm,1.0s								
INK	**Inuvik**	**66.44**	**347**	P	**P**	**03 10 25.4**	**+1.0**		
YKA	**Yellowknife Ar**	**67.02**	**336**	P	**P**	**03 10 29.5**	**+1.2**		
	comp=Z,1.2nm,0.7s,baz=32,slow=5.9,SNR=3.0								
	comp=Z,1.2nm,0.7s								
H23K	**Yukon River**	**70.89**	**353**	P	**P**	**03 10 54.3**	**+1.9**		
H23K				IAmb	IAmb	03 10 57.7			
	comp=Z,5.3nm,1.4s								
H21K	**Melozitna Rive**	**71.34**	**354**	P	**P**	**03 10 57.5**	**+2.5**		
H21K				IAmb	IAmb	03 11 00.9			
	comp=Z,4.0nm,0.8s								
PZH	**PanZhiHua**	**71.57**	**71**	P	**P**	**03 10 58.3**	**+1.1**		
PZH				pmax	pmax				
	comp=Z,8.0nm,0.9s								
PZH				pmax	pmax				
	comp=Z,90nm,4.1s								
ILAR	**Eielson Array**	**71.64**	**351**	P	**P**	**03 10 57.7**	**+0.9**		
	comp=Z,0.8nm,0.9s,baz=2.6,slow=5.9,SNR=9.4								
	comp=Z,0.8nm,0.9s								
ILAR	**Eielson Array**	**71.64**	**351**	*e*P	**P**	**03 10 58.9**	**+2.1**		
ILAR				pmax	pmax				
	comp=Z,1.0nm,0.9s								
BOSA	**Boshof**	**71.92**	**169**	P	**P**	**03 10 59.3**	**+0.3**		
BOSA	**Boshof**	**71.92**	**169**	P	**P**	**03 10 59.3**	**+0.3**		
BOSA				pmax	pmax				
	comp=Z,13nm,1.3s								
RIDG	**Independent Ri**	**72.38**	**350**	P	**P**	**03 11 03.4**	**+2.0**		
DHY	**Denali Highway**	**73.34**	**351**	P	**P**	**03 11 07.5**	**+0.3**		
K20K	**Telida**	**73.71**	**354**	P	**P**	**03 11 10.1**	**+0.9**		
K20K				IAmb	IAmb	03 11 51.8			
	comp=Z,8.6nm,1.5s								
WALA	**Waterton Lakes**	**77.40**	**327**	P	**P**	**03 11 31.0**	**+0.2**		
WALA				IAmb	IAmb	03 11 36.9			
	comp=Z,3.2nm,0.8s								
PDAR	**Pinedale Array**	**80.48**	**321**	P	**P**	**03 11 49.3**	**+1.4**		
	comp=Z,0.3nm,0.6s,baz=98,slow=4.8,SNR=3.4								
	comp=Z,0.3nm,0.6s								
WMOK	**Wichita Mounta**	**80.92**	**309**	P	**P**	**03 11 50.2**	**+0.1**		
WMOK				IAmb	IAmb	03 12 18.5			
	comp=Z,2.8nm,1.1s								
WMOK	**Wichita Mounta**	**80.92**	**309**	P	**P**	**03 11 50.2**	**+0.1**		
WMOK				pmax	pmax				
	comp=Z,3.0nm,1.2s								
BMO	**Blue Mountains**	**82.17**	**327**	P	**P**	**03 11 57.0**	**+0.4**		
BMO	**Blue Mountains**	**82.17**	**327**	P	**P**	**03 11 57.0**	**+0.4**		
BMO				pmax	pmax				
	comp=Z,5.0nm,0.8s								
TXAR	**Lajitas Array**	**87.69**	**309**	P	**P**	**03 12 25.1**	**+0.4**		
	comp=Z,0.4nm,0.8s,baz=74,slow=3.2,SNR=3.1								
	comp=Z,0.4nm,0.8s								

ROM 24 03:03:05.0±0.1, 42°647N±0'007×13°233E±0'010, h10km, ML2.2/6, 1C, Error ellipse: s-maj=0.8km s-min=0.5km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.14**	**186**	P	Pg	03 03 08.7	+0.5
RM33				S	Sg	03 03 11.4	+0.9
RM33				AML	AML		
	comp=E,4285μm,0.4s						
RM33				AML	AML		
	comp=N,2745μm,0.4s						
RM33				AML	AML		
	comp=E,4155μm,0.3s						
RM33				AML	AML		
	comp=E,4290μm,0.4s						
RM33				AML	AML		
	comp=N,2740μm,0.4s						
RM33				AML	AML		
	comp=E,4150μm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.17**	**131**	P	Pg	03 03 09.2	+0.4
CAMP				S	Sg	03 03 12.1	+0.7
CAMP				AML	AML		
	comp=E,1185μm,0.2s						
CAMP				AML	AML		
	comp=N,696μm,0.5s						
CAMP				AML	AML		
	comp=E,1190μm,0.2s						
CAMP				AML	AML		
	comp=N,696μm,0.5s						
CAMP				AML	AML		
	comp=N,696μm,0.5s						
CAMP				END			
NRCA	**Norcia**	**0.21**	**335**	P	Pg	03 03 10.0	+0.7
NRCA				S	Sg	03 03 13.0	+0.7
TERO	**Teramo**	**0.28**	**95**	P	Pg	03 03 10.7	+0.2
TERO				S	Sg	03 03 14.9	+0.6
TERO				AML	AML		
	comp=E,1345μm,1.1s						
TERO				AML	AML		
	comp=E,1535μm,1.1s						
TERO				AML	AML		
	comp=N,1690μm,0.3s						
TERO				AML	AML		
	comp=E,1340μm,1.1s						
TERO				AML	AML		
	comp=N,1555μm,0.3s						
TERO				AML	AML		
	comp=N,1425μm,0.3s						
TERO				END			
GIGS	**Gran Sasso**	**0.32**	**128**	P	Pb	03 03 13.3	+0.5
GIGS				AML	AML		
	comp=E,184μm,1.3s						
GIGS				AML	AML		
	comp=N,161μm,0.4s						
GIGS				AML	AML		
	comp=E,171μm,0.2s						
AQU	**L'Aquila**	**0.32**	**157**	P	Pb	03 03 12.6	-0.2
FEMA	**Monte Fema**	**0.34**	**337**	P	Pb	03 03 12.7	-0.6
FEMA				S	Sg	03 03 17.6	+1.1
ARRO	**Arrone**	**0.35**	**259**	P	Pg	03 03 12.2	+0.2
ARRO				S	Sb	03 03 18.1	-0.9
ARRO				AML	AML		
	comp=E,752μm,1.5s						
ARRO				AML	AML		
	comp=N,818μm,0.2s						
ARRO				AML	AML		
	comp=E,751μm,1.5s						
ARRO				AML	AML		
	comp=N,818μm,0.2s						
ARRO				AML	AML		
	comp=N,818μm,0.2s						
ARRO				END			
FIAM	**Fiamignano**	**0.39**	**193**	P	Pg	03 03 12.9	+0.2
FIAM				S	Sg	03 03 18.9	+1.1
GUMA	**Gualdo di Mace**	**0.42**	**10**	P	Pg	03 03 13.8	+0.4
CESI	**CESI - Serrava**	**0.43**	**326**	P	Pb	03 03 14.2	-0.6
CESI				AML	AML		
	comp=E,1775μm,0.4s						
CESI				AML	AML		
	comp=N,2600μm,0.4s						
CESI				AML	AML		
	comp=E,1770μm,0.4s						
OFFI	**Offida**	**0.44**	**49**	⇑P	Pb	03 03 14.7	-0.2
OFFI				AML	AML		
	comp=E,1785μm,0.7s						
OFFI				AML	AML		
	comp=N,1870μm,1.2s						
OFFI				AML	AML		
	comp=E,1643μm,0.3s						
CESX	**Cesi**	**0.48**	**266**	P	Pg	03 03 14.3	-0.1
CESX				S	Sg	03 03 21.6	+0.8
CESX				AML	AML		
	comp=E,330μm,1.6s						
CESX				AML	AML		
	comp=N,438μm,0.6s						
CESX				AML	AML		
	comp=N,316μm,0.2s						
VCEL	**Villa Celiera**	**0.52**	**119**	P	Pb	03 03 16.3	0.0
TRTR	**Tortoreto Alta**	**0.53**	**72**	P	Pg	03 03 15.6	+0.3
ASSB	**Assisi San Ben**	**0.58**	**313**	P	Pb	03 03 17.6	+0.3
T0110	**Collepietro**	**0.58**	**136**	P	Pg	03 03 15.3	-1.0
SRES	**S.Oreste - Sor**	**0.67**	**233**	P	Pb	03 03 18.6	-0.3
ATCC	**AVT- Casa Cast**	**0.69**	**321**	P	Pb	03 03 19.4	+0.1
PP3	**Marolino**	**0.78**	**21**	P	Pg	03 03 20.2	+0.1

ROM 24 03:03:16.5±0.1, 42°775N±0'004×13°16E±0'01, h7km, ML2.1, Error ellipse: s-maj=1.0km s-min=0.1km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**331**	P	Pg	03 03 19.1	+0.6
NRCA				S	Sg	03 03 20.4	+0.6
FDMO	**Fiordimonte**	**0.27**	**349**	P	Pg	03 03 22.5	+0.6
FDMO				S	Sg	03 03 26.7	+1.3
FDMO				END			
RM33	**Pellescritta (**	**0.27**	**171**	P	Pg	03 03 22.7	+0.8
RM33				S	Sb	03 03 27.5	-1.0
RM33				AML	AML		
	comp=E,4285μm,0.4s						
RM33				AML	AML		
	comp=N,2745μm,0.4s						
RM33				AML	AML		
	comp=E,4155μm,0.3s						
RM33				AML	AML		
	comp=N,2840μm,0.4s						
RM33				AML	AML		
	comp=E,4290μm,0.4s						
RM33				AML	AML		
	comp=N,2740μm,0.4s						
RM33				AML	AML		
	comp=E,4150μm,0.3s						
RM33				END			
CESI	**CESI - Serrava**	**0.30**	**321**	P	Pg	03 03 23.1	+0.6
CESI				S	Sb	03 03 27.9	-1.4
CESI				AML	AML		
	comp=E,1775μm,0.4s						
CESI				AML	AML		
	comp=N,2600μm,0.4s						
CESI				AML	AML		
	comp=E,1770μm,0.4s						
CESI				END			
CAMP	**Campotosto**	**0.30**	**142**	P	Pg	03 03 23.2	+0.7
CAMP				S	Sb	03 03 28.1	-1.5
CAMP				AML	AML		
	comp=E,1185μm,0.2s						
CAMP				AML	AML		
	comp=N,696μm,0.5s						
CAMP				AML	AML		
	comp=E,1190μm,0.2s						
CAMP				AML	AML		
	comp=N,696μm,0.5s						
CAMP				END			
GUMA	**Gualdo di Mace**	**0.32**	**24**	P	Pg	03 03 23.6	+0.8
GUMA				S	Sb	03 03 29.2	-0.7
ARRO	**Arrone**	**0.35**	**236**	AML	AML		
	comp=E,752μm,1.5s						
ARRO				AML	AML		
	comp=N,818μm,0.2s						
ARRO				AML	AML		
	comp=E,751μm,1.5s						
ARRO				AML	AML		
	comp=N,818μm,0.2s						
TERO	**Teramo**	**0.36**	**115**	P	Pb	03 03 24.9	-0.4
TERO				S	Sb	03 03 29.9	-1.3
TERO				AML	AML		
	comp=E,1345μm,1.1s						
TERO				AML	AML		
	comp=E,1340μm,1.1s						
TERO				AML	AML		
	comp=N,1555μm,0.3s						
TERO				AML	AML		
	comp=E,1535μm,1.1s						
TERO				AML	AML		
	comp=N,1690μm,0.3s						
OFFI	**Offida**	**0.42**	**67**	AML	AML		
OFFI				AML	AML		
	comp=E,1785μm,0.7s						
OFFI				AML	AML		
	comp=N,1870μm,1.2s						
GIGS	**Gran Sasso**	**0.44**	**137**	AML	AML		
	comp=E,184μm,1.3s						
GIGS				AML	AML		
	comp=N,161μm,0.4s						
AQU	**L'Aquila**	**0.46**	**157**	P	Pb	03 03 26.4	-0.5
AQU				S	Sb	03 03 33.7	-0.2
CESX	**Cesi**	**0.46**	**249**	AML	AML		
	comp=E,330μm,1.6s						
CESX				AML	AML		
	comp=N,438μm,0.6s						
SNTG	**Esanatoglia**	**0.51**	**342**	P	Pg	03 03 26.7	+0.3
SNTG				S	Sb	03 03 34.6	-0.8
EL6	**Elcito**	**0.56**	**356**	P	Pg	03 03 27.6	+0.3
EL6				S	Sb	03 03 36.7	-0.2
ATCC	**AVT- Casa Cast**	**0.56**	**317**	P	Pg	03 03 27.8	+0.4
ATCC				S	Sb	03 03 36.6	-0.3
PP3	**Marolino**	**0.69**	**29**	P	Pb	03 03 31.1	+0.2
ARVD	**Arcevia**	**0.74**	**348**	P	Pg	03 03 31.1	+0.3
ARVD				S	Sb	03 03 42.2	+0.1

ROM 24 03:07:17.2±0.1, 42°771N±0'004×13°155E±0'007, h9km, ML2.8/5, 1C-1D, Error ellipse: s-maj=0.6km s-min=0.1km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**334**	P	Pg	03 07 19.6	+0.2
NRCA				S	Sg	03 07 21.0	-0.1
NRCA				AML	AML		
	comp=E,88250μm,0.1s						
NRCA				AML	AML		
	comp=N,80800μm,0.2s						
NRCA				AML	AML		
	comp=E,98450μm,0.1s						
NRCA				AML	AML		
	comp=N,85450μm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,98615μm,0.1s						
NRCA				END			
FEMA	**Monte Fema**	**0.21**	**338**	P	Pg	03 07 22.2	+0.6
RM33	**Pellescritta (**	**0.27**	**170**	P	Pb	03 07 23.8	-0.4
RM33				S	Sb	03 07 27.7	-1.2
FDMO	**Fiordimonte**	**0.27**	**349**	P	Pb	03 07 23.7	-0.6
FDMO				S	Sg	03 07 27.5	+1.1
FDMO				AML	AML		
	comp=E,1995μm,0.4s						
FDMO				AML	AML		
	comp=N,1525μm,0.3s						
FDMO				AML	AML		
	comp=E,13150μm,0.2s						
FDMO				AML	AML		
	comp=N,17800μm,0.2s						
FDMO				END			
CESI	**CESI - Serrava**	**0.30**	**322**	P	Pg	03 07 23.8	+0.6
CESI				S	Sg	03 07 28.4	+1.1
CESI				AML	AML		
	comp=E,3530μm,0.4s						
CESI				AML	AML		
	comp=N,5380μm,0.3s						
CESI				AML	AML		
	comp=E,14150μm,0.7s						
CESI				AML	AML		
	comp=N,15950μm,1.0s						
CESI				AML	AML		
	comp=E,3529μm,0.4s						
CESI				AML	AML		
	comp=N,5383μm,0.3s						
CESI				END			
CAMP	**Campotosto**	**0.30**	**141**	P	Pg	03 07 23.8	+0.5
CAMP				S	Sg	03 07 28.6	+1.3
CAMP				AML	AML		
	comp=E,1370μm,0.3s						
CAMP				AML	AML		
	comp=N,1395μm,0.6s						
CAMP				END			
GUMA	**Gualdo di Mace**	**0.32**	**24**	P	Pg	03 07 23.9	+0.3
ARRO	**Arrone**	**0.34**	**236**	P	Pg	03 07 24.7	+0.7
ARRO				S	Sb	03 07 30.5	-0.6
ARRO				AML	AML		
	comp=E,19200μm,0.2s						
ARRO				AML	AML		
	comp=N,22500μm,0.8s						
ARRO				AML	AML		
	comp=E,1292μm,1.1s						
ARRO				END			
TERO	**Teramo**	**0.36**	**114**	P	Pg	03 07 24.7	+0.3
TERO				S	Sb	03 07 30.4	-1.2
TERO				AML	AML		
	comp=E,1670μm,0.5s						
TERO				AML	AML		
	comp=N,1830μm,0.5s						
TERO				AML	AML		
	comp=E,1780μm,0.5s						
TERO				AML	AML		
	comp=N,1970μm,0.5s						
TERO				AML	AML		
	comp=E,75200μm,0.6s						
TERO				AML	AML		
	comp=N,71300μm,0.9s						
TERO				AML	AML		
	comp=E,79150μm,0.7s						
TERO				AML	AML		
	comp=N,74900μm,0.9s						
TERO				END			
MDAR	**Monte D'Aria**	**0.42**	**359**	P	Pg	03 07 26.0	+0.5
OFFI	**Offida**	**0.42**	**67**	⇑P	Pb	03 07 26.9	+0.1
OFFI				AML	AML		
	comp=E,86400μm,0.4s						
OFFI				AML	AML		
	comp=N,54200μm,0.7s						
MNTP	**Montappone**	**0.43**	**32**	P	Pb	03 07 27.1	0.0
GIGS	**Gran Sasso**	**0.44**	**136**	P	Pg	03 07 26.1	+0.3
GIGS				S	Sg	03 07 32.8	+1.1
GIGS				AML	AML		
	comp=E,500μm,0.2s						
GIGS				AML	AML		
	comp=N,272μm,0.6s						
GIGS				AML	AML		
	comp=E,8480μm,0.5s						
GIGS				AML	AML		
	comp=N,8425μm,0.4s						
GIGS				END			
CESX	**Cesi**	**0.45**	**249**	P	Pg	03 07 26.4	+0.3
CESX				S	Sb	03 07 33.6	-0.6
AQU	**L'Aquila**	**0.46**	**156**	P	Pb	03 07 26.8	-0.6
ASSB	**Assisi San Ben**	**0.46**	**307**	P	Pg	03 07 26.5	+0.4
ASSB				S	Sb	03 07 33.5	-0.9
ASSB				AML	AML		
	comp=E,10600μm,1.5s						
ASSB				AML	AML		
	comp=N,12100μm,1.0s						
ASSB				AML	AML		
	comp=E,1470μm,1.0s						
ASSB				END			
SSM1	**San Severino M**	**0.46**	**2**	P	Pg	03 07 26.7	+0.5
GAG1	**Gagliole**	**0.47**	**352**	P	Pb	03 07 27.5	-0.3
FIAM	**Fiamignano**	**0.50**	**183**	P	Pg	03 07 27.6	+0.6
FIAM				S	Sb	03 07 35.2	-0.6
SNTG	**Esanatoglia**	**0.51**	**342**	P	Pg	03 07 27.6	+0.4
TRTR	**Tortoreto Alta**	**0.56**	**86**	P	Pb	03 07 29.6	+0.4
TRTR				AML	AML		
	comp=E,1695μm,0.5s						
TRTR				AML	AML		
	comp=N,1600μm,1.2s						
TRTR				AML	AML		
	comp=E,39050μm,1.0s						
TRTR				AML	AML		
	comp=N,44900μm,0.5s						
FOSV	**Fossato di Vic**	**0.60**	**331**	P	Pg	03 07 29.1	+0.3
FOSV				S	Sb	03 07 38.1	-0.3
FOSV				AML	AML		
	comp=E,3195μm,1.3s						
FOSV				AML	AML		
	comp=N,5325μm,0.5s						
FOSV				AML	AML		
	comp=E,424μm,0.5s						
VCEL	**Villa Celiera**	**0.63**	**126**	P	Pb	03 07 30.4	0.0
VCEL				AML	AML		
	comp=E,1285μm,0.3s						
VCEL				AML	AML		
	comp=N,1405μm,0.6s						
VCEL				AML	AML		
	comp=E,34100μm,0.9s						
VCEL				AML	AML		
	comp=N,39600μm,0.9s						
MURB	**Monte Urbino**	**0.68**	**317**	P	Pg	03 07 30.6	+0.3
MURB				AML	AML		
	comp=E,17600μm,0.3s						
MURB				AML	AML		
	comp=N,17250μm,0.3s						
MURB				AML	AML		
	comp=E,18350μm,0.3s						
MURB				AML	AML		
	comp=N,17900μm,0.3s						
PP3	**Marolino**	**0.69**	**29**	AML	AML		
	comp=E,27700μm,0.6s						
PP3				AML	AML		
	comp=N,18900μm,0.8s						
PP3				AML	AML		
	comp=E,29250μm,0.6s						
PP3				AML	AML		

comp=N,16850µm,0.6s
PP3 AML AML
comp=E,3110µm,0.5s
T0110 Collepietro 0.71 139 ⇓P Pg 03 07 31.1 +0.1
T0110 AML AML
comp=E,20700µm,0.6s
T0110 AML AML
comp=N,26150µm,0.5s
ATFO Monte Foce - G 0.73 325 P Pg 03 07 31.6 +0.2
ATFO AML AML
comp=E,2915µm,1.0s
ATFO AML AML
comp=N,2765µm,0.9s
MGAB Montegabbione 0.78 281 P Pb 03 07 33.1 +0.1
INTR Introdacqua 0.94 144 P Pg 03 07 34.3 -1.0
INTR AML AML
comp=E,5µm,1.2s
INTR AML AML
comp=N,5µm,1.4s
INTR AML AML
comp=E,5270µm,1.2s
INTR AML AML
comp=N,7620µm,1.4s
FSSB Fossombrone 0.96 343 P Pg 03 07 35.0 -0.7
FSSB AML AML
comp=E,6200µm,0.8s
FSSB AML AML
comp=N,6255µm,0.3s
LPEL Lama dei Pelig 1.05 133 P Pg 03 07 36.7 -0.7
LPEL AML AML
comp=E,4190µm,0.6s
LPEL AML AML
comp=N,4830µm,0.6s

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*STR **24** 03:08:04.7±2.2, 42°N±10"×1°4E±1°7, h5km, mb3.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=112.6, preliminary*
*LDG **24** 03:08:06.4±0.3, 42°69N×13°70E, h15km, Ml3.2/30, Error ellipse: s-maj=7.6km s-min=4.6km az=60.0*
*ROM **24** 03:08:10.9±0.1, 42°624N±0°004×13°252E±0°006, h11km, ML4.0/17, Mw3.7, Error ellipse: s-maj=0.5km s-min=0.3km az=71.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-3.13; Mθθ0.80; Mφφ2.33; Mrθ 1.20; Mθφ-1.91; Mφr-2.43; Fault plane solution: Mo4.33294×10¹⁴ NP1:φs139.00000°, δ26.00000°, λ-101.00000°. NP2:φs331.00000°, δ64.00000°, λ-85.00000°.*
*IDC **24** 03:08:10.5±1.1, 42°79N×13°09E, h0km, mb3.7/7, mbtmp3.6/14, ML3.4/7 Error ellipse: s-maj=17.8km s-min=13.2km az=98.0*
*PDG **24** 03:08:10.5±0.2, 42°66N×13°25E, h6km±1km, ML4.1/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*BEO **24** 03:08:12.5±0.6, 42°62N×13°36E, h0km, ML3.9/9*
*PRU **24** 03:08:13.0±0.0, 42°74N×13°64E, h0km*
*BGR **24** 03:08:15.7±3.9, 42°74N×13°35E, h5km, ML3.8/12, Error ellipse: s-maj=85.6km s-min=16.7km az=168.0*

ISC 24 03:08:11.3±0.7, 42°63N±0°01×13°22E±0°02, h14km±5km, n334, σ2§10/431, mb3.9/6, 26C-9D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
RM33	**Pellescritta (**	**0.12**	**182**	⇑P		**Pg**	**03 08 14.4**	**-0.3**
RM33				S		**Sg**	**03 08 17.0**	**0.0**
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
CAMP	**Campotosto**	**0.17**	**122**	⇑P		**Pg**	**03 08 14.7**	**-0.7**
CAMP				S		**Sg**	**03 08 17.3**	**-0.8**
NRCA	**Norcia**	**0.22**	**340**	P		**Pg**	**03 08 16.0**	**-0.3**
NRCA				S		**Sg**	**03 08 19.4**	**-0.2**
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
TERO	**Teramo**	**0.28**	**90**	⇑P		**Pg**	**03 08 16.2**	**-1.1**
TERO				S		**Sg**	**03 08 20.2**	**-1.1**
TERO				AML	AML			
	comp=E,75200µm,0.6s							
TERO				AML	AML			
	comp=N,71250µm,0.9s							
TERO				AML	AML			
	comp=E,79150µm,0.7s							
TERO				AML	AML			
	comp=E,75250µm,0.6s							
TERO				AML	AML			
	comp=N,71300µm,0.9s							
TERO				AML	AML			
	comp=N,74900µm,0.9s							
AQU	**L'Aquila**	**0.30**	**153**	P		**Pg**	**03 08 17.2**	**-0.4**
GIGS	**Gran Sasso**	**0.31**	**124**	P		**Pg**	**03 08 16.8**	**-0.9**
GIGS				S		**Sg**	**03 08 21.3**	**-0.8**
GIGS				AML	AML			
	comp=N,8425µm,0.4s							
GIGS				AML	AML			
	comp=E,8480µm,0.5s							
ARRO	**Arrone**	**0.34**	**262**	P		**Pg**	**03 08 18.1**	**-0.1**
ARRO				AML	AML			
	comp=N,22500µm,0.8s							
ARRO				AML	AML			
	comp=N,22450µm,0.8s							
ARRO				AML	AML			
	comp=E,19200µm,0.2s							
FEMA	**Monte Fema**	**0.36**	**340**	P		**Pg**	**03 08 18.0**	**-0.7**
FEMA				S		**Sg**	**03 08 23.9**	**+0.2**
FIAM	**Fiamignano**	**0.36**	**192**	⇑P		**Pg**	**03 08 18.4**	**-0.3**
FDMO	**Fiordimonte**	**0.42**	**347**	P		**Pg**	**03 08 19.1**	**-0.6**
FDMO				S		**Sg**	**03 08 25.4**	**-0.1**
CESI	**CESI - Serrava**	**0.45**	**329**	P		**Pg**	**03 08 20.1**	**-0.2**
CESI				S		**Sg**	**03 08 26.7**	**+0.5**
CESI				AML	AML			
	comp=E,14150µm,0.7s							
CESI				AML	AML			
	comp=N,15950µm,1.0s							
GUMA	**Gualdo di Mace**	**0.45**	**11**	S		**Sg**	**03 08 26.7**	**+0.5**
FAGN	**Fagnano**	**0.45**	**143**	P		**Pg**	**03 08 19.4**	**-0.9**
OFFI	**Offida**	**0.46**	**48**	⇑P		**Pg**	**03 08 20.2**	**-0.3**
CESX	**Cesi**	**0.47**	**268**	P		**Pg**	**03 08 19.9**	**-0.7**
VCEL	**Villa Celiera**	**0.51**	**116**	⇑P		**Pg**	**03 08 20.8**	**-0.6**
VCEL				S		**Sg**	**03 08 28.7**	**+0.3**
VCEL				AML	AML			
	comp=N,39600µm,0.9s							
VCEL				AML	AML			
	comp=N,39650µm,0.9s							
VCEL				AML	AML			
	comp=E,34100µm,0.9s							
TRTR	**Tortoreto Alta**	**0.54**	**70**	⇑P		**Pg**	**03 08 22.0**	**0.0**
TRTR				AML	AML			
	comp=N,44900µm,0.5s							
TRTR				AML	AML			
	comp=E,39800µm,0.5s							
MNTP	**Montappone**	**0.54**	**20**	P		**Pg**	**03 08 21.5**	**-0.6**
MNTP				S		**Sb**	**03 08 30.5**	**0.0**
SEF1	**Sefro**	**0.56**	**339**	P		**Pg**	**03 08 21.4**	**-0.9**
SEF1				S		**Sg**	**03 08 30.2**	**+0.5**
MDAR	**Monte D'Aria**	**0.57**	**354**	P		**Pg**	**03 08 22.4**	**-0.1**
MDAR				S		**Sg**	**03 08 30.3**	**+0.2**
T0110	**Collepietro**	**0.57**	**134**	P		**Pg**	**03 08 21.6**	**-1.0**
T0110				AML	AML			
	comp=N,26150µm,0.5s							
T0110				AML	AML			
	comp=E,20700µm,0.6s							
ASSB	**Assisi San Ben**	**0.59**	**316**	P		**Pg**	**03 08 23.0**	**+0.2**
ASSB				S		**Sb**	**03 08 31.8**	**+0.1**
SSM1	**San Severino M**	**0.60**	**357**	P		**Pg**	**03 08 22.1**	**-1.0**
SSM1				S		**Sg**	**03 08 31.4**	**+0.2**
PTQR	**Pietraquaria**	**0.62**	**167**	P		**Pg**	**03 08 22.6**	**-0.8**
GAG1	**Gagliole**	**0.62**	**350**	P		**Pg**	**03 08 22.9**	**-0.7**
GAG1				S		**Sg**	**03 08 32.3**	**+0.5**
SRES	**S.Oreste - Sor**	**0.65**	**234**	⇑P		**Pg**	**03 08 23.3**	**-0.8**
SRES				S		**Sb**	**03 08 33.7**	**+0.2**
SNTG	**Esanatoglia**	**0.66**	**342**	P		**Pg**	**03 08 23.4**	**-0.8**
SNTG				S		**Sb**	**03 08 33.6**	**-0.3**
TRE1	**Treia**	**0.69**	**6**	P		**Pg**	**03 08 24.3**	**-0.4**
CADA	**Capodarco di F**	**0.69**	**35**	P		**Pb**	**03 08 25.0**	**-0.3**
CERT	**Cerreto**	**0.70**	**195**	P		**Pg**	**03 08 24.0**	**-1.0**
MTCE	**Montecelio**	**0.70**	**211**	⇑P		**Pg**	**03 08 24.0**	**-0.9**
EL6	**Elcito**	**0.71**	**353**	P		**Pg**	**03 08 24.5**	**-0.6**
EL6				S		**Sb**	**03 08 35.5**	**+0.3**
FOSV	**Fossato di Vic**	**0.75**	**333**	P		**Pg**	**03 08 25.1**	**-0.7**
FOSV				S		**Sb**	**03 08 37.0**	**+0.6**
FOSV				AML	AML			
	comp=E,4275µm,0.6s							
FOSV				AML	AML			
	comp=N,5375µm,0.5s							
CIMA	**Civitanova Mar**	**0.76**	**26**	P		**Pg**	**03 08 25.9**	**-0.1**
INTR	**Introdacqua**	**0.80**	**140**	P		**Pg**	**03 08 24.9**	**-1.8**
RCAV	**Rocca di Cave**	**0.80**	**195**	P		**Pg**	**03 08 26.7**	**-0.2**
PP3	**Marolino**	**0.81**	**21**	P		**Pg**	**03 08 25.8**	**-1.1**
VVLD	**Villa Vallelon**	**0.81**	**158**	P		**Pg**	**03 08 26.2**	**-0.8**
GUAR	**Guarcino**	**0.83**	**175**	P		**Pb**	**03 08 27.6**	**0.0**
MGAB	**Montegabbione**	**0.86**	**290**	P		**Pg**	**03 08 27.8**	**-0.2**
MGAB				AML	AML			
	comp=N,7875µm,0.3s							
MGAB				AML	AML			
	comp=E,13100µm,1.0s							
MGAB				AML	AML			
	comp=N,8150µm,0.9s							
MGAB				AML	AML			
	comp=E,13800µm,1.0s							
ATFO	**Monte Foce - G**	**0.88**	**328**	P		**Pg**	**03 08 27.5**	**-0.9**
ARVD	**Arcevia**	**0.90**	**347**	P		**Pg**	**03 08 27.4**	**-1.3**
RMP	**Rome, Mte Porz**	**0.90**	**205**	P		**Pg**	**03 08 27.5**	**-1.2**
ATLO	**AVT- Montelove**	**0.91**	**319**	P		**Pg**	**03 08 27.5**	**-1.5**
LPEL	**Lama dei Pelig**	**0.92**	**129**	P		**Pg**	**03 08 27.2**	**-1.9**
LPEL				AML	AML			
	comp=E,4190µm,0.6s							
LPEL				AML	AML			
	comp=N,4830µm,0.6s							
VIVA	**Pratoni del Vi**	**0.94**	**201**	P		**Pb**	**03 08 28.5**	**-0.9**
RDP	**Rocca di Papa**	**0.94**	**204**	P		**Pb**	**03 08 28.8**	**-0.8**
MA9	**Marino**	**0.95**	**206**	P		**Pb**	**03 08 29.1**	**-0.5**
TB01	**Gubbio**	**0.95**	**323**	P		**Pb**	**03 08 28.9**	**-0.8**
FRON	**Frontone**	**0.96**	**338**	P		**Pb**	**03 08 28.7**	**-1.1**
FRON				AML	AML			
	comp=E,4305µm,1.3s							
FRON				AML	AML			
	comp=N,3960µm,1.5s							
ATVO	**AVT- Monte Val**	**0.96**	**322**	P		**Pb**	**03 08 29.9**	**0.0**
AOI	**Ancona**	**0.97**	**17**	P		**Pb**	**03 08 28.5**	**-1.4**
SACS	**San Casciano d**	**0.99**	**284**	P		**Pb**	**03 08 30.4**	**+0.1**
ATMI	**Monte Miggiano**	**0.99**	**316**	P		**Pn**	**03 08 31.1**	**+0.2**
LRP	**Arpino**	**1.01**	**164**	P		**Pg**	**03 08 30.8**	**-0.1**
COR1	**Corinaldo**	**1.02**	**351**	P		**Pb**	**03 08 30.8**	**0.0**
TOLF	**Tolfa**	**1.06**	**239**	⇑P		**Pb**	**03 08 30.5**	**-1.0**
GIUL	**Giuliano Di Ro**	**1.07**	**179**	P		**Pn**	**03 08 31.9**	**0.0**
FSSB	**Fossombrone**	**1.11**	**343**	P		**Pb**	**03 08 32.0**	**-0.4**
FSSB				AML	AML			
	comp=E,9015µm,1.4s							
FSSB				AML	AML			
	comp=N,9535µm,0.3s							
SF03	**Valle Cupa**	**1.14**	**279**	P		**Pb**	**03 08 32.8**	**-0.1**
LATB	**Latina**	**1.15**	**190**	P		**Pb**	**03 08 31.4**	**-1.5**
LIK	**San Giovanni I**	**1.15**	**167**	P		**Pg**	**03 08 33.6**	**+0.2**
MCIV	**Monte Civitell**	**1.15**	**278**	P		**Pb**	**03 08 32.6**	**-0.4**
CAFI	**Castiglion Fio**	**1.16**	**308**	P		**Pg**	**03 08 33.7**	**0.0**
SF11	**Podere del Sol**	**1.16**	**283**	P		**Pn**	**03 08 33.4**	**+0.1**
CERA	**Filignano**	**1.19**	**150**	P		**Pn**	**03 08 33.5**	**-0.1**
SSP9	**Sansepolcro**	**1.24**	**320**	P		**Pb**	**03 08 35.2**	**0.0**
PARC	**Parchiule**	**1.25**	**325**	P		**Pb**	**03 08 35.0**	**+0.2**
ARCI	**Arcidosso**	**1.30**	**281**	P		**Pb**	**03 08 35.8**	**+0.1**
TRIV	**Trivento**	**1.31**	**130**	P		**Pg**	**03 08 36.2**	**-0.3**
PESA	**Pesaro**	**1.34**	**348**	P		**Pb**	**03 08 36.4**	**+0.1**
VAGA	**Valle Agricola**	**1.43**	**148**	P		**Pb**	**03 08 37.9**	**+0.2**
BSSO	**Busso**	**1.49**	**136**	P		**Pb**	**03 08 39.0**	**+0.2**
FROS	**Frosini**	**1.62**	**292**	P		**Pn**	**03 08 39.8**	**+0.2**
SFI	**Santa Sofia**	**1.62**	**322**	P		**Pb**	**03 08 40.8**	**-0.3**
CSNT	**Castellina Chi**	**1.65**	**302**	P		**Pn**	**03 08 40.1**	**+0.2**
SACR	**S. Croce Del S**	**1.65**	**137**	P		**Pg**	**03 08 42.6**	**-0.4**
MELA	**Melanico ??? S**	**1.69**	**122**	P		**Pb**	**03 08 41.5**	**-0.7**
OSSC	**Osservatorio P**	**1.70**	**303**	P		**Pn**	**03 08 41.3**	**+0.6**
CASP	**Castiglione de**	**1.74**	**276**	P		**Pn**	**03 08 41.3**	**+0.1**
RUFI	**Rufina**	**1.74**	**315**	P		**Pn**	**03 08 41.6**	**+0.4**
TRIF	**Trifonti**	**1.77**	**287**	P		**Pn**	**03 08 41.9**	**+0.2**
DUGI	**Dugi Otok**	**1.92**	**44**	*e*Pn		**Pn**	**03 08 43.2**	**-0.4**
BRIS	**BRISIGHELLA**	**1.97**	**321**	P		**Pb**	**03 08 45.8**	**-1.2**
SGRT	**San Giovanni R**	**2.07**	**114**	P		**Pn**	**03 08 47.0**	**+1.2**
VIRC	**Vir**	**2.14**	**38**	*e*Pn		**Pn**	**03 08 46.1**	**-0.5**
FNVD	**Fontana Vidola**	**2.17**	**316**	P		**Pn**	**03 08 48.2**	**+1.0**
MORI	**Morici**	**2.20**	**55**	*e*Pn		**Pn**	**03 08 47.3**	**-0.2**
PII	**Pisa**	**2.26**	**300**	P		**Pn**	**03 08 49.5**	**+1.2**
NVLJ	**Novalja**	**2.28**	**31**	*e*Pn		**Pn**	**03 08 48.1**	**-0.4**
BRJN	**Brijuni**	**2.31**	**9**	*e*Pn		**Pn**	**03 08 48.9**	**-0.1**
MAIM	**Mastiano**	**2.37**	**304**	P		**Pn**	**03 08 50.6**	**+0.7**
BDI	**Bagni Di Lucca**	**2.39**	**308**	P		**Pn**	**03 08 50.2**	**0.0**
RABC	**Rab**	**2.41**	**28**	*e*Pn		**Pn**	**03 08 50.0**	**-0.4**
SMRN	**Sveta Marina**	**2.50**	**15**	*e*Pn		**Pn**	**03 08 51.0**	**-0.6**
VLC	**Villacollemand**	**2.57**	**308**	P		**Pn**	**03 08 52.3**	**-0.3**
GSCL	**Gusciola**	**2.58**	**313**	P		**Pn**	**03 08 53.8**	**+1.0**
UDBI	**Udbina**	**2.65**	**43**	*e*Pn		**Pn**	**03 08 54.5**	**+0.7**
KIJV	**Kijevo**	**2.70**	**58**	*e*Pn		**Pn**	**03 08 55.3**	**+0.8**
LSTV	**Lastovo**	**2.71**	**86**	*e*Pn		**Pn**	**03 08 54.4**	**-0.1**
PLIT	**Plitvice**	**2.85**	**37**	*e*Pn		**Pn**	**03 08 56.8**	**+0.3**
RIY	**Rijeka**	**2.85**	**18**	*e*Pn		**Pn**	**03 08 56.3**	**-0.1**
MAKA	**Makarska**	**2.87**	**75**	*e*Pn		**Pn**	**03 08 56.7**	**0.0**
TEOL	**Teolo**	**2.95**	**338**	P		**Pn**	**03 08 57.8**	**-0.1**
SMPL	**Sampolo**	**2.96**	**261**	P		**Pn**	**03 08 58.4**	**+0.4**
SKDS	**Skadanscina**	**2.98**	**11**	*i* Pn		**Pn**	**03 08 57.6**	**-0.6**
SKDS				*e*Sn		**Sn**	**03 09 33.7**	**0.0**
SKDS				IAML			03 09 38.2	
	comp=Z,58nm,0.2s							
RICI	**Ricice**	**3.00**	**72**	*e*Pn		**Pn**	**03 08 59.6**	**+1.1**
AMUR	**Altamura**	**3.06**	**123**	P		**Pn**	**03 09 00.5**	**+1.2**
ZOVE	**Zovencedo**	**3.09**	**337**	P		**Pn**	**03 09 00.2**	**+0.4**
PGF	**Pioggiola**	**3.12**	**270**	*e*P		**Pn**	**03 09 01.5**	**+1.3**
PGF				*e*Sn		**Sn**	**03 09 36.8**	**-0.5**
	comp=Z,11nm,0.4s							
PGF	**Pioggiola**	**3.12**	**270**	P		**Pn**	**03 09 01.0**	**+0.8**
MSSA	**Maissana**	**3.18**	**303**	P		**Pn**	**03 09 01.8**	**+0.8**
BOJS	**Bojanci**	**3.23**	**26**	P		**Pn**	**03 09 02.8**	**+1.2**
STON	**Ston**	**3.31**	**84**	*e*Pn		**Pn**	**03 09 01.8**	**-0.9**
STON	**Ston**	**3.31**	**84**	*e*Pn		**Pn**	**03 09 02.1**	**-0.6**
STON				*e*Sn		**Sn**	**03 09 40.7**	**-1.1**
STON	**Ston**	**3.31**	**84**	P		**Pn**	**03 09 02.1**	**-0.6**
A251A	**Rujevac**	**3.33**	**40**	*e*Pn		**Pn**	**03 09 03.7**	**+0.7**
SABO	**M.te Sabotino**	**3.37**	**5**	P		**Pn**	**03 09 02.6**	**-1.0**
AJAC	**Base Areonaval**	**3.38**	**260**	P		**Pn**	**03 09 05.2**	**+1.6**
AJAC	**Base Areonaval**	**3.38**	**260**	P		**Pn**	**03 09 05.1**	**+1.4**
OZLJ	**Ozalj**	**3.40**	**28**	*e*Pn		**Pn**	**03 09 04.6**	**+0.7**
NOCI	**Noci**	**3.41**	**121**	P		**Pn**	**03 09 05.4**	**+1.2**
GORR	**Gorreto**	**3.47**	**306**	P		**Pn**	**03 09 07.2**	**+2.1**
LJU	**Ljubljana**	**3.54**	**15**	P		**Pn**	**03 09 06.5**	**+0.5**
DOSS	**Dosso del Somm**	**3.57**	**337**	P		**Pn**	**03 09 07.5**	**+1.0**
SALO	**Salr**	**3.57**	**328**	P		**Pn**	**03 09 07.7**	**+1.4**
BLY	**Banja Luka**	**3.57**	**52**	*e*Pn		**Pn**	**03 09 07.8**	**+1.4**
DBRK	**Dubrovnik**	**3.63**	**88**	*e*Pn		**Pn**	**03 09 07.0**	**-0.2**
STAL	**STALIGIAL**	**3.65**	**354**	P		**Pn**	**03 09 07.3**	**-0.2**
STAL				AML	AML			
	comp=N,374µm,0.3s							
STAL				AML	AML			
	comp=E,446µm,0.7s							
MAGA	**Magasa**	**3.66**	**330**	P		**Pn**	**03 09 08.2**	**+0.6**
LUSI	**Trento, Gardas**	**3.71**	**335**	P		**Pn**	**03 09 08.9**	**+0.5**
CIMO	**Cimolais**	**3.73**	**352**	P		**Pn**	**03 09 08.6**	**+0.1**
PTCC	**Patocco-Chiusa**	**3.78**	**1**	P		**Pn**	**03 09 08.9**	**-0.4**
GAGG	**Gaggia**	**3.82**	**336**	P		**Pn**	**03 09 11.1**	**+1.1**
PTJ	**Puntijarka**	**3.83**	**30**	*e*Pn		**Pn**	**03 09 10.4**	**+0.4**
ZONE	**Zone**	**3.85**	**326**	P		**Pn**	**03 09 10.4**	**+0.2**
PCP	**Piancastagn**	**3.90**	**301**	P		**Pn**	**03 09 11.7**	**+0.8**
HCY	**Herceg Novi**	**3.90**	**91**	⇓*i* Pn		**Pn**	**03 09 11.7**	**+0.8**
HCY				*i* Sn		**Sn**	**03 09 58.5**	**+2.0**
MOSL	**Moslavina**	**3.92**	**39**	*e*Pn		**Pn**	**03 09 10.5**	**-0.7**
BRY	**Bratogost**	**3.93**	**84**	⇑*i* Pn		**Pn**	**03 09 12.3**	**+0.9**
BRY				*i* Sn		**Sn**	**03 09 59.5**	**+2.2**
ZOU	**Zoufplan**	**3.94**	**358**	P		**Pn**	**03 09 11.6**	**+0.1**
CANO	**Canova, Maglio**	**3.96**	**295**	P		**Pn**	**03 09 12.5**	**+0.8**
OBKA	**Obir**	**4.00**	**13**	*e*Pn		**Pn**	**03 09 13.1**	**+0.8**
	comp=E,2.5nm,0.2s							
OBKA				*e*Sn		**Sn**	**03 10 02.6**	**+3.6**
	comp=E,79nm,0.8s							
OBKA	**Obir**	**4.00**	**13**	*e*Pn		**Pb**	**03 09 17.5**	**-4.1**
MYKA	**Terra Mystica**	**4.02**	**4**	*e*Pn		**Pn**	**03 09 13.2**	**+0.6**
	comp=E,1.6nm,0.2s							
MYKA				*e*Sn		**Sn**	**03 10 00.7**	**+1.2**
	comp=E,14nm,0.2s							
KOSI	**Kohlern**	**4.06**	**342**	P		**Pn**	**03 09 14.5**	**+1.3**
LOBO	**Lobor**	**4.08**	**29**	*e*Pn		**Pn**	**03 09 12.7**	**-0.6**
APPI	**Appiano**	**4.11**	**340**	P		**Pn**	**03 09 14.9**	**+1.1**
ABTA	**Abfaltersbach**	**4.15**	**353**	*i* Pn		**Pn**	**03 09 15.4**	**+0.9**
	comp=E,11nm,0.3s,SNR=21							
ABTA				*e*Sn		**Sn**	**03 10 05.2**	**+2.4**
	comp=E,60nm,0.6s							
CEME	**Cevo**	**4.21**	**89**	⇑*i* Pn		**Pn**	**03 09 16.1**	**+0.9**
CEME				*i* Sn		**Sn**	**03 10 06.4**	**+2.2**
BUM	**Brajici-Budva**	**4.21**	**92**	⇓*i* Pn		**Pn**	**03 09 16.4**	**+1.2**
BUM				*i* Sn		**Sn**	**03 10 06.3**	**+2.1**
UPM	**Unac-Piva**	**4.22**	**80**	⇓*i* Pn		**Pn**	**03 09 16.5**	**+1.1**
UPM				*i* Sn		**Sn**	**03 10 06.3**	**+1.8**
SOKA	**Soboth**	**4.25**	**17**	*e*Pn		**Pn**	**03 09 18.4**	**+2.6**
	comp=E,2.2nm,0.2s							
SOKA				*e*Sn		**Sn**	**03 10 04.7**	**-0.6**
	comp=E,16nm,0.5s							
VSL	**Villasalto**	**4.27**	**224**	P		**Pn**	**03 09 17.1**	**+1.2**
BRMO	**Bormio**	**4.36**	**333**	P		**Pn**	**03 09 19.5**	**+2.3**
RISI	**Rein**	**4.40**	**350**	P		**Pn**	**03 09 19.1**	**+1.2**
SBF	**Sospel**	**4.40**	**288**	*e*P		**Pn**	**03 09 18.6**	**+0.8**
SBF				*e*Sn		**Sn**	**03 10 06.6**	**-2.4**
	comp=E,18nm,0.4s							
CGL	**Cagliari Serpe**	**4.41**	**224**	P		**Pn**	**03 09 19.9**	**+1.9**
DRME	**Dracevica, Mon**	**4.44**	**94**	⇑*i* Pn		**Pn**	**03 09 19.5**	**+1.2**
DRME				*i* Sn		**Sn**	**03 10 11.8**	**+2.1**
ESCA	**l'Escarene**	**4.44**	**288**	P		**Pn**	**03 09 19.6**	**+1.4**
KBA	**Koelnbreinsper**	**4.45**	**1**	*e*Pn		**Pn**	**03 09 19.8**	**+1.2**
	comp=E,8.1nm,0.3s							
KBA				*e*Sn		**Sn**	**03 10 10.4**	**0.0**
	comp=E,36nm,0.8s							
KBA	**Koelnbreinsper**	**4.45**	**1**	*e*Pn		**Pn**	**03 09 20.9**	**+2.3**
KBA				*e*Sn		**Sn**	**03 10 07.3**	**-3.1**
MUGIO	**Muggio**	**4.46**	**319**	P		**Pn**	**03 09 18.7**	**+0.2**
TURF	**col de Turini**	**4.46**	**290**	P		**Pn**	**03 09 19.8**	**+1.0**
PDG	**Podgorica**	**4.46**	**90**	⇑P		**Pn**	**03 09 19.8**	**+1.2**
PDG	**Podgorica**	**4.46**	**90**	*e*Pn		**Pn**	**03 09 19.9**	**+1.3**
PDG				*e*Sn		**Sn**	**03 10 10.3**	**+0.5**
TTG	**Podgorica**	**4.46**	**90**	⇑*i* Pn		**Pn**	**03 09 19.8**	**+1.2**
TTG				*i* Sn		**Sn**	**03 10 12.5**	**+2.1**
ROSI	**Rosskopf**	**4.49**	**344**	P		**Pn**	**03 09 20.5**	**+1.4**
ULC	**Ulcinj**	**4.52**	**96**	⇑*i* Pn		**Pn**	**03 09 20.3**	**+0.9**
ULC				*i* Sn		**Sn**	**03 10 13.9**	**+2.2**
PLE	**Pljevlja**	**4.58**	**79**	⇑*i* Pn		**Pn**	**03 09 21.4**	**+1.1**
PLE				*i* Sn		**Sn**	**03 10 15.2**	**+1.8**
SPIF	**crte de Spivo**	**4.59**	**290**	P		**Pn**	**03 09 22.8**	**+2.3**
KOME	**Kolasin**	**4.64**	**85**	⇓*i* Pn		**Pn**	**03 09 22.5**	**+1.3**
KOME				*i* Sn		**Sn**	**03 10 16.7**	**+1.8**
BBLS	**Lazići**	**4.69**	**73**	*e*Pn		**Pn**	**03 09 23.1**	**+1.4**
FETA	**Feichten**	**4.74**	**339**	*i* Pn		**Pn**	**03 09 24.8**	**+2.3**
	comp=E,8.2nm,0.7s,SNR=8.8							
FETA				*e*Sn		**Sn**	**03 10 21.6**	**+4.2**
	comp=E,13nm,0.6s							
CALF	**Calern**	**4.74**	**286**	P		**Pn**	**03 09 23.5**	**+1.0**
WTTA	**Wattenberg**	**4.77**	**347**	*i* Pn		**Pn**	**03 09 25.8**	**+2.8**
	comp=E,2.3nm,0.2s,SNR=6.9							
WTTA				*e*Sn		**Sn**	**03 10 22.4**	**+4.2**
	comp=E,23nm,0.3s							
WTTA	**Wattenberg**	**4.77**	**347**	*e*Pn		**Pn**	**03 09 25.2**	**+2.2**
DAVOX	**Davos/Dischmat**	**4.79**	**331**	Pn		**Pn**	**03 09 25.4**	**+2.1**
	comp=E,2.8nm,0.3s,baz=161,slow=22,SNR=25							
DAVOX				Sn		**Sn**	**03 10 19.8**	**+1.2**
	comp=E,3.0nm,0.3s,baz=115,slow=23,SNR=6.3							
SQTA	**Sankt Quirin**	**4.81**	**343**	*e*Pn		**Pn**	**03 09 26.2**	**+2.7**
	comp=E,7.8nm,0.3s							
SQTA				*e*Sn		**Sn**	**03 10 22.9**	**+3.8**
	comp=E,12nm,0.2s							
WATA	**Walderalm**	**4.85**	**347**	*i* Pn		**Pn**	**03 09 27.3**	**+3.2**
	comp=E,5.1nm,0.2s,SNR=9.0							
WATA				*e*Sn		**Sn**	**03 10 24.0**	**+3.9**
	comp=E,9.9nm,0.3s							
ARSA	**Arzberg**	**4.91**	**19**	*e*Pn		**Pn**	**03 09 24.2**	**-0.5**
	comp=E,1.0nm,0.2s							
ARSA				*e*Sn		**Sn**	**03 10 19.1**	**-2.2**
	comp=E,4.4nm,0.3s							
ARSA	**Arzberg**	**4.91**	**19**	*e*Pn		**Pn**	**03 09 24.5**	**-0.2**
IVA	**Berane**	**4.92**	**85**	⇓*i* Pn		**Pn**	**03 09 26.4**	**+1.4**
IVA				*i* Sn		**Sn**	**03 10 22.9**	**+1.1**
KOVH	**Kovagotottos**	**4.92**	**44**	P		**Pn**	**03 09 24.2**	**-0.7**
KOVH				S		**Sn**	**03 10 18.8**	**-2.9**
MOTA	**Moosalm**	**4.95**	**343**	*i* Pn		**Pn**	**03 09 28.7**	**+3.2**
	comp=E,3.1nm,0.3s,SN

SMRF	**Simiane la Rot**	**5.74**	**286**	*e*P		**Pn**	**03 09 38.1**	**+1.9**
SMRF				*e*Sn		**Sn**	**03 10 37.9**	**-4.0**
	comp=E,1.8nm,0.4s							
OGSI	**Sixt**	**5.77**	**309**	P		**Pn**	**03 09 39.3**	**+2.7**
ORIF	**Oris-en-Rattie**	**5.79**	**296**	*e*P		**Pn**	**03 09 39.1**	**+2.2**
ORIF				*e*Sn		**Sn**	**03 10 38.9**	**-4.2**
	comp=E,17nm,0.8s							
ORIF	**Oris-en-Rattie**	**5.79**	**296**	P		**Pn**	**03 09 40.6**	**+3.7**
RUSF	**Rustrel**	**5.80**	**286**	P		**Pn**	**03 09 39.4**	**+2.4**
SELS	**Selova**	**5.83**	**81**	*e*Pn		**Pn**	**03 09 38.1**	**+0.7**
ARBF	**Arbois**	**5.84**	**281**	P		**Pn**	**03 09 40.7**	**+3.2**
OHR	**Ohrid**	**5.86**	**102**	*i* Pn		**Pn**	**03 09 39.9**	**+2.1**
GRN	**Grenoble**	**6.00**	**298**	P		**Pn**	**03 09 43.4**	**+3.6**
SAUF	**chteau de Sau**	**6.07**	**285**	P		**Pn**	**03 09 42.9**	**+2.3**
SULZ	**Cheisacher**	**6.09**	**325**	*e*Pn		**Pn**	**03 09 42.7**	**+1.8**
BALST	**Balsthal**	**6.13**	**322**	*e*Pn		**Pn**	**03 09 44.7**	**+3.2**
SLE	**Schleitheim**	**6.13**	**329**	P		**Pn**	**03 09 42.0**	**+0.5**
SKO	**Skopje**	**6.13**	**93**	*i* Pn		**Pn**	**03 09 43.1**	**+1.5**
ZST	**Bratislava**	**6.21**	**25**	*e*PN		**Pn**	**03 09 44.2**	**+1.7**
GEC2	**GERESS Array S**	**6.23**	**3**	*e*Sn		**Sn**	**03 10 50.6**	**-3.4**
GERES	**GERESS Array B**	**6.23**	**3**	Pn		**Pn**	**03 09 42.3**	**-0.6**
	comp=E,0.6nm,0.3s,baz=173,slow=14,SNR=16							
GERES				Sn		**Sn**	**03 10 52.0**	**-2.1**
	comp=E,2.5nm,0.3s,baz=183,slow=25,SNR=2.1							
	comp=E,1.3nm,0.4s							
CKRC	**Cesky Krumlov**	**6.24**	**7**	*e*PN		**Pn**	**03 09 44.0**	**+0.9**
CKRC				*e*SN		**Sn**	**03 10 51.8**	**-2.4**
BOVS	**Bovan**	**6.29**	**78**	⇓P		**Pn**	**03 09 43.7**	**+0.1**
BOVS	**Bovan**	**6.29**	**78**	*e*Pn		**Pn**	**03 09 43.8**	**+0.1**
GIMEL	**St. Georges /**	**6.32**	**311**	P		**Pn**	**03 09 46.1**	**+1.9**
BARS	**Barje**	**6.33**	**85**	*e*Pn		**Pn**	**03 09 45.1**	**+0.8**
BARS				*e*Sn		**Sn**	**03 10 55.1**	**-1.4**
NORI	**Noerdlinger Ri**	**6.36**	**344**	*e*Sn		**Sn**	**03 10 53.6**	**-3.5**
BOURR	**Bourrignon**	**6.38**	**320**	P		**Pn**	**03 09 46.1**	**+1.1**
BOURR	**Bourrignon**	**6.38**	**320**	S		**Sn**	**03 10 56.1**	**-1.6**
FELD	**Feldberg im Sc**	**6.41**	**327**	P		**Pn**	**03 09 46.2**	**+0.7**
MODS	**Modra-Piesok**	**6.42**	**25**	*e*PN		**Pn**	**03 09 45.1**	**-0.3**
MODS				*e*SN		**Sn**	**03 10 56.1**	**-2.4**
BRANT	**Les Verrieres**	**6.45**	**314**	P		**Pn**	**03 09 47.0**	**+1.0**
CABF	**La Chapelle**	**6.46**	**311**	*e*P		**Pn**	**03 09 47.3**	**+1.2**
CABF				*e*Sn		**Sn**	**03 10 54.1**	**-5.6**
	comp=E,1.7nm,0.3s							
KIZ	**Kirchzarten**	**6.51**	**327**	P		**Pn**	**03 09 46.7**	**0.0**
KHC	**Kasperske Hory**	**6.51**	**2**	*e*PN		**Pn**	**03 09 46.7**	**-0.1**
KHC				*e*SN		**Sn**	**03 10 58.2**	**-2.7**
MDVR	**Moldovita**	**6.52**	**68**	⇑P		**Pn**	**03 09 47.8**	**+0.9**
WET	**Wettzell**	**6.53**	**358**	*e*Pn		**Pn**	**03 09 48.4**	**+1.5**
WET				*e*Sn		**Sn**	**03 10 57.3**	**-3.9**
PRVS	**Prvonek**	**6.54**	**88**	*e*Pn		**Pn**	**03 09 48.1**	**+0.9**
PRVS				*e*Sn		**Sn**	**03 10 59.3**	**-2.3**
VIVF	**Saint-Julien-l**	**6.58**	**293**	*e*P		**Pn**	**03 09 50.0**	**+2.3**
VIVF				*e*Sn		**Sn**	**03 10 58.9**	**-3.6**
	comp=E,0.8nm,0.2s							
BFO	**Black Forest**	**6.66**	**331**	*e*Pn		**Pn**	**03 09 51.1**	**+2.3**
ZAGS	**Zajecar**	**6.69**	**77**	*e*Pn		**Pn**	**03 09 49.5**	**+0.3**
VOGT	**Vogtsburg - To**	**6.71**	**326**	P		**Pn**	**03 09 50.1**	**+0.6**
STIP	**Stip**	**6.73**	**95**	*i* Pn		**Pn**	**03 09 52.7**	**+3.0**
BZS	**Buzias**	**6.74**	**61**	⇓P		**Pn**	**03 09 50.1**	**+0.3**
BZS	**Buzias**	**6.74**	**61**	*e*Pn		**Pn**	**03 09 50.2**	**+0.3**
BOUC	**Bouclans**	**6.76**	**315**	P		**Pn**	**03 09 51.5**	**+1.3**
BOUC				S		**Sn**	**03 11 06.9**	**-0.2**
KRUC	**Moravsky**	**6.81**	**18**	*e*PN		**Pn**	**03 09 50.6**	**-0.2**
BOSS	**Bosilegrad**	**6.84**	**88**	*e*Pn		**Pn**	**03 09 51.9**	**+0.6**
BOSS				*e*Sn		**Sn**	**03 11 06.7**	**-2.2**
OPP	**Oppenau**	**6.85**	**331**	P		**Pn**	**03 09 51.8**	**+0.4**
TREC	**Trest**	**6.86**	**13**	*e*SN		**Sn**	**03 11 05.4**	**-3.9**
HINF	**Hinteralfeld**	**6.87**	**321**	*e*P		**Pn**	**03 09 52.1**	**+0.5**
HINF				*e*Sn		**Sn**	**03 11 02.3**	**-7.3**
	comp=E,11nm,0.3s							
ZAPS	**Zavoj**	**6.94**	**81**	*e*Pn		**Pn**	**03 09 53.7**	**+1.1**
ZAPS				*e*Sn		**Sn**	**03 11 09.4**	**-2.0**
JAVC	**Velka Javorina**	**6.97**	**25**	*e*PN		**Pn**	**03 09 53.5**	**+0.5**
LASF	**Ste Croix**	**6.98**	**285**	*e*P		**Pn**	**03 09 54.8**	**+1.6**
LASF				*e*Sn		**Sn**	**03 11 08.1**	**-4.2**
	comp=E,1.3nm,0.4s							
BLKB	**Belogradchik**	**6.99**	**79**	⇓P		**Pn**	**03 09 54.0**	**+0.7**
ECH	**Echery**	**7.03**	**325**	P		**Pn**	**03 09 54.2**	**+0.3**
HERR	**Herculane**	**7.03**	**68**	⇑P		**Pn**	**03 09 54.1**	**+0.2**
VYHS	**Vyhne**	**7.07**	**32**	*e*PN		**Pn**	**03 09 54.6**	**+0.2**
VYHS				*e*SN		**Sn**	**03 11 10.7**	**-3.8**
VRAC	**Vranov**	**7.08**	**18**	Pn		**Pn**	**03 09 54.1**	**-0.4**
	comp=E,0.4nm,0.3s,baz=196,slow=14,SNR=2.6							
VRAC				Sn		**Sn**	**03 11 12.9**	**-2.0**
	comp=E,0.4nm,0.3s,baz=200,slow=4.2,SNR=1.3							
	comp=E,2.3nm,0.5s							
VRAC	**Vranov**	**7.08**	**18**	*e*PN		**Pn**	**03 09 54.2**	**-0.4**
VAY	**Valandovo**	**7.09**	**97**	*i* Pn		**Pn**	**03 09 56.1**	**+1.4**
CDF	**Champ du Feu**	**7.13**	**326**	*e*P		**Pn**	**03 09 56.0**	**+0.7**
CDF				*e*Sn		**Sn**	**03 11 08.2**	**-8.0**
	comp=E,6.8nm,0.2s							
HAU	**Haudompre**	**7.24**	**320**	*e*P		**Pn**	**03 09 57.1**	**+0.4**
HAU				*e*Sn		**Sn**	**03 11 11.4**	**-7.3**
	comp=E,7.8nm,0.2s							
VTS	**Vitosha**	**7.39**	**87**	⇑P		**Pn**	**03 09 59.8**	**+0.9**
VTS	**Vitosha**	**7.39**	**87**	*e*Pn		**Pn**	**03 09 59.9**	**+1.0**
VTS				*e*Sn		**Sn**	**03 11 19.0**	**-3.6**
PRU	**Pruhonice**	**7.42**	**7**	*e*PN		**Pn**	**03 09 59.6**	**+0.4**
PRU				*e*SN		**Sn**	**03 11 19.5**	**-3.7**
GZR	**Gura Zlata**	**7.42**	**65**	⇑P		**Pn**	**03 09 59.8**	**+0.4**
KEST	**Kesra**	**7.51**	**205**	Pn		Pn	03 10 05.9	+5.3
	comp=E,0.4nm,0.3s,baz=331,slow=4.0,SNR=8.5							
KEST				Sn		**Sn**	**03 11 27.6**	**+2.0**
	baz=8.6,slow=23							
MORC	**Moravsky Berou**	**7.75**	**21**	*e*PN		**Pn**	**03 10 04.8**	**+1.0**
SMF	**Signal de Mont**	**7.80**	**304**	*e*P		**Pn**	**03 10 05.9**	**+1.5**
SMF				*e*Sn		**Sn**	**03 11 26.5**	**-6.1**
	comp=E,2.7nm,0.3s							
KRLC	**Kraliky**	**7.85**	**17**	*e*PN		**Pn**	**03 10 04.6**	**-0.5**
SRS	**Serrai**	**7.89**	**98**	*e*Pn		**Pn**	**03 10 06.7**	**+1.1**
SRS				*e*Sn		**Sn**	**03 11 29.8**	**-4.9**
PAGF	**Fort de Pagny**	**7.92**	**321**	*e*P		**Pn**	**03 10 07.1**	**+1.0**
	baz=130							
PAGF				*e*Sn		**Sn**	**03 11 27.5**	**-8.0**
	comp=E,2.0nm,0.2s							
DRGR		**7.94**	**55**	⇑P		**Pn**	**03 10 06.9**	**+0.6**
DRGR		**7.94**	**55**	*e*Pn		**Pn**	**03 10 06.8**	**+0.4**
SFTF	**Sexfontaines**	**8.01**	**317**	*e*P		**Pn**	**03 10 08.3**	**+1.0**
	baz=135							
SFTF				*e*Sn		**Sn**	**03 11 30.1**	**-7.6**
	comp=E,5.7nm,0.4s							
DPC	**Dobruska-Polom**	**8.02**	**14**	*e*PN		**Pn**	**03 10 07.3**	**-0.1**
LOR	**Lormes**	**8.10**	**308**	*e*P		**Pn**	**03 10 09.2**	**+0.7**
	baz=126							
LOR				*e*Sn		**Sn**	**03 11 33.2**	**-6.7**
	comp=E,7.3nm,0.5s							
MTLF	**Montolieu**	**8.10**	**279**	*e*P		**Pn**	**03 10 11.2**	**+2.7**
MTLF				*e*Sn		**Sn**	**03 11 35.1**	**-4.8**
	comp=E,0.5nm,0.3s							
AVF	**Avril sur Loir**	**8.17**	**304**	*e*P		**Pn**	**03 10 11.3**	**+1.9**
AVF				*e*Sn		**Sn**	**03 11 35.1**	**-6.4**
	comp=E,0.7nm,0.2s							
OSTC	**Ostas**	**8.20**	**14**	*e*PN		**Pn**	**03 10 09.8**	**-0.1**
SSF	**Saint Saulge**	**8.20**	**306**	*e*P		**Pn**	**03 10 11.5**	**+1.6**
SSF				*e*Sn		**Sn**	**03 11 35.8**	**-6.6**
	comp=E,5.2nm,0.7s							
MEZF	**Maizieres J'vi**	**8.21**	**319**	*e*P		**Pn**	**03 10 11.5**	**+1.6**
	baz=135							
MEZF				*e*Sn		**Sn**	**03 11 34.5**	**-7.9**
	comp=E,3.4nm,0.4s							
SAVF	**Savonnieres en**	**8.25**	**319**	*e*P		**Pn**	**03 10 11.6**	**+1.1**
	baz=134							
SAVF				*e*Sn		**Sn**	**03 11 36.4**	**-7.1**
	comp=E,4.3nm,0.4s							
BRG	**Berggiesshubel**	**8.27**	**3**	*e*(P)		Pn	03 10 16.0	+5.2
BRG				Amp			03 10 18.1	
	comp=Z,2.6nm,0.6s							
BRG				*ex*		x	03 11 52.2	
BRG				*ex*		x	03 12 22.1	
BRG				Amp			03 12 54.9	
	comp=Z,8.9nm,1.1s							
BGF	**Bois d'Agland**	**8.38**	**302**	*e*P		**Pn**	**03 10 13.8**	**+1.4**
BGF				*e*Sn		**Sn**	**03 11 40.6**	**-6.2**
	comp=Z,3.0nm,0.3s							
CAF	**Calviac**	**8.39**	**290**	*e*P		**Pn**	**03 10 14.6**	**+2.0**
CAF				*e*Sn		**Sn**	**03 11 41.8**	**-5.4**
	comp=Z,0.3nm,0.3s							
ARR	**Arges**	**8.67**	**68**	⇑P		**Pn**	**03 10 17.0**	**+0.5**
TCF	**Toulx Ste Croi**	**8.68**	**299**	*e*P		**Pn**	**03 10 18.7**	**+2.2**
TCF				*e*Sn		**Sn**	**03 11 48.0**	**-6.3**
	comp=Z,2.1nm,0.5s							
CLL	**Collm**	**8.69**	**359**	*e*Pn		Pn	03 10 11.0	-5.5
CLL				*ex*		x	03 10 18.0	
CLL				*e*Sn		Sn	03 11 35.0	-19
CLL				*ex*		x	03 11 51.0	
CLL				*ex*		x	03 12 15.0	
CLL				*e*Sg		**Sg**	**03 12 49.0**	**-0.9**
	comp=Z,16nm,1.0s							
RJF	**Les Rejaudoux**	**8.86**	**292**	*e*P		**Pn**	**03 10 21.4**	**+2.5**
RJF				*e*Sn		**Sn**	**03 11 52.6**	**-5.9**
	comp=Z,0.7nm,0.5s							
MLR	**Muntele Rosu**	**9.60**	**68**	Pn		**Pn**	**03 10 31.6**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=252,slow=8.3,SNR=8.7							
	comp=Z,9.2nm,1.0s							
ESDC	**Sonseca Array**	**13.28**	**263**	Pn		**Pn**	**03 11 20.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=59,slow=14,SNR=4.5							
	comp=Z,0.4nm,0.8s							
AKASG	**Malin Array Be**	**13.62**	**48**	Pn		**Pn**	**03 11 23.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=240,slow=10,SNR=1.9							
	comp=Z,0.2nm,0.3s							
EKA	**Eskdalemuir Ar**	**16.60**	**326**	Pn		**Pn**	**03 12 02.2**	**-1.2**
	baz=137,slow=13							
	comp=Z,0.3nm,0.5s							
HFS	**Hagfors**	**17.54**	**1**	P		**P**	**03 12 17.3**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=165,slow=12,SNR=3.6							
NB2	**NORSAR Subarra**	**18.48**	**357**	P		**Pn**	**03 12 27.9**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=175,slow=11							
NOA	**NORSAR Array B**	**18.48**	**357**	P		**P**	**03 12 25.5**	**-1.2**
	baz=176,slow=11,SNR=6.6							
	comp=Z,1.0nm,0.7s							
FINES	**FINESS Array B**	**20.37**	**18**	P		**P**	**03 12 46.7**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=190,slow=9.7,SNR=6.0							
	comp=Z,2.3nm,0.9s							
KBZ	**Khabaz**	**21.62**	**77**	P		**P**	**03 13 02.7**	**+1.8**
	comp=Z,3.5nm,0.9s,baz=295,slow=7.8,SNR=6.1							
	comp=Z,3.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**31.02**	**202**	P		**P**	**03 14 30.3**	**+1.6**
	comp=Z,1.7nm,0.9s,baz=18,slow=8.0,SNR=8.4							
	comp=Z,1.7nm,0.9s							
ZALV	**Zalesovo Beam**	**47.00**	**50**	P		**P**	**03 16 42.9**	**+1.1**
	comp=Z,0.4nm,0.2s,baz=59,slow=9.3,SNR=3.8							
	comp=Z,0.4nm,0.2s							
MKAR	**Makanchi Array**	**47.83**	**60**	P		**P**	**03 16 49.9**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=307,slow=5.2,SNR=4.1							
	comp=Z,0.6nm,0.6s							
SONM	**Songino Array**	**61.90**	**50**	P		**P**	**03 18 32.5**	**+2.2**
	comp=Z,1.0nm,0.7s,baz=286,slow=10,SNR=2.3							
	comp=Z,1.0nm,0.7s							
ILAR	**Eielson Array**	**71.81**	**351**	P		**P**	**03 19 33.2**	**+0.2**
	comp=Z,0.4nm,1.0s,baz=45,slow=7.8,SNR=2.4							
	comp=Z,0.4nm,1.0s							

ROM 24 03:09:14.9±0.1, 42°.688N±0°.004×13°.214E±0°.010, h9km, ML2.8/1, 4C, Error ellipse: s-maj=0.7km s-min=0.5km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.16**	**333**	P	Pg	03 09 18.7	+0.3
NRCA				S	Sg	03 09 21.4	+0.5
NRCA				AML	AML		
	comp=E,49900μm,0.1s						
NRCA				AML	AML		
	comp=N,67050μm,0.1s						
NRCA				AML	AML		
	comp=N,75550μm,1.4s						
NRCA				AML	AML		
	comp=N,67000μm,0.1s						
NRCA				AML	AML		
	comp=E,53600μm,0.1s						
RM33	**Pellescritta (**	**0.18**	**180**	P	Pg	03 09 19.7	+1.0
RM33				S	Sg	03 09 22.9	+1.5
CAMP	**Campotosto**	**0.21**	**137**	⇑*i*P	Pg	03 09 19.8	+0.6
CAMP				S	Sg	03 09 23.3	+1.0
CAMP				AML	AML		
	comp=E,4620μm,0.2s						
CAMP				AML	AML		
	comp=N,4515μm,0.4s						
TERO	**Teramo**	**0.29**	**103**	⇑*i*P	Pg	03 09 20.9	+0.1
TERO				S	Sg	03 09 25.5	+0.7
FEMA	**Monte Fema**	**0.30**	**336**	P	Pg	03 09 21.3	+0.3
FEMA				S	Sg	03 09 25.9	+0.9
ARRO	**Arrone**	**0.35**	**252**	⇑*e*P	Pg	03 09 22.4	+0.6
GIGS	**Gran Sasso**	**0.35**	**132**	P	Pg	03 09 22.1	+0.1
GIGS				S	Sg	03 09 27.5	+0.9
FDMO	**Fiordimonte**	**0.36**	**345**	P	Pg	03 09 22.2	+0.1
FDMO				S	Sg	03 09 27.6	+0.8
AQU	**L'Aquila**	**0.36**	**157**	P	Pg	03 09 22.6	+0.5
AQU				S	Sb	03 09 28.4	-0.9
CESI	**CESI - Serrava**	**0.39**	**324**	P	Pg	03 09 22.8	+0.2
CESI				S	Sg	03 09 28.9	+1.1
FIAM	**Fiamignano**	**0.43**	**190**	P	Pg	03 09 23.8	+0.5
FIAM				S	Sb	03 09 30.3	-0.9
OFFI	**Offida**	**0.43**	**54**	P	Pb	03 09 24.1	-0.5
CESX	**Cesi**	**0.47**	**261**	P	Pg	03 09 24.5	+0.4
MNTP	**Montappone**	**0.49**	**23**	P	Pg	03 09 24.9	+0.5
MNTP				S	Sb	03 09 33.2	+0.3
SEF1	**Sefro**	**0.50**	**337**	P	Pg	03 09 24.7	+0.1
SEF1				S	Sb	03 09 32.4	-0.9
MDAR	**Monte D'Aria**	**0.51**	**354**	P	Pg	03 09 25.2	+0.4
MDAR				S	Sb	03 09 32.7	-0.9
TRTR	**Tortoreto Alta**	**0.53**	**77**	⇑*i*P	Pb	03 09 26.3	-0.1
ASSB	**Assisi San Ben**	**0.54**	**311**	P	Pg	03 09 25.5	+0.1
ASSB				S	Sb	03 09 33.7	-0.8
SSM1	**San Severino M**	**0.54**	**357**	P	Pg	03 09 25.5	+0.1
SSM1				S	Sb	03 09 34.0	-0.5
VCEL	**Villa Celiera**	**0.55**	**122**	P	Pg	03 09 26.1	+0.5
VCEL				S	Sb	03 09 35.0	+0.3
GAG1	**Gagliole**	**0.56**	**349**	P	Pb	03 09 26.6	-0.3
SNTG	**Esanatoglia**	**0.60**	**341**	P	Pg	03 09 26.9	+0.3
T0110	**Collepietro**	**0.62**	**138**	P	Pb	03 09 27.6	-0.4
TRE1	**Treia**	**0.63**	**7**	P	Pb	03 09 27.6	-0.4
TRE1				S	Sb	03 09 37.5	+0.6
CADA	**Capodarco di F**	**0.65**	**38**	P	Pb	03 09 28.5	+0.2
ATCC	**AVT- Casa Cast**	**0.65**	**320**	P	Pg	03 09 27.8	+0.2
ATCC				S	Sb	03 09 37.8	+0.1
FOSV	**Fossato di Vic**	**0.69**	**331**	P	Pg	03 09 28.3	0.0
CIMA	**Civitanova Mar**	**0.70**	**28**	P	Pb	03 09 29.6	+0.3
PP3	**Marolino**	**0.75**	**23**	P	Pb	03 09 30.0	-0.1
ATTE	**AVT- Monte Tez**	**0.81**	**309**	P	Pn	03 09 32.1	-0.4
ARVD	**Arcevia**	**0.83**	**346**	P	Pg	03 09 31.3	+0.3
MGAB	**Montegabbione**	**0.84**	**286**	P	Pb	03 09 32.0	+0.3
ATLO	**AVT- Montelove**	**0.86**	**317**	P	Pb	03 09 31.8	-0.3
ATVA	**AVT- Monte Val**	**0.90**	**311**	P	Pn	03 09 33.3	-0.5
SACS	**San Casciano d**	**0.97**	**280**	P	Pb	03 09 34.0	0.0
CAFI	**Castiglion Fio**	**1.12**	**305**	P	Pn	03 09 36.8	0.0

ROM 24 03:10:43.6±0.1, 42°.803N±0°.004×13°.155E±0°.009, h10km, ML2.7/5, Error ellipse: s-maj=0.8km s-min=0.3km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**316**	P	Pg	03 10 46.1	+0.3
NRCA				S	Sg	03 10 47.5	+0.2
NRCA				AML	AML		
	comp=E,43200μm,0.1s						
NRCA				AML	AML		
	comp=N,58750μm,0.1s						
NRCA				AML	AML		
	comp=E,46200μm,0.1s						
NRCA				AML	AML		
	comp=N,62750μm,0.1s						
NRCA				AML	AML		
	comp=E,45162μm,0.2s						
NRCA				END			
FEMA	**Monte Fema**	**0.18**	**334**	P	Pg	03 10 48.2	+0.6
FEMA				S	Sg	03 10 51.0	+0.7
FEMA				AML	AML		
	comp=E,4460μm,0.2s						
FEMA				AML	AML		
	comp=E,4460μm,0.2s						
FEMA				AML	AML		
	comp=N,4310μm,0.5s						
FEMA				AML	AML		
	comp=N,3553μm,0.4s						
FEMA				END			
FDMO	**Fiordimonte**	**0.24**	**348**	P	Pg	03 10 48.9	+0.3
FDMO				AML	AML		
	comp=E,1074μm,0.7s						
FDMO				AML	AML		
	comp=N,1150μm,0.3s						
FDMO				AML	AML		
	comp=E,1080μm,0.3s						
FDMO				AML	AML		
	comp=N,1365μm,0.2s						
FDMO				AML	AML		
	comp=E,1015μm,0.2s						
CESI	**CESI - Serrava**	**0.27**	**318**	P	Pg	03 10 49.7	+0.5
CESI				S	Sb	03 10 54.2	-1.2
CESI				AML	AML		
	comp=N,5600μm,0.2s						
CESI				AML	AML		
	comp=E,4070μm,0.5s						
CESI				AML	AML		
	comp=E,4070μm,0.5s						
CESI				END			
RM33	**Pellescritta (**	**0.30**	**171**	P	Pb	03 10 50.6	-0.5
RM33				S	Sg	03 10 54.4	+0.7
CAMP	**Campotosto**	**0.33**	**145**	P	Pb	03 10 51.3	-0.3
CAMP				S	Sb	03 10 56.0	-1.0
ARRO	**Arrone**	**0.36**	**232**	P	Pb	03 10 51.6	-0.6
TERO	**Teramo**	**0.38**	**118**	P	Pg	03 10 51.2	+0.1
TERO				S	Sg	03 10 56.9	+0.8
TERO				AML	AML		
	comp=E,1875μm,0.1s						
TERO				AML	AML		
	comp=N,1975μm,0.5s						
TERO				AML	AML		
	comp=E,17200μm,0.4s						
TERO				AML	AML		
	comp=N,22450μm,0.5s						
TERO				AML	AML		
	comp=E,18400μm,0.4s						
TERO				AML	AML		
	comp=N,23550μm,0.5s						
OFFI	**Offida**	**0.41**	**71**	P	Pb	03 10 52.7	-0.3
SSM1	**San Severino M**	**0.43**	**2**	P	Pg	03 10 52.2	+0.2
SSM1				S	Sb	03 10 59.0	-0.8
ASSB	**Assisi San Ben**	**0.44**	**304**	P	Pg	03 10 52.7	+0.4
ASSB				S	Sb	03 10 59.3	-0.8
SNTG	**Esanatoglia**	**0.48**	**341**	P	Pg	03 10 53.3	+0.3
SNTG				S	Sb	03 11 00.4	-0.9
SNTG				AML	AML		
	comp=E,219μm,0.1s						
EL6	**Elcito**	**0.53**	**356**	P	Pg	03 10 53.9	-0.1
EL6				S	Sb	03 11 02.3	-0.5
TRTR	**Tortoreto Alta**	**0.56**	**89**	P	Pb	03 10 55.7	+0.2
ARVD	**Arcevia**	**0.71**	**347**	P	Pg	03 10 57.7	+0.3

*NEIC **24** 03:10:43.4±0.5, 55°.38N±0°.04×160°.80W±0°.06, h77km±2km, Error ellipse: s-maj=6.5km s-min=4.8km az=175.0*

AEIC 24 03:10:44.3±0.7, 55°.37N±0°.03×160°.80W±0°.06, h72km±6km, ML2.9/41, Error ellipse: s-maj=4.8km s-min=4.4km az=75.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.19**	**97**		Pn	03 10 54.3	-0.8
SDPT					Sn	03 11 02.8	-0.2
PS1A	**Pavlof South-1**	**0.54**	**275**		Pn	03 10 57.1	-0.5
PVV	**Pavlof Volcano**	**0.56**	**270**		Pn	03 10 57.3	-0.6
PS4A	**Pavlof South-4**	**0.60**	**268**		Pn	03 10 57.8	-0.6
HAG	**Hague Volcano**	**0.63**	**265**		Pn	03 10 58.2	-0.5
PN7A	**Pavlof North-7**	**0.68**	**275**		Pn	03 10 58.8	-0.5
DT1	**Dutton Round H**	**0.89**	**253**		Pn	03 11 00.7	-0.8
CNBA	**Chernabura Isl**	**0.89**	**128**		Pn	03 10 59.9	-1.7
CNBA					Sn	03 11 13.9	-0.4
VNFG	**Fog Glacier, M**	**1.15**	**37**		Pn	03 11 04.5	-0.4
VNFG	**Fog Glacier, M**	**1.15**	**37**		Pn	03 11 04.3	-0.6
VNSG	**Veniaminof 6**	**1.23**	**51**		Pn	03 11 04.9	-0.9
VNSG					Sn	03 11 21.2	-0.8
VNHG	**Veniaminof 1**	**1.26**	**47**		Pn	03 11 05.7	-0.5
CHGN	**Chignik**	**1.64**	**54**		Pn	03 11 10.0	-1.1
CHGN					Sn	03 11 30.5	-0.9
ISNN	**Isanotski Nort**	**1.79**	**254**		Pn	03 11 12.7	-0.5
ISLZ	**Isanotski Laza**	**1.79**	**250**		Pn	03 11 12.5	-0.8
BRPK	**Brown Peak**	**1.84**	**248**		Pn	03 11 13.2	-0.6
SSLN	**Shishaldin Nor**	**1.92**	**254**		Pn	03 11 14.5	-0.4
SSLS	**Shishaldin Sou**	**1.96**	**251**		Pn	03 11 15.0	-0.4
SSLW	**Shishaldin Wes**	**2.00**	**254**		Pn	03 11 15.2	-0.9
SSBA	**Shishaldin**	**2.00**	**254**		Pn	03 11 15.1	-1.0
WTUG	**Tugumak**	**2.12**	**257**		Pn	03 11 16.6	-1.1
WECS	**Westd

GIGS					END				
AQU	**L'Aquila**	**0.33**	**159**		P	Pb	03 11 07.4	-0.5	
AQU					S	Sb	03 11 12.5	-0.8	
AQU					AML	AML			
	comp=E,756µm,0.9s								
AQU					AML	AML			
	comp=N,570µm,0.3s								
AQU					AML	AML			
	comp=E,736µm,0.7s								
AQU					AML	AML			
	comp=N,493µm,0.3s								
AQU					AML	AML			
	comp=E,7270µm,0.6s								
AQU					AML	AML			
	comp=N,4505µm,0.6s								
AQU					AML	AML			
	comp=E,7070µm,0.6s								
AQU					AML	AML			
	comp=N,4655µm,0.6s								
AQU					END				
FEMA	**Monte Fema**	**0.33**	**335**		P	Pg	03 11 07.0	+0.4	
ARRO	**Arrone**	**0.36**	**257**		P	Pg	03 11 07.4	+0.4	
ARRO					S	Sg	03 11 12.9	+1.1	
ARRO					AML	AML			
	comp=E,702µm,0.7s								
ARRO					AML	AML			
	comp=N,898µm,0.2s								
ARRO					AML	AML			
	comp=E,5130µm,0.2s								
ARRO					AML	AML			
	comp=N,5385µm,0.9s								
ARRO					AML	AML			
	comp=N,898µm,0.2s								
ARRO					END				
FDMO	**Fiordimonte**	**0.39**	**343**		P	Pg	03 11 08.0	+0.4	
FDMO					S	Sb	03 11 14.1	-1.0	
FIAM	**Fiamignano**	**0.40**	**193**		P	Pg	03 11 08.1	+0.3	
FIAM					S	Sg	03 11 14.2	+1.1	
FIAM					AML	AML			
	comp=E,656µm,0.8s								
FIAM					AML	AML			
	comp=N,514µm,0.9s								
FIAM					AML	AML			
	comp=E,5465µm,0.4s								
FIAM					AML	AML			
	comp=N,6415µm,0.7s								
FIAM					AML	AML			
	comp=E,655µm,0.8s								
FIAM					END				
OFFI	**Offida**	**0.43**	**50**		P	Pb	03 11 09.4	-0.1	
CESX	**Cesi**	**0.49**	**264**		P	Pb	03 11 10.6	-0.1	
CESX					S	Sb	03 11 17.2	-0.6	
TRTR	**Tortoreto Alta**	**0.52**	**73**		P	Pb	03 11 11.4	+0.4	

*MDD **24** 03:11:44.8±0.7,36°.00N×8°.73W,h18km±16km,*
mb_Lg3.2/21,Error ellipse: s-maj=19.2km s-min=3.7km az=39.0
*CNRM **24** 03:11:45.5,35°.82N×8°.45W,h74km,ml3.4*
*IGIL **24** 03:11:46.9,35°.95N×8°.70W,h31km,ML3.1*
INMG 24 03:11:46.4±1.4,35°.95N×8°.73W,h36km,ML2.9,4C-4D,
Error ellipse: s-maj=4.7km s-min=2.6km az=67.0,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.18**	**356**	P		Pn	03 12 04.7	-1.7
PFVI	**Vila Bisbo**	**1.18**	**356**	⇓*i*P		Pn	03 12 05.0	-1.4
PFVI				*e*S		Sn	03 12 19.3	-2.0
PFVI				A		A	03 12 23.4	
	66nm,0.2s							
MORF	**Marmelete**	**1.35**	**3**	*e*P		Pn	03 12 07.4	-1.5
MORF				*e*S		Sn	03 12 22.8	-2.8
MORF				IAML			03 12 27.2	
	comp=E,279nm,0.1s							
MORF	**Marmelete**	**1.35**	**3**	⇓*e*P		Pn	03 12 07.4	-1.4
MORF				*e*S		Sn	03 12 23.5	-2.1
MORF				A		A	03 12 26.9	
	comp=E,229nm,0.2s							
PBDV	**Barranco-do-Ve**	**1.44**	**26**	⇑*e*P		Pn	03 12 08.9	-1.1
PBDV				*e*S		Sn	03 12 25.7	-2.0
PBDV				A		A	03 12 34.6	
	comp=E,52nm,0.4s							
PTEO	**Sao Teotonio**	**1.59**	**0**	⇓*e*P		Pn	03 12 10.7	-1.3
PTEO				*e*S		Sn	03 12 29.2	-2.1
PTEO				A		A	03 12 29.9	
	comp=E,68nm,0.2s							
PVAQ	**Vaqueiros**	**1.66**	**29**	P		Pn	03 12 11.8	-1.2
PVAQ	**Vaqueiros**	**1.66**	**29**	P		Pn	03 12 12.4	-0.6
PVAQ				S		Sn	03 12 35.6	+2.5
PVAQ	**Vaqueiros**	**1.66**	**29**	⇑*e*P		Pn	03 12 11.7	-1.3
PVAQ				*e*S		Sn	03 12 30.7	-2.4
PVAQ				A		A	03 12 32.0	
	comp=E,40nm,0.1s							
PCVE	**Castro Verde**	**1.77**	**18**	⇑*e*P		Pn	03 12 13.5	-0.9
PCVE				*e*S		Sn	03 12 33.5	-2.2
PCVE				A		A	03 12 34.9	
	comp=E,89nm,0.3s							
MESJ	**Messejana**	**1.93**	**12**	*e*P		Pn	03 12 15.4	-1.2
MESJ				*e*S		Sn	03 12 36.5	-3.2
MESJ				IAML			03 12 38.9	
	comp=N,98nm,0.2s							
MESJ	**Messejana**	**1.93**	**12**	⇓*e*P		Pn	03 12 15.6	-1.1
MESJ				*e*S		Sn	03 12 37.4	-2.3
MESJ				A		A	03 12 39.9	
	comp=N,53nm,0.2s							
PNCL	**Nicolau / Gran**	**2.16**	**4**	*e*P		Pn	03 12 18.4	-1.5
PNCL				*e*S		Sn	03 12 42.5	-2.9
PNCL				A		A	03 12 45.0	
	comp=N,74nm,0.4s							
PBEJ	**Beja**	**2.19**	**18**	⇑*e*P		Pn	03 12 18.8	-1.4
PBEJ				*e*S		Sn	03 12 43.0	-3.0
PBEJ				A		A	03 12 43.9	
	comp=N,31nm,0.2s							
EMIN	**Mina Concepcio**	**2.45**	**42**	P		Pn	03 12 22.4	-1.5
EMIN				S		Sn	03 12 49.0	-3.5
EMIN				*i* Vmb_Lg			03 12 50.2	
ESPR	**Espera**	**2.49**	**68**	P		Pn	03 12 23.2	-1.2
ESPR				S		Sn	03 12 50.2	-3.3
ESPR				*i* Vmb_Lg			03 12 52.0	
PBAR	**Barrancos**	**2.60**	**31**	*e*P		Pn	03 12 24.5	-1.4
PBAR				*e*S		Sn	03 12 53.0	-3.2
PBAR				A		A	03 12 55.4	
	comp=N,24nm,0.5s							
LIS	**Lisbon**	**2.78**	**353**	*e*S		Sn	03 12 57.0	-3.7
LIS				IAML			03 13 01.2	
	comp=N,101nm,0.3s							
PMST	**Lisbon--Monsan**	**2.81**	**353**	*e*P		Pn	03 12 27.5	-1.2
PMST				*e*S		Sn	03 12 58.4	-2.9
PMST				A		A	03 13 01.1	
	comp=N,36nm,0.4s							
PACT	**Alcochete**	**2.81**	**358**	*e*P		Pn	03 12 28.1	-0.7
PACT				*e*S		Sn	03 13 00.1	-1.4
PACT				A		A	03 13 01.9	
	comp=N,42nm,0.6s							
AVE	**Averroes**	**2.86**	**157**	P		Pn	03 12 27.8	-1.7
AVE	**Averroes**	**2.86**	**157**	P		Pn	03 12 28.0	-1.4
AVE				S		Sn	03 12 56.2	-6.4
PMAFR	**Mafra**	**3.03**	**352**	*e*P		Pn	03 12 30.7	-1.1
PMAFR				*e*S		Sn	03 13 04.5	-2.4
PMAFR				A		A	03 13 07.0	
	comp=N,58nm,0.2s							
ZHG	**ZHG**	**3.03**	**145**	P		Pn	03 12 30.0	-1.9
ZHG	**ZHG**	**3.03**	**145**	P		Pn	03 12 30.0	-1.9
PESTR	**Estremoz**	**3.05**	**17**	P		Pn	03 12 30.6	-1.5
PESTR	**Estremoz**	**3.05**	**17**	P		Pn	03 12 31.2	-0.8
PESTR				S		Sn	03 13 08.9	+1.6
PESTR	**Estremoz**	**3.05**	**17**	*e*P		Pn	03 12 30.5	-1.6
PESTR				*e*S		Sn	03 13 03.6	-3.7
PESTR				A		A	03 13 05.8	
	comp=N,18nm,0.2s							
EBAD	**Badajoz**	**3.12**	**26**	P		Pn	03 12 31.5	-1.5
EBAD				S		Sn	03 13 05.8	-3.2
EBAD				*i* Vmb_Lg			03 13 08.1	
PMTG	**Montargil**	**3.14**	**7**	*e*P		Pn	03 12 31.9	-1.4
PMTG				*e*S		Sn	03 13 05.4	-4.1
PMTG				A		A	03 13 07.7	
	comp=N,22nm,0.4s							
EMIJ	**Mijas**	**3.26**	**78**	P		Pn	03 12 33.0	-2.0
EMIJ				*i* Vmb_Lg			03 13 10.9	
EMIJ				S		Sn	03 13 10.9	-1.5
ECAB	**El Cabril**	**3.39**	**50**	P		Pn	03 12 35.4	-1.5
ECAB				S		Sn	03 13 13.2	-2.6
ECAB				*i* Vmb_Lg			03 13 16.7	
SRHM	**Skhour des Reh**	**3.54**	**169**	P		Pn	03 12 37.3	-1.6
SRHM	**Skhour des Reh**	**3.54**	**169**	P		Pn	03 12 37.6	-1.3
SRHM				S		Sn	03 13 21.7	+2.3
PSBE	**So Bento**	**3.56**	**359**	*e*P		Pn	03 12 38.0	-1.1
PSBE				*e*S		Sn	03 13 16.6	-3.3
PSBE				A		A	03 13 34.8	
	comp=N,16nm,0.6s							
PMRV	**Marv??o**	**3.63**	**17**	*e*P		Pn	03 12 38.6	-1.5
PMRV				*e*S		Sn	03 13 17.6	-4.1
PMRV				A		A	03 13 19.4	
	comp=N,26nm,0.4s							
EGOR	**Sierra Gorda,**	**3.90**	**71**	P		Pn	03 12 43.1	-0.7
EGOR				S		Sn	03 13 25.3	-3.1
EGOR				*i* Vmb_Lg			03 13 33.6	
LCRM	**LCR**	**3.90**	**124**	P		Pn	03 12 42.0	-2.0
LCRM	**LCR**	**3.90**	**124**	P		Pn	03 12 41.8	-2.1
LCRM				S		Sn	03 13 21.9	-6.7
PALE	**Palemas**	**3.97**	**99**	P		Pn	03 12 39.1	-5.7
PALE				S		Sn	03 13 22.0	-8.1
EADA	**Adamuz**	**3.99**	**55**	P		Pn	03 12 43.7	-1.4
EADA				S		Sn	03 13 26.3	-4.3
EADA				*i* Vmb_Lg			03 13 28.8	
PCBR	**Castelo Branco**	**4.01**	**14**	*e*P		Pn	03 12 43.9	-1.3
PCBR				*e*S		Sn	03 13 26.8	-4.1
PCBR				A		A	03 13 28.6	
	comp=N,50nm,0.2s							
PCAS	**Casmilo, Conde**	**4.10**	**2**	*e*P		Pn	03 12 45.5	-1.0
PCAS				*e*S		Sn	03 13 29.5	-3.7
PCAS				A		A	03 13 33.0	
	comp=N,15nm,0.8s							
CZD	**Col de Zad**	**4.21**	**133**	P		Pn	03 12 46.3	-2.0
CZD	**Col de Zad**	**4.21**	**133**	P		Pn	03 12 46.6	-1.7
CZD				S		Sn	03 13 28.3	-8.1
ELGU	**Los Guajares,**	**4.22**	**76**	P		Pn	03 12 46.8	-1.4
ELGU				S		Sn	03 13 33.3	-2.9
ELGU				*i* Vmb_Lg			03 13 38.4	
EQUE	**Quentar**	**4.44**	**72**	P		Pn	03 12 50.4	-0.8
EQUE				S		Sn	03 13 39.1	-2.6
EQUE				*i* Vmb_Lg			03 13 46.7	
MD31	**MD31**	**4.50**	**132**	P		Pn	03 12 49.8	-2.3
MD31				S		Sn	03 13 38.1	-5.0
MTE	**Manteigas**	**4.54**	**12**	*e*P		Pn	03 12 51.0	-1.6
MTE				*e*S		Sn	03 13 39.8	-4.3
MTE				A		A	03 13 41.6	
	comp=N,34nm,0.2s							
MDT	**Midelt**	**4.63**	**131**	P		Pn	03 12 51.6	-2.3
MDT	**Midelt**	**4.63**	**131**	P		Pn	03 12 51.6	-2.3
MDT				S		Sn	03 13 40.5	-5.9
OUK	**Oukaimeden**	**4.79**	**171**	P		Pn	03 12 54.0	-2.3
OUK	**Oukaimeden**	**4.79**	**171**	P		Pn	03 12 54.5	-1.8
OUK				S		Sn	03 13 46.7	-3.9
EBER	**Berja**	**4.80**	**77**	P		Pn	03 12 54.3	-2.1
EBER				S		Sn	03 13 47.1	-3.7
PVIS	**Viseu**	**4.80**	**8**	*e*S		Sn	03 13 45.7	-4.9
PVIS				A		A	03 13 48.7	
	comp=N,6.3nm,0.1s							
EQES	**Quesada**	**4.90**	**66**	P		Pn	03 12 55.9	-1.7
EQES				S		Sn	03 13 48.3	-4.8
EQES				*i* Vmb_Lg			03 14 02.0	
PAB	**San Pablo**	**4.99**	**43**	P		Pn	03 12 57.3	-1.5
PAB				S		Sn	03 13 48.3	-7.1
PAB				*i* Vmb_Lg			03 13 51.7	
PAB	**San Pablo**	**4.99**	**43**	P		Pn	03 12 57.4	-1.4
PTO	**Porto**	**5.18**	**1**	*e*P		Pn	03 13 00.2	-1.1
PTO				*e*S		Sn	03 13 55.0	-4.8
PTO				A		A	03 13 57.6	
	comp=N,14nm,0.2s							
ESDC	**Sonseca Array**	**5.30**	**44**	P		Pn	03 13 01.7	-1.3
ESDC				*i* Vmb_Lg			03 13 59.8	
JBK	**JBK**	**5.30**	**106**	P		Pn	03 12 57.8	-5.4
JBK				S		Sn	03 13 53.5	-10
MVO	**Moncorvo**	**5.37**	**14**	*e*P		Pn	03 13 02.7	-1.4
MVO				*e*S		Sn	03 13 58.9	-5.8
MVO				A		A	03 14 01.9	
	comp=N,8.2nm,0.3s							
PVRL	**Vila Real**	**5.38**	**8**	*e*P		Pn	03 13 03.0	-1.1
PVRL				*e*S		Sn	03 14 00.0	-4.7
PVRL				A		A	03 14 01.7	
	comp=N,14nm,0.2s							
TTIG	**Tnine Tigouga,**	**5.39**	**177**	P		Pn	03 13 01.0	-3.4
TTIG				S		Sn	03 14 01.1	-4.2
POLO	**Lamas de Olo**	**5.46**	**7**	*e*P		Pn	03 13 03.8	-1.5
POLO				*e*S		Sn	03 14 01.1	-5.9
POLO				A		A	03 14 04.7	
	comp=N,4.1nm,0.3s							
PCAB	**Cabril**	**5.78**	**5**	*e*S		Sn	03 14 08.9	-5.7
PCAB				A		A	03 14 11.9	
	comp=N,4.8nm,0.3s							
GUD	**Guadarrama**	**5.91**	**36**	P		Pn	03 13 09.8	-1.7
GUD				S		Sn	03 14 13.5	-4.4
GUD				*i* Vmb_Lg			03 15 45.1	
ELOB	**Lobios**	**5.93**	**5**	P		Pn	03 13 09.8	-1.9
ELOB				S		Sn	03 14 13.0	-5.5
ELOB				*i* Vmb_Lg			03 14 15.8	
PGAV	**Gavieira, Arco**	**6.02**	**3**	*e*P		Pn	03 13 11.4	-1.5
PGAV				*e*S		Sn	03 14 14.2	-6.4
PGAV				A		A	03 14 17.3	
	comp=N,7.5nm,0.6s							
PBRG	**Braganca**	**6.05**	**14**	*e*P		Pn	03 13 12.0	-1.3
PBRG				*e*S		Sn	03 14 16.2	-5.1
PBRG				A		A	03 14 17.8	
	comp=N,9.5nm,0.2s							
ECAL	**Calabor**	**6.18**	**14**	P		Pn	03 13 14.0	-1.1
ECAL				S		Sn	03 14 19.9	-4.7
ECAL				*i* Vmb_Lg			03 14 22.3	
ETOB	**Tobarra**	**6.32**	**63**	P		Pn	03 13 14.7	-2.4
ETOB				S		Sn	03 14 22.1	-6.0
ETOB				*i* Vmb_Lg			03 14 32.6	
SFNM	**Sidi Ifni**	**6.71**	**191**	P		Pn	03 13 19.3	-3.0
SFNM				S		Sn	03 14 33.2	-4.3
EAGO	**Agolada(Pontev**	**6.86**	**4**	P		Pn	03 13 22.9	-1.5
EAGO				S		Sn	03 14 35.4	-5.9
EAGO				*i* Vmb_Lg			03 14 39.4	
EMAZ	**Mazaricos**	**6.99**	**359**	P		Pn	03 13 24.7	-1.6
ECHE	**Chera**	**7.14**	**57**	P		Pn	03 13 26.2	-2.1
ETOR	**Torete**	**7.15**	**45**	P		Pn	03 13 27.4	-1.1
ETOR				S		Sn	03 14 42.8	-5.6
ETOR				*i* Vmb_Lg			03 14 46.3	
EMOS	**Mosqueruela**	**7.86**	**53**	P		Pn	03 13 37.2	-1.0
EMOS				S		Sn	03 14 58.9	-7.0
EORO	**Oroz-Betelu**	**9.00**	**37**	P		Pn	03 13 52.9	-0.9
ECHI	**Chisagues Biel**	**9.63**	**43**	P		Pn	03 14 01.3	-1.2

*ROM **24** 03:11:47.5±0.1,42°.643N×0°.004×13°.230E±0°.007,*
h2km,ML3.4/31,Error ellipse: s-maj=0.6km s-min=0.1km az=246.0
*IDC **24** 03:11:47.7±1.3,42°.68N×13°.48E,h0km,mb3.5/4,*
mbtmp3.5/7,ML3.0/3,MS4.3/1,Error ellipse: s-maj=31.0km s-min=15.2km az=91.0
*BEO **24** 03:11:49.0±0.8,42°.58N×13°.15E,h10km±5km,ML3.6/7*
*PRU **24** 03:11:49.9±0.0,42°.76N×13°.22E,h0km*
ISC 24 03:11:48.4±0.8,42°.63N±0°.01×13°.22E±0°.02,h10km±6km,
n155,σ1s27/173,mb3.5/3,9C-1D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**182**	⇑*i*P		**Pg**	**03 11 51.4**	**-0.1**
RM33				S		**Sg**	**03 11 53.8**	**+0.1**
RM33				AML		AML		
	comp=E,45200µm,0.5s							
RM33				AML		AML		
	comp=N,30800µm,0.3s							
RM33				AML		AML		
	comp=E,45250µm,0.5s							
RM33				AML		AML		
	comp=N,30750µm,0.3s							
RM33				AML		AML		
	comp=E,43850µm,0.9s							
RM33				AML		AML		
	comp=N,30800µm,0.3s							
RM33				AML		AML		
	comp=N,31400µm,0.3s							
CAMP	**Campotosto**	**0.17**	**125**	⇑*i*P		**Pg**	**03 11 51.9**	**-0.3**
CAMP				S		**Sg**	**03 11 54.6**	**-0.2**
CAMP				AML		AML		
	comp=E,13750µm,0.7s							
CAMP				AML		AML		
	comp=N,11710µm,0.4s							
NRCA	**Norcia**	**0.21**	**339**	P		**Pg**	**03 11 52.8**	**-0.1**
NRCA				S		**Sg**	**03 11 56.3**	**+0.2**
NRCA				AML		AML		
	comp=E,42450µm,0.1s							
NRCA				AML		AML		
	comp=N,60100µm,0.7s							
NRCA				AML		AML		
	comp=N,64650µm,0.7s							
NRCA				AML		AML		
	comp=E,42450µm,0.1s							
NRCA				AML		AML		
	comp=N,58750µm,0.1s							
NRCA				AML		AML		
	comp=N,62750µm,0.1s							
NRCA				AML		AML		
	comp=N,60050µm,0.7s							
NRCA				AML		AML		
	comp=E,44000µm,0.1s							
NRCA				AML		AML		
	comp=E,42400µm,0.1s							
TERO	**Teramo**	**0.28**	**92**	⇑*e*P		**Pg**	**03 11 53.5**	**-0.7**
TERO				S		**Sg**	**03 11 57.5**	**-0.5**
TERO				AML		AML		
	comp=N,23550µm,0.5s							
TERO				AML		AML		
	comp=E,18400µm,0.4s							
TERO				AML		AML		
	comp=E,17200µm,0.4s							
TERO				AML		AML		
	comp=N,22450µm,0.5s							
TERO				AML		AML		
	comp=E,17250µm,0.4s							
AQU	**L'Aquila**	**0.31**	**154**	P		**Pg**	**03 11 54.4**	**-0.3**
AQU				AML		AML		
	comp=E,7270µm,0.6s							
AQU				AML		AML		
	comp=N,4655µm,0.6s							
AQU				AML		AML		
	comp=E,7070µm,0.6s							
AQU				AML		AML		
	comp=N,4510µm,0.6s							
GIGS	**Gran Sasso**	**0.32**	**125**	⇑P		**Pg**	**03 11 54.1**	**-0.8**
GIGS				S		**Sg**	**03 11 58.8**	**-0.3**
GIGS				AML		AML		
	comp=E,3835µm,0.3s							
GIGS				AML		AML		
	comp=N,2035µm,0.9s							
ARRO	**Arrone**	**0.34**	**261**	⇑*e*P		**Pg**	**03 11 55.1**	**-0.1**
ARRO				AML		AML		
	comp=E,5125µm,0.2s							
ARRO				AML		AML		
	comp=N,5380µm,0.9s							
ARRO				AML		AML		
	comp=E,5130µm,0.2s							
ARRO				AML		AML		
	comp=N,5385µm,0.9s							
FEMA	**Monte Fema**	**0.35**	**339**	P		**Pg**	**03 11 55.3**	**-0.2**
FEMA				S		**Sg**	**03 12 00.9**	**+0.7**
FIAM	**Fiamignano**	**0.37**	**192**	⇑*e*P		**Pg**	**03 11 55.6**	**-0.3**
FIAM				S		**Sg**	**03 12 01.4**	**+0.6**
FIAM				AML		AML		
	comp=N,6415µm,0.7s							
FIAM				AML		AML		
	comp=E,5465µm,0.4s							
FDMO	**Fiordimonte**	**0.41**	**346**	P		**Pg**	**03 11 56.2**	**-0.4**
FDMO				S		**Sg**	**03 12 02.8**	**+0.7**
FDMO				AML		AML		
	comp=N,3330µm,0.4s							
FDMO				AML		AML		
	comp=E,3205µm,1.2s							
CESI	**CESI - Serrava**	**0.44**	**328**	P		**Pg**	**03 11 57.2**	**+0.1**
CESI				S		**Sg**	**03 12 03.7**	**+0.8**
CESI				AML		AML		
	comp=N,6435µm,0.5s							
CESI				AML		AML		
	comp=E,3310µm,0.8s							
CESI				AML		AML		
	comp=N,6440µm,0.5s							
FAGN	**Fagnano**	**0.46**	**144**	P		**Pg**	**03 11 57.4**	**+0.1**
FAGN				AML		AML		
	comp=N,10245µm,0.5s							
FAGN				AML		AML		
	comp=E,8900µm,0.4s							
OFFI	**Offida**	**0.46**	**49**	⇑*e*P		**Pg**	**03 11 57.5**	**+0.1**
OFFI				S		**Sb**	**03 12 05.7**	**+0.3**
OFFI				AML		AML		
	comp=E,12850µm,0.5s							
OFFI				AML		AML		
	comp=N,16950µm,0.5s							
CSP1	**Cessapalombo**	**0.46**	**359**	⇑P		**Pg**	**03 11 56.9**	**-0.6**
CSP1				S		**Sg**	**03 12 04.2**	**+0.7**
CSP1				AML		AML		
	comp=E,5725µm,0.3s							
CSP1				AML		AML		
	comp=N,8365µm,1.0s							
CESX	**Cesi**	**0.47**	**267**	P		**Pg**	**03 11 57.3**	**-0.4**
CESX				S		**Sb**	**03 12 05.6**	**-0.3**
CESX				AML		AML		
	comp=N,4790µm,0.2s							
CESX				AML		AML		
	comp=E,4845µm,0.6s							
VCEL	**Villa Celiera**	**0.52**	**117**	⇓P		**Pg**	**03 11 58.3**	**-0.2**
VCEL				S		**Sb**	**03 12 06.4**	**-0.9**
VCEL				AML		AML		
	comp=E,10350µm,1.4s							
VCEL				AML		AML		
	comp=N,10065µm,0.3s							
VCEL				AML		AML		
	comp=E,10370µm,1.4s							
MNTP	**Montappone**	**0.54**	**20**	P		**Pg**	**03 11 58.7**	**-0.1**
MNTP				S		**Sb**	**03 12 08.0**	**+0.3**
TRTR	**Tortoreto Alta**	**0.54**	**71**	⇑*i*P		**Pg**	**03 11 59.3**	**+0.3**
TRTR				S		**Sb**	**03 12 08.7**	**+0.9**
TRTR				AML		AML		
	comp=E,12650µm,0.6s							
TRTR				AML		AML		
	comp=N,14500µm,0.4s							
SEF1	**Sefro**	**0.55**	**339**	P		**Pg**	**03 11 58.8**	**-0.4**
SEF1				S		**Sb**	**03 12 07.6**	**-0.6**
SEF1				AML		AML		
	comp=E,4230µm,1.3s							
SEF1				AML		AML		
	comp=N,3855µm,1.3s							
MDAR	**Monte D'Aria**	**0.56**	**354**	P		**Pg**	**03 11 58.6**	**-0.8**
ASSB	**Assisi San Ben**	**0.58**	**315**	P		**Pg**	**03 11 59.4**	**-0.4**
ASSB				S		**Sb**	**03 12 08.5**	**-0.6**
ASSB				AML		AML		
	comp=N,2290µm,0.5s							
ASSB				AML		AML		
	comp=E,2825µm,0.8s							
T0110	**Collepietro**	**0.58**	**134**	P		**Pg**	**03 11 58.9**	**-0.8**
T0110				S		**Sg**	**03 12 07.8**	**+0.4**
T0110				AML		AML		
	comp=E,6345µm,0.5s							
T0110				AML		AML		
	comp=N,6865µm,1.1s							
SSM1	**San Severino M**	**0.59**	**357**	P		**Pg**	**03 11 59.4**	**-0.6**
SSM1				S		**Sb**	**03 12 08.9**	**-0.5**
GAG1	**Gagliole**	**0.61**	**350**	P		**Pg**	**03 11 59.9**	**-0.5**
PTQR	**Pietraquaria**	**0.63**	**168**	P		**Pb**	**03 12 01.6**	**+0.1**
MTL1	**Matelica**	**0.64**	**346**	P		**Pg**	**03 12 00.3**	**-0.6**
MTL1				S		**Sb**	**03 12 10.7**	**-0.1**
SNTG	**Esanatoglia**	**0.65**	**342**	P		**Pg**	**03 12 00.5**	**-0.6**
SNTG				AML		AML		
	comp=E,1250µm,0.1s							
SNTG				AML		AML		
	comp=N,1500µm,0.5s							
SRES	**S.Oreste - Sor**	**0.66**	**233**	P		**Pg**	**03 12 00.4**	**-0.8**
SRES				AML		AML		
	comp=E,974µm,0.5s							
SRES				AML		AML		
	comp=N,894µm,1.4s							
TRE1	**Treia**	**0.68**	**6**	P		**Pg**	**03 12 01.4**	**-0.3**
TRE1				S		**Sb**	**03 12 12.7**	**+0.8**
TRE1				AML		AML		
	comp=E,7780µm,0.5s							
TRE1				AML		AML		
	comp=N,6575µm,0.5s							
TRE1				AML		AML		
	comp=E,7775µm,0.5s							
CADA	**Capodarco di F**	**0.69**	**35**	P		**Pb**	**03 12 02.3**	**-0.2**
EL6	**Elcito

comp=N,1460µm,1.5s
CERT Cerneto 0.71 195 P **Pg** 03 12 01.0 -1.1
CERT AML AML
comp=N,1840µm,0.7s
CERT AML AML
comp=E,3155µm,0.7s
FOSV Fossato di Vic 0.74 333 P **Pg** 03 12 02.3 -0.5
FOSV AML AML
comp=E,1062µm,0.5s
FOSV AML AML
comp=E,1066µm,0.5s
FOSV AML AML
comp=N,1560µm,0.4s
PP3 Marolino 0.80 21 P **Pg** 03 12 03.5 -0.3
PP3 S **Sn** 03 12 17.4 -0.2
PP3 AML AML
comp=E,9720µm,0.5s
PP3 AML AML
comp=E,9715µm,0.6s
PP3 AML AML
comp=N,4450µm,1.0s
PP3 AML AML
comp=N,3925µm,1.0s
PP3 AML AML
comp=E,9800µm,0.5s
INTR Introdacqua 0.80 141 P **Pg** 03 12 02.5 -1.4
INTR AML AML
comp=E,1µm,1.6s
INTR AML AML
comp=E,1µm,1.6s
INTR AML AML
comp=N,2µm,0.8s
INTR AML AML
comp=N,2420µm,0.8s
INTR AML AML
comp=N,2µm,0.8s
INTR AML AML
comp=E,1200µm,1.6s
RCAV Rocca di Cave 0.81 195 P **Pn** 03 12 05.7 -0.3
VVLD Villa Vallelon 0.82 158 P **Pn** 03 12 07.2 +1.1
GUAR Guarcino 0.84 175 P **Pn** 03 12 07.3 +0.9
MGAB Montegabbione 0.86 289 P **Pg** 03 12 04.8 -0.3
MGAB AML AML
comp=E,2710µm,1.1s
MGAB AML AML
comp=E,2955µm,0.7s
MGAB AML AML
comp=E,2715µm,1.1s
MGAB AML AML
comp=N,2270µm,0.6s
MGAB AML AML
comp=N,2585µm,0.7s
ARVD Arcevia 0.89 347 AML AML
comp=E,1250µm,0.7s
ARVD AML AML
comp=N,938µm,0.9s
ATLO AVT- Montelove 0.91 319 P **Pg** 03 12 05.7 -0.2
RMP Rome, Mte Porz 0.91 205 P **Pg** 03 12 06.0 +0.1
LPEL Lama dei Peligi 0.92 129 P **Pg** 03 12 05.2 -1.0
LPEL S **Sg** 03 12 18.1 -0.2
LPEL AML AML
comp=E,1370µm,0.9s
LPEL AML AML
comp=N,1380µm,0.6s
ATVA AVT- Monte Val 0.94 314 P **Pn** 03 12 07.7 -0.1
TB01 Gubbio 0.94 323 P **Pg** 03 12 06.3 -0.3
VIVA Pratoni del Vi 0.94 201 P **Pn** 03 12 07.6 -0.1
VIVA AML AML
comp=E,3735µm,0.5s
VIVA AML AML
comp=N,3410µm,0.6s
RDP Rocca di Papa 0.95 203 P **Pg** 03 12 06.3 -0.5
FRON Frontone 0.95 338 P **Pg** 03 12 06.4 -0.4
ATVO AVT- Monte Val 0.96 322 P **Pb** 03 12 07.6 +0.4
ATVO AML AML
comp=E,1495µm,1.2s
ATVO AML AML
comp=N,1000µm,0.6s
ATVO AML AML
comp=N,999µm,0.6s
AOI Ancona 0.96 17 P **Pg** 03 12 06.1 -0.8
AOI AML AML
comp=N,1685µm,0.4s
AOI AML AML
comp=E,1670µm,1.4s
MA9 Marino 0.96 206 P **Pb** 03 12 07.4 +0.3
ATBU Serra di Buran 0.97 330 P **Pb** 03 12 07.5 +0.1
POFI Posta Fibreno 0.99 158 P **Pn** 03 12 09.5 +1.1
POFI AML AML
comp=E,1115µm,0.7s
POFI AML AML
comp=N,536µm,0.6s
ATMI Monte Miggiano 0.99 315 AML AML
comp=E,2515µm,0.5s
ATMI AML AML
comp=N,2330µm,0.9s
SACS San Casciano d 0.99 283 P **Pg** 03 12 07.2 -0.3
SACS AML AML
comp=E,1275µm,0.6s
SACS AML AML
comp=N,1180µm,0.8s
SACS AML AML
comp=E,1220µm,0.6s
SACS AML AML
comp=N,1170µm,0.8s
COR1 Corinaldo 1.01 351 P **Pg** 03 12 07.9 0.0
ATPC Poggio Castell 1.01 327 P **Pb** 03 12 08.3 +0.2
LAV9 Lanuvio 1.03 202 P **Pn** 03 12 09.2 +0.2
PIEI Pieia 1.03 331 AML AML
comp=E,846µm,0.8s
PIEI AML AML
comp=N,1015µm,0.5s
LATE Laterza 1.04 269 P **Pg** 03 12 08.0 -0.5
MPAG Monte Paganucc 1.05 341 P **Pg** 03 12 08.1 -0.6
MPAG AML AML
comp=E,1185µm,0.6s
MPAG AML AML
comp=N,1225µm,0.5s
TOLF Tolfa 1.07 238 P **Pg** 03 12 08.0 -0.9
TOLF AML AML
comp=E,744µm,0.6s
TOLF AML AML
comp=N,784µm,1.2s
SENI Senigallia 1.07 1 P **Pg** 03 12 09.1 0.0
GIUL Giuliano Di Ro 1.07 179 P **Pn** 03 12 10.6 +1.0
GIUL AML AML
comp=E,698µm,0.9s
GIUL AML AML
comp=N,1070µm,0.8s
NARO Abbazia di Nar 1.08 335 P **Pg** 03 12 09.0 -0.3
NARO AML AML
comp=E,844µm,0.7s
NARO AML AML
comp=N,904µm,0.6s
FSSB Fossombrone 1.11 343 P **Pb** 03 12 09.0 -0.7
FSSB AML AML
comp=E,2375µm,0.4s
FSSB AML AML
comp=N,2490µm,0.4s
ATMC Monte Cedrone 1.11 318 P **Pn** 03 12 11.3 +1.3
SF03 Valle Cupa 1.14 279 P **Pb** 03 12 10.1 -0.3
MCIV Monte Civitell 1.15 278 P **Pb** 03 12 10.1 -0.3
MCIV AML AML
comp=E,468µm,0.7s
MCIV AML AML
comp=N,382µm,1.5s
CAFI Castiglion Fio 1.15 307 P **Pn** 03 12 11.8 +1.1
CAFI AML AML
comp=E,818µm,0.6s
CAFI AML AML
comp=N,560µm,0.6s
LATB Latina 1.16 190 P **Pb** 03 12 09.4 -1.0
LIK San Giovanni I 1.16 167 P **Pn** 03 12 13.1 +2.4
SF11 Podere del Sol 1.16 282 P **Pb** 03 12 10.7 +0.1
RNI2 Rionero Sannit 1.16 143 P **Pn** 03 12 12.7 +1.8
SF04 Casetta 1.17 280 P **Pb** 03 12 10.5 -0.3
CERA Filignano 1.19 150 P **Pg** 03 12 13.1 +1.7
SF13 Bagnolo 1.19 279 P **Pb** 03 12 10.9 -0.2
SF01 Poggio Pratacc 1.23 279 P **Pg** 03 12 12.3 +0.2
PARC Parchiule 1.24 325 P **Pn** 03 12 11.2 -0.7
ARCI Arcidosso 1.30 280 P **Pn** 03 12 12.6 -0.2
ARCI AML AML
comp=E,188µm,0.8s
ARCI AML AML
comp=N,187µm,1.1s
TRIV Trivento 1.31 131 P **Pg** 03 12 14.4 +0.7

PESA Pesaro 1.34 348 AML AML
comp=E,1495µm,0.7s
PESA AML AML
comp=N,1720µm,1.0s
VAGA Valle Agricola 1.43 148 P **Pg** 03 12 16.3 +0.4
SFI Santa Sofia 1.62 322 P **Pg** 03 12 21.2 +1.7
FROS Frosini 1.62 291 P **Pn** 03 12 17.3 +0.2
CSNT Castellina Chi 1.64 301 P **Pn** 03 12 17.5 +0.1
MELA Melanico ??? S 1.69 123 P **Pg** 03 12 20.6 -0.4
OSSC Osservatorio P 1.70 302 P **Pn** 03 12 18.8 +0.6
RUFI Rufina 1.74 315 P **Pn** 03 12 19.5 +0.9
CASP Castiglione de 1.74 276 P **Pn** 03 12 18.6 -0.2
TRIF Trifonti 1.77 287 P **Pn** 03 12 19.3 +0.1
TRIF AML AML
comp=E,151µm,1.6s
TRIF AML AML
comp=N,165µm,0.8s
LMD Lutirano 1.82 323 P **Pb** 03 12 21.5 -0.3
APRC Apricena 1.94 116 P **Pb** 03 12 23.1 -0.7
A318A Donoratico (LI 2.00 285 P **Pn** 03 12 23.4 +1.0
SGRT San Giovanni R 2.07 114 P **Pn** 03 12 24.5 +1.2
A308A Longastrino (F 2.14 336 P **Pb** 03 12 26.1 -1.2
FNVD Fontana Vidola 2.17 316 P **Pb** 03 12 26.8 -1.0
STON Ston 3.31 84 *e*Pn **Pn** 03 12 39.9 -0.3
STON *e*Sn **Sn** 03 13 19.9 +0.3
ROVR Rover Verones 3.39 334 AML AML
comp=E,37µm,0.4s
ROVR AML AML
comp=N,64µm,0.4s
CGRP Cima Grappa 3.40 343 AML AML
comp=N,178µm,0.8s
CGRP AML AML
comp=E,200µm,0.5s
BLY Banja Luka 3.57 52 *e*Pn **Pn** 03 12 47.0 +3.2
MPRI Monte Prat 3.61 357 AML AML
comp=N,169µm,1.3s
MPRI AML AML
comp=E,153µm,0.6s
STAL STALIGIAL 3.64 354 AML AML
comp=E,122µm,0.9s
STAL AML AML
comp=N,108µm,1.3s
MAGA Magasa 3.65 330 AML AML
comp=E,266µm,1.0s
MAGA AML AML
comp=N,178µm,0.5s
LUSI Trento, Gardas 3.71 335 AML AML
comp=E,90µm,1.3s
LUSI AML AML
comp=N,114µm,0.3s
CIMO Cimolais 3.72 352 AML AML
comp=E,33µm,0.4s
CIMO AML AML
comp=N,31µm,0.5s
ACOM Acomizza, Ital 3.92 3 AML AML
comp=N,92µm,0.9s
ACOM AML AML
comp=E,94µm,0.7s
ZOU Zoufplan 3.93 358 AML AML
comp=E,78µm,0.8s
ZOU AML AML
comp=N,67µm,1.1s
MABI Malga Bissina 3.93 331 AML AML
comp=E,37µm,0.7s
MABI AML AML
comp=N,40µm,1.6s
OBKA Obir 3.99 13 *e*Pn **Pn** 03 12 50.3 +0.6
comp=N,3.9nm,0.3s
MYKA Terra Mystica 4.01 4 *e*Pn **Pn** 03 12 50.4 +0.4
comp=N,0.9nm,0.1s
KOSI Kohlern 4.05 342 AML AML
comp=E,92µm,1.5s
KOSI AML AML
comp=N,105µm,0.4s
ABTA Abfaltersbach 4.14 353 *e*Pn **Pn** 03 12 53.1 +1.2
comp=N,8.3nm,0.3s
SOKA Soboth 4.25 17 *e*Pn **Pn** 03 12 55.7 +2.5
comp=N,1.0nm,0.3s
RISI Rein 4.39 350 AML AML
comp=E,143µm,0.6s
RISI AML AML
comp=N,169µm,0.4s
KBA Koelnbreinsper 4.45 1 *e*Pn Pb 03 13 01.6 -5.1
comp=N,3.0nm,0.3s
PDG Podgorica 4.46 91 *e*Pn **Pn** 03 12 57.3 +1.2
PDG *e*Sn **Sn** 03 13 48.3 +0.2
BBLS Lazići 4.68 73 *e*Pn **Pn** 03 13 00.5 +1.3
FETA Feichten 4.73 339 *e*Pn **Pn** 03 13 03.9 +4.0
comp=N,2.5nm,0.5s
WTTA Wattenberg 4.76 347 *e*Pn **Pn** 03 13 02.5 +2.1
comp=N,2.7nm,0.5s
DAVOX Davos/Dischmat 4.78 331 Pn **Pn** 03 13 03.9 +3.2
comp=N,1.0nm,0.3s,baz=159,slow=21,SNR=3.8
DAVOX Sn **Sn** 03 13 57.2 +1.0
comp=N,0.8nm,0.3s,baz=101,slow=23,SNR=2.1
comp=N,7.3nm,0.6s
SQTA Sankt Quirin 4.80 343 *e*Pn **Pn** 03 13 03.2 +2.2
comp=N,2.0nm,0.1s
WATA Walderalm 4.84 347 *e*Pn **Pn** 03 13 04.0 +2.5
comp=N,2.3nm,0.2s
ARSA Arzberg 4.90 19 *e*Pn **Pn** 03 13 04.3 +2.2
comp=N,2.1nm,0.4s
MOTA Moosalm 4.94 343 *e*Pn **Pn** 03 13 06.0 +3.1
comp=N,0.7nm,0.1s
SJES Sjenica 5.00 81 *e*Pn **Pn** 03 13 05.4 +1.8
SJES *e*Sn **Sn** 03 14 02.2 +0.8
BIOA Bad Ischl, Aus 5.07 3 *e*Pn **Pn** 03 13 07.0 +2.6
comp=N,8.7nm,0.7s
TIR Tirane 5.12 102 *e*Pn **Pn** 03 13 05.9 +0.8
TIR *e*Sn **Sn** 03 14 04.6 +0.4
DIVS Divibare 5.15 71 *e*Pn **Pn** 03 13 06.6 +1.0
RETA Reutte 5.16 341 *e*Pn **Pn** 03 13 08.7 +3.0
comp=N,1.9nm,0.3s
IVAS Ivanjica 5.16 77 *e*Pn **Pn** 03 13 06.5 +0.7
IVAS *e*Sn **Sn** 03 14 04.5 -0.9
DAVA Damuels 5.22 334 *e*Pn **Pn** 03 13 09.6 +2.9
comp=N,5.4nm,0.5s
MOA Molln 5.27 8 *e*Pn **Pn** 03 13 08.2 +1.0
MOA *e*Sn **Sn** 03 14 07.3 -0.7
MOA Molln 5.27 8 *e*Pn **Pn** 03 13 08.0 +0.8
comp=N,0.4nm,0.1s
RONA Rosalia, Austr 5.51 22 *e*Pn **Pn** 03 13 10.6 0.0
comp=N,0.8nm,0.2s
CONA Conrad Observa 5.61 18 *e*Pn **Pn** 03 13 11.5 -0.5
comp=N,2.6nm,0.4s
GRUS Gruza 5.62 75 *e*Sn **Sn** 03 14 17.6 +1.1
SELS Selova 5.83 82 *e*Pn **Pn** 03 13 14.1 -0.8
GERES GERESS Array B 6.22 3 Pn **Pn** 03 13 19.8 -0.6
comp=N,0.1nm,0.3s,baz=158,slow=11,SNR=1.3
GERES Sn **Sn** 03 14 31.1 -0.4
comp=N,0.8nm,0.3s,baz=194,slow=25,SNR=4.2
comp=N,0.4nm,0.4s
CKRC Cesky Krumlov 6.23 7 *e*PN **Pn** 03 13 21.6 +1.1
CKRC *e*SN **Sn** 03 14 29.7 -2.0
BARS Barje 6.33 85 *e*Pn **Pn** 03 13 22.3 +0.5
KHC Kasperske Hory 6.50 2 *e*PN **Pn** 03 13 24.5 +0.3
KHC *e*SN **Sn** 03 14 35.5 -2.9
PRVS Prvonek 6.54 88 *e*Pn **Pn** 03 13 25.5 +0.8
PRVS *e*Sn **Sn** 03 14 38.7 -0.6
ZAGS Zajecar 6.69 77 *e*Pn **Pn** 03 13 27.3 +0.6
BOSS Bosilegrad 6.84 88 *e*Pn **Pn** 03 13 29.2 +0.4
BOSS *e*Sn **Sn** 03 14 43.9 -2.8
ZAPS Zavoj 6.94 82 *e*Sn **Sn** 03 14 46.1 -3.0
KEST Kesra 7.52 205 Pn **Pn** 03 13 42.2 +4.0
comp=N,0.3nm,0.3s,baz=18,slow=20,SNR=5.3
comp=N,2.0nm,0.6s
CLL Collm 8.68 359 *e*Sg **Sg** 03 16 22.0 -4.8
CLL *ex* x 03 16 39.0
CLL Collm 8.68 359 *e*Sg **Sg** 03 16 32.0 +5.2
FINES FINESS Array B 20.36 18 P **P** 03 16 25.1 +0.4
comp=N,0.8nm,0.6s,baz=209,slow=14,SNR=2.0
comp=N,0.8nm,0.6s
ASF Jabal al Asfar 21.45 111 LR LR 03 27 20.4
comp=N,789nm,18.9s,baz=335,slow=44
TORD Torodi Ar. Bea 31.03 202 P **P** 03 18 07.0 +0.6
comp=N,0.5nm,0.9s,baz=15,slow=7.9,SNR=2.9
comp=N,0.5nm,0.9s
GEYT Alibeck 34.26 82 P **P** 03 18 32.5 -2.1
comp=N,1.1nm,0.4s,baz=275,slow=16,SNR=2.0
comp=N,1.1nm,0.4s
MKAR Makanchi Array 47.82 60 P **P** 03 20 26.7 +0.7
comp=N,0.3nm,0.8s,baz=284,slow=5.8,SNR=2.5
comp=N,0.3nm,0.8s

ROM 24 03:12:58.0±0.2,**42°739N**±0°010×**13°27E**±0°01,**h11**km±1km,

ML2.5/5,**Error ellipse: s-maj=1.2km s-min=0.6km az=228.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.15**	**310**	P	Pg	03 13 02.0	+0.5
NRCA				S	Sg	03 13 04.2	+0.4
NRCA				AML	AML		
	comp=E,71100µm,0.2s						
NRCA				AML	AML		
	comp=N,53050µm,0.1s						
NRCA				AML	AML		
	comp=E,75300µm,0.2s						
NRCA				AML	AML		
	comp=N,57700µm,0.1s						
NRCA				AML	AML		
	comp=E,11653µm,0.1s						
RM33	**Pellescritta (**	**0.23**	**190**	P	Pg	03 13 03.5	+0.7
RM33				AML	AML		
	comp=E,9420µm,0.6s						
RM33				AML	AML		
	comp=E,9400µm,0.6s						
RM33				AML	AML		
	comp=N,6085µm,0.7s						
RM33				AML	AML		
	comp=E,9035µm,0.6s						
RM33				AML	AML		
	comp=N,6045µm,0.7s						
RM33				AML	AML		
	comp=N,2163µm,0.1s						
RM33				AML	AML		
	comp=N,2139µm,0.1s						
RM33				AML	AML		
	comp=E,2654µm,0.7s						
TERO	**Teramo**	**0.27**	**115**	P	Pb	03 13 04.4	-0.6
TERO				S	Sg	03 13 08.3	+1.1
TERO				AML	AML		
	comp=E,7870µm,0.9s						
TERO				AML	AML		
	comp=N,10060µm,0.5s						
TERO				AML	AML		
	comp=N,10500µm,0.5s						
TERO				AML	AML		
	comp=N,10050µm,0.5s						
TERO				AML	AML		
	comp=E,8435µm,0.9s						
TERO				AML	AML		
	comp=E,545µm,0.7s						
FEMA	**Monte Fema**	**0.28**	**324**	P	Pg	03 13 04.3	+0.7
FEMA				S	Sg	03 13 07.6	+0.2
FDMO	**Fiordimonte**	**0.33**	**336**	P	Pg	03 13 05.2	+0.6
FDMO				S	Sg	03 13 09.5	+0.6
FDMO				AML	AML		
	comp=E,5320µm,0.2s						
FDMO				AML	AML		
	comp=N,6200µm,1.0s						
FDMO				AML	AML		
	comp=E,376µm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**8**	P	Pb	03 13 05.9	0.0
GUMA				S	Sb	03 13 11.3	+0.1
GUMA				AML	AML		
	comp=E,9995µm,0.7s						
GUMA				AML	AML		
	comp=N,18250µm,0.6s						
GUMA				AML	AML		
	comp=E,10005µm,0.7s						
GUMA				AML	AML		
	comp=N,18200µm,0.6s						
GUMA				AML	AML		
	comp=E,18450µm,0.3s						
GUMA				AML	AML		
	comp=N,13900µm,0.6s						
GUMA				AML	AML		
	comp=N,1549µm,0.7s						
CSP1	**Cessapalombo**	**0.36**	**352**	P	Pb	03 13 05.9	-0.6
CSP1				S	Sb	03 13 11.2	-1.0
OFFI	**Offida**	**0.36**	**57**	P	Pg	03 13 05.0	-0.2
CESI	**CESI - Serrava**	**0.38**	**315**	P	Pg	03 13 06.0	+0.6
CESI				S	Sg	03 13 11.1	+0.5
CESI				AML	AML		
	comp=E,10950µm,0.2s						
CESI				AML	AML		
	comp=N,22400µm,0.3s						
CESI				AML	AML		
	comp=E,877µm,0.6s						
CESI				AML	AML		
	comp=N,1988µm,0.2s						
ARRO	**Arrone**	**0.41**	**247**	P	Pg	03 13 06.6	+0.6
ARRO				AML	AML		
	comp=N,2655µm,0.2s						
ARRO				AML	AML		
	comp=E,2425µm,1.1s						
TRTR	**Tortoreto Alta**	**0.48**	**81**	P	Pg	03 13 06.7	-0.6
ASSB	**Assisi San Ben**	**0.54**	**304**	P	Pg	03 13 08.9	+0.3
ASSB				S	Sg	03 13 16.5	+0.8
SNTG	**Esanatoglia**	**0.57**	**335**	P	Pg	03 13 09.5	+0.4
SNTG				S	Sb	03 13 17.6	-0.6

ROM 24 03:13:10.4±0.1,**42°706N**±0°004×**13°241E**±0°009,
h9km,**ML3.3**/18,**Error ellipse: s-maj=0.8km s-min=0.3km az=237.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.16**	**324**	P	Pg	03 13 14.4	+0.6
NRCA				S	Sg	03 13 16.9	+0.7
NRCA				AML	AML		
	comp=N,57700µm,0.1s						
NRCA				AML	AML		
	comp=N,53050µm,0.1s						
NRCA				AML	AML		
	comp=E,75300µm,0.2s						
NRCA				AML	AML		
	comp=E,71100µm,0.2s						
NRCA				AML	AML		
	comp=N,53065µm,0.1s						
NRCA				END			
RM33	**Pellescritta (**	**0.20**	**186**	P	Pg	03 13 15.5	+1.0
RM33				S	Sg	03 13 19.1	+1.8
RM33				AML	AML		
	comp=E,9420µm,0.6s						
RM33				AML	AML		
	comp=N,6085µm,0.7s						
RM33				AML	AML		
	comp=E,9035µm,0.6s						
RM33				AML	AML		
	comp=E,9395µm,0.6s						
RM33				AML	AML		
	comp=N,6090µm,0.7s						
RM33				AML	AML		
	comp=E,9040µm,0.6s						
RM33				AML	AML		
	comp=E,9400µm,0.6s						
RM33				AML	AML		
	comp=N,6045µm,0.7s						
RM33				AML	AML		
	comp=E,9407µm,0.6s						
CAMP	**Campotosto**	**0.21**	**144**	P	Pg	03 13 15.4	+0.6
CAMP				S	Sg	03 13 19.0	+1.3
CAMP				AML	AML		
	comp=N,5265µm,0.6s						
CAMP				AML	AML		
	comp=E,5455µm,0.2s						
CAMP				END			
TERO	**Teramo**	**0.28**	**107**	P	Pg	03 13 16.4	+0.4
TERO				S	Sg	03 13 20.9	+1.1
TERO				AML	AML		
	comp=E,7870µm,0.9s						
TERO				AML	AML		
	comp=N,10060µm,0.5s						
TERO				AML	AML		
	comp=N,10065µm,0.5s						
TERO				AML	AML		
	comp=N,10050µm,0.5s						
TERO				AML	AML		
	comp=E,8435µm,0.9s						
TERO				AML	AML		
	comp=N,10500µm,0.5s						
TERO				AML	AML		
	comp=N,8816µm,0.1s						
TERO				END			
FEMA	**Monte Fema**	**0.29**	**331**	P	Pg	03 13 16.8	+0.5
FEMA				S	Sg	03 13 21.5	+1.2
FEMA				AML	AML		
	comp=E,10520µm,0.9s						
FEMA				AML	AML		

comp=E,10540μm,0.9s
FEMA AML AML
comp=N,15250μm,1.3s
FEMA AML AML
comp=N,14772μm,0.5s
FEMA END
FDMO Fiordimonte 0.35 341 P Pg 03 13 17.7 +0.4
FDMO S Sb 03 13 23.2 -1.2
FDMO AML AML
comp=E,5320μm,0.2s
FDMO AML AML
comp=N,6200μm,1.0s
FDMO AML AML
comp=N,6203μm,1.0s
FDMO END
GIGS Gran Sasso 0.35 136 P Pg 03 13 17.9 +0.5
GIGS S Sb 03 13 23.6 -0.9
GIGS AML AML
comp=E,793μm,0.5s
GIGS AML AML
comp=E,792μm,0.5s
GIGS AML AML
comp=N,734μm,1.6s
GUMA Gualdo di Mace 0.36 11 P Pb 03 13 18.3 -0.7
GUMA S Sb 03 13 24.5 -0.4
AQU L'Aquila 0.37 161 P Pg 03 13 17.6 -0.2
ARRO Arrone 0.37 250 P Pb 03 13 18.8 -0.4
ARRO AML AML
comp=E,2430μm,1.1s
ARRO AML AML
comp=N,2655μm,0.2s
ARRO AML AML
comp=E,2425μm,1.1s
ARRO AML AML
comp=E,2428μm,1.1s
ARRO AML AML
comp=N,2730μm,2.3s
CSP1 Cessapalombo 0.39 356 P Pg 03 13 18.4 +0.3
CSP1 S Sb 03 13 24.5 -1.2
CESI CESI - Serrava 0.39 320 P Pg 03 13 18.5 +0.5
CESI S Sb 03 13 24.7 -0.9
CESI AML AML
comp=N,22400μm,0.3s
CESI AML AML
comp=E,10950μm,0.2s
CESI AML AML
comp=E,10962μm,0.2s
CESI AML AML
comp=N,22396μm,0.3s
OFFI Offida 0.40 55 P Pb 03 13 19.5 -0.2
OFFI AML AML
comp=E,5580μm,0.7s
OFFI AML AML
comp=N,6130μm,0.6s
OFFI AML AML
comp=N,6129μm,0.6s
FIAM Fiamignano 0.45 192 P Pg 03 13 19.7 +0.5
FIAM S Sb 03 13 26.9 -0.4
FIAM AML AML
comp=E,3040μm,0.7s
FIAM AML AML
comp=N,1645μm,0.5s
FIAM AML AML
comp=E,3040μm,0.7s
SEF1 Sefro 0.49 334 P Pg 03 13 20.3 +0.4
SEF1 S Sb 03 13 28.2 -0.3
SEF1 AML AML
comp=E,6225μm,0.2s
SEF1 AML AML
comp=N,7835μm,0.2s
CESX Cesi 0.50 259 P Pg 03 13 19.9 -0.2
CESX AML AML
comp=E,2535μm,0.6s
CESX AML AML
comp=N,1975μm,0.5s
CESX AML AML
comp=E,2534μm,0.6s
TRTR Tortoreto Alta 0.51 78 P Pb 03 13 21.6 +0.2
TRTR AML AML
comp=E,4695μm,0.9s
TRTR AML AML
comp=N,4360μm,1.0s
FAGN Fagnano 0.51 150 P Pb 03 13 21.0 -0.5
FAGN AML AML
comp=E,2445μm,0.6s
FAGN AML AML
comp=N,3740μm,0.4s
VCEL Villa Celiera 0.54 125 P Pb 03 13 21.6 -0.5
VCEL AML AML
comp=E,2710μm,0.5s
VCEL AML AML
comp=N,2630μm,1.0s
VCEL AML AML
comp=N,2535μm,0.4s
GAG1 Gagliole 0.55 347 P Pg 03 13 21.5 +0.4
GAG1 S Sb 03 13 29.8 -0.3
GAG1 AML AML
comp=E,6085μm,0.2s
GAG1 AML AML
comp=N,5710μm,0.8s
GAG1 AML AML
comp=N,5713μm,0.8s
T0110 Collepietro 0.62 140 P Pg 03 13 22.5 +0.1
T0110 AML AML
comp=E,2100μm,0.5s
T0110 AML AML
comp=E,2095μm,0.5s
T0110 AML AML
comp=N,2425μm,0.4s
T0110 AML AML
comp=N,2571μm,4.7s
EL6 Elcito 0.63 351 P Pg 03 13 22.7 0.0
EL6 S Sb 03 13 33.0 +0.3
EL6 AML AML
comp=E,3550μm,0.5s
EL6 AML AML
comp=N,3685μm,1.1s
EL6 AML AML
comp=N,3670μm,1.1s
EL6 AML AML
comp=E,3552μm,0.5s
ATCC AVT- Casa Cast 0.65 318 P Pg 03 13 23.1 +0.1
ATCC S Sb 03 13 33.5 +0.3
ATCC AML AML
comp=E,2880μm,1.4s
ATCC AML AML
comp=N,3840μm,0.3s
ATCC AML AML
comp=N,3835μm,0.3s
ATCC AML AML
comp=E,2875μm,1.4s
ATCC AML AML
comp=N,3836μm,0.3s
FOSV Fossato di Vic 0.69 329 P Pg 03 13 23.6 0.0
FOSV S Sb 03 13 34.5 +0.3
FOSV AML AML
comp=E,2200μm,0.3s
FOSV AML AML
comp=N,2300μm,0.9s
FOSV AML AML
comp=E,2200μm,0.3s
PP3 Marolino 0.72 22 P Pb 03 13 25.6 +0.5
PP3 AML AML
comp=E,2370μm,1.6s
PP3 AML AML
comp=N,2245μm,1.1s
PP3 AML AML
comp=N,2040μm,1.1s
PP3 AML AML
comp=E,2325μm,1.6s
PP3 AML AML
comp=N,2045μm,1.1s
MURB Monte Urbino 0.77 317 P Pg 03 13 24.7 -0.5
MURB AML AML
comp=E,4635μm,0.9s
MURB AML AML
comp=N,5660μm,1.0s
MURB AML AML
comp=E,4635μm,1.0s
MURB AML AML
comp=E,4895μm,1.1s
MURB AML AML
comp=N,5475μm,1.0s
MURB AML AML
comp=N,5660μm,1.0s
MURB AML AML
comp=E,4893μm,1.1s

MTCE Montecelio 0.78 209 AML AML
comp=E,1415μm,0.5s
MTCE AML AML
comp=N,651μm,0.5s
ARVD Arcevia 0.82 345 P Pg 03 13 26.0 -0.3
ARVD AML AML
comp=E,636μm,1.1s
ARVD AML AML
comp=N,654μm,0.8s
ARVD AML AML
comp=E,636μm,1.1s
ATFO Monte Foce - G 0.82 324 AML AML
comp=E,1158μm,0.2s
ATFO AML AML
comp=N,1365μm,0.4s
INTR Introdacqua 0.85 144 AML AML
comp=E,596nm,0.6s
INTR AML AML
comp=N,1190μm,0.6s
INTR AML AML
comp=E,601μm,0.8s
INTR AML AML
comp=N,796nm,0.5s
MGAB Montegabbione 0.86 284 AML AML
comp=N,2205μm,0.5s
MGAB AML AML
comp=E,1765μm,0.8s
MGAB AML AML
comp=N,2235μm,0.5s
MGAB AML AML
comp=E,2035μm,1.4s
AOI Ancona 0.88 17 AML AML
comp=E,666μm,0.5s
AOI AML AML
comp=N,500μm,1.1s
FRON Frontone 0.90 335 AML AML
comp=N,1070μm,0.6s
FRON AML AML
comp=E,688μm,0.5s
ATVO AVT- Monte Val 0.91 318 AML AML
comp=N,634μm,0.4s
ATVO AML AML
comp=E,728μm,0.4s
LPEL Lama dei Pelig 0.96 133 AML AML
comp=E,561μm,0.7s
LPEL AML AML
comp=N,492μm,1.2s
LPEL AML AML
comp=N,493μm,1.2s
ATPI Pietralunga - 0.96 321 AML AML
comp=E,600μm,0.9s
ATPI AML AML
comp=N,468μm,1.1s
PIEI Piela 0.98 328 AML AML
comp=E,803μm,0.3s
PIEI AML AML
comp=N,490μm,1.1s
MPAG Monte Paganucc 0.99 339 AML AML
comp=E,835μm,0.5s
MPAG AML AML
comp=N,564μm,0.8s
SACS San Casciano d 0.99 279 AML AML
comp=N,652μm,0.8s
SACS AML AML
comp=E,592μm,1.1s
SACS AML AML
comp=N,658μm,0.8s
SACS AML AML
comp=E,531μm,1.1s
NARO Abbazia di Nar 1.02 332 AML AML
comp=N,318μm,1.4s
NARO AML AML
comp=E,440μm,0.8s
FSSB Fossombrone 1.04 341 AML AML
comp=E,2075μm,0.4s
FSSB AML AML
comp=N,2860μm,0.4s
FSSB AML AML
comp=N,2855μm,0.4s
APEC Apecchio 1.04 325 AML AML
comp=N,652μm,0.6s
APEC AML AML
comp=E,740μm,0.5s
CAFI Castiglion Fio 1.12 304 AML AML
comp=N,357μm,0.7s
CAFI AML AML
comp=E,452μm,0.6s
PESA Pesaro 1.27 347 AML AML
comp=N,905μm,1.1s
PESA AML AML
comp=E,1014μm,0.7s

IDC 24 03:15:29.0±4.2, 17°96S×174°13W, h216km±37km, mb3.1/4, mbtmp3.8/5, Error ellipse: s-maj=33.1km s-min=29.8km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.46**	**271**	P	Pn	03 17 15.3	0.0
	9.1nm,0.5s,baz=112,slow=19,SNR=9.0						
URZ	**Urewera**	**21.63**	**199**	P	P	03 20 02.3	0.0
	2.8nm,0.4s,baz=61,slow=11,SNR=6.8 2.8nm,0.4s						
WRA	**Warramunga Arr**	**48.63**	**259**	P	P	03 23 51.3	-0.2
	0.3nm,0.3s,baz=97,slow=7.2,SNR=8.7 0.3nm,0.3s						
ASAR	**Alice Springs**	**48.70**	**254**	P	P	03 23 52.0	-0.1
	0.7nm,0.6s,baz=89,slow=8.4,SNR=12 0.7nm,0.6s						
TXAR	**Lajitas Array**	**82.61**	**56**	P	P	03 27 28.5	0.0
	0.2nm,0.7s,baz=231,slow=7.9,SNR=3.7 0.2nm,0.7s						

ROM 24 03:15:36.5±0.1, 42°654N±0'005×13°201E±0'007, h11km±1km, ML2.3/7,1C, Error ellipse: s-maj=0.6km s-min=0.1km az=323.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.14**	**176**	P	Pg	03 15 40.5	+0.5
RM33				S	Sg	03 15 43.5	+1.0
RM33				AML	AML		
	comp=E,3105μm,1.5s						
RM33				AML	AML		
	comp=E,3095μm,1.5s						
RM33				AML	AML		
	comp=E,3110μm,1.5s						
RM33				AML	AML		
	comp=N,3585μm,1.0s						
RM33				AML	AML		
	comp=E,3100μm,1.5s						
RM33				AML	AML		
	comp=N,3655μm,0.9s						
RM33				AML	AML		
	comp=E,57750μm,0.2s						
RM33				AML	AML		
	comp=N,34650μm,1.3s						
RM33				AML	AML		
	comp=E,56650μm,0.2s						
RM33				AML	AML		
	comp=N,34500μm,1.3s						
RM33				AML	AML		
	comp=E,3098μm,1.5s						
CAMP	**Campotosto**	**0.19**	**128**	⇑P	Pg	03 15 41.1	+0.3
CAMP				S	Sg	03 15 44.5	+0.7
CAMP				AML	AML		
	comp=E,1120μm,0.4s						
CAMP				AML	AML		
	comp=N,794μm,0.4s						
CAMP				AML	AML		
	comp=E,20300μm,0.3s						
CAMP				AML	AML		
	comp=N,21950μm,0.5s						
CAMP				AML	AML		
	comp=E,1121μm,0.4s						
TERO	**Teramo**	**0.30**	**96**	P	Pg	03 15 42.5	-0.1
TERO				AML	AML		
	comp=E,1240μm,0.1s						
TERO				AML	AML		
	comp=E,1245μm,0.1s						
TERO				AML	AML		
	comp=N,1645μm,0.2s						
TERO				AML	AML		
	comp=E,1450μm,0.1s						
TERO				AML	AML		
	comp=N,1895μm,0.2s						
TERO				AML	AML		
	comp=E,18250μm,1.1s						
TERO				AML	AML		
	comp=N,18200μm,1.4s						
TERO				AML	AML		
	comp=E,20200μm,1.1s						
TERO				AML	AML		
	comp=N,20000μm,1.4s						
TERO				AML	AML		
	comp=N,1898μm,0.2s						
TERO				AML	AML		
	comp=E,1450μm,0.1s						
ARRO	**Arrone**	**0.33**	**257**	P	Pg	03 15 43.3	+0.2
ARRO				AML	AML		
	comp=E,1305μm,0.2s						
ARRO				AML	AML		
	comp=N,1176μm,1.3s						
ARRO				AML	AML		
	comp=N,1178μm,1.3s						
ARRO				AML	AML		
	comp=E,13650μm,1.0s						
ARRO				AML	AML		
	comp=N,11600μm,0.6s						
ARRO				AML	AML		
	comp=N,622μm,1.2s						
GIGS	**Gran Sasso**	**0.34**	**127**	P	Pg	03 15 43.4	+0.1
GIGS				AML	AML		
	comp=E,342μm,0.3s						
GIGS				AML	AML		
	comp=N,238μm,0.8s						
GIGS				AML	AML		
	comp=E,3225μm,0.4s						
GIGS				AML	AML		
	comp=N,3725μm,0.9s						
GIGS				AML	AML		
	comp=E,342μm,0.3s						
GIGS				AML	AML		
	comp=N,238μm,0.8s						
FDMO	**Fiordimonte**	**0.39**	**348**	P	Pg	03 15 44.6	+0.3
FDMO				S	Sg	03 15 50.2	+0.7
FDMO				END			
FIAM	**Fiamignano**	**0.39**	**189**	P	Pg	03 15 44.5	+0.2
FIAM				S	Sb	03 15 50.8	-0.7
OFFI	**Offida**	**0.45**	**52**	P	Pg	03 15 45.9	+0.5
OFFI				AML	AML		
	comp=E,4625μm,0.5s						
OFFI				AML	AML		
	comp=N,4030μm,0.5s						
OFFI				AML	AML		
	comp=E,51850μm,0.5s						
OFFI				AML	AML		
	comp=N,63850μm,0.5s						
CESX	**Cesi**	**0.46**	**265**	P	Pg	03 15 45.4	-0.2
CESX				S	Sb	03 15 52.5	-0.9
CESX				AML	AML		
	comp=E,1042μm,1.2s						
CESX				AML	AML		
	comp=N,1115μm,0.3s						
CESX				AML	AML		
	comp=N,1110μm,0.3s						
CESX				AML	AML		
	comp=E,5925μm,0.2s						
CESX				AML	AML		
	comp=N,9185μm,0.3s						
CESX				AML	AML		
	comp=E,358μm,0.3s						
VCEL	**Villa Celiera**	**0.54**	**119**	P	Pb	03 15 47.6	-0.4
VCEL				AML	AML		
	comp=E,670μm,0.4s						
VCEL				AML	AML		
	comp=N,574μm,0.8s						
VCEL				AML	AML		
	comp=N,574μm,0.8s						
VCEL				AML	AML		
	comp=E,10285μm,0.3s						
VCEL				AML	AML		
	comp=N,10700μm,0.3s						
VCEL				AML	AML		
	comp=E,703μm,1.7s						
TRTR	**Tortoreto Alta**	**0.55**	**73**	P	Pb	03 15 48.0	-0.1
TRTR				AML	AML		
	comp=E,3390μm,0.4s						
TRTR				AML	AML		
	comp=N,1720μm,0.4s						
TRTR				AML	AML		
	comp=E,3385μm,0.4s						
TRTR				AML	AML		
	comp=N,1905μm,1.3s						
TRTR				AML	AML		
	comp=E,39400μm,0.4s						
TRTR				AML	AML		
	comp=N,26200μm,0.5s						
T0110	**Collepietro**	**0.60**	**135**	P	Pg	03 15 48.4	+0.1
T0110				AML	AML		
	comp=N,630μm,0.4s						
T0110				AML	AML		
	comp=E,620μm,1.4s						
T0110				AML	AML		
	comp=E,8325μm,0.4s						
T0110				AML	AML		
	comp=N,9270μm,0.6s						
SRES	**S.Oreste - Sor**	**0.66**	**231**	AML	AML		
	comp=N,2880μm,1.1s						
SRES				AML	AML		
	comp=E,270μm,0.4s						
SRES				AML	AML		
	comp=N,170μm,1.1s						
SRES				AML	AML		
	comp=E,3255μm,0.9s						
CERT	**Cerreto**	**0.72**	**193**	P	Pg	03 15 50.0	-0.5
CERT				AML	AML		
	comp=E,416μm,0.6s						
CERT				AML	AML		
	comp=N,286μm,0.6s						
CERT				AML	AML		
	comp=E,5925μm,0.4s						
CERT				AML	AML		
	comp=N,3315μm,0.7s						
INTR	**Introdacqua**	**0.83**	**141**	P	Pg	03 15 51.8	-0.7
INTR				AML	AML		
	comp=E,151μm,0.5s						
INTR				AML	AML		
	comp=N,356μm,0.7s						
INTR				AML	AML		
	comp=E,2μm,1.3s						
INTR				AML	AML		
	comp=N,3μm,0.6s						
INTR				AML	AML		
	comp=E,1650μm,1.3s						
INTR				AML	AML		
	comp=N,4425μm,0.6s						
MGAB	**Montegabbione**	**0.84**	**288**	P	Pb	03 15 53.3	+0.1
MGAB				AML	AML		
	comp=E,526μm,1.0s						
MGAB				AML	AML		
	comp=N,736μm,0.7s						
MGAB				AML	AML		
	comp=E,560μm,0.5s						
MGAB				AML	AML		
	comp=N,756μm,0.7s						
MGAB				AML	AML		
	comp=E,7000μm,0.6s						
MGAB				AML	AML		
	comp=N,3980μm,0.5s						
MGAB				AML	AML		
	comp=E,7765μm,0.6s						
MGAB				AML	AML		
	comp=N,4140μm,0.5s						
CSNT	**Castellina Chi**	**1.62**	**301**	AML	AML		
	comp=N,217μm,0.5s						
CSNT				AML	AML		
	comp=E,81μm,0.5s						
CSNT				AML	AML		
	comp=N,90μm,0.3s						
CSNT				AML	AML		
	comp=E,331μm,0.5s						
OSSC	**Osservatorio P**	**1.68**	**302**	AML	AML		
	comp=E,104μm,0.4s						
OSSC				AML	AML		
	comp=N,79μm,1.1s						
OSSC				AML	AML		
	comp=E,180μm,1.1s						
OSSC				AML	AML		
	comp=N,208μm,0.6s						
ZOU	**Zoufplan**	**3.91**	**358**	AML	AML		
	comp=N,84μm,0.4s						
ZOU				AML	AML		
	comp=E,91μm,0.5s						

ROM 24 03:15:52.7±0.1, **42°.734N**±0°.004×**13°.158E**±0°.009, **h9**km, **ML2.7**/8, **Error ellipse: s-maj=0.7km s-min=0.2km az=78.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
NRCA	**Norcia**	**0.10**	**342**	P		Pg	03 15 55.8	+0.5
NRCA				S		Sg	03 15 57.9	+0.7
NRCA				AML		AML		
	comp=E,31850μm,0.1s							
NRCA				AML		AML		
	comp=N,51950μm,0.2s							
NRCA				AML		AML		
	comp=E,33650μm,0.1s							
NRCA				AML		AML		
	comp=N,56100μm,0.2s							
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
RM33	**Pellescritta (**	**0.23**	**169**	P		Pg	03 15 57.8	+0.4
RM33				S		Sg	03 16 02.0	+1.5
RM33				END				
FEMA	**Monte Fema**	**0.24**	**341**	P		Pg	03 15 58.4	+0.7
FEMA				S		Sg	03 16 02.0	+1.0
FEMA				AML		AML		
	comp=E,5795μm,1.5s							
FEMA				AML		AML		
	comp=N,6035μm,1.1s							
FEMA				AML		AML		
	comp=E,36450μm,0.6s							
FEMA				AML		AML		
	comp=N,50150μm,0.5s							
FEMA				AML		AML		
	comp=E,5792μm,1.4s							
CAMP	**Campotosto**	**0.27**	**137**	P		Pb	03 15 59.6	-0.2
FDMO	**Fiordimonte**	**0.31**	**350**	P		Pg	03 15 59.4	+0.6
FDMO				S		Sb	03 16 04.6	-1.0
FDMO				AML		AML		
	comp=E,1770μm,0.1s							
FDMO				AML		AML		
	comp=N,2040μm,0.3s							
FDMO				AML		AML		
	comp=E,10380μm,0.6s							
FDMO				AML		AML		
	comp=N,10920μm,0.3s							
FDMO				AML		AML		
	comp=N,2039μm,0.3s							
ARRO	**Arrone**	**0.33**	**242**	P		Pb	03 16 00.1	-0.6
ARRO				S		Sb	03 16 05.4	-0.7
ARRO				AML		AML		
	comp=E,1305μm,0.2s							
ARRO				AML		AML		
	comp=N,1176μm,1.3s							
ARRO				AML		AML		
	comp=E,13650μm,1.0s							
ARRO				AML		AML		
	comp=N,11600μm,0.6s							
ARRO				AML		AML		
	comp=N,1177μm,1.3s							
CESI	**CESI - Serrava**	**0.33**	**326**	P		Pg	03 15 59.8	+0.5
CESI				S		Sg	03 16 04.9	+1.2
CESI				AML		AML		
	comp=E,1260μm,0.4s							
CESI				AML		AML		
	comp=N,1955μm,1.3s							
CESI				AML		AML		
	comp=E,11600μm,1.3s							
CESI				AML		AML		
	comp=N,14350μm,1.6s							
CESI				AML		AML		
	comp=N,2097μm,1.6s							
OFFI	**Offida**	**0.44**	**62**	P		Pg	03 16 01.6	+0.3
ASSB	**Assisi San Ben**	**0.48**	**310**	P		Pg	03 16 02.1	+0.1
ASSB				S		Sb	03 16 09.9	-0.7
GAG1	**Gagliole**	**0.51**	**353**	P		Pb	03 16 03.4	-0.4
GAG1				S		Sb	03 16 10.6	-0.7
GAG1				AML		AML		
	comp=E,14190μm,0.4s							
GAG1				AML		AML		
	comp=N,20400μm,0.4s							
GAG1				AML		AML		
	comp=E,2821μm,1.1s							
SNTG	**Esanatoglia**	**0.55**	**343**	P		Pg	03 16 03.7	+0.5
SNTG				S		Sb	03 16 11.9	-0.5
SNTG				AML		AML		
	comp=E,434μm,0.8s							
SNTG				AML		AML		
	comp=N,468μm,0.3s							
SNTG				AML		AML		
	comp=E,437μm,0.6s							
SNTG				AML		AML		
	comp=N,427μm,0.4s							
SNTG				AML		AML		
	comp=E,3010μm,0.6s							
SNTG				AML		AML		
	comp=N,3455μm,0.4s							
SNTG				AML		AML		
	comp=N,467μm,0.3s							
SNTG				AML		AML		
	comp=E,408μm,1.0s							
TRTR	**Tortoreto Alta**	**0.56**	**82**	P		Pg	03 16 03.7	+0.1
ATFO	**Monte Foce - G**	**0.77**	**326**	P		Pb	03 16 07.9	-0.3
ATFO				AML		AML		
	comp=E,3190μm,1.2s							
ATFO				AML		AML		
	comp=N,2735μm,0.5s							
ARVD	**Arcevia**	**0.78**	**348**	P		Pg	03 16 08.0	+0.2
ARVD				S		Sb	03 16 19.8	+0.6
ARVD				AML		AML		
	comp=E,1680μm,1.0s							
ARVD				AML		AML		
	comp=N,1675μm,0.6s							
ARVD				AML		AML		
	comp=E,273μm,1.2s							

*BGR **24** 03:16:26.3±0.9, 42°.26N×13°.65E, h5km, ML3.8/11, Error ellipse: s-maj=12.2km s-min=10.0km az=145.0*
*PRU **24** 03:16:27.4±0.0, 42°.66N×13°.06E, h0km*
*IDC **24** 03:16:29.8±1.5, 42°.81N×12°.85E, h0km, mb3.4/3, mbtmp3.3/6, ML3.0/3, Error ellipse: s-maj=42.3km s-min=16.2km az=101.0*
*LDG **24** 03:16:29.7±0.1, 42°.73N×13°.18E, h6km, Ml2.8/17, Error ellipse: s-maj=3.3km s-min=2.1km az=48.0*
*ROM **24** 03:16:30.2±0.1, 42°.722N±0°.003×13°.161E±0°.006, h8km, ML3.5/79, Error ellipse: s-maj=0.5km s-min=0.2km az=247.0*
*PDG **24** 03:16:30.6±0.5, 42°.73N×13°.18E, h15km, ML3.6/10, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **24** 03:16:30.9±0.7, 42°.74N×13°.15E, h0km, ML3.7/8*

ISC 24 03:16:30.7±0.8, **42°.71N**±0°.01×**13°.12E**±0°.02, **h14**km±5km, **n291**, σ1§**69**/349, **32C-22D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
NRCA	**Norcia**	**0.13**	**357**	P		**Pg**	**03 16 33.5**	**-0.8**
NRCA				S		**Sg**	**03 16 35.7**	**-1.0**
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
RM33	**Pellescritta (**	**0.21**	**161**	P		**Pg**	**03 16 35.4**	**0.0**
RM33				S		**Sb**	**03 16 39.4**	**-0.8**
RM33				AML		AML		
	comp=E,57700μm,0.2s							
RM33				AML		AML		
	comp=N,34700μm,1.3s							
RM33				AML		AML		
	comp=E,57750μm,0.2s							
RM33				AML		AML		
	comp=N,34500μm,1.3s							
RM33				AML		AML		
	comp=E,56650μm,0.2s							
RM33				AML		AML		
	comp=N,34650μm,1.3s							
FEMA	**Monte Fema**	**0.26**	**348**	P		**Pg**	**03 16 35.8**	**-0.6**
FEMA				S		**Sg**	**03 16 40.0**	**-0.2**
FEMA				AML		AML		
	comp=E,36400μm,0.6s							
FEMA				AML		AML		
	comp=N,50150μm,0.5s							
FEMA				AML		AML		
	comp=E,36450μm,0.6s							
FEMA				AML		AML		
	comp=N,50150μm,0.5s							
CAMP	**Campotosto**	**0.27**	**129**	⇓P		**Pg**	**03 16 36.1**	**-0.4**
CAMP				S		**Sg**	**03 16 40.1**	**-0.3**
CAMP				AML		AML		
	comp=E,20300μm,0.3s							
CAMP				AML		AML		
	comp=N,21950μm,0.5s							
ARRO	**Arrone**	**0.29**	**244**	⇑P		**Pg**	**03 16 37.2**	**+0.4**
ARRO				S		**Sb**	**03 16 42.6**	**+0.1**
ARRO				AML		AML		
	comp=E,13650μm,1.0s							
ARRO				AML		AML		
	comp=N,11600μm,0.6s							
ARRO				AML		AML		
	comp=N,11550μm,0.6s							
FDMO	**Fiordimonte**	**0.33**	**355**	⇑P		**Pg**	**03 16 36.8**	**-0.7**
FDMO				S		**Sg**	**03 16 41.7**	**-0.5**
FDMO				AML		AML		
	comp=N,10920μm,0.3s							
FDMO				AML		AML		
	comp=E,10380μm,0.6s							
FDMO	**Fiordimonte**	**0.33**	**355**	AML		AML		
	comp=E,35900μm,1.0s							
FDMO	**Fiordimonte**	**0.33**	**355**	AML		AML		
	comp=N,37400μm,0.6s							
CESI	**CESI - Serrava**	**0.34**	**332**	⇑P		**Pg**	**03 16 37.3**	**-0.3**
CESI				S		**Sg**	**03 16 43.1**	**+0.7**
CESI				AML		AML		
	comp=N,14350μm,1.6s							
CESI				AML		AML		
	comp=E,11600μm,1.3s							
CESI	**CESI - Serrava**	**0.34**	**332**	AML		AML		
	comp=N,90650μm,0.4s							
CESI	**CESI - Serrava**	**0.34**	**332**	AML		AML		
	comp=E,68300μm,0.4s							
TERO	**Teramo**	**0.36**	**103**	P		**Pg**	**03 16 37.2**	**-0.9**
TERO				S		**Sg**	**03 16 42.4**	**-0.7**
TERO				AML		AML		
	comp=N,20000μm,1.4s							
TERO				AML		AML		
	comp=N,18200μm,1.4s							
TERO				AML		AML		
	comp=E,20200μm,1.1s							
TERO				AML		AML		
	comp=E,18250μm,1.1s							
TERO				AML		AML		
	comp=N,18250μm,1.4s							
GUMA	**Gualdo di Mace**	**0.39**	**24**	⇑P		**Pg**	**03 16 38.0**	**-0.6**
GUMA				S		**Sg**	**03 16 44.0**	**+0.1**
GUMA				AML		AML		
	comp=E,76000μm,0.3s							
GUMA				AML		AML		
	comp=N,66600μm,0.4s							
GUMA				AML		AML		
	comp=E,87300μm,0.3s							
GUMA				AML		AML		
	comp=E,75950μm,0.3s							
GUMA				AML		AML		
	comp=N,66650μm,0.4s							
GUMA				AML		AML		
	comp=N,76650μm,1.0s							
AQU	**L'Aquila**	**0.41**	**150**	P		**Pg**	**03 16 38.6**	**-0.3**
AQU				S		**Sb**	**03 16 45.5**	**-0.3**
AQU				AML		AML		
	comp=E,9670μm,0.3s							
AQU				AML		AML		
	comp=N,10010μm,0.3s							
AQU				AML		AML		
	comp=N,9700μm,0.3s							
AQU				AML		AML		
	comp=E,9675μm,0.3s							
AQU				AML		AML		
	comp=N,10015μm,0.3s							
AQU				AML		AML		
	comp=E,9885μm,0.3s							
CESX	**Cesi**	**0.41**	**257**	⇑P		**Pg**	**03 16 39.0**	**+0.1**
CESX				S		**Sb**	**03 16 46.2**	**+0.3**
CESX				AML		AML		
	comp=N,9185μm,0.3s							
CESX				AML		AML		
	comp=E,5925μm,0.2s							
GIGS	**Gran Sasso**	**0.42**	**128**	P		**Pg**	**03 16 38.3**	**-0.8**
GIGS				S		**Sg**	**03 16 44.6**	**-0.2**
GIGS				AML		AML		
	comp=E,3225μm,0.4s							
GIGS				AML		AML		
	comp=N,3725μm,0.9s							
FIAM	**Fiamignano**	**0.44**	**181**	⇑P		**Pg**	**03 16 39.4**	**-0.1**
FIAM				S		**Sb**	**03 16 46.6**	**-0.1**
FIAM				AML		AML		
	comp=E,19250μm,0.2s							
FIAM				AML		AML		
	comp=N,14500μm,0.3s							
SEF1	**Sefro**	**0.46**	**344**	P		**Pg**	**03 16 39.3**	**-0.5**
SEF1				S		**Sb**	**03 16 46.7**	**-0.6**
SEF1				AML		AML		
	comp=E,12650μm,0.2s							
SEF1				AML		AML		
	comp=E,12700μm,0.2s							
SEF1				AML		AML		
	comp=N,10550μm,0.3s							
OFFI	**Offida**	**0.47**	**61**	⇑P		**Pg**	**03 16 39.8**	**-0.2**
OFFI				AML		AML		
	comp=E,51850μm,0.5s							
OFFI				AML		AML		
	comp=N,63850μm,0.5s							
OFFI	**Offida**	**0.47**	**61**	AML		AML		
	comp=N,67750μm,0.5s							
OFFI	**Offida**	**0.47**	**61**	AML		AML		
	comp=E,36300μm,0.6s							
OFFI	**Offida**	**0.47**	**61**	AML		AML		
	comp=E,33950μm,1.0s							
ASSB	**Assisi San Ben**	**0.48**	**315**	P		**Pg**	**03 16 39.6**	**-0.6**
ASSB				S		**Sb**	**03 16 47.6**	**-0.3**
ASSB				AML		AML		
	comp=N,5220μm,0.3s							
ASSB				AML		AML		
	comp=E,6325μm,0.5s							
PIO1	**Pioraco**	**0.48**	**348**	P		**Pg**	**03 16 39.7**	**-0.6**
PIO1				AML		AML		
	comp=E,6280μm,1.4s							
PIO1				AML		AML		
	comp=N,7270μm,1.0s							
MDAR	**Monte D'Aria**	**0.49**	**2**	P		**Pg**	**03 16 39.6**	**-0.7**
MDAR				S		**Sg**	**03 16 47.0**	**+0.2**
MDAR				AML		AML		
	comp=E,5865μm,0.4s							
MDAR				AML		AML		
	comp=N,6970μm,0.5s							
FIU1	**Fiuminata**	**0.50**	**344**	P		**Pg**	**03 16 40.4**	**-0.3**
FIU1				AML		AML		
	comp=E,5830μm,0.4s							
FIU1				AML		AML		
	comp=N,5365μm,0.5s							
FIU1				AML		AML		
	comp=N,5370μm,0.4s							
FIU1				AML		AML		
	comp=E,5825μm,0.4s							
SSM1	**San Severino M**	**0.52**	**4**	P		**Pg**	**03 16 40.3**	**-0.7**
GAG1	**Gagliole**	**0.53**	**356**	P		**Pg**	**03 16 40.9**	**-0.3**
GAG1				AML		AML		
	comp=E,14210μm,0.4s							
GAG1				AML		AML		
	comp=N,20350μm,0.4s							
GAG1				AML		AML		
	comp=E,14190μm,0.4s							
GAG1				AML		AML		
	comp=N,20400μm,0.4s							
GAG1				AML		AML		
	comp=E,14205μm,0.4s							
FAGN	**Fagnano**	**0.56**	**142**	⇑P		**Pg**	**03 16 41.0**	**-0.6**
FAGN				S		**Sb**	**03 16 50.0**	**-0.1**
FAGN				AML		AML		
	comp=N,18900μm,1.4s							
FAGN				AML		AML		
	comp=E,18150μm,0.7s							
SNTG	**Esanatoglia**	**0.56**	**346**	P		**Pg**	**03 16 41.0**	**-0.8**
SNTG				S		**Sg**	**03 16 49.8**	**+0.5**
SNTG				AML		AML		
	comp=E,438μm,0.6s							
SNTG				AML		AML		
	comp=N,427μm,0.4s							
SNTG				AML		AML		
	comp=N,3455μm,0.4s							
SNTG				AML		AML		
	comp=E,437μm,0.6s							
SNTG				AML		AML		
	comp=N,427μm,0.4s							
SNTG				AML		AML		
	comp=E,3010μm,0.6s							
TRTR	**Tortoreto Alta**	**0.59**	**80**	P		**Pg**	**03 16 42.2**	**0.0**
TRTR				AML		AML		
	comp=N,26200μm,0.5s							
TRTR				AML		AML		
	comp=E,39400μm,0.4s							
ATCC	**AVT- Casa Cast**	**0.59**	**324**	P		**Pg**	**03 16 42.0**	**-0.4**
ATCC				S		**Sb**	**03 16 51.5**	**+0.3**
ATCC				AML		AML		
	comp=E,4870μm,0.6s							
ATCC				AML		AML		
	comp=N,4720μm,0.5s							
ATCC				AML		AML		
	comp=N,4715μm,0.5s							
ATCC				AML		AML		
	comp=E,4865μm,0.6s							
VCEL	**Villa Celiera**	**0.61**	**120**	P		**Pg**	**03 16 42.1**	**-0.6**
VCEL				AML		AML		
	comp=E,10295μm,0.3s							
VCEL				AML		AML		
	comp=E,10285μm,0.3s							
VCEL				AML		AML		
	comp=N,10700μm,0.3s							
VCEL				AML		AML		
	comp=E,10315μm,0.3s							
TRE1	**Treia**	**0.62**	**13**	P		**Pg**	**03 16 42.6**	**-0.2**
TRE1				AML		AML		
	comp=E,21100μm,0.4s							
TRE1				AML		AML		
	comp=N,12550μm,0.4s							
TRE1				AML		AML		
	comp=E,21050μm,0.4s							
EL6	**Elcito**	**0.62**	**359**	P		**Pg**	**03 16 42.0**	**-0.9**
EL6				S		**Sb**	**03 16 51.7**	**-0.3**
EL6				AML		AML		
	comp=N,7815μm,0.7s							
EL6				AML		AML		
	comp=E,6795μm,1.5s							
EL6				AML		AML		
	comp=N,7810μm,0.7s							
FOSV	**Fossato di Vic**	**0.65**	**336**	P		**Pg**	**03 16 42.6**	**-0.7**
FOSV				AML		AML		
	comp=N,3260μm,0.5s							
FOSV				AML		AML		
	comp=E,2695μm,0.3s							
SRES	**S.Oreste - Sor**	**0.65**	**224**	P		**Pg**	**03 16 43.3**	**-0.2**
SRES				AML		AML		
	comp=E,3255μm,0.9s							
SRES				AML		AML		
	comp=N,2880μm,1.1s							
CADA	**Capodarco di F**	**0.68**	**44**	P		**Pb**	**03 16 44.1**	**-0.1**
CADA				AML		AML		
	comp=E,22750μm,0.4s							
CADA				AML		AML		
	comp=N,21800μm,0.4s							
CADA				AML		AML		
	comp=E,22750μm,0.4s							
T0110	**Collepietro**	**0.68**	**134**	⇑P		**Pg**	**03 16 43.0**	**-1.0**
T0110				S		**Sb**	**03 16 54.1**	**+0.4**
T0110				AML		AML		
	comp=E,8325μm,0.4s							
T0110				AML		AML		
	comp=N,9275μm,0.6s							
T0110				AML		AML		
	comp=N,9270μm,0.6s							
MURB	**Monte Urbino**	**0.71**	**322**	P		**Pg**	**03 16 44.2**	**-0.3**
MURB				AML		AML		
	comp=E,8395μm,0.4s							
MURB				AML		AML		
	comp=N,8340μm,0.3s							
MURB				AML		AML		
	comp=E,9255μm,0.4s							
MURB				AML		AML		
	comp=E,8400μm,0.4s							
MURB				AML		AML		
	comp=N,8365μm,0.3s							
MURB				AML		AML		
	comp=N,8345μm,0.3s							
MTCE	**Montecelio**	**0.74**	**203**	P		**Pg**	**03 16 44.4**	**-0.7**
MTCE				AML		AML		
	comp=N,2175μm,1.0s							
MTCE				AML		AML		
	comp=E,4855μm,0.5s							
MTCE				AML		AML		
	comp=N,2170μm,1.0s							
PP3	**Marolino**	**0.76**	**28**	P		**Pg**	**03 16 45.1**	**-0.4**
PP3				AML		AML		
	comp=E,17600μm,0.4s							
PP3				AML		AML		
	comp=N,25250μm,0.4s							
PP3				AML		AML		
	comp=E,16100μm,0.4s							
PP3				AML		AML		
	comp=N,26600μm,0.4s							
PP3				AML		AML		
	comp=N,26550μm,0.4s							
PP3				AML		AML		
	comp=E,17550μm,0.4s							
PP3				AML		AML		
	comp=N,25250μm,0.4s							
CERT	**Cerreto**	**0.77**	**188**	P		**Pg**	**03 16 44.7**	**-0.8**
CERT				AML		AML		
	comp=N,3345μm,0.9s							
CERT				AML		AML		
	comp=E,5925μm,0.4s							
SSFR	**Montelago di S**	**0.77**	**341**	P		**Pg**	**03 16 45.1**	**-0.6**
SSFR				AML		AML		
	comp=E,5870μm,0.7s							
SSFR				AML		AML		
	comp=N,4205μm,0.3s							
SSFR				AML		AML		
	comp=N,4450μm,0.3s							
SSFR				AML		AML		
	comp=E,6325μm,0.7s							
MGAB	**Montegabbione**	**0.77**	**286**	P		**Pb**	**03 16 46.2**	**+0.3**
MGAB				AML		AML		
	comp=E,6995μm,0.6s							
MGAB				AML		AML		
	comp=N,4135μm,0.5s							
MGAB				AML		AML		
	comp=E,7000μm,0.6s							
MGAB				AML		AML		
	comp=N,4140μm,0.5s							
MGAB				AML		AML		
	comp=N,3980μm,0.5s							
MGAB				AML		AML		
	comp=E,7765μm,0.6s							
ATFO	**Monte Foce - G**	**0.77**	**329**	P		**Pg**	**03 16 45.2**	**-0.6**
ATFO				AML		AML		
	comp=E,3190μm,1.2s							
ATFO				AML		AML		
	comp=N,2735μm,0.5s							
ARVD	**Arcevia**	**0.80**	**351**	P		**Pg**	**03 16 45.1**	**-1.1**
ARVD				S		**Sb**	**03 16 57.3**	**+0.1**
ARVD				AML		AML		
	comp=E,1680μm,1.0s							
ARVD				AML		AML		
	comp=N,1675μm,0.6s							
ATVO	**AVT- Monte Val**	**0.85**	**322**	P		**Pg**	**03 16 46.5**	**-0.8**
ATVO				AML		AML		
	comp=E,2395μm,0.8s							
ATVO				AML		AML		
	comp=N,1795μm,0.6s							
FRON	**Frontone**	**0.86**	**340**	P		**Pg**	**03 16 46.1**	**-1.3**
FRON				AML		AML		
	comp=N,3005μm,0.5s							
FRON				AML		AML		
	comp=E,2345μm,0.9s							
RCAV	**Rocca di Cave**	**0.87**	**189**	P		**Pg**	**03 16 47.2**	**-0.3**
RCAV				AML		AML		
	comp=N,6095μm,1.6s							
RCAV				AML		AML		
	comp=N,6100μm,1.6s							
RCAV				AML		AML		
	comp=E,4230μm,0.4s							
ATMI	**Monte Miggiano**	**0.89**	**315**	AML		AML		
	comp=N,4770μm,0.5s							

ATMI AML AML
comp=E,7175µm,0.7s
INTR Introdacqua 0.91 140 P **Pg 03 16 46.7 -1.5**
INTR AML AML
comp=E,3µm,0.9s
INTR AML AML
comp=E,2530µm,0.9s
INTR AML AML
comp=E,3µm,0.9s
INTR AML AML
comp=N,3µm,0.6s
INTR AML AML
comp=N,3µm,0.6s
INTR AML AML
comp=N,4425µm,0.6s
SACS San Casciano d 0.91 279 P **Pb 03 16 48.2 0.0**
SACS AML AML
comp=E,2305µm,0.9s
SACS AML AML
comp=E,2150µm,0.9s
SACS AML AML
comp=N,1920µm,0.9s
SACS AML AML
comp=N,1915µm,1.2s
AOI Ancona 0.91 22 P **Pg 03 16 47.1 -1.2**
AOI AML AML
comp=N,4600µm,0.4s
AOI AML AML
comp=E,3475µm,0.4s
VVLD Villa Vallelon 0.91 156 P **Pg 03 16 48.1 -0.3**
VVLD AML AML
comp=E,1705µm,1.4s
VVLD AML AML
comp=N,2355µm,0.8s
GUAR Guarcino 0.92 171 P **Pg 03 16 47.9 -0.6**
GUAR AML AML
comp=N,4100µm,0.6s
GUAR AML AML
comp=E,3350µm,1.1s
COR1 Corinaldo 0.93 354 P **Pg 03 16 48.6 -0.1**
COR1 AML AML
comp=E,7710µm,0.6s
COR1 AML AML
comp=N,6550µm,0.7s
PIEI Pieia 0.93 333 P **Pg 03 16 48.0 -0.8**
PIEI AML AML
comp=N,1550µm,0.4s
PIEI AML AML
comp=E,1795µm,0.3s
RMP Rome, Mte Porz 0.95 199 P **Pn 03 16 49.5 -0.1**
RMP AML AML
comp=E,3185µm,0.5s
RMP AML AML
comp=N,5100µm,0.7s
MPAG Monte Paganucc 0.96 344 P **Pg 03 16 47.9 -1.3**
MPAG AML AML
comp=E,2665µm,0.8s
MPAG AML AML
comp=N,2655µm,0.7s
MPAG AML AML
comp=N,2650µm,0.7s
MPAG AML AML
comp=E,2670µm,0.8s
NARO Abbazia di Nar 0.99 336 P **Pb 03 16 48.7 -0.9**
NARO AML AML
comp=E,1795µm,0.7s
NARO AML AML
comp=N,1370µm,0.8s
VIVA Pratoni del Vi 0.99 195 P **Pg 03 16 49.8 -0.1**
VIVA AML AML
comp=N,6870µm,0.4s
VIVA AML AML
comp=E,5550µm,1.1s
APEC Apecchio 0.99 329 P **Pb 03 16 49.8 +0.1**
APEC AML AML
comp=N,3685µm,0.4s
APEC AML AML
comp=E,3385µm,0.6s
RDP Rocca di Papa 0.99 198 P **Pn 03 16 50.3 +0.1**
RDP AML AML
comp=E,9275µm,0.4s
RDP AML AML
comp=N,6655µm,1.6s
SENI Senigallia 1.00 5 P **Pb 03 16 49.6 -0.2**
FSSB Fossombrone 1.02 346 P **Pb 03 16 49.2 -0.9**
FSSB AML AML
comp=E,5725µm,1.6s
FSSB AML AML
comp=N,8160µm,0.4s
LPEL Lama dei Pelig 1.03 130 P **Pb 03 16 48.7 -1.6**
LPEL AML AML
comp=N,2195µm,0.5s
LPEL AML AML
comp=E,2670µm,0.5s
BADI Badiali 1.03 322 P **Pb 03 16 50.4 +0.1**
BADI AML AML
comp=N,2220µm,0.7s
BADI AML AML
comp=E,212µm,0.6s
TOLF Tolfa 1.05 233 P **Pb 03 16 50.5 -0.2**
TOLF AML AML
comp=E,1320µm,0.7s
TOLF AML AML
comp=N,1525µm,0.5s
CAFI Castiglion Fio 1.05 307 P **Pb 03 16 50.6 -0.1**
CAFI AML AML
comp=E,1365µm,0.6s
CAFI AML AML
comp=N,1260µm,0.7s
MCIV Monte Civitell 1.07 274 P **Pn 03 16 51.4 +0.1**
MCIV AML AML
comp=E,960µm,0.8s
MCIV AML AML
comp=N,672µm,1.2s
LAV9 Lanuvio 1.08 197 P **Pb 03 16 50.9 -0.2**
LAV9 AML AML
comp=E,5500µm,0.3s
LAV9 AML AML
comp=E,5705µm,0.4s
LAV9 AML AML
comp=N,5840µm,0.4s
LAV9 AML AML
comp=N,5495µm,0.5s
POFI Posta Fibreno 1.08 156 P **Pb 03 16 50.6 -0.6**
POFI AML AML
comp=E,1290µm,1.2s
POFI AML AML
comp=N,930µm,0.9s
POFI AML AML
comp=N,912µm,0.8s
POFI AML AML
comp=E,1200µm,1.2s
PE3 Peglio 1.09 335 P **Pb 03 16 51.3 -0.1**
LRP Arpino 1.11 162 P **Pb 03 16 51.4 -0.3**
LRP AML AML
comp=N,1240µm,0.7s
LRP AML AML
comp=E,953µm,0.7s
PARC Parchiule 1.14 326 P **Pb 03 16 52.1 -0.1**
PARC AML AML
comp=E,1710µm,1.1s
PARC AML AML
comp=N,1405µm,1.1s
GIUL Giuliano Di Ro 1.15 175 P **Pb 03 16 51.7 -0.7**
GIUL AML AML
comp=E,1345µm,0.6s
GIUL AML AML
comp=N,1410µm,0.5s
SF01 Poggio Pratacc 1.15 276 P **Pg 03 16 53.0 0.0**
SF01 AML AML
comp=E,1697µm,0.5s
SF01 AML AML
comp=N,1121µm,1.3s
ARCI Arcidosso 1.22 277 P **Pb 03 16 53.9 +0.3**
ARCI AML AML
comp=E,361µm,0.5s
ARCI AML AML
comp=N,390µm,1.5s
LIK San Giovanni I 1.24 165 P **Pg 03 16 54.6 0.0**
PESA Pesaro 1.25 351 P **Pb 03 16 54.1 0.0**
PESA AML AML
comp=N,3310µm,0.5s
PESA AML AML
comp=E,3595µm,1.0s
FRES Fresagrandinar 1.36 122 P **Pb 03 16 55.7 -0.2**
CSNT Castellina Chi 1.54 300 P **Pn 03 16 58.3 +0.4**
CSNT AML AML
comp=E,331µm,0.5s
CSNT AML AML
comp=N,244µm,0.6s
OSSC Osservatorio P 1.60 301 P **Pn 03 16 59.2 +0.6**
OSSC AML AML
comp=E,291µm,1.6s
OSSC AML AML
comp=N,408µm,0.6s
RUFI Rufina 1.63 314 P **Pn 03 16 59.8 +0.8**
MODR Mondragone 1.66 160 AML AML
comp=E,310µm,0.7s
MODR AML AML
comp=N,332µm,1.1s
CASP Castiglione de 1.67 274 P **Pn 03 16 59.8 +0.3**
CASP AML AML
comp=N,206µm,0.9s
CASP AML AML
comp=E,140µm,0.7s
CASP Castiglione de 1.67 274 AML AML
comp=N,274µm,0.8s
CASP Castiglione de 1.67 274 AML AML
comp=E,394µm,0.6s
TRIF Trifonti 1.68 285 P **Pn 03 17 00.5 +0.8**
TRIF AML AML
comp=E,252µm,0.6s
TRIF AML AML
comp=N,272µm,0.7s
CIGN Sant'Elia a Pi 1.69 128 P **Pb 03 17 01.6 0.0**
LMD Lutirano 1.71 323 P **Pb 03 17 01.4 -0.6**
MELA Melanico ??? S 1.79 123 P **Pb 03 17 02.9 -0.4**
DUGI Dugi Otok 1.91 47 *e*Pn **Pn 03 17 02.6 -0.2**
MPPT Montemurlo 1.94 311 P **Pn 03 17 03.9 +0.7**
APRC Apricena 2.03 117 P **Pn 03 17 05.9 +1.3**
APRC AML AML
comp=N,847µm,0.5s
APRC AML AML
comp=E,424µm,0.3s
MTCR Monte La Croce 2.04 311 P **Pn 03 17 05.5 +0.8**
FNVD Fontana Vidola 2.06 316 P **Pn 03 17 06.0 +1.0**
VIRC Vir 2.12 41 *e*Pn **Pn 03 17 05.2 -0.4**
CELB S.Piero in Cam 2.15 272 P **Pn 03 17 06.3 +0.2**
CELB AML AML
comp=N,109µm,0.9s
CELB AML AML
comp=E,102µm,0.5s
SGRT San Giovanni R 2.17 115 P **Pn 03 17 07.7 +1.3**
SGRT AML AML
comp=N,720µm,0.4s
SGRT AML AML
comp=E,690µm,0.5s
BRJN Brijuni 2.24 11 *e*Pn **Pn 03 17 07.2 -0.2**
BDI Bagni Di Lucca 2.29 307 P **Pn 03 17 08.1 0.0**
BDI AML AML
comp=N,83µm,0.5s
BDI AML AML
comp=E,65µm,0.4s
MSAG Monte S. Angel 2.30 115 P **Pn 03 17 09.4 +1.2**
RABC Rab 2.37 30 *e*Pn **Pn 03 17 08.6 -0.5**
SMRN Sveta Marina 2.44 17 *e*Pn **Pn 03 17 09.9 -0.2**
VLC Villacollemand 2.47 307 P **Pn 03 17 10.5 0.0**
VLC AML AML
comp=E,89µm,0.7s
VLC AML AML
comp=E,103µm,1.1s
VLC AML AML
comp=N,108µm,0.9s
VLC AML AML
comp=N,107µm,0.6s
UDBI Udbina 2.64 46 *e*Pn **Pn 03 17 13.6 +0.7**
A250A Rusevo Krmpots 2.71 28 *e*Pn **Pn 03 17 14.0 +0.2**
KIJV Kijevo 2.72 60 *e*Pn **Pn 03 17 14.7 +0.7**
PLMA Palmaria, Port 2.74 300 AML AML
comp=E,78µm,0.6s
PLMA AML AML
comp=N,85µm,0.4s
LSTV Lastovo 2.78 87 *e*Pn **Pn 03 17 15.0 +0.2**
PLIT Plitvice 2.83 39 *e*Pn **Pn 03 17 15.7 +0.3**
SMPL Sampolo 2.91 259 AML AML
comp=N,33µm,1.6s
SMPL AML AML
comp=E,38µm,1.6s
SKDS Skadanscina 2.91 12 *i* Pn **Pn 03 17 16.1 -0.5**
SKDS *i* Sn **Sn 03 17 50.0 -1.4**
SKDS IAML 03 17 58.5
comp=Z,50nm,0.3s
MAKA Makarska 2.92 77 *e*Pn **Pn 03 17 16.8 +0.1**
RICI Ricice 3.04 74 *e*Pn **Pn 03 17 19.1 +0.7**
PGF Pioggiola 3.05 268 *e*P **Pn 03 17 20.0 +1.4**
PGF *e*Sn **Sn 03 17 52.3 -2.6**
comp=Z,8.3nm,0.4s
MSSA Maissana 3.08 303 AML AML
comp=E,70µm,0.6s
MSSA AML AML
comp=N,91µm,0.9s
AMUR Altamura 3.16 123 AML AML
comp=E,184µm,0.4s
AMUR AML AML
comp=N,163µm,0.6s
ROVR Rover Verones 3.29 334 AML AML
comp=E,59µm,1.0s
ROVR AML AML
comp=N,126µm,0.7s
SABO M.te Sabotino 3.29 6 AML AML
comp=E,1530µm,0.5s
SABO AML AML
comp=E,323µm,0.8s
SABO AML AML
comp=N,405µm,0.6s
SABO AML AML
comp=N,1660µm,0.8s
CGRP Cima Grappa 3.31 344 AML AML
comp=E,268µm,0.7s
CGRP AML AML
comp=E,309µm,0.5s
CGRP AML AML
comp=N,474µm,0.6s
CGRP AML AML
comp=N,435µm,0.5s
A251A Rujevac 3.32 42 *e*Pn **Pn 03 17 22.8 +0.6**
OZLJ Ozalj 3.36 29 *e*Pn **Pn 03 17 22.8 +0.1**
VARN Col Varnada, M 3.37 348 AML AML
comp=N,299µm,0.5s
VARN AML AML
comp=E,454µm,0.4s
STON Ston 3.37 86 *e*Pn **Pn 03 17 21.9 -1.0**
STON Ston 3.37 86 *e*Pn **Pn 03 17 22.4 -0.5**
STON *e*Sn **Sn 03 18 03.3 +0.6**
STON Ston 3.37 86 AML AML
comp=N,109µm,1.0s
STON AML AML
comp=E,144µm,0.6s
DOSS Dosso del Somm 3.46 337 AML AML
comp=E,202µm,1.4s
DOSS AML AML
comp=E,174µm,0.3s
DOSS AML AML
comp=N,198µm,0.6s
DOSS AML AML
comp=N,168µm,0.4s
LJU Ljubljana 3.48 16 AML AML
comp=E,818µm,0.7s
LJU AML AML
comp=N,1322µm,0.6s
MPRI Monte Prat 3.54 358 AML AML
comp=N,318µm,0.5s
MPRI AML AML
comp=E,354µm,1.5s
MAGA Magasa 3.55 331 AML AML
comp=N,454µm,0.5s
MAGA AML AML
comp=E,760µm,0.7s
STAL STALIGIAL 3.56 355 AML AML
comp=N,256µm,0.7s
STAL AML AML
comp=E,344µm,0.3s
BLY Banja Luka 3.58 54 *e*Pn **Pn 03 17 27.0 +1.2**
LUSI Trento, Gardas 3.61 335 AML AML
comp=N,290µm,0.4s
LUSI AML AML
comp=E,190µm,0.7s
CIMO Cimolais 3.64 353 AML AML
comp=E,77µm,1.5s
CIMO AML AML
comp=N,90µm,1.4s
CIMO AML AML
comp=E,83µm,1.5s
CIMO AML AML
comp=N,77µm,1.4s
PTCC Patocco-Chiusa 3.70 2 AML AML
comp=N,119µm,1.4s
PTCC AML AML
comp=E,104µm,0.4s
DBRK Dubrovnik 3.70 89 *e*Pn **Pn 03 17 26.9 -0.6**
ZONE Zone 3.74 326 AML AML
comp=E,126µm,0.7s
ZONE AML AML
comp=N,179µm,0.4s
CLUD Cludinico 3.75 357 AML AML
comp=N,160µm,0.8s
CLUD AML AML
comp=E,141µm,0.8s
PTJ Puntijarka 3.79 32 *e*Pn **Pn 03 17 28.4 -0.4**
ACOM Acomizza, Ital 3.85 4 AML AML
comp=E,284µm,0.4s
ACOM AML AML
comp=E,274µm,0.4s
ACOM AML AML
comp=N,275µm,1.4s
ACOM AML AML
comp=N,231µm,1.4s
ZOU Zoufplan 3.85 358 AML AML
comp=N,144µm,1.0s
ZOU AML AML
comp=E,160µm,0.9s
MOSL Moslavina 3.91 41 *e*Pn **Pn 03 17 28.9 -1.3**
OBKA Obir 3.94 14 *e*Pn **Pn 03 17 31.3 +0.6**
comp=E,5.2nm,0.5s
OBKA Obir 3.94 14 *e*Pn **Pn 03 17 31.4 +0.6**
MYKA Terra Mystica 3.94 5 *i* Pn **Pn 03 17 30.4 -0.4**
comp=E,6.9nm,0.2s,SNR=4.9
KOSI Kohlern 3.96 342 AML AML
comp=N,168µm,1.6s
KOSI AML AML
comp=E,212µm,0.7s
HCY Herceg Novi 3.98 92 ⇓ *i* Pn **Pn 03 17 31.5 +0.3**
HCY *i* Sn **Sn 03 18 16.0 -1.6**
HCY Herceg Novi 3.98 92 ⇑ *i* Pn **Pn 03 17 32.0 +0.8**
HCY *i* Sn **Sn 03 18 14.9 -2.7**
BRY Bratogost 3.99 85 ⇓ *i* Pn **Pn 03 17 32.0 +0.5**
BRY *i* Sn **Sn 03 18 18.7 +0.5**
LOBO Lobor 4.04 30 *e*Pn **Pn 03 17 31.5 -0.6**
ABTA Abfaltersbach 4.06 354 Pn **Pn 03 17 33.6 +1.1**
comp=E,39nm,0.5s,SNR=44
SOKA Soboth 4.20 18 *e*Pn **Pn 03 17 34.5 +0.2**
comp=E,2.0nm,0.5s
UPM Unac-Piva 4.27 81 ⇑ *i* Pn **Pn 03 17 36.7 +1.2**
UPM *i* Sn **Sn 03 18 24.1 -1.1**
UPM Unac-Piva 4.27 81 ⇓ *i* Pn **Pn 03 17 37.4 +1.9**
UPM *i* Sn **Sn 03 18 24.2 -1.0**
UPM Unac-Piva 4.27 81 ⇓ *i* Pn **Pn 03 17 36.5 +1.0**
UPM *i* Sn **Sn 03 18 25.7 +0.5**
CEME Cevo 4.28 90 ⇓ *i* Pn **Pn 03 17 36.1 +0.7**
CEME *i* Sn **Sn 03 18 24.7 -0.5**
CEME Cevo 4.28 90 ⇑ *i* Pn **Pn 03 17 36.5 +1.1**
CEME *i* Sn **Sn 03 18 22.7 -2.5**
CEME Cevo 4.28 90 ⇓ *i* Pn **Pn 03 17 36.3 +0.9**
CEME *i* Sn **Sn 03 18 25.6 +0.4**
BUM Brajici-Budva 4.29 93 ⇓ *i* Pn **Pn 03 17 36.0 +0.5**
BUM *i* Sn **Sn 03 18 24.7 -0.7**
BUM Brajici-Budva 4.29 93 ⇑ *i* Pn **Pn 03 17 36.3 +0.8**
BUM *i* Sn **Sn 03 18 22.0 -3.4**
BUM Brajici-Budva 4.29 93 ⇓ *i* Pn **Pn 03 17 36.1 +0.5**
BUM *i* Sn **Sn 03 18 26.1 +0.7**
NKME Niksic 4.29 87 ⇑ *i* Pn **Pn 03 17 36.7 +1.1**
NKME *i* Sn **Sn 03 18 23.7 -1.8**
NKME Niksic 4.29 87 ⇓ *i* Pn **Pn 03 17 36.6 +1.0**
NKME *i* Sn **Sn 03 18 23.8 -1.8**
NKME Niksic 4.29 87 ⇓ *i* Pn **Pn 03 17 36.9 +1.3**
NKME *i* Sn **Sn 03 18 26.4 +0.8**
SBF Sospel 4.31 287 *e*P **Pn 03 17 36.8 +0.9**
SBF *e*Sn **Sn 03 18 22.4 -3.6**
comp=E,24nm,0.8s
A252A Venje 4.36 50 *e*Pn **Pn 03 17 35.9 -0.6**
KBA Koelnbreinsper 4.37 2 *i* Pn **Pn 03 17 37.8 +0.9**
comp=E,6.1nm,0.3s,SNR=6.3
KBA Koelnbreinsper 4.37 2 *e*Pn **Pn 03 17 37.7 +0.9**
KBA *e*Sn **Sn 03 18 28.8 +1.1**
DRME Dracevica, Mon 4.51 95 ⇑ *i* Pn **Pn 03 17 39.0 +0.4**
DRME *i* Sn **Sn 03 18 29.9 -1.0**
DRME Dracevica, Mon 4.51 95 ⇑ *i* Pn **Pn 03 17 39.5 +0.9**
DRME *i* Sn **Sn 03 18 27.4 -3.5**
DRME Dracevica, Mon 4.51 95 ⇑ *i* Pn **Pn 03 17 39.1 +0.4**
DRME *i* Sn **Sn 03 18 31.4 +0.5**
PDG Podgorica 4.54 91 *e*Pn **Pn 03 17 40.2 +1.3**
PDG *e*Sn **Sn 03 18 33.5 +2.1**
TTG Podgorica 4.54 91 ⇓ *i* Pn **Pn 03 17 39.7 +0.8**
TTG *i* Sn **Sn 03 18 31.6 +0.2**
TTG Podgorica 4.54 91 ⇑ *i* Pn **Pn 03 17 40.0 +1.1**
TTG *i* Sn **Sn 03 18 28.7 -2.7**
TTG Podgorica 4.54 91 ⇑ *i* Pn **Pn 03 17 39.7 +0.8**
TTG *i* Sn **Sn 03 18 32.3 +0.9**
ULC Ulcinj 4.60 97 ⇓ *i* Pn **Pn 03 17 40.3 +0.5**
ULC *i* Sn **Sn 03 18 30.9 -2.1**
ULC Ulcinj 4.60 97 ⇑ *i* Pn **Pn 03 17 40.3 +0.5**
ULC *i* Sn **Sn 03 18 29.1 -3.9**
ULC Ulcinj 4.60 97 ⇓ *i* Pn **Pn 03 17 40.1 +0.3**
ULC *i* Sn **Sn 03 18 33.4 +0.4**
PLE Pljevlja 4.64 80 ⇑ *i* Pn **Pn 03 17 42.1 +1.7**
PLE *i* Sn **Sn 03 18 32.8 -1.3**
PLE Pljevlja 4.64 80 ⇓ *i* Pn **Pn 03 17 42.6 +2.2**
PLE *i* Sn **Sn 03 18 33.3 -0.8**
PLE Pljevlja 4.64 80 ⇑ *i* Pn **Pn 03 17 41.4 +1.0**
PLE *i* Sn **Sn 03 18 34.1 0.0**
FETA Feichten 4.64 339 *i* Pn **Pn 03 17 43.2 +2.7**
comp=E,3.1nm,0.5s,SNR=8.1
WTTA Wattenberg 4.68 347 *i* Pn **Pn 03 17 42.7 +1.7**
comp=E,4.2nm,0.4s,SNR=8.1
WTTA Wattenberg 4.68 347 *e*Pn **Pn 03 17 43.1 +2.1**
DAVOX Davos/Dischmat 4.68 332 Pn **Pn 03 17 44.0 +2.9**
comp=E,2.4nm,0.3s,baz=141,slow=15,SNR=19
DAVOX Sn **Sn 03 18 38.0 +2.7**
comp=E,1.8nm,0.3s,baz=122,slow=18,SNR=9.0
KOME Kolasin 4.71 86 ⇓ *i* Pn **Pn 03 17 42.6 +1.2**
KOME *i* Sn **Sn 03 18 35.9 +0.1**
KOME Kolasin 4.71 86 ⇑ *i* Pn **Pn 03 17 43.4 +2.0**
KOME *i* Sn **Sn 03 18 34.1 -1.7**
KOME Kolasin 4.71 86 ⇑ *i* Pn **Pn 03 17 42.3 +0.9**
KOME *i* Sn **Sn 03 18 36.2 +0.4**
SQTA Sankt Quirin 4.71 344 *i* Pn **Pn 03 17 43.9 +2.4**
comp=E,7.9nm,0.3s,SNR=11
BBLS Lazići 4.73 74 *e*Pn **Pn 03 17 43.4 +1.8**
WATA Walderalm 4.76 347 *i* Pn **Pn 03 17 44.5 +2.4**
comp=E,8.5nm,0.4s,SNR=9.6
ARSA Arzberg 4.85 20 *i* Pn **Pn 03 17 43.5 +0.2**
comp=E,3.0nm,0.5s,SNR=6.2
ARSA Arzberg 4.85 20 *e*Pn **Pn 03 17 43.4 +0.2**
ARSA *e*Sn **Sn 03 18 37.8 -1.5**
MOTA Moosalm 4.85 344 *i* Pn **Pn 03 17 45.6 +2.1**
comp=E,1.2nm,0.3s,SNR=6.9
LMR La Mourre 4.89 280 *e*P **Pn 03 17 44.1 +0.3**
LMR *e*Sn **Sn 03 18 36.3 -3.8**
comp=E,2.2nm,0.4s
IVA Berane 4.99 86 ⇓ *i* Pn **Pn 03 17 46.4 +1.2**
IVA *i* Sn **Sn 03 18 42.6 0.0**
IVA Berane 4.99 86 ⇓ *i* Pn **Pn 03 17 47.0 +1.8**
IVA *i* Sn **Sn 03 18 38.8 -3.8**
IVA Berane 4.99 86 ⇓ *i* Pn **Pn 03 17 46.1 +0.9**
BIOA Bad Ischl, Aus 5.00 4 *i* Pn **Pn 03 17 45.5 +0.2**
comp=E,5.5nm,0.2s,SNR=8.5
MBDF Montbardon 5.03 296 *e*P **Pn 03 17 48.3 +2.5**
MBDF *e*Sn **Sn 03 18 39.4 -4.3**
comp=E,2.5nm,0.5s
RJOB Jochberg 5.04 357 *e*Pn **Pn 03 17 47.3 +1.5**
PVY Plav 5.04 89 ⇓ *i* Pn **Pn 03 17 47.5 +1.5**
PVY *i* Sn **Sn 03 18 41.8 -2.3**
PVY Plav 5.04 89 ⇑ *i* Pn **Pn 03 17 48.0 +2.0**
PVY *i* Sn **Sn 03 18 41.6 -2.5**
PVY Plav 5.04 89 ⇓ *i* Pn **Pn 03 17 47.3 +1.3**
SJES Sjenica 5.06 81 *e*Pn **Pn 03 17 47.9 +1.7**
SJES *e*Sn **Sn 03 18 45.3 +0.9**
RETA Reutte 5.06 342 *i* Pn **Pn 03 17 48.7 +2.5**
comp=E,3.4nm,0.4s,SNR=7.8
PLONS Plons/SG 5.09 330 *e*Pn **Pn 03 17 49.8 +3.2**
PLONS *e*Sn **Sn 03 18 50.5 +5.2**
OBER Oberstdorf 5.11 338 *e*Pn **Pn 03 17 50.4 +3.6**
OBER *e*Sn **Sn 03 18 49.3 +3.7**
DAVA Damuels 5.12 334 *i* Pn **Pn 03 17 50.3 +3.1**
comp=E,8.9nm,0.5s,SNR=12
DAVA Damuels 5.12 334 *e*Pn **Pn 03 17 50.3 +3.1**

DIVS	**Divibare**	**5.19**	**72**	*e*Pn		**Pn**	**03 17 49.1**	**+1.1**
TIR	**Tirane**	**5.20**	**103**	⇑P		**Pn**	**03 17 48.4**	**+0.4**
TIR	**Tirane**	**5.20**	**103**	*e*Pn		**Pn**	**03 17 48.8**	**+0.7**
MOA	**Molln**	**5.21**	**9**	*e*Pn		**Pn**	**03 17 48.8**	**+0.7**
MOA				*e*Sn		**Sn**	**03 18 49.0**	**+1.0**
MOA	**Molln**	**5.21**	**9**	*i* Pn		**Pn**	**03 17 48.8**	**+0.7**
	comp=E,3.7nm,0.5s,SNR=6.8							
MOA	**Molln**	**5.21**	**9**	*e*Pn		**Pn**	**03 17 48.7**	**+0.7**
MOA				*e*Sn		**Sn**	**03 18 48.6**	**+0.6**
IVAS	**Ivanjica**	**5.22**	**78**	*e*Pn		**Pn**	**03 17 49.2**	**+0.9**
IVAS				*e*Sn		**Sn**	**03 18 46.8**	**-1.5**
MORH	**Mrgy, Hungar**	**5.28**	**47**	⇑P		**Pb**	**03 18 04.9**	**+2.1**
MORH	**Mrgy, Hungar**	**5.28**	**47**	*e*Pn		**Pn**	**03 17 48.9**	**-0.2**
LPG	**La Plagne**	**5.37**	**303**	*e*P		**Pn**	**03 17 52.8**	**+2.2**
LPG				*e*Sn		**Sn**	**03 18 47.6**	**-4.8**
	comp=E,2.4nm,0.3s							
LPL	**La Plagne**	**5.39**	**304**	*e*P		**Pn**	**03 17 53.8**	**+2.9**
LPL				*e*Sn		**Sn**	**03 18 48.6**	**-4.2**
	comp=E,5.9nm,0.5s							
UBR	**Ueberruh**	**5.41**	**338**	*e*Pn		**Pn**	**03 17 53.8**	**+2.8**
FRGS	**Fruska Gora**	**5.42**	**61**	*e*Pn		**Pn**	**03 17 50.5**	**-0.5**
RONA	**Rosalia, Austr**	**5.47**	**23**	*e*Pn		**Pn**	**03 17 50.1**	**-1.7**
	comp=E,1.6nm,0.2s							
TRUS	**Trudelj**	**5.51**	**72**	*e*Pn		**Pn**	**03 17 53.0**	**+0.7**
CONA	**Conrad Observa**	**5.57**	**19**	*i* Pn		**Pn**	**03 17 53.4**	**+0.2**
	comp=E,5.3nm,0.5s,SNR=11							
WILA	**Wila**	**5.57**	**329**	*e*Pn		**Pn**	**03 17 54.9**	**+1.7**
SMRF	**Simiane la Rot**	**5.65**	**286**	*e*P		**Pn**	**03 17 56.1**	**+1.9**
SMRF				*e*Sn		**Sn**	**03 18 53.9**	**-5.0**
	comp=E,1.1nm,0.5s							
GRUS	**Gruza**	**5.67**	**75**	*e*Pn		**Pn**	**03 17 55.3**	**+0.9**
ORIF	**Oris-en-Rattie**	**5.69**	**295**	*e*P		**Pn**	**03 17 58.4**	**+3.6**
ORIF				*e*Sn		**Sn**	**03 18 55.0**	**-4.9**
	comp=E,1.2nm,0.4s							
SELS	**Selova**	**5.89**	**82**	*e*Pn		**Pn**	**03 17 58.1**	**+0.6**
OHR	**Ohrid**	**5.95**	**103**	*i* Pn		**Pn**	**03 18 00.5**	**+2.1**
BALST	**Balsthal**	**6.02**	**322**	*e*Pn		**Pn**	**03 18 01.3**	**+2.0**
GE52	**GERESS Array S**	**6.15**	**4**	*e*Pn		**Pn**	**03 18 01.0**	**-0.2**
GERES	**GERESS Array B**	**6.15**	**4**	Pn		**Pn**	**03 18 00.8**	**-0.4**
	comp=E,0.7nm,0.3s,baz=183,slow=13,SNR=13							
GERES				Sn		**Sn**	**03 19 11.2**	**-0.2**
	comp=E,3.1nm,0.3s,baz=173,slow=24,SNR=11							
	comp=E,1.4nm,0.4s							
ZST	**Bratislava**	**6.16**	**26**	*e*PN		**Pn**	**03 18 01.6**	**+0.4**
CKRC	**Cesky Krumlov**	**6.17**	**7**	*e*PN		**Pn**	**03 18 00.4**	**-1.0**
CKRC				*e*SN		**Sn**	**03 19 09.9**	**-1.8**
BOVS	**Bovan**	**6.34**	**79**	⇑P		**Pn**	**03 18 02.2**	**-1.5**
BOVS	**Bovan**	**6.34**	**79**	*e*Pn		**Pn**	**03 18 03.9**	**+0.2**
BOVS				*e*Sn		**Sn**	**03 19 14.8**	**-1.2**
CABF	**La Chapelle**	**6.36**	**310**	*e*P		**Pn**	**03 18 05.4**	**+1.4**
CABF				*e*Sn		**Sn**	**03 19 11.8**	**-4.6**
	comp=E,0.9nm,0.2s							
MODS	**Modra-Piesok**	**6.37**	**26**	*e*PN		**Pn**	**03 18 03.2**	**-0.9**
MODS				*e*PG		**Pg**	**03 18 29.8**	**-2.8**
MODS				*e*SN		**Sn**	**03 19 14.6**	**-2.1**
BARS	**Barje**	**6.40**	**86**	*e*Pn		**Pn**	**03 18 05.5**	**+1.0**
BARS				*e*Sn		**Sn**	**03 19 16.8**	**-0.6**
KHC	**Kasperske Hory**	**6.43**	**3**	*e*PN		**Pn**	**03 18 04.2**	**-0.8**
KHC				*e*SN		**Sn**	**03 19 15.7**	**-2.5**
WET	**Wettzell**	**6.44**	**359**	*e*Pn		**Pn**	**03 18 04.4**	**-0.7**
VIVF	**Saint-Julien-l**	**6.48**	**292**	*e*P		**Pn**	**03 18 08.7**	**+3.0**
VIVF				*e*Sn		**Sn**	**03 19 13.7**	**-5.7**
	comp=E,0.2nm,0.2s							
BFO	**Black Forest**	**6.55**	**331**	*e*Pn		**Pn**	**03 18 08.3**	**+1.7**
PRVS	**Prvonek**	**6.61**	**89**	*e*Pn		**Pn**	**03 18 08.6**	**+1.2**
PRVS				*e*Sn		**Sn**	**03 19 21.9**	**-0.7**
ZAGS	**Zajecar**	**6.74**	**77**	*e*Pn		**Pn**	**03 18 09.5**	**+0.3**
KRUC	**Moravsky**	**6.75**	**19**	*e*PN		**Pn**	**03 18 09.1**	**-0.2**
KRUC				*e*SN		**Sn**	**03 19 23.7**	**-2.3**
HINF	**Hinteralfeld**	**6.76**	**321**	*e*P		**Pn**	**03 18 10.7**	**+1.3**
HINF				*e*Sn		**Sn**	**03 19 21.3**	**-4.9**
	comp=E,1.0nm,0.2s							
BZS	**Buzias**	**6.76**	**62**	⇑P		**Pn**	**03 18 08.2**	**-1.3**
BZS	**Buzias**	**6.76**	**62**	*e*Pn		**Pn**	**03 18 09.4**	**-0.1**
STIP	**Stip**	**6.81**	**95**	*i* Pn		**Pn**	**03 18 13.3**	**+3.2**
LASF	**Ste Croix**	**6.89**	**285**	*e*Pn		**Pn**	**03 18 10.3**	**-0.9**
BOSS	**Bosilegrad**	**6.91**	**89**	*e*Pn		**Pn**	**03 18 12.4**	**+0.9**
BOSS				*e*Sn		**Sn**	**03 19 28.0**	**-1.9**
JAVC	**Velka Javorina**	**6.92**	**26**	*e*PN		**Pn**	**03 18 12.2**	**+0.5**
ZAPS	**Zavoj**	**7.00**	**82**	*e*Pn		**Pn**	**03 18 14.4**	**+1.6**
CDF	**Champ du Feu**	**7.03**	**326**	*e*P		**Pn**	**03 18 14.9**	**+1.7**
CDF				*e*Sn		**Sn**	**03 19 26.9**	**-6.0**
	comp=E,4.8nm,0.4s							
VRAC	**Vranov**	**7.03**	**19**	*e*PN		**Pn**	**03 18 12.7**	**-0.5**
VYHS	**Vyhne**	**7.04**	**33**	*e*PN		**Pn**	**03 18 12.8**	**-0.5**
HERR	**Herculane**	**7.07**	**69**	⇑P		**Pn**	**03 18 13.8**	**+0.1**
HAU	**Haudompre**	**7.13**	**320**	*e*Pn		**Pn**	**03 18 12.7**	**-1.8**
HAU				*e*Sn		**Sn**	**03 19 29.7**	**-5.6**
	comp=E,5.7nm,0.3s							
GZR	**Gura Zlata**	**7.46**	**66**	⇑P		**Pn**	**03 18 19.2**	**+0.2**
VTS	**Vitosha**	**7.46**	**87**	*e*Pn		**Pn**	**03 18 19.9**	**+0.8**
KEST	**Kesra**	**7.56**	**204**	Pn		Pn	03 18 27.0	+6.5
	comp=E,0.2nm,0.3s,baz=37,slow=15,SNR=1.8							
SMF	**Signal de Mont**	**7.70**	**304**	*e*P		**Pn**	**03 18 25.4**	**+3.1**
SMF				*e*Sn		**Sn**	**03 19 42.7**	**-6.6**
	comp=E,0.9nm,0.3s							
MORC	**Moravsky Berou**	**7.71**	**22**	⇑P		**Pn**	**03 18 22.8**	**+0.4**
MORC	**Moravsky Berou**	**7.71**	**22**	*e*PN		**Pn**	**03 18 22.3**	**-0.1**
KRLC	**Kraliky**	**7.79**	**18**	*e*PN		**Pn**	**03 18 23.3**	**-0.3**
PAGF	**Fort de Pagny**	**7.81**	**321**	*e*P		**Pn**	**03 18 26.6**	**+2.7**
SFTF	**Sexfontaines**	**7.91**	**317**	*e*P		**Pn**	**03 18 28.4**	**+3.2**
	baz=136							
SRS	**Serrai**	**7.97**	**98**	*e*Pn		**Pn**	**03 18 27.3**	**+1.2**
LOR	**Lormes**	**7.99**	**308**	*e*Pn		**Pn**	**03 18 25.1**	**-1.3**
	baz=126							
MTLF	**Montolieu**	**8.02**	**278**	*e*P		**Pn**	**03 18 30.5**	**+3.8**
AVF	**Avril sur Loir**	**8.06**	**304**	*e*P		**Pn**	**03 18 30.4**	**+3.1**
MEZF	**Maizieres J'vi**	**8.10**	**318**	*e*Pn		**Pn**	**03 18 25.7**	**-2.1**
	baz=135							
SSF	**Saint Saulge**	**8.10**	**306**	*e*P		**Pn**	**03 18 30.2**	**+2.4**
SAVF	**Savonnieres en**	**8.14**	**319**	*e*P		**Pn**	**03 18 31.7**	**+3.4**
BGF	**Bois d'Agland**	**8.28**	**301**	*e*P		**Pn**	**03 18 33.7**	**+3.4**
CAF	**Calviac**	**8.30**	**289**	*e*P		**Pn**	**03 18 33.4**	**+2.8**
CLL	**Collm**	**8.61**	**359**	*e*Sg		**Sg**	**03 21 08.0**	**+1.4**
ARR	**Arges**	**8.71**	**68**	⇓P		**Pn**	**03 18 38.5**	**+2.3**
RJF	**Les Rejaudoux**	**8.76**	**291**	*e*P		**Pn**	**03 18 40.9**	**+4.0**
ESDC	**Sonseca Array**	**13.22**	**263**	Pn		**Pn**	**03 19 37.2**	**-0.8**
	baz=72,slow=13,SNR=2.0							
	comp=E,0.3nm,0.8s							
NOA	**NORSAR Array B**	**18.40**	**357**	P		**P**	**03 20 44.5**	**-0.6**
	baz=176,slow=11,SNR=1.6							
	comp=E,0.2nm,0.7s							
FINES	**FINESS Array B**	**20.31**	**18**	P		**P**	**03 21 06.7**	**+0.8**
	comp=E,0.9nm,0.7s,baz=198,slow=8.7,SNR=4.6							
	comp=E,0.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**31.07**	**202**	P		**P**	**03 22 49.7**	**+1.3**
	comp=E,0.8nm,0.9s,baz=21,slow=8.5,SNR=3.2							
	comp=E,0.8nm,0.9s							
MKAR	**Makanchi Array**	**47.84**	**60**	P		**P**	**03 25 10.5**	**+2.7**
	comp=E,0.4nm,0.6s,baz=306,slow=8.2,SNR=2.9							
	comp=E,0.4nm,0.6s							

LDG ***24*** *03:17:58.9±0.1, 42.˚76N×13.˚12E, h6km, Ml3.4/27, Error ellipse: s-maj=2.3km s-min=1.3km az=39.0*
PRU ***24*** *03:17:59.5±0.0, 42.˚79N×13.˚20E, h0km*
ROM ***24*** *03:17:59.1±0.0, 42.˚759N±0.˚002×13.˚138E±0.˚004, h8km, ML3.8/88, Mw3.6, Error ellipse: s-maj=0.3km s-min=0.1km az=247.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-2.77; Mθθ-0.45; Mφφ3.21; Mrθ0.62; Mrφ0.23; Mθ~1.91; Fault plane solution: M₀3.62062×10¹⁴ NP1:φs198.00000°,δ31.00000°, λ-66.00000°. NP2:φs351.00000°,δ62.00000°, λ-104.00000°.*
PDG ***24*** *03:18:00.1±0.5, 42.˚77N×13.˚18E, h8km, ML3.8/12 Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
IDC ***24*** *03:18:00.0±1.0, 42.˚89N×13.˚12E, h0km, mb3.7/6, mbtmp3.7/14, ML3.2/8, Error ellipse: s-maj=19.3km s-min=12.8km az=91.0*
BEO ***24*** *03:18:02.0±0.6, 42.˚80N×13.˚25E, h0km, ML3.8/13*
ISC 24 03:18:00.1±0.7, 42.˚76N±0.˚01×13.˚11E±0.˚02, h14km±4km, n255, σ2ş27/330, mb4.0/4, 28C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**5**	⇑P		**Pg**	**03 18 01.9**	**-1.1**
NRCA				S		**Sg**	**03 18 03.1**	**-1.8**
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		

FEMA	**Monte Fema**	**0.20**	**348**	⇑P		**Pg**	**03 18 04.3**	**-0.5**
FEMA				S		**Sg**	**03 18 07.6**	**-0.3**
FEMA					AML	AML		
FEMA					AML	AML		
	comp=N,81450μm,0.2s							
FEMA					AML	AML		
FEMA					AML	AML		
	comp=N,81450μm,0.2s							
RM33	**Pellescritta (**	**0.27**	**163**	⇓P		**Pg**	**03 18 05.3**	**-0.4**
RM33				S		**Sg**	**03 18 09.6**	**0.0**
RM33					AML	AML		
	comp=E,40850μm,1.5s							
RM33					AML	AML		
	comp=N,30300μm,0.8s							
RM33					AML	AML		
	comp=E,40300μm,1.5s							
RM33					AML	AML		
	comp=N,30700μm,0.8s							
RM33					AML	AML		
	comp=N,30300μm,0.8s							
RM33					AML	AML		
	comp=E,40350μm,1.5s							
FDMO	**Fiordimonte**	**0.27**	**357**	⇑P		**Pg**	**03 18 05.4**	**-0.5**
FDMO				S		**Sg**	**03 18 10.0**	**+0.2**
CESI	**CESI - Serrava**	**0.28**	**328**	⇑P		**Pg**	**03 18 06.0**	**-0.1**
CESI				S		**Sg**	**03 18 10.8**	**+0.7**
ARRO	**Arrone**	**0.31**	**234**	P		**Pg**	**03 18 06.7**	**+0.2**
ARRO				S		**Sb**	**03 18 12.1**	**-0.3**
ARRO					AML	AML		
	comp=N,13150μm,0.7s							
ARRO					AML	AML		
	comp=E,12550μm,0.7s							
CAMP	**Campotosto**	**0.32**	**135**	⇑P		**Pg**	**03 18 05.8**	**-0.8**
CAMP				S		**Sg**	**03 18 10.7**	**-0.5**
CAMP					AML	AML		
	comp=N,19600μm,0.7s							
CAMP					AML	AML		
	comp=N,22450μm,0.6s							
CAMP					AML	AML		
	comp=N,20350μm,0.6s							
CAMP					AML	AML		
	comp=E,19550μm,0.5s							
CSP1	**Cessapalombo**	**0.34**	**12**	⇑P		**Pg**	**03 18 06.4**	**-0.6**
CSP1				S		**Sg**	**03 18 11.7**	**0.0**
TERO	**Teramo**	**0.39**	**111**	⇑P		**Pg**	**03 18 06.8**	**-1.2**
TERO				S		**Sg**	**03 18 12.6**	**-0.7**
TERO					AML	AML		
	comp=E,24800μm,0.5s							
TERO					AML	AML		
	comp=N,32150μm,0.3s							
TERO					AML	AML		
	comp=E,26100μm,0.5s							
TERO					AML	AML		
	comp=N,35100μm,0.3s							
TERO					AML	AML		
	comp=E,37550μm,0.6s							
TERO					AML	AML		
	comp=N,64300μm,0.2s							
TERO					AML	AML		
	comp=N,67650μm,0.2s							
TERO					AML	AML		
	comp=E,39250μm,0.6s							
TERO					AML	AML		
	comp=E,37500μm,0.6s							
TERO					AML	AML		
	comp=N,64350μm,0.2s							
SEF1	**Sefro**	**0.40**	**343**	P		**Pg**	**03 18 07.7**	**-0.4**
SEF1				S		**Sb**	**03 18 14.5**	**-0.5**
SEF1					AML	AML		
	comp=E,48850μm,0.7s							
SEF1					AML	AML		
	comp=N,32500μm,0.3s							
SEF1					AML	AML		
	comp=E,48900μm,0.7s							
SEF1					AML	AML		
	comp=N,32450μm,0.3s							
SEF1					AML	AML		
	comp=E,48850μm,0.7s							
CESX	**Cesi**	**0.42**	**249**	⇑P		**Pg**	**03 18 08.5**	**+0.1**
CESX					AML	AML		
	comp=N,11850μm,0.4s							
CESX					AML	AML		
	comp=E,14800μm,0.8s							
PIO1	**Pioraco**	**0.42**	**348**	P		**Pg**	**03 18 08.1**	**-0.5**
PIO1				S		**Sb**	**03 18 15.0**	**-0.7**
PIO1					AML	AML		
	comp=N,20450μm,0.6s							
PIO1					AML	AML		
	comp=E,15750μm,0.4s							
PIO1					AML	AML		
	comp=N,20400μm,0.6s							
MDAR	**Monte D'Aria**	**0.43**	**4**	P		**Pg**	**03 18 08.1**	**-0.6**
MDAR				S		**Sg**	**03 18 14.9**	**+0.4**
MDAR					AML	AML		
	comp=N,25150μm,0.5s							
MDAR					AML	AML		
	comp=E,15800μm,0.6s							
MDAR					AML	AML		
	comp=N,25200μm,0.5s							
ASSB	**Assisi San Ben**	**0.43**	**310**	⇑P		**Pg**	**03 18 08.6**	**-0.1**
ASSB				S		**Sb**	**03 18 15.4**	**-0.5**
ASSB					AML	AML		
	comp=N,18350μm,1.1s							
ASSB					AML	AML		
	comp=E,21250μm,0.6s							
FIU1	**Fiuminata**	**0.44**	**343**	P		**Pg**	**03 18 08.6**	**-0.3**
MNTP	**Montappone**	**0.46**	**35**	P		**Pg**	**03 18 08.9**	**-0.2**
OFFI	**Offida**	**0.46**	**68**	⇑P		**Pg**	**03 18 09.0**	**-0.2**
OFFI				S		**Sb**	**03 18 17.1**	**+0.5**
AQU	**L'Aquila**	**0.46**	**152**	P		**Pg**	**03 18 08.5**	**-0.7**
AQU					AML	AML		
	comp=E,12550μm,0.4s							
AQU					AML	AML		
	comp=N,13600μm,0.7s							
AQU					AML	AML		
	comp=E,12800μm,0.4s							
AQU					AML	AML		
	comp=N,13700μm,0.9s							
GIGS	**Gran Sasso**	**0.46**	**132**	⇑P		**Pg**	**03 18 08.0**	**-1.3**
GIGS				S		**Sg**	**03 18 14.8**	**-0.7**
GIGS					AML	AML		
	comp=N,5080μm,0.6s							
GIGS					AML	AML		
	comp=E,10375μm,0.2s							
SSM1	**San Severino M**	**0.47**	**6**	P		**Pg**	**03 18 08.8**	**-0.5**
SSM1				S		**Sg**	**03 18 16.0**	**+0.4**
GAG1	**Gagliole**	**0.47**	**357**	P		**Pg**	**03 18 09.1**	**-0.4**
GAG1				S		**Sb**	**03 18 16.8**	**-0.3**
GAG1					AML	AML		
	comp=N,36900μm,0.5s							
GAG1					AML	AML		
	comp=E,36450μm,0.4s							
FIAM	**Fiamignano**	**0.50**	**179**	⇓P		**Pg**	**03 18 09.3**	**-0.5**
FIAM				S		**Sg**	**03 18 17.1**	**+0.6**
FIAM					AML	AML		
	comp=E,8385μm,0.9s							
FIAM					AML	AML		
	comp=N,11490μm,0.7s							
MTL1	**Matelica**	**0.50**	**352**	P		**Pg**	**03 18 09.7**	**-0.2**
MTL1				S		**Sb**	**03 18 17.5**	**-0.3**
MTL1					AML	AML		
	comp=E,25550μm,0.4s							
MTL1					AML	AML		
	comp=N,39750μm,0.5s							
SNTG	**Esanatoglia**	**0.51**	**346**	⇑P		**Pg**	**03 18 09.6**	**-0.5**
SNTG				S		**Sb**	**03 18 17.7**	**-0.3**
SNTG					AML	AML		
	comp=E,1225μm,1.0s							
SNTG					AML	AML		
	comp=N,1209μm,0.3s							
SNTG					AML	AML		
	comp=E,9900μm,1.0s							
SNTG					AML	AML		
	comp=N,10075μm,0.5s							
SNTG					AML	AML		
	comp=E,1220μm,1.0s							
SNTG					AML	AML		
	comp=N,1210μm,0.3s							
ATCC	**AVT- Casa Cast**	**0.54**	**321**	⇑P		**Pg**	**03 18 10.6**	**-0.1**
ATCC				S		**Sb**	**03 18 19.4**	**+0.3**
ATCC					AML	AML		
	comp=E,25500μm,1.1s							
ATCC					AML	AML		
	comp=N,18600μm,0.3s							
ATCC					AML	AML		
	comp=E,25550μm,1.1s							

ATCC					AML	AML		
	comp=N,18650μm,0.3s							
EL6	**Elcito**	**0.56**	**360**	P		**Pg**	**03 18 10.5**	**-0.7**
EL6				S		**Sb**	**03 18 19.5**	**-0.3**
EL6					AML	AML		
	comp=N,22550μm,0.3s							
EL6					AML	AML		
	comp=E,19650μm,0.4s							
EL6					AML	AML		
	comp=N,22600μm,0.3s							
TRE1	**Treia**	**0.57**	**15**	P		**Pg**	**03 18 10.9**	**-0.3**
TRE1					AML	AML		
	comp=N,25850μm,0.4s							
TRE1					AML	AML		
	comp=E,37650μm,1.0s							
TRE1					AML	AML		
	comp=N,25900μm,0.4s							
FOSV	**Fossato di Vic**	**0.59**	**335**	⇑P		**Pg**	**03 18 11.2**	**-0.4**
FOSV				S		**Sb**	**03 18 20.4**	**0.0**
FOSV					AML	AML		
	comp=E,10750μm,0.2s							
FOSV					AML	AML		
	comp=N,8925μm,0.9s							
FOSV					AML	AML		
	comp=E,10700μm,0.2s							
FOSV					AML	AML		
	comp=N,8905μm,0.9s							
TRTR	**Tortoreto Alta**	**0.60**	**85**	⇑P		**Pg**	**03 18 11.7**	**0.0**
TRTR					AML	AML		
	comp=N,25700μm,0.5s							
TRTR					AML	AML		
	comp=E,24550μm,0.6s							
FAGN	**Fagnano**	**0.61**	**144**	P		**Pg**	**03 18 10.7**	**-1.4**
FAGN					AML	AML		
	comp=E,22150μm,0.9s							
FAGN					AML	AML		
	comp=N,23200μm,0.5s							
CING	**Cingoli**	**0.61**	**6**	P		**Pg**	**03 18 11.3**	**-0.8**
CADA	**Capodarco di F**	**0.65**	**48**	P		**Pb**	**03 18 12.9**	**-0.2**
MURB	**Monte Urbino**	**0.66**	**320**	⇑P		**Pg**	**03 18 12.6**	**-0.3**
MURB				S		**Sb**	**03 18 23.0**	**+0.6**
MURB					AML	AML		
	comp=E,22150μm,0.6s							
MURB					AML	AML		
	comp=N,25400μm,0.9s							
MURB					AML	AML		
	comp=E,22200μm,0.6s							
MURB					AML	AML		
	comp=E,26050μm,0.6s							
MURB					AML	AML		
	comp=N,24200μm,0.9s							
VCEL	**Villa Celiera**	**0.66**	**124**	⇑P		**Pg**	**03 18 11.8**	**-1.1**
VCEL				S		**Sb**	**03 18 22.2**	**-0.2**
VCEL					AML	AML		
	comp=E,19350μm,0.4s							
VCEL					AML	AML		
	comp=N,21800μm,1.2s							
VCEL					AML	AML		
	comp=E,19400μm,0.4s							
CIMA	**Civitanova Mar**	**0.68**	**37**	P		**Pb**	**03 18 13.5**	**-0.3**
MMUR	**Monte Murano**	**0.68**	**353**	P		**Pg**	**03 18 13.0**	**-0.4**
SRES	**S.Oreste - Sor**	**0.69**	**220**	P		**Pg**	**03 18 13.4**	**0.0**
SRES					AML	AML		
	comp=N,3620μm,0.6s							
SRES					AML	AML		
	comp=E,5230μm,0.6s							
ATTE	**AVT- Monte Tez**	**0.70**	**308**	P		**Pg**	**03 18 13.4**	**-0.4**
ATTE					AML	AML		
	comp=E,7065μm,0.7s							
ATTE					AML	AML		
	comp=N,4550μm,0.5s							
SSFR	**Montelago di S**	**0.71**	**341**	P		**Pg**	**03 18 13.3**	**-0.6**
SSFR				S		**Sb**	**03 18 24.4**	**+0.4**
SSFR					AML	AML		
	comp=N,18850μm,0.2s							
SSFR					AML	AML		
	comp=N,21150μm,1.1s							
SSFR					AML	AML		
	comp=E,23750μm,0.2s							
SSFR					AML	AML		
	comp=E,26200μm,0.2s							
PP3	**Marolino**	**0.72**	**31**	P		**Pg**	**03 18 13.8**	**-0.1**
PP3					AML	AML		
	comp=E,76300μm,0.4s							
PP3					AML	AML		
	comp=E,76800μm,0.5s							
PP3					AML	AML		
	comp=N,27900μm,0.3s							
PP3					AML	AML		
	comp=N,32200μm,0.4s							
ATFO	**Monte Foce - G**	**0.72**	**327**	⇑P		**Pg**	**03 18 13.5**	**-0.5**
ATFO					AML	AML		
	comp=E,8355μm,1.5s							
ATFO					AML	AML		
	comp=N,7080μm,0.3s							
T0110	**Collepietro**	**0.73**	**137**	P		**Pg**	**03 18 12.7**	**-1.6**
T0110					AML	AML		
	comp=E,14650μm,0.5s							
T0110					AML	AML		
	comp=N,15550μm,0.4s							
ARVD	**Arcevia**	**0.74**	**351**	⇑P		**Pg**	**03 18 13.6**	**-0.9**
ARVD				S		**Sb**	**03 18 25.4**	**+0.5**
ARVD					AML	AML		
	comp=N,3430μm,0.3s							
ARVD					AML	AML		
	comp=E,4900μm,0.1s							
MGAB	**Montegabbione**	**0.75**	**282**	P		**Pg**	**03 18 14.6**	**0.0**
MGAB					AML	AML		
	comp=E,14550μm,1.4s							
MGAB					AML	AML		
	comp=N,14000μm,0.4s							
MGAB					AML	AML		
	comp=N,13650μm,0.4s							
MGAB					AML	AML		
	comp=E,14500μm,1.4s							
MGAB					AML	AML		
	comp=E,13850μm,1.4s							
PTQR	**Pietraquaria**	**0.77**	**164**	P		**Pg**	**03 18 14.0**	**-1.1**
PTQR					AML	AML		
	comp=N,2400μm,1.2s							
PTQR					AML	AML		
	comp=E,1700μm,0.8s							
MTCE	**Montecelio**	**0.79**	**200**	P		**Pg**	**03 18 14.4**	**-1.0**
MTCE					AML	AML		
	comp=E,4930μm,0.6s							
MTCE					AML	AML		
	comp=N,3275μm,0.6s							
MTCE					AML	AML		
	comp=E,4935μm,0.6s							
ATVO	**AVT- Monte Val**	**0.80**	**321**	⇑P		**Pg**	**03 18 14.9**	**-0.7**
ATVO					AML	AML		
	comp=E,6790μm,1.0s							
ATVO					AML	AML		
	comp=N,5995μm,0.5s							
FRON	**Frontone**	**0.80**	**340**	⇑P		**Pg**	**03 18 14.7**	**-0.9**
FRON				S		**Sb**	**03 18 27.6**	**+1.0**
FRON					AML	AML		
	comp=E,5120μm,0.5s							

comp=N,10925µm,0.5s
COR1 AML AML

comp=E,13405µm,1.6s
PIEI Pieia 0.88 332 P **Pg** 03 18 16.1 -1.0
PIEI AML AML

comp=E,3800µm,0.4s
PIEI AML AML

comp=N,3175µm,1.4s
SACS San Casciano d 0.89 276 P **Pg** 03 18 17.0 -0.2
SACS AML AML

comp=N,4880µm,0.9s
SACS AML AML

comp=N,4860µm,0.9s
SACS AML AML

comp=E,5365µm,0.5s
SACS AML AML

comp=E,5350µm,0.6s
MPAG Monte Paganucc 0.90 344 P **Pg** 03 18 16.7 -0.9
MPAG AML AML

comp=N,5320µm,1.0s
MPAG AML AML

comp=N,5510µm,0.5s
MPAG AML AML

comp=E,5425µm,0.4s
MPAG AML AML

comp=E,5430µm,0.4s
RCAV Rocca di Cave 0.92 187 P **Pg** 03 18 17.8 -0.1
NARO Abbazia di Nar 0.93 336 P **Pg** 03 18 16.9 -1.1
NARO AML AML

comp=E,2710µm,0.8s
NARO AML AML

comp=N,2750µm,0.5s
APEC Apecchio 0.94 328 P **Pg** 03 18 17.6 -0.7
APEC AML AML

comp=E,998µm,1.5s
APEC AML AML

comp=N,1470µm,0.7s
APEC AML AML

comp=N,6590µm,0.7s
APEC AML AML

comp=E,5170µm,0.5s
SENI Senigallia 0.94 6 P **Pb** 03 18 18.5 +0.2
INTR Introdacqua 0.96 142 P **Pg** 03 18 16.5 -2.1
INTR AML AML

comp=E,6150µm,1.6s
INTR AML AML

comp=N,10200µm,0.5s
INTR AML AML

comp=N,7µm,0.5s
INTR AML AML

comp=E,6µm,1.6s
FSSB Fossombrone 0.96 346 ⇑P **Pg** 03 18 17.6 -1.0
FSSB AML AML

comp=N,17300µm,0.3s
FSSB AML AML

comp=E,12500µm,0.4s
VVLD Villa Vallelon 0.97 157 P **Pg** 03 18 17.8 -1.1
VVLD AML AML

comp=E,3385µm,1.1s
VVLD AML AML

comp=N,3180µm,0.6s
LATE Laterza 0.97 262 P **Pg** 03 18 18.5 -0.3
BADI Badiali 0.98 320 P **Pg** 03 18 18.4 -0.6
BADI AML AML

comp=E,514µm,0.5s
BADI AML AML

comp=E,513µm,0.5s
BADI AML AML

comp=N,3010µm,1.5s
GUAR Guarcino 0.98 171 P **Pb** 03 18 19.2 +0.3
GUAR AML AML

comp=E,4090µm,0.9s
GUAR AML AML

comp=N,4330µm,0.5s
GUAR AML AML

comp=E,4095µm,0.9s
RMP Rome, Mte Porz 1.00 198 P **Pb** 03 18 19.4 +0.3
RMP AML AML

comp=E,4115µm,0.6s
RMP AML AML

comp=N,5445µm,0.7s
CAFI Castiglion Fio 1.01 304 P **Pg** 03 18 18.8 -0.8
CAFI AML AML

comp=N,3740µm,1.0s
CAFI AML AML

comp=N,3895µm,1.0s
CAFI AML AML

comp=E,3305µm,0.4s
CAFI AML AML

comp=E,3235µm,0.4s
VIVA Pratoni del Vi 1.04 194 P **Pg** 03 18 20.3 +0.1
VIVA AML AML

comp=E,5635µm,0.7s
VIVA AML AML

comp=N,5685µm,0.4s
RDP Rocca di Papa 1.05 196 P **Pb** 03 18 20.0 +0.1
RDP AML AML

comp=N,12400µm,0.5s
RDP AML AML

comp=E,8395µm,0.5s
SF03 Valle Cupa 1.05 273 P **Pn** 03 18 20.6 +0.2
MCIV Monte Civitell 1.05 271 P **Pb** 03 18 20.3 +0.2
MCIV AML AML

comp=E,2090µm,0.8s
MCIV AML AML

comp=N,1805µm,1.3s
SF11 Podere del Sol 1.05 276 P **Pn** 03 18 20.8 +0.3
SF04 Casetta 1.07 274 P **Pg** 03 18 20.7 +0.1
LPEL Lama dei Pelig 1.07 132 P **Pb** 03 18 18.3 -2.2
LPEL AML AML

comp=E,5735µm,0.6s
LPEL AML AML

comp=N,3225µm,0.5s
TOLF Tolfa 1.08 230 P **Pb** 03 18 20.1 -0.4
TOLF AML AML

comp=E,2945µm,0.6s
TOLF AML AML

comp=N,2930µm,0.5s
SSP9 Sansepolcro 1.08 319 AML AML

comp=E,3040µm,0.9s
SSP9 AML AML

comp=N,3260µm,1.6s
PARC Parchiule 1.09 325 P **Pb** 03 18 20.0 -0.7
PARC AML AML

comp=E,4665µm,0.6s
PARC AML AML

comp=N,2610µm,0.7s
SF13 Bagnolo 1.10 273 P **Pg** 03 18 21.2 0.0
SF14 Selvena 1.10 270 P **Pn** 03 18 21.4 +0.4
LAV9 Lanuvio 1.13 196 P **Pg** 03 18 22.2 +0.5
SF01 Poggio Pratacc 1.14 273 P **Pg** 03 18 22.1 +0.1
SF01 AML AML

comp=E,4320µm,0.7s
SF01 AML AML

comp=N,3055µm,0.6s
POFI Posta Fibreno 1.14 157 P **Pb** 03 18 20.2 -1.4
LRP Arpino 1.17 162 P **Pb** 03 18 21.8 -0.3
LRP AML AML

comp=N,1870µm,0.7s
LRP AML AML

comp=E,1550µm,0.7s
PESA Pesaro 1.19 351 P **Pn** 03 18 22.6 +0.3
PESA AML AML

comp=E,6495µm,0.9s
PESA AML AML

comp=N,5745µm,0.3s
ARCI Arcidosso 1.20 275 P **Pb** 03 18 23.1 +0.5
ARCI AML AML

comp=N,674µm,0.5s
ARCI AML AML

comp=E,940µm,0.7s
GIUL Giuliano Di Ro 1.21 175 P **Pn** 03 18 22.2 -0.4
GIUL AML AML

comp=N,1520µm,0.5s
GIUL AML AML

comp=E,1220µm,1.4s
RNI2 Rionero Sannit 1.31 143 P **Pn** 03 18 23.5 -0.6
CERA Filignano 1.35 150 P **Pn** 03 18 23.8 -0.8
CERA AML AML

comp=E,2810µm,0.5s
CERA AML AML

comp=N,2890µm,0.6s
CERA AML AML

comp=N,3000µm,0.6s
CERA AML AML

comp=E,2895µm,0.5s

ASQU Asqua 1.41 317 P **Pg** 03 18 26.9 -0.3
TRIV Trivento 1.46 132 P **Pb** 03 18 26.8 -0.3
TRIV AML AML

comp=E,3305µm,1.5s
TRIV AML AML

comp=N,2675µm,1.3s
TRIV AML AML

comp=E,3470µm,1.6s
TRIV AML AML

comp=N,2590µm,0.8s
FROS Frosini 1.50 288 P **Pb** 03 18 27.6 -0.1
CSNT Castellina Chi 1.51 299 P **Pb** 03 18 27.9 +0.1
CSNT AML AML

comp=E,702µm,0.6s
CSNT AML AML

comp=N,620µm,0.9s
OSSC Osservatorio P 1.56 300 P **Pb** 03 18 28.4 -0.3
OSSC AML AML

comp=N,676µm,1.5s
OSSC AML AML

comp=E,633µm,1.0s
OSSC AML AML

comp=N,806µm,0.7s
OSSC AML AML

comp=E,866µm,1.0s
RUFI Rufina 1.59 313 P **Pb** 03 18 28.8 -0.3
RUFI AML AML

comp=E,956µm,0.7s
RUFI AML AML

comp=N,994µm,1.4s
BSSO Busso 1.65 137 P **Pn** 03 18 29.1 +0.5
BSSO AML AML

comp=N,1141µm,1.6s
BSSO AML AML

comp=E,612µm,1.1s
BSSO AML AML

comp=E,1520µm,1.1s
BSSO AML AML

comp=N,480µm,1.2s
CASP Castiglione de 1.65 272 ⇑P **Pn** 03 18 29.1 +0.4
TRIF Trifonti 1.66 283 P **Pn** 03 18 29.7 +1.0
TRIF AML AML

comp=E,842µm,1.5s
TRIF AML AML

comp=N,586µm,0.8s
CIGN Sant'Elia a Pi 1.74 129 P **Pb** 03 18 31.4 -0.3
PIGN Pignataro Magg 1.76 153 P **Pb** 03 18 31.4 -0.6
MELA Melanico ??? S 1.84 124 AML AML
comp=E,3390µm,1.0s
MELA AML AML

comp=E,3325µm,1.0s
MELA AML AML

comp=N,3710µm,0.7s
MELA AML AML

comp=N,3555µm,0.7s
APRC Apricena 2.07 118 P **Pn** 03 18 35.2 +0.7
APRC AML AML

comp=N,1690µm,1.0s
APRC AML AML

comp=E,1094µm,0.6s
VIRC Vir 2.08 42 *e*Pn **Pn** 03 18 34.7 +0.1
POPM Popiglio 2.14 308 P **Pn** 03 18 36.4 +1.0
POPM AML AML

comp=E,428µm,1.6s
POPM AML AML

comp=N,380µm,1.2s
BRJN Brijuni 2.19 12 *e*Pn **Pn** 03 18 37.7 +1.6
MORI Morici 2.19 59 *e*Pn **Pn** 03 18 36.7 +0.6
SGRT San Giovanni R 2.20 116 P **Pn** 03 18 37.3 +1.0
SGRT AML AML

comp=N,1135µm,0.4s
SGRT AML AML

comp=E,1620µm,0.4s
NVLJ Novalja 2.21 35 *e*Pn **Pn** 03 18 36.3 +0.1
CARD Cardoso 2.29 304 P **Pn** 03 18 38.8 +1.3
CARD AML AML

comp=E,393µm,0.6s
CARD AML AML

comp=N,428µm,1.1s
RABC Rab 2.33 31 *e*Pn **Pn** 03 18 38.3 +0.4
MSAG Monte S. Angel 2.33 116 P **Pn** 03 18 39.5 +1.5
MSAG AML AML

comp=N,2990µm,0.4s
MSAG AML AML

comp=E,1675µm,1.5s
MSAG AML AML

comp=N,2905µm,0.4s
MSAG AML AML

comp=E,1525µm,1.5s
SMRN Sveta Marina 2.40 18 *e*Pn **Pn** 03 18 39.3 +0.5
VLC Villacollemand 2.42 306 AML AML
comp=N,276µm,1.5s
VLC AML AML

comp=N,270µm,1.4s
VLC AML AML

comp=E,168µm,1.5s
VLC AML AML

comp=E,165µm,0.7s
UDBI Udbina 2.61 47 *e*Pn **Pn** 03 18 43.3 +1.4
A250A Rusevo Krmpots 2.66 29 *e*Pn **Pn** 03 18 43.2 +0.6
KIJV Kijevo 2.71 62 *e*Pn **Pn** 03 18 44.6 +1.5
RIY Rijeka 2.75 21 *e*Pn **Pn** 03 18 44.2 +0.6
LSTV Lastovo 2.79 89 *e*Pn **Pn** 03 18 44.6 +0.3
PLIT Plitvice 2.79 40 *e*Pn **Pn** 03 18 45.6 +1.2
PALZ Palazzo San Ge 2.80 130 AML AML
comp=N,1409µm,1.2s
PALZ AML AML

comp=E,842µm,1.3s
SKDS Skadanscina 2.86 13 *i* Pn **Pn** 03 18 45.8 +0.5
SKDS *i* Sn **Sn** 03 19 19.7 +0.2
SKDS IAML 03 19 20.5

comp=Z,103nm,0.3s
MRVN Minervino Murg 2.87 125 AML AML
comp=E,230µm,0.6s
MRVN AML AML

comp=N,296µm,1.0s
MAKA Makarska 2.92 78 *e*Pn **Pn** 03 18 46.8 +0.8
PGF Pioggiola 3.04 267 *e*P **Pn** 03 18 48.9 +1.1
PGF *e*Sn **Sn** 03 19 20.3 -3.7

comp=N,19nm,0.3s
RICI Ricice 3.04 75 *e*Pn **Pn** 03 18 48.9 +1.2
AMUR Altamura 3.21 124 P **Pn** 03 18 51.4 +1.4
AMUR AML AML

comp=N,390µm,0.5s
AMUR AML AML

comp=E,408µm,0.7s
ROVR Rover Verones 3.23 334 P **Pn** 03 18 52.7 +2.2
ROVR AML AML

comp=N,210µm,0.9s
ROVR AML AML

comp=E,111µm,0.9s
CGRP Cima Grappa 3.25 344 P **Pn** 03 18 53.0 +2.2
A251A Rujevac 3.29 43 *e*Pn **Pn** 03 18 52.3 +1.2
OZLJ Ozalj 3.32 30 *e*Pn **Pn** 03 18 52.7 +1.2
STON Ston 3.38 87 *e*Pn **Pn** 03 18 51.8 -0.6
STON Ston 3.38 87 *e*Pn **Pn** 03 18 52.7 +0.3
STON *e*Sn **Sn** 03 19 34.9 +2.6
STON Ston 3.38 87 P **Pn** 03 18 52.1 -0.2
STON AML AML

comp=N,198µm,0.5s
STON AML AML

comp=E,190µm,0.4s
SALO Salr 3.40 328 P **Pn** 03 18 55.3 +2.5
SALO AML AML

comp=N,560µm,1.3s
SALO AML AML

comp=E,393µm,1.2s
DOSS Dosso del Somm 3.41 337 P **Pn** 03 18 55.7 +2.8
MATE Matera 3.42 127 ⇑P **Pn** 03 18 54.4 +1.4
MPRI Monte Prat 3.48 359 P **Pn** 03 18 55.3 +1.5
MAGA Magasa 3.50 330 P **Pn** 03 18 55.9 +1.8
MAGA AML AML

comp=E,1085µm,0.5s
MAGA AML AML

comp=N,611µm,0.4s
LTRZ Laterza 3.52 127 P **Pn** 03 18 56.0 +1.7
NOCI Noci 3.56 122 P **Pn** 03 18 55.9 +1.1
NOCI AML AML

comp=N,390µm,1.6s
NOCI AML AML

comp=E,280µm,0.3s
PTCC Patocco-Chiusa 3.65 3 AML AML
comp=N,176µm,0.6s
PTCC AML AML

comp=E,202µm,0.3s
DBRK Dubrovnik 3.72 90 *e*Pn **Pn** 03 18 57.2 +0.2

ACOM Acomizza, Ital 3.79 4 AML AML
comp=E,374µm,1.6s
ACOM AML AML

comp=E,404µm,0.7s
ACOM AML AML

comp=N,392µm,1.6s
ACOM AML AML

comp=N,424µm,1.6s
MYKA Terra Mystica 3.88 5 *e*Pn **Pn** 03 18 59.6 +0.2
comp=N,11nm,0.3s
OBKA Obir 3.88 15 *e*Pn **Pn** 03 18 57.2 -2.2
comp=N,40nm,0.5s
HCY Herceg Novi 3.99 93 ⇓*i*Pn **Pn** 03 19 01.9 +1.1
HCY *i* Sn **Sn** 03 19 49.5 +2.1
BRY Bratogost 4.00 86 ⇓*i*Pn **Pn** 03 19 02.0 +1.0
BRY *i* Sn **Sn** 03 19 49.2 +1.4
ABTA Abfaltersbach 4.00 354 *e*Pn **Pn** 03 19 02.9 +1.9
comp=N,36nm,0.5s
SOKA Soboth 4.15 19 *e*Pn **Pn** 03 19 01.4 -1.6
comp=N,20nm,0.7s
UPM Unac-Piva 4.28 82 ⇓*i*Pn **Pn** 03 19 06.4 +1.5
UPM *i* Sn **Sn** 03 19 56.6 +1.9
SBF Sospel 4.28 287 *e*P **Pn** 03 19 06.3 +1.4
SBF *e*Sn **Sn** 03 19 50.2 -4.4

comp=N,53nm,0.5s
CEME Cevo 4.29 91 ⇑*i*Pn **Pn** 03 19 06.2 +1.2
CEME *i* Sn **Sn** 03 19 57.1 +2.2
BUM Brajici-Budva 4.30 94 ⇓*i*Pn **Pn** 03 19 06.2 +1.1
BUM *i* Sn **Sn** 03 19 57.0 +1.9
NKME Niksic 4.30 88 ⇑*i*Pn **Pn** 03 19 06.7 +1.5
NKME *i* Sn **Sn** 03 19 56.9 +1.7
VSL Villasalto 4.31 222 P **Pn** 03 19 07.1 +1.9
KBA Koelnbreinsper 4.32 2 *e*Pn **Pn** 03 19 08.7 +3.3
comp=N,15nm,0.3s
A252A Venje 4.33 50 *e*Pn **Pn** 03 19 05.9 +0.4
ROSI Rosskopf 4.33 344 P **Pn** 03 19 08.3 +2.6
DRME Dracevica, Mon 4.53 95 ⇓*i*Pn **Pn** 03 19 09.5 +1.3
DRME *i* Sn **Sn** 03 20 02.4 +1.7
PDG Podgorica 4.55 92 *e*Pn **Pn** 03 19 10.4 +1.9
PDG *e*Sn **Sn** 03 20 02.7 +1.5
PDG Podgorica 4.55 92 P **Pn** 03 19 10.0 +1.5
PDG AML AML

comp=E,146µm,1.4s
PDG AML AML

comp=N,237µm,0.4s
PDG AML AML

comp=N,174µm,0.4s
PDG AML AML

comp=E,181µm,0.7s
TTG Podgorica 4.55 92 ⇓*i*Pn **Pn** 03 19 10.1 +1.6
TTG *i* Sn **Sn** 03 20 03.3 +2.1
FETA Feichten 4.58 339 *e*Pn **Pn** 03 19 10.0 +0.9
comp=E,15nm,0.8s
ULC Ulcinj 4.62 98 ⇓*i*Pn **Pn** 03 19 10.7 +1.3
ULC *i* Sn **Sn** 03 20 04.6 +1.7
WTTA Wattenberg 4.62 347 *e*Pn **Pn** 03 19 11.3 +1.7
comp=E,34nm,1.0s
DAVOX Davos/Dischmat 4.63 331 Pn **Pn** 03 19 12.8 +3.1
comp=E,3.2nm,0.3s,baz=148,slow=19,SNR=4.2
DAVOX Sn **Sn** 03 20 06.8 +3.5
comp=E,2.3nm,0.3s,baz=127,slow=20,SNR=1.8
DAVOX Davos/Dischmat 4.63 331 P **Pn** 03 19 12.8 +3.1
PLE Pljevlja 4.64 81 ⇓*i*Pn **Pn** 03 19 10.8 +1.0
PLE *i* Sn **Sn** 03 20 04.9 +1.4
SQTA Sankt Quirin 4.66 344 *e*Pn **Pn** 03 19 10.0 0.0
comp=E,4.3nm,0.5s
WATA Walderalm 4.70 347 *e*Pn **Pn** 03 19 12.6 +2.0
comp=E,13nm,0.7s
KOME Kolasin 4.72 87 ⇓*i*Pn **Pn** 03 19 12.4 +1.5
KOME *i* Sn **Sn** 03 20 07.2 +1.8
MOTA Moosalm 4.79 343 *e*Pn **Pn** 03 19 11.9 -0.1
comp=E,11nm,0.6s
ARSA Arzberg 4.80 20 *e*Pn **Pn** 03 19 13.9 +2.0
comp=E,9.6nm,0.5s
SCTE Santa Cesarea 4.84 122 P **Pn** 03 19 13.9 +1.4
LMR La Mourre 4.87 279 *e*P **Pn** 03 19 14.3 +1.5
LMR *e*Sn **Sn** 03 20 04.0 -5.0

comp=E,13nm,0.5s
BIOA Bad Ischl, Aus 4.94 4 *e*Pn **Pn** 03 19 14.0 +0.1
comp=E,11nm,0.3s
MBDF Montbardon 4.99 295 *e*P **Pn** 03 19 16.5 +1.8
MBDF *e*Sn **Sn** 03 20 07.4 -4.8

comp=E,31nm,0.7s
IVA Berane 4.99 86 ⇓*i*Pn **Pn** 03 19 15.6 +0.9
IVA *i* Sn **Sn** 03 20 13.5 +1.3
RETA Reutte 5.00 341 *e*Pn **Pn** 03 19 18.4 +3.6
comp=E,6.4nm,0.3s
PVY Plav 5.05 90 ⇓*i*Pn **Pn** 03 19 16.9 +1.4
PVY *i* Sn **Sn** 03 20 15.7 +1.9
SJES Sjenica 5.06 82 *e*Pn **Pn** 03 19 18.1 +2.5
SJES *e*Sn **Sn** 03 20 14.0 +0.1
DAVA Damuels 5.07 334 *e*Pn **Pn** 03 19 18.3 +2.6
comp=E,8.6nm,0.3s
MOA Molln 5.15 9 *e*Pn **Pn** 03 19 19.3 +2.5
MOA *e*Sn **Sn** 03 20 17.4 +1.4
MOA Molln 5.15 9 *e*Pn **Pn** 03 19 17.4 +0.6
comp=E,3.2nm,0.5s
DIVS Divibare 5.19 73 *e*Pn **Pn** 03 19 18.7 +1.4
DIVS *e*Sn **Sn** 03 20 17.1 +0.1
IVAS Ivanjica 5.22 79 *e*Pn **Pn** 03 19 18.8 +1.1
IVAS *e*Sn **Sn** 03 20 17.0 -0.7
TIR Tirane 5.23 103 *e*Pn **Pn** 03 19 19.1 +1.3
TIR *e*Sn **Sn** 03 20 19.1 +1.3
LPG La Plagne 5.33 303 *e*P **Pn** 03 19 22.2 +2.8
LPG *e*Sn **Sn** 03 20 15.3 -5.4

comp=E,29nm,0.6s
LPL La Plagne 5.35 303 *e*P **Pn** 03 19 21.4 +1.7
LPL *e*Sn **Sn** 03 20 15.6 -5.5

comp=E,26nm,0.7s
VAE Valguarnera 5.37 169 Sn **Sn** 03 20 23.6 +2.0
baz=342,slow=20
VAE Lg Lg 03 20 43.3

comp=E,1.0nm,0.3s,baz=0.0,slow=14,SNR=1.4
FRGS Fruska Gora 5.40 61 ⇓P **Pn** 03 19 24.1 +3.9
RONA Rosalia, Austr 5.42 23 *e*Pn **Pn** 03 19 21.0 +0.4
comp=E,4.1nm,0.3s
TRUS Trudelj 5.51 72 *e*Pn **Pn** 03 19 22.6 +1.0
CONA Conrad Observa 5.52 20 *e*Pn **Pn** 03 19 23.5 +1.6
comp=E,5.0nm,0.4s
SMRF Simiane la Rot 5.62 285 *e*P **Pn** 03 19 25.3 +2.1
SMRF *e*Sn **Sn** 03 20 22.2 -5.4

comp=E,7.2nm,0.4s
ORIF Oris-en-Rattie 5.65 295 *e*P **Pn** 03 19 27.6 +3.9
ORIF *e*Sn **Sn** 03 20 23.1 -5.4
comp=E,13nm,0.4s
GRUS Gruza 5.66 76 *e*Pn **Pn** 03 19 25.5 +1.7
GRUS *e*Sn **Sn** 03 20 29.1 +0.5
SELS Selova 5.89 83 *e*Pn **Pn** 03 19 27.9 +0.9
SELS *e*Sn **Sn** 03 20 32.1 -2.2
GERES GERESS Array B 6.10 4 Pn **Pn** 03 19 30.0 +0.2
comp=E,1.6nm,0.3s,baz=170,slow=13,SNR=6.5
GERES Sn **Sn** 03 20 37.5 -1.8
comp=E,4.4nm,0.3s,baz=172,slow=22,SNR=7.1
GERES Lg Lg 03 21 23.2
baz=180,slow=27
comp=E,2.0nm,0.3s
CKRC Cesky Krumlov 6.12 7 *e*PN **Pn** 03 19 31.0 +1.0
CKRC *e*SN **Sn** 03 20 38.2 -1.5
ZST Bratislava 6.12 26 *e*PN **Pn** 03 19 29.8 -0.2
CABF La Chapelle 6.31 310 *e*P **Pn** 03 19 35.4 +2.7
MODS Modra-Piesok 6.33 26 *e*PN **Pn** 03 19 34.2 +1.3
MODS *e*SN **Sn** 03 20 44.2 -0.7
BOVS Bovan 6.35 79 *e*Pn **Pn** 03 19 33.9 +0.8
BOVS *e*Sn **Sn** 03 20 42.9 -2.5
KHC Kasperske Hory 6.38 3 *e*PN **Pn** 03 19 33.1 -0.5
KHC *e*SN **Sn** 03 20 44.9 -1.3
BARS Barje 6.41 87 *e*Pn **Pn** 03 19 35.2 +1.2
BARS *e*Sn **Sn** 03 20 45.7 -1.3
VIVF Saint-Julien-l 6.45 292 *e*P **Pn** 03 19 36.7 +2.1
PRVS Prvonek 6.62 89 *e*Pn **Pn** 03 19 38.3 +1.3
PRVS *e*Sn **Sn** 03 20 50.5 -1.7
KRUC Moravsky 6.70 19 *e*PN **Pn** 03 19 40.6 +2.6
HINF Hinteralfeld 6.71 321 *e*P **Pn** 03 19 39.7 +1.6
HINF *e*Sn **Sn** 03 20 47.3 -7.0
comp=E,8.9nm,0.3s
ZAGS Zajecar 6.74 78 *e*Pn **Pn** 03 19 39.2 +0.6
BZS Buzias 6.75 62 *e*Pn **Pn** 03 19 39.3 +0.6
LASF Ste Croix 6.86 284 *e*P **Pn** 03 19 41.9 +1.6
LASF *e*Sn **Sn** 03 20 51.7 -6.4

comp=E,3.8nm,0.4s
BOSS Bosilegrad 6.92 89 *e*Pn **Pn** 03 19 42.3 +1.3
BOSS *e*Sn **Sn** 03 20 57.1 -2.5
CDF Champ du Feu 6.97 326 *e*P **Pn** 03 19 43.5 +1.7
VRAC Vranov 6.98 19 *e*PN **Pn** 03 19 44.1 +2.3

VYHS	**Vyhne**	**7.00**	**33**	*e*PN	**Pn**	**03 19 45.0**	**+2.9**
VYHS				*e*SN	**Sn**	**03 21 02.0**	**+0.6**
ZAPS	**Zavoj**	**7.00**	**83**	*e*Pn	**Pn**	**03 19 44.1**	**+1.9**
ZAPS				*e*Sn	**Sn**	**03 20 58.2**	**-3.4**
HAU	**Haudompre**	**7.08**	**320**	*e*P	**Pn**	**03 19 45.1**	**+1.9**
HAU				*e*Sn	**Sn**	**03 20 56.8**	**-6.6**
	comp=E,20nm,0.5s						
PRU	**Pruhonice**	**7.29**	**7**	*e*SN	**Sn**	**03 21 07.6**	**-1.1**
VTS	**Vitosha**	**7.46**	**88**	⇑P	Pn	03 19 41.8	-6.9
KEST	**Kesra**	**7.60**	**204**	Pn	Pn	03 19 55.5	+5.0
	comp=E,0.3nm,0.3s,baz=83,slow=17,SNR=4.1						
KEST				Sn	Sn	03 21 06.1	-10
	comp=E,0.5nm,0.3s,baz=41,slow=17,SNR=2.1						
	comp=E,6.7nm,0.9s						
SMF	**Signal de Mont**	**7.66**	**304**	*e*Pn	**Pn**	**03 19 48.5**	**-2.6**
SMF				*e*Sn	**Sn**	**03 21 10.7**	**-6.9**
	comp=E,4.4nm,0.3s						
MORC	**Moravsky Berou**	**7.66**	**22**	*e*PN	**Pn**	**03 19 53.0**	**+1.8**
PAGF	**Fort de Pagny**	**7.76**	**321**	*e*P	**Pn**	**03 19 55.0**	**+2.5**
	baz=140						
PAGF				*e*Sn	**Sn**	**03 21 13.1**	**-7.1**
	comp=E,15nm,0.4s						
LANS	**Liptovska Anna**	**7.77**	**33**	*e*PN	Pn	03 19 45.1	-7.6
SFTF	**Sexfontaines**	**7.86**	**317**	*e*P	**Pn**	**03 19 56.3**	**+2.5**
SFTF				*e*Sn	**Sn**	**03 21 15.7**	**-6.8**
	comp=E,5.8nm,0.3s						
LOR	**Lormes**	**7.95**	**308**	*e*P	**Pn**	**03 19 57.8**	**+2.7**
	baz=123						
LOR				*e*Sn	**Sn**	**03 21 17.8**	**-7.0**
	comp=E,5.4nm,0.3s						
SRS	**Serrai**	**7.99**	**98**	*e*Pn	**Pn**	**03 19 57.1**	**+1.4**
MTLF	**Montolieu**	**8.00**	**278**	*e*P	**Pn**	**03 19 58.5**	**+2.7**
MTLF				*e*Sn	**Sn**	**03 21 18.8**	**-7.2**
	comp=E,2.5nm,0.5s						
AVF	**Avril sur Loir**	**8.02**	**303**	*e*P	**Pn**	**03 19 58.6**	**+2.5**
AVF				*e*Sn	**Sn**	**03 21 19.5**	**-7.1**
	comp=E,2.5nm,0.4s						
MEZF	**Maizieres J'vi**	**8.05**	**318**	*e*P	**Pn**	**03 19 58.5**	**+2.1**
MEZF				*e*Sn	**Sn**	**03 21 19.8**	**-7.4**
	comp=E,3.7nm,0.3s						
SSF	**Saint Saulge**	**8.05**	**306**	*e*P	**Pn**	**03 19 59.3**	**+2.7**
SSF				*e*Sn	**Sn**	**03 21 20.1**	**-7.3**
	comp=E,3.5nm,0.5s						
SAVF	**Savonnieres en**	**8.09**	**319**	*e*P	**Pn**	**03 19 59.7**	**+2.7**
SAVF				*e*Sn	**Sn**	**03 21 21.1**	**-7.1**
BRG	**Berggiesshubel**	**8.13**	**4**	*e*P	Pn	03 19 48.4	-9.2
BRG				Amp		03 19 57.1	
	comp=Z,3.0nm,0.6s						
BRG				*ex*	x	03 20 00.2	
BRG				Amp		03 20 01.7	
	comp=Z,3.9nm,0.7s						
BRG				*ex*	x	03 21 24.1	
BRG				*ex*	x	03 22 30.3	
BRG				Amp		03 22 55.4	
	comp=Z,14nm,1.0s						
BGF	**Bois d'Agland**	**8.24**	**301**	*e*P	**Pn**	**03 20 02.0**	**+2.9**
BGF				*e*Sn	**Sn**	**03 21 24.2**	**-7.7**
	comp=Z,2.8nm,0.3s						
CAF	**Calviac**	**8.27**	**289**	*e*P	**Pn**	**03 20 02.2**	**+2.6**
CAF				*e*Sn	**Sn**	**03 21 25.3**	**-7.5**
	comp=Z,0.9nm,0.4s						
TCF	**Toulx Ste Croi**	**8.54**	**298**	*e*P	**Pn**	**03 20 06.1**	**+2.8**
TCF				*e*Sn	**Sn**	**03 21 31.8**	**-7.7**
	comp=Z,0.6nm,0.2s						
CLL	**Collm**	**8.55**	**360**	*e*Pn	**Pn**	**03 20 02.0**	**-1.3**
CLL				*e*Pg	**Pg**	**03 20 39.0**	**-4.5**
CLL				*e*Sn	Sn	03 21 18.0	-21
CLL				*e*Sg	**Sg**	**03 22 27.0**	**-7.1**
	comp=Z,25nm,1.3s						
RJF	**Les Rejaudoux**	**8.73**	**291**	*e*P	**Pn**	**03 20 08.8**	**+3.0**
EPF	**Esparros**	**9.38**	**276**	*e*P	**Pn**	**03 20 17.3**	**+2.5**
MLR	**Muntele Rosu**	**9.63**	**69**	Pn	**Pn**	**03 20 19.9**	**+1.7**
	baz=270,slow=20,SNR=1.8						
	comp=Z,2.9nm,0.8s						
MFF	**Saint Martin d**	**10.19**	**297**	*e*P	**Pn**	**03 20 29.2**	**+3.4**
IDI	**Anoyia**	**11.81**	**125**	Pn	**Pn**	**03 20 50.7**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=312,slow=14,SNR=2.2						
IDI				Sn	**Sn**	**03 22 55.9**	**-3.9**
	comp=Z,0.4nm,0.3s,baz=252,slow=19,SNR=2.5						
	comp=Z,6.1nm,0.9s						
ESDC	**Sonseca Array**	**13.22**	**262**	Pn	**Pn**	**03 21 08.7**	**+1.4**
	baz=73,slow=14,SNR=4.1						
	comp=Z,0.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**16.43**	**326**	Pn	**P**	**03 21 52.3**	**-0.5**
	baz=140,slow=17						
	comp=Z,0.5nm,0.6s						
HFS	**Hagfors**	**17.40**	**1**	P	**P**	**03 22 03.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=146,slow=10,SNR=2.9						
	comp=Z,2.1nm,0.9s						
NB2	**NORSAR Subarra**	**18.34**	**357**	P	**P**	**03 22 16.0**	**+2.1**
	comp=Z,1.9nm,1.0s,baz=175,slow=11						
NOA	**NORSAR Array B**	**18.34**	**357**	P	**P**	**03 22 15.3**	**+1.4**
	baz=171,slow=11,SNR=4.6						
	comp=Z,0.5nm,0.7s						
MMAI	**Mount Meron Ar**	**20.06**	**112**	P	Pn	03 22 35.2	+0.5
	comp=Z,1.4nm,0.5s,baz=323,slow=9.3,SNR=3.8						
	comp=Z,1.4nm,0.5s						
FINES	**FINESS Array B**	**20.26**	**18**	P	Pn	03 22 36.1	-0.7
	comp=Z,1.6nm,0.7s,baz=203,slow=10,SNR=7.1						
	comp=Z,1.6nm,0.7s						
KBZ	**Khabaz**	**21.67**	**77**	P	**P**	**03 22 52.1**	**+2.0**
	comp=Z,4.7nm,1.0s,baz=312,slow=3.8,SNR=6.0						
	comp=Z,4.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**31.12**	**202**	P	**P**	**03 24 20.1**	**+2.0**
	comp=Z,2.1nm,0.8s,baz=16,slow=9.1,SNR=12						
	comp=Z,2.1nm,0.8s						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**03 26 38.3**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=272,slow=7.1,SNR=4.8						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**61.87**	**50**	P	**P**	**03 28 21.5**	**+2.7**
	comp=Z,1.2nm,0.8s,baz=266,slow=5.9,SNR=4.0						
	comp=Z,1.2nm,0.8s						

ROM 24 03:18:59.7±0.1, 42.779N±0.005×13.139E±0.010, h10km, ML2.7/2, 4C, Error ellipse: s-maj=0.8km s-min=0.3km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**342**	⇑P	Pg	03 19 02.2	+0.4
NRCA				S	Sg	03 19 03.5	+0.1
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.19**	**340**	⇑P	Pg	03 19 04.4	+0.6
FEMA				AML	AML		
	comp=E,45950μm,0.8s						
FEMA				AML	AML		
	comp=N,36450μm,1.5s						
FEMA				AML	AML		
	comp=N,36450μm,1.4s						
FDMO	**Fiordimonte**	**0.26**	**352**	⇑P	Pg	03 19 05.4	+0.4
FDMO				AML	AML		
	comp=N,15550μm,1.3s						
FDMO				AML	AML		
	comp=E,16000μm,0.7s						
FDMO	**Fiordimonte**	**0.26**	**352**	AML	AML		
	comp=N,15550μm,1.3s						
FDMO	**Fiordimonte**	**0.26**	**352**	AML	AML		
	comp=E,16000μm,0.7s						
RM33	**Pellescritta (**	**0.28**	**168**	P	Pg	03 19 06.1	+0.8
RM33				AML	AML		
	comp=E,30700μm,0.8s						
RM33				AML	AML		
	comp=N,28800μm,0.4s						
RM33				AML	AML		
	comp=E,30250μm,0.8s						
RM33				AML	AML		
	comp=N,29550μm,0.4s						
CESI	**CESI - Serrava**	**0.28**	**323**	⇑P	Pg	03 19 06.2	+0.7
CESI				AML	AML		
	comp=E,19350μm,0.5s						
CESI				AML	AML		
	comp=N,22850μm,0.3s						
CESI				AML	AML		
	comp=N,3582μm,0.3s						
CAMP	**Campotosto**	**0.31**	**141**	P	Pg	03 19 06.4	+0.4
CAMP				AML	AML		
	comp=E,16300μm,0.7s						
CAMP				AML	AML		
	comp=N,22450μm,0.6s						
CAMP				AML	AML		
	comp=E,2367μm,0.4s						
ARRO	**Arrone**	**0.34**	**234**	P	Pb	03 19 07.6	-0.3
ARRO				AML	AML		
	comp=E,10355μm,1.1s						
ARRO				AML	AML		
	comp=N,8605μm,0.9s						
ARRO				AML	AML		
	comp=E,10380μm,1.1s						
ARRO				AML	AML		
	comp=N,8600μm,0.9s						
TERO	**Teramo**	**0.38**	**114**	P	Pg	03 19 07.2	0.0
TERO				S	Sg	03 19 12.9	+0.7
TERO				AML	AML		
	comp=N,64350μm,0.2s						
TERO				AML	AML		
	comp=E,39250μm,0.6s						
TERO				AML	AML		
	comp=E,37550μm,0.6s						
TERO				AML	AML		
	comp=N,67650μm,0.2s						
TERO	**Teramo**	**0.38**	**114**	AML	AML		
	comp=N,67650μm,0.2s						
TERO	**Teramo**	**0.38**	**114**	AML	AML		
	comp=N,64350μm,0.2s						
TERO	**Teramo**	**0.38**	**114**	AML	AML		
	comp=E,37550μm,0.6s						
TERO	**Teramo**	**0.38**	**114**	AML	AML		
	comp=E,39250μm,0.6s						
TERO	**Teramo**	**0.38**	**114**	AML	AML		
	comp=N,64300μm,0.2s						
TERO	**Teramo**	**0.38**	**114**	AML	AML		
	comp=E,37500μm,0.6s						
SEF1	**Sefro**	**0.39**	**339**	P	Pg	03 19 07.9	+0.4
SEF1				AML	AML		
	comp=N,17500μm,0.3s						
SEF1				AML	AML		
	comp=E,22600μm,0.8s						
SEF1				AML	AML		
	comp=N,17450μm,0.3s						
MDAR	**Monte D'Aria**	**0.41**	**0**	AML	AML		
	comp=N,19950μm,0.8s						
MDAR				AML	AML		
	comp=E,11950μm,1.5s						
PIO1	**Pioraco**	**0.41**	**344**	P	Pg	03 19 08.2	+0.3
PIO1				S	Sb	03 19 15.2	-0.4
PIO1				AML	AML		
	comp=E,7715μm,0.7s						
PIO1				AML	AML		
	comp=N,13000μm,0.4s						
PIO1				END			
OFFI	**Offida**	**0.43**	**69**	P	Pb	03 19 09.0	-0.5
OFFI				AML	AML		
	comp=E,41350μm,0.6s						
OFFI				AML	AML		
	comp=N,37650μm,0.6s						
MNTP	**Montappone**	**0.43**	**34**	P	Pb	03 19 08.9	-0.6
MNTP				AML	AML		
	comp=E,20300μm,0.8s						
MNTP				AML	AML		
	comp=N,19700μm,0.7s						
FIU1	**Fiuminata**	**0.44**	**340**	P	Pg	03 19 08.8	+0.5
FIU1				AML	AML		
	comp=E,6630μm,0.2s						
FIU1				AML	AML		
	comp=N,5710μm,1.5s						
FIU1				AML	AML		
	comp=E,6625μm,0.2s						
ASSB	**Assisi San Ben**	**0.44**	**307**	P	Pg	03 19 08.9	+0.6
ASSB				AML	AML		
	comp=E,11470μm,0.3s						
ASSB				AML	AML		
	comp=N,10430μm,0.8s						
ASSB	**Assisi San Ben**	**0.44**	**307**	AML	AML		
	comp=N,10430μm,0.8s						
ASSB	**Assisi San Ben**	**0.44**	**307**	AML	AML		
	comp=E,11470μm,0.3s						
CESX	**Cesi**	**0.45**	**248**	P	Pb	03 19 09.4	-0.3
CESX				AML	AML		
	comp=E,10075μm,0.8s						
CESX				AML	AML		
	comp=N,9165μm,0.5s						
SSM1	**San Severino M**	**0.45**	**4**	P	Pg	03 19 08.7	+0.2
SSM1				S	Sb	03 19 16.0	-0.6
GIGS	**Gran Sasso**	**0.46**	**136**	P	Pg	03 19 08.7	0.0
GIGS				AML	AML		
	comp=E,5485μm,0.6s						
GIGS				AML	AML		
	comp=N,3310μm,0.9s						
GAG1	**Gagliole**	**0.46**	**354**	P	Pg	03 19 09.1	+0.3
GAG1				AML	AML		
	comp=E,21750μm,0.8s						
GAG1				AML	AML		
	comp=N,26950μm,0.5s						
GAG1				AML	AML		
	comp=N,27000μm,0.5s						
AQU	**L'Aquila**	**0.47**	**155**	AML	AML		
	comp=N,10335μm,0.8s						
AQU				AML	AML		
	comp=E,10350μm,0.8s						
AQU				AML	AML		
	comp=N,11155μm,0.8s						
AQU				AML	AML		
	comp=E,10095μm,0.8s						
MTL1	**Matelica**	**0.49**	**349**	AML	AML		
	comp=N,17250μm,0.8s						
MTL1				AML	AML		
	comp=E,20100μm,1.2s						
SNTG	**Esanatoglia**	**0.50**	**343**	P	Pg	03 19 09.7	+0.3
SNTG				AML	AML		
	comp=N,614μm,0.3s						
SNTG				AML	AML		
	comp=E,5735μm,0.6s						
SNTG				AML	AML		
	comp=N,5470μm,0.8s						
SNTG				AML	AML		
	comp=E,662μm,0.6s						
SNTG				AML	AML		
	comp=N,614μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.55**	**318**	P	Pg	03 19 10.9	+0.5
TRE1	**Treia**	**0.55**	**13**	P	Pg	03 19 10.8	+0.4
TRE1				AML	AML		
	comp=E,19350μm,0.5s						
TRE1				AML	AML		
	comp=N,18900μm,0.9s						
EL6	**Elcito**	**0.55**	**357**	P	Pg	03 19 10.6	+0.1
EL6				AML	AML		
	comp=E,11560μm,1.0s						
EL6				AML	AML		
	comp=N,12135μm,0.2s						
TRTR	**Tortoreto Alta**	**0.57**	**87**	P	Pb	03 19 11.9	0.0
TRTR				AML	AML		
	comp=E,45150μm,0.6s						
TRTR				AML	AML		
	comp=N,42300μm,1.3s						
FOSV	**Fossato di Vic**	**0.58**	**332**	P	Pg	03 19 11.4	+0.3
FOSV				AML	AML		
	comp=E,4935μm,0.5s						
FOSV				AML	AML		
	comp=N,15600μm,0.3s						
CADA	**Capodarco di F**	**0.62**	**48**	P	Pb	03 19 12.9	+0.3
VCEL	**Villa Celiera**	**0.65**	**126**	P	Pg	03 19 12.3	+0.1
PP3	**Marolino**	**0.69**	**30**	P	Pb	03 19 14.1	+0.2
SSFR	**Montelago di S**	**0.71**	**338**	P	Pg	03 19 13.7	+0.3
SSFR				AML	AML		
	comp=E,12750μm,0.2s						
SSFR				AML	AML		
	comp=N,7790μm,0.2s						
SSFR				AML	AML		
	comp=E,12250μm,0.2s						
SSFR				AML	AML		
	comp=N,6970μm,1.5s						
T0110	**Collepietro**	**0.73**	**139**	P	Pg	03 19 14.0	+0.2
ARVD	**Arcevia**	**0.73**	**349**	P	Pg	03 19 13.7	-0.2
ARVD				AML	AML		
	comp=E,2360μm,1.6s						
ARVD				AML	AML		
	comp=N,2275μm,0.9s						
INTR	**Introdacqua**	**0.95**	**143**	AML	AML		
	comp=N,4μm,1.6s						
INTR	**Introdacqua**	**0.95**	**143**	AML	AML		
	comp=N,5500μm,1.1s						
INTR	**Introdacqua**	**0.95**	**143**	AML	AML		
	comp=E,4μm,0.7s						
INTR	**Introdacqua**	**0.95**	**143**	AML	AML		
	comp=E,4215μm,0.7s						
INTR	**Introdacqua**	**0.95**	**143**	P	Pn	03 19 20.9	+1.5
SAMA	**S.Maria delle**	**1.08**	**202**	AML	AML		
	comp=E,2185μm,1.2s						
SAMA	**S.Maria delle**	**1.08**	**202**	AML	AML		
	comp=N,2055μm,1.3s						

*ROM **24** 03:19:03.6±0.1, 42.786N±0.003×13.223E±0.005, h7km, ML3.7/26, Error ellipse: s-maj=0.4km s-min=0.0km az=65.0*
*LDG **24** 03:19:03.6±0.1, 42.89N×13.20E, h6km, Ml3.1/15, Error ellipse: s-maj=4.2km s-min=2.4km az=51.0*
*IDC **24** 03:19:04.2±1.6, 42.83N×13.11E, h0km, mb3.7/5, mbtmp3.6/6, ML1.7/1, MS4.0/1, Error ellipse: s-maj=43.9km s-min=25.7km az=108.0*

ISC 24 03:19:04.4±0.8, 42.78N±0.02×13.17E±0.02, h15km±5km, n109, σ2ş18/141, mb4.0/3, 1C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**321**	P	**Pg**	**03 19 06.6**	**-0.8**
NRCA				S	**Sg**	**03 19 08.5**	**-0.9**
FEMA	**Monte Fema**	**0.20**	**334**	P	**Pg**	**03 19 08.5**	**-0.6**
FEMA				S	**Sg**	**03 19 12.6**	**+0.3**
FDMO	**Fiordimonte**	**0.26**	**346**	P	**Pg**	**03 19 09.8**	**-0.2**
FDMO				S	**Sg**	**03 19 14.0**	**+0.1**
RM33	**Pellescritta (**	**0.28**	**173**	⇓P	**Pg**	**03 19 10.1**	**-0.1**
RM33				S	**Sg**	**03 19 14.7**	**+0.4**
RM33				AML	AML		
	comp=E,30700μm,0.8s						
RM33				AML	AML		
	comp=N,28800μm,0.4s						
RM33				AML	AML		
	comp=N,28750μm,0.4s						
RM33				AML	AML		
	comp=E,30250μm,0.8s						
RM33				AML	AML		
	comp=N,29550μm,0.4s						
RM33				AML	AML		
	comp=E,30200μm,0.8s						
CESI	**CESI - Serrava**	**0.30**	**319**	P	**Pg**	**03 19 10.8**	**+0.1**
CESI				S	**Sb**	**03 19 15.9**	**-0.4**
CAMP	**Campotosto**	**0.30**	**145**	P	**Pg**	**03 19 09.9**	**-0.8**
CAMP				S	**Sg**	**03 19 14.5**	**-0.6**
CSP1	**Cessapalombo**	**0.31**	**4**	P	**Pg**	**03 19 10.3**	**-0.6**
CSP1				S	**Sg**	**03 19 15.3**	**-0.1**
TERO	**Teramo**	**0.36**	**116**	P	**Pg**	**03 19 10.5**	**-1.1**
TERO				S	**Sg**	**03 19 15.7**	**-0.9**
ARRO	**Arrone**	**0.36**	**236**	P	**Pb**	**03 19 12.5**	**0.0**
ARRO				S	**Sb**	**03 19 18.7**	**+0.7**
SEF1	**Sefro**	**0.40**	**336**	P	**Pg**	**03 19 12.4**	**-0.1**
SEF1				S	**Sb**	**03 19 18.9**	**-0.3**
OFFI	**Offida**	**0.41**	**68**	⇑P	**Pg**	**03 19 12.2**	**-0.4**
MDAR	**Monte D'Aria**	**0.41**	**357**	P	**Pg**	**03 19 12.1**	**-0.6**
MDAR				S	**Sg**	**03 19 18.7**	**+0.4**
MNTP	**Montappone**	**0.42**	**31**	P	**Pg**	**03 19 12.6**	**-0.1**
PIO1	**Pioraco**	**0.42**	**341**	P	**Pg**	**03 19 12.7**	**-0.1**
PIO1				S	**Sb**	**03 19 19.4**	**-0.3**
PIO1				AML	AML		
	comp=E,7715μm,0.7s						
PIO1				AML	AML		
	comp=N,13000μm,0.4s						
PIO1				AML	AML		
	comp=E,7715μm,0.7s						
PIO1				AML	AML		
	comp=N,12950μm,0.4s						
FIU1	**Fiuminata**	**0.44**	**337**	P	**Pg**	**03 19 13.1**	**-0.1**
FIU1				S	**Sb**	**03 19 20.5**	**+0.1**
GIGS	**Gran Sasso**	**0.44**	**138**	P	**Pg**	**03 19 12.8**	**-0.5**
SSM1	**San Severino M**	**0.45**	**0**	P	**Pg**	**03 19 13.2**	**-0.1**
SSM1				S	**Sb**	**03 19 20.1**	**-0.4**
ASSB	**Assisi San Ben**	**0.46**	**305**	P	**Pb**	**03 19 13.9**	**-0.3**
ASSB				S	**Sb**	**03 19 21.2**	**+0.3**
AQU	**L'Aquila**	**0.46**	**158**	P	**Pg**	**03 19 12.9**	**-0.6**
GAG1	**Gagliole**	**0.46**	**350**	P	**Pg**	**03 19 13.5**	**-0.1**
CESX	**Cesi**	**0.47**	**249**	P	**Pb**	**03 19 15.2**	**+0.8**
MTL1	**Matelica**	**0.49**	**346**	P	**Pg**	**03 19 13.8**	**-0.3**
SNTG	**Esanatoglia**	**0.50**	**340**	P	**Pg**	**03 19 14.2**	**-0.2**
SNTG				S	**Sb**	**03 19 22.1**	**0.0**
FIAM	**Fiamignano**	**0.52**	**185**	P	**Pg**	**03 19 14.3**	**-0.3**
FIAM				S	**Sb**	**03 19 22.5**	**0.0**
FIAM				AML	AML		
	comp=E,9515μm,1.2s						
FIAM				AML	AML		
	comp=N,7175μm,0.5s						
TRE1	**Treia**	**0.54**	**11**	P	**Pg**	**03 19 14.9**	**-0.1**
TRTR	**Tortoreto Alta**	**0.55**	**87**	P	**Pg**	**03 19 15.0**	**-0.1**
TRTR				AML	AML		
	comp=N,42300μm,1.3s						
TRTR				AML	AML		
	comp=E,45150μm,0.6s						
EL6	**Elcito**	**0.55**	**355**	P	**Pg**	**03 19 15.4**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.56**	**316**	P	**Pg**	**03 19 15.4**	**0.0**
FOSV	**Fossato di Vic**	**0.59**	**330**	P	**Pg**	**03 19 16.0**	**-0.1**
FOSV				S	**Sb**	**03 19 25.2**	**+0.4**
CADA	**Capodarco di F**	**0.60**	**46**	P	**Pb**	**03 19 16.7**	**+0.2**
FAGN	**Fagnano**	**0.60**	**149**	P	**Pg**	**03 19 16.0**	**-0.1**
FAGN				AML	AML		
	comp=N,18450μm,0.4s						
FAGN				AML	AML		
	comp=E,15950μm,0.5s						
VCEL	**Villa Celiera**	**0.63**	**128**	P	**Pg**	**03 19 16.2**	**-0.4**
VCEL				S	**Sg**	**03 19 25.5**	**+0.5**
VCEL				AML	AML		
	comp=N,16450μm,0.7s						
VCEL				AML	AML		
	comp=E,21150μm,0.4s						
VCEL				AML	AML		
	comp=N,16400μm,0.7s						
VCEL				AML	AML		
	comp=E,21200μm,0.4s						
CIMA	**Civitanova Mar**	**0.64**	**35**	P	**Pb**	**03 19 17.3**	**+0.1**
MMUR	**Monte Murano**	**0.67**	**349**	P	**Pg**	**03 19 17.2**	**-0.3**
MMUR				S	**Sb**	**03 19 28.2**	**+1.2**
MURB	**Monte Urbino**	**0.68**	**316**	P	**Pg**	**03 19 17.5**	**0.0**
MURB				S	**Sb**	**03 19 28.5**	**+1.4**
MURB				AML	AML		
	comp=E,15000μm,0.3s						
MURB				AML	AML		
	comp=N,12950μm,0.3s						
MURB				AML	AML		
	comp=N,13300μm,0.2s						
MURB				AML	AML		
	comp=E,16900μm,0.3s						
PP3	**Marolino**	**0.68**	**28**	P	**Pg**	**03 19 17.7**	**+0.1**
SSFR	**Montelago di S**	**0.71**	**337**	P	**Pg**	**03 19 18.1**	**-0.2**
T0110	**Collepietro**	**0.71**	**141**	P	**Pg**	**03 19 18.0**	**-0.3**
T0110				AML	AML		
	comp=E,16200μm,0.4s						
T0110				AML	AML		
	comp=N,18450μm,0.8s						
ATTE	**AVT- Monte Tez**	**0.73**	**305**	P	**Pg**	**03 19 18.4**	**-0.3**
ATFO	**Monte Foce - G**	**0.73**	**323**	P	**Pg**	**03 19 18.4**	**-0.3**
ATFO				AML	AML		
	comp=E,4680μm,1.1s						
ATFO				AML	AML		
	comp=N,3030μm,0.4s						
SRES	**S.Oreste - Sor**	**0.73**	**222**	P	**Pn**	**03 19 20.2**	**0.0**
ATSC	**Scheggia e Pas**	**0.73**	**331**	P	**Pg**	**03 19 18.7**	**+0.1**
ATSC				S	**Sb**	**03 19 30.0**	**+1.2**
ARVD	**Arcevia**	**0.73**	**347**	P	**Pg**	**03 19 18.3**	**-0.4**
ARVD				S	**Sb**	**03 19 29.9**	**+1.1**
ATLO	**AVT- Montelove**	**0.77**	**314**	P	**Pg**	**03 19 19.1**	**-0.3**
PTQR	**Pietraquaria**	**0.78**	**167**	P	**Pg**	**03 19 18.6**	**-0.9**
MGAB	**Montegabbione**	**0.79**	**280**	P	**Pg**	**03 19 18.8**	**-0.9**
MGAB				AML	AML		
	comp=E,6600μm,0.6s						
MGAB				AML	AML		
	comp=N,6790μm,0.7s						
MGAB				AML	AML		
	comp=N,7155μm,1.2s						
MGAB				AML	AML		
	comp=E,6605μm,0.6s						
MGAB				AML	AML		
	comp=E,7255μm,0.6s						
FRON	**Frontone**	**0.81**	**336**	P	**Pg**	**03 19 19.5**	**-0.5**
FRON				S	**Sb**	**03 19 32.0**	**+1.2**
TB01	**Gubbio**	**0.81**	**318**	P	**Pg**	**03 19 19.6**	**-0.4**
TB02	**Pietralunga**	**0.81**	**317**	P	**Pg**	**03 19 19.0**	**-1.2**
TB02				S	**Sb**	**03 19 32.2**	**+1.2**
ATVO	**AVT- Monte Val**	**0.82**	**317**	P	**Pg**	**03 19 19.8**	**-0.5**
ATVO				AML	AML		
	comp=E,3005μm,1.4s						
ATVO				AML	AML		
	comp=N,2690μm,1.2s						
ATVO				AML	AML		
	comp=E,3010μm,1.4s						
ATVO				AML	AML		
	comp=N,2695μm,1.2s						
MTCE	**Montecelio**	**0.82**	**203**	P	**Pg**	**03 19 19.6**	**-0.7**

MTCE AML AML
comp=N,3370µm,1.1s
MTCE AML AML
comp=N,3365µm,1.1s
MTCE AML AML
comp=E,4445µm,1.0s
AOI Ancona 0.83 22 P **Pg** **03 19 19.9 -0.5**
AOI AML AML
comp=E,3800µm,0.4s
AOI AML AML
comp=N,3805µm,0.3s
ATBU Serra di Buran 0.83 327 P **Pg** **03 19 20.5 0.0**
TB03 Pietralunga 0.83 318 P **Pg** **03 19 20.1 -0.4**
CERT Cerreto 0.84 190 P **Pg** **03 19 19.9 -0.9**
CERT AML AML
comp=E,5665µm,0.6s
CERT AML AML
comp=E,5670µm,0.6s
CERT AML AML
comp=N,3385µm,0.4s
COR1 Corinaldo 0.86 352 P **Pg** **03 19 20.3 -0.7**
ATMI Monte Miggiano 0.86 310 P **Pn** **03 19 22.1 0.0**
ATPC Poggio Castell 0.87 323 P **Pg** **03 19 21.1 -0.2**
ATPI Pietralunga - 0.87 320 P **Pg** **03 19 20.8 -0.5**
PIEI Pieia 0.89 328 P **Pg** **03 19 21.3 -0.3**
PIEI AML AML
comp=E,2135µm,0.9s
PIEI AML AML
comp=N,2220µm,1.1s
MPAG Monte Paganucc 0.90 341 P **Pg** **03 19 21.6 -0.2**
MPAG AML AML
comp=N,2810µm,1.0s
MPAG AML AML
comp=E,2880µm,0.3s
MPAG AML AML
comp=N,2805µm,1.0s
SACS San Casciano d 0.93 275 P **Pn** **03 19 24.5 +1.4**
SACS AML AML
comp=N,4595µm,0.8s
SACS AML AML
comp=N,4675µm,0.8s
SACS AML AML
comp=E,3500µm,0.8s
SACS AML AML
comp=E,3510µm,0.8s
APEC Apecchio 0.95 325 P **Pg** **03 19 22.6 -0.1**
FSSB Fossombrone 0.95 343 P **Pg** **03 19 22.7 -0.1**
FSSB AML AML
comp=E,5785µm,1.2s
FSSB AML AML
comp=N,7825µm,0.4s
VVLD Villa Vallelon 0.97 160 P **Pg** **03 19 23.5 +0.4**
VVLD AML AML
comp=N,3130µm,1.4s
VVLD AML AML
comp=E,3685µm,0.7s
GUAR Guarcino 0.99 174 AML AML
comp=N,3240µm,0.4s
GUAR AML AML
comp=E,3085µm,0.7s
GUAR AML AML
comp=E,3080µm,0.7s
BADI Badiali 0.99 317 P **Pg** **03 19 23.6 0.0**
RMP Rome, Mte Porz 1.03 200 AML AML
comp=N,5125µm,1.0s
RMP AML AML
comp=E,3935µm,0.8s
CAFI Castiglion Fio 1.04 302 P **Pn** **03 19 24.8 +0.3**
CAFI AML AML
comp=E,2270µm,0.6s
CAFI AML AML
comp=N,1580µm,0.8s
CAFI AML AML
comp=E,2265µm,0.6s
LPEL Lama dei Pelig 1.05 134 P **Pb** **03 19 23.7 -0.6**
LPEL AML AML
comp=E,2920µm,1.0s
LPEL AML AML
comp=N,3385µm,0.6s
VIVA Pratoni del Vi 1.07 196 P **Pb** **03 19 24.3 -0.3**
SAMA S.Maria delle 1.09 203 P **Pb** **03 19 25.0 +0.1**
TOLF Tolfa 1.13 231 P **Pg** **03 19 26.3 +0.2**
TOLF AML AML
comp=E,2085µm,0.7s
TOLF AML AML
comp=N,1685µm,1.0s
POFI Posta Fibreno 1.14 159 P **Pn** **03 19 26.1 +0.2**
LAV9 Lanuvio 1.16 198 AML AML
comp=N,6730µm,0.8s
LAV9 AML AML
comp=E,5500µm,0.5s
LAV9 AML AML
comp=E,5720µm,0.5s
LAV9 AML AML
comp=N,6905µm,0.8s
GIUL Giuliano Di Ro 1.22 177 P **Pb** **03 19 27.5 +0.2**
GIUL AML AML
comp=E,1380µm,1.6s
GIUL AML AML
comp=N,1780µm,1.1s
ARCI Arcidosso 1.25 274 P **Pg** **03 19 29.0 +0.6**
LATB Latina 1.30 187 P **Pn** **03 19 27.2 -0.8**
CERA Filignano 1.34 152 P **Pb** **03 19 29.6 +0.4**
TRIV Trivento 1.44 134 P **Pn** **03 19 30.1 +0.2**
CSNT Castellina Chi 1.54 297 P **Pb** **03 19 33.3 +0.6**
RUFI Rufina 1.61 312 P **Pg** **03 19 35.1 -0.1**
CASP Castiglione de 1.70 271 P **Pb** **03 19 34.6 -0.7**
TRIF Trifonti 1.70 282 P **Pb** **03 19 35.1 -0.3**
PIGN Pignataro Magg 1.75 154 P **Pb** **03 19 36.0 -0.2**
PGF Pioggiola 3.09 267 *e*P **Pn** **03 19 54.8 +2.1**
PGF *e*Sn **Sn** **03 20 26.7 -2.7**
comp=N,15nm,0.3s
SBF Sospel 4.32 286 *e*P **Pn** **03 20 11.1 +1.5**
SBF *e*Sn **Sn** **03 20 55.4 -4.4**
comp=N,12nm,0.5s
LMR La Mourre 4.91 279 *e*P **Pn** **03 20 19.4 +1.7**
LMR *e*Sn **Sn** **03 21 09.6 -4.6**
comp=N,7.1nm,0.7s
LPG La Plagne 5.36 303 *e*P **Pn** **03 20 25.3 +1.2**
LPG *e*Sn **Sn** **03 21 19.2 -6.5**
comp=N,4.1nm,0.4s
LPL La Plagne 5.38 303 *e*P **Pn** **03 20 25.5 +1.2**
LPL *e*Sn **Sn** **03 21 20.0 -6.1**
comp=N,3.8nm,0.3s
SMRF Simiane la Rot 5.66 285 *e*P **Pn** **03 20 30.9 +2.9**
SMRF *e*Sn **Sn** **03 21 27.4 -5.4**
comp=N,7.4nm,0.9s
ORIF Oris-en-Rattie 5.69 295 *e*P **Pn** **03 20 30.8 +2.4**
ORIF *e*Sn **Sn** **03 21 26.1 -7.4**
comp=N,4.4nm,0.4s
CABF La Chapelle 6.33 310 *e*P **Pn** **03 20 39.1 +1.8**
CABF *e*Sn **Sn** **03 21 42.4 -7.0**
comp=N,3.7nm,0.6s
CABF La Chapelle 6.33 310 *e*Sn **Pn** **03 20 38.7 +1.4**
comp=N,3.4nm,0.3s
VIVF Saint-Julien-l 6.49 292 *e*P **Pn** **03 20 41.8 +2.5**
VIVF *e*Sn **Sn** **03 21 46.8 -6.3**
comp=N,0.9nm,0.2s
VIVF Saint-Julien-l 6.49 292 *e*Sn **Pn** **03 20 41.9 +2.6**
comp=N,1.7nm,0.3s
HINF Hinteralfeld 6.72 321 *e*P **Pn** **03 20 44.7 +2.2**
HINF *e*Sn **Sn** **03 21 51.3 -7.5**
comp=N,19nm,0.5s
LASF Ste Croix 6.90 284 *e*P **Pn** **03 20 47.3 +2.3**
LASF *e*Sn **Sn** **03 21 56.8 -6.5**
comp=N,0.2nm,0.2s
CDF Champ du Feu 6.98 326 *e*P **Pn** **03 20 48.0 +1.8**
CDF *e*Sn **Sn** **03 21 57.3 -8.1**
comp=N,10nm,0.5s
HAU Haudompre 7.09 320 *e*P **Pn** **03 20 49.3 +1.7**
HAU *e*Sn **Sn** **03 22 00.2 -7.8**
comp=N,23nm,0.4s
MTLF Montolieu 8.04 278 *e*P **Pn** **03 21 03.8 +3.2**
CAF Calviac 8.31 289 *e*P **Pn** **03 21 07.5 +3.2**
EKA Eskdalemuir Ar 16.45 325 LR LR 03 30 08.1
comp=N,596nm,20.8s,baz=90,slow=40
NOA NORSAR Array B 18.32 357 P **P** **03 23 18.5 +0.6**
baz=167,slow=10,SNR=2.1
comp=N,0.6nm,1.0s
MMAI Mount Meron Ar 20.02 112 P Pn 03 23 39.4 +1.0
comp=N,0.8nm,0.4s,baz=337,slow=9.4,SNR=4.0
comp=N,0.8nm,0.4s
FINES FINESS Array B 20.23 18 P Pn 03 23 40.2 -0.4
comp=N,2.8nm,0.9s,baz=192,slow=10.0,SNR=4.5
comp=N,2.8nm,0.9s
TORD Torodi Ar. Bea 31.15 202 P **P** **03 25 24.9 +2.2**
comp=N,0.9nm,0.8s,baz=16,slow=8.9,SNR=5.2
comp=N,0.9nm,0.8s
MKAR Makanchi Array 47.78 60 P **P** **03 27 42.6 +1.7**
comp=N,1.1nm,0.8s,baz=283,slow=6.0,SNR=4.1
comp=N,1.1nm,0.8s
SONM Songino Array 61.82 50 P **P** **03 29 25.4 +2.7**
comp=N,0.9nm,0.8s,baz=318,slow=8.4,SNR=2.3
comp=N,0.9nm,0.8s

ROM 24 03:21:58.3±0.1, 42°.727N±0°.004×13°.236E±0°.007,
h9km,ML3.0/38,12C,Error ellipse: s-maj=0.5km
s-min=0.4km az=68.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
NRCA	**Norcia**	**0.14**	**320**	⇑P		Pg	03 22 02.0	+0.4
NRCA				S		Sg	03 22 04.4	+0.6
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
RM33	**Pellescritta (**	**0.22**	**184**	P		Pg	03 22 03.9	+1.0
RM33				S		Sg	03 22 07.6	+1.7
RM33				AML		AML		
	comp=E,5175µm,1.0s							
RM33				AML		AML		
	comp=N,2995µm,1.1s							
RM33				AML		AML		
	comp=E,5100µm,1.0s							
RM33				AML		AML		
	comp=N,2975µm,1.1s							
RM33				AML		AML		
	comp=E,6405µm,0.4s							
RM33				AML		AML		
	comp=N,3060µm,1.4s							
RM33				AML		AML		
	comp=E,6405µm,0.4s							
RM33				AML		AML		
	comp=N,3055µm,1.4s							
RM33				AML		AML		
	comp=N,3095µm,1.5s							
RM33				AML		AML		
	comp=E,6255µm,0.4s							
RM33				AML		AML		
	comp=N,3100µm,1.5s							
RM33				AML		AML		
	comp=E,6400µm,0.4s							
CAMP	**Campotosto**	**0.23**	**146**	⇑P		Pg	03 22 03.7	+0.7
CAMP				S		Sg	03 22 07.7	+1.4
CAMP				AML		AML		
	comp=E,6260µm,0.3s							
CAMP				AML		AML		
	comp=N,3500µm,0.7s							
FEMA	**Monte Fema**	**0.27**	**330**	P		Pg	03 22 04.2	+0.3
FEMA				S		Sg	03 22 08.6	+0.9
FEMA				AML		AML		
	comp=E,18000µm,0.4s							
FEMA				AML		AML		
	comp=N,8950µm,0.8s							
FEMA				AML		AML		
	comp=E,17950µm,0.4s							
FEMA				AML		AML		
	comp=N,10890µm,0.4s							
FEMA				AML		AML		
	comp=E,17950µm,0.4s							
FEMA				AML		AML		
	comp=N,10865µm,0.4s							
TERO	**Teramo**	**0.29**	**111**	⇑P		Pg	03 22 04.6	+0.4
TERO				S		Sg	03 22 09.3	+1.3
TERO				AML		AML		
	comp=E,3635µm,0.6s							
TERO				AML		AML		
	comp=N,3850µm,1.4s							
TERO				AML		AML		
	comp=E,3875µm,0.6s							
TERO				AML		AML		
	comp=N,4290µm,1.4s							
TERO				AML		AML		
	comp=N,11305µm,0.1s							
TERO				AML		AML		
	comp=E,6660µm,0.4s							
TERO				AML		AML		
	comp=E,5870µm,0.4s							
TERO				AML		AML		
	comp=N,11285µm,0.1s							
TERO				AML		AML		
	comp=N,12675µm,0.1s							
TERO				AML		AML		
	comp=N,11275µm,0.1s							
TERO				AML		AML		
	comp=E,5875µm,0.4s							
FDMO	**Fiordimonte**	**0.33**	**341**	⇑P		Pg	03 22 05.2	+0.3
FDMO				S		Sg	03 22 10.3	+1.0
FDMO				AML		AML		
	comp=N,8050µm,0.2s							
FDMO				AML		AML		
	comp=E,5940µm,1.1s							
GUMA	**Gualdo di Mace**	**0.34**	**12**	P		Pg	03 22 05.9	+0.7
GUMA				S		Sb	03 22 11.7	-0.6
GUMA				AML		AML		
	comp=E,24650µm,0.3s							
GUMA				AML		AML		
	comp=N,19750µm,0.3s							
GUMA				AML		AML		
	comp=E,27950µm,0.3s							
GUMA				AML		AML		
	comp=N,19000µm,1.6s							
CESI	**CESI - Serrava**	**0.37**	**319**	⇑P		Pg	03 22 06.0	+0.4
CESI				S		Sg	03 22 11.8	+1.2
CESI				AML		AML		
	comp=N,13350µm,0.3s							
CESI				AML		AML		
	comp=E,8575µm,0.5s							
GIGS	**Gran Sasso**	**0.37**	**138**	⇑P		Pg	03 22 05.9	+0.2
GIGS				S		Sg	03 22 11.6	+1.1
GIGS				AML		AML		
	comp=E,872µm,0.4s							
GIGS				AML		AML		
	comp=N,664µm,1.2s							
GIGS				AML		AML		
	comp=N,665µm,1.2s							
ARRO	**Arrone**	**0.38**	**247**	P		Pb	03 22 06.5	-0.7
ARRO				AML		AML		
	comp=E,1935µm,0.5s							
ARRO				AML		AML		
	comp=N,2020µm,0.2s							
OFFI	**Offida**	**0.39**	**58**	⇑P		Pb	03 22 07.2	-0.2
OFFI				S		Sb	03 22 14.5	+1.0
OFFI				AML		AML		
	comp=E,6435µm,0.8s							
OFFI				AML		AML		
	comp=N,11650µm,0.5s							
AQU	**L'Aquila**	**0.39**	**162**	⇑P		Pg	03 22 06.6	+0.6
AQU				AML		AML		
	comp=E,1480µm,0.5s							
AQU				AML		AML		
	comp=E,1550µm,0.5s							
AQU				AML		AML		
	comp=N,1430µm,0.9s							
AQU				AML		AML		
	comp=N,1525µm,0.9s							
FIAM	**Fiamignano**	**0.47**	**191**	P		Pg	03 22 07.9	+0.5
FIAM				S		Sb	03 22 15.1	-0.6
FIAM				AML		AML		
	comp=E,1165µm,1.0s							
FIAM				AML		AML		
	comp=N,670µm,0.5s							
MDAR	**Monte D'Aria**	**0.47**	**352**	P		Pg	03 22 07.6	+0.1
SEF1	**Sefro**	**0.47**	**333**	P		Pg	03 22 07.6	+0.1
SEF1				S		Sb	03 22 14.8	-1.1
SEF1				AML		AML		
	comp=N,6155µm,0.2s							
SEF1				AML		AML		
	comp=E,6960µm,0.6s							
SEF1				AML		AML		
	comp=N,6155µm,0.2s							
CESX	**Cesi**	**0.50**	**257**	P		Pg	03 22 08.2	+0.2
CESX				S		Sb	03 22 16.4	-0.2
CESX				AML		AML		
	comp=E,1540µm,0.6s							
CESX				AML		AML		
	comp=N,1575µm,0.3s							

SSM1 San Severino M 0.50 355 P Pg 03 22 08.2 +0.1
TRTR Tortoreto Alta 0.51 80 ⇑P Pb 03 22 09.7 +0.3
TRTR AML AML
comp=E,4130µm,0.6s
TRTR AML AML
comp=N,3705µm,0.3s
TRTR AML AML
comp=N,4480µm,0.4s
FIU1 Fiuminata 0.51 334 P Pg 03 22 08.5 +0.2
FIU1 S Sb 03 22 16.3 -0.8
GAG1 Gagliole 0.53 346 P Pg 03 22 08.8 +0.3
GAG1 S Sb 03 22 17.0 -0.5
FAGN Fagnano 0.53 151 P Pg 03 22 08.6 0.0
FAGN AML AML
comp=E,3905µm,0.3s
FAGN AML AML
comp=N,3165µm,0.5s
ASSB Assisi San Ben 0.53 307 P Pg 03 22 08.7 +0.1
ASSB AML AML
comp=N,3275µm,0.2s
ASSB AML AML
comp=E,5170µm,0.2s
MTL1 Matelica 0.56 343 P Pg 03 22 09.2 0.0
VCEL Villa Celiera 0.56 126 P Pg 03 22 09.7 +0.6
VCEL AML AML
comp=N,2595µm,0.3s
VCEL AML AML
comp=E,2155µm,0.8s
SNTG Esanatoglia 0.57 338 P Pg 03 22 09.3 -0.1
SNTG S Sb 03 22 18.0 -0.8
SNTG AML AML
comp=N,1475µm,1.3s
SNTG AML AML
comp=E,1430µm,1.1s
TRE1 Treia 0.59 5 P Pb 03 22 10.6 -0.2
CADA Capodarco di F 0.61 39 P Pb 03 22 11.8 +0.7
EL6 Elcito 0.61 351 P Pg 03 22 10.0 -0.1
ATCC AVT- Casa Cast 0.63 317 P Pg 03 22 10.6 -0.1
ATCC AML AML
comp=E,2640µm,1.6s
ATCC AML AML
comp=N,2145µm,1.1s
T0110 Collepietro 0.64 141 ⇑P Pg 03 22 10.8 +0.1
T0110 AML AML
comp=N,2235µm,0.4s
T0110 AML AML
comp=E,2385µm,0.7s
CING Cingoli 0.65 357 P Pg 03 22 10.8 -0.1
FOSV Fossato di Vic 0.67 329 ⇑P Pg 03 22 11.1 -0.1
FOSV S Sb 03 22 21.4 -0.1
FOSV AML AML
comp=N,1113µm,1.1s
FOSV AML AML
comp=N,1116µm,1.1s
FOSV AML AML
comp=E,1220µm,0.3s
PP3 Marolino 0.71 23 ⇑P Pb 03 22 13.1 +0.3
PP3 AML AML
comp=N,2665µm,0.4s
PP3 AML AML
comp=E,3040µm,0.6s
PP3 AML AML
comp=N,2690µm,0.5s
PP3 AML AML
comp=N,2670µm,0.4s
PP3 AML AML
comp=E,3055µm,0.7s
MURB Monte Urbino 0.75 316 P Pg 03 22 12.7 -0.1
MURB AML AML
comp=E,3310µm,0.4s
MURB AML AML
comp=N,2680µm,0.2s
MURB AML AML
comp=N,2740µm,0.2s
MURB AML AML
comp=E,3625µm,0.4s
MURB AML AML
comp=E,3315µm,0.4s
MURB AML AML
comp=N,2745µm,0.2s
MURB AML AML
comp=N,2680µm,0.2s
SSFR Montelago di S 0.78 335 P Pg 03 22 13.2 -0.3
SSFR S Sb 03 22 25.8 +0.9
SSFR AML AML
comp=N,2345µm,0.7s
SSFR AML AML
comp=N,2285µm,0.7s
SSFR AML AML
comp=N,2350µm,0.7s
SSFR AML AML
comp=E,2630µm,0.2s
SSFR AML AML
comp=E,2935µm,0.2s
CERT Cerreto 0.80 194 P Pg 03 22 13.5 -0.2
CERT AML AML
comp=E,490µm,1.3s
CERT AML AML
comp=N,458µm,0.4s
CERT AML AML
comp=E,896µm,1.2s
CERT AML AML
comp=N,545µm,1.0s
ARVD Arcevia 0.80 344 P Pg 03 22 13.5 -0.3
ARVD AML AML
comp=E,641µm,1.1s
ARVD AML AML
comp=N,622µm,1.2s
ATTE AVT- Monte Tez 0.80 306 P Pg 03 22 13.8 0.0
ATFO Monte Foce - G 0.80 323 P Pg 03 22 13.6 -0.3
ATFO AML AML
comp=N,726µm,0.2s
ATFO AML AML
comp=E,815µm,0.6s
ATFO AML AML
comp=N,727µm,0.2s
MGAB Montegabbione 0.85 283 P Pg 03 22 14.8 +0.1
MGAB AML AML
comp=N,1455µm,0.5s
MGAB AML AML
comp=N,1410µm,0.5s
MGAB AML AML
comp=E,884µm,1.3s
MGAB AML AML
comp=N,1460µm,0.5s
MGAB AML AML
comp=E,1050µm,0.3s
AOI Ancona 0.87 18 P Pg 03 22 15.2 +0.2
AOI AML AML
comp=N,684µm,1.3s
AOI AML AML
comp=N,684µm,1.3s
AOI AML AML
comp=E,783µm,0.7s
INTR Introdacqua 0.87 145 P Pg 03 22 14.4 -0.7
INTR AML AML
comp=E,416nm,0.5s
INTR AML AML
comp=N,618nm,1.0s
INTR AML AML
comp=N,617nm,1.0s
INTR AML AML
comp=E,448µm,0.6s
INTR AML AML
comp=N,1036µm,1.0s
FRON Frontone 0.88 335 P Pg 03 22 14.7 -0.5
FRON AML AML
comp=E,674µm,0.7s
FRON AML AML
comp=N,918µm,1.1s
ATVO AVT- Monte Val 0.89 317 P Pg 03 22 15.2 -0.4
ATVO AML AML
comp=E,540µm,0.8s
ATVO AML AML
comp=N,628µm,0.7s
VVLD Villa Vallelon 0.90 161 P Pg 03 22 15.4 -0.3
COR1 Corinaldo 0.92 349 P Pb 03 22 16.5 0.0
GUAR Guarcino 0.93 177 P Pn 03 22 17.6 0.0
ATMI Monte Miggiano 0.93 311 P Pg 03 22 16.2 -0.1
ATPI Pietralunga - 0.95 320 P Pg 03 22 16.2 -0.4
PIEI Pieia 0.96 328 P Pg 03 22 16.1 -0.7
PIEI AML AML
comp=E,726µm,0.3s
PIEI AML AML
comp=N,411µm,1.2s
MPAG Monte Paganucc 0.97 339 P Pg 03 22 16.7 -0.3

LPEL	**Lama dei Pelig**	**0.98**	**134**	P	Pg	03 22 15.9	-1.2
LPEL				AML	AML			
	comp=N,436µm,0.3s							
LPEL				AML	AML			
	comp=E,578µm,0.3s							
SACS	**San Casciano d**	**0.98**	**278**	P	Pg	03 22 17.2	0.0	
SACS				AML	AML			
	comp=N,406µm,1.2s							
SACS				AML	AML			
	comp=N,413µm,1.2s							
SACS				AML	AML			
	comp=E,401µm,1.3s							
SACS				AML	AML			
	comp=E,407µm,1.3s							
NARO	**Abbazia di Nar**	**1.01**	**332**	P	Pg	03 22 16.9	-0.8	
NARO				AML	AML			
	comp=E,534µm,0.7s							
NARO				AML	AML			
	comp=N,355µm,0.3s							
FSSB	**Fossombrone**	**1.02**	**341**	P	Pg	03 22 17.5	-0.5	
FSSB				AML	AML			
	comp=E,1860µm,0.3s							
FSSB				AML	AML			
	comp=N,1800µm,0.6s							
APEC	**Apecchio**	**1.02**	**325**	P	Pg	03 22 17.6	-0.5	
APEC				AML	AML			
	comp=E,526µm,0.5s							
APEC				AML	AML			
	comp=N,580µm,1.5s							
BADI	**Badiali**	**1.07**	**317**	P	Pg	03 22 18.4	-0.5	
CAFI	**Castiglion Fio**	**1.11**	**303**	P	Pg	03 22 19.3	-0.3	
CAFI				AML	AML			
	comp=N,318µm,0.7s							
CAFI				AML	AML			
	comp=E,383µm,0.5s							
TOLF	**Tolfa**	**1.13**	**235**	P	Pb	03 22 19.7	-0.3	
MCIV	**Monte Civitell**	**1.15**	**273**	P	Pb	03 22 20.2	-0.1	
MCIV				AML	AML			
	comp=E,174µm,0.9s							
MCIV				AML	AML			
	comp=N,138µm,0.8s							
SF04	**Casetta**	**1.17**	**276**	P	Pn	03 22 21.3	+0.5	
SSP9	**Sansepolcro**	**1.17**	**317**	P	Pn	03 22 20.9	+0.1	
PARC	**Parchiule**	**1.18**	**322**	P	Pb	03 22 20.6	-0.2	
PARC				AML	AML			
	comp=N,358µm,0.8s							
PARC				AML	AML			
	comp=E,358µm,0.8s							
RNI2	**Rionero Sannit**	**1.23**	**146**	P	Pn	03 22 21.1	-0.6	
SF01	**Poggio Pratacc**	**1.23**	**275**	P	Pg	03 22 22.2	+0.1	
CERA	**Filignano**	**1.27**	**152**	P	Pn	03 22 21.0	-1.2	
ARCI	**Arcidosso**	**1.30**	**276**	P	Pg	03 22 24.1	+0.8	
SFI	**Santa Sofia**	**1.55**	**320**	P	Pn	03 22 26.6	+0.4	
FROS	**Frosini**	**1.60**	**288**	P	Pn	03 22 27.2	+0.4	
OSSC	**Osservatorio P**	**1.66**	**299**	P	Pn	03 22 28.3	+0.7	
RUFI	**Rufina**	**1.68**	**312**	P	Pn	03 22 28.4	+0.5	
CASP	**Castiglione de**	**1.75**	**273**	P	Pn	03 22 28.9	+0.1	
TRIF	**Trifonti**	**1.76**	**284**	P	Pn	03 22 29.4	+0.5	
TRIF				AML	AML			
	comp=E,100µm,1.0s							
TRIF				AML	AML			
	comp=N,91µm,1.6s							
ROVR	**Rover Verones**	**3.31**	**333**	P	Pn	03 22 51.8	+1.4	
MPRI	**Monte Prat**	**3.52**	**357**	P	Pn	03 22 53.5	+0.3	
MAGA	**Magasa**	**3.58**	**329**	P	Pn	03 22 55.4	+1.3	
GAGG	**Gaggia**	**3.73**	**335**	P	Pn	03 22 57.9	+1.7	
KOSI	**Kohlern**	**3.96**	**341**	P	Pn	03 23 00.9	+1.5	
MUGIO	**Muggio**	**4.39**	**318**	P	Pn	03 23 05.8	+0.6	
ROSI	**Rosskopf**	**4.40**	**343**	P	Pn	03 23 07.3	+1.9	

ROM 24 03:22:38.3±0.1, 42°.772N×0°.003×13°.198E±0°.006, h7^{km}, ML3.1/20, 7C-3D, Error ellipse: s-maj=0.5km s-min=0.1km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**315**	⇑P	Pg	03 22 41.3	+0.8
NRCA				S	Sg	03 22 42.9	+0.9
NRCA				AML	AML		
	comp=E,79850µm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,88950µm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,79900µm,0.1s						
FEMA	**Monte Fema**	**0.22**	**330**	⇑P	Pg	03 22 43.5	+0.8
FEMA				S	Sg	03 22 47.2	+1.5
FEMA				AML	AML		
	comp=E,14550µm,0.1s						
FEMA				AML	AML		
	comp=N,10895µm,0.4s						
FEMA				AML	AML		
	comp=N,10870µm,0.4s						
FEMA				AML	AML		
	comp=N,10895µm,0.4s						
RM33	**Pellescritta (**	**0.26**	**177**	P	Pb	03 22 44.6	-0.8
RM33				S	Sb	03 22 49.4	-0.8
RM33				AML	AML		
	comp=N,3060µm,1.4s						
RM33				AML	AML		
	comp=E,6405µm,0.4s						
RM33				AML	AML		
	comp=N,3095µm,1.5s						
RM33				AML	AML		
	comp=E,6405µm,0.4s						
RM33				AML	AML		
	comp=E,6255µm,0.4s						
RM33				AML	AML		
	comp=N,3055µm,1.4s						
RM33				AML	AML		
	comp=E,6400µm,0.4s						
RM33				AML	AML		
	comp=N,3100µm,1.5s						
FDMO	**Fiordimonte**	**0.28**	**343**	⇑P	Pg	03 22 44.4	+0.6
FDMO				S	Sg	03 22 48.9	+1.4
FDMO				AML	AML		
	comp=N,6840µm,0.2s						
FDMO				AML	AML		
	comp=E,5675µm,1.1s						
CAMP	**Campotosto**	**0.28**	**146**	⇑P	Pg	03 22 44.7	+0.8
CAMP				S	Sb	03 22 49.4	-1.4
CAMP				AML	AML		
	comp=E,2745µm,0.2s						
CAMP				AML	AML		
	comp=N,1495µm,0.6s						
GUMA	**Gualdo di Mace**	**0.31**	**19**	⇓P	Pg	03 22 45.2	+0.9
GUMA				S	Sb	03 22 50.5	-0.9
GUMA				AML	AML		
	comp=E,27950µm,0.3s						
GUMA				AML	AML		
	comp=E,24650µm,0.3s						
GUMA				AML	AML		
	comp=N,19750µm,0.3s						
GUMA				AML	AML		
	comp=N,19000µm,1.6s						
CESI	**CESI - Serrava**	**0.32**	**317**	⇑P	Pg	03 22 45.4	+0.8
CESI				S	Sb	03 22 50.6	-1.1
CESI				AML	AML		
	comp=N,12000µm,0.1s						
CESI				AML	AML		
	comp=E,6480µm,0.3s						
TERO	**Teramo**	**0.33**	**116**	⇑P	Pg	03 22 45.4	+0.5
TERO				S	Sg	03 22 50.7	+1.4
TERO				AML	AML		
	comp=N,11270µm,0.1s						
TERO				AML	AML		
	comp=N,11305µm,0.1s						
TERO				AML	AML		
	comp=E,5870µm,0.4s						
TERO				AML	AML		
	comp=N,11285µm,0.1s						
TERO				AML	AML		
	comp=N,12675µm,0.1s						
TERO				AML	AML		
	comp=E,6660µm,0.4s						
TERO				AML	AML		
	comp=E,5875µm,0.4s						
TERO				AML	AML		
	comp=N,11275µm,0.1s						
ARRO	**Arrone**	**0.37**	**239**	P	Pb	03 22 46.5	-0.6
OFFI	**Offida**	**0.39**	**65**	⇓P	Pb	03 22 47.3	-0.2
OFFI				S	Sb	03 22 54.8	+0.9
OFFI				AML	AML		
	comp=N,4973µm,0.7s						
MNTP	**Montappone**	**0.42**	**29**	P	Pb	03 22 47.4	-0.5
SEF1	**Sefro**	**0.42**	**334**	P	Pg	03 22 46.9	+0.5
SEF1				S	Sb	03 22 53.6	-0.9
SEF1				AML	AML		
	comp=E,3925µm,0.7s						
SEF1				AML	AML		
	comp=N,3090µm,0.2s						
SEF1				AML	AML		
	comp=N,3090µm,0.2s						
SEF1				AML	AML		
	comp=E,3930µm,0.7s						
GIGS	**Gran Sasso**	**0.42**	**139**	P	Pg	03 22 47.0	+0.5
GIGS				S	Sb	03 22 53.5	-1.2
GIGS				AML	AML		
	comp=N,542µm,0.6s						
GIGS				AML	AML		
	comp=E,579µm,1.3s						
MDAR	**Monte D'Aria**	**0.42**	**355**	P	Pg	03 22 47.0	+0.4
MDAR				S	Sb	03 22 53.7	-1.1
MDAR				AML	AML		
	comp=E,2450µm,0.2s						
MDAR				AML	AML		
	comp=N,3210µm,1.4s						
MDAR				AML	AML		
	comp=E,2455µm,0.2s						
PIO1	**Pioraco**	**0.44**	**339**	P	Pg	03 22 47.3	+0.5
PIO1				S	Sb	03 22 54.4	-0.7
PIO1				AML	AML		
	comp=E,2532µm,4.1s						
AQU	**L'Aquila**	**0.44**	**160**	⇑P	Pg	03 22 47.6	+0.8
AQU				S	Sb	03 22 54.9	-0.4
SSM1	**San Severino M**	**0.46**	**358**	P	Pg	03 22 47.7	+0.5
FIU1	**Fiuminata**	**0.46**	**335**	P	Pg	03 22 47.7	+0.5
FIU1				S	Sb	03 22 55.2	-0.6
FIU1				AML	AML		
	comp=E,2030µm,1.6s						
FIU1				AML	AML		
	comp=N,3610µm,1.6s						
GAG1	**Gagliole**	**0.48**	**348**	P	Pg	03 22 48.1	+0.6
GAG1				S	Sb	03 22 55.6	-0.6
ASSB	**Assisi San Ben**	**0.48**	**305**	P	Pg	03 22 48.2	+0.6
ASSB				S	Sb	03 22 55.6	-0.8
ASSB				AML	AML		
	comp=N,3275µm,0.2s						
ASSB				AML	AML		
	comp=E,5170µm,0.2s						
CESX	**Cesi**	**0.48**	**251**	⇓P	Pg	03 22 48.3	+0.7
CESX				S	Sb	03 22 56.4	0.0
MTL1	**Matelica**	**0.50**	**344**	P	Pg	03 22 48.5	+0.5
FIAM	**Fiamignano**	**0.51**	**187**	P	Pg	03 22 48.7	+0.6
FIAM				S	Sb	03 22 56.6	-0.6
SNTG	**Esanatoglia**	**0.52**	**339**	P	Pg	03 22 48.6	+0.3
SNTG				S	Sb	03 22 56.8	-0.7
SNTG				AML	AML		
	comp=N,1280µm,0.5s						
SNTG				AML	AML		
	comp=E,1170µm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**86**	P	Pb	03 22 50.2	+0.3
TRE1	**Treia**	**0.55**	**9**	P	Pb	03 22 49.7	-0.5
TRE1				S	Sb	03 22 59.0	+0.7
EL6	**Elcito**	**0.56**	**353**	P	Pg	03 22 49.0	-0.2
EL6				S	Sb	03 22 58.6	-0.2
FAGN	**Fagnano**	**0.58**	**150**	P	Pg	03 22 50.1	+0.6
ATCC	**AVT- Casa Cast**	**0.58**	**315**	P	Pg	03 22 50.0	+0.5
ATCC				S	Sb	03 22 59.3	0.0
CADA	**Capodarco di F**	**0.59**	**44**	P	Pb	03 22 51.5	+0.6
CING	**Cingoli**	**0.60**	**360**	P	Pg	03 22 50.2	+0.3
VCEL	**Villa Celiera**	**0.61**	**128**	P	Pb	03 22 50.7	-0.5
VCEL				S	Sb	03 23 00.5	+0.5
VCEL				AML	AML		
	comp=N,1654µm,1.9s						
FOSV	**Fossato di Vic**	**0.61**	**329**	P	Pg	03 22 50.4	+0.3
FOSV				S	Sb	03 23 00.1	-0.1
FOSV				AML	AML		
	comp=E,1004µm,0.9s						
FOSV				AML	AML		
	comp=N,826µm,1.1s						
FOSV				AML	AML		
	comp=E,1002µm,0.9s						
FOSV				AML	AML		
	comp=N,827µm,1.1s						
PP3	**Marolino**	**0.68**	**26**	P	Pb	03 22 52.2	-0.2
PP3				AML	AML		
	comp=N,2190µm,2.5s						
T0110	**Collepietro**	**0.69**	**142**	P	Pg	03 22 51.8	+0.2
MURB	**Monte Urbino**	**0.70**	**315**	P	Pg	03 22 52.1	+0.5
SSFR	**Montelago di S**	**0.73**	**336**	P	Pg	03 22 52.7	+0.3
SSFR				AML	AML		
	comp=E,2630µm,0.2s						
SSFR				AML	AML		
	comp=E,2935µm,0.2s						
SSFR				AML	AML		
	comp=N,2345µm,0.7s						
SSFR				AML	AML		
	comp=N,2285µm,0.7s						
SSFR				AML	AML		
	comp=N,2350µm,0.7s						
SRES	**S.Oreste - Sor**	**0.74**	**224**	P	Pb	03 22 53.2	-0.2
SRES				AML	AML		
	comp=N,414µm,0.4s						
SRES				AML	AML		
	comp=E,415µm,0.4s						
ARVD	**Arcevia**	**0.75**	**346**	P	Pg	03 22 52.8	+0.1
ARVD				S	Sb	03 23 04.8	+0.7
ATFO	**Monte Foce - G**	**0.75**	**323**	P	Pg	03 22 53.0	+0.3
ATSC	**Scheggia e Pas**	**0.75**	**330**	P	Pg	03 22 52.9	+0.1
ATLO	**AVT- Montelove**	**0.79**	**313**	P	Pg	03 22 53.7	+0.1
MGAB	**Montegabbione**	**0.81**	**280**	P	Pb	03 22 54.9	+0.2
FRON	**Frontone**	**0.82**	**335**	P	Pg	03 22 54.0	-0.1
FRON				S	Sb	03 23 06.7	+0.5
TB01	**Gubbio**	**0.83**	**318**	P	Pg	03 22 54.2	+0.1
AOI	**Ancona**	**0.83**	**21**	P	Pb	03 22 54.7	-0.4
ATVA	**AVT- Monte Val**	**0.84**	**307**	P	Pg	03 22 54.8	+0.4
ATBU	**Serra di Buran**	**0.85**	**326**	P	Pg	03 22 54.9	+0.3
PIEI	**Pieia**	**0.91**	**328**	P	Pg	03 22 55.7	+0.1
INTR	**Introdacqua**	**0.92**	**145**	P	Pg	03 22 55.2	-0.8
NARO	**Abbazia di Nar**	**0.95**	**332**	P	Pg	03 22 56.2	-0.4
FSSB	**Fossombrone**	**0.97**	**342**	P	Pg	03 22 56.8	-0.1
LPEL	**Lama dei Pelig**	**1.03**	**134**	P	Pg	03 22 56.9	-1.2
CAFI	**Castiglion Fio**	**1.06**	**302**	P	Pg	03 22 58.8	+0.1

NEIC ***24*** *03:22:48.9±1.9, 20°.2S±0°.1×175°.59W±0°.09, h183^{km}±7^{km}, mb4.5/126, Error ellipse: s-maj=16.5km s-min=11.3km az=166.0*

NOU ***24*** *03:22:51.4, 20°.25S×175°.37W, h229^{km}, mb5.0/43, Tonga Islands*

IDC ***24*** *03:22:57.2±2.0, 20°.17S×175°.89W, h252^{km}±17^{km}, mb4.2/16, mbtmp4.7/18, Error ellipse: s-maj=16.3km s-min=10.8km az=137.0*

ISC 24 03:22:50.1±0.3, 20°.44S±0°.05×175°.62W±0°.05, h200^{km}, n256, σ1°65/267, mb4.5/83, 5C-7D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.73**	**306**	P	**Pn**	**03 23 51.9**	**+3.3**
TAVE	**Taveuni**	**5.50**	**312**	P	**Pn**	**03 24 13.3**	**+2.3**
NIUE	**Niue**	**5.53**	**77**	Pn	**Pn**	**03 24 10.8**	**-0.5**
NIUE	**Niue**	**5.53**	**77**	P	**Pn**	**03 24 11.2**	**-0.2**
DGTI	**Dogotuki**	**6.03**	**312**	P	**Pn**	**03 24 20.0**	**+2.1**
MSVF	**Nonsavu**	**6.56**	**293**	P	**Pn**	**03 24 29.1**	**+4.3**
	133nm,0.7s,baz=125,slow=13,SNR=70						
MSVF	**Nonsavu**	**6.56**	**293**	Pn	**Pn**	**03 24 28.6**	**+3.8**
MSVF	**Nonsavu**	**6.56**	**293**	P	**Pn**	**03 24 28.6**	**+3.8**
AFI	**Afiamalu**	**7.46**	**30**	S	Sn	03 25 46.5	-14
	89nm,0.4s,baz=64,slow=23,SNR=2.2						
RIZ	**Raoul Island**	**9.01**	**193**	S	**Sn**	**03 26 36.7**	**-0.9**
RAO	**Raoul Island**	**9.02**	**193**	S	**Sn**	**03 26 38.3**	**+0.6**
	567nm,0.5s,baz=70,slow=23,SNR=8.1						
RAO	**Raoul Island**	**9.02**	**193**	Pn	**Pn**	**03 24 57.0**	**+0.4**
GLKZ	**Green Lake**	**9.03**	**193**	P	**Pn**	**03 24 58.0**	**+1.3**
GLKZ				S	**Sn**	**03 26 37.5**	**-0.4**
RAR	**Rarotonga**	**14.84**	**96**	P	**P**	**03 26 13.3**	**+2.0**
	77nm,1.0s,baz=251,slow=10.0,SNR=9.3						
RAR				S	**S**	**03 28 54.8**	**-0.5**
	5.9nm,0.7s,baz=28,slow=21,SNR=1.0						
RAR	**Rarotonga**	**14.84**	**96**		**P**	**03 26 13.0**	**+1.8**
MARNC	**Mare, Loyalty**	**15.31**	**263**	Pn	**Pn**	**03 26 13.7**	**-2.5**
MARNC	**Mare, Loyalty**	**15.31**	**263**	P	**P**	**03 26 19.3**	**+2.8**
LIFNC	**LIFOU**	**16.05**	**266**	P	**Pn**	**03 26 25.9**	**+0.8**
YATNC	**Mamie plateau,**	**16.38**	**261**	P	**Pn**	**03 26 31.4**	**+2.2**

OUENC	**Ouen Island, N**	**16.45**	**260**		**Pn**	**03 26 29.5**	**-0.4**	
OUENC	**Ouen Island, N**	**16.45**	**260**	P	**Pn**	**03 26 31.9**	**+2.0**	
DZM	**Mont Dzumac**	**16.80**	**261**	P	**Pn**	**03 26 36.1**	**+1.9**	
	38nm,0.5s,baz=81,slow=20,SNR=59							
DZM	**Mont Dzumac**	**16.80**	**261**	Pn	**Pn**	**03 26 36.1**	**+1.9**	
DZM	**Mont Dzumac**	**16.80**	**261**	P	**Pn**	**03 26 36.3**	**+2.1**	
NOUC	**Port Laguerre**	**16.93**	**261**	P	**Pn**	**03 26 37.3**	**+1.7**	
KUZ	**Kuaotunu**	**17.92**	**203**	P	**Pn**	**03 26 49.9**	**+2.8**	
HAZ	**Te Kaha**	**18.18**	**197**	P	**Pn**	**03 26 52.4**	**+2.2**	
PKGZ	**Pakihiroa**	**18.23**	**196**	S	**S**	**03 30 00.8**	**-5.7**	
PUZ	**Puketiti**	**18.36**	**196**	P	**Pn**	**03 26 54.3**	**+2.1**	
PUZ				S	**S**	**03 30 00.8**	**-8.1**	
RUGZ	**Raukumara Rang**	**18.41**	**197**	P	**Pn**	**03 26 54.5**	**+1.6**	
RUGZ				S	**S**	**03 30 03.3**	**-6.9**	
MKAZ	**Moumakai**	**18.45**	**204**	P	**Pn**	**03 26 55.3**	**+2.0**	
TWGZ	**Tauwhareparae**	**18.52**	**196**	P	**Pn**	**03 26 57.4**	**+3.1**	
TWGZ				S	**S**	**03 30 09.5**	**-2.9**	
MWZ	**Matawai**	**18.79**	**197**	P	**Pn**	**03 26 58.0**	**+0.6**	
MWZ				S	**S**	**03 30 13.1**	**-4.5**	
URZ	**Urewera**	**18.84**	**198**	P	**Pn**	**03 26 57.2**	**-0.7**	
	12nm,0.5s,baz=20,slow=4.0,SNR=17							
URZ				S	**S**	**03 30 15.0**	**-3.4**	
	9.4nm,0.5s,baz=226,slow=23,SNR=8.9							
URZ	**Urewera**	**18.84**	**198**	P	**Pn**	**03 26 57.2**	**-0.7**	
URZ				IAmb	IAmb	03 27 11.4		
	comp=Z,31nm,1.3s							
URZ	**Urewera**	**18.84**	**198**	P	**Pn**	**03 26 57.1**	**-0.8**	
URZ				S	**S**	**03 30 15.0**	**-3.4**	
URZ	**Urewera**	**18.84**	**198**	P	**Pn**	**03 26 57.5**	**-0.4**	
TOZ	**Tahuroa Road**	**18.88**	**202**	P	**Pn**	**03 26 60.0**	**+1.6**	
RAGZ	**Rawiri**	**18.98**	**197**	P	**Pn**	**03 26 59.5**	**-0.1**	
MUGZ	**Murupara**	**19.14**	**198**	P	**Pn**	**03 27 01.4**	**-0.2**	
BKZ	**Black Stump Fm**	**19.86**	**198**	P	**P**	**03 27 07.3**	**+1.3**	
QRZ	**Quartz Range**	**22.69**	**204**	P	**P**	**03 27 36.3**	**+1.7**	
LTZ	**Lake Taylor**	**24.49**	**202**	P	**P**	**03 27 53.3**	**+2.3**	
RPZ	**Rata Peaks**	**25.74**	**203**	P	**P**	**03 28 07.1**	**+4.9**	
	comp=Z,15nm,0.5s,baz=28,slow=2.7,SNR=15							
	comp=Z,15nm,0.5s							
RMQ	**Roma**	**33.15**	**253**	P	**P**	**03 29 10.7**	**+2.9**	
CTA	**Charters Tower**	**35.71**	**264**	P	**P**	**03 29 30.1**	**+0.2**	
CTAO	**Charters Tower**	**35.71**	**264**	P	**P**	**03 29 30.0**	**+0.1**	
CTAO	**Charters Tower**	**35.71**	**264**	P	**P**	**03 29 29.7**	**-0.2**	
CMSA	**Cobar Meteorol**	**36.32**	**244**	P	**P**	**03 29 34.8**	**-0.1**	
TOO	**Toolangi**	**37.74**	**235**	P	**P**	**03 29 47.1**	**+0.3**	
TOO				IAmb	IAmb	03 29 48.8		
	comp=Z,14nm,0.8s							
TOO	**Toolangi**	**37.74**	**235**	P	**P**	**03 29 47.3**	**+0.5**	
MTSU	**Mount Surprise**	**37.82**	**266**	P	**P**	**03 29 47.5**	**-0.2**	
BRAT	**Ballarat**	**38.93**	**235**	P	**P**	**03 29 58.3**	**+1.7**	
	comp=Z,15nm,0.8s							
COEN	**Coen**	**39.81**	**273**	P	**P**	**03 30 04.0**	**-0.2**	
COEN	**Coen**	**39.81**	**273**	P	**P**	**03 30 03.8**	**-0.4**	
STKA	**Stephens Creek**	**39.82**	**244**	P	**P**	**03 30 04.4**	**+0.2**	
	comp=Z,6.1nm,0.5s,baz=91,slow=11,SNR=15							
	comp=Z,6.1nm,0.5s							
STKA	**Stephens Creek**	**39.82**	**244**	P	**P**	**03 30 04.1**	**0.0**	
STKA	**Stephens Creek**	**39.82**	**244**	P	**P**	**03 30 04.1**	**0.0**	
LCRK	**Leigh Creek**	**42.61**	**247**	P	**P**	**03 30 26.6**	**-0.2**	
OOD	**Oodnadatta**	**44.81**	**251**	P	**P**	**03 30 45.5**	**+1.1**	
MULG	**Mulgathing**	**46.20**	**247**	P	**P**	**03 30 54.5**	**-0.8**	
GENI	**Genyem**	**46.60**	**287**	P	**P**	**03 30 56.6**	**-1.9**	
	comp=Z,168nm,0.7s							
GENI	**Genyem**	**46.60**	**287**	P	**P**	**03 30 59.2**	**+0.7**	
	comp=Z,168nm,0.8s							
AS31	**Alice Springs**	**46.70**	**256**	P	**P**	**03 30 59.7**	**+0.4**	
ASAR	**Alice Springs**	**46.70**	**256**	P	**P**	**03 30 58.5**	**-0.8**	
	comp=Z,26nm,0.9s,baz=87,slow=8.3,SNR=105							
ASAR				PcP	**PcP**	**03 32 29.7**	**+0.2**	
	comp=Z,8.8nm,0.7s,baz=105,slow=3.8,SNR=22							
ASAR				S	**S**	**03 37 29.5**	**-4.3**	
	comp=Z,1.2nm,0.6s,baz=94,slow=16,SNR=6.3							
	comp=Z,26nm,0.9s							
ASAR	**Alice Springs**	**46.70**	**256**	P	**P**	**03 30 58.9**	**-0.4**	
ASAR				PcP	**PcP**	**03 32 29.8**	**+0.2**	
WRAB	**Tennant Creek**	**46.81**	**261**	P	**P**	**03 30 59.4**	**-0.8**	
WRAB				IAmb	IAmb	03 30 59.7		
	comp=Z,13nm,0.8s							
WRAB	**Tennant Creek**	**46.81**	**261**	P	**P**	**03 30 59.3**	**-0.8**	
WRA	**Warramunga Arr**	**46.82**	**261**	P	**P**	**03 30 59.5**	**-0.7**	
	comp=Z,7.3nm,0.3s,baz=96,slow=7.1,SNR=272							
WRA				PcP	**PcP**	**03 32 30.2**	**+0.2**	
	comp=Z,5.0nm,0.7s,baz=92,slow=4.1,SNR=7.5							
	comp=Z,7.3nm,0.3s							
WRA	**Warramunga Arr**	**46.82**	**261**	P	**P**	**03 30 59.0**	**-1.2**	
WRA				PcP	**PcP**	**03 32 30.2**	**+0.2**	
KDU	**Kakadu**	**50.18**	**270**	P	**P**	**03 31 24.9**	**-1.0**	
MTN	**Manton Dam**	**51.39**	**270**	P	**P**	**03 31 33.3**	**-1.6**	
MTN	**Manton Dam**	**51.39**	**270**	P	**P**	**03 31 33.8**	**-1.1**	
WRKA	**Warakurna**	**51.63**	**254**	P	**P**	**03 31 35.8**	**-0.8**	
SAUI	**Saumlaki**	**52.71**	**276**	P	**P**	**03 31 45.7**	**+1.0**	
SAUI	**Saumlaki**	**52.71**	**276**	P	**P**	**03 31 44.1**	**-0.6**	
	comp=Z,43µmcomp=Z,166nm,0.6s							
SAUI	**Saumlaki**	**52.71**	**276**	P	**P**	**03 31 46.1**	**+1.4**	
KNRA	**Kununurra**	**52.89**	**265**	P	**P**	**03 31 45.9**	**-0.1**	
KNRA	**Kununurra**	**52.89**	**265**	P	**P**	**03 31 46.1**	**+0.2**	
FITZ	**Fitzroy Crossi**	**55.24**	**262**	P	**P**	**03 32 03.9**	**+1.0**	
MSAI	**Masohi**	**56.56**	**280**	P	**P**	**03 32 12.2**	**-0.1**	
	comp=Z,1µmcomp=Z,13nm,0.5s							
SOEI	**Soe**	**58.73**	**271**	P	**P**	**03 32 28.4**	**+0.8**	
SOEI	**Soe**	**58.73**	**271**	P	**P**	**03 32 28.0**	**+0.5**	
	comp=Z,133nm,0.8s							
SOEI	**Soe**	**58.73**	**271**	P	**P**	**03 32 28.1**	**+0.5**	
SANI	**Sanana**	**59.77**	**280**	P	**P**	**03 32 34.9**	**+0.3**	
SANI	**Sanana**	**59.77**	**280**	P	**P**	**03 32 35.4**	**+0.8**	
	comp=Z,29nm,0.7s							
EDFI	**Ende, Flores**	**61.46**	**271**	P	**P**	**03 32 45.2**	**-0.9**	
SPSI	**Sidrap Palu**	**64.85**	**275**	P	**P**	**03 33 07.5**	**-0.8**	
TOLI2	**Tolitoli**	**65.78**	**281**	P	**P**	**03 33 13.6**	**-0.7**	
TOLI2	**Tolitoli**	**65.78**	**281**	P	**P**	**03 33 14.0**	**-0.3**	
	comp=Z,21nm,0.9s							
TWSI	**Taliwang, Sumb**	**65.97**	**269**	P	**P**	**03 33 15.1**	**-0.4**	
MPSI	**Mapaga**	**66.30**	**280**	P	**P**	**03 33 16.8**	**-0.8**	
QSPA	**South Pole Qui**	**69.63**	**180**	P	**P**	**03 33 40.0**	**+2.4**	
QSPA				IAmb	IAmb	03 33 43.1		
	comp=Z,5.9nm,1.0s							
JYT	**Yasato**	**70.16**	**323**	P	**P**	**03 33 39.2**	**-1.8**	
MJAR	**Matsushiro Arr**	**71.50**	**322**	P	**P**	**03 33 48.1**	**-1.1**	
	comp=Z,7.0nm,0.6s,baz=154,slow=6.4,SNR=22							
MJAR				PcP	**PcP**	**03 34 06.9**	**-0.5**	
	comp=Z,0.8nm,0.

NVAR	**Mina Array Bea**	**79.47**	**42**	P	**P**		**03 34 35.7**	**+1.0**	
	comp=Z,4.9nm,0.7s,baz=222,slow=8.2,SNR=33								
	comp=Z,4.9nm,0.7s								
NVAR	**Mina Array Bea**	**79.47**	**42**	P	**P**		**03 34 35.2**	**+0.5**	
GMN	**Gold Mountain**	**79.47**	**44**	P	**P**		**03 34 35.3**	**+0.6**	
NV11	**Mina Array Sit**	**79.56**	**42**	P	**P**		**03 34 35.9**	**+0.8**	
NV11				IAmb	IAmb		03 34 37.2		
	comp=Z,12nm,1.3s								
PAHR	**Pah Rah Range**	**79.56**	**41**	P	**P**		**03 34 35.7**	**+0.7**	
PAHR				IAmb	IAmb		03 34 37.0		
	comp=Z,8.0nm,1.1s								
WCT	**Wildcat Mounta**	**79.59**	**44**	P	**P**		**03 34 36.1**	**+0.9**	
MZP	**Montezuma Peak**	**79.62**	**43**	P	**P**		**03 34 35.6**	**0.0**	
TPNV	**Topopah Spring**	**79.92**	**44**	P	**P**		**03 34 36.9**	**-0.2**	
TPH	**Tonopah**	**79.94**	**43**	P	**P**		**03 34 36.7**	**-0.5**	
KVN	**Kaiserville**	**79.96**	**42**	P	**P**		**03 34 36.8**	**-0.5**	
KVN				IAmb	IAmb		03 34 39.0		
	comp=Z,8.2nm,1.3s								
V12A	**Nelson**	**80.17**	**46**	P	**P**		**03 34 38.2**	**-0.1**	
J04D	**Umpqua Nationa**	**80.18**	**37**	P	**P**		**03 34 37.4**	**-0.9**	
USRK	**Ussuriysk Ar.**	**80.19**	**325**	P	**P**		**03 34 38.8**	**+0.7**	
	comp=Z,6.2nm,1.0s,baz=131,slow=4.0,SNR=13								
	comp=Z,6.2nm,1.0s								
USRK	**Ussuriysk Ar.**	**80.19**	**325**	P	**P**		**03 34 37.8**	**-0.3**	
MOD	**Modoc Plateau**	**80.36**	**39**	P	**P**		**03 34 38.9**	**-0.5**	
MOD				IAmb	IAmb		03 34 41.1		
	comp=Z,7.7nm,0.8s								
W13A	**Hualapai Mount**	**80.48**	**47**	P	**P**		**03 34 39.1**	**-1.1**	
K05A	**Summer Lake**	**80.54**	**38**	P	**P**		**03 34 39.2**	**-1.1**	
K05A				IAmb	IAmb		03 34 42.4		
	comp=Z,13nm,1.0s								
PRN	**Pahroc Range**	**80.97**	**45**	P	**P**		**03 34 42.5**	**-0.2**	
PRN				IAmb	IAmb		03 34 45.3		
	comp=Z,13nm,1.4s								
Q19K	**Cape Douglas,**	**81.13**	**11**	P	**P**		**03 34 42.4**	**-0.4**	
PINE	**Pine Mountain**	**81.19**	**37**	P	**P**		**03 34 44.1**	**+0.4**	
PINE				IAmb	IAmb		03 34 45.9		
	comp=Z,14nm,0.8s								
TUC	**Tucson**	**81.20**	**51**	P	**P**		**03 34 43.9**	**0.0**	
WVOR	**Wild Horse Val**	**81.67**	**39**	P	**P**		**03 34 46.3**	**+0.1**	
WVOR				IAmb	IAmb		03 34 48.0		
	comp=Z,6.6nm,1.0s								
MDJ	**Mudanjiang**	**81.77**	**324**	P	**P**		**03 34 45.5**	**-1.0**	
X16A	**Lo Mia Camp, P**	**81.82**	**49**	P	**P**		**03 34 47.8**	**+0.6**	
X16A				IAmb	IAmb		03 34 50.1		
	comp=Z,6.1nm,0.8s								
CCUT	**Cedar City**	**82.17**	**45**	P	**P**		**03 34 48.4**	**-0.7**	
I07A	**Izee**	**82.18**	**37**	P	**P**		**03 34 49.5**	**+0.7**	
I07A				IAmb	IAmb		03 34 50.8		
	comp=Z,7.9nm,1.0s								
KNB	**Kanab**	**82.24**	**46**	P	**P**		**03 34 49.7**	**+0.3**	
KNB				IAmb	IAmb		03 34 52.1		
	comp=Z,5.9nm,0.9s								
U15A	**North Rim**	**82.28**	**47**	P	**P**		**03 34 49.1**	**-0.6**	
U15A				IAmb	IAmb		03 34 52.6		
	comp=Z,11nm,0.8s								
J08A	**Circle Bar Ran**	**82.32**	**38**	P	**P**		**03 34 48.9**	**-0.7**	
J08A				IAmb	IAmb		03 34 51.3		
	comp=Z,8.4nm,1.1s								
SPR3	**Spring Creek 3**	**82.33**	**44**	P	**P**		**03 34 49.0**	**-0.9**	
SPR3				IAmb	IAmb		03 34 52.3		
	comp=Z,3.7nm,1.2s								
MAW	**Mawson**	**82.37**	**199**	P	**P**		**03 34 51.3**	**+2.1**	
	comp=Z,3.7nm,0.5s,baz=159,slow=4.3,SNR=12								
	comp=Z,3.7nm,0.5s								
SZCU	**Shurtz Canyon**	**82.38**	**45**	P	**P**		**03 34 49.3**	**-0.8**	
WUAZ	**Wupatki**	**82.44**	**48**	P	**P**		**03 34 49.4**	**-1.0**	
WUAZ				IAmb	IAmb		03 34 53.2		
	comp=Z,9.1nm,1.1s								
ELK	**Elko**	**82.74**	**42**	P	**P**		**03 34 51.4**	**-0.5**	
D05A	**Enumclaw**	**82.80**	**34**	P	**P**		**03 34 50.2**	**-1.5**	
D05A				IAmb	IAmb		03 34 54.8		
	comp=Z,12nm,0.9s								
PKCU	**Pink Cliffs**	**82.81**	**46**	P	**P**		**03 34 50.5**	**-2.0**	
PKCU				IAmb	IAmb		03 34 55.9		
	comp=Z,11nm,0.9s								
X18A	**Snowflake**	**82.93**	**49**	P	**P**		**03 34 53.4**	**+0.4**	
X18A				IAmb	IAmb		03 34 55.7		
	comp=Z,5.5nm,1.0s								
MTPU	**Mount Pierson**	**83.22**	**45**	P	**P**		**03 34 53.2**	**-1.4**	
MTPU				IAmb	IAmb		03 34 57.7		
	comp=Z,8.1nm,0.8s								
G08A	**Pilot Rock**	**83.23**	**36**	P	**P**		**03 34 53.1**	**-1.1**	
G08A				IAmb	IAmb		03 34 56.0		
	comp=Z,12nm,0.9s								
MSU	**Marysvale**	**83.47**	**45**	P	**P**		**03 34 55.9**	**+0.2**	
LTY	**Liberty**	**83.53**	**34**	P	**P**		**03 34 54.6**	**-1.0**	
LTY				IAmb	IAmb		03 34 57.0		
	comp=Z,8.2nm,1.0s								
HAWA	**Hanford**	**83.59**	**35**	P	**P**		**03 34 56.0**	**+0.2**	
HAWA				IAmb	IAmb		03 34 57.7		
	comp=Z,13nm,1.1s								
BMO	**Blue Mountains**	**83.89**	**37**	P	**P**		**03 34 57.8**	**+0.3**	
MFID	**Camas Ranch**	**83.91**	**39**	P	**P**		**03 34 56.2**	**-1.5**	
MFID				IAmb	IAmb		03 34 59.4		
	comp=Z,5.8nm,0.9s								
E08A	**Dider Farm, El**	**83.91**	**35**	P	**P**		**03 34 56.4**	**-1.0**	
E08A				IAmb	IAmb		03 34 59.2		
	comp=Z,8.6nm,0.8s								
H03S2	**Juan Fernandez**	**84.18**	**124**	T	T		05 08 18.2		
	baz=248								
H03S1	**Juan Fernandez**	**84.19**	**124**	T	T		05 07 41.5		
	baz=248								
H03S3	**Juan Fernandez**	**84.20**	**124**	T	T		05 07 40.2		
	baz=248								
H03N2	**Juan Fernandez**	**84.31**	**123**	T	T		05 08 12.2		
	baz=253,slow=72								
H03N3	**Juan Fernandez**	**84.31**	**123**	T	T		05 07 45.2		
	baz=253,slow=72								
H03N1	**Juan Fernandez**	**84.33**	**123**	T	T		05 08 06.0		
	baz=253,slow=72								
D08A	**Wollman Farm,**	**84.34**	**35**	P	**P**		**03 34 58.4**	**-1.1**	
D08A				IAmb	IAmb		03 35 01.4		
	comp=Z,14nm,1.0s								
E09A	**Wood Farm, Sta**	**84.42**	**36**	P	**P**		**03 34 59.0**	**-1.0**	
E09A				IAmb	IAmb		03 35 01.0		
	comp=Z,5.1nm,0.8s								
TMUT	**Trail Mountain**	**84.53**	**45**	P	**P**		**03 34 59.3**	**-1.8**	
TMUT				IAmb	IAmb		03 35 03.7		
	comp=Z,12nm,1.0s								
MPU	**Maple Canyon**	**84.63**	**44**	P	**P**		**03 35 00.5**	**-1.0**	
HLID	**Hailey**	**84.84**	**40**	P	**P**		**03 35 03.8**	**+1.3**	
HVU	**Hansel Valley**	**84.86**	**42**	P	**P**		**03 35 00.3**	**-2.2**	
MESA	**MESA**	**84.87**	**16**	P	**P**		**03 35 01.7**	**-0.5**	
SRU	**San Rafael Swe**	**84.89**	**45**	P	**P**		**03 35 02.0**	**-0.8**	
SRU				IAmb	IAmb		03 35 04.7		
	comp=Z,6.0nm,0.7s								
MNTX	**Cornudas Mount**	**84.91**	**54**	P	**P**		**03 35 01.7**	**-1.1**	
B08A	**Colville Reser**	**84.92**	**34**	P	**P**		**03 35 01.8**	**-0.7**	
B08A				IAmb	IAmb		03 35 03.5		
	comp=Z,7.1nm,0.7s								
P17A	**Butcher Ranch,**	**84.93**	**45**	P	**P**		**03 35 02.4**	**-0.6**	
YAH	**Yahtse**	**85.08**	**16**	P	**P**		**03 35 02.2**	**-1.0**	
TX31	**Lajitas Ar. Si**	**85.15**	**56**	P	**P**		**03 35 05.2**	**+1.0**	
TX31				IAmb	IAmb		03 35 06.6		
	comp=Z,14nm,1.1s								
TX32	**Lajitas Array**	**85.15**	**56**	P	**P**		**03 35 03.9**	**-0.4**	
TXAR	**Lajitas Array**	**85.16**	**56**	P	**P**		**03 35 05.7**	**+1.5**	
	comp=Z,2.2nm,0.9s,baz=211,slow=6.9,SNR=19								
	comp=Z,2.2nm,0.9s								
TXAR	**Lajitas Array**	**85.16**	**56**	P	**P**		**03 35 03.2**	**-1.0**	
K20K	**Telida**	**85.22**	**10**	P	**P**		**03 35 02.7**	**-0.9**	
K20K				IAmb	IAmb		03 35 04.3		
	comp=Z,7.9nm,0.8s								
N25K	**Chitina, Valde**	**85.46**	**14**	P	**P**		**03 35 03.6**	**-1.3**	
N25K				IAmb	IAmb		03 35 05.7		
	comp=Z,11nm,0.7s								
ANMO	**Albuquerque**	**85.64**	**50**	P	**P**		**03 35 06.7**	**+0.1**	
GDL2	**Guadalupe Moun**	**85.91**	**54**	P	**P**		**03 35 07.0**	**-0.9**	
KTH	**Kantishna Hill**	**85.92**	**11**	P	**P**		**03 35 05.6**	**-1.5**	
KTH				IAmb	IAmb		03 35 50.2		
	comp=Z,8.5nm,0.7s								
TRF	**Thorofare Moun**	**85.94**	**11**	P	**P**		**03 35 06.8**	**-0.5**	
J20K	**Nowinta River**	**85.98**	**9**	P	**P**		**03 35 05.5**	**-1.8**	
J20K				IAmb	IAmb		03 35 07.7		
	comp=Z,9.1nm,0.7s								
DHY	**Denali Highway**	**86.16**	**12**	P	**P**		**03 35 07.3**	**-1.1**	
RND	**Reindeer**	**86.17**	**12**	P	**P**		**03 35 07.2**	**-1.1**	
BPAW	**Bear Paw Mtn.**	**86.42**	**11**	P	**P**		**03 35 08.1**	**-1.4**	
BPAW				IAmb	IAmb		03 35 41.2		
	comp=Z,6.8nm,1.0s								
MCK	**McKinley**	**86.45**	**12**	P	**P**		**03 35 08.9**	**-0.8**	
M27K	**Edge Creek, AK**	**86.75**	**15**	P	**P**		**03 35 11.4**	**+0.1**	
M27K				IAmb	IAmb		03 35 12.8		
	comp=Z,12nm,1.1s								
L26K	**Log Cabin Wild**	**86.98**	**14**	P	**P**		**03 35 12.3**	**0.0**	
L26K				IAmb	IAmb		03 35 13.4		
	comp=Z,5.1nm,0.8s								
NEA2	**Nenana**	**87.21**	**11**	P	**P**		**03 35 12.6**	**-0.7**	
NEA2				IAmb	IAmb		03 35 32.7		
	comp=Z,3.5nm,0.7s								
I21K	**Tanana**	**87.25**	**10**	P	**P**		**03 35 12.8**	**-0.7**	
I21K				IAmb	IAmb		03 35 14.0		
	comp=Z,6.3nm,0.8s								
WRH	**Wood River Hil**	**87.28**	**12**	P	**P**		**03 35 12.9**	**-0.7**	
WRH				IAmb	IAmb		03 35 14.0		
	comp=Z,11nm,0.8s								
SMCO	**Snowmass**	**87.31**	**46**	P	**P**		**03 35 13.8**	**-1.1**	
SMCO				IAmb	IAmb		03 35 16.4		
	comp=Z,5.5nm,1.2s								
MLY	**Manley**	**87.32**	**10**	P	**P**		**03 35 13.0**	**-0.8**	
MLY				IAmb	IAmb		03 35 13.7		
	comp=Z,8.9nm,1.2s								
DOT	**Dot Lake**	**87.37**	**14**	P	**P**		**03 35 14.1**	**0.0**	
BCAR	**Beaver Creek A**	**87.38**	**15**	P	**P**		**03 35 14.1**	**-0.1**	
PDAR	**Pinedale Array**	**87.40**	**42**	P	**P**		**03 35 15.2**	**+0.2**	
	comp=Z,0.8nm,0.7s,baz=242,slow=1.9,SNR=9.2								
	comp=Z,0.8nm,0.7s								
HDA	**Harding Lake**	**87.44**	**12**	P	**P**		**03 35 13.8**	**-0.5**	
CCB	**Clear Creek Bu**	**87.49**	**12**	P	**P**		**03 35 13.5**	**-1.0**	
CCB				IAmb	IAmb		03 35 14.3		
	comp=Z,8.2nm,0.9s								
H21K	**Melozitna Rive**	**87.57**	**9**	P	**P**		**03 35 15.0**	**0.0**	
H21K				IAmb	IAmb		03 35 16.9		
	comp=Z,11nm,1.4s								
BOZ	**Bozeman (W)**	**87.62**	**39**	P	**P**		**03 35 15.3**	**-0.6**	
SCRK	**Sand Creek**	**87.67**	**13**	P	**P**		**03 35 15.6**	**-0.1**	
SCRK				IAmb	IAmb		03 35 51.1		
	comp=Z,5.7nm,0.8s								
TCOL	**CIGO, UAF Yank**	**87.69**	**11**	P	**P**		**03 35 14.8**	**-0.7**	
MDM	**Murphy Dome**	**87.69**	**11**	P	**P**		**03 35 14.3**	**-1.3**	
MDM				IAmb	IAmb		03 35 15.8		
	comp=Z,8.3nm,0.8s								
IMAR	**Indian Mountai**	**87.74**	**9**	P	**P**		**03 35 15.2**	**-0.6**	
IL31		**87.78**	**12**	P	**P**		**03 35 15.0**	**-0.9**	
IL31				IAmb	IAmb		03 35 16.4		
	comp=Z,20nm,1.4s								
ILAR	**Eielson Array**	**87.78**	**12**	P	**P**		**03 35 15.2**	**-0.8**	
	comp=Z,2.2nm,0.6s,baz=212,slow=5.3,SNR=27								
	comp=Z,2.2nm,0.6s								
ILAR	**Eielson Array**	**87.78**	**12**	P	**P**		**03 35 14.8**	**-1.2**	
J25K	**Salcha River,**	**87.94**	**13**	P	**P**		**03 35 16.2**	**-0.6**	
J26L	**Joseph Creek**	**88.22**	**13**	P	**P**		**03 35 18.1**	**0.0**	
J26L				IAmb	IAmb		03 35 19.8		
	comp=Z,12nm,0.9s								
PRP	**Porcupine Dome**	**88.71**	**12**	P	**P**		**03 35 20.4**	**-0.1**	
PRP				IAmb	IAmb		03 35 53.3		
	comp=Z,7.8nm,0.6s								
DAWY	**Dawson**	**88.81**	**15**	P	**P**		**03 35 20.1**	**-0.8**	
DAWY				IAmb	IAmb		03 35 21.7		
	comp=Z,6.2nm,0.8s								
EGAK	**Eagle**	**88.99**	**14**	P	**P**		**03 35 21.8**	**+0.2**	
EGAK				IAmb	IAmb		03 35 22.2		
	comp=Z,6.2nm,0.9s								
BMAR	**Burnt Mountain**	**90.58**	**11**	P	**P**		**03 35 29.3**	**+0.2**	
CMAR	**Chiang Mai Arr**	**92.20**	**289**	P	**P**		**03 35 38.6**	**+1.0**	
	comp=Z,2.0nm,0.3s,baz=118,slow=3.0,SNR=20								
	comp=Z,2.0nm,0.3s								
YKA	**Yellowknife Ar**	**95.54**	**24**	P	**P**		**03 35 51.5**	**-0.4**	
	comp=Z,1.5nm,0.7s,baz=188,slow=1.6,SNR=4.6								
	comp=Z,1.5nm,0.7s								
SONM	**Songino Array**	**97.18**	**318**	P		Pdif	03 36 00.3	+0.4	
	comp=Z,1.2nm,0.7s,baz=125,slow=5.4,SNR=3.9								
	comp=Z,1.2nm,0.7s								
MKAR	**Makanchi Array**	**112.78**	**313**	PKiKP		**PKiKP**	**03 41 01.8**	**-1.2**	
	comp=Z,0.8nm,0.4s,baz=110,slow=1.7,SNR=19								
SPITS	**Spitsbergen Ar**	**121.93**	**357**	PKP		**PKPdf**	**03 41 19.3**	**-0.4**	
	baz=90,slow=4.3								
BOSA	**Boshof**	**127.23**	**203**	PKP		**PKiKP**	**03 41 32.6**	**+0.6**	
	comp=Z,5.1nm,1.1s,baz=180,slow=3.0,SNR=2.7								
ARCES	**ARCESS Array B**	**129.25**	**351**	PKP		**PKPdf**	**03 41 33.6**	**-0.3**	
	comp=Z,1.3nm,0.4s,baz=29,slow=2.1,SNR=22								
FINES	**FINESS Array B**	**136.31**	**345**	PKhKP		PKPpre	03 41 40.8		
	comp=Z,0.6nm,0.6s,baz=5.7,slow=1.4,SNR=1.6								
FINES				PKP		**PKPdf**	**03 41 48.0**	**+0.6**	
	comp=Z,1.2nm,0.5s,baz=31,slow=3.2,SNR=7.2								
NB2	**NORSAR Subarra**	**139.15**	**355**	PKP		PKPpre	03 41 42.3		
	comp=Z,0.6nm,0.7s,baz=17,slow=2.6								
NOA	**NORSAR Array B**	**139.15**	**355**	PKhKP		PKPpre	03 41 45.7		
	comp=Z,0.4nm,0.7s,baz=19,slow=2.8,SNR=4.5								
NOA				PKP		**PKPdf**	**03 41 52.0**	**-0.6**	
	comp=Z,0.9nm,0.7s,baz=13,slow=3.9,SNR=6.2								
HFS	**Hagfors**	**139.79**	**353**	PKhKP		PKPpre	03 41 44.3		
	comp=Z,0.7nm,0.4s,baz=73,slow=2.0,SNR=14								
MNK	**Minsk**	**141.59**	**338**	*i* PKP		**PKPdf**	**03 41 52.9**	**-4.3**	
	comp=E,1.0nm,0.8s								
MNK				*i* PKP		**PKPdf**	**03 41 52.9**	**-4.3**	
	comp=N,8.0nm,0.9s								
MNK				*i* PKP		**PKPdf**	**03 41 52.9**	**-4.3**	
	comp=Z,7.0nm,0.7s,baz=216								
MNK				*i* PP		**PP**	**03 44 57.5**	**-5.0**	
MNK				*i* PPP		PPP	03 48 04.5		
MNK				*i* SKS		**SKSdf**	**03 48 53.5**	**+5.5**	
MNK				*i* SKKS		SKKSdf	03 58 26.0	+14	
MNK				*i* SS		**SS**	**04 03 21.1**	**+4.7**	
MNK				*i* SSS		SSS	04 08 44.4		
MNK				*i* LR		LR	04 41 39.3		
MNK				*i* LRM		MLR	04 44 43.8		
	comp=E,45nm,26.1s								
MNK				*i* LRM		MLR	04 44 54.0		
	comp=Z,117nm,21.7s								
MNK				*i* LRM		MLR	04 45 01.2		
	comp=N,19nm,21.0s								
AKASG	**Malin Array Be**	**144.01**	**333**	PKP		**PKPab**	**03 41 58.8**	**-0.7**	
	comp=N,2.8nm,0.3s,baz=39,slow=4.5,SNR=30								
EKA	**Eskdalemuir Ar**	**144.70**	**7**	PKP		**PKPab**	**03 42 01.3**	**-0.7**	
	comp=N,10.0nm,0.7s,baz=335,slow=2.7,SNR=42								
SORM	**Soroca**	**146.28**	**331**	⇓P		**PKPdf**	**03 42 04.4**	**-1.2**	
DIKM	**Dikmen**	**146.41**	**316**	⇓P		**PKPab**	**03 42 08.6**	**-0.3**	
BIZ	**Bicaz**	**148.19**	**331**	⇑P		**PKPbc**	**03 42 12.3**	**-0.1**	
BRTR	**Keskin Array B**	**148.43**	**314**	PKPbc		**PKPbc**	**03 42 13.4**	**+0.1**	
	comp=N,6.3nm,0.6s,baz=90,slow=2.5,SNR=18								
CFR	**Carcaliu**	**148.49**	**327**	⇓P		**PKPbc**	**03 42 13.1**	**0.0**	
TPGR	**Topolog**	**148.56**	**326**	⇑P		**PKPbc**	**03 42 13.2**	**-0.2**	
VRI	**Vrincioaia**	**148.69**	**329**	⇓P		**PKPbc**	**03 42 13.4**	**-0.3**	
ASF	**Jabal al Asfar**	**148.71**	**299**	PKPbc		**PKPbc**	**03 42 14.7**	**+0.4**	
	comp=N,9.0nm,0.8s,baz=110,slow=2.0,SNR=17								
PLOR	**Plostina**	**148.74**	**329**	⇑P		**PKPbc**	**03 42 13.3**	**-0.6**	
ANTO	**Ankara**	**148.92**	**315**	⇓P		**PKPdf**	**03 42 12.3**	**+2.0**	
NEHR	**Nehoiu**	**149.22**	**329**	⇓P		**PKPbc**	**03 42 14.1**	**-0.9**	
DOPR	**Dopca**	**149.25**	**331**	⇑P		**PKPbc**	**03 42 13.8**	**-1.3**	
MLR	**Muntele Rosu**	**149.34**	**330**	⇓P		**PKPbc**	**03 42 14.9**	**-0.5**	
MLR	**Muntele Rosu**	**149.34**	**330**	PKPbc		**PKPbc**	**03 42 15.2**	**-0.3**	
	comp=N,5.7nm,0.6s,baz=72,slow=3.2,SNR=9.4								
SECR		**149.62**	**329**	⇑P		**PKPbc**	**03 42 15.4**	**-0.6**	
MMAI	**Mount Meron Ar**	**149.71**	**301**	PKPbc		**PKiKP**	**03 42 17.2**	**-0.4**	
	comp=N,4.0nm,0.5s,baz=54,slow=4.3,SNR=13								
EIL	**Elat**	**150.89**	**294**	PKPbc		**PKiKP**	**03 42 20.0**	**-0.1**	
	comp=N,9.2nm,0.9s,baz=114,slow=1.2,SNR=6.0								
ESDC	**Sonseca Array**	**159.53**	**19**	PKP		**PKPdf**	**03 42 25.4**	**+0.3**	
	comp=N,0.2nm,0.7s,baz=347,slow=2.4,SNR=4.2								
ESDC				PKPab		**PKPab**	**03 43 04.3**	**+0.2**	
	comp=N,2.3nm,0.9s,baz=309,slow=3.3,SNR=12								
TORD	**Torodi Ar. Bea**	**172.31**	**160**	PKP		**PKPdf**	**03 42 35.0**	**-0.8**	
	comp=N,1.2nm,1.1s,baz=212,slow=1.7,SNR=4.2								
TORD				PKPab		**PKPab**	**03 44 04.4**	**+3.5**	
	comp=N,0.5nm,0.7s,baz=228,slow=2.8,SNR=2.6								

ROM 24 03:25:34.9±0.1, 42.754N±0.004×13.188E±0.007, h8km, ML2.6/5, Error ellipse: s-maj=0.7km s-min=0.1km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**326**	P	Pg	03 25 37.9	+0.6
NRCA				S	Sg	03 25 39.6	+0.6
FEMA	**Monte Fema**	**0.23**	**334**	P	Pg	03 25 40.3	+0.7
FEMA				S	Sg	03 25 44.0	+1.2
RM33	**Pellescritta (**	**0.24**	**175**	P	Pg	03 25 40.4	+0.6
RM33				S	Sg	03 25 45.2	+2.1
RM33				AML	AML		
	comp=E,6250μm,0.2s						
RM33				AML	AML		
	comp=N,4220μm,0.1s						
RM33				AML	AML		
	comp=E,6170μm,0.2s						
RM33				AML	AML		
	comp=N,4365μm,0.1s						
RM33				AML	AML		
	comp=E,6175μm,0.2s						
RM33				AML	AML		
	comp=N,4360μm,0.1s						
RM33				AML	AML		
	comp=N,4215μm,0.1s						
CAMP	**Campotosto**	**0.27**	**143**	P	Pg	03 25 40.7	+0.4
CAMP				S	Sb	03 25 45.6	-1.3
CAMP				AML	AML		
	comp=E,1228μm,0.2s						
CAMP				AML	AML		
	comp=N,1460μm,0.5s						
FDMO	**Fiordimonte**	**0.29**	**345**	P	Pg	03 25 41.4	+0.7
FDMO				S	Sb	03 25 46.0	-1.4
CESI	**CESI - Serrava**	**0.33**	**320**	P	Pg	03 25 42.0	+0.6
CESI				S	Sb	03 25 47.1	-1.4
GUMA	**Gualdo di Mace**	**0.33**	**19**	P	Pb	03 25 42.3	-0.7
GUMA				S	Sb	03 25 47.9	-0.5
TERO	**Teramo**	**0.33**	**113**	P	Pg	03 25 41.7	+0.3
TERO				S	Sb	03 25 47.4	-1.3
TERO				AML	AML		
	comp=N,2285μm,0.3s						
TERO				AML	AML		
	comp=N,2290μm,0.3s						
TERO				AML	AML		
	comp=E,1555μm,0.8s						
TERO				AML	AML		
	comp=N,2600μm,0.5s						
TERO				AML	AML		
	comp=E,1415μm,0.8s						
CSP1	**Cessapalombo**	**0.34**	**2**	P	Pg	03 25 42.2	+0.6
CSP1				S	Sb	03 25 47.7	-1.2
ARRO	**Arrone**	**0.36**	**241**	P	Pg	03 25 42.6	+0.8
ARRO				S	Sb	03 25 49.1	-0.1
OFFI	**Offida**	**0.41**	**64**	P	Pb	03 25 44.3	0.0
GIGS	**Gran Sasso**	**0.41**	**137**	P	Pg	03 25 43.3	+0.4
GIGS				AML	AML		
	comp=E,325μm,0.5s						
GIGS				AML	AML		
	comp=N,218μm,0.6s						
GIGS				AML	AML		
	comp=N,233μm,1.3s						
SEF1	**Sefro**	**0.43**	**336**	P	Pg	03 25 43.7	+0.4
SEF1				S	Sb	03 25 50.5	-1.0
MDAR	**Monte D'Aria**	**0.44**	**356**	P	Pg	03 25 44.0	+0.5
MDAR				S	Sb	03 25 50.9	-0.9
ASSB	**Assisi San Ben**	**0.48**	**307**	P	Pg	03 25 44.9	+0.6
ASSB				S	Sb	03 25 52.1	-0.9
FIAM	**Fiamignano**	**0.49**	**186**	P	Pg	03 25 45.0	+0.7
FIAM				S	Sb	03 25 52.4	-0.7
TRTR	**Tortoreto Alta**	**0.54**	**84**	P	Pb	03 25 46.9	+0.4
ATCC	**AVT- Casa Cast**	**0.59**	**317**	P	Pg	03 25 46.7	+0.4
VCEL	**Villa Celiera**	**0.60**	**126**	P	Pb	03 25 47.3	-0.4
FOSV	**Fossato di Vic**	**0.62**	**330**	P	Pg	03 25 47.1	+0.1
FOSV				S	Sb	03 25 56.8	-0.2
ARVD	**Arcevia**	**0.77**	**346**	P	Pg	03 25 49.8	+0.1
ARVD				S	Sb	03 26 01.7	+0.7
MGAB	**Montegabbione**	**0.81**	**282**	P	Pb	03 25 50.9	-0.3
CERT	**Cerreto**	**0.82**	**191**	P	Pg	03 25 50.7	+0.1
ATVO	**AVT- Monte Val**	**0.85**	**318**	P	Pg	03 25 51.3	0.0
AOI	**Ancona**	**0.85**	**21**	P	Pb	03 25 51.9	0.0
MPAG	**Monte Paganucc**	**0.93**	**340**	P	Pg	03 25 52.8	0.0
NARO	**Abbazia di Nar**	**0.96**	**333**	P	Pg	03 25 53.2	-0.3
FSSB	**Fossombrone**	**0.98**	**342**	P	Pg	03 25 53.7	-0.1
CAFI	**Castiglion Fio**	**1.06**	**303**	P	Pn	03 25 56.2	+0.1
CAFI				AML	AML		
	comp=N,107μm,1.4s

comp=N,686µm,1.4s
FOSV Fossato di Vic 0.63 330 P Pg 03 26 26.6 +0.2
FOSV AML AML
comp=E,364µm,0.2s
T0110 Collepietro 0.68 140 P Pg 03 26 27.9 +0.5
ARVD Arcevia 0.77 347 P Pg 03 26 29.1 0.0
ARVD AML AML
comp=E,217µm,0.2s
MPAG Monte Paganucc 0.93 341 P Pg 03 26 32.2 -0.1
ABTA Abfaltersbach 4.03 353 *e*Pn Pn 03 27 18.0 +1.9
comp=E,0.8nm,0.3s

ROM 24 03:28:41.6±0.2, 42°.686N±0°.006×13°.17E±0°.01, h11km±1km, ML2.0/2, 1D, Error ellipse: s-maj=0.8km s-min=0.8km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.15**	**346**	P	Pg	03 28 45.4	+0.2
NRCA				S	Sg	03 28 48.4	+0.8
NRCA				AML	AML		
	comp=E,30950µm,0.3s						
NRCA				AML	AML		
	comp=N,24650µm,0.7s						
NRCA				AML	AML		
	comp=E,32700µm,0.2s						
NRCA				AML	AML		
	comp=N,26350µm,0.7s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,55800µm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,59600µm,0.1s						
RM33	**Pellescritta (**	**0.18**	**168**	P	Pg	03 28 46.3	+0.7
RM33				S	Sg	03 28 49.8	+1.4
RM33				AML	AML		
	comp=E,3635µm,0.7s						
RM33				AML	AML		
	comp=N,2920µm,0.9s						
RM33				AML	AML		
	comp=E,3685µm,0.7s						
RM33				AML	AML		
	comp=N,2880µm,0.9s						
CAMP	**Campotosto**	**0.23**	**130**	P	Pg	03 28 46.9	+0.4
CAMP				S	Sg	03 28 50.8	+0.9
CAMP				AML	AML		
	comp=E,1350µm,0.8s						
CAMP				AML	AML		
	comp=N,1775µm,0.7s						
CAMP				AML	AML		
	comp=E,731µm,0.4s						
FEMA	**Monte Fema**	**0.29**	**343**	P	Pg	03 28 48.1	+0.6
FEMA				S	Sg	03 28 52.4	+0.9
FEMA				AML	AML		
	comp=E,8885µm,0.4s						
FEMA				AML	AML		
	comp=N,6670µm,0.4s						
FEMA				END			
ARRO	**Arrone**	**0.31**	**250**	P	Pg	03 28 48.5	+0.6
ARRO				AML	AML		
	comp=E,536µm,1.5s						
ARRO				AML	AML		
	comp=N,560µm,0.3s						
ARRO				AML	AML		
	comp=E,1354µm,1.1s						
ARRO				AML	AML		
	comp=N,1650µm,0.2s						
TERO	**Teramo**	**0.33**	**101**	P	Pg	03 28 48.2	-0.1
TERO				S	Sg	03 28 53.3	+0.6
TERO				AML	AML		
	comp=E,2330µm,0.3s						
TERO				AML	AML		
	comp=N,2985µm,0.5s						
TERO				AML	AML		
	comp=E,2465µm,0.4s						
TERO				AML	AML		
	comp=N,3110µm,0.5s						
FDMO	**Fiordimonte**	**0.35**	**351**	AML	AML		
	comp=N,2965µm,0.3s						
FDMO				AML	AML		
	comp=E,2270µm,0.3s						
CESI	**CESI - Serrava**	**0.37**	**329**	P	Pg	03 28 49.3	+0.3
CESI				S	Sg	03 28 54.9	+0.9
CESI				AML	AML		
	comp=E,2150µm,0.7s						
CESI				AML	AML		
	comp=N,2510µm,0.3s						
AQU	**L'Aquila**	**0.38**	**152**	P	Pg	03 28 49.5	+0.4
AQU				AML	AML		
	comp=E,1710µm,1.4s						
AQU				AML	AML		
	comp=N,1425µm,0.9s						
AQU				AML	AML		
	comp=E,1665µm,1.4s						
AQU				AML	AML		
	comp=N,1260µm,0.9s						
AQU				AML	AML		
	comp=N,382µm,0.6s						
GIGS	**Gran Sasso**	**0.38**	**128**	P	Pg	03 28 49.3	+0.1
GIGS				S	Sg	03 28 55.0	+0.7
GIGS				AML	AML		
	comp=E,428µm,0.7s						
GIGS				AML	AML		
	comp=N,326µm,0.9s						
GUMA	**Gualdo di Mace**	**0.40**	**18**	P	Pg	03 28 49.7	+0.2
GUMA				S	Sb	03 28 55.8	-1.0
CESX	**Cesi**	**0.44**	**260**	AML	AML		
	comp=E,443µm,0.2s						
CESX				AML	AML		
	comp=N,504µm,0.2s						
OFFI	**Offida**	**0.46**	**57**	P	Pb	03 28 51.3	-0.4
OFFI				AML	AML		
	comp=E,6140µm,0.6s						
OFFI				AML	AML		
	comp=N,7500µm,0.7s						
SEF1	**Sefro**	**0.49**	**341**	AML	AML		
	comp=N,3995µm,0.9s						
SEF1				AML	AML		
	comp=E,5615µm,0.3s						
ASSB	**Assisi San Ben**	**0.52**	**314**	AML	AML		
	comp=N,658µm,0.3s						
ASSB				AML	AML		
	comp=E,693µm,0.3s						
TRTR	**Tortoreto Alta**	**0.56**	**77**	⇓P	Pb	03 28 53.6	+0.1
TRTR				AML	AML		
	comp=E,4260µm,0.9s						
TRTR				AML	AML		
	comp=N,3795µm,0.9s						
VCEL	**Villa Celiera**	**0.58**	**120**	P	Pg	03 28 53.3	+0.4
ATCC	**AVT- Casa Cast**	**0.63**	**322**	AML	AML		
	comp=N,936µm,0.4s						
ATCC				AML	AML		
	comp=E,892µm,0.8s						
SRES	**S.Oreste - Sor**	**0.66**	**227**	AML	AML		
	comp=N,118µm,0.3s						
SRES				AML	AML		
	comp=E,138µm,0.2s						
CADA	**Capodarco di F**	**0.67**	**41**	P	Pb	03 28 55.6	+0.3
CERT	**Cerreto**	**0.75**	**191**	AML	AML		
	comp=E,690µm,0.6s						
CERT				AML	AML		
	comp=N,506µm,1.1s						
MGAB	**Montegabbione**	**0.81**	**287**	AML	AML		
	comp=N,286µm,0.3s						
MGAB				AML	AML		
	comp=E,248µm,0.6s						
MGAB				AML	AML		
	comp=N,314µm,0.3s						
MGAB				AML	AML		
	comp=E,262µm,0.6s						

*ROM **24** 03:28:58.8±0.1, 42°.787N±0°.004×13°.232E±0°.007, h8km, ML2.8/5, Error ellipse: s-maj=0.7km s-min=0.1km az=241.0*
*VIE **24** 03:29:00.8±0.7, 42°.74N×13°.36E, h10km, mb2.7/12, ml2.6/13, Error ellipse: s-maj=7.5km s-min=5.6km az=122.0 118 km NE of Rome*
*PRU **24** 03:29:02.4±0.0, 42°.97N×14°.11E, h0km*
ISC 24 03:28:59.4±1.0, 42.78N±0°.03×13.24E±0°.04, h5km±8km, n32, σ1§66/48, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**303**	P	**Pg**	**03 29 01.7**	**+0.1**
NRCA				S	**Sg**	**03 29 03.5**	**+0.4**
FEMA	**Monte Fema**	**0.23**	**324**	P	**Pg**	**03 29 04.3**	**+0.4**
FEMA				S	**Sg**	**03 29 08.0**	**+1.0**
RM33	**Pellescritta (**	**0.27**	**183**	P	**Pb**	**03 29 05.3**	**-1.4**
RM33				S	**Sb**	**03 29 10.3**	**-1.3**
CAMP	**Campotosto**	**0.27**	**152**	P	**Pg**	**03 29 05.3**	**+0.6**
CAMP				S	**Sb**	**03 29 10.0**	**-1.9**
FDMO	**Fiordimonte**	**0.28**	**338**	P	**Pg**	**03 29 05.0**	**+0.1**
FDMO				S	**Sg**	**03 29 09.1**	**+0.5**
FDMO				AML	AML		
	comp=E,2270µm,0.3s						
FDMO				AML	AML		
	comp=N,2965µm,0.3s						
GUMA	**Gualdo di Mace**	**0.30**	**14**	P	**Pg**	**03 29 05.3**	**+0.2**
GUMA				S	**Sb**	**03 29 10.2**	**-2.3**
TERO	**Teramo**	**0.31**	**119**	P	**Pg**	**03 29 05.6**	**+0.2**
TERO				S	**Sb**	**03 29 11.2**	**-1.7**
CESI	**CESI - Serrava**	**0.33**	**314**	P	**Pg**	**03 29 05.8**	**-0.1**
CESI				S	**Sb**	**03 29 11.2**	**-2.4**
CESI				AML	AML		
	comp=E,3185µm,0.7s						
CESI				AML	AML		
	comp=N,3720µm,0.3s						
OFFI	**Offida**	**0.37**	**64**	P	**Pb**	**03 29 07.4**	**-1.0**
AQU	**L'Aquila**	**0.44**	**164**	P	**Pb**	**03 29 08.4**	**-1.2**
SNTG	**Esanatoglia**	**0.53**	**336**	P	**Pg**	**03 29 08.8**	**-0.7**
SNTG				S	**Sb**	**03 29 17.2**	**-1.9**
EL6	**Elcito**	**0.56**	**350**	P	**Pg**	**03 29 09.9**	**-0.3**
EL6				S	**Sb**	**03 29 18.9**	**-1.3**
ATCC	**AVT- Casa Cast**	**0.60**	**313**	P	**Pg**	**03 29 10.4**	**-0.5**
ATCC				AML	AML		
	comp=E,1320µm,0.4s						
ATCC				AML	AML		
	comp=N,1460µm,0.4s						
FOSV	**Fossato di Vic**	**0.62**	**326**	P	**Pg**	**03 29 10.7**	**-0.7**
FOSV				S	**Sb**	**03 29 20.7**	**-1.3**
ARVD	**Arcevia**	**0.75**	**344**	P	**Pg**	**03 29 13.3**	**-0.5**
MPAG	**Monte Paganucc**	**0.92**	**338**	P	**Pg**	**03 29 16.3**	**-0.7**
MPAG				AML	AML		
	comp=E,614µm,0.3s						
MPAG				AML	AML		
	comp=N,430µm,0.4s						
MPAG				AML	AML		
	comp=E,721µm,1.3s						
MPAG				AML	AML		
	comp=N,762µm,1.6s						
NARO	**Abbazia di Nar**	**0.96**	**330**	P	**Pg**	**03 29 16.7**	**-1.1**
NARO				AML	AML		
	comp=E,308µm,1.6s						
NARO				AML	AML		
	comp=N,242µm,0.8s						
NARO				AML	AML		
	comp=E,308µm,1.6s						
NARO				AML	AML		
	comp=N,241µm,0.8s						
PTRJ	**Pietraroja**	**1.71**	**145**	AML	AML		
	comp=N,4675µm,0.4s						
PTRJ				AML	AML		
	comp=E,1775µm,0.1s						
PTRJ				AML	AML		
	comp=N,3740µm,0.4s						
PTRJ				AML	AML		
	comp=E,2170µm,0.1s						
OBKA	**Obir**	**3.85**	**14**	*e*Pn	**Pn**	**03 30 00.5**	**+1.1**
	comp=E,2.2nm,0.4s						
OBKA				*e*Sn	**Sn**	**03 30 47.7**	**+2.7**
	comp=E,2.6nm,0.4s						
MYKA	**Terra Mystica**	**3.87**	**4**	*e*Pn	**Pn**	**03 30 00.8**	**+1.2**
	comp=E,2.1nm,0.3s						
MYKA				*e*Sn	**Sn**	**03 30 47.7**	**+2.3**
	comp=E,3.3nm,0.4s						
ABTA	**Abfaltersbach**	**4.00**	**353**	*e*Pn	**Pn**	**03 30 01.9**	**+0.4**
	comp=E,7.5nm,0.5s						
ABTA				*e*Sn	**Sn**	**03 30 51.5**	**+2.7**
	comp=E,5.3nm,0.7s						
SOKA	**Soboth**	**4.11**	**18**	*e*Pn	**Pn**	**03 30 03.5**	**+0.6**
	comp=E,3.5nm,0.0s						
SOKA				*e*Sn	**Sn**	**03 30 52.4**	**+1.0**
	comp=E,1.7nm,0.4s						
FETA	**Feichten**	**4.60**	**338**	*e*Pn	**Pn**	**03 30 11.7**	**+1.9**
	comp=E,1.1nm,0.4s						
FETA				*e*Sn	**Sn**	**03 31 06.9**	**+3.2**
	comp=E,0.7nm,0.3s						
WTTA	**Wattenberg**	**4.63**	**346**	*e*Pn	**Pn**	**03 30 11.9**	**+1.8**
	comp=E,1.7nm,0.4s						
SQTA	**Sankt Quirin**	**4.67**	**343**	*e*Pn	**Pn**	**03 30 13.5**	**+2.9**
	comp=E,1.2nm,0.2s						
WATA	**Walderalm**	**4.71**	**346**	*e*Pn	**Pn**	**03 30 13.2**	**+2.0**
	comp=E,0.7nm,0.2s						
MOTA	**Moosalm**	**4.81**	**342**	*e*Pn	**Pn**	**03 30 14.0**	**+1.4**
	comp=E,0.7nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.92**	**3**	*e*Pn	**Pn**	**03 30 15.4**	**+1.4**
	comp=E,3.1nm,0.3s						
RETA	**Reutte**	**5.03**	**340**	*e*Pn	**Pn**	**03 30 17.3**	**+1.8**
	comp=E,0.6nm,0.3s						
DAVA	**Damuels**	**5.10**	**333**	*e*Pn	**Pn**	**03 30 17.9**	**+1.4**
	comp=E,0.7nm,0.3s						
MOA	**Molln**	**5.13**	**8**	*e*Pn	**Pn**	**03 30 18.8**	**+2.0**
	comp=E,0.8nm,0.3s						
KHC	**Kasperske Hory**	**6.36**	**2**	*e*PN	**Pn**	**03 30 33.1**	**-0.7**
KHC				*e*SN	**Sn**	**03 31 42.6**	**-4.2**

*IDC **24** 03:29:27.3±1.5, 20°.78S×177°.84W, h474km±15km, mb3.6/13, mbtmp4.4/16, Error ellipse: s-maj=14.9km s-min=10.4km az=131.0*
*NEIC **24** 03:29:27.6±1.0, 20°.9S±0°.2×177°.9W±0°.2, h480km±7km, mb4.1/21, Error ellipse: s-maj=25.0km s-min=20.7km az=148.0*
ISC 24 03:29:28.5±0.5, 20°.93S±0°.06×177°.81W±0°.09, h495km, n79, σ1§55/84, mb4.0/22, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.04**	**308**	P	**P**	**03 30 52.5**	**-3.3**
	22nm,0.5s,baz=110,slow=20,SNR=25						
MSVF	**Nonsavu**	**5.04**	**308**		**P**	**03 30 52.7**	**-3.0**
RIZ	**Raoul Island**	**8.28**	**181**	S	**S**	**03 33 01.5**	**-3.8**
RAO	**Raoul Island**	**8.29**	**181**	S	**S**	**03 33 02.1**	**-3.4**
	139nm,0.4s,baz=95,slow=22,SNR=4.2						
GLKZ	**Green Lake**	**8.30**	**181**	P	**P**	**03 31 25.4**	**-2.3**
GLKZ				S	**S**	**03 33 02.0**	**-3.7**
DZM	**Mont Dzumac**	**14.70**	**263**	P	**P**	**03 32 35.0**	**-0.8**
	5.7nm,0.8s,baz=54,slow=16,SNR=3.6						
OUZ	**Omahuta**	**16.12**	**206**	P	**P**	**03 32 54.5**	**+4.2**
KUZ	**Kuaotunu**	**16.74**	**198**	P	**P**	**03 32 59.0**	**+2.2**
MXZ	**Matakaoa Point**	**16.91**	**191**	P	**P**	**03 32 57.1**	**-1.5**
HAZ	**Te Kaha**	**17.20**	**192**	P	**P**	**03 33 01.4**	**0.0**
PKGZ	**Pakihiroa**	**17.27**	**191**	P	**P**	**03 33 03.0**	**+0.8**
PKGZ				S	S	03 36 12.6	+15
PUZ	**Puketiti**	**17.42**	**190**	P	**P**	**03 33 02.8**	**-0.8**
PUZ				S	**S**	**03 36 00.7**	**+1.2**
URZ	**Urewera**	**17.82**	**193**	P	**P**	**03 33 06.8**	**-0.5**
	12nm,0.4s,baz=298,slow=1.9,SNR=17						
URZ				S	**S**	**03 36 10.8**	**+4.8**
	4.7nm,0.6s,baz=328,slow=22,SNR=5.6						
URZ	**Urewera**	**17.82**	**193**	P	**P**	**03 33 06.8**	**-0.5**
TCW	**Tory Channel**	**21.30**	**197**	P	**P**	**03 33 40.1**	**+1.0**
QRZ	**Quartz Range**	**21.47**	**200**	P	**P**	**03 33 41.3**	**+0.8**
TKNZ	**Takaka Hill**	**21.52**	**199**	P	**P**	**03 33 41.8**	**+0.7**
NNZ	**Nelson**	**21.56**	**198**	P	**P**	**03 33 42.0**	**+0.6**
TUWZ	**Tuamarina**	**21.60**	**197**	P	**P**	**03 33 42.7**	**+1.0**
BSWZ	**Blackbirch Sta**	**21.88**	**197**	P	P	03 33 36.4	-7.9
MRNZ	**Matariki Terra**	**21.91**	**199**	P	**P**	**03 33 45.7**	**+1.1**
THZ	**Tophouse**	**22.20**	**199**	P	**P**	**03 33 47.6**	**+0.4**
DSZ	**Denniston Nort**	**22.53**	**201**	P	**P**	**03 33 50.8**	**+0.6**
KHZ	**Kahutara**	**22.62**	**197**	P	**P**	**03 33 50.4**	**-0.5**
LTZ	**Lake Taylor**	**23.32**	**199**	P	**P**	**03 33 56.7**	**-0.6**
INZ	**Inchbonnie**	**23.53**	**200**	P	**P**	**03 33 58.4**	**-0.7**
RPZ	**Rata Peaks**	**24.54**	**200**	P	**P**	**03 34 10.9**	**+2.8**
	15nm,0.9s,baz=140,slow=19,SNR=2.2						
	15nm,0.9s						
RPZ	**Rata Peaks**	**24.54**	**200**	P	**P**	**03 34 11.1**	**+3.0**
STKA	**Stephens Creek**	**37.76**	**245**	P	**P**	**03 36 02.5**	**+0.8**
	2.0nm,0.6s,baz=110,slow=15,SNR=3.5						
	2.0nm,0.6s						
AS31	**Alice Springs**	**44.59**	**257**	P	**P**	**03 36 56.7**	**+0.5**
AS31				IAmb	IAmb	03 36 57.3	
	comp=Z,2.8nm,0.5s						
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**03 36 56.4**	**+0.2**
	comp=Z,6.9nm,0.5s,baz=96,slow=7.8,SNR=63						
ASAR				PcP	**PcP**	**03 38 29.4**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=90,slow=5.4,SNR=6.1						
ASAR				S	**S**	**03 42 56.5**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=92,slow=16,SNR=6.6						
	comp=Z,6.9nm,0.5s						
WRA	**Warramunga Arr**	**44.72**	**262**	P	**P**	**03 36 56.5**	**-0.7**
	comp=Z,1.7nm,0.3s,baz=98,slow=7.2,SNR=75						
WRA				PcP	**PcP**	**03 38 29.9**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=99,slow=3.7,SNR=2.6						
WRA				S	**S**	**03 43 00.3**	**+2.8**
	comp=Z,0.2nm,0.6s,baz=115,slow=16,SNR=2.7						
	comp=Z,1.7nm,0.3s						
WRA	**Warramunga Arr**	**44.72**	**262**	P	**P**	**03 36 56.3**	**-0.9**
MTN	**Manton Dam**	**49.34**	**271**	P	**P**	**03 37 31.5**	**-0.7**
MTN				IAmb	IAmb	03 37 32.9	
	comp=Z,8.5nm,0.7s						
SOEI	**Soe**	**56.69**	**272**	P	**P**	**03 38 22.0**	**-2.9**
CASY	**Casey**	**63.65**	**205**	P	**P**	**03 39 10.4**	**+0.3**
MJAR	**Matsushiro Arr**	**70.66**	**324**	P	**P**	**03 39 53.4**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=155,slow=6.2,SNR=8.3						
	comp=Z,1.8nm,0.5s						
PETK	**Petropavlovsk-**	**76.73**	**345**	P	**P**	**03 40 27.1**	**-0.9**
	comp=Z,5.0nm,0.7s,baz=133,slow=8.7,SNR=4.9						
	comp=Z,5.0nm,0.7s						
KSRS	**Korea Array**	**77.33**	**319**	P	**P**	**03 40 32.6**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=128,slow=6.3,SNR=7.1						
	comp=Z,1.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**79.42**	**326**	P	**P**	**03 40 43.9**	**+1.2**
	comp=Z,4.9nm,0.8s,baz=122,slow=3.3,SNR=16						
	comp=Z,4.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**79.42**	**326**	P	**P**	**03 40 42.0**	**-0.7**
NVAR	**Mina Array Bea**	**81.22**	**43**	P	**P**	**03 40 52.9**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=224,slow=7.6,SNR=8.9						
	comp=Z,1.3nm,0.8s						
MOD	**Modoc Plateau**	**82.04**	**39**	P	**P**	**03 40 57.0**	**+0.4**
K05A	**Summer Lake**	**82.19**	**39**	P	**P**	**03 40 58.0**	**+0.6**
K05A				IAmb	IAmb	03 40 59.1	
	comp=Z,7.3nm,1.0s						
PRN	**Pahroc Range**	**82.77**	**46**	P	**P**	**03 41 01.1**	**+0.7**
PRN				IAmb	IAmb	03 41 01.7	
	comp=Z,2.8nm,0.8s						
PINE	**Pine Mountain**	**82.81**	**38**	P	**P**	**03 41 01.2**	**+0.7**
PINE				IAmb	IAmb	03 41 02.2	
	comp=Z,8.1nm,0.9s						
BMN	**Battle Mountai**	**83.05**	**42**	P	**P**	**03 41 02.1**	**+0.3**
BMN				IAmb	IAmb	03 41 02.5	
	comp=Z,2.8nm,0.7s						
TUC	**Tucson**	**83.11**	**52**	P	**P**	**03 41 02.6**	**+0.5**
X16A	**Lo Mia Camp, P**	**83.69**	**50**	P	**P**	**03 41 05.9**	**+0.8**
I07A	**Izee**	**83.82**	**38**	P	**P**	**03 41 06.0**	**+0.6**
I07A				IAmb	IAmb	03 41 06.9	
	comp=Z,3.3nm,0.9s						
U15A	**North Rim**	**84.12**	**48**	P	**P**	**03 41 06.8**	**-0.5**
U15A				IAmb	IAmb	03 41 09.1	
	comp=Z,3.8nm,0.7s						
TXAR	**Lajitas Array**	**87.14**	**57**	P	**P**	**03 41 23.0**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=213,slow=7.3,SNR=13						
	comp=Z,0.8nm,0.7s						
SNAA	**Sanae**	**87.58**	**178**	P	**P**	**03 41 23.7**	**+0.7**
VNA3	**Neumayer Olymp**	**87.70**	**176**	P	**P**	**03 41 24.6**	**+1.0**
GDL2	**Guadalupe Moun**	**87.85**	**54**	P	**P**	**03 41 25.7**	**+0.6**
VNA2	**Neumayer--Watz**	**88.15**	**177**	P	**P**	**03 41 26.8**	**+1.2**
	baz=187,slow=3.5						
MCMT	**McKenzie Canyo**	**88.17**	**40**	P	**P**	**03 41 27.1**	**+0.7**
VNA1	**Neumayer--Stat**	**88.37**	**177**	P	**P**	**03 41 28.4**	**+1.8**
CCB	**Clear Creek Bu**	**88.40**	**12**	P	**P**	**03 41 25.7**	**-0.9**
MDM	**Murphy Dome**	**88.59**	**12**	P	**P**	**03 41 26.2**	**-1.4**
MDM				IAmb	IAmb	03 41 27.0	
	comp=Z,4.3nm,0.9s						
ILAR	**Eielson Array**	**88.69**	**13**	P	**P**	**03 41 26.7**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=215,slow=5.6,SNR=12						
	comp=Z,1.1nm,0.5s						
PD31	**Pinedale Array**	**89.15**	**43**	P	**P**	**03 41 31.4**	**+0.3**
PD31				IAmb	IAmb	03 41 31.7	
	comp=Z,1.8nm,0.8s						
PDAR	**Pinedale Array**	**89.15**	**43**	P	**P**	**03 41 31.1**	**0.0**
	comp=Z,1.1nm,0.7s,baz=231,slow=2.3,SNR=12						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**90.42**	**290**	P	**P**	**03 41 38.8**	**+1.6**
	comp=Z,1.3nm,0.3s,baz=124,slow=2.9,SNR=10						
	comp=Z,1.3nm,0.3s						
MKAR	**Makanchi Array**	**111.62**	**313**	PKiKP	**PKiKP**	**03 47 05.3**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=85,slow=3.0,SNR=4.6						
ARCES	**ARCESS Array B**	**129.37**	**350**	PKP	**PKPdf**	**03 47 39.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=48,slow=1.3,SNR=7.3						
HFS	**Hagfors**	**139.99**	**351**	PKhKP	PKPpre	03 47 51.6	
	comp=Z,0.6nm,0.4s,baz=50,slow=4.5,SNR=7.9						
AKASG	**Malin Array Be**	**143.47**	**331**	PKhKP	PKPpre	03 48 03.6	
	comp=Z,0.5nm,0.2s,baz=40,slow=4.1,SNR=5.7						
EKA	**Eskdalemuir Ar**	**145.41**	**5**	PKPbc	**PKPdf**	**03 48 10.0**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=330,slow=2.4,SNR=14						
ASF	**Jabal al Asfar**	**147.13**	**297**	PKPbc	**PKPbc**	**03 48 16.3**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=77,slow=4.4,SNR=3.7						
BRTR	**Keskin Array B**	**147.26**	**312**	PKPbc	**PKPbc**	**03 48 16.4**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=141,slow=4.8,SNR=4.6						
MMAI	**Mount Meron Ar**	**148.18**	**299**	PKPbc	**PKPbc**	**03 48 19.7**	**+0.9**
	comp=Z,1.9nm,0.4s,baz=81,slow=6.2,SNR=6.2						
DPC	**Dobrinska-Polom**	**148.59**	**343**	*e*PKP	**PKPdf**	**03 48 17.3**	**+2.5**
KRLC	**Kraliky**	**148.70**	**342**	*e*PKP	**PKPbc**	**03 48 19.9**	**+0.4**
PRU	**Pruhonice**	**149.39**	**344**	*e*PKP	**PKPbc**	**03 48 20.8**	**-0.3**
KHC	**Kasperske Hory**	**150.43**	**345**	*e*PKP	**PKPbc**	**03 48 23.8**	**+0.2**
CKRC	**Cesky Krumlov**	**150.53**	**344**	*e*PKP	**PKPbc**	**03 48 23.6**	**-0.2**
GERES	**GERESS Array B**	**150.66**	**344**	PKPbc	**PKPbc**	**03 48 24.1**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=15,slow=4.2,SNR=6.8						
TORD	**Torodi Ar. Bea**	**172.25**	**176**	PKP	**PKPdf**	**03 48 40.1**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=188,slow=0.8,SNR=3.0						
TORD				PKPab	**PKPab**	**03 50 09.4**	**+1.4**
	comp=Z,0.5nm,1.0s,baz=194,slow=5.3,SNR=1.4						

ROM 24 03:39:24.8±0.1, 42°.617N±0°.004×13°.257E±0°.006, h12km±1km, ML3.1/8, 4C, Error ellipse: s-maj=0.5km s-min=0.2km az=47.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.11**	**196**	⇑P	Pg	03 39 28.4	+0.5
RM33				S	Sg	03 39 30.9	+0.8
RM33				AML	AML		
	comp=E,14650µm,0.6s						
RM33				AML	AML		
	comp=N,13900µm,0.9s						
RM33				AML	AML		
	comp=E,14900µm,0.6s						
RM33				AML	AML		
	comp=N,13900µm,0.9s						
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=N,13879µm,0.9s						
RM33				AML	AML		
	comp=E,14880µm,0.6s						
CAMP	**Campotosto**	**0.14**	**126**	⇑P	Pg	03 39 28.6	+0.3
CAMP				S	Sg	03 39 31.2	+0.5
CAMP				AML	AML		
CAMP				AML	AML		
CAMP				AML	AML		
CAMP				END			
NRCA	**Norcia**	**0.24**	**334**	P	Pg	03 39 30.3	+0.4
NRCA				S	Sg	03 39 33.6	+0.2
TERO	**Teramo**	**0.26**	**89**	⇑P	Pg	03 39 30.2	0.0
TERO				S	Sg	03 39 34.1	+0.3
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	A

AQU				AML	AML		
	comp=N,28950μm,0.8s						
AQU				AML	AML		
	comp=E,23950μm,0.5s						
AQU				AML	AML		
	comp=N,30100μm,0.8s						
AQU				AML	AML		
	comp=E,54950μm,0.9s						
AQU				AML	AML		
	comp=N,66600μm,0.9s						
AQU				AML	AML		
	comp=E,51350μm,0.9s						
AQU				AML	AML		
	comp=N,68000μm,0.9s						
GIGS	**Gran Sasso**	**0.28**	**126**	P	Pg	03 39 30.8	+0.1
GIGS				S	Sg	03 39 35.4	+0.8
GIGS				AML	AML		
	comp=E,822μm,0.4s						
GIGS				AML	AML		
	comp=N,777μm,0.5s						
GIGS				AML	AML		
	comp=E,38400μm,1.5s						
GIGS				AML	AML		
	comp=N,20485μm,0.4s						
FIAM	**Fiamignano**	**0.36**	**197**	⇑P	Pg	03 39 32.5	+0.3
FIAM				S	Sb	03 39 38.2	-0.8
FIAM				AML	AML		
	comp=E,59550μm,0.4s						
FIAM				AML	AML		
	comp=N,30050μm,0.7s						
FIAM				AML	AML		
	comp=E,73000μm,0.6s						
FIAM				AML	AML		
	comp=N,49600μm,0.7s						
FIAM				AML	AML		
	comp=N,1524μm,1.0s						
ARRO	**Arrone**	**0.36**	**264**	P	Pg	03 39 32.3	+0.1
ARRO				S	Sb	03 39 38.4	-0.5
ARRO				AML	AML		
	comp=E,1980μm,0.2s						
ARRO				AML	AML		
	comp=N,2135μm,0.2s						
ARRO				AML	AML		
	comp=E,17200μm,1.1s						
ARRO				AML	AML		
	comp=N,11710μm,0.3s						
ARRO				AML	AML		
	comp=E,37700μm,1.1s						
ARRO				AML	AML		
	comp=N,44850μm,1.0s						
FAGN	**Fagnano**	**0.43**	**145**	P	Pg	03 39 33.5	+0.2
FAGN				AML	AML		
	comp=E,2675μm,0.6s						
FAGN				AML	AML		
	comp=N,2785μm,0.3s						
FAGN				AML	AML		
	comp=E,20250μm,0.7s						
FAGN				AML	AML		
	comp=N,23350μm,0.4s						
FAGN				AML	AML		
FAGN				AML	AML		
	comp=N,73350μm,0.8s						
FDMO	**Fiordimonte**	**0.44**	**343**	P	Pb	03 39 34.2	-0.4
FDMO				S	Sg	03 39 40.1	+0.8
FDMO				AML	AML		
	comp=E,2205μm,0.2s						
FDMO				AML	AML		
	comp=N,2130μm,1.4s						
FDMO				AML	AML		
	comp=E,5520μm,0.7s						
FDMO				AML	AML		
	comp=N,5450μm,0.6s						
FDMO				AML	AML		
	comp=E,28350μm,0.2s						
FDMO				AML	AML		
	comp=N,37100μm,0.3s						
OFFI	**Offida**	**0.45**	**45**	P	Pb	03 39 34.3	-0.4
OFFI				AML	AML		
	comp=E,35300μm,0.4s						
OFFI				AML	AML		
	comp=N,35900μm,0.9s						
OFFI				AML	AML		
	comp=E,90300μm,0.5s						
OFFI				AML	AML		
OFFI				AML	AML		
	comp=E,8050μm,0.5s						
VCEL	**Villa Celiera**	**0.49**	**117**	P	Pb	03 39 35.1	-0.4
VCEL				AML	AML		
	comp=E,16155μm,0.8s						
VCEL				AML	AML		
	comp=N,11650μm,0.5s						
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
	comp=E,3176μm,0.9s						
CESX	**Cesi**	**0.50**	**269**	P	Pg	03 39 34.6	0.0
CESX				AML	AML		
	comp=E,1285μm,0.5s						
CESX				AML	AML		
	comp=N,1440μm,1.3s						
CESX				AML	AML		
	comp=E,9220μm,0.4s						
CESX				AML	AML		
	comp=N,9595μm,1.2s						
CESX				AML	AML		
	comp=E,39350μm,0.5s						
CESX				AML	AML		
	comp=N,44050μm,0.3s						
TRTR	**Tortoreto Alta**	**0.52**	**68**	P	Pb	03 39 36.0	0.0
TRTR				AML	AML		
	comp=E,16850μm,0.4s						
TRTR				AML	AML		
	comp=N,18250μm,1.6s						
TRTR				AML	AML		
TRTR				AML	AML		
T0110	**Collepietro**	**0.55**	**135**	P	Pg	03 39 35.5	0.0
T0110				AML	AML		
	comp=E,13350μm,0.9s						
T0110				AML	AML		
	comp=N,11050μm,0.4s						
T0110				AML	AML		
	comp=E,81850μm,0.5s						
T0110				AML	AML		
	comp=N,88800μm,0.5s						
T0110				AML	AML		
	comp=N,1938μm,0.4s						
T0110				AML	AML		
	comp=E,2080μm,2.9s						
ASSB	**Assisi San Ben**	**0.61**	**314**	AML	AML		
	comp=N,2680μm,0.5s						
ASSB				AML	AML		
	comp=E,2815μm,1.1s						
ASSB				AML	AML		
	comp=E,21350μm,1.6s						
ASSB				AML	AML		
	comp=N,28950μm,1.0s						
SRES	**S.Oreste - Sor**	**0.67**	**236**	P	Pg	03 39 37.9	0.0
SRES				AML	AML		
	comp=E,4475μm,1.0s						
SRES				AML	AML		
	comp=N,3105μm,0.8s						
SRES				AML	AML		
	comp=E,17700μm,0.8s						
SRES				AML	AML		
	comp=N,14500μm,0.5s						
SNTG	**Esanatoglia**	**0.68**	**340**	AML	AML		
	comp=N,12395μm,1.3s						
SNTG				AML	AML		
	comp=E,272μm,1.2s						
SNTG				AML	AML		
	comp=N,398μm,1.3s						
SNTG				AML	AML		
	comp=E,1675μm,0.6s						
SNTG				AML	AML		
	comp=N,2865μm,1.3s						
SNTG				AML	AML		
	comp=E,1022μm,0.5s						
SNTG				AML	AML		
	comp=N,1510μm,1.3s						
SNTG				AML	AML		
	comp=E,8095μm,1.6s						
CERT	**Cerreto**	**0.70**	**197**	P	Pg	03 39 38.1	-0.3
CERT				AML	AML		
	comp=E,7150μm,0.9s						
CERT				AML	AML		
	comp=N,7685μm,0.3s						
CERT				AML	AML		
	comp=E,35200μm,0.5s						
CERT				AML	AML		
	comp=N,34950μm,0.4s						
MTCE	**Montecelio**	**0.71**	**213**	P	Pg	03 39 38.0	-0.5
MTCE				AML	AML		
	comp=E,6490μm,0.5s						
MTCE				AML	AML		
	comp=N,4290μm,1.2s						
MTCE				AML	AML		
	comp=E,44100μm,0.5s						
MTCE				AML	AML		
	comp=N,20250μm,0.5s						
MTCE				AML	AML		
	comp=N,487μm,0.6s						
EL6	**Elcito**	**0.72**	**351**	AML	AML		
	comp=E,24050μm,0.4s						
EL6				AML	AML		
	comp=N,31500μm,0.9s						
ATCC	**AVT- Casa Cast**	**0.73**	**322**	P	Pg	03 39 39.0	+0.1
ATCC				AML	AML		
	comp=E,4150μm,0.9s						
ATCC				AML	AML		
	comp=N,3310μm,0.3s						
ATCC				AML	AML		
	comp=E,23650μm,0.5s						
ATCC				AML	AML		
	comp=N,18400μm,0.6s						
FOSV	**Fossato di Vic**	**0.77**	**332**	AML	AML		
	comp=E,1625μm,0.4s						
FOSV				AML	AML		
	comp=N,1895μm,0.7s						
FOSV				AML	AML		
	comp=E,10565μm,0.6s						
FOSV				AML	AML		
	comp=N,13295μm,0.4s						
INTR	**Introdacqua**	**0.77**	**141**	P	Pg	03 39 39.2	-0.6
INTR				AML	AML		
	comp=E,3μm,0.6s						
INTR				AML	AML		
	comp=N,4μm,0.8s						
INTR				AML	AML		
	comp=E,3140μm,0.6s						
INTR				AML	AML		
	comp=N,6045μm,0.8s						
INTR				AML	AML		
	comp=E,26μm,1.0s						
INTR				AML	AML		
	comp=N,22μm,0.9s						
INTR				AML	AML		
	comp=E,25950μm,1.0s						
INTR				AML	AML		
	comp=N,32250μm,0.9s						
LPEL	**Lama dei Pelig**	**0.89**	**129**	P	Pg	03 39 41.4	-0.6
LPEL				AML	AML		
	comp=E,6100μm,0.8s						
LPEL				AML	AML		
	comp=N,3345μm,0.6s						
LPEL				AML	AML		
	comp=E,16750μm,0.9s						
LPEL				AML	AML		
	comp=N,17900μm,0.7s						
MGAB	**Montegabbione**	**0.89**	**290**	P	Pg	03 39 42.0	-0.1
MGAB				AML	AML		
	comp=E,10175μm,0.4s						
MGAB				AML	AML		
	comp=N,7960μm,0.4s						
MGAB				AML	AML		
	comp=E,9675μm,0.4s						
MGAB				AML	AML		
	comp=N,8980μm,1.1s						
MGAB				AML	AML		
	comp=E,39300μm,0.5s						
MGAB				AML	AML		
	comp=N,24950μm,0.5s						
MGAB				AML	AML		
	comp=E,46200μm,0.6s						
MGAB				AML	AML		
	comp=N,29900μm,0.4s						
ATFO	**Monte Foce - G**	**0.90**	**326**	AML	AML		
	comp=N,9150μm,1.6s						
ATFO				AML	AML		
	comp=E,14100μm,1.3s						
RMP	**Rome, Mte Porz**	**0.91**	**207**	AML	AML		
	comp=E,38550μm,1.5s						
RMP				AML	AML		
	comp=E,8210μm,1.5s						
RMP				AML	AML		
	comp=N,8530μm,1.0s						
RMP				AML	AML		
	comp=N,41050μm,0.5s						
POFI	**Posta Fibreno**	**0.96**	**159**	AML	AML		
	comp=N,8255μm,1.6s						
POFI				AML	AML		
	comp=E,4360μm,0.4s						
POFI				AML	AML		
	comp=N,2870μm,0.8s						
POFI				AML	AML		
	comp=E,4400μm,0.4s						
POFI				AML	AML		
	comp=N,2920μm,0.8s						
POFI				AML	AML		
	comp=E,12900μm,0.8s						
POFI				AML	AML		
	comp=N,8145μm,0.6s						
POFI				AML	AML		
	comp=E,13700μm,0.8s						
GIUL	**Giuliano Di Ro**	**1.06**	**180**	AML	AML		
	comp=E,10970μm,0.7s						
GIUL				AML	AML		
	comp=N,15500μm,0.7s						
MCIV	**Monte Civitell**	**1.18**	**278**	AML	AML		
	comp=N,2075μm,0.5s						
MCIV				AML	AML		
	comp=E,2535μm,0.4s						
MCIV				AML	AML		
	comp=E,5935μm,0.3s						
MCIV				AML	AML		
	comp=N,4715μm,0.6s						
CAFI	**Castiglion Fio**	**1.19**	**307**	AML	AML		
	comp=N,7665μm,0.6s						
CAFI				AML	AML		
	comp=E,6930μm,0.5s						
CAFI				AML	AML		
	comp=E,7145μm,0.4s						
CAFI				AML	AML		
	comp=N,8040μm,0.6s						
CGRP	**Cima Grappa**	**3.43**	**343**	AML	AML		
	comp=N,2035μm,0.6s						
CGRP				AML	AML		
	comp=E,1935μm,0.4s						
CGRP				AML	AML		
	comp=N,2010μm,0.6s						
CGRP				AML	AML		
	comp=E,1945μm,0.4s						
MPRI	**Monte Prat**	**3.63**	**357**	AML	AML		
	comp=E,1079μm,0.5s						
MPRI				AML	AML		
	comp=N,1365μm,0.4s						
MAGA	**Magasa**	**3.68**	**330**	AML	AML		
	comp=E,2715μm,1.1s						
MAGA				AML	AML		
	comp=N,1985μm,0.3s						

*BGR **24** 03:40:05.6±0.7, 42°.05N×13°.69E, h5km, ML4.5/8, Error ellipse: s-maj=15.6km s-min=11.1km az=59.0*
*IDC **24** 03:40:10.8±0.6, 42°.74N×13°.10E, h0km, mb4.2/20, mbtmp4.1/29, ML3.8/8, MS3.7/2, Error ellipse: s-maj=11.2km s-min=9.1km az=117.0*
*MOS **24** 03:40:10.3±1.2, 42°.68N×13°.21E, h14km, mb4.7/14, Error ellipse: s-maj=6.1km s-min=3.5km az=74.8*
*LDG **24** 03:40:10.1±0.1, 42°.65N×13°.24E, h6km, Ml3.7/34, Error ellipse: s-maj=2.5km s-min=1.6km az=46.0*
*ROM **24** 03:40:10.9±0.1, 42°.614N±0°.002×13°.244E±0°.004, h11km, ML4.2/112, Mw4.1, Error ellipse: s-maj=0.3km s-min=0.2km az=74.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.56; Mθθ0.31; Mφφ1.25; Mrθ0.46; Mθφ-0.86; Mφr-0.75; Fault plane solution: M₀1.87665×10¹⁵ NP1:φs150.00000°, δ31.00000°, λ-89.00000°. NP2:φs329.00000°, δ59.00000°, λ-90.00000°.*
*NEIC **24** 03:40:11.2±1.4, 42°.65N±0°.02×13°.26E±0°.06, h6km±5km, mb4.3/24, Mwr4.2/13, ML4.2(ROM) Error ellipse: s-maj=7.0km s-min=2.8km az=74.0*

*NEIC **24** 03:40:11.5, 42°.63N×13°.23E, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.23; Mθθ-0.58; Mφφ1.81; Mrθ0.96; Mθφ-0.68; Mφr-1.47; Fault plane solution: M₀2.47000×10¹⁵ NP1:φs327.11000°, δ70.48000°, λ-108.46000°. NP2:φs192.09000°, δ26.62000°, λ-48.23000°. Principal axes: T 2.7095, Plg23.0000°, Azm71.0000°; N -0.5859, Plg17.0000°, Azm333.0000°; P -2.1235, Plg60.0000°, Azm210.0000°;*
*PDG **24** 03:40:11.3±0.6, 42°.63N×13°.25E, h16km, ML4.1/13 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*PRU **24** 03:40:11.2±0.0, 42°.70N×12°.95E, h0km, M4.3*
*BEO **24** 03:40:12.1±0.6, 42°.60N×13°.16E, h10km±1km, ML4.5/14*
*STR **24** 03:40:12.3±0.8, 43°.N±6°×1°.3E±°, h5km, mb4.1/26, Error ellipse: s-maj=0.0km s-min=0.0km az=136.6, preliminary*

ISC 24 03:40:11.7±0.7, 42°.62N±0°.01×13°.21E±0°.02, h12km±4km, n667, σ1ŝ90/787, mb4.3/39, 73C-29D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.11**	**179**	⇑P		**Pg**	**03 40 14.6**	**-0.2**
RM33				S		**Sg**	**03 40 17.0**	**-0.1**
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
RM33				AML		AML		
CAMP	**Campotosto**	**0.17**	**120**	⇑P		**Pg**	**03 40 14.8**	**-0.9**
CAMP				S		**Sg**	**03 40 17.2**	**-1.2**
CAMP				AML		AML		
CAMP				AML		AML		
NRCA	**Norcia**	**0.23**	**341**			**Pg**	**03 40 16.2**	**-0.4**
NRCA				Sg		**Sg**	**03 40 19.8**	**-0.1**
NRCA	**Norcia**	**0.23**	**341**	⇑P		**Pg**	**03 40 16.2**	**-0.4**
NRCA				S		**Sg**	**03 40 19.9**	**0.0**
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
TERO	**Teramo**	**0.29**	**89**	⇑P		**Pg**	**03 40 16.4**	**-1.3**
TERO				S		**Sg**	**03 40 20.4**	**-1.3**
TERO				AML		AML		
TERO				AML		AML		
TERO				AML		AML		
TERO				AML		AML		
TERO				AML		AML		
AQU	**L'Aquila**	**0.30**	**152**	Pg		**Pg**	**03 40 17.3**	**-0.6**
AQU						**Sg**	**03 40 22.2**	**+0.2**
AQU	**L'Aquila**	**0.30**	**152**	P		**Pg**	**03 40 17.3**	**-0.6**
AQU	**L'Aquila**	**0.30**	**152**	⇑P		**Pg**	**03 40 17.3**	**-0.6**
AQU				S		**Sg**	**03 40 21.9**	**-0.1**
AQU				AML		AML		
	comp=E,51350μm,0.9s							
AQU				AML		AML		
	comp=E,54950μm,0.9s							
AQU				AML		AML		
	comp=N,68000μm,0.9s							
AQU				AML		AML		
	comp=N,66600μm,0.9s							
GIGS	**Gran Sasso**	**0.31**	**123**	⇑P		**Pg**	**03 40 17.0**	**-1.2**
GIGS				S		**Sg**	**03 40 21.5**	**-0.9**
ARRO	**Arrone**	**0.33**	**263**	⇑P		**Pg**	**03 40 18.6**	**+0.1**
ARRO				S		**Sg**	**03 40 23.9**	**+1.0**
ARRO				AML		AML		
	comp=E,37700μm,1.1s							
ARRO				AML		AML		
	comp=N,44850μm,1.0s							
FIAM	**Fiamignano**	**0.36**	**191**	⇑P		**Pg**	**03 40 18.7**	**-0.3**
FIAM				S		**Sg**	**03 40 24.2**	**+0.4**
FIAM				AML		AML		
	comp=E,73000μm,0.6s							
FIAM				AML		AML		
	comp=N,49600μm,0.7s							
FEMA	**Monte Fema**	**0.36**	**341**	P		**Pg**	**03 40 18.6**	**-0.4**
FEMA				S		**Sg**	**03 40 24.4**	**+0.4**
FEMA				AML		AML		
	comp=N,48900μm,1.2s							
FEMA				AML		AML		
	comp=E,67750μm,0.3s							
FDMO	**Fiordimonte**	**0.43**	**348**	⇑P		**Pg**	**03 40 19.5**	**-0.7**
FDMO				S		**Sg**	**03 40 26.0**	**+0.1**
FDMO				AML		AML		
	comp=N,37100μm,0.3s							
FDMO				AML		AML		
	comp=E,28350μm,0.2s							
CESI	**CESI - Serrava**	**0.45**	**330**	⇑P		**Pg**	**03 40 20.1**	**-0.4**
CESI				S		**Sg**	**03 40 27.2**	**+0.7**
CESI				AML		AML		
	comp=E,34050μm,0.6s							
CESI				AML		AML		
	comp=N,46500μm,0.4s							
FAGN	**Fagnano**	**0.45**	**142**	P		**Pg**	**03 40 19.7**	**-0.9**
FAGN				AML		AML		
FAGN				AML		AML		
	comp=N,73350μm,0.8s							
CESX	**Cesi**	**0.47**	**269**	⇑P		**Pg**	**03 40 20.7**	**-0.2**
CESX				S		**Sb**	**03 40 28.5**	**-0.3**
CESX				AML		AML		
	comp=E,39350μm,0.5s							
CESX				AML		AML		
	comp=N,44050μm,0.3s							
OFFI	**Offida**	**0.47**	**48**	⇑P		**Pg**	**03 40 20.6**	**-0.4**
OFFI				S		**Sb**	**03 40 28.5**	**-0.4**
OFFI				AML		AML		
	comp=E,90300μm,0.5s							
OFFI				AML		AML		
CSP1	**Cessapalombo**	**0.47**	**359**	⇑P		**Pg**	**03 40 20.2**	**-0.8**
CSP1				S		**Sg**	**03 40 27.3**	**-0.1**
CSP1				AML		AML		
	comp=N,41050μm,1.0s							
CSP1				AML		AML		
	comp=E,38850μm,0.6s							
VCEL	**Villa Celiera**	**0.52**	**116**	⇑P		**Pg**	**03 40 20.7**	**-1.2**
VCEL				S		**Sg**	**03 40 29.2**	**+0.4**
VCEL				AML		AML		
VCEL				AML		AML		
MNTP	**Montappone**	**0.55**	**20**	P		**Pg**	**03 40 22.0**	**-0.5**
MNTP				S		**Sb**	**03 40 31.0**	**-0.2**
MNTP				AML		AML		
	comp=N,85650μm,0.3s							
MNTP				AML		AML		
	comp=E,90950μm,1.2s							
MNTP				AML		AML		
	comp=N,85600μm,0.3s							
TRTR	**Tortoreto Alta**	**0.55**	**70**	⇑P		**Pg**	**03 40 22.2**	**-0.3**
TRTR				AML		AML		
TRTR				AML		AML		
SEF1	**Sefro**	**0.56**	**340**	P		**Pg**	**03 40 22.0**	**-0.7**
SEF1				S		**Sb**	**03 40 30.9**	**-0.7**
SEF1				AML		AML		
	comp=N,35150μm,0.2s							
SEF1				AML		AML		
	comp=E,39100μm,0.7s							
MDAR	**Monte D'Aria**	**0.57**	**355**	⇑P		**Pg**	**03 40 21.9**	**-1.1**
MDAR				S		**Sg**	**03 40 31.1**	**+0.4**
T0110	**Collepietro**	**0.58**	**133**	⇑P		**Pg**	**03 40 21.7**	**-1.3**
T0110				S		**Sg**	**03 40 30.2**	**-0.4**
T0110				AML		AML		
	comp=N,88800μm,0.5s							
T0110				AML		AML		
	comp=E,81850μm,0.5s							
ASSB	**Assisi San Ben**	**0.59**	**316**	⇑P		**Pg**	**03 40 22.6**	**-0.6**
ASSB				S		**Sb**	**03 40 32.2**	**-0.1**
ASSB				AML		AML		
	comp=E,21350μm,1.6s							
ASSB				AML		AML		
	comp=N,28950μm,1.0s							
FIU1	**Fiuminata**	**0.60**	**340**	P		**Pg**	**03 40 22.8**	**-0.7**
FIU1				S		**Sb**	**03 40 32.3**	**-0.5**
FIU1				AML		AML		
	comp=E,17150μm,0.3s							
FIU1				AML		AML		
	comp=N,17650μm,0.3s							
FIU1				AML		AML		
	comp=E,17150μm,0.3s							
SSM1	**San Severino M**	**0.61**	**358**	P		**Pg**	**03 40 22.6**	**-1.0**
SSM1				S		**Sg**	**03 40 32.0**	**+0.3**
PTQR	**Pietraquaria**	**0.61**	**167**	⇑P		**Pg**	**03 40 22.5**	**-1.2**
PTQR				AML		AML		
	comp=N,9890μm,1.0s							

PTQR AML AML
comp=E,10090µm,0.5s
GAG1 Gagliole 0.63 350 P **Pg** **03 40 23.1 -0.8**
GAG1 S **Sb** **03 40 32.8 -0.6**
GAG1 AML AML
comp=E,41250µm,0.6s
GAG1 AML AML
comp=N,45050µm,0.5s
GAG1 AML AML
comp=E,41200µm,0.6s
GAG1 AML AML
comp=N,45000µm,0.5s
SRES S.Oreste - Sor 0.65 234 ⇑P **Pg** **03 40 23.8 -0.5**
SRES AML AML
comp=E,17700µm,0.8s
SRES AML AML
comp=N,14500µm,0.5s
MTL1 Matelica 0.65 347 P **Pg** **03 40 23.7 -0.8**
MTL1 S **Sb** **03 40 33.8 -0.4**
SNTG Esanatoglia 0.67 343 ⇑P **Pg** **03 40 23.6 -1.1**
SNTG AML AML
comp=E,1021µm,0.5s
SNTG AML AML
comp=N,12395µm,1.3s
SNTG AML AML
comp=E,1022µm,0.5s
SNTG AML AML
comp=N,1510µm,1.3s
SNTG AML AML
comp=E,8095µm,1.6s
SNTG AML AML
comp=E,1024µm,0.5s
MTCE Montecelio 0.69 210 ⇑P **Pg** **03 40 24.3 -0.9**
MTCE AML AML
comp=E,44100µm,0.5s
MTCE AML AML
comp=N,20250µm,0.5s
CERT Cerreto 0.69 194 P **Pg** **03 40 24.1 -1.1**
CERT AML AML
comp=E,35200µm,0.5s
CERT AML AML
comp=N,34950µm,0.4s
TRE1 Treia 0.69 6 P **Pg** **03 40 24.6 -0.7**
CADA Capodarco di F 0.70 35 P **Pg** **03 40 25.3 0.0**
CADA AML AML
comp=E,62100µm,0.7s
CADA AML AML
comp=N,61400µm,1.4s
CADA AML AML
comp=E,62050µm,0.7s
CADA AML AML
comp=N,61400µm,1.3s
ATCC AVT- Casa Cast 0.70 323 ⇑P **Pg** **03 40 24.7 -0.7**
ATCC AML AML
comp=E,23700µm,0.5s
ATCC AML AML
comp=E,23650µm,0.5s
ATCC AML AML
comp=N,18400µm,0.6s
EL6 Elcito 0.71 354 ⇑P **Pg** **03 40 24.5 -1.1**
EL6 AML AML
comp=E,24050µm,0.4s
EL6 AML AML
comp=N,31500µm,0.9s
FOSV Fossato di Vic 0.75 334 P **Pg** **03 40 25.3 -1.0**
FOSV AML AML
comp=E,10565µm,0.6s
FOSV AML AML
comp=N,13305µm,0.4s
FOSV AML AML
comp=N,13295µm,0.4s
FOSV AML AML
comp=N,13285µm,0.4s
FOSV AML AML
comp=E,10535µm,0.6s
CING Cingoli 0.76 359 ⇑P **Pg** **03 40 25.1 -1.3**
CIMA Civitanova Mar 0.76 26 P **Pg** **03 40 26.5 0.0**
INTR Introdacqua 0.80 140 P **Pg** **03 40 25.5 -1.7**
INTR AML AML
comp=E,26µm,1.0s
INTR AML AML
comp=N,22µm,0.9s
INTR AML AML
comp=E,26µm,1.0s
INTR AML AML
comp=E,25950µm,1.0s
INTR AML AML
comp=N,32250µm,0.9s
INTR AML AML
comp=N,22µm,0.9s
RCAV Rocca di Cave 0.80 194 P **Pg** **03 40 26.0 -1.2**
RCAV AML AML
comp=E,35450µm,1.6s
RCAV AML AML
comp=N,37550µm,1.0s
RCAV AML AML
comp=N,37500µm,1.0s
VVLD Villa Vallelon 0.81 158 P **Pg** **03 40 26.6 -0.8**
VVLD AML AML
comp=N,13400µm,0.8s
VVLD AML AML
comp=E,10700µm,1.3s
PP3 Marolino 0.81 21 ⇑P **Pg** **03 40 26.8 -0.7**
PP3 AML AML
comp=E,65050µm,0.6s
PP3 AML AML
comp=E,67550µm,0.6s
PP3 AML AML
comp=N,43400µm,0.4s
PP3 AML AML
comp=N,43450µm,0.5s
MURB Monte Urbino 0.82 322 **Pg** **03 40 26.9 -0.7**
MURB Sg **Sg** **03 40 37.7 -0.6**
MURB Monte Urbino 0.82 322 P **Pg** **03 40 26.9 -0.7**
MURB AML AML
comp=E,35350µm,0.3s
MURB AML AML
comp=N,42550µm,0.9s
MURB AML AML
comp=N,43150µm,0.3s
MURB AML AML
comp=E,41200µm,0.3s
MURB AML AML
comp=E,35400µm,0.3s
GUAR Guarcino 0.83 175 P **Pg** **03 40 27.6 -0.1**
GUAR AML AML
comp=N,25500µm,0.4s
GUAR AML AML
comp=E,18400µm,1.0s
GUAR AML AML
comp=N,25450µm,0.4s
MMUR Monte Murano 0.84 349 P **Pg** **03 40 26.9 -1.0**
ATTE AVT- Monte Tez 0.85 313 P **Pg** **03 40 27.3 -1.0**
ATTE AML AML
comp=N,14850µm,0.6s
ATTE AML AML
comp=E,12050µm,1.6s
MGAB Montegabbione 0.86 290 ⇑P **Pg** **03 40 27.7 -0.7**
MGAB AML AML
comp=N,29900µm,0.4s
MGAB AML AML
comp=E,46200µm,0.6s
MGAB AML AML
comp=N,24950µm,0.5s
MGAB AML AML
comp=E,39300µm,0.5s
SSFR Montelago di S 0.87 339 P **Pg** **03 40 27.9 -0.8**
SSFR AML AML
comp=E,28900µm,0.2s
SSFR AML AML
comp=N,31150µm,0.2s
ATFO Monte Foce - G 0.88 328 P **Pg** **03 40 28.0 -0.7**
ATFO AML AML
comp=E,14100µm,1.3s
ATFO AML AML
comp=N,9150µm,1.6s
ATFO AML AML
comp=N,9145µm,1.6s
ATSC Scheggia e Pas 0.89 335 P **Pg** **03 40 27.9 -1.0**
RMP Rome, Mte Porz 0.89 205 P **Pg** **03 40 27.7 -1.2**
RMP AML AML
comp=E,38550µm,1.5s
RMP AML AML
comp=N,41050µm,0.5s
ARVD Arcevia 0.90 347 P **Pg** **03 40 27.9 -1.2**
ARVD AML AML
comp=E,12500µm,0.9s
ARVD AML AML
comp=N,9040µm,0.8s
ATLO AVT- Montelove 0.91 320 ⇑P **Pg** **03 40 28.2 -1.1**
LPEL Lama dei Pelig 0.92 128 P **Pg** **03 40 27.4 -2.2**
LPEL AML AML
comp=E,16750µm,0.9s
LPEL AML AML
comp=N,17900µm,0.7s
VIVA Pratoni del Vi 0.93 201 P **Pg** **03 40 28.5 -1.1**
VIVA AML AML
comp=E,57150µm,0.4s
VIVA AML AML
comp=N,58150µm,0.4s
RDP Rocca di Papa 0.94 203 P **Pg** **03 40 28.6 -1.3**
RDP AML AML
comp=N,75150µm,0.5s
RDP AML AML
comp=E,82050µm,0.5s
MA9 Marino 0.94 206 P **Pg** **03 40 28.5 -1.5**
MA9 AML AML
comp=E,63900µm,0.6s
MA9 AML AML
comp=N,70600µm,0.5s
TB01 Gubbio 0.95 323 P **Pg** **03 40 29.1 -0.9**
TB02 Pietralunga 0.95 322 P **Pg** **03 40 29.2 -1.0**
SAMA S.Maria delle 0.96 209 P **Pg** **03 40 29.8 -0.4**
ATVO AVT- Monte Val 0.96 322 P **Pg** **03 40 29.5 -0.9**
ATVO AML AML
comp=N,7710µm,0.6s
ATVO AML AML
comp=E,10330µm,1.1s
FRON Frontone 0.96 338 P **Pg** **03 40 29.2 -1.1**
FRON AML AML
comp=E,14400µm,0.7s
FRON AML AML
comp=N,13050µm,1.6s
AOI Ancona 0.97 17 ⇑P **Pg** **03 40 28.9 -1.6**
AOI AML AML
comp=N,12600µm,1.6s
AOI AML AML
comp=E,12375µm,0.9s
POFI Posta Fibreno 0.98 157 P **Pb** **03 40 30.8 +0.1**
POFI AML AML
comp=E,12900µm,0.8s
POFI AML AML
comp=N,8145µm,0.6s
POFI AML AML
comp=E,12950µm,0.8s
POFI AML AML
comp=N,8150µm,0.6s
POFI AML AML
comp=E,13700µm,0.8s
POFI AML AML
comp=N,8255µm,1.6s
TB03 Pietralunga 0.98 323 P **Pg** **03 40 29.8 -0.8**
ATBU Serra di Buran 0.98 331 P **Pg** **03 40 29.9 -0.8**
SACS San Casciano d 0.99 284 P **Pg** **03 40 29.9 -0.9**
SACS AML AML
comp=E,16650µm,0.9s
SACS AML AML
comp=N,16250µm,0.7s
SACS AML AML
comp=N,17450µm,0.7s
SACS AML AML
comp=E,16000µm,0.8s
ATMI Monte Miggiano 0.99 316 P **Pg** **03 40 29.9 -1.0**
ATMI AML AML
comp=E,21900µm,0.5s
ATMI AML AML
comp=N,26750µm,0.9s
LRP Arpino 1.01 164 P **Pg** **03 40 30.8 -0.5**
LRP AML AML
comp=E,5605µm,1.2s
LRP AML AML
comp=N,8850µm,1.0s
LAV9 Lanuvio 1.02 202 P **Pg** **03 40 30.5 -0.8**
ATPI Pietralunga - 1.02 325 P **Pg** **03 40 30.4 -1.0**
ATPI AML AML
comp=N,14350µm,0.5s
ATPI AML AML
comp=E,11750µm,0.7s
ATPC Poggio Castell 1.02 327 P **Pg** **03 40 30.5 -1.0**
COR1 Corinaldo 1.02 351 P **Pg** **03 40 30.8 -0.7**
COR1 AML AML
comp=N,24100µm,0.6s
COR1 AML AML
comp=E,16400µm,0.9s
COR1 AML AML
comp=N,24100µm,0.6s
COR1 AML AML
comp=E,30900µm,0.9s
LATE Laterza 1.04 270 **Pg** **03 40 31.1 -0.7**
LATE Laterza 1.04 270 P **Pg** **03 40 31.2 -0.5**
PIEI Pieia 1.04 332 P **Pg** **03 40 30.8 -1.0**
PIEI AML AML
comp=N,9000µm,1.4s
PIEI AML AML
comp=E,10320µm,0.3s
TOLF Tolfa 1.06 239 ⇑P **Pg** **03 40 31.1 -1.0**
TOLF AML AML
comp=N,13300µm,0.9s
TOLF AML AML
comp=E,12750µm,0.5s
MPAG Monte Paganucc 1.06 342 P **Pg** **03 40 30.7 -1.5**
MPAG AML AML
comp=E,11900µm,0.8s
MPAG AML AML
comp=N,11185µm,0.9s
MPAG AML AML
comp=N,11570µm,0.9s
MPAG AML AML
comp=E,11950µm,0.8s
GIUL Giuliano Di Ro 1.06 178 P **Pg** **03 40 31.2 -1.0**
GIUL AML AML
comp=E,10970µm,0.7s
GIUL AML AML
comp=N,15500µm,0.7s
SENI Senigallia 1.08 1 P **Pb** **03 40 31.4 -1.0**
SENI AML AML
comp=E,39300µm,0.5s
SENI AML AML
comp=N,40250µm,0.3s
NARO Abbazia di Nar 1.09 335 P **Pb** **03 40 31.6 -1.0**
NARO AML AML
comp=E,7245µm,0.9s
NARO AML AML
comp=N,9420µm,0.7s
APEC Apecchio 1.10 329 P **Pb** **03 40 31.7 -1.1**
APEC AML AML
comp=E,2130µm,0.8s
APEC AML AML
comp=N,10350µm,1.5s
APEC AML AML
comp=N,2170µm,0.9s
APEC AML AML
comp=E,10970µm,0.6s
ATMC Monte Cedrone 1.11 318 P **Pb** **03 40 33.0 0.0**
FSSB Fossombrone 1.12 344 P **Pb** **03 40 32.0 -1.1**
FSSB AML AML
comp=N,25050µm,0.3s
FSSB AML AML
comp=E,23250µm,1.4s
BADI Badiali 1.14 322 P **Pb** **03 40 33.2 -0.2**
BADI AML AML
comp=N,9835µm,0.5s
BADI AML AML
comp=E,768µm,0.5s
SF03 Valle Cupa 1.14 280 P **Pb** **03 40 32.9 -0.6**
LATB Latina 1.14 189 P **Pb** **03 40 31.6 -1.8**
MCIV Monte Civitell 1.14 278 P **Pb** **03 40 32.8 -0.7**
MCIV AML AML
comp=E,5935µm,0.3s
MCIV AML AML
comp=N,4715µm,0.6s
LIK San Giovanni I 1.14 167 P **Pb** **03 40 32.7 -0.8**
RNI2 Rionero Sannit 1.15 142 P **Pb** **03 40 32.7 -1.0**
RNI2 AML AML
comp=E,12700µm,0.8s
RNI2 AML AML
comp=N,15900µm,0.7s
RNI2 AML AML
comp=N,15500µm,0.8s
RNI2 AML AML
comp=E,13050µm,0.8s
SF11 Podere del Sol 1.16 283 P **Pb** **03 40 32.9 -0.8**
CAFI Castiglion Fio 1.16 308 P **Pb** **03 40 32.4 -1.3**
CAFI AML AML
comp=N,7665µm,0.6s
CAFI AML AML
comp=E,7145µm,0.4s
CAFI AML AML
comp=N,8040µm,0.6s
CAFI AML AML
comp=N,8035µm,0.6s
CAFI AML AML
comp=E,7150µm,0.4s
CAFI AML AML
comp=E,6930µm,0.5s
SF04 Casetta 1.16 281 P **Pb** **03 40 33.3 -0.6**
CERA Filignano 1.19 149 P **Pb** **03 40 33.8 -0.4**
SF14 Selvena 1.19 277 P **Pb** **03 40 33.7 -0.5**
SF13 Bagnolo 1.19 280 P **Pb** **03 40 33.6 -0.7**
PE3 Peglio 1.20 334 P **Pb** **03 40 33.5 -0.9**
PE3 AML AML
comp=N,58µm,0.7s
PE3 AML AML
comp=E,59µm,1.3s
SF01 Poggio Pratacc 1.23 279 P **Pn** **03 40 34.7 -0.2**
SF01 AML AML
comp=E,9350µm,0.5s
SF01 AML AML
comp=N,9295µm,0.9s
SSP9 Sansepolcro 1.24 321 P **Pg** **03 40 35.3 -0.2**
PARC Parchiule 1.25 326 P **Pn** **03 40 34.6 -0.5**
PARC AML AML
comp=N,10085µm,0.6s
PARC AML AML
comp=E,12745µm,1.0s
FRES Fresagrandinar 1.26 120 P **Pn** **03 40 34.6 -0.6**
ARCI Arcidosso 1.30 281 P **Pn** **03 40 35.7 -0.2**
ARCI AML AML
comp=N,2465µm,1.3s
ARCI AML AML
comp=E,2695µm,1.1s
TRIV Trivento 1.31 130 P **Pn** **03 40 35.9 0.0**
TRIV AML AML
comp=E,10980µm,0.8s
TRIV AML AML
comp=E,12180µm,0.8s
TRIV AML AML
comp=N,12900µm,0.8s
TRIV AML AML
comp=N,12000µm,0.8s
CPGN Carpegna, Ital 1.35 331 P **Pg** **03 40 37.4 -0.3**
PESA Pesaro 1.35 348 P **Pn** **03 40 36.4 0.0**
PESA AML AML
comp=E,12150µm,0.3s
PESA AML AML
comp=N,12050µm,1.5s
RSM Repubblica di 1.42 337 P **Pg** **03 40 39.1 0.0**
VAGA Valle Agricola 1.43 147 P **Pg** **03 40 39.0 -0.1**
VAGA AML AML
comp=E,4955µm,0.9s
VAGA AML AML
comp=E,5140µm,0.9s
VAGA AML AML
comp=N,5800µm,0.8s
VAGA AML AML
comp=N,6025µm,0.7s
BSSO Busso 1.49 136 P **Pn** **03 40 38.5 +0.1**
BSSO AML AML
comp=N,5090µm,0.8s
BSSO AML AML
comp=E,2400µm,1.0s
BSSO AML AML
comp=E,5685µm,1.0s
BSSO AML AML
comp=N,2050µm,0.8s
MODR Mondragone 1.56 161 P **Pb** **03 40 40.4 -0.1**
MODR AML AML
comp=N,2425µm,1.3s
MODR AML AML
comp=E,2665µm,1.6s
ASQU Asqua 1.57 319 P **Pb** **03 40 41.2 +0.4**
CIGN Sant'Elia a Pi 1.59 127 P **Pn** **03 40 40.4 +0.7**
PIGN Pignataro Magg 1.59 153 P **Pn** **03 40 39.4 -0.4**
PIGN AML AML
comp=E,1905µm,1.2s
PIGN AML AML
comp=N,2150µm,0.7s
PIGN AML AML
comp=E,2020µm,1.2s
PIGN AML AML
comp=N,2280µm,0.7s
FROS Frosini 1.62 292 P **Pn** **03 40 40.5 +0.3**
SFI Santa Sofia 1.62 323 P **Pn** **03 40 40.8 +0.5**
SFI AML AML
comp=E,3410µm,0.7s
SFI AML AML
comp=N,2910µm,1.6s
SFI AML AML
comp=N,2840µm,1.6s
SFI AML AML
comp=E,3370µm,0.7s
CSNT Castellina Chi 1.65 302 P **Pn** **03 40 40.6 +0.1**
SACR S. Croce Del S 1.65 137 P **Pb** **03 40 42.8 +0.6**
GATE Gambatesa 1.68 131 P **Pb** **03 40 43.1 +0.4**
MELA Melanico ??? S 1.69 122 P **Pn** **03 40 41.5 +0.4**
MELA AML AML
comp=N,13250µm,0.9s
MELA AML AML
comp=E,11295µm,0.9s
MELA AML AML
comp=E,10775µm,0.9s
MELA AML AML
comp=N,12650µm,0.9s
OSSC Osservatorio P 1.70 303 Pn **Pn** **03 40 41.5 +0.2**
OSSC Osservatorio P 1.70 303 P **Pn** **03 40 41.4 +0.2**
OSSC AML AML
comp=E,1825µm,1.3s
OSSC AML AML
comp=N,1550µm,0.9s
OSSC AML AML
comp=E,1610µm,0.9s
OSSC AML AML
comp=N,1780µm,1.3s
CASP Castiglione de 1.74 276 Pn **Pn** **03 40 41.9 +0.1**
CASP Castiglione de 1.74 276 P **Pn** **03 40 41.8 +0.1**
CASP AML AML
comp=N,1107µm,1.4s
CASP AML AML
comp=E,920µm,0.8s
RUFI Rufina 1.74 315 P **Pn** **03 40 42.4 +0.6**
RUFI AML AML
comp=E,2740µm,0.7s
RUFI AML AML
comp=N,3655µm,0.6s
TRIF Trifonti 1.77 287 P **Pn** **03 40 42.4 +0.2**
TRIF AML AML
comp=N,1920µm,1.3s
TRIF AML AML
comp=E,1675µm,0.7s
TREM Isole Tremiti 1.77 105 P **Pn** **03 40 41.7 -0.5**
TREM AML AML
comp=N,12450µm,0.6s
TREM AML AML
comp=E,10805µm,0.7s
VITU Vitulano (BN) 1.78 143 P **Pb** **03 40 43.7 -0.7**
LMD Lutirano 1.82 324 P **Pb** **03 40 44.2 -0.9**
LMD AML AML
comp=E,2675µm,1.2s
LMD AML AML
comp=N,2205µm,0.5s
PAOL Paolisi 1.88 147 **Pn** **03 40 44.1 +0.3**
PAOL Paolisi 1.88 147 P **Pn** **03 40 44.7 +0.9**
MOCO Biccari - m.te 1.92 130 P **Pb** **03 40 45.9 -0.8**
DUGI Dugi Otok 1.92 44 *i* Pn **Pn** **03 40 43.8 -0.5**
APRC Apricena 1.94 116 P **Pn** **03 40 44.4 -0.1**
SEI Scarperia 1.97 317 P **Pb** **03 40 46.9 -0.8**
SEI AML AML
comp=E,3165µm,0.5s
SEI AML AML
comp=N,5355µm,0.8s
MRB1 Monte Rocchett 1.99 138 P **Pb** **03 40 47.2 -0.7**
A318A Donoratico (LI 2.00 285 P **Pn** **03 40 45.8 +0.4**
CRMI Carmignano 2.01 306 P **Pn** **03 40 46.7 +1.1**
MPPT Montemurlo 2.05 311 P **Pn** **03 40 46.7 +0.7**
SGRT San Giovanni R 2.07 114 Pn **Pn** **03 40 44.5 -1.9**
SGRT San Giovanni R 2.07 114 P **Pn** **03 40 47.1 +0.7**
SGRT AML AML
comp=E,4275µm,0.6s
SGRT AML AML

comp=N,4480µm,0.7s
A319A Santa Luce (Pl 2.11 295 P Pn 03 40 47.8 +0.9
MTCR Monte La Croce 2.14 312 P Pn 03 40 47.8 +0.4
VIRC Vir 2.14 38 ePn Pn 03 40 46.8 -0.5
A308A Longastrino (F 2.15 336 P Pb 03 40 49.8 -0.8
FNVD Fontana Vidola 2.17 316 P Pn 03 40 48.8 +1.0
SGTA Sant Agata di 2.19 132 P Pb 03 40 50.1 -1.2
CAFE Carife 2.20 136 P Pb 03 40 50.5 -1.0
MSAG Monte S. Angel 2.20 113 P Pn 03 40 47.3 -0.9
MSAG AML AML
comp=N,8715µm,1.0s
MSAG AML AML
comp=E,5130µm,1.5s
MSAG AML AML
comp=N,8500µm,1.0s
MSAG AML AML
comp=E,4895µm,1.5s
MORI Morici 2.21 55 ePn Pn 03 40 47.8 -0.4
RSF3 Rocca San Feli 2.21 138 P Pb 03 40 50.9 -0.8
CELB S.Piero in Cam 2.22 274 ⇑P Pn 03 40 48.4 0.0
CELB AML AML
comp=E,444µm,1.6s
CELB AML AML
comp=N,677µm,1.3s
PII Pisa 2.25 300 P Pn 03 40 49.5 +0.7
SNAL S. Angelo Dei 2.26 138 P Pb 03 40 51.5 -1.0
SNAL AML AML
comp=E,1970µm,1.6s
SNAL AML AML
comp=N,3085µm,1.0s
SNAL AML AML
comp=E,2090µm,1.6s
SNAL AML AML
comp=N,3210µm,1.1s
NVLJ Novalja 2.29 31 *i* Pn Pn 03 40 48.7 -0.5
POPM Popiglio 2.29 309 P Pn 03 40 49.9 +0.6
POPM AML AML
comp=E,1135µm,0.8s
POPM AML AML
comp=N,1092µm,0.7s
BRJN Brijuni 2.32 10 P Pn 03 40 49.0 -0.7
MAIM Mastiano 2.37 304 P Pn 03 40 51.5 +1.1
ZCCA Zocca 2.38 318 Pn Pn 03 40 51.3 +0.7
ZCCA Zocca 2.38 318 P Pb 03 40 53.8 -0.7
BDI Bagni Di Lucca 2.39 308 P Pn 03 40 51.3 +0.5
BDI AML AML
comp=E,538µm,0.4s
BDI AML AML
comp=N,1570µm,0.4s
BDI AML AML
comp=E,1194µm,0.6s
BDI AML AML
comp=N,713µm,0.4s
A305A Porto Tolle (R 2.41 347 P Pn 03 40 52.8 +1.9
RABC Rab 2.41 28 *i* Pn Pn 03 40 50.7 -0.3
CAPA Cerignola FG 2.43 126 P Pn 03 40 52.3 +1.0
CAPA AML AML
comp=E,7060µm,0.9s
CAPA AML AML
comp=N,5270µm,0.9s
CARD Cardoso 2.44 306 P Pn 03 40 51.6 +0.2
CARD AML AML
comp=E,1660µm,0.4s
CARD AML AML
comp=N,2055µm,0.4s
VULT Monte Vulture 2.45 132 P Pn 03 40 53.1 +1.4
SMRN Sveta Marina 2.51 15 *i* Pn Pn 03 40 51.7 -0.6
GROG Isola di Gorgo 2.56 289 P Pn 03 40 53.8 +0.6
VLC Villacollemand 2.57 308 Pn Pn 03 40 53.4 +0.2
VLC Villacollemand 2.57 308 P Pn 03 40 53.4 +0.2
VLC AML AML
comp=E,619µm,1.2s
VLC AML AML
comp=N,534µm,1.0s
VLC AML AML
comp=E,644µm,1.1s
VLC AML AML
comp=N,564µm,1.3s
GSCL Gusciola 2.58 313 P Pn 03 40 54.4 +1.0
GSCL AML AML
comp=N,1560µm,1.1s
GSCL AML AML
comp=E,1710µm,1.1s
CDRU Civita di Ruta 2.65 143 P Pn 03 40 56.6 +2.3
PALZ Palazzo San Ge 2.65 128 P Pn 03 40 55.6 +1.2
UDBI Udbina 2.66 43 ePn Pn 03 40 55.1 +0.6
KIJV Kijevo 2.71 58 *i* Pn Pn 03 40 55.9 +0.8
EQUI Equi 2.71 306 P Pn 03 40 55.8 +0.7
EQUI AML AML
comp=E,604µm,0.7s
EQUI AML AML
comp=N,636µm,0.4s
LSTV Lastovo 2.72 86 ePn Pn 03 40 54.7 -0.5
MRVN Minervino Murg 2.72 124 P Pn 03 40 56.0 +0.7
MRVN AML AML
comp=N,1030µm,1.4s
MRVN AML AML
comp=E,818µm,1.5s
ACER Acerenza 2.75 131 P Pn 03 40 55.3 -0.3
PLMA Palmaria, Port 2.84 301 P Pn 03 40 57.6 +0.7
PLIT Plitvice 2.85 37 *i* Pn Pn 03 40 57.5 +0.3
RIY Rijeka 2.85 18 ePn Pn 03 40 56.8 -0.3
GRAM Graiana 2.95 310 P Pn 03 41 01.1 +2.6
TEOL Teolo 2.96 338 Pn Pn 03 40 59.6 +1.1
TEOL Teolo 2.96 338 P Pn 03 40 59.7 +1.1
SMPL Sampolo 2.96 261 P Pn 03 40 58.5 -0.1
SMPL S Sb 03 41 37.6 -2.9
SKDS Skadanscina 2.98 11 ePn Pn 03 40 57.7 -1.2
SKDS Skadanscina 2.98 11 ePn Pn 03 40 58.1 -0.8
SKDS *eSn* Sn 03 41 33.9 -0.7
SKDS IAML 03 41 43.0
comp=Z,172nm,0.3s
PRMA PARMA 3.00 317 Pn Pn 03 40 58.7 -0.4
BULG Bulgheria - Ca 3.02 147 P Pn 03 41 01.1 +1.7
A301A Isiata (VE) 3.03 352 P Pn 03 41 01.1 +1.6
MTSN Montesano sull 3.03 140 P Pn 03 41 01.9 +2.3
A050A Klekovaca 3.05 51 ePn Pn 03 41 00.4 +0.6
AMUR Altamura 3.06 123 P Pn 03 41 00.9 +0.9
AMUR AML AML
comp=N,1300µm,0.5s
AMUR AML AML
comp=E,1690µm,0.8s
ZOVE Zovencedo 3.09 337 P Pn 03 41 01.2 +0.8
PGF Pioggiola 3.11 270 eP Pn 03 41 01.9 +1.2
PGF *eSn* Sn 03 41 33.8 -4.1
comp=E,121nm,0.7s
PGF Pioggiola 3.11 270 P Pn 03 41 02.0 +1.2
TRI Trieste 3.11 7 Pn Pn 03 40 59.2 -1.4
TRI Trieste 3.11 7 P Pn 03 40 59.2 -1.4
SIRI Monte Sirino - 3.15 140 P Pn 03 41 03.4 +2.1
MSSA Maissana 3.18 303 Pn Pn 03 41 01.9 +0.2
MSSA Maissana 3.18 303 P Pn 03 41 02.5 +0.8
MSSA AML AML
comp=E,462µm,0.6s
MSSA AML AML
comp=N,737µm,0.6s
SRKY Kupres RS 3.23 62 ePn Pn 03 41 03.6 +1.3
BOJS Bojanci 3.24 26 ePn Pn 03 41 03.9 +1.5
BOJS Bojanci 3.24 26 P Pn 03 41 03.0 +0.7
CEY Cerknica 3.24 15 ePn Pn 03 41 02.6 +0.2
MATE Matera 3.28 126 ⇑P Pn 03 41 03.2 +0.4
MATE ⇑S Sn 03 41 41.1 -0.6
MATE Matera 3.28 126 P Pn 03 41 03.6 +0.8
CUC Castrocucco 3.28 142 Pn 03 41 03.0 0.0
CUC Castrocucco 3.28 142 P Pn 03 41 06.2 +3.2
CRAC Craco 3.31 132 P Pn 03 41 04.8 +1.5
ASOL Asolo 3.31 344 P Pn 03 41 05.3 +1.9
CRND Cornuda 3.31 346 P Pn 03 41 04.5 +1.0
STON Ston 3.31 84 ePn Pn 03 41 02.4 -1.0
STON Ston 3.31 84 ePn Pn 03 41 02.6 -0.8
STON *eSn* Sn 03 41 42.4 -0.3
MGRS Mrkonjic Grad 3.34 56 ePn Pn 03 41 05.0 +1.2
A251A Rujevac 3.34 40 *i* Pn Pn 03 41 04.2 +0.4
SABO M.te Sabotino 3.37 5 Pn 03 41 03.6 -0.6
SABO M.te Sabotino 3.37 5 ⇑P Pn 03 41 03.7 -0.6
SABO AML AML
comp=N,5590µm,1.1s
SABO AML AML
comp=E,5435µm,0.6s
SABO AML AML
comp=N,1440µm,1.1s
SABO AML AML
comp=E,1290µm,0.6s
AJAC Base Areonaval 3.37 260 P Pn 03 41 05.6 +1.4
AJAC S Sn 03 41 46.7 +2.5
AJAC Base Areonaval 3.37 260 ⇑P Pn 03 41 05.4 +1.1
AJAC AML AML
comp=N,404µm,0.6s
AJAC AML AML
comp=E,622µm,0.3s
LTRZ Laterza 3.37 125 P Pn 03 41 05.3 +1.1
ROVR Rover Verones 3.40 334 P Pn 03 41 05.8 +1.1
ROVR AML AML
comp=E,251µm,0.9s
ROVR AML AML
comp=N,508µm,0.4s
CGRP Cima Grappa 3.41 343 P Pn 03 41 06.0 +1.0
CGRP AML AML
comp=E,1935µm,0.4s
CGRP AML AML
comp=E,1945µm,0.4s
CGRP AML AML
comp=N,2035µm,0.6s
CGRP AML AML
comp=N,2010µm,0.6s
CGRP AML AML
comp=E,1930µm,0.4s
NOCI Noci 3.42 121 P Pn 03 41 05.7 +0.9
NOCI AML AML
comp=N,1450µm,0.7s
NOCI AML AML
comp=E,1310µm,0.7s
CAE Caneva 3.43 351 P Pn 03 41 05.0 -0.1
VARN Col Varnada, M 3.46 347 P Pn 03 41 05.4 -0.1
VARN AML AML
comp=E,1915µm,1.6s
VARN AML AML
comp=E,1875µm,1.6s
VARN AML AML
comp=N,1216µm,0.9s
VARN AML AML
comp=N,1212µm,0.9s
GORR Gorreto 3.47 306 AML AML
comp=E,492µm,0.6s
GORR AML AML
comp=N,416µm,0.5s
LJU Ljubljana 3.55 15 *i* Pn Pn 03 41 06.7 0.0
LJU *eSn* Sn 03 41 47.8 -0.8
LJU Ljubljana 3.55 15 P Pn 03 41 06.6 0.0
LJU AML AML
comp=N,5640µm,1.5s
LJU AML AML
comp=E,4575µm,0.6s
DGI Dorgali Grotta 3.55 231 P Pn 03 41 07.0 +0.3
SALO Salr 3.57 328 Pn 03 41 06.2 -0.8
SALO Salr 3.57 328 AML AML
comp=E,1131µm,0.7s
SALO AML AML
comp=N,1475µm,0.6s
SALO AML AML
comp=E,1142µm,0.6s
SALO AML AML
comp=N,1535µm,0.6s
DOSS Dosso del Somm 3.57 337 AML AML
comp=N,792µm,0.5s
DOSS AML AML
comp=E,858µm,0.5s
DOSS AML AML
comp=E,812µm,0.4s
DOSS AML AML
comp=N,900µm,0.5s
BLY Banja Luka 3.58 52 ePn Pn 03 41 07.8 +0.7
BLY Banja Luka 3.58 52 ePn Pn 03 41 08.1 +1.0
BLY Banja Luka 3.58 52 P Pn 03 41 07.6 +0.5
A051A Mrakovica 3.59 47 ePn Pn 03 41 07.5 +0.3
MPRI Monte Prat 3.62 358 ⇑P Pn 03 41 07.8 0.0
MPRI AML AML
comp=E,1196µm,1.6s
MPRI AML AML
comp=N,1420µm,0.8s
STAL STALIGIAL 3.66 355 Pn 03 41 07.8 -0.3
STAL STALIGIAL 3.66 355 P Pn 03 41 07.8 -0.3
STAL AML AML
comp=N,1142µm,1.3s
STAL AML AML
comp=E,1077µm,0.7s
STAL AML AML
comp=N,1145µm,0.9s
STAL AML AML
comp=E,996µm,0.7s
MAGA Magasa 3.66 330 AML AML
comp=E,2715µm,1.1s
MAGA AML AML
comp=N,1985µm,0.3s
LUSI Trento, Gardas 3.71 335 AML AML
comp=E,934µm,0.3s
LUSI AML AML
comp=N,1395µm,1.6s
CIMO Cimolais 3.73 352 Pn 03 41 08.8 -0.3
CIMO Cimolais 3.73 352 AML AML
comp=E,278µm,0.6s
CIMO AML AML
comp=E,279µm,0.6s
CIMO AML AML
comp=N,271µm,0.4s
CIMO AML AML
comp=N,279µm,0.4s
AGOR Agordo 3.75 348 AML AML
comp=N,347µm,1.5s
AGOR AML AML
comp=E,453µm,1.6s
AGOR AML AML
comp=N,450µm,1.2s
AGOR AML AML
comp=E,604µm,1.2s
PTCC Patocco-Chiusa 3.79 1 AML AML
comp=N,396µm,1.0s
PTCC AML AML
comp=E,404µm,0.5s
GAGG Gaggia 3.82 336 AML AML
comp=N,1095µm,1.3s
GAGG AML AML
comp=E,828µm,0.8s
GAGG AML AML
comp=N,888µm,1.0s
GAGG AML AML
comp=E,1150µm,1.3s
PRED Cave del Predi 3.83 4 Pn 03 41 09.8 -0.8
CLUD Cludinico 3.84 357 Pn Pn 03 41 10.4 -0.3
CLUD Cludinico 3.84 357 AML AML
comp=E,656µm,1.3s
CLUD AML AML
comp=N,586µm,0.9s
CLUD AML AML
comp=N,604µm,0.9s
CLUD AML AML
comp=E,662µm,1.3s
ZONE Zone 3.85 326 P Pn 03 41 11.4 +0.6
ZONE AML AML
comp=E,982µm,1.4s
ZONE AML AML
comp=N,1300µm,0.4s
HCY Herceg Novi 3.91 91 ePn Pn 03 41 12.0 +0.4
HCY Herceg Novi 3.91 91 ⇑/Pn Pn 03 41 11.9 +0.4
HCY *i* Sn Sn 03 41 57.7 +0.3
BRY Bratogost 3.93 84 ePn Pn 03 41 12.3 +0.2
BRY Bratogost 3.93 84 ⇓/Pn Pn 03 41 11.9 -0.2
BRY *i* Sn Sn 03 41 58.5 +0.3
ACOM Acomizza, Ital 3.93 3 AML AML
comp=N,794µm,0.6s
ACOM AML AML
comp=E,946µm,0.4s
ACOM AML AML
comp=N,938µm,1.3s
ACOM AML AML
comp=N,816µm,0.6s
ZOU Zoufplan 3.94 358 ⇑P Pn 03 41 11.9 -0.3
ZOU AML AML
comp=E,676µm,1.3s
ZOU AML AML
comp=N,756µm,1.2s
ZOU AML AML
comp=N,792µm,1.2s
ZOU AML AML
comp=E,704µm,1.3s
MABI Malga Bissina 3.94 332 AML AML
comp=E,293µm,1.2s
MABI AML AML
comp=N,266µm,1.5s
OBKA Obir 4.00 13 ePn Pn 03 41 11.9 -1.1
OBKA Obir 4.00 13 ePn Pn 03 41 13.4 +0.4
comp=N,25nm,0.7s
OBKA *eSn* Sn 03 41 59.2 -0.6
comp=N,172nm,0.6s
OBKA Obir 4.00 13 ePn Pn 03 41 13.0 0.0
MYKA Terra Mystica 4.02 4 *i* Pn Pn 03 41 13.5 +0.3
comp=N,7.0nm,0.2s,SNR=22
MYKA *eSn* Sn 03 42 02.1 +1.8
comp=N,54nm,0.4s
KOSI Kohlern 4.06 342 AML AML
comp=N,955µm,0.8s
KOSI AML AML
comp=E,1016µm,0.7s
APPI Appiano 4.11 340 AML AML
comp=E,700µm,0.8s
APPI AML AML
comp=N,865µm,0.5s
DOB Doboj 4.13 58 ePn Pn 03 41 13.4 -1.2
ABTA Abfaltersbach 4.16 353 *i* Pn Pn 03 41 15.6 +0.5
comp=N,211nm,0.6s,SNR=70
ABTA *eSn* Sn 03 42 05.3 +1.6
comp=N,107nm,0.6s
CEME Cevo 4.21 89 ⇓/Pn Pn 03 41 16.0 +0.1
CEME *i* Sn Sn 03 42 04.9 -0.1
BUM Brajici-Budva 4.22 92 ⇓/Pn Pn 03 41 15.9 0.0
BUM *i* Sn Sn 03 42 05.4 +0.3
UPM Unac-Piva 4.22 80 ePn Pn 03 41 17.1 +1.0
UPM Unac-Piva 4.22 80 ⇑/Pn Pn 03 41 16.5 +0.4
UPM *i* Sn Sn 03 42 05.2 -0.2
NKME Niksic 4.23 86 ⇑/Pn Pn 03 41 16.6 +0.5
NKME *i* Sn Sn 03 42 05.7 +0.2
SOKA Soboth 4.26 17 *i* Pn Pn 03 41 17.6 +1.1
comp=N,16nm,0.4s,SNR=7.6
SOKA *eSn* Sn 03 42 05.8 -0.4
comp=N,19nm,0.4s
VSL Villasalto 4.26 224 P Pn 03 41 17.4 +0.9
VSL AML AML
VSL AML AML
SBF Sospel 4.40 288 ePn Pn 03 41 19.3 +0.9
SBF *eSn* Sn 03 42 04.6 -5.0
comp=N,64nm,0.5s
CGL Cagliari Serpe 4.40 224 P Pn 03 41 20.0 +1.5
RISI Rein 4.40 350 AML AML
comp=N,1835µm,0.5s
RISI AML AML
comp=E,1095µm,0.7s
ESCA l'Escarene 4.43 288 P Pn 03 41 19.8 +0.9
DRME Dracevica, Mon 4.44 94 ePn Pn 03 41 19.7 +0.7
DRME Dracevica, Mon 4.44 94 ⇓/Pn Pn 03 41 19.6 +0.6
DRME *i* Sn Sn 03 42 10.4 -0.2
KBA Koelnbreinsper 4.46 1 *i* Pn Pn 03 41 19.7 +0.4
comp=E,32nm,0.4s,SNR=24
KBA *eSn* Sn 03 42 10.6 -0.6
comp=E,43nm,0.3s
KBA Koelnbreinsper 4.46 1 ePn Pn 03 41 19.5 +0.2
TURF col de Turini 4.46 290 P Pn 03 41 20.4 +1.0
PDG Podgorica 4.47 90 ⇓P Pn 03 41 19.9 +0.6
PDG ⇑S Sn 03 42 13.3 +2.1
PDG Podgorica 4.47 90 Pn Pn 03 41 19.9 +0.6
PDG Podgorica 4.47 90 ePn Pn 03 41 20.2 +0.9
PDG *eSn* Sn 03 42 11.7 +0.5
PDG Podgorica 4.47 90 ⇑P Pn 03 41 20.0 +0.7
PDG AML AML
comp=E,552µm,0.5s
PDG AML AML
comp=E,716µm,0.5s
PDG AML AML
comp=N,1550µm,0.6s
PDG AML AML
comp=N,1215µm,0.6s
TTG Podgorica 4.47 90 ⇓/Pn Pn 03 41 19.9 +0.6
TTG *i* Sn Sn 03 42 11.5 +0.3
ROSI Rosskopf 4.49 344 AML AML
comp=E,1435µm,0.4s
ROSI AML AML
comp=N,1395µm,0.5s
FUORN Ofenpass-Fuorn 4.52 333 Pn 03 41 21.2 +0.9
ULC Ulcinj 4.52 96 ⇑/Pn Pn 03 41 20.4 +0.3
ULC *i* Sn Sn 03 42 12.4 -0.2
VARE Varese 4.55 317 AML AML
comp=E,456µm,0.7s
VARE AML AML
comp=N,422µm,0.5s
PLE Pljevlja 4.59 79 ⇑/Pn Pn 03 41 21.5 +0.5
PLE *i* Sn Sn 03 42 14.7 +0.4
SPIF crte de Spivo 4.59 290 P Pn 03 41 23.0 +1.9
MVIF Mont Vial 4.61 288 P Pn 03 41 22.2 +0.9
RUDO Rudo 4.62 75 ePn Pn 03 41 21.8 +0.5
KOME Kolasin 4.65 85 ⇓/Pn Pn 03 41 22.5 +0.6
KOME *i* Sn Sn 03 42 16.0 +0.2
BBLS Lazići 4.69 73 ePn Pn 03 41 23.4 +1.0
SCTE Santa Cesarea 4.70 121 Pn Pn 03 41 23.0 +0.5
SCTE Santa Cesarea 4.70 121 P Pn 03 41 23.2 +0.7
CALF Calera 4.74 286 P Pn 03 41 24.1 +1.0
FETA Feichten 4.74 339 *i* Pn Pn 03 41 24.6 +1.4
comp=N,14nm,0.8s,SNR=26
FETA *eSn* Sn 03 42 20.4 +2.2
comp=N,28nm,0.4s
ISO Isola 4.75 291 P Pn 03 41 26.3 +3.0
WTTA Wattenberg 4.78 347 *i* Pn Pn 03 41 25.4 +1.8
comp=N,37nm,0.5s,SNR=18
WTTA *eSn* Sn 03 42 22.8 +3.7
comp=N,81nm,0.3s
WTTA Wattenberg 4.78 347 ePn Pn 03 41 25.5 +1.8
WTTA *eSn* Sn 03 42 22.2 +3.1
DAVOX Davos/Dischmat 4.79 331 Pn Pn 03 41 26.5 +2.7
comp=N,12nm,0.3s,baz=156,slow=8.8,SNR=45
DAVOX Sn Sn 03 42 20.5 +1.1
comp=N,6.0nm,0.3s,baz=54,slow=23,SNR=4.7
DAVOX LR LR 03 42 59.7
comp=N,420nm,18.2s,baz=48,slow=36
CEL Celeste 4.81 154 Pn 03 41 23.9 -0.2
SQTA Sankt Quirin 4.81 344 Pn 03 41 26.1 +1.9
SQTA Sn 03 42 22.6 +2.7
SQTA Sankt Quirin 4.81 344 P Pn 03 41 26.1 +1.9
SQTA 03 42 22.6
SQTA Sankt Quirin 4.81 344 *i* Pn Pn 03 41 26.1 +1.9
comp=N,14nm,0.3s,SNR=18
SQTA *eSn* Sn 03 42 22.6 +2.7
comp=N,100nm,0.4s
WATA Walderalm 4.86 347 Pn 03 41 26.9 +2.2
WATA Sn 03 42 23.8 +2.8
WATA Walderalm 4.86 347 *i* Pn Pn 03 41 26.9 +2.2
comp=N,26nm,0.4s,SNR=39
WATA *eSn* Sn 03 42 23.8 +2.8
comp=N,137nm,0.5s
BLJ Bijeljina 4.89 62 ePn Pn 03 41 24.2 -0.9
ARSA Arzberg 4.91 19 *i* Pn Pn 03 41 24.9 -0.5
comp=N,13nm,0.5s,SNR=14
ARSA *eSn* Sn 03 42 19.7 -2.5
comp=N,15nm,0.3s
ARSA Arzberg 4.91 19 ePn Pn 03 41 25.0 -0.4
IVA Berane 4.93 85 ⇓/Pn Pn 03 41 27.2 +1.5
IVA *i* Sn Sn 03 42 22.9 +0.3
KOVH Kovagotottos 4.93 44 P Pn 03 41 24.6 -1.1
KOVH S Sn 03 42 19.0 -3.6
MOTA Moosalm 4.96 343 Pn 03 41 28.6 +2.5
MOTA Sn 03 42 26.1 +2.7
MOTA Moosalm 4.96 343 *i* Pn Pn 03 41 28.6 +2.5
comp=N,34nm,0.5s,SNR=29
MOTA *eSn* Sn 03 42 26.1 +2.7
comp=N,74nm,0.9s
LMR La Mourre 4.97 281 eP Pn 03 41 26.5 +0.3
LMR *eSn* Sn 03 42 18.0 -5.5
comp=N,17nm,0.5s
TEKS Tekeris 4.98 65 ePn Pn 03 41 27.6 +1.3
PVY Plav 4.98 88 ⇑/Pn Pn 03 41 27.5 +1.1
PVY *i* Sn Sn 03 42 24.2 +0.2
SJES Sjenica 5.00 80 ePn Pn 03 41 28.1 +1.3
SJES *eSn* Sn 03 42 23.1 -1.5
ZUGS Zugspitze, Sch 5.05 343 ePn Pn 03 41 29.9 +2.4
ZUGS *eSn* Sn 03 42 30.2 +4.2
BIOA Bad Ischl, Aus 5.08 3 Pn 03 41 28.0 +0.3
BIOA Sn 03 42 28.4 +2.1
BIOA Bad Ischl, Aus 5.08 3 *i* Pn Pn 03 41 28.0 +0.3
comp=N,8.6nm,0.3s,SNR=23
BIOA *eSn* Sn 03 42 28.4 +2.1
comp=N,31nm,0.3s
PART Garmisch-Parte 5.10 344 ePn Pn 03 41 30.0 +2.0
TRIGF Trigance 5.10 285 P Pn 03 41 29.5 +1.4
TIR Tirane 5.12 102 ⇑P Pn 03 41 28.6 +0.4
TIR ⇓S Sn 03 42 26.5 -0.8
TIR Tirane 5.12 102 Pn 03 41 28.6 +0.4
TIR Tirane 5.12 102 P Pn 03 41 28.6 +0.4
TIR Tirane 5.12 102 ePn Pn 03 41 28.9 +0.7

TIR eSn Sn 03 42 26.2 -1.0
MBDF Montbardon 5.12 296 eP Pn 03 41 29.9 +1.5
MBDF eSn Sn 03 42 21.8 -5.8
comp=N,55nm,0.7s
RJOB Jochberg 5.12 357 ePn Pn 03 41 28.9 +0.6
RJOB eSn Sn 03 42 30.6 +3.1
DIVS Divibare 5.16 71 Pn Pn 03 41 28.7 -0.2
DIVS Divibare 5.16 71 ePn Pn 03 41 28.7 -0.2
DIVS Divibare 5.16 71 ePn Pn 03 41 29.0 +0.1
FLAF Flassans-sur-l 5.16 281 P Pn 03 41 29.8 +1.0
RETA Reutte 5.17 341 *i* Pn Pn 03 41 31.2 +2.2
comp=N,13nm,0.4s,SNR=18
RETA eSn Sn 03 42 29.8 +1.3
comp=N,81nm,0.6s
IVAS Ivanjica 5.17 77 ePn Pn 03 41 29.4 +0.4
IVAS eSn Sn 03 42 27.2 -1.4
VLO Vlora 5.18 112 Pn Pn 03 41 29.3 +0.2
VLO Vlora 5.18 112 P Pn 03 41 29.3 +0.2
OGAG Argentiere 5.18 293 P Pn 03 41 33.2 +3.9
PLONS Plons/SG 5.20 330 ePn Pn 03 41 31.6 +2.2
OBER Oberstdorf 5.21 338 ePn Pn 03 41 31.9 +2.3
OBER eSn Sn 03 42 31.8 +2.1
VAE Valguarnera 5.22 169 Pn Pb 03 41 36.7 -6.2
comp=N,0.6nm,0.3s,baz=353,slow=16,SNR=2.2
DAVA Damuels 5.23 334 *i* Pn Pn 03 41 32.3 +2.4
comp=N,50nm,0.6s,SNR=31
DAVA eSn Sn 03 42 30.9 +0.7
comp=N,58nm,0.5s
DAVA Damuels 5.23 334 ePn Pn 03 41 32.7 +2.8
DAVA eSn Sn 03 42 36.4 +6.2
MOA Molln 5.28 8 ePn Pn 03 41 30.9 +0.4
MOA eSn Sn 03 42 30.3 -1.0
MOA Molln 5.28 8 *i* Pn Pn 03 41 30.7 +0.2
comp=N,17nm,0.4s,SNR=24
MOA eSn Sn 03 42 30.8 -0.5
comp=N,26nm,0.4s
MOA Molln 5.28 8 ePn Pn 03 41 30.8 +0.4
MORH Mrgy, Hungar 5.29 45 ⇑P Pn 03 41 29.8 -0.8
MORH Mrgy, Hungar 5.29 45 ePn Pn 03 41 30.2 -0.4
MORH Mrgy, Hungar 5.29 45 P Pn 03 41 29.9 -0.8
BNI Bardonecchia 5.31 299 Pn Pn 03 41 31.1 +0.1
BNI Bardonecchia 5.31 299 P Pn 03 41 31.1 +0.1
OGMO Fort Saint-Gob 5.38 301 P Pn 03 41 33.6 +1.7
BLAF les Blancs 5.40 287 P Pn 03 41 34.0 +1.9
FRGS Fruska Gora 5.40 60 ⇓P Pn 03 41 31.6 -0.5
FRGS Fruska Gora 5.40 60 ePn Pn 03 41 31.6 -0.5
FRGS Fruska Gora 5.40 60 ePn Pn 03 41 31.5 -0.6
DIX Grande Dixence 5.41 312 S Sn 03 42 37.7 +2.8
DIX Grande Dixence 5.41 312 P Pn 03 41 35.0 +2.5
TIH Tihany 5.42 36 P Pn 03 41 32.6 +0.2
LPG La Plagne 5.47 304 eP Pn 03 41 34.9 +1.6
LPG eSn Sn 03 42 30.1 -6.2
comp=N,40nm,0.5s
TRUS Trudelj 5.48 71 ePn Pn 03 41 33.4 +0.2
TRUS eSn Sn 03 42 37.5 +1.4
MPLH Magyarpolny 5.49 33 P Pn 03 41 33.1 -0.2
LPL La Plagne 5.49 304 eP Pn 03 41 35.2 +1.6
LPL eSn Sn 03 42 30.7 -6.1
comp=N,31nm,0.6s
ARTF Artigues 5.51 283 P Pn 03 41 34.9 +1.3
UBR Ueberruh 5.51 338 ePn Pn 03 41 34.7 +0.9
UBR eSn Sn 03 42 39.5 +2.4
RONA Rosalia, Austr 5.53 22 Pn Pn 03 41 33.6 -0.2
RONA Sn 03 42 35.9 -1.4
RONA Rosalia, Austr 5.53 22 *i* Pn Pn 03 41 33.6 -0.2
comp=N,16nm,0.4s,SNR=15
RONA eSn Sn 03 42 35.9 -1.4
comp=N,24nm,0.7s
SOP Sopron 5.59 24 P Pn 03 41 35.7 +1.1
SOP S Sn 03 42 39.0 +0.3
GRUS Gruza 5.62 74 ePn Pn 03 41 35.4 +0.2
GRUS eSn Sn 03 42 39.9 +0.2
CONA Conrad Observa 5.63 18 *i* Pn Pn 03 41 35.1 -0.2
comp=N,19nm,0.3s,SNR=17
CONA eSn Sn 03 42 39.0 -0.9
comp=N,25nm,0.5s
RSL Roselend 5.64 305 P Pn 03 41 37.6 +2.1
SENIN Lac Senin/Sane 5.65 314 Pn Pn 03 41 35.3 -0.4
BSTF la Bastide-des 5.67 285 P Pn 03 41 37.3 +1.5
WILA Wila 5.68 329 ePn Pn 03 41 37.7 +1.7
FUR Furstenfeldbru 5.71 347 ePn Pn 03 41 39.2 +2.9
SMRF Simiane la Rot 5.74 286 eP Pn 03 41 38.3 +1.6
SMRF eSn Sn 03 42 36.3 -6.2
comp=N,12nm,0.6s
GDM Grand'Maison 5.74 299 P Pn 03 41 40.9 +4.0
KEK Kerkira 5.76 118 Pn Pn 03 41 37.2 +0.2
ORIF Oris-en-Rattie 5.78 296 eP Pn 03 41 39.4 +1.9
ORIF eSn Sn 03 42 37.6 -6.2
comp=N,26nm,0.5s
ORIF Oris-en-Rattie 5.78 296 P Pn 03 41 41.1 +3.6
SELS Selova 5.84 81 ePn Pn 03 41 38.2 +0.1
SELS eSn Sn 03 42 42.7 -2.3
ARBF Arbois 5.84 281 P Pn 03 41 39.9 +1.8
OHR Ohrid 5.86 102 *i* Pn Pn 03 41 40.0 +1.5
KBN Korca 6.02 107 Pn 03 41 41.3 +0.6
KBN Korca 6.02 107 P Pn 03 41 41.3 +0.6
SAUF chteau de Sau 6.06 285 P Pn 03 41 43.2 +2.0
TORNY Torny/Romont 6.09 315 P Pn 03 41 42.8 +1.2
SULZ Cheisacher 6.09 325 P Pn 03 41 42.4 +0.8
SULZ Cheisacher 6.09 325 ePn Pn 03 41 42.4 +0.8
BALST Balsthal 6.13 322 P Pn 03 41 43.1 +1.0
BALST Balsthal 6.13 322 ePn Pn 03 41 42.7 +0.6
SLE Schleitheim 6.13 329 P Pn 03 41 42.4 +0.2
SLE Schleitheim 6.13 329 ePn Pn 03 41 42.4 +0.2
SKO Skopje 6.14 93 *i* Pn Pn 03 41 43.3 +1.1
GUT Gutenstein 6.17 334 P Pn 03 41 44.3 +1.6
OGSM Saint Maurice 6.18 301 P Pn 03 41 45.9 +3.1
ZST Bratislava 6.21 25 eP Pn 03 41 43.9 +0.7
ZST e 03 42 54.3
ZST Bratislava 6.21 25 ePN Pn 03 41 43.9 +0.7
ZST eSN Sn 03 42 54.3 +0.2
ZST eLG Lg 03 42 58.2
GEC2 GERESS Array S 6.24 3 Pn 03 41 42.6 -1.0
GEC2 GERESS Array S 6.24 3 ePn Pn 03 41 42.7 -0.9
GERES GERESS Array B 6.24 3 Pn Pn 03 41 42.9 -0.8
comp=N,2.0nm,0.3s,baz=169,slow=12,SNR=30
GERES Sn Sn 03 42 53.2 -1.6
comp=N,11nm,0.3s,baz=180,slow=25,SNR=12
comp=N,7.2nm,0.5s
GERES GERESS Array B 6.24 3 Pn 03 41 42.2 -1.4
CKRC Cesky Krumlov 6.25 7 ePN Pn 03 41 42.5 -1.2
CKRC eSN Sn 03 42 52.0 -3.1
BOVS Bovan 6.30 78 ⇑P Pn 03 41 44.0 -0.4
BOVS Bovan 6.30 78 ePn Pn 03 41 44.0 -0.4
BOVS eSn Sn 03 42 54.3 -2.0
GIMEL St. Georges / 6.32 311 P Pn 03 41 46.1 +1.4
BARS Barje 6.34 85 ePn Pn 03 41 45.4 +0.4
BARS eSn Sn 03 42 55.4 -2.0
NORI Noerdlinger Ri 6.36 344 ePn Pn 03 41 45.2 -0.1
BUD Budapest 6.37 38 P Pn 03 41 47.2 +1.8
BOURR Bourrignon 6.38 320 P Pn 03 41 46.1 +0.4
FELD Feldberg im Sc 6.41 327 P Pn 03 41 46.2 +0.1
MODS Modra-Piesok 6.42 25 eP Pn 03 41 45.5 -0.6
MODS e 03 42 58.4
MODS Modra-Piesok 6.42 25 ePN Pn 03 41 45.5 -0.6
MODS eSN Sn 03 42 58.4 -1.0
BRANT Les Verrieres 6.45 314 P Pn 03 41 47.8 +1.2
OG35 Corcelles 6.46 305 P Pn 03 41 47.8 +1.1
CABF La Chapelle 6.46 311 eP Pn 03 41 48.5 +1.7
CABF eSn Sn 03 42 53.5 -6.9
comp=N,28nm,0.6s
KIZ Kirchzarten 6.51 327 P Pn 03 41 47.7 +0.3
KHC Kasperske Hory 6.52 2 Pn 03 41 46.0 -1.4
KHC Kasperske Hory 6.52 2 eP Pn 03 41 46.4 -1.0
KHC e 03 42 58.1
KHC Kasperske Hory 6.52 2 ePN Pn 03 41 46.4 -1.0
KHC eSN Sn 03 42 58.1 -3.6
MDVR Moldovita 6.53 68 ⇓P Pn 03 41 47.3 -0.3
WET Wettzell 6.53 358 ePn Pn 03 41 47.4 -0.2
PRVS Prvonek 6.55 88 ePn Pn 03 41 48.3 +0.4
PRVS eSn Sn 03 43 01.2 -1.3
VIVF Saint-Julien-l 6.58 293 eP Pn 03 41 50.4 +2.1
VIVF eSn Sn 03 42 57.2 -6.0
comp=N,4.6nm,0.4s
SMOL Smolenice 6.59 25 eP Pn 03 41 50.8 +2.3
SMOL e 03 43 05.0
RIVEL MONT RIVEL 6.64 311 P Pn 03 41 49.6 +0.5
BFO Black Forest 6.66 331 Pn 03 41 49.5 +0.1
BFO Black Forest 6.66 331 P Pn 03 41 49.5 +0.1
BFO Black Forest 6.66 331 ePn Pn 03 41 50.7 +1.3
ZAGS Zajecar 6.70 77 ePn Pn 03 41 49.8 -0.1

ZAGS eSn Sn 03 43 04.3 -1.8
VOGT Vogtsburg - To 6.71 326 P Pn 03 41 50.4 +0.3
STIP Stip 6.73 95 *i* Pn Pn 03 41 53.0 +2.6
BZS Buzias 6.75 61 ⇓P Pn 03 41 49.6 -1.0
BZS Buzias 6.75 61 ⇓P Pn 03 41 49.6 -1.0
BZS Buzias 6.75 61 ePn Pn 03 41 50.5 -0.1
BZS eSn Sn 03 43 05.1 -2.3
BOUC Bouclans 6.76 316 P Pn 03 41 51.9 +1.1
SSB Saint Sauveur 6.80 296 Pn 03 41 50.8 -0.5
SSB Saint Sauveur 6.80 296 P Pn 03 41 50.8 -0.5
SSB Saint Sauveur 6.80 296 P Pn 03 41 53.5 +2.2
KRUC Moravsky 6.81 18 ePN Pn 03 41 50.6 -0.9
KRUC eSN Sn 03 43 06.2 -2.8
BOSS Bosilegrad 6.84 88 ePn Pn 03 41 52.2 +0.2
BOSS eSn Sn 03 43 07.8 -2.0
OPP Oppenau 6.85 331 P Pn 03 41 52.6 +0.6
TREC Trest 6.86 13 eP Pn 03 41 51.1 -1.1
TREC e 03 43 07.6
TREC Trest 6.86 13 ePN Pn 03 41 51.1 -1.1
TREC eSN Sn 03 43 07.6 -2.5
HINF Hinteralfeld 6.87 321 eP Pn 03 41 52.8 +0.6
HINF eSn Sn 03 43 02.8 -7.5
comp=N,17nm,0.3s
ZAPS Zavoj 6.95 81 ePn Pn 03 41 53.9 +0.6
ZAPS eSn Sn 03 43 09.5 -2.8
JAVC Velka Javorina 6.97 25 ePN Pn 03 41 54.4 +0.7
LASF Ste Croix 6.97 285 eP Pn 03 41 55.5 +1.8
LASF eSn Sn 03 43 05.8 -7.2
comp=N,0.9nm,0.3s
BLKB Belogradchik 7.00 79 ⇑P Pn 03 41 54.6 +0.5
ECH Echery 7.03 325 Pn 03 41 54.1 -0.4
ECH Echery 7.03 325 P Pn 03 41 54.1 -0.4
ECH Echery 7.03 325 P Pn 03 41 54.7 +0.2
ECH Echery 7.03 325 P Pn 03 41 54.6 +0.1
HERR Herculane 7.04 68 ⇑P Pn 03 41 54.4 -0.1
DJES Djerdap 7.05 70 ⇓P Pn 03 41 54.9 0.0
SIRR Siria 7.06 56 ⇑P Pn 03 41 55.6 +0.7
VYHS Vyhne 7.08 32 eP Pn 03 41 55.8 +0.7
VYHS e 03 43 11.9
VYHS Vyhne 7.08 32 ePN Pn 03 41 55.8 +0.7
VYHS eSN Sn 03 43 11.9 -3.5
VYHS eLG Lg 03 43 30.9
PSZ Piszkesteto 7.09 39 ⇑P Pn 03 42 02.3 +7.0
PSZ Piszkesteto 7.09 39 ⇑P Pn 03 42 02.3 +7.0
PSZ Piszkesteto 7.09 39 P Pn 03 41 57.0 +1.7
VRAC Vranov 7.09 18 ⇓P Pn 03 41 54.6 -0.7
VRAC Vranov 7.09 18 Pn Pn 03 41 54.6 -0.7
comp=N,1.8nm,0.3s,baz=208,slow=12,SNR=8.2
VRAC Sn Sn 03 43 14.7 -1.0
comp=N,2.1nm,0.3s,baz=114,slow=12,SNR=3.6
comp=N,6.0nm,0.5s
VRAC Vranov 7.09 18 ePN Pn 03 41 54.4 -0.9
VAY Valandovo 7.09 97 *i* Pn Pn 03 41 56.2 +0.9
WLS Welschbruch 7.10 327 P Pn 03 41 55.3 -0.3
CDF Champ du Feu 7.13 326 eP Pn 03 41 56.0 0.0
CDF eSn Sn 03 43 09.4 -7.6
comp=N,33nm,0.4s
GRA1 Grafenberg Arr 7.21 350 Pn 03 41 56.4 -0.5
GRF Grafenberg Arr 7.21 350 P Pn 03 41 56.4 -0.5
GRFO Grafenberg 7.21 350 Pn Pn 03 41 56.5 -0.4
GRFO Grafenberg 7.21 350 P Pn 03 41 56.5 -0.4
HAU Haudompre 7.24 320 eP Pn 03 41 57.5 +0.2
HAU eSn Sn 03 43 12.1 -7.3
comp=N,132nm,0.5s
PUNG Punghina 7.27 74 ⇓P Pn 03 41 58.1 +0.4
KKB Krupnik 7.36 93 P Pn 03 42 00.3 +1.2
VTS Vitosha 7.39 87 ⇑P Pn 03 41 59.7 +0.1
VTS Vitosha 7.39 87 Pn Pn 03 41 59.0 -0.6
VTS Vitosha 7.39 87 ⇑P Pn 03 41 59.7 +0.1
VTS Vitosha 7.39 87 ePn Pn 03 42 00.3 +0.7
VTS eSn Sn 03 43 21.6 -1.9
VTS Vitosha 7.39 87 P Pn 03 42 00.1 +0.5
LIT Litokhoron 7.42 107 Pn 03 41 59.3 -0.5
LIT Litokhoron 7.42 107 P Pn 03 41 59.3 -0.5
PRU Pruhonice 7.43 7 eP Pn 03 41 59.9 0.0
PRU e 03 43 20.8
PRU Pruhonice 7.43 7 ePN Pn 03 41 59.9 0.0
PRU eSN Sn 03 43 20.8 -3.2
GZR Gura Zlata 7.43 65 ⇓P Pn 03 41 60.0 0.0
GZR Gura Zlata 7.43 65 ⇓P Pn 03 42 00.0 0.0
KEST Kesra 7.50 205 Pn Pn 03 42 05.5 +4.5
comp=N,4.1nm,0.3s,baz=322,slow=4.5,SNR=42
KEST Sn Sn 03 43 27.2 +1.1
baz=9.0,slow=19
KEST Kesra 7.50 205 Pn Pn 03 42 02.7 +1.6
SRE Strehaia 7.53 71 ⇑P Pn 03 42 01.9 +0.6
SRE Strehaia 7.53 71 ⇑P Pn 03 42 01.9 +0.6
SJAF Saint Jean de 7.63 272 P Pn 03 42 02.1 -0.7
DEV Deva 7.68 62 ⇓P Pn 03 42 03.4 0.0
DEV Deva 7.68 62 ⇓P Pn 03 42 03.4 0.0
MPEP Malo Peshtene 7.75 81 P Pn 03 42 05.4 +1.0
MORC Moravsky Berou 7.76 21 ⇑P Pn 03 42 06.0 +1.5
MORC Moravsky Berou 7.76 21 Pn 03 42 04.4 -0.1
MORC Moravsky Berou 7.76 21 ⇑P Pn 03 42 06.0 +1.5
MORC Moravsky Berou 7.76 21 ePN Pn 03 42 04.4 -0.1
SMF Signal de Mont 7.80 304 eP Pn 03 42 06.8 +1.8
SMF eSn Sn 03 43 25.4 -7.8
comp=N,19nm,0.5s
LANS Liptovska Anna 7.85 32 eP Pn 03 42 08.7 +2.9
LANS Liptovska Anna 7.85 32 ePN Pn 03 42 08.7 +2.9
KRLC Kraliky 7.85 17 eP Pn 03 42 04.7 -1.1
KRLC Kraliky 7.85 17 ePN Pn 03 42 04.7 -1.1
FILF Fillols 7.86 273 P Pn 03 42 07.5 +1.5
MMB Musomiste 7.89 94 P Pn 03 42 07.3 +1.0
SRS Serrai 7.89 97 ePn Pn 03 42 06.6 +0.3
SRS eSn Sn 03 43 31.0 -4.5
PAGF Fort de Pagny 7.92 321 eP Pn 03 42 07.8 +1.1
PAGF eSn Sn 03 43 27.9 -8.3
comp=N,55nm,0.7s
DRGR 7.95 55 ⇑P Pn 03 42 08.1 +1.0
DRGR 7.95 55 ⇑P Pn 03 42 08.1 +1.0
DRGR 7.95 55 ePn Pn 03 42 08.3 +1.2
PYM Petit Puy Mans 7.97 297 P Pn 03 42 09.6 +2.1
OKC Ostrava-Krasne 7.99 24 eP Pn 03 42 08.3 +0.7
OKC Ostrava-Krasne 7.99 24 ePN Pn 03 42 08.3 +0.7
SFTF Sexfontaines 8.01 317 eP Pn 03 42 09.9 +2.0
SFTF eSn Sn 03 43 30.7 -7.8
comp=N,15nm,0.4s
DPC Dobruska-Polom 8.02 14 eP Pn 03 42 07.1 -1.0
DPC Dobruska-Polom 8.02 14 ePN Pn 03 42 07.1 -1.0
PGB Panagyurishte 8.09 87 P Pn 03 42 10.2 +1.2
MTLF Montolieu 8.10 279 eP Pn 03 42 11.6 +2.5
MTLF eSn Sn 03 43 32.6 -7.9
comp=N,5.1nm,0.6s
LOR Lormes 8.10 308 eP Pn 03 42 09.9 +0.8
baz=123
LOR eSn Sn 03 43 32.6 -8.0
comp=N,16nm,0.4s
LOR Lormes 8.10 308 P Pn 03 42 09.6 +0.4
MOX Moxa 8.10 353 ePn Pn 03 42 08.9 -0.3
LOT Lotru 8.12 66 ⇑P Pn 03 42 12.0 +2.6
UPC Upice 8.12 13 eP Pn 03 42 09.0 -0.4
UPC Upice 8.12 13 ePN Pn 03 42 09.0 -0.4
AVF Avril sur Loir 8.16 304 eP Pn 03 42 10.7 +0.7
AVF eSn Sn 03 43 34.5 -7.7
comp=N,6.5nm,0.6s
SSF Saint Saulge 8.20 306 eP Pn 03 42 11.6 +1.1
SSF eSn Sn 03 43 36.4 -6.7
comp=N,10nm,0.6s
OSTC Ostas 8.20 14 ePN Pn 03 42 10.6 0.0
MEZF Maizieres J'vi 8.21 319 eP Pn 03 42 12.7 +2.1
MEZF eSn Sn 03 43 35.0 -8.1
comp=N,18nm,0.5s
SAVF Savonnieres en 8.25 319 eP Pn 03 42 13.1 +2.0
SAVF eSn Sn 03 43 36.0 -8.2
comp=N,13nm,0.4s
BRG Berggiesshubel 8.27 3 eP Pn 03 42 11.3 -0.1
BRG Amp 03 42 14.3
comp=Z,8.6nm,0.5s
BRG ex x 03 42 17.5
BRG Amp 03 42 18.7
comp=Z,6.6nm,0.7s
BRG ex x 03 43 38.9
BRG ex x 03 44 50.6
BRG Amp 03 45 12.7
comp=Z,30nm,1.3s
BRG Berggiesshubel 8.27 3 eP Pn 03 42 11.3 -0.1
BRG e 03 43 38.9
BRG pmax pmax
comp=Z,9.0nm,0.5s
BRG pmax pmax
comp=Z,7.0nm,0.7s

BRG pmax pmax
comp=Z,30nm,1.3s
TNS Taunus Mts 8.28 338 ePn Pn 03 42 12.1 +0.4
BGF Bois d'Agland 8.38 302 eP Pn 03 42 14.3 +1.3
BGF eSn Sn 03 43 38.1 -9.4
comp=Z,6.4nm,0.3s
CAF Calviac 8.39 290 eP Pn 03 42 14.6 +1.4
CAF eSn Sn 03 43 40.0 -7.8
comp=Z,0.6nm,0.3s
CJR Cluj-Napoca 8.46 58 ⇓P Pn 03 42 15.4 +1.4
CJR Cluj-Napoca 8.46 58 ⇓P Pn 03 42 15.4 +1.4
PLD Plovdiv 8.53 90 ePn Pn 03 42 16.5 +1.5
PLD Plovdiv 8.53 90 P Pn 03 42 16.3 +1.3
WLF Walferdange 8.58 328 Pn 03 42 15.2 -0.5
WLF Walferdange 8.58 328 P Pn 03 42 15.2 -0.5
WLF Walferdange 8.58 328 ePn Pn 03 42 19.2 +3.5
RZN Rozhen 8.60 92 P Pn 03 42 17.5 +1.3
PAND Andorre 8.61 273 P Pn 03 42 16.9 +0.5
ARR Arges 8.68 68 ⇑P Pn 03 42 17.8 +0.6
TCF Toulx Ste Croi 8.68 299 eP Pn 03 42 19.7 +2.6
TCF eSn Sn 03 43 47.7 -7.2
comp=Z,3.9nm,0.4s
CLL Collm 8.69 359 *i* P Pn 03 42 12.8 -4.4
CLL pmax pmax
comp=Z,15nm,0.6s
CLL Collm 8.69 359 *i* Pn Pn 03 42 12.8 -4.4
comp=Z,15nm,0.6s
CLL ex x 03 42 20.0
CLL ex x 03 43 26.0
CLL eSn Sn 03 43 35.0 -20
CLL ex x 03 43 51.0
CLL ex x 03 44 09.0
CLL ex x 03 44 33.0
CLL eSg **Sg** 03 44 49.0 -1.5
comp=Z,62nm,1.2s
UZH Uzhgorod 8.75 44 ⇑*i*P Pn 03 42 11.5 -6.5
HUMR Humele 8.76 73 ⇑P Pn 03 42 15.5 -2.6
HYF Humbligny 8.82 305 eP Pn 03 42 21.5 +2.5
HYF eSn Sn 03 43 50.0 -8.3
comp=Z,64nm,0.5s
RJF Les Rejaudoux 8.85 292 eP Pn 03 42 21.6 +2.1
RJF eSn Sn 03 43 50.8 -8.3
comp=Z,1.2nm,0.2s
MONQ Montcuq 8.91 285 P Pn 03 42 21.2 +1.0
KOLS Kolonicke sedl 8.94 42 eP Pn 03 42 15.2 -5.4
KOLS Kolonicke sedl 8.94 42 ePN Pn 03 42 15.2 -5.4
VOIR 8.98 68 ⇑P Pn 03 42 16.9 -4.4
VOIR 8.98 68 ⇑P Pn 03 42 16.9 -4.4
RDO Rodhopi 9.31 95 Pn Pn 03 42 22.6 -3.1
LFF La Frestale 9.32 289 eP Pn 03 42 28.3 +2.5
GIVF Givet 9.46 325 eP Pn 03 42 29.8 +2.0
GIVF eSn Sn 03 44 04.9 -9.1
comp=Z,7.3nm,0.4s
EPF Esparros 9.47 277 eP Pn 03 42 30.5 +2.5
EPF eSn Sn 03 44 05.6 -8.8
comp=Z,2.7nm,0.6s
BCLA Clavier 9.51 328 *d*S Sn 03 44 13.3 -1.9
MLR Muntele Rosu 9.61 68 Pn Pn 03 42 32.2 +2.3
comp=Z,0.9nm,0.3s,baz=218,slow=5.3,SNR=12
MLR Sn Sn 03 44 19.8 +2.0
comp=Z,0.3nm,0.3s,baz=330,slow=20,SNR=2.0
comp=Z,23nm,0.9s
ALN Alexandroupoli 9.74 96 Pn 03 42 31.2 -0.5
ALN Alexandroupoli 9.74 96 P Pn 03 42 31.2 -0.5
RAZG Razgrad 9.78 80 ⇑P Pn 03 42 32.3 +0.2
ETSF Etsaut 10.13 276 eP Pn 03 42 39.7 +2.6
ETSF eSn Sn 03 44 21.7 -9.0
comp=Z,1.3nm,0.4s
LVV L'vov 10.39 42 eP Pn 03 42 43.4 +3.0
IDI Anoyia 11.66 125 Pn Pn 03 43 01.0 +2.9
comp=Z,0.4nm,0.3s,baz=322,slow=16,SNR=3.9
IDI Sn Sn 03 44 59.3 -9.0
comp=Z,0.7nm,0.3s,baz=238,slow=12,SNR=4.3
comp=Z,4.6nm,0.6s
KLNR Kaliningrad 12.85 19*ce*P Pn 03 43 14.5 +0.5
KLNR pmax pmax
comp=Z,161nm,1.1s
ESDC Sonseca Array 13.28 263 Pn Pn 03 43 20.4 +0.3
comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=10.0
ESDC LR LR 03 48 11.8
comp=Z,507nm,18.1s,baz=10.0,slow=36
comp=Z,1.1nm,0.7s
AKASG Malin Array Be 13.63 48 Pn Pn 03 43 23.5 -1.1
comp=Z,0.3nm,0.4s,baz=262,slow=21,SNR=1.4
MDUB Mudurnu 13.64 93 Pn 03 43 23.7 -1.4
ELL Elmali 14.12 109 Pn 03 43 31.6 -0.1
ELL Elmali 14.12 109 P Pn 03 43 31.6 -0.1
PABE Paberze 14.67 25 Pn 03 43 36.7 -2.2
NACGM Naroch 15.17 31 ⇓eP Pn 03 43 44.1 -1.5
baz=221
MNK Minsk 15.31 34 *i* P Pn 03 43 44.6 -2.9
MNK *i* S Sn 03 46 33.5 -3.4
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK MLR MLR
comp=E,40nm,13.0s
MNK MLR MLR
comp=Z,236nm,13.0s
MNK MLR MLR
comp=N,14nm,16.0s
MNK Minsk 15.31 34 *i* P Pn 03 43 44.6 -2.9
comp=E,2.0nm,1.1s
MNK *i* P Pn 03 43 44.6 -2.9
comp=N,8.0nm,0.9s
MNK *i* P Pn 03 43 44.6 -2.9
comp=Z,7.0nm,0.9s,baz=227
MNK *i* PP P 03 43 52.7 +0.4
MNK *i* PPP PPP 03 44 00.4
MNK *i* S SnSn 03 46 33.6 -3.4
MNK *i* SS SnSn 03 46 47.5 -2.0
MNK *i* SSS SSS 03 47 00.2
MNK *i* LR LR 03 49 47.3
MNK *i* LRM MLR 03 50 34.0
comp=E,40nm,13.4s
MNK *i* LRM MLR 03 50 34.6
comp=Z,236nm,12.8s
MNK *i* LRM MLR 03 50 40.4
comp=N,14nm,16.0s
BRTR Keskin Array B 15.65 94 Pn P 03 43 54.9 -1.4
comp=N,0.1nm,0.3s,baz=280,slow=12,SNR=2.7
comp=N,1.2nm,0.6s
EKA Eskdalemuir Ar 16.60 326 Pn Pn 03 44 04.8 +0.7
baz=141,slow=14
comp=N,1.1nm,0.5s
MDT Midelt 17.13 241 P P 03 44 16.8 +4.1
comp=N,1.4nm,0.8s,baz=91,slow=16,SNR=2.1
HFS Hagfors 17.54 1 P P 03 44 17.5 +0.5
comp=N,3.2nm,0.8s,baz=171,slow=10,SNR=7.6
VSU Vasula 17.98 23 ⇑eP Pn 03 44 21.2 -0.1
VSU pmax pmax
comp=Z,18nm,0.7s
NC602 NORSAR Array S 18.17 357 P Pn 03 44 21.8 -1.9
NC602 lAmb lAmb 03 44 25.4
comp=Z,15nm,0.8s
NAO01 NORSAR Array S 18.31 356 P Pn 03 44 24.0 -1.3
NB2 NORSAR Subarra 18.49 357 P P 03 44 27.6 +0.2
comp=Z,4.2nm,0.8s,baz=175,slow=12
NOA NORSAR Array B 18.49 357 P Pn 03 44 28.4 +0.9
baz=176,slow=12,SNR=18
comp=Z,2.6nm,0.7s
NB201 NORSAR Array S 18.49 357 P Pn 03 44 27.9 +0.3
NB201 lAmb lAmb 03 44 29.8
comp=Z,16nm,0.8s
NC405 NORSAR Array S 18.54 358 P P 03 44 27.8 -0.2
NC405 lAmb lAmb 03 44 37.2
comp=Z,16nm,0.7s
NC303 NORSAR Array S 18.67 357 P P 03 44 27.4 -2.0
NC204 NORSAR Array S 18.74 356 P P 03 44 29.5 -0.8
NC204 lAmb lAmb 03 44 33.5
comp=Z,25nm,1.1s
VSR Storozhevoye 19.62 55 eP P 03 44 38.5 -1.4
VSR pmax pmax
comp=Z,10.0nm,1.2s
VORR Voronezh 19.77 54 eP P 03 44 36.4 -5.1
VORR pmax pmax
comp=Z,390nm,1.2s
LPSR Galich'ya Gora 19.91 51 eP P 03 44 41.5 -1.5
LPSR pmax pmax
comp=Z,20nm,0.9s
PUL Pulkovo 20.14 26*de*P P 03 44 45.3 -0.1
PUL pmax pmax

comp=Z,5.1nm,0.5s
FINES FINESS Array B 20.37 18 P **P** 03 44 48.2 +0.3
comp=Z,4.6nm,0.7s,baz=206,slow=9.8,SNR=11
comp=Z,4.6nm,0.7s
FINES FINESS Array B 20.37 18 P **P** 03 44 47.1 -0.8
FIA1 FINESS Array S 20.37 18 P **P** 03 44 47.4 -0.5
FIA1 IAmb IAmb 03 44 55.7
comp=Z,12nm,0.9s
MOS Moscow 20.52 42 *e*P **P** 03 44 48.2 -1.4
MOS pmax pmax
comp=Z,100nm,1.2s
MOS pmax pmax
comp=Z,46nm,0.9s
KOPT Kop Dagi 20.63 88 P **P** 03 44 47.9 -3.3
TAM Tamanrasset 20.79 200 P **P** 03 44 52.1 -0.8
TAM Tamanrasset 20.79 200 P **P** 03 44 52.1 -0.8
TAM pmax pmax
comp=Z,9.0nm,1.1s
GHAJ Ghor Haditha 21.07 115 P **P** 03 44 55.8 0.0
GHAJ IAmb IAmb 03 45 21.6
comp=Z,16nm,1.0s
VRH Novokhopyorsk 21.17 56 *e*P **P** 03 44 56.7 0.0
VRH pmax pmax
comp=Z,30nm,0.8s
ASF Jabal al Asfar 21.45 111 P **P** 03 45 03.7 +3.7
comp=Z,4.6nm,0.8s,baz=332,slow=7.6,SNR=6.3
comp=Z,4.6nm,0.8s
KIV Kislovodsk 21.45 76 P **P** 03 44 58.0 -1.9
KIV Kislovodsk 21.45 76 *e*P **P** 03 45 01.1 +1.2
KIV pmax pmax
comp=Z,21nm,1.1s
KVAR Kislovodsk Arr 21.46 76 P **P** 03 45 05.3 +5.3
comp=Z,1.5nm,0.3s,baz=79,slow=23,SNR=5.6
VALR Valaam 21.56 23⇑*e*P **P** 03 44 59.2 -1.5
VALR pmax pmax
comp=Z,16nm,0.8s
KBZ Khabaz 21.63 77 P **P** 03 45 03.5 +1.8
comp=Z,13nm,1.0s,baz=269,slow=7.5,SNR=13
comp=Z,13nm,1.0s
ONI Oni 22.21 80 P **P** 03 45 07.2 -0.8
ONI IAmb IAmb 03 45 26.2
comp=Z,8.7nm,0.8s
ONI Oni 22.21 80 P **P** 03 45 07.2 -0.8
ONI pmax pmax
comp=Z,9.0nm,0.8s
GURO Guroymak-BITLI 22.21 91 P **P** 03 45 07.5 -0.7
GURO IAmb IAmb 03 45 16.9
comp=Z,7.8nm,0.8s
ZEI Tsey 22.50 79 *e*P **P** 03 45 12.8 +1.5
ZEI pmax pmax
comp=Z,8.0nm,0.9s
GNI Garni 23.72 85 P **P** 03 45 28.3 +4.6
comp=Z,5.6nm,0.7s,baz=256,slow=5.3,SNR=3.9
KLMR Klimovskoe 24.19 32 *e*P **P** 03 45 25.9 -1.8
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR Klimovskoe 24.19 32 *e*P **P** 03 45 26.0 -1.8
KLMR AMP 03 45 32.0
comp=Z,18nm,1.3s
BELG Belogornoye 25.00 55 P **P** 03 45 36.1 +0.9
comp=Z,41nm,1.1s,baz=1.3,slow=1.4,SNR=8.1
comp=Z,41nm,1.1s
PRGR Permogore 27.09 34 *e*P **P** 03 45 50.9 -3.0
ARCES ARCESS Array B 27.72 9 P **P** 03 45 58.6 -1.0
comp=Z,1.3nm,0.7s,baz=186,slow=6.4,SNR=4.8
comp=Z,1.3nm,0.7s
TOA0 Torodi Ar. Sit 31.02 202 P **P** 03 46 30.1 +0.8
TORD Torodi Ar. Bea 31.02 202 P **P** 03 46 30.4 +1.2
comp=Z,6.7nm,0.9s,baz=20,slow=8.7,SNR=37
comp=Z,6.7nm,0.9s
TORD Torodi Ar. Bea 31.02 202 P **P** 03 46 29.4 +0.2
TORD IAmb IAmb 03 46 31.1
comp=Z,4.3nm,0.9s
ARU Arti 31.88 48 P **P** 03 46 35.7 -0.9
ARU Arti 31.88 48*d i*P **P** 03 46 36.6 +0.1
ARU 03 47 36.1
ARU S **S** 03 51 48.1 +1.2
ARU pmax pmax
comp=Z,23nm,0.8s
ABKAR Akbulak array 32.74 62 P **P** 03 46 44.3 +0.1
GEYT Alibeck 34.27 82 P **P** 03 46 58.7 +1.0
comp=Z,1.2nm,0.3s,baz=322,slow=9.1,SNR=1.8
comp=Z,1.2nm,0.3s
BRVK Borovoye 38.73 54 P **P** 03 47 35.7 +0.2
BRVK Borovoye 38.73 54*de*P **P** 03 47 36.8 +1.3
BRVK pmax pmax
comp=Z,12nm,0.8s
DBIC Dimbokro 39.21 209 P **P** 03 47 40.0 +0.2
comp=Z,4.3nm,0.8s,baz=55,slow=9.1,SNR=4.3
comp=Z,4.3nm,0.8s
KK31 Karatay Array 41.29 69 P **P** 03 47 57.2 +0.3
KK31 IAmb IAmb 03 48 02.3
comp=Z,4.3nm,0.8s
KK31 Karatay Array 41.29 69 P **P** 03 47 57.2 +0.3
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 41.29 69 P **P** 03 47 57.1 +0.3
KKAR IAmb IAmb 03 48 02.3
comp=Z,4.3nm,0.8s
KKAR Karatay Array 41.29 69 P **P** 03 47 57.2 +0.3
KKAR Karatay Array 41.29 69 P **P** 03 47 57.2 +0.3
KURK Kurchatov 44.27 56 P **P** 03 48 20.6 -0.3
KURK Kurchatov 44.27 56*ce*P **P** 03 48 21.9 +1.0
KURK pmax pmax
comp=Z,5.0nm,1.3s
ZAA0 Zalesovo Array 47.01 50 P **P** 03 48 41.5 -1.1
ZALV Zalesovo Beam 47.01 50 P **P** 03 48 43.0 +0.5
comp=Z,3.2nm,0.9s,baz=291,slow=9.4,SNR=8.9
comp=Z,3.2nm,0.9s
ZALV Zalesovo Beam 47.01 50 P **P** 03 48 42.5 -0.1
MK31 Makanchi Array 47.83 60 P **P** 03 48 48.7 -0.4
MK31 IAmb IAmb 03 48 55.5
comp=Z,2.7nm,0.8s
MK31 Makanchi Array 47.83 60*ce*P **P** 03 48 50.0 +0.9
MKAR Makanchi Array 47.83 60 P **P** 03 48 49.8 +0.7
comp=Z,2.6nm,0.8s,baz=289,slow=6.4,SNR=20
comp=Z,2.6nm,0.8s
MKAR Makanchi Array 47.83 60 P **P** 03 48 49.3 +0.2
WMQ Urumqi 52.52 62 *e*P **P** 03 49 27.3 +2.5
SONM Songino Array 61.90 50 P **P** 03 50 32.8 +1.7
comp=Z,4.1nm,0.8s,baz=289,slow=7.5,SNR=9.5
comp=Z,4.1nm,0.8s
GTA Gaotai 62.58 61 *e*P **P** 03 50 37.0 +1.2
GTA sP sP 03 50 42.9 +1.3
GTA pmax pmax
comp=Z,2.0nm,0.7s
YAK Yakutsk 63.90 28⇓*e*P **P** 03 50 45.2 +1.2
YAK pmax pmax
comp=Z,9.0nm,0.8s
YKA Yellowknife Ar 67.21 337 P **P** 03 51 06.2 +0.9
comp=Z,0.6nm,0.4s,baz=45,slow=5.9,SNR=4.2
comp=Z,0.6nm,0.4s
ULM Lac du Bonnet 68.76 319 P **P** 03 51 17.9 +2.7
comp=Z,4.6nm,0.8s,baz=133,slow=6.9,SNR=3.7
PZH PanZhiHua 71.55 71 P **P** 03 51 33.4 +0.4
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.3s
ILAR Eielson Array 71.81 351 P **P** 03 51 34.9 +1.1
comp=Z,0.7nm,0.9s,baz=15,slow=7.5,SNR=4.9
comp=Z,0.7nm,0.9s
KLR Kul'dur 73.84 37 P **P** 03 51 46.5 +0.4
comp=Z,0.8nm,0.5s,baz=320,slow=8.5,SNR=2.7
comp=Z,0.8nm,0.5s
KLR Kul'dur 73.84 37⇓*e*P **P** 03 51 47.3 +1.3
KLR pmax pmax
comp=Z,8.0nm,1.7s
CMAR Chiang Mai Arr 74.66 79 P **P** 03 51 52.0 +0.7
comp=Z,1.2nm,0.3s,baz=303,slow=8.5,SNR=6.0
comp=Z,1.2nm,0.3s
USRK Ussuriysk Ar. 77.69 40 P **P** 03 52 09.1 +0.9
comp=Z,1.7nm,0.9s,baz=202,slow=8.2,SNR=4.4
comp=Z,1.7nm,0.9s
KSRS Korea Array 80.62 47 P **P** 03 52 25.1 +0.8
comp=Z,1.1nm,0.6s,baz=318,slow=4.2,SNR=5.8
comp=Z,1.1nm,0.6s
PDAR Pinedale Array 80.66 321 P **P** 03 52 24.8 0.0
comp=Z,1.0nm,1.0s,baz=52,slow=5.8,SNR=3.0
comp=Z,1.0nm,1.0s
BDFB Brasilia 80.70 239 P **P** 03 52 25.9 +0.8
comp=Z,7.4nm,0.8s,baz=68,slow=4.2,SNR=12
comp=Z,7.4nm,0.8s
TXAR Lajitas Array 87.85 309 P **P** 03 53 03.4 +2.1
comp=Z,0.4nm,0.7s,baz=54,slow=4.6,SNR=3.8
comp=Z,0.4nm,0.7s
ASAR Alice Springs 127.93 88 PKP **PKPdf** 03 59 17.2 -0.4

comp=Z,0.2nm,0.3s,baz=325,slow=1.5,SNR=4.9

ROM 24 03:42:50.2±0.1, 42.785N±0.004×13.219E±0.006, h7km, ML2.8/16, 1C, Error ellipse: s-maj=0.6km s-min=0.1km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**302**	P	Pg	03 42 53.1	+0.7
NRCA				S	Sg	03 42 54.8	+0.9
NRCA				AML	AML		
	comp=E,21650μm,0.2s						
NRCA				AML	AML		
	comp=E,21700μm,0.2s						
NRCA				AML	AML		
	comp=E,23800μm,0.2s						
NRCA				AML	AML		
	comp=N,28950μm,1.3s						
NRCA				AML	AML		
	comp=E,21700μm,0.1s						
NRCA				AML	AML		
	comp=N,27000μm,1.3s						
FEMA	**Monte Fema**	**0.22**	**325**	P	Pg	03 42 55.3	+0.8
FEMA				S	Sg	03 42 59.2	+1.7
FEMA				AML	AML		
	comp=E,4000μm,0.5s						
FEMA				AML	AML		
	comp=N,3300μm,0.6s						
FEMA				AML	AML		
	comp=E,4000μm,0.5s						
FDMO	**Fiordimonte**	**0.27**	**339**	P	Pg	03 42 56.1	+0.6
FDMO				S	Sb	03 43 00.7	-1.5
FDMO				AML	AML		
	comp=N,2000μm,0.3s						
FDMO				AML	AML		
	comp=E,2015μm,0.2s						
RM33	**Pellescritta (**	**0.28**	**181**	P	Pb	03 42 56.9	-0.6
RM33				S	Sb	03 43 01.7	-0.7
RM33				AML	AML		
	comp=E,2760μm,0.2s						
RM33				AML	AML		
	comp=N,2670μm,0.8s						
RM33				AML	AML		
	comp=E,2760μm,0.2s						
RM33				AML	AML		
	comp=N,2705μm,0.5s						
RM33				AML	AML		
	comp=N,2710μm,0.5s						
RM33				AML	AML		
	comp=E,2755μm,0.2s						
RM33				AML	AML		
	comp=N,2670μm,0.8s						
CAMP	**Campotosto**	**0.29**	**151**	P	Pg	03 42 56.5	+0.7
CAMP				S	Sg	03 43 01.1	+1.5
CAMP				AML	AML		
	comp=E,818μm,0.9s						
CAMP				AML	AML		
	comp=N,1012μm,0.6s						
CAMP				AML	AML		
	comp=E,977μm,0.2s						
GUMA	**Gualdo di Mace**	**0.29**	**17**	P	Pg	03 42 56.8	+0.9
GUMA				S	Sb	03 43 01.9	-1.0
GUMA				AML	AML		
	comp=N,8825μm,0.3s						
GUMA				AML	AML		
	comp=E,14000μm,0.3s						
GUMA				AML	AML		
	comp=N,8845μm,0.3s						
GUMA				AML	AML		
	comp=N,7075μm,0.4s						
GUMA				AML	AML		
	comp=E,12250μm,0.3s						
CESI	**CESI - Serrava**	**0.32**	**314**	P	Pg	03 42 57.1	+0.6
CESI				S	Sb	03 43 02.5	-1.2
CESI				AML	AML		
	comp=E,2140μm,1.2s						
CESI				AML	AML		
	comp=N,5340μm,0.5s						
TERO	**Teramo**	**0.33**	**120**	P	Pg	03 42 57.2	+0.6
TERO				S	Sg	03 43 02.3	+1.4
TERO				AML	AML		
	comp=E,2030μm,0.5s						
TERO				AML	AML		
	comp=E,2035μm,0.5s						
TERO				AML	AML		
	comp=N,2505μm,1.2s						
TERO				AML	AML		
	comp=E,2200μm,0.7s						
TERO				AML	AML		
	comp=N,2315μm,1.2s						
OFFI	**Offida**	**0.38**	**66**	P	Pb	03 42 59.1	-0.1
OFFI				S	Sb	03 43 06.1	+0.9
ARRO	**Arrone**	**0.39**	**239**	P	Pb	03 42 58.7	-0.8
ARRO				S	Sb	03 43 05.8	+0.1
ARRO				AML	AML		
	comp=N,960μm,0.9s						
ARRO				AML	AML		
	comp=N,960μm,0.9s						
ARRO				AML	AML		
	comp=E,1058μm,1.1s						
MDAR	**Monte D'Aria**	**0.41**	**352**	P	Pg	03 42 58.6	+0.4
MDAR				S	Sb	03 43 05.5	-0.9
SEF1	**Sefro**	**0.41**	**331**	P	Pg	03 42 58.8	+0.6
SEF1				S	Sb	03 43 05.3	-1.0
GIGS	**Gran Sasso**	**0.42**	**142**	P	Pg	03 42 58.9	+0.6
SSM1	**San Severino M**	**0.45**	**356**	P	Pg	03 42 59.3	+0.5
GAG1	**Gagliole**	**0.47**	**346**	P	Pg	03 42 59.9	+0.6
GAG1				S	Sb	03 43 07.5	-0.4
ASSB	**Assisi San Ben**	**0.48**	**302**	P	Pg	03 43 00.0	+0.5
ASSB				S	Sb	03 43 07.9	-0.6
ASSB				AML	AML		
	comp=E,2235μm,1.1s						
ASSB				AML	AML		
	comp=N,1910μm,0.2s						
CESX	**Cesi**	**0.50**	**250**	P	Pb	03 43 00.6	-0.7
SNTG	**Esanatoglia**	**0.51**	**337**	P	Pg	03 43 00.5	+0.4
SNTG				S	Sb	03 43 08.8	-0.5
SNTG				AML	AML		
	comp=E,520μm,1.4s						
SNTG				AML	AML		
	comp=N,700μm,0.2s						
TRTR	**Tortoreto Alta**	**0.51**	**87**	P	Pb	03 43 01.8	+0.3
FIAM	**Fiamignano**	**0.52**	**188**	P	Pg	03 43 00.7	+0.5
FIAM				S	Sb	03 43 09.1	-0.4
FIAM				AML	AML		
	comp=N,529μm,0.3s						
FIAM				AML	AML		
	comp=E,821μm,1.3s						
FIAM				AML	AML		
	comp=E,820μm,1.3s						
EL6	**Elcito**	**0.55**	**351**	P	Pg	03 43 01.2	+0.4
EL6				S	Sb	03 43 10.5	+0.1
ATCC	**AVT- Casa Cast**	**0.58**	**313**	P	Pg	03 43 01.9	+0.5
ATCC				S	Sb	03 43 11.3	0.0
ATCC				AML	AML		
	comp=E,1066μm,0.3s						
ATCC				AML	AML		
	comp=N,1178μm,0.2s						
ATCC				AML	AML		
	comp=E,1069μm,0.3s						
ATCC				AML	AML		
	comp=N,1181μm,0.2s						
FAGN	**Fagnano**	**0.58**	**152**	P	Pb	03 43 02.2	-0.5
VCEL	**Villa Celiera**	**0.60**	**130**	⇑P	Pb	03 43 02.5	-0.7
FOSV	**Fossato di Vic**	**0.61**	**327**	P	Pg	03 43 02.2	+0.3
FOSV				S	Sb	03 43 11.9	-0.1
FOSV				AML	AML		
	comp=N,1132μm,0.3s						
FOSV				AML	AML		
	comp=E,580μm,0.2s						
FOSV				AML	AML		
	comp=N,1134μm,0.3s						
PP3	**Marolino**	**0.66**	**26**	P	Pb	03 43 04.4	+0.4
T0110	**Collepietro**	**0.69**	**143**	P	Pg	03 43 04.0	+0.4
MURB	**Monte Urbino**	**0.70**	**313**	P	Pg	03 43 04.1	+0.5
SSFR	**Montelago di S**	**0.72**	**334**	P	Pg	03 43 04.4	+0.2
SSFR				AML	AML		
	comp=E,1380μm,0.3s						
SSFR				AML	AML		
	comp=N,1125μm,0.2s						
SSFR				AML	AML		
	comp=N,848μm,0.2s						
SSFR				AML	AML		
	comp=E,1195μm,0.2s						
ARVD	**Arcevia**	**0.74**	**344**	P	Pg	03 43 04.6	+0.2
ATFO	**Monte Foce - G**	**0.75**	**321**	P	Pg	03 43 04.9	+0.3
FRON	**Frontone**	**0.82**	**334**	P	Pg	03 43 05.9	0.0
MGAB	**Montegabbione**	**0.82**	**279**	P	Pb	03 43 07.0	+0.2
MPAG	**Monte Paganucc**	**0.91**	**338**	P	Pg	03 43 08.0	+0.3
MPAG				AML	AML		
	comp=E,980μm,1.1s						
MPAG				AML	AML		
	comp=N,976μm,1.6s						
NARO	**Abbazia di Nar**	**0.95**	**331**	P	Pg	03 43 08.1	-0.2
FSSB	**Fossombrone**	**0.96**	**341**	P	Pg	03 43 08.9	+0.3
FSSB				AML	AML		
	comp=E,731μm,0.4s						
FSSB				AML	AML		
	comp=N,1025μm,0.3s						
FSSB				AML	AML		
	comp=E,730μm,0.4s						

ROM 24 03:43:44.8±0.1, 42.713N±0.005×13.219E±0.01, h11km, ML2.6/3, 1C, Error ellipse: s-maj=1.1km s-min=0.3km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**336**	⇑P	Pg	03 43 48.5	+0.5
NRCA				S	Sg	03 43 50.9	+0.6
NRCA				AML	AML		
	comp=E,17950μm,0.2s						
NRCA				AML	AML		
	comp=N,14200μm,0.2s						
NRCA				AML	AML		
	comp=E,19700μm,0.2s						
NRCA				AML	AML		
	comp=N,15200μm,0.1s						
NRCA				AML	AML		
	comp=N,15550μm,1.3s						
NRCA				AML	AML		
	comp=E,18000μm,0.2s						
NRCA				AML	AML		
	comp=N,14400μm,1.3s						
RM33	**Pellescritta (**	**0.20**	**175**	P	Pb	03 43 50.0	-0.7
RM33				S	Sg	03 43 53.7	+1.6
RM33				AML	AML		
	comp=E,1610μm,0.2s						
RM33				AML	AML		
	comp=N,1905μm,0.2s						
RM33				AML	AML		
	comp=N,1910μm,0.2s						
RM33				AML	AML		
	comp=N,1950μm,0.2s						
RM33				AML	AML		
	comp=E,1580μm,0.2s						
CAMP	**Campotosto**	**0.24**	**137**	P	Pg	03 43 50.1	+0.4
CAMP				S	Sg	03 43 54.0	+0.8
FEMA	**Monte Fema**	**0.27**	**338**	P	Pg	03 43 50.8	+0.5
FEMA				S	Sg	03 43 55.1	+1.0
TERO	**Teramo**	**0.32**	**106**	P	Pg	03 43 51.4	+0.2
TERO				S	Sg	03 43 56.1	+0.7
FDMO	**Fiordimonte**	**0.33**	**347**	P	Pg	03 43 51.7	+0.2
FDMO				S	Sg	03 43 57.0	+1.1
FDMO				AML	AML		
	comp=N,615μm,0.8s						
FDMO				AML	AML		
	comp=E,586μm,0.2s						
CESI	**CESI - Serrava**	**0.36**	**324**	P	Pg	03 43 52.4	+0.4
CESI				S	Sb	03 43 58.3	-0.7
GUMA	**Gualdo di Mace**	**0.37**	**17**	P	Pg	03 43 52.5	+0.4
GUMA				S	Sb	03 43 58.5	-0.7
OFFI	**Offida**	**0.43**	**58**	P	Pb	03 43 54.1	-0.2
TRTR	**Tortoreto Alta**	**0.54**	**80**	P	Pb	03 43 56.3	0.0
VCEL	**Villa Celiera**	**0.58**	**123**	P	Pg	03 43 56.4	+0.3

*IDC **24** 03:44:43.5±3.0, 46.38N×146.99E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=80.8km s-min=27.6km az=2.0*
*SKHL **24** 03:44:47.6±0.0, 44.10N×148.40E, h55km±4km, mb4.8/2*
*JMA **24** 03:44:49.5±0.4, 44°N±2°×14°8E±°, h106km, MV3.7/25, SE OFF ETOROFU*

ISC 24 03:44:46.0±1.6, 44.4N±0.1×148.1E±0.2, h132km±9km, n22, σ18 87/31, mb4.0/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.89**	**350**	*i* P	**Pn**	**03 45 08.2**	**+0.2**
KUR				AMB	AMB	03 45 08.8	
	470nm,0.4s						
KUR				*e*S	**Sn**	**03 45 22.4**	**-2.3**
KUR				A	A	03 45 24.3	
	370nm,0.4s						
KUR				A	A	03 45 24.3	
	230nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.64**	**260**	*e*P	**Pn**	**03 45 17.0**	**+1.4**
YUK				AMB	AMB	03 45 17.3	
	290nm,0.4s						
YUK				*e*S	**Sn**	**03 45 37.6**	**-0.7**
YUK				A	A	03 45 39.5	
	220nm,0.4s						
YUK				A	A	03 45 39.5	
	450nm,0.4s						
NEM2	**Nemuro 2**	**1.97**	**241**	*e*P	**Pn**	**03 45 20.9**	**+1.4**
NEM2				*e*S	**Sn**	**03 45 44.5**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.98**	**241**	*i* P	**Pn**	**03 45 20.9**	**+1.3**
NMR				*e*S	**Sn**	**03 45 44.5**	**-0.9**
JRA	**Rausu**	**2.18**	**260**	*e*P	**Pn**	**03 45 23.4**	**+1.2**
JRA				*e*S	**Sn**	**03 45 49.8**	**-0.1**
JNSB	**Nemuroshibetsu**	**2.30**	**256**	*e*P	**Pn**	**03 45 25.4**	**+1.7**
JNSB				*e*S	**Sn**	**03 45 53.4**	**+0.8**
JKHN	**Kushirohamanak**	**2.48**	**240**	*e*P	**Pn**	**03 45 27.5**	**+1.6**
JKHN				*e*S	**Sn**	**03 45 56.1**	**-0.4**
JNK	**Nakash**	**2.56**	**254**	*e*P	**Pn**	**03 45 28.4**	**+1.5**
JAK	**Akkeshi**	**2.81**	**242**	*e*P	**Pn**	**03 45 31.5**	**+1.4**
JAK				*e*S	**Sn**	**03 46 03.4**	**-0.9**
JAR	**Ashorobuto**	**3.30**	**253**	*e*P	**Pn**	**03 45 38.6**	**+2.0**
JAR				*e*S	**Sn**	**03 46 16.1**	**+0.5**
JCH	**Churui**	**3.86**	**245**	*e*P	**Pn**	**03 45 45.2**	**+1.4**
JCH				*e*S	**Sn**	**03 46 26.4**	**-2.3**
JNBK	**Urakawa-nobuka**	**4.42**	**244**	*e*P	**Pn**	**03 45 52.8**	**+1.6**
JNBK				*e*S	**Sn**	**03 46 39.5**	**-2.4**
JOT	**Ohata**	**5.97**	**243**	*e*S	**Sn**	**03 47 14.6**	**-4.6**
JANG	**Nango**	**6.29**	**233**	*e*S	**Sn**	**03 47 22.5**	**-4.5**
MKAR	**Makanchi Array**	**44.91**	**297**	P	**P**	**03 52 47.2**	**-0.1**
	1.6nm,0.7s,baz=78,slow=9.1,SNR=10						
	1.6nm,0.7s						
INK	**Inuvik**	**45.53**	**31**	P	**P**	**03 52 53.9**	**+2.0**
	1.6nm,0.4s,baz=298,slow=8.6,SNR=32						
	1.6nm,0.4s						
ARCES	**ARCESS Array B**	**58.92**	**340**	P	**P**	**03 54 29.2**	**-1.4**
	6.0nm,1.1s,baz=48,slow=9.0,SNR=5.9						
	6.0nm,1.1s						
FINES	**FINESS Array B**	**64.64**	**333**	P	**P**	**03 55 07.8**	**-1.2**
	2.3nm,0.5s,baz=42,slow=6.4,SNR=16						
	2.3nm,0.5s						
NVAR	**Mina Array Bea**	**66.68**	**59**	P	P	03 55 33.9	+11
	0.1nm,0.3s,baz=293,slow=5.8,SNR=2.2						
	0.1nm,0.3s						
NOA	**NORSAR Array B**	**69.28**	**339**	P	**P**	**03 55 38.4**	**-0.1**
	0.1nm,0.3s,baz=31,slow=6.7,SNR=6.1						
	0.1nm,0.3s						
HFS	**Hagfors**	**69.39**	**338**	P	**P**	**03 55 38.6**	**-0.5**
	0.9nm,0.3s,baz=18,slow=5.2,SNR=15						
	0.9nm,0.3s						
TXAR	**Lajitas Array**	**81.75**	**57**	P	P	03 57 01.6	+12
	0.1nm,0.6s,baz=335,slow=4.1,SNR=1.7						
	0.1nm,0.6s						

ROM 24 03:44:47.9±0.1, 42.770N±0.006×13.12E±0.02, h11km, ML2.1/5, 1C, Error ellipse: s-maj=1.4km s-min=0.3km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**357**	P	Pg	03 44 50.8	+0.4
NRCA				S	Sg	03 44 52.0	-0.1
FEMA	**Monte Fema**	**0.20**	**345**	P	Pg	03 44 52.9	+0.7
FEMA				S	Sg	03 44 55.8	+0.5
FDMO	**Fiordimonte**	**0.27**	**355**	⇑P	Pg	03 44 53.9	+0.5
FDMO				S	Sg	03 44 57.9	+0.7
FDMO				AML	AML		
	comp=E,462μm,0.8s						
FDMO				AML	AML		
	comp=N,544μm,0.2s						
FDMO				AML	AML		
	comp=E,3545μm,0.2s						

FDMO				AML	AML		
	comp=N,5325µm,1.2s						
FDMO				AML	AML		
	comp=N,544µm,0.2s						
FDMO				AML	AML		
	comp=E,367µm,0.4s						
RM33	**Pellescritta (**	**0.27**	**165**	P	Pg	03 44 53.8	+0.2
RM33				S	Sg	03 44 58.2	+1.0
RM33				AML	AML		
	comp=E,1435µm,0.3s						
RM33				AML	AML		
	comp=N,977µm,0.3s						
RM33				AML	AML		
	comp=E,1430µm,0.3s						
RM33				AML	AML		
	comp=N,957µm,0.3s						
RM33				AML	AML		
	comp=E,4450µm,0.2s						
RM33				AML	AML		
	comp=N,4310µm,0.7s						
RM33				AML	AML		
	comp=E,4380µm,0.2s						
RM33				AML	AML		
	comp=N,4250µm,0.7s						
RM33				AML	AML		
	comp=E,814µm,0.3s						
RM33				AML	AML		
	comp=E,817µm,1.6s						
RM33				AML	AML		
	comp=N,718µm,0.4s						
RM33				AML	AML		
	comp=N,755µm,0.4s						
CESI	**CESI - Serrava**	**0.28**	**326**	P	Pb	03 44 54.5	-0.6
CESI				S	Sg	03 44 58.6	+0.9
CESI				AML	AML		
	comp=E,561µm,0.6s						
CESI				AML	AML		
	comp=N,708µm,0.4s						
CESI				AML	AML		
	comp=E,3405µm,0.2s						
CESI				AML	AML		
	comp=N,4485µm,1.6s						
CESI				AML	AML		
	comp=N,4480µm,1.6s						
CESI				AML	AML		
	comp=E,561µm,0.6s						
CAMP	**Campotosto**	**0.32**	**138**	P	Pg	03 44 54.6	+0.3
CAMP				S	Sg	03 44 59.5	+0.8
ARRO	**Arrone**	**0.32**	**234**	P	Pb	03 44 55.6	-0.1
ARRO				AML	AML		
	comp=E,232µm,0.2s						
ARRO				AML	AML		
	comp=N,290µm,0.2s						
ARRO				AML	AML		
	comp=E,2135µm,0.7s						
ARRO				AML	AML		
	comp=N,2610µm,0.2s						
ARRO				AML	AML		
	comp=E,231µm,0.2s						
ARRO				AML	AML		
	comp=N,290µm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**28**	P	Pb	03 44 55.5	-0.4
GUMA				S	Sb	03 45 00.8	-0.5
TERO	**Teramo**	**0.39**	**112**	P	Pg	03 44 56.0	+0.4
TERO				AML	AML		
	comp=E,672µm,0.3s						
TERO				AML	AML		
	comp=N,922µm,0.6s						
TERO				AML	AML		
	comp=E,2810µm,0.7s						
TERO				AML	AML		
	comp=N,2580µm,0.6s						
TERO				AML	AML		
	comp=E,3045µm,0.7s						
TERO				AML	AML		
	comp=N,2770µm,0.6s						
TERO				AML	AML		
	comp=E,393µm,0.5s						
TERO				AML	AML		
	comp=N,504µm,0.1s						
TERO				AML	AML		
	comp=N,429µm,0.1s						
TERO				AML	AML		
	comp=E,346µm,0.5s						

ROM 24 03:45:14.6±0.1, 42°.740N±0°.004×13°.253E±0°.009, h9km, ML2.4/6, Error ellipse: s-maj=0.8km s-min=0.3km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.14**	**313**	P	Pg	03 45 18.3	+0.6
NRCA				S	Sg	03 45 20.3	+0.5
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,9597µm,0.1s						
RM33	**Pellescritta (**	**0.23**	**187**	P	Pg	03 45 20.3	+1.0
RM33				S	Sg	03 45 24.1	+1.6
CAMP	**Campotosto**	**0.23**	**150**	P	Pg	03 45 20.4	+1.0
CAMP				S	Sg	03 45 24.0	+1.4
FDMO	**Fiordimonte**	**0.32**	**338**	P	Pg	03 45 21.5	+0.6
FDMO				S	Sb	03 45 26.6	-1.2
FDMO				AML	AML		
	comp=E,2010µm,0.6s						
FDMO				AML	AML		
	comp=N,2480µm,0.2s						
FDMO				AML	AML		
	comp=E,3545µm,0.2s						
FDMO				AML	AML		
	comp=N,5325µm,1.2s						
FDMO				AML	AML		
	comp=N,738µm,0.2s						
FDMO				AML	AML		
	comp=E,604µm,0.4s						
GUMA	**Gualdo di Mace**	**0.33**	**11**	P	Pb	03 45 22.0	-0.7
GUMA				S	Sb	03 45 28.0	-0.1
GUMA				AML	AML		
	comp=E,9450µm,0.3s						
GUMA				AML	AML		
	comp=N,5005µm,1.2s						
GUMA				AML	AML		
	comp=E,11400µm,0.3s						
GUMA				AML	AML		
	comp=N,5045µm,0.3s						
GUMA				AML	AML		
	comp=E,27050µm,0.2s						
GUMA				AML	AML		
	comp=N,17300µm,0.2s						
GUMA				AML	AML		
	comp=E,28950µm,0.3s						
GUMA				AML	AML		
	comp=N,23550µm,1.0s						
GUMA				AML	AML		
	comp=E,11443µm,0.3s						
GUMA				AML	AML		
	comp=N,5045µm,0.3s						
CESI	**CESI - Serrava**	**0.37**	**316**	P	Pg	03 45 22.3	+0.5
CESI				S	Sb	03 45 28.1	-1.1
CESI				AML	AML		
	comp=E,3405µm,0.2s						
CESI				AML	AML		
	comp=N,4485µm,1.6s						
CESI				AML	AML		
	comp=N,1264µm,0.4s						
CESI				AML	AML		
	comp=E,778µm,0.2s						
GIGS	**Gran Sasso**	**0.37**	**141**	P	Pg	03 45 22.4	+0.5
GIGS				S	Sb	03 45 28.3	-1.1
ARRO	**Arrone**	**0.39**	**246**	P	Pb	03 45 23.8	+0.1
ARRO				S	Sb	03 45 28.9	-0.9
ARRO				END			
FIAM	**Fiamignano**	**0.48**	**192**	P	Pg	03 45 24.2	+0.3
FIAM				S	Sb	03 45 31.7	-0.8
CESX	**Cesi**	**0.51**	**256**	P	Pg	03 45 24.6	+0.1
CESX				S	Sb	03 45 33.2	-0.1
ASSB	**Assisi San Ben**	**0.53**	**305**	P	Pg	03 45 25.3	+0.4
ASSB				AML	AML		
	comp=E,2290µm,0.2s						
ASSB				AML	AML		
	comp=N,906µm,0.5s						
ASSB				AML	AML		
	comp=E,2540µm,1.3s						
ASSB				AML	AML		
	comp=N,2345µm,0.4s						
ASSB				AML	AML		
	comp=N,323µm,0.1s						
SNTG	**Esanatoglia**	**0.56**	**336**	P	Pg	03 45 25.7	+0.2
SNTG				AML	AML		
	comp=E,1435µm,1.3s						
SNTG				AML	AML		
	comp=N,926µm,1.0s						
SNTG				AML	AML		
	comp=E,123µm,0.3s						
SNTG				AML	AML		
	comp=N,128µm,0.2s						
EL6	**Elcito**	**0.60**	**349**	P	Pg	03 45 26.1	-0.1
EL6				S	Sb	03 45 36.1	+0.2
ATCC	**AVT- Casa Cast**	**0.63**	**315**	AML	AML		
	comp=N,538µm,0.6s						
ATCC				AML	AML		
	comp=E,660µm,0.9s						
ATCC				AML	AML		
	comp=E,1925µm,0.7s						
ATCC				AML	AML		
	comp=N,1379µm,0.5s						
FOSV	**Fossato di Vic**	**0.66**	**327**	P	Pg	03 45 27.7	+0.3
FOSV				S	Sb	03 45 37.7	0.0
MURB	**Monte Urbino**	**0.75**	**315**	AML	AML		
	comp=E,2600µm,0.3s						
MURB				AML	AML		
	comp=E,1064µm,0.6s						
MURB				AML	AML		
	comp=N,1430µm,0.3s						
MURB				AML	AML		
	comp=N,2310µm,1.2s						
MURB				AML	AML		
	comp=E,2710µm,0.3s						
MURB				AML	AML		
	comp=N,2450µm,1.2s						
PTRJ	**Pietraroja**	**1.67**	**145**	P	Pn	03 45 40.9	-3.2
PTRJ				AML	AML		
	comp=E,1650µm,0.4s						
PTRJ				AML	AML		
	comp=N,2260µm,0.7s						
PTRJ				AML	AML		
	comp=E,1665µm,1.1s						
PTRJ				AML	AML		
	comp=N,2805µm,0.7s						

PRU ***24*** *03:45:42.8±0.0, 42°.75N×13°.83E, h0km*
ROM ***24*** *03:45:43.0±0.1, 42°.728N±0°.004×13°.153E±0°.009, h8km, ML2.8/30, Error ellipse: s-maj=0.7km s-min=0.1km az=253.0*
ISC 24 03:45:42.5±0.9, 42°.71N±0°.02×13°.17E±0°.02, h15km±6km, n70, σ1s50/82, 6C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**342**	P	**Pg**	**03 45 45.8**	**-0.4**
NRCA				S	**Sg**	**03 45 48.4**	**-0.2**
RM33	**Pellescritta (**	**0.21**	**170**	P	**Pb**	**03 45 48.6**	**+0.5**
RM33				S	**Sb**	**03 45 51.7**	**-0.1**
RM33				AML	AML		
	comp=E,4455µm,0.2s						
RM33				AML	AML		
	comp=N,4310µm,0.7s						
RM33				AML	AML		
	comp=E,4450µm,0.2s						
RM33				AML	AML		
	comp=E,4455µm,0.2s						
RM33				AML	AML		
	comp=E,4380µm,0.2s						
RM33				AML	AML		
	comp=N,4305µm,0.7s						
RM33				AML	AML		
	comp=N,4250µm,0.7s						
CAMP	**Campotosto**	**0.25**	**135**	P	**Pb**	**03 45 49.1**	**+0.3**
CAMP				S	**Sb**	**03 45 53.5**	**+0.4**
CAMP				AML	AML		
	comp=N,1830µm,1.2s						
CAMP				AML	AML		
	comp=N,1835µm,1.2s						
CAMP				AML	AML		
	comp=E,2030µm,1.2s						
FEMA	**Monte Fema**	**0.26**	**341**	P	**Pb**	**03 45 48.6**	**-0.4**
FEMA				S	**Sg**	**03 45 52.5**	**+0.3**
ARRO	**Arrone**	**0.33**	**246**	P	**Pb**	**03 45 50.3**	**+0.3**
ARRO				S	**Sb**	**03 45 55.6**	**+0.5**
ARRO				AML	AML		
	comp=E,2140µm,0.7s						
ARRO				AML	AML		
	comp=N,2615µm,0.2s						
ARRO				AML	AML		
	comp=E,2135µm,0.7s						
ARRO				AML	AML		
	comp=N,2610µm,0.2s						
FDMO	**Fiordimonte**	**0.33**	**350**	P	**Pg**	**03 45 49.5**	**+0.2**
FDMO				S	**Sb**	**03 45 54.9**	**-0.4**
FDMO				AML	AML		
	comp=E,3545µm,0.2s						
FDMO				AML	AML		
	comp=N,5325µm,1.2s						
TERO	**Teramo**	**0.34**	**106**	P	**Pb**	**03 45 50.5**	**+0.2**
TERO				S	**Sb**	**03 45 55.7**	**+0.3**
TERO				AML	AML		
	comp=E,2810µm,0.7s						
TERO				AML	AML		
	comp=E,3045µm,0.7s						
TERO				AML	AML		
	comp=N,2770µm,0.6s						
TERO				AML	AML		
	comp=E,2815µm,0.7s						
TERO				AML	AML		
	comp=N,2580µm,0.6s						
CESI	**CESI - Serrava**	**0.35**	**327**	P	**Pb**	**03 45 50.2**	**-0.3**
CESI				S	**Sb**	**03 45 55.4**	**-0.5**
CESI				AML	AML		
	comp=N,4480µm,1.6s						
CESI				AML	AML		
	comp=N,4485µm,1.6s						
CESI				AML	AML		
	comp=E,3405µm,0.2s						
GUMA	**Gualdo di Mace**	**0.37**	**19**	P	**Pb**	**03 45 50.9**	**+0.1**
GUMA				S	**Sb**	**03 45 56.7**	**+0.3**
GUMA				AML	AML		
	comp=E,27100µm,0.2s						
GUMA				AML	AML		
	comp=N,23550µm,1.0s						
GUMA				AML	AML		
	comp=E,27050µm,0.2s						
GUMA				AML	AML		
	comp=N,17300µm,0.2s						
GUMA				AML	AML		
	comp=E,28950µm,0.3s						
CSP1	**Cessapalombo**	**0.38**	**4**	P	**Pg**	**03 45 50.5**	**+0.3**
CSP1				S	**Sb**	**03 45 56.4**	**-0.4**
GIGS	**Gran Sasso**	**0.40**	**131**	P	**Pb**	**03 45 51.7**	**+0.4**
GIGS				S	**Sb**	**03 45 57.8**	**+0.5**
GIGS				AML	AML		
	comp=N,378µm,1.5s						
GIGS				AML	AML		
	comp=E,496µm,0.8s						
GIGS				AML	AML		
	comp=N,378µm,1.5s						
AQU	**L'Aquila**	**0.40**	**154**	P	**Pb**	**03 45 52.1**	**+0.8**
AQU				S	**Sb**	**03 45 58.6**	**+1.4**
AQU				AML	AML		
	comp=E,1029µm,0.6s						
AQU				AML	AML		
	comp=N,1082µm,1.6s						
AQU				AML	AML		
	comp=N,1110µm,1.6s						
AQU				AML	AML		
	comp=E,1018µm,0.6s						
AQU				AML	AML		
	comp=N,1082µm,1.6s						
AQU				AML	AML		
	comp=E,1027µm,0.6s						
OFFI	**Offida**	**0.44**	**60**	P	**Pb**	**03 45 52.7**	**+0.7**
OFFI				S	**Sn**	**03 46 00.8**	**-1.3**
OFFI				AML	AML		
	comp=E,11350µm,0.5s						
OFFI				AML	AML		
	comp=N,10770µm,0.4s						
CESX	**Cesi**	**0.45**	**257**	P	**Pb**	**03 45 52.0**	**-0.1**
CESX				AML	AML		
	comp=E,1850µm,0.5s						
CESX				AML	AML		
	comp=N,1490µm,0.3s						
FIAM	**Fiamignano**	**0.45**	**185**	P	**Pb**	**03 45 52.4**	**+0.3**
FIAM				S	**Sb**	**03 45 59.6**	**+0.9**
FIAM				AML	AML		
	comp=N,1080µm,0.8s						
FIAM				AML	AML		
	comp=E,1885µm,1.5s						
SEF1	**Sefro**	**0.46**	**340**	P	**Pb**	**03 45 52.1**	**-0.2**
ASSB	**Assisi San Ben**	**0.50**	**312**	P	**Pb**	**03 45 53.1**	**+0.1**
SSM1	**San Severino M**	**0.52**	**1**	P	**Pb**	**03 45 52.9**	**-0.3**
SSM1				S	**Sb**	**03 46 00.6**	**0.0**
FAGN	**Fagnano**	**0.54**	**145**	P	**Pn**	**03 45 55.1**	**-0.7**
FAGN				AML	AML		
	comp=E,1940µm,0.4s						
FAGN				AML	AML		
	comp=E,1945µm,0.4s						
FAGN				AML	AML		
	comp=N,1605µm,0.6s						
TRTR	**Tortoreto Alta**	**0.56**	**80**	P	**Pn**	**03 45 55.4**	**-0.5**
TRTR				AML	AML		
	comp=N,4940µm,1.2s						
TRTR				AML	AML		
	comp=E,9500µm,0.4s						
SNTG	**Esanatoglia**	**0.57**	**343**	P	**Pb**	**03 45 54.0**	**-0.2**
SNTG				S	**Sb**	**03 46 02.3**	**+0.2**
SNTG				AML	AML		
	comp=E,1435µm,1.3s						
SNTG				AML	AML		
	comp=N,926µm,1.0s						
ATCC	**AVT- Casa Cast**	**0.61**	**321**	AML	AML		
	comp=E,1925µm,0.7s						
ATCC				AML	AML		
	comp=N,1380µm,0.5s						
ATCC				AML	AML		
	comp=N,1378µm,0.5s						
EL6	**Elcito**	**0.62**	**356**	P	**Pb**	**03 45 54.8**	**-0.3**
EL6				S	**Sb**	**03 46 04.1**	**+0.5**
FOSV	**Fossato di Vic**	**0.65**	**333**	P	**Pb**	**03 45 55.9**	**+0.2**
T0110	**Collepietro**	**0.67**	**137**	P	**Pb**	**03 45 55.9**	**+0.1**
T0110				AML	AML		
	comp=N,1003µm,0.5s						
T0110				AML	AML		
	comp=N,999µm,0.5s						
T0110				AML	AML		
	comp=E,1450µm,0.6s						
SRES	**S.Oreste - Sor**	**0.68**	**226**	P	**Pn**	**03 45 57.2**	**-0.4**
SRES				AML	AML		
	comp=E,354µm,0.5s						
SRES				AML	AML		
	comp=N,319µm,0.5s						
MURB	**Monte Urbino**	**0.72**	**320**	AML	AML		
	comp=N,2310µm,1.2s						
MURB				AML	AML		
	comp=E,2600µm,0.3s						
MURB				AML	AML		
	comp=N,2450µm,1.2s						
MURB				AML	AML		
	comp=E,2710µm,0.3s						
MURB				AML	AML		
	comp=N,2455µm,1.2s						
PP3	**Marolino**	**0.74**	**26**	P	**Pn**	**03 45 58.0**	**-0.4**
MTCE	**Montecelio**	**0.76**	**205**	P	**Pb**	**03 45 57.9**	**+0.5**
MTCE				AML	AML		
	comp=N,285µm,1.3s						
MTCE				AML	AML		
	comp=E,544µm,0.6s						
MTCE				AML	AML		
	comp=N,286µm,1.3s						
CERT	**Cerreto**	**0.78**	**190**	P	**Pb**	**03 45 58.4**	**+0.6**
CERT				AML	AML		
	comp=E,581µm,0.6s						
CERT				AML	AML		
	comp=N,450µm,1.0s						
ARVD	**Arcevia**	**0.80**	**348**	P	**Pn**	**03 45 58.6**	**-0.7**
MGAB	**Montegabbione**	**0.80**	**285**	P	**Pn**	**03 45 58.8**	**-0.5**
MGAB				AML	AML		
	comp=N,1430µm,0.5s						
MGAB				AML	AML		
	comp=E,1310µm,1.5s						
MGAB				AML	AML		
	comp=N,1395µm,0.5s						
MGAB				AML	AML		
	comp=E,1525µm,0.7s						
INTR	**Introdacqua**	**0.89**	**142**	P	**Pb**	**03 45 59.4**	**-0.2**
INTR				AML	AML		
	comp=E,384µm,1.0s						
INTR				AML	AML		
	comp=N,650µm,0.6s						
AOI	**Ancona**	**0.90**	**21**	P	**Pn**	**03 46 01.1**	**+0.5**
COR1	**Corinaldo**	**0.93**	**352**	P	**Pn**	**03 46 01.4**	**+0.4**
SACS	**San Casciano d**	**0.94**	**279**	P	**Pg**	**03 46 00.8**	**+0.2**
SACS				AML	AML		
	comp=N,528µm,1.1s						
SACS				AML	AML		
	comp=E,660µm,0.4s						
SACS				AML	AML		
	comp=E,1330µm,0.4s						
SACS				AML	AML		
	comp=N,546µm,1.1s						
SACS				AML	AML		
	comp=N,528µm,1.1s						
LPEL	**Lama dei Pelig**	**1.00**	**131**	AML	AML		
	comp=N,298µm,0.9s						
LPEL				AML	AML		
	comp=E,358µm,0.4s						
CAFI	**Castiglion Fio**	**1.07**	**305**	P	**Pg**	**03 46 03.6**	**+0.4**
CAFI				AML	AML		
	comp=E,375µm,0.5s						
CAFI				AML	AML		
	comp=N,296µm,0.8s						
CAFI				AML	AML		
	comp=E,374µm,0.5s						
GIUL	**Giuliano Di Ro**	**1.16**	**177**	AML	AML		
	comp=N,242µm,0.8s						
GIUL				AML	AML		
	comp=E,146µm,0.7s						
ASQU	**Asqua**	**1.48**	**318**	AML	AML		
	comp=N,136µm,1.5s						
ASQU				AML	AML		
	comp=E,131µm,0.6s						
TRIF	**Trifonti**	**1.71**	**284**	⇑P	**Pn**	**03 46 10.0**	**-1.8**
TRIF				AML	AML		
	comp=E,57µm,0.5s						
TRIF				AML	AML		
	comp=N,71µm,0.6s						
ZCCA	**Zocca**	**2.28**	**317**	S	**Sn**	**03 46 47.0**	**-0.6**
ROVR	**Rover Verones**	**3.30**	**334**	⇑P	**Pb**	**03 46 37.1**	**-3.6**
CGRP	**Cima Grappa**	**3.31**	**343**	⇑P	**Pn**	**03 46 36.5**	**+2.5**
SCHR	**S. Chirico Rap**	**3.33**	**138**	P	**Pn**	**03 46 33.6**	**-0.5**
SCHR				AML	AML		
	comp=E,44µm,1.5s						
SCHR				AML	AML		
	comp=N,52µm,1.6s						
MAGA	**Magasa**	**3.56**	**330**	⇓P	**Pn**	**03 46 39.8**	**+2.5**
MAGA				AML	AML		
	comp=N,79µm,0.4s						
MAGA				AML	AML		
	comp=E,107µm,1.0s						
ORI	**Oriolo Calabro**	**3.62**	**136**	⇑P	**Pg**	**03 46 50.8**	**-1.1**
ZAG	**Zagreb**	**3.71**	**32**	⇑P	**Pn**	**03 46 39.1**	**-0.2**
QLNO	**Quiliano**	**3.86**	**296**	P	**Pn**	**03 46 43.4**	**+2.1**
OBKA	**Obir**	**3.92**	**14**	*e*Pn	**Pn**	**03 46 44.7**	**+2.5**
MYKA	**Terra Mystica**	**3.93**	**5**	*e*Pn	**Pn**	**03 46 45.3**	**+3.0**
	comp=E,2.4nm,0.3s						
KOSI	**Kohlern**	**3.96**	**342**	⇓P	**Pn**	**03 46 45.7**	**+2.8**
ABTA	**Abfaltersbach**	**4.06**	**354**	*e*Pn	**Pn**	**03 46 46.4**	**+2.2**
	comp=E,3.9nm,0.4s						
SOKA	**Soboth**	**4.18**	**18**	*e*Pn	**Pn**	**03 46 48.7**	**+2.9**
	comp=E,0.7nm,0.3s						
KBA	**Koelnbreinsper**	**4.37**	**2**	*e*Pn	**Pn**	**03 46 51.0**	**+2.6**
	comp=E,2.9nm,0.3s						
ROSI	**Rosskopf**	**4.39**	**344**	⇑P	**Pn**	**03 46 52.2**	**+3.4**
SERS	**Sersale**	**4.54**	**143**	P	**Pn**	**03 46 47.9**	**-2.9**
FETA	**Feichten**	**4.64**	**339**	*e*Pn	**Pn**	**03 46 55.3**	**+3.1**
	comp=E,0.4nm,0.3s						
WTTA	**Wattenberg**	**4.68**	**347**	*e*Pn	**Pn**	**03 46 55.0**	**+2.3**
	comp=E,1.5nm,0.5s						
SQTA	**Sankt Quirin**	**4.72**	**344**	*e*Pn	**Pn**	**03 46 56.8**	**+3.6**
	comp=E,2.2nm,0.4s						
WATA	**Walderalm**	**4.76**	**347**	*e*Pn	**Pn**	**03 46 57.7**	**+3.9**
	comp=E,1.2nm,0.2s						
ARSA	**Arzberg**	**4.83**	**19**	*e*Pn	**Pn**	**03 46 55.9**	**+1.2**
	comp=E,1.1nm,0.5s						
MOTA	**Moosalm**	**4.86**	**343**	*e*Pn	**Pn**	**03 46 57.1**	**+1.9**
	comp=E,1.4nm,0.4s						

BIOA	**Bad Ischl, Aus**	**4.99**	**4**	*e*Pn	**Pn**	**03 46 59.3**	**+2.5**
	comp=E,1.4nm,0.2s						
RETA	**Reutte**	**5.07**	**341**	*e*Pn	**Pn**	**03 46 59.9**	**+1.9**
	comp=E,0.2nm,0.2s						
DAVA	**Damuels**	**5.13**	**334**	*e*Pn	**Pn**	**03 46 59.8**	**+0.9**
	comp=E,3.8nm,0.6s						
MOA	**Molln**	**5.19**	**8**	*e*Pn	**Pn**	**03 47 00.9**	**+1.2**
	comp=E,0.5nm,0.3s						
RONA	**Rosalia, Austr**	**5.45**	**23**	*e*Pn	**Pn**	**03 47 04.2**	**+0.9**
	comp=E,1.2nm,0.5s						
CONA	**Conrad Observa**	**5.55**	**19**	*e*Pn	**Pn**	**03 47 06.3**	**+1.7**
	comp=E,0.6nm,0.3s						
KHC	**Kasperske Hory**	**6.42**	**2**	*e*SN	**Sn**	**03 48 28.0**	**-1.6**

ROM 24 03:46:23.5±0.1, 42°.780N±0°.005×13°.147E±0°.010, h8km, ML2.4/5, Error ellipse: s-maj=0.9km s-min=0.4km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**336**	P	Pg	03 46 25.8	+0.4
NRCA				S	Sg	03 46 27.1	+0.2
NRCA				AML	AML		
	comp=N,35100μm,0.1s						
NRCA				AML	AML		
	comp=E,52700μm,0.1s						
NRCA				AML	AML		
	comp=N,35050μm,0.1s						
NRCA				AML	AML		
	comp=E,57950μm,0.2s						
NRCA				AML	AML		
	comp=N,37100μm,0.1s						
FEMA	**Monte Fema**	**0.20**	**339**	P	Pg	03 46 28.0	+0.4
FEMA				S	Sg	03 46 31.5	+1.1
FDMO	**Fiordimonte**	**0.26**	**350**	P	Pg	03 46 29.3	+0.6
FDMO				S	Sg	03 46 33.5	+1.3
FDMO				AML	AML		
	comp=E,1164μm,0.2s						
FDMO				AML	AML		
	comp=N,1425μm,0.2s						
RM33	**Pellescritta (**	**0.28**	**170**	P	Pb	03 46 30.3	-0.4
RM33				S	Sb	03 46 34.8	-0.7
CESI	**CESI - Serrava**	**0.29**	**322**	P	Pg	03 46 30.0	+0.7
CESI				S	Sb	03 46 34.5	-1.3
CESI				AML	AML		
	comp=E,1110μm,0.4s						
CESI				AML	AML		
	comp=N,1935μm,0.3s						
CESI				AML	AML		
	comp=E,1115μm,0.4s						
CAMP	**Campotosto**	**0.31**	**142**	P	Pg	03 46 30.3	+0.6
CAMP				S	Sg	03 46 35.2	+1.4
GUMA	**Gualdo di Mace**	**0.31**	**26**	P	Pg	03 46 30.5	+0.8
GUMA				S	Sb	03 46 35.8	-0.8
GUMA				AML	AML		
	comp=E,2809μm,0.5s						
GUMA				AML	AML		
	comp=N,1635μm,0.2s						
ARRO	**Arrone**	**0.35**	**235**	P	Pb	03 46 31.4	-0.5
ARRO				AML	AML		
	comp=N,624μm,0.2s						
TERO	**Teramo**	**0.37**	**115**	P	Pg	03 46 30.7	-0.1
TERO				S	Sg	03 46 36.8	+1.1
OFFI	**Offida**	**0.42**	**68**	P	Pb	03 46 33.0	-0.2
ASSB	**Assisi San Ben**	**0.44**	**306**	P	Pg	03 46 32.8	+0.7
ASSB				S	Sb	03 46 39.5	-0.9
CESX	**Cesi**	**0.45**	**248**	P	Pg	03 46 32.8	+0.5
GIGS	**Gran Sasso**	**0.45**	**137**	P	Pg	03 46 32.7	+0.4
GIGS				S	Sb	03 46 39.9	-0.8
GIGS				AML	AML		
	comp=N,125μm,0.1s						
AQU	**L'Aquila**	**0.47**	**156**	S	Sb	03 46 40.0	-1.0
EL6	**Elcito**	**0.55**	**357**	P	Pb	03 46 34.9	-0.5
EL6				S	Sb	03 46 43.3	-0.1
TRTR	**Tortoreto Alta**	**0.56**	**87**	P	Pb	03 46 35.9	+0.3
VCEL	**Villa Celiera**	**0.64**	**127**	P	Pb	03 46 36.5	-0.5
MURB	**Monte Urbino**	**0.66**	**317**	S	Sb	03 46 47.0	+0.2
ARVD	**Arcevia**	**0.73**	**348**	P	Pb	03 46 38.3	-0.2

ROM 24 03:47:04.5±0.1, 42°.834N±0°.006×13°.225E±0°.009, h15km±1km, ML2.3/3, Error ellipse: s-maj=0.9km s-min=0.1km az=45.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**270**	P	Pg	03 47 07.5	-0.2
NRCA				S	Sg	03 47 10.2	+0.5
NRCA				AML	AML		
	comp=E,23300μm,0.2s						
NRCA				AML	AML		
	comp=N,19350μm,0.4s						
NRCA				AML	AML		
	comp=N,18100μm,0.4s						
NRCA				AML	AML		
	comp=E,25150μm,0.1s						
NRCA				AML	AML		
	comp=N,19600μm,0.1s						
NRCA				AML	AML		
	comp=E,23250μm,0.2s						
FEMA	**Monte Fema**	**0.18**	**315**	P	Pg	03 47 09.1	+0.1
FEMA				S	Sg	03 47 12.3	+0.3
FDMO	**Fiordimonte**	**0.23**	**334**	P	Pg	03 47 09.7	+0.1
FDMO				S	Sg	03 47 13.5	+0.4
FDMO				AML	AML		
	comp=N,1425μm,0.2s						
FDMO				AML	AML		
	comp=E,1164μm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**19**	P	Pb	03 47 10.4	-0.2
GUMA				S	Sb	03 47 14.8	0.0
CSP1	**Cessapalombo**	**0.26**	**357**	P	Pg	03 47 10.5	+0.3
CSP1				S	Sg	03 47 14.5	+0.4
CESI	**CESI - Serrava**	**0.29**	**306**	P	Pg	03 47 11.1	+0.4
CESI				S	Sb	03 47 15.7	-0.4
CESI				AML	AML		
	comp=E,1135μm,0.6s						
CESI				AML	AML		
	comp=N,1375μm,0.2s						
CESI				AML	AML		
	comp=E,1140μm,0.6s						
CAMP	**Campotosto**	**0.33**	**155**	P	Pg	03 47 11.7	+0.3
CAMP				S	Sb	03 47 17.2	-0.1
OFFI	**Offida**	**0.35**	**73**	P	Pg	03 47 11.7	0.0
SEF1	**Sefro**	**0.37**	**327**	P	Pg	03 47 12.4	+0.3
SEF1				S	Sb	03 47 18.4	-0.1
SSM1	**San Severino M**	**0.40**	**355**	P	Pg	03 47 12.0	-0.5
ASSB	**Assisi San Ben**	**0.47**	**297**	P	Pg	03 47 13.9	+0.1
ASSB				S	Sb	03 47 21.2	0.0
SNTG	**Esanatoglia**	**0.47**	**334**	P	Pg	03 47 13.9	0.0
EL6	**Elcito**	**0.50**	**350**	P	Pb	03 47 14.9	-0.3
ATCC	**AVT- Casa Cast**	**0.55**	**310**	P	Pg	03 47 15.6	+0.2
FOSV	**Fossato di Vic**	**0.57**	**324**	P	Pg	03 47 15.9	+0.1
FOSV				AML	AML		
	comp=E,155μm,1.4s						
FOSV				AML	AML		
	comp=N,272μm,0.3s						

ROM 24 03:47:57.0±0.1, 42°.613N±0°.006×13°.257E±0°.010, h12km±2km, ML2.5/5, Error ellipse: s-maj=0.7km s-min=0.4km az=76.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.11**	**197**	P	Pg	03 48 00.3	+0.3
RM33				S	Sg	03 48 02.8	+0.6
RM33				AML	AML		
	comp=E,5465μm,0.6s						
RM33				AML	AML		
	comp=N,5200μm,0.2s						
RM33				AML	AML		
	comp=E,5465μm,0.6s						
RM33				AML	AML		
	comp=E,5360μm,0.6s						
RM33				AML	AML		
	comp=N,5270μm,0.1s						
CAMP	**Campotosto**	**0.14**	**124**	P	Pg	03 48 00.8	+0.4
CAMP				S	Sg	03 48 03.5	+0.7
NRCA	**Norcia**	**0.24**	**335**	P	Pb	03 48 02.9	-0.5
NRCA				S	Sg	03 48 06.0	+0.3
TERO	**Teramo**	**0.26**	**88**	P	Pg	03 48 02.4	0.0
TERO				S	Sg	03 48 06.5	+0.6
TERO				AML	AML		
	comp=E,1605μm,0.4s						
TERO				AML	AML		
	comp=N,1930μm,0.1s						
TERO				AML	AML		
	comp=N,2800μm,0.1s						
TERO				AML	AML		
	comp=E,2380μm,0.1s						
TERO				AML	AML		
	comp=N,3630μm,0.1s						
TERO				AML	AML		
	comp=E,1343μm,0.8s						
TERO				AML	AML		
	comp=E,1700μm,1.3s						
TERO				AML	AML		
	comp=N,1930μm,0.1s						
TERO				AML	AML		
	comp=N,1704μm,0.1s						
GIGS	**Gran Sasso**	**0.28**	**125**	P	Pg	03 48 03.0	+0.2
GIGS				S	Sg	03 48 07.7	+1.0
GIGS				AML	AML		
	comp=N,303μm,0.1s						
GIGS				AML	AML		
	comp=E,470μm,0.3s						
GIGS				AML	AML		
	comp=N,304μm,0.1s						
FIAM	**Fiamignano**	**0.36**	**197**	P	Pg	03 48 04.3	+0.1
FIAM				S	Sb	03 48 10.1	-0.9
FIAM				AML	AML		
	comp=E,676μm,0.3s						
FIAM				AML	AML		
	comp=N,458μm,0.4s						
FIAM				AML	AML		
	comp=E,666μm,0.3s						
FIAM				AML	AML		
	comp=N,253μm,2.1s						
OFFI	**Offida**	**0.45**	**44**	P	Pb	03 48 06.4	-0.5
GUMA	**Gualdo di Mace**	**0.45**	**7**	P	Pg	03 48 05.8	-0.2
GUMA				S	Sb	03 48 13.0	-0.8
VCEL	**Villa Celiera**	**0.48**	**117**	P	Pb	03 48 07.1	-0.4
VCEL				AML	AML		
	comp=E,864μm,0.9s						
VCEL				AML	AML		
	comp=N,1021μm,0.3s						
VCEL				AML	AML		
	comp=N,678μm,0.3s						
VCEL				AML	AML		
	comp=E,550μm,2.4s						
TRTR	**Tortoreto Alta**	**0.52**	**68**	P	Pb	03 48 08.1	0.0

ROM 24 03:48:25.4±0.1, 42°.627N±0°.006×13°.27E±0°.02, h11km, ML2.5/4, 1C, Error ellipse: s-maj=1.5km s-min=0.2km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**200**	P	Pg	03 48 28.9	+0.4
RM33				S	Sg	03 48 31.6	+0.8
RM33				AML	AML		
	comp=N,2955μm,1.6s						
RM33				AML	AML		
	comp=E,4010μm,0.3s						
RM33				AML	AML		
	comp=N,3010μm,1.6s						
RM33				AML	AML		
	comp=E,4085μm,0.3s						
CAMP	**Campotosto**	**0.14**	**132**	P	Pg	03 48 29.2	+0.4
CAMP				S	Sg	03 48 32.1	+1.0
NRCA	**Norcia**	**0.24**	**331**	P	Pg	03 48 31.0	+0.6
NRCA				S	Sg	03 48 34.9	+1.1
NRCA				AML	AML		
	comp=E,6728μm,0.2s						
TERO	**Teramo**	**0.24**	**91**	⇑P	Pg	03 48 30.6	+0.2
TERO				S	Sg	03 48 34.7	+0.8
TERO				AML	AML		
	comp=E,2380μm,0.1s						
TERO				AML	AML		
	comp=N,3630μm,0.1s						
GIGS	**Gran Sasso**	**0.28**	**129**	P	Pg	03 48 31.5	+0.3
GIGS				S	Sb	03 48 36.3	-1.0
GIGS				AML	AML		
	comp=E,208μm,0.4s						
AQU	**L'Aquila**	**0.29**	**161**	P	Pg	03 48 31.9	+0.6
AQU				S	Sb	03 48 37.1	-0.3
FEMA	**Monte Fema**	**0.37**	**334**	P	Pb	03 48 34.0	-0.1
FEMA				S	Sg	03 48 38.0	+0.2
ARRO	**Arrone**	**0.38**	**263**	P	Pg	03 48 32.5	-0.4
ARRO				AML	AML		
	comp=N,602μm,0.2s						
OFFI	**Offida**	**0.43**	**44**	P	Pb	03 48 34.6	-0.4
CESX	**Cesi**	**0.51**	**268**	P	Pg	03 48 34.7	-0.7
CESX				S	Sg	03 48 42.8	+0.6
ARVD	**Arcevia**	**0.90**	**345**	S	Sn	03 48 57.0	-0.1

ROM 24 03:49:28.1±0.2, 42°.752N±0°.009×13°.196E±0°.010, h10km, ML2.4/10, Error ellipse: s-maj=1.1km s-min=0.4km az=216.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**324**	*e*P	Pg	03 49 31.4	+0.7
NRCA				S	Sg	03 49 33.0	+0.3
NRCA				AML	AML		
	comp=E,8125μm,0.1s						
NRCA				AML	AML		
	comp=N,8170μm,0.8s						
NRCA				AML	AML		
	comp=E,8830μm,0.1s						
NRCA				AML	AML		
	comp=N,8770μm,1.4s						
NRCA				AML	AML		
	comp=E,25150μm,0.2s						
NRCA				AML	AML		
	comp=E,27050μm,0.2s						
NRCA				AML	AML		
	comp=N,22250μm,0.5s						
NRCA				AML	AML		
	comp=N,24300μm,0.1s						
NRCA				AML	AML		
	comp=E,7998μm,0.1s						
NRCA				AML	AML		
	comp=N,6467μm,0.1s						
NRCA				AML	AML		
	comp=N,7605μm,0.2s						
NRCA				AML	AML		
	comp=E,8752μm,0.2s						
FDMO	**Fiordimonte**	**0.30**	**344**	P	Pg	03 49 34.4	+0.3
FDMO				S	Sg	03 49 38.9	+0.8
FDMO				AML	AML		
	comp=N,1490μm,0.3s						
FDMO				AML	AML		
	comp=E,1450μm,0.3s						
FDMO				AML	AML		
	comp=N,369μm,0.2s						
FDMO				AML	AML		
	comp=E,451μm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**18**	*e*P	Pg	03 49 35.0	+0.4
GUMA				S	Sg	03 49 40.0	+1.0
GUMA				AML	AML		
	comp=N,8080μm,0.5s						
GUMA				AML	AML		
	comp=E,10430μm,0.3s						
GUMA				AML	AML		
	comp=N,6735μm,0.5s						
GUMA				AML	AML		
	comp=E,7715μm,0.9s						
GUMA				AML	AML		
	comp=N,2212μm,1.1s						
GUMA				AML	AML		
	comp=N,2165μm,0.5s						
GUMA				AML	AML		
	comp=E,4162μm,0.4s						
GUMA				AML	AML		
	comp=E,4068μm,0.4s						
TERO	**Teramo**	**0.33**	**113**	P	Pg	03 49 35.2	+0.6
TERO				S	Sb	03 49 40.2	-1.1
TERO				AML	AML		
	comp=E,946μm,0.2s						
TERO				AML	AML		
	comp=N,1410μm,1.1s						
TERO				AML	AML		
	comp=E,1053μm,0.2s						
TERO				AML	AML		
	comp=N,1525μm,1.1s						
CESI	**CESI - Serrava**	**0.33**	**320**	*e*P	Pg	03 49 35.1	+0.4
CESI				S	Sb	03 49 40.5	-1.0
CESI				AML	AML		
	comp=E,612μm,1.1s						
CESI				AML	AML		
	comp=N,1655μm,0.5s						
CESI				AML	AML		
	comp=N,2980μm,0.3s						
CESI				AML	AML		
	comp=E,2030μm,0.4s						
CESI				AML	AML		
	comp=N,1585μm,0.2s						
CESI				AML	AML		
	comp=E,605μm,0.2s						
ARRO	**Arrone**	**0.36**	**242**	P	Pg	03 49 35.5	+0.3
OFFI	**Offida**	**0.40**	**63**	*e*P	Pb	03 49 36.9	-0.4
OFFI				S	Sb	03 49 43.9	+0.3
OFFI				AML	AML		
	comp=E,640μm,0.6s						
OFFI				AML	AML		
	comp=N,634μm,1.5s						
OFFI				AML	AML		
	comp=N,3985μm,0.5s						
OFFI				AML	AML		
	comp=E,3935μm,0.3s						
OFFI				AML	AML		
	comp=E,628μm,0.6s						
OFFI				AML	AML		
	comp=N,595μm,0.6s						
ASSB	**Assisi San Ben**	**0.49**	**307**	*e*P	Pg	03 49 38.0	+0.4
ASSB				S	Sb	03 49 45.6	-0.5
ASSB				AML	AML		
	comp=N,1630μm,0.6s						
ASSB				AML	AML		
	comp=E,1685μm,1.5s						
ASSB				AML	AML		
	comp=E,496μm,0.2s						
ASSB				AML	AML		
	comp=N,544μm,0.3s						
SNTG	**Esanatoglia**	**0.54**	**340**	*e*P	Pg	03 49 38.7	+0.1
SNTG				S	Sb	03 49 46.9	-0.5
SNTG				AML	AML		
	comp=E,452μm,0.2s						
SNTG				AML	AML		
	comp=N,635μm,0.6s						
SNTG				AML	AML		
	comp=N,149μm,0.4s						
SNTG				AML	AML		
	comp=E,123μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.59**	**317**	*e*P	Pg	03 49 40.0	+0.4
ATCC				S	Sb	03 49 49.2	+0.1
ATCC				AML	AML		
	comp=E,1054μm,1.2s						
ATCC				AML	AML		
	comp=N,1040μm,0.8s						
ATCC				AML	AML		
	comp=N,269μm,0.2s						
ATCC				AML	AML		
	comp=E,305μm,0.3s						
FOSV	**Fossato di Vic**	**0.63**	**330**	*e*P	Pg	03 49 40.5	+0.2
FOSV				S	Sb	03 49 50.0	-0.1
FOSV				AML	AML		
	comp=E,446μm,0.5s						
FOSV				AML	AML		
	comp=N,514μm,1.2s						
FOSV				AML	AML		
	comp=N,467μm,0.2s						
FOSV				AML	AML		
	comp=E,232μm,0.4s						
LRP	**Arpino**	**1.14**	**165**	AML	AML		
	comp=N,15μm,0.1s						
LRP				AML	AML		
	comp=E,151μm,0.7s						
LRP				AML	AML		
	comp=E,17μm,0.4s						
LRP				AML	AML		
	comp=N,226μm,1.0s						

ROM 24 03:50:11.3±0.1, 42°.654N±0°.004×13°.210E±0°.007, h10km, ML2.8/44, 10C-2D, Error ellipse: s-maj=0.5km s-min=0.3km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.14**	**179**	⇑*i*P	Pg	03 50 15.5	+0.9
RM33				S	Sg	03 50 18.4	+1.5
RM33				AML	AML		
	comp=E,20850μm,0.2s						
RM33				AML	AML		
	comp=N,19950μm,1.0s						
RM33				AML	AML		
	comp=E,20400μm,0.2s						
RM33				AML	AML		
	comp=N,20300μm,1.0s						
RM33				AML	AML		
	comp=E,20800μm,0.2s						
RM33				AML	AML		
	comp=N,19950μm,1.0s						
RM33				AML	AML		
	comp=E,20400μm,0.2s						
RM33				AML	AML		
	comp=N,20350μm,1.0s						
RM33				AML	AML		
	comp=E,20800μm,0.2s						
RM33				AML	AML		
	comp=N,19950μm,1.0s						
RM33				AML	AML		
	comp=E,20400μm,0.2s						
RM33				AML	AML		
	comp=N,20350μm,1.0s						
RM33				AML	AML		
	comp=N,19950μm,1.0s						
CAMP	**Campotosto**	**0.19**	**129**	⇑*i*P	Pg	03 50 15.9	+0.6
CAMP				S	Sg	03 50 18.9	+0.9
CAMP				AML	AML		
	comp=N,3790μm,0.5s						
CAMP				AML	AML		
	comp=E,2975μm,1.0s						
NRCA	**Norcia**	**0.19**	**338**	*e*P	Pg	03 50 15.7	+0.3
NRCA				S	Sg	03 50 18.6	+0.4
NRCA				AML	AML		
	comp=E,25100μm,0.2s						
NRCA				AML	AML		
	comp=N,22250μm,0.5s						
NRCA				AML	AML		
	comp=E,25150μm,0.2s						
NRCA				AML	AML		
	comp=N,22250μm,0.5s						
NRCA				AML	AML		
	comp=E,27050μm,0.2s						
NRCA				AML	AML		
	comp=N,24300μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,65800μm,1.2s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,74450μm,0.5s						
NRCA				AML	AML		
	comp=N,23461μm,0.1s						
NRCA				AML	AML		
	comp=N,21941μm,0.1s						
NRCA				AML	AML		
	comp=E,24894μm,0.2s						
NRCA				AML	AML		
	comp=E,25779μm,0.2s						
TERO	**Teramo**	**0.29**	**96**	⇑*i*P	Pg	03 50 17.3	+0.2
TERO				S	Sg	03 50 21.7	+0.7
TERO				AML	AML		
	comp=E,4390μm,0.5s						
TERO				AML	AML		
	comp=N,8485μm,0.6s						
TERO				AML	AML		
	comp=E,4590μm,0.5s						
TERO				AML	AML		
	comp=N,8865μm,0.6s						
TERO				AML	AML		
	comp=E,4390μm,0.5s						
TERO				AML	AML		
	comp=N,8485μm,0.6s						
TERO				AML	AML		
	comp=E,4590μm,0.5s						

TERO AML AML
comp=N,8865µm,0.6s
TERO AML AML
comp=E,4390µm,0.5s
TERO AML AML
comp=N,8480µm,0.6s
TERO AML AML
comp=E,4590µm,0.5s
TERO AML AML
comp=N,8865µm,0.6s
TERO AML AML
comp=N,8865µm,0.6s
TERO AML AML
comp=N,8480µm,0.6s
TERO AML AML
comp=E,4390µm,0.5s
TERO AML AML
comp=E,4590µm,0.5s
AQU L'Aquila 0.33 155 *e*P Pg 03 50 18.4 +0.5
AQU AML AML
comp=N,2190µm,0.3s
AQU AML AML
comp=E,1445µm,0.3s
AQU AML AML
comp=N,2090µm,0.3s
AQU AML AML
comp=E,1475µm,0.7s
AQU AML AML
comp=N,2190µm,0.3s
AQU AML AML
comp=E,1445µm,0.3s
AQU AML AML
comp=N,2090µm,0.3s
AQU AML AML
comp=N,2190µm,0.3s
AQU AML AML
comp=N,2090µm,0.3s
AQU AML AML
comp=E,1445µm,0.3s
AQU AML AML
comp=E,1475µm,0.7s
GIGS Gran Sasso 0.34 127 *e*P Pg 03 50 18.3 +0.3
GIGS S Sg 03 50 23.1 +0.7
GIGS AML AML
comp=E,791µm,1.0s
GIGS AML AML
comp=N,536µm,0.2s
ARRO Arrone 0.34 257⇑*i*P Pg 03 50 18.5 +0.6
ARRO AML AML
comp=E,2375µm,0.2s
ARRO AML AML
comp=N,3105µm,1.3s
ARRO AML AML
comp=E,2380µm,0.2s
ARRO AML AML
comp=N,3105µm,1.3s
ARRO AML AML
comp=E,2380µm,0.2s
ARRO AML AML
comp=N,3105µm,1.3s
FIAM Fiamignano 0.39 190⇑*i*P Pg 03 50 19.6 +0.6
FIAM S Sb 03 50 25.9 -0.7
FIAM AML AML
comp=E,2810µm,0.6s
FIAM AML AML
comp=N,2185µm,0.8s
FIAM AML AML
comp=E,2805µm,0.6s
FDMO Fiordimonte 0.39 347 *e*P Pg 03 50 19.0 0.0
FDMO S Sg 03 50 25.0 +0.8
FDMO AML AML
comp=E,1450µm,0.3s
FDMO AML AML
comp=N,1490µm,0.3s
FDMO AML AML
comp=E,1450µm,0.3s
FDMO AML AML
comp=N,1490µm,0.3s
FDMO AML AML
comp=E,5730µm,0.3s
FDMO AML AML
comp=N,7235µm,0.3s
FDMO AML AML
comp=E,1422µm,0.2s
FDMO AML AML
comp=N,1487µm,0.3s
CESI CESI - Serrava 0.42 327 *e*P Pg 03 50 19.6 +0.1
CESI S Sg 03 50 25.6 +0.6
CESI AML AML
comp=E,2030µm,0.4s
CESI AML AML
comp=N,2980µm,0.3s
CESI AML AML
comp=E,2030µm,0.4s
CESI AML AML
comp=N,2980µm,0.3s
CESI AML AML
comp=E,11295µm,0.2s
CESI AML AML
comp=N,16750µm,0.2s
CESI AML AML
comp=E,2027µm,0.4s
CESI AML AML
comp=N,2947µm,0.3s
GUMA Gualdo di Mace 0.42 13⇑*i*P Pg 03 50 19.8 +0.3
GUMA S Sb 03 50 26.6 -0.7
GUMA AML AML
comp=E,7715µm,0.9s
GUMA AML AML
comp=N,8080µm,0.5s
GUMA AML AML
comp=E,10430µm,0.3s
GUMA AML AML
comp=N,6735µm,0.5s
GUMA AML AML
comp=E,32300µm,0.3s
GUMA AML AML
comp=N,36300µm,0.3s
GUMA AML AML
comp=E,43650µm,0.3s
GUMA AML AML
comp=N,31400µm,0.7s
GUMA AML AML
comp=E,7654µm,0.3s
GUMA AML AML
comp=E,10335µm,0.3s
GUMA AML AML
comp=N,6684µm,0.5s
GUMA AML AML
comp=N,8072µm,0.5s
OFFI Offida 0.45 51 P Pb 03 50 20.7 -0.6
OFFI S Sb 03 50 28.3 +0.2
OFFI AML AML
comp=E,3935µm,0.3s
OFFI AML AML
comp=N,3985µm,0.5s
CESX Cesi 0.47 265⇑*i*P Pg 03 50 20.5 +0.1
CESX S Sg 03 50 27.4 +0.9
CESX AML AML
comp=E,1430µm,0.7s
CESX AML AML
comp=E,1790µm,0.3s
CESX AML AML
comp=N,1355µm,0.3s
CESX AML AML
comp=E,1428µm,0.7s
FAGN Fagnano 0.48 144 *e*P Pg 03 50 20.9 +0.3
FAGN AML AML
comp=E,1970µm,0.6s
FAGN AML AML
comp=N,2430µm,0.6s
VCEL Villa Celiera 0.53 119 *e*P Pg 03 50 22.1 +0.4
VCEL S Sb 03 50 30.5 -0.1
VCEL AML AML
comp=E,2900µm,1.3s
VCEL AML AML
comp=N,2600µm,0.9s
TRTR Tortoreto Alta 0.54 73⇑*i*P Pb 03 50 22.9 0.0
TRTR AML AML
comp=E,2865µm,0.6s
TRTR AML AML
comp=N,2810µm,1.6s
ASSB Assisi San Ben 0.56 314 *e*P Pg 03 50 22.1 -0.1
ASSB S Sg 03 50 30.1 +0.5
ASSB AML AML
comp=E,1685µm,1.5s
ASSB AML AML
comp=N,1630µm,0.6s
ASSB AML AML
comp=E,3620µm,1.1s
ASSB AML AML
comp=N,3710µm,1.5s
ASSB AML AML
comp=N,1621µm,0.6s
ASSB AML AML
comp=E,1635µm,0.4s
T0110 Collepietro 0.60 135 *e*P Pg 03 50 22.9 0.0
T0110 S Sb 03 50 31.7 -0.8
T0110 AML AML
comp=E,1865µm,1.1s
T0110 AML AML
comp=N,1390µm,0.4s
SNTG Esanatoglia 0.63 342 *e*P Pg 03 50 23.3 -0.3
SNTG S Sb 03 50 33.2 -0.2
SNTG AML AML
comp=E,452µm,0.2s
SNTG AML AML
comp=N,635µm,0.6s
SNTG AML AML
comp=E,2195µm,0.8s
SNTG AML AML
comp=N,1600µm,0.7s
SNTG AML AML
comp=N,625µm,0.7s
SNTG AML AML
comp=E,435µm,0.2s
PTQR Pietraquaria 0.65 167 *e*P Pb 03 50 24.3 -0.4
PTQR AML AML
comp=N,282µm,0.4s
PTQR AML AML
comp=E,249µm,0.7s
SRES S.Oreste - Sor 0.67 231 *e*P Pg 03 50 24.3 +0.2
SRES AML AML
comp=E,396µm,0.7s
SRES AML AML
comp=N,336µm,1.2s
SRES AML AML
comp=N,344µm,0.4s
SRES AML AML
comp=N,321µm,0.5s
SRES AML AML
comp=E,396µm,0.7s
ATCC AVT- Casa Cast 0.68 322 *e*P Pg 03 50 24.2 -0.1
ATCC S Sg 03 50 33.9 +0.7
ATCC AML AML
comp=E,1056µm,1.2s
ATCC AML AML
comp=N,1045µm,0.8s
ATCC AML AML
comp=E,2365µm,0.7s
ATCC AML AML
comp=N,1855µm,0.8s
ATCC AML AML
comp=E,981µm,0.2s
ATCC AML AML
comp=N,1043µm,0.8s
EL6 Elcito 0.68 353 *e*P Pg 03 50 24.2 -0.3
EL6 S Sb 03 50 34.9 0.0
EL6 AML AML
comp=E,4115µm,1.3s
EL6 AML AML
comp=N,3795µm,1.1s
EL6 AML AML
comp=E,941µm,0.4s
EL6 AML AML
comp=N,1194µm,0.4s
FOSV Fossato di Vic 0.72 333 *e*P Pg 03 50 25.3 +0.1
FOSV S Sb 03 50 35.9 0.0
FOSV AML AML
comp=E,446µm,0.5s
FOSV AML AML
comp=N,514µm,1.2s
FOSV AML AML
comp=E,1435µm,0.8s
FOSV AML AML
comp=N,1365µm,0.2s
FOSV AML AML
comp=N,483µm,0.5s
FOSV AML AML
comp=E,445µm,0.5s
MTCE Montecelio 0.72 209 *e*P Pg 03 50 24.9 -0.3
MTCE AML AML
comp=E,546µm,0.4s
MTCE AML AML
comp=E,546µm,0.4s
MTCE AML AML
comp=N,406µm,1.4s
CERT Cerreto 0.72 194 *e*P Pg 03 50 25.0 -0.3
CERT AML AML
comp=N,828µm,0.4s
CERT AML AML
comp=E,962µm,1.2s
PP3 Marolino 0.78 22⇓*i*P Pb 03 50 26.9 0.0
PP3 S Sn 03 50 39.9 -0.3
PP3 AML AML
comp=E,4400µm,0.5s
PP3 AML AML
comp=N,1515µm,1.3s
PP3 AML AML
comp=E,4430µm,0.5s
PP3 AML AML
comp=N,1655µm,0.4s
PP3 AML AML
comp=E,7955µm,0.7s
PP3 AML AML
comp=N,4840µm,0.4s
PP3 AML AML
comp=N,4850µm,0.4s
PP3 AML AML
comp=E,7965µm,0.7s
PP3 AML AML
comp=N,1457µm,0.5s
PP3 AML AML
comp=N,1623µm,0.4s
PP3 AML AML
comp=E,4391µm,0.5s
PP3 AML AML
comp=E,4417µm,0.5s
INTR Introdacqua 0.82 141 *e*P Pg 03 50 26.7 -0.4
INTR AML AML
comp=N,675µm,0.7s
INTR AML AML
comp=E,353µm,1.2s
RCAV Rocca di Cave 0.83 194 P Pn 03 50 29.9 +0.7
ATTE AVT- Monte Tez 0.83 311 *e*P Pg 03 50 27.3 0.0
ATTE AML AML
comp=E,678µm,0.4s
ATTE AML AML
comp=N,587µm,0.8s
ATTE AML AML
comp=E,363µm,0.6s
ATTE AML AML
comp=N,447µm,0.7s
SSFR Montelago di S 0.84 338 *e*P Pg 03 50 27.3 -0.2
SSFR AML AML
comp=E,2645µm,0.2s
SSFR AML AML
comp=N,2825µm,0.7s
SSFR AML AML
comp=E,2460µm,0.2s
SSFR AML AML
comp=N,2135µm,0.7s
SSFR AML AML
comp=E,1192µm,0.2s
SSFR AML AML
comp=N,897µm,0.2s
SSFR AML AML
comp=N,761µm,0.2s
SSFR AML AML
comp=E,1103µm,0.2s
MGAB Montegabbione 0.85 288 *e*P Pg 03 50 27.7 +0.1
MGAB AML AML
comp=E,1400µm,1.5s
MGAB AML AML
comp=N,1175µm,0.6s
MGAB AML AML
comp=E,1500µm,1.5s
MGAB AML AML
comp=N,1165µm,0.6s
MGAB AML AML
comp=E,1750µm,0.6s
MGAB AML AML
comp=N,1830µm,0.5s
MGAB AML AML
comp=E,1840µm,0.6s
MGAB AML AML
comp=N,1900µm,0.5s
MGAB AML AML
comp=E,1275µm,0.4s
MGAB AML AML
comp=E,1394µm,1.3s
MGAB AML AML
comp=N,1167µm,0.6s
MGAB AML AML
comp=N,1144µm,0.6s
ATFO Monte Foce - G 0.85 327 *e*P Pg 03 50 27.5 -0.2
ATFO S Sb 03 50 40.6 +0.8
ATFO AML AML
comp=E,516µm,0.9s
ATFO AML AML
comp=N,559µm,0.3s
ATFO AML AML
comp=E,636µm,0.9s
ATFO AML AML
comp=N,701µm,1.1s
ATFO AML AML
comp=N,556µm,0.3s
ATFO AML AML
comp=E,512µm,0.9s
ARVD Arcevia 0.87 347 P Pg 03 50 27.7 -0.2
ARVD S Sb 03 50 40.7 +0.6
ARVD AML AML
comp=E,821µm,0.2s
ARVD AML AML
comp=N,661µm,0.5s
ARVD AML AML
comp=E,353µm,0.6s
ARVD AML AML
comp=N,469µm,0.6s
LPEL Lama dei Peligi 0.94 130 *e*P Pg 03 50 29.2 -0.2
LPEL S Sb 03 50 42.1 -0.2
LPEL AML AML
comp=N,386µm,0.5s
LPEL AML AML
comp=E,494µm,0.5s
VIVA Pratoni del Vi 0.96 200 P Pg 03 50 28.1 -1.6
SACS San Casciano d 0.98 282 *e*P Pg 03 50 30.0 0.0
SACS S Sb 03 50 43.3 -0.1
SACS AML AML
comp=E,554µm,0.9s
SACS AML AML
comp=N,710µm,0.9s
SACS AML AML
comp=E,534µm,0.9s
SACS AML AML
comp=N,705µm,0.9s
SACS AML AML
comp=E,432µm,0.3s
SACS AML AML
comp=E,416µm,0.3s
SACS AML AML
comp=N,495µm,0.8s
SACS AML AML
comp=N,522µm,0.9s
COR1 Corinaldo 0.99 351 *e*P Pn 03 50 30.9 -0.3
COR1 S Sn 03 50 46.6 +1.3
PIEI Pieia 1.01 331 *e*P Pb 03 50 31.0 +0.1
PIEI AML AML
comp=E,712µm,0.3s
PIEI AML AML
comp=N,512µm,0.3s
PIEI AML AML
comp=E,402µm,0.3s
PIEI AML AML
comp=N,251µm,0.2s
NARO Abbazia di Nar 1.06 334 *e*P Pg 03 50 31.1 -0.6
NARO AML AML
comp=E,396µm,1.2s
NARO AML AML
comp=N,402µm,0.6s
NARO AML AML
comp=N,198µm,0.8s
NARO AML AML
comp=E,339µm,0.9s
FSSB Fossombrone 1.08 343 *e*P Pg 03 50 31.5 -0.6
FSSB AML AML
comp=E,2260µm,0.4s
FSSB AML AML
comp=N,2865µm,0.4s
FSSB AML AML
comp=N,905µm,0.3s
FSSB AML AML
comp=E,942µm,0.4s
GIUL Giuliano Di Ro 1.10 178 P Pn 03 50 32.8 0.0
GIUL AML AML
comp=E,264µm,0.5s
GIUL AML AML
comp=N,286µm,0.8s
CAFI Castiglion Fio 1.14 307 *e*P Pb 03 50 32.6 -0.4
CAFI AML AML
comp=E,720µm,0.4s
CAFI AML AML
comp=N,723µm,0.8s
CAFI AML AML
comp=E,351µm,0.6s
CAFI AML AML
comp=N,256µm,0.6s
CAFI AML AML
comp=N,251µm,0.6s
RUFI Rufina 1.72 314 *e*P Pn 03 50 42.0 +0.7
PAOL Paolisi 1.91 148 S Sb 03 51 11.0 +0.7
MCRV Calabrutti - M 2.38 141 S Sn 03 51 19.0 -0.7
CDRU Civita di Ruta 2.67 143 P Pn 03 50 53.3 -1.2
CDRU AML AML
comp=E,31µm,1.6s
CDRU AML AML
comp=N,26µm,1.5s
BOJS Bojanci 3.21 27 S Sn 03 51 43.0 +3.0
SCHR S. Chirico Rap 3.27 138 S Sn 03 51 40.0 -1.6
STON Ston 3.31 85 S Sg 03 51 57.0 -0.6
CGRP Cima Grappa 3.38 343 *e*P Pn 03 51 05.3 +1.0
CGRP S Sn 03 51 43.7 -0.9
CGRP AML AML
comp=E,80µm,0.4s
CGRP AML AML
comp=N,63µm,1.3s
CGRP AML AML
comp=E,60µm,0.7s
CGRP AML AML
comp=N,52µm,0.4s
MAGA Magasa 3.63 330 AML AML
comp=N,76µm,1.2s
MAGA AML AML
comp=E,112µm,0.5s
SALB San Lorenzo Be 3.64 139 ⇑P Pb 03 51 16.0 +0.1
SALB S Sg 03 52 06.0 -2.3
LUSI Trento, Gardas 3.68 335 S Sg 03 52 07.0 -2.5
KOSI Kohlern 4.03 342 *e*P Pn 03 51 14.5 +1.4
KOSI AML AML
comp=E,36µm,0.4s
KOSI AML AML
comp=N,42µm,1.5s
IACL Alicudi 4.21 168 ⇑P Pn 03 51 16.4 +0.9
MTGR Montagna Grand 4.77 184 P Pb 03 51 35.4 +0.4
CRJA Costa Raja 4.85 182 P Pb 03 51 37.3 +1.0
MFNL Monte Finestre 4.86 183 ⇓P Pn 03 51 23.9 -0.7

ROM ***24*** *03:51:09.8±0.1,42°.814N±0°.004×13°.161E±0°.007, h10km,ML3.0/40,Error ellipse: s-maj=0.6km s-min=0.2km az=247.0*
PRU ***24*** *03:51:17.7±0.0,43°.21N×12°.89E,h1km*
ISC 24 03:51:10.2±0.8,**42°.81N**±0°.02×**13°.14E**±0°.02,**h12**km±5km,
n53,σ0°77/80,8C-4D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.03**	**323**	⇑*i*P	**Pg**	**03 51 12.2**	**-0.3**
NRCA				S	**Sg**	**03 51 13.4**	**-0.7**
NRCA				AML	AML		
	comp=N,65850µm,1.2s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,65800µm,1.2s						
NRCA				AML	AML		
	comp=N,74450µm,0.5s						
NRCA				AML	AML		
	comp=N,65850µm,1.2s						

FEMA	**Monte Fema**	**0.17**	**337**	⇑	*e*P		**Pg**	**03 51 14.1**	**-0.1**
FEMA					S		**Sg**	**03 51 16.9**	**-0.1**
FEMA					AML	AML			
	comp=E,19850μm,0.9s								
FEMA					AML	AML			
	comp=N,13500μm,0.6s								
FEMA					AML	AML			
	comp=E,19850μm,0.9s								
FDMO	**Fiordimonte**	**0.23**	**350**	⇓	*e*P		**Pg**	**03 51 15.0**	**-0.2**
FDMO					S		**Sg**	**03 51 18.4**	**-0.1**
FDMO					AML	AML			
	comp=E,5730μm,0.3s								
FDMO					AML	AML			
	comp=N,7235μm,0.3s								
CESI	**CESI - Serrava**	**0.26**	**319**	⇑	*i*P		**Pg**	**03 51 15.8**	**+0.1**
CESI					S		**Sg**	**03 51 19.9**	**+0.4**
CESI					AML	AML			
	comp=N,16750μm,0.2s								
CESI					AML	AML			
	comp=E,11295μm,0.2s								
GUMA	**Gualdo di Mace**	**0.29**	**29**	⇑	*e*P		**Pg**	**03 51 16.3**	**0.0**
GUMA					S		**Sg**	**03 51 20.9**	**+0.6**
GUMA					AML	AML			
	comp=N,36350μm,0.3s								
GUMA					AML	AML			
	comp=E,43650μm,0.3s								
GUMA					AML	AML			
	comp=N,31400μm,0.7s								
GUMA					AML	AML			
	comp=E,32300μm,0.3s								
GUMA					AML	AML			
	comp=N,36300μm,0.3s								
RM33	**Pellescritta (**	**0.30**	**170**		*e*P		**Pg**	**03 51 16.7**	**+0.3**
RM33					S		**Sg**	**03 51 21.8**	**+1.2**
RM33					AML	AML			
	comp=E,2685μm,1.6s								
RM33					AML	AML			
	comp=N,2615μm,1.6s								
RM33					AML	AML			
	comp=E,2585μm,1.4s								
RM33					AML	AML			
	comp=N,2730μm,1.6s								
RM33					AML	AML			
	comp=E,2580μm,1.4s								
RM33					AML	AML			
	comp=N,3020μm,0.1s								
RM33					AML	AML			
	comp=N,2980μm,0.1s								
RM33					AML	AML			
	comp=E,2690μm,1.6s								
CAMP	**Campotosto**	**0.34**	**144**		*e*P		**Pg**	**03 51 17.0**	**-0.1**
CAMP					S		**Sg**	**03 51 22.0**	**+0.4**
CAMP					AML	AML			
	comp=E,1785μm,1.1s								
CAMP					AML	AML			
	comp=N,1120μm,0.4s								
ARRO	**Arrone**	**0.36**	**231**	⇑	*i*P		**Pg**	**03 51 17.7**	**+0.3**
ARRO					S		**Sb**	**03 51 23.6**	**-0.5**
ARRO					AML	AML			
	comp=E,1910μm,1.3s								
ARRO					AML	AML			
	comp=N,1590μm,1.5s								
MDAR	**Monte D'Aria**	**0.39**	**0**		*e*P		**Pg**	**03 51 17.6**	**-0.3**
MDAR					S		**Sg**	**03 51 23.3**	**+0.2**
MDAR					AML	AML			
	comp=E,3810μm,0.7s								
MDAR					AML	AML			
	comp=N,5645μm,0.3s								
MDAR					AML	AML			
	comp=N,5640μm,0.2s								
MDAR					AML	AML			
	comp=E,3805μm,0.7s								
TERO	**Teramo**	**0.39**	**118**		*e*P		**Pg**	**03 51 17.3**	**-0.7**
TERO					S		**Sg**	**03 51 23.4**	**+0.2**
TERO					AML	AML			
	comp=E,2515μm,0.3s								
TERO					AML	AML			
	comp=N,2905μm,1.0s								
TERO					AML	AML			
	comp=E,2710μm,0.3s								
TERO					AML	AML			
	comp=N,3220μm,1.0s								
TERO					AML	AML			
	comp=E,2520μm,0.3s								
FIU1	**Fiuminata**	**0.41**	**338**		*e*P		**Pg**	**03 51 18.3**	**-0.1**
FIU1					S		**Sg**	**03 51 24.3**	**+0.4**
OFFI	**Offida**	**0.42**	**72**	⇑	*i*P		**Pg**	**03 51 19.0**	**+0.4**
OFFI					AML	AML			
	comp=E,3070μm,0.8s								
OFFI					AML	AML			
	comp=N,3895μm,1.1s								
SSM1	**San Severino M**	**0.42**	**4**		*e*P		**Pg**	**03 51 18.3**	**-0.3**
SSM1					S		**Sg**	**03 51 24.6**	**+0.4**
ASSB	**Assisi San Ben**	**0.42**	**304**		*e*P		**Pg**	**03 51 18.5**	**-0.2**
ASSB					S		**Sg**	**03 51 24.9**	**+0.5**
ASSB					AML	AML			
	comp=E,3620μm,1.1s								
ASSB					AML	AML			
	comp=N,3710μm,1.5s								
CESX	**Cesi**	**0.46**	**245**		*e*P		**Pg**	**03 51 17.3**	**-2.0**
SNTG	**Esanatoglia**	**0.47**	**342**	⇓	*i*P		**Pg**	**03 51 19.1**	**-0.4**
SNTG					S		**Sg**	**03 51 26.1**	**+0.3**
SNTG					AML	AML			
	comp=E,2195μm,0.8s								
SNTG					AML	AML			
	comp=N,1600μm,0.7s								
GIGS	**Gran Sasso**	**0.48**	**138**		*e*P		**Pg**	**03 51 19.2**	**-0.4**
GIGS					S		**Sg**	**03 51 26.0**	**+0.1**
GIGS					AML	AML			
	comp=N,300μm,0.3s								
GIGS					AML	AML			
	comp=E,396μm,0.3s								
TRE1	**Treia**	**0.52**	**14**		*e*P		**Pg**	**03 51 20.6**	**+0.1**
TRE1					S		**Sb**	**03 51 28.3**	**-0.5**
EL6	**Elcito**	**0.52**	**357**		*e*P		**Pg**	**03 51 20.1**	**-0.4**
EL6					S		**Sg**	**03 51 28.0**	**+0.6**
EL6					AML	AML			
	comp=E,4110μm,0.2s								
EL6					AML	AML			
	comp=N,3795μm,1.1s								
EL6					AML	AML			
	comp=N,3805μm,1.1s								
ATCC	**AVT- Casa Cast**	**0.53**	**316**	⇓	*e*P		**Pg**	**03 51 20.5**	**-0.1**
ATCC					S		**Sg**	**03 51 28.3**	**+0.7**
ATCC					AML	AML			
	comp=N,1860μm,0.8s								
ATCC					AML	AML			
	comp=E,2365μm,0.7s								
ATCC					AML	AML			
	comp=N,1855μm,0.8s								
FIAM	**Fiamignano**	**0.54**	**182**		*e*P		**Pg**	**03 51 21.1**	**+0.3**
FIAM					AML	AML			
	comp=E,735μm,0.5s								
FIAM					AML	AML			
	comp=N,667μm,0.9s								
FOSV	**Fossato di Vic**	**0.56**	**330**		*e*P		**Pg**	**03 51 20.9**	**-0.3**
FOSV					S		**Sg**	**03 51 29.0**	**+0.4**
FOSV					AML	AML			
	comp=N,1365μm,0.2s								
FOSV					AML	AML			
	comp=E,1435μm,0.8s								
TRTR	**Tortoreto Alta**	**0.57**	**90**		P		**Pb**	**03 51 22.1**	**-0.1**
TRTR					S		**Sb**	**03 51 31.9**	**+1.7**
TRTR					AML	AML			
	comp=E,3885μm,1.1s								
TRTR					AML	AML			
	comp=N,3615μm,0.7s								
TRTR					AML	AML			
	comp=E,3836μm,1.1s								
MURB	**Monte Urbino**	**0.64**	**315**		*e*P		**Pg**	**03 51 22.5**	**-0.2**
MURB					S		**Sb**	**03 51 32.5**	**+0.1**
MURB					AML	AML			
	comp=N,2920μm,1.0s								
MURB					AML	AML			
	comp=N,3145μm,1.0s								
MURB					AML	AML			
	comp=E,2965μm,1.2s								
MURB					AML	AML			
	comp=E,2830μm,1.2s								
VCEL	**Villa Celiera**	**0.66**	**128**		*e*P		**Pg**	**03 51 23.0**	**-0.1**
VCEL					S		**Sg**	**03 51 32.4**	**+0.6**
VCEL					AML	AML			
	comp=E,1260μm,0.4s								
VCEL					AML	AML			
	comp=N,1260μm,1.5s								
SSFR	**Montelago di S**	**0.68**	**337**		*e*P		**Pg**	**03 51 23.2**	**-0.3**
SSFR					S		**Sb**	**03 51 33.3**	**-0.3**
SSFR					AML	AML			
	comp=E,2645μm,0.2s								
SSFR					AML	AML			
	comp=N,2825μm,0.7s								
SSFR					AML	AML			
	comp=E,2460μm,0.2s								
SSFR					AML	AML			
	comp=N,2135μm,0.7s								
SSFR					AML	AML			
	comp=E,2465μm,0.2s								
SSFR					AML	AML			
	comp=N,2830μm,0.7s								
ATFO	**Monte Foce - G**	**0.70**	**323**		*e*P		**Pg**	**03 51 23.5**	**-0.3**
ATFO					S		**Sb**	**03 51 33.9**	**-0.1**
ATFO					AML	AML			
	comp=E,636μm,0.9s								
ATFO					AML	AML			
	comp=E,636μm,0.9s								
ATFO					AML	AML			
	comp=N,701μm,1.1s								
ARVD	**Arcevia**	**0.70**	**348**		*e*P		**Pg**	**03 51 23.3**	**-0.7**
ARVD					S		**Sg**	**03 51 33.7**	**+0.5**
ARVD					AML	AML			
	comp=E,821μm,0.2s								
ARVD					AML	AML			
	comp=N,661μm,0.5s								
SRES	**S.Oreste - Sor**	**0.74**	**220**		P		**Pg**	**03 51 24.7**	**+0.2**
T0110	**Collepietro**	**0.75**	**141**		*e*P		**Pg**	**03 51 23.6**	**-1.1**
T0110					AML	AML			
	comp=N,1350μm,0.3s								
T0110					AML	AML			
	comp=E,1115μm,0.4s								
MGAB	**Montegabbione**	**0.76**	**278**		*e*P		**Pg**	**03 51 25.2**	**+0.1**
MGAB					S		**Sb**	**03 51 36.2**	**+0.3**
MGAB					AML	AML			
	comp=E,1755μm,0.6s								
MGAB					AML	AML			
	comp=N,1900μm,0.5s								
MGAB					AML	AML			
	comp=E,1750μm,0.6s								
MGAB					AML	AML			
	comp=E,1840μm,0.6s								
MGAB					AML	AML			
	comp=N,1830μm,0.5s								
FRON	**Frontone**	**0.77**	**337**		P		**Pg**	**03 51 24.4**	**-0.8**
FRON					S		**Sb**	**03 51 36.1**	**0.0**
FRON					AML	AML			
	comp=E,1135μm,0.2s								
FRON					AML	AML			
	comp=N,1211μm,0.4s								
ATVO	**AVT- Monte Val**	**0.79**	**317**		P		**Pg**	**03 51 24.9**	**-0.6**
ATVO					AML	AML			
	comp=N,436μm,0.7s								
ATVO					AML	AML			
	comp=E,505μm,0.4s								
AOI	**Ancona**	**0.81**	**24**	⇑	P		**Pg**	**03 51 25.8**	**-0.2**
AOI					AML	AML			
	comp=E,1114μm,0.4s								
AOI					AML	AML			
	comp=N,1200μm,1.2s								
COR1	**Corinaldo**	**0.83**	**353**		*e*P		**Pb**	**03 51 26.6**	**-0.1**
COR1					AML	AML			
	comp=N,1709μm,0.8s								
COR1					AML	AML			
	comp=E,907μm,1.5s								
MTCE	**Montecelio**	**0.84**	**201**		*e*P		**Pg**	**03 51 26.2**	**-0.2**
MTCE					AML	AML			
	comp=E,354μm,1.2s								
MTCE					AML	AML			
	comp=N,326μm,1.6s								
MTCE					AML	AML			
	comp=N,326μm,1.6s								
MTCE					AML	AML			
	comp=E,354μm,1.2s								
ATPI	**Pietralunga -**	**0.84**	**320**	⇓	P		**Pg**	**03 51 26.1**	**-0.3**
ATPI					AML	AML			
	comp=N,482μm,0.4s								
ATPI					AML	AML			
	comp=E,569μm,0.6s								
PIEI	**Pieia**	**0.85**	**329**		*e*P		**Pg**	**03 51 26.2**	**-0.5**
PIEI					AML	AML			
	comp=N,512μm,0.3s								
PIEI					AML	AML			
	comp=E,712μm,0.3s								
CERT	**Cerreto**	**0.87**	**188**		AML	AML			
	comp=N,578μm,0.4s								
CERT					AML	AML			
	comp=E,603μm,0.9s								
MPAG	**Monte Paganucc**	**0.87**	**341**		*e*P		**Pg**	**03 51 26.3**	**-0.7**
MPAG					S		**Sb**	**03 51 39.2**	**+0.2**
MPAG					AML	AML			
	comp=E,1220μm,0.3s								
MPAG					AML	AML			
	comp=N,594μm,0.3s								
NARO	**Abbazia di Nar**	**0.90**	**333**		*e*P		**Pg**	**03 51 26.8**	**-0.9**
NARO					AML	AML			
	comp=E,396μm,1.2s								
NARO					AML	AML			
	comp=N,402μm,0.6s								
SACS	**San Casciano d**	**0.91**	**273**		*e*P		**Pg**	**03 51 27.7**	**0.0**
SACS					AML	AML			
	comp=N,705μm,0.9s								
SACS					AML	AML			
	comp=E,596μm,0.8s								
SACS					AML	AML			
	comp=E,574μm,1.0s								
SACS					AML	AML			
	comp=N,726μm,0.8s								
SACS					AML	AML			
	comp=N,704μm,0.9s								
FSSB	**Fossombrone**	**0.92**	**343**		*e*P		**Pg**	**03 51 27.4**	**-0.6**
FSSB					AML	AML			
	comp=E,2260μm,0.4s								
FSSB					AML	AML			
	comp=N,2865μm,0.4s								
BADI	**Badiali**	**0.96**	**317**		*e*P		**Pg**	**03 51 28.5**	**-0.3**
INTR	**Introdacqua**	**0.98**	**144**		*e*P		**Pg**	**03 51 27.9**	**-1.2**
PE3	**Peglio**	**1.00**	**332**		*e*P		**Pn**	**03 51 30.2**	**0.0**
CAFI	**Castiglion Fio**	**1.01**	**302**		P		**Pg**	**03 51 29.6**	**-0.1**
CAFI					AML	AML			
	comp=N,723μm,0.8s								
CAFI					AML	AML			
	comp=E,720μm,0.4s								
SSP9	**Sansepolcro**	**1.06**	**316**	⇑	P		**Pn**	**03 51 32.5**	**+1.4**
LPEL	**Lama dei Pelig**	**1.08**	**134**		AML	AML			
	comp=N,240μm,0.6s								
LPEL					AML	AML			
	comp=E,269μm,1.5s								
MODR	**Mondragone**	**1.75**	**161**		P		**Pn**	**03 51 40.0**	**-0.4**
PII	**Pisa**	**2.12**	**296**		S		**Sg**	**03 52 21.0**	**+2.7**
MAIM	**Mastiano**	**2.23**	**301**		S		**Sg**	**03 52 21.0**	**-0.8**
KHC	**Kasperske Hory**	**6.33**	**3**		*e*PN		**Pn**	**03 52 45.7**	**+2.3**
KHC					*e*SN		**Sn**	**03 53 52.6**	**-3.1**

MRB 24 03:51:48.1±0.3, 41°84N×2°66E, h3$^{km}_{=5km}$, ML0.3/8, 2C, Error ellipse: s-maj=2.0km s-min=1.0km az=189.0, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFON	**Fontmartina**	**0.18**	**246**	⇑P	Pg	03 51 51.9	+0.2
CFON				S	Sg	03 51 54.6	+0.6
	10nm,0.2s						
CCAS	**Cassa de la Se**	**0.19**	**76**	P	Pg	03 51 51.9	+0.1
CCAS				S	Sg	03 51 54.9	+0.5
CBEU	**Beuda**	**0.42**	**2**	P	Pg	03 51 56.3	+0.1
CBEU				S	Sg	03 52 02.2	+0.6
CORI	**Orista**	**0.47**	**287**	P	Pg	03 51 57.0	-0.2
CORI				S	Sg	03 52 03.6	+0.3
	2.5nm,0.1s						
CBRU	**Bruguera**	**0.57**	**322**	⇑P	Pg	03 51 58.8	-0.3
CBRU				S	Sg	03 52 06.7	+0.2
CPAL	**Palau Saverder**	**0.61**	**38**	P	Pg	03 51 59.3	-0.4
CPAL				S	Sg	03 52 08.2	+0.6
	0.8nm,0.1s						
SJAF	**Saint Jean de**	**0.67**	**14**	P	Pg	03 52 00.4	-0.5
SJAF				S	Sg	03 52 10.3	+0.6
	1.2nm,0.1s						
FILF	**Fillols**	**0.73**	**354**	P	Pg	03 52 02.3	+0.3
FILF				S	Sb	03 52 12.9	-0.9
	0.9nm,0.3s						
ARBS	**La Rabassa**	**1.02**	**307**	P	Pg	03 52 07.5	-0.2
ARBS				S	Sb	03 52 21.9	-0.6
	0.6nm,0.2s						
CORG	**Organya**	**1.07**	**292**	P	Pg	03 52 08.2	-0.5
CORG				S	Sg	03 52 22.8	+0.2
CSOR	**Sort**	**1.25**	**296**	P	Pg	03 52 11.4	-0.7
CSOR				S	Sg	03 52 28.6	+0.2
EPOB	**Poblet**	**1.28**	**248**	S	Sg	03 52 28.6	-0.5
	0.5nm,0.2s						
CEST	**Esterri de Car**	**1.29**	**307**	P	Pg	03 52 12.0	-0.8
CEST				S	Sg	03 52 29.6	0.0
	0.6nm,0.4s						

ROM 24 03:52:31.7±0.1, 42°828N±0°006×13°13E±0°01, h9^{km}, ML2.2/7, 1D, Error ellipse: s-maj=0.9km s-min=0.6km az=93.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.02**	**292**	*e*P	Pg	03 52 33.6	+0.2
NRCA				S	Sg	03 52 34.7	+0.1
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,87700μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,87700μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,98100μm,0.1s						
NRCA				AML	AML		
	comp=E,33963μm,0.1s						
NRCA				AML	AML		
	comp=E,35875μm,0.1s						
NRCA				AML	AML		
	comp=N,34716μm,0.2s						
NRCA				AML	AML		
	comp=N,36774μm,0.1s						
NRCA				AML	AML		
	comp=E,32306μm,0.1s						
NRCA				AML	AML		
	comp=N,37723μm,0.1s						
NRCA				AML	AML		
	comp=E,34467μm,0.1s						
NRCA				AML	AML		
	comp=N,34397μm,0.1s						
FEMA	**Monte Fema**	**0.15**	**335**	*e*P	Pg	03 52 35.7	+0.7
FEMA				S	Sg	03 52 38.4	+1.1
FEMA				AML	AML		
	comp=E,20300μm,0.4s						
FEMA				AML	AML		
	comp=E,20300μm,0.4s						
FEMA				AML	AML		
	comp=N,14350μm,0.4s						
FEMA				AML	AML		
	comp=E,2394μm,0.3s						
FEMA				AML	AML		
	comp=E,2416μm,0.2s						
FEMA				AML	AML		
	comp=N,1723μm,0.3s						
FDMO	**Fiordimonte**	**0.21**	**351**	P	Pg	03 52 36.7	+0.6
FDMO				S	Sg	03 52 40.2	+1.1
FDMO				AML	AML		
	comp=E,3660μm,1.0s						
FDMO				AML	AML		
	comp=N,5500μm,1.0s						
FDMO				AML	AML		
	comp=N,709μm,0.2s						
FDMO				AML	AML		
	comp=E,550μm,0.2s						
FDMO				AML	AML		
	comp=N,694μm,0.2s						
CESI	**CESI - Serrava**	**0.24**	**317**	⇓ *i*P	Pg	03 52 37.5	+0.7
CESI				AML	AML		
	comp=N,10810μm,0.3s						
CESI				AML	AML		
	comp=E,5830μm,0.5s						
GUMA	**Gualdo di Mace**	**0.28**	**32**	P	Pb	03 52 38.2	-0.8
GUMA				AML	AML		
	comp=E,11055μm,0.3s						
GUMA				AML	AML		
	comp=E,10800μm,0.4s						
GUMA				AML	AML		
	comp=N,9950μm,0.4s						
GUMA				AML	AML		
	comp=N,7845μm,0.3s						
ASSB	**Assisi San Ben**	**0.41**	**302**	*e*P	Pg	03 52 40.2	+0.4
ASSB				AML	AML		
	comp=N,2290μm,1.4s						
ASSB				AML	AML		
	comp=E,2950μm,0.3s						
EL6	**Elcito**	**0.50**	**357**	*e*P	Pg	03 52 42.1	+0.6
ATCC	**AVT- Casa Cast**	**0.51**	**315**	*e*P	Pg	03 52 42.2	+0.5
ATCC				AML	AML		
	comp=E,1715μm,0.2s						
ATCC				AML	AML		
	comp=N,1670μm,0.7s						
RDP	**Rocca di Papa**	**1.11**	**196**	AML	AML		
	comp=N,685μm,0.4s						
RDP				AML	AML		
	comp=E,622μm,0.6s						
RDP				AML	AML		
	comp=E,621μm,0.6s						

ROM 24 03:52:34.7±0.1, 42°700N±0°004×13°203E±0°007, h9^{km}, ML3.1/23, 8C-5D, Error ellipse: s-maj=0.4km s-min=0.4km az=80.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQT1	**Arquata del Tr**	**0.10**	**42**	⇑ *i*P	Pg	03 52 37.7	+0.4
AQT1				S	Sg	03 52 39.3	+0.2
NRCA	**Norcia**	**0.15**	**334**	⇓ *i*P	Pg	03 52 38.6	+0.5
NRCA				S	Sg	03 52 41.0	+0.6
RM33	**Pellescritta (**	**0.19**	**177**	⇑ *e*P	Pg	03 52 39.8	+1.0
RM33				S	Sg	03 52 43.4	+1.9
RM33				AML	AML		
	comp=N,9815μm,0.2s						
RM33				AML	AML		
	comp=N,9690μm,0.3s						
RM33				AML	AML		
	comp=E,8005μm,0.1s						
RM33				AML	AML		
	comp=N,9800μm,0.3s						
RM33				AML	AML		
	comp=E,7880μm,0.1s						
RM33				AML	AML		
	comp=N,9700μm,0.3s						
RM33				AML	AML		
	comp=E,8000μm,0.1s						
RM33				AML	AML		
	comp=E,7875μm,0.1s						
RM33				AML	AML		
	comp=N,9710μm,0.3s						
RM33				AML	AML		
	comp=N,9785μm,0.3s						
CAMP	**Campotosto**	**0.22**	**137**	⇑ *i*P	Pg	03 52 40.0	+0.7
CAMP				S	Sg	03 52 43.8	+1.4
CAMP				AML	AML		
	comp=E,15300μm,0.2s						
CAMP				AML	AML		
	comp=N,7580μm,0.2s						
FEMA	**Monte Fema**	**0.28**	**337**	*e*P	Pg	03 52 40.9	+0.4
FEMA				S	Sg	03 52 45.3	+0.9
TERO	**Teramo**	**0.31**	**105**	⇓ *e*P	Pg	03 52 41.1	+0.2
TERO				S	Sg	03 52 45.5	+0.6
TERO				AML	AML		
	comp=E,7265μm,0.1s						
TERO				AML	AML		
	comp=N,11875μm,0.3s						
TERO				AML	AML		
	comp=N,14050μm,0.3s						
TERO				AML	AML		
	comp=E,8785μm,0.1s						
TERO				AML	AML		
	comp=N,11880μm,0.3s						
TERO				AML	AML		
	comp=E,7270μm,0.1s						
ARRO	**Arrone**	**0.34**	**250**	P	Pb	03 52 42.5	-0.5
ARRO				S	Sb	03 52 48.0	-0.6
ARRO				AML	AML		
	comp=N,1650μm,0.2s						
ARRO				AML	AML		
	comp=E,1770μm,0.2s						
FDMO	**Fiordimonte**	**0.35**	**346**	*e*P	Pg	03 52 42.0	+0.4
FDMO				S	Sg	03 52 47.0	+0.8
GIGS	**Gran Sasso**	**0.37**	**133**	*e*P	Pg	03 52 42.2	+0.2

GIGS				S	Sg	03 52 47.7	+0.8		
GIGS				AML	AML				
	comp=N,1480µm,0.2s								
GIGS				AML	AML				
	comp=E,2290µm,0.1s								
CESI	**CESI - Serrava**	**0.38**	**324**	*e*P	Pg	03 52 42.8	+0.6		
CESI				S	Sg	03 52 48.1	+1.0		
GUMA	**Gualdo di Mace**	**0.38**	**15**⇑*i*	P	Pg	03 52 42.6	+0.5		
GUMA				S	Sb	03 52 48.6	-1.0		
AQU	**L'Aquila**	**0.38**	**157**⇑⇑	P	Pg	03 52 42.9	+0.7		
AQU				S	Sb	03 52 48.5	-1.1		
AQU				AML	AML				
	comp=N,3125µm,0.4s								
AQU				AML	AML				
	comp=E,2880µm,0.5s								
AQU				AML	AML				
	comp=N,3220µm,0.4s								
AQU				AML	AML				
	comp=E,3160µm,0.5s								
AQU				AML	AML				
	comp=N,3120µm,0.4s								
CSP1	**Cessapalombo**	**0.39**	**0**⇑*i*	P	Pg	03 52 42.6	+0.1		
CSP1				S	Sb	03 52 49.1	-1.0		
OFFI	**Offida**	**0.43**	**56**	P	Pb	03 52 44.1	-0.4		
OFFI				S	Sb	03 52 51.0	0.0		
FIAM	**Fiamignano**	**0.44**	**188**⇑*i*	P	Pb	03 52 44.0	-0.7		
FIAM				S	Sb	03 52 50.8	-0.5		
FIAM				AML	AML				
	comp=E,2275µm,0.2s								
FIAM				AML	AML				
	comp=N,1935µm,0.2s								
CESX	**Cesi**	**0.47**	**259**	*e*P	Pb	03 52 44.7	-0.4		
CESX				S	Sb	03 52 51.8	-0.4		
CESX				AML	AML				
	comp=E,1059µm,1.5s								
CESX				AML	AML				
	comp=N,1054µm,0.3s								
MNTP	**Montappone**	**0.48**	**24**⇑*i*	P	Pb	03 52 44.7	-0.6		
MNTP				S	Sb	03 52 52.0	-0.5		
SEF1	**Sefro**	**0.48**	**337**	*e*P	Pg	03 52 44.3	+0.1		
SEF1				S	Sb	03 52 51.7	-1.0		
SEF1				AML	AML				
	comp=E,4540µm,0.6s								
SEF1				AML	AML				
	comp=N,4500µm,0.4s								
SEF1				AML	AML				
	comp=N,4500µm,0.3s								
SEF1				AML	AML				
	comp=E,4535µm,0.6s								
MDAR	**Monte D'Aria**	**0.49**	**355**	*e*P	Pg	03 52 44.4	0.0		
MDAR				S	Sb	03 52 52.2	-0.9		
MDAR				AML	AML				
	comp=E,2030µm,1.0s								
MDAR				AML	AML				
	comp=N,2800µm,0.3s								
MDAR				AML	AML				
	comp=E,2035µm,1.1s								
MDAR				AML	AML				
	comp=N,2800µm,0.2s								
PIO1	**Pioraco**	**0.50**	**341**	*e*P	Pg	03 52 44.6	+0.1		
PIO1				S	Sb	03 52 52.7	-0.6		
FAGN	**Fagnano**	**0.52**	**147**	*e*P	Pg	03 52 45.2	+0.4		
FAGN				S	Sb	03 52 52.9	-0.7		
FAGN				AML	AML				
	comp=E,3250µm,0.5s								
FAGN				AML	AML				
	comp=N,5415µm,1.3s								
ASSB	**Assisi San Ben**	**0.53**	**311**	*e*P	Pg	03 52 45.4	+0.5		
ASSB				S	Sb	03 53 53.0	-0.9		
FIU1	**Fiuminata**	**0.53**	**338**	*e*P	Pg	03 52 45.1	+0.2		
FIU1				S	Sb	03 52 53.1	-0.9		
FIU1				AML	AML				
	comp=E,2835µm,1.6s								
FIU1				AML	AML				
	comp=N,3021µm,1.4s								
FIU1				AML	AML				
	comp=N,2135µm,0.2s								
FIU1				AML	AML				
	comp=E,2192µm,0.3s								
SSM1	**San Severino M**	**0.53**	**358**	*e*P	Pg	03 52 45.1	+0.1		
SSM1				S	Sb	03 53 53.7	-0.3		
TRTR	**Tortoreto Alta**	**0.54**	**78**⇓*i*	P	Pb	03 52 46.3	0.0		
TRTR				S	Sb	03 52 55.3	+1.2		
TRTR				AML	AML				
	comp=N,3270µm,1.2s								
TRTR				AML	AML				
	comp=E,3605µm,0.3s								
GAG1	**Gagliole**	**0.55**	**350**	*e*P	Pg	03 52 45.4	+0.1		
GAG1				S	Sb	03 52 53.8	-0.7		
GAG1				AML	AML				
	comp=N,4394µm,0.4s								
GAG1				AML	AML				
	comp=E,3767µm,3.9s								
VCEL	**Villa Celiera**	**0.56**	**123**	*e*P	Pg	03 52 46.2	+0.6		
VCEL				S	Sg	03 52 53.5	+0.5		
VCEL				AML	AML				
	comp=E,3520µm,0.3s								
VCEL				AML	AML				
	comp=N,3220µm,0.8s								
VCEL				AML	AML				
	comp=E,3525µm,0.3s								
SNTG	**Esanatoglia**	**0.59**	**341**	*e*P	Pg	03 52 46.0	-0.1		
SNTG				S	Sb	03 52 55.4	-0.3		
SNTG				AML	AML				
	comp=N,968µm,0.6s								
SNTG				AML	AML				
	comp=E,1082µm,0.8s								
TRE1	**Treia**	**0.62**	**7**	*e*P	Pb	03 52 47.2	-0.5		
TRE1				S	Sb	03 52 57.0	+0.5		
EL6	**Elcito**	**0.63**	**353**	*e*P	Pg	03 52 46.9	-0.1		
EL6				S	Sb	03 52 56.8	-0.2		
ATCC	**AVT- Casa Cast**	**0.64**	**320**	*e*P	Pg	03 52 47.2	+0.1		
ATCC				S	Sb	03 52 56.7	-0.4		
T0110	**Collepietro**	**0.64**	**138**	*e*P	Pg	03 52 47.0	0.0		
T0110				AML	AML				
	comp=E,2140µm,0.2s								
T0110				AML	AML				
	comp=N,2930µm,0.4s								
CADA	**Capodarco di F**	**0.64**	**40**	P	Pb	03 52 48.5	+0.4		
CADA				S	Sn	03 52 58.9	-1.4		
CING	**Cingoli**	**0.68**	**360**	*e*P	Pg	03 52 47.6	-0.2		
CING				S	Sb	03 52 58.2	0.0		
FOSV	**Fossato di Vic**	**0.68**	**332**	⇓P	Pg	03 52 47.8	0.0		
FOSV				S	Sb	03 52 57.9	-0.4		
FOSV				AML	AML				
	comp=N,1120µm,0.2s								
FOSV				AML	AML				
	comp=E,1156µm,1.5s								
SRES	**S.Oreste - Sor**	**0.69**	**228**	*e*P	Pb	03 52 49.1	+0.1		
SRES				AML	AML				
	comp=E,220µm,0.4s								
SRES				AML	AML				
	comp=E,220µm,0.4s								
SRES				AML	AML				
	comp=N,178µm,1.6s								
PTQR	**Pietraquaria**	**0.69**	**168**	*e*P	Pg	03 52 48.0	-0.1		
PTQR				AML	AML				
	comp=E,328µm,0.5s								
PTQR				AML	AML				
	comp=N,293µm,1.5s								
PTQR				AML	AML				
	comp=N,292µm,1.5s								
PTQR				AML	AML				
	comp=E,327µm,0.5s								
CIMA	**Civitanova Mar**	**0.70**	**29**	*e*P	Pb	03 52 49.5	+0.5		
CIMA				S	Sn	03 53 01.1	-0.5		
PP3	**Marolino**	**0.74**	**24**⇓*i*	P	Pb	03 52 49.8	0.0		
PP3				S	Sn	03 53 01.9	-0.8		
PP3				AML	AML				
	comp=E,3085µm,0.5s								
PP3				AML	AML				
	comp=N,1710µm,0.5s								
PP3				AML	AML				
	comp=E,3120µm,0.5s								
PP3				AML	AML				
	comp=N,1705µm,0.5s								
PP3				AML	AML				
	comp=N,1730µm,0.5s								
PP3				AML	AML				
	comp=E,3085µm,0.5s								
MURB	**Monte Urbino**	**0.75**	**319**	*e*P	Pg	03 52 49.4	+0.2		
MURB				AML	AML				
	comp=N,2165µm,1.0s								
MURB				AML	AML				
	comp=N,2570µm,0.2s								
MURB				AML	AML				
	comp=E,3470µm,0.2s								
MURB				AML	AML				
	comp=N,2160µm,1.0s								
MURB				AML	AML				
	comp=E,3640µm,0.2s								
MTCE	**Montecelio**	**0.76**	**207**	P	Pg	03 52 49.4	0.0		
CERT	**Cerreto**	**0.77**	**192**	*e*P	Pg	03 52 49.4	-0.2		
CERT				AML	AML				
	comp=E,653µm,0.4s								
CERT				AML	AML				
	comp=N,423µm,0.3s								
ATTE	**AVT- Monte Tez**	**0.80**	**309**	*e*P	Pb	03 52 50.6	-0.2		
ATTE				S	Sb	03 53 02.5	+0.7		
SSFR	**Montelago di S**	**0.80**	**337**	AML	AML				
	comp=N,1870µm,0.2s								
SSFR				AML	AML				
	comp=N,1720µm,0.3s								
SSFR				AML	AML				
	comp=E,1920µm,1.1s								
SSFR				AML	AML				
	comp=E,1790µm,1.1s								
ATFO	**Monte Foce - G**	**0.81**	**325**	AML	AML				
	comp=E,772µm,1.0s								
ATFO				AML	AML				
	comp=E,772µm,1.0s								
ATFO				AML	AML				
	comp=N,694µm,0.2s								
ARVD	**Arcevia**	**0.82**	**347**	AML	AML				
	comp=N,452µm,1.3s								
ARVD				AML	AML				
	comp=E,526µm,0.2s								
MGAB	**Montegabbione**	**0.83**	**285**	*e*P	Pb	03 52 52.0	+0.6		
MGAB				AML	AML				
	comp=N,906µm,0.8s								
MGAB				AML	AML				
	comp=E,854µm,1.1s								
MGAB				AML	AML				
	comp=N,946µm,1.2s								
MGAB				AML	AML				
	comp=E,1012µm,1.2s								
INTR	**Introdacqua**	**0.86**	**143**	*e*P	Pg	03 52 50.6	-0.7		
INTR				S	Sb	03 53 03.2	-0.4		
INTR				AML	AML				
	comp=E,520nm,0.9s								
INTR				AML	AML				
	comp=N,642nm,0.8s								
INTR				AML	AML				
	comp=E,521nm,0.9s								
INTR				AML	AML				
	comp=E,526µm,1.0s								
INTR				AML	AML				
	comp=N,874µm,0.8s								
INTR				AML	AML				
	comp=N,642nm,0.8s								
FRON	**Frontone**	**0.89**	**337**	AML	AML				
	comp=E,453µm,1.6s								
FRON				AML	AML				
	comp=N,807µm,0.6s								
ATVO	**AVT- Monte Val**	**0.90**	**320**	AML	AML				
	comp=N,467µm,0.4s								
ATVO				AML	AML				
	comp=E,392µm,0.6s								
AOI	**Ancona**	**0.90**	**19**	AML	AML				
	comp=N,569µm,1.2s								
AOI				AML	AML				
	comp=E,435µm,1.0s								
COR1	**Corinaldo**	**0.94**	**351**	AML	AML				
	comp=E,1990µm,1.6s								
COR1				AML	AML				
	comp=N,1495µm,1.3s								
ATPI	**Pietralunga -**	**0.95**	**322**	AML	AML				
	comp=E,464µm,1.2s								
ATPI				AML	AML				
	comp=N,350µm,1.3s								
RMP	**Rome, Mte Porz**	**0.96**	**203**	AML	AML				
	comp=E,320µm,0.9s								
RMP				AML	AML				
	comp=N,314µm,1.0s								
SACS	**San Casciano d**	**0.96**	**279**	AML	AML				
	comp=N,254µm,0.4s								
SACS				AML	AML				
	comp=E,236µm,1.1s								
PIEI	**Pieia**	**0.97**	**330**	AML	AML				
	comp=E,480µm,0.9s								
PIEI				AML	AML				
	comp=N,406µm,0.2s								
LPEL	**Lama dei Pelig**	**0.98**	**132**	AML	AML				
	comp=N,1010µm,0.2s								
LPEL				AML	AML				
	comp=E,778µm,0.3s								
MPAG	**Monte Paganucc**	**0.98**	**341**	AML	AML				
	comp=N,336µm,0.5s								
MPAG				AML	AML				
	comp=E,660µm,1.1s								
MPAG				AML	AML				
	comp=E,466µm,0.9s								
MPAG				AML	AML				
	comp=N,700µm,1.6s								
NARO	**Abbazia di Nar**	**1.02**	**334**	AML	AML				
	comp=N,206µm,1.5s								
NARO				AML	AML				
	comp=E,237µm,1.3s								
APEC	**Apecchio**	**1.03**	**327**	AML	AML				
	comp=N,473µm,0.4s								
APEC				AML	AML				
	comp=E,462µm,0.4s								
FSSB	**Fossombrone**	**1.04**	**343**	AML	AML				
	comp=E,1130µm,0.4s								
FSSB				AML	AML				
	comp=N,1130µm,0.3s								
CAFI	**Castiglion Fio**	**1.10**	**305**	AML	AML				
	comp=E,287µm,0.9s								
CAFI				AML	AML				
	comp=N,376µm,0.9s								
PARC	**Parchiule**	**1.18**	**324**	AML	AML				
	comp=N,249µm,1.2s								
PARC				AML	AML				
	comp=E,200µm,0.4s								
TRIV	**Trivento**	**1.37**	**133**	AML	AML				
	comp=N,169µm,1.3s								
TRIV				AML	AML				
	comp=E,139µm,0.9s								

*ROM **24** 03:53:55.5±0.1, 42.663N±0.005×13.277E±0.009, h6km, ML3.1/31, Error ellipse: s-maj=0.7km s-min=0.3km az=232.0*

ISC 24 03:53:56.0±0.8, **42.67N**±0.02×**13.29E**±0.02, **h13**km±6km, **n41**, σ0**.54**/55, **4C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.16**	**147**	*e*P	**Pg**	**03 53 59.6**	**-0.4**
CAMP				S	**Sg**	**03 54 02.5**	**-0.2**
CAMP				AML	AML		
	comp=E,14750µm,0.2s						
CAMP				AML	AML		
	comp=N,16000µm,0.6s						
RM33	**Pellescritta (**	**0.17**	**198**	P	**Pg**	**03 53 59.7**	**-0.4**
RM33				AML	AML		
	comp=N,12970µm,0.5s						
RM33				AML	AML		
	comp=E,14600µm,0.7s						
RM33				AML	AML		
	comp=E,15300µm,0.7s						
RM33				AML	AML		
	comp=N,12980µm,0.5s						
RM33				AML	AML		
	comp=E,14550µm,0.7s						
RM33				AML	AML		
	comp=E,15250µm,0.7s						
RM33				AML	AML		
	comp=N,13550µm,0.5s						
RM33				AML	AML		
	comp=N,12985µm,0.5s						
NRCA	**Norcia**	**0.20**	**321**	*e*P	**Pg**	**03 54 00.6**	**0.0**
NRCA				S	**Sg**	**03 54 03.9**	**+0.2**
TERO	**Teramo**	**0.24**	**102**	*e*P	**Pg**	**03 54 00.8**	**-0.3**
TERO				S	**Sg**	**03 54 04.7**	**+0.1**
TERO				AML	AML		
	comp=N,13450µm,0.6s						
TERO				AML	AML		
	comp=E,13700µm,0.7s						
TERO				AML	AML		
	comp=N,14600µm,0.6s						
TERO				AML	AML		
	comp=N,13500µm,0.6s						
TERO				AML	AML		
	comp=E,12650µm,0.7s						
GIGS	**Gran Sasso**	**0.30**	**137**	P	**Pg**	**03 54 02.1**	**-0.2**
GIGS				S	**Sg**	**03 54 06.9**	**+0.3**
GIGS				AML	AML		
	comp=E,1610µm,0.7s						
GIGS				AML	AML		
	comp=N,1155µm,0.9s						
AQU	**L'Aquila**	**0.33**	**165**	*e*P	**Pg**	**03 54 02.6**	**-0.1**
AQU				S	**Sg**	**03 54 07.8**	**+0.6**
AQU				AML	AML		
	comp=E,3785µm,1.1s						
AQU				AML	AML		
	comp=N,3640µm,1.2s						
AQU				AML	AML		
	comp=N,3520µm,1.2s						
AQU				AML	AML		
	comp=E,3785µm,1.5s						
GUMA	**Gualdo di Mace**	**0.39**	**5**	*e*P	**Pg**	**03 54 04.0**	**+0.2**
GUMA				S	**Sb**	**03 54 10.8**	**0.0**
GUMA				AML	AML		
	comp=E,12050µm,0.5s						
GUMA				AML	AML		
	comp=N,7760µm,0.4s						
GUMA				AML	AML		
	comp=N,9100µm,0.5s						
GUMA				AML	AML		
	comp=E,12850µm,0.5s						
FDMO	**Fiordimonte**	**0.39**	**338**	P	**Pg**	**03 54 03.9**	**0.0**
FDMO				S	**Sb**	**03 54 10.1**	**-0.8**
FDMO				AML	AML		
	comp=N,1960µm,0.6s						
FDMO				AML	AML		
	comp=E,1625µm,0.2s						
OFFI	**Offida**	**0.39**	**48**⇑	P	**Pb**	**03 54 04.8**	**-0.1**
OFFI				S	**Sb**	**03 54 12.1**	**+1.3**
OFFI				AML	AML		
	comp=E,8575µm,0.7s						
OFFI				AML	AML		
	comp=N,8225µm,0.5s						
ARRO	**Arrone**	**0.40**	**256**	P	**Pg**	**03 54 04.1**	**+0.2**
ARRO				S	**Sg**	**03 54 10.1**	**+0.8**
ARRO				AML	AML		
	comp=E,1770µm,0.7s						
ARRO				AML	AML		
	comp=E,1765µm,0.7s						
ARRO				AML	AML		
	comp=N,1635µm,1.1s						
CSP1	**Cessapalombo**	**0.42**	**352**	*e*P	**Pg**	**03 54 04.5**	**0.0**
CSP1				S	**Sg**	**03 54 11.0**	**+0.9**
CSP1				AML	AML		
	comp=E,2800µm,0.6s						
CSP1				AML	AML		
	comp=N,3425µm,0.4s						
FIAM	**Fiamignano**	**0.42**	**197**⇑	P	**Pg**	**03 54 04.8**	**+0.3**
FIAM				S	**Sg**	**03 54 10.6**	**+0.5**
FIAM				AML	AML		
	comp=N,3155µm,0.6s						
FIAM				AML	AML		
	comp=E,2800µm,0.6s						
CESI	**CESI - Serrava**	**0.43**	**320**⇑	P	**Pg**	**03 54 04.7**	**0.0**
CESI				S	**Sb**	**03 54 11.6**	**-0.6**
CESI				AML	AML		
	comp=E,2425µm,0.3s						
CESI				AML	AML		
	comp=N,4200µm,0.2s						
FAGN	**Fagnano**	**0.46**	**152**⇓	P	**Pg**	**03 54 05.5**	**+0.3**
FAGN				AML	AML		
	comp=E,4740µm,0.6s						
FAGN				AML	AML		
	comp=N,5725µm,0.5s						
TRTR	**Tortoreto Alta**	**0.48**	**74**⇑	P	**Pb**	**03 54 06.6**	**+0.3**
TRTR				AML	AML		
	comp=N,5735µm,0.9s						
TRTR				AML	AML		
	comp=E,7560µm,0.5s						
VCEL	**Villa Celiera**	**0.49**	**124**⇓	P	**Pg**	**03 54 06.0**	**+0.3**
VCEL				S	**Sb**	**03 54 14.0**	**+0.2**
VCEL				AML	AML		
	comp=N,4180µm,0.5s						
VCEL				AML	AML		
	comp=E,3385µm,1.5s						
CESX	**Cesi**	**0.53**	**263**	P	**Pg**	**03 54 05.8**	**-0.5**
CESX				S	**Sb**	**03 54 14.1**	**-0.6**
CESX				AML	AML		
	comp=N,1530µm,0.3s						
CESX				AML	AML		
	comp=E,1580µm,0.5s						
T0110	**Collepietro**	**0.58**	**141**⇓	P	**Pg**	**03 54 06.9**	**-0.4**
T0110				S	**Sb**	**03 54 16.4**	**+0.3**
T0110				AML	AML		
	comp=E,2830µm,0.7s						
T0110				AML	AML		
	comp=N,2700µm,0.5s						
ASSB	**Assisi San Ben**	**0.59**	**309**	P	**Pg**	**03 54 07.9**	**+0.3**
ASSB				S	**Sb**	**03 54 17.0**	**+0.3**
ASSB				AML	AML		
	comp=E,1200µm,1.5s						
ASSB				AML	AML		
	comp=N,1155µm,1.3s						
ASSB				AML	AML		
	comp=N,1150µm,1.3s						
SNTG	**Esanatoglia**	**0.64**	**336**	P	**Pg**	**03 54 08.4**	**0.0**
SNTG				AML	AML		
	comp=N,744µm,0.4s						
SNTG				AML	AML		
	comp=E,756µm,0.5s						
EL6	**Elcito**	**0.67**	**348**	P	**Pb**	**03 54 09.9**	**+0.2**
EL6				AML	AML		
	comp=E,1707µm,0.3s						
EL6				AML	AML		
	comp=N,1659µm,0.6s						
EL6				AML	AML		
	comp=E,1710µm,0.3s						
EL6				AML	AML		
	comp=N,1656µm,0.6s						
FOSV	**Fossato di Vic**	**0.73**	**328**	*e*P	**Pg**	**03 54 09.8**	**-0.4**
FOSV				AML	AML		
	comp=E,672µm,1.0s						
FOSV				AML	AML		
	comp=N,1195µm,0.4s						
PP3	**Marolino**	**0.74**	**18**	*e*P	**Pb**	**03 54 11.4**	**+0.6**
PP3				AML	AML		
	comp=N,1735µm,1.1s						
PP3				AML	AML		
	comp=E,2305µm,1.1s						
PP3				AML	AML		
	comp=E,2120µm,1.1s						
PP3				AML	AML		
	comp=N,1845µm,1.1s						
INTR	**Introdacqua**	**0.80**	**145**	*e*P	**Pg**	**03 54 10.5**	**-1.1**
INTR				AML	AML		
	comp=E,852nm,1.2s						
INTR				AML	AML		
	comp=N,914nm,0.7s						
INTR				AML	AML		
	comp=N,1360µm,0.7s						
INTR				AML	AML		
	comp=N,912nm,0.7s						
INTR				AML	AML		
	comp=E,854nm,1.2s						
INTR				AML	AML		
	comp=E,843µm,1.2s						
ARVD	**Arcevia**	**0.86**	**343**	AML	AML		
	comp=E,406µm,1.2s						
ARVD				AML	AML		
	comp=N,515µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.86**	**308**	P	**Pn**	**03 54 14.2**	**+0.2**
ATTE				AML	AML		
	comp=E,488µm,1.3s						
ATTE				AML	AML		
	comp=N,481µm,0.6s						
MGAB	**Montegabbione**	**0.90**	**286**	P	**Pn**	**03 54 14.8**	**+0.4**
MGAB				AML	AML		
	comp=N,1690µm,0.5s						
MGAB				AML	AML		
	comp=E,1765µm,1.5s						
MGAB				AML	AML		
	comp=N,1655µm,0.5s						
MGAB				AML	AML		
	comp=E,1880µm,0.7s						
LPEL	**Lama dei Pelig**	**0.91**	**133**	*e*P	**Pg**	**03 54 12.6**	**-1.0**
LPEL				AML	AML		
	comp=E,724µm,0.5s						
LPEL				AML	AML		

comp=N,662μm,0.9s
FRON Frontone 0.94 334 *e*P **Pg 03 54 14.0 -0.1**
FRON S **Sn 03 54 28.1 -0.2**
VIVA Pratoni del Vi 1.00 203 P **Pg 03 54 15.2 -0.1**
VIVA AML AML
comp=N,2200μm,0.5s
VIVA AML AML
comp=E,1660μm,1.6s
POFI Posta Fibreno 1.01 162 *e*P **Pn 03 54 16.2 +0.2**
POFI AML AML
comp=E,408μm,1.3s
POFI AML AML
comp=N,315μm,0.6s
SACS San Casciano d 1.03 280 *e*P **Pn 03 54 16.2 -0.1**
SACS AML AML
comp=E,652μm,1.2s
SACS AML AML
comp=N,765μm,0.9s
SACS AML AML
comp=E,609μm,1.0s
SACS AML AML
comp=N,746μm,0.9s
FSSB Fossombrone 1.08 340 *e*P **Pb 03 54 16.7 0.0**
FSSB AML AML
comp=N,1125μm,0.5s
FSSB AML AML
comp=E,1305μm,0.3s
GIUL Giuliano Di Ro 1.11 181 AML AML
comp=E,444μm,0.7s
GIUL AML AML
comp=N,400μm,0.7s
CAFI Castiglion Fio 1.17 304 *e*P **Pn 03 54 18.4 +0.2**
CAFI AML AML
comp=E,326μm,0.5s
CAFI AML AML
comp=N,266μm,0.6s
MODR Mondragone 1.59 164 P **Pb 03 54 25.6 +0.4**
MODR AML AML
comp=N,118μm,1.0s
MODR AML AML
comp=E,132μm,1.6s
TRIF Trifonti 1.81 285 AML AML
comp=E,101μm,0.8s
TRIF AML AML
comp=N,84μm,1.4s
ORZI Orzinuovi 3.65 320 S **Sb 03 55 43.0 -1.5**
ZONE Zone 3.84 325 S **Sn 03 55 40.0 +0.1**
MYKA Terra Mystica 3.96 4 *e*Pn **Pn 03 54 56.8 +0.2**
comp=N,1.6nm,0.3s
ABTA Abfaltersbach 4.11 353 *e*Pn **Pn 03 54 57.1 -1.6**
comp=N,4.6nm,0.3s

ROM 24 03:54:22.6±0.1, 42°.792N±0°.005×13°.15E±0°.01, h10km, ML2.4/3, 3C-1D, Error ellipse: s-maj=1.0km s-min=0.4km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**325**	*e*P		Pg		03 54 25.3	+0.5
NRCA				S		Sg		03 54 26.6	+0.2
NRCA				AML		AML			
	comp=N,55000μm,0.1s								
NRCA				AML		AML			
	comp=N,58900μm,0.1s								
NRCA				AML		AML			
	comp=E,66400μm,0.6s								
NRCA				AML		AML			
	comp=E,71750μm,0.6s								
FEMA	**Monte Fema**	**0.19**	**336**	⇑*e*P		Pg		03 54 27.3	+0.6
FEMA				S		Sg		03 54 30.4	+0.8
FEMA				AML		AML			
	comp=E,1980μm,0.2s								
FEMA				AML		AML			
	comp=N,2272μm,0.3s								
FDMO	**Fiordimonte**	**0.25**	**349**	⇓P		Pg		03 54 28.3	+0.5
FDMO				AML		AML			
	comp=E,907μm,0.4s								
FDMO				AML		AML			
	comp=N,829μm,0.2s								
CESI	**CESI - Serrava**	**0.28**	**319**	⇑P		Pg		03 54 29.1	+0.7
CESI				S		Sb		03 54 33.5	-1.1
CESI				AML		AML			
	comp=N,2835μm,0.2s								
CESI				AML		AML			
	comp=E,1157μm,0.3s								
GUMA	**Gualdo di Mace**	**0.30**	**26**	*e*P		Pb		03 54 29.6	-0.6
GUMA				S		Sb		03 54 34.3	-0.9
CSP1	**Cessapalombo**	**0.30**	**7**	*e*P		Pg		03 54 29.4	+0.6
CSP1				S		Sb		03 54 34.1	-1.2
CAMP	**Campotosto**	**0.32**	**144**	P		Pb		03 54 29.9	-0.6
CAMP				AML		AML			
	comp=E,5936μm,0.2s								
CAMP				AML		AML			
	comp=N,5512μm,0.2s								
TERO	**Teramo**	**0.37**	**117**	⇑P		Pg		03 54 30.6	+0.6
GIGS	**Gran Sasso**	**0.46**	**138**	P		Pg		03 54 32.1	+0.4

ROM 24 03:54:32.0±0.2, 42°.639N±0°.009×13°.32E±0°.01, h10km±1km, ML2.6/3, Error ellipse: s-maj=1.1km s-min=0.8km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**146**	P		Pg		03 54 35.6	+0.6
CAMP				S		Sg		03 54 37.9	+0.7
RM33	**Pellescritta (**	**0.15**	**210**	P		Pg		03 54 36.0	+0.5
RM33				S		Sg		03 54 38.5	+0.7
TERO	**Teramo**	**0.21**	**94**	P		Pg		03 54 37.2	+0.7
TERO				S		Sg		03 54 40.7	+1.2
NRCA	**Norcia**	**0.24**	**323**	P		Pg		03 54 37.5	+0.4
NRCA				S		Sg		03 54 41.5	+1.0
NRCA				AML		AML			
	comp=N,55000μm,0.1s								
NRCA				AML		AML			
	comp=E,66400μm,0.6s								
NRCA				AML		AML			
	comp=N,55050μm,0.1s								
NRCA				AML		AML			
	comp=E,71750μm,0.6s								
NRCA				AML		AML			
	comp=N,58900μm,0.1s								
NRCA				AML		AML			
	comp=N,8645μm,0.1s								
NRCA				AML		AML			
	comp=N,8051μm,0.1s								
NRCA				AML		AML			
	comp=E,9354μm,0.2s								
NRCA				AML		AML			
	comp=E,8720μm,0.2s								
GIGS	**Gran Sasso**	**0.27**	**135**	P		Pg		03 54 38.2	+0.7
GIGS				S		Sg		03 54 42.2	+1.1
AQU	**L'Aquila**	**0.29**	**167**	P		Pb		03 54 38.7	-0.7
AQU				S		Sb		03 54 43.5	-0.9
FEMA	**Monte Fema**	**0.38**	**329**	AML		AML			
	comp=N,2272μm,0.3s								
FEMA				AML		AML			
	comp=E,2061μm,0.4s								
ARRO	**Arrone**	**0.41**	**262**	P		Pb		03 54 41.9	+0.5
ARRO				S		Sb		03 54 48.1	+0.4
GUMA	**Gualdo di Mace**	**0.42**	**2**	P		Pb		03 54 41.2	-0.5
GUMA				S		Sb		03 54 48.3	+0.2
FDMO	**Fiordimonte**	**0.43**	**337**	P		Pb		03 54 42.9	+1.1
FDMO				S		Sg		03 54 46.8	+0.5
FDMO				AML		AML			
	comp=N,591μm,0.3s								
FDMO				AML		AML			
	comp=E,447μm,0.2s								
FDMO				AML		AML			
	comp=N,829μm,0.2s								
FDMO				AML		AML			
	comp=E,907μm,0.4s								
CESI	**CESI - Serrava**	**0.47**	**321**	P		Pb		03 54 43.0	+0.5
CESI				S		Sg		03 54 48.2	+0.6
CESI				AML		AML			
	comp=E,1714μm,0.3s								
CESI				AML		AML			
	comp=N,4094μm,0.2s								
CESI				AML		AML			
	comp=E,572μm,0.2s								
CESI				AML		AML			
	comp=N,1460μm,0.2s								
VVLD	**Villa Vallelon**	**0.80**	**163**	AML		AML			
	comp=N,764μm,0.6s								
VVLD				AML		AML			
	comp=E,630μm,0.6s								
GUAR	**Guarcino**	**0.84**	**180**	AML		AML			
	comp=E,877μm,0.5s								
GUAR				AML		AML			
	comp=N,920μm,0.4s								
GUAR				AML		AML			
	comp=N,918μm,0.4s								

ROM 24 03:55:20.9±0.1, 42°.781N±0°.004×13°.148E±0°.007, h8km, ML2.7/20, 3C-2D, Error ellipse: s-maj=0.7km s-min=0.2km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**335**	⇓*i*P		Pg		03 55 23.5	+0.7
NRCA				S		Sg		03 55 24.9	+0.6
NRCA				AML		AML			
	comp=E,38100μm,0.1s								
NRCA				AML		AML			
	comp=E,38100μm,0.2s								
NRCA				AML		AML			
	comp=N,47050μm,1.1s								
NRCA				AML		AML			
	comp=N,42100μm,1.1s								
NRCA				AML		AML			
	comp=N,29182μm,0.1s								
NRCA				AML		AML			
	comp=E,39650μm,0.1s								
NRCA				AML		AML			
	comp=N,33782μm,0.1s								
AQT1	**Arquata del Tr**	**0.11**	**94**	*e*P		Pg		03 55 24.0	+0.5
AQT1				S		Sg		03 55 26.0	+0.7
FEMA	**Monte Fema**	**0.20**	**338**	*e*P		Pg		03 55 25.6	+0.7
FEMA				S		Sg		03 55 28.8	+1.1
FDMO	**Fiordimonte**	**0.26**	**350**	⇑*i*P		Pg		03 55 26.6	+0.5
FDMO				S		Sg		03 55 30.6	+1.0
FDMO				AML		AML			
	comp=E,2255μm,1.3s								
FDMO				AML		AML			
	comp=N,2985μm,0.8s								
RM33	**Pellescritta (**	**0.28**	**170**	*e*P		Pg		03 55 27.1	+0.7
RM33				S		Sg		03 55 31.5	+1.3
CESI	**CESI - Serrava**	**0.29**	**321**	⇓*i*P		Pg		03 55 27.3	+0.7
CESI				S		Sg		03 55 31.7	+1.2
CESI				AML		AML			
	comp=E,3525μm,0.1s								
CESI				AML		AML			
	comp=N,5965μm,0.2s								
CAMP	**Campotosto**	**0.31**	**142**	P		Pg		03 55 27.5	+0.4
CAMP				S		Sg		03 55 32.5	+1.3
GUMA	**Gualdo di Mace**	**0.31**	**26**	⇑*i*P		Pg		03 55 27.8	+0.6
GUMA				S		Sb		03 55 32.9	-1.1
GUMA				AML		AML			
	comp=N,8780μm,0.3s								
GUMA				AML		AML			
	comp=N,7425μm,0.3s								
GUMA				AML		AML			
	comp=E,7250μm,0.3s								
GUMA				AML		AML			
	comp=E,10375μm,0.2s								
GUMA				AML		AML			
	comp=N,8775μm,0.3s								
GUMA				AML		AML			
	comp=E,6360μm,0.2s								
GUMA				AML		AML			
	comp=E,3866μm,0.4s								
ARRO	**Arrone**	**0.35**	**235**	P		Pb		03 55 28.6	-0.6
ARRO				S		Sb		03 55 34.3	-0.6
TERO	**Teramo**	**0.37**	**115**	P		Pb		03 55 29.7	0.0
TERO				S		Sg		03 55 34.0	+0.9
SEF1	**Sefro**	**0.39**	**338**	*e*P		Pg		03 55 29.1	+0.5
SEF1				S		Sb		03 55 35.1	-1.2
SEF1				AML		AML			
	comp=E,5295μm,1.1s								
SEF1				AML		AML			
	comp=E,5295μm,1.1s								
SEF1				AML		AML			
	comp=N,4785μm,0.5s								
OFFI	**Offida**	**0.42**	**69**	⇑*i*P		Pb		03 55 30.2	-0.5
OFFI				S		Sb		03 55 37.6	+0.5
OFFI				AML		AML			
	comp=N,2545μm,1.1s								
OFFI				AML		AML			
	comp=E,2145μm,1.5s								
OFFI				AML		AML			
	comp=E,1611μm,0.9s								
ASSB	**Assisi San Ben**	**0.44**	**306**	*e*P		Pg		03 55 30.1	+0.5
ASSB				S		Sg		03 55 36.2	+0.8
ASSB				AML		AML			
	comp=E,1660μm,0.2s								
ASSB				AML		AML			
	comp=N,1410μm,0.3s								
ASSB				AML		AML			
	comp=E,672μm,0.3s								
ASSB				AML		AML			
	comp=N,844μm,0.2s								
SSM1	**San Severino M**	**0.45**	**3**	*e*P		Pg		03 55 29.9	+0.3
SSM1				S		Sg		03 55 36.6	+1.1
CESX	**Cesi**	**0.45**	**248**	*e*P		Pg		03 55 30.1	+0.4
CESX				S		Sb		03 55 37.1	-0.9
CESX				AML		AML			
	comp=E,843μm,1.4s								
CESX				AML		AML			
	comp=E,842μm,1.4s								
CESX				AML		AML			
	comp=N,1290μm,0.4s								
GAG1	**Gagliole**	**0.46**	**353**	*e*P		Pb		03 55 30.6	-0.6
GAG1				S		Sb		03 55 37.5	-0.8
SNTG	**Esanatoglia**	**0.50**	**342**	*e*P		Pg		03 55 30.8	+0.2
SNTG				S		Sb		03 55 38.3	-1.0
SNTG				AML		AML			
	comp=E,719μm,0.1s								
SNTG				AML		AML			
	comp=N,866μm,0.2s								
ATCC	**AVT- Casa Cast**	**0.55**	**317**	*e*P		Pg		03 55 32.0	+0.5
ATCC				S		Sb		03 55 40.4	-0.4
ATCC				AML		AML			
	comp=E,1260μm,0.2s								
ATCC				AML		AML			
	comp=N,862μm,0.5s								
ATCC				AML		AML			
	comp=E,607μm,0.2s								
ATCC				AML		AML			
	comp=N,686μm,0.3s								
EL6	**Elcito**	**0.55**	**356**	*e*P		Pg		03 55 31.6	+0.1
EL6				S		Sb		03 55 40.2	-0.7
TRTR	**Tortoreto Alta**	**0.56**	**87**	*e*P		Pb		03 55 32.9	-0.1
FOSV	**Fossato di Vic**	**0.59**	**331**	*e*P		Pg		03 55 32.6	+0.3
FOSV				S		Sg		03 55 40.9	+0.9
FOSV				AML		AML			
	comp=E,452μm,1.1s								
FOSV				AML		AML			
	comp=N,774μm,0.3s								
PP3	**Marolino**	**0.69**	**29**	*e*P		Pb		03 55 35.2	+0.1
PP3				S		Sn		03 55 46.9	-0.8
PP3				AML		AML			
	comp=E,2895μm,0.4s								
PP3				AML		AML			
	comp=E,2890μm,0.4s								
PP3				AML		AML			
	comp=N,2080μm,0.3s								
PP3				AML		AML			
	comp=N,2260μm,0.3s								
PP3				AML		AML			
	comp=E,2925μm,0.4s								
PP3				AML		AML			
	comp=E,1571μm,0.6s								
PP3				AML		AML			
	comp=E,1826μm,0.6s								
SRES	**S.Oreste - Sor**	**0.72**	**221**	*e*P		Pb		03 55 35.6	0.0
SRES				S		Sb		03 55 47.1	+1.4
SRES				AML		AML			
	comp=E,342μm,0.2s								
SRES				AML		AML			
	comp=N,235μm,0.4s								
ARVD	**Arcevia**	**0.73**	**348**	*e*P		Pg		03 55 34.9	-0.1
ARVD				S		Sb		03 55 45.8	-0.3
ARVD				AML		AML			
	comp=E,299μm,0.2s								
ARVD				AML		AML			
	comp=N,264μm,0.1s								
MGAB	**Montegabbione**	**0.77**	**280**	P		Pg		03 55 33.2	-2.5
FRON	**Frontone**	**0.80**	**337**	*e*P		Pg		03 55 36.2	-0.1
FRON				S		Sb		03 55 47.9	0.0
FRON				AML		AML			
	comp=E,330μm,0.2s								
FRON				AML		AML			
	comp=E,330μm,0.2s								
FRON				AML		AML			
	comp=N,506μm,0.2s								
ATVO	**AVT- Monte Val**	**0.81**	**318**	*e*P		Pg		03 55 36.8	+0.4
ATVO				AML		AML			
	comp=N,314μm,0.8s								
ATVO				AML		AML			
	comp=E,292μm,1.0s								
ATVO				AML		AML			
	comp=N,314μm,0.8s								
ATVO				AML		AML			
	comp=E,170μm,0.6s								
ATVO				AML		AML			
	comp=N,169μm,0.8s								
AOI	**Ancona**	**0.84**	**23**	*e*P		Pb		03 55 37.4	-0.3
AOI				AML		AML			
	comp=N,461μm,1.0s								
AOI				AML		AML			
	comp=E,412μm,1.0s								
AOI				AML		AML			
	comp=E,249μm,0.2s								
AOI				AML		AML			
	comp=N,312μm,0.2s								
PIEI	**Pieia**	**0.88**	**329**	*e*P		Pg		03 55 37.2	-0.6
PIEI				S		Sb		03 55 51.3	+1.0
MPAG	**Monte Paganucc**	**0.89**	**342**	*e*P		Pb		03 55 38.4	-0.3
MPAG				S		Sn		03 55 52.0	-0.9
MPAG				AML		AML			
	comp=E,1044μm,1.1s								
MPAG				AML		AML			
	comp=N,1156μm,1.0s								
MPAG				AML		AML			
	comp=N,362μm,0.7s								
MPAG				AML		AML			
	comp=E,1041μm,1.1s								
MPAG				AML		AML			
	comp=E,538μm,0.3s								
MPAG				AML		AML			
	comp=N,362μm,0.7s								
MPAG				AML		AML			
	comp=N,1206μm,1.6s								
MPAG				AML		AML			
	comp=E,537μm,0.3s								
MPAG				AML		AML			
	comp=N,609μm,0.5s								
NARO	**Abbazia di Nar**	**0.93**	**334**	*e*P		Pg		03 55 38.6	-0.2
FSSB	**Fossombrone**	**0.95**	**344**	*e*P		Pg		03 55 39.1	0.0
FSSB				S		Sn		03 55 53.5	-0.7
FSSB				AML		AML			
	comp=E,800μm,0.3s								
FSSB				AML		AML			
	comp=N,1180μm,0.3s								
CAFI	**Castiglion Fio**	**1.02**	**303**	P		Pn		03 55 41.5	-0.1
CAFI				AML		AML			
	comp=N,122μm,0.4s								
CAFI				AML		AML			
	comp=E,186μm,0.5s								
CAFI				AML		AML			
	comp=N,122μm,0.4s								
CAFI				AML		AML			
	comp=E,90μm,1.3s								
CAFI				AML		AML			
	comp=N,92μm,0.3s								
RUFI	**Rufina**	**1.60**	**312**	*e*P		Pb		03 55 50.5	-0.1
PTRJ	**Pietraroja**	**1.75**	**144**	S		Sg		03 56 18.0	+0.9
MCRV	**Calabrutti - M**	**2.50**	**142**	P		Pg		03 56 09.3	+0.4

ROM 24 03:55:38.3±0.1, 42°.731N±0°.004×13°.185E±0°.010, h10km, ML3.0/5, 3C, Error ellipse: s-maj=0.6km s-min=0.5km az=262.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**333**	*e*P		Pg		03 55 41.7	+0.4
NRCA				S		Sg		03 55 43.9	+0.5
RM33	**Pellescritta (**	**0.22**	**174**	⇑*i*P		Pg		03 55 43.7	+0.7
RM33				S		Sg		03 55 47.6	+1.4
RM33				AML		AML			
	comp=N,9060μm,0.3s								
RM33				AML		AML			
	comp=N,8790μm,0.2s								
RM33				AML		AML			
	comp=E,4950μm,0.3s								
RM33				AML		AML			
	comp=N,9035μm,0.3s								
RM33				AML		AML			
	comp=E,5360μm,0.3s								
RM33				AML		AML			
	comp=N,8785μm,0.2s								
FEMA	**Monte Fema**	**0.25**	**337**	*e*P		Pg		03 55 44.0	+0.5
FEMA				S		Sg		03 55 48.2	+1.2
CAMP	**Campotosto**	**0.26**	**140**	⇑*i*P		Pg		03 55 44.1	+0.5
CAMP				S		Sg		03 55 48.2	+1.1
CAMP				AML		AML			
	comp=E,4435μm,0.2s								
CAMP				AML		AML			
	comp=N,1860μm,1.2s								
FDMO	**Fiordimonte**	**0.31**	**347**	*e*P		Pg		03 55 45.0	+0.3
FDMO				S		Sg		03 55 49.9	+1.0
TERO	**Teramo**	**0.33**	**109**	*e*P		Pg		03 55 45.2	+0.3
TERO				S		Sg		03 55 50.1	+0.9
TERO				AML		AML			
	comp=E,3440μm,0.3s								
TERO				AML		AML			
	comp=N,5430μm,0.1s								
TERO				AML		AML			
	comp=E,3435μm,0.3s								
TERO				AML		AML			
	comp=N,5425μm,0.1s								
TERO				AML		AML			
	comp=N,6365μm,0.1s								
TERO				AML		AML			
	comp=E,3915μm,0.3s								
CESI	**CESI - Serrava**	**0.34**	**323**	*e*P		Pg		03 55 45.5	+0.3
CESI				S		Sg		03 55 50.9	+1.1
ARRO	**Arrone**	**0.34**	**244**	*e*P		Pb		03 55 46.0	-0.5
ARRO				S		Sb		03 55 51.6	-0.4
GUMA	**Gualdo di Mace**	**0.35**	**18**	*e*P		Pg		03 55 46.0	+0.6
GUMA				S		Sb		03 55 51.8	-0.5
GIGS	**Gran Sasso**	**0.40**	**135**	*e*P		Pg		03 55 46.4	+0.1
GIGS				S		Sg		03 55 52.2	+0.7
GIGS				AML		AML			
	comp=E,966μm,0.2s								
GIGS				AML		AML			
	comp=N,628μm,0.2s								
AQU	**L'Aquila**	**0.41**	**157**	*e*P		Pg		03 55 47.0	+0.5
AQU				S		Sb		03 55 53.2	-0.8
OFFI	**Offida**	**0.42**	**61**	⇑*i*P		Pb		03 55 47.7	-0.1
OFFI				S		Sb		03 55 55.6	+1.3
FIAM	**Fiamignano**	**0.47**	**186**	*e*P		Pg		03 55 48.0	+0.6
FIAM				S		Sb		03 55 54.8	-0.8
TRTR	**Tortoreto Alta**	**0.54**	**82**	*e*P		Pb		03 55 50.2	+0.3
FAGN	**Fagnano**	**0.55**	**147**	S		Sb		03 55 59.0	+1.0
ATCC	**AVT- Casa Cast**	**0.60**	**319**	S		Sb		03 56 01.0	+1.4
T0110	**Collepietro**	**0.67**	**139**	*e*P		Pg		03 55 51.2	-0.1
T0110				S		Sb		03 56 01.8	+0.3
AOI	**Ancona**	**0.87**	**20**	P		Pg		03 55 54.0	-1.2
AOI				S		Sn		03 56 09.7	+0.2
MCIV	**Monte Civitell**	**1.11**	**273**	S		Sn		03 56 15.0	-0.4
SALB	**San Lorenzo Be**	**3.71**	**139**	AML		AML			
	comp=N,70μm,0.4s								
SALB				AML		AML			
	comp=E,150μm,1.6s								
SALB				AML		AML			
	comp=N,120μm,0.7s								
SALB				AML		AML			
	comp=E,70μm,0.5s								
SALB				AML		AML			
	comp=E,61μm,0.9s								

*STR **24** 03:55:48.4±0.5, 46°.N±3°×±°, h15km±5km, MLv1.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=97.3, preliminary*
*ZUR **24** 03:55:48.2, 46°.49N×7°.08E, h-1km, MLh1.5/16, Error ellipse: s-maj=1.4km s-min=0.6km az=83.0*
*LDG **24** 03:55:48.4±0.1, 46°.48N×7°.05E, h2km, Md1.9/1, Ml2.0/15, Error ellipse: s-maj=1.7km s-min=1.3km az=83.0*
ISC 24 03:55:48.2±0.8, 46°.48N±0°.02×7°.06E±0°.02, h14km±6km, n51, σ1.9 04/88, 3C, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.15**	**209**	⇑Pg	**Pg**	**03 55 51.8**	**-0.4**
AIGLE				Sg	**Sg**	**03 55 54.9**	**+0.1**
SAIG	**Aigle Rue de l**	**0.17**	**202**	Sg	**Sg**	**03 55 55.3**	**+0.1**
SENIN	**Lac Senin/Sane**	**0.20**	**125**	⇑Pg	**Pg**	**03 55 52.2**	**-0.8**
SENIN				Sg	**Sg**	**03 55 55.6**	**-0.6**
GRYON	**Gryon**	**0.23**	**172**	⇑Pg	**Pg**	**03 55 53.0**	**-0.4**
GRYON				Sg	**Sg**	**03 55 56.8**	**-0.1**
SALAN	**Lac Salanfe**	**0.34**	**191**	Pg	**Pg**	**03 55 55.3**	**0.0**
SALAN				Sg	**Sg**	**03 56 00.2**	**+0.1**
LKBD	**Leukerbad**	**0.40**	**103**	Pg	**Pg**	**03 55 55.7**	**-0.7**
LKBD				Sg	**Sg**	**03 56 01.9**	**0.0**
LKBD2	**Leukerbad 2**	**0.41**	**104**	Pg	**Pg**	**03 55 56.5**	**-0.1**
LKBD2				Sg	**Sg**	**03 56 02.4**	**0.0**
OGSI	**Sixt**	**0.46**	**208**	Pg	**Pg**	**03 55 57.7**	**+0.3**
OGSI				Sg	**Sg**	**03 56 04.2**	**+0.4**
OGSI	**Sixt**	**0.46**	**208**	Pg	**Pg**	**03 55 57.5**	**+0.1**
OGSI				Sg	**Sg**	**03 56 04.1**	**+0.4**
DIX	**Grande Dixence**	**0.46**	**149**	Sg	**Sg**	**03 56 04.1**	**+0.2**
LAUCH	**Lauchernalp**	**0.49**	**97**	Pg	**Pg**	**03 55 57.9**	**-0.2**
EMBD	**Embd, Matterta**	**0.59**	**116**	Sg	**Sg**	**03 56 07.6**	**-0.2**
BRANT	**Les Verrieres**	**0.61**	**319**	Pg	**Pb**	**03 56 00.9**	**+0.2**
BRANT	**Les Verrieres**	**0.61**	**319**	Sg	**Sg**	**03 56 07.8**	**-0.6**
CABF	**La Chapelle**	**0.69**	**282**	*e*Pg	**Pg**	**03 56 00.6**	**-1.0**
CABF	**La Chapelle**	**0.69**	**282**	*e*Pn	**Pb**	**03 56 03.0**	**+1.0**
CABF				*e*Sg	**Sg**	**03 56 09.9**	**-0.8**
CABF				*e*Sn	**Sn**	**03 56 13.2**	**-0.8**
	3.8nm,0.3s						
SAIRA	**Les Sairains D**	**0.83**	**1**	Pg	**Pb**	**03 56 04.6**	**+0.2**
RIVEL	**MONT RIVEL**	**0.83**	**290**	Pg	**Pg**	**03 56 04.7**	**+0.3**
RIVEL				Pn	**Pn**	**03 56 06.8**	**+1.2**
RIVEL				Sg	**Sb**	**03 56 16.9**	**+1.3**
RSL	**Roselend**	**0.85**	**201**	Pg	**Pb**	**03 56 04.9**	**+0.2**
RSL				Pn	**Pn**	**03 56 07.9**	**+2.1**
RSL				Sg	**Sb**	**03 56 16.2**	**+0.2**
BOURR	**Bourrignon**	**0.92**	**7**	Pg	**Pb**	**03 56 06.4**	**+0.3**
BOUC	**Bouclans**	**0.95**	**325**	Pg	**Pn**	**03 56 07.3**	**+0.3**
BOUC				Pn	**Pg**	**03 56 07.9**	**+1.4**
BOUC				Sg	**Sg**	**03 56 19.6**	**+0.6**
BOUC				Sn	**Sn**	**03 56 21.1**	**+0.7**
BALST	**Balsthal**	**0.96**	**27**	Pg	**Pg**	**03 56 06.9**	**+0.1**
BALST	**Balsthal**	**0.96**	**27**	Sg	**Sn**	**03 56 21.4**	**+0.6**
BALST	**Balsthal**	**0.96**	**27**	Pn	**Pn**	**03 56 08.2**	**+0.8**
LPL	**La Plagne**	**0.99**	**194**	*e*Pg	**Pb**	**03 56 07.3**	**+0.1**
LPL	**La Plagne**	**0.99**	**194**	*e*P	**Pn**	**03 56 09.7**	**+1.9**
LPL				*e*Sg	**Sb**	**03 56 21.0**	**+0.8**
	2.4nm,0.3s						
LPG	**La Plagne**	**1.00**	**193**	*e*Pg	**Pb**	**03 56 07.5**	**0.0**
LPG	**La Plagne**	**1.00**	**193**	*e*P	**Pn**	**03 56 10.0**	**+1.9**
LPG				*e*Sg	**Sb**	**03 56 21.5**	**+0.8**
	2.8nm,0.2s						
SULZ	**Cheisacher**	**1.27**	**34**	Sn	**Sg**	**03 56 30.1**	**+0.8**
SULZ	**Cheisacher**	**1.27**	**34**	Pn	**Pg**	**03 56 13.2**	**+0.5**
HINF	**Hinteralfeld**	**1.35**	**354**	*e*Pg	**Pb**	**03 56 13.8**	**+0.6**
HINF				*e*Sg	**Sb**	**03 56 30.0**	**-0.3**
	8.6nm,0.3s						
KIZ	**Kirchzarten**	**1.59**	**21**	Pg	**Pb**	**03 56 18.1**	**+0.7**
KIZ	**Kirchzarten**	**1.59**	**21**	Pn	**Pn**	**03 56 15.4**	**-0.5**
HAU	**Haudompre**	**1.60**	**343**	*e*Pg	**Pb**	**03 56 17.2**	**-0.4**
HAU				*e*Sg	**Sb**	**03 56 38.1**	**+0.4**
	28nm,0.7s						
SLE	**Schleitheim**	**1.62**	**37**	Pg	**Pg**	**03 56 18.9**	**-0.4**
SLE	**Schleitheim**	**1.62**	**37**	Pn	**Pn**	**03 56 16.0**	**-0.3**
SLE	**Schleitheim**	**1.62**	**37**	Sn	**Sg**	**03 56 40.0**	**-0.2**
MBDF	**Montbardon**	**1.76**	**187**	*e*Pn	**Pn**	**03 56 17.6**	**-0.8**
MBDF	**Montbardon**	**1.76**	**187**	*e*Pg	**Pg**	**03 56 21.4**	**-0.7**
MBDF				*e*Sn	**Sn**	**03 56 39.9**	**-0.8**
MBDF				*e*Sg	**Sg**	**03 56 44.9**	**-0.1**
	1.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.77**	**208**	*e*Pn	**Pn**	**03 56 18.4**	**0.0**
ORIF	**Oris-en-Rattie**	**1.77**	**208**	*e*Pg	**Pg**	**03 56 21.6**	**-0.5**
ORIF				*e*Sg	**Sg**	**03 56 44.6**	**-0.4**
	2.2nm,0.3s						
CDF	**Champ du Feu**	**1.94**	**4**	*e*Pn	**Pn**	**03 56 19.6**	**-1.2**
CDF				*e*Sg	**Sb**	**03 56 48.7**	**+1.2**
	1.8nm,0.3s						
SFTF	**Sexfontaines**	**2.21**	**322**	*e*Pn	**Pn**	**03 56 23.6**	**-0.8**
SFTF				*e*Sn	**Sn**	**03 56 50.7**	**-0.8**
SFTF				*e*Sg	**Sg**	**03 56 57.6**	**-1.6**
	3.7nm,0.3s						
PAGF	**Fort de Pagny**	**2.27**	**337**	*e*Pn	**Pn**	**03 56 23.6**	**-1.6**
VIVF	**Saint-Julien-l**	**2.33**	**227**	*e*Pn	**Pn**	**03 56 26.1**	**0.0**
VIVF	**Saint-Julien-l**	**2.33**	**227**	*e*Pg	**Pb**	**03 56 31.2**	**+1.2**
VIVF				*e*Sn	**Sn**	**03 56 52.4**	**-2.1**
VIVF				*e*Sg	**Sg**	**03 57 01.7**	**-1.4**
	1.4nm,0.3s						
LOR	**Lormes**	**2.34**	**291**	*e*P	**Pn**	**03 56 27.7**	**+1.5**
	baz=114						
LOR				*e*Sg	**Sb**	**03 57 00.7**	**+2.0**
	2.0nm,0.3s,baz=127						
MEZF	**Maizieres J'vi**	**2.44**	**327**	*e*Pn	**Pn**	**03 56 26.2**	**-1.4**
MEZF				*e*Sn	**Sn**	**03 56 55.9**	**-1.3**
	1.0nm,0.2s						
SSF	**Saint Saulge**	**2.51**	**285**	*e*Pn	**Pn**	**03 56 27.4**	**-1.2**
SSF				*e*Sn	**Sn**	**03 56 57.0**	**-2.0**
SSF				*e*Sg	**Sb**	**03 57 06.2**	**+2.4**
	0.4nm,0.2s						
AVF	**Avril sur Loir**	**2.58**	**278**	*e*Pn	**Pn**	**03 56 28.5**	**-0.9**
AVF				*e*Sn	**Sn**	**03 56 58.8**	**-1.7**
AVF				*e*Sg	**Sb**	**03 57 08.7**	**+3.1**
	0.3nm,0.2s						
LASF	**Ste Croix**	**3.30**	**224**	*e*Pn	**Pn**	**03 56 39.7**	**+0.3**
LASF				*e*Sn	**Sn**	**03 57 16.7**	**-1.7**
LASF				*e*Sg	**Sg**	**03 57 31.9**	**-2.3**
	0.2nm,0.2s						

ROM 24 03:56:08.4±0.2, 42°.68N±0°.01×13°.23E±0°.02, h7km±2km, Md1.6/5, ML2.4/4, 2C-1D, Error ellipse: s-maj=1.8km s-min=1.5km az=222.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.17**	**184**	⇑*i*P	Pg	03 56 12.5	+0.7
RM33				S	Sg	03 56 14.8	+0.6
RM33				END			
NRCA	**Norcia**	**0.17**	**331**	⇑*i*P	Pg	03 56 14.0	+2.1
NRCA				S	Sg	03 56 15.0	+0.7
NRCA				END			
CAMP	**Campotosto**	**0.20**	**137**	*e*P	Pg	03 56 12.8	+0.5
TERO	**Teramo**	**0.28**	**102**	*e*P	Pg	03 56 14.7	+0.7
TERO				S	Sg	03 56 18.3	+0.6
TERO				AML	AML		
	comp=E,1549μm,0.1s						
TERO				AML	AML		
	comp=N,1224μm,0.1s						
TERO				AML	AML		
	comp=E,808μm,0.1s						
TERO				AML	AML		
	comp=E,652μm,0.1s						
FEMA	**Monte Fema**	**0.31**	**335**	*e*P	Pb	03 56 16.2	-0.1
FEMA				S	Sg	03 56 18.9	+0.2
FEMA				AML	AML		
	comp=E,1526μm,0.3s						
FEMA				AML	AML		
	comp=N,1225μm,0.1s						
FDMO	**Fiordimonte**	**0.37**	**344**	⇓P	Pb	03 56 17.3	0.0
FDMO				S	Sg	03 56 21.0	+0.5
FDMO				AML	AML		
	comp=N,820μm,0.2s						
FDMO				AML	AML		
	comp=E,635μm,0.5s						
GUMA	**Gualdo di Mace**	**0.39**	**12**	*e*P	Pb	03 56 18.6	+1.0
GUMA				S	Sb	03 56 23.6	-0.4
GUMA				END			
CESI	**CESI - Serrava**	**0.40**	**324**	P	Pb	03 56 18.1	+0.1
CESI				S	Sg	03 56 22.3	+0.8
CESI				AML	AML		
	comp=E,596μm,0.4s						
CESI				AML	AML		
	comp=N,826μm,0.3s						
ASSB	**Assisi San Ben**	**0.55**	**311**	*e*P	Pb	03 56 20.9	+0.4
ASSB				S	Sg	03 56 27.2	+0.9
EL6	**Elcito**	**0.66**	**352**	*e*P	Pb	03 56 22.6	+0.3
EL6				S	Sb	03 56 30.9	-0.7
EL6				END			
MURB	**Monte Urbino**	**0.78**	**319**	*e*P	Pb	03 56 24.8	+0.5
MURB				S	Sb	03 56 35.2	+0.1
MURB				END			

ROM 24 03:56:40.5±0.3, 42°.816N±0°.008×13°.26E±0°.02, h10km±1km, ML2.1/3, 1C, Error ellipse: s-maj=1.7km s-min=0.4km az=261.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**279**	*e*P	Pg	03 56 43.2	-0.1
NRCA				S	Sg	03 56 46.1	+0.7
FEMA	**Monte Fema**	**0.21**	**313**	*e*P	Pb	03 56 46.6	0.0
FEMA				S	Sg	03 56 48.9	+0.7
GUMA	**Gualdo di Mace**	**0.25**	**13**	*e*P	Pg	03 56 46.5	+0.7
GUMA				S	Sb	03 56 50.5	-1.2
FDMO	**Fiordimonte**	**0.25**	**330**	*e*P	Pg	03 56 46.0	+0.3
FDMO				S	Sg	03 56 49.9	+0.6
RM33	**Pellescritta (**	**0.31**	**186**	P	Pb	03 56 47.6	-0.6
RM33				S	Sg	03 56 51.9	+0.9
RM33				AML	AML		
	comp=E,1765μm,1.1s						
RM33				AML	AML		
	comp=E,1730μm,1.1s						
RM33				AML	AML		
	comp=N,1575μm,1.1s						
RM33				AML	AML		
	comp=E,1835μm,0.3s						
RM33				AML	AML		
	comp=N,1500μm,0.7s						
RM33				AML	AML		
	comp=E,1765μm,0.3s						
RM33				AML	AML		
	comp=N,1580μm,1.1s						
RM33				AML	AML		
	comp=E,808μm,0.4s						
RM33				AML	AML		
	comp=E,801μm,0.4s						
RM33				AML	AML		
	comp=N,507μm,0.1s						
RM33				AML	AML		
	comp=N,471μm,0.2s						
CESI	**CESI - Serrava**	**0.32**	**306**	*e*P	Pg	03 56 47.3	+0.3
CESI				S	Sb	03 56 52.8	-0.9
ARRO	**Arrone**	**0.43**	**237**	⇑P	Pg	03 56 49.5	+0.4
ARRO				AML	AML		
	comp=E,506μm,0.1s						
ARRO				AML	AML		
	comp=N,394μm,1.5s						
ARRO				AML	AML		
	comp=E,338μm,0.2s						
ARRO				AML	AML		
	comp=N,279μm,0.2s						
ASSB	**Assisi San Ben**	**0.50**	**297**	*e*P	Pb	03 56 51.4	+0.1
ASSB				S	Sb	03 56 58.2	-0.4
ASSB				AML	AML		
	comp=N,296μm,0.2s						
ASSB				AML	AML		
	comp=E,295μm,1.4s						
EL6	**Elcito**	**0.53**	**347**	*e*P	Pg	03 56 50.8	0.0
EL6				S	Sb	03 57 00.3	+0.7
FIAM	**Fiamignano**	**0.56**	**191**	*e*P	Pb	03 56 53.0	+0.6
FIAM				S	Sg	03 56 59.0	+0.3

ROM 24 03:57:11.1±0.2, 42°.69N±0°.01×13°.17E±0°.03, h10km±1km, ML2.5/4, 1C-2D, Error ellipse: s-maj=2.6km s-min=0.6km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.15**	**343**	⇓*i*P	Pb	03 57 15.4	-0.5
NRCA				S	Sg	03 57 17.0	+0.1
NRCA				AML	AML		
	comp=N,13100μm,0.1s						
NRCA				AML	AML		
	comp=N,14200μm,1.3s						
NRCA				AML	AML		
	comp=E,11750μm,0.1s						
NRCA				AML	AML		
	comp=E,12600μm,0.1s						
NRCA				AML	AML		
	comp=N,14104μm,0.1s						
RM33	**Pellescritta (**	**0.19**	**170**	P	Pb	03 57 16.4	-0.2
RM33				S	Sg	03 57 18.7	+0.7
RM33				AML	AML		
	comp=E,1835μm,0.3s						
RM33				AML	AML		
	comp=N,1500μm,0.7s						
RM33				AML	AML		
	comp=E,1765μm,0.3s						
RM33				AML	AML		
	comp=N,1580μm,1.1s						
RM33				AML	AML		
	comp=N,1575μm,1.1s						
RM33				AML	AML		
	comp=E,1760μm,0.3s						
TERO	**Teramo**	**0.33**	**102**	*e*P	Pg	03 57 17.9	+0.3
TERO				S	Sg	03 57 22.1	+0.1
FDMO	**Fiordimonte**	**0.35**	**350**	⇑*i*P	Pb	03 57 18.8	-0.6
FDMO				S	Sg	03 57 23.3	+0.6
FDMO				AML	AML		
	comp=E,478μm,0.2s						
FDMO				AML	AML		
	comp=N,546μm,0.2s						
CESI	**CESI - Serrava**	**0.37**	**328**	*e*P	Pb	03 57 19.5	-0.2
CESI				S	Sg	03 57 24.2	+0.9
OFFI	**Offida**	**0.45**	**57**	⇓P	Pb	03 57 21.5	+0.4
OFFI				S	Sb	03 57 28.5	+0.7
OFFI				AML	AML		
	comp=E,701μm,0.6s						
OFFI				AML	AML		
	comp=N,868μm,0.6s						
OFFI				AML	AML		
	comp=E,702μm,0.6s						
ASSB	**Assisi San Ben**	**0.51**	**313**	S	Sg	03 57 23.0	-4.9
VCEL	**Villa Celiera**	**0.58**	**121**	P	Pb	03 57 22.9	-0.4
VCEL				S	Sg	03 57 30.4	+0.4
SNTG	**Esanatoglia**	**0.59**	**343**	P	Pb	03 57 23.1	-0.4
SNTG				S	Sb	03 57 31.3	-0.5
EL6	**Elcito**	**0.64**	**355**	*e*P	Pg	03 57 23.0	-0.5
EL6				S	Sb	03 57 32.9	-0.4
ARVD	**Arcevia**	**0.82**	**348**	S	Sn	03 57 40.0	-0.9

ROM 24 03:57:28.7±0.1, 42°.822N±0°.008×13°.20E±0°.01, h10km, ML2.6/3, Error ellipse: s-maj=1.3km s-min=0.3km az=233.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**281**	P	Pg	03 57 31.4	+0.3
NRCA				S	Sg	03 57 32.8	+0.1
NRCA				AML	AML		
	comp=E,11750μm,0.1s						
NRCA				AML	AML		
	comp=N,13100μm,0.1s						
NRCA				AML	AML		
	comp=E,12600μm,0.1s						
NRCA				AML	AML		
	comp=N,14200μm,1.3s						
NRCA				AML	AML		
	comp=N,12419μm,0.1s						
NRCA				AML	AML		
	comp=E,11580μm,0.1s						
NRCA				AML	AML		
	comp=E,10620μm,0.1s						
FEMA	**Monte Fema**	**0.18**	**322**	*e*P	Pb	03 57 33.5	-0.6
FEMA				S	Sg	03 57 36.3	+0.9
FDMO	**Fiordimonte**	**0.23**	**340**	P	Pg	03 57 34.0	+0.5
FDMO				S	Sg	03 57 37.9	+1.1
FDMO				AML	AML		
	comp=E,478μm,0.2s						
FDMO				AML	AML		
	comp=N,546μm,0.2s						
FDMO				AML	AML		
	comp=E,192μm,0.2s						
FDMO				AML	AML		
	comp=N,223μm,0.2s						
CESI	**CESI - Serrava**	**0.28**	**310**	P	Pg	03 57 35.1	+0.6
CESI				S	Sb	03 57 39.6	-1.1
CESI				AML	AML		
	comp=E,494μm,0.3s						
CESI				AML	AML		
	comp=E,494μm,0.3s						
CESI				AML	AML		
	comp=N,874μm,0.3s						
RM33	**Pellescritta (**	**0.31**	**178**	*e*P	Pg	03 57 35.6	+0.5
RM33				S	Sb	03 57 40.9	-0.7
RM33				AML	AML		
	comp=E,1830μm,0.3s						
RM33				AML	AML		
	comp=N,1500μm,0.7s						
RM33				AML	AML		
	comp=E,1765μm,0.3s						
RM33				AML	AML		
	comp=N,1575μm,1.1s						
CAMP	**Campotosto**	**0.33**	**151**	*e*P	Pg	03 57 35.6	+0.3
CAMP				S	Sg	03 57 40.7	+1.0
TERO	**Teramo**	**0.36**	**123**	*e*P	Pb	03 57 36.7	-0.5
TERO				S	Sb	03 57 41.9	-1.0
OFFI	**Offida**	**0.38**	**72**	AML	AML		
	comp=E,701μm,0.6s						
OFFI				AML	AML		
	comp=N,868μm,0.6s						
OFFI				AML	AML		
	comp=E,702μm,0.6s						
ASSB	**Assisi San Ben**	**0.45**	**299**	*e*P	Pb	03 57 38.7	-0.1
ASSB				S	Sb	03 57 44.7	-0.9
GIGS	**Gran Sasso**	**0.46**	**143**	*e*P	Pb	03 57 38.9	-0.1
GIGS				S	Sg	03 57 44.9	+0.9
CERT	**Cerreto**	**0.89**	**190**	AML	AML		
	comp=E,116μm,0.4s						
CERT				AML	AML		
	comp=N,99μm,1.0s						

ROM 24 03:58:53.5±0.1, 42°.731N±0°.005×13°.207E±0°.010, h9km, ML2.2/11, 2C-3D, Error ellipse: s-maj=0.8km s-min=0.3km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**326**	⇓*i*P	Pg	03 58 56.9	+0.5
NRCA				S	Sg	03 58 59.1	+0.6
NRCA				AML	AML		
	comp=E,21700μm,0.1s						
NRCA				AML	AML		
	comp=N,18850μm,0.1s						
NRCA				AML	AML		
	comp=E,23350μm,0.1s						
NRCA				AML	AML		
	comp=E,28350μm,0.1s						
NRCA				AML	AML		
	comp=N,18850μm,0.1s						
NRCA				AML	AML		
	comp=E,30800μm,0.1s						
NRCA				AML	AML		
	comp=N,20450μm,0.1s						
NRCA				AML	AML		
	comp=E,21717μm,0.1s						
NRCA				AML	AML		
	comp=E,23305μm,0.1s						
NRCA				AML	AML		
	comp=N,15279μm,0.1s						
NRCA				AML	AML		
	comp=N,16506μm,0.1s						
RM33	**Pellescritta (**	**0.22**	**179**	*e*P	Pg	03 58 58.9	+0.8
RM33				S	Sg	03 59 02.7	+1.5
RM33				AML	AML		
	comp=N,5665μm,0.5s						
RM33				AML	AML		
	comp=E,6165μm,0.3s						
RM33				AML	AML		
	comp=E,6155μm,0.9s						
RM33				AML	AML		
	comp=N,5660μm,0.5s						
RM33				AML	AML		
	comp=N,1106μm,0.3s						
RM33				AML	AML		
	comp=N,1107μm,0.2s						
RM33				AML	AML		
	comp=E,891μm,0.3s						
RM33				AML	AML		
	comp=E,945μm,0.3s						
CAMP	**Campotosto**	**0.25**	**143**	*e*P	Pg	03 58 59.2	+0.7
CAMP				S	Sg	03 59 03.1	+1.2
CAMP				AML	AML		
	comp=E,1860μm,0.6s						
CAMP				AML	AML		
	comp=N,1705μm,0.6s						
CAMP				AML	AML		
	comp=N,171μm,0.4s						
CAMP				AML	AML		
	comp=E,194μm,0.2s						
TERO	**Teramo**	**0.31**	**110**	*e*P	Pg	03 59 00.3	+0.6
TERO				S	Sg	03 59 05.0	+1.1
TERO				AML	AML		
	comp=N,3965μm,0.3s						
TERO				AML	AML		
	comp=E,3345μm,0.5s						
TERO				AML	AML		
	comp=E,2990μm,0.3s						
TERO				AML	AML		
	comp=E,3340μm,0.5s						
TERO				AML	AML		
	comp=N,4185μm,0.3s						
TERO				AML	AML		
	comp=E,518μm,0.1s						
TERO				AML	AML		
	comp=N,855μm,0.1s						
TERO				AML	AML		
	comp=N,995μm,0.1s						
TERO				AML	AML		
	comp=E,614μm,0.1s						
FDMO	**Fiordimonte**	**0.32**	**344**	⇓*i*P	Pg	03 59 00.1	+0.3
FDMO				S	Sg	03 59 05.0	+0.9
FDMO				AML	AML		
	comp=E,1000μm,0.2s						
FDMO				AML	AML		
	comp=N,904μm,1.0s						
FDMO				AML	AML		
	comp=E,502μm,0.1s						
FDMO				AML	AML		
	comp=N,461μm,0.2s						
ARRO	**Arrone**	**0.36**	**245**	*e*P	Pg	03 59 01.1	+0.5
ARRO				S	Sb	03 59 07.0	-0.7
ARRO				AML	AML		
	comp=E,944μm,0.2s						
ARRO				AML	AML		
	comp=N,888μm,0.3s						
ARRO				AML	AML		
	comp=E,324μm,0.2s						
ARRO				AML	AML		
	comp=N,249μm,0.2s						
GIGS	**Gran Sasso**	**0.39**	**136**	*e*P	Pg	03 59 01.4	+0.2
GIGS				S	Sb	03 59 07.8	-0.9
GIGS				AML	AML		
	comp=N,444μm,0.8s						
GIGS				AML	AML		
	comp=E,562μm,0.2s						
GIGS				AML	AML		
	comp=N,445μm,0.8s						
GIGS				AML	AML		
	comp=E,54μm,0.1s						
GIGS				AML	AML		
	comp=N,91μm,0.1s						
OFFI	**Offida**	**0.41**	**60**	⇑*i*P	Pb	03 59 02.7	-0.2
OFFI				S	Sb	03 59 09.1	0.0
OFFI				AML	AML		
	comp=N,2365μm,0.8s						
OFFI				AML	AML		
	comp=E,2215μm,0.4s						
OFFI				AML	AML		
	comp=E,1063μm,0.5s						
OFFI				AML	AML		
	comp=N,877μm,0.3s						
FIAM	**Fiamignano**	**0.47**	**188**	*e*P	Pg	03 59 03.0	+0.3
FIAM				S	Sb	03 59 10.0	-1.0
FIAM				AML	AML		
	comp=E,1735μm,0.4s						
FIAM				AML	AML		
	comp=N,890μm,0.7s						
FIAM				AML	AML		
	comp=E,218μm,0.3s						
FIAM				AML	AML		
	comp=N,141μm,0.5s						
ASSB	**Assisi San Ben**	**0.51**	**308**	S	Sb	03 59 13.0	+0.8
TRTR	**Tortoreto Alta**	**0.53**	**81**	S	Sn	03 59 17.0	+0.8
FAGN	**Fagnano**	**0.54**	**149**	S	Sn	03 59 15.0	-1.6
VCEL	**Villa Celiera**	**0.58**	**125**	S	Sn	03 59 16.0	-1.6
T0110	**Collepietro**	**0.66**	**140**	P	Pg	03 59 06.4	+0.2
T0110				AML	AML		
	comp=E,1006μm,0.5s						
T0110				AML	AML		
	comp=N,1060μm,0.3s						
T0110				AML	AML		

comp=N,1065μm,0.3s
SRES S.Oreste - Sor 0.71 226 ⇑P Pg 03 59 06.7 -0.5
SRES AML AML
comp=E,226μm,0.6s
SRES AML AML
comp=N,212μm,0.4s
ARVD Arcevia 0.79 346 *e*P Pn 03 59 10.3 -0.6
ARVD S Sb 03 59 19.9 -0.3
CERT Cerreto 0.80 192 S Sn 03 59 22.0 -1.0
CAFI Castiglion Fio 1.09 304 ⇓P Pb 03 59 14.6 +0.1
CAFI AML AML
comp=E,156μm,0.5s
CAFI AML AML
comp=N,114μm,0.8s
GIUL Giuliano Di Ro 1.17 178 *e*P Pn 03 59 17.0 +0.9
GIUL AML AML
comp=E,126μm,0.7s
GIUL AML AML
comp=N,125μm,0.9s

ROM 24 03:59:04.5±0.1, 42°.649N±0°.004×13°.241E±0°.009, h8km, ML2.6/13, Error ellipse: s-maj=0.5km s-min=0.5km az=76.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.14**	**188**	P	Pg	03 59 08.5	+0.9
RM33				S	Sg	03 59 11.0	+1.3
RM33				AML	AML		
	comp=E,6165μm,0.3s						
RM33				AML	AML		
	comp=N,5660μm,0.5s						
RM33				AML	AML		
	comp=N,5665μm,0.5s						
RM33				AML	AML		
	comp=E,6155μm,0.9s						
CAMP	**Campotosto**	**0.17**	**132**	P	Pg	03 59 08.8	+0.8
CAMP				S	Sg	03 59 11.7	+1.2
CAMP				AML	AML		
	comp=N,1705μm,0.6s						
CAMP				AML	AML		
	comp=E,1860μm,0.6s						
NRCA	**Norcia**	**0.21**	**333**	P	Pg	03 59 09.2	+0.4
NRCA				S	Sg	03 59 12.7	+1.1
NRCA				AML	AML		
	comp=E,21700μm,0.1s						
NRCA				AML	AML		
	comp=N,18850μm,0.1s						
NRCA				AML	AML		
	comp=E,23350μm,0.1s						
NRCA				AML	AML		
	comp=E,28350μm,0.1s						
NRCA				AML	AML		
	comp=N,20450μm,0.1s						
NRCA				AML	AML		
	comp=N,18850μm,0.1s						
NRCA				AML	AML		
	comp=E,30800μm,0.1s						
TERO	**Teramo**	**0.27**	**95**	P	Pg	03 59 10.4	+0.6
TERO				S	Sg	03 59 14.4	+0.9
TERO				AML	AML		
	comp=E,3345μm,0.5s						
TERO				AML	AML		
	comp=E,3340μm,0.5s						
TERO				AML	AML		
	comp=N,4185μm,0.3s						
TERO				AML	AML		
	comp=E,2990μm,0.3s						
TERO				AML	AML		
	comp=N,3965μm,0.3s						
GIGS	**Gran Sasso**	**0.31**	**129**	P	Pg	03 59 11.1	+0.4
GIGS				AML	AML		
	comp=N,444μm,0.8s						
GIGS				AML	AML		
	comp=E,562μm,0.2s						
GIGS				AML	AML		
	comp=N,445μm,0.8s						
ARRO	**Arrone**	**0.36**	**259**	*e*P	Pg	03 59 12.2	+0.7
ARRO				AML	AML		
	comp=E,944μm,0.2s						
ARRO				AML	AML		
	comp=N,888μm,0.3s						
FIAM	**Fiamignano**	**0.39**	**194**	P	Pg	03 59 12.8	+0.6
FIAM				S	Sg	03 59 18.3	+1.0
FIAM				AML	AML		
	comp=E,1735μm,0.4s						
FIAM				AML	AML		
	comp=N,890μm,0.7s						
FDMO	**Fiordimonte**	**0.40**	**344**	*e*P	Pg	03 59 13.1	+0.7
FDMO				S	Sb	03 59 19.5	-0.7
FDMO				AML	AML		
	comp=E,1000μm,0.2s						
FDMO				AML	AML		
	comp=N,904μm,1.0s						
OFFI	**Offida**	**0.43**	**49**	P	Pb	03 59 14.5	+0.1
OFFI				S	Sb	03 59 21.1	0.0
OFFI				AML	AML		
	comp=N,2365μm,0.8s						
OFFI				AML	AML		
	comp=E,2215μm,0.4s						
FAGN	**Fagnano**	**0.46**	**146**	P	Pg	03 59 14.0	+0.6
FAGN				S	Sb	03 59 20.9	-0.9
T0110	**Collepietro**	**0.58**	**136**	P	Pg	03 59 16.1	+0.4
T0110				S	Sb	03 59 25.2	-0.1
T0110				AML	AML		
	comp=E,1006μm,0.5s						
T0110				AML	AML		
	comp=N,1060μm,0.3s						
T0110				AML	AML		
	comp=N,1065μm,0.3s						
SRES	**S.Oreste - Sor**	**0.68**	**233**	P	Pg	03 59 17.7	+0.1
SRES				S	Sb	03 59 28.3	+0.2
SRES				AML	AML		
	comp=N,212μm,0.4s						
SRES				AML	AML		
	comp=E,226μm,0.6s						
CERT	**Cerreto**	**0.72**	**195**	P	Pg	03 59 18.2	-0.2
CERT				S	Sb	03 59 28.8	-0.7
GIUL	**Giuliano Di Ro**	**1.09**	**179**	AML	AML		
	comp=E,126μm,0.7s						
GIUL				AML	AML		
	comp=N,125μm,0.9s						
CAFI	**Castiglion Fio**	**1.16**	**306**	*e*P	Pg	03 59 26.6	0.0
CAFI				AML	AML		
	comp=N,114μm,0.8s						
CAFI				AML	AML		
	comp=E,156μm,0.5s						

ROM 24 03:59:57.5±0.1, 42°.722N±0°.005×13°.219E±0°.010, h10km, ML2.2/8, 2C-2D, Error ellipse: s-maj=0.9km s-min=0.3km az=235.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.14**	**325**	P	Pg	04 00 01.1	+0.4
NRCA				S	Sg	04 00 03.4	+0.5
NRCA				AML	AML		
	comp=E,8435μm,0.8s						
NRCA				AML	AML		
	comp=N,8260μm,0.1s						
NRCA				AML	AML		
	comp=E,8995μm,0.8s						
NRCA				AML	AML		
	comp=N,8920μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,9220μm,0.1s						
NRCA				AML	AML		
	comp=N,8682μm,0.1s						
NRCA				AML	AML		
	comp=N,9698μm,0.1s						
NRCA				AML	AML		
	comp=E,8478μm,0.1s						
RM33	**Pellescritta (**	**0.21**	**181**	P	Pg	04 00 02.8	+0.8
RM33				S	Sg	04 00 06.4	+1.4
RM33				AML	AML		
	comp=E,846μm,0.6s						
RM33				AML	AML		
	comp=N,669μm,1.1s						
RM33				AML	AML		
	comp=E,8245μm,1.4s						
RM33				AML	AML		
	comp=E,8390μm,1.4s						
RM33				AML	AML		
	comp=N,9335μm,0.3s						
RM33				AML	AML		
	comp=N,9340μm,0.3s						
RM33				AML	AML		
	comp=N,9690μm,0.3s						
RM33				AML	AML		
	comp=E,8385μm,1.4s						
RM33				AML	AML		
	comp=N,617μm,0.2s						
RM33				AML	AML		
	comp=N,654μm,0.3s						
RM33				AML	AML		
	comp=E,669μm,0.1s						
RM33				AML	AML		
	comp=E,688μm,0.1s						
TERO	**Teramo**	**0.30**	**109**	P	Pg	04 00 04.1	+0.6
TERO				S	Sb	04 00 09.0	-1.0
TERO				AML	AML		
	comp=E,651μm,1.1s						
TERO				AML	AML		
	comp=N,822μm,0.3s						
TERO				AML	AML		
	comp=E,732μm,1.1s						
TERO				AML	AML		
	comp=N,936μm,0.3s						
TERO				AML	AML		
	comp=E,3220μm,0.7s						
TERO				AML	AML		
	comp=N,3920μm,0.5s						
TERO				AML	AML		
	comp=E,3500μm,0.8s						
TERO				AML	AML		
	comp=E,3225μm,0.7s						
TERO				AML	AML		
	comp=N,3670μm,0.5s						
TERO				AML	AML		
	comp=E,618μm,0.1s						
TERO				AML	AML		
	comp=E,543μm,0.1s						
TERO				AML	AML		
	comp=N,703μm,0.1s						
TERO				AML	AML		
	comp=N,733μm,0.1s						
FDMO	**Fiordimonte**	**0.33**	**343**	⇓P	Pg	04 00 04.5	+0.4
FDMO				S	Sg	04 00 09.6	+1.1
FDMO				AML	AML		
	comp=E,380μm,0.8s						
FDMO				AML	AML		
	comp=N,386μm,0.7s						
FDMO				AML	AML		
	comp=E,21800μm,0.2s						
FDMO				AML	AML		
	comp=N,20000μm,0.3s						
FDMO				AML	AML		
	comp=N,332μm,0.1s						
FDMO				AML	AML		
	comp=E,321μm,0.2s						
GUMA	**Gualdo di Mace**	**0.35**	**14**	⇑P	Pb	04 00 05.2	-0.7
GUMA				S	Sb	04 00 11.3	-0.2
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
	comp=N,1685μm,0.4s						
GUMA				AML	AML		
	comp=E,943μm,0.6s						
GUMA				AML	AML		
	comp=E,2284μm,0.3s						
GUMA				AML	AML		
	comp=N,2197μm,0.4s						
CESI	**CESI - Serrava**	**0.36**	**321**	⇓P	Pg	04 00 05.2	+0.4
CESI				S	Sb	04 00 10.9	-1.1
CESI				AML	AML		
	comp=E,418μm,0.2s						
CESI				AML	AML		
	comp=N,586μm,1.2s						
CESI				AML	AML		
	comp=N,20900μm,0.5s						
CESI				AML	AML		
	comp=N,20850μm,0.5s						
CESI				AML	AML		
	comp=E,13650μm,0.9s						
CESI				AML	AML		
	comp=N,597μm,0.3s						
CESI				AML	AML		
	comp=E,435μm,0.2s						
CSP1	**Cessapalombo**	**0.37**	**358**	P	Pg	04 00 05.1	+0.2
CSP1				S	Sb	04 00 11.0	-1.1
CSP1				AML	AML		
	comp=N,27100μm,0.2s						
CSP1				AML	AML		
	comp=E,23200μm,0.4s						
CSP1				AML	AML		
	comp=N,728μm,0.4s						
CSP1				AML	AML		
	comp=E,692μm,0.2s						
GIGS	**Gran Sasso**	**0.38**	**136**	P	Pg	04 00 05.6	+0.7
GIGS				S	Sg	04 00 10.9	+1.0
GIGS				AML	AML		
	comp=E,447μm,0.6s						
GIGS				AML	AML		
	comp=N,511μm,0.9s						
GIGS				AML	AML		
	comp=N,512μm,0.9s						
GIGS				AML	AML		
	comp=E,31μm,0.3s						
GIGS				AML	AML		
	comp=N,42μm,0.1s						
OFFI	**Offida**	**0.40**	**58**	⇑P	Pb	04 00 06.8	0.0
OFFI				AML	AML		
	comp=E,10665μm,0.6s						
OFFI				AML	AML		
	comp=N,22150μm,0.6s						
ASSB	**Assisi San Ben**	**0.52**	**308**	P	Pb	04 00 08.7	-0.1
ASSB				S	Sb	04 00 15.8	-0.7
ASSB				AML	AML		
	comp=N,2670μm,1.3s						
ASSB				AML	AML		
	comp=E,2565μm,0.5s						
ASSB				AML	AML		
	comp=E,141μm,0.4s						
ASSB				AML	AML		
	comp=N,148μm,0.1s						
TOLF	**Tolfa**	**1.12**	**234**	AML	AML		
	comp=E,204μm,0.9s						
TOLF				AML	AML		
	comp=N,262μm,0.9s						

*ROM **24** 04:00:51.1±0.1, 42°.737N±0°.004×13°.231E±0°.007, h10km, ML3.2/40, Error ellipse: s-maj=0.5km s-min=0.3km az=68.0*
*PRU **24** 04:00:51.6±0.0, 42°.72N×13°.32E, h0km*
*BEO **24** 04:00:55.5±1.1, 42°.88N×13°.52E, h9km, 4km, ML3.2/4*
ISC 24 04:00:51.5±0.8, 42°.74N±0°.02×13°.23E±0°.02, h12km±5km, n112, σ0°98/139, 1C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQT1	**Arquata del Tr**	**0.06**	**52**	⇓*e*P	**Pg**	**04 00 53.6**	**-0.4**
AQT1				S	**Sg**	**04 00 55.4**	**-0.4**
NRCA	**Norcia**	**0.13**	**319**	⇓*i*P	**Pg**	**04 00 54.5**	**-0.3**
NRCA				S	**Sg**	**04 00 56.8**	**-0.4**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
RM33	**Pellescritta (**	**0.23**	**183**	P	**Pg**	**04 00 56.5**	**+0.1**
RM33				S	**Sg**	**04 01 00.2**	**+0.5**
RM33				AML	AML		
	comp=E,8385μm,1.4s						
RM33				AML	AML		
	comp=N,9345μm,0.3s						
RM33				AML	AML		
	comp=N,9725μm,0.3s						
RM33				AML	AML		
	comp=N,9340μm,0.3s						
RM33				AML	AML		
	comp=N,9690μm,0.3s						
RM33				AML	AML		
	comp=E,8390μm,1.4s						
RM33				AML	AML		
	comp=N,9335μm,0.3s						
RM33				AML	AML		
	comp=E,8245μm,1.4s						
CAMP	**Campotosto**	**0.24**	**146**	P	**Pg**	**04 00 56.4**	**-0.2**
CAMP				S	**Sg**	**04 01 00.4**	**+0.3**
CAMP				AML	AML		
	comp=E,3490μm,0.5s						
CAMP				AML	AML		
	comp=N,2485μm,0.3s						
FEMA	**Monte Fema**	**0.26**	**330**	P	**Pg**	**04 00 56.6**	**-0.3**
FEMA				S	**Sg**	**04 01 00.8**	**+0.1**
TERO	**Teramo**	**0.30**	**112**	P	**Pg**	**04 00 57.5**	**-0.1**
TERO				S	**Sg**	**04 01 01.8**	**+0.1**
TERO				AML	AML		
	comp=E,3220μm,0.7s						
TERO				AML	AML		
	comp=E,3225μm,0.7s						
TERO				AML	AML		
	comp=E,3500μm,0.8s						
TERO				AML	AML		
	comp=N,3920μm,0.5s						
TERO				AML	AML		
	comp=N,3670μm,0.5s						
FDMO	**Fiordimonte**	**0.32**	**341**	P	**Pg**	**04 00 57.6**	**-0.3**
FDMO				S	**Sg**	**04 01 02.3**	**0.0**
FDMO				AML	AML		
	comp=E,21800μm,0.2s						
FDMO				AML	AML		
	comp=N,20000μm,0.3s						
GUMA	**Gualdo di Mace**	**0.34**	**13**	P	**Pg**	**04 00 58.3**	**0.0**
GUMA				S	**Sb**	**04 01 03.9**	**-0.8**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
CSP1	**Cessapalombo**	**0.36**	**357**	P	**Pg**	**04 00 58.3**	**-0.4**
CSP1				S	**Sg**	**04 01 03.7**	**+0.2**
CSP1				AML	AML		
	comp=E,23200μm,0.4s						
CSP1				AML	AML		
	comp=N,27100μm,0.2s						
CESI	**CESI - Serrava**	**0.36**	**318**	⇓P	**Pg**	**04 00 58.4**	**-0.4**
CESI				S	**Sg**	**04 01 03.9**	**+0.4**
CESI				AML	AML		
	comp=N,20850μm,0.5s						
CESI				AML	AML		
	comp=E,13650μm,0.9s						
CESI				AML	AML		
	comp=N,20900μm,0.5s						
ARRO	**Arrone**	**0.38**	**245**	P	**Pg**	**04 00 58.7**	**-0.3**
ARRO				AML	AML		
	comp=N,1355μm,0.8s						
ARRO				AML	AML		
	comp=E,1245μm,0.8s						
ARRO				AML	AML		
	comp=N,1360μm,0.8s						
GIGS	**Gran Sasso**	**0.38**	**139**	P	**Pg**	**04 00 58.7**	**-0.4**
GIGS				S	**Sg**	**04 01 04.8**	**+0.5**
GIGS				AML	AML		
	comp=E,447μm,0.6s						
GIGS				AML	AML		
	comp=N,512μm,0.9s						
GIGS				AML	AML		
	comp=N,511μm,0.9s						
OFFI	**Offida**	**0.39**	**59**	⇑P	**Pg**	**04 00 59.7**	**+0.4**
OFFI				S	**Sb**	**04 01 07.1**	**+0.8**
OFFI				AML	AML		
	comp=E,10665μm,0.6s						
OFFI				AML	AML		
	comp=N,22150μm,0.6s						
AQU	**L'Aquila**	**0.40**	**161**	P	**Pg**	**04 00 59.2**	**-0.2**
AQU				S	**Sg**	**04 01 04.9**	**0.0**
AQU				AML	AML		
	comp=E,2265μm,1.1s						
AQU				AML	AML		
	comp=N,2005μm,1.1s						
AQU				AML	AML		
	comp=N,1945μm,1.1s						
AQU				AML	AML		
	comp=E,2185μm,1.1s						
MNTP	**Montappone**	**0.44**	**24**	*e*P	**Pg**	**04 01 00.2**	**+0.1**
MNTP				S	**Sb**	**04 01 07.8**	**+0.2**
SEF1	**Sefro**	**0.46**	**333**	P	**Pg**	**04 01 00.0**	**-0.5**
SEF1				S	**Sg**	**04 01 07.1**	**+0.5**
SEF1				AML	AML		
	comp=N,16650μm,1.2s						
SEF1				AML	AML		
	comp=N,16600μm,1.2s						
SEF1				AML	AML		
	comp=E,15200μm,0.7s						
SEF1				AML	AML		
	comp=E,15250μm,0.7s						
MDAR	**Monte D'Aria**	**0.46**	**352**	P	**Pg**	**04 01 00.1**	**-0.5**
MDAR				S	**Sg**	**04 01 07.1**	**+0.3**
MDAR				AML	AML		
	comp=E,8070μm,0.3s						
MDAR				AML	AML		
	comp=N,10170μm,0.3s						
MDAR				AML	AML		
	comp=E,8070μm,0.2s						
MDAR				AML	AML		
	comp=N,10160μm,0.3s						
FIAM	**Fiamignano**	**0.47**	**190**	P	**Pg**	**04 01 00.5**	**-0.4**
FIAM				S	**Sg**	**04 01 08.1**	**+0.9**
FIAM				AML	AML		
	comp=N,1730μm,0.9s						
FIAM				AML	AML		
	comp=E,1725μm,0.5s						
PIO1	**Pioraco**	**0.48**	**338**	P	**Pg**	**04 01 00.5**	**-0.4**
PIO1				S	**Sg**	**04 01 07.6**	**+0.4**
SSM1	**San Severino M**	**0.49**	**356**	P	**Pg**	**04 01 00.8**	**-0.4**
SSM1				S	**Sg**	**04 01 08.2**	**+0.5**
CESX	**Cesi**	**0.49**	**255**	P	**Pg**	**04 01 01.0**	**-0.2**
CESX				S	**Sg**	**04 01 08.8**	**+1.1**
CESX				AML	AML		
	comp=E,1350μm,0.6s						
CESX				AML	AML		
	comp=N,1425μm,1.6s						
FIU1	**Fiuminata**	**0.50**	**334**	P	**Pg**	**04 01 01.0**	**-0.3**
FIU1				S	**Sg**	**04 01 08.4**	**+0.4**
TRTR	**Tortoreto Alta**	**0.51**	**82**	P	**Pb**	**04 01 02.1**	**-0.2**
TRTR				AML	AML		
	comp=E,6860μm,0.5s						
TRTR				AML	AML		
	comp=N,6945μm,1.4s						
GAG1	**Gagliole**	**0.52**	**347**	P	**Pg**	**04 01 01.5**	**-0.1**
GAG1				S	**Sg**	**04 01 09.0**	**+0.6**
GAG1				AML	AML		
	comp=E,14200μm,0.3s						
GAG1				AML	AML		
	comp=N,16250μm,0.9s						
GAG1				AML	AML		
	comp=E,14150μm,0.3s						
GAG1				AML	AML		
	comp=N,16250μm,0.9s						
ASSB	**Assisi San Ben**	**0.52**	**306**	⇓*e*P	**Pg**	**04 01 01.1**	**-0.5**
ASSB				S	**Sg**	**04 01 09.1**	**+0.5**
ASSB				AML	AML		
	comp=E,2565μm,0.5s						
ASSB				AML	AML		
	comp=N,2670μm,1.3s						
FAGN	**Fagnano**	**0.54**	**151**	P	**Pg**	**04 01 02.0**	**0.0**
FAGN				AML	AML		
	comp=N,2240μm,0.4s						
FAGN				AML	AML		
	comp=E,2250μm,0.5s						
SNTG	**Esanatoglia**	**0.56**	**338**	P	**Pg**	**04 01 01.9**	**-0.6**
SNTG				S	**Sg**	**04 01 10.3**	**+0.5**
SNTG				AML	AML		
	comp=N,432μm,1.4s						
SNTG				AML	AML		
	comp=E,3430μm,1.5s						
SNTG				AML	AML		
	comp=E,404μm,1.3s						
SNTG				AML	AML		
	comp=E,403μm,1.3s						
SNTG				AML	AML		
	comp=N,3345μm,1.4s						
VCEL	**Villa Celiera**	**0.57**	**127**	P	**Pg**	**04 01 02.6**	**0.0**
VCEL				AML	AML		
	comp=N,2035μm,0.9s						
VCEL				AML	AML		
	comp=E,1690μm,0.9s						

TRE1	**Treia**	**0.58**	**6**	P	**Pg**	**04 01 02.8**	**0.0**	
EL6	**Elcito**	**0.60**	**351**	P	**Pg**	**04 01 02.5**	**-0.7**	
EL6				S	**Sg**	**04 01 11.7**	**+0.6**	
EL6				AML	AML			
	comp=E,10050µm,0.2s							
EL6				AML	AML			
	comp=N,8120µm,0.2s							
EL6				AML	AML			
	comp=N,8125µm,0.2s							
EL6				AML	AML			
	comp=E,10090µm,0.2s							
CADA	**Capodarco di F**	**0.60**	**40**	P	**Pb**	**04 01 04.0**	**+0.1**	
CADA				AML	AML			
	comp=E,7895µm,0.3s							
CADA				AML	AML			
	comp=N,8568µm,1.6s							
CADA				AML	AML			
	comp=N,7520µm,0.7s							
ATCC	**AVT- Casa Cast**	**0.62**	**316**	P	**Pg**	**04 01 03.1**	**-0.5**	
ATCC				AML	AML			
	comp=E,3095µm,0.8s							
ATCC				AML	AML			
	comp=N,2615µm,0.8s							
CING	**Cingoli**	**0.64**	**358**	P	**Pg**	**04 01 03.7**	**-0.2**	
T0110	**Collepietro**	**0.65**	**141**	P	**Pg**	**04 01 03.7**	**-0.4**	
T0110				AML	AML			
	comp=E,1360µm,0.6s							
T0110				AML	AML			
	comp=N,1350µm,0.4s							
CIMA	**Civitanova Mar**	**0.66**	**29**	P	**Pb**	**04 01 05.0**	**+0.1**	
FOSV	**Fossato di Vic**	**0.66**	**329**	P	**Pg**	**04 01 03.4**	**-0.8**	
FOSV				S	**Sg**	**04 01 13.3**	**+0.5**	
FOSV				AML	AML			
	comp=N,3065µm,0.3s							
FOSV				AML	AML			
	comp=E,3095µm,1.3s							
PP3	**Marolino**	**0.70**	**23**	P	**Pg**	**04 01 05.4**	**+0.4**	
PP3				AML	AML			
	comp=E,10500µm,0.4s							
PP3				AML	AML			
	comp=N,13070µm,0.4s							
PP3				AML	AML			
	comp=E,10470µm,0.4s							
PP3				AML	AML			
	comp=N,13055µm,0.4s							
PP3				AML	AML			
	comp=N,13050µm,0.4s							
PP3				AML	AML			
	comp=E,11250µm,0.4s							
PP3				AML	AML			
	comp=N,13100µm,0.4s							
SRES	**S.Oreste - Sor**	**0.73**	**227**	P	**Pg**	**04 01 05.1**	**-0.5**	
SRES				AML	AML			
	comp=N,408µm,1.0s							
SRES				AML	AML			
	comp=E,626µm,0.4s							
MURB	**Monte Urbino**	**0.74**	**316**	P	**Pg**	**04 01 05.2**	**-0.6**	
MURB				AML	AML			
	comp=N,2860µm,0.3s							
MURB				AML	AML			
	comp=E,4760µm,0.3s							
MURB				AML	AML			
	comp=N,3275µm,0.4s							
MURB				AML	AML			
	comp=E,4515µm,0.3s							
SSFR	**Montelago di S**	**0.77**	**335**	P	**Pg**	**04 01 06.2**	**-0.2**	
SSFR				S	**Sg**	**04 01 16.3**	**-0.2**	
SSFR				AML	AML			
	comp=E,11850µm,0.2s							
SSFR				AML	AML			
	comp=N,8285µm,0.8s							
SSFR				AML	AML			
	comp=E,12300µm,0.2s							
SSFR				AML	AML			
	comp=N,9475µm,0.8s							
ARVD	**Arcevia**	**0.79**	**345**	P	**Pg**	**04 01 05.8**	**-0.9**	
ARVD				S	**Sb**	**04 01 17.7**	**-0.1**	
ARVD				AML	AML			
	comp=E,2120µm,0.7s							
ARVD				AML	AML			
	comp=N,1535µm,0.5s							
ATTE	**AVT- Monte Tez**	**0.79**	**306**	P	**Pg**	**04 01 06.7**	**-0.1**	
ATFO	**Monte Foce - G**	**0.79**	**323**	P	**Pg**	**04 01 06.2**	**-0.6**	
ATSC	**Scheggia e Pas**	**0.79**	**330**	P	**Pg**	**04 01 06.0**	**-0.9**	
MTCE	**Montecelio**	**0.80**	**207**	P	**Pg**	**04 01 05.9**	**-1.0**	
MTCE				AML	AML			
	comp=E,753µm,0.6s							
MTCE				AML	AML			
	comp=N,342µm,1.1s							
CERT	**Cerreto**	**0.81**	**193**	P	**Pg**	**04 01 05.9**	**-1.2**	
CERT				AML	AML			
	comp=E,1245µm,0.4s							
CERT				AML	AML			
	comp=N,724µm,0.6s							
ATLO	**AVT- Montelove**	**0.83**	**314**	P	**Pg**	**04 01 06.7**	**-0.9**	
MGAB	**Montegabbione**	**0.84**	**282**	*e*P	**Pg**	**04 01 07.7**	**0.0**	
AOI	**Ancona**	**0.86**	**18**	P	**Pg**	**04 01 07.5**	**-0.5**	
AOI				AML	AML			
	comp=E,2530µm,0.3s							
AOI				AML	AML			
	comp=N,2500µm,0.2s							
FRON	**Frontone**	**0.86**	**335**	P	**Pg**	**04 01 07.2**	**-1.0**	
FRON				AML	AML			
	comp=E,1840µm,0.2s							
FRON				AML	AML			
	comp=N,2515µm,0.4s							
TB01	**Gubbio**	**0.87**	**318**	P	**Pg**	**04 01 07.4**	**-0.9**	
TB02	**Pietralunga**	**0.87**	**317**	P	**Pg**	**04 01 07.5**	**-0.9**	
ATVA	**AVT- Monte Val**	**0.88**	**308**	P	**Pg**	**04 01 08.1**	**-0.3**	
INTR	**Introdacqua**	**0.88**	**145**	P	**Pg**	**04 01 07.1**	**-1.4**	
INTR				AML	AML			
	comp=E,488µm,1.4s							
INTR				AML	AML			
	comp=E,489nm,0.8s							
INTR				AML	AML			
	comp=N,562nm,0.6s							
INTR				AML	AML			
	comp=N,825µm,0.6s							
INTR				AML	AML			
	comp=N,564nm,0.6s							
INTR				AML	AML			
	comp=E,487nm,0.8s							
ATVO	**AVT- Monte Val**	**0.88**	**317**	P	**Pg**	**04 01 08.2**	**-0.3**	
ATVO				AML	AML			
	comp=N,912µm,0.5s							
ATVO				AML	AML			
	comp=E,921µm,1.0s							
ATBU	**Serra di Buran**	**0.89**	**326**	P	**Pg**	**04 01 08.4**	**-0.3**	
TB03	**Pietralunga**	**0.90**	**318**	P	**Pg**	**04 01 08.3**	**-0.5**	
COR1	**Corinaldo**	**0.91**	**349**	P	**Pg**	**04 01 08.3**	**-0.8**	
COR1				AML	AML			
	comp=N,4795µm,0.2s							
COR1				AML	AML			
	comp=N,4690µm,0.3s							
COR1				AML	AML			
	comp=N,4800µm,0.3s							
COR1				AML	AML			
	comp=E,2750µm,0.4s							
COR1				AML	AML			
	comp=E,5580µm,0.8s							
ATMI	**Monte Miggiano**	**0.92**	**311**	P	**Pg**	**04 01 08.9**	**-0.4**	
ATPC	**Poggio Castell**	**0.93**	**323**	P	**Pg**	**04 01 09.1**	**-0.4**	
ATPI	**Pietralunga -**	**0.94**	**320**	P	**Pg**	**04 01 09.1**	**-0.4**	
ATPI				AML	AML			
	comp=E,1004µm,0.5s							
ATPI				AML	AML			
	comp=N,1080µm,0.6s							
ATPI				AML	AML			
	comp=E,1006µm,0.5s							
PIEI	**Pieia**	**0.95**	**328**	P	**Pg**	**04 01 08.7**	**-1.1**	
PIEI				AML	AML			
	comp=N,1024µm,1.4s							
PIEI				AML	AML			
	comp=E,1655µm,0.8s							
MPAG	**Monte Paganucc**	**0.96**	**339**	P	**Pg**	**04 01 09.1**	**-0.9**	
MPAG				AML	AML			
	comp=E,1880µm,0.3s							
MPAG				AML	AML			
	comp=N,1544µm,0.2s							
MPAG				AML	AML			
	comp=N,1548µm,0.2s							
MPAG				AML	AML			
	comp=E,1975µm,0.3s							
MPAG				AML	AML			
	comp=N,1655µm,0.2s							
SENI	**Senigallia**	**0.97**	**0**	P	**Pg**	**04 01 10.3**	**+0.2**	
SENI				AML	AML			
	comp=E,10365µm,0.7s							
SENI				AML	AML			
	comp=N,13100µm,0.3s							
SACS	**San Casciano d**	**0.98**	**277**	*e*P	**Pn**	**04 01 11.4**	**+0.3**	
SACS				S	**Sb**	**04 01 24.3**	**+1.1**	
LPEL	**Lama dei Pelig**	**0.99**	**134**	AML	AML			
	comp=N,370µm,1.0s							
LPEL				AML	AML			
	comp=E,514µm,0.7s							
NARO	**Abbazia di Nar**	**0.99**	**332**	P	**Pg**	**04 01 09.5**	**-1.1**	
NARO				AML	AML			
	comp=N,807µm,0.5s							
NARO				AML	AML			
	comp=E,934µm,0.5s							
FSSB	**Fossombrone**	**1.01**	**341**	P	**Pg**	**04 01 10.0**	**-0.9**	
FSSB				AML	AML			
	comp=E,4880µm,1.3s							
FSSB				AML	AML			
	comp=N,7075µm,0.4s							
APEC	**Apecchio**	**1.01**	**324**	P	**Pg**	**04 01 10.6**	**-0.4**	
RDP	**Rocca di Papa**	**1.05**	**201**	P	**Pg**	**04 01 11.4**	**-0.3**	
PE3	**Peglio**	**1.10**	**331**	P	**Pb**	**04 01 12.1**	**-0.3**	
CAFI	**Castiglion Fio**	**1.10**	**303**	P	**Pb**	**04 01 12.4**	**0.0**	
CAFI				AML	AML			
	comp=E,475µm,0.7s							
CAFI				AML	AML			
	comp=N,538µm,0.6s							
TOLF	**Tolfa**	**1.13**	**234**	P	**Pb**	**04 01 13.4**	**+0.4**	
TOLF				AML	AML			
	comp=E,391µm,0.9s							
TOLF				AML	AML			
	comp=N,262µm,0.9s							
SF03	**Valle Cupa**	**1.14**	**274**	P	**Pb**	**04 01 13.0**	**-0.1**	
MCIV	**Monte Civitell**	**1.14**	**273**	*e*P	**Pb**	**04 01 13.5**	**+0.3**	
SF11	**Podere del Sol**	**1.15**	**277**	*e*P	**Pb**	**04 01 13.1**	**-0.1**	
PARC	**Parchiule**	**1.16**	**322**	P	**Pb**	**04 01 11.6**	**-2.0**	
PARC				AML	AML			
	comp=E,858µm,0.9s							
PARC				AML	AML			
	comp=N,884µm,0.8s							
SF01	**Poggio Pratacc**	**1.23**	**274**	P	**Pg**	**04 01 15.5**	**+0.4**	
PESA	**Pesaro**	**1.24**	**347**	AML	AML			
	comp=E,2550µm,0.8s							
PESA				AML	AML			
	comp=N,3005µm,0.2s							
CRE	**Caprese Michel**	**1.29**	**314**	P	**Pn**	**04 01 15.6**	**+0.3**	
CSNT	**Castellina Chi**	**1.60**	**298**	*e*P	**Pn**	**04 01 19.6**	**0.0**	
CSNT				AML	AML			
	comp=E,136µm,0.7s							
CSNT				AML	AML			
	comp=N,114µm,0.7s							
CDRU	**Civita di Ruta**	**2.73**	**145**	AML	AML			
	comp=N,30µm,1.6s							
CDRU				AML	AML			
	comp=E,40µm,0.6s							
RIY	**Rijeka**	**2.74**	**19**	*e*Pn	**Pn**	**04 01 35.5**	**+0.3**	
RIY				*e*Sn	**Sn**	**04 02 08.9**	**+0.6**	
STON	**Ston**	**3.29**	**86**	*e*Pn	**Pn**	**04 01 43.6**	**+0.8**	
STON				*e*Sn	**Sn**	**04 02 20.8**	**-1.0**	
CGRP	**Cima Grappa**	**3.31**	**342**	AML	AML			
	comp=E,173µm,0.8s							
CGRP				AML	AML			
	comp=N,173µm,0.5s							
MPRI	**Monte Prat**	**3.51**	**357**	AML	AML			
	comp=N,170µm,0.7s							
MPRI				AML	AML			
	comp=E,139µm,0.6s							
ZAG	**Zagreb**	**3.67**	**32**	AML	AML			
	comp=N,315µm,0.2s							
ZAG				AML	AML			
	comp=E,219µm,1.3s							
ACOM	**Acomizza, Ital**	**3.82**	**3**	AML	AML			
	comp=E,126µm,1.1s							
ACOM				AML	AML			
	comp=N,129µm,0.7s							
OBKA	**Obir**	**3.89**	**14**	*e*Pn	**Pn**	**04 01 55.1**	**+4.0**	
	comp=N,10.0nm,0.4s							
MYKA	**Terra Mystica**	**3.90**	**4**	*e*Pn	**Pn**	**04 01 52.0**	**+0.8**	
	comp=N,3.3nm,0.3s							
ABTA	**Abfaltersbach**	**4.04**	**353**	Pn	**Pn**	**04 01 54.2**	**+1.0**	
	comp=N,15nm,0.5s,SNR=19							
SOKA	**Soboth**	**4.14**	**17**	*e*Pn	**Pn**	**04 01 57.3**	**+2.7**	
	comp=N,1.1nm,0.4s							
KBA	**Koelnbreinsper**	**4.34**	**1**	*e*Pn	**Pn**	**04 01 58.1**	**+0.7**	
	comp=N,4.9nm,0.6s							
FETA	**Feichten**	**4.64**	**338**	*e*Pn	**Pn**	**04 02 03.5**	**+2.1**	
WTTA	**Wattenberg**	**4.67**	**347**	*e*Pn	**Pn**	**04 02 03.4**	**+1.5**	
	comp=N,3.0nm,0.5s							
SQTA	**Sankt Quirin**	**4.71**	**343**	Pn	**Pn**	**04 02 04.3**	**+1.9**	
	comp=N,8.3nm,0.4s,SNR=6.9							
WATA	**Walderalm**	**4.75**	**346**	*e*Pn	**Pn**	**04 02 04.9**	**+2.0**	
	comp=N,1.6nm,0.3s							
ARSA	**Arzberg**	**4.80**	**19**	*e*Pn	**Pn**	**04 02 05.3**	**+1.8**	
	comp=N,2.0nm,0.5s							
MOTA	**Moosalm**	**4.85**	**343**	Pn	**Pn**	**04 02 06.2**	**+1.8**	
	comp=N,1.3nm,0.3s,SNR=5.8							
BIOA	**Bad Ischl, Aus**	**4.96**	**3**	*e*Pn	**Pn**	**04 02 06.9**	**+1.1**	
	comp=N,2.0nm,0.3s							
SJES	**Sjenica**	**4.97**	**82**	*e*Pn	**Pn**	**04 02 06.9**	**+0.9**	
SJES				*e*Sn	**Sn**	**04 03 00.8**	**-2.7**	
RETA	**Reutte**	**5.06**	**341**	*e*Pn	**Pn**	**04 02 09.1**	**+2.0**	
	comp=N,2.5nm,0.3s							
DAVA	**Damuels**	**5.13**	**334**	Pn	**Pn**	**04 02 10.5**	**+2.3**	
	comp=N,4.9nm,0.5s,SNR=6.0							
IVAS	**Ivanjica**	**5.13**	**78**	*e*Pn	**Pn**	**04 02 09.4**	**+1.2**	
IVAS				*e*Sn	**Sn**	**04 03 03.0**	**-4.4**	
MOA	**Molln**	**5.17**	**8**	*e*Pn	**Pn**	**04 02 09.3**	**+0.7**	
	comp=N,1.4nm,0.5s							
RONA	**Rosalia, Austr**	**5.42**	**23**	*e*Pn	**Pn**	**04 02 12.5**	**+0.5**	
	comp=N,0.8nm,0.2s							
CONA	**Conrad Observa**	**5.51**	**19**	*e*Pn	**Pn**	**04 02 14.4**	**+1.0**	
	comp=N,0.1nm,0.1s							
GRUS	**Gruza**	**5.58**	**76**	*e*Pn	**Pn**	**04 02 15.6**	**+1.3**	
CKRC	**Cesky Krumlov**	**6.13**	**7**	*e*SN	**Sn**	**04 03 30.4**	**-1.4**	
BARS	**Barje**	**6.32**	**86**	*e*Pn	**Pn**	**04 02 26.4**	**+2.0**	
KHC	**Kasperske Hory**	**6.40**	**2**	*e*PN	**Pn**	**04 02 25.4**	**-0.1**	
KHC				*e*SN	**Sn**	**04 03 38.7**	**+0.2**	
BOSS	**Bosilegrad**	**6.83**	**89**	*e*Pn	**Pn**	**04 02 31.6**	**+0.2**	

ROM 24 04:01:52.9±0.1, 42°.744N±0°.005×13°.197E±0°.010, h10km, ML2.0/3, Error ellipse: s-maj=0.8km s-min=0.5km az=258.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**326**	P	Pg	04 01 56.1	+0.5
NRCA				S	Sg	04 01 57.9	+0.3
RM33	**Pellescritta (**	**0.23**	**177**	P	Pg	04 01 58.7	+1.0
RM33				S	Sg	04 02 03.0	+2.0
RM33				AML	AML		
	comp=E,532µm,0.1s						
RM33				AML	AML		
	comp=E,514µm,0.2s						
RM33				AML	AML		
	comp=N,521µm,0.1s						
RM33				AML	AML		
	comp=N,525µm,0.1s						
FEMA	**Monte Fema**	**0.24**	**334**	P	Pg	04 01 59.0	+1.1
CAMP	**Campotosto**	**0.26**	**143**	P	Pb	04 01 59.0	-0.7
CAMP				S	Sb	04 02 03.2	-1.2
FDMO	**Fiordimonte**	**0.30**	**345**	P	Pb	04 02 00.2	-0.3
FDMO				S	Sg	04 02 04.2	+1.1
TERO	**Teramo**	**0.32**	**112**	P	Pg	04 02 00.1	+0.7
TERO				S	Sb	04 02 04.9	-1.2
TERO				AML	AML		
	comp=E,899µm,0.8s						
TERO				AML	AML		
	comp=N,1140µm,0.1s						
TERO				AML	AML		
	comp=E,1050µm,0.8s						
TERO				AML	AML		
	comp=N,1450µm,0.1s						
TERO				AML	AML		
	comp=E,366µm,0.3s						
TERO				AML	AML		
	comp=E,441µm,0.3s						
TERO				AML	AML		
	comp=N,659µm,0.1s						
TERO				AML	AML		
	comp=N,854µm,0.3s						
GUMA	**Gualdo di Mace**	**0.34**	**18**	P	Pb	04 02 00.3	-0.7
GUMA				S	Sb	04 02 06.1	-0.4
CESI	**CESI - Serrava**	**0.34**	**321**	P	Pg	04 02 00.2	+0.6
CESI				S	Sg	04 02 05.2	+1.0
ARRO	**Arrone**	**0.36**	**243**	P	Pb	04 02 00.8	-0.5
ARRO				S	Sb	04 02 05.9	-1.1
GIGS	**Gran Sasso**	**0.40**	**137**	P	Pg	04 02 01.1	+0.3
GIGS				AML	AML		
	comp=E,117µm,0.2s						
GIGS				AML	AML		
	comp=N,50µm,0.1s						

ROM 24 04:03:03.3±0.1, 42°.692N±0°.008×13°.26E±0°.02, h9km±1km, ML2.4/10, 5C-1D, Error ellipse: s-maj=1.4km s-min=0.7km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.18**	**324**	⇑P	Pg	04 03 07.3	+0.3
NRCA				AML	AML		
	comp=E,84800µm,0.2s						
NRCA				AML	AML		
	comp=N,87400µm,0.2s						
NRCA				AML	AML		
	comp=E,84850µm,0.2s						
NRCA				AML	AML		
	comp=N,87450µm,0.2s						
NRCA				AML	AML		
	comp=E,87850µm,0.2s						
NRCA				AML	AML		
	comp=N,97150µm,0.2s						
NRCA				AML	AML		
	comp=E,50516µm,1.2s						
NRCA				AML	AML		
	comp=N,97152µm,0.2s						
CAMP	**Campotosto**	**0.19**	**144**	P	Pg	04 03 08.2	+0.9
CAMP				S	Sg	04 03 10.2	+0.1
CAMP				AML	AML		
	comp=E,1840µm,0.4s						
CAMP				AML	AML		
	comp=N,1600µm,0.4s						
MMO1	**Montemonaco**	**0.21**	**14**	P	Pg	04 03 09.3	+1.6
MMO1				S	Sg	04 03 12.1	+1.4
TERO	**Teramo**	**0.27**	**105**	P	Pb	04 03 09.9	-0.4
TERO				S	Sg	04 03 13.2	+1.0
TERO				AML	AML		
	comp=E,1160µm,0.1s						
TERO				AML	AML		
	comp=N,1450µm,0.1s						
TERO				AML	AML		
	comp=E,1830µm,1.1s						
TERO				AML	AML		
	comp=N,3280µm,0.7s						
TERO				AML	AML		
	comp=E,2025µm,1.1s						
TERO				AML	AML		
	comp=N,3470µm,0.7s						
TERO				AML	AML		
	comp=N,1447µm,0.1s						
TERO				END			
FEMA	**Monte Fema**	**0.31**	**331**	P	Pg	04 03 09.9	+0.4
GIGS	**Gran Sasso**	**0.34**	**136**	P	Pg	04 03 10.2	+0.3
AOU	**L'Aquila**	**0.35**	**162**	P	Pb	04 03 11.9	+0.1
FDMO	**Fiordimonte**	**0.37**	**340**	P	Pg	04 03 10.9	+0.4
FDMO				AML	AML		
	comp=E,1780µm,0.6s						
FDMO				AML	AML		
	comp=N,1545µm,0.3s						
FDMO				AML	AML		
	comp=N,1547µm,0.3s						
GUMA	**Gualdo di Mace**	**0.38**	**9**	P	Pb	04 03 12.0	-0.1
GUMA				S	Sb	04 03 17.0	-1.1
ARRO	**Arrone**	**0.38**	**253**	AML	AML		
	comp=N,1085µm,0.2s						
ARRO				AML	AML		
	comp=E,1020µm,0.2s						
ARRO				AML	AML		
	comp=E,2045µm,0.2s						
ARRO				AML	AML		
	comp=N,1800µm,0.3s						
CESI	**CESI - Serrava**	**0.41**	**321**	⇑P	Pg	04 03 11.8	+0.5
CESI				AML	AML		
	comp=E,1680µm,1.5s						
CESI				AML	AML		
	comp=N,2435µm,0.6s						
CESI				AML	AML		
	comp=N,2435µm,0.6s						
FIAM	**Fiamignano**	**0.44**	**194**	P	Pb	04 03 13.7	+0.5
SEF1	**Sefro**	**0.51**	**334**	⇑P	Pg	04 03 13.4	+0.3
ASSB	**Assisi San Ben**	**0.56**	**309**	P	Pb	04 03 14.8	-0.6
ASSB				AML	AML		
	comp=E,480µm,1.4s						
ASSB				AML	AML		
	comp=N,488µm,0.7s						
ASSB				AML	AML		
	comp=E,848µm,0.2s						
ASSB				AML	AML		
	comp=N,1190µm,0.6s						
ASSB				AML	AML		
	comp=E,345µm,0.7s						
SNTG	**Esanatoglia**	**0.61**	**338**	P	Pg	04 03 15.2	+0.1
SNTG				AML	AML		
	comp=E,311µm,0.3s						
SNTG				AML	AML		
	comp=N,332µm,0.6s						
SNTG				AML	AML		
	comp=E,326µm,0.1s						
SNTG				AML	AML		
	comp=N,405µm,1.6s						
SNTG				AML	AML		
	comp=E,220µm,0.2s						
EL6	**Elcito**	**0.65**	**350**	⇓P	Pg	04 03 16.2	+0.4
EL6				AML	AML		
	comp=E,287µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.67**	**318**	⇑P	Pg	04 03 16.6	+0.4
ATCC				S	Sg	04 03 25.4	+0.5
ATCC				AML	AML		
	comp=E,692µm,0.8s						
ATCC				AML	AML		
	comp=N,586µm,0.2s						
ATCC				AML	AML		
	comp=E,429µm,1.2s						
FOSV	**Fossato di Vic**	**0.70**	**329**	⇑P	Pg	04 03 17.0	+0.1
FOSV				AML	AML		
	comp=E,392µm,0.5s						
FOSV				AML	AML		
	comp=N,698µm,0.4s						
ARVD	**Arcevia**	**0.84**	**344**	P	Pg	04 03 19.4	0.0
ARVD				S	Sb	04 03 31.0	-0.4
ARVD				AML	AML		
	comp=E,252µm,1.0s						
ARVD				AML	AML		
	comp=N,248µm,0.6s						
ARVD				AML	AML		
	comp=E,198µm,0.1s						
ARVD				AML	AML		
	comp=N,127µm,0.2s						
ATFO	**Monte Foce - G**	**0.84**	**324**	P	Pg	04 03 19.6	+0.1
ATFO				S	Sg	04 03 30.8	+0.4
ATFO				AML	AML		
	comp=E,285µm,0.7s						
ATFO				AML	AML		
	comp=N,354µm,0.3s						
ATFO				AML	AML		
	comp=N,122µm,0.5s						
FSSB	**Fossombrone**	**1.06**	**341**	AML	AML		
	comp=E,609µm,0.4s						
FSSB				AML	AML		
	comp=N,726µm,0.4s						

*IDC **24** 04:03:25.6±1.5, 45°.46S×77°.97W, h0km, mb3.9/5, mbtmp3.9/6, ML4.2/1, MS3.8/1, Error ellipse: s-maj=56.6km s-min=26.4km az=122.0*
*GUC **24** 04:03:27.2±0.4, 45°.48S×77°.25W, h4km±48km, ML4.3*
*NEIC **24** 04:03:28.1±1.2, 45°.62S±0°.07×77°.5W±0°.2, h14km±6km, mb4.2/5, Mwr4.5(GUC), Error ellipse: s-maj=18.1km s-min=10.0km az=93.0*

ISC 24 04:03:27.6±0.8, 45°.60S±0°.07×77°.24W±0°.07, h10km, n49, σ1s 76/46, mb4.0/7, 3C, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AY01	**Puyuhuapi**	**3.46**	**72**		**Pn**	**04 04 22.1**	**+0.5**
AY01				Sn	**Sb**	**04 05 05.7**	**-5.3**
AY01	**Puyuhuapi**	**3.46**	**72**	*e*S	**Sn**	**04 05 05.0**	**+2.4**
AY01				IAML		04 05 08.0	
	comp=N,448nm,0.4s						

GO07	**Milladeo Hill,**	**3.57**	**47**			**Pn**	**04 04 23.2**	**+0.2**
GO07				Sn		**Sn**	**04 05 06.8**	**+1.6**
GO07	**Milladeo Hill,**	**3.57**	**47**	⇑*i*P		**Pn**	**04 04 23.2**	**+0.2**
GO07				*e*S		**Sn**	**04 05 06.4**	**+1.1**
GO07				IAML			04 05 09.2	
	comp=N,499nm,0.9s							
COYC	**Coyhaique**	**3.62**	**91**			**Pn**	**04 04 27.5**	**+3.8**
COYC						**Sb**	**04 05 11.6**	**-4.0**
COYC	**Coyhaique**	**3.62**	**91**	*e*P		**Pn**	**04 04 24.9**	**+1.2**
COYC				IAmb		IAmb	04 04 38.2	
	comp=E,27nm,1.1s							
COYC				*e*S		**Sn**	**04 05 10.2**	**+3.7**
LL07	**Hotel Espejo d**	**3.87**	**46**			**Pn**	**04 04 28.1**	**+1.0**
LL07	**Hotel Espejo d**	**3.87**	**46**	⇑*i*P		**Pn**	**04 04 27.8**	**+0.7**
LL07				*e*S		**Sn**	**04 05 13.5**	**+0.9**
LL02	**Futaleuf**	**4.55**	**60**			**Pn**	**04 04 37.3**	**+0.7**
LL01	**San Ignacio de**	**4.74**	**49**			**Pn**	**04 04 39.8**	**+0.6**
LL05	**Los Muermos**	**5.01**	**34**			**Pn**	**04 04 44.3**	**+1.5**
LL05	**Los Muermos**	**5.01**	**34**	⇑*i*P		**Pn**	**04 04 44.2**	**+1.5**
LL05				IAmb		IAmb	04 04 48.1	
	comp=E,607nm,1.1s							
LL03	**Petrohue**	**5.68**	**40**			**Pn**	**04 04 53.4**	**+1.4**
LL03	**Petrohue**	**5.68**	**40**	*e*P		**Pn**	**04 04 53.5**	**+1.4**
LL04	**Puerto Octay**	**5.87**	**39**			**Pn**	**04 04 55.8**	**+1.2**
LL04	**Puerto Octay**	**5.87**	**39**	*e*P		**Pn**	**04 04 55.8**	**+1.2**
LL04				IAmb		IAmb	04 04 57.1	
	comp=N,218nm,0.2s							
LR04	**Corral**	**6.37**	**27**			**Pn**	**04 05 02.8**	**+1.4**
LR04	**Corral**	**6.37**	**27**	*e*P		**Pn**	**04 05 03.0**	**+1.5**
GO09	**Cerro Castillo**	**6.54**	**152**			**Pn**	**04 05 03.6**	**-0.3**
MG05	**Puerto Natales**	**6.84**	**154**			**Pn**	**04 05 07.8**	**-0.1**
PLCA	**Paso Flores**	**6.89**	**47**	Pn		**Pn**	**04 05 11.0**	**+2.2**
	comp=N,1.0nm,0.3s,baz=242,slow=13,SNR=44							
PLCA				LR		LR	04 07 51.4	
	comp=N,707nm,19.6s,baz=192,slow=37							
	comp=N,2.6nm,0.4s							
PLCA	**Paso Flores**	**6.89**	**47**			**Pn**	**04 05 09.1**	**+0.2**
LR03	**Panguipulli**	**6.97**	**33**			**Pn**	**04 05 11.0**	**+1.3**
LR03	**Panguipulli**	**6.97**	**33**	*e*P		**Pn**	**04 05 11.1**	**+1.3**
GO06	**Curarrehue**	**7.36**	**37**			**Pn**	**04 05 16.9**	**+1.7**
GO06	**Curarrehue**	**7.36**	**37**	*e*P		**Pn**	**04 05 17.4**	**+2.2**
GO06				IAmb		IAmb	04 05 21.2	
	comp=N,55nm,0.9s							
BI05	**Punta Hualpn**	**9.36**	**20**			**Pn**	**04 05 43.3**	**+0.8**
ML02	**Panimavida**	**10.77**	**26**			**Pn**	**04 06 02.5**	**+0.6**
GO05	**Huala**	**11.32**	**23**			**Pn**	**04 06 09.9**	**+0.4**
H03S1	**Juan Fernandez**	**11.81**	**353**	T		T	04 18 22.0	
	baz=173							
H03S2	**Juan Fernandez**	**11.82**	**353**	T		T	04 18 18.6	
	baz=173							
H03S3	**Juan Fernandez**	**11.83**	**353**	T		T	04 18 22.0	
	baz=173							
VA05	**Santo Domingo**	**12.69**	**22**			**Pn**	**04 06 28.3**	**+0.3**
LVC	**Limon Verde**	**23.92**	**19**	P		**P**	**04 08 42.3**	**+0.2**
	comp=N,9.0nm,0.8s,baz=174,slow=14,SNR=5.5							
	comp=N,9.0nm,0.8s							
LVC	**Limon Verde**	**23.92**	**19**	P		**P**	**04 08 42.4**	**+0.2**
CPUP	**Villa Florida**	**24.97**	**46**	P		**P**	**04 08 53.2**	**+2.0**
	comp=N,6.7nm,0.9s,baz=225,slow=11,SNR=11							
	comp=N,6.7nm,0.9s							
CPUP	**Villa Florida**	**24.97**	**46**	P		**P**	**04 08 52.5**	**+1.3**
CPUP				IAmb		IAmb	04 08 56.0	
	comp=Z,8.4nm,1.1s							
SIV	**San Ignacio**	**32.49**	**30**	P		**P**	**04 09 59.4**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=226,slow=11,SNR=5.3							
	comp=Z,0.9nm,0.4s							
ETMB	**Extrema**	**36.89**	**18**	P		**P**	**04 10 36.2**	**-0.2**
ETMB				IAmb		IAmb	04 10 38.7	
	comp=Z,3.3nm,0.8s							
SNAA	**Sanae**	**42.67**	**153**	P		**P**	**04 11 24.5**	**+0.5**
SNAA				IAmb		IAmb	04 11 30.1	
	comp=Z,4.1nm,1.2s							
QSPA	**South Pole Qui**	**44.64**	**180**	P		**P**	**04 11 40.0**	**-0.1**
VNDA	**Vanda**	**51.93**	**194**	P		**P**	**04 12 35.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=153,slow=4.5,SNR=1.5							
	comp=Z,0.5nm,0.8s							
TXAR	**Lajitas Array**	**78.36**	**337**	P		**P**	**04 15 25.4**	**-2.7**
	comp=Z,0.2nm,0.8s,baz=159,slow=7.7,SNR=2.3							
	comp=Z,0.2nm,0.8s							
H11S2	**WAKE ISLAND Hyl**	**21.14**	**265**	T		T	06 34 58.7	
	baz=135,slow=75							
H11S1	**WAKE ISLAND Hyl**	**21.16**	**265**	T		T	06 34 55.9	
	baz=135,slow=75							
H11S3	**WAKE ISLAND Hyl**	**21.16**	**265**	T		T	06 34 53.3	
	baz=135,slow=75							
H11N3	**WAKE ISLAND Hyl**	**21.82**	**266**	T		T	06 35 41.1	
	baz=130							
H11N1	**WAKE ISLAND Hyl**	**21.83**	**266**	T		T	06 35 34.9	
	baz=130							
H11N2	**WAKE ISLAND Hyl**	**21.84**	**266**	T		T	06 35 38.2	
	baz=130							

ROM 24 04:03:32.6±0.1, 42°.663N±0°.004×13°.205E±0°.009, h9km, ML2.8/19, 8C, Error ellipse: s-maj=0.6km s-min=0.4km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.13**	**30**	P	Pg	04 03 36.1	+0.5
AQT1				S	Sg	04 03 38.5	+0.8
RM33	**Pellescritta (**	**0.15**	**177**	⇑P	Pg	04 03 36.7	+0.7
RM33				S	Sg	04 03 39.7	+1.3
RM33				AML	AML		
	comp=E,8070μm,1.4s						
RM33				AML	AML		
	comp=N,5810μm,1.0s						
RM33				AML	AML		
	comp=E,7910μm,1.5s						
RM33				AML	AML		
	comp=E,7905μm,1.5s						
RM33				AML	AML		
	comp=E,8070μm,1.5s						
RM33				AML	AML		
	comp=N,5815μm,0.9s						
RM33				AML	AML		
	comp=N,5915μm,0.9s						
NRCA	**Norcia**	**0.18**	**339**	⇑P	Pg	04 03 36.9	+0.4
NRCA				S	Sg	04 03 39.8	+0.6
NRCA				AML	AML		
	comp=E,33300μm,0.2s						
NRCA				AML	AML		
	comp=N,21200μm,0.1s						
NRCA				AML	AML		
	comp=E,35950μm,0.2s						
NRCA				AML	AML		
	comp=N,23950μm,0.1s						
NRCA				AML	AML		
	comp=N,21850μm,0.1s						
CAMP	**Campotosto**	**0.20**	**130**	P	Pg	04 03 37.3	+0.6
CAMP				S	Sg	04 03 40.6	+1.1
CAMP				AML	AML		
	comp=E,1840μm,0.4s						
CAMP				AML	AML		
	comp=N,1600μm,0.4s						
CAMP				AML	AML		
	comp=N,1595μm,0.4s						
TERO	**Teramo**	**0.30**	**98**	P	Pg	04 03 38.7	+0.2
TERO				S	Sg	04 03 43.2	+0.7
TERO				AML	AML		
	comp=E,1830μm,1.1s						
TERO				AML	AML		
	comp=E,2025μm,1.1s						
TERO				AML	AML		
	comp=N,3470μm,0.7s						
TERO				AML	AML		
	comp=E,1825μm,1.1s						
TERO				AML	AML		
	comp=N,3280μm,0.7s						
FEMA	**Monte Fema**	**0.32**	**339**	P	Pg	04 03 39.7	+0.6
FEMA				AML	AML		
	comp=N,2625μm,0.5s						
FEMA				AML	AML		
	comp=E,2375μm,0.6s						
FEMA				AML	AML		
	comp=N,2625μm,0.5s						
ARRO	**Arrone**	**0.34**	**256**	⇑P	Pg	04 03 39.6	+0.4
ARRO				S	Sg	04 03 44.9	+1.2
ARRO				AML	AML		
	comp=E,2045μm,0.2s						
ARRO				AML	AML		
	comp=N,1795μm,0.3s						
ARRO				AML	AML		
	comp=N,1800μm,0.3s						
ARRO				AML	AML		
	comp=E,2040μm,0.2s						
AQU	**L'Aquila**	**0.34**	**155**	P	Pg	04 03 39.9	+0.5
AQU				S	Sb	04 03 46.1	-0.4
GIGS	**Gran Sasso**	**0.34**	**128**	P	Pg	04 03 39.8	+0.3
GIGS				AML	AML		
	comp=N,312μm,0.3s						
GIGS				AML	AML		
	comp=N,311μm,0.3s						
GIGS				AML	AML		
	comp=E,412μm,0.3s						
FDMO	**Fiordimonte**	**0.38**	**347**	P	Pg	04 03 40.2	+0.1
FIAM	**Fiamignano**	**0.40**	**189**	⇑P	Pg	04 03 40.7	+0.2
FIAM				S	Sb	04 03 47.0	-1.1
FIAM				AML	AML		
	comp=N,1405μm,1.1s						
FIAM				AML	AML		
	comp=E,1200μm,0.6s						
CESI	**CESI - Serrava**	**0.41**	**327**	⇑P	Pg	04 03 40.9	+0.3
GUMA	**Gualdo di Mace**	**0.41**	**13**	⇑P	Pg	04 03 41.2	+0.5
GUMA				S	Sb	04 03 47.8	-0.7
GUMA				AML	AML		
	comp=E,5780μm,0.3s						
GUMA				AML	AML		
	comp=N,6455μm,0.3s						
GUMA				AML	AML		
	comp=E,5780μm,0.3s						
GUMA				AML	AML		
	comp=E,7815μm,0.3s						
GUMA				AML	AML		
	comp=N,6450μm,0.3s						
GUMA				AML	AML		
	comp=N,6945μm,0.3s						
OFFI	**Offida**	**0.45**	**52**	P	Pb	04 03 42.3	-0.4
OFFI				AML	AML		
	comp=E,3530μm,1.5s						
OFFI				AML	AML		
	comp=N,2425μm,0.3s						
CESX	**Cesi**	**0.46**	**264**	⇑P	Pg	04 03 41.8	+0.2
CESX				AML	AML		
	comp=N,996μm,0.3s						
CESX				AML	AML		
	comp=E,804μm,0.5s						
TRTR	**Tortoreto Alta**	**0.54**	**74**	P	Pb	04 03 44.2	-0.1
TRTR				AML	AML		
	comp=E,2240μm,0.7s						
TRTR				AML	AML		
	comp=N,1735μm,0.5s						
ASSB	**Assisi San Ben**	**0.55**	**314**	P	Pb	04 03 44.1	-0.4
ASSB				S	Sb	04 03 52.1	-0.5
ASSB				AML	AML		
	comp=E,848μm,0.2s						
ASSB				AML	AML		
	comp=E,848μm,0.2s						
ASSB				AML	AML		
	comp=N,1190μm,0.6s						
SNTG	**Esanatoglia**	**0.62**	**342**	P	Pg	04 03 44.8	+0.1
ATCC	**AVT- Casa Cast**	**0.67**	**322**	P	Pg	04 03 45.9	+0.4
SRES	**S.Oreste - Sor**	**0.67**	**231**	⇑P	Pb	04 03 46.0	-0.4
SRES				AML	AML		
	comp=N,206μm,0.4s						
SRES				AML	AML		
	comp=E,222μm,0.5s						
FOSV	**Fossato di Vic**	**0.71**	**333**	P	Pg	04 03 46.3	-0.1
CERT	**Cerreto**	**0.73**	**193**	P	Pb	04 03 47.8	+0.3
CERT				AML	AML		
	comp=E,613μm,0.5s						
CERT				AML	AML		
	comp=N,327μm,0.4s						
PP3	**Marolino**	**0.77**	**22**	P	Pb	04 03 48.3	0.0
PP3				AML	AML		
	comp=N,1650μm,0.4s						
PP3				AML	AML		
	comp=E,2570μm,0.7s						
PP3				AML	AML		
	comp=N,1785μm,0.4s						
PP3				AML	AML		
	comp=E,2655μm,0.7s						
PP3				AML	AML		
	comp=N,1655μm,0.4s						
PP3				AML	AML		
	comp=E,2575μm,0.7s						
PP3				AML	AML		
	comp=N,1790μm,0.4s						
MGAB	**Montegabbione**	**0.84**	**288**	P	Pb	04 03 49.5	+0.1
MGAB				AML	AML		
	comp=N,704μm,1.0s						
MGAB				AML	AML		
	comp=N,660μm,1.0s						
MGAB				AML	AML		
	comp=E,848μm,1.4s						
MGAB				AML	AML		
	comp=E,812μm,1.4s						
MGAB				AML	AML		
	comp=N,704μm,1.0s						
SACS	**San Casciano d**	**0.97**	**281**	P	Pb	04 03 51.5	-0.2
SACS				AML	AML		
	comp=E,224μm,0.9s						
SACS				AML	AML		
	comp=N,276μm,0.9s						
CAFI	**Castiglion Fio**	**1.13**	**307**	P	Pn	04 03 55.2	+0.6
CAFI				AML	AML		
	comp=E,225μm,0.4s						
CAFI				AML	AML		
	comp=N,173μm,0.5s						
CAFI				AML	AML		
	comp=E,226μm,0.4s						
CAFI				AML	AML		
	comp=N,172μm,0.5s						
MYKA	**Terra Mystica**	**3.98**	**4**	*e*Pn	Pn	04 04 36.5	+2.6
	comp=N,1.6nm,0.3s						
ABTA	**Abfaltersbach**	**4.11**	**353**	*e*Pn	Pn	04 04 37.4	+1.7
	comp=N,0.7nm,0.2s						

ROM 24 04:04:07.2±0.1, 42°.724N±0°.005×13°.19E±0°.01, h10km, ML2.2/5, Error ellipse: s-maj=1.0km s-min=0.5km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.09**	**57**	P	Pg	04 04 10.4	+0.6
AQT1				S	Sg	04 04 12.3	+0.6
NRCA	**Norcia**	**0.12**	**333**	P	Pg	04 04 10.6	+0.3
NRCA				S	Sg	04 04 12.7	+0.3
NRCA				AML	AML		
	comp=E,24000μm,0.2s						
NRCA				AML	AML		
	comp=N,22500μm,0.1s						
NRCA				AML	AML		
	comp=E,25800μm,0.2s						
NRCA				AML	AML		
	comp=N,24350μm,0.1s						
NRCA				AML	AML		
	comp=N,8673μm,0.1s						
NRCA				END			
RM33	**Pellescritta (**	**0.22**	**175**	P	Pb	04 04 12.6	-0.6
RM33				S	Sg	04 04 16.3	+1.5
RM33				AML	AML		
	comp=E,3015μm,1.4s						
RM33				AML	AML		
	comp=N,4055μm,0.2s						
RM33				AML	AML		
	comp=E,3170μm,1.0s						
RM33				AML	AML		
	comp=N,4170μm,0.2s						
RM33				AML	AML		
	comp=E,3165μm,1.0s						
RM33				AML	AML		
	comp=N,4060μm,0.2s						
RM33				AML	AML		
	comp=N,1458μm,0.2s						
RM33				END			
CAMP	**Campotosto**	**0.25**	**139**	P	Pg	04 04 12.8	+0.4
CAMP				S	Sg	04 04 16.9	+1.1
CAMP				AML	AML		
	comp=E,1690μm,0.2s						
CAMP				AML	AML		
	comp=N,1100μm,0.2s						
CAMP				AML	AML		
	comp=E,473μm,0.6s						
CAMP				END			
FEMA	**Monte Fema**	**0.26**	**336**	P	Pb	04 04 13.4	-0.6
FEMA				S	Sg	04 04 17.0	+0.8
TERO	**Teramo**	**0.32**	**108**	P	Pg	04 04 13.9	+0.3
TERO				AML	AML		
	comp=N,537μm,0.5s						
GUMA	**Gualdo di Mace**	**0.35**	**17**	P	Pg	04 04 14.9	+0.7
GUMA				S	Sb	04 04 21.0	-0.3
GIGS	**Gran Sasso**	**0.39**	**134**	P	Pg	04 04 15.2	+0.3
GIGS				S	Sg	04 04 21.1	+0.9
GIGS				AML	AML		
	comp=E,180μm,1.2s						
FIAM	**Fiamignano**	**0.46**	**187**	P	Pb	04 04 17.2	-0.2
FIAM				S	Sb	04 04 23.8	-0.5
MURB	**Monte Urbino**	**0.73**	**318**	AML	AML		
	comp=E,1357μm,0.4s						
MURB				AML	AML		
	comp=N,1245μm,1.6s						

ROM 24 04:04:15.9±0.1, 42°.736N±0°.005×13°.213E±0°.009, h11km, ML2.2/4, Error ellipse: s-maj=0.8km s-min=0.3km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.07**	**58**	P	Pg	04 04 18.6	+0.3
AQT1				S	Sg	04 04 20.4	+0.3
NRCA	**Norcia**	**0.12**	**323**	P	Pg	04 04 19.4	+0.4
NRCA				S	Sg	04 04 21.7	+0.5
NRCA				AML	AML		
	comp=E,17150μm,0.6s						
NRCA				AML	AML		
	comp=N,21900μm,0.1s						
NRCA				AML	AML		
	comp=E,19000μm,0.6s						
NRCA				AML	AML		
	comp=N,23600μm,0.1s						
RM33	**Pellescritta (**	**0.23**	**180**	P	Pg	04 04 21.4	+0.6
RM33				S	Sg	04 04 25.5	+1.6
RM33				AML	AML		
	comp=E,3010μm,1.4s						
RM33				AML	AML		
	comp=N,4055μm,0.2s						
CAMP	**Campotosto**	**0.25**	**144**	P	Pg	04 04 21.6	+0.6
CAMP				S	Sg	04 04 25.5	+0.9
CAMP				AML	AML		
	comp=E,1690μm,0.2s						
CAMP				AML	AML		
	comp=N,1100μm,0.2s						
FEMA	**Monte Fema**	**0.26**	**332**	P	Pg	04 04 21.8	+0.6
FEMA				S	Sg	04 04 25.8	+1.0
FEMA				AML	AML		
	comp=E,1975μm,0.3s						
FEMA				AML	AML		
	comp=N,2625μm,0.5s						
FEMA				AML	AML		
	comp=N,2410μm,0.7s						
TERO	**Teramo**	**0.31**	**111**	P	Pb	04 04 23.3	-0.3
TERO				S	Sg	04 04 27.1	+0.8
FDMO	**Fiordimonte**	**0.31**	**343**	P	Pg	04 04 22.3	+0.1
FDMO				S	Sg	04 04 27.4	+0.9
FDMO				AML	AML		
	comp=E,802μm,0.2s						
FDMO				AML	AML		
	comp=N,725μm,1.1s						
FDMO				AML	AML		
	comp=E,932μm,0.2s						
FDMO				AML	AML		
	comp=N,1100μm,0.1s						
FDMO				AML	AML		
	comp=E,802μm,0.2s						
GUMA	**Gualdo di Mace**	**0.34**	**15**	P	Pb	04 04 23.4	-0.6
GUMA				S	Sb	04 04 28.9	-0.5
GUMA				AML	AML		
	comp=E,5425μm,0.4s						
GUMA				AML	AML		
	comp=N,6450μm,0.3s						
GUMA				AML	AML		
	comp=E,5425μm,0.3s						
GUMA				AML	AML		
	comp=E,5425μm,0.3s						
GUMA				AML	AML		
	comp=N,6945μm,0.3s						
GUMA				AML	AML		
	comp=N,6450μm,0.3s						
CESI	**CESI - Serrava**	**0.35**	**320**	P	Pg	04 04 23.3	+0.3
CESI				S	Sb	04 04 28.9	-1.0
CESI				AML	AML		
	comp=E,564μm,0.2s						
CESI				AML	AML		
	comp=N,1075μm,0.3s						
CESI				AML	AML		
	comp=E,809μm,0.9s						
CESI				AML	AML		
	comp=N,1355μm,0.2s						
CESI				AML	AML		
	comp=E,564μm,0.2s						
GIGS	**Gran Sasso**	**0.39**	**137**	P	Pg	04 04 24.2	+0.6
GIGS				S	Sg	04 04 29.4	+0.6
GIGS				AML	AML		
	comp=N,129nm,0.2s						
OFFI	**Offida**	**0.40**	**60**	P	Pb	04 04 24.8	-0.3
AQU	**L'Aquila**	**0.41**	**160**	P	Pb	04 04 24.8	-0.4
AQU				S	Sb	04 04 30.8	-0.6

ROM 24 04:04:47.5±0.1, 42°.793N±0°.004×13°.153E±0°.009, h8km, ML2.4/4, 2C, Error ellipse: s-maj=0.7km s-min=0.2km az=255.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**325**	P	Pg	04 04 49.9	+0.5
NRCA				S	Sg	04 04 51.1	+0.3
NRCA				AML	AML		
	comp=N,22500μm,0.1s						
NRCA				AML	AML		
	comp=E,24000μm,0.2s						
NRCA				AML	AML		
	comp=E,25800μm,0.2s						
NRCA				AML	AML		
	comp=N,24350μm,0.1s						
FEMA	**Monte Fema**	**0.18**	**336**	P	Pg	04 04 52.3	+0.9
FEMA				S	Sg	04 04 55.2	+1.1
FDMO	**Fiordimonte**	**0.25**	**349**	P	Pg	04 04 53.1	+0.6
FDMO				S	Sg	04 04 57.0	+1.1
FDMO				AML	AML		
	comp=N,898μm,0.2s						
FDMO				AML	AML		
	comp=E,932μm,0.2s						
FDMO				AML	AML		
	comp=N,1100μm,0.1s						
CESI	**CESI - Serrava**	**0.28**	**319**	P	Pg	04 04 53.8	+0.6
CESI				S	Sg	04 04 58.2	+1.3
RM33	**Pellescritta (**	**0.29**	**171**	P	Pb	04 04 54.2	-0.7
RM33				S	Sb	04 04 59.0	-0.9
GUMA	**Gualdo di Mace**	**0.30**	**26**	⇑P	Pg	04 04 54.3	+0.7
GUMA				S	Sb	04 04 59.5	-0.8
CAMP	**Campotosto**	**0.32**	**144**	P	Pg	04 04 54.3	+0.4
CAMP				S	Sb	04 04 59.7	-1.2
ARRO	**Arrone**	**0.36**	**233**	P	Pb	04 04 55.4	-0.7
ARRO				S	Sb	04 05 01.1	-0.7
ARRO				AML	AML		
	comp=E,750μm,0.8s						
ARRO				AML	AML		
	comp=N,1170μm,0.2s						
TERO	**Teramo**	**0.37**	**117**	P	Pb	04 04 55.8	-0.6
TERO				S	Sb	04 05 01.1	-1.2
TERO				AML	AML		
	comp=N,1610μm,0.1s						
TERO				AML	AML		
	comp=E,1180μm,0.1s						
SEF1	**Sefro**	**0.39**	**337**	P	Pg	04 04 55.5	+0.4
SEF1				S	Sb	04 05 01.7	-1.1
OFFI	**Offida**	**0.42**	**70**	P	Pb	04 04 57.0	-0.1
AQU	**L'Aquila**	**0.48**	**157**	P	Pg	04 04 56.8	0.0
AQU				S	Sb	04 05 05.4	+0.1
SNTG	**Esanatoglia**	**0.49**	**341**	P	Pb	04 04 58.5	+0.1
SNTG				S	Sb	04 05 04.9	-0.8
FIAM	**Fiamignano**	**0.53**	**183**	P	Pg	04 04 58.2	+0.5
EL6	**Elcito**	**0.54**	**356**	P	Pg	04 04 58.3	+0.4
EL6				S	Sb	04 05 06.5	-0.7
ARVD	**Arcevia**	**0.72**	**348**	P	Pb	04 05 01.9	-0.4
ARVD				S	Sb	04 05 12.6	+0.2
MPAG	**Monte Paganucc**	**0.88**	**341**	P	Pg	04 05 04.8	+0.2
MPAG				S	Sb	04 05 17.6	+0.5
FSSB	**Fossombrone**	**0.94**	**343**	⇑P	Pg	04 05 05.5	0.0

ROM 24 04:05:16.1±0.1, 42°.738N±0°.004×13°.166E±0°.006,

h10km, ML2.5/5, 5C, Error ellipse: s-maj=0.5km s-min=0.2km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQT1	**Arquata del Tr**	**0.10**	**69**	⇑P	Pg	04 05 19.4	+0.6
AQT1				S	Sg	04 05 20.9	+0.2
NRCA	**Norcia**	**0.10**	**338**	⇑P	Pg	04 05 19.4	+0.5
NRCA				S	Sg	04 05 21.4	+0.6
NRCA				AML	AML		
	comp=N,22450μm,0.1s						
NRCA				AML	AML		
	comp=N,24350μm,0.1s						
NRCA				AML	AML		
	comp=E,23600μm,0.8s						
NRCA				AML	AML		
	comp=N,22500μm,0.1s						
NRCA				AML	AML		
	comp=E,22250μm,0.8s						
RM33	**Pellescritta (**	**0.23**	**171**	P	Pg	04 05 21.6	+0.6
RM33				S	Sg	04 05 25.6	+1.5
RM33				AML	AML		
	comp=E,3170μm,1.0s						
RM33				AML	AML		
	comp=N,1780μm,0.5s						
RM33				AML	AML		
	comp=E,3160μm,1.0s						
RM33				AML	AML		
	comp=N,1795μm,0.5s						
RM33				AML	AML		
	comp=N,1810μm,0.9s						
RM33				AML	AML		
	comp=E,3165μm,1.0s						
RM33				AML	AML		
	comp=N,1805μm,0.9s						
FEMA	**Monte Fema**	**0.24**	**339**	P	Pg	04 05 21.6	+0.5
FEMA				S	Sg	04 05 25.4	+0.9
FEMA				AML	AML		
	comp=E,3330μm,0.6s						
FEMA				AML	AML		
	comp=N,2065μm,0.7s						
CAMP	**Campotosto**	**0.27**	**138**	P	Pg	04 05 22.2	+0.5
CAMP				S	Sg	04 05 26.5	+1.1
FDMO	**Fiordimonte**	**0.30**	**349**	⇑P	Pg	04 05 22.6	+0.3
FDMO				S	Sb	04 05 27.6	-1.2
FDMO				AML	AML		
	comp=E,744μm,1.4s						
FDMO				AML	AML		
	comp=N,1100μm,0.1s						
CESI	**CESI - Serrava**	**0.33**	**324**	P	Pg	04 05 23.1	+0.3
CESI				S	Sg	04 05 28.1	+1.0
CESI				AML	AML		
	comp=N,1440μm,0.3s						
CESI				AML	AML		
	comp=E,982μm,0.3s						
ARRO	**Arrone**	**0.34**	**242**	P	Pg	04 05 23.4	+0.6
ARRO				S	Sb	04 05 28.8	-0.7
ARRO				AML	AML		
	comp=E,750μm,0.8s						
ARRO				AML	AML		
	comp=N,1175μm,0.2s						
TERO	**Teramo**	**0.34**	**109**	P	Pg	04 05 23.4	+0.4
TERO				S	Sg	04 05 28.6	+1.1
GUMA	**Gualdo di Mace**	**0.35**	**21**	⇑P	Pb	04 05 23.8	-0.6
GUMA				S	Sb	04 05 29.7	-0.3
GUMA				AML	AML		
	comp=E,3470μm,0.2s						
GUMA				AML	AML		
	comp=N,3430μm,1.5s						
GUMA				AML	AML		
	comp=E,2555μm,0.2s						
GUMA				AML	AML		
	comp=N,2950μm,0.6s						
GIGS	**Gran Sasso**	**0.41**	**134**	P	Pg	04 05 24.6	+0.4
GIGS				S	Sb	04 05 31.0	-0.9
GIGS				AML	AML		
	comp=E,181μm,0.5s						
GIGS				AML	AML		
	comp=N,212μm,0.5s						
AQU	**L'Aquila**	**0.42**	**156**	P	Pg	04 05 24.8	+0.4
AQU				S	Sb	04 05 31.6	-0.5
AQU				AML	AML		
	comp=N,590μm,0.3s						
AQU				AML	AML		
	comp=E,646μm,0.6s						
OFFI	**Offida**	**0.43**	**63**	P	Pb	04 05 25.7	-0.1
OFFI				AML	AML		
	comp=E,1795μm,1.6s						
OFFI				AML	AML		
	comp=N,2870μm,1.0s						
FIAM	**Fiamignano**	**0.47**	**184**	⇑P	Pg	04 05 25.5	+0.2
FIAM				S	Sb	04 05 33.0	-0.5
FIAM				AML	AML		
	comp=E,516μm,0.7s						
FIAM				AML	AML		
	comp=N,534μm,0.7s						
ASSB	**Assisi San Ben**	**0.48**	**309**	P	Pg	04 05 25.9	+0.3
SNTG	**Esanatoglia**	**0.54**	**342**	P	Pg	04 05 26.6	0.0
ATCC	**AVT- Casa Cast**	**0.59**	**319**	P	Pg	04 05 27.8	+0.2
ATCC				S	Sb	04 05 36.9	-0.1
EL6	**Elcito**	**0.59**	**355**	P	Pg	04 05 27.6	-0.1
MURB	**Monte Urbino**	**0.70**	**318**	P	Pb	04 05 30.1	-0.4
ARVD	**Arcevia**	**0.78**	**348**	P	Pg	04 05 30.8	-0.4
PIEI	**Pieia**	**0.92**	**330**	S	Sn	04 05 49.0	+0.5

IDC 24 04:05:19.5±1.8, 6°26S×129°44E, h0km, mb4.0/1, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=61.6km s-min=30.1km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.66**	**19**	Pn	Pn	04 06 45.0	+0.1
	4.1nm,0.3s,baz=192,slow=19,SNR=18						
SIJI				Sn	Sn	04 07 40.3	-10
	5.6nm,0.3s,baz=225,slow=22,SNR=13						
	15nm,0.2s						
WRA	**Warramunga Arr**	**14.41**	**161**	Pn	Pn	04 08 43.4	-1.6
	0.2nm,0.3s,baz=340,slow=13,SNR=11						
WRA				Sn	Sn	04 11 13.3	-12
	0.4nm,0.3s,baz=351,slow=23,SNR=8.9						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**17.83**	**167**	Pn	P	04 09 30.7	+0.6
	0.2nm,0.3s,baz=352,slow=11,SNR=1.7						
ASAR				Sn	Sn	04 12 37.1	-12
	baz=342,slow=23,SNR=1.6						
MKAR	**Makanchi Array**	**67.31**	**327**	P	P	04 16 16.2	0.0
	0.6nm,0.4s,baz=116,slow=7.1,SNR=9.4						
	0.6nm,0.4s						

LDG **24** *04:06:42.7±0.4, 42°.43N×13°.79E, h10km, Ml3.8/38, Error ellipse: s-maj=7.1km s-min=4.8km az=119.0*
BGR **24** *04:06:48.1±0.9, 42°.30N×13°.47E, h5km, ML4.6/12, Error ellipse: s-maj=16.7km s-min=10.0km az=132.0*
ROM **24** *04:06:51.0±0.1, 42°.771N±0°.003×13°.124E±0°.005, h6km, ML4.3/75, Mw4.4, Error ellipse: s-maj=0.3km s-min=0.2km az=246.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=5.06; Mθθ 1.14; Mφφ 3.91; Mrθ=0.57; Mθφ=1.69; Mφr=0.01; Fault plane solution: M0 4.91814×10^15 NP1:φs340.00000°, δ44.00000°, λ-82.00000°. NP2:φs149.00000°, δ47.00000°, λ-97.00000°.*
MED_RC **24** *04:06:50.0±0.5, 42°.68N×13°.17E, h10km, MW4.7/16, Moment Tensor Solution. Mantle waves: s16,c24; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr=1.19±.08; Mθθ 0.26±.08; Mφφ 0.93±.06; Mrθ 0.06±.36; Mθφ=0.28±.07; Mφr=0.50±.23; Best double couple: M0 1.22000×10^16 NP1:φs345.00000°, δ57.00000°, λ-85.00000°. NP2:φs156.00000°, δ33.00000°, λ-97.00000°. Principal axes: T 1.1300, Plg12.0000°, Azm71.0000°; N 0.1600, Plg4.0000°, Azm162.0000°; P -1.3000, Plg77.0000°, Azm271.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
IDC **24** *04:06:51.6±0.5, 42°.85N×13°.04E, h0km, mb4.4/32, mbtmp4.3/45, ML3.7/13, MS3.9/13 Error ellipse: s-maj=9.8km s-min=7.6km az=104.0*
PDG **24** *04:06:51.9±0.5, 42°.79N×13°.13E, h13km, ML4.6/14, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
NEIC **24** *04:06:51.7±1.8, 42°.80N±0°.05×13°.08E±0°.06, h3km±4km, mb4.7/50, Mwr4.5/30, ML4.3(ROM), Mwr4.4(VIE), Error ellipse: s-maj=8.3km s-min=6.0km az=203.0*
MOS **24** *04:06:51.4±1.2, 42°.83N×13°.13E, h11km, mb4.9/32, Error ellipse: s-maj=5.2km s-min=3.1km az=73.8*
NEIC **24** *04:06:52.2, 42°.78N×13°.03E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=6.44; Mθθ 0.69; Mφφ 5.75; Mrθ=0.13; Mθφ=1.24; Mφr 2.54; Fault plane solution: M0 6.75000×10^15 NP1:φs170.52000°, δ56.02000°, λ-86.18000°. NP2:φs343.71000°, δ34.17000°, λ-95.65000°. Principal axes: T 6.5218, Plg11.0000°, Azm258.0000°; N 0.4277, Plg3.0000°, Azm348.0000°; P -6.9495, Plg79.0000°, Azm94.0000°;*
TIR **24** *04:06:52.1, 42°.77N×13°.56E, h14km, Md5.1*
BEO **24** *04:06:53.1±0.7, 42°.84N×13°.11E, h7km±9km, ML4.6/9*
PRU **24** *04:06:53.2±0.0, 42°.81N×13°.37E, h0km, M4.5*

ISC 24 04:06:52.7±0.5, 42.77N±0°.01×13.11E±0°.02, h12km±3km, n768, σ1§60/924, mb4.6/81, MS4.1/11, 84C-33D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.06**	**360**		**Pg**	**04 06 52.8**	**-2.5**
NRCA				Sg	**Sg**	**04 06 54.3**	**-2.9**
NRCA	**Norcia**	**0.06**	**360**	⇓P	**Pg**	**04 06 53.3**	**-2.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
AQT1	**Arquata del Tr**	**0.13**	**88**	⇑P	**Pg**	**04 06 54.4**	**-1.6**
AQT1				S	**Sg**	**04 06 56.5**	**-2.0**
FEMA	**Monte Fema**	**0.20**	**346**	P	**Pg**	**04 06 55.8**	**-1.4**
FEMA				S	**Sg**	**04 06 59.0**	**-1.3**
FDMO	**Fiordimonte**	**0.27**	**356**	⇑P	**Pg**	**04 06 56.9**	**-1.5**
FDMO				S	**Sg**	**04 07 01.3**	**-0.8**
FDMO				AML	AML		
	comp=N,95300μm,0.3s						
FDMO				AML	AML		
RM33	**Pellescritta (**	**0.27**	**164**	⇓P	**Pg**	**04 06 57.3**	**-1.1**
RM33				S	**Sg**	**04 07 01.9**	**-0.3**
CESI	**CESI - Serrava**	**0.28**	**327**	⇑P	**Pg**	**04 06 57.4**	**-1.2**
CESI				S	**Sg**	**04 07 02.1**	**-0.4**
CESI				AML	AML		
CESI				AML	AML		
CAMP	**Campotosto**	**0.32**	**137**	⇑P	**Pg**	**04 06 57.9**	**-1.4**
CAMP				S	**Sg**	**04 07 03.0**	**-0.6**
ARRO	**Arrone**	**0.32**	**234**	⇑P	**Pg**	**04 06 58.4**	**-0.8**
ARRO				S	**Sg**	**04 07 03.9**	**+0.3**
ARRO				AML	AML		
ARRO				AML	AML		
CSP1	**Cessapalombo**	**0.33**	**12**	⇑P	**Pg**	**04 06 57.9**	**-1.6**
CSP1				S	**Sg**	**04 07 03.3**	**-0.7**
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
TERO	**Teramo**	**0.39**	**112**	⇑P	**Pg**	**04 06 58.8**	**-1.7**
TERO				S	**Sg**	**04 07 04.8**	**-0.9**
SEF1	**Sefro**	**0.40**	**342**	P	**Pg**	**04 06 59.4**	**-1.3**
SEF1				S	**Sg**	**04 07 06.0**	**0.0**
SEF1				AML	AML		
	comp=E,96200μm,0.3s						
SEF1				AML	AML		
	comp=N,85400μm,0.2s						
SEF1				AML	AML		
	comp=E,96350μm,0.3s						
PIO1	**Pioraco**	**0.42**	**347**	P	**Pg**	**04 06 59.8**	**-1.3**
PIO1				S	**Sg**	**04 07 06.5**	**-0.2**
MDAR	**Monte D'Aria**	**0.42**	**3**	P	**Pg**	**04 06 59.6**	**-1.5**
MDAR				S	**Sg**	**04 07 06.2**	**-0.6**
MDAR				AML	AML		
	comp=N,47250μm,1.0s						
MDAR				AML	AML		
	comp=N,47300μm,1.0s						
MDAR				AML	AML		
	comp=E,37250μm,1.1s						
CESX	**Cesi**	**0.42**	**248**	⇑P	**Pg**	**04 07 00.1**	**-1.1**
CESX				AML	AML		
	comp=E,89500μm,1.5s						
CESX				AML	AML		
	comp=N,80300μm,0.7s						
ASSB	**Assisi San Ben**	**0.43**	**309**	⇑P	**Pg**	**04 07 00.0**	**-1.3**
ASSB				S	**Sg**	**04 07 07.1**	**0.0**
ASSB				AML	AML		
	comp=E,65650μm,0.4s						
ASSB				AML	AML		
	comp=N,56700μm,0.9s						
FIU1	**Fiuminata**	**0.44**	**342**	P	**Pg**	**04 07 00.3**	**-1.2**
FIU1				S	**Sg**	**04 07 07.5**	**+0.2**
FIU1				AML	AML		
	comp=E,35100μm,0.4s						
FIU1				AML	AML		
	comp=N,33650μm,1.0s						
FIU1				AML	AML		
	comp=E,35100μm,0.3s						
FIU1				AML	AML		
	comp=N,33650μm,1.0s						
MNTP	**Montappone**	**0.45**	**35**	P	**Pg**	**04 07 00.7**	**-0.9**
OFFI	**Offida**	**0.45**	**68**	⇑P	**Pg**	**04 07 00.9**	**-0.7**
OFFI				S	**Sb**	**04 07 09.8**	**+0.5**
SSM1	**San Severino M**	**0.46**	**6**	P	**Pg**	**04 07 00.4**	**-1.5**
GIGS	**Gran Sasso**	**0.46**	**133**	⇑P	**Pg**	**04 07 00.3**	**-1.6**
GIGS				S	**Sg**	**04 07 07.3**	**-0.8**
AQU	**L'Aquila**	**0.47**	**153**	Pg	**Pg**	**04 07 00.6**	**-1.4**
AQU				Sg	**Sg**	**04 07 08.7**	**+0.6**
AQU	**L'Aquila**	**0.47**	**153**	P	**Pg**	**04 07 00.6**	**-1.4**
AQU						04 07 08.7	
AQU	**L'Aquila**	**0.47**	**153**	⇓P	**Pg**	**04 07 00.5**	**-1.4**
GAG1	**Gagliole**	**0.47**	**356**	P	**Pg**	**04 07 00.6**	**-1.4**
GAG1				S	**Sg**	**04 07 08.2**	**0.0**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
MTL1	**Matelica**	**0.49**	**351**	P	**Pg**	**04 07 01.1**	**-1.3**
MTL1				AML	AML		
MTL1				AML	AML		
	comp=E,88500μm,0.6s						
MTL1				AML	AML		
SNTG	**Esanatoglia**	**0.50**	**345**	P	**Pg**	**04 07 01.1**	**-1.6**
SNTG				S	**Sg**	**04 07 09.2**	**0.0**
SNTG				AML	AML		
	comp=E,2690μm,1.4s						
SNTG				AML	AML		
	comp=E,22300μm,1.4s						
SNTG				AML	AML		
	comp=N,2920μm,0.7s						
SNTG				AML	AML		
	comp=N,24400μm,0.7s						
FIAM	**Fiamignano**	**0.50**	**180**	P	**Pg**	**04 07 01.4**	**-1.2**
FIAM				S	**Sg**	**04 07 09.2**	**-0.1**
ATCC	**AVT- Casa Cast**	**0.54**	**320**	⇑P	**Pg**	**04 07 02.0**	**-1.3**
ATCC				S	**Sg**	**04 07 10.9**	**+0.4**
EL6	**Elcito**	**0.56**	**359**	⇑P	**Pg**	**04 07 02.0**	**-1.7**
EL6				S	**Sg**	**04 07 11.3**	**+0.1**
TRE1	**Treia**	**0.56**	**15**	P	**Pg**	**04 07 02.6**	**-1.1**
TRE1				AML	AML		
	comp=N,63500μm,1.5s						
TRE1				AML	AML		
FOSV	**Fossato di Vic**	**0.58**	**334**	P	**Pg**	**04 07 02.6**	**-1.6**
FOSV				S	**Sg**	**04 07 12.1**	**+0.2**
FOSV				AML	AML		
	comp=E,20600μm,0.8s						
FOSV				AML	AML		
	comp=E,20550μm,0.8s						
FOSV				AML	AML		
	comp=N,30950μm,0.8s						
TRTR	**Tortoreto Alta**	**0.59**	**86**	⇑P	**Pg**	**04 07 03.6**	**-0.6**
FAGN	**Fagnano**	**0.61**	**145**	⇓P	**Pg**	**04 07 02.9**	**-1.8**
CADA	**Capodarco di F**	**0.64**	**48**	P	**Pg**	**04 07 04.8**	**-0.3**
VCEL	**Villa Celiera**	**0.65**	**125**	⇑P	**Pg**	**04 07 03.8**	**-1.7**
VCEL				S	**Sg**	**04 07 14.4**	**+0.3**
MURB	**Monte Urbino**	**0.66**	**319**		**Pg**	**04 07 04.0**	**-1.6**
MURB	**Monte Urbino**	**0.66**	**319**	P	**Pg**	**04 07 04.1**	**-1.4**
MURB				AML	AML		
	comp=E,64800μm,0.3s						
MURB				AML	AML		
	comp=N,84900μm,0.3s						
MURB				AML	AML		
	comp=N,84850μm,0.3s						
MURB				AML	AML		
	comp=E,64800μm,0.3s						
MURB				AML	AML		
	comp=N,82450μm,0.3s						
MURB				AML	AML		
	comp=E,73150μm,0.4s						
CIMA	**Civitanova Mar**	**0.67**	**37**	P	**Pg**	**04 07 05.1**	**-0.7**
MMUR	**Monte Murano**	**0.68**	**353**	P	**Pg**	**04 07 04.6**	**-1.4**
SRES	**S.Oreste - Sor**	**0.69**	**220**	⇑P	**Pg**	**04 07 04.8**	**-1.5**
ATTE	**AVT- Monte Tez**	**0.70**	**308**	⇑P	**Pg**	**04 07 04.9**	**-1.5**
ATTE				AML	AML		
	comp=E,17700μm,0.9s						
ATTE				AML	AML		
	comp=N,17750μm,0.7s						
PP3	**Marolino**	**0.71**	**31**	P	**Pg**	**04 07 05.4**	**-1.1**
PP3				AML	AML		
PP3				AML	AML		
	comp=E,97750μm,1.0s						
PP3				AML	AML		
	comp=N,69300μm,0.6s						
PP3				AML	AML		
	comp=N,64450μm,0.6s						
PP3				AML	AML		
	comp=N,69350μm,0.6s						
PP3				AML	AML		
PP3				AML	AML		
	comp=E,98050μm,1.0s						
SSFR	**Montelago di S**	**0.71**	**340**	P	**Pg**	**04 07 05.0**	**-1.5**
SSFR				S	**Sb**	**04 07 16.8**	**-0.1**
SSFR				AML	AML		
	comp=E,41950μm,0.8s						
SSFR				AML	AML		
	comp=N,43350μm,0.3s						
SSFR				AML	AML		
	comp=N,43300μm,0.3s						
SSFR				AML	AML		
	comp=E,42000μm,0.8s						
ATFO	**Monte Foce - G**	**0.72**	**326**	P	**Pg**	**04 07 05.2**	**-1.5**
ATFO				AML	AML		
	comp=N,24250μm,1.4s						
ATFO				AML	AML		
	comp=E,25950μm,1.6s						
ATSC	**Scheggia e Pas**	**0.72**	**335**	P	**Pg**	**04 07 05.2**	**-1.7**
T0110	**Collepietro**	**0.73**	**138**	⇑P	**Pg**	**04 07 05.2**	**-1.8**
T0110				S	**Sg**	**04 07 16.3**	**-0.3**
ARVD	**Arcevia**	**0.74**	**350**	P	**Pg**	**04 07 05.3**	**-1.8**
ARVD				S	**Sg**	**04 07 17.2**	**+0.4**
ARVD				AML	AML		
	comp=E,12650μm,1.0s						
ARVD				AML	AML		
	comp=N,13400μm,0.3s						
MGAB	**Montegabbione**	**0.75**	**281**	P	**Pg**	**04 07 05.9**	**-1.4**
MGAB				AML	AML		
	comp=N,43050μm,0.9s						
MGAB				AML	AML		
	comp=E,62550μm,0.8s						
MGAB				AML	AML		
	comp=E,54700μm,1.6s						
MGAB				AML	AML		
	comp=N,45150μm,0.9s						
ATLO	**AVT- Montelove**	**0.75**	**317**	P	**Pg**	**04 07 05.7**	**-1.7**
ATLO				S	**Sg**	**04 07 17.5**	**+0.3**
PTQR	**Pietraquaria**	**0.78**	**164**	P	**Pg**	**04 07 05.7**	**-2.1**
TB01	**Gubbio**	**0.79**	**321**	P	**Pg**	**04 07 06.3**	**-1.7**
TB02	**Pietralunga**	**0.79**	**320**	P	**Pg**	**04 07 06.3**	**-1.8**
ATVA	**AVT- Monte Val**	**0.79**	**310**	P	**Pg**	**04 07 06.5**	**-1.5**
MTCE	**Montecelio**	**0.80**	**200**	⇑P	**Pg**	**04 07 06.2**	**-2.0**
FRON	**Frontone**	**0.80**	**339**	P	**Pg**	**04 07 06.5**	**-1.8**
FRON				AML	AML		
	comp=N,18150μm,1.6s						
FRON				AML	AML		
	comp=E,13700μm,0.7s						
ATVO	**AVT- Monte Val**	**0.80**	**320**	P	**Pg**	**04 07 06.5**	**-1.8**
ATVO				AML	AML		
	comp=N,13350μm,1.5s						
ATVO				AML	AML		
	comp=E,19100μm,0.7s						
TB03	**Pietralunga**	**0.81**	**321**	P	**Pg**	**04 07 06.7**	**-1.8**
ATBU	**Serra di Buran**	**0.82**	**330**	P	**Pg**	**04 07 07.1**	**-1.5**
CERT	**Cerreto**	**0.83**	**187**	P	**Pg**	**04 07 06.8**	**-1.9**
ATMI	**Monte Miggiano**	**0.84**	**313**	P	**Pg**	**04 07 07.8**	**-1.2**
ATMI				AML	AML		
	comp=N,46200μm,0.7s						
ATMI				AML	AML		
	comp=E,46300μm,0.6s						
AOI	**Ancona**	**0.86**	**24**	⇑P	**Pg**	**04 07 07.5**	**-1.8**
AOI				AML	AML		
	comp=E,19950μm,0.8s						
AOI				AML	AML		
	comp=N,18150μm,1.0s						
ATPI	**Pietralunga -**	**0.86**	**323**	P	**Pg**	**04 07 07.7**	**-1.7**
ATPI				AML	AML		
	comp=E,17050μm,1.1s						
ATPI				AML	AML		
	comp=N,15000μm,1.6s						
ATPC	**Poggio Castell**	**0.86**	**326**	P	**Pg**	**04 07 07.8**	**-1.6**
COR1	**Corinaldo**	**0.86**	**355**	P	**Pg**	**04 07 08.5**	**-1.0**
COR1				AML	AML		
	comp=E,19850μm,1.0s						
COR1				AML	AML		
	comp=N,44850μm,0.9s						
COR1				AML	AML		
	comp=N,46400μm,0.9s						
COR1				AML	AML		
	comp=E,38200μm,1.0s						
PIEI	**Pieia**	**0.88**	**331**	P	**Pg**	**04 07 07.8**	**-1.8**
PIEI				AML	AML		
	comp=E,11505μm,0.6s						
PIEI				AML	AML		
	comp=E,13450μm,0.8s						
SACS	**San Casciano d**	**0.89**	**276**	⇑P	**Pg**	**04 07 08.7**	**-1.3**
SACS				AML	AML		
	comp=E,25450μm,1.4s						
SACS				AML	AML		
	comp=N,33800μm,1.0s						
SACS				AML	AML		
	comp=E,25900μm,1.4s						
SACS				AML	AML		
	comp=N,34150μm,1.0s						
MPAG	**Monte Paganucc**	**0.90**	**343**	P	**Pg**	**04 07 08.2**	**-1.9**
MPAG				AML	AML		
	comp=N,14300μm,1.0s						
MPAG				AML	AML		
	comp=E,15950μm,0.3s						
MPAG				AML	AML		
	comp=E,15700μm,0.3s						
MPAG				AML	AML		
	comp=N,15550μm,1.0s						
NARO	**Abbazia di Nar**	**0.93**	**335**	P	**Pg**	**04 07 08.7**	**-1.9**
NARO				AML	AML		
	comp=N,8450μm,1.6s						
NARO				AML	AML		
	comp=E,8705μm,1.6s						
RCAV	**Rocca di Cave**	**0.93**	**188**	P	**Pg**	**04 07 09.2**	**-1.5**
APEC	**Apecchio**	**0.94**	**327**	P	**Pg**	**04 07 09.3**	**-1.6**
SENI	**Senigallia**	**0.94**	**5**	P	**Pg**	**04 07 09.9**	**-1.0**
SENI				AML	AML		
	comp=N,50450μm,0.6s						
SENI				AML	AML		
	comp=E,19900μm,1.0s						
SENI				AML	AML		
	comp=N,23200μm,0.8s						
SENI				AML	AML		
	comp=E,51750μm,0.3s						
FSSB	**Fossombrone**	**0.95**	**345**	P	**Pg**	**04 07 09.4**	**-1.7**
FSSB				AML	AML		
	comp=E,28400μm,1.2s						
FSSB				AML	AML		
	comp=N,27750μm,1.6s						
INTR	**Introdacqua**	**0.96**	**142**	P	**Pg**	**04 07 08.8**	**-2.4**
VVLD	**Villa Vallelon**	**0.97**	**157**	P	**Pg**	**04 07 09.3**	**-2.2**
BADI	**Badiali**	**0.98**	**320**	P	**Pg**	**04 07 09.9**	**-1.7**
BADI				AML	AML		
	comp=N,11500μm,1.3s						
BADI				AML	AML		
	comp=E,1265μm,1.2s						
LATE	**Laterza**	**0.98**	**261**		**Pg**	**04 07 09.7**	**-1.9**
LATE	**Laterza**	**0.98**	**261**	⇑P	**Pg**	**04 07 10.1**	**-1.5**
GUAR	**Guarcino**	**0.99**	**171**	P	**Pg**	**04 07 10.0**	**-1.8**
RMP	**Rome, Mte Porz**	**1.01**	**198**	P	**Pg**	**04 07 09.9**	**-2.2**
CAFI	**Castiglion Fio**	**1.01**	**304**	P	**Pg**	**04 07 10.8**	**-1.5**
CAFI				AML	AML		
	comp=N,13950μm,0.7s						
CAFI				AML	AML		
	comp=E,10980μm,1.6s						
CAFI				AML	AML		
	comp=N,14450μm,0.7s						
CAFI				AML	AML		
	comp=E,10660μm,1.6s						

PE3	**Peglio**	**1.03 334**	P		**Pb**	**04 07 11.0**	**-1.6**
PE3			AML		AML			
	comp=N,87µm,0.4s							
PE3			AML		AML			
	comp=E,72µm,0.3s							
VIVA	**Pratoni del Vi**	**1.05 194**	P		**Pb**	**04 07 11.2**	**-1.6**
RDP	**Rocca di Papa**	**1.05 196**	P		**Pb**	**04 07 10.7**	**-2.2**
MA9	**Marino**	**1.05 199**	P		**Pb**	**04 07 11.4**	**-1.6**
MCIV	**Monte Civitell**	**1.06 271**	P		**Pb**	**04 07 11.5**	**-1.6**
MCIV			AML		AML			
	comp=N,9845µm,0.6s							
MCIV			AML		AML			
	comp=E,11250µm,1.2s							
SAMA	**S.Maria delle**	**1.06 202**	P		**Pb**	**04 07 11.1**	**-1.9**
LPEL	**Lama dei Pelig**	**1.07 132**	P		**Pb**	**04 07 10.7**	**-2.6**
SF04	**Casetta**	**1.07 274**	P		**Pb**	**04 07 12.1**	**-1.2**
SF04			AML		AML			
	comp=N,11405µm,1.2s							
SF04			AML		AML			
	comp=E,10495µm,1.1s							
SSP9	**Sansepolcro**	**1.08 319**	P		**Pb**	**04 07 12.7**	**-0.6**
SSP9			AML		AML			
	comp=N,14730µm,1.6s							
SSP9			AML		AML			
	comp=E,14850µm,1.6s							
TOLF	**Tolfa**	**1.09 230**	⇑P		**Pb**	**04 07 11.8**	**-1.6**
PARC	**Parchiule**	**1.09 324**	P		**Pb**	**04 07 11.9**	**-1.6**
PARC			AML		AML			
	comp=E,9495µm,0.7s							
PARC			AML		AML			
	comp=N,15650µm,0.8s							
LAV9	**Lanuvio**	**1.13 196**	P		**Pb**	**04 07 13.1**	**-1.2**
POFI	**Posta Fibreno**	**1.14 157**	⇑P		**Pb**	**04 07 12.2**	**-2.2**
SF01	**Poggio Pratacc**	**1.14 273**	P		**Pb**	**04 07 13.1**	**-1.4**
SF01			AML		AML			
	comp=N,20900µm,1.3s							
SF01			AML		AML			
	comp=E,15150µm,0.9s							
PESA	**Pesaro**	**1.19 350**	P		**Pn**	**04 07 14.0**	**-1.2**
PESA			AML		AML			
	comp=N,18350µm,0.8s							
PESA			AML		AML			
	comp=E,22050µm,0.9s							
CRE	**Caprese Michel**	**1.20 315**	P		**Pn**	**04 07 14.4**	**-1.1**
CRE			AML		AML			
	comp=N,6485µm,1.6s							
CRE			AML		AML			
	comp=E,5890µm,1.4s							
ARCI	**Arcidosso**	**1.21 274**	P		**Pn**	**04 07 14.3**	**-1.2**
ARCI			AML		AML			
	comp=N,4710µm,1.6s							
ARCI			AML		AML			
	comp=E,6155µm,1.4s							
GIUL	**Giuliano Di Ro**	**1.22 175**	P		**Pn**	**04 07 13.8**	**-1.8**
CERA	**Filignano**	**1.35 150**	⇑P		**Pn**	**04 07 15.3**	**-2.2**
FRES	**Fresagrandinar**	**1.40 124**	P		**Pn**	**04 07 17.4**	**-0.7**
ASQU	**Asqua**	**1.41 317**	P		**Pn**	**04 07 17.8**	**-0.5**
FROS	**Frosini**	**1.50 288**	P		**Pn**	**04 07 19.1**	**-0.4**
CSNT	**Castellina Chi**	**1.51 298**	⇓P		**Pn**	**04 07 19.3**	**-0.3**
CSNT			AML		AML			
	comp=N,3130µm,1.2s							
CSNT			AML		AML			
	comp=E,3705µm,1.3s							
OSSC	**Osservatorio P**	**1.56 299**			**Pn**	**04 07 20.1**	**-0.3**
OSSC	**Osservatorio P**	**1.56 299**	P		**Pn**	**04 07 20.0**	**-0.3**
OSSC			AML		AML			
	comp=E,3235µm,1.2s							
OSSC			AML		AML			
	comp=N,3185µm,1.3s							
OSSC			AML		AML			
	comp=E,4060µm,1.4s							
OSSC			AML		AML			
	comp=N,3990µm,1.4s							
RUFI	**Rufina**	**1.59 313**	P		**Pn**	**04 07 19.9**	**-0.8**
RUFI			AML		AML			
	comp=N,5410µm,1.6s							
RUFI			AML		AML			
	comp=E,4415µm,1.6s							
VAGA	**Valle Agricola**	**1.59 148**	P		**Pn**	**04 07 20.6**	**-0.2**
BSSO	**Busso**	**1.65 138**	P		**Pn**	**04 07 22.1**	**+0.6**
CASP	**Castiglione de**	**1.66 271**			**Pn**	**04 07 20.6**	**-1.0**
CASP	**Castiglione de**	**1.66 271**	⇑P		**Pn**	**04 07 20.7**	**-0.9**
CASP			AML		AML			
	comp=E,1865µm,1.6s							
CASP			AML		AML			
	comp=N,1615µm,1.3s							
TRIF	**Trifonti**	**1.66 283**	P		**Pn**	**04 07 21.2**	**-0.5**
TRIF			AML		AML			
	comp=E,2720µm,1.3s							
TRIF			AML		AML			
	comp=N,3045µm,1.2s							
LMD	**Lutirano**	**1.66 322**	AML		AML			
	comp=N,3650µm,1.6s							
LMD			AML		AML			
	comp=E,4550µm,0.8s							
CIGN	**Sant'Elia a Pi**	**1.74 129**	P		**Pn**	**04 07 23.2**	**+0.5**
PTRJ	**Pietraroja**	**1.76 143**	AML		AML			
	comp=E,8015µm,1.1s							
PTRJ			AML		AML			
	comp=N,5985µm,0.8s							
PTRJ			AML		AML			
	comp=E,8860µm,1.1s							
PTRJ			AML		AML			
	comp=N,6605µm,0.7s							
PIGN	**Pignataro Magg**	**1.76 153**	P		**Pn**	**04 07 22.9**	**-0.2**
BRIS	**BRISIGHELLA**	**1.81 320**	AML		AML			
	comp=N,6850µm,1.3s							
BRIS			AML		AML			
	comp=E,3975µm,1.5s							
SACR	**S. Croce Del S**	**1.81 139**	P		**Pb**	**04 07 25.1**	**-0.8**
SEI	**Scarperia**	**1.81 316**	P		**Pn**	**04 07 23.6**	**-0.3**
GATE	**Gambatesa**	**1.83 133**	P		**Pb**	**04 07 25.9**	**-0.3**
MELA	**Melanico ??? S**	**1.83 125**	P		**Pn**	**04 07 24.8**	**+0.8**
CRMI	**Carmignano**	**1.87 304**	P		**Pn**	**04 07 24.7**	**+0.1**
DUGI	**Dugi Otok**	**1.87 49**	*i* Pn		**Pn**	**04 07 23.7**	**-0.9**
MPPT	**Montemurlo**	**1.89 309**	AML		AML			
	comp=N,2220µm,1.0s							
MPPT			AML		AML			
	comp=E,3135µm,1.0s							
A318A	**Donoratico (LI**	**1.90 282**	P		**Pn**	**04 07 24.7**	**-0.2**
VITU	**Vitulano (BN)**	**1.95 144**	P		**Pn**	**04 07 26.0**	**+0.4**
MTCR	**Monte La Croce**	**1.99 310**	P		**Pn**	**04 07 25.9**	**-0.5**
PSB1	**Pescosannita**	**2.00 140**	⇑P		**Pb**	**04 07 28.4**	**-0.7**
FNVD	**Fontana Vidola**	**2.01 315**	P		**Pn**	**04 07 26.7**	**+0.1**
FNVD			AML		AML			
	comp=N,3990µm,1.1s							
FNVD			AML		AML			
	comp=E,4360µm,1.0s							
PAOL	**Paolisi**	**2.05 148**			**Pn**	**04 07 27.1**	**0.0**
PAOL	**Paolisi**	**2.05 148**	AML		AML			
	comp=E,2055µm,0.7s							
PAOL			AML		AML			
	comp=N,1835µm,0.9s							
PAOL			AML		AML			
	comp=E,2085µm,0.7s							
PAOL			AML		AML			
	comp=N,1875µm,1.0s							
PAOL			AML		AML			
	comp=N,3290µm,1.6s							
PAOL			AML		AML			
	comp=E,2970µm,1.3s							
PAOL			AML		AML			
	comp=N,3135µm,1.6s							
PAOL			AML		AML			
	comp=E,3075µm,1.3s							
MOCO	**Biccari - m.te**	**2.07 132**	P		**Pb**	**04 07 28.9**	**-1.3**
VIRC	**Vir**	**2.08 42**	*e*Pn		**Pn**	**04 07 26.5**	**-0.9**
PII	**Pisa**	**2.12 298**	P		**Pn**	**04 07 27.4**	**-0.5**
PII			AML		AML			
	comp=E,1428µm,0.7s							
PII			AML		AML			
	comp=N,1750µm,0.8s							
CELB	**S.Piero in Cam**	**2.14 270**	⇑P		**Pn**	**04 07 27.4**	**-0.9**
CELB			AML		AML			
	comp=N,620µm,1.1s							
CELB			AML		AML			
	comp=E,800µm,1.3s							
POPM	**Popiglio**	**2.14 307**	P		**Pn**	**04 07 27.9**	**-0.4**
POPM			AML		AML			
	comp=N,2185µm,1.6s							
POPM			AML		AML			
	comp=E,1685µm,1.6s							
MRB1	**Monte Rocchett**	**2.15 139**	⇑P		**Pb**	**04 07 30.7**	**-0.9**
BIOG	**Biogem**	**2.17 136**	P		**Pb**	**04 07 31.8**	**-0.3**
BRJN	**Brijuni**	**2.18 12**	*e*Pn		**Pn**	**04 07 27.9**	**-1.0**
BRJN	**Brijuni**	**2.18 12**	P		**Pn**	**04 07 27.8**	**-1.1**
MORI	**Morici**	**2.19 59**	*i* Pn		**Pn**	**04 07 28.5**	**-0.4**
NVLJ	**Novalja**	**2.20 35**	*e*Pn		**Pn**	**04 07 28.1**	**-1.0**
SGRT	**San Giovanni R**	**2.20 117**			**Pn**	**04 07 29.7**	**+0.5**
SGRT	**San Giovanni R**	**2.20 117**	P		**Pn**	**04 07 30.2**	**+1.0**
SGRT	baz=121		S		**Sb**	**04 07 57.9**	**-1.8**
	baz=121							
SGRT	**San Giovanni R**	**2.20 117**	P		**Pn**	**04 07 29.7**	**+0.5**
ZCCA	**Zocca**	**2.22 316**			**Pn**	**04 07 30.4**	**+1.0**
ZCCA	**Zocca**	**2.22 316**	AML		AML			
	comp=E,3500µm,1.6s							
ZCCA			AML		AML			
	comp=N,4365µm,1.4s							
ZCCA			AML		AML			
	comp=N,4770µm,1.4s							
ZCCA			AML		AML			
	comp=E,3990µm,1.6s							
MAIM	**Mastiano**	**2.23 302**	P		**Pn**	**04 07 29.2**	**-0.3**
CARD	**Cardoso**	**2.29 304**	P		**Pn**	**04 07 29.9**	**-0.5**
CARD			AML		AML			
	comp=E,1375µm,0.8s							
CARD			AML		AML			
	comp=N,1555µm,0.7s							
RABC	**Rab**	**2.32 31**	*e*Pn		**Pn**	**04 07 29.9**	**-0.8**
MSAG	**Monte S. Angel**	**2.33 116**	P		**Pn**	**04 07 31.5**	**+0.5**
SGTA	**Sant Agata di**	**2.34 133**	P		**Pn**	**04 07 32.6**	**+1.5**
CAFE	**Carife**	**2.35 137**	P		**Pb**	**04 07 33.7**	**-1.4**
SMRN	**Sveta Marina**	**2.39 18**	*e*Pn		**Pn**	**04 07 30.4**	**-1.2**
SNAL	**S. Angelo Dei**	**2.42 139**	P		**Pb**	**04 07 34.3**	**-1.9**
GSCL	**Gusciola**	**2.42 312**	AML		AML			
	comp=N,2000µm,0.8s							
GSCL			AML		AML			
	comp=E,1595µm,1.6s							
VLC	**Villacollemand**	**2.42 306**			**Pn**	**04 07 31.7**	**-0.5**
LIO3	**Lioni**	**2.43 140**	P		**Pn**	**04 07 34.1**	**+1.9**
EQUI	**Equi**	**2.57 304**	P		**Pn**	**04 07 33.9**	**-0.3**
EQUI			AML		AML			
	comp=N,996µm,0.9s							
EQUI			AML		AML			
	comp=E,838µm,1.6s							
UDBI	**Udbina**	**2.60 47**	*i* Pn		**Pn**	**04 07 35.4**	**+0.6**
A250A	**Rusevo Krmpots**	**2.65 29**	*i* Pn		**Pn**	**04 07 35.2**	**-0.1**
MRLC	**Muro Lucano**	**2.68 138**	P		**Pn**	**04 07 37.3**	**+1.6**
KLIV	**Kijevo**	**2.70 62**	*i* Pn		**Pn**	**04 07 36.3**	**+0.3**
PLMA	**Palmaria, Port**	**2.70 299**	P		**Pn**	**04 07 35.8**	**-0.2**
PLMA			AML		AML			
	comp=E,632µm,1.6s							
PLMA			AML		AML			
	comp=N,638µm,1.4s							
RIY	**Rijeka**	**2.74 21**	*e*Pn		**Pn**	**04 07 36.3**	**-0.2**
RIY	**Rijeka**	**2.74 21**	*e*Pn		**Pn**	**04 07 36.3**	**-0.2**
RIY			*e*Sn		**Sn**	**04 08 09.5**	**0.0**
LSTV	**Lastovo**	**2.78 89**	*e*Pn		**Pn**	**04 07 36.7**	**-0.4**
PLIT	**Plitvice**	**2.78 40**	*i* Pn		**Pn**	**04 07 37.3**	**+0.1**
TEOL	**Teolo**	**2.79 339**			**Pn**	**04 07 37.8**	**+0.6**
TEOL	**Teolo**	**2.79 339**	P		**Pn**	**04 07 37.6**	**+0.4**
PALZ	**Palazzo San Ge**	**2.80 130**	P		**Pn**	**04 07 38.3**	**+0.9**
GRAM	**Graiana**	**2.80 309**	AML		AML			
	comp=E,1895µm,0.8s							
GRAM			AML		AML			
	comp=N,1850µm,1.0s							
PRMA	**PARMA**	**2.84 315**			**Pn**	**04 07 38.0**	**0.0**
SKDS	**Skadanscina**	**2.85 13**	*e*Pn		**Pn**	**04 07 37.0**	**-1.1**
SKDS	**Skadanscina**	**2.85 13**	⇑*i* Pn		**Pn**	**04 07 37.5**	**-0.6**
SKDS			IAML			04 08 16.7		
	comp=Z,184nm,0.2s							
MAKA	**Makarska**	**2.91 78**	*i* Pn		**Pn**	**04 07 38.7**	**-0.1**
SMPL	**Sampolo**	**2.91 258**	P		**Pn**	**04 07 39.0**	**+0.1**
SMPL			AML		AML			
	comp=N,282µm,1.6s							
SMPL			AML		AML			
	comp=E,306µm,1.3s							
TRI	**Trieste**	**2.98 9**			**Pn**	**04 07 38.9**	**-0.8**
TRI	**Trieste**	**2.98 9**	P		**Pn**	**04 07 38.9**	**-0.8**
A050A	**Klekovaca**	**3.01 54**	*e*Pn		**Pn**	**04 07 40.9**	**+0.5**
RICI	**Ricice**	**3.03 75**	*e*Pn		**Pn**	**04 07 40.6**	**+0.1**
MSSA	**Maissana**	**3.04 302**	Pn		**Pn**	**04 07 40.7**	**0.0**
MSSA	**Maissana**	**3.04 302**	P		**Pn**	**04 07 40.7**	**0.0**
MSSA			AML		AML			
	comp=N,983µm,1.2s							
MSSA			AML		AML			
	comp=E,662µm,1.4s							
PGF	**Pioggiola**	**3.04 267**	*e*P		**Pn**	**04 07 40.7**	**-0.1**
PGF			*e*Sn		**Sn**	**04 08 15.6**	**-1.6**
	comp=E,95nm,0.6s							
CEY	**Cerknica**	**3.11 17**	*e*Pn		**Pn**	**04 07 40.8**	**-0.9**
BOJS	**Bojanci**	**3.14 29**	*e*Pn		**Pn**	**04 07 42.2**	**+0.2**
BOJS	**Bojanci**	**3.14 29**	⇑*i* Pn		**Pn**	**04 07 42.7**	**+0.8**
BOJS	**Bojanci**	**3.14 29**	P		**Pn**	**04 07 42.6**	**+0.6**
SRKY	**Kupres RS**	**3.22 65**	*e*Pn		**Pn**	**04 07 44.2**	**+0.9**
SABO	**M.te Sabotino**	**3.23 6**			**Pn**	**04 07 42.4**	**-0.9**
SABO	**M.te Sabotino**	**3.23 6**	P		**Pn**	**04 07 42.5**	**-0.8**
SABO			AML		AML			
	comp=E,9480µm,0.9s							
SABO			AML		AML			
	comp=N,9055µm,1.2s							
SABO			AML		AML			
	comp=E,2250µm,0.9s							
SABO			AML		AML			
	comp=N,2460µm,1.2s							
ROVR	**Rover Verones**	**3.23 334**	P		**Pn**	**04 07 44.1**	**+0.8**
ROVR			AML		AML			
	comp=E,434µm,0.9s							
ROVR			AML		AML			
	comp=N,518µm,0.7s							
CGRP	**Cima Grappa**	**3.25 344**	P		**Pn**	**04 07 44.5**	**+0.8**
CGRP			AML		AML			
	comp=E,2615µm,1.4s							
CGRP			AML		AML			
	comp=N,2530µm,0.8s							
CGRP			AML		AML			
	comp=E,2580µm,1.1s							
CGRP			AML		AML			
	comp=N,2525µm,0.8s							
A251A	**Rujevac**	**3.28 43**	*e*Pn		**Pn**	**04 07 44.0**	**+0.1**
VARN	**Col Varnada, M**	**3.30 348**	P		**Pn**	**04 07 44.7**	**+0.4**
VARN			AML		AML			
	comp=E,2640µm,0.8s							
VARN			AML		AML			
	comp=E,2645µm,0.8s							
VARN			AML		AML			
	comp=N,2205µm,0.9s							
VARN			AML		AML			
	comp=N,2225µm,0.9s							
OZLJ	**Ozalj**	**3.31 30**	*e*Pn		**Pn**	**04 07 43.4**	**-0.9**
MGRS	**Mrkonjic Grad**	**3.32 59**	*e*Pn		**Pn**	**04 07 45.6**	**+1.1**
GORR	**Gorreto**	**3.33 305**	P		**Pn**	**04 07 45.8**	**+1.2**
GORR			AML		AML			
	comp=E,798µm,0.8s							
GORR			AML		AML			
	comp=N,784µm,1.6s							
AJAC	**Base Areonaval**	**3.33 257**	⇑P		**Pn**	**04 07 45.0**	**+0.3**
AJAC			AML		AML			
	comp=N,690µm,1.5s							
AJAC			AML		AML			
	comp=E,610µm,0.3s							
STON	**Ston**	**3.38 87**	*e*Pn		**Pn**	**04 07 43.8**	**-1.4**
STON	**Ston**	**3.38 87**	*i* Pn		**Pn**	**04 07 44.0**	**-1.2**
STON	**Ston**	**3.38 87**	*e*Pn		**Pn**	**04 07 44.3**	**-0.9**
STON			*e*Sn		**Sn**	**04 08 26.3**	**+1.1**
DOSS	**Dosso del Somm**	**3.40 337**	P		**Pn**	**04 07 46.5**	**+0.7**
DOSS			AML		AML			
	comp=N,1245µm,0.7s							
DOSS			AML		AML			
	comp=N,1200µm,0.5s							
DOSS			AML		AML			
	comp=E,1240µm,0.7s							
DOSS			AML		AML			
	comp=E,1215µm,0.5s							
SALO	**Salr**	**3.40 328**			**Pn**	**04 07 45.7**	**+0.1**
SALO	**Salr**	**3.40 328**	P		**Pn**	**04 07 46.9**	**+1.2**
SALO			AML		AML			
	comp=N,1915µm,0.9s							
SALO			AML		AML			
	comp=E,1665µm,1.6s							
SALO			AML		AML			
	comp=N,1925µm,1.3s							
SALO			AML		AML			
	comp=E,1635µm,1.6s							
PRIJ	**Prijedor**	**3.41 48**	*e*Pn		**Pb**	**04 07 52.5**	**-0.6**
MATE	**Matera**	**3.42 127**	⇑P		**Pn**	**04 07 46.7**	**+0.8**
LJU	**Ljubljana**	**3.43 17**	⇑*i* Pn		**Pn**	**04 07 45.9**	**-0.1**
LJU			*i* Sn		**Sn**	**04 08 27.9**	**+1.4**
CUC	**Castrocucco**	**3.44 143**			**Pn**	**04 07 47.0**	**+0.8**
MPRI	**Monte Prat**	**3.47 359**	P		**Pn**	**04 07 46.5**	**-0.2**
MPRI			AML		AML			
	comp=E,2370µm,1.4s							
MPRI			AML		AML			
	comp=N,1915µm,1.4s							
MPRI			AML		AML			
	comp=E,3110µm,1.4s							
MPRI			AML		AML			
	comp=N,2575µm,1.4s							
CRES	**Cresnjev**	**3.49 28**	*e*Pn		**Pn**	**04 07 46.3**	**-0.5**
MAGA	**Magasa**	**3.50 330**	AML		AML			
	comp=E,3320µm,0.7s							
MAGA			AML		AML			
	comp=N,1570µm,0.5s							
STAL	**STALIGIAL**	**3.50 355**			**Pn**	**04 07 46.5**	**-0.5**
STAL	**STALIGIAL**	**3.50 355**	P		**Pn**	**04 07 46.6**	**-0.5**
STAL			AML		AML			
	comp=N,1206µm,0.3s							
STAL			AML		AML			
	comp=E,1275µm,0.8s							
STAL			AML		AML			
	comp=E,1715µm,1.3s							
STAL			AML		AML			
	comp=N,1212µm,1.3s							
A051A	**Mrakovica**	**3.54 49**	*e*Pn		**Pn**	**04 07 47.5**	**-0.1**
LUSI	**Trento, Gardas**	**3.55 335**	P		**Pn**	**04 07 47.9**	**+0.2**
LUSI			AML		AML			
	comp=N,1295µm,0.9s							
LUSI			AML		AML			
	comp=E,953µm,1.1s							
BLY	**Banja Luka**	**3.55 55**	*e*Pn		**Pn**	**04 07 48.0**	**+0.3**
BLY	**Banja Luka**	**3.55 55**	P		**Pn**	**04 07 49.0**	**+1.3**
NOCI	**Noci**	**3.56 123**	P		**Pn**	**04 07 48.6**	**+0.9**
NOCI	baz=125		S		**Sn**	**04 08 30.1**	**+0.4**
	baz=125							
CIMO	**Cimolais**	**3.57 352**			**Pn**	**04 07 47.8**	**-0.2**
CIMO	**Cimolais**	**3.57 352**	P		**Pn**	**04 07 47.8**	**-0.2**
PTCC	**Patocco-Chiusa**	**3.64 3**	P		**Pn**	**04 07 48.0**	**-1.0**
PTCC			AML		AML			
	comp=E,784µm,0.9s							
PTCC			AML		AML			
	comp=N,647µm,1.4s							
GAGG	**Gaggia**	**3.66 336**	P		**Pn**	**04 07 49.8**	**+0.5**
GAGG			AML		AML			
	comp=E,1431µm,1.0s							
GAGG			AML		AML			
	comp=N,1445µm,1.0s							
GAGG			AML		AML			
	comp=E,1910µm,1.0s							
GAGG			AML		AML			
	comp=N,1855µm,1.0s							
PRED	**Cave del Predi**	**3.69 5**			**Pn**	**04 07 49.0**	**-0.7**
ZONE	**Zone**	**3.69 325**	AML		AML			
	comp=E,682µm,0.9s							
ZONE			AML		AML			
	comp=N,888µm,0.3s							
CLUD	**Cludinico**	**3.69 357**	Pn		**Pn**	**04 07 49.4**	**-0.2**
CLUD	**Cludinico**	**3.69 357**	P		**Pn**	**04 07 49.2**	**-0.4**
CLUD			AML		AML			
	comp=E,1344µm,1.2s							
CLUD			AML		AML			
	comp=E,1345µm,1.2s							
CLUD			AML		AML			
	comp=N,1425µm,1.0s							
CLUD			AML		AML			
	comp=N,1405µm,1.0s							
DBRK	**Dubrovnik**	**3.71 90**	*e*Pn		**Pn**	**04 07 48.7**	**-1.1**
PTJ	**Puntijarka**	**3.75 32**	*e*Pn		**Pn**	**04 07 50.1**	**-0.3**
MABI	**Malga Bissina**	**3.78 331**	P		**Pn**	**04 07 51.8**	**+0.8**
MABI			AML		AML			
	comp=N,376µm,0.4s							
MABI			AML		AML			
	comp=E,428µm,0.8s							
ACOM	**Acomizza, Ital**	**3.79 4**	AML		AML			
	comp=E,1825µm,0.9s							
ACOM			AML		AML			
	comp=E,1900µm,0.9s							
ACOM			AML		AML			
	comp=N,1545µm,1.3s							
ACOM			AML		AML			
	comp=N,1465µm,1.3s							
ZOU	**Zoufplan**	**3.79 359**	P		**Pn**	**04 07 50.9**	**-0.2**
CANO	**Canova, Maglio**	**3.83 294**	AML		AML			
	comp=E,984µm,1.2s							
CANO			AML		AML			
	comp=N,358µm,0.4s							
MOSL	**Moslavina**	**3.86 41**	*e*Pn		**Pn**	**04 07 51.0**	**-1.0**
OBKA	**Obir**	**3.88 15**	*e*Pn		**Pn**	**04 07 51.5**	**-0.7**
OBKA	**Obir**	**3.88 15**	*e*Pn		**Pn**	**04 07 52.0**	**-0.2**
OBKA	comp=N,2.4nm,0.2s		*e*Sn		**Sn**	**04 08 36.3**	**-1.4**
	comp=N,187nm,0.6s							
OBKA	**Obir**	**3.88 15**	*e*Pn		**Pn**	**04 07 52.1**	**-0.1**
MYKA	**Terra Mystica**	**3.88 5**	*i* Pn		**Pn**	**04 07 52.7**	**+0.5**
MYKA	comp=N,58nm,0.4s,SNR=34		*e*Sn		**Sn**	**04 08 36.6**	**-1.1**
	comp=N,69nm,0.4s							
HCY	**Herceg Novi**	**3.98 93**	*e*Pn		**Pn**	**04 07 53.7**	**+0.1**
HCY	**Herceg Novi**	**3.98 93**	⇓*i* Pn		**Pn**	**04 07 54.2**	**+0.6**
HCY			*i* Sn		**Sn**	**04 08 41.1**	**+0.9**
LUBO	**Lobor**	**3.99 31**	*e*Pn		**Pn**	**04 07 52.6**	**-1.1**
BRY	**Bratogost**	**3.99 86**	*e*Pn		**Pn**	**04 07 54.2**	**+0.3**
BRY	**Bratogost**	**3.99 86**	⇓*i* Pn		**Pn**	**04 07 54.6**	**+0.7**
BRY			*i* Sn		**Sn**	**04 08 41.5**	**+0.9**
ABTA	**Abfaltersbach**	**4.00 354**	*i* Pn		**Pn**	**04 07 54.9**	**+0.9**
ABTA	comp=N,103nm,0.4s,SNR=72		*e*Sn		**Sn**	**04 08 42.3**	**+1.6**
	comp=N,84nm,0.3s							
DOB	**Doboj**	**4.11 60**	*e*Pn		**Pn**	**04 07 54.7**	**-0.6**
SOKA	**Soboth**	**4.14 19**	*i* Pn		**Pn**	**04 07 55.9**	**0.0**
SOKA	comp=N,3.7nm,0.3s,SNR=13		*e*Sn		**Sn**	**04 08 41.6**	**-2.6**
	comp=N,29nm,0.6s							
BRMO	**Bormio**	**4.19 333**	P		**Pn**	**04 07 58.2**	**+1.6**
BRMO			AML		AML			
	comp=E,350µm,1.0s							
BRMO			AML		AML			
	comp=N,350µm,1.1s							
RISI	**Rein**	**4.24 350**	P		**Pn**	**04 07 58.4**	**+1.1**
RISI			AML		AML			
	comp=E,2165µm,0.4s							
RISI			AML		AML			
	comp=N,1580µm,1.2s							
UPM	**Unac-Piva**	**4.27 82**	*e*Pn		**Pn**	**04 07 58.8**	**+1.1**
UPM	**Unac-Piva**	**4.27 82**	⇑*i* Pn		**Pn**	**04 07 58.8**	**+1.1**
UPM			*i* Sn		**Sn**	**04 08 48.2**	**+0.6**
CEME	**Cevo**	**4.29 91**	⇑*i* Pn		**Pn**	**04 07 58.4**	**+0.6**
CEME			*i* Sn		**Sn**	**04 08 48.3**	**+0.5**
SBF	**Sospel**	**4.29 287**	*e*P		**Pn**	**04 07 57.8**	**0.0**
SBF			*e*Sn		**Sn**	**04 08 46.8**	**-1.0**
	comp=N,89nm,0.7s							
BUM	**Brajici-Budva**	**4.30 94**	⇓*i* Pn		**Pn**	**04 07 58.9**	**+0.9**
BUM			*i* Sn		**Sn**	**04 08 49.0**	**+1.0**
NKME	**Niksic**	**4.30 88**	⇓*i* Pn		**Pn**	**04 07 58.9**	**+0.9**
NKME			*i* Sn		**Sn**	**04 08 48.4**	**+0.3**
KBA	**Koelnbreinsper**	**4.31 2**	*i* Pn		**Pn**	**04 07 59.1**	**+0.8**
KBA	comp=N,20nm,0.3s,SNR=38		*e*Sn		**Sn**	**04 08 48.8**	**+0.3**
	comp=N,81nm,0.5s							
KBA	**Koelnbreinsper**	**4.31 2**	*e*Pn		**Pn**	**04 07 59.4**	**+1.1**
KBA			*e*Sn		**Sn**	**

WTTA Wattenberg 4.61 347 *e*Pn **Pn 04 08 04.5 +2.1**
DAVOX Davos/Dischmat 4.62 331 Pn **Pn 04 08 04.7 +2.1**
comp=N,27nm,0.3s,baz=153,slow=17,SNR=104
DAVOX Sn **Sn 04 08 55.5 -0.7**
comp=N,5.1nm,0.3s,baz=138,slow=21,SNR=1.1
PLE Pljevlja 4.63 81 ⇑*i* Pn **Pn 04 08 03.7 +1.1**
PLE *i* Sn **Sn 04 08 56.7 +0.3**
SQTA Sankt Quirin 4.65 344 **Pn 04 08 05.0 +2.1**
SQTA **Sn 04 08 58.2 +1.3**
SQTA Sankt Quirin 4.65 344 P **Pn 04 08 05.0 +2.1**
SQTA 04 08 58.2
SQTA Sankt Quirin 4.65 344 *i* Pn **Pn 04 08 04.9 +2.1**
comp=N,14nm,0.2s,SNR=42
SQTA *e*Sn **Sn 04 08 58.2 +1.3**
comp=N,43nm,0.3s
RUDO Rudo 4.65 77 *e*Pn **Pn 04 08 03.3 +0.5**
PZZ Stroppo 4.69 294 P **Pn 04 08 03.5 +0.1**
WATA Walderalm 4.69 347 **Pn 04 08 05.7 +2.2**
WATA **Sn 04 08 59.1 +1.2**
WATA Walderalm 4.69 347 *i* Pn **Pn 04 08 05.7 +2.2**
comp=N,13nm,0.2s,SNR=59
WATA *e*Sn **Sn 04 08 59.1 +1.2**
comp=N,30nm,0.3s
KOME Kolasin 4.71 87 ⇓*i* Pn **Pn 04 08 04.9 +1.2**
KOME *i* Sn **Sn 04 08 58.2 -0.1**
BBLS Lazići 4.72 74 *e*Pn **Pn 04 08 04.9 +1.1**
BBLS *e*Sn **Sn 04 08 57.1 -1.4**
MOTA Moosalm 4.79 343 **Pn 04 08 07.2 +2.3**
MOTA **Sn 04 09 00.3 0.0**
MOTA Moosalm 4.79 343 P **Pn 04 08 07.2 +2.3**
MOTA 04 09 00.3
MOTA Moosalm 4.79 343 *i* Pn **Pn 04 08 07.2 +2.3**
comp=N,19nm,0.4s,SNR=77
MOTA *e*Sn **Sn 04 09 00.3 0.0**
comp=N,38nm,0.4s
ARSA Arzberg 4.79 20 *i* Pn **Pn 04 08 04.2 -0.6**
comp=N,6.5nm,0.4s,SNR=17
ARSA *e*Sn **Sn 04 08 59.8 -0.5**
comp=N,26nm,0.3s
ARSA Arzberg 4.79 20 *e*Pn **Pn 04 08 04.7 -0.1**
ARSA *e*Sn **Sn 04 08 59.9 -0.3**
SCTE Santa Cesarea 4.84 122 Pn **Pn 04 08 06.3 +0.9**
SCTE Santa Cesarea 4.84 122 P **Pn 04 08 06.8 +1.4**
baz=124
SCTE S **Sn 04 08 55.9 -5.5**
baz=124
KOVH Kovagotottos 4.87 45 P **Pn 04 08 05.2 -0.6**
KOVH S **Sn 04 09 00.1 -2.0**
LMR La Mourre 4.87 279 *e*P **Pn 04 08 05.1 -0.7**
LMR *e*Sn **Sn 04 09 00.1 -2.0**
comp=N,13nm,0.4s
ZUGS Zugspitze, Sch 4.89 343 *e*Pn **Pn 04 08 08.2 +1.9**
BLJ Bijeljina 4.89 64 *e*Pn **Pn 04 08 05.7 -0.3**
PART Garmisch-Parte 4.93 344 *e*Pn **Pn 04 08 08.6 +1.9**
BIOA Bad Ischl, Aus 4.94 4 **Pn 04 08 07.0 +0.3**
BIOA **Sn 04 09 04.9 +1.2**
BIOA Bad Ischl, Aus 4.94 4 *i* Pn **Pn 04 08 07.0 +0.3**
comp=N,9.9nm,0.2s,SNR=40
BIOA *e*Sn **Sn 04 09 04.9 +1.2**
comp=N,184nm,0.6s
RJOB Jochberg 4.97 358 *e*Pn **Pn 04 08 08.2 +0.9**
RJOB *e*Sn **Sn 04 09 08.1 +3.4**
CEL Celeste 4.98 154 **Pn 04 08 07.6 +0.3**
TEKS Tekeris 4.98 67 *e*Pn **Pn 04 08 07.4 +0.1**
IVA Berane 4.99 87 ⇑*i* Pn **Pn 04 08 09.4 +1.9**
IVA *i* Sn **Sn 04 09 04.5 -0.6**
MBDF Montbardon 4.99 295 *e*P **Pn 04 08 08.3 +0.7**
MBDF *e*Sn **Sn 04 09 04.4 -1.0**
comp=N,50nm,0.7s
RETA Reutte 5.00 341 *i* Pn **Pn 04 08 10.2 +2.5**
comp=N,14nm,0.3s,SNR=53
RETA *e*Sn **Sn 04 09 06.5 +1.1**
comp=N,42nm,0.6s
PLONS Plons/SG 5.03 330 P **Pn 04 08 10.5 +2.4**
PLONS Plons/SG 5.03 330 *e*Pn **Pn 04 08 10.3 +2.2**
OBER Oberstdorf 5.05 338 *e*Pn **Pn 04 08 10.8 +2.5**
PVY Plav 5.05 90 ⇑*i* Pn **Pn 04 08 09.7 +1.3**
PVY *i* Sn **Sn 04 09 06.7 0.0**
SJES Sjenica 5.05 82 *e*Pn **Pn 04 08 09.7 +1.3**
SJES *e*Sn **Sn 04 09 05.0 -1.8**
DAVA Damuels 5.06 334 *i* Pn **Pn 04 08 11.1 +2.5**
comp=N,7.8nm,0.2s,SNR=39
DAVA *e*Sn **Sn 04 09 06.6 -0.5**
comp=N,75nm,0.8s
DAVA Damuels 5.06 334 *e*Pn **Pn 04 08 11.2 +2.6**
MOA Molln 5.14 9 *i* Pn **Pn 04 08 09.7 +0.1**
comp=N,3.1nm,0.2s,SNR=28
MOA *e*Sn **Sn 04 09 08.6 -0.3**
comp=N,28nm,0.3s
MOA Molln 5.14 9 *e*Pn **Pn 04 08 09.6 0.0**
BCI Bajram Curri 5.15 92 P **Pn 04 08 11.2 +1.6**
baz=92
BCI S **Sn 04 09 10.7 +1.7**
baz=92
BNI Bardonecchia 5.18 298 Pn **Pn 04 08 10.4 +0.2**
BNI Bardonecchia 5.18 298 P **Pn 04 08 10.4 +0.2**
DIVS Divibare 5.18 73 Pn **Pn 04 08 10.8 +0.6**
DIVS Divibare 5.18 73 *e*Pn **Pn 04 08 10.0 -0.1**
DIVS Divibare 5.18 73 *e*Pn **Pn 04 08 10.0 -0.1**
DIVS *e*Sn **Sn 04 09 08.3 -1.6**
IVAS Ivanjica 5.21 79 *e*Pn **Pn 04 08 10.7 +0.2**
IVAS *e*Sn **Sn 04 09 09.7 -0.8**
TIR Tirane 5.22 104 ⇓P **Pn 04 08 11.2 +0.5**
TIR Tirane 5.22 104 P **Pn 04 08 11.2 +0.5**
TIR S **Sn 04 09 06.9 -3.9**
TIR Tirane 5.22 104 **Pn 04 08 11.3 +0.7**
TIR Tirane 5.22 104 P **Pn 04 08 11.3 +0.7**
TIR Tirane 5.22 104 P **Pn 04 08 11.0 +0.4**
baz=104
TIR S **Sn 04 09 09.8 -0.9**
baz=104
TIR Tirane 5.22 104 P **Pn 04 08 11.0 +0.4**
MORH Mrgy, Hungar 5.24 47 P **Pn 04 08 09.7 -1.2**
BNALP Bannalp 5.29 322 P **Pn 04 08 12.8 +1.2**
VLO Vlora 5.31 114 **Pn 04 08 12.9 +1.1**
VLO Vlora 5.31 114 P **Pn 04 08 12.9 +1.1**
VLO Vlora 5.31 114 P **Pn 04 08 13.2 +1.5**
baz=115
VLO S **Sn 04 09 15.6 +2.7**
baz=115
LPG La Plagne 5.33 303 *e*P **Pn 04 08 13.1 +0.7**
LPG *e*Sn **Sn 04 09 12.7 -1.1**
comp=N,20nm,0.5s
TIH Tihany 5.35 38 P **Pn 04 08 15.6 +3.3**
LPL La Plagne 5.35 303 *e*P **Pn 04 08 13.6 +1.0**
LPL *e*Sn **Sn 04 09 13.3 -0.9**
comp=N,40nm,0.5s
UBR Ueberruh 5.35 338 *e*Pn **Pn 04 08 14.2 +1.8**
VAE Valguarnera 5.38 169 Pn **Pn 04 08 15.8 +2.9**
comp=N,2.1nm,0.3s,baz=70,slow=11,SNR=1.3
comp=N,9.3nm,0.4s
FRGS Fruska Gora 5.39 61 *e*Pn **Pn 04 08 12.3 -0.7**
FRGS Fruska Gora 5.39 61 *e*Pn **Pn 04 08 12.7 -0.3**
MPLH Magyarpolny 5.40 34 P **Pn 04 08 13.8 +0.7**
RONA Rosalia, Austr 5.42 23 **Pn 04 08 13.0 -0.3**
RONA **Sn 04 09 15.3 -0.3**
RONA Rosalia, Austr 5.42 23 *i* Pn **Pn 04 08 13.0 -0.3**
comp=N,8.7nm,0.2s,SNR=36
RONA *e*Sn **Sn 04 09 15.3 -0.3**
comp=N,32nm,0.6s
SOP Sopron 5.48 25 P **Pn 04 08 14.4 +0.3**
SOP S **Sn 04 09 14.4 -2.7**
SENIN Lac Senin/Sane 5.49 313 Pn **Pn 04 08 15.3 +0.8**
TRUS Trudelj 5.50 72 *e*Pn **Pn 04 08 14.3 -0.1**
CONA Conrad Observa 5.51 20 *i* Pn **Pn 04 08 14.7 0.0**
comp=N,6.1nm,0.2s,SNR=46
CONA *e*Sn **Sn 04 09 17.3 -0.7**
comp=N,35nm,0.6s
WILA Wila 5.52 329 *e*Pn **Pn 04 08 16.1 +1.3**
EGYH Egyhazaskeszo 5.52 31 P **Pn 04 08 14.8 +0.1**
PHP Peshkopia 5.55 99 P **Pn 04 08 16.1 +1.0**
PHP S **Sn 04 09 17.3 -1.5**
PHP Peshkopia 5.55 99 P **Pn 04 08 16.5 +1.4**
baz=99
PHP S **Sn 04 09 19.7 +0.9**
baz=99
FUR Furstenfeldbru 5.55 347 *e*Pn **Pn 04 08 16.1 +0.9**
SMRF Simiane la Rot 5.63 285 *e*P **Pn 04 08 17.2 +1.0**
SMRF *e*Sn **Sn 04 09 18.8 -2.0**
comp=N,8.3nm,0.4s
ORIF Oris-en-Rattie 5.66 295 *e*P **Pn 04 08 17.7 +1.0**
ORIF *e*Sn **Sn 04 09 20.2 -1.4**
comp=N,31nm,0.6s

GRUS Gruza 5.66 76 *e*Pn **Pn 04 08 16.8 +0.2**
CSKK Cskako 5.86 37 P **Pn 04 08 22.4 +3.0**
SELS Selova 5.89 83 *e*Pn **Pn 04 08 19.9 +0.1**
SELS *e*Sn **Sn 04 09 25.8 -1.4**
KEK Kerkira 5.89 119 P **Pn 04 08 20.9 +1.1**
KEK S **Sn 04 09 24.8 -2.5**
KEK Kerkira 5.89 119 Pn **Pn 04 08 20.6 +0.8**
SULZ Cheisacher 5.93 325 *e*Pn **Pn 04 08 21.0 +0.7**
SRN Sarande 5.93 117 P **Pn 04 08 21.3 +0.9**
SRN S **Sn 04 09 25.1 -3.2**
SRN Sarande 5.93 117 P **Pn 04 08 21.6 +1.2**
baz=118
SRN S **Sn 04 09 30.8 +2.6**
baz=118
BALST Balsthal 5.96 322 *e*Pn **Pn 04 08 22.0 +1.2**
SLE Schleitheim 5.96 328 *e*Pn **Pn 04 08 20.9 0.0**
OHR Ohrid 5.96 104 *i* Pn **Pn 04 08 22.6 +1.7**
GEC2 GERESS Array S 6.09 4 **Pn 04 08 21.6 -1.1**
GEC2 GERESS Array S 6.09 4 *e*Pn **Pn 04 08 21.9 -0.7**
GERES GERESS Array B 6.09 4 Pn **Pn 04 08 22.1 -0.5**
comp=N,2.8nm,0.3s,baz=185,slow=13,SNR=62
GERES Sn **Sn 04 09 30.9 -1.4**
comp=N,14nm,0.3s,baz=167,slow=24,SNR=18
GERES Lg Lg 04 09 59.2
comp=N,0.6nm,0.3s,baz=183,slow=26,SNR=0.9
GERES LR LR 04 11 26.5
comp=N,715nm,19.2s,baz=182,slow=46
comp=N,6.4nm,0.4s
GERES GERESS Array B 6.09 4 Pn **Pn 04 08 21.6 -1.1**
ZST Bratislava 6.11 26 *e*P **Pn 04 08 22.6 -0.2**
ZST *e* 04 09 28.6
ZST MLR MLR
comp=Z,900nm,2.3s
ZST Bratislava 6.11 26 *e*PN **Pn 04 08 22.6 -0.2**
ZST *e*PG **Pg 04 08 46.7 -2.9**
ZST *e*SN **Sn 04 09 28.6 -3.9**
ZST *e*SG **Sg 04 10 04.3 -4.4**
ZST *e*LG Lg 04 10 19.6
CKRC Cesky Krumlov 6.11 7 *e*PN **Pn 04 08 22.8 0.0**
CKRC *e*SN **Sn 04 09 29.9 -2.7**
KBN Korca 6.13 108 P **Pn 04 08 24.2 +1.0**
KBN S **Sn 04 09 30.8 -2.5**
KBN Korca 6.13 108 **Pn 04 08 21.9 -1.3**
KBN Korca 6.13 108 P **Pn 04 08 21.9 -1.3**
KBN Korca 6.13 108 P **Pn 04 08 24.7 +1.6**
baz=109
KBN S **Sn 04 09 33.6 +0.4**
baz=109
NORI Noerdlinger Ri 6.20 345 *e*Pn **Pn 04 08 24.2 +0.1**
LSK Leskovik 6.20 112 P **Pn 04 08 25.5 +1.3**
LSK S **Sn 04 09 33.0 -2.0**
LSK Leskovik 6.20 112 P **Pn 04 08 25.9 +1.7**
baz=113
LSK S **Sn 04 09 36.0 +1.0**
baz=113
SKO Skopje 6.22 95 *i* Pn **Pn 04 08 25.4 +1.0**
BUD Budapest 6.30 40 P **Pn 04 08 24.3 -1.1**
CABF La Chapelle 6.31 310 *e*P **Pn 04 08 26.4 +0.7**
CABF *e*Sn **Sn 04 09 36.0 -1.7**
comp=Z,80nm,0.8s
MODS Modra-Piesok 6.32 26 *e*P **Pn 04 08 25.8 +0.1**
MODS *e* 04 09 35.5
MODS MLR MLR
comp=Z,300nm,1.2s
MODS Modra-Piesok 6.32 26 *e*PN **Pn 04 08 25.8 +0.1**
MODS *e*SN **Sn 04 09 35.5 -2.3**
MODS *e*LG Lg 04 10 38.3
BOVS Bovan 6.34 79 *e*Pn **Pn 04 08 25.5 -0.5**
KHC Kasperske Hory 6.37 3 **Pn 04 08 25.1 -1.3**
KHC Kasperske Hory 6.37 3 *e*P **Pn 04 08 25.9 -0.5**
KHC *e* 04 09 37.1
KHC MLR MLR
comp=Z,900nm,16.2s
KHC Kasperske Hory 6.37 3 *e*PN **Pn 04 08 25.9 -0.5**
KHC *e*SN **Sn 04 09 37.1 -2.0**
KHC AMS AMS 04 10 50.0
comp=Z,900nm,16.2s
WET Wettzell 6.38 359 *e*Pn **Pn 04 08 25.5 -1.0**
NEST Nestorio 6.40 109 P **Pn 04 08 28.9 +2.0**
NEST S **Sn 04 09 37.6 -2.2**
BARS Barje 6.40 87 *e*Pn **Pn 04 08 27.3 +0.5**
VIVF Saint-Julien-l 6.45 292 *e*P **Pn 04 08 28.5 +0.9**
VIVF *e*Sn **Sn 04 09 39.0 -2.1**
comp=Z,6.6nm,0.5s
SMOL Smolenice 6.49 26 *e*P **Pn 04 08 30.2 +2.2**
SMOL *e* 04 09 41.7
BFO Black Forest 6.50 331 Pn **Pn 04 08 27.2 -0.9**
BFO Black Forest 6.50 331 P **Pn 04 08 27.3 -0.9**
BFO Black Forest 6.50 331 *e*Pn **Pn 04 08 28.6 +0.5**
STU Stuttgart 6.60 337 *e*Pn **Pn 04 08 31.0 +1.5**
JAN Janina 6.61 115 P **Pn 04 08 30.4 +0.7**
JAN S **Sn 04 09 42.5 -2.5**
PRVS Prvonek 6.62 89 *e*Pn **Pn 04 08 30.3 +0.5**
SSB Saint Sauveur 6.67 295 Pn **Pn 04 08 31.1 +0.5**
SSB Saint Sauveur 6.67 295 P **Pn 04 08 31.1 +0.5**
KRUC Moravsky 6.70 19 *e*PN **Pn 04 08 29.6 -1.2**
KRUC *e*SN **Sn 04 09 44.2 -2.8**
HINF Hinteralfeld 6.70 321 *e*P **Pn 04 08 31.7 +0.7**
HINF *e*Sn **Sn 04 09 44.9 -2.4**
comp=Z,29nm,0.3s
TREC Trest 6.73 13 *e*P **Pn 04 08 31.2 -0.2**
TREC *e* 04 09 45.3
TREC MLR MLR
comp=Z,1μm,11.5s
TREC Trest 6.73 13 *e*PN **Pn 04 08 31.2 -0.2**
TREC *e*SN **Sn 04 09 45.3 -2.6**
TREC AMS AMS 04 11 10.0
comp=Z,1μm,11.5s
ZAGS Zajecar 6.74 78 *e*Pn **Pn 04 08 31.2 -0.2**
ZAGS *e*Sn **Sn 04 09 45.4 -2.6**
STIP Stip 6.82 96 *i* Pn **Pn 04 08 35.1 +2.6**
LASF Ste Croix 6.87 284 *e*P **Pn 04 08 33.7 +0.5**
LASF *e*Sn **Sn 04 09 48.3 -3.0**
comp=Z,6.3nm,0.5s
ECH Echery 6.87 325 **Pn 04 08 32.6 -0.6**
ECH Echery 6.87 325 P **Pn 04 08 32.6 -0.6**
JAVC Velka Javorina 6.87 26 *e*PN **Pn 04 08 33.0 -0.3**
BOSS Bosilegrad 6.91 89 *e*Pn **Pn 04 08 33.9 0.0**
BOSS *e*Sn **Sn 04 09 49.1 -3.3**
TSLK Tsoukalades, L 6.95 122 P **Pn 04 08 36.0 +1.7**
TSLK S **Sn 04 09 49.8 -3.4**
LKD2 Lefkada island 6.97 122 P **Pn 04 08 36.0 +1.3**
CDF Champ du Feu 6.97 326 *e*P **Pn 04 08 34.7 0.0**
CDF *e*Sn **Sn 04 09 51.6 -2.3**
comp=Z,30nm,0.4s
VRAC Vranov 6.97 19 ⇓P **Pn 04 08 33.8 -0.9**
VRAC Vranov 6.97 19 Pn **Pn 04 08 34.7 +0.1**
comp=Z,1.4nm,0.3s,baz=217,slow=12,SNR=8.8
VRAC Sn **Sn 04 09 53.3 -0.6**
comp=Z,1.6nm,0.3s,baz=279,slow=19,SNR=4.1
VRAC Lg Lg 04 10 30.9
comp=Z,0.7nm,0.3s,baz=287,slow=21,SNR=1.6
VRAC LR LR 04 11 30.5
comp=Z,511nm,20.4s,baz=196,slow=40
comp=Z,7.4nm,0.5s
VRAC Vranov 6.97 19 *e*PN **Pn 04 08 33.2 -1.5**
VYHS Vyhne 6.99 33 *e*P **Pn 04 08 36.0 +1.1**
VYHS *e* 04 09 53.6
VYHS Vyhne 6.99 33 *e*PN **Pn 04 08 36.0 +1.1**
VYHS *e*SN **Sn 04 09 53.6 -0.6**
VYHS Lg Lg 04 10 12.8
ZAPS Zavoj 7.00 83 *e*Pn **Pn 04 08 35.8 +0.8**
PSZ Piszkesteto 7.02 41 Pn **Pn 04 08 35.7 +0.3**
PSZ Piszkesteto 7.02 41 P **Pn 04 08 35.7 +0.3**
PSZ Piszkesteto 7.02 41 P **Pn 04 08 37.9 +2.6**
BLKB Belogradchik 7.04 80 ⇑P **Pn 04 08 36.2 +0.6**
NYDR Nydri-Lefkada 7.04 123 P **Pn 04 08 36.7 +1.1**
GRFO Grafenberg 7.05 350 Pn **Pn 04 08 34.9 -0.8**
GRFO Grafenberg 7.05 350 P **Pn 04 08 34.9 -0.8**
GRA1 Grafenberg Arr 7.05 350 **Pn 04 08 34.7 -1.0**
GRF Grafenberg Arr 7.05 350 P **Pn 04 08 34.7 -1.0**
GRF Grafenberg Arr 7.05 350 *e*Pn **Pn 04 08 38.1 +2.5**
HERR Herculane 7.05 69 ⇑P **Pn 04 08 36.2 +0.4**
EVGI Lefkada island 7.07 123 P **Pn 04 08 37.3 +1.3**
DJES Djerdap 7.07 71 ⇑P **Pn 04 08 37.1 +1.1**
HAU Haudompre 7.08 320 *e*P **Pn 04 08 35.8 -0.3**
HAU *e*Sn **Sn 04 09 53.9 -2.5**
comp=Z,81nm,0.4s
FSK Fiskardo 7.12 125 P **Pn 04 08 38.7 +2.1**
FSK S **Sn 04 09 54.4 -3.0**
DMLN Damoulianata-K 7.15 127 P **Pn 04 08 38.5 +1.4**
KEF4 Livadi, Kephal 7.16 127 P **Pn 04 08 38.7 +1.4**

GRG Griva 7.17 102 P **Pn 04 08 37.7 +0.3**
GRG S **Sn 04 09 55.0 -3.7**
VAY Valandovo 7.19 98 *i* Pn **Pn 04 08 38.3 +0.7**
MAHO Mahon 7.25 250 Pn **Pn 04 08 38.3 -0.2**
PRU Pruhonice 7.29 7 *e*P **Pn 04 08 38.5 -0.5**
PRU *e* 04 09 59.6
PRU MLR MLR
comp=Z,900nm,14.6s
PRU Pruhonice 7.29 7 *e*PN **Pn 04 08 38.5 -0.5**
PRU *e*SN **Sn 04 09 59.6 -2.0**
PRU AMS AMS 04 11 30.0
comp=Z,900nm,14.6s
PUNG Punghina 7.29 75 ⇓P **Pn 04 08 40.9 +1.9**
VLS Valsamata 7.31 126 P **Pn 04 08 41.0 +1.6**
PSDA Pessada-Kefalo 7.35 127 P **Pn 04 08 41.3 +1.4**
GZR Gura Zlata 7.43 66 ⇑P **Pn 04 08 42.1 +1.0**
THL Klokotos Trika 7.44 113 P **Pn 04 08 42.7 +1.7**
THL S **Sn 04 10 02.7 -2.6**
KKB Krupnik 7.44 94 P **Pn 04 08 42.6 +1.4**
VTS Vitosha 7.46 88 ⇑P **Pn 04 08 41.7 +0.2**
VTS Vitosha 7.46 88 Pn **Pn 04 08 41.5 0.0**
VTS Vitosha 7.46 88 P **Pn 04 08 41.5 0.0**
VTS Vitosha 7.46 88 P **Pn 04 08 42.7 +1.2**
KNT Kendrikon 7.47 99 P **Pn 04 08 41.8 +0.3**
KNT S **Sn 04 10 02.8 -3.2**
LIT Litokhoron 7.53 108 P **Pn 04 08 42.3 -0.1**
LIT S **Sn 04 10 04.8 -2.9**
LIT Litokhoron 7.53 108 Pn **Pn 04 08 42.1 -0.3**
LIT Litokhoron 7.53 108 P **Pn 04 08 42.1 -0.3**
KEST Kesra 7.61 204 Pn **Pn 04 08 46.0 +2.4**
comp=Z,3.8nm,0.3s,baz=314,slow=5.4,SNR=38
KEST Sn **Sn 04 10 11.8 +2.0**
baz=9.2,slow=19
comp=Z,12nm,0.6s
PVO Paravola 7.62 120 P **Pn 04 08 45.3 +1.8**
EVR Evrytania 7.63 117 P **Pn 04 08 46.3 +2.5**
MORC Moravsky Berou 7.65 22 ⇓P **Pn 04 08 45.0 +1.1**
MORC Moravsky Berou 7.65 22 Pn **Pn 04 08 43.9 -0.1**
MORC Moravsky Berou 7.65 22 P **Pn 04 08 43.9 -0.1**
MORC Moravsky Berou 7.65 22 *e*PN **Pn 04 08 42.7 -1.3**
SMF Signal de Mont 7.66 304 *e*P **Pn 04 08 44.5 +0.4**
SMF *e*Sn **Sn 04 10 08.1 -2.6**
comp=Z,9.6nm,0.5s
DEV Deva 7.68 63 ⇑P **Pn 04 08 46.2 +1.9**
KRLC Kraliky 7.73 18 *e*P **Pn 04 08 44.7 -0.4**
KRLC MLR MLR
comp=Z,800nm,10.9s
KRLC Kraliky 7.73 18 *e*PN **Pn 04 08 44.7 -0.4**
KRLC AMS AMS 04 12 00.0
comp=Z,800nm,10.9s
PAGF Fort de Pagny 7.76 321 *e*P **Pn 04 08 46.5 +1.0**
PAGF *e*Sn **Sn 04 10 10.2 -3.0**
comp=Z,23nm,0.5s
LANS Liptovska Anna 7.76 33 *e*P Pn 04 08 53.0 +7.5
LANS Liptovska Anna 7.76 33 *e*PN Pn 04 08 53.0 +7.5
MAKR Makrakomi, Fth 7.79 116 P **Pn 04 08 47.7 +1.7**
MAKR S **Sn 04 10 11.5 -2.6**
MPEP Malo Peshtene 7.80 82 P **Pn 04 08 47.1 +1.0**
PVCC Panska Ves 7.83 7 AMS AMS 04 11 50.0
comp=Z,800nm,16.1s
SFTF Sexfontaines 7.86 317 *e*P **Pn 04 08 48.1 +1.3**
SFTF *e*Sn **Sn 04 10 12.4 -3.1**
comp=Z,6.1nm,0.4s
OKC Ostrava-Krasne 7.88 24 *e*P **Pn 04 08 47.0 -0.1**
OKC MLR MLR
comp=Z,1μm,9.1s
OKC Ostrava-Krasne 7.88 24 *e*PN **Pn 04 08 47.0 -0.1**
OKC AMS AMS 04 12 00.0
comp=Z,1μm,9.1s
ANX Ano Chora 7.88 119 P **Pn 04 08 49.6 +2.3**
DPC Dobruska-Polom 7.90 15 *e*P **Pn 04 08 47.3 -0.1**
DPC MLR MLR
comp=Z,1μm,18.9s
DPC Dobruska-Polom 7.90 15 *e*PN **Pn 04 08 47.3 -0.1**
DPC AMS AMS 04 11 50.0
comp=Z,1μm,18.9s
RLS Riolos of Patr 7.92 124 P **Pn 04 08 49.3 +1.6**
DRGR 7.92 56 ⇑P **Pn 04 08 48.5 +0.8**
MOX Moxa 7.94 353 *e*Pn **Pn 04 08 47.9 0.0**
MOX *e*Sn **Sn 04 10 14.9 -2.8**
LOR Lormes 7.95 308 *e*P **Pn 04 08 48.2 +0.1**
baz=124
LOR *e*Sn **Sn 04 10 15.0 -2.9**
comp=Z,14nm,0.4s
EFP Efpalio 7.97 120 P **Pn 04 08 50.5 +2.1**
MMB Musomiste 7.97 95 P **Pn 04 08 49.2 +0.8**
SRS Serrai 7.98 98 P **Pn 04 08 48.9 +0.3**
UPC Upice 7.99 13 *e*P **Pn 04 08 48.5 -0.1**
UPC MLR MLR
comp=Z,1μm,12.8s
UPC Upice 7.99 13 *e*PN **Pn 04 08 48.5 -0.1**
UPC AMS AMS 04 11 50.0
comp=Z,1μm,12.8s
MTLF Montolieu 8.00 278 *e*P **Pn 04 08 49.4 +0.6**
MTLF *e*Sn **Sn 04 10 15.0 -4.2**
comp=Z,6.1nm,0.6s
AVF Avril sur Loir 8.02 303 *e*P **Pn 04 08 49.2 +0.2**
AVF *e*Sn **Sn 04 10 17.0 -2.6**
comp=Z,5.2nm,0.5s
MEZF Maizieres J'vi 8.04 318 *e*P **Pn 04 08 50.6 +1.2**
MEZF *e*Sn **Sn 04 10 17.2 -3.0**
comp=Z,9.3nm,0.3s
SSF Saint Saulge 8.05 305 *e*P **Pn 04 08 49.4 -0.1**
SSF *e*Sn **Sn 04 10 17.0 -3.5**
comp=Z,7.7nm,0.4s
OSTC Ostas 8.07 14 *e*PN **Pn 04 08 49.3 -0.5**
OSTC AMS AMS 04 11 50.0
comp=Z,1μm,16.9s
SERG Sergoula 8.07 120 P **Pn 04 08 52.1 +2.3**
SAVF Savonnieres en 8.09 319 *e*P **Pn 04 08 51.0 +1.1**
SAVF *e*Sn **Sn 04 10 18.0 -3.2**
comp=Z,7.2nm,0.3s
TNS Taunus Mts 8.12 338 *e*Pn **Pn 04 08 50.7 +0.2**
LOT Lotru 8.12 67 ⇓P **Pn 04 08 51.6 +1.0**
NVR Nevrokopi 8.12 96 P **Pn 04 08 50.6 +0.1**
BRG Berggiesshubel 8.13 4 *e*P **Pn 04 08 49.5 -0.9**
BRG Amp 04 08 54.3
comp=Z,5.7nm,0.8s
BRG *ex* x 04 10 11.7
BRG *ex* x 04 11 34.8
BRG Amp 04 11 47.5
comp=Z,128nm,1.6s
BRG Amp 04 12 19.0
comp=Z,0.5nm,9.7s
BRG Amp 04 12 23.0
comp=N,0.6nm,10.9s
BRG Amp 04 12 29.0
comp=E,1.0nm,12.9s
BRG Berggiesshubel 8.13 4 *e*P **Pn 04 08 49.5 -0.9**
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG pmax pmax
comp=Z,128nm,1.6s
BRG MLR MLR
comp=Z,466nm,9.7s
BRG MLR MLR
comp=N,575nm,10.9s
BRG MLR MLR
comp=E,957nm,12.9s
LAKA Lakka 8.13 121 P **Pn 04 08 52.3 +1.8**
DRO Drossia 8.14 123 P **Pn 04 08 52.4 +1.7**
PGB Panagyurishte 8.15 88 P **Pn 04 08 51.7 +0.8**
MESR Meseseni 8.23 55 ⇓P **Pn 04 08 54.0 +2.0**
BGF Bois d'Agland 8.24 301 *e*P **Pn 04 08 52.5 +0.5**
BGF *e*Sn **Sn 04 10 22.6 -2.4**
comp=E,8.6nm,0.3s
CAF Calviac 8.27 289 *e*P **Pn 04 08 53.6 +1.1**
CAF *e*Sn **Sn 04 10 22.0 -3.9**
comp=E,3.6nm,0.6s
NIE Niedzica 8.31 34 *e*P **Pn 04 08 55.6 +2.5**
NIE *e*S Sb 04 10 45.5 -10
KLV Kalavryta, Ach 8.35 121 P **Pn 04 08 55.6 +1.9**
KSP Ksiaz 8.36 14 *e*P **Pn 04 08 54.1 +0.4**
KSP *e*S **Sn 04 10 27.1 -1.0**
KSP *e*L L 04 12 25.4
comp=E,965nm,17.5s
WLF Walferdange 8.41 327 Pn **Pn 04 08 54.3 -0.1**
WLF Walferdange 8.41 327 P **Pn 04 08 54.3 -0.1**
WLF Walferdange 8.41 327 *d*P **Pn 04 08 56.6 +2.2**
WLF Walferdange 8.41 327 *e*Pn **Pn 04 08 56.6 +2.2**
CLL Collm 8.54 360 Pn **Pn 04 08 55.7 -0.5**
CLL Collm 8.54 360 *e*P **Pn 04 08 56.0 -0.1**
CLL Collm 8.54 360 *e*Pn **Pn 04 08 56.0 -0.1**

CLL ex x 04 09 16.0
CLL ePg Pg 04 09 30.0 -6.1
CLL eSn Sn 04 10 18.0 -14
CLL ex x 04 10 34.0
CLL ex x 04 11 16.0
CLL eSg **Sg** **04 11 26.0 -0.6**
comp=Z,151nm,1.5s
CLL Lm MLR 04 12 00.0
comp=Z,600nm,20.3s
CLL Lmax 04 12 00.0
TCF **Toulx Ste Croi** **8.55 298** eP **Pn** **04 08 57.8 +1.5**
TCF eSn **Sn** **04 10 29.1 -3.5**
comp=Z,4.3nm,0.5s
PLD **Plovdiv** **8.60 91** P **Pn** **04 08 59.2 +2.3**
HYF **Humbligny** **8.67 305** eP **Pn** **04 08 59.6 +1.6**
HYF eSn **Sn** **04 10 32.6 -3.1**
comp=Z,25nm,0.3s
RZN **Rozhen** **8.68 93** P **Pn** **04 08 58.9 +0.7**
ARR **Arges** **8.69 69** ⇑P **Pn** **04 09 00.1 +1.8**
UZH **Uzhgorod** **8.69 44** eP **Pn** **04 09 01.5 +3.3**
UZH eS **Sn** **04 10 41.6 +5.5**
UZH MLR MLR
comp=Z,120nm,14.0s
RJF **Les Rejaudoux** **8.73 291** eP **Pn** **04 08 59.9 +1.1**
RJF eSn **Sn** **04 10 33.2 -3.9**
comp=Z,6.2nm,0.6s
OJC **Ojcow** **8.76 29** eP **Pn** **04 09 03.9 +4.7**
OJC eS Sn 04 10 49.4 +12
OJC eL L 04 13 08.8
comp=Z,1μm,15.7s
ITM **Ithomi** **8.77 127** Pn **Pn** **04 09 00.7 +1.4**
PYL **PYLOS** **8.86 129** P **Pn** **04 09 01.3 +0.8**
KOLS **Kolonicke sedl** **8.88 43** eP **Pn** **04 09 05.5 +4.7**
KOLS **Kolonicke sedl** **8.88 43** ePN **Pn** **04 09 05.5 +4.7**
VOIR **8.99 69** ⇑P **Pn** **04 09 04.5 +2.0**
RCHB **Rochefort** **9.17 326** dP **Pn** **04 09 05.5 +0.8**
KDZ **Kurdzhali** **9.20 93** P **Pn** **04 09 05.4 +0.2**
LFF **La Frestale** **9.20 288** eP **Pn** **04 09 06.0 +0.8**
GIVF **Givet** **9.30 325** eP **Pn** **04 09 07.6 +1.1**
GIVF eSn **Sn** **04 10 47.0 -4.0**
comp=Z,3.0nm,0.3s
DOPR **Dopca** **9.35 66** ⇑P **Pn** **04 09 08.8 +1.5**
EPF **Esparros** **9.38 276** eP **Pn** **04 09 08.0 +0.2**
EPF eSn **Sn** **04 10 47.4 -5.8**
comp=Z,1.2nm,0.5s
RDO **Rodhopi** **9.40 96** Pn **Pn** **04 09 08.6 +0.7**
SZH **Strazhica** **9.40 83** P **Pn** **04 09 09.6 +1.6**
KWP **Kalwaria Pacla** **9.55 41** eP **Pn** **04 09 14.6 +4.6**
KWP eS **Sn** **04 10 50.5 -6.7**
KWP eL L 04 13 13.1
comp=Z,819nm,18.6s
KWP **Kalwaria Pacla** **9.55 41** **Pn** **04 09 10.4 +0.4**
KWP **Kalwaria Pacla** **9.55 41** P **Pn** **04 09 10.4 +0.4**
MLR **Muntele Rosu** **9.62 69** ⇑P **Pn** **04 09 13.3 +2.2**
MLR **Muntele Rosu** **9.62 69** Pn **Pn** **04 09 12.9 +1.8**
comp=Z,0.3nm,0.3s,baz=153,slow=10.0,SNR=14
MLR Lg Lg 04 11 56.9
comp=Z,0.2nm,0.3s,baz=252,slow=20,SNR=1.8
MLR LR LR 04 13 45.1
comp=Z,2μm,20.0s,baz=250,slow=43
comp=Z,18nm,0.9s
MLR **Muntele Rosu** **9.62 69** **Pn** **04 09 12.0 +0.9**
SECR **9.62 72** ⇓P **Pn** **04 09 12.9 +1.9**
OZUR **9.65 66** ⇑P **Pn** **04 09 13.2 +1.7**
BURAR **Bucovina Array** **9.82 56** ⇑P **Pn** **04 09 15.9 +2.1**
BURAR **Bucovina Array** **9.82 56** **Pn** **04 09 14.9 +1.1**
BUR08 **Bucovina Ar. S** **9.82 56** **Pn** **04 09 15.1 +1.3**
RAZG **Razgrad** **9.82 81** ⇑P **Pn** **04 09 13.8 +0.1**
ALN **Alexandroupoli** **9.83 97** **Pn** **04 09 13.0 -0.9**
ALN **Alexandroupoli** **9.83 97** P **Pn** **04 09 13.0 -0.9**
NEHR **Nehoiu** **9.85 70** ⇓P **Pn** **04 09 16.6 +2.5**
COVR **Voineasa-Covas** **9.87 67** ⇓P **Pn** **04 09 16.9 +2.5**
ETSF **Etsaut** **10.05 275** eP **Pn** **04 09 17.6 +0.7**
BIZ **Bicaz** **10.12 61** ⇑P **Pn** **04 09 20.2 +2.3**
PLOR **Plostina** **10.18 68** ⇓P **Pn** **04 09 19.8 +1.2**
MFF **Saint Martin d** **10.19 297** eP **Pn** **04 09 20.7 +2.0**
MFF eSn **Sn** **04 11 08.1 -4.8**
comp=Z,0.7nm,0.3s
VRI **Vrincioaia** **10.23 68** ⇑P **Pn** **04 09 21.2 +1.8**
LVV **L'vov** **10.32 43** eP **Pn** **04 09 23.7 +3.1**
LVV MLR MLR
comp=N,800nm,10.0s
LVV MLR MLR
comp=E,300nm,10.0s
LVV MLR MLR
comp=Z,700nm,10.0s
SJPF **Ste Jean** **10.52 277** eP **Pn** **04 09 24.0 +0.7**
LDF **La Druitiere** **10.93 307** eP **Pn** **04 09 30.7 +1.8**
LDF eSn **Sn** **04 11 25.2 -5.9**
comp=Z,1.9nm,0.4s
CFR **Carcaliu** **11.09 72** ⇑P **Pn** **04 09 32.7 +1.6**
APE **Apeiranthos** **11.10 117** ⇓eP **Pn** **04 09 31.6 +0.3**
FLN **La Foliniere** **11.22 307** eP **Pn** **04 09 34.4 +1.5**
FLN eSn **Sn** **04 11 33.3 -4.9**
comp=Z,1.5nm,0.3s
TPGR **Topolog** **11.26 74** ⇑P **Pn** **04 09 34.4 +1.0**
GRR **Gorron** **11.28 305** eP **Pn** **04 09 35.1 +1.4**
GRR eSn **Sn** **04 11 34.7 -4.9**
comp=Z,1.5nm,0.2s
IDI **Anoyia** **11.81 125** Pn **Pn** **04 09 42.2 +1.1**
comp=Z,0.9nm,0.3s,baz=344,slow=12,SNR=4.3
IDI Sn Sn 04 11 42.8 -10
comp=Z,0.6nm,0.3s,baz=260,slow=8.1,SNR=2.7
IDI LR LR 04 16 24.8
comp=Z,364nm,18.0s,baz=280,slow=48
comp=Z,11nm,0.5s
MILM **Milestii Mici** **11.89 64** eP **Pn** **04 09 44.0 +2.0**
MILM eL L 04 13 45.0
MILM LQM 04 14 15.0
comp=Z,700nm,14.0s
MILM LRM MLR 04 15 13.0
comp=Z,1μm,12.0s
MILM **Milestii Mici** **11.89 64** eP **Pn** **04 09 44.0 +2.0**
MILM MLR MLR
comp=E,2μm,12.0s
MILM MLR MLR
comp=Z,2μm,12.0s
QUIF **Quistinic** **12.55 300** eP **Pn** **04 09 51.8 +0.8**
QUIF eSn **Sn** **04 12 04.6 -6.0**
comp=Z,11nm,0.9s
KLNR **Kaliningrad** **12.73 19** ⇑eP **Pn** **04 09 55.5 +2.1**
ROSF **Rostrenen** **12.76 301** eP **Pn** **04 09 53.9 +0.1**
ESDC **Sonseca Array** **13.22 262** Pn **Pn** **04 09 58.8 -1.5**
comp=Z,0.1nm,0.3s,baz=67,slow=13,SNR=15
ESDC LR LR 04 15 10.1
comp=Z,583nm,18.2s,baz=38,slow=38
comp=Z,1.9nm,0.8s
ESDC **Sonseca Array** **13.22 262** **Pn** **04 09 59.1 -1.2**
AKASG **Malin Array Be** **13.58 49** Pn **Pn** **04 10 04.7 -0.4**
comp=Z,0.3nm,0.3s,baz=241,slow=12,SNR=5.4
AKASG Lg Lg 04 14 07.9
comp=Z,0.3nm,0.3s,baz=258,slow=32,SNR=1.1
AKASG LR LR 04 15 51.9
comp=Z,424nm,19.6s,baz=255,slow=40
comp=Z,2.4nm,0.8s
AKASG **Malin Array Be** **13.58 49** *i* P **Pn** **04 10 04.5 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB **Malin Array Si** **13.58 49** Pn **Pn** **04 10 05.5 +0.4**
AKBB **Malin Array Si** **13.58 49** *ce*P **Pn** **04 10 04.9 -0.1**
ELL **Elmali** **14.24 109** Pn **Pn** **04 10 13.1 -1.2**
ELL **Elmali** **14.24 109** P **Pn** **04 10 13.1 -1.2**
AKAS **Kas** **14.30 112** Pn **Pn** **04 10 15.8 +0.7**
PABE **Paberze** **14.57 25** Pn **Pn** **04 10 17.9 -0.6**
NACGM **Naroch** **15.08 32** eP **Pn** **04 10 25.2 -0.2**
MNK **Minsk** **15.23 34** *i* P **Pn** **04 10 23.8 -3.6**
MNK *i* S **Sn** **04 13 12.4 -3.4**
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=E,38nm,17.0s
MNK MLR MLR
comp=N,12nm,15.0s
MNK MLR MLR
comp=Z,466nm,17.0s
MNK **Minsk** **15.23 34** *i* P **Pn** **04 10 23.9 -3.6**
comp=E,1.0nm,0.8s
MNK *i* P **Pn** **04 10 23.9 -3.6**
comp=N,8.0nm,0.9s
MNK *i* P **Pn** **04 10 23.9 -3.6**
comp=Z,5.0nm,0.8s,baz=226
MNK *i* PP **P** **04 10 31.9 -0.4**
MNK *i* PPP PPP 04 10 39.7
MNK *i* S **Sn** **04 13 12.5 -3.4**
MNK *i* SS **SnSn** **04 13 26.4 -2.0**
MNK *i* SSS SSS 04 13 39.1
MNK *i* LQ LQ 04 14 50.6
MNK *i* LR LR 04 15 59.7
MNK *i* LRM MLR 04 16 55.6
comp=E,38nm,16.8s
MNK *i* LRM MLR 04 16 55.6
comp=N,12nm,15.5s
MNK *i* LRM MLR 04 16 55.6
comp=Z,466nm,16.8s
ILGA **Ilgaz** **15.43 89** P **Pn** **04 10 30.0 -0.4**
ILGA IAmb IAmb 04 10 39.8
comp=Z,26nm,0.9s
BRTR **Keskin Array B** **15.73 94** Pn **Pn** **04 10 35.8 +1.5**
comp=Z,0.2nm,0.3s,baz=282,slow=11,SNR=3.9
BRTR LR LR 04 17 51.9
comp=Z,907nm,18.0s,baz=299,slow=42
comp=Z,1.9nm,0.7s
BRTR **Keskin Array B** **15.73 94** P **Pn** **04 10 33.7 -0.5**
EKA **Eskdalemuir Ar** **16.43 326** Pn **Pn** **04 10 43.2 +0.2**
baz=127,slow=14
comp=Z,1.5nm,0.7s
KONO **Kongsberg** **17.04 354** P **Pn** **04 10 49.8 -0.8**
KONO **Kongsberg** **17.04 354** *de*P **P** **04 10 52.1 -0.3**
KONO pmax pmax
comp=Z,56nm,1.7s
MDT **Midelt** **17.14 240** P **P** **04 10 54.2 +0.4**
baz=76,slow=11,SNR=4.2
comp=Z,3.5nm,1.1s
HFS **Hagfors** **17.39 1** P **Pn** **04 10 54.9 -0.1**
comp=Z,0.2nm,0.3s,baz=173,slow=16,SNR=5.8
comp=Z,4.7nm,1.0s
BNN **Bunyan** **17.64 95** P **P** **04 10 59.1 -0.2**
BNN IAmb IAmb 04 11 11.2
comp=Z,50nm,1.0s
TOKA **Tokat** **17.65 90** **P** **04 11 00.1 +0.8**
ANN **Anapa** **17.66 75** *e*P **Pn** **04 10 57.4 -1.1**
ANN *e*S **Sn** **04 14 11.9 -3.1**
ANN pmax pmax
comp=Z,81nm,1.6s
ANN MLR MLR
comp=Z,255nm,10.0s
VSU **Vasula** **17.87 24** ⇑*e*P **Pn** **04 10 59.8 -1.1**
VSU pmax pmax
comp=Z,81nm,0.9s
NC602 **NORSAR Array S** **18.02 358** P **Pn** **04 11 01.8 -1.0**
NAO01 **NORSAR Array S** **18.15 356** P **Pn** **04 11 02.8 -1.6**
NB2 **NORSAR Subarra** **18.33 357** P **P** **04 11 06.9 +0.2**
comp=Z,40nm,2.0s,baz=175,slow=11
NOA **NORSAR Array B** **18.33 357** P **P** **04 11 07.0 +0.2**
baz=176,slow=11,SNR=9.5
NOA LR LR 04 19 33.9
comp=Z,225nm,19.0s,baz=180,slow=42
comp=Z,2.9nm,0.9s
NOA **NORSAR Array B** **18.33 357** P **P** **04 11 07.0 +0.2**
NB201 **NORSAR Array S** **18.34 357** P **Pn** **04 11 01.3 -5.5**
NBO00 **NORSAR Array S** **18.34 356** P **Pn** **04 11 02.0 -4.8**
NC405 **NORSAR Array S** **18.39 358** P **P** **04 11 03.4 -3.9**
NC303 **NORSAR Array S** **18.51 357** P **P** **04 11 05.0 -3.7**
NC204 **NORSAR Array S** **18.59 356** P **P** **04 11 06.9 -2.6**
NC204 IAmb IAmb 04 11 11.4
comp=Z,53nm,1.3s
AVE **Averroes** **18.69 246** **P** **04 11 09.3 -1.6**
AVE IAmb IAmb 04 11 15.6
comp=Z,47nm,1.1s
SOC **Sochi** **19.39 78** *e*P **P** **04 11 18.0 -0.5**
SOC *e* 04 14 55.2
SOC pmax pmax
comp=Z,16nm,0.8s
SOC MLR MLR
comp=Z,150nm,16.0s
VSR **Storozhevoye** **19.59 55** *e*P **P** **04 11 20.5 -0.1**
VSR pmax pmax
comp=Z,20nm,0.7s
VORR **Voronezh** **19.75 54** *e*P **P** **04 11 22.6 +0.4**
VORR pmax pmax
comp=Z,30nm,0.3s
LPSR **Galich'ya Gora** **19.87 51** *e*P **P** **04 11 23.7 +0.2**
LPSR pmax pmax
comp=Z,20nm,1.0s
MMAI **Mount Meron Ar** **20.05 112** P Pn 04 11 27.5 -0.1
comp=Z,25nm,0.8s,baz=310,slow=10,SNR=19
MMAI LR LR 04 21 04.2
comp=Z,282nm,20.6s,baz=188,slow=42
comp=Z,25nm,0.8s
FINES **FINESS Array B** **20.25 18** P **P** **04 11 27.8 +0.2**
comp=Z,14nm,0.8s,baz=195,slow=10,SNR=29
comp=Z,14nm,0.8s
FINES **FINESS Array B** **20.25 18** P **P** **04 11 27.5 -0.1**
FIA1 **FINESS Array S** **20.25 18** P **P** **04 11 26.0 -1.7**
MOS **Moscow** **20.46 42** *e*P **P** **04 11 28.9 -1.0**
MOS *e* 04 11 46.2
MOS *e*S **S** **04 15 16.5 -2.1**
MOS pmax pmax
comp=Z,200nm,1.7s
MOS pmax pmax
comp=Z,142nm,1.3s
KOPT **Kop Dagi** **20.69 88** **P** **04 11 31.3 -1.7**
KOPT IAmb IAmb 04 11 44.5
comp=Z,44nm,1.3s
VRH **Novokhopyorsk** **21.15 57** *e*P **P** **04 11 37.9 +0.4**
VRH pmax pmax
comp=Z,60nm,1.1s
VALR **Valaam** **21.45 24** *ce*P **P** **04 11 41.8 +1.2**
VALR pmax pmax
comp=Z,66nm,1.0s
KIV **Kislovodsk** **21.48 77** P **P** **04 11 39.6 -1.6**
KIV **Kislovodsk** **21.48 77** *e*P **P** **04 11 43.4 +2.2**
KIV *e*S **S** **04 15 41.5 +2.2**
KIV pmax pmax
comp=Z,69nm,1.1s
KIV MLR MLR
comp=Z,120nm,14.0s
KVAR **Kislovodsk Arr** **21.49 77** P **P** **04 11 42.5 +1.2**
comp=Z,4.2nm,0.7s,baz=278,slow=18,SNR=4.0
comp=Z,4.2nm,0.7s
ASF **Jabal al Asfar** **21.57 112** P **P** **04 11 44.5 +2.3**
comp=Z,6.1nm,0.8s,baz=284,slow=3.9,SNR=12
comp=Z,6.1nm,0.8s
GOF **Gofitskoye** **21.63 74** ⇑*e*P **P** **04 11 44.6 +2.0**
KBZ **Khabaz** **21.67 77** P **P** **04 11 45.3 +2.2**
comp=Z,25nm,1.0s,baz=285,slow=9.7,SNR=34
comp=Z,25nm,1.0s
KBZ **Khabaz** **21.67 77** *de*P **P** **04 11 45.7 +2.7**
MARD **Mardin** **21.82 95** P **P** **04 11 44.5 -0.5**
MARD IAmb IAmb 04 11 49.9
comp=Z,28nm,1.1s
EIL **Elat** **21.86 120** P **P** **04 11 46.6 +1.4**
comp=Z,7.6nm,0.8s,baz=304,slow=4.9,SNR=3.9
comp=Z,7.6nm,0.8s
ONI **Oni** **22.25 80** P **P** **04 11 49.4 -0.1**
ONI IAmb IAmb 04 11 55.6
comp=Z,22nm,0.9s
ONI **Oni** **22.25 80** P **P** **04 11 49.4 -0.1**
ONI pmax pmax
comp=Z,22nm,0.9s
GURO **Guroymak-BITLI** **22.29 91** P **P** **04 11 50.1 +0.2**
GURO IAmb IAmb 04 11 59.7
comp=Z,22nm,1.0s
ZEI **Tsey** **22.54 79** *e*P **P** **04 11 54.4 +1.7**
ZEI pmax pmax
comp=Z,35nm,1.8s
GNI **Garni** **23.78 86** P **P** **04 12 07.7 +2.5**
comp=Z,3.2nm,0.3s,baz=349,slow=6.2,SNR=5.4
comp=Z,3.2nm,0.3s
GNI **Garni** **23.78 86** *ce*P **P** **04 12 08.4 +3.1**
GNI pmax pmax
comp=Z,26nm,1.7s
GROC **Groznyy** **23.83 78** *e*P **P** **04 12 02.8 -2.8**
GROC *e* 04 12 31.4
GROC pmax pmax
comp=Z,48nm,0.6s
KLMR **Klimovskoe** **24.10 32** *e*P **P** **04 12 05.7 -2.2**
KLMR pmax pmax
comp=Z,68nm,1.5s
KLMR **Klimovskoe** **24.10 32** *e*P **P** **04 12 05.7 -2.2**
KLMR AMP 04 12 10.9
comp=Z,68nm,1.5s
BELG **Belogornoye** **24.97 55** P **P** **04 12 17.2 +1.3**
comp=Z,24nm,0.9s,baz=0.0,slow=3.0,SNR=17
comp=Z,24nm,0.9s
BELG **Belogornoye** **24.97 55** *ce*P **P** **04 12 16.9 +1.0**
BELG pmax pmax
comp=Z,6.0nm,1.1s
MAK **Makhachkala** **25.11 78** *c* *i*P **P** **04 12 12.8 -4.4**
MAK *e* 04 12 48.7
MAK *e*S **S** **04 16 37.0 -4.5**
MAK pmax pmax
comp=Z,342nm,1.5s
MAK MLR MLR
comp=Z,417nm,13.0s
PRGR **Permogore** **27.00 34** eP **P** **04 12 30.3 -3.9**
KIRV **Kirov** **27.48 42** P **P** **04 12 39.1 +0.7**
comp=Z,5.0nm,0.4s,baz=260,slow=12,SNR=4.6
comp=Z,5.0nm,0.4s
ARCES **ARCESS Array B** **27.59 9** P **P** **04 12 39.5 +0.1**
comp=Z,4.8nm,0.9s,baz=185,slow=7.9,SNR=5.2
comp=Z,4.8nm,0.9s
TOA0 **Torodi Ar. Sit** **31.13 202** P **P** **04 13 10.7 -0.5**
TOA0 IAmb IAmb 04 13 12.7
comp=Z,14nm,0.9s
TORD **Torodi Ar. Bea** **31.13 202** P **P** **04 13 11.7 +0.4**
comp=Z,11nm,0.8s,baz=13,slow=9.0,SNR=62
TORD PcP **PcP** **04 16 05.5 -0.9**
comp=Z,0.6nm,0.8s,baz=33,slow=3.0,SNR=2.4
comp=Z,11nm,0.8s
TORD **Torodi Ar. Bea** **31.13 202** P **P** **04 13 09.8 -1.4**
TORD IAmb IAmb 04 13 12.7
comp=Z,9.7nm,0.9s
KOWA **Kowa** **31.80 213** P **P** **04 13 17.5 +0.3**
KOWA IAmb IAmb 04 13 19.0
comp=Z,8.0nm,1.1s
ARU **Arti** **31.83 49** P **P** **04 13 18.7 +1.5**
ARU **Arti** **31.83 49** *c* *i*P **P** **04 13 17.5 +0.4**
ARU PPP PPP 04 14 29.8
ARU 04 16 07.3
ARU S **S** **04 18 28.8 +1.7**
ARU pmax pmax
comp=Z,23nm,0.8s
ABKAR **Akbulak array** **32.73 62** P **P** **04 13 25.2 +0.1**
ABKAR **Akbulak array** **32.73 62** P **P** **04 13 25.9 +0.8**
ABKAR IAmb IAmb 04 13 38.4
comp=Z,3.2nm,0.9s
GEYT **Alibeck** **34.32 83** P **P** **04 13 40.4 +1.3**
comp=Z,7.8nm,0.8s,baz=297,slow=7.9,SNR=9.2
comp=Z,7.8nm,0.8s
GEYT **Alibeck** **34.32 83** P **P** **04 13 38.8 -0.3**
GEYT IAmb IAmb 04 13 42.3
comp=Z,8.7nm,0.8s
GYA0B **ALIBECK ARRAY** **34.32 83** P **P** **04 13 39.8 +0.7**
GYA0B IAmb IAmb 04 13 42.3
comp=Z,8.4nm,0.8s
KBS **Kingsbay** **36.28 360** ⇑eP **P** **04 13 57.0 +1.6**
KBS pmax pmax
comp=Z,52nm,1.7s
BRVK **Borovoye** **38.70 54** P **P** **04 14 16.8 +0.6**
BRVK IAmb IAmb 04 14 19.6
comp=Z,20nm,0.8s
BRVK **Borovoye** **38.70 54** *c* *i*P **P** **04 14 17.7 +1.5**
BRVK pmax pmax
comp=Z,27nm,1.0s
BVAR **Borovoye Array** **38.77 54** LR LR 04 31 32.5
comp=Z,302nm,20.6s,baz=81,slow=38
DBIC **Dimbokro** **39.30 209** P **P** **04 14 22.5 +0.9**
comp=Z,6.8nm,0.9s,baz=34,slow=10,SNR=5.0
comp=Z,6.8nm,0.9s
TIC **Toumodi** **39.38 209** ⇑eP **P** **04 14 21.4 -0.9**
comp=Z,10nm,1.0s
UOSS **Minazif** **39.47 103** P **P** **04 14 23.1 +0.1**
UOSS IAmb IAmb 04 14 37.4
comp=Z,22nm,0.8s
KIC **Kosan Boka** **39.55 209** ⇓*i*P **P** **04 14 24.3 +0.6**
comp=Z,4.6nm,0.7s
LIC **Lamto** **39.78 209** ⇑eP **P** **04 14 23.1 -2.5**
comp=Z,25nm,1.0s
BRZS **Berezniki** **40.75 58** eP **P** **04 14 33.8 +0.5**
BRZS **Berezniki** **40.75 58** eP **P** **04 14 33.9 +0.5**
baz=59
KK31 **Karatay Array** **41.30 69** P **P** **04 14 38.3 +0.3**
KK31 IAmb IAmb 04 14 41.2
comp=Z,10nm,0.9s
KK31 **Karatay Array** **41.30 69** P **P** **04 14 38.3 +0.3**
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR **Karatay Array** **41.30 69** P **P** **04 14 39.3 +1.3**
KKAR **Karatay Array** **41.30 69** P **P** **04 14 36.9 -1.1**
KKAR IAmb IAmb 04 14 41.2
comp=Z,10nm,0.9s
KKAR **Karatay Array** **41.30 69** P **P** **04 14 39.3 +1.3**
KKAR pmax pmax
comp=Z,10.0nm,0.9s
IUG **Iuzhnay** **41.30 71** eP **P** **04 14 38.5 +0.4**
IUG **Iuzhnay** **41.30 71** eP **P** **04 14 38.6 +0.4**
baz=71
CHGR **Chuyangaron** **42.02 76** P **P** **04 14 43.4 -0.6**
CHGR IAmb IAmb 04 14 46.7
comp=Z,16nm,1.0s
CHGR **Chuyangaron** **42.02 76** P **P** **04 14 43.4 -0.6**
CHGR pmax pmax
comp=Z,17nm,1.0s
BTLS **Baital** **43.05 65** eP **P** **04 14 53.0 +0.9**
BTLS **Baital** **43.05 65** eP **P** **04 14 53.1 +0.9**
baz=65
SGDS **Sogindy** **43.99 67** eP **P** **04 15 00.5 +0.6**
SGDS **Sogindy** **43.99 67** eP **P** **04 15 00.6 +0.6**
baz=67
AAK **Ala-Archa** **44.20 68** P **P** **04 15 02.0 +0.3**
AAK IAmb IAmb 04 15 05.5
comp=Z,13nm,1.2s
AAK **Ala-Archa** **44.20 68** *ce*P **P** **04 15 04.3 +2.6**
AAK pmax pmax
comp=Z,10.0nm,1.0s
KURK **Kurchatov** **44.24 56** P **P** **04 15 02.0 +0.3**
KURK IAmb IAmb 04 15 04.2
comp=Z,11nm,0.9s
KURK **Kurchatov** **44.24 56** *ce*P **P** **04 15 03.0 +1.3**
KURK pmax pmax
comp=Z,23nm,1.7s
KUU **Kurty** **44.99 66** eP **P** **04 15 09.2 +1.4**
KUU pmax pmax
comp=Z,6.0nm,0.7s
KUU **Kurty** **44.99 66** eP **P** **04 15 09.3 +1.4**
comp=Z,6.4nm,0.7s,baz=66
SEM **Semipalatinsk** **45.33 56** eP **P** **04 15 11.8 +1.2**
SEM **Semipalatinsk** **45.33 56** eP **P** **04 15 11.8 +1.2**
baz=56
NRIK **Noril'sk** **45.36 29** P **P** **04 15 11.5 +1.1**
comp=Z,4.3nm,0.7s,baz=270,slow=7.2,SNR=3.9
comp=Z,4.3nm,0.7s
NRIK **Noril'sk** **45.36 29** ⇑eP **P** **04 15 13.8 +3.4**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
MDOK **Medeo** **45.74 67** eP **P** **04 15 14.7 +0.8**
MDOK **Medeo** **45.74 67** eP **P** **04 15 14.7 +0.8**
baz=67
TDK **Taldyqorghan** **45.96 64** eP **P** **04 15 16.8 +1.3**
TDK **Taldyqorghan** **45.96 64** eP **P** **04 15 16.8 +1.3**
baz=64
MBAR **Mbarara** **46.00 155** ⇑eP **P** **04 15 15.9 -0.3**
KSH **Kashi** **46.48 72** P **P** **04 15 21.8 +2.0**
KSH pmax pmax
comp=Z,18nm,1.0s
SATY **Saty** **46.70 66** eP **P** **04 15 22.9 +1.5**
SATY **Saty** **46.70 66** eP **P** **04 15 22.9 +1.5**
baz=66
KPKS **Kokpek** **46.72 66** eP **P** **04 15 22.8 +1.2**
KPKS **Kokpek** **46.72 66** eP **P** **04 15 22.8 +1.2**
baz=66
ZAA0 **Zalesovo Array** **46.97 50** P **P** **04 15 23.4 +0.2**
ZALV **Zalesovo Beam** **46.97 50** P **P** **04 15 23.5 +0.3**
comp=Z,6.1nm,0.8s,baz=289,slow=9.0,SNR=22
comp=Z,6.1nm,0.8s
ZALV **Zalesovo Beam** **46.97 50** P **P** **04 15 22.9 -0.3**
UZB **Uzynbulak** **47.08 66** eP **P** **04 15 25.3 +0.9**
UZB **Uzynbulak** **47.08 66** eP **P** **04 15 25.3 +0.9**
baz=66
NIL **Nilore** **47.23 80** P **P** **04 15 25.3 -0.3**
NIL **Nilore** **47.23 80** P **P** **04 15 25.3 -0.3**
NIL pmax pmax
comp=Z,14nm,0.9s
SHLS **Shalkode** **47.37 66** eP **P** **04 15 30.4 +3.8**
SHLS pmax pmax
comp=Z,4.0nm,0.7s
SHLS **Shalkode** **47.37 66** eP **P** **04 15 30.5 +3.8**
comp=Z,4.0nm,0.7s,baz=66
MAKZ **Makanchi** **47.61 60** P **P** **04 15 28.7 +0.3**
MAKZ IAmb IAmb 04 15 31.2
comp=Z,11nm,1.2s

MAKZ	**Makanchi**	**47.61**	**60**	P	**P**	**04 15 28.7 +0.3**
MAKZ				pmax	pmax	
	comp=Z,11nm,1.2s					
MK31	**Makanchi Array**	**47.82**	**60**	P	**P**	**04 15 30.7 +0.7**
MK31	**Makanchi Array**	**47.82**	**60**	*de*P	**P**	**04 15 31.0 +1.0**
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**04 15 30.8 +0.8**
	comp=Z,10nm,0.8s,baz=288,slow=5.6,SNR=56					
MKAR				PcP	**PcP**	**04 16 59.1 +0.4**
	comp=Z,1.2nm,0.9s,baz=292,slow=4.5,SNR=1.6					
	comp=Z,10nm,0.8s					
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**04 15 31.1 +1.0**
KMBO	**Kilima Mbogo**	**48.80**	**147**	P	**P**	**04 15 39.7 +1.6**
	comp=Z,2.2nm,0.5s,baz=348,slow=5.9,SNR=5.6					
	comp=Z,2.2nm,0.5s					
KMBO	**Kilima Mbogo**	**48.80**	**147**	⇓*e*P	**P**	**04 15 38.5 +0.4**
KMBO				pmax	pmax	
	comp=Z,2.0nm,0.5s					
ZSN	**Zaisan**	**49.20**	**58**	*e*P	**P**	**04 15 42.6 +2.0**
ZSN				pmax	pmax	
	comp=Z,6.0nm,1.1s					
ZSN	**Zaisan**	**49.20**	**58**	*e*P	**P**	**04 15 42.6 +2.0**
	comp=Z,5.7nm,1.1s,baz=58					
SCHQ	**Schefferville**	**51.23**	**313**	P	**P**	**04 15 56.9 +1.0**
	comp=Z,4.4nm,0.8s,baz=51,slow=14,SNR=2.9					
	comp=Z,4.4nm,0.8s					
WMQ	**Urumqi**	**52.52**	**62**	*e*P	**P**	**04 16 08.9 +3.2**
WMQ				pmax	pmax	
	comp=Z,14nm,0.7s					
KNGR	**Kungurtug, Tuv**	**55.44**	**50**	⇓*e*P	**P**	**04 16 29.7 +2.6**
KNGR				pmax	pmax	
	comp=Z,24nm,1.5s					
MOY	**Mondy**	**56.88**	**48**	*e*P	**P**	**04 16 40.2 +2.9**
ZAK	**Zakamensk**	**58.77**	**48**	*e*P	P	04 16 44.3 -6.3
ZAK				pmax	pmax	
	comp=Z,7.0nm,1.5s					
SONM	**Songino Array**	**61.86**	**50**	P	**P**	**04 17 13.1 +1.3**
	comp=Z,14nm,0.9s,baz=294,slow=8.6,SNR=48					
	comp=Z,14nm,0.9s					
SONM	**Songino Array**	**61.86**	**50**	P	**P**	**04 17 10.9 -0.9**
ULN	**Ulaanbaatar**	**62.21**	**49**	P	**P**	**04 17 15.2 +1.0**
ULN	**Ulaanbaatar**	**62.21**	**49**	*ce*P	**P**	**04 17 16.3 +2.1**
ULN				pmax	pmax	
	comp=Z,22nm,1.7s					
GTA	**Gaotai**	**62.57**	**61**	⇑P	**P**	**04 17 18.3 +1.6**
GTA				pP	sP	04 17 24.0 +1.5
GTA				sP	pP	04 17 27.3 +6.4
GTA				pmax	pmax	
	comp=Z,5.0nm,1.5s					
YAK	**Yakutsk**	**63.80**	**28**	*ce*P	**P**	**04 17 26.4 +2.1**
YAK				pmax	pmax	
	comp=Z,9.0nm,0.5s					
INK	**Inuvik**	**66.46**	**347**	P	**P**	**04 17 41.1 -0.2**
	comp=Z,1.1nm,0.5s,baz=20,slow=5.5,SNR=6.0					
	comp=Z,1.1nm,0.5s					
YKA	**Yellowknife Ar**	**67.04**	**336**	P	**P**	**04 17 45.4 +0.2**
	comp=Z,1.9nm,0.8s,baz=46,slow=5.9,SNR=6.5					
	comp=Z,1.9nm,0.8s					
YKA	**Yellowknife Ar**	**67.04**	**336**	*i* P	**P**	**04 17 47.9 +2.7**
YKA				pmax	pmax	
	comp=Z,2.0nm,0.8s					
LZH	**Lanzhou**	**67.10**	**62**	*e*P	**P**	**04 17 48.3 +2.0**
LZH				pP	sP	04 17 52.5 +0.4
LZH				pmax	pmax	
	comp=Z,15nm,1.6s					
LZH				LR	LR	
	comp=N,260nm,15.5s					
LZH				LR	LR	
	comp=E,230nm,16.5s					
LZH				LR	LR	
	comp=Z,250nm,16.9s					
BILL	**Bilibino**	**67.68**	**11**	⇑*e*P	**P**	**04 17 52.4 +3.2**
BILL				*PP	**sP**	**04 17 55.0 -0.1**
BILL				*SP	**pP**	**04 17 58.0 +4.5**
BILL						04 20 27.0
BILL				S	**S**	**04 26 42.0 -3.9**
BILL				pmax	pmax	
	comp=Z,44nm,2.1s					
BILL				MLR	MLR	
	comp=Z,114nm,18.0s					
XLT	**XiLinHaoTe**	**69.63**	**49**	*e*P	**P**	**04 18 03.3 +1.4**
XLT				pP	sP	04 18 08.4 +0.6
XLT				sP	pP	04 18 10.5 +4.3
XLT				pmax	pmax	
	comp=Z,10.0nm,1.3s					
XLT				pmax	pmax	
	comp=Z,220nm,4.2s					
I29M	**Ogilvie Camp,**	**69.93**	**348**	P	**P**	**04 18 03.4 +0.1**
I29M				IAmb	IAmb	04 18 07.1
	comp=Z,9.7nm,1.3s					
IMAR	**Indian Mountai**	**71.11**	**354**	P	**P**	**04 18 10.0 -0.4**
DAWY	**Dawson**	**71.31**	**348**	P	**P**	**04 18 11.8 +0.1**
DAWY				IAmb	IAmb	04 18 16.2
	comp=Z,7.8nm,1.2s					
H21K	**Melozitna Rive**	**71.36**	**354**	P	**P**	**04 18 11.5 -0.5**
J26L	**Joseph Creek**	**71.50**	**350**	P	**P**	**04 18 12.3 -0.7**
PZH	**PanZhiHua**	**71.57**	**71**	P	**P**	**04 18 15.6 +1.5**
PZH				pmax	pmax	
	comp=Z,10.0nm,0.8s					
PZH				pmax	pmax	
	comp=Z,90nm,5.5s					
XAN	**Xi'an**	**71.63**	**61**	⇑P	**P**	**04 18 15.5 +1.3**
XAN				pP	sP	04 18 19.4 -0.7
XAN				pmax	pmax	
	comp=Z,7.0nm,1.0s					
ILAR	**Eielson Array**	**71.65**	**351**	P	**P**	**04 18 14.7 +0.9**
	comp=Z,1.4nm,0.9s,baz=13,slow=6.7,SNR=9.0					
	comp=Z,1.4nm,0.9s					
ILAR	**Eielson Array**	**71.65**	**351**	P	**P**	**04 18 14.4 +0.6**
ILAR	**Eielson Array**	**71.65**	**351**	P	**P**	**04 18 14.4 +0.6**
I21K	**Tanana**	**71.76**	**353**	P	**P**	**04 18 13.8 -0.6**
MLY	**Manley**	**71.80**	**353**	P	**P**	**04 18 14.4 -0.3**
MLY				IAmb	IAmb	04 18 18.7
	comp=Z,5.9nm,1.2s					
BOSA	**Boshof**	**71.91**	**169**	P	**P**	**04 18 15.7 0.0**
	comp=Z,3.3nm,0.8s,baz=2.9,slow=5.0,SNR=4.4					
	comp=Z,3.3nm,0.8s					
HDA	**Harding Lake**	**72.01**	**351**	P	**P**	**04 18 15.0 -0.9**
HDA				IAmb	IAmb	04 18 19.1
	comp=Z,8.3nm,1.3s					
BJI	**Beijing**	**72.19**	**52**	P	**P**	**04 18 18.8 +1.4**
BJI				pmax	pmax	
	comp=Z,9.0nm,1.6s					
BJI				LR	LR	
	comp=N,49nm,15.2s					
BJI				LR	LR	
	comp=E,130nm,15.4s					
BJI				LR	LR	
	comp=Z,220nm,15.5s					
RIDG	**Independent Ri**	**72.40**	**350**	P	**P**	**04 18 18.2 -0.1**
BCAR	**Beaver Creek A**	**72.62**	**348**	P	**P**	**04 18 18.1 -1.6**
KMI	**Kunming**	**73.14**	**71**	⇑P	**P**	**04 18 24.1 +0.5**
KMI				pmax	pmax	
	comp=Z,10.0nm,1.5s					
DHY	**Denali Highway**	**73.36**	**351**	P	**P**	**04 18 23.8 -0.3**
K20K	**Telida**	**73.73**	**354**	P	**P**	**04 18 25.3 -0.8**
K20K				IAmb	IAmb	04 18 29.8
	comp=Z,6.4nm,1.0s					
KLR	**Kul'dur**	**73.76**	**37**	P	**P**	**04 18 27.2 +0.6**
	comp=Z,1.2nm,0.7s,baz=321,slow=9.3					
	comp=Z,1.2nm,0.7s					
KLR	**Kul'dur**	**73.76**	**37**	⇑*e*P	**P**	**04 18 27.4 +0.8**
KLR				pmax	pmax	
	comp=Z,3.0nm,1.1s					
CN2	**Changchun**	**74.69**	**44**	*e*P	**P**	**04 18 33.1 +1.1**
CN2				pmax	pmax	
	comp=Z,10.0nm,1.2s					
CMAR	**Chiang Mai Arr**	**74.71**	**79**	P	**P**	**04 18 32.6 +0.1**
	comp=Z,3.6nm,0.7s,baz=306,slow=7.3,SNR=12					
CMAR				LR	LR	04 57 52.9
	comp=Z,48nm,21.2s,baz=295,slow=41					
	comp=Z,3.6nm,0.7s					
CMAR	**Chiang Mai Arr**	**74.71**	**79**	*i* P	**P**	**04 18 32.9 +0.3**
CMAR				pmax	pmax	
	comp=Z,4.0nm,0.8s					
USRK	**Ussuriysk Ar.**	**77.62**	**40**	P	**P**	**04 18 48.5 -0.2**
	comp=Z,3.3nm,0.8s,baz=336,slow=4.2,SNR=6.6					
USRK				LR	LR	04 55 50.3
	comp=Z,114nm,19.6s,baz=300,slow=38					
	comp=Z,3.3nm,0.8s					
USRK	**Ussuriysk Ar.**	**77.62**	**40**	P	**P**	**04 18 48.9 +0.2**
USRK	**Ussuriysk Ar.**	**77.62**	**40**	P	**P**	**04 18 48.9 +0.2**
YSS	**Yuzh-Sakhalins**	**80.15**	**32**	⇓*e*P	**P**	**04 19 00.4 -2.1**
YSS				*e*		04 19 05.4
YSS				pmax	pmax	
	comp=Z,40nm,0.9s					
YSS				MLR	MLR	
	comp=Z,400nm,18.0s					
YSS				MLR	MLR	
	comp=N,300nm,13.0s					
YSS				MLR	MLR	
	comp=E,400nm,14.0s					
PDAR	**Pinedale Array**	**80.50**	**321**	P	**P**	**04 19 05.8 +1.0**
	comp=E,1.1nm,0.8s,baz=54,slow=3.9,SNR=9.2					
	comp=E,1.1nm,0.8s					
KSRS	**Korea Array**	**80.57**	**47**	P	**P**	**04 19 06.0 +1.0**
	comp=E,3.8nm,0.8s,baz=319,slow=4.4,SNR=11					
	comp=E,3.8nm,0.8s					
BDFB	**Brasilia**	**80.72**	**239**	P	**P**	**04 19 07.1 +1.0**
	comp=E,4.9nm,0.9s,baz=83,slow=2.7,SNR=5.6					
	comp=E,4.9nm,0.9s					
ANMO	**Albuquerque**	**84.99**	**314**	⇑*e*P	**P**	**04 19 31.4 +3.1**
ANMO				pmax	pmax	
	comp=Z,3.0nm,1.0s					
MJAR	**Matsushiro Arr**	**86.55**	**41**	P	**P**	**04 19 35.9 +0.1**
	comp=Z,2.3nm,0.8s,baz=307,slow=4.4,SNR=4.2					
	comp=Z,2.3nm,0.8s					
TXAR	**Lajitas Array**	**87.70**	**309**	P	**P**	**04 19 42.3 +0.7**
	comp=Z,1.5nm,1.0s,baz=106,slow=2.7,SNR=11					
	comp=Z,1.5nm,1.0s					
NVAR	**Mina Array Bea**	**87.92**	**324**	P	**P**	**04 19 43.7 +1.1**
	comp=Z,0.7nm,0.9s,baz=80,slow=7.4,SNR=1.4					
	comp=Z,0.7nm,0.9s					
JHJ	**Hachijo jima 2**	**90.06**	**42**	LR	LR	05 03 39.0
	comp=Z,114nm,18.7s,baz=314,slow=38					

GII **24** *04:06:54.2±0.0 s, 30.16N×32.06E, h2 km, MD3.1/3, Mm3.0/4*
HLW **24** *04:06:54.8, 30.17N×31.99E, h8 km, Md3.2, Ml3.4*
ISC 24 04:06:54.8±1.2 s, 30.17N±0.05×31.98E±0.03, h13 km±8 km, n29, σ0 s 48/40, 2D, Egypt

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HHAG	**Hagoal**	**0.24**	**155**	⇑P	**Pg**	**04 07 00.1**	**+0.1**
	baz=156						
HHAG				S	**Sg**	**04 07 03.5**	**0.0**
	baz=156						
KOT	**Kottamia**	**0.28**	**209**	⇑P	**Pg**	**04 07 00.6**	**0.0**
	baz=210						
KOT				S	**Sg**	**04 07 04.8**	**+0.3**
	baz=210						
GLL	**Jalalah**	**0.64**	**202**	⇑P	**Pg**	**04 07 07.0**	**-0.3**
	baz=203						
HSAF	**As Saff**	**0.66**	**214**	⇓P	**Pg**	**04 07 07.4**	**-0.4**
	baz=215						
SUZ	**Suez**	**0.81**	**114**	⇑P	**Pg**	**04 07 10.3**	**-0.2**
	baz=114						
SUZ				S	**Sb**	**04 07 22.4**	**+0.8**
	baz=114						
ZAF	**Zafarana**	**1.01**	**151**	⇑P	**Pb**	**04 07 13.7**	**-0.5**
	baz=151						
HMYD	**Mayadein**	**1.09**	**250**	⇑P	**Pb**	**04 07 15.3**	**-0.3**
	baz=251						
HNAT	**Natroun**	**1.30**	**246**	P	**Pn**	**04 07 18.8**	**+0.1**
	baz=247						
HNAT				S	**Sn**	**04 07 36.1**	**+0.1**
	baz=247						
NBNS	**Bani Suef**	**1.66**	**201**	P	**Pn**	**04 07 23.5**	**-0.1**
	baz=202						
NBNS				S	**Sn**	**04 07 45.0**	**+0.3**
	baz=202						
RYAN	**Fayoum**	**1.84**	**234**	P	**Pn**	**04 07 25.9**	**-0.3**
	baz=235						
HRDS	**Abu Rudays**	**1.85**	**141**	⇑P	**Pn**	**04 07 26.2**	**-0.1**
	baz=141						
GRB	**Gharib**	**2.02**	**159**	P	**Pn**	**04 07 28.3**	**-0.3**
	baz=159						
KZIT	**Kziot**	**2.21**	**70**	Pn	**Pn**	**04 07 30.8**	**-0.4**
KZIT				Sn	**Sn**	**04 07 59.0**	**+0.6**
TR2	**Tor 2**	**2.34**	**139**	⇑P	**Pn**	**04 07 32.4**	**-0.6**
	baz=139						
KRMI	**Paran Flat**	**2.38**	**91**	Pn	**Pn**	**04 07 33.2**	**-0.4**
KRMI				Sn	**Sn**	**04 08 02.9**	**+0.3**
HKAT	**Jabal Katrina**	**2.40**	**133**	⇑P	**Pn**	**04 07 33.5**	**-0.6**
	baz=132						
MBRI	**Mt Berech**	**2.57**	**98**	Pn	**Pn**	**04 07 35.9**	**-0.4**
MBRI				Sn	**Sn**	**04 08 08.2**	**+0.7**
NUB	**Nuweibaa**	**2.59**	**115**	P	**Pn**	**04 07 36.3**	**-0.1**
	baz=116						
PRNI	**Paran**	**2.62**	**85**	Pn	**Pn**	**04 07 36.9**	**0.0**
PRNI				Sn	**Sn**	**04 08 08.2**	**-0.4**
EIL	**Elat**	**2.63**	**100**	Pn	**Pn**	**04 07 36.8**	**-0.2**
EIL				Sn	**Sn**	**04 08 08.0**	**-0.7**
TAMRE	**El Minia**	**2.65**	**201**	⇑P	**Pn**	**04 07 37.2**	**0.0**
	baz=201						
HRFI	**Mount Harif**	**2.65**	**92**	Pn	**Pn**	**04 07 37.3**	**0.0**
HRFI				Sn	**Sn**	**04 08 09.7**	**+0.3**
TR1	**Tor 1**	**2.76**	**141**	⇓P	**Pn**	**04 07 38.4**	**-0.5**
	baz=140						
ASUT		**2.79**	**188**	⇑P	**Pn**	**04 07 39.1**	**-0.1**
	baz=188						
AMAZ	**Amatzia**	**2.87**	**61**	Pn	**Pn**	**04 07 40.1**	**-0.2**
YTIR	**Yattir**	**2.95**	**65**	Pn	**Pn**	**04 07 41.2**	**-0.3**
DSI	**Dead Sea**	**3.24**	**64**	Pn	**Pn**	**04 07 45.5**	**+0.1**
HHRG	**Al Ghardaqah**	**3.25**	**154**	P	**Pn**	**04 07 47.4**	**+1.8**
	baz=154						
HMDT	**Nahal Hemdat**	**3.68**	**55**	Pn	**Pn**	**04 07 51.9**	**+0.5**

ROM 24 04:11:49.5±0.1 s, 42.791N±0.006×13.155E±0.007, h9 km, ML1.4/3, 4C, Error ellipse: s-maj=0.7km s-min=0.5km az=40.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.05**	**325**	P	Pg	04 11 51.5	-0.1
NRCA				S	Sg	04 11 53.1	+0.2
NRCA				END			
AQT1	**Arquata del Tr**	**0.10**	**99**	P	Pg	04 11 52.5	+0.4
AQT1				S	Sg	04 11 54.6	+0.7
MMO1	**Montemonaco**	**0.17**	**49**	P	Pg	04 11 53.6	+0.5
MMO1				S	Sg	04 11 56.7	+1.1
FEMA	**Monte Fema**	**0.19**	**336**	P	Pg	04 11 54.8	+1.2
FEMA				S	Sg	04 11 57.4	+1.1
FEMA				AML	AML		
	comp=E,9030μm,1.4s						
FEMA				AML	AML		
	comp=E,9040μm,1.4s						
FEMA				AML	AML		
	comp=N,7445μm,0.7s						
FEMA				AML	AML		
	comp=E,114μm,0.4s						
FEMA				END			
FDMO	**Fiordimonte**	**0.25**	**349**	⇑P	Pg	04 11 55.2	+0.5
FDMO				S	Sg	04 11 59.3	+1.3
FDMO				AML	AML		
	comp=N,4770μm,1.2s						
FDMO				AML	AML		
	comp=E,4915μm,0.2s						
FDMO				END			
GUMA	**Gualdo di Mace**	**0.30**	**26**	⇑P	Pg	04 11 56.4	+0.8
GUMA				AML	AML		
	comp=E,11685μm,0.7s						
GUMA				AML	AML		
	comp=N,12700μm,0.7s						
GUMA				AML	AML		
	comp=N,8880μm,0.4s						
GUMA				AML	AML		
	comp=E,11705μm,0.7s						
GUMA				AML	AML		
	comp=N,12650μm,0.7s						
GUMA				AML	AML		
	comp=E,14800μm,0.3s						
ARRO	**Arrone**	**0.36**	**234**	P	Pg	04 11 57.2	+0.7
ARRO				AML	AML		
	comp=E,822μm,1.6s						
ARRO				AML	AML		
	comp=N,864μm,0.3s						
ARRO				AML	AML		
	comp=E,1245μm,0.8s						
ARRO				AML	AML		
	comp=N,983μm,0.9s						
TERO	**Teramo**	**0.37**	**117**	P	Pg	04 11 57.0	+0.2
TERO				AML	AML		
	comp=E,3005μm,1.5s						
TERO				AML	AML		
	comp=N,5110μm,0.5s						
TERO				AML	AML		
	comp=E,3225μm,1.4s						
TERO				AML	AML		
	comp=N,5450μm,0.5s						
TERO				AML	AML		
	comp=E,174μm,0.1s						
TERO				AML	AML		
	comp=N,173μm,0.1s						
SNTG	**Esanatoglia**	**0.49**	**341**	P	Pg	04 11 59.5	+0.4
SNTG				S	Sb	04 12 07.0	-0.7
SNTG				AML	AML		
	comp=E,763μm,0.6s						
SNTG				AML	AML		
	comp=N,812μm,1.0s						
SNTG				AML	AML		
	comp=E,29μm,0.2s						
EL6	**Elcito**	**0.54**	**356**	⇑P	Pg	04 12 00.4	+0.4
EL6				AML	AML		
	comp=E,1735μm,0.9s						
EL6				AML	AML		
	comp=N,1880μm,0.3s						
ARVD	**Arcevia**	**0.72**	**348**	⇑P	Pg	04 12 03.8	+0.3
ARVD				AML	AML		
	comp=E,568μm,0.8s						
ARVD				AML	AML		
	comp=N,353μm,0.6s						

ROM 24 04:12:10.4±0.1, 42.805N±0.003×13.227E±0.006, h8 km, ML2.9/20, 3C-2D, Error ellipse: s-maj=0.5km s-min=0.0km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQT1	**Arquata del Tr**	**0.06**	**123**	⇑P	Pg	04 12 12.6	+0.4
AQT1				S	Sg	04 12 13.9	+0.3
NRCA	**Norcia**	**0.09**	**289**	P	Pg	04 12 13.2	+0.5
NRCA				S	Sg	04 12 15.1	+0.8
FEMA	**Monte Fema**	**0.20**	**320**	P	Pg	04 12 15.2	+0.6
FEMA				S	Sg	04 12 18.9	+1.5
FEMA				AML	AML		
	comp=E,9030μm,1.4s						
FEMA				AML	AML		
	comp=E,9070μm,1.4s						
FEMA				AML	AML		
	comp=N,7445μm,0.7s						
FEMA				AML	AML		
	comp=E,9040μm,1.4s						
FDMO	**Fiordimonte**	**0.25**	**336**	⇓P	Pg	04 12 15.9	+0.5
FDMO				S	Sg	04 12 20.2	+1.4
FDMO				AML	AML		
	comp=E,4915μm,0.2s						
FDMO				AML	AML		
	comp=N,4770μm,1.2s						
GUMA	**Gualdo di Mace**	**0.27**	**17**	P	Pb	04 12 16.6	-0.9
GUMA				S	Sb	04 12 21.6	-0.7
GUMA				AML	AML		
	comp=E,11675μm,0.7s						
GUMA				AML	AML		
	comp=N,12650μm,0.7s						
GUMA				AML	AML		
	comp=E,11705μm,0.7s						
GUMA				AML	AML		
	comp=E,14800μm,0.3s						
GUMA				AML	AML		
	comp=N,8880μm,0.4s						
CSP1	**Cessapalombo**	**0.29**	**357**	P	Pg	04 12 16.5	+0.4
CSP1				S	Sg	04 12 21.3	+1.3
RM33	**Pellescritta (**	**0.30**	**182**	P	Pb	04 12 17.7	-0.3
RM33				S	Sb	04 12 22.3	-0.8
CAMP	**Campotosto**	**0.30**	**153**	P	Pg	04 12 17.0	+0.7
CAMP				S	Sb	04 12 21.9	-1.4
CESI	**CESI - Serrava**	**0.31**	**310**	P	Pg	04 12 17.1	+0.6
CESI				S	Sb	04 12 22.3	-1.2
CESI				AML	AML		
	comp=E,5200μm,0.6s						
CESI				AML	AML		
	comp=E,5195μm,0.6s						
CESI				AML	AML		
	comp=N,9950μm,0.5s						
TERO	**Teramo**	**0.33**	**123**	P	Pg	04 12 17.4	+0.4
TERO				S	Sg	04 12 22.7	+1.4
TERO				AML	AML		
	comp=N,5450μm,0.5s						
TERO				AML	AML		
	comp=E,3225μm,1.4s						
TERO				AML	AML		
	comp=N,5110μm,0.5s						
TERO				AML	AML		
	comp=E,3005μm,1.5s						
OFFI	**Offida**	**0.36**	**69**	P	Pb	04 12 18.8	-0.3
OFFI				AML	AML		
	comp=N,4480μm,0.4s						
OFFI				AML	AML		
	comp=E,2680μm,0.8s						
SEF1	**Sefro**	**0.40**	**329**	P	Pg	04 12 18.5	+0.4
SEF1				S	Sb	04 12 25.1	-0.9
ARRO	**Arrone**	**0.41**	**237**	P	Pb	04 12 19.3	-0.6
ARRO				S	Sb	04 12 26.0	-0.2
GIGS	**Gran Sasso**	**0.43**	**144**	P	Pg	04 12 19.5	+0.7
GIGS				S	Sb	04 12 26.4	-0.6
GIGS				AML	AML		
	comp=E,400μm,1.3s						
GIGS				AML	AML		
	comp=N,332μm,0.7s						
GIGS				AML	AML		
	comp=E,1232μm,0.2s						
GIGS				AML	AML		
	comp=N,1026μm,0.2s						
GIGS				AML	AML		
	comp=E,1228μm,0.2s						
GIGS				AML	AML		
	comp=N,1026μm,0.2s						
GAG1	**Gagliole**	**0.45**	**345**	P	Pb	04 12 20.1	-0.5
GAG1				S	Sb	04 12 26.8	-0.7
AQU	**L'Aquila**	**0.47**	**164**	P	Pg	04 12 19.8	+0.3
AQU				S	Sb	04 12 27.5	-0.5
ASSB	**Assisi San Ben**	**0.48**	**300**	⇑P	Pg	04 12 20.0	+0.3
ASSB				S	Sb	04 12 27.8	-0.6
ASSB				AML	AML		
	comp=N,2300μm,0.8s						
ASSB				AML	AML		
	comp=E,2885μm,0.2s						
SNTG	**Esanatoglia**	**0.50**	**335**	P	Pg	04 12 20.1	+0.1
SNTG				S	Sb	04 12 28.3	-0.6
SNTG				AML	AML		
	comp=E,763μm,0.6s						
SNTG				AML	AML		
	comp=N,812μm,1.0s						
TRTR	**Tortoreto Alta**	**0.51**	**89**	P	Pb	04 12 21.5	0.0
TRTR				AML	AML		
	comp=E,4740μm,0.4s						
TRTR				AML	AML		
	comp=N,3930μm,1.6s						
CESX	**Cesi**	**0.52**	**248**	P	Pg	04 12 20.9	+0.6
EL6	**Elcito**	**0.53**	**350**	P	Pg	04 12 20.9	+0.2
EL6				S	Sb	04 12 29.9	0.0
FIAM	**Fiamignano**	**0.54**	**189**	P	Pb	04 12 21.6	-0.6
FIAM				S	Sb	04 12 29.8	-0.4
FOSV	**Fossato di Vic**	**0.60**	**325**	P	Pg	04 12 22.0	+0.1
FOSV				S	Sb	04 12 31.6	-0.1
FOSV				AML	AML		
	comp=E,980μm,1.1s						
FOSV				AML	AML		
	comp=N,2390μm,0.3s						
FOSV				AML	AML		
	comp=E,980μm,1.1s						
FOSV				AML	AML		
	comp=N,2395μm,0.3s						
FAGN	**Fagnano**	**0.60**	**154**	P	Pb	04 12 23.0	-0.2
VCEL	**Villa Celiera**	**0.61**	**132**	P	Pg	04 12 22.5	+0.3
MURB	**Monte Urbino**	**0.69**	**312**	P	Pg	04 12 23.9	+0.3
MURB				AML	AML		
	comp=E,3035μm,0.2s						
MURB				AML	AML		
	comp=E,3520μm,0.2s						
MURB				AML	AML		
	comp=N,1790μm,0.7s						
MURB				AML	AML		
	comp=E,3040μm,0.2s						
MURB				AML	AML		
	comp=N,1965μm,0.7s						
ARVD	**Arcevia**	**0.72**	**343**	⇑P	Pb	04 12 24.9	-0.4
ARVD				AML	AML		
	comp=E,568μm,0.8s						
ARVD				AML	AML		
	comp=N,353μm,0.6s						
ATFO	**Monte Foce - G**	**0.74**	**320**	P	Pg	04 12 24.7	+0.1
ATFO				AML	AML		
	comp=N,406μm,1.0s						
ATFO				AML	AML		

	comp=E,585µm,1.4s							
SRES	**S.Oreste - Sor**	**0.78**	**223**	P	Pb	04	12	25.7 -0.4
AOI	**Ancona**	**0.79**	**20**	P	Pb	04	12	26.1 -0.4
ATVO	**AVT- Monte Val**	**0.83**	**314**	P	Pg	04	12	26.3 -0.1
ATVO				AML	AML			
	comp=E,394µm,0.8s							
ATVO				AML	AML			
	comp=N,452µm,0.6s							
ATVO				AML	AML			
	comp=N,451µm,0.6s							
ATVO				AML	AML			
	comp=E,395µm,0.8s							
COR1	**Corinaldo**	**0.84**	**349**	P	Pb	04	12	27.5 +0.2
ATPI	**Pietralunga -**	**0.88**	**317**	⇓P	Pg	04	12	27.3 -0.1
ATPI				AML	AML			
	comp=E,366µm,1.4s							
ATPI				AML	AML			
	comp=N,296µm,0.6s							
ATPI				AML	AML			
	comp=N,297µm,0.6s							
ATPI				AML	AML			
	comp=E,366µm,1.4s							
MPAG	**Monte Paganucc**	**0.89**	**338**	P	Pg	04	12	27.5 0.0
MPAG				AML	AML			
	comp=N,599µm,1.6s							
MPAG				AML	AML			
	comp=E,318µm,0.4s							
MPAG				AML	AML			
	comp=N,402µm,0.9s							
MPAG				AML	AML			
	comp=E,622µm,0.8s							
NARO	**Abbazia di Nar**	**0.93**	**330**	P	Pg	04	12	28.0 -0.3
NARO				AML	AML			
	comp=E,250µm,0.3s							
NARO				AML	AML			
	comp=N,182µm,1.5s							
FSSB	**Fossombrone**	**0.95**	**340**	P	Pg	04	12	28.5 0.0
FSSB				AML	AML			
	comp=E,903µm,0.4s							
FSSB				AML	AML			
	comp=N,1065µm,0.4s							
APEC	**Apecchio**	**0.96**	**322**	P	Pb	04	12	29.1 -0.2
APEC				AML	AML			
	comp=E,571µm,0.5s							
APEC				AML	AML			
	comp=N,304µm,0.5s							
APEC				AML	AML			
	comp=N,304µm,0.5s							
CPGN	**Carpegna, Ital**	**1.20**	**327**	AML	AML			
	comp=N,14950µm,1.3s							
CPGN				AML	AML			
	comp=E,15700µm,1.3s							
CPGN				AML	AML			
	comp=N,14955µm,1.3s							
CPGN				AML	AML			
	comp=E,15700µm,1.3s							

ROM 24 04:12:57.6±0.1, 42°584N±0'004×13°273E±0'005, h12km, ML2.5/6, 3C, Error ellipse: s-maj=0.4km s-min=0.3km az=193.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
RM33	**Pellescritta (**	**0.09**	**210**	⇑P	Pg	04	13	00.7	+0.3
RM33				S	Sg	04	13	02.6	+0.3
RM33				AML	AML				
	comp=E,33150µm,0.2s								
RM33				AML	AML				
	comp=N,19400µm,1.0s								
RM33				AML	AML				
	comp=E,33150µm,0.1s								
RM33				AML	AML				
	comp=N,20100µm,1.0s								
RM33				AML	AML				
	comp=E,31800µm,0.1s								
CAMP	**Campotosto**	**0.11**	**116**	⇑P	Pg	04	13	01.1	+0.4
CAMP				S	Sg	04	13	03.4	+0.5
CAMP				AML	AML				
	comp=N,3540µm,0.6s								
CAMP				AML	AML				
	comp=E,3520µm,1.1s								
TERO	**Teramo**	**0.25**	**81**	⇑P	Pg	04	13	03.0	+0.2
TERO				S	Sg	04	13	06.9	+0.6
TERO				AML	AML				
	comp=E,2855µm,0.1s								
TERO				AML	AML				
	comp=N,3590µm,0.7s								
TERO				AML	AML				
	comp=N,3220µm,0.7s								
TERO				AML	AML				
	comp=E,2610µm,0.2s								
AQU	**L'Aquila**	**0.25**	**157**	P	Pg	04	13	03.1	+0.3
AQU				S	Sg	04	13	07.7	+1.4
AQU				AML	AML				
	comp=E,904µm,1.5s								
AQU				AML	AML				
	comp=N,1435µm,0.6s								
AQU				AML	AML				
	comp=E,962µm,0.3s								
AQU				AML	AML				
	comp=N,1430µm,0.6s								
AQU				AML	AML				
	comp=N,1360µm,0.6s								
GIGS	**Gran Sasso**	**0.26**	**121**	P	Pg	04	13	03.2	+0.3
GIGS				S	Sg	04	13	07.4	+0.8
GIGS				AML	AML				
	comp=E,1228µm,0.2s								
GIGS				AML	AML				
	comp=N,1026µm,0.2s								
GIGS				AML	AML				
	comp=N,1026µm,0.2s								
NRCA	**Norcia**	**0.28**	**335**	P	Pb	04	13	04.0	-0.6
FIAM	**Fiamignano**	**0.34**	**200**	P	Pg	04	13	04.6	+0.2
FIAM				S	Sg	04	13	09.9	+1.0
FIAM				AML	AML				
	comp=E,1430µm,0.6s								
FIAM				AML	AML				
	comp=N,906µm,0.5s								
ARRO	**Arrone**	**0.38**	**269**	P	Pg	04	13	05.0	-0.1
ARRO				S	Sg	04	13	10.8	+0.8
ARRO				AML	AML				
	comp=E,998µm,0.9s								
ARRO				AML	AML				
	comp=N,959µm,0.1s								
FAGN	**Fagnano**	**0.39**	**144**	P	Pb	04	13	06.2	-0.4
VCEL	**Villa Celiera**	**0.46**	**114**	P	Pg	04	13	07.2	+0.5
VCEL				AML	AML				
	comp=N,2615µm,0.2s								
VCEL				AML	AML				
	comp=E,2010µm,0.5s								
OFFI	**Offida**	**0.46**	**41**	P	Pg	04	13	06.7	-0.1
GUMA	**Gualdo di Mace**	**0.48**	**5**	P	Pg	04	13	07.5	+0.4
CESX	**Cesi**	**0.51**	**273**	P	Pg	04	13	07.8	+0.2
T0110	**Collepietro**	**0.52**	**133**	P	Pg	04	13	07.8	0.0
TRTR	**Tortoreto Alta**	**0.52**	**64**	P	Pg	04	13	08.2	+0.4
PTQR	**Pietraquaria**	**0.57**	**170**	P	Pg	04	13	08.8	+0.1
ASSB	**Assisi San Ben**	**0.64**	**316**	P	Pg	04	13	09.9	-0.2
SRES	**S.Oreste - Sor**	**0.66**	**239**	P	Pg	04	13	10.6	+0.1
CERT	**Cerreto**	**0.67**	**199**	P	Pg	04	13	10.4	-0.2
MTCE	**Montecelio**	**0.69**	**215**	P	Pg	04	13	10.1	-0.8
SNTG	**Esanatoglia**	**0.71**	**340**	P	Pg	04	13	11.3	-0.2
EL6	**Elcito**	**0.76**	**350**	P	Pg	04	13	12.0	-0.2
VVLD	**Villa Vallelon**	**0.76**	**160**	P	Pg	04	13	11.6	-0.7
FOSV	**Fossato di Vic**	**0.80**	**332**	P	Pg	04	13	12.1	-1.0
MURB	**Monte Urbino**	**0.87**	**321**	P	Pb	04	13	14.7	0.0
MGAB	**Montegabbione**	**0.92**	**291**	P	Pg	04	13	14.4	-0.8
GIUL	**Giuliano Di Ro**	**1.02**	**181**	P	Pb	04	13	17.1	-0.2

ROM 24 04:14:07.8±0.1, 42°825N±0'003×13°158E±0'005, h10km, ML2.6/31, 9C-4D, Error ellipse: s-maj=0.4km s-min=0.0km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
NRCA	**Norcia**	**0.03**	**286**	⇑P	Pg	04	14	10.2	+0.3
NRCA				S	Sg	04	14	11.5	+0.2
AQT1	**Arquata del Tr**	**0.11**	**117**	⇓P	Pg	04	14	11.2	+0.6
AQT1				S	Sg	04	14	13.7	+1.0
FEMA	**Monte Fema**	**0.16**	**330**	⇓P	Pg	04	14	12.0	+0.5
FEMA				S	Sg	04	14	14.5	+0.6
FEMA				AML	AML				
	comp=E,4855µm,1.1s								
FEMA				AML	AML				
	comp=N,3040µm,1.5s								
FEMA				AML	AML				
	comp=N,3040µm,1.5s								
FEMA				AML	AML				
	comp=E,4860µm,1.1s								
FDMO	**Fiordimonte**	**0.22**	**346**	⇑P	Pg	04	14	12.8	+0.4
FDMO				S	Sg	04	14	16.3	+0.8
FDMO				AML	AML				
	comp=E,1700µm,1.2s								
FDMO				AML	AML				
	comp=N,3035µm,1.0s								
CESI	**CESI - Serrava**	**0.26**	**314**	⇓P	Pg	04	14	13.6	+0.5
CESI				S	Sg	04	14	17.9	+1.1
CSP1	**Cessapalombo**	**0.27**	**7**	⇑P	Pg	04	14	13.6	+0.2
CSP1				S	Sg	04	14	18.0	+0.9
CSP1				AML	AML				
	comp=N,4970µm,1.2s								
CSP1				AML	AML				
	comp=E,3475µm,1.5s								
GUMA	**Gualdo di Mace**	**0.27**	**29**	⇑P	Pg	04	14	14.0	+0.6
GUMA				S	Sb	04	14	19.1	-0.5
RM33	**Pellescritta (**	**0.32**	**172**	⇑P	Pg	04	14	14.8	+0.5
RM33				S	Sb	04	14	20.0	-1.0
RM33				AML	AML				
	comp=E,4000µm,0.2s								
RM33				AML	AML				
	comp=N,5080µm,0.2s								
RM33				AML	AML				
	comp=E,3930µm,0.2s								
RM33				AML	AML				
	comp=N,4945µm,0.2s								
RM33				AML	AML				
	comp=N,5085µm,0.2s								
CAMP	**Campotosto**	**0.34**	**147**	⇑P	Pg	04	14	15.0	+0.3
CAMP				S	Sg	04	14	20.4	+1.1
CAMP				AML	AML				
	comp=E,1870µm,0.2s								
CAMP				AML	AML				
	comp=N,1138µm,0.2s								
SEF1	**Sefro**	**0.36**	**334**	P	Pg	04	14	15.3	+0.3
SEF1				S	Sb	04	14	21.1	-0.9
MDAR	**Monte D'Aria**	**0.37**	**358**	P	Pg	04	14	15.4	+0.2
MDAR				S	Sb	04	14	21.3	-1.1
PIO1	**Pioraco**	**0.38**	**340**	P	Pg	04	14	15.5	+0.2
PIO1				S	Sb	04	14	21.7	-0.9
ARRO	**Arrone**	**0.38**	**230**	⇑P	Pg	04	14	15.8	+0.5
ARRO				S	Sb	04	14	22.3	-0.2
ARRO				AML	AML				
	comp=E,1200µm,0.2s								
ARRO				AML	AML				
	comp=N,1225µm,0.2s								
ARRO				AML	AML				
	comp=E,1205µm,0.2s								
TERO	**Teramo**	**0.39**	**121**	P	Pg	04	14	15.7	+0.2
TERO				S	Sg	04	14	21.6	+1.1
TERO				AML	AML				
	comp=E,1790µm,0.3s								
TERO				AML	AML				
	comp=N,2285µm,0.8s								
TERO				AML	AML				
	comp=E,1985µm,0.3s								
TERO				AML	AML				
	comp=E,1785µm,0.3s								
TERO				AML	AML				
	comp=N,2675µm,0.1s								
MNTP	**Montappone**	**0.39**	**36**	P	Pb	04	14	16.4	-0.4
FIU1	**Fiuminata**	**0.40**	**336**	P	Pg	04	14	16.3	+0.5
FIU1				S	Sb	04	14	22.2	-1.0
OFFI	**Offida**	**0.40**	**74**	P	Pb	04	14	17.0	-0.1
SSM1	**San Severino M**	**0.40**	**2**	P	Pg	04	14	16.1	+0.3
SSM1				S	Sb	04	14	22.6	-0.8
GAG1	**Gagliole**	**0.42**	**351**	P	Pg	04	14	16.4	+0.3
GAG1				S	Sb	04	14	23.2	-0.6
ASSB	**Assisi San Ben**	**0.43**	**301**	⇑P	Pg	04	14	16.5	+0.2
ASSB				S	Sg	04	14	23.0	+1.1
ASSB				AML	AML				
	comp=E,886µm,1.5s								
ASSB				AML	AML				
	comp=E,886µm,1.5s								
ASSB				AML	AML				
	comp=N,1035µm,0.4s								
SNTG	**Esanatoglia**	**0.46**	**340**	P	Pg	04	14	17.0	+0.2
SNTG				S	Sb	04	14	24.0	-1.0
SNTG				AML	AML				
	comp=E,420µm,0.8s								
SNTG				AML	AML				
	comp=N,484µm,0.7s								
SNTG				AML	AML				
	comp=N,484µm,0.7s								
CESX	**Cesi**	**0.48**	**243**	P	Pg	04	14	17.3	+0.2
CESX				S	Sb	04	14	25.1	-0.3
CESX				AML	AML				
	comp=E,862µm,0.9s								
CESX				AML	AML				
	comp=N,771µm,0.6s								
GIGS	**Gran Sasso**	**0.48**	**141**	P	Pg	04	14	17.2	-0.1
GIGS				S	Sg	04	14	24.4	+0.8
GIGS				AML	AML				
	comp=E,338µm,1.0s								
GIGS				AML	AML				
	comp=E,339µm,1.0s								
GIGS				AML	AML				
	comp=N,328µm,0.1s								
AQU	**L'Aquila**	**0.50**	**159**	P	Pg	04	14	18.2	+0.5
AQU				S	Sg	04	14	25.2	+1.0
EL6	**Elcito**	**0.51**	**355**	⇓P	Pg	04	14	17.9	+0.2
EL6				S	Sb	04	14	25.8	-0.6
EL6				AML	AML				
	comp=E,994µm,0.2s								
EL6				AML	AML				
	comp=N,965µm,1.0s								
EL6				AML	AML				
	comp=E,995µm,0.2s								
EL6				AML	AML				
	comp=N,960µm,1.0s								
ATCC	**AVT- Casa Cast**	**0.52**	**314**	P	Pg	04	14	18.2	+0.2
ATCC				S	Sb	04	14	26.4	-0.5
ATCC				AML	AML				
	comp=N,557µm,1.1s								
ATCC				AML	AML				
	comp=E,580µm,0.7s								
FOSV	**Fossato di Vic**	**0.55**	**328**	⇑P	Pg	04	14	18.7	+0.1
FOSV				S	Sb	04	14	27.1	-0.6
FOSV				AML	AML				
	comp=E,450µm,0.8s								
FOSV				AML	AML				
	comp=N,610µm,0.3s								
TRTR	**Tortoreto Alta**	**0.56**	**91**	P	Pb	04	14	19.5	-0.2
TRTR				AML	AML				
	comp=E,2700µm,0.4s								
TRTR				AML	AML				
	comp=N,2135µm,0.6s								
FIAM	**Fiamignano**	**0.56**	**183**	P	Pg	04	14	18.7	0.0
FIAM				S	Sb	04	14	27.2	-0.6
FIAM				AML	AML				
	comp=E,822µm,0.5s								
FIAM				AML	AML				
	comp=N,539µm,0.4s								
MURB	**Monte Urbino**	**0.64**	**314**	P	Pg	04	14	20.6	+0.4
PP3	**Marolino**	**0.64**	**31**	P	Pb	04	14	21.4	+0.2
PP3				AML	AML				
	comp=E,2060µm,0.3s								
PP3				AML	AML				
	comp=N,1605µm,0.4s								
PP3				AML	AML				
	comp=N,1645µm,0.4s								
PP3				AML	AML				
	comp=E,2065µm,0.3s								
PP3				AML	AML				
	comp=N,1610µm,0.4s								
PP3				AML	AML				
	comp=E,2100µm,0.3s								
VCEL	**Villa Celiera**	**0.66**	**130**	P	Pg	04	14	20.8	+0.2
VCEL				AML	AML				
	comp=E,794µm,1.3s								
VCEL				AML	AML				
	comp=N,932µm,1.6s								
VCEL				AML	AML				
	comp=E,794µm,1.3s								
VCEL				AML	AML				
	comp=N,933µm,1.6s								
SSFR	**Montelago di S**	**0.67**	**336**	P	Pg	04	14	21.1	+0.3
SSFR				AML	AML				
	comp=E,784µm,1.1s								
SSFR				AML	AML				
	comp=N,831µm,0.7s								
SSFR				AML	AML				
	comp=E,711µm,0.2s								
SSFR				AML	AML				
	comp=N,658µm,0.7s								
ATFO	**Monte Foce - G**	**0.69**	**322**	P	Pg	04	14	21.2	0.0
ATFO				AML	AML				
	comp=N,236µm,0.5s								
ATFO				AML	AML				
	comp=E,206µm,0.4s								
ATFO				AML	AML				
	comp=N,236µm,0.5s								
ARVD	**Arcevia**	**0.69**	**347**	P	Pg	04	14	21.0	-0.2
ARVD				AML	AML				
	comp=N,214µm,1.5s								
ARVD				AML	AML				
	comp=E,211µm,0.6s								
ATSC	**Scheggia e Pas**	**0.69**	**330**	P	Pg	04	14	21.2	0.0
ATTE	**AVT- Monte Tez**	**0.70**	**303**	P	Pg	04	14	21.4	0.0
T0110	**Collepietro**	**0.75**	**142**	P	Pg	04	14	22.2	-0.2
T0110				AML	AML				
	comp=N,790µm,0.3s								
T0110				AML	AML				
	comp=N,790µm,0.3s								
T0110				AML	AML				
	comp=E,564µm,0.5s								
SRES	**S.Oreste - Sor**	**0.76**	**219**	P	Pg	04	14	22.7	+0.3
FRON	**Frontone**	**0.76**	**336**	P	Pg	04	14	22.2	-0.4
FRON				AML	AML				
	comp=E,239µm,0.2s								
FRON				AML	AML				
	comp=N,316µm,1.3s								
MGAB	**Montegabbione**	**0.77**	**277**	P	Pb	04	14	23.4	0.0
MGAB				AML	AML				
	comp=N,878µm,0.6s								
MGAB				AML	AML				
	comp=E,706µm,0.8s								
MGAB				AML	AML				
	comp=N,876µm,0.7s								
MGAB				AML	AML				
	comp=E,808µm,0.8s								
ATVO	**AVT- Monte Val**	**0.78**	**316**	AML	AML				
	comp=N,150µm,0.8s								
ATVO				AML	AML				
	comp=E,178µm,1.6s								
ATVO				AML	AML				
	comp=N,150µm,0.8s								
ATVA	**AVT- Monte Val**	**0.78**	**306**	P	Pg	04	14	23.2	+0.2
ATBU	**Serra di Buran**	**0.79**	**326**	P	Pg	04	14	23.1	+0.1
AOI	**Ancona**	**0.80**	**24**	P	Pg	04	14	23.3	+0.2
AOI				AML	AML				
	comp=E,420µm,0.3s								
AOI				AML	AML				
	comp=N,380µm,1.2s								
COR1	**Corinaldo**	**0.81**	**352**	P	Pb	04	14	23.9	-0.2
COR1				AML	AML				
	comp=N,654µm,1.3s								
COR1				AML	AML				
	comp=E,445µm,1.6s								
PIEI	**Pieia**	**0.84**	**328**	P	Pg	04	14	24.2	0.0
MPAG	**Monte Paganucc**	**0.85**	**340**	P	Pg	04	14	24.6	+0.2
MPAG				AML	AML				
	comp=E,415µm,0.3s								
MPAG				AML	AML				
	comp=N,240µm,0.7s								
MTCE	**Montecelio**	**0.86**	**201**	P	Pg	04	14	23.9	-0.5
CERT	**Cerreto**	**0.89**	**189**	P	Pg	04	14	24.7	-0.2
CERT				AML	AML				
	comp=N,258µm,0.5s								
CERT				AML	AML				
	comp=E,366µm,0.4s								
NARO	**Abbazia di Nar**	**0.89**	**332**	P	Pg	04	14	24.9	-0.1
NARO				AML	AML				
	comp=E,126µm,0.6s								
NARO				AML	AML				
	comp=N,122µm,1.1s								
APEC	**Apecchio**	**0.91**	**324**	AML	AML				
	comp=N,236µm,0.8s								
APEC				AML	AML				
	comp=E,200µm,0.4s								
FSSB	**Fossombrone**	**0.91**	**342**	P	Pg	04	14	25.3	-0.1
FSSB				AML	AML				
	comp=N,842µm,0.4s								
FSSB				AML	AML				
	comp=E,688µm,0.5s								
SACS	**San Casciano d**	**0.92**	**272**	P	Pb	04	14	26.0	+0.1
INTR	**Introdacqua**	**0.98**	**146**	P	Pg	04	14	25.8	-0.9
INTR				AML	AML				
	comp=N,312µm,1.0s								
INTR				AML	AML				
	comp=E,162µm,0.4s								
CAFI	**Castiglion Fio**	**1.01**	**300**	P	Pb	04	14	27.7	+0.3
LPEL	**Lama dei Pelig**	**1.09**	**135**	AML	AML				
	comp=E,198µm,0.9s								
LPEL				AML	AML				
	comp=N,168µm,0.3s								
POFI	**Posta Fibreno**	**1.18**	**159**	AML	AML				
	comp=N,85µm,1.3s								
POFI				AML	AML				
	comp=E,108µm,0.9s								
GIUL	**Giuliano Di Ro**	**1.27**	**177**	AML	AML				
	comp=E,94µm,1.6s								
GIUL				AML	AML				
	comp=N,96µm,0.8s								

ROM 24 04:14:16.2±0.1, 42°742N±0'005×13°245E±0'010, h9km, ML2.3/8, Error ellipse: s-maj=0.8km s-min=0.3km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
NRCA	**Norcia**	**0.13**	**314**	P	Pg	04	14	19.7	+0.4
NRCA				S	Sg	04	14	22.1	+0.7
RM33	**Pellescritta (**	**0.23**	**186**	P	Pg	04	14	21.8	+0.8
RM33				S	Sg	04	14	25.5	+1.2
RM33				AML	AML				
	comp=E,4000µm,0.2s								
RM33				AML	AML				
	comp=N,2760µm,1.5s								
RM33				AML	AML				
	comp=E,3930µm,0.2s								
RM33				AML	AML				
	comp=N,2735µm,1.5s								
CAMP	**Campotosto**	**0.24**	**149**	P	Pg	04	14	22.5	+1.4
CAMP				S	Sg	04	14	25.5	+1.1
CAMP				AML	AML				
	comp=E,1870µm,0.2s								
CAMP				AML	AML				
	comp=N,1138µm,0.2s								
FEMA	**Monte Fema**	**0.26**	**327**	P	Pb	04	14	22.8	-0.5
FEMA				S	Sg	04	14	26.5	+1.3
FEMA				AML	AML				
	comp=E,4855µm,1.1s								
FEMA				AML	AML				
	comp=N,3035µm,1.5s								
FEMA				AML	AML				
	comp=E,4860µm,1.1s								
FEMA				AML	AML				
	comp=N,3035µm,1.5s								
FEMA				AML	AML				
	comp=N,3040µm,1.5s								
FEMA				AML	AML				
	comp=E,262µm,0.8s								
FEMA				AML	AML				
	comp=N,415µm,0.5s								
FEMA				AML	AML				
	comp=E,112µm,0.6s								
TERO	**Teramo**	**0.29**	**114**	P	Pb	04	14	23.6	-0.1
TERO				S	Sb	04	14	27.4	-1.2
TERO				AML	AML				
	comp=E,1790µm,0.3s								
TERO				AML	AML				
	comp=E,1985µm,0.3s								
TERO				AML	AML				
	comp=N,2675µm,0.1s								
TERO				AML	AML				
	comp=E,1785µm,0.3s								
TERO				AML	AML				
	comp=N,2285µm,0.8s								
FDMO	**Fiordimonte**	**0.32**	**339**	P	Pb	04	14	23.9	-0.3
FDMO				S	Sb	04	14	28.2	-1.2
FDMO				AML	AML				
	comp=N,3035µm,1.0s								
FDMO				AML	AML				
	comp=E,1700µm,1.2s								
FDMO				AML	AML				
	comp=E,367µm,0.7s								

FDMO				AML	AML		
	comp=E,466µm,0.7s						
GUMA	**Gualdo di Mace**	**0.33**	**12**	P	Pg	04 14 23.4	+0.7
GUMA				S	Sb	04 14 29.2	-0.6
GUMA				AML	AML		
	comp=E,7690µm,0.4s						
GUMA				AML	AML		
	comp=N,7115µm,1.6s						
GUMA				AML	AML		
	comp=N,7655µm,0.7s						
GUMA				AML	AML		
	comp=N,7110µm,1.6s						
GUMA				AML	AML		
	comp=E,7695µm,0.4s						
GUMA				AML	AML		
	comp=E,9020µm,0.3s						
GUMA				AML	AML		
	comp=N,3462µm,0.2s						
GUMA				AML	AML		
	comp=E,4810µm,0.3s						
GUMA				AML	AML		
	comp=E,4768µm,0.3s						
CSP1	**Cessapalombo**	**0.35**	**355**	P	Pg	04 14 23.9	+0.7
CSP1				S	Sb	04 14 29.2	-1.3
CSP1				AML	AML		
	comp=E,3475µm,1.5s						
CSP1				AML	AML		
	comp=N,4970µm,1.2s						
CSP1				AML	AML		
	comp=N,96µm,0.8s						
CSP1				AML	AML		
	comp=E,468µm,0.4s						
CESI	**CESI - Serrava**	**0.36**	**317**	P	Pg	04 14 23.7	+0.3
CESI				S	Sb	04 14 29.5	-1.3
CESI				AML	AML		
	comp=E,2320µm,0.2s						
CESI				AML	AML		
	comp=N,3510µm,0.3s						
CESI				AML	AML		
	comp=E,303µm,0.1s						
GIGS	**Gran Sasso**	**0.38**	**140**	AML	AML		
	comp=E,339µm,1.0s						
GIGS				AML	AML		
	comp=E,338µm,1.0s						
GIGS				AML	AML		
	comp=N,328µm,0.1s						
OFFI	**Offida**	**0.38**	**59**	P	Pb	04 14 25.1	0.0
OFFI				AML	AML		
	comp=E,1500µm,0.3s						
OFFI				AML	AML		
	comp=E,2385µm,0.5s						
OFFI				AML	AML		
	comp=E,2940µm,0.7s						
OFFI				AML	AML		
	comp=N,2460µm,1.0s						
ARRO	**Arrone**	**0.39**	**245**	P	Pb	04 14 24.8	-0.5
ARRO				S	Sb	04 14 30.8	-0.7
ARRO				AML	AML		
	comp=E,740µm,1.5s						
ARRO				AML	AML		
	comp=N,858µm,0.6s						
ARRO				AML	AML		
	comp=E,1200µm,0.2s						
ARRO				AML	AML		
	comp=N,1230µm,0.2s						
ARRO				AML	AML		
	comp=N,557µm,0.6s						
ARRO				AML	AML		
	comp=N,1225µm,0.2s						
AQU	**L'Aquila**	**0.41**	**163**	AML	AML		
	comp=N,704µm,0.3s						
AQU				AML	AML		
	comp=E,910µm,0.5s						
AQU				AML	AML		
	comp=N,738µm,0.3s						
AQU				AML	AML		
	comp=E,918µm,0.5s						
MNTP	**Montappone**	**0.43**	**23**	AML	AML		
	comp=N,1860µm,0.3s						
MNTP				AML	AML		
	comp=E,2315µm,0.5s						
MDAR	**Monte D'Aria**	**0.46**	**351**	AML	AML		
	comp=E,1110µm,1.6s						
MDAR				AML	AML		
	comp=N,1580µm,0.3s						
TRTR	**Tortoreto Alta**	**0.50**	**82**	AML	AML		
	comp=N,2135µm,0.6s						
TRTR				AML	AML		
	comp=E,2700µm,0.4s						
CESX	**Cesi**	**0.51**	**255**	AML	AML		
	comp=E,862µm,0.9s						
CESX				AML	AML		
	comp=N,771µm,0.6s						
ASSB	**Assisi San Ben**	**0.53**	**305**	P	Pb	04 14 27.4	-0.3
ASSB				S	Sb	04 14 35.4	0.0
ASSB				AML	AML		
	comp=E,886µm,1.5s						
ASSB				AML	AML		
	comp=E,886µm,1.5s						
ASSB				AML	AML		
	comp=N,1035µm,0.4s						
ASSB				AML	AML		
	comp=E,82µm,1.1s						
ASSB				AML	AML		
	comp=E,116µm,0.2s						
SNTG	**Esanatoglia**	**0.56**	**337**	AML	AML		
	comp=N,484µm,0.7s						
SNTG				AML	AML		
	comp=E,420µm,0.8s						
SNTG				AML	AML		
	comp=N,484µm,0.7s						
VCEL	**Villa Celiera**	**0.56**	**128**	AML	AML		
	comp=N,933µm,1.6s						
VCEL				AML	AML		
	comp=E,794µm,1.3s						
VCEL				AML	AML		
	comp=E,794µm,1.3s						
EL6	**Elcito**	**0.60**	**350**	AML	AML		
	comp=E,993µm,0.2s						
EL6				AML	AML		
	comp=E,994µm,0.2s						
EL6				AML	AML		
	comp=N,960µm,1.0s						
EL6				AML	AML		
	comp=N,960µm,1.0s						
EL6				AML	AML		
	comp=E,993µm,0.2s						
EL6				AML	AML		
	comp=E,995µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.63**	**315**	AML	AML		
	comp=E,580µm,0.7s						
ATCC				AML	AML		
	comp=E,580µm,0.7s						
ATCC				AML	AML		
	comp=N,556µm,1.1s						
ATCC				AML	AML		
	comp=N,557µm,1.1s						
T0110	**Collepietro**	**0.65**	**142**	AML	AML		
	comp=E,564µm,0.5s						
T0110				AML	AML		
	comp=N,790µm,0.3s						
T0110				AML	AML		
	comp=N,790µm,0.3s						
FOSV	**Fossato di Vic**	**0.66**	**327**	AML	AML		
	comp=N,610µm,0.3s						
FOSV				AML	AML		
	comp=E,450µm,0.8s						
PP3	**Marolino**	**0.69**	**23**	AML	AML		
	comp=N,1605µm,0.4s						
PP3				AML	AML		
	comp=N,1610µm,0.4s						
PP3				AML	AML		
	comp=E,2095µm,0.3s						
PP3				AML	AML		
	comp=E,2060µm,0.3s						
PP3				AML	AML		
	comp=N,1640µm,0.4s						
PP3				AML	AML		
	comp=E,2100µm,0.3s						
PP3				AML	AML		
	comp=N,1645µm,0.4s						
SSFR	**Montelago di S**	**0.77**	**334**	AML	AML		
	comp=E,711µm,0.2s						
SSFR				AML	AML		
	comp=N,831µm,0.7s						
SSFR				AML	AML		
	comp=E,784µm,1.1s						
SSFR				AML	AML		
	comp=N,658µm,0.7s						
ARVD	**Arcevia**	**0.79**	**344**	AML	AML		
	comp=E,211µm,0.6s						
ARVD				AML	AML		
	comp=E,210µm,0.6s						
ARVD				AML	AML		
	comp=N,214µm,1.5s						
ATFO	**Monte Foce - G**	**0.80**	**322**	AML	AML		
	comp=N,236µm,0.5s						
ATFO				AML	AML		
	comp=N,236µm,0.5s						
ATFO				AML	AML		
	comp=E,206µm,0.4s						
CERT	**Cerreto**	**0.82**	**194**	AML	AML		
	comp=E,366µm,0.4s						
CERT				AML	AML		
	comp=N,258µm,0.5s						
AOI	**Ancona**	**0.85**	**18**	AML	AML		
	comp=N,380µm,1.2s						
AOI				AML	AML		
	comp=E,420µm,0.3s						
FRON	**Frontone**	**0.86**	**334**	AML	AML		
	comp=N,316µm,1.3s						
FRON				AML	AML		
	comp=E,239µm,0.2s						
ATVO	**AVT- Monte Val**	**0.89**	**316**	AML	AML		
	comp=N,150µm,0.8s						
ATVO				AML	AML		
	comp=E,178µm,1.6s						
ATVO				AML	AML		
	comp=N,150µm,0.8s						
COR1	**Corinaldo**	**0.91**	**349**	AML	AML		
	comp=E,456µm,1.3s						
COR1				AML	AML		
	comp=N,654µm,1.3s						
PIEI	**Pieia**	**0.95**	**327**	AML	AML		
	comp=E,204µm,1.3s						
PIEI				AML	AML		
	comp=N,164µm,0.4s						
MPAG	**Monte Paganucc**	**0.95**	**338**	AML	AML		
	comp=E,415µm,0.3s						
MPAG				AML	AML		
	comp=N,239µm,0.7s						
MPAG				AML	AML		
	comp=N,240µm,0.7s						
LPEL	**Lama dei Pelig**	**0.98**	**135**	AML	AML		
	comp=N,168µm,0.3s						
LPEL				AML	AML		
	comp=E,198µm,0.9s						
NARO	**Abbazia di Nar**	**0.99**	**331**	AML	AML		
	comp=N,122µm,1.1s						
NARO				AML	AML		
	comp=E,126µm,0.6s						
FSSB	**Fossombrone**	**1.01**	**340**	AML	AML		
	comp=E,688µm,0.5s						
FSSB				AML	AML		
	comp=N,842µm,0.4s						
APEC	**Apecchio**	**1.01**	**324**	AML	AML		
	comp=E,200µm,0.4s						
APEC				AML	AML		
	comp=N,236µm,0.8s						

*ATH **24** 04:14:45.0, 39°.72N×22°.23E, h8km±3km, ML2.5/5, Error ellipse: s-maj=3.4km s-min=1.0km az=346.0*
*THE **24** 04:14:45.2, 39°.73N×22°.22E, h5km±1km, ML2.6/9, Error ellipse: s-maj=1.8km s-min=0.7km az=27.0*

ISC 24 04:14:44.9±0.9, 39°.73N±0°.02×22°.24E±0°.03, h8km±8km, n21, σ0°50/40, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LRSO	**Larissa Observ**	**0.13**	**116**	P	**Pg**	**04 14 47.7**	**0.0**
LRSO				S	**Sg**	**04 14 50.2**	**+0.5**
	10µm,0.5s						
THL	**Klokotos Trika**	**0.24**	**226**	P	**Pg**	**04 14 49.3**	**-0.3**
THL				S	**Sg**	**04 14 52.8**	**0.0**
	2µm,0.7s						
THL	**Klokotos Trika**	**0.24**	**226**	P	**Pg**	**04 14 49.3**	**-0.3**
THL				S	**Sg**	**04 14 52.3**	**-0.5**
THL				AML	AML	04 14 53.8	
	comp=E,2613µm,0.4s						
THL				AML	AML	04 14 54.6	
	comp=N,2382µm,0.6s						
LIT	**Litokhoron**	**0.42**	**28**	P	**Pg**	**04 14 52.6**	**-0.5**
LIT				S	**Sb**	**04 15 00.3**	**-0.8**
	comp=N,688nm,0.5s						
LIT	**Litokhoron**	**0.42**	**28**	P	**Pg**	**04 14 52.5**	**-0.5**
LIT				S	**Sg**	**04 14 59.6**	**+1.1**
LIT				AML	AML	04 15 01.8	
	comp=E,1200µm,0.4s						
LIT				AML	AML	04 15 02.8	
	comp=N,1244µm,0.2s						
KZN	**Kozani**	**0.68**	**328**	P	**Pg**	**04 14 58.0**	**0.0**
KZN				S	**Sg**	**04 15 08.0**	**+1.2**
	comp=N,500nm,0.4s						
MAKR	**Makrakomi, Fth**	**0.72**	**187**	P	**Pg**	**04 14 59.1**	**+0.4**
MAKR				S	**Sb**	**04 15 10.2**	**+0.5**
	comp=N,3µm,0.3s						
MAKR	**Makrakomi, Fth**	**0.72**	**187**	P	**Pg**	**04 14 59.1**	**+0.4**
MAKR				S	**Sg**	**04 15 07.6**	**-0.5**
XOR	**Xorichti**	**0.82**	**116**	P	**Pg**	**04 15 00.3**	**-0.4**
XOR				S	**Sb**	**04 15 12.2**	**-0.5**
XOR				AML	AML	04 15 15.0	
	comp=E,421µm,0.5s						
XOR				AML	AML	04 15 15.7	
	comp=N,913µm,0.7s						
NEO	**Neokhori**	**0.87**	**119**	P	**Pg**	**04 15 01.2**	**-0.5**
NEO				S	**Sg**	**04 15 13.4**	**+0.5**
NEO				AML	AML	04 15 18.1	
	comp=E,1003µm,0.6s						
NEO				AML	AML	04 15 19.5	
	comp=N,954µm,0.8s						
EVR	**Evrytania**	**0.88**	**202**	P	**Pg**	**04 15 01.3**	**-0.4**
EVR				S	**Sb**	**04 15 15.1**	**+0.8**
	comp=N,380nm,0.5s						
EVR	**Evrytania**	**0.88**	**202**	P	**Pg**	**04 15 01.2**	**-0.5**
EVR				S	**Sg**	**04 15 13.1**	**-0.1**
NEST	**Nestorio**	**1.14**	**307**	P	**Pg**	**04 15 06.4**	**-0.4**
NEST				S	**Sg**	**04 15 21.6**	**0.0**
	comp=N,175nm,0.7s						
ANX	**Ano Chora**	**1.16**	**192**	P	**Pb**	**04 15 07.2**	**0.0**
ANX				S	**Sn**	**04 15 23.5**	**-0.1**
	comp=N,752nm,0.4s						
ANX	**Ano Chora**	**1.16**	**192**	P	**Pb**	**04 15 07.3**	**0.0**
ANX				S	**Sb**	**04 15 22.5**	**0.0**
SERG	**Sergoula**	**1.32**	**186**	P	**Pg**	**04 15 10.1**	**-0.1**
SERG				S	**Sn**	**04 15 27.7**	**+0.2**
	comp=N,365nm,0.8s						
SERG	**Sergoula**	**1.32**	**186**	P	**Pn**	**04 15 09.0**	**-0.7**
SERG				S	**Sb**	**04 15 26.7**	**-0.4**
EFP	**Efpalio**	**1.33**	**191**	P	**Pn**	**04 15 09.8**	**+0.1**
EFP				S	**Sn**	**04 15 28.6**	**+1.1**
EFP	**Efpalio**	**1.33**	**191**	P	**Pn**	**04 15 09.8**	**+0.1**
EFP				S	**Sn**	**04 15 27.6**	**0.0**
EFP				AML	AML	04 15 31.6	
	comp=N,927µm,0.5s						
EFP				AML	AML	04 15 33.4	
	comp=E,1168µm,0.7s						
KNT	**Kendrikon**	**1.52**	**19**	P	**Pn**	**04 15 12.2**	**-0.2**
KLV	**Kalavryta, Ach**	**1.69**	**182**	P	**Pn**	**04 15 14.9**	**+0.2**

ROM 24 04:14:46.9±0.1, 42°.720N±0°.004×13°.173E±0°.007, h9km, ML2.2/6, 6C-3D, Error ellipse: s-maj=0.6km s-min=0.0km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.12**	**339**	P	Pg	04 14 50.4	+0.6
NRCA				S	Sg	04 14 52.6	+0.8
NRCA				AML	AML		
	comp=E,52200µm,0.1s						
NRCA				AML	AML		
	comp=N,20300µm,0.7s						
NRCA				AML	AML		
	comp=E,56250µm,0.2s						
NRCA				AML	AML		
	comp=N,20950µm,0.7s						
NRCA				AML	AML		
	comp=E,52250µm,0.2s						
NRCA				AML	AML		
	comp=N,27250µm,0.1s						
NRCA				AML	AML		
	comp=N,29600µm,1.1s						
NRCA				AML	AML		
	comp=E,10010µm,0.1s						
RM33	**Pellescritta (**	**0.21**	**172**	P	Pg	04 14 52.1	+0.8
RM33				AML	AML		
	comp=E,2985µm,0.1s						
RM33				AML	AML		
	comp=N,5085µm,0.2s						
RM33				AML	AML		
	comp=E,3035µm,0.1s						
RM33				AML	AML		
	comp=N,4945µm,0.2s						
RM33				AML	AML		
	comp=E,2985µm,0.2s						
RM33				AML	AML		
	comp=N,5080µm,0.2s						
RM33				AML	AML		
	comp=N,1104µm,0.3s						
CAMP	**Campotosto**	**0.25**	**137**	P	Pg	04 14 52.8	+0.7
CAMP				AML	AML		
	comp=E,811µm,0.5s						
CAMP				AML	AML		
	comp=N,776µm,0.3s						
CAMP				AML	AML		
	comp=E,677µm,0.3s						
FEMA	**Monte Fema**	**0.26**	**340**	P	Pg	04 14 52.8	+0.6
FEMA				S	Sg	04 14 57.0	+1.3
FDMO	**Fiordimonte**	**0.32**	**349**	P	Pg	04 14 54.1	+0.8
FDMO				AML	AML		
	comp=E,747µm,0.2s						
FDMO				AML	AML		
	comp=N,685µm,0.4s						
FDMO				AML	AML		
	comp=E,898µm,1.6s						
FDMO				AML	AML		
	comp=N,735µm,0.2s						
ARRO	**Arrone**	**0.33**	**245**	P	Pg	04 14 54.1	+0.7
ARRO				S	Sb	04 14 59.7	-0.7
ARRO				AML	AML		
	comp=E,1200µm,0.2s						
ARRO				AML	AML		
	comp=N,1225µm,0.2s						
ARRO				AML	AML		
	comp=E,1205µm,0.2s						
TERO	**Teramo**	**0.33**	**107**	P	Pg	04 14 54.1	+0.6
CESI	**CESI - Serrava**	**0.35**	**325**	⇑P	Pg	04 14 54.2	+0.4
CESI				AML	AML		
	comp=E,2365µm,0.2s						
CESI				AML	AML		
	comp=N,3315µm,0.3s						
CESI				AML	AML		
	comp=E,448µm,0.2s						
CESI				AML	AML		
	comp=N,391µm,0.1s						
GUMA	**Gualdo di Mace**	**0.36**	**19**	⇑P	Pb	04 14 54.9	-0.7
GUMA				S	Sb	04 15 01.0	-0.5
GUMA				AML	AML		
	comp=E,4330µm,0.2s						
GUMA				AML	AML		
	comp=N,4535µm,0.2s						
GUMA				AML	AML		
	comp=E,6095µm,0.3s						
GUMA				AML	AML		
	comp=N,3340µm,0.3s						
GUMA				AML	AML		
	comp=N,2476µm,0.3s						
GUMA				AML	AML		
	comp=N,1845µm,0.2s						
GIGS	**Gran Sasso**	**0.40**	**133**	⇓P	Pb	04 14 55.6	-0.6
GIGS				AML	AML		
	comp=E,224µm,0.4s						
GIGS				AML	AML		
	comp=N,197µm,0.4s						
AQU	**L'Aquila**	**0.40**	**155**	P	Pb	04 14 55.9	-0.4
AQU				S	Sb	04 15 02.4	-0.2
OFFI	**Offida**	**0.43**	**60**	⇓P	Pb	04 14 56.7	-0.1
OFFI				AML	AML		
	comp=E,2940µm,0.7s						
OFFI				AML	AML		
	comp=N,2280µm,0.5s						
CESX	**Cesi**	**0.45**	**256**	⇓P	Pb	04 14 56.7	-0.4
FIAM	**Fiamignano**	**0.45**	**185**	⇑P	Pg	04 14 56.2	+0.4
FIAM				AML	AML		
	comp=N,370µm,0.2s						
ASSB	**Assisi San Ben**	**0.50**	**311**	⇑P	Pb	04 14 57.4	-0.5
SNTG	**Esanatoglia**	**0.56**	**342**	⇑P	Pg	04 14 58.4	+0.6
EL6	**Elcito**	**0.61**	**355**	⇑P	Pg	04 14 59.2	+0.4

ROM 24 04:14:51.0±0.1, 42°.701N±0°.007×13°.19E±0°.02, h9km±1km, ML2.3/5, Error ellipse: s-maj=1.5km s-min=0.5km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.14**	**337**	P	Pg	04 14 54.8	+0.5
NRCA				S	Sg	04 14 57.0	+0.5
NRCA				AML	AML		
	comp=E,52200µm,0.1s						
NRCA				AML	AML		
	comp=N,20300µm,0.7s						
NRCA				AML	AML		
	comp=E,56250µm,0.2s						
NRCA				AML	AML		
	comp=N,20950µm,0.7s						
NRCA				AML	AML		
	comp=E,52250µm,0.2s						
NRCA				AML	AML		
	comp=N,27250µm,0.1s						
NRCA				AML	AML		
	comp=N,29600µm,1.1s						
NRCA				AML	AML		
	comp=E,31446µm,0.4s						
RM33	**Pellescritta (**	**0.19**	**175**	P	Pg	04 14 55.4	+0.3
RM33				S	Sg	04 14 58.9	+1.1
RM33				AML	AML		
	comp=E,2985µm,0.1s						
RM33				AML	AML		
	comp=N,5085µm,0.2s						
RM33				AML	AML		
	comp=N,4945µm,0.2s						
RM33				AML	AML		
	comp=E,2985µm,0.2s						
RM33				AML	AML		
	comp=N,5080µm,0.2s						
RM33				AML	AML		
	comp=E,3035µm,0.1s						
RM33				AML	AML		
	comp=N,3915µm,0.2s						
CAMP	**Campotosto**	**0.23**	**135**	P	Pg	04 14 57.0	+1.2
CAMP				AML	AML		
	comp=E,811µm,0.5s						
CAMP				AML	AML		
	comp=N,776µm,0.3s						
FEMA	**Monte Fema**	**0.28**	**339**	P	Pb	04 14 58.0	-0.3
FEMA				S	Sg	04 15 01.5	+1.0
TERO	**Teramo**	**0.32**	**104**	P	Pb	04 14 59.0	+0.2
ARRO	**Arrone**	**0.34**	**249**	P	Pb	04 14 59.1	-0.1
ARRO				AML	AML		
	comp=E,1200µm,0.2s						
ARRO				AML	AML		
	comp=E,1205µm,0.2s						
ARRO				AML	AML		
	comp=N,1225µm,0.2s						
FDMO	**Fiordimonte**	**0.34**	**347**	P	Pb	04 14 58.9	-0.4
FDMO				S	Sg	04 15 03.5	+1.1
FDMO				AML	AML		
	comp=E,747µm,0.2s						
FDMO				AML	AML		
	comp=N,685µm,0.4s						
FDMO				AML	AML		
	comp=E,898µm,1.6s						
FDMO				AML	AML		
	comp=N,735µm,0.2s						
FDMO				AML	AML		
	comp=N,502µm,0.4s						
CESI	**CESI - Serrava**	**0.37**	**325**	P	Pb	04 14 59.8	0.0
CESI				AML	AML		
	comp=E,2365µm,0.2s						
CESI				AML	AML		
	comp=N,3315µm,0.3s						
CESI				AML	AML		
	comp=E,446µm,0.2s						
GIGS	**Gran Sasso**	**0.38**	**132**	P	Pb	04 14 59.4	-0.5
GIGS				S	Sg	04 15 03.9	+0.5
GIGS				AML	AML		
	comp=E,224µm,0.4s						
GIGS				AML	AML		
	comp=N,197µm,0.4s						

GUMA	**Gualdo di Mace**	**0.38**	**16**	P	Pb	04 14 59.4	-0.5	
GUMA				S	Sb	04 15 04.8	-1.1	
GUMA				AML	AML			
	comp=E,4330µm,0.2s							
GUMA				AML	AML			
	comp=N,4535µm,0.2s							
GUMA				AML	AML			
	comp=E,6095µm,0.3s							
GUMA				AML	AML			
	comp=N,3340µm,0.3s							
GUMA				AML	AML			
	comp=E,2824µm,0.2s							
OFFI	**Offida**	**0.43**	**57**	P	Pg	04 14 59.9	+0.4	
OFFI				AML	AML			
	comp=E,2940µm,0.7s							
OFFI				AML	AML			
	comp=N,2280µm,0.5s							
FIAM	**Fiamignano**	**0.44**	**187**	P	Pg	04 14 59.6	0.0	
FIAM				AML	AML			
	comp=N,373µm,0.2s							
TRTR	**Tortoreto Alta**	**0.54**	**78**	P	Pg	04 15 02.0	+0.5	
T0110	**Collepietro**	**0.64**	**137**	P	Pb	04 15 04.1	-0.3	

ROM 24 04:15:18.8±0.1, 42°813N±0".004×13°168E±0".010, h10km, ML2.5/4, 1C, Error ellipse: s-maj=0.8km s-min=0.3km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**297**	P	Pg	04 15 21.1	+0.4
NRCA				S	Sg	04 15 22.4	+0.2
NRCA				AML	AML		
	comp=N,27250µm,0.1s						
NRCA				AML	AML		
	comp=N,29600µm,1.1s						
NRCA				AML	AML		
	comp=E,26100µm,0.2s						
NRCA				AML	AML		
	comp=E,24750µm,0.2s						
FEMA	**Monte Fema**	**0.17**	**330**	P	Pg	04 15 23.1	+0.5
FEMA				S	Sg	04 15 26.1	+0.9
FDMO	**Fiordimonte**	**0.23**	**345**	P	Pg	04 15 24.2	+0.7
FDMO				S	Sg	04 15 28.0	+1.2
FDMO				AML	AML		
	comp=N,694µm,0.5s						
CESI	**CESI - Serrava**	**0.27**	**315**	P	Pg	04 15 24.9	+0.6
CESI				S	Sb	04 15 29.4	-1.2
CESI				AML	AML		
	comp=E,2365µm,0.2s						
CESI				AML	AML		
	comp=N,3315µm,0.3s						
GUMA	**Gualdo di Mace**	**0.28**	**26**	P	Pb	04 15 25.4	-0.5
GUMA				S	Sb	04 15 29.7	-1.0
RM33	**Pellescritta (**	**0.31**	**174**	P	Pg	04 15 25.3	+0.4
RM33				S	Sb	04 15 30.4	-1.2
CAMP	**Campotosto**	**0.33**	**147**	P	Pb	04 15 26.6	-0.2
CAMP				S	Sg	04 15 30.6	+0.9
SEF1	**Sefro**	**0.37**	**334**	P	Pg	04 15 26.6	+0.5
SEF1				S	Sb	04 15 32.6	-0.8
TERO	**Teramo**	**0.37**	**120**	P	Pb	04 15 27.5	0.0
TERO				S	Sb	04 15 32.6	-0.8
ARRO	**Arrone**	**0.38**	**232**	P	Pb	04 15 27.2	-0.3
ARRO				S	Sb	04 15 33.2	-0.3
ARRO				AML	AML		
	comp=N,617µm,0.2s						
SNTG	**Esanatoglia**	**0.47**	**339**	P	Pg	04 15 28.4	+0.4
SNTG				S	Sb	04 15 35.9	-0.5
AQU	**L'Aquila**	**0.49**	**159**	P	Pg	04 15 28.2	-0.1
AQU				S	Sb	04 15 36.0	-0.8
FIAM	**Fiamignano**	**0.55**	**184**	P	Pb	04 15 30.2	-0.3
FIAM				S	Sg	04 15 37.2	+0.6
FIAM				AML	AML		
	comp=E,693µm,0.3s						
FAGN	**Fagnano**	**0.63**	**151**	P	Pg	04 15 31.2	+0.3
FAGN				S	Sb	04 15 40.4	-0.3
ARVD	**Arcevia**	**0.70**	**346**	S	Sb	04 15 44.0	+1.0
FSSB	**Fossombrone**	**0.92**	**342**	S	Sn	04 15 52.0	+0.7
PII	**Pisa**	**2.13**	**296**	S	Sg	04 16 27.0	-0.3
GRAM	**Graiana**	**2.81**	**308**	⇑P	Pg	04 16 13.4	+0.9
GRAM				S	Sb	04 16 41.0	-2.6

ROM 24 04:15:57.0±0.1, 42°719N±0".004×13°167E±0".006, h10km, ML2.1/4, 1C-3D, Error ellipse: s-maj=0.5km s-min=0.2km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.12**	**341**	P	Pg	04 16 00.5	+0.4
NRCA				S	Sg	04 16 02.6	+0.4
NRCA				AML	AML		
	comp=E,18850µm,0.8s						
NRCA				AML	AML		
	comp=N,14800µm,0.2s						
NRCA				AML	AML		
	comp=E,20400µm,0.8s						
NRCA				AML	AML		
	comp=N,15900µm,0.2s						
NRCA				AML	AML		
	comp=N,8090µm,0.2s						
NRCA				END			
RM33	**Pellescritta (**	**0.21**	**170**	P	Pb	04 16 02.4	-0.7
RM33				S	Sg	04 16 06.0	+1.4
RM33				END			
CAMP	**Campotosto**	**0.26**	**136**	P	Pg	04 16 02.6	+0.3
CAMP				S	Sb	04 16 07.2	-1.2
FEMA	**Monte Fema**	**0.26**	**341**	P	Pg	04 16 02.8	+0.4
FEMA				S	Sg	04 16 07.2	+1.2
FDMO	**Fiordimonte**	**0.32**	**350**	⇑P	Pg	04 16 04.0	+0.5
FDMO				AML	AML		
	comp=E,2500µm,0.2s						
FDMO				AML	AML		
	comp=N,2155µm,0.2s						
FDMO				AML	AML		
	comp=N,505µm,0.6s						
ARRO	**Arrone**	**0.33**	**245**	⇓P	Pg	04 16 04.2	+0.6
ARRO				AML	AML		
	comp=N,325µm,0.2s						
TERO	**Teramo**	**0.34**	**106**	P	Pg	04 16 03.9	+0.1
TERO				S	Sb	04 16 09.6	-1.0
CESI	**CESI - Serrava**	**0.34**	**326**	⇓P	Pg	04 16 04.4	+0.4
CESI				AML	AML		
	comp=E,2900µm,0.2s						
CESI				AML	AML		
	comp=N,6400µm,0.1s						
CESI				AML	AML		
	comp=E,441µm,0.2s						
GUMA	**Gualdo di Mace**	**0.36**	**20**	P	Pg	04 16 04.9	+0.6
GUMA				S	Sb	04 16 11.0	-0.5
GIGS	**Gran Sasso**	**0.40**	**132**	P	Pb	04 16 05.7	-0.5
GIGS				S	Sg	04 16 11.2	+0.9
GIGS	**Gran Sasso**	**0.40**	**132**	P	Pb	04 16 06.9	+0.7
AQU	**L'Aquila**	**0.40**	**154**	P	Pg	04 16 05.5	+0.5
AQU				S	Sb	04 16 11.9	-0.6
OFFI	**Offida**	**0.44**	**60**	P	Pb	04 16 06.7	-0.2
CESX	**Cesi**	**0.45**	**256**	P	Pg	04 16 06.0	+0.2
CESX				S	Sb	04 16 13.4	-0.3
FIAM	**Fiamignano**	**0.45**	**185**	P	Pg	04 16 06.2	+0.3
FIAM				S	Sb	04 16 13.0	-1.0
FIAM				END			
ARVD	**Arcevia**	**0.80**	**348**	S	Sn	04 16 26.0	-0.3
APEC	**Apecchio**	**1.00**	**327**	⇓P	Pg	04 16 16.0	-0.3

ROM 24 04:16:40.6±0.1, 42°821N±0".005×13°216E±0".010, h10km, ML2.7/8, 4C, Error ellipse: s-maj=0.9km s-min=0.3km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**279**	⇑P	Pg	04 16 43.3	+0.3
NRCA				S	Sg	04 16 45.2	+0.5
FEMA	**Monte Fema**	**0.19**	**319**	P	Pg	04 16 45.3	+0.6
FEMA				S	Sg	04 16 48.5	+1.1
FDMO	**Fiordimonte**	**0.23**	**336**	P	Pg	04 16 45.7	+0.2
FDMO				S	Sg	04 16 49.7	+1.0
FDMO				AML	AML		
	comp=E,2500µm,0.2s						
FDMO				AML	AML		
	comp=N,2155µm,0.2s						
GUMA	**Gualdo di Mace**	**0.26**	**20**	P	Pb	04 16 46.7	-0.7
GUMA				S	Sb	04 16 50.9	-1.0
GUMA				AML	AML		
	comp=N,5280µm,0.3s						
GUMA				AML	AML		
	comp=E,3565µm,0.2s						
GUMA				AML	AML		
	comp=E,6185µm,0.3s						
GUMA				AML	AML		
	comp=N,3535µm,0.4s						
CESI	**CESI - Serrava**	**0.29**	**309**	P	Pg	04 16 46.8	+0.3
CESI				S	Sb	04 16 52.1	-0.9
CESI				AML	AML		
	comp=E,2900µm,0.2s						
CESI				AML	AML		
	comp=N,6400µm,0.1s						
RM33	**Pellescritta (**	**0.31**	**180**	P	Pg	04 16 46.9	0.0
RM33				S	Sb	04 16 53.0	-0.5
CAMP	**Campotosto**	**0.32**	**153**	P	Pg	04 16 47.1	+0.1
CAMP				S	Sg	04 16 52.3	+1.0
TERO	**Teramo**	**0.35**	**125**	⇑P	Pg	04 16 47.6	+0.1
TERO				AML	AML		
	comp=N,2895µm,0.3s						
TERO				AML	AML		
	comp=N,3220µm,0.3s						
TERO				AML	AML		
	comp=E,2440µm,0.1s						
TERO				AML	AML		
	comp=E,2105µm,0.1s						
TERO				AML	AML		
	comp=N,2900µm,0.3s						
OFFI	**Offida**	**0.36**	**72**	P	Pb	04 16 48.7	-0.4
GIGS	**Gran Sasso**	**0.45**	**145**	P	Pb	04 16 50.6	-0.2
GIGS				S	Sb	04 16 57.0	-0.6
ASSB	**Assisi San Ben**	**0.47**	**299**	P	Pg	04 16 50.2	+0.5
ASSB				S	Sb	04 16 57.6	-0.3
TRTR	**Tortoreto Alta**	**0.51**	**91**	P	Pb	04 16 51.7	0.0
FIAM	**Fiamignano**	**0.56**	**188**	P	Pg	04 16 51.5	0.0
FIAM				S	Sb	04 17 00.4	-0.1
FIAM				AML	AML		
	comp=E,219µm,0.3s						
FIAM				AML	AML		
	comp=N,149µm,0.5s						
FIAM				AML	AML		
	comp=E,662µm,0.2s						
FIAM				AML	AML		
	comp=N,314µm,0.2s						
FOSV	**Fossato di Vic**	**0.58**	**325**	P	Pg	04 16 52.1	+0.2
FOSV				S	Sb	04 17 01.2	+0.1
VCEL	**Villa Celiera**	**0.63**	**133**	⇑P	Pg	04 16 53.0	+0.3
VCEL				AML	AML		
	comp=E,560µm,1.2s						
VCEL				AML	AML		
	comp=N,792µm,0.9s						
ARVD	**Arcevia**	**0.71**	**344**	P	Pg	04 16 53.8	-0.4
T0110	**Collepietro**	**0.73**	**145**	⇑P	Pg	04 16 54.2	-0.4
T0110				AML	AML		
	comp=E,388µm,0.3s						
T0110				AML	AML		
	comp=N,384µm,0.4s						

*DJA **24** 04:16:49.7±0.2,6°N±3°×12°4E±°, h523km±3km, M4.4/36, mB4.9/12, mb4.4/36, MLv4.8/10, Mw(mB)4.2/12*
*NEIC **24** 04:16:50.8±1.9, 5°95N±0°.09×124°1E±0°.1, h534km±9km, mb4.4/31, Error ellipse: s-maj=17.8km s-min=12.7km az=75.0*
*IDC **24** 04:16:51.0±0.6, 5°.86N×124°.07E, h540km±7km, mb3.5/21, mbtmp4.4/23, Error ellipse: s-maj=15.5km s-min=7.1km az=69.0*

ISC 24 04:16:50.6±0.5, 5°87N±0°.05×124°09E±0°.07, h537km±5km, n131, σ1°08/155, mb4.3/44, 3C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKMP	**Bagumbayan, Su**	**0.79**	**35**	⇓*e*P	**P**	**04 17 55.0**	**-0.2**
GSPH	**General Santos**	**0.88**	**76**	⇑*i*P	**P**	**04 17 55.8**	**+0.3**
GSPH				*i* S	**S**	**04 18 49.3**	**+1.1**
CTBH	**Cotabato--PC H**	**1.35**	**7**	⇓*e*P	**P**	**04 17 57.0**	**+0.3**
CTBH				*i* S	**S**	**04 18 50.6**	**+0.4**
KCP	**Kidapawan**	**1.50**	**41**	⇑*i*P	**P**	**04 17 58.5**	**+1.2**
KCP				*i* S	**S**	**04 18 50.5**	**-0.9**
DAV	**Davao City (W)**	**1.90**	**51**	P	**P**	**04 17 59.1**	**+0.4**
	177nm,0.4s,baz=196,slow=7.4,SNR=1.4						
DAV				S	**S**	**04 18 54.7**	**+0.7**
	162nm,0.3s,baz=210,slow=20,SNR=1.6						
DAV	**Davao City (W)**	**1.90**	**51**	P	**P**	**04 17 58.7**	**0.0**
PAGZ	**Pagadian**	**2.08**	**340**	⇓*e*P	**P**	**04 17 59.8**	**+0.3**
MATI	**Mati**	**2.41**	**64**	⇓*e*P	**P**	**04 18 00.9**	**-0.2**
MATI				*e*S	**S**	**04 18 56.8**	**-1.7**
SGSI	**Sangihe**	**2.61**	**146**	P	**P**	**04 18 01.2**	**-1.1**
SGSI				S	**S**	**04 18 57.6**	**-2.9**
TBP	**Tagbilaran**	**3.80**	**357**	*e*P	**P**	**04 18 09.7**	**-0.4**
MYLDM	**Lahad Datu**	**5.60**	**263**	P	**P**	**04 18 26.2**	**+1.1**
TOLI2	**Tolitoli**	**5.77**	**215**	P	**P**	**04 18 26.1**	**-0.4**
TOLI2	**Tolitoli**	**5.77**	**215**	P	**P**	**04 18 26.2**	**-0.4**
MRSI	**Marisa**	**5.77**	**202**	P	**P**	**04 18 27.1**	**+0.5**
	0.1nm946nm28nm,0.6s						
PPR	**Puerto Princes**	**6.57**	**306**	⇓*e*P	**P**	**04 18 34.1**	**+0.1**
MPSI	**Mapaga**	**6.91**	**217**	P	**P**	**04 18 36.8**	**-0.5**
	0.1nm13nm,0.8s						
LUWI	**Luwuk**	**6.99**	**191**	P	**P**	**04 18 39.4**	**+1.3**
APSI	**Ampana**	**7.17**	**200**	P	**P**	**04 18 40.3**	**+0.5**
	0.4nm1nm91nm,0.6s						
LBMI	**Labuha**	**7.31**	**152**	P	**P**	**04 18 41.8**	**+0.5**
	1.1nm2µm126nm,0.5s						
PVCP	**Virac**	**7.67**	**0**	⇓*e*P	**P**	**04 18 44.9**	**+0.2**
KKM	**Kota Kinabalu**	**7.83**	**272**	P	**P**	**04 18 45.2**	**-1.2**
KKM	**Kota Kinabalu**	**7.83**	**272**	P	**P**	**04 18 45.9**	**-0.6**
SANI	**Sanana**	**8.10**	**166**	P	**P**	**04 18 47.4**	**-1.6**
	2µm119nm,0.7s						
SANI	**Sanana**	**8.10**	**166**	P	**P**	**04 18 50.1**	**+1.1**
SWI	**Sorong**	**9.80**	**133**	P	**P**	**04 19 06.5**	**+0.1**
	57nm,0.5s						
SIJI	**Sorong**	**9.81**	**133**	P	**P**	**04 19 08.2**	**+1.7**
	30nm,0.4s,baz=309,slow=16,SNR=10						
TTSI	**Tana Toraja**	**9.83**	**206**	P	**P**	**04 19 07.5**	**+0.8**
	97nm,0.9s						
MSAI	**Masohi**	**10.36**	**152**	P	**P**	**04 19 12.7**	**+0.5**
	19nm,0.6s						
SPSI	**Sidrap Palu**	**10.68**	**204**	P	**P**	**04 19 16.4**	**+0.9**
	2µm200nm,0.7s						
KAPI	**Kappang**	**11.65**	**202**	P	**P**	**04 19 25.3**	**-0.3**
	7.2nm,0.3s,baz=347,slow=13,SNR=6.7						
KAPI				S	**S**	**04 21 33.5**	**+0.4**
	4.0nm,0.3s,baz=17,slow=19,SNR=1.0						
KAPI	**Kappang**	**11.65**	**202**	P	**P**	**04 19 26.0**	**+0.4**
KAPI	**Kappang**	**11.65**	**202**	P	**P**	**04 19 27.6**	**+2.0**
BKSI	**Bulukumba**	**11.80**	**200**	P	**P**	**04 19 28.2**	**+1.0**
	22nm,0.7s						
FAKI	**Fak Fak**	**11.95**	**137**	P	**P**	**04 19 27.5**	**-1.2**
FAKI	**Fak Fak**	**11.95**	**137**	P	**P**	**04 19 29.2**	**+0.5**
	1µm106nm,0.7s						
FAKI	**Fak Fak**	**11.95**	**137**	P	**P**	**04 19 30.3**	**+1.6**
SBUM	**Sibu**	**12.31**	**254**	P	**P**	**04 19 31.0**	**-1.5**
EDFI	**Ende, Flores**	**14.72**	**189**	P	**P**	**04 20 02.1**	**+4.5**
BATI	**Baumata**	**15.98**	**182**	S	**S**	**04 22 53.9**	**-0.1**
	32nm,0.6s,baz=104,slow=21,SNR=6.4						
TWSI	**Taliwang, Sumb**	**16.20**	**206**	P	**P**	**04 20 12.0**	**-0.5**
	34nm,0.8s						
TWG	**Pinlang**	**17.10**	**351**	P	**P**	**04 20 17.9**	**-3.0**
JAGI	**Jajag, Banyuwa**	**17.35**	**215**	P	**P**	**04 20 23.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**17.35**	**215**	P	**P**	**04 20 23.4**	**0.0**
	108nm,0.7s						
JAGI	**Jajag, Banyuwa**	**17.35**	**215**	P	**P**	**04 20 24.2**	**+0.8**
YULB	**Yu-li**	**17.62**	**352**	P	**P**	**04 20 23.8**	**-1.9**
YULB				IAmb	IAmb	04 20 25.3	
	comp=Z,9.5nm,0.7s						
TPUB	**Ta-pu**	**17.64**	**349**	P	**P**	**04 20 25.9**	**0.0**
TPUB	**Ta-pu**	**17.64**	**349**	P	**P**	**04 20 26.5**	**+0.6**
SSLB	**Suanglung**	**18.06**	**351**	P	**P**	**04 20 27.9**	**-1.8**
SSLB				IAmb	IAmb	04 20 34.0	
	comp=Z,15nm,0.9s						
SSLB	**Suanglung**	**18.06**	**351**	P	**P**	**04 20 30.1**	**+0.3**
MTN	**Manton Dam**	**19.87**	**159**	P	**P**	**04 20 46.4**	**+0.1**
KDU	**Kakadu**	**20.24**	**156**	P	**P**	**04 20 49.9**	**+0.3**
LEM	**Lembang**	**20.72**	**233**	P	**P**	**04 20 54.6**	**+0.5**
	comp=Z,23nm,0.7s,baz=32,slow=13,SNR=2.2						
	comp=Z,23nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.87**	**176**	P	**P**	**04 21 22.2**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=2.4,slow=7.7,SNR=16						
	comp=Z,2.0nm,0.6s						
PSI	**Prapat**	**25.27**	**264**	P	**P**	**04 21 34.4**	**-0.4**
	comp=Z,6.4nm,0.5s,baz=58,slow=6.7,SNR=4.3						
	comp=Z,6.4nm,0.5s						
RPSI	**Rantau Prapat**	**25.29**	**264**	P	**P**	**04 21 34.4**	**-0.4**
WHN	**Wuhan**	**26.19**	**341**	⇑P	**P**	**04 21 44.8**	**+2.3**
WHN				pmax	pmax		
	comp=Z,26nm,0.6s						
KCSI	**Kotacane, Aceh**	**26.33**	**266**	P	**P**	**04 21 42.3**	**-1.7**
	comp=Z,42nm,0.8s						
COEN	**Coen**	**27.33**	**136**	P	**P**	**04 21 52.7**	**0.0**
COEN				IAmb	IAmb	04 21 53.4	
	comp=Z,6.3nm,0.7s						
COEN	**Coen**	**27.33**	**136**	P	**P**	**04 21 52.8**	**0.0**
CMAR	**Chiang Mai Arr**	**27.53**	**299**	P	**P**	**04 21 55.0**	**+0.5**
	comp=Z,5.2nm,0.7s,baz=114,slow=7.0,SNR=24						
CMAR				ScP	**ScP**	**04 27 45.4**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=132,slow=1.3,SNR=6.8						
	comp=Z,5.2nm,0.7s						
WRAB	**Tennant Creek**	**27.56**	**159**	P	**P**	**04 21 54.9**	**+0.1**
WRAB				IAmb	IAmb	04 21 55.4	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**27.56**	**159**	P	**P**	**04 21 54.9**	**+0.1**
WRA	**Warramunga Arr**	**27.57**	**159**	P	**P**	**04 21 54.8**	**0.0**
	comp=Z,17nm,0.6s,baz=333,slow=10,SNR=98						
WRA				ScP	**ScP**	**04 27 44.4**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=345,slow=3.0,SNR=7.2						
	comp=Z,17nm,0.6s						
WRA	**Warramunga Arr**	**27.57**	**159**	P	**P**	**04 21 53.5**	**-1.3**
CHTO	**Chiang Mai**	**27.67**	**300**	P	**P**	**04 21 56.1**	**+0.3**
CHTO				IAmb	IAmb	04 21 57.1	
	comp=Z,9.1nm,0.7s						
CHTO	**Chiang Mai**	**27.67**	**300**	P	**P**	**04 21 56.4**	**+0.7**
	comp=Z,9.6nm,0.9s						
PZH	**PanZhiHua**	**29.58**	**316**	P	**P**	**04 22 13.8**	**+1.4**
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
QIS	**Mount Isa**	**30.37**	**150**	P	**P**	**04 22 20.0**	**+0.8**
AS31	**Alice Springs**	**30.89**	**162**	P	**P**	**04 22 24.1**	**+0.5**
AS31				IAmb	IAmb	04 22 25.2	
	comp=Z,5.6nm,0.7s						
ASAR	**Alice Springs**	**30.89**	**162**	P	**P**	**04 22 24.3**	**+0.7**
	comp=Z,14nm,0.5s,baz=342,slow=7.0,SNR=203						
ASAR				PcP	**PcP**	**04 25 03.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=347,slow=3.8,SNR=2.7						
ASAR				S	**S**	**04 26 48.4**	**-1.5**
	comp=Z,5.5nm,0.8s,baz=336,slow=13,SNR=26						
ASAR				ScP	**ScP**	**04 27 55.6**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=337,slow=3.3,SNR=5.9						
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**30.89**	**162**	P	**P**	**04 22 24.6**	**+1.1**
WRKA	**Warakurna**	**31.00**	**173**	P	**P**	**04 22 25.4**	**+0.9**
MJAR	**Matsushiro Arr**	**33.15**	**21**	P	**P**	**04 22 42.6**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=214,slow=10,SNR=1.9						
	comp=Z,0.6nm,0.3s						
CTA	**Charters Tower**	**33.78**	**140**	P	**P**	**04 22 48.4**	**+0.2**
CTAO	**Charters Tower**	**33.78**	**140**	P	**P**	**04 22 49.3**	**+1.2**
CTAO				IAmb	IAmb	04 22 50.5	
	comp=Z,8.3nm,0.6s						
CTAO	**Charters Tower**	**33.78**	**140**	P	**P**	**04 22 48.3**	**+0.1**
BJI	**Beijing**	**34.75**	**349**	P	**P**	**04 22 54.3**	**-1.7**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OOD	**Oodnadatta**	**35.30**	**162**	P	**P**	**04 23 01.7**	**+1.0**
	comp=Z,26nm,0.8s						
LZH	**Lanzhou**	**35.35**	**331**	*e*P	**P**	**04 23 03.3**	**+2.0**
LZH				pP	pP	04 24 34.8	+1.5
LZH				sP	sP	04 25 44.0	+9.3
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
SHL	**Shillong**	**36.49**	**306**	P	**P**	**04 23 10.7**	**-0.3**
INKA	**Innaminka**	**37.09**	**155**	P	**P**	**04 23 17.8**	**+2.3**
GTA	**Gaotai**	**39.93**	**330**	⇓P	**P**	**04 23 39.6**	**+1.0**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GOMU	**GeErMu**	**40.39**	**322**	P	**P**	**04 23 44.4**	**+1.8**
GOMU				PcP	**PP**	**04 25 30.3**	**-0.9**
GOMU				pmax	pmax		
	comp=Z,15nm,0.5s						
EIDS	**Eidsvold**	**40.66**	**141**	P	**P**	**04 23 45.4**	**+1.0**
STKA	**Stephens Creek**	**41.09**	**157**	P	**P**	**04 23 49.0**	**+1.3**
	comp=Z,16nm,0.7s,baz=334,slow=8.1,SNR=38						
STKA				S	**S**	**04 29 21.8**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=65,slow=18,SNR=2.8						
	comp=Z,16nm,0.7s						
STKA	**Stephens Creek**	**41.09**	**157**	P	**P**	**04 23 47.7**	**0.0**
STKA	**Stephens Creek**	**41.09**	**157**	P	**P**	**04 23 49.3**	**+1.6**
HTT	**Hallett**	**41.55**	**161**	P	**P**	**04 23 53.0**	**+1.6**
CMSA	**Cobar Meteorol**	**42.54**	**152**	P	**P**	**04 24 01.2**	**+2.0**
KLR	**Kul'dur**	**43.69**	**7**	P	**P**	**04 24 09.1**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=260,slow=12,SNR=2.5						
	comp=Z,0.6nm,0.4s						
ULN	**Ulaanbaatar**	**44.30**	**344**	P	**P**	**04 24 12.7**	**-0.2**
SONM	**Songino Array**	**44.46**	**343**	P	**P**	**04 24 15.1**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=159,slow=9.2,SNR=6.5						
SONM				PcP	**PcP**	**04 25 45.2**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=147,slow=3.4,SNR=2.0						
	comp=Z,2.1nm,0.7s						
WMQ	**Urumqi**	**49.47**	**326**	*e*P	**P**	**04 24 53.8**	**+1.9**
MK31	**Makanchi Array**	**54.31**	**326**	P	**P**	**04 25 26.6**	**+0.1**
MK31				PcP	**PcP**	**04 26 21.1**	**-1.1**
MKAR	**Makanchi Array**	**54.31**	**326**	P	**P**	**04 25 27.2**	**+0.6**
	comp=Z,7.4nm,0.5s,baz=120,slow=8.1,SNR=132						
MKAR				PcP	**PcP**	**04 26 21.5**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=116,slow=5.6,SNR=6.1						
MKAR				ScP	**ScP**	**04 29 28.1**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=122,slow=4.7,SNR=16						
	comp=Z,7.4nm,0.5s						
MKAR	**Makanchi Array**	**54.31**	**326**	P	**P**	**04 25 27.1**	**+0.5**
MKAR				PcP	**PcP**	**04 26 21.4**	**-0.9**
MAKZ	**Makanchi**	**54.49**	**326**	P	**P**	**04 25 27.8**	**0.0**
MAKZ				IAmb	IAmb	04 25 29.1	
	comp=Z,13nm,1.1s						
KSH	**Kashi**	**54.67**	**315**	P	**P**	**04 25 31.1**	**+1.7**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZALV	**Zalesovo Beam**	**57.50**	**334**	P	**P**	**04 25 48.0**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=123,slow=5.5,SNR=6.8						
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**57.50**	**334**	P	**P**	**04 25 47.6**	**-0.9**
KBL	**Kabul**	**58.14**	**307**	P	**P**	**04 25 52.0**	**-1.5**
KURK	**Kurchatov**	**58.53**	**328**	P	**P**	**04 25 55.7**	**+0.2**
KURK				IAmb	IAmb	04 25 56.6	
	comp=Z,18nm,0.7s						
GAR	**Garm**	**58.54**	**313**	P	**P**	**04 25 55.8**	**-0.2**
GAR				IAmb	IAmb	04 25 57.1	
	comp=Z,26nm,1.0s						
KK31	**Karatay Array**	**59.88**	**317**	P	**P**	**04 26 04.3**	**-0

comp=Z,2.4nm,0.8s
ARCES ARCESS Array B 87.54 340 P P 04 28 42.2 +1.1
comp=Z,1.1nm,0.7s,baz=88,slow=7.3,SNR=3.9
comp=Z,1.1nm,0.7s
AKASG Malin Array Be 88.58 321 P P 04 28 44.4 -1.9
comp=Z,0.4nm,0.5s,baz=77,slow=2.1,SNR=4.3
comp=Z,0.4nm,0.5s
FINES FINESS Array B 88.71 332 P P 04 28 45.7 -0.9
comp=Z,1.0nm,0.5s,baz=72,slow=6.0,SNR=7.9
comp=Z,1.0nm,0.5s
MNK Minsk 88.86 325 *i* P **P 04 28 48.1 +0.6**
comp=E,1.0nm,0.8s
MNK *i* P **P 04 28 48.1 +0.6**
comp=N,8.0nm,0.8s
MNK *i* P **P 04 28 48.1 +0.6**
comp=Z,5.0nm,0.7s,baz=261
MNK *i* pP **pP 04 30 44.7 -1.0**
MNK *i* PP **PP 04 32 26.8 +0.4**
MNK *i* PPP PPP 04 34 28.2
MNK *i* S **SKSac 04 38 26.1 +0.5**
MNK *i* sS sS 04 42 07.1 -13
MNK *i* SS **SS 04 45 00.5 +2.6**
MNK *i* SSS SSS 04 48 42.9
MNK *i* LRM MLR 05 09 57.1
comp=Z,167nm,18.5s
MNK *i* LRM MLR 05 10 01.6
comp=E,20nm,17.9s
MNK *i* LRM MLR 05 10 32.9
comp=N,8.0nm,15.3s
DLBC Dease Lake 93.25 30 P P 04 29 07.8 0.0
DLBC IAmb IAmb 04 29 12.2
comp=Z,3.6nm,0.8s
VTS Vitosha 93.99 313 P P 04 29 10.4 -1.3
VTS IAmb IAmb 04 29 11.2
comp=Z,4.4nm,0.6s
BRG Berggiesshubel 97.95 323 *e*(P) Pdif 04 29 28.3 -0.8
BRG Amp 04 29 30.2
comp=Z,3.3nm,0.6s
BRG *ex* x 04 30 31.8
BRG Amp 04 31 01.6
comp=Z,4.0nm,0.9s
BRG *ex* x 04 36 29.1
BRG Amp 04 36 30.8
comp=Z,3.7nm,0.7s
BRG *ex* x 04 36 54.7
BRG *ex* x 04 37 44.5
BRG Amp 04 37 59.8
comp=Z,5.1nm,0.9s
BRG *ex* x 04 41 35.9
BRG Amp 04 41 37.3
comp=Z,2.8nm,0.6s
BRG *ex* x 04 41 51.5
BRG Amp 04 42 13.2
comp=Z,5.5nm,0.8s
BRG *ex* x 04 42 48.5
BRG Amp 04 43 04.4
comp=Z,3.8nm,0.9s
BRG *ex* x 04 48 05.0
BRG Amp 04 48 09.9
comp=Z,3.7nm,0.7s
BRG *ex* x 04 48 53.0
BRG Amp 04 49 34.3
comp=Z,5.9nm,1.0s
TORD Torodi Ar. Bea 119.75 289 PKP **PKPdf 04 34 40.3 -0.5**
comp=Z,0.9nm,0.8s,baz=79,slow=0.6,SNR=5.6
PBMO Poplar Bluff 126.69 35 PKPdf 04 34 53.3 -0.3
PLCA Paso Flores 142.90 161 PKP **PKPdf 04 35 21.6 -2.0**
comp=Z,0.6nm,0.6s,baz=270,slow=1.0,SNR=2.2

ROM 24 04:17:32.1±0.1, 42°.644N±0°.004×13°.226E±0°.007, h10km, ML2.3/6, 2C, Error ellipse: s-maj=0.6km s-min=0.3km az=230.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.14**	**184**	P	Pg	04 17 36.0	+0.7
RM33				S	Sg	04 17 38.7	+1.2
RM33				AML	AML		
	comp=E,3510μm,0.3s						
RM33				AML	AML		
	comp=N,4365μm,0.2s						
RM33				AML	AML		
	comp=N,4330μm,0.2s						
RM33				AML	AML		
	comp=N,4370μm,0.2s						
RM33				AML	AML		
	comp=E,3430μm,0.3s						
RM33				AML	AML		
	comp=E,2431μm,0.2s						
RM33				AML	AML		
	comp=N,4329μm,0.2s						
RM33				END			
CAMP	**Campotosto**	**0.17**	**129**	⇑P	Pg	04 17 36.5	+0.5
CAMP				S	Sg	04 17 39.5	+1.0
NRCA	**Norcia**	**0.21**	**336**	P	Pg	04 17 36.8	+0.3
NRCA				S	Sg	04 17 40.2	+0.7
TERO	**Teramo**	**0.28**	**94**	⇑P	Pg	04 17 38.0	+0.2
TERO				S	Sg	04 17 42.4	+0.8
TERO				AML	AML		
	comp=N,1615μm,1.2s						
TERO				AML	AML		
	comp=E,1240μm,0.4s						
TERO				AML	AML		
	comp=N,1620μm,1.2s						
TERO				AML	AML		
	comp=E,1410μm,0.5s						
TERO				AML	AML		
	comp=N,1980μm,0.1s						
TERO				AML	AML		
	comp=E,1164μm,0.5s						
AQU	**L'Aquila**	**0.32**	**156**	P	Pb	04 17 39.6	-0.4
GIGS	**Gran Sasso**	**0.32**	**127**	P	Pg	04 17 38.9	+0.4
GIGS				S	Sg	04 17 43.8	+1.0
GIGS				AML	AML		
	comp=E,216μm,1.5s						
GIGS				AML	AML		
	comp=N,134μm,0.3s						
GIGS				AML	AML		
	comp=N,108μm,0.1s						
FEMA	**Monte Fema**	**0.34**	**338**	P	Pb	04 17 40.2	-0.2
FEMA				S	Sb	04 17 45.2	-0.9
ARRO	**Arrone**	**0.35**	**259**	P	Pg	04 17 39.3	+0.3
ARRO				S	Sb	04 17 44.9	-1.1
ARRO				AML	AML		
	comp=E,619μm,0.2s						
ARRO				AML	AML		
	comp=N,396μm,1.3s						
FIAM	**Fiamignano**	**0.39**	**192**	P	Pg	04 17 40.3	+0.5
FIAM				S	Sb	04 17 46.0	-1.2
FIAM				AML	AML		
	comp=E,662μm,0.2s						
FIAM				AML	AML		
	comp=N,315μm,0.2s						
FIAM				AML	AML		
	comp=E,662μm,0.2s						
FIAM				AML	AML		
	comp=N,314μm,0.2s						
FIAM				AML	AML		
	comp=N,329μm,2.0s						
FDMO	**Fiordimonte**	**0.41**	**345**	P	Pb	04 17 41.4	-0.1
FDMO				S	Sb	04 17 47.0	-0.8
GUMA	**Gualdo di Mace**	**0.43**	**11**	P	Pg	04 17 41.0	+0.5
GUMA				S	Sb	04 17 48.1	-0.2
CESI	**CESI - Serrava**	**0.43**	**327**	P	Pg	04 17 40.4	-0.2
OFFI	**Offida**	**0.45**	**49**	P	Pb	04 17 41.9	-0.2
FAGN	**Fagnano**	**0.46**	**145**	P	Pg	04 17 41.7	+0.5
CESX	**Cesi**	**0.48**	**266**	P	Pg	04 17 41.5	+0.1
CESX				AML	AML		
	comp=E,281μm,1.5s						
CESX				AML	AML		
	comp=N,394μm,0.3s						
VCEL	**Villa Celiera**	**0.52**	**119**	P	Pg	04 17 42.7	+0.5
VCEL				AML	AML		
	comp=E,560μm,1.2s						
VCEL				AML	AML		
	comp=N,790μm,0.9s						
VCEL				AML	AML		
	comp=N,792μm,0.9s						
VCEL				AML	AML		
	comp=N,722μm,0.8s						
T0110	**Collepietro**	**0.58**	**135**	P	Pg	04 17 43.8	+0.3
T0110				S	Sb	04 17 52.6	-0.3
T0110				AML	AML		
	comp=N,384μm,0.4s						
T0110				AML	AML		
	comp=E,388μm,0.3s						
T0110				AML	AML		
	comp=N,290μm,0.4s						
SRES	**S.Oreste - Sor**	**0.67**	**233**	P	Pb	04 17 45.8	-0.2
LPEL	**Lama dei Pelig**	**0.93**	**130**	P	Pg	04 17 49.5	-0.4
LPEL				S	Sb	04 18 03.0	+0.2
VIVA	**Pratoni del Vi**	**0.96**	**201**	S	Sg	04 18 02.0	-0.9
PAOL	**Paolisi**	**1.90**	**148**	S	Sn	04 18 29.0	+0.3

ROM 24 04:23:29.9±0.1, 42°.601N±0°.005×13°.258E±0°.007, h12km±1km, ML2.1/10, 1C-1D, Error ellipse: s-maj=0.6km s-min=0.2km az=16.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.10**	**199**	⇑P	Pg	04 23 33.2	+0.4
RM33				S	Sg	04 23 35.5	+0.6
RM33				AML	AML		
	comp=E,7730μm,0.2s						
RM33				AML	AML		
	comp=N,5030μm,0.7s						
RM33				AML	AML		
	comp=E,7500μm,0.2s						
RM33				AML	AML		
	comp=N,4920μm,0.7s						
RM33				AML	AML		
	comp=E,57600μm,0.2s						
RM33				AML	AML		
	comp=N,35250μm,0.3s						
RM33				AML	AML		
	comp=E,55800μm,0.2s						
RM33				AML	AML		
	comp=N,37550μm,0.3s						
RM33				AML	AML		
	comp=E,7496μm,0.2s						
CAMP	**Campotosto**	**0.13**	**120**	P	Pg	04 23 33.5	+0.2
CAMP				S	Sg	04 23 36.2	+0.6
CAMP				AML	AML		
	comp=E,544μm,0.9s						
CAMP				AML	AML		
	comp=N,832μm,0.3s						
CAMP				AML	AML		
	comp=E,6015μm,1.0s						
CAMP				AML	AML		
	comp=N,5965μm,0.6s						
CAMP				AML	AML		
	comp=N,833μm,0.3s						
TERO	**Teramo**	**0.26**	**85**	P	Pg	04 23 35.2	-0.1
TERO				S	Sg	04 23 39.2	+0.3
TERO				AML	AML		
	comp=E,1006μm,0.4s						
TERO				AML	AML		
	comp=N,1160μm,0.7s						
TERO				AML	AML		
	comp=E,1140μm,0.4s						
TERO				AML	AML		
	comp=N,1325μm,0.7s						
TERO				AML	AML		
	comp=E,4280μm,0.2s						
TERO				AML	AML		
	comp=N,4700μm,0.5s						
TERO				AML	AML		
	comp=E,4690μm,0.2s						
TERO				AML	AML		
	comp=N,5130μm,0.2s						
TERO				AML	AML		
	comp=N,1160μm,0.7s						
TERO				END			
AQU	**L'Aquila**	**0.27**	**157**	P	Pg	04 23 36.0	+0.5
AQU				S	Sb	04 23 40.8	-0.6
GIGS	**Gran Sasso**	**0.28**	**123**	P	Pg	04 23 35.8	+0.2
GIGS				S	Sg	04 23 40.3	+0.8
GIGS				AML	AML		
	comp=E,154μm,0.2s						
GIGS				AML	AML		
	comp=N,163μm,0.6s						
GIGS				AML	AML		
	comp=E,1485μm,0.2s						
GIGS				AML	AML		
	comp=N,1162μm,0.2s						
GIGS				AML	AML		
	comp=N,163μm,0.6s						
FIAM	**Fiamignano**	**0.35**	**197**	P	Pg	04 23 37.4	+0.4
FIAM				S	Sb	04 23 42.9	-0.7
FIAM				AML	AML		
	comp=E,368μm,0.5s						
FIAM				AML	AML		
	comp=N,222μm,0.7s						
FIAM				AML	AML		
	comp=E,2740μm,0.6s						
FIAM				AML	AML		
	comp=N,1730μm,0.4s						
FIAM				AML	AML		
	comp=E,369μm,0.5s						
ARRO	**Arrone**	**0.36**	**267**	P	Pg	04 23 37.2	0.0
ARRO				S	Sg	04 23 43.0	+1.0
ARRO				AML	AML		
	comp=E,216μm,1.3s						
ARRO				AML	AML		
	comp=N,310μm,1.3s						
ARRO				AML	AML		
	comp=E,1495μm,0.9s						
ARRO				AML	AML		
	comp=N,1040μm,1.0s						
ARRO				AML	AML		
	comp=N,268μm,0.3s						
FEMA	**Monte Fema**	**0.39**	**337**	P	Pb	04 23 38.4	-0.5
FEMA				S	Sg	04 23 43.8	+0.8
FDMO	**Fiordimonte**	**0.45**	**344**	P	Pg	04 23 39.0	+0.2
FDMO				S	Sg	04 23 45.4	+0.5
OFFI	**Offida**	**0.46**	**43**	P	Pb	04 23 39.5	-0.5
VCEL	**Villa Celiera**	**0.48**	**115**	P	Pb	04 23 40.1	-0.3
VCEL				AML	AML		
	comp=E,2930μm,0.5s						
VCEL				AML	AML		
	comp=N,3935μm,0.2s						
VCEL				AML	AML		
	comp=E,392μm,1.9s						
TRTR	**Tortoreto Alta**	**0.53**	**67**	P	Pb	04 23 41.2	+0.1
T0110	**Collepietro**	**0.54**	**134**	P	Pb	04 23 41.0	-0.4
T0110				AML	AML		
	comp=E,1545μm,0.7s						
T0110				AML	AML		
	comp=N,1395μm,0.3s						
PTQR	**Pietraquaria**	**0.59**	**170**	P	Pg	04 23 41.4	0.0
SRES	**S.Oreste - Sor**	**0.66**	**237**	P	Pg	04 23 42.4	-0.4
SRES				AML	AML		
	comp=E,328μm,1.1s						
SRES				AML	AML		
	comp=N,330μm,1.1s						
SRES				AML	AML		
	comp=E,49μm,1.8s						
CERT	**Cerreto**	**0.68**	**198**	⇓P	Pg	04 23 42.8	-0.4
CERT				AML	AML		
	comp=E,1290μm,0.4s						
CERT				AML	AML		
	comp=N,863μm,0.4s						
CERT				AML	AML		
	comp=N,111μm,0.4s						

ROM 24 04:24:24.5±0.1, 42°.578N±0°.004×13°.259E±0°.006, h11km, ML2.8/30, 5C-1D, Error ellipse: s-maj=0.5km s-min=0.3km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.08**	**206**	P	Pg	04 24 27.5	+0.5
RM33				S	Sg	04 24 29.3	+0.4
RM33				AML	AML		
	comp=N,35300μm,0.3s						
RM33				AML	AML		
	comp=E,57600μm,0.2s						
RM33				AML	AML		
	comp=N,35250μm,0.3s						
RM33				AML	AML		
	comp=E,55800μm,0.2s						
RM33				AML	AML		
	comp=N,37550μm,0.3s						
RM33				AML	AML		
	comp=E,57650μm,0.2s						
RM33				AML	AML		
	comp=N,35300μm,0.3s						
CAMP	**Campotosto**	**0.12**	**111**	P	Pg	04 24 27.9	+0.3
CAMP				S	Sg	04 24 30.0	+0.2
CAMP				AML	AML		
	comp=E,6015μm,1.0s						
CAMP				AML	AML		
	comp=N,5965μm,0.6s						
AQU	**L'Aquila**	**0.25**	**155**	P	Pg	04 24 30.3	+0.7
AQU				S	Sg	04 24 34.5	+1.4
AQU				AML	AML		
	comp=N,2620μm,0.6s						
AQU				AML	AML		
	comp=E,1875μm,1.0s						
AQU				AML	AML		
	comp=N,2625μm,0.6s						
AQU				AML	AML		
	comp=N,2495μm,0.6s						
AQU				AML	AML		
	comp=E,1870μm,1.0s						
AQU				AML	AML		
	comp=E,1990μm,1.0s						
TERO	**Teramo**	**0.26**	**80**	⇑P	Pg	04 24 29.9	0.0
TERO				S	Sg	04 24 33.9	+0.4
TERO				AML	AML		
	comp=E,4285μm,0.2s						
TERO				AML	AML		
	comp=E,4690μm,0.2s						
TERO				AML	AML		
	comp=N,5130μm,0.2s						
TERO				AML	AML		
	comp=E,4280μm,0.2s						
TERO				AML	AML		
	comp=N,4700μm,0.5s						
TERO				AML	AML		
	comp=N,4705μm,0.5s						
GIGS	**Gran Sasso**	**0.26**	**119**	⇑P	Pg	04 24 30.1	+0.2
GIGS				S	Sg	04 24 34.5	+0.9
GIGS				AML	AML		
	comp=E,1485μm,0.2s						
GIGS				AML	AML		
	comp=N,1162μm,0.2s						
GIGS				AML	AML		
	comp=N,1162μm,0.2s						
NRCA	**Norcia**	**0.28**	**337**	AML	AML		
	comp=E,80150μm,1.4s						
NRCA				AML	AML		
	comp=E,80100μm,1.4s						
NRCA				AML	AML		
	comp=N,82900μm,0.1s						
NRCA				AML	AML		
	comp=N,82900μm,0.1s						
NRCA				AML	AML		
	comp=E,86700μm,1.4s						
NRCA				AML	AML		
	comp=N,90000μm,0.1s						
FIAM	**Fiamignano**	**0.33**	**199**	⇑P	Pg	04 24 31.5	+0.4
FIAM				S	Sg	04 24 36.6	+1.1
FIAM				AML	AML		
	comp=N,1730μm,0.4s						
FIAM				AML	AML		
	comp=E,2740μm,0.6s						
ARRO	**Arrone**	**0.36**	**270**	⇑P	Pg	04 24 31.9	+0.2
ARRO				S	Sb	04 24 37.7	-1.0
ARRO				AML	AML		
	comp=N,1680μm,0.2s						
ARRO				AML	AML		
	comp=E,1500μm,0.9s						
ARRO				AML	AML		
	comp=E,1495μm,0.9s						
FAGN	**Fagnano**	**0.39**	**142**	P	Pg	04 24 32.6	+0.3
FAGN				AML	AML		
	comp=E,2590μm,0.5s						
FAGN				AML	AML		
	comp=N,2175μm,0.3s						
FAGN				AML	AML		
	comp=E,2585μm,0.5s						
FAGN				AML	AML		
	comp=N,2170μm,0.3s						
FEMA	**Monte Fema**	**0.41**	**338**	P	Pb	04 24 33.5	-0.5
FEMA				S	Sg	04 24 39.2	+1.0
VCEL	**Villa Celiera**	**0.47**	**113**	P	Pb	04 24 34.4	-0.4
VCEL				AML	AML		
	comp=N,3935μm,0.2s						
VCEL				AML	AML		
	comp=E,2930μm,0.5s						
FDMO	**Fiordimonte**	**0.48**	**345**	P	Pg	04 24 33.6	-0.2
FDMO				AML	AML		
	comp=E,2090μm,1.5s						
FDMO				AML	AML		
	comp=N,2715μm,0.4s						
OFFI	**Offida**	**0.48**	**41**	⇑P	Pb	04 24 34.5	-0.4
OFFI				AML	AML		
	comp=E,4395μm,0.6s						
OFFI				AML	AML		
	comp=N,4580μm,0.5s						
GUMA	**Gualdo di Mace**	**0.49**	**7**	P	Pg	04 24 34.2	+0.1
GUMA				S	Sb	04 24 42.0	-0.4
GUMA				AML	AML		
	comp=E,8235μm,0.5s						
GUMA				AML	AML		
	comp=N,5730μm,0.7s						
GUMA				AML	AML		
	comp=N,5420μm,1.2s						
GUMA				AML	AML		
	comp=E,8265μm,0.5s						
GUMA				AML	AML		
	comp=E,8700μm,0.6s						
CESI	**CESI - Serrava**	**0.50**	**329**	P	Pg	04 24 34.4	+0.1
CESI				AML	AML		
	comp=E,1580μm,0.2s						
CESI				AML	AML		
	comp=N,4655μm,0.4s						
CESX	**Cesi**	**0.50**	**274**	P	Pg	04 24 34.0	-0.3
CESX				S	Sg	04 24 41.6	+0.6
CESX				AML	AML		
	comp=N,1110μm,0.5s						
CESX				AML	AML		
	comp=E,978μm,1.2s						
T0110	**Collepietro**	**0.52**	**132**	P	Pg	04 24 35.1	+0.4
T0110				AML	AML		
	comp=E,1545μm,0.7s						
T0110				AML	AML		
	comp=N,1395μm,0.3s						
TRTR	**Tortoreto Alta**	**0.54**	**64**	⇓P	Pb	04 24 35.7	-0.2
TRTR				AML	AML		
	comp=E,2095μm,0.5s						
TRTR				AML	AML		
	comp=N,2415μm,0.4s						
SRES	**S.Oreste - Sor**	**0.65**	**239**	P	Pg	04 24 37.2	0.0
SRES				AML	AML		
	comp=N,330μm,1.1s						
SRES				AML	AML		
	comp=E,328μm,1.1s						
CERT	**Cerreto**	**0.66**	**198**	P	Pg	04 24 37.3	0.0
CERT				AML	AML		
	comp=E,1295μm,0.4s						
CERT				AML	AML		
	comp=E,1290μm,0.4s						
CERT				AML	AML		
	comp=N,863μm,0.4s						
MTCE	**Montecelio**	**0.67**	**215**	P	Pg	04 24 37.2	-0.4
MTCE				AML	AML		
	comp=N,425μm,0.6s						
MTCE				AML	AML		
	comp=E,598μm,0.7s						
SNTG	**Esanatoglia**	**0.72**	**341**	P	Pg	04 24 38.0	-0.4
SNTG				AML	AML		
	comp=E,520μm,0.4s						
SNTG				AML	AML		
	comp=N,583μm,0.3s						
INTR	**Introdacqua**	**0.74**	**140**	P	Pb	04 24 39.2	-0.3
INTR				AML	AML		
	comp=N,613μm,0.7s						
INTR				AML	AML		
	comp=E,276μm,0.7s						
VVLD	**Villa Vallelon**	**0.76**	**159**	AML	AML		
	comp=N,243μm,0.4s						
VVLD				AML	AML		
	comp=E,290μm,0.7s						
EL6	**Elcito**	**0.76**	**351**	P	Pg	04 24 39.1	-0.1
EL6				AML	AML		
	comp=E,1476μm,0.9s						
EL6				AML	AML		
	comp=E,1476μm,0.9s						
EL6				AML	AML		
	comp=N,1465μm,0.4s						
GUAR	**Guarcino**	**0.78**	**177**	AML	AML		
	comp=N,508μm,0.4s						
GUAR				AML	AML		
	comp=E,478μm,0.6s						

GUAR				AML	AML			
	comp=E,478μm,0.6s							
PP3	**Marolino**	**0.84**	**18**	P	Pg	04 24 40.5	-0.3	
PP3				AML	AML			
	comp=N,2055μm,0.3s							
PP3				AML	AML			
	comp=E,1980μm,0.4s							
PP3				AML	AML			
	comp=N,2170μm,0.3s							
PP3				AML	AML			
	comp=E,2045μm,0.4s							
LPEL	**Lama dei Pelig**	**0.87**	**127**	P	Pg	04 24 41.4	+0.1	
LPEL				AML	AML			
	comp=N,330μm,0.8s							
LPEL				AML	AML			
	comp=E,436μm,0.8s							
MGAB	**Montegabbione**	**0.91**	**292**	AML	AML			
	comp=N,740μm,0.4s							
MGAB				AML	AML			
	comp=E,639μm,0.4s							
MGAB				AML	AML			
	comp=N,664μm,0.4s							
MGAB				AML	AML			
	comp=E,694μm,0.5s							
MGAB				AML	AML			
	comp=E,694μm,0.5s							
MGAB				AML	AML			
	comp=N,664μm,0.4s							
POFI	**Posta Fibreno**	**0.92**	**158**	AML	AML			
	comp=E,172μm,0.5s							
POFI				AML	AML			
	comp=E,172μm,0.5s							
POFI				AML	AML			
	comp=N,152μm,1.2s							
ARVD	**Arcevia**	**0.95**	**346**	P	Pg	04 24 42.5	-0.3	
ARVD				AML	AML			
	comp=E,384μm,0.6s							
ARVD				AML	AML			
	comp=N,372μm,0.6s							
LAV9	**Lanuvio**	**0.99**	**205**	AML	AML			
	comp=N,756μm,1.3s							
LAV9				AML	AML			
	comp=E,1000μm,0.4s							
LAV9				AML	AML			
	comp=N,756μm,1.3s							
LAV9				AML	AML			
	comp=E,1002μm,0.4s							
LAV9				AML	AML			
	comp=N,818μm,1.3s							
LAV9				AML	AML			
	comp=E,1090μm,0.4s							
GIUL	**Giuliano Di Ro**	**1.02**	**180**	AML	AML			
	comp=N,210μm,0.5s							
GIUL				AML	AML			
	comp=E,172μm,0.7s							

ROM 24 04:24:45.6±0.1, 42°.782N±0°.003×13°.156E±0°.006, h8km, ML2.6/3, 2C-1D, Error ellipse: s-maj=0.5km s-min=0.1km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.06**	**329**	⇓P	Pg	04 24 48.0	+0.5
NRCA				S	Sg	04 24 49.2	+0.4
NRCA				AML	AML		
	comp=E,80100μm,1.4s						
NRCA				AML	AML		
	comp=N,82900μm,0.1s						
NRCA				AML	AML		
	comp=E,86700μm,1.4s						
NRCA				AML	AML		
	comp=N,90000μm,0.1s						
FEMA	**Monte Fema**	**0.20**	**337**	P	Pg	04 24 50.5	+0.8
FEMA				S	Sg	04 24 53.5	+1.1
FDMO	**Fiordimonte**	**0.26**	**349**	⇑P	Pg	04 24 51.5	+0.7
FDMO				S	Sg	04 24 55.7	+1.3
FDMO				AML	AML		
	comp=E,2090μm,1.5s						
FDMO				AML	AML		
	comp=N,2715μm,0.4s						
RM33	**Pellescritta (**	**0.28**	**171**	P	Pb	04 24 52.1	-0.8
RM33				S	Sb	04 24 56.5	-1.3
CESI	**CESI - Serrava**	**0.29**	**320**	P	Pg	04 24 52.1	+0.7
CESI				S	Sg	04 24 56.7	+1.4
CESI				AML	AML		
	comp=N,4655μm,0.4s						
CESI				AML	AML		
	comp=E,1580μm,0.2s						
CAMP	**Campotosto**	**0.31**	**143**	P	Pg	04 24 52.5	+0.7
CAMP				S	Sg	04 24 57.3	+1.4
ARRO	**Arrone**	**0.35**	**235**	P	Pg	04 24 53.0	+0.5
ARRO				S	Sb	04 24 59.5	-0.5
TERO	**Teramo**	**0.37**	**116**	P	Pg	04 24 53.5	+0.6
TERO				S	Sg	04 24 59.0	+1.3
SEF1	**Sefro**	**0.40**	**337**	P	Pg	04 24 54.0	+0.7
SEF1				S	Sb	04 25 00.3	-0.9
MDAR	**Monte D'Aria**	**0.41**	**359**	P	Pg	04 24 54.2	+0.5
MDAR				S	Sb	04 25 00.7	-1.1
PIO1	**Pioraco**	**0.42**	**342**	P	Pg	04 24 53.9	+0.1
PIO1				S	Sg	04 25 00.5	+1.3
OFFI	**Offida**	**0.42**	**68**	⇑P	Pb	04 24 55.1	-0.2
FIU1	**Fiuminata**	**0.44**	**338**	P	Pb	04 24 55.1	-0.6
FIU1				S	Sb	04 25 01.6	-0.9
ASSB	**Assisi San Ben**	**0.45**	**306**	P	Pb	04 24 55.5	-0.4
ASSB				S	Sb	04 25 01.9	-0.9
CESX	**Cesi**	**0.46**	**248**	P	Pb	04 24 55.3	-0.7
CESX				S	Sb	04 25 02.5	-0.5
GAG1	**Gagliole**	**0.46**	**352**	P	Pb	04 24 55.7	-0.4
GAG1				S	Sb	04 25 02.3	-0.8
AQU	**L'Aquila**	**0.47**	**157**	P	Pb	04 24 55.6	-0.6
AQU				S	Sb	04 25 02.8	-0.4
SNTG	**Esanatoglia**	**0.50**	**342**	P	Pb	04 24 56.4	-0.3
SNTG				S	Sb	04 25 03.7	-0.6
FIAM	**Fiamignano**	**0.51**	**183**	P	Pg	04 24 56.2	+0.6
FIAM				S	Sb	04 25 04.0	-0.7
EL6	**Elcito**	**0.55**	**356**	P	Pg	04 24 56.6	+0.4
EL6				S	Sb	04 25 05.3	-0.4
ATCC	**AVT- Casa Cast**	**0.55**	**317**	P	Pb	04 24 57.1	-0.5
ATCC				S	Sb	04 25 05.3	-0.5
ATCC				AML	AML		
	comp=N,626μm,1.0s						
ATCC				AML	AML		
	comp=E,716μm,0.9s						
ATCC				AML	AML		
	comp=N,626μm,1.0s						
TRTR	**Tortoreto Alta**	**0.56**	**87**	P	Pb	04 24 58.2	+0.4
FOSV	**Fossato di Vic**	**0.59**	**331**	P	Pb	04 24 57.7	-0.6
FOSV				S	Sb	04 25 06.5	-0.4
SRES	**S.Oreste - Sor**	**0.72**	**221**	P	Pg	04 24 59.5	-0.1
SRES				S	Sb	04 25 11.2	+0.5
ARVD	**Arcevia**	**0.73**	**348**	P	Pb	04 25 00.6	-0.1
ARVD				S	Sb	04 25 11.4	+0.5

*ROM **24** 04:25:58.9±0.1, 42°.635N×0°.003×13°.236E±0°.005, h10km, ML3.5/76, Mw3.4, Error ellipse: s-maj=0.4km s-min=0.2km az=250.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.50; $M_{\theta\theta}$0.05; $M_{\phi\phi}$1.45; $M_{r\theta}$0.17; $M_{\theta\phi}$-0.51; $M_{\phi r}$-0.82; Fault plane solution: M_o1.77060×10^{14} NP1:ϕ_s159.00000°, δ31.00000°, λ-96.00000°. NP2:ϕ_s345.00000°, δ59.00000°, λ-87.00000°.*

*LDG **24** 04:25:58.4±0.1, 42°.64N×13°.22E, h6km, Ml3.2/23 Error ellipse: s-maj=2.9km s-min=2.2km az=41.0*

*IDC **24** 04:25:59.1±1.1, 42°.72N×13°.11E, h0km, mb3.6/4, mbtmp3.5/12, ML3.4/8, Error ellipse: s-maj=22.0km s-min=14.9km az=107.0*

*PDG **24** 04:25:59.2±0.5, 42°.62N×13°.23E, h12km, ML3.8/12, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*PRU **24** 04:26:01.2±0.0, 42°.70N×13°.52E, h10km*

*BEO **24** 04:26:01.0±0.7, 42°.69N×13°.31E, h10km, ML3.7/7*

ISC 24 04:25:59.5±0.7, 42°.64N±0°.02×13°.21E±0°.02, h15km±5km, n241, σ2ˢ14/311, mb3.7/3, 29C-16D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.13**	**177**	⇑*i*P	**Pg**	**04 26 02.8**	**-0.6**
RM33				S	**Sg**	**04 26 05.3**	**-0.5**
RM33				AML	AML		
	comp=E,65150μm,0.4s						
RM33				AML	AML		
	comp=N,54800μm,1.6s						
RM33				AML	AML		
	comp=E,63050μm,0.3s						
RM33				AML	AML		
	comp=N,55650μm,0.8s						
RM33				AML	AML		
	comp=N,55700μm,0.8s						
RM33				AML	AML		
	comp=E,65200μm,0.4s						
RM33				AML	AML		
	comp=E,63000μm,0.3s						
CAMP	**Campotosto**	**0.18**	**125**	⇑*i*P	**Pg**	**04 26 03.1**	**-0.9**
CAMP				S	**Sg**	**04 26 05.8**	**-1.2**
CAMP				AML	AML		
	comp=N,20900μm,0.5s						
CAMP				AML	AML		
	comp=E,21100μm,0.8s						
NRCA	**Norcia**	**0.20**	**341**	P	**Pg**	**04 26 03.7**	**-0.6**
NRCA				S	**Sg**	**04 26 07.2**	**-0.3**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
TERO	**Teramo**	**0.29**	**94**	⇑*i*P	**Pg**	**04 26 04.6**	**-1.1**
TERO				S	**Sg**	**04 26 08.9**	**-1.1**
TERO				AML	AML		
	comp=E,33100μm,0.5s						
TERO				AML	AML		
	comp=N,28550μm,0.4s						
TERO				AML	AML		
	comp=N,29900μm,0.4s						
TERO				AML	AML		
	comp=N,28600μm,0.4s						
TERO				AML	AML		
	comp=E,34550μm,0.5s						
TERO				AML	AML		
	comp=E,33150μm,0.5s						
AQU	**L'Aquila**	**0.32**	**153**	⇑*e*P	**Pg**	**04 26 05.7**	**-0.6**
AQU				AML	AML		
	comp=E,10580μm,1.1s						
AQU				AML	AML		
	comp=N,8045μm,0.6s						
AQU				AML	AML		
	comp=E,10195μm,1.1s						
AQU				AML	AML		
	comp=N,7760μm,0.6s						
ARRO	**Arrone**	**0.33**	**259**	⇑*i*P	**Pg**	**04 26 06.2**	**-0.1**
ARRO				S	**Sb**	**04 26 11.9**	**-0.4**
ARRO				AML	AML		
	comp=N,9760μm,0.2s						
ARRO				AML	AML		
	comp=E,13850μm,1.5s						
ARRO				AML	AML		
	comp=N,9805μm,0.2s						
ARRO				AML	AML		
	comp=N,9775μm,0.2s						
FEMA	**Monte Fema**	**0.34**	**340**	P	**Pg**	**04 26 06.7**	**+0.1**
FEMA				S	**Sg**	**04 26 11.9**	**+0.4**
FEMA				AML	AML		
	comp=E,18950μm,0.2s						
FEMA				AML	AML		
	comp=N,19450μm,0.6s						
FEMA				AML	AML		
	comp=E,34150μm,0.3s						
FEMA				AML	AML		
	comp=N,23350μm,0.6s						
FEMA				AML	AML		
	comp=E,34200μm,0.3s						
FEMA				AML	AML		
	comp=N,23400μm,0.6s						
FIAM	**Fiamignano**	**0.38**	**190**	⇑*i*P	**Pg**	**04 26 06.8**	**-0.4**
FIAM				S	**Sg**	**04 26 12.8**	**+0.2**
FIAM				AML	AML		
	comp=E,11350μm,0.2s						
FIAM				AML	AML		
	comp=N,10050μm,0.7s						
FDMO	**Fiordimonte**	**0.40**	**348**	P	**Pg**	**04 26 07.3**	**-0.4**
FDMO				S	**Sg**	**04 26 13.7**	**+0.4**
FDMO				AML	AML		
	comp=E,7770μm,0.4s						
FDMO				AML	AML		
	comp=N,7985μm,1.2s						
FDMO				AML	AML		
	comp=E,9345μm,0.2s						
CESI	**CESI - Serrava**	**0.42**	**329**	⇑P	**Pg**	**04 26 07.7**	**-0.5**
CESI				S	**Sg**	**04 26 14.5**	**+0.6**
CESI				AML	AML		
	comp=E,16350μm,0.3s						
CESI				AML	AML		
	comp=N,24250μm,0.6s						
CSP1	**Cessapalombo**	**0.45**	**360**	⇑*i*P	**Pg**	**04 26 07.8**	**-0.8**
CSP1				S	**Sg**	**04 26 14.8**	**+0.1**
OFFI	**Offida**	**0.46**	**50**	P	**Pg**	**04 26 08.3**	**-0.4**
OFFI				AML	AML		
	comp=N,44400μm,0.5s						
OFFI				AML	AML		
	comp=E,45700μm,0.4s						
CESX	**Cesi**	**0.46**	**266**	P	**Pg**	**04 26 08.3**	**-0.5**
CESX				S	**Sb**	**04 26 16.1**	**-0.1**
CESX				AML	AML		
	comp=E,9330μm,0.4s						
CESX				AML	AML		
	comp=N,12040μm,0.3s						
FAGN	**Fagnano**	**0.47**	**143**	P	**Pg**	**04 26 07.9**	**-1.0**
FAGN				AML	AML		
	comp=E,13750μm,0.5s						
FAGN				AML	AML		
	comp=N,15400μm,0.4s						
MNTP	**Montappone**	**0.53**	**21**	P	**Pg**	**04 26 09.8**	**-0.3**
MNTP				S	**Sb**	**04 26 18.5**	**+0.4**
VCEL	**Villa Celiera**	**0.53**	**118**	P	**Pg**	**04 26 09.3**	**-0.8**
VCEL				AML	AML		
	comp=E,12950μm,0.9s						
VCEL				AML	AML		
	comp=N,17200μm,0.9s						
SEF1	**Sefro**	**0.54**	**339**	P	**Pg**	**04 26 09.8**	**-0.4**
SEF1				S	**Sb**	**04 26 18.4**	**+0.1**
SEF1				AML	AML		
	comp=E,11455μm,0.3s						
SEF1				AML	AML		
	comp=N,12100μm,0.2s						
SEF1				AML	AML		
	comp=E,14900μm,0.2s						
SEF1				AML	AML		
	comp=N,12150μm,0.2s						
SEF1				AML	AML		
	comp=E,14850μm,0.2s						
TRTR	**Tortoreto Alta**	**0.55**	**72**	P	**Pg**	**04 26 09.2**	**-1.2**
TRTR				AML	AML		
	comp=E,16800μm,0.5s						
TRTR				AML	AML		
	comp=N,18300μm,0.5s						
MDAR	**Monte D'Aria**	**0.55**	**355**	P	**Pg**	**04 26 09.8**	**-0.7**
MDAR				S	**Sb**	**04 26 18.6**	**-0.2**
PIO1	**Pioraco**	**0.56**	**343**	P	**Pg**	**04 26 10.6**	**0.0**
ASSB	**Assisi San Ben**	**0.57**	**315**	P	**Pg**	**04 26 10.3**	**-0.4**
ASSB				S	**Sb**	**04 26 19.2**	**0.0**
SSM1	**San Severino M**	**0.59**	**358**	P	**Pg**	**04 26 10.6**	**-0.5**
SSM1				S	**Sb**	**04 26 19.9**	**+0.2**
T0110	**Collepietro**	**0.59**	**134**	⇑*e*P	**Pg**	**04 26 10.1**	**-1.2**
T0110				AML	AML		
	comp=N,13250μm,0.5s						
T0110				AML	AML		
	comp=E,12200μm,0.4s						
GAG1	**Gagliole**	**0.60**	**350**	P	**Pg**	**04 26 11.4**	**-0.1**
GAG1				S	**Sb**	**04 26 20.4**	**+0.2**
GAG1				AML	AML		
	comp=E,11105μm,0.5s						
GAG1				AML	AML		
	comp=N,13700μm,0.4s						
GAG1				AML	AML		
	comp=E,11205μm,1.0s						
GAG1				AML	AML		
	comp=N,13700μm,0.4s						
PTQR	**Pietraquaria**	**0.64**	**167**	P	**Pg**	**04 26 11.3**	**-0.7**
SNTG	**Esanatoglia**	**0.64**	**342**	P	**Pg**	**04 26 11.8**	**-0.4**
SNTG				S	**Sb**	**04 26 21.7**	**+0.4**
SNTG				AML	AML		
	comp=E,2560μm,1.4s						
SNTG				AML	AML		
	comp=N,3055μm,0.4s						
SNTG				AML	AML		
	comp=N,386μm,0.2s						
SNTG				AML	AML		
	comp=E,380μm,1.6s						
SRES	**S.Oreste - Sor**	**0.66**	**232**	P	**Pg**	**04 26 11.7**	**-0.7**
SRES				AML	AML		
	comp=E,2690μm,0.5s						
SRES				AML	AML		
	comp=N,2215μm,0.5s						
TRE1	**Treia**	**0.67**	**7**	P	**Pg**	**04 26 12.4**	**-0.3**
ATCC	**AVT- Casa Cast**	**0.68**	**323**	P	**Pg**	**04 26 12.2**	**-0.7**
ATCC				AML	AML		
	comp=E,6185μm,1.1s						
ATCC				AML	AML		
	comp=N,5855μm,0.8s						
ATCC				AML	AML		
	comp=E,6515μm,0.9s						
ATCC				AML	AML		
	comp=N,6560μm,0.2s						
ATCC				AML	AML		
	comp=E,6510μm,0.9s						
ATCC				AML	AML		
	comp=N,6555μm,0.2s						
CADA	**Capodarco di F**	**0.69**	**36**	P	**Pg**	**04 26 12.4**	**-0.6**
EL6	**Elcito**	**0.69**	**354**	P	**Pg**	**04 26 12.4**	**-0.7**
EL6				AML	AML		
	comp=N,7560μm,0.3s						
EL6				AML	AML		
	comp=E,6510μm,1.6s						
MTCE	**Montecelio**	**0.71**	**209**	⇑*i*P	**Pg**	**04 26 12.3**	**-1.1**
MTCE				AML	AML		
	comp=E,3200μm,0.4s						
MTCE				AML	AML		
	comp=N,1860μm,0.7s						
CERT	**Cerreto**	**0.71**	**194**	⇑*e*P	**Pg**	**04 26 12.3**	**-1.2**
CERT				AML	AML		
	comp=E,4765μm,0.5s						
CERT				AML	AML		
	comp=N,3320μm,0.4s						
FOSV	**Fossato di Vic**	**0.73**	**334**	P	**Pg**	**04 26 13.2**	**-0.6**
FOSV				AML	AML		
	comp=E,2395μm,0.6s						
FOSV				AML	AML		
	comp=N,2830μm,0.4s						
FOSV				AML	AML		
	comp=E,2495μm,0.3s						
FOSV				AML	AML		
	comp=N,2845μm,0.3s						
FOSV				AML	AML		
	comp=E,2490μm,0.3s						
CIMA	**Civitanova Mar**	**0.75**	**27**	P	**Pg**	**04 26 13.9**	**-0.1**
PP3	**Marolino**	**0.79**	**22**	⇑*e*P	**Pg**	**04 26 14.6**	**-0.4**
PP3				AML	AML		
	comp=N,13465μm,0.5s						
PP3				AML	AML		
	comp=N,12135μm,0.5s						
PP3				AML	AML		
	comp=E,18050μm,0.5s						
PP3				AML	AML		
	comp=N,12400μm,0.4s						
PP3				AML	AML		
	comp=N,12350μm,0.4s						
PP3				AML	AML		
	comp=E,19300μm,0.5s						
PP3				AML	AML		
	comp=N,13480μm,0.5s						
MURB	**Monte Urbino**	**0.80**	**321**	P	**Pg**	**04 26 14.6**	**-0.5**
MURB				AML	AML		
	comp=E,9050μm,1.6s						
MURB				AML	AML		
	comp=E,10270μm,1.6s						
MURB				AML	AML		
	comp=N,12200μm,0.4s						
MURB				AML	AML		
	comp=E,10680μm,0.3s						
MURB				AML	AML		
	comp=E,10675μm,0.3s						
MURB				AML	AML		
	comp=E,9670μm,0.3s						
MURB				AML	AML		
	comp=N,12850μm,1.1s						
MURB				AML	AML		
	comp=E,9685μm,0.3s						
INTR	**Introdacqua**	**0.82**	**140**	P	**Pg**	**04 26 13.6**	**-1.8**
INTR				AML	AML		
	comp=E,3μm,0.7s						
INTR				AML	AML		
	comp=N,3μm,1.3s						
INTR				AML	AML		
	comp=E,3270μm,0.7s						
INTR				AML	AML		
	comp=N,4510μm,1.3s						
INTR				AML	AML		
	comp=N,3μm,1.3s						
INTR				AML	AML		
	comp=E,3265μm,0.7s						
INTR				AML	AML		
	comp=E,3μm,0.7s						
RCAV	**Rocca di Cave**	**0.82**	**194**	P	**Pg**	**04 26 15.3**	**-0.1**
RCAV				AML	AML		
	comp=N,5960μm,1.3s						
RCAV				AML	AML		
	comp=E,4565μm,0.7s						
VVLD	**Villa Vallelon**	**0.83**	**158**	P	**Pg**	**04 26 14.9**	**-0.8**
ATTE	**AVT- Monte Tez**	**0.84**	**312**	P	**Pg**	**04 26 15.2**	**-0.7**
ATTE				AML	AML		
	comp=E,3535μm,0.4s						
ATTE				AML	AML		
	comp=N,3025μm,0.6s						
MGAB	**Montegabbione**	**0.85**	**289**	P	**Pb**	**04 26 15.4**	**-0.6**
MGAB				AML	AML		
	comp=E,9080μm,0.5s						
MGAB				AML	AML		
	comp=N,5645μm,0.8s						
MGAB				AML	AML		
	comp=N,6415μm,0.6s						
MGAB				AML	AML		
	comp=E,9065μm,0.5s						
MGAB				AML	AML		
	comp=E,9280μm,1.3s						
SSFR	**Montelago di S**	**0.85**	**339**	P	**Pb**	**04 26 15.3**	**-0.8**
ATFO	**Monte Foce - G**	**0.86**	**327**	P	**Pb**	**04 26 15.6**	**-0.7**
ATFO				AML	AML		
	comp=N,2810μm,0.6s						
ATFO				AML	AML		
	comp=E,3290μm,0.6s						
ARVD	**Arcevia**	**0.88**	**347**	P	**Pb**	**04 26 15.6**	**-0.9**
ARVD				AML	AML		
	comp=E,2480μm,0.8s						
ARVD				AML	AML		
	comp=N,1840μm,0.7s						
RMP	**Rome, Mte Porz**	**0.91**	**204**	P	**Pb**	**04 26 16.4**	**-0.7**
RMP				AML	AML		
	comp=N,5850μm,0.5s						
RMP				AML	AML		
	comp=E,3750μm,0.4s						
LPEL	**Lama dei Pelig**	**0.94**	**129**	P	**Pb**	**04 26 16.0**	**-1.6**
LPEL				AML	AML		
	comp=E,3280μm,1.3s						
LPEL				AML	AML		
	comp=N,2210μm,0.6s						
FRON	**Frontone**	**0.94**	**338**	P	**Pb**	**04 26 17.0**	**-0.7**
FRON				AML	AML		
	comp=N,2780μm,1.0s						
FRON				AML	AML		
	comp=E,2565μm,0.5s						
ATVO	**AVT- Monte Val**	**0.94**	**322**	P	**Pb**	**04 26 16.8**	**-0.9**
ATVO				AML	AML		
	comp=E,2435μm,0.7s						
ATVO				AML	AML		
	comp=N,1935μm,0.4s						
AOI	**Ancona**	**0.95**	**18**	P	**Pb**	**04 26 16.9**	**-0.9**
AOI				AML	AML		
	comp=N,3935μm,0.5s						
AOI				AML	AML		
	comp=E,2995μm,0.4s						
RDP	**Rocca di Papa**	**0.95**	**203**	P	**Pb**	**04 26 17.5**	**-0.4**
ATMI	**Monte Miggiano**	**0.98**	**315**	AML	AML		
	comp=N,6320μm,0.9s						
ATMI				AML	AML		
	comp=E,6615μm,0.5s						
SACS	**San Casciano d**	**0.98**	**283**	P	**Pb**	**04 26 18.0**	**-0.2**
SACS				AML	AML		
	comp=N,2975μm,0.8s						
SACS				AML	AML		
	comp=E,2285μm,0.7s						

SACS AML AML
comp=N,2995µm,0.8s
SACS AML AML
comp=E,2425µm,0.7s
POFI Posta Fibreno 1.00 158 P **Pg 04 26 19.0 +0.1**
POFI AML AML
comp=E,1232µm,0.5s
POFI AML AML
comp=N,1170µm,0.6s
ATPI Pietralunga - 1.00 324 P **Pb 04 26 18.1 -0.5**
ATPI AML AML
comp=N,2130µm,0.7s
ATPI AML AML
comp=E,2925µm,0.6s
COR1 Corinaldo 1.00 351 P **Pb 04 26 18.6 0.0**
COR1 AML AML
comp=N,4920µm,0.7s
COR1 AML AML
comp=N,4895µm,0.7s
COR1 AML AML
comp=E,8000µm,1.6s
COR1 AML AML
comp=E,7410µm,0.5s
PIEI Pieia 1.02 331 P **Pb 04 26 18.8 -0.2**
PIEI AML AML
comp=N,1825µm,1.1s
PIEI AML AML
comp=E,2445µm,1.0s
LRP Arpino 1.03 164 AML AML
comp=N,1395µm,0.6s
LRP AML AML
comp=E,764µm,0.6s
LATE Laterza 1.03 269 P **Pb 04 26 19.2 0.0**
MPAG Monte Paganucc 1.04 342 P **Pb 04 26 18.8 -0.5**
MPAG AML AML
comp=E,1685µm,1.0s
MPAG AML AML
comp=N,2485µm,1.1s
TOLF Tolfa 1.06 238 P **Pb 04 26 18.9 -0.8**
NARO Abbazia di Nar 1.07 335 P **Pb 04 26 19.2 -0.6**
NARO AML AML
comp=N,1305µm,0.9s
NARO AML AML
comp=E,1640µm,1.1s
APEC Apecchio 1.08 328 P **Pb 04 26 19.7 -0.3**
GIUL Giuliano Di Ro 1.08 178 P **Pb 04 26 19.9 -0.2**
GIUL AML AML
comp=E,1835µm,0.7s
GIUL AML AML
comp=N,1374µm,0.5s
FSSB Fossombrone 1.09 344 P **Pb 04 26 19.6 -0.7**
FSSB AML AML
comp=E,5540µm,0.4s
FSSB AML AML
comp=N,5355µm,0.4s
BADI Badiali 1.12 321 P **Pb 04 26 20.5 -0.1**
SF03 Valle Cupa 1.13 279 P **Pb 04 26 20.6 -0.2**
MCIV Monte Civitell 1.14 277 P **Pb 04 26 20.7 -0.2**
MCIV AML AML
comp=E,1191µm,0.9s
MCIV AML AML
comp=N,1140µm,0.6s
CAFI Castiglion Fio 1.14 307 P **Pb 04 26 20.3 -0.7**
CAFI AML AML
comp=E,1815µm,0.4s
CAFI AML AML
comp=N,1815µm,0.6s
CAFI AML AML
comp=N,1845µm,0.6s
CAFI AML AML
comp=E,1860µm,0.4s
CAFI Castiglion Fio 1.14 307 P **Pb 04 26 20.3 -0.7**
SF11 Podere del Sol 1.15 282 P **Pb 04 26 20.1 -1.0**
SF11 Podere del Sol 1.15 282 P **Pb 04 26 20.2 -0.9**
SF04 Casetta 1.16 280 P **Pn 04 26 20.5 -0.7**
LIK San Giovanni I 1.17 167 P **Pn 04 26 20.1 -1.2**
SF14 Selvena 1.18 276 P **Pn 04 26 21.4 -0.1**
SF13 Bagnolo 1.18 279 P **Pn 04 26 20.6 -1.1**
CERA Filignano 1.21 150 P **Pn 04 26 21.5 -0.5**
SSP9 Sansepolcro 1.22 320 P **Pn 04 26 21.9 -0.2**
SSP9 AML AML
comp=N,1738µm,0.7s
SSP9 AML AML
comp=E,1395µm,0.7s
SF01 Poggio Pratacc 1.22 279 P **Pn 04 26 20.9 -1.3**
PARC Parchiule 1.23 325 P **Pn 04 26 21.8 -0.5**
PARC AML AML
comp=N,1980µm,0.9s
PARC AML AML
comp=E,2570µm,0.6s
ARCI Arcidosso 1.29 280 P **Pb 04 26 23.7 +0.1**
ARCI AML AML
comp=N,374µm,1.0s
ARCI AML AML
comp=E,418µm,0.7s
PESA Pesaro 1.32 348 P **Pn 04 26 23.3 -0.2**
TRIV Trivento 1.33 131 AML AML
comp=N,1265µm,0.7s
TRIV AML AML
comp=E,1585µm,0.7s
TRIV AML AML
comp=N,1265µm,0.7s
TRIV AML AML
comp=E,1665µm,0.7s
CRE Caprese Michel 1.34 317 P **Pn 04 26 21.8 -2.1**
VAGA Valle Agricola 1.45 148 P **Pn 04 26 25.7 +0.5**
BSSO Busso 1.51 136 P **Pb 04 26 27.6 +0.3**
MODR Mondragone 1.58 161 P **Pn 04 26 27.1 +0.1**
SFI Santa Sofia 1.60 322 P **Pn 04 26 27.1 -0.3**
SFI AML AML
comp=N,766µm,0.9s
SFI AML AML
comp=E,532µm,0.6s
SACR S. Croce Del S 1.67 138 P **Pn 04 26 28.3 -0.1**
MELA Melanico ??? S 1.71 123 P **Pn 04 26 29.2 +0.5**
RUFI Rufina 1.72 315 P **Pn 04 26 29.9 +0.9**
DUGI Dugi Otok 1.91 44 *e*Pn **Pn 04 26 31.6 0.0**
SGRT San Giovanni R 2.08 114 P **Pn 04 26 33.6 -0.5**
SGRT AML AML
comp=E,706µm,0.5s
SGRT AML AML
comp=N,666µm,0.5s
VIRC Vir 2.13 39 *e*Pn **Pn 04 26 34.3 -0.2**
MORI Morici 2.20 55 *e*Pn **Pn 04 26 35.8 +0.2**
NVLJ Novalja 2.27 32 *e*Pn **Pn 04 26 36.6 +0.1**
POPM Popiglio 2.27 309 P **Pn 04 26 36.9 +0.4**
POPM AML AML
comp=E,247µm,0.8s
POPM AML AML
comp=N,237µm,0.3s
BRJN Brijuni 2.30 10 *e*Pn **Pn 04 26 36.8 0.0**
MAIM Mastiano 2.35 304 P **Pn 04 26 39.2 +1.5**
RABC Rab 2.40 28 *e*Pn **Pn 04 26 38.3 0.0**
SMRN Sveta Marina 2.49 16 *e*Pn **Pn 04 26 39.4 -0.1**
UDBI Udbina 2.65 44 *e*Pn **Pn 04 26 42.8 +1.1**
EQUI Equi 2.70 305 P **Pn 04 26 43.2 +0.8**
EQUI AML AML
comp=E,144µm,0.6s
EQUI AML AML
comp=N,160µm,0.6s
KIJV Kijevo 2.70 59 *i* Pn **Pn 04 26 43.8 +1.3**
LSTV Lastovo 2.72 86 *e*Pn **Pn 04 26 42.7 +0.1**
RIY Rijeka 2.84 19 *e*Pn **Pn 04 26 45.0 +0.7**
RIY *e*Sn **Sn 04 27 19.5 +1.3**
PLIT Plitvice 2.84 37 *e*Pn **Pn 04 26 45.0 +0.7**
MAKA Makarska 2.87 76 *e*Pn **Pn 04 26 45.0 +0.2**
SMPL Sampolo 2.96 261 P **Pn 04 26 46.5 +0.5**
RICI Ricice 3.00 72 *e*Pn **Pn 04 26 47.5 +0.9**
AMUR Altamura 3.08 123 P **Pn 04 26 48.1 +0.5**
AMUR AML AML
comp=N,165µm,1.1s
AMUR AML AML
comp=E,283µm,1.6s
PGF Pioggiola 3.11 270 *e*P **Pn 04 26 49.4 +1.3**
PGF *e*Sn **Sn 04 27 22.0 -3.0**
comp=E,9.5nm,0.5s
MSSA Maissana 3.16 303 P **Pn 04 26 49.9 +1.0**
MSSA AML AML
comp=E,126µm,0.7s
MSSA AML AML
comp=N,132µm,0.6s
BOJS Bojanci 3.22 27 P **Pn 04 26 50.6 +1.0**
MATE Matera 3.29 126 ⇓P **Pn 04 26 52.4 +1.9**
STON Ston 3.32 85 *e*Pn **Pn 04 26 50.6 -0.3**
STON Ston 3.32 85 *e*Pn **Pn 04 26 50.4 -0.5**
STON *e*Sn **Sn 04 27 29.1 -0.9**
STON Ston 3.32 85 P **Pn 04 26 50.6 -0.3**
STON AML AML
comp=E,140µm,1.3s
STON AML AML
comp=N,158µm,1.0s
A251A Rujevac 3.33 41 *e*Pn **Pn 04 26 52.0 +1.0**
AJAC Base Areonaval 3.37 259 P **Pn 04 26 53.0 +1.3**
AJAC AML AML
comp=E,148µm,0.3s
AJAC AML AML
comp=N,70µm,0.7s
CGRP Cima Grappa 3.39 343 P **Pn 04 26 53.1 +1.0**
CGRP AML AML
comp=N,354µm,0.4s
CGRP AML AML
comp=E,343µm,0.4s
LJU Ljubljana 3.53 15 AML AML
comp=E,1084µm,0.5s
LJU AML AML
comp=N,1275µm,0.6s
SALO Salr 3.55 328 P **Pn 04 26 55.6 +1.5**
SALO AML AML
comp=N,232µm,0.5s
SALO AML AML
comp=E,206µm,0.9s
DOSS Dosso del Somm 3.55 337 P **Pn 04 26 55.4 +1.1**
DOSS AML AML
comp=N,195µm,0.5s
DOSS AML AML
comp=E,260µm,0.4s
STAL STALIGIAL 3.63 355 P **Pn 04 26 56.0 +0.7**
STAL AML AML
comp=E,268µm,0.8s
STAL AML AML
comp=N,296µm,0.9s
STAL AML AML
comp=E,265µm,0.9s
STAL AML AML
comp=N,248µm,0.8s
SALB San Lorenzo Be 3.64 138 AML AML
comp=N,150µm,1.6s
SALB AML AML
comp=E,158µm,0.8s
MAGA Magasa 3.64 330 P **Pn 04 26 56.2 +0.8**
MAGA AML AML
comp=N,400µm,0.4s
MAGA AML AML
comp=E,550µm,0.3s
DBRK Dubrovnik 3.65 88 *i* Pn **Pn 04 26 55.9 +0.5**
LUSI Trento, Gardas 3.69 335 P **Pn 04 26 57.5 +1.4**
LUSI AML AML
comp=N,226µm,0.7s
LUSI AML AML
comp=E,186µm,1.1s
CIMO Cimolais 3.71 352 P **Pn 04 26 56.8 +0.5**
CIMO AML AML
comp=E,55µm,1.5s
CIMO AML AML
comp=N,79µm,0.5s
CIMO AML AML
comp=N,75µm,0.6s
CIMO AML AML
comp=E,59µm,1.5s
PTCC Patocco-Chiusa 3.76 2 P **Pn 04 26 57.5 +0.4**
PTCC AML AML
comp=N,97µm,0.9s
PTCC AML AML
comp=E,134µm,0.3s
ACOM Acomizza, Ital 3.91 3 P **Pn 04 27 00.2 +0.9**
ACOM AML AML
comp=E,202µm,0.4s
ACOM AML AML
comp=N,176µm,1.3s
ACOM AML AML
comp=E,215µm,1.6s
ACOM AML AML
comp=N,158µm,0.5s
HCY Herceg Novi 3.91 91 ⇑*i*Pn **Pn 04 26 59.8 +0.7**
HCY *i* Sn **Sn 04 27 41.9 -2.8**
HCY Herceg Novi 3.91 91 ⇑*i*Pn **Pn 04 26 59.8 +0.7**
HCY *i* Sn **Sn 04 27 46.4 +1.7**
MOSL Moslavina 3.92 39 *e*Pn **Pn 04 26 58.4 -0.8**
ZOU Zoufplan 3.92 358 P **Pn 04 26 59.7 +0.4**
ZOU AML AML
comp=N,124µm,0.9s
ZOU AML AML
comp=N,163µm,1.2s
ZOU AML AML
comp=E,133µm,0.8s
ZOU AML AML
comp=E,142µm,0.8s
BRY Bratogost 3.94 84 ⇓*i*Pn **Pn 04 26 59.7 +0.2**
BRY *i* Sn **Sn 04 27 41.7 -3.8**
BRY Bratogost 3.94 84 ⇑*i*Pn **Pn 04 27 00.2 +0.7**
BRY *i* Sn **Sn 04 27 47.1 +1.6**
OBKA Obir 3.98 13 *e*Pn **Pn 04 27 00.2 +0.1**
comp=E,11nm,0.7s
MYKA Terra Mystica 4.00 4 *e*Pn **Pn 04 27 00.8 +0.4**
comp=E,1.4nm,0.2s
KOSI Kohlern 4.04 342 P **Pn 04 27 02.4 +1.5**
KOSI AML AML
comp=E,140µm,0.5s
KOSI AML AML
comp=N,191µm,1.0s
LOBO Lobor 4.07 29 *e*Pn **Pn 04 27 01.4 +0.2**
ABTA Abfaltersbach 4.13 353 Pn **Pn 04 27 03.5 +1.3**
comp=N,24nm,0.4s,SNR=12
BRES Bressanone 4.19 346 P **Pn 04 27 04.3 +1.1**
CEME Cevo 4.22 89 ⇓*i*Pn **Pn 04 27 04.1 +0.8**
CEME *i* Sn **Sn 04 27 49.2 -3.2**
CEME Cevo 4.22 89 ⇑*i*Pn **Pn 04 27 04.3 +1.0**
CEME *i* Sn **Sn 04 27 54.2 +1.8**
BUM Brajici-Budva 4.22 93 ⇑*i*Pn **Pn 04 27 04.2 +0.8**
BUM *i* Sn **Sn 04 27 49.2 -3.2**
BUM Brajici-Budva 4.22 93 ⇑*i*Pn **Pn 04 27 04.6 +1.2**
BUM *i* Sn **Sn 04 27 54.1 +1.7**
NKME Niksic 4.24 86 ⇓*i*Pn **Pn 04 27 04.9 +1.3**
NKME *i* Sn **Sn 04 27 50.2 -2.6**
NKME Niksic 4.24 86 ⇓*i*Pn **Pn 04 27 04.9 +1.3**
NKME *i* Sn **Sn 04 27 54.8 +2.0**
SOKA Soboth 4.24 17 *e*Pn **Pn 04 27 06.6 +2.9**
comp=N,4.5nm,0.4s
VSL Villasalto 4.27 224 P **Pn 04 27 05.2 +1.2**
A252A Venje 4.36 49 *e*Pn **Pn 04 27 05.2 0.0**
SBF Sospel 4.39 288 *e*P **Pn 04 27 06.8 +1.1**
SBF *e*Sn **Sn 04 27 52.6 -4.0**
comp=N,16nm,0.4s
KBA Koelnbreinsper 4.44 1 *e*Pn **Pn 04 27 07.9 +1.5**
comp=N,8.6nm,0.5s
MUGIO Muggio 4.44 319 P **Pn 04 27 07.3 +0.9**
MUGIO AML AML
comp=E,60µm,0.4s
MUGIO AML AML
comp=N,51µm,0.5s
DRME Dracevica, Mon 4.45 94 ⇓*i*Pn **Pn 04 27 07.4 +1.0**
DRME *i* Sn **Sn 04 27 55.0 -3.0**
DRME Dracevica, Mon 4.45 94 ⇓*i*Pn **Pn 04 27 07.5 +1.0**
DRME *i* Sn **Sn 04 27 59.4 +1.4**
ROSI Rosskopf 4.47 344 P **Pn 04 27 07.5 +0.5**
ROSI AML AML
comp=E,248µm,1.1s
ROSI AML AML
comp=N,396µm,0.4s
PDG Podgorica 4.47 91 ⇓P **Pn 04 27 08.1 +1.2**
PDG ⇓S **Sn 04 28 01.9 +3.3**
TTG Podgorica 4.47 91 ⇑*i*Pn **Pn 04 27 07.6 +0.8**
TTG *i* Sn **Sn 04 27 55.5 -3.1**
TTG Podgorica 4.47 91 ⇑*i*Pn **Pn 04 27 08.0 +1.2**
TTG *i* Sn **Sn 04 28 00.1 +1.5**
ULC Ulcinj 4.53 97 ⇑*i*Pn **Pn 04 27 08.3 +0.7**
ULC *i* Sn **Sn 04 27 56.5 -3.5**
ULC Ulcinj 4.53 97 ⇑*i*Pn **Pn 04 27 08.5 +0.9**
ULC *i* Sn **Sn 04 28 01.6 +1.6**
PLE Pljevlja 4.59 79 ⇑*i*Pn **Pn 04 27 09.9 +1.4**
PLE *i* Sn **Sn 04 27 59.3 -2.3**
PLE Pljevlja 4.59 79 ⇓*i*Pn **Pn 04 27 09.6 +1.1**
PLE *i* Sn **Sn 04 28 03.2 +1.6**
KOME Kolasin 4.65 85 ⇑*i*Pn **Pn 04 27 10.5 +1.2**
KOME *i* Sn **Sn 04 28 00.0 -3.1**
KOME Kolasin 4.65 85 ⇓*i*Pn **Pn 04 27 10.9 +1.6**
KOME *i* Sn **Sn 04 28 04.7 +1.6**
BBLS Lazići 4.69 73 *e*Pn **Pn 04 27 11.0 +1.2**
BBLS *e*Sn **Sn 04 28 03.3 -0.7**

FETA Feichten 4.72 339 Pn **Pn 04 27 13.4 +3.0**
comp=N,4.2nm,0.6s,SNR=7.1
WTTA Wattenberg 4.75 347 Pn **Pn 04 27 14.1 +3.3**
comp=N,7.5nm,0.4s,SNR=5.1
DAVOX Davos/Dischmat 4.77 331 Pn **Pn 04 27 13.0 +2.0**
comp=N,2.8nm,0.3s,baz=146,slow=22,SNR=10
DAVOX Sn **Sn 04 28 02.5 -3.6**
comp=N,2.5nm,0.3s,baz=147,slow=20,SNR=1.8
comp=N,16nm,0.6s
SQTA Sankt Quirin 4.79 343 *e*Pn **Pn 04 27 15.3 +4.0**
comp=N,7.0nm,0.3s
WATA Walderalm 4.83 347 Pn **Pn 04 27 14.9 +3.0**
comp=N,4.1nm,0.3s,SNR=4.8
ARSA Arzberg 4.89 19 *e*Pn **Pn 04 27 15.6 +3.0**
comp=N,0.9nm,0.2s
IVA Berane 4.93 85 ⇑*i*Pn **Pn 04 27 14.5 +1.4**
IVA *i* Sn **Sn 04 28 05.1 -4.8**
IVA Berane 4.93 85 ⇑*i*Pn **Pn 04 27 14.5 +1.4**
IVA *i* Sn **Sn 04 28 10.9 +1.0**
MOTA Moosalm 4.93 343 *e*Pn **Pn 04 27 16.9 +3.7**
comp=N,3.1nm,0.4s
LMR La Mourre 4.96 280 *e*P **Pn 04 27 14.1 +0.6**
LMR *e*Sn **Sn 04 28 02.6 -8.0**
comp=N,7.1nm,0.5s
PVY Plav 4.98 88 ⇓*i*Pn **Pn 04 27 15.4 +1.5**
PVY *i* Sn **Sn 04 28 08.1 -3.2**
PVY Plav 4.98 88 ⇑*i*Pn **Pn 04 27 15.1 +1.2**
PVY *i* Sn **Sn 04 28 12.7 +1.4**
SJES Sjenica 5.01 81 *e*Pn **Pn 04 27 15.9 +1.7**
SJES *e*Sn **Sn 04 28 10.1 -1.7**
BIOA Bad Ischl, Aus 5.06 3 *e*Pn **Pn 04 27 17.0 +2.2**
comp=N,13nm,0.4s
MBDF Montbardon 5.11 296 *e*P **Pn 04 27 18.0 +2.3**
MBDF *e*Sn **Sn 04 28 09.8 -4.7**
comp=N,13nm,0.6s
TIR Tirane 5.13 102 ⇑P **Pn 04 27 16.8 +1.1**
TIR ⇓S **Sn 04 28 14.9 +0.2**
RETA Reutte 5.14 341 *e*Pn **Pn 04 27 18.9 +2.9**
comp=N,2.8nm,0.3s
DIVS Divibare 5.16 71 *e*Pn **Pn 04 27 17.7 +1.4**
IVAS Ivanjica 5.17 77 *e*Pn **Pn 04 27 16.7 +0.3**
IVAS *e*Sn **Sn 04 28 14.4 -1.4**
DAVA Damuels 5.21 334 *e*Pn **Pn 04 27 19.8 +2.8**
comp=N,3.3nm,0.3s
MOA Molln 5.26 8 *e*Pn **Pn 04 27 18.3 +0.7**
comp=N,3.0nm,0.4s
FRGS Fruska Gora 5.39 60 *e*Pn **Pn 04 27 19.1 -0.4**
LPG La Plagne 5.46 304 *e*P **Pn 04 27 22.9 +2.3**
LPG *e*Sn **Sn 04 28 18.5 -4.7**
comp=N,22nm,0.9s
TRUS Trudelj 5.48 71 *e*Pn **Pn 04 27 19.5 -1.1**
LPL La Plagne 5.48 304 *e*P **Pn 04 27 23.4 +2.6**
LPL *e*Sn **Sn 04 28 19.0 -4.6**
comp=N,9.4nm,0.6s
RONA Rosalia, Austr 5.51 22 Pn **Pn 04 27 23.7 +2.6**
comp=N,3.2nm,0.3s,SNR=5.0
CONA Conrad Observa 5.61 19 Pn **Pn 04 27 22.1 -0.3**
comp=N,1.9nm,0.3s,SNR=5.4
GRUS Gruza 5.62 75 *e*Pn **Pn 04 27 23.3 +0.7**
SMRF Simiane la Rot 5.72 286 *e*P **Pn 04 27 26.6 +2.6**
SMRF *e*Sn **Sn 04 28 24.5 -5.0**
comp=N,4.0nm,0.6s
ORIF Oris-en-Rattie 5.77 296 *e*P **Pn 04 27 28.3 +3.6**
ORIF *e*Sn **Sn 04 28 25.6 -5.1**
comp=N,12nm,0.7s
SELS Selova 5.84 82 *e*Pn **Pn 04 27 26.1 +0.5**
ZST Bratislava 6.19 25 *e*PN **Pn 04 27 31.7 +1.3**
ZST *e*SN Sn 04 28 21.2 -20
GERES GERESS Array B 6.21 3 Pn **Pn 04 27 30.7 0.0**
comp=N,0.4nm,0.3s,baz=172,slow=15,SNR=8.8
GERES Sn **Sn 04 28 35.5 -6.0**
comp=N,0.7nm,0.3s,baz=182,slow=16,SNR=2.2
GERES Lg Lg 04 29 23.2
comp=N,1.0nm,0.3s,baz=173,slow=26,SNR=1.7
comp=N,0.6nm,0.3s
CKRC Cesky Krumlov 6.23 7 *e*PN **Pn 04 27 31.9 +1.0**
CKRC *e*SN **Sn 04 28 39.6 -2.2**
BOVS Bovan 6.30 78 ⇓P **Pn 04 27 32.3 +0.4**
BOVS Bovan 6.30 78 *e*Pn **Pn 04 27 32.2 +0.4**
BARS Barje 6.34 86 *e*Pn **Pn 04 27 33.4 +0.9**
BARS *e*Sn **Sn 04 28 42.2 -2.5**
MODS Modra-Piesok 6.41 25 *e*PN **Pn 04 27 30.8 -2.5**
MODS *e*SN Sn 04 28 24.3 -22
CABF La Chapelle 6.44 310 *e*P **Pn 04 27 36.7 +2.8**
CABF *e*Sn **Sn 04 28 42.1 -5.1**
comp=N,4.3nm,0.5s
KHC Kasperske Hory 6.50 2 *e*PN **Pn 04 27 35.6 +1.0**
KHC *e*SN **Sn 04 28 45.8 -2.6**
PRVS Prvonek 6.55 88 *e*Pn **Pn 04 27 36.4 +1.0**
PRVS *e*Sn **Sn 04 28 46.8 -3.0**
VIVF Saint-Julien-l 6.56 293 *e*P **Pn 04 27 38.1 +2.6**
VIVF *e*Sn **Sn 04 28 44.8 -5.3**
comp=N,1.5nm,0.3s
ZAGS Zajecar 6.70 77 *e*Pn **Pn 04 27 37.3 0.0**
BZS Buzias 6.74 61 ⇓P **Pn 04 27 38.8 +0.8**
HINF Hinteralfeld 6.85 321 *e*P **Pn 04 27 40.9 +1.5**
HINF *e*Sn **Sn 04 28 50.7 -6.3**
comp=N,9.5nm,0.4s
BOSS Bosilegrad 6.85 88 *e*Pn **Pn 04 27 40.0 +0.6**
ZAPS Zavoj 6.95 82 *e*Pn **Pn 04 27 41.5 +0.7**
LASF Ste Croix 6.96 285 *e*P **Pn 04 27 42.9 +1.9**
LASF *e*Sn **Sn 04 28 54.1 -5.8**
comp=N,1.0nm,0.4s
BLKB Belogradchik 7.00 79 ⇓P **Pn 04 27 42.8 +1.3**
VRAC Vranov 7.07 18 Pn **Pn 04 27 44.7 +2.2**
comp=N,0.4nm,0.3s,baz=206,slow=12,SNR=1.6
comp=N,1.6nm,0.3s
CDF Champ du Feu 7.11 326 *e*Pn **Pn 04 27 42.4 -0.7**
CDF *e*Sn **Sn 04 28 58.3 -5.4**
comp=N,8.2nm,0.4s
HAU Haudompre 7.22 320 *e*P **Pn 04 27 45.8 +1.3**
HAU *e*Sn **Sn 04 29 00.5 -5.7**
comp=N,17nm,0.4s
VTS Vitosha 7.40 87 ⇑P **Pn 04 27 48.0 +0.9**
KEST Kesra 7.52 205 Pn **Pn 04 27 52.3 +3.6**
comp=N,0.4nm,0.3s,baz=323,slow=5.7,SNR=6.3
comp=N,2.1nm,0.6s
SMF Signal de Mont 7.78 304 *e*P **Pn 04 27 54.6 +2.4**
SMF *e*Sn **Sn 04 29 13.8 -6.3**
comp=N,3.2nm,0.3s
PAGF Fort de Pagny 7.90 321 *e*Pn **Pn 04 27 52.3 -1.5**
PAGF *e*Sn **Sn 04 29 16.6 -6.3**
comp=N,2.6nm,0.3s
LOR Lormes 8.08 308 *e*P **Pn 04 28 00.0 +3.7**
baz=126
LOR *e*Sn **Sn 04 29 19.9 -7.5**
comp=N,0.8nm,0.3s
MTLF Montolieu 8.09 279 *e*P **Pn 04 27 59.6 +3.2**
AVF Avril sur Loir 8.15 304 *e*P **Pn 04 28 00.2 +3.0**
AVF *e*Sn **Sn 04 29 22.4 -6.6**
comp=N,1.6nm,0.3s
SSF Saint Saulge 8.18 306 *e*P **Pn 04 28 01.2 +3.5**
SSF *e*Sn **Sn 04 29 23.4 -6.5**
comp=N,3.2nm,0.5s
BGF Bois d'Agland 8.36 301 *e*P **Pn 04 28 03.3 +3.1**
BGF *e*Sn **Sn 04 29 27.9 -6.4**
comp=N,2.6nm,0.3s
CAF Calviac 8.38 290 *e*P **Pn 04 28 03.4 +3.0**
TCF Toulx Ste Croi 8.67 299 *e*P **Pn 04 28 07.9 +3.5**
TCF *e*Sn **Sn 04 29 34.9 -6.9**
comp=N,1.0nm,0.3s
EPF Esparros 9.46 277 *e*P **Pn 04 28 18.7 +3.4**
MLR Muntele Rosu 9.60 68 Pn **Pn 04 28 20.6 +3.3**
comp=N,0.2nm,0.3s,baz=307,slow=21,SNR=3.7
comp=N,2.2nm,0.6s
ESDC Sonseca Array 13.27 263 Pn **Pn 04 29 08.0 +0.5**
comp=N,0.1nm,0.3s,baz=76,slow=16,SNR=3.0
comp=N,0.2nm,0.6s
HFS Hagfors 17.52 1 Pn **Pn 04 30 03.5 +0.5**
comp=N,0.1nm,0.3s,baz=169,slow=8.7,SNR=2.4
comp=N,0.8nm,0.7s
NOA NORSAR Array B 18.46 357 Pn **P 04 30 14.2 -0.4**
baz=176,slow=12,SNR=3.9
comp=N,0.4nm,0.7s
FINES FINESS Array B 20.35 18 P Pn 04 30 36.5 -0.7
comp=N,1.2nm,0.7s,baz=164,slow=16,SNR=1.4
comp=N,1.2nm,0.7s
TORD Torodi Ar. Bea 31.03 202 P **P 04 32 18.2 +1.5**
comp=N,1.0nm,0.8s,baz=20,slow=8.6,SNR=10
comp=N,1.0nm,0.8s
MKAR Makanchi Array 47.83 60 P **P 04 34 37.5 +1.1**
comp=N,0.5nm,0.7s,baz=320,slow=16,SNR=3.3
comp=N,0.5nm,0.7s
SONM Songino Array 61.89 50 P **P 04 36 21.0 +2.6**
comp=N,0.5nm,0.6s,baz=270,slow=4.3,SNR=2.1
comp=N,0.5nm,0.6s

ROM 24 04:26:10.5±0.2, 43°256N×0°008×11°35E±0°01, h10km±1km, Md1.6/3, Error ellipse: s-maj=0.9km s-min=0.9km az=303.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FROS	**Frosini**	**0.15**	**252**	P	Pg	04 26 14.5	+0.7
FROS				S	Sg	04 26 16.8	+0.7
FROS				END			
CSNT	**Castellina Chi**	**0.22**	**349**	P	Pg	04 26 15.8	+0.7
CSNT				S	Sg	04 26 19.3	+1.1
CSNT				END			
OSSC	**Osservatorio P**	**0.28**	**344**	P	Pb	04 26 16.9	-0.7
OSSC				S	Sb	04 26 21.4	-1.0
TRIF	**Trifonti**	**0.36**	**247**	P	Pg	04 26 18.2	+0.6
TRIF				S	Sg	04 26 23.1	+0.9
TRIF				END			
ARCI	**Arcidosso**	**0.41**	**167**	P	Pb	04 26 19.3	-0.7
ARCI				S	Sg	04 26 24.7	+0.6
SACS	**San Casciano d**	**0.58**	**134**	P	Pg	04 26 21.2	-0.5
CASP	**Castiglione de**	**0.58**	**218**	P	Pb	04 26 22.9	+0.1
CASP				S	Sg	04 26 30.2	+0.8
MGAB	**Montegabbione**	**0.66**	**121**	P	Pg	04 26 22.7	-0.5
CELB	**S.Piero in Cam**	**0.98**	**239**	P	Pb	04 26 29.9	+0.4

ROM 24 04:26:47.8±0.1, 42°770N×0°003×13°167E±0°006, h9km, ML3.5/16, 13C-8D, Error ellipse: s-maj=0.3km s-min=0.3km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**329**	P	Pg	04 26 50.5	+0.4
NRCA				S	Sg	04 26 52.0	+0.3
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.21**	**336**	P	Pg	04 26 52.7	+0.5
FEMA				S	Sg	04 26 56.2	+1.0
FEMA				AML	AML		
	comp=N,23350µm,0.6s						
FEMA				AML	AML		
	comp=E,34150µm,0.3s						
FEMA				AML	AML		
	comp=N,23400µm,0.6s						
RM33	**Pellescritta (**	**0.26**	**172**	P	Pg	04 26 53.8	+0.6
RM33				S	Sb	04 26 58.2	-1.2
RM33				AML	AML		
	comp=E,11600µm,0.4s						
RM33				AML	AML		
	comp=N,10175µm,0.2s						
RM33				AML	AML		
	comp=E,11570µm,0.4s						
RM33				AML	AML		
	comp=N,10350µm,0.2s						
RM33				AML	AML		
	comp=E,11625µm,0.4s						
RM33				AML	AML		
	comp=E,11535µm,0.4s						
RM33				AML	AML		
	comp=N,10400µm,0.2s						
RM33				AML	AML		
	comp=N,10200µm,0.2s						
RM33				AML	AML		
	comp=E,11525µm,0.4s						
RM33				AML	AML		
	comp=E,11610µm,0.4s						
FDMO	**Fiordimonte**	**0.27**	**348**	P	Pg	04 26 53.7	+0.4
FDMO				S	Sg	04 26 58.2	+1.2
FDMO				AML	AML		
	comp=N,7550µm,0.2s						
FDMO				AML	AML		
	comp=E,9345µm,0.2s						
CAMP	**Campotosto**	**0.29**	**143**	⇑P	Pg	04 26 54.2	+0.5
CAMP				S	Sg	04 26 58.8	+1.1
CAMP				AML	AML		
	comp=E,8775µm,0.2s						
CAMP				AML	AML		
	comp=N,4645µm,0.6s						
CESI	**CESI - Serrava**	**0.30**	**321**	⇑P	Pg	04 26 54.4	+0.5
CESI				S	Sg	04 26 59.1	+1.2
CESI				AML	AML		
	comp=N,24250µm,0.6s						
CESI				AML	AML		
	comp=E,16350µm,0.3s						
CSP1	**Cessapalombo**	**0.32**	**5**	P	Pg	04 26 54.7	+0.4
ARRO	**Arrone**	**0.35**	**237**	P	Pg	04 26 55.1	+0.4
ARRO				S	Sb	04 27 00.8	-1.0
ARRO				AML	AML		
	comp=N,7450µm,0.1s						
ARRO				AML	AML		
	comp=E,8695µm,0.2s						
TERO	**Teramo**	**0.35**	**114**	P	Pg	04 26 55.0	+0.2
TERO				S	Sb	04 27 00.7	-1.2
TERO				AML	AML		
	comp=E,6915µm,0.6s						
TERO				AML	AML		
	comp=N,6035µm,1.4s						
TERO				AML	AML		
	comp=N,6620µm,0.3s						
TERO				AML	AML		
	comp=E,7235µm,0.6s						
SEF1	**Sefro**	**0.41**	**337**	P	Pg	04 26 56.1	+0.2
SEF1				S	Sb	04 27 02.8	-0.8
SEF1				AML	AML		
	comp=E,14850µm,0.2s						
SEF1				AML	AML		
	comp=N,12150µm,0.2s						
SEF1				AML	AML		
	comp=E,14900µm,0.2s						
SEF1				AML	AML		
	comp=N,12100µm,0.2s						
SEF1				AML	AML		
	comp=E,14850µm,0.2s						
OFFI	**Offida**	**0.42**	**66**	P	Pb	04 26 56.9	-0.4
OFFI				AML	AML		
	comp=E,9560µm,0.6s						
OFFI				AML	AML		
	comp=N,15100µm,0.6s						
MDAR	**Monte D'Aria**	**0.42**	**358**	P	Pg	04 26 56.4	+0.3
MDAR				AML	AML		
	comp=E,4135µm,0.2s						
MDAR				AML	AML		
	comp=N,4080µm,0.5s						
MNTP	**Montappone**	**0.43**	**31**	P	Pb	04 26 57.2	-0.3
PIO1	**Pioraco**	**0.43**	**342**	P	Pg	04 26 56.4	+0.2
PIO1				S	Sb	04 27 03.4	-0.7
AQU	**L'Aquila**	**0.45**	**157**	⇑P	Pb	04 26 57.6	-0.3
FIU1	**Fiuminata**	**0.45**	**338**	⇑P	Pg	04 26 56.8	+0.2
SSM1	**San Severino M**	**0.46**	**1**	P	Pg	04 26 57.0	+0.2
CESX	**Cesi**	**0.46**	**250**	P	Pg	04 26 56.9	+0.1
CESX				AML	AML		
	comp=N,5250µm,0.5s						
CESX				AML	AML		
	comp=E,4370µm,0.4s						
ASSB	**Assisi San Ben**	**0.46**	**306**	P	Pg	04 26 56.9	+0.1
GAG1	**Gagliole**	**0.47**	**351**	⇑P	Pg	04 26 57.4	+0.4
GAG1				AML	AML		
	comp=E,11200µm,1.0s						
GAG1				AML	AML		
	comp=N,9645µm,0.7s						
GAG1				AML	AML		
	comp=E,11250µm,1.0s						
GAG1				AML	AML		
	comp=N,9665µm,0.7s						
MTL1	**Matelica**	**0.50**	**347**	⇓P	Pg	04 26 57.9	+0.4
FIAM	**Fiamignano**	**0.50**	**184**	P	Pg	04 26 57.7	+0.1
FIAM				S	Sb	04 27 06.0	-0.3
SNTG	**Esanatoglia**	**0.51**	**341**	P	Pg	04 26 57.9	+0.2
SNTG				S	Sb	04 27 06.4	-0.2
TRE1	**Treia**	**0.55**	**11**	P	Pb	04 26 59.3	-0.3
TRTR	**Tortoreto Alta**	**0.55**	**86**	P	Pb	04 26 59.8	+0.2
EL6	**Elcito**	**0.56**	**355**	⇑P	Pg	04 26 58.9	+0.1
ATCC	**AVT- Casa Cast**	**0.57**	**317**	P	Pg	04 26 59.0	+0.2
ATCC				AML	AML		
	comp=N,6560µm,0.2s						
ATCC				AML	AML		
	comp=E,6515µm,0.9s						
FAGN	**Fagnano**	**0.59**	**148**	P	Pb	04 26 60.0	-0.3
FOSV	**Fossato di Vic**	**0.60**	**331**	P	Pg	04 26 59.6	+0.1
FOSV				S	Sb	04 27 09.0	-0.1
FOSV				AML	AML		
	comp=E,2490µm,0.3s						
FOSV				AML	AML		
	comp=N,2845µm,0.3s						
CING	**Cingoli**	**0.61**	**2**	P	Pg	04 26 59.6	0.0
VCEL	**Villa Celiera**	**0.62**	**127**	⇑P	Pb	04 27 00.5	-0.4
MURB	**Monte Urbino**	**0.68**	**317**	⇓P	Pg	04 27 01.1	+0.1
MURB				AML	AML		
	comp=N,9885µm,0.3s						
MURB				AML	AML		
	comp=E,10675µm,0.3s						
MURB				AML	AML		
	comp=E,9685µm,0.3s						
MURB				AML	AML		
	comp=N,9875µm,0.3s						
MURB				AML	AML		
	comp=N,9995µm,0.4s						
MURB				AML	AML		
	comp=E,10680µm,0.3s						
MMUR	**Monte Murano**	**0.68**	**350**	P	Pg	04 27 01.0	0.0
PP3	**Marolino**	**0.69**	**28**	P	Pb	04 27 01.7	-0.3
PP3				AML	AML		
	comp=E,10810µm,0.7s						
PP3				AML	AML		
	comp=E,11370µm,0.4s						
PP3				AML	AML		
	comp=N,12350µm,0.4s						
PP3				AML	AML		
	comp=E,10795µm,0.7s						
PP3				AML	AML		
	comp=E,11340µm,0.4s						
PP3				AML	AML		
	comp=N,12400µm,0.4s						
PP3				AML	AML		
	comp=N,11800µm,0.4s						
T0110	**Collepietro**	**0.71**	**140**	P	Pg	04 27 01.1	-0.3
SRES	**S.Oreste - Sor**	**0.72**	**223**	⇓P	Pg	04 27 02.0	+0.4
SSFR	**Montelago di S**	**0.72**	**337**	P	Pb	04 27 02.6	0.0
ATTE	**AVT- Monte Tez**	**0.73**	**306**	P	Pg	04 27 02.4	+0.4
ATFO	**Monte Foce - G**	**0.74**	**324**	⇓P	Pg	04 27 02.3	+0.3
ARVD	**Arcevia**	**0.75**	**347**	⇑P	Pg	04 27 02.1	-0.1
PTQR	**Pietraquaria**	**0.77**	**167**	P	Pg	04 27 02.6	+0.1
MGAB	**Montegabbione**	**0.79**	**281**	⇓P	Pb	04 27 03.4	-0.2
MGAB				AML	AML		
	comp=E,4610µm,0.5s						
MGAB				AML	AML		
	comp=N,5455µm,0.4s						
MTCE	**Montecelio**	**0.81**	**203**	P	Pg	04 27 03.3	-0.1
FRON	**Frontone**	**0.81**	**337**	⇓P	Pg	04 27 03.4	-0.1
ATVO	**AVT- Monte Val**	**0.83**	**318**	⇑P	Pg	04 27 03.6	-0.1
CERT	**Cerreto**	**0.83**	**190**	P	Pg	04 27 03.9	+0.1
AOI	**Ancona**	**0.84**	**22**	P	Pb	04 27 04.5	0.0
ATMI	**Monte Miggiano**	**0.87**	**311**	P	Pb	04 27 05.0	0.0
ATPI	**Pietralunga -**	**0.88**	**321**	P	Pg	04 27 04.6	-0.2
PIEI	**Pieia**	**0.89**	**329**	⇓P	Pg	04 27 05.2	+0.2
MPAG	**Monte Paganucc**	**0.91**	**341**	P	Pg	04 27 05.3	0.0
SACS	**San Casciano d**	**0.93**	**275**	⇑P	Pg	04 27 05.7	0.0
RCAV	**Rocca di Cave**	**0.94**	**190**	P	Pg	04 27 06.0	+0.2
NARO	**Abbazia di Nar**	**0.94**	**333**	⇑P	Pg	04 27 05.6	-0.4
APEC	**Apecchio**	**0.96**	**326**	P	Pg	04 27 05.2	-1.0
VVLD	**Villa Vallelon**	**0.96**	**159**	P	Pg	04 27 06.2	0.0
FSSB	**Fossombrone**	**0.96**	**343**	⇑P	Pg	04 27 06.5	+0.1
BADI	**Badiali**	**1.00**	**318**	P	Pg	04 27 06.9	-0.1
RMP	**Rome, Mte Porz**	**1.02**	**200**	P	Pg	04 27 07.3	0.0
CAFI	**Castiglion Fio**	**1.04**	**303**	P	Pg	04 27 07.6	-0.2
LPEL	**Lama dei Pelig**	**1.04**	**133**	P	Pg	04 27 07.1	-0.7
MCIV	**Monte Civitell**	**1.10**	**271**	P	Pg	04 27 08.4	-0.4
SF04	**Casetta**	**1.11**	**274**	P	Pg	04 27 08.6	-0.5
TOLF	**Tolfa**	**1.11**	**231**	P	Pg	04 27 08.8	-0.4
CPGN	**Carpegna, Ital**	**1.20**	**329**	P	Pb	04 27 10.3	-0.5
GIUL	**Giulino Di Ro**	**1.21**	**177**	P	Pb	04 27 10.2	-0.7
RUFI	**Rufina**	**1.61**	**312**	S	Sn	04 27 37.0	-0.3
TRIF	**Trifonti**	**1.70**	**282**	⇑P	Pn	04 27 18.2	+0.7
NDIM	**Novi di Modena**	**2.68**	**323**	⇓P	Pb	04 27 35.3	-0.5

*IDC **24** 04:27:22.7±0.5, 0°74N×29°94W, h0km, mb4.3/26, mbtmp4.4/28, ML5.2/2, MS4.1/19, Error ellipse: s-maj=20.2km s-min=10.0km az=143.0*
*NEIC **24** 04:27:25.0±1.1, 0°72N±0°02×29°9W±0°1, h10km±1km, mb4.8/88, Error ellipse: s-maj=17.4km s-min=4.4km az=91.0*
*GCMT **24** 04:27:26.0±0.4, 0°76N±0°02×29°96W±0°02, h26km±1km, MW5.0/78, Moment Tensor Solution. s15,c16; s78,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.31±.22; $M_{\theta\theta}$1.50±.23; $M_{\phi\phi}$-1.19±.21; $M_{r\theta}$-2.07±.38; $M_{\theta\phi}$-3.41±.16; $M_{\phi r}$0.74±.33; Best double couple: M_o4.17500×10^{16} NP1:ϕ_s352.00000°, δ65.00000°, λ9.00000°. Principal axes: T 4.7250, Plg23.0000°, Azm213.0000°; N -1.1030, Plg64.0000°, Azm62.0000°; P -3.6250, Plg12.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 04:27:24.2±0.4, 0°75N±0°08×29°95W±0°07, h10km, n186, o0°77/172, mb4.8/69, MS4.1/17, 3C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**8.83**	**222**	Pn	**Pn**	**04 29 30.8**	**-1.2**
	15nm,0.3s,baz=166,slow=14,SNR=95						
RCBR				Sn	Sn	04 31 02.6	-9.1
	2.7nm,0.3s,baz=97,slow=20,SNR=1.4						
RCBR				LR	LR	04 32 22.3	
	comp=Z,1µm,19.4s,baz=248,slow=34 47nm,0.5s						
RCBR	**Riachuelo**	**8.83**	**222**	*e*P	**Pn**	**04 29 30.6**	**-1.5**
NBAN	**Anadia - AL**	**12.11**	**211**	*e*P	**Pn**	**04 30 16.1**	**-0.9**
ROSB	**Rosrio**	**14.62**	**256**	*e*P	**Pn**	**04 30 49.9**	**-1.5**
SACV	**Santiago Islan**	**15.46**	**24**	P	**Pn**	**04 31 01.2**	**-1.4**
GDU01	**Guandu, BA**	**17.25**	**213**	*e*P	**Pn**	**04 31 25.2**	**-0.2**
H10N3	**ASCENSION HYDR**	**17.61**	**119**	T	T	04 49 29.6	
	baz=298,slow=74,SNR=785						
H10N2	**ASCENSION HYDR**	**17.62**	**119**	T	T	04 49 30.1	
	baz=298,slow=74,SNR=643						
H10N1	**ASCENSION HYDR**	**17.63**	**119**	T	T	04 49 31.2	
	baz=298,slow=74,SNR=877						
H10S3	**ASCENSION HYDR**	**18.02**	**123**	T	T	04 50 02.7	
	baz=292,slow=74						
H10S2	**ASCENSION HYDR**	**18.04**	**123**	T	T	04 50 02.4	
	baz=288,slow=74						
TMAB	**Tom-Au,PA,Br**	**18.40**	**260**	*e*P	**Pn**	**04 31 40.1**	**+0.4**
CMC01	**Camacan, BA**	**18.59**	**210**	*e*P	**Pn**	**04 31 43.6**	**+1.7**
BBTS	**Babate**	**19.16**	**43**	P	**P**	**04 31 48.3**	**+0.3**
	11nm,0.3s,baz=98,slow=4.0,SNR=13						
BBTS				LR	LR	04 37 18.7	
	comp=Z,640nm,21.0s,baz=197,slow=31 57nm,0.9s						
SDBA	**SAO DESIDERIO**	**19.77**	**228**	*e*P	**Pn**	**04 31 55.8**	**-0.5**
SMTB	**Santa Maria do**	**20.00**	**241**	*e*P	**P**	**04 31 57.4**	**+0.2**
PRPB	**Paraupebas**	**20.98**	**251**	*e*P	**P**	**04 32 07.3**	**-0.6**
NAN01	**Guarapari, ES**	**21.01**	**208**	*e*P	**P**	**04 32 09.9**	**+1.7**
JANB	**Januaria**	**21.17**	**222**	*e*P	**P**	**04 32 09.7**	**-0.3**
MC01	**Montes Claros**	**22.16**	**218**	*e*P	**P**	**04 32 20.9**	**+0.3**
MDP	**Montagnes des**	**23.06**	**281**	P	**P**	**04 32 30.7**	**+0.5**
	8.2nm,1.1s,baz=89,slow=12,SNR=3.6 8.2nm,1.1s						
DIAM	**Diamantina, MG**	**23.24**	**215**	*e*P	**P**	**04 32 32.7**	**+0.6**
BDFB	**Brasilia**	**24.16**	**227**	P	**P**	**04 32 40.4**	**-0.5**
	11nm,0.8s,baz=56,slow=6.6,SNR=16						
BDFB				LR	LR	04 41 38.4	
	comp=Z,674nm,18.1s,baz=93,slow=35 11nm,0.8s						
BDFB	**Brasilia**	**24.16**	**227**	P	**P**	**04 32 40.7**	**-0.2**
BDFB				IAmb	IAmb	04 32 43.0	
	comp=Z,23nm,1.1s						
BDFB	**Brasilia**	**24.16**	**227**	*e*P	**P**	**04 32 41.7**	**+0.8**
MALB	**Monte Alegre**	**24.45**	**264**	*e*P	**P**	**04 32 43.5**	**0.0**
SNDB	**Serra Nova Dou**	**24.68**	**239**	*e*P	**P**	**04 32 46.2**	**+0.6**
PMNB	**Patos De Minas**	**25.10**	**219**	*e*P	**P**	**04 32 50.5**	**+1.1**
LIC	**Lamto**	**25.46**	**77⇑**	*e*P	**P**	**04 32 51.2**	**-1.5**
	comp=Z,112nm,0.9s						
TIC	**Toumodi**	**25.55**	**76⇑**	*e*P	**P**	**04 32 52.4**	**-1.2**
	comp=Z,21nm,0.9s						
DBIC	**Dimbokro**	**25.71**	**76**	P	**P**	**04 32 54.9**	**-0.1**
	comp=Z,36nm,0.7s,baz=271,slow=10,SNR=47 comp=Z,36nm,0.7s						
DBIC	**Dimbokro**	**25.71**	**76**	P	**P**	**04 32 55.7**	**+0.7**
KIC	**Kosan Boka**	**25.76**	**77⇑**	*e*P	**P**	**04 32 54.2**	**-1.3**
	comp=Z,28nm,0.9s						
IPMB	**Ipameri, GO**	**25.87**	**223**	*e*P	**P**	**04 32 57.5**	**+1.1**
ITTB	**Itaituba**	**26.26**	**259**	*e*P	**P**	**04 32 59.5**	**-0.4**
NPGB	**Novo Progresso**	**26.50**	**253**	*e*P	**P**	**04 33 02.0**	**-0.2**
CLDB	**Colider**	**28.17**	**245**	*e*P	**P**	**04 33 16.3**	**-0.9**
KOWA	**Kowa**	**29.05**	**61**	P	**P**	**04 33 24.8**	**-0.2**
KOWA				IAmb	IAmb	04 33 33.4	
	comp=Z,48nm,2.0s						
PDRB	**Porto dos Gac**	**29.30**	**244**	*e*P	**P**	**04 33 26.6**	**-0.6**
SALV	**Santo Antonio**	**30.33**	**236**	*e*P	**P**	**04 33 35.6**	**-0.7**
BOAV	**Boa Vista**	**30.60**	**273**	P	**P**	**04 33 38.8**	**+0.1**
BOAV				IAmb	IAmb	04 33 43.8	
	comp=Z,8.6nm,1.2s						
BOAV	**Boa Vista**	**30.60**	**273**	*e*P	**P**	**04 33 38.9**	**+0.1**
MACA	**Manacapuru-AM**	**30.96**	**263**	P	**P**	**04 33 42.2**	**+0.3**
MACA				IAmb	IAmb	04 33 43.2	
	comp=Z,18nm,1.2s						
MACA	**Manacapuru-AM**	**30.96**	**263**	*e*P	**P**	**04 33 42.6**	**+0.7**
RVDE	**Rio Verde (Bra**	**31.43**	**230**	*e*P	**P**	**04 33 46.2**	**+0.1**
AQDB	**Aquidauana**	**32.87**	**229**	P	**P**	**04 33 58.0**	**-0.6**
AQDB				IAmb	IAmb	04 34 00.3	
	comp=Z,25nm,1.6s						
AQDB	**Aquidauana**	**32.87**	**229**	*e*P	**P**	**04 33 59.1**	**+0.5**
VILB	**Vilhena**	**32.94**	**245**	*e*P	**P**	**04 33 59.9**	**+0.5**
PTLB	**Pontes e Lacer**	**33.03**	**240**	P	**P**	**04 34 00.5**	**+0.5**
PTLB				IAmb	IAmb	04 34 01.7	
	comp=Z,13nm,1.0s						
PTLB	**Pontes e Lacer**	**33.03**	**240**	*e*P	**P**	**04 34 01.0**	**+1.0**
PTGB	**Pitanga**	**33.16**	**219**	*e*P	**P**	**04 34 02.4**	**+1.1**
H05S1	**Guadeloupe/Mar**	**33.42**	**295**	T	T	05 08 55.5	
	SNR=106						
TOA0	**Torodi Ar. Sit**	**33.68**	**67**	P	**P**	**04 34 04.5**	**-1.3**
TOA0				IAmb	IAmb	04 34 06.0	
	comp=Z,25nm,1.9s						
TORD	**Torodi Ar. Bea**	**33.68**	**67**	P	**P**	**04 34 04.8**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=256,slow=8.7,SNR=14 comp=Z,2.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**33.68**	**67**	P	**P**	**04 34 04.9**	**-0.9**
ANTJ	**Antonio Joao (**	**34.02**	**227**	*e*P	**P**	**04 34 09.9**	**+1.2**
SIV	**San Ignacio**	**34.94**	**240**	P	**P**	**04 34 16.9**	**+0.2**
	comp=Z,11nm,0.8s,baz=85,slow=9.1,SNR=42						
SIV				LR	LR	04 48 12.3	
	comp=Z,816nm,18.8s,baz=80,slow=36 comp=Z,11nm,0.8s						
ITAB	**Concordia**	**35.06**	**216**	*e*P	**P**	**04 34 18.6**	**+1.1**
ETMB	**Extrema**	**37.59**	**253**	P	**P**	**04 34 39.5**	**+0.1**
ETMB				IAmb	IAmb	04 34 40.6	
	comp=Z,7.5nm,0.8s						
ETMB	**Extrema**	**37.59**	**253**	*e*P	**P**	**04 34 39.8**	**+0.5**
CPUP	**Villa Florida**	**37.71**	**222**	P	**P**	**04 34 40.6**	**+0.4**
	comp=Z,7.9nm,0.9s,baz=49,slow=7.5,SNR=12						
CPUP				LR	LR	04 49 54.6	
	comp=Z,566nm,19.0s,baz=58,slow=36 comp=Z,7.9nm,0.9s						
CPUP	**Villa Florida**	**37.71**	**222**	P	**P**	**04 34 40.1**	**-0.1**
CPUP				IAmb	IAmb	04 34 42.0	
	comp=Z,14nm,1.1s						
CPUP	**Villa Florida**	**37.71**	**222**	*e*P	**P**	**04 34 41.1**	**+0.9**
RODS	**Rosario do Sul**	**39.16**	**216**	*e*P	**P**	**04 34 53.1**	**+0.7**
PLTB	**Pedras Altas**	**39.34**	**213**	P	**P**	**04 34 54.1**	**+0.3**
PLTB	**Pedras Altas**	**39.34**	**213**	*e*P	**P**	**04 34 54.6**	**+0.7**
ITQB	**Itaqui**	**39.53**	**218**	P	**P**	**04 34 55.5**	**0.0**
ITQB				IAmb	IAmb	04 34 57.2	
	comp=Z,21nm,1.0s						
ITQB	**Itaqui**	**39.53**	**218**	*e*P	**P**	**04 34 56.4**	**+0.9**
MDT	**Midelt**	**39.83**	**34**	P	**P**	**04 34 59.0**	**+0.9**
	comp=Z,5.3nm,0.8s,baz=260,slow=5.6,SNR=11 comp=Z,5.3nm,0.8s						
SDV	**Santo Domingo**	**41.30**	**283**	*e*P	**P**	**04 35 11.2**	**+0.6**
LPAZ	**La Paz**	**41.30**	**244**	P	**P**	**04 35 12.1**	**+1.1**
	comp=Z,11nm,0.7s,baz=97,slow=2.8,SNR=49						
LPAZ				LR	LR	04 51 08.3	
	comp=Z,252nm,21.1s,baz=72,slow=34 comp=Z,11nm,0.7s						
LPAZ	**La Paz**	**41.30**	**244**	P	**P**	**04 35 10.6**	**-0.4**
LPAZ				IAmb	IAmb	04 35 13.6	
	comp=Z,16nm,0.8s						
LPAZ	**La Paz**	**41.30**	**244**	*e*P	**P**	**04 35 11.5**	**+0.5**
LPAZ	**La Paz**	**41.30**	**244**	*e*P	**P**	**04 35 12.2**	**+1.1**
PB16	**IPOC Station P**	**43.26**	**242**	P	**P**	**04 35 25.9**	**-1.1**
PB16				IAmb	IAmb	04 35 27.4	
	comp=Z,17nm,1.3s						
RUSC	**La Rusia**	**43.34**	**278**	*e*P	**P**	**04 35 30.1**	**+2.4**
CZSB	**Cruzeiro do Su**	**43.45**	**258**	P	**P**	**04 35 27.1**	**-0.9**
CZSB				IAmb	IAmb	04 35 28.4	
	comp=Z,20nm,1.0s						
CZSB	**Cruzeiro do Su**	**43.45**	**258**	*e*P	**P**	**04 35 27.6**	**-0.4**
GO01	**Chusmiza**	**43.49**	**240**	P	**P**	**04 35 27.2**	**-1.5**
SPBC	**San Pablo de B**	**44.30**	**277**	*e*P	**P**	**04 35 34.6**	**-0.3**
PB09	**IPOC Station P**	**44.40**	**237**	P	**P**	**04 35 35.0**	**-0.6**
PB09				IAmb	IAmb	04 35 36.0	
	comp=Z,40nm,1.6s						
LVC	**Limon Verde**	**44.47**	**236**	P	**P**	**04 35 35.8**	**-0.6**
	comp=Z,4.9nm,0.8s,baz=34,slow=6.3,SNR=5.2						
LVC				LR	LR	04 54 52.5	
	comp=Z,177nm,20.5s,baz=62,slow=37 comp=Z,4.9nm,0.8s						
LVC	**Limon Verde**	**44.47**	**236**	*e*P	**P**	**04 35 35.8**	**-0.6**
ROSC	**El Rosal**	**44.49**	**276**	P	**P**	**04 35 38.0**	**+1.3**
	comp=Z,3.9nm,0.3s,baz=153,slow=12,SNR=4.7 comp=Z,3.9nm,0.3s						
PB02	**IPOC Station P**	**44.76**	**238**	P	**P**	**04 35 37.8**	**-0.6**
PTBC	**PUERTO BERRIO,**	**44.76**	**278**	*e*P	**P**	**04 35 37.2**	**-1.2**
PB07	**IPOC Station P**	**44.91**	**238**	P	**P**	**04 35 38.5**	**-1.2**
PB07				IAmb	IAmb	04 35 39.9	
	comp=Z,14nm,0.7s						
PB06	**IPOC Station P**	**45.07**	**236**	P	**P**	**04 35 40.7**	**-0.3**
PB06				IAmb	IAmb	04 35 41.4	
	comp=Z,22nm,1.0s						
NORC	**Norcasia**	**45.09**	**277**	*e*P	**P**	**04 35 39.8**	**-1.3**
PB15	**IPOC Station P**	**45.20**	**236**	P	**P**	**04 35 41.6**	**-0.5**
PB04	**IPOC Station P**	**45.39**	**237**	P	**P**	**04 35 43.4**	**-0.2**
ESDC	**Sonseca Array**	**45.42**	**28**	P	**P**	**04 35 43.7**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=224,slow=8.9,SNR=24 comp=Z,4.2nm,0.9s						
ESDC	**Sonseca Array**	**45.42**	**28**	P	**P**	**04 35 44.3**	**+0.9**
GUY2C	**Guyana, Caldas**	**45.55**	**277**	*e*P	**P**	**04 35 44.3**	**-1.0**
FLOC	**Florencia**	**45.70**	**271**	*e*P	**P**	**04 35 43.1**	**-2.8**
GO02	**Mina Guanaco**	**46.18**	**233**	P	**P**	**04 35 49.7**	**-0.2**
CBOC	**Ciudad Bolivar**	**46.24**	**277**	*e*P	**P**	**04 35 49.8**	**-0.6**
PLMC	**San Jos del P**	**46.45**	**276**	*e*P	**P**	**04 35 51.3**	**-0.6**
PB14	**IPOC Station P**	**46.60**	**234**	P	**P**	**04 35 52.4**	**-0.8**
PB14				IAmb	IAmb	04 35 54.3	
	comp=Z,14nm,1.1s						
AC02	**Maricunga**	**46.62**	**231**	P	**P**	**04 35 53.3**

comp=Z,15nm,0.9s
MT09 Talagante 51.60 224 P **P** **04 36 31.0 -0.2**
MT01 Popeta 51.84 224 P **P** **04 36 32.3 -0.5**
MT01 IAmb IAmb 04 36 32.8
comp=Z,11nm,0.9s
BO02 Sierra Bellavi 52.02 223 P **P** **04 36 33.3 -1.0**
BO02 IAmb IAmb 04 36 35.3
comp=Z,14nm,0.8s
ML02 Panimavida 52.99 222 P **P** **04 36 41.4 0.0**
GO06 Curarrehue 55.22 219 P **P** **04 36 58.0 +0.2**
GO06 IAmb IAmb 04 36 59.0
comp=Z,15nm,0.8s
PLCA Paso Flores 55.35 217 P **P** **04 36 58.4 -0.2**
comp=Z,1.6nm,0.8s,baz=42,slow=13,SNR=4.1
PLCA LR LR 05 00 30.5
comp=Z,126nm,19.7s,baz=54,slow=36
comp=Z,1.6nm,0.8s
PLCA Paso Flores 55.35 217 *e*P **P** **04 36 59.4 +0.9**
LL04 Puerto Octay 56.58 218 P **P** **04 37 07.1 -0.2**
LL04 IAmb IAmb 04 37 07.8
comp=Z,10nm,1.1s
LL02 Futaleuf 57.62 215 P **P** **04 37 14.9 +0.3**
SUR Sutherland 58.11 129 LR LR 04 56 29.8
comp=Z,154nm,21.9s,baz=259,slow=30
EKA Eskdalemuir Ar 58.63 18 P **P** **04 37 21.4 0.0**
comp=Z,0.9nm,0.8s,baz=206,slow=6.3,SNR=2.6
comp=Z,0.9nm,0.8s
BOSA Boshof 60.30 124 P **P** **04 37 33.6 0.0**
comp=Z,6.3nm,0.9s,baz=294,slow=8.1,SNR=6.9
BOSA LR LR 04 58 29.7
comp=Z,127nm,19.3s,baz=306,slow=31
comp=Z,6.3nm,0.9s
TKL Tuckaleechee C 60.78 311 LR LR 04 57 50.2
comp=Z,103nm,21.4s,baz=88,slow=30
GERES GERESS Array B 60.82 31 P **P** **04 37 37.0 +0.2**
comp=Z,2.7nm,0.8s,baz=210,slow=7.7,SNR=5.0
comp=Z,2.7nm,0.8s
SADO Sadowa 61.67 322 LR LR 05 00 07.2
comp=Z,125nm,21.3s,baz=38,slow=32
HALT Halls 65.11 310 P **P** **04 38 07.1 +1.6**
MLR Muntele Rosu 66.20 40 P **P** **04 38 12.9 +0.4**
comp=Z,6.5nm,1.0s,baz=279,slow=11,SNR=3.9
comp=Z,6.5nm,1.0s
KMBO Kilima Mbogo 67.23 92 LR LR 05 03 13.1
comp=Z,153nm,21.3s,baz=264,slow=32
NB2 NORSAR Subarra 67.81 20 P **P** **04 38 22.5 +0.2**
comp=Z,12nm,1.7s,baz=226,slow=6.5
NOA NORSAR Array B 67.81 20 P **P** **04 38 22.4 0.0**
comp=Z,1.0nm,0.8s,baz=225,slow=6.1,SNR=5.7
comp=Z,1.0nm,0.8s
HFS Hagfors 68.08 22 P **P** **04 38 25.4 +1.5**
comp=Z,0.7nm,0.6s,baz=251,slow=4.4,SNR=1.6
comp=Z,0.7nm,0.6s
BRTR Keskin Array B 69.44 48 P **P** **04 38 32.7 -0.4**
comp=Z,1.7nm,0.9s,baz=193,slow=5.1,SNR=4.6
comp=Z,1.7nm,0.9s
AKASG Malin Array Be 70.38 35 P **P** **04 38 38.0 -0.4**
comp=Z,2.6nm,0.7s,baz=245,slow=6.3,SNR=9.9
comp=Z,2.6nm,0.7s
AKBB Malin Array Si 70.38 35 P **P** **04 38 38.7 +0.3**
AKBB IAmb IAmb 04 38 46.8
comp=Z,12nm,1.4s
SPMN Marine on St. 70.64 318 P **P** **04 38 39.2 -0.9**
SPMN IAmb IAmb 04 38 39.6
comp=Z,8.5nm,0.7s
JCT Junction City 72.31 302 P **P** **04 38 50.1 -0.5**
JCT IAmb IAmb 04 39 06.3
comp=Z,5.3nm,0.8s
SMAI San Martin Ant 73.34 194 P **P** **04 38 56.8 +1.0**
SMAI IAmb IAmb 04 38 58.9
comp=Z,14nm,1.6s
FINES FINESS Array B 73.75 25 P **P** **04 38 58.2 -0.2**
comp=Z,2.3nm,0.9s,baz=267,slow=2.8,SNR=1.9
comp=Z,2.3nm,0.9s
ULM Lac du Bonnet 74.23 322 P **P** **04 39 00.1 -1.4**
comp=Z,4.0nm,0.9s,baz=112,slow=9.4,SNR=3.1
comp=Z,4.0nm,0.9s
MSTX Muleshoe 75.37 305 P **P** **04 39 08.6 +0.1**
TX32 Lajitas Array 75.45 300 P **P** **04 39 09.1 0.0**
TX32 IAmb IAmb 04 39 29.6
comp=Z,12nm,1.8s
TXAR Lajitas Array 75.45 300 P **P** **04 39 08.9 -0.2**
comp=Z,1.0nm,0.8s,baz=128,slow=7.8,SNR=17
comp=Z,1.0nm,0.8s
TX31 Lajitas Ar. Si 75.46 300 P **P** **04 39 09.1 -0.1**
KSCO Kaye Shedlock' 76.11 310 P **P** **04 39 13.2 +0.5**
KSCO IAmb IAmb 04 39 13.9
comp=Z,14nm,0.8s
MNTX Cornudas Mount 77.22 302 P **P** **04 39 18.1 -0.9**
SDCO Great Sand Dun 78.13 308 P **P** **04 39 24.3 0.0**
ANMO Albuquerque 78.52 305 LR LR 05 10 40.4
comp=Z,90nm,20.0s,baz=40,slow=33
SMCO Snowmass 79.47 310 P **P** **04 39 31.5 -0.3**
LAO LASA Array 80.05 317 P **P** **04 39 35.1 +0.7**
LAO IAmb IAmb 04 39 36.0
comp=Z,10nm,0.9s
O20A White River Ci 80.57 310 P **P** **04 39 37.8 +0.4**
PV13 Radium Mtn., P 80.78 308 P **P** **04 39 38.9 +0.2**
PDAR Pinedale Array 81.86 313 P **P** **04 39 43.8 -0.6**
comp=Z,0.8nm,0.6s,baz=80,slow=6.1,SNR=11
PDAR LR LR 05 13 13.9
comp=Z,70nm,19.9s,baz=83,slow=34
comp=Z,0.8nm,0.6s
P18A Preston Nutter 82.04 310 P **P** **04 39 45.9 +0.5**
P18A IAmb IAmb 04 40 05.3
comp=Z,8.5nm,1.3s
SRU San Rafael Swe 82.21 309 P **P** **04 39 46.5 +0.3**
WUAZ Wupatki 82.58 306 P **P** **04 39 48.6 +0.4**
WUAZ IAmb IAmb 04 40 08.7
comp=Z,6.1nm,1.1s
LOHW Long Hollow 82.71 314 P **P** **04 39 49.2 +0.5**
HWUT Hardware Ranch 83.23 312 P **P** **04 39 51.0 -0.4**
HWUT IAmb IAmb 04 39 52.1
comp=Z,5.6nm,0.8s
U15A North Rim 83.39 306 P **P** **04 39 52.5 0.0**
MSU Marysvale 83.45 309 P **P** **04 39 52.9 +0.3**
MVU Marysvale 83.47 309 P **P** **04 39 53.9 +1.1**
KIRV Kirov 83.82 31 LR LR 05 15 52.7
comp=Z,177nm,19.4s,baz=249,slow=35
CCUT Cedar City 84.32 307 P **P** **04 39 57.6 +0.5**
CCUT IAmb IAmb 04 40 17.5
comp=Z,6.1nm,1.4s
PSUT Pine Spring 84.76 308 P **P** **04 39 59.0 -0.3**
EDM Edmonton 85.44 323 P **P** **04 40 01.9 -0.3**
HLID Hailey 85.47 313 P **P** **04 40 03.3 +0.6**
WALA Waterton Lakes 85.47 319 P **P** **04 40 02.6 0.0**
WALA IAmb IAmb 04 40 03.4
comp=Z,5.6nm,0.9s
ELK Elko 85.94 311 LR LR 05 13 47.3
comp=Z,68nm,21.4s,baz=68,slow=32
ELK Elko 85.94 311 P **P** **04 40 05.3 +0.1**
WCT Wildcat Mounta 86.89 307 P **P** **04 40 10.1 +0.3**
GWY Greenwater Val 86.91 306 P **P** **04 40 09.2 -0.8**
TPH Tonopah 87.39 308 P **P** **04 40 12.5 +0.2**
BMN Battle Mountai 87.44 310 P **P** **04 40 12.3 -0.2**
BMN IAmb IAmb 04 40 13.5
comp=Z,3.9nm,1.0s
BMO Blue Mountains 87.60 315 P **P** **04 40 12.4 -0.6**
BMO IAmb IAmb 04 40 43.0
comp=Z,9.3nm,1.7s
NVAR Mina Array Bea 88.25 308 P **P** **04 40 16.2 -0.2**
comp=Z,1.2nm,0.8s,baz=103,slow=6.8,SNR=8.5
comp=Z,1.2nm,0.8s
LHV Little Huntoon 88.40 308 P **P** **04 40 17.8 +0.9**
LHV IAmb IAmb 04 40 37.8
comp=Z,9.0nm,1.3s
I29M Ogilvie Camp, 96.91 336 P **P** **04 40 56.9 +1.3**
ASAR Alice Springs 152.35 147 PKPbc **PKiKP** **04 47 21.8 0.0**
comp=Z,0.2nm,0.3s,baz=7.1,slow=40,SNR=2.7

ROM 24 04:30:07.8±0.1, 42°.812N±0°.006×13°.225E±0°.010, h10km, ML2.7/3, Error ellipse: s-maj=0.8km s-min=0.5km az=238.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**285**	P	Pg	04 30 10.6	+0.4
NRCA				S	Sg	04 30 12.5	+0.4
NRCA				AML	AML		
	comp=E,38050µm,0.2s						
NRCA				AML	AML		
	comp=N,27300µm,0.1s						
NRCA				AML	AML		
	comp=E,40100µm,0.2s						
NRCA				AML	AML		
	comp=N,30000µm,0.1s						
NRCA				AML	AML		
	comp=E,41650µm,0.2s						
NRCA				AML	AML		
	comp=N,34300µm,0.1s						
NRCA				AML	AML		
	comp=E,46300µm,0.2s						
NRCA				AML	AML		
	comp=E,41650µm,0.2s						
NRCA				AML	AML		
	comp=N,34300µm,0.2s						
NRCA				AML	AML		
	comp=N,35750µm,0.1s						
FEMA	**Monte Fema**	**0.20**	**319**	P	Pg	04 30 12.5	+0.5
FEMA				S	Sg	04 30 16.2	+1.2
FDMO	**Fiordimonte**	**0.25**	**336**	P	Pg	04 30 13.2	+0.4
FDMO				S	Sg	04 30 17.3	+1.1
FDMO				AML	AML		
	comp=N,1865µm,0.2s						
FDMO				AML	AML		
	comp=E,1800µm,0.2s						
RM33	**Pellescritta (**	**0.30**	**182**	P	Pb	04 30 14.9	-0.5
RM33				AML	AML		
	comp=E,5225µm,0.4s						
RM33				AML	AML		
	comp=N,6765µm,0.9s						
RM33				AML	AML		
	comp=E,5040µm,0.4s						
RM33				AML	AML		
	comp=N,6870µm,0.9s						
CESI	**CESI - Serrava**	**0.30**	**309**	P	Pg	04 30 14.5	+0.5
CESI				S	Sb	04 30 19.9	-0.7
CESI				AML	AML		
	comp=N,2265µm,0.3s						
CESI				AML	AML		
	comp=E,1500µm,0.4s						
CESI				AML	AML		
	comp=E,1500µm,0.4s						
CAMP	**Campotosto**	**0.31**	**154**	P	Pg	04 30 14.3	+0.3
CAMP				S	Sg	04 30 19.4	+1.2
CAMP				AML	AML		
	comp=E,3015µm,0.3s						
CAMP				AML	AML		
	comp=N,2785µm,0.3s						
CAMP				AML	AML		
	comp=E,9255µm,0.3s						
CAMP				AML	AML		
	comp=N,9465µm,0.4s						
CAMP				AML	AML		
	comp=E,3013µm,0.3s						
TERO	**Teramo**	**0.34**	**124**	P	Pg	04 30 14.8	+0.2
TERO				S	Sb	04 30 20.2	-1.2
TERO				AML	AML		
	comp=E,3325µm,0.3s						
TERO				AML	AML		
	comp=N,3735µm,0.6s						
TERO				AML	AML		
	comp=E,3600µm,0.3s						
TERO				AML	AML		
	comp=N,4065µm,0.6s						
TERO				AML	AML		
	comp=E,9150µm,0.3s						
TERO				AML	AML		
	comp=N,15850µm,0.3s						
TERO				AML	AML		
	comp=E,10480µm,0.3s						
TERO				AML	AML		
	comp=E,9175µm,0.3s						
TERO				AML	AML		
	comp=N,18150µm,0.3s						
OFFI	**Offida**	**0.36**	**70**	P	Pb	04 30 16.1	-0.2
OFFI				AML	AML		
	comp=E,3955µm,1.5s						
OFFI				AML	AML		
	comp=N,3220µm,0.5s						
OFFI				AML	AML		
	comp=E,10090µm,0.5s						
OFFI				AML	AML		
	comp=N,5920µm,0.5s						
MNTP	**Montappone**	**0.37**	**29**	AML	AML		
	comp=N,3895µm,0.2s						
MNTP				AML	AML		
	comp=E,5310µm,0.2s						
ARRO	**Arrone**	**0.41**	**236**	P	Pb	04 30 16.6	-0.5
ARRO				AML	AML		
	comp=E,2050µm,0.2s						
ARRO				AML	AML		
	comp=N,1515µm,0.9s						
ARRO				AML	AML		
	comp=E,2510µm,0.4s						
ARRO				AML	AML		
	comp=N,2930µm,0.2s						
GIGS	**Gran Sasso**	**0.44**	**145**	P	Pg	04 30 16.8	+0.3
GIGS				AML	AML		
	comp=E,849µm,0.3s						
GIGS				AML	AML		
	comp=N,574µm,0.3s						
GIGS				AML	AML		
	comp=E,2475µm,0.3s						
GIGS				AML	AML		
	comp=N,2245µm,0.3s						
AQU	**L'Aquila**	**0.48**	**164**	AML	AML		
	comp=N,4035µm,0.9s						
AQU				AML	AML		
	comp=E,922µm,0.5s						
AQU				AML	AML		
	comp=N,1036µm,0.3s						
AQU				AML	AML		
	comp=E,857µm,0.5s						
AQU				AML	AML		
	comp=N,1002µm,0.3s						
AQU				AML	AML		
	comp=E,4190µm,1.0s						
AQU				AML	AML		
	comp=N,3920µm,0.9s						
AQU				AML	AML		
	comp=E,4250µm,1.0s						
ASSB	**Assisi San Ben**	**0.48**	**299**	P	Pg	04 30 17.4	+0.3
ASSB				S	Sb	04 30 25.2	-0.2
ASSB				AML	AML		
	comp=E,1260µm,1.2s						
ASSB				AML	AML		
	comp=N,1395µm,0.6s						
ASSB				AML	AML		
	comp=E,753µm,0.3s						
SNTG	**Esanatoglia**	**0.49**	**335**	AML	AML		
	comp=E,344µm,1.4s						
SNTG				AML	AML		
	comp=N,424µm,0.5s						
TRTR	**Tortoreto Alta**	**0.51**	**90**	P	Pb	04 30 19.1	+0.3
TRTR				AML	AML		
	comp=E,7425µm,0.4s						
TRTR				AML	AML		
	comp=N,7530µm,0.4s						
CESX	**Cesi**	**0.52**	**247**	P	Pg	04 30 18.0	+0.1
CESX				AML	AML		
	comp=E,1150µm,0.3s						
CESX				AML	AML		
	comp=N,979µm,0.3s						
CESX				AML	AML		
	comp=E,1590µm,1.5s						
CESX				AML	AML		
	comp=N,1565µm,1.2s						
ATCC	**AVT- Casa Cast**	**0.57**	**311**	AML	AML		
	comp=E,842µm,0.3s						
ATCC				AML	AML		
	comp=N,1075µm,0.6s						
ATCC				AML	AML		
	comp=E,972µm,1.6s						
FOSV	**Fossato di Vic**	**0.59**	**325**	AML	AML		
	comp=E,401µm,0.3s						
FOSV				AML	AML		
	comp=E,506µm,0.5s						
FOSV				AML	AML		
	comp=N,900µm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**132**	AML	AML		
	comp=N,7365µm,0.7s						
VCEL				AML	AML		
	comp=E,2650µm,0.9s						
VCEL				AML	AML		
	comp=N,2190µm,0.3s						
VCEL				AML	AML		
	comp=E,6205µm,1.6s						
MURB	**Monte Urbino**	**0.68**	**311**	AML	AML		
	comp=N,1605µm,0.9s						
MURB				AML	AML		
	comp=E,1700µm,0.3s						
MURB				AML	AML		
	comp=N,1790µm,1.0s						
MURB				AML	AML		
	comp=N,1875µm,0.9s						
T0110	**Collepietro**	**0.71**	**145**	AML	AML		
	comp=E,3885µm,0.4s						
T0110				AML	AML		
	comp=E,2735µm,0.4s						
T0110				AML	AML		
	comp=N,2315µm,0.4s						
T0110				AML	AML		
	comp=N,5470µm,0.3s						
ARVD	**Arcevia**	**0.72**	**343**	AML	AML		
	comp=E,240µm,0.9s						
ARVD				AML	AML		
	comp=N,286µm,0.7s						
SRES	**S.Oreste - Sor**	**0.78**	**223**	AML	AML		
	comp=E,397µm,0.9s						
SRES				AML	AML		
	comp=N,376µm,0.9s						
SRES	**S.Oreste - Sor**	**0.78**	**223**	AML	AML		
	comp=E,397µm,0.9s						
SRES	**S.Oreste - Sor**	**0.78**	**223**	AML	AML		
	comp=N,376µm,0.9s						
SRES	**S.Oreste - Sor**	**0.78**	**223**	P	Pn	04 30 26.0	+1.1
MGAB	**Montegabbione**	**0.82**	**277**	AML	AML		
	comp=N,914µm,0.5s						
MGAB				AML	AML		
	comp=E,992µm,1.4s						
MGAB				AML	AML		
	comp=N,728µm,0.3s						
MGAB				AML	AML		
	comp=E,1094µm,1.4s						
MGAB				AML	AML		
	comp=N,660µm,0.8s						
MGAB				AML	AML		
	comp=E,1114µm,1.4s						
MGAB				AML	AML		
	comp=E,1245µm,1.3s						
MGAB				AML	AML		
	comp=N,912µm,0.5s						
CERT	**Cerreto**	**0.88**	**192**	AML	AML		
	comp=E,2305µm,0.4s						
CERT				AML	AML		
	comp=N,1150µm,0.5s						
CERT	**Cerreto**	**0.88**	**192**	AML	AML		
	comp=N,1150µm,0.5s						
CERT	**Cerreto**	**0.88**	**192**	AML	AML		
	comp=E,2305µm,0.4s						
CERT	**Cerreto**	**0.88**	**192**	P	Pn	04 30 26.7	+0.4
NARO	**Abbazia di Nar**	**0.93**	**330**	AML	AML		
	comp=N,250µm,1.2s						
NARO				AML	AML		
	comp=E,211µm,0.6s						
LPEL	**Lama dei Pelig**	**1.04**	**137**	AML	AML		
	comp=E,1255µm,0.3s						
LPEL				AML	AML		
	comp=N,756µm,0.3s						
LAV9	**Lanuvio**	**1.20**	**199**	AML	AML		
	comp=E,1885µm,0.5s						
LAV9				AML	AML		
	comp=E,1795µm,0.5s						
LAV9				AML	AML		
	comp=N,1875µm,1.4s						
LAV9				AML	AML		
	comp=N,1895µm,1.4s						
SEI	**Scarperia**	**1.84**	**313**	AML	AML		
	comp=N,984µm,0.3s						
SEI				AML	AML		
	comp=E,496µm,0.3s						

ROM 24 04:30:12.7±0.1, 42°.671N±0°.005×13°.210E±0°.009, h10km, ML2.9/19, Error ellipse: s-maj=0.8km s-min=0.2km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.16**	**179**	P	Pg	04 30 17.0	+0.7
RM33				S	Sg	04 30 20.0	+1.2
RM33				AML	AML		
	comp=E,5230µm,0.4s						
RM33				AML	AML		
	comp=N,6770µm,0.9s						
RM33				AML	AML		
	comp=E,5035µm,0.4s						
RM33				AML	AML		
	comp=N,6870µm,0.9s						
RM33				AML	AML		
	comp=N,27550µm,0.4s						
RM33				AML	AML		
	comp=E,37800µm,0.3s						
RM33				AML	AML		
	comp=N,28000µm,0.4s						
RM33				AML	AML		
	comp=E,39200µm,0.3s						
RM33				AML	AML		
	comp=N,27950µm,0.4s						
RM33				AML	AML		
	comp=N,27550µm,0.4s						
NRCA	**Norcia**	**0.18**	**337**	P	Pg	04 30 17.0	+0.5
NRCA				S	Sg	04 30 19.9	+0.6
NRCA				AML	AML		
	comp=E,41650µm,0.2s						
NRCA				AML	AML		
	comp=N,34350µm,0.2s						
NRCA				AML	AML		
	comp=E,46300µm,0.2s						
NRCA				AML	AML		
	comp=N,35750µm,0.1s						
CAMP	**Campotosto**	**0.20**	**132**	P	Pg	04 30 17.6	+0.6
CAMP				S	Sg	04 30 21.0	+1.1
CAMP				AML	AML		
	comp=E,9255µm,0.3s						
CAMP				AML	AML		
	comp=N,9465µm,0.4s						
TERO	**Teramo**	**0.29**	**99**	P	Pg	04 30 18.9	+0.3
TERO				S	Sg	04 30 23.5	+0.9
TERO				AML	AML		
	comp=E,3320µm,0.3s						
TERO				AML	AML		
	comp=N,3735µm,0.6s						
TERO				AML	AML		
	comp=E,3600µm,0.3s						
TERO				AML	AML		
	comp=N,4065µm,0.6s						
TERO				AML	AML		
	comp=E,9150µm,0.3s						
TERO				AML	AML		
	comp=E,9180µm,0.3s						
TERO				AML	AML		
	comp=E,10480µm,0.3s						
TERO				AML	AML		
	comp=N,18150µm,0.3s						
TERO				AML	AML		
	comp=N,15850µm,0.3s						
TERO				AML	AML		
	comp=E,9175µm,0.3s						
ARRO	**Arrone**	**0.34**	**255**	P	Pg	04 30 19.8	+0.4
ARRO				AML	AML		
	comp=E,2090µm,1.0s						
ARRO				AML	AML		
	comp=N,2210µm,0.2s						
GIGS	**Gran Sasso**	**0.34**	**130**	P	Pg	04 30 19.8	+0.2
GIGS				S	Sg	04 30 25.1	+0.9
GIGS				AML	AML		
	comp=E,849µm,0.3s						
GIGS				AML	AML		
	comp=N,574µm,0.3s						
GIGS				AML	AML		
	comp=E,2475µm,0.3s						
GIGS				AML	AML		
	comp=N,2245µm,0.3s						
AQU	**L'Aquila**	**0.35**	**156**	AML	AML		
	comp=N,1002µm,0.3s						
AQU				AML	AML		
	comp=E,922µm,0.5s						
AQU				AML	AML		
	comp=N,1040µm,0.3s						
AQU				AML	AML		
	comp=E,857µm,0.5s						
AQU				AML	AML		
	comp=E,3995µm,1.0s						

AQU				AML	AML	
	comp=N,4035µm,0.9s					
AQU				AML	AML	
	comp=E,4040µm,1.1s					
AQU				AML	AML	
	comp=E,4190µm,1.0s					
AQU				AML	AML	
	comp=E,4250µm,1.0s					
AQU				AML	AML	
	comp=N,3920µm,0.9s					
FDMO	**Fiordimonte**	**0.38**	**346**	AML	AML	
	comp=E,1800µm,0.2s					
FDMO				AML	AML	
	comp=N,1865µm,0.2s					
CESI	**CESI - Serrava**	**0.40**	**326**	AML	AML	
	comp=N,3360µm,0.3s					
CESI				AML	AML	
	comp=E,2225µm,0.4s					
CESI				AML	AML	
	comp=E,1500µm,0.4s					
FIAM	**Fiamignano**	**0.41**	**190**	P	Pg	04 30 21.1 +0.4
FIAM				S	Sb	04 30 27.4 -0.9
FIAM				AML	AML	
	comp=N,3300µm,0.9s					
FIAM				AML	AML	
	comp=N,3935µm,0.6s					
FIAM				AML	AML	
	comp=E,6570µm,0.3s					
OFFI	**Offida**	**0.44**	**53**	P	Pb	04 30 22.5 0.0
OFFI				AML	AML	
	comp=E,3955µm,1.5s					
OFFI				AML	AML	
	comp=N,3220µm,0.5s					
OFFI				AML	AML	
	comp=N,5920µm,0.5s					
OFFI				AML	AML	
	comp=E,10090µm,0.5s					
CESX	**Cesi**	**0.47**	**263**	P	Pg	04 30 21.9 +0.1
CESX				AML	AML	
	comp=E,1150µm,0.3s					
CESX				AML	AML	
	comp=N,979µm,0.3s					
CESX				AML	AML	
	comp=N,1565µm,1.2s					
CESX				AML	AML	
	comp=E,1590µm,1.5s					
TRTR	**Tortoreto Alta**	**0.54**	**75**	AML	AML	
	comp=N,7530µm,0.4s					
TRTR				AML	AML	
	comp=E,7425µm,0.4s					
VCEL	**Villa Celiera**	**0.54**	**120**	P	Pb	04 30 24.2 -0.1
VCEL				AML	AML	
	comp=E,2130µm,0.3s					
VCEL				AML	AML	
	comp=N,2185µm,0.3s					
VCEL				AML	AML	
	comp=E,6200µm,1.6s					
VCEL				AML	AML	
	comp=N,7365µm,0.7s					
VCEL				AML	AML	
	comp=E,6205µm,1.6s					
ASSB	**Assisi San Ben**	**0.55**	**313**	AML	AML	
	comp=E,1260µm,1.2s					
ASSB				AML	AML	
	comp=N,1395µm,0.6s					
T0110	**Collepietro**	**0.61**	**136**	AML	AML	
	comp=N,5470µm,0.3s					
T0110				AML	AML	
	comp=E,2450µm,1.6s					
T0110				AML	AML	
	comp=N,2315µm,0.4s					
T0110				AML	AML	
	comp=E,3885µm,0.4s					
SNTG	**Esanatoglia**	**0.62**	**341**	AML	AML	
	comp=E,345µm,1.4s					
SNTG				AML	AML	
	comp=E,447µm,0.7s					
SNTG				AML	AML	
	comp=N,424µm,0.5s					
ATCC	**AVT- Casa Cast**	**0.66**	**321**	AML	AML	
	comp=E,842µm,0.3s					
ATCC				AML	AML	
	comp=N,1075µm,0.6s					
ATCC				AML	AML	
	comp=E,973µm,1.6s					
ATCC				AML	AML	
	comp=N,1080µm,0.6s					
ATCC				AML	AML	
	comp=E,976µm,1.6s					
FOSV	**Fossato di Vic**	**0.71**	**332**	AML	AML	
	comp=E,506µm,0.5s					
FOSV				AML	AML	
	comp=E,401µm,0.3s					
FOSV				AML	AML	
	comp=N,899µm,0.3s					
FOSV				AML	AML	
	comp=E,506µm,0.5s					
FOSV				AML	AML	
	comp=N,900µm,0.3s					
MURB	**Monte Urbino**	**0.78**	**320**	AML	AML	
	comp=N,1605µm,0.9s					
MURB				AML	AML	
	comp=E,1700µm,0.3s					
MURB				AML	AML	
	comp=N,1545µm,0.9s					
MURB				AML	AML	
	comp=E,1700µm,0.3s					
MURB				AML	AML	
	comp=N,1790µm,1.0s					
MURB				AML	AML	
	comp=N,1875µm,0.9s					
MURB				AML	AML	
	comp=E,1840µm,1.4s					
MGAB	**Montegabbione**	**0.84**	**287**	AML	AML	
	comp=N,912µm,0.5s					
MGAB				AML	AML	
	comp=E,992µm,1.4s					
MGAB				AML	AML	
	comp=N,728µm,0.3s					
MGAB				AML	AML	
	comp=E,1094µm,1.4s					
MGAB				AML	AML	
	comp=N,660µm,0.8s					
MGAB				AML	AML	
	comp=E,1111µm,1.4s					
MGAB				AML	AML	
	comp=N,914µm,0.5s					
MGAB				AML	AML	
	comp=E,1114µm,1.4s					
MGAB				AML	AML	
	comp=E,1245µm,1.3s					
ARVD	**Arcevia**	**0.85**	**347**	AML	AML	
	comp=N,286µm,0.7s					
ARVD				AML	AML	
	comp=E,240µm,0.9s					
LPEL	**Lama dei Pelig**	**0.95**	**130**	AML	AML	
	comp=N,756µm,0.3s					
LPEL				AML	AML	
	comp=E,1255µm,0.3s					
SACS	**San Casciano d**	**0.97**	**281**	AML	AML	
	comp=N,784µm,1.2s					
SACS				AML	AML	
	comp=E,448µm,0.6s					
SACS				AML	AML	
	comp=E,438µm,0.6s					
SACS				AML	AML	
	comp=N,778µm,1.2s					
SACS				AML	AML	
	comp=E,439µm,0.6s					
SACS				AML	AML	
	comp=N,779µm,1.2s					
NARO	**Abbazia di Nar**	**1.05**	**334**	AML	AML	
	comp=N,250µm,1.2s					
NARO				AML	AML	
	comp=E,211µm,0.6s					
LAV9	**Lanuvio**	**1.06**	**201**	AML	AML	
	comp=E,1795µm,0.5s					
LAV9				AML	AML	
	comp=N,1895µm,1.4s					
LAV9				AML	AML	
	comp=E,1885µm,0.5s					
LAV9				AML	AML	
	comp=N,1875µm,1.4s					
SEI	**Scarperia**	**1.93**	**316**	AML	AML	
	comp=E,496µm,0.3s					
SEI				AML	AML	
	comp=N,984µm,0.3s					

ROM 24 04:30:12.4±0.1, 43°246N±0°004×11°364E±0°006, h5km, ML2.6/11, 3C-1D, Error ellipse: s-maj=0.6km s-min=0.4km az=257.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FROS	**Frosini**	**0.16**	**257**	⇑P	Pg	04 30 16.4	+0.9
FROS	**Frosini**	**0.16**	**257**	S	Sg	04 30 18.7	+1.1
CSNT	**Castellina Chi**	**0.23**	**347**	P	Pg	04 30 17.7	+0.7
CSNT	**Castellina Chi**	**0.23**	**347**	S	Sg	04 30 21.2	+1.1
OSSC	**Osservatorio P**	**0.29**	**343**	P	Pg	04 30 18.7	+0.6
OSSC	**Osservatorio P**	**0.29**	**343**	S	Sg	04 30 23.3	+1.4
TRIF	**Trifonti**	**0.36**	**249**	⇑P	Pg	04 30 20.0	+0.6
TRIF	**Trifonti**	**0.36**	**249**	S	Sg	04 30 24.8	+0.7
ARCI	**Arcidosso**	**0.40**	**168**	P	Pg	04 30 21.1	+0.9
CAFI	**Castiglion Fio**	**0.45**	**79**	⇑P	Pb	04 30 22.2	-0.6
CAFI	**Castiglion Fio**	**0.45**	**79**	S	Sg	04 30 28.3	+1.4
SF01	**Poggio Pratacc**	**0.46**	**161**	P	Pb	04 30 22.3	-0.7
SF01	**Poggio Pratacc**	**0.46**	**161**	S	Sb	04 30 30.2	+0.1
SF04	**Casetta**	**0.46**	**152**	P	Pb	04 30 22.4	-0.7
SF04	**Casetta**	**0.46**	**152**	S	Sb	04 30 30.5	+0.2
SF13	**Bagnolo**	**0.47**	**156**	P	Pb	04 30 22.4	-0.7
SF03	**Valle Cupa**	**0.50**	**152**	⇓P	Pb	04 30 23.1	-0.7
MCIV	**Monte Civitell**	**0.52**	**154**	P	Pb	04 30 23.3	-0.8
SF14	**Selvena**	**0.52**	**159**	P	Pb	04 30 23.4	-0.7
CRE	**Caprese Michel**	**0.57**	**49**	P	Pb	04 30 24.9	-0.1
CASP	**Castiglione de**	**0.58**	**219**	P	Pb	04 30 24.6	-0.5
RUFI	**Rufina**	**0.60**	**10**	S	Sb	04 30 33.8	-0.5
RUFI	**Rufina**	**0.60**	**10**	P	Pb	04 30 24.9	-0.5
CRMI	**Carmignano**	**0.61**	**332**	P	Pb	04 30 25.1	-0.5
ASQU	**Asqua**	**0.63**	**29**	P	Pb	04 30 26.1	+0.1
MGAB	**Montegabbione**	**0.64**	**121**	P	Pg	04 30 24.9	+0.1
BADI	**Badiali**	**0.69**	**67**	P	Pb	04 30 26.8	-0.3
MPPT	**Montemurlo**	**0.74**	**344**	P	Pb	04 30 27.6	-0.2
SFI	**Santa Sofia**	**0.75**	**28**	P	Pb	04 30 27.9	0.0
PARC	**Parchiule**	**0.75**	**57**	P	Pb	04 30 27.8	-0.3
PII	**Pisa**	**0.77**	**308**	P	Pg	04 30 27.8	+0.5
LMD	**Lutirano**	**0.87**	**17**	P	Pb	04 30 29.9	-0.1
MAIM	**Mastiano**	**0.92**	**317**	P	Pg	04 30 30.3	+0.2
CELB	**S.Piero in Cam**	**0.98**	**240**	P	Pb	04 30 32.0	+0.1
CARD	**Cardoso**	**1.01**	**321**	P	Pg	04 30 32.0	+0.2
GROG	**Isola di Gorgo**	**1.09**	**280**	P	Pb	04 30 33.7	0.0

ROM 24 04:30:54.0±0.1, 42°642N±0°004×13°219E±0°005, h9km, ML3.1/22, 7C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.13**	**181**	P	Pg	04 30 57.8	+0.7
RM33				S	Sg	04 31 00.5	+1.3
RM33				AML	AML		
	comp=E,39250µm,0.3s						
RM33				AML	AML		
	comp=N,27550µm,0.4s						
RM33				AML	AML		
	comp=E,37800µm,0.3s						
RM33				AML	AML		
	comp=N,27550µm,0.4s						
RM33				AML	AML		
	comp=N,27950µm,0.4s						
RM33				AML	AML		
	comp=E,39200µm,0.3s						
CAMP	**Campotosto**	**0.18**	**127**	⇑P	Pg	04 30 58.4	+0.6
CAMP				S	Sg	04 31 01.2	+0.8
CAMP				AML	AML		
	comp=E,9255µm,0.3s						
CAMP				AML	AML		
	comp=N,9465µm,0.4s						
NRCA	**Norcia**	**0.21**	**338**	P	Pg	04 30 58.8	+0.5
NRCA				S	Sg	04 31 02.2	+0.9
TERO	**Teramo**	**0.28**	**94**	P	Pg	04 31 00.0	+0.3
TERO				S	Sg	04 31 04.4	+0.9
TERO				AML	AML		
	comp=E,9150µm,0.3s						
TERO				AML	AML		
	comp=E,10480µm,0.3s						
TERO				AML	AML		
	comp=E,9180µm,0.3s						
TERO				AML	AML		
	comp=N,18150µm,0.3s						
TERO				AML	AML		
	comp=E,9140µm,0.3s						
TERO				AML	AML		
	comp=E,9175µm,0.3s						
TERO				AML	AML		
	comp=N,15850µm,0.3s						
AQU	**L'Aquila**	**0.32**	**155**	P	Pg	04 31 00.9	+0.6
AQU				S	Sb	04 31 06.1	-1.1
AQU				AML	AML		
	comp=E,4185µm,1.0s						
AQU				AML	AML		
	comp=E,3995µm,1.0s						
AQU				AML	AML		
	comp=N,4035µm,0.9s						
AQU				AML	AML		
	comp=E,4040µm,1.1s						
AQU				AML	AML		
	comp=E,4250µm,1.0s						
AQU				AML	AML		
	comp=N,4030µm,0.9s						
AQU				AML	AML		
	comp=E,4190µm,1.0s						
AQU				AML	AML		
	comp=N,3920µm,0.9s						
GIGS	**Gran Sasso**	**0.32**	**126**	P	Pg	04 31 01.1	+0.7
GIGS				S	Sg	04 31 05.5	+0.8
GIGS				AML	AML		
	comp=E,2475µm,0.3s						
GIGS				AML	AML		
	comp=N,2245µm,0.3s						
ARRO	**Arrone**	**0.34**	**259**	⇑P	Pg	04 31 01.3	+0.6
ARRO				S	Sb	04 31 06.7	-1.0
FEMA	**Monte Fema**	**0.34**	**339**	P	Pb	04 31 02.3	0.0
FEMA				S	Sb	04 31 07.3	-0.6
FIAM	**Fiamignano**	**0.38**	**191**	⇓P	Pg	04 31 01.8	+0.2
FIAM				S	Sb	04 31 07.8	-1.2
FIAM				AML	AML		
	comp=E,6570µm,0.3s						
FIAM				AML	AML		
	comp=N,3935µm,0.6s						
FDMO	**Fiordimonte**	**0.41**	**346**	⇑P	Pg	04 31 02.5	+0.6
FDMO				S	Sb	04 31 08.8	-0.8
FDMO				AML	AML		
	comp=E,1315µm,0.7s						
FDMO				AML	AML		
	comp=N,1595µm,0.3s						
CESI	**CESI - Serrava**	**0.43**	**328**	P	Pg	04 31 02.6	+0.2
CESI				S	Sb	04 31 09.4	-1.0
OFFI	**Offida**	**0.45**	**49**	⇑P	Pb	04 31 03.7	-0.4
OFFI				AML	AML		
	comp=E,10090µm,0.5s						
OFFI				AML	AML		
	comp=N,5920µm,0.5s						
FAGN	**Fagnano**	**0.46**	**144**	⇑P	Pg	04 31 03.1	+0.1
FAGN				S	Sb	04 31 10.5	-0.8
FAGN				AML	AML		
	comp=N,6500µm,0.3s						
FAGN				AML	AML		
	comp=E,5985µm,0.4s						
CESX	**Cesi**	**0.47**	**266**	⇑P	Pg	04 31 03.3	+0.1
CESX				S	Sb	04 31 11.1	-0.5
CESX				AML	AML		
	comp=E,1590µm,1.5s						
CESX				AML	AML		
	comp=N,1565µm,1.2s						
VCEL	**Villa Celiera**	**0.52**	**118**	⇓P	Pg	04 31 04.5	+0.4
VCEL				S	Sb	04 31 13.1	0.0
VCEL				AML	AML		
	comp=E,6200µm,1.6s						
VCEL				AML	AML		
	comp=N,7365µm,0.7s						
VCEL				AML	AML		
	comp=E,6205µm,1.6s						
TRTR	**Tortoreto Alta**	**0.54**	**72**	P	Pb	04 31 05.0	-0.5
TRTR				AML	AML		
	comp=E,7425µm,0.4s						
TRTR				AML	AML		
	comp=N,7530µm,0.4s						
T0110	**Collepietro**	**0.59**	**135**	⇑P	Pg	04 31 05.4	0.0
T0110				S	Sb	04 31 14.7	-0.2
T0110				AML	AML		
	comp=N,5470µm,0.3s						
T0110				AML	AML		
	comp=E,3885µm,0.4s						
PTQR	**Pietraquaria**	**0.63**	**168**	AML	AML		
	comp=E,777µm,0.8s						
PTQR				AML	AML		
	comp=N,710µm,0.7s						
SNTG	**Esanatoglia**	**0.65**	**342**	P	Pg	04 31 06.7	+0.2
SNTG				AML	AML		
	comp=N,416µm,0.5s						
SNTG				AML	AML		
	comp=N,416µm,0.5s						
SNTG				AML	AML		
	comp=E,447µm,0.7s						
SRES	**S.Oreste - Sor**	**0.66**	**233**	P	Pg	04 31 07.1	+0.3
SRES				AML	AML		
	comp=N,376µm,0.9s						
SRES				AML	AML		
	comp=E,397µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.69**	**322**	P	Pg	04 31 07.5	+0.2
EL6	**Elcito**	**0.69**	**353**	P	Pg	04 31 07.0	-0.3
MTCE	**Montecelio**	**0.71**	**210**	P	Pg	04 31 07.4	-0.3
MTCE				AML	AML		
	comp=E,1455µm,0.5s						
MTCE				AML	AML		
	comp=N,694µm,0.5s						
MTCE				AML	AML		
	comp=N,694µm,0.5s						
CERT	**Cerreto**	**0.71**	**194**	P	Pb	04 31 08.8	+0.2
CERT				AML	AML		
	comp=N,1150µm,0.5s						
CERT				AML	AML		
	comp=E,2305µm,0.4s						
CERT				AML	AML		
	comp=N,1145µm,0.5s						
FOSV	**Fossato di Vic**	**0.73**	**333**	P	Pg	04 31 08.3	+0.1
FOSV				AML	AML		
	comp=E,506µm,0.5s						
FOSV				AML	AML		
	comp=N,563µm,0.9s						
FOSV				AML	AML		
	comp=E,506µm,0.5s						
PP3	**Marolino**	**0.79**	**21**	⇓P	Pb	04 31 09.9	+0.1
PP3				AML	AML		
	comp=E,3235µm,0.6s						
PP3				AML	AML		
	comp=N,2005µm,0.3s						
PP3				AML	AML		
	comp=N,2090µm,1.3s						
PP3				AML	AML		
	comp=E,3240µm,0.6s						
PP3				AML	AML		
	comp=E,3320µm,0.6s						
PP3				AML	AML		
	comp=N,2095µm,1.3s						
PP3				AML	AML		
	comp=N,2010µm,0.3s						
INTR	**Introdacqua**	**0.81**	**141**	P	Pg	04 31 09.5	-0.1
INTR				AML	AML		
	comp=E,732µm,0.7s						
INTR				AML	AML		
	comp=N,1530µm,0.4s						
INTR				AML	AML		
	comp=E,731µm,0.7s						
MGAB	**Montegabbione**	**0.86**	**289**	AML	AML		
	comp=E,1111µm,1.4s						
MGAB				AML	AML		
	comp=N,914µm,0.5s						
MGAB				AML	AML		
	comp=N,912µm,0.5s						
MGAB				AML	AML		
	comp=E,1115µm,1.4s						
MGAB				AML	AML		
	comp=N,914µm,0.5s						
MGAB				AML	AML		
	comp=E,1114µm,1.4s						
MGAB				AML	AML		
	comp=E,1245µm,1.3s						
ARVD	**Arcevia**	**0.88**	**347**	P	Pg	04 31 10.9	0.0
RMP	**Rome, Mte Porz**	**0.92**	**205**	AML	AML		
	comp=N,1125µm,0.8s						
RMP				AML	AML		
	comp=E,1245µm,0.9s						
LPEL	**Lama dei Pelig**	**0.93**	**129**	P	Pg	04 31 11.5	-0.4
LPEL				S	Sb	04 31 24.6	-0.2
LPEL				AML	AML		
	comp=N,756µm,0.3s						
LPEL				AML	AML		
	comp=E,1255µm,0.3s						
AOI	**Ancona**	**0.95**	**17**	P	Pg	04 31 12.1	-0.1
AOI				AML	AML		
	comp=E,389µm,0.7s						
AOI				AML	AML		
	comp=N,502µm,0.7s						
SACS	**San Casciano d**	**0.99**	**283**	P	Pg	04 31 12.5	-0.5
SACS				AML	AML		
	comp=E,438µm,0.6s						
SACS				AML	AML		
	comp=N,778µm,1.2s						
SACS				AML	AML		
	comp=N,779µm,1.2s						
SACS				AML	AML		
	comp=E,439µm,0.6s						
POFI	**Posta Fibreno**	**0.99**	**158**	AML	AML		
	comp=E,862µm,0.6s						
POFI				AML	AML		
	comp=E,922µm,0.6s						
POFI				AML	AML		
	comp=N,410µm,0.6s						
POFI				AML	AML		
	comp=N,410µm,1.1s						
TOLF	**Tolfa**	**1.07**	**238**	P	Pg	04 31 14.3	-0.3
TOLF				AML	AML		
	comp=E,286µm,0.7s						
TOLF				AML	AML		
	comp=N,238µm,1.5s						
GIUL	**Giuliano Di Ro**	**1.08**	**179**	P	Pg	04 31 13.5	-1.3
GIUL				AML	AML		
	comp=N,633µm,0.6s						
GIUL				AML	AML		
	comp=E,594µm,1.6s						

ROM 24 04:31:32.2±0.1, 42°817N±0°005×13°120E±0°007, h9km, ML2.9/5, Error ellipse: s-maj=0.7km s-min=0.5km az=220.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**346**	P	Pg	04 31 34.0	0.0
NRCA				S	Sg	04 31 35.2	0.0
FEMA	**Monte Fema**	**0.15**	**341**	P	Pg	04 31 36.4	+0.8
FEMA				S	Sg	04 31 39.1	+1.1
FEMA				AML	AML		
	comp=E,4594µm,0.2s						
FEMA				AML	AML		
	comp=N,2636µm,0.0s						
FDMO	**Fiordimonte**	**0.22**	**354**	P	Pg	04 31 37.5	+0.7
FDMO				S	Sg	04 31 41.2	+1.4
CESI	**CESI - Serrava**	**0.25**	**320**	P	Pg	04 31 37.9	+0.7
CESI				S	Sg	04 31 42.4	+1.8
CESI				AML	AML		
	comp=E,1471µm,0.3s						
RM33	**Pellescritta (**	**0.32**	**167**	AML	AML		
	comp=E,8245µm,0.3s						
RM33				AML	AML		
	comp=N,5250µm,1.5s						
RM33				AML	AML		
	comp=E,8070µm,0.4s						
RM33				AML	AML		
	comp=N,5235µm,1.6s						
RM33				AML	AML		
	comp=E,8250µm,0.4s						
RM33				AML	AML		
	comp=N,5245µm,1.6s						
RM33				AML	AML		
	comp=E,8075µm,0.4s						
SEF1	**Sefro**	**0.35**	**339**	P	Pg	04 31 39.7	+0.5
TERO	**Teramo**	**0.41**	**118**	P	Pg	04 31 40.5	+0.3
TERO				AML	AML		
	comp=N,1988µm,0.0s						
ASSB	**Assisi San Ben**	**0.41**	**304**	P	Pg	04 31 40.7	+0.5
ASSB				AML	AML		
	comp=E,762µm,0.2s						
OFFI	**Offida**	**0.43**	**74**	P	Pg	04 31 41.4	+0.7
CESX	**Cesi**	**0.45**	**243**	P	Pg	04 31 41.6	+0.7
SNTG	**Esanatoglia**	**0.46**	**343**	P	Pg	04 31 41.8	+0.6
ATCC	**AVT- Casa Cast**	**0.51**	**316**	P	Pg	04 31 42.6	+0.5

TRTR	**Tortoreto Alta**	**0.58**	**91**	P	Pb	04 31 44.5	-0.1

PRU ***24*** *04:33:09.5±0.0, 42°.68N×13°.28E, h0km*
LDG ***24*** *04:33:09.3±0.2, 42°.64N×13°.19E, h6km, Ml3.3/19, Error ellipse: s-maj=6.7km s-min=3.6km az=45.0*
ROM ***24*** *04:33:09.8±0.1, 42°.623N±0°.004×13°.215E±0°.006, h10km, ML3.5/70, Mw3.4, Error ellipse: s-maj=0.5km s-min=0.1km az=247.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=1.65; Mθθ 0.46; Mφφ 1.19; Mrθ 0.17; Mrφ -0.83; Mθφ -0.15; Fault plane solution: M0 1.70501×10^14 NP1:φ1 49.00000°, δ41.00000°, λ -87.00000°. NP2:φ2 325.00000°, δ49.00000°, λ -93.00000°.*
IDC ***24*** *04:33:10.1±1.1, 42°.77N×13°.00E, h0km, mb3.6/5, mbtmp3.6/12, ML3.7/6 Error ellipse: s-maj=22.3km s-min=12.9km az=92.0*
PDG ***24*** *04:33:10.2±0.4, 42°.63N×13°.22E, h14km, ML3.5/14, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
BEO ***24*** *04:33:11.3±0.7, 42°.74N×13°.31E, h0km, ML3.6/11*
STR ***24*** *04:33:11.7±2.0, 43°N±15°×1°3E±1°1, h5km, mb3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=149.9, preliminary*
ISC 24 04:33:10.6±0.7, 42°.63N±0°.02×13°.18E±0°.02, h14km±5km, n277, σt1s98/333, mb3.8/4, 35C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
RM33	**Pellescritta (**	**0.12**	**167**	⇑P		**Pg**		**04 33 13.4**	**-0.8**
RM33				S		**Sg**		**04 33 15.8**	**-0.8**
RM33				AML	AML				
RM33				AML	AML				
	comp=N,75650μm,0.3s								
RM33				AML	AML				
RM33				AML	AML				
	comp=N,78650μm,0.3s								
RM33				AML	AML				
	comp=N,75600μm,0.3s								
RM33				AML	AML				
	comp=N,75600μm,0.3s								
RM33				AML	AML				
	comp=N,78600μm,0.3s								
CAMP	**Campotosto**	**0.20**	**119**	⇑P		**Pg**		**04 33 14.0**	**-1.2**
CAMP				S		**Sg**		**04 33 16.8**	**-1.5**
CAMP				AML	AML				
	comp=E,22500μm,0.8s								
CAMP				AML	AML				
	comp=N,19800μm,0.5s								
NRCA	**Norcia**	**0.21**	**347**	P		**Pg**		**04 33 14.8**	**-0.6**
NRCA				S		**Sg**		**04 33 18.3**	**-0.4**
NRCA				AML	AML				
NRCA				AML	AML				
	comp=N,81150μm,0.1s								
NRCA				AML	AML				
	comp=N,87000μm,0.1s								
NRCA				AML	AML				
	comp=N,81100μm,0.1s								
NRCA				AML	AML				
NRCA				AML	AML				
	comp=N,81100μm,0.1s								
ARRO	**Arrone**	**0.31**	**261**	⇑P		**Pg**		**04 33 16.9**	**-0.2**
ARRO				S		**Sg**		**04 33 22.0**	**+0.6**
ARRO				AML	AML				
	comp=E,16600μm,0.6s								
ARRO				AML	AML				
	comp=N,14950μm,0.6s								
ARRO				AML	AML				
	comp=E,16550μm,0.6s								
ARRO				AML	AML				
	comp=N,14900μm,0.6s								
TERO	**Teramo**	**0.32**	**91**	⇑P		**Pg**		**04 33 15.7**	**-1.5**
TERO				S		**Sg**		**04 33 20.0**	**-1.6**
TERO				AML	AML				
	comp=E,22350μm,1.0s								
TERO				AML	AML				
	comp=E,23600μm,1.0s								
TERO				AML	AML				
	comp=N,31550μm,0.5s								
TERO				AML	AML				
	comp=E,22300μm,1.0s								
TERO				AML	AML				
	comp=N,33400μm,0.5s								
AQU	**L'Aquila**	**0.32**	**149**	⇑P		**Pg**		**04 33 16.4**	**-0.9**
AQU				AML	AML				
	comp=E,10625μm,1.0s								
AQU				AML	AML				
	comp=N,11250μm,0.5s								
AQU				AML	AML				
	comp=N,10555μm,1.5s								
AQU				AML	AML				
	comp=E,10670μm,1.0s								
AQU				AML	AML				
	comp=E,10400μm,1.1s								
GIGS	**Gran Sasso**	**0.34**	**122**	⇑P		**Pg**		**04 33 16.2**	**-1.5**
GIGS				S		**Sg**		**04 33 21.1**	**-1.3**
GIGS				AML	AML				
	comp=N,3955μm,1.5s								
GIGS				AML	AML				
	comp=E,4425μm,0.4s								
FEMA	**Monte Fema**	**0.34**	**344**	P		**Pg**		**04 33 17.6**	**-0.2**
FEMA				S		**Sb**		**04 33 23.0**	**-1.0**
FIAM	**Fiamignano**	**0.36**	**187**	⇑P		**Pg**		**04 33 17.5**	**-0.6**
FIAM				S		**Sg**		**04 33 23.4**	**+0.3**
FIAM				AML	AML				
	comp=E,20750μm,0.4s								
FIAM				AML	AML				
	comp=N,12700μm,0.6s								
FDMO	**Fiordimonte**	**0.41**	**351**	P		**Pg**		**04 33 18.2**	**-0.7**
FDMO				S		**Sg**		**04 33 24.8**	**+0.2**
FDMO				AML	AML				
	comp=E,8420μm,0.4s								
FDMO				AML	AML				
	comp=N,9290μm,0.2s								
CESI	**CESI - Serrava**	**0.43**	**332**	P		**Pg**		**04 33 18.9**	**-0.3**
CESI				S		**Sb**		**04 33 25.7**	**-0.6**
CESI				AML	AML				
	comp=E,8345μm,0.4s								
CESI				AML	AML				
	comp=N,14050μm,1.5s								
CESX	**Cesi**	**0.44**	**268**	⇑P		**Pg**		**04 33 19.0**	**-0.4**
CESX				AML	AML				
	comp=N,14650μm,0.2s								
CESX				AML	AML				
	comp=E,12130μm,0.3s								
CSP1	**Cessapalombo**	**0.46**	**2**	⇑P		**Pg**		**04 33 19.0**	**-0.9**
CSP1				S		**Sg**		**04 33 26.0**	**-0.2**
CSP1				AML	AML				
	comp=N,22900μm,0.4s								
CSP1				AML	AML				
	comp=N,22950μm,0.4s								
CSP1				AML	AML				
	comp=E,12925μm,0.7s								
CSP1				AML	AML				
	comp=E,12900μm,0.7s								
FAGN	**Fagnano**	**0.47**	**140**	P		**Pg**		**04 33 18.6**	**-1.4**
FAGN				AML	AML				
	comp=N,10630μm,0.4s								
FAGN				AML	AML				
	comp=E,12800μm,0.5s								
OFFI	**Offida**	**0.48**	**51**	⇑P		**Pg**		**04 33 19.7**	**-0.5**
OFFI				AML	AML				
	comp=N,20250μm,0.7s								
OFFI				AML	AML				
	comp=E,20350μm,0.4s								
SEF1	**Sefro**	**0.54**	**342**	P		**Pg**		**04 33 21.1**	**-0.3**
VCEL	**Villa Celiera**	**0.54**	**115**	P		**Pg**		**04 33 20.1**	**-1.3**
VCEL				S		**Sg**		**04 33 28.6**	**0.0**
VCEL				AML	AML				
	comp=E,14900μm,0.5s								
VCEL				AML	AML				
	comp=N,15700μm,0.5s								
MNTP	**Montappone**	**0.55**	**23**	P		**Pg**		**04 33 20.9**	**-0.6**
ASSB	**Assisi San Ben**	**0.56**	**317**	P		**Pg**		**04 33 21.1**	**-0.7**
MDAR	**Monte D'Aria**	**0.56**	**357**	P		**Pg**		**04 33 20.0**	**-1.8**
TRTR	**Tortoreto Alta**	**0.57**	**72**	⇑P		**Pg**		**04 33 21.5**	**-0.4**
TRTR				AML	AML				
	comp=N,22300μm,0.4s								
TRTR				AML	AML				
	comp=E,24550μm,0.4s								
T0110	**Collepietro**	**0.60**	**132**	P		**Pg**		**04 33 21.0**	**-1.4**
T0110				AML	AML				
	comp=N,9110μm,0.7s								
T0110				AML	AML				
	comp=E,10515μm,0.5s								
GAG1	**Gagliole**	**0.61**	**352**	P		**Pg**		**04 33 21.6**	**-1.1**
PTQR	**Pietraquaria**	**0.63**	**165**	P		**Pg**		**04 33 21.3**	**-1.7**
PTQR				AML	AML				
	comp=E,1840μm,0.4s								
PTQR				AML	AML				
	comp=N,2165μm,0.8s								
SRES	**S.Oreste - Sor**	**0.63**	**232**	⇑P		**Pg**		**04 33 22.2**	**-0.8**
SRES				AML	AML				
	comp=N,2370μm,0.5s								
SRES				AML	AML				
	comp=E,2930μm,1.1s								
MTL1	**Matelica**	**0.64**	**349**	P		**Pg**		**04 33 22.4**	**-0.8**
SNTG	**Esanatoglia**	**0.65**	**345**	P		**Pg**		**04 33 22.3**	**-1.0**
SNTG				S		**Sb**		**04 33 32.5**	**-0.2**
ATCC	**AVT- Casa Cast**	**0.68**	**325**	P		**Pg**		**04 33 23.1**	**-0.9**
ATCC				AML	AML				
	comp=E,6975μm,1.2s								
ATCC				AML	AML				
	comp=N,5355μm,0.4s								
MTCE	**Montecelio**	**0.69**	**208**	⇑P		**Pg**		**04 33 22.9**	**-1.1**
MTCE				AML	AML				
	comp=E,7065μm,0.5s								
MTCE				AML	AML				
	comp=N,3440μm,0.4s								
TRE1	**Treia**	**0.69**	**8**	P		**Pg**		**04 33 23.5**	**-0.6**
CERT	**Cerreto**	**0.69**	**192**	⇑P		**Pg**		**04 33 22.9**	**-1.2**
CERT				AML	AML				
	comp=E,7735μm,0.5s								
CERT				AML	AML				
	comp=N,4710μm,0.8s								
EL6	**Elcito**	**0.70**	**355**	P		**Pg**		**04 33 23.1**	**-1.3**
CADA	**Capodarco di F**	**0.71**	**37**	P		**Pg**		**04 33 24.4**	**-0.1**
FOSV	**Fossato di Vic**	**0.73**	**335**	P		**Pg**		**04 33 24.0**	**-0.9**
CIMA	**Civitanova Mar**	**0.77**	**28**	P		**Pg**		**04 33 25.4**	**-0.1**
MURB	**Monte Urbino**	**0.79**	**323**	P		**Pg**		**04 33 25.5**	**-0.6**
RCAV	**Rocca di Cave**	**0.80**	**193**	P		**Pg**		**04 33 24.6**	**-1.6**
PP3	**Marolino**	**0.81**	**23**	⇑P		**Pg**		**04 33 25.7**	**-0.7**
INTR	**Introdacqua**	**0.82**	**139**	P		**Pg**		**04 33 24.5**	**-2.1**
INTR				AML	AML				
	comp=E,3μm,0.8s								
INTR				AML	AML				
	comp=N,3μm,0.8s								
INTR				AML	AML				
	comp=N,3μm,0.8s								
INTR				AML	AML				
	comp=E,2550μm,0.8s								
INTR				AML	AML				
	comp=N,4275μm,0.7s								
INTR				AML	AML				
	comp=E,3μm,0.8s								
VVLD	**Villa Vallelon**	**0.83**	**156**	P		**Pg**		**04 33 25.8**	**-0.9**
VVLD				AML	AML				
	comp=E,2410μm,0.6s								
VVLD				AML	AML				
	comp=N,1895μm,0.5s								
ATTE	**AVT- Monte Tez**	**0.83**	**313**	P		**Pg**		**04 33 26.1**	**-0.7**
MGAB	**Montegabbione**	**0.83**	**290**	P		**Pg**		**04 33 26.1**	**-0.7**
MGAB				AML	AML				
	comp=E,8335μm,0.5s								
MGAB				AML	AML				
	comp=N,8010μm,0.4s								
MGAB				AML	AML				
	comp=N,8495μm,0.4s								
MGAB				AML	AML				
	comp=E,8725μm,0.8s								
GUAR	**Guarcino**	**0.84**	**173**	P		**Pg**		**04 33 26.4**	**-0.6**
GUAR				AML	AML				
	comp=E,3460μm,1.5s								
GUAR				AML	AML				
	comp=N,4615μm,0.8s								
SSFR	**Montelago di S**	**0.86**	**340**	P		**Pg**		**04 33 26.4**	**-0.9**
ATFO	**Monte Foce - G**	**0.86**	**329**	P		**Pg**		**04 33 26.5**	**-0.8**
ATFO				AML	AML				
	comp=E,3090μm,1.0s								
ATFO				AML	AML				
	comp=N,3255μm,0.6s								
ARVD	**Arcevia**	**0.89**	**349**	P		**Pg**		**04 33 26.5**	**-1.3**
ATLO	**AVT- Montelove**	**0.89**	**321**	P		**Pg**		**04 33 27.1**	**-0.8**
RMP	**Rome, Mte Porz**	**0.89**	**204**	P		**Pg**		**04 33 26.3**	**-1.6**
RMP				AML	AML				
	comp=E,5390μm,0.8s								
RMP				AML	AML				
	comp=N,6175μm,1.0s								
ATVA	**AVT- Monte Val**	**0.92**	**315**	P		**Pg**		**04 33 27.6**	**-0.9**
VIVA	**Pratoni del Vi**	**0.93**	**199**	AML	AML				
	comp=N,10645μm,0.4s								
VIVA				AML	AML				
	comp=E,10785μm,0.4s								
RDP	**Rocca di Papa**	**0.94**	**202**	P		**Pg**		**04 33 27.2**	**-1.5**
RDP				AML	AML				
	comp=E,11200μm,0.5s								
RDP				AML	AML				
	comp=N,16400μm,0.5s								
ATVO	**AVT- Monte Val**	**0.94**	**323**	P		**Pg**		**04 33 28.0**	**-0.9**
LPEL	**Lama dei Pelig**	**0.95**	**128**	P		**Pg**		**04 33 26.4**	**-2.5**
LPEL				AML	AML				
	comp=E,2625μm,0.5s								
LPEL				AML	AML				
	comp=N,1785μm,0.6s								
FRON	**Frontone**	**0.95**	**340**	P		**Pg**		**04 33 27.7**	**-1.3**
SACS	**San Casciano d**	**0.96**	**284**	⇑P		**Pg**		**04 33 28.5**	**-0.7**
SACS				AML	AML				
	comp=E,2880μm,1.6s								
SACS				AML	AML				
	comp=N,3225μm,1.0s								
SACS				AML	AML				
	comp=N,3570μm,0.9s								
SACS				AML	AML				
	comp=E,2625μm,1.6s								
ATMI	**Monte Miggiano**	**0.97**	**317**	P		**Pg**		**04 33 28.9**	**-0.5**
AOI	**Ancona**	**0.97**	**19**	P		**Pg**		**04 33 27.9**	**-1.5**
POFI	**Posta Fibreno**	**0.99**	**156**	P		**Pg**		**04 33 29.7**	**-0.2**
POFI				AML	AML				
	comp=E,1620μm,0.8s								
POFI				AML	AML				
	comp=N,1370μm,1.2s								
POFI				AML	AML				
	comp=N,1390μm,1.1s								
POFI				AML	AML				
	comp=E,1660μm,0.8s								
ATPI	**Pietralunga -**	**1.00**	**326**	P		**Pg**		**04 33 28.9**	**-1.0**
COR1	**Corinaldo**	**1.01**	**353**	P		**Pb**		**04 33 30.0**	**+0.1**
LAV9	**Lanuvio**	**1.01**	**201**	AML	AML				
	comp=N,7195μm,0.6s								
LAV9				AML	AML				
	comp=E,7315μm,0.5s								
LAV9				AML	AML				
	comp=E,8120μm,1.1s								
LAV9				AML	AML				
	comp=N,7330μm,0.5s								
PIEI	**Pieia**	**1.02**	**333**	P		**Pg**		**04 33 29.3**	**-1.1**
LRP	**Arpino**	**1.03**	**163**	P		**Pb**		**04 33 30.3**	**+0.1**
LRP				AML	AML				
	comp=E,970μm,0.8s								
LRP				AML	AML				
	comp=N,1435μm,0.5s								
TOLF	**Tolfa**	**1.04**	**237**	⇑P		**Pb**		**04 33 29.5**	**-0.9**
TOLF				AML	AML				
	comp=N,1975μm,0.3s								
TOLF				AML	AML				
	comp=E,1990μm,0.6s								
MPAG	**Monte Paganucc**	**1.04**	**343**	P		**Pg**		**04 33 29.4**	**-1.4**
GIUL	**Giuliano Di Ro**	**1.07**	**177**	P		**Pb**		**04 33 30.3**	**-0.7**
GIUL				AML	AML				
	comp=N,2450μm,0.6s								
GIUL				AML	AML				
	comp=E,1910μm,0.8s								
NARO	**Abbazia di Nar**	**1.07**	**336**	P		**Pb**		**04 33 30.0**	**-1.0**
SENI	**Senigallia**	**1.08**	**2**	P		**Pg**		**04 33 31.1**	**-0.3**
APEC	**Apecchio**	**1.08**	**329**	AML	AML				
	comp=N,758μm,1.0s								
APEC				AML	AML				
	comp=E,3070μm,0.7s								
APEC				AML	AML				
	comp=N,3645μm,0.9s								
APEC				AML	AML				
	comp=E,590μm,0.7s								
FSSB	**Fossombrone**	**1.10**	**345**	P		**Pb**		**04 33 30.3**	**-1.2**
MCIV	**Monte Civitell**	**1.12**	**278**	P		**Pb**		**04 33 31.4**	**-0.3**
MCIV				AML	AML				
	comp=E,1365μm,0.9s								
MCIV				AML	AML				
	comp=N,1050μm,0.6s								
CAFI	**Castiglion Fio**	**1.13**	**309**	P		**Pb**		**04 33 31.3**	**-0.6**
SF04	**Casetta**	**1.14**	**281**	P		**Pb**		**04 33 31.3**	**-0.8**
SF04				AML	AML				
	comp=N,2384μm,0.3s								
SF04				AML	AML				
	comp=E,3450μm,0.3s								
SF04				AML	AML				
	comp=N,2384μm,0.3s								
SF04				AML	AML				
	comp=E,3455μm,0.3s								
SF13	**Bagnolo**	**1.16**	**280**	P		**Pb**		**04 33 31.2**	**-1.3**
SF01	**Poggio Pratacc**	**1.20**	**279**	P		**Pn**		**04 33 33.3**	**+0.3**
CERA	**Filignano**	**1.21**	**148**	P		**Pb**		**04 33 33.7**	**+0.4**
ARCI	**Arcidosso**	**1.27**	**281**	P		**Pb**		**04 33 34.7**	**+0.3**
TRIV	**Trivento**	**1.34**	**130**	P		**Pn**		**04 33 34.9**	**+0.1**
TRIV				AML	AML				
	comp=E,1154μm,0.9s								
TRIV				AML	AML				
	comp=E,1235μm,0.9s								
TRIV				AML	AML				
	comp=N,1290μm,0.8s								
TRIV				AML	AML				
	comp=N,1245μm,0.9s								
MODR	**Mondragone**	**1.57**	**160**	AML	AML				
	comp=E,282μm,0.9s								
MODR				AML	AML				
	comp=N,332μm,0.7s								
CASP	**Castiglione de**	**1.71**	**276**	P		**Pn**		**04 33 40.2**	**+0.2**
CASP				AML	AML				
	comp=E,189μm,0.4s								
CASP				AML	AML				
	comp=N,210μm,0.6s								
RUFI	**Rufina**	**1.72**	**315**	P		**Pn**		**04 33 40.8**	**+0.7**
RUFI				AML	AML				
	comp=N,660μm,0.5s								
RUFI				AML	AML				
	comp=N,655μm,0.5s								
RUFI				AML	AML				
	comp=E,556μm,1.6s								
DUGI	**Dugi Otok**	**1.93**	**45**	*e*Pn		**Pn**		**04 33 42.7**	**-0.3**
APRC	**Apricena**	**1.96**	**116**	P		**Pn**		**04 33 44.3**	**+0.9**
APRC				AML	AML				
	comp=E,541μm,0.6s								
APRC				AML	AML				
	comp=N,926μm,1.2s								
APRC				AML	AML				
	comp=N,926μm,1.2s								
VIRC	**Vir**	**2.15**	**39**	*e*Pn		**Pn**		**04 33 45.8**	**-0.2**
MORI	**Morici**	**2.22**	**55**	*e*Pn		**Pn**		**04 33 47.3**	**+0.2**
POPM	**Popiglio**	**2.26**	**310**	AML	AML				
	comp=N,306μm,0.3s								
POPM				AML	AML				
	comp=E,262μm,0.8s								
NVLJ	**Novalja**	**2.29**	**32**	*e*Pn		**Pn**		**04 33 47.7**	**-0.2**
BRJN	**Brijuni**	**2.31**	**10**	*e*Pn		**Pn**		**04 33 48.1**	**-0.1**
BRJN	**Brijuni**	**2.31**	**10**	P		**Pn**		**04 33 48.0**	**-0.3**
MAIM	**Mastiano**	**2.34**	**304**	P		**Pn**		**04 33 49.9**	**+1.2**
MAIM				AML	AML				
	comp=E,253μm,1.2s								
MAIM				AML	AML				
	comp=N,263μm,0.4s								
BDI	**Bagni Di Lucca**	**2.37**	**308**	P		**Pn**		**04 33 49.1**	**0.0**
BDI				AML	AML				
	comp=E,146μm,1.1s								
BDI				AML	AML				
	comp=N,137μm,0.4s								
RABC	**Rab**	**2.42**	**28**	*e*Pn		**Pn**		**04 33 49.5**	**-0.2**
SMRN	**Sveta Marina**	**2.51**	**16**	*e*Pn		**Pn**		**04 33 50.6**	**-0.3**
UDBI	**Udbina**	**2.67**	**44**	*e*Pn		**Pn**		**04 33 54.1**	**+0.9**
EQUI	**Equi**	**2.69**	**306**	P		**Pn**		**04 33 53.9**	**+0.4**
EQUI				AML	AML				
	comp=E,156μm,1.0s								
EQUI				AML	AML				
	comp=N,177μm,0.5s								
KIJV	**Kijevo**	**2.73**	**59**	*i* Pn		**Pn**		**04 33 54.8**	**+0.9**
CAVE	**Cavezzo**	**2.73**	**326**	AML	AML				
	comp=E,334μm,1.0s								
CAVE				AML	AML				
	comp=N,434μm,0.5s								
LSTV	**Lastovo**	**2.74**	**86**	*e*Pn		**Pn**		**04 33 54.2**	**+0.1**
A250A	**Rusevo Krmpots**	**2.75**	**26**	*e*Pn		**Pn**		**04 33 54.5**	**+0.1**
PLMA	**Palmaria, Port**	**2.81**	**301**	P		**Pn**		**04 33 56.3**	**+1.2**
PLMA				AML	AML				
	comp=E,110μm,0.2s								
PLMA				AML	AML				
	comp=N,112μm,0.8s								
RIY	**Rijeka**	**2.85**	**19**	*e*Pn		**Pn**		**04 33 56.0**	**+0.2**
RIY	**Rijeka**	**2.85**	**19**	*e*Pn		**Pn**		**04 33 55.9**	**+0.2**
RIY				*e*Sn		**Sn**		**04 34 30.4**	**+0.6**
PLIT	**Plitvice**	**2.86**	**37**	*e*Pn		**Pn**		**04 33 56.4**	**+0.6**
MAKA	**Makarska**	**2.90**	**76**	*e*Pn		**Pn**		**04 33 56.3**	**0.0**
SMPL	**Sampolo**	**2.93**	**261**	P		**Pn**		**04 33 57.2**	**+0.4**
SMPL	**Sampolo**	**2.93**	**261**	P		**Pn**		**04 33 57.1**	**+0.3**
SKDS	**Skadanscina**	**2.98**	**11**	*e*Pn		**Pn**		**04 33 56.7**	**-0.7**
SKDS				*e*Sn		**Sn**		**04 34 33.3**	**+0.4**
SKDS				IAML				04 34 36.2	
	comp=Z,54nm,0.2s								
RICI	**Ricice**	**3.02**	**72**	*e*Pn		**Pn**		**04 33 59.0**	**+1.0**
PGF	**Pioggiola**	**3.09**	**270**	*e*P		**Pn**		**04 34 00.3**	**+1.3**
PGF				*e*Sn		**Sn**		**04 34 32.6**	**-3.1**
	comp=Z,30nm,0.8s								
PGF	**Pioggiola**	**3.09**	**270**	P		**Pn**		**04 34 00.2**	**+1.3**
AMUR	**Altamura**	**3.09**	**123**	AML	AML				
	comp=N,170μm,0.4s								
AMUR				AML	AML				
	comp=E,210μm,1.2s								
MSSA	**Maissana**	**3.15**	**304**	P		**Pn**		**04 34 00.8**	**+0.9**
MSSA				AML	AML				
	comp=E,86μm,1.5s								
MSSA				AML	AML				
	comp=N,111μm,0.6s								
BOJS	**Bojanci**	**3.24**	**27**	*i* Pn		**Pn**		**04 34 01.6**	**+0.7**
BOJS	**Bojanci**	**3.24**	**27**	P		**Pn**		**04 34 01.7**	**+0.7**
MATE	**Matera**	**3.30**	**126**	⇑P		**Pn**		**04 34 01.9**	**0.0**
STON	**Ston**	**3.34**	**84**	*e*Pn		**Pn**		**04 34 01.4**	**-0.9**
STON	**Ston**	**3.34**	**84**	*e*Pn		**Pn**		**04 34 01.5**	**-0.9**
STON				*e*Sn		**Sn**		**04 34 40.3**	**-1.5**
STON	**Ston**	**3.34**	**84**	P		**Pn**		**04 34 01.3**	**-1.0**
STON				AML	AML				
	comp=E,192μm,0.4s								
STON				AML	AML				
	comp=N,146μm,1.0s								
AJAC	**Base Areonaval**	**3.35**	**259**	P		**Pn**		**04 34 04.1**	**+1.7**
AJAC				S		**Sn**		**04 34 44.5**	**+2.5**
AJAC	**Base Areonaval**	**3.35**	**259**	P		**Pn**		**04 34 03.9**	**+1.5**
AJAC				AML	AML				
	comp=E,226μm,0.3s								
AJAC				AML	AML				
	comp=N,83μm,1.2s								
A251A	**Rujevac**	**3.35**	**41**	*e*Pn		**Pn**		**04 34 03.4**	**+0.8**
ROVR	**Rover Verones**	**3.38**	**334**	P		**Pn**		**04 34 03.9**	**+0.9**
ROVR				AML	AML				
	comp=N,166μm,0.7s								
ROVR				AML	AML				
	comp=E,77μm,1.1s								
OZLJ	**Ozalj**	**3.41**	**28**	*e*Pn		**Pn**		**04 34 04.0**	**+0.7**
SALO	**Salr**	**3.55**	**328**	P		**Pn**		**04 34 06.8**	**+1.5**
SALO				AML	AML				
	comp=N,294μm,0.4s								
SALO				AML	AML				
	comp=E,210μm,0.8s								
LJU	**Ljubljana**	**3.55**	**15**	P		**Pn**		**04 34 05.8**	**+0.5**
LJU				AML	AML				
	comp=E,946μm,0.6s								
LJU				AML	AML				
	comp=N,1475μm,0.7s								
DOSS	**Dosso del Somm**	**3.55**	**337**	P		**Pn**		**04 34 06.6**	**+1.2**
DOSS				AML	AML				
	comp=E,173μm,0.6s								
DOSS				AML	AML				
	comp=E,221μm,1.6s								
DOSS				AML	AML				
	comp=N,224μm,0.5s								
DOSS				AML	AML				
	comp=N,174μm,1.0s								
MPRI	**Monte Prat**	**3.61**	**358**	P		**Pn**		**04 34 06.6**	**+0.4**
MPRI				AML	AML				
	comp=N,439μm,0.3s								
MPRI				AML	AML				
	comp=E,306μm,0.7s								
MAGA	**Magasa**	**3.64**	**331**	P		**Pn**		**04 34 07.5**	**+0.9**
MAGA				AML	AML				
	comp=N,598μm,0.5s								
MAGA				AML	AML				
	comp=E,642μm,0.4s								
STAL	**STALIGIAL**	**3.65**	**355**	P		**Pn**		**04 34 06.7**	**+0.1**
STAL				AML	AML

comp=E,410μm,1.0s
STAL AML AML
comp=N,282μm,0.5s
DBRK Dubrovnik 3.67 88 *e*Pn **Pn 04 34 06.7 -0.1**
LUSI Trento, Gardas 3.69 335 P **Pn 04 34 08.5 +1.1**
LUSI AML AML
comp=N,297μm,0.4s
LUSI AML AML
comp=E,272μm,0.6s
CIMO Cimolais 3.72 352 P **Pn 04 34 07.7 +0.1**
CIMO AML AML
comp=E,98μm,0.8s
CIMO AML AML
comp=N,99μm,0.3s
CIMO AML AML
comp=E,96μm,0.6s
CIMO AML AML
comp=N,94μm,0.3s
PTCC Patocco-Chiusa 3.78 2 P **Pn 04 34 08.1 -0.3**
PTCC AML AML
comp=E,126μm,0.3s
PTCC AML AML
comp=N,108μm,0.4s
GAGG Gaggia 3.80 336 P **Pn 04 34 09.9 +1.1**
GAGG AML AML
comp=E,218μm,0.9s
GAGG AML AML
comp=N,155μm,0.8s
ZONE Zone 3.83 326 AML AML
comp=N,244μm,0.2s
ZONE AML AML
comp=E,200μm,1.1s
CLUD Cludinico 3.83 357 P **Pn 04 34 09.3 +0.1**
CLUD AML AML
comp=N,140μm,0.9s
CLUD AML AML
comp=E,162μm,0.7s
CLUD AML AML
comp=E,176μm,0.7s
CLUD AML AML
comp=N,131μm,0.8s
ACOM Acomizza, Ital 3.92 3 P **Pn 04 34 11.3 +0.7**
ACOM AML AML
comp=N,289μm,0.8s
ACOM AML AML
comp=E,228μm,0.9s
ACOM AML AML
comp=E,224μm,0.9s
ACOM AML AML
comp=N,226μm,0.8s
ZOU Zoufplan 3.93 358 P **Pn 04 34 10.9 +0.2**
ZOU AML AML
comp=E,188μm,0.7s
ZOU AML AML
comp=N,165μm,1.6s
ZOU AML AML
comp=E,202μm,0.8s
ZOU AML AML
comp=N,124μm,1.4s
HCY Herceg Novi 3.93 91⇑ *i*Pn **Pn 04 34 11.1 +0.6**
HCY *i* Sn **Sn 04 34 57.1 +0.7**
MOSL Moslavina 3.94 40 *e*Pn **Pn 04 34 10.0 -0.7**
BRY Bratogost 3.96 84⇓ *i*Pn **Pn 04 34 11.6 +0.6**
BRY *i* Sn **Sn 04 34 57.8 +0.6**
OBKA Obir 4.00 14 *e*Pn **Pn 04 34 12.1 +0.5**
comp=N,0.2nm,0.1s
MYKA Terra Mystica 4.01 5 *e*Pn **Pn 04 34 12.1 +0.4**
comp=N,5.1nm,0.4s
KOSI Kohlern 4.04 342 P **Pn 04 34 13.7 +1.5**
LOBO Lobor 4.09 29 *e*Pn **Pn 04 34 12.3 -0.4**
ABTA Abfaltersbach 4.14 354 *i*Pn **Pn 04 34 14.7 +1.2**
comp=N,16nm,0.2s,SNR=19
CEME Cevo 4.24 89⇓ *i*Pn **Pn 04 34 15.1 +0.3**
CEME *i* Sn **Sn 04 35 05.0 +0.9**
BUM Brajici-Budva 4.24 93⇑ *i*Pn **Pn 04 34 15.4 +0.6**
BUM *i* Sn **Sn 04 35 05.0 +0.8**
UPM Unac-Piva 4.25 80⇓ *i*Pn **Pn 04 34 15.8 +0.8**
UPM *i* Sn **Sn 04 35 05.0 +0.6**
VSL Villasalto 4.25 224 P **Pn 04 34 16.0 +1.1**
VSL AML AML
VSL AML AML
NKME Niksic 4.26 86⇑ *i*Pn **Pn 04 34 15.7 +0.6**
NKME *i* Sn **Sn 04 35 05.0 +0.4**
SOKA Soboth 4.26 17 *e*Pn **Pn 04 34 17.6 +2.5**
comp=N,1.1nm,0.2s
NKY Niksic 4.29 86⇑ *i*Pn **Pn 04 34 16.4 +0.9**
NKY *i* Sn **Sn 04 35 06.2 +0.8**
SBF Sospel 4.37 288 *e*P **Pn 04 34 17.9 +1.3**
SBF *e*Sn **Sn 04 35 03.4 -4.0**
comp=N,15nm,0.4s
RISI Rein 4.39 350 P **Pn 04 34 18.6 +1.6**
TURF col de Turini 4.43 290 P **Pn 04 34 18.8 +1.3**
TURF S **Sn 04 35 11.9 +2.9**
KBA Koelnbreinsper 4.45 1 *e*Pn **Pn 04 34 19.0 +1.2**
comp=N,2.6nm,0.2s
DRME Dracevica, Mon 4.47 94⇓ *i*Pn **Pn 04 34 18.3 +0.4**
DRME *i* Sn **Sn 04 35 10.3 +0.6**
ROSI Rosskopf 4.48 344 P **Pn 04 34 19.9 +1.7**
PDG Podgorica 4.50 90⇑ P **Pn 04 34 19.1 +0.9**
PDG Podgorica 4.50 90 *e*Pn **Pn 04 34 19.5 +1.3**
PDG *e*Sn **Sn 04 35 10.7 +0.4**
TTG Podgorica 4.50 90⇓ *i*Pn **Pn 04 34 18.9 +0.7**
TTG *i* Sn **Sn 04 35 11.1 +0.8**
ULC Ulcinj 4.55 96⇑ *i*Pn **Pn 04 34 19.6 +0.6**
ULC *i* Sn **Sn 04 35 12.4 +0.7**
SPIF crte de Spivo 4.56 290 P **Pn 04 34 21.5 +2.2**
PLE Pljevlja 4.61 79⇓ *i*Pn **Pn 04 34 21.0 +1.0**
PLE *i* Sn **Sn 04 35 13.8 +0.5**
KOME Kolasin 4.67 85⇓ *i*Pn **Pn 04 34 21.9 +1.1**
KOME *i* Sn **Sn 04 35 15.4 +0.6**
CALF Calern 4.71 286 P **Pn 04 34 23.1 +1.8**
BBLS Lazići 4.71 73 *e*Pn **Pn 04 34 22.5 +1.2**
BBLS *e*Sn **Sn 04 35 13.6 -2.2**
FETA Feichten 4.72 339 *e*Pn **Pn 04 34 24.7 +3.2**
comp=N,1.3nm,0.3s
ISO Isola 4.73 291 P **Pn 04 34 25.1 +3.6**
WTTA Wattenberg 4.76 347 Pn **Pn 04 34 24.5 +2.4**
comp=N,2.6nm,0.2s,SNR=5.1
WTTA Wattenberg 4.76 347 P **Pn 04 34 24.4 +2.3**
DAVOX Davos/Dischmat 4.77 332 Pn **Pn 04 34 24.5 +2.3**
comp=N,2.1nm,0.3s,baz=274,slow=7.0,SNR=11
DAVOX Sn **Sn 04 35 21.5 +4.1**
comp=N,3.1nm,0.3s,baz=135,slow=22,SNR=6.6
DAVOX Davos/Dischmat 4.77 332 P **Pn 04 34 24.8 +2.6**
SQTA Sankt Quirin 4.80 344 Pn **Pn 04 34 25.2 +2.7**
comp=N,6.3nm,0.2s,SNR=11
WATA Walderalm 4.84 347 Pn **Pn 04 34 26.0 +2.9**
comp=N,6.3nm,0.2s,SNR=8.9
ARSA Arzberg 4.91 19 *e*Pn **Pn 04 34 23.6 -0.4**
comp=N,1.4nm,0.3s
MOTA Moosalm 4.94 343 *e*Pn **Pn 04 34 27.1 +2.6**
comp=N,5.3nm,0.3s
LMR La Mourre 4.94 280 *e*P **Pn 04 34 25.2 +0.8**
LMR *e*Sn **Sn 04 35 16.8 -4.5**
comp=N,6.0nm,0.5s
IVA Berane 4.95 85⇑ *i*Pn **Pn 04 34 25.9 +1.3**
IVA *i* Sn **Sn 04 35 22.0 +0.3**
PVY Plav 5.00 88⇑ *i*Pn **Pn 04 34 26.1 +0.7**
PVY *i* Sn **Sn 04 35 23.2 +0.1**
SJES Sjenica 5.03 80 *e*Pn **Pn 04 34 27.0 +1.3**
SJES *e*Sn **Sn 04 35 22.5 -1.1**
BIOA Bad Ischl, Aus 5.07 4 Pn **Pn 04 34 26.8 +0.6**
comp=N,3.0nm,0.2s,SNR=6.9
TRIGF Trigance 5.07 285 P **Pn 04 34 28.4 +2.1**
TRIGF Sn **Sn 04 35 28.7 +4.0**
MBDF Montbardon 5.10 296 *e*P **Pn 04 34 29.0 +2.3**
MBDF *e*Sn **Sn 04 35 20.6 -4.7**
comp=N,4.9nm,0.5s
TIR Tirane 5.15 102⇑ P **Pn 04 34 27.9 +0.7**
RETA Reutte 5.15 341 Pn **Pn 04 34 30.3 +3.0**
comp=N,4.0nm,0.4s,SNR=7.8
DIVS Divibare 5.18 71 *e*Pn **Pn 04 34 27.6 -0.1**
DIVS *e*Sn **Sn 04 35 27.0 -0.3**
IVAS Ivanjica 5.19 77 *e*Pn **Pn 04 34 28.3 +0.4**
IVAS *e*Sn **Sn 04 35 25.5 -2.1**
DAVA Damuels 5.21 334 *i*Pn **Pn 04 34 31.0 +2.7**
comp=N,2.4nm,0.3s,SNR=8.7
MOA Molln 5.28 8 *i*P **Pn 04 34 30.8 +1.8**
SNR=6.8
FRGS Fruska Gora 5.42 60 *e*Pn **Pn 04 34 30.0 -0.9**
LPG La Plagne 5.45 304 *e*P **Pn 04 34 33.9 +2.3**
LPG *e*Sn **Sn 04 35 29.1 -5.0**
comp=N,12nm,0.6s
LPL La Plagne 5.47 304 *e*P **Pn 04 34 34.2 +2.4**
LPL *e*Sn **Sn 04 35 29.5 -5.0**
comp=N,6.9nm,0.4s
ARTF Artigues 5.48 283 P **Pn 04 34 33.8 +2.0**
TRUS Trudelj 5.50 71 *e*Pn **Pn 04 34 30.4 -1.7**
RONA Rosalia, Austr 5.53 22 *e*Pn **Pn 04 34 32.4 0.0**
comp=N,1.4nm,0.2s
RSL Roselend 5.62 305 P **Pn 04 34 36.6 +2.8**
CONA Conrad Observa 5.63 19 *e*Pn **Pn 04 34 34.1 +0.2**
comp=N,2.3nm,0.3s
BSTF la Bastide-des 5.64 285 P **Pn 04 34 35.7 +1.7**
GRUS Gruza 5.65 75 *e*Pn **Pn 04 34 33.4 -0.7**
GRUS *e*Sn **Sn 04 35 35.9 -2.8**
SMRF Simiane la Rot 5.71 286 *e*P **Pn 04 34 37.5 +2.5**
SMRF *e*Sn **Sn 04 35 35.2 -5.1**
comp=N,2.0nm,0.3s
GDM Grand'Maison 5.71 299 P **Pn 04 34 39.6 +4.5**
ORIF Oris-en-Rattie 5.76 296 *e*P **Pn 04 34 38.6 +2.9**
ORIF *e*Sn **Sn 04 35 36.3 -5.2**
comp=N,8.4nm,0.8s
ORIF Oris-en-Rattie 5.76 296 P **Pn 04 34 39.8 +4.1**
RUSF Rustrel 5.77 286 P **Pn 04 34 38.3 +2.6**
SELS Selova 5.86 82 *e*Pn **Pn 04 34 36.6 -0.4**
OHR Ohrid 5.89 102 *i*Pn **Pn 04 34 39.2 +1.7**
TORNY Torny/Romont 6.07 315 P **Pn 04 34 43.2 +3.3**
BALST Balsthal 6.10 322 P **Pn 04 34 41.6 +1.2**
SLE Schleitheim 6.11 329 P **Pn 04 34 41.3 +0.9**
ZST Bratislava 6.21 25 *e*PN **Pn 04 34 43.3 +1.5**
GERES GERESS Array B 6.23 3 Pn **Pn 04 34 42.1 0.0**
comp=N,0.7nm,0.3s,baz=174,slow=13,SNR=8.9
GERES Sn **Sn 04 35 50.9 -2.2**
comp=N,3.8nm,0.3s,baz=169,slow=24,SNR=11
GERES Lg Lg 04 36 32.7
baz=173,slow=28
comp=N,1.1nm,0.3s
CKRC Cesky Krumlov 6.24 7 *e*PN **Pn 04 34 42.3 +0.1**
CKRC *e*SN **Sn 04 35 50.6 -2.7**
BOVS Bovan 6.32 78⇑ P **Pn 04 34 43.1 -0.2**
BOVS Bovan 6.32 78 *e*Pn **Pn 04 34 43.3 0.0**
BOVS *e*Sn **Sn 04 35 51.2 -4.1**
BARS Barje 6.37 85 *e*Pn **Pn 04 34 44.6 +0.7**
BARS *e*Sn **Sn 04 35 54.2 -2.2**
FELD Feldberg im Sc 6.39 327 P **Pn 04 34 45.2 +0.8**
MODS Modra-Piesok 6.42 25 *e*PN **Pn 04 34 45.4 +0.6**
MODS *e*SN **Sn 04 35 58.2 +0.3**
BRANT Les Verrieres 6.43 314 S **Sn 04 35 56.4 -1.7**
BRANT Les Verrieres 6.43 314 P **Pn 04 34 47.1 +2.2**
CABF La Chapelle 6.44 311 *e*P **Pn 04 34 47.6 +2.6**
KIZ Kirchzarten 6.49 327 P **Pn 04 34 46.2 +0.5**
KIZ Kirchzarten 6.49 327 S **Sn 04 35 57.2 -2.3**
KHC Kasperske Hory 6.51 2 *e*PN **Pn 04 34 45.7 -0.2**
KHC *e*SN **Sn 04 35 57.4 -2.5**
MDVR Moldovita 6.55 68⇑ P **Pn 04 34 46.4 -0.1**
VIVF Saint-Julien-l 6.55 293 *e*P **Pn 04 34 49.1 +2.6**
PRVS Prvonek 6.57 88 *e*Pn **Pn 04 34 47.5 +0.7**
PRVS *e*Sn **Sn 04 35 59.6 -1.9**
VOGT Vogtsburg - To 6.69 326 P **Pn 04 34 49.7 +1.3**
ZAGS Zajecar 6.72 77 *e*Pn **Pn 04 34 48.7 -0.1**
BOUC Bouclans 6.74 316 P **Pn 04 34 48.0 -1.1**
STIP Stip 6.76 95 *i*Pn **Pn 04 34 52.2 +2.8**
BZS Buzias 6.77 61⇑ P **Pn 04 34 49.5 0.0**
KRUC Moravsky 6.81 18 *e*PN **Pn 04 34 50.4 +0.3**
HINF Hinteralfeld 6.84 321 *e*Pn **Pn 04 34 48.9 -1.6**
HINF *e*Sn **Sn 04 36 02.3 -5.9**
comp=N,11nm,0.3s
BOSS Bosilegrad 6.87 88 *e*Pn **Pn 04 34 51.2 +0.3**
LASF Ste Croix 6.95 285 *e*P **Pn 04 34 54.2 +2.3**
ZAPS Zavoj 6.97 81 *e*Pn **Pn 04 34 52.9 +0.6**
ECH Echery 7.01 325 P **Pn 04 34 53.2 +0.4**
BLKB Belogradchik 7.02 79⇓ P **Pn 04 34 53.7 +0.7**
HERR Herculane 7.06 68⇑ P **Pn 04 34 53.5 0.0**
WLS Welschbruch 7.08 327 P **Pn 04 34 54.3 +0.4**
VRAC Vranov 7.09 18 Pn **Pn 04 34 55.3 +1.4**
comp=N,0.7nm,0.3s,baz=205,slow=11,SNR=2.0
comp=N,1.9nm,0.4s
VRAC Vranov 7.09 18 *e*PN **Pn 04 34 53.1 -0.8**
CDF Champ du Feu 7.11 326 *e*Pn **Pn 04 34 53.1 -1.2**
CDF *e*Sn **Sn 04 36 08.5 -6.4**
comp=N,15nm,0.5s
HAU Haudompre 7.21 321 *e*Pn **Pn 04 34 53.8 -1.8**
HAU *e*Sn **Sn 04 36 11.0 -6.3**
comp=N,19nm,0.4s
VTS Vitosha 7.42 87⇑ P **Pn 04 34 59.0 +0.4**
PRU Pruhonice 7.42 7 *e*SN **Sn 04 36 18.8 -3.5**
GZR Gura Zlata 7.45 65⇑ P **Pn 04 34 59.5 +0.6**
KEST Kesra 7.50 205 Pn **Pn 04 35 03.5 +3.9**
comp=N,0.5nm,0.3s,baz=305,slow=6.3,SNR=7.5
comp=N,2.5nm,0.6s
SMF Signal de Mont 7.77 304 *e*P **Pn 04 35 06.2 +2.9**
SMF *e*Sn **Sn 04 36 24.4 -6.6**
comp=N,4.9nm,0.4s
FILF Fillols 7.83 273 P **Pn 04 35 06.0 +1.8**
LANS Liptovska Anna 7.86 32 *e*PN **Pn** 04 35 14.8 +10
PAGF Fort de Pagny 7.90 321 *e*P **Pn 04 35 07.8 +2.8**
DRGR 7.96 55⇑ P **Pn 04 35 06.5 +0.6**
SFTF Sexfontaines 7.99 317 *e*Pn **Pn 04 35 04.4 -1.8**
SFTF *e*Sn **Sn 04 36 30.0 -6.3**
comp=N,6.6nm,0.5s
MTLF Montolieu 8.07 279 *e*P **Pn 04 35 10.5 +3.2**
MTLF *e*Sn **Sn 04 36 31.3 -7.0**
comp=N,1.3nm,0.4s
LOR Lormes 8.07 308 *e*P **Pn 04 35 10.7 +3.3**
baz=122
LOR *e*Sn **Sn 04 36 31.2 -7.2**
comp=N,3.6nm,0.3s
AVF Avril sur Loir 8.14 304 *e*P **Pn 04 35 11.1 +2.9**
AVF *e*Sn **Sn 04 36 32.9 -7.1**
comp=N,1.9nm,0.5s
SSF Saint Saulge 8.18 306 *e*P **Pn 04 35 11.2 +2.4**
SSF *e*Sn **Sn 04 36 33.8 -7.1**
comp=N,3.2nm,0.5s
MEZF Maizieres J'vi 8.18 319 *e*Pn **Pn 04 35 07.9 -0.9**
SAVF Savonnieres en 8.22 319 *e*P **Pn 04 35 12.2 +2.8**
BGF Bois d'Agland 8.35 302 *e*P **Pn 04 35 14.2 +3.0**
CAF Calviac 8.36 290 *e*P **Pn 04 35 14.0 +2.6**
RJF Les Rejaudoux 8.82 292 *e*P **Pn 04 35 20.5 +2.8**
VOIR 9.00 68⇑ P **Pn 04 35 19.4 -0.8**
GIVF Givet 9.44 325 *e*P **Pn 04 35 29.4 +3.3**
MLR Muntele Rosu 9.63 68 Pn **Pn 04 35 32.1 +3.4**
comp=N,0.5nm,0.3s,baz=144,slow=16,SNR=3.3
comp=N,1.4nm,0.3s
IDI Anoyia 11.69 125 Pn **Pn 04 36 01.7 +4.7**
comp=N,0.1nm,0.3s,baz=170,slow=16,SNR=1.2
IDI Sn **Sn 04 38 06.4 -0.9**
comp=N,0.3nm,0.3s,baz=306,slow=19,SNR=1.8
comp=N,3.1nm,0.8s
EKA Eskdalemuir Ar 16.57 326 Pn **Pn 04 37 02.4 +0.1**
baz=133,slow=15
comp=N,0.2nm,0.5s
NB2 NORSAR Subarra 18.48 357 P **Pn 04 37 26.4 +0.4**
comp=Z,1.8nm,1.0s,baz=175,slow=11
NOA NORSAR Array B 18.48 357 P **Pn 04 37 26.6 +0.6**
comp=Z,0.6nm,0.8s,baz=175,slow=11,SNR=3.7
FINES FINESS Array B 20.37 18 P **P 04 37 46.8 +0.3**
comp=Z,1.1nm,0.6s,baz=209,slow=11,SNR=3.6
comp=Z,1.1nm,0.6s
KBZ Khabaz 21.65 77 P **P 04 38 03.1 +2.7**
comp=Z,1.2nm,0.6s,baz=344,slow=12,SNR=2.5
comp=Z,1.2nm,0.6s
TORD Torodi Ar. Bea 31.01 202 P **P 04 39 29.2 +1.4**
comp=Z,0.9nm,0.7s,baz=20,slow=8.7,SNR=8.9
comp=Z,0.9nm,0.7s
MKAR Makanchi Array 47.85 60 P **P 04 41 49.0 +1.3**
comp=Z,0.6nm,0.7s,baz=285,slow=6.0,SNR=4.9
comp=Z,0.6nm,0.7s
SONM Songino Array 61.92 50 P **P 04 43 31.8 +2.1**
comp=Z,0.7nm,0.7s,baz=36,slow=40,SNR=2.4
comp=Z,0.7nm,0.7s

LDG ***24*** *04:38:09.1±0.1, 42.°61N×13.°21E, h6km, Ml3.3/21, Error ellipse: s-maj=3.8km s-min=2.7km az=44.0*
ROM ***24*** *04:38:09.8±0.1, 42.°629N±0.°003×13.°223E±0.°005, h10km, ML3.5/69, Mw3.4, Error ellipse: s-maj=0.3km s-min=0.2km az=237.0, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-0.96; Mθθ-0.08; Mφφ 1.05; Mrθ 0.48; Mrφ-0.46; Mθr-0.95; Fault plane solution: M0 1.52280×10^14 NP1:φs 169.00000°, δ 23.00000°, λ -76.00000°. NP2:φs 334.00000°, δ 67.00000°, λ -96.00000°.*
IDC ***24*** *04:38:10.0±1.1, 42.°78N×13.°11E, h0km, mb3.6/6, mbtmp3.6/12, ML3.3/6 Error ellipse: s-maj=22.6km s-min=13.6km az=93.0*
BEO ***24*** *04:38:11.2±0.8, 42.°75N×13.°27E, h0km, ML3.5/8*
PRU ***24*** *04:38:12.3±0.0, 42.°74N×13.°55E, h0km*
STR ***24*** *04:38:15.8±1.3, 43°N±8°×1°3E±1°2, h5km, mb3.4/10, Error ellipse: s-maj=0.0km s-min=0.0km az=66.4, preliminary*

ISC 24 04:38:10.4±0.7, 42.°63N±0.°02×13.°19E±0.°02, h13km±5km, n232, σ2s02/285, mb3.9/5, 13C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**172**	⇑P	**Pg**		**04 38 13.4**	**-0.3**
RM33				S	**Sg**		**04 38 16.0**	**0.0**
RM33				AML	AML			
	comp=E,40050μm,0.9s							
RM33				AML	AML			
	comp=N,36800μm,0.3s							
RM33				AML	AML			
	comp=E,39550μm,0.9s							
RM33				AML	AML			
	comp=E,40100μm,0.9s							
RM33				AML	AML			
	comp=E,39500μm,0.9s							
RM33				AML	AML			
	comp=N,36850μm,0.3s							
RM33				AML	AML			
	comp=N,36950μm,0.3s							
AQT1	**Arquata del Tr**	**0.16**	**27**	⇓P	**Pg**		**04 38 13.7**	**-0.7**
AQT1				S	**Sg**		**04 38 16.2**	**-0.9**
CAMP	**Campotosto**	**0.18**	**120**	⇑P	**Pg**		**04 38 14.0**	**-0.7**
CAMP				S	**Sg**		**04 38 17.0**	**-0.6**
CAMP				AML	AML			
	comp=N,9795μm,1.6s							
CAMP				AML	AML			
	comp=E,14350μm,0.7s							
NRCA	**Norcia**	**0.21**	**344**	⇓P	**Pg**		**04 38 14.7**	**-0.4**
NRCA				S	**Sg**		**04 38 18.2**	**-0.2**
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
TERO	**Teramo**	**0.30**	**91**	⇑P	**Pg**		**04 38 15.7**	**-1.0**
TERO				S	**Sg**		**04 38 19.9**	**-1.0**
TERO				AML	AML			
	comp=E,20050μm,0.8s							
TERO				AML	AML			
	comp=N,19750μm,0.6s							
TERO				AML	AML			
	comp=E,20100μm,0.8s							
TERO				AML	AML			
	comp=N,18900μm,0.6s							
TERO				AML	AML			
	comp=E,20850μm,0.8s							
AQU	**L'Aquila**	**0.31**	**150**	P	**Pg**		**04 38 16.6**	**-0.3**
AQU				AML	AML			
	comp=E,7635μm,1.1s							
AQU				AML	AML			
	comp=N,5865μm,0.8s							
AQU				AML	AML			
	comp=N,6450μm,0.8s							
AQU				AML	AML			
	comp=E,7640μm,1.1s							
AQU				AML	AML			
	comp=E,7680μm,1.1s							
ARRO	**Arrone**	**0.32**	**262**	⇑P	**Pg**		**04 38 17.0**	**0.0**
ARRO				S	**Sg**		**04 38 22.1**	**+0.8**
GIGS	**Gran Sasso**	**0.33**	**122**	⇑P	**Pg**		**04 38 16.2**	**-1.0**
GIGS				S	**Sg**		**04 38 21.0**	**-0.7**
GIGS				AML	AML			
	comp=E,2775μm,0.6s							
GIGS				AML	AML			
	comp=N,2500μm,0.7s							
FEMA	**Monte Fema**	**0.35**	**343**	P	**Pg**		**04 38 17.5**	**-0.1**
FEMA				S	**Sg**		**04 38 23.0**	**+0.6**
FEMA				AML	AML			
	comp=N,13050μm,0.6s							
FEMA				AML	AML			
	comp=E,23400μm,0.5s							
FEMA				AML	AML			
	comp=N,13100μm,0.6s							
FIAM	**Fiamignano**	**0.36**	**189**	⇑P	**Pg**		**04 38 17.6**	**-0.1**
FIAM				S	**Sg**		**04 38 23.2**	**+0.5**
FIAM				AML	AML			
	comp=E,4950μm,0.6s							
FIAM				AML	AML			
	comp=N,6020μm,0.7s							
FDMO	**Fiordimonte**	**0.42**	**349**	P	**Pg**		**04 38 18.4**	**-0.3**
FDMO				S	**Sg**		**04 38 24.6**	**+0.3**
FDMO				AML	AML			
	comp=E,12550μm,0.5s							
FDMO				AML	AML			
	comp=N,9300μm,1.5s							
CESI	**CESI - Serrava**	**0.43**	**331**	⇑P	**Pg**		**04 38 18.6**	**-0.5**
CESI				S	**Sg**		**04 38 25.2**	**+0.3**
CESI				AML	AML			
	comp=E,9700μm,0.5s							
CESI				AML	AML			
	comp=N,14100μm,0.4s							
CESX	**Cesi**	**0.45**	**268**	⇑P	**Pg**		**04 38 19.1**	**-0.3**
CESX				S	**Sg**		**04 38 26.3**	**+0.9**
CESX				AML	AML			
	comp=E,9475μm,0.4s							
CESX				AML	AML			
	comp=N,12100μm,0.5s							
FAGN	**Fagnano**	**0.46**	**141**	P	**Pg**		**04 38 19.0**	**-0.6**
FAGN				AML	AML			
	comp=N,6615μm,0.6s							
FAGN				AML	AML			
	comp=E,10500μm,0.6s							
OFFI	**Offida**	**0.48**	**50**	⇑P	**Pg**		**04 38 19.7**	**-0.1**
OFFI				AML	AML			
	comp=N,48600μm,0.4s							
OFFI				AML	AML			
	comp=E,46600μm,0.5s							
VCEL	**Villa Celiera**	**0.53**	**116**	P	**Pg**		**04 38 20.2**	**-0.7**
VCEL				S	**Sg**		**04 38 28.5**	**+0.5**
VCEL				AML	AML			
	comp=E,8880μm,0.5s							
VCEL				AML	AML			
	comp=N,13150μm,0.6s							
VCEL				AML	AML			
	comp=E,8885μm,0.5s							
VCEL				AML	AML			
	comp=N,13200μm,0.6s							
MNTP	**Montappone**	**0.55**	**22**	P	**Pg**		**04 38 20.8**	**-0.4**
SEF1	**Sefro**	**0.55**	**341**	P	**Pg**		**04 38 20.7**	**-0.5**
SEF1				AML	AML			
	comp=E,12900μm,0.8s							
SEF1				AML	AML			
	comp=N,12700μm,0.2s							
TRTR	**Tortoreto Alta**	**0.56**	**71**	⇑P	**Pg**		**04 38 21.5**	**+0.1**
TRTR				AML	AML			
	comp=E,17850μm,0.7s							
TRTR				AML	AML			
	comp=N,12850μm,0.4s							
MDAR	**Monte D'Aria**	**0.57**	**356**	P	**Pg**		**04 38 20.8**	**-0.8**
ASSB	**Assisi San Ben**	**0.57**	**317**	⇑P	**Pg**		**04 38 21.0**	**-0.7**
ASSB				S	**Sb**		**04 38 29.9**	**-0.6**
ASSB				AML	AML			
	comp=E,7685μm,0.4s							
ASSB				AML	AML			
	comp=N,8615μm,0.4s							
PIO1	**Pioraco**	**0.57**	**344**	P	**Pg**		**04 38 21.8**	**+0.2**
T0110	**Collepietro**	**0.59**	**133**	⇑P	**Pg**		**04 38 20.9**	**-1.1**
T0110				S	**Sg**		**04 38 29.6**	**-0.2**
T0110				AML	AML			
	comp=N,6605μm,0.6s							
T0110				AML	AML			
	comp=E,8835μm,0.6s							
FIU1	**Fiuminata**	**0.59**	**341**	P	**Pg**		**04 38 21.9**	**-0.1**

IDC 24 04:33:16.4±2.9, 18.°57S×177.°29W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=307.8km s-min=35.5km az=160.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.56**	**260**	P	P		04 41 38.5	+0.1
	0.4nm,0.4s,baz=96,slow=7.6,SNR=18							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**45.64**	**255**	P	P		04 41 38.7	-0.4
	0.6nm,0.5s,baz=86,slow=7.9,SNR=8.0							
	0.6nm,0.5s							
TXAR	**Lajitas Array**	**85.45**	**57**	P	P		04 45 56.5	0.0
	0.2nm,0.7s,baz=238,slow=4.9,SNR=2.2							
	0.2nm,0.7s							

FIU1 S **Sb** **04 38 30.7 -0.4**
FIU1 AML AML
comp=E,4850µm,0.7s
FIU1 AML AML
comp=N,4380µm,0.7s
SSM1 San Severino M 0.60 359 P **Pg** **04 38 21.4 -0.8**
GAG1 Gagliole 0.62 351 P **Pg** **04 38 21.9 -0.6**
GAG1 AML AML
comp=N,12550µm,1.1s
GAG1 AML AML
comp=N,12540µm,1.1s
GAG1 AML AML
comp=E,12400µm,0.2s
PTQR Pietraquaria 0.62 166 P **Pg** **04 38 22.0 -0.6**
PTQR AML AML
comp=E,795µm,0.7s
PTQR AML AML
comp=N,1060µm,1.5s
PTQR AML AML
comp=E,794µm,0.7s
SRES S.Oreste - Sor 0.64 233 P **Pg** **04 38 22.3 -0.5**
SRES AML AML
comp=E,1670µm,0.5s
SRES AML AML
comp=N,1405µm,0.7s
MTL1 Matelica 0.64 348 P **Pg** **04 38 22.5 -0.4**
MTL1 S **Sb** **04 38 32.4 -0.1**
SNTG Esanatoglia 0.65 344 P **Pg** **04 38 22.3 -0.9**
SNTG S **Sb** **04 38 32.2 -0.7**
SNTG AML AML
comp=E,364µm,0.7s
SNTG AML AML
comp=N,463µm,0.7s
SNTG AML AML
comp=E,2705µm,0.2s
SNTG AML AML
comp=N,3345µm,0.2s
SNTG AML AML
comp=E,364µm,0.7s
SNTG AML AML
comp=N,464µm,0.7s
TRE1 Treia 0.69 7 P **Pg** **04 38 23.4 -0.4**
ATCC AVT- Casa Cast 0.69 324 P **Pg** **04 38 23.0 -0.9**
MTCE Montecelio 0.69 209 ⇑P **Pg** **04 38 23.0 -0.9**
MTCE AML AML
comp=E,3305µm,0.5s
MTCE AML AML
comp=N,1620µm,0.5s
CERT Cerreto 0.70 193 P **Pg** **04 38 23.1 -0.8**
CERT AML AML
comp=N,2315µm,0.6s
CERT AML AML
comp=E,3380µm,0.5s
EL6 Elcito 0.70 355 P **Pg** **04 38 23.3 -0.9**
EL6 AML AML
comp=N,8755µm,1.5s
EL6 AML AML
comp=E,8040µm,0.6s
EL6 AML AML
comp=N,8745µm,1.5s
FOSV Fossato di Vic 0.74 335 P **Pg** **04 38 24.1 -0.6**
FOSV AML AML
comp=E,3075µm,0.4s
FOSV AML AML
comp=N,4300µm,0.6s
CING Cingoli 0.75 0 P **Pg** **04 38 24.1 -0.8**
CIMA Civitanova Mar 0.76 27 P **Pg** **04 38 25.1 -0.1**
RCAV Rocca di Cave 0.80 193 P **Pg** **04 38 25.7 -0.2**
MURB Monte Urbino 0.80 323 P **Pg** **04 38 25.4 -0.6**
MURB AML AML
comp=E,14950µm,0.2s
MURB AML AML
comp=N,12400µm,0.3s
MURB AML AML
comp=E,15600µm,0.3s
MURB AML AML
comp=N,12350µm,0.3s
MURB AML AML
comp=E,14950µm,0.3s
MURB AML AML
comp=N,12650µm,0.3s
PP3 Marolino 0.81 22 P **Pg** **04 38 25.7 -0.4**
PP3 AML AML
comp=E,17550µm,0.4s
PP3 AML AML
comp=N,25100µm,0.4s
PP3 AML AML
comp=N,24700µm,0.4s
PP3 AML AML
comp=E,18500µm,0.5s
INTR Introdacqua 0.81 139 P **Pg** **04 38 24.7 -1.4**
INTR AML AML
comp=N,3µm,1.0s
INTR AML AML
comp=N,3870µm,0.6s
INTR AML AML
comp=E,2400µm,1.2s
INTR AML AML
comp=E,2µm,0.8s
VVLD Villa Vallelon 0.82 157 P **Pg** **04 38 25.6 -0.7**
GUAR Guarcino 0.84 174 P **Pg** **04 38 25.9 -0.7**
ATTE AVT- Monte Tez 0.84 313 P **Pg** **04 38 25.8 -0.9**
ATTE AML AML
comp=N,2345µm,0.5s
ATTE AML AML
comp=E,2860µm,1.4s
MGAB Montegabbione 0.84 290 P **Pg** **04 38 26.2 -0.5**
MGAB AML AML
comp=E,7895µm,0.6s
MGAB AML AML
comp=N,7550µm,0.5s
MGAB AML AML
comp=N,7545µm,0.5s
MGAB AML AML
comp=E,8165µm,0.5s
MGAB AML AML
comp=E,7890µm,0.6s
MGAB AML AML
comp=N,8185µm,0.5s
SSFR Montelago di S 0.86 340 P **Pg** **04 38 26.5 -0.7**
SSFR AML AML
comp=E,8365µm,0.8s
SSFR AML AML
comp=N,8015µm,0.2s
SSFR AML AML
comp=N,7210µm,0.2s
SSFR AML AML
comp=E,8520µm,0.2s
ATFO Monte Foce - G 0.87 329 P **Pg** **04 38 26.6 -0.7**
ATFO AML AML
comp=N,2565µm,0.3s
ATFO AML AML
comp=E,2840µm,1.1s
ARVD Arcevia 0.89 348 P **Pg** **04 38 26.6 -1.1**
ARVD AML AML
comp=N,2265µm,0.8s
ARVD AML AML
comp=E,2565µm,1.0s
RMP Rome, Mte Porz 0.89 204 AML AML
comp=E,2420µm,0.7s
RMP AML AML
comp=N,3160µm,0.6s
LPEL Lama dei Pelig 0.94 128 P **Pg** **04 38 26.7 -1.8**
LPEL AML AML
comp=E,2765µm,0.9s
LPEL AML AML
comp=N,1570µm,1.0s
RDP Rocca di Papa 0.94 202 P **Pg** **04 38 28.3 -0.3**
MA9 Marino 0.94 205 P **Pg** **04 38 28.6 -0.1**
ATVO AVT- Monte Val 0.95 323 P **Pg** **04 38 27.9 -0.8**
ATVO AML AML
comp=E,2065µm,0.4s
ATVO AML AML
comp=N,1705µm,0.5s
FRON Frontone 0.95 339 P **Pg** **04 38 27.9 -1.0**
FRON AML AML
comp=E,3010µm,0.6s
FRON AML AML
comp=N,4320µm,0.7s
AOI Ancona 0.97 18 P **Pg** **04 38 27.9 -1.3**
AOI AML AML
comp=E,3710µm,0.3s
AOI AML AML
comp=N,4765µm,1.1s
SACS San Casciano d 0.97 284 P **Pg** **04 38 28.5 -0.6**
SACS AML AML
comp=E,2080µm,0.8s
SACS AML AML
comp=E,2235µm,0.5s
SACS AML AML
comp=N,2420µm,0.9s
SACS AML AML
comp=N,2205µm,1.0s
ATMI Monte Miggiano 0.98 316 P **Pg** **04 38 28.8 -0.5**
ATMI AML AML
comp=N,5500µm,0.5s
ATMI AML AML
comp=E,7950µm,0.5s
POFI Posta Fibreno 0.99 157 P **Pg** **04 38 28.0 -1.5**
ATPI Pietralunga - 1.01 325 P **Pg** **04 38 28.9 -1.0**
ATPI AML AML
comp=N,2030µm,1.2s
ATPI AML AML
comp=E,3165µm,0.6s
COR1 Corinaldo 1.01 352 P **Pg** **04 38 29.4 -0.6**
COR1 AML AML
comp=E,3470µm,0.9s
COR1 AML AML
comp=N,5615µm,1.3s
COR1 AML AML
comp=N,6360µm,1.1s
COR1 AML AML
comp=E,6410µm,0.4s
LRP Arpino 1.02 163 P **Pb** **04 38 29.2 -0.8**
LRP AML AML
comp=N,1099µm,0.9s
LRP AML AML
comp=E,635µm,0.7s
LATE Laterza 1.02 270 P **Pg** **04 38 29.4 -0.8**
PIEI Pieia 1.03 332 P **Pg** **04 38 29.4 -0.9**
PIEI AML AML
comp=E,2230µm,0.3s
PIEI AML AML
comp=N,1665µm,0.3s
TOLF Tolfa 1.05 238 P **Pb** **04 38 29.6 -0.9**
MPAG Monte Paganucc 1.05 343 P **Pb** **04 38 29.6 -0.9**
MPAG AML AML
comp=N,2395µm,1.2s
MPAG AML AML
comp=E,2505µm,0.5s
SENI Senigallia 1.08 2 P **Pb** **04 38 30.6 -0.3**
SENI AML AML
comp=E,11715µm,0.3s
SENI AML AML
comp=N,11295µm,0.3s
NARO Abbazia di Nar 1.08 336 P **Pb** **04 38 30.1 -1.0**
NARO AML AML
comp=N,1335µm,0.7s
NARO AML AML
comp=E,1890µm,0.6s
APEC Apecchio 1.09 329 P **Pb** **04 38 30.4 -0.7**
APEC AML AML
comp=E,2205µm,0.8s
APEC AML AML
comp=N,3280µm,0.4s
FSSB Fossombrone 1.11 344 P **Pb** **04 38 30.6 -0.9**
FSSB AML AML
comp=N,8420µm,1.3s
FSSB AML AML
comp=E,6380µm,0.4s
BADI Badiali 1.12 322 P **Pb** **04 38 31.2 -0.5**
BADI AML AML
comp=E,219µm,0.6s
BADI AML AML
comp=N,2555µm,0.5s
SF03 Valle Cupa 1.12 279 P **Pb** **04 38 31.5 -0.3**
MCIV Monte Civitell 1.13 278 P **Pb** **04 38 31.4 -0.4**
MCIV AML AML
comp=N,1035µm,0.7s
MCIV AML AML
comp=E,977µm,0.8s
CAFI Castiglion Fio 1.14 308 P **Pb** **04 38 31.4 -0.7**
CAFI AML AML
comp=E,1900µm,0.3s
CAFI AML AML
comp=N,1615µm,0.6s
SF11 Podere del Sol 1.14 283 P **Pb** **04 38 31.8 -0.3**
SF04 Casetta 1.15 281 P **Pb** **04 38 32.1 -0.1**
SF14 Selvena 1.17 277 P **Pb** **04 38 31.4 -1.2**
SF13 Bagnolo 1.18 280 P **Pb** **04 38 32.2 -0.5**
PE3 Peglio 1.18 335 P **Pb** **04 38 32.1 -0.6**
CERA Filignano 1.20 149 P **Pn** **04 38 31.8 -1.2**
SF01 Poggio Pratacc 1.22 279 P **Pn** **04 38 33.3 +0.1**
PARC Parchiule 1.24 326 P **Pn** **04 38 32.8 -0.8**
PARC AML AML
comp=E,1900µm,0.6s
PARC AML AML
comp=N,1650µm,0.7s
ARCI Arcidosso 1.28 281 P **Pn** **04 38 34.3 0.0**
TRIV Trivento 1.32 130 AML AML
comp=E,1052µm,1.3s
TRIV AML AML
comp=N,1270µm,0.9s
TRIV AML AML
comp=E,1145µm,1.1s
TRIV AML AML
comp=N,1175µm,0.9s
PESA Pesaro 1.34 349 P **Pn** **04 38 35.1 +0.3**
VAGA Valle Agricola 1.44 147 P **Pn** **04 38 35.8 -0.3**
ASQU Asqua 1.56 319 P **Pn** **04 38 38.6 +0.6**
MODR Mondragone 1.57 161 P **Pn** **04 38 38.7 +0.7**
SFI Santa Sofia 1.61 323 P **Pn** **04 38 38.4 -0.3**
CSNT Castellina Chi 1.63 302 P **Pn** **04 38 39.6 +0.7**
OSSC Osservatorio P 1.69 303 P **Pn** **04 38 40.6 +0.9**
OSSC AML AML
comp=E,290µm,1.0s
OSSC AML AML
comp=N,308µm,0.6s
MELA Melanico ??? S 1.71 122 P **Pn** **04 38 40.6 +0.7**
CASP Castiglione de 1.72 276 P **Pn** **04 38 40.1 0.0**
RUFI Rufina 1.73 315 P **Pn** **04 38 40.7 +0.5**
TRIF Trifonti 1.75 287 P **Pn** **04 38 40.9 +0.3**
TRIF AML AML
comp=N,404µm,0.4s
TRIF AML AML
comp=E,326µm,1.5s
LMD Lutirano 1.81 324 P **Pn** **04 38 42.5 +1.1**
LMD AML AML
comp=N,623µm,0.6s
LMD AML AML
comp=E,476µm,1.5s
DUGI Dugi Otok 1.93 44 *e*Pn **Pn** **04 38 42.5 -0.4**
VIRC Vir 2.15 39 *e*Pn **Pn** **04 38 45.6 -0.3**
MORI Morici 2.21 55 *i* Pn **Pn** **04 38 47.0 +0.1**
NVLJ Novalja 2.29 32 *e*Pn **Pn** **04 38 47.5 -0.4**
BRJN Brijuni 2.31 10 *e*Pn **Pn** **04 38 47.8 -0.4**
MAIM Mastiano 2.35 304 P **Pn** **04 38 49.8 +0.9**
MAIM AML AML
comp=E,214µm,0.9s
MAIM AML AML
comp=N,278µm,0.6s
BDI Bagni Di Lucca 2.38 308 P **Pn** **04 38 49.3 +0.1**
BDI AML AML
comp=E,140µm,0.3s
BDI AML AML
comp=N,124µm,0.2s
RABC Rab 2.42 28 *e*Pn **Pn** **04 38 49.3 -0.3**
SMRN Sveta Marina 2.51 16 *e*Pn **Pn** **04 38 50.5 -0.4**
UDBI Udbina 2.67 44 *e*Pn **Pn** **04 38 53.8 +0.7**
EQUI Equi 2.70 306 P **Pn** **04 38 53.9 +0.4**
EQUI AML AML
comp=E,142µm,0.8s
EQUI AML AML
comp=N,137µm,1.3s
KIJV Kijevo 2.72 58 *e*Pn **Pn** **04 38 54.5 +0.7**
LSTV Lastovo 2.73 86 *e*Pn **Pn** **04 38 53.8 -0.2**
RIY Rijeka 2.85 19 *e*Pn **Pn** **04 38 55.6 -0.1**
RIY Rijeka 2.85 19 *e*Pn **Pn** **04 38 55.9 +0.2**
RIY *e*Sn **Sn** **04 39 30.1 +0.2**
PLIT Plitvice 2.86 37 *e*Pn **Pn** **04 38 56.3 +0.5**
MAKA Makarska 2.89 75 *e*Pn **Pn** **04 38 56.3 +0.2**
SKDS Skadanscina 2.98 11 *e*Pn **Pn** **04 38 57.0 -0.4**
SKDS *e*Sn **Sn** **04 39 32.4 -0.6**
SKDS IAML 04 39 36.3
comp=Z,47nm,0.2s
RICI Ricice 3.02 72 *e*Pn **Pn** **04 38 58.7 +0.8**
PGF Pioggiola 3.10 270 *e*P **Pn** **04 39 00.0 +0.8**
PGF *e*Sn **Sn** **04 39 32.1 -4.0**
comp=Z,10.0nm,0.5s
PGF Pioggiola 3.10 270 P **Pn** **04 39 00.2 +1.0**
STON Ston 3.33 84 *e*Pn **Pn** **04 39 01.3 -0.9**
STON Ston 3.33 84 *e*Pn **Pn** **04 39 01.6 -0.6**
STON *e*Sn **Sn** **04 39 40.8 -0.8**
CGRP Cima Grappa 3.40 343 AML AML
comp=N,344µm,0.4s
CGRP AML AML
comp=E,538µm,0.4s
OZLJ Ozalj 3.41 28 *e*Pn **Pn** **04 39 03.6 +0.4**
SALO Salr 3.55 328 P **Pn** **04 39 06.5 +1.1**
SALO AML AML
comp=E,220µm,0.6s
SALO AML AML
comp=N,292µm,0.4s
DOSS Dosso del Somm 3.56 337 AML AML
comp=N,178µm,0.6s
DOSS AML AML
comp=E,172µm,0.3s
MAGA Magasa 3.65 331 P **Pn** **04 39 07.5 +0.8**
MAGA AML AML
comp=N,394µm,0.3s
MAGA AML AML
comp=E,514µm,0.5s
STAL STALIGIAL 3.65 355 AML AML
comp=E,364µm,0.9s
STAL AML AML
comp=N,452µm,1.6s
STAL AML AML
comp=E,312µm,0.8s
STAL AML AML
comp=N,208µm,0.3s
LUSI Trento, Gardas 3.70 335 P **Pn** **04 39 08.2 +0.8**
LUSI AML AML
comp=E,220µm,0.5s
LUSI AML AML
comp=N,293µm,0.3s
CIMO Cimolais 3.72 352 P **Pn** **04 39 07.7 +0.1**
CIMO AML AML
comp=N,78µm,1.3s
CIMO AML AML
comp=E,78µm,0.4s
PTCC Patocco-Chiusa 3.78 2 P **Pn** **04 39 08.0 -0.5**
SARZ Sarezzano 3.83 307 AML AML
comp=E,154µm,0.8s
SARZ AML AML
comp=N,166µm,0.5s
ACOM Acomizza, Ital 3.93 3 P **Pn** **04 39 11.2 +0.6**
ACOM AML AML
comp=E,224µm,0.8s
ACOM AML AML
comp=N,252µm,0.7s
ACOM AML AML
comp=E,215µm,0.3s
ACOM AML AML
comp=N,233µm,0.7s
ZOU Zoufplan 3.93 358 P **Pn** **04 39 10.8 0.0**
ZOU AML AML
comp=N,95µm,0.9s
ZOU AML AML
comp=E,113µm,1.2s
MOSL Moslavina 3.94 39 *e*Pn **Pn** **04 39 09.9 -0.7**
OBKA Obir 4.00 14 *e*Pn **Pn** **04 39 12.7 +1.2**
comp=E,2.2nm,0.2s
MYKA Terra Mystica 4.01 4 *i* Pn **Pn** **04 39 12.4 +0.7**
comp=E,4.4nm,0.3s,SNR=4.6
MYKA *e*Sn **Sn** **04 39 59.5 +0.8**
comp=E,16nm,0.3s,SNR=5.0
KOSI Kohlern 4.05 342 P **Pn** **04 39 13.7 +1.5**
KOSI AML AML
comp=N,153µm,1.6s
KOSI AML AML
comp=E,201µm,0.8s
LOBO Lobor 4.08 29 *e*Pn **Pn** **04 39 12.2 -0.5**
ABTA Abfaltersbach 4.15 354 *i* Pn **Pn** **04 39 14.4 +0.8**
comp=E,17nm,0.4s,SNR=29
ABTA *e*Sn **Sn** **04 40 02.5 +0.5**
comp=E,20nm,0.4s
SOKA Soboth 4.26 17 *e*Pn **Pn** **04 39 17.9 +2.9**
comp=E,1.7nm,0.2s
SOKA *e*Sn **Sn** **04 40 04.6 -0.1**
comp=E,2.7nm,0.3s
SBF Sospel 4.38 288 *e*P **Pn** **04 39 17.9 +1.1**
SBF *e*Sn **Sn** **04 40 02.7 -5.1**
comp=E,28nm,0.6s
RISI Rein 4.39 350 P **Pn** **04 39 18.2 +1.2**
TURF col de Turini 4.44 290 P **Pn** **04 39 18.6 +0.9**
KBA Koelnbreinsper 4.45 1 *e*Pn **Pn** **04 39 18.9 +1.0**
comp=E,3.2nm,0.3s
KBA *e*Sn **Sn** **04 40 08.7 -0.9**
comp=E,25nm,0.5s
ROSI Rosskopf 4.48 344 P **Pn** **04 39 19.9 +1.6**
PDG Podgorica 4.49 90 *e*Pn **Pn** **04 39 19.4 +1.3**
PDG *e*Sn **Sn** **04 40 12.4 +2.3**
MVIF Mont Vial 4.59 288 P **Pn** **04 39 22.3 +2.6**
BBLS Lazi?i 4.70 73 *e*Pn **Pn** **04 39 22.4 +1.2**
CALF Calern 4.72 286 P **Pn** **04 39 21.6 +0.2**
FETA Feichten 4.73 339 *e*Pn **Pn** **04 39 24.1 +2.4**
comp=E,1.7nm,0.3s
FETA *e*Sn **Sn** **04 40 17.2 +0.8**
comp=E,1.3nm,0.5s
WTTA Wattenberg 4.77 347 Pn **Pn** **04 39 24.3 +2.2**
comp=E,11nm,0.6s,SNR=7.1
WTTA *e*Sn **Sn** **04 40 18.6 +1.2**
comp=E,63nm,0.6s
DAVOX Davos/Dischmat 4.78 332 Pn **Pn** **04 39 24.3 +2.0**
comp=E,2.9nm,0.3s,baz=158,slow=17,SNR=14
DAVOX Sn **Sn** **04 40 18.7 +1.1**
comp=E,2.1nm,0.3s,baz=110,slow=23,SNR=2.9
SQTA Sankt Quirin 4.80 344 Pn **Pn** **04 39 25.1 +2.5**
comp=E,4.0nm,0.2s,SNR=7.6
WATA Walderalm 4.85 347 *e*Pn **Pn** **04 39 26.1 +2.9**
comp=E,2.7nm,0.3s
ARSA Arzberg 4.91 19 *e*Pn **Pn** **04 39 23.5 -0.5**
comp=E,1.2nm,0.3s
MOTA Moosalm 4.94 343 Pn **Pn** **04 39 27.4 +2.9**
comp=E,2.3nm,0.3s,SNR=5.4
LMR La Mourre 4.95 280 *e*P **Pn** **04 39 25.1 +0.5**
LMR *e*Sn **Sn** **04 40 16.2 -5.5**
comp=E,22nm,1.2s
SJES Sjenica 5.02 80 *e*Pn **Pn** **04 39 27.1 +1.6**
SJES *e*Sn **Sn** **04 40 22.7 -0.8**
BIOA Bad Ischl, Aus 5.07 3 *e*Pn **Pn** **04 39 27.0 +0.8**
comp=E,4.7nm,0.3s
TRIGF Trigance 5.09 285 P **Pn** **04 39 27.8 +1.4**
MBDF Montbardon 5.11 296 *e*P **Pn** **04 39 28.7 +1.9**
MBDF *e*Sn **Sn** **04 40 20.4 -5.3**
comp=E,18nm,0.7s
RETA Reutte 5.16 341 *i* Pn **Pn** **04 39 30.4 +3.0**
comp=E,3.4nm,0.3s,SNR=8.9
OGAG Argentiere 5.17 293 P Pb 04 39 34.9 -5.8
DIVS Divibare 5.17 71 *e*Pn **Pn** **04 39 28.8 +1.2**
IVAS Ivanjica 5.18 77 *e*Pn **Pn** **04 39 28.3 +0.5**
IVAS *e*Sn **Sn** **04 40 26.6 -0.9**
DAVA Damuels 5.22 334 *i* Pn **Pn** **04 39 30.6 +2.3**
comp=E,1.4nm,0.2s,SNR=9.0
MOA Mollin 5.28 8 *i* Pn **Pn** **04 39 30.0 +1.0**
comp=E,4.3nm,0.4s,SNR=5.6
FRGS Fruska Gora 5.41 60 *e*Pn **Pn** **04 39 30.3 -0.5**
LPG La Plagne 5.46 304 *e*P **Pn** **04 39 33.6 +1.9**
LPG *e*Sn **Sn** **04 40 29.1 -5.4**
comp=E,11nm,0.6s
LPL La Plagne 5.48 304 *e*P **Pn** **04 39 34.1 +2.1**
LPL *e*Sn **Sn** **04 40 29.4 -5.5**
comp=E,6.2nm,0.3s
RONA Rosalia, Austr 5.53 22 *i* Pn **Pn** **04 39 32.7 +0.3**
comp=E,1.5nm,0.3s,SNR=4.3
CONA Conrad Observa 5.62 19 *e*Pn **Pn** **04 39 33.7 -0.2**
comp=E,1.0nm,0.2s
RSL Roselend 5.63 305 P **Pn** **04 39 37.2 +3.2**
RSL S **Sn** **04 40 42.6 +4.0**
GRUS Gruza 5.64 75 *e*Pn **Pn** **04 39 34.6 +0.7**
BSTF la Bastide-des 5.65 285 P **Pn** **04 39 35.6 +1.4**
SMRF Simiane la Rot 5.72 286 *e*P **Pn** **04 39 37.1 +2.0**
SMRF *e*Sn **Sn** **04 40 34.8 -5.9**
comp=E,15nm,1.2s
GDM Grand'Maison 5.72 299 P **Pn** **04 39 39.2 +3.9**
ORIF Oris-en-Rattie 5.77 296 *e*P **Pn** **04 39 38.1 +2.3**
ORIF *e*Sn **Sn** **04 40 36.3 -5.6**
comp=E,10nm,0.6s
SELS Selova 5.85 82 *e*Pn **Pn** **04 39 37.2 +0.3**
OHR Ohrid 5.88 102 *i* Pn **Pn** **04 39 39.2 +1.9**
BALST Balsthal 6.11 322 P **Pn** **04 39 41.4 +0.9**
ZST Bratislava 6.21 25 *e*PN **Pn** **04 39 41.2 -0.6**
ZST *e*SN **Sn** **04 40 52.5 -0.1**
GERES GERESS Array B 6.23 3 Pn **Pn** **04 39 41.9 -0.3**
comp=E,0.4nm,0.3s,baz=184,slow=14,SNR=9.3
GERES Sn **Sn** **04 40 50.0 -3.2**
comp=E,3.5nm,0.3s,baz=170,slow=24,SNR=13

GERES					Lg	Lg	04 41 30.1		
	baz=188,slow=33								
	comp=E,1.4nm,0.5s								
CKRC	**Cesky Krumlov**	**6.24**	**7**	*e*PN	**Pn**	**04 39 43.8**	**+1.5**		
CKRC				*e*SN	**Sn**	**04 40 50.5**	**-3.0**		
BOVS	**Bovan**	**6.31**	**78**	*e*Pn	**Pn**	**04 39 43.4**	**+0.2**		
BARS	**Barje**	**6.35**	**85**	*e*Pn	**Pn**	**04 39 44.6**	**+0.8**		
BARS				*e*Sn	**Sn**	**04 40 55.1**	**-1.1**		
BOURR	**Bourrignon**	**6.37**	**320**	S	**Sn**	**04 40 55.2**	**-1.5**		
BOURR	**Bourrignon**	**6.37**	**320**	P	**Pn**	**04 39 46.1**	**+2.1**		
FELD	**Feldberg im Sc**	**6.40**	**327**	P	**Pn**	**04 39 45.1**	**+0.5**		
FELD	**Feldberg im Sc**	**6.40**	**327**	S	**Sn**	**04 40 54.7**	**-2.9**		
MODS	**Modra-Piesok**	**6.42**	**25**	*e*PN	**Pn**	**04 39 42.4**	**-2.3**		
MODS				*e*SN	**Sn**	**04 40 56.0**	**-1.9**		
CABF	**La Chapelle**	**6.45**	**311**	*e*P	**Pn**	**04 39 47.4**	**+2.3**		
CABF				*e*Sn	**Sn**	**04 40 52.1**	**-6.5**		
	comp=E,7.8nm,0.6s								
KIZ	**Kirchzarten**	**6.50**	**327**	P	**Pn**	**04 39 46.4**	**+0.6**		
KIZ	**Kirchzarten**	**6.50**	**327**	S	**Sn**	**04 40 57.5**	**-2.3**		
KHC	**Kasperske Hory**	**6.51**	**2**	*e*PN	**Pn**	**04 39 46.6**	**+0.6**		
KHC				*e*SN	**Sn**	**04 40 58.0**	**-2.1**		
PRVS	**Prvonek**	**6.56**	**88**	*e*Pn	**Pn**	**04 39 47.4**	**+0.7**		
PRVS				*e*Sn	**Sn**	**04 40 58.8**	**-2.6**		
VIVF	**Saint-Julien-l**	**6.56**	**293**	*e*P	**Pn**	**04 39 49.0**	**+2.3**		
VIVF				*e*Sn	**Sn**	**04 40 55.1**	**-6.3**		
	comp=E,4.6nm,0.9s								
VOGT	**Vogtsburg - To**	**6.70**	**326**	S	**Sn**	**04 41 02.1**	**-2.5**		
VOGT	**Vogtsburg - To**	**6.70**	**326**	P	**Pn**	**04 39 49.6**	**+1.1**		
ZAGS	**Zajecar**	**6.71**	**77**	*e*Pn	**Pn**	**04 39 49.2**	**+0.5**		
STIP	**Stip**	**6.75**	**95**	*i* Pn	**Pn**	**04 39 52.0**	**+2.8**		
KRUC	**Moravsky**	**6.81**	**18**	*e*PN	**Pn**	**04 39 50.7**	**+0.6**		
HINF	**Hinteralfeld**	**6.85**	**321**	*e*P	**Pn**	**04 39 51.5**	**+0.9**		
HINF				*e*Sn	**Sn**	**04 41 02.2**	**-6.3**		
	comp=E,14nm,0.3s								
BOSS	**Bosilegrad**	**6.86**	**88**	*e*Pn	**Pn**	**04 39 51.4**	**+0.7**		
LASF	**Ste Croix**	**6.96**	**285**	*e*P	**Pn**	**04 39 54.6**	**+2.5**		
ZAPS	**Zavoj**	**6.96**	**81**	*e*Pn	**Pn**	**04 39 53.0**	**+0.9**		
ZAPS				*e*Sn	**Sn**	**04 41 08.8**	**-2.3**		
ECH	**Echery**	**7.02**	**325**	P	**Pn**	**04 39 53.5**	**+0.6**		
ECH				S	**Sn**	**04 41 09.6**	**-2.9**		
ECH	**Echery**	**7.02**	**325**	P	**Pn**	**04 39 53.4**	**+0.5**		
ECH				S	**Sn**	**04 41 10.2**	**-2.4**		
VRAC	**Vranov**	**7.09**	**18**	*e*PN	**Pn**	**04 39 53.8**	**-0.1**		
WLS	**Welschbruch**	**7.09**	**327**	P	**Pn**	**04 39 54.4**	**+0.5**		
WLS				S	**Sn**	**04 41 12.7**	**-1.7**		
VAY	**Valandovo**	**7.11**	**97**	*i* Pn	**Pn**	**04 39 55.6**	**+1.5**		
CDF	**Champ du Feu**	**7.12**	**326**	*e*P	**Pn**	**04 39 55.1**	**+0.7**		
CDF				*e*Sn	**Sn**	**04 41 08.8**	**-6.4**		
	comp=E,17nm,0.5s								
HAU	**Haudompre**	**7.22**	**320**	*e*P	**Pn**	**04 39 56.9**	**+1.2**		
HAU				*e*Sn	**Sn**	**04 41 11.1**	**-6.5**		
	comp=E,12nm,0.3s								
PRU	**Pruhonice**	**7.42**	**7**	*e*SN	**Sn**	**04 41 19.4**	**-3.0**		
KEST	**Kesra**	**7.50**	**205**	Pn	**Pn**	**04 40 04.3**	**+4.6**		
	comp=E,0.6nm,0.3s,baz=55,slow=19,SNR=7.3								
	comp=E,2.6nm,0.5s								
SMF	**Signal de Mont**	**7.78**	**304**	*e*P	**Pn**	**04 40 06.1**	**+2.7**		
SMF				*e*Sn	**Sn**	**04 41 24.3**	**-7.1**		
	comp=E,2.3nm,0.2s								
PAGF	**Fort de Pagny**	**7.91**	**321**	*e*P	**Pn**	**04 40 07.8**	**+2.7**		
PAGF				*e*Sn	**Sn**	**04 41 27.4**	**-7.0**		
	comp=E,12nm,0.7s								
MTLF	**Montolieu**	**8.08**	**279**	*e*P	**Pn**	**04 40 09.9**	**+2.4**		
LOR	**Lormes**	**8.08**	**308**	*e*P	**Pn**	**04 40 09.3**	**+1.8**		
	baz=123								
LOR				*e*Sn	**Sn**	**04 41 31.4**	**-7.4**		
	comp=E,11nm,0.7s								
AVF	**Avril sur Loir**	**8.15**	**304**	*e*P	**Pn**	**04 40 11.1**	**+2.7**		
AVF				*e*Sn	**Sn**	**04 41 33.0**	**-7.4**		
	comp=E,4.0nm,0.7s								
SSF	**Saint Saulge**	**8.19**	**306**	*e*P	**Pn**	**04 40 10.8**	**+1.9**		
SSF				*e*Sn	**Sn**	**04 41 33.8**	**-7.4**		
	comp=E,7.0nm,0.8s								
CAF	**Calviac**	**8.37**	**290**	*e*P	**Pn**	**04 40 14.1**	**+2.6**		
KOLS	**Kolonicke sedl**	**8.94**	**42**	*e*PN	Pn	04 40 10.4	-8.9		
MLR	**Muntele Rosu**	**9.62**	**68**	Pn	**Pn**	**04 40 30.8**	**+2.2**		
	comp=E,0.3nm,0.3s,baz=281,slow=10,SNR=3.0								
	comp=E,3.0nm,0.7s								
IDI	**Anoyia**	**11.68**	**125**	Sn	**Sn**	**04 43 07.9**	**+0.7**		
	comp=E,0.2nm,0.3s,baz=76,slow=11,SNR=2.0								
EKA	**Eskdalemuir Ar**	**16.58**	**326**	Pn	**Pn**	**04 42 03.4**	**+0.9**		
	baz=132,slow=12								
	comp=E,0.2nm,0.5s								
HFS	**Hagfors**	**17.53**	**1**	P	**Pn**	**04 42 14.1**	**-0.3**		
	comp=E,0.1nm,0.3s,baz=171,slow=10,SNR=2.2								
	comp=E,0.9nm,0.6s								
NOA	**NORSAR Array B**	**18.48**	**357**	P	**P**	**04 42 25.9**	**-0.1**		
	baz=176,slow=11,SNR=3.3								
	comp=E,0.5nm,0.8s								
FINES	**FINESS Array B**	**20.37**	**18**	P	**P**	**04 42 45.9**	**-0.6**		
	comp=E,1.4nm,0.8s,baz=200,slow=12,SNR=4.4								
	comp=E,1.4nm,0.8s								
KBZ	**Khabaz**	**21.64**	**77**	P	**P**	**04 43 01.9**	**+1.6**		
	comp=E,2.1nm,0.8s,baz=332,slow=5.6,SNR=4.3								
	comp=E,2.1nm,0.8s								
TORD	**Torodi Ar. Bea**	**31.02**	**202**	P	**P**	**04 44 29.0**	**+1.1**		
	comp=E,0.5nm,0.6s,baz=20,slow=8.8,SNR=7.9								
	comp=E,0.5nm,0.6s								
ZALV	**Zalesovo Beam**	**47.02**	**50**	P	**P**	**04 46 42.6**	**+1.5**		
	comp=E,0.4nm,0.4s,baz=269,slow=10,SNR=1.6								
	comp=E,0.4nm,0.4s								
MKAR	**Makanchi Array**	**47.84**	**60**	P	**P**	**04 46 49.1**	**+1.4**		
	comp=E,0.5nm,0.4s,baz=305,slow=5.1,SNR=4.8								
	comp=E,0.5nm,0.4s								
SONM	**Songino Array**	**61.91**	**50**	P	**P**	**04 48 31.2**	**+1.4**		
	comp=E,0.8nm,0.8s,baz=297,slow=6.3,SNR=1.8								
	comp=E,0.8nm,0.8s								

ROM 24 04:44:10.8±0.1, **42°.684N**±0°.004×**13°.239E**±0°.006, **h10km, ML2.6/7, 9C-6D, Error ellipse: s-maj=0.5km s-min=0.1km az=243.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.17**	**328**	P		Pg	Pg	04 44 15.2	+0.6
NRCA				S		Sg	Sg	04 44 18.1	+0.8
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
	comp=N,6366µm,0.0s								
NRCA						AML	AML		
	comp=N,7080µm,0.1s								
NRCA						AML	AML		
	comp=E,12171µm,0.0s								
NRCA						AML	AML		
	comp=E,13220µm,0.0s								
RM33	**Pellescritta (**	**0.18**	**186**	⇑P		Pb		04 44 15.5	-0.8
RM33				S		Sg		04 44 18.7	+1.4
RM33						AML	AML		
	comp=E,6080µm,0.1s								
RM33						AML	AML		
	comp=N,3225µm,0.6s								
RM33						AML	AML		
	comp=E,6010µm,0.1s								
RM33						AML	AML		
	comp=N,3295µm,1.0s								
RM33						AML	AML		
	comp=E,33000µm,0.3s								
RM33						AML	AML		
	comp=N,35200µm,0.2s								
RM33						AML	AML		
	comp=E,32200µm,0.3s								
RM33						AML	AML		
	comp=N,34950µm,0.2s								
RM33						AML	AML		
	comp=N,35000µm,0.2s								
RM33						AML	AML		
	comp=N,3211µm,0.0s								
RM33						AML	AML		
	comp=N,2324µm,0.2s								
RM33						AML	AML		
	comp=E,6010µm,0.1s								
RM33						AML	AML		
	comp=E,6083µm,0.1s								
CAMP	**Campotosto**	**0.19**	**140**	⇓P		Pg		04 44 15.6	+0.6
CAMP				S		Sg		04 44 18.8	+1.0
CAMP						AML	AML		
	comp=E,16700µm,0.2s								
CAMP						AML	AML		
	comp=N,20350µm,0.3s								
CAMP						AML	AML		
	comp=E,4564µm,0.2s								
CAMP						AML	AML		
	comp=N,2903µm,0.2s								
TERO	**Teramo**	**0.28**	**103**	P		Pg		04 44 16.7	+0.3
TERO				S		Sg		04 44 21.2	+1.0
TERO						AML	AML		
	comp=E,4465µm,0.6s								
TERO						AML	AML		
	comp=N,2575µm,0.7s								
TERO						AML	AML		
	comp=E,4900µm,0.5s								
TERO						AML	AML		
	comp=N,2850µm,0.7s								
TERO						AML	AML		
	comp=E,23900µm,0.3s								
TERO						AML	AML		
	comp=E,26850µm,0.3s								
TERO						AML	AML		
	comp=N,38150µm,0.3s								
TERO						AML	AML		
	comp=N,43200µm,0.3s								
TERO						AML	AML		
	comp=N,2373µm,0.0s								
TERO						AML	AML		
	comp=E,1824µm,0.3s								
TERO						AML	AML		
	comp=E,1608µm,0.0s								
GIGS	**Gran Sasso**	**0.34**	**134**	⇓P		Pg		04 44 17.7	+0.1
GIGS				S		Sg		04 44 22.9	+0.8
GIGS						AML	AML		
	comp=E,828µm,0.2s								
GIGS						AML	AML		
	comp=N,486µm,1.0s								
GIGS						AML	AML		
	comp=E,6905µm,0.1s								
GIGS						AML	AML		
	comp=N,3495µm,0.1s								
GIGS						AML	AML		
	comp=E,820µm,0.2s								
GIGS						AML	AML		
	comp=N,261µm,0.0s								
AQU	**L'Aquila**	**0.35**	**160**	P		Pb		04 44 18.6	-0.5
AQU				S		Sb		04 44 24.1	-0.7
AQU						AML	AML		
	comp=N,8795µm,1.0s								
AQU						AML	AML		
	comp=N,8610µm,1.0s								
AQU						AML	AML		
	comp=E,8430µm,0.4s								
AQU						AML	AML		
	comp=N,8800µm,1.0s								
AQU						AML	AML		
	comp=E,8645µm,0.4s								
AQU						AML	AML		
	comp=N,827µm,0.3s								
AQU						AML	AML		
	comp=N,892µm,0.3s								
AQU						AML	AML		
	comp=E,997µm,0.5s								
AQU						AML	AML		
	comp=E,630µm,0.3s								
ARRO	**Arrone**	**0.36**	**253**	⇓P		Pg		04 44 18.6	+0.6
ARRO				S		Sb		04 44 24.0	-1.1
ARRO						AML	AML		
	comp=E,8440µm,0.7s								
ARRO						AML	AML		
	comp=N,4970µm,0.3s								
ARRO						AML	AML		
	comp=E,12600µm,0.9s								
ARRO						AML	AML		
	comp=N,13000µm,0.2s								
ARRO						AML	AML		
	comp=E,12550µm,0.9s								
FDMO	**Fiordimonte**	**0.37**	**342**	P		Pg		04 44 18.6	+0.4
FDMO				S		Sg		04 44 24.1	+1.0
FDMO						AML	AML		
	comp=E,8140µm,0.2s								
FDMO						AML	AML		
	comp=N,4355µm,0.2s								
FDMO						AML	AML		
	comp=E,16350µm,1.1s								
FDMO						AML	AML		
	comp=N,24450µm,0.4s								
FDMO						AML	AML		
	comp=N,1344µm,0.2s								
FDMO						AML	AML		
	comp=E,758µm,0.2s								
CESI	**CESI - Serrava**	**0.40**	**323**	P		Pg		04 44 19.2	+0.4
CESI				S		Sb		04 44 25.4	-1.0
OFFI	**Offida**	**0.41**	**53**	⇑P		Pb		04 44 20.1	-0.1
OFFI						AML	AML		
	comp=N,37950µm,0.4s								
OFFI						AML	AML		
	comp=E,36800µm,0.4s								
FIAM	**Fiamignano**	**0.43**	**192**	⇑P		Pg		04 44 19.6	+0.4
FIAM				S		Sb		04 44 26.4	-0.6
FIAM						AML	AML		
	comp=E,1750µm,1.2s								
FIAM						AML	AML		
	comp=N,2175µm,1.2s								
FIAM						AML	AML		
	comp=E,9285µm,0.4s								
FIAM						AML	AML		
	comp=N,7435µm,0.6s								
FAGN	**Fagnano**	**0.49**	**148**	⇓P		Pb		04 44 21.4	-0.1
FAGN						AML	AML		
	comp=N,14050µm,0.4s								
FAGN						AML	AML		
	comp=E,23000µm,0.4s								
CESX	**Cesi**	**0.49**	**262**	P		Pg		04 44 20.7	+0.3
CESX						AML	AML		
	comp=E,3095µm,1.1s								
CESX						AML	AML		
	comp=N,3265µm,0.3s								
CESX						AML	AML		
	comp=E,10600µm,0.5s								
CESX						AML	AML		
	comp=N,8735µm,0.3s								
TRTR	**Tortoreto Alta**	**0.51**	**76**			AML	AML		
	comp=N,26400µm,0.4s								
TRTR						AML	AML		
	comp=E,31850µm,0.4s								
VCEL	**Villa Celiera**	**0.53**	**123**	⇑P		Pg		04 44 21.6	+0.5
VCEL						AML	AML		
	comp=E,12250µm,1.0s								
VCEL						AML	AML		
	comp=N,13300µm,0.7s								
VCEL						AML	AML		
	comp=N,13350µm,0.7s								
T0110	**Collepietro**	**0.61**	**139**	⇑P		Pg		04 44 22.8	+0.2
T0110						AML	AML		
	comp=E,11900µm,0.4s								
T0110						AML	AML		
	comp=N,13300µm,0.4s								
SNTG	**Esanatoglia**	**0.61**	**339**	P		Pg		04 44 22.7	0.0
SNTG						AML	AML		
	comp=N,5265µm,0.2s								
SNTG						AML	AML		
	comp=E,668µm,0.5s								
SNTG						AML	AML		
	comp=N,618µm,0.3s								
SNTG						AML	AML		
	comp=N,5270µm,0.2s								
SNTG						AML	AML		
	comp=E,5095µm,0.4s								
EL6	**Elcito**	**0.65**	**351**	⇑P		Pg		04 44 23.5	0.0
EL6						AML	AML		
	comp=E,9635µm,1.1s								
EL6						AML	AML		
	comp=N,10065µm,0.3s								
EL6						AML	AML		
	comp=E,9645µm,1.1s								
EL6						AML	AML		
	comp=N,10070µm,0.3s								
EL6						AML	AML		
	comp=E,9660µm,1.1s								
ATCC	**AVT- Casa Cast**	**0.67**	**319**	⇑P		Pg		04 44 23.9	+0.1
ATCC						AML	AML		
	comp=E,9480µm,0.4s								
ATCC						AML	AML		
	comp=E,9485µm,0.4s								
ATCC						AML	AML		
	comp=N,10900µm,0.4s								
ATCC						AML	AML		
	comp=N,10950µm,0.4s								
FOSV	**Fossato di Vic**	**0.70**	**330**	⇑P		Pg		04 44 24.6	+0.2
FOSV						AML	AML		
	comp=N,4035µm,0.3s								
FOSV						AML	AML		
	comp=E,3945µm,0.2s								
MTCE	**Montecelio**	**0.76**	**209**	⇓P		Pg		04 44 25.1	-0.3
MTCE						AML	AML		
	comp=E,5680µm,0.4s								
MTCE						AML	AML		
	comp=N,3270µm,0.6s								
CERT	**Cerreto**	**0.76**	**195**	⇑P		Pg		04 44 25.0	-0.4
CERT						AML	AML		
	comp=E,10485µm,0.4s								
CERT						AML	AML		
	comp=N,6050µm,0.9s								
INTR	**Introdacqua**	**0.83**	**144**	⇓P		Pg		04 44 26.5	-0.3
INTR						AML	AML		
	comp=E,2430µm,0.8s								
INTR						AML	AML		
	comp=N,4415µm,0.7s								
MGAB	**Montegabbione**	**0.86**	**286**			AML	AML		
	comp=E,8830µm,0.9s								
MGAB						AML	AML		
	comp=N,7010µm,0.4s								
MGAB						AML	AML		
	comp=N,7145µm,0.4s								
MGAB						AML	AML		
	comp=E,7510µm,0.9s								
LPEL	**Lama dei Pelig**	**0.95**	**132**			AML	AML		
	comp=N,2330µm,0.8s								
LPEL						AML	AML		
	comp=E,2650µm,1.2s								

LDG ***24*** *04:44:37.9±0.1, 42°.73N×13°.18E, h6km, Ml3.4/26, Error ellipse: s-maj=2.0km s-min=1.2km az=42.0*

ROM ***24*** *04:44:38.9±0.1, 42°.732N±0°.003×13°.177E±0°.006, h8km, ML3.6/89, Mw3.5, Error ellipse: s-maj=0.4km s-min=0.3km az=239.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.72; Mθθ=0.69; Mφφ=1.03; Mrθ=0.08; Mrφ=-0.98; Mθφ=0.68; Fault plane solution: M₀=1.92155×10¹⁴ NP1:φs=305.00000°, δ=40.00000°, λ=-114.00000°. NP2:φs=155.00000°, δ=54.00000°, λ=-71.00000°.*

IDC ***24*** *04:44:38.4±1.2, 42°.77N×13°.19E, h0km, mb3.5/4, mbtmp3.5/10, ML3.4/6 Error ellipse: s-maj=26.7km s-min=14.1km az=90.0*

PDG ***24*** *04:44:39.5±0.4, 42°.72N×13°.16E, h9km, ML3.8/12, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

PRU ***24*** *04:44:39.3±0.0, 42°.74N×13°.57E, h0km*

BEO ***24*** *04:44:40.7±0.8, 42°.75N×13°.18E, h10km, ML3.7/7*

ISC 24 04:44:39.3±0.7, **42°.73N**±0°.01×**13°.15E**±0°.02, **h15**km±4km, **n268, σ2°20/337, mb3.6**/3, **39C-12D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**348**	⇓P		**Pg**		**04 44 42.1**	**-0.8**
NRCA				S		**Sg**		**04 44 44.0**	**-1.1**
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
NRCA						AML	AML		
AQT1	**Arquata del Tr**	**0.12**	**66**	⇑P		**Pg**		**04 44 41.9**	**-1.0**
AQT1				S		**Sg**		**04 44 43.9**	**-1.3**
RM33	**Pellescritta (**	**0.22**	**167**	⇑P		**Pg**		**04 44 44.3**	**0.0**
RM33				S		**Sg**		**04 44 48.1**	**+0.4**
FEMA	**Monte Fema**	**0.25**	**343**	⇑P		**Pg**		**04 44 44.4**	**-0.4**
FEMA				S		**Sg**		**04 44 48.4**	**-0.2**
FEMA						AML	AML		
	comp=E,69650µm,0.7s								
FEMA						AML	AML		
	comp=N,39000µm,1.4s								
FEMA						AML	AML		
	comp=N,39000µm,1.4s								
FEMA						AML	AML		
	comp=E,69650µm,0.7s								
CAMP	**Campotosto**	**0.27**	**134**	⇑P		**Pg**		**04 44 44.8**	**-0.4**
CAMP				S		**Sg**		**04 44 48.9**	**-0.2**
CAMP						AML	AML		
	comp=E,16700µm,0.2s								
CAMP						AML	AML		
	comp=N,20350µm,0.3s								
FDMO	**Fiordimonte**	**0.32**	**352**	⇑P		**Pg**		**04 44 45.4**	**-0.5**
FDMO				S		**Sg**		**04 44 50.4**	**0.0**
FDMO						AML	AML		
	comp=N,24450µm,0.4s								
FDMO						AML	AML		
	comp=E,16350µm,1.1s								
ARRO	**Arrone**	**0.32**	**243**	⇑P		**Pg**		**04 44 46.2**	**+0.3**
ARRO						AML	AML		
	comp=N,13050µm,0.2s								
ARRO						AML	AML		
	comp=E,12600µm,0.9s								
ARRO						AML	AML		
	comp=N,13000µm,0.2s								
ARRO						AML	AML		
	comp=E,12550µm,0.9s								
CESI	**CESI - Serrava**	**0.33**	**328**	⇑P		**Pg**		**04 44 46.0**	**-0.2**
CESI				S		**Sg**		**04 44 51.4**	**+0.5**
CESI						AML	AML		
	comp=E,24400µm,0.3s								
CESI						AML	AML		
	comp=N,40750µm,0.3s								
TERO	**Teramo**	**0.35**	**107**	⇑P		**Pg**		**04 44 45.8**	**-0.8**
TERO				S		**Sg**		**04 44 51.2**	**-0.3**
CSP1	**Cessapalombo**	**0.37**	**7**	⇑P		**Pg**		**04 44 46.3**	**-0.6**
CSP1				S		**Sg**		**04 44 52.0**	**-0.1**
CSP1						AML	AML		
	comp=E,25300µm,0.6s								
CSP1						AML	AML		
	comp=N,34900µm,0.7s								
AQU	**L'Aquila**	**0.42**	**153**	⇑P		**Pg**		**04 44 47.5**	**-0.2**
AQU				S		**Sb**		**04 44 54.4**	**-0.2**
AQU						AML	AML		
	comp=E,8430µm,0.4s								
AQU						AML	AML		
	comp=N,8795µm,1.0s								
AQU						AML	AML		
	comp=N,8800µm,1.0s								
AQU						AML	AML		
	comp=E,8440µm,0.4s								
AQU						AML	AML		
	comp=E,8435µm,0.4s								
AQU						AML	AML		
	comp=E,8645µm,0.4s								
AQU						AML	AML		
	comp=N,8610µm,1.0s								
GIGS	**Gran Sasso**	**0.42**	**131**	⇑P		**Pg**		**04 44 47.0**	**-0.7**
GIGS				S		**Sg**		**04 44 53.1**	**-0.3**
GIGS						AML	AML		
	comp=N,3495µm,0.1s								
GIGS						AML	AML		
	comp=E,6905µm,0.1s								
CESX	**Cesi**	**0.43**	**255**	⇑P		**Pg**		**04 44 48.1**	**+0.1**
CESX				S		**Sb**		**04 44 55.6**	**+0.6**
CESX						AML	AML		
	comp=E,10600µm,0.5s								
CESX						AML	AML		
	comp=N,8735µm,0.3s								
SEF1	**Sefro**	**0.45**	**341**	P		**Pg**		**04 44 47.9**	**-0.4**
SEF1				S		**Sg**		**04 44 54.8**	**+0.5**
SEF1						AML	AML		
	comp=N,40600µm,0.2s								
SEF1						AML	AML		
	comp=E,23550µm,0.2s								
OFFI	**Offida**	**0.45**	**62**	⇑P		**Pg**		**04 44 48.3**	**0.0**
OFFI				S		**Sb**		**04 44 56.4**	**+0.9**
OFFI						AML	AML		
	comp=N,37950µm,0.4s								
OFFI						AML	AML		
	comp=E,36800µm,0.4s								
FIAM	**Fiamignano**	**0.46**	**183**	⇑P		**Pg**		**04 44 48.4**	**-0.1**
FIAM				S		**Sb**		**04 44 55.5**	**-0.3**
FIAM						AML	AML		
	comp=E,9285µm,0.4s								

FIAM AML AML
comp=N,7435µm,0.6s
MDAR Monte D'Aria 0.47 360 ⇑P **Pg 04 44 48.0 -0.7**
MDAR S **Sg 04 44 55.1 +0.1**
MDAR AML AML
comp=E,9570µm,1.3s
MDAR AML AML
comp=N,12200µm,0.3s
PIO1 Pioraco 0.47 345 P **Pg 04 44 48.1 -0.6**
PIO1 S **Sb 04 44 55.8 -0.3**
MNTP Montappone 0.48 30 P **Pg 04 44 48.5 -0.2**
MNTP S **Sb 04 44 56.9 +0.6**
ASSB Assisi San Ben 0.48 312 ⇑P **Pg 04 44 48.6 -0.2**
ASSB S **Sb 04 44 56.8 +0.4**
ASSB AML AML
comp=E,11330µm,0.2s
ASSB AML AML
comp=N,8535µm,0.3s
FIU1 Fiuminata 0.49 341 P **Pg 04 44 48.6 -0.5**
FIU1 S **Sb 04 44 56.5 -0.2**
FIU1 AML AML
comp=N,10075µm,0.2s
FIU1 AML AML
comp=E,7235µm,0.2s
FIU1 AML AML
comp=N,10060µm,0.2s
SSM1 San Severino M 0.50 3 P **Pg 04 44 48.6 -0.7**
GAG1 Gagliole 0.52 354 P **Pg 04 44 49.0 -0.6**
GAG1 S **Sb 04 44 57.4 -0.1**
GAG1 AML AML
comp=E,21950µm,0.4s
GAG1 AML AML
comp=N,21450µm,0.5s
GAG1 AML AML
comp=E,22000µm,0.4s
MTL1 Matelica 0.54 349 P **Pg 04 44 49.5 -0.6**
SNTG Esanatoglia 0.55 344 ⇑P **Pg 04 44 49.6 -0.6**
SNTG S **Sg 04 44 58.0 +0.4**
SNTG AML AML
comp=E,668µm,0.5s
SNTG AML AML
comp=N,5265µm,0.2s
SNTG AML AML
comp=E,5095µm,0.4s
SNTG AML AML
comp=N,618µm,0.3s
SNTG AML AML
comp=N,5270µm,0.2s
FAGN Fagnano 0.56 145 P **Pg 04 44 49.6 -0.8**
FAGN AML AML
comp=E,23000µm,0.4s
FAGN AML AML
comp=N,14050µm,0.4s
TRTR Tortoreto Alta 0.57 81 ⇑P **Pb 04 44 50.9 -0.2**
TRTR AML AML
comp=E,31850µm,0.4s
TRTR AML AML
comp=N,26400µm,0.4s
ATCC AVT- Casa Cast 0.59 321 ⇑P **Pg 04 44 50.6 -0.3**
ATCC S **Sb 04 45 00.5 +0.8**
ATCC AML AML
comp=E,9480µm,0.4s
ATCC AML AML
comp=E,9470µm,0.4s
ATCC AML AML
comp=E,9485µm,0.4s
ATCC AML AML
comp=N,10900µm,0.4s
ATCC AML AML
comp=N,10950µm,0.4s
TRE1 Treia 0.60 12 P **Pg 04 44 50.8 -0.3**
TRE1 AML AML
comp=E,17850µm,1.3s
TRE1 AML AML
comp=N,14600µm,1.5s
TRE1 AML AML
comp=N,14550µm,1.5s
EL6 Elcito 0.60 357 P **Pg 04 44 50.5 -0.8**
EL6 S **Sb 04 45 00.3 +0.2**
EL6 AML AML
comp=E,9635µm,1.1s
EL6 AML AML
comp=N,10065µm,0.3s
EL6 AML AML
comp=E,9670µm,1.1s
EL6 AML AML
comp=N,10095µm,0.3s
EL6 AML AML
comp=E,9645µm,1.1s
EL6 AML AML
comp=N,10070µm,0.3s
EL6 AML AML
comp=E,9660µm,1.1s
VCEL Villa Celiera 0.61 123 P **Pg 04 44 50.8 -0.5**
VCEL S **Sb 04 45 00.2 0.0**
VCEL AML AML
comp=E,12250µm,1.0s
VCEL AML AML
comp=N,13350µm,0.7s
VCEL AML AML
comp=N,13300µm,0.7s
FOSV Fossato di Vic 0.64 334 ⇑P **Pg 04 44 51.2 -0.6**
FOSV S **Sb 04 45 01.2 +0.3**
FOSV AML AML
comp=N,4035µm,0.3s
FOSV AML AML
comp=E,3945µm,0.2s
CADA Capodarco di F 0.65 44 P **Pb 04 44 52.6 +0.1**
CADA AML AML
comp=N,20850µm,0.5s
CADA AML AML
comp=N,20850µm,0.4s
CADA AML AML
comp=E,24600µm,0.4s
CING Cingoli 0.65 3 ⇑P **Pg 04 44 51.2 -0.9**
SRES S.Oreste - Sor 0.68 224 ⇑P **Pg 04 44 52.3 -0.3**
SRES AML AML
comp=E,3280µm,0.3s
SRES AML AML
comp=N,4085µm,0.5s
T0110 Collepietro 0.68 137 P **Pg 04 44 51.8 -0.9**
T0110 AML AML
comp=E,11900µm,0.4s
T0110 AML AML
comp=N,13300µm,0.4s
CIMA Civitanova Mar 0.70 33 P **Pb 04 44 53.0 -0.2**
MURB Monte Urbino 0.70 320 P **Pg 04 44 52.9 -0.3**
MURB AML AML
comp=N,15150µm,0.3s
MURB AML AML
comp=E,11950µm,1.1s
MURB AML AML
comp=E,10600µm,1.2s
MURB AML AML
comp=N,15500µm,0.3s
MURB AML AML
comp=E,10605µm,1.2s
MMUR Monte Murano 0.72 351 P **Pg 04 44 53.5 0.0**
PTQR Pietraquaria 0.73 165 P **Pg 04 44 52.7 -0.8**
PP3 Marolino 0.74 27 ⇑P **Pg 04 44 53.3 -0.4**
PP3 AML AML
comp=E,37650µm,0.5s
PP3 AML AML
comp=N,40850µm,0.4s
PP3 AML AML
comp=N,42700µm,0.4s
PP3 AML AML
comp=E,34100µm,0.5s
ATTE AVT- Monte Tez 0.75 309 P **Pg 04 44 53.5 -0.4**
ATTE AML AML
comp=N,2160µm,0.3s
ATTE AML AML
comp=E,2425µm,0.4s
SSFR Montelago di S 0.76 340 P **Pg 04 44 53.5 -0.7**
SSFR S **Sb 04 45 05.4 +0.9**
SSFR AML AML
comp=E,10455µm,0.7s
SSFR AML AML
comp=E,10195µm,0.7s
SSFR AML AML
comp=N,13800µm,0.2s
SSFR AML AML
comp=N,13250µm,0.2s
MTCE Montecelio 0.76 203 ⇑P **Pg 04 44 53.4 -0.7**
MTCE AML AML
comp=N,3270µm,0.6s
MTCE AML AML
comp=E,5680µm,0.4s
ATFO Monte Foce - G 0.77 327 P **Pg 04 44 53.8 -0.5**
ATFO AML AML
comp=E,5355µm,0.8s
ATFO AML AML
comp=N,3240µm,1.1s
ATSC Scheggia e Pas 0.78 334 P **Pg 04 44 53.9 -0.6**
MGAB Montegabbione 0.78 284 P **Pb 04 44 54.8 +0.1**
MGAB AML AML
comp=N,7010µm,0.4s
MGAB AML AML
comp=E,7505µm,0.9s
MGAB AML AML
comp=N,7145µm,0.4s
MGAB AML AML
comp=E,7510µm,0.9s
MGAB AML AML
comp=E,8830µm,0.9s
CERT Cerreto 0.79 189 P **Pg 04 44 53.6 -1.0**
CERT AML AML
comp=N,6050µm,0.9s
CERT AML AML
comp=E,10485µm,0.4s
ARVD Arcevia 0.79 349 P **Pg 04 44 53.8 -0.9**
ARVD S **Sb 04 45 06.2 +0.9**
ARVD AML AML
comp=E,2565µm,0.2s
ARVD AML AML
comp=N,2155µm,0.5s
ATLO AVT- Montelove 0.80 318 P **Pg 04 44 54.7 -0.2**
TB01 Gubbio 0.84 322 P **Pg 04 44 55.0 -0.6**
ATVA AVT- Monte Val 0.84 312 P **Pb 04 44 55.9 +0.2**
TB02 Pietralunga 0.84 320 P **Pg 04 44 55.5 -0.2**
FRON Frontone 0.85 339 ⇓P **Pg 04 44 54.9 -0.9**
FRON AML AML
comp=E,2850µm,0.6s
FRON AML AML
comp=N,4735µm,0.4s
ATVO AVT- Monte Val 0.85 321 P **Pg 04 44 54.9 -0.9**
ATVO AML AML
comp=N,2745µm,0.4s
ATVO AML AML
comp=E,2300µm,0.9s
TB03 Pietralunga 0.86 322 P **Pg 04 44 55.4 -0.7**
ATBU Serra di Buran 0.87 330 P **Pg 04 44 55.7 -0.5**
ATMI Monte Miggiano 0.89 314 P **Pn 04 44 57.9 +0.5**
ATMI AML AML
comp=E,6210µm,0.8s
ATMI AML AML
comp=N,7590µm,0.3s
AOI Ancona 0.89 22 ⇑P **Pg 04 44 55.7 -0.9**
AOI AML AML
comp=E,5075µm,0.3s
AOI AML AML
comp=N,5855µm,0.3s
RCAV Rocca di Cave 0.89 190 AML AML
comp=E,5785µm,1.4s
RCAV AML AML
comp=N,7460µm,0.4s
INTR Introdacqua 0.91 142 P **Pg 04 44 55.4 -1.5**
INTR AML AML
comp=N,4415µm,0.7s
INTR AML AML
comp=E,2µm,0.8s
INTR AML AML
comp=N,3µm,0.7s
INTR AML AML
comp=E,2430µm,0.8s
INTR AML AML
comp=N,3µm,0.7s
ATPI Pietralunga - 0.91 323 P **Pg 04 44 56.3 -0.6**
ATPI AML AML
comp=E,2190µm,0.6s
ATPI AML AML
comp=N,2035µm,0.6s
ATPC Poggio Castell 0.91 326 P **Pg 04 44 56.7 -0.3**
COR1 Corinaldo 0.91 353 P **Pb 04 44 57.0 +0.1**
COR1 AML AML
comp=E,6770µm,0.6s
COR1 AML AML
comp=N,6070µm,0.8s
SACS San Casciano d 0.92 278 P **Pg 04 44 56.9 -0.3**
SACS AML AML
comp=E,2515µm,1.1s
SACS AML AML
comp=N,3135µm,0.7s
SACS AML AML
comp=E,2525µm,1.1s
SACS AML AML
comp=N,3060µm,0.7s
VVLD Villa Vallelon 0.92 157 P **Pg 04 44 56.4 -0.8**
PIEI Pieia 0.93 331 P **Pb 04 44 56.6 -0.5**
PIEI AML AML
comp=N,1880µm,0.4s
PIEI AML AML
comp=E,2420µm,0.3s
GUAR Guarcino 0.94 172 P **Pn 04 44 58.2 +0.1**
MPAG Monte Paganucc 0.95 343 P **Pb 04 44 56.7 -0.9**
MPAG AML AML
comp=E,2335µm,1.5s
MPAG AML AML
comp=N,2380µm,0.9s
RMP Rome, Mte Porz 0.97 200 AML AML
comp=N,6920µm,0.6s
RMP AML AML
comp=E,6010µm,1.0s
NARO Abbazia di Nar 0.98 335 P **Pb 04 44 57.4 -0.6**
NARO AML AML
comp=N,1745µm,0.6s
NARO AML AML
comp=E,1765µm,0.3s
SENI Senigallia 0.98 4 P **Pg 04 44 58.3 0.0**
SENI AML AML
comp=N,2550µm,0.9s
SENI AML AML
comp=E,3805µm,0.9s
APEC Apecchio 0.99 328 P **Pb 04 44 57.7 -0.5**
APEC AML AML
comp=N,2820µm,0.4s
APEC AML AML
comp=E,3940µm,0.4s
FSSB Fossombrone 1.00 345 P **Pb 04 44 57.8 -0.7**
FSSB AML AML
comp=E,8220µm,0.3s
FSSB AML AML
comp=N,9680µm,0.4s
ATMC Monte Cedrone 1.00 316 P **Pg 04 44 58.9 +0.2**
VIVA Pratoni del Vi 1.01 196 P **Pn 04 44 59.3 +0.2**
VIVA AML AML
comp=N,8615µm,0.7s
VIVA AML AML
comp=E,6480µm,0.4s
RDP Rocca di Papa 1.02 198 P **Pb 04 44 58.8 +0.1**
RDP AML AML
comp=E,10600µm,0.6s
RDP AML AML
comp=N,9500µm,0.6s
LPEL Lama dei Pelig 1.02 131 P **Pb 04 44 57.3 -1.5**
LPEL AML AML
comp=E,2650µm,1.2s
LPEL AML AML
comp=N,2330µm,0.8s
BADI Badiali 1.03 320 P **Pb 04 44 59.0 +0.1**
BADI AML AML
comp=N,2070µm,1.3s
BADI AML AML
comp=E,218µm,0.4s
CAFI Castiglion Fio 1.06 305 P **Pb 04 44 59.2 -0.1**
CAFI AML AML
comp=E,1950µm,0.8s
CAFI AML AML
comp=E,2040µm,0.8s
CAFI AML AML
comp=N,1925µm,0.4s
CAFI AML AML
comp=N,1800µm,0.5s
TOLF Tolfa 1.08 233 P **Pb 04 44 59.5 -0.2**
TOLF AML AML
comp=E,1860µm,0.6s
TOLF AML AML
comp=N,1350µm,0.6s
SF03 Valle Cupa 1.08 275 P **Pb 04 44 60.0 +0.2**
PE3 Peglio 1.08 334 P **Pb 04 44 59.6 -0.1**
PE3 AML AML
comp=E,14µm,1.1s
PE3 AML AML
comp=N,14µm,0.3s
MCIV Monte Civitell 1.08 273 P **Pg 04 45 00.3 +0.1**
MCIV AML AML
comp=N,1280µm,0.8s
MCIV AML AML
comp=E,1465µm,1.0s
SF11 Podere del Sol 1.09 278 P **Pg 04 45 00.6 +0.2**
POFI Posta Fibreno 1.09 157 P **Pg 04 45 00.3 -0.1**
POFI AML AML
comp=E,1985µm,0.5s
POFI AML AML
comp=N,1425µm,0.6s
POFI AML AML
comp=N,1380µm,0.6s
POFI AML AML
comp=E,2065µm,0.5s
LAV9 Lanuvio 1.10 198 AML AML
comp=E,6985µm,0.4s
LAV9 AML AML
comp=N,5680µm,0.5s
LAV9 AML AML
comp=E,6455µm,0.5s
LAV9 AML AML
comp=N,5960µm,0.5s
SF04 Casetta 1.10 276 P **Pg 04 45 00.7 +0.2**
SF04 AML AML
comp=E,1960µm,0.4s
SF04 AML AML
comp=N,1604µm,0.9s
LRP Arpino 1.12 163 P **Pg 04 45 01.8 +0.8**
LRP AML AML
comp=N,1645µm,1.0s
LRP AML AML
comp=E,999µm,0.6s
SF13 Bagnolo 1.13 275 P **Pn 04 45 00.9 +0.2**
SSP9 Sansepolcro 1.13 319 P **Pg 04 45 01.0 0.0**
PARC Parchiule 1.14 325 P **Pb 04 45 00.8 +0.1**
PARC AML AML
comp=N,1705µm,0.5s
PARC AML AML
comp=E,1940µm,0.6s
GIUL Giuliano Di Ro 1.17 176 P **Pn 04 45 01.3 +0.1**
GIUL AML AML
comp=N,1585µm,1.2s
GIUL AML AML
comp=E,1735µm,0.9s
SF01 Poggio Pratacc 1.17 275 P **Pg 04 45 01.9 0.0**
SF01 AML AML
comp=E,2815µm,0.5s
SF01 AML AML
comp=N,2080µm,1.4s
CPGN Carpegna, Ital 1.23 331 P **Pb 04 45 02.6 +0.2**
CPGN AML AML
comp=N,97900µm,0.7s
CPGN AML AML
comp=E,85550µm,0.5s
PESA Pesaro 1.24 350 P **Pb 04 45 02.4 0.0**
PESA AML AML
comp=E,3755µm,0.5s
PESA AML AML
comp=N,3055µm,1.5s
ARCI Arcidosso 1.24 276 P **Pg 04 45 03.1 -0.1**
ARCI AML AML
comp=E,438µm,1.1s
ARCI AML AML
comp=N,420µm,1.1s
RNI2 Rionero Sannit 1.27 143 P **Pg 04 45 04.8 +1.1**
CERA Filignano 1.30 150 P **Pn 04 45 03.0 0.0**
RSM Repubblica di 1.31 337 P **Pg 04 45 04.2 -0.3**
TRIV Trivento 1.42 132 P **Pg 04 45 06.9 +0.3**
TRIV AML AML
comp=E,1224µm,1.1s
TRIV AML AML
comp=N,1270µm,1.6s
TRIV AML AML
comp=E,1225µm,1.1s
TRIV AML AML
comp=N,1335µm,1.6s
ASQU Asqua 1.46 318 P **Pg 04 45 07.9 +0.5**
SFI Santa Sofia 1.51 322 P **Pb 04 45 07.3 +0.2**
BSSO Busso 1.60 137 P **Pb 04 45 08.9 +0.3**
RUFI Rufina 1.63 314 P **Pn 04 45 08.2 +0.7**
MODR Mondragone 1.67 161 AML AML
comp=N,468µm,1.0s
MODR AML AML
comp=E,369µm,0.7s
CASP Castiglione de 1.68 273 P **Pn 04 45 08.7 +0.5**
CASP AML AML
comp=E,220µm,0.9s
CASP AML AML
comp=N,235µm,0.9s
CIGN Sant'Elia a Pi 1.69 129 P **Pg 04 45 10.9 -0.9**
MELA Melanico ??? S 1.79 124 P **Pb 04 45 11.6 -0.2**
PAOL Paolisi 2.00 147 AML AML
comp=E,196µm,0.4s
PAOL AML AML
comp=N,246µm,0.9s
APRC Apricena 2.02 118 AML AML
comp=N,882µm,0.4s
APRC AML AML
comp=E,788µm,1.3s
SGRT San Giovanni R 2.16 116 P **Pn 04 45 15.8 +0.9**
SGRT AML AML
comp=N,880µm,0.4s
SGRT AML AML
comp=E,762µm,1.0s
PII Pisa 2.16 298 AML AML
comp=E,354µm,0.4s
PII AML AML
comp=N,340µm,0.5s
POPM Popiglio 2.19 308 AML AML
comp=N,302µm,0.8s
POPM AML AML
comp=E,264µm,0.3s
MORI Morici 2.19 58 *e*Pn **Pn 04 45 16.0 +0.8**
BRJN Brijuni 2.22 11 *e*Pn **Pn 04 45 15.9 +0.3**
BRJN Brijuni 2.22 11 P **Pn 04 45 15.9 +0.3**
NVLJ Novalja 2.22 34 *e*Pn **Pn 04 45 15.7 +0.1**
MAIM Mastiano 2.27 302 P **Pn 04 45 17.3 +0.9**
MAIM AML AML
comp=N,206µm,0.6s
MAIM AML AML
comp=E,276µm,0.5s
MSAG Monte S. Angel 2.29 115 P **Pb 04 45 18.6 -1.8**
MSAG AML AML
comp=E,1091µm,0.5s
MSAG AML AML
comp=N,1800µm,0.4s
MSAG AML AML
comp=E,1160µm,0.5s
MSAG AML AML
comp=N,1835µm,0.4s
CAFE Carife 2.30 137 AML AML
comp=E,410µm,1.0s
CAFE AML AML
comp=N,332µm,1.4s
RABC Rab 2.35 30 *e*Pn **Pn 04 45 17.5 +0.2**
SMRN Sveta Marina 2.42 17 *e*Pn **Pn 04 45 18.2 -0.2**
CAPA Cerignola FG 2.53 127 AML AML
comp=N,988µm,1.2s
CAPA AML AML
comp=E,848µm,1.4s
EQUI Equi 2.61 304 P **Pn 04 45 22.0 +0.9**
EQUI AML AML
comp=E,112µm,0.7s
EQUI AML AML
comp=N,152µm,1.0s
UDBI Udbina 2.62 46 *e*Pn **Pn 04 45 22.4 +1.2**
A250A Rusevo Krmpots 2.68 28 *e*Pn **Pn 04 45 22.9 +0.9**
KIJV Kijevo 2.70 61 *e*Pn **Pn 04 45 23.5 +1.3**
PLMA Palmaria, Port 2.74 300 P **Pn 04 45 24.1 +1.3**
PLMA AML AML
comp=E,110µm,0.6s
PLMA AML AML
comp=N,124µm,0.4s
LSTV Lastovo 2.76 88 *e*Pn **Pn 04 45 23.5 +0.5**
RIY Rijeka 2.77 20 *e*Pn **Pn 04 45 23.7 +0.5**
RIY Rijeka 2.77 20 *e*Pn **Pn 04 45 24.2 +1.0**
RIY *e*Sn **Sn 04 45 58.2 +1.8**
PLIT Plitvice 2.80 39 *e*Pn **Pn 04 45 24.6 +1.0**
GRAM Graiana 2.85 309 AML AML
comp=N,442µm,0.7s
GRAM AML AML
comp=E,300µm,1.1s
SKDS Skadanscina 2.89 12 *e*Pn **Pn 04 45 25.0 +0.2**

SKDS *i* Sn **Sn** **04 46 00.1 +0.8**
SKDS IAML 04 46 03.8
comp=Z,107nm,0.3s
SMPL Sampolo 2.93 259 P **Pn** **04 45 26.9 +1.5**
SMPL AML AML
comp=N,40μm,0.8s
SMPL AML AML
comp=E,44μm,1.6s
RICI Ricice 3.02 74 *e*Pn **Pn** **04 45 27.9 +1.3**
PGF Pioggiola 3.06 268 *e*P **Pn** **04 45 28.6 +1.3**
PGF *e*Sn **Sn** **04 46 00.5 -3.3**
comp=E,13nm,0.3s
MSSA Maissana 3.08 302 P **Pn** **04 45 28.6 +1.1**
MSSA AML AML
comp=N,112μm,0.6s
MSSA AML AML
comp=E,93μm,0.6s
AMUR Altamura 3.16 124 P **Pn** **04 45 30.3 +1.7**
AMUR AML AML
comp=E,244μm,0.5s
AMUR AML AML
comp=N,356μm,0.4s
BOJS Bojanci 3.17 28 P **Pn** **04 45 29.5 +0.9**
CGRP Cima Grappa 3.30 343 P **Pn** **04 45 32.3 +1.7**
CGRP AML AML
comp=N,390μm,0.4s
CGRP AML AML
comp=E,495μm,0.4s
OZLJ Ozalj 3.34 29 *e*Pn **Pn** **04 45 31.9 +1.0**
STON Ston 3.35 86 *e*Pn **Pn** **04 45 31.0 -0.2**
STON Ston 3.35 86 *e*Pn **Pn** **04 45 31.7 +0.5**
STON *e*Sn **Sn** **04 46 10.7 0.0**
STON Ston 3.35 86 AML AML
comp=N,115μm,0.4s
STON AML AML
comp=E,126μm,1.5s
SALO Salr 3.45 328 AML AML
comp=E,279μm,0.4s
SALO AML AML
comp=N,266μm,0.9s
DOSS Dosso del Somm 3.45 337 AML AML
comp=E,199μm,1.4s
DOSS AML AML
comp=N,260μm,0.5s
LJU Ljubljana 3.46 16 P **Pn** **04 45 33.8 +1.0**
LJU AML AML
comp=E,1370μm,1.0s
LJU AML AML
comp=N,1730μm,0.6s
LTRZ Laterza 3.47 126 AML AML
comp=E,132μm,1.5s
LTRZ AML AML
comp=N,375μm,1.6s
NOCI Noci 3.51 122 P **Pn** **04 45 35.1 +1.7**
NOCI AML AML
comp=E,190μm,1.1s
NOCI AML AML
comp=N,252μm,1.2s
MPRI Monte Prat 3.52 358 P **Pn** **04 45 34.4 +0.8**
MPRI AML AML
comp=E,343μm,0.5s
MPRI AML AML
comp=N,538μm,0.5s
MAGA Magasa 3.55 330 P **Pn** **04 45 35.3 +1.4**
MAGA AML AML
comp=N,402μm,0.4s
MAGA AML AML
comp=E,648μm,0.5s
STAL STALIGIAL 3.55 355 P **Pn** **04 45 34.8 +0.8**
STAL AML AML
comp=N,261μm,0.3s
STAL AML AML
comp=E,300μm,0.9s
DGI Dorgali Grotta 3.58 229 P **Pn** **04 45 35.9 +1.5**
LUSI Trento, Gardas 3.60 335 P **Pn** **04 45 36.6 +1.9**
LUSI AML AML
comp=N,290μm,0.7s
LUSI AML AML
comp=E,186μm,0.8s
CIMO Cimolais 3.62 352 P **Pn** **04 45 35.6 +0.7**
CIMO AML AML
comp=N,86μm,0.7s
CIMO AML AML
comp=E,90μm,0.8s
PTCC Patocco-Chiusa 3.68 2 P **Pn** **04 45 36.0 +0.2**
PTCC AML AML
comp=N,110μm,0.8s
PTCC AML AML
comp=E,149μm,0.4s
GAGG Gaggia 3.71 336 P **Pn** **04 45 38.1 +1.9**
GAGG AML AML
comp=N,160μm,0.8s
GAGG AML AML
comp=E,252μm,0.9s
CLUD Cludinico 3.74 357 P **Pn** **04 45 37.5 +1.0**
CLUD AML AML
comp=E,206μm,1.2s
CLUD AML AML
comp=N,154μm,0.8s
EUCT Pavia 3.81 312 AML AML
comp=N,3015μm,0.1s
EUCT AML AML
comp=E,1830μm,0.1s
ACOM Acomizza, Ital 3.83 4 AML AML
comp=N,234μm,1.6s
ACOM AML AML
comp=E,252μm,0.3s
ACOM AML AML
comp=N,236μm,0.6s
ACOM AML AML
comp=E,250μm,0.3s
ZOU Zoufplan 3.83 358 P **Pn** **04 45 39.0 +1.0**
ZOU AML AML
comp=E,184μm,1.3s
ZOU AML AML
comp=E,188μm,0.8s
ZOU AML AML
comp=N,222μm,1.5s
ZOU AML AML
comp=N,210μm,1.5s
MOSL Moslavina 3.88 41 *e*Pn **Pn** **04 45 38.0 -0.5**
OBKA Obir 3.91 14 *e*Pn **Pn** **04 45 40.6 +1.6**
comp=N,1.2nm,0.1s
MYKA Terra Mystica 3.92 5 *e*Pn **Pn** **04 45 40.6 +1.6**
comp=N,9.6nm,0.5s
KOSI Kohlern 3.94 342 AML AML
comp=N,168μm,0.9s
KOSI AML AML
comp=E,236μm,0.7s
HCY Herceg Novi 3.96 92⇑ *i* Pn **Pn** **04 45 41.3 +1.8**
HCY *i* Sn **Sn** **04 46 28.5 +2.8**
HCY Herceg Novi 3.96 92⇓ *i* Pn **Pn** **04 45 41.0 +1.5**
HCY *i* Sn **Sn** **04 46 25.7 0.0**
APPI Appiano 4.00 341 AML AML
comp=N,171μm,0.3s
APPI AML AML
comp=E,180μm,1.5s
ABTA Abfaltersbach 4.05 354 *i* Pn **Pn** **04 45 42.5 +1.7**
comp=E,8.7nm,0.3s,SNR=17
SOKA Soboth 4.17 18 *e*Pn **Pn** **04 45 44.6 +2.0**
comp=E,1.7nm,0.2s
UPM Unac-Piva 4.25 82⇑ *i* Pn **Pn** **04 45 45.8 +2.1**
UPM *i* Sn **Sn** **04 46 36.3 +3.1**
UPM Unac-Piva 4.25 82⇓ *i* Pn **Pn** **04 45 46.8 +3.1**
UPM *i* Sn **Sn** **04 46 32.5 -0.7**
CEME Cevo 4.26 90⇓ *i* Pn **Pn** **04 45 45.5 +1.7**
CEME *i* Sn **Sn** **04 46 36.2 +2.9**
CEME Cevo 4.26 90⇑ *i* Pn **Pn** **04 45 45.4 +1.7**
CEME *i* Sn **Sn** **04 46 33.3 0.0**
BUM Brajici-Budva 4.27 94⇑ *i* Pn **Pn** **04 45 45.4 +1.5**
BUM *i* Sn **Sn** **04 46 36.2 +2.7**
BUM Brajici-Budva 4.27 94⇓ *i* Pn **Pn** **04 45 45.2 +1.3**
BUM *i* Sn **Sn** **04 46 32.5 -1.0**
NKME Niksic 4.28 87⇑ *i* Pn **Pn** **04 45 46.0 +2.1**
NKME *i* Sn **Sn** **04 46 36.8 +3.2**
NKME Niksic 4.28 87⇑ *i* Pn **Pn** **04 45 46.0 +2.1**
NKME *i* Sn **Sn** **04 46 30.4 -3.2**
RISI Rein 4.29 350 AML AML
comp=N,444μm,0.5s
RISI AML AML
comp=E,394μm,0.5s
SBF Sospel 4.32 287 *e*P **Pn** **04 45 45.8 +1.2**
SBF *e*Sn **Sn** **04 46 30.7 -4.0**
comp=E,21nm,0.4s
A252A Venje 4.34 50 *e*Pn **Pn** **04 45 45.1 +0.3**
MUGIO Muggio 4.35 319 AML AML
comp=N,68μm,0.4s
MUGIO AML AML
comp=E,74μm,0.4s
KBA Koelnbreinsper 4.36 2 *e*Pn **Pn** **04 45 47.2 +2.1**
comp=E,6.4nm,0.4s
DRME Dracevica, Mon 4.50 95⇓ *i* Pn **Pn** **04 45 48.9 +1.9**
DRME *i* Sn **Sn** **04 46 41.7 +2.7**
DRME Dracevica, Mon 4.50 95⇓ *i* Pn **Pn** **04 45 48.1 +1.1**
DRME *i* Sn **Sn** **04 46 37.7 -1.3**
TTG Podgorica 4.52 92⇑ *i* Pn **Pn** **04 45 49.4 +2.2**
TTG *i* Sn **Sn** **04 46 42.4 +2.9**
TTG Podgorica 4.52 92⇑ *i* Pn **Pn** **04 45 47.9 +0.7**
TTG *i* Sn **Sn** **04 46 40.6 +1.1**
ULC Ulcinj 4.58 97⇓ *i* Pn **Pn** **04 45 50.0 +1.9**
ULC *i* Sn **Sn** **04 46 44.2 +3.1**
ULC Ulcinj 4.58 97⇑ *i* Pn **Pn** **04 45 48.9 +0.8**
ULC *i* Sn **Sn** **04 46 36.7 -4.4**
PLE Pljevlja 4.62 80⇑ *i* Pn **Pn** **04 45 52.2 +3.5**
PLE *i* Sn **Sn** **04 46 44.6 +2.5**
PLE Pljevlja 4.62 80⇑ *i* Pn **Pn** **04 45 52.2 +3.5**
PLE *i* Sn **Sn** **04 46 41.4 -0.7**
FETA Feichten 4.63 339 *i* Pn **Pn** **04 45 51.7 +2.8**
comp=E,1.3nm,0.2s,SNR=7.8
WTTA Wattenberg 4.66 347 *e*Pn **Pn** **04 45 52.4 +3.1**
comp=E,0.8nm,0.1s
DAVOX Davos/Dischmat 4.67 331 Pn **Pn** **04 45 51.1 +1.6**
comp=E,1.2nm,0.3s,baz=137,slow=11,SNR=11
DAVOX Sn **Sn** **04 46 46.4 +2.7**
comp=E,2.8nm,0.3s,baz=123,slow=24,SNR=4.3
comp=E,8.0nm,0.4s
KOME Kolasin 4.69 86⇓ *i* Pn **Pn** **04 45 52.0 +2.4**
KOME *i* Sn **Sn** **04 46 46.8 +3.0**
KOME Kolasin 4.69 86⇑ *i* Pn **Pn** **04 45 52.3 +2.7**
KOME *i* Sn **Sn** **04 46 45.0 +1.2**
SQTA Sankt Quirin 4.70 344 *i* Pn **Pn** **04 45 53.1 +3.3**
comp=E,3.7nm,0.2s,SNR=7.0
BBLS Lazići 4.71 74 *e*Pn **Pn** **04 45 51.9 +2.0**
WATA Walderalm 4.74 347 *e*Pn **Pn** **04 45 54.1 +3.7**
comp=E,1.4nm,0.1s
ARSA Arzberg 4.83 20 *e*Pn **Pn** **04 45 53.2 +1.6**
comp=E,5.6nm,0.3s
MOTA Moosalm 4.84 343 *e*Pn **Pn** **04 45 55.4 +3.6**
comp=E,1.7nm,0.2s
LMR La Mourre 4.90 279 *e*P **Pn** **04 45 53.1 +0.6**
LMR *e*Sn **Sn** **04 46 44.3 -4.7**
comp=E,14nm,0.9s
IVA Berane 4.97 86⇓ *i* Pn **Pn** **04 45 56.0 +2.5**
IVA *i* Sn **Sn** **04 46 53.4 +2.7**
IVA Berane 4.97 86⇓ *i* Pn **Pn** **04 45 56.0 +2.5**
IVA *i* Sn **Sn** **04 46 51.6 +0.9**
BIOA Bad Ischl, Aus 4.98 4 *i* Pn **Pn** **04 45 55.2 +1.6**
comp=E,8.6nm,0.3s,SNR=10
PVY Plav 5.03 89⇑ *i* Pn **Pn** **04 45 56.2 +1.9**
PVY *i* Sn **Sn** **04 46 54.6 +2.4**
PVY Plav 5.03 89⇑ *i* Pn **Pn** **04 45 56.2 +1.9**
PVY *i* Sn **Sn** **04 46 48.5 -3.7**
MBDF Montbardon 5.04 296 *e*P **Pn** **04 45 56.6 +2.1**
MBDF *e*Sn **Sn** **04 46 47.6 -4.8**
comp=E,16nm,0.7s
SJES Sjenica 5.04 82 *e*Pn **Pn** **04 45 54.8 +0.4**
SJES *e*Sn **Sn** **04 46 51.9 -0.5**
RETA Reutte 5.05 341 *i* Pn **Pn** **04 45 58.1 +3.5**
comp=E,3.0nm,0.3s,SNR=5.3
DAVA Damuels 5.12 334 *i* Pn **Pn** **04 45 59.0 +3.4**
comp=E,2.3nm,0.2s,SNR=9.8
DIVS Divibare 5.17 72 *e*Pn **Pn** **04 45 57.5 +1.2**
MOA Molln 5.18 8 *e*Pn **Pn** **04 45 57.8 +1.4**
comp=E,2.3nm,0.2s
IVAS Ivanjica 5.20 78 *e*Pn **Pn** **04 45 57.9 +1.3**
IVAS *e*Sn **Sn** **04 46 55.5 -0.8**
LPG La Plagne 5.37 303 *e*P **Pn** **04 46 02.1 +2.9**
LPG *e*Sn **Sn** **04 46 55.9 -5.1**
comp=E,16nm,0.7s
FRGS Fruska Gora 5.39 61 *e*Pn **Pn** **04 45 59.6 +0.4**
LPL La Plagne 5.39 303 *e*P **Pn** **04 46 01.9 +2.4**
LPL *e*Sn **Sn** **04 46 56.4 -5.0**
comp=E,16nm,0.9s
RONA Rosalia, Austr 5.45 23 *e*Pn **Pn** **04 46 02.0 +1.9**
comp=E,2.4nm,0.3s
TRUS Trudelj 5.49 72 *e*Pn **Pn** **04 46 01.9 +1.3**
CONA Conrad Observa 5.54 19 *i* Pn **Pn** **04 46 02.3 +0.9**
comp=E,5.8nm,0.3s,SNR=7.7
GRUS Gruza 5.64 76 *e*Pn **Pn** **04 46 03.7 +1.0**
SMRF Simiane la Rot 5.66 285 *e*P **Pn** **04 46 05.2 +2.2**
SMRF *e*Sn **Sn** **04 47 02.4 -5.3**
comp=E,3.6nm,0.6s
ORIF Oris-en-Rattie 5.70 295 *e*P **Pn** **04 46 05.7 +2.2**
ORIF *e*Sn **Sn** **04 47 03.3 -5.3**
comp=E,5.1nm,0.6s
SELS Selova 5.87 82 *e*Pn **Pn** **04 46 07.1 +1.3**
OHR Ohrid 5.93 103 *i* Pn **Pn** **04 46 09.2 +2.5**
GERES GERESS Array B 6.13 3 Pn **Pn** **04 46 09.8 +0.3**
comp=E,0.8nm,0.3s,baz=176,slow=13,SNR=16
GERES Sn **Sn** **04 47 19.9 +0.5**
comp=E,2.8nm,0.3s,baz=173,slow=24,SNR=9.8
GERES Lg Lg 04 47 59.3
baz=174,slow=28
comp=E,1.0nm,0.3s
CKRC Cesky Krumlov 6.15 7 *e*PN **Pn** **04 46 09.9 +0.3**
CKRC *e*SN **Sn** **04 47 18.2 -1.5**
BOVS Bovan 6.32 79 *e*Pn **Pn** **04 46 13.0 +1.0**
MODS Modra-Piesok 6.35 26 *e*PN **Pn** **04 46 13.1 +0.7**
MODS *e*SN **Sn** **04 47 26.0 +1.4**
CABF La Chapelle 6.36 310 *e*P **Pn** **04 46 14.9 +2.3**
CABF *e*Sn **Sn** **04 47 19.3 -5.6**
comp=E,12nm,0.7s
BARS Barje 6.38 86 *e*Pn **Pn** **04 46 14.1 +1.3**
BARS *e*Sn **Sn** **04 47 24.1 -1.3**
KHC Kasperske Hory 6.41 3 *e*PN **Pn** **04 46 13.2 -0.1**
KHC *e*SN **Sn** **04 47 25.0 -1.2**
VIVF Saint-Julien-l 6.49 292 *e*P **Pn** **04 46 16.7 +2.3**
PRVS Prvonek 6.59 89 *e*Pn **Pn** **04 46 17.3 +1.6**
PRVS *e*Sn **Sn** **04 47 28.9 -1.7**
ZAGS Zajecar 6.72 78 *e*Pn **Pn** **04 46 18.3 +0.8**
KRUC Moravsky 6.73 19 *e*PN **Pn** **04 46 19.0 +1.4**
HINF Hinteralfeld 6.75 321 *e*P **Pn** **04 46 19.0 +1.0**
HINF *e*Sn **Sn** **04 47 28.7 -5.9**
comp=E,27nm,0.6s
STIP Stip 6.79 96 *i* Pn **Pn** **04 46 21.9 +3.5**
BOSS Bosilegrad 6.89 89 *e*Pn **Pn** **04 46 20.5 +0.7**
LASF Ste Croix 6.90 284 *e*P **Pn** **04 46 21.9 +1.9**
LASF *e*Sn **Sn** **04 47 32.2 -6.0**
comp=E,0.9nm,0.5s
ZAPS Zavoj 6.98 82 *e*Pn **Pn** **04 46 21.6 +0.6**
ZAPS *e*Sn **Sn** **04 47 38.1 -2.0**
VYHS Vyhne 7.01 33 *e*PN **Pn** **04 46 26.2 +4.7**
VYHS *e*SN **Sn** **04 47 45.4 +4.5**
CDF Champ du Feu 7.02 326 *e*P **Pn** **04 46 22.9 +1.2**
CDF *e*Sn **Sn** **04 47 34.8 -6.4**
comp=E,19nm,0.6s
HAU Haudompre 7.13 320 *e*P **Pn** **04 46 24.8 +1.8**
HAU *e*Sn **Sn** **04 47 37.5 -6.2**
comp=E,16nm,0.4s
KEST Kesra 7.58 204 Pn Pn 04 46 35.5 +6.2
comp=E,0.3nm,0.3s,baz=351,slow=13,SNR=2.7
SMF Signal de Mont 7.70 304 *e*P **Pn** **04 46 33.7 +2.8**
SMF *e*Sn **Sn** **04 47 51.2 -6.7**
comp=E,7.1nm,0.5s
PAGF Fort de Pagny 7.81 321 *e*P **Pn** **04 46 34.9 +2.5**
PAGF *e*Sn **Sn** **04 47 53.7 -6.8**
comp=E,23nm,0.8s
SFTF Sexfontaines 7.90 317 *e*P **Pn** **04 46 36.2 +2.5**
SFTF *e*Sn **Sn** **04 47 55.9 -6.9**
comp=E,20nm,0.9s
LOR Lormes 8.00 308 *e*P **Pn** **04 46 37.9 +2.9**
baz=124
LOR *e*Sn **Sn** **04 47 58.2 -6.9**
comp=E,4.3nm,0.3s
MTLF Montolieu 8.03 278 *e*P **Pn** **04 46 37.9 +2.4**
AVF Avril sur Loir 8.07 304 *e*P **Pn** **04 46 38.4 +2.5**
AVF *e*Sn **Sn** **04 48 00.1 -6.7**
comp=E,66nm,2.1s
MEZF Maizieres J'vi 8.10 318 *e*P **Pn** **04 46 39.6 +3.3**
MEZF *e*Sn **Sn** **04 48 00.5 -7.0**
comp=E,12nm,0.6s
SSF Saint Saulge 8.10 306 *e*P **Pn** **04 46 38.1 +1.7**
SSF *e*Sn **Sn** **04 48 00.7 -7.0**
comp=E,3.7nm,0.4s
SAVF Savonnieres en 8.14 319 *e*P **Pn** **04 46 39.3 +2.4**
BGF Bois d'Agland 8.28 301 *e*P **Pn** **04 46 41.9 +3.0**
BGF *e*Sn **Sn** **04 48 05.1 -7.1**
comp=E,11nm,0.7s
CAF Calviac 8.31 289 *e*P **Pn** **04 46 41.9 +2.6**
CAF *e*Sn **Sn** **04 48 05.9 -7.0**
comp=E,1.5nm,0.5s
CLL Collm 8.59 359 *e*Pn Pn 04 46 33.0 -10
CLL *ex* x 04 46 52.0
CLL *e*Pg **Pg** **04 47 21.0 -2.6**
CLL *e*Sn Sn 04 48 04.0 -16
CLL *ex* x 04 48 18.0
CLL *ex* x 04 48 54.0
CLL *e*Sg **Sg** **04 49 11.0 -3.6**
comp=E,10.0nm,1.1s
TCF Toulx Ste Croi 8.59 298 *e*P **Pn** **04 46 46.1 +3.0**
TCF *e*Sn **Sn** **04 48 12.4 -7.3**
comp=Z,40nm,1.9s
IDI Anoyia 11.76 125 Pn **Pn** **04 47 27.2 +0.5**
comp=Z,0.4nm,0.3s,baz=326,slow=18,SNR=1.6
IDI Sn **Sn** **04 49 32.0 -5.8**
comp=Z,0.3nm,0.3s,baz=147,slow=16,SNR=1.6
comp=Z,3.8nm,0.8s
ESDC Sonseca Array 13.24 262 Pn **Pn** **04 47 47.4 +0.6**
comp=Z,0.1nm,0.3s,baz=79,slow=13,SNR=3.0
comp=Z,0.4nm,0.7s
EKA Eskdalemuir Ar 16.48 326 Pn **Pn** **04 48 29.2 -0.6**
baz=132,slow=13
comp=Z,0.1nm,0.3s
NOA NORSAR Array B 18.38 357 P **Pn** **04 48 54.6 +1.2**
baz=176,slow=11,SNR=3.2
comp=Z,0.3nm,0.7s
FINES FINESS Array B 20.29 18 P **P** **04 49 14.8 +0.6**
comp=Z,1.1nm,0.7s,baz=206,slow=9.3,SNR=6.7
comp=Z,1.1nm,0.7s
TORD Torodi Ar. Bea 31.09 202 P **P** **04 50 59.1 +2.0**
comp=Z,0.6nm,0.6s,baz=16,slow=9.5,SNR=7.8
comp=Z,0.6nm,0.6s
MKAR Makanchi Array 47.82 60 P **P** **04 53 16.5 +0.3**
comp=Z,0.4nm,0.6s,baz=283,slow=7.2,SNR=3.7
comp=Z,0.4nm,0.6s
SONM Songino Array 61.87 50 P **P** **04 55 00.1 +2.0**
comp=Z,0.7nm,0.6s,baz=299,slow=9.5,SNR=2.2
comp=Z,0.7nm,0.6s

ROM 24 04:51:56.2±0.1, 42°.803N±0°.008×13°.23E±0°.01, h10km, ML2.4/7, Error ellipse: s-maj=1.1km s-min=0.6km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.09**	**290**	P	Pg	04 51 59.4	+0.6
NRCA				S	Sg	04 52 01.4	+0.9
FEMA	**Monte Fema**	**0.21**	**320**	P	Pg	04 52 01.1	+0.4
FEMA				S	Sg	04 52 04.5	+0.9
FEMA				AML	AML		
	comp=E,5315μm,0.3s						
FEMA				AML	AML		
	comp=N,4010μm,0.5s						
FEMA				AML	AML		
	comp=E,21450μm,0.2s						
FEMA				AML	AML		
	comp=N,18750μm,0.3s						
FEMA				AML	AML		
	comp=N,4012μm,0.6s						
FDMO	**Fiordimonte**	**0.26**	**336**	P	Pg	04 52 01.8	+0.3
FDMO				S	Sg	04 52 05.8	+0.9
FDMO				AML	AML		
	comp=E,1300μm,1.1s						
FDMO				AML	AML		
	comp=N,1095μm,0.4s						
FDMO				AML	AML		
	comp=E,4110μm,0.3s						
FDMO				AML	AML		
	comp=N,3395μm,0.4s						
FDMO				AML	AML		
	comp=E,1303μm,1.1s						
GUMA	**Gualdo di Mace**	**0.27**	**16**	P	Pg	04 52 02.5	+0.7
GUMA				S	Sb	04 52 07.3	-0.7
CSP1	**Cessapalombo**	**0.29**	**356**	P	Pg	04 52 02.4	+0.3
CSP1				S	Sg	04 52 07.1	+1.1
CSP1				AML	AML		
	comp=E,6955μm,0.6s						
CSP1				AML	AML		
	comp=N,9590μm,0.4s						
CSP1				AML	AML		
	comp=E,1001μm,2.2s						
CESI	**CESI - Serrava**	**0.31**	**310**	P	Pg	04 52 02.8	+0.3
CESI				S	Sg	04 52 07.8	+1.0
CESI				AML	AML		
	comp=E,1335μm,1.4s						
CESI				AML	AML		
	comp=N,2775μm,0.5s						
CESI				AML	AML		
	comp=E,5820μm,0.6s						
CESI				AML	AML		
	comp=N,9660μm,0.4s						
CESI				AML	AML		
	comp=N,2777μm,0.5s						
TERO	**Teramo**	**0.33**	**123**	P	Pg	04 52 03.5	+0.7
TERO				S	Sg	04 52 07.6	+0.5
TERO				AML	AML		
	comp=E,3790μm,0.9s						
TERO				AML	AML		
	comp=N,4925μm,0.5s						
TERO				AML	AML		
	comp=E,4145μm,0.9s						
TERO				AML	AML		
	comp=N,5345μm,0.5s						
TERO				AML	AML		
	comp=N,563μm,2.2s						
OFFI	**Offida**	**0.36**	**68**	P	Pb	04 52 04.6	-0.1
GIGS	**Gran Sasso**	**0.43**	**145**	P	Pg	04 52 05.3	+0.6
GIGS				S	Sg	04 52 11.4	+1.0
ASSB	**Assisi San Ben**	**0.48**	**300**	P	Pg	04 52 06.3	+0.6
ASSB				S	Sb	04 52 13.2	-1.0
SNTG	**Esanatoglia**	**0.50**	**335**	P	Pb	04 52 06.7	-0.5
SNTG				S	Sb	04 52 13.7	-0.9
SNTG				AML	AML		
	comp=E,214μm,0.6s						
SNTG				AML	AML		
	comp=N,223μm,0.2s						
SNTG				AML	AML		
	comp=E,1300μm,0.4s						
SNTG				AML	AML		
	comp=N,1345μm,0.3s						
SNTG				AML	AML		
	comp=E,213μm,0.1s						
CESX	**Cesi**	**0.52**	**248**	P	Pg	04 52 06.2	-0.1
EL6	**Elcito**	**0.54**	**350**	P	Pg	04 52 06.7	0.0
EL6				S	Sb	04 52 15.5	-0.2
ARVD	**Arcevia**	**0.73**	**343**	P	Pb	04 52 10.9	-0.1
ARVD				S	Sb	04 52 21.5	+0.4
ARVD				AML	AML		
	comp=E,93μm,1.3s						
ARVD				AML	AML		
	comp=N,90μm,1.0s						
ARVD				AML	AML		
	comp=E,640μm,0.6s						
ARVD				AML	AML		
	comp=N,664μm,0.4s						
MGAB	**Montegabbione**	**0.83**	**278**	P	Pb	04 52 12.8	0.0
MGAB				AML	AML		
	comp=E,2480μm,0.6s						
MGAB				AML	AML		
	comp=N,1895μm,1.0s						
MGAB				AML	AML		
	comp=E,2940μm,0.6s						
MGAB				AML	AML		
	comp=N,1775μm,0.3s						
MGAB				AML	AML		
	comp=N,223μm,2.0s						
PAOL	**Paolisi**	**2.03**	**150**	S	Sb	04 52 59.0	+0.3
SBPO	**S.Benedetto Po**	**2.80**	**324**	S	Sb	04 53 19.0	-1.7
SOLUN	**Solunto**	**4.71**	**177**	P	Pn	04 53 08.3	+1.0

*PRU **24** 04:52:43.6±0.0, 42°.59N×13°.60E, h0km*
*BEO **24** 04:52:43.9±1.1, 42°.69N×13°.14E, h0km, ML3.2/4*
*ROM **24** 04:52:45.3±0.1, 42°.726N±0°.003×13°.176E±0°.005, h10km, ML3.0/44, Error ellipse: s-maj=0.4km s-min=0.1km az=247.0*

ISC 24 04:52:45.5±0.8, 42°.72N±0°.02×13°.17E±0°.02, h15km±5km, n80, σ0°.94/97, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.12**	**339**	P	**Pg**	**04 52 48.7**	**-0.6**
NRCA				S	**Sg**	**04 52 50.8**	**-0.8**
NRCA				AML	AML		
	comp=N,89800μm,1.1s						

NRCA				AML	AML			
	comp=E,93450µm,0.1s							
NRCA				AML	AML			
	comp=N,99250µm,1.1s							
NRCA				AML	AML			
	comp=E,97500µm,0.1s							
NRCA				AML	AML			
	comp=N,89750µm,1.1s							
RM33	**Pellescritta (**	**0.21**	**172**	P	**Pb**	**04 52 50.8**	**-0.3**
RM33				S	**Sg**	**04 52 54.2**	**+0.4**
RM33				AML	AML			
	comp=E,8240µm,1.4s							
RM33				AML	AML			
	comp=E,8455µm,1.4s							
RM33				AML	AML			
	comp=N,10375µm,0.2s							
RM33				AML	AML			
	comp=E,8235µm,1.4s							
RM33				AML	AML			
	comp=N,10350µm,0.2s							
RM33				AML	AML			
	comp=E,8450µm,1.4s							
RM33				AML	AML			
	comp=N,10800µm,0.2s							
CAMP	**Campotosto**	**0.25**	**136**	P	**Pg**	**04 52 51.0**	**-0.1**
CAMP				S	**Sg**	**04 52 55.3**	**+0.4**
CAMP				AML	AML			
	comp=N,3495µm,0.3s							
CAMP				AML	AML			
	comp=E,3755µm,0.6s							
FEMA	**Monte Fema**	**0.26**	**340**	P	**Pg**	**04 52 51.3**	**0.0**
FEMA				S	**Sg**	**04 52 55.1**	**-0.1**
FEMA				AML	AML			
	comp=N,18750µm,0.3s							
FEMA				AML	AML			
	comp=E,21450µm,0.2s							
FEMA				AML	AML			
	comp=N,18800µm,0.3s							
FDMO	**Fiordimonte**	**0.33**	**349**	P	**Pg**	**04 52 52.2**	**-0.1**
FDMO				S	**Sg**	**04 52 56.6**	**-0.3**
FDMO				AML	AML			
	comp=N,3395µm,0.4s							
FDMO				AML	AML			
	comp=E,4110µm,0.3s							
ARRO	**Arrone**	**0.33**	**245**	P	**Pg**	**04 52 52.4**	**0.0**
ARRO				S	**Sb**	**04 52 58.0**	**-0.3**
ARRO				AML	AML			
	comp=N,3705µm,0.2s							
ARRO				AML	AML			
	comp=E,3610µm,1.3s							
ARRO				AML	AML			
	comp=N,3700µm,0.2s							
TERO	**Teramo**	**0.33**	**107**	P	**Pg**	**04 52 52.2**	**-0.2**
TERO				S	**Sb**	**04 52 57.6**	**-0.7**
TERO				AML	AML			
	comp=N,4925µm,0.5s							
TERO				AML	AML			
	comp=E,3790µm,0.9s							
TERO				AML	AML			
	comp=E,4145µm,0.9s							
TERO				AML	AML			
	comp=N,5345µm,0.5s							
CESI	**CESI - Serrava**	**0.35**	**326**	P	**Pg**	**04 52 52.7**	**0.0**
CESI				S	**Sg**	**04 52 57.7**	**0.0**
CESI				AML	AML			
	comp=N,9660µm,0.4s							
CESI				AML	AML			
	comp=E,5820µm,0.6s							
GUMA	**Gualdo di Mace**	**0.36**	**19**	P	**Pg**	**04 52 53.1**	**0.0**
GUMA				S	**Sb**	**04 52 58.9**	**-0.4**
GUMA				AML	AML			
	comp=E,47400µm,0.2s							
GUMA				AML	AML			
	comp=N,27800µm,0.3s							
GUMA				AML	AML			
	comp=N,32300µm,0.2s							
GUMA				AML	AML			
	comp=E,31950µm,0.2s							
CSP1	**Cessapalombo**	**0.37**	**4**	P	**Pg**	**04 52 53.0**	**-0.2**
CSP1				S	**Sg**	**04 52 58.7**	**+0.2**
CSP1				AML	AML			
	comp=E,6955µm,0.6s							
CSP1				AML	AML			
	comp=N,9590µm,0.4s							
GIGS	**Gran Sasso**	**0.40**	**132**	P	**Pg**	**04 52 53.5**	**-0.1**
GIGS				S	**Sg**	**04 52 59.5**	**+0.5**
GIGS				AML	AML			
	comp=E,806µm,1.5s							
GIGS				AML	AML			
	comp=N,727µm,0.5s							
GIGS				AML	AML			
	comp=N,726µm,0.5s							
AQU	**L'Aquila**	**0.40**	**155**	P	**Pb**	**04 52 54.0**	**-0.4**
AQU				S	**Sb**	**04 53 00.2**	**-0.1**
AQU				AML	AML			
	comp=E,2315µm,0.5s							
AQU				AML	AML			
	comp=N,1520µm,1.1s							
AQU				AML	AML			
	comp=N,1505µm,0.7s							
AQU				AML	AML			
	comp=E,2275µm,0.5s							
OFFI	**Offida**	**0.43**	**60**	P	**Pb**	**04 52 54.9**	**-0.1**
OFFI				AML	AML			
	comp=E,6735µm,0.4s							
OFFI				AML	AML			
	comp=N,7300µm,0.5s							
CESX	**Cesi**	**0.45**	**256**	P	**Pg**	**04 52 54.2**	**-0.3**
CESX				S	**Sb**	**04 53 01.3**	**-0.4**
CESX				AML	AML			
	comp=E,2150µm,0.3s							
CESX				AML	AML			
	comp=N,2540µm,0.6s							
FIAM	**Fiamignano**	**0.45**	**185**	P	**Pg**	**04 52 54.6**	**0.0**
FIAM				S	**Sg**	**04 53 01.4**	**+0.6**
FIAM				AML	AML			
	comp=E,2180µm,1.3s							
FIAM				AML	AML			
	comp=N,2050µm,0.5s							
ASSB	**Assisi San Ben**	**0.50**	**311**	P	**Pg**	**04 52 55.2**	**-0.3**
ASSB				S	**Sg**	**04 53 02.4**	**+0.3**
ASSB				AML	AML			
	comp=N,3180µm,1.6s							
ASSB				AML	AML			
	comp=E,5175µm,1.3s							
SSM1	**San Severino M**	**0.51**	**0**	P	**Pg**	**04 52 55.4**	**-0.2**
SSM1				S	**Sb**	**04 53 03.5**	**0.0**
FAGN	**Fagnano**	**0.54**	**146**	P	**Pg**	**04 52 56.0**	**-0.3**
FAGN				S	**Sb**	**04 53 04.3**	**-0.2**
FAGN				AML	AML			
	comp=N,4755µm,0.4s							
FAGN				AML	AML			
	comp=E,5070µm,0.4s							
TRTR	**Tortoreto Alta**	**0.55**	**80**	P	**Pg**	**04 52 56.2**	**-0.3**
TRTR				AML	AML			
	comp=E,6300µm,0.4s							
TRTR				AML	AML			
	comp=N,5110µm,0.4s							
SNTG	**Esanatoglia**	**0.56**	**342**	P	**Pg**	**04 52 56.1**	**-0.6**
SNTG				S	**Sb**	**04 53 04.6**	**-0.4**
SNTG				AML	AML			
	comp=E,1300µm,0.4s							
SNTG				AML	AML			
	comp=N,1345µm,0.3s							
VCEL	**Villa Celiera**	**0.59**	**123**	P	**Pg**	**04 52 57.2**	**0.0**
VCEL				AML	AML			
	comp=E,2190µm,0.5s							
VCEL				AML	AML			
	comp=N,2260µm,1.2s							
ATCC	**AVT- Casa Cast**	**0.61**	**320**	P	**Pg**	**04 52 57.5**	**-0.1**
ATCC				S	**Sb**	**04 53 06.6**	**+0.2**
EL6	**Elcito**	**0.61**	**355**	P	**Pg**	**04 52 57.5**	**-0.1**
FOSV	**Fossato di Vic**	**0.65**	**332**	P	**Pg**	**04 52 58.3**	**-0.1**
FOSV				AML	AML			
	comp=N,1405µm,0.8s							
FOSV				AML	AML			
	comp=E,1215µm,0.6s							
T0110	**Collepietro**	**0.67**	**137**	P	**Pg**	**04 52 58.4**	**-0.2**
T0110				AML	AML			
	comp=E,2255µm,0.6s							
T0110				AML	AML			
	comp=N,2000µm,0.5s							
SRES	**S.Oreste - Sor**	**0.69**	**226**	P	**Pg**	**04 52 58.9**	**0.0**
SRES				AML	AML			
	comp=E,694µm,0.3s							
SRES				AML	AML			

	comp=N,714µm,0.4s							
MURB	**Monte Urbino**	**0.72**	**319**	P	**Pb**	**04 52 59.8**	**-0.1**
MURB				AML	AML			
	comp=N,4520µm,0.3s							
MURB				AML	AML			
	comp=E,5140µm,0.3s							
MURB				AML	AML			
	comp=E,4615µm,0.3s							
MURB				AML	AML			
	comp=N,4700µm,0.3s							
PP3	**Marolino**	**0.73**	**26**	P	**Pg**	**04 52 58.8**	**-1.0**
PP3				AML	AML			
	comp=N,5665µm,0.6s							
PP3				AML	AML			
	comp=N,4935µm,0.7s							
PP3				AML	AML			
	comp=E,7770µm,0.5s							
PP3				AML	AML			
	comp=E,8480µm,0.5s							
SSFR	**Montelago di S**	**0.77**	**338**	P	**Pg**	**04 52 59.3**	**-1.3**
SSFR				AML	AML			
	comp=N,1960µm,1.0s							
SSFR				AML	AML			
	comp=N,1825µm,0.9s							
SSFR				AML	AML			
	comp=E,2040µm,0.2s							
SSFR				AML	AML			
	comp=E,2245µm,0.6s							
CERT	**Cerreto**	**0.78**	**191**	P	**Pg**	**04 53 00.8**	**+0.1**
CERT				AML	AML			
	comp=N,792µm,0.4s							
CERT				AML	AML			
	comp=E,1455µm,0.5s							
ATFO	**Monte Foce - G**	**0.78**	**326**	P	**Pg**	**04 53 00.6**	**-0.3**
ATFO				AML	AML			
	comp=N,999µm,1.2s							
ATFO				AML	AML			
	comp=E,978µm,0.9s							
ARVD	**Arcevia**	**0.80**	**348**	P	**Pg**	**04 53 00.3**	**-0.8**
ARVD				AML	AML			
	comp=E,640µm,0.6s							
ARVD				AML	AML			
	comp=N,664µm,0.4s							
MGAB	**Montegabbione**	**0.81**	**284**	P	**Pg**	**04 53 00.7**	**-0.5**
MGAB				AML	AML			
	comp=N,1895µm,1.0s							
MGAB				AML	AML			
	comp=E,2940µm,0.6s							
MGAB				AML	AML			
	comp=E,2480µm,0.6s							
MGAB				AML	AML			
	comp=N,1775µm,0.3s							
FRON	**Frontone**	**0.86**	**338**	AML	AML			
	comp=E,718µm,0.5s							
FRON				AML	AML			
	comp=N,1170µm,0.6s							
RCAV	**Rocca di Cave**	**0.89**	**191**	P	**Pg**	**04 53 02.1**	**-0.6**
INTR	**Introdacqua**	**0.89**	**142**	P	**Pb**	**04 53 03.0**	**+0.2**
INTR				AML	AML			
	comp=E,768µm,1.6s							
INTR				AML	AML			
	comp=N,1240µm,0.7s							
INTR				AML	AML			
	comp=N,814nm,0.6s							
INTR				AML	AML			
	comp=E,777nm,1.6s							
ATMI	**Monte Miggiano**	**0.91**	**313**	AML	AML			
	comp=E,2735µm,0.6s							
ATMI				AML	AML			
	comp=N,2935µm,0.4s							
ATPI	**Pietralunga -**	**0.93**	**323**	P	**Pg**	**04 53 02.8**	**-0.7**
ATPI				AML	AML			
	comp=E,666µm,0.7s							
ATPI				AML	AML			
	comp=N,738µm,0.5s							
SACS	**San Casciano d**	**0.94**	**278**	P	**Pg**	**04 53 03.0**	**-0.7**
SACS				AML	AML			
	comp=E,794µm,1.4s							
SACS				AML	AML			
	comp=N,642µm,0.9s							
SACS				AML	AML			
	comp=N,639µm,0.5s							
SACS				AML	AML			
	comp=E,782µm,0.8s							
PIEI	**Pieia**	**0.94**	**330**	P	**Pb**	**04 53 03.5**	**-0.1**
PIEI				AML	AML			
	comp=N,466µm,1.1s							
PIEI				AML	AML			
	comp=E,707µm,0.4s							
MPAG	**Monte Paganucc**	**0.96**	**342**	P	**Pg**	**04 53 03.4**	**-0.8**
MPAG				AML	AML			
	comp=E,776µm,0.5s							
MPAG				AML	AML			
	comp=N,560µm,1.0s							
NARO	**Abbazia di Nar**	**0.99**	**334**	P	**Pg**	**04 53 04.0**	**-0.8**
NARO				AML	AML			
	comp=E,432µm,0.6s							
NARO				AML	AML			
	comp=N,410µm,1.4s							
APEC	**Apecchio**	**1.00**	**327**	P	**Pg**	**04 53 04.1**	**-0.9**
APEC				AML	AML			
	comp=N,954µm,0.4s							
APEC				AML	AML			
	comp=E,776µm,0.6s							
LPEL	**Lama dei Pelig**	**1.00**	**132**	P	**Pg**	**04 53 04.2**	**-0.7**
LPEL				AML	AML			
	comp=E,698µm,1.0s							
LPEL				AML	AML			
	comp=N,730µm,0.7s							
VIVA	**Pratoni del Vi**	**1.01**	**197**	S	**Sg**	**04 53 16.0**	**-2.4**
FSSB	**Fossombrone**	**1.02**	**344**	P	**Pg**	**04 53 04.2**	**-1.0**
FSSB				AML	AML			
	comp=N,2395µm,0.4s							
FSSB				AML	AML			
	comp=E,1840µm,0.3s							
CAFI	**Castiglion Fio**	**1.08**	**305**	P	**Pg**	**04 53 05.2**	**-1.1**
CAFI				AML	AML			
	comp=E,626µm,0.5s							
CAFI				AML	AML			
	comp=N,571µm,0.7s							
MCIV	**Monte Civitell**	**1.10**	**274**	P	**Pb**	**04 53 05.8**	**-0.5**
MCIV				AML	AML			
	comp=N,244µm,1.0s							
MCIV				AML	AML			
	comp=E,362µm,0.3s							
PARC	**Parchiule**	**1.15**	**324**	P	**Pb**	**04 53 06.2**	**-1.0**
PARC				AML	AML			
	comp=N,433µm,0.9s							
PARC				AML	AML			
	comp=E,435µm,0.7s							
ARCI	**Arcidosso**	**1.26**	**277**	AML	AML			
	comp=N,104µm,0.7s							
ARCI				AML	AML			
	comp=E,114µm,0.8s							
CSNT	**Castellina Chi**	**1.57**	**299**	P	**Pn**	**04 53 13.6**	**+0.7**
CSNT				AML	AML			
	comp=E,99µm,0.4s							
CSNT				AML	AML			
	comp=N,119µm,0.8s							
RUFI	**Rufina**	**1.65**	**313**	P	**Pn**	**04 53 14.3**	**+0.3**
TRIF	**Trifonti**	**1.71**	**284**	P	**Pn**	**04 53 15.8**	**+0.9**
TRIF				AML	AML			
	comp=E,123µm,0.8s							
TRIF				AML	AML			
	comp=N,104µm,0.4s							
MCRV	**Calabrutti - M**	**2.44**	**142**	AML	AML			
	comp=N,52µm,1.3s							
MCRV				AML	AML			
	comp=E,45µm,1.0s							
RIY	**Rijeka**	**2.77**	**19**	*e*Pn	**Pn**	**04 53 30.5**	**+1.1**
RIY				*e*Sn	**Sn**	**04 54 04.0**	**+1.4**
STON	**Ston**	**3.33**	**86**	*e*Pn	**Pn**	**04 53 37.3**	**+0.2**
STON				*e*Sn	**Sn**	**04 54 17.0**	**+0.6**
DOSS	**Dosso del Somm**	**3.47**	**336**	AML	AML			
	comp=E,48µm,0.6s							
DOSS				AML	AML			
	comp=N,57µm,0.7s							
CIMO	**Cimolais**	**3.63**	**352**	AML	AML			
	comp=N,20µm,1.5s							
CIMO				AML	AML			
	comp=E,21µm,0.4s							
ACOM	**Acomizza, Ital**	**3.84**	**4**	AML	AML			
	comp=E,80µm,1.0s							
ACOM				AML	AML			
	comp=N,83µm,0.7s							
MYKA	**Terra Mystica**	**3.93**	**5**	*e*Pn	**Pn**	**04 53 48.4**	**+3.1**
	comp=N,2.3nm,0.3s							

ABTA	**Abfaltersbach**	**4.06**	**354**	*e*Pn	**Pn**	**04 53 49.0**	**+1.9**
	comp=N,3.0nm,0.3s							
KBA	**Koelnbreinsper**	**4.36**	**2**	*e*Pn	**Pn**	**04 53 51.5**	**+0.1**
	comp=N,2.4nm,0.2s							
FETA	**Feichten**	**4.64**	**339**	*e*Pn	**Pn**	**04 53 58.4**	**+3.2**
	comp=N,0.4nm,0.2s							
WTTA	**Wattenberg**	**4.67**	**347**	*e*Pn	**Pn**	**04 53 58.6**	**+2.9**
	comp=N,0.6nm,0.2s							
BBLS	**Lazići**	**4.69**	**74**	*e*Pn	**Pn**	**04 53 56.4**	**+0.6**
SQTA	**Sankt Quirin**	**4.71**	**343**	*e*Pn	**Pn**	**04 53 58.6**	**+2.4**
	comp=N,2.1nm,0.3s							
WATA	**Walderalm**	**4.75**	**347**	*e*Pn	**Pn**	**04 53 59.3**	**+2.6**
	comp=N,1.4nm,0.3s							
ARSA	**Arzberg**	**4.83**	**19**	*e*Pn	**Pn**	**04 53 56.2**	**-1.5**
	comp=N,2.5nm,0.5s							
MOTA	**Moosalm**	**4.85**	**343**	*e*Pn	**Pn**	**04 53 59.4**	**+1.3**
	comp=N,0.7nm,0.2s							
BIOA	**Bad Ischl, Aus**	**4.98**	**4**	*e*Pn	**Pn**	**04 54 01.5**	**+1.7**
	comp=N,2.0nm,0.2s							
SJES	**Sjenica**	**5.02**	**81**	*e*Pn	**Pn**	**04 54 00.1**	**-0.3**
SJES				*e*Sn	**Sn**	**04 54 58.0**	**-0.1**
DAVA	**Damuels**	**5.13**	**334**	*e*Pn	**Pn**	**04 54 02.1**	**+0.1**
	comp=N,1.6nm,0.4s							
IVAS	**Ivanjica**	**5.18**	**78**	*e*Pn	**Pn**	**04 54 02.8**	**+0.3**
IVAS				*e*Sn	**Sn**	**04 55 02.2**	**+0.2**
MOA	**Molln**	**5.19**	**8**	*e*Pn	**Pn**	**04 54 03.1**	**+0.5**
	comp=N,0.9nm,0.3s							
RONA	**Rosalia, Austr**	**5.45**	**23**	*e*Pn	**Pn**	**04 54 06.8**	**+0.6**
	comp=N,0.4nm,0.2s							
CONA	**Conrad Observa**	**5.54**	**19**	*e*Pn	**Pn**	**04 54 08.5**	**+0.9**
	comp=N,0.5nm,0.3s							
SELS	**Selova**	**5.85**	**82**	*e*Pn	**Pn**	**04 54 12.1**	**+0.4**
BARS	**Barje**	**6.36**	**86**	*e*Pn	**Pn**	**04 54 17.6**	**-1.1**
KHC	**Kasperske Hory**	**6.42**	**2**	*e*PN	**Pn**	**04 54 19.9**	**+0.4**
KHC				*e*SN	**Sn**	**04 55 32.2**	**-0.3**
ZAPS	**Zavoj**	**6.96**	**82**	*e*Pn	**Pn**	**04 54 26.0**	**-0.9**

ROM 24 04:53:23.4±0.1, 42°.743N±0°.003×13°.246E±0°.005, h8km, ML2.2/6, Error ellipse: s-maj=0.4km s-min=0.2km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.13**	**313**	P	Pg	04 53 26.4	+0.1
NRCA				S	Sg	04 53 28.9	+0.5
RM33	**Pellescritta (**	**0.23**	**186**	P	Pg	04 53 29.2	+1.0
RM33				S	Sg	04 53 33.3	+2.0
RM33				AML	AML		
	comp=N,1320µm,0.3s						
RM33				AML	AML		
	comp=E,998µm,0.1s						
RM33				AML	AML		
	comp=E,1018µm,0.2s						
RM33				AML	AML		
	comp=N,1269µm,0.3s						
CAMP	**Campotosto**	**0.24**	**150**	P	Pg	04 53 29.1	+0.9
CAMP				S	Sg	04 53 33.0	+1.6
TERO	**Teramo**	**0.29**	**114**	P	Pg	04 53 29.9	+0.7
TERO				S	Sb	04 53 34.6	-1.3
TERO				AML	AML		
	comp=E,757µm,0.0s						
TERO				AML	AML		
	comp=N,1014µm,0.1s						
TERO				AML	AML		
	comp=N,924µm,0.0s						
TERO				AML	AML		
	comp=E,865µm,0.1s						
FDMO	**Fiordimonte**	**0.32**	**338**	P	Pb	04 53 30.6	-0.8
FDMO				S	Sb	04 53 35.5	-1.2
FDMO				AML	AML		
	comp=N,780µm,0.2s						
FDMO				AML	AML		
	comp=E,617µm,0.2s						
GUMA	**Gualdo di Mace**	**0.33**	**12**	P	Pb	04 53 30.9	-0.6
GUMA				S	Sb	04 53 36.6	-0.4
CSP1	**Cessapalombo**	**0.35**	**355**	P	Pb	04 53 31.7	-0.3
CSP1				S	Sb	04 53 37.0	-0.8
CESI	**CESI - Serrava**	**0.36**	**316**	P	Pg	04 53 31.3	+0.7
CESI				S	Sb	04 53 37.2	-0.9
CESI				AML	AML		
	comp=E,819µm,0.2s						
CESI				AML	AML		
	comp=N,1611µm,0.3s						
OFFI	**Offida**	**0.38**	**59**	P	Pb	04 53 32.4	0.0
GIGS	**Gran Sasso**	**0.38**	**141**	P	Pg	04 53 31.6	+0.7
GIGS				S	Sb	04 53 37.6	-0.9
GIGS				AML	AML		
	comp=E,144µm,0.3s						
GIGS				AML	AML		
	comp=N,135µm,0.1s						
ARRO	**Arrone**	**0.39**	**245**	P	Pb	04 53 31.9	-0.7
ARRO				S	Sb	04 53 38.5	-0.3
ARRO				AML	AML		
	comp=N,384µm,0.0s						
ARRO				AML	AML		
	comp=E,551µm,0.2s						
AQU	**L'Aquila**	**0.41**	**163**	P	Pb	04 53 32.2	-0.8
AQU				S	Sb	04 53 38.6	-0.7
FIAM	**Fiamignano**	**0.48**	**191**	P	Pg	04 53 33.4	+0.6
FIAM				S	Sb	04 53 40.5	-1.1
CESX	**Cesi**	**0.51**	**255**	P	Pg	04 53 33.9	+0.7
CESX				S	Sb	04 53 41.8	-0.4
ASSB	**Assisi San Ben**	**0.53**	**305**	P	Pb	04 53 34.7	-0.2
ASSB				S	Sb	04 53 42.3	-0.4
SNTG	**Esanatoglia**	**0.56**	**336**	S	Sb	04 53 44.0	+0.3

PRU ***24*** *04:57:35.9±0.0, 42°.65N×13°.47E, h0km*
LDG ***24*** *04:57:36.6±0.1, 42°.83N×13°.04E, h6km, Ml3.3/20, Error ellipse: s-maj=2.2km s-min=1.9km az=52.0*
IDC ***24*** *04:57:37.9±0.9, 43°.01N×12°.65E, h0km, mb3.7/13, mbtmp3.6/21, ML3.2/8, Error ellipse: s-maj=17.3km s-min=11.4km az=88.0*
BEO ***24*** *04:57:37.2±1.0, 42°.82N×12°.75E, h9km±9km, ML3.7/7*
ROM ***24*** *04:57:37.2±0.1, 42°.850N±0°.003×13°.041E±0°.005, h8km, ML3.6/45, Mw3.5, Error ellipse: s-maj=0.4km s-min=0.2km az=61.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=2.01; Mθθ1.57; Mφφ0.44; Mrθ-0.33; Mθφ-0.83; Mφr-0.42; Fault plane solution: M0 2.07416×10¹⁴ NP1:φs311.00000°, δ45.00000°, λ-71.00000°. NP2:φs105.00000°, δ48.00000°, λ-109.00000°.*

ISC 24 04:57:38.1±0.9, 42°.84N±0°.02×12°.98E±0°.02, h5km±6km, n202, σ2°32/230, mb3.7/12, 3C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**93**	P	**Pg**	**04 57 38.8**	**-1.4**
NRCA				S	**Sg**	**04 57 40.5**	**-1.2**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.13**	**23**	P	**Pg**	**04 57 40.1**	**-0.8**
FEMA				S	**Sg**	**04 57 42.7**	**-0.1**
FEMA				AML	AML		
FEMA				AML	AML		
CESI	**CESI - Serrava**	**0.17**	**342**	⇓P	**Pg**	**04 57 41.5**	**-0.1**
CESI				S	**Sg**	**04 57 45.0**	**+1.1**
CESI				AML	AML		
	comp=E,62000µm,0.8s						
CESI				AML	AML		
	comp=N,62000µm,0.4s						
FDMO	**Fiordimonte**	**0.21**	**22**	⇑P	**Pg**	**04 57 41.5**	**-0.7**
FDMO				S	**Sg**	**04 57 45.2**	**+0.1**
FDMO				AML	AML		
	comp=E,44650µm,1.0s						
FDMO				AML	AML		
	comp=N,35050µm,0.6s						
AQT1	**Arquata del Tr**	**0.24**	**106**	P	**Pg**	**04 57 42.0**	**-0.8**
AQT1				S	**Sg**	**04 57 46.2**	**+0.3**
CSP1	**Cessapalombo**	**0.30**	**33**	P	**Pg**	**04 57 43.1**	**-0.9**
CSP1				S	**Sg**	**04 57 48.2**	**+0.2**
CSP1				AML	AML		
	comp=E,24850µm,1.3s						
CSP1				AML	AML		
	comp=N,52000µm,1.0s						
CSP1				AML	AML		
	comp=E,24900µm,1.3s						
CSP1				AML	AML		
	comp=N,52050µm,1.0s						

ARRO Arrone 0.30 211 P Pg 04 57 44.5 +0.6
ARRO AML AML
comp=E,11400µm,1.0s
ARRO AML AML
comp=N,9425µm,0.7s
SEF1 Sefro 0.31 356 P Pg 04 57 43.8 -0.3
SEF1 S Sg 04 57 49.5 +1.3
SEF1 AML AML
comp=E,47350µm,0.6s
SEF1 AML AML
comp=N,35100µm,0.7s
SEF1 AML AML
comp=E,47300µm,0.6s
SEF1 AML AML
comp=N,35150µm,0.7s
ASSB Assisi San Ben 0.31 311 ⇓P Pg 04 57 44.2 0.0
ASSB S Sg 04 57 50.3 +2.0
ASSB AML AML
comp=N,16400µm,0.6s
ASSB AML AML
comp=E,11600µm,0.4s
PIO1 Pioraco 0.34 0 P Pg 04 57 44.1 -0.6
PIO1 S Sg 04 57 50.1 +1.0
FIU1 Fiuminata 0.35 354 P Pg 04 57 44.6 -0.3
FIU1 S Sg 04 57 50.6 +1.0
RM33 Pellescritta (0.37 152 P Pg 04 57 45.3 0.0
RM33 S Sb 04 57 51.4 -1.9
RM33 AML AML
comp=E,9745µm,1.2s
RM33 AML AML
comp=N,9890µm,0.8s
RM33 AML AML
comp=E,9580µm,1.2s
RM33 AML AML
comp=N,9870µm,0.8s
CESX Cesi 0.37 232 P Pg 04 57 45.4 +0.1
CESX AML AML
comp=E,20200µm,0.6s
CESX AML AML
comp=N,16600µm,0.6s
MDAR Monte D'Aria 0.37 19 P Pg 04 57 44.9 -0.5
MDAR S Sg 04 57 50.8 +0.6
GAG1 Gagliole 0.41 9 P Pg 04 57 45.6 -0.3
SSM1 San Severino M 0.42 20 P Pg 04 57 45.5 -0.6
SNTG Esanatoglia 0.42 356 P Pg 04 57 45.4 -0.7
SNTG S Sg 04 57 53.1 +1.4
SNTG AML AML
comp=E,11400µm,0.8s
SNTG AML AML
comp=N,11750µm,0.7s
MTL1 Matelica 0.42 3 P Pg 04 57 46.0 -0.2
ATCC AVT- Casa Cast 0.43 324 ⇓P Pg 04 57 46.2 -0.1
ATCC AML AML
comp=N,14500µm,0.6s
ATCC AML AML
comp=E,14550µm,0.8s
CAMP Campotosto 0.44 134 P Pg 04 57 45.6 -1.0
CAMP S Sg 04 57 52.8 +0.5
FOSV Fossato di Vic 0.48 341 P Pg 04 57 47.0 -0.4
FOSV AML AML
comp=E,7505µm,0.9s
FOSV AML AML
comp=N,7675µm,0.6s
FOSV AML AML
comp=E,7510µm,0.9s
FOSV AML AML
comp=N,7670µm,0.6s
EL6 Elcito 0.50 10 P Pg 04 57 46.9 -0.7
EL6 S Sg 04 57 55.1 +0.9
EL6 AML AML
comp=E,11940µm,0.9s
EL6 AML AML
comp=N,13600µm,0.7s
EL6 AML AML
comp=E,11935µm,0.9s
TERO Teramo 0.51 115 P Pg 04 57 46.6 -1.2
TERO AML AML
comp=E,5690µm,0.6s
TERO AML AML
comp=N,8420µm,0.9s
TERO AML AML
comp=E,6005µm,0.6s
TERO AML AML
comp=N,8735µm,0.9s
OFFI Offida 0.53 79 P Pg 04 57 48.1 -0.1
TRE1 Treia 0.53 27 P Pg 04 57 47.9 -0.4
MURB Monte Urbino 0.54 322 P Pg 04 57 48.4 0.0
MURB AML AML
comp=E,13300µm,0.4s
MURB AML AML
comp=N,11370µm,1.6s
MURB AML AML
comp=E,13950µm,0.4s
MURB AML AML
comp=N,11365µm,0.9s
MURB AML AML
comp=N,11365µm,1.6s
CING Cingoli 0.56 16 P Pg 04 57 48.0 -0.8
AQU L'Aquila 0.58 147 P Pg 04 57 48.7 -0.4
FIAM Fiamignano 0.58 170 P Pg 04 57 48.5 -0.7
FIAM AML AML
comp=N,5030µm,0.7s
FIAM AML AML
comp=E,6945µm,0.7s
ATTE AVT- Monte Tez 0.58 308 P Pg 04 57 49.4 +0.1
ATTE AML AML
comp=N,2850µm,1.0s
ATTE AML AML
comp=E,4255µm,0.6s
ATTE AML AML
comp=N,2845µm,1.0s
GIGS Gran Sasso 0.58 132 P Pg 04 57 47.8 -1.5
GIGS AML AML
comp=E,1445µm,0.9s
GIGS AML AML
comp=N,998µm,0.6s
ATFO Monte Foce - G 0.61 331 P Pg 04 57 49.7 -0.1
ATFO AML AML
comp=E,5050µm,1.0s
ATFO AML AML
comp=N,4650µm,0.7s
SSFR Montelago di S 0.61 346 P Pg 04 57 49.5 -0.4
SSFR AML AML
comp=E,5600µm,0.6s
SSFR AML AML
comp=N,4530µm,0.7s
SSFR AML AML
comp=N,5185µm,0.7s
SSFR AML AML
comp=E,5405µm,0.3s
ATSC Scheggia e Pas 0.62 340 P Pg 04 57 49.5 -0.6
ATLO AVT- Montelove 0.64 319 P Pg 04 57 49.8 -0.5
MGAB Montegabbione 0.64 277 P Pg 04 57 51.0 +0.6
MGAB AML AML
comp=E,4825µm,0.6s
MGAB AML AML
comp=N,5590µm,0.6s
MGAB AML AML
comp=E,5350µm,0.6s
MGAB AML AML
comp=N,5590µm,0.6s
ARVD Arcevia 0.66 358 P Pg 04 57 50.0 -0.8
ARVD AML AML
comp=E,4595µm,0.5s
ARVD AML AML
comp=N,3680µm,0.7s
ATVA AVT- Monte Val 0.67 311 P Pg 04 57 51.0 0.0
TB01 Gubbio 0.67 324 P Pg 04 57 50.4 -0.6
TB02 Pietralunga 0.68 322 P Pg 04 57 50.5 -0.6
ATVO AVT- Monte Val 0.69 323 P Pg 04 57 50.8 -0.4
ATVO AML AML
comp=E,3710µm,0.9s
ATVO AML AML
comp=N,5830µm,0.7s
TRTR Tortoreto Alta 0.69 92 P Pg 04 57 50.1 -1.1
SRES S.Oreste - Sor 0.69 210 P Pg 04 57 51.5 +0.2
SRES AML AML
comp=E,3140µm,0.5s
SRES AML AML
comp=N,2645µm,0.7s
TB03 Pietralunga 0.70 324 P Pg 04 57 50.8 -0.7
FRON Frontone 0.70 345 P Pg 04 57 50.9 -0.7
FRON AML AML
comp=N,5125µm,0.6s
FRON AML AML
comp=E,3385µm,0.7s

PP3 Marolino 0.71 40 P Pg 04 57 50.9 -0.8
PP3 AML AML
comp=E,10840µm,0.6s
PP3 AML AML
comp=N,10045µm,0.5s
PP3 AML AML
comp=E,10055µm,1.0s
PP3 AML AML
comp=E,10870µm,0.6s
PP3 AML AML
comp=E,10070µm,1.0s
PP3 AML AML
comp=N,11450µm,0.6s
PP3 AML AML
comp=N,10055µm,0.5s
ATBU Serra di Buran 0.71 334 P Pg 04 57 51.4 -0.3
ATMI Monte Miggiano 0.72 314 P Pg 04 57 52.3 +0.4
ATMI AML AML
comp=E,11300µm,0.7s
ATMI AML AML
comp=N,13150µm,0.7s
FAGN Fagnano 0.73 142 P Pg 04 57 51.1 -0.9
ATPI Pietralunga - 0.74 326 P Pg 04 57 51.9 -0.4
ATPI AML AML
comp=E,3540µm,0.9s
ATPI AML AML
comp=N,2985µm,0.6s
ATPC Poggio Castell 0.75 329 P Pg 04 57 51.7 -0.7
PIEI Pieia 0.77 335 P Pg 04 57 52.1 -0.7
PIEI AML AML
comp=E,2860µm,1.2s
PIEI AML AML
comp=N,1755µm,0.8s
VCEL Villa Celiera 0.78 125 P Pg 04 57 51.8 -1.1
SACS San Casciano d 0.79 271 P Pg 04 57 53.8 +0.7
SACS AML AML
comp=E,3335µm,1.0s
SACS AML AML
comp=E,2915µm,1.0s
SACS AML AML
comp=N,3530µm,0.8s
SACS AML AML
comp=N,3890µm,0.8s
COR1 Corinaldo 0.79 1 P Pg 04 57 53.0 -0.3
COR1 AML AML
comp=E,13350µm,0.7s
COR1 AML AML
comp=N,10015µm,0.6s
COR1 AML AML
comp=N,9630µm,0.6s
COR1 AML AML
comp=E,6820µm,0.7s
MPAG Monte Paganucc 0.81 349 P Pg 04 57 52.8 -0.8
MPAG AML AML
comp=E,3810µm,0.5s
MPAG AML AML
comp=N,3850µm,1.0s
MPAG AML AML
comp=E,3635µm,0.5s
MPAG AML AML
comp=E,3810µm,0.6s
MPAG AML AML
comp=E,3640µm,0.5s
MPAG AML AML
comp=N,3670µm,1.0s
MPAG AML AML
comp=N,3855µm,1.0s
NARO Abbazia di Nar 0.82 339 P Pg 04 57 53.0 -0.9
NARO AML AML
comp=E,3095µm,0.9s
NARO AML AML
comp=N,2305µm,1.0s
APEC Apecchio 0.83 331 P Pg 04 57 53.6 -0.3
APEC AML AML
comp=E,3725µm,0.7s
APEC AML AML
comp=N,4320µm,1.2s
MTCE Montecelio 0.83 192 P Pg 04 57 54.1 0.0
MTCE AML AML
comp=E,3840µm,0.6s
MTCE AML AML
comp=N,2135µm,1.6s
ATMC Monte Cedrone 0.84 317 P Pg 04 57 53.3 -0.8
AOI Ancona 0.84 32 P Pg 04 57 53.3 -1.0
T0110 Collepietro 0.85 136 P Pg 04 57 53.1 -1.3
BADI Badiali 0.86 322 P Pg 04 57 54.1 -0.5
BADI AML AML
comp=E,428µm,0.6s
BADI AML AML
comp=N,2255µm,0.8s
FSSB Fossombrone 0.87 350 P Pg 04 57 53.8 -0.9
FSSB AML AML
comp=N,11600µm,0.4s
FSSB AML AML
comp=E,5830µm,0.5s
PTQR Pietraquaria 0.87 159 P Pg 04 57 53.8 -1.0
CERT Cerreto 0.89 180 P Pg 04 57 54.1 -1.0
CERT AML AML
comp=E,4015µm,0.9s
CERT AML AML
comp=N,2225µm,1.6s
CAFI Castiglion Fio 0.89 304 P Pg 04 57 55.3 +0.2
CAFI AML AML
comp=N,3440µm,0.6s
CAFI AML AML
comp=N,3275µm,0.6s
CAFI AML AML
comp=E,2815µm,1.6s
CAFI AML AML
comp=E,2865µm,1.6s
LATE Laterza 0.90 256 P Pb 04 57 55.9 -0.1
SF03 Valle Cupa 0.95 268 P Pg 04 57 56.0 -0.4
SF11 Podere del Sol 0.96 272 P Pb 04 57 57.1 0.0
MCIV Monte Civitell 0.96 267 P Pg 04 57 56.0 -0.4
MCIV AML AML
comp=E,1104µm,0.8s
MCIV AML AML
comp=N,1460µm,0.8s
SSP9 Sansepolcro 0.96 320 P Pg 04 57 56.1 -0.4
SSP9 AML AML
comp=E,2825µm,1.4s
SSP9 AML AML
comp=N,3000µm,1.6s
SF04 Casetta 0.97 270 P Pg 04 57 56.9 +0.2
PARC Parchiule 0.97 326 P Pg 04 57 56.3 -0.5
PARC AML AML
comp=E,2735µm,1.1s
PARC AML AML
comp=N,3665µm,0.7s
RCAV Rocca di Cave 0.99 181 P Pg 04 57 56.6 -0.5
SF13 Bagnolo 1.00 269 P Pg 04 57 57.6 +0.3
SF14 Selvena 1.01 266 P Pg 04 57 57.5 +0.1
RMP Rome, Mte Porz 1.05 191 P Pg 04 57 58.0 -0.1
TOLF Tolfa 1.06 223 P Pg 04 57 58.2 -0.1
TOLF AML AML
comp=E,1445µm,0.6s
TOLF AML AML
comp=N,1300µm,0.8s
GUAR Guarcino 1.07 167 P Pg 04 57 57.7 -0.9
INTR Introdacqua 1.07 140 P Pg 04 57 56.5 -2.1
CPGN Carpegna, Ital 1.08 334 AML AML
CPGN AML AML
VVLD Villa Vallelon 1.08 154 P Pg 04 57 57.8 -0.9
CRE Caprese Michel 1.08 316 P Pg 04 57 58.2 -0.7
MA9 Marino 1.09 193 P Pg 04 57 57.8 -1.3
SAMA S.Maria delle 1.10 195 P Pg 04 57 58.2 -0.8
RDP Rocca di Papa 1.10 190 P Pg 04 57 58.5 -0.6
ARCI Arcidosso 1.11 271 P Pb 04 57 59.8 +0.1
ARCI AML AML
comp=E,514µm,0.8s
ARCI AML AML
comp=N,570µm,0.9s
PESA Pesaro 1.11 355 P Pg 04 57 58.4 -0.9
PESA AML AML
comp=E,4300µm,0.9s
PESA AML AML
comp=N,6305µm,0.6s
LPEL Lama dei Pelig 1.19 131 P Pg 04 57 59.2 -1.7
POFI Posta Fibreno 1.25 154 P Pg 04 58 00.1 -1.8
ASQU Asqua 1.29 318 P Pn 04 58 01.9 -0.9
GIUL Giuliano Di Ro 1.29 171 P Pg 04 58 01.1 -1.8
LATB Latina 1.34 181 P Pn 04 58 02.1 -1.3
SFI Santa Sofia 1.35 323 P Pn 04 58 03.1 -0.4
SFI AML AML
comp=E,1105µm,1.2s

SFI AML AML
comp=N,1140µm,0.9s
OSSC Osservatorio P 1.44 299 P Pn 04 58 04.5 -0.3
OSSC AML AML
comp=E,1235µm,0.9s
OSSC AML AML
comp=E,810µm,1.1s
OSSC AML AML
comp=N,1164µm,0.9s
OSSC AML AML
comp=N,788µm,1.1s
CERA Filignano 1.46 148 P Pn 04 58 04.0 -1.1
LMD Lutirano 1.55 324 P Pn 04 58 06.2 -0.1
TRIV Trivento 1.58 132 P Pn 04 58 05.9 -0.9
VAGA Valle Agricola 1.70 146 P Pn 04 58 07.3 -1.1
BSSO Busso 1.76 137 P Pn 04 58 07.6 -1.6
POPM Popiglio 2.02 307 AML AML
comp=E,368µm,1.6s
POPM AML AML
comp=N,458µm,1.0s
BRJN Brijuni 2.14 15 P Pn 04 58 13.7 -0.6
VLC Villacollemand 2.30 306 AML AML
comp=N,218µm,1.0s
VLC AML AML
comp=N,226µm,1.0s
VLC AML AML
comp=E,204µm,1.1s
VLC AML AML
comp=E,201µm,1.1s
SGTA Sant Agata di 2.46 133 P Pn 04 58 17.9 -1.0
RIY Rijeka 2.71 23 *e*Pn Pn 04 58 21.9 -0.3
RIY *e*Sn Sn 04 58 56.0 +0.6
SKDS Skadanscina 2.81 15⇑ *e*Pn Pn 04 58 22.7 -0.8
SKDS *e*Sn Sn 04 58 58.7 +0.9
SKDS IAML 04 59 28.6
comp=Z,135nm,0.7s
MSSA Maissana 2.92 302 AML AML
comp=N,155µm,1.1s
MSSA AML AML
comp=E,118µm,1.2s
PGF Pioggiola 2.95 266 *e*P Pn 04 58 25.8 +0.2
PGF *e*Sn Sn 04 58 56.6 -4.8
comp=E,20nm,0.6s
ROVR Rover Verones 3.12 335 AML AML
comp=E,99µm,1.0s
ROVR AML AML
comp=N,132µm,0.7s
CGRP Cima Grappa 3.16 345 AML AML
comp=N,540µm,1.0s
CGRP AML AML
comp=E,480µm,0.8s
SABO M.te Sabotino 3.17 8 AML AML
comp=N,580µm,0.7s
SABO AML AML
comp=E,696µm,0.7s
DOSS Dosso del Somm 3.30 338 AML AML
comp=E,304µm,0.9s
DOSS AML AML
comp=N,318µm,0.8s
DOSS AML AML
comp=E,326µm,0.9s
DOSS AML AML
comp=N,296µm,0.8s
MAGA Magasa 3.39 331 AML AML
comp=E,784µm,0.7s
MAGA AML AML
comp=N,412µm,0.4s
LJU Ljubljana 3.39 19⇑ *i*Pn Pn 04 58 32.1 +0.5
LJU *i*Sn Sn 04 59 14.2 +2.0
LJU IAML 04 59 46.0
comp=Z,160nm,0.7s
LJU Ljubljana 3.39 19 AML AML
comp=N,1680µm,0.7s
LJU AML AML
comp=E,1915µm,1.1s
MPRI Monte Prat 3.40 0 AML AML
comp=N,642µm,0.8s
MPRI AML AML
comp=E,476µm,0.7s
STAL STALIGIAL 3.43 357 AML AML
comp=N,319µm,0.9s
STAL AML AML
comp=E,394µm,0.6s
LUSI Trento, Gardas 3.44 336 AML AML
comp=E,246µm,0.7s
LUSI AML AML
comp=N,260µm,1.0s
STON Ston 3.47 88 *e*Pn Pn 04 58 33.1 +0.5
STON *e*Sn Sn 04 59 15.7 +1.7
PTCC Patocco-Chiusa 3.58 4 AML AML
comp=E,165µm,0.8s
PTCC AML AML
comp=N,152µm,0.8s
ACOM Acomizza, Ital 3.73 6 AML AML
comp=N,386µm,0.9s
ACOM AML AML
comp=E,390µm,1.1s
ACOM AML AML
comp=N,433µm,1.0s
ACOM AML AML
comp=E,402µm,1.0s
MYKA Terra Mystica 3.82 7 *i* Pn Pn 04 58 38.5 +1.0
comp=E,25nm,0.5s,SNR=8.6
OBKA Obir 3.84 16 *e*Pn Pb 04 58 42.3 -3.9
comp=E,5.5nm,0.4s
ABTA Abfaltersbach 3.92 355 *i* Pn Pn 04 58 39.8 +0.8
comp=E,49nm,0.5s,SNR=25
SOKA Soboth 4.11 20 *e*Pn Pn 04 58 42.3 +0.8
comp=E,0.9nm,0.2s
SBF Sospel 4.17 286 *e*P Pn 04 58 42.7 +0.3
SBF *e*Sn Sn 04 59 26.0 -5.5
comp=E,28nm,0.6s
KBA Koelnbreinsper 4.25 3 *i* Pn Pn 04 58 44.2 +0.7
comp=E,18nm,0.5s,SNR=10
FETA Feichten 4.48 340 *i* Pn Pn 04 58 48.7 +2.1
comp=E,17nm,0.6s,SNR=11
DAVOX Davos/Dischmat 4.52 332 Pn Pn 04 58 48.9 +1.7
comp=E,5.6nm,0.3s,baz=146,slow=7.6,SNR=35
DAVOX Sn Sn 04 59 44.0 +3.8
comp=E,1.9nm,0.3s,baz=78,slow=19,SNR=6.3
WTTA Wattenberg 4.53 348 *e*Pn Pn 04 58 49.5 +2.2
comp=E,13nm,0.5s
SQTA Sankt Quirin 4.56 345 *e*Pn Pn 04 58 50.2 +2.5
comp=E,3.7nm,0.2s
WATA Walderalm 4.61 348 *i* Pn Pn 04 58 51.2 +2.8
comp=E,7.8nm,0.3s,SNR=9.8
MOTA Moosalm 4.70 344 *e*Pn Pn 04 58 52.5 +2.9
comp=E,14nm,0.7s
LMR La Mourre 4.76 278 *e*P Pn 04 58 50.5 +0.1
LMR *e*Sn Sn 04 59 40.0 -6.0
comp=E,4.8nm,0.6s
ARSA Arzberg 4.77 21 *e*Pn Pn 04 58 50.2 -0.3
comp=E,2.9nm,0.5s
BBLS Lazići 4.80 75 *e*Pn Pn 04 58 51.9 +1.0
BIOA Bad Ischl, Aus 4.88 5 *i* Pn Pn 04 58 52.9 +0.9
comp=E,24nm,0.5s,SNR=10
MBDF Montbardon 4.88 295 *e*P Pn 04 58 52.9 +0.8
MBDF *e*Sn Sn 04 59 43.0 -5.9
comp=E,29nm,0.8s
RETA Reutte 4.91 342 *e*Pn Pn 04 58 55.4 +3.0
comp=E,1.8nm,0.2s
DAVA Damuels 4.96 335 *i* Pn Pn 04 58 56.5 +3.2
comp=E,15nm,0.5s,SNR=9.5
MOA Molln 5.09 10 *i* Pn Pn 04 58 55.0 +0.1
comp=E,9.6nm,0.4s,SNR=10
SJES Sjenica 5.14 83 *e*Pn Pn 04 58 56.7 +1.0
LPG La Plagne 5.21 303 *e*P Pn 04 58 57.8 +1.0
LPG *e*Sn Sn 04 59 51.1 -6.3
comp=E,26nm,0.9s
LPL La Plagne 5.23 303 *e*P Pn 04 58 52.2 +1.2
LPL *e*Sn Sn 04 59 51.4 -6.4
comp=E,16nm,0.8s
IVAS Ivanjica 5.29 80 *e*Pn Pn 04 58 58.0 +0.2
IVAS *e*Sn Sn 04 59 59.3 +0.2
RONA Rosalia, Austr 5.39 25 *e*Pn Pn 04 58 58.8 -0.3
comp=E,5.0nm,0.4s
FRGS Fruska Gora 5.45 62 *e*Pn Pn 04 58 59.9 +0.1
CONA Conrad Observa 5.48 21 *e*Pn Pn 04 58 60.0 -0.4
comp=E,10.0nm,0.6s
SMRF Simiane la Rot 5.51 284 *e*P Pn 04 59 01.8 +1.0
SMRF *e*Sn Sn 04 59 57.9 -6.6
comp=E,12nm,0.9s
ORIF Oris-en-Rattie 5.54 294 *e*P Pn 04 59 02.2 +1.1
ORIF *e*Sn Sn 04 59 58.6 -6.6
comp=E,17nm,0.8s
TRUS Trudelj 5.57 73 *e*Pn Pn 04 59 02.6 +1.0
GRUS Gruza 5.74 77 *e*Pn Pn 04 59 04.2 +0.4

SELS	**Selova**	**5.98**	**84**	*e*Pn	**Pn**	**04 59 06.9**	**-0.2**
GERES	**GERESS Array B**	**6.03**	**5**	Pn	**Pn**	**04 59 07.0**	**-0.9**
	comp=E,0.7nm,0.3s,baz=160,slow=12,SNR=12						
GERES				Sn	**Sn**	**05 00 14.7**	**-2.6**
	comp=E,1.2nm,0.3s,baz=176,slow=16,SNR=3.1						
	comp=E,2.7nm,0.6s						
CKRC	**Cesky Krumlov**	**6.05**	**8**	*e*PN	**Pn**	**04 59 07.6**	**-0.6**
CKRC				*e*SN	**Sn**	**05 00 17.1**	**-0.7**
CABF	**La Chapelle**	**6.19**	**310**	*e*P	**Pn**	**04 59 11.4**	**+1.3**
CABF				*e*Sn	**Sn**	**05 00 14.3**	**-7.0**
	comp=E,35nm,1.1s						
KHC	**Kasperske Hory**	**6.31**	**4**	*e*PN	**Pn**	**04 59 11.3**	**-0.4**
KHC				*e*SN	**Sn**	**05 00 23.1**	**-0.9**
VIVF	**Saint-Julien-l**	**6.34**	**291**	*e*P	**Pn**	**04 59 13.5**	**+1.4**
VIVF				*e*Sn	**Sn**	**05 00 17.7**	**-7.1**
	comp=E,0.8nm,0.3s						
BOVS	**Bovan**	**6.42**	**80**	*e*Pn	**Pn**	**04 59 13.2**	**0.0**
BARS	**Barje**	**6.50**	**87**	*e*Pn	**Pn**	**04 59 14.7**	**+0.5**
HINF	**Hinteralfeld**	**6.59**	**321**	*e*P	**Pn**	**04 59 17.1**	**+1.6**
HINF				*e*Sn	**Sn**	**05 00 23.8**	**-7.2**
	comp=E,54nm,1.0s						
KRUC	**Moravsky**	**6.66**	**20**	*e*PN	**Pn**	**04 59 15.9**	**-0.6**
PRVS	**Prvonek**	**6.71**	**90**	*e*Pn	**Pn**	**04 59 17.4**	**+0.2**
LASF	**Ste Croix**	**6.75**	**284**	*e*P	**Pn**	**04 59 19.2**	**+1.4**
LASF				*e*Sn	**Sn**	**05 00 27.5**	**-7.5**
	comp=E,0.6nm,0.3s						
ZAGS	**Zajecar**	**6.82**	**79**	*e*Pn	**Pn**	**04 59 18.2**	**-0.4**
CDF	**Champ du Feu**	**6.86**	**326**	*e*P	**Pn**	**04 59 20.5**	**+1.2**
CDF				*e*Sn	**Sn**	**05 00 30.1**	**-7.6**
	comp=E,30nm,1.0s						
VRAC	**Vranov**	**6.94**	**20**	Pn	**Pn**	**04 59 20.6**	**+0.3**
	comp=E,0.1nm,0.3s,baz=210,slow=20,SNR=1.9						
VRAC				Sn	**Sn**	**05 00 36.9**	**-2.7**
	comp=E,0.4nm,0.3s,baz=133,slow=23,SNR=1.8						
	comp=E,2.4nm,0.5s						
HAU	**Haudompre**	**6.96**	**320**	*e*P	**Pn**	**04 59 21.8**	**+1.2**
HAU				*e*Sn	**Sn**	**05 00 32.5**	**-7.6**
	comp=E,43nm,0.8s						
BOSS	**Bosilegrad**	**7.01**	**90**	*e*Pn	**Pn**	**04 59 22.0**	**+0.7**
ZAPS	**Zavoj**	**7.08**	**83**	*e*Pn	**Pn**	**04 59 22.4**	**+0.1**
PRU	**Pruhonice**	**7.23**	**8**	*e*PN	**Pn**	**04 59 23.1**	**-1.2**
PRU				*e*SN	**Sn**	**05 00 45.9**	**-0.8**
SMF	**Signal de Mont**	**7.54**	**303**	*e*P	**Pn**	**04 59 29.8**	**+1.3**
SMF				*e*Sn	**Sn**	**05 00 46.3**	**-8.0**
	comp=E,15nm,0.8s						
KEST	**Kesra**	**7.63**	**203**	Pn	**Pn**	**04 59 31.4**	**+1.4**
	baz=232,slow=19,SNR=1.5						
	comp=E,2.1nm,0.8s						
PAGF	**Fort de Pagny**	**7.64**	**321**	*e*P	**Pn**	**04 59 31.7**	**+1.7**
PAGF				*e*Sn	**Sn**	**05 00 48.5**	**-8.4**
	comp=E,32nm,0.9s						
LOR	**Lormes**	**7.83**	**308**	*e*P	**Pn**	**04 59 34.2**	**+1.7**
	baz=122						
LOR				*e*Sn	**Sn**	**05 00 53.1**	**-8.4**
	comp=E,14nm,0.7s						
MTLF	**Montolieu**	**7.89**	**277**	*e*P	**Pn**	**04 59 35.4**	**+2.0**
SSF	**Saint Saulge**	**7.94**	**305**	*e*P	**Pn**	**04 59 35.0**	**+1.1**
SSF				*e*Sn	**Sn**	**05 00 55.8**	**-8.2**
	comp=E,15nm,1.2s						
BRG	**Berggiesshubel**	**8.06**	**4**	*e*(P)	Pb	04 59 49.8	-8.3
BRG				Amp		04 59 52.4	
	comp=Z,3.4nm,0.6s						
BRG				*ex*	x	05 01 02.1	
BRG				Amp		05 01 07.2	
	comp=Z,11nm,0.9s						
BRG				*ex*	x	05 36 07.2	
BRG				Amp		05 36 27.1	
	comp=Z,2.9nm,0.7s						
CAF	**Calviac**	**8.16**	**289**	*e*P	**Pn**	**04 59 38.9**	**+1.9**
CLL	**Collm**	**8.47**	**0**	*e*Pn	Pn	04 59 33.0	-8.3
CLL				*e*Sn	Sn	05 00 58.0	-19
CLL				*ex*	x	05 01 09.0	
CLL				*ex*	x	05 01 23.0	
CLL				*ex*	x	05 01 31.0	
CLL				*e*Sg	**Sg**	**05 02 06.0**	**-3.8**
	comp=Z,15nm,1.1s						
MFF	**Saint Martin d**	**10.07**	**296**	*e*P	**Pn**	**05 00 05.4**	**+2.2**
GRR	**Gorron**	**11.16**	**305**	*e*P	**Pn**	**05 00 20.4**	**+2.3**
IDI	**Anoyia**	**11.93**	**125**	Pn	**Pn**	**05 00 32.3**	**+3.5**
	comp=Z,0.4nm,0.3s,baz=251,slow=18,SNR=1.6						
IDI				Sn	**Sn**	**05 02 41.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=265,slow=17,SNR=2.7						
	comp=Z,2.1nm,0.5s						
ESDC	**Sonseca Array**	**13.13**	**262**	Pn	**Pn**	**05 00 42.6**	**-2.6**
	baz=81,slow=12,SNR=2.2						
	comp=Z,0.5nm,1.0s						
BRTR	**Keskin Array B**	**15.84**	**94**	Pn	**P**	**05 01 26.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=281,slow=13,SNR=2.2						
	comp=Z,1.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**16.32**	**326**	Pn	**Pn**	**05 01 26.4**	**-1.3**
	baz=137,slow=14						
	comp=Z,0.5nm,0.5s						
NOA	**NORSAR Array B**	**18.26**	**357**	P	**Pn**	**05 01 51.8**	**-0.2**
	baz=175,slow=12,SNR=1.7						
	comp=Z,0.3nm,0.8s						
MMAI	**Mount Meron Ar**	**20.17**	**112**	P	Pn	05 02 18.1	+2.9
	comp=Z,0.9nm,0.3s,baz=325,slow=12,SNR=3.2						
	comp=Z,0.9nm,0.3s						
FINES	**FINESS Array B**	**20.22**	**18**	P	**P**	**05 02 14.4**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=203,slow=9.0,SNR=8.9						
	comp=Z,1.9nm,0.6s						
KVAR	**Kislovodsk Arr**	**21.57**	**77**	P	**P**	**05 02 31.3**	**+2.9**
	comp=Z,1.3nm,0.4s,baz=285,slow=12,SNR=1.2						
	comp=Z,1.3nm,0.4s						
ASF	**Jabal al Asfar**	**21.69**	**112**	P	**P**	**05 02 33.7**	**+4.0**
	comp=Z,1.3nm,0.6s,baz=37,slow=10,SNR=1.7						
	comp=Z,1.3nm,0.6s						
KBZ	**Khabaz**	**21.75**	**77**	P	**P**	**05 02 32.5**	**+2.3**
	comp=Z,2.6nm,0.9s,baz=313,slow=11,SNR=3.5						
	comp=Z,2.6nm,0.9s						
BELG	**Belogornoye**	**25.02**	**55**	P	**P**	**05 03 04.4**	**+1.8**
	comp=Z,6.1nm,0.6s,baz=211,slow=5.9,SNR=2.3						
	comp=Z,6.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.15**	**202**	P	**P**	**05 03 59.0**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=14,slow=7.9,SNR=4.1						
	comp=Z,0.7nm,0.7s						
AKTO	**Aktyubinsk**	**31.43**	**60**	P	**P**	**05 04 02.0**	**+2.0**
	comp=Z,0.5nm,0.4s,baz=284,slow=8.3,SNR=2.0						
	comp=Z,0.5nm,0.4s						
ARU	**Arti**	**31.86**	**49**	P	**P**	**05 04 05.8**	**+2.1**
	comp=Z,5.5nm,0.2s,baz=286,slow=14,SNR=3.1						
BVAR	**Borovoye Array**	**38.81**	**54**	P	**P**	**05 05 05.5**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=282,slow=6.8,SNR=3.9						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**47.87**	**60**	P	**P**	**05 06 17.7**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=284,slow=7.3,SNR=5.0						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**61.89**	**50**	P	**P**	**05 07 59.8**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=284,slow=8.3,SNR=1.9						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**66.94**	**336**	P	**P**	**05 08 28.5**	**-2.4**
	comp=Z,0.5nm,0.7s,baz=37,slow=5.7,SNR=2.7						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**71.57**	**351**	P	**P**	**05 08 59.2**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=0.0,slow=6.3,SNR=2.6						
	comp=Z,0.2nm,0.6s						

ROM 24 04:59:16.7±0.1, 42°.712N±0°.003×13°.218E±0°.006, h10km, ML2.3/5, 3C-3D, Error ellipse: s-maj=0.5km s-min=0.1km az=72.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQT1	**Arquata del Tr**	**0.08**	**42**	⇑P	Pg	04 59 19.7	+0.5
AQT1				S	Sg	04 59 21.5	+0.5
NRCA	**Norcia**	**0.14**	**328**	P	Pg	04 59 20.4	+0.4
NRCA				S	Sg	04 59 22.9	+0.5
RM33	**Pellescritta (**	**0.20**	**181**	P	Pg	04 59 21.7	+0.6
RM33				S	Sg	04 59 25.3	+1.4
RM33				AML	AML		
	comp=E,2525μm,1.0s						
RM33				AML	AML		
	comp=N,1595μm,1.4s						
RM33				AML	AML		
	comp=E,2590μm,1.0s						
RM33				AML	AML		
	comp=N,1570μm,0.6s						
RM33				AML	AML		
	comp=N,4150μm,0.7s						
RM33				AML	AML		
	comp=E,5980μm,1.0s						
RM33				AML	AML		
	comp=N,4170μm,0.7s						
RM33				AML	AML		
	comp=E,6100μm,1.0s						
RM33				AML	AML		
	comp=E,1988μm,0.3s						
RM33				AML	AML		
	comp=N,1404μm,0.1s						
RM33				AML	AML		
	comp=N,1353μm,0.1s						
RM33				AML	AML		
	comp=E,1523μm,0.2s						
CAMP	**Campotosto**	**0.23**	**141**	P	Pg	04 59 22.1	+0.7
CAMP				S	Sg	04 59 25.9	+1.3
FEMA	**Monte Fema**	**0.28**	**334**	P	Pg	04 59 22.9	+0.5
FEMA				S	Sg	04 59 27.4	+1.1
TERO	**Teramo**	**0.30**	**107**	P	Pg	04 59 23.2	+0.4
TERO				S	Sg	04 59 27.9	+1.1
TERO				AML	AML		
	comp=E,1375μm,0.6s						
TERO				AML	AML		
	comp=N,2510μm,1.1s						
TERO				AML	AML		
	comp=E,4765μm,0.3s						
TERO				AML	AML		
	comp=N,5200μm,0.5s						
TERO				AML	AML		
	comp=E,5350μm,0.3s						
TERO				AML	AML		
	comp=N,5010μm,0.5s						
TERO				AML	AML		
	comp=N,2159μm,0.1s						
TERO				AML	AML		
	comp=E,883μm,0.1s						
TERO				AML	AML		
	comp=E,1078μm,0.1s						
TERO				AML	AML		
	comp=N,1799μm,0.0s						
FDMO	**Fiordimonte**	**0.34**	**343**	P	Pg	04 59 23.4	-0.1
FDMO				S	Sg	04 59 29.1	+1.1
FDMO				AML	AML		
	comp=E,706μm,1.0s						
FDMO				AML	AML		
	comp=N,548μm,1.3s						
FDMO				AML	AML		
	comp=N,3750μm,0.2s						
FDMO				AML	AML		
	comp=E,2455μm,0.2s						
FDMO				AML	AML		
	comp=N,518μm,0.1s						
FDMO				AML	AML		
	comp=E,590μm,0.3s						
ARRO	**Arrone**	**0.36**	**248**	⇓P	Pg	04 59 24.2	+0.4
ARRO				S	Sb	04 59 30.3	-0.6
ARRO				AML	AML		
	comp=N,880μm,0.7s						
ARRO				AML	AML		
	comp=E,723μm,0.2s						
ARRO				AML	AML		
	comp=N,537μm,0.1s						
GUMA	**Gualdo di Mace**	**0.36**	**14**	P	Pb	04 59 24.6	-0.6
GUMA				S	Sb	04 59 30.8	-0.2
GIGS	**Gran Sasso**	**0.37**	**135**	P	Pg	04 59 24.3	+0.3
GIGS				S	Sg	04 59 29.9	+1.0
CESI	**CESI - Serrava**	**0.37**	**322**	P	Pg	04 59 24.5	+0.4
CESI				S	Sg	04 59 30.2	+1.1
CESI				AML	AML		
	comp=E,1720μm,0.5s						
CESI				AML	AML		
	comp=N,4710μm,0.5s						
CESI				AML	AML		
	comp=E,487μm,0.1s						
CESI				AML	AML		
	comp=N,724μm,0.1s						
CSP1	**Cessapalombo**	**0.38**	**359**	⇓P	Pg	04 59 24.6	+0.3
CSP1				S	Sb	04 59 30.7	-1.0
AQU	**L'Aquila**	**0.38**	**159**	⇓P	Pb	04 59 25.1	-0.5
AQU				S	Sb	04 59 31.0	-0.7
OFFI	**Offida**	**0.41**	**57**	⇑P	Pb	04 59 26.1	0.0
FIAM	**Fiamignano**	**0.45**	**190**	P	Pg	04 59 25.8	+0.3
FIAM				S	Sb	04 59 32.8	-0.8
CESX	**Cesi**	**0.48**	**258**	P	Pb	04 59 26.9	-0.4
MDAR	**Monte D'Aria**	**0.48**	**353**	P	Pb	04 59 27.0	-0.4
MDAR				S	Sb	04 59 33.7	-0.9
FIU1	**Fiuminata**	**0.52**	**336**	P	Pb	04 59 27.8	-0.2
FIU1				S	Sb	04 59 35.0	-0.6
ASSB	**Assisi San Ben**	**0.53**	**309**	P	Pb	04 59 27.8	-0.3
SNTG	**Esanatoglia**	**0.58**	**340**	P	Pg	04 59 28.1	+0.1
EL6	**Elcito**	**0.62**	**352**	⇑P	Pg	04 59 28.9	+0.1
ATCC	**AVT- Casa Cast**	**0.64**	**318**	P	Pg	04 59 29.4	+0.4
T0110	**Collepietro**	**0.64**	**139**	P	Pg	04 59 29.3	+0.2
SRES	**S.Oreste - Sor**	**0.71**	**228**	P	Pg	04 59 30.5	+0.1
FSSB	**Fossombrone**	**1.03**	**342**	AML	AML		
	comp=N,1300μm,0.4s						
FSSB				AML	AML		
	comp=E,848μm,1.1s						
RSM	**Repubblica di**	**1.34**	**336**	S	Sg	05 00 01.0	+1.1
GSCL	**Gusciola**	**2.52**	**311**	S	Sb	05 00 32.0	-1.1

ROM 24 04:59:53.4±0.1, 42°.678N±0°.004×13°.298E±0°.006, h6km, ML2.8/17, 4C-4D, Error ellipse: s-maj=0.5km s-min=0.2km az=240.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.16**	**150**	P	Pg	04 59 57.5	+0.8
CAMP				S	Sg	05 00 00.3	+1.3
CAMP				AML	AML		
	comp=E,1815μm,1.0s						
CAMP				AML	AML		
	comp=N,2010μm,0.8s						
RM33	**Pellescritta (**	**0.18**	**200**	P	Pg	04 59 58.0	+1.0
RM33				S	Sg	05 00 00.9	+1.5
RM33				AML	AML		
	comp=E,6100μm,1.0s						
RM33				AML	AML		
	comp=N,4170μm,0.7s						
RM33				AML	AML		
	comp=E,6095μm,1.0s						
RM33				AML	AML		
	comp=N,4165μm,0.7s						
RM33				AML	AML		
	comp=E,5980μm,1.0s						
RM33				AML	AML		
	comp=N,4155μm,0.7s						
RM33				AML	AML		
	comp=N,4165μm,0.7s						
RM33				AML	AML		
	comp=N,4150μm,0.7s						
RM33				AML	AML		
	comp=N,4170μm,0.7s						
NRCA	**Norcia**	**0.21**	**319**	P	Pg	04 59 58.4	+0.9
NRCA				S	Sg	05 00 01.7	+1.4
NRCA				AML	AML		
	comp=E,11535μm,0.2s						
NRCA				AML	AML		
	comp=N,9145μm,0.2s						
NRCA				AML	AML		
	comp=E,11555μm,0.2s						
NRCA				AML	AML		
	comp=N,9145μm,0.2s						
NRCA				AML	AML		
	comp=E,12350μm,0.2s						
NRCA				AML	AML		
	comp=N,9585μm,0.2s						
NRCA				AML	AML		
	comp=E,11570μm,0.2s						
TERO	**Teramo**	**0.23**	**104**	P	Pg	04 59 58.6	+0.7
TERO				S	Sg	05 00 02.5	+1.4
TERO				AML	AML		
	comp=E,4760μm,0.3s						
TERO				AML	AML		
	comp=N,5010μm,0.5s						
TERO				AML	AML		
	comp=E,5350μm,0.3s						
TERO				AML	AML		
	comp=N,5200μm,0.5s						
TERO				AML	AML		
	comp=E,4765μm,0.3s						
GIGS	**Gran Sasso**	**0.30**	**139**	P	Pg	05 00 00.1	+0.7
GIGS				S	Sg	05 00 04.6	+1.3
GIGS				AML	AML		
	comp=N,452μm,0.5s						
GIGS				AML	AML		
	comp=N,452μm,0.5s						
GIGS				AML	AML		
	comp=E,448μm,0.4s						
AQU	**L'Aquila**	**0.33**	**167**	P	Pg	05 00 00.6	+0.8
AQU				S	Sb	05 00 06.2	-1.0
FEMA	**Monte Fema**	**0.34**	**327**	P	Pg	05 00 00.4	+0.4
FEMA				S	Sb	05 00 06.3	-1.3
OFFI	**Offida**	**0.38**	**48**	P	Pb	05 00 02.5	-0.1
OFFI				AML	AML		
	comp=N,3600μm,0.6s						
OFFI				AML	AML		
	comp=E,2450μm,0.4s						
GUMA	**Gualdo di Mace**	**0.39**	**4**	P	Pb	05 00 01.9	-0.7
GUMA				S	Sb	05 00 08.6	-0.2
GUMA				AML	AML		
	comp=E,6500μm,0.4s						
GUMA				AML	AML		
	comp=N,6760μm,0.6s						
GUMA				AML	AML		
	comp=N,5945μm,0.3s						
GUMA				AML	AML		
	comp=E,8305μm,0.4s						
GUMA				AML	AML		
	comp=N,6755μm,0.6s						
FDMO	**Fiordimonte**	**0.39**	**337**	P	Pg	05 00 01.7	+0.7
FDMO				S	Sb	05 00 07.9	-1.1
FDMO				AML	AML		
	comp=E,2455μm,0.2s						
FDMO				AML	AML		
	comp=N,3750μm,0.2s						
ARRO	**Arrone**	**0.41**	**256**	P	Pg	05 00 01.7	+0.5
ARRO				S	Sb	05 00 08.5	-0.8
ARRO				AML	AML		
	comp=E,676μm,0.5s						
ARRO				AML	AML		
	comp=N,880μm,0.7s						
CSP1	**Cessapalombo**	**0.42**	**351**	P	Pg	05 00 02.3	+0.8
CSP1				S	Sb	05 00 08.9	-1.0
CSP1				AML	AML		
	comp=E,1925μm,1.4s						
CSP1				AML	AML		
	comp=E,1930μm,1.4s						
CSP1				AML	AML		
	comp=N,2395μm,0.3s						
CSP1				AML	AML		
	comp=E,1603μm,0.4s						
FIAM	**Fiamignano**	**0.43**	**198**	P	Pg	05 00 02.3	+0.6
FIAM				S	Sb	05 00 09.1	-1.0
CESI	**CESI - Serrava**	**0.44**	**319**	P	Pg	05 00 02.3	+0.5
CESI				S	Sb	05 00 09.4	-0.9
CESI				AML	AML		
	comp=E,1720μm,0.5s						
CESI				AML	AML		
	comp=N,4710μm,0.5s						
FAGN	**Fagnano**	**0.46**	**153**	P	Pb	05 00 03.6	-0.3
FAGN				S	Sb	05 00 11.1	+0.1
FAGN				AML	AML		
	comp=N,1560μm,0.6s						
FAGN				AML	AML		
	comp=E,1690μm,0.5s						
TRTR	**Tortoreto Alta**	**0.47**	**74**	P	Pg	05 00 03.3	+0.8
VCEL	**Villa Celiera**	**0.49**	**125**	⇑P	Pb	05 00 03.7	-0.7
VCEL				AML	AML		
	comp=N,1325μm,0.6s						
VCEL				AML	AML		
	comp=N,1320μm,0.6s						
VCEL				AML	AML		
	comp=E,1620μm,0.5s						
MDAR	**Monte D'Aria**	**0.53**	**348**	P	Pg	05 00 04.1	+0.6
MDAR				S	Sb	05 00 12.7	-0.3
CESX	**Cesi**	**0.53**	**263**	P	Pb	05 00 04.7	-0.4
CESX				AML	AML		
	comp=E,665μm,1.0s						
CESX				AML	AML		
	comp=N,382μm,0.4s						
SEF1	**Sefro**	**0.54**	**331**	P	Pb	05 00 04.7	-0.5
SEF1				S	Sb	05 00 13.1	0.0
T0110	**Collepietro**	**0.57**	**142**	⇓P	Pg	05 00 04.8	+0.4
T0110				AML	AML		
	comp=E,889μm,1.1s						
T0110				AML	AML		
	comp=N,958μm,0.6s						
FIU1	**Fiuminata**	**0.58**	**332**	P	Pb	05 00 06.0	+0.1
FIU1				S	Sb	05 00 14.1	-0.3
ASSB	**Assisi San Ben**	**0.59**	**308**	P	Pb	05 00 06.1	-0.1
ASSB				S	Sb	05 00 14.9	0.0
SNTG	**Esanatoglia**	**0.63**	**336**	⇑P	Pg	05 00 06.0	+0.5
SNTG				S	Sb	05 00 15.8	-0.1
SNTG				AML	AML		
	comp=E,403μm,0.5s						
SNTG				AML	AML		
	comp=N,527μm,0.2s						
EL6	**Elcito**	**0.67**	**348**	⇓P	Pg	05 00 06.8	+0.6
ATCC	**AVT- Casa Cast**	**0.70**	**317**	⇑P	Pg	05 00 07.1	+0.3
ATCC				AML	AML		
	comp=E,734μm,0.3s						
ATCC				AML	AML		
	comp=E,733μm,0.3s						
ATCC				AML	AML		
	comp=N,681μm,1.1s						
SRES	**S.Oreste - Sor**	**0.73**	**233**	P	Pb	05 00 08.0	-0.5
FOSV	**Fossato di Vic**	**0.73**	**328**	⇑P	Pg	05 00 07.6	+0.2
FOSV				AML	AML		
	comp=E,528μm,0.8s						
FOSV				AML	AML		
	comp=N,504μm,0.9s						
PP3	**Marolino**	**0.74**	**18**	⇓P	Pb	05 00 08.3	-0.3
ARVD	**Arcevia**	**0.86**	**342**	⇓P	Pb	05 00 10.3	-0.4
ARVD				AML	AML		
	comp=N,256μm,0.9s						
ARVD				AML	AML		
	comp=E,355μm,1.0s						
MGAB	**Montegabbione**	**0.90**	**285**	AML	AML		
	comp=N,408μm,0.5s						
MGAB				AML	AML		
	comp=E,584μm,0.8s						
CAFI	**Castiglion Fio**	**1.17**	**304**	P	Pg	05 00 15.6	-0.3

*LDG **24** 05:02:23.8±0.1, 42°.45N×13°.22E, h10km, Ml3.2/8, Error ellipse: s-maj=4.9km s-min=3.3km az=31.0*
*ROM **24** 05:02:24.6±0.1, 42°.462N±0°.004×13°.293E±0°.006, h10km, ML3.6/18, Mw3.4, Error ellipse: s-maj=0.5km s-min=0.3km az=236.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.26; Mθθ=0.25; Mφφ=1.01; Mrθ=0.26; Mθφ=0.60; Mφr=0.10; Fault plane solution: M₀=1.33229×10¹⁴ NP1:φs=343.00000°, δ=45.00000°, λ=72.00000°. NP2:φs=139.00000°, δ=47.00000°, λ=107.00000°.*
*IDC **24** 05:02:24.3±1.4, 42°.60N×13°.40E, h0km, mb3.4/3, mbtmp3.5/6, ML3.5/3 Error ellipse: s-maj=38.5km s-min=15.0km az=96.0*
*BEO **24** 05:02:27.3±0.9, 42°.55N×13°.40E, h7km±3km, ML3.4/7*
*PRU **24** 05:02:27.9±0.0, 42°.63N×13°.85E, h0km*
*PDG **24** 05:02:29.6±0.1, 42°.46N×13°.74E, h11km±11km, ML3.7/10, Error ellipse: s-maj=1.7km s-min=37.7km az=0.0*

ISC 24 05:02:24.7±0.7, 42°.49N±0°.02×13°.27E±0°.02, h14km±4km, n130, σ2s10/167, 11C-9D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.05**	**294**	⇓P	**Pg**	**05 02 27.4**	**0.0**
RM33				S	**Sg**	**05 02 29.1**	**-0.2**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
CAMP	**Campotosto**	**0.11**	**66**	⇑P	**Pg**	**05 02 27.9**	**-0.2**
CAMP				S	**Sg**	**05 02 30.0**	**-0.4**
AQU	**L'Aquila**	**0.17**	**145**	⇓P	**Pg**	**05 02 28.4**	**-0.4**
AQU				S	**Sg**	**05 02 30.5**	**-1.0**
AQU				AML	AML		
	comp=N,22300μm,0.4s						
AQU				AML	AML		
	comp=N,24150μm,0.4s						
AQU				AML	AML		
	comp=N,24100μm,0.4s						
AQU				AML	AML		
	comp=E,19250μm,1.2s						
AQU				AML	AML		
	comp=E,20300μm,1.1s						
GIGS	**Gran Sasso**	**0.22**	**100**	⇑P	**Pg**	**05 02 29.1**	**-0.6**
GIGS				S	**Sg**	**05 02 32.5**	**-0.5**
GIGS				AML	AML		
	comp=N,13500μm,0.7s						
GIGS				AML	AML		
	comp=E,9410μm,0.7s						
FIAM	**Fiamignano**	**0.25**	**207**	⇑P	**Pg**	**05 02 30.0**	**-0.1**

FIAM S Sg 05 02 33.7 -0.1
FIAM AML AML
comp=E,20850µm,0.6s
FIAM AML AML
comp=N,16550µm,0.7s
TERO Teramo 0.28 62 ⇑P Pg 05 02 30.2 -0.3
TERO S Sg 05 02 34.8 +0.2
TERO AML AML
comp=E,19000µm,0.4s
TERO AML AML
comp=N,17950µm,0.4s
TERO AML AML
comp=N,18700µm,0.4s
TERO AML AML
comp=E,18950µm,0.4s
TERO AML AML
comp=E,20000µm,0.4s
TERO AML AML
comp=N,17900µm,0.4s
FAGN Fagnano 0.32 134 P Pg 05 02 30.9 -0.5
FAGN AML AML
comp=E,29100µm,0.4s
FAGN AML AML
comp=N,31150µm,0.4s
NRCA Norcia 0.36 341 P Pb 05 02 32.8 -0.2
NRCA S Sb 05 02 38.4 -0.2
ARRO Arrone 0.38 284 ⇑P Pg 05 02 32.8 +0.3
ARRO S Sb 05 02 39.1 0.0
VCEL Villa Celiera 0.43 103 P Pg 05 02 33.1 -0.2
VCEL AML AML
comp=E,17400µm,0.4s
VCEL AML AML
comp=N,19150µm,0.4s
VCEL AML AML
comp=N,19200µm,0.4s
T0110 Collepietro 0.46 125 P Pg 05 02 33.5 -0.3
T0110 S Sg 05 02 40.3 +0.3
T0110 AML AML
comp=E,22300µm,0.4s
T0110 AML AML
comp=N,16300µm,0.5s
PTQR Pietraquaria 0.48 168 P Pg 05 02 33.7 -0.4
FEMA Monte Fema 0.50 341 P Pb 05 02 35.3 -0.1
FEMA S Sb 05 02 43.0 +0.4
CESX Cesi 0.53 283 P Pg 05 02 35.0 0.0
CESX S Sg 05 02 42.6 +0.6
OFFI Offida 0.54 34 ⇑P Pb 05 02 36.0 0.0
OFFI AML AML
comp=E,14900µm,0.5s
OFFI AML AML
comp=N,10650µm,0.7s
FDMO Fiordimonte 0.56 346 P Pg 05 02 35.4 -0.4
FDMO S Sb 05 02 44.6 +0.3
FDMO AML AML
comp=N,6950µm,0.2s
FDMO AML AML
comp=E,4905µm,0.2s
TRTR Tortoreto Alta 0.57 56 P Pb 05 02 36.5 0.0
TRTR AML AML
comp=N,11500µm,0.8s
TRTR AML AML
comp=E,14100µm,0.7s
CESI CESI - Serrava 0.58 332 P Pg 05 02 36.6 +0.4
CESI AML AML
comp=E,4135µm,1.5s
CESI AML AML
comp=N,5615µm,1.4s
CERT Cerreto 0.58 202 P Pg 05 02 35.7 -0.5
CSP1 Cessapalombo 0.60 355 P Pg 05 02 36.5 -0.1
CSP1 S Sb 05 02 46.1 +0.5
CSP1 AML AML
comp=E,5785µm,0.5s
CSP1 AML AML
comp=N,8150µm,1.1s
CSP1 AML AML
comp=E,5790µm,0.5s
CSP1 AML AML
comp=N,8145µm,1.1s
MTCE Montecelio 0.61 220 ⇑P Pg 05 02 36.0 -0.6
SRES S.Oreste - Sor 0.62 246 P Pg 05 02 35.9 -0.9
INTR Introdacqua 0.67 135 P Pg 05 02 37.1 -0.7
INTR S Sg 05 02 46.0 -0.6
VVLD Villa Vallelon 0.67 157 P Pg 05 02 37.8 0.0
RCAV Rocca di Cave 0.69 201 P Pg 05 02 37.7 -0.4
GUAR Guarcino 0.70 177 P Pb 05 02 38.8 +0.1
MDAR Monte D'Aria 0.71 352 P Pg 05 02 38.5 0.0
MDAR S Sb 05 02 49.6 +1.0
ASSB Assisi San Ben 0.71 321 P Pg 05 02 38.8 +0.2
ASSB AML AML
comp=E,6210µm,1.1s
ASSB AML AML
comp=N,6005µm,0.2s
SSM1 San Severino M 0.74 355 P Pg 05 02 39.2 +0.1
GAG1 Gagliole 0.76 349 P Pb 05 02 40.1 +0.3
SNTG Esanatoglia 0.80 342 P Pg 05 02 40.5 +0.3
LPEL Lama dei Pelig 0.81 123 P Pg 05 02 39.0 -1.4
POFI Posta Fibreno 0.84 157 P Pg 05 02 40.7 -0.3
EL6 Elcito 0.85 352 P Pb 05 02 41.9 +0.6
FOSV Fossato di Vic 0.89 335 P Pb 05 02 42.6 +0.6
PP3 Marolino 0.92 16 P Pg 05 02 42.2 -0.3
PP3 AML AML
comp=E,7120µm,0.5s
PP3 AML AML
comp=N,6160µm,0.5s
PP3 AML AML
comp=E,7125µm,0.5s
PP3 AML AML
comp=E,7130µm,0.5s
PP3 AML AML
comp=N,6160µm,0.5s
PP3 AML AML
comp=N,6485µm,0.5s
GIUL Giuliano Di Ro 0.93 181 P Pg 05 02 42.5 -0.2
GIUL AML AML
comp=E,1265µm,1.5s
GIUL AML AML
comp=N,1440µm,0.9s
GIUL AML AML
comp=E,1270µm,1.5s
MGAB Montegabbione 0.95 297 P Pb 05 02 43.6 +0.6
TOLF Tolfa 1.03 246 P Pb 05 02 43.9 -0.5
ATLO AVT- Montelove 1.04 323 P Pg 05 02 45.0 +0.2
CERA Filignano 1.05 148 P Pb 05 02 44.4 -0.3
SACS San Casciano d 1.07 290 P Pb 05 02 45.2 +0.2
ATVA AVT- Monte Val 1.07 318 P Pn 05 02 45.9 +0.5
AOI Ancona 1.09 13 P Pg 05 02 46.0 +0.3
AOI AML AML
comp=N,1960µm,1.2s
AOI AML AML
comp=E,2335µm,0.3s
ATPC Poggio Castell 1.16 329 P Pg 05 02 47.5 +0.5
SENI Senigallia 1.22 359 P Pg 05 02 48.5 +0.4
APEC Apecchio 1.24 330 P Pb 05 02 48.2 +0.4
CAFI Castiglion Fio 1.27 312 P Pg 05 02 50.1 +0.9
BSSO Busso 1.36 133 P Pb 05 02 50.4 +0.3
MODR Mondragone 1.42 161 AML AML
comp=E,310µm,1.5s
MODR AML AML
comp=N,421µm,0.8s
DUGI Dugi Otok 1.99 40 *e*Pn Pn 05 02 58.4 +0.4
VIRC Vir 2.22 35 *e*Pn Pn 05 03 01.7 +0.6
MORI Morici 2.25 52 *e*Pn Pn 05 03 03.0 +1.4
NVLJ Novalja 2.38 29 *e*Pn Pn 05 03 03.8 +0.6
RABC Rab 2.51 25 *e*Pn Pn 05 03 05.4 +0.3
SMRN Sveta Marina 2.62 14 *e*Pn Pn 05 03 06.9 +0.3
LSTV Lastovo 2.69 83 *e*Pn Pn 05 03 08.6 +1.1
UDBI Udbina 2.73 41 *e*Pn Pn 05 03 10.0 +1.8
KJV Kijevo 2.75 55 *e*Pn Pn 05 03 10.2 +1.9
MAKA Makarska 2.87 73 *e*Pn Pn 05 03 10.6 +0.6
RIY Rijeka 2.97 17 *e*Pn Pn 05 03 12.3 +1.0
RIY Rijeka 2.97 17 *e*Pn Pn 05 03 12.7 +1.3
RIY *e*Sn Sn 05 03 49.3 +2.5
RICI Ricice 3.00 69 *e*Pn Pn 05 03 13.3 +1.4
PGF Pioggiola 3.16 272 *e*P Pn 05 03 15.5 +1.4
PGF *e*Sn Sn 05 03 45.0 -6.7
comp=N,18nm,0.6s
STON Ston 3.29 82 *e*Pn Pn 05 03 16.1 +0.3
STON Ston 3.29 82 *e*Pn Pn 05 03 15.9 +0.1
STON *e*Sn Sn 05 03 54.5 -0.1
CGRP Cima Grappa 3.55 343 P Pn 05 03 21.1 +1.5
CGRP AML AML
comp=E,216µm,1.1s
CGRP AML AML
comp=N,300µm,0.5s

DBRK Dubrovnik 3.60 86 *e*Pn Pn 05 03 20.5 +0.4
DOSS Dosso del Somm 3.71 337 P Pn 05 03 23.9 +2.2
MAGA Magasa 3.79 331 P Pn 05 03 24.2 +1.3
LUSI Trento, Gardas 3.85 335 P Pn 05 03 25.6 +2.0
HCY Herceg Novi 3.86 89 ⇑*i*Pn Pn 05 03 25.4 +1.7
HCY *i* Sn Sn 05 04 07.9 -1.0
ACOM Acomizza, Ital 4.06 2 P Pn 05 03 28.4 +1.8
ACOM AML AML
comp=N,113µm,1.5s
ACOM AML AML
comp=E,133µm,1.5s
OBKA Obir 4.12 12 *e*Pn Pn 05 03 25.2 -2.1
comp=E,8.8nm,0.7s
MYKA Terra Mystica 4.15 4 *e*Pn Pn 05 03 29.4 +1.7
comp=E,3.6nm,0.4s
BUM Brajici-Budva 4.17 91 ⇓*i*Pn Pn 05 03 29.8 +1.8
BUM *i* Sn Sn 05 04 15.4 -1.1
CEME Cevo 4.17 87 ⇑*i*Pn Pn 05 03 29.8 +1.8
CEME *i* Sn Sn 05 04 15.6 -1.1
KOSI Kohlern 4.20 342 P Pn 05 03 30.4 +2.0
NKME Niksic 4.20 84 ⇓*i*Pn Pn 05 03 30.2 +1.8
NKME *i* Sn Sn 05 04 16.5 -0.8
ABTA Abfaltersbach 4.29 353 *e*Pn Pn 05 03 31.5 +1.8
comp=E,17nm,0.5s
SOKA Soboth 4.37 16 *e*Pn Pn 05 03 33.5 +2.7
comp=E,1.2nm,0.2s
DRME Dracevica, Mon 4.39 92 ⇑*i*Pn Pn 05 03 33.2 +2.2
DRME *i* Sn Sn 05 04 20.9 -1.1
TTG Podgorica 4.43 89 ⇑*i*Pn Pn 05 03 33.3 +1.9
TTG *i* Sn Sn 05 04 21.7 -1.1
ULC Ulcinj 4.47 95 ⇓*i*Pn Pn 05 03 33.8 +1.8
ULC *i* Sn Sn 05 04 22.6 -1.2
PLE Pljevlja 4.57 77 ⇓*i*Pn Pn 05 03 35.5 +2.0
PLE *i* Sn Sn 05 04 26.0 -0.5
KOME Kolasin 4.62 83 ⇓*i*Pn Pn 05 03 36.4 +2.2
KOME *i* Sn Sn 05 04 26.3 -1.3
BBLS Lazići 4.69 71 *e*Pn Pn 05 03 37.0 +1.8
FETA Feichten 4.88 339 *e*Pn Pn 05 03 41.1 +3.3
IVA Berane 4.90 83 ⇓*i*Pn Pn 05 03 40.0 +2.0
IVA *i* Sn Sn 05 04 33.1 -1.4
WTTA Wattenberg 4.91 347 *e*Pn Pn 05 03 42.0 +3.7
comp=E,2.6nm,0.3s
DAVOX Davos/Dischmat 4.92 332 Pn Pn 05 03 40.2 +1.7
comp=E,2.1nm,0.3s,baz=146,slow=15,SNR=7.3
DAVOX Sn Sn 05 04 36.6 +1.3
comp=E,0.9nm,0.3s,baz=163,slow=19,SNR=1.4
comp=E,5.7nm,0.4s
PVY Plav 4.94 87 ⇓*i*Pn Pn 05 03 40.4 +1.7
PVY *i* Sn Sn 05 04 34.3 -1.4
SJES Sjenica 4.99 79 *e*Pn Pn 05 03 41.9 +2.7
WATA Walderalm 4.99 347 *e*Pn Pn 05 03 42.4 +3.0
comp=E,4.2nm,0.3s
ARSA Arzberg 5.02 18 *e*Pn Pn 05 03 40.5 +0.9
comp=E,2.3nm,0.4s
LMR La Mourre 5.04 282 *e*P Pn 05 03 40.3 +0.5
LMR *e*Sn Sn 05 04 30.1 -7.7
comp=E,1.2nm,0.3s
MOTA Moosalm 5.09 343 *e*Pn Pn 05 03 45.6 +4.8
IVAS Ivanjica 5.16 76 *e*Pn Pn 05 03 42.9 +1.3
IVAS *e*Sn Sn 05 04 40.7 -0.2
DIVS Divibare 5.16 70 *e*Pn Pn 05 03 42.9 +1.3
BIOA Bad Ischl, Aus 5.21 3 *e*Pn Pn 05 03 48.2 +6.0
comp=E,6.6nm,0.3s
MBDF Montbardon 5.22 298 *e*P Pn 05 03 45.0 +2.5
RETA Reutte 5.30 341 *e*Pn Pn 05 03 44.7 +1.2
comp=E,1.8nm,0.2s
DAVA Damuels 5.37 334 *e*Pn Pn 05 03 47.4 +2.9
comp=E,1.1nm,0.2s
MOA Molln 5.41 7 *e*Pn Pn 05 03 45.5 +0.6
comp=E,2.8nm,0.2s
FRGS Fruska Gora 5.43 58 *e*Pn Pn 05 03 45.3 +0.1
TRUS Trudelj 5.48 69 *e*Pn Pn 05 03 47.4 +1.4
LPG La Plagne 5.58 305 *e*P Pn 05 03 49.1 +1.5
GRUS Gruza 5.62 73 *e*Pn Pn 05 03 49.9 +2.1
RONA Rosalia, Austr 5.63 21 *e*Pn Pn 05 03 49.3 +1.2
comp=E,0.7nm,0.2s
CONA Conrad Observa 5.74 18 *e*Pn Pn 05 03 52.9 +3.4
comp=E,1.5nm,0.2s
SELS Selova 5.81 80 *e*Pn Pn 05 03 52.3 +1.8
SMRF Simiane la Rot 5.81 287 *e*P Pn 05 03 51.5 +0.9
SMRF *e*Sn Sn 05 04 48.9 -8.2
comp=E,1.6nm,0.5s
ORIF Oris-en-Rattie 5.88 297 *e*P Pn 05 03 54.6 +3.1
BARS Barje 6.31 84 *e*Pn Pn 05 03 59.0 +1.7
GERES GERESS Array B 6.36 3 Pn Pn 05 03 58.5 +0.3
comp=E,0.5nm,0.3s,baz=171,slow=13,SNR=5.7
GERES Sn Sn 05 05 08.5 -2.1
comp=E,0.6nm,0.3s,baz=186,slow=18,SNR=1.8
comp=E,0.7nm,0.3s
CKRC Cesky Krumlov 6.37 6 *e*SN Sn 05 05 08.7 -2.0
PRVS Prvonek 6.51 87 *e*Pn Pn 05 04 01.6 +1.5
PRVS *e*Sn Sn 05 05 12.0 -2.1
CABF La Chapelle 6.58 311 *e*P Pn 05 04 03.7 +2.6
CABF *e*Sn Sn 05 05 08.2 -7.8
comp=E,42nm,1.6s
KHC Kasperske Hory 6.64 2 *e*PN Pn 05 04 03.2 +1.3
KHC *e*SN Sn 05 05 16.5 -1.0
VIVF Saint-Julien-l 6.67 294 *e*P Pn 05 04 05.5 +3.2
ZAGS Zajecar 6.69 76 *e*Pn Pn 05 04 04.0 +1.5
ZAPS Zavoj 6.92 80 *e*Pn Pn 05 04 08.1 +2.3
HINF Hinteralfeld 7.00 322 *e*P Pn 05 04 08.1 +1.4
HINF *e*Sn Sn 05 05 18.2 -7.9
comp=E,7.5nm,0.4s
CDF Champ du Feu 7.27 327 *e*P Pn 05 04 12.1 +1.6
CDF *e*Sn Sn 05 05 24.8 -8.1
comp=E,7.4nm,0.5s
HAU Haudompre 7.37 321 *e*P Pn 05 04 13.4 +1.6
HAU *e*Sn Sn 05 05 26.7 -8.5
comp=E,8.1nm,0.4s
KEST Kesra 7.41 206 Pn Pn 05 04 17.0 +4.5
comp=E,0.6nm,0.3s,baz=352,slow=14,SNR=7.7
KEST Sn Sn 05 05 34.7 -1.6
comp=E,0.1nm,0.3s,baz=236,slow=8.4,SNR=1.4
comp=E,2.3nm,0.5s
CLL Collm 8.82 359 *ex* x 05 06 06.0
CLL *e*Sg Sg 05 07 01.0 -6.6
FINES FINESS Array B 20.48 18 P P 05 07 03.2 +1.4
comp=E,1.4nm,0.9s,baz=221,slow=14,SNR=2.4
comp=E,1.4nm,0.9s
TORD Torodi Ar. Bea 30.91 202 P P 05 08 42.8 +1.8
comp=E,0.6nm,0.8s,baz=28,slow=8.0,SNR=4.2
comp=E,0.6nm,0.8s
MKAR Makanchi Array 47.86 60 P P 05 11 02.3 +0.3
comp=E,0.3nm,0.6s,baz=275,slow=6.6,SNR=3.1
comp=E,0.3nm,0.6s

ROM 24 05:04:42.3±0.1, 42°774N±0°003×13°179E±0°005, h10km, ML2.4/20, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.0km az=63.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**321**	⇑P		Pg		05 04 45.0	+0.3
NRCA					AML	AML			
	comp=E,35900µm,0.1s								
NRCA					AML	AML			
	comp=N,39300µm,0.1s								
NRCA					AML	AML			
	comp=N,44000µm,0.1s								
NRCA					AML	AML			
	comp=E,38600µm,0.1s								
NRCA					AML	AML			
	comp=E,35950µm,0.1s								
AQT1	**Arquata del Tr**	**0.08**	**90**	⇓P		Pg		05 04 45.3	+0.6
FEMA	**Monte Fema**	**0.21**	**333**	P		Pg		05 04 47.3	+0.5
FEMA				S		Sg		05 04 50.8	+1.0
RM33	**Pellescritta (**	**0.27**	**174**	P		Pg		05 04 48.4	+0.6
RM33				S		Sb		05 04 52.7	-1.2
RM33					AML	AML			
	comp=E,1155µm,0.1s								
RM33					AML	AML			
	comp=N,1100µm,0.2s								
RM33					AML	AML			
	comp=E,1130µm,0.5s								
RM33					AML	AML			
	comp=N,1058µm,0.2s								
RM33					AML	AML			
	comp=E,6395µm,0.3s								
RM33					AML	AML			
	comp=N,6490µm,0.2s								
RM33					AML	AML			
	comp=E,6585µm,0.3s								
RM33					AML	AML			
	comp=N,6365µm,0.3s								
RM33					AML	AML			
	comp=N,6360µm,0.3s								
RM33					AML	AML			
	comp=E,6590µm,0.3s								
FDMO	**Fiordimonte**	**0.27**	**346**	P		Pg		05 04 48.2	+0.4
FDMO				S		Sg		05 04 52.5	+0.9
FDMO					AML	AML			
	comp=E,1450µm,1.5s								
FDMO					AML	AML			
	comp=N,1395µm,0.9s								
CAMP	**Campotosto**	**0.29**	**144**	P		Pg		05 04 48.8	+0.5
CAMP				S		Sg		05 04 53.3	+1.1
CAMP					AML	AML			
	comp=E,646µm,0.6s								
CAMP					AML	AML			
	comp=N,458µm,0.5s								
CAMP					AML	AML			
	comp=N,576µm,0.4s								
CESI	**CESI - Serrava**	**0.31**	**319**	P		Pg		05 04 49.0	+0.5
CESI				S		Sg		05 04 53.9	+1.2
CESI					AML	AML			
	comp=N,3040µm,0.2s								
CESI					AML	AML			
	comp=E,1845µm,0.5s								
GUMA	**Gualdo di Mace**	**0.31**	**22**	P		Pg		05 04 49.3	+0.7
GUMA				S		Sb		05 04 54.2	-1.0
GUMA					AML	AML			
	comp=E,3685µm,0.2s								
GUMA					AML	AML			
	comp=N,4355µm,0.7s								
GUMA					AML	AML			
	comp=N,4390µm,0.7s								
GUMA					AML	AML			
	comp=E,3860µm,0.2s								
CSP1	**Cessapalombo**	**0.32**	**3**	P		Pg		05 04 49.1	+0.3
CSP1				S		Sb		05 04 54.4	-1.1
CSP1					AML	AML			
	comp=E,2515µm,0.4s								
CSP1					AML	AML			
	comp=N,2430µm,0.3s								
CSP1					AML	AML			
	comp=E,2510µm,0.4s								
CSP1					AML	AML			
	comp=N,2435µm,0.3s								
TERO	**Teramo**	**0.35**	**116**	P		Pg		05 04 49.7	+0.5
TERO				S		Sb		05 04 55.4	-0.8
TERO					AML	AML			
	comp=E,1265µm,0.1s								
TERO					AML	AML			
	comp=E,1495µm,0.1s								
TERO					AML	AML			
	comp=E,1260µm,0.1s								
TERO					AML	AML			
	comp=N,2375µm,0.1s								
TERO					AML	AML			
	comp=N,1970µm,0.1s								
ARRO	**Arrone**	**0.36**	**238**	P		Pg		05 04 50.0	+0.6
ARRO					AML	AML			
	comp=E,620µm,0.2s								
ARRO					AML	AML			
	comp=N,537µm,0.2s								
ARRO					AML	AML			
	comp=E,622µm,0.2s								
ARRO					AML	AML			
	comp=N,749µm,1.6s								
OFFI	**Offida**	**0.41**	**66**	P		Pg		05 04 50.8	+0.5
OFFI					AML	AML			
	comp=E,731µm,0.6s								
OFFI					AML	AML			
	comp=N,739µm,0.7s								
OFFI					AML	AML			
	comp=E,1840µm,1.5s								
OFFI					AML	AML			
	comp=N,1350µm,0.3s								
SEF1	**Sefro**	**0.41**	**336**	P		Pg		05 04 50.8	+0.3
SEF1				S		Sb		05 04 57.6	-0.4
MDAR	**Monte D'Aria**	**0.42**	**356**	P		Pg		05 04 50.9	+0.3
MDAR				S		Sb		05 04 57.6	-0.8
GIGS	**Gran Sasso**	**0.43**	**138**	P		Pg		05 04 51.3	+0.5
GIGS					AML	AML			
	comp=E,142µm,1.4s								
GIGS					AML	AML			
	comp=N,117µm,0.1s								
GIGS					AML	AML			
	comp=N,178µm,0.1s								
GIGS					AML	AML			
	comp=E,204µm,0.4s								
ASSB	**Assisi San Ben**	**0.47**	**305**	P		Pg		05 04 51.8	+0.3
ASSB				S		Sb		05 04 59.0	-0.8
ASSB					AML	AML			
	comp=N,599µm,0.2s								
ASSB					AML	AML			
	comp=E,790µm,0.2s								
CESX	**Cesi**	**0.47**	**250**	P		Pg		05 04 51.6	+0.1
GAG1	**Gagliole**	**0.47**	**350**	P		Pb		05 04 52.2	-0.6
GAG1				S		Sb		05 04 59.2	-0.6
FIAM	**Fiamignano**	**0.51**	**185**	P		Pg		05 04 52.5	+0.2
FIAM				S		Sb		05 05 00.5	-0.4
FIAM					AML	AML			
	comp=N,770µm,0.7s								
FIAM					AML	AML			
	comp=E,954µm,0.6s								
FIAM					AML	AML			
	comp=N,770µm,0.7s								
SNTG	**Esanatoglia**	**0.51**	**340**	P		Pg		05 04 52.5	+0.2
SNTG				S		Sb		05 05 00.4	-0.6
SNTG					AML	AML			
	comp=E,366µm,0.1s								
SNTG					AML	AML			
	comp=N,376µm,0.2s								
EL6	**Elcito**	**0.56**	**354**	P		Pg		05 04 53.4	+0.1
EL6				S		Sb		05 05 02.0	-0.4
ATCC	**AVT- Casa Cast**	**0.57**	**316**	P		Pg		05 04 53.6	+0.2
ATCC				S		Sb		05 05 02.4	-0.3
ATCC					AML	AML			
	comp=E,506µm,1.5s								
ATCC					AML	AML			
	comp=E,506µm,1.5s								
ATCC					AML	AML			
	comp=N,378µm,0.4s								
FAGN	**Fagnano**	**0.59**	**149**	P		Pb		05 04 54.5	-0.3
FAGN					AML	AML			
	comp=E,418µm,0.7s								
FAGN					AML	AML			
	comp=N,468µm,0.4s								
FAGN					AML	AML			
	comp=E,480µm,0.8s								
FAGN					AML	AML			
	comp=N,705µm,0.4s								
FAGN					AML	AML			
	comp=E,544µm,0.3s								
FOSV	**Fossato di Vic**	**0.60**	**330**	P		Pg		05 04 54.2	+0.1
FOSV				S		Sb		05 05 03.5	-0.2
FOSV					AML	AML			
	comp=E,298µm,0.1s								
FOSV					AML	AML			
	comp=N,302µm,0.2s								
FOSV					AML	AML			
	comp=E,298µm,0.1s								
VCEL	**Villa Celiera**	**0.62**	**128**	P		Pg		05 04 54.8	+0.5
VCEL					AML	AML			
	comp=E,346µm,1.1s								
VCEL					AML	AML			
	comp=N,316µm,1.1s								
VCEL					AML	AML			
	comp=E,707µm,0.3s								
VCEL					AML	AML			
	comp=N,548µm,0.3s								
VCEL					AML	AML			
	comp=E,708µm,0.3s								
VCEL					AML	AML			
	comp=N,547µm,0.3s								
PP3	**Marolino**	**0.68**	**27**	AML	AML				
	comp=N,1106µm,1.2s								
PP3					AML	AML			
	comp=E,1260µm,1.5s								
PP3					AML	AML			
	comp=N,1104µm,1.2s								
PP3					AML	AML			
	comp=E,1264µm,1.5s								
MURB	**Monte Urbino**	**0.69**	**316**	P		Pg		05 04 55.4	-0.2
MURB					AML	AML			
	comp=N,600µm,0.3s								
MURB					AML	AML			
	comp=E,772µm,0.2s								
T0110	**Collepietro**	**0.70**	**141**	P		Pg		05 04 56.1	+0.2

T0110				AML	AML		
	comp=E,285µm,1.0s						
T0110				AML	AML		
	comp=N,320µm,0.3s						
T0110				AML	AML		
	comp=E,284µm,1.0s						
T0110				AML	AML		
	comp=N,319µm,1.5s						
SSFR	**Monte Lago di S**	**0.72**	**336**	P	Pg	05 04 56.3	0.0
SSFR				AML	AML		
	comp=N,628µm,0.2s						
SSFR				AML	AML		
	comp=N,769µm,0.2s						
SSFR				AML	AML		
	comp=E,573µm,0.2s						
SSFR				AML	AML		
	comp=E,728µm,0.2s						
ATFO	**Monte Foce - G**	**0.74**	**323**	P	Pg	05 04 56.6	-0.1
ATFO				AML	AML		
	comp=E,173µm,0.2s						
ATFO				AML	AML		
	comp=N,192µm,1.2s						
ATFO				AML	AML		
	comp=E,172µm,0.2s						
ARVD	**Arcevia**	**0.74**	**347**	P	Pg	05 04 56.7	0.0
ARVD				AML	AML		
	comp=N,142µm,1.5s						
ARVD				AML	AML		
	comp=E,144µm,1.1s						
ARVD				AML	AML		
	comp=N,142µm,1.5s						
FRON	**Frontone**	**0.81**	**336**	P	Pg	05 04 57.8	-0.3
FRON				AML	AML		
	comp=E,180µm,0.8s						
FRON				AML	AML		
	comp=N,222µm,0.3s						
ATVO	**AVT- Monte Val**	**0.83**	**317**	P	Pg	05 04 58.0	-0.4
ATPI	**Pietralunga -**	**0.88**	**320**	P	Pg	05 04 59.2	-0.2
PIEI	**Pieia**	**0.90**	**328**	P	Pg	05 04 59.4	-0.2
PIEI				AML	AML		
	comp=E,107µm,0.8s						
PIEI				AML	AML		
	comp=N,90µm,0.2s						
MPAG	**Monte Paganucc**	**0.91**	**340**	P	Pg	05 04 59.6	-0.3
MPAG				AML	AML		
	comp=E,140µm,1.1s						
MPAG				AML	AML		
	comp=N,130µm,1.3s						
INTR	**Introdacqua**	**0.93**	**145**	P	Pg	05 04 59.9	-0.3
NARO	**Abbazia di Nar**	**0.94**	**333**	P	Pg	05 05 00.0	-0.5
FSSB	**Fossombrone**	**0.96**	**342**	P	Pg	05 05 00.7	-0.2
FSSB				AML	AML		
	comp=N,394µm,0.4s						
FSSB				AML	AML		
	comp=E,324µm,0.4s						
BADI	**Badiali**	**1.00**	**317**	P	Pg	05 05 01.3	-0.3
CAFI	**Castiglion Fio**	**1.05**	**302**	P	Pg	05 05 02.4	-0.1

ROM 24 05:05:28.1±0.1, 42°.653N±0°.005×13°.230E±0°.005, h12km±1km, ML2.4/6, 1C, Error ellipse: s-maj=0.7km s-min=0.1km az=339.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.14**	**184**	P	Pg	05 05 32.1	+0.5
RM33				S	Sg	05 05 35.0	+0.8
RM33				AML	AML		
	comp=E,6395µm,0.3s						
RM33				AML	AML		
	comp=N,6490µm,0.3s						
RM33				AML	AML		
	comp=E,6590µm,0.3s						
RM33				AML	AML		
	comp=N,6360µm,0.3s						
RM33				AML	AML		
	comp=E,6396µm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.18**	**131**	P	Pg	05 05 32.6	+0.4
CAMP				S	Sg	05 05 36.0	+1.0
CAMP				AML	AML		
	comp=E,646µm,0.6s						
CAMP				AML	AML		
	comp=N,576µm,0.4s						
CAMP				AML	AML		
	comp=E,646µm,0.6s						
CAMP				END			
TERO	**Teramo**	**0.28**	**96**	P	Pg	05 05 34.0	+0.1
TERO				S	Sg	05 05 38.4	+0.6
TERO				AML	AML		
	comp=E,1182µm,0.2s						
TERO				AML	AML		
	comp=E,1180µm,0.2s						
TERO				AML	AML		
	comp=N,1970µm,0.1s						
TERO				AML	AML		
	comp=E,1405µm,0.2s						
TERO				AML	AML		
	comp=N,2375µm,0.1s						
TERO				AML	AML		
	comp=N,1971µm,0.1s						
TERO				END			
GIGS	**Gran Sasso**	**0.32**	**129**	P	Pg	05 05 34.8	+0.1
GIGS				S	Sg	05 05 40.0	+0.9
GIGS				END			
AQU	**L'Aquila**	**0.33**	**157**	P	Pg	05 05 35.1	+0.4
ARRO	**Arrone**	**0.35**	**258**	P	Pg	05 05 35.2	0.0
ARRO				S	Sb	05 05 40.8	-0.9
ARRO				END			
FIAM	**Fiamignano**	**0.39**	**192**	⇑P	Pg	05 05 36.2	+0.2
FIAM				S	Sb	05 05 42.3	-0.8
FIAM				AML	AML		
	comp=E,954µm,0.6s						
FIAM				AML	AML		
	comp=N,770µm,0.7s						
FIAM				END			
GUMA	**Gualdo di Mace**	**0.42**	**11**	P	Pg	05 05 36.5	+0.1
GUMA				AML	AML		
	comp=E,2205µm,0.3s						
GUMA				AML	AML		
	comp=N,1845µm,0.6s						
OFFI	**Offida**	**0.44**	**50**	P	Pb	05 05 37.5	-0.3
OFFI				AML	AML		
	comp=E,1840µm,1.5s						
OFFI				AML	AML		
	comp=N,1350µm,0.3s						
CESX	**Cesi**	**0.48**	**265**	P	Pg	05 05 37.7	+0.1
CESX				AML	AML		
	comp=E,325µm,0.6s						
CESX				AML	AML		
	comp=N,321µm,1.0s						
CESX				AML	AML		
	comp=N,321µm,1.0s						
CESX				END			
VCEL	**Villa Celiera**	**0.52**	**120**	P	Pb	05 05 39.1	-0.2
VCEL				AML	AML		
	comp=E,707µm,0.3s						
VCEL				AML	AML		
	comp=N,547µm,0.3s						
VCEL				AML	AML		
	comp=E,707µm,0.3s						
VCEL				END			
ASSB	**Assisi San Ben**	**0.57**	**313**	AML	AML		
	comp=N,256µm,0.2s						
ASSB				AML	AML		
	comp=E,262µm,1.4s						
T0110	**Collepietro**	**0.59**	**136**	P	Pg	05 05 39.8	+0.2
T0110				AML	AML		
	comp=E,285µm,1.0s						
SNTG	**Esanatoglia**	**0.64**	**341**	AML	AML		
	comp=E,88µm,0.4s						
SNTG				AML	AML		
	comp=N,123µm,0.1s						
SRES	**S.Oreste - Sor**	**0.68**	**232**	P	Pg	05 05 41.2	0.0
SRES				AML	AML		
	comp=E,91µm,0.3s						
SRES				AML	AML		
	comp=N,104µm,0.7s						
MTCE	**Montecelio**	**0.73**	**210**	P	Pg	05 05 42.0	-0.2
CERT	**Cerreto**	**0.73**	**195**	P	Pg	05 05 41.7	-0.5
VIVA	**Pratoni del Vi**	**0.96**	**201**	AML	AML		
	comp=N,520µm,0.4s						
VIVA				AML	AML		
	comp=E,903µm,0.1s						

ROM 24 05:07:58.8±0.1, 42°.678N±0°.002×13°.211E±0°.004, h11km, ML2.0/9, 1C-2D, Error ellipse: s-maj=0.3km s-min=0.2km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.17**	**179**	P	Pg	05 08 03.2	+0.6
RM33				S	Sg	05 08 06.5	+1.2
RM33				AML	AML		
	comp=E,900µm,0.4s						
RM33				AML	AML		
	comp=N,788µm,1.0s						
RM33				AML	AML		
	comp=E,864µm,0.4s						
RM33				AML	AML		
	comp=N,818µm,1.0s						
RM33				AML	AML		
	comp=E,984µm,0.7s						
RM33				AML	AML		
	comp=N,1215µm,0.8s						
RM33				AML	AML		
	comp=E,981µm,0.7s						
RM33				AML	AML		
	comp=N,1205µm,0.8s						
RM33				AML	AML		
	comp=N,818µm,1.0s						
RM33				END			
NRCA	**Norcia**	**0.17**	**335**	P	Pg	05 08 03.0	+0.3
NRCA				S	Sg	05 08 06.1	+0.7
CAMP	**Campotosto**	**0.20**	**134**	⇑P	Pg	05 08 03.8	+0.5
CAMP				S	Sg	05 08 07.2	+0.9
CAMP				AML	AML		
	comp=E,902µm,0.2s						
CAMP				AML	AML		
	comp=N,778µm,0.2s						
CAMP				AML	AML		
	comp=E,294µm,0.4s						
CAMP				END			
TERO	**Teramo**	**0.29**	**101**	P	Pg	05 08 05.1	+0.3
TERO				S	Sg	05 08 09.7	+0.8
TERO				AML	AML		
	comp=E,549µm,0.4s						
TERO				AML	AML		
	comp=N,503µm,0.3s						
TERO				AML	AML		
	comp=E,894µm,0.8s						
TERO				AML	AML		
	comp=N,1265µm,0.1s						
TERO				AML	AML		
	comp=E,930µm,0.8s						
TERO				AML	AML		
	comp=N,1380µm,0.1s						
TERO				AML	AML		
	comp=N,442µm,1.7s						
TERO				END			
FEMA	**Monte Fema**	**0.31**	**337**	P	Pg	05 08 05.7	+0.6
FEMA				S	Sg	05 08 10.3	+1.0
FEMA				END			
ARRO	**Arrone**	**0.34**	**253**	P	Pg	05 08 05.9	+0.2
ARRO				S	Sg	05 08 11.3	+1.0
ARRO				AML	AML		
	comp=E,312µm,0.2s						
ARRO				AML	AML		
	comp=N,350µm,0.6s						
ARRO				END			
GIGS	**Gran Sasso**	**0.35**	**131**	P	Pg	05 08 06.1	+0.2
GIGS				S	Sg	05 08 11.5	+1.0
GIGS				END			
FDMO	**Fiordimonte**	**0.37**	**346**	P	Pg	05 08 06.7	+0.5
FDMO				S	Sg	05 08 12.0	+0.9
FDMO				END			
GUMA	**Gualdo di Mace**	**0.40**	**13**	P	Pg	05 08 07.1	+0.5
GUMA				S	Sb	05 08 13.3	-0.7
GUMA				END			
CESI	**CESI - Serrava**	**0.40**	**326**	P	Pb	05 08 07.4	-0.5
CESI				S	Sg	05 08 13.0	+1.0
CESI				AML	AML		
	comp=N,822µm,0.3s						
CESI				AML	AML		
	comp=E,664µm,1.0s						
CESI				AML	AML		
	comp=N,616µm,0.3s						
CESI				END			
CSP1	**Cessapalombo**	**0.41**	**359**	P	Pg	05 08 07.4	+0.3
CSP1				S	Sb	05 08 13.7	-0.9
CSP1				END			
FIAM	**Fiamignano**	**0.42**	**190**	P	Pg	05 08 07.4	+0.4
FIAM				S	Sb	05 08 13.8	-0.8
FIAM				AML	AML		
	comp=E,134µm,0.6s						
FIAM				AML	AML		
	comp=N,158µm,0.4s						
FIAM				AML	AML		
	comp=E,199µm,0.3s						
FIAM				AML	AML		
	comp=N,202µm,0.8s						
FIAM				AML	AML		
	comp=N,159µm,0.4s						
FIAM				END			
OFFI	**Offida**	**0.43**	**54**	P	Pg	05 08 07.8	+0.4
OFFI				AML	AML		
	comp=E,702µm,0.5s						
OFFI				AML	AML		
	comp=N,770µm,0.6s						
OFFI				AML	AML		
	comp=E,775µm,2.0s						
CESX	**Cesi**	**0.47**	**262**	P	Pg	05 08 08.1	+0.1
CESX				AML	AML		
	comp=E,123µm,0.4s						
CESX				AML	AML		
	comp=N,148µm,0.2s						
CESX				AML	AML		
	comp=E,210µm,1.5s						
CESX				AML	AML		
	comp=N,242µm,0.8s						
CESX				AML	AML		
	comp=N,148µm,0.2s						
VCEL	**Villa Celiera**	**0.55**	**121**	P	Pg	05 08 09.9	+0.4
VCEL				AML	AML		
	comp=E,294µm,1.0s						
VCEL				AML	AML		
	comp=N,352µm,0.9s						
VCEL				AML	AML		
	comp=E,355µm,1.3s						
VCEL				AML	AML		
	comp=N,374µm,0.1s						
VCEL				AML	AML		
	comp=E,294µm,1.0s						
T0110	**Collepietro**	**0.62**	**137**	⇓P	Pg	05 08 10.9	+0.1
T0110				AML	AML		
	comp=E,424µm,0.4s						
T0110				AML	AML		
	comp=N,368µm,0.3s						
T0110				AML	AML		
	comp=E,211µm,0.3s						
EL6	**Elcito**	**0.66**	**353**	P	Pg	05 08 11.6	+0.1
ARVD	**Arcevia**	**0.84**	**347**	S	Sn	05 08 29.0	-0.1
MODR	**Mondragone**	**1.61**	**162**	P	Pn	05 08 25.7	-1.5
PTRJ	**Pietraroja**	**1.64**	**143**	P	Pn	05 08 28.1	+0.4
PAOL	**Paolisi**	**1.93**	**148**	⇓P	Pb	05 08 33.3	-0.8
PAOL				S	Sn	05 08 56.0	0.0

ROM 24 05:08:26.1±0.1, 42°.831N±0°.003×13°.215E±0°.005, h10km, ML2.2/6, 2C, Error ellipse: s-maj=0.4km s-min=0.1km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**272**	P	Pg	05 08 29.0	+0.5
NRCA				S	Sg	05 08 30.6	+0.5
FEMA	**Monte Fema**	**0.18**	**317**	P	Pg	05 08 30.7	+0.7
FEMA				S	Sg	05 08 33.8	+1.1
FEMA				AML	AML		
	comp=E,2103µm,0.2s						
FDMO	**Fiordimonte**	**0.23**	**335**	P	Pg	05 08 31.4	+0.5
FDMO				S	Sg	05 08 35.0	+1.0
FDMO				AML	AML		
	comp=E,1255µm,0.2s						
FDMO				AML	AML		
	comp=N,1635µm,0.2s						
FDMO				AML	AML		
	comp=E,1252µm,0.2s						
FDMO				END			
GUMA	**Gualdo di Mace**	**0.25**	**21**	P	Pg	05 08 32.1	+0.9
GUMA				S	Sg	05 08 36.2	+1.6

GUMA				AML	AML		
	comp=E,2065µm,0.2s						
GUMA				AML	AML		
	comp=N,1830µm,0.2s						
GUMA				END			
CSP1	**Cessapalombo**	**0.26**	**358**	P	Pg	05 08 32.1	+0.6
CSP1				S	Sg	05 08 36.1	+1.0
CSP1				END			
CESI	**CESI - Serrava**	**0.29**	**307**	⇑P	Pg	05 08 32.6	+0.7
CESI				S	Sb	05 08 37.2	-1.2
CESI				AML	AML		
	comp=E,664µm,1.0s						
CESI				AML	AML		
	comp=N,1010µm,0.5s						
CESI				AML	AML		
	comp=E,665µm,1.0s						
CESI				END			
CAMP	**Campotosto**	**0.33**	**154**	P	Pg	05 08 33.3	+0.6
CAMP				S	Sg	05 08 38.2	+1.1
CAMP				AML	AML		
	comp=E,902µm,0.2s						
CAMP				AML	AML		
	comp=N,778µm,0.2s						
CAMP				END			
TERO	**Teramo**	**0.35**	**126**	P	Pg	05 08 33.7	+0.5
TERO				S	Sb	05 08 39.4	-0.9
TERO				AML	AML		
	comp=E,894µm,0.8s						
TERO				AML	AML		
	comp=N,1265µm,0.1s						
TERO				AML	AML		
	comp=E,930µm,0.8s						
TERO				AML	AML		
	comp=N,1380µm,0.1s						
OFFI	**Offida**	**0.36**	**73**	P	Pb	05 08 34.5	-0.2
MDAR	**Monte D'Aria**	**0.36**	**352**	P	Pg	05 08 34.0	+0.6
MDAR				S	Sb	05 08 39.7	-1.0
MDAR				END			
SEF1	**Sefro**	**0.37**	**328**	P	Pg	05 08 34.0	+0.5
SEF1				S	Sb	05 08 39.8	-1.0
SEF1				END			
SSM1	**San Severino M**	**0.40**	**356**	P	Pb	05 08 35.0	-0.3
SSM1				S	Sb	05 08 40.7	-0.9
GAG1	**Gagliole**	**0.42**	**345**	P	Pg	05 08 34.6	+0.2
GAG1				S	Sb	05 08 41.5	-0.7
GAG1				END			
ASSB	**Assisi San Ben**	**0.46**	**298**	P	Pg	05 08 35.5	+0.4
ASSB				S	Sb	05 08 42.7	-0.6
GIGS	**Gran Sasso**	**0.46**	**145**	P	Pb	05 08 35.8	-0.6
GIGS				S	Sb	05 08 42.5	-1.0
SNTG	**Esanatoglia**	**0.47**	**335**	P	Pg	05 08 35.6	+0.3
SNTG				S	Sb	05 08 42.9	-0.7
SNTG				AML	AML		
	comp=E,240µm,0.2s						
SNTG				AML	AML		
	comp=N,286µm,0.8s						
SNTG				AML	AML		
	comp=E,240µm,0.2s						
SNTG				AML	AML		
	comp=N,226µm,0.6s						
SNTG				END			
EL6	**Elcito**	**0.51**	**351**	P	Pg	05 08 36.4	+0.4
EL6				S	Sb	05 08 44.5	-0.2
EL6				AML	AML		
	comp=N,329µm,1.4s						
ATCC	**AVT- Casa Cast**	**0.55**	**310**	P	Pg	05 08 37.2	+0.4
ATCC				S	Sb	05 08 45.5	-0.4
FIAM	**Fiamignano**	**0.57**	**187**	P	Pb	05 08 38.2	-0.1
FIAM				S	Sb	05 08 45.6	-0.9
FIAM				END			
FOSV	**Fossato di Vic**	**0.57**	**324**	P	Pg	05 08 37.5	+0.2
FOSV				S	Sb	05 08 46.2	-0.3
FOSV				AML	AML		
	comp=E,250µm,0.2s						
FOSV				AML	AML		
	comp=N,415µm,0.2s						
FOSV				AML	AML		
	comp=E,250µm,0.2s						
FOSV				END			
VCEL	**Villa Celiera**	**0.64**	**133**	P	Pg	05 08 38.8	+0.3
MURB	**Monte Urbino**	**0.67**	**311**	P	Pg	05 08 39.0	-0.1
ARVD	**Arcevia**	**0.70**	**343**	P	Pg	05 08 39.8	+0.1
T0110	**Collepietro**	**0.73**	**145**	P	Pg	05 08 40.4	0.0
T0110				AML	AML		
	comp=E,424µm,0.4s						
T0110				AML	AML		
	comp=N,368µm,0.3s						
T0110				AML	AML		
	comp=N,367µm,0.3s						
NARO	**Abbazia di Nar**	**0.91**	**329**	P	Pg	05 08 43.5	-0.2
PTRJ	**Pietraroja**	**1.76**	**146**	P	Pg	05 09 00.6	+0.7
PAOL	**Paolisi**	**2.06**	**150**	P	Pg	05 09 07.0	+1.4
EQUI	**Equi**	**2.60**	**302**	⇑P	Pb	05 09 14.0	+1.2
SBPO	**S.Benedetto Po**	**2.77**	**324**	S	Sn	05 09 46.0	+1.9

ROM 24 05:09:14.0±0.1, 42°.823N±0°.004×13°.159E±0°.005, h9km, ML1.8/3, Error ellipse: s-maj=0.4km s-min=0.4km az=346.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**288**	P	Pg	05 09 15.9	0.0
FEMA	**Monte Fema**	**0.16**	**330**	P	Pg	05 09 18.3	+0.7
FEMA				S	Sg	05 09 21.1	+1.1
FDMO	**Fiordimonte**	**0.22**	**346**	P	Pg	05 09 19.1	+0.6
FDMO				AML	AML		
	comp=E,342µm,1.2s						
FDMO				AML	AML		
	comp=N,328µm,0.1s						
CESI	**CESI - Serrava**	**0.26**	**314**	P	Pg	05 09 19.9	+0.6
CESI				S	Sb	05 09 24.2	-1.3
CESI				AML	AML		
	comp=N,682µm,0.5s						
CESI				AML	AML		
	comp=E,411µm,0.4s						
CESI				AML	AML		
	comp=N,683µm,0.5s						
CSP1	**Cessapalombo**	**0.27**	**7**	P	Pg	05 09 20.2	+0.7
CSP1				S	Sb	05 09 24.9	-1.0
GUMA	**Gualdo di Mace**	**0.27**	**28**	P	Pb	05 09 20.6	-0.5
GUMA				S	Sb	05 09 24.9	-0.9
GUMA				AML	AML		
	comp=E,880µm,0.5s						
GUMA				AML	AML		
	comp=N,1580µm,0.4s						
GUMA				AML	AML		
	comp=E,1645µm,0.3s						
GUMA				AML	AML		
	comp=N,984µm,0.4s						
CAMP	**Campotosto**	**0.34**	**147**	P	Pg	05 09 21.4	+0.6
CAMP				AML	AML		
	comp=E,397µm,0.2s						
CAMP				AML	AML		
	comp=N,208µm,0.3s						
SEF1	**Sefro**	**0.36**	**334**	P	Pg	05 09 21.6	+0.5
TERO	**Teramo**	**0.38**	**121**	P	Pg	05 09 21.8	+0.3
TERO				AML	AML		
	comp=E,358µm,0.5s						
TERO				AML	AML		
	comp=N,361µm,0.1s						
OFFI	**Offida**	**0.40**	**74**	P	Pb	05 09 22.8	-0.5
GAG1	**Gagliole**	**0.42**	**351**	P	Pb	05 09 23.1	-0.5
GAG1				AML	AML		
	comp=E,1586µm,1.6s						
GAG1				AML	AML		
	comp=N,1238µm,1.6s						
ASSB	**Assisi San Ben**	**0.43**	**301**	P	Pg	05 09 22.9	+0.5
ASSB				AML	AML		
	comp=E,276µm,1.4s						
ASSB				AML	AML		
	comp=N,262µm,1.6s						
SNTG	**Esanatoglia**	**0.46**	**340**	P	Pg	05 09 23.5	+0.5
SNTG				AML	AML		
	comp=E,104µm,0.2s						
SNTG				AML	AML		
	comp=N,103µm,0.3s						
SNTG				AML	AML		
	comp=E,104µm,0.2s						
SNTG				AML	AML		
	comp=N,103µm,0.3s						
CESX	**Cesi**	**0.48**	**244**	P	Pb	05 09 23.9	-0.6
CESX				S	Sb	05 09 31.2	-0.5
EL6	**Elcito**	**0.51**	**355**	P	Pg	05 09 24.5	+0.6

ATCC	**AVT- Casa Cast**	**0.53**	**314**	AML	AML
	comp=N,206µm,0.6s				
ATCC				AML	AML
	comp=E,242µm,1.4s				
FOSV	**Fossato di Vic**	**0.56**	**328**	P	Pg
MURB	**Monte Urbino**	**0.64**	**314**	P	Pg
ARVD	**Arcevia**	**0.69**	**347**	P	Pg
PIEI	**Pieia**	**0.85**	**328**	P	Pg

WEL 24 05:21:32.5,41°S±2°×17°6E±°, h20km±4km, M2.0/17, ML2.5/24, MLv2.0/17, Error ellipse: s-maj=0.0km s-min=0.0km az=86.3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.02**	**346**	P	Pg	05 21 36.6	+0.7
TIWZ	**Tintock**	**0.21**	**199**	P	Pg	05 21 38.5	+0.6
BFZ	**Birch Farm**	**0.23**	**118**	P	Pg	05 21 38.4	+0.3
POWZ	**Post Office Ro**	**0.24**	**319**	P	Pg	05 21 38.5	+0.3
DVHZ	**Dannevirke**	**0.31**	**28**	P	Pb	05 21 39.5	+0.1
MRZ	**Mangatainoka R**	**0.32**	**254**	P	Pb	05 21 39.6	+0.1
CPWZ	**Castlepoint**	**0.38**	**153**	P	Pn	05 21 41.8	-1.0
ANWZ	**Angora Road**	**0.40**	**73**	P	Pb	05 21 41.2	+0.4
HOWZ	**Holdsworth Sta**	**0.48**	**227**	P	Pg	05 21 42.6	+0.3
TSZ	**Takapari Road**	**0.52**	**359**	P	Pn	05 21 50.4	+5.6
TMWZ	**Te Maipa**	**0.54**	**187**	P	Pg	05 21 43.9	+0.5
PRHZ	**Porangahau**	**0.59**	**59**	P	Pg	05 21 44.3	0.0
WPHZ	**Waipukurau**	**0.62**	**35**	P	Pg	05 21 45.0	+0.1
OGWZ	**Otaki Gorge**	**0.66**	**248**	P	Pg	05 21 45.5	-0.1
PNHZ	**Pukenui**	**0.68**	**15**	P	Pb	05 21 45.8	+0.1
KIW	**Kapiti Island**	**0.86**	**250**	P	Pb	05 21 49.0	+0.2
CAW	**Cannon Point**	**0.87**	**232**	P	Pb	05 21 49.1	+0.2
KRHZ	**Kereru**	**0.98**	**18**	P	Pb	05 21 50.4	-0.4
BHHZ	**Black Hill Sta**	**1.08**	**4**	P	Pb	05 21 52.3	-0.4
WAZ	**Wanganui**	**1.12**	**317**	P	Pg	05 21 53.9	-0.3
MOVZ	**Moawhango**	**1.18**	**352**	P	Pn	05 21 53.8	-0.1
WNVZ	**Wahianoa**	**1.28**	**347**	P	Pn	05 21 55.6	+0.2
WHVZ	**Whangaehu Hut**	**1.32**	**347**	P	Pn	05 21 56.4	+0.3
TUVZ	**Tukino**	**1.33**	**349**	P	Pb	05 21 56.6	-0.2
FWVZ	**Far West T-bar**	**1.36**	**346**	P	Pn	05 21 56.8	+0.3
SNVZ	**South Ngauruho**	**1.41**	**349**	P	Pb	05 21 57.8	-0.4
NGZ	**Ngauruhoe**	**1.43**	**348**	P	Pb	05 21 58.3	-0.1
OTVZ	**Oturere**	**1.43**	**350**	P	Pb	05 21 58.1	-0.5
ETVZ	**East Tongariro**	**1.45**	**352**	P	Pb	05 21 58.4	-0.5
TMVZ	**Te Maari**	**1.47**	**352**	P	Pb	05 21 58.8	-0.4
NTVZ	**North Tongarir**	**1.49**	**351**	P	Pb	05 21 59.0	-0.6
PUZ	**Puketiti**	**3.06**	**36**	P	Pn	05 22 19.2	-0.6

WEL 24 05:22:08.4±0.5, 44°S±2°×17°2E±°, h4km±2km, M2.2/6, ML2.4/9, MLv2.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=2.9, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RACZ	**Rakaia**	**0.18**	**242**	P	Pg	05 22 12.3	+0.4
RACZ				S	Sg	05 22 15.3	+1.0
MQZ	**McQueen's Vall**	**0.22**	**107**	P	Pg	05 22 12.6	-0.2
MQZ				S	Sg	05 22 16.0	+0.4
OXZ	**Oxford**	**0.39**	**323**	P	Pg	05 22 15.9	-0.1
OXZ				S	Sg	05 22 21.4	+0.3
AKCZ	**Akaroa Harbour**	**0.46**	**120**	P	Pg	05 22 17.2	0.0
AKCZ				S	Sg	05 22 24.0	+0.8
WACZ	**Wakanui South**	**0.48**	**231**	P	Pg	05 22 18.2	+0.5
WACZ				S	Sb	05 22 25.6	-1.4
AMCZ	**Amberley**	**0.51**	**25**	P	Pg	05 22 18.8	+0.6
OKCZ	**Okains Bay**	**0.51**	**99**	P	Pg	05 22 18.4	+0.1
OKCZ				S	Sg	05 22 26.1	+1.2
GVZ	**Greta Valley S**	**0.83**	**36**	P	Pb	05 22 25.2	-0.3
GVZ				S	Sb	05 22 36.5	-0.6
LTZ	**Lake Taylor**	**0.86**	**356**	P	Pg	05 22 24.8	-0.1
LTZ	**Lake Taylor**	**0.86**	**356**	P	Pg	05 22 24.9	-0.1
LTZ				S	Sg	05 22 36.8	+0.7
ARCZ	**Arundel**	**0.91**	**250**	P	Pg	05 22 25.6	-0.3
ARCZ				S	Sg	05 22 37.9	+0.3
RPZ	**Rata Peaks**	**0.95**	**265**	P	Pg	05 22 26.4	-0.2
INZ	**Inchbonnie**	**1.14**	**324**	P	Pg	05 22 30.3	+0.2
TMZ	**Timaru**	**1.23**	**232**	P	Pg	05 22 31.4	-0.5
ODZ	**Otahua Downs**	**1.87**	**221**	P	Pb	05 22 43.4	+0.3

*ROM **24** 05:24:00.0±0.0, 42°.760N±0°.002×13°.237E±0°.004, h7km, ML3.2/50, Error ellipse: s-maj=0.3km s-min=0.2km az=68.0*
*BEO **24** 05:24:01.6±0.9, 42°.71N×13°.20E, h14km±8km, ML3.4/6*
*PRU **24** 05:24:04.8±0.0, 42°.95N×13°.35E, h0km*
ISC 24 05:24:00.9±0.8, 42°.76N±0°.02×13°.22E±0°.02, h11km±6km, n129, σ1$26/155, 22C-10D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**313**	P	**Pg**	**05 24 03.2**	**-0.6**
NRCA				S	**Sg**	**05 24 05.4**	**-0.4**
NRCA				AML	AML		
	comp=E,57900µm,1.1s						
NRCA				AML	AML		
	comp=N,50150µm,0.7s						
NRCA				AML	AML		
	comp=E,63200µm,1.1s						
NRCA				AML	AML		
	comp=N,53250µm,0.7s						
NRCA				AML	AML		
	comp=E,57900µm,1.0s						
FEMA	**Monte Fema**	**0.23**	**328**	P	**Pg**	**05 24 05.8**	**-0.1**
FEMA				S	**Sg**	**05 24 09.9**	**+0.6**
FEMA				AML	AML		
	comp=E,30000µm,0.2s						
FEMA				AML	AML		
	comp=N,17450µm,0.4s						
RM33	**Pellescritta (**	**0.25**	**181**	P	**Pg**	**05 24 06.2**	**0.0**
RM33				S	**Sg**	**05 24 10.5**	**+0.8**
RM33				AML	AML		
	comp=E,8160µm,1.4s						
RM33				AML	AML		
	comp=E,8190µm,1.4s						
RM33				AML	AML		
	comp=N,6950µm,1.0s						
RM33				AML	AML		
	comp=N,6985µm,1.0s						
RM33				AML	AML		
	comp=E,8185µm,1.4s						
RM33				AML	AML		
	comp=N,6955µm,1.0s						
CAMP	**Campotosto**	**0.27**	**148**	⇓P	**Pg**	**05 24 06.1**	**-0.4**
CAMP				S	**Sg**	**05 24 10.2**	**+0.1**
CAMP				AML	AML		
	comp=E,5075µm,1.0s						
CAMP				AML	AML		
	comp=N,6545µm,0.2s						
FDMO	**Fiordimonte**	**0.29**	**341**	P	**Pg**	**05 24 06.5**	**-0.3**
FDMO				S	**Sg**	**05 24 11.6**	**+0.8**
FDMO				AML	AML		
	comp=E,8855µm,0.2s						
FDMO				AML	AML		
	comp=N,10390µm,1.2s						
GUMA	**Gualdo di Mace**	**0.31**	**16**	P	**Pg**	**05 24 07.4**	**+0.2**
GUMA				S	**Sg**	**05 24 12.7**	**+1.2**
GUMA				AML	AML		
	comp=E,23950µm,0.4s						
GUMA				AML	AML		
	comp=N,31950µm,0.5s						
GUMA				AML	AML		
	comp=E,23950µm,0.4s						
GUMA				AML	AML		
	comp=N,33050µm,0.5s						
GUMA				AML	AML		
	comp=E,21400µm,0.3s						
TERO	**Teramo**	**0.32**	**116**	P	**Pg**	**05 24 06.7**	**-0.6**
TERO				S	**Sg**	**05 24 11.6**	**+0.1**
TERO				AML	AML		
	comp=E,11770µm,0.8s						
TERO				AML	AML		
	comp=N,6935µm,0.8s						
TERO				AML	AML		
	comp=E,12310µm,0.8s						
TERO				AML	AML		
	comp=E,11745µm,0.8s						
TERO				AML	AML		
	comp=N,7700µm,0.8s						
TERO				AML	AML		
	comp=N,6940µm,0.8s						
TERO				AML	AML		
	comp=E,11730µm,0.8s						
CSP1	**Cessapalombo**	**0.33**	**358**	⇓P	**Pg**	**05 24 07.4**	**-0.2**
CSP1				S	**Sg**	**05 24 12.8**	**+0.8**
CSP1				AML	AML		
	comp=E,6705µm,0.9s						
CSP1				AML	AML		
	comp=N,8730µm,1.0s						
CSP1				AML	AML		
	comp=N,8735µm,1.0s						
CSP1				AML	AML		
	comp=E,6695µm,0.9s						
CSP1				AML	AML		
	comp=N,8745µm,1.0s						
CSP1				AML	AML		
	comp=N,8750µm,1.0s						
CSP1				AML	AML		
	comp=E,6700µm,0.9s						
CESI	**CESI - Serrava**	**0.33**	**317**	⇑P	**Pg**	**05 24 07.6**	**-0.1**
CESI				S	**Sg**	**05 24 13.2**	**+1.0**
CESI				AML	AML		
	comp=N,17400µm,0.8s						
CESI				AML	AML		
	comp=E,14400µm,0.6s						
ARRO	**Arrone**	**0.38**	**241**	⇑P	**Pg**	**05 24 08.5**	**0.0**
ARRO				S	**Sg**	**05 24 14.8**	**+1.2**
ARRO				AML	AML		
	comp=E,3820µm,1.3s						
ARRO				AML	AML		
	comp=N,3605µm,0.8s						
ARRO				AML	AML		
	comp=E,3825µm,1.3s						
OFFI	**Offida**	**0.39**	**63**	P	**Pg**	**05 24 08.5**	**0.0**
OFFI				AML	AML		
	comp=E,12620µm,0.5s						
OFFI				AML	AML		
	comp=N,10410µm,0.5s						
GIGS	**Gran Sasso**	**0.41**	**140**	P	**Pg**	**05 24 08.7**	**-0.2**
GIGS				S	**Sg**	**05 24 15.1**	**+0.7**
GIGS				AML	AML		
	comp=E,1080µm,1.6s						
GIGS				AML	AML		
	comp=N,1095µm,1.6s						
AQU	**L'Aquila**	**0.43**	**162**	P	**Pg**	**05 24 09.1**	**-0.3**
AQU				S	**Sg**	**05 24 15.7**	**+0.6**
AQU				AML	AML		
	comp=E,3420µm,1.3s						
AQU				AML	AML		
	comp=E,3290µm,1.4s						
AQU				AML	AML		
	comp=N,2960µm,1.6s						
AQU				AML	AML		
	comp=N,2800µm,1.6s						
SEF1	**Sefro**	**0.43**	**333**	P	**Pg**	**05 24 09.2**	**-0.2**
SEF1				S	**Sb**	**05 24 16.6**	**-0.4**
SEF1				AML	AML		
	comp=E,8635µm,1.4s						
SEF1				AML	AML		
	comp=N,7400µm,0.7s						
SEF1				AML	AML		
	comp=E,8640µm,1.4s						
SEF1				AML	AML		
	comp=N,7400µm,0.7s						
SEF1				AML	AML		
	comp=N,7410µm,0.7s						
SEF1				AML	AML		
	comp=E,8635µm,1.4s						
MDAR	**Monte D'Aria**	**0.43**	**353**	P	**Pg**	**05 24 09.1**	**-0.4**
PIO1	**Pioraco**	**0.45**	**338**	P	**Pg**	**05 24 09.6**	**-0.2**
SSM1	**San Severino M**	**0.47**	**356**	P	**Pg**	**05 24 09.8**	**-0.3**
FIU1	**Fiuminata**	**0.47**	**334**	P	**Pg**	**05 24 09.7**	**-0.5**
FIU1				S	**Sg**	**05 24 17.7**	**+1.2**
GAG1	**Gagliole**	**0.49**	**347**	P	**Pg**	**05 24 10.6**	**+0.1**
GAG1				S	**Sg**	**05 24 18.3**	**+1.3**
GAG1				AML	AML		
	comp=N,11125µm,0.7s						
GAG1				AML	AML		
	comp=E,11000µm,1.2s						
GAG1				AML	AML		
	comp=N,11105µm,0.7s						
CESX	**Cesi**	**0.49**	**252**	P	**Pg**	**05 24 10.2**	**-0.3**
CESX				S	**Sb**	**05 24 18.4**	**-0.4**
CESX				AML	AML		
	comp=E,2870µm,1.0s						
CESX				AML	AML		
	comp=N,3165µm,1.1s						
ASSB	**Assisi San Ben**	**0.50**	**304**	⇑P	**Pg**	**05 24 10.4**	**-0.3**
ASSB				S	**Sg**	**05 24 18.1**	**+0.9**
ASSB				AML	AML		
	comp=E,5215µm,0.2s						
ASSB				AML	AML		
	comp=N,4365µm,1.5s						
FIAM	**Fiamignano**	**0.50**	**189**	P	**Pg**	**05 24 10.3**	**-0.3**
FIAM				S	**Sg**	**05 24 18.2**	**+0.9**
FIAM				AML	AML		
	comp=N,3170µm,0.5s						
FIAM				AML	AML		
	comp=E,2700µm,0.6s						
TRTR	**Tortoreto Alta**	**0.51**	**85**	⇑P	**Pb**	**05 24 11.7**	**-0.2**
TRTR				S	**Sb**	**05 24 21.4**	**+2.1**
TRTR				AML	AML		
	comp=N,9035µm,0.4s						
TRTR				AML	AML		
	comp=E,8915µm,0.4s						
MTL1	**Matelica**	**0.52**	**343**	P	**Pg**	**05 24 10.7**	**-0.4**
SNTG	**Esanatoglia**	**0.53**	**338**	P	**Pg**	**05 24 10.9**	**-0.4**
SNTG				S	**Sg**	**05 24 19.7**	**+1.3**
SNTG				AML	AML		
	comp=N,2470µm,1.1s						
SNTG				AML	AML		
	comp=E,1860µm,0.6s						
FAGN	**Fagnano**	**0.56**	**151**	P	**Pg**	**05 24 11.6**	**-0.3**
FAGN				AML	AML		
	comp=N,4950µm,1.4s						
FAGN				AML	AML		
	comp=E,4115µm,0.4s						
EL6	**Elcito**	**0.57**	**351**	P	**Pg**	**05 24 11.8**	**-0.3**
EL6				AML	AML		
	comp=N,5775µm,1.2s						
EL6				AML	AML		
	comp=E,3890µm,1.0s						
EL6				AML	AML		
	comp=N,5770µm,1.2s						
VCEL	**Villa Celiera**	**0.59**	**128**	P	**Pg**	**05 24 12.0**	**-0.3**
VCEL				AML	AML		
	comp=E,4215µm,1.0s						
VCEL				AML	AML		
	comp=E,4220µm,1.0s						
VCEL				AML	AML		
	comp=N,5775µm,1.4s						
ATCC	**AVT- Casa Cast**	**0.60**	**315**	⇑P	**Pg**	**05 24 12.3**	**-0.3**
ATCC				AML	AML		
	comp=E,4465µm,1.3s						
ATCC				AML	AML		
	comp=E,4460µm,1.3s						
ATCC				AML	AML		
	comp=N,3995µm,1.5s						
FOSV	**Fossato di Vic**	**0.63**	**328**	⇑P	**Pg**	**05 24 12.7**	**-0.4**
FOSV				S	**Sb**	**05 24 22.6**	**-0.1**
FOSV				AML	AML		
	comp=E,2835µm,0.2s						
FOSV				AML	AML		
	comp=N,4040µm,0.3s						
FOSV				AML	AML		
	comp=E,2840µm,0.2s						
CIMA	**Civitanova Mar**	**0.64**	**31**	P	**Pg**	**05 24 13.2**	**-0.1**
T0110	**Collepietro**	**0.68**	**142**	⇑P	**Pg**	**05 24 13.3**	**-0.8**
T0110				AML	AML		
	comp=E,3755µm,0.6s						
T0110				AML	AML		
	comp=N,3085µm,0.4s						
PP3	**Marolino**	**0.68**	**25**	AML	AML		
	comp=N,5120µm,0.3s						
PP3				AML	AML		
	comp=E,3075µm,0.6s						
PP3				AML	AML		
	comp=N,4985µm,0.3s						
PP3				AML	AML		
	comp=E,3270µm,0.5s						
PP3				AML	AML		
	comp=E,3275µm,0.5s						
PP3				AML	AML		
	comp=E,3080µm,0.6s						
PP3				AML	AML		
	comp=N,4990µm,0.3s						
MURB	**Monte Urbino**	**0.71**	**315**	P	**Pg**	**05 24 14.3**	**-0.4**
MURB				AML	AML		
	comp=E,4825µm,0.9s						
MURB				AML	AML		
	comp=N,6645µm,0.3s						
MURB				AML	AML		
	comp=N,6410µm,0.3s						
MURB				AML	AML		
	comp=E,4725µm,0.4s						
SRES	**S.Oreste - Sor**	**0.74**	**225**	P	**Pg**	**05 24 14.9**	**-0.4**
SRES				AML	AML		
	comp=N,960µm,0.3s						
SRES				AML	AML		
	comp=E,1270µm,0.4s						
SSFR	**Montelago di S**	**0.74**	**335**	P	**Pg**	**05 24 15.0**	**-0.4**
SSFR				AML	AML		
	comp=E,3765µm,0.2s						
SSFR				AML	AML		
	comp=N,5300µm,0.2s						
SSFR				AML	AML		
	comp=N,5295µm,0.2s						
SSFR				AML	AML		
	comp=N,3825µm,0.2s						
SSFR				AML	AML		
	comp=E,3485µm,0.3s						
SSFR				AML	AML		
	comp=E,3765µm,0.2s						
ARVD	**Arcevia**	**0.76**	**345**	P	**Pg**	**05 24 15.4**	**-0.3**
ARVD				AML	AML		
	comp=E,1515µm,0.4s						
ARVD				AML	AML		
	comp=N,1640µm,0.5s						
ARVD				AML	AML		
	comp=N,823µm,0.5s						
ATSC	**Scheggia e Pas**	**0.77**	**330**	P	**Pg**	**05 24 14.7**	**-1.0**
ATFO	**Monte Foce - G**	**0.77**	**322**	P	**Pg**	**05 24 15.2**	**-0.6**
ATFO				AML	AML		
	comp=N,1345µm,0.5s						
ATFO				AML	AML		
	comp=N,1350µm,0.5s						
ATFO				AML	AML		
	comp=E,1730µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.77**	**305**	P	**Pg**	**05 24 15.2**	**-0.6**
ATTE				AML	AML		
	comp=E,995µm,0.5s						
ATTE				AML	AML		
	comp=N,1405µm,0.5s						
ATLO	**AVT- Montelove**	**0.81**	**313**	P	**Pg**	**05 24 15.8**	**-0.7**
MTCE	**Montecelio**	**0.82**	**206**	P	**Pg**	**05 24 15.6**	**-1.1**
MTCE				AML	AML		
	comp=N,681µm,1.2s						
MTCE				AML	AML		
	comp=E,1695µm,1.5s						
MGAB	**Montegabbione**	**0.83**	**281**	P	**Pg**	**05 24 16.7**	**-0.2**
MGAB				AML	AML		
	comp=N,2235µm,1.1s						
MGAB				AML	AML		
	comp=E,1550µm,1.1s						
MGAB				AML	AML		
	comp=N,2240µm,1.1s						
MGAB				AML	AML		
	comp=N,2190µm,1.1s						
MGAB				AML	AML		
	comp=E,1705µm,0.4s						
CERT	**Cerreto**	**0.83**	**192**	P	**Pg**	**05 24 16.3**	**-0.7**
CERT				AML	AML		
	comp=E,2905µm,0.5s						
CERT				AML	AML		
	comp=N,1565µm,0.5s						
AOI	**Ancona**	**0.84**	**20**	P	**Pg**	**05 24 16.0**	**-1.0**
FRON	**Frontone**	**0.84**	**335**	P	**Pg**	**05 24 16.2**	**-0.8**
FRON				AML	AML		
	comp=N,2100µm,0.3s						
FRON				AML	AML		
	comp=E,1210µm,0.2s						
TB01	**Gubbio**	**0.84**	**317**	P	**Pg**	**05 24 16.4**	**-0.8**
ATVO	**AVT- Monte Val**	**0.86**	**316**	⇑P	**Pg**	**05 24 16.7**	**-0.8**
ATVO				AML	AML		
	comp=E,1380µm,1.6s						
ATVO				AML	AML		
	comp=E,1375µm,1.6s						
ATVO				AML	AML		
	comp=N,951µm,0.8s						
ATBU	**Serra di Buran**	**0.86**	**326**	P	**Pg**	**05 24 17.0**	**-0.6**
TB03	**Pietralunga**	**0.87**	**317**	P	**Pg**	**05 24 16.8**	**-0.9**
COR1	**Corinaldo**	**0.88**	**350**	P	**Pg**	**05 24 17.6**	**-0.4**
COR1				AML	AML		
	comp=E,3520µm,0.8s						
COR1				AML	AML		
	comp=N,4095µm,1.1s						
INTR	**Introdacqua**	**0.91**	**146**	P	**Pg**	**05 24 17.3**	**-1.0**
INTR				AML	AML		
	comp=E,975nm,0.7s						
INTR				AML	AML		
	comp=N,1µm,0.6s						
INTR				AML	AML		
	comp=E,1004µm,0.7s						
INTR				AML	AML		
	comp=E,1004µm,0.7s						
INTR				AML	AML		
	comp=N,1885µm,0.6s						
INTR				AML	AML		
	comp=N,1µm,0.6s						
INTR				AML	AML		
	comp=E,979nm,0.7s						
ATPC	**Poggio Castell**	**0.91**	**322**	P	**Pg**	**05 24 17.6**	**-0.8**
ATPI	**Pietralunga -**	**0.91**	**319**	P	**Pg**	**05 24 17.7**	**-0.8**
ATPI				AML	AML		
	comp=N,866µm,0.5s						
ATPI				AML	AML		
	comp=E,882µm,0.6s						
PIEI	**Pieia**	**0.92**	**327**	P	**Pg**	**05 24 17.7**	**-0.9**
PIEI				AML	AML		
	comp=E,962µm,0.3s						
PIEI				AML	AML		
	comp=N,1014µm,0.6s						
MPAG	**Monte Paganucc**	**0.93**	**339**	P	**Pg**	**05 24 18.1**	**-0.7**
SENI	**Senigallia**	**0.94**	**1**	P	**Pg**	**05 24 18.1**	**-0.9**
SACS	**San Casciano d**	**0.97**	**276**	P	**Pg**	**05 24 19.0**	**-0.5**
SACS				AML	AML		
	comp=E,827µm,0.4s						
SACS				AML	AML		
	comp=N,618µm,0.7s						
SACS				AML	AML		
	comp=N,596µm,0.7s						
SACS				AML	AML		
	comp=E,826µm,0.9s						
NARO	**Abbazia di Nar**	**0.97**	**331**	P	**Pg**	**05 24 18.4**	**-1.1**
NARO				AML	AML		
	comp=E,944µm,0.9s						
NARO				AML	AML		
	comp=N,840µm,0.8s						
FSSB	**Fossombrone**	**0.98**	**341**	P	**Pg**	**05 24 19.3**	**-0.6**
FSSB				AML	AML		
	comp=E,4620µm,0.4s						
FSSB				AML	AML		
	comp=N,4340µm,0.4s						
APEC	**Apecchio**	**0.99**	**324**	P	**Pg**	**05 24 19.1**	**-0.8**
APEC				AML	AML		
	comp=E,1270µm,1.3s						
APEC				AML	AML		
	comp=N,1500µm,0.8s						
BADI	**Badiali**	**1.03**	**317**	P	**Pg**	**05 24 20.0**	**-0.8**
PE3	**Peglio**	**1.07**	**331**	P	**Pg**	**05 24 20.9**	**-0.6**
CAFI	**Castiglion Fio**	**1.08**	**302**	P	**Pg**	**05 24 21.0**	**-0.6**
CAFI				AML	AML		
	comp=E,552µm,0.4s						
CAFI				AML	AML		
	comp=N,474µm,0.7s						
CAFI				AML	AML		
	comp=E,584µm,0.5s						
CAFI				AML	AML		
	comp=N,500µm,1.2s						
MCIV	**Monte Civitell**	**1.14**	**271**	⇑P	**Pg**	**05 24 23.1**	**+0.4**
MCIV				AML	AML		
	comp=N,250µm,0.5s						
MCIV				AML	AML		
	comp=E,390µm,1.4s						
SSP9	**Sansepolcro**	**1.14**	**316**	P	**Pb**	**05 24 22.0**	**-0.5**
PARC	**Parchiule**	**1.14**	**321**	P	**Pb**	**05 24 21.6**	**-1.0**
PARC				AML	AML		
	comp=N,1145µm,0.7s						
PARC				AML	AML		
	comp=E,835µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.20**	**179**	P	**Pb**	**05 24 22.3**	**-1.4**
PESA	**Pesaro**	**1.21**	**347**	P	**Pn**	**05 24 22.0**	**-1.8**
SF01	**Poggio Pratacc**	**1.22**	**273**	⇑P	**Pn**	**05 24 23.2**	**-0.7**
SF01				AML	AML		

	comp=N,325μm,1.4s							
SF01					AML	AML		
	comp=E,470μm,1.5s							
ARCI	**Arcidosso**	**1.29**	**275**		P	**Pg**	**05 24 26.1**	**+0.6**
ARCI					AML	AML		
	comp=E,148μm,1.3s							
ARCI					AML	AML		
	comp=N,122μm,1.1s							
TRIV	**Trivento**	**1.40**	**135**	⇑	P	**Pg**	**05 24 28.4**	**+0.6**
TRIV					AML	AML		
	comp=N,744μm,0.7s							
TRIV					AML	AML		
	comp=N,770μm,0.7s							
TRIV					AML	AML		
	comp=E,590μm,0.8s							
TRIV					AML	AML		
	comp=E,600μm,1.3s							
SFI	**Santa Sofia**	**1.52**	**319**		P	**Pn**	**05 24 28.4**	**+0.4**
FROS	**Frosini**	**1.58**	**287**	⇑	P	**Pn**	**05 24 28.0**	**-0.8**
FROS					AML	AML		
	comp=E,542μm,0.2s							
FROS					AML	AML		
	comp=N,706μm,0.2s							
CSNT	**Castellina Chi**	**1.58**	**297**	⇑	P	**Pn**	**05 24 29.2**	**+0.4**
CSNT					AML	AML		
	comp=E,128μm,0.5s							
CSNT					AML	AML		
	comp=N,159μm,1.4s							
OSSC	**Osservatorio P**	**1.63**	**298**	⇑	P	**Pn**	**05 24 30.4**	**+0.9**
OSSC					AML	AML		
	comp=E,163μm,0.6s							
OSSC					AML	AML		
	comp=N,183μm,0.9s							
RUFI	**Rufina**	**1.65**	**311**	⇑	P	**Pb**	**05 24 31.0**	**-0.2**
RUFI					AML	AML		
	comp=E,278μm,1.6s							
RUFI					AML	AML		
	comp=N,268μm,0.6s							
MODR	**Mondragone**	**1.69**	**163**		P	**Pg**	**05 24 34.0**	**+0.7**
PTRJ	**Pietraroja**	**1.70**	**145**		S	**Sg**	**05 24 57.0**	**+1.3**
TRIF	**Trifonti**	**1.74**	**282**		P	**Pn**	**05 24 31.6**	**+0.6**
TRIF					AML	AML		
	comp=N,126μm,0.5s							
TRIF					AML	AML		
	comp=E,184μm,0.2s							
MELA	**Melanico ??? S**	**1.77**	**126**		P	**Pn**	**05 24 32.2**	**+0.8**
MPPT	**Montemurlo**	**1.96**	**308**		P	**Pn**	**05 24 35.2**	**+1.1**
MPPT					AML	AML		
	comp=N,145μm,0.6s							
MPPT					AML	AML		
	comp=E,170μm,1.2s							
PAOL	**Paolisi**	**2.00**	**149**		P	**Pn**	**05 24 34.6**	**-0.1**
PAOL					AML	AML		
	comp=N,76μm,1.5s							
PAOL					AML	AML		
	comp=E,72μm,1.5s							
FNVD	**Fontana Vidola**	**2.07**	**313**		P	**Pn**	**05 24 36.5**	**+0.8**
MSAG	**Monte S. Angel**	**2.26**	**117**	⇓	P	**Pb**	**05 24 43.0**	**+1.3**
MAIM	**Mastiano**	**2.30**	**301**	⇑	P	**Pn**	**05 24 39.6**	**+1.0**
MAIM					AML	AML		
	comp=N,73μm,0.4s							
MAIM					AML	AML		
	comp=E,100μm,0.7s							
RIY	**Rijeka**	**2.72**	**19**		*e*Pn	**Pn**	**05 24 44.9**	**+0.4**
RIY					*e*Sn	**Sn**	**05 25 19.5**	**+2.2**
MNTV	**Mantova**	**2.96**	**325**		S	**Sb**	**05 25 32.0**	**+2.2**
MSSA	**Maissana**	**3.11**	**301**	⇓	P	**Pn**	**05 24 51.6**	**+1.7**
MSSA					AML	AML		
	comp=E,34μm,1.5s							
MSSA					AML	AML		
	comp=N,50μm,0.5s							
ROVR	**Rover Verones**	**3.27**	**333**	⇓	P	**Pn**	**05 24 54.6**	**+2.4**
CGRP	**Cima Grappa**	**3.28**	**342**	⇑	P	**Pn**	**05 24 53.9**	**+1.5**
CGRP					AML	AML		
	comp=N,126μm,1.1s							
CGRP					AML	AML		
	comp=E,167μm,0.6s							
STON	**Ston**	**3.30**	**87**		*e*Pn	**Pn**	**05 24 52.2**	**-0.2**
STON					*e*Sn	**Sn**	**05 25 31.2**	**-0.4**
STON	**Ston**	**3.30**	**87**	⇑	P	**Pn**	**05 24 52.3**	**-0.2**
DOSS	**Dosso del Somm**	**3.44**	**336**	⇑	P	**Pn**	**05 24 56.8**	**+2.2**
LEOD	**Capriano del C**	**3.50**	**321**		S	**Sg**	**05 25 53.0**	**-0.2**
MAGA	**Magasa**	**3.54**	**329**	⇓	P	**Pn**	**05 24 58.1**	**+2.2**
MAGA					AML	AML		
	comp=E,314μm,0.6s							
MAGA					AML	AML		
	comp=N,150μm,1.2s							
LUSI	**Trento, Gardas**	**3.59**	**334**	⇓	P	**Pn**	**05 24 58.3**	**+1.8**
LUSI					AML	AML		
	comp=E,71μm,1.1s							
LUSI					AML	AML		
	comp=N,92μm,0.9s							
GAGG	**Gaggia**	**3.69**	**335**	⇓	P	**Pn**	**05 25 00.1**	**+2.0**
EUCT	**Pavia**	**3.83**	**311**	⇓	P	**Pg**	**05 25 14.0**	**-0.1**
OBKA	**Obir**	**3.87**	**14**		*e*Pn	**Pn**	**05 25 01.7**	**+1.4**
	comp=N,3.0nm,0.3s							
MYKA	**Terra Mystica**	**3.88**	**4**		*e*Pn	**Pn**	**05 25 01.3**	**+0.8**
	comp=N,1.5nm,0.3s							
KOSI	**Kohlern**	**3.93**	**341**	⇑	P	**Pn**	**05 25 03.0**	**+1.7**
KOSI					AML	AML		
	comp=N,77μm,0.5s							
KOSI					AML	AML		
	comp=E,76μm,0.8s							
BOSI	**Bolzano**	**3.97**	**341**	⇑	P	**Pn**	**05 25 04.2**	**+2.5**
ABTA	**Abfaltersbach**	**4.02**	**353**		*e*Pn	**Pn**	**05 25 04.0**	**+1.6**
	comp=E,2.9nm,0.3s							
SOKA	**Soboth**	**4.12**	**18**		*e*Pn	**Pb**	**05 25 09.1**	**-4.4**
	comp=E,1.0nm,0.2s							
KBA	**Koelnbreinsper**	**4.32**	**1**		*e*Pn	**Pn**	**05 25 08.1**	**+1.5**
	comp=E,1.8nm,0.3s							
ROSI	**Rosskopf**	**4.36**	**343**	⇑	P	**Pn**	**05 25 09.3**	**+2.1**
VSL	**Villasalto**	**4.37**	**223**	⇓	P	**Pn**	**05 25 08.8**	**+1.7**
FETA	**Feichten**	**4.61**	**338**		*e*Pn	**Pn**	**05 25 13.6**	**+3.0**
	comp=E,0.5nm,0.2s							
WTTA	**Wattenberg**	**4.64**	**347**		*e*Pn	**Pn**	**05 25 12.1**	**+1.0**
	comp=E,1.9nm,0.2s							
BBLS	**Lazići**	**4.65**	**74**		*e*Pn	**Pn**	**05 25 11.9**	**+0.9**
SQTA	**Sankt Quirin**	**4.68**	**343**		*e*Pn	**Pn**	**05 25 15.7**	**+4.1**
	comp=E,4.4nm,0.2s							
WATA	**Walderalm**	**4.72**	**346**		*e*Pn	**Pn**	**05 25 15.2**	**+3.1**
	comp=E,1.6nm,0.2s							
PZZ	**Stroppo**	**4.76**	**294**		P	**Pn**	**05 25 13.0**	**+0.4**
ARSA	**Arzberg**	**4.78**	**19**		*e*Pn	**Pn**	**05 25 16.1**	**+3.4**
	comp=E,1.2nm,0.3s							
MOTA	**Moosalm**	**4.82**	**343**		*e*Pn	Pn	05 25 18.7	+5.2
	comp=E,1.2nm,0.2s							
BIOA	**Bad Ischl, Aus**	**4.94**	**3**		*e*Pn	**Pn**	**05 25 18.2**	**+3.2**
	comp=E,4.5nm,0.3s							
SJES	**Sjenica**	**4.98**	**82**		*e*Pn	**Pn**	**05 25 16.2**	**+0.6**
SJES					*e*Sn	**Sn**	**05 26 12.3**	**-0.9**
RETA	**Reutte**	**5.03**	**341**		*e*Pn	**Pn**	**05 25 19.3**	**+3.0**
	comp=E,1.5nm,0.4s							
DAVA	**Damuels**	**5.11**	**334**		*e*Pn	**Pn**	**05 25 20.3**	**+2.8**
	comp=E,2.1nm,0.3s							
IVAS	**Ivanjica**	**5.14**	**79**		*e*Pn	**Pn**	**05 25 18.7**	**+0.9**
IVAS					*e*Sn	**Sn**	**05 26 14.8**	**-2.2**
MOA	**Moln**	**5.14**	**8**		*e*Pn	**Pn**	**05 25 17.9**	**+0.2**
	comp=E,0.5nm,0.2s							
RONA	**Rosalia, Austr**	**5.39**	**23**		*e*Pn	**Pn**	**05 25 19.6**	**-1.7**
	comp=E,0.5nm,0.3s							
CONA	**Conrad Observa**	**5.49**	**19**		*e*Pn	**Pn**	**05 25 23.3**	**+0.6**
	comp=E,1.5nm,0.2s							
BARS	**Barje**	**6.33**	**87**		*e*Pn	**Pn**	**05 25 34.8**	**+0.8**
BARS					*e*Sn	**Sn**	**05 26 43.8**	**-2.5**
KHC	**Kasperske Hory**	**6.38**	**2**		*e*PN	**Pn**	**05 25 35.6**	**+0.9**
KHC					*e*SN	**Sn**	**05 26 45.4**	**-2.1**
PRVS	**Prvonek**	**6.54**	**89**		*e*Pn	**Pn**	**05 25 36.7**	**-0.3**
PRVS					*e*Sn	**Sn**	**05 26 49.2**	**-2.3**
ZAGS	**Zajecar**	**6.66**	**78**		*e*Pn	**Pn**	**05 25 38.8**	**+0.2**
BOSS	**Bosilegrad**	**6.84**	**89**		*e*Pn	**Pn**	**05 25 40.8**	**-0.3**

ROM 24 05:25:04.4±0.3, 42°.64N±0°.02×13°.21E±0°.01, h16km±4km, ML2.4/2, Error ellipse: s-maj=1.3km s-min=1.1km az=347.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.13**	**179**	P	Pb	05 25 08.5	-0.1
RM33				S	Sb	05 25 11.4	+0.1
RM33				AML	AML		
	comp=E,1965μm,0.2s						
RM33				AML	AML		
	comp=N,1970μm,0.1s						
RM33				AML	AML		
	comp=E,1945μm,0.2s						
RM33				AML	AML		
	comp=N,1960μm,0.1s						
CAMP	**Campotosto**	**0.18**	**125**	P	Pg	05 25 09.1	+0.2
CAMP				S	Sg	05 25 12.2	+0.3
TERO	**Teramo**	**0.29**	**93**	P	Pg	05 25 10.4	-0.2
TERO				S	Sg	05 25 14.9	0.0
TERO				AML	AML		
	comp=E,682μm,0.1s						
TERO				AML	AML		
	comp=N,1060μm,0.1s						
GIGS	**Gran Sasso**	**0.32**	**125**	P	Pg	05 25 11.5	+0.3
GIGS				S	Sb	05 25 16.6	-0.2
ARRO	**Arrone**	**0.33**	**260**	P	Pg	05 25 11.4	+0.1
ARRO				S	Sb	05 25 17.1	0.0
GUMA	**Gualdo di Mace**	**0.43**	**12**	P	Pg	05 25 13.0	-0.2
OFFI	**Offida**	**0.46**	**49**	P	Pb	05 25 14.0	-0.1
CESX	**Cesi**	**0.47**	**267**	P	Pg	05 25 13.6	-0.1
TRTR	**Tortoreto Alta**	**0.55**	**72**	P	Pb	05 25 16.1	+0.5

IDC 24 05:25:09.0±6.8, 19°.35S×177°.38W, h581km±54km, mb2.6/4, mbtmp3.5/5, Error ellipse: s-maj=226.5km s-min=24.1km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.63**	**290**	P	P	05 26 38.1	+0.2
	6.3nm,0.5s,baz=113,slow=12,SNR=7.1						
WRA	**Warramunga Arr**	**45.35**	**261**	P	P	05 32 36.2	-0.4
	0.5nm,0.7s,baz=98,slow=7.2,SNR=7.6						
WRA				PcP	PcP	05 34 04.3	+0.6
	0.3nm,0.9s,baz=94,slow=3.7,SNR=1.9						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**45.36**	**256**	P	P	05 32 36.5	-0.2
	0.6nm,0.5s,baz=92,slow=7.0,SNR=7.4						
	0.6nm,0.5s						
NVAR	**Mina Array Bea**	**79.79**	**43**	P	P	05 36 18.0	0.0
	0.2nm,0.5s,baz=222,slow=7.3,SNR=1.5						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**85.94**	**57**	P	P	05 36 48.4	-0.4
	0.2nm,0.7s,baz=224,slow=7.5,SNR=2.7						
	0.2nm,0.7s						

ROM 24 05:28:58.9±0.1, 42°.724N±0°.002×13°.179E±0°.004, h10km, ML2.8/38, 7C-7D, Error ellipse: s-maj=0.3km s-min=0.1km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**336**	⇓P	Pg	05 29 02.4	+0.5
NRCA				S	Sg	05 29 04.5	+0.5
NRCA				AML	AML		
	comp=E,52450μm,0.8s						
NRCA				AML	AML		
	comp=N,44900μm,0.2s						
NRCA				AML	AML		
	comp=E,55850μm,0.8s						
NRCA				AML	AML		
	comp=E,52400μm,0.8s						
NRCA				AML	AML		
	comp=N,44850μm,0.2s						
NRCA				AML	AML		
	comp=N,50100μm,0.2s						
NRCA				AML	AML		
	comp=N,52100μm,0.5s						
NRCA				AML	AML		
	comp=E,71000μm,1.1s						
NRCA				AML	AML		
	comp=N,52150μm,0.5s						
NRCA				AML	AML		
	comp=N,54500μm,0.5s						
NRCA				AML	AML		
	comp=E,66250μm,1.1s						
RM33	**Pellescritta (**	**0.22**	**173**	⇓P	Pb	05 29 04.3	-0.6
RM33				S	Sg	05 29 07.9	+1.3
RM33				AML	AML		
	comp=E,2895μm,0.3s						
RM33				AML	AML		
	comp=N,3635μm,0.2s						
RM33				AML	AML		
	comp=E,2895μm,0.3s						
RM33				AML	AML		
	comp=N,3585μm,0.2s						
RM33				AML	AML		
	comp=E,2855μm,1.3s						
RM33				AML	AML		
	comp=N,3635μm,0.2s						
CAMP	**Campotosto**	**0.25**	**138**	⇓P	Pg	05 29 04.7	+0.5
CAMP				S	Sg	05 29 08.6	+0.9
CAMP				AML	AML		
	comp=E,1810μm,0.3s						
CAMP				AML	AML		
	comp=N,1430μm,0.3s						
FEMA	**Monte Fema**	**0.26**	**338**	P	Pg	05 29 04.7	+0.4
FEMA				S	Sg	05 29 08.7	+0.9
FDMO	**Fiordimonte**	**0.32**	**348**	⇑P	Pg	05 29 05.7	+0.4
FDMO				S	Sg	05 29 10.7	+1.0
FDMO				AML	AML		
	comp=E,3130μm,0.2s						
FDMO				AML	AML		
	comp=N,2210μm,0.5s						
TERO	**Teramo**	**0.33**	**108**	P	Pg	05 29 05.5	+0.1
TERO				S	Sb	05 29 11.2	-1.0
TERO				AML	AML		
	comp=E,1960μm,0.9s						
TERO				AML	AML		
	comp=N,1915μm,0.6s						
TERO				AML	AML		
	comp=E,2075μm,0.9s						
TERO				AML	AML		
	comp=N,2105μm,0.6s						
TERO				AML	AML		
	comp=E,2710μm,0.5s						
TERO				AML	AML		
	comp=E,3125μm,0.1s						
TERO				AML	AML		
	comp=N,2655μm,0.3s						
TERO				AML	AML		
	comp=N,2405μm,0.6s						
ARRO	**Arrone**	**0.34**	**245**	P	Pg	05 29 06.0	+0.3
ARRO				AML	AML		
	comp=E,3335μm,0.2s						
ARRO				AML	AML		
	comp=E,3340μm,0.2s						
ARRO				AML	AML		
	comp=N,2465μm,0.2s						
CESI	**CESI - Serrava**	**0.35**	**324**	⇓P	Pg	05 29 06.2	+0.4
CESI				S	Sg	05 29 11.5	+1.0
CESI				AML	AML		
	comp=E,2160μm,0.2s						
CESI				AML	AML		
	comp=N,3180μm,1.0s						
CESI				AML	AML		
	comp=N,3915μm,0.2s						
CESI				AML	AML		
	comp=E,2535μm,0.5s						
CSP1	**Cessapalombo**	**0.37**	**3**	⇑P	Pg	05 29 06.7	+0.4
CSP1				S	Sb	05 29 12.5	-1.0
CSP1				AML	AML		
	comp=E,3305μm,1.0s						
CSP1				AML	AML		
	comp=N,3625μm,0.4s						
CSP1				AML	AML		
	comp=N,3605μm,0.4s						
CSP1				AML	AML		
	comp=E,3310μm,1.0s						
CSP1				AML	AML		
	comp=N,3615μm,0.4s						
GIGS	**Gran Sasso**	**0.40**	**133**	P	Pg	05 29 07.0	+0.2
GIGS				AML	AML		
	comp=N,426μm,0.4s						
GIGS				AML	AML		
	comp=E,299μm,0.4s						
GIGS				AML	AML		
	comp=E,316μm,0.6s						
GIGS				AML	AML		
	comp=N,426μm,0.4s						
AQU	**L'Aquila**	**0.41**	**156**	P	Pb	05 29 07.6	-0.6
AQU				AML	AML		
	comp=E,691μm,1.6s						
AQU				AML	AML		
	comp=N,792μm,0.3s						
AQU				AML	AML		
	comp=E,690μm,1.6s						
AQU				AML	AML		
	comp=N,820μm,0.3s						
AQU				AML	AML		
	comp=E,668μm,0.6s						
OFFI	**Offida**	**0.43**	**60**	P	Pb	05 29 08.1	-0.5
OFFI				AML	AML		
	comp=E,5150μm,0.4s						
OFFI				AML	AML		
	comp=N,4650μm,0.5s						
CESX	**Cesi**	**0.46**	**256**	P	Pg	05 29 07.8	0.0
CESX				S	Sg	05 29 14.8	+1.0
CESX				AML	AML		
	comp=E,1525μm,1.3s						
CESX				AML	AML		
	comp=N,1610μm,0.4s						
SEF1	**Sefro**	**0.46**	**338**	P	Pg	05 29 08.1	+0.2
SEF1				S	Sb	05 29 15.2	-0.6
FIAM	**Fiamignano**	**0.46**	**186**	⇑P	Pg	05 29 08.2	+0.3
FIAM				S	Sb	05 29 15.2	-0.8
FIAM				AML	AML		
	comp=E,2240μm,0.2s						
FIAM				AML	AML		
	comp=N,1475μm,0.2s						
MDAR	**Monte D'Aria**	**0.47**	**357**	P	Pg	05 29 08.0	-0.2
MDAR				S	Sb	05 29 15.7	-0.6
ASSB	**Assisi San Ben**	**0.50**	**310**	P	Pg	05 29 08.9	+0.2
ASSB				S	Sb	05 29 16.4	-0.7
ASSB				AML	AML		
	comp=N,3165μm,0.2s						
ASSB				AML	AML		
	comp=E,2110μm,1.3s						
GAG1	**Gagliole**	**0.52**	**351**	P	Pg	05 29 09.4	+0.4
FAGN	**Fagnano**	**0.55**	**147**	⇑P	Pg	05 29 09.8	+0.3
FAGN				S	Sb	05 29 18.1	-0.4
FAGN				AML	AML		
	comp=N,1720μm,0.4s						
FAGN				AML	AML		
	comp=E,1455μm,0.3s						
TRTR	**Tortoreto Alta**	**0.55**	**81**	P	Pg	05 29 09.8	+0.3
TRTR				AML	AML		
	comp=E,4240μm,1.3s						
TRTR				AML	AML		
	comp=N,2940μm,1.3s						
VCEL	**Villa Celiera**	**0.59**	**124**	P	Pg	05 29 10.7	+0.3
VCEL				AML	AML		
	comp=E,1254μm,0.7s						
VCEL				AML	AML		
	comp=N,1335μm,0.5s						
VCEL				AML	AML		
	comp=E,1252μm,0.7s						
VCEL				AML	AML		
	comp=N,1330μm,0.5s						
TRE1	**Treia**	**0.59**	**9**	P	Pg	05 29 10.6	+0.1
ATCC	**AVT- Casa Cast**	**0.61**	**320**	P	Pg	05 29 10.8	+0.1
ATCC				AML	AML		
	comp=E,1108μm,0.6s						
ATCC				AML	AML		
	comp=N,991μm,0.4s						
ATCC				AML	AML		
	comp=E,1108μm,0.6s						
ATCC				AML	AML		
	comp=N,986μm,0.4s						
FOSV	**Fossato di Vic**	**0.65**	**332**	P	Pg	05 29 11.5	0.0
FOSV				AML	AML		
	comp=E,512μm,0.2s						
FOSV				AML	AML		
	comp=N,492μm,0.2s						
FOSV				AML	AML		
	comp=N,492μm,0.2s						
FOSV				AML	AML		
	comp=E,512μm,0.2s						
T0110	**Collepietro**	**0.67**	**138**	P	Pg	05 29 11.9	+0.1
T0110				AML	AML		
	comp=E,864μm,0.6s						
T0110				AML	AML		
	comp=N,1175μm,0.5s						
SRES	**S.Oreste - Sor**	**0.69**	**226**	P	Pg	05 29 12.3	-0.1
SRES				AML	AML		
	comp=E,478μm,0.8s						
SRES				AML	AML		
	comp=N,370μm,0.3s						
PTQR	**Pietraquaria**	**0.72**	**167**	P	Pg	05 29 12.4	-0.4
MURB	**Monte Urbino**	**0.72**	**319**	P	Pg	05 29 13.0	+0.2
MURB				AML	AML		
	comp=E,2250μm,1.6s						
MURB				AML	AML		
	comp=N,2160μm,0.3s						
MURB				AML	AML		
	comp=N,2130μm,0.4s						
MURB				AML	AML		
	comp=E,2465μm,0.2s						
PP3	**Marolino**	**0.73**	**26**	P	Pg	05 29 12.8	-0.1
PP3				AML	AML		
	comp=E,2575μm,0.5s						
PP3				AML	AML		
	comp=E,2410μm,0.5s						
PP3				AML	AML		
	comp=N,2725μm,0.4s						
PP3				AML	AML		
	comp=N,2665μm,0.4s						
PP3				AML	AML		
	comp=E,2575μm,0.5s						
PP3				AML	AML		
	comp=E,2405μm,0.5s						
SSFR	**Montelago di S**	**0.77**	**338**	P	Pg	05 29 13.9	+0.1
SSFR				AML	AML		
	comp=E,1680μm,0.2s						
SSFR				AML	AML		
	comp=N,1300μm,0.7s						
SSFR				AML	AML		
	comp=E,1475μm,0.2s						
SSFR				AML	AML		
	comp=N,1460μm,0.7s						
MTCE	**Montecelio**	**0.77**	**205**	P	Pg	05 29 13.3	-0.4
MTCE				AML	AML		
	comp=E,644μm,0.5s						
MTCE				AML	AML		
	comp=E,644μm,0.5s						
MTCE				AML	AML		
	comp=N,281μm,1.3s						
ARVD	**Arcevia**	**0.79**	**347**	P	Pg	05 29 14.0	-0.2
ARVD				AML	AML		
	comp=E,346μm,0.2s						
ARVD				AML	AML		
	comp=N,303μm,0.3s						
MGAB	**Montegabbione**	**0.81**	**284**	P	Pg	05 29 14.5	+0.1
MGAB				AML	AML		
	comp=E,1056μm,0.7s						
MGAB				AML	AML		
	comp=E,1056μm,0.7s						
MGAB				AML	AML		
	comp=N,1070μm,0.7s						
MGAB				AML	AML		
	comp=E,1158μm,1.1s						
MGAB				AML	AML		
	comp=N,1175μm,0.7s						
FRON	**Frontone**	**0.86**	**337**	P	Pg	05 29 15.2	-0.3
FRON				AML	AML		
	comp=E,332μm,1.4s						
FRON				AML	AML		
	comp=N,488μm,0.7s						
ATVO	**AVT- Monte Val**	**0.87**	**320**	P	Pg	05 29 15.5	-0.2
ATVO				AML	AML		
	comp=E,469μm,1.4s						
ATVO				AML	AML		
	comp=N,308μm,0.4s						
INTR	**Introdacqua**	**0.89**	**143**	P	Pg	05 29 15.7	-0.4
INTR				AML	AML		
	comp=N,530μm,0.5s						
INTR				AML	AML		
	comp=E,250μm,1.0s						
ATMI	**Monte Miggiano**	**0.91**	**313**	⇓P	Pn	05 29 18.4	+0.8
COR1	**Corinaldo**	**0.92**	**352**	P	Pg	05 29 16.4	-0.2
COR1				AML	AML		
	comp=N,1448μm,1.6s						
COR1				AML	AML		
	comp=E,2088μm,1.3s						
SACS	**San Casciano d**	**0.94**	**278**	P	Pg	05 29 16.9	-0.2
SACS				AML	AML		
	comp=E,327μm,1.5s						
SACS				AML	AML		
	comp=N,309μm,0.4s						
SACS				AML	AML		
	comp=E,334μm,0.7s						
SACS				AML	AML		
	comp=N,308μm,0.7s						
MPAG	**Monte Paganucc**	**0.96**	**341**	P	Pg	05 29 17.1	-0.2
MPAG				AML	AML		

comp=E,293μm,0.4s
MPAG AML AML
comp=N,298μm,0.9s
NARO Abbazia di Nar 0.99 334 P Pg 05 29 17.5 -0.5
NARO AML AML
comp=E,233μm,0.7s
NARO AML AML
comp=N,197μm,0.7s
LPEL Lama dei Pelig 1.00 132 P Pg 05 29 17.6 -0.6
LPEL AML AML
comp=E,254μm,0.5s
LPEL AML AML
comp=N,279μm,0.6s
FSSB Fossombrone 1.01 343 P Pg 05 29 18.0 -0.4
FSSB AML AML
comp=E,754μm,0.3s
FSSB AML AML
comp=N,938μm,1.1s
FSSB AML AML
comp=E,753μm,0.3s
BADI Badiali 1.04 319 ⇓P Pn 05 29 21.0 +1.5
CAFI Castiglion Fio 1.08 305 ⇑P Pn 05 29 19.9 -0.1
CAFI S Sn 05 29 36.0 +1.0
CAFI AML AML
comp=N,212μm,1.0s
CAFI AML AML
comp=E,250μm,0.5s
CAFI AML AML
comp=E,257μm,0.9s
CAFI AML AML
comp=N,211μm,1.0s
PARC Parchiule 1.15 324 P Pb 05 29 20.1 -0.8
PARC AML AML
comp=E,209μm,1.1s
PARC AML AML
comp=N,170μm,0.9s
SF01 Poggio Pratacc 1.19 275 S Sn 05 29 42.0 +4.0
PESA Pesaro 1.24 349 P Pn 05 29 21.9 -0.4
CPGN Carpegna, Ital 1.25 330 P Pn 05 29 21.8 -0.7
CPGN AML AML
comp=N,6815μm,1.6s
CPGN AML AML
comp=E,9605μm,1.2s
SEI Scarperia 1.88 316 ⇓P Pn 05 29 30.9 -0.1
SEI AML AML
comp=E,77μm,0.3s
SEI AML AML
comp=N,131μm,0.4s
GRAM Graiana 2.87 309 ⇑P Pb 05 29 49.2 -1.0
DOSS Dosso del Somm 3.46 336 ⇑P Pn 05 29 55.9 +2.9
ABTA Abfaltersbach 4.05 353 *e*Pn Pn 05 30 02.7 +1.7
comp=N,1.8nm,0.3s
KBA Koelnbreinsper 4.36 1 *e*Pn Pn 05 30 06.9 +1.7
comp=N,0.9nm,0.2s

ROM 24 05:29:34.5±0.1, 42°753N±0°004×13°170E±0°009, h9km, ML2.2/7, Error ellipse: s-maj=0.7km s-min=0.2km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**333**	P	Pg	05 29 36.9	-0.1
NRCA				S	Sg	05 29 39.3	+0.5
NRCA				AML	AML		
	comp=E,66300μm,1.1s						
NRCA				AML	AML		
	comp=N,52100μm,0.5s						
NRCA				AML	AML		
	comp=E,71000μm,1.1s						
NRCA				AML	AML		
	comp=N,54500μm,0.5s						
NRCA				AML	AML		
	comp=E,66250μm,1.1s						
NRCA				AML	AML		
	comp=N,52100μm,0.5s						
NRCA				END			
FEMA	**Monte Fema**	**0.23**	**337**	P	Pg	05 29 40.3	+1.0
FEMA				S	Sg	05 29 43.7	+1.3
FEMA				END			
RM33	**Pellescritta (**	**0.25**	**172**	P	Pg	05 29 39.9	+0.4
RM33				S	Sg	05 29 44.6	+1.7
RM33				END			
CAMP	**Campotosto**	**0.28**	**141**	P	Pg	05 29 40.9	+0.7
CAMP				S	Sb	05 29 45.4	-1.3
CAMP				AML	AML		
	comp=N,420μm,0.3s						
CAMP				END			
FDMO	**Fiordimonte**	**0.29**	**348**	P	Pg	05 29 41.2	+0.8
FDMO				S	Sb	05 29 45.7	-1.2
FDMO				AML	AML		
	comp=N,1765μm,0.2s						
FDMO				AML	AML		
	comp=E,1161μm,0.7s						
FDMO				AML	AML		
	comp=N,592μm,0.7s						
FDMO				END			
CESI	**CESI - Serrava**	**0.32**	**322**	P	Pg	05 29 41.7	+0.8
CESI				S	Sb	05 29 46.5	-1.3
CESI				AML	AML		
	comp=E,1710μm,0.5s						
CESI				AML	AML		
	comp=N,2640μm,0.2s						
CESI				AML	AML		
	comp=E,1715μm,0.5s						
CESI				AML	AML		
	comp=E,1018μm,0.1s						
CESI				END			
CSP1	**Cessapalombo**	**0.34**	**4**	P	Pb	05 29 42.1	-0.7
CSP1				S	Sb	05 29 47.3	-1.1
CSP1				AML	AML		
	comp=E,2236μm,0.4s						
CSP1				AML	AML		
	comp=N,1972μm,0.7s						
CSP1				AML	AML		
	comp=E,935μm,0.3s						
CSP1				END			
ARRO	**Arrone**	**0.34**	**240**	P	Pb	05 29 42.3	-0.6
ARRO				S	Sb	05 29 48.1	-0.3
ARRO				AML	AML		
	comp=E,1235μm,0.2s						
ARRO				AML	AML		
	comp=N,1270μm,0.3s						
ARRO				AML	AML		
	comp=E,1240μm,0.2s						
ARRO				AML	AML		
	comp=N,1290μm,0.8s						
ARRO				AML	AML		
	comp=E,824μm,0.2s						
ARRO				END			
TERO	**Teramo**	**0.34**	**112**	P	Pg	05 29 41.8	+0.4
TERO				S	Sg	05 29 47.2	+1.2
TERO				AML	AML		
	comp=E,3125μm,0.1s						
TERO				AML	AML		
	comp=N,2655μm,0.3s						
TERO				AML	AML		
	comp=N,877μm,0.5s						
TERO				END			
OFFI	**Offida**	**0.42**	**64**	P	Pb	05 29 44.2	0.0
GIGS	**Gran Sasso**	**0.42**	**136**	P	Pg	05 29 43.0	+0.2
GIGS				S	Sg	05 29 49.4	+1.0
GIGS				AML	AML		
	comp=E,316μm,0.6s						
GIGS				AML	AML		
	comp=E,316μm,0.6s						
GIGS				AML	AML		
	comp=N,250μm,0.4s						
GIGS				AML	AML		
	comp=E,234μm,0.2s						
GIGS				END			
MNTP	**Montappone**	**0.44**	**30**	P	Pb	05 29 44.0	-0.5
CESX	**Cesi**	**0.46**	**252**	P	Pg	05 29 43.6	+0.2
CESX				S	Sb	05 29 51.3	-0.4
CESX				AML	AML		
	comp=E,974μm,0.5s						
CESX				AML	AML		
	comp=N,1062μm,0.6s						
CESX				END			
ASSB	**Assisi San Ben**	**0.47**	**308**	P	Pg	05 29 44.3	+0.5
ASSB				S	Sb	05 29 51.4	-0.8
ASSB				END			
TRTR	**Tortoreto Alta**	**0.55**	**84**	P	Pb	05 29 46.8	+0.5
VCEL	**Villa Celiera**	**0.61**	**126**	P	Pg	05 29 46.7	+0.3
T0110	**Collepietro**	**0.69**	**139**	P	Pb	05 29 48.7	-0.1
PTRJ	**Pietraroja**	**1.72**	**143**	S	Sn	05 30 27.0	+0.2

ROM 24 05:29:54.8±0.1, 42°800N±0°005×13°12E±0°01, h9km, ML2.7/5, 2C, Error ellipse: s-maj=0.9km s-min=0.4km az=252.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**351**	*e*P	Pg	05 29 57.1	+0.5
NRCA				S	Sg	05 29 58.1	+0.2
NRCA				AML	AML		
	comp=E,66250μm,1.1s						
NRCA				AML	AML		
	comp=N,52100μm,0.5s						
NRCA				AML	AML		
	comp=E,71000μm,1.1s						
NRCA				AML	AML		
	comp=N,52150μm,0.5s						
NRCA				AML	AML		
	comp=N,54500μm,0.5s						
FEMA	**Monte Fema**	**0.17**	**342**	*e*P	Pg	05 29 59.2	+0.7
FEMA				S	Sg	05 30 01.9	+0.8
FDMO	**Fiordimonte**	**0.24**	**354**	*e*P	Pg	05 30 00.3	+0.6
FDMO				S	Sg	05 30 04.0	+1.1
FDMO				AML	AML		
	comp=N,1765μm,0.2s						
FDMO				AML	AML		
	comp=E,1161μm,0.7s						
CESI	**CESI - Serrava**	**0.26**	**322**	*e*P	Pb	05 30 01.0	-0.8
CESI				S	Sb	05 30 05.0	-1.3
CESI				AML	AML		
	comp=E,2535μm,0.5s						
CESI				AML	AML		
	comp=N,3915μm,0.2s						
CSP1	**Cessapalombo**	**0.30**	**12**	*e*P	Pg	05 30 01.2	+0.4
CSP1				S	Sg	05 30 05.9	+1.1
RM33	**Pellescritta (**	**0.30**	**167**	P	Pb	05 30 02.0	-0.4
RM33				S	Sb	05 30 06.5	-1.0
RM33				AML	AML		
	comp=E,1542μm,0.5s						
RM33				AML	AML		
	comp=E,1463μm,0.5s						
RM33				AML	AML		
	comp=N,1698μm,0.3s						
RM33				AML	AML		
	comp=N,1771μm,0.4s						
CAMP	**Campotosto**	**0.34**	**141**	*e*P	Pg	05 30 02.1	+0.6
CAMP				S	Sg	05 30 07.0	+0.9
ARRO	**Arrone**	**0.34**	**230**	*e*P	Pb	05 30 03.1	0.0
ARRO				S	Sb	05 30 08.1	-0.6
ARRO				AML	AML		
	comp=E,1235μm,0.2s						
ARRO				AML	AML		
	comp=N,1290μm,0.8s						
SEF1	**Sefro**	**0.37**	**340**	*e*P	Pb	05 30 03.0	-0.6
SEF1				S	Sb	05 30 08.3	-1.2
MDAR	**Monte D'Aria**	**0.39**	**2**	⇑*i*P	Pg	05 30 03.0	+0.4
MDAR				S	Sg	05 30 08.8	+1.0
TERO	**Teramo**	**0.40**	**116**	P	Pg	05 30 02.5	-0.1
TERO				S	Sg	05 30 08.7	+0.9
TERO				AML	AML		
	comp=N,2655μm,0.3s						
TERO				AML	AML		
	comp=E,3125μm,0.1s						
TERO				AML	AML		
	comp=E,2694μm,0.1s						
TERO				AML	AML		
	comp=N,1749μm,0.1s						
ASSB	**Assisi San Ben**	**0.42**	**306**	P	Pg	05 30 03.6	+0.6
ASSB				S	Sb	05 30 09.9	-1.0
MNTP	**Montappone**	**0.42**	**37**	*e*P	Pb	05 30 04.0	-0.4
MNTP				S	Sb	05 30 11.5	+0.5
OFFI	**Offida**	**0.44**	**72**	⇑*i*P	Pb	05 30 04.3	-0.4
OFFI				S	Sb	05 30 12.0	+0.7
SNTG	**Esanatoglia**	**0.47**	**344**	*e*P	Pg	05 30 04.7	+0.6
SNTG				S	Sb	05 30 11.7	-0.8
GIGS	**Gran Sasso**	**0.48**	**136**	*e*P	Pg	05 30 04.3	+0.1
GIGS				S	Sg	05 30 11.1	+0.6
FIAM	**Fiamignano**	**0.53**	**180**	P	Pb	05 30 05.8	-0.6
FIAM				S	Sb	05 30 13.8	-0.3
TRTR	**Tortoreto Alta**	**0.58**	**89**	*e*P	Pb	05 30 07.4	+0.2
TRTR				S	Sb	05 30 16.6	+1.1
ARVD	**Arcevia**	**0.71**	**349**	P	Pb	05 30 09.0	-0.4
ARVD				S	Sb	05 30 19.7	+0.4

ROM 24 05:30:41.4±0.2, 42°79N±0°01×13°19E±0°02, h11km±1km, ML1.5/5, Error ellipse: s-maj=2.1km s-min=0.6km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**308**	P	Pg	05 30 44.6	+0.6
NRCA				S	Sg	05 30 45.9	+0.1
NRCA				AML	AML		
	comp=E,4010μm,0.1s						
NRCA				AML	AML		
	comp=N,3757μm,0.1s						
NRCA				AML	AML		
	comp=N,3429μm,0.1s						
FDMO	**Fiordimonte**	**0.26**	**343**	P	Pb	05 30 47.5	-0.6
FDMO				S	Sg	05 30 50.9	+0.5
FDMO				AML	AML		
	comp=N,1765μm,0.2s						
FDMO				AML	AML		
	comp=E,1161μm,0.7s						
FDMO				AML	AML		
	comp=E,59μm,0.2s						
FDMO				AML	AML		
	comp=N,52μm,0.2s						
RM33	**Pellescritta (**	**0.28**	**177**	P	Pb	05 30 48.6	+0.1
RM33				S	Sg	05 30 51.4	+0.4
CAMP	**Campotosto**	**0.30**	**148**	P	Pg	05 30 47.7	+0.2
CAMP				S	Sb	05 30 54.1	+0.4
CESI	**CESI - Serrava**	**0.30**	**316**	P	Pg	05 30 48.2	+0.6
CESI				S	Sg	05 30 52.7	+1.0
CESI				AML	AML		
	comp=E,1710μm,0.5s						
CESI				AML	AML		
	comp=N,2640μm,0.2s						
CESI				AML	AML		
	comp=E,1715μm,0.5s						
CESI				AML	AML		
	comp=E,140μm,0.2s						
CESI				AML	AML		
	comp=N,3915μm,0.2s						
CSP1	**Cessapalombo**	**0.30**	**2**	P	Pb	05 30 48.5	-0.4
CSP1				S	Sg	05 30 52.8	+1.0
CSP1				AML	AML		
	comp=E,101μm,0.5s						
CSP1				AML	AML		
	comp=N,67μm,0.3s						
TERO	**Teramo**	**0.34**	**119**	P	Pg	05 30 48.0	-0.3
TERO				AML	AML		
	comp=E,3125μm,0.1s						
TERO				AML	AML		
	comp=N,2655μm,0.3s						
TERO				AML	AML		
	comp=E,79μm,0.0s						
ARRO	**Arrone**	**0.38**	**237**	AML	AML		
	comp=E,1235μm,0.2s						
ARRO				AML	AML		
	comp=E,1240μm,0.2s						
ARRO				AML	AML		
	comp=N,1290μm,0.8s						
AQU	**L'Aquila**	**0.46**	**160**	AML	AML		
	comp=E,504μm,1.0s						
AQU				AML	AML		
	comp=N,458μm,0.6s						
ASSB	**Assisi San Ben**	**0.47**	**303**	P	Pg	05 30 50.2	-0.4
ASSB				S	Sb	05 30 57.9	-0.7
ASSB				AML	AML		
	comp=E,36μm,0.1s						
CESX	**Cesi**	**0.49**	**249**	AML	AML		
	comp=E,974μm,0.5s						
CESX				AML	AML		
	comp=N,1062μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.57**	**315**	AML	AML		
	comp=E,798μm,1.0s						
ATCC				AML	AML		
	comp=N,830μm,0.4s						

ROM 24 05:31:24.9±0.1, 42°784N±0°004×13°132E±0°009,

h11km, ML2.5/6, 2C-3D, Error ellipse: s-maj=0.7km s-min=0.1km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**346**	*e*P	Pg	05 31 27.1	0.0
NRCA				S	Sg	05 31 29.2	+0.5
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,11984μm,0.1s						
NRCA				AML	AML		
	comp=N,14506μm,0.1s						
NRCA				AML	AML		
	comp=E,15529μm,0.1s						
NRCA				AML	AML		
	comp=E,16838μm,0.1s						
FEMA	**Monte Fema**	**0.19**	**341**	*e*P	Pg	05 31 29.5	+0.5
FEMA				S	Sg	05 31 32.7	+0.8
FEMA				AML	AML		
	comp=E,28300μm,0.3s						
FEMA				AML	AML		
	comp=N,18750μm,1.1s						
FEMA				AML	AML		
	comp=N,2216μm,0.3s						
FEMA				AML	AML		
	comp=E,4175μm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**353**	*e*P	Pg	05 31 30.5	+0.4
FDMO				S	Sg	05 31 34.5	+0.8
CESI	**CESI - Serrava**	**0.28**	**323**	⇓P	Pg	05 31 31.0	+0.4
CESI				S	Sg	05 31 35.2	+0.9
CESI				AML	AML		
	comp=E,9045μm,0.2s						
CESI				AML	AML		
	comp=N,20850μm,0.4s						
CESI				AML	AML		
	comp=N,1226μm,0.6s						
CESI				AML	AML		
	comp=E,866μm,0.1s						
RM33	**Pellescritta (**	**0.28**	**167**	P	Pg	05 31 31.1	+0.5
RM33				AML	AML		
	comp=E,29400μm,0.9s						
RM33				AML	AML		
	comp=N,33650μm,0.2s						
RM33				AML	AML		
	comp=E,29300μm,0.9s						
RM33				AML	AML		
	comp=N,32700μm,0.3s						
RM33				AML	AML		
	comp=E,29250μm,0.9s						
RM33				AML	AML		
	comp=E,29450μm,0.9s						
RM33				AML	AML		
	comp=E,1108μm,0.3s						
RM33				AML	AML		
	comp=E,1075μm,0.3s						
RM33				AML	AML		
	comp=N,1465μm,0.3s						
RM33				AML	AML		
	comp=N,1426μm,0.3s						
CSP1	**Cessapalombo**	**0.31**	**10**	*e*P	Pg	05 31 31.5	+0.3
CSP1				S	Sg	05 31 36.4	+0.9
CSP1				AML	AML		
	comp=E,9175μm,0.6s						
CSP1				AML	AML		
	comp=N,15580μm,0.3s						
CSP1				AML	AML		
	comp=N,15600μm,0.3s						
CSP1				AML	AML		
	comp=E,9165μm,0.6s						
CSP1				AML	AML		
	comp=N,15605μm,0.3s						
CSP1				AML	AML		
	comp=N,998μm,0.3s						
CSP1				AML	AML		
	comp=E,998μm,0.5s						
CAMP	**Campotosto**	**0.32**	**140**	*e*P	Pg	05 31 31.5	+0.2
CAMP				AML	AML		
	comp=E,17000μm,0.4s						
CAMP				AML	AML		
	comp=N,20400μm,0.4s						
ARRO	**Arrone**	**0.34**	**233**	*e*P	Pg	05 31 32.0	+0.4
ARRO				S	Sb	05 31 37.5	-0.8
ARRO				AML	AML		
	comp=E,9665μm,1.1s						
ARRO				AML	AML		
	comp=N,13090μm,0.6s						
ARRO				AML	AML		
	comp=E,9705μm,1.1s						
ARRO				AML	AML		
	comp=N,13115μm,0.6s						
ARRO				AML	AML		
	comp=E,9695μm,1.1s						
ARRO				AML	AML		
	comp=N,13095μm,0.6s						
ARRO				AML	AML		
	comp=N,176μm,0.1s						
ARRO				AML	AML		
	comp=E,417μm,0.2s						
TERO	**Teramo**	**0.38**	**115**	*e*P	Pg	05 31 32.8	+0.3
TERO				AML	AML		
	comp=N,21800μm,0.4s						
TERO				AML	AML		
	comp=N,23150μm,0.4s						
TERO				AML	AML		
	comp=E,17950μm,0.3s						
TERO				AML	AML		
	comp=E,19000μm,0.3s						
ASSB	**Assisi San Ben**	**0.43**	**307**	*e*P	Pg	05 31 33.5	+0.1
ASSB				AML	AML		
	comp=N,8760μm,0.6s						
ASSB				AML	AML		
	comp=E,8740μm,0.9s						
OFFI	**Offida**	**0.43**	**69**	⇑*i*P	Pb	05 31 34.6	0.0
OFFI				AML	AML		
	comp=N,21950μm,0.6s						
OFFI				AML	AML		
	comp=E,25350μm,1.5s						
CESX	**Cesi**	**0.44**	**247**	AML	AML		
	comp=E,6210μm,0.3s						
CESX				AML	AML		
	comp=N,6710μm,0.3s						
GIGS	**Gran Sasso**	**0.46**	**136**	⇓*i*P	Pg	05 31 33.8	-0.1
GIGS				AML	AML		
	comp=N,3620μm,0.6s						
GIGS				AML	AML		
	comp=N,3615μm,0.6s						
GIGS				AML	AML		
	comp=E,4740μm,0.3s						
AQU	**L'Aquila**	**0.47**	**155**	S	Sg	05 31 40.0	-0.4
SNTG	**Esanatoglia**	**0.49**	**343**	*e*P	Pg	05 31 34.3	-0.2
SNTG				S	Sb	05 31 42.4	-0.4
SNTG				AML	AML		
	comp=E,317μm,0.7s						
SNTG				AML	AML		
	comp=E,2235μm,0.7s						
SNTG				AML	AML		
	comp=N,2740μm,0.4s						
SNTG				AML	AML		
	comp=N,363μm,0.5s						
FIAM	**Fiamignano**	**0.52**	**181**	*e*P	Pg	05 31 34.8	-0.1
FIAM				AML	AML		
	comp=N,5940μm,0.4s						
FIAM				AML	AML		
	comp=E,10310μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.54**	**318**	*e*P	Pg	05 31 35.2	-0.2
ATCC				AML	AML		
	comp=E,5720μm,1.3s						
ATCC				AML	AML		
	comp=N,6925μm,0.6s						
ATCC				AML	AML		
	comp=E,5725μm,1.3s						
EL6	**Elcito**	**0.55**	**358**	*e*P	Pg	05 31 35.2	-0.3
EL6				S	Sb	05 31 44.0	-0.5
EL6				AML	AML		
	comp=N,5365μm,0.3s						
EL6				AML	AML		
	comp=E,7815μm,0.2s						
FOSV	**Fossato di Vic**	**0.58**	**332**	*e*P	Pg	05 31 35.9	-0.3
FOSV				AML	AML		
	comp=E,2805μm,0.5s						
FOSV				AML	AML		
	comp=N,2710μm,0.3s						

FAGN	**Fagnano**	**0.62**	**147**	*e*P	Pg	05 31 37.0	+0.2
FAGN				AML	AML			
	comp=E,10100μm,0.4s							
FAGN				AML	AML			
	comp=N,7720μm,0.3s							
VCEL	**Villa Celiera**	**0.65**	**126**	*e*P	Pg	05 31 37.6	+0.1
VCEL				AML	AML			
	comp=E,11030μm,0.4s							
VCEL				AML	AML			
	comp=E,11050μm,0.4s							
VCEL				AML	AML			
	comp=N,9540μm,1.0s							
VCEL				AML	AML			
	comp=E,11035μm,0.4s							
SRES	**S.Oreste - Sor**	**0.71**	**220**	*e*P	Pg	05 31 39.0	+0.3
SRES				AML	AML			
	comp=N,1480μm,0.4s							
SRES				AML	AML			
	comp=E,1900μm,0.8s							
ARVD	**Arcevia**	**0.73**	**349**	*e*P	Pg	05 31 39.0	0.0
ARVD				AML	AML			
	comp=N,1194μm,0.3s							
ARVD				AML	AML			
	comp=E,1680μm,1.4s							
T0110	**Collepietro**	**0.73**	**139**	*e*P	Pg	05 31 38.7	-0.3
T0110				AML	AML			
	comp=E,8290μm,0.4s							
T0110				AML	AML			
	comp=N,5915μm,0.4s							
MGAB	**Montegabbione**	**0.76**	**280**	*e*P	Pb	05 31 40.1	-0.1
MGAB				AML	AML			
	comp=N,4790μm,0.4s							
MGAB				AML	AML			
	comp=N,4395μm,0.4s							
MGAB				AML	AML			
	comp=E,8080μm,0.4s							
MGAB				AML	AML			
	comp=E,8810μm,0.4s							
MGAB				AML	AML			
	comp=N,4785μm,0.4s							
FRON	**Frontone**	**0.79**	**338**⇓	*i*P	Pg	05 31 40.0	-0.2
FRON				AML	AML			
	comp=N,2640μm,0.6s							
FRON				AML	AML			
	comp=E,1255μm,1.3s							
FRON				AML	AML			
	comp=N,2645μm,0.6s							
ATVO	**AVT- Monte Val**	**0.80**	**319**	*e*P	Pg	05 31 39.9	-0.4
ATVO				AML	AML			
	comp=N,1690μm,0.4s							
ATVO				AML	AML			
	comp=E,2110μm,0.7s							
ATPI	**Pietralunga -**	**0.85**	**322**	*e*P	Pg	05 31 41.2	-0.1
ATPI				AML	AML			
	comp=E,2020μm,0.7s							
ATPI				AML	AML			
	comp=N,1510μm,0.4s							
ATPI				AML	AML			
	comp=E,2025μm,0.7s							
ATPI	**Pietralunga -**	**0.85**	**322**	AML	AML			
	comp=N,1510μm,0.4s							
PIEI	**Pieia**	**0.87**	**330**	*e*P	Pg	05 31 41.6	0.0
PIEI				S	Sg	05 31 51.9	-1.1
PIEI				AML	AML			
	comp=E,1710μm,0.3s							
PIEI				AML	AML			
	comp=N,1023μm,0.4s							
MPAG	**Monte Paganucc**	**0.89**	**342**	*e*P	Pg	05 31 41.9	-0.1
MPAG				AML	AML			
	comp=E,1860μm,0.5s							
MPAG				AML	AML			
	comp=N,1605μm,0.6s							
MPAG				AML	AML			
	comp=N,1610μm,0.6s							
MPAG				AML	AML			
	comp=E,1855μm,0.5s							
NARO	**Abbazia di Nar**	**0.92**	**334**	*e*P	Pg	05 31 42.1	-0.4
NARO				AML	AML			
	comp=E,894μm,0.8s							
NARO				AML	AML			
	comp=N,762μm,0.6s							
FSSB	**Fossombrone**	**0.94**	**344**	P	Pg	05 31 42.9	-0.2
INTR	**Introdacqua**	**0.96**	**143**	*e*P	Pg	05 31 42.2	-1.1
INTR				AML	AML			
	comp=E,2μm,0.5s							
INTR				AML	AML			
	comp=N,2μm,0.9s							
INTR				AML	AML			
	comp=E,1605μm,0.5s							
INTR				AML	AML			
	comp=E,2μm,0.5s							
INTR				AML	AML			
	comp=N,2μm,0.9s							
INTR				AML	AML			
	comp=E,2μm,0.5s							
INTR				AML	AML			
	comp=N,2545μm,0.9s							
BADI	**Badiali**	**0.97**	**318**	*e*P	Pb	05 31 44.0	+0.2
BADI				AML	AML			
	comp=E,188μm,0.6s							
BADI				AML	AML			
	comp=N,1470μm,0.8s							
CAFI	**Castiglion Fio**	**1.01**	**303**	*e*P	Pg	05 31 44.2	-0.1
CAFI				AML	AML			
	comp=N,1650μm,0.3s							
CAFI				AML	AML			
	comp=N,1785μm,0.3s							
CAFI				AML	AML			
	comp=E,2250μm,0.4s							
CAFI				AML	AML			
	comp=N,1655μm,0.3s							
CAFI				AML	AML			
	comp=E,2315μm,0.4s							
PE3	**Peglio**	**1.02**	**333**	*e*P	Pb	05 31 44.7	+0.1
VIVA	**Pratoni del Vi**	**1.07**	**195**	P	Pg	05 31 44.3	-1.1
VIVA				AML	AML			
	comp=E,4880μm,0.5s							
VIVA				AML	AML			
	comp=N,5175μm,0.4s							
VIVA				AML	AML			
	comp=N,5180μm,0.4s							
VIVA				AML	AML			
	comp=E,4885μm,0.5s							
VIVA	**Pratoni del Vi**	**1.07**	**195**	AML	AML			
	comp=N,5175μm,0.4s							
VIVA	**Pratoni del Vi**	**1.07**	**195**	AML	AML			
	comp=N,5180μm,0.4s							
VIVA	**Pratoni del Vi**	**1.07**	**195**	AML	AML			
	comp=E,4880μm,0.5s							
LPEL	**Lama dei Pelig**	**1.07**	**133**	*e*P	Pg	05 31 44.9	-0.6
LPEL				AML	AML			
	comp=E,2010μm,0.4s							
LPEL				AML	AML			
	comp=N,1665μm,0.8s							
PARC	**Parchiule**	**1.08**	**323**	⇑P	Pb	05 31 45.4	-0.3
PARC				AML	AML			
	comp=E,1510μm,0.6s							
PARC				AML	AML			
	comp=N,1385μm,0.5s							
NDIM	**Novi di Modena**	**2.65**	**323**	S	Sn	05 32 39.0	-0.7

LDG **24** *05:31:31.4±0.3,42.°64N×13.°26E,h6km,Ml3.1/12,Error ellipse: s-maj=10.5km s-min=5.9km az=25.0*
ROM **24** *05:31:32.1±0.1,42.°663N±0.°003×13.°194E±0.°005, h10km,ML3.5/34,Mw3.3,Error ellipse: s-maj=0.4km s-min=0.3km az=73.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.00; Mθθ0.07; Mφφ0.93; Mrθ0.18; Mθφ-0.46; Mφr0.57; Fault plane solution: Mo1.22752×10¹⁴ NP1:φs318.00000°,δ37.00000°, λ-122.00000°. NP2:φs175.00000°,δ59.00000°, λ-69.00000°.*
IDC **24** *05:31:32.2±1.4,42.°74N×13.°17E,h0km,mb3.4/3, mbtmp3.4/6,ML3.3/3 Error ellipse: s-maj=41.0km s-min=14.4km az=102.0*
BEO **24** *05:31:34.1±0.8,42.°69N×13.°28E,h10km,ML3.6/8*
PRU **24** *05:31:36.3±0.0,42.°82N×13.°54E,h1km*
ISC 24 05:31:32.5±0.8,**42.°68N**±0.°01×**13.°22E**±0.°02,**h12**km±5km, **n164,**σ1§**48**/226,**10C-5D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.17**	**334**	⇓*i*P		**Pg**	**05 31 36.3**	**-0.2**
NRCA				S		**Sg**	**05 31 39.1**	**-0.1**
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
RM33	**Pellescritta (**	**0.17**	**180**	P		**Pg**	**05 31 36.4**	**-0.1**
RM33				S		**Sg**	**05 31 39.5**	**+0.2**
RM33				AML		AML		
	comp=E,29400μm,0.9s							
RM33				AML		AML		
	comp=E,29300μm,0.9s							
RM33				AML		AML		
	comp=N,32700μm,0.3s							
RM33				AML		AML		
	comp=E,29450μm,0.9s							
RM33				AML		AML		
	comp=N,33650μm,0.2s							
RM33				AML		AML		
	comp=E,29250μm,0.9s							
CAMP	**Campotosto**	**0.20**	**136**	*e*P		**Pg**	**05 31 37.0**	**-0.1**
CAMP				S		**Sg**	**05 31 40.3**	**+0.1**
CAMP				AML		AML		
	comp=N,20400μm,0.4s							
CAMP				AML		AML		
	comp=E,17000μm,0.4s							
TERO	**Teramo**	**0.29**	**102**⇑	*i*P		**Pg**	**05 31 38.3**	**-0.2**
TERO				S		**Sb**	**05 31 42.9**	**-1.6**
TERO				AML		AML		
	comp=E,17950μm,0.3s							
TERO				AML		AML		
	comp=N,21800μm,0.4s							
TERO				AML		AML		
	comp=N,23150μm,0.4s							
TERO				AML		AML		
	comp=E,19000μm,0.3s							
FEMA	**Monte Fema**	**0.30**	**336**	P		**Pg**	**05 31 38.8**	**0.0**
FEMA				S		**Sg**	**05 31 43.6**	**+0.6**
FEMA				AML		AML		
	comp=N,18700μm,1.1s							
FEMA				AML		AML		
	comp=E,28300μm,0.3s							
ARRO	**Arrone**	**0.35**	**253**⇑	*i*P		**Pg**	**05 31 39.1**	**-0.4**
ARRO				S		**Sg**	**05 31 44.4**	**+0.2**
ARRO				AML		AML		
	comp=E,9665μm,1.1s							
ARRO				AML		AML		
	comp=N,13090μm,0.6s							
ARRO				AML		AML		
	comp=E,9705μm,1.1s							
ARRO				AML		AML		
	comp=N,13115μm,0.6s							
ARRO				AML		AML		
	comp=N,13095μm,0.6s							
ARRO				AML		AML		
	comp=E,9695μm,1.1s							
GIGS	**Gran Sasso**	**0.35**	**132**	P		**Pg**	**05 31 39.2**	**-0.4**
GIGS				S		**Sg**	**05 31 44.5**	**+0.2**
GIGS				AML		AML		
	comp=N,3620μm,0.6s							
GIGS				AML		AML		
	comp=N,3615μm,0.6s							
GIGS				AML		AML		
	comp=E,4740μm,0.3s							
AQU	**L'Aquila**	**0.36**	**157**⇓	*i*P		**Pg**	**05 31 39.4**	**-0.2**
FDMO	**Fiordimonte**	**0.37**	**345**⇓	*i*P		**Pg**	**05 31 39.7**	**-0.2**
FDMO				S		**Sg**	**05 31 45.4**	**+0.6**
GUMA	**Gualdo di Mace**	**0.39**	**13**	P		**Pb**	**05 31 40.7**	**-0.7**
GUMA				S		**Sb**	**05 31 47.2**	**-0.2**
GUMA				AML		AML		
	comp=E,38950μm,0.4s							
GUMA				AML		AML		
	comp=E,55250μm,0.3s							
GUMA				AML		AML		
	comp=N,46900μm,0.5s							
GUMA				AML		AML		
	comp=N,38900μm,0.5s							
CESI	**CESI - Serrava**	**0.40**	**325**	P		**Pg**	**05 31 40.4**	**0.0**
CESI				S		**Sg**	**05 31 46.0**	**+0.3**
CESI				AML		AML		
	comp=E,9045μm,0.2s							
CESI				AML		AML		
	comp=N,20850μm,0.4s							
CSP1	**Cessapalombo**	**0.41**	**359**	P		**Pg**	**05 31 40.7**	**0.0**
CSP1				S		**Sb**	**05 31 47.0**	**-0.9**
CSP1				AML		AML		
	comp=E,9175μm,0.6s							
CSP1				AML		AML		
	comp=N,15580μm,0.3s							
CSP1				AML		AML		
	comp=N,15600μm,0.3s							
CSP1				AML		AML		
	comp=E,9165μm,0.6s							
CSP1				AML		AML		
	comp=N,15590μm,0.3s							
FIAM	**Fiamignano**	**0.42**	**190**⇑	*i*P		**Pg**	**05 31 40.4**	**-0.5**
FIAM				S		**Sg**	**05 31 46.5**	**0.0**
FIAM				AML		AML		
	comp=E,10310μm,0.5s							
FIAM				AML		AML		
	comp=N,5940μm,0.4s							
OFFI	**Offida**	**0.43**	**54**⇑	*i*P		**Pb**	**05 31 41.7**	**-0.3**
OFFI				S		**Sb**	**05 31 49.5**	**+1.1**
OFFI				AML		AML		
	comp=N,21950μm,0.6s							
OFFI				AML		AML		
	comp=E,25350μm,1.5s							
CESX	**Cesi**	**0.47**	**261**⇑	*i*P		**Pg**	**05 31 41.2**	**-0.6**
CESX				S		**Sg**	**05 31 48.5**	**+0.4**
CESX				AML		AML		
	comp=E,6210μm,0.3s							
CESX				AML		AML		
	comp=N,6710μm,0.3s							
FAGN	**Fagnano**	**0.50**	**147**⇓	*e*P		**Pg**	**05 31 41.8**	**-0.5**
FAGN				S		**Sb**	**05 31 49.5**	**-0.9**
FAGN				AML		AML		
	comp=N,7720μm,0.3s							
FAGN				AML		AML		
	comp=E,10100μm,0.4s							
TRTR	**Tortoreto Alta**	**0.53**	**76**⇑	*i*P		**Pb**	**05 31 43.8**	**+0.1**
VCEL	**Villa Celiera**	**0.54**	**122**	P		**Pg**	**05 31 43.0**	**-0.2**
VCEL				S		**Sb**	**05 31 51.9**	**0.0**
VCEL				AML		AML		
	comp=E,11030μm,0.4s							
VCEL				AML		AML		
	comp=N,9540μm,1.0s							
VCEL				AML		AML		
	comp=E,11035μm,0.4s							
ASSB	**Assisi San Ben**	**0.55**	**311**	P		**Pb**	**05 31 43.7**	**-0.3**
ASSB				S		**Sg**	**05 31 51.0**	**+0.6**
ASSB				AML		AML		
	comp=E,8740μm,0.9s							
ASSB				AML		AML		
	comp=N,8760μm,0.6s							
SNTG	**Esanatoglia**	**0.61**	**341**	P		**Pb**	**05 31 45.0**	**0.0**
SNTG				S		**Sb**	**05 31 53.5**	**-0.1**
SNTG				AML		AML		
	comp=E,317μm,0.7s							
SNTG				AML		AML		
	comp=E,2235μm,0.7s							
SNTG				AML		AML		
	comp=N,363μm,0.5s							
SNTG				AML		AML		
	comp=N,2740μm,0.4s							
T0110	**Collepietro**	**0.62**	**137**	P		**Pg**	**05 31 43.9**	**-0.6**
T0110				S		**Sg**	**05 31 52.6**	**-0.2**
T0110				AML		AML		
	comp=E,8290μm,0.4s							
T0110				AML		AML		
	comp=N,5915μm,0.4s							
TRE1	**Treia**	**0.63**	**6**	P		**Pb**	**05 31 45.1**	**-0.4**
CADA	**Capodarco di F**	**0.65**	**38**	P		**Pb**	**05 31 46.2**	**+0.5**
ATCC	**AVT- Casa Cast**	**0.66**	**320**	P		**Pg**	**05 31 44.8**	**-0.5**
ATCC				S		**Sb**	**05 31 55.0**	**0.0**
ATCC				AML		AML		
	comp=E,5720μm,1.3s							
ATCC				AML		AML		
	comp=E,5725μm,1.3s							
ATCC				AML		AML		
	comp=N,6925μm,0.6s							
PTQR	**Pietraquaria**	**0.67**	**168**	P		**Pg**	**05 31 44.9**	**-0.7**
SRES	**S.Oreste - Sor**	**0.69**	**230**	P		**Pg**	**05 31 44.9**	**-0.9**
SRES				AML		AML		
	comp=E,1900μm,0.8s							
SRES				AML		AML		
	comp=N,1480μm,0.4s							
FOSV	**Fossato di Vic**	**0.70**	**332**	P		**Pg**	**05 31 45.5**	**-0.6**
FOSV				S		**Sb**	**05 31 56.2**	**0.0**
FOSV				AML		AML		
	comp=N,2710μm,0.3s							
FOSV				AML		AML		
	comp=E,2805μm,0.5s							
CIMA	**Civitanova Mar**	**0.71**	**28**	P		**Pn**	**05 31 47.2**	**-1.0**
MTCE	**Montecelio**	**0.75**	**208**⇑	*i*P		**Pg**	**05 31 45.6**	**-1.3**
PP3	**Marolino**	**0.75**	**22**⇓	*i*P		**Pb**	**05 31 47.7**	**+0.2**
PP3				S		**Sn**	**05 32 00.9**	**+0.7**
CERT	**Cerreto**	**0.75**	**193**	P		**Pg**	**05 31 46.1**	**-1.0**
ATTE	**AVT- Monte Tez**	**0.82**	**309**	P		**Pg**	**05 31 48.1**	**-0.2**
ARVD	**Arcevia**	**0.84**	**346**	P		**Pg**	**05 31 48.4**	**-0.3**
ARVD				S		**Sn**	**05 32 01.6**	**-0.8**
ARVD				AML		AML		
	comp=E,1680μm,1.4s							
ARVD				AML		AML		
	comp=N,1194μm,0.3s							
INTR	**Introdacqua**	**0.84**	**142**	P		**Pg**	**05 31 47.6**	**-1.2**
INTR				AML		AML		
	comp=E,2μm,0.5s							
INTR				AML		AML		
	comp=N,2μm,0.9s							
INTR				AML		AML		
	comp=N,2μm,0.9s							
INTR				AML		AML		
	comp=E,2μm,0.5s							
INTR				AML		AML		
	comp=E,1605μm,0.5s							
INTR				AML		AML		
	comp=N,2545μm,0.9s							
MGAB	**Montegabbione**	**0.84**	**286**	P		**Pg**	**05 31 48.7**	**-0.2**
MGAB				AML		AML		
	comp=N,4790μm,0.4s							
MGAB				AML		AML		
	comp=E,8810μm,0.4s							
MGAB				AML		AML		
	comp=N,4785μm,0.4s							
MGAB				AML		AML		
	comp=N,4395μm,0.4s							
MGAB				AML		AML		
	comp=E,8080μm,0.4s							
RCAV	**Rocca di Cave**	**0.86**	**194**	P		**Pb**	**05 31 49.2**	**-0.2**
RCAV				S		**Sn**	**05 32 03.4**	**+0.4**
VVLD	**Villa Vallelon**	**0.86**	**159**	P		**Pb**	**05 31 49.1**	**-0.4**
GUAR	**Guarcino**	**0.89**	**175**	P		**Pb**	**05 31 50.2**	**+0.3**
GUAR				S		**Sn**	**05 32 03.8**	**+0.1**
FRON	**Frontone**	**0.91**	**337**	P		**Pg**	**05 31 49.4**	**-0.7**
FRON				S		**Sb**	**05 32 02.9**	**+0.6**
FRON				AML		AML		
	comp=E,1255μm,1.3s							
FRON				AML		AML		
	comp=N,2645μm,0.6s							
AOI	**Ancona**	**0.91**	**18**	P		**Pb**	**05 31 49.9**	**-0.3**
ATVO	**AVT- Monte Val**	**0.92**	**320**	P		**Pg**	**05 31 49.6**	**-0.6**
ATVO				S		**Sb**	**05 32 03.2**	**+0.7**
ATVO				AML		AML		
	comp=N,1690μm,0.4s							
ATVO				AML		AML		
	comp=E,2110μm,0.7s							
RMP	**Rome, Mte Porz**	**0.95**	**204**	P		**Pb**	**05 31 51.1**	**+0.2**
LPEL	**Lama dei Pelig**	**0.96**	**131**	P		**Pg**	**05 31 50.2**	**-0.8**
LPEL				S		**Sg**	**05 32 02.6**	**-0.8**
LPEL				AML		AML		
	comp=N,1665μm,0.8s							
LPEL				AML		AML		
	comp=E,2010μm,0.4s							
COR1	**Corinaldo**	**0.96**	**351**	P		**Pn**	**05 31 51.5**	**-0.3**
ATPI	**Pietralunga -**	**0.97**	**322**	P		**Pg**	**05 31 50.7**	**-0.6**
ATPI				S		**Sb**	**05 32 04.8**	**+0.7**
ATPI				AML		AML		
	comp=E,2025μm,0.7s							
SACS	**San Casciano d**	**0.98**	**280**	*e*P		**Pg**	**05 31 50.4**	**-0.9**
SACS				S		**Sb**	**05 32 05.3**	**+1.1**
PIEI	**Pieia**	**0.99**	**330**	P		**Pg**	**05 31 51.3**	**-0.3**
PIEI				AML		AML		
	comp=N,1023μm,0.4s							
PIEI				AML		AML		
	comp=E,1710μm,0.3s							
RDP	**Rocca di Papa**	**0.99**	**202**	P		**Pg**	**05 31 51.3**	**-0.4**
RDP				S		**Sn**	**05 32 06.4**	**+0.1**
MA9	**Marino**	**1.00**	**205**	P		**Pn**	**05 31 52.5**	**+0.2**
MPAG	**Monte Paganucc**	**1.00**	**341**	*e*P		**Pg**	**05 31 51.3**	**-0.5**
MPAG				S		**Sn**	**05 32 06.7**	**+0.2**
MPAG				AML		AML		
	comp=E,1855μm,0.5s							
MPAG				AML		AML		
	comp=N,1610μm,0.6s							
SAMA	**S.Maria delle**	**1.01**	**207**	P		**Pn**	**05 31 52.3**	**-0.1**
POFI	**Posta Fibreno**	**1.03**	**159**	P		**Pg**	**05 31 51.3**	**-1.1**
NARO	**Abbazia di Nar**	**1.04**	**334**	P		**Pg**	**05 31 51.7**	**-0.8**
NARO				AML		AML		
	comp=E,894μm,0.8s							
NARO				AML		AML		
	comp=N,762μm,0.6s							
LATE	**Laterza**	**1.04**	**267**	P		**Pg**	**05 31 51.9**	**-0.7**
FSSB	**Fossombrone**	**1.06**	**343**	P		**Pg**	**05 31 52.5**	**-0.4**
LAV9	**Lanuvio**	**1.07**	**201**	P		**Pn**	**05 31 53.8**	**+0.4**
BADI	**Badiali**	**1.09**	**320**	P		**Pn**	**05 31 53.5**	**-0.1**
BADI				AML		AML		
	comp=E,188μm,0.6s							
BADI				AML		AML		
	comp=N,1470μm,0.8s							
TOLF	**Tolfa**	**1.09**	**236**⇑	*i*P		**Pb**	**05 31 52.2**	**-1.2**
CAFI	**Castiglion Fio**	**1.12**	**306**	P		**Pb**	**05 31 53.4**	**-0.4**
CAFI				S		**Sn**	**05 32 09.6**	**+0.2**
CAFI				AML		AML		
	comp=N,1650μm,0.3s							
CAFI				AML		AML		
	comp=N,1785μm,0.3s							
CAFI				AML		AML		
	comp=E,2315μm,0.4s							
CAFI				AML		AML		
	comp=E,2250μm,0.4s							
CAFI				AML		AML		
	comp=N,1655μm,0.3s							
GIUL	**Giuliano Di Ro**	**1.12**	**179**	P		**Pn**	**05 31 54.5**	**+0.5**
GIUL				S		**Sn**	**05 32 10.4**	**+1.0**
SF03	**Valle Cupa**	**1.13**	**277**	P		**Pb**	**05 31 53.5**	**-0.6**
SF03				S		**Sn**	**05 32 10.2**	**+0.5**
MCIV	**Monte Civitell**	**1.14**	**275**	P		**Pb**	**05 31 53.3**	**-0.9**
MCIV				S		**Sn**	**05 32 11.1**	**+1.3**
PE3	**Peglio**	**1.14**	**333**	P		**Pn**	**05 31 54.4**	**+0.1**
SF11	**Podere del Sol**	**1.15**	**280**	P		**Pb**	**05 31 53.6**	**-0.6**
SF11				S		**Sg**	**05 32 09.6**	**+0.1**
SF04	**Casetta**	**1.16**	**278**	*e*P		**Pb**	**05 31 54.1**	**-0.3**
SF04				S		**Sg**	**05 32 10.2**	**+0.4**
SF14	**Selvena**	**1.18**	**274**	P		**Pb**	**05 31 54.3**	**-0.6**
SF13	**Bagnolo**	**1.18**	**277**	P		**Pb**	**05 31 54.7**	**-0.2**
SSP9	**Sansepolcro**	**1.19**	**319**	P		**Pg**	**05 31 55.7**	**+0.2**
PARC	**Parchiule**	**1.20**	**324**	P		**Pb**	**05 31 54.9**	**-0.3**
PARC				S		**Sn**	**05 32 14.1**	**+2.7**
PARC				AML		AML		
	comp=E,1510μm,0.6s							
PARC				AML		AML		
	comp=N,1385μm,0.5s							
RNI2	**Rionero Sannit**	**1.20**	**144**	P		**Pg**	**05 31 57.0**	**+1.3**
SF01	**Poggio Pratacc**	**1.22**	**277**	P		**Pb**	**05 31 55.7**	**+0.1**
SF01				S		**Sn**	**05 32 12.9**	**+1.0**
CERA	**Filignano**	**1.24**	**151**	*e*P		**Pn**	**05 31 55.0**	**-0.6**
ARCI	**Arcidosso**	**1.29**	**278**	*e*P		**Pn**	**05 31 56.3**	**-0.1**
TRIV	**Trivento**	**1.35**	**132**⇑	*i*P		**Pg**	**05 31 59.5**	**+1.0**
VAGA	**Valle Agricola**	**1.48**	**149**	P		**Pg**	**05 32 00.4**	**-0.5**
ASQU	**Asqua**	**1.52**	**317**	P		**Pg**	**05 32 02.0**	**+0.2**
FROS	**Frosini**	**1.60**	**290**	*e*P		**Pn**	**05 32 00.7**	**+0.1**
CSNT	**Castellina Chi**	**1.62**	**300**	*e*P		**Pn**	**05 32 01.3**	**+0.4**
PTRJ	**Pietraroja**	**1.64**	**143**	P		**Pn**	**05 31 59.1**	**-2.2**
OSSC	**Osservatorio P**	**1.67**	**301**	*e*P		**Pn**	**05 32 02.2**	**+0.6**
SACR	**S. Croce Del S**	**1.70**	**139**	P		**Pg**	**05 32 04.9**	**-0.2**
RUFI	**Rufina**	**1.70**	**313**	P		**Pn**	**05 32 02.5**	**+0.6**
MELA	**Melanico ??? S**	**1.72**	**124**	P		**Pb**	**05 32 04.1**	**0.0**
TRIF	**Trifonti**	**1.75**	**285**⇑	*i*P		**Pn**	**05 32 02.9**	**+0.1**
LMD	**Lutirano**	**1.78**	**322**	P		**Pb**	**05 32 04.8**	**-0.1**
BRIS	**BRISIGHELLA**	**1.92**	**320**	P		**Pg**	**05 32 09.6**	**+0.2**
SEI	**Scarperia**	**1.93**	**316**	P		**Pb**	**05 32 06.4**	**-1.2**
APRC	**Apricena**	**1.96**	**117**	P		**Pb**	**05 32 06.7**	**-1.4**
A318A	**Donoratico (LI**	**1.99**	**284**	*e*P		**Pn**	**05 32 06.1**	**+0.2**
VIRC	**Vir**	**2.09**	**39**	*e*Pn		**Pn**	**05 32 07.8**	**+0.4**
MTRZ	**Monterenzio**	**2.12**	**324**	P		**Pn**	**05 32 08.4**	**+0.7**
FNVD	**Fontana Vidola**	**2.13**	**315**	P		**Pn**	**05 32 08.0**	**+0.1**
MORI	**Morici**	**2.17**	**56**	*e*Pn		**Pn**	**05 32 09.5**	**+1.1**

CELB	S.Piero in Cam	2.22	273	P		Pn	05 32 08.7	-0.4	
PII	Pisa	2.23	299	P		Pb	05 32 11.0	-1.6	
NVLJ	Novalja	2.23	32	*e*Pn		Pn	05 32 09.3	+0.1	
BRJN	Brijuni	2.26	10	*e*Pn		Pn	05 32 09.9	+0.3	
BRJN	Brijuni	2.26	10	P		Pn	05 32 10.5	+0.9	
RABC	Rab	2.36	28	*e*Pn		Pn	05 32 10.5	-0.5	
SMRN	Sveta Marina	2.45	16	*e*Pn		Pn	05 32 11.9	-0.4	
UDBI	Udbina	2.61	44	*e*Pn		Pn	05 32 15.9	+1.3	
KIJV	Kijevo	2.68	59	*e*Pn		Pn	05 32 16.6	+1.3	
LSTV	Lastovo	2.71	87	*e*Pn		Pn	05 32 16.8	+0.9	
RIY	Rijeka	2.79	19	*e*Pn		Pn	05 32 18.0	+1.0	
RIY				*e*Sn		Sn	05 32 52.0	+1.4	
PLIT	Plitvice	2.80	38	*e*Pn		Pn	05 32 17.9	+0.8	
MAKA	Makarska	2.86	76	*e*Pn		Pn	05 32 19.6	+1.8	
SKDS	Skadanscina	2.92	11	*i* Pn		Pn	05 32 19.4	+0.6	
SKDS				eSn		Sn	05 32 54.9	+1.1	
SKDS				IAML			05 33 00.5		
	comp=Z,23nm,0.2s								
RICI	Ricice	2.98	73	*e*Pn		Pn	05 32 21.0	+1.4	
PGF	Pioggiola	3.12	269	*e*P		Pn	05 32 21.9	+0.4	
PGF				*e*Sn		Sn	05 32 57.6	-1.1	
	comp=Z,63nm,1.3s								
STON	Ston	3.31	85	*e*Pn		Pn	05 32 24.0	0.0	
STON	Ston	3.31	85	*e*Pn		Pn	05 32 23.7	-0.3	
STON				eSn		Sn	05 33 02.3	-0.9	
OZLJ	Ozalj	3.35	28	*e*Pn		Pn	05 32 25.8	+1.2	
DBRK	Dubrovnik	3.64	89	*e*Pn		Pn	05 32 29.1	+0.5	
MOSL	Moslavina	3.88	40	*e*Pn		Pn	05 32 31.6	-0.3	
OBKA	Obir	3.94	14	*e*Pn		Pn	05 32 36.1	+3.3	
	comp=Z,1.2nm,0.2s								
MYKA	Terra Mystica	3.96	4	*e*Pn		Pn	05 32 34.6	+1.6	
	comp=Z,1.1nm,0.1s								
ABTA	Abfaltersbach	4.09	353	*e*Pn		Pn	05 32 36.7	+1.7	
	comp=Z,8.7nm,0.4s								
SOKA	Soboth	4.20	17	*e*Pn		Pn	05 32 39.1	+2.7	
	comp=Z,0.7nm,0.2s								
SBF	Sospel	4.38	288	*e*P		Pn	05 32 39.3	+0.4	
SBF				*e*Sn		Sn	05 33 27.2	-2.7	
	comp=Z,11nm,0.4s								
KBA	Koelnbreinsper	4.40	1	*e*Pn		Pn	05 32 42.3	+3.1	
	comp=Z,4.3nm,0.5s								
BBLS	Lazići	4.67	73	*e*Pn		Pn	05 32 44.5	+1.6	
BBLS				*e*Sn		Sn	05 33 36.5	-0.5	
FETA	Feichten	4.68	339	*e*Pn		Pn	05 32 46.0	+2.9	
	comp=Z,2.1nm,0.4s								
WTTA	Wattenberg	4.72	347	*e*Pn		Pn	05 32 45.9	+2.4	
	comp=Z,0.9nm,0.2s								
SQTA	Sankt Quirin	4.76	343	*e*Pn		Pn	05 32 47.0	+2.9	
	comp=Z,3.2nm,0.4s								
WATA	Walderalm	4.80	347	*e*Pn		Pn	05 32 48.1	+3.4	
	comp=Z,3.6nm,0.2s								
ARSA	Arzberg	4.85	19	*e*Pn		Pn	05 32 48.3	+3.0	
	comp=Z,0.6nm,0.2s								
MOTA	Moosalm	4.90	343	*e*Pn		Pn	05 32 48.6	+2.6	
	comp=Z,0.7nm,0.2s								
LMR	La Mourre	4.96	280	*e*P		Pn	05 32 46.7	-0.1	
LMR				*e*Sn		Sn	05 33 41.4	-2.6	
	comp=Z,18nm,1.1s								
SJES	Sjenica	4.99	81	*e*Pn		Pn	05 32 48.1	+0.8	
SJES				eSn		Sn	05 33 44.1	-0.9	
BIOA	Bad Ischl, Aus	5.02	3	*e*Pn		Pn	05 32 51.0	+3.4	
	comp=Z,4.6nm,0.3s								
MBDF	Montbardon	5.10	296	*e*P		Pn	05 32 51.1	+2.3	
MBDF				*e*Sn		Sn	05 33 44.8	-2.9	
	comp=Z,11nm,0.7s								
RETA	Reutte	5.11	341	*e*Pn		Pn	05 32 49.2	+0.4	
	comp=Z,0.6nm,0.2s								
DIVS	Divibare	5.14	72	*e*Pn		Pn	05 32 50.6	+1.3	
IVAS	Ivanjica	5.16	78	*e*Pn		Pn	05 32 50.5	+1.0	
IVAS				eSn		Sn	05 33 47.8	-1.1	
DAVA	Damuels	5.18	334	*e*Pn		Pn	05 32 51.1	+1.3	
	comp=Z,2.1nm,0.2s								
MOA	Molln	5.22	8	*e*Pn		Pn	05 32 50.1	-0.2	
	comp=Z,1.0nm,0.2s								
LPG	La Plagne	5.44	303	*e*P		Pn	05 32 56.6	+3.0	
LPG				*e*Sn		Sn	05 33 54.3	-1.9	
	comp=Z,14nm,1.0s								
LPL	La Plagne	5.46	303	*e*P		Pn	05 32 56.6	+2.8	
LPL				*e*Sn		Sn	05 33 53.2	-3.5	
	comp=Z,6.4nm,0.6s								
RONA	Rosalia, Austr	5.47	22	*e*Pn		Pn	05 32 54.8	+1.0	
	comp=Z,1.7nm,0.2s								
CONA	Conrad Observa	5.57	19	*e*Pn		Pn	05 32 55.8	+0.6	
	comp=Z,1.4nm,0.2s								
GRUS	Gruza	5.61	75	*e*Pn		Pn	05 32 57.3	+1.7	
SMRF	Simiane la Rot	5.72	286	*e*P		Pn	05 32 58.5	+1.2	
ORIF	Oris-en-Rattie	5.76	295	*e*P		Pn	05 33 00.6	+2.8	
SELS	Selova	5.83	82	*e*Pn		Pn	05 32 58.9	+0.2	
GERES	GERESS Array B	6.17	3	Pn		Pn	05 33 04.8	+1.3	
	comp=Z,0.4nm,0.3s,baz=184,slow=11,SNR=5.4								
GERES				Sn		Sn	05 34 13.4	-0.6	
	comp=Z,2.5nm,0.3s,baz=179,slow=25,SNR=9.8								
GERES				Lg		Lg	05 34 50.3		
	baz=184,slow=29								
	comp=Z,0.6nm,0.3s								
CKRC	Cesky Krumlov	6.19	7	*e*SN		Sn	05 34 13.0	-1.2	
BOVS	Bovan	6.28	78	*e*Pn		Pn	05 33 05.8	+0.9	
BARS	Barje	6.33	86	*e*Pn		Pn	05 33 05.9	+0.3	
BARS				eSn		Sn	05 34 15.2	-2.7	
CABF	La Chapelle	6.42	310	*e*P		Pn	05 33 09.9	+3.0	
CABF				*e*Sn		Sn	05 34 16.0	-4.2	
	comp=Z,1.5nm,0.4s								
KHC	Kasperske Hory	6.45	2	*e*PN		Pn	05 33 10.0	+2.7	
KHC				eSN		Sn	05 34 19.1	-1.8	
PRVS	Prvonek	6.54	89	*e*Pn		Pn	05 33 08.8	+0.3	
PRVS				eSn		Sn	05 34 20.1	-2.9	
VIVF	Saint-Julien-l	6.55	292	*e*P		Pn	05 33 11.5	+2.8	
VIVF				*e*Sn		Sn	05 34 19.5	-3.9	
	comp=Z,1.0nm,0.3s								
ZAGS	Zajecar	6.68	77	*e*Pn		Pn	05 33 11.6	+1.2	
HINF	Hinteralfeld	6.82	321	*e*P		Pn	05 33 14.4	+2.1	
HINF				*e*Sn		Sn	05 34 24.6	-5.2	
	comp=Z,8.8nm,0.3s								
ZAPS	Zavoj	6.93	82	*e*Pn		Pn	05 33 14.7	+0.8	
ZAPS				eSn		Sn	05 34 30.3	-2.4	
CDF	Champ du Feu	7.08	326	*e*P		Pn	05 33 16.8	+0.8	
CDF				*e*Sn		Sn	05 34 30.5	-5.9	
	comp=Z,6.5nm,0.4s								
HAU	Haudompre	7.19	320	*e*P		Pn	05 33 19.9	+2.5	
HAU				*e*Sn		Sn	05 34 33.7	-5.3	
	comp=Z,12nm,0.4s								
KEST	Kesra	7.56	205	Pn		Pn	05 33 26.0	+3.4	
	comp=Z,0.2nm,0.3s,baz=48,slow=23,SNR=1.7								
	comp=Z,2.0nm,0.7s								
CAF	Calviac	8.37	289	*e*P		Pn	05 33 35.4	+1.8	
CLL	Collm	8.63	359	*e*Pn		Pn	05 33 36.0	-1.1	
CLL				eSn		Sn	05 35 02.0	-12	
CLL				*ex*		x	05 35 16.0		
CLL				eSg		Sg	05 36 05.0	-4.2	
ESDC	Sonseca Array	13.29	263	Pn		Pn	05 34 40.8	-0.1	
	comp=Z,0.1nm,0.3s,baz=66,slow=14,SNR=6.2								
	comp=Z,0.7nm,0.7s								
FINES	FINESS Array B	20.31	18	P		Pn	05 36 10.3	+0.3	
	comp=Z,0.9nm,0.8s,baz=224,slow=12,SNR=1.8								
	comp=Z,0.9nm,0.8s								
TORD	Torodi Ar. Bea	31.07	202	P		P	05 37 51.7	+1.2	
	comp=Z,0.6nm,0.7s,baz=16,slow=7.8,SNR=4.6								
	comp=Z,0.6nm,0.7s								
MKAR	Makanchi Array	47.80	60	P		P	05 40 10.4	+0.8	
	comp=Z,0.4nm,0.8s,baz=287,slow=5.9,SNR=2.9								
	comp=Z,0.4nm,0.8s								

LDG ***24*** *05:36:18.7±0.1, 42.˚79N× 13.˚11E, h6km, Ml3.1/14, Error ellipse: s-maj=2.9km s-min=2.0km az=50.0*
PRU ***24*** *05:36:19.9±0.0, 42.˚79N× 13.˚77E, h0km*
ROM ***24*** *05:36:19.1±0.1, 42.˚801N±0.˚004× 13.˚136E±0.˚006, h7km, ML3.4/66, Mw3.3, Error ellipse: s-maj=0.5km s-min=0.3km az=66.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.32; Mθθ=0.18; Mφφ=0.49; Mrθ=0.48; Mθφ=0.29; Mφr=0.74; Fault plane solution: M₀ 1.01205× 10¹⁴ NP1:φs 231.00000°, δ 29.00000°, λ -19.00000°. NP2:φs 338.00000°, δ 81.00000°, λ -117.00000°.*
BEO ***24*** *05:36:19.1±1.1, 42.˚77N× 12.˚97E, h11km±6km, ML3.4/4*
IDC ***24*** *05:36:19.9±1.6, 43.˚02N× 12.˚21E, h0km, mb3.5/2, mbtmp3.5/4, ML3.3/2, MS3.0/2, Error ellipse: s-maj=98.0km s-min=14.8km az=103.0*

ISC 24 05:36:19.5±0.8, 42.79N±0.˚02× 13.˚11E±0.˚02, h12km±5km, n162, σ1ŝ75/212, 29C-13D, Central Italy

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

NRCA	Norcia	0.04	9	⇑*i*P		Pg	05 36 21.4	-0.6	
NRCA				S		Sg	05 36 22.5	-1.1	
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
FEMA	Monte Fema	0.17	347	P		Pg	05 36 23.6	0.0	
FEMA				S		Sg	05 36 26.3	-0.1	
FEMA				AML	AML				
	comp=E,55250μm,0.3s								
FEMA				AML	AML				
	comp=N,44100μm,0.7s								
FEMA				AML	AML				
	comp=E,55250μm,0.3s								
FEMA				AML	AML				
	comp=N,44100μm,0.7s								
FDMO	Fiordimonte	0.24	357	⇓*e*P		Pg	05 36 24.5	-0.2	
FDMO				S		Sg	05 36 28.2	0.0	
CESI	CESI - Serrava	0.26	325	⇑*i*P		Pg	05 36 25.2	+0.2	
CESI				S		Sg	05 36 29.7	+1.0	
CESI				AML	AML				
	comp=E,20950μm,0.3s								
CESI				AML	AML				
	comp=N,30250μm,0.2s								
RM33	Pellescritta (	0.29	164	AML	AML				
	comp=N,7745μm,0.3s								
RM33				AML	AML				
	comp=E,9240μm,0.8s								
RM33				AML	AML				
	comp=N,8025μm,0.3s								
RM33				AML	AML				
	comp=E,9240μm,0.8s								
RM33				AML	AML				
	comp=N,7740μm,0.3s								
RM33				AML	AML				
	comp=E,9130μm,0.8s								
CSP1	Cessapalombo	0.31	14	⇓*e*P		Pg	05 36 25.5	-0.4	
CSP1				S		Sg	05 36 30.1	0.0	
CSP1				AML	AML				
	comp=E,31150μm,0.8s								
CSP1				AML	AML				
	comp=E,31100μm,0.8s								
CSP1				AML	AML				
	comp=N,35700μm,0.3s								
ARRO	Arrone	0.33	230	⇑*e*P		Pb	05 36 26.9	-0.4	
ARRO				S		Sb	05 36 32.5	0.0	
ARRO				AML	AML				
	comp=E,7030μm,1.1s								
ARRO				AML	AML				
	comp=N,6680μm,1.2s								
ARRO				AML	AML				
	comp=E,7025μm,1.1s								
ARRO				AML	AML				
	comp=N,6675μm,1.2s								
CAMP	Campotosto	0.34	139	AML	AML				
	comp=N,3780μm,1.3s								
CAMP				AML	AML				
	comp=E,3540μm,0.6s								
SEF1	Sefro	0.37	342	⇑*i*P		Pg	05 36 27.0	0.0	
SEF1				S		Sg	05 36 32.7	+0.7	
SEF1				AML	AML				
	comp=N,16750μm,0.3s								
SEF1				AML	AML				
	comp=E,15950μm,0.2s								
SEF1				AML	AML				
	comp=N,16750μm,0.2s								
PIO1	Pioraco	0.40	347	⇑*i*P		Pg	05 36 27.3	-0.1	
PIO1				S		Sg	05 36 33.7	+0.9	
PIO1				AML	AML				
	comp=E,7375μm,0.4s								
PIO1				AML	AML				
	comp=N,8745μm,1.2s								
PIO1				AML	AML				
	comp=E,7375μm,0.4s								
PIO1				AML	AML				
	comp=N,8740μm,1.3s								
MDAR	Monte D'Aria	0.40	4	*e*P		Pg	05 36 27.3	-0.3	
MDAR				S		Sg	05 36 33.3	+0.3	
MDAR				AML	AML				
	comp=E,8430μm,1.6s								
MDAR				AML	AML				
	comp=N,11950μm,0.4s								
MDAR				AML	AML				
	comp=E,8425μm,1.6s								
MDAR				AML	AML				
	comp=N,12000μm,0.4s								
TERO	Teramo	0.40	114	*e*P		Pg	05 36 27.0	-0.6	
TERO				S		Sg	05 36 32.9	-0.1	
TERO				AML	AML				
	comp=N,7890μm,0.3s								
TERO				AML	AML				
	comp=N,7885μm,0.3s								
TERO				AML	AML				
	comp=N,8740μm,0.3s								
TERO				AML	AML				
	comp=E,6515μm,1.2s								
TERO				AML	AML				
	comp=E,5650μm,0.9s								
ASSB	Assisi San Ben	0.41	308	⇑*e*P		Pg	05 36 27.9	+0.2	
ASSB				S		Sb	05 36 34.5	-0.6	
ASSB				AML	AML				
	comp=E,11800μm,0.3s								
ASSB				AML	AML				
	comp=N,10450μm,0.4s								
CESX	Cesi	0.43	245	⇑*e*P		Pg	05 36 28.5	+0.5	
CESX				S		Sb	05 36 35.5	0.0	
CESX				AML	AML				
	comp=E,8390μm,0.5s								
CESX				AML	AML				
	comp=N,6395μm,0.5s								
SSM1	San Severino M	0.44	7	⇓*e*P		Pg	05 36 27.9	-0.4	
SSM1				S		Sg	05 36 34.6	+0.5	
GAG1	Gagliole	0.45	356	P		Pg	05 36 28.2	-0.1	
GAG1				S		Sg	05 36 35.1	+0.8	
GAG1				AML	AML				
	comp=E,14050μm,0.4s								
GAG1				AML	AML				
	comp=E,14100μm,0.4s								
GAG1				AML	AML				
	comp=N,17100μm,0.9s								
OFFI	Offida	0.45	71	*e*P		Pg	05 36 28.4	0.0	
OFFI				AML	AML				
	comp=E,13025μm,0.5s								
OFFI				AML	AML				
	comp=N,19400μm,0.6s								
MTL1	Matelica	0.47	351	⇑*e*P		Pg	05 36 28.7	-0.1	
MTL1				S		Sb	05 36 36.1	-0.6	
MTL1				AML	AML				
	comp=E,12700μm,1.1s								
MTL1				AML	AML				
	comp=N,13800μm,0.4s								
SNTG	Esanatoglia	0.48	345	P		Pg	05 36 28.7	-0.2	
SNTG				S		Sg	05 36 36.1	+0.7	
SNTG				AML	AML				
	comp=E,498μm,0.9s								
SNTG				AML	AML				
	comp=N,582μm,0.6s								
SNTG				AML	AML				
	comp=N,4130μm,1.3s								
SNTG				AML	AML				
	comp=E,498μm,0.8s								
SNTG				AML	AML				
	comp=N,582μm,0.5s								
SNTG				AML	AML				
	comp=E,3445μm,0.9s								
GIGS	Gran Sasso	0.48	135	AML	AML				
	comp=N,1112μm,0.7s								
GIGS				AML	AML				
	comp=E,918μm,0.5s								
AQU	L'Aquila	0.49	153	⇑*i*P		Pg	05 36 29.1	0.0	
AQU				AML	AML				
	comp=E,4265μm,0.7s								
AQU				AML	AML				
	comp=N,3170μm,1.3s								
AQU				AML	AML				
	comp=E,4175μm,0.7s								
AQU				AML	AML				
	comp=N,3160μm,1.3s								
ATCC	AVT- Casa Cast	0.52	319	⇑*i*P		Pg	05 36 29.8	+0.1	
ATCC				S		Sb	05 36 37.9	-0.3	
ATCC				AML	AML				
	comp=E,7295μm,1.6s								
ATCC				AML	AML				
	comp=N,7785μm,0.3s								
FIAM	Fiamignano	0.52	179	⇓*e*P		Pg	05 36 29.8	0.0	

FIAM				S		Sg	05 36 37.5	+0.8	
FIAM				AML	AML				
	comp=N,3860μm,0.6s								
FIAM				AML	AML				
	comp=E,4120μm,0.4s								
EL6	Elcito	0.54	360	⇑*i*P		Pg	05 36 29.7	-0.4	
EL6				S		Sg	05 36 37.9	+0.7	
TRE1	Treia	0.54	16	⇓*e*P		Pg	05 36 30.2	+0.1	
TRE1				S		Sb	05 36 38.8	0.0	
TRE1				AML	AML				
	comp=E,10545μm,1.2s								
TRE1				AML	AML				
	comp=N,10805μm,0.4s								
TRE1				AML	AML				
	comp=E,10525μm,1.1s								
TRE1				AML	AML				
	comp=N,10835μm,0.4s								
FOSV	Fossato di Vic	0.56	333	⇑*i*P		Pg	05 36 30.3	-0.2	
FOSV				S		Sb	05 36 38.8	-0.6	
FOSV				AML	AML				
	comp=N,4685μm,0.3s								
FOSV				AML	AML				
	comp=E,3125μm,0.8s								
TRTR	Tortoreto Alta	0.59	88	*e*P		Pb	05 36 31.6	-0.3	
TRTR				S		Sb	05 36 41.1	+0.9	
TRTR				AML	AML				
	comp=E,10215μm,0.4s								
TRTR				AML	AML				
	comp=N,10465μm,1.6s								
FAGN	Fagnano	0.63	146	⇑*e*P		Pg	05 36 31.3	-0.6	
FAGN				S		Sb	05 36 42.2	+0.8	
FAGN				AML	AML				
	comp=N,4320μm,0.6s								
FAGN				AML	AML				
	comp=E,6730μm,0.6s								
MURB	Monte Urbino	0.64	318	⇑*e*P		Pg	05 36 31.9	0.0	
MURB				S		Sb	05 36 42.4	+0.9	
MURB				AML	AML				
	comp=N,12150μm,0.3s								
MURB				AML	AML				
	comp=N,13450μm,1.6s								
MURB				AML	AML				
	comp=N,12170μm,0.3s								
MURB				AML	AML				
	comp=E,12350μm,0.3s								
MURB				AML	AML				
	comp=E,12350μm,0.3s								
VCEL	Villa Celiera	0.67	126	⇓*e*P		Pg	05 36 32.1	-0.5	
VCEL				AML	AML				
	comp=N,3335μm,1.6s								
VCEL				AML	AML				
	comp=E,3190μm,0.5s								
ATTE	AVT- Monte Tez	0.69	307	*e*P		Pg	05 36 32.8	-0.1	
ATTE				S		Sb	05 36 44.0	+1.1	
ATTE				AML	AML				
	comp=E,2610μm,0.3s								
ATTE				AML	AML				
	comp=N,2350μm,1.0s								
SSFR	Montelago di S	0.69	340	⇓*e*P		Pg	05 36 32.6	-0.3	
SSFR				AML	AML				
	comp=E,7050μm,0.3s								
SSFR				AML	AML				
	comp=N,8190μm,0.2s								
SSFR				AML	AML				
	comp=E,6865μm,0.3s								
SSFR				AML	AML				
	comp=E,7045μm,0.2s								
SSFR				AML	AML				
	comp=N,7510μm,0.2s								
SSFR				AML	AML				
	comp=N,8185μm,0.2s								
PP3	Marolino	0.69	32	*e*P		Pg	05 36 33.1	+0.1	
PP3				S		Sn	05 36 44.9	-0.9	
PP3				AML	AML				
	comp=E,15850μm,0.3s								
PP3				AML	AML				
	comp=N,13300μm,0.4s								
PP3				AML	AML				
	comp=N,14300μm,0.3s								
PP3				AML	AML				
	comp=N,13250μm,0.4s								
PP3				AML	AML				
	comp=N,14350μm,0.3s								
PP3				AML	AML				
	comp=E,15600μm,0.3s								
PP3				AML	AML				
	comp=E,15900μm,0.3s								
ATFO	Monte Foce - G	0.69	326	⇑*e*P		Pg	05 36 32.9	-0.2	
ATFO				S		Sb	05 36 44.1	+0.9	
ATFO				AML	AML				
	comp=N,2785μm,0.6s								
ATFO				AML	AML				
	comp=E,2310μm,0.4s								
SRES	S.Oreste - Sor	0.71	219	*e*P		Pb	05 36 33.9	+0.1	
SRES				AML	AML				
	comp=N,1770μm,0.4s								
SRES				AML	AML				
	comp=E,1390μm,0.4s								
ARVD	Arcevia	0.72	350	⇑*i*P		Pg	05 36 32.9	-0.5	
ARVD				S		Sb	05 36 43.5	-0.4	
ARVD				AML	AML				
	comp=E,1805μm,0.6s								
ARVD				AML	AML				
	comp=N,1255μm,0.6s								
MGAB	Montegabbione	0.74	280	*e*P		Pg	05 36 34.2	+0.3	
MGAB				AML	AML				
	comp=N,6940μm,1.3s								
MGAB				AML	AML				
	comp=E,6605μm,0.4s								
MGAB				AML	AML				
	comp=E,5640μm,1.2s								
MGAB				AML	AML				
	comp=N,6880μm,1.3s								
T0110	Collepietro	0.75	138	⇑*e*P		Pg	05 36 33.2	-0.9	
T0110				S		Sb	05 36 44.7	-0.1	
T0110				AML	AML				
	comp=N,4170μm,0.5s								
T0110				AML	AML				
	comp=E,3715μm,0.6s								
FRON	Frontone	0.78	339	⇑*i*P		Pg	05 36 34.0	-0.6	
FRON				S		Sb	05 36 45.8	+0.2	
FRON				AML	AML				
	comp=E,1540μm,0.9s								
FRON				AML	AML				
	comp=N,2990μm,0.4s								
ATVO	AVT- Monte Val	0.78	319	⇑*i*P		Pg	05 36 34.2	-0.4	
ATVO				AML	AML				
	comp=E,1955μm,1.5s								
ATVO				AML	AML				
	comp=N,1640μm,0.4s								
PTQR	Pietraquaria	0.80	164	⇑*i*P		Pg	05 36 34.6	-0.4	
PTQR				AML	AML				
	comp=N,784μm,1.1s								
PTQR				AML	AML				
	comp=E,924μm,0.4s								
MTCE	Montecelio	0.81	199	*e*P		Pg	05 36 35.3	+0.1	
MTCE				AML	AML				
	comp=N,1010μm,0.5s								
MTCE				AML	AML				
	comp=E,1330μm,1.1s								
ATMI	Monte Miggiano	0.82	312	*e*P		Pg	05 36 35.4	+0.1	
ATMI				AML	AML				
	comp=E,5620μm,0.7s								
ATMI				AML	AML				
	comp=N,6635μm,0.3s								
ATPI	Pietralunga -	0.84	322	P		Pg	05 36 35.4	-0.3	
ATPI				AML	AML				
	comp=E,1620μm,1.1s								
ATPI				AML	AML				
	comp=E,1625μm,1.1s								
ATPI				AML	AML				
	comp=N,1565μm,0.3s								
AOI	Ancona	0.84	25	*e*P		Pg	05 36 35.3	-0.5	
AOI				S		Sb	05 36 48.4	+1.0	
AOI				AML	AML				
	comp=E,1980μm,0.5s								
AOI				AML	AML				
	comp=N,2270μm,0.7s								
COR1	Corinaldo	0.84	355	*e*P		Pb	05 36 36.0	-0.1	
COR1				S		Sn	05 36 49.9	+0.3	
COR1				AML	AML				
	comp=E

	comp=E,2190µm,0.5s								
CERT					AML	AML			
	comp=N,2030µm,0.8s								
PIEI	**Pieia**	**0.85**	**331**	⇑*i*	P	**Pg**	**05 36 35.4**	**-0.7**
PIEI					S	**Sb**	**05 36 48.9**	**+1.1**
PIEI					AML	AML			
	comp=E,1595µm,0.4s								
PIEI					AML	AML			
	comp=N,1010µm,0.3s								
MPAG	**Monte Paganucc**	**0.88**	**343**	⇑*i*	P	**Pg**	**05 36 35.8**	**-0.6**
MPAG					S	**Sb**	**05 36 49.4**	**+0.9**
SACS	**San Casciano d**	**0.88**	**274**	*e*	P	**Pb**	**05 36 37.0**	**+0.2**
SACS					AML	AML			
	comp=N,1915µm,0.5s								
SACS					AML	AML			
	comp=E,1600µm,0.7s								
SACS					AML	AML			
	comp=N,1925µm,0.5s								
SACS					AML	AML			
	comp=E,1650µm,0.7s								
NARO	**Abbazia di Nar**	**0.91**	**335**	⇑*e*	P	**Pg**	**05 36 36.2**	**-0.8**
NARO					S	**Sn**	**05 36 50.4**	**-0.7**
NARO					AML	AML			
	comp=E,955µm,1.2s								
NARO					AML	AML			
	comp=N,975µm,0.4s								
APEC	**Apecchio**	**0.92**	**327**	*e*	P	**Pg**	**05 36 37.0**	**-0.2**
APEC					AML	AML			
	comp=N,2180µm,1.3s								
APEC					AML	AML			
	comp=E,1995µm,0.7s								
FSSB	**Fossombrone**	**0.93**	**345**	⇑*i*	P	**Pg**	**05 36 36.9**	**-0.6**
FSSB					S	**Sn**	**05 36 51.3**	**-0.6**
FSSB					AML	AML			
	comp=E,4195µm,0.6s								
FSSB					AML	AML			
	comp=N,8685µm,0.3s								
BADI	**Badiali**	**0.95**	**319**	*e*	P	**Pg**	**05 36 37.6**	**-0.4**
BADI					AML	AML			
	comp=E,144µm,0.4s								
BADI					AML	AML			
	comp=N,1191µm,0.7s								
INTR	**Introdacqua**	**0.98**	**143**	⇑*e*	P	**Pg**	**05 36 36.9**	**-1.5**
INTR					AML	AML			
	comp=E,1595µm,0.8s								
INTR					AML	AML			
	comp=E,2µm,0.8s								
INTR					AML	AML			
	comp=N,2830µm,1.2s								
INTR					AML	AML			
	comp=N,2µm,1.2s								
CAFI	**Castiglion Fio**	**0.99**	**303**	*e*	P	**Pg**	**05 36 38.5**	**-0.2**
CAFI					AML	AML			
	comp=E,1135µm,0.3s								
CAFI					AML	AML			
	comp=N,1600µm,0.8s								
CAFI					AML	AML			
	comp=E,1100µm,0.3s								
CAFI					AML	AML			
	comp=N,1540µm,0.8s								
GUAR	**Guarcino**	**1.01**	**171**		AML	AML			
	comp=E,2045µm,1.0s								
GUAR					AML	AML			
	comp=N,2290µm,0.9s								
RMP	**Rome, Mte Porz**	**1.02**	**197**	*e*	P	**Pn**	**05 36 39.8**	**0.0**
RMP					AML	AML			
	comp=E,2060µm,0.5s								
RMP					AML	AML			
	comp=N,2055µm,0.4s								
SSP9	**Sansepolcro**	**1.06**	**318**	*e*	P	**Pn**	**05 36 40.3**	**+0.1**
PARC	**Parchiule**	**1.07**	**324**	*e*	P	**Pg**	**05 36 39.3**	**-0.7**
PARC					AML	AML			
	comp=N,1380µm,0.5s								
PARC					AML	AML			
	comp=E,1885µm,0.6s								
LPEL	**Lama dei Pelig**	**1.09**	**133**	*e*	P	**Pb**	**05 36 39.0**	**-1.3**
LPEL					AML	AML			
	comp=N,1240µm,0.6s								
LPEL					AML	AML			
	comp=E,1265µm,0.6s								
PESA	**Pesaro**	**1.17**	**351**	*e*	P	**Pb**	**05 36 41.7**	**0.0**
PESA					AML	AML			
	comp=E,2120µm,0.3s								
PESA					AML	AML			
	comp=N,2400µm,0.3s								
GIUL	**Giuliano Di Ro**	**1.24**	**175**	*e*	P	**Pb**	**05 36 43.0**	**+0.2**
GIUL					AML	AML			
	comp=N,818µm,0.7s								
GIUL					AML	AML			
	comp=E,886µm,0.9s								
TRIV	**Trivento**	**1.48**	**133**	⇑	P	**Pg**	**05 36 47.8**	**-0.2**
TRIV					AML	AML			
	comp=E,555µm,0.9s								
TRIV					AML	AML			
	comp=E,660µm,1.0s								
TRIV					AML	AML			
	comp=N,864µm,1.0s								
TRIV					AML	AML			
	comp=N,836µm,1.0s								
CSNT	**Castellina Chi**	**1.49**	**298**	*e*	P	**Pb**	**05 36 47.1**	**-0.1**
CSNT					AML	AML			
	comp=N,228µm,0.8s								
CSNT					AML	AML			
	comp=E,260µm,0.7s								
RUFI	**Rufina**	**1.57**	**313**	*e*	P	**Pb**	**05 36 48.0**	**-0.4**
VAGA	**Valle Agricola**	**1.61**	**148**	*e*	P	**Pg**	**05 36 51.5**	**+1.1**
LMD	**Lutirano**	**1.64**	**322**	*e*	P	**Pb**	**05 36 50.0**	**+0.3**
CASP	**Castiglione de**	**1.65**	**271**	⇓*i*	P	**Pn**	**05 36 48.8**	**+0.5**
CASP					AML	AML			
	comp=N,114µm,0.5s								
CASP					AML	AML			
	comp=E,138µm,0.9s								
TRIF	**Trifonti**	**1.65**	**282**	*e*	P	**Pn**	**05 36 49.3**	**+0.9**
TRIF					AML	AML			
	comp=E,220µm,0.3s								
TRIF					AML	AML			
	comp=N,208µm,0.4s								
MODR	**Mondragone**	**1.74**	**160**	*e*	P	**Pb**	**05 36 51.7**	**+0.2**
DUGI	**Dugi Otok**	**1.86**	**49**	*e*	Pn	**Pn**	**05 36 51.8**	**+0.5**
VIRC	**Vir**	**2.06**	**43**	*e*	Pn	**Pn**	**05 36 54.0**	**0.0**
PAOL	**Paolisi**	**2.07**	**148**		P	**Pn**	**05 36 54.9**	**+0.8**
PAOL					AML	AML			
	comp=E,96µm,0.6s								
PAOL					AML	AML			
	comp=N,138µm,1.2s								
APRC	**Apricena**	**2.08**	**119**	*e*	P	**Pn**	**05 36 55.4**	**+1.1**
APRC					AML	AML			
	comp=N,384µm,1.5s								
APRC					AML	AML			
	comp=E,366µm,0.4s								
MORI	**Morici**	**2.18**	**60**	*e*	Pn	**Pn**	**05 36 56.3**	**+0.7**
NVLJ	**Novalja**	**2.19**	**35**	*e*	Pn	**Pn**	**05 36 55.7**	**0.0**
SGRT	**San Giovanni R**	**2.21**	**117**	*e*	P	**Pn**	**05 36 57.3**	**+1.2**
SGRT					AML	AML			
	comp=E,323µm,0.5s								
SGRT					AML	AML			
	comp=N,338µm,0.9s								
RABC	**Rab**	**2.30**	**31**	*e*	Pn	**Pn**	**05 36 57.7**	**+0.4**
MSAG	**Monte S. Angel**	**2.34**	**116**	*e*	P	**Pn**	**05 36 59.3**	**+1.4**
UDBI	**Udbina**	**2.60**	**47**	*e*	Pn	**Pn**	**05 37 02.6**	**+1.2**
PLMA	**Palmaria, Port**	**2.68**	**299**	*e*	P	**Pn**	**05 37 04.1**	**+1.6**
KIJV	**Kijevo**	**2.69**	**62**	*e*	Pn	**Pn**	**05 37 03.8**	**+1.1**
RIY	**Rijeka**	**2.72**	**21**	*e*	Pn	**Pn**	**05 37 03.5**	**+0.5**
RIY					eSn	**Sn**	**05 37 37.1**	**+1.2**
LSTV	**Lastovo**	**2.79**	**89**	*e*	Pn	**Pn**	**05 37 04.1**	**+0.2**
MSSA	**Maissana**	**3.02**	**302**	*e*	P	**Pn**	**05 37 08.4**	**+1.2**
RICI	**Ricice**	**3.03**	**75**	*e*	Pn	**Pn**	**05 37 08.5**	**+1.2**
PGF	**Pioggiola**	**3.04**	**267**	*e*	P	**Pn**	**05 37 08.6**	**+1.1**
PGF					eSn	**Sn**	**05 37 40.3**	**-3.6**
	comp=N,31nm,1.0s								
BOJS	**Bojanci**	**3.12**	**29**	*e*	P	**Pn**	**05 37 10.3**	**+1.8**
CGRP	**Cima Grappa**	**3.23**	**344**	*e*	P	**Pn**	**05 37 11.6**	**+1.4**
CGRP					S	**Sn**	**05 37 48.9**	**+0.2**
STON	**Ston**	**3.38**	**87**	*e*	Pn	**Pn**	**05 37 12.0**	**-0.1**
STON	**Ston**	**3.38**	**87**	*e*	Pn	**Pn**	**05 37 11.8**	**-0.3**
DOSS	**Dosso del Somm**	**3.38**	**337**		P	**Pn**	**05 37 14.2**	**+1.9**
SALO	**Salr**	**3.38**	**328**		P	**Pn**	**05 37 14.5**	**+2.4**
LJU	**Ljubljana**	**3.41**	**17**	⇑	P	**Pn**	**05 37 13.4**	**+0.9**
LJU					AML	AML			
	comp=E,635µm,0.8s								
LJU					AML	AML			
	comp=N,700µm,0.7s								
MAGA	**Magasa**	**3.47**	**330**	*e*	P	**Pn**	**05 37 15.0**	**+1.5**
STAL	**STALIGIAL**	**3.48**	**355**	*e*	P	**Pn**	**05 37 14.2**	**+0.6**
STAL					S	**Sn**	**05 37 54.9**	**+0.2**
STAL					AML	AML			
	comp=N,136µm,0.3s								
STAL					AML	AML			
	comp=E,205µm,0.3s								
LUSI	**Trento, Gardas**	**3.53**	**335**	⇓	P	**Pn**	**05 37 16.3**	**+2.1**
CIMO	**Cimolais**	**3.55**	**353**	*e*	P	**Pn**	**05 37 15.0**	**+0.5**
CIMO					AML	AML			
	comp=E,35µm,0.9s								
CIMO					AML	AML			
	comp=N,45µm,0.8s								
NOCI	**Noci**	**3.57**	**123**		P	**Pn**	**05 37 16.1**	**+1.3**
PTCC	**Patocco-Chiusa**	**3.62**	**3**	⇓	P	**Pn**	**05 37 15.7**	**+0.3**
PTCC					AML	AML			
	comp=N,60µm,1.4s								
PTCC					AML	AML			
	comp=E,69µm,0.4s								
GAGG	**Gaggia**	**3.63**	**336**	*e*	P	**Pn**	**05 37 17.9**	**+2.2**
CLUD	**Cludinico**	**3.67**	**358**	⇓	P	**Pn**	**05 37 15.5**	**-0.6**
CLUD					AML	AML			
	comp=N,37µm,1.5s								
CLUD					AML	AML			
	comp=E,54µm,1.4s								
EUCT	**Pavia**	**3.74**	**311**	⇓	P	**Pb**	**05 37 26.7**	**+1.2**
ZOU	**Zoufplan**	**3.77**	**359**	*e*	P	**Pn**	**05 37 18.3**	**+0.7**
ACOM	**Acomizza, Ital**	**3.77**	**4**	*e*	P	**Pn**	**05 37 19.0**	**+1.4**
MYKA	**Terra Mystica**	**3.86**	**6**	*e*	Pn	**Pn**	**05 37 20.5**	**+1.7**
	comp=E,1.4nm,0.1s								
OBKA	**Obir**	**3.86**	**15**	*e*	Pn	**Pn**	**05 37 20.5**	**+1.7**
	comp=E,0.1nm,0.1s								
KOSI	**Kohlern**	**3.87**	**342**	*e*	P	**Pn**	**05 37 20.8**	**+1.8**
APPI	**Appiano**	**3.92**	**341**	*e*	P	**Pn**	**05 37 21.5**	**+1.8**
ABTA	**Abfaltersbach**	**3.98**	**354**	*e*	Pn	**Pn**	**05 37 22.2**	**+1.8**
	comp=E,21nm,0.5s								
SOKA	**Soboth**	**4.12**	**19**	*e*	Pn	**Pn**	**05 37 24.2**	**+1.8**
	comp=E,1.8nm,0.2s								
SBF	**Sospel**	**4.27**	**286**	*e*	P	**Pn**	**05 37 25.7**	**+1.2**
SBF					eSn	**Sn**	**05 38 10.0**	**-4.3**
	comp=E,17nm,0.4s								
KBA	**Koelnbreinsper**	**4.29**	**2**	*e*	Pn	**Pn**	**05 37 26.2**	**+1.4**
	comp=E,0.8nm,0.2s								
VSL	**Villasalto**	**4.33**	**222**	⇓	P	**Pn**	**05 37 27.7**	**+2.5**
VARE	**Varese**	**4.37**	**316**	⇑	P	**Pn**	**05 37 28.0**	**+2.1**
FETA	**Feichten**	**4.55**	**339**	*e*	Pn	**Pn**	**05 37 28.1**	**-0.3**
	comp=E,0.8nm,0.3s								
LLI	**Lipari**	**4.56**	**161**	⇑	P	**Pn**	**05 37 25.0**	**-3.4**
WTTA	**Wattenberg**	**4.59**	**347**	*e*	Pn	**Pn**	**05 37 29.5**	**+0.6**
	comp=E,0.7nm,0.2s								
SQTA	**Sankt Quirin**	**4.63**	**344**	*e*	Pn	**Pn**	**05 37 30.5**	**+1.1**
	comp=E,5.7nm,0.2s								
WATA	**Walderalm**	**4.67**	**347**	*e*	Pn	**Pn**	**05 37 29.8**	**-0.2**
	comp=E,1.6nm,0.2s								
BBLS	**Lazići**	**4.72**	**75**	*e*	Pn	**Pn**	**05 37 31.2**	**+0.6**
MOTA	**Moosalm**	**4.77**	**343**	*e*	Pn	**Pn**	**05 37 34.7**	**+3.3**
	comp=E,5.1nm,0.4s								
ARSA	**Arzberg**	**4.78**	**20**	*e*	Pn	**Pn**	**05 37 30.3**	**-1.1**
	comp=E,3.0nm,0.3s								
LMR	**La Mourre**	**4.86**	**279**	*e*	P	**Pn**	**05 37 33.5**	**+1.0**
LMR					eSn	**Sn**	**05 38 24.0**	**-4.7**
	comp=E,2.1nm,0.4s								
BIOA	**Bad Ischl, Aus**	**4.92**	**4**	*e*	Pn	**Pn**	**05 37 35.5**	**+2.3**
	comp=E,3.1nm,0.3s								
MBDF	**Montbardon**	**4.98**	**295**	*e*	P	**Pn**	**05 37 36.2**	**+2.0**
MBDF					eSn	**Sn**	**05 38 26.9**	**-4.9**
	comp=E,3.1nm,0.4s								
RETA	**Reutte**	**4.98**	**341**	*e*	Pn	**Pn**	**05 37 37.2**	**+3.1**
	comp=E,0.9nm,0.2s								
DAVA	**Damuels**	**5.04**	**334**	*e*	Pn	**Pn**	**05 37 38.8**	**+3.7**
	comp=E,2.1nm,0.2s								
SJES	**Sjenica**	**5.06**	**82**	*e*	Pn	**Pn**	**05 37 37.1**	**+1.8**
SJES					eSn	**Sn**	**05 38 32.9**	**-0.8**
MOA	**Molln**	**5.12**	**9**	*e*	Pn	**Pn**	**05 37 37.7**	**+1.6**
	comp=E,0.2nm,0.1s								
DIVS	**Divibare**	**5.18**	**73**	*e*	Pn	**Pn**	**05 37 36.9**	**0.0**
IVAS	**Ivanjica**	**5.21**	**79**	*e*	Pn	**Pn**	**05 37 38.3**	**+0.9**
IVAS					eSn	**Sn**	**05 38 38.0**	**+0.6**
LPG	**La Plagne**	**5.31**	**303**	*e*	P	**Pn**	**05 37 41.1**	**+2.2**
LPG					eSn	**Sn**	**05 38 35.0**	**-5.2**
	comp=E,10nm,0.8s								
LPL	**La Plagne**	**5.33**	**303**	*e*	P	**Pn**	**05 37 41.5**	**+2.3**
LPL					eSn	**Sn**	**05 38 35.5**	**-5.1**
	comp=E,3.9nm,0.4s								
RONA	**Rosalia, Austr**	**5.40**	**24**	*e*	Pn	**Pn**	**05 37 41.3**	**+1.4**
	comp=E,0.7nm,0.2s								
CONA	**Conrad Observa**	**5.49**	**20**	*e*	Pn	**Pn**	**05 37 42.3**	**+1.1**
	comp=E,1.7nm,0.3s								
SMRF	**Simiane la Rot**	**5.61**	**285**	*e*	P	**Pn**	**05 37 45.1**	**+2.2**
SMRF					eSn	**Sn**	**05 38 41.8**	**-5.5**
	comp=E,0.9nm,0.3s								
GRUS	**Gruza**	**5.66**	**76**	*e*	Pn	**Pn**	**05 37 44.3**	**+0.9**
SELS	**Selova**	**5.89**	**83**	*e*	Pn	**Pn**	**05 37 47.1**	**+0.4**
GERES	**GERESS Array B**	**6.07**	**4**		Pn	**Pn**	**05 37 49.3**	**+0.2**
	comp=E,0.7nm,0.3s,baz=180,slow=14,SNR=5.5								
GERES					Sn	**Sn**	**05 38 56.8**	**-1.8**
	comp=E,1.5nm,0.3s,baz=190,slow=34,SNR=7.1								
GERES					LR	LR	05 40 02.6		
	comp=E,87nm,21.0s,baz=26,slow=38								
	comp=E,0.7nm,0.3s								
CKRC	**Cesky Krumlov**	**6.09**	**8**	*e*	SN	**Sn**	**05 38 57.0**	**-1.9**
CABF	**La Chapelle**	**6.29**	**310**	*e*	P	**Pn**	**05 37 54.4**	**+2.2**
CABF					eSn	**Sn**	**05 38 58.2**	**-5.8**
	comp=E,21nm,1.2s								
KHC	**Kasperske Hory**	**6.35**	**3**	*e*	PN	**Pn**	**05 37 53.7**	**+0.8**
KHC					eSN	**Sn**	**05 39 05.0**	**-0.4**
BARS	**Barje**	**6.41**	**87**	*e*	Pn	**Pn**	**05 37 54.5**	**+0.8**
VIVF	**Saint-Julien-l**	**6.44**	**292**	*e*	P	**Pn**	**05 37 56.1**	**+1.9**
PRVS	**Prvonek**	**6.62**	**89**	*e*	Pn	**Pn**	**05 37 57.5**	**+0.8**
HINF	**Hinteralfeld**	**6.68**	**321**	*e*	P	**Pn**	**05 37 59.4**	**+1.9**
HINF					eSn	**Sn**	**05 39 07.3**	**-6.3**
	comp=E,8.8nm,0.4s								
ZAGS	**Zajecar**	**6.74**	**78**	*e*	Pn	**Pn**	**05 37 57.9**	**-0.3**
LASF	**Ste Croix**	**6.86**	**284**	*e*	P	**Pn**	**05 38 02.2**	**+2.3**
CDF	**Champ du Feu**	**6.95**	**326**	*e*	P	**Pn**	**05 38 02.8**	**+1.6**
CDF					eSn	**Sn**	**05 39 13.8**	**-6.4**
	comp=E,8.8nm,0.5s								
ZAPS	**Zavoj**	**7.00**	**83**	*e*	Pn	**Pn**	**05 38 02.2**	**+0.3**
HAU	**Haudompre**	**7.06**	**320**	*e*	P	**Pn**	**05 38 04.5**	**+1.9**
HAU					eSn	**Sn**	**05 39 16.5**	**-6.2**
	comp=E,7.1nm,0.3s								
KEST	**Kesra**	**7.63**	**204**		Pn	**Pn**	**05 38 12.7**	**+2.1**
	comp=E,0.2nm,0.3s,baz=343,slow=12,SNR=1.3								
KEST					Sn	**Sn**	**05 39 35.6**	**-1.3**
	comp=E,0.1nm,0.3s,baz=102,slow=11,SNR=1.6								
	comp=E,4.4nm,1.1s								
SFTF	**Sexfontaines**	**7.83**	**316**	*e*	P	**Pn**	**05 38 16.1**	**+2.8**
OKC	**Ostrava-Krasne**	**7.86**	**25**	*e*	PN	**Pn**	**05 38 11.9**	**-1.7**
LOR	**Lormes**	**7.93**	**308**	*e*	P	**Pn**	**05 38 17.5**	**+2.9**
	baz=123								
LOR					eSn	**Sn**	**05 39 37.4**	**-6.9**
	comp=E,6.2nm,0.6s								
MTLF	**Montolieu**	**7.99**	**278**	*e*	P	**Pn**	**05 38 18.2**	**+2.7**
AVF	**Avril sur Loir**	**8.01**	**303**	*e*	P	**Pn**	**05 38 18.5**	**+2.9**
FINES	**FINESS Array B**	**20.23**	**18**		P	Pn	05 40 57.4	+1.2
	comp=E,1.6nm,0.8s,baz=217,slow=9.1,SNR=3.9								
	comp=E,1.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**31.14**	**202**		P	**P**	**05 42 39.7**	**+1.5**
	comp=E,0.8nm,0.9s,baz=24,slow=10.0,SNR=4.4								
	comp=E,0.8nm,0.9s								
SJG	**San Juan**	**70.14**	**277**		LR	LR	06 11 57.9		
	comp=E,20nm,21.1s,baz=88,slow=31								

ROM 24 05:37:45.9±0.1,**42°606N**±0°005×**13°286E**±0°007,
h10km,**ML3.0**/19,**6C-1D**,**Error ellipse: s-maj=0.6km**
s-min=0.5km az=74.0,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.11**	**208**	⇑*i*P	Pg	05 37 49.4	+0.6
RM33				S	Sg	05 37 51.7	+1.0
RM33				AML	AML		
	comp=E,17700µm,0.7s						
RM33				AML	AML		
	comp=N,16900µm,1.3s						
RM33				AML	AML		
	comp=N,16900µm,1.2s						
RM33				AML	AML		
	comp=N,16900µm,1.2s						
RM33				AML	AML		
	comp=E,16950µm,0.7s						
RM33				AML	AML		
	comp=N,16950µm,1.2s						
RM33				AML	AML		
	comp=E,17700µm,0.7s						
RM33				AML	AML		
	comp=E,16900µm,0.7s						
CAMP	**Campotosto**	**0.12**	**128**	⇓*i*P	Pg	05 37 49.2	+0.4
CAMP				S	Sg	05 37 51.3	+0.4
CAMP				AML	AML		
	comp=E,12600µm,0.7s						
CAMP				AML	AML		
	comp=N,6235µm,0.5s						
TERO	**Teramo**	**0.24**	**86**	⇑*i*P	Pg	05 37 50.9	+0.1
TERO				S	Sg	05 37 54.5	+0.5
TERO				AML	AML		
	comp=N,7620µm,1.1s						
TERO				AML	AML		
	comp=E,5275µm,0.2s						
TERO				AML	AML		
	comp=E,5820µm,0.7s						
TERO				AML	AML		
	comp=N,9330µm,0.7s						
TERO				AML	AML		
	comp=E,5280µm,0.2s						
NRCA	**Norcia**	**0.26**	**331**	*e*P	Pg	05 37 51.5	+0.3
NRCA				S	Sg	05 37 55.4	+0.5
NRCA				AML	AML		
	comp=N,37200µm,1.0s						
NRCA				AML	AML		
	comp=E,39150µm,0.1s						
NRCA				AML	AML		
	comp=E,34550µm,0.1s						
NRCA				AML	AML		
	comp=N,40000µm,1.0s						
NRCA				AML	AML		
	comp=N,37200µm,1.0s						
GIGS	**Gran Sasso**	**0.26**	**127**	⇑*e*P	Pg	05 37 51.5	+0.2
GIGS				S	Sg	05 37 55.5	+0.7
GIGS				AML	AML		
	comp=E,1080µm,1.0s						
GIGS				AML	AML		
	comp=N,990µm,0.5s						
GIGS				AML	AML		
	comp=E,1080µm,1.0s						
AQU	**L'Aquila**	**0.27**	**161**	⇑P	Pb	05 37 52.2	-0.6
AQU				S	Sb	05 37 56.5	-1.0
AQU				AML	AML		
	comp=N,3385µm,1.1s						
AQU				AML	AML		
	comp=N,3205µm,1.1s						
AQU				AML	AML		
	comp=E,2725µm,0.5s						
AQU				AML	AML		
	comp=E,2830µm,0.5s						
AQU				AML	AML		
	comp=E,2720µm,0.5s						
AQU				AML	AML		
	comp=N,3390µm,1.1s						
FIAM	**Fiamignano**	**0.36**	**200**	*e*P	Pb	05 37 53.9	-0.6
FIAM				AML	AML		
	comp=N,1305µm,0.8s						
FIAM				AML	AML		
	comp=E,1770µm,0.6s						
ARRO	**Arrone**	**0.39**	**266**	*e*P	Pg	05 37 54.0	+0.5
ARRO				S	Sb	05 37 59.8	-1.0
ARRO				AML	AML		
	comp=N,1885µm,1.0s						
ARRO				AML	AML		
	comp=N,1890µm,1.0s						
ARRO				AML	AML		
	comp=E,1685µm,1.0s						
FEMA	**Monte Fema**	**0.40**	**334**	*e*P	Pg	05 37 53.8	0.0
FEMA				S	Sg	05 37 59.9	+0.9
FAGN	**Fagnano**	**0.41**	**147**	*e*P	Pb	05 37 55.0	-0.2
FAGN				AML	AML		
	comp=E,3705µm,0.5s						
FAGN				AML	AML		
	comp=N,2130µm,0.4s						
OFFI	**Offida**	**0.44**	**42**	*e*P	Pb	05 37 55.4	-0.5
OFFI				S	Sb	05 38 03.0	+0.5
FDMO	**Fiordimonte**	**0.45**	**341**	*e*P	Pg	05 37 54.9	+0.1
FDMO				S	Sg	05 38 01.5	+0.7
FDMO				AML	AML		
	comp=E,1405µm,0.2s						
FDMO				AML	AML		
	comp=N,2355µm,0.3s						
GUMA	**Gualdo di Mace**	**0.46**	**5**	*e*P	Pg	05 37 55.4	+0.5
GUMA				S	Sb	05 38 02.5	-0.5
GUMA				AML	AML		
	comp=N,6145µm,0.4s						
GUMA				AML	AML		
	comp=E,8140µm,0.4s						
GUMA				AML	AML		
	comp=N,6145µm,0.4s						
GUMA				AML	AML		
	comp=E,7955µm,0.8s						
GUMA				AML	AML		
	comp=N,6495µm,0.5s						
VCEL	**Villa Celiera**	**0.46**	**117**	*e*P	Pb	05 37 55.6	-0.6
VCEL				S	Sb	05 38 03.0	-0.1
VCEL				AML	AML		
	comp=N,4150µm,0.7s						
VCEL				AML	AML		
	comp=E,2230µm,0.5s						
CESI	**CESI - Serrava**	**0.49**	**325**	P	Pg	05 37 55.5	0.0
CESI				S	Sg	05 38 02.9	+1.0
CESI				AML	AML		
	comp=N,3605µm,0.4s						
CESI				AML	AML		
	comp=E,2880µm,0.5s						
CESI				AML	AML		
	comp=N,3610µm,0.4s						
CSP1	**Cessapalombo**	**0.49**	**353**	*e*P	Pg	05 37 55.1	-0.3
CSP1				S	Sg	05 38 02.8	+0.8
CSP1				AML	AML		
	comp=E,2770µm,0.2s						
CSP1				AML	AML		
	comp=E,2765µm,0.2s						
CSP1				AML	AML		
	comp=N,4085µm,0.5s						
TRTR	**Tortoreto Alta**	**0.51**	**66**	⇑*i*P	Pb	05 37 56.8	0.0
TRTR				S	Sb	05 38 05.2	+0.9
CESX	**Cesi**	**0.52**	**271**	*e*P	Pg	05 37 56.4	+0.3
CESX				S	Sb	05 38 04.9	+0.1
CESX				AML	AML		
	comp=E,1160µm,0.4s						
CESX				AML	AML		
	comp=N,1485µm,0.4s						
T0110	**Collepietro**	**0.53**	**136**	*e*P	Pg	05 37 56.5	+0.4
T0110				S	Sb	05 38 04.5	-0.5
T0110				AML	AML		
	comp=E,1465µm,0.8s						
T0110				AML	AML		
	comp=N,1485µm,0.5s						
MNTP	**Montappone**	**0.55**	**14**	*e*P	Pb	05 37 57.1	-0.5
MNTP				S	Sb	05 38 06.5	+1.0
PTQR	**Pietraquaria**	**0.59**	**172**	*e*P	Pg	05 37 57.6	+0.2
SEF1	**Sefro**	**0.59**	**335**	⇑*i*P	Pg	05 37 57.2	-0.2
SEF1				S	Sb	05 38 06.4	-0.5
ASSB	**Assisi San Ben**	**0.64**	**314**	*e*P	Pg	05 37 58.1	-0.1
ASSB				S	Sg	05 38 06.9	+0.3
SRES	**S.Oreste - Sor**	**0.68**	**238**	*e*P	Pg	05 37 58.6	-0.5
SRES				AML	AML		
	comp=N,410µm,0.6s						
SRES				AML	AML		

	comp=E,1790μm,0.6s							
MGAB					AML	AML		
	comp=E,1510μm,0.8s							
SF01	**Poggio Pratacc**	**1.29**	**280**	*e*P		Pn	05 38 10.1	+0.1
SF01				S		Sn	05 38 29.4	+2.1
PAOL	**Paolisi**	**1.84**	**148**	*e*P		Pn	05 38 17.6	0.0

NOU 24 05:38:33.1,21.50S×172.28E,h104km,MLv4.2/8,
Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.96**	**270**	P		Pn	05 39 32.0	+0.2
PINNC	**Pines Island,**	**4.62**	**255**	P		Pn	05 39 40.6	-0.1
LIFNC	**LIFOU**	**4.76**	**278**	P		Pn	05 39 42.4	-0.2
YATNC	**Mamie plateau,**	**5.04**	**263**	P		Pn	05 39 45.4	-1.0
OUENC	**Ouen Island, N**	**5.13**	**259**	P		Pn	05 39 47.6	0.0
DZM	**Mont Dzumac**	**5.45**	**263**	P		Pn	05 39 52.3	+0.2
ONTNC	**Ouen Toro**	**5.47**	**260**	P		Pn	05 39 52.3	+0.1
NOUC	**Port Laguerre**	**5.59**	**263**	P		Pn	05 39 53.8	0.0

ROM 24 05:38:44.3±0.1,42.711N±0.004×13.204E±0.009,
h10km,ML2.3/4,3C-1D,Error ellipse: s-maj=0.8km
s-min=0.2km az=241.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.14**	**332**	P		Pg	05 38 47.8	+0.3
NRCA				S		Sg	05 38 50.5	+0.8
RM33	**Pellescritta (**	**0.20**	**178**	⇑*e*P		Pg	05 38 49.4	+0.9
RM33				S		Sg	05 38 52.7	+1.3
RM33				AML		AML		
	comp=N,2840μm,0.5s							
RM33				AML		AML		
	comp=N,2845μm,0.5s							
RM33				AML		AML		
	comp=E,2080μm,0.8s							
CAMP	**Campotosto**	**0.23**	**139**	⇑*e*P		Pg	05 38 49.8	+0.7
CAMP				S		Sg	05 38 53.5	+1.2
FEMA	**Monte Fema**	**0.28**	**336**	*e*P		Pg	05 38 50.6	+0.7
FEMA				S		Sb	05 38 55.0	-1.3
TERO	**Teramo**	**0.31**	**107**	⇑*i*P		Pg	05 38 50.9	+0.4
TERO				S		Sg	05 38 55.5	+0.9
TERO				AML		AML		
	comp=E,1170μm,0.8s							
TERO				AML		AML		
	comp=N,1400μm,0.5s							
TERO				AML		AML		
	comp=E,1169μm,0.8s							
FDMO	**Fiordimonte**	**0.34**	**345**	*e*P		Pb	05 38 51.8	-0.7
FDMO				S		Sg	05 38 56.7	+1.2
FDMO				AML		AML		
	comp=E,428μm,0.8s							
FDMO				AML		AML		
	comp=N,504μm,1.0s							
ARRO	**Arrone**	**0.35**	**248**	*e*P		Pb	05 38 52.2	-0.5
ARRO				S		Sb	05 38 57.4	-0.8
ARRO				AML		AML		
	comp=E,672μm,0.2s							
ARRO				AML		AML		
	comp=N,642μm,0.2s							
ARRO				AML		AML		
	comp=E,672μm,0.2s							
CESI	**CESI - Serrava**	**0.37**	**323**	*e*P		Pg	05 38 52.2	+0.6
CESI				S		Sb	05 38 57.9	-0.9
GIGS	**Gran Sasso**	**0.38**	**134**	*e*P		Pg	05 38 52.0	+0.3
GIGS				S		Sg	05 38 57.6	+0.9
CSP1	**Cessapalombo**	**0.38**	**0**	*e*P		Pg	05 38 52.5	+0.7
CSP1				S		Sb	05 38 58.1	-1.2
AQU	**L'Aquila**	**0.39**	**158**	*e*P		Pg	05 38 52.2	+0.3
AQU				S		Sb	05 38 59.0	-0.3
OFFI	**Offida**	**0.42**	**58**	⇓*i*P		Pb	05 38 53.9	+0.1
OFFI				S		Sb	05 39 01.3	+1.1
FIAM	**Fiamignano**	**0.45**	**188**	*e*P		Pg	05 38 53.6	+0.6
FIAM				S		Sb	05 39 00.2	-1.0
VCEL	**Villa Celiera**	**0.57**	**124**	*e*P		Pb	05 38 56.1	-0.3
VCEL				S		Sb	05 39 04.2	-0.4
ATCC	**AVT- Casa Cast**	**0.63**	**319**	*e*P		Pb	05 38 57.3	-0.2
T0110	**Collepietro**	**0.65**	**139**	*e*P		Pg	05 38 57.1	+0.4
T0110				S		Sb	05 39 06.7	-0.1
ARVD	**Arcevia**	**0.81**	**346**	S		Sn	05 39 14.0	0.0

ROM 24 05:39:12.3±0.1,42.769N±0.005×13.16E±0.02,h9km,
Md1.7/5,ML1.7/2,1C-1D,Error ellipse: s-maj=1.8km
s-min=0.4km az=256.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**334**	⇓*e*P		Pg	05 39 15.1	+0.5
NRCA				S		Sg	05 39 16.4	+0.2
FEMA	**Monte Fema**	**0.21**	**338**	P		Pg	05 39 17.2	+0.4
FEMA				S		Sg	05 39 20.9	+1.2
FEMA				END				
RM33	**Pellescritta (**	**0.26**	**171**	P		Pb	05 39 18.8	-0.5
RM33				S		Sb	05 39 22.6	-1.3
FDMO	**Fiordimonte**	**0.27**	**349**	*e*P		Pg	05 39 18.6	+0.8
FDMO				S		Sb	05 39 22.8	-1.3
FDMO				AML		AML		
	comp=E,175μm,0.2s							
FDMO				AML		AML		
	comp=N,239μm,0.3s							
FDMO				END				
CESI	**CESI - Serrava**	**0.30**	**322**	⇑*i*P		Pg	05 39 19.1	+0.8
CESI				S		Sb	05 39 24.0	-0.9
CESI				AML		AML		
	comp=N,488μm,0.5s							
CESI				AML		AML		
	comp=E,199μm,0.3s							
CESI				END				
CSP1	**Cessapalombo**	**0.32**	**6**	P		Pb	05 39 19.8	-0.6
CSP1				S		Sb	05 39 24.6	-1.1
CSP1				END				
SEF1	**Sefro**	**0.41**	**338**	*e*P		Pg	05 39 21.0	+0.7
SEF1				S		Sb	05 39 27.7	-0.3
SEF1				END				

ROM 24 05:39:45.4±0.2,42.802N±0.007×13.21E±0.02,h9km±1km,
ML2.1/1,Error ellipse: s-maj=1.4km s-min=0.8km
az=265.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**295**	P		Pg	05 39 48.1	+0.5
NRCA				S		Sg	05 39 49.5	+0.3
NRCA				AML		AML		
	comp=E,16400μm,0.7s							
NRCA				AML		AML		
	comp=N,18600μm,0.2s							
NRCA				AML		AML		
	comp=E,18250μm,0.7s							
NRCA				AML		AML		
	comp=N,19650μm,0.2s							
FEMA	**Monte Fema**	**0.20**	**324**	*e*P		Pg	05 39 50.1	+0.5
FEMA				S		Sg	05 39 53.6	+1.2
FDMO	**Fiordimonte**	**0.25**	**339**	P		Pg	05 39 51.0	+0.5
FDMO				S		Sg	05 39 55.1	+1.2
GUMA	**Gualdo di Mace**	**0.28**	**20**	P		Pb	05 39 52.2	-0.4
GUMA				S		Sb	05 39 57.2	-0.3
GUMA				AML		AML		
	comp=E,1410μm,0.8s							
GUMA				AML		AML		
	comp=N,702μm,1.1s							
GUMA				AML		AML		
	comp=E,2560μm,0.3s							
GUMA				AML		AML		
	comp=N,2230μm,0.4s							
GUMA				AML		AML		
	comp=E,3660μm,0.3s							
GUMA				AML		AML		
	comp=N,2125μm,0.4s							
GUMA				AML		AML		
	comp=E,601μm,0.6s							
GUMA				AML		AML		
	comp=E,568μm,0.5s							
GUMA				AML		AML		
	comp=N,497μm,0.3s							
GUMA				AML		AML		
	comp=N,627μm,0.3s							
CSP1	**Cessapalombo**	**0.29**	**360**	P		Pg	05 39 52.1	+0.8
CSP1				S		Sb	05 39 56.7	-1.2
RM33	**Pellescritta (**	**0.29**	**179**	P		Pb	05 39 52.1	-0.8
RM33				S		Sb	05 39 57.8	-0.1
TERO	**Teramo**	**0.34**	**121**	*e*P		Pg	05 39 52.8	+0.6
TERO				S		Sb	05 39 58.1	-1.2
TERO				AML		AML		
	comp=E,416μm,0.2s							
TERO				AML		AML		
	comp=N,436μm,0.4s							
ARVD	**Arcevia**	**0.72**	**344**	P		Pg	05 39 58.8	-0.6
ARVD				S		Sb	05 40 10.8	+0.5

ROM 24 05:39:59.2±0.1,42.807N±0.006×13.25E±0.01,h9km,
ML1.9/4,Error ellipse: s-maj=1.1km s-min=0.6km
az=251.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**286**	P		Pg	05 40 02.3	+0.6
NRCA				S		Sg	05 40 03.8	+0.2
NRCA				AML		AML		
	comp=E,16400μm,0.7s							
NRCA				AML		AML		
	comp=N,18600μm,0.2s							
NRCA				AML		AML		
	comp=E,18250μm,0.7s							
NRCA				AML		AML		
	comp=N,19650μm,0.2s							
FDMO	**Fiordimonte**	**0.26**	**333**	P		Pb	05 40 05.5	-0.6
FDMO				S		Sb	05 40 09.4	-1.3
FDMO				AML		AML		
	comp=N,212μm,0.1s							
FDMO				AML		AML		
	comp=E,243μm,0.2s							
GUMA	**Gualdo di Mace**	**0.26**	**14**	AML		AML		
	comp=E,1410μm,0.8s							
GUMA				AML		AML		
	comp=N,702μm,1.1s							
CSP1	**Cessapalombo**	**0.29**	**354**	P		Pb	05 40 05.9	-0.7
CSP1				S		Sb	05 40 10.6	-0.9
CSP1				AML		AML		
	comp=E,387μm,0.4s							
CSP1				AML		AML		
	comp=N,583μm,0.3s							
CAMP	**Campotosto**	**0.30**	**156**	P		Pb	05 40 06.5	-0.2
CAMP				S		Sb	05 40 10.6	-1.2
RM33	**Pellescritta (**	**0.30**	**185**	P		Pg	05 40 05.0	-0.1
RM33				S		Sb	05 40 11.3	-0.5
CESI	**CESI - Serrava**	**0.32**	**308**	P		Pb	05 40 06.5	-0.6
CESI				S		Sb	05 40 11.4	-1.1
CESI				AML		AML		
	comp=E,117μm,0.2s							
TERO	**Teramo**	**0.32**	**125**	P		Pg	05 40 05.8	+0.2
TERO				S		Sb	05 40 11.7	-0.7
TERO				AML		AML		
	comp=E,1290μm,1.1s							
TERO				AML		AML		
	comp=N,1300μm,0.3s							
FIU1	**Fiuminata**	**0.45**	**329**	AML		AML		
	comp=N,3115μm,1.5s							
FIU1				AML		AML		
	comp=E,1890μm,1.5s							
SNTG	**Esanatoglia**	**0.50**	**334**	P		Pg	05 40 08.8	-0.1
SNTG				S		Sb	05 40 17.4	-0.3

ROM 24 05:40:09.4±0.2,42.750N±0.006×13.18E±0.01,h5km±1km,
ML2.3/1,Error ellipse: s-maj=1.0km s-min=0.3km
az=266.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**328**	P		Pg	05 40 12.4	+0.9
NRCA				S		Sg	05 40 13.6	+0.7
NRCA				AML		AML		
	comp=E,16400μm,0.7s							
NRCA				AML		AML		
	comp=N,18600μm,0.2s							
NRCA				AML		AML		
	comp=E,18250μm,0.7s							
NRCA				AML		AML		
	comp=N,19650μm,0.2s							
FEMA	**Monte Fema**	**0.23**	**335**	*e*P		Pg	05 40 14.8	+0.9
FEMA				S		Sg	05 40 18.1	+1.0
RM33	**Pellescritta (**	**0.24**	**175**	P		Pg	05 40 14.6	+0.5
RM33				S		Sg	05 40 18.2	+0.9
FDMO	**Fiordimonte**	**0.29**	**346**	P		Pb	05 40 16.6	-0.6
FDMO				S		Sg	05 40 20.0	+1.0
CESI	**CESI - Serrava**	**0.33**	**321**	*e*P		Pg	05 40 16.5	+0.7
CESI				S		Sg	05 40 20.9	+0.8
GUMA	**Gualdo di Mace**	**0.33**	**20**	P		Pb	05 40 17.4	-0.5
GUMA				S		Sb	05 40 22.8	-0.7
GUMA				AML		AML		
	comp=E,1410μm,0.8s							
GUMA				AML		AML		
	comp=N,702μm,1.1s							
GUMA				AML		AML		
	comp=E,2560μm,0.3s							
GUMA				AML		AML		
	comp=N,2230μm,0.4s							
GUMA				AML		AML		
	comp=E,3660μm,0.3s							
GUMA				AML		AML		
	comp=N,2125μm,0.4s							
GUMA				AML		AML		
	comp=N,825μm,0.3s							
GUMA				AML		AML		
	comp=E,758μm,0.4s							
GUMA				AML		AML		
	comp=N,870μm,0.5s							
GUMA				AML		AML		
	comp=E,1067μm,0.4s							
TERO	**Teramo**	**0.34**	**112**	P		Pb	05 40 17.2	-0.7
TERO				S		Sg	05 40 21.6	+1.4
TERO				AML		AML		
	comp=E,416μm,0.2s							
TERO				AML		AML		
	comp=N,436μm,0.4s							
CSP1	**Cessapalombo**	**0.34**	**3**	P		Pg	05 40 16.3	+0.3
CSP1				S		Sg	05 40 22.1	+1.5
ARRO	**Arrone**	**0.35**	**241**	P		Pb	05 40 18.0	-0.1
ARRO				S		Sb	05 40 23.1	-0.9
CESX	**Cesi**	**0.47**	**253**	P		Pb	05 40 20.3	+0.2
CESX				S		Sb	05 40 26.2	-1.2
EL6	**Elcito**	**0.58**	**354**	P		Pb	05 40 21.8	-0.4
EL6				S		Sb	05 40 29.7	-1.0
ARVD	**Arcevia**	**0.77**	**347**	P		Pb	05 40 25.5	+0.2
ARVD				S		Sb	05 40 36.2	+0.2

ROM 24 05:40:41.2±0.1,42.628N±0.006×13.242E±0.007,
h11km,ML2.3/14,3C,Error ellipse: s-maj=0.7km
s-min=0.5km az=204.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**190**	⇑*i*P		Pg	05 40 44.9	+0.6
RM33				S		Sg	05 40 47.3	+0.7
RM33				AML		AML		
	comp=E,2260μm,0.2s							
RM33				AML		AML		
	comp=N,2440μm,0.3s							
RM33				AML		AML		
	comp=E,2185μm,0.2s							
RM33				AML		AML		
	comp=N,2495μm,0.3s							
CAMP	**Campotosto**	**0.15**	**127**	P		Pg	05 40 45.3	+0.4
CAMP				S		Sg	05 40 48.0	+0.6
CAMP				AML		AML		
	comp=E,1355μm,0.2s							
CAMP				AML		AML		
	comp=N,1055μm,0.4s							
CAMP				AML		AML		
	comp=E,962μm,0.5s							
NRCA	**Norcia**	**0.23**	**336**	P		Pg	05 40 46.3	+0.2
NRCA				S		Sg	05 40 49.8	+0.5
NRCA				AML		AML		
	comp=E,10750μm,0.1s							
NRCA				AML		AML		
	comp=N,10670μm,0.1s							
NRCA				AML		AML		
	comp=E,11350μm,0.1s							
NRCA				AML		AML		
	comp=N,11600μm,0.1s							
NRCA				AML		AML		
	comp=N,7303μm,0.1s							
NRCA				AML		AML		
	comp=E,8824μm,0.2s							
NRCA				AML		AML		
	comp=E,9477μm,0.2s							
NRCA				AML		AML		
	comp=N,7160μm,0.1s							
TERO	**Teramo**	**0.27**	**91**	*e*P		Pg	05 40 47.0	+0.2
TERO				S		Sg	05 40 51.0	+0.5
TERO				AML		AML		
	comp=E,1290μm,1.1s							
TERO				AML		AML		
	comp=N,1300μm,0.3s							
GIGS	**Gran Sasso**	**0.30**	**126**	⇑*e*P		Pg	05 40 47.6	+0.3
GIGS				S		Sg	05 40 52.2	+0.7
GIGS				AML		AML		
	comp=N,184μm,1.0s							
GIGS				AML		AML		
	comp=E,399μm,0.3s							
ARRO	**Arrone**	**0.35**	**262**	*e*P		Pg	05 40 48.5	+0.2
ARRO				S		Sg	05 40 54.0	+1.0
ARRO				AML		AML		
	comp=E,480μm,1.2s							
ARRO				AML		AML		
	comp=N,420μm,0.2s							
FIAM	**Fiamignano**	**0.37**	**194**	*e*P		Pg	05 40 49.0	+0.4
FIAM				S		Sg	05 40 54.4	+0.8
FIAM				AML		AML		
	comp=E,750μm,0.3s							
FIAM				AML		AML		
	comp=N,381μm,0.7s							
FDMO	**Fiordimonte**	**0.42**	**345**	*e*P		Pg	05 40 49.6	0.0
FDMO				S		Sg	05 40 56.1	+0.8
FDMO				AML		AML		
	comp=E,469μm,0.3s							
FDMO				AML		AML		
	comp=N,497μm,0.3s							
FAGN	**Fagnano**	**0.44**	**145**	*e*P		Pg	05 40 50.2	+0.3
FAGN				S		Sg	05 40 56.6	+0.8
FAGN				AML		AML		
	comp=E,658μm,0.4s							
FAGN				AML		AML		
	comp=N,501μm,0.3s							
OFFI	**Offida**	**0.45**	**47**	*e*P		Pb	05 40 51.0	-0.1
OFFI				S		Sb	05 40 58.8	+0.9
OFFI				AML		AML		
	comp=N,968μm,0.5s							
OFFI				AML		AML		
	comp=N,835μm,0.5s							
OFFI				AML		AML		
	comp=E,748μm,0.5s							
CESI	**CESI - Serrava**	**0.45**	**327**	⇑*i*P		Pg	05 40 50.3	+0.1
CESI				S		Sg	05 40 57.0	+0.8
CESI				AML		AML		
	comp=N,492μm,0.2s							
CESI				AML		AML		
	comp=E,264μm,0.2s							
CESX	**Cesi**	**0.49**	**268**	*e*P		Pg	05 40 51.2	+0.4
CESX				AML		AML		
	comp=E,249μm,0.3s							
CESX				AML		AML		
	comp=N,314μm,0.3s							
VCEL	**Villa Celiera**	**0.50**	**118**	*e*P		Pb	05 40 51.6	-0.5
VCEL				S		Sb	05 40 59.6	+0.1
VCEL				AML		AML		
	comp=N,973μm,0.2s							
VCEL				AML		AML		
	comp=E,627μm,0.3s							
T0110	**Collepietro**	**0.56**	**135**	*e*P		Pg	05 40 52.4	+0.1
T0110				S		Sb	05 41 01.0	-0.2
T0110				AML		AML		
	comp=E,402μm,1.3s							
T0110				AML		AML		
	comp=N,618μm,0.3s							
ATTE	**AVT- Monte Tez**	**0.87**	**311**	*e*P		Pg	05 40 58.0	0.0
MGAB	**Montegabbione**	**0.88**	**289**	*e*P		Pg	05 40 57.8	-0.4
MGAB				S		Sb	05 41 11.1	+0.9
MGAB				AML		AML		
	comp=N,144μm,0.4s							
MGAB				AML		AML		
	comp=E,257μm,0.3s							
MGAB				AML		AML		
	comp=E,232μm,0.3s							
MGAB				AML		AML		
	comp=N,143μm,0.4s							

ROM 24 05:41:06.5±0.2,42.775N±0.009×13.119E±0.010,
h10km,ML1.7/1,Error ellipse: s-maj=1.0km
s-min=0.8km az=4.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.19**	**345**	P		Pg	05 41 11.4	+0.7
FEMA				S		Sg	05 41 14.6	+1.1
FDMO	**Fiordimonte**	**0.26**	**355**	P		Pg	05 41 12.6	+0.7
FDMO				S		Sb	05 41 16.9	-1.2
CESI	**CESI - Serrava**	**0.28**	**326**	P		Pb	05 41 13.0	-0.7
CESI				S		Sb	05 41 17.7	-0.9
CSP1	**Cessapalombo**	**0.32**	**11**	P		Pg	05 41 13.6	+0.5
CSP1				S		Sb	05 41 19.0	-0.9
GUMA	**Gualdo di Mace**	**0.33**	**29**	P		Pg	05 41 13.6	+0.5
GUMA				S		Sb	05 41 19.3	-0.7
ARVD	**Arcevia**	**0.73**	**350**	AML		AML		
	comp=E,77μm,0.3s							
ARVD				AML		AML		
	comp=N,58μm,1.5s							

ROM 24 05:41:33.0±0.1,42.744N±0.005×13.155E±0.010,
h11km,ML1.8/8,4C,Error ellipse: s-maj=0.9km
s-min=0.2km az=242.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**341**	*e*P		Pg	05 41 36.2	+0.5
NRCA				S		Sg	05 41 38.0	+0.4
NRCA				AML		AML		
	comp=E,10750μm,0.1s							
NRCA				AML		AML		
	comp=N,10635μm,0.1s							
NRCA				AML		AML		
	comp=E,10750μm,0.1s							
NRCA				AML		AML		
	comp=N,10670μm,0.1s							
NRCA				AML		AML		
	comp=E,11350μm,0.1s							
NRCA				AML		AML		
	comp=E,10700μm,0.1s							
NRCA				AML		AML		
	comp=N,11600μm,0.1s							
NRCA				AML		AML		
	comp=N,10640μm,0.1s							
RM33	**Pellescritta (**	**0.24**	**169**	AML		AML		
	comp=E,920μm,0.3s							
RM33				AML		AML		
	comp=E,950μm,1.4s							
RM33				AML		AML		
	comp=N,914μm,0.1s							
RM33				AML		AML		
	comp=N,886μm,0.1s							
CAMP	**Campotosto**	**0.28**	**138**	P		Pg	05 41 39.2	+0.5
CAMP				S		Sg	05 41 43.3	+0.7
FDMO	**Fiordimonte**	**0.30**	**350**	⇑*i*P		Pg	05 41 39.4	+0.4
FDMO				S		Sg	05 41 43.9	+0.8
FDMO				AML		AML		
	comp=N,430μm,0.3s							
FDMO				AML		AML		
	comp=E,310μm,0.2s							
FDMO				AML		AML		
	comp=E,193μm,0.3s							
FDMO				AML		AML		
	comp=N,200μm,0.1s							
CESI	**CESI - Serrava**	**0.32**	**325**	⇑*i*P		Pg	05 41 39.8	+0.4
CESI				S		Sg	05 41 44.6	+0.9
CESI				AML		AML		
	comp=E,136μm,0.2s							
CESI				AML		AML		
	comp=N,200μm,0.3s							
GUMA	**Gualdo di Mace**	**0.34**	**22**	*e*P		Pb	05 41 40.7	-0.5
GUMA				S		Sb	05 41 46.3	-0.4
GUMA				AML		AML		
	comp=E,453μm,0.4s							
GUMA				AML		AML		
	comp=N,397μm,0.3s							

GUMA AML AML
comp=N,362μm,0.2s
GUMA AML AML
comp=E,307μm,0.3s
CSP1 Cessapalombo 0.35 6 eP Pg 05 41 40.2 +0.2
CSP1 S Sg 05 41 45.4 +0.7
CSP1 AML AML
comp=E,185μm,0.1s
CSP1 AML AML
comp=N,204μm,0.3s
TERO Teramo 0.35 110 eP Pg 05 41 40.2 +0.2
TERO AML AML
comp=E,400μm,1.5s
TERO AML AML
comp=N,458μm,0.4s
TERO AML AML
comp=E,220μm,0.3s
TERO AML AML
comp=N,249μm,0.2s
GIGS Gran Sasso 0.42 134 eP Pg 05 41 41.3 0.0
GIGS S Sg 05 41 47.7 +0.8
GIGS AML AML
comp=E,137μm,1.0s
GIGS AML AML
comp=N,102μm,1.1s
GIGS AML AML
comp=N,33μm,0.2s
GIGS AML AML
comp=E,53μm,0.4s
CESX Cesi 0.45 253 P Pg 05 41 41.8 +0.1
CESX S Sb 05 41 49.0 -0.5
SNTG Esanatoglia 0.53 343 eP Pg 05 41 43.5 +0.1
SNTG S Sb 05 41 51.9 -0.3
SNTG AML AML
comp=E,101μm,0.1s
SNTG AML AML
comp=E,101μm,0.1s
SNTG AML AML
comp=N,80μm,1.5s
SNTG AML AML
comp=N,53μm,0.3s
SNTG AML AML
comp=E,66μm,0.1s
VCEL Villa Celiera 0.61 124 eP Pb 05 41 45.4 -0.4
VCEL S Sb 05 41 54.5 0.0
T0110 Collepietro 0.69 138 eP Pg 05 41 46.2 -0.1
T0110 S Sg 05 41 55.9 +0.4
CERT Cerreto 0.81 189 S Sg 05 41 59.0 0.0
BADI Badiali 1.01 319 S Sb 05 42 06.0 0.0
CSNT Castellina Chi 1.55 299 P Pb 05 42 02.0 +0.4

ROM 24 05:41:43.2±0.1, 42°.724N±0°.009×13°.27E±0°.02, h10km±1km, ML2.0/4, Error ellipse: s-maj=1.6km s-min=0.3km az=237.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.16**	**313**	P	Pg	05 41 47.6	+0.8
NRCA				S	Sg	05 41 49.7	+0.4
NRCA				AML	AML		
	comp=E,10750μm,0.1s						
NRCA				AML	AML		
	comp=N,10630μm,0.1s						
NRCA				AML	AML		
	comp=N,11600μm,0.1s						
NRCA				AML	AML		
	comp=E,10700μm,0.1s						
NRCA				AML	AML		
	comp=N,10640μm,0.1s						
NRCA				AML	AML		
	comp=E,11350μm,0.1s						
NRCA				AML	AML		
	comp=E,4654μm,0.1s						
NRCA				AML	AML		
	comp=N,4276μm,0.1s						
NRCA				AML	AML		
	comp=N,3905μm,0.2s						
NRCA				AML	AML		
	comp=E,4218μm,0.1s						
CAMP	**Campotosto**	**0.21**	**152**	P	Pg	05 41 48.6	+0.9
CAMP				S	Sg	05 41 52.0	+1.2
RM33	**Pellescritta (**	**0.22**	**191**	P	Pg	05 41 48.8	+1.0
RM33				S	Sg	05 41 52.0	+1.2
TERO	**Teramo**	**0.26**	**112**	P	Pg	05 41 49.3	+0.7
TERO				S	Sg	05 41 53.4	+1.2
TERO				AML	AML		
	comp=N,458μm,0.4s						
TERO				AML	AML		
	comp=E,400μm,1.5s						
GIGS	**Gran Sasso**	**0.35**	**141**	P	Pb	05 41 51.0	-0.6
GIGS				S	Sb	05 41 56.3	-1.0
GIGS				AML	AML		
	comp=E,136μm,1.0s						
GIGS				AML	AML		
	comp=N,102μm,1.1s						
GIGS				AML	AML		
	comp=E,137μm,1.0s						
SNTG	**Esanatoglia**	**0.58**	**335**	P	Pg	05 41 55.0	+0.4
SNTG				S	Sg	05 42 03.1	+0.8
SNTG				AML	AML		
	comp=E,100μm,0.1s						
SNTG				AML	AML		
	comp=N,80μm,1.5s						
SNTG				AML	AML		
	comp=E,101μm,0.1s						

IDC 24 05:45:07.6±2.8, 3°.88S×152°.29E, h56km±14km, mb3.3/3, mbtmp3.6/3, Error ellipse: s-maj=63.8km s-min=39.6km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.50**	**212**	P	Pn	05 45 19.7	+0.3
	490nm,0.4s,baz=169,slow=10,SNR=58						
KRVT				S	Sn	05 45 30.2	+2.4
	998nm,0.5s,baz=336,slow=22,SNR=13						
WRA	**Warramunga Arr**	**23.69**	**226**	P	P	05 50 14.6	0.0
	1.4nm,0.5s,baz=53,slow=9.7,SNR=29						
	1.4nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**26.37**	**32**	T	T	06 18 18.0	
	baz=210,slow=76,SNR=9.9						
H11S2	**WAKE ISLAND Hy**	**26.38**	**32**	T	T	06 18 20.3	
	baz=210,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy**	**26.39**	**32**	T	T	06 18 15.3	
	baz=210,slow=76,SNR=4.1						
ASAR	**Alice Springs**	**26.50**	**220**	P	P	05 50 38.5	-1.6
	0.2nm,0.4s,baz=56,slow=8.8,SNR=2.4						
	0.2nm,0.4s						
VNDA	**Vanda**	**73.77**	**178**	P	P	05 56 36.2	+0.7
	0.4nm,0.8s,baz=322,slow=5.0,SNR=5.1						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**149.53**	**289**	PKPbc	PKPbc	06 04 52.0	+0.2
	0.5nm,0.8s,baz=71,slow=1.6,SNR=4.3						

*ROM **24** 05:45:35.2±0.1, 42°.653N±0°.004×13°.213E±0°.007, h10km, ML2.8/43, Error ellipse: s-maj=0.6km s-min=0.1km az=249.0*

ISC 24 05:45:35.4±0.8, 42°.63N±0°.02×13°.19E±0°.02, h14km±5km, n77, σ1§10/100, 9C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.13**	**172**	**P**	**Pg**	**05 45 39.3**	**+0.3**
RM33				S	Sg	05 45 42.0	+0.6
RM33				AML	AML		
	comp=E,14400μm,0.3s						
RM33				AML	AML		
	comp=N,9805μm,0.3s						
RM33				AML	AML		
	comp=E,14350μm,0.3s						
RM33				AML	AML		
	comp=N,9810μm,0.3s						
RM33				AML	AML		
	comp=E,14050μm,0.3s						
RM33				AML	AML		
	comp=N,9700μm,0.3s						
RM33				AML	AML		
	comp=E,14100μm,0.3s						
RM33				AML	AML		
	comp=N,9805μm,0.3s						
CAMP	**Campotosto**	**0.19**	**121**	P	Pg	05 45 39.8	0.0
CAMP				S	Sg	05 45 42.9	+0.1
CAMP				AML	AML		
	comp=E,1570μm,0.5s						
CAMP				AML	AML		
	comp=N,1710μm,1.0s						
NRCA	**Norcia**	**0.21**	**344**	P	Pg	05 45 39.8	-0.3
NRCA				S	Sg	05 45 42.9	-0.5
TERO	**Teramo**	**0.30**	**92**	P	Pg	05 45 41.3	-0.4
TERO				S	Sg	05 45 45.8	-0.3
TERO				AML	AML		
	comp=E,3960μm,1.2s						
TERO				AML	AML		
	comp=N,5595μm,0.6s						
TERO				AML	AML		
	comp=N,5345μm,0.5s						
TERO				AML	AML		
	comp=E,3660μm,1.2s						
TERO				AML	AML		
	comp=E,3965μm,1.2s						
TERO				AML	AML		
	comp=E,3665μm,1.2s						
AQU	**L'Aquila**	**0.32**	**151**	P	Pg	05 45 42.2	+0.3
AQU				S	Sb	05 45 47.9	0.0
ARRO	**Arrone**	**0.32**	**260**	P	Pg	05 45 42.2	+0.3
ARRO				S	Sb	05 45 47.8	0.0
ARRO				AML	AML		
	comp=E,3145μm,0.2s						
ARRO				AML	AML		
	comp=N,3020μm,0.4s						
GIGS	**Gran Sasso**	**0.33**	**123**	P	Pg	05 45 42.2	-0.1
GIGS				S	Sg	05 45 47.3	+0.4
GIGS				AML	AML		
	comp=E,373μm,0.5s						
GIGS				AML	AML		
	comp=N,480μm,0.3s						
GIGS				AML	AML		
	comp=N,480μm,0.3s						
GIGS				AML	AML		
	comp=E,374μm,0.5s						
FEMA	**Monte Fema**	**0.34**	**342**	P	Pg	05 45 42.3	-0.2
FIAM	**Fiamignano**	**0.37**	**189**	P	Pg	05 45 43.2	+0.3
FIAM				S	Sb	05 45 49.5	+0.1
FIAM				AML	AML		
	comp=E,2875μm,0.6s						
FIAM				AML	AML		
	comp=N,2030μm,0.5s						
FDMO	**Fiordimonte**	**0.41**	**349**	P	Pg	05 45 43.0	-0.6
FDMO				S	Sg	05 45 49.3	0.0
FDMO				AML	AML		
	comp=E,1890μm,0.7s						
FDMO				AML	AML		
	comp=N,1995μm,0.2s						
CESI	**CESI - Serrava**	**0.43**	**330**	P	Pg	05 45 43.6	-0.3
CESI				S	Sg	05 45 50.1	+0.3
CESI				AML	AML		
	comp=E,1860μm,1.1s						
CESI				AML	AML		
	comp=N,2495μm,0.7s						
GUMA	**Gualdo di Mace**	**0.44**	**14**	P	Pg	05 45 44.0	-0.3
GUMA				S	Sb	05 45 50.8	-0.7
GUMA				AML	AML		
	comp=E,9850μm,1.0s						
GUMA				AML	AML		
	comp=N,9245μm,1.5s						
GUMA				AML	AML		
	comp=N,9200μm,1.5s						
GUMA				AML	AML		
	comp=N,8750μm,0.5s						
GUMA				AML	AML		
	comp=E,14350μm,0.3s						
GUMA				AML	AML		
	comp=E,9805μm,0.9s						
CESX	**Cesi**	**0.45**	**267**	P	Pg	05 45 44.3	-0.1
CESX				S	Sb	05 45 51.6	-0.1
CESX				AML	AML		
	comp=N,1725μm,1.4s						
CESX				AML	AML		
	comp=E,1435μm,0.2s						
CSP1	**Cessapalombo**	**0.46**	**1**	i P	Pg	05 45 43.9	-0.6
CSP1				S	Sg	05 45 50.3	-0.4
FAGN	**Fagnano**	**0.47**	**142**	P	Pb	05 45 45.4	0.0
FAGN				AML	AML		
	comp=N,1805μm,0.4s						
FAGN				AML	AML		
	comp=E,3420μm,0.4s						
OFFI	**Offida**	**0.47**	**50**	P	Pg	05 45 44.9	+0.1
OFFI				AML	AML		
	comp=E,4410μm,0.6s						
OFFI				AML	AML		
	comp=N,3370μm,0.4s						
VCEL	**Villa Celiera**	**0.54**	**116**	P	Pg	05 45 46.1	+0.1
VCEL				AML	AML		
	comp=N,1770μm,1.5s						
VCEL				AML	AML		
	comp=E,1430μm,1.1s						
MNTP	**Montappone**	**0.54**	**22**	i P	Pg	05 45 46.0	-0.1
MNTP				S	Sb	05 45 55.0	+0.7
SEF1	**Sefro**	**0.54**	**341**	eP	Pg	05 45 45.6	-0.5
SEF1				S	Sg	05 45 53.5	+0.1
TRTR	**Tortoreto Alta**	**0.56**	**72**	P	Pg	05 45 46.5	+0.1
TRTR				AML	AML		
	comp=N,3080μm,0.3s						
TRTR				AML	AML		
	comp=E,4685μm,0.5s						
PIO1	**Pioraco**	**0.56**	**344**	eP	Pg	05 45 45.9	-0.6
PIO1				S	Sg	05 45 54.3	+0.3
ASSB	**Assisi San Ben**	**0.57**	**316**	P	Pg	05 45 46.5	0.0
ASSB				AML	AML		
	comp=E,1285μm,1.3s						
ASSB				AML	AML		
	comp=N,1795μm,0.2s						
T0110	**Collepietro**	**0.60**	**133**	P	Pg	05 45 47.3	+0.2
T0110				AML	AML		
	comp=E,1205μm,1.3s						
T0110				AML	AML		
	comp=N,1335μm,0.3s						
PTQR	**Pietraquaria**	**0.63**	**166**	eP	Pg	05 45 47.3	-0.4
SRES	**S.Oreste - Sor**	**0.64**	**232**	eP	Pg	05 45 47.7	-0.2
SRES				S	Sb	05 45 58.6	+1.4
SRES				AML	AML		
	comp=E,366μm,0.3s						
SRES				AML	AML		
	comp=N,334μm,0.5s						
SNTG	**Esanatoglia**	**0.65**	**344**	eP	Pg	05 45 47.2	-0.8
SNTG				S	Sg	05 45 56.9	+0.3
SNTG				AML	AML		
	comp=E,709μm,0.6s						
SNTG				AML	AML		
	comp=N,714μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.68**	**324**	eP	Pg	05 45 48.3	-0.4
ATCC				S	Sb	05 45 58.5	0.0
ATCC				AML	AML		
	comp=N,944μm,1.0s						
ATCC				AML	AML		
	comp=N,942μm,1.0s						
ATCC				AML	AML		
	comp=E,909μm,1.4s						
MTCE	**Montecelio**	**0.70**	**209**	i P	Pg	05 45 48.5	-0.5
MTCE				S	Sb	05 45 59.8	+1.0
MTCE				AML	AML		
	comp=N,328μm,0.7s						
MTCE				AML	AML		
	comp=E,382μm,0.4s						
MTCE				AML	AML		
	comp=N,327μm,0.7s						
EL6	**Elcito**	**0.70**	**355**	i P	Pg	05 45 48.1	-0.9
EL6				S	Sg	05 45 58.5	+0.3
EL6				AML	AML		
	comp=E,1749μm,0.2s						
EL6				AML	AML		
	comp=N,1555μm,0.4s						
EL6				AML	AML		
	comp=N,1554μm,0.4s						
EL6				AML	AML		
	comp=E,1750μm,0.2s						
CERT	**Cerreto**	**0.70**	**193**	P	Pg	05 45 48.8	-0.3
CERT				AML	AML		
	comp=E,896μm,0.6s						
CERT				AML	AML		
	comp=N,641μm,0.4s						
CERT				AML	AML		
	comp=E,897μm,0.6s						
CERT				AML	AML		
	comp=N,642μm,0.4s						
FOSV	**Fossato di Vic**	**0.73**	**335**	eP	Pg	05 45 49.1	-0.6
FOSV				AML	AML		
	comp=E,522μm,0.3s						
FOSV				AML	AML		
	comp=N,725μm,0.3s						
FOSV				AML	AML		
	comp=E,523μm,0.3s						
PP3	**Marolino**	**0.80**	**22**	↓P	Pg	05 45 51.0	0.0
PP3				S	Sn	05 46 03.6	-0.4
PP3				AML	AML		
	comp=N,1450μm,1.6s						
PP3				AML	AML		
	comp=E,2950μm,0.4s						
PP3				AML	AML		
	comp=E,2960μm,0.4s						
PP3				AML	AML		
	comp=N,1355μm,1.6s						
INTR	**Introdacqua**	**0.82**	**139**	P	Pg	05 45 50.7	-0.5
INTR				AML	AML		
	comp=E,460nm,1.5s						
INTR				AML	AML		
	comp=N,410nm,1.2s						
INTR				AML	AML		
	comp=N,582μm,0.6s						
INTR				AML	AML		
	comp=E,465nm,1.5s						
INTR				AML	AML		
	comp=E,330μm,0.6s						
INTR				AML	AML		
	comp=N,405nm,1.2s						
INTR				AML	AML		
	comp=N,582μm,0.6s						
ATTE	**AVT- Monte Tez**	**0.83**	**313**	eP	Pb	05 45 51.8	+0.1
ATTE				AML	AML		
	comp=E,232μm,0.7s						
ATTE				AML	AML		
	comp=N,309μm,0.6s						
MGAB	**Montegabbione**	**0.84**	**290**	eP	Pg	05 45 51.9	+0.2
MGAB				AML	AML		
	comp=E,1150μm,0.4s						
MGAB				AML	AML		
	comp=E,1130μm,0.4s						
MGAB				AML	AML		
	comp=N,812μm,1.1s						
MGAB				AML	AML		
	comp=N,874μm,0.4s						
ARVD	**Arcevia**	**0.88**	**348**	eP	Pb	05 45 51.4	-1.1
ARVD				S	Sb	05 46 04.6	+0.5
ARVD				AML	AML		
	comp=N,600μm,0.6s						
ARVD				AML	AML		
	comp=E,514μm,1.5s						
RMP	**Rome, Mte Porz**	**0.90**	**204**	eP	Pn	05 45 54.5	+0.9
RMP				AML	AML		
	comp=E,620μm,0.4s						
RMP				AML	AML		
	comp=N,626μm,1.0s						
ATVO	**AVT- Monte Val**	**0.94**	**323**	eP	Pb	05 45 53.3	-0.2
ATVO				AML	AML		
	comp=E,430μm,0.7s						
ATVO				AML	AML		
	comp=N,372μm,0.4s						
ATVO				AML	AML		
	comp=E,431μm,0.7s						
FRON	**Frontone**	**0.95**	**339**	eP	Pb	05 45 52.8	-0.8
FRON				AML	AML		
	comp=N,742μm,0.5s						
FRON				AML	AML		
	comp=E,543μm,0.5s						
AOI	**Ancona**	**0.96**	**18**	i P	Pb	05 45 53.3	-0.6
AOI				AML	AML		
	comp=E,478μm,0.9s						
AOI				AML	AML		
	comp=N,384μm,0.5s						
AOI				AML	AML		
	comp=N,384μm,0.5s						
AOI				AML	AML		
	comp=E,479μm,0.9s						
SACS	**San Casciano d**	**0.97**	**283**	eP	Pb	05 45 53.9	0.0
SACS				AML	AML		
	comp=N,480μm,0.4s						
SACS				AML	AML		
	comp=E,334μm,1.1s						
SACS				AML	AML		
	comp=N,495μm,0.4s						
SACS				AML	AML		
	comp=E,345μm,0.4s						
ATMI	**Monte Miggiano**	**0.97**	**316**	eP	Pn	05 45 55.1	+0.5
POFI	**Posta Fibreno**	**0.99**	**157**	eP	Pn	05 45 55.8	+0.8
POFI				AML	AML		
	comp=E,198μm,0.4s						
POFI				AML	AML		
	comp=N,198μm,0.9s						
COR1	**Corinaldo**	**1.01**	**352**	i P	Pn	05 45 55.2	+0.1
PIEI	**Pieia**	**1.02**	**332**	eP	Pb	05 45 54.6	-0.3
PIEI				AML	AML		
	comp=N,317μm,0.4s						
PIEI				AML	AML		
	comp=E,378μm,0.5s						
MPAG	**Monte Paganucc**	**1.04**	**342**	eP	Pb	05 45 54.5	-0.7
MPAG				AML	AML		
	comp=N,348μm,1.0s						
MPAG				AML	AML		
	comp=E,361μm,0.6s						
NARO	**Abbazia di Nar**	**1.07**	**336**	eP	Pb	05 45 55.0	-0.7
NARO				AML	AML		
	comp=E,355μm,1.1s						
NARO				AML	AML		
	comp=N,380μm,0.9s						
GIUL	**Giuliano Di Ro**	**1.08**	**178**	eP	Pg	05 45 56.3	+0.2
GIUL				AML	AML		
	comp=N,352μm,0.6s						
GIUL				AML	AML		
	comp=E,219μm,0.5s						
FSSB	**Fossombrone**	**1.10**	**344**	eP	Pb	05 45 55.7	-0.5
FSSB				AML	AML		
	comp=E,935μm,0.3s						
FSSB				AML	AML		
	comp=N,1580μm,0.4s						
BADI	**Badiali**	**1.12**	**322**	eP	Pn	05 45 56.8	+0.2
CAFI	**Castiglion Fio**	**1.14**	**308**	eP	Pb	05 45 56.6	-0.2
CAFI				AML	AML		
	comp=E,197μm,0.2s						
CAFI				AML	AML		
	comp=N,178μm,0.5s						
LIK	**San Giovanni I**	**1.16**	**166**	S	Sb	05 46 11.0	-1.1
PESA	**Pesaro**	**1.33**	**349**	eP	Pb	05 46 00.4	+0.3
PESA				AML	AML		
	comp=E,630μm,1.2s						
PESA				AML	AML		
	comp=N,664μm,0.4s						
CSNT	**Castellina Chi**	**1.63**	**302**	eP	Pb	05 46 05.5	+0.4
BRIS	**BRISIGHELLA**	**1.95**	**322**	P	Pn	05 46 08.6	+0.5
BRIS				AML	AML		
	comp=E,59μm,1.4s						
BRIS				AML	AML		
	comp=N,112μm,0.3s						
BRIS				AML	AML		
	comp=N,5590μm,1.5s						
BRIS				AML	AML		
	comp=E,5550μm,0.9s						
PZUN	**Potenza**	**2.79**	**135**	S	Sn	05 46 55.0	+2.0
CGRP	**Cima Grappa**	**3.40**	**343**	eP	Pn	05 46 29.6	+1.5
CGRP				S	Sn	05 47 07.8	-0.4
DOSS	**Dosso del Somm**	**3.55**	**337**	eP	Pn	05 46 31.6	+1.4
MPRI	**Monte Prat**	**3.61**	**358**	eP	Pn	05 46 31.0	+0.1
MPRI				AML	AML		
	comp=E,46μm,1.5s						
MPRI				AML	AML		
	comp=N,87μm,0.4s						
SALB	**San Lorenzo Be**	**3.64**	**138**	P	Pb	05 46 36.0	-3.5
MAGA	**Magasa**	**3.64**	**330**	eP	Pn	05 46 33.1	+1.8
LUSI	**Trento, Gardas**	**3.70**	**335**	eP	Pn	05 46 34.1	+2.0
ZAG	**Zagreb**	**3.77**	**31**	↑P	Pb	05 46 43.4	+1.7
OBKA	**Obir**	**3.99**	**14**	ePn	Pb	05 46 43.1	-2.5
	comp=N,2.9nm,0.4s						
BOSI	**Bolzano**	**4.09**	**342**	↓P	Pn	05 46 36.9	-0.4
BOSI				↑P	Pb	05 46 47.6	+0.5
SPS2	**Spezzano della**	**4.10**	**143**	P	Pn	05 46 37.0	-0.6
ABTA	**Abfaltersbach**	**4.14**	**354**	ePn	Pn	05 46 39.7	+1.4
	comp=N,2.3nm,0.3s						
BURY	**Giardini Botan**	**4.28**	**287**	P	Pb	05 46 45.9	-4.4
MUGIO	**Muggio**	**4.44**	**319**	P	Pn	05 46 42.6	+0.4
KBA	**Koelnbreinsper**	**4.45**	**1**	ePn	Pn	05 46 43.2	+0.7
	comp=N,2.5nm,0.4s						
FETA	**Feichten**	**4.72**	**339**	ePn	Pn	05 46 51.2	+4.9
	comp=N,0.5nm,0.4s						
WTTA	**Wattenberg**	**4.76**	**347**	ePn	Pn	05 46 50.5	+3.7
	comp=N,1.2nm,0.2s						
WATA	**Walderalm**	**4.84**	**347**	ePn	Pn	05 46 47.9	0.0

comp=N,1.4nm,0.2s
ARSA Arzberg 4.90 19 *e*Pn **Pn 05 46 53.1 +4.5**
comp=N,1.3nm,0.3s
VLO Vlora 5.20 112 P Pn 05 46 59.3 +6.6
MOA Mollη 5.27 8 *e*Pn **Pn 05 46 55.0 +1.4**
comp=N,0.5nm,0.2s
CONA Conrad Observa 5.62 19 *e*Pn **Pn 05 46 56.6 -1.9**
comp=N,0.5nm,0.2s

ROM 24 05:46:30.7±0.1, 42°.681N±0°.004×13°.265E±0°.009, h10km, ML2.1/3, 1C, Error ellipse: s-maj=0.8km s-min=0.2km az=238.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.18**	**192**	P	Pb	05 46 35.4	-0.7
RM33				S	Sg	05 46 38.5	+1.3
RM33				AML	AML		
	comp=E,688μm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.18**	**144**	P	Pb	05 46 35.5	-0.7
CAMP				S	Sg	05 46 37.7	+0.3
CAMP				END			
NRCA	**Norcia**	**0.19**	**324**	P	Pg	05 46 35.4	+0.6
NRCA				S	Sg	05 46 38.4	+0.9
NRCA				AML	AML		
	comp=E,5455μm,0.1s						
NRCA				AML	AML		
	comp=N,5015μm,0.2s						
NRCA				AML	AML		
	comp=E,6090μm,0.1s						
NRCA				AML	AML		
	comp=N,5275μm,0.2s						
NRCA				AML	AML		
	comp=E,26950μm,0.1s						
NRCA				AML	AML		
	comp=N,25250μm,0.1s						
NRCA				AML	AML		
	comp=E,29350μm,0.1s						
NRCA				AML	AML		
	comp=N,27150μm,0.1s						
NRCA				AML	AML		
	comp=E,2125μm,0.6s						
NRCA				AML	AML		
	comp=N,3216μm,0.1s						
TERO	**Teramo**	**0.26**	**103**	P	Pg	05 46 36.4	+0.4
TERO				S	Sb	05 46 40.9	-1.1
TERO				AML	AML		
	comp=E,578μm,0.4s						
TERO				AML	AML		
	comp=N,821μm,0.1s						
TERO				AML	AML		
	comp=N,514μm,2.1s						
TERO				END			
FEMA	**Monte Fema**	**0.32**	**331**	P	Pg	05 46 37.7	+0.5
FEMA				S	Sb	05 46 42.8	-1.1
GIGS	**Gran Sasso**	**0.32**	**136**	P	Pb	05 46 37.9	-0.7
GIGS				S	Sg	05 46 42.5	+1.0
FDMO	**Fiordimonte**	**0.38**	**340**	P	Pb	05 46 39.1	-0.4
FDMO				S	Sb	05 46 44.6	-0.9
CSP1	**Cessapalombo**	**0.41**	**354**	P	Pg	05 46 39.5	+0.6
CSP1				S	Sb	05 46 45.8	-0.7
CESI	**CESI - Serrava**	**0.42**	**321**	P	Pg	05 46 39.2	+0.3
CESI				S	Sg	05 46 45.0	+0.5
FIAM	**Fiamignano**	**0.43**	**195**	P	Pg	05 46 39.5	+0.4
FIAM				S	Sb	05 46 45.9	-1.0
FIAM				END			
VCEL	**Villa Celiera**	**0.51**	**124**	P	Pb	05 46 41.3	-0.5
EL6	**Elcito**	**0.66**	**350**	S	Sb	05 46 55.0	+1.4
VVLD	**Villa Vallelon**	**0.85**	**162**	P	Pg	05 46 42.5	-4.6
APEC	**Apecchio**	**1.07**	**325**	P	Pg	05 46 49.1	-2.2
CIGN	**Sant'Elia a Pi**	**1.59**	**130**	S	Sn	05 47 16.0	-3.6
MODR	**Mondragone**	**1.60**	**163**	S	Sn	05 47 19.0	-0.7
PTRJ	**Pietraroja**	**1.62**	**144**	P	Pn	05 46 57.9	-1.4
PTRJ				S	Sn	05 47 10.0	-10
PTRJ				AML	AML		
	comp=E,2105μm,1.0s						
PTRJ				AML	AML		
	comp=N,3775μm,0.3s						
PTRJ				AML	AML		
	comp=E,2550μm,1.0s						
PTRJ				AML	AML		
	comp=N,4735μm,0.3s						
PAOL	**Paolisi**	**1.92**	**149**	S	Sb	05 47 30.0	+0.3
ZCCA	**Zocca**	**2.36**	**316**	P	Pn	05 47 07.3	-2.1
ZCCA				AML	AML		
	comp=E,1163μm,0.4s						
ZCCA				AML	AML		
	comp=N,1782μm,0.5s						
CARD	**Cardoso**	**2.43**	**304**	⇑P	Pn	05 47 01.6	-8.9
PLMA	**Palmaria, Port**	**2.84**	**300**	P	Pb	05 47 22.8	+1.3
CRND	**Cornuda**	**3.27**	**345**	P	Pn	05 47 22.9	+1.0
EUCT	**Pavia**	**3.91**	**312**	S	Sb	05 48 25.0	-1.9

ROM 24 05:47:07.6±0.1, 42°.800N±0°.003×13°.235E±0°.007, h10km, ML2.1/11, 6C-1D, Error ellipse: s-maj=0.6km s-min=0.2km az=258.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**291**	P	Pg	05 47 10.6	+0.3
NRCA				S	Sg	05 47 12.7	+0.5
FEMA	**Monte Fema**	**0.21**	**320**	P	Pg	05 47 12.2	0.0
FEMA				AML	AML		
	comp=E,1245μm,0.3s						
FEMA				AML	AML		
	comp=E,1250μm,0.3s						
FEMA				AML	AML		
	comp=N,2140μm,0.3s						
FDMO	**Fiordimonte**	**0.26**	**335**	⇓P	Pg	05 47 13.3	+0.4
FDMO				S	Sg	05 47 17.6	+1.1
FDMO				AML	AML		
	comp=N,546μm,0.3s						
FDMO				AML	AML		
	comp=E,498μm,0.1s						
GUMA	**Gualdo di Mace**	**0.27**	**16**	P	Pg	05 47 13.8	+0.6
GUMA				S	Sb	05 47 18.6	-0.7
GUMA				AML	AML		
	comp=N,4440μm,0.3s						
GUMA				AML	AML		
	comp=N,3005μm,0.6s						
GUMA				AML	AML		
	comp=E,3825μm,0.3s						
GUMA				AML	AML		
	comp=N,4435μm,0.3s						
GUMA				AML	AML		
	comp=E,5790μm,0.2s						
RM33	**Pellescritta (**	**0.29**	**183**	P	Pb	05 47 14.2	-0.7
RM33				S	Sb	05 47 19.0	-0.8
RM33				AML	AML		
	comp=E,546μm,1.1s						
RM33				AML	AML		
	comp=N,642μm,0.1s						
RM33				AML	AML		
	comp=E,564μm,1.1s						
RM33				AML	AML		
	comp=N,606μm,0.2s						
RM33				AML	AML		
	comp=E,846μm,0.3s						
RM33				AML	AML		
	comp=N,642μm,0.2s						
RM33				AML	AML		
	comp=E,805μm,0.3s						
RM33				AML	AML		
	comp=N,606μm,0.2s						
RM33				AML	AML		
	comp=E,1290μm,0.9s						
RM33				AML	AML		
	comp=N,838μm,0.5s						
RM33				AML	AML		
	comp=E,1250μm,0.9s						
RM33				AML	AML		
	comp=N,817μm,0.4s						
CAMP	**Campotosto**	**0.29**	**154**	P	Pg	05 47 13.9	+0.3
CAMP				S	Sg	05 47 18.7	+1.1
CAMP				AML	AML		
	comp=E,576μm,0.2s						
CAMP				AML	AML		
	comp=N,470μm,0.5s						
CAMP				AML	AML		
	comp=E,687μm,0.3s						
CSP1	**Cessapalombo**	**0.29**	**356**	⇑P	Pg	05 47 13.9	+0.3
CSP1				S	Sg	05 47 18.4	+0.9
CSP1				AML	AML		
	comp=E,690μm,0.3s						
CSP1				AML	AML		
	comp=N,878μm,0.2s						
CSP1				AML	AML		
	comp=N,879μm,0.2s						
CSP1				AML	AML		
	comp=E,689μm,0.3s						
CSP1				AML	AML		
	comp=N,880μm,0.2s						
CESI	**CESI - Serrava**	**0.32**	**310**	P	Pg	05 47 14.4	+0.4
CESI				S	Sb	05 47 19.6	-1.0
TERO	**Teramo**	**0.32**	**123**	P	Pg	05 47 14.6	+0.5
TERO				AML	AML		
	comp=E,578μm,0.4s						
TERO				AML	AML		
	comp=N,820μm,0.1s						
TERO				AML	AML		
	comp=N,821μm,0.1s						
TERO				AML	AML		
	comp=E,579μm,0.4s						
OFFI	**Offida**	**0.36**	**68**	P	Pb	05 47 15.8	-0.3
OFFI				AML	AML		
	comp=N,1305μm,0.5s						
OFFI				AML	AML		
	comp=E,696μm,0.9s						
MDAR	**Monte D'Aria**	**0.40**	**350**	P	Pg	05 47 15.8	+0.3
ARRO	**Arrone**	**0.41**	**238**	P	Pg	05 47 15.9	+0.3
GIGS	**Gran Sasso**	**0.43**	**145**	P	Pg	05 47 16.2	+0.2
GIGS				S	Sb	05 47 22.9	-0.8
GIGS				AML	AML		
	comp=N,107μm,0.6s						
GIGS				AML	AML		
	comp=E,109μm,0.3s						
SNTG	**Esanatoglia**	**0.50**	**335**	P	Pg	05 47 17.9	+0.4
SNTG				AML	AML		
	comp=E,126μm,1.0s						
SNTG				AML	AML		
	comp=N,132μm,0.5s						
CESX	**Cesi**	**0.52**	**249**	⇑P	Pg	05 47 18.1	+0.4
CESX				AML	AML		
	comp=N,144μm,0.2s						
CESX				AML	AML		
	comp=E,150μm,0.4s						
CESX				AML	AML		
	comp=N,162μm,0.3s						
CESX				AML	AML		
	comp=E,152μm,0.5s						
CESX				AML	AML		
	comp=N,208μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.58**	**312**	⇑P	Pb	05 47 19.7	-0.2
ATCC				AML	AML		
	comp=N,146μm,0.4s						
ATCC				AML	AML		
	comp=E,202μm,1.3s						
PP3	**Marolino**	**0.64**	**25**	⇑P	Pb	05 47 21.1	+0.3
ARVD	**Arcevia**	**0.73**	**343**	⇑P	Pb	05 47 22.2	-0.2
FRON	**Frontone**	**0.81**	**333**	P	Pb	05 47 23.5	-0.3
ATVO	**AVT- Monte Val**	**0.84**	**314**	P	Pg	05 47 23.4	-0.4
PIEI	**Pieia**	**0.90**	**325**	P	Pg	05 47 24.2	-0.7
NARO	**Abbazia di Nar**	**0.94**	**330**	P	Pg	05 47 25.8	+0.1
VAGA	**Valle Agricola**	**1.57**	**151**	S	Sg	05 47 60.0	+1.9
PTRJ	**Pietraroja**	**1.73**	**146**	P	Pn	05 47 36.6	-1.1
PTRJ				AML	AML		
	comp=E,2110μm,1.0s						
PTRJ				AML	AML		
	comp=N,3775μm,0.3s						
PTRJ				AML	AML		
	comp=E,2550μm,1.0s						
PTRJ				AML	AML		
	comp=N,4735μm,0.3s						
SGRT	**San Giovanni R**	**2.13**	**118**	P	Pg	05 47 50.2	+1.7
ZCCA	**Zocca**	**2.26**	**314**	S	Sn	05 48 14.0	+1.1
CARD	**Cardoso**	**2.35**	**302**	S	Sg	05 48 24.0	+0.9
GSCL	**Gusciola**	**2.47**	**310**	S	Sn	05 48 19.0	+0.9
LEOD	**Capriano del C**	**3.48**	**321**	⇑P	Pb	05 48 10.8	+1.7
ZONE	**Zone**	**3.71**	**324**	P	Pg	05 48 16.1	-2.6
SALB	**San Lorenzo Be**	**3.74**	**140**	P	Pb	05 48 14.7	+0.9

GEN 24 05:47:16.2, 44°.18N×10°.17E, h5km, MI0.5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**218**	P	Pg	05 47 17.7	+0.5
EQUI				S	Sg	05 47 18.3	+0.5
FIVI	**Fivizzano**	**0.07**	**334**	P	Pg	05 47 18.3	+0.5
FIVI				S	Sg	05 47 19.6	+0.7
VLC	**Villacollemand**	**0.16**	**97**	P	Pg	05 47 19.9	+0.5
VLC				S	Sg	05 47 22.4	+1.0
SARO	**Sassorosso**	**0.17**	**88**	P	Pg	05 47 20.0	+0.5
SARO				S	Sg	05 47 22.6	+0.8
GRAM	**Graiana**	**0.32**	**347**	P	Pg	05 47 23.4	+0.9
GRAM				S	Sb	05 47 28.6	-1.5
MAIM	**Mastiano**	**0.35**	**139**	P	Pb	05 47 24.3	-0.7
MAIM				S	Sg	05 47 28.6	+1.0
POPM	**Popiglio**	**0.45**	**107**	P	Pg	05 47 25.2	+0.4
POPM				S	Sg	05 47 32.0	+1.4

ROM 24 05:48:02.4±0.1, 42°.821N±0°.004×13°.230E±0°.006, h15km±1km, ML2.0/6, Error ellipse: s-maj=0.6km s-min=0.1km az=234.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**279**	P	Pg	05 48 05.8	+0.1
NRCA				S	Sg	05 48 08.1	+0.2
NRCA				AML	AML		
	comp=E,29650μm,0.8s						
NRCA				AML	AML		
	comp=N,21900μm,1.0s						
NRCA				AML	AML		
	comp=N,21184μm,0.1s						
NRCA				AML	AML		
	comp=E,18117μm,0.1s						
FEMA	**Monte Fema**	**0.19**	**317**	P	Pg	05 48 07.2	0.0
FEMA				S	Sb	05 48 10.9	-0.4
FEMA				AML	AML		
	comp=E,800μm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**334**	P	Pg	05 48 08.0	+0.2
FDMO				S	Sb	05 48 12.0	-0.5
GUMA	**Gualdo di Mace**	**0.25**	**18**	P	Pb	05 48 08.6	-0.1
GUMA				S	Sb	05 48 13.1	+0.1
CSP1	**Cessapalombo**	**0.27**	**356**	P	Pg	05 48 08.0	-0.3
CSP1				S	Sb	05 48 13.2	-0.4
CESI	**CESI - Serrava**	**0.30**	**308**	P	Pg	05 48 09.1	+0.2
CESI				S	Sb	05 48 14.2	-0.2
RM33	**Pellescritta (**	**0.31**	**182**	P	Pb	05 48 09.4	-0.3
RM33				S	Sb	05 48 14.4	-0.2
RM33				AML	AML		
	comp=E,1915μm,0.6s						
RM33				AML	AML		
	comp=N,1230μm,0.2s						
RM33				AML	AML		
	comp=E,1860μm,0.6s						
RM33				AML	AML		
	comp=N,1275μm,0.2s						
RM33				AML	AML		
	comp=E,1121μm,0.1s						
RM33				AML	AML		
	comp=E,1111μm,0.1s						
RM33				AML	AML		
	comp=N,787μm,0.2s						
RM33				AML	AML		
	comp=N,801μm,0.2s						
CAMP	**Campotosto**	**0.31**	**155**	P	Pg	05 48 09.1	+0.1
CAMP				S	Sg	05 48 14.2	+0.6
TERO	**Teramo**	**0.34**	**126**	P	Pg	05 48 09.5	+0.1
TERO				S	Sb	05 48 15.3	-0.1
TERO				AML	AML		
	comp=E,855μm,0.8s						
TERO				AML	AML		
	comp=N,1046μm,0.6s						
TERO				AML	AML		
	comp=E,434μm,0.1s						
TERO				AML	AML		
	comp=N,523μm,0.1s						
MDAR	**Monte D'Aria**	**0.38**	**350**	P	Pg	05 48 10.1	-0.1
SEF1	**Sefro**	**0.39**	**328**	P	Pg	05 48 09.9	-0.3
GIGS	**Gran Sasso**	**0.45**	**146**	P	Pg	05 48 11.1	-0.3
GIGS				S	Sg	05 48 17.9	+0.4
GIGS				AML	AML		
	comp=N,107μm,0.6s						
GIGS				AML	AML		
	comp=E,134μm,0.5s						
GIGS				AML	AML		
	comp=N,107μm,0.6s						
GIGS				AML	AML		
	comp=E,109μm,0.3s						
SNTG	**Esanatoglia**	**0.48**	**334**	P	Pg	05 48 12.2	+0.1
FIAM	**Fiamignano**	**0.56**	**189**	P	Pg	05 48 13.5	0.0
FIAM				S	Sb	05 48 21.9	+0.1
VCEL	**Villa Celiera**	**0.62**	**133**	P	Pg	05 48 14.6	0.0
ARVD	**Arcevia**	**0.71**	**343**	AML	AML		
	comp=E,101μm,1.4s						
ARVD				AML	AML		
	comp=N,86μm,1.3s						
T0110	**Collepietro**	**0.72**	**145**	P	Pg	05 48 16.2	-0.2

ROM 24 05:48:24.6±0.1, 42°.803N±0°.004×13°.172E±0°.007, h10km, ML2.4/11, 5C-8D, Error ellipse: s-maj=0.7km s-min=0.2km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**306**	⇓P	Pg	05 48 27.3	+0.5
NRCA				S	Sg	05 48 28.7	+0.3
FEMA	**Monte Fema**	**0.18**	**331**	P	Pg	05 48 29.2	+0.5
FEMA				S	Sg	05 48 32.1	+0.7
FEMA				AML	AML		
	comp=E,2895μm,0.5s						
FEMA				AML	AML		
	comp=E,2895μm,0.5s						
FEMA				AML	AML		
	comp=N,2415μm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**345**	⇓P	Pg	05 48 30.1	+0.4
FDMO				S	Sg	05 48 33.9	+0.9
FDMO				AML	AML		
	comp=E,602μm,0.3s						
FDMO				AML	AML		
	comp=N,835μm,0.3s						
FDMO				AML	AML		
	comp=E,896μm,0.2s						
FDMO				AML	AML		
	comp=N,1132μm,0.2s						
FDMO				AML	AML		
	comp=N,835μm,0.3s						
FDMO				AML	AML		
	comp=E,602μm,0.3s						
CESI	**CESI - Serrava**	**0.28**	**316**	⇓P	Pg	05 48 30.9	+0.5
CESI				S	Sg	05 48 35.4	+1.2
CESI				AML	AML		
	comp=E,1325μm,0.4s						
CESI				AML	AML		
	comp=N,2530μm,0.2s						
CESI				AML	AML		
	comp=N,2830μm,0.2s						
CESI				AML	AML		
	comp=N,2529μm,0.2s						
GUMA	**Gualdo di Mace**	**0.29**	**25**	P	Pb	05 48 31.3	-0.6
GUMA				S	Sb	05 48 35.9	-0.9
GUMA				AML	AML		
	comp=E,3760μm,0.3s						
GUMA				AML	AML		
	comp=N,4650μm,0.5s						
CSP1	**Cessapalombo**	**0.29**	**5**	P	Pg	05 48 31.0	+0.4
CSP1				AML	AML		
	comp=E,1650μm,0.4s						
CSP1				AML	AML		
	comp=N,1650μm,0.4s						
CSP1				AML	AML		
	comp=N,1653μm,0.4s						
CSP1				AML	AML		
	comp=E,1652μm,0.4s						
RM33	**Pellescritta (**	**0.30**	**174**	⇓P	Pg	05 48 30.9	+0.2
RM33				AML	AML		
	comp=E,8685μm,0.2s						
RM33				AML	AML		
	comp=N,4055μm,0.5s						
RM33				AML	AML		
	comp=E,8585μm,0.2s						
RM33				AML	AML		
	comp=N,4105μm,0.5s						
RM33				AML	AML		
	comp=N,4110μm,0.5s						
RM33				AML	AML		
	comp=E,8680μm,0.2s						
CAMP	**Campotosto**	**0.32**	**147**	⇓P	Pg	05 48 31.1	+0.1
CAMP				AML	AML		
	comp=N,547μm,0.3s						
TERO	**Teramo**	**0.37**	**119**	⇑P	Pb	05 48 32.8	-0.5
TERO				AML	AML		
	comp=E,855μm,0.8s						
TERO				AML	AML		
	comp=N,1046μm,0.6s						
TERO				AML	AML		
	comp=E,1135μm,1.4s						
TERO				AML	AML		
	comp=N,1365μm,0.7s						
TERO				AML	AML		
	comp=N,982μm,0.3s						
TERO				AML	AML		
	comp=E,730μm,0.3s						
ARRO	**Arrone**	**0.37**	**233**	⇑P	Pb	05 48 32.9	-0.5
ARRO				S	Sb	05 48 38.8	-0.4
ARRO				AML	AML		
	comp=E,487μm,1.3s						
ARRO				AML	AML		
	comp=N,720μm,0.4s						
SEF1	**Sefro**	**0.38**	**334**	P	Pb	05 48 33.3	-0.2
SEF1				S	Sb	05 48 38.5	-1.0
MDAR	**Monte D'Aria**	**0.39**	**357**	P	Pb	05 48 33.1	-0.6
MDAR				S	Sb	05 48 38.8	-1.0
OFFI	**Offida**	**0.40**	**71**	P	Pb	05 48 33.9	+0.1
ASSB	**Assisi San Ben**	**0.45**	**303**	P	Pg	05 48 33.6	+0.2
GIGS	**Gran Sasso**	**0.46**	**140**	P	Pg	05 48 33.5	-0.2
GIGS				AML	AML		
	comp=E,366μm,0.3s						
GIGS				AML	AML		
	comp=N,282μm,0.1s						
GIGS				AML	AML		
	comp=E,366μm,0.3s						
CESX	**Cesi**	**0.48**	**246**	P	Pg	05 48 34.3	+0.4
SNTG	**Esanatoglia**	**0.48**	**340**	⇓P	Pg	05 48 34.6	+0.5
SNTG				S	Sb	05 48 42.0	-0.5
FIAM	**Fiamignano**	**0.54**	**184**	P	Pg	05 48 35.2	+0.1
FIAM				AML	AML		
	comp=N,320μm,0.2s						
FIAM				AML	AML		
	comp=E,798μm,0.6s						
FIAM				AML	AML		
	comp=N,267μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.55**	**315**	⇑P	Pb	05 48 35.8	-0.5
ATCC				S	Sb	05 48 43.9	-0.4
ATCC				AML	AML		
	comp=E,248μm,1.1s						
ATCC				AML	AML		
	comp=N,328μm,0.5s						
TRTR	**Tortoreto Alta**	**0.55**	**89**	⇓P	Pb	05 48 37.2	+0.9
FAGN	**Fagnano**	**0.62**	**150**	P	Pg	05 48 36.2	-0.4
VCEL	**Villa Celiera**	**0.64**	**129**	P	Pg	05 48 37.4	+0.3
VCEL				S	Sb	05 48 46.3	-0.7
ARVD	**Arcevia**	**0.71**	**346**	S	Sn	05 48 51.0	-0.9
LPEL	**Lama dei Pelig**	**1.06**	**135**	S	Sn	05 49 02.0	+1.5
MODR	**Mondragone**	**1.74**	**162**	P	Pn	05 48 52.5	-2.3
PTRJ	**Pietraroja**	**1.76**	**144**	S	Sb	05 49 20.0	+0.8
MTCR	**Monte La Croce**	**2.00**	**308**	P	Pb	05 49 00.6	-0.6
PAOL	**Paolisi**	**2.05**	**149**	S	Sb	05 49 29.0	+1.3
ZCCA	**Zocca**	**2.22**	**315**	S	Sn	05 49 28.0	-1.1
CARD	**Cardoso**	**2.31**	**303**	S	Sg	05 49 37.0	-1.8
BOB	**Bobbio (Coli)**	**3.33**	**307**	⇓P	Pg	05 49 29.2	+0.6
SARZ	**Sarezzano**	**3.71**	**305**	⇑P	Pb	05 49 30.3	+0.1
EUCT	**Pavia**	**3.77**	**311**	⇑P	Pb	05 49 33.8	+2.5

ROM 24 05:49:11.6±0.1, 42°.639N±0°.007×13°.318E±0°.009, h8km±1km, ML1.8/4, 1C-1D, Error ellipse: s-maj=0.7km s-min=0.7km az=198.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**147**	⇑P	Pg	05 49 15.0	+0.6
CAMP				S	Sg	05 49 17.2	+0.9
CAMP				AML	AML		
	comp=E,767μm,0.2s						
CAMP				AML	AML		
	comp=N,552μm,0.6s						
CAMP				AML	AML		
	comp=E,1052μm,0.6s						

CAMP					AML	AML		
	comp=N,676μm,0.6s							
CAMP					AML	AML		
	comp=E,767μm,0.2s							
CAMP					AML	AML		
	comp=N,282μm,0.2s							
RM33	**Pellescritta (**	**0.15**	**210**	P	Pg	05 49 15.4	+0.6	
RM33				S	Sg	05 49 18.0	+0.9	
RM33				AML	AML			
	comp=E,8680μm,0.2s							
RM33				AML	AML			
	comp=N,4055μm,0.5s							
RM33				AML	AML			
	comp=E,8585μm,0.2s							
RM33				AML	AML			
	comp=N,4110μm,0.5s							
RM33				AML	AML			
	comp=E,8685μm,0.2s							
RM33				AML	AML			
	comp=N,4055μm,0.5s							
RM33				AML	AML			
	comp=N,4105μm,0.5s							
RM33				AML	AML			
	comp=N,870μm,0.3s							
TERO	**Teramo**	**0.21**	**94**	⇓P	Pg	05 49 16.6	+0.7	
TERO				S	Sg	05 49 20.1	+1.4	
TERO				AML	AML			
	comp=E,1135μm,1.4s							
TERO				AML	AML			
	comp=N,1365μm,0.7s							
TERO				AML	AML			
	comp=E,1170μm,0.2s							
TERO				AML	AML			
	comp=N,2075μm,0.2s							
TERO				AML	AML			
	comp=E,338μm,0.3s							
TERO				AML	AML			
	comp=N,794μm,0.1s							
TERO				AML	AML			
	comp=E,489μm,0.1s							
TERO				AML	AML			
	comp=N,931μm,0.1s							
NRCA	**Norcia**	**0.24**	**322**	P	Pg	05 49 17.9	+1.4	
NRCA				S	Sg	05 49 21.1	+1.2	
GIGS	**Gran Sasso**	**0.27**	**135**	P	Pg	05 49 17.5	+0.6	
GIGS				S	Sg	05 49 21.6	+1.2	
GIGS				AML	AML			
	comp=E,366μm,0.3s							
GIGS				AML	AML			
	comp=N,282μm,0.1s							
GIGS				AML	AML			
	comp=E,366μm,0.3s							
GIGS				AML	AML			
	comp=E,82μm,0.4s							
GIGS				AML	AML			
	comp=N,42μm,0.5s							
OFFI	**Offida**	**0.40**	**42**	P	Pb	05 49 20.6	-0.3	
ARRO	**Arrone**	**0.41**	**262**	P	Pg	05 49 20.1	+0.5	
GUMA	**Gualdo di Mace**	**0.42**	**2**	P	Pb	05 49 20.7	-0.7	
CSP1	**Cessapalombo**	**0.46**	**350**	P	Pg	05 49 20.8	+0.2	

ROM 24 05:49:20.8±0.1, 42°625N±0°004×13°243E±0°006, h11km±1km, ML2.0/5, 1C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=234.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
RM33	**Pellescritta (**	**0.12**	**190**	P	Pg	05 49 24.4		+0.5
RM33				S	Sg	05 49 26.7		+0.6
CAMP	**Campotosto**	**0.15**	**126**	P	Pg	05 49 24.9		+0.5
CAMP				S	Sg	05 49 27.9		+0.9
NRCA	**Norcia**	**0.23**	**336**	P	Pg	05 49 26.0		+0.4
NRCA				S	Sg	05 49 29.8		+0.8
NRCA				AML	AML			
	comp=E,12005μm,0.1s							
NRCA				AML	AML			
	comp=N,7535μm,0.1s							
NRCA				AML	AML			
	comp=E,12640μm,0.1s							
NRCA				AML	AML			
	comp=N,8355μm,0.7s							
NRCA				AML	AML			
	comp=E,12025μm,0.2s							
NRCA				AML	AML			
	comp=N,7530μm,0.1s							
NRCA				AML	AML			
	comp=E,12650μm,0.1s							
NRCA				AML	AML			
	comp=N,8365μm,0.7s							
NRCA				AML	AML			
	comp=E,54800μm,0.1s							
NRCA				AML	AML			
	comp=N,66750μm,1.0s							
NRCA				AML	AML			
	comp=E,47550μm,0.1s							
NRCA				AML	AML			
	comp=N,60800μm,1.0s							
TERO	**Teramo**	**0.27**	**90**	P	Pg	05 49 26.7		+0.4
TERO				S	Sg	05 49 30.9		+0.9
TERO				AML	AML			
	comp=N,2075μm,0.2s							
TERO				AML	AML			
	comp=E,1170μm,0.2s							
AQU	**L'Aquila**	**0.30**	**156**	P	Pb	05 49 27.8		-0.4
AQU				S	Sb	05 49 32.2		-0.8
GIGS	**Gran Sasso**	**0.30**	**126**	P	Pg	05 49 27.2		+0.3
GIGS				S	Sg	05 49 31.8		+0.8
GIGS				AML	AML			
	comp=E,366μm,0.3s							
GIGS				AML	AML			
	comp=E,366μm,0.3s							
GIGS				AML	AML			
	comp=N,282μm,0.1s							
GIGS				AML	AML			
	comp=N,282μm,0.1s							
GIGS				AML	AML			
	comp=E,366μm,0.3s							
ARRO	**Arrone**	**0.35**	**263**	P	Pg	05 49 28.1		+0.2
ARRO				S	Sb	05 49 33.8		-0.9
ARRO				AML	AML			
	comp=N,388μm,0.2s							
ARRO				AML	AML			
	comp=E,382μm,0.2s							
ARRO				AML	AML			
	comp=N,388μm,0.2s							
ARRO				AML	AML			
	comp=E,382μm,0.2s							
FIAM	**Fiamignano**	**0.37**	**195**	P	Pg	05 49 28.5		+0.3
FIAM				S	Sg	05 49 34.0		+0.9
FDMO	**Fiordimonte**	**0.43**	**345**	P	Pg	05 49 29.2		0.0
FDMO				AML	AML			
	comp=N,1131μm,0.2s							
FDMO				AML	AML			
	comp=E,896μm,0.2s							
FDMO				AML	AML			
	comp=N,1132μm,0.2s							
FDMO				AML	AML			
	comp=E,897μm,0.2s							
FAGN	**Fagnano**	**0.44**	**145**	P	Pg	05 49 29.6		+0.1
GUMA	**Gualdo di Mace**	**0.44**	**9**	P	Pb	05 49 30.4		-0.3
CESI	**CESI - Serrava**	**0.45**	**327**	P	Pg	05 49 29.5		-0.3
CESI				AML	AML			
	comp=N,2830μm,0.2s							
CESI				AML	AML			
	comp=E,1185μm,0.5s							
CESI				AML	AML			
	comp=N,2828μm,0.2s							
CESX	**Cesi**	**0.49**	**268**	P	Pg	05 49 30.6		+0.2
CESX				S	Sb	05 49 37.9		-0.7
CESX				AML	AML			
	comp=E,156μm,1.5s							
CESX				AML	AML			
	comp=N,178μm,1.3s							
CESX				AML	AML			
	comp=E,191μm,0.2s							
CESX				AML	AML			
	comp=N,246μm,0.8s							
CESX				AML	AML			
	comp=E,150μm,0.7s							
CESX				AML	AML			
	comp=N,178μm,1.3s							
VCEL	**Villa Celiera**	**0.50**	**117**	P	Pb	05 49 31.2		-0.5
VCEL				AML	AML			
	comp=E,748μm,0.3s							
VCEL				AML	AML			
	comp=N,636μm,0.8s							
T0110	**Collepietro**	**0.56**	**135**	P	Pg	05 49 31.6		-0.1
T0110				S	Sg	05 49 39.9		+0.7
T0110				AML	AML			
	comp=E,306μm,0.5s							
T0110				AML	AML			
	comp=N,244μm,0.3s							
T0110				AML	AML			
	comp=N,244μm,0.3s							
SNTG	**Esanatoglia**	**0.67**	**341**	AML	AML			
	comp=E,132μm,0.8s							
SNTG				AML	AML			
	comp=N,178μm,1.0s							
SRES	**S.Oreste - Sor**	**0.67**	**235**	⇓P	Pg	05 49 33.8		+0.1
SRES				AML	AML			
	comp=E,76μm,1.3s							
SRES				AML	AML			
	comp=N,62μm,0.5s							
SRES				AML	AML			
	comp=N,62μm,0.5s							
CERT	**Cerreto**	**0.70**	**196**	⇑P	Pg	05 49 34.0		-0.4
CERT				AML	AML			
	comp=E,154μm,0.3s							
CERT				AML	AML			
	comp=E,154μm,0.3s							
CERT				AML	AML			
	comp=N,116μm,1.0s							
CERT				AML	AML			
	comp=E,154μm,0.3s							
CERT				AML	AML			
	comp=N,110μm,0.5s							
ATCC	**AVT- Casa Cast**	**0.71**	**322**	AML	AML			
	comp=N,215μm,1.4s							
ATCC				AML	AML			
	comp=E,312μm,0.6s							
MURB	**Monte Urbino**	**0.83**	**321**	AML	AML			
	comp=N,389μm,0.2s							
MURB				AML	AML			
	comp=E,488μm,0.2s							
MURB				AML	AML			
	comp=E,488μm,0.2s							
VIVA	**Pratoni del Vi**	**0.94**	**202**	AML	AML			
	comp=N,630μm,0.3s							
VIVA				AML	AML			
	comp=E,778μm,1.1s							

ROM 24 05:50:18.6±0.1, 42°620N±0°005×13°293E±0°007, h7km, Md1.1/5, ML2.3/6, 5C-1D, Error ellipse: s-maj=0.6km s-min=0.5km az=147.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
CAMP	**Campotosto**	**0.12**	**134**	P	Pg	05 50 21.8		+0.5
CAMP				S	Sg	05 50 24.0		+0.9
CAMP				END				
RM33	**Pellescritta (**	**0.12**	**208**	P	Pg	05 50 22.0		+0.7
RM33				S	Sg	05 50 24.5		+1.3
RM33				END				
TERO	**Teramo**	**0.23**	**89**	P	Pg	05 50 23.6		+0.5
TERO				S	Sg	05 50 27.4		+1.1
TERO				END				
NRCA	**Norcia**	**0.25**	**328**	AML	AML			
	comp=N,60750μm,1.0s							
NRCA				AML	AML			
	comp=N,66750μm,1.0s							
NRCA				AML	AML			
	comp=E,67900μm,1.1s							
NRCA				AML	AML			
	comp=E,63400μm,1.1s							
NRCA				AML	AML			
	comp=N,60800μm,1.0s							
NRCA				AML	AML			
	comp=N,60800μm,1.0s							
NRCA				AML	AML			
	comp=E,54787μm,0.1s							
NRCA				AML	AML			
	comp=E,47580μm,0.1s							
GIGS	**Gran Sasso**	**0.27**	**130**	P	Pg	05 50 24.6		+0.8
GIGS				S	Sg	05 50 28.8		+1.4
GIGS				END				
AQU	**L'Aquila**	**0.28**	**163**	P	Pg	05 50 24.2		+0.1
AQU				S	Sb	05 50 29.7		-1.1
AQU				END				
FIAM	**Fiamignano**	**0.38**	**200**	P	Pg	05 50 26.3		+0.4
FEMA	**Monte Fema**	**0.39**	**332**	P	Pb	05 50 27.2		-0.7
ARRO	**Arrone**	**0.39**	**264**	P	Pg	05 50 26.6		+0.4
ARRO				S	Sb	05 50 33.8		-0.2
FAGN	**Fagnano**	**0.41**	**149**	⇑P	Pb	05 50 27.6		-0.6
FAGN				AML	AML			
	comp=E,307μm,0.3s							
FAGN				AML	AML			
	comp=N,334μm,0.6s							
FAGN				AML	AML			
	comp=N,1510μm,1.6s							
FAGN				AML	AML			
	comp=E,1365μm,0.4s							
FAGN				AML	AML			
	comp=N,333μm,0.6s							
FAGN				AML	AML			
	comp=E,307μm,0.3s							
OFFI	**Offida**	**0.43**	**42**	P	Pb	05 50 28.3		-0.2
FDMO	**Fiordimonte**	**0.44**	**340**	P	Pg	05 50 27.8		+0.6
FDMO				AML	AML			
	comp=E,1230μm,1.6s							
FDMO				AML	AML			
	comp=N,1485μm,0.7s							
GUMA	**Gualdo di Mace**	**0.44**	**4**	P	Pg	05 50 27.9		+0.7
GUMA				S	Sb	05 50 35.5		-0.2
VCEL	**Villa Celiera**	**0.46**	**119**	P	Pg	05 50 28.3		+0.7
VCEL				AML	AML			
	comp=N,988μm,0.9s							
VCEL				AML	AML			
	comp=E,786μm,0.3s							
VCEL				AML	AML			
	comp=N,986μm,0.9s							
VCEL				AML	AML			
	comp=N,984μm,0.9s							
CSP1	**Cessapalombo**	**0.48**	**352**	P	Pb	05 50 28.8		-0.6
CSP1				S	Sb	05 50 35.9		-0.8
CESI	**CESI - Serrava**	**0.48**	**324**	P	Pb	05 50 28.7		-0.7
TRTR	**Tortoreto Alta**	**0.49**	**67**	P	Pb	05 50 29.5		-0.1
CESX	**Cesi**	**0.53**	**269**	P	Pg	05 50 28.9		+0.2
T0110	**Collepietro**	**0.53**	**137**	⇑P	Pg	05 50 29.3		+0.5
T0110				AML	AML			
	comp=E,192μm,0.4s							
T0110				AML	AML			
	comp=N,177μm,0.3s							
T0110				AML	AML			
	comp=E,540μm,0.3s							
T0110				AML	AML			
	comp=N,742μm,0.3s							
T0110				AML	AML			
	comp=N,742μm,0.3s							
T0110				AML	AML			
	comp=N,177μm,0.3s							
T0110				AML	AML			
	comp=E,192μm,0.4s							
PTQR	**Pietraquaria**	**0.60**	**172**	P	Pb	05 50 31.0		-0.5
SRES	**S.Oreste - Sor**	**0.69**	**237**	P	Pg	05 50 32.0		+0.1
SRES				AML	AML			
	comp=E,168μm,0.3s							
SRES				AML	AML			
	comp=N,158μm,0.4s							
LPEL	**Lama dei Pelig**	**0.87**	**131**	P	Pb	05 50 35.9		-0.2
VIVA	**Pratoni del Vi**	**0.95**	**204**	S	Sn	05 50 53.0		+0.8
LAV9	**Lanuvio**	**1.04**	**205**	S	Sg	05 50 51.0		-1.0
LAV9				S	Sn	05 50 56.0		+1.6
NARO	**Abbazia di Nar**	**1.12**	**332**	S	Sn	05 50 58.0		+1.6
FSSB	**Fossombrone**	**1.14**	**341**	⇑P	Pg	05 50 38.6		-1.8
FSSB				S	Sb	05 50 56.0		+0.4
FSSB				AML	AML			
	comp=E,737μm,0.4s							
FSSB				AML	AML			
	comp=N,782μm,1.4s							
FSSB				AML	AML			
	comp=N,782μm,1.4s							
FSSB				AML	AML			
	comp=E,736μm,0.4s							
MCIV	**Monte Civitell**	**1.20**	**278**	S	Sn	05 50 60.0		+1.5
SF04	**Casetta**	**1.22**	**281**	S	Sn	05 51 02.0		+3.1
MODR	**Mondragone**	**1.54**	**163**	⇑P	Pb	05 50 47.0		-0.4
ASQU	**Asqua**	**1.61**	**317**	P	Pn	05 50 45.9		-1.6
ASQU				AML	AML			
	comp=E,56μm,1.0s							
ASQU				AML	AML			
	comp=N,57μm,1.3s							
ASQU				AML	AML			
	comp=E,103μm,1.1s							
ASQU				AML	AML			
	comp=N,91μm,1.2s							
PII	**Pisa**	**2.31**	**299**	P	Pg	05 51 03.0		+0.3
ZCCA	**Zocca**	**2.42**	**317**	P	Pn	05 51 00.4		+1.8
STON	**Ston**	**3.26**	**84**	P	Pb	05 51 17.7		+1.0
EUCT	**Pavia**	**3.96**	**312**	P	Pb	05 51 26.4		-2.3
EUCT	**Pavia**	**3.96**	**312**	S	Sb	05 52 17.0		+0.2
IFIL	**Filicudi I Eol**	**4.17**	**166**	P	Pn	05 51 23.2		+0.7
SERS	**Sersale**	**4.41**	**143**	⇑P	Pn	05 51 27.7		+1.6
RISI	**Rein**	**4.41**	**349**	⇓P	Pb	05 51 32.9		-3.6
MUGIO	**Muggio**	**4.50**	**319**	P	Pn	05 51 29.5		+2.4

ROM 24 05:50:57.3±0.1, 42°789N±0°003×13°236E±0°006, h7km, ML2.7/31, 2C, Error ellipse: s-maj=0.4km s-min=0.3km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
NRCA	**Norcia**	**0.10**	**297**	P	Pg	05 51 00.5		+0.9
NRCA				S	Sg	05 51 02.3		+1.1
NRCA				AML	AML			
	comp=E,63400μm,1.1s							
NRCA				AML	AML			
	comp=N,60250μm,0.2s							
NRCA				AML	AML			
	comp=N,65600μm,0.5s							
NRCA				AML	AML			
	comp=N,72050μm,1.0s							
NRCA				AML	AML			
	comp=N,77250μm,0.1s							
NRCA				AML	AML			
	comp=E,67900μm,1.1s							
NRCA				AML	AML			
	comp=N,60273μm,0.2s							
NRCA				AML	AML			
	comp=N,65182μm,0.2s							
FEMA	**Monte Fema**	**0.22**	**322**	P	Pg	05 51 02.8		+1.1
FEMA				S	Sg	05 51 06.2		+1.4
FEMA				AML	AML			
	comp=N,3140μm,1.0s							
FEMA				AML	AML			
	comp=E,4070μm,0.2s							
FEMA				AML	AML			
	comp=N,3135μm,1.0s							
FEMA				AML	AML			
	comp=E,4075μm,0.2s							
FEMA				AML	AML			
	comp=N,3135μm,1.0s							
FDMO	**Fiordimonte**	**0.27**	**336**	P	Pg	05 51 03.3		+0.7
FDMO				S	Sg	05 51 07.5		+1.3
FDMO				AML	AML			
	comp=N,1485μm,0.7s							
FDMO				AML	AML			
	comp=E,1230μm,1.6s							
RM33	**Pellescritta (**	**0.28**	**183**	P	Pb	05 51 03.9		-0.8
RM33				S	Sb	05 51 08.8		-0.9
RM33				AML	AML			
	comp=E,4150μm,0.3s							
RM33				AML	AML			
	comp=N,3635μm,1.6s							
RM33				AML	AML			
	comp=N,3635μm,1.6s							
RM33				AML	AML			
	comp=E,4055μm,0.3s							
RM33				AML	AML			
	comp=N,3520μm,1.6s							
RM33				AML	AML			
	comp=N,20350μm,0.1s							
RM33				AML	AML			
	comp=E,17400μm,0.1s							
RM33				AML	AML			
	comp=N,20050μm,0.1s							
RM33				AML	AML			
	comp=E,17200μm,0.1s							
CAMP	**Campotosto**	**0.28**	**153**	P	Pg	05 51 03.8		+0.9
CAMP				S	Sb	05 51 08.5		-1.3
CAMP				AML	AML			
	comp=E,3090μm,0.2s							
CAMP				AML	AML			
	comp=N,2960μm,0.5s							
CAMP				AML	AML			
	comp=E,4500μm,0.3s							
CAMP				AML	AML			
	comp=N,3725μm,0.3s							
GUMA	**Gualdo di Mace**	**0.28**	**15**	P	Pg	05 51 03.7		+0.8
GUMA				S	Sb	05 51 08.5		-1.2
GUMA				AML	AML			
	comp=N,11640μm,1.5s							
GUMA				AML	AML			
	comp=E,14790μm,0.4s							
GUMA				AML	AML			
	comp=N,11620μm,1.5s							
GUMA				AML	AML			
	comp=E,19350μm,0.4s							
GUMA				AML	AML			
	comp=N,11365μm,0.6s							
CSP1	**Cessapalombo**	**0.30**	**356**	P	Pg	05 51 03.7		+0.4
CSP1				S	Sg	05 51 08.7		+1.4
CSP1				AML	AML			
	comp=E,2015μm,0.3s							
CSP1				AML	AML			
	comp=N,2150μm,0.4s							
CSP1				AML	AML			
	comp=N,2155μm,0.4s							
CSP1				AML	AML			
	comp=E,2010μm,0.3s							
TERO	**Teramo**	**0.32**	**121**	P	Pg	05 51 04.2		+0.7
TERO				S	Sb	05 51 09.4		-1.3
TERO				AML	AML			
	comp=E,2780μm,0.3s							
TERO				AML	AML			
	comp=N,3060μm,0.4s							
TERO				AML	AML			
	comp=E,2790μm,0.2s							
TERO				AML	AML			
	comp=N,4645μm,0.5s							
TERO				AML	AML			
	comp=E,3275μm,0.2s							
TERO				AML	AML			
	comp=N,5340μm,0.3s							
TERO				AML	AML			
	comp=E,2420μm,0.1s							
TERO				AML	AML			
	comp=N,2625μm,0.2s							
TERO				AML	AML			
	comp=N,2903μm,0.2s							
TERO				AML	AML			
	comp=E,2114μm,0.1s							
CESI	**CESI - Serrava**	**0.33**	**312**	P	Pg	05 51 04.2		+0.5
CESI				S	Sg	05 51 09.5		+1.5
CESI				AML	AML			
	comp=E,2490μm,0.3s							
CESI				AML	AML			
	comp=N,4770μm,0.3s							
OFFI	**Offida**	**0.36**	**66**	P	Pb	05 51 05.7		-0.4
OFFI				AML	AML			
	comp=E,1875μm,1.0s							
OFFI				AML	AML			
	comp=N,2720μm,0.5s							
ARRO	**Arrone**	**0.41**	**239**	P	Pg	05 51 05.8		+0.6
ARRO				S	Sb	05 51 13.1		-0.1
ARRO				AML	AML			
	comp=E,1039μm,0.2s							
ARRO				AML	AML			
	comp=E,1043μm,0.2s							
ARRO				AML	AML			
	comp=N,783μm,1.2s							
GIGS	**Gran Sasso**	**0.42**	**144**	P	Pg	05 51 06.0		+0.6
GIGS				S	Sb	05 51 12.7		-1.0
GIGS				AML	AML			
	comp=E,330μm,0.1s							
GIGS				AML	AML			
	comp=E,330μm,0.1s							
GIGS				AML	AML			
	comp=N,313μm,0.5s							
GIGS				AML	AML			
	comp=E,742μm,1.2s							
GIGS				AML	AML			
	comp=N,820μm,0.4s							
AQU	**L'Aquila**	**0.45**	**164**	P	Pb	05 51 07.1		-0.5
ASSB	**Assisi San Ben**	**0.49**	**301**	P	Pg	05 51 07.1		+0.2
ASSB				S	Sb	05 51 14.6		-1.2

ASSB				AML	AML			
	comp=E,672µm,0.9s							
ASSB				AML	AML			
	comp=N,852µm,1.6s							
TRTR	**Tortoreto Alta**	**0.50**	**88**	P	Pb	05 51 08.2	-0.2	
TRTR				AML	AML			
	comp=E,1940µm,1.3s							
TRTR				AML	AML			
	comp=N,2370µm,1.2s							
SNTG	**Esanatoglia**	**0.51**	**335**	P	Pg	05 51 07.5	+0.2	
SNTG				AML	AML			
	comp=E,314µm,1.3s							
SNTG				AML	AML			
	comp=N,345µm,0.2s							
SNTG				AML	AML			
	comp=E,313µm,1.3s							
CESX	**Cesi**	**0.52**	**250**	P	Pg	05 51 07.5	+0.3	
CESX				AML	AML			
	comp=E,543µm,0.8s							
CESX				AML	AML			
	comp=N,574µm,0.7s							
FIAM	**Fiamignano**	**0.53**	**190**	P	Pg	05 51 07.8	+0.4	
FIAM				S	Sb	05 51 16.1	-0.7	
FIAM				AML	AML			
	comp=E,916µm,0.8s							
FIAM				AML	AML			
	comp=N,548µm,0.7s							
FIAM				AML	AML			
	comp=E,2460µm,0.6s							
FIAM				AML	AML			
	comp=N,2535µm,0.2s							
EL6	**Elcito**	**0.55**	**350**	P	Pg	05 51 08.4	+0.5	
EL6				S	Sb	05 51 16.8	-0.7	
FAGN	**Fagnano**	**0.58**	**154**	P	Pb	05 51 09.8	0.0	
FAGN				AML	AML			
	comp=N,1510µm,1.6s							
FAGN				AML	AML			
	comp=E,1365µm,0.4s							
ATCC	**AVT- Casa Cast**	**0.59**	**312**	P	Pg	05 51 09.0	+0.3	
ATCC				S	Sb	05 51 18.5	0.0	
ATCC				AML	AML			
	comp=E,596µm,0.3s							
ATCC				AML	AML			
	comp=N,614µm,0.7s							
ATCC				AML	AML			
	comp=E,596µm,0.3s							
VCEL	**Villa Celiera**	**0.60**	**131**	P	Pb	05 51 09.6	-0.5	
VCEL				AML	AML			
	comp=N,988µm,0.9s							
VCEL				AML	AML			
	comp=N,986µm,0.9s							
VCEL				AML	AML			
	comp=N,984µm,0.9s							
VCEL				AML	AML			
	comp=E,786µm,0.3s							
PP3	**Marolino**	**0.65**	**25**	P	Pb	05 51 10.9	0.0	
PP3				AML	AML			
	comp=E,4100µm,0.5s							
PP3				AML	AML			
	comp=N,3270µm,0.4s							
PP3				AML	AML			
	comp=N,3350µm,0.4s							
PP3				AML	AML			
	comp=E,3805µm,0.5s							
T0110	**Collepietro**	**0.69**	**144**	P	Pg	05 51 10.9	+0.4	
T0110				AML	AML			
	comp=E,540µm,0.3s							
T0110				AML	AML			
	comp=N,742µm,0.3s							
T0110				AML	AML			
	comp=N,742µm,0.3s							
MURB	**Monte Urbino**	**0.70**	**313**	⇑P	Pb	05 51 11.6	-0.4	
MURB				S	Sb	05 51 22.0	+0.1	
MURB				AML	AML			
	comp=E,988µm,0.3s							
MURB				AML	AML			
	comp=N,872µm,1.0s							
ARVD	**Arcevia**	**0.74**	**343**	P	Pg	05 51 11.1	-0.4	
AOI	**Ancona**	**0.81**	**19**	P	Pg	05 51 13.0	+0.2	
AOI				S	Sb	05 51 25.4	+0.6	
FRON	**Frontone**	**0.82**	**333**	P	Pg	05 51 13.2	+0.2	
FRON				AML	AML			
	comp=E,228µm,1.4s							
FRON				AML	AML			
	comp=N,312µm,0.5s							
MGAB	**Montegabbione**	**0.84**	**279**	P	Pb	05 51 13.9	-0.2	
MGAB				AML	AML			
	comp=N,611µm,1.0s							
MGAB				AML	AML			
	comp=E,650µm,0.4s							
MGAB				AML	AML			
	comp=N,530µm,1.0s							
MGAB				AML	AML			
	comp=E,608µm,1.2s							
ATVO	**AVT- Monte Val**	**0.85**	**315**	P	Pg	05 51 13.9	+0.3	
ATVO				AML	AML			
	comp=E,200µm,0.9s							
ATVO				AML	AML			
	comp=N,176µm,0.3s							
CERT	**Cerreto**	**0.86**	**193**	⇑P	Pg	05 51 13.9	+0.1	
CERT				AML	AML			
	comp=N,436µm,0.3s							
CERT				AML	AML			
	comp=E,462µm,0.4s							
PIEI	**Pieia**	**0.91**	**326**	P	Pg	05 51 15.0	+0.3	
PIEI				AML	AML			
	comp=E,176µm,0.3s							
PIEI				AML	AML			
	comp=N,136µm,1.5s							
MPAG	**Monte Paganucc**	**0.91**	**338**	P	Pb	05 51 15.5	+0.1	
MPAG				AML	AML			
	comp=N,192µm,1.5s							
MPAG				AML	AML			
	comp=E,257µm,0.5s							
INTR	**Introdacqua**	**0.92**	**147**	P	Pg	05 51 14.8	-0.2	
INTR				AML	AML			
	comp=E,219µm,0.7s							
INTR				AML	AML			
	comp=N,362µm,0.9s							
NARO	**Abbazia di Nar**	**0.95**	**330**	P	Pg	05 51 15.7	+0.1	
NARO				AML	AML			
	comp=N,174µm,0.7s							
NARO				AML	AML			
	comp=E,154µm,0.1s							
FSSB	**Fossombrone**	**0.96**	**340**	P	Pb	05 51 16.4	+0.1	
FSSB				AML	AML			
	comp=E,737µm,0.4s							
FSSB				AML	AML			
	comp=N,782µm,1.4s							
FSSB				AML	AML			
	comp=N,782µm,1.4s							
FSSB				AML	AML			
	comp=E,736µm,0.4s							
CAFI	**Castiglion Fio**	**1.08**	**301**	P	Pg	05 51 18.0	+0.1	
CAFI				AML	AML			
	comp=E,132µm,0.8s							
CAFI				AML	AML			
	comp=N,136µm,0.8s							
MAGA	**Magasa**	**3.52**	**329**	AML	AML			
	comp=E,63µm,0.6s							
MAGA				AML	AML			
	comp=N,39µm,1.3s							

ROM 24 05:51:21.3±0.1, 42°37'N±0°00'4×13°27'1E±0°00'6, h10km, Md1.2/9, 1C, Error ellipse: s-maj=0.5km s-min=0.2km az=238.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.15**	**310**	P	Pg	05 51 25.3	+0.6
NRCA				S	Sg	05 51 28.0	+0.9
NRCA				END			
CAMP	**Campotosto**	**0.23**	**153**	P	Pg	05 51 26.6	+0.6
CAMP				S	Sg	05 51 30.6	+1.4
CAMP				END			
RM33	**Pellescritta (**	**0.23**	**190**	P	Pg	05 51 26.7	+0.6
RM33				S	Sg	05 51 31.0	+1.6
RM33				AML	AML		
	comp=E,17200µm,0.1s						
RM33				AML	AML		
	comp=N,20350µm,0.1s						
RM33				AML	AML		
	comp=E,17400µm,0.1s						
RM33				AML	AML		
	comp=N,20050µm,0.1s						
RM33				END			
TERO	**Teramo**	**0.27**	**115**	P	Pg	05 51 27.3	+0.5
TERO				S	Sb	05 51 31.9	-1.1
TERO				END			
FEMA	**Monte Fema**	**0.28**	**324**	P	Pg	05 51 27.4	+0.4
FEMA				S	Sg	05 51 32.0	+1.2
FEMA				END			
FDMO	**Fiordimonte**	**0.33**	**336**	P	Pg	05 51 28.3	+0.4
FDMO				S	Sg	05 51 33.4	+1.1
GUMA	**Gualdo di Mace**	**0.33**	**8**	P	Pb	05 51 29.0	-0.4
GUMA				S	Sb	05 51 34.5	-0.2
GIGS	**Gran Sasso**	**0.36**	**142**	⇑P	Pg	05 51 28.9	+0.4
GIGS				AML	AML		
	comp=E,754µm,0.9s						
GIGS				AML	AML		
	comp=N,820µm,0.4s						
GIGS				END			
CESI	**CESI - Serrava**	**0.38**	**315**	P	Pg	05 51 29.1	+0.2
CESI				S	Sb	05 51 35.2	-1.0
CESI				END			
AQU	**L'Aquila**	**0.40**	**166**	P	Pb	05 51 30.1	-0.3
AQU				S	Sb	05 51 36.0	-0.5
AQU				END			
ARRO	**Arrone**	**0.41**	**247**	P	Pg	05 51 29.7	+0.4
ARRO				S	Sb	05 51 36.1	-0.7
ARRO				END			
FIAM	**Fiamignano**	**0.48**	**194**	P	Pg	05 51 30.9	+0.2
FIAM				S	Sb	05 51 38.4	-0.7
CESX	**Cesi**	**0.53**	**256**	P	Pg	05 51 32.0	+0.5
CESX				S	Sb	05 51 39.5	-0.7

*NOU **24** 05:51:41.7, 19°.08S×172°.78W, h0km, mb5.0/11, Tonga Islands Region*
*IDC **24** 05:51:42.3±0.5, 19°.03S×173°.38W, h0km, mb4.5/16, mbtmp4.5/17, ML5.0/2, Error ellipse: s-maj=23.1km s-min=13.7km az=139.0*
*NEIC **24** 05:51:42.7±2.7, 19°.3S±0°.1×172°.84W±0°.07, h10km±1km, mb4.8/78, Error ellipse: s-maj=21.8km s-min=11.6km az=359.0*

ISC 24 05:51:43.4±0.4, 19°.33S±0°.06×173°.14W±0°.08, h10km, n196, σ2s05/158, mb4.7/54, 15D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.04**	**86**	Pn	Pn	05 52 26.6	-5.0
NIUE	**Niue**	**3.04**	**86**	P	Pn	05 52 26.2	-5.4
AFI	**Afiamalu**	**5.55**	**14**	Pn	Pn	05 52 59.3	-6.8
	12nm,0.3s,baz=298,slow=20,SNR=2.0						
AFI				Sn	Sn	05 53 49.1	-21
	16nm,0.3s,baz=228,slow=23,SNR=1.6						
MSVF	**Nonsavu**	**8.51**	**279**	Pn	**Pn**	**05 53 46.6**	**-0.2**
	0.2nm,0.3s,baz=116,slow=16,SNR=2.6						
MSVF	**Nonsavu**	**8.51**	**279**	Pn	**Pn**	**05 53 49.8**	**+3.0**
MSVF	**Nonsavu**	**8.51**	**279**	P	**Pn**	**05 53 50.4**	**+3.6**
RIZ	**Raoul Island**	**10.79**	**203**	P	Pn	05 54 23.5	+5.5
RAO	**Raoul Island**	**10.79**	**203**	Pn	**Pn**	**05 54 22.4**	**+4.4**
	101nm,0.3s,baz=261,slow=20,SNR=7.5						
RAO				Sn	**Sn**	**05 56 16.3**	**-2.6**
	15nm,0.3s,baz=124,slow=21,SNR=1.4						
RAO	**Raoul Island**	**10.79**	**203**	P	Pn	05 54 22.8	+4.8
GLKZ	**Green Lake**	**10.80**	**203**	P	Pn	05 54 24.6	+6.4
GLKZ				S	**Sn**	**05 56 14.9**	**-4.2**
RAR	**Rarotonga**	**12.68**	**101**	Pn	Pn	05 54 39.3	-4.6
	15nm,0.3s,baz=242,slow=4.1,SNR=30						
RAR				Sn	Sn	05 56 48.8	-16
	0.8nm,0.3s,baz=206,slow=12,SNR=1.4						
RAR	**Rarotonga**	**12.68**	**101**	Pn	Pn	05 54 39.5	-4.4
RAR	**Rarotonga**	**12.68**	**101**	P	Pn	05 54 39.5	-4.4
YATNC	**Mamie plateau,**	**18.88**	**258**	P	**Pn**	**05 56 08.2**	**+3.6**
OUENC	**Ouen Island, N**	**18.96**	**257**		**P**	**05 56 05.2**	**+0.3**
DZM	**Mont Dzumac**	**19.29**	**258**	P	**P**	**05 56 08.8**	**+0.1**
	0.5nm,0.3s,baz=88,slow=18,SNR=4.3						
	9.0nm,0.7s						
DZM	**Mont Dzumac**	**19.29**	**258**	*e*LR	LR	06 01 04.3	
	comp=Z,167nm,22.6s						
DZM	**Mont Dzumac**	**19.29**	**258**	P	**P**	**05 56 09.2**	**+0.5**
OUZ	**Omahuta**	**19.70**	**214**	P	**Pn**	**05 56 14.5**	**+0.2**
HAZ	**Te Kaha**	**19.99**	**201**	P	**Pn**	**05 56 21.1**	**+3.3**
HAZ				S	**S**	**05 59 54.3**	**-6.6**
MWZ	**Matawai**	**20.60**	**201**	P	Pn	05 56 25.2	+0.2
MWZ				S	**S**	**06 00 06.5**	**-6.5**
URZ	**Urewera**	**20.68**	**202**	P	Pn	05 56 26.6	+0.7
	13nm,0.6s,baz=22,slow=5.4,SNR=18						
URZ				S	**S**	**06 00 05.3**	**-9.2**
	2.6nm,0.6s,baz=161,slow=17,SNR=1.6						
	13nm,0.6s						
URZ	**Urewera**	**20.68**	**202**	P	**P**	**05 56 24.9**	**+1.4**
URZ				IAmb	IAmb	05 56 34.4	
	comp=Z,18nm,0.6s						
URZ	**Urewera**	**20.68**	**202**	P	Pn	05 56 26.8	+1.0
URZ	**Urewera**	**20.68**	**202**	P	Pn	05 56 27.1	+1.3
TOZ	**Tahuroa Road**	**20.84**	**206**	P	Pn	05 56 30.4	+2.7
TARZ	**Mount Tarawera**	**20.88**	**203**	P	Pn	05 56 32.7	+4.4
SNGZ	**Shannon Statio**	**21.07**	**201**	P	P	05 56 36.7	+9.0
MTHZ	**Maungataniwha**	**21.30**	**202**	P	P	05 56 37.5	+7.2
TLZ	**Tolley Road**	**21.34**	**205**	P	P	05 56 39.1	+8.4
NMHZ	**Naumai**	**21.53**	**202**	P	**P**	**05 56 36.7**	**+3.9**
BKZ	**Black Stump Fm**	**21.70**	**202**	P	**P**	**05 56 35.0**	**+0.3**
HIZ	**Hauiti**	**21.77**	**206**	P	**P**	**05 56 36.8**	**+1.5**
HIZ	**Hauiti**	**21.77**	**206**	P	**P**	**05 56 40.2**	**+4.9**
OTVZ	**Oturere**	**22.01**	**204**	P	**P**	**05 56 39.1**	**+1.0**
BHHZ	**Black Hill Sta**	**22.14**	**203**	P	**P**	**05 56 40.5**	**+1.1**
WNVZ	**Wahianoa**	**22.18**	**204**	P	**P**	**05 56 42.8**	**+2.9**
PAE	**Paea**	**22.40**	**90**	*e*T	T	06 19 46.5	
	comp=Z,2.4nm,0.3s						
TBI	**Tubuai**	**22.41**	**104**	*e*LR	LR	06 01 59.7	
	comp=Z,126nm,26.0s						
PPT2	**Papeete2**	**22.41**	**89**	*e*LR	LR	06 01 44.2	
	comp=Z,164nm,25.8s						
BFZ	**Birch Farm**	**23.14**	**201**	P	**P**	**05 56 51.7**	**+1.8**
BFZ				IAmb	IAmb	05 56 55.0	
	comp=Z,22nm,0.8s						
BFZ	**Birch Farm**	**23.14**	**201**	P	**P**	**05 56 54.3**	**+4.5**
TUWZ	**Tuamarina**	**24.63**	**204**	P	**P**	**05 57 01.7**	**-2.3**
NNZ	**Nelson**	**24.66**	**205**	P	**P**	**05 57 05.2**	**+0.8**
NNZ				IAmb	IAmb	05 57 10.7	
	comp=Z,29nm,1.1s						
QRZ	**Quartz Range**	**24.69**	**207**	P	**P**	**05 57 06.1**	**+1.6**
LTZ	**Lake Taylor**	**26.43**	**205**	P	**P**	**05 57 22.3**	**+1.9**
OXZ	**Oxford**	**26.98**	**204**	P	**P**	**05 57 26.1**	**+0.9**
OXZ				IAmb	IAmb	05 57 34.7	
	comp=Z,25nm,0.9s						
RPZ	**Rata Peaks**	**27.69**	**205**	P	**P**	**05 57 38.4**	**+6.6**
	comp=Z,21nm,0.6s,baz=292,slow=16,SNR=9.3						
WKZ	**Wanaka**	**29.44**	**206**	P	**P**	**05 57 46.7**	**-0.6**
WKZ				IAmb	IAmb	05 57 52.2	
	comp=Z,21nm,1.1s						
EIDS	**Eidsvold**	**33.56**	**253**	P	**P**	**05 58 22.5**	**-1.3**
EIDS				IAmb	IAmb	05 58 25.5	
	comp=Z,6.7nm,0.8s						
ARMA	**Armidale**	**33.69**	**244**	P	**P**	**05 58 23.8**	**-1.1**
CTA	**Charters Tower**	**38.17**	**262**	P	**P**	**05 59 01.6**	**-1.7**
	comp=Z,18nm,0.5s,baz=99,slow=11,SNR=35						
	comp=Z,18nm,0.5s						
CTAO	**Charters Tower**	**38.17**	**262**	P	**P**	**05 59 01.9**	**-1.5**
TOO	**Toolangi**	**40.28**	**234**	P	**P**	**05 59 19.6**	**-1.3**
COEN	**Coen**	**42.11**	**270**	P	**P**	**05 59 35.3**	**-0.9**
COEN				IAmb	IAmb	05 59 36.1	
	comp=Z,9.3nm,0.7s						
STKA	**Stephens Creek**	**42.41**	**244**	P	**P**	**05 59 37.4**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=90,slow=6.1,SNR=5.3						
	comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**42.41**	**244**	P	**P**	**05 59 37.7**	**-0.7**
AS31	**Alice Springs**	**49.24**	**255**	P	**P**	**06 00 31.0**	**-1.5**
ASAR	**Alice Springs**	**49.24**	**255**	P	**P**	**06 00 30.9**	**-1.5**
	comp=Z,7.0nm,0.5s,baz=95,slow=8.1,SNR=86						
ASAR				PcP	**PcP**	**06 01 56.1**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=90,slow=6.0,SNR=4.7						
ASAR				S	**S**	**06 07 32.4**	**-6.4**
	comp=Z,0.8nm,0.8s,baz=90,slow=16,SNR=4.4						
	comp=Z,7.0nm,0.5s						
ASAR	**Alice Springs**	**49.24**	**255**	P	**P**	**06 00 31.6**	**-0.9**
WB0	**Warramunga Arr**	**49.28**	**260**	P	**P**	**06 00 30.9**	**-1.9**
WB2	**Warramunga Arr**	**49.29**	**260**	P	**P**	**06 00 30.4**	**-2.5**
WB2				IAmb	IAmb	06 00 35.6	
	comp=Z,6.5nm,0.8s						
WRA	**Warramunga Arr**	**49.30**	**260**	P	**P**	**06 00 30.6**	**-2.4**
	comp=Z,2.5nm,0.3s,baz=97,slow=7.0,SNR=97						
WRA				S	S	06 07 30.8	-8.9
	comp=Z,1.0nm,1.1s,baz=96,slow=13,SNR=4.2						
	comp=Z,2.5nm,0.3s						
MTN	**Manton Dam**	**53.75**	**268**	P	**P**	**06 01 04.5**	**-1.8**
KNRA	**Kununurra**	**55.31**	**264**	P	**P**	**06 01 16.1**	**-1.6**
SIJI	**Sorong**	**57.42**	**282**	P	**P**	**06 01 30.5**	**-2.3**
	comp=Z,14nm,0.6s,baz=143,slow=20,SNR=1.7						
	comp=Z,14nm,0.6s						
FITZ	**Fitzroy Crossi**	**57.72**	**260**	P	**P**	**06 01 33.4**	**-1.5**
	comp=Z,2.9nm,0.6s,baz=88,slow=2.8,SNR=9.1						
	comp=Z,2.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**57.72**	**260**	P	**P**	**06 01 33.8**	**-1.0**
VNDA	**Vanda**	**59.51**	**186**	P	**P**	**06 01 49.7**	**+3.3**
	comp=Z,1.7nm,0.9s,baz=36,slow=8.6,SNR=9.6						
	comp=Z,1.7nm,0.9s						
VNDA	**Vanda**	**59.51**	**186**	P	**P**	**06 01 46.9**	**+0.5**
PSA00	**Pilbara Seismi**	**62.39**	**255**	P	**P**	**06 02 06.4**	**-0.4**
MBWA	**Marble Bar**	**62.57**	**256**	P	**P**	**06 02 07.5**	**-0.6**
MORW	**Morawa**	**64.49**	**246**	P	**P**	**06 02 19.0**	**-1.7**
MORW				IAmb	IAmb	06 02 26.6	
	comp=Z,6.5nm,1.0s						
GIRL	**Giralia**	**67.27**	**253**	P	**P**	**06 02 39.7**	**+1.1**
QSPA	**South Pole Qui**	**70.73**	**180**	P	**P**	**06 03 00.8**	**+1.2**
QSPA				IAmb	IAmb	06 03 02.8	
	comp=Z,7.2nm,0.8s						
MJAR	**Matsushiro Arr**	**72.10**	**321**	P	**P**	**06 03 07.4**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=144,slow=7.9,SNR=5.2						
	comp=Z,2.7nm,0.9s						
NVAR	**Mina Array Bea**	**77.09**	**41**	P	**P**	**06 03 36.9**	**-0.5**
	comp=Z,4.7nm,0.8s,baz=227,slow=9.6,SNR=34						
	comp=Z,4.7nm,0.8s						
SMAI	**San Martin Ant**	**78.03**	**158**	P	**P**	**06 03 40.1**	**-1.8**
SMAI				IAmb	IAmb	06 03 45.2	
	comp=Z,7.1nm,0.8s						
KSRS	**Korea Array**	**79.14**	**316**	P	**P**	**06 03 48.4**	**0.0**
	comp=Z,5.0nm,0.9s,baz=132,slow=5.9,SNR=15						
	comp=Z,5.0nm,0.9s						
KSAR	**Wonju Array Be**	**79.16**	**316**	P	**P**	**06 03 48.9**	**+0.4**
ILSW	**Iliamna Southw**	**80.69**	**10**	IAmb	IAmb	06 03 56.0	
	comp=Z,17nm,0.8s						
G08A	**Pilot Rock**	**80.97**	**35**	P	**P**	**06 03 56.7**	**-1.6**
SRU	**San Rafael Swe**	**82.46**	**44**	P	**P**	**06 04 03.8**	**-2.6**
P17A	**Butcher Ranch,**	**82.51**	**44**	IAmb	IAmb	06 04 08.3	
	comp=Z,5.9nm,1.1s						
TX31	**Lajitas Ar. Si**	**82.60**	**56**	P	**P**	**06 04 06.5**	**-0.8**
TX31				IAmb	IAmb	06 04 12.9	
	comp=Z,12nm,1.1s						
TX32	**Lajitas Array**	**82.60**	**56**	P	**P**	**06 04 06.7**	**-0.5**
TXAR	**Lajitas Array**	**82.60**	**56**	P	**P**	**06 04 07.5**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=232,slow=5.6,SNR=20						
	comp=Z,2.7nm,1.0s						
H03S2	**Juan Fernandez**	**82.84**	**123**	T	T	07 36 52.3	
	baz=250						
H03S1	**Juan Fernandez**	**82.85**	**123**	T	T	07 36 53.5	
	baz=250						
H03S3	**Juan Fernandez**	**82.86**	**123**	T	T	07 36 51.1	
	baz=250						
TCUT	**Toone Canyon**	**82.97**	**42**	P	**P**	**06 04 08.7**	**-0.4**
CAST	**Castle Rocks**	**84.11**	**9**	P	**P**	**06 04 11.4**	**-2.7**
MAW	**Mawson**	**84.17**	**199**	P	**P**	**06 04 16.2**	**+1.7**
	comp=Z,2.7nm,0.8s,baz=126,slow=1.1,SNR=6.0						
	comp=Z,2.7nm,0.8s						
S22A	**4UR Ranch, Cre**	**84.25**	**47**	P	**P**	**06 04 14.8**	**-1.0**
S22A				IAmb	IAmb	06 04 17.6	
	comp=Z,7.1nm,0.9s						
J20K	**Nowinta River**	**84.54**	**8**	P	**P**	**06 04 15.2**	**-1.0**
J20K				IAmb	IAmb	06 04 16.2	
	comp=Z,7.7nm,1.1s						
REDW	**Red Top Meadow**	**84.54**	**40**	IAmb	IAmb	06 04 18.0	
	comp=Z,7.0nm,1.1s						
TPAW	**Teton Pass**	**84.55**	**40**	IAmb	IAmb	06 04 17.2	
	comp=Z,5.5nm,1.1s						
RND	**Reindeer**	**84.63**	**11**	P	**P**	**06 04 15.5**	**-1.3**
RND				IAmb	IAmb	06 04 17.2	
	comp=Z,6.9nm,0.9s						
IMW	**Indian Meadow**	**84.78**	**40**	P	**P**	**06 04 17.2**	**-1.1**
IMW				IAmb	IAmb	06 04 19.3	
	comp=Z,5.2nm,1.0s						
SMCO	**Snowmass**	**84.86**	**46**	P	**P**	**06 04 18.3**	**-0.7**
M26K	**Nabesna, AK**	**84.89**	**14**	IAmb	IAmb	06 04 19.4	
	comp=Z,10.0nm,1.1s						
MCK	**McKinley**	**84.92**	**11**	P	**P**	**06 04 16.3**	**-1.9**
BW06	**Boulder Array**	**85.02**	**41**	IAmb	IAmb	06 04 19.9	
	comp=Z,4.3nm,0.9s						
PD31	**Pinedale Array**	**85.02**	**41**	IAmb	IAmb	06 04 19.9	
	comp=Z,3.9nm,0.9s						
PDAR	**Pinedale Array**	**85.02**	**41**	P	**P**	**06 04 18.9**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=211,slow=3.5,SNR=28						
	comp=Z,2.9nm,0.8s						
PDAR	**Pinedale Array**	**85.02**	**41**	P	**P**	**06 04 18.5**	**-1.0**
BOZ	**Bozeman (W)**	**85.30**	**38**	P	**P**	**06 04 19.5**	**-1.2**
BOZ				IAmb	IAmb	06 04 21.7	
	comp=Z,4.8nm,0.9s						
L26K	**Log Cabin Wild**	**85.36**	**13**	IAmb	IAmb	06 04 21.3	
	comp=Z,5.9nm,1.1s						
MSTX	**Muleshoe**	**85.37**	**52**	P	**P**	**06 04 20.7**	**-0.6**
WRH	**Wood River Hil**	**85.75**	**11**	P	**P**	**06 04 21.0**	**-1.3**
DOT	**Dot Lake**	**85.77**	**13**	IAmb	IAmb	06 04 22.9	
	comp=Z,8.1nm,1.0s						
MLY	**Manley**	**85.84**	**9**	P	**P**	**06 04 21.2**	**-1.6**
MLY				IAmb	IAmb	06 04 22.4	
	comp=Z,5.6nm,1.0s						
HDA	**Harding Lake**	**85.89**	**11**	IAmb	IAmb	06 04 23.1	
	comp=Z,7.7nm,0.8s						
N31M	**Braeburn, Yuko**	**85.90**	**17**	IAmb	IAmb	06 04 24.1	
	comp=Z,8.0nm,0.9s						
SCRK	**Sand Creek**	**86.08**	**12**	IAmb	IAmb	06 04 24.7	
	comp=Z,5.0nm,1.0s						
H21K	**Melozitna Rive**	**86.13**	**8**	P	**P**	**06 04 23.7**	**-0.5**
H21K				IAmb	IAmb	06 04 25.1	
	comp=Z,7.8nm,1.1s						
TCOL	**CIGO, UAF Yank**	**86.16**	**11**	P	**P**	**06 04 22.6**	**-1.7**
COLA	**College**	**86.16**	**11**	P	**P**	**06 04 22.6**	**-1.7**
I23K	**Minto, Yukon-K**	**86.16**	**10**	IAmb	IAmb	06 04 27.6	
	comp=Z,7.1nm,1.1s						
IL31		**86.24**	**11**	P	**P**	**06 04 23.1**	**-1.6**
IL31				IAmb	IAmb	06 04 25.5	
	comp=Z,4.9nm,0.8s						
ILAR	**Eielson Array**	**86.24**	**11**	P	**P**	**06 04 23.9**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=213,slow=6.3,SNR=23						
	comp=Z,2.3nm,0.8s						
ILAR	**Eielson Array**	**86.24**	**11**	P	**P**	**06 04 23.0**	**-1.7**
IMAR	**Indian Mountai**	**86.31**	**8**	P	**P**	**06 04 24.0**	**-1.1**
J25K	**Salcha River,**	**86.37**	**12**	IAmb	IAmb	06 04 25.9	
	comp=Z,5.1nm,0.9s						
K27K	**Chicken**	**86.52**	**13**	IAmb	IAmb	06 04 27.4	
	comp=Z,6.6nm,1.1s						
J26L	**Joseph Creek**	**86.63**	**12**	IAmb	IAmb	06 04 27.9	
	comp=Z,9.0nm,0.9s						
DAWY	**Dawson**	**87.15**	**14**	P	**P**	**06 04 27.9**	**-1.4**
DAWY				IAmb	IAmb	06 04 30.2	
	comp=Z,7.8nm,0.9s						
PRP	**Porcupine Dome**	**87.16**	**11**	IAmb	IAmb	06 04 30.0	
	comp=Z,8.2nm,1.1s						
EGAK	**Eagle**

	comp=Z,14nm,0.9s							
OSTC	**Ostas**	**147.97**	**349**	*e*PKP	**PKPbc**	**06 11 30.2**	**+1.2**
TSSL	**Sulina**	**148.01**	**329**	⇓P	**PKPab**	**06 11 39.0**	**+7.2**
UPC	**Upice**	**148.05**	**349**	*e*PKP	**PKPbc**	**06 11 30.1**	**+0.9**
DPC	**Dobruska-Polom**	**148.15**	**348**	*e*PKP	**PKPbc**	**06 11 29.3**	**-0.2**
BIZ	**Bicaz**	**148.28**	**335**	⇓P	**PKPbc**	**06 11 31.0**	**+1.1**
KRLC	**Kraliky**	**148.32**	**348**	*e*PKP	**PKPbc**	**06 11 30.1**	**+0.2**
PRU	**Pruhonice**	**148.80**	**350**	*e*PKP	**PKPbc**	**06 11 31.5**	**+0.4**
TPGR	**Topolog**	**148.87**	**330**	⇓P	**PKPbc**	**06 11 31.9**	**+0.4**
VRAC	**Vranov**	**149.09**	**348**	*e*PKP	**PKPbc**	**06 11 32.6**	**+0.7**
BRTR	**Keskin Array B**	**149.28**	**317**	PKPbc	**PKPbc**	**06 11 33.5**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=97,slow=1.7,SNR=11							
JAVC	**Velka Javorina**	**149.28**	**346**	*e*PKP	**PKiKP**	**06 11 34.2**	**+0.6**
KRUC	**Moravsky**	**149.36**	**348**	*e*PKP	**PKPbc**	**06 11 33.2**	**+0.6**
KHC	**Kasperske Hory**	**149.78**	**351**	*e*PKP	**PKPbc**	**06 11 34.1**	**+0.5**
VOIR		**149.92**	**334**	⇓P	**PKPbc**	**06 11 35.1**	**+0.9**
CKRC	**Cesky Krumlov**	**149.98**	**350**	*e*PKP	**PKPbc**	**06 11 34.6**	**+0.5**
GERES	**GERESS Array B**	**150.04**	**351**	PKPbc	**PKPbc**	**06 11 34.6**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=5.7,slow=1.0,SNR=14							
MTUR	**Matau**	**150.09**	**334**	⇓P	**PKPdf**	**06 11 31.4**	**+1.8**
ARR	**Arges**	**150.15**	**334**	⇓P	**PKPbc**	**06 11 35.6**	**+1.0**
ASF	**Jabal al Asfar**	**150.19**	**301**	PKPbc	**PKPbc**	**06 11 36.0**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=45,slow=1.6,SNR=4.4							
SIRR	**Siria**	**150.50**	**339**	⇓P	**PKPbc**	**06 11 36.2**	**+0.8**
CONA	**Conrad Observa**	**150.55**	**348**	*e*P	**PKPbc**	**06 11 36.1**	**+0.5**
	comp=Z,7.7nm,0.9s							
RONA	**Rosalia, Austr**	**150.68**	**347**	*e*P	**PKPbc**	**06 11 36.6**	**+0.8**
	comp=Z,8.9nm,1.0s							
MOA	**Molln**	**150.92**	**350**	*e*P	**PKPbc**	**06 11 36.6**	**+0.2**
	comp=Z,4.4nm,1.2s							
BZS	**Buzias**	**151.08**	**338**	⇓P	**PKPbc**	**06 11 37.3**	**+0.5**
MMAI	**Mount Meron Ar**	**151.10**	**304**	PKPbc	**PKPbc**	**06 11 38.0**	**+0.7**
	comp=Z,4.1nm,0.6s,baz=44,slow=4.4,SNR=3.3							
MMAI	**Mount Meron Ar**	**151.10**	**304**		**PKPbc**	**06 11 38.0**	**+0.7**
ARSA	**Arzberg**	**151.27**	**348**	*e*P	**PKPbc**	**06 11 38.4**	**+1.1**
	comp=Z,1.4nm,0.5s							
HERR	**Herculane**	**151.42**	**337**	⇓P	**PKPbc**	**06 11 37.5**	**-0.2**
MORH	**Mrgy, Hungar**	**151.49**	**343**	⇓P	**PKPbc**	**06 11 37.8**	**+0.1**
RETA	**Reutte**	**151.74**	**354**	*e*P	**PKPbc**	**06 11 38.9**	**+0.5**
	comp=Z,0.4nm,0.4s							
MDVR	**Moldovita**	**151.77**	**337**	⇓P	**PKPbc**	**06 11 36.8**	**-1.6**
WATA	**Walderalm**	**151.81**	**353**	*e*P	**PKPbc**	**06 11 39.4**	**+0.8**
	comp=Z,5.9nm,0.6s							
KBA	**Koelnbreinsper**	**151.82**	**351**	*e*P	**PKPbc**	**06 11 38.7**	**0.0**
	comp=Z,5.5nm,0.7s							
MOTA	**Moosalm**	**151.85**	**354**	*e*P	**PKPbc**	**06 11 38.8**	**+0.1**
	comp=Z,11nm,1.1s							
WTTA	**Wattenberg**	**151.87**	**353**	*e*P	**PKPbc**	**06 11 39.1**	**+0.3**
	comp=Z,12nm,0.6s							
SOKA	**Soboth**	**151.91**	**348**	*e*P	**PKPbc**	**06 11 38.5**	**-0.3**
	comp=Z,7.6nm,1.2s							
SQTA	**Sankt Quirin**	**151.96**	**354**	*e*P	**PKPbc**	**06 11 39.8**	**+0.8**
	comp=Z,4.9nm,0.7s							
DAVA	**Damuels**	**152.01**	**356**	*e*P	**PKPbc**	**06 11 39.8**	**+0.7**
	comp=Z,8.6nm,0.9s							
FRGS	**Fruska Gora**	**152.09**	**340**	⇓P	**PKPbc**	**06 11 38.7**	**-0.5**
OBKA	**Obir**	**152.17**	**349**	*e*P	**PKPbc**	**06 11 39.7**	**+0.3**
	comp=Z,2.9nm,0.6s							
FETA	**Feichten**	**152.20**	**354**	*e*P	**PKPbc**	**06 11 39.4**	**-0.1**
	comp=Z,7.9nm,1.1s							
MYKA	**Terra Mystica**	**152.21**	**350**	*e*P	**PKPbc**	**06 11 37.9**	**-1.6**
	comp=Z,3.4nm,0.6s							
ABTA	**Abfaltersbach**	**152.27**	**352**	*e*P	**PKPbc**	**06 11 39.3**	**-0.3**
	comp=Z,12nm,1.1s							
BLKB	**Belogradchik**	**152.38**	**335**	⇓P	**PKPbc**	**06 11 39.6**	**-0.3**
DAVOX	**Davos/Dischmat**	**152.51**	**356**	PKPbc	**PKPbc**	**06 11 40.5**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=54,slow=19,SNR=5.9							
BOVS	**Bovan**	**152.75**	**336**	⇓P	**PKPbc**	**06 11 40.2**	**-0.4**
ESDC	**Sonseca Array**	**157.68**	**22**	PKPab	**PKPab**	**06 12 12.4**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=311,slow=4.1,SNR=4.5							
TORD	**Torodi Ar. Bea**	**172.10**	**140**	PKP	**PKPdf**	**06 11 52.2**	**-1.3**
	comp=Z,0.7nm,0.9s,baz=243,slow=2.0,SNR=3.8							

ROM 24 05:52:03.5±0.1, 42°.752N±0°.003×13°.264E±0°.005, h10km, ML2.8/23, 1C, Error ellipse: s-maj=0.4km s-min=0.1km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
NRCA	**Norcia**	**0.14**	**307**	P		Pg	05 52 07.3	+0.6
NRCA				S		Sg	05 52 09.8	+0.9
CAMP	**Campotosto**	**0.24**	**154**	P		Pg	05 52 09.1	+0.6
CAMP				S		Sg	05 52 13.1	+1.3
CAMP				AML		AML		
	comp=E,4500μm,0.3s							
CAMP				AML		AML		
	comp=N,3725μm,0.3s							
RM33	**Pellescritta (**	**0.24**	**189**	P		Pg	05 52 09.3	+0.8
RM33				S		Sg	05 52 13.4	+1.5
RM33				AML		AML		
	comp=E,17150μm,0.1s							
RM33				AML		AML		
	comp=N,20350μm,0.2s							
RM33				AML		AML		
	comp=E,17350μm,0.1s							
RM33				AML		AML		
	comp=N,20300μm,0.2s							
RM33				AML		AML		
	comp=E,17200μm,0.1s							
RM33				AML		AML		
	comp=E,17400μm,0.1s							
RM33				AML		AML		
	comp=N,20050μm,0.1s							
RM33				AML		AML		
	comp=N,20350μm,0.1s							
FEMA	**Monte Fema**	**0.26**	**323**	P		Pg	05 52 09.3	+0.4
FEMA				S		Sg	05 52 13.6	+1.1
TERO	**Teramo**	**0.28**	**117**	P		Pg	05 52 09.7	+0.5
TERO				S		Sg	05 52 14.2	+1.2
TERO				AML		AML		
	comp=E,3045μm,1.4s							
TERO				AML		AML		
	comp=N,4640μm,0.5s							
TERO				AML		AML		
	comp=N,5340μm,0.3s							
TERO				AML		AML		
	comp=N,4645μm,0.5s							
TERO				AML		AML		
	comp=E,3360μm,1.4s							
TERO				AML		AML		
	comp=E,3040μm,1.4s							
FDMO	**Fiordimonte**	**0.31**	**336**	P		Pg	05 52 10.2	+0.4
FDMO				S		Sb	05 52 15.2	-1.2
GUMA	**Gualdo di Mace**	**0.32**	**10**	P		Pb	05 52 10.7	-0.5
GUMA				S		Sb	05 52 16.2	-0.3
CSP1	**Cessapalombo**	**0.34**	**353**	P		Pb	05 52 11.2	-0.6
CSP1				S		Sg	05 52 16.1	+1.2
OFFI	**Offida**	**0.36**	**59**	P		Pb	05 52 11.8	-0.2
OFFI				AML		AML		
	comp=N,6545μm,0.5s							
OFFI				AML		AML		
	comp=E,5910μm,0.4s							
CESI	**CESI - Serrava**	**0.37**	**314**	P		Pg	05 52 11.2	+0.4
CESI				S		Sb	05 52 16.8	-1.1
GIGS	**Gran Sasso**	**0.38**	**143**	P		Pg	05 52 11.3	+0.3
GIGS				S		Sb	05 52 17.2	-1.0
GIGS				AML		AML		
	comp=N,820μm,0.4s							
GIGS				AML		AML		
	comp=E,754μm,0.9s							
GIGS				AML		AML		
	comp=E,754μm,0.9s							
ARRO	**Arrone**	**0.41**	**245**	P		Pb	05 52 12.1	-0.7
AQU	**L'Aquila**	**0.41**	**166**	P		Pb	05 52 12.3	-0.6
AQU				AML		AML		
	comp=E,2050μm,1.2s							
AQU				AML		AML		
	comp=E,1970μm,1.2s							
AQU				AML		AML		
	comp=N,2195μm,0.4s							
AQU				AML		AML		
	comp=N,2110μm,0.4s							
SSM1	**San Severino M**	**0.48**	**352**	P		Pg	05 52 12.7	-0.2
SSM1				S		Sb	05 52 20.8	-0.4
TRTR	**Tortoreto Alta**	**0.48**	**83**	P		Pg	05 52 13.1	+0.2
TRTR				AML		AML		
	comp=E,4145μm,0.9s							
TRTR				AML		AML		
	comp=N,3810μm,0.6s							
FIAM	**Fiamignano**	**0.50**	**193**	P		Pg	05 52 13.4	+0.3
FIAM				S		Sb	05 52 21.0	-0.7
CESX	**Cesi**	**0.52**	**255**	P		Pg	05 52 13.4	-0.3
CESX				S		Sb	05 52 21.9	-0.5
ASSB	**Assisi San Ben**	**0.53**	**303**	P		Pg	05 52 13.5	-0.3
ASSB				S		Sb	05 52 22.2	-0.5
FAGN	**Fagnano**	**0.54**	**154**	P		Pb	05 52 14.6	-0.5
FAGN				AML		AML		
	comp=E,2515μm,0.3s							
FAGN				AML		AML		
	comp=N,2290μm,1.5s							
VCEL	**Villa Celiera**	**0.56**	**130**	P		Pg	05 52 14.8	+0.5
VCEL				AML		AML		
	comp=N,2650μm,0.3s							
VCEL				AML		AML		
	comp=E,1985μm,0.2s							
ATCC	**AVT- Casa Cast**	**0.63**	**314**	P		Pg	05 52 15.2	-0.5
ATCC				S		Sb	05 52 25.4	-0.1
T0110	**Collepietro**	**0.65**	**144**	P		Pg	05 52 16.4	+0.3
T0110				S		Sb	05 52 25.7	-0.4
T0110				AML		AML		
	comp=N,1640μm,0.3s							
T0110				AML		AML		
	comp=E,1213μm,0.5s							
PTQR	**Pietraquaria**	**0.74**	**172**	S		Sb	05 52 29.0	+0.4
SRES	**S.Oreste - Sor**	**0.76**	**228**	⇑P		Pg	05 52 18.2	+0.1
SRES				S		Sb	05 52 28.8	-0.3
SRES				AML		AML		
	comp=E,430μm,0.9s							
SRES				AML		AML		
	comp=N,338μm,0.3s							
MTCE	**Montecelio**	**0.82**	**208**	P		Pg	05 52 19.5	+0.2
MTCE				AML		AML		
	comp=N,398μm,0.8s							
MTCE				AML		AML		
	comp=E,578μm,0.3s							
CERT	**Cerreto**	**0.83**	**195**	P		Pb	05 52 19.9	-0.1
CERT				AML		AML		
	comp=N,810μm,1.1s							
CERT				AML		AML		
	comp=E,1070μm,0.4s							
INTR	**Introdacqua**	**0.88**	**147**	P		Pg	05 52 19.9	-0.5
INTR				AML		AML		
	comp=E,376nm,0.8s							
INTR				AML		AML		
	comp=N,473nm,0.9s							
INTR				AML		AML		
	comp=E,382μm,0.8s							
INTR				AML		AML		
	comp=N,660μm,1.1s							
VVLD	**Villa Vallelon**	**0.92**	**163**	P		Pg	05 52 20.7	-0.5
VVLD				AML		AML		
	comp=E,334μm,0.5s							
VVLD				AML		AML		
	comp=N,372μm,0.5s							
RCAV	**Rocca di Cave**	**0.93**	**195**	P		Pg	05 52 21.2	-0.2
GUAR	**Guarcino**	**0.96**	**178**	P		Pg	05 52 21.8	-0.1
LPEL	**Lama dei Pelig**	**0.98**	**136**	P		Pg	05 52 21.8	-0.5
LPEL				AML		AML		
	comp=E,460μm,0.1s							
LPEL				AML		AML		
	comp=N,546μm,0.3s							
POFI	**Posta Fibreno**	**1.09**	**162**	P		Pg	05 52 23.1	-1.3
LRP	**Arpino**	**1.13**	**168**	P		Pb	05 52 24.6	-0.5
LRP				AML		AML		
	comp=E,134μm,0.5s							
LRP				AML		AML		
	comp=N,210μm,0.4s							
LRP				AML		AML		
	comp=E,134μm,0.5s							
LRP				AML		AML		
	comp=N,210μm,0.4s							
LRP				AML		AML		
	comp=N,210μm,0.4s							
LRP				AML		AML		
	comp=E,134μm,0.5s							

ROM 24 05:52:11.1±0.1, 43°.734N±0°.005×12°.098E±0°.006, h10km, ML1.7/6, 5C-4D, Error ellipse: s-maj=0.5km s-min=0.5km az=194.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
PARC	**Parchiule**	**0.13**	**130**	⇑P		Pg	05 52 14.4	+0.2
PARC				AML		AML		
	comp=N,496μm,1.6s							
PARC				AML		AML		
	comp=E,686μm,0.1s							
PARC	**Parchiule**	**0.13**	**130**	⇓P		Pg	05 52 14.5	+0.2
PARC				S		Sg	05 52 17.0	+0.5
PARC				AML		AML		
	comp=E,686μm,0.1s							
PARC				AML		AML		
	comp=N,496μm,1.6s							
CRE	**Caprese Michel**	**0.16**	**223**	⇓P		Pb	05 52 15.7	-0.4
CRE				AML		AML		
	comp=E,272μm,0.6s							
CRE				AML		AML		
	comp=N,582μm,0.2s							
CRE				AML		AML		
	comp=E,273μm,0.6s							
CRE	**Caprese Michel**	**0.16**	**223**	P		Pg	05 52 15.1	+0.5
CRE				S		Sg	05 52 18.4	+1.2
CRE				AML		AML		
	comp=E,272μm,0.6s							
CRE				AML		AML		
	comp=N,582μm,0.2s							
CRE				AML		AML		
	comp=E,273μm,0.6s							
SSP9	**Sansepolcro**	**0.16**	**171**	⇑P		Pg	05 52 15.2	+0.5
SSP9	**Sansepolcro**	**0.16**	**171**	P		Pg	05 52 15.2	+0.6
SSP9				S		Sg	05 52 18.5	+1.4
CPGN	**Carpegna, Ital**	**0.17**	**67**	P		Pb	05 52 15.7	-0.7
CPGN	**Carpegna, Ital**	**0.17**	**67**	P		Pg	05 52 15.7	+0.7
CPGN				S		Sg	05 52 19.5	+1.8
BADI	**Badiali**	**0.25**	**155**	P		Pg	05 52 16.6	+0.5
BADI	**Badiali**	**0.25**	**155**	P		Pg	05 52 16.6	+0.5
BADI				S		Sg	05 52 21.0	+1.4
SFI	**Santa Sofia**	**0.25**	**313**	⇑P		Pg	05 52 16.5	+0.3
SFI				AML		AML		
	comp=N,191μm,0.3s							
SFI				AML		AML		
	comp=E,354μm,0.2s							
SFI				AML		AML		
	comp=N,192μm,0.3s							
SFI	**Santa Sofia**	**0.25**	**313**	P		Pg	05 52 16.5	+0.2
SFI				S		Sg	05 52 20.9	+1.2
SFI				AML		AML		
	comp=N,191μm,0.3s							
SFI				AML		AML		
	comp=E,354μm,0.2s							
SFI				AML		AML		
	comp=N,192μm,0.3s							
PE3	**Peglio**	**0.29**	**97**	⇑P		Pg	05 52 17.6	+0.6
PE3				AML		AML		
	comp=E,10μm,0.7s							
PE3				AML		AML		
	comp=N,9μm,0.1s							
PE3	**Peglio**	**0.29**	**97**	P		Pg	05 52 17.6	+0.6
ATPI	**Pietralunga -**	**0.36**	**142**	S		Sg	05 52 19.0	-4.0
NARO	**Abbazia di Nar**	**0.37**	**109**	⇓P		Pg	05 52 13.4	-5.0
NARO				AML		AML		
	comp=N,152μm,0.6s							
NARO				AML		AML		
	comp=E,170μm,0.6s							
NARO	**Abbazia di Nar**	**0.37**	**109**	P		Pg	05 52 18.4	0.0
NARO				S		Sb	05 52 24.5	-1.0
NARO				AML		AML		
	comp=E,154μm,0.1s							
NARO				AML		AML		
	comp=N,151μm,0.6s							
NARO				AML		AML		
	comp=E,170μm,0.6s							
NARO				AML		AML		
	comp=N,152μm,0.6s							
PIEI	**Pieia**	**0.37**	**122**	S		Sg	05 52 19.0	-4.5
PIEI	**Pieia**	**0.37**	**122**	AML		AML		
	comp=E,150μm,0.7s							
PIEI				AML		AML		
	comp=N,128μm,0.7s							
CAFI	**Castiglion Fio**	**0.41**	**193**	⇓P		Pg	05 52 19.8	+0.6
CAFI				AML		AML		
	comp=N,156μm,0.7s							
CAFI				AML		AML		
	comp=E,165μm,0.6s							
CAFI	**Castiglion Fio**	**0.41**	**193**	P		Pg	05 52 19.8	+0.6
CAFI				S		Sb	05 52 26.8	0.0
CAFI				AML		AML		
	comp=E,164μm,0.6s							
CAFI				AML		AML		
	comp=N,156μm,0.7s							
CAFI				AML		AML		
	comp=N,155μm,0.7s							
CAFI				AML		AML		
	comp=E,165μm,0.6s							
ATVO	**AVT- Monte Val**	**0.42**	**147**	S		Sg	05 52 20.0	-4.8
ATVO	**AVT- Monte Val**	**0.42**	**147**	AML		AML		
	comp=N,130μm,0.6s							
ATVO				AML		AML		
	comp=E,194μm,0.6s							
ATMI	**Monte Miggiano**	**0.42**	**163**	AML		AML		
	comp=N,454μm,0.7s							
ATMI				AML		AML		
	comp=E,452μm,0.8s							
RUFI	**Rufina**	**0.44**	**284**	⇑P		Pg	05 52 19.9	+0.2
RUFI	**Rufina**	**0.44**	**284**	P		Pg	05 52 19.9	+0.2
RUFI				S		Sb	05 52 26.7	-0.8
LMD	**Lutirano**	**0.45**	**321**	P		Pg	05 52 20.1	+0.3
LMD				AML		AML		
	comp=N,153μm,0.2s							
LMD				AML		AML		
	comp=E,176μm,0.8s							
LMD	**Lutirano**	**0.45**	**321**	P		Pg	05 52 20.1	+0.3
LMD				S		Sb	05 52 27.2	-0.5
LMD				AML		AML		
	comp=N,153μm,0.2s							
LMD				AML		AML		
	comp=E,176μm,0.8s							
FSSB	**Fossombrone**	**0.49**	**95**	P		Pg	05 52 20.7	0.0
FSSB				S		Sb	05 52 29.0	-0.1
FSSB				AML		AML		
	comp=E,604μm,0.3s							
FSSB				AML		AML		
	comp=N,616μm,0.3s							
ATFO	**Monte Foce - G**	**0.50**	**137**	AML		AML		
	comp=N,185μm,1.1s							
ATFO				AML		AML		
	comp=E,252μm,1.0s							
FRON	**Frontone**	**0.51**	**115**	AML		AML		
	comp=E,175μm,1.0s							
FRON				AML		AML		
	comp=N,320μm,0.4s							
BRIS	**BRISIGHELLA**	**0.59**	**315**	P		Pg	05 52 22.2	-0.4

CNRM ***24*** *05:58:55.5, 36°.18N×8°.17W, h34km, ml2.9*
MDD ***24*** *05:58:56.7±0.9, 36°.47N×7°.63W, h5km±3km, mb_Lg1.9/5, Error ellipse: s-maj=6.4km s-min=3.6km az=13.0*
IGIL ***24*** *05:58:59.7, 36°.35N×7°.75W, h31km, ML1.5*
INMG ***24*** *05:58:59.3±1.4, 36°.37N×7°.73W, h35km, ML1.8, Error ellipse: s-maj=4.6km s-min=3.2km az=55.0*

ISC 24 05:58:56.7±1.3, 36°.30N±0°.03×7°.75W±0°.05, h53km±32km, n27, σ1°52/46, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
PBDV	**Barranco-do-Ve**	**0.95**	**351**	⇓*e*P		**Pn**	**05 59 14.3**	**+0.4**
PBDV				*e*S		**Sn**	**05 59 25.4**	**-1.1**
PBDV				A		A	05 59 25.8	
	7.8nm,0.3s							
PVAQ	**Vaqueiros**	**1.10**	**1**	P		**Pn**	**05 59 16.6**	**+0.8**
PVAQ				S		**Sn**	**05 59 32.2**	**+2.2**
PVAQ	**Vaqueiros**	**1.10**	**1**	*e*P		**Pn**	**05 59 16.5**	**+0.6**
PVAQ				*e*S		**Sn**	**05 59 29.1**	**-0.9**
PVAQ				A		A	05 59 30.0	
	15nm,0.3s							
PFVI	**Vila Bisbo**	**1.20**	**314**	*e*P		**Pn**	**05 59 18.0**	**+0.8**
PFVI				*e*S		**Sn**	**05 59 32.5**	**0.0**
MORF	**Marmelete**	**1.24**	**324**	*e*P		**Pn**	**05 59 18.3**	**+0.5**
MORF	**Marmelete**	**1.24**	**324**	*e*P		**Pn**	**05 59 18.2**	**+0.5**
EGRO	**El Granado**	**1.25**	**10**	Pg		**Pn**	**05 59 18.2**	**+0.4**
EGRO				Sg		**Sn**	**05 59 32.3**	**-1.2**
EGRO				*i* Vmb_Lg			05 59 34.1	
PCVE	**Castro Verde**	**1.35**	**350**	*e*P		**Pn**	**05 59 20.1**	**+0.9**
PCVE				*e*S		**Sn**	**05 59 35.1**	**-0.9**
PCVE				A		A	05 59 36.0	
	9.2nm,0.5s							
MESJ	**Messejana**	**1.58**	**346**	*e*P		**Pn**	**05 59 22.8**	**+0.4**
MESJ				*e*S		**Sn**	**05 59 40.0**	**-1.7**
MESJ				IAML			05 59 42.0	
	comp=N,4.6nm,0.1s							
MESJ	**Messejana**	**1.58**	**346**	*e*P		**Pn**	**05 59 23.2**	**+0.8**
MESJ				*e*S		**Sn**	**05 59 40.5**	**-1.2**
MESJ				A		A	05 59 47.7	
	comp=N,3.5nm,0.5s							
ESPR	**Espera**	**1.62**	**69**	Pg		**Pn**	**05 59 24.1**	**+1.2**
ESPR				Sg		**Sn**	**05 59 42.5**	**-0.2**
ESPR				*i* Vmb_Lg			05 59 44.2	
EMIN	**Mina Concepcio**	**1.70**	**30**	Pg		**Pn**	**05 59 24.4**	**+0.5**
EMIN				Sg		**Sn**	**05 59 42.2**	**-2.3**
EMIN				*i* Vmb_Lg			05 59 43.6	
PNCL	**Nicolau / Gran**	**1.91**	**341**	*e*P		**Pn**	**05 59 27.5**	**+0.6**
PNCL				*e*S		**Sn**	**05 59 48.0**	**-1.7**
PNCL				A		A	06 00 00.0	
	comp=N,3.0nm,0.6s							
PBAR	**Barrancos**	**1.95**	**17**	*e*P		**Pn**	**05 59 28.4**	**+1.0**
EBAD	**Badajoz**	**2.52**	**13**	Pn		**Pn**	**05 59 34.5**	**-0.7**
EBAD				Sn		**Sn**	**06 00 01.9**	**-2.7**
EBAD				*i* Vmb_Lg			06 00 06.8	
PESTR	**Estremoz**	**2.56**	**3**	P		**Pn**	**05 59 37.5**	**+1.7**
PESTR				S		**Sn**	**06 00 09.8**	**+4.0**
PESTR	**Estremoz**	**2.56**	**3**	*e*P		**Pn**	**05 59 37.1**	**+1.3**
PESTR				*e*S		**Sn**	**06 00 04.5**	**-1.3**
PESTR				A		A	06 00 08.2	
	comp=N,2.1nm,0.7s							
ECAB	**El Cabril**	**2.57**	**46**	Pn		**Pn**	**05 59 36.6**	**+0.7**
ECAB				*i* Vmb_Lg			05 59 43.3	
ECAB				Sn		**Sn**	**06 00 03.3**	**-2.5**
PMTG	**Montargil**	**2.79**	**352**	*e*P		**Pn**	**05 59 39.8**	**+1.0**
PMTG				*e*S		**Sn**	**06 00 10.5**	**-0.8**
PMAFR	**Mafra**	**2.92**	**336**	*e*P		**Pn**	**05 59 41.9**	**+1.3**
ZHG	**ZHG**	**2.99**	**162**	P		**Pn**	**05 59 41.2**	**-0.5**
ZHG				S		**Sn**	**06 00 17.5**	**+1.1**
PSBE	**So Bento**	**3.31**	**346**	*e*P		**Pn**	**05 59 47.5**	**+1.4**
PCBR	**Castelo Branco**	**3.54**	**3**	*e*P		**Pn**	**05 59 49.9**	**+0.8**
SRHM	**Skhour des Reh**	**3.82**	**182**	P		**Pn**	**05 59 52.8**	**-0.4**
SRHM				S		**Sn**	**06 00 40.0**	**+3.1**
MD31	**MD31**	**4.22**	**143**	P		**Pn**	**05 59 59.9**	**+1.3**
MDT	**Midelt**	**4.34**	**142**	P		**Pn**	**06 00 01.5**	**+1.3**
OUK	**Oukaimeden**	**5.08**	**181**	P		**Pn**	**06 00 08.0**	**-2.7**
OUK				S		**Sn**	**06 01 06.5**	**-1.7**

ROM 24 06:00:45.6±0.1, 42°.812N±0°.004×13°.181E±0°.006, h9km, Md1.4/1, ML2.0/6, 3C, Error ellipse: s-maj=0.6km s-min=0.3km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
NRCA	**Norcia**	**0.05**	**294**	P		Pg	06 00 47.3	-0.3
NRCA				S		Sg	06 00 49.6	+0.6
NRCA				AML		AML		
	comp=E,20050μm,0.2s							
NRCA				AML		AML		
	comp=N,13650μm,0.1s							
NRCA				AML		AML		
	comp=E,21550μm,0.2s							
NRCA				AML		AML		
	comp=N,14700μm,0.1s							
FEMA	**Monte Fema**	**0.18**	**327**	P		Pg	06 00 50.1	+0.7
FEMA				S		Sg	06 00 53

CESI				END			
CSP1	**Cessapalombo**	**0.28**	**4**	P	Pg	06 00 51.9	+0.7
CSP1				S	Sb	06 00 56.4	-1.3
CSP1				AML	AML		
	comp=E,1585µm,0.3s						
CSP1				AML	AML		
	comp=N,1854µm,1.1s						
CSP1				AML	AML		
	comp=N,1039µm,0.3s						
CSP1				AML	AML		
	comp=E,766µm,0.4s						
CAMP	**Campotosto**	**0.32**	**149**	P	Pg	06 00 52.6	+0.6
CAMP				S	Sg	06 00 57.4	+1.1
CAMP				AML	AML		
	comp=E,4705µm,0.6s						
CAMP				AML	AML		
	comp=N,4095µm,0.3s						
TERO	**Teramo**	**0.36**	**121**	P	Pg	06 00 53.4	+0.6
TERO				S	Sb	06 00 59.2	-0.8
TERO				AML	AML		
	comp=E,6025µm,1.0s						
TERO				AML	AML		
	comp=N,8165µm,0.2s						
TERO				AML	AML		
	comp=E,6555µm,0.4s						
TERO				AML	AML		
	comp=N,9335µm,0.4s						
TERO				AML	AML		
	comp=E,378µm,0.3s						
TERO				AML	AML		
	comp=N,45µm,0.1s						
TERO				AML	AML		
	comp=N,1109µm,0.1s						
TERO				AML	AML		
	comp=E,1073µm,0.3s						
SEF1	**Sefro**	**0.38**	**333**	P	Pg	06 00 53.6	+0.6
SEF1				S	Sb	06 00 59.6	-0.8
ARRO	**Arrone**	**0.39**	**233**	P	Pb	06 00 54.2	-0.4
ARRO				S	Sb	06 00 59.9	-0.7
OFFI	**Offida**	**0.39**	**71**	P	Pb	06 00 54.6	0.0
GAG1	**Gagliole**	**0.43**	**349**	P	Pg	06 00 54.7	+0.7
GAG1				S	Sb	06 01 01.4	-0.6
ASSB	**Assisi San Ben**	**0.45**	**301**	P	Pg	06 00 54.6	+0.3
ASSB				S	Sg	06 01 01.1	+0.9
GIGS	**Gran Sasso**	**0.46**	**142**	AML	AML		
	comp=N,594µm,0.2s						
GIGS				AML	AML		
	comp=E,658µm,0.5s						
SNTG	**Esanatoglia**	**0.48**	**338**	P	Pb	06 00 55.5	-0.6
SNTG				S	Sb	06 01 02.7	-0.6
SNTG				AML	AML		
	comp=E,311µm,1.4s						
SNTG				AML	AML		
	comp=N,473µm,1.4s						
SNTG				AML	AML		
	comp=N,115µm,0.2s						
CESX	**Cesi**	**0.49**	**246**	P	Pg	06 00 55.2	+0.2
CESX				S	Sb	06 01 03.3	-0.2
EL6	**Elcito**	**0.52**	**354**	P	Pg	06 00 56.3	+0.6
EL6				S	Sg	06 01 03.1	+0.6
EL6				AML	AML		
	comp=E,1130µm,1.6s						
EL6				AML	AML		
	comp=N,1195µm,0.7s						
ATCC	**AVT- Casa Cast**	**0.55**	**313**	⇑*i*P	Pg	06 00 56.7	+0.5
ATCC				S	Sb	06 01 05.4	+0.1
ATCC				AML	AML		
	comp=E,848µm,0.4s						
ATCC				AML	AML		
	comp=N,789µm,1.2s						
ATCC				AML	AML		
	comp=N,195µm,0.5s						
POPM	**Popiglio**	**2.15**	**306**	S	Sg	06 01 56.0	+1.2
ZCCA	**Zocca**	**2.22**	**315**	P	Pn	06 01 20.9	-1.7
BDI	**Bagni Di Lucca**	**2.26**	**304**	S	Sg	06 01 57.0	-1.2
GSCL	**Gusciola**	**2.43**	**310**	P	Pg	06 01 30.9	-1.3

ROM 24 06:00:58.8±0.1, 42°.618N±0°.005×13°.289E±0°.007, h7km, ML2.7/23, 7C-3D, Error ellipse: s-maj=0.6km s-min=0.4km az=55.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**133**	⇓*i*P	Pg	06 01 02.1	+0.7
CAMP				S	Sg	06 01 04.1	+0.9
CAMP				AML	AML		
	comp=E,4705µm,0.6s						
CAMP				AML	AML		
	comp=N,4095µm,0.3s						
RM33	**Pellescritta (**	**0.12**	**207**	⇑*i*P	Pg	06 01 02.3	+0.8
RM33				S	Sg	06 01 04.8	+1.6
RM33				AML	AML		
	comp=E,10190µm,0.5s						
RM33				AML	AML		
	comp=N,9715µm,0.5s						
RM33				AML	AML		
	comp=N,9735µm,0.5s						
RM33				AML	AML		
	comp=E,10220µm,0.6s						
RM33				AML	AML		
	comp=N,9700µm,0.5s						
RM33				AML	AML		
	comp=E,10195µm,0.9s						
RM33				AML	AML		
	comp=N,9730µm,0.5s						
RM33				AML	AML		
	comp=N,9685µm,0.5s						
RM33				AML	AML		
	comp=N,9760µm,0.5s						
RM33				AML	AML		
	comp=E,10200µm,0.6s						
RM33				AML	AML		
	comp=E,10190µm,0.9s						
TERO	**Teramo**	**0.23**	**89**	⇑*e*P	Pg	06 01 03.8	+0.5
TERO				S	Sg	06 01 07.6	+1.1
NRCA	**Norcia**	**0.25**	**329**	P	Pg	06 01 04.6	+0.9
NRCA				S	Sg	06 01 08.5	+1.4
GIGS	**Gran Sasso**	**0.27**	**129**	P	Pg	06 01 04.8	+0.7
GIGS				S	Sg	06 01 08.6	+1.0
AQU	**L'Aquila**	**0.28**	**162**	P	Pg	06 01 04.8	+0.6
AQU				S	Sg	06 01 09.4	+1.5
AQU				AML	AML		
	comp=N,2370µm,1.6s						
AQU				AML	AML		
	comp=E,2140µm,1.2s						
AQU				AML	AML		
	comp=E,2105µm,1.2s						
AQU				AML	AML		
	comp=N,2325µm,0.3s						
AQU				AML	AML		
	comp=N,2365µm,1.6s						
FIAM	**Fiamignano**	**0.37**	**200**	P	Pb	06 01 07.6	-0.2
FIAM				AML	AML		
	comp=E,910µm,0.7s						
FIAM				AML	AML		
	comp=E,911µm,0.7s						
FIAM				AML	AML		
	comp=N,746µm,0.6s						
FEMA	**Monte Fema**	**0.39**	**333**	P	Pg	06 01 07.0	+0.6
FEMA				S	Sb	06 01 13.1	-1.2
ARRO	**Arrone**	**0.39**	**264**	P	Pg	06 01 06.9	+0.6
ARRO				S	Sb	06 01 12.9	-1.3
ARRO				AML	AML		
	comp=E,1052µm,0.2s						
ARRO				AML	AML		
	comp=E,1051µm,0.2s						
ARRO				AML	AML		
	comp=N,1395µm,1.3s						
ARRO				AML	AML		
	comp=E,1052µm,0.2s						
ARRO				AML	AML		
	comp=N,1390µm,1.3s						
OFFI	**Offida**	**0.43**	**43**	P	Pb	06 01 08.4	-0.4
OFFI				S	Sb	06 01 16.5	+1.1
FDMO	**Fiordimonte**	**0.44**	**341**	P	Pg	06 01 08.0	+0.6
FDMO				S	Sb	06 01 15.0	-0.9
GUMA	**Gualdo di Mace**	**0.45**	**4**	⇓*i*P	Pb	06 01 08.3	-0.7
GUMA				S	Sb	06 01 15.7	-0.2
GUMA				AML	AML		
	comp=E,4815µm,0.8s						
GUMA				AML	AML		
	comp=N,3850µm,1.0s						
GUMA				AML	AML		
	comp=E,3880µm,0.9s						
GUMA				AML	AML		
	comp=N,4790µm,0.8s						
GUMA				AML	AML		
	comp=N,5695µm,0.5s						
GUMA				AML	AML		
	comp=E,7710µm,0.3s						
GUMA				AML	AML		
	comp=N,5280µm,0.5s						
GUMA				AML	AML		
	comp=E,9290µm,0.3s						
VCEL	**Villa Celiera**	**0.47**	**119**	⇑*i*P	Pg	06 01 08.6	+0.8
VCEL				S	Sb	06 01 16.2	-0.3
VCEL				AML	AML		
	comp=N,2000µm,0.8s						
VCEL				AML	AML		
	comp=E,1990µm,0.5s						
CSP1	**Cessapalombo**	**0.48**	**353**	⇑*i*P	Pb	06 01 08.9	-0.7
CSP1				S	Sb	06 01 16.0	-0.9
CESI	**CESI - Serrava**	**0.48**	**324**	⇑*i*P	Pb	06 01 08.9	-0.7
CESI				S	Sb	06 01 16.2	-0.7
TRTR	**Tortoreto Alta**	**0.50**	**67**	⇑*i*P	Pb	06 01 09.9	0.0
CESX	**Cesi**	**0.52**	**269**	P	Pg	06 01 09.2	+0.4
CESX				S	Sb	06 01 17.3	-0.8
T0110	**Collepietro**	**0.53**	**137**	⇓*i*P	Pg	06 01 09.5	+0.4
T0110				AML	AML		
	comp=N,904µm,0.6s						
T0110				AML	AML		
	comp=N,904µm,0.6s						
T0110				AML	AML		
	comp=E,1200µm,1.0s						
CADA	**Capodarco di F**	**0.67**	**31**	P	Pb	06 01 13.6	+0.7
SRES	**S.Oreste - Sor**	**0.69**	**237**	P	Pg	06 01 12.2	+0.2
SRES				S	Sb	06 01 23.7	+0.8
SRES				AML	AML		
	comp=E,310µm,0.4s						
SRES				AML	AML		
	comp=N,226µm,0.3s						
CERT	**Cerreto**	**0.71**	**199**	P	Pb	06 01 13.3	-0.2
CERT				AML	AML		
	comp=N,542µm,0.3s						
CERT				AML	AML		
	comp=E,684µm,0.3s						
EL6	**Elcito**	**0.72**	**349**	AML	AML		
	comp=N,1195µm,0.7s						
EL6				AML	AML		
	comp=N,1200µm,0.7s						
EL6				AML	AML		
	comp=E,1127µm,1.6s						
EL6				AML	AML		
	comp=E,1130µm,1.6s						
ATCC	**AVT- Casa Cast**	**0.74**	**320**	P	Pb	06 01 13.6	-0.5
ATCC				S	Sb	06 01 25.4	+1.0
ATCC				AML	AML		
	comp=E,848µm,0.4s						
ATCC				AML	AML		
	comp=E,850µm,0.4s						
ATCC				AML	AML		
	comp=N,789µm,1.2s						
INTR	**Introdacqua**	**0.76**	**143**	P	Pg	06 01 13.0	-0.3
INTR				AML	AML		
	comp=E,241µm,0.5s						
INTR				AML	AML		
	comp=N,366µm,0.5s						
INTR				AML	AML		
	comp=N,553µm,0.7s						
INTR				AML	AML		
	comp=E,256µm,0.7s						
PP3	**Marolino**	**0.80**	**17**	⇑*i*P	Pb	06 01 15.3	+0.4
PP3				AML	AML		
	comp=N,1215µm,0.5s						
PP3				AML	AML		
	comp=E,1775µm,0.7s						
PP3				AML	AML		
	comp=N,1210µm,0.4s						
PP3				AML	AML		
	comp=N,1330µm,0.6s						
PP3				AML	AML		
	comp=E,1675µm,0.8s						
GUAR	**Guarcino**	**0.82**	**179**	P	Pn	06 01 18.2	+1.3
LPEL	**Lama dei Pelig**	**0.88**	**130**	P	Pg	06 01 15.6	+0.1
MGAB	**Montegabbione**	**0.92**	**289**	P	Pn	06 01 18.9	+0.8
MGAB				AML	AML		
	comp=E,761µm,0.4s						
MGAB				AML	AML		
	comp=N,782µm,0.4s						
MGAB				AML	AML		
	comp=N,742µm,0.4s						
MGAB				AML	AML		
	comp=E,930µm,0.4s						
MGAB				AML	AML		
	comp=E,759µm,0.4s						
ARVD	**Arcevia**	**0.92**	**344**	S	Sn	06 01 31.1	-0.5
ARVD				AML	AML		
	comp=N,264µm,0.9s						
ARVD				AML	AML		
	comp=E,280µm,1.0s						
RMP	**Rome, Mte Porz**	**0.92**	**209**	P	Pn	06 01 18.6	+0.5
RMP				AML	AML		
	comp=E,618µm,0.4s						
RMP				AML	AML		
	comp=N,461µm,0.8s						
POFI	**Posta Fibreno**	**0.95**	**161**	P	Pn	06 01 20.6	+1.9
MAGA	**Magasa**	**3.69**	**330**	AML	AML		
	comp=N,58µm,0.3s						
MAGA				AML	AML		
	comp=E,83µm,0.7s						
KOSI	**Kohlern**	**4.08**	**341**	AML	AML		
	comp=E,36µm,1.0s						
KOSI				AML	AML		
	comp=N,31µm,0.5s						
ABTA	**Abfaltersbach**	**4.17**	**353**	*e*Pn	Pn	06 02 04.8	+1.9
	comp=N,3.5nm,0.4s						

ROM 24 06:01:39.4±0.1, 42°.729N±0°.004×13°.25E±0°.01, h10km, ML1.7/3, Error ellipse: s-maj=1.0km s-min=0.2km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.14**	**318**	P	Pg	06 01 43.1	+0.4
NRCA				S	Sg	06 01 45.5	+0.6
NRCA				AML	AML		
	comp=N,2274µm,0.1s						
NRCA				AML	AML		
	comp=E,1853µm,0.1s						
NRCA				AML	AML		
	comp=N,1885µm,0.1s						
NRCA				AML	AML		
	comp=E,1770µm,0.1s						
RM33	**Pellescritta (**	**0.22**	**186**	P	Pg	06 01 44.8	+0.8
RM33				S	Sg	06 01 48.9	+1.8
RM33				AML	AML		
	comp=E,1525µm,1.1s						
RM33				AML	AML		
	comp=N,1290µm,0.2s						
RM33				AML	AML		
	comp=N,1250µm,0.2s						
RM33				AML	AML		
	comp=N,1295µm,0.2s						
RM33				AML	AML		
	comp=E,1520µm,1.1s						
RM33				AML	AML		
	comp=E,414µm,0.3s						
RM33				AML	AML		
	comp=E,394µm,0.2s						
RM33				AML	AML		
	comp=N,238µm,0.3s						
RM33				AML	AML		
	comp=N,217µm,0.3s						
CAMP	**Campotosto**	**0.23**	**148**	P	Pg	06 01 44.8	+0.7
CAMP				S	Sg	06 01 48.8	+1.5
FEMA	**Monte Fema**	**0.27**	**329**	P	Pg	06 01 45.6	+0.6
TERO	**Teramo**	**0.28**	**112**	P	Pg	06 01 45.7	+0.6
TERO				AML	AML		
	comp=E,982µm,0.1s						
TERO				AML	AML		
	comp=N,1690µm,0.6s						
GUMA	**Gualdo di Mace**	**0.34**	**11**	P	Pb	06 01 46.9	-0.7
GUMA				S	Sb	06 01 52.6	-0.6
GUMA				AML	AML		
	comp=E,7710µm,0.3s						
GUMA				AML	AML		
	comp=N,5280µm,0.5s						
GUMA				AML	AML		
	comp=E,9290µm,0.3s						
GUMA				AML	AML		
	comp=N,5695µm,0.5s						
GIGS	**Gran Sasso**	**0.37**	**139**	P	Pg	06 01 47.2	+0.6
GIGS				S	Sb	06 01 52.8	-1.2
GIGS				AML	AML		
	comp=N,160µm,1.2s						
GIGS				AML	AML		
	comp=E,146µm,0.4s						
ARRO	**Arrone**	**0.38**	**247**	AML	AML		
	comp=E,486µm,0.2s						
ARRO				AML	AML		
	comp=N,480µm,0.3s						
ARRO				AML	AML		
	comp=N,480µm,0.3s						
ASSB	**Assisi San Ben**	**0.53**	**306**	AML	AML		
	comp=N,426µm,0.2s						
ASSB				AML	AML		
	comp=E,514µm,1.0s						
CERT	**Cerreto**	**0.80**	**194**	AML	AML		
	comp=N,175µm,0.4s						
CERT				AML	AML		
	comp=E,386µm,0.5s						

ROM 24 06:01:50.8±0.1, 42°.736N±0°.004×13°.202E±0°.010, h10km, ML2.4/7, 5C-2D, Error ellipse: s-maj=0.8km s-min=0.3km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**326**	P	Pg	06 01 54.0	+0.3
NRCA				S	Sg	06 01 56.1	+0.4
RM33	**Pellescritta (**	**0.23**	**178**	P	Pg	06 01 56.3	+0.8
RM33				S	Sg	06 02 00.4	+1.7
RM33				AML	AML		
	comp=E,1525µm,1.1s						
RM33				AML	AML		
	comp=N,1255µm,0.2s						
RM33				AML	AML		
	comp=N,1295µm,0.2s						
RM33				AML	AML		
	comp=E,1520µm,1.1s						
RM33				AML	AML		
	comp=N,1250µm,0.2s						
RM33				AML	AML		
	comp=N,1290µm,0.2s						
CAMP	**Campotosto**	**0.25**	**143**	⇑*i*P	Pg	06 01 56.5	+0.6
CAMP				S	Sg	06 02 00.4	+1.0
FEMA	**Monte Fema**	**0.25**	**334**	P	Pb	06 01 57.0	-0.6
FEMA				S	Sg	06 02 00.6	+1.1
FDMO	**Fiordimonte**	**0.31**	**344**	P	Pg	06 01 57.5	+0.5
FDMO				S	Sb	06 02 02.6	-1.1
TERO	**Teramo**	**0.32**	**111**	P	Pg	06 01 57.2	+0.1
TERO				S	Sg	06 02 02.1	+0.8
TERO				AML	AML		
	comp=E,982µm,0.1s						
TERO				AML	AML		
	comp=N,1690µm,0.6s						
GUMA	**Gualdo di Mace**	**0.34**	**17**	P	Pb	06 01 58.3	-0.7
GUMA				S	Sb	06 02 04.0	-0.5
GUMA				AML	AML		
	comp=E,7715µm,0.3s						
GUMA				AML	AML		
	comp=E,9290µm,0.3s						
GUMA				AML	AML		
	comp=N,5280µm,0.5s						
GUMA				AML	AML		
	comp=E,7710µm,0.3s						
GUMA				AML	AML		
	comp=N,5695µm,0.5s						
CESI	**CESI - Serrava**	**0.35**	**321**	P	Pg	06 01 58.1	+0.4
CESI				S	Sg	06 02 03.4	+1.1
CSP1	**Cessapalombo**	**0.35**	**0**	P	Pg	06 01 58.2	+0.3
CSP1				S	Sg	06 02 03.7	+1.1
ARRO	**Arrone**	**0.36**	**244**	⇓*i*P	Pb	06 01 58.7	-0.6
ARRO				AML	AML		
	comp=E,486µm,0.2s						
ARRO				AML	AML		
	comp=N,480µm,0.3s						
ARRO				AML	AML		
	comp=N,480µm,0.3s						
ARRO				AML	AML		
	comp=E,486µm,0.2s						
GIGS	**Gran Sasso**	**0.39**	**136**	⇑*i*P	Pg	06 01 58.8	+0.3
GIGS				S	Sg	06 02 04.6	+0.8
GIGS				AML	AML		
	comp=E,146µm,0.4s						
GIGS				AML	AML		
	comp=N,160µm,1.2s						
OFFI	**Offida**	**0.41**	**61**	⇑*i*P	Pb	06 01 59.8	-0.3
OFFI				S	Sb	06 02 07.3	+0.9
MDAR	**Monte D'Aria**	**0.46**	**355**	P	Pg	06 01 59.2	-0.6
MDAR				S	Sb	06 02 07.1	-0.8
FIAM	**Fiamignano**	**0.47**	**188**	⇑*i*P	Pg	06 02 00.4	+0.4
FIAM				S	Sb	06 02 07.9	-0.4
ASSB	**Assisi San Ben**	**0.50**	**308**	P	Pg	06 02 00.7	+0.2
ASSB				AML	AML		
	comp=E,514µm,1.0s						
ASSB				AML	AML		
	comp=N,426µm,0.2s						
TRTR	**Tortoreto Alta**	**0.53**	**82**	P	Pb	06 02 02.1	0.0
SNTG	**Esanatoglia**	**0.55**	**340**	S	Sg	06 02 03.0	-5.8
SNTG	**Esanatoglia**	**0.55**	**340**	P	Pg	06 02 01.9	+0.3
SNTG				S	Sb	06 02 10.7	+0.1
VCEL	**Villa Celiera**	**0.58**	**126**	P	Pg	06 02 02.6	+0.5
VCEL				S	Sb	06 02 11.7	+0.2
T0110	**Collepietro**	**0.67**	**140**	P	Pg	06 02 03.7	+0.1
T0110				S	Sb	06 02 13.4	-0.4
PP3	**Marolino**	**0.71**	**25**	P	Pg	06 01 58.2	-6.2
ARVD	**Arcevia**	**0.79**	**346**	P	Pg	06 02 05.9	0.0
CERT	**Cerreto**	**0.80**	**192**	AML	AML		
	comp=E,386µm,0.5s						
CERT				AML	AML		
	comp=N,175µm,0.4s						
MODR	**Mondragone**	**1.67**	**162**	S	Sn	06 02 41.0	-0.5
SEI	**Scarperia**	**1.88**	**315**	S	Sb	06 02 50.0	+1.1
ZCCA	**Zocca**	**2.29**	**316**	P	Pg	06 02 36.2	+1.6
MCRV	**Calabrutti - M**	**2.44**	**142**	P	Pb	06 02 35.9	+1.0
VENL	**Venezia Lido**	**2.75**	**348**	P	Pb	06 02 38.0	-1.9
LEOD	**Capriano del C**	**3.51**	**322**	⇑P	Pb	06 02 50.4	-2.6
LUSI	**Trento, Gardas**	**3.61**	**334**	⇓P	Pn	06 02 44.0	-2.7
SALB	**San Lorenzo Be**	**3.71**	**139**	S	Sn	06 03 34.0	+1.9
EUCT	**Pavia**	**3.83**	**311**	S	Sn	06 03 36.0	+1.1
TDS	**Terranova Siba**	**3.88**	**141**	S	Sn	06 03 38.0	+1.9
MUGIO	**Muggio**	**4.37**	**318**	P	Pg	06 03 11.2	-3.1
JOPP	**Joppolo**	**4.60**	**153**	P	Pn	06 03 01.6	+1.2

*IDC **24** 06:04:30.7±1.7, 3°.43S×128°.73E, h0km, mb3.6/2, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=49.3km s-min=27.6km az=84.0*

*DJA **24** 06:04:33.6±0.5, 3°.5×6°×12°.9E±°, h10km, M3.3/6, MLv3.3/6*

ISC 24 06:04:32.6±1.1, 3°.4S±0°.1×128°.86E±0°.09, h12km±7km, n7, σ0°84/9, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.09**	**44**	P	**Pg**	**06 04 35.4**	**0.0**
MSAI				S	**Sg**	**06 04 37.4**	**-0.1**
AAI	**Ambon**	**0.72**	**248**	P	**Pn**	**06 04 49.2**	**+0.6**
FAKI	**Fak Fak**	**3.42**	**82**	P	**Pn**	**06 05 26.5**	**+0.8**
SIJI	**Sorong**	**3.49**	**44**	Pn	**Pn**	**06 05 27.2**	**+0.6**
	8.6nm,0.3s,baz=250,slow=23,SNR=12						
SIJI				Sn	**Sn**	**06 06 07.5**	**-0.4**
	4.8nm,0.3s,baz=285,slow=20,SNR=3.6 17nm,0.3s						
WRA	**Warramunga Arr**	**17.27**	**162**	P	**Pn**	**06 08 32.6**	**-1.2**
	baz=342,slow=13,SNR=3.6 0.7nm,1.0s						
ASAR	**Alice Springs**	**20.71**	**167**	P	**P**	**06 09 13.7**	**+0.6**
	3.0nm,0.8s,baz=346,slow=10.0,SNR=23 3.0nm,0.8s						
MKAR	**Makanchi Array**	**64.63**	**326**	P	**P**	**06 15 09.9**	**-0.3**
	0.3nm,0.5s,baz=116,slow=6.6,SNR=3.1 0.3nm,0.5s						

ROM 24 06:06:15.7±0.2, 42°.60N±0°.01×13°.23E±0°.01, h10km, ML2.3/12, 9C-2D, Error ellipse: s-maj=1.4km s-min=1.1km az=41.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**186**	⇑*e*P	Pg	06 06 19.1	+0.7
RM33				S	Sg	06 06 21.6	+1.3

RM33				AML	AML		
	comp=N,1595µm,1.0s						
RM33				AML	AML		
	comp=E,1720µm,0.9s						
RM33				AML	AML		
	comp=N,1535µm,1.0s						
RM33				AML	AML		
	comp=E,1665µm,0.9s						
RM33				AML	AML		
	comp=N,1590µm,1.0s						
RM33				AML	AML		
	comp=N,1530µm,1.0s						
RM33				AML	AML		
	comp=E,1715µm,0.9s						
RM33				AML	AML		
	comp=E,1670µm,0.9s						
RM33				AML	AML		
	comp=E,1117µm,0.3s						
RM33				AML	AML		
	comp=N,1128µm,0.2s						
RM33				AML	AML		
	comp=N,1137µm,0.2s						
CAMP	**Campotosto**	**0.15 117**	⇑*i*	P	Pg	06 06 19.5	+0.4
CAMP				S	Sg	06 06 22.6	+1.0
NRCA	**Norcia**	**0.24 340**		AML	AML		
	comp=N,9515µm,0.1s						
NRCA				AML	AML		
	comp=N,10925µm,0.1s						
NRCA				AML	AML		
	comp=E,11500µm,0.2s						
NRCA				AML	AML		
	comp=N,9505µm,0.1s						
NRCA				AML	AML		
	comp=E,12750µm,0.2s						
NRCA				AML	AML		
	comp=E,11500µm,0.2s						
NRCA				AML	AML		
	comp=N,9495µm,0.1s						
NRCA				AML	AML		
	comp=N,10005µm,0.2s						
NRCA				AML	AML		
	comp=N,8930µm,0.2s						
TERO	**Teramo**	**0.28 86**		AML	AML		
	comp=E,751µm,1.0s						
TERO				AML	AML		
	comp=N,772µm,0.1s						
GIGS	**Gran Sasso**	**0.29 121**		P	Pg	06 06 21.9	+0.2
GIGS				S	Sg	06 06 26.7	+1.0
GIGS				AML	AML		
	comp=E,146µm,0.4s						
GIGS				AML	AML		
	comp=N,92µm,0.9s						
GIGS				AML	AML		
	comp=E,146µm,0.4s						
ARRO	**Arrone**	**0.34 266**		P	Pg	06 06 22.4	-0.1
FIAM	**Fiamignano**	**0.35 194**		P	Pg	06 06 23.1	+0.5
FIAM				S	Sb	06 06 29.1	-0.5
FAGN	**Fagnano**	**0.43 142**		S	Sb	06 06 32.0	0.0
FDMO	**Fiordimonte**	**0.44 347**		AML	AML		
	comp=E,620µm,0.2s						
FDMO				AML	AML		
	comp=N,444µm,0.9s						
CESI	**CESI - Serrava**	**0.47 329**		AML	AML		
	comp=E,302µm,0.2s						
CESI				AML	AML		
	comp=N,820µm,0.4s						
CESI				AML	AML		
	comp=E,303µm,0.2s						
OFFI	**Offida**	**0.47 45**		P	Pg	06 06 25.0	0.0
OFFI				AML	AML		
	comp=E,660µm,0.8s						
OFFI				AML	AML		
	comp=N,588µm,0.7s						
OFFI				AML	AML		
	comp=E,660µm,0.8s						
OFFI				AML	AML		
	comp=N,588µm,0.7s						
CESX	**Cesi**	**0.48 271**	⇑*i*	P	Pg	06 06 24.6	-0.4
CESX				AML	AML		
	comp=E,118µm,1.6s						
CESX				AML	AML		
	comp=N,176µm,0.3s						
CESX	**Cesi**	**0.48 271**	⇑	P	Pg	06 06 24.7	-0.4
CESX				AML	AML		
	comp=E,118µm,1.6s						
CESX				AML	AML		
	comp=N,176µm,0.3s						
CESX				AML	AML		
	comp=E,118µm,1.6s						
CESX				AML	AML		
	comp=N,176µm,0.3s						
CESX				AML	AML		
	comp=E,118µm,1.6s						
CESX				AML	AML		
	comp=N,176µm,0.3s						
CESX				AML	AML		
	comp=E,118µm,1.6s						
CESX				AML	AML		
	comp=N,176µm,0.3s						
CSP1	**Cessapalombo**	**0.49 358**		P	Pg	06 06 25.9	+0.6
SNTG	**Esanatoglia**	**0.68 342**		AML	AML		
	comp=N,128µm,1.6s						
SNTG				AML	AML		
	comp=E,161µm,1.2s						
ATCC	**AVT- Casa Cast**	**0.72 324**		P	Pb	06 06 30.4	-0.1
ATCC	**AVT- Casa Cast**	**0.72 324**	⇑	P	Pb	06 06 30.3	-0.2
CING	**Cingoli**	**0.77 358**		P	Pb	06 06 31.2	-0.1
CING	**Cingoli**	**0.77 358**	⇓	P	Pb	06 06 31.3	0.0
PP3	**Marolino**	**0.82 20**	⇑	P	Pg	06 06 29.6	-2.0
LAV9	**Lanuvio**	**1.01 203**		P	Pn	06 06 36.5	+0.6
LAV9				AML	AML		
	comp=E,475µm,1.0s						
LAV9				AML	AML		
	comp=N,394µm,1.5s						
LAV9				AML	AML		
	comp=E,475µm,1.0s						
LAV9				AML	AML		
	comp=N,394µm,1.5s						
SF04	**Casetta**	**1.18 282**		S	Sn	06 06 58.0	+3.5
VITU	**Vitulano (BN)**	**1.76 143**		P	Pg	06 06 49.3	-0.2
ZCCA	**Zocca**	**2.40 318**	⇓	P	Pb	06 06 58.0	-1.0
ZCCA				S	Sg	06 07 33.0	+0.3
ZCCA				AML	AML		
	comp=N,42µm,1.5s						
ZCCA				AML	AML		
	comp=E,47µm,1.6s						
CARD	**Cardoso**	**2.46 306**		S	Sg	06 07 39.0	+4.3
NDIM	**Novi di Modena**	**2.84 324**	⇑	P	Pb	06 07 05.8	-0.7
NDIM				S	Sg	06 07 45.0	-1.9
SBPO	**S.Benedetto Po**	**2.96 326**		S	Sb	06 07 47.0	+2.2
MNTV	**Mantova**	**3.10 326**		S	Sg	06 07 54.0	-1.1
STON	**Ston**	**3.31 84**		S	Sg	06 08 05.0	+3.1
SARZ	**Sarezzano**	**3.86 307**	⇑	P	Pb	06 07 19.9	-4.0
SARZ				AML	AML		
	comp=E,179µm,0.3s						
SARZ				AML	AML		
	comp=N,265µm,0.4s						
ZONE	**Zone**	**3.87 326**		S	Sb	06 08 13.0	+2.0
QLNO	**Quiliano**	**3.95 297**		S	Sg	06 08 26.0	+3.5
MUGIO	**Muggio**	**4.48 319**		S	Sn	06 08 16.0	+0.2
MILZ	**Milazzo**	**4.59 160**	⇑	P	Pn	06 07 29.7	+4.6
MSRU	**Castanea**	**4.67 157**		P	Pg	06 07 42.5	-2.7
VLS	**Valsamata**	**7.15 126**		P	Pb	06 08 19.0	-0.9

ROM 24 06:06:22.0±0.1, 42°708N±0°007×13°23E±0°01, h9km, ML2.2/9, Error ellipse: s-maj=1.3km s-min=0.3km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.15**	**326**	P	Pg	06 06 25.8	+0.4
NRCA				S	Sg	06 06 28.2	+0.5
NRCA				AML	AML		
	comp=N,9515µm,0.1s						
NRCA				AML	AML		
	comp=N,10925µm,0.1s						
NRCA				AML	AML		
	comp=E,11500µm,0.2s						
NRCA				AML	AML		
	comp=N,9505µm,0.1s						
NRCA				AML	AML		
	comp=E,11500µm,0.2s						
NRCA				AML	AML		
	comp=N,9495µm,0.1s						
NRCA				AML	AML		
	comp=E,12750µm,0.2s						
NRCA				AML	AML		
	comp=E,11013µm,0.2s						
NRCA				AML	AML		
	comp=E,10210µm,0.2s						
RM33	**Pellescritta (**	**0.20**	**183**	P	Pg	06 06 27.2	+1.0
RM33				S	Sg	06 06 30.5	+1.5
RM33				AML	AML		
	comp=E,1670µm,0.9s						
RM33				AML	AML		
	comp=N,1595µm,1.0s						
RM33				AML	AML		
	comp=N,1535µm,1.0s						
RM33				AML	AML		
	comp=N,1590µm,1.0s						
RM33				AML	AML		
	comp=E,1665µm,0.9s						
RM33				AML	AML		
	comp=E,1720µm,0.9s						
RM33				AML	AML		
	comp=E,1715µm,0.9s						
CAMP	**Campotosto**	**0.22**	**142**	P	Pg	06 06 27.3	+0.8
CAMP				S	Sg	06 06 30.9	+1.3
TERO	**Teramo**	**0.29**	**107**	P	Pb	06 06 30.8	+1.3
TERO				S	Sb	06 06 33.1	-1.3
TERO				AML	AML		
	comp=E,751µm,1.0s						
TERO				AML	AML		
	comp=N,772µm,0.1s						
TERO				AML	AML		
	comp=N,715µm,0.1s						
FDMO	**Fiordimonte**	**0.34**	**343**	P	Pg	06 06 25.0	-3.9
FDMO				AML	AML		
	comp=N,444µm,0.9s						
FDMO				AML	AML		
	comp=E,620µm,0.2s						
GIGS	**Gran Sasso**	**0.36**	**136**	P	Pg	06 06 29.7	+0.5
GIGS				S	Sg	06 06 34.9	+1.0
GIGS				AML	AML		
	comp=E,146µm,0.4s						
GIGS				AML	AML		
	comp=E,146µm,0.4s						
GIGS				AML	AML		
	comp=N,92µm,0.9s						
CESI	**CESI - Serrava**	**0.38**	**321**	P	Pb	06 06 30.5	-0.5
CESI				S	Sg	06 06 35.7	+1.2
CESI				AML	AML		
	comp=N,820µm,0.4s						
CESI				AML	AML		
	comp=E,302µm,0.2s						
CESI				AML	AML		
	comp=E,303µm,0.2s						
CSP1	**Cessapalombo**	**0.38**	**358**	P	Pg	06 06 30.1	+0.4
CSP1				S	Sb	06 06 36.9	-0.3
OFFI	**Offida**	**0.41**	**56**	P	Pb	06 06 31.2	-0.2
OFFI				AML	AML		
	comp=E,660µm,0.8s						
OFFI				AML	AML		
	comp=N,588µm,0.7s						
OFFI				AML	AML		
	comp=N,588µm,0.7s						
OFFI				AML	AML		
	comp=E,660µm,0.8s						
FIAM	**Fiamignano**	**0.45**	**191**	P	Pb	06 06 33.0	+0.9
FIAM				S	Sb	06 06 37.9	-1.0
SNTG	**Esanatoglia**	**0.59**	**339**	AML	AML		
	comp=E,161µm,1.2s						
SNTG				AML	AML		
	comp=N,128µm,1.6s						
T0110	**Collepietro**	**0.63**	**140**	P	Pg	06 06 34.4	+0.2
T0110				S	Sb	06 06 44.4	+0.2
LAV9	**Lanuvio**	**1.10**	**201**	AML	AML		
	comp=E,475µm,1.0s						
LAV9				AML	AML		
	comp=E,475µm,1.0s						
LAV9				AML	AML		
	comp=N,394µm,1.5s						
LAV9				AML	AML		
	comp=E,475µm,1.0s						
LAV9				AML	AML		
	comp=N,394µm,1.5s						
ZCCA	**Zocca**	**2.32**	**316**	AML	AML		
	comp=E,47µm,1.6s						
ZCCA				AML	AML		
	comp=N,42µm,1.5s						
SARZ	**Sarezzano**	**3.80**	**306**	AML	AML		
	comp=E,179µm,0.3s						
SARZ				AML	AML		
	comp=N,265µm,0.4s						

ROM 24 06:17:21.8±0.1, 42°817N±0°005×13°132E±0°009, h6km, ML2.3/16, 6C-4D, Error ellipse: s-maj=0.8km s-min=0.4km az=240.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**322**	P	Pg	06 17 23.0	-0.1
NRCA				S	Sg	06 17 23.8	-0.3
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,55300µm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,51350µm,0.2s						
FDMO	**Fiordimonte**	**0.22**	**352**	P	Pg	06 17 27.1	+0.9
FDMO				S	Sg	06 17 30.6	+1.4
FDMO				AML	AML		
	comp=E,732µm,0.2s						
FDMO				AML	AML		
	comp=N,1355µm,0.2s						
FDMO				AML	AML		
	comp=E,732µm,0.2s						
FDMO				AML	AML		
	comp=E,986µm,0.2s						
CESI	**CESI - Serrava**	**0.25**	**318**	⇓*i* P	Pg	06 17 27.7	+0.9
CESI				S	Sb	06 17 32.0	-1.5
CESI				AML	AML		
	comp=E,662µm,0.9s						
CESI				AML	AML		
	comp=N,1280µm,0.2s						
CESI				AML	AML		
	comp=E,1990µm,0.4s						
CESI				AML	AML		
	comp=E,580µm,0.2s						
CESI				AML	AML		
	comp=N,1281µm,0.2s						
CESI				AML	AML		
	comp=N,4635µm,0.3s						
CSP1	**Cessapalombo**	**0.28**	**11**	⇑*i* P	Pb	06 17 28.4	-0.9
CSP1				AML	AML		
	comp=E,786µm,0.7s						
CSP1				AML	AML		
	comp=N,754µm,0.7s						
CSP1				AML	AML		
	comp=E,3305µm,0.3s						
CSP1				AML	AML		
	comp=N,2455µm,0.4s						
CSP1				AML	AML		
	comp=E,3310µm,0.3s						
CSP1				AML	AML		
	comp=N,2450µm,0.4s						
CSP1				AML	AML		
	comp=E,704µm,0.3s						
CSP1				AML	AML		
	comp=N,582µm,0.2s						
GUMA	**Gualdo di Mace**	**0.29**	**31**	⇑*i* P	Pg	06 17 28.2	+0.7
GUMA				S	Sb	06 17 33.2	-1.3
CAMP	**Campotosto**	**0.35**	**144**	AML	AML		
	comp=E,480µm,0.7s						
CAMP				AML	AML		
	comp=N,388µm,0.5s						
CAMP				AML	AML		
	comp=E,902µm,0.2s						
CAMP				AML	AML		
	comp=E,387µm,0.2s						
CAMP				AML	AML		
	comp=N,366µm,0.1s						
CAMP				AML	AML		
	comp=N,1044µm,0.4s						
ARRO	**Arrone**	**0.36**	**229**	⇑ P	Pb	06 17 30.4	-0.2
TERO	**Teramo**	**0.40**	**119**	P	Pb	06 17 30.8	-0.5
TERO				S	Sb	06 17 36.7	-1.0
TERO				AML	AML		
	comp=E,1605µm,0.5s						
TERO				AML	AML		
	comp=N,1970µm,1.2s						
TERO				AML	AML		
	comp=E,1600µm,0.5s						
TERO				AML	AML		
	comp=N,2100µm,0.7s						
TERO				AML	AML		
	comp=N,1557µm,0.1s						
TERO				AML	AML		
	comp=N,1771µm,0.1s						
TERO				AML	AML		
	comp=E,1464µm,0.5s						
ASSB	**Assisi San Ben**	**0.41**	**303**	P	Pg	06 17 30.3	+0.4
ASSB				AML	AML		
	comp=E,384µm,0.8s						
ASSB				AML	AML		
	comp=N,382µm,0.9s						
ASSB				AML	AML		
	comp=N,237µm,0.2s						
ASSB				AML	AML		
	comp=E,321µm,0.4s						
ASSB				AML	AML		
	comp=N,786µm,1.4s						
ASSB				AML	AML		
	comp=E,964µm,1.2s						
OFFI	**Offida**	**0.42**	**74**	P	Pb	06 17 31.4	-0.3
OFFI				AML	AML		
	comp=E,825µm,0.2s						
OFFI				AML	AML		
	comp=N,987µm,0.9s						
OFFI				AML	AML		
	comp=E,2160µm,0.6s						
OFFI				AML	AML		
	comp=N,2360µm,0.4s						
OFFI				AML	AML		
	comp=E,685µm,0.3s						
OFFI				AML	AML		
	comp=N,926µm,0.5s						
CESX	**Cesi**	**0.46**	**243**	P	Pb	06 17 31.5	-0.7
CESX				AML	AML		
	comp=E,300µm,0.5s						
CESX				AML	AML		
	comp=N,266µm,0.5s						
CESX				AML	AML		
	comp=N,266µm,0.5s						
CESX				AML	AML		
	comp=N,1039µm,0.3s						
CESX				AML	AML		
	comp=E,788µm,0.3s						
CESX				AML	AML		
	comp=N,228µm,0.2s						
CESX				AML	AML		
	comp=E,300µm,0.5s						
SNTG	**Esanatoglia**	**0.46**	**342**	P	Pg	06 17 31.0	+0.3
SNTG				S	Sb	06 17 38.6	-0.9
SNTG				AML	AML		
	comp=N,254µm,0.2s						
SNTG				AML	AML		
	comp=E,216µm,0.2s						
SNTG				AML	AML		
	comp=N,276µm,1.2s						
SNTG				AML	AML		
	comp=E,282µm,0.5s						
GIGS	**Gran Sasso**	**0.49**	**139**	P	Pb	06 17 32.8	-0.1
GIGS				AML	AML		
	comp=E,175µm,0.2s						
GIGS				AML	AML		
	comp=N,147µm,1.5s						
GIGS				AML	AML		
	comp=E,228µm,0.4s						
GIGS				AML	AML		
	comp=N,128µm,0.2s						
GIGS				AML	AML		
	comp=N,190µm,0.6s						
GIGS				AML	AML		
	comp=E,175µm,0.2s						
EL6	**Elcito**	**0.51**	**358**	P	Pg	06 17 31.9	+0.1
EL6				S	Sb	06 17 40.5	-0.5
EL6				AML	AML		
	comp=E,517µm,1.4s						
EL6				AML	AML		
	comp=N,562µm,0.2s						
EL6				AML	AML		
	comp=E,785µm,1.5s						
EL6				AML	AML		
	comp=N,562µm,0.2s						
EL6				AML	AML		
	comp=E,506µm,0.2s						
EL6				AML	AML		
	comp=N,605µm,1.5s						
ATCC	**AVT- Casa Cast**	**0.52**	**316**	P	Pg	06 17 32.4	+0.6
ATCC				AML	AML		
	comp=E,278µm,0.6s						
ATCC				AML	AML		
	comp=N,340µm,1.0s						
ATCC				AML	AML		
	comp=E,379µm,0.4s						
ATCC				AML	AML		
	comp=E,610µm,0.8s						
ATCC				AML	AML		
	comp=E,610µm,0.8s						
ATCC				AML	AML		
	comp=N,686µm,0.5s						
FIAM	**Fiamignano**	**0.55**	**181**	P	Pg	06 17 32.7	+0.3
FIAM				AML	AML		
	comp=N,358µm,0.7s						
FIAM				AML	AML		
	comp=E,632µm,0.3s						
FIAM				AML	AML		
	comp=N,551µm,0.6s						
FIAM				AML	AML		
	comp=N,340µm,0.3s						
FIAM				AML	AML		
	comp=N,552µm,0.6s						
FOSV	**Fossato di Vic**	**0.55**	**330**	P	Pb	06 17 33.9	0.0
FOSV				S	Sb	06 17 41.6	-0.4
TRTR	**Tortoreto Alta**	**0.58**	**91**	P	Pg	06 17 33.1	+0.2
VCEL	**Villa Celiera**	**0.67**	**129**	P	Pb	06 17 35.6	-0.4
VCEL				AML	AML		
	comp=E,556µm,0.5s						
VCEL				AML	AML		
	comp=N,504µm,0.3s						
VCEL				AML	AML		
	comp=E,556µm,0.5s						
VCEL				AML	AML		
	comp=E,584µm,1.5s						
VCEL				AML	AML		
	comp=N,505µm,0.3s						
VCEL				AML	AML		
	comp=N,628µm,0.9s						
ARVD	**Arcevia**	**0.69**	**349**	P	Pg	06 17 35.7	+0.5
ARVD				S	Sb	06 17 46.4	+0.2
SRES	**S.Oreste - Sor**	**0.74**	**219**	AML	AML		
	comp=N,83µm,0.9s						
SRES				AML	AML		
	comp=E,86µm,1.1s						
SRES				AML	AML		
	comp=E,190µm,0.3s						
SRES				AML	AML		
	comp=N,147µm,1.2s						
ATPI	**Pietralunga -**	**0.83**	**320**	P	Pb	06 17 38.6	-0.1
CERT	**Cerreto**	**0.88**	**187**	P	Pb	06 17 40.0	+0.6
CERT				AML	AML		
	comp=E,179µm,0.4s						
CERT				AML	AML		
	comp=N,175µm,1.6s						
CERT				AML	AML		
	comp=E,278µm,0.6s						
CERT				AML	AML		
	comp=N,224µm,0.6s						
INTR	**Introdacqua**	**0.99**	**144**	AML	AML		
	comp=E,410nm,1.5s						
INTR				AML	AML		
	comp=E,415nm,1.5s						
INTR				AML	AML		
	comp=N,256nm,1.5s						
INTR				AML	AML		
	comp=E,100µm,1.4s						
INTR				AML	AML		
	comp=N,188µm,0.9s						
INTR				AML	AML		
	comp=N,256nm,1.5s						
INTR				AML	AML		
	comp=E,142µm,0.7s						
INTR				AML	AML		
	comp=N,247µm,0.9s						
CAFI	**Castiglion Fio**	**0.99**	**301**	AML	AML		
	comp=N,345µm,0.6s						
CAFI				AML	AML		

	comp=E,257μm,0.6s							
CAFI					AML	AML		
	comp=N,345μm,0.6s							
CAFI					AML	AML		
	comp=E,266μm,0.5s							
CAFI					AML	AML		
	comp=E,256μm,0.6s							
CAFI					AML	AML		
	comp=E,267μm,0.5s							
CAFI					AML	AML		
	comp=N,364μm,0.6s							
PARC	**Parchiule**	**1.06**	**322**		AML	AML		
	comp=N,197μm,0.5s							
PARC					AML	AML		
	comp=E,205μm,0.4s							
VIVA	**Pratoni del Vi**	**1.10**	**194**	S		Sb	06 17 58.0	+0.2
PTRJ	**Pietraroja**	**1.79**	**144**	P		Pg	06 18 00.1	+4.0
ZCCA	**Zocca**	**2.19**	**315**	P		Pb	06 18 01.7	-0.2
ZCCA				S		Sg	06 18 35.0	+2.8
ZCCA				AML		AML		
	comp=E,1352μm,0.8s							
ZCCA				AML		AML		
	comp=N,1890μm,0.8s							
CAFE	**Carife**	**2.38**	**138**	S		Sg	06 18 38.0	-0.3
CAVE	**Cavezzo**	**2.56**	**324**	S		Sg	06 18 46.0	+1.9
NDIM	**Novi di Modena**	**2.62**	**323**	S		Sg	06 18 46.0	-0.1
STON	**Ston**	**3.36**	**88**	⇓P		Pn	06 18 16.7	+1.9
STON				S		Sg	06 19 08.0	-1.7
LEOD	**Capriano del C**	**3.41**	**322**	S		Sn	06 18 55.0	-1.3
SARZ	**Sarezzano**	**3.68**	**305**	⇑P		Pg	06 18 30.2	-2.1
SARZ				S		Sg	06 19 18.0	-1.9
EUCT	**Pavia**	**3.74**	**311**	P		Pb	06 18 29.3	+1.0
SALB	**San Lorenzo Be**	**3.81**	**139**	⇑P		Pg	06 18 36.3	+1.6
RISI	**Rein**	**4.20**	**350**	S		Sn	06 19 11.0	-4.9
RISI	**Rein**	**4.20**	**350**	⇑P		Pg	06 18 42.9	+0.7
MOSI	**Grossmontoni**	**4.22**	**335**	P		Pn	06 18 28.1	+1.2
MUGIO	**Muggio**	**4.27**	**318**	P		Pn	06 18 30.5	+3.1
SPS2	**Spezzano della**	**4.27**	**144**	P		Pg	06 18 41.6	-2.1
SCTE	**Santa Cesarea**	**4.86**	**123**	⇓P		Pb	06 18 46.7	-0.6
TAMR	**Tamra**	**6.54**	**210**	⇓P		Pn	06 18 58.5	+0.1

ROM 24 06:17:31.1±0.1, 43°.019N±0°.006×11°.329E±0°.010, h9km, ML2.6/8, 4C-13D, Error ellipse: s-maj=0.9km s-min=0.4km az=234.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
ARCI	**Arcidosso**	**0.20**	**147**	⇓*e*P		Pg	06 17 36.1		+0.8
ARCI				S		Sg	06 17 39.0		+0.9
ARCI				AML		AML			
	comp=N,5200μm,0.9s								
ARCI				AML		AML			
	comp=E,4185μm,1.5s								
ARCI				AML		AML			
	comp=N,5195μm,0.9s								
FROS	**Frosini**	**0.23**	**327**	⇓P		Pg	06 17 36.8		+0.9
FROS				S		Sg	06 17 40.0		+1.0
FROS				AML		AML			
	comp=E,4765μm,0.4s								
FROS				AML		AML			
	comp=N,3415μm,0.3s								
FROS				AML		AML			
	comp=N,3415μm,0.3s								
SF01	**Poggio Pratacc**	**0.27**	**140**	⇑*i*P		Pb	06 17 37.5		-0.7
SF01				S		Sb	06 17 42.3		-0.6
SF01				AML		AML			
	comp=E,3635μm,1.5s								
SF01				AML		AML			
	comp=E,3640μm,1.5s								
SF01				AML		AML			
	comp=N,4765μm,0.8s								
SF01				AML		AML			
	comp=E,3645μm,1.5s								
SF13	**Bagnolo**	**0.29**	**133**	⇓*i*P		Pg	06 17 37.7		+0.7
SF13				S		Sg	06 17 41.4		+0.5
SF11	**Podere del Sol**	**0.30**	**120**	⇓*i*P		Pg	06 17 37.6		+0.5
SF04	**Casetta**	**0.30**	**127**	⇓*i*P		Pg	06 17 38.0		+0.7
SF04				AML		AML			
	comp=E,6070μm,0.2s								
SF04				AML		AML			
	comp=N,4525μm,0.2s								
SF04				AML		AML			
	comp=E,6075μm,0.2s								
SF04				AML		AML			
	comp=N,4526μm,0.2s								
SF04				AML		AML			
	comp=E,5934μm,0.3s								
TRIF	**Trifonti**	**0.33**	**287**	⇓P		Pb	06 17 38.9		-0.2
TRIF				S		Sb	06 17 43.4		-1.1
TRIF				AML		AML			
	comp=E,1040μm,0.7s								
TRIF				AML		AML			
	comp=E,1040μm,0.7s								
TRIF				AML		AML			
	comp=N,795μm,0.3s								
TRIF				AML		AML			
	comp=E,1040μm,0.7s								
TRIF				AML		AML			
	comp=N,795μm,0.3s								
SF14	**Selvena**	**0.34**	**141**	⇓*i*P		Pb	06 17 38.7		-0.6
SF03	**Valle Cupa**	**0.34**	**129**	⇓*i*P		Pg	06 17 38.6		+0.7
MCIV	**Monte Civitell**	**0.35**	**133**	⇓*i*P		Pb	06 17 38.8		-0.7
MCIV				AML		AML			
	comp=N,987μm,0.2s								
MCIV				AML		AML			
	comp=N,986μm,0.2s								
MCIV				AML		AML			
	comp=E,1415μm,0.2s								
MCIV				AML		AML			
	comp=N,986μm,0.2s								
CASP	**Castiglione de**	**0.41**	**236**	P		Pb	06 17 40.5		0.0
CASP				AML		AML			
	comp=E,445μm,0.4s								
CASP				AML		AML			
	comp=N,430μm,0.3s								
CSNT	**Castellina Chi**	**0.45**	**357**	P		Pg	06 17 40.4		+0.4
CSNT				S		Sg	06 17 46.3		+0.3
CSNT				AML		AML			
	comp=N,382μm,0.4s								
CSNT				AML		AML			
	comp=E,446μm,0.8s								
SACS	**San Casciano d**	**0.46**	**112**	⇓*e*P		Pg	06 17 40.7		+0.6
OSSC	**Osservatorio P**	**0.51**	**353**	P		Pg	06 17 41.4		+0.4
OSSC				S		Sg	06 17 48.2		+0.5
OSSC				AML		AML			
	comp=N,375μm,1.6s								
OSSC				AML		AML			
	comp=E,354μm,0.4s								
OSSC				AML		AML			
	comp=N,350μm,0.4s								
OSSC				AML		AML			
	comp=N,374μm,1.6s								
OSSC				AML		AML			
	comp=E,334μm,1.6s								
OSSC				AML		AML			
	comp=E,354μm,0.4s								
CAFI	**Castiglion Fio**	**0.56**	**56**	⇑*i*P		Pg	06 17 41.9		-0.1
MGAB	**Montegabbione**	**0.58**	**100**	⇑P		Pg	06 17 42.7		+0.2
MGAB				AML		AML			
	comp=E,395μm,0.3s								
MGAB				AML		AML			
	comp=E,454μm,0.3s								
MGAB				AML		AML			
	comp=E,443μm,0.4s								
MGAB				AML		AML			
	comp=E,470μm,0.4s								
MGAB				AML		AML			
	comp=N,454μm,0.6s								
MGAB				AML		AML			
	comp=N,419μm,0.5s								
MGAB				AML		AML			
	comp=E,470μm,0.4s								
CRE	**Caprese Michel**	**0.75**	**37**	⇓*i*P		Pb	06 17 46.1		-0.3
CRE				AML		AML			
	comp=E,234μm,0.5s								
CRE				AML		AML			
	comp=N,340μm,1.0s								
CRE				AML		AML			
	comp=E,234μm,0.5s								
CRE				AML		AML			
	comp=N,340μm,1.0s								
CRE				AML		AML			
	comp=E,234μm,0.5s								
CRE				AML		AML			
	comp=N,340μm,1.0s								
CRE	**Caprese Michel**	**0.75**	**37**	⇓*i*P		Pb	06 17 46.1		-0.3
SSP9	**Sansepolcro**	**0.81**	**46**	P		Pb	06 17 47.2		-0.1
RUFI	**Rufina**	**0.83**	**9**	P		Pg	06 17 47.3		+0.2
RUFI				S		Sb	06 17 59.3		+0.3
RUFI				AML		AML			
	comp=E,160μm,1.3s								
RUFI				AML		AML			
	comp=N,98μm,0.9s								
RUFI				AML		AML			
	comp=E,155μm,1.3s								
RUFI				AML		AML			
	comp=N,96μm,0.9s								
CELB	**S.Piero in Cam**	**0.87**	**252**	⇑*i*P		Pg	06 17 47.4		-0.4
CELB				AML		AML			
	comp=E,160μm,0.6s								
CELB				AML		AML			
	comp=N,217μm,0.5s								
CELB				AML		AML			
	comp=N,218μm,0.5s								
CELB				AML		AML			
	comp=E,161μm,0.6s								
PARC	**Parchiule**	**0.92**	**46**	P		Pg	06 17 48.8		+0.1
PARC				AML		AML			
	comp=E,205μm,0.4s								
PARC				AML		AML			
	comp=N,197μm,0.5s								
SFI	**Santa Sofia**	**0.96**	**23**	⇓P		Pb	06 17 50.0		+0.1
SFI				S		Sn	06 18 04.1		-0.5
SFI				AML		AML			
	comp=E,146μm,1.6s								
SFI				AML		AML			
	comp=N,132μm,1.5s								
SFI				AML		AML			
	comp=E,146μm,1.6s								
SFI				AML		AML			
	comp=N,131μm,1.5s								
SFI				AML		AML			
	comp=N,131μm,1.5s								
SFI				AML		AML			
	comp=E,146μm,1.6s								
GSCL	**Gusciola**	**1.44**	**338**	AML		AML			
	comp=E,67μm,1.4s								
GSCL				AML		AML			
	comp=N,60μm,0.5s								

ROM 24 06:18:19.5±0.1, 42°.756N±0°.004×13°.186E±0°.007, h8km, ML2.7/14, 4C, Error ellipse: s-maj=0.7km s-min=0.1km az=240.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
NRCA	**Norcia**	**0.09**	**326**	P		Pg	06 18 22.5		+0.6
NRCA				S		Sg	06 18 24.3		+0.7
NRCA				AML		AML			
	comp=E,44750μm,0.5s								
NRCA				AML		AML			
	comp=N,38100μm,1.1s								
NRCA				AML		AML			
	comp=N,42450μm,1.1s								
NRCA				AML		AML			
	comp=E,44750μm,0.5s								
NRCA				AML		AML			
	comp=E,47400μm,0.5s								
FEMA	**Monte Fema**	**0.23**	**334**	P		Pg	06 18 25.0		+0.8
FEMA				S		Sg	06 18 28.9		+1.5
CAMP	**Campotosto**	**0.28**	**143**	P		Pg	06 18 25.6		+0.5
CAMP				S		Sg	06 18 30.0		+1.3
FDMO	**Fiordimonte**	**0.29**	**346**	⇑*e*P		Pg	06 18 25.9		+0.6
FDMO				S		Sb	06 18 30.8		-1.3
FDMO				AML		AML			
	comp=N,1045μm,0.3s								
FDMO				AML		AML			
	comp=E,988μm,1.3s								
FDMO				AML		AML			
	comp=E,983μm,0.2s								
CESI	**CESI - Serrava**	**0.32**	**320**	P		Pg	06 18 26.6		+0.6
CESI				S		Sb	06 18 31.7		-1.4
CESI				AML		AML			
	comp=N,4635μm,0.3s								
CESI				AML		AML			
	comp=E,1990μm,0.4s								
GUMA	**Gualdo di Mace**	**0.33**	**20**	P		Pb	06 18 26.9		-0.8
GUMA				S		Sb	06 18 32.4		-0.7
GUMA				AML		AML			
	comp=E,6725μm,0.5s								
GUMA				AML		AML			
	comp=N,12300μm,0.2s								
GUMA				AML		AML			
	comp=E,10200μm,0.2s								
GUMA				AML		AML			
	comp=N,10355μm,0.3s								
CSP1	**Cessapalombo**	**0.34**	**2**	P		Pg	06 18 26.7		+0.5
CSP1				S		Sb	06 18 32.1		-1.4
CSP1				AML		AML			
	comp=N,2450μm,0.4s								
CSP1				AML		AML			
	comp=E,3305μm,0.3s								
CSP1				AML		AML			
	comp=N,2455μm,0.4s								
CSP1				AML		AML			
	comp=E,3310μm,0.3s								
TERO	**Teramo**	**0.34**	**113**	P		Pg	06 18 26.6		+0.5
TERO				S		Sg	06 18 31.7		+1.1
ARRO	**Arrone**	**0.36**	**241**	P		Pb	06 18 27.8		-0.4
ARRO				AML		AML			
	comp=E,1175μm,1.0s								
ARRO				AML		AML			
	comp=N,1155μm,0.3s								
ARRO				AML		AML			
	comp=N,1154μm,0.3s								
OFFI	**Offida**	**0.41**	**64**	P		Pb	06 18 28.7		-0.3
OFFI				S		Sb	06 18 36.4		+1.0
GIGS	**Gran Sasso**	**0.42**	**137**	P		Pg	06 18 27.9		+0.3
AQU	**L'Aquila**	**0.43**	**158**	P		Pb	06 18 28.9		-0.5
AQU				S		Sb	06 18 35.6		-0.5
MDAR	**Monte D'Aria**	**0.44**	**356**	P		Pg	06 18 28.5		+0.4
MDAR				S		Sb	06 18 35.7		-0.7
CESX	**Cesi**	**0.47**	**252**	P		Pg	06 18 29.1		+0.4
CESX				S		Sb	06 18 36.5		-0.7
CESX				AML		AML			
	comp=E,788μm,0.3s								
CESX				AML		AML			
	comp=N,1039μm,0.3s								
ASSB	**Assisi San Ben**	**0.48**	**307**	P		Pg	06 18 29.5		+0.6
ASSB				S		Sb	06 18 36.6		-1.0
ASSB				AML		AML			
	comp=N,786μm,1.4s								
ASSB				AML		AML			
	comp=E,964μm,1.2s								
FIAM	**Fiamignano**	**0.49**	**186**	P		Pg	06 18 29.5		+0.4
FIAM				S		Sb	06 18 37.3		-0.5
FIAM				AML		AML			
	comp=E,493μm,0.4s								
FIAM				AML		AML			
	comp=N,551μm,0.6s								
FIAM				AML		AML			
	comp=E,494μm,0.4s								
FIAM				AML		AML			
	comp=N,552μm,0.6s								
SNTG	**Esanatoglia**	**0.53**	**340**	⇑P		Pg	06 18 30.3		+0.5
SNTG				AML		AML			
	comp=E,511μm,0.1s								
SNTG				AML		AML			
	comp=N,426μm,1.2s								
SNTG				AML		AML			
	comp=E,244μm,0.2s								
SNTG				AML		AML			
	comp=N,201μm,0.1s								
FAGN	**Fagnano**	**0.57**	**149**	P		Pb	06 18 31.9		+0.1
EL6	**Elcito**	**0.58**	**354**	P		Pg	06 18 31.1		+0.4
EL6				S		Sb	06 18 40.5		+0.1
ATCC	**AVT- Casa Cast**	**0.59**	**317**	⇑*i*P		Pg	06 18 31.5		+0.6
ATCC				S		Sb	06 18 40.6		0.0
ATCC				AML		AML			
	comp=E,610μm,0.8s								
ATCC				AML		AML			
	comp=E,610μm,0.8s								
ATCC				AML		AML			
	comp=N,686μm,0.5s								
VCEL	**Villa Celiera**	**0.60**	**127**	P		Pb	06 18 31.9		-0.5
VCEL				S		Sb	06 18 41.5		+0.4
FOSV	**Fossato di Vic**	**0.62**	**330**	⇑P		Pg	06 18 32.0		+0.4
FOSV				S		Sb	06 18 41.7		+0.1
FOSV				AML		AML			
	comp=N,384μm,0.3s								
FOSV				AML		AML			
	comp=E,277μm,1.1s								
T0110	**Collepietro**	**0.69**	**140**	P		Pg	06 18 33.2		+0.4
SRES	**S.Oreste - Sor**	**0.72**	**224**	P		Pb	06 18 34.1		-0.2
MTCE	**Montecelio**	**0.80**	**204**	P		Pb	06 18 35.8		+0.1
MGAB	**Montegabbione**	**0.81**	**282**	P		Pg	06 18 35.0		0.0
MGAB				AML		AML			
	comp=E,470μm,0.4s								
MGAB				AML		AML			
	comp=E,470μm,0.4s								
MGAB				AML		AML			
	comp=N,394μm,0.5s								
FSSB	**Fossombrone**	**0.98**	**342**	P		Pg	06 18 38.6		+0.2
FSSB				AML		AML			
	comp=E,566μm,1.5s								
FSSB				AML		AML			
	comp=N,792μm,0.4s								
LPEL	**Lama dei Pelig**	**1.02**	**133**	S		Sn	06 18 56.0		+1.2

ROM 24 06:18:49.1±0.2, 43°.045N±0°.010×11°.39E±0°.02, h8km±1km, ML1.5/4, 2C-1D, Error ellipse: s-maj=1.5km s-min=0.8km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
ARCI	**Arcidosso**	**0.20**	**161**	P		Pg	06 18 54.2		+0.9
ARCI				S		Sg	06 18 57.7		+1.6
ARCI				AML		AML			
	comp=E,198μm,0.4s								
ARCI				AML		AML			
	comp=N,278μm,0.2s								
ARCI				AML		AML			
	comp=E,199μm,0.4s								
FROS	**Frosini**	**0.23**	**315**	P		Pg	06 18 54.8		+1.0
FROS				S		Sg	06 18 58.0		+1.0
FROS				AML		AML			
	comp=N,286μm,0.2s								
FROS				AML		AML			
	comp=E,340μm,0.3s								
FROS				AML		AML			
	comp=N,286μm,0.2s								
SF01	**Poggio Pratacc**	**0.27**	**151**	P		Pb	06 18 55.5		-0.7
SF01				S		Sb	06 18 59.6		-1.4
SF13	**Bagnolo**	**0.28**	**143**	⇓*i*P		Pb	06 18 55.9		-0.6
SF13				S		Sg	06 18 59.5		+0.9
SF04	**Casetta**	**0.29**	**136**	⇑P		Pb	06 18 56.0		-0.6
SF04				S		Sg	06 18 59.7		+0.9
SF03	**Valle Cupa**	**0.33**	**138**	P		Pb	06 18 56.7		-0.6
MCIV	**Monte Civitell**	**0.34**	**141**	P		Pb	06 18 56.9		-0.6
TRIF	**Trifonti**	**0.36**	**281**	P		Pb	06 18 57.8		-0.1
TRIF				S		Sg	06 19 01.5		+0.5
TRIF				AML		AML			
	comp=E,90μm,1.2s								
TRIF				AML		AML			
	comp=N,86μm,1.2s								
CASP	**Castiglione de**	**0.46**	**236**	⇑P		Pb	06 18 59.1		-0.3
CASP				S		Sb	06 19 05.9		-0.6
CASP				AML		AML			
	comp=N,87μm,0.8s								
CASP				AML		AML			
	comp=E,52μm,1.1s								
CASP				AML		AML			
	comp=N,87μm,0.8s								
OSSC	**Osservatorio P**	**0.49**	**348**	P		Pb	06 18 59.8		-0.3
OSSC				S		Sb	06 19 06.4		-1.0

ROM 24 06:19:19.2±0.1, 42°.494N±0°.007×13°.283E±0°.009, h11km, ML2.4/18, 4C-4D, Error ellipse: s-maj=0.7km s-min=0.6km az=26.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
CAMP	**Campotosto**	**0.10**	**66**	P		Pb	06 19 22.8		-0.5
CAMP				S		Sg	06 19 25.0		+0.8
CAMP				AML		AML			
	comp=E,1270μm,0.2s								
CAMP				AML		AML			
	comp=N,2050μm,0.4s								
AQU	**L'Aquila**	**0.17**	**148**	⇓*i*P		Pg	06 19 23.2		+0.3
AQU				S		Sg	06 19 26.0		+0.5
AQU				AML		AML			
	comp=E,734μm,1.2s								
AQU				AML		AML			
	comp=N,1058μm,0.6s								
AQU				AML		AML			
	comp=E,794μm,1.3s								
AQU				AML		AML			
	comp=N,997μm,0.6s								
AQU				AML		AML			
	comp=E,894μm,1.1s								
AQU				AML		AML			
	comp=E,601μm,0.6s								
AQU				AML		AML			
	comp=N,748μm,0.4s								
AQU				AML		AML			
	comp=N,716μm,0.4s								
AQU				AML		AML			
	comp=N,1061μm,0.6s								
AQU				AML		AML			
	comp=E,764μm,0.3s								
AQU				AML		AML			
	comp=E,870μm,1.1s								
GIGS	**Gran Sasso**	**0.22**	**102**	P		Pg	06 19 24.1		+0.3
GIGS				S		Sg	06 19 27.7		+0.7
GIGS				AML		AML			
	comp=N,370μm,0.6s								
GIGS				AML		AML			
	comp=E,364μm,0.8s								
FIAM	**Fiamignano**	**0.26**	**209**	P		Pg	06 19 24.9		+0.4
FIAM				S		Sg	06 19 28.9		+0.8
FIAM				AML		AML			
	comp=E,396μm,0.7s								
FIAM				AML		AML			
	comp=N,394μm,0.5s								
FIAM				AML		AML			
	comp=E,396μm,0.7s								
FIAM				AML		AML			
	comp=N,387μm,0.4s								
FIAM				AML		AML			
	comp=E,531μm,0.4s								
FIAM				AML		AML			
	comp=N,578μm,0.7s								
TERO	**Teramo**	**0.27**	**61**	P		Pg	06 19 25.2		+0.4
TERO				S		Sg	06 19 29.5		+1.0
TERO				AML		AML			
	comp=E,753μm,0.4s								
TERO				AML		AML			
	comp=N,577μm,1.5s								
TERO				AML		AML			
	comp=E,2790μm,0.2s								
TERO				AML		AML			
	comp=N,3060μm,0.5s								
TERO				AML		AML			
	comp=N,571μm,0.2s								
TERO				AML		AML			
	comp=E,608μm,0.1s								
TERO				AML		AML			
	comp=E,660μm,0.1s								
TERO				AML		AML			
	comp=N,526μm,0.2s								
FAGN	**Fagnano**	**0.32**	**135**	⇓P		Pg	06 19 26.0		+0.4
FAGN				S		Sb	06 19 31.7		-0.4
FAGN				AML		AML			
	comp=E,1300μm,0.3s								
FAGN				AML		AML			
	comp=N,1021μm,0.4s								
FAGN				AML		AML			
	comp=E,846μm,0.4s								
FAGN				AML		AML			
	comp=N,1110μm,1.5s								
NRCA	**Norcia**	**0.36**	**340**	AML		AML			
NRCA				AML		AML			
NRCA				AML		AML			
NRCA				AML		AML			
ARRO	**Arrone**	**0.39**	**283**	⇓*i*P		Pb	06 19 27.7		-0.5
ARRO				S		Sb	06 19 34.0		-0.2
ARRO				AML		AML			
	comp=E,596μm,0.2s								
ARRO				AML		AML			
	comp=N,632μm,0.4s								
ARRO				AML		AML			
	comp=E,958μm,1.4s								
ARRO				AML		AML			
	comp=N,1050μm,0.5s								

ARRO				AML	AML			
	comp=N,422μm,0.2s							
VCEL	**Villa Celiera**	**0.42**	**103**	P	Pb	06 19 28.2	-0.6	
VCEL				S	Sb	06 19 35.2	0.0	
VCEL				AML	AML			
	comp=E,562μm,0.6s							
VCEL				AML	AML			
	comp=N,578μm,0.6s							
VCEL				AML	AML			
	comp=N,578μm,0.6s							
VCEL				AML	AML			
	comp=N,914μm,0.6s							
VCEL				AML	AML			
	comp=E,1030μm,0.4s							
VCEL				AML	AML			
	comp=E,461μm,0.2s							
T0110	**Collepietro**	**0.46**	**126**	P	Pg	06 19 28.4	+0.3	
T0110				S	Sb	06 19 35.2	-0.9	
T0110				AML	AML			
	comp=E,658μm,0.4s							
T0110				AML	AML			
	comp=N,546μm,0.4s							
T0110				AML	AML			
	comp=N,632μm,0.6s							
T0110				AML	AML			
	comp=E,942μm,0.5s							
PTQR	**Pietraquaria**	**0.48**	**169**	P	Pg	06 19 28.3	-0.3	
PTQR				S	Sg	06 19 35.4	+0.4	
CESX	**Cesi**	**0.53**	**283**	⇑P	Pg	06 19 29.9	+0.4	
CESX				S	Sb	06 19 38.2	0.0	
CESX				AML	AML			
	comp=E,942μm,0.5s							
CESX				AML	AML			
	comp=N,762μm,0.3s							
FDMO	**Fiordimonte**	**0.56**	**345**	P	Pg	06 19 29.0	-1.1	
FDMO				AML	AML			
	comp=E,3105μm,1.6s							
FDMO				AML	AML			
	comp=N,3875μm,0.3s							
GUMA	**Gualdo di Mace**	**0.57**	**4**	⇓P	Pg	06 19 30.3	0.0	
GUMA				AML	AML			
	comp=N,10550μm,1.2s							
GUMA				AML	AML			
	comp=E,11215μm,0.4s							
GUMA				AML	AML			
	comp=E,11550μm,0.3s							
GUMA				AML	AML			
	comp=N,12950μm,0.5s							
CESI	**CESI - Serrava**	**0.58**	**332**	P	Pg	06 19 29.5	-1.0	
CESI				AML	AML			
	comp=N,4150μm,0.3s							
CESI				AML	AML			
	comp=E,2705μm,0.4s							
CERT	**Cerreto**	**0.59**	**202**	⇑P	Pb	06 19 31.7	+0.1	
CERT				AML	AML			
	comp=N,466μm,0.4s							
CERT				AML	AML			
	comp=E,657μm,0.4s							
CSP1	**Cessapalombo**	**0.60**	**355**	⇑P	Pg	06 19 30.1	-0.8	
CSP1				AML	AML			
	comp=N,3565μm,0.5s							
CSP1				AML	AML			
	comp=E,3705μm,0.3s							
MTCE	**Montecelio**	**0.62**	**221**	P	Pg	06 19 30.9	-0.3	
INTR	**Introdacqua**	**0.67**	**136**	⇑*i*P	Pg	06 19 32.4	+0.2	
INTR				AML	AML			
	comp=E,244μm,1.0s							
INTR				AML	AML			
	comp=N,458μm,1.0s							
SNTG	**Esanatoglia**	**0.80**	**342**	P	Pg	06 19 33.2	-1.5	
SNTG				AML	AML			
	comp=E,659μm,0.5s							
SNTG				AML	AML			
	comp=N,870μm,0.7s							
LPEL	**Lama dei Pelig**	**0.80**	**123**	P	Pg	06 19 33.9	-0.8	
LPEL				S	Sg	06 19 45.2	0.0	
LPEL				AML	AML			
	comp=N,228μm,1.2s							
LPEL				AML	AML			
	comp=E,284μm,0.7s							

ROM 24 06:19:43.1±0.1, 42°.801N±0°.004×13°.138E±0°.007, h5km, ML2.8/15, 5C-2D, Error ellipse: s-maj=0.6km s-min=0.3km az=55.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**332**	⇑*i*P	Pg	06 19 44.8	+0.4
NRCA				S	Sg	06 19 45.3	0.0
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.17**	**338**	P	Pg	06 19 47.5	+0.9
FEMA				AML	AML		
	comp=N,6305μm,0.5s						
FEMA				AML	AML		
	comp=E,9095μm,0.4s						
FEMA				AML	AML		
	comp=N,6305μm,0.5s						
FEMA				AML	AML		
	comp=N,6310μm,0.5s						
FEMA				AML	AML		
	comp=E,9095μm,0.3s						
FDMO	**Fiordimonte**	**0.24**	**351**	P	Pg	06 19 48.8	+1.0
FDMO				S	Sg	06 19 51.9	+1.0
FDMO				AML	AML		
	comp=E,3105μm,1.6s						
FDMO				AML	AML		
	comp=N,3875μm,0.3s						
CESI	**CESI - Serrava**	**0.27**	**320**	⇑P	Pb	06 19 49.4	-1.0
CESI				S	Sg	06 19 53.5	+1.7
CESI				AML	AML		
	comp=E,2705μm,0.4s						
CESI				AML	AML		
	comp=N,4150μm,0.3s						
CSP1	**Cessapalombo**	**0.29**	**10**	⇓P	Pg	06 19 49.5	+0.6
CSP1				S	Sg	06 19 54.1	+1.3
CSP1				AML	AML		
	comp=N,3560μm,0.5s						
CSP1				AML	AML		
	comp=E,3705μm,0.3s						
CSP1				AML	AML		
	comp=E,3700μm,0.3s						
CSP1				AML	AML		
	comp=N,3565μm,0.5s						
GUMA	**Gualdo di Mace**	**0.30**	**29**	⇓P	Pg	06 19 49.9	+1.0
GUMA				S	Sb	06 19 54.8	-1.4
GUMA				AML	AML		
	comp=E,11600μm,0.3s						
GUMA				AML	AML		
	comp=N,10600μm,1.2s						
GUMA				AML	AML		
	comp=N,10550μm,1.2s						
GUMA				AML	AML		
	comp=N,12950μm,0.5s						
GUMA				AML	AML		
	comp=E,11215μm,0.4s						
GUMA				AML	AML		
	comp=E,11550μm,0.3s						
CAMP	**Campotosto**	**0.33**	**143**	P	Pg	06 19 50.4	+0.9
CAMP				S	Sb	06 19 56.2	-1.0
ARRO	**Arrone**	**0.35**	**231**	P	Pb	06 19 51.3	-0.6
TERO	**Teramo**	**0.39**	**117**	⇑*i*P	Pg	06 19 51.4	+0.8
TERO				S	Sb	06 19 57.6	-1.1
OFFI	**Offida**	**0.42**	**71**	⇑*i*P	Pb	06 19 52.8	-0.3
OFFI				S	Sb	06 20 01.1	+1.3
ASSB	**Assisi San Ben**	**0.43**	**305**	P	Pg	06 19 52.2	+0.9
ASSB				S	Sb	06 19 58.7	-1.2
ASSB				AML	AML		
	comp=E,807μm,0.6s						
ASSB				AML	AML		
	comp=E,808μm,0.6s						
ASSB				AML	AML		
	comp=N,1075μm,0.5s						
CESX	**Cesi**	**0.45**	**245**	P	Pb	06 19 53.2	-0.4
GIGS	**Gran Sasso**	**0.47**	**138**	P	Pb	06 19 53.2	-0.8
GIGS				S	Sb	06 20 00.5	-0.8
SNTG	**Esanatoglia**	**0.48**	**342**	P	Pg	06 19 52.8	+0.5
SNTG				S	Sb	06 20 00.1	-1.2
AQU	**L'Aquila**	**0.49**	**156**	P	Pb	06 19 53.6	-0.6
EL6	**Elcito**	**0.53**	**357**	P	Pg	06 19 53.8	+0.5
EL6				S	Sb	06 20 02.1	-0.8

ATCC	**AVT- Casa Cast**	**0.53**	**317**	P	Pg	06 19 53.8	+0.5	
ATCC				S	Sb	06 20 02.5	-0.4	
ATCC				AML	AML			
	comp=N,966μm,0.4s							
ATCC				AML	AML			
	comp=E,932μm,1.1s							
FIAM	**Fiamignano**	**0.53**	**182**	P	Pb	06 19 54.4	-0.6	
FIAM				S	Sb	06 20 02.8	-0.2	
TRTR	**Tortoreto Alta**	**0.57**	**89**	P	Pb	06 19 55.8	+0.3	
FAGN	**Fagnano**	**0.63**	**148**	P	Pg	06 19 55.5	+0.3	
MURB	**Monte Urbino**	**0.64**	**316**	P	Pg	06 19 55.5	0.0	
MURB				S	Sb	06 20 06.9	+0.7	
MURB				AML	AML			
	comp=E,1215μm,0.4s							
MURB				AML	AML			
	comp=N,1046μm,0.3s							
VCEL	**Villa Celiera**	**0.66**	**128**	P	Pg	06 19 55.7	-0.1	
VCEL				S	Sb	06 20 07.4	+0.8	
PP3	**Marolino**	**0.67**	**31**	P	Pb	06 19 57.0	-0.2	
PP3				AML	AML			
	comp=E,2510μm,0.6s							
PP3				AML	AML			
	comp=N,2450μm,1.5s							
PP3				AML	AML			
	comp=N,2450μm,1.5s							
PP3				AML	AML			
	comp=N,2430μm,1.5s							
PP3				AML	AML			
	comp=E,2565μm,0.6s							
ATFO	**Monte Foce - G**	**0.70**	**324**	P	Pb	06 19 57.3	-0.5	
ATFO				AML	AML			
	comp=N,395μm,0.5s							
ATFO				AML	AML			
	comp=E,402μm,1.2s							
ARVD	**Arcevia**	**0.71**	**348**	P	Pg	06 19 56.9	+0.1	
ARVD				AML	AML			
	comp=N,262μm,0.5s							
ARVD				AML	AML			
	comp=E,350μm,0.5s							
ATLO	**AVT- Montelove**	**0.74**	**314**	P	Pb	06 19 58.0	-0.5	
T0110	**Collepietro**	**0.74**	**140**	⇑P	Pg	06 19 57.7	+0.3	
FRON	**Frontone**	**0.78**	**337**	⇑P	Pg	06 19 58.2	+0.2	
FRON				AML	AML			
	comp=E,253μm,0.4s							
FRON				AML	AML			
	comp=N,411μm,0.6s							
TB02	**Pietralunga**	**0.78**	**317**	P	Pn	06 20 00.1	-0.7	
ATVO	**AVT- Monte Val**	**0.79**	**318**	P	Pg	06 19 58.6	+0.4	
ATBU	**Serra di Buran**	**0.80**	**328**	P	Pb	06 19 59.1	-0.5	
TB03	**Pietralunga**	**0.80**	**319**	P	Pb	06 19 59.5	-0.1	
AOI	**Ancona**	**0.82**	**24**	P	Pb	06 19 59.6	-0.3	
ATPC	**Poggio Castell**	**0.84**	**324**	P	Pb	06 20 00.3	+0.1	
MPAG	**Monte Paganucc**	**0.87**	**342**	P	Pb	06 20 00.4	-0.4	
MPAG				AML	AML			
	comp=E,318μm,0.6s							
MPAG				AML	AML			
	comp=N,273μm,0.5s							
MPAG				AML	AML			
	comp=E,318μm,0.6s							
NARO	**Abbazia di Nar**	**0.91**	**333**	P	Pg	06 20 00.5	0.0	
NARO				AML	AML			
	comp=E,157μm,0.8s							
NARO				AML	AML			
	comp=N,156μm,0.8s							
FSSB	**Fossombrone**	**0.93**	**344**	P	Pg	06 20 01.2	+0.3	
FSSB				AML	AML			
	comp=E,627μm,0.4s							
FSSB				AML	AML			
	comp=E,626μm,0.4s							
FSSB				AML	AML			
	comp=N,1065μm,0.3s							

ROM 24 06:20:54.9±0.1, 42°.793N±0°.005×13°.189E±0°.010, h9km, ML2.3/7, 2C-2D, Error ellipse: s-maj=0.9km s-min=0.3km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**307**	P	Pg	06 20 57.6	+0.5
NRCA				S	Sg	06 20 59.1	+0.5
FEMA	**Monte Fema**	**0.20**	**329**	P	Pg	06 20 59.8	+0.7
FEMA				S	Sg	06 21 03.1	+1.2
FDMO	**Fiordimonte**	**0.26**	**343**	P	Pg	06 21 00.5	+0.4
FDMO				S	Sg	06 21 04.8	+1.2
FDMO				AML	AML		
	comp=E,2350μm,0.3s						
FDMO				AML	AML		
	comp=N,2805μm,0.9s						
FDMO				AML	AML		
	comp=N,1156μm,0.2s						
FDMO				AML	AML		
	comp=E,875μm,0.2s						
RM33	**Pellescritta (**	**0.28**	**176**	P	Pb	06 21 01.5	-0.8
RM33				S	Sb	06 21 06.6	-0.6
GUMA	**Gualdo di Mace**	**0.29**	**22**	P	Pg	06 21 01.5	+0.7
GUMA				S	Sb	06 21 07.0	-0.3
CESI	**CESI - Serrava**	**0.30**	**316**	P	Pg	06 21 00.9	0.0
CESI				S	Sb	06 21 06.6	-1.0
CSP1	**Cessapalombo**	**0.30**	**2**	P	Pg	06 21 01.3	+0.3
CSP1				S	Sb	06 21 06.6	-1.1
CSP1				AML	AML		
	comp=E,3425μm,0.3s						
CSP1				AML	AML		
	comp=N,2660μm,0.3s						
CSP1				AML	AML		
	comp=E,634μm,0.4s						
CSP1				AML	AML		
	comp=N,823μm,0.5s						
CAMP	**Campotosto**	**0.30**	**148**	P	Pg	06 21 01.5	+0.5
CAMP				S	Sg	06 21 06.4	+1.3
TERO	**Teramo**	**0.35**	**119**	⇓P	Pg	06 21 02.1	+0.3
TERO				S	Sg	06 21 07.6	+1.1
TERO				AML	AML		
	comp=E,1003μm,0.1s						
TERO				AML	AML		
	comp=N,774μm,0.6s						
TERO				AML	AML		
	comp=E,2280μm,0.1s						
TERO				AML	AML		
	comp=N,2290μm,0.9s						
TERO				AML	AML		
	comp=E,989μm,0.4s						
TERO				AML	AML		
	comp=E,886μm,0.4s						
TERO				AML	AML		
	comp=N,701μm,0.2s						
TERO				AML	AML		
	comp=N,702μm,0.2s						
OFFI	**Offida**	**0.39**	**69**	⇓P	Pb	06 21 03.9	-0.2
OFFI				S	Sb	06 21 11.3	+1.1
OFFI				AML	AML		
	comp=E,850μm,1.5s						
OFFI				AML	AML		
	comp=N,936μm,0.4s						
OFFI				AML	AML		
	comp=N,935μm,0.4s						
OFFI				AML	AML		
	comp=E,777μm,0.9s						
OFFI				AML	AML		
	comp=N,1810μm,0.4s						
OFFI				AML	AML		
	comp=E,1530μm,0.6s						
GIGS	**Gran Sasso**	**0.44**	**141**	P	Pg	06 21 04.0	+0.4
GIGS				S	Sg	06 21 10.4	+1.0
GIGS				AML	AML		
	comp=E,134μm,0.2s						
GIGS				AML	AML		
	comp=N,97μm,0.8s						
GIGS				AML	AML		
	comp=E,288μm,0.6s						
GIGS				AML	AML		
	comp=N,81μm,0.2s						
GIGS				AML	AML		
	comp=E,135μm,0.2s						
GIGS				AML	AML		
	comp=E,288μm,0.6s						
GIGS				AML	AML		
	comp=N,254μm,1.4s						
ASSB	**Assisi San Ben**	**0.46**	**303**	P	Pg	06 21 04.4	+0.4
ASSB				S	Sb	06 21 11.7	-0.7
CESX	**Cesi**	**0.48**	**248**	P	Pb	06 21 05.2	-0.5
CESX				S	Sb	06 21 13.3	+0.4
SNTG	**Esanatoglia**	**0.50**	**339**	P	Pg	06 21 04.9	+0.3
SNTG				S	Sb	06 21 12.8	-0.5

FIAM	**Fiamignano**	**0.53**	**186**	P	Pg	06 21 05.6	+0.4	
FIAM				S	Sb	06 21 13.8	-0.4	
VCEL	**Villa Celiera**	**0.62**	**129**	⇑P	Pg	06 21 07.5	+0.5	
VCEL				S	Sb	06 21 17.4	+0.3	
VCEL				AML	AML			
	comp=N,1020μm,1.6s							
VCEL				AML	AML			
	comp=E,1070μm,0.4s							
VCEL				AML	AML			
	comp=N,409μm,0.2s							
VCEL				AML	AML			
	comp=E,283μm,0.2s							
T0110	**Collepietro**	**0.71**	**142**	⇑P	Pg	06 21 08.8	+0.1	
T0110				S	Sb	06 21 19.6	0.0	
T0110				AML	AML			
	comp=E,400μm,0.6s							
T0110				AML	AML			
	comp=N,304μm,1.5s							
T0110				AML	AML			
	comp=E,495μm,0.7s							
T0110				AML	AML			
	comp=N,528μm,0.3s							
T0110				AML	AML			
	comp=N,254μm,0.4s							
T0110				AML	AML			
	comp=E,399μm,0.6s							
T0110				AML	AML			
	comp=E,496μm,0.7s							

ROM 24 06:21:35.6±0.1, 42°.801N±0°.003×13°.194E±0°.006, h7km, ML2.6/34, 2C-7D, Error ellipse: s-maj=0.5km s-min=0.0km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**299**	⇓*i*P	Pg	06 21 38.2	+0.7
NRCA				S	Sg	06 21 39.6	+0.7
NRCA				AML	AML		
	comp=E,95900μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.19**	**327**	⇓*i*P	Pg	06 21 40.3	+0.8
FEMA				S	Sg	06 21 43.4	+1.1
FEMA				AML	AML		
	comp=N,15650μm,0.4s						
FEMA				AML	AML		
	comp=N,15600μm,0.4s						
FEMA				AML	AML		
	comp=E,12450μm,0.5s						
FDMO	**Fiordimonte**	**0.25**	**342**	⇓*e*P	Pg	06 21 41.1	+0.6
FDMO				S	Sg	06 21 45.1	+1.2
FDMO				AML	AML		
	comp=E,2350μm,0.3s						
FDMO				AML	AML		
	comp=N,2805μm,0.9s						
GUMA	**Gualdo di Mace**	**0.28**	**22**	P	Pb	06 21 42.2	-0.8
GUMA				S	Sb	06 21 47.0	-0.9
GUMA				AML	AML		
	comp=E,3850μm,0.3s						
GUMA				AML	AML		
	comp=N,4255μm,0.3s						
GUMA				AML	AML		
	comp=E,3180μm,0.6s						
GUMA				AML	AML		
	comp=N,3955μm,0.7s						
CSP1	**Cessapalombo**	**0.29**	**2**	⇓*e*P	Pg	06 21 42.0	+0.6
CSP1				S	Sg	06 21 46.5	+1.2
CSP1				AML	AML		
	comp=N,2665μm,0.3s						
CSP1				AML	AML		
	comp=E,3425μm,0.3s						
CSP1				AML	AML		
	comp=N,2660μm,0.3s						
RM33	**Pellescritta (**	**0.29**	**177**	P	Pb	06 21 42.3	-0.9
RM33				S	Sb	06 21 47.3	-1.0
RM33				AML	AML		
	comp=E,1160μm,1.4s						
RM33				AML	AML		
	comp=N,1280μm,0.3s						
RM33				AML	AML		
	comp=E,1143μm,1.4s						
RM33				AML	AML		
	comp=E,1162μm,1.4s						
RM33				AML	AML		
	comp=E,1159μm,1.4s						
RM33				AML	AML		
	comp=N,1270μm,0.3s						
RM33				AML	AML		
	comp=E,1144μm,1.4s						
CESI	**CESI - Serrava**	**0.29**	**314**	⇓*i*P	Pg	06 21 42.1	+0.6
CESI				S	Sg	06 21 46.8	+1.4
CESI				AML	AML		
	comp=N,8020μm,0.4s						
CESI				AML	AML		
	comp=E,4550μm,0.3s						
CAMP	**Campotosto**	**0.31**	**149**	⇓*i*P	Pg	06 21 42.5	+0.7
CAMP				S	Sb	06 21 47.5	-1.3
CAMP				AML	AML		
	comp=N,1390μm,0.2s						
CAMP				AML	AML		
	comp=E,2095μm,0.1s						
TERO	**Teramo**	**0.35**	**120**	⇓*e*P	Pg	06 21 43.1	+0.6
TERO				S	Sb	06 21 48.8	-1.1
TERO				AML	AML		
	comp=N,2290μm,0.9s						
TERO				AML	AML		
	comp=E,2280μm,0.1s						
ARRO	**Arrone**	**0.39**	**235**	⇑*e*P	Pg	06 21 43.9	+0.8
ARRO				S	Sb	06 21 50.1	-0.8
ARRO				AML	AML		
	comp=E,970μm,0.1s						
ARRO				AML	AML		
	comp=N,908μm,0.2s						
OFFI	**Offida**	**0.39**	**70**	⇑*i*P	Pb	06 21 44.7	0.0
OFFI				S	Sb	06 21 51.6	+0.7
OFFI				AML	AML		
	comp=N,1810μm,0.4s						
OFFI				AML	AML		
	comp=E,1530μm,0.6s						
SEF1	**Sefro**	**0.39**	**332**	P	Pg	06 21 43.7	+0.5
SEF1				S	Sb	06 21 49.8	-1.3
MDAR	**Monte D'Aria**	**0.39**	**355**	P	Pg	06 21 43.8	+0.5
MDAR				S	Sb	06 21 49.9	-1.3
SSM1	**San Severino M**	**0.43**	**358**	P	Pg	06 21 44.1	+0.2
FIU1	**Fiuminata**	**0.43**	**334**	P	Pg	06 21 44.5	+0.5
FIU1				S	Sb	06 21 51.2	-1.1
GAG1	**Gagliole**	**0.45**	**348**	P	Pg	06 21 45.0	+0.7
GIGS	**Gran Sasso**	**0.45**	**142**	P	Pg	06 21 44.6	+0.3
GIGS				S	Sb	06 21 51.6	-1.1
GIGS				AML	AML		
	comp=N,254μm,1.4s						
GIGS				AML	AML		
	comp=E,288μm,0.6s						
GIGS				AML	AML		
	comp=N,254μm,1.4s						
GIGS				AML	AML		
	comp=E,288μm,0.6s						
ASSB	**Assisi San Ben**	**0.46**	**302**	P	Pg	06 21 44.9	+0.4
ASSB				S	Sb	06 21 51.9	-1.2
ASSB				AML	AML		
	comp=N,2730μm,0.2s						
ASSB				AML	AML		
	comp=E,1670μm,0.5s						
AQU	**L'Aquila**	**0.47**	**161**	P	Pg	06 21 45.4	+0.6
SNTG	**Esanatoglia**	**0.49**	**338**	P	Pg	06 21 45.3	+0.2
SNTG				S	Sb	06 21 52.9	-1.1
SNTG				AML	AML		
	comp=E,688μm,0.2s						
SNTG				AML	AML		
	comp=N,730μm,1.2s						
CESX	**Cesi**	**0.49**	**247**	P	Pg	06 21 45.5	+0.4
CESX				S	Sb	06 21 53.3	-0.6
CESX				AML	AML		
	comp=E,447μm,0.7s						
CESX				AML	AML		
	comp=N,388μm,0.9s						
TRTR	**Tortoreto Alta**	**0.53**	**89**	P	Pb	06 21 47.7	+0.5
TRTR				AML	AML		
	comp=N,1485μm,0.7s						
TRTR				AML	AML		
	comp=E,1590μm,0.5s						
EL6	**Elcito**	**0.53**	**353**	P	Pg	06 21 46.3	+0.3
EL6				S	Sb	06 21 55.0	-0.2

EL6 AML AML
comp=E,1205µm,0.9s
EL6 AML AML
comp=N,1340µm,1.2s
EL6 AML AML
comp=N,1341µm,1.2s
EL6 AML AML
comp=E,1206µm,0.9s
FIAM Fiamignano 0.54 186 P Pg 06 21 46.6 +0.6
FIAM S Sb 06 21 54.9 -0.4
FIAM AML AML
comp=N,236µm,0.3s
FIAM AML AML
comp=E,376µm,0.6s
ATCC AVT- Casa Cast 0.56 314 P Pg 06 21 46.8 +0.4
ATCC S Sb 06 21 55.4 -0.5
ATCC AML AML
comp=E,1192µm,1.2s
ATCC AML AML
comp=N,1016µm,0.7s
ATCC AML AML
comp=E,1194µm,1.2s
ATCC AML AML
comp=N,1018µm,0.7s
CING Cingoli 0.57 0 P Pg 06 21 47.3 +0.6
CING S Sb 06 21 56.1 -0.3
VCEL Villa Celiera 0.63 130 P Pg 06 21 48.2 +0.5
VCEL S Sb 06 21 57.8 -0.1
VCEL AML AML
comp=E,1074µm,0.4s
VCEL AML AML
comp=N,1019µm,1.6s
VCEL AML AML
comp=E,1070µm,0.4s
VCEL AML AML
comp=N,1020µm,1.6s
MURB Monte Urbino 0.67 313 P Pg 06 21 49.0 +0.4
MURB S Sb 06 21 59.6 +0.3
MURB AML AML
comp=E,1555µm,0.2s
MURB AML AML
comp=N,1675µm,0.2s
SSFR Montelago di S 0.70 335 P Pb 06 21 49.9 -0.3
SSFR S Sb 06 22 00.4 +0.3
T0110 Collepietro 0.72 143 P Pg 06 21 49.5 +0.1
T0110 AML AML
comp=E,495µm,0.7s
T0110 AML AML
comp=N,528µm,0.3s
T0110 AML AML
comp=E,496µm,0.7s
ARVD Arcevia 0.72 345 P Pg 06 21 49.6 +0.1
ARVD S Sb 06 22 00.8 +0.2
ARVD AML AML
comp=N,233µm,1.1s
ARVD AML AML
comp=E,256µm,0.6s
ATSC Scheggia e Pas 0.72 329 P Pb 06 21 50.3 -0.2
ATSC S Sb 06 22 00.7 0.0
ATFO Monte Foce - G 0.73 321 P Pb 06 21 50.1 -0.5
ATTE AVT- Monte Tez 0.73 303 P Pb 06 21 50.5 -0.2
SRES S.Oreste - Sor 0.76 222 P Pb 06 21 51.0 -0.1
ATLO AVT- Montelove 0.77 312 P Pg 06 21 50.6 +0.1
ATLO S Sb 06 22 02.2 +0.1
FRON Frontone 0.79 335 P Pg 06 21 50.8 -0.1
FRON S Sb 06 22 03.0 +0.3
FRON AML AML
comp=N,462µm,0.3s
FRON AML AML
comp=E,504µm,0.2s
MGAB Montegabbione 0.80 278 P Pb 06 21 51.7 -0.2
MGAB AML AML
comp=E,368µm,1.0s
MGAB AML AML
comp=E,412µm,0.3s
MGAB AML AML
comp=N,376µm,0.5s
MGAB AML AML
comp=N,364µm,0.5s
TB01 Gubbio 0.80 317 P Pg 06 21 51.1 0.0
AOI Ancona 0.81 22 P Pb 06 21 52.0 0.0
TB02 Pietralunga 0.81 315 P Pg 06 21 51.4 +0.3
ATVO AVT- Monte Val 0.82 315 P Pg 06 21 51.4 0.0
ATVO AML AML
comp=E,184µm,0.8s
ATVO AML AML
comp=N,206µm,1.3s
ATVA AVT- Monte Val 0.82 306 P Pb 06 21 52.1 -0.1
ATBU Serra di Buran 0.82 325 P Pg 06 21 51.8 +0.3
TB03 Pietralunga 0.83 317 P Pg 06 21 51.6 +0.1
TB03 S Sb 06 22 04.1 +0.4
ATPC Poggio Castell 0.87 322 P Pg 06 21 52.4 +0.2
ATPI Pietralunga - 0.87 319 P Pg 06 21 52.3 -0.1
ATPI AML AML
comp=E,128µm,1.0s
ATPI AML AML
comp=N,160µm,0.5s
ATPI AML AML
comp=N,161µm,0.5s
ATPI AML AML
comp=E,128µm,1.0s
PIEI Pieia 0.88 327 P Pg 06 21 52.4 -0.1
PIEI AML AML
comp=E,283µm,0.3s
PIEI AML AML
comp=N,158µm,1.4s
MPAG Monte Paganucc 0.89 339 P Pb 06 21 53.1 -0.3
MPAG AML AML
comp=N,190µm,0.6s
MPAG AML AML
comp=E,232µm,0.3s
NARO Abbazia di Nar 0.93 331 P Pg 06 21 53.2 -0.2
NARO AML AML
comp=E,152µm,0.9s
NARO AML AML
comp=N,106µm,1.6s
FSSB Fossombrone 0.94 341 P Pb 06 21 54.1 -0.1
FSSB AML AML
comp=N,934µm,1.4s
FSSB AML AML
comp=E,682µm,0.3s
SACS San Casciano d 0.95 273 P Pb 06 21 54.1 -0.2
SACS AML AML
comp=N,97µm,1.2s
SACS AML AML
comp=E,140µm,0.8s
INTR Introdacqua 0.95 146 P Pg 06 21 53.3 -0.5
INTR AML AML
comp=E,395nm,1.6s
INTR AML AML
comp=N,329nm,1.3s
INTR AML AML
comp=N,328nm,1.3s
INTR AML AML
comp=N,234µm,1.5s
INTR AML AML
comp=E,110µm,1.2s
INTR AML AML
comp=E,400nm,1.6s
CAFI Castiglion Fio 1.04 301 P Pb 06 21 56.1 +0.2
CAFI AML AML
comp=E,103µm,1.3s
CAFI AML AML
comp=N,132µm,1.0s
LPEL Lama dei Pelig 1.05 135 P Pg 06 21 55.8 0.0
LPEL AML AML
comp=E,147µm,1.6s
LPEL AML AML
comp=N,148µm,1.2s
MCIV Monte Civitell 1.12 269 AML AML
comp=N,398µm,1.6s
MCIV AML AML
comp=E,404µm,0.1s

ROM 24 06:26:21.9±0.1, 42°.615N±0°.006×13°.236E±0°.007, h14km±1km, Md1.6/1, ML1.9/4, 3C-6D, Error ellipse: s-maj=0.7km s-min=0.3km az=28.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.11**	**188**	⇑P	Pg	06 26 25.5	+0.3
RM33				S	Sg	06 26 27.9	+0.5
RM33				AML	AML		
	comp=E,1410µm,0.3s						
RM33				AML	AML		
	comp=N,1500µm,0.3s						
RM33				AML	AML		
	comp=E,1400µm,0.3s						
RM33				AML	AML		
	comp=N,1505µm,0.3s						
RM33				AML	AML		
	comp=E,7860µm,0.1s						
RM33				AML	AML		
	comp=N,8100µm,0.3s						
RM33				AML	AML		
	comp=E,7860µm,0.1s						
RM33				AML	AML		
	comp=N,8310µm,0.3s						
RM33				AML	AML		
	comp=E,1414µm,0.3s						
RM33				AML	AML		
	comp=E,1374µm,0.2s						
RM33				AML	AML		
	comp=N,1500µm,0.3s						
RM33				AML	AML		
	comp=N,1502µm,0.3s						
CAMP	**Campotosto**	**0.15**	**122**	⇑P	Pg	06 26 26.0	+0.2
CAMP				S	Sg	06 26 29.0	+0.6
CAMP				AML	AML		
	comp=E,7025µm,1.1s						
CAMP				AML	AML		
	comp=N,3555µm,0.4s						
CAMP				AML	AML		
	comp=N,344µm,0.3s						
CAMP				AML	AML		
	comp=E,310µm,0.3s						
TERO	**Teramo**	**0.27**	**88**	P	Pg	06 26 27.2	-0.5
TERO				S	Sg	06 26 31.9	+0.3
TERO				AML	AML		
	comp=E,8850µm,0.3s						
TERO				AML	AML		
	comp=N,7915µm,0.3s						
TERO				AML	AML		
	comp=E,9970µm,0.3s						
TERO				AML	AML		
	comp=N,8600µm,0.3s						
GIGS	**Gran Sasso**	**0.30**	**124**	⇓P	Pg	06 26 28.4	+0.2
GIGS				S	Sg	06 26 33.1	+0.8
GIGS				AML	AML		
	comp=E,91µm,0.2s						
GIGS				AML	AML		
	comp=N,82µm,0.3s						
GIGS				AML	AML		
	comp=E,1375µm,0.7s						
GIGS				AML	AML		
	comp=N,1345µm,0.5s						
GIGS				AML	AML		
	comp=E,91µm,0.2s						
GIGS				AML	AML		
	comp=N,82µm,0.3s						
ARRO	**Arrone**	**0.35**	**264**	⇑P	Pg	06 26 29.0	-0.1
ARRO				S	Sb	06 26 35.0	-0.4
ARRO				AML	AML		
	comp=E,380µm,0.8s						
ARRO				AML	AML		
	comp=N,228µm,0.3s						
ARRO				AML	AML		
	comp=E,5725µm,1.2s						
ARRO				AML	AML		
	comp=N,5105µm,0.5s						
ARRO				AML	AML		
	comp=E,375µm,0.2s						
ARRO				AML	AML		
	comp=N,228µm,0.3s						
ARRO				END			
FIAM	**Fiamignano**	**0.36**	**194**	P	Pg	06 26 29.3	+0.1
FIAM				S	Sb	06 26 35.3	-0.4
FDMO	**Fiordimonte**	**0.43**	**346**	⇓P	Pb	06 26 31.3	-0.2
FDMO				AML	AML		
	comp=E,8405µm,1.0s						
FDMO				AML	AML		
	comp=N,7920µm,0.2s						
CESI	**CESI - Serrava**	**0.46**	**328**	⇓P	Pb	06 26 31.6	-0.3
CESI				AML	AML		
	comp=E,18350µm,0.7s						
CESI				AML	AML		
	comp=N,28850µm,0.9s						
OFFI	**Offida**	**0.46**	**46**	P	Pb	06 26 31.7	-0.2
OFFI				AML	AML		
	comp=E,9075µm,0.5s						
OFFI				AML	AML		
	comp=N,13250µm,0.6s						
CESX	**Cesi**	**0.48**	**270**	⇓P	Pg	06 26 31.2	-0.3
CESX				S	Sg	06 26 38.1	+0.1
CESX				AML	AML		
	comp=E,164µm,0.6s						
CESX				AML	AML		
	comp=N,166µm,0.2s						
CESX				AML	AML		
	comp=E,7530µm,0.4s						
CESX				AML	AML		
	comp=N,6055µm,0.6s						
VCEL	**Villa Celiera**	**0.50**	**116**	⇓P	Pb	06 26 32.3	-0.2
VCEL				AML	AML		
	comp=E,273µm,1.6s						
VCEL				AML	AML		
	comp=N,332µm,1.4s						
VCEL				AML	AML		
	comp=E,4240µm,0.3s						
VCEL				AML	AML		
	comp=N,4295µm,0.3s						
T0110	**Collepietro**	**0.56**	**134**	P	Pg	06 26 33.0	+0.1
T0110				AML	AML		
	comp=E,168µm,0.9s						
T0110				AML	AML		
	comp=N,197µm,1.3s						
T0110				AML	AML		
	comp=E,3495µm,0.3s						
T0110				AML	AML		
	comp=N,3745µm,0.4s						
ASSB	**Assisi San Ben**	**0.60**	**315**	P	Pg	06 26 33.3	-0.4
ASSB				AML	AML		
	comp=E,8680µm,0.3s						
ASSB				AML	AML		
	comp=N,7565µm,0.2s						
INTR	**Introdacqua**	**0.78**	**140**	⇓P	Pg	06 26 36.9	-0.2
INTR				AML	AML		
	comp=E,968nm,0.5s						
INTR				AML	AML		
	comp=N,2µm,0.5s						
INTR				AML	AML		
	comp=E,992µm,0.7s						
INTR				AML	AML		
	comp=N,2725µm,0.5s						
MGAB	**Montegabbione**	**0.88**	**290**	AML	AML		
	comp=E,3225µm,1.6s						
MGAB				AML	AML		
	comp=N,3960µm,1.1s						
MGAB				AML	AML		
	comp=E,3770µm,1.6s						
MGAB				AML	AML		
	comp=N,3905µm,1.1s						

*ROM **24** 06:27:00.4±0.1, 42°.805N±0°.003×13°.167E±0°.005, h7km, ML3.2/64, Error ellipse: s-maj=0.4km s-min=0.2km az=67.0*
*PRU **24** 06:27:03.6±0.0, 42°.87N×13°.65E, h0km*
*BEO **24** 06:27:04.2±0.9, 42°.90N×13°.35E, h10km, ML3.3/4*

ISC 24 06:27:01.1±0.8, 42.80N±0°.01×13.16E±0°.01, h9km±5km, n176, σ1§04/224, 17C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**316**	⇑iP	Pg	**06 27 02.9**	**-0.2**
NRCA				S	Sg	**06 27 04.0**	**-0.5**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.18**	**334**	⇑iP	Pg	**06 27 04.9**	**-0.1**
FEMA				S	Sg	**06 27 07.7**	**0.0**
FEMA				AML	AML		
	comp=E,30150µm,0.4s						
FEMA				AML	AML		
	comp=N,25450µm,0.5s						
FEMA				AML	AML		
	comp=E,30100µm,0.4s						
FEMA				AML	AML		
	comp=N,25500µm,0.5s						
FDMO	**Fiordimonte**	**0.24**	**348**	P	Pg	**06 27 05.8**	**-0.3**
FDMO				S	Sg	**06 27 09.3**	**-0.1**
FDMO				AML	AML		
	comp=E,8405µm,1.0s						
FDMO				AML	AML		
	comp=N,7920µm,0.2s						
CESI	**CESI - Serrava**	**0.27**	**318**	⇑iP	Pg	**06 27 06.6**	**-0.1**
CESI				S	Sg	**06 27 10.8**	**+0.4**
CESI				AML	AML		
	comp=E,18350µm,0.7s						
CESI				AML	AML		
	comp=N,28850µm,0.9s						
CSP1	**Cessapalombo**	**0.29**	**7**	⇓eP	Pg	**06 27 06.7**	**-0.3**
CSP1				S	Sg	**06 27 11.3**	**+0.3**
CSP1				AML	AML		
	comp=E,9800µm,0.4s						
CSP1				AML	AML		
	comp=E,9805µm,0.4s						
CSP1				AML	AML		
	comp=N,12700µm,0.4s						
CSP1				AML	AML		
	comp=E,9810µm,0.4s						
CSP1				AML	AML		
	comp=N,12750µm,0.4s						
GUMA	**Gualdo di Mace**	**0.29**	**27**	P	Pg	**06 27 07.0**	**0.0**
GUMA				S	Sg	**06 27 11.7**	**+0.7**
GUMA				AML	AML		
	comp=E,23450µm,0.4s						
GUMA				AML	AML		
	comp=N,25200µm,1.6s						
GUMA				AML	AML		
	comp=N,30050µm,0.5s						
GUMA				AML	AML		
	comp=E,28900µm,0.3s						
RM33	**Pellescritta (**	**0.30**	**172**	⇓eP	Pg	**06 27 07.3**	**+0.2**
RM33				S	Sg	**06 27 12.2**	**+1.1**
RM33				AML	AML		
	comp=E,7860µm,0.1s						
RM33				AML	AML		
	comp=N,8095µm,0.3s						
RM33				AML	AML		
	comp=N,8100µm,0.3s						
RM33				AML	AML		
	comp=N,8310µm,0.3s						
RM33				AML	AML		
	comp=E,7860µm,0.1s						
RM33				AML	AML		
	comp=N,8100µm,0.3s						
RM33				AML	AML		
	comp=E,7860µm,0.1s						
CAMP	**Campotosto**	**0.33**	**145**	P	Pg	**06 27 07.4**	**-0.2**
CAMP				S	Sg	**06 27 12.8**	**+0.8**
ARRO	**Arrone**	**0.36**	**232**	P	Pg	**06 27 08.5**	**+0.1**
ARRO				S	Sg	**06 27 14.4**	**+1.3**
TERO	**Teramo**	**0.38**	**118**	⇑iP	Pg	**06 27 08.2**	**-0.4**
TERO				S	Sg	**06 27 14.0**	**+0.5**
TERO				AML	AML		
	comp=E,8855µm,0.3s						
TERO				AML	AML		
	comp=N,8600µm,0.3s						
TERO				AML	AML		
	comp=E,8850µm,0.3s						
TERO				AML	AML		
	comp=E,9970µm,0.3s						
TERO				AML	AML		
	comp=N,7915µm,0.3s						
SEF1	**Sefro**	**0.38**	**336**	P	Pg	**06 27 08.2**	**-0.3**
SEF1				S	Sg	**06 27 14.2**	**+0.6**
SEF1				AML	AML		
	comp=E,10515µm,0.7s						
SEF1				AML	AML		
	comp=N,8975µm,0.2s						
SEF1				AML	AML		
	comp=N,8960µm,0.2s						
SEF1				AML	AML		
	comp=E,10505µm,0.7s						
SEF1				AML	AML		
	comp=N,8955µm,0.2s						
MDAR	**Monte D'Aria**	**0.39**	**359**	P	Pg	**06 27 08.5**	**-0.4**
MDAR				S	Sg	**06 27 14.7**	**+0.7**
PIO1	**Pioraco**	**0.40**	**342**	P	Pg	**06 27 08.6**	**-0.4**
MNTP	**Montappone**	**0.41**	**34**	P	Pg	**06 27 09.5**	**+0.4**
OFFI	**Offida**	**0.41**	**71**	⇑iP	Pg	**06 27 09.6**	**+0.3**
OFFI				S	Sb	**06 27 17.5**	**+0.6**
OFFI				AML	AML		
	comp=N,13250µm,0.6s						
OFFI				AML	AML		
	comp=E,9075µm,0.5s						
FIU1	**Fiuminata**	**0.42**	**337**	P	Pg	**06 27 09.1**	**-0.3**
FIU1				S	Sg	**06 27 15.8**	**+0.9**
FIU1				AML	AML		
	comp=E,5180µm,0.1s						
FIU1				AML	AML		
	comp=E,5175µm,0.2s						
FIU1				AML	AML		
	comp=N,3685µm,0.6s						
SSM1	**San Severino M**	**0.43**	**2**	P	Pg	**06 27 09.1**	**-0.4**
ASSB	**Assisi San Ben**	**0.44**	**304**	⇑iP	Pg	**06 27 09.3**	**-0.4**
ASSB				S	Sg	**06 27 15.9**	**+0.4**
ASSB				AML	AML		
	comp=E,8680µm,0.3s						
ASSB				AML	AML		
	comp=N,7565µm,0.2s						
GAG1	**Gagliole**	**0.44**	**352**	P	Pg	**06 27 09.5**	**-0.3**
GAG1				AML	AML		
	comp=E,8395µm,0.6s						
GAG1				AML	AML		
	comp=N,9780µm,0.5s						
CESX	**Cesi**	**0.47**	**246**	⇑eP	Pg	**06 27 10.0**	**-0.2**
CESX				S	Sg	**06 27 16.9**	**+0.5**
CESX				AML	AML		
	comp=E,7530µm,0.4s						
CESX				AML	AML		
	comp=N,6055µm,0.6s						
GIGS	**Gran Sasso**	**0.47**	**139**	⇑iP	Pg	**06 27 09.6**	**-0.7**
GIGS				S	Sg	**06 27 16.7**	**+0.3**
GIGS				AML	AML		
	comp=E,1375µm,0.7s						
GIGS				AML	AML		
	comp=N,1345µm,0.5s						
GIGS				AML	AML		
	comp=E,1370µm,0.7s						
SNTG	**Esanatoglia**	**0.48**	**341**	P	Pg	**06 27 09.9**	**-0.6**
SNTG				S	Sg	**06 27 17.3**	**+0.5**
SNTG				AML	AML		
	comp=N,244µm,1.1s						
SNTG				AML	AML		
	comp=E,294µm,0.5s						
SNTG				AML	AML		
	comp=N,1865µm,1.0s						
SNTG				AML	AML		
	comp=E,2075µm,0.4s						
AQU	**L'Aquila**	**0.48**	**158**	⇑iP	Pg	**06 27 10.3**	**-0.3**
AQU				S	Sg	**06 27 17.7**	**+0.8**
AQU				AML	AML		
	comp=N,3785µm,0.2s						
AQU				AML	AML		
	comp=N,3780µm,0.2s						
AQU				AML	AML		
	comp=N,3625µm,0.2s						
AQU				AML	AML		
	comp=E,3255µm,1.0s						
AQU				AML	AML		
	comp=E,3335µm,0.5s						
TRE1	**Treia**	**0.52**	**13**	P	Pg	**06 27 11.4**	**+0.1**
EL6	**Elcito**	**0.53**	**356**	P	Pg	**06 27 10.9**	**-0.6**
EL6				S	Sg	**06 27 19.4**	**+1.0**
EL6				AML	AML		
	comp=E,3000µm,1.4s						
EL6				AML	AML		
	comp=N,3500µm,0.4s						
FIAM	**Fiamignano**	**0.54**	**183**	P	Pg	**06 27 11.3**	**-0.2**
FIAM				S	Sg	**06 27 19.4**	**+0.8**
FIAM				AML	AML		
	comp=N,2000µm,1.3s						
FIAM				AML	AML		
	comp=E,1920µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.54**	**316**	P	Pg	**06 27 11.2**	**-0.4**
ATCC				S	Sg	**06 27 19.5**	**+0.8**
ATCC				AML	AML		
	comp=N,4595µm,1.4s						
ATCC				AML	AML		
	comp=E,4695µm,0.9s						
TRTR	**Tortoreto Alta**	**0.56**	**89**	⇑iP	Pb	**06 27 12.7**	**-0.4**
TRTR				AML	AML		
	comp=N,8480µm,0.4s						
TRTR				AML	AML		

	comp=E,9260µm,0.5s							
FOSV	**Fossato di Vic**	**0.57**	**330**	P	**Pg**	**06 27 11.6**	**-0.6**
FOSV				S	**Sg**	**06 27 20.5**	**+0.7**
FOSV				AML	AML		
	comp=E,2760µm,0.2s						
FOSV				AML	AML		
	comp=N,2470µm,0.3s						
CING	**Cingoli**	**0.57**	**3**	P	**Pg**	**06 27 11.7**	**-0.6**
CING				S	**Sg**	**06 27 20.4**	**+0.5**
CADA	**Capodarco di F**	**0.59**	**48**	P	**Pb**	**06 27 13.5**	**-0.2**
FAGN	**Fagnano**	**0.62**	**149**	P	**Pg**	**06 27 12.9**	**-0.3**
FAGN				AML	AML		
	comp=N,5450µm,0.4s						
FAGN				AML	AML		
	comp=E,4495µm,1.0s						
CIMA	**Civitanova Mar**	**0.63**	**37**	P	**Pb**	**06 27 14.1**	**-0.2**
MMUR	**Monte Murano**	**0.65**	**350**	P	**Pg**	**06 27 13.2**	**-0.6**
MMUR				S	**Sb**	**06 27 23.4**	**-0.5**
VCEL	**Villa Celiera**	**0.65**	**129**	⇑*i*P	**Pg**	**06 27 13.3**	**-0.4**
VCEL				S	**Sb**	**06 27 23.9**	**0.0**
VCEL				AML	AML		
	comp=E,4240µm,0.3s						
VCEL				AML	AML		
	comp=N,4295µm,0.3s						
VCEL				AML	AML		
	comp=E,4235µm,0.3s						
MURB	**Monte Urbino**	**0.65**	**315**	P	**Pg**	**06 27 13.2**	**-0.6**
MURB				S	**Sb**	**06 27 23.9**	**-0.1**
MURB				AML	AML		
	comp=E,6390µm,1.2s						
MURB				AML	AML		
	comp=N,5970µm,0.3s						
MURB				AML	AML		
	comp=E,6910µm,0.3s						
MURB				AML	AML		
	comp=N,6370µm,0.3s						
PP3	**Marolino**	**0.67**	**30**	P	**Pg**	**06 27 14.3**	**+0.4**
PP3				AML	AML		
	comp=N,8060µm,0.3s						
PP3				AML	AML		
	comp=E,10275µm,0.3s						
PP3				AML	AML		
	comp=E,9720µm,0.4s						
PP3				AML	AML		
	comp=N,7875µm,0.3s						
SSFR	**Montelago di S**	**0.69**	**337**	P	**Pg**	**06 27 14.3**	**-0.2**
SSFR				S	**Sb**	**06 27 24.8**	**-0.2**
ATFO	**Monte Foce - G**	**0.71**	**323**	P	**Pg**	**06 27 14.1**	**-0.7**
ATFO				S	**Sg**	**06 27 24.8**	**+0.7**
ATFO				AML	AML		
	comp=E,1765µm,0.5s						
ATFO				AML	AML		
	comp=N,2120µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.71**	**304**	P	**Pg**	**06 27 14.4**	**-0.5**
ATTE				S	**Sb**	**06 27 25.7**	**+0.1**
ATTE				AML	AML		
	comp=E,3060µm,0.4s						
ATTE				AML	AML		
	comp=N,1291µm,0.4s						
ATSC	**Scheggia e Pas**	**0.71**	**331**	P	**Pg**	**06 27 14.2**	**-0.7**
ARVD	**Arcevia**	**0.71**	**347**	P	**Pg**	**06 27 14.3**	**-0.6**
ARVD				S	**Sb**	**06 27 25.2**	**-0.4**
ARVD				AML	AML		
	comp=E,867µm,1.1s						
ARVD				AML	AML		
	comp=N,721µm,0.3s						
T0110	**Collepietro**	**0.74**	**141**	⇑*i*P	**Pg**	**06 27 14.4**	**-0.9**
T0110				AML	AML		
	comp=E,3495µm,0.3s						
T0110				AML	AML		
	comp=N,3745µm,0.4s						
SRES	**S.Oreste - Sor**	**0.74**	**220**	P	**Pg**	**06 27 15.2**	**-0.1**
SRES				S	**Sb**	**06 27 27.1**	**+0.7**
SRES				AML	AML		
	comp=E,1000µm,0.8s						
SRES				AML	AML		
	comp=N,1082µm,0.4s						
ATLO	**AVT- Montelove**	**0.75**	**313**	P	**Pg**	**06 27 14.8**	**-0.8**
ATLO				S	**Sb**	**06 27 26.4**	**-0.3**
MGAB	**Montegabbione**	**0.78**	**279**	P	**Pg**	**06 27 15.9**	**-0.2**
MGAB				AML	AML		
	comp=E,3770µm,1.6s						
MGAB				AML	AML		
	comp=E,3225µm,1.6s						
MGAB				AML	AML		
	comp=N,3960µm,1.1s						
MGAB				AML	AML		
	comp=N,3905µm,1.1s						
MGAB				AML	AML		
	comp=N,3965µm,1.1s						
MGAB				AML	AML		
	comp=E,3220µm,1.6s						
FRON	**Frontone**	**0.78**	**336**	P	**Pg**	**06 27 15.1**	**-1.1**
FRON				S	**Sb**	**06 27 27.3**	**-0.3**
FRON				AML	AML		
	comp=N,1440µm,0.4s						
FRON				AML	AML		
	comp=E,1008µm,0.5s						
TB01	**Gubbio**	**0.78**	**318**	P	**Pg**	**06 27 15.4**	**-0.8**
TB01				S	**Sb**	**06 27 27.6**	**-0.1**
TB02	**Pietralunga**	**0.79**	**316**	P	**Pg**	**06 27 15.5**	**-0.8**
TB02				S	**Sb**	**06 27 27.7**	**-0.1**
ATVA	**AVT- Monte Val**	**0.80**	**307**	P	**Pg**	**06 27 15.7**	**-0.8**
ATVO	**AVT- Monte Val**	**0.80**	**317**	P	**Pg**	**06 27 15.7**	**-0.9**
ATVO				AML	AML		
	comp=E,1260µm,1.0s						
ATVO				AML	AML		
	comp=N,1325µm,0.6s						
PTQR	**Pietraquaria**	**0.80**	**167**	P	**Pg**	**06 27 15.7**	**-0.9**
PTQR				AML	AML		
	comp=N,599µm,0.8s						
PTQR				AML	AML		
	comp=E,850µm,0.3s						
PTQR				AML	AML		
	comp=N,598µm,0.8s						
ATBU	**Serra di Buran**	**0.81**	**327**	P	**Pg**	**06 27 16.0**	**-0.7**
TB03	**Pietralunga**	**0.81**	**318**	P	**Pg**	**06 27 15.8**	**-0.9**
AOI	**Ancona**	**0.82**	**23**	P	**Pg**	**06 27 16.7**	**-0.1**
AOI				S	**Sb**	**06 27 29.4**	**+0.8**
AOI				AML	AML		
	comp=E,1235µm,0.4s						
AOI				AML	AML		
	comp=N,950µm,0.4s						
COR1	**Corinaldo**	**0.84**	**352**	⇓P	**Pb**	**06 27 17.9**	**+0.1**
MTCE	**Montecelio**	**0.84**	**202**	P	**Pg**	**06 27 16.4**	**-0.9**
MTCE				AML	AML		
	comp=E,1165µm,0.6s						
MTCE				AML	AML		
	comp=N,772µm,1.1s						
ATMI	**Monte Miggiano**	**0.84**	**310**	P	**Pg**	**06 27 17.3**	**0.0**
ATPC	**Poggio Castell**	**0.85**	**323**	P	**Pg**	**06 27 16.8**	**-0.7**
ATPI	**Pietralunga -**	**0.85**	**320**	P	**Pg**	**06 27 16.6**	**-0.9**
ATPI				S	**Sb**	**06 27 29.5**	**-0.1**
ATPI				AML	AML		
	comp=E,1010µm,0.6s						
ATPI				AML	AML		
	comp=N,879µm,0.6s						
CERT	**Cerreto**	**0.86**	**189**	P	**Pg**	**06 27 16.9**	**-0.9**
CERT				AML	AML		
	comp=E,1715µm,0.5s						
CERT				AML	AML		
	comp=N,1895µm,0.4s						
PIEI	**Pieia**	**0.86**	**328**	P	**Pg**	**06 27 16.9**	**-0.8**
PIEI				S	**Sb**	**06 27 30.1**	**+0.1**
PIEI				AML	AML		
	comp=N,662µm,1.3s						
PIEI				AML	AML		
	comp=E,1025µm,0.3s						
MPAG	**Monte Paganucc**	**0.88**	**341**	P	**Pg**	**06 27 17.3**	**-0.7**
NARO	**Abbazia di Nar**	**0.91**	**333**	P	**Pg**	**06 27 17.4**	**-1.2**
NARO				S	**Sb**	**06 27 31.6**	**+0.3**
SACS	**San Casciano d**	**0.92**	**273**	P	**Pg**	**06 27 18.5**	**-0.3**
SACS				AML	AML		
	comp=E,1360µm,1.2s						
SACS				AML	AML		
	comp=E,1280µm,1.2s						
SACS				AML	AML		
	comp=N,1063µm,0.7s						
SACS				AML	AML		
	comp=N,1160µm,0.7s						
APEC	**Apecchio**	**0.93**	**325**	P	**Pg**	**06 27 18.8**	**-0.2**
APEC				AML	AML		
	comp=N,1360µm,1.5s						
APEC				AML	AML		
	comp=E,1210µm,0.8s						

FSSB	**Fossombrone**	**0.93**	**343**	P	**Pg**	**06 27 18.2**	**-0.9**
FSSB				AML	AML		
	comp=N,2595µm,0.4s						
FSSB				AML	AML		
	comp=E,3145µm,0.5s						
ATMC	**Monte Cedrone**	**0.95**	**313**	P	**Pg**	**06 27 19.1**	**-0.4**
INTR	**Introdacqua**	**0.97**	**145**	P	**Pg**	**06 27 18.1**	**-1.7**
INTR				AML	AML		
	comp=E,972nm,0.5s						
INTR				AML	AML		
	comp=N,2µm,0.5s						
INTR				AML	AML		
	comp=E,992µm,0.7s						
INTR				AML	AML		
	comp=N,2µm,0.5s						
INTR				AML	AML		
	comp=E,992µm,0.7s						
INTR				AML	AML		
	comp=N,2725µm,0.5s						
INTR				AML	AML		
	comp=E,974nm,0.5s						
RCAV	**Rocca di Cave**	**0.97**	**189**	P	**Pg**	**06 27 19.7**	**-0.1**
BADI	**Badiali**	**0.97**	**317**	P	**Pg**	**06 27 19.1**	**-0.7**
VVLD	**Villa Vallelon**	**0.99**	**159**	P	**Pg**	**06 27 19.3**	**-0.9**
GUAR	**Guarcino**	**1.01**	**173**	P	**Pb**	**06 27 21.4**	**+0.6**
GUAR				AML	AML		
	comp=N,1310µm,0.4s						
GUAR				AML	AML		
	comp=E,1184µm,0.8s						
CAFI	**Castiglion Fio**	**1.02**	**302**	⇑P	**Pg**	**06 27 19.9**	**-0.8**
CAFI				AML	AML		
	comp=E,860µm,0.4s						
CAFI				AML	AML		
	comp=N,857µm,0.6s						
LPEL	**Lama dei Pelig**	**1.07**	**134**	P	**Pg**	**06 27 19.9**	**-1.8**
LPEL				AML	AML		
	comp=E,1052µm,1.4s						
LPEL				AML	AML		
	comp=N,1100µm,0.3s						
SSP9	**Sansepolcro**	**1.07**	**316**	P	**Pg**	**06 27 21.7**	**-0.1**
PARC	**Parchiule**	**1.08**	**322**	P	**Pg**	**06 27 21.0**	**-0.9**
PARC				AML	AML		
	comp=E,774µm,0.5s						
PARC				AML	AML		
	comp=E,655µm,1.6s						
SF03	**Valle Cupa**	**1.08**	**271**	P	**Pg**	**06 27 21.4**	**-0.5**
SF11	**Podere del Sol**	**1.09**	**274**	P	**Pn**	**06 27 22.6**	**0.0**
MCIV	**Monte Civitell**	**1.09**	**269**	P	**Pg**	**06 27 21.7**	**-0.3**
MCIV				AML	AML		
	comp=E,630µm,0.3s						
MCIV				AML	AML		
	comp=N,724µm,0.7s						
RDP	**Rocca di Papa**	**1.09**	**197**	P	**Pn**	**06 27 22.7**	**+0.1**
MA9	**Marino**	**1.09**	**200**	P	**Pn**	**06 27 22.8**	**+0.1**
SF04	**Casetta**	**1.10**	**272**	P	**Pg**	**06 27 22.2**	**-0.1**
TOLF	**Tolfa**	**1.13**	**230**	P	**Pb**	**06 27 22.4**	**-0.4**
TOLF				AML	AML		
	comp=E,562µm,0.4s						
TOLF				AML	AML		
	comp=N,686µm,1.1s						
SF13	**Bagnolo**	**1.13**	**271**	P	**Pg**	**06 27 22.6**	**-0.3**
POFI	**Posta Fibreno**	**1.16**	**159**	P	**Pb**	**06 27 21.8**	**-1.5**
POFI				AML	AML		
	comp=E,578µm,1.5s						
POFI				AML	AML		
	comp=N,405µm,0.5s						
PESA	**Pesaro**	**1.16**	**349**	P	**Pb**	**06 27 22.8**	**-0.6**
PESA				AML	AML		
	comp=E,1130µm,1.2s						
PESA				AML	AML		
	comp=N,1450µm,0.7s						
SF01	**Poggio Pratacc**	**1.17**	**271**	P	**Pn**	**06 27 23.9**	**+0.1**
LRP	**Arpino**	**1.20**	**164**	P	**Pg**	**06 27 25.8**	**+1.6**
LRP				AML	AML		
	comp=E,370µm,1.0s						
LRP				AML	AML		
	comp=N,501µm,0.4s						
CRE	**Caprese Michel**	**1.20**	**313**	P	**Pb**	**06 27 24.1**	**0.0**
ARCI	**Arcidosso**	**1.24**	**273**	P	**Pn**	**06 27 22.7**	**-1.9**
ARCI				AML	AML		
	comp=N,154µm,1.2s						
ARCI				AML	AML		
	comp=E,158µm,0.7s						
GIUL	**Giuliano Di Ro**	**1.25**	**177**	P	**Pb**	**06 27 25.1**	**+0.2**
GIUL				AML	AML		
	comp=E,354µm,0.6s						
GIUL				AML	AML		
	comp=N,514µm,0.8s						
RNI2	**Rionero Sannit**	**1.32**	**146**	P	**Pb**	**06 27 26.5**	**+0.3**
CERA	**Filignano**	**1.36**	**152**	P	**Pn**	**06 27 25.4**	**-1.0**
ASQU	**Asqua**	**1.41**	**315**	P	**Pg**	**06 27 29.8**	**+1.7**
SFI	**Santa Sofia**	**1.46**	**320**	P	**Pn**	**06 27 27.9**	**+0.2**
TRIV	**Trivento**	**1.46**	**135**	P	**Pg**	**06 27 29.3**	**+0.1**
TRIV				AML	AML		
	comp=E,451µm,0.7s						
TRIV				AML	AML		
	comp=N,451µm,0.7s						
CSNT	**Castellina Chi**	**1.52**	**297**	⇓P	**Pb**	**06 27 29.8**	**+0.3**
CSNT				S	**Sg**	**06 27 51.0**	**+1.0**
CSNT				AML	AML		
	comp=E,183µm,0.8s						
CSNT				AML	AML		
	comp=N,191µm,0.9s						
CSNT				AML	AML		
	comp=E,182µm,0.8s						
OSSC	**Osservatorio P**	**1.57**	**298**	P	**Pn**	**06 27 29.8**	**+0.5**
RUFI	**Rufina**	**1.59**	**311**	P	**Pn**	**06 27 29.2**	**-0.2**
VAGA	**Valle Agricola**	**1.60**	**150**	P	**Pn**	**06 27 29.5**	**-0.2**
VAGA				AML	AML		
	comp=E,219µm,0.7s						
VAGA				AML	AML		
	comp=N,318µm,0.4s						
VAGA				AML	AML		
	comp=N,333µm,1.5s						
VAGA				AML	AML		
	comp=E,224µm,0.3s						
BSSO	**Busso**	**1.65**	**139**	P	**Pg**	**06 27 32.5**	**-0.3**
BSSO				AML	AML		
	comp=E,89µm,1.3s						
BSSO				AML	AML		
	comp=N,120µm,1.4s						
LMD	**Lutirano**	**1.66**	**321**	P	**Pb**	**06 27 31.5**	**-0.3**
TRIF	**Trifonti**	**1.68**	**281**	P	**Pn**	**06 27 30.9**	**+0.1**
CASP	**Castiglione de**	**1.69**	**270**	P	**Pn**	**06 27 30.2**	**-0.6**
MODR	**Mondragone**	**1.74**	**162**	P	**Pn**	**06 27 31.9**	**+0.4**
BRIS	**BRISIGHELLA**	**1.80**	**319**	P	**Pb**	**06 27 33.8**	**-0.5**
SEI	**Scarperia**	**1.81**	**314**	P	**Pg**	**06 27 35.3**	**-0.6**
DUGI	**Dugi Otok**	**1.83**	**49**	*e*Pn	**Pn**	**06 27 32.4**	**-0.3**
MPPT	**Montemurlo**	**1.90**	**308**	P	**Pn**	**06 27 34.4**	**+0.7**
MTCR	**Monte La Croce**	**1.99**	**309**	P	**Pn**	**06 27 35.2**	**+0.1**
MTRZ	**Monterenzio**	**2.00**	**323**	P	**Pg**	**06 27 40.5**	**+1.1**
FNVD	**Fontana Vidola**	**2.01**	**313**	P	**Pn**	**06 27 36.6**	**+1.3**
VIRC	**Vir**	**2.03**	**42**	*e*Pn	**Pn**	**06 27 34.9**	**-0.5**
APRC	**Apricena**	**2.06**	**120**	P	**Pn**	**06 27 36.6**	**+0.7**
MORI	**Morici**	**2.14**	**59**	*e*Pn	**Pn**	**06 27 37.3**	**+0.2**
BRJN	**Brijuni**	**2.15**	**11**	*e*Pn	**Pn**	**06 27 37.1**	**+0.1**
NVLJ	**Novalja**	**2.16**	**35**	*e*Pn	**Pn**	**06 27 36.2**	**-1.0**
SGRT	**San Giovanni R**	**2.19**	**118**	P	**Pn**	**06 27 38.0**	**+0.3**
SGRT				AML	AML		
	comp=N,266µm,1.1s						
SGRT				AML	AML		
	comp=E,314µm,0.8s						
ZCCA	**Zocca**	**2.21**	**315**	S	**Sg**	**06 28 15.0**	**+2.7**
RABC	**Rab**	**2.28**	**31**	*e*Pn	**Pn**	**06 27 38.4**	**-0.5**
SMRN	**Sveta Marina**	**2.35**	**18**	*e*Pn	**Pn**	**06 27 39.3**	**+0.5**
GSCL	**Gusciola**	**2.42**	**311**	⇓P	**Pg**	**06 27 47.5**	**-0.1**
UDBI	**Udbina**	**2.56**	**47**	*e*Pn	**Pn**	**06 27 43.6**	**+0.8**
EQUI	**Equi**	**2.58**	**303**	P	**Pn**	**06 27 43.4**	**+0.4**
EQUI				AML	AML		
	comp=N,62µm,1.1s						
EQUI				AML	AML		
	comp=E,50µm,0.6s						
A250A	**Rusevo Krmpots**	**2.61**	**28**	*e*Pn	**Pn**	**06 27 43.2**	**-0.3**
RIY	**Rijeka**	**2.70**	**20**	*e*Pn	**Pn**	**06 27 44.9**	**+0.3**
RIY				*e*Sn	**Sn**	**06 28 17.7**	**+0.3**
PLIT	**Plitvice**	**2.74**	**40**	*e*Pn	**Pn**	**06 27 45.6**	**+0.4**
LSTV	**Lastovo**	**2.75**	**89**	*e*Pn	**Pn**	**06 27 45.4**	**0.0**
SKDS	**Skadanscina**	**2.81**	**12**	*i* Pn	**Pn**	**06 27 46.1**	**-0.2**
RICI	**Ricice**	**2.99**	**75**	*e*Pn	**Pn**	**06 27 49.2**	**+0.5**
SABO	**M.te Sabotino**	**3.19**	**6**	P	**Pn**	**06 27 51.6**	**+0.1**
SABO				AML	AML		
	comp=N,1404µm,1.1s						
SABO				AML	AML		
	comp=N,194µm,0.6s						

SABO				AML	AML		
	comp=E,1208µm,1.5s						
SABO				AML	AML		
	comp=E,116µm,1.5s						
STON	**Ston**	**3.34**	**87**	*e*Pn	**Pn**	**06 27 52.6**	**-0.9**
STON	**Ston**	**3.34**	**87**	*e*Pn	**Pn**	**06 27 52.8**	**-0.7**
STON				*e*Sn	**Sn**	**06 28 31.5**	**-1.8**
DOSS	**Dosso del Somm**	**3.39**	**336**	⇑P	**Pn**	**06 27 56.2**	**+1.9**
LEOD	**Capriano del C**	**3.44**	**322**	P	**Pn**	**06 27 53.9**	**-0.9**
STAL	**STALIGIAL**	**3.47**	**355**	P	**Pn**	**06 27 55.2**	**-0.1**
STAL				AML	AML		
	comp=E,100µm,0.3s						
STAL				AML	AML		
	comp=N,72µm,0.4s						
RNCA	**Ronca, Sant'Ol**	**3.48**	**300**	⇑P	**Pb**	**06 28 01.3**	**-1.5**
MAGA	**Magasa**	**3.48**	**329**	P	**Pn**	**06 27 56.3**	**+0.7**
MAGA				AML	AML		
	comp=E,285µm,0.6s						
MAGA				AML	AML		
	comp=N,120µm,0.5s						
CNCS	**Concesio**	**3.51**	**324**	P	**Pn**	**06 27 54.7**	**-1.1**
LTRZ	**Laterza**	**3.51**	**127**	P	**Pn**	**06 27 56.2**	**+0.3**
LUSI	**Trento, Gardas**	**3.53**	**334**	P	**Pn**	**06 27 57.5**	**+1.3**
NOCI	**Noci**	**3.55**	**123**	P	**Pn**	**06 27 57.1**	**+0.7**
ZONE	**Zone**	**3.68**	**325**	⇑P	**Pb**	**06 28 03.0**	**-3.3**
ACOM	**Acomizza, Ital**	**3.75**	**4**	P	**Pn**	**06 28 00.0**	**+0.7**
ACOM				AML	AML		
	comp=N,62µm,0.8s						
ACOM				AML	AML		
	comp=E,90µm,0.9s						
ZOU	**Zoufplan**	**3.76**	**358**	P	**Pn**	**06 27 59.7**	**+0.3**
ZOU				AML	AML		
	comp=E,53µm,0.8s						
ZOU				AML	AML		
	comp=N,58µm,1.0s						
EUCT	**Pavia**	**3.76**	**311**	S	**Sb**	**06 28 51.0**	**-2.4**
OBKA	**Obir**	**3.84**	**15**	*e*Pn	**Pn**	**06 28 01.7**	**+1.3**
	comp=N,1.2nm,0.2s						
MYKA	**Terra Mystica**	**3.84**	**5**	*e*Pn	**Pn**	**06 28 00.9**	**+0.4**
	comp=N,4.4nm,0.4s						
CANO	**Canova, Maglio**	**3.84**	**293**	S	**Sn**	**06 28 47.0**	**+1.3**
BOSI	**Bolzano**	**3.92**	**341**	⇑P	**Pn**	**06 28 02.3**	**+0.9**
BOSI				S	**Sn**	**06 28 48.0**	**+0.5**
BOSI				AML	AML		
	comp=N,706µm,0.9s						
BOSI				AML	AML		
	comp=E,770µm,0.8s						
ABTA	**Abfaltersbach**	**3.97**	**354**	*e*Pn	**Pn**	**06 28 03.4**	**+1.2**
	comp=E,21nm,0.6s						
KBA	**Koelnbreinsper**	**4.28**	**2**	*e*Pn	**Pn**	**06 28 07.8**	**+1.2**
	comp=E,6.3nm,0.4s						
MUGIO	**Muggio**	**4.29**	**318**	S	**Sn**	**06 28 58.0**	**+1.2**
PDG	**Podgorica**	**4.52**	**93**	*e*Pn	**Pn**	**06 28 10.8**	**+1.2**
FETA	**Feichten**	**4.56**	**339**	*e*Pn	**Pn**	**06 28 10.3**	**0.0**
	comp=E,2.8nm,0.4s						
WTTA	**Wattenberg**	**4.59**	**347**	*e*Pn	**Pn**	**06 28 14.1**	**+3.3**
	comp=E,0.8nm,0.2s						
SQTA	**Sankt Quirin**	**4.63**	**343**	*e*Pn	**Pn**	**06 28 12.1**	**+0.8**
	comp=E,4.3nm,0.2s						
WATA	**Walderalm**	**4.67**	**347**	*e*Pn	**Pn**	**06 28 15.0**	**+3.1**
	comp=E,1.4nm,0.1s						
BBLS	**Lazići**	**4.68**	**75**	*e*Pn	**Pn**	**06 28 13.4**	**+1.4**
BBLS				*e*Sn	**Sn**	**06 29 02.0**	**-4.4**
ARSA	**Arzberg**	**4.75**	**20**	*e*Pn	**Pn**	**06 28 16.0**	**+3.0**
	comp=E,2.7nm,0.5s						
MOTA	**Moosalm**	**4.77**	**343**	*e*Pn	**Pn**	**06 28 16.4**	**+3.1**
	comp=E,0.5nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.90**	**4**	*e*Pn	**Pn**	**06 28 18.0**	**+3.0**
	comp=E,3.2nm,0.3s						
RETA	**Reutte**	**4.98**	**341**	*e*Pn	**Pn**	**06 28 17.5**	**+1.4**
	comp=E,2.5nm,0.3s						
SJES	**Sjenica**	**5.02**	**82**	*e*Pn	**Pn**	**06 28 18.0**	**+1.3**
DAVA	**Damuels**	**5.05**	**334**	*e*Pn	**Pn**	**06 28 16.3**	**-0.8**
	comp=E,1.3nm,0.2s						
MOA	**Molln**	**5.11**	**8**	*e*Pn	**Pn**	**06 28 20.5**	**+2.7**
	comp=E,1.3nm,0.3s						
IVAS	**Ivanjica**	**5.17**	**79**	*e*Pn	**Pn**	**06 28 19.2**	**+0.5**
IVAS				*e*Sn	**Sn**	**06 29 16.3**	**-2.3**
VLO	**Vlora**	**5.29**	**114**	⇓P	**Pn**	**06 28 22.4**	**+2.1**
VLO				P	**Pb**	**06 28 36.1**	**+2.4**
RONA	**Rosalia, Austr**	**5.38**	**23**	*e*Pn	**Pn**	**06 28 21.9**	**+0.4**
	comp=E,0.6nm,0.2s						
CONA	**Conrad Observa**	**5.47**	**19**	*e*Pn	**Pn**	**06 28 25.5**	**+2.7**
	comp=E,1.2nm,0.2s						
SELS	**Selova**	**5.85**	**83**	*e*Pn	**Pn**	**06 28 28.5**	**+0.4**
KHC	**Kasperske Hory**	**6.34**	**3**	*e*PN	**Pn**	**06 28 36.4**	**+1.7**
KHC				*e*SN	**Sn**	**06 29 45.9**	**-1.2**
PRVS	**Prvonek**	**6.58**	**90**	*e*Pn	**Pn**	**06 28 38.2**	**+0.1**
BOSS	**Bosilegrad**	**6.88**	**89**	*e*Pn	**Pn**	**06 28 43.1**	**+0.9**
ZAPS	**Zavoj**	**6.96**	**83**	*e*Sn	**Sn**	**06 29 59.2**	**-3.3**

ROM 24 06:35:01.6±0.1, 42°.796N±0°.004×13°.167E±0°.007, h8km, ML2.6/39, 19C-12D, Error ellipse: s-maj=0.6km s-min=0.0km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
NRCA	**Norcia**	**0.05**	**314**	⇑*i*P		Pg	06 35 04.2	+0.8
NRCA					S	Sg	06 35 05.5	+0.8
NRCA					AML	AML		
	comp=E,98900µm,0.2s							
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
FEMA	**Monte Fema**	**0.19**	**333**	⇑*i*P		Pg	06 35 06.3	+0.8
FEMA					S	Sg	06 35 09.3	+1.1
FEMA					AML	AML		
	comp=N,10185µm,0.4s							
FEMA					AML	AML		
	comp=E,12650µm,1.4s							
FEMA					AML	AML		
	comp=N,10200µm,0.4s							
FDMO	**Fiordimonte**	**0.25**	**346**	⇑*i*P		Pg	06 35 07.3	+0.7
FDMO					S	Sg	06 35 10.9	+1.0
FDMO					AML	AML		
	comp=E,2115µm,1.5s							
FDMO					AML	AML		
	comp=N,3440µm,1.0s							
CESI	**CESI - Serrava**	**0.28**	**317**	*i*P		Pg	06 35 08.0	+0.7
CESI					S	Sg	06 35 12.5	+1.4
CESI					AML	AML		
	comp=N,12150µm,0.2s							
CESI					AML	AML		
	comp=E,8700µm,0.2s							
RM33	**Pellescritta (**	**0.29**	**173**	⇓*e*P		Pb	06 35 08.4	-0.7
RM33					S	Sb	06 35 13.1	-1.1
RM33					AML	AML		
	comp=E,2475µm,1.0s							
RM33					AML	AML		
	comp=N,1700µm,1.0s							
RM33					AML	AML		
	comp=E,2470µm,1.0s							
RM33					AML	AML		
	comp=E,2465µm,1.0s							
RM33					AML	AML		
	comp=N,1695µm,1.0s							
RM33					AML	AML		
	comp=N,1690µm,1.0s							
GUMA	**Gualdo di Mace**	**0.29**	**25**	⇓*e*P		Pb	06 35 08.4	-0.8
GUMA					S	Sb	06 35 13.1	-1.2
GUMA					AML	AML		
	comp=E,5275µm,0.7s							
GUMA					AML	AML		
	comp=N,2910µm,0.6s							
GUMA					AML	AML		
	comp=E,4090µm,1.6s							
GUMA					AML	AML		
	comp=N,3460µm,0.4s							
CSP1	**Cessapalombo**	**0.30**	**5**	⇓*i*P		Pg	06 35 08.1	+0.6
CSP1					S	Sg	06 35 12.8	+1.3
CSP1					AML	AML		
	comp=E,3290µm,0.2s							
CSP1					AML	AML		
	comp=N,4510µm,0.4s							
CSP1					A

	comp=E,919μm,0.6s								
CAMP				AML	AML				
	comp=N,636μm,0.6s								
TERO	**Teramo**	**0.36**	**118**	⇑*e*P	Pg	06 35 09.4	+0.7		
TERO				S	Sb	06 35 15.3	-1.1		
TERO				AML	AML				
	comp=N,934μm,0.9s								
TERO				AML	AML				
	comp=E,1165μm,0.5s								
ARRO	**Arrone**	**0.37**	**234**	*e*P	Pb	06 35 09.8	-0.6		
ARRO				AML	AML				
	comp=N,454μm,0.5s								
ARRO				AML	AML				
	comp=E,562μm,0.2s								
SEF1	**Sefro**	**0.39**	**335**	⇑*e*P	Pg	06 35 09.6	+0.5		
SEF1				S	Sg	06 35 15.5	+1.2		
SEF1				AML	AML				
	comp=E,4600μm,1.6s								
SEF1				AML	AML				
	comp=N,4765μm,0.7s								
SEF1				AML	AML				
	comp=N,4760μm,0.7s								
SEF1				AML	AML				
	comp=E,4600μm,1.6s								
OFFI	**Offida**	**0.41**	**70**	⇑*e*P	Pb	06 35 11.1	0.0		
OFFI				S	Sb	06 35 18.5	+1.1		
OFFI				AML	AML				
	comp=E,1335μm,0.7s								
OFFI				AML	AML				
	comp=N,2100μm,0.6s								
SSM1	**San Severino M**	**0.43**	**1**	*e*P	Pg	06 35 10.5	+0.5		
SSM1				S	Sb	06 35 17.5	-0.7		
ASSB	**Assisi San Ben**	**0.45**	**304**	⇑*e*P	Pg	06 35 10.7	+0.4		
ASSB				S	Sg	06 35 17.2	+1.0		
ASSB				AML	AML				
	comp=N,1135μm,0.4s								
ASSB				AML	AML				
	comp=E,1068μm,0.3s								
GAG1	**Gagliole**	**0.45**	**351**	⇑*e*P	Pg	06 35 10.9	+0.6		
GAG1				S	Sb	06 35 17.8	-0.9		
GIGS	**Gran Sasso**	**0.46**	**139**	⇑*i*P	Pg	06 35 10.8	+0.4		
GIGS				S	Sg	06 35 17.6	+1.2		
GIGS				AML	AML				
	comp=E,216μm,0.6s								
GIGS				AML	AML				
	comp=N,150μm,1.5s								
CESX	**Cesi**	**0.47**	**247**	*e*P	Pb	06 35 11.7	-0.5		
CESX				AML	AML				
	comp=N,420μm,1.2s								
CESX				AML	AML				
	comp=E,374μm,0.7s								
AQU	**L'Aquila**	**0.47**	**159**	*e*P	Pg	06 35 11.5	+0.7		
AQU				S	Sg	06 35 18.2	+1.2		
AQU				AML	AML				
	comp=N,694μm,0.3s								
AQU				AML	AML				
	comp=E,524μm,1.4s								
AQU				AML	AML				
	comp=N,694μm,0.3s								
AQU				AML	AML				
	comp=N,649μm,0.3s								
AQU				AML	AML				
	comp=E,578μm,1.3s								
SNTG	**Esanatoglia**	**0.49**	**340**	⇓*e*P	Pg	06 35 11.3	+0.3		
SNTG				S	Sb	06 35 18.8	-1.1		
SNTG				AML	AML				
	comp=E,1058μm,1.2s								
SNTG				AML	AML				
	comp=N,915μm,0.1s								
FIAM	**Fiamignano**	**0.53**	**184**	⇓*e*P	Pg	06 35 12.4	+0.6		
FIAM				S	Sb	06 35 20.5	-0.6		
FIAM				AML	AML				
	comp=E,431μm,0.2s								
FIAM				AML	AML				
	comp=N,456μm,1.3s								
FIAM	**Fiamignano**	**0.53**	**184**	⇑P	Pb	06 35 12.5	-0.7		
FIAM				S	Sb	06 35 21.0	-0.1		
FIAM				AML	AML				
	comp=E,431μm,0.2s								
FIAM				AML	AML				
	comp=N,456μm,1.3s								
FIAM				AML	AML				
	comp=E,431μm,0.2s								
FIAM				AML	AML				
	comp=N,456μm,1.3s								
FIAM				AML	AML				
	comp=E,431μm,0.2s								
FIAM				AML	AML				
	comp=N,456μm,1.3s								
ATCC	**AVT- Casa Cast**	**0.55**	**315**	⇑*e*P	Pg	06 35 12.6	+0.4		
ATCC				S	Sb	06 35 20.9	-0.8		
ATCC				AML	AML				
	comp=E,1500μm,1.4s								
ATCC				AML	AML				
	comp=N,1210μm,1.0s								
TRTR	**Tortoreto Alta**	**0.55**	**88**	*e*P	Pb	06 35 14.1	+0.6		
FOSV	**Fossato di Vic**	**0.58**	**329**	*e*P	Pg	06 35 13.1	+0.3		
FOSV				S	Sb	06 35 21.9	-0.7		
FOSV				AML	AML				
	comp=E,1280μm,0.2s								
FOSV				AML	AML				
	comp=N,1235μm,0.3s								
FOSV				AML	AML				
	comp=N,1237μm,0.3s								
FAGN	**Fagnano**	**0.61**	**150**	*e*P	Pb	06 35 14.1	-0.5		
FAGN				AML	AML				
	comp=E,768μm,0.4s								
FAGN				AML	AML				
	comp=N,788μm,0.3s								
FAGN	**Fagnano**	**0.61**	**150**	⇓P	Pb	06 35 14.7	+0.1		
FAGN				AML	AML				
	comp=E,768μm,0.4s								
FAGN				AML	AML				
	comp=N,788μm,0.3s								
FAGN				AML	AML				
	comp=E,768μm,0.4s								
FAGN				AML	AML				
	comp=N,788μm,0.3s								
FAGN				AML	AML				
	comp=E,768μm,0.4s								
FAGN				AML	AML				
	comp=N,788μm,0.3s								
VCEL	**Villa Celiera**	**0.64**	**129**	⇑*i*P	Pb	06 35 14.6	-0.5		
VCEL				S	Sb	06 35 24.0	-0.3		
VCEL				AML	AML				
	comp=N,488μm,0.2s								
VCEL				AML	AML				
	comp=N,487μm,0.2s								
VCEL				AML	AML				
	comp=E,422μm,0.3s								
MURB	**Monte Urbino**	**0.66**	**315**	*e*P	Pg	06 35 14.7	+0.3		
MURB				S	Sb	06 35 25.1	+0.1		
MURB				AML	AML				
	comp=N,1925μm,1.0s								
MURB				AML	AML				
	comp=E,1565μm,0.3s								
MURB				AML	AML				
	comp=E,1705μm,0.3s								
MURB				AML	AML				
	comp=N,1950μm,0.3s								
PP3	**Marolino**	**0.67**	**29**	*e*P	Pb	06 35 16.1	+0.6		
PP3				S	Sn	06 35 27.1	-0.9		
PP3				AML	AML				
	comp=E,1002μm,0.6s								
PP3				AML	AML				
	comp=N,1520μm,0.4s								
SSFR	**Montelago di S**	**0.70**	**336**	*e*P	Pg	06 35 15.5	+0.4		
SSFR				S	Sb	06 35 25.8	-0.2		
SSFR				AML	AML				
	comp=E,1685μm,0.2s								
SSFR				AML	AML				
	comp=N,1064μm,0.1s								
SSFR				AML	AML				
	comp=E,1630μm,0.3s								
SSFR				AML	AML				
	comp=N,1375μm,0.2s								
ATFO	**Monte Foce - G**	**0.72**	**323**	*e*P	Pg	06 35 15.6	+0.1		
ATFO				S	Sb	06 35 26.6	+0.1		
ATFO				AML	AML				
	comp=E,395μm,0.2s								
ATFO				AML	AML				
	comp=N,398μm,0.3s								
ATTE	**AVT- Monte Tez**	**0.72**	**304**	*e*P	Pg	06 35 15.6	+0.2		
ATTE				S	Sb	06 35 27.1	+0.5		
ATTE				AML	AML				
	comp=E,354μm,0.3s								
ATTE				AML	AML				
	comp=N,270μm,0.3s								
ARVD	**Arcevia**	**0.72**	**347**	*e*P	Pg	06 35 15.6	+0.1		
ARVD				S	Sb	06 35 26.6	0.0		
ARVD				AML	AML				
	comp=N,326μm,0.3s								
ARVD				AML	AML				
	comp=E,401μm,0.2s								
T0110	**Collepietro**	**0.73**	**141**	⇑*i*P	Pg	06 35 15.7	+0.1		
T0110				AML	AML				
	comp=E,439μm,0.3s								
T0110				AML	AML				
	comp=E,438μm,0.3s								
T0110				AML	AML				
	comp=N,467μm,1.2s								
T0110	**Collepietro**	**0.73**	**141**	⇑P	Pg	06 35 15.7	+0.1		
T0110				AML	AML				
	comp=E,439μm,0.3s								
T0110				AML	AML				
	comp=N,467μm,1.2s								
T0110				AML	AML				
	comp=E,438μm,0.3s								
T0110				AML	AML				
	comp=N,467μm,1.2s								
T0110				AML	AML				
	comp=E,438μm,0.3s								
T0110				AML	AML				
	comp=N,467μm,1.2s								
SRES	**S.Oreste - Sor**	**0.74**	**221**	*e*P	Pb	06 35 16.6	-0.1		
SRES				S	Sb	06 35 28.0	+0.9		
SRES	**S.Oreste - Sor**	**0.74**	**221**	S	Sn	06 35 30.0	+0.1		
MGAB	**Montegabbione**	**0.79**	**279**	*e*P	Pb	06 35 17.7	+0.1		
MGAB	**Montegabbione**	**0.79**	**279**	⇓P	Pn	06 35 19.6	+0.6		
FRON	**Frontone**	**0.79**	**336**	*e*P	Pg	06 35 16.7	-0.1		
FRON				S	Sb	06 35 28.6	+0.1		
FRON				AML	AML				
	comp=N,470μm,1.6s								
FRON				AML	AML				
	comp=E,585μm,0.2s								
ATVO	**AVT- Monte Val**	**0.81**	**317**	*e*P	Pg	06 35 17.1	-0.1		
ATVO				AML	AML				
	comp=E,212μm,0.9s								
ATVO				AML	AML				
	comp=E,212μm,0.9s								
ATVO				AML	AML				
	comp=N,178μm,0.5s								
COR1	**Corinaldo**	**0.84**	**352**	⇑P	Pb	06 35 18.5	0.0		
ATMI	**Monte Miggiano**	**0.85**	**310**	*e*P	Pb	06 35 18.4	-0.3		
ATMI				S	Sb	06 35 30.9	+0.6		
ATMI				AML	AML				
	comp=N,738μm,0.3s								
ATMI				AML	AML				
	comp=E,589μm,0.3s								
ATMI	**Monte Miggiano**	**0.85**	**310**	⇑P	Pb	06 35 18.9	+0.2		
ATMI				S	Sn	06 35 32.0	-0.7		
ATMI				AML	AML				
	comp=E,589μm,0.3s								
ATMI				AML	AML				
	comp=N,738μm,0.3s								
ATMI				AML	AML				
	comp=E,589μm,0.3s								
ATMI				AML	AML				
	comp=N,738μm,0.3s								
ATMI				AML	AML				
	comp=N,738μm,0.3s								
ATMI				AML	AML				
	comp=E,589μm,0.3s								
ATPI	**Pietralunga -**	**0.86**	**320**	*e*P	Pg	06 35 18.1	-0.1		
ATPI				S	Sb	06 35 30.9	+0.3		
ATPI				AML	AML				
	comp=E,172μm,0.4s								
ATPI				AML	AML				
	comp=N,186μm,0.3s								
PIEI	**Pieia**	**0.87**	**328**	*e*P	Pg	06 35 18.3	0.0		
PIEI				S	Sb	06 35 31.6	+0.6		
PIEI				AML	AML				
	comp=E,276μm,1.4s								
PIEI				AML	AML				
	comp=N,184μm,1.0s								
MPAG	**Monte Paganucc**	**0.89**	**340**	*e*P	Pg	06 35 18.6	-0.1		
MPAG				S	Sb	06 35 32.1	+0.8		
MPAG				AML	AML				
	comp=N,305μm,0.3s								
MPAG				AML	AML				
	comp=N,306μm,0.3s								
MPAG				AML	AML				
	comp=E,332μm,0.7s								
MPAG	**Monte Paganucc**	**0.89**	**340**	⇓P	Pg	06 35 18.6	0.0		
MPAG				S	Sn	06 35 33.0	-0.6		
MPAG				AML	AML				
	comp=E,332μm,0.7s								
MPAG				AML	AML				
	comp=N,305μm,0.3s								
MPAG				AML	AML				
	comp=E,332μm,0.7s								
MPAG				AML	AML				
	comp=N,306μm,0.3s								
MPAG				AML	AML				
	comp=N,306μm,0.3s								
MPAG				AML	AML				
	comp=E,332μm,0.7s								
NARO	**Abbazia di Nar**	**0.92**	**332**	*e*P	Pg	06 35 19.0	-0.3		
NARO				S	Sb	06 35 32.9	+0.6		
NARO				AML	AML				
	comp=E,158μm,1.1s								
NARO				AML	AML				
	comp=N,126μm,1.2s								
NARO	**Abbazia di Nar**	**0.92**	**332**	⇓P	Pg	06 35 19.0	-0.2		
NARO				S	Sn	06 35 34.0	-0.4		
NARO				AML	AML				
	comp=E,158μm,1.1s								
NARO				AML	AML				
	comp=N,126μm,1.2s								
NARO				AML	AML				
	comp=E,158μm,1.1s								
NARO				AML	AML				
	comp=N,126μm,1.2s								
FSSB	**Fossombrone**	**0.94**	**342**	*e*P	Pg	06 35 19.5	-0.2		
FSSB				S	Sb	06 35 33.6	+0.7		
FSSB				AML	AML				
	comp=E,1002μm,0.2s								
FSSB				AML	AML				
	comp=N,2090μm,0.3s								
FSSB	**Fossombrone**	**0.94**	**342**	⇑P	Pg	06 35 19.6	-0.1		
FSSB				S	Sn	06 35 35.0	+0.1		
FSSB				AML	AML				
	comp=E,1002μm,0.2s								
FSSB				AML	AML				
	comp=N,2090μm,0.3s								
FSSB				AML	AML				
	comp=E,1002μm,0.2s								
FSSB				AML	AML				
	comp=N,2090μm,0.3s								
INTR	**Introdacqua**	**0.95**	**145**	*e*P	Pg	06 35 19.4	-0.5		
INTR				AML	AML				
	comp=N,224μm,0.9s								
INTR				AML	AML				
	comp=E,112μm,0.8s								
INTR	**Introdacqua**	**0.95**	**145**	⇓P	Pg	06 35 19.5	-0.4		
INTR				AML	AML				
	comp=E,112μm,0.8s								
INTR				AML	AML				
	comp=N,224μm,0.9s								
INTR				AML	AML				
	comp=E,112μm,0.8s								
INTR				AML	AML				
	comp=N,224μm,0.9s								
INTR				AML	AML				
	comp=E,112μm,0.8s								
BADI	**Badiali**	**0.98**	**317**	*e*P	Pg	06 35 20.6	+0.1		
BADI	**Badiali**	**0.98**	**317**	P	Pg	06 35 20.6	+0.2		
CAFI	**Castiglion Fio**	**1.03**	**302**	*e*P	Pg	06 35 21.3	0.0		
CAFI				AML	AML				
	comp=E,110μm,0.6s								
CAFI				AML	AML				
	comp=N,101μm,0.9s								
CAFI	**Castiglion Fio**	**1.03**	**302**	P	Pg	06 35 21.5	+0.2		
CAFI				AML	AML				
	comp=E,110μm,0.6s								
CAFI				AML	AML				
	comp=N,101μm,0.9s								
CAFI				AML	AML				
	comp=E,110μm,0.6s								
CAFI				AML	AML				
	comp=N,101μm,0.9s								
LPEL	**Lama dei Pelig**	**1.06**	**135**	*e*P	Pg	06 35 21.5	-0.4		
LPEL				AML	AML				
	comp=N,124μm,1.4s								
LPEL				AML	AML				
	comp=E,124μm,1.6s								
LPEL	**Lama dei Pelig**	**1.06**	**135**	P	Pg	06 35 21.7	-0.3		
LPEL				AML	AML				
	comp=E,124μm,1.6s								
LPEL				AML	AML				
	comp=N,124μm,1.4s								
LPEL				AML	AML				
	comp=N,124μm,1.4s								
LPEL				AML	AML				
	comp=E,124μm,1.6s								
PARC	**Parchiule**	**1.09**	**322**	*e*P	Pg	06 35 22.4	-0.1		
PARC				S	Sn	06 35 39.4	+0.8		
PARC	**Parchiule**	**1.09**	**322**	S	Sn	06 35 41.0	+2.4		
ZCCA	**Zocca**	**2.23**	**315**	P	Pn	06 35 39.4	+0.5		
CAVE	**Cavezzo**	**2.59**	**324**	⇓P	Pb	06 35 47.0	-1.4		
VENL	**Venezia Lido**	**2.68**	**348**	S	Sb	06 36 22.0	-0.9		
SBPO	**S.Benedetto Po**	**2.78**	**325**	S	Sb	06 36 28.0	+2.3		
PZUN	**Potenza**	**2.92**	**137**	S	Sg	06 36 36.0	+0.7		
ZAG	**Zagreb**	**3.64**	**33**	P	Pg	06 36 11.6	+0.2		
SALB	**San Lorenzo Be**	**3.77**	**140**	P	Pb	06 36 10.9	+2.3		
CET2	**Cetraro**	**3.88**	**146**	P	Pb	06 36 12.6	+2.2		
ABTA	**Abfaltersbach**	**3.98**	**353**	*e*Pn	Pn	06 36 04.7	+1.7		
	comp=E,1.8nm,0.3s								
RISI	**Rein**	**4.22**	**350**	⇓P	Pb	06 36 15.5	-0.7		

ROM 24 06:35:33.6±0.1, 42°812N±0'005 × 13°16E±0'01, h9km, ML1.6/7, Error ellipse: s-maj=1.0km s-min=0.4km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
NRCA	**Norcia**	**0.04**	**301**	P	Pg	06 35 35.9			+0.4
NRCA				S	Sg	06 35 37.0			+0.1
NRCA				AML	AML				
	comp=E,98900μm,0.2s								
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
FEMA	**Monte Fema**	**0.17**	**331**	P	Pg	06 35 38.2			+0.8
FEMA				S	Sg	06 35 40.8			+0.9
FEMA				AML	AML				
	comp=N,10185μm,0.4s								
FEMA				AML	AML				
	comp=E,12650μm,1.4s								
FEMA				AML	AML				
	comp=N,10200μm,0.4s								
FEMA				AML	AML				
	comp=N,500μm,0.5s								
FEMA				AML	AML				
	comp=E,476μm,0.2s								
FDMO	**Fiordimonte**	**0.23**	**346**	P	Pg	06 35 39.2			+0.8
FDMO				S	Sg	06 35 42.7			+1.2
FDMO				AML	AML				
	comp=E,2115μm,1.5s								
FDMO				AML	AML				
	comp=N,3440μm,1.0s								
FDMO				AML	AML				
	comp=E,133μm,0.3s								
FDMO				AML	AML				
	comp=N,171μm,0.2s								
CESI	**CESI - Serrava**	**0.27**	**316**	P	Pg	06 35 39.8			+0.7
CESI				S	Sb	06 35 44.1			-1.3
CESI				AML	AML				
	comp=E,8700μm,0.2s								
CESI				AML	AML				
	comp=N,12150μm,0.2s								
CESI				AML	AML				
	comp=N,230μm,0.4s								
CESI				AML	AML				
	comp=E,223μm,0.3s								
CSP1	**Cessapalombo**	**0.28**	**6**	*e*P	Pb	06 35 40.2			-0.8
CSP1				S	Sb	06 35 44.6			-1.2
CSP1				AML	AML				
	comp=E,3290μm,0.2s								
CSP1				AML	AML				
	comp=N,4510μm,0.4s								
CSP1				AML	AML				
	comp=E,3285μm,0.2s								
CSP1				AML	AML				
	comp=N,4505μm,0.4s								
CSP1				AML	AML				
	comp=E,248μm,0.1s								
CSP1				AML	AML				
	comp=N,255μm,0.4s								
GUMA	**Gualdo di Mace**	**0.28**	**27**	P	Pb	06 35 40.4			-0.5
GUMA				S	Sb	06 35 45.5			-0.3
GUMA				AML	AML				
	comp=E,4090μm,1.6s								
GUMA				AML	AML				
	comp=N,3460μm,0.4s								
GUMA				AML	AML				
	comp=E,5275μm,0.7s								
GUMA				AML	AML				
	comp=N,2910μm,0.6s								
GUMA				AML	AML				
	comp=E,4090μm,1.6s								
GUMA				AML	AML				
	comp=N,3460μm,0.4s								
GUMA				AML	AML				
	comp=E,5275μm,0.7s								
GUMA				AML	AML				
	comp=N,2910μm,0.6s								
GUMA				AML	AML				
	comp=E,564μm,0.5s								
GUMA				AML	AML				
	comp=E,465μm,0.4s								
GUMA				AML	AML				
	comp=N,577μm,0.6s								
GUMA				AML	AML				
	comp=N,488μm,0.6s								
RM33	**Pellescritta (**	**0.31**	**173**	*e*P	Pb	06 35 41.9			+0.5
RM33				S	Sb	06 35 45.9			-0.6
RM33				AML	AML				
	comp=E,2475μm,1.0s								
RM33				AML	AML				
	comp=E,2470μm,1.0s								
RM33				AML	AML				
	comp=N,1700μm,1.0s								
RM33				AML	AML				
	comp=N,1690μm,1.0s								
RM33				AML	AML				
	comp=N,1695μm,1.0s								
RM33				AML	AML				
	comp=E,2465μm,1.0s								
RM33				AML	AML				
	comp=N,110μm,0.4s								
RM33				AML	AML				
	comp=N,88μm,0.3s								
RM33				AML	AML				
	comp=E,194μm,0.5s								
RM33				AML	AML				
	comp=E,130μm,0.1s								
CAMP	**Campotosto**	**0.33**	**146**	P	Pg	06 35 41.0			+0.7
CAMP				S	Sb	06 35 46.2			-1.1
CAMP				AML	AML				
	comp=E,914μm,0.6s								
CAMP				AML	AML				
	comp=N,636μm,0.6s								
CAMP				AML	AML				
	comp=E,919μm,0.6s								
CAMP				AML	AML				
	comp=E,60μm,1.1s								
CAMP				AML	AML				
	comp=N,20μm,0.2s								
SEF1	**Sefro**	**0.37**	**335**	P	Pb	06 35 41.8			-0.6
SEF1				S	Sb	06 35 47.9			-0.4
SEF1				AML	AML				
	comp=E,4600μm,1.6s								
SEF1				AML	AML				
	comp=N,4765μm,0.7s								
SEF1				AML	AML				
	comp=N,4760μm,0.7s								
SEF1				AML	AML				
	comp=E,4600μm,1.6s								
SEF1				AML	AML				
	comp=N,486μm,0.6s								
SEF1				AML	AML				
	comp=E,378μm,0.7s								
ARRO	**Arrone**	**0.37**	**232**	AML	AML				

	comp=N,454µm,0.5s						
ARRO				AML	AML		
	comp=E,562µm,0.2s						
TERO	**Teramo**	**0.38**	**120**	P	Pg	06 35 41.6	+0.6
TERO				S	Sg	06 35 47.1	+1.1
TERO				AML	AML		
	comp=E,1165µm,0.5s						
TERO				AML	AML		
	comp=N,934µm,0.9s						
TERO				AML	AML		
	comp=N,139µm,0.1s						
OFFI	**Offida**	**0.40**	**72**	AML	AML		
	comp=E,1335µm,0.7s						
OFFI				AML	AML		
	comp=N,2100µm,0.6s						
ASSB	**Assisi San Ben**	**0.43**	**302**	AML	AML		
	comp=E,1068µm,0.3s						
ASSB				AML	AML		
	comp=N,1135µm,0.4s						
GIGS	**Gran Sasso**	**0.47**	**140**	AML	AML		
	comp=N,150µm,1.5s						
GIGS				AML	AML		
	comp=E,216µm,0.6s						
SNTG	**Esanatoglia**	**0.47**	**340**	AML	AML		
	comp=N,915µm,0.1s						
SNTG				AML	AML		
	comp=E,1058µm,1.2s						
CESX	**Cesi**	**0.47**	**245**	AML	AML		
	comp=N,420µm,1.2s						
CESX				AML	AML		
	comp=E,374µm,0.7s						
AQU	**L'Aquila**	**0.49**	**159**	AML	AML		
	comp=N,649µm,0.3s						
AQU				AML	AML		
	comp=E,524µm,1.4s						
AQU				AML	AML		
	comp=N,694µm,0.3s						
AQU				AML	AML		
	comp=E,578µm,1.3s						
ATCC	**AVT- Casa Cast**	**0.53**	**314**	AML	AML		
	comp=N,1210µm,1.0s						
ATCC				AML	AML		
	comp=E,1500µm,1.4s						
FOSV	**Fossato di Vic**	**0.56**	**329**	AML	AML		
	comp=N,1237µm,0.3s						
FOSV				AML	AML		
	comp=N,1235µm,0.3s						
FOSV				AML	AML		
	comp=E,1280µm,0.2s						
MURB	**Monte Urbino**	**0.65**	**314**	AML	AML		
	comp=N,1950µm,0.3s						
MURB				AML	AML		
	comp=E,1565µm,0.3s						
MURB				AML	AML		
	comp=E,1705µm,0.3s						
MURB				AML	AML		
	comp=N,1925µm,1.0s						
VCEL	**Villa Celiera**	**0.65**	**130**	AML	AML		
	comp=N,487µm,0.2s						
VCEL				AML	AML		
	comp=N,488µm,0.2s						
VCEL				AML	AML		
	comp=E,422µm,0.3s						
PP3	**Marolino**	**0.65**	**30**	AML	AML		
	comp=E,1002µm,0.6s						
PP3				AML	AML		
	comp=N,1520µm,0.4s						
SSFR	**Montelago di S**	**0.68**	**336**	AML	AML		
	comp=N,1064µm,0.1s						
SSFR				AML	AML		
	comp=N,1375µm,0.2s						
SSFR				AML	AML		
	comp=E,1630µm,0.3s						
SSFR				AML	AML		
	comp=E,1685µm,0.2s						
ATFO	**Monte Foce - G**	**0.70**	**322**	AML	AML		
	comp=N,398µm,0.3s						
ATFO				AML	AML		
	comp=E,395µm,0.2s						
ARVD	**Arcevia**	**0.70**	**347**	AML	AML		
	comp=N,326µm,0.3s						
ARVD				AML	AML		
	comp=E,401µm,0.2s						
ATTE	**AVT- Monte Tez**	**0.71**	**303**	AML	AML		
	comp=N,270µm,0.3s						
ATTE				AML	AML		
	comp=E,354µm,0.3s						
FRON	**Frontone**	**0.77**	**336**	AML	AML		
	comp=E,585µm,0.2s						
FRON				AML	AML		
	comp=N,470µm,1.6s						
ATVO	**AVT- Monte Val**	**0.79**	**316**	AML	AML		
	comp=E,212µm,0.9s						
ATVO				AML	AML		
	comp=N,178µm,0.5s						
ATVO				AML	AML		
	comp=E,212µm,0.9s						
ATPI	**Pietralunga -**	**0.85**	**319**	AML	AML		
	comp=N,186µm,0.3s						
ATPI				AML	AML		
	comp=E,172µm,0.4s						
PIEI	**Pieia**	**0.86**	**328**	AML	AML		
	comp=N,184µm,1.0s						
PIEI				AML	AML		
	comp=E,276µm,1.4s						

ATH ***24*** *06:38:00.7, 38.37N×22.00E, h8km±3km, ML1.7/6, Error ellipse: s-maj=3.0km s-min=0.9km az=53.0*

THE 24 06:38:00.3, 38.37N×22.01E, h9km±1km, ML1.8/5, Error ellipse: s-maj=1.9km s-min=0.6km az=33.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERG	**Sergoula**	**0.05**	**40**	P	Pg	06 38 02.2	-0.1
SERG				S	Sg	06 38 03.6	-0.1
	5µm,0.1s						
SERG	**Sergoula**	**0.05**	**40**	P	Pg	06 38 02.3	0.0
SERG				S	Sg	06 38 03.7	0.0
SERG				AML	AML	06 38 03.9	
	comp=E,9251µm,0.1s						
SERG				AML	AML	06 38 03.9	
	comp=N,14362µm,0.1s						
EFP	**Efpalio**	**0.10**	**303**	P	Pg	06 38 02.6	-0.2
EFP				S	Sg	06 38 04.6	0.0
	comp=N,458nm,0.2s						
EFP	**Efpalio**	**0.10**	**303**	P	Pg	06 38 02.6	-0.2
EFP				S	Sg	06 38 04.6	0.0
EFP				AML	AML	06 38 04.9	
	comp=E,530µm,0.1s						
EFP				AML	AML	06 38 05.0	
	comp=N,800µm,0.1s						
LAKA	**Lakka**	**0.13**	**191**	P	Pg	06 38 03.6	+0.3
LAKA				S	Sg	06 38 05.9	+0.4
	comp=N,668nm,0.2s						
LAKA	**Lakka**	**0.13**	**191**	P	Pg	06 38 03.6	+0.3
LAKA				S	Sg	06 38 06.0	+0.5
LAKA				AML	AML	06 38 06.4	
	comp=E,1555µm,0.3s						
LAKA				AML	AML	06 38 06.6	
	comp=N,1223µm,0.2s						
ALIK	**Aliki, Aigiali**	**0.14**	**145**	P	Pg	06 38 04.0	+0.7
ANX	**Ano Chora**	**0.23**	**342**	P	Pg	06 38 04.9	-0.2
ANX				S	Sg	06 38 08.7	+0.4
	comp=N,555nm,0.2s						
ANX	**Ano Chora**	**0.23**	**342**	P	Pg	06 38 04.9	-0.2
ANX				S	Sg	06 38 08.8	+0.4
ANX				AML	AML	06 38 09.0	
	comp=N,1023µm,0.2s						
ANX				AML	AML	06 38 09.2	
	comp=E,1144µm,0.2s						
KLV	**Kalavryta, Ach**	**0.34**	**162**	P	Pg	06 38 07.0	-0.2
KLV				S	Sg	06 38 11.5	-0.2
	comp=E,38nm,0.3s						
KLV	**Kalavryta, Ach**	**0.34**	**162**	P	Pg	06 38 07.0	-0.1
KLV				S	Sg	06 38 12.2	+0.5
KLV				AML	AML	06 38 14.1	
	comp=E,69µm,0.1s						
KLV				AML	AML	06 38 15.0	
	comp=N,68µm,0.2s						
PVO	**Paravola**	**0.45**	**303**	P	Pg	06 38 08.9	-0.3
PVO				S	Sg	06 38 16.2	+1.1
DRO	**Drossia**	**0.48**	**210**	P	Pg	06 38 09.7	0.0
RLS	**Riolos of Patr**	**0.53**	**234**	P	Pg	06 38 11.1	+0.5
RLS				S	Sg	06 38 16.8	-0.8
EVR	**Evrytania**	**0.57**	**344**	P	Pg	06 38 11.0	-0.3
EVR				S	Sb	06 38 20.1	-0.6
EVR				AML	AML	06 38 22.1	
	comp=N,94µm,0.1s						
EVR				AML	AML	06 38 22.7	
	comp=E,166µm,0.3s						
AXAR	**Agios Charalam**	**0.64**	**52**	P	Pg	06 38 12.9	+0.1
AXAR				S	Sb	06 38 22.6	-0.1

PRU 24 06:38:14.5±0.0, 50.55N×18.11E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.86**	**205**	*e*PG	Pg	06 38 30.0	-0.9
KRLC	**Kraliky**	**0.97**	**241**	*e*PG	Pg	06 38 31.5	-1.7
KRLC				*e*SG	Sg	06 38 44.0	-1.8
	comp=Z,1.9nm,0.5s						
DPC	**Dobruska-Polom**	**1.16**	**261**	*e*PG	Pg	06 38 36.3	-0.4
DPC				*e*SG	Sg	06 38 51.4	-0.3
	comp=Z,1.7nm,0.4s						

ROM 24 06:39:15.1±0.1, 42.975N±0.005×13.142E±0.006, h9km, ML2.4/8, 1C, Error ellipse: s-maj=0.5km s-min=0.5km az=355.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.07**	**260**	⇑*e*P	Pg	06 39 17.4	+0.1
FEMA				S	Sg	06 39 19.4	+0.5
FEMA				AML	AML		
	comp=E,8295µm,1.4s						
FEMA				AML	AML		
	comp=N,5570µm,0.6s						
FEMA				AML	AML		
	comp=E,8295µm,1.4s						
FDMO	**Fiordimonte**	**0.07**	**327**	*e*P	Pg	06 39 17.3	0.0
FDMO				S	Sg	06 39 19.0	+0.2
FDMO				AML	AML		
	comp=E,3880µm,1.3s						
FDMO				AML	AML		
	comp=N,4865µm,1.5s						
CSP1	**Cessapalombo**	**0.13**	**21**	*e*P	Pg	06 39 18.4	+0.3
CSP1				S	Sg	06 39 20.7	+0.5
CSP1				AML	AML		
	comp=E,1975µm,1.6s						
CSP1				AML	AML		
	comp=N,2545µm,0.6s						
CSP1				AML	AML		
	comp=E,1963µm,1.6s						
CSP1				AML	AML		
	comp=N,2550µm,0.6s						
NRCA	**Norcia**	**0.14**	**188**	*e*P	Pg	06 39 18.5	+0.2
GUMA	**Gualdo di Mace**	**0.17**	**58**	*e*P	Pg	06 39 19.4	+0.7
GUMA				S	Sg	06 39 22.7	+1.6
GUMA				AML	AML		
	comp=E,3365µm,0.5s						
GUMA				AML	AML		
	comp=N,4325µm,0.5s						
GUMA				AML	AML		
	comp=E,4280µm,0.7s						
GUMA				AML	AML		
	comp=N,4925µm,0.5s						
GUMA				AML	AML		
	comp=E,4110µm,0.9s						
GUMA				AML	AML		
	comp=N,4430µm,0.6s						
GUMA				AML	AML		
	comp=E,4940µm,0.9s						
GUMA				AML	AML		
	comp=E,4275µm,0.7s						
GUMA				AML	AML		
	comp=N,4324µm,0.5s						
GUMA				AML	AML		
	comp=E,3362µm,0.5s						
CESI	**CESI - Serrava**	**0.18**	**280**	*e*P	Pg	06 39 19.5	+0.6
CESI				S	Sg	06 39 23.0	+1.6
CESI				AML	AML		
	comp=E,2000µm,0.3s						
CESI				AML	AML		
	comp=N,2780µm,0.4s						
CESI				AML	AML		
	comp=E,2345µm,0.4s						
CESI				AML	AML		
	comp=N,4530µm,0.2s						
CESI				AML	AML		
	comp=E,2002µm,0.3s						
CESI				AML	AML		
	comp=N,2780µm,0.4s						
SNTG	**Esanatoglia**	**0.32**	**332**	*e*P	Pg	06 39 22.0	+0.6
SNTG				S	Sb	06 39 27.6	-0.7
SNTG				AML	AML		
	comp=E,357µm,0.6s						
SNTG				AML	AML		
	comp=N,292µm,0.5s						
SNTG				AML	AML		
	comp=E,582µm,0.1s						
SNTG				AML	AML		
	comp=N,825µm,0.8s						
SNTG				AML	AML		
	comp=E,357µm,0.6s						
SNTG				AML	AML		
	comp=N,292µm,0.5s						
ASSB	**Assisi San Ben**	**0.36**	**281**	*e*P	Pg	06 39 22.7	+0.4
ASSB				S	Sb	06 39 28.8	-0.8
ASSB				AML	AML		
	comp=E,454µm,0.7s						
ASSB				AML	AML		
	comp=N,700µm,0.3s						
ASSB				AML	AML		
	comp=E,1725µm,0.1s						
ASSB				AML	AML		
	comp=N,2130µm,0.2s						
ASSB				AML	AML		
	comp=N,700µm,0.3s						
ASSB				AML	AML		
	comp=E,454µm,0.7s						
RM33	**Pellescritta (**	**0.47**	**173**	P	Pg	06 39 24.2	-0.1
RM33				S	Sb	06 39 32.2	-0.5
TERO	**Teramo**	**0.49**	**136**	*e*P	Pb	06 39 25.9	-0.1
TERO				S	Sb	06 39 32.2	-1.1
CESX	**Cesi**	**0.55**	**229**	*e*P	Pg	06 39 25.9	+0.1
CESX				S	Sb	06 39 34.8	-0.2
CESX				AML	AML		
	comp=E,228µm,0.7s						
CESX				AML	AML		
	comp=N,200µm,0.5s						
CESX				AML	AML		
	comp=E,706µm,0.4s						
CESX				AML	AML		
	comp=N,680µm,0.3s						
CESX				AML	AML		
	comp=N,194µm,0.4s						
CESX				AML	AML		
	comp=E,206µm,1.0s						
PIEI	**Pieia**	**0.71**	**322**	*e*P	Pg	06 39 29.4	+0.4
VIVA	**Pratoni del Vi**	**1.25**	**193**	AML	AML		
	comp=N,874µm,0.2s						
VIVA				AML	AML		
	comp=E,790µm,0.8s						

ROM 24 06:39:48.7±0.1, 42.772N±0.004×13.227E±0.006, h6km, ML2.7/19, 4C-2D, Error ellipse: s-maj=0.4km s-min=0.3km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**307**	P	Pg	06 39 52.0	+0.9
NRCA				S	Sg	06 39 53.7	+1.0
NRCA				AML	AML		
	comp=E,23000µm,0.1s						
NRCA				AML	AML		
	comp=E,21000µm,0.1s						
NRCA				AML	AML		
	comp=N,18150µm,0.1s						
NRCA				AML	AML		
	comp=N,16450µm,0.1s						
RM33	**Pellescritta (**	**0.26**	**182**	P	Pb	06 39 55.2	-0.7
RM33				S	Sg	06 39 58.1	+0.7
RM33				AML	AML		
	comp=E,2330µm,0.2s						
RM33				AML	AML		
	comp=N,1670µm,1.1s						
CAMP	**Campotosto**	**0.27**	**150**	P	Pg	06 39 55.0	+0.9
CAMP				S	Sb	06 39 59.5	-1.4
CAMP				AML	AML		
	comp=N,1014µm,0.3s						
CAMP				AML	AML		
	comp=E,1034µm,1.0s						
FDMO	**Fiordimonte**	**0.28**	**339**	P	Pg	06 39 55.0	+0.6
FDMO				S	Sb	06 39 59.8	-1.5
FDMO				AML	AML		
	comp=E,3810µm,0.2s						
FDMO				AML	AML		
	comp=N,3815µm,0.2s						
GUMA	**Gualdo di Mace**	**0.30**	**15**	P	Pb	06 39 55.8	-0.7
GUMA				S	Sb	06 40 01.1	-0.7
GUMA				AML	AML		
	comp=E,4940µm,0.9s						
GUMA				AML	AML		
	comp=N,4430µm,0.6s						
GUMA				AML	AML		
	comp=E,4110µm,0.9s						
GUMA				AML	AML		
	comp=N,4095µm,1.6s						
TERO	**Teramo**	**0.32**	**118**	P	Pg	06 39 55.6	+0.7
TERO				S	Sg	06 40 00.6	+1.5
TERO				AML	AML		
	comp=E,1400µm,0.5s						
TERO				AML	AML		
	comp=N,3130µm,0.6s						
CSP1	**Cessapalombo**	**0.32**	**357**	P	Pg	06 39 55.7	+0.6
CSP1				S	Sb	06 40 01.0	-1.4
CSP1				AML	AML		
	comp=E,1670µm,1.2s						
CSP1				AML	AML		
	comp=N,2014µm,1.4s						
CESI	**CESI - Serrava**	**0.33**	**315**	P	Pg	06 39 56.1	+0.8
CESI				S	Sb	06 40 01.6	-1.1
CESI				AML	AML		
	comp=N,4530µm,0.2s						
CESI				AML	AML		
	comp=E,2345µm,0.4s						
OFFI	**Offida**	**0.38**	**64**	⇑P	Pb	06 39 57.6	-0.2
OFFI				AML	AML		
	comp=E,1765µm,0.3s						
OFFI				AML	AML		
	comp=N,2775µm,0.5s						
ARRO	**Arrone**	**0.39**	**241**	P	Pb	06 39 57.4	-0.6
ARRO				S	Sb	06 40 03.9	-0.4
ARRO				AML	AML		
	comp=E,1465µm,0.6s						
ARRO				AML	AML		
	comp=N,1175µm,0.2s						
ARRO				AML	AML		
	comp=N,1170µm,0.2s						
GIGS	**Gran Sasso**	**0.41**	**142**	⇓P	Pg	06 39 57.4	+0.8
GIGS				S	Sb	06 40 03.9	-1.0
GIGS				AML	AML		
	comp=N,306µm,1.1s						
GIGS				AML	AML		
	comp=N,305µm,1.1s						
GIGS				AML	AML		
	comp=E,300µm,0.1s						
SEF1	**Sefro**	**0.43**	**331**	⇑P	Pg	06 39 57.7	+0.7
SEF1				AML	AML		
	comp=E,2915µm,0.6s						
SEF1				AML	AML		
	comp=N,3075µm,0.7s						
SEF1				AML	AML		
	comp=E,2920µm,0.6s						
SEF1				AML	AML		
	comp=N,3080µm,0.7s						
AQU	**L'Aquila**	**0.44**	**163**	P	Pb	06 39 58.3	-0.5
AQU				AML	AML		
	comp=E,594µm,1.3s						
AQU				AML	AML		
	comp=N,632µm,0.8s						
AQU				AML	AML		
	comp=E,610µm,1.3s						
AQU				AML	AML		
	comp=E,594µm,1.3s						
AQU				AML	AML		
	comp=N,632µm,0.8s						
AQU				AML	AML		
	comp=N,638µm,0.8s						
ASSB	**Assisi San Ben**	**0.50**	**303**	P	Pg	06 39 58.9	+0.5
ASSB				S	Sb	06 40 06.9	-0.5
ASSB				AML	AML		
	comp=N,2130µm,0.2s						
ASSB				AML	AML		
	comp=E,1725µm,0.1s						
CESX	**Cesi**	**0.50**	**251**	P	Pg	06 39 59.1	+0.7
CESX				S	Sb	06 40 07.2	-0.3
CESX				AML	AML		
	comp=E,706µm,0.4s						
CESX				AML	AML		
	comp=N,680µm,0.3s						
CESX				AML	AML		
	comp=N,681µm,0.3s						
TRTR	**Tortoreto Alta**	**0.51**	**86**	⇑P	Pb	06 40 00.4	+0.4
FIAM	**Fiamignano**	**0.51**	**189**	P	Pg	06 39 59.3	+0.8
FIAM				S	Sb	06 40 07.5	-0.3
FIAM				AML	AML		
	comp=N,553µm,0.8s						
FIAM				AML	AML		
	comp=E,672µm,0.4s						
SNTG	**Esanatoglia**	**0.53**	**337**	P	Pg	06 39 59.3	+0.4
SNTG				S	Sb	06 40 07.8	-0.5
SNTG				AML	AML		
	comp=E,582µm,0.1s						
SNTG				AML	AML		
	comp=N,825µm,0.8s						
FAGN	**Fagnano**	**0.57**	**152**	*e*P	Pb	06 40 00.6	-0.5
FAGN				S	Sb	06 40 09.7	+0.2
VCEL	**Villa Celiera**	**0.59**	**130**	⇑*i*P	Pb	06 40 00.8	-0.6
VCEL				AML	AML		
	comp=E,986µm,0.4s						
VCEL				AML	AML		
	comp=N,902µm,0.9s						
VCEL				AML	AML		
	comp=E,986µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.60**	**314**	P	Pg	06 40 00.8	+0.5
ATCC				AML	AML		
	comp=E,1175µm,0.3s						
ATCC				AML	AML		
	comp=N,860µm,1.1s						
FOSV	**Fossato di Vic**	**0.62**	**327**	AML	AML		
	comp=E,538µm,1.5s						
FOSV				AML	AML		
	comp=E,537µm,1.5s						
FOSV				AML	AML		
	comp=N,608µm,1.0s						
FOSV				AML	AML		
	comp=N,609µm,1.0s						
PP3	**Marolino**	**0.67**	**25**	AML	AML		
	comp=N,956µm,1.2s						
PP3				AML	AML		
	comp=E,1192µm,1.5s						
PP3				AML	AML		
	comp=E,1190µm,1.5s						
PP3				AML	AML		
	comp=N,958µm,1.2s						
T0110	**Collepietro**	**0.68**	**143**	⇓*i*P	Pg	06 40 02.2	+0.4
T0110				S	Sb	06 40 12.7	0.0
T0110				AML	AML		
	comp=E,1235µm,0.3s						
T0110				AML	AML		
	comp=N,1162µm,0.6s						
T0110				AML	AML		
	comp=E,1230µm,0.3s						
T0110				AML	AML		
	comp=N,1161µm,0.6s						
MURB	**Monte Urbino**	**0.71**	**314**	AML	AML		
	comp=N,1735µm,0.9s						
MURB				AML	AML		
	comp=E,1225µm,0.4s						
FRON	**Frontone**	**0.83**	**334**	AML	AML		
	comp=N,498µm,0.2s						
FRON				AML	AML		
	comp=E,314µm,0.3s						
MGAB	**Montegabbione**	**0.83**	**280**	AML	AML		
	comp=E,460µm,0.5s						
MGAB				AML	AML		
	comp=E,460µm,0.5s						
MGAB				AML	AML		
	comp=N,562µm,1.1s						
MGAB				AML	AML		
	comp=E,507µm,1.1s						
MGAB				AML	AML		
	comp=N,572µm,0.7s						
MGAB				AML	AML		
	comp=N,562µm,1.1s						
ATVO	**AVT- Monte Val**	**0.86**	**316**	AML	AML		

	comp=N,201μm,1.0s								
ATVO					AML	AML			
	comp=N,202μm,1.0s								
ATVO					AML	AML			
	comp=E,233μm,0.8s								
ATPI	**Pietralunga -**	**0.91**	**319**		AML	AML			
	comp=E,183μm,0.4s								
ATPI					AML	AML			
	comp=N,190μm,0.7s								
INTR	**Introdacqua**	**0.91**	**146**		AML	AML			
	comp=E,204μm,1.1s								
INTR					AML	AML			
	comp=N,368μm,1.6s								
PIEI	**Pieia**	**0.92**	**327**		AML	AML			
	comp=E,255μm,0.3s								
PIEI					AML	AML			
	comp=N,190μm,0.2s								
NARO	**Abbazia di Nar**	**0.96**	**331**		AML	AML			
	comp=N,115μm,0.6s								
NARO					AML	AML			
	comp=E,180μm,1.4s								
NARO					AML	AML			
	comp=N,115μm,0.6s								
NARO					AML	AML			
	comp=E,181μm,1.4s								
FSSB	**Fossombrone**	**0.98**	**341**		AML	AML			
	comp=E,642μm,0.3s								
FSSB					AML	AML			
	comp=N,748μm,0.3s								
CAFI	**Castiglion Fio**	**1.08**	**302**		AML	AML			
	comp=E,124μm,1.2s								
CAFI					AML	AML			
	comp=N,150μm,0.3s								

ROM 24 06:40:26.7±0.2, 42°.696N±0°.004×13°.119E±0°.005, h11km±1km, ML2.1/8, 1C, Error ellipse: s-maj=0.5km s-min=0.0km az=234.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
NRCA	**Norcia**	**0.14**	**358**	AML		AML				
	comp=E,23000μm,0.1s									
NRCA				AML		AML				
	comp=E,21050μm,0.1s									
NRCA				AML		AML				
	comp=E,21000μm,0.1s									
NRCA				AML		AML				
	comp=N,18150μm,0.1s									
NRCA				AML		AML				
	comp=N,16450μm,0.1s									
RM33	**Pellescritta (**	**0.20**	**159**	iP		Pg	06	40	31.6	+0.6
RM33				S		Sg	06	40	35.1	+1.2
RM33				AML		AML				
	comp=E,2330μm,0.2s									
RM33				AML		AML				
	comp=N,1670μm,1.1s									
CAMP	**Campotosto**	**0.27**	**127**	eP		Pg	06	40	32.6	+0.4
CAMP				S		Sg	06	40	36.6	+0.7
CAMP				AML		AML				
	comp=E,1034μm,1.0s									
CAMP				AML		AML				
	comp=N,1014μm,0.3s									
FEMA	**Monte Fema**	**0.27**	**349**	eP		Pb	06	40	33.2	-0.4
FEMA				S		Sg	06	40	37.2	+1.1
FEMA				AML		AML				
	comp=E,5085μm,0.3s									
FEMA				AML		AML				
	comp=N,4985μm,0.4s									
ARRO	**Arrone**	**0.29**	**246**	eP		Pg	06	40	32.9	+0.4
ARRO				S		Sg	06	40	37.4	+1.0
ARRO				AML		AML				
	comp=N,1175μm,0.2s									
ARRO				AML		AML				
	comp=E,1465μm,0.6s									
ARRO				AML		AML				
	comp=N,234μm,0.2s									
FDMO	**Fiordimonte**	**0.34**	**356**	AML		AML				
	comp=E,3810μm,0.2s									
FDMO				AML		AML				
	comp=N,3815μm,0.2s									
CESI	**CESI - Serrava**	**0.35**	**333**	AML		AML				
	comp=N,4530μm,0.2s									
CESI				AML		AML				
	comp=N,3060μm,0.2s									
CESI				AML		AML				
	comp=E,1580μm,0.4s									
CESI				AML		AML				
	comp=E,2345μm,0.4s									
TERO	**Teramo**	**0.36**	**101**	eP		Pg	06	40	34.3	+0.3
TERO				S		Sb	06	40	40.1	-0.8
TERO				AML		AML				
	comp=N,3130μm,0.6s									
TERO				AML		AML				
	comp=E,1400μm,0.5s									
GUMA	**Gualdo di Mace**	**0.40**	**23**	AML		AML				
	comp=E,4940μm,0.9s									
GUMA				AML		AML				
	comp=E,4110μm,0.9s									
GUMA				AML		AML				
	comp=N,4430μm,0.6s									
GUMA				AML		AML				
	comp=N,4095μm,1.6s									
CSP1	**Cessapalombo**	**0.40**	**9**	eP		Pg	06	40	34.9	+0.3
CSP1				S		Sg	06	40	40.9	+0.9
CSP1				AML		AML				
	comp=E,1670μm,1.2s									
CSP1				AML		AML				
	comp=N,2005μm,1.4s									
AQU	**L'Aquila**	**0.40**	**148**	P		Pb	06	40	35.2	-0.6
AQU				S		Sb	06	40	41.6	-0.3
AQU				AML		AML				
	comp=E,594μm,1.3s									
AQU				AML		AML				
	comp=N,638μm,0.8s									
AQU				AML		AML				
	comp=E,594μm,1.3s									
AQU				AML		AML				
	comp=E,610μm,1.3s									
AQU				AML		AML				
	comp=N,632μm,0.8s									
AQU				AML		AML				
	comp=E,78μm,0.5s									
AQU				AML		AML				
	comp=E,111μm,0.3s									
AQU				AML		AML				
	comp=N,189μm,0.3s									
AQU				AML		AML				
	comp=N,166μm,0.3s									
CESX	**Cesi**	**0.41**	**258**	P		Pg	06	40	35.0	+0.2
CESX				S		Sg	06	40	41.1	+1.0
CESX				AML		AML				
	comp=N,681μm,0.3s									
CESX				AML		AML				
	comp=E,706μm,0.4s									
CESX				AML		AML				
	comp=N,680μm,0.3s									
GIGS	**Gran Sasso**	**0.41**	**126**	eP		Pg	06	40	34.8	-0.1
GIGS				S		Sg	06	40	41.2	+0.8
GIGS				AML		AML				
	comp=E,300μm,0.1s									
GIGS				AML		AML				
	comp=N,306μm,1.1s									
GIGS				AML		AML				
	comp=N,305μm,1.1s									
SEF1	**Sefro**	**0.47**	**344**	P		Pg	06	40	36.3	+0.4
SEF1				S		Sb	06	40	43.2	-0.7
SEF1				AML		AML				
	comp=E,2920μm,0.6s									
SEF1				AML		AML				
	comp=N,3075μm,0.7s									
SEF1				AML		AML				
	comp=E,2915μm,0.6s									
SEF1				AML		AML				
	comp=N,3080μm,0.7s									
OFFI	**Offida**	**0.48**	**60**	AML		AML				
	comp=N,2775μm,0.5s									
OFFI				AML		AML				
	comp=E,1765μm,0.3s									
ASSB	**Assisi San Ben**	**0.48**	**316**	AML		AML				
	comp=N,269μm,0.3s									
ASSB				AML		AML				
	comp=E,1725μm,0.1s									
ASSB				AML		AML				
	comp=N,2130μm,0.2s									
PIO1	**Pioraco**	**0.49**	**348**	AML		AML				
	comp=N,1156μm,1.2s									
PIO1				AML		AML				
	comp=E,1617μm,0.9s									
SNTG	**Esanatoglia**	**0.57**	**347**	AML		AML				
	comp=N,825μm,0.8s									
SNTG				AML		AML				
	comp=E,582μm,0.1s									
ATCC	**AVT- Casa Cast**	**0.60**	**324**	AML		AML				
	comp=N,860μm,1.1s									
ATCC				AML		AML				
	comp=E,1180μm,0.3s									
ATCC				AML		AML				
	comp=E,1175μm,0.3s									
ATCC				AML		AML				
	comp=N,859μm,1.1s									
VCEL	**Villa Celiera**	**0.61**	**119**	AML		AML				
	comp=N,902μm,0.9s									
VCEL				AML		AML				
	comp=E,986μm,0.4s									
VCEL				AML		AML				
	comp=E,987μm,0.4s									
VCEL				AML		AML				
	comp=E,986μm,0.4s									
FOSV	**Fossato di Vic**	**0.65**	**336**	AML		AML				
	comp=E,538μm,1.5s									
FOSV				AML		AML				
	comp=N,609μm,1.0s									
T0110	**Collepietro**	**0.68**	**134**	AML		AML				
	comp=N,1161μm,0.6s									
T0110				AML		AML				
	comp=E,1235μm,0.3s									
T0110				AML		AML				
	comp=N,1162μm,0.6s									
T0110				AML		AML				
	comp=E,1230μm,0.3s									
MURB	**Monte Urbino**	**0.71**	**323**	AML		AML				
	comp=N,1735μm,0.9s									
MURB				AML		AML				
	comp=E,1225μm,0.4s									
ATTE	**AVT- Monte Tez**	**0.75**	**312**	AML		AML				
	comp=E,316μm,0.3s									
ATTE				AML		AML				
	comp=N,206μm,0.4s									
PP3	**Marolino**	**0.77**	**28**	AML		AML				
	comp=N,954μm,1.2s									
PP3				AML		AML				
	comp=E,1190μm,1.5s									
ATVO	**AVT- Monte Val**	**0.86**	**323**	AML		AML				
	comp=N,201μm,1.0s									
ATVO				AML		AML				
	comp=N,202μm,1.0s									
ATVO				AML		AML				
	comp=E,233μm,0.8s									
FRON	**Frontone**	**0.87**	**341**	AML		AML				
	comp=N,498μm,0.2s									
FRON				AML		AML				
	comp=E,314μm,0.3s									
ATPI	**Pietralunga -**	**0.92**	**325**	AML		AML				
	comp=N,189μm,0.7s									
ATPI				AML		AML				
	comp=E,183μm,0.4s									
ATPI				AML		AML				
	comp=E,184μm,0.4s									
ATPI				AML		AML				
	comp=N,190μm,0.7s									
PIEI	**Pieia**	**0.94**	**333**	AML		AML				
	comp=N,190μm,0.2s									
PIEI				AML		AML				
	comp=E,255μm,0.3s									
NARO	**Abbazia di Nar**	**1.00**	**337**	AML		AML				
	comp=N,115μm,0.6s									
NARO				AML		AML				
	comp=E,180μm,1.4s									
NARO				AML		AML				
	comp=N,115μm,0.6s									
NARO				AML		AML				
	comp=E,181μm,1.4s									
FSSB	**Fossombrone**	**1.03**	**346**	AML		AML				
	comp=E,642μm,0.3s									
FSSB				AML		AML				
	comp=N,748μm,0.3s									
CAFI	**Castiglion Fio**	**1.06**	**307**	AML		AML				
	comp=N,150μm,0.3s									
CAFI				AML		AML				
	comp=E,124μm,1.2s									

ROM 24 06:41:15.8±0.1, 42°.790N±0°.005×13°.230E±0°.010, h8km, ML2.2/9, 1C-1D, Error ellipse: s-maj=0.9km s-min=0.1km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
NRCA	**Norcia**	**0.10**	**297**	P		Pg	06	41	19.1	+0.9
NRCA				S		Sg	06	41	20.8	+0.8
NRCA				AML		AML				
	comp=E,8880μm,0.2s									
NRCA				AML		AML				
	comp=N,9180μm,0.1s									
NRCA				AML		AML				
	comp=E,9725μm,0.3s									
NRCA				AML		AML				
	comp=N,9810μm,0.1s									
FEMA	**Monte Fema**	**0.22**	**322**	eP		Pg	06	41	20.0	-0.3
FEMA				S		Sg	06	41	24.8	+1.5
FDMO	**Fiordimonte**	**0.27**	**337**	P		Pg	06	41	21.3	+0.1
FDMO				S		Sg	06	41	26.2	+1.4
FDMO				AML		AML				
	comp=E,478μm,0.3s									
FDMO				AML		AML				
	comp=N,578μm,0.3s									
FDMO				AML		AML				
	comp=E,534μm,0.2s									
RM33	**Pellescritta (**	**0.28**	**182**	P		Pb	06	41	22.5	-0.7
RM33				S		Sb	06	41	27.3	-0.8
RM33				AML		AML				
	comp=E,484μm,0.3s									
RM33				AML		AML				
	comp=N,575μm,0.4s									
GUMA	**Gualdo di Mace**	**0.28**	**16**	eP		Pb	06	41	22.5	-0.7
GUMA				S		Sb	06	41	27.6	-0.6
GUMA				AML		AML				
	comp=E,3110μm,0.3s									
GUMA				AML		AML				
	comp=N,2215μm,0.4s									
GUMA				AML		AML				
	comp=E,3650μm,0.3s									
GUMA				AML		AML				
	comp=N,2215μm,0.4s									
GUMA				AML		AML				
	comp=E,3115μm,0.3s									
GUMA				AML		AML				
	comp=N,1675μm,0.3s									
CAMP	**Campotosto**	**0.29**	**152**	P		Pb	06	41	22.5	-0.8
CAMP				S		Sb	06	41	26.9	-1.4
CAMP				AML		AML				
	comp=E,152μm,0.6s									
CAMP				AML		AML				
	comp=N,238μm,0.5s									
CSP1	**Cessapalombo**	**0.30**	**357**	eP		Pg	06	41	22.5	+0.6
CSP1				S		Sg	06	41	27.1	+1.2
CSP1				AML		AML				
	comp=E,610μm,0.6s									
CSP1				AML		AML				
	comp=N,1105μm,0.3s									
CSP1				AML		AML				
	comp=E,612μm,0.6s									
CSP1				AML		AML				
	comp=N,1104μm,0.3s									
CESI	**CESI - Serrava**	**0.32**	**312**	eP		Pg	06	41	22.9	+0.7
CESI				S		Sg	06	41	27.8	+1.3
CESI				AML		AML				
	comp=E,264μm,0.2s									
CESI				AML		AML				
	comp=N,506μm,0.5s									
CESI				AML		AML				
	comp=N,506μm,0.5s									
TERO	**Teramo**	**0.32**	**121**	iP		Pg	06	41	22.7	+0.5
TERO				S		Sg	06	41	27.8	+1.3
TERO				AML		AML				
	comp=E,716μm,0.1s									
TERO				AML		AML				
	comp=N,768μm,0.9s									
TERO				AML		AML				
	comp=N,768μm,0.9s									
TERO				AML		AML				
	comp=E,716μm,0.1s									
OFFI	**Offida**	**0.36**	**66**	eP		Pb	06	41	24.7	+0.1
OFFI				S		Sb	06	41	31.5	+1.0
OFFI				AML		AML				
	comp=N,620μm,1.0s									
OFFI				AML		AML				
	comp=N,621μm,1.0s									
OFFI				AML		AML				
	comp=E,628μm,0.5s									
GIGS	**Gran Sasso**	**0.42**	**144**	AML		AML				
	comp=E,48μm,1.6s									
GIGS				AML		AML				
	comp=N,48μm,0.3s									
ASSB	**Assisi San Ben**	**0.49**	**301**	eP		Pg	06	41	25.9	+0.5
ASSB				S		Sb	06	41	33.3	-0.8
ASSB				AML		AML				
	comp=N,333μm,0.3s									
ASSB				AML		AML				
	comp=E,331μm,0.2s									
SNTG	**Esanatoglia**	**0.51**	**336**	eP		Pg	06	41	26.2	+0.5
SNTG				S		Sb	06	41	34.2	-0.5
SNTG				AML		AML				
	comp=E,149μm,0.7s									
SNTG				AML		AML				
	comp=N,184μm,0.7s									
CESX	**Cesi**	**0.51**	**250**	eP		Pb	06	41	26.6	-0.4
CESX				AML		AML				
	comp=N,142μm,0.3s									
CESX				AML		AML				
	comp=E,137μm,0.4s									
ATCC	**AVT- Casa Cast**	**0.59**	**313**	eP		Pb	06	41	27.8	-0.6
ATCC				S		Sb	06	41	36.7	-0.1
FOSV	**Fossato di Vic**	**0.61**	**326**	eP		Pg	06	41	28.1	+0.4
FOSV				S		Sb	06	41	37.3	-0.3
FOSV				AML		AML				
	comp=E,223μm,0.3s									
FOSV				AML		AML				
	comp=N,13175μm,0.6s									
T0110	**Collepietro**	**0.69**	**144**	⇓P		Pb	06	41	29.9	-0.3
MPAG	**Monte Paganucc**	**0.91**	**338**	eP		Pb	06	41	34.1	+0.2
MPAG				S		Sb	06	41	46.5	+0.3
MA9	**Marino**	**1.10**	**203**	S		Sb	06	41	52.0	+0.3
PESA	**Pesaro**	**1.19**	**346**	S		Sn	06	41	58.0	+3.0
PTRJ	**Pietraroja**	**1.72**	**145**	S		Sg	06	42	14.0	+2.8
VITU	**Vitulano (BN)**	**1.92**	**146**	S		Sn	06	42	14.0	+0.9
SGRT	**San Giovanni R**	**2.13**	**118**	P		Pg	06	41	55.9	-0.8

ROM 24 06:42:10.6±0.1, 42°.806N±0°.008×13°.16E±0°.02, h7km, ML1.9/2, 1C, Error ellipse: s-maj=1.7km s-min=0.1km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
NRCA	**Norcia**	**0.04**	**310**	iP		Pg	06	42	12.6	+0.3
NRCA				S		Sg	06	42	13.1	-0.2
FEMA	**Monte Fema**	**0.18**	**333**	eP		Pg	06	42	15.1	+0.8
FEMA				S		Sg	06	42	18.2	+1.5
FDMO	**Fiordimonte**	**0.24**	**347**	eP		Pg	06	42	16.1	+0.8
FDMO				S		Sg	06	42	19.8	+1.3
CESI	**CESI - Serrava**	**0.27**	**317**	eP		Pb	06	42	17.5	-0.4
CESI				S		Sb	06	42	21.4	-1.4
RM33	**Pellescritta (**	**0.30**	**172**	eP		Pg	06	42	17.3	+0.8
RM33				S		Sb	06	42	23.0	-0.5
CAMP	**Campotosto**	**0.33**	**146**	eP		Pg	06	42	17.2	+0.2
CAMP				S		Sb	06	42	23.9	-0.4
ASSB	**Assisi San Ben**	**0.44**	**303**	eP		Pg	06	42	19.9	+0.8
ASSB				S		Sb	06	42	26.6	-0.9
ASSB				AML		AML				
	comp=E,164μm,0.7s									
ASSB				AML		AML				
	comp=N,146μm,0.8s									
EL6	**Elcito**	**0.53**	**355**	eP		Pg	06	42	21.3	+0.6
EL6				S		Sb	06	42	29.7	-0.4
EL6				AML		AML				
	comp=E,205μm,0.3s									
EL6				AML		AML				
	comp=N,202μm,0.2s									

ROM 24 06:42:38.0±0.2, 42°.58N±0°.01×13°.242E±0°.009, h17km±1km, ML2.4/3, 1C, Error ellipse: s-maj=1.0km s-min=0.7km az=359.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
RM33	**Pellescritta (**	**0.07**	**197**	P		Pg	06	42	41.6	+0.2
RM33				S		Sg	06	42	44.1	+0.6
RM33				AML		AML				
	comp=E,3955μm,0.4s									
RM33				AML		AML				
	comp=N,3415μm,0.4s									
RM33				AML		AML				
	comp=E,3875μm,0.4s									
RM33				AML		AML				
	comp=N,3485μm,0.4s									
CAMP	**Campotosto**	**0.13**	**108**	eP		Pb	06	42	42.1	0.0
CAMP				S		Sb	06	42	44.8	-0.1
CAMP				AML		AML				
	comp=E,410μm,0.7s									
CAMP				AML		AML				
	comp=N,525μm,0.2s									
AQU	**L'Aquila**	**0.25**	**152**	AML		AML				
	comp=E,331μm,1.1s									
AQU				AML		AML				
	comp=N,390μm,1.6s									
AQU				AML		AML				
	comp=E,284μm,1.1s									
AQU				AML		AML				
	comp=N,342μm,1.6s									
TERO	**Teramo**	**0.27**	**80**	iP		Pg	06	42	43.6	-0.4
TERO				S		Sg	06	42	47.6	-0.5
TERO				AML		AML				
	comp=E,1027μm,1.1s									
TERO				AML		AML				
	comp=E,1026μm,1.1s									
TERO				AML		AML				
	comp=N,1205μm,0.6s									
GIGS	**Gran Sasso**	**0.27**	**117**	P		Pg	06	42	44.2	+0.1
GIGS				S		Sb	06	42	48.9	-0.1
GIGS				AML		AML				
	comp=E,133μm,1.6s									
GIGS				AML		AML				
	comp=N,86μm,0.1s									
NRCA	**Norcia**	**0.27**	**340**	P		Pg	06	42	43.9	-0.2
NRCA				S		Sb	06	42	48.9	-0.1
NRCA				AML		AML				
	comp=E,10210μm,0.1s									
NRCA				AML		AML				
	comp=N,13900μm,0.1s									
NRCA				AML		AML				
	comp=E,10900μm,0.1s									
NRCA				AML		AML				
	comp=N,15250μm,0.1s									
NRCA				AML		AML				
	comp=N,4726μm,1.0s									
NRCA				AML		AML				
	comp=E,6173μm,0.1s									
NRCA				AML		AML				
	comp=N,5282μm,1.0s									
ARRO	**Arrone**	**0.35**	**271**	eP		Pg	06	42	45.4	+0.1
ARRO				S		Sg	06	42	50.5	+0.2
ARRO				AML		AML				
	comp=E,304μm,0.2s									
ARRO				AML		AML				
	comp=N,366μm,0.2s									
ARRO				AML		AML				
	comp=E,304μm,0.2s									
FAGN	**Fagnano**	**0.40**	**141**	P		Pb	06	42	47.2	+0.5
FAGN				AML		AML				
	comp=E,320μm,0.4s									
FAGN				AML		AML				
	comp=N,408μm,0.5s									
FDMO	**Fiordimonte**	**0.47**	**346**	AML		AML				
	comp=E,229μm,0.4s									
FDMO				AML		AML				
	comp=N,284μm,0.6s									
VCEL	**Villa Celiera**	**0.48**	**112**	P		Pb	06	42	48.2	+0.1
VCEL				AML		AML				
	comp=E,444μm,1.5s									
VCEL				AML		AML				
	comp=N,424μm,1.4s									
OFFI	**Offida**	**0.48**	**42**	eP		Pg	06	42	47.8	+0.1
OFFI				S		Sb	06	42	55.9	+1.0
OFFI				AML		AML				
	comp=E,839μm,1.9s									
CESX	**Cesi**	**0.49**	**274**	P		Pg	06	42	47.9	0.0

CESX				S	Sb	06 42 54.9	-0.2
T0110	**Collepietro**	**0.53**	**131**	AML	AML		
	comp=E,248μm,0.3s						
T0110				AML	AML		
	comp=N,286μm,1.3s						
CERT	**Cerreto**	**0.66**	**197**	AML	AML		
	comp=N,106μm,1.5s						
CERT				AML	AML		
	comp=E,118μm,0.4s						
MTCE	**Montecelio**	**0.67**	**214**	AML	AML		
	comp=E,83μm,0.4s						
MTCE				AML	AML		
	comp=N,59μm,0.8s						
VVLD	**Villa Vallelon**	**0.76**	**158**	AML	AML		
	comp=E,39μm,1.6s						
VVLD				AML	AML		
	comp=N,42μm,1.5s						
GUAR	**Guarcino**	**0.78**	**176**	AML	AML		
	comp=N,93μm,1.4s						
GUAR				AML	AML		
	comp=E,79μm,1.0s						

ROM 24 06:43:17.1±0.1, 42°.802N±0°.004×13°.25E±0°.01, h10km, ML1.8/5, 2C, Error ellipse: s-maj=1.2km s-min=0.5km az=261.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**288**	P	Pg	06 43 20.3	+0.5
NRCA				S	Sg	06 43 22.4	+0.7
FEMA	**Monte Fema**	**0.21**	**318**	*e*P	Pb	06 43 22.5	-0.6
FEMA				S	Sg	06 43 25.4	+0.7
FDMO	**Fiordimonte**	**0.26**	**334**	*e*P	Pb	06 43 23.2	-0.7
FDMO				AML	AML		
	comp=E,912μm,0.6s						
FDMO				AML	AML		
	comp=N,854μm,0.2s						
FDMO				AML	AML		
	comp=E,163μm,0.2s						
FDMO				AML	AML		
	comp=N,128μm,0.5s						
GUMA	**Gualdo di Mace**	**0.27**	**14**	*e*P	Pb	06 43 23.7	-0.3
GUMA				S	Sb	06 43 27.9	-0.7
CSP1	**Cessapalombo**	**0.29**	**354**	*e*P	Pb	06 43 23.7	-0.7
CSP1				S	Sb	06 43 28.3	-1.1
CSP1				AML	AML		
	comp=E,225μm,0.4s						
CSP1				AML	AML		
	comp=N,195μm,0.2s						
CAMP	**Campotosto**	**0.29**	**156**	P	Pg	06 43 23.5	+0.5
CAMP				S	Sg	06 43 28.1	+1.2
RM33	**Pellescritta (**	**0.29**	**185**	*e*P	Pg	06 43 23.6	+0.6
RM33				S	Sb	06 43 28.6	-0.8
RM33				AML	AML		
	comp=E,3255μm,0.8s						
RM33				AML	AML		
	comp=N,2245μm,0.7s						
RM33				AML	AML		
	comp=E,3110μm,0.8s						
RM33				AML	AML		
	comp=N,2200μm,0.2s						
RM33				AML	AML		
	comp=E,392μm,0.4s						
RM33				AML	AML		
	comp=E,339μm,0.2s						
RM33				AML	AML		
	comp=N,248μm,0.1s						
RM33				AML	AML		
	comp=N,237μm,0.1s						
TERO	**Teramo**	**0.32**	**124**	*e*P	Pg	06 43 24.1	+0.6
TERO				S	Sb	06 43 29.2	-0.9
TERO				AML	AML		
	comp=E,630μm,0.6s						
TERO				AML	AML		
	comp=N,646μm,0.9s						
TERO				AML	AML		
	comp=E,359μm,0.2s						
TERO				AML	AML		
	comp=N,431μm,0.1s						
CESI	**CESI - Serrava**	**0.32**	**309**	⇑P	Pg	06 43 23.9	+0.3
CESI				AML	AML		
	comp=E,992μm,0.2s						
CESI				AML	AML		
	comp=N,1810μm,0.3s						
CESI				AML	AML		
	comp=N,247μm,0.2s						
CESI				AML	AML		
	comp=E,184μm,0.2s						
PP3	**Marolino**	**0.63**	**25**	⇑P	Pg	06 43 28.5	-0.9

ROM 24 06:43:32.8±0.1, 42°.626N±0°.006×13°.288E±0°.007, h6km±1km, ML1.8/5, 2C, Error ellipse: s-maj=0.6km s-min=0.6km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.13**	**135**	P	Pg	06 43 36.0	+0.5
CAMP				S	Sg	06 43 38.6	+1.3
CAMP				AML	AML		
	comp=E,332μm,0.9s						
CAMP				AML	AML		
	comp=N,372μm,0.4s						
RM33	**Pellescritta (**	**0.13**	**205**	⇑*i*P	Pg	06 43 36.0	+0.5
RM33				S	Sg	06 43 38.2	+0.8
RM33				AML	AML		
	comp=E,3260μm,0.8s						
RM33				AML	AML		
	comp=N,2250μm,0.7s						
RM33				AML	AML		
	comp=E,3105μm,0.8s						
RM33				AML	AML		
	comp=N,2200μm,0.2s						
TERO	**Teramo**	**0.23**	**91**	⇑*i*P	Pg	06 43 38.1	+0.7
TERO				S	Sg	06 43 41.9	+1.4
TERO				AML	AML		
	comp=E,630μm,0.6s						
TERO				AML	AML		
	comp=E,630μm,0.6s						
TERO				AML	AML		
	comp=N,646μm,0.9s						
NRCA	**Norcia**	**0.24**	**328**	P	Pg	06 43 38.3	+0.7
NRCA				S	Sg	06 43 42.4	+1.5
NRCA				AML	AML		
	comp=E,10210μm,0.1s						
NRCA				AML	AML		
	comp=N,13950μm,0.1s						
NRCA				AML	AML		
	comp=E,10900μm,0.1s						
NRCA				AML	AML		
	comp=N,15250μm,0.1s						
GIGS	**Gran Sasso**	**0.27**	**130**	*e*P	Pg	06 43 39.0	+0.9
GIGS				S	Sg	06 43 42.5	+0.8
GIGS				AML	AML		
	comp=E,81μm,1.3s						
GIGS				AML	AML		
	comp=E,80μm,1.3s						
GIGS				AML	AML		
	comp=N,68μm,0.7s						
ARRO	**Arrone**	**0.39**	**263**	AML	AML		
	comp=E,165μm,0.2s						
ARRO				AML	AML		
	comp=N,183μm,0.2s						
OFFI	**Offida**	**0.43**	**43**	*e*P	Pb	06 43 42.7	0.0
OFFI				S	Sb	06 43 50.0	+0.7
FDMO	**Fiordimonte**	**0.44**	**340**	*e*P	Pb	06 43 42.2	-0.7
FDMO				S	Sb	06 43 48.6	-1.0
FDMO				AML	AML		
	comp=E,912μm,0.6s						
FDMO				AML	AML		
	comp=N,854μm,0.2s						
FDMO				AML	AML		
	comp=N,854μm,0.2s						
CSP1	**Cessapalombo**	**0.47**	**353**	*e*P	Pb	06 43 42.9	-0.6
CSP1				S	Sb	06 43 49.9	-0.8
CSP1				AML	AML		
	comp=N,1472μm,0.3s						
CSP1				AML	AML		
	comp=E,1440μm,0.2s						
CSP1				AML	AML		
	comp=N,1469μm,0.3s						
CSP1				AML	AML		
	comp=N,177μm,0.4s						
CESI	**CESI - Serrava**	**0.47**	**323**	*e*P	Pg	06 43 42.6	+0.7
CESI				S	Sb	06 43 50.2	-0.5
CESI				AML	AML		
	comp=E,669μm,0.2s						
CESI				AML	AML		
	comp=N,1220μm,0.3s						
CESI				AML	AML		
	comp=E,670μm,0.2s						
CESI				AML	AML		
	comp=N,118μm,0.1s						
CESI				AML	AML		
	comp=E,46μm,0.1s						

ROM 24 06:44:01.8±0.1, 42°.792N±0°.004×13°.155E±0°.009, h8km, ML2.1/15, 3C-5D, Error ellipse: s-maj=0.7km s-min=0.1km az=66.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**324**	⇑*i*P	Pg	06 44 04.2	+0.6
NRCA				S	Sg	06 44 05.2	+0.4
NRCA				AML	AML		
	comp=N,15500μm,0.7s						
NRCA				AML	AML		
	comp=E,24400μm,0.5s						
NRCA				AML	AML		
	comp=E,21800μm,0.5s						
NRCA				AML	AML		
	comp=N,15500μm,0.7s						
NRCA				AML	AML		
	comp=N,17000μm,0.7s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,23813μm,0.2s						
NRCA				AML	AML		
	comp=N,14634μm,0.1s						
NRCA				AML	AML		
	comp=E,21334μm,0.2s						
NRCA				AML	AML		
	comp=N,16145μm,0.1s						
FEMA	**Monte Fema**	**0.19**	**336**	*e*P	Pg	06 44 06.4	+0.8
FEMA				S	Sg	06 44 09.3	+0.9
FDMO	**Fiordimonte**	**0.25**	**348**	*e*P	Pg	06 44 07.5	+0.8
FDMO				S	Sg	06 44 11.3	+1.1
FDMO				AML	AML		
	comp=E,912μm,0.6s						
FDMO				AML	AML		
	comp=N,854μm,0.2s						
FDMO				AML	AML		
	comp=N,854μm,0.2s						
CESI	**CESI - Serrava**	**0.28**	**319**	⇓*i*P	Pg	06 44 08.1	+0.7
CESI				S	Sg	06 44 12.4	+1.3
CESI				AML	AML		
	comp=N,1810μm,0.3s						
CESI				AML	AML		
	comp=E,992μm,0.2s						
RM33	**Pellescritta (**	**0.29**	**171**	*e*P	Pb	06 44 08.6	-0.7
RM33				S	Sb	06 44 13.3	-0.9
RM33				AML	AML		
	comp=N,580μm,0.3s						
RM33				AML	AML		
	comp=E,726μm,0.2s						
RM33				AML	AML		
	comp=N,580μm,0.3s						
RM33				AML	AML		
	comp=E,726μm,0.2s						
CSP1	**Cessapalombo**	**0.30**	**7**	⇑*e*P	Pg	06 44 08.5	+0.7
CSP1				S	Sb	06 44 13.3	-1.4
CSP1				AML	AML		
	comp=E,1440μm,0.2s						
CSP1				AML	AML		
	comp=N,1475μm,0.3s						
CSP1				AML	AML		
	comp=N,1472μm,0.3s						
GUMA	**Gualdo di Mace**	**0.30**	**26**	⇑*e*P	Pb	06 44 08.8	-0.7
GUMA				S	Sb	06 44 13.9	-0.8
GUMA				AML	AML		
	comp=N,1345μm,0.5s						
GUMA				AML	AML		
	comp=E,1534μm,1.5s						
GUMA				AML	AML		
	comp=N,1610μm,0.3s						
GUMA				AML	AML		
	comp=E,2110μm,0.3s						
CAMP	**Campotosto**	**0.32**	**144**	⇓*e*P	Pg	06 44 08.9	+0.8
CAMP				S	Sb	06 44 13.8	-1.3
CAMP				AML	AML		
	comp=E,253μm,0.4s						
CAMP				AML	AML		
	comp=N,353μm,0.3s						
CAMP				AML	AML		
	comp=E,258μm,0.6s						
CAMP				AML	AML		
	comp=E,253μm,0.4s						
ARRO	**Arrone**	**0.36**	**234**	*e*P	Pb	06 44 09.6	-0.8
ARRO				AML	AML		
	comp=E,303μm,1.1s						
ARRO				AML	AML		
	comp=N,238μm,0.2s						
ARRO				AML	AML		
	comp=N,238μm,0.2s						
TERO	**Teramo**	**0.37**	**117**	*e*P	Pg	06 44 09.6	+0.6
TERO				S	Sb	06 44 15.6	-1.0
TERO				AML	AML		
	comp=N,510μm,0.7s						
TERO				AML	AML		
	comp=N,611μm,0.1s						
TERO				AML	AML		
	comp=N,414μm,0.1s						
TERO				AML	AML		
	comp=E,507μm,0.1s						
OFFI	**Offida**	**0.42**	**70**	*e*P	Pb	06 44 11.5	+0.1
ASSB	**Assisi San Ben**	**0.44**	**305**	⇓*e*P	Pg	06 44 10.8	+0.4
ASSB				S	Sg	06 44 17.2	+1.0
ASSB				AML	AML		
	comp=E,368μm,1.4s						
ASSB				AML	AML		
	comp=N,510μm,1.3s						
GIGS	**Gran Sasso**	**0.46**	**138**	*e*P	Pg	06 44 11.0	+0.4
GIGS				S	Sg	06 44 17.8	+1.1
GIGS				AML	AML		
	comp=E,73μm,1.3s						
GIGS				AML	AML		
	comp=N,68μm,0.7s						
GIGS				AML	AML		
	comp=E,73μm,1.0s						
GIGS				AML	AML		
	comp=E,66μm,0.1s						
SNTG	**Esanatoglia**	**0.49**	**341**	*e*P	Pg	06 44 11.7	+0.5
SNTG				S	Sb	06 44 19.0	-1.0
SNTG				AML	AML		
	comp=N,219μm,0.3s						
SNTG				AML	AML		
	comp=E,224μm,1.6s						
SNTG				AML	AML		
	comp=N,220μm,0.3s						
SNTG				AML	AML		
	comp=E,223μm,1.6s						
FIAM	**Fiamignano**	**0.52**	**183**	*e*P	Pg	06 44 12.3	+0.4
FIAM				S	Sb	06 44 20.5	-0.6
ATCC	**AVT- Casa Cast**	**0.55**	**316**	⇓*e*P	Pg	06 44 12.7	+0.4
ATCC				S	Sb	06 44 21.1	-0.6
ATCC				AML	AML		
	comp=E,358μm,1.4s						
ATCC				AML	AML		
	comp=N,310μm,1.1s						
VCEL	**Villa Celiera**	**0.64**	**128**	*e*P	Pb	06 44 15.2	-0.1
MURB	**Monte Urbino**	**0.66**	**316**	P	Pg	06 44 14.9	+0.4
MURB				S	Sb	06 44 25.1	+0.1
MURB				AML	AML		
	comp=E,332μm,1.4s						
MURB				AML	AML		
	comp=N,417μm,1.0s						
MURB				AML	AML		
	comp=E,451μm,0.2s						
MURB				AML	AML		
	comp=N,565μm,0.8s						
MURB				AML	AML		
	comp=N,413μm,0.2s						
MURB				AML	AML		
	comp=E,308μm,0.3s						
ARVD	**Arcevia**	**0.72**	**348**	*e*P	Pg	06 44 15.9	+0.3
ARVD				S	Sb	06 44 27.0	+0.3
T0110	**Collepietro**	**0.73**	**141**	*e*P	Pg	06 44 16.3	+0.5
MGAB	**Montegabbione**	**0.78**	**279**	*e*P	Pb	06 44 17.8	+0.2
ATVO	**AVT- Monte Val**	**0.81**	**317**	*e*P	Pg	06 44 17.4	+0.2
ATVO				AML	AML		
	comp=E,79μm,1.2s						
ATVO				AML	AML		
	comp=N,86μm,1.4s						
ATVO				AML	AML		
	comp=N,47μm,0.7s						
ATVO				AML	AML		
	comp=E,46μm,0.5s						
ATPI	**Pietralunga -**	**0.86**	**320**	*e*P	Pg	06 44 18.4	+0.2
PIEI	**Pieia**	**0.87**	**329**	*e*P	Pg	06 44 18.2	-0.3
PIEI				S	Sb	06 44 31.7	+0.7
MPAG	**Monte Paganucc**	**0.89**	**341**	*e*P	Pg	06 44 19.0	+0.2
MPAG				AML	AML		
	comp=E,131μm,0.4s						
MPAG				AML	AML		
	comp=N,94μm,0.3s						
MPAG				AML	AML		
	comp=N,94μm,0.3s						
MPAG				AML	AML		
	comp=E,130μm,0.4s						
FSSB	**Fossombrone**	**0.94**	**343**	*e*P	Pg	06 44 19.9	0.0
FSSB				S	Sn	06 44 34.8	-0.2
FSSB				AML	AML		
	comp=N,256μm,0.4s						
FSSB				AML	AML		
	comp=E,208μm,0.4s						
OVO	**Vesuviano**	**2.17**	**154**	⇓P	Pb	06 44 40.6	-0.7
MGR	**Morigerati**	**3.21**	**145**	P	Pb	06 44 55.8	-3.1

ROM 24 06:44:51.4±0.1, 42°.784N±0°.007×13°.19E±0°.01, h10km, ML2.0/8, 2C, Error ellipse: s-maj=1.0km s-min=0.3km az=231.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**312**	⇑*i*P	Pg	06 44 54.2	+0.4
NRCA				S	Sg	06 44 55.7	+0.3
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,7670μm,0.1s						
NRCA				AML	AML		
	comp=E,7268μm,0.1s						
NRCA				AML	AML		
	comp=N,5718μm,0.2s						
NRCA				AML	AML		
	comp=N,4752μm,0.1s						
FDMO	**Fiordimonte**	**0.26**	**344**	*e*P	Pg	06 44 57.4	+0.6
FDMO				S	Sg	06 45 01.6	+1.2
FDMO				AML	AML		
	comp=E,2290μm,0.7s						
FDMO				AML	AML		
	comp=N,3030μm,0.3s						
FDMO				AML	AML		
	comp=N,395μm,0.2s						
FDMO				AML	AML		
	comp=E,263μm,0.5s						
CESI	**CESI - Serrava**	**0.30**	**317**	*e*P	Pg	06 44 58.3	+0.7
CESI				S	Sg	06 45 02.8	+1.1
CESI				AML	AML		
	comp=E,2440μm,0.3s						
CESI				AML	AML		
	comp=N,4055μm,0.3s						
CESI				AML	AML		
	comp=E,528μm,0.2s						
CESI				AML	AML		
	comp=N,1242μm,0.3s						
CSP1	**Cessapalombo**	**0.31**	**2**	*e*P	Pg	06 44 58.2	+0.6
CSP1				S	Sb	06 45 03.2	-1.1
CSP1				AML	AML		
	comp=E,2650μm,1.4s						
CSP1				AML	AML		
	comp=N,2480μm,0.4s						
CSP1				AML	AML		
	comp=E,2620μm,1.4s						
CSP1				AML	AML		
	comp=N,323μm,0.3s						
CSP1				AML	AML		
	comp=E,297μm,0.2s						
TERO	**Teramo**	**0.34**	**118**	⇑*i*P	Pg	06 44 58.5	+0.2
TERO				S	Sg	06 45 03.7	+0.8
TERO				AML	AML		
	comp=N,962μm,0.5s						
TERO				AML	AML		
	comp=E,842μm,0.7s						
TERO				AML	AML		
	comp=N,962μm,0.5s						
TERO				AML	AML		
	comp=E,401μm,0.1s						
TERO				AML	AML		
	comp=N,611μm,0.1s						
ARRO	**Arrone**	**0.37**	**237**	*e*P	Pb	06 45 00.1	-0.1
ARRO				S	Sb	06 45 05.6	-0.5
ARRO				AML	AML		
	comp=E,426μm,0.7s						
ARRO				AML	AML		
	comp=N,583μm,1.1s						
ARRO				AML	AML		
	comp=E,209μm,0.2s						
ARRO				AML	AML		
	comp=N,173μm,0.2s						
OFFI	**Offida**	**0.40**	**67**	*e*P	Pb	06 45 00.4	-0.2
OFFI				S	Sb	06 45 07.7	+0.9
OFFI				AML	AML		
	comp=E,1720μm,0.4s						
OFFI				AML	AML		
	comp=N,1680μm,0.5s						
GIGS	**Gran Sasso**	**0.44**	**140**	P	Pg	06 45 00.3	+0.3
GIGS				S	Sg	06 45 06.7	+0.9
GIGS				AML	AML		
	comp=E,107μm,0.3s						
GIGS				AML	AML		
	comp=N,83μm,0.2s						
GIGS				AML	AML		
	comp=N,144μm,1.5s						
GIGS				AML	AML		
	comp=E,156μm,1.1s						
ASSB	**Assisi San Ben**	**0.47**	**304**	*e*P	Pg	06 45 01.1	+0.5
ASSB				S	Sb	06 45 08.2	-0.7
ASSB				AML	AML		
	comp=E,676μm,0.5s						
ASSB				AML	AML		
	comp=N,850μm,0.3s						
SNTG	**Esanatoglia**	**0.51**	**339**	*e*P	Pg	06 45 01.6	+0.4
SNTG				S	Sb	06 45 09.6	-0.4
SNTG				AML	AML		
	comp=E,550μm,0.6s						
SNTG				AML	AML		
	comp=N,730μm,0.5s						
SNTG				AML	AML		
	comp=E,549μm,0.6s						
VCEL	**Villa Celiera**	**0.62**	**129**	*e*P	Pg	06 45 03.5	+0.1
VCEL				S	Sb	06 45 13.3	0.0
VCEL				AML	AML		
	comp=N,456μm,1.5s						
VCEL				AML	AML		
	comp=E,478μm,0.3s						
T0110	**Collepietro**	**0.71**	**142**	*e*P	Pg	06 45 05.0	-0.2
T0110				S	Sb	06 45 15.8	+0.1
T0110				AML	AML		
	comp=N,357μm,0.3s						
T0110				AML	AML		
	comp=E,416μm,0.4s						
T0110				AML	AML		
	comp=N,358μm,0.3s						
INTR	**Introdacqua**	**0.94**	**145**	AML	AML		
	comp=E,118μm,0.5s						
INTR				AML	AML		
	comp=N,200μm,0.4s						
VIVA	**Pratoni del Vi**	**1.08**	**197**	AML	AML		
	comp=E,494μm,0.1s						
VIVA				AML	AML		
	comp=N,462μm,0.6s						

ROM 24 06:45:10.0±0.1, 42°.812N±0°.003×13°.153E±0°.005, h7km, ML2.5/8, 1D, Error ellipse: s-maj=0.5km s-min=0.1km az=64.0, Central Italy

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

NRCA	**Norcia**	**0.04**	**307**	P	Pg	06 45 11.8 +0.2
NRCA				S	Sg	06 45 12.4 -0.3
NRCA				AML	AML	
NRCA				AML	AML	
NRCA				AML	AML	
NRCA				AML	AML	
FEMA	**Monte Fema**	**0.17**	**333**	P	Pg	06 45 14.5 +0.9
FEMA				S	Sg	06 45 17.3 +1.3
FDMO	**Fiordimonte**	**0.23**	**348**	P	Pg	06 45 15.5 +0.8
FDMO				S	Sg	06 45 19.1 +1.3
FDMO				AML	AML	
	comp=E,2290µm,0.7s					
FDMO				AML	AML	
	comp=N,3030µm,0.3s					
CESI	**CESI - Serrava**	**0.27**	**317**	P	Pg	06 45 16.1 +0.8
CESI				S	Sg	06 45 20.4 +1.5
CESI				AML	AML	
	comp=E,2440µm,0.3s					
CESI				AML	AML	
	comp=N,4055µm,0.3s					
CSP1	**Cessapalombo**	**0.28**	**8**	P	Pg	06 45 16.4 +0.8
CSP1				S	Sb	06 45 21.2 -1.3
CSP1				AML	AML	
	comp=E,2650µm,1.4s					
CSP1				AML	AML	
	comp=N,2480µm,0.4s					
CSP1				AML	AML	
	comp=E,2620µm,1.4s					
CSP1				AML	AML	
	comp=N,2475µm,0.4s					
CSP1				AML	AML	
	comp=E,2635µm,1.4s					
GUMA	**Gualdo di Mace**	**0.28**	**28**	P	Pb	06 45 16.7 -0.8
GUMA				S	Sb	06 45 21.4 -1.0
GUMA				AML	AML	
	comp=N,6170µm,0.3s					
GUMA				AML	AML	
	comp=E,7820µm,0.4s					
GUMA				AML	AML	
	comp=N,6980µm,0.4s					
GUMA				AML	AML	
	comp=E,6390µm,0.4s					
RM33	**Pellescritta (**	**0.31**	**171**	P	Pb	06 45 17.3 -0.5
RM33				AML	AML	
	comp=E,1530µm,0.8s					
RM33				AML	AML	
	comp=N,1440µm,0.7s					
CAMP	**Campotosto**	**0.33**	**146**	P	Pg	06 45 17.3 +0.6
CAMP				S	Sb	06 45 23.2 -0.7
SEF1	**Sefro**	**0.37**	**336**	P	Pg	06 45 17.9 +0.7
SEF1				S	Sb	06 45 24.0 -0.9
ARRO	**Arrone**	**0.37**	**231**	P	Pg	06 45 17.8 +0.6
TERO	**Teramo**	**0.38**	**119**	P	Pb	06 45 18.4 -0.8
TERO				S	Sb	06 45 24.5 -0.7
OFFI	**Offida**	**0.41**	**72**	P	Pg	06 45 18.6 +0.6
ASSB	**Assisi San Ben**	**0.43**	**303**	P	Pg	06 45 19.0 +0.6
ASSB				S	Sb	06 45 25.7 -1.0
ASSB				AML	AML	
	comp=E,676µm,0.5s					
ASSB				AML	AML	
	comp=N,850µm,0.3s					
CESX	**Cesi**	**0.47**	**245**	P	Pb	06 45 20.2 -0.4
SNTG	**Esanatoglia**	**0.47**	**341**	P	Pg	06 45 19.9 +0.7
SNTG				S	Sb	06 45 27.1 -0.7
SNTG				AML	AML	
	comp=E,550µm,0.6s					
SNTG				AML	AML	
	comp=N,730µm,0.5s					
SNTG				AML	AML	
	comp=E,549µm,0.6s					
EL6	**Elcito**	**0.52**	**356**	P	Pg	06 45 20.5 +0.4
EL6				S	Sb	06 45 28.6 -0.6
ATCC	**AVT- Casa Cast**	**0.53**	**315**	P	Pg	06 45 21.0 +0.7
ATCC				S	Sb	06 45 29.3 -0.3
FIAM	**Fiamignano**	**0.54**	**183**	P	Pb	06 45 21.4 -0.5
FIAM				S	Sb	06 45 29.6 -0.4
FIAM				AML	AML	
	comp=N,500µm,0.8s					
FIAM				AML	AML	
	comp=E,628µm,1.0s					
FOSV	**Fossato di Vic**	**0.56**	**329**	P	Pg	06 45 21.6 +0.7
FOSV				S	Sb	06 45 30.3 -0.2
FOSV				AML	AML	
	comp=N,628µm,0.3s					
FOSV				AML	AML	
	comp=E,684µm,0.4s					
MURB	**Monte Urbino**	**0.65**	**315**	P	Pb	06 45 23.4 -0.3
MURB				S	Sb	06 45 33.0 +0.1
MURB				AML	AML	
	comp=N,786µm,0.3s					
MURB				AML	AML	
	comp=E,829µm,0.3s					
T0110	**Collepietro**	**0.75**	**141**	P	Pg	06 45 24.8 +0.4
T0110				AML	AML	
	comp=E,416µm,0.4s					
T0110				AML	AML	
	comp=N,357µm,0.3s					
T0110				AML	AML	
	comp=N,358µm,0.3s					
MGAB	**Montegabbione**	**0.77**	**278**	P	Pg	06 45 25.2 +0.3
MPAG	**Monte Paganucc**	**0.87**	**341**	S	Sn	06 45 41.0 -0.7
NARO	**Abbazia di Nar**	**0.90**	**333**	P	Pg	06 45 27.5 +0.1
NARO				AML	AML	
	comp=N,114µm,0.4s					
NARO				AML	AML	
	comp=E,112µm,1.5s					
PTRJ	**Pietraroja**	**1.77**	**144**	⇓P	Pb	06 45 43.4 +0.5

ROM 24 06:45:24.4±0.1, 42°.729N±0°.005×13°.16E±0°.01, h10km, ML2.2/6, 1D, Error ellipse: s-maj=1.2km s-min=0.3km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**343**	⇓*i*P	Pg	06 45 27.7	+0.4
NRCA				S	Sg	06 45 29.8	+0.5
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
RM33	**Pellescritta (**	**0.22**	**169**	P	Pg	06 45 29.9	+0.7
RM33				S	Sg	06 45 33.8	+1.5
RM33				AML	AML		
	comp=E,1530µm,0.8s						
RM33				AML	AML		
	comp=N,1440µm,0.7s						
FEMA	**Monte Fema**	**0.25**	**341**	*e*P	Pg	06 45 30.1	+0.5
FEMA				S	Sg	06 45 34.0	+1.0
FDMO	**Fiordimonte**	**0.31**	**350**	P	Pb	06 45 31.4	-0.6
FDMO				S	Sg	06 45 35.7	+0.8
FDMO				AML	AML		
	comp=N,3030µm,0.3s						
FDMO				AML	AML		
	comp=E,2290µm,0.7s						
FDMO				AML	AML		
	comp=N,434µm,0.4s						
CESI	**CESI - Serrava**	**0.33**	**326**	*e*P	Pb	06 45 31.8	-0.7
CESI				S	Sg	06 45 36.2	+0.6
CESI				AML	AML		
	comp=E,2440µm,0.3s						
CESI				AML	AML		
	comp=N,4055µm,0.3s						
CESI				AML	AML		
	comp=N,570µm,0.3s						
CESI				AML	AML		
	comp=E,401µm,0.3s						
TERO	**Teramo**	**0.35**	**108**	*e*P	Pg	06 45 31.8	+0.5
TERO				S	Sg	06 45 36.6	+0.7
GUMA	**Gualdo di Mace**	**0.36**	**21**	P	Pb	06 45 32.4	-0.5
GUMA				S	Sb	06 45 38.2	-0.4
GUMA				AML	AML		
	comp=E,6390µm,0.4s						
GUMA				AML	AML		
	comp=N,6170µm,0.3s						
GUMA				AML	AML		
	comp=E,7820µm,0.4s						
GUMA				AML	AML		
	comp=N,6980µm,0.4s						
GUMA				AML	AML		
	comp=N,2475µm,0.3s						
GUMA				AML	AML		
	comp=E,2570µm,0.2s						
GUMA				AML	AML		
	comp=E,3573µm,0.3s						
GUMA				AML	AML		
	comp=N,2279µm,1.5s						
CSP1	**Cessapalombo**	**0.36**	**5**	P	Pg	06 45 32.2	+0.6
CSP1				S	Sg	06 45 37.7	+1.1
CSP1				AML	AML		
	comp=E,2650µm,1.4s						
CSP1				AML	AML		
	comp=N,2480µm,0.4s						
CSP1				AML	AML		
	comp=E,2620µm,1.4s						
CSP1				AML	AML		
	comp=E,667µm,0.5s						
CSP1				AML	AML		
	comp=N,1314µm,0.4s						
FIAM	**Fiamignano**	**0.46**	**184**	AML	AML		
	comp=E,628µm,1.0s						
FIAM				AML	AML		
	comp=N,500µm,0.8s						
ASSB	**Assisi San Ben**	**0.48**	**311**	*e*P	Pg	06 45 33.7	-0.2
ASSB				S	Sb	06 45 41.6	-0.6
ASSB				AML	AML		
	comp=E,676µm,0.5s						
ASSB				AML	AML		
	comp=N,850µm,0.3s						
ASSB				AML	AML		
	comp=N,380µm,0.3s						
ASSB				AML	AML		
	comp=E,404µm,0.3s						
SNTG	**Esanatoglia**	**0.55**	**343**	*e*P	Pg	06 45 34.8	-0.3
SNTG				S	Sb	06 45 44.1	0.0
SNTG				AML	AML		
	comp=E,550µm,0.6s						
SNTG				AML	AML		
	comp=N,730µm,0.5s						
SNTG				AML	AML		
	comp=N,154µm,0.2s						
SNTG				AML	AML		
	comp=E,165µm,0.6s						
FOSV	**Fossato di Vic**	**0.64**	**333**	AML	AML		
	comp=N,628µm,0.3s						
FOSV				AML	AML		
	comp=E,684µm,0.4s						
T0110	**Collepietro**	**0.68**	**137**	AML	AML		
	comp=N,358µm,0.3s						
T0110				AML	AML		
	comp=E,416µm,0.4s						
T0110				AML	AML		
	comp=N,357µm,0.3s						
MURB	**Monte Urbino**	**0.71**	**319**	AML	AML		
	comp=E,829µm,0.3s						
MURB				AML	AML		
	comp=N,786µm,0.3s						
NARO	**Abbazia di Nar**	**0.98**	**335**	AML	AML		
	comp=N,114µm,0.4s						
NARO				AML	AML		
	comp=E,112µm,1.5s						

*TEH **24** 06:48:28.4, 32°.66N×48°.24E, h8km, ML3.0*
*ISN **24** 06:48:28.8±1.1, 32°.61N×48°.18E, h16km±7km, ML2.9*
ISC 24 06:48:30.6±1.1, 32°.62N±0°.05×48°.18E±0°.04, h15km, n34, σ1$25/37, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.76**	**275**	*e*Pg	**Pb**	**06 48 45.3**	**-0.2**
IKFM	**Kafar-mosalman**	**0.94**	**343**	*e*Pg	**Pb**	**06 48 46.5**	**-2.1**
IKFM				*e*		06 48 50.8	
	comp=E,5µm,0.3s						
IDOB	**Doab**	**1.16**	**360**	*e*Pg	**Pb**	**06 48 51.1**	**-1.4**
AMIS	**Naft Sefid**	**1.34**	**135**	*e*Pg	**Pn**	**06 48 55.1**	**+0.3**
AMIS				*e*		06 49 18.4	
	comp=Z,3µm,0.2s						
HSAM	**Samen**	**1.62**	**12**	*e*Pg	**Pb**	**06 48 59.7**	**-0.7**
HSAM				*e*		06 49 00.5	
	comp=Z,2µm,0.3s						
IKOM	**Komasi**	**1.65**	**340**	*e*Pg	**Pb**	**06 49 00.0**	**-0.7**
IKOM				*e*		06 49 27.6	
	comp=Z,2µm,0.4s						
IBZA	**Bozab**	**1.86**	**352**	*e*		06 49 03.5	
	comp=Z,1µm,0.2s						
IBZA				*e*Pn	**Pb**	**06 49 03.2**	**-1.3**
KHMZ	**Khomeyn**	**1.86**	**53**	*e*Pg	**Pn**	**06 49 03.6**	**+1.4**
KCHF	**Cheshme Sefid,**	**1.90**	**330**	*e*		06 49 33.2	
	comp=Z,980nm,0.6s						
KCHF				*e*Pn	**Pb**	**06 49 04.5**	**-0.6**
IBDR	**Badra**	**1.95**	**285**	*e*Pg	**Pn**	**06 49 04.0**	**+0.8**
IBDR				*e*Sg	**Sb**	**06 49 30.0**	**0.0**
IBDR				AML	AML	06 49 36.5	
	comp=N,86nm,0.5s						
IBDR				AML	AML	06 49 47.0	
	comp=E,61nm,0.5s						
RAFI	**Al-Rafai**	**1.97**	**243**	*e*Pg	**Pn**	**06 49 04.0**	**+0.6**
RAFI				*e*Sg	**Sb**	**06 49 31.0**	**+0.6**
RAFI				AML	AML	06 49 32.1	
	comp=E,348nm,0.5s						
IGHG	**Ghaleghazi**	**2.17**	**322**	*e*		06 49 55.5	
	comp=Z,763nm,0.8s						
IGHG				*e*Pn	**Pb**	**06 49 08.5**	**-1.2**
IPIR	**Pirpir**	**2.29**	**88**	*e*		06 49 49.8	
	comp=Z,1µm,0.4s						
IPIR				*e*Pn	**Pn**	**06 49 09.3**	**+1.2**
HAGD	**Aghdareh**	**2.33**	**20**	*e*		06 49 46.5	
	comp=Z,980nm,0.4s						
HAGD				*e*Pn	**Pn**	**06 49 09.5**	**+0.8**
ASAO	**Ashtian**	**2.46**	**38**	*e*Pn	**Pn**	**06 49 12.0**	**+1.6**
ILIN	**Lien**	**2.50**	**336**	*e*Pn	**Pb**	**06 49 13.8**	**-1.6**
ILIN				*e*		06 49 54.5	
	comp=Z,551nm,0.6s						
IDHR	**Dehrash**	**2.55**	**325**	*e*Pn	**Pb**	**06 49 13.6**	**-2.7**
IDHR				*e*		06 49 60.0	
	comp=Z,593nm,0.4s						
SNGE	**Sanandaj**	**2.56**	**345**	*e*Pn	**Pb**	**06 49 14.3**	**-2.0**
QAMS	**Qamsar**	**2.92**	**67**	*e*Pn	**Pn**	**06 49 16.3**	**-0.4**
QAMS				*e*		06 50 00.5	
	comp=Z,734nm,0.4s						
IKLH	**Kolahrood**	**2.94**	**75**	*e*Pn	**Pn**	**06 49 18.1**	**+1.1**
IKLH				*e*		06 50 09.1	
	comp=Z,398nm,0.4s						
IRAZ	**Razeghan**	**3.13**	**27**	*e*Pn	**Pn**	**06 49 21.7**	**+2.1**
IRAZ				*e*		06 49 22.0	
	comp=Z,885nm,0.4s						
GHVR	**GHOM**	**3.19**	**54**	*e*Pn	**Pn**	**06 49 21.7**	**+1.4**
BHD	**Baghdad**	**3.26**	**282**	*e*Pn	**Pn**	**06 49 22.0**	**+0.9**
BHD				*e*Sn	**Sn**	**06 50 00.0**	**+0.4**
IQOM	**Qom**	**3.27**	**47**	*e*Pn	**Pn**	**06 49 22.1**	**+0.5**
IQOM				*e*		06 49 24.3	
	comp=Z,530nm,0.2s						
KLNJ	**Kolanjah**	**3.32**	**118**	*e*Pn	**Pn**	**06 49 23.0**	**+0.6**
KLNJ				*e*		06 50 06.2	
	comp=Z,355nm,0.5s						
IZEF	**Zefreh**	**3.51**	**84**	*e*Pn	**Pn**	**06 49 25.8**	**+1.0**
IZEF				*e*		06 49 34.3	
	comp=Z,144nm,0.2s						
KRSH	**Karshahi**	**3.58**	**67**	*e*Pn	**Pn**	**06 49 26.5**	**+0.8**
KRSH				*e*		06 50 40.8	
	comp=N,256nm,0.6s						
IRAM	**Ramesheh**	**3.65**	**102**	*e*Pn	**Pn**	**06 49 27.3**	**+0.5**
IRAM				*e*		06 50 17.4	
	comp=Z,150nm,0.6s						
IVRN	**Varamin**	**3.79**	**50**	*e*Pn	**Pn**	**06 49 29.5**	**+1.0**
IVRN				*e*		06 49 44.1	
	comp=Z,216nm,0.5s						
NASN	**Na'in**	**3.91**	**86**	*e*Pn	**Pn**	**06 49 31.4**	**+1.0**
ZNJK	**Zanjan**	**4.06**	**6**	*e*Pn	**Pn**	**06 49 34.2**	**+1.8**
CHTH	**Charan**	**4.08**	**36**	*e*Pn	**Pn**	**06 49 34.2**	**+1.4**
DAMV	**Damavand**	**4.35**	**45**	*e*Pn	**Pn**	**06 49 37.1**	**+0.8**
IFIR	**Firoozkooh**	**4.84**	**50**	*e*Pn	**Pn**	**06 49 44.4**	**+1.2**

*NOU **24** 06:50:04.8, 38°.54S×175°.67E, h154km, ML4.7/8, North Island, New Zealand*
*IDC **24** 06:50:07.8±0.9, 38°.77S×175°.85E, h122km±10km, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=22.0km s-min=18.2km az=123.0*
*NEIC **24** 06:50:08.7±1.3, 38°.75S±0°.06×175°.75E±0°.07, h112km±8km, Error ellipse: s-maj=9.1km s-min=7.8km az=225.0*
*WEL **24** 06:50:10.3, 39°S±3°×17°6E±°, h103km±6km, M4.2/143, ML3.9/31, MLv4.2/143, Error ellipse: s-maj=0.0km s-min=0.0km az=89.3*
ISC 24 06:50:08.9±0.6, 38°.74S±0°.04×175°.75E±0°.04, h127km±4km, n195, σ1$36/217, mb4.3/10, 3C, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATZ	**Rangitukua**	**0.13**	**171**	P	**Pn**	**06 50 25.1**	**-1.2**
RATZ				S	**Sn**	**06 50 38.7**	**-0.9**
WHTZ	**Whakaora**	**0.18**	**66**	P	**Pn**	**06 50 25.4**	**-1.1**
KATZ	**Kakaramea**	**0.24**	**190**	P	**Pn**	**06 50 26.1**	**-0.6**
KUTZ	**Kaahu Road**	**0.26**	**14**	P	**Pn**	**06 50 25.4**	**-1.3**
KRVZ	**Karewarewa**	**0.36**	**193**	P	**Pn**	**06 50 26.5**	**-0.7**
KRVZ				S	**Sn**	**06 50 39.9**	**-1.1**
TMVZ	**Te Maari**	**0.38**	**185**	P	**Pn**	**06 50 26.4**	**-0.8**
TMVZ				S	**Sn**	**06 50 40.3**	**-0.8**
WTVZ	**West Tongariro**	**0.40**	**198**	P	**Pn**	**06 50 26.5**	**-0.7**
WTVZ				S	**Sn**	**06 50 39.9**	**-1.4**
ETVZ	**East Tongariro**	**0.40**	**184**	P	**Pn**	**06 50 26.6**	**-0.7**
ETVZ				S	**Sn**	**06 50 40.4**	**-0.8**
TWVZ	**Taurewa**	**0.41**	**216**	P	**Pn**	**06 50 26.6**	**-0.7**
TWVZ				S	**Sn**	**06 50 39.9**	**-1.4**
OTVZ	**Oturere**	**0.43**	**189**	P	**Pn**	**06 50 26.7**	**-0.8**
OTVZ				S	**Sn**	**06 50 40.9**	**-0.7**
TLZ	**Tolley Road**	**0.44**	**338**	P	**Pn**	**06 50 26.1**	**-1.3**
TLZ				S	**Sn**	**06 50 39.7**	**-1.6**
SNVZ	**South Ngauruho**	**0.46**	**190**	P	**Pn**	**06 50 27.0**	**-0.6**
GRRZ	**Galatos Road**	**0.48**	**36**	P	**Pn**	**06 50 26.3**	**-1.3**
MRHZ	**Matea Rd**	**0.53**	**101**	P	**Pn**	**06 50 26.5**	**-1.4**
MRHZ				S	**Sn**	**06 50 39.7**	**-2.6**
TUVZ	**Tukino**	**0.53**	**188**	P	**Pn**	**06 50 27.6**	**-0.4**
HRRZ	**Handcock Road**	**0.55**	**51**	P	**Pn**	**06 50 26.7**	**-1.3**
DRZ	**Dome Shelter**	**0.56**	**195**	P	**Pn**	**06 50 28.2**	**-0.2**
WHVZ	**Whangaehu Hut**	**0.56**	**193**	P	**Pn**	**06 50 27.5**	**-0.8**
PRRZ	**Plateau Road**	**0.56**	**65**	P	**Pn**	**06 50 26.4**	**-1.6**
PRRZ				S	**Sn**	**06 50 40.6**	**-1.9**
WNVZ	**Wahianoa**	**0.60**	**191**	P	**Pn**	**06 50 28.0**	**-0.5**
PKVZ	**Pokaka**	**0.63**	**209**	P	**Pn**	**06 50 28.2**	**-0.4**
PKVZ				S	**Sn**	**06 50 42.8**	**-0.7**
UTU	**Utuhina**	**0.66**	**32**	P	**Pn**	**06 50 27.6**	**-1.2**
MOVZ	**Moawhango**	**0.67**	**180**	P	**Pn**	**06 50 28.1**	**-0.7**
MOVZ				S	**Sn**	**06 50 42.6**	**-1.4**
MTVZ	**Mangateitei**	**0.68**	**198**	P	**Pn**	**06 50 28.7**	**-0.3**
BKZ	**Black Stump Fm**	**0.72**	**127**		**Pn**	**06 50 28.3**	**-0.9**
BKZ	**Black Stump Fm**	**0.72**	**127**	P	**Pn**	**06 50 28.2**	**-0.9**
BKZ	**Black Stump Fm**	**0.72**	**127**	P	**Pn**	**06 50 28.8**	**-0.4**
NGRZ	**Ngongotaha**	**0.72**	**29**	P	**Pn**	**06 50 27.9**	**-1.3**
HIZ	**Hauiti**	**0.73**	**288**		**Pn**	**06 50 28.3**	**-1.0**
HIZ	**Hauiti**	**0.73**	**288**	P	**Pn**	**06 50 28.3**	**-1.0**
HIZ				S	**Sn**	**06 50 43.3**	**-1.3**
HIZ	**Hauiti**	**0.73**	**288**	P	**Pn**	**06 50 28.2**	**-1.0**
TARZ	**Mount Tarawera**	**0.78**	**50**	P	**Pn**	**06 50 28.5**	**-1.2**
BHHZ	**Black Hill Sta**	**0.79**	**162**	P	**Pn**	**06 50 29.1**	**-0.7**
BHHZ				S	**Sn**	**06 50 44.4**	**-1.2**
OMRZ	**Omania**	**0.80**	**38**	P	**Pn**	**06 50 28.4**	**-1.4**
KARZ	**Kaharoa**	**0.82**	**29**	P	**Pn**	**06 50 28.5**	**-1.4**
MKRZ	**Makatiti**	**0.82**	**44**	P	**Pn**	**06 50 29.2**	**-0.9**
MUGZ	**Murupara**	**0.84**	**72**	P	**Pn**	**06 50 28.5**	**-1.7**
VRZ	**Vera Road**	**0.86**	**243**	P	**Pn**	**06 50 30.1**	**-0.2**
VRZ				S	**Sn**	**06 50 46.8**	**+0.3**
MTHZ	**Maungataniwha**	**0.86**	**98**	P	**Pn**	**06 50 29.2**	**-1.1**
MTHZ				S	**Sn**	**06 50 45.4**	**-1.3**
KWHZ	**Kaweka Forest**	**0.86**	**143**	P	**Pn**	**06 50 30.1**	**-0.3**
LIRZ	**Lichensteins R**	**0.89**	**35**	P	**Pn**	**06 50 29.2**	**-1.3**
NMHZ	**Naumai**	**0.90**	**114**	P	**Pn**	**06 50 30.7**	**-0.1**
KMRZ	**Kaimai**	**0.90**	**10**	P	**Pn**	**06 50 29.4**	**-1.3**
EDRZ	**Edgecumbe**	**1.00**	**51**	P	**Pn**	**06 50 30.2**	**-1.4**
TOZ	**Tahuroa Road**	**1.02**	**349**	P	**Pn**	**06 50 30.7**	**-1.1**
KRHZ	**Kereru**	**1.02**	**152**	P	**Pn**	**06 50 31.8**	**0.0**
MARZ	**Manawahe**	**1.05**	**44**	P	**Pn**	**06 50 30.8**	**-1.3**
RAHZ	**Arahi**	**1.06**	**100**	P	**Pn**	**06 50 31.7**	**-0.4**
TGHZ	**Tauranga**	**1.09**	**22**	P	**Pn**	**06 50 31.3**	**-1.3**
ARHZ	**Aropaunui**	**1.11**	**119**	P	**Pn**	**06 50 32.5**	**0.0**
MHEZ	**Mangahewa**	**1.16**	**253**	P	**Pn**	**06 50 33.6**	**+0.5**
URZ	**Urewera**	**1.17**	**66**	P	**Pn**	**06 50 31.5**	**-1.7**
	340nm,0.4s,baz=248,slow=7.8,SNR=867						
URZ				S	**Sn**	**06 50 48.7**	**-3.0**
	1µm,0.4s,baz=0.0,slow=20,SNR=18						
URZ				LR	LR	06 50 54.0	
	comp=Z,48nm,20.3s,baz=211,slow=42						
URZ	**Urewera**	**1.17**	**66**	P	**Pn**	**06 50 31.5**	**-1.7**
URZ	**Urewera**	**1.17**	**66**	P	**Pn**	**06 50 31.9**	**-1.3**
WAZ	**Wanganui**	**1.18**	**210**	P	**Pn**	**06 50 33.7**	**+0.4**
WHHZ	**Waihua**	**1.21**	**107**	P	**Pn**	**06 50 33.4**	**-0.2**
PNHZ	**Pukenui**	**1.23**	**163**	P	**Pn**	**06 50 33.7**	**-0.1**
SNGZ	**Shannon Statio**	**1.25**	**92**	P	**Pn**	**06 50 33.6**	**-0.4**
LREZ	**Lake Rotokare**	**1.27**	**235**	P	**Pn**	**06 50 35.0**	**+0.8**
DREZ	**Durham Road**	**1.29**	**249**	P	**Pn**	**06 50 34.9**	**+0.5**
WHRZ	**Whale Island**	**1.31**	**48**	P	**Pn**	**06 50 34.4**	**-0.3**
RAGZ	**Rawiri**	**1.33**	**80**	P	**Pn**	**06 50 33.8**	**-1.2**
TSZ	**Takapari Road**	**1.33**	**173**	P	**Pn**	**06 50 34.9**	**0.0**
KAHZ	**Kahuranaki**	**1.37**	**141**	P	**Pn**	**06 50 35.7**	**+0.3**
PREZ	**Palmer Road**	**1.38**	**244**	P	**Pn**	**06 50 36.7**	**+1.3**
CKHZ	**Cape Kidnapper**	**1.38**	**132**	P	**Pn**	**06 50 35.7**	**+0.2**
NEZ	**North Egmont**	**1.39**	**247**	P	**Pn**	**06 50 36.3**	**+0.6**
WPHZ	**Waipukurau**	**1.43**	**158**	P	**Pn**	**06 50 35.9**	**-0.1**
PKE	**Pukeiti**	**1.45**	**251**	P	**Pn**	**06 50 37.0**	**+0.8**
MWZ	**Matawai**	**1.45**	**74**	P	**Pn**	**06 50 34.9**	**-1.4**
KHEZ	**Kahui Hut**	**1.46**	**247**	P	**Pn**	**06 50 37.0**	**+0.6**
OHWZ	**Ohakea**	**1.50**	**193**	P	**Pn**	**06 50 37.6**	**+0.8**
MYRZ	**Mayor Island**	**1.51**	**15**	P	**Pn**	**06 50 36.0**	**-0.9**
KNZ	**Kokohu**	**1.53**	**101**	P	**Pn**	**06 50 36.5**	**-0.6**
PXZ	**Rewanui**	**1.55**	**147**	P	**Pn**	**06 50 37.3**	**-0.1**
NBEZ	**Newall Road No**	**1.56**	**250**	P	**Pn**	**06 50 38.0**	**+0.6**
RIGZ	**Rimuhau**	**1.58**	**89**	P	**Pn**	**06 50 37.4**	**-0.3**
DVHZ	**Dannevirke**	**1.59**	**168**	P	**Pn**	**06 50 37.5**	**-0.4**
NMEZ	**Namu Road**	**1.60**	**245**	P	**Pn**	**06 50 38.6**	**+0.7**
POWZ	**Post Office Ro**	**1.65**	**179**	P	**Pn**	**06 50 38.2**	**-0.3**
WIZ	**White Island**	**1.66**	**44**	P	**Pn**	**06 50 37.5**	**-1.2**
PRHZ	**Porangahau**	**1.67**	**156**	P	**Pn**	**06 50 38.7**	**-0.1**
TKGZ	**Te Karaka**	**1.67**	**80**	P	**Pn**	**06 50 38.5**	**-0.3**
PRGZ	**Paritu Road**	**1.68**	**97**	P	**Pn**	**06 50 38.2**	**-0.7**
MKAZ	**Moumakai**	**1.70**	**344**	P	**Pn**	**06 50 38.0**	**-1.1**
RUGZ	**Raukumara Rang**	**1.70**	**64**	P	**Pn**	**06 50 37.1**	**-2.2**
MHGZ	**Mahia Peninsul**	**1.73**	**104**	P	**Pn**	**06 50 39.1**	**-0.4**
ANWZ	**Angora Road**	**1.81**	**162**	P	**Pn**	**06 50 40.3**	**0.0**
PRWZ	**Pori Road**	**1.82**	**175**	P	**Pn**	**06 50 40.4**	**-0.2**
TWGZ	**Tauwhareparae**	**1.84**	**73**	P	**Pn**	**06 50 40.3**	**-0.5**
HAZ	**Te Kaha**	**1.88**	**59**	P	**Pn**	**06 50 39.1**	**-2.1**
AWAZ	**Awhitu Peninsu**	**1.89**	**332**	P	**Pn**	**06 50 40.4**	**-0.9**
ETAZ	**East Tamaki Re**	**1.90**	**340**	P	**Pn**	**06 50 40.4**	**-1.1**
MRZ	**Mangatainoka R**	**1.92**	**184**	P	**Pn**	**06 50 41.1**	**-0.6**
CNGZ	**Carnagh Statio**	**1.94**	**83**	P	**Pn**	**06 50 41.6**	**-0.4**
BFZ	**Birch Farm**	**1.98**	**169**		**Pn**	**06 50 41.9**	**-0.5**
BFZ	**Birch Farm**	**1.98**	**169**	P	**Pn**	**06 50 41.9**	**-0.5**
BFZ	**Birch Farm**	**1.98**	**169**	P	**Pn**	**06 50 42.3**	**-0.1**
KUZ	**Kuaotunu**	**1.99**	**359**	P	**Pn**	**06 50 41.3**	**-1.3**
PKGZ	**Pakihiroa**	**2.02**	**66**	P	**Pn**	**06 50 42.2**	**-0.8**
EPAZ	**Eden Park BICE**	**2.02**	**337**	P	**Pn**	**06 50 41.7**	**-1.2**
WTAZ	**Waiatarua**

CMWZ	**Cape Campbell**	**3.23**	**201**	P	**Pn**	**06 50 57.2**	**-1.1**
QRZ	**Quartz Range**	**3.24**	**229**	P	**Pn**	**06 50 57.1**	**-1.3**
QRZ	**Quartz Range**	**3.24**	**229**	P	**Pn**	**06 50 56.9**	**-1.6**
BSWZ	**Blackbirch Sta**	**3.30**	**205**		**Pn**	**06 50 58.3**	**-0.9**
BSWZ	**Blackbirch Sta**	**3.30**	**205**	P	**Pn**	**06 50 57.6**	**-1.7**
MRNZ	**Matariki Terra**	**3.51**	**220**	P	**Pn**	**06 51 00.5**	**-1.6**
THZ	**Tophouse**	**3.72**	**215**	Pn	**Pn**	**06 51 04.0**	**-0.9**
THZ	**Tophouse**	**3.72**	**215**	P	**Pn**	**06 51 03.2**	**-1.7**
OUZ	**Omahuta**	**3.91**	**333**	Pn	**Pn**	**06 51 06.9**	**-0.5**
OUZ	**Omahuta**	**3.91**	**333**	P	**Pn**	**06 51 07.5**	**+0.1**
KHZ	**Kahutara**	**4.04**	**204**	Pn	**Pn**	**06 51 07.2**	**-1.8**
KHZ	**Kahutara**	**4.04**	**204**	P	**Pn**	**06 51 06.8**	**-2.2**
KHZ	**Kahutara**	**4.04**	**204**	P	**Pn**	**06 51 06.7**	**-2.3**
DSZ	**Dennistone Nort**	**4.26**	**224**	P	**Pn**	**06 51 09.9**	**-2.1**
GVZ	**Greta Valley S**	**4.70**	**205**	P	**Pn**	**06 51 15.9**	**-2.0**
LTZ	**Lake Taylor**	**4.83**	**212**	P	**Pn**	**06 51 16.5**	**-3.1**
AMCZ	**Amberley**	**5.01**	**207**	P	**Pn**	**06 51 19.7**	**-2.3**
INZ	**Inchbonnie**	**5.15**	**218**	P	**Pn**	**06 51 21.0**	**-2.9**
OKCZ	**Okains Bay**	**5.38**	**201**	P	**Pn**	**06 51 24.5**	**-2.4**
AKCZ	**Akaroa Harbour**	**5.56**	**202**	P	**Pn**	**06 51 27.1**	**-2.3**
WVZ	**Waitaha Valley**	**5.76**	**220**	P	**Pn**	**06 51 28.9**	**-3.1**
WACZ	**Wakanui South**	**5.97**	**208**	P	**Pn**	**06 51 31.8**	**-3.1**
RPZ	**Rata Peaks**	**6.10**	**214**	P	**Pn**	**06 51 34.0**	**-2.7**
	11nm,0.4s,baz=253,slow=2.9,SNR=17						
RPZ				S	**Sn**	**06 52 38.9**	**-6.3**
	33nm,0.3s,baz=8.6,slow=2.8,SNR=5.6						
RPZ	**Rata Peaks**	**6.10**	**214**	P	**Pn**	**06 51 33.9**	**-2.8**
RPZ	**Rata Peaks**	**6.10**	**214**	P	**Pn**	**06 51 34.1**	**-2.6**
GCSZ	**Gaunt Creek Bo**	**6.14**	**220**	P	**Pn**	**06 51 35.8**	**-1.4**
ARCZ	**Arundel**	**6.24**	**212**	P	**Pn**	**06 51 35.5**	**-3.0**
LBZ	**Lake Benmore**	**7.01**	**215**	P	**Pn**	**06 51 46.5**	**-2.5**
JCZ	**Jackson Bay**	**7.47**	**222**	P	**Pn**	**06 51 52.7**	**-2.5**
CTZ	**Chatham Island**	**7.62**	**133**	P	**Pn**	**06 51 56.2**	**-0.8**
WHZ	**Wether Hill Ro**	**9.19**	**216**	P	**Pn**	**06 52 16.0**	**-2.2**
PYZ	**Puysegur Point**	**9.99**	**219**	P	**Pn**	**06 52 27.5**	**-1.6**
MSVF	**Nonsavu**	**21.02**	**6**	P	**P**	**06 54 43.2**	**+0.6**
	4.1nm,0.5s,baz=126,slow=22,SNR=5.3						
	4.1nm,0.5s						
MSVF	**Nonsavu**	**21.02**	**6**	P	**P**	**06 54 42.6**	**0.0**
MSVF				IAmb	IAmb	06 55 05.1	
	comp=Z,37nm,1.4s						
BBOO	**Buckleboo**	**32.55**	**268**	P	**P**	**06 56 28.4**	**+0.5**
COEN	**Coen**	**37.89**	**302**	P	**P**	**06 57 15.1**	**+1.4**
COEN				IAmb	IAmb	06 57 41.2	
	comp=Z,6.4nm,1.3s						
AS31	**Alice Springs**	**38.47**	**281**	P	**P**	**06 57 19.5**	**+1.0**
ASAR	**Alice Springs**	**38.47**	**281**	P	**P**	**06 57 19.3**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=116,slow=6.2,SNR=16						
ASAR				PcP	**PcP**	**06 59 27.4**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=109,slow=4.4,SNR=2.2						
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	**38.47**	**281**	P	**P**	**06 57 20.1**	**+1.5**
VNDA	**Vanda**	**39.34**	**185**	P	**P**	**06 57 25.3**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=351,slow=8.3,SNR=3.1						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**39.34**	**185**	P	**P**	**06 57 26.6**	**+1.5**
WB2	**Warramunga Arr**	**40.25**	**286**	P	**P**	**06 57 33.8**	**+0.4**
WB2				IAmb	IAmb	06 57 35.6	
	comp=Z,9.6nm,1.4s						
WRAB	**Tennant Creek**	**40.26**	**286**	P	**P**	**06 57 33.2**	**-0.2**
WRAB				IAmb	IAmb	06 57 55.5	
	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**40.26**	**286**	P	**P**	**06 57 33.7**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=125,slow=7.9,SNR=11						
WRA				PcP	**PcP**	**06 59 32.8**	**-2.0**
	comp=Z,0.3nm,0.8s,baz=121,slow=2.9,SNR=1.5						
	comp=Z,0.7nm,0.6s						
WB0	**Warramunga Arr**	**40.32**	**286**	P	**P**	**06 57 34.9**	**+1.0**
WB0				IAmb	IAmb	06 58 08.6	
	comp=Z,6.5nm,1.3s						
FITZ	**Fitzroy Crossi**	**47.97**	**281**	P	**P**	**06 58 36.0**	**+1.2**
FITZ				IAmb	IAmb	06 58 40.7	
	comp=Z,9.0nm,1.4s						
QSPA	**South Pole Qui**	**51.39**	**180**	P	**P**	**06 59 03.1**	**+2.8**
BELA	**Belgrano 2**	**62.19**	**173**	P	**P**	**07 00 17.6**	**+1.5**
BELA				IAmb	IAmb	07 00 18.7	
	comp=Z,3.5nm,1.0s						
SNAA	**Sanae**	**69.89**	**180**	P	**P**	**07 01 06.6**	**+1.1**
VNA3	**Neumayer Olymp**	**70.25**	**178**	P	**P**	**07 01 08.9**	**+1.2**
VNA2	**Neumayer--Watz**	**70.62**	**179**	P	**P**	**07 01 11.3**	**+1.5**
	baz=170,slow=6.0						
VNA1	**Neumayer--Stat**	**70.88**	**179**	P	**P**	**07 01 12.4**	**+1.0**
ARCES	**ARCESS Array B**	**145.30**	**342**	PKPbc	**PKPdf**	**07 09 29.9**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=54,slow=4.6,SNR=11						
LIC	**Lamto**	**147.62**	**179**	⇑*i*PKP1	**PKPbc**	**07 09 38.5**	**-0.3**
	comp=Z,6.8nm,0.5s						
KIC	**Kosan Boka**	**147.76**	**179**	⇑*i*PKP1	**PKPbc**	**07 09 38.9**	**-0.3**
	comp=Z,3.0nm,0.4s						
TIC	**Toumodi**	**148.04**	**179**	⇑*e*PKP1	**PKPbc**	**07 09 39.9**	**0.0**
	comp=Z,2.6nm,0.5s						
DBIC	**Dimbokro**	**148.07**	**179**	PKPbc	**PKPbc**	**07 09 39.5**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=162,slow=5.0,SNR=6.1						
FINES	**FINESS Array B**	**150.56**	**330**	PKPbc	**PKPbc**	**07 09 43.1**	**-1.5**
	comp=Z,0.8nm,0.2s,baz=45,slow=2.8,SNR=13						
FINES				PKPab	**PKPab**	**07 09 50.3**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=71,slow=6.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**153.97**	**193**	PKPbc	**PKPbc**	**07 09 53.0**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=162,slow=3.5,SNR=14						
TORD				PKPab	**PKPab**	**07 10 07.1**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=157,slow=4.5,SNR=9.9						

ROM ***24*** *06:54:54.3±0.1, 42°.799N±0°.002×13°.186E±0°.004, h9km, Md2.1/1, ML3.5/65, Mw3.2, Error ellipse: s-maj=0.3km s-min=0.1km az=255.0, Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr-5.21; Mθθ-2.41; Mφφ 7.62; Mrθ4.07; Mθφ-1.75; Mφr-0.08; Fault plane solution: M₀8.06992×10¹³ NP1:φs201.00000°, δ52.00000°, λ-42.00000°. NP2:φs320.00000°, δ58.00000°, λ-134.00000°.*

PRU ***24*** *06:54:57.8±0.0, 42°.92N×13°.10E, h0km*

BEO ***24*** *06:54:59.8±0.9, 42°.84N×13°.52E, h10km, ML3.4/8*

ISC 24 06:54:55.1±0.8, 42°.81N±0°.01×13°.23E±0°.02, h9km±6km, n195, σ1s36/242, 17C-22D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**286**	⇓P		**Pg**	**06 54 57.0**	**-0.5**
NRCA				S		**Sg**	**06 54 58.4**	**-0.8**
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				AML		AML		
NRCA				END				
FEMA	**Monte Fema**	**0.20**	**320**	⇓P		**Pg**	**06 54 59.1**	**-0.2**
FEMA				S		**Sg**	**06 55 02.2**	**0.0**
FEMA				AML		AML		
FEMA				AML		AML		
	comp=N,74100μm,0.6s							
FEMA				AML		AML		
FEMA				AML		AML		
	comp=N,74050μm,0.6s							
FEMA				AML		AML		
FDMO	**Fiordimonte**	**0.25**	**336**	⇓P		**Pg**	**06 54 59.9**	**-0.3**
FDMO				S		**Sg**	**06 55 03.6**	**+0.1**
FDMO				AML		AML		
	comp=N,23400μm,0.2s							
FDMO				AML		AML		
	comp=E,13500μm,0.7s							
CSP1	**Cessapalombo**	**0.28**	**357**	⇓P		**Pg**	**06 55 00.7**	**-0.1**
CSP1				S		**Sg**	**06 55 05.2**	**+0.6**
CSP1				AML		AML		
	comp=N,43350μm,0.4s							
CSP1				AML		AML		
	comp=N,43400μm,0.4s							
CSP1				AML		AML		
	comp=E,23750μm,0.5s							
RM33	**Pellescritta (**	**0.30**	**182**	⇓P		**Pg**	**06 55 01.0**	**-0.1**
RM33				S		**Sg**	**06 55 06.0**	**+0.9**
RM33				AML		AML		
	comp=E,11810μm,0.2s							
RM33				AML		AML		
	comp=E,11830μm,0.2s							
RM33				AML		AML		
	comp=E,11795μm,0.2s							
RM33				AML		AML		
	comp=N,14300μm,0.9s							
CAMP	**Campotosto**	**0.30**	**154**	⇓P		**Pg**	**06 55 01.1**	**-0.1**
CAMP				S		**Sg**	**06 55 06.0**	**+0.7**
CAMP				AML		AML		
	comp=N,16250μm,0.6s							
CAMP				AML		AML		
	comp=E,19300μm,0.2s							
CESI	**CESI - Serrava**	**0.31**	**310**	P		**Pg**	**06 55 00.9**	**-0.3**
CESI				S		**Sg**	**06 55 05.6**	**+0.3**
CESI				AML		AML		
	comp=E,39350μm,0.3s							
CESI				AML		AML		
	comp=N,78200μm,0.2s							
TERO	**Teramo**	**0.34**	**124**	⇑P		**Pg**	**06 55 01.7**	**-0.1**
TERO				S		**Sg**	**06 55 07.2**	**+1.0**
TERO				AML		AML		
	comp=N,39050μm,0.3s							
TERO				AML		AML		
	comp=E,26200μm,0.2s							
TERO				AML		AML		
	comp=N,41900μm,0.3s							
TERO				AML		AML		
	comp=N,39100μm,0.3s							
TERO				AML		AML		
	comp=E,24400μm,0.2s							
OFFI	**Offida**	**0.36**	**70**	⇑P		**Pb**	**06 55 03.2**	**-0.5**
OFFI				AML		AML		
	comp=E,12995μm,0.6s							
OFFI				AML		AML		
	comp=N,16950μm,0.5s							
MNTP	**Montappone**	**0.37**	**29**	P		**Pg**	**06 55 03.1**	**+0.6**
MNTP				S		**Sb**	**06 55 10.2**	**+0.4**
MNTP				AML		AML		
	comp=E,39650μm,0.2s							
MNTP				AML		AML		
	comp=N,28850μm,0.2s							
MNTP				AML		AML		
	comp=E,39600μm,0.2s							
MDAR	**Monte D'Aria**	**0.39**	**351**	⇓P		**Pg**	**06 55 02.4**	**-0.3**
MDAR				S		**Sg**	**06 55 08.7**	**+0.8**
MDAR				AML		AML		
	comp=E,10040μm,0.3s							
MDAR				AML		AML		
	comp=N,11390μm,0.2s							
MDAR				AML		AML		
	comp=E,10025μm,0.3s							
MDAR				AML		AML		
	comp=N,11365μm,0.2s							
MDAR				AML		AML		
	comp=N,11415μm,0.2s							
MDAR				AML		AML		
	comp=E,10030μm,0.3s							
SEF1	**Sefro**	**0.39**	**329**	⇓P		**Pg**	**06 55 02.4**	**-0.4**
SEF1				S		**Sg**	**06 55 08.7**	**+0.6**
SEF1				AML		AML		
	comp=E,14200μm,1.5s							
SEF1				AML		AML		
	comp=N,17450μm,0.6s							
SEF1				AML		AML		
	comp=N,17450μm,0.6s							
SEF1				AML		AML		
	comp=E,14200μm,1.5s							
PIO1	**Pioraco**	**0.41**	**334**	P		**Pg**	**06 55 02.6**	**-0.5**
PIO1				AML		AML		
	comp=N,10220μm,0.9s							
PIO1				AML		AML		
	comp=N,10210μm,0.9s							
PIO1				AML		AML		
	comp=E,6970μm,0.5s							
ARRO	**Arrone**	**0.41**	**236**	⇑P		**Pg**	**06 55 02.6**	**-0.5**
ARRO				S		**Sg**	**06 55 08.9**	**+0.4**
ARRO				AML		AML		
	comp=N,6475μm,0.3s							
ARRO				AML		AML		
	comp=E,8925μm,0.2s							
SSM1	**San Severino M**	**0.42**	**355**	P		**Pg**	**06 55 03.0**	**-0.3**
FIU1	**Fiuminata**	**0.44**	**330**	P		**Pg**	**06 55 03.1**	**-0.5**
FIU1				S		**Sg**	**06 55 10.0**	**+0.6**
GIGS	**Gran Sasso**	**0.44**	**145**	⇓P		**Pg**	**06 55 03.2**	**-0.5**
GIGS				S		**Sg**	**06 55 09.9**	**+0.4**
GIGS				AML		AML		
	comp=N,2740μm,0.6s							
GIGS				AML		AML		
	comp=E,3120μm,0.3s							
GAG1	**Gagliole**	**0.44**	**345**	P		**Pg**	**06 55 03.4**	**-0.3**
GAG1				S		**Sg**	**06 55 10.6**	**+1.0**
GAG1				AML		AML		
	comp=N,19800μm,0.4s							
GAG1				AML		AML		
	comp=E,19600μm,0.5s							
GAG1				AML		AML		
	comp=N,19850μm,0.4s							
AQU	**L'Aquila**	**0.47**	**164**	⇓P		**Pg**	**06 55 04.0**	**-0.3**
AQU				S		**Sg**	**06 55 11.3**	**+0.7**
AQU				AML		AML		
	comp=E,3855μm,1.5s							
AQU				AML		AML		
	comp=N,5855μm,0.8s							
AQU				AML		AML		
	comp=E,3900μm,1.5s							
AQU				AML		AML		
	comp=N,5650μm,0.8s							
ASSB	**Assisi San Ben**	**0.48**	**299**	⇑P		**Pg**	**06 55 03.7**	**-0.7**
ASSB				S		**Sg**	**06 55 10.9**	**+0.2**
ASSB				AML		AML		
	comp=E,12300μm,0.2s							
ASSB				AML		AML		
	comp=N,14450μm,0.2s							
SNTG	**Esanatoglia**	**0.49**	**335**	⇓P		**Pg**	**06 55 04.1**	**-0.5**
SNTG				S		**Sg**	**06 55 11.7**	**+0.5**
SNTG				AML		AML		
	comp=E,3435μm,0.4s							
SNTG				AML		AML		
	comp=N,495μm,0.4s							
SNTG				AML		AML		
	comp=N,4440μm,0.4s							
SNTG				AML		AML		
	comp=E,422μm,0.4s							
TRE1	**Treia**	**0.51**	**7**	⇑P		**Pg**	**06 55 05.3**	**+0.4**
TRE1				S		**Sb**	**06 55 14.1**	**+0.4**
TRE1				AML		AML		
	comp=E,22750μm,0.4s							
TRE1				AML		AML		
	comp=N,16150μm,0.3s							
TRTR	**Tortoreto Alta**	**0.51**	**90**	P		**Pb**	**06 55 06.1**	**0.0**
TRTR				AML		AML		
	comp=N,20850μm,0.4s							
TRTR				AML		AML		
	comp=E,19850μm,0.4s							
CESX	**Cesi**	**0.52**	**247**	⇑P		**Pg**	**06 55 04.3**	**-0.8**
CESX				AML		AML		
	comp=E,5540μm,0.4s							
CESX				AML		AML		
	comp=N,6390μm,0.2s							
EL6	**Elcito**	**0.53**	**350**	⇓P		**Pg**	**06 55 04.9**	**-0.5**
EL6				S		**Sb**	**06 55 13.6**	**-0.8**
FIAM	**Fiamignano**	**0.55**	**188**	⇓P		**Pg**	**06 55 05.1**	**-0.6**
FIAM				S		**Sg**	**06 55 13.4**	**+0.5**
FIAM				AML		AML		
	comp=E,4220μm,0.3s							
FIAM				AML		AML		
	comp=N,3615μm,0.7s							
CADA	**Capodarco di F**	**0.55**	**45**	P		**Pb**	**06 55 07.2**	**+0.3**
CADA				AML		AML		
	comp=E,15450μm,1.1s							
CADA				AML		AML		
	comp=N,19250μm,0.3s							
CADA				AML		AML		
	comp=E,15400μm,1.1s							
CADA				AML		AML		
	comp=N,19200μm,0.3s							
CING	**Cingoli**	**0.57**	**358**	⇓P		**Pg**	**06 55 05.6**	**-0.5**
CING				S		**Sb**	**06 55 14.7**	**-0.8**
ATCC	**AVT- Casa Cast**	**0.57**	**311**	⇑P		**Pg**	**06 55 05.6**	**-0.6**
ATCC				S		**Sg**	**06 55 14.2**	**+0.6**
ATCC				AML		AML		
	comp=E,9530μm,0.3s							
ATCC				AML		AML		
	comp=N,8140μm,0.2s							
CIMA	**Civitanova Mar**	**0.59**	**33**	P		**Pb**	**06 55 07.6**	**-0.1**
FAGN	**Fagnano**	**0.60**	**154**	P		**Pg**	**06 55 06.1**	**-0.7**
FAGN				S		**Sb**	**06 55 15.8**	**-0.8**
FAGN				AML		AML		
	comp=N,9990μm,0.5s							
FAGN				AML		AML		
	comp=E,10210μm,0.3s							
VCEL	**Villa Celiera**	**0.61**	**132**	P		**Pg**	**06 55 07.0**	**0.0**
VCEL				S		**Sb**	**06 55 16.9**	**0.0**
VCEL				AML		AML		
	comp=E,14250μm,0.8s							
VCEL				AML		AML		
	comp=N,12250μm,0.4s							
VCEL				AML		AML		
	comp=E,14200μm,0.8s							
PP3	**Marolino**	**0.63**	**26**	P		**Pb**	**06 55 08.0**	**-0.3**
PP3				AML		AML		
	comp=E,19550μm,0.5s							
PP3				AML		AML		
	comp=N,9800μm,0.3s							
PP3				AML		AML		
	comp=N,10615μm,0.2s							
PP3				AML		AML		
	comp=N,10620μm,0.2s							
PP3				AML		AML		
	comp=E,19250μm,0.5s							
PP3				AML		AML		
	comp=E,19550μm,0.5s							
MMUR	**Monte Murano**	**0.65**	**345**	P		**Pg**	**06 55 07.1**	**-0.6**
MURB	**Monte Urbino**	**0.69**	**312**	⇑P		**Pg**	**06 55 07.6**	**-0.8**
MURB				AML		AML		
	comp=E,10060μm,0.3s							
MURB				AML		AML		
	comp=N,11900μm,0.3s							
MURB				AML		AML		
	comp=E,11100μm,0.2s							
MURB				AML		AML		
	comp=N,12950μm,0.3s							
MURB				AML		AML		
	comp=E,10085μm,0.3s							
SSFR	**Montelago di S**	**0.71**	**333**	P		**Pg**	**06 55 08.0**	**-0.8**
SSFR				S		**Sb**	**06 55 19.1**	**-0.4**
SSFR				AML		AML		
	comp=E,9860μm,0.2s							
SSFR				AML		AML		
	comp=E,9150μm,0.2s							
SSFR				AML		AML		
	comp=N,7980μm,1.4s							
SSFR				AML		AML		
	comp=N,8925μm,0.2s							
T0110	**Collepietro**	**0.71**	**145**	⇓P		**Pg**	**06 55 08.1**	**-0.7**
T0110				S		**Sb**	**06 55 19.2**	**-0.4**
T0110				AML		AML		
	comp=E,9160μm,0.6s							
T0110				AML		AML		
	comp=N,8295μm,0.4s							
ARVD	**Arcevia**	**0.72**	**343**	P		**Pg**	**06 55 08.2**	**-0.8**
ARVD				S		**Sb**	**06 55 19.3**	**-0.5**
ARVD				AML		AML		
	comp=E,2320μm,0.6s							
ARVD				AML		AML		
	comp=N,1450μm,0.9s							
ATSC	**Scheggia e Pas**	**0.73**	**327**	P		**Pg**	**06 55 08.2**	**-1.0**
ATFO	**Monte Foce - G**	**0.73**	**320**	P		**Pg**	**06 55 08.5**	**-0.8**
ATFO				AML		AML		
	comp=E,2585μm,1.6s							
ATFO				AML		AML		
	comp=N,2735μm,0.7s							
ATTE	**AVT- Monte Tez**	**0.75**	**302**	P		**Pg**	**06 55 08.6**	**-1.0**
ATTE				AML		AML		
	comp=E,1400μm,1.1s							
ATTE				AML		AML		
	comp=N,1955μm,0.6s							
SRES	**S.Oreste - Sor**	**0.78**	**223**	P		**Pg**	**06 55 09.2**	**-0.9**
SRES				AML		AML		
	comp=N,1670μm,1.3s							
SRES				AML		AML		
	comp=E,1805μm,0.3s							
ATLO	**AVT- Montelove**	**0.78**	**310**	P		**Pg**	**06 55 09.2**	**-1.0**
AOI	**Ancona**	**0.79**	**20**	P		**Pg**	**06 55 10.2**	**-0.2**
AOI				AML		AML		
	comp=N,2590μm,0.4s							
AOI				AML		AML		
	comp=E,2685μm,1.6s							
FRON	**Frontone**	**0.80**	**333**	P		**Pg**	**06 55 09.4**	**-1.0**
FRON				S		**Sb**	**06 55 21.6**	**-0.5**
FRON				AML		AML		
	comp=E,2385μm,0.2s							
FRON				AML		AML		
	comp=N,2725μm,0.5s							
PTQR	**Pietraquaria**	**0.80**	**171**	P		**Pg**	**06 55 09.2**	**-1.3**
PTQR				AML		AML		
	comp=N,854μm,1.5s							
PTQR				AML		AML		
	comp=E,1015μm,0.9s							
TB01	**Gubbio**	**0.81**	**315**	P		**Pg**	**06 55 09.8**	**-1.0**
TB02	**Pietralunga**	**0.82**	**313**	P		**Pg**	**06 55 09.8**	**-1.1**
MGAB	**Montegabbione**	**0.82**	**278**	P		**Pg**	**06 55 10.0**	**-0.9**
MGAB				AML		AML		
	comp=E,2935μm,0.5s							
MGAB				AML		AML		
	comp=N,4380μm,0.3s							
MGAB				AML		AML		
	comp=E,3355μm,0.3s							
MGAB				AML		AML		
	comp=N,5120μm,0.3s							
ATVO	**AVT- Monte Val**	**0.83**	**314**	⇑P		**Pg**	**06 55 10.0**	**-1.1**
ATVO				AML		AML		
	comp=E,1795μm,0.8s							
ATVO				AML		AML		
	comp=N,1880μm,0.8s							
ATBU	**Serra di Buran**	**0.83**	**324**	P		**Pg**	**06 55 10.3**	**-0.8**
ATVA	**AVT- Monte Val**	**0.83**	**305**	P		**Pg**	**06 55 09.9**	**-1.3**
COR1	**Corinaldo**	**0.84**	**349**	P		**Pg**	**06 55 11.2**	**-0.1**
COR1				AML		AML		
	comp=N,4665μm,0.4s							
COR1				AML		AML		
	comp=E,5575μm,0.5s							
COR1				AML		AML		
	comp=N,4660μm,0.4s							
TB03	**Pietralunga**	**0.84**	**315**	P		**Pg**	**06 55 10.1**	**-1.2**
MTCE	**Montecelio**	**0.86**	**205**	P		**Pg**	**06 55 10.6**	**-1.1**
MTCE				AML		AML		
	comp=N,1003μm,1.0s							
MTCE				AML		AML		
	comp=E,1810μm,0.5s							
ATPC	**Poggio Castell**	**0.88**	**320**	P		**Pg**	**06 55 10.9**	**-1.0**
ATMI	**Monte Miggiano**	**0.88**	**307**	P		**Pg**	**06 55 11.0**	**-0.9**
ATMI				AML		AML		
	comp=E,5310μm,0.4s							
ATMI				AML		AML		
	comp=N,6130μm,0.4s							
CERT	**Cerreto**	**0.88**	**192**	P		**Pg**	**06 55 10.7**	**-1.3**
CERT				AML		AML		
	comp=N,2030μm,0.4s							
CERT				AML		AML		
	comp=E,2385μm,0.5s							
ATPI	**Pietralunga -**	**0.88**	**317**	⇑P		**Pg**	**06 55 11.0**	**-1.1**
ATPI				AML		AML		
	comp=N,1620μm,0.9s							
ATPI				AML		AML		
	comp=N,1625μm,0.9s							
ATPI				AML		AML		
	comp=E,1275μm,0.5s							
PIEI	**Pieia**	**0.89**	**325**	P		**Pg**	**06 55 10.9**	**-1.2**
PIEI				AML		AML		
	comp=E,1565μm,1.1s							
PIEI				AML		AML		
	comp=N,1204μm,0.5s							
MPAG	**Monte Paganucc**	**0.89**	**338**	P		**Pg**	**06 55 11.3**	**-0.9**
MPAG				AML		AML		
	comp=E,1725μm,0.3s							
MPAG				AML		AML		
	comp=N,1650μm,0.6s							
SENI	**Senigallia**	**0.90**	**0**	P		**Pg**	**06 55 11.7**	**-0.6**
NARO	**Abbazia di Nar**	**0.93**	**330**	P		**Pg**	**06 55 11.8**	**-1.2**
FSSB	**Fossombrone**	**0.94**	**340**	P		**Pg**	**06 55 12.2**	**-1.0**
FSSB				AML		AML		
	comp=E,5205μm,0.3s							
FSSB				AML		AML		
	comp=N,7390μm,0.4s							
INTR	**Introdacqua**	**0.94**	**148**	P		**Pg**	**06 55 11.7**	**-1.5**
INTR				AML		AML		
	comp=E,1330μm,1.1s							
INTR				AML		AML		
	comp=N,2680μm,0.5s							
APEC	**Apecchio**	**0.95**	**322**	P		**Pg**	**06 55 12.7**	**-0.8**
SACS	**San Casciano d**	**0.97**	**273**	P		**Pg**	**06 55 12.7**	**-1.0**
SACS				AML		AML		
	comp=E,1114μm,0.5s							
SACS				AML		AML		
	comp=N,1394μm,0.9s							
SACS				AML		AML		
	comp=N,1350μm,0.7s							
SACS				AML		AML		
	comp=E,1084μm,1.5s							
CDCA	**Citt' di

comp=E,3575µm,0.7s
VVLD Villa Vallelon 0.98 162 P **Pg** 06 55 12.8 -1.2
VVLD AML AML
comp=E,1115µm,1.0s
VVLD AML AML
comp=N,1440µm,0.5s
RCAV Rocca di Cave 0.98 192 P **Pg** 06 55 14.0 0.0
RCAV S **Sn** 06 55 29.7 +0.4
ATMC Monte Cedrone 0.99 310 P **Pg** 06 55 13.9 -0.2
BADI Badiali 1.00 315 P **Pg** 06 55 13.2 -1.2
GUAR Guarcino 1.02 176 P **Pg** 06 55 13.8 -0.8
PE3 Peglio 1.03 329 P **Pg** 06 55 14.2 -0.8
LPEL Lama dei Pelig 1.04 137 S **Sn** 06 55 30.0 -0.6
CAFI Castiglion Fio 1.06 300 P **Pg** 06 55 14.2 -1.2
CAFI AML AML
comp=N,1435µm,0.7s
CAFI AML AML
comp=E,1175µm,1.1s
LATE Laterza 1.07 260 P **Pg** 06 55 14.9 -0.7
RMP Rome, Mte Porz 1.07 201 P **Pg** 06 55 15.7 0.0
PARC Parchiule 1.11 320 P **Pg** 06 55 15.1 -1.2
PARC AML AML
comp=N,964µm,0.6s
PARC AML AML
comp=E,1068µm,0.4s
SSP9 Sansepolcro 1.11 314 P **Pg** 06 55 15.7 -0.6
VIVA Pratoni del Vi 1.11 198 P **Pn** 06 55 18.5 +1.6
RDP Rocca di Papa 1.12 200 P **Pn** 06 55 17.2 +0.2
RDP S **Sn** 06 55 34.2 +1.7
SF11 Podere del Sol 1.14 273 P **Pg** 06 55 16.3 -0.7
MCIV Monte Civitell 1.14 269 P **Pg** 06 55 16.3 -0.7
MCIV AML AML
comp=E,613µm,0.3s
MCIV AML AML
comp=N,488µm,0.7s
POFI Posta Fibreno 1.15 162 P **Pg** 06 55 15.4 -1.8
POFI AML AML
comp=E,774µm,1.4s
POFI AML AML
comp=N,670µm,1.3s
SF04 Casetta 1.15 272 P **Pg** 06 55 16.7 -0.5
PESA Pesaro 1.17 346 P **Pg** 06 55 17.2 -0.3
TOLF Tolfa 1.17 231 P **Pb** 06 55 16.0 -1.6
TOLF AML AML
comp=E,952µm,0.9s
TOLF AML AML
comp=N,986µm,0.3s
SF13 Bagnolo 1.18 271 P **Pg** 06 55 16.5 -1.3
SF13 S **Sb** 06 55 33.7 +0.5
LRP Arpino 1.19 167 P **Pn** 06 55 19.3 +1.3
LRP AML AML
comp=E,582µm,1.5s
LRP AML AML
comp=N,732µm,1.1s
GIUL Giuliano Di Ro 1.25 179 P **Pn** 06 55 17.3 -1.5
GIUL AML AML
comp=N,629µm,0.9s
GIUL AML AML
comp=E,557µm,0.4s
RSM Repubblica di 1.25 333 P **Pg** 06 55 19.2 +0.1
ARCI Arcidosso 1.29 272 P **Pb** 06 55 19.7 +0.1
RNI2 Rionero Sannit 1.30 148 P **Pg** 06 55 21.1 +1.0
LATB Latina 1.33 189 P **Pn** 06 55 19.3 -0.5
LATB S **Sg** 06 55 39.3 +1.5
CERA Filignano 1.35 154 P **Pn** 06 55 20.0 -0.1
CERA S **Sg** 06 55 43.0 +4.6
TRIV Trivento 1.43 136 P **Pg** 06 55 23.1 +0.5
ASQU Asqua 1.44 314 P **Pn** 06 55 21.9 +0.5
SFI Santa Sofia 1.49 318 P **Pn** 06 55 22.4 +0.3
SFI S **Sg** 06 55 47.8 +4.9
CSNT Castellina Chi 1.56 296 P **Pn** 06 55 21.1 -2.0
VAGA Valle Agricola 1.58 151 P **Pg** 06 55 25.4 -0.1
OSSC Osservatorio P 1.61 297 P **Pn** 06 55 23.7 -0.1
BSSO Busso 1.62 141 P **Pg** 06 55 26.6 +0.4
RUFI Rufina 1.62 310 P **Pn** 06 55 24.0 +0.2
LMD Lutirano 1.68 319 P **Pb** 06 55 26.3 +0.1
CIGN Sant'Elia a Pi 1.70 132 P **Pg** 06 55 27.2 -0.5
MODR Mondragone 1.73 163 P **Pn** 06 55 25.7 +0.3
TRIF Trifonti 1.73 281 P **Pn** 06 55 25.0 -0.4
CASP Castiglione de 1.74 270 P **Pn** 06 55 24.6 -0.8
DUGI Dugi Otok 1.78 48 *e*Pn **Pn** 06 55 26.0 -0.1
GATE Gambatesa 1.80 135 ⇑P **Pb** 06 55 28.9 +0.6
TREM Isole Tremiti 1.82 111 P **Pg** 06 55 30.3 +0.3
BRIS BRISIGHELLA 1.83 318 P **Pb** 06 55 28.8 +0.1
SEI Scarperia 1.84 313 P **Pn** 06 55 27.3 +0.4
MPPT Montemurlo 1.93 307 P **Pn** 06 55 27.6 -0.6
VIRC Vir 1.99 41 *e*Pn **Pn** 06 55 28.6 -0.3
APRC Apricena 2.02 121 P **Pn** 06 55 30.6 +1.3
APRC AML AML
comp=E,634µm,0.4s
APRC AML AML
comp=N,821µm,0.5s
MTRZ Monterenzio 2.02 321 P **Pg** 06 55 33.3 -0.5
MTCR Monte La Croce 2.03 308 P **Pn** 06 55 29.6 0.0
PAOL Paolisi 2.04 150 S **Sn** 06 55 56.0 +0.7
FNVD Fontana Vidola 2.05 312 P **Pn** 06 55 30.3 +0.5
MORI Morici 2.10 59 *e*Pn **Pn** 06 55 30.7 +0.3
NVLJ Novalja 2.12 34 *e*Pn **Pn** 06 55 30.6 -0.1
BRJN Brijuni 2.13 10 *e*Pn **Pn** 06 55 30.2 -0.6
BRJN Brijuni 2.13 10 P **Pn** 06 55 30.7 -0.1
PII Pisa 2.17 296 P **Pn** 06 55 32.2 +0.8
POPM Popiglio 2.18 305 P **Pn** 06 55 31.4 -0.5
RABC Rab 2.24 30 *e*Pn **Pn** 06 55 32.4 0.0
MSAG Monte S. Angel 2.27 118 P **Pn** 06 55 34.2 +1.3
MSAG AML AML
comp=N,1318µm,0.4s
MSAG AML AML
comp=E,785µm,0.7s
MAIM Mastiano 2.28 300 P **Pn** 06 55 32.8 -0.1
MAIM AML AML
comp=N,141µm,0.4s
MAIM AML AML
comp=E,114µm,0.8s
SMRN Sveta Marina 2.33 16 *e*Pn **Pn** 06 55 32.9 -0.6
UDBI Udbina 2.52 46 *e*Pn **Pn** 06 55 35.8 -0.4
KIJV Kijevo 2.61 62 *e*Pn **Pn** 06 55 38.4 +1.0
RIY Rijeka 2.67 19 *e*Pn **Pb** 06 55 40.9 -2.2
RIY *e*Sn **Sn** 06 56 12.9 +2.1
LSTV Lastovo 2.70 90 *e*Pn **Pn** 06 55 38.7 +0.1
PLIT Plitvice 2.70 39 *e*Pn **Pn** 06 55 39.4 +0.6
CDRU Civita di Ruta 2.79 145 P **Pn** 06 55 41.9 +1.8
SKDS Skadanscina 2.79 11 *i* Pn **Pn** 06 55 39.9 -0.1
SKDS *i* Sn **Sn** 06 56 13.8 -0.1
SKDS IAML 06 56 20.3
comp=Z,35nm,0.3s
MAKA Makarska 2.82 79 *e*Pn **Pn** 06 55 41.3 +1.0
GRAM Graiana 2.84 307 ⇓P **Pn** 06 55 42.1 +1.3
RICI Ricice 2.94 75 *e*Pn **Pn** 06 55 43.1 +1.1
BOJS Bojanci 3.06 28 P **Pn** 06 55 44.8 +1.1
A251A Rujevac 3.19 42 *e*Pn **Pn** 06 55 45.6 +0.2
ROVR Rover Verones 3.23 332 ⇑P **Pn** 06 55 48.3 +2.2
STON Ston 3.29 87 *e*Pn **Pn** 06 55 46.1 -0.7
STON Ston 3.29 87 *e*Pn **Pn** 06 55 46.8 0.0
STON *e*Sn **Sn** 06 56 24.6 -1.4
STON Ston 3.29 87 ⇓P **Pn** 06 55 45.9 -0.9
STON AML AML
comp=E,63µm,1.6s
STON AML AML
comp=N,94µm,0.7s
LJU Ljubljana 3.37 16 S **Sn** 06 56 31.0 +3.1
DOSS Dosso del Somm 3.40 335 ⇓P **Pn** 06 55 51.1 +2.6
STAL STALIGIAL 3.47 354 P **Pn** 06 55 49.8 +0.5
STAL AML AML
comp=N,152µm,0.3s
STAL AML AML
comp=E,184µm,0.6s
LTRZ Laterza 3.48 128 ⇑P **Pn** 06 55 50.2 +0.8
MAGA Magasa 3.50 329 P **Pn** 06 55 51.5 +1.7
LUSI Trento, Gardas 3.55 333 P **Pn** 06 55 52.3 +1.9
PTCC Patocco-Chiusa 3.60 1 P **Pn** 06 55 51.1 +0.1
PTCC AML AML
comp=E,53µm,0.6s
PTCC AML AML
comp=N,60µm,1.6s
ZONE Zone 3.70 324 ⇑P **Pn** 06 55 54.1 +1.6
ACOM Acomizza, Ital 3.74 3 P **Pn** 06 55 54.1 +0.9
SALB San Lorenzo Be 3.75 140 S **Sn** 06 56 38.0 +0.3
SALB S **Sg** 06 56 54.0 -1.7
EUCT Pavia 3.80 310 ⇓P **Pg** 06 56 08.6 +0.7
OBKA Obir 3.82 14 *e*Pn **Pn** 06 55 53.9 -0.3
comp=N,1.0nm,0.2s
MYKA Terra Mystica 3.83 4 *e*Pn **Pn** 06 55 53.5 -0.8
comp=N,2.2nm,0.3s
KOSI Kohlern 3.88 341 P **Pn** 06 55 56.4 +1.3
MILN Milano 3.92 314 P **Pb** 06 56 05.2 +0.8
APPI Appiano 3.94 339 P **Pn** 06 55 56.9 +1.2
ABTA Abfaltersbach 3.97 353 Pn **Pn** 06 55 57.4 +1.1
comp=N,5.4nm,0.3s,SNR=30
SOKA Soboth 4.08 18 *e*Pn **Pn** 06 56 01.1 +3.4
comp=N,1.0nm,0.2s
RISI Rein 4.22 349 P **Pn** 06 56 01.9 +2.2
RISI ⇑P **Pb** 06 56 10.9 +1.4
RISI S **Sn** 06 56 48.0 -1.2
KBA Koelnbreinsper 4.27 1 *e*Pn **Pn** 06 56 02.0 +1.5
comp=N,4.6nm,0.3s
ROSI Rosskopf 4.32 343 ⇓P **Pn** 06 56 04.0 +2.9
VSL Villasalto 4.40 223 ⇑P **Pn** 06 56 03.0 +0.8
FETA Feichten 4.57 338 Pn **Pn** 06 56 08.1 +3.6
comp=N,1.8nm,0.4s,SNR=6.7
WTTA Wattenberg 4.59 346 *e*Pn **Pn** 06 56 08.3 +3.4
comp=N,4.3nm,0.2s
WTTA Wattenberg 4.59 346 ⇓P **Pn** 06 56 08.4 +3.6
BBLS Lazići 4.63 75 *e*Pn **Pn** 06 56 07.3 +2.0
SQTA Sankt Quirin 4.64 343 Pn **Pn** 06 56 07.8 +2.4
comp=N,5.8nm,0.2s,SNR=4.4
WATA Walderalm 4.67 346 *e*Pn **Pn** 06 56 09.5 +3.6
comp=N,2.9nm,0.2s
ARSA Arzberg 4.73 19 *e*Pn **Pn** 06 56 08.0 +1.4
comp=N,0.9nm,0.2s
ARSA Arzberg 4.73 19 ⇓P **Pg** 06 56 23.1 -2.5
MOTA Moosalm 4.78 342 *e*Pn **Pn** 06 56 11.7 +4.3
comp=N,0.7nm,0.2s
BIOA Bad Ischl, Aus 4.89 3 *e*Pn **Pn** 06 56 10.0 +1.2
comp=N,2.9nm,0.3s
SJES Sjenica 4.97 82 *e*Pn **Pn** 06 56 11.4 +1.4
SJES *e*Sn **Sn** 06 57 04.8 -2.7
RETA Reutte 4.99 340 *e*Pn **Pn** 06 56 10.8 +0.5
comp=N,0.4nm,0.1s
DAVA Damuels 5.07 333 *e*Pn **Pn** 06 56 10.5 -0.8
comp=N,1.4nm,0.3s
DIVS Divibare 5.09 73 *e*Pn **Pn** 06 56 13.6 +2.0
MOA Molln 5.09 8 *e*Pn **Pn** 06 56 12.2 +0.6
comp=N,3.5nm,0.3s
IVAS Ivanjica 5.12 79 *e*Pn **Pn** 06 56 13.2 +1.2
IVAS *e*Sn **Sn** 06 57 09.1 -2.2
VLO Vlora 5.25 114 P Pn 06 56 19.3 +5.7
RONA Rosalia, Austr 5.35 23 *e*Pn **Pn** 06 56 14.1 -1.0
comp=N,0.9nm,0.3s
CONA Conrad Observa 5.45 19 *e*Pn **Pn** 06 56 15.9 -0.6
comp=N,0.7nm,0.2s
GRUS Gruza 5.57 76 *e*Pn **Pn** 06 56 19.8 +1.7
BARS Barje 6.32 87 *e*Pn **Pn** 06 56 29.5 +1.1
BARS *e*Sn **Sn** 06 57 36.2 -4.5
KHC Kasperske Hory 6.33 2 *e*PN **Pn** 06 56 29.1 +0.5
KHC *e*SN **Sn** 06 57 39.9 -1.0
PRVS Prvonek 6.53 90 *e*Pn **Pn** 06 56 31.9 +0.5
PRVS *e*Sn **Sn** 06 57 40.5 -5.5
ZAGS Zajecar 6.65 78 *e*Pn **Pn** 06 56 33.5 +0.6
BOSS Bosilegrad 6.83 89 *e*Pn **Pn** 06 56 35.9 +0.4
BOSS *e*Sn **Sn** 06 57 48.6 -4.7
ZAPS Zavoj 6.91 83 *e*Pn **Pn** 06 56 38.3 +1.7
ZAPS *e*Sn **Sn** 06 57 51.5 -3.8

ROM 24 06:56:01.7±0.1, 42°.815N±0°.004×13°.258E±0°.006, h15km±1km, Md1.6/10, 2D, Error ellipse: s-maj=0.5km s-min=0.1km az=90.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**280**		P	Pg	06 56 05.3	+0.2
NRCA					S	Sg	06 56 07.7	+0.3
NRCA					AML	AML		
	comp=E,31200µm,0.1s							
NRCA					AML	AML		
	comp=N,36050µm,1.1s							
NRCA					AML	AML		
	comp=E,33750µm,0.1s							
NRCA					AML	AML		
	comp=N,39150µm,1.1s							
NRCA					END			
FEMA	**Monte Fema**	**0.21**	**314**	*e*P	Pg		06 56 06.8	+0.2
FEMA					S	Sg	06 56 10.6	+0.6
FEMA					END			
FDMO	**Fiordimonte**	**0.26**	**331**	*i*P	Pg		06 56 07.4	+0.1
FDMO					S	Sg	06 56 11.5	+0.4
FDMO					END			
CSP1	**Cessapalombo**	**0.28**	**352**	⇓*i*P	Pg		06 56 07.9	+0.1
CSP1					S	Sg	06 56 12.4	+0.6
CSP1					END			
CAMP	**Campotosto**	**0.30**	**158**	P	Pg		06 56 08.2	+0.2
CAMP					S	Sb	06 56 13.2	-0.6
CAMP					END			
RM33	**Pellescritta (**	**0.31**	**186**	P	Pb		06 56 08.7	-0.4
RM33					S	Sb	06 56 13.6	-0.3
RM33					END			
CESI	**CESI - Serrava**	**0.32**	**306**	*e*P	Pg		06 56 08.6	+0.2
CESI					S	Sb	06 56 13.9	-0.4
CESI					END			
ASSB	**Assisi San Ben**	**0.50**	**298**	*e*P	Pg		06 56 11.6	0.0
ASSB					S	Sb	06 56 19.2	-0.1
ASSB					END			
SNTG	**Esanatoglia**	**0.50**	**332**	*e*P	Pg		06 56 11.3	-0.3
SNTG					END			
EL6	**Elcito**	**0.53**	**347**	*e*P	Pg		06 56 12.1	-0.1
GUAR	**Guarcino**	**1.02**	**178**	AML	AML			
	comp=E,1595µm,0.5s							
GUAR				AML	AML			
	comp=N,1820µm,0.5s							
MRB1	**Monte Rocchett**	**2.12**	**142**	AML	AML			
	comp=E,451µm,0.8s							

ROM 24 06:59:28.2±0.2, 42°.655N±0°.010×13°.20E±0°.01, h10km±1km, ML1.7/4, Error ellipse: s-maj=1.1km s-min=0.6km az=229.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.15**	**176**	P	Pg		06 59 32.3	+0.8
RM33				S	Sg		06 59 35.1	+1.3
RM33				AML	AML			
	comp=E,4390µm,0.4s							
RM33				AML	AML			
	comp=N,2675µm,0.5s							
RM33				AML	AML			
	comp=E,4315µm,0.4s							
RM33				AML	AML			
	comp=N,2745µm,0.5s							
NRCA	**Norcia**	**0.19**	**340**	P	Pg		06 59 33.0	+0.7
NRCA				S	Sg		06 59 35.7	+0.7
NRCA				AML	AML			
	comp=E,41050µm,0.1s							
NRCA				AML	AML			
	comp=N,53500µm,0.1s							
NRCA				AML	AML			
	comp=E,44800µm,0.1s							
NRCA				AML	AML			
	comp=N,57300µm,0.1s							
CAMP	**Campotosto**	**0.19**	**128**	*e*P	Pg		06 59 32.9	+0.5
CAMP				S	Sg		06 59 36.1	+0.9
CAMP				AML	AML			
	comp=E,3565µm,0.3s							
CAMP				AML	AML			
	comp=N,3675µm,0.5s							
TERO	**Teramo**	**0.30**	**96**	*e*P	Pg		06 59 34.4	+0.2
TERO				S	Sg		06 59 38.8	+0.6
TERO				AML	AML			
	comp=E,2045µm,0.6s							
TERO				AML	AML			
	comp=N,2515µm,0.5s							
TERO				AML	AML			
	comp=E,2435µm,0.2s							
TERO				AML	AML			
	comp=N,2660µm,0.5s							
TERO				AML	AML			
	comp=N,717µm,0.1s							
TERO				AML	AML			
	comp=E,440µm,0.1s							
FEMA	**Monte Fema**	**0.33**	**340**	AML	AML			
	comp=N,9260µm,0.6s							
FEMA				AML	AML			
	comp=E,10750µm,0.1s							
ARRO	**Arrone**	**0.33**	**257**	P	Pg		06 59 35.3	+0.5
ARRO				S	Sb		06 59 40.8	-0.9
ARRO				AML	AML			
	comp=E,994µm,1.1s							
ARRO				AML	AML			
	comp=N,1005µm,0.3s							
ARRO				AML	AML			
	comp=E,993µm,1.1s							
ARRO				AML	AML			
	comp=N,1007µm,0.3s							
ARRO				AML	AML			
	comp=N,111µm,0.1s							
ARRO				AML	AML			
	comp=E,149µm,0.2s							
GIGS	**Gran Sasso**	**0.34**	**127**	*e*P	Pg		06 59 35.2	+0.2
GIGS				S	Sg		06 59 40.4	+0.9
GIGS				AML	AML			
	comp=E,687µm,0.5s							
GIGS				AML	AML			
	comp=N,674µm,0.9s							
GIGS				AML	AML			
	comp=E,51µm,0.3s							
GIGS				AML	AML			
	comp=N,38µm,0.1s							
FDMO	**Fiordimonte**	**0.39**	**348**	AML	AML			
	comp=N,6485µm,0.2s							
FDMO				AML	AML			
	comp=E,3830µm,0.2s							
CESI	**CESI - Serrava**	**0.41**	**328**	AML	AML			
	comp=N,6075µm,0.3s							
CESI				AML	AML			
	comp=E,3580µm,0.2s							
GUMA	**Gualdo di Mace**	**0.42**	**13**	AML	AML			
	comp=E,15800µm,0.3s							
GUMA				AML	AML			
	comp=N,17050µm,1.1s							
GUMA				AML	AML			
	comp=E,13300µm,0.7s							
GUMA				AML	AML			
	comp=N,19950µm,0.3s							
CSP1	**Cessapalombo**	**0.44**	**0**	AML	AML			
	comp=E,3800µm,1.4s							
CSP1				AML	AML			
	comp=N,3915µm,1.3s							
OFFI	**Offida**	**0.45**	**52**	P	Pb		06 59 38.0	-0.4
OFFI				AML	AML			
	comp=E,5595µm,0.3s							
OFFI				AML	AML			
	comp=N,7905µm,0.4s							
MNTP	**Montappone**	**0.52**	**22**	AML	AML			
	comp=E,2415µm,0.8s							
MNTP				AML	AML			
	comp=N,2400µm,0.6s							
SEF1	**Sefro**	**0.53**	**339**	AML	AML			
	comp=N,4980µm,1.0s							
SEF1				AML	AML			
	comp=E,4250µm,0.4s							
VCEL	**Villa Celiera**	**0.54**	**119**	P	Pb		06 59 39.4	-0.5
VCEL				S	Sb		06 59 48.0	+0.2
VCEL				AML	AML			
	comp=E,1400µm,0.3s							
VCEL				AML	AML			
	comp=N,1200µm,1.0s							
VCEL				AML	AML			
	comp=N,143µm,0.3s							
VCEL				AML	AML			
	comp=E,122µm,0.4s							
TRTR	**Tortoreto Alta**	**0.55**	**74**	AML	AML			
	comp=E,2315µm,0.4s							
TRTR				AML	AML			
	comp=N,1950µm,1.3s							
ASSB	**Assisi San Ben**	**0.56**	**314**	AML	AML			
	comp=E,970µm,0.1s							
ASSB				AML	AML			
	comp=N,952µm,0.2s							
GAG1	**Gagliole**	**0.59**	**350**	AML	AML			
	comp=N,3280µm,0.4s							
GAG1				AML	AML			
	comp=E,3280µm,1.0s							
T0110	**Collepietro**	**0.60**	**135**	*e*P	Pg		06 59 40.4	+0.4
T0110				S	Sb		06 59 48.9	-0.7
SNTG	**Esanatoglia**	**0.63**	**342**	AML	AML			
	comp=E,844µm,1.5s							
SNTG				AML	AML			
	comp=N,906µm,0.4s							
ATCC	**AVT- Casa Cast**	**0.67**	**322**	AML	AML			
	comp=N,928µm,1.5s							
ATCC				AML	AML			
	comp=E,1075µm,1.2s							
CADA	**Capodarco di F**	**0.68**	**37**	AML	AML			
	comp=N,1670µm,0.9s							
CADA				AML	AML			
	comp=E,1420µm,1.0s							
FOSV	**Fossato di Vic**	**0.72**	**333**	AML	AML			
	comp=N,1480µm,0.4s							
FOSV				AML	AML			
	comp=E,712µm,0.5s							
PP3	**Marolino**	**0.78**	**22**	AML	AML			
	comp=N,1443µm,0.3s							
PP3				AML	AML			
	comp=E,1135µm,0.4s							
PP3				AML	AML			
	comp=N,1334µm,0.3s							
PP3				AML	AML			
	comp=E,1245µm,0.4s							
MMUR	**Monte Murano**	**0.80**	**349**	AML	AML			
	comp=E,1640µm,0.3s							
MMUR				AML	AML			
	comp=N,1070µm,0.4s							

ROM 24 06:59:37.4±0.1, 42°.804N±0°.003×13°.163E±0°.005, h10km, ML2.3/5, Error ellipse: s-maj=0.4km s-min=0.1km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**310**	P	Pg		06 59 39.9	+0.4
NRCA				S	Sg		06 59 41.2	+0.2
FEMA	**Monte Fema**	**0.18**	**332**	P	Pg		06 59 41.9	+0.6
FEMA				S	Sg		06 59 44.8	+0.8
FDMO	**Fiordimonte**	**0.24**	**347**	P	Pg		06 59 42.8	+0.5
FDMO				S	Sg		06 59 46.6	+0.9
CESI	**CESI - Serrava**	**0.28**	**317**	P	Pg		06 59 43.5	+0.5
CESI				S	Sg		06 59 47.9	+1.2
GUMA	**Gualdo di Mace**	**0.29**	**26**	P	Pb		06 59 44.1	-0.6
GUMA				S	Sb		06 59 49.0	-0.6
CSP1	**Cessapalombo**	**0.29**	**6**	P	Pg		06 59 43.8	+0.5
CSP1				S	Sg		06 59 48.5	+1.2
RM33	**Pellescritta (**	**0.30**	**173**	P	Pg		06 59 43.9	+0.6
RM33				S	Sb		06 59 48.9	-1.0
RM33				AML	AML			
	comp=E,4390µm,0.4s							
RM33				AML	AML			
	comp=N,2675µm,0.5s							
RM33				AML	AML			
	comp=E,4315µm,0.4s							
RM33				AML	AML			
	comp=E,4390µm,0.4s							
RM33				AML	AML			
	comp=E,4395µm,0.4s							
RM33				AML	AML			
	comp=N,2745µm,0.5s							
RM33				AML	AML			
	comp=N,2680µm,0.5s							
RM33				AML	AML			
	comp=N,1318µm,0.2s							
RM33				AML	AML			
	comp=N,1344µm,0.2s							
RM33				AML	AML			
	comp=E,1129µm,0.2s							
RM33				AML	AML			
	comp=E,1606µm,0.0s							
CAMP	**Campotosto**	**0.32**	**146**	P	Pg		06 59 44.3	+0.4
CAMP				S	Sb		06 59 49.5	-1.1
ARRO	**Arrone**	**0.37**	**233**	P	Pb		06 59 45.5	-0.5
ARRO				S	Sb		06 59 50.9	-1.0
ARRO				AML	AML			
	comp=E,990µm,1.1s							
ARRO				AML	AML			
	comp=N,1005µm,0.3s							
ARRO				AML	AML			
	comp=E,992µm,1.1s							
ARRO				AML	AML			
	comp=E,992µm,1.1s							
ARRO				AML	AML			
	comp=N,1006µm,0.3s							
ARRO				AML	AML			
	comp=E,702µm,0.2s							
ARRO				AML	AML			
	comp=N,854µm,0.0s							
TERO	**Teramo**	**0.37**	**119**	P	Pg		06 59 45.2	+0.4

TERO				S	Sb	06 59 50.9	-1.0
TERO				AML	AML		
	comp=E,2045µm,0.6s						
TERO				AML	AML		
	comp=N,2515µm,0.5s						
TERO				AML	AML		
	comp=E,2435µm,0.2s						
TERO				AML	AML		
	comp=N,2660µm,0.5s						
TERO				AML	AML		
	comp=E,916µm,0.0s						
TERO				AML	AML		
	comp=N,825µm,0.2s						
SEF1	**Sefro**	**0.38**	**335**	P	Pb	06 59 45.5	-0.7
MDAR	**Monte D'Aria**	**0.39**	**358**	P	Pg	06 59 45.4	+0.3
MDAR				S	Sb	06 59 51.4	-1.1
PIO1	**Pioraco**	**0.40**	**341**	P	Pg	06 59 45.5	+0.3
PIO1				S	Sb	06 59 51.8	-0.9
MNTP	**Montappone**	**0.40**	**34**	P	Pb	06 59 46.3	-0.3
OFFI	**Offida**	**0.41**	**71**	P	Pb	06 59 46.4	-0.3
OFFI				AML	AML		
	comp=N,7905µm,0.4s						
OFFI				AML	AML		
	comp=E,5595µm,0.3s						
OFFI				AML	AML		
FIU1	**Fiuminata**	**0.42**	**336**	P	Pg	06 59 46.0	+0.3
FIU1				S	Sb	06 59 52.6	-0.8
SSM1	**San Severino M**	**0.42**	**1**	P	Pg	06 59 46.1	+0.4
SSM1				S	Sb	06 59 52.9	-0.6
ASSB	**Assisi San Ben**	**0.44**	**303**	P	Pg	06 59 46.2	+0.2
ASSB				S	Sb	06 59 52.9	-1.0
GAG1	**Gagliole**	**0.44**	**351**	P	Pg	06 59 46.5	+0.5
GAG1				S	Sb	06 59 53.5	-0.4
GIGS	**Gran Sasso**	**0.46**	**140**	P	Pg	06 59 46.5	0.0
GIGS				S	Sg	06 59 53.5	+1.0
GIGS				AML	AML		
	comp=E,687µm,0.5s						
GIGS				AML	AML		
	comp=N,674µm,0.9s						
GIGS				AML	AML		
	comp=N,133µm,0.2s						
GIGS				AML	AML		
	comp=E,114µm,0.2s						
SNTG	**Esanatoglia**	**0.48**	**340**	P	Pg	06 59 46.9	+0.2
SNTG				S	Sb	06 59 54.4	-0.7
AQU	**L'Aquila**	**0.48**	**158**	P	Pb	06 59 47.6	-0.4
EL6	**Elcito**	**0.53**	**355**	P	Pg	06 59 47.9	+0.2
FIAM	**Fiamignano**	**0.54**	**184**	P	Pg	06 59 48.1	+0.3
FIAM				S	Sb	06 59 56.1	-0.7
FIAM				AML	AML		
	comp=E,700µm,1.6s						
FIAM				AML	AML		
	comp=E,699µm,1.6s						
FIAM				AML	AML		
	comp=N,492µm,0.6s						
FIAM				AML	AML		
	comp=N,194µm,0.7s						
FIAM				AML	AML		
	comp=E,345µm,0.0s						
ATCC	**AVT- Casa Cast**	**0.54**	**315**	P	Pg	06 59 48.3	+0.4
ATCC				S	Sb	06 59 56.7	-0.1
FOSV	**Fossato di Vic**	**0.57**	**329**	P	Pg	06 59 48.8	+0.3
FOSV				S	Sb	06 59 57.6	-0.1
VCEL	**Villa Celiera**	**0.65**	**129**	AML	AML		
	comp=N,1200µm,1.0s						
VCEL				AML	AML		
	comp=E,1405µm,0.3s						
VCEL				AML	AML		
	comp=N,1204µm,1.0s						
VCEL				AML	AML		
	comp=E,1400µm,0.3s						
MURB	**Monte Urbino**	**0.66**	**315**	P	Pg	06 59 50.3	+0.2
ARVD	**Arcevia**	**0.71**	**347**	P	Pg	06 59 51.3	+0.2
T0110	**Collepietro**	**0.73**	**141**	P	Pg	06 59 51.7	+0.1
ATVO	**AVT- Monte Val**	**0.80**	**316**	P	Pg	06 59 52.7	-0.1
PIEI	**Pieia**	**0.86**	**328**	P	Pg	06 59 54.1	+0.1
MPAG	**Monte Paganucc**	**0.88**	**340**	P	Pg	06 59 54.3	0.0
FSSB	**Fossombrone**	**0.93**	**343**	P	Pg	06 59 55.3	0.0
FSSB				AML	AML		
	comp=E,952µm,0.3s						
FSSB				AML	AML		
	comp=N,1850µm,0.4s						
FSSB				AML	AML		
	comp=E,952µm,0.3s						
FSSB				AML	AML		
	comp=N,1850µm,0.4s						
FSSB				AML	AML		
	comp=E,952µm,0.3s						
FSSB				AML	AML		
	comp=N,1850µm,0.4s						
CIMO	**Cimolais**	**3.54**	**352**	AML	AML		
	comp=N,10µm,1.5s						
CIMO				AML	AML		
	comp=E,10µm,0.1s						

ROM 24 06:59:45.4±0.1, 42°822N±0'004×13°243E±0'007, h11km±1km, ML2.8/8, Error ellipse: s-maj=0.6km s-min=0.2km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**277**	P	Pg	06 59 48.7	+0.5
NRCA				S	Sg	06 59 50.6	+0.4
NRCA				AML	AML		
	comp=E,41050µm,0.1s						
NRCA				AML	AML		
	comp=N,53500µm,0.1s						
NRCA				AML	AML		
	comp=E,44800µm,0.1s						
NRCA				AML	AML		
	comp=E,41050µm,0.1s						
NRCA				AML	AML		
	comp=N,53500µm,0.1s						
NRCA				AML	AML		
	comp=N,57300µm,0.1s						
NRCA				AML	AML		
	comp=E,36683µm,0.1s						
NRCA				AML	AML		
	comp=E,31682µm,0.1s						
NRCA				AML	AML		
	comp=N,44266µm,0.1s						
NRCA				AML	AML		
	comp=N,40358µm,0.1s						
FEMA	**Monte Fema**	**0.20**	**315**	P	Pg	06 59 50.0	+0.2
FEMA				S	Sg	06 59 53.5	+0.7
FEMA				AML	AML		
	comp=N,9260µm,0.6s						
FEMA				AML	AML		
	comp=E,10750µm,0.1s						
FEMA				AML	AML		
	comp=N,9275µm,0.6s						
FEMA				AML	AML		
	comp=N,9280µm,0.6s						
FEMA				AML	AML		
	comp=E,10775µm,0.1s						
FDMO	**Fiordimonte**	**0.24**	**332**	P	Pg	06 59 50.5	0.0
FDMO				S	Sg	06 59 54.7	+0.8
FDMO				AML	AML		
	comp=N,6485µm,0.2s						
FDMO				AML	AML		
	comp=E,3830µm,0.2s						
GUMA	**Gualdo di Mace**	**0.25**	**16**	P	Pg	06 59 51.2	+0.6
GUMA				S	Sb	06 59 55.9	-0.4
GUMA				AML	AML		
	comp=E,15800µm,0.3s						
GUMA				AML	AML		
	comp=N,17050µm,1.1s						
GUMA				AML	AML		
	comp=N,19950µm,0.3s						
GUMA				AML	AML		
	comp=N,17050µm,1.1s						
GUMA				AML	AML		
	comp=E,15800µm,0.3s						
GUMA				AML	AML		
	comp=E,13300µm,0.7s						
CSP1	**Cessapalombo**	**0.27**	**354**	P	Pg	06 59 51.0	0.0
CSP1				S	Sg	06 59 55.8	+0.9
CSP1				AML	AML		
	comp=E,3800µm,1.4s						
CSP1				AML	AML		
	comp=N,3915µm,1.3s						
CSP1				AML	AML		
	comp=E,3775µm,1.4s						
CSP1				AML	AML		
	comp=E,3768µm,1.4s						
CSP1				AML	AML		
	comp=N,3930µm,1.3s						
CSP1				AML	AML		
	comp=N,3940µm,1.3s						
CSP1				AML	AML		
	comp=E,3770µm,1.4s						
CESI	**CESI - Serrava**	**0.31**	**306**	P	Pg	06 59 52.0	+0.3
CESI				S	Sg	06 59 56.8	+1.0
CESI				AML	AML		
	comp=N,6075µm,0.3s						
CESI				AML	AML		
	comp=E,3580µm,0.2s						
CESI				AML	AML		
	comp=N,2668µm,0.3s						
CAMP	**Campotosto**	**0.31**	**157**	P	Pg	06 59 51.8	+0.1
CAMP				S	Sg	06 59 56.9	+0.9
CAMP				AML	AML		
	comp=E,3565µm,0.3s						
CAMP				AML	AML		
	comp=N,3675µm,0.5s						
RM33	**Pellescritta (**	**0.31**	**184**	P	Pg	06 59 52.0	+0.2
RM33				S	Sb	06 59 57.3	-0.8
RM33				AML	AML		
	comp=E,4390µm,0.4s						
RM33				AML	AML		
	comp=N,2675µm,0.5s						
RM33				AML	AML		
	comp=E,4315µm,0.4s						
RM33				AML	AML		
	comp=N,2745µm,0.5s						
TERO	**Teramo**	**0.33**	**127**	P	Pb	06 59 52.8	-0.5
TERO				S	Sg	06 59 57.4	+0.9
TERO				AML	AML		
	comp=E,2045µm,0.6s						
TERO				AML	AML		
	comp=N,2515µm,0.5s						
TERO				AML	AML		
	comp=N,2660µm,0.5s						
TERO				AML	AML		
	comp=E,2435µm,0.2s						
OFFI	**Offida**	**0.34**	**71**	P	Pb	06 59 53.0	-0.5
OFFI				AML	AML		
	comp=N,7905µm,0.4s						
OFFI				AML	AML		
	comp=E,5595µm,0.3s						
MNTP	**Montappone**	**0.36**	**28**	AML	AML		
	comp=N,2400µm,0.6s						
MNTP				AML	AML		
	comp=E,2415µm,1.4s						
SEF1	**Sefro**	**0.39**	**326**	AML	AML		
	comp=E,4250µm,0.4s						
SEF1				AML	AML		
	comp=N,4980µm,1.0s						
SSM1	**San Severino M**	**0.41**	**353**	P	Pg	06 59 53.8	+0.3
ARRO	**Arrone**	**0.43**	**236**	AML	AML		
	comp=E,994µm,1.1s						
ARRO				AML	AML		
	comp=N,1005µm,0.3s						
ARRO				AML	AML		
	comp=E,990µm,1.1s						
ARRO				AML	AML		
	comp=N,1004µm,0.3s						
ARRO				AML	AML		
	comp=E,993µm,1.1s						
ARRO				AML	AML		
	comp=N,1007µm,0.3s						
ARRO				AML	AML		
	comp=N,1006µm,0.3s						
FIU1	**Fiuminata**	**0.43**	**328**	P	Pb	06 59 54.7	-0.3
FIU1				S	Sb	07 00 00.9	-0.6
GAG1	**Gagliole**	**0.44**	**343**	AML	AML		
	comp=E,3865µm,0.4s						
GAG1				AML	AML		
	comp=N,3280µm,0.4s						
GIGS	**Gran Sasso**	**0.44**	**147**	P	Pg	06 59 54.5	+0.4
GIGS				S	Sg	07 00 00.6	+0.7
GIGS				AML	AML		
	comp=E,687µm,0.5s						
GIGS				AML	AML		
	comp=N,674µm,0.9s						
AQU	**L'Aquila**	**0.48**	**166**	P	Pb	06 59 55.5	-0.3
AQU				S	Sb	07 00 02.5	-0.5
AQU				AML	AML		
	comp=E,782µm,0.6s						
AQU				AML	AML		
	comp=N,662µm,0.4s						
AQU				AML	AML		
	comp=E,793µm,0.6s						
AQU				AML	AML		
	comp=N,640µm,0.3s						
ASSB	**Assisi San Ben**	**0.48**	**297**	P	Pg	06 59 55.3	+0.4
ASSB				S	Sb	07 00 02.3	-0.7
ASSB				AML	AML		
	comp=N,952µm,0.2s						
ASSB				AML	AML		
	comp=N,799µm,0.5s						
ASSB				AML	AML		
	comp=E,970µm,0.1s						
SNTG	**Esanatoglia**	**0.49**	**333**	AML	AML		
	comp=N,906µm,0.4s						
SNTG				AML	AML		
	comp=E,844µm,1.5s						
EL6	**Elcito**	**0.52**	**348**	AML	AML		
	comp=N,1530µm,0.3s						
EL6				AML	AML		
	comp=E,1610µm,0.2s						
CESX	**Cesi**	**0.53**	**247**	P	Pg	06 59 55.7	-0.1
CESX				S	Sb	07 00 03.6	-0.7
CESX				AML	AML		
	comp=E,1150µm,0.5s						
CESX				AML	AML		
	comp=N,1285µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.57**	**310**	AML	AML		
	comp=N,927µm,1.5s						
ATCC				AML	AML		
	comp=N,930µm,1.5s						
ATCC				AML	AML		
	comp=E,1075µm,1.2s						
FOSV	**Fossato di Vic**	**0.59**	**323**	AML	AML		
	comp=E,712µm,0.5s						
FOSV				AML	AML		
	comp=N,1480µm,0.4s						
FOSV				AML	AML		
	comp=E,711µm,0.5s						
PP3	**Marolino**	**0.62**	**26**	AML	AML		
	comp=N,1730µm,0.4s						
PP3				AML	AML		
	comp=E,1300µm,0.4s						
PP3				AML	AML		
	comp=N,1650µm,0.4s						
PP3				AML	AML		
	comp=E,1320µm,0.4s						
PP3				AML	AML		
	comp=N,1655µm,0.4s						
PP3				AML	AML		
	comp=E,1325µm,0.4s						
MURB	**Monte Urbino**	**0.69**	**310**	AML	AML		
	comp=N,1970µm,0.3s						
MURB				AML	AML		
	comp=E,1880µm,0.9s						
MURB				AML	AML		
	comp=N,2090µm,0.3s						
MURB				AML	AML		
	comp=E,2195µm,0.9s						
ARVD	**Arcevia**	**0.71**	**342**	AML	AML		
	comp=E,464µm,0.2s						
ARVD				AML	AML		
	comp=N,289µm,0.7s						
T0110	**Collepietro**	**0.71**	**146**	AML	AML		
	comp=N,1022µm,0.3s						
T0110				AML	AML		
	comp=E,1400µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.75**	**300**	AML	AML		
	comp=E,266µm,0.4s						
ATTE				AML	AML		
	comp=N,236µm,0.7s						
SRES	**S.Oreste - Sor**	**0.80**	**223**	AML	AML		
	comp=N,197µm,0.8s						
SRES				AML	AML		
	comp=E,253µm,0.7s						
ATVO	**AVT- Monte Val**	**0.83**	**313**	AML	AML		
	comp=N,246µm,1.2s						
ATVO				AML	AML		
	comp=E,306µm,0.4s						
MGAB	**Montegabbione**	**0.84**	**277**	AML	AML		
	comp=N,658µm,0.3s						
MGAB				AML	AML		
	comp=E,474µm,0.3s						
MGAB				AML	AML		
	comp=N,682µm,0.3s						
MGAB				AML	AML		
	comp=N,658µm,0.3s						
MGAB				AML	AML		
	comp=E,475µm,0.3s						
MGAB				AML	AML		
	comp=E,502µm,0.3s						
MPAG	**Monte Paganucc**	**0.88**	**337**	AML	AML		
	comp=E,596µm,0.3s						
MPAG				AML	AML		
	comp=N,389µm,0.3s						
PIEI	**Pieia**	**0.88**	**324**	AML	AML		
	comp=N,435µm,0.2s						
PIEI				AML	AML		
	comp=E,368µm,1.2s						
CERT	**Cerreto**	**0.89**	**193**	AML	AML		
	comp=N,220µm,1.5s						
CERT				AML	AML		
	comp=E,584µm,0.4s						
NARO	**Abbazia di Nar**	**0.93**	**329**	AML	AML		
	comp=N,200µm,0.5s						
NARO				AML	AML		
	comp=E,214µm,1.2s						
NARO				AML	AML		
	comp=E,215µm,1.2s						
NARO				AML	AML		
	comp=N,201µm,0.5s						
FSSB	**Fossombrone**	**0.93**	**339**	AML	AML		
	comp=E,952µm,0.3s						
FSSB				AML	AML		
	comp=E,952µm,0.3s						
FSSB				AML	AML		
	comp=N,1850µm,0.4s						
CAFI	**Castiglion Fio**	**1.06**	**299**	AML	AML		
	comp=E,114µm,0.5s						
CAFI				AML	AML		
	comp=N,95µm,0.7s						

ROM 24 07:06:01.8±0.1, 42°769N±0'004×13°181E±0'007, h10km, ML2.2/16, 2D, Error ellipse: s-maj=0.6km s-min=0.1km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**323**	P	Pg	07 06 04.6	+0.5
NRCA				S	Sg	07 06 06.3	+0.4
FEMA	**Monte Fema**	**0.22**	**333**	P	Pg	07 06 06.8	+0.5
FEMA				S	Sg	07 06 10.6	+1.2
RM33	**Pellescritta (**	**0.26**	**175**	P	Pg	07 06 07.7	+0.6
RM33				S	Sb	07 06 12.3	-1.0
RM33				AML	AML		
	comp=E,1530µm,1.5s						
RM33				AML	AML		
	comp=N,1030µm,0.3s						
RM33				AML	AML		
	comp=E,1445µm,1.5s						
RM33				AML	AML		
	comp=N,1010µm,0.3s						
RM33				AML	AML		
	comp=E,1525µm,1.5s						
RM33				AML	AML		
	comp=N,1028µm,0.3s						
RM33				AML	AML		
	comp=E,1440µm,1.5s						
RM33				AML	AML		
	comp=N,1010µm,0.3s						
RM33				AML	AML		
	comp=E,34250µm,0.6s						
RM33				AML	AML		
	comp=N,39400µm,0.2s						
RM33				AML	AML		
	comp=E,33550µm,0.6s						
RM33				AML	AML		
	comp=N,38950µm,0.2s						
RM33				AML	AML		
	comp=E,1473µm,0.2s						
RM33				AML	AML		
	comp=E,1440µm,0.2s						
RM33				AML	AML		
	comp=N,734µm,0.1s						
RM33				AML	AML		
	comp=N,749µm,0.1s						
FDMO	**Fiordimonte**	**0.28**	**346**	P	Pg	07 06 07.7	+0.3
FDMO				S	Sg	07 06 12.2	+1.1
FDMO				AML	AML		
	comp=E,710µm,0.2s						
FDMO				AML	AML		
	comp=N,830µm,0.2s						
FDMO				AML	AML		
	comp=E,1525µm,0.6s						
FDMO				AML	AML		
	comp=N,2005µm,0.2s						
FDMO				AML	AML		
	comp=N,829µm,0.2s						
FDMO				AML	AML		
	comp=E,514µm,0.4s						
CAMP	**Campotosto**	**0.29**	**144**	P	Pg	07 06 08.1	+0.5
CAMP				S	Sb	07 06 12.8	-1.3
CESI	**CESI - Serrava**	**0.31**	**319**	P	Pg	07 06 08.5	+0.5
CESI				S	Sb	07 06 13.5	-1.2
CESI				AML	AML		
	comp=E,822µm,1.6s						
CESI				AML	AML		
	comp=N,1710µm,0.3s						
CESI				AML	AML		
	comp=E,1300µm,0.2s						
CESI				AML	AML		
	comp=N,2300µm,1.3s						
CESI				AML	AML		
	comp=E,778µm,0.2s						
CESI				AML	AML		
	comp=N,1710µm,0.3s						
GUMA	**Gualdo di Mace**	**0.31**	**21**	P	Pb	07 06 08.9	-0.7
GUMA				AML	AML		
	comp=E,2930µm,0.8s						
GUMA				AML	AML		
	comp=N,3785µm,0.3s						
GUMA				AML	AML		
	comp=E,4225µm,0.2s						
GUMA				AML	AML		
	comp=N,3185µm,0.7s						
GUMA				AML	AML		
	comp=E,17150µm,0.3s						
GUMA				AML	AML		
	comp=N,13400µm,0.5s						
GUMA				AML	AML		
	comp=E,23000µm,0.3s						
GUMA				AML	AML		
	comp=N,11300µm,0.4s						
GUMA				AML	AML		
	comp=E,2896µm,0.4s						
GUMA				AML	AML		
	comp=N,2776µm,0.7s						
GUMA				AML	AML		
	comp=E,4227µm,0.2s						
GUMA				AML	AML		
	comp=N,3782µm,0.3s						
CSP1	**Cessapalombo**	**0.32**	**3**	P	Pg	07 06 08.7	+0.4
CSP1				S	Sg	07 06 13.7	+1.0
CSP1				AML	AML		
	comp=E,1076µm,0.7s						
CSP1				AML	AML		
	comp=N,1308µm,0.9s						
CSP1				AML	AML		
	comp=E,3055µm,0.3s						
CSP1				AML	AML		
	comp=N,3630µm,0.3s						
CSP1				AML	AML		
	comp=N,1313µm,0.9s						
CSP1				AML	AML		
	comp=E,1077µm,0.7s						
TERO	**Teramo**	**0.34**	**115**	P	Pg	07 06 08.9	+0.3
TERO				AML	AML		
	comp=E,643µm,0.8s						
TERO				AML	AML		
	comp=N,1205µm,0.6s						
TERO				AML	AML		
	comp=E,642µm,0.8s						
TERO				AML	AML		
	comp=E,6765µm,0.6s						
TERO				AML	AML		
	comp=N,7005µm,0.3s						
TERO				AML	AML		
	comp=E,7305µm,0.6s						
TERO				AML	AML		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=N,7685µm,0.3s						
TERO				AML	AML		
	comp=N,872µm,0.3s						
TERO				AML	AML		
	comp=E,445µm,0.2s						
TERO				AML	AML		
	comp=N,760µm,0.2s						
TERO				AML	AML		
	comp=E,563µm,0.1s						
ARRO	Arrone	0.36	238	P	Pg	07 06 09.6	+0.7
ARRO				AML	AML		
	comp=E,266µm,0.2s						
ARRO				AML	AML		
	comp=N,344µm,0.9s						
ARRO				AML	AML		
	comp=E,3120µm,1.6s						
ARRO				AML	AML		
	comp=N,3285µm,0.6s						
ARRO				AML	AML		
	comp=E,266µm,0.2s						
ARRO				AML	AML		
	comp=N,327µm,0.1s						
OFFI	Offida	0.41	66	P	Pb	07 06 10.9	-0.2
OFFI				AML	AML		
	comp=E,706µm,1.4s						
OFFI				AML	AML		
	comp=N,1200µm,1.0s						
OFFI				AML	AML		
	comp=E,2590µm,0.8s						
OFFI				AML	AML		
	comp=N,3985µm,0.5s						
OFFI				AML	AML		
	comp=N,1069µm,0.7s						
OFFI				AML	AML		
	comp=E,628µm,0.6s						
SEF1	Sefro	0.41	336	P	Pg	07 06 10.2	+0.3
SEF1				S	Sb	07 06 17.0	-0.7
MNTP	Montappone	0.42	30	P	Pb	07 06 11.0	-0.4
GIGS	Gran Sasso	0.43	138	P	Pg	07 06 10.3	+0.1
ASSB	Assisi San Ben	0.47	306	⇓P	Pg	07 06 11.3	+0.3
ASSB				AML	AML		
	comp=E,235µm,0.6s						
ASSB				AML	AML		
	comp=N,324µm,1.2s						
ASSB				AML	AML		
	comp=E,1178µm,1.3s						
ASSB				AML	AML		
	comp=N,1215µm,0.5s						
ASSB				AML	AML		
	comp=E,213µm,0.7s						
ASSB				AML	AML		
	comp=N,321µm,0.1s						
CESX	Cesi	0.47	250	P	Pg	07 06 11.3	+0.4
CESX				S	Sb	07 06 18.8	-0.4
CESX				AML	AML		
	comp=E,235µm,1.4s						
CESX				AML	AML		
	comp=N,314µm,0.6s						
CESX				AML	AML		
	comp=E,2285µm,0.3s						
CESX				AML	AML		
	comp=N,2595µm,0.5s						
CESX				AML	AML		
	comp=E,212µm,0.3s						
CESX				AML	AML		
	comp=N,314µm,0.6s						
GAG1	Gagliole	0.48	350	P	Pg	07 06 10.9	-0.2
GAG1				S	Sb	07 06 18.9	-0.5
FIAM	Fiamignano	0.50	185	P	Pg	07 06 12.0	+0.4
FIAM				S	Sb	07 06 19.6	-0.7
SNTG	Esanatoglia	0.52	340	P	Pg	07 06 12.0	+0.1
SNTG				S	Sb	07 06 19.9	-0.7
SNTG				AML	AML		
	comp=E,189µm,0.1s						
SNTG				AML	AML		
	comp=N,184µm,0.7s						
SNTG				AML	AML		
	comp=N,184µm,0.7s						
SNTG				AML	AML		
	comp=E,462µm,1.5s						
SNTG				AML	AML		
	comp=N,588µm,1.2s						
SNTG				AML	AML		
	comp=E,189µm,0.1s						
SNTG				AML	AML		
	comp=N,155µm,0.5s						
ATCC	AVT- Casa Cast	0.57	316	P	Pg	07 06 13.2	+0.3
ATCC				S	Sb	07 06 22.1	-0.2
ATCC				AML	AML		
	comp=E,223µm,0.5s						
ATCC				AML	AML		
	comp=N,200µm,0.4s						
ATCC				AML	AML		
	comp=N,200µm,0.4s						
ATCC				AML	AML		
	comp=E,889µm,0.4s						
ATCC				AML	AML		
	comp=N,710µm,0.6s						
ATCC				AML	AML		
	comp=N,199µm,0.6s						
ATCC				AML	AML		
	comp=E,223µm,0.5s						
FAGN	Fagnano	0.58	149	P	Pg	07 06 13.4	+0.2
FOSV	Fossato di Vic	0.61	330	P	Pg	07 06 13.7	+0.1
FOSV				S	Sb	07 06 23.2	-0.1
FOSV				AML	AML		
	comp=E,148µm,0.3s						
FOSV				AML	AML		
	comp=N,118µm,1.1s						
FOSV				AML	AML		
	comp=E,357µm,1.0s						
FOSV				AML	AML		
	comp=N,462µm,0.3s						
FOSV				AML	AML		
	comp=E,148µm,0.3s						
FOSV				AML	AML		
	comp=N,113µm,0.3s						
VCEL	Villa Celiera	0.61	127	P	Pg	07 06 14.2	+0.5
PP3	Marolino	0.68	27	P	Pb	07 06 16.3	+0.4
MURB	Monte Urbino	0.69	316	P	Pg	07 06 15.4	+0.3
MURB				AML	AML		
	comp=E,343µm,0.2s						
MURB				AML	AML		
	comp=N,358µm,1.0s						
MURB				AML	AML		
	comp=E,944µm,0.5s						
MURB				AML	AML		
	comp=N,1255µm,0.5s						
MURB				AML	AML		
	comp=E,323µm,0.2s						
MURB				AML	AML		
	comp=N,346µm,0.4s						
T0110	Collepietro	0.70	141	P	Pg	07 06 15.4	+0.1
ARVD	Arcevia	0.75	347	P	Pb	07 06 16.6	-0.4
ARVD				S	Sb	07 06 27.7	+0.4
ARVD				AML	AML		
	comp=E,88µm,1.3s						
ARVD				AML	AML		
	comp=N,82µm,1.3s						
ARVD				AML	AML		
	comp=E,238µm,1.0s						
ARVD				AML	AML		
	comp=N,222µm,0.2s						
ARVD				AML	AML		
	comp=N,67µm,0.5s						
ARVD				AML	AML		
	comp=E,70µm,0.2s						
INTR	Introdacqua	0.93	144	P	Pg	07 06 19.0	-0.6
FSSB	Fossombrone	0.97	342	P	Pg	07 06 20.3	-0.1
FSSB				AML	AML		
	comp=E,332µm,1.3s						
FSSB				AML	AML		
	comp=N,396µm,0.3s						
FSSB				AML	AML		
	comp=E,138µm,0.3s						
FSSB				AML	AML		
	comp=N,270µm,0.4s						

ROM **24** *07:07:01.4±0.1, 42.605N±0.004×13.241E±0.006, h10km, ML2.9/41, Error ellipse: s-maj=0.5km s-min=0.2km az=67.0*
BEO **24** *07:07:01.1±1.1, 42.63N×13.20E, h0km, ML3.2/4*
ISC 24 07:07:01.5±0.8, 42.59N±0.01×13.23E±0.02, h14km±5km, n114, σ1.22/145, 12C-9D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.08	190	⇑P	Pg	07 07 04.6	0.0
RM33				S	Sg	07 07 06.7	+0.1
RM33				AML	AML		
	comp=N,39400µm,0.2s						
RM33				AML	AML		
	comp=E,33600µm,0.6s						
RM33				AML	AML		
	comp=N,38900µm,0.2s						
RM33				AML	AML		
	comp=E,34200µm,0.6s						
RM33				AML	AML		
	comp=N,39400µm,0.2s						
RM33				AML	AML		
	comp=E,34250µm,0.6s						
RM33				AML	AML		
	comp=N,39450µm,0.2s						
RM33				AML	AML		
	comp=E,33550µm,0.6s						
RM33				AML	AML		
	comp=N,38950µm,0.2s						
CAMP	Campotosto	0.14	111	P	Pg	07 07 05.2	-0.1
CAMP				S	Sg	07 07 07.8	0.0
CAMP				AML	AML		
	comp=N,5975µm,0.6s						
CAMP				AML	AML		
	comp=E,4920µm,0.9s						
NRCA	Norcia	0.26	341	P	Pg	07 07 06.3	-0.8
NRCA				AML	AML		
	comp=E,29350µm,0.2s						
NRCA				AML	AML		
	comp=N,20850µm,0.1s						
NRCA				AML	AML		
	comp=N,20900µm,0.1s						
NRCA				AML	AML		
	comp=E,30850µm,0.2s						
NRCA				AML	AML		
	comp=N,23200µm,0.1s						
NRCA				AML	AML		
	comp=N,20850µm,0.1s						
NRCA				AML	AML		
	comp=E,29400µm,0.2s						
AQU	L'Aquila	0.27	152	P	Pg	07 07 07.6	+0.4
AQU				S	Sb	07 07 12.6	+0.2
AQU				AML	AML		
	comp=N,2070µm,0.4s						
AQU				AML	AML		
	comp=E,2355µm,0.3s						
AQU				AML	AML		
	comp=E,2320µm,0.5s						
AQU				AML	AML		
	comp=N,2045µm,0.4s						
TERO	Teramo	0.28	82	P	Pg	07 07 07.0	-0.4
TERO				S	Sg	07 07 11.2	-0.2
TERO				AML	AML		
	comp=E,6770µm,0.6s						
TERO				AML	AML		
	comp=N,7685µm,0.3s						
TERO				AML	AML		
	comp=N,7010µm,0.3s						
TERO				AML	AML		
	comp=E,6765µm,0.6s						
TERO				AML	AML		
	comp=N,7005µm,0.3s						
TERO				AML	AML		
	comp=E,7305µm,0.6s						
GIGS	Gran Sasso	0.28	119	P	Pg	07 07 07.4	-0.1
GIGS				S	Sg	07 07 12.1	+0.5
GIGS				AML	AML		
	comp=E,2115µm,1.3s						
GIGS				AML	AML		
	comp=N,1700µm,0.2s						
FIAM	Fiamignano	0.33	195	⇑P	Pg	07 07 08.7	+0.3
FIAM				S	Sb	07 07 14.3	0.0
FIAM				AML	AML		
	comp=N,2850µm,0.2s						
FIAM				AML	AML		
	comp=E,7050µm,0.8s						
ARRO	Arrone	0.34	269	⇑P	Pg	07 07 08.3	-0.2
ARRO				S	Sg	07 07 13.8	+0.4
ARRO				AML	AML		
	comp=E,3125µm,1.6s						
ARRO				AML	AML		
	comp=N,3285µm,0.6s						
ARRO				AML	AML		
	comp=E,3120µm,1.6s						
FEMA	Monte Fema	0.40	340	P	Pg	07 07 09.0	-0.6
FEMA				S	Sg	07 07 15.0	-0.1
FAGN	Fagnano	0.41	141	P	Pg	07 07 09.9	+0.1
FAGN				AML	AML		
	comp=E,4630µm,0.4s						
FAGN				AML	AML		
	comp=N,2890µm,0.3s						
FDMO	Fiordimonte	0.46	347	P	Pg	07 07 09.8	-1.0
FDMO				S	Sg	07 07 16.9	-0.1
FDMO				AML	AML		
	comp=E,1525µm,0.6s						
FDMO				AML	AML		
	comp=N,2005µm,0.2s						
GUMA	Gualdo di Mace	0.48	9	⇑P	Pg	07 07 10.5	-0.5
GUMA				S	Sg	07 07 17.9	+0.3
GUMA				AML	AML		
	comp=E,17150µm,0.3s						
GUMA				AML	AML		
	comp=N,13400µm,0.5s						
GUMA				AML	AML		
	comp=N,11300µm,0.4s						
GUMA				AML	AML		
	comp=N,13400µm,0.4s						
GUMA				AML	AML		
	comp=E,23000µm,0.3s						
GUMA				AML	AML		
	comp=E,17200µm,0.3s						
CESI	CESI - Serrava	0.48	330	P	Pg	07 07 10.3	-0.8
CESI				S	Sg	07 07 17.3	-0.3
CESI				AML	AML		
	comp=N,2300µm,1.3s						
CESI				AML	AML		
	comp=E,1300µm,0.2s						
OFFI	Offida	0.48	44	⇑P	Pg	07 07 11.2	+0.1
OFFI				S	Sb	07 07 19.7	+1.1
OFFI				AML	AML		
	comp=N,4325µm,0.4s						
OFFI				AML	AML		
	comp=N,4330µm,0.4s						
OFFI				AML	AML		
	comp=E,3460µm,0.5s						
CESX	Cesi	0.48	273	P	Pg	07 07 10.4	-0.7
CESX				S	Sg	07 07 17.9	+0.3
CESX				AML	AML		
	comp=N,2595µm,0.5s						
CESX				AML	AML		
	comp=E,2285µm,0.3s						
VCEL	Villa Celiera	0.49	113	P	Pg	07 07 11.2	0.0
VCEL				S	Sb	07 07 19.2	+0.3
CSP1	Cessapalombo	0.51	358	⇑P	Pg	07 07 10.6	-0.9
CSP1				S	Sg	07 07 17.9	-0.5
CSP1				AML	AML		
	comp=E,3055µm,0.3s						
CSP1				AML	AML		
	comp=N,3630µm,0.3s						
CSP1				AML	AML		
	comp=N,3635µm,0.3s						
CSP1				AML	AML		
	comp=E,3050µm,0.3s						
T0110	Collepietro	0.54	132	P	Pg	07 07 12.1	-0.1
T0110				S	Sb	07 07 20.7	+0.2
T0110				AML	AML		
	comp=N,1975µm,0.4s						
T0110				AML	AML		
	comp=E,2415µm,0.4s						
TRTR	Tortoreto Alta	0.55	66	P	Pb	07 07 12.8	0.0
TRTR				AML	AML		
	comp=N,3150µm,1.2s						
TRTR				AML	AML		
	comp=E,3195µm,0.5s						
MNTP	Montappone	0.58	17	P	Pg	07 07 12.5	-0.4
MNTP				S	Sb	07 07 21.8	+0.4
MNTP				AML	AML		
	comp=E,5540µm,1.3s						
MNTP				AML	AML		
	comp=N,5540µm,0.2s						
MNTP				AML	AML		
	comp=N,5545µm,0.2s						
MNTP				AML	AML		
	comp=E,5540µm,1.4s						
PTQR	Pietraquaria	0.58	168	P	Pg	07 07 13.1	+0.2
PTQR				AML	AML		
	comp=E,392µm,0.3s						
PTQR				AML	AML		
	comp=N,371µm,0.5s						
MDAR	Monte D'Aria	0.61	354	P	Pg	07 07 12.3	-1.1
MDAR				S	Sb	07 07 21.9	-0.5
ASSB	Assisi San Ben	0.62	317	P	Pg	07 07 12.7	-0.9
ASSB				S	Sg	07 07 22.2	+0.3
ASSB				AML	AML		
	comp=N,1255µm,0.4s						
ASSB				AML	AML		
	comp=E,1178µm,1.3s						
SRES	S.Oreste - Sor	0.64	237	P	Pg	07 07 13.6	-0.4
SRES				S	Sb	07 07 23.8	+0.6
SRES				AML	AML		
	comp=N,516µm,0.2s						
SRES				AML	AML		
	comp=E,698µm,0.3s						
GAG1	Gagliole	0.66	349	P	Pg	07 07 13.5	-1.0
GAG1				S	Sb	07 07 23.8	-0.1
CERT	Cerreto	0.66	196	⇑P	Pg	07 07 14.1	-0.4
CERT				AML	AML		
	comp=N,1021µm,0.3s						
CERT				AML	AML		
	comp=E,1320µm,0.5s						
MTCE	Montecelio	0.67	213	P	Pg	07 07 14.1	-0.5
MTCE				AML	AML		
	comp=E,1095µm,1.5s						
MTCE				AML	AML		
	comp=N,716µm,0.3s						
SNTG	Esanatoglia	0.70	342	P	Pg	07 07 13.9	-1.3
SNTG				S	Sb	07 07 24.8	-0.2
SNTG				AML	AML		
	comp=N,588µm,1.2s						
SNTG				AML	AML		
	comp=E,590µm,0.5s						
SNTG				AML	AML		
	comp=N,588µm,1.2s						
SNTG	Esanatoglia	0.70	342	S	Sb	07 07 26.0	+1.0
TRE1	Treia	0.73	5	P	Pg	07 07 15.2	-0.4
INTR	Introdacqua	0.76	139	P	Pg	07 07 15.8	-0.5
INTR				AML	AML		
	comp=E,486µm,1.0s						
INTR				AML	AML		
	comp=N,789µm,0.7s						
FOSV	Fossato di Vic	0.79	334	P	Pg	07 07 15.8	-1.0
FOSV				S	Sb	07 07 28.2	+0.7
FOSV				AML	AML		
	comp=E,498µm,0.5s						
FOSV				AML	AML		
	comp=N,917µm,1.2s						
GUAR	Guarcino	0.79	176	P	Pn	07 07 18.2	-0.1
GUAR				AML	AML		
	comp=E,756µm,0.8s						
GUAR				AML	AML		
	comp=N,883µm,0.4s						
GUAR				AML	AML		
	comp=E,756µm,0.8s						
PP3	Marolino	0.84	19	P	Pg	07 07 17.6	-0.2
PP3				S	Sb	07 07 29.1	+0.2
PP3				AML	AML		
	comp=N,1710µm,0.5s						
PP3				AML	AML		
	comp=E,3135µm,0.5s						
PP3				AML	AML		
	comp=E,3195µm,0.5s						
PP3				AML	AML		
	comp=N,1650µm,0.4s						
MURB	Monte Urbino	0.85	323	P	Pg	07 07 18.0	-0.1
MURB	Monte Urbino	0.85	323	S	Sn	07 07 31.0	-0.4
MGAB	Montegabbione	0.89	292	P	Pg	07 07 18.1	-0.6
MGAB				AML	AML		
	comp=E,1440µm,1.3s						
MGAB				AML	AML		
	comp=N,1335µm,1.3s						
MGAB				AML	AML		
	comp=E,1445µm,1.3s						
MGAB				AML	AML		
	comp=N,1430µm,0.4s						
MGAB				AML	AML		
	comp=N,1330µm,1.3s						
MGAB				AML	AML		
	comp=E,1565µm,1.3s						
LPEL	Lama dei Pelig	0.89	127	P	Pg	07 07 18.2	-0.4
ATTE	AVT- Monte Tez	0.89	314	P	Pg	07 07 17.7	-1.0
SSFR	Montelago di S	0.91	339	P	Pg	07 07 18.4	-0.8
SSFR				AML	AML		
	comp=N,1415µm,0.2s						
SSFR				AML	AML		
	comp=E,1275µm,0.2s						
SSFR				AML	AML		
	comp=N,1375µm,0.2s						
SSFR				AML	AML		
	comp=E,1225µm,1.3s						
ARVD	Arcevia	0.94	347	P	Pg	07 07 18.5	-1.1
ARVD				S	Sb	07 07 31.9	+0.2
ARVD				AML	AML		
	comp=E,627µm,0.8s						
ARVD				AML	AML		
	comp=N,402µm,0.4s						
ATLO	AVT- Montelove	0.95	320	P	Pg	07 07 18.5	-1.3
AOI	Ancona	1.00	16	P	Pb	07 07 19.8	-0.8
AOI				AML	AML		
	comp=N,558µm,0.5s						
AOI				AML	AML		
	comp=E,606µm,0.3s						
AOI				AML	AML		
	comp=N,275µm,0.8s						
AOI				AML	AML		
	comp=E,259µm,0.9s						
ATVO	AVT- Monte Val	1.00	323	P	Pb	07 07 20.1	-0.5
ATVO				AML	AML		
	comp=E,466µm,1.0s						
ATVO				AML	AML		
	comp=N,302µm,0.8s						
SACS	San Casciano d	1.01	285	P	Pb	07 07 20.4	-0.4
SACS				S	Sb	07 07 33.8	-0.1
SACS				AML	AML		
	comp=N,440µm,0.7s						
SACS				AML	AML		
	comp=E,375µm,0.6s						
ATBU	Serra di Buran	1.02	331	P	Pb	07 07 20.3	-0.7
GIUL	Giuliano Di Ro	1.03	179	P	Pb	07 07 20.8	-0.2
GIUL				AML	AML		
	comp=E,320µm,1.6s						
GIUL				AML	AML		
	comp=N,344µm,0.7s						
TOLF	Tolfa	1.05	241	P	Pb	07 07 21.2	-0.3
TOLF				AML	AML		
	comp=E,270µm,0.4s						
TOLF				AML	AML		
	comp=N,411µm,1.0s						
LATE	Laterza	1.05	272	P	Pb	07 07 21.5	0.0
ATPI	Pietralunga -	1.06	325	P	Pb	07 07 20.6	-1.0
COR1	Corinaldo	1.06	351	⇓P	Pg	07 07 21.8	-0.1
COR1				AML	AML		
	comp=N,1100µm,1.4s						
COR1				AML	AML		
	comp=E,1600µm,1.6s						
ATPC	Poggio Castell	1.06	328	P	Pb	07 07 21.1	-0.5
PIEI	Pieia	1.08	332	P	Pb	07 07 21.1	-0.8
PIEI				AML	AML		
	comp=E,462µm,1.0s						
PIEI				AML	AML		
	comp=N,376µm,0.3s						
MPAG	Monte Paganucc	1.10	342	⇓P	Pb	07 07 21.5	-0.8
MPAG				AML	AML		
	comp=E,402µm,0.4s						
MPAG				AML	AML		
	comp=N,322µm,0.8s						
LATB	Latina	1.11	191	P	Pg	07 07 23.0	+0.1
NARO	Abbazia di Nar	1.13	335	P	Pb	07 07 20.1	-2.6
NARO				AML	AML		
	comp=E,362µm,0.8s						
NARO				AML	AML		
	comp=N,267µm,1.2s						
APEC	Apecchio	1.14	329	P	Pg	07 07 23.4	0.0
FSSB	Fossombrone	1.15	343	P	Pb	07 07 22.4	-0.8
FSSB				AML	AML		
	comp=E,984µm,0.4s						
FSSB				AML	AML		
	comp=N,1135µm,0.3s						
SF03	Valle Cupa	1.16	281	P	Pb	07 07 23.4	0.0
MCIV	Monte Civitell	1.16	280	P	Pb	07 07 23.3	-0.1

SF11	**Podere del Sol**	**1.18**	**284**	P	**Pb**	**07 07 23.7**	**+0.1**
SF04	**Casetta**	**1.19**	**283**	P	**Pb**	**07 07 23.9**	**+0.2**
CAFI	**Castiglion Fio**	**1.19**	**309**	P	**Pn**	**07 07 23.2**	**-0.5**
SF13	**Bagnolo**	**1.21**	**282**	P	**Pn**	**07 07 23.7**	**-0.3**
SF01	**Poggio Pratacc**	**1.25**	**281**	P	**Pg**	**07 07 25.5**	**-0.1**
ARCI	**Arcidosso**	**1.32**	**282**	P	**Pb**	**07 07 26.4**	**+0.3**
VAGA	**Valle Agricola**	**1.39**	**147**	AML	AML		
	comp=E,106μm,0.8s						
VAGA				AML	AML		
	comp=N,153μm,1.0s						
PTRJ	**Pietraroja**	**1.56**	**141**	P	**Pg**	**07 07 32.0**	**+0.6**
RUFI	**Rufina**	**1.78**	**315**	P	**Pn**	**07 07 32.6**	**+0.9**
CAFE	**Carife**	**2.16**	**135**	S	**Sn**	**07 08 03.0**	**-0.7**
RIY	**Rijeka**	**2.88**	**18**	*e*Pn	**Pn**	**07 07 47.5**	**+0.6**
RIY				*e*Sn	**Sn**	**07 08 22.9**	**+1.6**
SBPO	**S.Benedetto Po**	**2.98**	**327**	S	**Sn**	**07 08 22.0**	**-1.7**
BOJS	**Bojanci**	**3.26**	**26**	P	**Pn**	**07 07 54.6**	**+2.5**
STON	**Ston**	**3.30**	**84**	*e*Pn	**Pn**	**07 07 52.9**	**+0.2**
STON				*e*Sn	**Sn**	**07 08 32.6**	**+0.9**
STON	**Ston**	**3.30**	**84**	P	**Pn**	**07 07 52.5**	**-0.1**
STON				S	**Sg**	**07 08 47.0**	**-0.6**
ROVR	**Rover Verones**	**3.43**	**334**	⇓P	**Pn**	**07 07 55.9**	**+1.3**
CGRP	**Cima Grappa**	**3.45**	**343**	⇓P	**Pn**	**07 07 56.2**	**+1.3**
DOSS	**Dosso del Somm**	**3.61**	**337**	⇓P	**Pn**	**07 07 59.6**	**+2.6**
STAL	**STALIGIAL**	**3.69**	**354**	⇓P	**Pn**	**07 07 58.8**	**+0.7**
STAL				AML	AML		
	comp=E,82μm,0.8s						
STAL				AML	AML		
	comp=N,80μm,0.2s						
MAGA	**Magasa**	**3.70**	**330**	⇓P	**Pn**	**07 07 59.2**	**+1.0**
MAGA				AML	AML		
	comp=N,95μm,0.3s						
MAGA				AML	AML		
	comp=E,94μm,0.5s						
TDS	**Terranova Siba**	**3.75**	**140**	⇑P	**Pn**	**07 07 57.2**	**-1.6**
LUSI	**Trento, Gardas**	**3.75**	**335**	⇓P	**Pn**	**07 08 00.1**	**+1.1**
SARZ	**Sarezzano**	**3.88**	**307**	P	**Pn**	**07 08 02.9**	**+2.3**
ACOM	**Acomizza, Ital**	**3.96**	**3**	⇑P	**Pn**	**07 08 03.2**	**+1.2**
ACOM				AML	AML		
	comp=N,42μm,1.5s						
ACOM				AML	AML		
	comp=E,71μm,0.4s						
CAR1	**CAROLEI**	**4.02**	**145**	S	**Sb**	**07 09 02.0**	**+1.4**
OBKA	**Obir**	**4.03**	**13**	*e*Pn	**Pn**	**07 08 04.0**	**+1.2**
	comp=E,1.3nm,0.3s						
MYKA	**Terra Mystica**	**4.05**	**4**	*e*Pn	**Pn**	**07 08 04.0**	**+0.9**
	comp=E,1.1nm,0.2s						
ISTR	**Stromboli Gino**	**4.08**	**158**	⇑P	**Pg**	**07 08 16.7**	**-2.9**
IMI	**Imperia**	**4.12**	**291**	P	**Pb**	**07 08 11.8**	**-1.9**
IMI				S	**Sn**	**07 08 51.0**	**-1.0**
ABTA	**Abfaltersbach**	**4.19**	**353**	*e*Pn	**Pn**	**07 08 06.2**	**+1.2**
	comp=E,1.8nm,0.3s						
MGRO	**Montegrosso**	**4.22**	**292**	S	**Sn**	**07 08 60.0**	**+5.4**
VSL	**Villasalto**	**4.25**	**225**	⇑P	**Pn**	**07 08 07.0**	**+1.3**
SOKA	**Soboth**	**4.29**	**17**	*e*Pn	**Pn**	**07 08 08.2**	**+1.9**
	comp=E,0.9nm,0.3s						
SERS	**Sersale**	**4.41**	**142**	P	**Pn**	**07 08 08.3**	**+0.2**
RISI	**Rein**	**4.44**	**350**	⇓P	**Pn**	**07 08 06.6**	**-1.8**
KBA	**Koelnbreinsper**	**4.49**	**1**	*e*Pn	**Pn**	**07 08 10.6**	**+1.3**
	comp=E,1.2nm,0.3s						
BBLS	**Lazići**	**4.69**	**72**	*e*Pn	**Pn**	**07 08 12.2**	**+0.4**
FETA	**Feichten**	**4.78**	**339**	*e*Pn	**Pn**	**07 08 17.6**	**+4.5**
	comp=E,0.8nm,0.2s						
WTTA	**Wattenberg**	**4.81**	**347**	*e*Pn	**Pn**	**07 08 17.2**	**+3.5**
	comp=E,1.0nm,0.2s						
SQTA	**Sankt Quirin**	**4.85**	**343**	*e*Pn	**Pn**	**07 08 17.4**	**+3.3**
	comp=E,0.7nm,0.1s						
WATA	**Walderalm**	**4.89**	**347**	*e*Pn	**Pn**	**07 08 17.4**	**+2.7**
	comp=E,0.1nm,0.1s						
ARSA	**Arzberg**	**4.94**	**18**	*e*Pn	**Pn**	**07 08 16.0**	**+0.8**
	comp=E,1.0nm,0.2s						
MOTA	**Moosalm**	**4.99**	**343**	*e*Pn	**Pn**	**07 08 16.2**	**+0.2**
	comp=E,1.1nm,0.2s						
SJES	**Sjenica**	**5.00**	**80**	*e*Pn	**Pn**	**07 08 17.4**	**+1.3**
SJES				*e*Sn	**Sn**	**07 09 15.6**	**+2.0**
CAGR	**Agira**	**5.05**	**169**	⇑P	**Pb**	**07 08 26.8**	**-2.9**
BIOA	**Bad Ischl, Aus**	**5.11**	**3**	*e*Pn	**Pn**	**07 08 17.9**	**+0.3**
	comp=E,1.8nm,0.2s						
IVAS	**Ivanjica**	**5.16**	**77**	*e*Pn	**Pn**	**07 08 19.9**	**+1.6**
IVAS				*e*Sn	**Sn**	**07 09 17.4**	**-0.3**
RETA	**Reutte**	**5.20**	**341**	*e*Pn	**Pn**	**07 08 19.5**	**+0.7**
	comp=E,0.8nm,0.2s						
DAVA	**Damuels**	**5.27**	**334**	*e*Pn	**Pn**	**07 08 19.9**	**+0.1**
	comp=E,0.8nm,0.2s						
TRUS	**Trudelj**	**5.48**	**70**	*e*Pn	**Pn**	**07 08 22.3**	**-0.3**
RONA	**Rosalia, Austr**	**5.55**	**22**	*e*Pn	**Pn**	**07 08 24.2**	**+0.6**
	comp=E,0.9nm,0.2s						
CONA	**Conrad Observa**	**5.65**	**18**	*e*Pn	**Pn**	**07 08 23.2**	**-1.9**
	comp=E,0.1nm,0.1s						
BARS	**Barje**	**6.33**	**85**	*e*Pn	**Pn**	**07 08 35.5**	**+1.2**
PRVS	**Prvonek**	**6.53**	**88**	*e*Pn	**Pn**	**07 08 39.1**	**+2.0**

ROM 24 07:10:03.7±0.1, 42°.776N±0°.003×13°.152E±0°.006, h9km, ML3.1/6, 2C-6D, Error ellipse: s-maj=0.5km s-min=0.1km az=256.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**334**	⇑P	Pg	07 10 06.3	+0.4
NRCA				S	Sg	07 10 07.6	+0.2
NRCA				AML	AML		
	comp=E,56300μm,0.2s						
NRCA				AML	AML		
	comp=N,64600μm,0.1s						
NRCA				AML	AML		
	comp=N,60650μm,0.1s						
NRCA				AML	AML		
	comp=E,60900μm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,59861μm,0.2s						
NRCA				END			
NRCA				END			
FEMA	**Monte Fema**	**0.20**	**338**	P	Pg	07 10 08.7	+0.7
FEMA				S	Sg	07 10 11.8	+1.0
FDMO	**Fiordimonte**	**0.26**	**350**	P	Pg	07 10 09.4	+0.4
FDMO				S	Sg	07 10 13.8	+1.1
FDMO				END			
RM33	**Pellescritta (**	**0.27**	**170**	P	Pg	07 10 09.8	+0.6
RM33				S	Sb	07 10 14.2	-1.3
RM33				END			
CESI	**CESI - Serrava**	**0.29**	**322**	⇓P	Pg	07 10 10.2	+0.6
CESI				S	Sb	07 10 14.9	-1.2
CESI				AML	AML		
	comp=E,5480μm,1.0s						
CESI				AML	AML		
	comp=N,10160μm,0.3s						
CESI				AML	AML		
	comp=E,29550μm,0.1s						
CESI				AML	AML		
	comp=N,43700μm,0.3s						
CESI				AML	AML		
	comp=E,5178μm,0.1s						
CESI				AML	AML		
	comp=N,10154μm,0.3s						
CESI				END			
CESI				END			
CAMP	**Campotosto**	**0.31**	**142**	P	Pg	07 10 10.2	+0.4
CAMP				S	Sg	07 10 14.9	+1.0
CAMP				END			
CSP1	**Cessapalombo**	**0.32**	**7**	P	Pg	07 10 10.3	+0.3
CSP1				S	Sg	07 10 15.3	+1.0
CSP1				AML	AML		
	comp=E,3885μm,0.6s						
CSP1				AML	AML		
	comp=N,5780μm,0.4s						
CSP1				AML	AML		
	comp=E,3890μm,0.6s						
CSP1				AML	AML		
	comp=N,18350μm,1.1s						
CSP1				AML	AML		
	comp=E,15800μm,0.7s						
CSP1				AML	AML		
	comp=E,3895μm,0.6s						
CSP1				AML	AML		
	comp=N,5778μm,0.4s						
CSP1				END			
ARRO	**Arrone**	**0.35**	**235**	P	Pb	07 10 11.3	-0.7
ARRO				S	Sb	07 10 17.0	-0.5
ARRO				AML	AML		
	comp=E,2615μm,0.2s						
ARRO				AML	AML		
	comp=N,2380μm,0.4s						
ARRO				AML	AML		
	comp=N,2385μm,0.4s						
ARRO				AML	AML		
	comp=E,11850μm,0.2s						
ARRO				AML	AML		
	comp=N,10495μm,0.2s						
ARRO				AML	AML		
	comp=N,2384μm,0.4s						
ARRO				AML	AML		
	comp=E,2615μm,0.2s						
ARRO				END			
TERO	**Teramo**	**0.37**	**115**	P	Pg	07 10 11.0	+0.1
TERO				S	Sg	07 10 16.4	+0.6
TERO				AML	AML		
	comp=E,1995μm,0.9s						
TERO				AML	AML		
	comp=N,2400μm,0.9s						
TERO				AML	AML		
	comp=E,2295μm,0.9s						
TERO				AML	AML		
	comp=N,2680μm,0.9s						
TERO				AML	AML		
	comp=E,5340μm,0.8s						
TERO				AML	AML		
	comp=N,6810μm,1.4s						
TERO				AML	AML		
	comp=N,6280μm,1.4s						
TERO				AML	AML		
	comp=E,5640μm,0.8s						
TERO				AML	AML		
	comp=E,2039μm,0.5s						
TERO				AML	AML		
	comp=E,1797μm,0.5s						
TERO				END			
SEF1	**Sefro**	**0.40**	**338**	P	Pg	07 10 11.9	+0.4
SEF1				S	Sb	07 10 18.2	-0.9
MDAR	**Monte D'Aria**	**0.42**	**359**	⇓*e*P	Pg	07 10 12.1	+0.2
MDAR				S	Sg	07 10 18.5	+1.1
PIO1	**Pioraco**	**0.42**	**343**	P	Pg	07 10 12.3	+0.4
PIO1				S	Sb	07 10 18.9	-0.8
OFFI	**Offida**	**0.42**	**68**	P	Pb	07 10 12.9	-0.4
OFFI				S	Sb	07 10 20.5	+0.7
MNTP	**Montappone**	**0.43**	**33**	P	Pb	07 10 12.9	-0.5
FIU1	**Fiuminata**	**0.44**	**339**	P	Pg	07 10 12.9	+0.5
FIU1				S	Sb	07 10 19.6	-0.8
GIGS	**Gran Sasso**	**0.45**	**137**	P	Pg	07 10 12.3	-0.2
GIGS				S	Sg	07 10 18.9	+0.5
ASSB	**Assisi San Ben**	**0.45**	**306**	P	Pg	07 10 12.8	+0.3
ASSB				S	Sb	07 10 19.8	-0.8
CESX	**Cesi**	**0.45**	**249**	P	Pg	07 10 12.9	+0.3
CESX				S	Sb	07 10 20.0	-0.6
AQU	**L'Aquila**	**0.46**	**156**	P	Pb	07 10 13.8	-0.1
AQU				S	Sb	07 10 20.4	-0.5
GAG1	**Gagliole**	**0.47**	**352**	P	Pg	07 10 13.2	+0.4
GAG1				S	Sb	07 10 20.4	-0.7
MTL1	**Matelica**	**0.49**	**348**	P	Pg	07 10 13.8	+0.6
MTL1				S	Sb	07 10 21.5	-0.3
SNTG	**Esanatoglia**	**0.50**	**342**	P	Pg	07 10 13.7	+0.2
SNTG				S	Sb	07 10 21.5	-0.7
FIAM	**Fiamignano**	**0.51**	**183**	P	Pg	07 10 13.8	+0.2
FIAM				S	Sb	07 10 21.5	-0.8
EL6	**Elcito**	**0.55**	**356**	P	Pg	07 10 14.5	+0.1
ATCC	**AVT- Casa Cast**	**0.56**	**318**	P	Pg	07 10 14.7	+0.3
ATCC				S	Sb	07 10 23.7	+0.1
TRTR	**Tortoreto Alta**	**0.56**	**86**	P	Pb	07 10 15.6	0.0
FOSV	**Fossato di Vic**	**0.59**	**331**	P	Pg	07 10 15.3	+0.2
FOSV				S	Sb	07 10 24.4	-0.3
FAGN	**Fagnano**	**0.60**	**148**	P	Pg	07 10 15.7	+0.4
MURB	**Monte Urbino**	**0.67**	**317**	P	Pb	07 10 17.1	-0.4
PP3	**Marolino**	**0.69**	**29**	P	Pb	07 10 17.8	0.0
SRES	**S.Oreste - Sor**	**0.72**	**222**	P	Pb	07 10 18.0	-0.3
ATTE	**AVT- Monte Tez**	**0.72**	**306**	P	Pb	07 10 18.2	-0.3
ARVD	**Arcevia**	**0.74**	**348**	P	Pg	07 10 17.8	-0.1
ARVD				S	Sb	07 10 29.0	+0.2
MGAB	**Montegabbione**	**0.78**	**280**	P	Pb	07 10 19.1	-0.3
MTCE	**Montecelio**	**0.81**	**202**	P	Pg	07 10 19.5	+0.2
MAIM	**Mastiano**	**2.25**	**301**	⇓P	Pn	07 10 42.0	+1.0
GSCL	**Gusciola**	**2.44**	**311**	P	Pn	07 10 42.1	-1.6
GRAM	**Graiana**	**2.82**	**308**	S	Sb	07 11 27.0	-1.9
STON	**Ston**	**3.35**	**87**	⇓P	Pn	07 10 55.4	-0.6
RNCA	**Ronca, Sant'Ol**	**3.49**	**300**	⇓P	Pn	07 11 00.3	+2.3
STAL	**STALIGIAL**	**3.50**	**355**	AML	AML		
	comp=N,109μm,0.3s						
MAGA	**Magasa**	**3.50**	**330**	⇑P	Pn	07 11 00.3	+1.9
LUSI	**Trento, Gardas**	**3.56**	**334**	⇓P	Pn	07 11 01.4	+2.4
EUCT	**Pavia**	**3.78**	**311**	⇓P	Pb	07 11 07.8	-2.7
IMI	**Imperia**	**4.00**	**288**	P	Pn	07 11 02.0	-3.1

*PRU **24** 07:10:52.5±0.0, 42°.73N×14°.96E, h10km*
*IDC **24** 07:10:54.5±1.7, 42°.85N×13°.50E, h0km, mb3.3/2, mbtmp3.3/3, ML3.3/1, MS3.0/1, Error ellipse: s-maj=51.1km s-min=18.1km az=94.0*
*ROM **24** 07:10:55.5±0.1, 42°.777N±0°.003×13°.158E±0°.005, h9km, ML3.4/61, Mw3.2, Error ellipse: s-maj=0.4km s-min=0.3km az=258.0, Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr-4.86; Mθθ2.10; Mφφ2.76; Mrθ1.10; Mθφ-3.34; Mφr-5.75; Fault plane solution: M₀7.95207×10¹³ NP1:φs116.00000°, δ27.00000°, λ-131.00000°. NP2:φs340.00000°, δ70.00000°, λ-71.00000°.*
*BEO **24** 07:10:55.8±1.0, 43°.35N×13°.06E, h0km, ML3.3/5*
ISC 24 07:10:56.2±0.8, 42°.78N±0°.01×13°.15E±0°.02, h11km±5km, n154, σ1s14/194, 19C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**331**	⇑P	**Pg**	**07 10 58.1**	**-0.5**
NRCA				S	**Sg**	**07 10 59.5**	**-0.8**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.20**	**337**	⇑P	**Pg**	**07 11 00.3**	**-0.2**
FEMA				S	**Sg**	**07 11 03.7**	**+0.2**
FEMA				AML	AML		
	comp=N,18200μm,0.8s						
FEMA				AML	AML		
	comp=N,18250μm,0.8s						
FEMA				AML	AML		
	comp=E,27650μm,0.2s						
FEMA				AML	AML		
	comp=N,18200μm,0.8s						
FDMO	**Fiordimonte**	**0.26**	**349**	⇑P	**Pg**	**07 11 01.3**	**-0.3**
FDMO				S	**Sg**	**07 11 05.5**	**+0.2**
FDMO				AML	AML		
	comp=N,13200μm,0.8s						
FDMO				AML	AML		
	comp=E,11000μm,0.2s						
RM33	**Pellescritta (**	**0.27**	**171**	⇑P	**Pg**	**07 11 01.6**	**-0.2**
RM33				S	**Sg**	**07 11 06.3**	**+0.7**
RM33				AML	AML		
	comp=E,12600μm,0.2s						
RM33				AML	AML		
	comp=N,10150μm,1.4s						
RM33				AML	AML		
	comp=N,10140μm,1.5s						
RM33				AML	AML		
	comp=N,10420μm,1.5s						
RM33				AML	AML		
	comp=N,10370μm,1.5s						
RM33				AML	AML		
	comp=E,12500μm,0.2s						
RM33				AML	AML		
	comp=N,10130μm,1.4s						
CESI	**CESI - Serrava**	**0.29**	**321**	⇑P	**Pg**	**07 11 02.0**	**-0.1**
CESI				S	**Sg**	**07 11 06.7**	**+0.6**
CESI				AML	AML		
	comp=E,29550μm,0.1s						
CESI				AML	AML		
	comp=N,43700μm,0.3s						
CAMP	**Campotosto**	**0.31**	**142**	⇑P	**Pg**	**07 11 02.0**	**-0.5**
CAMP				S	**Sg**	**07 11 06.8**	**+0.2**
CAMP				AML	AML		
	comp=N,4105μm,1.1s						
CAMP				AML	AML		
	comp=E,7000μm,0.3s						
CSP1	**Cessapalombo**	**0.31**	**7**	⇑P	**Pg**	**07 11 02.2**	**-0.4**
CSP1				S	**Sg**	**07 11 07.1**	**+0.2**
CSP1				AML	AML		
	comp=E,15850μm,0.7s						
CSP1				AML	AML		
	comp=N,18350μm,1.1s						
CSP1				AML	AML		
	comp=N,18400μm,1.1s						
CSP1				AML	AML		
	comp=E,15800μm,0.7s						
ARRO	**Arrone**	**0.35**	**235**	⇑P	**Pg**	**07 11 03.2**	**0.0**
ARRO				S	**Sg**	**07 11 08.8**	**+1.0**
ARRO				AML	AML		
	comp=N,10495μm,0.2s						
ARRO				AML	AML		
	comp=E,11850μm,0.2s						
ARRO				AML	AML		
	comp=N,10490μm,0.2s						
TERO	**Teramo**	**0.37**	**115**	P	**Pg**	**07 11 02.8**	**-0.7**
TERO				S	**Sg**	**07 11 08.4**	**0.0**
TERO				AML	AML		
	comp=N,6280μm,1.4s						
TERO				AML	AML		
	comp=E,5635μm,0.8s						
TERO				AML	AML		
	comp=N,6810μm,1.4s						
TERO				AML	AML		
	comp=E,5640μm,0.8s						
TERO				AML	AML		
	comp=E,5340μm,0.8s						
SEF1	**Sefro**	**0.40**	**338**	P	**Pg**	**07 11 03.7**	**-0.4**
SEF1				S	**Sg**	**07 11 10.0**	**+0.7**
SEF1				AML	AML		
	comp=N,26700μm,0.3s						
SEF1				AML	AML		
	comp=E,20750μm,1.1s						
MDAR	**Monte D'Aria**	**0.41**	**359**	P	**Pg**	**07 11 03.9**	**-0.5**
MDAR				S	**Sg**	**07 11 10.2**	**+0.3**
MDAR				AML	AML		
	comp=E,6140μm,0.3s						
MDAR				AML	AML		
	comp=N,9030μm,0.4s						
MDAR				AML	AML		
	comp=E,6135μm,0.3s						
MDAR				AML	AML		
	comp=N,9035μm,0.4s						
MDAR				AML	AML		
	comp=N,9020μm,0.4s						
MDAR				AML	AML		
	comp=E,6140μm,0.3s						
PIO1	**Pioraco**	**0.42**	**343**	P	**Pg**	**07 11 03.8**	**-0.6**
PIO1				S	**Sg**	**07 11 10.6**	**+0.6**
PIO1				AML	AML		
	comp=N,9845μm,0.4s						
PIO1				AML	AML		
	comp=N,9850μm,0.4s						
PIO1				AML	AML		
	comp=N,9870μm,0.4s						
PIO1				AML	AML		
	comp=E,4715μm,0.2s						
OFFI	**Offida**	**0.42**	**68**	P	**Pg**	**07 11 04.7**	**+0.2**
OFFI				AML	AML		
	comp=N,12200μm,1.1s						
OFFI				AML	AML		
	comp=E,8960μm,0.7s						
MNTP	**Montappone**	**0.43**	**33**	P	**Pg**	**07 11 04.6**	**0.0**
MNTP				AML	AML		
	comp=E,14100μm,1.2s						
MNTP				AML	AML		
	comp=N,8980μm,0.3s						
MNTP				AML	AML		
	comp=E,14100μm,1.2s						
FIU1	**Fiuminata**	**0.44**	**338**	P	**Pg**	**07 11 04.5**	**-0.4**
FIU1				S	**Sg**	**07 11 11.4**	**+0.7**
FIU1				AML	AML		
	comp=E,5925μm,1.2s						
FIU1				AML	AML		
	comp=N,6320μm,0.9s						
ASSB	**Assisi San Ben**	**0.45**	**306**	P	**Pg**	**07 11 04.7**	**-0.3**
ASSB				S	**Sg**	**07 11 11.6**	**+0.6**
ASSB				AML	AML		
	comp=N,8015μm,0.2s						
ASSB				AML	AML		
	comp=E,5960μm,0.3s						
SSM1	**San Severino M**	**0.45**	**2**	P	**Pg**	**07 11 04.5**	**-0.5**
SSM1				S	**Sg**	**07 11 11.5**	**+0.5**
GIGS	**Gran Sasso**	**0.45**	**137**	P	**Pg**	**07 11 04.1**	**-0.9**
GIGS				S	**Sg**	**07 11 10.8**	**-0.2**
GIGS				AML	AML		
	comp=E,1700μm,0.4s						
GIGS				AML	AML		
	comp=N,1104μm,0.2s						
CESX	**Cesi**	**0.46**	**248**	P	**Pg**	**07 11 04.8**	**-0.3**
CESX				S	**Sg**	**07 11 11.8**	**+0.7**
CESX				AML	AML		
	comp=E,6530μm,0.6s						
CESX				AML	AML		
	comp=N,5880μm,0.4s						
GAG1	**Gagliole**	**0.46**	**352**	P	**Pg**	**07 11 04.9**	**-0.4**
GAG1				S	**Sg**	**07 11 12.3**	**+0.9**
GAG1				AML	AML		
	comp=E,13500μm,1.6s						
GAG1				AML	AML		
	comp=N,15150μm,0.5s						
AQU	**L'Aquila**	**0.46**	**157**	P	**Pg**	**07 11 04.8**	**-0.5**
AQU				S	**Sg**	**07 11 12.3**	**+0.9**
AQU				AML	AML		
	comp=E,4100μm,0.8s						
AQU				AML	AML		
	comp=N,3290μm,0.3s						
AQU				AML	AML		
	comp=E,4015μm,0.8s						
AQU				AML	AML		
	comp=N,3035μm,0.3s						
AQU				AML	AML		
	comp=N,3295μm,0.3s						
MTL1	**Matelica**	**0.49**	**348**	*e*P	**Pg**	**07 11 05.4**	**-0.4**
MTL1				S	**Sg**	**07 11 13.0**	**+0.8**
SNTG	**Esanatoglia**	**0.50**	**342**	⇑P	**Pg**	**07 11 05.4**	**-0.6**
SNTG				S	**Sg**	**07 11 13.1**	**+0.5**
SNTG				AML	AML		
	comp=E,527μm,0.6s						
SNTG				AML	AML		
	comp=N,575μm,1.2s						
SNTG				AML	AML		
	comp=N,4695μm,1.2s						
SNTG				AML	AML		
	comp=E,528μm,0.6s						
SNTG				AML	AML		
	comp=N,575μm,1.2s						
SNTG				AML	AML		
	comp=E,4170μm,0.4s						
FIAM	**Fiamignano**	**0.51**	**183**	P	**Pg**	**07 11 05.6**	**-0.6**
FIAM				S	**Sg**	**07 11 13.7**	**+0.7**
FIAM				AML	AML		
	comp=E,3490μm,0.9s						
FIAM				AML	AML		
	comp=N,2255μm,0.4s						
TRE1	**Treia**	**0.54**	**12**	P	**Pg**	**07 11 06.7**	**-0.2**
TRE1				AML	AML		
	comp=E,9460μm,0.3s						
TRE1				AML	AML		
	comp=N,11230μm,0.5s						
TRE1				AML	AML		
	comp=N,11205μm,0.5s						
TRE1				AML	AML		
	comp=E,9440μm,0.3s						
EL6	**Elcito**	**0.55**	**356**	⇑P	**Pg**	**07 11 06.3**	**-0.7**
EL6				S	**Sg**	**07 11 14.8**	**+0.5**
EL6				AML	AML		
	comp=E,5780μm,0.1s						
EL6				AML	AML		
	comp=N,7710μm,1.0s						
ATCC	**AVT- Casa Cast**	**0.55**	**317**	P	**Pg**	**07 11 06.5**	**-0.5**
ATCC				S	**Sb**	**07 11 15.4**	**-0.5**
TRTR	**Tortoreto Alta**	**0.56**	**87**	P	**Pg**	**07 11 07.5**	**+0.4**
TRTR				AML	AML		
	comp=E,7105μm,0.8s						
TRTR				AML	AML		
	comp=N,8120μm,0.9s						
FOSV	**Fossato di Vic**	**0.59**	**331**	⇑P	**Pg**	**07 11 07.1**	**-0.6**
FOSV				S	**Sg**	**07 11 16.2**	**+0.7**
FOSV				AML	AML		
	comp=E,3065μm,1.0s						
FOSV				AML	AML		
	comp=N,4230μm,0.3s						
CING	**Cingoli**	**0.60**	**3**	⇑*i*P	**Pg**	**07 11 07.1**	**-0.7**

CING				S		Sb	07 11 16.5	-0.7	
FAGN	**Fagnano**	**0.60**	**148**	P		**Pg**	**07 11 07.6**	**-0.3**	
FAGN				AML		AML			
	comp=E,5740µm,0.5s								
FAGN				AML		AML			
	comp=N,5080µm,0.3s								
CADA	**Capodarco di F**	**0.61**	**47**	P		**Pb**	**07 11 08.8**	**-0.1**	
VCEL	**Villa Celiera**	**0.64**	**127**	P		**Pg**	**07 11 07.9**	**-0.7**	
VCEL				AML		AML			
	comp=N,2810µm,0.3s								
VCEL				AML		AML			
	comp=E,2890µm,0.3s								
VCEL				AML		AML			
	comp=N,2815µm,0.3s								
CIMA	**Civitanova Mar**	**0.65**	**36**	*e*P		**Pb**	**07 11 09.2**	**-0.3**	
CIMA				S		**Sn**	**07 11 20.5**	**-1.1**	
MURB	**Monte Urbino**	**0.67**	**317**	P		**Pg**	**07 11 08.7**	**-0.5**	
MURB				AML		AML			
	comp=N,6685µm,1.1s								
MURB				AML		AML			
	comp=E,7745µm,0.2s								
MURB				AML		AML			
	comp=N,6335µm,1.0s								
MURB				AML		AML			
	comp=E,8570µm,0.2s								
MMUR	**Monte Murano**	**0.67**	**350**	P		**Pg**	**07 11 08.5**	**-0.7**	
MMUR				S		**Sb**	**07 11 19.1**	**-0.3**	
PP3	**Marolino**	**0.68**	**29**	P		**Pg**	**07 11 09.6**	**+0.1**	
PP3				S		**Sn**	**07 11 21.5**	**-1.0**	
PP3				AML		AML			
	comp=E,6800µm,0.8s								
PP3				AML		AML			
	comp=E,6805µm,0.8s								
PP3				AML		AML			
	comp=N,8370µm,0.3s								
PP3				AML		AML			
	comp=E,6540µm,0.8s								
PP3				AML		AML			
	comp=N,8815µm,0.3s								
SSFR	**Montelago di S**	**0.71**	**338**	P		**Pg**	**07 11 09.3**	**-0.7**	
SSFR				AML		AML			
	comp=E,6360µm,0.2s								
SSFR				AML		AML			
	comp=N,6170µm,0.3s								
SSFR				AML		AML			
	comp=E,6365µm,0.2s								
SSFR				AML		AML			
	comp=E,5840µm,1.3s								
SSFR				AML		AML			
	comp=N,6470µm,0.3s								
ATTE	**AVT- Monte Tez**	**0.72**	**306**	AML		AML			
	comp=E,1420µm,0.4s								
ATTE				AML		AML			
	comp=N,1510µm,1.5s								
T0110	**Collepietro**	**0.72**	**140**	P		**Pg**	**07 11 09.0**	**-1.1**	
T0110				AML		AML			
	comp=E,2850µm,0.4s								
T0110				AML		AML			
	comp=N,3020µm,0.3s								
SRES	**S.Oreste - Sor**	**0.72**	**221**	P		**Pg**	**07 11 09.8**	**-0.4**	
SRES				S		**Sb**	**07 11 20.9**	**+0.2**	
SRES				AML		AML			
	comp=E,1375µm,0.3s								
SRES				AML		AML			
	comp=N,1032µm,0.4s								
ATFO	**Monte Foce - G**	**0.72**	**324**	P		**Pg**	**07 11 09.6**	**-0.7**	
ATFO				AML		AML			
	comp=E,2310µm,0.2s								
ATFO				AML		AML			
	comp=N,1855µm,0.3s								
ARVD	**Arcevia**	**0.73**	**348**	⇑P		**Pg**	**07 11 09.6**	**-0.9**	
ARVD				S		**Sb**	**07 11 20.9**	**-0.2**	
ARVD				AML		AML			
	comp=E,1860µm,0.2s								
ARVD				AML		AML			
	comp=N,1485µm,0.1s								
MGAB	**Montegabbione**	**0.78**	**280**	P		**Pg**	**07 11 11.1**	**-0.1**	
MGAB				AML		AML			
	comp=N,3025µm,0.7s								
MGAB				AML		AML			
	comp=E,4980µm,1.5s								
MGAB				AML		AML			
	comp=E,4610µm,1.5s								
MGAB				AML		AML			
	comp=N,3490µm,1.0s								
ATVO	**AVT- Monte Val**	**0.81**	**318**	P		**Pg**	**07 11 11.1**	**-0.8**	
ATVO				AML		AML			
	comp=E,1525µm,0.7s								
ATVO				AML		AML			
	comp=N,1480µm,0.5s								
MTCE	**Montecelio**	**0.82**	**202**	P		**Pg**	**07 11 10.8**	**-1.1**	
MTCE				AML		AML			
	comp=N,992µm,1.2s								
MTCE				AML		AML			
	comp=E,1840µm,0.6s								
AOI	**Ancona**	**0.84**	**23**	⇑P		**Pg**	**07 11 11.6**	**-0.8**	
AOI				AML		AML			
	comp=E,1625µm,0.3s								
AOI				AML		AML			
	comp=E,1630µm,0.3s								
AOI				AML		AML			
	comp=N,1855µm,0.2s								
CERT	**Cerreto**	**0.84**	**189**	P		**Pg**	**07 11 11.2**	**-1.2**	
CERT				AML		AML			
	comp=E,2140µm,0.8s								
CERT				AML		AML			
	comp=N,1325µm,1.5s								
COR1	**Corinaldo**	**0.86**	**353**	P		**Pn**	**07 11 14.4**	**+0.1**	
COR1				S		**Sn**	**07 11 27.4**	**+0.6**	
ATPI	**Pietralunga -**	**0.87**	**321**	P		**Pg**	**07 11 12.2**	**-0.8**	
ATPI				AML		AML			
	comp=E,1060µm,0.4s								
ATPI				AML		AML			
	comp=N,1215µm,0.8s								
ATPI				AML		AML			
	comp=E,1062µm,0.4s								
ATPI				AML		AML			
	comp=N,1220µm,0.8s								
ATPI				AML		AML			
	comp=E,1065µm,0.4s								
PIEI	**Piela**	**0.88**	**329**	AML		AML			
	comp=N,1009µm,0.3s								
PIEI				AML		AML			
	comp=E,1555µm,0.4s								
MPAG	**Monte Paganucc**	**0.90**	**341**	P		**Pg**	**07 11 12.6**	**-0.9**	
MPAG				AML		AML			
	comp=E,2955µm,0.3s								
MPAG				AML		AML			
	comp=N,1900µm,0.3s								
SACS	**San Casciano d**	**0.92**	**275**	P		**Pg**	**07 11 13.6**	**-0.3**	
SACS				AML		AML			
	comp=E,2335µm,1.0s								
SACS				AML		AML			
	comp=E,1205µm,1.0s								
SACS				AML		AML			
	comp=N,1195µm,1.1s								
SACS				AML		AML			
	comp=N,3610µm,1.0s								
NARO	**Abbazia di Nar**	**0.93**	**333**	P		**Pg**	**07 11 13.0**	**-1.2**	
NARO				AML		AML			
	comp=N,1385µm,0.6s								
NARO				AML		AML			
	comp=E,1070µm,0.7s								
INTR	**Introdacqua**	**0.95**	**144**	P		**Pg**	**07 11 12.7**	**-1.7**	
INTR				AML		AML			
	comp=N,1740µm,0.6s								
INTR				AML		AML			
	comp=E,795µm,1.2s								
INTR				AML		AML			
	comp=N,1745µm,0.6s								
FSSB	**Fossombrone**	**0.95**	**343**	P		**Pg**	**07 11 13.7**	**-0.8**	
FSSB				AML		AML			
	comp=E,4450µm,0.3s								
FSSB				AML		AML			
	comp=N,5330µm,0.4s								
BADI	**Badiali**	**0.99**	**318**	*e*P		**Pg**	**07 11 14.7**	**-0.5**	
GUAR	**Guarcino**	**0.99**	**173**	P		**Pb**	**07 11 15.6**	**+0.2**	
GUAR				AML		AML			
	comp=N,1585µm,0.5s								
GUAR				AML		AML			
	comp=E,1415µm,0.8s								
RMP	**Rome, Mte Porz**	**1.02**	**199**	P		**Pn**	**07 11 17.1**	**+0.6**	
RMP				AML		AML			
	comp=E,1780µm,0.4s								
RMP				AML		AML			
	comp=N,1735µm,1.1s								

CAFI	**Castiglion Fio**	**1.03**	**303**	AML		AML			
	comp=N,738µm,0.9s								
CAFI				AML		AML			
	comp=E,687µm,1.1s								
LPEL	**Lama dei Pelig**	**1.06**	**134**	P		**Pg**	**07 11 14.8**	**-1.7**	
LPEL				AML		AML			
	comp=N,706µm,0.5s								
LPEL				AML		AML			
	comp=E,974µm,0.6s								
MCIV	**Monte Civitell**	**1.09**	**270**	P		**Pg**	**07 11 17.3**	**+0.1**	
MCIV				AML		AML			
	comp=E,696µm,0.4s								
MCIV				AML		AML			
	comp=N,414µm,0.9s								
PARC	**Parchiule**	**1.10**	**323**	AML		AML			
	comp=E,1125µm,0.5s								
PARC				AML		AML			
	comp=N,1014µm,0.6s								
SF04	**Casetta**	**1.10**	**273**	*e*P		**Pn**	**07 11 17.9**	**+0.3**	
POFI	**Posta Fibreno**	**1.14**	**158**	P		**Pb**	**07 11 17.6**	**-0.3**	
POFI				AML		AML			
	comp=E,898µm,0.7s								
POFI				AML		AML			
	comp=N,402µm,1.0s								
GIUL	**Giuliano Di Ro**	**1.22**	**176**	P		**Pn**	**07 11 19.2**	**-0.1**	
GIUL				AML		AML			
	comp=N,570µm,0.8s								
GIUL				AML		AML			
	comp=E,400µm,0.7s								
TRIV	**Trivento**	**1.45**	**134**	*e*P		**Pg**	**07 11 24.2**	**+0.2**	
BSSO	**Busso**	**1.63**	**139**	P		**Pg**	**07 11 27.3**	**-0.2**	
PTRJ	**Pietraroja**	**1.75**	**144**	P		**Pn**	**07 11 24.9**	**-1.6**	
PTRJ				AML		AML			
	comp=E,4645µm,1.5s								
PTRJ				AML		AML			
	comp=N,4175µm,0.3s								
PTRJ				AML		AML			
	comp=N,5035µm,0.3s								
PTRJ				AML		AML			
	comp=E,2805µm,0.1s								
DUGI	**Dugi Otok**	**1.84**	**48**	*e*Pn		**Pn**	**07 11 27.9**	**+0.2**	
PAOL	**Paolisi**	**2.04**	**148**	⇑P		**Pg**	**07 11 36.2**	**+0.9**	
VIRC	**Vir**	**2.05**	**42**	*e*Pn		**Pn**	**07 11 30.1**	**-0.5**	
MORI	**Morici**	**2.16**	**59**	*e*Pn		**Pn**	**07 11 32.0**	**0.0**	
NVLJ	**Novalja**	**2.17**	**34**	*e*Pn		**Pn**	**07 11 32.1**	**-0.2**	
MAIM	**Mastiano**	**2.25**	**301**	*e*P		**Pn**	**07 11 33.6**	**+0.2**	
MAIM				AML		AML			
	comp=E,90µm,0.6s								
MAIM				AML		AML			
	comp=N,119µm,0.5s								
RABC	**Rab**	**2.30**	**30**	*e*Pn		**Pn**	**07 11 33.6**	**-0.3**	
UDBI	**Udbina**	**2.58**	**46**	*e*Pn		**Pn**	**07 11 39.0**	**+1.0**	
KIJV	**Kijevo**	**2.67**	**62**	*e*Pn		**Pn**	**07 11 40.4**	**+1.2**	
RIY	**Rijeka**	**2.72**	**20**	*e*Pn		Pn	07 11 33.3	-6.5	
RIY				*e*Sn		Sn	07 12 02.0	-11	
RIY	**Rijeka**	**2.72**	**20**	*e*Pn		Pn	07 11 33.3	-6.5	
RIY				*e*Sn		Sn	07 12 02.0	-11	
PLMA	**Palmaria, Port**	**2.72**	**299**	P		**Pn**	**07 11 40.6**	**+0.8**	
PLMA				AML		AML			
	comp=N,64µm,0.8s								
PLMA				AML		AML			
	comp=E,39µm,0.7s								
LSTV	**Lastovo**	**2.75**	**89**	*e*Pn		**Pn**	**07 11 40.6**	**+0.3**	
MAKA	**Makarska**	**2.88**	**79**	*e*Pn		**Pn**	**07 11 43.5**	**+1.5**	
RICI	**Ricice**	**3.00**	**75**	*e*Pn		**Pn**	**07 11 44.5**	**+0.8**	
ROVR	**Rover Verones**	**3.23**	**333**	*e*P		**Pn**	**07 11 48.4**	**+1.4**	
CGRP	**Cima Grappa**	**3.25**	**343**	*e*P		**Pn**	**07 11 48.3**	**+1.0**	
CGRP				S		**Sn**	**07 12 26.0**	**0.0**	
STON	**Ston**	**3.34**	**87**	*e*Pn		**Pn**	**07 11 47.8**	**-0.6**	
STON	**Ston**	**3.34**	**87**	*e*Pn		**Pn**	**07 11 50.3**	**+1.9**	
STON				*e*Sn		**Sn**	**07 12 30.0**	**+1.9**	
STON	**Ston**	**3.34**	**87**	*e*Pn		**Pn**	**07 11 50.3**	**+1.9**	
STON				*e*Sn		**Sn**	**07 12 30.0**	**+1.9**	
LJU	**Ljubljana**	**3.41**	**16**	⇑P		**Pn**	**07 11 52.1**	**+2.8**	
LJU				S		**Sn**	**07 12 31.0**	**+1.3**	
SALO	**Salr**	**3.41**	**327**	*e*P		**Pn**	**07 11 51.0**	**+1.7**	
LEOD	**Capriano del C**	**3.45**	**322**	⇑P		**Pn**	**07 11 49.7**	**-0.1**	
MPRI	**Monte Prat**	**3.46**	**358**	*e*P		**Pn**	**07 11 50.7**	**+0.6**	
MPRI				AML		AML			
	comp=E,111µm,0.4s								
MPRI				AML		AML			
	comp=N,192µm,0.5s								
STAL	**STALIGIAL**	**3.49**	**355**	*e*P		**Pn**	**07 11 51.2**	**+0.7**	
STAL				AML		AML			
	comp=E,176µm,0.8s								
MAGA	**Magasa**	**3.50**	**330**	*e*P		**Pn**	**07 11 51.8**	**+1.1**	
MAGA				AML		AML			
	comp=E,281µm,0.5s								
MAGA				AML		AML			
	comp=N,186µm,0.5s								
LUSI	**Trento, Gardas**	**3.55**	**334**	*e*P		**Pn**	**07 11 52.7**	**+1.4**	
LUSI				S		**Sn**	**07 12 36.0**	**+2.7**	
CIMO	**Cimolais**	**3.57**	**352**	⇓P		**Pn**	**07 11 52.4**	**+0.9**	
CIMO				AML		AML			
	comp=N,28µm,1.3s								
CIMO				AML		AML			
	comp=E,43µm,0.9s								
GAGG	**Gaggia**	**3.66**	**335**	P		**Pn**	**07 11 54.4**	**+1.6**	
SALB	**San Lorenzo Be**	**3.77**	**139**	P		**Pn**	**07 11 57.4**	**+3.0**	
SALB				S		**Sn**	**07 12 38.0**	**-0.7**	
SALB				S		**Sg**	**07 12 56.0**	**-1.1**	
ACOM	**Acomizza, Ital**	**3.78**	**4**	P		**Pn**	**07 11 55.5**	**+1.0**	
ACOM				AML		AML			
	comp=E,120µm,1.2s								
ACOM				AML		AML			
	comp=N,132µm,0.6s								
ACOM				AML		AML			
	comp=E,124µm,1.3s								
ACOM				AML		AML			
	comp=N,106µm,0.9s								
EUCT	**Pavia**	**3.78**	**311**	⇑P		**Pg**	**07 12 06.2**	**-2.4**	
ZOU	**Zoufplan**	**3.78**	**358**	*e*P		**Pn**	**07 11 55.2**	**+0.7**	
ZOU				AML		AML			
	comp=N,79µm,1.0s								
ZOU				AML		AML			
	comp=E,104µm,0.9s								
MABI	**Malga Bissina**	**3.78**	**331**	*e*P		**Pn**	**07 11 56.4**	**+1.8**	
OBKA	**Obir**	**3.86**	**14**	*e*Pn		**Pg**	**07 12 09.8**	**-0.3**	
	comp=E,4.2nm,0.3s								
MYKA	**Terra Mystica**	**3.87**	**5**	*e*Pn		**Pn**	**07 11 55.9**	**+0.3**	
	comp=E,0.9nm,0.2s								
KOSI	**Kohlern**	**3.90**	**342**	*e*P		**Pn**	**07 11 57.7**	**+1.6**	
ABTA	**Abfaltersbach**	**3.99**	**354**	*e*Pn		**Pn**	**07 11 58.7**	**+1.3**	
	comp=E,0.3nm,0.1s								
SOKA	**Soboth**	**4.12**	**18**	*e*Pn		**Pn**	**07 11 59.6**	**+0.5**	
	comp=E,1.8nm,0.5s								
BURY	**Giardini Botan**	**4.21**	**286**	S		**Sg**	**07 13 09.0**	**-2.3**	
RISI	**Rein**	**4.24**	**350**	⇑P		**Pn**	**07 11 59.4**	**-1.4**	
RISI				S		**Sn**	**07 12 50.0**	**-0.4**	
KBA	**Koelnbreinsper**	**4.30**	**2**	*e*Pn		**Pn**	**07 12 01.1**	**-0.6**	
	comp=E,2.2nm,0.2s								
ROSI	**Rosskopf**	**4.33**	**344**	*e*P		**Pn**	**07 12 03.9**	**+1.8**	
VSL	**Villasalto**	**4.35**	**222**	*e*P		**Pn**	**07 12 03.5**	**+1.3**	
VSL				S		**Sn**	**07 12 54.0**	**+1.1**	
STV	**Sant Anna di V**	**4.49**	**291**	S		**Sn**	**07 12 60.0**	**+3.6**	
FETA	**Feichten**	**4.58**	**339**	*e*Pn		**Pn**	**07 12 08.2**	**+2.7**	
	comp=E,0.5nm,0.3s								
WTTA	**Wattenberg**	**4.61**	**347**	*e*Pn		**Pn**	**07 12 06.4**	**+0.5**	
	comp=E,1.4nm,0.2s								
SQTA	**Sankt Quirin**	**4.65**	**343**	*e*Pn		**Pn**	**07 12 08.9**	**+2.4**	
	comp=E,2.8nm,0.2s								
GRI	**Girifalco**	**4.67**	**147**	⇓P		**Pb**	**07 12 15.1**	**-3.0**	
BBLS	**Lazići**	**4.69**	**74**	*e*Pn		**Pn**	**07 12 06.3**	**-0.6**	
BBLS	**Lazići**	**4.69**	**74**	*e*Pn		**Pn**	**07 12 06.3**	**-0.6**	
WATA	**Walderalm**	**4.69**	**347**	*e*Pn		**Pn**	**07 12 09.8**	**+2.8**	
	comp=E,3.1nm,0.3s								
ERC	**Erice**	**4.76**	**185**	P		**Pn**	**07 12 08.8**	**+0.9**	
ARSA	**Arzberg**	**4.78**	**20**	*e*Pn		**Pn**	**07 12 10.7**	**+2.6**	
	comp=E,1.9nm,0.3s								
MOTA	**Moosalm**	**4.79**	**343**	*e*Pn		**Pn**	**07 12 07.6**	**-0.8**	
	comp=E,1.2nm,0.3s								
MSFR	**San Fratello**	**4.87**	**167**	S		**Sn**	**07 13 04.0**	**-1.8**	
BIOA	**Bad Ischl, Aus**	**4.92**	**4**	*e*Pn		**Pn**	**07 12 09.4**	**-0.7**	
	comp=E,2.7nm,0.2s								
RETA	**Reutte**	**5.00**	**341**	*e*Pn		**Pn**	**07 12 10.4**	**-0.8**	
	comp=E,1.8nm,0.2s								
SJES	**Sjenica**	**5.02**	**82**	*e*Pn		**Pn**	**07 12 12.8**	**+1.2**	
SJES				*e*Sn		**Sn**	**07 13 10.4**	**+0.7**	
SJES	**Sjenica**	**5.02**	**82**	*e*Pn		**Pn**	**07 12 12.8**	**+1.2**	
SJES				*e*Sn		**Sn**	**07 13 10.4**	**+0.7**	
GMB	**Gambarie**	**5.04**	**155**	P		**Pn**	**07 12 13.7**	**+1.8**	
DAVA	**Damuels**	**5.07**	**334**	*e*Pn		**Pn**	**07 12 11.2**	**-1.0**	
	comp=E,1.6nm,0.3s								
MOA	**Molln**	**5.13**	**8**	*e*Pn		**Pn**	**07 12 12.7**	**-0.3**	

	comp=E,0.8nm,0.2s								
IVAS	**Ivanjica**	**5.18**	**79**	*e*Pn		**Pn**	**07 12 14.1**	**+0.4**	
IVAS				*e*Sn		**Sn**	**07 13 12.9**	**-0.5**	
IVAS	**Ivanjica**	**5.18**	**79**	*e*Pn		**Pn**	**07 12 14.1**	**+0.4**	
IVAS				*e*Sn		**Sn**	**07 13 12.9**	**-0.5**	
VLO	**Vlora**	**5.28**	**114**	⇓P		**Pb**	**07 12 32.4**	**+3.8**	
RONA	**Rosalia, Austr**	**5.40**	**23**	*e*Pn		**Pn**	**07 12 16.8**	**+0.1**	
	comp=E,0.8nm,0.1s								
TRUS	**Trudelj**	**5.47**	**72**	*e*Pn		**Pn**	**07 12 17.0**	**-0.6**	
TRUS	**Trudelj**	**5.47**	**72**	*e*Pn		**Pn**	**07 12 17.0**	**-0.6**	
CONA	**Conrad Observa**	**5.49**	**19**	*e*Pn		**Pn**	**07 12 18.1**	**+0.1**	
	comp=E,2.2nm,0.5s								
SELS	**Selova**	**5.86**	**83**	*e*Pn		**Pn**	**07 12 23.3**	**+0.3**	
SELS	**Selova**	**5.86**	**83**	*e*Pn		**Pn**	**07 12 23.3**	**+0.3**	
GERES	**GERESS Array B**	**6.08**	**3**	Pn		**Pn**	**07 12 25.1**	**-0.9**	
	comp=E,0.4nm,0.3s,baz=176,slow=13,SNR=4.9								
GERES				Sn		**Sn**	**07 13 33.3**	**-2.3**	
	comp=E,0.7nm,0.3s,baz=175,slow=25,SNR=1.4								
	comp=E,0.6nm,0.3s								
KHC	**Kasperske Hory**	**6.36**	**3**	*e*PN		**Pn**	**07 12 27.9**	**-1.9**	
KHC				*e*SN		**Sn**	**07 13 38.9**	**-3.5**	
PRVS	**Prvonek**	**6.58**	**89**	*e*Pn		**Pn**	**07 12 34.1**	**+1.1**	
PRVS	**Prvonek**	**6.58**	**89**	*e*Pn		**Pn**	**07 12 34.1**	**+1.1**	
ZAGS	**Zajecar**	**6.71**	**78**	*e*Pn		**Pn**	**07 12 34.5**	**-0.1**	
ZAGS	**Zajecar**	**6.71**	**78**	*e*Pn		**Pn**	**07 12 34.5**	**-0.1**	
BOSS	**Bosilegrad**	**6.88**	**89**	*e*Pn		**Pn**	**07 12 38.2**	**+1.2**	
BOSS	**Bosilegrad**	**6.88**	**89**	*e*Pn		**Pn**	**07 12 38.2**	**+1.2**	
ZAPS	**Zavoj**	**6.96**	**83**	*e*Pn		**Pn**	**07 12 38.9**	**+0.7**	
ZAPS	**Zavoj**	**6.96**	**83**	*e*Pn		**Pn**	**07 12 38.9**	**+0.7**	
TORD	**Torodi Ar. Bea**	**31.15**	**202**	P		**P**	**07 17 16.0**	**+1.0**	
	comp=E,0.5nm,0.9s,baz=23,slow=9.1,SNR=2.8								
	comp=E,0.5nm,0.9s								
ARU	**Arti**	**31.81**	**49**	LR		LR	07 31 45.5		
	comp=E,28nm,19.6s,baz=124,slow=40								
MKAR	**Makanchi Array**	**47.79**	**60**	P		**P**	**07 19 31.8**	**-1.6**	
	comp=E,0.2nm,0.6s,baz=286,slow=5.4,SNR=1.9								
	comp=E,0.2nm,0.6s								

LJU 24 07:12:22.4, 46.39N × 15.07E, h0km, Confirmed
Rockburst, Northwestern Balkan Peninsula

NEIC 24 07:12:31.6 ± 2.4, 38.15N ± 0.02 × 104.81W ± 0.03, h3km ± 6km,
mb_Lg2.9/72, ML2.9/67, Error ellipse: s-maj=3.3km
s-min=2.1km az=94.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDCO	**Great Sand Dun**	**0.68**	**234**	Pg	Pg	07 12 43.9	-0.8
SDCO				Sg	Sg	07 12 53.2	-0.4
SDCO				IAML		07 12 54.3	
	398nm,0.1s						
Q24A	**Divide**	**0.85**	**342**	Pg	Pg	07 12 47.3	-0.8
Q24A				Sg	Sg	07 12 58.1	-1.1
T25A	**Trinidad**	**1.06**	**163**	Pg	Pg	07 12 51.4	-0.5
T25A				Sg	Sg	07 13 05.0	-0.7
T25A				IAmb_Lg		07 13 05.6	
	comp=Z,100nm,0.9s						
S22A	**4UR Ranch, Cre**	**1.65**	**256**	Pn	Pn	07 13 01.7	-0.2
S22A				Sn	Sn	07 13 23.7	-0.1
S22A				IAML		07 13 26.1	
	comp=E,132nm,0.1s						
S22A				IAML		07 13 32.6	
	comp=N,137nm,0.8s						
ISCO	**Idaho Springs**	**1.76**	**339**		Pn	07 13 03.3	-0.1
ISCO				Sn	Sn	07 13 26.2	-0.4
ISCO				IAML		07 13 27.1	
	comp=N,139nm,0.3s						
ISCO				IAML		07 13 29.1	
	comp=N,91nm,0.5s						
KSCO	**Kaye Shedlock'**	**1.91**	**63**	Pn	Pn	07 13 06.2	+0.9
KSCO				Sn	Sn	07 13 30.5	+0.5
SMCO	**Snowmass**	**1.98**	**302**		Pb	07 13 07.7	-0.9
SMCO				IAML		07 13 37.6	
	comp=N,65nm,0.4s						
SMCO				IAML		07 13 41.5	
	comp=N,92nm,0.4s						
N23A	**Red Feather La**	**2.88**	**343**		Pn	07 13 20.2	+1.5
N23A				IAML		07 14 02.4	
	comp=E,74nm,0.6s						
N23A				IAML		07 14 10.6	
	comp=N,54nm,0.9s						
PV15	**Paradox Valley**	**2.90**	**275**		Pn	07 13 20.3	+1.3
PV15				IAML		07 14 06.0	
	comp=E,31nm,0.5s						
PV15				IAML		07 14 09.5	
	comp=N,35nm,0.8s						
PV07	**Paradox Valley**	**3.04**	**277**		Pn	07 13 21.9	+1.1
PV07				IAML		07 14 14.5	
	comp=N,24nm,0.8s						
MVCO	**Mesa Verde**	**3.08**	**253**	Pn	Pn	07 13 22.3	+0.8
MVCO				IAML		07 14 15.4	
	comp=N,34nm,1.0s						
MVCO				IAML		07 14 16.1	
	comp=N,43nm,1.0s						
PV22	**Blue Mesa, Par**	**3.15**	**278**	Pn	Pn	07 13 24.3	+1.8
PV22				IAML		07 14 13.5	
	comp=N,27nm,0.5s						
PV13	**Radium Mtn., P**	**3.16**	**271**		Pn	07 13 23.8	+1.2
PV13				IAML		07 14 15.3	
	comp=N,30nm,1.0s						
PV13				IAML		07 14 17.9	
	comp=E,33nm,0.5s						
PHWY	**Pilot Hill**	**3.19**	**351**		Pn	07 13 24.1	+1.2
PHWY				IAML		07 14 10.6	
	comp=E,36nm,0.4s						
PV11	**David Mesa, Pa**	**3.21**	**274**		Pn	07 13 23.8	+0.7
PV23	**Carpenter Ridg**	**3.32**	**276**	Pn	Pn	07 13 26.4	+1.6
PV23				IAML		07 14 25.0	
	comp=N,38nm,0.8s						
O20A	**White River Ci**	**3.32**	**308**	Pn	Pn	07 13 26.1	+1.3
PV10	**Paradox Valley**	**3.34**	**275**	Pn	Pn	07 13 26.4	+1.3
PV10				IAML		07 14 30.9	
	comp=E,20nm,1.1s						
ANMO	**Albuquerque**	**3.46**	**203**	Pn	Pn	07 13 27.9	+1.2
OGNE	**Ogallala**	**3.52**	**37**	Pn	Pn	07 13 27.7	+0.4
RWWY	**Rawlins**	**3.99**	**333**	Pg	Pb	07 13 44.2	+1.5
RWWY				IAML		07 14 40.0	
	comp=E,31nm,0.9s						
CBKS	**Cedar Bluff**	**4.03**	**79**	Pn	Pn	07 13 34.4	+0.1
CBKS				IAmb_Lg		07 14 48.8	
	comp=Z,29nm,0.7s						
AMTX	**Amarillo**	**4.12**	**141**	Pn	Pn	07 13 33.9

CSTR				IAmb_Lg		07 15 30.7		
	comp=Z,1.3nm,0.7s							
X18A	**Snowflake**	**5.50**	**230**	Pn	Pn	07 13 53.1	-1.7	
KAN14	**Manchester OK**	**5.57**	**100**	Pn	Pn	07 13 53.1	-2.4	
KAN06	**Argonia West S**	**5.58**	**97**	IAmb_Lg		07 15 39.9		
	comp=Z,17nm,0.7s							
KAN01	**Argonia South**	**5.68**	**98**	IAmb_Lg		07 15 31.5		
	comp=Z,18nm,0.7s							
CROK	**Carrier**	**5.68**	**105**	IAmb_Lg		07 15 36.7		
	comp=Z,17nm,0.7s							
KAN17	**Caldwell West**	**5.70**	**99**	Pn	Pn	07 13 54.8	-2.5	
KAN17				IAmb_Lg		07 15 31.8		
	comp=Z,22nm,1.0s							
MTPU	**Mount Pierson**	**5.82**	**271**	Pn	Pn	07 13 57.7	-1.6	
WUAZ	**Wupatki**	**5.89**	**245**	Pn	Pn	07 14 01.1	+1.1	
KAN13	**South Haven SW**	**5.93**	**99**	IAmb_Lg		07 15 45.3		
	comp=Z,23nm,0.8s							
WMOK	**Wichita Mounta**	**5.93**	**123**	Pn	Pn	07 14 00.7	+0.2	
GDL2	**Guadalupe Moun**	**5.95**	**176**	Pn	Pn	07 14 00.1	-0.7	
RSSD	**Black Hills**	**5.99**	**5**	Pn	Pn	07 14 01.1	-0.3	
RSSD				IAmb_Lg		07 15 49.6		
	comp=Z,17nm,1.1s							
BGNE	**Belgrade**	**6.07**	**56**	Pn	Pn	07 14 02.1	-0.3	
U15A	**North Rim**	**6.21**	**256**	Pn	Pn	07 14 04.5	0.0	
OK029	**Liberty Lake**	**6.34**	**110**	Pn	Pn	07 14 05.3	-0.8	
MNTX	**Cornudas Mount**	**6.46**	**184**	Pg	Pb	07 14 28.1	+3.4	
KNB	**Kanab**	**6.47**	**262**	Pn	Pn	07 14 06.4	-1.5	
FNO	**Franklin**	**6.61**	**114**	IAmb_Lg		07 16 06.7		
	comp=Z,14nm,0.8s							
X34A	**Smith Ranch, M**	**6.65**	**120**	IAmb_Lg		07 16 12.4		
	comp=Z,16nm,0.9s							
T35A	**Sooner Cattle**	**6.71**	**98**	Pn	Pn	07 14 11.5	+0.4	
T35A				Pg	Pb	07 14 33.4	+4.5	
T35A				IAmb_Lg		07 16 23.4		
	comp=Z,16nm,0.7s							
TPAW	**Teton Pass**	**7.08**	**321**	Pn	Pn	07 14 15.4	-1.0	
TUL1	**Leonard**	**7.55**	**104**	IAmb_Lg		07 16 34.1		
	comp=Z,14nm,0.9s							
SUSD	**Miller**	**7.67**	**33**	IAmb_Lg		07 16 44.0		
	comp=Z,14nm,0.7s							
RLMT	**Red Lodge**	**7.72**	**336**	Pn	Pn	07 14 26.0	+0.8	
ECSD	**EROS Data Cent**	**8.34**	**45**	Pn	Pn	07 14 33.3	-0.1	
X37A	**Clayton**	**8.40**	**112**	Pn	Pn	07 14 33.2	-1.1	
X37A				IAmb_Lg		07 17 08.1		
	comp=Z,14nm,0.8s							
JCT	**Junction City**	**8.70**	**150**	IAmb_Lg		07 17 22.6		
	comp=Z,8.9nm,0.9s							
435B	**Jarrell**	**9.46**	**139**	IAmb_Lg		07 17 41.1		
	comp=Z,12nm,0.8s							

ROM 24 07:14:03.0±0.1, 42°.830N±0'.004×13°.238E±0'.009, h10km, ML2.0/3, Error ellipse: s-maj=0.7km s-min=0.3km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**272**	P	Pg	07 14 06.0	+0.4
NRCA				S	Sg	07 14 07.7	+0.3
FDMO	**Fiordimonte**	**0.23**	**332**	*e*P	Pg	07 14 08.4	+0.6
FDMO				S	Sg	07 14 12.2	+1.1
CSP1	**Cessapalombo**	**0.26**	**355**	*e*P	Pb	07 14 09.1	-0.7
CSP1				S	Sb	07 14 13.4	-1.1
CESI	**CESI - Serrava**	**0.30**	**306**	*e*P	Pg	07 14 09.6	+0.5
CESI				S	Sb	07 14 14.4	-1.1
CAMP	**Campotosto**	**0.32**	**157**	*e*P	Pg	07 14 09.4	0.0
CAMP				S	Sb	07 14 15.2	-0.9
CAMP				AML	AML		
	comp=N,346μm,0.2s						
CAMP				AML	AML		
	comp=N,347μm,0.2s						
CAMP				AML	AML		
	comp=E,340μm,0.2s						
RM33	**Pellescritta (**	**0.32**	**183**	*e*P	Pg	07 14 09.7	+0.3
RM33				S	Sb	07 14 15.3	-0.8
RM33				AML	AML		
	comp=E,557μm,0.1s						
RM33				AML	AML		
	comp=N,424μm,0.8s						
RM33				AML	AML		
	comp=N,842μm,0.2s						
RM33				AML	AML		
	comp=E,703μm,0.2s						
RM33				AML	AML		
	comp=N,411μm,0.4s						
RM33				AML	AML		
	comp=E,557μm,0.1s						
TERO	**Teramo**	**0.34**	**127**	AML	AML		
	comp=E,218μm,0.1s						
TERO				AML	AML		
	comp=E,760μm,0.1s						
TERO				AML	AML		
	comp=N,1040μm,0.5s						
TERO				AML	AML		
	comp=N,1040μm,0.5s						
TERO				AML	AML		
	comp=N,328μm,0.2s						
GIGS	**Gran Sasso**	**0.45**	**147**	*e*P	Pb	07 14 12.4	-0.6
ASSB	**Assisi San Ben**	**0.48**	**297**	*e*P	Pg	07 14 12.5	+0.3
ASSB				S	Sg	07 14 19.5	+1.0
SNTG	**Esanatoglia**	**0.48**	**333**	P	Pg	07 14 12.7	+0.4
SNTG				S	Sb	07 14 20.1	-0.5
ATCC	**AVT- Casa Cast**	**0.56**	**309**	P	Pb	07 14 14.5	-0.5
ATCC				S	Sb	07 14 22.5	-0.6
MURB	**Monte Urbino**	**0.68**	**310**	*e*P	Pg	07 14 16.5	+0.4
MURB				S	Sb	07 14 26.7	+0.3
SENI	**Senigallia**	**0.88**	**360**	AML	AML		
	comp=E,447μm,1.5s						
SENI				AML	AML		
	comp=N,710μm,1.6s						

IDC 24 07:17:01.8±2.4, 54°.04N×86°.48E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=20.2km s-min=12.0km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**265**	*i*		07 23 55.0	
	baz=84,slow=317,SNR=12						
ZALV	**Zalesovo Beam**	**0.99**	**265**	Pg	Pg	07 17 18.9	-1.7
	0.9nm,0.3s,baz=85,slow=18,SNR=8.9						
ZALV				Lg	Lg	07 17 35.0	
	1.8nm,0.3s,baz=86,slow=28,SNR=7.1						
KURBB	**Kurchatov Arra**	**5.95**	**238**	Pn	Pn	07 18 32.1	+1.0
	0.1nm,0.3s,baz=56,slow=14,SNR=11						
KURBB				Lg	Lg	07 20 10.7	
	baz=52,slow=29,SNR=2.7						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	07 18 56.5	+1.0
	0.4nm,0.3s,baz=22,slow=14,SNR=11						
MKAR				Sn	Sn	07 20 23.6	-0.2
	0.1nm,0.3s,baz=22,slow=25,SNR=5.6						
MKAR				Lg	Lg	07 21 07.0	
	baz=16,slow=27,SNR=3.2						
	0.5nm,0.3s						

HEL 24 07:23:10.4±0.1, 60°.84N×27°.85E, h0km, ML1.2, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.34**	**206**	PG	Pg	07 23 16.6	-0.2
	baz=25						
VJF				SG	Sg	07 23 20.9	-0.2
RUFX	**Ruokolahti**	**0.80**	**42**	PB	Pg	07 23 25.4	-0.2
RUFX				SB	Sg	07 23 36.2	+0.2
PVF	**Pernaja**	**1.02**	**254**	PN	Pb	07 23 31.3	+0.3
PVF				MSG		07 23 41.8	
	comp=Z,2.3nm,0.2s						
FIA0	**FINESS Array S**	**1.05**	**306**	PG	Pg	07 23 29.5	-1.1
FIA0				SB	Sg	07 23 43.8	-0.4
KAF	**Kangasniemi**	**1.48**	**331**	MSG		07 23 54.7	
	comp=Z,1.5nm,0.2s						
KAF				SN	Sg	07 23 57.3	-0.5
JOF	**Joensuu**	**2.65**	**37**	SG	Sb	07 24 32.1	+0.3
VAF	**Ylistaro**	**3.30**	**314**	SB	Sb	07 24 47.4	-2.9
OBF0	**Syolatti, Pyha**	**4.03**	**337**	PN	Pn	07 24 13.7	+0.4
OBF8	**Ulkokalla**	**4.05**	**332**	PN	Pn	07 24 14.3	+0.7

*VIE **24** 07:23:25.0±2.3, 42°.37N×13°.26E, h10km, mb2.9/17, ml3.2/14, ms3.1/3, Error ellipse: s-maj=25.7km s-min=4.4km az=178.0 83 km NE of Rome*

*ROM **24** 07:23:28.2±0.1, 42°.718N±0'.004×13°.187E±0'.007, h9km, ML3.3/51, Error ellipse: s-maj=0.6km s-min=0.4km az=246.0*

*IDC **24** 07:23:29.3±1.5, 42°.80N×13°.33E, h0km, mb3.3/2, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=39.7km s-min=15.2km az=95.0*

*PRU **24** 07:23:31.1±0.0, 42°.88N×13°.60E, h0km*

*BEO **24** 07:23:31.0±2.9, 42°.67N×12°.89E, h47km, ML3.4/5*

ISC 24 07:23:29.2±0.8, 42.72N±0'.02×13.17E±0'.02, h9km±6km, n130, σ1§01/161, 25C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**341**	⇓P	Pg	07 23 31.9	-0.3
NRCA				S	Sg	07 23 34.0	-0.2
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
RM33	**Pellescritta (**	**0.21**	**171**	⇑P	Pg	07 23 33.6	+0.1
RM33				S	Sg	07 23 37.0	+0.5
RM33				AML	AML		
	comp=E,17450μm,1.0s						
RM33				AML	AML		
	comp=N,15600μm,1.0s						
RM33				AML	AML		
	comp=E,17450μm,1.0s						
RM33				AML	AML		
	comp=N,15600μm,1.0s						
RM33				AML	AML		
	comp=N,15650μm,1.0s						
RM33				AML	AML		
	comp=E,17150μm,1.0s						
RM33				AML	AML		
	comp=N,15650μm,1.0s						
RM33				AML	AML		
	comp=E,17400μm,1.0s						
RM33				AML	AML		
	comp=E,17200μm,1.0s						
CAMP	**Campotosto**	**0.25**	**135**	⇑P	Pg	07 23 33.9	-0.5
CAMP				S	Sg	07 23 37.3	-0.5
FEMA	**Monte Fema**	**0.26**	**340**	P	Pg	07 23 34.2	-0.4
FEMA				S	Sg	07 23 38.4	+0.3
ARRO	**Arrone**	**0.33**	**246**	⇑P	Pg	07 23 35.8	+0.1
ARRO				AML	AML		
	comp=E,7675μm,0.3s						
ARRO				AML	AML		
	comp=N,7590μm,0.2s						
ARRO				AML	AML		
	comp=N,7555μm,0.2s						
FDMO	**Fiordimonte**	**0.33**	**349**	⇑P	Pg	07 23 35.1	-0.6
FDMO				S	Sg	07 23 40.2	+0.1
FDMO				AML	AML		
	comp=E,10955μm,0.4s						
FDMO				AML	AML		
	comp=N,11095μm,0.9s						
TERO	**Teramo**	**0.33**	**106**	⇑P	Pg	07 23 34.9	-0.9
TERO				S	Sg	07 23 39.8	-0.5
TERO				AML	AML		
	comp=N,15750μm,0.6s						
TERO				AML	AML		
	comp=N,15700μm,0.6s						
TERO				AML	AML		
	comp=E,7730μm,0.6s						
TERO				AML	AML		
	comp=E,7155μm,0.8s						
TERO				AML	AML		
	comp=E,7150μm,0.8s						
TERO				AML	AML		
	comp=N,16350μm,0.6s						
CESI	**CESI - Serrava**	**0.35**	**326**	⇑P	Pg	07 23 35.8	-0.4
CESI				S	Sg	07 23 41.5	+0.8
CESI				AML	AML		
	comp=E,13300μm,0.4s						
CESI				AML	AML		
	comp=N,15300μm,0.3s						
CSP1	**Cessapalombo**	**0.38**	**4**	⇑P	Pg	07 23 35.9	-0.8
CSP1				S	Sg	07 23 41.7	0.0
CSP1				AML	AML		
	comp=E,24950μm,1.0s						
CSP1				AML	AML		
	comp=N,16100μm,1.1s						
GIGS	**Gran Sasso**	**0.40**	**132**	P	Pg	07 23 36.2	-0.9
GIGS				S	Sg	07 23 42.0	-0.3
GIGS				AML	AML		
	comp=E,1270μm,1.6s						
GIGS				AML	AML		
	comp=N,880μm,0.5s						
GIGS				AML	AML		
	comp=N,880μm,0.5s						
AQU	**L'Aquila**	**0.40**	**154**	P	Pg	07 23 36.7	-0.4
AQU				AML	AML		
	comp=E,3785μm,0.5s						
AQU				AML	AML		
	comp=N,3775μm,0.7s						
AQU				AML	AML		
	comp=E,3630μm,0.6s						
AQU				AML	AML		
	comp=N,3800μm,0.7s						
AQU				AML	AML		
	comp=E,3790μm,0.5s						
OFFI	**Offida**	**0.44**	**60**	⇑P	Pg	07 23 37.6	-0.2
OFFI				S	Sb	07 23 45.4	-0.5
OFFI				AML	AML		
	comp=N,21950μm,0.3s						
OFFI				AML	AML		
	comp=E,20550μm,0.7s						
CESX	**Cesi**	**0.45**	**257**	⇑P	Pg	07 23 37.8	-0.2
CESX				AML	AML		
	comp=N,4945μm,0.3s						
CESX				AML	AML		
	comp=E,4615μm,0.4s						
FIAM	**Fiamignano**	**0.45**	**185**	⇑P	Pg	07 23 37.7	-0.3
FIAM				S	Sg	07 23 44.8	+0.9
FIAM				AML	AML		
	comp=E,3875μm,0.5s						
FIAM				AML	AML		
	comp=N,5335μm,0.6s						
SEF1	**Sefro**	**0.46**	**339**	P	Pg	07 23 37.5	-0.7
SEF1				S	Sg	07 23 45.2	+0.9
SEF1				AML	AML		
	comp=E,17450μm,0.2s						
SEF1				AML	AML		
	comp=N,11150μm,0.2s						
SEF1				AML	AML		
	comp=E,17450μm,0.2s						
SEF1				AML	AML		
	comp=N,11150μm,0.2s						
SEF1				AML	AML		
	comp=N,11100μm,0.2s						
SEF1				AML	AML		
	comp=E,17500μm,0.2s						
MNTP	**Montappone**	**0.48**	**27**	P	Pg	07 23 38.0	-0.4
MNTP				S	Sb	07 23 45.9	-1.0
MNTP				AML	AML		
	comp=E,18150μm,0.8s						
MNTP				AML	AML		
	comp=E,18200μm,0.8s						
MNTP				AML	AML		
	comp=N,16500μm,0.7s						
MDAR	**Monte D'Aria**	**0.48**	**358**	⇑P	Pg	07 23 37.7	-0.9
MDAR				S	Sg	07 23 44.9	0.0
PIO1	**Pioraco**	**0.48**	**344**	P	Pg	07 23 37.9	-0.7
PIO1				S	Sg	07 23 45.5	+0.6
ASSB	**Assisi San Ben**	**0.50**	**311**	P	Pg	07 23 38.9	0.0
ASSB				S	Sb	07 23 46.5	-1.1
ASSB				AML	AML		
	comp=E,5485μm,0.3s						
ASSB				AML	AML		
	comp=N,4805μm,1.4s						
FIU1	**Fiuminata**	**0.50**	**340**	P	Pg	07 23 38.2	-0.8
FIU1				S	Sg	07 23 46.3	+0.6
SSM1	**San Severino M**	**0.51**	**1**	P	Pg	07 23 38.0	-1.2
SSM1				S	Sg	07 23 46.3	+0.3
GAG1	**Gagliole**	**0.53**	**352**	P	Pg	07 23 38.9	-0.6
MTL1	**Matelica**	**0.55**	**348**	P	Pg	07 23 39.3	-0.7
TRTR	**Tortoreto Alta**	**0.56**	**80**	⇑P	Pg	07 23 40.0	0.0
TRTR				AML	AML		
	comp=N,15350μm,0.4s						
TRTR				AML	AML		
	comp=E,16250μm,0.4s						
SNTG	**Esanatoglia**	**0.56**	**343**	P	Pg	07 23 39.3	-0.9
SNTG				S	Sg	07 23 47.9	+0.2
SNTG				AML	AML		
	comp=E,408μm,0.6s						
SNTG				AML	AML		
	comp=E,3295μm,0.6s						
SNTG				AML	AML		
	comp=N,436μm,1.2s						
SNTG				AML	AML		
	comp=N,436μm,1.2s						
SNTG				AML	AML		
	comp=E,3290μm,0.6s						
SNTG				AML	AML		
	comp=E,408μm,0.6s						
SNTG				AML	AML		
	comp=N,3280μm,0.2s						
TRE1	**Treia**	**0.60**	**10**	P	Pg	07 23 40.4	-0.5
TRE1				S	Sb	07 23 50.1	-0.5
TRE1				AML	AML		
	comp=N,11585μm,1.2s						
TRE1				AML	AML		
	comp=E,13000μm,0.3s						
TRE1				AML	AML		
	comp=N,11595μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.61**	**321**	P	Pg	07 23 40.6	-0.4
ATCC				S	Sb	07 23 50.0	-0.8
ATCC				AML	AML		
	comp=N,4630μm,1.5s						
ATCC				AML	AML		
	comp=E,4385μm,0.6s						
ATCC				AML	AML		
	comp=E,4380μm,0.6s						
CADA	**Capodarco di F**	**0.65**	**42**	P	Pg	07 23 42.0	+0.3
FOSV	**Fossato di Vic**	**0.65**	**333**	P	Pg	07 23 41.5	-0.3
FOSV				S	Sg	07 23 50.7	+0.3
FOSV				AML	AML		
	comp=E,2225μm,0.7s						
FOSV				AML	AML		
	comp=N,2535μm,0.8s						
FOSV				AML	AML		
	comp=N,2540μm,0.8s						
SRES	**S.Oreste - Sor**	**0.68**	**226**	P	Pg	07 23 42.3	-0.1
SRES				AML	AML		
	comp=E,1600μm,0.3s						
SRES				AML	AML		
	comp=N,1530μm,0.5s						
CIMA	**Civitanova Mar**	**0.69**	**32**	P	Pg	07 23 42.6	0.0
MURB	**Monte Urbino**	**0.72**	**319**	S	Sb	07 23 55.0	+0.9
PP3	**Marolino**	**0.74**	**26**	⇑P	Pg	07 23 43.1	-0.3
PP3				AML	AML		
	comp=N,17200μm,0.3s						
PP3				AML	AML		
	comp=E,15250μm,0.5s						
PP3				AML	AML		
	comp=E,14350μm,0.8s						
PP3				AML	AML		
	comp=N,17200μm,0.3s						
PP3				AML	AML		
	comp=N,19050μm,0.3s						
MTCE	**Montecelio**	**0.76**	**205**	P	Pg	07 23 42.6	-1.3
MTCE				AML	AML		
	comp=E,2320μm,0.9s						
MTCE				AML	AML		
	comp=N,1620μm,0.4s						
ATFO	**Monte Foce - G**	**0.79**	**326**	P	Pg	07 23 44.0	-0.3
ATFO				AML	AML		
	comp=N,1690μm,0.6s						
ATFO				AML	AML		
	comp=E,1685μm,0.3s						
ARVD	**Arcevia**	**0.80**	**348**	S	Sb	07 23 57.0	+0.7
MGAB	**Montegabbione**	**0.80**	**285**	AML	AML		
	comp=E,3540μm,0.3s						
MGAB				AML	AML		
	comp=N,3350μm,0.5s						
MGAB				AML	AML		
	comp=N,3485μm,0.5s						
MGAB				AML	AML		
	comp=N,3345μm,0.5s						
MGAB				AML	AML		
	comp=E,3320μm,0.4s						
RCAV	**Rocca di Cave**	**0.88**	**191**	P	Pg	07 23 45.9	-0.3
RCAV				AML	AML		
	comp=E,3420μm,0.4s						
RCAV				AML	AML		
	comp=N,3705μm,0.5s						
AOI	**Ancona**	**0.89**	**21**	S	Sn	07 24 01.0	-0.1
SACS	**San Casciano d**	**0.94**	**279**	P	Pg	07 23 46.0	-1.2
SACS				AML	AML		
	comp=E,1235μm,0.3s						
SACS				AML	AML		
	comp=N,1625μm,0.9s						
PIEI	**Pieia**	**0.94**	**331**	S	Sn	07 24 02.0	-0.4
MPAG	**Monte Paganucc**	**0.96**	**342**	P	Pg	07 23 47.2	-0.5
MPAG				S	Sg	07 24 00.5	+0.3
NARO	**Abbazia di Nar**	**0.99**	**335**	S	Sn	07 24 03.0	-0.5
RDP	**Rocca di Papa**	**1.01**	**200**	AML	AML		
	comp=E,3885μm,0.5s						
RDP				AML	AML		
	comp=N,4270μm,0.4s						
TOLF	**Tolfa**	**1.08**	**233**	P	Pg	07 23 48.9	-1.1
TOLF				AML	AML		
	comp=N,536μm,0.8s						
TOLF				AML	AML		
	comp=E,688μm,0.7s						
MCIV	**Monte Civitell**	**1.10**	**274**	AML	AML		
	comp=E,748μm,0.3s						
MCIV				AML	AML		
	comp=N,538μm,1.1s						
SF04	**Casetta**	**1.12**	**277**	P	Pg	07 23 50.1	-0.6
PARC	**Parchiule**	**1.16**	**324**	AML	AML		
	comp=N,854μm,1.1s						
PARC				AML	AML		
	comp=E,1034μm,0.5s						
GIUL	**Giuliano Di Ro**	**1.16**	**177**	P	Pb	07 23 50.7	-0.7
GIUL				AML	AML		
	comp=E,665μm,1.0s						
GIUL				AML	AML		
	comp=N,1028μm,0.9s						
ARCI	**Arcidosso**	**1.25**	**277**	P	Pn	07 23 53.0	0.0
ARCI				AML	AML		
	comp=E,254μm,0.6s						
ARCI				AML	AML		
	comp=N,234μm,1.4s						
OSSC	**Osservatorio P**	**1.62**	**300**	P	Pn	07 23 57.1	-1.0
OSSC				AML	AML		
	comp=N,252μm,0.5s						
OSSC				AML	AML		
	comp=E,175μm,0.5s						
RUFI	**Rufina**	**1.65**	**313**	⇓P	Pn	07 23 58.1	-0.3
CASP	**Castiglione de**	**1.70**	**273**	⇑P	Pn	07 23 58.7	-0.4
CASP				AML	AML		
	comp=E,103μm,0.3s						
CASP				AML	AML		
	comp=N,102μm,0.9s						
LMD	**Lutirano**	**1.73**	**322**	P	Pn	07 24 00.1	+0.6
LMD				AML	AML		
	comp=E,286μm,0.8s						
LMD				AML	AML		
	comp=N,340μm,1.2s						
LMD				AML	AML		
	comp=E,286μm,0.8s						
DUGI	**Dugi Otok**	**1.88**	**47**	*e*Pn	Pn	07 24 00.8	-0.8
VIRC	**Vir**	**2.09**	**40**	*e*Pn	Pn	07 24 03.0	-1.4
VIRC				Sn	Sn	07 24 28.6	-1.9
VBKN	**Vesuvio Bunker**	**2.11**	**153**	S	Sn	07 24 32.0	+0.9
MORI	**Morici**	**2.18**	**57**	*e*Pn	Pn	07 24 05.0	-0.7
NVLJ	**Novalja**	**2.22**	**33**	*e*Pn	Pn	07 24 05.1	-1.1
NVLJ				Sn	Sn	07 24 32.1	-1.7
MAIM	**Mastiano**	**2.29**	**302**	⇑P	Pn	07 24 07.5	+0.3
MAIM				S	Sn	07 24 35.0	-0.6
VLC	**Villacollemand**	**2.49**	**306**	⇑P	Pn	07 24 09.6	-0.4
VLC				AML	AML		
	comp=N,65μm,1.2s						
VLC				AML	AML		
	comp=E,53μm,1.5s						
KIJV	**Kijevo**	**2.69**	**60**	*e*Pn	Pn	07 24 12.9	+0.2
LSTV	**Lastovo**	**2.74**	**88**	*e*Pn	Pn	07 24 12.9	-0.5
RIY	**Rijeka**	**2.78**	**20**	*e*Pn	Pn	07 24 12.9	-1.0
RIY				*e*Sn	Sn	07 24 47.0	-0.5
GRAM	**Graiana**	**2.87**	**309**	⇑P	Pn	07 24 16.6	+1.4
GRAM				AML	AML		
	comp=E,176μm,1.2s						
GRAM				AML	AML		
	comp=N,163μm,0.4s						
SKDS	**Skadanscina**	**2.90**	**12**	*e*Pn	Pn	07 24 14.3	-1.3
SKDS				*i* Sn	Sn	07 24 51.3	+0.8

SKDS					IAML			07 24 53.5	
	comp=Z,20nm,0.2s								
RICI	**Ricice**	**3.00**	**74**	*e*Pn		**Pn**		**07 24 17.2**	**+0.2**
BOJS	**Bojanci**	**3.17**	**28**	⇑P		**Pn**		**07 24 18.8**	**-0.4**
ROVR	**Rover Verones**	**3.30**	**333**	⇓P		**Pn**		**07 24 22.4**	**+1.3**
ROVR					AML	AML			
	comp=E,39µm,0.4s								
ROVR					AML	AML			
	comp=N,66µm,0.9s								
CGRP	**Cima Grappa**	**3.31**	**343**	⇓P		**Pn**		**07 24 21.4**	**0.0**
CGRP					AML	AML			
	comp=N,259µm,0.8s								
CGRP					AML	AML			
	comp=E,197µm,0.4s								
STON	**Ston**	**3.34**	**86**	*e*Pn		**Pn**		**07 24 20.5**	**-1.1**
STON	**Ston**	**3.34**	**86**	*e*Pn		**Pn**		**07 24 22.5**	**+0.9**
STON				*e*Sn		**Sn**		**07 25 00.6**	**-0.7**
LJU	**Ljubljana**	**3.47**	**16**	⇑P		**Pn**		**07 24 25.4**	**+2.0**
DOSS	**Dosso del Somm**	**3.47**	**336**	⇓P		**Pn**		**07 24 21.7**	**-1.9**
DOSS					AML	AML			
	comp=N,158µm,0.5s								
DOSS					AML	AML			
	comp=E,111µm,0.5s								
VOBA	**Vobarno**	**3.50**	**328**	P		**Pg**		**07 24 35.7**	**-0.5**
STAL	**STALIGIAL**	**3.56**	**355**	⇓P		**Pn**		**07 24 24.4**	**-0.3**
STAL					AML	AML			
	comp=E,166µm,0.7s								
STAL					AML	AML			
	comp=N,148µm,0.2s								
MAGA	**Magasa**	**3.56**	**330**	⇓P		**Pn**		**07 24 25.4**	**+0.6**
MAGA					AML	AML			
	comp=N,324µm,0.4s								
MAGA					AML	AML			
	comp=E,367µm,0.5s								
DGI	**Dorgali Grotta**	**3.59**	**229**	⇑P		**Pn**		**07 24 24.5**	**-0.6**
DGI				S		**Sg**		**07 25 22.0**	**-2.5**
LUSI	**Trento, Gardas**	**3.62**	**335**	⇓P		**Pn**		**07 24 26.2**	**+0.7**
LUSI					AML	AML			
	comp=E,86µm,0.7s								
LUSI					AML	AML			
	comp=N,150µm,1.5s								
CIMO	**Cimolais**	**3.63**	**352**	⇑P		**Pn**		**07 24 25.2**	**-0.4**
CIMO					AML	AML			
	comp=N,39µm,1.0s								
CIMO					AML	AML			
	comp=E,41µm,1.6s								
SALB	**San Lorenzo Be**	**3.71**	**139**	S		**Sb**		**07 25 22.0**	**+1.9**
GAGG	**Gaggia**	**3.72**	**336**	⇓P		**Pn**		**07 24 28.1**	**+1.1**
GAGG					AML	AML			
	comp=E,109µm,0.9s								
GAGG					AML	AML			
	comp=N,82µm,1.0s								
CAPR	**Capriolo**	**3.73**	**323**	S		**Sg**		**07 25 28.0**	**-1.1**
SARZ	**Sarezzano**	**3.76**	**306**	P		**Pb**		**07 24 36.6**	**+0.9**
ACOM	**Acomizza, Ital**	**3.84**	**4**	⇑P		**Pn**		**07 24 28.8**	**+0.1**
ACOM					AML	AML			
	comp=N,170µm,0.7s								
ACOM					AML	AML			
	comp=E,128µm,0.7s								
MABI	**Malga Bissina**	**3.84**	**331**	⇓P		**Pn**		**07 24 27.7**	**-1.0**
MABI					AML	AML			
	comp=N,54µm,0.7s								
MABI					AML	AML			
	comp=E,49µm,0.3s								
ZOU	**Zoufplan**	**3.84**	**358**	⇓P		**Pn**		**07 24 28.6**	**-0.2**
ZOU					AML	AML			
	comp=E,98µm,0.8s								
ZOU					AML	AML			
	comp=N,69µm,0.8s								
OBKA	**Obir**	**3.92**	**14**	*e*Pn		**Pn**		**07 24 29.5**	**-0.2**
	comp=N,1.7nm,0.2s								
MYKA	**Terra Mystica**	**3.93**	**5**	*e*Pn		**Pn**		**07 24 30.2**	**+0.4**
	comp=N,4.1nm,0.3s								
KOSI	**Kohlern**	**3.96**	**342**	⇓P		**Pn**		**07 24 31.0**	**+0.7**
KOSI					AML	AML			
	comp=E,107µm,0.7s								
KOSI					AML	AML			
	comp=N,103µm,0.5s								
APPI	**Appiano**	**4.01**	**340**	⇓P		**Pn**		**07 24 32.0**	**+1.1**
APPI					AML	AML			
	comp=E,104µm,0.3s								
APPI					AML	AML			
	comp=N,114µm,0.5s								
ABTA	**Abfaltersbach**	**4.06**	**354**	*e*Pn		**Pn**		**07 24 32.2**	**+0.6**
	comp=N,2.6nm,0.2s								
SOKA	**Soboth**	**4.18**	**18**	*e*Pn		**Pn**		**07 24 33.5**	**+0.3**
	comp=N,0.9nm,0.2s								
VSL	**Villasalto**	**4.31**	**223**	⇑P		**Pn**		**07 24 36.0**	**+1.1**
VSL					AML	AML			
VSL					AML	AML			
KBA	**Koelnbreinsper**	**4.37**	**2**	*e*Pn		**Pn**		**07 24 36.7**	**+0.8**
	comp=N,1.8nm,0.3s								
ROSI	**Rosskopf**	**4.39**	**344**	⇑P		**Pn**		**07 24 37.2**	**+1.0**
ROSI					AML	AML			
	comp=E,169µm,0.3s								
ROSI					AML	AML			
	comp=N,186µm,0.3s								
FETA	**Feichten**	**4.64**	**339**	*e*Pn		**Pn**		**07 24 40.2**	**+0.6**
	comp=N,0.8nm,0.2s								
WTTA	**Wattenberg**	**4.68**	**347**	*e*Pn		**Pn**		**07 24 40.8**	**+0.7**
	comp=N,2.4nm,0.3s								
WTTA	**Wattenberg**	**4.68**	**347**	⇑P		**Pn**		**07 24 41.9**	**+1.7**
DAVOX	**Davos/Dischmat**	**4.69**	**331**	Pn		**Pn**		**07 24 42.6**	**+2.2**
	comp=N,2.2nm,0.3s,baz=144,slow=19,SNR=7.3								
DAVOX				Sn		**Sn**		**07 25 36.9**	**+1.9**
	comp=N,0.8nm,0.3s,baz=298,slow=16,SNR=4.0								
	comp=N,7.8nm,0.4s								
ERC	**Erice**	**4.69**	**186**	P		**Pb**		**07 24 48.1**	**-3.6**
BBLS	**Lazići**	**4.70**	**74**	*e*Pn		**Pn**		**07 24 42.3**	**+2.0**
SQTA	**Sankt Quirin**	**4.71**	**344**	*e*Pn		**Pn**		**07 24 41.0**	**+0.4**
	comp=N,4.8nm,0.3s								
WATA	**Walderalm**	**4.76**	**347**	*e*Pn		**Pn**		**07 24 41.7**	**+0.5**
	comp=N,3.5nm,0.3s								
ARSA	**Arzberg**	**4.83**	**19**	*e*Pn		**Pn**		**07 24 42.1**	**-0.1**
	comp=N,0.1nm,0.1s								
MOTA	**Moosalm**	**4.86**	**343**	*e*Pn		**Pn**		**07 24 43.2**	**+0.7**
	comp=N,1.6nm,0.2s								
BIOA	**Bad Ischl, Aus**	**4.99**	**4**	*e*Pn		**Pn**		**07 24 44.7**	**+0.4**
	comp=N,4.0nm,0.2s								
SJES	**Sjenica**	**5.02**	**81**	*e*Pn		**Pn**		**07 24 46.6**	**+1.8**
SJES				*e*Sn		**Sn**		**07 25 42.6**	**-0.4**
RETA	**Reutte**	**5.07**	**341**	*e*Pn		**Pn**		**07 24 45.7**	**+0.3**
	comp=N,0.9nm,0.2s								
CLTB	**Caltabellotta**	**5.13**	**180**	⇓P		**Pn**		**07 24 44.8**	**-1.5**
DAVA	**Damuels**	**5.13**	**334**	*e*Pn		**Pn**		**07 24 46.5**	**+0.2**
	comp=N,1.5nm,0.2s								
IVAS	**Ivanjica**	**5.18**	**78**	*e*Pn		**Pn**		**07 24 47.5**	**+0.5**
IVAS				*e*Sn		**Sn**		**07 25 44.8**	**-2.1**
MOA	**Molln**	**5.19**	**8**	*e*Pn		**Pn**		**07 24 46.7**	**-0.4**
	comp=N,0.6nm,0.2s								
VLO	**Vlora**	**5.25**	**113**	P		**Pb**		**07 25 01.6**	**+0.5**
RONA	**Rosalia, Austr**	**5.45**	**23**	*e*Pn		**Pn**		**07 24 50.7**	**0.0**
	comp=N,0.5nm,0.2s								
TRUS	**Trudelj**	**5.48**	**72**	*e*Pn		**Pn**		**07 24 52.6**	**+1.6**
CONA	**Conrad Observa**	**5.55**	**19**	*e*Pn		**Pn**		**07 24 51.7**	**-0.4**
	comp=N,0.8nm,0.2s								
GRUS	**Gruza**	**5.63**	**75**	*e*Pn		**Pn**		**07 24 53.7**	**+0.6**
SELS	**Selova**	**5.86**	**82**	*e*Pn		**Pn**		**07 24 56.7**	**+0.5**
GERES	**GERESS Array B**	**6.14**	**3**	Pn		**Pn**		**07 25 01.3**	**+1.1**
	comp=N,0.6nm,0.3s,baz=185,slow=11,SNR=6.9								
GERES				Sn		**Sn**		**07 26 08.2**	**-2.4**
	comp=N,1.9nm,0.3s,baz=184,slow=16,SNR=5.4								
	comp=N,0.7nm,0.3s								
CKRC	**Cesky Krumlov**	**6.16**	**7**	*e*PN		**Pn**		**07 24 59.4**	**-0.9**
BARS	**Barje**	**6.37**	**86**	*e*Pn		**Pn**		**07 25 04.1**	**+0.9**
KHC	**Kasperske Hory**	**6.42**	**2**	*e*PN		**Pn**		**07 25 04.5**	**+0.5**
KHC				*e*SN		**Sn**		**07 26 13.6**	**-3.8**
PRVS	**Prvonek**	**6.58**	**89**	*e*Pn		**Pn**		**07 25 07.8**	**+1.7**
ZAGS	**Zajecar**	**6.71**	**78**	*e*Pn		**Pn**		**07 25 08.1**	**+0.2**
BOSS	**Bosilegrad**	**6.87**	**89**	*e*Pn		**Pn**		**07 25 11.1**	**+0.9**
ZAPS	**Zavoj**	**6.96**	**82**	*e*Pn		**Pn**		**07 25 12.3**	**+0.9**
KEST	**Kesra**	**7.58**	**204**	Pn		**Pn**		**07 25 22.9**	**+3.0**
	comp=N,0.4nm,0.3s,baz=202,slow=23,SNR=1.8								
	comp=N,3.3nm,0.5s								
TORD	**Torodi Ar. Bea**	**31.09**	**202**	P		**P**		**07 29 49.6**	**+1.7**
	comp=N,0.4nm,0.9s,baz=26,slow=9.5,SNR=1.9								
	comp=N,0.4nm,0.9s								
MKAR	**Makanchi Array**	**47.81**	**60**	P		**P**		**07 32 07.3**	**+0.4**
	comp=N,0.3nm,0.7s,baz=272,slow=9.5,SNR=1.9								
	comp=N,0.3nm,0.7s								

ROM 24 07:24:49.2±0.1, 42°.712N±0°.007×13°.18E±0°.03, h11$^{km_{\pm1}}$km, ML2.5/3, 1D, Error ellipse: s-maj=2.6km s-min=0.3km az=254.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**339**	P	Pg	07 24 52.9	+0.5
NRCA				S	Sg	07 24 55.2	+0.5
NRCA				AML	AML		
	comp=E,93000µm,0.2s						
NRCA				AML	AML		
	comp=N,64450µm,0.1s						
NRCA				AML	AML		
	comp=E,97400µm,0.2s						
NRCA				AML	AML		
	comp=E,92950µm,0.2s						
NRCA				AML	AML		
	comp=N,64450µm,0.1s						
NRCA				AML	AML		
	comp=N,70900µm,0.1s						
NRCA				AML	AML		
	comp=E,10416µm,0.2s						
NRCA				END			
RM33	**Pellescritta (**	**0.20**	**172**	⇓P	Pg	07 24 53.9	+0.3
RM33				S	Sg	07 24 58.3	+1.8
RM33				AML	AML		
	comp=E,9760µm,0.5s						
RM33				AML	AML		
	comp=N,7110µm,0.4s						
RM33				AML	AML		
	comp=E,9770µm,0.5s						
RM33				AML	AML		
	comp=N,6735µm,0.4s						
RM33				AML	AML		
	comp=E,9765µm,0.5s						
RM33				AML	AML		
	comp=N,7110µm,0.4s						
RM33				AML	AML		
	comp=N,6730µm,0.4s						
RM33				AML	AML		
	comp=N,1503µm,0.2s						
RM33				END			
CAMP	**Campotosto**	**0.25**	**136**	P	Pg	07 24 55.0	+0.6
TERO	**Teramo**	**0.33**	**106**	P	Pg	07 24 56.1	+0.3
TERO				S	Sg	07 25 00.9	+0.8
TERO				AML	AML		
	comp=E,8975µm,1.6s						
TERO				AML	AML		
	comp=N,13925µm,0.6s						
TERO				AML	AML		
	comp=N,15200µm,0.6s						
TERO				AML	AML		
	comp=E,8980µm,1.6s						
TERO				AML	AML		
	comp=N,13900µm,0.6s						
TERO				AML	AML		
	comp=E,9940µm,0.3s						
TERO				AML	AML		
	comp=N,1335µm,0.1s						
TERO				END			
GUMA	**Gualdo di Mace**	**0.37**	**18**	P	Pg	07 24 57.0	+0.5
GUMA				S	Sb	07 25 02.9	-0.8
GUMA				AML	AML		
	comp=N,23000µm,0.4s						
GUMA				AML	AML		
	comp=E,31650µm,0.5s						
GUMA				AML	AML		
	comp=E,25550µm,0.6s						
GUMA				AML	AML		
	comp=N,24450µm,0.6s						
GUMA				AML	AML		
	comp=E,1536µm,1.5s						
GUMA				END			
CSP1	**Cessapalombo**	**0.38**	**3**	P	Pg	07 24 57.0	+0.2
CSP1				S	Sg	07 25 02.7	+0.8
CSP1				END			
GIGS	**Gran Sasso**	**0.39**	**132**	P	Pg	07 24 57.5	+0.5
GIGS				S	Sg	07 25 03.2	+1.1
GIGS				END			
OFFI	**Offida**	**0.44**	**59**	P	Pb	07 24 58.6	-0.4
OFFI				AML	AML		
	comp=E,12030µm,0.5s						
OFFI				AML	AML		
	comp=N,14700µm,0.3s						
MNTP	**Montappone**	**0.48**	**27**	P	Pb	07 24 59.1	-0.5

ROM 24 07:25:02.8±0.1, 42°.712N±0°.003×13°.221E±0°.006, h6^{km}, ML3.2/30, 13C-3D, Error ellipse: s-maj=0.4km s-min=0.3km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.14**	**327**	⇓P	Pg	07 25 06.8	+1.1
NRCA				S	Sg	07 25 09.2	+1.5
NRCA				AML	AML		
	comp=E,93000µm,0.2s						
NRCA				AML	AML		
	comp=N,64450µm,0.1s						
NRCA				AML	AML		
	comp=E,92950µm,0.2s						
NRCA				AML	AML		
	comp=N,64400µm,0.1s						
NRCA				AML	AML		
	comp=E,92950µm,0.2s						
NRCA				AML	AML		
	comp=E,97400µm,0.2s						
NRCA				AML	AML		
	comp=N,70900µm,0.1s						
NRCA				AML	AML		
	comp=N,64450µm,0.1s						
NRCA				AML	AML		
	comp=E,92850µm,0.2s						
NRCA				AML	AML		
	comp=N,70900µm,0.2s						
RM33	**Pellescritta (**	**0.20**	**181**	⇑P	Pg	07 25 08.2	+1.4
RM33				S	Sg	07 25 11.7	+2.2
RM33				AML	AML		
	comp=E,9765µm,0.5s						
RM33				AML	AML		
	comp=N,6735µm,0.4s						
RM33				AML	AML		
	comp=E,9780µm,0.5s						
RM33				AML	AML		
	comp=N,7110µm,0.4s						
RM33				AML	AML		
	comp=E,9765µm,0.5s						
RM33				AML	AML		
	comp=E,9765µm,0.5s						
RM33				AML	AML		
	comp=E,9770µm,0.5s						
RM33				AML	AML		
	comp=N,6730µm,0.4s						
RM33				AML	AML		
	comp=N,7110µm,0.4s						
RM33				AML	AML		
	comp=E,9760µm,0.5s						
CAMP	**Campotosto**	**0.22**	**142**	⇑P	Pg	07 25 08.3	+1.1
CAMP				S	Sg	07 25 11.9	+1.7
CAMP				AML	AML		
	comp=N,6190µm,0.6s						
CAMP				AML	AML		
	comp=E,4880µm,0.7s						
FEMA	**Monte Fema**	**0.28**	**333**	P	Pg	07 25 09.3	+1.0
FEMA				S	Sg	07 25 13.7	+1.7
TERO	**Teramo**	**0.30**	**107**	⇑P	Pg	07 25 09.2	+0.7
TERO				S	Sg	07 25 13.8	+1.3
TERO				AML	AML		
	comp=E,8960µm,1.6s						
TERO				AML	AML		
	comp=N,13900µm,0.6s						
TERO				AML	AML		
	comp=N,15200µm,0.6s						
TERO				AML	AML		
	comp=E,8980µm,1.6s						
TERO				AML	AML		
	comp=E,9940µm,0.3s						
TERO				AML	AML		
	comp=E,8985µm,1.6s						
FDMO	**Fiordimonte**	**0.34**	**343**	P	Pg	07 25 10.2	+0.8
FDMO				S	Sb	07 25 15.6	-1.5
FDMO				AML	AML		
	comp=N,8315µm,0.3s						
FDMO				AML	AML		
	comp=E,4930µm,0.6s						
GUMA	**Gualdo di Mace**	**0.36**	**13**	⇑P	Pb	07 25 10.8	-0.8
GUMA				S	Sb	07 25 16.8	-0.9
ARRO	**Arrone**	**0.36**	**249**	⇑P	Pb	07 25 10.9	-0.8
ARRO				AML	AML		
	comp=N,2760µm,0.2s						
ARRO				AML	AML		
	comp=E,2750µm,0.3s						
ARRO				AML	AML		
	comp=N,2755µm,0.2s						
GIGS	**Gran Sasso**	**0.37**	**135**	P	Pg	07 25 10.8	+0.8
GIGS				S	Sg	07 25 16.1	+1.3
CESI	**CESI - Serrava**	**0.37**	**322**	⇑P	Pg	07 25 10.9	+0.9
CESI				S	Sb	07 25 17.0	-1.1
CESI				AML	AML		
	comp=E,12850µm,0.5s						
CESI				AML	AML		
	comp=N,21550µm,0.3s						
CSP1	**Cessapalombo**	**0.38**	**358**	P	Pg	07 25 10.9	+0.7
CSP1				S	Sb	07 25 16.8	-1.5
CSP1				AML	AML		
	comp=E,5010µm,1.6s						
CSP1				AML	AML		
	comp=N,6955µm,1.3s						
CSP1				AML	AML		
	comp=N,6960µm,1.3s						
AQU	**L'Aquila**	**0.38**	**159**	⇓P	Pg	07 25 11.1	+0.9
AQU				S	Sb	07 25 17.1	-1.1
AQU				AML	AML		
	comp=E,2600µm,0.4s						
AQU				AML	AML		
	comp=N,3215µm,1.1s						
AQU				AML	AML		
	comp=N,3190µm,1.1s						
AQU				AML	AML		
	comp=E,2605µm,0.4s						
AQU				AML	AML		
	comp=N,3220µm,1.1s						
AQU				AML	AML		
	comp=E,2595µm,1.3s						
OFFI	**Offida**	**0.41**	**57**	⇑P	Pb	07 25 12.1	-0.4
OFFI				S	Sb	07 25 19.7	+0.7
OFFI				AML	AML		
	comp=E,12030µm,0.5s						
OFFI				AML	AML		
	comp=N,14700µm,0.3s						
FIAM	**Fiamignano**	**0.45**	**190**	⇑P	Pg	07 25 12.4	+0.9
FIAM				S	Sb	07 25 19.6	-0.7
FIAM				AML	AML		
	comp=N,2135µm,0.3s						
FIAM				AML	AML		
	comp=E,4970µm,0.2s						
MNTP	**Montappone**	**0.46**	**23**	P	Pb	07 25 12.8	-0.6
MNTP				S	Sb	07 25 20.7	+0.1
MNTP				AML	AML		
	comp=E,7670µm,0.1s						
MNTP				AML	AML		
	comp=N,5705µm,1.6s						
MNTP				AML	AML		
	comp=N,5710µm,1.6s						
SEF1	**Sefro**	**0.48**	**335**	⇑P	Pg	07 25 12.8	+0.7
SEF1				S	Sb	07 25 20.2	-0.9
SEF1				AML	AML		
	comp=E,7645µm,0.3s						
SEF1				AML	AML		
	comp=N,6640µm,0.2s						
CESX	**Cesi**	**0.48**	**258**	P	Pg	07 25 12.8	+0.7
CESX				AML	AML		
	comp=N,2050µm,0.7s						
CESX				AML	AML		
	comp=E,2495µm,0.5s						
MDAR	**Monte D'Aria**	**0.48**	**353**	P	Pg	07 25 12.8	+0.6
MDAR				S	Sb	07 25 20.4	-0.8
SSM1	**San Severino M**	**0.52**	**356**	P	Pg	07 25 13.4	+0.6
SSM1				S	Sb	07 25 21.9	-0.2
TRTR	**Tortoreto Alta**	**0.52**	**79**	⇑P	Pb	07 25 14.5	+0.1
TRTR				AML	AML		
	comp=E,10815µm,0.5s						
TRTR				AML	AML		
	comp=N,10605µm,0.3s						
FAGN	**Fagnano**	**0.52**	**149**	P	Pb	07 25 14.1	-0.3
FAGN				S	Sb	07 25 22.5	+0.3
FAGN				AML	AML		
	comp=E,7600µm,0.3s						
FAGN				AML	AML		
	comp=N,5040µm,1.4s						
ASSB	**Assisi San Ben**	**0.53**	**309**	⇑P	Pg	07 25 13.6	+0.6
ASSB				S	Sb	07 25 21.9	-0.6
ASSB				AML	AML		
	comp=N,4925µm,0.2s						
ASSB				AML	AML		
	comp=E,4220µm,1.1s						
GAG1	**Gagliole**	**0.54**	**348**	P	Pg	07 25 13.9	+0.8
GAG1				S	Sb	07 25 22.2	-0.5
GAG1				AML	AML		
	comp=E,4815µm,0.7s						
GAG1				AML	AML		
	comp=N,5280µm,0.3s						
GAG1				AML	AML		
	comp=E,4810µm,0.7s						
VCEL	**Villa Celiera**	**0.56**	**125**	P	Pg	07 25 13.8	+0.3
VCEL				S	Sb	07 25 22.8	-0.5
VCEL				AML	AML		
	comp=E,5515µm,0.3s						
VCEL				AML	AML		
	comp=N,5255µm,1.0s						
VCEL				AML	AML		
	comp=N,5260µm,1.0s						
VCEL				AML	AML		
	comp=E,5510µm,0.3s						
SNTG	**Esanatoglia**	**0.58**	**339**	P	Pg	07 25 14.7	+0.7
SNTG				S	Sb	07 25 23.5	-0.5
SNTG				AML	AML		
	comp=N,1290µm,1.0s						
SNTG				AML	AML		
	comp=E,1200µm,0.1s						
TRE1	**Treia**	**0.60**	**6**	P	Pb	07 25 15.7	-0.1
ATCC	**AVT- Casa Cast**	**0.64**	**318**	⇑P	Pg	07 25 15.6	+0.5
ATCC				S	Sb	07 25 25.5	-0.1
ATCC				AML	AML		
	comp=E,2920µm,1.3s						
ATCC				AML	AML		
	comp=N,3185µm,0.5s						
T0110	**Collepietro**	**0.64**	**139**	⇑P	Pg	07 25 15.5	+0.4
T0110				S	Sb	07 25 25.1	-0.5
T0110				AML	AML		
	comp=E,4765µm,0.4s						
T0110				AML	AML		
	comp=N,3965µm,0.4s						
CING	**Cingoli**	**0.66**	**358**	P	Pb	07 25 16.5	-0.3
CING				S	Sb	07 25 26.9	+0.5
FOSV	**Fossato di Vic**	**0.67**	**330**	⇓P	Pg	07 25 16.2	+0.4
FOSV				S	Sb	07 25 26.6	0.0
FOSV				AML	AML		
	comp=E,1270µm,0.2s						
FOSV				AML	AML		
	comp=N,2125µm,0.3s						
FOSV				AML	AML		
	comp=E,1265µm,0.2s						
SRES	**S.Oreste - Sor**	**0.71**	**228**	P	Pb	07 25 17.6	0.0
PP3	**Marolino**	**0.72**	**23**	P	Pb	07 25 18.1	+0.2
PP3				S	Sb	07 25 28.5	+0.5
MURB	**Monte Urbino**	**0.75**	**317**	P	Pg	07 25 17.6	+0.4
MURB				S	Sb	07 25 29.1	+0.2
MURB				AML	AML		
	comp=E,4385µm,0.3s						
MURB				AML	AML		
	comp=N,4865µm,1.1s						
MURB				AML	AML		
	comp=E,4390µm,0.4s						
MURB				AML	AML		
	comp=E,4930µm,0.4s						
MURB				AML	AML		
	comp=N,4935µm,1.1s						
MTCE	**Montecelio**	**0.78**	**207**	P	Pg	07 25 17.6	0.0
CERT	**Cerreto**	**0.78**	**193**	P	Pg	07 25 18.2	+0.4
CERT				S	Sb	07 25 29.9	+0.1
CERT				AML	AML		
	comp=E,1885µm,0.4s						
CERT				AML	AML		
	comp=N,1170µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.80**	**308**	P	Pb	07 25 19.1	-0.1
ATTE				S	Sb	07 25 30.2	-0.1
ATTE				AML	AML		
	comp=N,748µm,0.4s						
ATTE				AML	AML		
	comp=E,820µm,0.5s						
ATTE				AML	AML		
	comp=N,748µm,0.4s						
ATFO	**Monte Foce - G**	**0.81**	**324**	P	Pb	07 25 19.1	-0.3
ATFO				S	Sb	07 25 30.5	-0.1

ATFO				AML	AML		
	comp=N,1045µm,0.3s						
ATFO				AML	AML		
	comp=E,1270µm,0.5s						
ATFO				AML	AML		
	comp=N,1040µm,0.3s						
ARVD	**Arcevia**	**0.81**	**345**	P	Pg	07 25 18.2	-0.1
ARVD				S	Sb	07 25 31.1	+0.5
ARVD				AML	AML		
	comp=N,559µm,0.2s						
ARVD				AML	AML		
	comp=N,558µm,0.2s						
ARVD				AML	AML		
	comp=E,769µm,1.0s						
MGAB	**Montegabbione**	**0.84**	**284**	P	Pb	07 25 19.8	-0.1
MGAB				AML	AML		
	comp=N,1750µm,0.3s						
MGAB				AML	AML		
	comp=E,1965µm,1.0s						
MGAB				AML	AML		
	comp=E,1815µm,1.1s						
MGAB				AML	AML		
	comp=N,1780µm,0.3s						
INTR	**Introdacqua**	**0.86**	**144**	P	Pg	07 25 18.9	-0.5
INTR				S	Sb	07 25 32.6	+0.5
INTR				AML	AML		
	comp=E,770µm,0.5s						
INTR				AML	AML		
	comp=N,1295µm,0.5s						
FRON	**Frontone**	**0.88**	**336**	AML	AML		
	comp=E,714µm,0.2s						
FRON				AML	AML		
	comp=N,894µm,0.6s						
ATVO	**AVT- Monte Val**	**0.90**	**319**	AML	AML		
	comp=N,750µm,0.6s						
ATVO				AML	AML		
	comp=E,828µm,0.6s						
ATMI	**Monte Miggiano**	**0.94**	**312**	AML	AML		
	comp=E,2475µm,0.6s						
ATMI				AML	AML		
	comp=N,2940µm,0.9s						
ATPI	**Pietralunga -**	**0.95**	**321**	AML	AML		
	comp=E,652µm,1.1s						
ATPI				AML	AML		
	comp=N,553µm,0.6s						
PIEI	**Pieia**	**0.96**	**329**	AML	AML		
	comp=N,454µm,0.6s						
PIEI				AML	AML		
	comp=E,621µm,1.1s						
LPEL	**Lama dei Pelig**	**0.97**	**133**	AML	AML		
	comp=N,764µm,1.5s						
LPEL				AML	AML		
	comp=E,838µm,0.8s						
SACS	**San Casciano d**	**0.97**	**279**	AML	AML		
	comp=N,782µm,0.6s						
SACS				AML	AML		
	comp=E,612µm,0.5s						
MPAG	**Monte Paganucc**	**0.98**	**340**	AML	AML		
	comp=N,663µm,1.2s						
MPAG				AML	AML		
	comp=E,645µm,0.4s						
NARO	**Abbazia di Nar**	**1.01**	**333**	AML	AML		
	comp=N,372µm,0.8s						
NARO				AML	AML		
	comp=E,432µm,1.2s						
FSSB	**Fossombrone**	**1.03**	**342**	AML	AML		
	comp=N,1810µm,0.5s						
FSSB				AML	AML		
	comp=E,2645µm,0.3s						
TOLF	**Tolfa**	**1.11**	**235**	AML	AML		
	comp=N,254µm,1.6s						
TOLF				AML	AML		
	comp=E,434µm,0.7s						
MCIV	**Monte Civitell**	**1.14**	**274**	AML	AML		
	comp=E,280µm,1.3s						
MCIV				AML	AML		
	comp=N,206µm,0.4s						
GIUL	**Giuliano Di Ro**	**1.15**	**179**	AML	AML		
	comp=E,538µm,0.5s						
GIUL				AML	AML		
	comp=N,468µm,0.7s						
PARC	**Parchiule**	**1.18**	**323**	AML	AML		
	comp=N,647µm,0.8s						
PARC				AML	AML		
	comp=E,516µm,0.5s						

ROM 24 07:28:25.3±0.2, 42°701N±0°008×13°13E±0°02, h10km±1km, ML2.1/4, Error ellipse: s-maj=1.5km s-min=0.5km az=255.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.13**	**354**	P	Pb	07 28 29.8	-0.2
NRCA				S	Sg	07 28 31.1	+0.2
NRCA				AML	AML		
	comp=E,12400µm,0.3s						
NRCA				AML	AML		
	comp=N,25200µm,0.1s						
NRCA				AML	AML		
	comp=E,13850µm,0.3s						
NRCA				AML	AML		
	comp=E,25250µm,0.1s						
NRCA				AML	AML		
	comp=E,27600µm,0.1s						
NRCA				AML	AML		
	comp=N,25150µm,0.1s						
NRCA				AML	AML		
	comp=N,28300µm,0.1s						
NRCA				END			
RM33	**Pellescritta (**	**0.20**	**162**	P	Pg	07 28 30.1	+0.5
RM33				S	Sg	07 28 33.3	+0.7
RM33				AML	AML		
	comp=E,608µm,0.1s						
RM33				AML	AML		
	comp=N,566µm,1.5s						
RM33				AML	AML		
	comp=N,566µm,1.5s						
RM33				AML	AML		
	comp=N,633µm,1.5s						
RM33				END			
CAMP	**Campotosto**	**0.26**	**129**	P	Pg	07 28 30.8	+0.1
ARRO	**Arrone**	**0.30**	**246**	P	Pb	07 28 32.5	-0.2
FDMO	**Fiordimonte**	**0.34**	**354**	P	Pg	07 28 32.6	+0.5
FDMO				AML	AML		
	comp=E,1190µm,0.3s						
FDMO				AML	AML		
	comp=N,1273µm,0.3s						
FDMO				AML	AML		
	comp=E,1205µm,0.4s						
FDMO				AML	AML		
	comp=N,1298µm,0.2s						
FDMO				AML	AML		
	comp=N,251µm,0.3s						
CESI	**CESI - Serrava**	**0.35**	**331**	P	Pb	07 28 33.4	-0.2
CESI				S	Sg	07 28 37.8	+0.8
CESI				AML	AML		
	comp=E,464µm,0.2s						
CESI				AML	AML		
	comp=N,882µm,0.3s						
CESI				AML	AML		
	comp=E,1685µm,0.6s						
CESI				AML	AML		
	comp=N,2400µm,0.5s						
CESI				AML	AML		
	comp=E,463µm,0.2s						
CESI				END			
GUMA	**Gualdo di Mace**	**0.39**	**22**	P	Pb	07 28 33.8	-0.5
GUMA				S	Sg	07 28 38.5	+0.3
GUMA				AML	AML		
	comp=E,1400µm,0.2s						
GUMA				AML	AML		
	comp=N,1890µm,0.3s						
GUMA				AML	AML		
	comp=E,2305µm,0.2s						
GUMA				AML	AML		
	comp=N,1320µm,0.2s						
GUMA				AML	AML		
	comp=E,4100µm,0.2s						
GUMA				AML	AML		
	comp=E,3810µm,0.4s						
GUMA				AML	AML		
	comp=N,3780µm,0.3s						
GUMA				AML	AML		
	comp=N,3405µm,0.3s						
GUMA				AML	AML		
	comp=E,944µm,0.3s						
GUMA				END			
CSP1	**Cessapalombo**	**0.40**	**8**	P	Pg	07 28 33.5	+0.4
FIAM	**Fiamignano**	**0.43**	**181**	P	Pg	07 28 34.2	+0.4
OFFI	**Offida**	**0.47**	**60**	P	Pb	07 28 35.6	0.0
OFFI				S	Sb	07 28 42.0	-0.6
ASSB	**Assisi San Ben**	**0.49**	**315**	P	Pg	07 28 35.0	+0.2
ASSB				S	Sb	07 28 42.4	-0.8
ASSB				END			
SNTG	**Esanatoglia**	**0.57**	**346**	P	Pg	07 28 36.0	-0.4
SNTG				S	Sg	07 28 44.1	+0.1
SNTG				END			
TRE1	**Treia**	**0.62**	**12**	P	Pb	07 28 37.9	-0.4
CRE	**Caprese Michel**	**1.26**	**317**	P	Pg	07 28 50.6	+1.1

ROM 24 07:28:54.5±0.1, 42°796N±0°003×13°201E±0°006, h8km, ML2.4/22, 1C-2D, Error ellipse: s-maj=0.5km s-min=0.1km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.07**	**300**	P	Pg	07 28 57.2	+0.7
NRCA				S	Sg	07 28 58.5	+0.5
NRCA				AML	AML		
	comp=E,25200µm,0.1s						
NRCA				AML	AML		
	comp=E,27600µm,0.1s						
NRCA				AML	AML		
	comp=N,28300µm,0.1s						
NRCA				AML	AML		
	comp=N,25200µm,0.1s						
NRCA				AML	AML		
	comp=N,25150µm,0.1s						
NRCA				AML	AML		
	comp=E,25250µm,0.1s						
FEMA	**Monte Fema**	**0.20**	**326**	P	Pg	07 28 59.4	+0.8
FEMA				S	Sg	07 29 02.6	+1.2
FDMO	**Fiordimonte**	**0.25**	**341**	P	Pg	07 29 00.2	+0.7
FDMO				S	Sg	07 29 04.3	+1.3
FDMO				AML	AML		
	comp=E,1190µm,0.3s						
FDMO				AML	AML		
	comp=N,1298µm,0.2s						
FDMO				AML	AML		
	comp=E,1205µm,0.4s						
GUMA	**Gualdo di Mace**	**0.28**	**20**	P	Pb	07 29 01.1	-0.8
GUMA				S	Sb	07 29 06.0	-0.9
GUMA				AML	AML		
	comp=N,3780µm,0.3s						
GUMA				AML	AML		
	comp=E,4100µm,0.2s						
GUMA				AML	AML		
	comp=E,3810µm,0.4s						
GUMA				AML	AML		
	comp=N,3405µm,0.3s						
RM33	**Pellescritta (**	**0.29**	**178**	P	Pb	07 29 01.3	-0.7
RM33				S	Sb	07 29 05.8	-1.2
RM33				AML	AML		
	comp=E,524µm,1.5s						
RM33				AML	AML		
	comp=E,524µm,1.5s						
RM33				AML	AML		
	comp=N,524µm,0.4s						
RM33				AML	AML		
	comp=N,1565µm,0.3s						
RM33				AML	AML		
	comp=E,1345µm,0.1s						
RM33				AML	AML		
	comp=E,1394µm,0.1s						
RM33				AML	AML		
	comp=N,1545µm,0.3s						
RM33				AML	AML		
	comp=N,524µm,0.4s						
RM33				AML	AML		
	comp=E,487µm,0.3s						
RM33				AML	AML		
	comp=E,492µm,0.3s						
RM33				AML	AML		
	comp=N,535µm,0.4s						
CSP1	**Cessapalombo**	**0.29**	**0**	⇓P	Pg	07 29 01.0	+0.6
CSP1				S	Sb	07 29 05.9	-1.4
CSP1				AML	AML		
	comp=N,1190µm,0.4s						
CAMP	**Campotosto**	**0.30**	**149**	P	Pg	07 29 01.2	+0.7
CAMP				S	Sb	07 29 06.1	-1.3
CAMP				AML	AML		
	comp=E,689µm,0.9s						
CAMP				AML	AML		
	comp=N,614µm,0.4s						
CAMP				AML	AML		
	comp=N,866µm,0.6s						
CAMP				AML	AML		
	comp=E,1155µm,0.2s						
CAMP				AML	AML		
	comp=N,614µm,0.4s						
CAMP				AML	AML		
	comp=E,586µm,0.3s						
CESI	**CESI - Serrava**	**0.30**	**314**	P	Pg	07 29 01.2	+0.7
CESI				S	Sb	07 29 06.0	-1.4
CESI				AML	AML		
	comp=N,2400µm,0.5s						
CESI				AML	AML		
	comp=E,1685µm,0.6s						
TERO	**Teramo**	**0.34**	**120**	P	Pg	07 29 01.7	+0.5
TERO				S	Sb	07 29 07.3	-1.3
TERO				AML	AML		
	comp=E,1580µm,0.3s						
TERO				AML	AML		
	comp=N,1620µm,0.4s						
TERO				AML	AML		
	comp=N,1511µm,0.4s						
OFFI	**Offida**	**0.38**	**69**	P	Pb	07 29 03.4	-0.2
OFFI				AML	AML		
	comp=E,981µm,0.5s						
OFFI				AML	AML		
	comp=N,994µm,0.6s						
ARRO	**Arrone**	**0.39**	**236**	P	Pb	07 29 03.0	-0.7
ARRO				S	Sb	07 29 08.7	-1.1
ARRO				AML	AML		
	comp=E,396µm,1.1s						
ARRO				AML	AML		
	comp=N,368µm,1.5s						
ARRO				AML	AML		
	comp=E,396µm,1.1s						
ARRO				AML	AML		
	comp=N,368µm,1.5s						
ARRO				AML	AML		
	comp=N,349µm,0.8s						
MNTP	**Montappone**	**0.39**	**30**	P	Pb	07 29 03.8	0.0
SEF1	**Sefro**	**0.40**	**332**	P	Pg	07 29 02.9	+0.6
SEF1				S	Sb	07 29 09.2	-0.9
MDAR	**Monte D'Aria**	**0.40**	**354**	P	Pg	07 29 02.8	+0.5
MDAR				S	Sb	07 29 09.0	-1.2
GIGS	**Gran Sasso**	**0.44**	**142**	P	Pg	07 29 03.5	+0.4
GIGS				S	Sg	07 29 10.0	+1.2
GIGS				AML	AML		
	comp=N,123µm,0.1s						
GIGS				AML	AML		
	comp=E,200µm,1.1s						
GIGS				AML	AML		
	comp=N,148µm,0.5s						
GIGS				AML	AML		
	comp=N,107µm,0.8s						
ASSB	**Assisi San Ben**	**0.47**	**302**	P	Pg	07 29 04.0	+0.4
ASSB				S	Sb	07 29 11.3	-0.9
ASSB				AML	AML		
	comp=N,744µm,0.3s						
ASSB				AML	AML		
	comp=E,584µm,0.4s						
CESX	**Cesi**	**0.49**	**248**	⇓P	Pb	07 29 04.8	-0.7
CESX				S	Sb	07 29 12.6	-0.2
CESX				AML	AML		
	comp=N,436µm,0.3s						
CESX				AML	AML		
	comp=E,502µm,0.4s						
SNTG	**Esanatoglia**	**0.50**	**337**	P	Pg	07 29 04.6	+0.5
SNTG				S	Sb	07 29 12.4	-0.7
SNTG				AML	AML		
	comp=E,270µm,0.3s						
SNTG				AML	AML		
	comp=N,258µm,1.6s						
SNTG				AML	AML		
	comp=E,271µm,0.3s						
SNTG				AML	AML		
	comp=N,258µm,1.6s						
FIAM	**Fiamignano**	**0.53**	**187**	P	Pg	07 29 05.3	+0.5
FIAM				S	Sb	07 29 13.5	-0.5
FIAM				AML	AML		
	comp=E,199µm,0.8s						
FIAM				AML	AML		
	comp=N,148µm,0.7s						
FIAM				AML	AML		
	comp=N,316µm,0.2s						
FIAM				AML	AML		
	comp=E,660µm,0.2s						
FIAM				AML	AML		
	comp=N,148µm,0.7s						
FIAM				AML	AML		
	comp=E,199µm,0.8s						
ATCC	**AVT- Casa Cast**	**0.57**	**314**	P	Pg	07 29 05.9	+0.4
ATCC				S	Sb	07 29 14.8	-0.2
ATCC				AML	AML		
	comp=E,524µm,0.6s						
ATCC				AML	AML		
	comp=N,364µm,1.3s						
ATCC				AML	AML		
	comp=E,524µm,0.6s						
ATCC				AML	AML		
	comp=N,365µm,1.3s						
FOSV	**Fossato di Vic**	**0.59**	**327**	P	Pg	07 29 06.4	+0.4
FOSV				S	Sb	07 29 15.0	-0.7
FOSV				AML	AML		
	comp=N,299µm,0.3s						
FOSV				AML	AML		
	comp=E,332µm,0.3s						
FAGN	**Fagnano**	**0.60**	**152**	⇑P	Pb	07 29 07.4	+0.1
FAGN				S	Sb	07 29 15.5	-0.5
FAGN				AML	AML		
	comp=N,464µm,0.3s						
FAGN				AML	AML		
	comp=E,710µm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**130**	P	Pg	07 29 07.0	+0.6
VCEL				S	Sb	07 29 16.8	+0.2
VCEL				AML	AML		
	comp=E,484µm,0.4s						
VCEL				AML	AML		
	comp=E,485µm,0.4s						
VCEL				AML	AML		
	comp=N,520µm,0.3s						
MURB	**Monte Urbino**	**0.68**	**313**	P	Pg	07 29 07.9	+0.3
MURB				AML	AML		
	comp=N,566µm,0.3s						
MURB				AML	AML		
	comp=E,686µm,0.2s						
T0110	**Collepietro**	**0.71**	**143**	P	Pg	07 29 08.5	+0.3
T0110				S	Sb	07 29 19.2	0.0
T0110				AML	AML		
	comp=N,512µm,1.5s						
T0110				AML	AML		
	comp=N,512µm,1.5s						
T0110				AML	AML		
	comp=E,568µm,0.4s						
ATFO	**Monte Foce - G**	**0.73**	**321**	P	Pg	07 29 08.8	+0.1
ATFO				S	Sb	07 29 20.1	+0.2
ATFO				AML	AML		
	comp=N,194µm,0.3s						
ATFO				AML	AML		
	comp=E,183µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.74**	**303**	P	Pg	07 29 09.2	+0.5
ATTE				S	Sb	07 29 20.6	+0.6
PIEI	**Pieia**	**0.89**	**327**	P	Pg	07 29 11.6	+0.1
PIEI				AML	AML		
	comp=E,76µm,0.7s						
PIEI				AML	AML		
	comp=N,68µm,1.5s						
NARO	**Abbazia di Nar**	**0.93**	**331**	P	Pg	07 29 12.3	-0.1
FSSB	**Fossombrone**	**0.95**	**341**	P	Pb	07 29 13.1	-0.1
FSSB				AML	AML		
	comp=N,382µm,0.3s						
FSSB				AML	AML		
	comp=N,382µm,0.3s						
FSSB				AML	AML		
	comp=E,264µm,1.2s						
CAFI	**Castiglion Fio**	**1.05**	**301**	P	Pg	07 29 14.7	0.0
CAFI				AML	AML		
	comp=E,80µm,0.4s						
CAFI				AML	AML		
	comp=N,77µm,1.2s						

ROM 24 07:29:52.0±0.1, 42°726N±0°004×13°241E±0°007, h9km, ML2.3/10, Error ellipse: s-maj=0.5km s-min=0.5km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.22**	**185**	P	Pg	07 29 57.5	+1.0
RM33				S	Sg	07 30 01.0	+1.5
RM33				AML	AML		
	comp=N,1560µm,0.3s						
RM33				AML	AML		
	comp=N,1540µm,0.3s						
RM33				AML	AML		
	comp=E,1345µm,0.1s						
RM33				AML	AML		
	comp=N,1545µm,0.3s						
RM33				AML	AML		
	comp=E,1395µm,0.1s						
RM33				AML	AML		
	comp=E,1350µm,0.1s						
CAMP	**Campotosto**	**0.23**	**147**	P	Pg	07 29 57.3	+0.6
CAMP				S	Sg	07 30 01.1	+1.2
CAMP				AML	AML		
	comp=E,1155µm,0.2s						
CAMP				AML	AML		
	comp=N,866µm,0.6s						
FEMA	**Monte Fema**	**0.28**	**329**	P	Pb	07 29 58.4	-0.7
FEMA				S	Sg	07 30 02.4	+1.1
TERO	**Teramo**	**0.29**	**111**	P	Pg	07 29 58.3	+0.5
TERO				S	Sg	07 30 02.7	+1.1
FDMO	**Fiordimonte**	**0.33**	**340**	P	Pg	07 29 59.0	+0.5
FDMO				S	Sb	07 30 04.3	-1.1
GUMA	**Gualdo di Mace**	**0.34**	**12**	P	Pb	07 29 59.7	-0.6
GUMA				S	Sb	07 30 05.5	-0.3
GUMA				AML	AML		
	comp=N,1870µm,0.4s						
GUMA				AML	AML		
	comp=E,1875µm,0.4s						
CSP1	**Cessapalombo**	**0.37**	**356**	P	Pg	07 29 59.8	+0.5
CSP1				S	Sb	07 30 05.5	-1.1
CSP1				AML	AML		
	comp=N,815µm,0.3s						
CSP1				AML	AML		
	comp=E,712µm,0.2s						
GIGS	**Gran Sasso**	**0.37**	**139**	P	Pg	07 29 59.5	+0.3
GIGS				S	Sg	07 30 05.2	+1.1
GIGS				AML	AML		
	comp=E,180µm,0.4s						
GIGS				AML	AML		
	comp=N,148µm,0.5s						
GIGS				AML	AML		
	comp=E,180µm,0.4s						
CESI	**CESI - Serrava**	**0.37**	**319**	P	Pg	07 29 59.9	+0.5
CESI				S	Sg	07 30 05.4	+1.1
CESI				AML	AML		
	comp=E,412µm,0.9s						
CESI				AML	AML		
	comp=N,996µm,0.3s						
CESI				AML	AML		
	comp=E,416µm,0.3s						
CESI				AML	AML		
	comp=N,1045µm,0.4s						
CESI				AML	AML		
	comp=E,416µm,0.3s						
ARRO	**Arrone**	**0.38**	**248**	P	Pg	07 29 59.9	+0.4
ARRO				AML	AML		
	comp=E,254µm,0.2s						
ARRO				AML	AML		
	comp=N,249µm,0.2s						
ARRO				AML	AML		
	comp=N,344µm,0.2s						
ARRO				AML	AML		
	comp=E,460µm,0.2s						
ARRO				AML	AML		
	comp=N,343µm,0.2s						
ARRO				AML	AML		
	comp=E,251µm,0.2s						
ARRO				AML	AML		
	comp=N,249µm,0.2s						
OFFI	**Offida**	**0.39**	**57**	P	Pb	07 30 00.9	-0.1
FIAM	**Fiamignano**	**0.47**	**191**	P	Pg	07 30 01.4	+0.3
FIAM				S	Sb	07 30 08.4	-1.0

FIAM				AML	AML			
	comp=N,316μm,0.2s							
FIAM				AML	AML			
	comp=N,316μm,0.2s							
FIAM				AML	AML			
	comp=E,660μm,0.2s							
CESX	**Cesi**	**0.50**	**257**	P	Pb	07 30 02.8	-0.1	
CESX				S	Sb	07 30 10.0	-0.4	
FAGN	**Fagnano**	**0.53**	**151**	P	Pg	07 30 02.6	+0.5	
FAGN				S	Sb	07 30 10.8	-0.2	
FAGN				AML	AML			
	comp=N,336μm,0.3s							
FAGN				AML	AML			
	comp=N,337μm,0.3s							
FAGN				AML	AML			
	comp=E,446μm,1.1s							
ASSB	**Assisi San Ben**	**0.53**	**307**	P	Pg	07 30 02.9	+0.6	
ASSB				S	Sb	07 30 10.7	-0.6	
VCEL	**Villa Celiera**	**0.55**	**127**	P	Pb	07 30 03.5	-0.3	
VCEL				S	Sb	07 30 11.7	-0.3	
VCEL				AML	AML			
	comp=E,424μm,0.3s							
VCEL				AML	AML			
	comp=N,364μm,0.4s							
T0110	**Collepietro**	**0.64**	**141**	P	Pg	07 30 04.5	+0.1	
T0110				S	Sb	07 30 14.4	0.0	
EUCT	**Pavia**	**3.86**	**311**	AML	AML			
	comp=E,1640μm,0.1s							
EUCT				AML	AML			
	comp=N,910μm,0.1s							

ROM 24 07:30:25.9±0.1, 42°.756N±0°.003×13°.157E±0°.006, h7km, ML2.1/9, Error ellipse: s-maj=0.5km s-min=0.2km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**338**	P	Pg	07 30 28.7	+0.7
NRCA				S	Sg	07 30 30.0	+0.5
FEMA	**Monte Fema**	**0.22**	**339**	P	Pg	07 30 31.0	+0.6
FEMA				S	Sg	07 30 34.5	+1.1
RM33	**Pellescritta (**	**0.25**	**170**	P	Pb	07 30 31.9	-0.9
RM33				S	Sb	07 30 36.1	-1.3
RM33				AML	AML		
	comp=E,640μm,1.0s						
RM33				AML	AML		
	comp=N,868μm,0.4s						
RM33				AML	AML		
	comp=E,814μm,0.2s						
RM33				AML	AML		
	comp=N,826μm,0.3s						
RM33				AML	AML		
	comp=N,868μm,0.4s						
RM33				AML	AML		
	comp=E,677μm,0.3s						
RM33				AML	AML		
	comp=E,625μm,0.3s						
RM33				AML	AML		
	comp=E,816μm,1.0s						
CAMP	**Campotosto**	**0.29**	**140**	P	Pg	07 30 32.4	+0.8
CAMP				S	Sg	07 30 36.8	+1.4
CESI	**CESI - Serrava**	**0.31**	**323**	P	Pg	07 30 32.8	+0.8
CESI				S	Sb	07 30 37.7	-1.5
CESI				AML	AML		
	comp=E,416μm,0.3s						
CESI				AML	AML		
	comp=N,1045μm,0.4s						
CESI				AML	AML		
	comp=E,416μm,0.3s						
GUMA	**Gualdo di Mace**	**0.33**	**23**	P	Pb	07 30 33.5	-0.7
GUMA				S	Sb	07 30 39.1	-0.7
GUMA				AML	AML		
	comp=N,1540μm,0.6s						
GUMA				AML	AML		
	comp=E,1650μm,0.3s						
ARRO	**Arrone**	**0.34**	**239**	P	Pg	07 30 33.4	+0.9
ARRO				S	Sb	07 30 38.9	-0.9
ARRO				AML	AML		
	comp=E,460μm,0.2s						
ARRO				AML	AML		
	comp=N,343μm,0.2s						
ARRO				AML	AML		
	comp=N,344μm,0.2s						
ARRO				AML	AML		
	comp=E,460μm,0.2s						
CSP1	**Cessapalombo**	**0.34**	**6**	P	Pg	07 30 33.3	+0.7
CSP1				S	Sb	07 30 38.7	-1.3
CSP1				AML	AML		
	comp=E,714μm,0.2s						
CSP1				AML	AML		
	comp=N,818μm,0.3s						
CSP1				AML	AML		
	comp=N,816μm,0.3s						
SEF1	**Sefro**	**0.42**	**339**	P	Pb	07 30 35.0	-0.7
SEF1				S	Sb	07 30 41.3	-1.0
GIGS	**Gran Sasso**	**0.43**	**135**	P	Pg	07 30 34.9	+0.6
GIGS				S	Sb	07 30 41.3	-1.3
GIGS				AML	AML		
	comp=N,84μm,0.4s						
CESX	**Cesi**	**0.45**	**251**	P	Pb	07 30 35.4	-0.7
CESX				S	Sb	07 30 42.4	-0.7
CESX				AML	AML		
	comp=N,153μm,0.3s						
CESX				AML	AML		
	comp=E,213μm,0.6s						
ASSB	**Assisi San Ben**	**0.47**	**308**	P	Pb	07 30 36.4	0.0
ASSB				S	Sb	07 30 42.5	-1.1
FIAM	**Fiamignano**	**0.49**	**183**	P	Pg	07 30 36.0	+0.7
FIAM				S	Sb	07 30 43.5	-0.8
SNTG	**Esanatoglia**	**0.52**	**342**	P	Pg	07 30 36.5	+0.5
SNTG				S	Sb	07 30 44.7	-0.6
SNTG				AML	AML		
	comp=E,122μm,0.7s						
SNTG				AML	AML		
	comp=N,111μm,1.2s						
SNTG				AML	AML		
	comp=E,122μm,0.7s						
SNTG				AML	AML		
	comp=N,111μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.57**	**319**	P	Pb	07 30 37.6	-0.7
ATCC				S	Sb	07 30 46.4	-0.3
VCEL	**Villa Celiera**	**0.62**	**125**	P	Pb	07 30 38.9	-0.3
VCEL				S	Sb	07 30 48.2	+0.1
VCEL				AML	AML		
	comp=N,265μm,0.9s						
T0110	**Collepietro**	**0.70**	**139**	P	Pg	07 30 39.9	+0.5
SRES	**S.Oreste - Sor**	**0.70**	**223**	P	Pb	07 30 40.2	-0.3
ARVD	**Arcevia**	**0.76**	**348**	P	Pb	07 30 41.2	-0.2
ARVD				S	Sb	07 30 52.2	+0.2
MGAB	**Montegabbione**	**0.78**	**282**	P	Pb	07 30 41.7	-0.2
MAIM	**Mastiano**	**2.26**	**302**	S	Sn	07 31 33.0	+1.1
CAVE	**Cavezzo**	**2.62**	**324**	S	Sb	07 31 44.0	-1.6

ROM 24 07:34:34.1±0.2, 42°.761N±0°.001×13°.309E±0°.010, h11km, ML1.5/3, 2C-1D, Error ellipse: s-maj=1.3km s-min=0.7km az=174.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.10**	**133**	⇑*i*P	Pg	07 34 37.5	+0.5
CAMP				S	Sg	07 34 39.5	+0.4
CAMP				AML	AML		
	comp=E,244μm,0.2s						
CAMP				AML	AML		
	comp=N,276μm,0.3s						
CAMP				AML	AML		
	comp=E,244μm,0.2s						
CAMP				AML	AML		
	comp=N,276μm,0.3s						
CAMP				AML	AML		
	comp=E,109μm,0.6s						
CAMP				AML	AML		
	comp=N,121μm,0.3s						
RM33	**Pellescritta (**	**0.12**	**216**	⇑*i*P	Pg	07 34 37.6	+0.4
RM33				S	Sg	07 34 39.9	+0.4
RM33				AML	AML		
	comp=E,628μm,0.2s						
RM33				AML	AML		
	comp=N,662μm,0.6s						
RM33				AML	AML		
	comp=E,630μm,0.2s						
RM33				AML	AML		
	comp=E,630μm,0.2s						
RM33				AML	AML		
	comp=N,652μm,0.5s						
RM33				AML	AML		
	comp=N,439μm,0.3s						
RM33				AML	AML		
	comp=E,246μm,0.2s						
TERO	**Teramo**	**0.22**	**85**	⇓*i*P	Pg	07 34 39.2	+0.4
TERO				S	Sg	07 34 42.7	+0.8
TERO				AML	AML		
	comp=E,708μm,0.4s						
TERO				AML	AML		
	comp=N,753μm,0.2s						
TERO				AML	AML		
	comp=N,411μm,0.1s						
TERO				AML	AML		
	comp=E,335μm,0.1s						
GIGS	**Gran Sasso**	**0.25**	**129**	*e*P	Pg	07 34 39.9	+0.7
GIGS				S	Sg	07 34 43.8	+1.1
NRCA	**Norcia**	**0.27**	**328**	AML	AML		
	comp=E,4975μm,0.2s						
NRCA				AML	AML		
	comp=N,4570μm,0.1s						
NRCA				AML	AML		
	comp=E,5285μm,0.1s						
NRCA				AML	AML		
	comp=N,4925μm,0.1s						
NRCA				AML	AML		
	comp=N,6905μm,1.0s						
NRCA				AML	AML		
	comp=N,6280μm,1.0s						
NRCA				AML	AML		
	comp=E,8235μm,0.1s						
NRCA				AML	AML		
	comp=E,7575μm,0.1s						
FDMO	**Fiordimonte**	**0.46**	**339**	AML	AML		
	comp=N,404μm,0.3s						
FDMO				AML	AML		
	comp=E,388μm,0.5s						
CSP1	**Cessapalombo**	**0.49**	**351**	AML	AML		
	comp=N,640μm,0.5s						
CSP1				AML	AML		
	comp=E,355μm,0.3s						

ROM 24 07:34:41.5±0.2, 42°.840N±0°.005×13°.17E±0°.01, h7km±1km, Md1.3/3, ML1.4/4, 2C, Error ellipse: s-maj=0.8km s-min=0.7km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**261**	⇑P	Pg	07 34 42.9	-0.1
NRCA				S	Sg	07 34 44.3	+0.2
NRCA				AML	AML		
	comp=E,4975μm,0.2s						
NRCA				AML	AML		
	comp=N,4570μm,0.1s						
NRCA				AML	AML		
	comp=E,5285μm,0.1s						
NRCA				AML	AML		
	comp=N,4925μm,0.1s						
NRCA				AML	AML		
	comp=E,7575μm,0.1s						
NRCA				AML	AML		
	comp=N,6280μm,1.0s						
NRCA				AML	AML		
	comp=N,6905μm,1.0s						
NRCA				AML	AML		
	comp=E,8235μm,0.1s						
NRCA				AML	AML		
	comp=N,4923μm,0.1s						
NRCA				AML	AML		
	comp=N,4569μm,0.0s						
NRCA				AML	AML		
	comp=E,5285μm,0.1s						
NRCA				AML	AML		
	comp=E,4968μm,0.0s						
NRCA				END			
FDMO	**Fiordimonte**	**0.20**	**343**	P	Pg	07 34 46.3	+0.7
FDMO				S	Sg	07 34 50.1	+1.7
FDMO				AML	AML		
	comp=N,404μm,0.3s						
FDMO				AML	AML		
	comp=N,105μm,0.2s						
FDMO				AML	AML		
	comp=E,93μm,0.1s						
FDMO				AML	AML		
	comp=E,388μm,0.5s						
FDMO				END			
CSP1	**Cessapalombo**	**0.25**	**6**	P	Pg	07 34 47.2	+0.7
CSP1				S	Sg	07 34 51.4	+1.4
CSP1				AML	AML		
	comp=E,355μm,0.3s						
CSP1				AML	AML		
	comp=N,640μm,0.5s						
CSP1				AML	AML		
	comp=E,111μm,0.2s						
CSP1				AML	AML		
	comp=N,136μm,0.3s						
CESI	**CESI - Serrava**	**0.25**	**311**	⇑P	Pg	07 34 47.0	+0.5
CESI				AML	AML		
	comp=E,550μm,0.3s						
CESI				AML	AML		
	comp=N,1106μm,0.4s						
CESI				AML	AML		
	comp=N,1106μm,0.4s						
CESI				AML	AML		
	comp=E,550μm,0.3s						
CESI	**CESI - Serrava**	**0.25**	**311**	P	Pg	07 34 46.9	+0.4
CESI				S	Sb	07 34 51.8	-1.3
CESI				AML	AML		
	comp=N,1106μm,0.4s						
CESI				AML	AML		
	comp=E,550μm,0.3s						
CESI				AML	AML		
	comp=N,144μm,0.2s						
CESI				AML	AML		
	comp=E,100μm,0.3s						
CESI				END			
RM33	**Pellescritta (**	**0.33**	**174**	AML	AML		
	comp=N,662μm,0.6s						
RM33				AML	AML		
	comp=E,628μm,0.2s						
RM33				AML	AML		
	comp=E,630μm,0.2s						
RM33				AML	AML		
	comp=E,652μm,0.5s						
RM33				AML	AML		
	comp=E,630μm,0.2s						
CAMP	**Campotosto**	**0.35**	**150**	P	Pb	07 34 49.6	-0.5
CAMP				AML	AML		
	comp=E,244μm,0.2s						
CAMP				AML	AML		
	comp=N,276μm,0.3s						
CAMP				AML	AML		
	comp=N,276μm,0.3s						
CAMP				AML	AML		
	comp=E,244μm,0.2s						
TERO	**Teramo**	**0.39**	**124**	AML	AML		
	comp=E,708μm,0.4s						
TERO				AML	AML		
	comp=N,753μm,0.2s						
TERO				AML	AML		
	comp=E,708μm,0.4s						
SALB	**San Lorenzo Be**	**3.81**	**140**	AML	AML		
	comp=N,84μm,1.0s						
SALB				AML	AML		
	comp=E,61μm,1.3s						

ROM 24 07:45:19.0±0.1, 42°.679N±0°.003×13°.152E±0°.004, h13km±1km, ML2.0/3, Error ellipse: s-maj=0.4km s-min=0.1km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.11**	**227**	P	Pg	07 45 22.6	+0.3
LNSS				S	Sg	07 45 24.9	+0.3
LNSS				AML	AML		
	comp=E,4560μm,0.2s						
LNSS				AML	AML		
	comp=N,10085μm,0.1s						
NRCA	**Norcia**	**0.16**	**350**	*e*P	Pg	07 45 23.2	+0.3
NRCA				S	Sb	07 45 26.3	-0.7
NRCA				AML	AML		
	comp=E,6620μm,1.5s						
NRCA				AML	AML		
	comp=N,4330μm,0.1s						
NRCA				AML	AML		
	comp=N,4685μm,0.2s						
NRCA				AML	AML		
	comp=E,6615μm,1.5s						
NRCA				AML	AML		
	comp=E,7160μm,1.5s						
NRCA				AML	AML		
	comp=N,7595μm,0.1s						
NRCA				AML	AML		
	comp=N,7155μm,0.5s						
RM33	**Pellescritta (**	**0.18**	**165**	*e*P	Pg	07 45 23.5	+0.3
RM33				S	Sb	07 45 26.8	-0.7
CAMP	**Campotosto**	**0.24**	**127**	*e*P	Pg	07 45 24.7	+0.5
CAMP				S	Sb	07 45 28.6	-0.7
CAMP				AML	AML		
	comp=E,1310μm,0.2s						
CAMP				AML	AML		
	comp=N,1096μm,0.2s						
ARRO	**Arrone**	**0.30**	**251**	AML	AML		
	comp=N,440μm,1.2s						
ARRO				AML	AML		
	comp=E,566μm,0.2s						
TERO	**Teramo**	**0.34**	**99**	*e*P	Pg	07 45 26.1	+0.2
TERO				S	Sb	07 45 31.5	-0.7
TERO				AML	AML		
	comp=E,2205μm,1.0s						
TERO				AML	AML		
	comp=N,2680μm,0.1s						
TERO				AML	AML		
	comp=E,2435μm,0.4s						
TERO				AML	AML		
	comp=N,3095μm,0.1s						
TERO				AML	AML		
	comp=N,3100μm,0.1s						
FDMO	**Fiordimonte**	**0.36**	**352**	AML	AML		
	comp=E,753μm,0.2s						
FDMO				AML	AML		
	comp=N,1310μm,0.3s						
CESI	**CESI - Serrava**	**0.37**	**331**	*e*P	Pg	07 45 26.8	+0.2
CESI				S	Sg	07 45 32.4	+0.8
CESI				AML	AML		
	comp=E,903μm,0.4s						
CESI				AML	AML		
	comp=N,1525μm,0.2s						
CESI				AML	AML		
	comp=E,207μm,0.3s						
CESI				AML	AML		
	comp=N,531μm,0.2s						
AQU	**L'Aquila**	**0.37**	**150**	AML	AML		
	comp=N,388μm,0.6s						
AQU				AML	AML		
	comp=E,470μm,0.6s						
AQU				AML	AML		
	comp=N,423μm,1.1s						
AQU				AML	AML		
	comp=E,498μm,0.6s						
GIGS	**Gran Sasso**	**0.38**	**126**	*e*P	Pg	07 45 27.2	+0.4
GIGS				S	Sg	07 45 32.5	+0.6
GIGS				AML	AML		
	comp=N,172μm,0.2s						
GIGS				AML	AML		
	comp=E,203μm,0.9s						
GUMA	**Gualdo di Mace**	**0.41**	**19**	AML	AML		
	comp=E,3000μm,0.4s						
GUMA				AML	AML		
	comp=N,4255μm,0.3s						
GUMA				AML	AML		
	comp=E,4185μm,0.3s						
GUMA				AML	AML		
	comp=N,3875μm,0.3s						
MTL1	**Matelica**	**0.59**	**350**	S	Sb	07 45 40.0	+0.6

ROM 24 07:45:37.2±0.1, 42°.714N±0°.003×13°.260E±0°.005, h10km, Md1.6/8, ML2.6/10, 4C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQT1	**Arquata del Tr**	**0.06**	**23**	⇑P	Pg	07 45 39.7	+0.3
AQT1				S	Sg	07 45 41.0	+0.1
AQT1				END			
NRCA	**Norcia**	**0.16**	**318**	⇑P	Pg	07 45 41.2	+0.5
NRCA				S	Sg	07 45 43.9	+0.7
NRCA				AML	AML		
	comp=E,6620μm,1.5s						
NRCA				AML	AML		
	comp=N,4330μm,0.1s						
NRCA				AML	AML		
	comp=N,4685μm,0.2s						
NRCA				AML	AML		
	comp=E,7160μm,1.5s						
NRCA				AML	AML		
	comp=N,7600μm,0.1s						
NRCA				AML	AML		
	comp=N,7150μm,0.5s						
NRCA				AML	AML		
	comp=N,4309μm,0.2s						
NRCA				AML	AML		
	comp=N,4147μm,0.2s						
NRCA				END			
LNSS	**Leonessa**	**0.20**	**236**	⇑P	Pg	07 45 42.0	+0.7
LNSS				S	Sg	07 45 45.5	+1.3
LNSS				END			
RM33	**Pellescritta (**	**0.21**	**189**	P	Pg	07 45 42.7	+1.2
RM33				S	Sg	07 45 45.9	+1.4
RM33				END			
CAMP	**Campotosto**	**0.21**	**148**	⇓P	Pg	07 45 42.2	+0.6
CAMP				S	Sg	07 45 45.5	+0.9
CAMP				AML	AML		
	comp=N,1096μm,0.2s						
CAMP				AML	AML		
	comp=E,1310μm,0.2s						
TERO	**Teramo**	**0.27**	**110**	⇓P	Pg	07 45 43.2	+0.6
TERO				S	Sg	07 45 47.5	+1.3
TERO				AML	AML		
	comp=E,2205μm,1.0s						
TERO				AML	AML		
	comp=N,2685μm,0.1s						
TERO				AML	AML		
	comp=N,3095μm,0.1s						
TERO				AML	AML		
	comp=E,2435μm,0.4s						
TERO				AML	AML		
	comp=N,3100μm,0.1s						
TERO				END			
FEMA	**Monte Fema**	**0.29**	**328**	P	Pg	07 45 43.4	+0.3
FEMA				S	Sb	07 45 48.4	-1.2
FDMO	**Fiordimonte**	**0.35**	**339**	P	Pg	07 45 44.5	+0.4
FDMO				S	Sb	07 45 50.1	-0.9
FDMO				AML	AML		
	comp=N,1310μm,0.3s						
FDMO				AML	AML		
	comp=E,753μm,0.2s						
FDMO				END			
GIGS	**Gran Sasso**	**0.35**	**139**	P	Pg	07 45 44.6	+0.5
GIGS				S	Sg	07 45 49.9	+1.2
GIGS				AML	AML		
	comp=E,203μm,0.9s						
GIGS				AML	AML		
	comp=N,172μm,0.2s						
GIGS				END			
GUMA	**Gualdo di Mace**	**0.35**	**9**	⇓P	Pb	07 45 45.1	-0.5
GUMA				S	Sb	07 45 51.4	+0.1
GUMA				AML	AML		
	comp=E,3000μm,0.3s						
GUMA				AML	AML		
	comp=E,4185μm,0.3s						
GUMA				AML	AML		
	comp=N,3875μm,0.3s						
GUMA				AML	AML		
	comp=N,4255μm,0.3s						
AQU	**L'Aquila**	**0.38**	**164**	P	Pb	07 45 45.5	-0.5
AQU				S	Sb	07 45 51.6	-0.3
CSP1	**Cessapalombo**	**0.38**	**354**	P	Pg	07 45 45.2	+0.5
CSP1				S	Sb	07 45 51.0	-1.1
CSP1				END			
OFFI	**Offida**	**0.38**	**55**	P	Pb	07 45 46.2	+0.2
OFFI				AML	AML		
	comp=E,1325μm,0.3s						
OFFI				AML	AML		
	comp=N,1470μm,0.4s						
ARRO	**Arrone**	**0.39**	**250**	P	Pg	07 45 45.3	+0.5
ARRO				S	Sb	07 45 51.4	-0.9
CESI	**CESI - Serrava**	**0.39**	**318**	P	Pg	07 45 45.2	+0.3
CESI				S	Sg	07 45 51.2	+1.1

CESI				AML	AML		
	comp=N,2255µm,0.2s						
CESI				AML	AML		
	comp=E,1335µm,0.4s						
CESI				AML	AML		
	comp=N,2260µm,0.2s						
FIAM	**Fiamignano**	**0.46**	**193**	P	Pg	07 45 46.5	+0.4
FIAM				S	Sb	07 45 53.6	-0.7
CESX	**Cesi**	**0.51**	**258**	⇑P	Pg	07 45 47.2	+0.1
CESX				S	Sb	07 45 55.3	-0.5
CESX	**Cesi**	**0.51**	**258**	AML	AML		
	comp=E,294µm,1.0s						
CESX				AML	AML		
	comp=N,277µm,0.4s						
ASSB	**Assisi San Ben**	**0.55**	**307**	P	Pg	07 45 48.4	+0.6
ASSB				S	Sb	07 45 56.2	-0.7
ASSB				AML	AML		
	comp=E,660µm,0.8s						
ASSB				AML	AML		
	comp=N,777µm,1.0s						
ASSB	**Assisi San Ben**	**0.55**	**307**	AML	AML		
	comp=N,777µm,1.0s						
ASSB				AML	AML		
	comp=E,660µm,0.8s						
T0110	**Collepietro**	**0.62**	**142**	P	Pg	07 45 49.4	+0.2
T0110				AML	AML		
	comp=E,446µm,0.4s						
T0110				AML	AML		
	comp=N,489µm,0.4s						
SRES	**S.Oreste - Sor**	**0.73**	**230**	AML	AML		
	comp=E,108µm,0.2s						
SRES				AML	AML		
	comp=N,76µm,1.3s						

ROM 24 07:46:12.9±0.1, 42°.785N±0°.003×13°.115E±0°.007, h11km, ML2.1/5, 1D, Error ellipse: s-maj=0.6km s-min=0.1km az=255.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**359**	P	Pg	07 46 15.5	+0.3
NRCA				S	Sg	07 46 17.1	+0.2
NRCA				AML	AML		
	comp=E,4715µm,0.9s						
NRCA				AML	AML		
	comp=N,7150µm,0.5s						
NRCA				AML	AML		
	comp=E,5330µm,0.1s						
NRCA				AML	AML		
	comp=N,7600µm,0.1s						
NRCA				AML	AML		
	comp=E,4299µm,0.0s						
NRCA				AML	AML		
	comp=E,4755µm,0.0s						
NRCA				AML	AML		
	comp=N,6495µm,0.0s						
NRCA				AML	AML		
	comp=N,5723µm,0.0s						
FEMA	**Monte Fema**	**0.18**	**345**	P	Pb	07 46 18.0	-0.5
FEMA				S	Sg	07 46 20.5	+0.6
LNSS	**Leonessa**	**0.19**	**197**	P	Pg	07 46 17.2	+0.1
LNSS				S	Sg	07 46 21.2	+1.3
LNSS				AML	AML		
	comp=E,490µm,0.2s						
FDMO	**Fiordimonte**	**0.25**	**355**	P	Pg	07 46 18.5	+0.3
FDMO				S	Sg	07 46 22.5	+0.9
FDMO				AML	AML		
	comp=E,447µm,0.7s						
FDMO				AML	AML		
	comp=N,420µm,0.5s						
CESI	**CESI - Serrava**	**0.27**	**325**	P	Pg	07 46 18.8	+0.4
CESI				S	Sg	07 46 23.3	+1.1
CESI				AML	AML		
	comp=E,305µm,0.1s						
CESI				AML	AML		
	comp=N,568µm,0.3s						
RM33	**Pellescritta (**	**0.28**	**165**	P	Pg	07 46 18.8	0.0
RM33				S	Sb	07 46 24.1	-0.8
CSP1	**Cessapalombo**	**0.31**	**12**	⇓P	Pg	07 46 19.5	+0.2
CSP1				S	Sg	07 46 24.6	+1.0
GUMA	**Gualdo di Mace**	**0.32**	**30**	P	Pg	07 46 20.0	+0.6
GUMA				S	Sb	07 46 25.3	-0.6
ARRO	**Arrone**	**0.33**	**232**	P	Pb	07 46 20.2	-0.5
ARRO				S	Sb	07 46 25.5	-0.6
CAMP	**Campotosto**	**0.33**	**139**	P	Pg	07 46 19.8	+0.2
CAMP				S	Sb	07 46 25.3	-0.9
SEF1	**Sefro**	**0.38**	**341**	P	Pg	07 46 20.7	+0.2
SEF1				S	Sb	07 46 26.9	-0.8
TERO	**Teramo**	**0.40**	**114**	P	Pg	07 46 21.3	+0.5
TERO				S	Sg	07 46 26.9	+0.9
TERO				AML	AML		
	comp=N,214µm,0.3s						
TERO				AML	AML		
	comp=E,121µm,0.0s						
ASSB	**Assisi San Ben**	**0.42**	**308**	P	Pg	07 46 21.4	+0.1
OFFI	**Offida**	**0.45**	**70**	P	Pb	07 46 22.6	-0.1
GIGS	**Gran Sasso**	**0.47**	**135**	P	Pg	07 46 22.1	-0.1
GIGS				S	Sg	07 46 29.3	+0.9
SNTG	**Esanatoglia**	**0.49**	**345**	P	Pg	07 46 22.8	+0.4
SNTG				S	Sg	07 46 29.7	+0.8

IDC 24 07:46:28.6±3.1, 54°.20N×87°.36E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=25.8km s-min=17.1km az=55.0

NNC 24 07:46:30.8±1.3, 54°.22N×87°.19E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=19.5km s-min=7.0km az=0.0, Suspected Mining explosion.

ISC 24 07:46:30.0±4.4, 54°.3N±0°.2×87°.2E±0°.2, h0km, n7, σ1§27/10, 4C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.43**	**259**	*i*		07 55 19.1	
	baz=79,slow=322,SNR=35						
ZAA0	**Zalesovo Array**	**1.43**	**259**	⇑P	**Pn**	**07 46 56.9**	**-0.2**
	0.3nm,0.3s						
ZAA0				⇑S	**Sn**	**07 47 16.6**	**+0.1**
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**1.43**	**259**	Pg	**Pn**	**07 46 56.5**	**-0.6**
	1.8nm,0.3s,baz=80,slow=16,SNR=16						
ZALV				Lg	Lg	07 47 17.3	
	1.1nm,0.3s,baz=84,slow=27,SNR=5.2						
KURBB	**Kurchatov Arra**	**6.42**	**239**	Pn	**Pn**	**07 48 04.1**	**-1.5**
	baz=57,slow=14,SNR=5.6						
KURBB				Sn	**Sn**	**07 49 19.3**	**-0.3**
	baz=53,slow=22,SNR=1.4						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**6.42**	**239**	⇓Pn	**Pn**	**07 48 07.3**	**+1.7**
	0.4nm,0.2s,baz=53,slow=12						
KURBB				⇑Sn	**Sn**	**07 49 20.9**	**+1.3**
	1.7nm,0.7s						
KURBB				⇑Lg	Lg	07 49 52.2	
	2.9nm,0.9s						
MK31	**Makanchi Array**	**8.09**	**205**	Pn	**Pn**	**07 48 29.1**	**+0.5**
	0.2nm,0.5s,baz=27,slow=13,SNR=4.9						
MKAR	**Makanchi Array**	**8.09**	**205**	Pn	**Pn**	**07 48 29.4**	**+0.8**
	0.2nm,0.3s,baz=26,slow=13,SNR=6.7						
MKAR				Sn	**Sn**	**07 49 58.9**	**-1.7**
	0.1nm,0.3s,baz=28,slow=28,SNR=4.6						
	0.3nm,0.4s						

IDC 24 07:46:56.8±2.2, 32°.36S×178°.87W, h64km±23km, mb3.4/2, mbtmp3.8/4, MS3.1/1, Error ellipse: s-maj=62.7km s-min=12.6km az=113.0

WEL 24 07:48:16.3, 38°.S±21°.×17°.8E±1°.4, h36km±16km, M2.0/13, ML2.3/14, MLv2.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=161.7

ISC 24 07:46:56.8±1.4, 32°.4S±0°.1×178°.8W±0°.3, h61km, n31, σ1§48/26, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.22**	**13**	P	**Pn**	**07 47 44.7**	**-0.1**
	100nm,0.5s,baz=98,slow=20,SNR=1.6						
RAO				S	**Sn**	**07 48 22.1**	**+0.2**
	93nm,0.3s,baz=57,slow=23,SNR=1.7						
WMGZ	**Waiomatatini S**	**5.89**	**202**	P	**Pn**	**07 48 23.1**	**+1.7**
HAZ	**Te Kaha**	**6.05**	**207**	P	**Pn**	**07 48 24.6**	**+0.9**
PKGZ	**Pakihiroa**	**6.06**	**204**	P	**Pn**	**07 48 24.5**	**+0.6**
PUZ	**Puketiti**	**6.17**	**203**	P	**Pn**	**07 48 25.9**	**+0.6**
RUGZ	**Raukumara Rang**	**6.28**	**207**	P	**Pn**	**07 48 28.6**	**+1.8**
TWGZ	**Tauwhareparae**	**6.36**	**204**	P	**Pn**	**07 48 28.9**	**+1.0**
CNGZ	**Carnagh Statio**	**6.56**	**201**	P	**Pn**	**07 48 31.8**	**+1.2**
TKGZ	**Te Karaka**	**6.64**	**204**	P	**Pn**	**07 48 33.3**	**+1.7**
MWZ	**Matawai**	**6.66**	**206**	P	**Pn**	**07 48 31.8**	**-0.1**
URZ	**Urewera**	**6.75**	**209**	P	**Pn**	**07 48 35.0**	**+1.7**
	5.9nm,0.4s,baz=22,slow=16,SNR=20						
URZ				S	**Sn**	**07 49 47.1**	**-1.6**
	8.6nm,0.4s,baz=186,slow=14,SNR=7.2						
URZ	**Urewera**	**6.75**	**209**	P	**Pn**	**07 48 32.6**	**-0.6**
RAGZ	**Rawiri**	**6.84**	**206**	P	**Pn**	**07 48 35.6**	**+1.1**
LIRZ	**Lichensteins R**	**6.86**	**214**	P	**Pn**	**07 48 38.2**	**+3.5**
RIGZ	**Rimuhau**	**6.91**	**203**	P	**Pn**	**07 48 35.7**	**+0.4**
MUGZ	**Murupara**	**7.08**	**210**	P	**Pn**	**07 48 38.8**	**+1.1**
SNGZ	**Shannon Statio**	**7.12**	**205**	P	**Pn**	**07 48 40.7**	**+2.4**
RAHZ	**Arahi**	**7.33**	**206**	P	**Pn**	**07 48 42.8**	**+1.6**
MTHZ	**Maungataniwha**	**7.37**	**208**	P	**Pn**	**07 48 43.7**	**+2.0**
NMHZ	**Naumai**	**7.60**	**207**	P	**Pn**	**07 48 46.1**	**+1.2**
KAHZ	**Kahuranaki**	**8.18**	**204**	P	**Pn**	**07 48 51.9**	**-0.9**
DZM	**Mont Dzumac**	**16.69**	**304**	LR	LR	07 55 09.7	
	comp=Z,60nm,19.8s,baz=174,slow=30						
ASAR	**Alice Springs**	**42.40**	**269**	P	**P**	**07 54 44.6**	**-0.9**
	0.2nm,0.3s,baz=108,slow=7.8,SNR=4.6						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.57**	**275**	P	**P**	**07 54 54.0**	**-1.0**
	0.6nm,0.3s,baz=113,slow=7.7,SNR=36						
	0.6nm,0.3s						
H03S2	**Juan Fernandez**	**79.90**	**124**	T	T	09 27 36.4	
	baz=236						
H03S1	**Juan Fernandez**	**79.91**	**124**	T	T	09 27 40.4	
	baz=236						
H03S3	**Juan Fernandez**	**79.92**	**124**	T	T	09 27 36.7	
	baz=236						
H03N3	**Juan Fernandez**	**80.11**	**123**	T	T	09 27 47.8	
	baz=240,slow=72						
H03N2	**Juan Fernandez**	**80.11**	**123**	T	T	09 27 46.3	
	baz=240,slow=72						
H03N1	**Juan Fernandez**	**80.12**	**123**	T	T	09 27 47.0	
	baz=240,slow=72						
FINES	**FINESS Array B**	**146.78**	**338**	PKPbc	**PKPdf**	**08 06 29.5**	**+0.2**
	1.6nm,0.8s,baz=57,slow=5.1,SNR=6.3						

ROM 24 07:47:31.4±0.1, 42°.657N±0°.004×13°.229E±0°.005, h11km, ML1.3/5, 1D, Error ellipse: s-maj=0.5km s-min=0.3km az=216.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.15**	**249**	P	Pg	07 47 35.0	0.0
LNSS				S	Sg	07 47 38.2	+0.8
RM33	**Pellescritta (**	**0.15**	**184**	P	Pb	07 47 35.6	-0.7
RM33				S	Sg	07 47 38.4	+1.0
RM33				AML	AML		
	comp=E,309µm,1.2s						
RM33				AML	AML		
	comp=N,275µm,0.3s						
RM33				AML	AML		
	comp=E,3865µm,1.0s						
RM33				AML	AML		
	comp=N,3300µm,0.1s						
RM33				AML	AML		
	comp=E,3835µm,1.0s						
RM33				AML	AML		
	comp=N,3380µm,0.1s						
RM33				AML	AML		
	comp=E,194µm,0.0s						
RM33				AML	AML		
	comp=E,193µm,0.0s						
RM33				AML	AML		
	comp=N,181µm,0.1s						
RM33				AML	AML		
	comp=N,184µm,0.0s						
CAMP	**Campotosto**	**0.18**	**132**	P	Pg	07 47 36.0	+0.6
CAMP				S	Sg	07 47 39.2	+1.0
CAMP				AML	AML		
	comp=E,227µm,0.2s						
CAMP				AML	AML		
	comp=N,113µm,1.1s						
CAMP				AML	AML		
	comp=E,1394µm,0.2s						
CAMP				AML	AML		
	comp=N,1045µm,0.3s						
CAMP				AML	AML		
	comp=N,95µm,0.3s						
CAMP				AML	AML		
	comp=E,90µm,0.3s						
NRCA	**Norcia**	**0.20**	**334**	P	Pb	07 47 36.7	-0.4
NRCA				S	Sg	07 47 39.8	+1.2
TERO	**Teramo**	**0.28**	**97**	⇓P	Pg	07 47 37.6	+0.5
TERO				S	Sg	07 47 41.9	+1.0
TERO				AML	AML		
	comp=E,378µm,1.3s						
TERO				AML	AML		
	comp=N,397µm,0.1s						
TERO				AML	AML		
	comp=E,1185µm,1.2s						
TERO				AML	AML		
	comp=N,1380µm,0.9s						
TERO				AML	AML		
	comp=E,303µm,0.1s						
TERO				AML	AML		
	comp=N,397µm,0.1s						
GIGS	**Gran Sasso**	**0.33**	**129**	P	Pg	07 47 38.5	+0.6
GIGS				S	Sg	07 47 43.5	+1.1
GIGS				AML	AML		
	comp=E,49µm,1.3s						
GIGS				AML	AML		
	comp=N,41µm,1.5s						
GIGS				AML	AML		
	comp=E,315µm,0.1s						
GIGS				AML	AML		
	comp=N,185µm,0.9s						
GIGS				AML	AML		
	comp=E,44µm,0.1s						
GIGS				AML	AML		
	comp=N,41µm,0.2s						
ARRO	**Arrone**	**0.35**	**257**	P	Pg	07 47 39.0	+0.6
ARRO				S	Sb	07 47 44.4	-0.9
ARRO				AML	AML		
	comp=E,147µm,0.8s						
ARRO				AML	AML		
	comp=N,208µm,0.2s						
ARRO				AML	AML		
	comp=E,686µm,0.2s						
ARRO				AML	AML		
	comp=N,902µm,0.7s						
ARRO				AML	AML		
	comp=E,75µm,0.2s						
ARRO				AML	AML		
	comp=N,64µm,0.2s						
SSFR	**Montelago di S**	**0.84**	**337**	P	Pg	07 47 47.2	-0.5
SSFR				AML	AML		
	comp=E,742µm,0.2s						
SSFR				AML	AML		
	comp=E,804µm,0.2s						
SSFR				AML	AML		
	comp=N,650µm,0.7s						
SSFR				AML	AML		
	comp=N,747µm,0.8s						

ROM 24 07:47:57.7±0.1, 42°.738N±0°.003×13°.221E±0°.005, h11km, Md0.8/1, ML2.5/17, 9C-5D, Error ellipse: s-maj=0.4km s-min=0.2km az=63.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.06**	**56**	⇓P	Pg	07 48 00.5	+0.5
AQT1				S	Sg	07 48 02.1	+0.4
NRCA	**Norcia**	**0.12**	**321**	P	Pg	07 48 01.2	+0.4
NRCA				S	Sg	07 48 03.5	+0.5
NRCA				AML	AML		
	comp=E,45600µm,0.1s						
NRCA				AML	AML		
	comp=E,42450µm,0.1s						
NRCA				AML	AML		
	comp=N,43700µm,0.1s						
NRCA				AML	AML		
	comp=N,47350µm,0.1s						
NRCA				AML	AML		
	comp=E,42400µm,0.1s						
NRCA				END			
LNSS	**Leonessa**	**0.19**	**225**	⇑P	Pg	07 48 02.5	+0.7
LNSS				S	Sg	07 48 06.1	+1.4
LNSS				AML	AML		
	comp=E,2255µm,1.4s						
LNSS				AML	AML		
	comp=E,2250µm,1.4s						
RM33	**Pellescritta (**	**0.23**	**181**	⇑P	Pg	07 48 03.1	+0.6
RM33				S	Sg	07 48 07.1	+1.3
RM33				AML	AML		
	comp=E,3865µm,1.0s						
RM33				AML	AML		
	comp=N,3300µm,0.1s						
RM33				AML	AML		
	comp=N,2010µm,0.1s						
RM33				AML	AML		
	comp=N,3375µm,0.1s						
RM33				AML	AML		
	comp=E,3830µm,1.0s						
RM33				AML	AML		
	comp=N,3380µm,0.1s						
RM33				AML	AML		
	comp=E,3835µm,1.0s						
RM33				AML	AML		
	comp=N,3295µm,0.1s						
CAMP	**Campotosto**	**0.24**	**145**	P	Pg	07 48 03.2	+0.4
CAMP				S	Sg	07 48 07.1	+0.8
CAMP				AML	AML		
	comp=E,1394µm,0.2s						
CAMP				AML	AML		
	comp=N,1045µm,0.3s						
FEMA	**Monte Fema**	**0.26**	**331**	P	Pg	07 48 03.4	+0.4
FEMA				S	Sg	07 48 07.5	+0.8
TERO	**Teramo**	**0.30**	**112**	P	Pg	07 48 04.0	+0.2
TERO				S	Sg	07 48 08.8	+0.8
TERO				AML	AML		
	comp=E,1185µm,1.2s						
TERO				AML	AML		
	comp=N,1380µm,0.9s						
FDMO	**Fiordimonte**	**0.31**	**342**	⇑P	Pg	07 48 04.3	+0.2
FDMO				S	Sg	07 48 09.2	+0.9
FDMO				AML	AML		
	comp=E,1895µm,0.2s						
FDMO				AML	AML		
	comp=N,1615µm,0.4s						
FDMO				AML	AML		
	comp=E,752µm,0.4s						
FDMO				AML	AML		
	comp=N,1308µm,0.3s						
GUMA	**Gualdo di Mace**	**0.34**	**14**	⇑P	Pg	07 48 05.0	+0.6
GUMA				S	Sb	07 48 10.7	-0.4
GUMA				AML	AML		
	comp=E,8145µm,0.8s						
GUMA				AML	AML		
	comp=N,5555µm,0.2s						
GUMA				AML	AML		
	comp=E,9280µm,0.2s						
GUMA				AML	AML		
	comp=N,5325µm,0.6s						
CESI	**CESI - Serrava**	**0.35**	**319**	⇓P	Pg	07 48 05.1	+0.3
CESI				S	Sb	07 48 10.6	-1.1
CESI				AML	AML		
	comp=N,5230µm,0.2s						
CESI				AML	AML		
	comp=E,2060µm,1.4s						
CESI				AML	AML		
	comp=N,1645µm,0.3s						
CESI				AML	AML		
	comp=E,657µm,0.2s						
CSP1	**Cessapalombo**	**0.35**	**358**	⇑P	Pg	07 48 05.0	+0.2
CSP1				S	Sg	07 48 10.6	+1.0
CSP1				AML	AML		
	comp=E,2340µm,0.8s						
CSP1				AML	AML		
	comp=N,2655µm,0.5s						
CSP1				AML	AML		
	comp=E,691µm,0.4s						
CSP1				AML	AML		
	comp=N,1104µm,0.2s						
ARRO	**Arrone**	**0.37**	**245**	P	Pg	07 48 05.5	+0.5
ARRO				S	Sb	07 48 11.6	-0.6
ARRO				AML	AML		
	comp=E,686µm,0.2s						
ARRO				AML	AML		
	comp=E,686µm,0.2s						
ARRO				AML	AML		
	comp=N,902µm,0.7s						
ARRO				AML	AML		
	comp=E,669µm,0.2s						
ARRO				AML	AML		
	comp=N,463µm,0.0s						
GIGS	**Gran Sasso**	**0.39**	**138**	P	Pg	07 48 05.3	0.0
GIGS				S	Sg	07 48 11.2	+0.7
GIGS				AML	AML		
	comp=E,314µm,0.1s						
GIGS				AML	AML		
	comp=N,184µm,0.9s						
GIGS				AML	AML		
	comp=E,315µm,0.1s						
OFFI	**Offida**	**0.39**	**60**	⇑P	Pb	07 48 06.6	-0.1
OFFI				S	Sb	07 48 12.5	-0.3
OFFI				AML	AML		
	comp=E,2015µm,1.5s						
OFFI				AML	AML		
	comp=N,3790µm,0.5s						
MNTP	**Montappone**	**0.44**	**24**	AML	AML		
	comp=N,2130µm,0.1s						
MNTP				AML	AML		
	comp=E,2625µm,0.2s						
FIAM	**Fiamignano**	**0.48**	**189**	⇑P	Pg	07 48 07.2	+0.2
FIAM				S	Sb	07 48 14.3	-0.9
FIAM				AML	AML		
	comp=N,383µm,0.7s						
FIAM				AML	AML		
	comp=N,384µm,0.7s						
FIAM				AML	AML		
	comp=E,642µm,0.4s						
FIAM				AML	AML		
	comp=E,295µm,0.2s						
FIAM				AML	AML		
	comp=N,322µm,0.6s						
SNTG	**Esanatoglia**	**0.56**	**338**	P	Pg	07 48 08.4	-0.1
SNTG				S	Sb	07 48 17.0	-0.5
SNTG				AML	AML		
	comp=E,506µm,0.1s						
SNTG				AML	AML		
	comp=N,454µm,0.1s						
VCEL	**Villa Celiera**	**0.57**	**127**	P	Pg	07 48 09.2	+0.3
VCEL				AML	AML		
	comp=E,427µm,0.4s						
VCEL				AML	AML		
	comp=N,490µm,0.4s						
T0110	**Collepietro**	**0.66**	**141**	P	Pg	07 48 10.7	+0.3
T0110				S	Sb	07 48 20.0	-0.4
T0110				AML	AML		
	comp=E,426µm,0.6s						
T0110				AML	AML		
	comp=N,431µm,0.3s						
PP3	**Marolino**	**0.70**	**24**	AML	AML		
	comp=N,1158µm,0.3s						
PP3				AML	AML		
	comp=N,1103µm,0.3s						
PP3				AML	AML		
	comp=N,1160µm,0.3s						
PP3				AML	AML		
	comp=N,1102µm,0.3s						
PP3				AML	AML		
	comp=E,1435µm,0.5s						
PP3				AML	AML		
	comp=E,1415µm,0.4s						
SRES	**S.Oreste - Sor**	**0.73**	**227**	P	Pg	07 48 12.0	+0.3
CERT	**Cerreto**	**0.81**	**193**	P	Pg	07 48 12.8	-0.5
CERT				AML	AML		
	comp=N,174µm,0.9s						
CERT				AML	AML		
	comp=N,174µm,0.9s						
CERT				AML	AML		
	comp=E,278µm,0.5s						
CERT				AML	AML		
	comp=E,93µm,0.4s						
CERT				AML	AML		
	comp=N,109µm,0.5s						
MGAB	**Montegabbione**	**0.83**	**282**	AML	AML		
	comp=E,270µm,0.9s						
MGAB				AML	AML		
	comp=N,332µm,0.4s						
MGAB				AML	AML		
	comp=N,352µm,0.4s						

MGAB				AML	AML		
	comp=E,328μm,0.9s						
MGAB				AML	AML		
	comp=N,333μm,0.4s						
PIEI	**Pieia**	**0.94**	**328**	AML	AML		
	comp=N,116μm,0.4s						
PIEI				AML	AML		
	comp=N,116μm,0.4s						
PIEI				AML	AML		
	comp=E,138μm,0.7s						
NARO	**Abbazia di Nar**	**0.99**	**332**	AML	AML		
	comp=E,100μm,0.7s						
NARO				AML	AML		
	comp=N,78μm,0.6s						
LPEL	**Lama dei Pelig**	**0.99**	**134**	AML	AML		
	comp=E,124μm,1.6s						
LPEL				AML	AML		
	comp=N,142μm,1.2s						
LPEL				AML	AML		
	comp=E,124μm,1.6s						
FSSB	**Fossombrone**	**1.01**	**341**	AML	AML		
	comp=E,428μm,0.5s						
FSSB				AML	AML		
	comp=N,716μm,0.3s						
GIUL	**Giuliano Di Ro**	**1.18**	**179**	AML	AML		
	comp=E,67μm,1.6s						
GIUL				AML	AML		
	comp=E,67μm,1.6s						
GIUL				AML	AML		
	comp=N,73μm,0.7s						
GIUL				AML	AML		
	comp=N,73μm,0.7s						
ARCI	**Arcidosso**	**1.29**	**276**	P	Pg	07 48 25.3	+2.8
PTRJ	**Pietraroja**	**1.68**	**144**	P	Pn	07 48 26.4	-0.8
PTRJ				S	Sb	07 48 50.0	0.0
CAVE	**Cavezzo**	**2.67**	**324**	⇓P	Pg	07 48 48.0	-0.8
AMUR	**Altamura**	**3.12**	**125**	S	Sn	07 49 27.0	+2.8
DOSS	**Dosso del Somm**	**3.46**	**336**	⇓P	Pn	07 48 54.1	+2.4
LEOD	**Capriano del C**	**3.52**	**322**	S	Sb	07 49 39.0	-3.6
EUCT	**Pavia**	**3.84**	**311**	⇓P	Pn	07 48 59.5	+2.8
CANO	**Canova, Maglio**	**3.91**	**294**	S	Sn	07 49 47.0	+3.3
SPS2	**Spezzano della**	**4.17**	**145**	⇑P	Pn	07 48 58.4	-2.9
SPS2				AML	AML		
	comp=E,29μm,1.6s						
SPS2				AML	AML		
	comp=N,26μm,1.1s						
RISI	**Rein**	**4.29**	**349**	S	Sn	07 49 55.0	+1.8
MUGIO	**Muggio**	**4.37**	**318**	⇑P	Pn	07 49 04.0	-0.1
MUGIO				P	Pg	07 49 18.5	-2.9
VLO	**Vlora**	**5.22**	**114**	P	Pg	07 49 35.6	-2.1

ROM 24 07:48:08.5±0.1, 42°.771N±0°.003×13°.192E±0°.005, h10km, ML2.7/5, 5C-2D, Error ellipse: s-maj=0.4km s-min=0.0km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.07**	**88**	⇓P	Pg	07 48 11.3	+0.5
AQT1				S	Sg	07 48 12.9	+0.3
NRCA	**Norcia**	**0.09**	**318**	⇑P	Pg	07 48 11.4	+0.3
NRCA				S	Sg	07 48 13.0	+0.2
NRCA				AML	AML		
	comp=E,42400μm,0.1s						
NRCA				AML	AML		
	comp=N,47350μm,0.1s						
NRCA				AML	AML		
	comp=E,42450μm,0.1s						
NRCA				AML	AML		
	comp=E,45600μm,0.1s						
NRCA				AML	AML		
	comp=N,43700μm,0.1s						
NRCA				END			
LNSS	**Leonessa**	**0.20**	**214**	⇓P	Pb	07 48 13.6	-0.7
LNSS				S	Sg	07 48 17.4	+1.6
LNSS				AML	AML		
	comp=E,2255μm,1.4s						
LNSS				AML	AML		
	comp=N,4690μm,0.2s						
LNSS				AML	AML		
	comp=E,2250μm,1.4s						
LNSS				END			
FEMA	**Monte Fema**	**0.22**	**331**	⇑P	Pg	07 48 13.6	+0.5
FEMA				S	Sg	07 48 17.3	+1.0
FEMA				AML	AML		
	comp=E,9345μm,0.3s						
FEMA				AML	AML		
	comp=N,3935μm,0.4s						
FEMA				AML	AML		
	comp=N,3635μm,1.0s						
FEMA				AML	AML		
	comp=E,9356μm,0.3s						
FEMA				END			
RM33	**Pellescritta (**	**0.26**	**176**	P	Pb	07 48 14.6	-0.7
RM33				S	Sb	07 48 19.0	-1.0
RM33				AML	AML		
	comp=N,3300μm,0.1s						
RM33				AML	AML		
	comp=N,3295μm,0.1s						
RM33				AML	AML		
	comp=E,3865μm,1.0s						
RM33				AML	AML		
	comp=N,3379μm,0.1s						
RM33				AML	AML		
	comp=E,3833μm,1.0s						
FDMO	**Fiordimonte**	**0.28**	**344**	P	Pg	07 48 14.6	+0.5
FDMO				S	Sg	07 48 18.8	+0.9
FDMO				AML	AML		
	comp=N,1614μm,0.4s						
FDMO				AML	AML		
	comp=E,1894μm,0.2s						
CAMP	**Campotosto**	**0.28**	**146**	⇑P	Pg	07 48 14.7	+0.4
CAMP				S	Sg	07 48 19.4	+1.2
GUMA	**Gualdo di Mace**	**0.31**	**20**	P	Pb	07 48 15.6	-0.6
GUMA				S	Sb	07 48 20.6	-0.7
CESI	**CESI - Serrava**	**0.32**	**318**	⇑P	Pg	07 48 15.3	+0.5
CESI				S	Sb	07 48 20.3	-1.2
CESI				AML	AML		
	comp=N,5230μm,0.2s						
CESI				AML	AML		
	comp=E,2060μm,1.4s						
CESI				AML	AML		
CSP1	**Cessapalombo**	**0.32**	**2**	P	Pg	07 48 15.4	+0.5
CSP1				S	Sb	07 48 20.6	-1.1
TERO	**Teramo**	**0.34**	**116**	⇑P	Pg	07 48 15.5	+0.3
TERO				S	Sg	07 48 20.8	+1.0
TERO				AML	AML		
	comp=N,1162μm,0.1s						
TERO				AML	AML		
	comp=E,1091μm,0.1s						
TERO				AML	AML		
	comp=E,952μm,0.1s						
TERO				AML	AML		
	comp=N,1213μm,0.7s						
ARRO	**Arrone**	**0.37**	**239**	P	Pb	07 48 16.6	-0.6
ARRO				S	Sg	07 48 21.7	+1.0
OFFI	**Offida**	**0.40**	**66**	P	Pb	07 48 17.6	0.0
SEF1	**Sefro**	**0.42**	**335**	P	Pg	07 48 17.0	+0.3
SEF1				S	Sb	07 48 23.6	-0.7
MNTP	**Montappone**	**0.42**	**29**	P	Pb	07 48 17.9	-0.1
GIGS	**Gran Sasso**	**0.42**	**139**	P	Pg	07 48 16.9	+0.1
GAG1	**Gagliole**	**0.48**	**349**	P	Pg	07 48 18.4	+0.6
GAG1				S	Sb	07 48 25.5	-0.5
ASSB	**Assisi San Ben**	**0.48**	**305**	P	Pg	07 48 18.1	+0.2
ASSB				S	Sb	07 48 25.5	-0.6
FIAM	**Fiamignano**	**0.51**	**186**	P	Pg	07 48 18.9	+0.6
FIAM				S	Sb	07 48 26.3	-0.6
SNTG	**Esanatoglia**	**0.52**	**339**	P	Pg	07 48 18.9	+0.3
SNTG				S	Sb	07 48 26.6	-0.7
TRTR	**Tortoreto Alta**	**0.53**	**86**	P	Pg	07 48 18.9	0.0
ARVD	**Arcevia**	**0.75**	**346**	AML	AML		
	comp=E,204μm,0.3s						
ARVD				AML	AML		
	comp=N,174μm,1.1s						
MPAG	**Monte Paganucc**	**0.91**	**340**	S	Sn	07 48 41.0	+0.3
TRIF	**Trifonti**	**1.72**	**282**	S	Sg	07 49 03.0	-0.7
PAOL	**Paolisi**	**2.02**	**149**	S	Sn	07 49 08.0	+0.1
MRB1	**Monte Rocchett**	**2.11**	**140**	S	Sg	07 49 15.0	-1.4

IDC 24 07:48:34.1±3.1, 54°.25N×87°.39E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=24.5km s-min=17.5km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.54**	**260**	*i*		07 57 20.5	
	baz=79,slow=326						
ZALV	**Zalesovo Beam**	**1.54**	**260**	Pg	Pn	07 49 00.8	-1.9
	0.7nm,0.3s,baz=77,slow=14,SNR=7.8						
ZALV				Lg	Lg	07 49 24.3	
	0.7nm,0.3s,baz=75,slow=30,SNR=2.6						
KURBB	**Kurchatov Arra**	**6.52**	**240**	Pn	Pn	07 50 11.7	+0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=8.2						
KURBB				Sn	Sn	07 51 24.8	-1.4
	baz=54,slow=22,SNR=2.0						
KURBB				Lg	Lg	07 52 01.0	
	baz=57,slow=32,SNR=3.6						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**8.14**	**206**	Pn	Pn	07 50 35.1	+1.7
	0.2nm,0.3s,baz=22,slow=11,SNR=4.2						
MKAR				Sn	Sn	07 52 04.8	-1.2
	baz=27,slow=29,SNR=2.3						
MKAR				Lg	Lg	07 52 55.1	
	baz=19,slow=31						
	0.3nm,0.4s						

*VIE **24** 07:50:39.0±0.1, 47°.50N×14°.91E, h0km, mb2.0/17, ml2.3/16, Error ellipse: s-maj=0.9km s-min=0.6km az=157.0 1 km S of Erzberg Mining explosion.*
*PRU **24** 07:50:40.6±0.0, 47°.58N×14°.99E, h0km*
ISC 24 07:50:39.2±0.7, 47°.53N±0°.02×14°.94E±0°.02, h0km, n36, σ1s08/64, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSA	**Arzberg**	**0.49**	**125**	Pg	**Pg**	**07 50 48.8**	**+0.3**
	7.5nm,0.1s,SNR=58						
ARSA				*e*Sg	**Sg**	**07 50 55.3**	**+0.5**
	30nm,0.3s						
MOA	**Molln**	**0.56**	**305**	*e*Pg	**Pg**	**07 50 49.2**	**-0.6**
	4.7nm,0.1s						
MOA				*e*Sg	**Sg**	**07 50 57.8**	**+0.8**
	11nm,0.2s						
CONA	**Conrad Observa**	**0.74**	**57**	Pg	**Pg**	**07 50 53.7**	**+0.3**
	SNR=12						
CONA				*e*Sg	**Sg**	**07 51 04.0**	**+1.0**
	4.4nm,0.1s						
SOKA	**Soboth**	**0.85**	**176**	Pg	**Pg**	**07 50 55.3**	**-0.3**
	9.1nm,0.3s,SNR=7.4						
SOKA				*e*Sg	**Sg**	**07 51 06.5**	**-0.2**
	10.0nm,0.4s						
BIOA	**Bad Ischl, Aus**	**0.89**	**281**	Pg	**Pg**	**07 50 56.3**	**0.0**
	3.7nm,0.1s,SNR=6.9						
BIOA				*e*Sg	**Sg**	**07 51 08.5**	**+0.5**
	9.3nm,0.3s						
RONA	**Rosalia, Austr**	**0.94**	**79**	Pg	**Pg**	**07 50 58.0**	**+0.8**
	6.0nm,0.1s,SNR=48						
RONA				*e*Sg	**Sb**	**07 51 11.4**	**+0.1**
	16nm,0.3s						
OBKA	**Obir**	**1.06**	**195**	Pg	**Pg**	**07 50 59.2**	**-0.2**
	3.8nm,0.2s,SNR=9.6						
OBKA				*e*Sg	**Sg**	**07 51 13.9**	**+0.8**
	4.8nm,0.2s						
SOP	**Sopron**	**1.11**	**81**	P	**Pg**	**07 51 00.6**	**+0.1**
SOP				S	**Sb**	**07 51 16.7**	**+0.5**
KBA	**Koelnbreinsper**	**1.18**	**248**	*e*Pg	**Pg**	**07 51 00.5**	**-1.2**
	8.2nm,0.3s,SNR=9.9						
KBA				*e*Sg	**Sg**	**07 51 16.4**	**-0.6**
	6.1nm,0.2s						
MYKA	**Terra Mystica**	**1.26**	**225**	*e*Pg	**Pg**	**07 51 02.5**	**-0.9**
	2.5nm,0.2s,SNR=5.5						
MYKA				*e*Sg	**Sg**	**07 51 19.8**	**0.0**
	1.5nm,0.2s						
CKRC	**Cesky Krumlov**	**1.36**	**342**	*e*PG	**Pg**	**07 51 05.0**	**-0.3**
CKRC				*e*SG	**Sg**	**07 51 23.0**	**+0.2**
LOBO	**Lobor**	**1.58**	**150**	*e*Pg	**Pb**	**07 51 09.6**	**+0.3**
LOBO				Sg	**Sn**	**07 51 28.5**	**-1.2**
EGYH	**Egyhazaskeszo**	**1.63**	**93**	P	**Pn**	**07 51 09.6**	**+0.5**
KALN	**Kalnik**	**1.75**	**143**	*e*Pg	**Pn**	**07 51 11.7**	**+0.9**
KALN				Sg	**Sn**	**07 51 30.0**	**-3.8**
PTJ	**Puntijarka**	**1.77**	**156**	*e*Pg	**Pb**	**07 51 13.2**	**+0.6**
MPLH	**Magyarpolny**	**1.81**	**101**	P	**Pn**	**07 51 11.8**	**+0.2**
KRUC	**Moravsky**	**1.81**	**32**	*e*PN	**Pn**	**07 51 11.9**	**+0.1**
KRUC				*e*SG	**Sn**	**07 51 35.3**	**-0.2**
ABTA	**Abfaltersbach**	**1.83**	**246**	*e*Pn	**Pn**	**07 51 11.9**	**-0.1**
	1.2nm,0.2s						
ABTA				*e*Sn	**Sn**	**07 51 35.6**	**-0.4**
	1.6nm,0.2s						
KHC	**Kasperske Hory**	**1.84**	**331**	*e*PG	**Pn**	**07 51 12.0**	**-0.1**
KHC				*e*SG	**Sb**	**07 51 37.7**	**+0.3**
	comp=Z,31nm,0.7s						
VRAC	**Vranov**	**2.09**	**31**	*e*PN	**Pn**	**07 51 15.7**	**+0.1**
VRAC				*e*SG	**Sn**	**07 51 43.6**	**+1.3**
WTTA	**Wattenberg**	**2.26**	**264**	*e*Pg	**Pb**	**07 51 20.8**	**-0.2**
	5.9nm,0.2s						
WTTA				*e*Sn	**Sn**	**07 51 46.3**	**-0.4**
	6.8nm,0.3s						
WATA	**Walderalm**	**2.29**	**266**	*e*Pg	**Pb**	**07 51 20.9**	**-0.7**
	1.9nm,0.2s						
WATA				*e*Sg	**Sg**	**07 51 52.8**	**0.0**
	2.6nm,0.2s						
MOSL	**Moslavina**	**2.29**	**146**	*e*Pn	**Pn**	**07 51 17.7**	**-0.6**
PRU	**Pruhonice**	**2.47**	**354**	*e*PG	**Pb**	**07 51 24.6**	**0.0**
PRU				*e*SG	**Sb**	**07 51 57.2**	**+1.6**
	comp=Z,10nm,0.4s						
SQTA	**Sankt Quirin**	**2.55**	**264**	*e*Pg	**Pn**	**07 51 23.7**	**+1.7**
	0.9nm,0.1s						
SQTA				*e*Sn	**Sn**	**07 51 56.6**	**+2.8**
	4.5nm,0.3s						
KOVH	**Kovagotottos**	**2.61**	**122**	P	**Pn**	**07 51 22.1**	**-0.5**
MOTA	**Moosalm**	**2.61**	**267**	*e*Pg	**Pn**	**07 51 24.8**	**+2.0**
	0.8nm,0.1s						
MOTA				*e*Sg	**Sg**	**07 52 02.9**	**-0.1**
	3.3nm,0.3s						
KRLC	**Kraliky**	**2.82**	**25**	*e*PG	**Pb**	**07 51 31.0**	**+0.4**
KRLC				*e*SG	**Sg**	**07 52 08.5**	**-1.4**
	comp=Z,12nm,0.4s						
RETA	**Reutte**	**2.83**	**271**	*e*Pg	**Pg**	**07 51 33.0**	**-0.5**
	2.1nm,0.2s						
RETA				*e*Sn	**Sn**	**07 52 01.0**	**+0.4**
	1.4nm,0.2s						
MORH	**Mrgy, Hungar**	**2.86**	**116**	P	**Pn**	**07 51 26.3**	**+0.2**
A252A	**Venje**	**2.90**	**135**	*e*Pn	**Pn**	**07 51 26.0**	**-0.7**
FETA	**Feichten**	**2.91**	**261**	*e*Pn	**Pn**	**07 51 27.8**	**+0.9**
	1.1nm,0.3s						
FETA				*e*Sn	**Sn**	**07 52 02.4**	**-0.3**
	1.8nm,0.3s						
DPC	**Dobruska-Polom**	**2.97**	**17**	*e*PG	**Pb**	**07 51 33.1**	**+0.1**
DPC				*e*SG	**Sg**	**07 52 12.4**	**-2.1**
	comp=Z,6.8nm,0.3s						
UPC	**Upice**	**3.06**	**13**	*e*PG	**Pb**	**07 51 35.1**	**+0.5**
UPC				*e*SG	**Sg**	**07 52 15.3**	**-2.3**
	comp=Z,11nm,0.8s						
OSTC	**Ostas**	**3.14**	**15**	*e*PG	**Pb**	**07 51 36.7**	**+0.7**
OSTC				*e*SG	**Sg**	**07 52 18.8**	**-1.4**
	comp=Z,8.2nm,0.6s						
CLL	**Collm**	**3.99**	**342**	*ex*	x	07 51 53.0	
CLL				*e*Sg	**Sg**	**07 52 44.0**	**-3.2**
	comp=Z,7.0nm,0.7s						

ROM 24 07:51:52.8±0.1, 42°.747N±0°.003×13°.201E±0°.006, h10km, ML1.9/12, Error ellipse: s-maj=0.4km s-min=0.2km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**324**	P	Pg	07 51 56.0	+0.4
NRCA				S	Sg	07 51 57.9	+0.3
NRCA				AML	AML		
	comp=E,8705μm,1.4s						
NRCA				AML	AML		
	comp=N,11200μm,1.0s						
NRCA				AML	AML		
	comp=E,9965μm,1.4s						
NRCA				AML	AML		
	comp=N,12300μm,1.0s						
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,9851μm,0.2s						
LNSS	**Leonessa**	**0.19**	**220**	P	Pb	07 51 57.6	-0.8
LNSS				S	Sg	07 52 00.8	+1.2
LNSS				AML	AML		
	comp=E,1510μm,0.7s						
LNSS				AML	AML		
	comp=N,3190μm,0.7s						
LNSS				AML	AML		
	comp=E,2550μm,0.1s						
LNSS				AML	AML		
	comp=N,4700μm,0.1s						
LNSS				AML	AML		
	comp=E,418μm,0.2s						
RM33	**Pellescritta (**	**0.24**	**178**	P	Pb	07 51 58.6	-0.7
RM33				S	Sg	07 52 02.7	+1.6
RM33				AML	AML		
	comp=E,5780μm,0.5s						
RM33				AML	AML		
	comp=N,5565μm,1.2s						
RM33				AML	AML		
	comp=E,5770μm,0.5s						
RM33				AML	AML		
	comp=N,5385μm,1.2s						
RM33				AML	AML		
	comp=N,5560μm,1.2s						
RM33				AML	AML		
	comp=N,5390μm,1.2s						
RM33				AML	AML		
	comp=N,449μm,0.2s						
FEMA	**Monte Fema**	**0.24**	**333**	P	Pg	07 51 58.3	+0.5
FEMA				S	Sg	07 52 02.3	+1.0
CAMP	**Campotosto**	**0.26**	**144**	P	Pg	07 51 58.8	+0.6
CAMP				S	Sb	07 52 03.2	-1.1
FDMO	**Fiordimonte**	**0.30**	**344**	P	Pg	07 51 59.4	+0.5
FDMO				S	Sg	07 52 04.1	+1.1
FDMO				AML	AML		
	comp=E,254μm,0.3s						
FDMO				AML	AML		
	comp=N,336μm,0.6s						
FDMO				AML	AML		
	comp=E,1795μm,1.2s						
FDMO				AML	AML		
	comp=N,2425μm,1.1s						
FDMO				AML	AML		
	comp=N,299μm,0.2s						
TERO	**Teramo**	**0.32**	**112**	P	Pg	07 51 59.7	+0.5
TERO				S	Sb	07 52 05.1	-0.8
TERO				AML	AML		
	comp=E,3275μm,1.0s						
TERO				AML	AML		
	comp=N,5390μm,0.2s						
TERO				AML	AML		
	comp=E,3680μm,1.2s						
TERO				AML	AML		
	comp=N,6190μm,0.2s						
TERO				AML	AML		
	comp=N,249μm,0.1s						
GUMA	**Gualdo di Mace**	**0.33**	**17**	P	Pb	07 52 00.2	-0.6
GUMA				S	Sb	07 52 05.8	-0.4
GUMA				AML	AML		
	comp=E,2345μm,1.0s						
GUMA				AML	AML		
	comp=N,2725μm,0.5s						
GUMA				AML	AML		
	comp=N,1015μm,0.2s						
CESI	**CESI - Serrava**	**0.34**	**320**	P	Pg	07 51 59.9	+0.4
CESI				S	Sg	07 52 05.2	+1.1
CESI				AML	AML		
	comp=E,306μm,0.5s						
CESI				AML	AML		
	comp=N,522μm,0.4s						
CESI				AML	AML		
	comp=E,2850μm,0.2s						
CESI				AML	AML		
	comp=N,3620μm,0.2s						
CESI				AML	AML		
	comp=N,522μm,0.4s						
CSP1	**Cessapalombo**	**0.34**	**1**	P	Pg	07 52 00.2	+0.4
CSP1				S	Sg	07 52 05.5	+1.2
CSP1				AML	AML		
	comp=E,338μm,0.2s						
ARRO	**Arrone**	**0.36**	**243**	P	Pb	07 52 01.6	+0.3
ARRO				S	Sb	07 52 06.0	-1.1
ARRO				AML	AML		
	comp=E,356μm,0.2s						
ARRO				AML	AML		
	comp=N,500μm,0.2s						
ARRO				AML	AML		
	comp=E,2370μm,0.2s						
ARRO				AML	AML		
	comp=N,1400μm,0.3s						
ARRO				AML	AML		
	comp=N,228μm,0.2s						
GIGS	**Gran Sasso**	**0.40**	**137**	P	Pg	07 52 01.0	+0.2
GIGS				S	Sg	07 52 07.1	+1.0
GIGS				AML	AML		
	comp=N,323μm,0.5s						
GIGS				AML	AML		
	comp=E,384μm,0.7s						
GIGS				AML	AML		
	comp=N,324μm,0.5s						
GIGS				AML	AML		
	comp=E,54μm,0.1s						
CESX	**Cesi**	**0.48**	**254**	P	Pb	07 52 03.2	-0.1
CESX				S	Sg	07 52 09.2	+0.8
FIAM	**Fiamignano**	**0.48**	**187**	P	Pg	07 52 02.6	+0.4
FIAM				S	Sg	07 52 09.3	+0.7
FIAM				AML	AML		
	comp=E,582μm,0.6s						
FIAM				AML	AML		
	comp=N,338μm,0.5s						
FIAM				AML	AML		
	comp=E,73μm,0.8s						
ASSB	**Assisi San Ben**	**0.50**	**307**	P	Pg	07 52 02.6	+0.1
ASSB				S	Sb	07 52 10.8	-0.2
ASSB				AML	AML		
	comp=E,1760μm,1.0s						
ASSB				AML	AML		
	comp=N,1360μm,0.3s						
ASSB				AML	AML		
	comp=N,88μm,0.2s						
SNTG	**Esanatoglia**	**0.54**	**340**	P	Pg	07 52 03.5	+0.1
SNTG				S	Sb	07 52 11.8	-0.5
SNTG				AML	AML		
	comp=E,680μm,0.7s						
SNTG				AML	AML		
	comp=N,843μm,0.4s						
T0110	**Collepietro**	**0.67**	**140**	P	Pg	07 52 06.3	+0.4
T0110				AML	AML		
	comp=E,761μm,1.4s						
T0110				AML	AML		
	comp=N,1275μm,1.2s						
T0110				AML	AML		
	comp=N,262μm,0.4s						
SSFR	**Montelago di S**	**0.76**	**336**	P	Pb	07 52 07.7	-0.3
SSFR				AML	AML		
	comp=E,1725μm,1.2s						
SSFR				AML	AML		
	comp=N,2100μm,0.8s						
SSFR				AML	AML		
	comp=E,1540μm,1.3s						
SSFR				AML	AML		
	comp=N,1805μm,0.8s						
SSFR				AML	AML		
	comp=N,219μm,1.1s						
MGAB	**Montegabbione**	**0.82**	**282**	P	Pn	07 52 11.3	+0.9
MGAB				S	Sg	07 52 19.7	+0.5
PIEI	**Pieia**	**0.93**	**329**	P	Pg	07 52 10.7	0.0
PIEI				AML	AML		
	comp=E,484μm,0.3s						
PIEI				AML	AML		
	comp=N,260μm,0.3s						
PIEI				AML	AML		
	comp=E,38μm,2.0s						
ARCI	**Arcidosso**	**1.27**	**275**	AML	AML		
	comp=N,85μm,1.5s						
ARCI				AML	AML		
	comp=E,152μm,0.6s						
PTRJ	**Pietraroja**	**1.70**	**144**	S	Sg	07 52 49.0	+1.6
PAOL	**Paolisi**	**2.00**	**149**	S	Sn	07 52 51.0	-0.7
ZCCA	**Zocca**	**2.28**	**316**	S	Sb	07 53 04.0	+1.7

ROM 24 07:52:17.1±0.1, 42°.623N±0°.006×13°.294E±0°.005, h7km, ML2.5/11, 3C, Error ellipse: s-maj=0.6km s-min=0.4km az=175.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**136**	P	Pg	07 52 20.3	+0.6
CAMP				S	Sg	07 52 22.4	+0.8
CAMP				AML	AML		

	comp=E,3150µm,0.6s							
CAMP					AML	AML		
	comp=N,2005µm,0.6s							
CAMP					AML	AML		
	comp=N,3440µm,0.8s							
CAMP					AML	AML		
	comp=E,5565µm,0.6s							
CAMP					AML	AML		
	comp=E,3149µm,0.6s							
CAMP					AML	AML		
	comp=N,2008µm,0.6s							
RM33	**Pellescritta (**	**0.13**	**207**	⇑P		Pg	07 52 20.6	+0.8
RM33				S		Sg	07 52 22.9	+1.2
RM33				AML	AML			
	comp=E,5785µm,0.5s							
RM33				AML	AML			
	comp=N,5565µm,1.2s							
RM33				AML	AML			
	comp=E,5770µm,0.5s							
RM33				AML	AML			
	comp=N,5385µm,1.2s							
RM33				AML	AML			
	comp=E,13000µm,0.2s							
RM33				AML	AML			
	comp=N,9085µm,0.2s							
RM33				AML	AML			
	comp=N,8860µm,0.2s							
RM33				AML	AML			
	comp=E,13000µm,0.2s							
RM33				AML	AML			
	comp=E,5773µm,0.5s							
RM33				AML	AML			
	comp=E,5780µm,0.5s							
RM33				AML	AML			
	comp=N,4959µm,0.3s							
RM33				AML	AML			
	comp=N,5116µm,0.3s							
LNSS	**Leonessa**	**0.19**	**264**	P		Pg	07 52 21.6	+0.7
LNSS				S		Sg	07 52 25.1	+1.6
LNSS				AML	AML			
	comp=N,45700µm,0.3s							
LNSS				AML	AML			
	comp=E,28400µm,0.2s							
LNSS				AML	AML			
	comp=N,3119µm,0.2s							
LNSS				AML	AML			
	comp=E,1552µm,0.6s							
TERO	**Teramo**	**0.23**	**90**	P		Pg	07 52 22.1	+0.5
TERO				S		Sg	07 52 25.5	+0.8
TERO				AML	AML			
	comp=E,3280µm,1.0s							
TERO				AML	AML			
	comp=N,5390µm,0.2s							
TERO				AML	AML			
	comp=E,3680µm,1.2s							
TERO				AML	AML			
	comp=N,6190µm,0.2s							
TERO				AML	AML			
	comp=N,11600µm,0.1s							
TERO				AML	AML			
	comp=N,9925µm,0.1s							
TERO				AML	AML			
	comp=E,10450µm,0.8s							
TERO				AML	AML			
	comp=E,11550µm,0.8s							
TERO				AML	AML			
	comp=E,3236µm,0.3s							
TERO				AML	AML			
	comp=N,6188µm,0.2s							
TERO				AML	AML			
	comp=N,5390µm,0.2s							
TERO				AML	AML			
	comp=E,3526µm,0.3s							
GIGS	**Gran Sasso**	**0.27**	**130**	P		Pg	07 52 22.9	+0.5
GIGS				S		Sg	07 52 27.0	+1.1
GIGS				AML	AML			
	comp=E,384µm,0.7s							
GIGS				AML	AML			
	comp=N,323µm,0.5s							
GIGS				AML	AML			
	comp=E,1082µm,0.3s							
GIGS				AML	AML			
	comp=N,1270µm,1.2s							
GIGS				AML	AML			
	comp=N,320µm,0.1s							
GIGS				AML	AML			
	comp=E,383µm,0.7s							
AQU	**L'Aquila**	**0.28**	**163**	P		Pg	07 52 23.3	+0.7
AQU				S		Sg	07 52 27.8	+1.4
AQU				AML	AML			
	comp=E,1020µm,1.2s							
AQU				AML	AML			
	comp=N,1178µm,0.2s							
AQU				AML	AML			
	comp=E,1019µm,1.2s							
AQU				AML	AML			
	comp=N,1185µm,0.3s							
AQU				AML	AML			
	comp=N,3175µm,0.3s							
AQU				AML	AML			
	comp=E,2820µm,1.1s							
AQU				AML	AML			
	comp=N,2970µm,0.3s							
AQU				AML	AML			
	comp=E,2810µm,1.1s							
AQU				AML	AML			
	comp=N,1185µm,0.3s							
AQU				AML	AML			
	comp=N,1180µm,0.2s							
AQU				AML	AML			
	comp=E,1023µm,1.2s							
AQU				AML	AML			
	comp=E,1019µm,1.2s							
FEMA	**Monte Fema**	**0.38**	**332**	P		Pg	07 52 25.2	+0.6
FEMA				S		Sb	07 52 31.4	-1.1
ARRO	**Arrone**	**0.39**	**264**	P		Pg	07 52 25.2	+0.5
ARRO				S		Sb	07 52 32.0	-0.6
ARRO				AML	AML			
	comp=E,4665µm,1.5s							
ARRO				AML	AML			
	comp=N,6345µm,0.3s							
ARRO				AML	AML			
	comp=N,787µm,0.4s							
ARRO				AML	AML			
	comp=E,664µm,0.2s							
OFFI	**Offida**	**0.42**	**43**	P		Pb	07 52 26.6	-0.3
OFFI				S		Sb	07 52 33.4	-0.2
OFFI				AML	AML			
	comp=E,10730µm,0.4s							
OFFI				AML	AML			
	comp=N,13150µm,0.6s							
OFFI				AML	AML			
	comp=N,1842µm,0.6s							
OFFI				AML	AML			
	comp=E,1943µm,0.6s							
FDMO	**Fiordimonte**	**0.44**	**340**	P		Pg	07 52 26.4	+0.7
FDMO				S		Sb	07 52 33.0	-1.0
GUMA	**Gualdo di Mace**	**0.44**	**4**	P		Pb	07 52 26.5	-0.8
GUMA				S		Sb	07 52 34.1	0.0
VCEL	**Villa Celiera**	**0.46**	**119**	P		Pb	07 52 26.9	-0.8
VCEL				S		Sb	07 52 34.4	-0.4
CESI	**CESI - Serrava**	**0.48**	**323**	⇑P		Pg	07 52 26.9	+0.5
CESI				S		Sb	07 52 34.3	-0.9
CESI				AML	AML			
	comp=E,27050µm,0.3s							
CESI				AML	AML			
	comp=N,51050µm,0.3s							
CESI				AML	AML			
	comp=N,902µm,0.2s							
CESI				AML	AML			
	comp=E,538µm,0.2s							
TRTR	**Tortoreto Alta**	**0.49**	**68**	⇑P		Pb	07 52 28.2	+0.1
TRTR				S		Sb	07 52 35.5	0.0
TRTR				AML	AML			
	comp=N,7420µm,0.3s							
TRTR				AML	AML			
	comp=E,7610µm,0.9s							
TRTR				AML	AML			
	comp=E,1243µm,1.0s							
TRTR				AML	AML			
	comp=N,1047µm,1.0s							
CESX	**Cesi**	**0.53**	**269**	P		Pg	07 52 27.5	+0.3
CESX				S		Sb	07 52 35.8	-0.7
MDAR	**Monte D'Aria**	**0.58**	**349**	P		Pg	07 52 20.3	-8.0
MDAR				S		Sb	07 52 37.8	-0.4
ASSB	**Assisi San Ben**	**0.63**	**312**	P		Pb	07 52 29.9	-0.5
ASSB				S		Sb	07 52 39.4	-0.1
GAG1	**Gagliole**	**0.64**	**345**	P		Pg	07 52 21.4	-7.9
GAG1				S		Sb	07 52 39.7	0.0
CERT		**0.71**	**199**	P		Pb	07 52 31.6	-0.3
RCAV	**Rocca di Cave**	**0.82**	**199**	AML	AML			
	comp=E,1810µm,1.1s							
RCAV				AML	AML			
	comp=N,2195µm,0.4s							
RCAV				AML	AML			
	comp=N,380µm,0.7s							
RCAV				AML	AML			
	comp=E,393µm,1.6s							
ZCCA	**Zocca**	**2.41**	**316**	S		Sg	07 53 33.0	-1.6

ROM ***24*** *07:53:01.4±0.0,42.°807N±0.°002×13.°168E±0.°004,*
h10km,ML3.3/50,Error ellipse: s-maj=0.3km s-min=0.0km
az=248.0
PRU ***24*** *07:53:02.9±0.0,42.°86N×13.°62E,h0km*
BEO ***24*** *07:53:05.3±3.1,42.°69N×13.°15E,h40km±1km,ML3.2/4*
ISC 24 07:53:01.9±0.8**,42.°80N**±0.°02×**13.°17E**±0.°02,**h10**km±5km,
n120,σ1=26/149,36C-14D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**308**	⇑P		**07 53 03.8**	**-0.3**
NRCA				S		**Sg 07 53 05.0**	**-0.7**
AQT1	**Arquata del Tr**	**0.10**	**108**	⇓P		**Pg 07 53 04.8**	**+0.2**
AQT1				S		**Sg 07 53 06.8**	**+0.3**
FEMA	**Monte Fema**	**0.18**	**331**	⇑P		**Pg 07 53 05.8**	**-0.1**
FEMA				S		**Sg 07 53 08.8**	**+0.1**
FEMA				AML	AML		
	comp=E,33100µm,0.4s						
FEMA				AML	AML		
	comp=N,29050µm,0.3s						
LNSS	**Leonessa**	**0.22**	**205**	⇓P		**Pg 07 53 06.9**	**+0.3**
LNSS				S		**Sg 07 53 10.9**	**+1.1**
LNSS				AML	AML		
	comp=N,45700µm,0.3s						
LNSS				AML	AML		
	comp=E,28400µm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**346**	⇑P		**Pg 07 53 06.7**	**-0.2**
FDMO				S		**Sg 07 53 10.7**	**+0.4**
FDMO				AML	AML		
	comp=N,8460µm,1.6s						
FDMO				AML	AML		
	comp=E,10230µm,0.4s						
CESI	**CESI - Serrava**	**0.28**	**316**	⇑P		**Pg 07 53 07.5**	**-0.1**
CESI				S		**Sg 07 53 12.0**	**+0.6**
CESI				AML	AML		
	comp=E,27050µm,0.3s						
CESI				AML	AML		
	comp=N,51050µm,0.3s						
GUMA	**Gualdo di Mace**	**0.29**	**25**	⇓P		**Pg 07 53 08.0**	**+0.3**
GUMA				S		**Sg 07 53 12.9**	**+1.2**
GUMA				AML	AML		
	comp=N,22800µm,0.5s						
GUMA				AML	AML		
	comp=N,24850µm,0.5s						
GUMA				AML	AML		
	comp=E,27000µm,0.3s						
GUMA				AML	AML		
	comp=E,26050µm,0.3s						
CSP1	**Cessapalombo**	**0.29**	**5**	⇓P		**Pg 07 53 07.8**	**-0.1**
CSP1				S		**Sg 07 53 12.4**	**+0.6**
CSP1				AML	AML		
	comp=E,9320µm,0.3s						
CSP1				AML	AML		
	comp=N,9785µm,0.3s						
CSP1				AML	AML		
	comp=E,9355µm,0.3s						
CSP1				AML	AML		
	comp=N,9780µm,0.3s						
RM33	**Pellescritta (**	**0.30**	**173**	⇑P		**Pg 07 53 08.0**	**+0.1**
RM33				S		**Sg 07 53 13.1**	**+1.1**
RM33				AML	AML		
	comp=E,13000µm,0.2s						
RM33				AML	AML		
	comp=N,9070µm,0.2s						
RM33				AML	AML		
	comp=N,8855µm,0.2s						
RM33				AML	AML		
	comp=N,9105µm,0.2s						
RM33				AML	AML		
	comp=N,8865µm,0.2s						
RM33				AML	AML		
	comp=E,13000µm,0.2s						
RM33				AML	AML		
	comp=N,8860µm,0.2s						
RM33				AML	AML		
	comp=N,9085µm,0.2s						
RM33				AML	AML		
	comp=N,8870µm,0.2s						
RM33				AML	AML		
	comp=E,12950µm,0.2s						
RM33				AML	AML		
	comp=E,12950µm,0.2s						
CAMP	**Campotosto**	**0.32**	**146**	⇑P		**Pg 07 53 08.4**	**0.0**
CAMP				S		**Sg 07 53 13.6**	**+0.9**
CAMP				AML	AML		
	comp=E,5565µm,0.6s						
CAMP				AML	AML		
	comp=N,3440µm,0.8s						
TERO	**Teramo**	**0.37**	**119**	⇑P		**Pg 07 53 09.1**	**-0.2**
TERO				S		**Sg 07 53 15.0**	**+0.8**
TERO				AML	AML		
	comp=E,10455µm,0.8s						
TERO				AML	AML		
	comp=N,9935µm,0.1s						
TERO				AML	AML		
	comp=E,10495µm,0.8s						
TERO				AML	AML		
	comp=N,9960µm,0.1s						
TERO				AML	AML		
	comp=E,11550µm,0.8s						
TERO				AML	AML		
	comp=E,10450µm,0.8s						
TERO				AML	AML		
	comp=N,9925µm,0.1s						
TERO				AML	AML		
	comp=N,11600µm,0.1s						
TERO				AML	AML		
	comp=E,10500µm,0.8s						
TERO				AML	AML		
	comp=N,9915µm,0.1s						
ARRO	**Arrone**	**0.37**	**233**	⇓P		**Pg 07 53 09.3**	**0.0**
ARRO				AML	AML		
	comp=N,6345µm,0.3s						
ARRO				AML	AML		
	comp=E,4665µm,1.5s						
SEF1	**Sefro**	**0.38**	**335**	⇑P		**Pg 07 53 09.2**	**-0.3**
SEF1				S		**Sg 07 53 15.2**	**+0.7**
SEF1				AML	AML		
	comp=E,15000µm,0.3s						
SEF1				AML	AML		
	comp=N,13900µm,0.2s						
SEF1				AML	AML		
	comp=N,13850µm,0.2s						
SEF1				AML	AML		
	comp=N,13900µm,0.2s						
MDAR	**Monte D'Aria**	**0.39**	**357**	⇑P		**Pg 07 53 09.5**	**-0.2**
MDAR				S		**Sg 07 53 15.6**	**+0.7**
PIO1	**Pioraco**	**0.40**	**340**	⇑P		**Pg 07 53 09.5**	**-0.3**
PIO1				S		**Sg 07 53 15.7**	**+0.6**
PIO1				AML	AML		
	comp=E,3380µm,0.7s						
PIO1				AML	AML		
	comp=N,7015µm,0.5s						
PIO1				AML	AML		
	comp=E,3385µm,0.7s						
PIO1				AML	AML		
	comp=N,7010µm,0.5s						
MNTP	**Montappone**	**0.40**	**33**	P		**Pg 07 53 10.4**	**+0.6**
MNTP				AML	AML		
	comp=E,7705µm,0.5s						
MNTP				AML	AML		
	comp=N,6970µm,0.3s						
OFFI	**Offida**	**0.40**	**71**	⇑P		**Pb 07 53 10.6**	**-0.5**
OFFI				AML	AML		
	comp=E,10730µm,0.4s						
OFFI				AML	AML		
	comp=N,13150µm,0.6s						
SSM1	**San Severino M**	**0.42**	**1**	P		**Pg 07 53 10.1**	**-0.2**
SSM1				S		**Sg 07 53 16.7**	**+0.8**
GAG1	**Gagliole**	**0.44**	**350**	⇑P		**Pg 07 53 10.5**	**-0.1**
GAG1				S		**Sg 07 53 17.4**	**+1.0**
GAG1				AML	AML		
GAG1				AML	AML		
	comp=N,13400µm,0.4s						
GAG1				AML	AML		
GAG1				AML	AML		
	comp=N,13395µm,0.4s						
ASSB	**Assisi San Ben**	**0.44**	**303**	⇑P		**Pg 07 53 10.3**	**-0.3**
ASSB				S		**Sg 07 53 17.1**	**+0.6**
ASSB				AML	AML		
	comp=E,12900µm,0.2s						
ASSB				AML	AML		
	comp=N,13600µm,0.2s						
GIGS	**Gran Sasso**	**0.46**	**140**	⇑P		**Pg 07 53 10.5**	**-0.5**
GIGS				S		**Sg 07 53 17.6**	**+0.5**
GIGS				AML	AML		
	comp=E,1082µm,0.3s						
GIGS				AML	AML		
	comp=E,1082µm,0.3s						
GIGS				AML	AML		
	comp=N,1270µm,1.2s						
CESX	**Cesi**	**0.47**	**246**	⇑P		**Pg 07 53 11.0**	**-0.2**
CESX				S		**Sg 07 53 18.2**	**+0.8**
CESX				AML	AML		
	comp=N,5430µm,0.5s						
CESX				AML	AML		
	comp=E,6220µm,0.3s						
AQU	**L'Aquila**	**0.48**	**159**	⇑P		**Pg 07 53 11.2**	**-0.2**
AQU				S		**Sb 07 53 18.8**	**-0.8**
AQU				AML	AML		
	comp=E,2815µm,1.1s						
AQU				AML	AML		
	comp=N,3170µm,0.3s						
AQU				AML	AML		
	comp=N,2970µm,0.3s						
AQU				AML	AML		
	comp=E,2820µm,1.1s						
AQU				AML	AML		
	comp=E,2810µm,1.1s						
SNTG	**Esanatoglia**	**0.48**	**340**	⇑P		**Pg 07 53 10.9**	**-0.5**
SNTG				S		**Sg 07 53 18.3**	**+0.6**
SNTG				AML	AML		
	comp=E,367µm,0.7s						
SNTG				AML	AML		
	comp=N,388µm,0.5s						
SNTG				AML	AML		
	comp=E,366µm,0.7s						
SNTG				AML	AML		
	comp=N,388µm,0.5s						
SNTG				AML	AML		
	comp=N,2830µm,0.3s						
SNTG				AML	AML		
	comp=E,2840µm,0.5s						
FIAM	**Fiamignano**	**0.54**	**184**	⇑P		**Pg 07 53 12.2**	**-0.2**
FIAM				S		**Sg 07 53 20.1**	**+0.7**
FIAM				AML	AML		
	comp=N,1720µm,0.8s						
FIAM				AML	AML		
	comp=E,2215µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.54**	**315**	⇑P		**Pg 07 53 12.2**	**-0.3**
ATCC				S		**Sg 07 53 20.4**	**+0.7**
ATCC				AML	AML		
	comp=E,8585µm,1.3s						
ATCC				AML	AML		
	comp=N,7255µm,0.3s						
TRTR	**Tortoreto Alta**	**0.55**	**89**	AML	AML		
	comp=N,7420µm,0.3s						
TRTR				AML	AML		
	comp=E,7610µm,0.9s						
FOSV	**Fossato di Vic**	**0.57**	**329**	⇑P		**Pg 07 53 12.7**	**-0.5**
FOSV				S		**Sg 07 53 21.2**	**+0.5**
FAGN	**Fagnano**	**0.62**	**150**	P		**Pg 07 53 14.2**	**+0.2**
FAGN				AML	AML		
	comp=N,5130µm,0.5s						
FAGN				AML	AML		
	comp=E,6830µm,0.4s						
VCEL	**Villa Celiera**	**0.64**	**129**	⇑P		**Pg 07 53 14.2**	**-0.2**
VCEL				AML	AML		
	comp=E,3595µm,0.3s						
VCEL				AML	AML		
	comp=N,3115µm,0.7s						
MURB	**Monte Urbino**	**0.66**	**314**	⇑P		**Pg 07 53 14.2**	**-0.5**
MURB				AML	AML		
	comp=E,10650µm,1.6s						
MURB				AML	AML		
	comp=N,11800µm,0.3s						
MURB				AML	AML		
	comp=E,9955µm,0.3s						
MURB				AML	AML		
	comp=N,11700µm,0.3s						
PP3	**Marolino**	**0.66**	**29**	P		**Pg 07 53 14.7**	**0.0**
PP3				AML	AML		
	comp=E,13000µm,0.4s						
PP3				AML	AML		
	comp=E,13100µm,0.4s						
PP3				AML	AML		
	comp=N,4850µm,0.7s						
PP3				AML	AML		
	comp=N,4840µm,0.7s						
SSFR	**Montelago di S**	**0.69**	**336**	P		**Pg 07 53 14.8**	**-0.6**
SSFR				S		**Sg 07 53 25.0**	**+0.6**
ATFO	**Monte Foce - G**	**0.71**	**322**	⇑P		**Pg 07 53 15.1**	**-0.6**
ATFO				S		**Sb 07 53 25.8**	**-0.6**
ATFO				AML	AML		
	comp=E,2150µm,0.2s						
ATFO				AML	AML		
	comp=N,2425µm,0.7s						
ARVD	**Arcevia**	**0.71**	**347**	P		**Pg 07 53 15.1**	**-0.6**
ARVD				S		**Sg 07 53 25.5**	**+0.5**
ARVD				AML	AML		
	comp=E,1285µm,0.2s						
ARVD				AML	AML		
	comp=N,1048µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.72**	**304**	P		**Pg 07 53 15.2**	**-0.6**
ATTE				S		**Sg 07 53 25.5**	**+0.3**
ATTE				AML	AML		
	comp=E,3250µm,0.4s						
ATTE				AML	AML		
	comp=N,1800µm,1.6s						
T0110	**Collepietro**	**0.73**	**142**	⇑P		**Pg 07 53 15.2**	**-0.9**
T0110				AML	AML		
	comp=N,3565µm,0.4s						
T0110				AML	AML		
	comp=E,3550µm,0.4s						
SRES	**S.Oreste - Sor**	**0.75**	**221**	P		**Pg 07 53 16.1**	**-0.2**
SRES				AML	AML		
	comp=N,962µm,0.4s						
SRES				AML	AML		
	comp=E,982µm,0.3s						
FRON	**Frontone**	**0.78**	**336**	⇑P		**Pg 07 53 16.2**	**-0.9**
FRON				S		**Sb 07 53 27.9**	**-0.4**
FRON				AML	AML		
	comp=E,2000µm,0.2s						
FRON				AML	AML		
	comp=N,1825µm,0.3s						
MGAB	**Montegabbione**	**0.78**	**278**	⇑P		**Pg 07 53 16.6**	**-0.5**
MGAB				AML	AML		
	comp=N,3860µm,1.1s						
MGAB				AML	AML		
	comp=E,4740µm,0.3s						
MGAB				AML	AML		
	comp=E,3790µm,1.1s						
MGAB				AML	AML		
	comp=N,3785µm,0.5s						
PTQR	**Pietraquaria**	**0.80**	**167**	P		**Pg 07 53 16.5**	**-0.8**
PTQR				AML	AML		
	comp=N,568µm,0.7s						
PTQR				AML	AML		
	comp=E,840µm,0.3s						
ATVO	**AVT- Monte Val**	**0.80**	**316**	⇑P		**Pg 07 53 16.6**	**-0.9**
ATVO				S		**Sg 07 53 28.0**	**+0.1**
ATVO				AML	AML		
	comp=E,1910µm,0.8s						
ATVO				AML	AML		
	comp=N,1440µm,0.5s						
AOI	**Ancona**	**0.81**	**23**	P		**Pg 07 53 17.2**	**-0.4**
AOI				AML	AML		
	comp=E,910µm,0.6s						
AOI				AML	AML		
	comp=N,976µm,0.4s						
MTCE	**Montecelio**	**0.84**	**202**	P		**Pg 07 53 17.3**	**-0.8**
MTCE				S		**Sg 07 53 29.3**	**+0.2**
MTCE				AML	AML		
	comp=E,1295µm,0.4s						
MTCE				AML	AML		
	comp=N,756µm,0.5s						
ATMI	**Monte Miggiano**	**0.85**	**309**	P		**Pg 07 53 17.6**	**-0.7**

ATMI				S	**Sg**	**07 53 29.5**	**+0.2**
ATMI				AML	AML		
	comp=N,5830µm,0.3s						
ATMI				AML	AML		
	comp=E,4295µm,0.4s						
ATPI	**Pietralunga -**	**0.86**	**319**	⇑P	**Pg**	**07 53 17.6**	**-0.9**
ATPI				S	**Sg**	**07 53 29.8**	**+0.2**
ATPI				AML	AML		
	comp=E,1405µm,0.5s						
ATPI				AML	AML		
	comp=N,1155µm,0.4s						
CERT	**Cerreto**	**0.86**	**189**	P	**Pg**	**07 53 17.8**	**-0.8**
CERT				AML	AML		
	comp=E,2365µm,0.4s						
CERT				AML	AML		
	comp=N,1885µm,0.4s						
PIEI	**Pieia**	**0.87**	**328**	P	**Pg**	**07 53 17.7**	**-0.9**
PIEI				S	**Sg**	**07 53 29.9**	**0.0**
PIEI				AML	AML		
	comp=E,1630µm,0.3s						
PIEI				AML	AML		
	comp=N,1061µm,0.3s						
NARO	**Abbazia di Nar**	**0.91**	**332**	P	**Pg**	**07 53 18.3**	**-1.2**
NARO				S	**Sb**	**07 53 31.8**	**-0.2**
NARO				AML	AML		
	comp=E,814µm,0.8s						
NARO				AML	AML		
	comp=N,699µm,0.6s						
SACS	**San Casciano d**	**0.93**	**273**	P	**Pg**	**07 53 19.3**	**-0.5**
SACS				AML	AML		
	comp=N,1026µm,0.4s						
SACS				AML	AML		
	comp=E,1265µm,0.8s						
SACS				AML	AML		
	comp=N,1117µm,0.4s						
SACS				AML	AML		
	comp=E,1274µm,1.2s						
FSSB	**Fossombrone**	**0.93**	**342**	P	**Pg**	**07 53 19.1**	**-0.8**
FSSB				AML	AML		
	comp=E,4880µm,0.4s						
FSSB				AML	AML		
	comp=N,6645µm,0.4s						
INTR	**Introdacqua**	**0.96**	**145**	P	**Pg**	**07 53 19.2**	**-1.2**
INTR				AML	AML		
	comp=E,963nm,1.1s						
INTR				AML	AML		
	comp=N,1µm,1.2s						
INTR				AML	AML		
	comp=E,947µm,1.1s						
INTR				AML	AML		
	comp=N,1875µm,1.2s						
INTR				AML	AML		
	comp=E,946µm,1.1s						
INTR				AML	AML		
	comp=N,1870µm,1.2s						
BADI	**Badiali**	**0.98**	**317**	P	**Pg**	**07 53 20.1**	**-0.7**
GUAR	**Guarcino**	**1.01**	**174**	AML	AML		
	comp=N,1715µm,0.4s						
GUAR				AML	AML		
	comp=E,1272µm,1.0s						
CAFI	**Castiglion Fio**	**1.02**	**301**	P	**Pg**	**07 53 21.0**	**-0.7**
CAFI				AML	AML		
	comp=E,916µm,0.3s						
CAFI				AML	AML		
	comp=N,966µm,0.6s						
RMP	**Rome, Mte Porz**	**1.05**	**199**	AML	AML		
	comp=N,1855µm,0.4s						
RMP				AML	AML		
	comp=E,1169µm,0.6s						
LPEL	**Lama dei Pelig**	**1.07**	**135**	P	**Pg**	**07 53 21.0**	**-1.4**
LPEL				AML	AML		
	comp=N,1044µm,0.3s						
LPEL				AML	AML		
	comp=E,1045µm,1.3s						
PARC	**Parchiule**	**1.08**	**322**	AML	AML		
	comp=E,908µm,0.5s						
PARC				AML	AML		
	comp=N,710µm,1.3s						
RDP	**Rocca di Papa**	**1.10**	**198**	AML	AML		
	comp=E,2905µm,0.4s						
RDP				AML	AML		
	comp=N,2135µm,0.7s						
TOLF	**Tolfa**	**1.14**	**230**	AML	AML		
	comp=N,622µm,0.6s						
TOLF				AML	AML		
	comp=E,466µm,0.4s						
POFI	**Posta Fibreno**	**1.16**	**159**	AML	AML		
	comp=N,412µm,0.5s						
POFI				AML	AML		
	comp=E,595µm,1.3s						
PESA	**Pesaro**	**1.16**	**348**	AML	AML		
	comp=E,1540µm,1.4s						
PESA				AML	AML		
	comp=N,1570µm,1.3s						
CRE	**Caprese Michel**	**1.21**	**313**	AML	AML		
	comp=N,572µm,1.2s						
CRE				AML	AML		
	comp=E,461µm,1.3s						
GIUL	**Giuliano Di Ro**	**1.25**	**177**	AML	AML		
	comp=N,504µm,0.8s						
GIUL				AML	AML		
	comp=E,390µm,0.5s						
TRIV	**Trivento**	**1.46**	**135**	AML	AML		
	comp=N,468µm,1.3s						
TRIV				AML	AML		
	comp=E,464µm,0.6s						
TRIF	**Trifonti**	**1.69**	**281**	⇓P	**Pn**	**07 53 29.3**	**-2.2**
TRIF				AML	AML		
	comp=E,190µm,0.7s						
TRIF				AML	AML		
	comp=N,195µm,0.6s						
APRC	**Apricena**	**2.05**	**120**	⇑P	**Pn**	**07 53 37.8**	**+1.4**
APRC				AML	AML		
	comp=E,254µm,0.6s						
APRC				AML	AML		
	comp=N,341µm,0.9s						
MSAG	**Monte S. Angel**	**2.31**	**117**	⇑P	**Pn**	**07 53 41.5**	**+1.5**
MSAG				AML	AML		
	comp=E,291µm,0.9s						
MSAG				AML	AML		
	comp=N,504µm,1.3s						
RIY	**Rijeka**	**2.69**	**20**	*e*Pn	**Pn**	**07 53 47.4**	**+2.2**
RIY				*e*Sn	**Sn**	**07 54 19.5**	**+1.6**
BOJS	**Bojanci**	**3.09**	**28**	P	**Pb**	**07 53 55.5**	**-1.4**
CGRP	**Cima Grappa**	**3.23**	**343**	⇓P	**Pn**	**07 53 53.8**	**+1.0**
CGRP				AML	AML		
	comp=N,127µm,0.5s						
CGRP				AML	AML		
	comp=E,156µm,0.4s						
STON	**Ston**	**3.33**	**87**	*e*Pn	**Pn**	**07 53 53.6**	**-0.4**
STON				*e*Sn	**Sn**	**07 54 32.7**	**-0.9**
LJU	**Ljubljana**	**3.38**	**16**	⇓P	**Pn**	**07 53 56.4**	**+1.6**
LJU				AML	AML		
	comp=E,478µm,0.7s						
LJU				AML	AML		
	comp=N,511µm,0.8s						
DOSS	**Dosso del Somm**	**3.39**	**336**	⇓P	**Pn**	**07 53 57.0**	**+2.0**
LEOD	**Capriano del C**	**3.44**	**321**	S	**Sn**	**07 54 36.0**	**-0.3**
MAGA	**Magasa**	**3.49**	**329**	P	**Pn**	**07 53 57.6**	**+1.3**
MAGA				AML	AML		
	comp=E,292µm,0.5s						
MAGA				AML	AML		
	comp=N,188µm,0.4s						
LTRZ	**Laterza**	**3.51**	**128**	⇓P	**Pn**	**07 53 58.3**	**+1.8**
LUSI	**Trento, Gardas**	**3.54**	**334**	⇑P	**Pn**	**07 53 58.6**	**+1.7**
LUSI				AML	AML		
	comp=N,98µm,0.3s						
LUSI				AML	AML		
	comp=E,95µm,0.6s						
NOCI	**Noci**	**3.54**	**123**	⇑P	**Pn**	**07 53 58.3**	**+1.4**
CIMO	**Cimolais**	**3.54**	**352**	P	**Pn**	**07 53 57.6**	**+0.6**
CIMO				AML	AML		
	comp=E,26µm,0.9s						
CIMO				AML	AML		
	comp=N,23µm,0.3s						
ZAG	**Zagreb**	**3.64**	**33**	P	**Pb**	**07 54 02.6**	**-3.6**
GAGG	**Gaggia**	**3.64**	**335**	⇑P	**Pn**	**07 54 00.6**	**+2.2**
SARZ	**Sarezzano**	**3.71**	**305**	S	**Sb**	**07 54 48.0**	**-4.4**
ACOM	**Acomizza, Ital**	**3.75**	**4**	⇓P	**Pn**	**07 54 01.2**	**+1.2**
ACOM				AML	AML		
	comp=E,107µm,0.4s						
ACOM				AML	AML		
	comp=N,117µm,1.3s						
ACOM				AML	AML		
	comp=E,94µm,0.8s						
ACOM				AML	AML		
	comp=N,76µm,0.4s						
EUCT	**Pavia**	**3.77**	**311**	S	**Sn**	**07 54 43.0**	**-1.4**
OBKA	**Obir**	**3.83**	**14**	*e*Pn	**Pn**	**07 54 02.8**	**+1.7**
	comp=N,0.5nm,0.2s						
MYKA	**Terra Mystica**	**3.84**	**5**	*e*Pn	**Pn**	**07 54 02.4**	**+1.3**
	comp=N,1.3nm,0.2s						
CANO	**Canova, Maglio**	**3.85**	**293**	P	**Pb**	**07 54 09.0**	**-0.9**
KOSI	**Kohlern**	**3.88**	**341**	⇓P	**Pn**	**07 54 03.0**	**+1.4**
KOSI				AML	AML		
	comp=N,82µm,0.6s						
KOSI				AML	AML		
	comp=E,66µm,0.5s						
MILN	**Milano**	**3.90**	**315**	S	**Sn**	**07 54 52.0**	**+4.5**
BOSI	**Bolzano**	**3.92**	**341**	⇑P	**Pn**	**07 54 06.0**	**+3.9**
ABTA	**Abfaltersbach**	**3.97**	**353**	*e*Pn	**Pn**	**07 54 04.3**	**+1.4**
	comp=E,7.7nm,0.4s						
SOKA	**Soboth**	**4.10**	**18**	*e*Pn	**Pb**	**07 54 12.8**	**-1.3**
	comp=E,1.1nm,0.2s						
RISI	**Rein**	**4.22**	**350**	⇑P	**Pb**	**07 54 18.8**	**+2.6**
KBA	**Koelnbreinsper**	**4.28**	**2**	*e*Pn	**Pn**	**07 54 07.2**	**0.0**
	comp=E,7.4nm,0.5s						
MUGIO	**Muggio**	**4.30**	**318**	S	**Sn**	**07 54 60.0**	**+2.5**
VSL	**Villasalto**	**4.37**	**222**	⇓P	**Pn**	**07 54 09.2**	**+0.9**
FETA	**Feichten**	**4.56**	**339**	*e*Pn	**Pn**	**07 54 10.0**	**-1.1**
	comp=E,1.1nm,0.3s						
LLI	**Lipari**	**4.56**	**162**	⇓P	**Pn**	**07 54 08.7**	**-2.2**
WTTA	**Wattenberg**	**4.59**	**347**	*e*Pn	**Pn**	**07 54 11.1**	**-0.4**
	comp=E,0.4nm,0.2s						
SQTA	**Sankt Quirin**	**4.63**	**343**	*e*Pn	**Pn**	**07 54 10.9**	**-1.0**
	comp=E,3.3nm,0.3s						
WATA	**Walderalm**	**4.67**	**347**	*e*Pn	**Pn**	**07 54 11.4**	**-1.2**
	comp=E,1.1nm,0.1s						
BBLS	**Lazići**	**4.67**	**75**	*e*Pn	**Pn**	**07 54 13.0**	**+0.5**
ARSA	**Arzberg**	**4.75**	**20**	*e*Pn	**Pn**	**07 54 12.7**	**-0.9**
	comp=E,0.9nm,0.2s						
MOTA	**Moosalm**	**4.77**	**343**	*e*Pn	**Pn**	**07 54 13.4**	**-0.6**
	comp=E,1.1nm,0.2s						
FUSIO	**Fusio**	**4.86**	**320**	⇑P	**Pn**	**07 54 17.5**	**+2.3**
BIOA	**Bad Ischl, Aus**	**4.90**	**4**	*e*Pn	**Pn**	**07 54 17.2**	**+1.6**
	comp=E,9.9nm,0.3s						
RETA	**Reutte**	**4.98**	**341**	*e*Pn	**Pn**	**07 54 16.9**	**+0.2**
	comp=E,1.2nm,0.3s						
SJES	**Sjenica**	**5.01**	**82**	*e*Pn	**Pn**	**07 54 18.5**	**+1.3**
SJES				*e*Sn	**Sn**	**07 55 12.1**	**-3.1**
DAVA	**Damuels**	**5.05**	**334**	*e*Pn	**Pn**	**07 54 17.2**	**-0.5**
	comp=E,1.3nm,0.3s						
MOA	**Molln**	**5.11**	**8**	*e*Pn	**Pn**	**07 54 19.7**	**+1.3**
	comp=E,1.0nm,0.2s						
DIVS	**Divibare**	**5.13**	**73**	*e*Pn	**Pn**	**07 54 20.2**	**+1.3**
IVAS	**Ivanjica**	**5.17**	**79**	*e*Pn	**Pn**	**07 54 20.1**	**+0.8**
IVAS				*e*Sn	**Sn**	**07 55 16.7**	**-2.2**
RONA	**Rosalia, Austr**	**5.37**	**23**	*e*Pn	**Pn**	**07 54 22.9**	**+0.8**
	comp=E,0.8nm,0.2s						
CONA	**Conrad Observa**	**5.46**	**19**	*e*Pn	**Pn**	**07 54 23.9**	**+0.5**
	comp=E,0.8nm,0.2s						
SELS	**Selova**	**5.84**	**83**	*e*Pn	**Pn**	**07 54 29.1**	**+0.5**
KBN	**Korca**	**6.10**	**108**	S	**Sn**	**07 55 46.0**	**+3.9**
KHC	**Kasperske Hory**	**6.33**	**2**	*e*PN	**Pn**	**07 54 34.5**	**-0.8**
KHC				*e*SN	**Sn**	**07 55 45.7**	**-2.0**
BARS	**Barje**	**6.36**	**87**	*e*Pn	**Pn**	**07 54 36.3**	**+0.7**
PRVS	**Prvonek**	**6.58**	**90**	*e*Pn	**Pn**	**07 54 39.5**	**+0.9**

ROM 24 07:55:03.3±0.1, 42°.798N±0°.005×13°.21E±0°.01, h10km, ML2.3/4, Error ellipse: s-maj=0.9km s-min=0.4km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**297**	P	Pg	07 55 05.8	+0.1
NRCA				S	Sg	07 55 07.8	+0.4
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,19408µm,0.1s						
NRCA				AML	AML		
	comp=E,14318µm,0.1s						
NRCA				AML	AML		
	comp=E,14508µm,0.1s						
NRCA				AML	AML		
	comp=N,17196µm,0.1s						
NRCA				END			
LNSS	**Leonessa**	**0.23**	**213**	P	Pg	07 55 09.3	+1.2
LNSS				S	Sg	07 55 13.1	+1.8
FDMO	**Fiordimonte**	**0.26**	**339**	P	Pg	07 55 08.9	+0.4
FDMO				S	Sb	07 55 13.5	-1.1
FDMO				AML	AML		
	comp=N,4245µm,0.3s						
FDMO				AML	AML		
	comp=E,4410µm,0.4s						
RM33	**Pellescritta (**	**0.29**	**180**	P	Pb	07 55 09.9	-0.7
RM33				S	Sb	07 55 14.9	-0.7
CSP1	**Cessapalombo**	**0.29**	**359**	P	Pg	07 55 09.5	+0.2
CSP1				S	Sg	07 55 14.4	+1.1
CSP1				AML	AML		
	comp=E,3745µm,0.2s						
CSP1				AML	AML		
	comp=N,4105µm,1.0s						
CSP1				AML	AML		
	comp=E,3735µm,0.2s						
CSP1				AML	AML		
	comp=E,3740µm,0.2s						
CSP1				AML	AML		
	comp=N,4110µm,1.0s						
CSP1				AML	AML		
	comp=E,567µm,0.3s						
CSP1				AML	AML		
	comp=N,864µm,0.5s						
CSP1				END			
CAMP	**Campotosto**	**0.30**	**151**	P	Pg	07 55 09.7	+0.4
CAMP				S	Sg	07 55 14.6	+1.2
CAMP				END			
CESI	**CESI - Serrava**	**0.31**	**313**	P	Pg	07 55 10.2	+0.7
CESI				S	Sb	07 55 15.4	-0.7
CESI				AML	AML		
	comp=E,4905µm,0.6s						
CESI				AML	AML		
	comp=N,10525µm,0.4s						
CESI				AML	AML		
	comp=E,365µm,0.2s						
CESI				AML	AML		
	comp=N,567µm,0.1s						
TERO	**Teramo**	**0.34**	**121**	P	Pg	07 55 10.1	+0.1
TERO				S	Sg	07 55 15.5	+1.0
OFFI	**Offida**	**0.38**	**68**	P	Pb	07 55 12.0	-0.1
OFFI				AML	AML		
	comp=E,2845µm,0.6s						
OFFI				AML	AML		
	comp=N,2570µm,0.9s						
MDAR	**Monte D'Aria**	**0.40**	**353**	P	Pg	07 55 11.0	-0.2
MDAR				S	Sb	07 55 18.0	-0.7
SEF1	**Sefro**	**0.40**	**331**	P	Pb	07 55 11.8	-0.7
GIGS	**Gran Sasso**	**0.44**	**143**	P	Pg	07 55 12.1	+0.2
GIGS				S	Sb	07 55 19.1	-0.7
ASSB	**Assisi San Ben**	**0.47**	**301**	P	Pg	07 55 13.1	+0.5
ASSB				AML	AML		
	comp=E,2730µm,0.2s						
ASSB				AML	AML		
	comp=N,2635µm,1.2s						
ASSB				AML	AML		
	comp=E,243µm,0.1s						
ASSB				AML	AML		
	comp=N,197µm,0.2s						
SNTG	**Esanatoglia**	**0.50**	**337**	P	Pg	07 55 13.3	+0.3
SNTG				AML	AML		
	comp=E,1090µm,0.4s						
SNTG				AML	AML		
	comp=N,1184µm,0.3s						
SNTG				AML	AML		
	comp=N,1185µm,0.3s						
TRTR	**Tortoreto Alta**	**0.52**	**89**	P	Pb	07 55 14.8	+0.4
VIVA	**Pratoni del Vi**	**1.10**	**198**	AML	AML		
	comp=N,479µm,1.2s						
VIVA				AML	AML		
	comp=E,648µm,0.4s						

ROM 24 07:55:22.8±0.1, 42°.811N±0°.003×13°.165E±0°.005, h10km, ML2.7/24, 9C-6D, Error ellipse: s-maj=0.4km s-min=0.1km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**301**	⇓*e*P	Pg	07 55 25.1	+0.3
NRCA				S	Sg	07 55 26.4	+0.2
AQT1	**Arquata del Tr**	**0.10**	**111**	P	Pg	07 55 25.9	+0.4
AQT1				S	Sg	07 55 28.3	+1.0
FEMA	**Monte Fema**	**0.17**	**331**	⇑*i*P	Pg	07 55 27.2	+0.6
FEMA				S	Sg	07 55 30.2	+1.0
FEMA				AML	AML		
	comp=E,10200µm,0.3s						
FEMA				AML	AML		
	comp=N,9365µm,0.5s						
FEMA				AML	AML		
	comp=N,9385µm,0.5s						
FEMA				AML	AML		
	comp=E,10175µm,0.3s						
LNSS	**Leonessa**	**0.23**	**204**	⇑*e*P	Pg	07 55 28.4	+0.9
LNSS				S	Sg	07 55 32.3	+1.6
LNSS				AML	AML		
	comp=N,5980µm,0.2s						
LNSS				AML	AML		
	comp=E,3340µm,0.2s						
LNSS				AML	AML		
	comp=N,5975µm,0.2s						
FDMO	**Fiordimonte**	**0.23**	**346**	⇑*i*P	Pg	07 55 28.1	+0.5
FDMO				S	Sg	07 55 32.0	+1.2
FDMO				AML	AML		
	comp=E,4410µm,0.4s						
FDMO				AML	AML		
	comp=N,4245µm,0.3s						
CESI	**CESI - Serrava**	**0.27**	**316**	⇑*i*P	Pg	07 55 28.9	+0.6
CESI				S	Sg	07 55 33.3	+1.2
CESI				AML	AML		
	comp=N,10525µm,0.4s						
CESI				AML	AML		
	comp=E,4905µm,0.6s						
CSP1	**Cessapalombo**	**0.28**	**6**	P	Pg	07 55 29.1	+0.5
CSP1				S	Sg	07 55 33.7	+1.3
CSP1				AML	AML		
	comp=E,3735µm,0.2s						
CSP1				AML	AML		
	comp=N,4110µm,1.0s						
CSP1				AML	AML		
	comp=E,3740µm,0.2s						
RM33	**Pellescritta (**	**0.30**	**173**	⇓*i*P	Pg	07 55 29.7	+0.7
RM33				S	Sb	07 55 34.7	-0.9
RM33				AML	AML		
	comp=E,2440µm,0.9s						
RM33				AML	AML		
	comp=E,2415µm,0.1s						
RM33				AML	AML		
	comp=E,2545µm,0.7s						
RM33				AML	AML		
	comp=N,2170µm,1.4s						
RM33				AML	AML		
	comp=E,2505µm,0.7s						
RM33				AML	AML		
	comp=N,2175µm,1.4s						
RM33				AML	AML		
	comp=N,2085µm,0.3s						
CAMP	**Campotosto**	**0.33**	**147**	⇑*i*P	Pg	07 55 29.8	+0.4
CAMP				S	Sg	07 55 34.9	+1.1
CAMP				AML	AML		
	comp=E,1200µm,1.1s						
CAMP				AML	AML		
	comp=N,1047µm,1.4s						
CAMP				AML	AML		
	comp=N,1046µm,1.4s						
SEF1	**Sefro**	**0.37**	**335**	⇓*i*P	Pg	07 55 30.6	+0.4
SEF1				S	Sb	07 55 36.6	-0.9
SEF1				AML	AML		
	comp=N,4225µm,0.2s						
SEF1				AML	AML		
	comp=N,4230µm,0.2s						
SEF1				AML	AML		
	comp=E,4690µm,0.3s						
ARRO	**Arrone**	**0.37**	**232**	P	Pb	07 55 31.1	-0.5
ARRO				AML	AML		
	comp=E,1145µm,1.5s						
ARRO				AML	AML		
	comp=E,1140µm,1.5s						
ARRO				AML	AML		
	comp=N,1535µm,0.2s						
TERO	**Teramo**	**0.37**	**120**	P	Pg	07 55 30.5	+0.3
TERO				S	Sb	07 55 36.4	-1.1
TERO				AML	AML		
	comp=E,2575µm,1.3s						
TERO				AML	AML		
	comp=N,2555µm,0.4s						
MDAR	**Monte D'Aria**	**0.38**	**358**	P	Pg	07 55 30.8	+0.4
PIO1	**Pioraco**	**0.39**	**340**	P	Pg	07 55 30.9	+0.4
OFFI	**Offida**	**0.40**	**72**	⇓*i*P	Pb	07 55 32.2	+0.1
OFFI				S	Sb	07 55 39.9	+1.6
OFFI				AML	AML		
	comp=N,2570µm,0.9s						
OFFI				AML	AML		
	comp=E,2845µm,0.6s						
FIU1	**Fiuminata**	**0.41**	**336**	P	Pg	07 55 31.3	+0.4
FIU1				S	Sb	07 55 38.0	-0.7
SSM1	**San Severino M**	**0.42**	**1**	⇓*i*P	Pg	07 55 31.4	+0.4
GAG1	**Gagliole**	**0.43**	**351**	P	Pg	07 55 31.9	+0.5
GAG1				S	Sb	07 55 38.6	-0.6
ASSB	**Assisi San Ben**	**0.44**	**302**	⇑*i*P	Pg	07 55 31.8	+0.3
ASSB				S	Sb	07 55 38.4	-1.0
ASSB				AML	AML		
	comp=E,2730µm,0.2s						
ASSB				AML	AML		
	comp=N,2635µm,1.2s						
GIGS	**Gran Sasso**	**0.47**	**140**	P	Pg	07 55 32.2	+0.3
GIGS				AML	AML		
	comp=N,308µm,0.4s						
GIGS				AML	AML		
	comp=E,290µm,0.2s						
GIGS				AML	AML		
	comp=N,308µm,0.4s						
SNTG	**Esanatoglia**	**0.47**	**340**	⇑*e*P	Pg	07 55 32.3	+0.2
SNTG				S	Sb	07 55 39.8	-0.6
SNTG				AML	AML		
	comp=N,1184µm,0.3s						
SNTG				AML	AML		
	comp=E,1090µm,0.4s						
SNTG				AML	AML		
	comp=N,1185µm,0.3s						
CESX	**Cesi**	**0.47**	**245**	P	Pb	07 55 32.9	-0.4
CESX				S	Sb	07 55 39.8	-0.6
CESX				AML	AML		
	comp=E,1230µm,0.4s						
CESX				AML	AML		
	comp=N,1255µm,0.3s						
AQU	**L'Aquila**	**0.49**	**159**	P	Pg	07 55 32.5	+0.2
AQU				AML	AML		
	comp=E,924µm,0.6s						
AQU				AML	AML		
	comp=N,1030µm,0.2s						
AQU				AML	AML		
	comp=N,1045µm,0.2s						
AQU				AML	AML		
	comp=E,928µm,0.6s						
AQU				AML	AML		
	comp=E,887µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.54**	**314**	P	Pg	07 55 33.6	+0.3
ATCC				AML	AML		
	comp=E,1595µm,0.4s						
ATCC				AML	AML		
	comp=N,1215µm,0.2s						
FIAM	**Fiamignano**	**0.54**	**184**	AML	AML		
	comp=N,498µm,0.9s						
FIAM				AML	AML		
	comp=E,574µm,0.7s						
FIAM				AML	AML		
	comp=N,498µm,0.9s						
FIAM				AML	AML		
	comp=E,574µm,0.7s						
TRTR	**Tortoreto Alta**	**0.55**	**90**	AML	AML		
	comp=E,2485µm,1.5s						
TRTR				AML	AML		
	comp=N,2670µm,0.8s						
FOSV	**Fossato di Vic**	**0.57**	**329**	P	Pg	07 55 33.9	+0.1
FOSV				S	Sb	07 55 42.8	-0.3
FOSV				AML	AML		
	comp=E,1285µm,0.3s						
FOSV				AML	AML		
	comp=N,1400µm,0.3s						
FAGN	**Fagnano**	**0.63**	**150**	AML	AML		
	comp=E,1320µm,0.5s						
FAGN				AML	AML		

comp=N,1230μm,1.3s
VCEL Villa Celiera 0.65 130 P Pg 07 55 35.6 +0.2
VCEL AML AML
comp=N,948μm,1.1s
VCEL AML AML
comp=E,1580μm,0.8s
VCEL AML AML
comp=N,948μm,1.1s
VCEL AML AML
comp=E,1575μm,0.8s
MURB Monte Urbino 0.65 314 P Pg 07 55 35.6 +0.2
MURB AML AML
comp=E,2505μm,0.2s
MURB AML AML
comp=E,2240μm,0.3s
MURB AML AML
comp=N,2700μm,0.3s
MURB AML AML
comp=N,2730μm,0.3s
PP3 Marolino 0.65 30 AML AML
comp=N,3450μm,0.3s
PP3 AML AML
comp=E,3385μm,0.4s
PP3 AML AML
comp=N,3225μm,0.3s
PP3 AML AML
comp=E,3125μm,0.4s
SSFR Montelago di S 0.69 336 P Pg 07 55 36.4 +0.4
SSFR S Sb 07 55 46.5 0.0
SSFR AML AML
comp=N,2140μm,0.7s
SSFR AML AML
comp=N,1900μm,0.7s
SSFR AML AML
comp=E,2400μm,0.2s
SSFR AML AML
comp=E,2440μm,0.2s
ATFO Monte Foce - G 0.70 322 P Pg 07 55 36.6 +0.1
ATFO AML AML
comp=E,489μm,0.6s
ATFO AML AML
comp=N,514μm,0.8s
ARVD Arcevia 0.71 347 P Pg 07 55 36.5 +0.1
ATSC Scheggia e Pas 0.71 330 P Pg 07 55 36.4 -0.1
ATTE AVT- Monte Tez 0.71 303 P Pg 07 55 36.2 -0.4
T0110 Collepietro 0.74 142 P Pg 07 55 37.0 -0.1
T0110 AML AML
comp=E,1176μm,0.5s
T0110 AML AML
comp=N,1310μm,0.4s
ATLO AVT- Montelove 0.75 313 P Pg 07 55 37.3 0.0
FRON Frontone 0.78 336 P Pg 07 55 37.6 -0.2
FRON S Sb 07 55 49.5 +0.4
FRON AML AML
comp=E,756μm,0.2s
FRON AML AML
comp=N,668μm,1.0s
MGAB Montegabbione 0.78 278 AML AML
comp=E,858μm,1.1s
MGAB AML AML
comp=N,1168μm,1.3s
MGAB AML AML
comp=E,722μm,0.5s
MGAB AML AML
comp=N,1068μm,1.3s
TB01 Gubbio 0.78 317 ⇓*i*P Pg 07 55 37.9 0.0
TB02 Pietralunga 0.79 316 P Pg 07 55 38.0 0.0
ATVA AVT- Monte Val 0.80 306 P Pg 07 55 38.2 0.0
ATVO AVT- Monte Val 0.80 316 P Pg 07 55 38.1 -0.1
ATVO AML AML
comp=E,482μm,0.9s
ATVO AML AML
comp=N,318μm,0.8s
ATBU Serra di Buran 0.80 326 P Pg 07 55 38.3 0.0
AOI Ancona 0.81 23 AML AML
comp=N,310μm,1.6s
AOI AML AML
comp=E,452μm,1.4s
TB03 Pietralunga 0.81 317 P Pg 07 55 38.2 -0.2
COR1 Corinaldo 0.83 352 AML AML
comp=E,1760μm,1.1s
COR1 AML AML
comp=N,860μm,0.8s
COR1 AML AML
comp=E,760μm,0.6s
COR1 AML AML
ATMI Monte Miggiano 0.84 309 AML AML
comp=E,1130μm,0.3s
ATMI AML AML
comp=N,977μm,0.3s
ATPI Pietralunga - 0.85 319 P Pg 07 55 39.4 +0.2
PIEI Pieia 0.86 328 ⇑*i*P Pg 07 55 39.6 +0.2
PIEI AML AML
comp=N,252μm,0.3s
PIEI AML AML
comp=E,337μm,0.7s
MPAG Monte Paganucc 0.87 340 P Pg 07 55 39.8 +0.2
MPAG AML AML
comp=N,450μm,0.4s
MPAG AML AML
comp=E,380μm,0.2s
NARO Abbazia di Nar 0.91 332 P Pg 07 55 39.9 -0.4
NARO AML AML
comp=N,216μm,0.4s
NARO AML AML
comp=E,267μm,1.4s
APEC Apecchio 0.93 324 P Pg 07 55 40.5 -0.2
FSSB Fossombrone 0.93 342 P Pg 07 55 40.8 +0.2
INTR Introdacqua 0.97 145 P Pg 07 55 40.6 -0.8
INTR AML AML
comp=E,422μm,0.7s
INTR AML AML
comp=N,582μm,1.0s
CAFI Castiglion Fio 1.02 301 P Pg 07 55 42.1 -0.3
CAFI AML AML
comp=E,218μm,0.3s
CAFI AML AML
comp=N,247μm,0.5s
LPEL Lama dei Pelig 1.07 135 AML AML
comp=N,366μm,0.5s
LPEL AML AML
comp=E,345μm,1.3s
PARC Parchiule 1.08 321 AML AML
comp=N,240μm,0.5s
PARC AML AML
comp=E,276μm,0.5s
SF13 Bagnolo 1.14 271 P Pn 07 55 44.9 0.0
PAOL Paolisi 2.06 149 S Sb 07 56 26.0 -0.2
OVO Vesuviano 2.19 155 ⇑P Pg 07 56 04.5 -0.2

ROM 24 08:01:58.4±0.1, 42°.776N±0°.003×13°.185E±0°.006, h10km, ML2.9/43, 14C-10D, Error ellipse: s-maj=0.5km s-min=0.3km az=253.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**318**	P	Pg	08 02 01.1	+0.3
NRCA				S	Sg	08 02 02.8	+0.2
NRCA				AML	AML		
	comp=E,67300μm,0.2s						
NRCA				AML	AML		
	comp=N,47350μm,0.2s						
NRCA				AML	AML		
	comp=E,67300μm,0.2s						
NRCA				AML	AML		
	comp=N,43300μm,0.2s						
NRCA				AML	AML		
	comp=N,93050μm,0.1s						
NRCA				AML	AML		
	comp=N,86950μm,0.1s						
NRCA				AML	AML		
	comp=N,86950μm,0.1s						
NRCA				AML	AML		
	comp=E,72750μm,0.2s						
LNSS	**Leonessa**	**0.20**	**212**	⇑P	Pg	08 02 03.4	+0.7
LNSS				S	Sg	08 02 07.2	+1.5
LNSS				AML	AML		
	comp=N,22400μm,1.3s						
LNSS				AML	AML		
	comp=E,15750μm,0.2s						
FEMA	**Monte Fema**	**0.21**	**332**	P	Pg	08 02 03.3	+0.4
FEMA				S	Sg	08 02 07.1	+1.2
FEMA				AML	AML		
	comp=E,9140μm,0.3s						
FEMA				AML	AML		
	comp=N,6715μm,0.3s						
FEMA				AML	AML		
	comp=N,7285μm,1.4s						
FEMA				AML	AML		
	comp=E,10360μm,0.2s						
RM33	**Pellescritta (**	**0.27**	**175**	P	Pg	08 02 04.5	+0.6
RM33				S	Sb	08 02 09.1	-0.9
RM33				AML	AML		
	comp=E,7705μm,0.2s						
RM33				AML	AML		
	comp=N,4915μm,1.0s						
RM33				AML	AML		
	comp=E,7705μm,0.2s						
RM33				AML	AML		
	comp=N,4835μm,1.5s						
RM33				AML	AML		
	comp=N,4920μm,1.0s						
RM33				AML	AML		
	comp=E,7700μm,0.2s						
RM33				AML	AML		
	comp=E,7520μm,0.2s						
FDMO	**Fiordimonte**	**0.27**	**345**	P	Pg	08 02 04.2	+0.3
FDMO				S	Sg	08 02 08.7	+1.2
FDMO				AML	AML		
	comp=N,4095μm,0.2s						
FDMO				AML	AML		
	comp=E,3445μm,0.2s						
FDMO				AML	AML		
	comp=E,6095μm,1.2s						
FDMO				AML	AML		
	comp=N,4460μm,0.8s						
CAMP	**Campotosto**	**0.29**	**145**	P	Pg	08 02 04.6	+0.3
CAMP				S	Sg	08 02 09.4	+1.1
CAMP				AML	AML		
	comp=N,1850μm,0.5s						
CAMP				AML	AML		
	comp=E,1770μm,0.2s						
CESI	**CESI - Serrava**	**0.31**	**318**	⇓P	Pg	08 02 05.1	+0.5
CESI				S	Sb	08 02 10.0	-1.2
CESI				AML	AML		
	comp=E,3890μm,1.5s						
CESI				AML	AML		
	comp=E,4005μm,0.2s						
CESI				AML	AML		
	comp=N,7990μm,0.3s						
CSP1	**Cessapalombo**	**0.32**	**3**	⇓P	Pg	08 02 05.2	+0.4
CSP1				S	Sg	08 02 10.2	+1.2
CSP1				AML	AML		
	comp=N,11430μm,1.1s						
CSP1				AML	AML		
	comp=E,8085μm,0.3s						
CSP1				AML	AML		
	comp=N,11385μm,1.1s						
TERO	**Teramo**	**0.34**	**116**	P	Pg	08 02 05.5	+0.2
TERO				S	Sg	08 02 10.9	+1.1
TERO				AML	AML		
	comp=E,2840μm,0.3s						
TERO				AML	AML		
	comp=E,3095μm,0.8s						
TERO				AML	AML		
	comp=N,4665μm,0.6s						
TERO				AML	AML		
	comp=E,3100μm,0.8s						
TERO				AML	AML		
	comp=N,5250μm,0.6s						
TERO				AML	AML		
	comp=E,2950μm,0.2s						
TERO				AML	AML		
	comp=E,3175μm,0.2s						
TERO				AML	AML		
	comp=N,4660μm,0.6s						
ARRO	**Arrone**	**0.37**	**238**	P	Pg	08 02 06.1	+0.5
ARRO				S	Sb	08 02 12.8	+0.1
ARRO				AML	AML		
	comp=E,1400μm,0.2s						
ARRO				AML	AML		
	comp=N,1625μm,0.9s						
ARRO				AML	AML		
	comp=N,1630μm,0.9s						
OFFI	**Offida**	**0.40**	**66**	⇑P	Pb	08 02 07.5	-0.1
OFFI				AML	AML		
	comp=E,3515μm,1.5s						
OFFI				AML	AML		
	comp=N,5715μm,1.0s						
OFFI				AML	AML		
	comp=E,6265μm,0.8s						
OFFI				AML	AML		
	comp=N,11900μm,0.6s						
SEF1	**Sefro**	**0.41**	**335**	P	Pg	08 02 06.7	+0.3
SEF1				AML	AML		
	comp=E,6770μm,1.6s						
SEF1				AML	AML		
	comp=E,6775μm,1.6s						
SEF1				AML	AML		
	comp=N,6415μm,0.2s						
MNTP	**Montappone**	**0.42**	**30**	P	Pb	08 02 07.5	-0.3
MNTP				AML	AML		
	comp=E,6770μm,0.2s						
MNTP				AML	AML		
	comp=N,4140μm,0.3s						
GIGS	**Gran Sasso**	**0.43**	**139**	P	Pg	08 02 06.8	0.0
GIGS				AML	AML		
	comp=E,412μm,0.5s						
GIGS				AML	AML		
	comp=N,326μm,1.2s						
GIGS				AML	AML		
	comp=N,357μm,0.4s						
GIGS				AML	AML		
	comp=E,440μm,0.7s						
GIGS				AML	AML		
	comp=E,441μm,0.7s						
AQU	**L'Aquila**	**0.45**	**159**	⇓P	Pg	08 02 07.5	+0.3
AQU				AML	AML		
	comp=E,1415μm,1.0s						
AQU				AML	AML		
	comp=N,1112μm,0.3s						
AQU				AML	AML		
	comp=N,1103μm,1.0s						
AQU				AML	AML		
	comp=N,1176μm,1.0s						
AQU				AML	AML		
	comp=N,1124μm,0.7s						
AQU				AML	AML		
	comp=E,1385μm,1.0s						
ASSB	**Assisi San Ben**	**0.47**	**305**	P	Pg	08 02 07.7	+0.2
ASSB				AML	AML		
	comp=N,2410μm,0.2s						
ASSB				AML	AML		
	comp=E,1680μm,1.4s						
GAG1	**Gagliole**	**0.47**	**349**	⇓P	Pb	08 02 08.2	-0.5
CESX	**Cesi**	**0.48**	**250**	P	Pg	08 02 07.8	+0.1
CESX				AML	AML		
	comp=E,1082μm,0.3s						
CESX				AML	AML		
	comp=E,1330μm,0.4s						
CESX				AML	AML		
	comp=N,1755μm,0.6s						
FIAM	**Fiamignano**	**0.51**	**186**	P	Pg	08 02 08.6	+0.2
FIAM				S	Sb	08 02 16.4	-0.6
FIAM				AML	AML		
	comp=N,815μm,0.6s						
FIAM				AML	AML		
	comp=N,978μm,0.7s						
FIAM				AML	AML		
	comp=E,1530μm,0.7s						
SNTG	**Esanatoglia**	**0.51**	**340**	P	Pg	08 02 08.5	+0.1
SNTG				S	Sb	08 02 16.4	-0.5
TRTR	**Tortoreto Alta**	**0.54**	**86**	P	Pb	08 02 10.2	+0.3
TRTR				AML	AML		
	comp=E,4005μm,0.6s						
TRTR				AML	AML		
	comp=N,3625μm,0.9s						
TRTR				AML	AML		
	comp=E,4010μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.57**	**316**	P	Pg	08 02 09.6	+0.1
ATCC				AML	AML		
	comp=E,2250μm,0.8s						
ATCC				AML	AML		
	comp=N,1775μm,0.3s						
FAGN	**Fagnano**	**0.59**	**150**	P	Pg	08 02 10.2	+0.4
FAGN				AML	AML		
	comp=N,1480μm,0.4s						
FAGN				AML	AML		
	comp=N,1565μm,0.5s						
FAGN				AML	AML		
	comp=E,1510μm,0.7s						
FOSV	**Fossato di Vic**	**0.60**	**329**	P	Pg	08 02 10.2	0.0
FOSV				S	Sb	08 02 19.7	0.0
FOSV				AML	AML		
	comp=N,2905μm,0.3s						
FOSV				AML	AML		
	comp=E,2570μm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**128**	P	Pg	08 02 10.6	+0.3
VCEL				AML	AML		
	comp=E,914μm,0.3s						
VCEL				AML	AML		
	comp=N,1190μm,0.4s						
VCEL				AML	AML		
	comp=E,1695μm,0.3s						
VCEL				AML	AML		
	comp=N,1250μm,0.3s						
PP3	**Marolino**	**0.68**	**27**	⇓P	Pb	08 02 12.8	+0.5
PP3				S	Sn	08 02 24.0	-0.6
PP3				AML	AML		
	comp=N,5735μm,1.4s						
PP3				AML	AML		
	comp=E,4800μm,1.0s						
PP3				AML	AML		
	comp=E,4750μm,1.0s						
PP3				AML	AML		
	comp=N,5515μm,1.4s						
MURB	**Monte Urbino**	**0.69**	**315**	P	Pg	08 02 11.9	+0.2
MURB				AML	AML		
	comp=E,3185μm,0.3s						
MURB				AML	AML		
	comp=E,2695μm,0.3s						
MURB				AML	AML		
	comp=N,3215μm,0.2s						
MURB				AML	AML		
	comp=N,2765μm,0.2s						
T0110	**Collepietro**	**0.70**	**141**	P	Pg	08 02 12.0	0.0
T0110				AML	AML		
	comp=E,899μm,0.5s						
T0110				AML	AML		
	comp=N,748μm,1.1s						
T0110				AML	AML		
	comp=N,1350μm,0.8s						
T0110				AML	AML		
	comp=E,1250μm,0.4s						
SSFR	**Montelago di S**	**0.72**	**336**	P	Pg	08 02 11.5	-0.9
SSFR				AML	AML		
	comp=N,3650μm,0.2s						
SSFR				AML	AML		
	comp=E,3815μm,0.2s						
SSFR				AML	AML		
	comp=E,4125μm,0.2s						
SSFR				AML	AML		
	comp=E,4125μm,0.2s						
SSFR				AML	AML		
	comp=N,3040μm,0.2s						
SRES	**S.Oreste - Sor**	**0.73**	**223**	P	Pg	08 02 12.9	+0.3
SRES				AML	AML		
	comp=E,254μm,0.3s						
SRES				AML	AML		
	comp=N,358μm,0.3s						
SRES				AML	AML		
	comp=E,618μm,0.4s						
ARVD	**Arcevia**	**0.74**	**346**	⇓P	Pg	08 02 11.7	-1.1
ARVD				S	Sb	08 02 25.0	+1.3
ARVD				AML	AML		
	comp=E,321μm,1.2s						
ARVD				AML	AML		
	comp=N,315μm,0.8s						
ARVD				AML	AML		
	comp=E,757μm,0.2s						
ARVD				AML	AML		
	comp=N,624μm,0.6s						
ARVD				AML	AML		
	comp=E,758μm,0.2s						
PTQR	**Pietraquaria**	**0.77**	**168**	P	Pg	08 02 12.9	-0.3
PTQR				AML	AML		
	comp=E,222μm,0.8s						
PTQR				AML	AML		
	comp=N,212μm,0.6s						
MGAB	**Montegabbione**	**0.80**	**280**	⇓P	Pb	08 02 14.6	+0.2
MGAB				AML	AML		
	comp=E,902μm,0.6s						
MGAB				AML	AML		
	comp=N,1012μm,0.5s						
MGAB				AML	AML		
	comp=N,1002μm,0.5s						
MGAB				AML	AML		
	comp=E,904μm,0.6s						
MGAB				AML	AML		
	comp=E,1139μm,0.6s						
MGAB				AML	AML		
	comp=N,1210μm,0.5s						
MGAB				AML	AML		
	comp=N,1136μm,0.5s						
FRON	**Frontone**	**0.81**	**336**	⇑P	Pg	08 02 13.8	-0.3
FRON				AML	AML		
	comp=E,832μm,0.7s						
FRON				AML	AML		
	comp=N,1490μm,0.3s						
FRON				AML	AML		
	comp=E,832μm,0.7s						
MTCE	**Montecelio**	**0.82**	**204**	P	Pg	08 02 14.0	-0.2
MTCE				AML	AML		
	comp=N,486μm,0.7s						
MTCE				AML	AML		
	comp=E,700μm,0.4s						
ATVO	**AVT- Monte Val**	**0.83**	**317**	⇑P	Pg	08 02 14.2	-0.2
ATVO				AML	AML		
	comp=E,460μm,0.3s						
ATVO				AML	AML		
	comp=N,368μm,0.3s						
ATVO				AML	AML		
	comp=E,460μm,0.3s						
ATPI	**Pietralunga -**	**0.89**	**320**	⇑P	Pg	08 02 15.3	-0.2
ATPI				AML	AML		
	comp=E,346μm,0.9s						
ATPI				AML	AML		
	comp=N,388μm,0.5s						
PIEI	**Pieia**	**0.90**	**328**	⇑P	Pg	08 02 15.5	-0.1
PIEI				AML	AML		
	comp=E,271μm,0.9s						
PIEI				AML	AML		
	comp=N,194μm,0.4s						
PIEI				AML	AML		
	comp=E,450μm,0.2s						
PIEI				AML	AML		
	comp=N,317μm,0.2s						
MPAG	**Monte Paganucc**	**0.91**	**340**	⇑P	Pg	08 02 15.7	-0.2
MPAG				AML	AML		
	comp=N,422μm,0.5s						
MPAG				AML	AML		
	comp=E,798μm,0.3s						
MPAG				AML	AML		
	comp=E,797μm,0.3s						
INTR	**Introdacqua**	**0.93**	**145**	P	Pg	08 02 15.5	-0.8
INTR				AML	AML		
	comp=E,272μm,0.5s						
INTR				AML	AML		
	comp=N,432μm,0.5s						
INTR				AML	AML		
	comp=N,482μm,0.7s						
INTR				AML	AML		
	comp=E,274μm,0.9s						
NARO	**Abbazia di Nar**	**0.94**	**332**	⇓P	Pg	08 02 16.3	-0.2
NARO				S	Sb	08 02 30.0	+0.6
NARO				AML	AML		
	comp=E,346μm,0.4s						
NARO				AML	AML		
	comp=N,218μm,0.2s						
FSSB	**Fossombrone**	**0.96**	**342**	⇑P	Pg	08 02 16.8	-0.1
FSSB				AML	AML		
	comp=E,722μm,1.3s						
FSSB				AML	AML		
	comp=N,1465μm,0.3s						
FSSB				AML	AML		
	comp=E,1215μm,0.6s						
FSSB				AML	AML		
	comp=N,1860μm,0.4s						
LPEL	**Lama dei Pelig**	**1.04**	**134**	⇑P	Pg	08 02 17.7	-0.6
LPEL				AML	AML		
	comp=E,244μm,0.8s						
LPEL				AML	AML		
	comp=N,227μm,0.9s						
LPEL				AML	AML		
	comp=N,270μm,0.4s						
LPEL				AML	AML		
	comp=E,268μm,0.3s						
CAFI	**Castiglion Fio**	**1.05**	**302**	⇑P	Pb	08 02 18.7	0.0
CAFI				AML	AML		

comp=E,242µm,0.6s
CAFI AML AML
comp=N,343µm,1.5s
CAFI AML AML
comp=N,344µm,1.5s
CAFI AML AML
comp=E,288µm,1.2s
PARC Parchiule 1.11 322 ⇓P Pg 08 02 19.9 +0.1
PARC AML AML
comp=E,156µm,1.1s
PARC AML AML
comp=N,233µm,1.0s
POFI Posta Fibreno 1.13 160 P Pb 08 02 19.3 -0.7
POFI AML AML
comp=N,134µm,0.8s
POFI AML AML
comp=E,166µm,0.5s
LRP Arpino 1.17 165 P Pg 08 02 21.8 +1.0
LRP AML AML
comp=E,115µm,0.9s
LRP AML AML
comp=N,134µm,0.6s
SF01 Poggio Pratacc 1.19 272 S Sn 08 02 38.0 +0.5
PTRJ Pietraroja 1.73 144 P Pg 08 02 31.1 -0.5
MRB1 Monte Rocchett 2.12 140 S Sb 08 03 03.0 -0.3
IFOR Ischia Forio P 2.12 166 ⇓P Pg 08 02 38.8 -0.3
MSAG Monte S. Angel 2.29 117 ⇑P Pb 08 02 38.1 -1.6
MAGA Magasa 3.52 329 ⇑P Pn 08 02 56.1 +2.9
ZAG Zagreb 3.65 32 P Pb 08 03 03.3 +0.3
EUCT Pavia 3.80 311 ⇑P Pb 08 03 05.0 -0.4
KOSI Kohlern 3.91 341 ⇑P Pn 08 03 00.7 +2.1
ABTA Abfaltersbach 4.00 353 *e*Pn Pn 08 03 01.7 +1.9
comp=N,1.4nm,0.3s

ROM 24 08:02:55.2±0.1, 42°.792N±0°.004×13°.232E±0°.006, h7km, ML2.9/18, 9C-10D, Error ellipse: s-maj=0.6km s-min=0.1km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**296**	P	Pg	08 02 58.0	+0.5
NRCA				S	Sg	08 02 59.6	+0.6
NRCA				AML	AML		
	comp=N,86900µm,0.1s						
NRCA				AML	AML		
	comp=E,50900µm,0.9s						
NRCA				AML	AML		
	comp=N,86900µm,0.1s						
NRCA				AML	AML		
	comp=N,93050µm,0.1s						
NRCA				AML	AML		
	comp=E,50850µm,0.9s						
NRCA				AML	AML		
	comp=N,86950µm,0.1s						
NRCA				AML	AML		
	comp=E,54550µm,0.8s						
NRCA				AML	AML		
	comp=N,86950µm,0.1s						
FEMA	**Monte Fema**	**0.22**	**322**	P	Pg	08 03 00.3	+0.8
FEMA				S	Sg	08 03 03.9	+1.4
FEMA				AML	AML		
	comp=E,10350µm,0.2s						
FEMA				AML	AML		
	comp=E,10400µm,0.2s						
FEMA				AML	AML		
	comp=N,7285µm,1.4s						
LNSS	**Leonessa**	**0.24**	**217**	⇑P	Pg	08 03 00.8	+1.0
LNSS				S	Sg	08 03 05.2	+2.2
LNSS				AML	AML		
	comp=E,4125µm,0.3s						
LNSS				AML	AML		
	comp=N,7995µm,0.4s						
FDMO	**Fiordimonte**	**0.27**	**337**	P	Pg	08 03 01.0	+0.6
FDMO				S	Sg	08 03 05.4	+1.4
FDMO				AML	AML		
	comp=N,4460µm,0.8s						
FDMO				AML	AML		
	comp=E,6095µm,1.2s						
GUMA	**Gualdo di Mace**	**0.28**	**16**	P	Pb	08 03 01.7	-0.9
GUMA				S	Sb	08 03 06.7	-0.8
GUMA				AML	AML		
	comp=E,26050µm,0.3s						
GUMA				AML	AML		
	comp=N,14050µm,1.3s						
GUMA				AML	AML		
	comp=N,16150µm,1.5s						
GUMA				AML	AML		
	comp=E,31100µm,0.3s						
GUMA				END			
RM33	**Pellescritta (**	**0.28**	**183**	P	Pb	08 03 01.9	-0.8
RM33				S	Sb	08 03 06.7	-1.0
RM33				AML	AML		
	comp=E,4215µm,1.0s						
RM33				AML	AML		
	comp=N,3255µm,0.3s						
RM33				AML	AML		
	comp=E,4240µm,1.0s						
RM33				AML	AML		
	comp=E,4210µm,1.0s						
RM33				AML	AML		
	comp=N,3260µm,0.3s						
RM33				AML	AML		
	comp=E,4235µm,1.0s						
RM33				AML	AML		
	comp=N,3250µm,0.3s						
RM33				END			
CAMP	**Campotosto**	**0.29**	**153**	P	Pg	08 03 01.6	+0.7
CAMP				S	Sb	08 03 06.5	-1.3
CAMP				AML	AML		
	comp=N,1375µm,0.6s						
CAMP				AML	AML		
	comp=E,1570µm,1.0s						
CSP1	**Cessapalombo**	**0.30**	**356**	P	Pg	08 03 01.6	+0.5
CSP1				S	Sb	08 03 06.7	-1.5
CSP1				AML	AML		
	comp=E,8090µm,0.3s						
CSP1				AML	AML		
	comp=N,11410µm,1.1s						
CSP1				AML	AML		
	comp=N,11430µm,1.1s						
CSP1				AML	AML		
	comp=N,11385µm,1.1s						
CSP1				AML	AML		
	comp=E,8085µm,0.3s						
CESI	**CESI - Serrava**	**0.32**	**312**	P	Pg	08 03 02.1	+0.7
CESI				S	Sb	08 03 07.3	-1.4
CESI				AML	AML		
	comp=N,5440µm,0.3s						
CESI				AML	AML		
	comp=E,4005µm,0.2s						
TERO	**Teramo**	**0.32**	**122**	P	Pg	08 03 02.1	+0.6
TERO				S	Sb	08 03 07.4	-1.3
TERO				AML	AML		
	comp=N,4605µm,0.4s						
TERO				AML	AML		
	comp=E,3170µm,0.2s						
TERO				AML	AML		
	comp=N,4835µm,1.2s						
TERO				AML	AML		
	comp=N,4610µm,0.4s						
TERO				AML	AML		
	comp=E,2950µm,0.2s						
TERO				AML	AML		
	comp=E,3175µm,0.2s						
OFFI	**Offida**	**0.36**	**67**	P	Pb	08 03 03.8	-0.2
OFFI				AML	AML		
	comp=E,6265µm,0.8s						
OFFI				AML	AML		
	comp=N,11900µm,0.6s						
ARRO	**Arrone**	**0.40**	**238**	P	Pg	08 03 03.7	+0.7
ARRO				S	Sb	08 03 10.4	-0.7
ARRO				AML	AML		
	comp=N,1500µm,0.2s						
ARRO				AML	AML		
	comp=N,1495µm,0.2s						
ARRO				AML	AML		
	comp=E,1400µm,0.2s						
ARRO				AML	AML		
	comp=N,1284µm,0.7s						
SEF1	**Sefro**	**0.41**	**330**	P	Pg	08 03 03.8	+0.7
SEF1				S	Sb	08 03 10.3	-1.0
SEF1				AML	AML		
	comp=E,6770µm,1.6s						
SEF1				AML	AML		
	comp=E,6775µm,1.6s						
SEF1				AML	AML		
	comp=N,6415µm,0.2s						
GIGS	**Gran Sasso**	**0.42**	**144**	P	Pg	08 03 04.0	+0.6
GIGS				S	Sb	08 03 10.6	-1.1
GIGS				AML	AML		
	comp=E,441µm,0.7s						
GIGS				AML	AML		
	comp=N,357µm,0.4s						
GIGS				AML	AML		
	comp=E,440µm,0.7s						
GAG1	**Gagliole**	**0.46**	**345**	P	Pb	08 03 04.9	-0.8
GAG1				AML	AML		
	comp=E,5845µm,0.7s						
GAG1				AML	AML		
	comp=N,8305µm,1.2s						
GAG1				AML	AML		
	comp=E,5845µm,0.7s						
ASSB	**Assisi San Ben**	**0.49**	**301**	P	Pg	08 03 04.9	+0.3
ASSB				S	Sb	08 03 12.7	-0.9
ASSB				AML	AML		
	comp=E,1680µm,1.4s						
ASSB				AML	AML		
	comp=N,2410µm,0.2s						
ASSB				AML	AML		
	comp=N,1396µm,0.7s						
ASSB				AML	AML		
	comp=E,1487µm,0.3s						
TRTR	**Tortoreto Alta**	**0.50**	**88**	⇓P	Pb	08 03 06.9	+0.6
TRTR				AML	AML		
	comp=E,4930µm,0.6s						
TRTR				AML	AML		
	comp=N,5575µm,0.5s						
SNTG	**Esanatoglia**	**0.51**	**335**	⇑P	Pg	08 03 05.4	+0.4
SNTG				S	Sb	08 03 13.4	-0.7
SNTG				AML	AML		
	comp=E,1435µm,0.6s						
SNTG				AML	AML		
	comp=N,1620µm,0.5s						
CESX	**Cesi**	**0.51**	**249**	⇑P	Pb	08 03 06.2	-0.3
CESX				AML	AML		
	comp=E,1330µm,0.4s						
CESX				AML	AML		
	comp=N,1410µm,1.1s						
FIAM	**Fiamignano**	**0.53**	**189**	⇓P	Pg	08 03 05.9	+0.5
FIAM				AML	AML		
	comp=N,978µm,0.7s						
FIAM				AML	AML		
	comp=E,1240µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.58**	**312**	P	Pg	08 03 06.9	+0.4
ATCC				S	Sb	08 03 17.0	+0.7
ATCC				AML	AML		
	comp=N,1775µm,0.3s						
ATCC				AML	AML		
	comp=E,2250µm,0.8s						
ATCC				AML	AML		
	comp=N,1140µm,0.6s						
ATCC				AML	AML		
	comp=E,1472µm,0.3s						
VCEL	**Villa Celiera**	**0.60**	**131**	P	Pb	08 03 08.2	+0.1
FOSV	**Fossato di Vic**	**0.61**	**326**	P	Pg	08 03 07.2	+0.3
FOSV				S	Sb	08 03 17.0	0.0
T0110	**Collepietro**	**0.69**	**144**	⇑P	Pg	08 03 08.7	+0.2
T0110				AML	AML		
	comp=N,1350µm,0.8s						
T0110				AML	AML		
	comp=E,1250µm,0.4s						
MURB	**Monte Urbino**	**0.70**	**312**	P	Pg	08 03 08.9	+0.2
MURB				S	Sb	08 03 20.5	+0.9
MURB				AML	AML		
	comp=N,2765µm,0.2s						
MURB				AML	AML		
	comp=E,3185µm,0.3s						
MURB				AML	AML		
	comp=N,3215µm,0.2s						
MURB				AML	AML		
	comp=E,2695µm,0.3s						
SSFR	**Montelago di S**	**0.72**	**333**	⇓P	Pg	08 03 09.3	+0.2
SSFR				AML	AML		
	comp=E,4125µm,0.2s						
SSFR				AML	AML		
	comp=N,3650µm,0.2s						
SSFR				AML	AML		
	comp=E,4125µm,0.2s						
SSFR				AML	AML		
	comp=E,3815µm,0.2s						
SSFR				AML	AML		
	comp=N,3040µm,0.2s						
ARVD	**Arcevia**	**0.74**	**343**	⇓P	Pg	08 03 09.4	+0.1
ARVD				S	Sb	08 03 21.2	+0.6
ARVD				AML	AML		
	comp=E,757µm,0.2s						
ARVD				AML	AML		
	comp=E,758µm,0.2s						
ARVD				AML	AML		
	comp=N,624µm,0.6s						
ARVD				AML	AML		
	comp=N,336µm,1.3s						
ARVD				AML	AML		
	comp=E,663µm,0.9s						
ATFO	**Monte Foce - G**	**0.75**	**320**	⇑P	Pg	08 03 09.9	+0.3
ATFO				S	Sb	08 03 21.6	+0.5
ATFO				AML	AML		
	comp=N,880µm,0.5s						
ATFO				AML	AML		
	comp=E,803µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.76**	**302**	P	Pb	08 03 10.6	-0.3
ATTE				AML	AML		
	comp=E,429µm,0.5s						
ATTE				AML	AML		
	comp=N,452µm,1.0s						
SRES	**S.Oreste - Sor**	**0.77**	**224**	P	Pg	08 03 10.2	+0.2
SRES				AML	AML		
	comp=E,618µm,0.4s						
SRES				AML	AML		
	comp=N,410µm,1.0s						
FRON	**Frontone**	**0.81**	**333**	⇓P	Pg	08 03 10.8	0.0
FRON				AML	AML		
	comp=E,832µm,0.7s						
FRON				AML	AML		
	comp=E,832µm,0.7s						
FRON				AML	AML		
	comp=N,1490µm,0.3s						
ATVO	**AVT- Monte Val**	**0.84**	**315**	P	Pg	08 03 11.4	0.0
ATVO				AML	AML		
	comp=E,460µm,0.3s						
ATVO				AML	AML		
	comp=E,460µm,0.3s						
ATVO				AML	AML		
	comp=N,492µm,0.7s						
ATPI	**Pietralunga -**	**0.90**	**318**	⇑P	Pg	08 03 12.5	+0.1
ATPI				AML	AML		
	comp=E,455µm,1.6s						
ATPI				AML	AML		
	comp=N,408µm,1.3s						
PIEI	**Pieia**	**0.90**	**326**	⇑P	Pg	08 03 12.3	-0.1
PIEI				S	Sb	08 03 26.4	+0.9
PIEI				AML	AML		
	comp=N,454µm,1.5s						
PIEI				AML	AML		
	comp=E,450µm,0.2s						
MPAG	**Monte Paganucc**	**0.91**	**338**	⇓P	Pg	08 03 12.7	+0.2
MPAG				S	Sn	08 03 26.9	-0.9
MPAG				AML	AML		
	comp=E,797µm,0.3s						
MPAG				AML	AML		
	comp=N,579µm,0.4s						
MPAG				AML	AML		
	comp=E,798µm,0.3s						
INTR	**Introdacqua**	**0.93**	**147**	⇓P	Pg	08 03 12.9	-0.1
INTR				AML	AML		
	comp=E,420µm,0.6s						
INTR				AML	AML		
	comp=N,953µm,0.9s						
NARO	**Abbazia di Nar**	**0.95**	**330**	P	Pg	08 03 13.1	-0.2
NARO				S	Sb	08 03 27.3	+0.6
FSSB	**Fossombrone**	**0.96**	**340**	P	Pg	08 03 13.7	+0.1
FSSB				S	Sn	08 03 28.8	-0.3
FSSB				AML	AML		
	comp=E,1215µm,0.6s						
FSSB				AML	AML		
	comp=N,1860µm,0.4s						
PESA	**Pesaro**	**1.18**	**346**	AML	AML		
	comp=E,1056µm,1.1s						
PESA				AML	AML		
	comp=N,1146µm,0.4s						
SBPO	**S.Benedetto Po**	**2.81**	**324**	⇑P	Pn	08 03 41.3	+0.8
BOJS	**Bojanci**	**3.08**	**28**	⇓P	Pn	08 03 46.3	+2.1
VARN	**Col Varnada, M**	**3.30**	**346**	⇓P	Pn	08 03 49.2	+1.9
MAGA	**Magasa**	**3.52**	**329**	⇓P	Pn	08 03 52.0	+1.7
MAGA				S	Sb	08 04 39.0	-1.8
RNCA	**Ronca, Sant'Ol**	**3.53**	**300**	⇑P	Pb	08 03 57.4	-0.5
CAPR	**Capriolo**	**3.70**	**321**	S	Sn	08 04 39.0	+2.3
OBKA	**Obir**	**3.83**	**14**	*e*Pn	Pn	08 03 54.8	+0.1
	comp=N,1.1nm,0.2s						
MYKA	**Terra Mystica**	**3.85**	**4**	*e*Pn	Pn	08 03 56.1	+1.2
	comp=N,1.2nm,0.2s						
ABTA	**Abfaltersbach**	**3.99**	**353**	*e*Pn	Pn	08 03 57.6	+0.8
	comp=N,4.7nm,0.4s						
SOKA	**Soboth**	**4.09**	**18**	*e*Pn	Pb	08 04 07.3	-0.2
	comp=N,1.5nm,0.2s						
RISI	**Rein**	**4.24**	**349**	S	Sn	08 04 49.0	-1.1
KBA	**Koelnbreinsper**	**4.29**	**1**	*e*Pn	Pn	08 04 01.2	+0.3
	comp=N,0.7nm,0.2s						
MUGIO	**Muggio**	**4.34**	**318**	P	Pn	08 04 02.9	+1.3
FETA	**Feichten**	**4.59**	**338**	*e*Pn	Pn	08 04 05.8	+0.7
	comp=N,1.8nm,0.3s						
WTTA	**Wattenberg**	**4.61**	**346**	*e*Pn	Pn	08 04 03.5	-2.0
	comp=N,1.6nm,0.4s						
CONA	**Conrad Observa**	**5.46**	**19**	*e*Pn	Pn	08 04 17.1	+0.1

MAN ***24*** *08:02:52, 12°.59N×125°.99E, h1km, Ms4.3*
IDC ***24*** *08:02:55.3±0.5, 12°.33N×125°.66E, h0km, mb4.2/19, mbtmp4.2/19, MS3.6/41, Error ellipse: s-maj=29.2km s-min=12.3km az=72.0*
DJA ***24*** *08:02:57.5±0.6, 13°.N±.5°×12°6E±°, h18km±4km, M4.5/13, mB5.4/2, mb4.5/13, Mw(mB)4.8/2*
NEIC ***24*** *08:03:05.5±1.9, 12°.4N±0°.1×125°.6E±0°.1, h71km±8km, mb4.7/28, Error ellipse: s-maj=19.1km s-min=14.0km az=47.0*

ISC 24 08:03:01.5±0.4, 12°.57N±0°.04×125°.70E±0°.06, h35km, n138, σ2s 22/112, mb4.5/38, MS3.7/45, 5C-18D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**1.01**	**267**	⇓*e*P	Pn	**08 03 16.7**	**-2.5**
PVCP	**Virac**	**1.82**	**304**	⇓*e*P	Pn	**08 03 28.7**	**-1.5**
OCLP	**Ormoc**	**1.85**	**215**	⇓*e*P	Pn	**08 03 30.1**	**-0.6**
MMPH	**Masbate**	**2.04**	**264**	⇑*i*P	Pn	**08 03 33.1**	**-0.1**
MMPH				*i* S	Sn	**08 03 52.7**	**-4.7**
MSLP	**Maasin**	**2.56**	**199**	⇓*e*P	Pn	**08 03 39.0**	**-1.5**
MSLP				*e*S	Sn	**08 04 18.5**	**+8.2**
SCPH	**Surigao**	**2.78**	**184**	⇑*e*P	Pn	**08 03 39.7**	**-3.8**
SCPH				*e*S	Sn	**08 04 22.6**	**+6.8**
GLSP	**General Luna,**	**2.80**	**171**	⇓*e*P	Pn	**08 03 39.3**	**-4.5**
GLSP				*e*S	Sn	08 04 39.0	+23
LLP	**Lapu-Lapu**	**2.81**	**217**	⇑*e*P	Pn	**08 03 43.8**	**-0.2**
LLP				*i* S	Sn	**08 04 20.1**	**+3.6**
RCP	**Roxas**	**3.06**	**251**	⇓*e*P	Pn	**08 03 46.2**	**-1.1**
RCP				*e*S	Sn	**08 04 25.5**	**+2.8**
TBP	**Tagbilaran**	**3.38**	**212**	*e*P	Pn	**08 03 50.1**	**-1.7**
TBP				*i* S	Sn	**08 04 34.8**	**+4.1**
JCNP	**Jose Panganiba**	**3.38**	**301**	⇓*e*P	Pn	08 03 58.5	+6.7
JCNP				*e*S	Sn	**08 04 24.3**	**-6.4**
GQP	**Guinayangan**	**3.43**	**293**	⇓*e*P	Pn	08 03 57.6	+5.2
GUIM	**Jordan**	**3.60**	**238**	⇓*e*P	Pn	**08 03 55.5**	**+0.6**
GUIM				*e*S	Sn	08 04 45.6	+9.3
BOAC	**Boac**	**3.86**	**284**	⇓*e*P	Pn	**08 04 01.3**	**+3.0**
BOAC				*e*S	Sn	08 04 55.9	+13
CNOP	**Candoni, Negro**	**4.05**	**228**	⇓*e*P	Pn	**08 04 00.1**	**-1.0**
CNOP				*e*S	Sn	08 04 23.0	-24
LQP	**Lukban**	**4.33**	**291**	*e*P	Pn	**08 04 07.0**	**+2.0**
BUKP	**Musuan**	**4.70**	**188**	⇓*e*P	Pn	**08 04 09.9**	**-0.1**
BUKP				*e*S	Sn	08 04 46.7	-17
TGY	**Tagaytay City**	**4.88**	**289**	Pn	Pn	**08 04 16.5**	**+4.1**
	baz=90,slow=13						
BALP	**Baler**	**5.09**	**309**	⇓*e*P	Pn	**08 04 17.3**	**+2.0**
PAGZ	**Pagadian**	**5.21**	**206**	⇓*e*P	Pn	**08 04 16.7**	**-0.3**
PAGZ				*e*S	Sn	**08 05 23.5**	**+7.5**
DAV	**Davao City (W)**	**5.47**	**181**	LR	LR	08 06 56.1	
	comp=Z,2µm,19.0s,baz=34,slow=46						
KCP	**Kidapawan**	**5.56**	**186**	⇑*e*P	Pn	08 04 26.3	+4.5
KCP				*i* S	Sn	08 05 46.7	+22
SMPP	**San Manuel, Pa**	**6.02**	**307**	⇓*e*P	Pn	**08 04 28.7**	**+0.6**
SMPP				*e*S	Sn	08 05 47.4	+11
SAMP	**Sagada Mountai**	**6.45**	**315**	⇓*e*P	Pn	**08 04 34.6**	**+0.6**
APYP	**Conner**	**6.79**	**321**	⇓*e*P	Pn	**08 04 40.1**	**+1.4**
APYP				*e*S	Sn	08 05 10.2	-45
JMZ	**Minamidaito 2**	**14.17**	**21**	P	**P**	**08 06 29.5**	**+2.7**
TTSI	**Tana Toraja**	**16.57**	**201**	P	**P**	**08 06 51.8**	**-1.7**
	41nm,0.8s						
SPSI	**Sidrap Palu**	**17.45**	**200**	P	**P**	**08 07 02.4**	**-0.8**
	721nm25nm,0.6s						
KAPI	**Kappang**	**18.44**	**199**	Pn	**Pn**	**08 07 13.8**	**-0.6**
	1.1nm,0.3s,baz=15,slow=12,SNR=1.5						
KAPI				LR	LR	08 15 53.9	
	comp=Z,108nm,18.3s,baz=36,slow=43						
GUMO	**Guam**	**18.70**	**85**	LR	LR	08 13 05.2	
	comp=Z,159nm,21.1s,baz=269,slow=32						
UBPT	**Khong Chiam**	**19.82**	**280**	P	**P**	**08 07 28.8**	**-0.4**
NJ2	**Nanjing**	**20.39**	**343**	*e*P	**P**	**08 07 33.8**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,29nm,0.5s						
NJ2				LR	LR		
	comp=N,280nm,10.0s						
NJ2				LR	LR		
	comp=E,400nm,12.4s						
NJ2				LR	LR		
	comp=Z,400nm,20.6s						
JCJ	**Chichijima**	**21.16**	**44**	LR	LR	08 15 48.1	
	comp=Z,140nm,19.4s,baz=114,slow=36						
GYA	**Guiyang**	**22.60**	**310**	*e*P	**P**	**08 08 01.9**	**+2.6**
GYA				S	**S**	**08 12 10.8**	**+5.9**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GYA				LR	LR		
	comp=N,390nm,15.7s						
GYA				LR	LR		
	comp=E,420nm,16.6s						
GYA				LR	LR		
	comp=Z,570nm,14.6s						
BATI	**Baumata**	**22.72**	**185**	P	**P**	**08 07 58.0**	**-2.5**
	comp=Z,32nn,0.4s,baz=37,slow=1.6,SNR=4.1						
	comp=Z,32nn,0.4s						
JHS	**Saijyo**	**23.32**	**16**	P	**P**	**08 08 07.5**	**+1.0**
JHS				IAmb	IAmb	08 08 29.9	
	comp=Z,45nm,1.5s						
JHJ	**Hachijo jima 2**	**24.17**	**30**	LR	LR	08 16 00.0	
	comp=Z,128nm,21.9s,baz=299,slow=32						
TIA	**Tai'an**	**24.77**	**343**	*e*P	**P**	**08 08 20.8**	**+0.8**
TIA				S	**S**	**08 12 40.1**	**0.0**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIA				LR	LR		
	comp=N,180nm,12.9s						
TIA				LR	LR		
	comp=Z,220nm,15.7s						
KSRS	**Korea Array**	**24.86**	**4**	P	**P**	**08 08 22.3**	**+1.6**
	comp=Z,4.1nm,0.9s,baz=182,slow=11,SNR=15						
KSRS				LR	LR	08 17 18.8	
	comp=Z,95nm,21.9s,baz=190,slow=34						
	comp=Z,4.1nm,0.9s						
CRAI	**Chiangrai**	**25.43**	**291**	P	**P**	**08 08 24.9**	**-1.3**
XAN	**Xi'an**	**26.27**	**327**	⇓P	**P**	**08 08 34.5**	**+0.9**
XAN				pP	pP	08 08 41.0	-0.7
XAN				sP	sP	08 08 44.0	-1.2
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
XAN				LR	LR		
	comp=N,350nm,13.3s						
XAN				LR	LR		
	comp=E,290nm,14.0s						
XAN				LR	LR		
	comp=Z,440nm,13.6s						
MJAR	**Matsushiro Arr**	**26.39**	**23**	LR	LR	08 17 43.4	
	comp=Z,167nm,20.8s,baz=202,slow=33						
CMAR	**Chiang Mai Arr**	**26.42**	**286**	P	**P**	**08 08 34.4**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=96,slow=7.6,SNR=22						
CMAR				LR	LR	08 20 08.4	
	comp=Z,240nm,18.2s,baz=105,slow=39						
	comp=Z,2.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**26.42**	**286**	P	**P**	**08 08 33.2**	**-1.9**
PSI	**Prapat**	**28.22**	**252**	LR	LR	08 20 57.7	
	comp=Z,316nm,19.4s,baz=90,slow=38						
FITZ	**Fitzroy Crossi**	**30.47**	**180**	LR	LR	08 22 19.5	
	comp=Z,47nm,19.2s,baz=358,slow=38						
FITZ	**Fitzroy Crossi**	**30.47**	**180**	P	**P**	**08 09 08.6**	**-2.6**
FITZ				IAmb	IAmb	08 09 09.9	
	comp=Z,13nm,0.9s						
LZH	**Lanzhou**	**30.59**	**324**	*e*P	**P**	**08 09 13.3**	**+1.0**

LZH				pP	pP	08 09 19.9	-0.5	
LZH				sP	sP	08 09 24.1	+0.3	
LZH				pmax	pmax			
	comp=Z,21nm,1.4s							
LZH				LR	LR			
	comp=N,430nm,11.5s							
LZH				LR	LR			
	comp=E,330nm,11.9s							
LZH				LR	LR			
	comp=Z,600nm,14.7s							
KRVT	**Keravat (AS076**	**31.08**	**121**	LR	LR	08 20 21.3		
	comp=Z,113nm,20.9s,baz=83,slow=34							
COEN	**Coen**	**31.54**	**146**	P	**P**	**08 09 19.6**	**-1.1**	
WB0	**Warramunga Arr**	**33.25**	**165**	P	**P**	**08 09 32.6**	**-3.0**	
WB0				IAmb	IAmb	08 10 18.1		
	comp=Z,27nm,1.9s							
WRA	**Warramunga Arr**	**33.41**	**165**	P	**P**	**08 09 33.1**	**-3.8**	
	comp=Z,0.5nm,0.6s,baz=344,slow=9.3,SNR=3.7							
WRA				PcP	**PcP**	**08 12 16.6**	**-1.4**	
	comp=Z,1.7nm,0.6s,baz=339,slow=2.9,SNR=16							
WRA				LR	LR	08 25 06.4		
	comp=Z,63nm,19.9s,baz=346,slow=40							
	comp=Z,0.5nm,0.6s							
WRA	**Warramunga Arr**	**33.41**	**165**	P	**P**	**08 09 38.2**	**+1.2**	
WB2	**Warramunga Arr**	**33.41**	**165**	P	**P**	**08 09 35.2**	**-1.8**	
WB2				IAmb	IAmb	08 10 05.7		
	comp=Z,12nm,1.4s							
WR0	**Warramunga Arr**	**33.48**	**165**	P	**P**	**08 09 37.6**	**0.0**	
WR0				IAmb	IAmb	08 10 04.8		
	comp=Z,12nm,1.4s							
GTA	**Gaotai**	**35.19**	**324**	⇑P	**P**	**08 09 54.8**	**+2.4**	
GTA				pP	pP	08 10 00.6	0.0	
GTA				sP	sP	08 10 04.0	0.0	
GTA				pmax	pmax			
	comp=Z,5.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,110nm,5.1s							
GTA				LR	LR			
	comp=N,150nm,14.9s							
GTA				LR	LR			
	comp=E,190nm,14.9s							
GTA				LR	LR			
	comp=Z,280nm,16.4s							
KLR	**Kul'dur**	**36.89**	**7**	P	**P**	**08 10 08.2**	**+1.5**	
	comp=Z,0.7nm,0.5s,baz=138,slow=16,SNR=2.7							
KLR				LR	LR	08 25 53.3		
	comp=Z,52nm,20.2s,baz=186,slow=37							
	comp=Z,0.7nm,0.5s							
AS31	**Alice Springs**	**36.90**	**167**	P	**P**	**08 10 05.8**	**-1.2**	
ASAR	**Alice Springs**	**36.90**	**167**	P	**P**	**08 10 04.0**	**-3.0**	
	comp=Z,1.0nm,0.7s,baz=340,slow=6.4,SNR=14							
ASAR				PcP	**PcP**	**08 12 26.6**	**-1.7**	
	comp=Z,1.1nm,0.6s,baz=335,slow=2.6,SNR=8.2							
ASAR				ScP	**ScP**	**08 16 12.2**	**-0.4**	
	comp=Z,1.0nm,0.9s,baz=347,slow=3.9,SNR=4.9							
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**36.90**	**167**	P	**P**	**08 10 06.3**	**-0.7**	
ODAN	**Odare**	**38.59**	**297**	*e*P	**P**	**08 10 21.2**	**-0.5**	
SONM	**Songino Array**	**38.68**	**339**	P	**P**	**08 10 22.8**	**+0.8**	
	comp=Z,3.6nm,0.9s,baz=159,slow=8.9,SNR=8.6							
SONM				LR	LR	08 27 47.8		
	comp=Z,71nm,18.2s,baz=47,slow=38							
	comp=Z,3.6nm,0.9s							
RAMN	**Ramite**	**39.30**	**297**	*e*P	**P**	**08 10 27.8**	**+0.2**	
JIRN	**Jiri**	**39.82**	**298**	*e*P	**P**	**08 10 32.5**	**+0.4**	
H11S3	**WAKE ISLAND Hy**	**39.87**	**76**	T	T	08 53 35.5		
	baz=269,slow=73							
H11S1	**WAKE ISLAND Hy**	**39.88**	**76**	T	T	08 53 33.1		
	baz=269,slow=73							
H11S2	**WAKE ISLAND Hy**	**39.88**	**76**	T	T	08 53 35.1		
	baz=269,slow=73							
H11N1	**WAKE ISLAND Hy**	**40.12**	**74**	T	T	08 53 50.3		
	baz=266,slow=74,SNR=44							
H11N2	**WAKE ISLAND Hy**	**40.13**	**74**	T	T	08 53 43.5		
	baz=266,slow=74,SNR=35							
H11N3	**WAKE ISLAND Hy**	**40.14**	**74**	T	T	08 53 51.6		
	baz=266,slow=74,SNR=38							
GUN	**Gumba**	**40.15**	**298**	*e*P	**P**	**08 10 35.3**	**+0.5**	
HNR	**Honiara**	**40.44**	**121**	LR	LR	08 24 51.9		
	comp=Z,120nm,21.6s,baz=277,slow=33							
PKI	**Pulchoki**	**40.48**	**298**	*e*P	**P**	**08 10 36.9**	**-0.6**	
PKIN	**Phulchoki**	**40.49**	**298**	*e*P	**P**	**08 10 37.1**	**-0.4**	
DMN	**Daman**	**40.74**	**298**	*e*P	**P**	**08 10 39.6**	**0.0**	
GKN	**Gorkha**	**41.24**	**298**	*e*P	**P**	**08 10 43.2**	**-0.4**	
DANN	**Dangsing**	**42.07**	**298**	*e*P	**P**	**08 10 50.4**	**-0.1**	
	comp=Z,44nm,0.9s							
KOLN	**Koldanda**	**42.08**	**298**	*e*P	**P**	**08 10 50.4**	**-0.1**	
PYUN	**Piuthan**	**42.68**	**298**	*e*P	**P**	**08 10 55.4**	**0.0**	
	comp=Z,74nm,1.0s							
FORT	**Forest**	**43.16**	**177**	P	**P**	**08 10 58.4**	**-0.4**	
PALK	**Pallekele**	**44.59**	**268**	LR	LR	08 30 09.8		
	comp=Z,56nm,19.7s,baz=204,slow=37							
BBOO	**Buckleboo**	**46.20**	**168**	P	**P**	**08 11 21.2**	**-1.9**	
STKA	**Stephens Creek**	**46.75**	**161**	P	**P**	**08 11 24.8**	**-2.6**	
	comp=Z,2.0nm,0.6s,baz=321,slow=7.4,SNR=4.7							
	comp=Z,2.0nm,0.6s							
STKA	**Stephens Creek**	**46.75**	**161**	P	**P**	**08 11 26.7**	**-0.7**	
PETK	**Petropavlovsk-**	**47.80**	**26**	LR	LR	08 29 22.7		
	comp=Z,74nm,21.6s,baz=234,slow=33							
MK31	**Makanchi Array**	**49.87**	**322**	P	**P**	**08 11 52.6**	**+1.2**	
MK31				IAmb	IAmb	08 11 53.8		
	comp=Z,6.7nm,1.1s							
MKAR	**Makanchi Array**	**49.87**	**322**	P	**P**	**08 11 52.5**	**+1.1**	
	comp=Z,3.5nm,0.7s,baz=115,slow=8.3,SNR=33							
MKAR				PcP	**PcP**	**08 13 11.3**	**-0.3**	
	comp=Z,1.7nm,0.8s,baz=106,slow=6.9,SNR=1.8							
MKAR				LR	LR	08 32 53.9		
	comp=Z,101nm,18.2s,baz=112,slow=36							
	comp=Z,3.5nm,0.7s							
MKAR	**Makanchi Array**	**49.87**	**322**	P	**P**	**08 11 52.9**	**+1.5**	
MAKZ	**Makanchi**	**50.07**	**322**	P	**P**	**08 11 53.8**	**+0.9**	
MAKZ				IAmb	IAmb	08 11 55.3		
	comp=Z,13nm,1.4s							
MA2	**Magadan**	**50.49**	**16**	LR	LR	08 32 53.5		
	comp=Z,31nm,19.6s,baz=134,slow=35							
KSH	**Kashi**	**51.30**	**311**	P	**P**	**08 12 05.0**	**+2.6**	
KSH				LR	LR			
	comp=N,330nm,17.1s							
KSH				LR	LR			
	comp=E,350nm,20.0s							
KSH				LR	LR			
	comp=Z,230nm,14.0s							
NIL	**Nilore**	**52.00**	**303**	P	**P**	**08 12 07.5**	**-0.1**	
ZALV	**Zalesovo Beam**	**52.35**	**331**	P	**P**	**08 12 10.6**	**+0.8**	
	comp=Z,2.3nm,0.7s,baz=118,slow=8.3,SNR=6.1							
	comp=Z,2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**52.35**	**331**	P	**P**	**08 12 10.1**	**+0.2**	
DZM	**Mont Dzumac**	**52.75**	**130**	LR	LR	08 34 17.6		
	comp=Z,48nm,18.3s,baz=18,slow=36							
KURK	**Kurchatov**	**53.87**	**325**	P	**P**	**08 12 21.6**	**+0.6**	
GAR	**Garm**	**55.41**	**309**	P	**P**	**08 12 33.0**	**+0.4**	
SHEM	**Shemya Is, Ala**	**55.54**	**33**	LR	LR	08 31 50.6		
	comp=Z,32nm,21.4s,baz=210,slow=31							
CHGR	**Chuyangaron**	**56.22**	**308**	P	**P**	**08 12 38.3**	**-0.2**	
KK31	**Karatay Array**	**56.26**	**314**	P	**P**	**08 12 38.9**	**+0.4**	
KK31				IAmb	IAmb	08 12 40.2		
	comp=Z,5.8nm,1.2s							
KKAR	**Karatay Array**	**56.26**	**314**	P	**P**	**08 12 38.4**	**-0.2**	
KKAR	**Karatay Array**	**56.26**	**314**	P	**P**	**08 12 38.0**	**-0.6**	
KKAR				IAmb	IAmb	08 12 40.2		
	comp=Z,5.8nm,1.2s							
BVAR	**Borovoye Array**	**59.47**	**325**	LR	LR	08 38 31.0		
	comp=Z,74nm,18.1s,baz=119,slow=36							
BRVK	**Borovoye**	**59.54**	**325**	P	**P**	**08 13 01.6**	**+0.3**	
BRVK				IAmb	IAmb	08 13 03.3		
	comp=Z,11nm,0.9s							
NRIK	**Noril'sk**	**61.66**	**346**	P	**P**	**08 13 16.1**	**+0.6**	
	comp=Z,2.8nm,0.5s,baz=123,slow=10,SNR=4.0							
	comp=Z,2.8nm,0.5s							
GEYT	**Alibeck**	**64.73**	**306**	P	**P**	**08 13 36.3**	**-0.2**	
	comp=Z,2.6nm,0.5s,baz=126,slow=2.0,SNR=5.3							
GEYT				LR	LR	08 45 48.5		
	comp=Z,113nm,18.1s,baz=114,slow=40							
	comp=Z,2.6nm,0.5s							
GEYT	**Alibeck**	**64.73**	**306**	P	**P**	**08 13 36.9**	**+0.4**	
GEYT				IAmb	IAmb	08 13 38.6		
	comp=Z,8.7nm,1.1s							
ABKAR	**Akbulak array**	**64.78**	**319**	P	**P**	**08 13 36.0**	**-0.6**	
ABKAR	**Akbulak array**	**64.78**	**319**	IAmb	IAmb	08 13 38.1		
	comp=Z,7.9nm,1.2s							
AKTO	**Aktyubinsk**	**66.21**	**320**	P	**P**	**08 13 45.6**	**-0.2**	
	comp=Z,1.4nm,0.6s,baz=103,slow=10,SNR=4.5							
	comp=Z,1.4nm,0.6s							
ARU	**Arti**	**67.01**	**326**	P	**P**	**08 13 50.8**	**+0.1**	
	comp=Z,6.3nm,0.2s,baz=112,slow=5.4,SNR=3.2							
AFI	**Afiamalu**	**67.31**	**111**	LR	LR	08 36 04.7		
	comp=Z,61nm,20.7s,baz=154,slow=30							

URZ	**Urewera**	**69.76**	**139**	LR	LR	08 48 28.3		
	comp=Z,36nm,18.0s,baz=29,slow=39							
BELG	**Belogornoye**	**72.87**	**321**	LR	LR	08 48 35.6		
	comp=Z,49nm,18.3s,baz=147,slow=38							
GNI	**Garni**	**75.14**	**308**	LR	LR	08 51 22.9		
	comp=Z,33nm,18.7s,baz=129,slow=39							
RAYN	**Ar Rayn**	**76.20**	**291**	P	**P**	**08 14 44.9**	**-1.9**	
RAYN				IAmb	IAmb	08 14 47.3		
	comp=Z,14nm,1.4s							
KBZ	**Khabaz**	**76.25**	**312**	LR	LR	08 50 56.5		
	comp=Z,69nm,18.9s,baz=56,slow=38							
KLMR	**Klimovskoe**	**77.27**	**330**	*e*P	**P**	**08 14 51.5**	**-0.5**	
KLMR				AMP		08 15 02.6		
	comp=Z,10.0nm,1.3s							
ILAR	**Eielson Array**	**77.63**	**26**	P	**P**	**08 14 54.4**	**+0.4**	
	comp=Z,0.3nm,0.6s,baz=260,slow=4.5,SNR=4.8							
ILAR				LR	LR	08 47 50.6		
	comp=Z,20nm,21.2s,baz=308,slow=35							
	comp=Z,0.3nm,0.6s							
ARCES	**ARCESS Array B**	**81.86**	**340**	P	**P**	**08 15 17.2**	**+0.3**	
	comp=Z,2.7nm,0.8s,baz=81,slow=5.6,SNR=2.6							
ARCES				LR	LR	08 56 18.9		
	comp=Z,33nm,18.1s,baz=135,slow=39							
	comp=Z,2.7nm,0.8s							
FINES	**FINESS Array B**	**83.61**	**332**	P	**P**	**08 15 25.7**	**-0.3**	
	comp=Z,0.8nm,0.4s,baz=83,slow=4.5,SNR=8.8							
	comp=Z,0.8nm,0.4s							
FARO	**Faro, Yukon**	**84.02**	**28**	P	**P**	**08 15 30.2**	**+2.0**	
FARO				IAmb	IAmb	08 15 35.0		
	comp=Z,6.2nm,1.0s							
AKASG	**Malin Array Be**	**84.44**	**321**	P	**P**	**08 15 30.4**	**0.0**	
	comp=Z,3.3nm,0.8s,baz=63,slow=4.5,SNR=14							
AKASG				LR	LR	08 57 04.2		
	comp=Z,36nm,19.5s,baz=62,slow=38							
	comp=Z,3.3nm,0.8s							
AKBB	**Malin Array Si**	**84.44**	**321**	P	**P**	**08 15 29.0**	**-1.5**	
AKBB				IAmb	IAmb	08 15 31.2		
	comp=Z,8.0nm,1.1s							
MLR	**Muntele Rosu**	**87.86**	**316**	LR	LR	08 57 46.9		
	comp=Z,50nm,20.3s,baz=291,slow=37							
KMBO	**Kilima Mbogo**	**88.72**	**269**	LR	LR	08 51 04.2		
	comp=Z,31nm,19.4s,baz=90,slow=33							
HFS	**Hagfors**	**89.76**	**332**	LR	LR	08 59 05.6		
	comp=Z,69nm,18.7s,baz=66,slow=38							
BBB	**Bella Bella**	**89.84**	**36**	LR	LR	08 59 53.8		
	comp=Z,16nm,19.2s,baz=206,slow=38							
NOA	**NORSAR Array B**	**90.46**	**334**	P	**P**	**08 15 58.4**	**-1.0**	
	comp=Z,0.8nm,1.0s,baz=45,slow=2.3,SNR=2.1							
NOA				LR	LR	09 00 48.7		
	comp=Z,64nm,18.5s,baz=75,slow=38							
	comp=Z,0.8nm,1.0s							
JMIC	**Jan Mayen**	**91.08**	**346**	LR	LR	09 01 37.0		
	comp=Z,20nm,19.3s,baz=280,slow=39							
VNDA	**Vanda**	**92.27**	**173**	P	**P**	**08 16 04.8**	**-2.4**	
	comp=Z,0.7nm,0.8s,baz=326,slow=5.3,SNR=5.2							
	comp=Z,0.7nm,0.8s							
VRAC	**Vranov**	**92.62**	**322**	LR	LR	09 01 19.9		
	comp=Z,57nm,18.8s,baz=68,slow=38							
YBH	**Yreka Blue Hor**	**97.21**	**45**	LR	LR	08 54 17.3		
	comp=Z,18nm,19.8s,baz=302,slow=32							
DAVOX	**Davos/Dischmat**	**97.77**	**321**	LR	LR	09 02 23.6		
	comp=Z,38nm,18.5s,baz=81,slow=36							
BFO	**Black Forest**	**97.96**	**323**	P	Pdif	08 16 35.4	+1.3	
BORG	**Borgarnes**	**98.97**	**346**	LR	LR	09 06 54.0		
	comp=Z,28nm,18.4s,baz=24,slow=39							
TXAR	**Lajitas Array**	**116.73**	**48**	PKP	**PKiKP**	**08 21 42.7**	**-0.3**	
	comp=Z,0.1nm,0.7s,baz=264,slow=1.8,SNR=1.5							
PLCA	**Paso Flores**	**148.53**	**156**	PKPbc	**PKPbc**	**08 22 44.7**	**-0.3**	
	comp=Z,2.0nm,0.8s,baz=230,slow=3.6,SNR=10							

*IDC **24** 08:12:23.4±10.0, 17°.83N×105°.72W, h0km, mb3.0/3, mbtmp3.0/4, ML2.9/1, MS3.0/10, Error ellipse: s-maj=188.0km s-min=90.1km az=134.0*
*MEX **24** 08:12:27.9±0.8, 18°.04N×105°.83W, h10km, MD4.0*
ISC 24 08:12:27.9±3.8, 18°.4N±0°.1×105°.71W±0°.09, h0km±25km, n26, σ1.9s68/24, mb3.0/3, MS3.1/6, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.29**	**29**	*e*P	**Pn**	**08 12 52.6**	**-0.7**
CJM				*e*S	**Sn**	**08 13 13.3**	**+2.1**
CDAR	**Ciudad de Arme**	**1.71**	**70**	*e*P	**Pn**	**08 12 57.4**	**-1.5**
CDAR				*i* S	**Sn**	**08 13 20.0**	**-1.5**
R15V		**1.82**	**63**	*e*P	**Pn**	**08 12 59.9**	**-0.7**
R15V				*e*S	**Sn**	**08 13 24.0**	**-0.4**
COIG	**Colima**	**2.08**	**67**	*e*P	**Pn**	**08 13 03.8**	**-0.4**
COIG				*i* S	**Sn**	**08 13 31.1**	**+0.4**
MNGA	**Volcan de Coli**	**2.26**	**61**	*e*P	**Pn**	**08 13 07.2**	**+0.5**
MNGA				*e*S	**Sn**	**08 13 35.2**	**-0.3**
EZ5V		**2.28**	**60**	*e*P	**Pn**	**08 13 07.5**	**+0.5**
EZ5V				*i* S	**Sn**	**08 13 37.3**	**+1.2**
INCO	**Volcan de Coli**	**2.30**	**59**	*e*P	**Pn**	**08 13 07.2**	**-0.3**
INCO				*e*S	**Sn**	**08 13 37.9**	**+1.1**
JUBC	**Volcan de Coli**	**2.33**	**60**	*e*P	**Pn**	**08 13 08.3**	**+0.6**
JUBC				*i* S	**Sn**	**08 13 36.8**	**-0.4**
ANIG	**Ahuacatlan**	**2.90**	**22**	*e*P	**Pb**	**08 13 18.9**	**-1.7**
ANIG				*i* S	**Sn**	**08 13 46.6**	**-4.6**
H06E1	**SOCORRO T-PHAS**	**4.97**	**276**	T	T	08 18 34.1	
	SNR=114						
ARIG	**Puente Sto Nin**	**5.09**	**90**	*e*P	**Pn**	**08 13 45.2**	**-0.3**
ARIG				*e*S	**Sn**	**08 14 44.4**	**-0.7**
CMIG	**Matias Romero**	**10.39**	**95**	LR	LR	08 19 00.4	
	comp=Z,29nm,18.6s,baz=294,slow=38						
TXAR	**Lajitas Array**	**11.08**	**9**	Pn	**Pn**	**08 15 11.4**	**+3.6**
	baz=184,slow=14,SNR=4.7						
TXAR				LR	LR	08 19 46.5	
	comp=Z,55nm,18.8s,baz=184,slow=38						
	0.4nm,0.7s						
ANMO	**Albuquerque**	**16.53**	**358**	LR	LR	08 22 16.9	
	comp=Z,49nm,18.5s,baz=177,slow=35						
PFO	**Pinyon Flats O**	**17.98**	**330**	LR	LR	08 22 53.9	
	comp=Z,37nm,21.2s,baz=141,slow=34						
NVAR	**Mina Array Bea**	**22.82**	**334**	P	**P**	**08 17 33.1**	**+0.4**
	0.1nm,0.3s,baz=150,slow=11,SNR=1.7						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	**24.55**	**353**	P	**P**	**08 17 51.1**	**+1.4**
	0.2nm,0.6s,baz=153,slow=6.1,SNR=2.1						
PDAR				LR	LR	08 26 37.2	
	comp=Z,26nm,19.5s,baz=31,slow=34						
	0.2nm,0.6s						
TKL	**Tuckaleechee C**	**25.95**	**44**	LR	LR	08 31 10.1	
	comp=Z,40nm,19.0s,baz=234,slow=43						
YBH	**Yreka Blue Hor**	**27.45**	**332**	LR	LR	08 28 33.5	
	comp=Z,42nm,18.5s,baz=149,slow=35						
ULM	**Lac du Bonnet**	**32.77**	**12**	LR	LR	08 33 07.6	
	comp=Z,50nm,18.5s,baz=176,slow=37						
SADO	**Sadowa**	**34.43**	**34**	LR	LR	08 33 35.4	
	comp=Z,44nm,18.6s,baz=200,slow=36						
ATAH	**Atahualpa**	**36.99**	**131**	LR	LR	08 31 51.1	
	comp=Z,47nm,20.2s,baz=15,slow=32						
ILAR	**Eielson Array**	**53.90**	**340**	P	**P**	**08 21 51.1**	**-1.7**
	0.2nm,0.5s,baz=135,slow=9.0,SNR=3.2						
	0.2nm,0.5s						
H03N2	**Juan Fernandez**	**57.50**	**153**	T	T	09 23 57.6	
	baz=331,slow=78,SNR=3.8						
H03N1	**Juan Fernandez**	**57.51**	**153**	T	T	09 23 56.5	
	baz=331,slow=78,SNR=5.1						
H03N3	**Juan Fernandez**	**57.52**	**153**	T	T	09 23 57.1	
	baz=331,slow=78,SNR=4.0						

ROM 24 08:19:27.2±0.1, 42°.737N±0°.004×13°.162E±0°.009, h11km, ML2.3/8, 1C, Error ellipse: s-maj=0.6km s-min=0.4km az=82.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.16**	**214**	P	Pg	08 19 31.5	+0.6
LNSS				S	Sg	08 19 34.6	+1.2
LNSS				AML	AML		
	comp=N,5020μm,0.1s						
LNSS				AML	AML		
	comp=E,2105μm,0.7s						
RM33	**Pellescritta (**	**0.23**	**170**	P	Pg	08 19 32.6	+0.5
RM33				S	Sg	08 19 36.7	+1.3
RM33				AML	AML		
	comp=E,3080μm,0.8s						
RM33				AML	AML		
	comp=N,3220μm,0.3s						
RM33				AML	AML		
	comp=N,3280μm,0.3s						
RM33				AML	AML		
	comp=E,3070μm,0.8s						
RM33				AML	AML		
	comp=N,3215μm,0.3s						
RM33				AML	AML		
	comp=N,952μm,0.2s						
FEMA	**Monte Fema**	**0.24**	**340**	END			
CAMP	**Campotosto**	**0.27**	**138**	P	Pg	08 19 33.1	+0.3
CAMP				S	Sg	08 19 37.7	+1.1
CAMP				AML	AML		
	comp=E,3540μm,0.2s						
CAMP				AML	AML		
	comp=N,2410μm,0.2s						
FDMO	**Fiordimonte**	**0.30**	**350**	P	Pg	08 19 33.6	+0.2
FDMO				S	Sb	08 19 38.8	-1.1
FDMO				AML	AML		
	comp=N,452μm,0.9s						
FDMO				AML	AML		
	comp=E,507μm,0.2s						
FDMO				AML	AML		
	comp=N,451μm,0.9s						
CESI	**CESI - Serrava**	**0.33**	**325**	P	Pg	08 19 33.9	0.0
CESI				AML	AML		
	comp=E,520μm,0.1s						
ARRO	**Arrone**	**0.33**	**242**	P	Pg	08 19 34.5	+0.6
ARRO				S	Sb	08 19 39.8	-0.8
ARRO				AML	AML		
	comp=N,452μm,0.7s						
ARRO				AML	AML		
	comp=N,584μm,0.2s						
ARRO				AML	AML		
	comp=E,424μm,0.2s						
TERO	**Teramo**	**0.34**	**109**	P	Pg	08 19 34.3	+0.2
TERO				AML	AML		
	comp=E,2100μm,0.2s						
TERO				AML	AML		
	comp=N,3625μm,0.1s						
TERO				AML	AML		
	comp=N,3630μm,0.1s						
TERO				AML	AML		
	comp=E,2310μm,0.2s						
TERO				AML	AML		
	comp=N,4035μm,0.1s						
TERO				AML	AML		
	comp=N,557μm,0.1s						
CSP1	**Cessapalombo**	**0.36**	**5**	P	Pg	08 19 34.6	+0.2
CSP1				S	Sb	08 19 40.5	-0.9
CSP1				AML	AML		
	comp=E,497μm,0.2s						
GIGS	**Gran Sasso**	**0.41**	**134**	P	Pg	08 19 35.6	+0.1
GIGS				AML	AML		
	comp=N,250μm,0.6s						
GIGS				AML	AML		
	comp=N,249μm,0.6s						
GIGS				AML	AML		
	comp=E,274μm,0.6s						
GIGS				AML	AML		
	comp=N,145μm,0.1s						
GIGS				END			
OFFI	**Offida**	**0.43**	**63**	P	Pb	08 19 37.1	+0.2
OFFI				S	Sb	08 19 44.9	+1.4
OFFI				AML	AML		
	comp=N,1745μm,0.6s						
OFFI				AML	AML		
	comp=E,1068μm,0.3s						
FIAM	**Fiamignano**	**0.47**	**184**	P	Pg	08 19 36.5	+0.1
FIAM				S	Sb	08 19 43.9	-0.7
FIAM				AML	AML		
	comp=N,280μm,0.7s						
FIAM				AML	AML		
	comp=E,380μm,0.3s						
FIAM				END			
ASSB	**Assisi San Ben**	**0.48**	**310**	P	Pg	08 19 37.1	+0.5
ASSB				S	Sb	08 19 44.4	-0.5
ASSB				AML	AML		
	comp=N,326μm,0.6s						
ASSB				AML	AML		
	comp=E,368μm,1.3s						
ASSB				END			
MTL1	**Matelica**	**0.53**	**348**	P	Pg	08 19 37.5	-0.2
FAGN	**Fagnano**	**0.56**	**146**	P	Pb	08 19 38.8	-0.4
FAGN				S	Sb	08 19 48.0	+0.6
FAGN				END			
VCEL	**Villa Celiera**	**0.61**	**124**	P	Pg	08 19 39.4	+0.4
VCEL				AML	AML		
	comp=N,850μm,0.9s						
VCEL				AML	AML		
	comp=E,1175μm,0.3s						
ARVD	**Arcevia**	**0.78**	**348**	S	Sn	08 19 55.0	-1.0
CERT	**Cerreto**	**0.80**	**190**	P	Pg	08 19 41.9	-0.8
CERT				AML	AML		
	comp=E,241μm,0.6s						
CERT				AML	AML		
	comp=N,164μm,0.5s						
CERT				AML	AML		
	comp=E,241μm,0.6s						
CERT				AML	AML		
	comp=N,164μm,0.5s						
CERT				AML	AML		
	comp=E,241μm,0.6s						
CERT				AML	AML		
	comp=N,164μm,0.5s						
CERT	**Cerreto**	**0.80**	**190**	⇑P	Pg	08 19 42.0	-0.6
PIEI	**Pieia**	**0.92**	**330**	S	Sn	08 19 60.0	+0.5

ROM 24 08:19:53.1±0.1, 42°.637N±0°.005×13°.304E±0°.006, h7km, ML2.5/10, 2C, Error ellipse: s-maj=0.5km s-min=0.5km az=179.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.13**	**142**	P	Pg	08 19 56.6	+0.6
CAMP				S	Sg	08 19 58.8	+0.9
CAMP				AML	AML		
	comp=N,2410μm,0.2s						
CAMP				AML	AML		
	comp=E,3540μm,0.2s						
CAMP				AML	AML		
	comp=E,3541μm,0.2s						
CAMP				END			
RM33	**Pellescritta (**	**0.14**	**207**	P	Pg	08 19 56.8	+0.6
RM33				S	Sg	08 19 59.4	+1.1
RM33				AML	AML		
	comp=E,3075μm,0.8s						
RM33				AML	AML		
	comp=N,3275μm,0.3s						
RM33				AML	AML		
	comp=E,3070μm,0.8s						
RM33				AML	AML		
	comp=N,3220μm,0.3s						
RM33				AML	AML		
	comp=N,4400μm,0.9s						
RM33				AML	AML		
	comp=N,4350μm,1.0s						
RM

GIGS				AML	AML			
	comp=E,274μm,0.6s							
GIGS				AML	AML			
	comp=N,250μm,0.6s							
GIGS				AML	AML			
	comp=N,249μm,0.6s							
GIGS				AML	AML			
	comp=N,208μm,0.3s							
GIGS				END				
AQU	**L'Aquila**	**0.29**	**166**	P	Pg	08 19 59.5	+0.7	
AQU				AML	AML			
	comp=N,835μm,0.3s							
AQU				END				
ARRO	**Arrone**	**0.40**	**262**	P	Pg	08 20 01.2	+0.3	
ARRO				AML	AML			
	comp=E,798μm,0.2s							
ARRO				AML	AML			
	comp=N,776μm,1.0s							
ARRO				AML	AML			
	comp=N,583μm,0.2s							
ARRO				END				
FDMO	**Fiordimonte**	**0.43**	**338**	P	Pg	08 20 02.2	+0.7	
FDMO				S	Sb	08 20 09.2	-0.5	
FDMO				AML	AML			
	comp=E,1205μm,0.6s							
FDMO				AML	AML			
	comp=N,1160μm,0.2s							
FDMO				AML	AML			
	comp=N,388μm,0.7s							
FDMO				END				
CSP1	**Cessapalombo**	**0.46**	**351**	P	Pg	08 20 02.7	+0.6	
CSP1				S	Sb	08 20 10.3	-0.4	
CSP1				AML	AML			
	comp=N,552μm,0.4s							
CSP1				END				
VCEL	**Villa Celiera**	**0.47**	**121**	⇑P	Pb	08 20 03.0	-0.7	
VCEL				S	Sb	08 20 10.8	0.0	
VCEL				AML	AML			
	comp=E,1175μm,0.3s							
VCEL				AML	AML			
	comp=N,850μm,0.9s							
VCEL				AML	AML			
	comp=N,667μm,0.2s							
VCEL				END				
CESI	**CESI - Serrava**	**0.47**	**322**	P	Pb	08 20 03.6	-0.2	
CESI				END				
CESX	**Cesi**	**0.54**	**267**	P	Pg	08 20 03.7	+0.2	
CESX				S	Sb	08 20 12.2	-0.5	
CESX				AML	AML			
	comp=E,442μm,0.4s							
CESX				AML	AML			
	comp=N,532μm,0.8s							
CESX				AML	AML			
	comp=N,504μm,0.3s							
CESX				END				
T0110	**Collepietro**	**0.54**	**139**	P	Pg	08 20 03.7	+0.2	
T0110				S	Sb	08 20 13.0	+0.1	
T0110				AML	AML			
	comp=N,429μm,0.3s							
T0110				AML	AML			
	comp=E,414μm,1.6s							
T0110				END				
SRES	**S.Oreste - Sor**	**0.71**	**236**	P	Pg	08 20 07.1	+0.3	
MTCE	**Montecelio**	**0.74**	**214**	P	Pb	08 20 08.0	-0.4	
MTCE				AML	AML			
	comp=E,232μm,0.5s							
MTCE				AML	AML			
	comp=N,125μm,0.3s							
ARVD	**Arcevia**	**0.90**	**343**	S	Sn	08 20 26.0	+0.5	
ATFO	**Monte Foce - G**	**0.91**	**324**	S	Sn	08 20 27.0	+1.3	
MGAB	**Montegabbione**	**0.92**	**288**	⇑P	Pn	08 20 13.3	+0.8	
SF01	**Poggio Pratacc**	**1.29**	**278**	P	Pg	08 20 19.2	+1.3	
ARCI	**Arcidosso**	**1.36**	**280**	P	Pg	08 20 19.9	+0.6	

*IDC **24** 08:34:46.2±0.4,23°.93S×82°.49E,h0km,mb4.6/24, mbtmp4.6/24,MS3.4/22,Error ellipse: s-maj=14.2km s-min=13.5km az=73.0*

*NEIC **24** 08:34:48.4±1.5,23°.9S±0°.1×82°.4E±0°.1,h10km±1km, mb4.9/42,Error ellipse: s-maj=18.8km s-min=17.7km az=127.0*

ISC 24 08:34:50.3±1.7,23°.93S±0°.07×82°.47E±0°.07,h26km±11km, n130,σ0°83/122,mb4.8/49,MS3.5/22,2C,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**18.81**	**328**	T	T	08 58 23.9	
	baz=152,slow=74,SNR=217						
H08S1	**Diego Garcia H**	**18.82**	**328**	T	T	08 58 26.5	
	baz=152,slow=74,SNR=180						
H08S3	**Diego Garcia H**	**18.83**	**328**	T	T	08 58 22.8	
	baz=152,slow=74,SNR=309						
H01W3	**Cape Leeuwin H**	**29.55**	**119**	T	T	09 11 42.8	
	baz=284,slow=75,SNR=82						
H01W2	**Cape Leeuwin H**	**29.56**	**119**	T	T	09 11 41.8	
	baz=284,slow=75,SNR=35						
H01W1	**Cape Leeuwin H**	**29.57**	**119**	T	T	09 11 42.5	
	baz=284,slow=75,SNR=48						
RPSI	**Rantau Prapat**	**30.94**	**33**	P	**P**	**08 41 04.1**	**-1.2**
PSI	**Prapat**	**31.03**	**33**	P	**P**	**08 41 04.1**	**-2.2**
	4.7nm,0.6s,baz=134,slow=6.7,SNR=3.7						
PSI				LR	LR	08 50 47.5	
	comp=Z,213nm,18.6s,baz=230,slow=31 4.7nm,0.6s						
PALK	**Pallekele**	**31.06**	**357**	LR	LR	08 50 50.4	
	comp=Z,94nm,21.8s,baz=266,slow=31						
OPO	**Ambohidratompo**	**33.25**	**272**	P	**P**	**08 41 24.9**	**-1.0**
	2.1nm,0.6s,baz=82,slow=7.1,SNR=1.9 2.1nm,0.6s						
SBUM	**Sibu**	**39.05**	**52**	P	**P**	**08 42 16.4**	**+1.0**
FITZ	**Fitzroy Crossi**	**40.60**	**90**	P	**P**	**08 42 27.9**	**-0.3**
FORT	**Forrest**	**40.85**	**110**	P	**P**	**08 42 30.9**	**+0.8**
FORT				IAmb	IAmb	08 42 46.5	
	comp=Z,28nm,0.9s						
MMRI	**Maumere**	**40.92**	**75**	P	**P**	**08 42 30.7**	**-0.2**
	comp=Z,4μmcomp=Z,43nm,1.2s						
HYBB	**Hyderabad (bro**	**41.28**	**354**	eP	**P**	**08 42 33.6**	**-0.1**
KNRA	**Kununurra**	**44.17**	**88**	P	**P**	**08 42 57.6**	**+0.4**
UBPT	**Khong Chiam**	**44.99**	**32**	P	**P**	**08 43 04.5**	**+0.7**
UBPT				IAmb	IAmb	08 43 05.2	
	comp=Z,6.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**45.10**	**22**	P	**P**	**08 43 05.2**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=212,slow=8.4,SNR=8.5						
CMAR				PcP	**PcP**	**08 44 45.5**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=224,slow=3.8,SNR=4.6						
CMAR				LR	LR	09 01 24.3	
	comp=Z,21nm,18.0s,baz=205,slow=35 comp=Z,1.6nm,0.3s						
MAW	**Mawson**	**45.34**	**190**	P	**P**	**08 43 07.0**	**+1.1**
	comp=Z,2.7nm,1.0s,baz=30,slow=9.0,SNR=4.0						
MAW				LR	LR	08 59 00.6	
	comp=Z,50nm,18.3s,baz=26,slow=32 comp=Z,2.7nm,1.0s						
MAW	**Mawson**	**45.34**	**190**	P	**P**	**08 43 06.5**	**+0.7**
ASAR	**Alice Springs**	**46.84**	**101**	P	**P**	**08 43 18.1**	**-0.3**
	comp=Z,16nm,0.8s,baz=264,slow=7.5,SNR=181						
ASAR				PcP	**PcP**	**08 44 50.8**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=265,slow=3.0,SNR=6.1						
ASAR				LR	LR	09 01 11.2	
	comp=Z,32nm,18.8s,baz=216,slow=34 comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**46.84**	**101**	P	**P**	**08 43 18.3**	**-0.2**
AS31	**Alice Springs**	**46.84**	**101**	P	**P**	**08 43 18.1**	**-0.4**
AS31				IAmb	IAmb	08 43 18.9	
	comp=Z,4.8nm,0.7s						
BBOO	**Buckleboo**	**47.55**	**113**	P	**P**	**08 43 23.2**	**-0.6**
BBOO				IAmb	IAmb	08 43 24.6	
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**48.07**	**96**	P	**P**	**08 43 27.9**	**-0.2**
	comp=Z,16nm,0.8s,baz=260,slow=8.7,SNR=135						
WRA				PcP	**PcP**	**08 44 55.1**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=251,slow=2.0,SNR=4.9 comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**48.07**	**96**	P	**P**	**08 43 28.3**	**+0.3**
WB2	**Warramunga Arr**	**48.08**	**96**	P	**P**	**08 43 27.8**	**-0.3**
WRAB	**Tennant Creek**	**48.08**	**96**	P	**P**	**08 43 28.2**	**+0.1**
WB0	**Warramunga Arr**	**48.16**	**96**	P	**P**	**08 43 28.8**	**+0.1**
WR0	**Warramunga Arr**	**48.25**	**96**	P	**P**	**08 43 29.6**	**+0.2**
KMBO	**Kilima Mbogo**	**49.28**	**291**	P	**P**	**08 43 38.4**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=156,slow=20,SNR=4.0 comp=Z,1.5nm,0.5s						
SHL	**Shillong**	**50.05**	**11**	P	**P**	**08 43 44.0**	**+0.9**
SHL				IAmb	IAmb	08 43 44.5	
	comp=Z,15nm,0.8s						
RAMN	**Ramite**	**50.74**	**5**	eP	**P**	**08 43 49.6**	**+1.2**
	comp=Z,30nm,0.6s						
BOSA	**Boshof**	**51.11**	**252**	P	**P**	**08 43 50.6**	**-0.5**
	comp=Z,9.5nm,0.6s,baz=106,slow=5.5,SNR=24 comp=Z,9.5nm,0.6s						
BOSA	**Boshof**	**51.11**	**252**	P	**P**	**08 43 50.7**	**-0.5**
BOSA				IAmb	IAmb	08 43 51.6	
	comp=Z,10nm,0.8s						
TAPN	**Taplejung**	**51.23**	**6**	eP	**P**	**08 43 53.0**	**+0.8**
PKI	**Pulchoki**	**51.28**	**3**	eP	**P**	**08 43 52.8**	**+0.2**
PKIN	**Phulchoki**	**51.29**	**3**	eP	**P**	**08 43 52.8**	**+0.3**
KOLN	**Koldanda**	**51.41**	**1**	eP	**P**	**08 43 54.1**	**+0.7**
	comp=Z,7.8nm,1.0s						
JIRN	**Jiri**	**51.42**	**4**	eP	**P**	**08 43 54.2**	**+0.6**
GUN	**Gumba**	**51.65**	**4**	eP	**P**	**08 43 56.3**	**+1.0**
	comp=Z,48nm,0.7s						
GKN	**Gorkha**	**51.68**	**2**	eP	**P**	**08 43 55.9**	**+0.6**
	comp=Z,36nm,0.8s						
PYUN	**Piuthan**	**51.73**	**1**	eP	**P**	**08 43 56.3**	**+0.5**
DANN	**Dangsing**	**51.99**	**1**	eP	**P**	**08 43 58.3**	**+0.5**
	comp=Z,52nm,0.8s						
WSAR	**Wadi Sarin**	**52.29**	**332**	LR	LR	09 02 46.1	
	comp=Z,44nm,18.2s,baz=153,slow=32						
STKA	**Stephens Creek**	**52.31**	**113**	P	**P**	**08 43 59.5**	**-0.5**
	comp=Z,4.3nm,0.7s,baz=306,slow=4.2,SNR=12						
STKA				PcP	**PcP**	**08 45 09.7**	**-1.4**
	comp=Z,2.1nm,0.7s,baz=344,slow=7.4,SNR=3.0						
STKA				LR	LR	09 02 59.7	
	comp=Z,23nm,20.8s,baz=207,slow=32 comp=Z,4.3nm,0.7s						
STKA	**Stephens Creek**	**52.31**	**113**	P	**P**	**08 43 59.6**	**-0.3**
FAKI	**Fak Fak**	**52.38**	**74**	P	**P**	**08 44 00.6**	**-0.1**
FAKI				IAmb	IAmb	08 44 03.4	
	comp=Z,16nm,0.8s						
SUR	**Sutherland**	**54.37**	**246**	P	**P**	**08 44 15.6**	**+0.3**
COEN	**Coen**	**57.91**	**92**	P	**P**	**08 44 40.0**	**-0.7**
CTA	**Charters Tower**	**58.83**	**100**	LR	LR	09 08 26.0	
	comp=Z,33nm,19.3s,baz=257,slow=34						
RAYN	**Ar Rayn**	**59.27**	**320**	P	**P**	**08 44 50.2**	**+0.3**
RAYN				IAmb	IAmb	08 44 51.5	
	comp=Z,12nm,0.8s						
KBL	**Kabul**	**59.53**	**347**	P	**P**	**08 44 51.7**	**0.0**
KBL				IAmb	IAmb	08 44 53.1	
	comp=Z,14nm,1.1s						
GOMU	**GeErMu**	**60.94**	**11**	P	**P**	**08 44 59.6**	**-1.9**
GOMU				pP	pP	08 45 01.8	-6.4
GOMU				sP	sP	08 45 07.6	-3.2
GOMU				PcP	**PcP**	**08 45 47.3**	**+2.5**
GOMU				pmax	pmax		
	comp=Z,13nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,43nm,3.7s						
EIDS	**Eidsvold**	**61.72**	**107**	P	**P**	**08 45 07.0**	**+0.2**
WHN	**Wuhan**	**62.20**	**31**	⇑P	**P**	**08 45 12.9**	**+3.2**
XAN	**Xi'an**	**62.90**	**25**	⇑P	**P**	**08 45 13.9**	**-0.5**
XAN				pP	pP	08 45 19.9	-1.1
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH	**Kashi**	**63.41**	**354**	P	**P**	**08 45 15.6**	**-2.1**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GAR	**Garm**	**63.63**	**349**	P	**P**	**08 45 18.5**	**-0.7**
GAR				IAmb	IAmb	08 45 19.0	
	comp=Z,8.6nm,1.0s						
VNDA	**Vanda**	**64.51**	**166**	P	**P**	**08 45 24.8**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=280,slow=6.5,SNR=12						
VNDA				LR	LR	09 08 56.3	
	comp=Z,43nm,19.3s,baz=276,slow=32 comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**64.51**	**166**	P	**P**	**08 45 24.5**	**+0.1**
GTA	**Gaotai**	**65.07**	**15**	eP	**P**	**08 45 29.5**	**+0.9**
GTA				pP	sP	08 45 38.3	+0.4
GTA				sP	pwP	08 45 44.8	+4.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SBA	**Scott Base**	**65.57**	**167**	P	**P**	**08 45 32.5**	**+1.2**
NJ2	**Nanjing**	**65.64**	**34**	eP	**P**	**08 45 34.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
GEYT	**Alibeck**	**65.65**	**339**	P	**P**	**08 45 31.9**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=180,slow=7.2,SNR=5.8 comp=Z,2.7nm,0.6s						
SNAA	**Sanae**	**66.02**	**200**	P	**P**	**08 45 34.3**	**-0.1**
SNAA	**Sanae**	**66.02**	**200**	P	**P**	**08 45 34.4**	**0.0**
SNAA				IAmb	IAmb	08 45 46.0	
	comp=Z,6.7nm,1.4s						
ULHL	**Ulahol**	**66.10**	**355**	P	**P**	**08 45 36.1**	**+0.8**
	SNR=5.5						
QSPA	**South Pole Qui**	**66.18**	**180**	P	**P**	**08 45 34.4**	**-1.1**
	comp=Z,6.8nm,0.9s,baz=289,slow=4.4,SNR=25						
QSPA				LR	LR	09 10 06.3	
	comp=Z,98nm,21.9s,baz=300,slow=32 comp=Z,6.8nm,0.9s						
QSPA	**South Pole Qui**	**66.18**	**180**	P	**P**	**08 45 35.2**	**-0.4**
QSPA				IAmb	IAmb	08 45 37.5	
	comp=Z,16nm,1.4s						
AML	**Almayashu**	**66.23**	**353**	P	**P**	**08 45 36.5**	**+0.2**
	SNR=17						
AAK	**Ala-Archa**	**66.64**	**354**	P	**P**	**08 45 38.7**	**0.0**
AAK				IAmb	IAmb	08 45 40.1	
	comp=Z,4.6nm,0.8s						
EKS2	**Erkin-Say**	**66.75**	**353**	P	**P**	**08 45 39.8**	**+0.5**
	SNR=5.7						
TKM2	**Tokmak 2**	**66.82**	**355**	P	**P**	**08 45 40.1**	**+0.2**
	SNR=9.0						
USP	**Ospenovka**	**67.27**	**354**	P	**P**	**08 45 42.8**	**+0.2**
	SNR=19						
VNA2	**Neumayer--Watz**	**67.56**	**201**	P	**P**	**08 45 44.5**	**+0.4**
	baz=98,slow=6.1						
KK31	**Karatay Array**	**67.61**	**351**	P	**P**	**08 45 45.0**	**+0.4**
KKAR	**Karatay Array**	**67.61**	**351**	P	**P**	**08 45 44.7**	**0.0**
KKAR	**Karatay Array**	**67.61**	**351**	P	**P**	**08 45 44.9**	**+0.2**
KKAR				IAmb	IAmb	08 45 45.8	
	comp=Z,11nm,0.8s						
VNA1	**Neumayer--Stat**	**67.89**	**201**	P	**P**	**08 45 46.8**	**+0.7**
VNA3	**Neumayer Olymp**	**68.24**	**200**	P	**P**	**08 45 48.7**	**+0.2**
MK31	**Makanchi Array**	**70.39**	**360**	P	**P**	**08 46 01.4**	**-0.5**
MK31				IAmb	IAmb	08 46 02.3	
	comp=Z,5.1nm,0.9s						
MKAR	**Makanchi Array**	**70.39**	**360**	P	**P**	**08 46 01.2**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=170,slow=6.1,SNR=35						
MKAR				LR	LR	09 15 25.4	
	comp=Z,32nm,21.8s,baz=208,slow=35 comp=Z,3.5nm,0.7s						
MAKZ	**Makanchi**	**70.41**	**360**	P	**P**	**08 46 01.5**	**-0.5**
MAKZ				IAmb	IAmb	08 46 02.5	
	comp=Z,9.4nm,0.8s						
BELA	**Belgrano 2**	**72.17**	**191**	P	**P**	**08 46 12.0**	**-0.3**
GNI	**Garni**	**72.80**	**331**	LR	LR	09 17 02.0	
	comp=Z,18nm,18.3s,baz=216,slow=35						
KURK	**Kurchatov**	**74.39**	**357**	P	**P**	**08 46 24.4**	**-1.2**
KURK				IAmb	IAmb	08 46 26.2	
	comp=Z,9.5nm,1.1s						
KSAR	**Wonju Array Be**	**74.52**	**36**	P	**P**	**08 46 26.5**	**-0.2**
KSRS	**Korea Array**	**74.54**	**36**	P	**P**	**08 46 27.9**	**+1.2**
	comp=Z,4.0nm,0.9s,baz=234,slow=5.9,SNR=13						
KSRS				LR	LR	09 17 55.6	
	comp=Z,15nm,20.4s,baz=225,slow=35 comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**74.61**	**16**	P	**P**	**08 46 27.6**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=202,slow=6.1,SNR=6.1 comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**74.61**	**16**	P	**P**	**08 46 27.1**	**0.0**
ABKAR	**Akbulak array**	**75.58**	**345**	P	**P**	**08 46 32.2**	**-0.3**
ABKAR				IAmb	IAmb	08 46 33.3	
	comp=Z,8.5nm,0.9s						
KBZ	**Khabaz**	**76.50**	**332**	P	**P**	**08 46 39.1**	**+1.3**
	comp=Z,5.3nm,0.9s,baz=154,slow=8.8,SNR=6.9 comp=Z,5.3nm,0.9s						
AKTO	**Aktyubinsk**	**77.14**	**344**	LR	LR	09 20 21.0	
	comp=Z,22nm,20.4s,baz=131,slow=35						
BVAR	**Borovoye Array**	**77.35**	**353**	LR	LR	09 19 01.8	
	comp=Z,36nm,20.7s,baz=161,slow=34						
BRVK	**Borovoye**	**77.39**	**353**	P	**P**	**08 46 42.0**	**-0.7**
BRVK				IAmb	IAmb	08 46 43.1	
	comp=Z,5.4nm,0.8s						
ZAA0	**Zalesovo Array**	**77.58**	**1**	IAmb	IAmb	08 46 43.7	
	comp=Z,11nm,0.8s						
ZALV	**Zalesovo Beam**	**77.58**	**1**	P	**P**	**08 46 42.9**	**-0.8**
	comp=Z,10nm,0.7s,baz=197,slow=4.3,SNR=36						
ZALV				LR	LR	09 21 22.5	
	comp=Z,24nm,18.5s,baz=234,slow=36 comp=Z,10nm,0.7s						
ZALV	**Zalesovo Beam**	**77.58**	**1**	P	**P**	**08 46 42.5**	**-1.3**
BR131	**Keskin Array S**	**78.01**	**324**	P	**P**	**08 46 46.8**	**+0.2**
BR131				IAmb	IAmb	08 46 47.9	
	comp=Z,10nm,0.8s						
BRTR	**Keskin Array B**	**78.01**	**324**	P	**P**	**08 46 47.0**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=151,slow=7.1,SNR=22						
BRTR				LR	LR	09 20 47.5	
	comp=Z,24nm,18.0s,baz=140,slow=35 comp=Z,5.7nm,0.8s						
BRTR	**Keskin Array B**	**78.01**	**324**	P	**P**	**08 46 46.2**	**-0.4**
MJAR	**Matsushiro Arr**	**79.88**	**43**	P	**P**	**08 46 57.0**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=216,slow=5.4,SNR=9.6						
MJAR				LR	LR	09 18 52.4	
	comp=Z,5.5nm,20.4s,baz=203,slow=33 comp=Z,3.7nm,0.9s						
USRK	**Ussuriysk Ar.**	**81.55**	**34**	P	**P**	**08 47 04.5**	**-1.1**
	comp=Z,5.3nm,1.0s,baz=213,slow=4.8,SNR=5.7 comp=Z,5.3nm,1.0s						
USRK	**Ussuriysk Ar.**	**81.55**	**34**	P	**P**	**08 47 04.7**	**-0.9**
ARU	**Arti**	**82.57**	**347**	LR	LR	09 22 10.5	
	comp=Z,49nm,22.0s,baz=162,slow=34						
KLR	**Kul'dur**	**85.03**	**30**	LR	LR	09 24 29.8	
	comp=Z,29nm,19.8s,baz=204,slow=35						
SMAI	**San Martin Ant**	**85.50**	**191**	IAmb	IAmb	08 47 28.6	
	comp=Z,7.4nm,0.9s						
MLR	**Muntele Rosu**	**86.08**	**324**	P	**P**	**08 47 27.2**	**-1.6**
TORD	**Torodi Ar. Bea**	**87.03**	**286**	P	**P**	**08 47 34.2**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=113,slow=4.7,SNR=12 comp=Z,2.7nm,0.9s						
AKASG	**Malin Array Be**	**87.89**	**329**	P	**P**	**08 47 37.6**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=126,slow=3.8,SNR=19 comp=Z,4.4nm,0.7s						
DIVS	**Divibare**	**88.57**	**320**	IAmb	IAmb	08 47 42.8	
	comp=Z,7.3nm,1.0s						
KEST	**Kesra**	**91.05**	**309**	P	**P**	**08 47 54.0**	**+1.3**
	comp=Z,7.5nm,0.9s,baz=30,slow=2.2,SNR=4.8 comp=Z,7.5nm,0.9s						
NRIK	**Noril'sk**	**93.08**	**2**	P	**P**	**08 48 00.6**	**-0.6**
	comp=Z,7.0nm,0.8s,baz=152,slow=4.1,SNR=6.7 comp=Z,7.0nm,0.8s						
YAK	**Yakutsk**	**93.60**	**20**	LR	LR	09 30 42.6	
	comp=Z,21nm,19.9s,baz=266,slow=36						
DAVOX	**Davos/Dischmat**	**96.02**	**319**	LR	LR	09 29 32.7	
	comp=Z,14nm,19.2s,baz=286,slow=34						
ILAR	**Eielson Array**	**128.31**	**24**	PKP	**PKPdf**	**08 53 52.2**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=315,slow=3.8,SNR=9.8						
RES	**Resolute Bay**	**129.18**	**359**	PKP	**PKPdf**	**08 53 55.2**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=26,slow=2.9,SNR=1.3						
INK	**Inuvik**	**130.52**	**17**	PKP	**PKPdf**	**08 53 57.6**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=342,slow=3.8,SNR=7.4						
LPAZ	**La Paz**	**130.78**	**219**	PKP	**PKiKP**	**08 54 01.4**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=79,slow=5.2,SNR=7.8						
DLBC	**Dease Lake**	**138.51**	**25**	PKP	**PKPdf**	**08 54 13.0**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=295,slow=3.9,SNR=6.2						
ROSC	**El Rosal**	**150.67**	**233**	PKPbc	**PKPbc**	**08 54 41.9**	**+0.4**
	comp=Z,9.1nm,0.6s,baz=70,slow=20,SNR=7.9						
NEW	**Newport**	**151.18**	**28**	PKPbc	**PKPbc**	**08 54 41.4**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=314,slow=4.6,SNR=11						
NEW				PKPab	**pPKPbc**	**08 54 48.3**	**-0.1**
	comp=Z,6.6nm,0.7s,baz=343,slow=4.8,SNR=9.8						
ULM	**Lac du Bonnet**	**153.70**	**358**	PKPbc	**PKPbc**	**08 54 45.5**	**-1.2**
	comp=Z,2.4nm,0.5s,baz=23,slow=1.2,SNR=5.2						
NVAR	**Mina Array Bea**	**157.17**	**46**	PKP	**PKPdf**	**08 54 45.1**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=256,slow=1.9,SNR=6.6						
NVAR				PKPab	**PKPab**	**08 55 15.3**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=283,slow=5.4,SNR=24						
ELK	**Elko**	**157.60**	**37**	PKP	**PKPdf**	**08 54 45.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=291,slow=6.2,SNR=2.0						
ELK				PKPab	**PKPab**	**08 55 16.8**	**0.0**
	comp=Z,1.7nm,1.0s,baz=319,slow=2.2,SNR=4.7						
PDAR	**Pinedale Array**	**158.74**	**25**	PKP	**PKPdf**	**08 54 46.0**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=69,slow=8.1,SNR=3.8						
PDAR				PKPab	**PKPab**	**08 55 20.6**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=318,slow=1.2,SNR=9.7						
TKL	**Tuckaleechee C**	**163.31**	**318**	PKPab	**PKPab**	**08 55 41.6**	**0.0**
	comp=Z,5.0nm,0.9s,baz=106,slow=7.4,SNR=5.2						
ANMO	**Albuquerque**	**166.56**	**33**	PKP	**PKPdf**	**08 54 54.3**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=326,slow=7.3,SNR=3.1						
ANMO				PKPab	**PKPab**	**08 55 56.2**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=315,slow=4.7,SNR=5.3						
TXAR	**Lajitas Array**	**172.32**	**44**	PKP	**PKPdf**	**08 54 58.0**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=270,slow=0.2,SNR=16						
TXAR				PKPab	**PKPab**	**08 56 21.2**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=268,slow=2.7,SNR=10						

*NEIC **24** 08:37:16.9±1.3,51°.8N±0°.1×166°.58W±0°.10,h34km±19km, Error ellipse: s-maj=17.7km s-min=8.0km az=166.0*

AEIC 24 08:37:16.7±1.3,51°.80N±0°.07×166°.58W±0°.09,h13km±8km, ML2.9/33,ML3.5/6(NEIC),Error ellipse: s-maj=10.6km s-min=7.4km az=156.0,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**1.79**	**325**		Pn	08 37 46.3	-1.1
OKFG	**Magazine Ridge**	**1.81**	**334**		Pn	08 37 45.4	-2.2
OKFG					Sn	08 38 07.8	-2.6
NIKH	**Nikolski High**	**1.82**	**311**		Pn	08 37 46.4	-1.4
NIKH					Sn	08 38 08.2	-2.5
OKSO	**Okmok South**	**1.84**	**329**		Pn	08 37 45.6	-2.4
OKSO					Sn	08 38 08.8	-2.3
OKCE	**Okmok Cone E**	**1.90**	**330**		Pn	08 37 47.1	-1.7
MGOD	**Makushin Gods**	**2.01**	**355**		Pn	08 37 48.8	-1.6
MGOD					Sn	08 38 14.2	-1.2
MAPS	**Pakushin South**	**2.03**	**354**		Pn	08 37 48.9	-1.7
MAPS					Sn	08 38 14.6	-1.1
UNV	**Unalaska Valle**	**2.05**	**1**		Pn	08 37 49.0	-1.9
UNV					Sn	08 38 15.1	-1.2

1.3nm,0.5s,baz=144,slow=7.9,SNR=4.7
1.3nm,0.5s
MKAR Makanchi Array 61.23 316 P **P** **08 47 37.7 +0.1**
0.7nm,0.5s,baz=95,slow=7.6,SNR=4.3
0.7nm,0.5s
YKA Yellowknife Ar 83.90 27 P **P** **08 49 50.6 -0.7**
0.4nm,0.7s,baz=288,slow=5.0,SNR=1.9
0.4nm,0.7s
NVAR Mina Array Bea 88.13 51 P **P** **08 50 09.5 -3.4**
0.1nm,0.5s,baz=267,slow=6.3,SNR=2.5
0.1nm,0.5s
LPAZ La Paz 148.94 100 PKPbc **PKPdf** **08 57 06.4 0.0**
0.5nm,0.5s,baz=290,slow=2.9,SNR=3.7

ROM 24 08:38:10.2±0.1, 42°.703N±0°.005×13°.253E±0°.007, h14km±2km, ML2.5/12, 2C, Error ellipse: s-maj=0.6km s-min=0.3km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.19**	**238**	P	Pb	08 38 15.1	-0.4
LNSS				S	Sg	08 38 18.3	+0.7
LNSS				AML	AML		
	comp=E,1885μm,0.2s						
LNSS				AML	AML		
	comp=N,4300μm,1.2s						
LNSS				AML	AML		
	comp=N,4305μm,1.2s						
LNSS				AML	AML		
	comp=E,1890μm,0.2s						
LNSS				AML	AML		
	comp=E,1889μm,0.2s						
LNSS				END			
RM33	**Pellescritta (**	**0.20**	**188**	P	Pg	08 38 13.0	-1.8
RM33				S	Sg	08 38 17.5	-0.4
RM33				AML	AML		
	comp=E,3115μm,1.6s						
RM33				AML	AML		
	comp=N,2275μm,0.3s						
RM33				AML	AML		
	comp=E,3040μm,0.8s						
RM33				AML	AML		
	comp=N,2300μm,0.3s						
RM33				AML	AML		
	comp=N,494μm,1.0s						
RM33				END			
CAMP	**Campotosto**	**0.20**	**145**	P	Pg	08 38 15.3	+0.4
CAMP				S	Sg	08 38 18.6	+0.5
CAMP				AML	AML		
	comp=E,2215μm,0.3s						
CAMP				AML	AML		
	comp=N,1475μm,1.6s						
CAMP				END			
TERO	**Teramo**	**0.27**	**107**	⇑P	Pg	08 38 16.3	+0.3
TERO				S	Sb	08 38 20.8	-0.7
TERO				AML	AML		
	comp=E,819μm,1.4s						
TERO				AML	AML		
	comp=N,922μm,0.4s						
TERO				AML	AML		
	comp=E,1366μm,0.1s						
TERO				AML	AML		
	comp=N,1581μm,1.6s						
TERO				AML	AML		
	comp=E,1675μm,1.5s						
TERO				AML	AML		
	comp=N,1985μm,1.6s						
TERO				AML	AML		
	comp=N,880μm,0.4s						
TERO				END			
GIGS	**Gran Sasso**	**0.34**	**137**	P	Pg	08 38 17.5	+0.2
GIGS				S	Sg	08 38 22.3	+0.3
GIGS				AML	AML		
	comp=E,160μm,1.6s						
GIGS				AML	AML		
	comp=N,158μm,1.0s						
GIGS				AML	AML		
	comp=E,372μm,0.8s						
GIGS				AML	AML		
	comp=N,448μm,0.7s						
GIGS				END			
GUMA	**Gualdo di Mace**	**0.36**	**10**	P	Pg	08 38 18.0	+0.3
GUMA				S	Sb	08 38 24.1	-0.1
GUMA				END			
ARRO	**Arrone**	**0.38**	**251**	P	Pb	08 38 18.6	-0.2
ARRO				AML	AML		
	comp=E,551μm,0.2s						
ARRO				AML	AML		
	comp=N,513μm,0.2s						
CSP1	**Cessapalombo**	**0.39**	**355**	P	Pg	08 38 18.2	+0.1
CSP1				S	Sg	08 38 23.9	+0.4
CSP1				AML	AML		
	comp=E,741μm,0.9s						
CSP1				AML	AML		
	comp=N,658μm,0.7s						
CSP1				AML	AML		
	comp=E,2015μm,0.4s						
CSP1				AML	AML		
	comp=N,2570μm,0.4s						
CSP1				AML	AML		
	comp=N,636μm,0.2s						
CSP1				END			
OFFI	**Offida**	**0.39**	**54**	P	Pb	08 38 19.1	+0.1
OFFI				AML	AML		
	comp=E,2870μm,0.6s						
OFFI				AML	AML		
	comp=N,4355μm,0.5s						
CESI	**CESI - Serrava**	**0.40**	**320**	P	Pg	08 38 18.2	0.0
CESI				S	Sg	08 38 24.1	+0.5
CESI				AML	AML		
	comp=N,2720μm,0.3s						
CESI				AML	AML		
	comp=E,1326μm,0.2s						
CESI				AML	AML		
	comp=N,2725μm,0.3s						
CESI				AML	AML		
	comp=N,2724μm,0.3s						
CESI				END			
FIAM	**Fiamignano**	**0.45**	**193**	P	Pb	08 38 19.6	-0.4
FIAM				AML	AML		
	comp=E,598μm,0.6s						
FIAM				AML	AML		
	comp=N,430μm,0.4s						
VCEL	**Villa Celiera**	**0.53**	**125**	P	Pg	08 38 21.1	+0.3
VCEL				AML	AML		
	comp=E,673μm,1.5s						
VCEL				AML	AML		
	comp=N,635μm,1.4s						
ASSB	**Assisi San Ben**	**0.55**	**308**	P	Pg	08 38 20.9	-0.2
SNTG	**Esanatoglia**	**0.60**	**338**	P	Pg	08 38 21.5	-0.5
T0110	**Collepietro**	**0.61**	**141**	P	Pg	08 38 22.4	+0.1
T0110				S	Sb	08 38 32.1	+0.8
T0110				AML	AML		
	comp=E,528μm,0.3s						
T0110				AML	AML		
	comp=N,730μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.66**	**317**	AML	AML		
	comp=N,424μm,0.4s						
ATCC				AML	AML		
	comp=E,311μm,0.3s						
VVLD	**Villa Vallelon**	**0.88**	**162**	AML	AML		
	comp=E,87μm,0.6s						
VVLD				AML	AML		
	comp=N,113μm,0.7s						
POPM	**Popiglio**	**2.26**	**307**	⇑P	Pn	08 38 46.3	-1.0
POPM				AML	AML		
	comp=E,55μm,0.1s						
POPM				AML	AML		
	comp=N,58μm,0.1s						

ROM 24 08:39:05.1±0.1, 42°.813N±0°.004×13°.194E±0°.009, h15km±1km, ML2.7/19, 2C-3D, Error ellipse: s-maj=0.7km s-min=0.4km az=57.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.06**	**289**	P	Pg	08 39 08.4	+0.2
NRCA				S	Sg	08 39 10.6	+0.5
NRCA				AML	AML		
	comp=E,16500μm,0.2s						
NRCA				AML	AML		
	comp=N,24150μm,0.1s						
NRCA				AML	AML		
	comp=N,22400μm,0.1s						
NRCA				AML	AML		
	comp=E,17800μm,0.2s						
FEMA	**Monte Fema**	**0.18**	**325**	P	Pg	08 39 09.9	+0.3
FEMA				S	Sb	08 39 13.4	-0.4
FDMO	**Fiordimonte**	**0.24**	**341**	P	Pg	08 39 10.5	+0.1
FDMO				S	Sg	08 39 14.4	+0.5
FDMO				AML	AML		
	comp=N,1835μm,0.2s						
FDMO				AML	AML		
	comp=E,1795μm,0.7s						
GUMA	**Gualdo di Mace**	**0.27**	**23**	P	Pg	08 39 11.1	+0.2
GUMA				S	Sb	08 39 15.7	-0.5
GUMA				AML	AML		
	comp=N,18650μm,0.3s						
GUMA				AML	AML		
	comp=N,17800μm,0.5s						
GUMA				AML	AML		
	comp=E,12735μm,0.3s						
GUMA				AML	AML		
	comp=E,11350μm,0.3s						
CSP1	**Cessapalombo**	**0.28**	**2**	P	Pg	08 39 11.1	0.0
CSP1				S	Sg	08 39 15.7	+0.4
CSP1				AML	AML		
	comp=E,2015μm,0.4s						
CSP1				AML	AML		
	comp=N,2570μm,0.4s						
CSP1				AML	AML		
	comp=N,2575μm,0.4s						
CSP1				AML	AML		
	comp=E,2020μm,0.4s						
CESI	**CESI - Serrava**	**0.29**	**312**	P	Pg	08 39 11.6	+0.3
CESI				S	Sb	08 39 16.5	-0.2
CESI				AML	AML		
	comp=N,2455μm,0.5s						
CESI				AML	AML		
	comp=E,822μm,0.2s						
RM33	**Pellescritta (**	**0.30**	**177**	P	Pb	08 39 11.9	-0.4
RM33				S	Sb	08 39 17.2	+0.1
RM33				AML	AML		
	comp=E,3115μm,1.6s						
RM33				AML	AML		
	comp=N,2275μm,0.3s						
RM33				AML	AML		
	comp=N,2300μm,0.3s						
RM33				AML	AML		
	comp=E,3040μm,0.8s						
CAMP	**Campotosto**	**0.32**	**150**	⇑P	Pg	08 39 11.9	+0.1
CAMP				S	Sg	08 39 16.7	+0.3
CAMP				AML	AML		
	comp=E,2215μm,0.3s						
CAMP				AML	AML		
	comp=N,1475μm,1.6s						
CAMP				AML	AML		
	comp=N,1470μm,1.6s						
TERO	**Teramo**	**0.36**	**122**	P	Pg	08 39 12.3	-0.1
TERO				S	Sg	08 39 17.7	+0.3
TERO				AML	AML		
	comp=N,1985μm,1.6s						
TERO				AML	AML		
	comp=E,1366μm,0.1s						
TERO				AML	AML		
	comp=E,1675μm,1.5s						
TERO				AML	AML		
	comp=N,1581μm,1.6s						
TERO				AML	AML		
	comp=E,1365μm,0.1s						
TERO				AML	AML		
	comp=N,1580μm,1.6s						
OFFI	**Offida**	**0.38**	**71**	P	Pb	08 39 13.3	-0.3
OFFI				S	Sb	08 39 20.4	+1.1
OFFI				AML	AML		
	comp=N,4355μm,0.5s						
OFFI				AML	AML		
	comp=E,2870μm,0.6s						
ARRO	**Arrone**	**0.39**	**234**	P	Pg	08 39 13.2	+0.2
ARRO				AML	AML		
	comp=N,513μm,0.2s						
ARRO				AML	AML		
	comp=E,551μm,0.2s						
GIGS	**Gran Sasso**	**0.46**	**143**	P	Pg	08 39 13.8	-0.4
GIGS				S	Sg	08 39 20.8	+0.3
GIGS				AML	AML		
	comp=E,372μm,0.8s						
GIGS				AML	AML		
	comp=N,448μm,0.7s						
GIGS				AML	AML		
	comp=E,371μm,0.8s						
CESX	**Cesi**	**0.50**	**246**	⇑P	Pb	08 39 15.4	-0.1
CESX				AML	AML		
	comp=E,488μm,0.5s						
CESX				AML	AML		
	comp=N,499μm,0.5s						
TRTR	**Tortoreto Alta**	**0.53**	**90**	P	Pb	08 39 16.3	+0.2
TRTR				S	Sb	08 39 24.1	+0.6
TRTR				AML	AML		
	comp=N,1960μm,0.7s						
TRTR				AML	AML		
	comp=E,2010μm,0.9s						
FIAM	**Fiamignano**	**0.55**	**186**	P	Pg	08 39 16.0	+0.1
FIAM				S	Sb	08 39 24.4	+0.2
FIAM				AML	AML		
	comp=E,598μm,0.6s						
FIAM				AML	AML		
	comp=N,430μm,0.4s						
FIAM				AML	AML		
	comp=E,598μm,0.6s						
FIAM				AML	AML		
	comp=N,430μm,0.4s						
FAGN	**Fagnano**	**0.62**	**152**	P	Pg	08 39 16.9	-0.4
FAGN				S	Sb	08 39 26.0	-0.2
FAGN				AML	AML		
	comp=E,1019μm,0.4s						
FAGN				AML	AML		
	comp=N,1064μm,0.3s						
VCEL	**Villa Celiera**	**0.64**	**131**	P	Pg	08 39 17.3	-0.3
VCEL				S	Sb	08 39 27.1	+0.4
VCEL				AML	AML		
	comp=E,673μm,1.5s						
VCEL				AML	AML		
	comp=N,635μm,1.4s						
VCEL				AML	AML		
	comp=E,674μm,1.5s						
VCEL				AML	AML		
	comp=N,636μm,1.4s						
ARVD	**Arcevia**	**0.71**	**345**	S	Sg	08 39 20.0	-8.3
T0110	**Collepietro**	**0.73**	**143**	P	Pg	08 39 18.8	-0.5
T0110				S	Sb	08 39 29.7	+0.3
T0110				AML	AML		
	comp=N,730μm,0.4s						
T0110				AML	AML		
	comp=E,528μm,0.3s						
PTQR	**Pietraquaria**	**0.81**	**169**	P	Pg	08 39 19.3	-1.4
INTR	**Introdacqua**	**0.96**	**146**	P	Pb	08 39 22.7	-0.8
INTR				AML	AML		
	comp=E,172μm,0.4s						
INTR				AML	AML		
	comp=N,300μm,0.9s						
STON	**Ston**	**3.31**	**87**	P	Pn	08 39 52.7	-3.7
SALB	**San Lorenzo Be**	**3.77**	**140**	⇓P	Pg	08 40 19.1	+1.7
CAR1	**CAROLEI**	**4.22**	**146**	⇓P	Pg	08 40 24.3	-1.7
SPS2	**Spezzano della**	**4.24**	**145**	⇓P	Pn	08 40 07.9	-1.4
PIPA	**Pietrapaola**	**4.30**	**139**	P	Pg	08 40 27.3	-0.3

ZUR 24 08:40:10.8, 46°.68N×7°.61E, h-1km±1km, MLh1.2/15, 1C, Error ellipse: s-maj=3.4km s-min=1.4km az=101.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIMIS	**Wimmis**	**0.02**	**154**	Pg	Pg	08 40 11.5	+0.3
LKBD	**Leukerbad**	**0.30**	**178**	Pn	Pg	08 40 17.2	+0.7
LKBD				Sg	Sg	08 40 21.3	+1.0
LKBD2	**Leukerbad 2**	**0.31**	**176**	Sg	Sg	08 40 22.3	+1.6
SENIN	**Lac Senin/Sane**	**0.39**	**214**	Pn	Pg	08 40 18.9	+0.7
SENIN				Sg	Sb	08 40 25.3	-2.0
FIESA	**Fiescheralp**	**0.42**	**126**	⇑Pn	Pg	08 40 19.5	+0.5
FIESA				Sg	Sg	08 40 26.1	+1.7

IDC 24 08:57:45.9±7.3, 14°.68S×177°.78W, h375km±33km, mb3.2/3, mbtmp4.0/4, Error ellipse: s-maj=100.9km s-min=60.5km az=74.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.02**	**232**	P	Pn	08 59 07.0	+0.1
	14nm,0.5s,baz=58,slow=15,SNR=14						
KRVT	**Keravat (AS076**	**31.47**	**286**	P	P	09 03 34.4	-0.1
	40nm,0.7s,baz=127,slow=6.7,SNR=2.2						
STKA	**Stephens Creek**	**40.77**	**238**	P	P	09 04 52.4	+0.2
	1.4nm,1.0s,baz=90,slow=13,SNR=1.6						
	1.4nm,1.0s						
WRA	**Warramunga Arr**	**45.89**	**256**	P	P	09 05 32.2	-0.6
	0.2nm,0.4s,baz=81,slow=6.3,SNR=16						
WRA				PcP	PcP	09 07 02.6	-0.3
	0.2nm,0.7s,baz=88,slow=3.6,SNR=1.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**46.32**	**251**	P	P	09 05 36.2	+0.1
	4.9nm,0.4s,baz=90,slow=8.2,SNR=160						
	4.9nm,0.4s						

ROM 24 09:04:37.8±0.1, 42°.811N±0°.004×13°.195E±0°.010, h10km, ML2.9/10, 1C-2D, Error ellipse: s-maj=0.8km s-min=0.3km az=256.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.06**	**291**	P	Pg	09 04 40.4	+0.4
NRCA				S	Sg	09 04 41.8	+0.1
FEMA	**Monte Fema**	**0.18**	**325**	P	Pg	09 04 42.5	+0.7
FEMA				S	Sg	09 04 45.7	+1.1
FEMA				AML	AML		
	comp=E,31450μm,0.3s						
FEMA				AML	AML		
	comp=N,24200μm,0.3s						
FEMA				AML	AML		
	comp=E,31450μm,0.3s						
FEMA				AML	AML		
	comp=N,24200μm,0.3s						
LNSS	**Leonessa**	**0.24**	**209**	⇑P	Pb	09 04 43.5	-0.7
LNSS				S	Sg	09 04 47.5	+1.4
LNSS				AML	AML		
	comp=N,20200μm,0.2s						
LNSS				AML	AML		
	comp=N,20150μm,0.2s						
LNSS				AML	AML		
	comp=E,12250μm,0.3s						
FDMO	**Fiordimonte**	**0.24**	**341**	P	Pg	09 04 43.3	+0.6
FDMO				S	Sg	09 04 47.3	+1.3
FDMO				AML	AML		
	comp=E,6385μm,0.2s						
FDMO				AML	AML		
	comp=N,8210μm,0.2s						
CSP1	**Cessapalombo**	**0.28**	**1**	⇓P	Pg	09 04 44.1	+0.6
CSP1				S	Sb	09 04 48.8	-1.0
CSP1				AML	AML		
	comp=N,5455μm,0.4s						
CSP1				AML	AML		
	comp=N,5450μm,0.4s						
CSP1				AML	AML		
	comp=E,4235μm,0.8s						
CESI	**CESI - Serrava**	**0.29**	**312**	P	Pg	09 04 44.3	+0.7
CESI				S	Sb	09 04 48.9	-1.1
CESI				AML	AML		
	comp=E,6720μm,0.5s						
CESI				AML	AML		
	comp=N,13450μm,0.2s						
RM33	**Pellescritta (**	**0.30**	**177**	P	Pb	09 04 44.7	-0.6
RM33				S	Sb	09 04 49.4	-1.0
RM33				AML	AML		
	comp=E,2795μm,1.5s						
RM33				AML	AML		
	comp=N,1830μm,1.0s						
RM33				AML	AML		
	comp=E,2765μm,1.5s						
RM33				AML	AML		
	comp=E,2790μm,1.5s						
RM33				AML	AML		
	comp=N,1825μm,1.0s						
RM33				AML	AML		
	comp=N,1885μm,1.0s						
RM33				AML	AML		
	comp=E,1694μm,0.3s						
RM33				AML	AML		
	comp=E,1653μm,0.3s						
RM33				AML	AML		
	comp=N,1159μm,0.9s						
RM33				AML	AML		
	comp=N,927μm,0.5s						
CAMP	**Campotosto**	**0.32**	**150**	P	Pg	09 04 44.5	+0.3
CAMP				S	Sg	09 04 49.2	+0.8
CAMP				AML	AML		
	comp=E,3800μm,0.2s						
CAMP				AML	AML		
	comp=N,2470μm,0.2s						
TERO	**Teramo**	**0.35**	**122**	AML	AML		
	comp=N,4950μm,0.3s						
TERO				AML	AML		
	comp=E,3140μm,0.3s						
TERO				AML	AML		
	comp=E,3330μm,0.3s						
TERO				AML	AML		
	comp=N,5290μm,0.3s						
ARRO	**Arrone**	**0.39**	**234**	P	Pb	09 04 46.2	-0.6
ARRO				AML	AML		
	comp=E,2170μm,0.2s						
ARRO				AML	AML		
	comp=N,1545μm,0.7s						
EL6	**Elcito**	**0.52**	**352**	S	Sb	09 04 58.0	+1.2
VCEL	**Villa Celiera**	**0.63**	**131**	P	Pg	09 04 50.2	+0.2
VCEL				S	Sb	09 05 00.1	+0.1
MURB	**Monte Urbino**	**0.67**	**313**	S	Sn	09 05 03.0	-0.9
SSFR	**Montelago di S**	**0.69**	**334**	S	Sb	09 05 03.0	+1.3
ARVD	**Arcevia**	**0.71**	**345**	S	Sn	09 05 04.0	-0.9
ATTE	**AVT- Monte Tez**	**0.73**	**302**	S	Sn	09 05 05.0	-0.4
SRES	**S.Oreste - Sor**	**0.77**	**222**	S	Sn	09 05 06.0	-0.2
AOI	**Ancona**	**0.80**	**22**	S	Sn	09 05 08.0	+1.0
ATVO	**AVT- Monte Val**	**0.81**	**315**	S	Sn	09 05 07.0	-0.4
PIEI	**Pieia**	**0.87**	**327**	S	Sn	09 05 09.0	+0.1
MPAG	**Monte Paganucc**	**0.88**	**339**	S	Sn	09 05 10.0	+0.9
FSSB	**Fossombrone**	**0.93**	**341**	S	Sn	09 05 12.0	+1.6
INTR	**Introdacqua**	**0.96**	**146**	P	Pg	09 04 55.4	-0.8
INTR				AML	AML		
	comp=E,252μm,0.7s						
INTR				AML	AML		
	comp=N,594μm,0.4s						
CAFI	**Castiglion Fio**	**1.04**	**300**	⇓P	Pb	09 04 57.9	0.0
CAFI				AML	AML		
	comp=N,194μm,0.7s						
CAFI				AML	AML		
	comp=E,181μm,1.4s						
LPEL	**Lama dei Pelig**	**1.06**	**136**	S	Sn	09 05 14.0	+0.5
PTRJ	**Pietraroja**	**1.75**	**145**	S	Sg	09 05 36.0	+1.8
GRAM	**Graiana**	**2.83**	**308**	P	Pb	09 05 28.3	0.0

ROM 24 09:05:09.9±0.1, 42°.654N±0°.007×13°.267E±0°.004, h12km±2km, ML2.6/2, 1D, Error ellipse: s-maj=0.8km s-min=0.1km az=193.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.15**	**195**	⇓P	Pb	09 05 14.1	-0.6
RM33				S	Sg	09 05 16.8	+0.7
RM33				AML	AML		
	comp=E,2215μm,0.6s						
RM33				AML	AML		
	comp=N,1520μm,0.5s						
CAMP	**Campotosto**	**0.16**	**138**	P	Pb	09 05 14.3	-0.6
CAMP				S	Sg	09 05 17.0	+0.8
LNSS	**Leonessa**	**0.17**	**253**	P	Pg	09 05 14.3	+0.4
LNSS				S	Sg	09 05 17.4	+0.8
TERO	**Teramo**	**0.25**	**97**	P	Pg	09 05 15.7	+0.5
TERO				S	Sg	09 05 19.6	+0.9
TERO				AML	AML		
	comp=N,1186μm,0.1s						
TERO				AML	AML		
	comp=N,1419μm,0.1s						
TERO				AML	AML		
	comp=E,666μm,0.4s						
TERO				AML	AML		
	comp=E,498μm,0.4s						
GIGS	**Gran Sasso**	**0.30**	**132**	P	Pg	09 05 16.5	+0.4
GIGS				S	Sg	09 05 21.2	+1.0
GIGS				AML	AML		
	comp=N,56μm,0.8s						
GIGS				AML	AML		
	comp=E,115μm,0.2s						

IDC 24 09:15:20.8±2.2, 3°.27N×125°.84E, h0km, mb3.4/3,

mbtmp3.4/3, Error ellipse: s-maj=199.4km s-min=26.8km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.53**	**160**	P	P	09 20 41.7	-0.6
	1.0nm,0.7s,baz=339,slow=11,SNR=16						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**27.90**	**164**	P	P	09 21 13.9	+1.2
	0.2nm,0.9s,baz=345,slow=6.9,SNR=1.3						
	0.2nm,0.9s						
MKAR	**Makanchi Array**	**57.43**	**326**	P	P	09 25 11.2	-0.3
	0.3nm,0.4s,baz=119,slow=8.7,SNR=5.7						
	0.3nm,0.4s						

*ROM **24** 09:28:08.4±0.1, 42.471N±0.004×13.248E±0.004, h12km, ML2.8/23, Error ellipse: s-maj=0.4km s-min=0.1km az=35.0*

ISC 24 09:28:08.6±0.8, **42.45N**±0.02×**13.21E**±0.02, **h14**km±5km, **n43**, σ1§**31**/54, **11C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.06**	**7**	⇓P	**Pg**	**09 28 11.2**	**-0.3**
RM33				S	**Sg**	**09 28 12.8**	**-0.6**
RM33				AML	AML		
	comp=E,33800μm,0.3s						
RM33				AML	AML		
	comp=N,28900μm,0.2s						
RM33				AML	AML		
	comp=E,33850μm,0.3s						
RM33				AML	AML		
	comp=N,27900μm,0.2s						
RM33				AML	AML		
	comp=E,33800μm,0.3s						
RM33				AML	AML		
	comp=N,28850μm,0.2s						
RM33				AML	AML		
	comp=N,27950μm,0.2s						
RM33				AML	AML		
	comp=E,33300μm,0.3s						
RM33				AML	AML		
	comp=E,33850μm,0.3s						
CAMP	**Campotosto**	**0.17**	**61**	⇑P	**Pg**	**09 28 12.5**	**-0.4**
CAMP				S	**Sg**	**09 28 15.0**	**-0.7**
CAMP				AML	AML		
	comp=N,11850μm,0.4s						
CAMP				AML	AML		
	comp=E,6785μm,0.6s						
CAMP				AML	AML		
	comp=E,5768μm,0.3s						
AQU	**L'Aquila**	**0.18**	**124**	P	**Pg**	**09 28 13.0**	**+0.2**
AQU				S	**Sg**	**09 28 15.8**	**+0.1**
AQU				AML	AML		
	comp=E,4850μm,1.1s						
AQU				AML	AML		
	comp=E,4890μm,1.1s						
AQU				AML	AML		
	comp=N,6820μm,0.4s						
AQU				AML	AML		
	comp=N,6345μm,0.4s						
AQU				AML	AML		
	comp=E,4845μm,1.1s						
AQU				AML	AML		
	comp=N,3930μm,0.5s						
AQU				AML	AML		
	comp=E,4059μm,0.3s						
AQU				AML	AML		
	comp=E,3720μm,1.2s						
AQU				AML	AML		
	comp=N,4671μm,1.0s						
LNSS	**Leonessa**	**0.19**	**321**	P	**Pg**	**09 28 13.5**	**+0.3**
LNSS				S	**Sg**	**09 28 16.8**	**+0.5**
LNSS				AML	AML		
	comp=E,1925μm,0.7s						
LNSS				AML	AML		
	comp=N,4845μm,0.6s						
LNSS				AML	AML		
	comp=N,4850μm,0.6s						
LNSS				AML	AML		
	comp=N,2964μm,0.7s						
LNSS				AML	AML		
	comp=E,1628μm,0.3s						
FIAM	**Fiamignano**	**0.20**	**200**	⇑P	**Pg**	**09 28 13.7**	**+0.5**
FIAM				S	**Sg**	**09 28 17.3**	**+1.1**
FIAM				AML	AML		
	comp=N,4125μm,1.3s						
FIAM				AML	AML		
	comp=E,6775μm,0.5s						
GIGS	**Gran Sasso**	**0.27**	**90**	P	**Pg**	**09 28 14.0**	**-0.4**
GIGS				S	**Sg**	**09 28 17.9**	**-0.4**
GIGS				AML	AML		
	comp=E,1520μm,0.5s						
GIGS				AML	AML		
	comp=N,1625μm,0.6s						
GIGS				AML	AML		
	comp=E,1218μm,0.7s						
GIGS				AML	AML		
	comp=N,1074μm,0.5s						
FAGN	**Fagnano**	**0.34**	**123**	P	**Pg**	**09 28 15.8**	**+0.3**
FAGN				AML	AML		
	comp=N,5975μm,0.3s						
FAGN				AML	AML		
	comp=E,5995μm,0.5s						
TERO	**Teramo**	**0.34**	**60**	P	**Pg**	**09 28 14.9**	**-0.7**
TERO				S	**Sg**	**09 28 19.4**	**-1.0**
TERO				AML	AML		
	comp=E,2825μm,0.3s						
TERO				AML	AML		
	comp=N,2970μm,0.4s						
TERO				AML	AML		
	comp=N,3110μm,0.4s						
TERO				AML	AML		
	comp=E,2820μm,0.3s						
TERO				AML	AML		
	comp=E,3025μm,0.3s						
TERO				AML	AML		
	comp=N,1670μm,0.2s						
ARRO	**Arrone**	**0.35**	**292**	P	**Pg**	**09 28 16.2**	**+0.4**
ARRO				AML	AML		
	comp=E,1219μm,0.2s						
ARRO				AML	AML		
	comp=N,1002μm,0.6s						
ARRO				AML	AML		
	comp=E,1220μm,0.2s						
ARRO				AML	AML		
	comp=N,1002μm,0.6s						
ARRO				AML	AML		
	comp=E,1215μm,0.2s						
ARRO				AML	AML		
	comp=N,1002μm,0.6s						
ARRO				AML	AML		
	comp=E,837μm,0.2s						
ARRO				AML	AML		
	comp=N,759μm,0.4s						
NRCA	**Norcia**	**0.39**	**350**	P	**Pg**	**09 28 16.3**	**-0.2**
NRCA				S	**Sg**	**09 28 22.0**	**+0.2**
PTQR	**Pietraquaria**	**0.45**	**161**	P	**Pg**	**09 28 17.5**	**-0.2**
PTQR				S	**Sb**	**09 28 24.7**	**-0.4**
PTQR				AML	AML		
	comp=N,588μm,0.4s						
PTQR				AML	AML		
	comp=E,669μm,0.3s						
VCEL	**Villa Celiera**	**0.47**	**97**	P	**Pg**	**09 28 17.8**	**-0.3**
VCEL				S	**Sb**	**09 28 25.1**	**-0.6**
VCEL				AML	AML		
	comp=E,2615μm,0.6s						
VCEL				AML	AML		
	comp=N,3045μm,1.5s						
VCEL				AML	AML		
	comp=E,2610μm,0.6s						
VCEL				AML	AML		
	comp=N,3040μm,1.5s						
VCEL				AML	AML		
	comp=E,1401μm,0.5s						
T0110	**Collepietro**	**0.48**	**118**	P	**Pg**	**09 28 18.0**	**-0.2**
T0110				S	**Sb**	**09 28 25.4**	**-0.5**
T0110				AML	AML		
	comp=E,2530μm,0.5s						
T0110				AML	AML		
	comp=N,2860μm,1.1s						
T0110				AML	AML		
	comp=E,2525μm,0.5s						
CERT	**Cerreto**	**0.53**	**198**	⇑P	**Pg**	**09 28 19.2**	**+0.2**
CERT				AML	AML		
	comp=E,942μm,0.6s						
CERT				AML	AML		
	comp=N,528μm,0.4s						
MTCE	**Montecelio**	**0.55**	**219**	⇑P	**Pg**	**09 28 19.5**	**+0.1**
MTCE				AML	AML		
	comp=E,695μm,1.4s						
MTCE				AML	AML		
	comp=N,374μm,0.7s						
SRES	**S.Oreste - Sor**	**0.56**	**248**	⇓P	**Pb**	**09 28 20.4**	**+0.3**
SRES				AML	AML		
	comp=E,430μm,0.5s						
SRES				AML	AML		
	comp=N,381μm,0.9s						
FDMO	**Fiordimonte**	**0.59**	**352**	S	**Sn**	**09 28 30.0**	**-2.1**
OFFI	**Offida**	**0.60**	**36**	⇓P	**Pb**	**09 28 20.6**	**-0.2**
OFFI				AML	AML		
	comp=N,1590μm,0.4s						
OFFI				AML	AML		
	comp=E,1815μm,1.5s						
OFFI				AML	AML		
	comp=E,1289μm,0.5s						
TRTR	**Tortoreto Alta**	**0.63**	**56**	AML	AML		
	comp=N,1485μm,1.1s						
TRTR				AML	AML		
	comp=E,1645μm,0.6s						
CSP1	**Cessapalombo**	**0.64**	**360**	S	**Sb**	**09 28 31.0**	**+0.5**
VVLD	**Villa Vallelon**	**0.66**	**152**	⇓P	**Pn**	**09 28 23.1**	**-0.4**
VVLD				AML	AML		
	comp=E,699μm,0.5s						
VVLD				AML	AML		
	comp=N,624μm,0.4s						
GUAR	**Guarcino**	**0.66**	**173**	P	**Pb**	**09 28 22.6**	**+0.7**
GUAR				AML	AML		
	comp=N,770μm,0.4s						
GUAR				AML	AML		
	comp=E,728μm,0.4s						
INTR	**Introdacqua**	**0.68**	**130**	⇑P	**Pg**	**09 28 21.9**	**0.0**
INTR				AML	AML		
	comp=E,343μm,0.7s						
INTR				AML	AML		
	comp=N,869μm,0.6s						
POFI	**Posta Fibreno**	**0.82**	**153**	⇓P	**Pn**	**09 28 25.7**	**-0.1**
POFI				AML	AML		
	comp=E,232μm,0.5s						
POFI				AML	AML		
	comp=N,235μm,0.5s						
LPEL	**Lama dei Pelig**	**0.83**	**119**	⇓P	**Pb**	**09 28 24.5**	**-0.3**
LPEL				S	**Sg**	**09 28 36.0**	**+0.3**
LPEL				AML	AML		
	comp=E,668μm,1.1s						
LPEL				AML	AML		
	comp=N,520μm,0.3s						
LPEL				AML	AML		
	comp=E,669μm,1.1s						
LPEL				AML	AML		
	comp=N,519μm,0.3s						
LRP	**Arpino**	**0.85**	**160**	P	**Pn**	**09 28 26.9**	**+0.7**
LRP				AML	AML		
	comp=E,238μm,0.4s						
LRP				AML	AML		
	comp=N,328μm,0.5s						
GIUL	**Giuliano Di Ro**	**0.89**	**178**	⇓P	**Pg**	**09 28 26.3**	**+0.4**
GIUL				AML	AML		
	comp=N,288μm,0.8s						
GIUL				AML	AML		
	comp=E,282μm,0.5s						
FOSV	**Fossato di Vic**	**0.90**	**339**	S	**Sn**	**09 28 39.0**	**-0.8**
LATB	**Latina**	**0.97**	**191**	⇑P	**Pb**	**09 28 24.8**	**-2.4**
LIK	**San Giovanni I**	**0.98**	**164**	P	**Pn**	**09 28 28.0**	**0.0**
VBKN	**Vesuvio Bunker**	**1.86**	**150**	⇑P	**Pb**	**09 28 42.8**	**+0.3**
FIU	**Minerbio Fiu**	**2.52**	**331**	⇑P	**Pb**	**09 28 52.6**	**-0.9**
NDIM	**Novi di Modena**	**2.95**	**326**	⇑P	**Pb**	**09 28 58.8**	**-2.2**
NDIM				S	**Sg**	**09 29 42.0**	**-1.5**
AMUR	**Altamura**	**2.98**	**120**	P	**Pn**	**09 28 58.0**	**+2.6**
MNTV	**Mantova**	**3.21**	**328**	S	**Sb**	**09 29 46.0**	**+1.6**
LEOD	**Capriano del C**	**3.74**	**325**	⇑P	**Pn**	**09 29 06.0**	**+0.2**
STAL	**STALIGIAL**	**3.82**	**355**	⇓P	**Pn**	**09 29 10.5**	**+3.4**
STAL				⇑P	**Pb**	**09 29 18.5**	**+2.7**
STAL	**STALIGIAL**	**3.82**	**355**	AML	AML		
	comp=E,286μm,0.5s						
STAL	**STALIGIAL**	**3.82**	**355**	AML	AML		
	comp=N,203μm,0.8s						
EUCT	**Pavia**	**4.03**	**314**	P	**Pb**	**09 29 14.8**	**-4.5**
OBKA	**Obir**	**4.17**	**13**	*e*Pn	**Pb**	**09 29 21.2**	**-0.5**
	comp=N,1.1nm,0.2s						
SERS	**Sersale**	**4.32**	**141**	P	**Pn**	**09 29 15.4**	**+1.5**
SERS				AML	AML		
	comp=N,29μm,1.6s						
SERS				AML	AML		
	comp=E,26μm,1.3s						
ABTA	**Abfaltersbach**	**4.32**	**354**	*e*Pn	**Pn**	**09 29 16.9**	**+2.9**
	comp=E,3.5nm,0.6s						

ZUR 24 09:29:47.9, 46.49N×7.08E, h-1km±1km, **MLh0.9/7, 3C, Error ellipse: s-maj=3.7km s-min=1.2km az=90.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.17**	**210**	⇑Pg	Pg	09 29 51.5	+0.4
AIGLE				Sg	Sg	09 29 54.6	+1.3
SENIN	**Lac Senin/Sane**	**0.20**	**129**	⇑Pg	Pg	09 29 52.5	+0.8
SENIN				Sg	Sg	09 29 55.1	+0.9
GRYON	**Gryon**	**0.24**	**174**	⇑Pg	Pg	09 29 52.6	+0.2
GRYON				Sg	Sg	09 29 56.5	+1.0
SALAN	**Lac Salanfe**	**0.35**	**192**	Sg	Sg	09 29 59.8	+0.7

*ROM **24** 09:31:43.3±0.0, 42.812N±0.002×13.192E±0.004, h10km, ML3.8/48, Mw3.4, Error ellipse: s-maj=0.3km s-min=0.1km az=70.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-0.04; Mθθ-1.28; Mφφ1.32; Mrθ0.45; Mθφ0.36; Mφr0.40; Fault plane solution: M₀1.48091×10¹⁴ NP1:φs323.00000°, δ66.00000°, λ179.00000°. NP2:φs53.00000°, δ89.00000°, λ24.00000°.*
*PRU **24** 09:31:47.3±0.0, 43.00N×13.43E, h0km*
*BEO **24** 09:31:47.7±0.9, 42.92N×13.50E, h3km±5km, ML3.4/7*

ISC 24 09:31:43.3±0.8, **42.82N**±0.01×**13.23E**±0.02, **h14**km±4km, **n164**, σ1§**42**/193, **42C-22D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.07**	**133**	⇑P	**Pg**	**09 31 46.4**	**+0.2**
AQT1				S	**Sg**	**09 31 48.6**	**+0.5**
NRCA	**Norcia**	**0.09**	**280**	⇓*i*P	**Pg**	**09 31 45.9**	**-0.5**
NRCA				S	**Sg**	**09 31 47.4**	**-1.1**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
MC2	**Monte Cornacci**	**0.10**	**344**	⇓P	**Pg**	**09 31 46.4**	**-0.3**
MC2				S	**Sg**	**09 31 48.5**	**-0.5**
MMO1	**Montemonaco**	**0.11**	**42**	⇑P	**Pg**	**09 31 46.8**	**+0.1**
MMO1				S	**Sg**	**09 31 49.1**	**+0.1**
FEMA	**Monte Fema**	**0.19**	**318**	⇓*e*P	**Pg**	**09 31 47.7**	**-0.2**
FEMA				S	**Sg**	**09 31 50.8**	**-0.2**
FEMA				AML	AML		
	comp=N,78050μm,0.8s						
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
	comp=N,78100μm,0.7s						
FEMA				AML	AML		
	comp=N,78100μm,0.8s						
T1243	**Rocca Santa Ma**	**0.20**	**127**	⇑P	**Pb**	**09 31 48.4**	**-0.4**
T1243				S	**Sb**	**09 31 52.1**	**-0.4**
FDMO	**Fiordimonte**	**0.24**	**335**	⇓P	**Pg**	**09 31 48.5**	**-0.1**
FDMO				S	**Sg**	**09 31 52.4**	**+0.3**
FDMO				AML	AML		
	comp=E,35600μm,1.2s						
FDMO				AML	AML		
	comp=N,61950μm,0.3s						
LNSS	**Leonessa**	**0.26**	**213**	⇓P	**Pg**	**09 31 49.0**	**+0.1**
LNSS				S	**Sg**	**09 31 53.2**	**+0.6**
LNSS				AML	AML		
	comp=N,57250μm,0.2s						
LNSS				AML	AML		
	comp=E,21800μm,0.5s						
CSP1	**Cessapalombo**	**0.27**	**356**	⇓*i*P	**Pg**	**09 31 49.3**	**+0.1**
CSP1				S	**Sb**	**09 31 54.0**	**-0.6**
CSP1				AML	AML		
	comp=E,31250μm,0.4s						
CSP1				AML	AML		
	comp=N,45850μm,0.4s						
CESI	**CESI - Serrava**	**0.30**	**308**	⇓P	**Pg**	**09 31 49.5**	**-0.1**
CESI				S	**Sg**	**09 31 54.2**	**+0.2**
CESI				AML	AML		
	comp=E,49750μm,0.4s						
CESI				AML	AML		
RM33	**Pellescritta (**	**0.31**	**182**	⇓*e*P	**Pg**	**09 31 50.0**	**+0.2**
RM33				S	**Sb**	**09 31 55.1**	**-0.4**
RM33				AML	AML		
	comp=E,12495μm,1.0s						
RM33				AML	AML		
	comp=N,14300μm,1.2s						
RM33				AML	AML		
	comp=N,14300μm,1.3s						
RM33				AML	AML		
	comp=E,12500μm,1.0s						
RM33				AML	AML		
	comp=N,14500μm,1.3s						
RM33				AML	AML		
	comp=E,12700μm,1.0s						
CAMP	**Campotosto**	**0.31**	**155**	⇓*e*P	**Pb**	**09 31 50.1**	**-0.6**
CAMP				S	**Sb**	**09 31 55.2**	**-0.4**
CAMP				AML	AML		
	comp=E,27100μm,0.2s						
CAMP				AML	AML		
	comp=N,19650μm,0.3s						
TERO	**Teramo**	**0.34**	**125**	⇑*i*P	**Pb**	**09 31 50.8**	**-0.3**
TERO				S	**Sb**	**09 31 56.4**	**0.0**
TERO				AML	AML		
	comp=E,24850μm,0.3s						
TERO				AML	AML		
	comp=N,34200μm,0.3s						
TERO				AML	AML		
	comp=N,36400μm,0.4s						
TERO				AML	AML		
	comp=E,23250μm,0.3s						
TERO				AML	AML		
	comp=E,24800μm,0.3s						
OFFI	**Offida**	**0.36**	**71**	⇑P	**Pb**	**09 31 52.1**	**+0.7**
OFFI				AML	AML		
	comp=N,25800μm,0.6s						
OFFI				AML	AML		
	comp=E,17250μm,0.8s						
MNTP	**Montappone**	**0.36**	**29**	⇓P	**Pb**	**09 31 51.8**	**+0.3**
MNTP				AML	AML		
	comp=E,35950μm,0.3s						
MNTP				AML	AML		
	comp=N,26250μm,0.5s						
MNTP				AML	AML		
	comp=E,35950μm,0.2s						
MNTP				AML	AML		
	comp=N,26200μm,0.5s						
MDAR	**Monte D'Aria**	**0.38**	**351**	P	**Pg**	**09 31 51.2**	**+0.1**
MDAR				S	**Sb**	**09 31 57.3**	**-0.3**
MDAR				AML	AML		
	comp=E,18400μm,1.5s						
MDAR				AML	AML		
	comp=N,19850μm,1.3s						
MDAR				AML	AML		
	comp=E,18400μm,1.5s						
SEF1	**Sefro**	**0.39**	**328**	⇑P	**Pg**	**09 31 51.1**	**0.0**
SEF1				S	**Sg**	**09 31 57.3**	**+0.8**
SEF1				AML	AML		
	comp=N,43000μm,0.2s						
SEF1				AML	AML		
	comp=E,66850μm,0.7s						
SEF1				AML	AML		
	comp=N,43050μm,0.2s						
SEF1				AML	AML		
	comp=E,66850μm,0.7s						
T1211	**Morro Reatino**	**0.40**	**224**	⇓P	**Pg**	**09 31 51.3**	**0.0**
T1211				S	**Sg**	**09 31 56.9**	**+0.2**
PIO1	**Pioraco**	**0.40**	**334**	*e*P	**Pg**	**09 31 51.4**	**0.0**
PIO1				S	**Sg**	**09 31 57.6**	**+0.7**
PIO1				AML	AML		
	comp=E,14150μm,0.2s						
PIO1				AML	AML		
	comp=E,14200μm,0.2s						
PIO1				AML	AML		
	comp=E,14150μm,0.3s						
PIO1				AML	AML		
	comp=N,43700μm,0.3s						
PIO1				AML	AML		
	comp=N,43750μm,0.3s						
SSM1	**San Severino M**	**0.41**	**355**	⇓P	**Pg**	**09 31 51.7**	**+0.1**
SSM1				S	**Sb**	**09 31 58.2**	**-0.2**
ARRO	**Arrone**	**0.42**	**235**	⇑*e*P	**Pg**	**09 31 51.5**	**-0.1**
FIU1	**Fiuminata**	**0.43**	**330**	P	**Pg**	**09 31 51.9**	**0.0**
FIU1				S	**Sg**	**09 31 58.5**	**+0.7**
GAG1	**Gagliole**	**0.44**	**344**	P	**Pg**	**09 31 52.2**	**+0.1**
GAG1				S	**Sb**	**09 31 59.1**	**-0.1**
GAG1				AML	AML		
	comp=N,50150μm,0.2s						
GAG1				AML	AML		
	comp=E,52750μm,0.2s						
GAG1				AML	AML		
	comp=N,50100μm,0.2s						
GIGS	**Gran Sasso**	**0.45**	**146**	⇓P	**Pb**	**09 31 52.2**	**-0.8**
GIGS				S	**Sb**	**09 31 59.3**	**-0.2**
GIGS				AML	AML		
	comp=E,4110μm,0.5s						
GIGS				AML	AML		
	comp=N,2915μm,1.2s						
MTL1	**Matelica**	**0.47**	**340**	P	**Pg**	**09 31 52.7**	**+0.1**
MTL1				S	**Sb**	**09 32 00.0**	**0.0**
ASSB	**Assisi San Ben**	**0.47**	**298**	⇑P	**Pg**	**09 31 52.4**	**-0.4**
ASSB				S	**Sg**	**09 31 59.2**	**+0.1**
ASSB				AML	AML		
	comp=E,8380μm,0.3s						
ASSB				AML	AML		
	comp=N,12300μm,0.2s						
AQU	**L'Aquila**	**0.48**	**164**	⇓P	**Pg**	**09 31 52.9**	**+0.1**
AQU				S	**Sb**	**09 32 00.4**	**0.0**
AQU				AML	AML		
	comp=E,6435μm,0.5s						
AQU				AML	AML		
	comp=E,6810μm,0.5s						
AQU				AML	AML		
	comp=E,6805μm,0.5s						
AQU				AML	AML		
	comp=N,7720μm,0.3s						
AQU				AML	AML		
	comp=N,7085μm,0.3s						
SNTG	**Esanatoglia**	**0.48**	**334**	⇓P	**Pg**	**09 31 52.7**	**-0.2**
SNTG				S	**Sg**	**09 32 00.1**	**+0.7**
SNTG				AML	AML		
	comp=E,1146μm,0.2s						
SNTG				AML	AML		
	comp=N,1895μm,0.2s						
SNTG				AML	AML		
	comp=E,9385μm,0.2s						
SNTG				AML	AML		
	comp=E,1146μm,0.2s						
SNTG				AML	AML		
	comp=N,1890μm,0.2s						
SNTG				AML	AML		
	comp=N,15650μm,0.2s						
TRE1	**Treia**	**0.50**	**7**	P	**Pb**	**09 31 53.9**	**+0.1**
TRE1				AML	AML		
	comp=N,13900μm,0.4s						
TRE1				AML	AML		
	comp=E,18900μm,0.4s						
TRE1				AML	AML		
	comp=N,13950μm,0.4s						
TRE1				AML	AML		
	comp=E,18950μm,0.4s						
TRTR	**Tortoreto Alta**	**0.51**	**91**	⇑P	**Pn**	**09 31 55.1**	**-0.9**
TRTR				AML	AML		
	comp=E,17150μm,0.5s						
TRTR				AML	AML		
	comp=N,13850μm,1.3s						
CESX	**Cesi**	**0.52**	**247**	⇑*i*P	**Pg**	**09 31 53.1**	**-0.5**
CESX				S	**Sg**	**09 32 00.8**	**+0.2**
CESX				AML	AML		
	comp=N,7945μm,1.0s						
CESX				AML	AML		
	comp=E,6640μm,0.8s						
CADA	**Capodarco di F**	**0.54**	**46**	AML	AML		
	comp=E,22450μm,1.0s						
CADA				AML	AML		
	comp=N,19950μm,0.7s						
FIAM	**Fiamignano**	**0.56**	**188**	⇓P	**Pg**	**09 31 54.1**	**-0.2**
FIAM				S	**Sb**	**09 32 02.4**	**-0.3**
FIAM				AML	AML		
	comp=E,3630μm,0.4s						
FIAM				AML	AML		

comp=E,3635µm,0.4s
FIAM AML AML
comp=N,4625µm,0.7s
CING Cingoli 0.56 358 ⇓P Pg 09 31 54.2 -0.1
ATCC AVT- Casa Cast 0.57 311⇑ *e*P Pg 09 31 54.2 -0.2
ATCC S **Sg 09 32 02.2 +0.2**
ATCC AML AML
comp=E,10135µm,1.5s
ATCC AML AML
comp=N,16850µm,0.7s
ATCC AML AML
comp=E,10125µm,1.5s
FOSV Fossato di Vic 0.59 324 ⇓P Pg 09 31 54.5 -0.3
FOSV S **Sg 09 32 03.4 +0.7**
FOSV AML AML
comp=E,14550µm,0.3s
FOSV AML AML
comp=N,33150µm,0.3s
FAGN Fagnano 0.61 154 ⇑P Pb 09 31 55.2 -0.6
FAGN S **Sb 09 32 05.0 +0.8**
FAGN AML AML
comp=N,18500µm,1.6s
FAGN AML AML
comp=E,15950µm,0.3s
VCEL Villa Celiera 0.62 133 ⇑P Pb 09 31 56.0 0.0
VCEL AML AML
comp=N,17300µm,0.9s
VCEL AML AML
comp=E,14305µm,0.9s
VCEL AML AML
comp=E,14295µm,0.9s
PP3 Marolino 0.62 26 P Pn 09 31 56.6 -1.1
PP3 AML AML
comp=E,15600µm,1.0s
PP3 AML AML
comp=N,19650µm,0.3s
PP3 AML AML
comp=N,20150µm,0.3s
PP3 AML AML
comp=E,15550µm,1.0s
PP3 AML AML
comp=N,19650µm,0.3s
PP3 AML AML
comp=E,16200µm,1.1s
MMUR Monte Murano 0.65 345 P Pg 09 31 55.9 -0.1
MMUR S **Sb 09 32 05.8 +0.5**
MURB Monte Urbino 0.68 311 ⇑P Pg 09 31 56.3 -0.3
MURB AML AML
comp=E,13150µm,0.8s
MURB AML AML
comp=E,13150µm,0.8s
MURB AML AML
comp=N,12400µm,0.9s
MURB AML AML
comp=E,14900µm,0.8s
MURB AML AML
comp=N,13400µm,0.9s
SSFR Montelago di S 0.70 332 ⇑P Pg 09 31 56.6 -0.4
SSFR S **Sb 09 32 07.1 +0.4**
SSFR AML AML
comp=E,23700µm,1.2s
SSFR AML AML
comp=N,21000µm,1.5s
SSFR AML AML
comp=E,22600µm,0.2s
SSFR AML AML
comp=N,19650µm,0.9s
ARVD Arcevia 0.71 343 ⇓P Pg 09 31 56.8 -0.3
ARVD S **Sb 09 32 07.7 +0.6**
ARVD AML AML
comp=N,4035µm,1.3s
ARVD AML AML
comp=E,5230µm,0.2s
T0110 Collepietro 0.72 145 ⇑P Pb 09 31 57.3 -0.3
T0110 S **Sb 09 32 07.9 +0.5**
T0110 AML AML
comp=E,12600µm,0.4s
T0110 AML AML
comp=N,11760µm,0.5s
ATSC Scheggia e Pas 0.72 327 ⇑P Pg 09 31 56.9 -0.5
ATSC S **Sb 09 32 07.8 +0.2**
ATFO Monte Foce - G 0.73 319 ⇑P Pg 09 31 57.1 -0.4
ATFO S **Sb 09 32 07.9 +0.2**
ATFO AML AML
comp=N,3365µm,0.3s
ATFO AML AML
comp=E,4290µm,1.2s
ATTE AVT- Monte Tez 0.74 301 ⇑P Pg 09 31 57.3 -0.5
ATTE AML AML
comp=N,2185µm,0.5s
ATTE AML AML
comp=E,2490µm,0.4s
ATLO AVT- Montelove 0.78 310 ⇑P Pg 09 31 57.9 -0.6
ATLO S **Sg 09 32 09.0 +0.3**
AOI Ancona 0.78 20 ⇑P Pb 09 31 58.9 +0.3
AOI AML AML
comp=E,2685µm,0.5s
AOI AML AML
comp=N,2355µm,0.4s
SRES S.Oreste - Sor 0.79 223 ⇑P Pg 09 31 58.3 -0.3
SRES AML AML
comp=N,1970µm,1.1s
SRES AML AML
comp=E,1830µm,1.4s
FRON Frontone 0.79 332 ⇑P Pg 09 31 58.1 -0.5
FRON S **Sb 09 32 09.9 +0.5**
FRON AML AML
comp=E,8785µm,0.2s
FRON AML AML
comp=N,11800µm,0.3s
PTQR Pietraquaria 0.81 171 ⇓P Pg 09 31 58.3 -0.6
TB01 Gubbio 0.81 314 ⇑P Pg 09 31 58.5 -0.5
TB02 Pietralunga 0.81 313 P Pg 09 31 58.6 -0.5
TB02 S **Sg 09 32 10.1 +0.3**
ATBU Serra di Buran 0.82 323 ⇑P Pg 09 31 58.9 -0.4
ATVO AVT- Monte Val 0.82 313 ⇑P Pg 09 31 58.6 -0.7
ATVO AML AML
comp=N,2700µm,0.7s
ATVO AML AML
comp=E,4010µm,0.4s
MGAB Montegabbione 0.83 277 ⇑P Pg 09 31 58.8 -0.5
MGAB AML AML
comp=E,4665µm,0.7s
MGAB AML AML
comp=N,3850µm,0.7s
MGAB AML AML
comp=E,5550µm,0.7s
MGAB AML AML
comp=N,3735µm,0.9s
ATVA AVT- Monte Val 0.83 304 ⇓P Pg 09 31 59.0 -0.4
COR1 Corinaldo 0.83 349 AML AML
comp=E,8130µm,1.0s
COR1 AML AML
comp=E,8130µm,1.0s
COR1 AML AML
comp=E,4265µm,1.2s
COR1 AML AML
comp=N,8215µm,0.6s
COR1 AML AML
comp=N,8045µm,0.6s
COR1 AML AML
comp=N,8235µm,0.6s
COR1 AML AML
comp=N,8030µm,0.6s
TB03 Pietralunga 0.83 314 ⇑P Pg 09 31 58.8 -0.7
ATPC Poggio Castell 0.87 320 ⇑P Pb 09 31 59.6 -0.6
ATMI Monte Miggiano 0.87 307 *e*P Pb 09 31 59.9 -0.3
ATMI AML AML
comp=E,5840µm,0.7s
ATMI AML AML
comp=N,5900µm,0.7s
MTCE Montecelio 0.87 205 ⇑P Pb 09 31 59.4 -0.8
MTCE AML AML
comp=E,2165µm,0.7s
MTCE AML AML
comp=N,1375µm,0.6s
ATPI Pietralunga - 0.88 317 ⇑P Pb 09 31 59.6 -0.6
ATPI S **Sg 09 32 12.2 +0.4**
ATPI AML AML
comp=E,2490µm,0.9s
ATPI AML AML
comp=N,2970µm,0.6s
ATPI AML AML
comp=E,2485µm,0.9s
PIEI Pieia 0.88 325 ⇑P Pb 09 31 59.5 -0.8
PIEI AML AML
comp=E,3420µm,0.7s
PIEI AML AML
comp=N,2450µm,0.5s
MPAG Monte Paganucc 0.88 337⇓ *e*P Pb 09 31 59.8 -0.6
MPAG AML AML
comp=E,9110µm,0.4s
MPAG AML AML
comp=N,3255µm,1.3s
SENI Senigallia 0.89 0 P Pb 09 32 00.2 -0.3
SENI AML AML
comp=N,13050µm,0.3s
SENI AML AML
comp=E,13800µm,0.3s
SENI AML AML
comp=N,13000µm,0.3s
SENI AML AML
comp=E,13850µm,0.3s
CERT Cerreto 0.89 192 P Pb 09 31 59.4 -1.0
CERT AML AML
comp=E,3265µm,0.5s
CERT AML AML
comp=N,1805µm,0.6s
NARO Abbazia di Nar 0.92 329 ⇑P Pb 09 32 00.3 -0.7
NARO S **Sb 09 32 13.4 +0.3**
NARO AML AML
comp=E,2655µm,0.2s
NARO AML AML
comp=N,1505µm,0.4s
FSSB Fossombrone 0.93 340⇑ *e*P Pb 09 32 01.1 -0.2
FSSB AML AML
comp=E,12450µm,1.5s
FSSB AML AML
comp=N,23950µm,0.3s
APEC Apecchio 0.95 322 ⇑P Pb 09 32 01.1 -0.4
APEC AML AML
comp=E,3075µm,0.7s
APEC AML AML
comp=N,3575µm,0.5s
INTR Introdacqua 0.95 148⇑ *e*P Pb 09 32 00.9 -0.7
INTR AML AML
comp=E,2µm,1.4s
INTR AML AML
comp=E,2455µm,1.4s
INTR AML AML
comp=N,4µm,0.5s
INTR AML AML
comp=N,6390µm,0.5s
SACS San Casciano d 0.97 272 ⇑P Pb 09 32 01.4 -0.5
SACS AML AML
comp=E,1895µm,0.8s
SACS AML AML
comp=N,1495µm,1.5s
SACS AML AML
comp=E,1880µm,0.8s
SACS AML AML
comp=N,1480µm,1.5s
ATMC Monte Cedrone 0.98 310 P Pb 09 32 01.9 -0.2
VVLD Villa Vallelon 0.99 163 P Pg 09 32 02.1 -0.4
VVLD AML AML
comp=N,2450µm,0.9s
VVLD AML AML
comp=E,2315µm,0.6s
RCAV Rocca di Cave 0.99 192 P Pb 09 32 01.4 -0.9
RCAV AML AML
comp=E,2470µm,0.4s
RCAV AML AML
comp=N,2500µm,0.3s
GUAR Guarcino 1.02 176 AML AML
comp=N,2225µm,1.1s
GUAR AML AML
comp=E,1810µm,0.3s
GUAR AML AML
comp=E,1815µm,0.3s
PE3 Peglio 1.03 329 ⇑P Pb 09 32 02.7 -0.2
PE3 AML AML
comp=E,24µm,0.5s
PE3 AML AML
comp=N,26µm,0.6s
LPEL Lama dei Pelig 1.05 137 P Pg 09 32 02.9 -0.6
LPEL AML AML
comp=E,3175µm,0.3s
LPEL AML AML
comp=N,2620µm,0.4s
CAFI Castiglion Fio 1.06 299 ⇑P Pb 09 32 02.9 -0.4
CAFI AML AML
comp=E,1675µm,0.5s
CAFI AML AML
comp=N,2445µm,0.6s
PARC Parchiule 1.10 319 ⇑P Pb 09 32 03.8 -0.3
PARC AML AML
comp=E,1625µm,1.1s
PARC AML AML
comp=N,2410µm,0.9s
SSP9 Sansepolcro 1.10 314 AML AML
comp=N,1454µm,0.6s
SSP9 AML AML
comp=E,1551µm,1.3s
SF03 Valle Cupa 1.14 270 P Pn 09 32 04.2 -0.6
SAMA S.Maria delle 1.14 205 P Pb 09 32 04.5 -0.2
SF04 Casetta 1.15 271 AML AML
comp=E,1213µm,0.5s
SF04 AML AML
comp=N,876µm,1.4s
POFI Posta Fibreno 1.16 162 P Pb 09 32 04.7 -0.3
POFI AML AML
comp=E,1755µm,0.7s
POFI AML AML
comp=N,1084µm,1.0s
POFI AML AML
comp=E,1885µm,0.7s
POFI AML AML
comp=N,1128µm,0.9s
TOLF Tolfa 1.18 231 P Pn 09 32 05.2 -0.2
TOLF AML AML
comp=E,1295µm,1.0s
TOLF AML AML
comp=N,1315µm,0.5s
SF14 Selvena 1.19 267 P Pn 09 32 05.2 -0.3
CRE Caprese Michel 1.23 311 P Pn 09 32 06.1 0.0
GIUL Giuliano Di Ro 1.26 179 AML AML
comp=N,640µm,1.0s
GIUL AML AML
comp=E,676µm,0.6s
ARCI Arcidosso 1.29 272 AML AML
comp=E,372µm,1.1s
ARCI AML AML
comp=N,288µm,0.9s
RNI2 Rionero Sannit 1.31 148 P Pg 09 32 07.9 -0.6
LATB Latina 1.34 189 P Pb 09 32 08.0 -0.1
CERA Filignano 1.35 154 P Pb 09 32 08.5 +0.1
ASQU Asqua 1.44 313 P Pn 09 32 09.0 +0.1
ASQU AML AML
comp=E,734µm,1.2s
ASQU AML AML
comp=N,668µm,1.6s
SFI Santa Sofia 1.48 318 AML AML
comp=N,717µm,0.8s
SFI AML AML
comp=E,611µm,0.5s
CSNT Castellina Chi 1.56 295 P Pn 09 32 11.2 +0.6
OSSC Osservatorio P 1.61 297 P Pn 09 32 12.1 +0.8
OSSC AML AML
comp=E,489µm,0.7s
OSSC AML AML
comp=N,438µm,1.2s
RUFI Rufina 1.62 310 ⇑P Pn 09 32 11.7 +0.4
LMD Lutirano 1.68 319 P Pb 09 32 13.3 -0.6
TRIF Trifonti 1.73 281 ⇑P Pn 09 32 13.3 +0.3
TRIF AML AML
comp=E,307µm,1.2s
TRIF AML AML
comp=N,384µm,0.5s
CASP Castiglione de 1.74 270 AML AML
comp=E,153µm,0.7s
CASP AML AML
comp=N,168µm,1.0s
MODR Mondragone 1.74 164 AML AML
comp=E,297µm,0.9s
MODR AML AML
comp=N,356µm,0.8s
DUGI Dugi Otok 1.78 48 *i* Pn Pb 09 32 15.1 -0.5
SEI Scarperia 1.84 313 P Pn 09 32 15.7 +1.3
VIRC Vir 1.98 41 *e*Pn Pb 09 32 17.6 -1.5
VIRC Sn **Sb 09 32 43.2 -0.4**
FNVD Fontana Vidola 2.04 312 P Pn 09 32 18.2 +1.0
MORI Morici 2.09 59 *e*Pn Pb 09 32 19.7 -1.2
NVLJ Novalja 2.11 34 *e*Pn Pn 09 32 19.4 +1.2
BRJN Brijuni 2.12 10 *e*Pn Pn 09 32 19.1 +0.8
RABC Rab 2.23 30 *e*Pn Pn 09 32 21.1 +1.3
MAIM Mastiano 2.28 300 AML AML
comp=E,166µm,0.6s
MAIM AML AML
comp=N,162µm,1.1s
SMRN Sveta Marina 2.32 16 *e*Pn Pn 09 32 21.6 +0.7
CAFE Carife 2.33 139 AML AML
comp=E,379µm,0.6s
CAFE AML AML
comp=N,250µm,1.0s
UDBI Udbina 2.51 46 *e*Pn Pb 09 32 26.2 -2.0
A250A Rusevo Krmpots 2.57 28 *e*Pn Pn 09 32 26.2 +1.7
KIJV Kijevo 2.60 62 *e*Pn Pb 09 32 27.2 -2.4
RIY Rijeka 2.66 19 *e*Pn Pb 09 32 28.8 -1.9
RIY *e*Sn **Sb 09 33 01.2 -2.0**
PLIT Plitvice 2.69 39 *e*Pn Pb 09 32 28.7 -2.5
LSTV Lastovo 2.70 90 *e*Pn Pn 09 32 27.9 +1.8
MAKA Makarska 2.82 79 *e*Pn Pb 09 32 30.5 -2.8
RICI Ricice 2.94 75 *e*Pn Pb 09 32 32.4 -3.0
MSSA Maissana 3.08 300 AML AML
comp=N,86µm,1.1s
MSSA AML AML
comp=E,66µm,1.1s
SABO M.te Sabotino 3.17 5 AML AML
comp=E,2095µm,1.6s
SABO AML AML
comp=N,2520µm,0.8s
SABO AML AML
comp=E,402µm,0.5s
SABO AML AML
comp=N,364µm,0.8s
OZLJ Ozalj 3.23 29 *e*Pn Pn 09 32 35.2 +1.8
STON Ston 3.29 88 *e*Pn Pn 09 32 35.0 +0.7
STON Ston 3.29 88 *e*Pn Pn 09 32 35.4 +1.1
STON *e*Sn **Sn 09 33 14.7 +1.5**
STON Ston 3.29 88 AML AML
comp=E,78µm,1.0s
STON AML AML
comp=N,85µm,0.7s
MPRI Monte Prat 3.43 357 AML AML
comp=N,386µm,0.5s
MPRI AML AML
comp=E,280µm,0.7s
NOCI Noci 3.51 124 AML AML
comp=E,182µm,0.5s
NOCI AML AML
comp=N,216µm,1.3s
CIMO Cimolais 3.54 351 AML AML
comp=N,70µm,0.9s
CIMO AML AML
comp=E,69µm,0.4s
CIMO AML AML
comp=E,70µm,0.6s
CIMO AML AML
comp=N,66µm,0.6s
PTJ Puntijarka 3.66 32 *e*Pn Pn 09 32 41.7 +2.1
OBKA Obir 3.81 14 *e*Pn Pn 09 32 43.4 +1.9
comp=N,2.2nm,0.3s
MYKA Terra Mystica 3.82 4 *e*Pn Pn 09 32 43.8 +2.1
comp=N,3.4nm,0.4s
ABTA Abfaltersbach 3.96 353 *i* Pn Pn 09 32 46.3 +2.7
comp=N,34nm,0.5s,SNR=19
SOKA Soboth 4.07 18 *e*Pn Pn 09 32 49.5 +4.4
comp=N,1.2nm,0.2s
KBA Koelnbreinsper 4.26 1 *i* Pn Pn 09 32 50.6 +2.7
comp=N,3.4nm,0.2s,SNR=5.2
FETA Feichten 4.56 338 Pn **Pn 09 32 56.0 +4.0**
comp=N,4.2nm,0.5s,SNR=12
WTTA Wattenberg 4.59 346 Pn **Pn 09 32 55.3 +3.0**
comp=N,4.4nm,0.3s,SNR=6.9
BBLS Lazići 4.62 75 *e*Pn Pn 09 32 56.2 +3.4
BBLS *e*Sn **Sn 09 33 44.1 -2.2**
SQTA Sankt Quirin 4.63 343 *e*Pn Pn 09 32 56.4 +3.5
comp=N,4.3nm,0.2s
WATA Walderalm 4.67 346 Pn **Pn 09 32 57.6 +4.2**
comp=N,5.6nm,0.3s,SNR=6.3
ARSA Arzberg 4.72 19 *e*Pn Pb 09 33 01.4 -4.4
comp=N,1.8nm,0.3s
MOTA Moosalm 4.77 342 *e*Pn Pn 09 32 59.6 +4.8
comp=N,3.2nm,0.4s
BIOA Bad Ischl, Aus 4.88 3 *e*Pn Pn 09 33 00.2 +3.9
comp=N,2.8nm,0.2s
SJES Sjenica 4.96 83 *e*Pn Pn 09 32 59.5 +2.0
SJES *e*Sn **Sn 09 33 54.4 -0.3**
RETA Reutte 4.98 340 Pn **Pn 09 33 01.2 +3.5**
comp=N,3.8nm,0.3s,SNR=7.2
DAVA Damuels 5.06 333 *e*Pn Pn 09 33 02.3 +3.6
comp=N,0.9nm,0.1s
MOA Molln 5.08 8 *e*Pn Pn 09 33 01.6 +2.6
comp=N,1.0.5nm,0.1s
DIVS Divibare 5.09 73 *e*Pn Pn 09 33 01.8 +2.7
IVAS Ivanjica 5.12 79 *e*Pn Pn 09 33 01.5 +2.0
IVAS *e*Sn **Sn 09 33 58.5 +0.1**
RONA Rosalia, Austr 5.34 23 *e*Pn Pn 09 33 04.3 +1.7
comp=N,0.7nm,0.1s
CONA Conrad Observa 5.44 19 *e*Pn Pn 09 33 05.8 +1.9
comp=N,0.6nm,0.2s
SELS Selova 5.80 83 *e*Pn Pn 09 33 11.0 +2.2
OHR Ohrid 5.90 104 *i* Pn Pn 09 33 13.7 +3.4
CKRC Cesky Krumlov 6.05 7 *e*SN Sn 09 34 20.9 -0.4
BOVS Bovan 6.25 80 *e*Pn Pn 09 33 17.3 +2.3
BARS Barje 6.32 87 *e*Pn Pn 09 33 18.7 +2.8
KHC Kasperske Hory 6.32 2 *e*PN Pn 09 33 18.2 +2.2
KHC *e*SN **Sn 09 34 26.6 -1.3**
PRVS Prvonek 6.53 90 *e*Pn Pn 09 33 21.4 +2.5
ZAGS Zajecar 6.64 78 *e*Pn Pn 09 33 22.4 +2.0
STIP Stip 6.74 97 *i* Pn Pn 09 33 26.2 +4.4
ZAPS Zavoj 6.91 83 *e*Pn Pn 09 33 26.9 +2.8
CLL Collm 8.49 359 *e*Pn Pn 09 33 51.0 +5.2
CLL *e*Sg **Sg 09 36 13.0 -2.6**
comp=Z,8.0nm,1.0s

IDC 24 09:37:59.1±3.2, 55°44N×86°13E, h0km, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=29.8km s-min=19.7km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.68**	**208**	*i*		09 49 30.0	
	baz=25,slow=322,SNR=5.7						
ZALV	**Zalesovo Beam**	**1.68**	**207**	Pg	Pn	09 38 28.6	-1.1
	2.7nm,0.3s,baz=28,slow=15,SNR=14						
ZALV				Lg	Lg	09 38 53.5	
	1.6nm,0.3s,baz=24,slow=30,SNR=4.4						
KURBB	**Kurchatov Arra**	**6.66**	**227**	Pn	Pn	09 39 36.3	-1.7
	0.1nm,0.3s,baz=41,slow=14,SNR=3.0						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**8.99**	**197**	Pn	Pn	09 40 10.5	+0.5
	0.1nm,0.3s,baz=20,slow=12,SNR=4.1						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**9.53**	**262**	Pn	Pn	09 40 17.7	+0.2
	baz=56,slow=13,SNR=2.4						
	0.4nm,0.5s						

IDC 24 09:40:40.7±5.2, 18°81S×177°79W, h614km±45km, mb2.6/3, mbtmp3.7/4, Error ellipse: s-maj=235.2km s-min=27.1km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.10**	**285**	P	P	09 42 08.0	-0.1
	15nm,0.7s,baz=127,slow=15,SNR=9.9						
WRA	**Warramunga Arr**	**45.05**	**260**	P	P	09 48 03.6	-0.2
	0.4nm,0.4s,baz=96,slow=7.7,SNR=30						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**45.12**	**255**	P	P	09 48 04.5	+0.1
	0.5nm,0.5s,baz=92,slow=7.7,SNR=9.5						
ASAR				PcP	PcP	09 49 31.3	-0.1
	0.2nm,0.4s,baz=108,slow=3.6,SNR=4.0						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**85.98**	**57**	P	P	09 52 17.6	-0.1
	0.3nm,0.7s,baz=216,slow=6.9,SNR=5.9						
	0.3nm,0.7s						

*IDC **24** 09:46:48.2±4.0, 55°28S×30°24W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=142.0km s-min=54.7km az=174.0*
*NEIC **24** 09:46:49.5±1.2, 55°5S±0°1×30°7W±0°1, h10km±2km, mb4.4/13, Error ellipse: s-maj=19.9km s-min=6.4km az=31.0*

ISC 24 09:46:49.6±0.9, 55°55S±0.1'×30°7W±0.1, **h10**km, **n17**, σ1°16'/17, **mb4.2/7**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.56**	**287**		**Pn**	**09 47 45.0**	**+0.2**
ORCD	**Orcadas**	**9.12**	**229**		**Pn**	**09 49 00.8**	**-0.3**
EFI	**East Falkland**	**16.65**	**272**		**Pn**	**09 50 42.6**	**-0.2**
PMSA	**Palmer Station**	**18.83**	**227**	P	**P**	**09 51 07.9**	**-1.3**
SNAA	**Sanae**	**20.11**	**155**	P	**P**	**09 51 22.6**	**-0.6**
SMAI	**San Martin Ant**	**20.97**	**218**	P	**P**	**09 51 32.3**	**-0.1**
MG04	**Isla Riesco**	**23.84**	**259**	P	**P**	**09 52 03.0**	**+0.5**
MG05	**Puerto Natales**	**24.84**	**261**	P	**P**	**09 52 11.6**	**-0.2**
MG05				IAmb	IAmb	09 52 25.3	
	comp=Z,21nm,1.3s						
QSPA	**South Pole Qui**	**34.79**	**180**	P	**P**	**09 53 41.1**	**+0.9**
CPUP	**Villa Florida**	**34.97**	**315**	P	**P**	**09 53 41.3**	**-0.4**
CPUP				IAmb	IAmb	09 53 41.7	
	comp=Z,4.5nm,1.2s						
MT03	**Universidad Ad**	**35.22**	**292**	P	**P**	**09 53 43.4**	**-0.6**
MT03				IAmb	IAmb	09 54 03.0	
	comp=Z,9.7nm,0.7s						
CO02	**Combarbal**	**37.26**	**294**	P	**P**	**09 54 01.2**	**-0.3**
CO02				IAmb	IAmb	09 54 03.4	
	comp=Z,14nm,1.2s						
LPAZ	**La Paz**	**48.44**	**309**	P	**P**	**09 55 33.5**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=158,slow=5.4,SNR=3.6						
	comp=Z,0.9nm,0.7s						
TOA0	**Torodi Ar. Sit**	**73.57**	**33**	P	**P**	**09 58 21.9**	**-0.8**
TOA0				IAmb	IAmb	09 58 22.5	
	comp=Z,1.9nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.57**	**33**	P	**P**	**09 58 21.3**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=208,slow=6.4,SNR=4.2						
	comp=Z,0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.57**	**33**	P	**P**	**09 58 21.4**	**-1.3**
TORD				IAmb	IAmb	09 58 35.5	
	comp=Z,1.7nm,1.1s						
ILAR	**Eielson Array**	**148.26**	**313**	PKPbc	**PKPdf**	**10 06 34.2**	**+3.2**
	comp=Z,0.7nm,0.5s,baz=116,slow=1.8,SNR=9.8						

*DJA **24** 09:47:00.9±0.3, 2°N±3'×12°7E±°, h61km±6km, M4.5/16, mb4.6/16, mB5.2/8, MLv4.5/15, Mw(mB)4.5/8, MwMwp4.7/1, Mwp5.0/1*
*IDC **24** 09:47:01.2±2.0, 1°81N×126°43E, h52km±18km, mb4.1/20, mbtmp4.4/23, ML4.0/3, MS3.3/5, Error ellipse: s-maj=22.0km s-min=8.4km az=77.0*
*NEIC **24** 09:47:01.6±1.5, 1°84N±0°07×126°42E±0°06, h53km±5km, mb4.6/44, Error ellipse: s-maj=10.3km s-min=9.3km az=169.0*

ISC 24 09:47:00.6±0.3, 1°87N±0°04×126°48E±0°07, **h47**km, **n133**, σ1°56/138, **mb4.5**/56, **MS3.3**/4, **1C-1D**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.04**	**332**	P	**Pn**	**09 47 31.9**	**-0.7**
SGSI				S	**Sn**	**09 47 56.7**	**-0.2**
LBMI	**Labuha**	**2.69**	**158**	P	**Pn**	**09 47 42.1**	**+0.6**
KMSI	**Cibinong**	**2.81**	**243**	P	**Pn**	**09 47 44.8**	**+1.8**
GTLO	**Gorontalo**	**3.67**	**251**	P	**Pn**	**09 47 56.7**	**+1.7**
SANI	**Sanana**	**3.92**	**187**	P	**Pn**	**09 47 58.5**	**+0.1**
LUWI	**Luwuk**	**4.70**	**232**		**Pn**	**09 48 08.1**	**-0.9**
LUWI	**Luwuk**	**4.70**	**232**	P	**Pn**	**09 48 11.9**	**+2.9**
MRSI	**Marisa**	**4.74**	**253**	P	**Pn**	**09 48 12.3**	**+2.7**
NLAI	**Namlea**	**5.11**	**173**	P	**Pn**	**09 48 16.1**	**+1.4**
	0.5nm7μm42nm,0.8s						
DAV	**Davao City (W)**	**5.25**	**350**	LR	LR	09 50 34.0	
	comp=Z,330nm,20.4s,baz=158,slow=40						
KCP	**Kidapawan**	**5.29**	**345**	*eP*	**Pn**	**09 48 19.4**	**+2.1**
KCP				*i* S	**Sn**	**09 49 22.8**	**+5.7**
SIJI	**Sorong**	**5.51**	**120**	P	**Pn**	**09 48 20.6**	**+0.4**
	1.8nm,0.3s,baz=308,slow=19,SNR=2.2						
SIJI				LR	LR	09 50 56.0	
	comp=Z,492nm,21.6s,baz=282,slow=43						
	5.6nm,0.4s						
APSI	**Ampana**	**5.56**	**240**	P	**Pn**	**09 48 23.1**	**+2.2**
	0.6nm2μm126nm,1.3s						
MSAI	**Masohi**	**5.73**	**155**	P	**Pn**	**09 48 24.2**	**+1.0**
	0.8nm5μm104nm,0.5s						
TOLI2	**Tolitoli**	**5.74**	**263**	Pn	**Pn**	**09 48 22.4**	**-1.0**
MPSI	**Mapaga**	**6.75**	**257**	P	**Pn**	**09 48 39.1**	**+1.9**
	0.1nm505nm29nm,0.9s						
FAKI	**Fak Fak**	**7.48**	**129**	Pn	**Pn**	**09 48 48.5**	**+1.3**
TTSI	**Tana Toraja**	**8.25**	**234**	P	**Pn**	**09 48 59.8**	**+2.0**
	2μm2μm38nm,1.0s						
BBSI	**Bau Bau**	**8.28**	**208**	P	**Pn**	**09 49 00.2**	**+2.0**
	12nm,0.7s						
MYLDM	**Lahad Datu**	**8.62**	**293**	Pn	**Pn**	**09 49 03.9**	**+1.1**
SPSI	**Sidrap Palu**	**8.86**	**229**	P	**Pn**	**09 49 08.1**	**+2.0**
	20nm,0.5s						
BKSI	**Bulukumba**	**9.55**	**222**	P	**Pn**	**09 49 18.1**	**+2.4**
	526nm22nm,0.6s						
KAPI	**Kappang**	**9.58**	**224**	P	**Pn**	**09 49 16.8**	**+0.7**
	1.5nm,0.3s,baz=79,slow=10,SNR=2.9						
	7.3nm,0.5s						
KAPI	**Kappang**	**9.58**	**224**	Pn	**Pn**	**09 49 16.5**	**+0.5**
KAPI	**Kappang**	**9.58**	**224**	P	**Pn**	**09 49 20.1**	**+4.0**
BAKI	**Biak**	**10.10**	**107**	P	Pn	09 49 30.8	+7.7
KKM	**Kota Kinabalu**	**11.04**	**292**		**Pn**	**09 49 38.8**	**+2.6**
SBUM	**Sibu**	**14.26**	**273**	Pn	**Pn**	**09 50 20.7**	**+0.8**
MTN	**Manton Dam**	**15.33**	**163**		**Pn**	**09 50 32.5**	**-1.5**
KDU	**Kakadu**	**15.63**	**158**	P	**Pn**	**09 50 38.8**	**+0.8**
KNRA	**Kununurra**	**17.58**	**173**	P	**Pn**	**09 51 02.0**	**-0.3**
KNRA				IAmb	IAmb	09 51 04.7	
	comp=Z,30nm,0.8s						
KNRA	**Kununurra**	**17.58**	**173**	P	**Pn**	**09 50 59.1**	**-3.2**
FITZ	**Fitzroy Crossi**	**19.86**	**182**	P	**P**	**09 51 26.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=10.0,slow=8.7,SNR=18						
	comp=Z,6.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.86**	**182**		**P**	**09 51 26.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.86**	**182**	P	**P**	**09 51 27.0**	**-0.9**
TPUB	**Ta-pu**	**22.05**	**346**	P	**P**	**09 51 49.7**	**-1.9**
TPUB				IAmb	IAmb	09 52 00.2	
	comp=Z,23nm,0.8s						
COEN	**Coen**	**22.83**	**134**	P	**P**	**09 52 00.1**	**+0.2**
COEN	**Coen**	**22.83**	**134**	P	**P**	**09 52 00.8**	**+0.9**
	comp=Z,5.9nm,1.2s						
WB0	**Warramunga Arr**	**22.86**	**160**	P	**P**	**09 51 59.2**	**-1.0**
WB0				IAmb	IAmb	09 52 02.8	
	comp=Z,35nm,0.8s						
WRAB	**Tennant Creek**	**23.00**	**161**	P	**P**	**09 52 00.7**	**-1.0**
WRAB	**Tennant Creek**	**23.00**	**161**	P	**P**	**09 51 59.9**	**-1.7**
	comp=Z,58nm,0.8s						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**09 52 00.4**	**-1.3**
	comp=Z,35nm,0.7s,baz=335,slow=11,SNR=113						
WRA				PcP	**PcP**	**09 55 51.1**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=342,slow=2.0,SNR=3.8						
WRA				S	**S**	**09 56 07.5**	**-1.4**
	comp=Z,3.5nm,0.9s,baz=345,slow=17,SNR=7.8						
	comp=Z,35nm,0.7s						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**09 51 59.6**	**-2.1**
WB2	**Warramunga Arr**	**23.01**	**161**	P	**P**	**09 52 00.8**	**-0.9**
QIS	**Mount Isa**	**25.73**	**151**	P	**P**	**09 52 27.1**	**+0.2**
	comp=Z,7.3nm,1.2s						
AS31	**Alice Springs**	**26.39**	**165**	P	**P**	**09 52 33.0**	**+0.1**
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**09 52 32.5**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=345,slow=8.0,SNR=39						
ASAR				PcP	**PcP**	**09 55 58.4**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=342,slow=2.1,SNR=7.8						
ASAR				S	**S**	**09 57 03.1**	**0.0**
	comp=Z,1.8nm,1.0s,baz=350,slow=20,SNR=7.3						
	comp=Z,5.1nm,0.6s						
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**09 52 32.7**	**-0.2**
WRKA	**Warakurna**	**26.80**	**176**	P	**P**	**09 52 36.7**	**+0.1**
	comp=Z,24nm,0.8s						
CTA	**Charters Tower**	**29.20**	**139**	P	**P**	**09 52 59.0**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=347,slow=13,SNR=1.3						
	comp=Z,1.2nm,0.3s						
JCJ	**Chichijima**	**29.26**	**30**	P	**P**	**09 52 58.5**	**0.0**
MEEK	**Meekatharra**	**29.34**	**194**	P	**P**	**09 52 59.5**	**+0.3**
	comp=Z,6.4nm,0.9s						
OOD	**Oodnadatta**	**30.79**	**164**	P	**P**	**09 53 11.5**	**-0.5**
	comp=Z,9.9nm,2.0s						
CMAR	**Chiang Mai Arr**	**31.63**	**303**	P	**P**	**09 53 18.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=96,slow=6.4,SNR=5.5						
CMAR				LR	LR	10 07 22.3	
	comp=Z,30nm,20.5s,baz=115,slow=39						
	comp=Z,1.5nm,0.5s						
CHTO	**Chiang Mai**	**31.80**	**304**	P	**P**	**09 53 20.7**	**-0.4**
MORW	**Morawa**	**32.34**	**197**	P	**P**	**09 53 25.5**	**-0.2**
MORW				IAmb	IAmb	09 53 26.3	
	comp=Z,6.2nm,0.8s						
MORW	**Morawa**	**32.34**	**197**	P	**P**	**09 53 26.9**	**+1.3**
JMN	**Monobe**	**32.45**	**12**	P	**P**	**09 53 28.3**	**+1.7**
FORT	**Forrest**	**32.50**	**177**	P	**P**	**09 53 26.7**	**-0.2**
FORT	**Forrest**	**32.50**	**177**	P	**P**	**09 53 26.9**	**0.0**
	comp=Z,50nm,0.7s						
MULG	**Mulgathing**	**32.78**	**168**	P	**P**	**09 53 30.2**	**+0.8**
	comp=Z,11nm,2.5s						
BLDU	**Ballidu**	**33.61**	**195**	P	**P**	**09 53 37.1**	**+0.4**
LCRK	**Leigh Creek**	**34.03**	**162**	P	**P**	**09 53 40.8**	**+0.5**
	comp=Z,19nm,1.7s						
KLBR	**Kellerberrin**	**34.29**	**193**	P	**P**	**09 53 42.5**	**-0.1**
	comp=Z,26nm,0.7s						
MUN	**Mundaring**	**35.04**	**195**	P	**P**	**09 53 49.1**	**+0.1**
	comp=Z,14nm,2.4s						
KSRS	**Korea Array**	**35.44**	**2**	P	**P**	**09 53 53.5**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=178,slow=10.0,SNR=11						
	comp=Z,1.9nm,0.6s						
BBOO	**Buckleboo**	**35.66**	**166**	P	**P**	**09 53 54.2**	**-0.2**
BBOO				IAmb	IAmb	09 53 54.7	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**35.66**	**166**	P	**P**	**09 53 53.9**	**-0.5**
	comp=Z,13nm,1.4s						
MAJO	**Matsushiro**	**36.17**	**16**	P	**P**	**09 53 57.8**	**-1.0**
MAJO				IAmb	IAmb	09 54 06.8	
	comp=Z,11nm,1.1s						
MJAR	**Matsushiro Arr**	**36.17**	**16**	P	**P**	**09 53 58.2**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=181,slow=9.9,SNR=15						
MJAR				LR	LR	10 08 44.4	
	comp=Z,27nm,18.9s,baz=218,slow=36						
	comp=Z,4.1nm,0.8s						
STKA	**Stephens Creek**	**36.50**	**158**	P	**P**	**09 54 00.8**	**-0.7**
	comp=Z,5.5nm,0.6s,baz=327,slow=8.6,SNR=24						
	comp=Z,5.5nm,0.6s						
STKA	**Stephens Creek**	**36.50**	**158**	P	**P**	**09 54 01.0**	**-0.5**
STKA	**Stephens Creek**	**36.50**	**158**	P	**P**	**09 54 01.1**	**-0.4**
	comp=Z,2.1nm,1.7s						
HTT	**Hallett**	**37.02**	**163**	P	**P**	**09 54 06.7**	**+0.7**
	comp=Z,7.8nm,2.0s						
JMM	**Maumori**	**38.17**	**18**	P	**P**	**09 54 16.4**	**+0.8**
SHL	**Shillong**	**40.80**	**308**	P	**P**	**09 54 36.2**	**-1.8**
USRK	**Ussuriysk Ar.**	**42.44**	**6**	P	**P**	**09 54 52.2**	**+1.4**
	comp=Z,5.7nm,0.8s,baz=194,slow=9.6,SNR=10						
	comp=Z,5.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**42.44**	**6**	P	**P**	**09 54 50.0**	**-0.8**
H11S3	**WAKE ISLAND Hy**	**42.73**	**65**	T	T	10 40 46.4	
	baz=252,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	**42.75**	**65**	T	T	10 40 40.5	
	baz=252,slow=75,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**42.75**	**65**	T	T	10 40 47.1	
	baz=252,slow=75,SNR=5.7						
GTA	**Gaotai**	**44.57**	**330**	||P	**P**	**09 55 08.5**	**+0.2**
GTA				pP	PP	09 56 52.4	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GOMU	**GeErMu**	**45.00**	**323**	P	**P**	**09 55 16.3**	**+4.3**
GOMU				pP	pP	09 55 17.3	-7.0
GOMU				sP	pwP	09 55 20.0	-6.8
GOMU				PcP	**PcP**	**09 56 49.3**	**-3.3**
GOMU				pmax	pmax		
	comp=Z,13nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,48nm,5.0s						
RAMN	**Ramnte**	**45.63**	**307**	*eP*	**P**	**09 55 16.4**	**-0.7**
JIRN	**Jiri**	**46.27**	**307**	*eP*	**P**	**09 55 21.7**	**-0.6**
KLR	**Kul'dur**	**47.40**	**5**	P	**P**	**09 55 30.5**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=197,slow=10,SNR=7.7						
	comp=Z,1.9nm,0.5s						
HIA	**Hailar**	**47.58**	**354**	P	**P**	**09 55 31.1**	**-0.5**
HIA				IAmb	IAmb	09 55 37.9	
	comp=Z,19nm,1.4s						
KOLN	**Koldanda**	**48.39**	**306**	*eP*	**P**	**09 55 37.5**	**-1.1**
DANN	**Dangsing**	**48.51**	**307**	*eP*	**P**	**09 55 37.5**	**-2.0**
ULN	**Ulaanbaatar**	**48.81**	**343**	P	**P**	**09 55 39.9**	**-1.4**
ULN				IAmb	IAmb	09 55 44.5	
	comp=Z,2.9nm,0.6s						
SONM	**Songino Array**	**48.98**	**342**	P	**P**	**09 55 42.4**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=154,slow=7.2,SNR=5.1						
SONM				LR	LR	10 17 18.8	
	comp=Z,66nm,20.8s,baz=46,slow=37						
	comp=Z,1.5nm,0.5s						
SONM	**Songino Array**	**48.98**	**342**	P	**P**	**09 55 42.3**	**-0.3**
PYUN	**Piuhan**	**49.02**	**306**	*eP*	**P**	**09 55 42.3**	**-1.1**
PETK	**Petropavlovsk-**	**57.24**	**22**	P	**P**	**09 56 43.4**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=195,slow=5.0,SNR=7.1						
	comp=Z,4.3nm,0.8s						
PETK	**Petropavlovsk-**	**57.24**	**22**	P	**P**	**09 56 43.5**	**+0.4**
MK31	**Makanchi Array**	**58.94**	**326**	P	**P**	**09 56 54.9**	**-0.4**
MK31				IAmb	IAmb	09 56 59.1	
	comp=Z,2.7nm,0.7s						
MKAR	**Makanchi Array**	**58.94**	**326**	P	**P**	**09 56 54.6**	**-0.6**
	comp=Z,3.6nm,0.4s,baz=119,slow=7.6,SNR=70						
	comp=Z,3.6nm,0.4s						
MAKZ	**Makanchi**	**59.12**	**326**	P	**P**	**09 56 55.9**	**-0.6**
MAKZ				IAmb	IAmb	09 57 00.3	
	comp=Z,3.9nm,0.9s						
ZALV	**Zalesovo Beam**	**62.13**	**334**	P	**P**	**09 57 16.6**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=135,slow=5.5,SNR=1.9						
	comp=Z,1.1nm,0.3s						
KURK	**Kurchatov**	**63.17**	**328**	P	**P**	**09 57 23.6**	**-0.1**
KK31	**Karatay Array**	**64.42**	**318**	P	**P**	**09 57 31.9**	**-0.3**
KKAR	**Karatay Array**	**64.42**	**318**	P	**P**	**09 57 31.8**	**-0.4**
KKAR	**Karatay Array**	**64.42**	**318**	P	**P**	**09 57 31.7**	**-0.6**
BRVK	**Borovoye**	**68.81**	**327**	P	**P**	**09 57 58.9**	**-1.1**
BRVK				IAmb	IAmb	09 58 09.9	
	comp=Z,3.8nm,0.6s						
NRIK	**Noril'sk**	**72.17**	**346**	P	**P**	**09 58 20.6**	**+0.5**
	comp=Z,5.5nm,0.7s,baz=137,slow=7.3,SNR=5.1						
	comp=Z,5.5nm,0.7s						
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**09 58 27.1**	**-0.9**
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**09 58 27.2**	**-0.8**
ABKAR				IAmb	IAmb	09 58 28.5	
	comp=Z,2.8nm,0.6s						
ARU	**Arti**	**76.37**	**328**	P	**P**	**09 58 44.1**	**-0.7**
ARU				IAmb	IAmb	09 58 44.9	
	comp=Z,6.9nm,0.6s						
VNDA	**Vanda**	**81.62**	**173**	P	**P**	**09 59 13.4**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=320,slow=6.2,SNR=21						
	comp=Z,2.4nm,0.8s						
VNDA	**Vanda**	**81.62**	**173**	P	**P**	**09 59 12.6**	**-0.6**
MAW	**Mawson**	**81.93**	**200**	P	**P**	**09 59 15.6**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=79,slow=5.4,SNR=8.2						
	comp=Z,1.8nm,0.7s						
MAW	**Mawson**	**81.93**	**200**	P	**P**	**09 59 15.4**	**+0.5**
SBA	**Scott Base**	**82.53**	**172**	P	**P**	**09 59 18.5**	**+0.5**
SBA				IAmb	IAmb	09 59 44.3	
	comp=Z,12nm,1.5s						
N19K	**Bonanza Creek**	**83.03**	**29**	P	**P**	**09 59 23.5**	**+2.5**
L19K	**White Mountain**	**83.07**	**28**	P	**P**	**09 59 23.6**	**+2.5**
L19K				IAmb	IAmb	09 59 24.3	
	comp=Z,6.8nm,0.9s						
Q19K	**Cape Douglas,**	**83.18**	**31**	P	**P**	**09 59 22.2**	**+0.5**
M19K	**Big River Lodg**	**83.24**	**28**	IAmb	IAmb	09 59 25.3	
	comp=Z,6.6nm,0.9s						
K20K	**Telida**	**83.61**	**26**	P	**P**	**09 59 23.9**	**+0.1**
K20K				IAmb	IAmb	09 59 27.2	
	comp=Z,12nm,1.4s						
J20K	**Nowinta River**	**83.70**	**26**	P	**P**	**09 59 27.1**	**+2.8**
J20K				IAmb	IAmb	09 59 27.5	
	comp=Z,7.5nm,0.9s						
M20K	**Styx River**	**83.83**	**28**	IAmb	IAmb	09 59 28.1	
	comp=Z,7.8nm,0.8s						
IMAR	**Indian Mountai**	**84.14**	**24**	P	**P**	**09 59 26.7**	**+0.3**
H21K	**Melozitna Rive**	**84.48**	**24**	IAmb	IAmb	09 59 31.3	
	comp=Z,6.0nm,1.1s						
ILAR	**Eielson Array**	**86.89**	**25**	P	**P**	**09 59 39.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=248,slow=4.7,SNR=4.5						
	comp=Z,0.4nm,0.6s						
KLMR	**Klimovskoe**	**86.89**	**331**	*eP*	**P**	**09 59 40.4**	**+0.1**
KLMR				AMP		09 59 45.7	
	comp=Z,11nm,1.1s						
K27K	**Chicken**	**88.97**	**26**	IAmb	IAmb	09 59 53.4	
	comp=Z,4.1nm,1.0s						
L27K	**Beaver Creek**	**89.12**	**27**	IAmb	IAmb	09 59 53.2	
	comp=Z,2.6nm,0.8s						
BRTR	**Keskin Array B**	**91.01**	**310**	P	**P**	**09 59 59.5**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=90,slow=3.5,SNR=2.6						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**92.10**	**340**	P	**P**	**10 00 03.4**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=83,slow=7.4,SNR=2.1						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**93.34**	**332**	P	**P**	**10 00 11.0**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=79,slow=7.5,SNR=4.9						
	comp=Z,1.3nm,0.7s						
MNK	**Minsk**	**93.49**	**325**	*i* P	**P**	**10 00 09.3**	**-2.0**
	comp=E,4.0nm,0.8s						
MNK				*i* P	**P**	**10 00 09.3**	**-2.0**
	comp=N,6.0nm,0.8s						
MNK				*i* P	**P**	**10 00 09.3**	**-2.0**
	comp=Z,6.0nm,0.7s,baz=81						
MNK				*i* pP	**pwP**	**10 00 26.3**	**-0.6**
MNK				*i* PP	**PP**	**10 03 53.9**	**-2.1**
MNK				*i* PPP	PPP	10 05 54.3	
MNK				*i* S	**SKSac**	**10 10 37.9**	**-4.0**
MNK				*i* sS	**SKKSac**	**10 11 08.3**	**+6.9**
MNK				*i* PS	**PS**	**10 12 33.9**	**-1.1**
MNK				*i* SS	**SS**	**10 17 31.2**	**-2.0**
MNK				*i* SSS	SSS	10 21 12.1	
MNK				*i* LR	LR	10 41 34.1	
MNK				*i* LRM	MLR	10 43 11.5	
	comp=E,45nm,26.8s						
MNK				*i* LRM	MLR	10 43 11.5	
	comp=N,18nm,23.0s						
MNK				*i* LRM	MLR	10 43 11.5	
	comp=Z,47nm,19.8s						
NOA	**NORSAR Array B**	**100.33**	**333**	P	**Pdif**	**10 00 40.3**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=66,slow=4.4,SNR=2.4						
TXAR	**Lajitas Array**	**122.92**	**53**	PKP	**PKiKP**	**10 05 53.4**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=228,slow=1.7,SNR=6.1						
TORD	**Torodi Ar. Bea**	**123.24**	**287**	PKP	**PKPdf**	**10 05 53.3**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=71,slow=2.2,SNR=5.7						

*NOU **24** 10:01:59.0, 19°45S×169°70E, h12km, MLv4.7/14, Vanuatu Islands*
*NEIC **24** 10:02:02.6±1.4, 19°59S±0°06×169°63E±0°08, h31km±4km, mb4.7/53, Error ellipse: s-maj=10.6km s-min=8.1km az=98.0*
*IDC **24** 10:02:04.0±2.3, 19°53S×169°58E, h44km±20km, mb4.2/17, mbtmp4.4/20, ML4.4/3, MS4.0/13, Error ellipse: s-maj=15.5km s-min=14.6km az=114.0*

ISC 24 10:02:02.9±0.4, 19°50S±0°05×169°56E±0°06, **h35**km, **n128**, σ1°05/110, **mb4.7**/46, **MS4.0**/11, **3C**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**2.01**	**327**	P	**Pn**	**10 02 33.0**	**-1.3**
DVP	**Devils Point**	**2.19**	**323**	P	**Pn**	**10 02 35.8**	**-1.0**
MARNC	**Mare, Loyalty**	**2.44**	**216**	Pn	**Pn**	**10 02 39.2**	**-0.9**
MARNC	**Mare, Loyalty**	**2.44**	**216**	P	**Pn**	**10 02 39.3**	**-0.9**
LIFNC	**LIFOU**	**2.52**	**239**	Pn	**Pn**	**10 02 39.4**	**-2.0**
LIFNC	**LIFOU**	**2.52**	**239**	P	**Pn**	**10 02 39.8**	**-1.6**
YATNC	**Mamie plateau,**	**3.57**	**224**	P	**Pn**	**10 02 55.8**	**0.0**
PINNC	**Pines Island,**	**3.67**	**212**		**Pn**	**10 02 57.2**	**0.0**
OUENC	**Ouen Island, N**	**3.86**	**221**	Pn	**Pn**	**10 03 00.5**	**+0.8**
OUENC	**Ouen Island, N**	**3.86**	**221**	P	**Pn**	**10 03 00.8**	**+1.0**
DZM	**Mont Dzumac**	**3.88**	**228**	P	**Pn**	**10 02 60.0**	**-0.2**
	10nm,0.3s,baz=114,slow=14,SNR=112						
DZM				S	**Sn**	**10 03 45.7**	**+1.1**
	153nm,0.8s,baz=337,slow=22,SNR=9.3						
DZM				LR	LR	10 04 34.7	
	comp=Z,7μm,19.2s,baz=65,slow=39						
	69nm,0.6s						
DZM	**Mont Dzumac**	**3.88**	**228**	*e*Pn	**Pn**	**10 02 59.4**	**-0.7**
	296nm,1.1s						
DZM				*e*Sn	**Sn**	**10 03 42.0**	**-2.5**
	862nm,1.3s						
DZM				*e*LR	LR	10 03 50.0	
	comp=Z,7μm,24.9s						
DZM	**Mont Dzumac**	**3.88**	**228**	Pn	**Pn**	**10 03 00.2**	**0.0**
DZM	**Mont Dzumac**	**3.88**	**228**	P	**Pn**	**10 03 00.2**	**0.0**
NOUC	**Port Laguerre**	**4.00**	**229**	P	**Pn**	**10 03 03.0**	**+1.3**
ONTNC	**Ouen Toro**	**4.03**	**226**	Pn	**Pn**	**10 03 01.9**	**-0.2**
ONTNC	**Ouen Toro**	**4.03**	**226**	P	**Pn**	**10 03 03.5**	**+1.4**
KOUNC	**Koumac, New Ca**	**5.07**	**257**	Pn	**Pn**	**10 03 16.3**	**-0.1**
KOUNC	**Koumac, New Ca**	**5.07**	**257**	P	**Pn**	**10 03 17.7**	**+1.3**
MSVF	**Nonsavu**	**8.24**	**79**	P	**Pn**	**10 04 01.3**	**+1.3**
	0.5nm,0.3s,baz=246,slow=13,SNR=8.8						
	35nm,0.9s						
MSVF	**Nonsavu**	**8.24**	**79**	Pn	**Pn**	**10 03 59.9**	**-0.1**
HNR	**Honiara**	**13.66**	**316**	LR	LR	10 10 09.2	
	comp=Z,232nm,19.9s,baz=193,slow=35					

PSA00	**Pilbara Seismi**	**46.45**	**258**	P	**P**	**10 10 26.7**	**0.0**
PSA00				IAmb	IAmb	10 10 28.5	
	comp=Z,11nm,1.1s						
TAOE	**Nuku Hiva Isla**	**49.73**	**85**	*e*S	**S**	**10 18 01.0**	**+1.6**
	comp=Z,70nm,21.6s						
TAOE				*e*LR	LR	10 25 04.6	
	comp=Z,210nm,27.0s						
KAPI	**Kappang**	**50.56**	**280**	P	**P**	**10 10 58.8**	**+0.4**
KAPI				IAmb	IAmb	10 11 15.7	
	comp=Z,15nm,1.1s						
VNDA	**Vanda**	**58.18**	**182**	P	**P**	**10 11 52.8**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=3.7,slow=6.8,SNR=13						
	comp=Z,2.9nm,0.9s						
VNDA	**Vanda**	**58.18**	**182**	P	**P**	**10 11 52.2**	**-0.7**
SBA	**Scott Base**	**58.41**	**181**	P	**P**	**10 11 54.8**	**+0.3**
CASY	**Casey**	**60.01**	**204**	P	**P**	**10 12 05.2**	**-0.5**
CASY				IAmb	IAmb	10 12 15.9	
	comp=Z,5.8nm,0.9s						
JWT	**Wachi**	**63.39**	**329**	P	**P**	**10 12 29.6**	**+0.7**
KSAR	**Wonju Array Be**	**68.90**	**325**	P	**P**	**10 13 04.9**	**+0.7**
QSPA	**South Pole Qui**	**70.56**	**180**	P	**P**	**10 13 14.2**	**-0.1**
	comp=Z,13nm,1.0s,baz=14,slow=2.4,SNR=27						
	comp=Z,13nm,1.0s						
QSPA	**South Pole Qui**	**70.56**	**180**	P	**P**	**10 13 13.7**	**-0.5**
USRK	**Ussuriysk Ar.**	**72.11**	**333**	P	**P**	**10 13 24.2**	**+0.6**
PET	**Petropavlovsk**	**72.84**	**353**	P	**P**	**10 13 28.5**	**+0.8**
PETK	**Petropavlovsk-**	**73.03**	**353**	P	**P**	**10 13 29.1**	**+0.1**
	comp=Z,8.3nm,1.0s,baz=191,slow=7.2,SNR=4.1						
	comp=Z,8.3nm,1.0s						
PETK	**Petropavlovsk-**	**73.03**	**353**	P	**P**	**10 13 30.4**	**+1.5**
KLR	**Kul'dur**	**76.23**	**336**	P	**P**	**10 13 48.4**	**+0.9**
	comp=Z,2.6nm,1.0s,baz=227,slow=2.4,SNR=4.6						
	comp=Z,2.6nm,1.0s						
BJT	**Baijiatuan**	**77.32**	**321**	P	**P**	**10 13 54.3**	**+0.4**
BJT				IAmb	IAmb	10 13 55.0	
	comp=Z,14nm,1.4s						
BJI	**Beijing**	**77.33**	**321**	P	**P**	**10 13 54.5**	**+0.5**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAW	**Mawson**	**78.31**	**202**	P	**P**	**10 13 59.6**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=135,slow=3.5,SNR=5.2						
	comp=Z,2.4nm,0.8s						
CRAI	**Chiangrai**	**78.42**	**296**	P	**P**	**10 14 00.5**	**0.0**
XAN	**Xi'an**	**78.51**	**312**	⇑P	**P**	**10 14 01.8**	**+1.0**
XAN				pP	PcP	10 14 10.8	+1.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI	**Kunming**	**78.67**	**302**	⇑P	**P**	**10 14 04.0**	**+2.0**
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
CMAR	**Chiang Mai Arr**	**78.89**	**294**	P	**P**	**10 14 04.2**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=128,slow=3.3,SNR=8.3						
	comp=Z,0.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**78.89**	**294**	P	**P**	**10 14 03.3**	**+0.2**
CHTO	**Chiang Mai**	**79.03**	**294**	P	**P**	**10 14 04.0**	**+0.1**
CHTO				IAmb	IAmb	10 14 05.8	
	comp=Z,9.3nm,1.4s						
PZH	**PanZhiHua**	**80.10**	**303**	P	**P**	**10 14 12.6**	**+2.9**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
BELA	**Belgrano 2**	**81.81**	**175**	P	**P**	**10 14 17.3**	**-0.6**
BELA				IAmb	IAmb	10 14 17.9	
	comp=Z,6.6nm,0.9s						
SMAI	**San Martin Ant**	**83.49**	**162**	P	**P**	**10 14 25.0**	**-1.6**
SMAI				IAmb	IAmb	10 14 27.7	
	comp=Z,6.6nm,1.1s						
ILSW	**Iliamna Southw**	**84.81**	**18**	P	**P**	**10 14 33.5**	**0.0**
ILSW				IAmb	IAmb	10 14 34.2	
	comp=Z,14nm,1.1s						
CMB	**Columbia Colle**	**87.10**	**48**	P	**P**	**10 14 45.1**	**-0.2**
ULN	**Ulaanbaatar**	**87.25**	**323**	P	**P**	**10 14 46.3**	**+0.4**
BILL	**Bilibino**	**87.32**	**359**	P	**P**	**10 14 45.0**	**-0.6**
GTA	**Gaotai**	**87.53**	**313**	⇑P	**P**	**10 14 48.5**	**+1.1**
GTA				pP	pP	10 14 58.3	-0.2
GTA				sP	sP	10 15 04.6	+2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.5s						
GTA				LR	LR		
	comp=N,43μm,19.3s						
GTA				LR	LR		
	comp=E,55μm,20.0s						
GTA				LR	LR		
	comp=Z,80μm,22.9s						
SONM	**Songino Array**	**87.61**	**323**	P	**P**	**10 14 48.1**	**+0.5**
	comp=Z,3.3nm,1.0s,baz=128,slow=5.9,SNR=9.0						
	comp=Z,3.3nm,1.0s						
SONM	**Songino Array**	**87.61**	**323**	P	**P**	**10 14 48.2**	**+0.6**
SONM				IAmb	IAmb	10 14 49.1	
	comp=Z,5.9nm,1.1s						
SHL	**Shillong**	**87.74**	**298**	P	**P**	**10 14 49.0**	**+0.2**
SHL				IAmb	IAmb	10 14 49.5	
	comp=Z,5.0nm,0.8s						
MDPB	**Devils Postpil**	**87.84**	**49**	P	**P**	**10 14 49.1**	**-0.1**
BEKR	**Beckworth**	**87.97**	**46**	P	**P**	**10 14 48.5**	**-1.0**
BEKR				IAmb	IAmb	10 14 54.1	
	comp=Z,6.6nm,1.5s						
TROLL	**Troll, Antarti**	**88.30**	**184**	P	**P**	**10 14 49.8**	**-0.8**
TROLL	**Troll, Antarti**	**88.30**	**184**	pP	pP	10 14 59.0	-2.5
GSC	**Goldstone, Bar**	**88.48**	**52**	P	**P**	**10 14 50.1**	**-1.8**
GSC				IAmb	IAmb	10 15 02.5	
	comp=Z,3.8nm,1.1s						
PAHR	**Pah Rah Range**	**88.56**	**47**	P	**P**	**10 14 51.5**	**-0.8**
PAHR				IAmb	IAmb	10 14 55.5	
	comp=Z,5.5nm,1.3s						
NVAR	**Mina Array Bea**	**88.75**	**48**	P	**P**	**10 14 54.2**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=232,slow=6.8,SNR=5.0						
	comp=Z,0.8nm,0.9s						
NVAR	**Mina Array Bea**	**88.75**	**48**	P	**P**	**10 14 53.9**	**+0.5**
SNAA	**Sanae**	**88.92**	**182**	P	**P**	**10 14 52.2**	**-1.2**
SNAA	**Sanae**	**88.92**	**182**	pP	pP	10 15 01.6	-2.8
SNAA	**Sanae**	**88.92**	**182**	P	**P**	**10 14 52.3**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=199,slow=9.7,SNR=12						
	comp=Z,2.1nm,0.8s						
SNAA	**Sanae**	**88.92**	**182**	P	**P**	**10 14 52.8**	**-0.7**
SNAA				IAmb	IAmb	10 14 53.1	
	comp=Z,4.6nm,1.0s						
WISH	**Wishkah**	**89.27**	**39**	P	**P**	**10 14 53.9**	**-1.3**
TPH	**Tonopah**	**89.36**	**49**	P	**P**	**10 14 55.9**	**-0.3**
VNA3	**Neumayer Olymp**	**89.49**	**180**	P	**P**	**10 14 55.0**	**-1.1**
VNA3	**Neumayer Olymp**	**89.49**	**180**	pP	pP	10 15 04.2	-2.9
F04A	**Amboy**	**89.50**	**40**	P	**P**	**10 14 55.5**	**-0.8**
VNA2	**Neumayer--Watz**	**89.79**	**181**	P	**P**	**10 14 56.4**	**-1.1**
	baz=174,slow=4.7						
VNA2	**Neumayer--Watz**	**89.79**	**181**	pP	pP	10 15 06.0	-2.5
VNA1	**Neumayer--Stat**	**90.08**	**181**	P	**P**	**10 14 57.8**	**-0.9**
WVOR	**Wild Horse Val**	**90.28**	**45**	P	**P**	**10 15 00.1**	**-0.2**
WVOR				IAmb	IAmb	10 15 08.7	
	comp=Z,9.7nm,1.4s						
D05A	**Enumclaw**	**90.36**	**39**	P	**P**	**10 15 01.8**	**+1.4**
ILAR	**Eielson Array**	**90.39**	**17**	P	**P**	**10 14 58.8**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=231,slow=5.5,SNR=6.3						
	comp=Z,0.9nm,0.8s						
I07A	**Izee**	**90.46**	**43**	P	**P**	**10 15 01.6**	**+0.6**
I07A				IAmb	IAmb	10 15 25.2	
	comp=Z,6.5nm,1.5s						
PRN	**Pahroc Range**	**90.64**	**50**	IAmb	IAmb	10 15 17.3	
	comp=Z,6.8nm,1.3s						
J08A	**Circle Bar Ran**	**90.80**	**44**	IAmb	IAmb	10 15 04.0	
	comp=Z,6.7nm,1.4s						
G08A	**Pilot Rock**	**91.35**	**42**	P	**P**	**10 15 05.9**	**+0.7**
G08A				IAmb	IAmb	10 15 11.6	
	comp=Z,3.6nm,1.2s						
CCUT	**Cedar City**	**91.93**	**51**	IAmb	IAmb	10 15 27.9	
	comp=Z,3.4nm,1.4s						
Q16A	**Castle Valley**	**94.05**	**50**	IAmb	IAmb	10 15 18.0	
	comp=Z,3.9nm,0.8s						
WMQ	**Urumqi**	**97.60**	**314**	*e*P	Pdif	10 15 36.4	+2.5
MKAR	**Makanchi Array**	**102.14**	**315**	P	**Pdif**	**10 15 52.6**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=96,slow=7.7,SNR=2.2						
CKRC	**Cesky Krumlov**	**144.61**	**331**	*e*PKP	PKPbc	10 21 34.9	+0.4
KHC	**Kasperske Hory**	**144.70**	**332**	*e*PKP	**PKPab**	**10 21 34.8**	**+0.1**
GERES	**GERESS Array B**	**144.86**	**332**	PKP	**PKPab**	**10 21 34.6**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=29,slow=3.0,SNR=12						
TORD	**Torodi Ar. Bea**	**166.75**	**243**	PKPab	**PKPab**	**10 23 08.4**	**-0.2**
	comp=Z,1.7nm,1.2s,baz=66,slow=3.6,SNR=4.0						

NIED ***24*** *10:07:16.9,25˚.07N×123˚.03E,h152km,MW3.9,Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}=6.55; $M_{\theta\theta}$=5.82; $M_{\phi\phi}$=0.73; $M_{r\theta}$=3.00; $M_{\theta\phi}$=-2.45; $M_{\phi r}$=-2.05; Fault plane solution: M_0=7.61000×10^{14} NP1:*

ϕ_s=106.00000°, δ=31.00000°, λ=-101.00000°. NP2: ϕ_s=298.00000°, δ=59.00000°, λ=-84.00000°.
NEIC ***24*** *10:07:16.4±1.8,25˚.08N±0˚.07×123˚.03E±0˚.07, h156km±6km, mb4.3/19 Error ellipse: s-maj=10.8km s-min=9.0km az=188.0*
JMA ***24*** *10:07:16.9±0.3,25˚.2N±2˚×123˚.0E±0˚.7, h152km±3km, MD4.0/14, MV4.3/14, NW OFF ISHIGAKIJIMA IS*
IDC ***24*** *10:07:22.2±5.8,25˚.22N×123˚.12E, h223km±65km, mb3.4/10, mbtmp4.0/11, MS4.1/1, Error ellipse: s-maj=23.5km s-min=13.0km az=62.0*

ISC 24 10:07:16.1±0.6, 25˚.08N±0˚.06×123˚.02E±0˚.04, h157km±6km, n70, σ0°93/78, mb3.9/19, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.62**	**181**			**Pn**	**Pn**	**10 07 39.3**	**+0.4**
YOJ				Sn		Sn	Sn	10 07 53.4	-3.0
YOJ	**Yonaguni jima**	**0.62**	**181**	P		**Pn**	**Pn**	**10 07 39.3**	**+0.4**
YOJ	**Yonaguni jima**	**0.62**	**181**	*i* P		**Pn**	**Pn**	**10 07 39.3**	**+0.4**
YOJ				S		Sn	Sn	10 07 56.1	-0.2
JYNG	**Yonagunijimaku**	**0.63**	**186**	*i* P		**Pn**	**Pn**	**10 07 39.4**	**+0.4**
JYNG				S		Sn	Sn	10 07 56.5	+0.1
JYNG	**Yonagunijimaku**	**0.63**	**186**	A		A	A	10 07 39.4	
	comp=E,3.0nm,3.5s,comp=E,5.0nm,4.5s								
IRIF	**Iriomote-Funau**	**0.98**	**139**	*i* P		**Pn**	**Pn**	**10 07 41.6**	**+0.2**
IRIF				S		Sn	Sn	10 08 00.6	-0.2
JKRS	**Kuro-shima**	**1.23**	**133**	*i* P		**Pn**	**Pn**	**10 07 44.2**	**+0.7**
JKRS				S		Sn	Sn	10 08 04.3	-0.3
HATJ	**Hateruma jima**	**1.25**	**145**	P		**Pn**	**Pn**	**10 07 44.4**	**+0.7**
HATJ				S		Sn	Sn	10 08 05.0	+0.1
HATJ	**Hateruma jima**	**1.25**	**145**	A		A	A	10 07 44.4	
	comp=E,4.0nm,1.4s,comp=E,5.0nm,0.6s								
JIJ	**Ishigaki jima**	**1.25**	**125**	*i* P		**Pn**	**Pn**	**10 07 43.9**	**+0.1**
JIJ				S		Sn	Sn	10 08 03.5	-1.4
TATO	**Taipei**	**1.39**	**266**			**Pn**	**Pn**	**10 07 44.8**	**-0.3**
TATO				Sn		Sn	Sn	10 08 07.7	+0.3
YHNB	**Yeheng**	**1.55**	**255**			**Pn**	**Pn**	**10 07 47.8**	**+1.1**
YHNB	**Yeheng**	**1.55**	**255**	P		**Pn**	**Pn**	**10 07 47.9**	**+1.1**
NACB	**Ninganchiao**	**1.58**	**235**			**Pn**	**Pn**	**10 07 46.9**	**-0.2**
JTJ	**Tarama**	**1.59**	**106**	*i* P		**Pn**	**Pn**	**10 07 47.6**	**+0.5**
JTJ				S		Sn	Sn	10 08 10.8	-0.1
JTJ	**Tarama**	**1.59**	**106**	A		A	A	10 07 47.6	
	comp=E,5.0nm,2.2s,comp=E,6.0nm,0.6s								
JIRB	**Irabujima**	**1.97**	**97**	P		**Pn**	**Pn**	**10 07 51.7**	**+0.4**
JIRB				S		Sn	Sn	10 08 17.3	-1.1
JIKM	**Ikemajima**	**2.03**	**94**	P		**Pn**	**Pn**	**10 07 52.7**	**+0.7**
JIKM				S		Sn	Sn	10 08 19.1	-0.4
JMJ	**Miyako jima 2**	**2.08**	**97**	P		**Pn**	**Pn**	**10 07 54.0**	**+1.4**
JMJ2	**Miyako jima3**	**2.12**	**99**	*i* P		**Pn**	**Pn**	**10 07 53.9**	**+0.9**
JMJ2				S		Sn	Sn	10 08 20.8	-0.7
JOGS	**Gusukube**	**2.19**	**98**	P		**Pn**	**Pn**	**10 07 54.8**	**+0.9**
JOGS				S		Sn	Sn	10 08 22.4	-0.6
JOGS	**Gusukube**	**2.19**	**98**	A		A	A	10 07 54.8	
	comp=E,5.0nm,4.0s,comp=E,4.0nm,2.9s								
SSLB	**Suanglung**	**2.28**	**236**			**Pn**	**Pn**	**10 07 55.7**	**+0.7**
SSLB	**Suanglung**	**2.28**	**236**	P		**Pn**	**Pn**	**10 07 55.9**	**+0.9**
YULB	**Yu-li**	**2.30**	**223**			**Pn**	**Pn**	**10 07 54.7**	**-0.5**
TPUB	**Ta-pu**	**2.81**	**231**			**Pn**	**Pn**	**10 08 02.2**	**+0.8**
TPUB	**Ta-pu**	**2.81**	**231**	P		**Pn**	**Pn**	**10 08 02.6**	**+1.1**
TWG	**Pinlang**	**2.87**	**219**			**Pn**	**Pn**	**10 08 01.5**	**-0.6**
KNMB	**Chin-men Tao**	**4.25**	**263**	Pn		**Pn**	**Pn**	**10 08 19.4**	**-0.4**
JOW	**Kunigami**	**5.04**	**69**	Pn		**Pn**	**Pn**	**10 08 28.5**	**-1.7**
JOW	**Kunigami**	**5.04**	**69**	P		**Pn**	**Pn**	**10 08 28.2**	**-2.0**
KSRS	**Korea Array**	**13.02**	**18**	P		**Pn**	**Pn**	**10 10 16.7**	**+1.5**
	7.9nm,0.8s,baz=200,slow=13,SNR=20								
KS19	**Wonju Array Si**	**13.05**	**17**			**Pn**	**Pn**	**10 10 17.1**	**+1.5**
SEHB	**SEOHWA**	**13.88**	**17**	Pn		**Pn**	**Pn**	**10 10 27.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**20.43**	**19**	P		**P**	**P**	**10 11 40.5**	**-0.4**
	3.2nm,0.7s,baz=204,slow=12,SNR=7.2								
	3.2nm,0.7s								
USRK	**Ussuriysk Ar.**	**20.43**	**19**	P		**P**	**P**	**10 11 40.9**	**0.0**
CMAR	**Chiang Mai Arr**	**23.29**	**258**	P		**P**	**P**	**10 12 12.2**	**+2.2**
	1.3nm,0.5s,baz=59,slow=7.1,SNR=6.1								
	1.3nm,0.5s								
SBUM	**Sibu**	**24.79**	**207**	P		**P**	**P**	**10 12 24.9**	**+1.3**
SBUM				IAmb		IAmb	IAmb	10 12 26.1	
	comp=Z,5.9nm,0.6s								
KLR	**Kul'dur**	**25.05**	**14**	P		**P**	**P**	**10 12 25.8**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=225,slow=8.6,SNR=4.4								
	comp=Z,0.8nm,0.5s								
BATI	**Baumata**	**35.08**	**179**	LR		LR	LR	10 30 55.6	
	comp=Z,258nm,18.7s,baz=134,slow=40								
MTN	**Manton Dam**	**38.52**	**167**	P		**P**	**P**	**10 14 22.5**	**-0.8**
MK31	**Makanchi Array**	**38.88**	**314**	P		**P**	**P**	**10 14 25.8**	**-0.4**
MKAR	**Makanchi Array**	**38.88**	**314**	P		**P**	**P**	**10 14 25.6**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=100,slow=9.9,SNR=14								
	comp=Z,1.0nm,0.5s								
MAKZ	**Makanchi**	**39.09**	**314**	P		**P**	**P**	**10 14 27.9**	**0.0**
MAKZ				IAmb		IAmb	IAmb	10 14 28.0	
	comp=Z,2.8nm,1.1s								
ZALV	**Zalesovo Beam**	**40.42**	**326**	P		**P**	**P**	**10 14 37.0**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=127,slow=10,SNR=2.3								
	comp=Z,0.5nm,0.3s								
KNRA	**Kununurra**	**40.90**	**172**	P		**P**	**P**	**10 14 42.6**	**-0.4**
KNRA				IAmb		IAmb	IAmb	10 14 43.8	
	comp=Z,4.9nm,0.6s								
KURBB	**Kurchatov Arra**	**42.52**	**319**	P		**P**	**P**	**10 14 54.8**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=112,slow=9.1,SNR=4.2								
	comp=Z,0.8nm,0.7s								
FITZ	**Fitzroy Crossi**	**42.99**	**176**	P		**P**	**P**	**10 14 59.1**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=3.4,slow=11,SNR=1.3								
	comp=Z,0.4nm,0.3s								
COEN	**Coen**	**43.50**	**151**	P		**P**	**P**	**10 15 04.8**	**+0.8**
COEN				IAmb		IAmb	IAmb	10 15 05.3	
	comp=Z,5.1nm,0.4s								
WB0	**Warramunga Arr**	**45.93**	**165**	P		**P**	**P**	**10 15 23.5**	**+0.2**
WB0				IAmb		IAmb	IAmb	10 15 24.1	
	comp=Z,13nm,1.2s								
WRAB	**Tennant Creek**	**46.08**	**165**	P		**P**	**P**	**10 15 24.8**	**+0.4**
WRAB				IAmb		IAmb	IAmb	10 15 25.0	
	comp=Z,6.5nm,0.5s								
WRA	**Warramunga Arr**	**46.09**	**165**	P		**P**	**P**	**10 15 24.6**	**+0.2**
	comp=Z,9.9nm,0.4s,baz=353,slow=8.6,SNR=71								
	comp=Z,4.9nm,0.4s								
WB2	**Warramunga Arr**	**46.09**	**165**	P		**P**	**P**	**10 15 24.7**	**+0.2**
WB2				IAmb		IAmb	IAmb	10 15 25.1	
	comp=Z,7.1nm,0.5s								
WR0	**Warramunga Arr**	**46.15**	**165**	P		**P**	**P**	**10 15 25.5**	**+0.5**
KK31	**Karatay Array**	**46.27**	**306**	P		**P**	**P**	**10 15 26.0**	**+0.2**
KKAR	**Karatay Array**	**46.27**	**306**	P		**P**	**P**	**10 15 26.5**	**+0.7**
KKAR	**Karatay Array**	**46.27**	**306**	P		**P**	**P**	**10 15 26.0**	**+0.2**
KKAR				IAmb		IAmb	IAmb	10 15 37.2	
	comp=Z,1.7nm,1.1s								
PSA00	**Pilbara Seismi**	**46.48**	**184**	P		**P**	**P**	**10 15 26.2**	**-1.2**
PSA00				IAmb		IAmb	IAmb	10 15 37.3	
	comp=Z,4.3nm,1.2s								
AS31	**Alice Springs**	**49.59**	**167**			**P**	**P**	**10 15 52.4**	**+0.9**
ASAR	**Alice Springs**	**49.59**	**167**	P		**P**	**P**	**10 15 52.1**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=354,slow=7.9,SNR=41								
	comp=Z,0.9nm,0.3s								
ASAR	**Alice Springs**	**49.59**	**167**	P		**P**	**P**	**10 15 51.0**	**-0.4**
ABKAR	**Akbulak array**	**54.02**	**314**	P		**P**	**P**	**10 16 23.5**	**-0.5**
MORW	**Morawa**	**54.25**	**188**	P		**P**	**P**	**10 16 25.2**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**55.79**	**300**	P		**P**	**P**	**10 16 34.5**	**-2.4**
GYA0B				IAmb		IAmb	IAmb	10 16 34.6	
	comp=Z,5.0nm,0.5s								
BBOO	**Buckleboo**	**58.90**	**167**	P		**P**	**P**	**10 16 58.8**	**+0.3**
STKA	**Stephens Creek**	**59.35**	**162**	P		**P**	**P**	**10 17 01.8**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=357,slow=6.5,SNR=9.3								
	comp=Z,1.8nm,0.5s								
STKA	**Stephens Creek**	**59.35**	**162**	P		**P**	**P**	**10 17 01.8**	**+0.1**
STKA				IAmb		IAmb	IAmb	10 17 04.1	
	comp=Z,2.2nm,1.5s								
K20K	**Telida**	**64.74**	**30**	P		**P**	**P**	**10 17 38.4**	**+1.2**
K20K				IAmb		IAmb	IAmb	10 17 48.4	
	comp=Z,1.9nm,1.1s								
BMAR	**Burnt Mountain**	**68.02**	**25**	P		**P**	**P**	**10 17 58.6**	**+0.5**
FINES	**FINESS Array B**	**71.52**	**330**	P		**P**	**P**	**10 18 18.5**	**-1.0**

IDC ***24*** *10:07:31.9±0.9,54˚.93S×31˚.74W, h0km, mb3.9/6, mbtmp3.9/7, ML3.1/1, Error ellipse: s-maj=30.8km s-min=23.5km az=81.0*
NEIC ***24*** *10:07:33.9±1.0,55˚.2S±0˚.1×32˚.13W±0˚.08, h10km±2km, mb4.5/16, Error ellipse: s-maj=17.7km s-min=6.8km az=10.0*

ISC 24 10:07:32.9±0.7, 55˚.05S±0˚.08×32˚.0W±0˚.1, h10km, n31, σ1°14/26, mb4.4/13, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.74**	**284**			**Pn**	**Pn**	**10 08 16.5**	**-0.3**
ORCD	**Orcadas**	**8.87**	**225**			**Pn**	**Pn**	**10 09 39.8**	**-1.1**

PMSA	**Palmer Station**	**18.59**	**226**	P		**Pn**		**10 11 52.0**	**+2.0**
	0.1nm,0.3s,baz=62,slow=10,SNR=2.8								
	3.1nm,0.8s								
PMSA	**Palmer Station**	**18.59**	**226**	P		**P**		**10 11 47.2**	**-2.5**
SNAA	**Sanae**	**20.80**	**154**	P		Pn		10 12 15.9	-0.4
	0.6nm,0.6s,baz=302,slow=11,SNR=2.2								
	0.6nm,0.6s								
SNAA	**Sanae**	**20.80**	**154**	P		**P**		**10 12 12.5**	**-1.4**
BELA	**Belgrano 2**	**22.95**	**181**	P		**P**		**10 12 37.6**	**+0.8**
MG05	**Puerto Natales**	**24.18**	**261**	P		**P**		**10 12 49.1**	**0.0**
GO09	**Cerro Castillo**	**24.26**	**262**	P		**P**		**10 12 49.8**	**0.0**
GO09				IAmb		IAmb		10 13 14.5	
	comp=Z,41nm,1.4s								
CPUP	**Villa Florida**	**34.16**	**317**	P		**P**		**10 14 17.0**	**-1.0**
MT09	**Talagante**	**34.42**	**292**	P		**P**		**10 14 20.8**	**+0.4**
MT09				IAmb		IAmb		10 14 32.8	
	comp=Z,4.9nm,0.8s								
MT01	**Popeta**	**34.49**	**291**	P		**P**		**10 14 21.3**	**+0.4**
MT01				IAmb		IAmb		10 14 22.8	
	comp=Z,16nm,1.5s								
VA05	**Santo Domingo**	**34.85**	**291**	P		**P**		**10 14 23.9**	**0.0**
QSPA	**South Pole Qui**	**35.21**	**180**	P		**P**		**10 14 27.6**	**+0.7**
QSPA				IAmb		IAmb		10 14 40.0	
	comp=Z,10nm,1.6s								
PTLB	**Pontes e Lacer**	**44.75**	**321**	P		**P**		**10 15 46.9**	**+0.6**
PTLB				IAmb		IAmb		10 15 48.6	
	comp=Z,3.3nm,0.8s								
SIV	**San Ignacio**	**44.97**	**319**	P		**P**		**10 15 48.1**	**-0.1**
	comp=Z,0.7nm,0.2s,baz=214,slow=13,SNR=4.0								
	comp=Z,0.7nm,0.2s								
GO01	**Chusmiza**	**45.14**	**306**	P		**P**		**10 15 50.5**	**+0.5**
GO01				IAmb		IAmb		10 16 10.3	
	comp=Z,3.5nm,1.1s								
VNDA	**Vanda**	**47.42**	**184**	P		**P**		**10 16 08.0**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=171,slow=6.9,SNR=2.2								
	comp=Z,0.4nm,0.8s								
VILB	**Vilhena**	**47.44**	**321**	P		**P**		**10 16 08.9**	**+1.3**
VILB				IAmb		IAmb		10 16 09.6	
	comp=Z,9.4nm,1.2s								
LPAZ	**La Paz**	**47.62**	**310**	P		**P**		**10 16 10.8**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=117,slow=6.1,SNR=12								
	comp=Z,2.6nm,0.7s								
LPAZ	**La Paz**	**47.62**	**310**	P		**P**		**10 16 10.2**	**+0.5**
H10N1	**ASCENSION HYDR**	**49.10**	**23**	T		T		11 09 44.6	
	baz=192,slow=75,SNR=7.8								
H10N3	**ASCENSION HYDR**	**49.10**	**23**	T		T		11 09 17.4	
	baz=192,slow=75,SNR=11								
H10N2	**ASCENSION HYDR**	**49.11**	**23**	T		T		11 09 18.6	
	baz=192,slow=75,SNR=12								
DBIC	**Dimbokro**	**65.51**	**30**	P		**P**		**10 18 14.5**	**-1.7**
	comp=Z,3.9nm,0.8s,baz=212,slow=9.6,SNR=3.0								
	comp=Z,3.9nm,0.8s								
TOA0	**Torodi Ar. Sit**	**73.63**	**34**	P		**P**		**10 19 07.5**	**+1.2**
TOA0				IAmb		IAm

Z35A	**Perchaven, San** baz=8.4,SNR=19	**2.77**	**188**	P		**Pn**	**10 09 42.3**	**+1.0**
R32A	**Long Quarter,** baz=146	**2.81**	**327**	S		**Sn**	**10 10 17.2**	**+1.2**
KSU1	**Kansas State U**	**3.02**	**2**			**Pn**	**10 09 43.2**	**-1.6**
KSU1	comp=Z,79nm,0.8s			IAmb_Lg			10 10 35.3	
MIAR	**Mount Ida**	**3.02**	**119**			**Pn**	**10 09 45.1**	**+0.2**
MIAR	**Mount Ida** baz=301,SNR=45	**3.02**	**119**	P		**Pn**	**10 09 45.4**	**+0.6**
Z38A	**Mt. Pleasant** comp=Z,110nm,0.9s	**3.17**	**152**	IAmb_Lg			10 10 40.7	
S39A	**Bolivar**	**3.20**	**59**	Pn		**Pn**	**10 09 47.5**	**+0.2**
S39A	comp=Z,153nm,1.0s			IAmb_Lg			10 10 43.6	
CBKS	**Cedar Bluff** baz=138	**3.61**	**320**	S		**Sn**	**10 10 36.7**	**+0.9**
WHAR	**Wooly Hollow**	**3.73**	**101**	Pn		**Pn**	**10 09 54.1**	**-0.4**
WHAR	comp=Z,125nm,1.0s			IAmb_Lg			10 10 57.9	
FCAR	**Ozark Folk Cen**	**3.77**	**91**			**Pn**	**10 09 55.6**	**+0.6**
FCAR	comp=Z,81nm,0.7s			IAmb_Lg			10 10 58.1	
MGMO	**Mountain Grove**	**3.78**	**72**			**Pn**	**10 09 56.7**	**+1.5**
MGMO	comp=Z,88nm,0.8s			IAmb_Lg			10 11 03.5	
WLAR	**White Oak Lake** comp=Z,51nm,0.7s	**3.84**	**127**	IAmb_Lg			10 11 04.2	
UALR	**University of** comp=Z,50nm,0.7s	**3.84**	**108**	IAmb_Lg			10 11 06.5	
WHTX	**Lake Whitney,**	**4.12**	**188**			**Pn**	**10 09 59.5**	**-0.3**
WHTX	**Lake Whitney,** baz=8.0,SNR=7.6	**4.12**	**188**	P		**Pn**	**10 10 00.1**	**+0.3**
237A	**Washetta, Mont**	**4.14**	**169**	Pn		**Pn**	**10 09 59.5**	**-0.8**
237A	**Washetta, Mont** baz=349	**4.14**	**169**	P		**Pn**	**10 10 00.2**	**0.0**
ABTX	**Abilene, Hawle** comp=Z,43nm,1.1s	**4.19**	**215**	IAmb_Lg			10 11 14.1	
R40A	**Maddies Statio**	**4.22**	**57**			**Pn**	**10 10 02.1**	**+0.9**
R40A	comp=Z,126nm,0.9s			IAmb_Lg			10 11 11.0	
R40A	**Maddies Statio** baz=240,SNR=14	**4.22**	**57**	P		**Pn**	**10 10 02.1**	**+0.9**
P38A	**Dawn**	**4.37**	**35**	Pn		**Pn**	**10 10 03.3**	**-0.1**
P38A	comp=Z,72nm,0.8s			IAmb_Lg			10 11 16.7	
P38A	**Dawn** baz=217	**4.37**	**35**	P		**Pn**	**10 10 04.0**	**+0.7**
LCAR	**Lake Charles**	**4.55**	**88**	Pn		**Pn**	**10 10 05.5**	**-0.2**
LCAR	comp=Z,49nm,0.8s			IAmb_Lg			10 11 29.4	
CCAR	**Cane Creek**	**4.63**	**116**	Pn		**Pn**	**10 10 06.7**	**-0.2**
CCAR	**Cane Creek** baz=299,SNR=6.2	**4.63**	**116**	P		**Pn**	**10 10 07.2**	**+0.3**
N33A	**J Bar K, Exete** comp=Z,109nm,0.8s	**4.68**	**354**	IAmb_Lg			10 11 33.5	
CCM	**Cathedral Cave**	**4.84**	**64**	Pn		**Pn**	**10 10 09.2**	**-0.6**
CCM	comp=Z,87nm,0.8s			IAmb_Lg			10 11 27.4	
N35A	**Tabor**	**4.86**	**10**	Pn		**Pn**	**10 10 09.6**	**-0.4**
N35A	comp=Z,127nm,0.8s			IAmb_Lg			10 11 44.0	
435B	**Jarrell** comp=Z,37nm,0.9s	**5.33**	**188**	IAmb_Lg			10 11 59.5	
BGNE	**Belgrade** comp=Z,66nm,0.7s	**5.43**	**349**	IAmb_Lg			10 11 59.1	
N38A	**Joes South For** comp=Z,80nm,0.8s	**5.46**	**29**	IAmb_Lg			10 11 54.5	
GNAR	**Gosnell** comp=Z,82nm,0.7s	**5.47**	**89**	IAmb_Lg			10 11 51.7	
KSCO	**Kaye Shedlock'** comp=Z,36nm,0.7s	**5.50**	**304**	IAmb_Lg			10 12 04.9	
HDBT	**Hernando Brdge**	**5.54**	**98**			**Pn**	**10 10 18.9**	**-0.5**
CGM3	**Cape Girardeau** comp=Z,93nm,0.8s	**5.84**	**76**	IAmb_Lg			10 12 03.0	
HALT	**Halls** comp=Z,100nm,0.8s	**6.03**	**89**	IAmb_Lg			10 12 11.4	
JCT	**Junction City**	**6.13**	**205**			**Pn**	**10 10 27.0**	**-0.6**
JCT	comp=Z,43nm,0.8s			IAmb_Lg			10 12 24.7	
OXF	**Oxford** comp=Z,44nm,1.0s	**6.22**	**102**	IAmb_Lg			10 12 23.5	
S44A	**Carbondale** comp=Z,104nm,0.9s	**6.23**	**73**	IAmb_Lg			10 12 13.7	
T25A	**Trinidad** comp=Z,35nm,0.8s	**6.24**	**282**	IAmb_Lg			10 12 16.5	
W45A	**Hickory Valley** comp=Z,85nm,0.7s	**6.24**	**96**	IAmb_Lg			10 12 14.9	
Y45A	**Yeager Farm, C** comp=Z,28nm,0.8s	**6.33**	**108**	IAmb_Lg			10 12 28.8	
OGNE	**Ogallala** comp=Z,88nm,0.8s	**6.38**	**321**	IAmb_Lg			10 12 24.5	
SCIA	**State Center** comp=Z,27nm,0.8s	**6.44**	**24**	IAmb_Lg			10 12 28.5	
N41A	**Harden Midland** comp=Z,85nm,0.8s	**6.55**	**43**	IAmb_Lg			10 12 28.2	
K31A	**O'Neill** comp=Z,87nm,0.7s	**6.71**	**347**	IAmb_Lg			10 12 33.5	
PLAL	**Pickwick Lake** comp=Z,22nm,1.0s	**7.17**	**96**	IAmb_Lg			10 12 43.1	
WVT	**Waverly** comp=Z,30nm,0.8s	**7.24**	**87**	IAmb_Lg			10 12 51.8	
K38A	**Parkersburg** comp=Z,35nm,0.9s	**7.25**	**24**	IAmb_Lg			10 13 07.2	
L40A	**Anamosa** comp=Z,28nm,0.7s	**7.37**	**34**	IAmb_Lg			10 13 01.5	
ECSD	**EROS Data Cent**	**7.65**	**1**			**Pn**	**10 10 48.2**	**-0.2**
V48A	**Smith Brothers** comp=Z,23nm,0.8s	**8.08**	**89**	IAmb_Lg			10 13 11.2	
X48A	**Hartselle** comp=Z,21nm,0.8s	**8.12**	**99**	IAmb_Lg			10 13 20.3	
I37A	**Lemond, Waseca** comp=Z,21nm,0.8s	**8.34**	**17**	IAmb_Lg			10 13 34.0	
JFWS	**Jewell Farm** comp=Z,46nm,0.7s	**8.48**	**34**	IAmb_Lg			10 13 32.5	
SUSD	**Miller** comp=Z,37nm,0.8s	**8.52**	**349**	IAmb_Lg			10 13 33.6	
N23A	**Red Feather La** comp=Z,27nm,0.7s	**8.65**	**307**	IAmb_Lg			10 13 54.0	
HQIL	**Hanson Quary C** comp=Z,96nm,1.2s	**8.99**	**48**	IAmb_Lg			10 13 47.4	
I40A	**Norwalk** comp=Z,19nm,0.7s	**9.12**	**29**	IAmb_Lg			10 13 50.1	
F33A	**5 Mile Ranch,** comp=Z,20nm,1.1s	**9.76**	**2**	IAmb_Lg			10 14 06.7	
RSSD	**Black Hills** comp=Z,14nm,0.8s	**9.77**	**328**	IAmb_Lg			10 14 24.2	
I42A	**Draeger Farm,** comp=Z,30nm,1.1s	**9.86**	**35**	IAmb_Lg			10 14 09.0	

RSNC 24 10:12:17.5±1.1,6°83N×73°13W,h152km±4km,ML3.5,5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**192**	⇑*i*P	Pn	10 12 38.1	-0.4
BARC				*e*S	Sn	10 12 53.2	-1.2
BARC				*e*S		10 12 53.5	
BARC				*i*		10 12 54.6	
	comp=Z,1μm,0.2s						
BRRC	**Barranca, Sant**	**0.64**	**296**	⇑*i*P	Pn	10 12 40.0	+0.1
BRRC				*e*S	Sn	10 12 57.1	+0.2
BRRC				*i*		10 13 00.9	
	comp=Z,391nm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**40**	*e*P	Pn	10 12 40.9	+0.3
PAMC				*e*S	Sn	10 12 58.1	-0.2
PAMC				*i*		10 12 58.8	
	comp=Z,348nm,0.3s						
RUSC	**La Rusia**	**0.93**	**177**	⇑*i*P	Pn	10 12 42.0	-0.5
RUSC				*e*S	Sn	10 13 00.9	-0.7
RUSC				*i*		10 13 02.7	
	comp=Z,249nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*e*P	Pn	10 12 44.6	-1.1
PTBC				*e*S	Sn	10 13 06.2	-1.1
PTBC				*i*		10 13 13.4	
	comp=Z,535nm,0.5s						
TAMC	**Tame, Arauca**	**1.39**	**106**	*e*P	Pn	10 12 46.4	+0.3
TAMC				*i*		10 13 07.0	
	comp=Z,295nm,0.3s						
TAMC				*e*S	Sn	10 13 08.1	+0.1
OCAC	**Ocana**	**1.42**	**353**	*e*P	Pn	10 12 46.3	-0.3
OCAC				*e*S	Sn	10 13 08.2	-0.7
OCAC				*i*		10 13 11.4	
	comp=Z,727nm,0.4s						
SPBC	**San Pablo de B**	**1.49**	**219**	⇑*e*P	Pn	10 12 46.9	-0.4
SPBC				*e*S	Sn	10 13 09.3	-0.9
SPBC				*i*		10 13 13.5	
	comp=Z,583nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	Pn	10 12 50.5	-0.4
ZARC				*e*S	Sn	10 13 16.1	-0.5
ZARC				*i*		10 13 22.2	
	comp=Z,503nm,0.6s						
NORC	**Norcasia**	**2.13**	**234**	*e*P	Pn	10 12 54.3	-0.1
NORC				*e*S	Sn	10 13 21.6	-1.2
NORC				*i*		10 13 27.7	
	comp=Z,386nm,0.5s						
CHIC	**Chingaza**	**2.26**	**195**	*e*P	Pn	10 12 56.0	-0.4
CHIC				*e*S	Sn	10 13 25.6	-0.5
CHIC				*i*		10 13 31.1	
	comp=Z,211nm,0.4s						
ROSC	**El Rosal**	**2.30**	**211**	*e*P	Pn	10 12 57.8	+1.1
ROSC				*e*S	Sn	10 13 26.4	-0.5
HELC	**Santa Helena**	**2.46**	**255**	*e*P	Pn	10 12 59.7	+1.0
HELC				*e*S	Sn	10 13 31.1	+0.8
HELC				*i*		10 13 36.7	
	comp=Z,214nm,0.3s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	Pn	10 12 58.1	-1.3
UREC				*e*S	Sn	10 13 28.3	-3.4
UREC				*i*		10 13 41.5	
	comp=Z,203nm,0.3s						
SOCV	**Socops**	**2.68**	**57**	*e*P	Pn	10 13 00.8	-0.2
SOCV				*e*S	Sn	10 13 32.7	-1.9
GUY2C	**Guyana, Caldas**	**2.73**	**234**	*e*P	Pn	10 13 02.7	+0.7
GUY2C				*e*S	Sn	10 13 37.4	+1.0
GUY2C				*i*		10 13 47.9	
	comp=Z,222nm,0.6s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e*P	Pn	10 13 03.8	+2.2
LL1C				*e*S	Sn	10 13 37.6	+1.8
LL1C				*i*		10 13 46.1	
	comp=Z,421nm,0.5s						
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	Pn	10 13 01.2	-0.8
VILC				*e*S	Sn	10 13 35.6	-0.9
VILC				*i*		10 13 39.7	
	comp=Z,229nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	⇑*i*P	Pn	10 13 01.1	-1.3
PTGC				*i*		10 13 36.3	
	comp=Z,119nm,0.2s						
PTGC				*e*S	Sn	10 13 38.3	+1.2
LL6C	**La Loma 6 Bece**	**2.89**	**357**	*e*P	Pn	10 13 02.5	-1.2
LL6C				*e*S	Sn	10 13 37.7	-1.7
LL6C				*i*		10 13 41.3	
	comp=Z,53nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*e*P	Pn	10 13 05.8	+0.5
CBOC				*e*S	Sn	10 13 41.5	-0.8
CBOC				*i*		10 13 56.1	
	comp=Z,106nm,0.7s						
DBBC	**Dabeiba**	**3.06**	**274**	*e*P	Pn	10 13 05.6	-0.2
DBBC				*e*S	Sn	10 13 43.0	-0.1
DBBC				*i*		10 13 44.9	
	comp=Z,89nm,0.5s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	Pn	10 13 08.8	+1.2
ARGC				*e*S	Sn	10 13 45.9	-0.6
ARGC				*i*		10 13 54.8	
	comp=Z,41nm,0.3s						
ANIL	**Santa Ana**	**3.24**	**224**	*e*P	Pn	10 13 09.1	+0.8
ANIL				*e*S	Sn	10 13 47.1	-0.5
PRAC	**Prado**	**3.55**	**210**	*e*P	Pn	10 13 11.1	-1.0
PRAC				*e*S	Sn	10 13 53.4	-1.1
PRAC				*i*		10 14 00.7	
	comp=Z,292nm,0.2s						
SJCC	**San Jacinto, C**	**3.66**	**327**	*e*P	Pn	10 13 12.0	-1.5
SJCC				*e*S	Sn	10 13 53.7	-3.3
SJCC				*i*		10 14 09.3	
	comp=Z,42nm,0.4s						
PLMC	**San Jos del P**	**3.67**	**239**	*e*P	Pn	10 13 13.7	+0.1
PLMC				*e*S	Sn	10 13 58.2	+1.0
PLMC				*i*		10 14 02.5	
	comp=Z,91nm,0.4s						
LCBC	**Los crdobas,**	**3.79**	**302**	*e*S	Sn	10 13 59.2	-0.6
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	Pn	10 13 18.5	-1.7
CRJC				*e*S	Sn	10 14 05.6	-3.5
CRJC				*i*		10 14 11.7	
	comp=Z,49nm,0.4s						
YOTC	**Yotoco, Valle**	**4.26**	**229**	*e*P	Pn	10 13 20.7	-0.7
YOTC				*e*S	Sn	10 14 10.4	-0.8
GUVC	**San Jose del G**	**4.28**	**173**	*e*P	Pn	10 13 20.7	-0.9
GUVC				*e*S	Sn	10 14 10.4	-1.0
GUVC				*i*		10 14 15.2	
	comp=Z,56nm,0.2s						
PTAC	**Punta Ardita,**	**4.65**	**274**	*e*P	Pn	10 13 25.8	-0.6
PTAC				*i*		10 14 12.4	
	comp=Z,28nm,0.8s						
PTAC				*e*S	Sn	10 14 21.3	+1.3
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	Pn	10 13 25.1	-2.1
MACC				*e*S	Sn	10 14 16.1	-5.3
MACC				*i*		10 14 23.2	
	comp=Z,38nm,0.7s						
BETC	**Betania**	**4.72**	**209**	*e*P	Pn	10 13 27.3	0.0
BETC				*e*S	Sn	10 14 15.3	-6.5
BETC				*i*		10 14 29.1	
	comp=Z,37nm,0.6s						
DABV	**Dabajuro**	**4.76**	**31**	*e*P	Pn	10 13 27.0	-0.8
DABV				*e*S	Sn	10 14 19.0	-3.6
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P	Pn	10 13 28.6	-2.1
URIC				*e*S	Sn	10 14 22.3	-5.4
URIC				*i*		10 14 30.5	
	comp=Z,11nm,0.5s						
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P	Pn	10 13 32.2	-1.3
GARC				*e*S	Sn	10 14 26.9	-6.0
GARC				*i*		10 14 35.8	
	comp=Z,45nm,0.2s						
POPC	**Popayan, Colom**	**5.53**	**220**	*e*P	Pn	10 13 37.9	-0.4
POPC				*e*S	Sn	10 14 35.1	-6.2
FLOC	**Florencia**	**5.78**	**206**	*e*P	Pn	10 13 40.5	-1.0
FLOC				*e*S	Sn	10 14 46.0	-1.1
FLOC				*i*		10 14 53.3	
	comp=Z,10nm,0.4s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	*e*P	Pn	10 13 47.7	-0.6
BBAC				*e*S	Sn	10 14 57.4	-2.1
BBAC				*i*		10 15 02.6	
	comp=Z,6.6nm,0.3s						
PTLC	**Puerto Leguiza**	**6.82**	**194**	*e*P	Pn	10 14 04.6	+9.4
PTLC				*e*S	Sn	10 15 29.2	+17
PTLC				*i*		10 15 41.9	
	comp=Z,7.7nm,0.3s						

*GEN **24** 10:14:36.4,43°.81N×10°.40E,h6km±1km,MI0.8*
ROM 24 10:14:35.9±0.2,43°.811N±0°.005×10°.39E±0°.01,h11km±3km, Md1.6/3,ML1.3/5,Error ellipse: s-maj=0.9km s-min=0.7km az=90.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAIM	**Mastiano**	**0.13**	**37**	P	Pb	10 14 39.8	-0.6
MAIM				S	Sg	10 14 42.1	+0.8
MAIM	**Mastiano**	**0.13**	**37**	P	Pb	10 14 39.9	-0.5
MAIM				S	Sg	10 14 42.1	+0.8
MAIM				AML	AML		
	comp=E,358μm,0.1s						
MAIM				AML	AML		
	comp=N,208μm,0.1s						
MAIM				END			
PII	**Pisa**	**0.14**	**131**	P	Pb	10 14 39.8	-0.7
PII				S	Sg	10 14 42.0	+0.6
PII	**Pisa**	**0.14**	**131**	P	Pg	10 14 39.8	+0.6
PII				S	Sg	10 14 42.0	+0.6
PII				AML	AML		
	comp=N,211μm,0.3s						
PII				AML	AML		
	comp=E,246μm,0.4s						
PII				END			
CARD	**Cardoso**	**0.23**	**18**	P	Pg	10 14 41.3	+0.6
CARD				S	Sg	10 14 45.0	+1.0
CARD	**Cardoso**	**0.23**	**18**	P	Pg	10 14 41.4	+0.7
CARD				S	Sg	10 14 44.9	+1.0
CARD				AML	AML		
	comp=N,160μm,0.3s						
CARD				AML	AML		
	comp=E,122μm,1.2s						
CARD				END			
VLC	**Villacollemand**	**0.35**	**0**	P	Pg	10 14 43.5	+0.6
VLC				S	Sg	10 14 48.6	+1.0
VLC	**Villacollemand**	**0.35**	**0**	P	Pg	10 14 43.5	+0.6
VLC				S	Sg	10 14 48.7	-1.0
POPM	**Popiglio**	**0.36**	**49**	P	Pg	10 14 43.7	+0.6
POPM				S	Sg	10 14 48.8	+1.0
POPM	**Popiglio**	**0.36**	**49**	P	Pg	10 14 43.7	+0.6
POPM				S	Sg	10 14 48.9	+1.0
POPM				AML	AML		
	comp=N,51μm,0.2s						
POPM				AML	AML		
	comp=E,38μm,0.9s						
SARO	**Sassorosso**	**0.37**	**2**	P	Pg	10 14 44.0	+0.5
SARO				S	Sg	10 14 49.4	+1.0
EQUI	**Equi**	**0.39**	**335**	P	Pg	10 14 44.0	+0.3
EQUI				S	Sg	10 14 49.2	+0.2
EQUI	**Equi**	**0.39**	**335**	P	Pg	10 14 44.0	+0.3
EQUI				S	Sg	10 14 49.1	+0.2
EQUI				AML	AML		
	comp=N,38μm,0.3s						
EQUI				AML	AML		
	comp=E,36μm,0.5s						
GROG	**Isola di Gorgo**	**0.53**	**223**	P	Pg	10 14 46.5	+0.3

*ROM **24** 10:15:10.8±0.1,42°.716N±0°.004×13°.219E±0°.007, h10km,ML3.0/23,Error ellipse: s-maj=0.6km s-min=0.3km az=78.0*
*BEO **24** 10:15:10.3±3.2,42°.47N×12°.83E,h50km±2km,ML3.2/5*
*PRU **24** 10:15:14.1±0.0,42°.85N×13°.52E,h0km*
ISC 24 10:15:11.2±0.8,42°.72N±0°.02×13°.22E±0°.02,h13km±6km, n117,σ1§20/132,23C-24D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.17**	**229**	P	**Pg**	**10 15 14.9**	**-0.4**
LNSS				S	**Sg**	**10 15 18.6**	**+0.4**
LNSS				AML	AML		
	comp=E,11100μm,1.5s						
LNSS				AML	AML		
	comp=N,59700μm,0.1s						
RM33	**Pellescritta (**	**0.21**	**181**	P	**Pg**	**10 15 15.6**	**-0.3**
RM33				S	**Sg**	**10 15 19.7**	**+0.7**
RM33				AML	AML		
	comp=E,14850μm,0.1s						
RM33				AML	AML		
	comp=N,14050μm,1.1s						
RM33				AML	AML		
	comp=E,15050μm,0.1s						
RM33				AML	AML		
	comp=N,13650μm,1.1s						
RM33				AML	AML		
	comp=N,13600μm,1.1s						
RM33				AML	AML		
	comp=E,14850μm,0.2s						
CAMP	**Campotosto**	**0.23**	**142**	P	**Pg**	**10 15 15.8**	**-0.4**
CAMP				S	**Sg**	**10 15 19.9**	**+0.3**
CAMP				AML	AML		
	comp=N,3090μm,0.7s						
CAMP				AML	AML		
	comp=E,4125μm,0.2s						
CAMP				AML	AML		
	comp=N,3085μm,0.7s						
FEMA	**Monte Fema**	**0.28**	**333**	P	**Pg**	**10 15 16.7**	**-0.3**
FEMA				S	**Sg**	**10 15 21.0**	**0.0**
FEMA				AML	AML		
	comp=E,18500μm,0.6s						
FEMA				AML	AML		
	comp=N,13600μm,0.2s						
TERO	**Teramo**	**0.30**	**108**	AML	AML		
	comp=E,9105μm,0.3s						
TERO				AML	AML		
	comp=N,17850μm,0.1s						
TERO				AML	AML		
	comp=E,10745μm,0.3s						
TERO				AML	AML		
	comp=E,9120μm,0.3s						
TERO				AML	AML		
	comp=N,17900μm,0.1s						
TERO				AML	AML		
	comp=N,20250μm,0.1s						
FDMO	**Fiordimonte**	**0.33**	**343**	P	**Pg**	**10 15 17.3**	**-0.7**
FDMO				S	**Sg**	**10 15 22.7**	**+0.1**
FDMO				AML	AML		
	comp=E,5750μm,0.2s						
FDMO				AML	AML		
	comp=N,6295μm,0.2s						
ARRO	**Arrone**	**0.36**	**248**	P	**Pg**	**10 15 18.2**	**-0.3**
ARRO				S	**Sg**	**10 15 24.4**	**+1.0**
ARRO				AML	AML		
	comp=E,6340μm,0.2s						
ARRO				AML	AML		
	comp=N,4535μm,1.1s						
CESI	**CESI - Serrava**	**0.37**	**321**	AML	AML		
	comp=N,8270μm,1.2s						
CESI				AML	AML		
	comp=E,5005μm,0.5s						
GIGS	**Gran Sasso**	**0.37**	**136**	P	**Pg**	**10 15 18.4**	**-0.2**
GIGS				S	**Sg**	**10 15 24.5**	**+0.7**
GIGS				AML	AML		
	comp=E,912μm,0.3s						
GIGS				AML	AML		
	comp=E,854μm,0.6s						
GIGS				AML	AML		
	comp=N,848μm,0.6s						
GIGS				AML	AML		
	comp=N,848μm,0.6s						
CSP1	**Cessapalombo**	**0.38**	**358**	P	**Pg**	**10 15 18.2**	**-0.6**
CSP1				S	**Sb**	**10 15 24.4**	**-1.2**
CSP1				AML	AML		
	comp=E,11600μm,1.0s						
CSP1				AML	AML		
	comp=N,9070μm,0.4s						
CSP1				AML	AML		
	comp=E,11605μm,1.0s						
CSP1				AML	AML		
	comp=N,9055μm,0.4s						
AQU	**L'Aquila**	**0.39**	**160**	P	**Pg**	**10 15 19.0**	**0.0**
AQU				S	**Sb**	**10 15 25.7**	**-0.1**
AQU				AML	AML		
	comp=E,3280μm,0.3s						
AQU				AML	AML		
	comp=N,3415μm,0.2s						
AQU				AML	AML		
	comp=N,3460μm,0.2s						
AQU				AML	AML		
	comp=E,3275μm,0.3s						
AQU				AML	AML		
	comp=E,3475μm,0.3s						
OFFI	**Offida**	**0.41**	**57**	⇓P	**Pb**	**10 15 19.8**	**-0.4**
OFFI				AML	AML		
	comp=N,11300μm,0.5s						
OFFI				AML	AML		
	comp=E,7915μm,1.6s						
FIAM	**Fiamignano**	**0.46**	**190**	⇑P	**Pg**	**10 15 19.7**	**-0.5**
FIAM				S	**Sg**	**10 15 27.0**	**+0.6**
FIAM				AML	AML		
	comp=E,3160μm,0.6s						
FIAM				AML	AML		
	comp=N,2235μm,0.6s						
MNTP	**Montappone**	**0.46**	**23**	P	**Pb**	**10 15 20.4**	**-0.8**
SEF1	**Sefro**	**0.47**	**335**	⇑P	**Pg**	**10 15 19.8**	**-0.8**
SEF1				S	**Sb**	**10 15 27.6**	**-0.7**
SEF1				AML	AML		
	comp=N,7970μm,0.6s						
SEF1				AML	AML		
	comp=E,6575μm,1.2s						
CESX	**Cesi**	**0.48**	**257**	⇓P	**Pg**	**10 15 20.2**	**-0.6**
CESX				S	**Sg**	**10 15 28.2**	**+1.0**
CESX				AML	AML		
	comp=N,2630μm,0.2s						
CESX				AML	AML		
	comp=E,2920μm,0.3s						
SSM1	**San Severino M**	**0.51**	**356**	P	**Pg**	**10 15 20.9**	**-0.3**
TRTR	**Tortoreto Alta**	**0.52**	**80**	P	**Pb**	**10 15 22.1**	**0.0**
TRTR				AML	AML		
	comp=N,9070μm,0.5s						
TRTR				AML	AML		
	comp=E,7815μm,0.4s						
FAGN	**Fagnano**	**0.53**	**149**	⇑P	**Pg**	**10 15 21.4**	**-0.1**
FAGN				AML	AML		
	comp=E,4590μm,0.6s						
FAGN				AML	AML		
	comp=N,4325μm,1.6s						
ASSB	**Assisi San Ben**	**0.53**	**308**	⇑P	**Pg**	**10 15 21.1**	**-0.4**
ASSB				S	**Sb**	**10 15 29.2**	**-0.6**
ASSB				AML	AML		
	comp=N,2525μm,1.3s						
ASSB				AML	AML		
	comp=E,2420μm,0.1s						
GAG1	**Gagliole**	**0.53**	**348**	P	**Pg**	**10 15 21.2**	**-0.4**
GAG1				S	**Sb**	**10 15 29.5**	**-0.5**
GAG1				AML	AML		

	comp=E,5565µm,0.4s								
GAG1				AML	AML				
	comp=N,6890µm,0.3s								
VCEL	**Villa Celiera**	**0.56**	**125**	⇓P	**Pg**	**10**	**15**	**22.3**	**+0.2**
VCEL				AML	AML				
	comp=N,2550µm,0.3s								
VCEL				AML	AML				
	comp=E,2390µm,0.4s								
SNTG	**Esanatoglia**	**0.58**	**339**	P	**Pg**	**10**	**15**	**21.6**	**-0.9**
SNTG				AML	AML				
	comp=E,1675µm,0.2s								
SNTG				AML	AML				
	comp=N,1890µm,0.2s								
EL6	**Elcito**	**0.62**	**352**	⇑P	**Pg**	**10**	**15**	**22.3**	**-1.0**
EL6				AML	AML				
	comp=N,3815µm,0.3s								
EL6				AML	AML				
	comp=N,3820µm,0.3s								
EL6				AML	AML				
	comp=E,2710µm,1.1s								
CADA	**Capodarco di F**	**0.62**	**40**	P	**Pb**	**10**	**15**	**24.1**	**+0.2**
T0110	**Collepietro**	**0.64**	**140**	⇓P	**Pg**	**10**	**15**	**23.4**	**-0.3**
T0110				AML	AML				
	comp=E,1995µm,0.3s								
T0110				AML	AML				
	comp=N,1745µm,1.3s								
T0110				AML	AML				
	comp=N,1750µm,1.3s								
FOSV	**Fossato di Vic**	**0.67**	**330**	⇑P	**Pg**	**10**	**15**	**23.6**	**-0.7**
FOSV				AML	AML				
	comp=N,1670µm,1.4s								
FOSV				AML	AML				
	comp=E,1281µm,0.2s								
PTQR	**Pietraquaria**	**0.71**	**169**	⇓P	**Pg**	**10**	**15**	**24.2**	**-0.7**
PTQR				AML	AML				
	comp=E,581µm,0.3s								
PTQR				AML	AML				
	comp=N,526µm,0.2s								
PTQR				AML	AML				
	comp=E,582µm,0.3s								
SRES	**S.Oreste - Sor**	**0.71**	**228**	⇑P	**Pg**	**10**	**15**	**24.4**	**-0.6**
SRES				AML	AML				
	comp=E,866µm,0.9s								
SRES				AML	AML				
	comp=N,1195µm,0.4s								
PP3	**Marolino**	**0.72**	**23**	⇑P	**Pb**	**10**	**15**	**25.4**	**-0.2**
PP3				AML	AML				
	comp=E,4885µm,0.5s								
PP3				AML	AML				
	comp=N,3520µm,0.2s								
PP3				AML	AML				
	comp=E,4650µm,0.5s								
PP3				AML	AML				
	comp=N,3975µm,0.2s								
MURB	**Monte Urbino**	**0.75**	**317**	⇑P	**Pg**	**10**	**15**	**25.4**	**-0.3**
MURB				AML	AML				
	comp=N,3545µm,0.3s								
MURB				AML	AML				
	comp=E,4355µm,0.2s								
MURB				AML	AML				
	comp=N,3330µm,0.3s								
MURB				AML	AML				
	comp=E,4050µm,0.2s								
MTCE	**Montecelio**	**0.78**	**207**	⇓P	**Pg**	**10**	**15**	**25.1**	**-1.2**
MTCE				AML	AML				
	comp=E,1470µm,0.5s								
MTCE				AML	AML				
	comp=N,852µm,0.7s								
CERT	**Cerreto**	**0.79**	**193**	⇓P	**Pg**	**10**	**15**	**25.2**	**-1.2**
CERT				AML	AML				
	comp=E,2810µm,0.5s								
CERT				AML	AML				
	comp=N,1680µm,0.5s								
SSFR	**Montelago di S**	**0.79**	**336**	⇓P	**Pg**	**10**	**15**	**25.8**	**-0.6**
SSFR				AML	AML				
	comp=N,3185µm,0.2s								
SSFR				AML	AML				
	comp=E,3440µm,0.2s								
SSFR				AML	AML				
	comp=N,3015µm,0.2s								
SSFR				AML	AML				
	comp=N,3185µm,0.2s								
SSFR				AML	AML				
	comp=E,3850µm,0.2s								
ATFO	**Monte Foce - G**	**0.81**	**324**	⇓P	**Pg**	**10**	**15**	**26.7**	**-0.1**
ATFO				AML	AML				
	comp=E,1040µm,1.1s								
ATFO				AML	AML				
	comp=N,966µm,0.5s								
ARVD	**Arcevia**	**0.81**	**345**	⇑P	**Pg**	**10**	**15**	**25.9**	**-0.9**
ARVD				AML	AML				
	comp=E,780µm,1.1s								
ARVD				AML	AML				
	comp=N,599µm,1.1s								
MGAB	**Montegabbione**	**0.84**	**284**	⇓P	**Pb**	**10**	**15**	**27.0**	**-0.6**
MGAB				AML	AML				
	comp=N,1960µm,0.4s								
MGAB				AML	AML				
	comp=E,1194µm,1.6s								
MGAB				AML	AML				
	comp=N,2095µm,0.4s								
MGAB				AML	AML				
	comp=E,1195µm,1.6s								
MGAB				AML	AML				
	comp=N,1965µm,0.4s								
MGAB				AML	AML				
	comp=E,1215µm,1.6s								
INTR	**Introdacqua**	**0.87**	**144**	⇓P	**Pb**	**10**	**15**	**26.9**	**-1.2**
INTR				AML	AML				
	comp=N,1055µm,1.0s								
INTR				AML	AML				
	comp=E,808µm,0.9s								
AOI	**Ancona**	**0.88**	**18**	P	**Pb**	**10**	**15**	**27.7**	**-0.6**
AOI				AML	AML				
	comp=N,916µm,1.3s								
AOI				AML	AML				
	comp=E,937µm,0.3s								
FRON	**Frontone**	**0.88**	**336**	⇓P	**Pb**	**10**	**15**	**27.2**	**-1.1**
FRON				AML	AML				
	comp=N,1155µm,0.4s								
FRON				AML	AML				
	comp=E,815µm,0.4s								
ATVO	**AVT- Monte Val**	**0.89**	**318**	⇑P	**Pb**	**10**	**15**	**28.2**	**-0.3**
ATVO				AML	AML				
	comp=E,564µm,0.5s								
ATVO				AML	AML				
	comp=N,544µm,1.3s								
RCAV	**Rocca di Cave**	**0.89**	**193**	P	**Pb**	**10**	**15**	**27.1**	**-1.4**
GUAR	**Guarcino**	**0.92**	**176**	P	**Pb**	**10**	**15**	**28.7**	**-0.3**
GUAR				AML	AML				
	comp=E,1180µm,0.4s								
GUAR				AML	AML				
	comp=N,1230µm,0.5s								
COR1	**Corinaldo**	**0.93**	**350**	P	**Pg**	**10**	**15**	**29.2**	**0.0**
ATPI	**Pietralunga -**	**0.95**	**321**	⇑P	**Pb**	**10**	**15**	**28.8**	**-0.7**
ATPI				AML	AML				
	comp=E,624µm,0.8s								
ATPI				AML	AML				
	comp=N,549µm,0.4s								
PIEI	**Pieia**	**0.96**	**329**	⇑P	**Pb**	**10**	**15**	**29.4**	**-0.3**
PIEI				AML	AML				
	comp=E,926µm,0.3s								
PIEI				AML	AML				
	comp=N,590µm,0.4s								
SACS	**San Casciano d**	**0.97**	**278**	P	**Pb**	**10**	**15**	**29.7**	**-0.2**
SACS				AML	AML				
	comp=E,530µm,0.6s								
SACS				AML	AML				
	comp=N,730µm,1.1s								
LPEL	**Lama dei Pelig**	**0.98**	**133**	⇑P	**Pb**	**10**	**15**	**29.8**	**-0.2**
LPEL				AML	AML				
	comp=N,576µm,1.3s								
LPEL				AML	AML				
	comp=E,576µm,1.0s								
SENI	**Senigallia**	**0.99**	**1**	P	**Pn**	**10**	**15**	**30.7**	**0.0**
NARO	**Abbazia di Nar**	**1.01**	**333**	P	**Pb**	**10**	**15**	**29.6**	**-0.9**
NARO				AML	AML				
	comp=N,444µm,1.2s								
NARO				AML	AML				
	comp=E,668µm,0.3s								
FSSB	**Fossombrone**	**1.03**	**342**	⇑P	**Pb**	**10**	**15**	**30.2**	**-0.6**
FSSB				AML	AML				
	comp=E,3460µm,0.4s								
FSSB				AML	AML				
	comp=N,2775µm,0.4s								
RDP	**Rocca di Papa**	**1.03**	**201**	AML	AML				
	comp=E,1630µm,0.4s								
RDP				AML	AML				
	comp=N,2250µm,1.4s								
POFI	**Posta Fibreno**	**1.06**	**160**	AML	AML				
	comp=N,317µm,0.5s								
POFI				AML	AML				
	comp=E,408µm,0.8s								
BADI	**Badiali**	**1.07**	**318**	⇓P	**Pn**	**10**	**15**	**31.5**	**-0.3**
LRP	**Arpino**	**1.10**	**166**	AML	AML				
	comp=E,292µm,0.6s								
LRP				AML	AML				
	comp=N,368µm,1.3s								
CAFI	**Castiglion Fio**	**1.10**	**304**	⇓P	**Pb**	**10**	**15**	**32.1**	**-0.1**
CAFI				AML	AML				
	comp=E,386µm,0.6s								
CAFI				AML	AML				
	comp=N,274µm,0.4s								
CAFI				AML	AML				
	comp=E,386µm,0.6s								
TOLF	**Tolfa**	**1.11**	**235**	P	**Pb**	**10**	**15**	**31.5**	**-0.8**
TOLF				AML	AML				
	comp=E,434µm,0.6s								
TOLF				AML	AML				
	comp=N,279µm,1.1s								
GIUL	**Giuliano Di Ro**	**1.16**	**179**	⇑P	**Pn**	**10**	**15**	**32.5**	**-0.6**
GIUL				AML	AML				
	comp=E,348µm,0.4s								
GIUL				AML	AML				
	comp=N,534µm,0.6s								
SSP9	**Sansepolcro**	**1.17**	**317**	⇓P	**Pg**	**10**	**15**	**34.3**	**+0.6**
PARC	**Parchiule**	**1.18**	**323**	⇓P	**Pb**	**10**	**15**	**33.4**	**0.0**
PARC				AML	AML				
	comp=E,511µm,0.5s								
PARC				AML	AML				
	comp=N,460µm,1.5s								
PESA	**Pesaro**	**1.25**	**347**	AML	AML				
	comp=N,1385µm,1.2s								
PESA				AML	AML				
	comp=E,1138µm,1.0s								
CPGN	**Carpegna, Ital**	**1.27**	**329**	P	**Pb**	**10**	**15**	**34.7**	**-0.2**
CPGN				AML	AML				
	comp=E,21650µm,1.4s								
CPGN				AML	AML				
	comp=N,23300µm,0.7s								
ARCI	**Arcidosso**	**1.29**	**277**	AML	AML				
	comp=E,119µm,0.6s								
ARCI				AML	AML				
	comp=N,110µm,0.6s								
ASQU	**Asqua**	**1.50**	**316**	AML	AML				
	comp=E,256µm,0.6s								
ASQU				AML	AML				
	comp=N,232µm,0.5s								
CASP	**Castiglione de**	**1.74**	**273**	⇑P	**Pn**	**10**	**15**	**40.9**	**-0.1**
DUGI	**Dugi Otok**	**1.85**	**46**	*e*Pn	**Pn**	**10**	**15**	**42.8**	**+0.3**
VIRC	**Vir**	**2.06**	**40**	*e*Pn	**Pn**	**10**	**15**	**45.9**	**+0.4**
VBKN	**Vesuvio Bunker**	**2.09**	**154**	⇓P	**Pb**	**10**	**15**	**47.9**	**-1.1**
VBKN				AML	AML				
	comp=E,912µm,0.6s								
VBKN				AML	AML				
	comp=N,775µm,1.5s								
MORI	**Morici**	**2.15**	**57**	*e*Pn	**Pn**	**10**	**15**	**47.7**	**+1.1**
NVLJ	**Novalja**	**2.20**	**32**	*e*Pn	**Pn**	**10**	**15**	**47.5**	**+0.2**
MAIM	**Mastiano**	**2.32**	**302**	⇑P	**Pn**	**10**	**15**	**50.1**	**+1.0**
MAIM				S	**Sn**	**10**	**16**	**17.0**	**-0.5**
MAIM				AML	AML				
	comp=E,69µm,0.5s								
MAIM				AML	AML				
	comp=N,82µm,0.3s								
RABC	**Rab**	**2.33**	**29**	*e*Pn	**Pn**	**10**	**15**	**49.1**	**0.0**
UDBI	**Udbina**	**2.59**	**45**	*e*Pn	**Pn**	**10**	**15**	**53.7**	**+1.0**
KIJV	**Kijevo**	**2.66**	**60**	*e*Pn	**Pn**	**10**	**15**	**55.0**	**+1.4**
A250A	**Rusevo Krmpots**	**2.66**	**27**	*e*Pn	**Pn**	**10**	**15**	**54.3**	**+0.5**
LSTV	**Lastovo**	**2.71**	**88**	*e*Pn	**Pn**	**10**	**15**	**55.1**	**+0.8**
RIY	**Rijeka**	**2.76**	**19**	*e*Pn	**Pn**	**10**	**15**	**55.5**	**+0.4**
RIY				*e*Sn	**Sn**	**10**	**16**	**30.3**	**+2.0**
AMUR	**Altamura**	**3.11**	**124**	P	**Pn**	**10**	**16**	**02.1**	**+2.2**
STON	**Ston**	**3.30**	**86**	*e*Pn	**Pn**	**10**	**16**	**02.5**	**0.0**
STON	**Ston**	**3.30**	**86**	*e*Pn	**Pn**	**10**	**16**	**01.7**	**-0.8**
STON				*e*Sn	**Sn**	**10**	**16**	**41.4**	**-0.1**
ROVR	**Rover Verones**	**3.31**	**333**	⇓P	**Pn**	**10**	**16**	**05.0**	**+2.2**
ROVR				S	**Sn**	**10**	**16**	**45.0**	**+2.9**
LJU	**Ljubljana**	**3.46**	**15**	P	**Pb**	**10**	**16**	**08.7**	**-3.5**
DOSS	**Dosso del Somm**	**3.48**	**336**	⇑P	**Pn**	**10**	**16**	**07.8**	**+2.6**
SALO	**Salr**	**3.49**	**327**	⇑P	**Pn**	**10**	**16**	**08.0**	**+2.8**
MAGA	**Magasa**	**3.58**	**330**	⇓P	**Pn**	**10**	**16**	**07.9**	**+1.4**
MAGA				S	**Sn**	**10**	**16**	**51.0**	**+2.3**
MAGA				AML	AML				
	comp=E,192µm,0.5s								
MAGA				AML	AML				
	comp=N,156µm,0.5s								
ORI	**Oriolo Calabro**	**3.59**	**136**	S	**Sn**	**10**	**16**	**51.0**	**+2.1**
LUSI	**Trento, Gardas**	**3.63**	**334**	⇓P	**Pn**	**10**	**16**	**09.1**	**+2.0**
LUSI				AML	AML				
	comp=N,100µm,1.4s								
LUSI				AML	AML				
	comp=E,56µm,0.5s								
GAGG	**Gaggia**	**3.74**	**335**	⇑P	**Pn**	**10**	**16**	**10.8**	**+2.2**
SARZ	**Sarezzano**	**3.79**	**306**	S	**Sg**	**10**	**17**	**10.0**	**-2.8**
ACOM	**Acomizza, Ital**	**3.84**	**3**	⇓P	**Pn**	**10**	**16**	**11.9**	**+1.9**
ACOM				AML	AML				
	comp=E,67µm,1.4s								
ACOM				AML	AML				
	comp=N,68µm,0.4s								
EUCT	**Pavia**	**3.86**	**312**	⇑P	**Pn**	**10**	**16**	**10.8**	**+0.6**
EUCT				AML	AML				
	comp=N,4080µm,0.1s								
EUCT				AML	AML				
	comp=E,1825µm,0.1s								
MABI	**Malga Bissina**	**3.86**	**331**	⇓P	**Pn**	**10**	**16**	**13.1**	**+2.8**
OBKA	**Obir**	**3.91**	**14**	*e*Pn	**Pn**	**10**	**16**	**13.0**	**+2.0**
	comp=E,1.5nm,0.2s								
MYKA	**Terra Mystica**	**3.92**	**4**	*e*Pn	**Pn**	**10**	**16**	**11.2**	**+0.1**
	comp=E,1.0nm,0.2s								
KOSI	**Kohlern**	**3.97**	**341**	⇑P	**Pn**	**10**	**16**	**13.6**	**+1.7**
KOSI				AML	AML				
	comp=E,68µm,0.6s								
KOSI				AML	AML				
	comp=N,76µm,0.7s								
ABTA	**Abfaltersbach**	**4.06**	**353**	*e*Pn	**Pn**	**10**	**16**	**13.7**	**+0.7**
	comp=N,3.5nm,0.3s								
SOKA	**Soboth**	**4.17**	**17**	*e*Pn	**Pn**	**10**	**16**	**15.5**	**+1.1**
	comp=N,1.0nm,0.3s								
KOGS	**Kog**	**4.31**	**29**	⇓P	**Pn**	**10**	**16**	**17.6**	**+1.2**
VSL	**Villasalto**	**4.33**	**223**	⇓P	**Pn**	**10**	**16**	**18.5**	**+1.8**
KBA	**Koelnbreinsper**	**4.36**	**1**	*e*Pn	**Pn**	**10**	**16**	**18.9**	**+1.6**
	comp=N,0.9nm,0.1s								
FETA	**Feichten**	**4.65**	**338**	*e*Pn	**Pn**	**10**	**16**	**23.5**	**+2.3**
	comp=N,1.0nm,0.3s								
BBLS	**Lazići**	**4.66**	**74**	*e*Pn	**Pn**	**10**	**16**	**22.6**	**+1.4**
BBLS				*e*Sn	**Sn**	**10**	**17**	**15.6**	**+0.4**
WTTA	**Wattenberg**	**4.68**	**347**	*e*Pn	**Pn**	**10**	**16**	**23.9**	**+2.2**
	comp=N,2.6nm,0.3s								
SQTA	**Sankt Quirin**	**4.72**	**343**	*e*Pn	**Pn**	**10**	**16**	**24.3**	**+2.1**
	comp=N,3.3nm,0.3s								
WATA	**Walderalm**	**4.76**	**346**	*e*Pn	**Pn**	**10**	**16**	**23.7**	**+1.0**
	comp=N,1.3nm,0.2s								
MOTA	**Moosalm**	**4.87**	**343**	*i* Pn	**Pn**	**10**	**16**	**25.4**	**+1.3**
	comp=N,1.3nm,0.3s								
FUSIO	**Fusio**	**4.96**	**321**	P	**Pn**	**10**	**16**	**25.0**	**-0.4**
BIOA	**Bad Ischl, Aus**	**4.98**	**3**	*e*Pn	**Pn**	**10**	**16**	**27.6**	**+1.9**
	comp=N,1.8nm,0.2s								
SJES	**Sjenica**	**4.98**	**81**	*e*Pn	**Pn**	**10**	**16**	**26.8**	**+1.1**
IVAS	**Ivanjica**	**5.14**	**78**	*e*Pn	**Pn**	**10**	**16**	**29.3**	**+1.4**
IVAS				*e*Sn	**Sn**	**10**	**17**	**26.0**	**-1.1**
MOA	**Molln**	**5.19**	**8**	*e*Pn	**Pn**	**10**	**16**	**30.0**	**+1.5**
	comp=N,1.4nm,0.3s								
RONA	**Rosalia, Austr**	**5.44**	**22**	*i* Pn	**Pn**	**10**	**16**	**32.1**	**+0.2**
	comp=N,2.2nm,0.4s								
CONA	**Conrad Observa**	**5.53**	**19**	*e*Pn	**Pn**	**10**	**16**	**34.9**	**+1.6**
	comp=N,1.3nm,0.2s								
BARS	**Barje**	**6.33**	**86**	*e*Pn	**Pn**	**10**	**16**	**46.1**	**+2.0**
BARS				*e*Sn	**Sn**	**10**	**17**	**54.7**	**-1.5**
MODS	**Modra-Piesok**	**6.33**	**25**	*e*SG	**Sg**	**10**	**18**	**34.9**	**+0.6**
KHC	**Kasperske Hory**	**6.42**	**2**	*e*PN	**Pn**	**10**	**16**	**47.0**	**+1.6**
KHC				*e*SN	**Sn**	**10**	**17**	**57.3**	**-1.2**
ZAPS	**Zavoj**	**6.92**	**82**	*e*Pn	**Pn**	**10**	**16**	**51.1**	**-1.2**

*IDC **24** 10:20:01.2±1.7,30°.38S×178°.10W,h0km,mb4.2/3, mbtmp4.3/5,ML3.5/2,Error ellipse: s-maj=50.9km s-min=20.2km az=121.0*
*NEIC **24** 10:20:04.0±1.1,30°.47S±0°.07×177°.7W±0°.2,h35km±2km, mb4.4/17,Error ellipse: s-maj=26.1km s-min=12.0km az=94.0*
ISC 24 10:20:05.1±1.0,**30°.51S**±0°.06×**177°.9W**±0°.2,**h46**km,**n41,**
σ**2§17**/44,**mb4.3**/12,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.26**	**357**	Pn		**Pn**	**Pn**	**10 20 24.0**	**-2.3**
	141nm,0.3s,baz=66,slow=11,SNR=17								
RAO				Sn			**Sn**	**10 20 37.8**	**-4.2**
	346nm,0.3s,baz=110,slow=23,SNR=17								
URZ	**Urewera**	**8.78**	**207**	Pn		**Pn**	**Pn**	**10 22 08.3**	**-1.1**
	0.3nm,0.3s,baz=262,slow=4.2,SNR=8.4								
URZ				Sn			**Sn**	**10 23 46.6**	**-0.3**
	3.2nm,0.3s,baz=214,slow=22,SNR=19								
	6.7nm,0.9s								
URZ	**Urewera**	**8.78**	**207**	Pn		**Pn**	**Pn**	**10 22 08.5**	**-0.8**
RAHZ	**Arahi**	**9.36**	**205**	P		**Sn**	**Sn**	**10 23 59.5**	**-1.7**
WHHZ	**Waihua**	**9.45**	**204**	P		**Sn**	**Sn**	**10 24 03.1**	**-0.3**
NMHZ	**Naumai**	**9.62**	**206**	P		**Sn**	**Sn**	**10 24 07.7**	**0.0**
BKZ	**Black Stump Fm**	**9.80**	**207**	P		**Sn**	**Sn**	**10 24 09.4**	**-2.7**
KWHZ	**Kaweka Forest**	**10.05**	**206**	P		**Sn**	**Sn**	**10 24 16.2**	**-2.1**
KAHZ	**Kahuranaki**	**10.21**	**204**	P		**Sn**	**Sn**	**10 24 20.3**	**-1.9**
BHHZ	**Black Hill Sta**	**10.25**	**207**	P		**Sn**	**Sn**	**10 24 21.6**	**-1.5**
KRHZ	**Kereru**	**10.26**	**206**	P		**Sn**	**Sn**	**10 24 20.6**	**-2.8**
PXZ	**Pawanui**	**10.43**	**203**	P		**Sn**	**Sn**	**10 24 22.3**	**-5.1**
PNHZ	**Pukenui**	**10.56**	**206**	P		**Sn**	**Sn**	**10 24 26.2**	**-4.6**
WPHZ	**Waipukurau**	**10.61**	**205**	P		**Sn**	**Sn**	**10 24 26.4**	**-5.4**
DVHZ	**Dannevirke**	**10.91**	**205**	P		**Sn**	**Sn**	**10 24 33.7**	**-5.6**
RPZ	**Rata Peaks**	**15.85**	**211**	Pn		**Pn**	**Pn**	**10 23 45.9**	**+0.8**
	0.3nm,0.3s,baz=24,slow=12,SNR=2.0								
RPZ				Sn			Sn	10 26 25.0	-15
	0.3nm,0.3s,baz=171,slow=18,SNR=1.3								
	17nm,1.0s								
ARMA	**Armidale**	**26.27**	**262**	P		**P**	**P**	**10 25 36.5**	**+0.2**
ARMA				IAmb		IAmb	IAmb	10 25 53.2	
	comp=Z,24nm,1.5s								
CTAO	**Charters Tower**	**33.95**	**279**	P		**P**	**P**	**10 26 46.4**	**+2.2**
CTAO				IAmb		IAmb	IAmb	10 26 47.1	
	comp=Z,3.7nm,0.6s								
STKA	**Stephens Creek**	**34.58**	**257**	P		**P**	**P**	**10 26 51.1**	**+1.5**
	comp=Z,2.9nm,0.5s,baz=106,slow=12,SNR=11								
	comp=Z,2.9nm,0.5s								
STKA	**Stephens Creek**	**34.58**	**257**	P		**P**	**P**	**10 26 52.3**	**+2.7**
BBOO	**Buckleboo**	**39.06**	**254**	P		**P**	**P**	**10 27 28.5**	**+0.8**
COEN	**Coen**	**39.43**	**286**	P		**P**	**P**	**10 27 31.9**	**+0.9**
COEN				IAmb		IAmb	IAmb	10 27 33.2	
	comp=Z,4.4nm,1.1s								
AS31	**Alice Springs**	**43.23**	**267**	P		**P**	**P**	**10 28 02.4**	**+0.3**
ASAR	**Alice Springs**	**43.23**	**267**	P		**P**	**P**	**10 28 02.6**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=106,slow=7.2,SNR=4.1								
ASAR				PcP		**PcP**	**PcP**	**10 29 51.7**	**+0.9**
	comp=Z,0.8nm,1.1s,baz=113,slow=4.4,SNR=1.9								
	comp=Z,1.0nm,0.5s								
ASAR	**Alice Springs**	**43.23**	**267**	P		**P**	**P**	**10 28 02.5**	**+0.3**
WR0	**Warramunga Arr**	**44.05**	**272**	P		**P**	**P**	**10 28 08.6**	**-0.1**
WR0				IAmb		IAmb	IAmb	10 28 18.4	
	comp=Z,8.9nm,1.4s								
WB2	**Warramunga Arr**	**44.22**	**272**	P		**P**	**P**	**10 28 09.9**	**-0.1**
WB2				IAmb		IAmb	IAmb	10 28 12.2	
	comp=Z,10nm,1.4s								
WRAB	**Tennant Creek**	**44.23**	**272**	P		**P**	**P**	**10 28 10.4**	**+0.3**
WRAB				IAmb		IAmb	IAmb	10 28 10.8	
	comp=Z,2.8nm,0.6s								
WRA	**Warramunga Arr**	**44.23**	**272**	P		**P**	**P**	**10 28 10.2**	**0.0**
	comp=Z,3.2nm,0.6s,baz=112,slow=7.8,SNR=84								
	comp=Z,3.2nm,0.6s								
WRA	**Warramunga Arr**	**44.23**	**272**	P		**P**	**P**	**10 28 10.2**	**0.0**
WB0	**Warramunga Arr**	**44.26**	**272**	P		**P**	**P**	**10 28 10.2**	**-0.1**
WB0				IAmb		IAmb	IAmb	10 28 12.8	
	comp=Z,4.6nm,0.7s								
FORT	**Forrest**	**46.15**	**255**	P		**P**	**P**	**10 28 25.7**	**+0.6**
SBA	**Scott Base**	**47.93**	**184**	P		**P**	**P**	**10 28 38.9**	**+0.4**
SBA				IAmb		IAmb	IAmb	10 28 46.8	
	comp=Z,2.6nm,1.2s								
VNDA	**Vanda**	**47.99**	**186**	P		**P**	**P**	**10 28 40.4**	**+1.5**
KNRA	**Kununurra**	**50.85**	**274**	P		**P**	**P**	**10 29 01.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.49**	**270**	P		**P**	**P**	**10 29 14.3**	**+0.5**
FITZ				IAmb		IAmb	IAmb	10 29 33.7	
	comp=Z,4.5nm,1.1s								
QSPA	**South Pole Qui**	**59.60**	**180**	P		**P**	**P**	**10 30 04.4**	**+0.4**
FINES	**FINESS Array B**	**145.30**	**340**	PKPbc		**PKPbc**	**PKPbc**	**10 39 36.9**	**0.0**
	comp=Z,2.6nm,0.5s,baz=61,slow=3.8,SNR=18								
NB2	**NORSAR Subarra**	**148.88**	**351**	PKP		**PKPab**	**PKPab**	**10 39 51.3**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=12,slow=2.7								
NOA	**NORSAR Array B**	**148.88**	**351**	PKPbc		**PKPab**	**PKPab**	**10 39 50.7**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=14,slow=4.3,SNR=4.1								
AKASG	**Malin Array Be**	**151.47**	**323**	PKPbc		**PKiKP**	**PKiKP**	**10 39 57.2**	**+3.2**
	comp=Z,1.2nm,0.5s,baz=49,slow=3.3,SNR=7.6								

*IDC **24** 10:26:30.8±0.9,51°.47N×75°.71E,h0km,mbtmp2.7/3, ML2.4/3,Error ellipse: s-maj=30.9km s-min=7.3km az=28.0*
*NNC **24** 10:26:30.4±0.3,51°.36N×75°.60E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=7.9km s-min=2.1km az=23.0, Suspected Mining explosion.*
ISC 24 10:26:31.0±1.0,**51°.47N**±0°.09×**75°.66E**±0°.07,**h0**km,**n12,**
σ**1§11**/14,**6C-4D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.00**	**114**	Pg		**Pn**	**Pn**	**10 27 05.9**	**-0.1**
	1.0nm,0.3s,baz=299,slow=18,SNR=75								
KURBB				Lg		Lg	Lg	10 27 33.5	
	1.1nm,0.3s,baz=304,slow=30,SNR=14								
KURBB	**Kurchatov Arra**	**2.00**	**114**	⇓Pn		**Pn**	**Pn**	**10 27 05.6**	**-0.3**
	14nm,0.5s								
KURBB				⇑Lg		Lg	Lg	10 27 33.5	
	33nm,0.5s								
KURK	**Kurchatov**	**2

ORCD	**Orcadas**	**9.37**	**225**	Pn		**Pn**	**10 29 23.7**	**-3.0**
VNA1	**Neumayer--Stat**	**18.79**	**156**	P		**P**	**10 31 30.4**	**-0.4**
VNA3	**Neumayer Olymp**	**18.91**	**159**	P		**P**	**10 31 32.5**	**+0.3**
PMSA	**Palmer Station**	**19.09**	**225**	P		**Pn**	**10 31 37.0**	**+2.1**
	1.4nm,0.3s,baz=65,slow=8.1,SNR=24							
PMSA				LR		LR	10 38 40.6	
	comp=Z,58nm,21.1s,baz=86,slow=36							
	19nm,0.7s							
PMSA	**Palmer Station**	**19.09**	**225**	P		**P**	**10 31 33.4**	**-0.8**
PMSA	**Palmer Station**	**19.09**	**225**	*eP*		**Pn**	**10 31 36.5**	**+1.6**
VNA2	**Neumayer--Watz**	**19.18**	**156**	P		**P**	**10 31 35.0**	**-0.2**
	baz=316,slow=11							
SNAA	**Sanae**	**20.78**	**155**	P		**P**	**10 31 51.7**	**-0.9**
SNAA	**Sanae**	**20.78**	**155**	P		**P**	**10 31 52.1**	**-0.5**
	14nm,0.7s,baz=308,slow=9.8,SNR=81							
	14nm,0.7s							
SNAA	**Sanae**	**20.78**	**155**	P		**P**	**10 31 52.4**	**-0.2**
SMAI	**San Martin Ant**	**21.31**	**217**	P		**P**	**10 31 58.7**	**+0.4**
SMAI				IAmb		IAmb	10 32 06.0	
	comp=Z,38nm,0.9s							
USHA	**Ushuaia**	**21.34**	**255**	P		**P**	**10 31 59.6**	**+1.0**
	comp=Z,22nm,0.7s,baz=83,slow=4.4,SNR=7.7							
	comp=Z,22nm,0.7s							
MG02	**Cerro Sombrero**	**22.42**	**259**	P		**P**	**10 32 08.4**	**-1.9**
BELA	**Belgrano 2**	**23.18**	**182**	P		**P**	**10 32 17.9**	**-0.1**
BELA				IAmb		IAmb	10 32 22.6	
	comp=Z,54nm,1.3s							
MG05	**Puerto Natales**	**24.70**	**260**	P		**P**	**10 32 32.3**	**-0.4**
MG05				IAmb		IAmb	10 32 41.6	
	comp=Z,43nm,1.4s							
GO09	**Cerro Castillo**	**24.78**	**261**	P		**P**	**10 32 33.3**	**-0.2**
GO09				IAmb		IAmb	10 32 54.1	
	comp=Z,48nm,1.4s							
PLTB	**Pedras Altas**	**28.05**	**316**	P		**P**	**10 33 03.0**	**-0.1**
PLTB	**Pedras Altas**	**28.05**	**316**	*eP*		**P**	**10 33 02.9**	**-0.1**
CPSB	**Cacapava Do Su**	**29.18**	**318**	*eP*		**P**	**10 33 13.0**	**-0.2**
CNLB	**Canela**	**29.21**	**323**	*eP*		**P**	**10 33 13.9**	**+0.4**
RODS	**Rosario do Sul**	**29.93**	**315**	*eP*		**P**	**10 33 19.9**	**0.0**
ALGR	**Alto Alegre (B**	**30.46**	**320**	*eP*		**P**	**10 33 25.3**	**+0.7**
UNIS	**Unistalda (Bra**	**31.01**	**316**	*eP*		**P**	**10 33 29.4**	**0.0**
ITQB	**Itaqui**	**31.12**	**313**	*eP*		**P**	**10 33 32.2**	**+1.9**
CRSM	**Crissiumal (Br**	**32.02**	**319**	*eP*		**P**	**10 33 38.5**	**+0.2**
TIJ01	**Guaruva-PR**	**32.31**	**329**	*eP*		**P**	**10 33 41.8**	**+0.9**
MAN01	**Angra dos Reis**	**33.35**	**338**	*eP*		**P**	**10 33 49.9**	**0.0**
PTGB	**Pitanga**	**33.85**	**324**	*eP*		**P**	**10 33 56.0**	**+1.6**
VAO	**Valinhos**	**33.93**	**333**	*eP*		**P**	**10 33 55.4**	**+0.3**
CPUP	**Villa Florida**	**34.35**	**315**	P		**P**	**10 33 57.9**	**-0.7**
	comp=Z,8.1nm,0.7s,baz=148,slow=6.3,SNR=14							
	comp=Z,8.1nm,0.7s							
CPUP	**Villa Florida**	**34.35**	**315**	P		**P**	**10 33 58.2**	**-0.4**
CPUP				IAmb		IAmb	10 34 10.3	
	comp=Z,10nm,0.7s							
CPUP	**Villa Florida**	**34.35**	**315**	*eP*		**P**	**10 33 57.9**	**-0.7**
GO05	**Huala**	**34.39**	**288**	P		**P**	**10 33 59.0**	**+0.1**
MT09	**Talagante**	**34.80**	**291**	P		**P**	**10 34 02.3**	**-0.3**
MT09				IAmb		IAmb	10 34 06.2	
	comp=Z,9.4nm,0.6s							
MT01	**Popeta**	**34.88**	**290**	P		**P**	**10 34 04.2**	**+1.1**
MT01				IAmb		IAmb	10 34 06.5	
	comp=Z,9.5nm,0.7s							
QSPA	**South Pole Qui**	**35.42**	**180**	P		**P**	**10 34 09.0**	**+1.3**
	comp=Z,21nm,0.8s,baz=196,slow=3.6,SNR=101							
	comp=Z,21nm,0.8s							
QSPA	**South Pole Qui**	**35.42**	**180**	P		**P**	**10 34 09.1**	**+1.5**
TRCB	**Terra Rica**	**35.82**	**325**	*eP*		**P**	**10 34 13.7**	**+2.4**
VA06	**Catapilco**	**35.90**	**292**	P		**P**	**10 34 11.8**	**-0.1**
VA06				IAmb		IAmb	10 34 24.3	
	comp=Z,19nm,0.8s							
PCMB	**Pacaembu**	**36.49**	**327**	*eP*		**P**	**10 34 14.2**	**-2.8**
CO02	**Combarbal**	**36.79**	**293**	P		**P**	**10 34 19.0**	**-0.6**
CO02				IAmb		IAmb	10 34 38.0	
	comp=Z,10.0nm,0.8s							
NAN01	**Guarapari, ES**	**37.57**	**346**	*eP*		**P**	**10 34 25.4**	**-0.7**
DIAM	**Diamantina, MG**	**37.72**	**340**	*eP*		**P**	**10 34 27.5**	**-0.2**
ITRB	**Iturama**	**38.01**	**330**	*eP*		**P**	**10 34 31.0**	**+1.1**
PMNB	**Patos De Minas**	**38.09**	**336**	*eP*		**P**	**10 34 30.4**	**-0.3**
GUA01	**Guaratinga, BA**	**38.76**	**347**	*eP*		**P**	**10 34 35.9**	**-0.3**
GO02	**Mina Guanaco**	**40.95**	**301**	P		**P**	**10 34 54.7**	**-0.1**
BDFB	**Brasilia**	**41.25**	**335**	P		**P**	**10 34 56.7**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=113,slow=4.5,SNR=5.9							
	comp=Z,3.9nm,0.6s							
BDFB	**Brasilia**	**41.25**	**335**	P		**P**	**10 34 57.0**	**-0.1**
BDFB				IAmb		IAmb	10 35 17.8	
	comp=Z,23nm,1.6s							
PB14	**IPOC Station P**	**41.80**	**300**	P		**P**	**10 35 01.4**	**-0.4**
MAW	**Mawson**	**42.44**	**145**	P		**P**	**10 35 05.9**	**-0.1**
	comp=Z,10.0nm,0.7s,baz=237,slow=7.5,SNR=26							
	comp=Z,10.0nm,0.7s							
MAW	**Mawson**	**42.44**	**145**	P		**P**	**10 35 06.1**	**+0.1**
LVC	**Limon Verde**	**42.76**	**303**	P		**P**	**10 35 12.2**	**+2.5**
	comp=Z,7.3nm,0.6s,baz=94,slow=2.6,SNR=11							
	comp=Z,7.3nm,0.6s							
LVC	**Limon Verde**	**42.76**	**303**	P		**P**	**10 35 09.2**	**-0.5**
PB01	**IPOC Station P**	**44.37**	**304**	P		**P**	**10 35 23.1**	**+0.7**
PB01				IAmb		IAmb	10 35 26.0	
	comp=Z,12nm,0.8s							
PTLB	**Pontes e Lacer**	**44.90**	**320**	P		**P**	**10 35 26.1**	**-0.3**
PTLB				IAmb		IAmb	10 35 38.2	
	comp=Z,8.4nm,0.6s							
SIV	**San Ignacio**	**45.14**	**317**	P		**P**	**10 35 27.3**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=187,slow=10,SNR=3.6							
	comp=Z,1.1nm,0.5s							
GO01	**Chusmiza**	**45.41**	**305**	P		**P**	**10 35 31.4**	**+0.3**
GO01				IAmb		IAmb	10 35 34.9	
	comp=Z,14nm,0.8s							
PB16	**IPOC Station P**	**46.71**	**306**	P		**P**	**10 35 41.8**	**+0.3**
PB16				IAmb		IAmb	10 35 54.2	
	comp=Z,10nm,1.3s							
SBA	**Scott Base**	**47.12**	**185**	P		**P**	**10 35 43.4**	**+0.1**
SBA				IAmb		IAmb	10 35 48.0	
	comp=Z,8.9nm,1.1s							
VILB	**Vilhena**	**47.59**	**320**	P		**P**	**10 35 47.2**	**-0.5**
VILB				IAmb		IAmb	10 35 49.0	
	comp=Z,27nm,1.4s							
VNDA	**Vanda**	**47.66**	**184**	P		**P**	**10 35 48.7**	**+1.2**
	comp=Z,3.6nm,0.8s,baz=183,slow=5.5,SNR=24							
	comp=Z,3.6nm,0.8s							
VNDA	**Vanda**	**47.66**	**184**	P		**P**	**10 35 47.6**	**+0.1**
LPAZ	**La Paz**	**47.86**	**309**	P		**P**	**10 35 51.1**	**+0.6**
	comp=Z,14nm,0.7s,baz=134,slow=4.8,SNR=29							
	comp=Z,14nm,0.7s							
LPAZ	**La Paz**	**47.86**	**309**	P		**P**	**10 35 50.7**	**+0.2**
H10N1	**ASCENSION HYDR**	**48.71**	**22**	T		T	11 28 22.8	
	baz=192,slow=75,SNR=14							
H10N3	**ASCENSION HYDR**	**48.71**	**22**	T		T	11 28 22.3	
	baz=192,slow=75,SNR=16							
H10N2	**ASCENSION HYDR**	**48.73**	**22**	T		T	11 28 23.5	
	baz=192,slow=75,SNR=18							
ETMB	**Extrema**	**52.80**	**315**	P		**P**	**10 36 26.5**	**-0.6**
ETMB				IAmb		IAmb	10 36 38.3	
	comp=Z,9.4nm,1.5s							
MACA	**Manacapuru-AM**	**56.84**	**324**	P		**P**	**10 36 55.6**	**-0.7**
MACA				IAmb		IAmb	10 36 56.1	
	comp=Z,6.8nm,0.6s							
TOA0	**Torodi Ar. Sit**	**73.18**	**33**	P		**P**	**10 38 42.4**	**-0.2**
TOA0				IAmb		IAmb	10 38 44.0	
	comp=Z,14nm,1.2s							
TORD	**Torodi Ar. Bea**	**73.18**	**33**	P		**P**	**10 38 42.2**	**-0.4**
	comp=Z,5.7nm,0.9s,baz=206,slow=6.4,SNR=16							
	comp=Z,5.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.18**	**33**	P		**P**	**10 38 42.3**	**-0.3**
TORD				IAmb		IAmb	10 38 44.1	
	comp=Z,12nm,1.2s							
KAAM	**Kaadhehdhoo**	**98.51**	**101**	P		Pdif	10 40 50.6	0.0
NVAR	**Mina Array Bea**	**118.86**	**296**	PKP		**PKiKP**	**10 46 00.1**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=182,slow=4.2,SNR=3.7							
ILAR	**Eielson Array**	**147.65**	**314**	PKPbc		**PKPbc**	**10 46 55.9**	**+0.9**
	comp=Z,5.3nm,1.0s,baz=117,slow=1.4,SNR=25							

*NEIC **24** 10:28:50.9±2.2, 35°.23S±0°.04×74°.10W±0°.07, h10km±1km, mb4.3/9, ML4.1(GUC), Error ellipse: s-maj=9.6km s-min=7.4km az=287.0*

*GUC **24** 10:28:54.4±0.8, 35°.35S×73°.86W, h19km±7km, ML4.1*

*IDC **24** 10:28:57.4±3.8, 35°.31S×73°.74W, h40km±33km, mb3.7/10, mbtmp4.0/12, ML3.9/2, MS3.0/3, Error ellipse: s-maj=33.3km s-min=15.0km az=86.0*

ISC 24 10:28:52.4±0.6,**35°.30S**±0°.04×**73°.76W**±0°.05,**h10**km,**n80,** σ**1§20/90,mb4.1**/15,**1C-4D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI05	**Punta Hualpn**	**1.52**	**162**	Pn	**Pb**	**10 29 19.6**	**-1.1**
BI05				Sn	**Sn**	**10 29 37.9**	**-1.6**
BI05	**Punta Hualpn**	**1.52**	**162**	*eP*	**Pb**	**10 29 19.5**	**-1.1**
BI05				*eS*	**Sn**	**10 29 38.0**	**-1.4**
GO05	**Huala**	**1.53**	**80**	Pn	**Pg**	**10 29 21.2**	**-0.5**
GO05				Sn	**Sg**	**10 29 42.0**	**+0.5**
GO05	**Huala**	**1.53**	**80**	*eP*	**Pg**	**10 29 21.2**	**-0.5**
GO05				*eS*	**Sg**	**10 29 41.6**	**0.0**
CCSP	**San Pedro de C**	**1.63**	**161**	*eP*	**Pn**	**10 29 20.8**	**-0.4**
CCSP				*eS*	**Sn**	**10 29 41.3**	**-0.9**
CCSP				IAML		10 29 42.8	
	comp=N,2μm,0.5s						
BO03	**Pichilemu**	**1.68**	**62**	*eP*	**Pb**	**10 29 22.5**	**-1.0**
BO03				*eS*	**Sb**	**10 29 44.0**	**-0.6**
BO03				IAML		10 29 46.0	
	comp=E,2μm,0.4s						
ML02	**Panimavida**	**1.96**	**104**		**Pg**	**10 29 29.2**	**-0.9**
ML02	**Panimavida**	**1.96**	**104**	*eP*	**Pb**	**10 29 28.4**	**+0.1**
ML02				*eS*	**Sg**	**10 29 55.1**	**-0.5**
ML02				IAML		10 29 58.4	
	comp=N,3μm,0.6s						
VA05	**Santo Domingo**	**2.41**	**48**		**Pn**	**10 29 31.9**	**-0.1**
VA05	**Santo Domingo**	**2.41**	**48**	*eP*	**Pn**	**10 29 31.8**	**-0.1**
VA05				*eS*	**Sn**	**10 30 00.1**	**-1.4**
VA05				IAML		10 30 06.1	
	comp=N,1μm,0.3s						
BO02	**Sierra Bellavi**	**2.50**	**79**		**Pb**	**10 29 35.5**	**-1.9**
BO02	**Sierra Bellavi**	**2.50**	**79**	*eP*	**Pb**	**10 29 35.5**	**-1.9**
BO02				*eS*	**Sb**	**10 30 07.5**	**-0.7**
BO02				IAML		10 30 11.0	
	comp=N,2μm,0.3s						
MT01	**Popeta**	**2.52**	**56**		**Pn**	**10 29 33.5**	**+0.1**
MT01	**Popeta**	**2.52**	**56**	*eP*	**Pn**	**10 29 33.3**	**-0.1**
MT01				*eS*	**Sn**	**10 30 03.5**	**-0.7**
MT09	**Talagante**	**2.75**	**57**		**Pn**	**10 29 37.0**	**+0.3**
MT09	**Talagante**	**2.75**	**57**	*eP*	**Pn**	**10 29 36.9**	**+0.2**
VA01	**Torpederas**	**2.87**	**38**		**Pn**	**10 29 37.3**	**-0.9**
MT02	**Curacav**	**2.98**	**48**		**Pn**	**10 29 39.6**	**-0.1**
MT02	**Curacav**	**2.98**	**48**	*eP*	**Pn**	**10 29 39.2**	**-0.6**
MT02				*eS*	**Sn**	**10 30 14.4**	**-1.1**
MT05	**Renca**	**3.14**	**54**	Pn	**Pn**	**10 29 43.0**	**+0.9**
MT05	**Renca**	**3.14**	**54**	*eP*	**Pn**	**10 29 42.4**	**+0.3**
MT05				IAML		10 30 22.5	
	comp=N,357nm,0.4s						
MT03	**Universidad Ad**	**3.23**	**57**		**Pn**	**10 29 44.3**	**+0.9**
MT03	**Universidad Ad**	**3.23**	**57**	*eP*	**Pn**	**10 29 44.1**	**+0.8**
MT03				*eS*	**Sn**	**10 30 22.4**	**+0.4**
MT03				IAML		10 30 33.4	
	comp=E,430nm,0.4s						
ROC1	**El Roble**	**3.25**	**45**		**Pn**	**10 29 44.1**	**+0.4**
ROCH	**El Roble**	**3.25**	**45**	*eP*	**Pn**	**10 29 43.4**	**-0.3**
ROCH				IAML		10 30 27.3	
	comp=N,306nm,0.3s						
LMEL	**Las Melosas**	**3.27**	**65**		**Pn**	**10 29 45.9**	**+1.9**
LMEL	**Las Melosas**	**3.27**	**65**	*eP*	**Pn**	**10 29 45.8**	**+1.9**
LMEL				*eS*	**Sn**	**10 30 25.3**	**+2.3**
LMEL				IAML		10 30 28.9	
	comp=N,428nm,0.2s						
PEL	**Peldehue**	**3.33**	**51**	Pn	**Pn**	**10 29 46.1**	**+1.5**
PEL	**Peldehue**	**3.33**	**51**	*eP*	**Pn**	**10 29 45.5**	**+0.9**
PEL				*eS*	**Sn**	**10 30 25.2**	**+0.8**
PEL				IAML		10 30 29.1	
	comp=N,324nm,0.5s						
VA06	**Catapilco**	**3.41**	**38**	Pn	**Pn**	**10 29 44.9**	**-0.8**
VA06	**Catapilco**	**3.41**	**38**	*eP*	**Pn**	**10 29 44.7**	**-1.0**
FCH	**Farellones**	**3.48**	**57**	*eP*	**Pn**	**10 29 47.8**	**+0.8**
FCH				IAML		10 30 33.7	
	comp=N,225nm,0.3s						
VA03	**San Esteban**	**3.67**	**47**		**Pn**	**10 29 49.9**	**+0.5**
VA03	**San Esteban**	**3.67**	**47**	*eP*	**Pn**	**10 29 50.0**	**+0.6**
LR03	**Panguipulli**	**4.47**	**166**		**Pn**	**10 30 01.7**	**+1.5**
VA04	**Juan Fernndez**	**4.50**	**290**		Pn	10 29 54.7	-6.0
VA04	**Juan Fernndez**	**4.50**	**290**	*eP*	Pn	10 29 54.6	-6.1
LR04	**Corral**	**4.58**	**177**		**Pn**	**10 30 01.0**	**-0.7**
GO06	**Curarrehue**	**4.65**	**158**	Pn	**Pn**	**10 30 05.0**	**+2.2**
CO02	**Combarbal**	**4.69**	**30**	Pn	**Pn**	**10 30 02.7**	**-0.7**
CO02	**Combarbal**	**4.69**	**30**	*eP*	**Pn**	**10 30 02.2**	**-1.2**
CO06	**Fray Jorge**	**4.95**	**22**		**Pn**	**10 30 04.3**	**-2.5**
CO03	**El Pedregal**	**5.14**	**31**		**Pn**	**10 30 09.5**	**0.0**
GO04	**Tololo Observa**	**5.69**	**27**		**Pn**	**10 30 15.1**	**-2.1**
LL04	**Puerto Octay**	**5.70**	**170**		**Pn**	**10 30 16.6**	**-0.5**
PLCA	**Paso Flores**	**5.99**	**156**	P	**Pn**	**10 30 23.9**	**+2.8**
	comp=N,0.9nm,0.3s,baz=324,slow=11,SNR=34						
PLCA				S	**Sn**	**10 31 30.0**	**+0.2**
	comp=N,5.5nm,0.8s,baz=359,slow=22,SNR=3.6						
PLCA				LR	LR	10 32 34.4	
	comp=N,165nm,20.4s,baz=337,slow=36						
	comp=N,4.4nm,0.4s						
PLCA	**Paso Flores**	**5.99**	**156**	Pn	**Pn**	**10 30 24.1**	**+3.0**
CO01	**Juntas del Tor**	**6.14**	**31**		**Pn**	**10 30 23.1**	**-0.3**
LCO	**Las Campanas**	**6.79**	**23**	Pn	**Pn**	**10 30 30.7**	**-1.7**
AC05	**El Transito**	**7.09**	**26**	Pn	**Pn**	**10 30 35.4**	**-1.0**
AC04	**Llanos de Chal**	**7.43**	**19**	Pn	**Pn**	**10 30 38.8**	**-2.2**
AC02	**Maricunga**	**9.32**	**26**	Pn	**Pn**	**10 31 05.7**	**-1.7**
AC01	**Pan de Azucar**	**9.52**	**17**	Pn	**Pn**	**10 31 08.8**	**-0.8**
PB14	**IPOC Station P**	**11.03**	**16**	Pn	**Pn**	**10 31 29.0**	**-1.6**
LVC	**Limon Verde**	**13.34**	**20**	LR	LR	10 36 30.3	
	comp=N,41nm,18.9s,baz=186,slow=34						
LPAZ	**La Paz**	**19.59**	**16**	P	**Pn**	**10 33 24.7**	**+1.9**
	comp=N,0.2nm,0.3s,baz=173,slow=6.2,SNR=8.8						
	comp=N,2.4nm,0.8s						
LPAZ	**La Paz**	**19.59**	**16**	P	**P**	**10 33 19.1**	**-2.3**
ITAB	**Concordia**	**20.13**	**72**	*eP*	Pn	10 33 30.0	+1.5
AQDB	**Aquidauana**	**21.69**	**52**	P	**P**	**10 33 43.9**	**+0.3**
AQDB				IAmb	IAmb	10 34 07.7	
	comp=Z,11nm,1.3s						
SIV	**San Ignacio**	**22.33**	**34**	P	**P**	**10 33 50.6**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=211,slow=9.5,SNR=6.7						
	comp=Z,1.2nm,0.5s						
NNA	**Nana**	**23.38**	**352**	LR	LR	10 40 41.2	
	comp=Z,51nm,19.6s,baz=154,slow=30						
PTLB	**Pontes e Lacer**	**23.72**	**37**	P	**P**	**10 34 05.5**	**+0.8**
PTLB				IAmb	IAmb	10 34 22.7	
	comp=Z,3.6nm,1.0s						
ETMB	**Extrema**	**26.29**	**17**	P	**P**	**10 34 28.7**	**+0.5**
ETMB				IAmb	IAmb	10 34 33.9	
	comp=Z,4.3nm,0.9s						
VNA3	**Neumayer Olymp**	**48.70**	**157**	P	**P**	**10 37 38.1**	**+1.5**
VNA2	**Neumayer--Watz**	**49.38**	**157**	P	**P**	**10 37 42.3**	**+0.6**
	baz=277,slow=7.9						
SNAA	**Sanae**	**50.93**	**157**	P	**P**	**10 37 54.9**	**+1.4**
SNAA	**Sanae**	**50.93**	**157**	P	**P**	**10 37 54.6**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=259,slow=8.7,SNR=9.3						
	comp=Z,1.6nm,0.9s						
QSPA	**South Pole Qui**	**54.94**	**180**	P	**P**	**10 38 24.5**	**+1.2**
	comp=Z,4.5nm,1.0s,baz=160,slow=9.4,SNR=3.8						
	comp=Z,4.5nm,1.0s						
QSPA	**South Pole Qui**	**54.94**	**180**	P	**P**	**10 38 25.5**	**+2.2**
VNDA	**Vanda**	**62.55**	**192**	P	**P**	**10 39 16.9**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=135,slow=5.7,SNR=1.4						
	comp=Z,0.5nm,0.8s						
TX31	**Lajitas Ar. Si**	**70.20**	**332**	P	**P**	**10 40 06.0**	**+0.4**
TX31				IAmb	IAmb	10 40 15.1	
	comp=Z,3.2nm,0.8s						
TX32	**Lajitas Array**	**70.20**	**332**	P	**P**	**10 40 05.7**	**+0.1**
TX32				IAmb	IAmb	10 40 15.1	
	comp=Z,1.1nm,0.8s						
TXAR	**Lajitas Array**	**70.20**	**332**	P	**P**	**10 40 05.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=158,slow=8.4,SNR=12						
	comp=Z,0.4nm,0.5s						
X48A	**Hartselle**	**70.50**	**348**	P	**P**	**10 40 07.0**	**-0.1**
CPCT	**Cooper Cave**	**71.10**	**351**	P	**P**	**10 40 10.4**	**-0.4**
CPCT				IAmb	IAmb	10 40 27.8	
	comp=Z,5.1nm,1.1s						
MAW	**Mawson**	**72.33**	**164**	P	**P**	**10 40 17.1**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=224,slow=11,SNR=4.9						
	comp=Z,2.2nm,0.7s						
DBIC	**Dimbokro**	**76.93**	**72**	P	**P**	**10 40 45.8**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=244,slow=9.1,SNR=1.4						
	comp=Z,1.7nm,0.6s						
BOSA	**Boshof**	**80.71**	**118**	P	**P**	**10 41 07.4**	**+1.2**
	comp=Z,2.6nm,0.8s,baz=331,slow=1.4,SNR=4.4						
	comp=Z,2.6nm,0.8s						
NVAR	**Mina Array Bea**	**84.16**	**326**	P	**P**	**10 41 24.5**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=158,slow=5.9,SNR=4.0						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**85.98**	**71**	P	**P**	**10 41 33.8**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=280,slow=5.6,SNR=4.3						
	comp=Z,1.3nm,0.9s						

*NEIC **24** 10:34:54.6±2.1, 20°.92N±0°.05×94°.57E±0°.06, h82km±1km, mb6.6/402, Mwb6.7/114, Mwc6.7/132, Mww6.8, Error ellipse: s-maj=9.5km s-min=8.6km az=47.0*

*NEIC **24** 10:34:54.9, 20°.92N×94°.58E, h86km, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.30; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-0.17; $M_{r\theta}$0.33; $M_{\theta\phi}$-0.16; $M_{\phi r}$-1.39; Fault plane solution: $M_0$1.46000×10^{19} NP1:ϕ168.52000°, δ85.92000°, λ83.66000°. NP2:ϕ45.91000°, δ7.54000°, λ147.17000°. Principal axes: T 1.5480, Plg49.0000°, Azm72.0000°; N -0.2048, Plg6.0000°, Azm169.0000°; P -1.3431, Plg41.0000°, Azm264.0000°;*

*BJI **24** 10:34:55.0±0.0, 20°.98N×94°.68E, h100km, mb6.1/78, mB6.9/74*

*MOS **24** 10:34:55.1±0.8, 20°.98N×94°.66E, h112km, mb6.4/85, MS6.3/55, Error ellipse: s-maj=6.0km s-min=3.3km az=117.6*

*IDC **24** 10:34:56.0±0.3, 21°.00N×94°.64E, h98km±2km, mb6.0/50, mbtmp6.3/53, MS6.2/71, Error ellipse: s-maj=7.6km s-min=4.4km az=41.0*

*NDI **24** 10:34:57.6±3.9, 20°.95N×94°.27E, h88km±18km, mb6.7, ML6.7, mb6.6(NEIC)*

*GCMT **24** 10:34:57.6±0.0, 20°.79N×94°.58E, h88km, MW6.8/175, Moment Tensor Solution. s175,c483; s174,c785; Duration: 58 Moment tensor: Scale 10^{19}Nm; M_{rr}0.52±.01; $M_{\theta\theta}$-0.23±.01; $M_{\phi\phi}$-0.29±.01; $M_{r\theta}$0.45±.00; $M_{\theta\phi}$0.04±.01; $M_{\phi r}$-1.60±.01; Best double couple: $M_0$1.71200×10^{19} NP1:ϕ164.00000°, δ83.00000°, λ91.00000°. NP2:ϕ338.00000°, δ7.00000°, λ84.00000°. Principal axes: T 1.8160, Plg52.0000°, Azm75.0000°; N -0.2080, Plg1.0000°, Azm344.0000°; P -1.6080, Plg38.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 10:34:59, 20°.72N×94°.36E, h80km, Moment Tensor Solution. Duration: 80 Moment tensor: Scale 10^{19}Nm; M_{rr}0.56; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-0.45; $M_{r\theta}$0.49; $M_{\theta\phi}$0.04; $M_{\phi r}$-1.88; Fault plane solution: $M_0$2.01000×10^{19} NP1: ϕ356.00000°, δ7.00000°, λ100.00000°. NP2: ϕ166.00000°, δ83.00000°, λ89.00000°. Principal axes: T 2.0661, Plg52.0000°, Azm74.0000°; N -0.1204, Plg1.0000°, Azm166.0000°; P -1.9457, Plg38.0000°, Azm257.0000°;*

*NEIC **24** 10:35:11, 20°.88N×94°.41E, h88km, Moment Tensor Solution. Duration: 125 Moment tensor: Scale 10^{19}Nm; M_{rr}0.58; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$-0.27; $M_{r\theta}$0.32; $M_{\theta\phi}$0.07; $M_{\phi r}$-1.33; Fault plane solution: $M_0$1.44000×10^{19} NP1: ϕ164.94000°, δ81.02000°, λ93.19000°. NP2: ϕ325.27000°, δ9.52000°, λ170.59000°. Principal axes: T 1.5724, Plg54.0000°, Azm79.0000°; N -0.2725, Plg3.0000°, Azm344.0000°; P -1.2999, Plg36.0000°, Azm252.0000°;*

ISC 24 10:34:54.3±0.2,**20°.94N**±0°.02×**94°.55E**±0°.02,**h88**km±1km, **h88**km:**pP-P,n2841,**σ1§85/3381,**mb6.5**/515,**269C-90D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MND	**Mandalay**	**1.81**	**54**		**Pn**	**10 35 25.1**	**+1.2**
MND				Sn	**Sn**	**10 35 47.2**	**+0.7**
BRDH	**Bariadhala**	**3.21**	**303**	P	**Pn**	**10 35 45.6**	**+3.1**
	502nm,0.3s,baz=269,slow=24,SNR=827						
BRDH				S	**Sn**	**10 36 21.8**	**+2.0**
	46μm,0.4s,baz=271,slow=24,SNR=40						
IMP	**Imphal**	**3.91**	**352**	*eP*	Pn	10 35 57.0	+4.8
AGT	**Agartala**	**4.23**	**314**	*ex*	**Pn**	**10 35 58.8**	**+2.4**
AGT				*ex*	**Sn**	**10 36 47.0**	**+2.3**
CHTO	**Chiang Mai**	**4.65**	**116**	Pn	**Pn**	**10 36 03.0**	**+0.8**
CHTO	**Chiang Mai**	**4.65**	**116**	P	**Pn**	**10 36 03.0**	**+0.8**
CHTO	**Chiang Mai**	**4.65**	**116**	P	**Pn**	**10 36 03.1**	**+1.0**

JHSG **JHARSUGUGA** 10.08 277 *e*P **Pn** **10 37 16.1 0.0**
JIRN **Jiri** 10.14 313 *e*P **Pn** **10 37 17.1 -0.2**
comp=Z,12μm,0.5s
JIRN **Jiri** 10.14 313 *e*Pn **Pn** **10 37 16.7 -0.6**
GUN **Gumba** 10.51 313 *e*P **Pn** **10 37 22.6 +0.3**
comp=Z,11μm,0.5s
GUN **Gumba** 10.51 313 *e*Pn **Pn** **10 37 22.0 -0.3**
GUN *e*Sn Sn 10 38 59.6 -19
comp=Z,14μm,0.7s
RAGD **RAYAGADA** 10.56 263 *e*P **Pn** **10 37 21.7 -1.0**
PKI **Pulchoki** 10.63 310 *e*P **Pn** **10 37 23.9 -0.1**
comp=Z,8μm,0.6s
PKI **Pulchoki** 10.63 310 *e*Pn **Pn** **10 37 23.3 -0.7**
PKI *e*Sn Sn 10 39 02.3 -19
PKIN **Phulchoki** 10.64 310 *e*P **Pn** **10 37 23.9 -0.2**
comp=Z,10μm,0.4s
PKIN **Phulchoki** 10.64 310 *e*Pn **Pn** **10 37 23.4 -0.7**
PKIN *e*Sn Sn 10 39 02.2 -19
comp=Z,9μm,0.5s
KKN **Kakani** 10.85 311 *e*P **Pn** **10 37 25.8 -1.1**
KKN **Kakani** 10.85 311 *e*Pn **Pn** **10 37 25.6 -1.3**
DMN **Daman** 10.87 309 *e*P **Pn** **10 37 26.9 -0.3**
DMN **Daman** 10.87 309 *e*Pn **Pn** **10 37 25.9 -1.3**
DMN *e*Sn Sn 10 39 07.5 -20
comp=Z,8μm,0.6s
VIS **Vishakhapatnam** 11.07 255 *ex* x 10 37 22.5
GKN **Gorkha** 11.44 310 *e*P **Pn** **10 37 34.3 -0.5**
GKN **Gorkha** 11.44 310 *e*Pn **Pn** **10 37 33.8 -1.0**
VAR **Varanasi** 11.46 294 *e*P **Pn** **10 37 33.4 -1.6**
BLSP **Bilaspur** 11.62 278 *e*P **Pn** **10 37 35.8 -1.4**
VLK **Valmikinagar** 11.63 305 *e*P **Pn** **10 37 36.9 -0.3**
UBPT **Khong Chiam** 11.81 117 Pn **Pn** **10 37 38.8 -0.9**
KOLN **Koldanda** 12.07 306 *e*P **Pn** **10 37 41.8 -1.6**
KOLN *e*S **Sn** **10 39 51.3 -4.9**
KOLN **Koldanda** 12.07 306 *e*Pn **Pn** **10 37 41.6 -1.8**
DANN **Dangsing** 12.27 309 *e*P **Pn** **10 37 44.2 -1.9**
comp=Z,8μm,0.5s
DANN **Dangsing** 12.27 309 *e*Pn **Pn** **10 37 44.3 -1.9**
DANN *e*Sn Sn 10 39 40.0 -21
comp=Z,6μm,0.7s
GYA **Guiyang** 12.38 61 ⇑*i*P **Pn** **10 37 48.6 +1.2**
GYA pP P 10 38 02.3 +6.4
GYA S **Sn** **10 40 05.3 +1.7**
GYA ScS **ScS** **10 50 22.5 -0.6**
GYA pmax pmax
comp=Z,420nm,2.4s
GYA pmax pmax
comp=Z,50μm,7.3s
GYA LR LR
comp=Z,297μm,19.2s
GYA LR LR
comp=Z,202μm,15.4s
GYA LR LR
comp=Z,310μm,20.1s
ALBI **Allahabad** 12.50 293 *e*P **Pn** **10 37 46.5 -2.5**
PYUN **Piuthan** 12.70 306 *e*P **Pn** **10 37 50.7 -1.1**
PYUN **Piuthan** 12.70 306 *e*Pn **Pn** **10 37 50.4 -1.4**
CD2 **Chengdu** 12.92 38 ⇑P **Pn** **10 37 56.0 +1.4**
CD2 S **Sn** **10 40 18.0 +1.4**
CD2 pmax pmax
comp=Z,330nm,0.9s
CD2 pmax pmax
comp=Z,20μm,5.6s
CD2 LR LR
comp=Z,283μm,17.6s
CD2 LR LR
comp=Z,179μm,13.2s
CD2 LR LR
comp=Z,228μm,16.2s
SRIT **Nakonsritamara** 13.21 158 **Pn** **10 37 58.1 -0.3**
BRCI **Bahraich** 13.54 302 *e*P **Pn** **10 38 01.2 -1.5**
JBP **Jabalpur** 13.69 282 *ex* **Pn** **10 38 02.0 -2.6**
JBP *e*S **Sn** **10 40 26.4 -8.7**
VJD **Vijayawada** 13.88 254 ⇓*i*P **Pn** **10 38 06.2 -1.0**
NGP **Nagpur** 14.47 274 ⇓*i*P **Pn** **10 38 13.6 -1.3**
QIZ **Qiongzhong** 14.50 95 **Pn** **10 38 16.7 +1.5**
QIZ **Qiongzhong** 14.50 95 ⇑*i*P **Pn** **10 38 16.4 +1.1**
QIZ pP P 10 38 30.3 +11
QIZ S **Sn** **10 40 55.5 +0.5**
QIZ pmax pmax
comp=Z,580nm,2.2s
QIZ pmax pmax
comp=Z,55μm,4.4s
QIZ LR LR
comp=Z,156μm,12.7s
QIZ LR LR
comp=Z,149μm,18.3s
QIZ LR LR
comp=Z,333μm,38.2s
QIZ **Qiongzhong** 14.50 95 P **Pn** **10 38 17.1 +1.8**
GULI **GuiLin** 15.18 70 ⇑P **Pn** **10 38 24.0 +0.1**
GULI S **Sn** **10 41 15.8 +4.5**
GULI pmax pmax
comp=Z,560nm,2.0s
GULI LR LR
comp=Z,262μm,11.4s
GULI LR LR
comp=Z,256μm,13.6s
GULI LR LR
comp=Z,282μm,13.0s
GOMU **GeErMu** 15.20 1 P **Pn** **10 38 21.9 -2.6**
GOMU pmax pmax
comp=Z,6μm,4.8s
GOMU LR LR
comp=Z,44μm,13.7s
GOMU LR LR
comp=Z,57μm,13.0s
GOMU LR LR
comp=Z,63μm,13.3s
JHNI **Jhansi** 15.39 290 ⇓*i*P **Pn** **10 38 23.1 -3.4**
LGTI **Lohaghat** 15.46 306 *e*P **Pn** **10 38 27.1 -0.3**
HYBB **Hyderabad (bro** 15.51 260 *e*P **Pn** **10 38 26.3 -1.9**
HYBB IVmB_BB 10 38 30.8
comp=Z,32μm,6.7s
HYBB *e*pP **pP** **10 38 47.3 -0.5**
HYBB *e*S **S** **10 41 30.9 +1.2**
HYBB IVMs_BB IVMs_BB 10 43 04.9
comp=Z,67μm,31.8s
PTH **Pithoragarh** 15.53 306 *e*P **Pn** **10 38 26.6 -1.8**
LHMI **Lhok Sumawe** 15.79 171 Pn **Pn** **10 38 31.0 -0.8**
LHMI **Lhok Sumawe** 15.79 171 P **Pn** **10 38 30.6 -1.1**
comp=Z,181μmcomp=Z,132μmcomp=Z,9μm,1.1s
LHMI **Lhok Sumawe** 15.79 171 P **Pn** **10 38 30.9 -0.8**
BHPL **Bhopal** 16.04 281 ⇓*i*P **Pn** **10 38 32.6 -2.1**
BHPL IAmb IAmb 10 38 41.1
comp=Z,3μm,0.6s
DLV **T Lat** 16.08 122 P **P** **10 38 38.5 +1.4**
ENH **Enshi** 16.35 52 **Pn** **10 38 38.1 -0.5**
AKL **Akola** 16.40 272 ⇓*i*P **Pn** **10 38 38.0 -1.2**
KULM **Kulim** 16.65 158 **Pn** **10 38 41.6 -0.8**
LZH **Lanzhou** 17.14 26 ⇑P **P** **10 38 48.8 +0.1**
LZH pP pP 10 39 04.6 -1.1
LZH sP sP 10 39 16.6 -0.3
LZH SS S 10 42 19.8 +17
LZH ScP **ScP** **10 46 56.5 +1.4**
LZH pmax pmax
comp=Z,2μm,1.3s
LZH pmax pmax
comp=Z,68μm,8.6s
LZH LR LR
comp=Z,115μm,17.0s
LZH LR LR
comp=Z,98μm,18.2s
LZH LR LR
comp=Z,232μm,18.7s
SONA **Sohna** 17.46 298 *e*P **P** **10 38 51.2 -0.9**
AYAN **Aya Nagar** 17.51 299 *e*P **P** **10 38 51.7 -0.9**
NDI **New Delhi** 17.51 300 *e*P **P** **10 38 51.0 -1.7**
NDI *e*P **Pn** **10 38 51.5 -1.3**
NDI *e*S **Sn** **10 41 57.0 -11**
IPM **Ipoh** 17.54 158 P **P** **10 38 51.6 -1.5**
IPM **Ipoh** 17.54 158 P **P** **10 38 53.0 -0.1**
DDI **Dehra Dun** 17.54 305 ⇓*i*P **P** **10 38 52.6 -0.5**
DDI IAmb IAmb 10 39 01.5
comp=Z,15μm,1.3s
KCSI **Kotacane, Aceh** 17.60 169 P **Pn** **10 38 54.1 +0.1**
comp=Z,143μmcomp=Z,117μmcomp=Z,3μm,1.1s
MCO **Taipa Grande** 17.73 83 P **Pn** **10 38 57.0 +1.5**
TSI **Tuntungan** 17.77 167 P **P** **10 38 55.6 -0.1**
comp=Z,205μmcomp=Z,211μmcomp=Z,9μm,1.1s
KUDL **Kundal** 17.91 297 *e*P **P** **10 38 55.9 -1.2**
CNSH **ChangSha** 18.20 63 ⇑P **Pn** **10 39 00.8 -0.3**
CNSH S **S** **10 42 19.3 -4.1**
CNSH pmax pmax
comp=Z,3μm,1.0s
CNSH LR LR
comp=Z,291μm,15.9s
CNSH LR LR
comp=Z,143μm,17.8s
CNSH LR LR
comp=Z,161μm,14.1s
SALM **Salem** 18.20 242 ⇓*i*P **Pn** **10 39 02.4 +1.3**
XAN **Xi'an** 18.21 41 ⇑P **P** **10 39 00.0 -0.4**
XAN pP pP 10 39 21.3 +3.8
XAN sP sP 10 39 30.3 +1.6
XAN S **S** **10 42 19.9 -3.9**
XAN pmax pmax
comp=Z,290nm,1.0s
XAN pmax pmax
comp=Z,96μm,7.1s
XAN LR LR
comp=Z,213μm,19.4s
XAN LR LR
comp=Z,129μm,18.7s
XAN LR LR
comp=Z,263μm,19.0s
KKR **Kurukshetra** 18.34 303 *e*P **Pn** **10 39 03.2 +0.4**
PSI **Prapat** 18.53 166 P **Pn** **10 39 06.0 +0.7**
comp=Z,4μm,0.9s,baz=310,slow=7.9,SNR=188
PSI ScP **ScP** **10 46 58.0 -0.3**
comp=Z,476nm,0.8s,baz=344,slow=7.6,SNR=19
PSI LR LR 10 48 16.7
comp=Z,60μm,19.8s,baz=338,slow=43
PSI **Prapat** 18.53 166 P **Pn** **10 39 06.0 +0.7**
PSI **Prapat** 18.53 166 P **Pn** **10 39 06.2 +0.9**
SMLA **Simla** 18.60 307 ⇓*i*P **Pn** **10 39 05.7 -0.2**
SMLA IAmb IAmb 10 39 11.8
comp=Z,5μm,0.9s
RPSI **Rantau Prapat** 18.63 166 P **P** **10 39 05.5 +0.4**
GTA **Gaotai** 18.95 13 ⇑P **P** **10 39 08.5 -0.1**
GTA pP pP 10 39 27.3 +1.6
GTA S **S** **10 42 38.0 -1.2**
GTA SS **SnSn** **10 43 02.3 +3.9**
GTA PcP **PcP** **10 43 32.8 +1.9**
GTA ScP **ScP** **10 46 59.8 +1.0**
GTA PcS **PcS** **10 47 03.3 -4.7**
GTA ScS **ScS** **10 50 39.4 -1.0**
GTA pmax pmax
comp=Z,430nm,1.0s
GTA pmax pmax
comp=Z,28μm,8.4s
GTA LR LR
comp=Z,54μm,20.4s
GTA LR LR
comp=Z,55μm,20.4s
GTA LR LR
comp=Z,122μm,24.3s
AJM **Ajmer** 19.04 291 ⇓*i*P **Pn** **10 39 11.2 0.0**
PALK **Pallekele** 19.08 227 P **Pn** **10 39 11.5 -0.3**
comp=Z,2μm,1.0s,baz=142,slow=11,SNR=106
PALK S S 10 42 29.1 -13
comp=Z,770nm,0.6s,baz=244,slow=23,SNR=9.4
PALK ScP **ScP** **10 47 00.7 +1.3**
comp=Z,196nm,1.0s,baz=50,slow=0.2,SNR=4.0
PALK **Pallekele** 19.08 227 **Pn** **10 39 11.4 -0.4**
PALK **Pallekele** 19.08 227 P **Pn** **10 39 11.7 -0.1**
PALK P **Pn** **10 39 11.7 -0.1**
BHK **Bhakra** 19.30 306 *e*P **Pn** **10 39 14.6 +0.3**
KAD **Karad** 19.58 263 ⇓*i*P **Pn** **10 39 17.1 -0.5**
KOD **Kodaikanal** 19.58 240 ⇓*i*P **Pn** **10 39 18.1 +0.2**
POO **Poona** 19.63 267 ⇓*i*P **Pn** **10 39 17.9 -0.4**
POO IAmb IAmb 10 39 22.6
comp=Z,5μm,1.0s
GSI **Gunungsitoli** 19.74 171 P **P** **10 39 16.3 -0.9**
GSI **Gunungsitoli** 19.74 171 P **P** **10 39 16.3 -0.9**
comp=Z,200μmcomp=Z,111μmcomp=Z,2μm,0.9s
GSI **Gunungsitoli** 19.74 171 P **P** **10 39 17.1 -0.1**
WHN **Wuhan** 20.21 58 ⇑P **P** **10 39 22.9 +0.8**
WHN sP **sP** **10 39 57.6 +7.0**
WHN S **S** **10 43 07.0 +2.9**
WHN pmax pmax
comp=Z,9μm,1.0s
WHN pmax pmax
comp=Z,136μm,8.1s
WHN LR LR
comp=Z,150μm,8.7s
WHN LR LR
comp=Z,423μm,17.3s
WHN LR LR
comp=Z,624μm,16.9s
THN **Thein Dam** 20.31 308 *e*P **P** **10 39 23.9 +0.6**
THN *i*pP **pP** **10 39 45.1 +4.1**
PCHI **Peechi** 20.33 242 *e*P Pn 10 39 25.1 -1.2
PCHI *e*S **S** **10 42 58.7 -8.0**
GOA **Goa** 20.41 258 ⇓*i*P Pn 10 39 26.8 -0.5
GOA IAmb IAmb 10 39 30.9
comp=Z,2μm,0.9s
MNGI **Mangalore** 20.46 250 ⇓*i*P Pn 10 39 26.7 -1.2
LYN **LuoYang** 20.82 46 ⇑*i*P **P** **10 39 28.5 -0.2**
LYN pP pP 10 39 45.1 -1.0
LYN S **S** **10 43 15.3 -0.7**
LYN sS sS 10 43 37.9 -7.0
LYN PcS **PcS** **10 47 15.8 +3.6**
LYN pmax pmax
comp=Z,570nm,1.6s
LYN pmax pmax
comp=Z,66μm,11.2s
TRD **Trivandrum** 21.00 237 ⇓*i*P **P** **10 39 32.5 +1.7**
TRD IAmb IAmb 10 39 45.3
comp=Z,2μm,1.0s
JMU **Jammu** 21.05 308 *e*P **P** **10 39 34.0 +2.8**
MYKOM **Kota Tinggi** 21.09 153 P **P** **10 39 31.8 +0.1**
BKNI **Bangkinang** 21.45 162 P **P** **10 39 35.2 -0.4**
BKNI **Bangkinang** 21.45 162 P **P** **10 39 35.3 -0.3**
comp=Z,120μmcomp=Z,50μmcomp=Z,3μm,1.0s
BKNI **Bangkinang** 21.45 162 P **P** **10 39 36.2 +0.6**
TPRI **Tanjung Pinang** 22.16 153 P **P** **10 39 42.1 -1.0**
comp=Z,96μmcomp=Z,47μmcomp=Z,2μm,1.3s
KNMB **Chin-men Tao** 22.26 76 P **P** **10 39 44.4 +0.2**
SARP **Sargodha** 22.39 304 P **P** **10 39 44.5 -1.0**
JASL **Jaisalmer** 22.40 290 *e*P **P** **10 39 47.1 +1.4**
QZH **Quanzhou** 22.49 75 ⇑*i*P **P** **10 39 46.6 0.0**
QZH pP **pP** **10 40 06.5 +2.2**
QZH sP **sP** **10 40 17.4 +2.1**
QZH PcP **PcP** **10 43 39.3 +1.6**
QZH S **S** **10 43 49.3 +2.0**
QZH sS **sS** **10 44 14.1 -4.2**
QZH pmax pmax
comp=Z,1μm,1.2s
QZH pmax pmax
comp=Z,64μm,6.7s
QZH LR LR
comp=Z,66μm,13.3s
QZH LR LR
comp=Z,86μm,15.4s
QZH LR LR
comp=Z,149μm,15.2s
RGRI **Rengat** 22.49 159 P **P** **10 39 46.7 +0.1**
comp=Z,4μmcomp=Z,46μmcomp=Z,2μm,1.2s
SISI **Saibi** 22.57 168 P **P** **10 39 47.4 -0.1**
comp=Z,76μmcomp=Z,50μmcomp=Z,2μm,1.4s
CHCP **Chirah Chowk** 22.71 308 P **P** **10 39 49.0 +0.1**
NIL **Nilore** 22.71 308 P **P** **10 39 48.7 -0.2**
NIL **Nilore** 22.71 308 P **P** **10 39 48.7 -0.2**
TIY **Taiyuan** 22.79 39 ⇑P **P** **10 39 48.3 -1.4**
TIY pP **pP** **10 40 11.5 +4.1**
TIY S **S** **10 43 48.8 -3.3**
TIY sS **sS** **10 44 24.4 +0.3**
TIY pmax pmax
comp=Z,350nm,1.1s
TIY pmax pmax
comp=Z,36μm,6.9s
TIY LR LR
comp=Z,93μm,18.6s
TIY LR LR
comp=Z,79μm,27.5s
TIY LR LR
comp=Z,77μm,19.2s
DSRI **Dabo** 23.44 154 P **P** **10 39 56.3 +0.3**
comp=Z,81μmcomp=Z,46μmcomp=Z,1μm,2.5s
THW **Thamme Wali** 23.46 305 P **P** **10 39 56.9 +0.8**
WMQ **Urumqi** 23.52 347 ⇑P **P** **10 39 57.8 +1.3**
WMQ pP pP 10 40 15.4 0.0
WMQ PP **PnPn** **10 40 33.1 +4.9**
WMQ S **S** **10 44 05.5 +1.8**
WMQ ScP **ScP** **10 47 11.8 +1.9**
WMQ ScS **ScS** **10 50 57.5 +1.1**
WMQ pmax pmax
comp=Z,2μm,0.9s
WMQ pmax pmax
comp=Z,30μm,4.1s
WMQ LR LR
comp=Z,60μm,20.9s
WMQ LR LR
comp=Z,64μm,19.3s
WMQ LR LR
comp=Z,67μm,20.9s
BTO **Baotou** 23.61 30 *e*P **P** **10 39 56.9 -0.5**
BTO S **S** **10 44 06.8 +1.4**
BTO LR LR
comp=Z,303μm,11.0s
BTO LR LR
comp=Z,278μm,15.1s
CEP **Cherat** 23.79 307 P **P** **10 40 00.3 +1.2**
KRJI **Kerinci** 23.87 163 P **P** **10 39 59.5 -0.4**
comp=Z,105μmcomp=Z,69μmcomp=Z,3μm,0.9s
HNS **HongShan** 23.97 42 ⇑P **P** **10 40 00.1 -0.4**
HNS PP **PnPn** **10 40 41.3 +6.9**
HNS PcP **PcP** **10 43 43.0 +2.5**
HNS S **S** **10 44 11.8 +0.8**
HNS ScP **ScP** **10 47 11.3 +0.1**
HNS ScS **ScS** **10 50 57.8 -0.5**
HNS pmax pmax
comp=Z,820nm,1.1s
HNS pmax pmax
comp=Z,45μm,9.4s
HNS LR LR
comp=Z,125μm,17.3s
HNS LR LR
comp=Z,108μm,19.6s
HNS LR LR
comp=Z,119μm,21.6s
JMBI **JAMBI** 24.14 157 P **P** **10 40 03.9 +1.7**
comp=Z,130μmcomp=Z,3μm,0.8s
PPSI **Pulau Pagai** 24.16 167 P **P** **10 40 03.3 +0.9**
comp=Z,116μmcomp=Z,261μmcomp=Z,11μm,1.4s
TPUB **Ta-pu** 24.26 80 P **P** **10 40 04.1 +0.8**
TPUB IAmb IAmb 10 40 29.6
comp=Z,4μm,1.6s
TPUB **Ta-pu** 24.26 80 P **P** **10 40 06.2 +2.8**
MNCI **Minicoy** 24.27 242 P **P** **10 40 05.8 +2.4**
MNCY **Minicoy** 24.30 242 ⇓*i*P **P** **10 40 06.0 +2.4**
NJ2 **Nanjing** 24.35 58 ⇑*i*P **P** **10 40 03.4 -0.6**
NJ2 pP **pP** **10 40 24.3 +0.6**
NJ2 sP **sP** **10 40 34.9 +0.6**
NJ2 PcP **PcP** **10 43 44.6 +3.1**
NJ2 S **S** **10 44 14.8 -2.3**
NJ2 sS **sS** **10 44 44.5 -7.2**
NJ2 pmax pmax
comp=Z,1μm,0.9s
NJ2 pmax pmax
comp=Z,51μm,6.1s
NJ2 LR LR
comp=Z,128μm,14.2s
NJ2 LR LR
comp=Z,152μm,16.2s
NJ2 LR LR
comp=Z,189μm,13.5s
KSH **Kashi** 24.41 323 P **P** **10 40 05.6 +0.9**
KSH pP pP 10 40 24.8 +0.1
KSH S **S** **10 44 17.4 -0.9**
KSH pmax pmax
comp=Z,690nm,0.5s
KSH pmax pmax
comp=Z,24μm,6.1s
KSH LR LR
comp=Z,107μm,15.2s
KSH LR LR
comp=Z,97μm,20.0s
KSH LR LR
comp=Z,247μm,29.5s
SSLB **Suanglung** 24.57 78 P **P** **10 40 09.4 +3.2**
TWG **Pinlang** 24.67 81 P **P** **10 40 08.8 +1.8**
TWG IAmb IAmb 10 40 33.7
comp=Z,4μm,1.2s
YULB **Yu-li** 24.88 79 P **P** **10 40 10.5 +1.5**
YULB IAmb IAmb 10 40 35.5
comp=Z,4μm,1.2s
TIA **Tai'an** 24.90 48 ⇑P **P** **10 40 08.5 -0.5**
TIA pP **pP** **10 40 32.4 +3.5**
TIA S **S** **10 44 25.3 -0.6**
TIA pmax pmax
comp=Z,1μm,0.8s
TIA pmax pmax
comp=Z,41μm,11.6s
TIA LR LR
comp=Z,89μm,17.8s
TIA LR LR
comp=Z,127μm,12.0s
TIA LR LR
comp=Z,132μm,32.4s
YHNB **Yeheng** 24.99 76 P **P** **10 40 11.3 +1.2**
YHNB **Yeheng** 24.99 76 P **P** **10 40 13.4 +3.4**
HMDM **Hanimaadhoo** 25.03 239 P **P** **10 40 14.0 +3.7**
HMDM IAmb IAmb 10 40 17.0
comp=Z,2μm,1.1s
HMDM **Hanimaadhoo** 25.03 239 P **P** **10 40 14.6 +4.2**
SNR=13
MASI **Maura Aman, Be** 25.09 162 P **P** **10 40 10.9 -0.1**
comp=Z,89μmcomp=Z,68μmcomp=Z,2μm,0.9s
TATO **Taipei** 25.11 76 P **P** **10 40 12.3 +1.3**
TATO **Taipei** 25.11 76 P **P** **10 40 12.1 +1.1**
TATO P **P** **10 40 12.1 +1.1**
NACB **Ninganchiao** 25.17 78 IAmb IAmb 10 40 38.1
comp=Z,3μm,1.1s
SBUM **Sibu** 25.19 135 P **P** **10 40 12.1 +0.3**
SHLS **Shalkode** 25.50 334 *e*P **P** **10 40 14.1 -0.4**
SHLS *e*S **S** **10 44 34.4 -1.0**
SHLS pmax pmax
comp=Z,2μm,1.7s
SHLS smax smax
comp=E,5μm,4.1s
SHLS **Shalkode** 25.50 334 *e*P **P** **10 40 14.1 -0.4**
comp=E,2μm,1.7s,baz=334
SHLS *e*S **S** **10 44 34.5 -1.0**
comp=E,5μm,4.1s,baz=334
PPBI **Pangkal Pinang** 25.61 152 P **P** **10 40 15.8 +0.2**
comp=E,105μmcomp=E,52μmcomp=E,1μm,0.9s
UZB **Uzunbulak** 25.67 333 *e*P **P** **10 40 17.5 +1.4**
UZB *e*S **S** **10 44 39.4 +1.2**
UZB smax smax
comp=N,13μm,9.3s
UZB **Uzunbulak** 25.67 333 *e*P **P** **10 40 17.6 +1.4**
baz=333
UZB *e*S **S** **10 44 39.5 +1.2**
comp=N,13μm,9.3s,baz=333
KSI **Kapahiang** 25.68 161 P **P** **10 40 15.1 -1.2**
comp=N,31μmcomp=N,1μm,0.6s
KKM **Kota Kinabalu** 25.70 122 P **P** **10 40 17.4 +0.9**
KKM **Kota Kinabalu** 25.70 122 P **P** **10 40 18.0 +1.5**
PMBI **Palembang** 25.75 156 P **P** **10 40 17.1 +0.2**
PMBI **Palembang** 25.75 156 P **P** **10 40 17.0 +0.2**
comp=N,95μmcomp=N,82μmcomp=N,5μm,1.1s
PMBI **Palembang** 25.75 156 P **P** **10 40 18.5 +1.6**
SATY **Saty** 25.86 332 *e*P **P** **10 40 19.4 +1.6**
SATY *e*S **S** **10 44 42.4 +1.1**
SATY pmax pmax
comp=Z,622nm,1.0s
SATY **Saty** 25.86 332 *e*P **P** **10 40 19.5 +1.6**
comp=Z,622nm,1.0s,baz=332
SATY *e*S **S** **10 44 42.4 +1.1**
baz=332
SSE **Sheshan** 25.93 62 P **P** **10 40 18.1 -0.2**
SSE pmax pmax
comp=Z,980nm,0.8s
SSE pmax pmax
comp=Z,5μm,7.9s
SSE LR LR
comp=Z,3μm,14.1s
SSE LR LR
comp=Z,2μm,13.4s
ZHN **Zhinishke** 25.94 332 *e*P **P** **10 40 20.0 +1.5**
ZHN *e*S **S** **10 44 44.7 +2.3**
ZHN smax smax
comp=N,10μm,9.2s
ZHN **Zhinishke** 25.94 332 *e*P **P** **10 40 20.0 +1.5**
baz=332
ZHN *e*S **S** **10 44 44.8 +2.3**
comp=N,10μm,9.2s,baz=332
TGY **Tagaytay City** 26.04 101 P **P** **10 40 20.7 +1.1**
comp=N,859nm,1.1s,baz=270,slow=16
TGY LR LR 10 50 41.4
comp=N,178μm,21.9s,baz=236,slow=36
comp=N,859nm,1.1s

KPKS Kokpek 26.07 333 *e*P **P** **10 40 20.8 +1.1**
KPKS *e*S **S** **10 44 45.0 +0.5**
KPKS pmax pmax
comp=Z,569nm,1.2s
KPKS smax smax
comp=E,4µm,4.1s
KPKS Kokpek 26.07 333 *e*P **P** **10 40 20.9 +1.2**
comp=E,569nm,1.2s,baz=333
KPKS *e*S **S** **10 44 45.0 +0.5**
comp=E,4µm,4.1s,baz=333
KBL Kabul 26.24 306 P **P** **10 40 22.8 +1.4**
KBL Kabul 26.24 306 P **P** **10 40 22.8 +1.4**
KBL pmax pmax
comp=Z,20µm,2.4s
KBL Kabul 26.24 306 P **P** **10 40 23.1 +1.7**
SNR=1166
KBL P **P** **10 40 23.1 +1.7**
SNR=1166
ULHL Ulahol 26.24 328 P **P** **10 40 22.9 +1.6**
SNR=342
MNAI Manna 26.46 161 P **P** **10 40 21.9 -1.4**
MNAI IAmb IAmb 10 40 56.1
comp=Z,1µm,1.0s
MNAI Manna 26.46 161 P **P** **10 40 22.1 -1.2**
comp=Z,77µmcomp=Z,38µmcomp=Z,1µm,1.1s
MNAI Manna 26.46 161 P **P** **10 40 23.0 -0.3**
YOJ Yonaguni jima 26.47 77 IAmb IAmb 10 40 48.5
comp=Z,2µm,1.1s
YOJ Yonaguni jima 26.47 77 P **P** **10 40 25.4 +2.1**
YOJ Yonaguni jima 26.47 77 P **P** **10 40 23.7 +0.4**
BJT Baijiatuau 26.50 39 P **P** **10 40 23.7 +0.3**
BJT Baijiatuau 26.50 39 P **P** **10 40 23.7 +0.3**
BJT pmax pmax
comp=Z,900nm,1.0s
BJI Beijing 26.52 39 P **P** **10 40 24.9 +1.3**
BJI pP **pP** **10 40 42.5 -1.1**
BJI PP **PnPn** **10 41 14.0 +5.1**
BJI PcP **PcP** **10 43 49.5 +3.3**
BJI S **S** **10 44 52.8 +1.5**
BJI sS **sS** **10 45 23.4 -2.8**
BJI ScP **ScP** **10 47 20.3 +1.9**
BJI PcS **PcS** **10 47 29.6 +2.2**
BJI pmax pmax
comp=Z,480nm,1.0s
BJI pmax pmax
comp=Z,27µm,13.3s
BJI LR LR
comp=Z,14µm,17.8s
BJI LR LR
comp=Z,93µm,18.8s
BJI LR LR
comp=Z,78µm,21.6s
STKI Sintang 26.54 139 P **P** **10 40 24.6 +0.6**
comp=Z,71µmcomp=Z,19µmcomp=Z,1µm,0.8s
MDOK Medeo 26.55 331 P **P** **10 40 26.4 +2.3**
MDOK Medeo 26.55 331 *e*P **P** **10 40 25.2 +1.1**
baz=330
MDOK *e*S **S** **10 44 53.8 +1.6**
baz=330
MDOK LR LR 10 50 58.1
comp=Z,35µm,20.0s,baz=330
SPMM Sapulut 26.71 124 P **P** **10 40 27.0 +1.4**
TPI Tanjungpandan 26.83 150 P **P** **10 40 26.7 +0.1**
comp=Z,14µmcomp=Z,376nm,1.1s
TKM2 Tokmak 2 27.06 328 P **P** **10 40 30.1 +1.4**
SNR=439
TKM2 Tokmak 2 27.06 328 *i* P **P** **10 40 30.0 +1.3**
TKM2 pmax pmax
comp=Z,541nm,1.2s
UCH Uchtor 27.10 326 P **P** **10 40 31.4 +2.0**
SNR=34
KBK Karagaybulak 27.19 327 P **P** **10 40 32.1 +2.3**
SNR=131
AAK Ala-Archa 27.41 327 P **P** **10 40 33.8 +2.1**
SNR=317
AAK Ala-Archa 27.41 327 P **P** **10 40 33.7 +2.0**
AAK IAmb IAmb 10 41 23.5
comp=Z,4µm,1.6s
AAK Ala-Archa 27.41 327*c i* P **P** **10 40 33.5 +1.8**
AAK pmax pmax
comp=Z,2µm,1.4s
AAK MLR MLR
comp=Z,66µm,22.0s
AAK Ala-Archa 27.41 327 P **P** **10 40 34.4 +2.6**
AAK P **P** **10 40 34.4 +2.6**
AAK Ala-Archa 27.41 327 *i* P **P** **10 40 34.0 +2.2**
SNR=449
LWLI Liwa 27.44 159 P **P** **10 40 30.2 -1.9**
comp=Z,38µmcomp=Z,13µmcomp=Z,1µm,0.8s
KUU Kurty 27.45 331 *e*P **P** **10 40 32.4 +0.5**
KUU *e*S **S** **10 45 07.5 +1.5**
KUU pmax pmax
comp=Z,2µm,2.9s
KUU smax smax
comp=N,2µm,3.9s
KUU Kurty 27.45 331 *e*P **P** **10 40 32.5 +0.5**
comp=N,2µm,2.9s,baz=330
KUU *e*S **S** **10 45 07.6 +1.5**
comp=N,2µm,3.9s,baz=330
TDK Taldyqorghan 27.45 335 *e*P **P** **10 40 32.2 +0.3**
TDK *e*S **S** **10 45 06.9 +0.9**
TDK pmax pmax
comp=Z,2µm,2.5s
TDK MLR MLR
comp=Z,30µm,13.0s
TDK Taldyqorghan 27.45 335 *e*P **P** **10 40 32.3 +0.3**
comp=Z,2µm,2.5s,baz=334
TDK *e*S **S** **10 45 06.9 +0.9**
baz=334
TDK LR LR 10 51 38.0
comp=Z,30µm,13.4s,baz=334
AML Almayashu 27.47 325 P **P** **10 40 34.8 +2.2**
SNR=31
CHMS Chumysh 27.54 327 P **P** **10 40 34.1 +1.3**
SNR=156
CHMS Chumysh 27.54 327 *i* P **P** **10 40 34.3 +1.5**
CHMS pmax pmax
comp=Z,316nm,0.8s
KLI Kotabumi 27.57 157 P **P** **10 40 33.0 -0.2**
comp=Z,69µmcomp=Z,548nm,0.8s
ZSN Zaisan 27.58 346 *e*P **P** **10 40 34.2 +1.1**
ZSN *e*S **S** **10 45 09.5 +1.4**
ZSN pmax pmax
comp=Z,685nm,1.6s
ZSN smax smax
comp=N,5µm,5.1s
ZSN Zaisan 27.58 346 *e*P **P** **10 40 34.2 +1.1**
comp=N,685nm,1.6s,baz=346
ZSN *e*S **S** **10 45 09.5 +1.4**
comp=N,5µm,5.1s,baz=346
MK31 Makanchi Array 27.65 342 P **P** **10 40 34.4 +0.7**
MK31 IAmb IAmb 10 41 01.9
comp=Z,2µm,1.4s
MK31 Makanchi Array 27.65 342 *i* P **P** **10 40 34.6 +0.9**
MK31 pmax pmax
comp=Z,286nm,0.5s
MKAR Makanchi Array 27.65 342 P **P** **10 40 34.8 +1.0**
comp=Z,312nm,0.5s,baz=147,slow=9.7,SNR=771
MKAR pP **pP** **10 40 57.4 +3.5**
comp=Z,320nm,0.6s,baz=144,slow=11,SNR=5.3
MKAR PcP **PcP** **10 43 51.1 +2.2**
comp=Z,116nm,0.8s,baz=204,slow=2.7,SNR=2.4
MKAR ScP **ScP** **10 47 22.4 +0.7**
comp=Z,170nm,0.8s,baz=150,slow=3.9,SNR=10
MKAR ScS **ScS** **10 51 15.4 +1.7**
comp=Z,17nm,0.9s,baz=142,slow=5.4,SNR=4.3
MKAR LR LR 10 52 28.8
comp=Z,31µm,18.6s,baz=180,slow=38
MKAR P3KPbc 11 12 58.0
comp=Z,6.9nm,0.8s,baz=352,slow=3.5,SNR=21
comp=Z,312nm,0.5s
MKAR Makanchi Array 27.65 342*ce*P **P** **10 40 34.4 +0.7**
MKAR pmax pmax
comp=Z,307nm,0.5s
MAKZ Makanchi 27.76 341 P **P** **10 40 35.1 +0.4**
MAKZ Makanchi 27.76 341 P **P** **10 40 35.1 +0.4**
MAKZ pmax pmax
comp=Z,1µm,1.5s
EKS2 Erkin-Say 27.80 326 P **P** **10 40 37.8 +2.6**
SNR=146
USP Ospenovka 27.86 328 P **P** **10 40 37.0 +1.4**
SNR=210
SGDS Sogindy 27.93 328 *e*P **P** **10 40 37.8 +1.6**
SGDS *e*S **S** **10 45 15.7 +2.0**
SGDS pmax pmax
comp=Z,1µm,4.6s
SGDS smax smax
comp=N,3µm,6.4s
SGDS Sogindy 27.93 328 *e*P **P** **10 40 37.9 +1.6**
comp=N,1µm,4.6s,baz=328
SGDS *e*S **S** **10 45 15.8 +2.0**
comp=N,3µm,6.4s,baz=328
MYLDM Lahad Datu 28.03 121 IAmb IAmb 10 41 39.2
comp=Z,3µm,1.6s
KASI Kota Agung 28.06 159 P **P** **10 40 34.7 -2.8**
comp=Z,52µmcomp=Z,8µmcomp=Z,442nm,0.6s
CHGR Chuyangaron 28.09 315 IAmb IAmb 10 41 30.6
comp=Z,2µm,1.0s
BLSI Bandar Lampung 28.18 157 P **P** **10 40 37.0 -1.6**
comp=Z,65µmcomp=Z,11µmcomp=Z,648nm,0.6s
SONM Songino Array 28.48 17 P **P** **10 40 41.9 +0.7**
comp=Z,84nm,0.5s,baz=198,slow=7.9,SNR=256
SONM PcP **PcP** **10 43 53.1 +2.1**
comp=Z,213nm,0.9s,baz=196,slow=7.5,SNR=9.2
SONM ScP **ScP** **10 47 24.5 +0.1**
comp=Z,132nm,1.1s,baz=196,slow=3.0,SNR=10
SONM PKiKP **PKiKP** **10 51 26.1 +0.1**
comp=Z,6.4nm,0.6s,baz=186,slow=3.2,SNR=7.6
SONM P3KPbc 11 12 55.0
comp=Z,5.1nm,1.0s,baz=10,slow=3.4,SNR=10
SONM PKPPKP **P'P'df** **11 14 53.1 -3.2**
comp=Z,3.5nm,0.9s,baz=291,slow=3.5,SNR=4.1
comp=Z,84nm,0.5s
JMJ Miyako jima 2 28.55 76 P **P** **10 40 42.9 +1.0**
ULN Ulaanbaatar 28.69 18 P **P** **10 40 42.9 -0.3**
ULN Ulaanbaatar 28.69 18*d i* P **P** **10 40 42.8 -0.3**
ULN pmax pmax
comp=Z,169nm,1.0s
ULN MLR MLR
comp=Z,80µm,21.0s
ULN Ulaanbaatar 28.69 18 P **P** **10 40 43.2 +0.1**
ULN P **P** **10 40 43.2 +0.1**
ULN Ulaanbaatar 28.69 18 P **P** **10 40 43.5 +0.4**
ULN sP **pP** **10 41 07.1 +3.8**
ULN ScP **ScP** **10 47 24.8 -0.3**
PBKI Pangkalan Bun 28.88 142 P **P** **10 40 45.8 +0.9**
comp=Z,27µmcomp=Z,1µm,1.1s
XLT XiLinHaoTe 29.06 33⇑ *i* P **P** **10 40 46.1 -0.3**
XLT pP pP 10 41 09.3 +2.7
XLT sP sP 10 41 19.8 +2.9
XLT PP **PnPn** **10 41 42.8 -0.1**
XLT S **S** **10 45 29.8 -1.8**
XLT sS sS 10 46 08.1 +1.6
XLT PcS **PcS** **10 47 34.0 -1.3**
XLT pmax pmax
comp=Z,200nm,0.9s
XLT pmax pmax
comp=Z,20µm,12.5s
XLT LR LR
comp=Z,8µm,16.8s
XLT LR LR
comp=Z,56µm,11.8s
XLT LR LR
comp=Z,90µm,25.7s
SBJI Serang 29.20 156 P **P** **10 40 46.8 -0.9**
comp=Z,11µmcomp=Z,456nm,1.4s
DGZ Jazzator, Alta 29.25 351*c i* P **P** **10 40 48.4 +0.4**
DGZ pmax pmax
comp=Z,503nm,0.7s
DGZ MLR MLR
comp=Z,34µm,19.0s
KAAM Kaadhehdhoo 29.27 229 P **P** **10 40 52.8 +4.5**
SNR=7.2
DZA Taraz 29.27 324 *e*P **P** **10 40 48.5 +0.4**
DZA *e*S **S** **10 45 36.7 +1.9**
DZA smax smax
comp=N,5µm,7.0s
DZA Taraz 29.27 324 *e*P **P** **10 40 48.6 +0.4**
baz=324
DZA *e*S **S** **10 45 36.8 +1.9**
comp=N,5µm,7.0s,baz=324
DL2 Dalian 29.35 46⇑ *i* P **P** **10 40 48.3 -0.5**
DL2 PcP **PcP** **10 43 54.5 +1.3**
DL2 S **S** **10 45 36.0 0.0**
DL2 pmax pmax
comp=N,720nm,0.8s
DL2 pmax pmax
comp=N,19µm,10.4s
DL2 LR LR
comp=N,54µm,20.8s
DL2 LR LR
comp=N,60µm,17.3s
DL2 LR LR
comp=N,77µm,27.9s
BTLS Baital 29.39 330 *e*P **P** **10 40 49.4 +0.3**
BTLS *e*S **S** **10 45 38.0 +1.6**
BTLS pmax pmax
comp=Z,390nm,1.5s
BTLS smax smax
comp=N,1µm,7.4s
BTLS Baital 29.39 330 *e*P **P** **10 40 49.5 +0.3**
comp=N,390nm,1.5s,baz=329
BTLS *e*S **S** **10 45 38.0 +1.6**
comp=N,1µm,7.4s,baz=329
TNG Tangerang 29.45 155 P **P** **10 40 50.8 +0.9**
comp=N,32µmcomp=N,26µmcomp=N,546nm,0.7s
MTKI Muara Teweh, K 29.48 135 P **P** **10 40 50.9 +0.6**
comp=N,60µmcomp=N,15µmcomp=N,780nm,0.8s
TAS Tashkent 29.48 319 P **P** **10 40 51.6 +1.6**
TAS IAmb IAmb 10 41 58.0
comp=Z,1µm,1.0s
TAS Tashkent 29.48 319 P **P** **10 40 51.6 +1.6**
TAS pmax pmax
comp=Z,1µm,1.0s
IUG Iuzhnay 29.54 321 *e*P **P** **10 40 52.2 +1.6**
IUG *e*S **S** **10 45 40.9 +1.8**
IUG smax smax
comp=E,2µm,3.2s
IUG Iuzhnay 29.54 321 *e*P **P** **10 40 52.2 +1.6**
baz=321
IUG *e*S **S** **10 45 41.0 +1.8**
comp=E,2µm,3.2s,baz=321
KNGR Kungurtug, Tuv 29.69 4*c i* P **P** **10 40 54.0 +2.1**
KNGR pmax pmax
comp=Z,1µm,1.1s
KNGR MLR MLR
comp=Z,19µm,17.0s
DBJI Dramaga 29.84 155 P **P** **10 40 51.9 -1.5**
comp=Z,74µmcomp=Z,24µmcomp=Z,716nm,1.1s
KK31 Karatay Array 29.87 323 P **P** **10 40 54.1 +0.6**
KK31 Karatay Array 29.87 323 *i* P **P** **10 40 53.3 -0.1**
KKAR Karatay Array 29.87 323 P **P** **10 40 54.2 +0.8**
KKAR Karatay Array 29.87 323 P **P** **10 40 54.2 +0.8**
KKAR pmax pmax
comp=Z,425nm,1.3s
SKJI Sukabumi 30.18 156 P **P** **10 40 53.8 -2.5**
comp=Z,5µmcomp=Z,518nm,0.7s
ZAK Zakamensk 30.18 11 *e*P **P** **10 40 56.2 0.0**
ZAK pmax pmax
comp=Z,374nm,1.0s
LEM Lembang 30.44 154 P **P** **10 40 59.4 +0.6**
comp=Z,262nm,0.9s,baz=347,slow=5.2,SNR=27
LEM ScP **ScP** **10 47 29.4 -1.8**
comp=Z,69nm,0.7s,baz=346,slow=14,SNR=3.6
LEM PKiKP **PKiKP** **10 51 27.5 -0.6**
comp=Z,54nm,0.8s,baz=313,slow=2.6,SNR=3.0
comp=Z,262nm,0.9s
LEM Lembang 30.44 154 P **P** **10 40 59.0 +0.2**
comp=Z,37µmcomp=Z,15µmcomp=Z,247nm,1.0s
CNJI Cibinong 30.68 155 P **P** **10 41 00.0 -0.7**
comp=Z,47µmcomp=Z,8µmcomp=Z,386nm,1.1s
SMKI Samarinda 30.70 131 P **P** **10 41 02.1 +1.0**
comp=Z,123µmcomp=Z,27µmcomp=Z,1µm,0.6s
NGCH Negor - Chabah 30.99 285 P **P** **10 41 08.0 +4.5**
SNR=14
BKB Balikpapan 31.07 133 P **P** **10 41 04.3 0.0**
BKB IAmb IAmb 10 41 09.1
comp=Z,805nm,0.7s
BKB Balikpapan 31.07 133 P **P** **10 41 04.4 +0.2**
comp=Z,110µmcomp=Z,40µmcomp=Z,2µm,1.5s
BKB Balikpapan 31.07 133 P **P** **10 41 05.6 +1.4**
MOY Mondy 31.07 8 *e*P **P** **10 41 04.5 +0.4**
MOY *e* 10 43 59.9
MOY pmax pmax
comp=Z,613nm,1.4s
JOW Kunigami 31.33 73 P **P** **10 41 06.1 -0.4**
JOW Kunigami 31.33 73 P **P** **10 41 08.2 +1.7**
JOW Kunigami 31.33 73 P **P** **10 41 06.6 +0.1**
BBKI Banjar Baru 31.37 138 P **P** **10 41 08.0 +1.1**
comp=Z,49µmcomp=Z,38µmcomp=Z,3µm,0.8s
SEM Semipalatinsk 31.50 342 *e*P **P** **10 41 07.7 -0.2**
SEM *e*S **S** **10 46 08.5 -1.3**
SEM smax smax
comp=E,5µm,8.7s
SEM Semipalatinsk 31.50 342 *e*P **P** **10 41 07.7 -0.2**
baz=342
SEM *e*S **S** **10 46 08.5 -1.3**
comp=E,5µm,8.7s,baz=342
HJU Haeju 31.84 51 P **P** **10 41 09.8 -1.1**
HJU pP **pP** **10 41 32.0 +0.9**
HJU S **S** **10 46 12.3 -2.7**
HJU AmB
comp=Z,6µm,3.1s
HJU AMS AMS
comp=N,70µm,10.9s
HJU AMS AMS
comp=E,57µm,8.9s
HJU AMS AMS
comp=Z,94µm,14.6s
SUJ Sinuiju 31.87 46 P **P** **10 41 10.1 -0.9**
SUJ pP **pP** **10 41 32.4 +1.1**
SUJ S **S** **10 46 13.8 -1.6**
SUJ AmB
comp=Z,2µm,1.4s
SUJ AMS AMS
comp=N,27µm,2.8s
SUJ AMS AMS
comp=E,87µm,9.0s
SUJ AMS AMS
comp=Z,113µm,11.7s
SMRI Semarang 31.90 149 P **P** **10 41 12.8 +1.3**
comp=Z,107µmcomp=Z,94µmcomp=Z,3µm,1.0s
SMRI Semarang 31.90 149 P **P** **10 41 13.7 +2.2**
BWJI Bawean 32.02 144 P **P** **10 41 13.6 +1.0**
comp=Z,42µmcomp=Z,25µmcomp=Z,2µm,1.1s
SNY Shenyang 32.12 43⇑ P **P** **10 41 13.5 +0.3**
SNY S **S** **10 46 16.3 -2.9**
SNY pmax pmax
comp=Z,720nm,0.9s
SNY pmax pmax
comp=Z,17µm,12.5s
SNY LR LR
comp=Z,53µm,13.9s
SNY LR LR
comp=Z,38µm,20.6s
SNY LR LR
comp=Z,100µm,24.5s
MPSI Mapaga 32.13 126 P **P** **10 41 14.2 +0.6**
comp=Z,108µmcomp=Z,18µmcomp=Z,397nm,1.0s
IRK Irkutsk 32.14 11 *e*P **P** **10 41 13.9 +0.6**
IRK *e* 10 44 02.4
IRK *e* 10 51 35.0
IRK pmax pmax
comp=Z,1µm,2.6s
KURBB Kurchatov Arra 32.20 341 P **P** **10 41 14.5 +0.8**
comp=Z,563nm,0.5s,baz=150,slow=8.6,SNR=831
KURBB PcP **PcP** **10 44 02.9 +2.4**
comp=Z,120nm,0.5s,baz=161,slow=2.4,SNR=10.0
KURBB S **S** **10 46 21.0 +0.8**
comp=Z,169nm,1.0s,baz=156,slow=14,SNR=6.1
KURBB ScP **ScP** **10 47 36.1 -0.1**
comp=Z,397nm,0.9s,baz=160,slow=3.1,SNR=20
KURBB LR LR 10 58 17.8
comp=Z,26µm,18.6s,baz=130,slow=44
KURBB SKKP 11 09 58.5
comp=Z,0.7nm,0.8s,baz=167,slow=2.3,SNR=5.2
KURBB P3KPbc 11 12 40.8
comp=Z,15nm,0.9s,baz=328,slow=5.0,SNR=39
KURBB PKPPKP **P'P'df** **11 14 49.2 -3.6**
comp=Z,0.8nm,0.3s,baz=239,slow=11,SNR=6.6
comp=Z,563nm,0.5s
KURBB Kurchatov Arra 32.20 341 P **P** **10 41 14.4 +0.6**
KURK Kurchatov 32.25 341 P **P** **10 41 14.8 +0.5**
KURK IAmb IAmb 10 41 17.0
comp=Z,843nm,0.8s
KURK Kurchatov 32.25 341*c i* P **P** **10 41 14.5 +0.3**
KURK pmax pmax
comp=Z,2µm,1.7s
KURK MLR MLR
comp=Z,26µm,16.0s
KURK Kurchatov 32.25 341 P **P** **10 41 14.8 +0.5**
KURK P **P** **10 41 14.8 +0.5**
KURK Kurchatov 32.25 341 P **P** **10 41 14.9 +0.7**
KURK pP **pP** **10 41 30.6 -3.9**
KURK sP **sP** **10 41 39.4 -5.5**
KURK ScP **ScP** **10 47 38.6 +2.2**
PYAG Pyongyang 32.28 49 P **P** **10 41 13.6 -1.0**
PYAG pP **pP** **10 41 36.2 +1.3**
PYAG S **S** **10 46 19.3 -2.4**
PYAG AmB
comp=Z,909nm,0.9s
PYAG AMS AMS
comp=N,105µm,18.4s
PYAG AMS AMS
comp=E,42µm,7.4s
PYAG AMS AMS
comp=Z,132µm,23.2s
INCN Inchon 32.29 52 P **P** **10 41 13.6 -1.2**
INCN Inchon 32.29 52 P **P** **10 41 13.6 -1.2**
INCN pmax pmax
comp=Z,280nm,0.8s
INCN Inchon 32.29 52 P **P** **10 41 13.4 -1.4**
INCN P **P** **10 41 13.4 -1.4**
INCN Inchon 32.29 52 P **P** **10 41 14.4 -0.4**
INCN Inchon 32.29 52 P **P** **10 41 13.5 -1.4**
INCN ScP **ScP** **10 47 35.7 -1.3**
TOLI2 Tolitoli 32.31 124 P **P** **10 41 15.9 +0.7**
TBJI Tambak Boyo 32.40 147 P **P** **10 41 17.6 +1.7**
comp=Z,42µmcomp=Z,30µmcomp=Z,2µm,1.0s
TJN Taejon 32.45 55*c i* P **P** **10 41 14.8 -1.4**
TJN Taejon 32.45 55 P **P** **10 41 15.9 -0.3**
YOGI Yogyakarta 32.50 150 P **P** **10 41 15.9 -0.9**
comp=Z,28µmcomp=Z,16µmcomp=Z,582nm,1.7s
JFU Fukue jima 2 32.54 62 P **P** **10 41 15.8 -1.2**
OTUK Ortayu 32.57 332 P **P** **10 41 18.0 +0.9**
JAM Amami Oshima 32.62 70 P **P** **10 41 17.4 -0.4**
NGJI Ngawi 32.67 148 P **P** **10 41 20.5 +2.2**
comp=Z,104µmcomp=Z,45µmcomp=Z,940nm,1.4s
UGM Wanagama 32.69 150 IAmb IAmb 10 41 23.3
comp=Z,2µm,1.3s
UGM Wanagama 32.69 150 P **P** **10 41 18.1 -0.4**
comp=Z,55µmcomp=Z,25µmcomp=Z,979nm,1.0s
UGM Wanagama 32.69 150 P **P** **10 41 18.6 +0.1**
COCO West Island 33.00 176 P **P** **10 41 24.2 +3.1**
COCO IAmb IAmb 10 41 48.5
comp=Z,1µm,1.2s
COCO West Island 33.00 176 P **P** **10 41 24.2 +3.1**
COCO pmax pmax
comp=Z,1µm,1.3s
DAV Davao City (W) 33.03 110 P **P** **10 41 22.8 +1.4**
comp=Z,249nm,0.4s,baz=84,slow=2.3,SNR=4.3
comp=Z,249nm,0.4s
DAV Davao City (W) 33.03 110 P **P** **10 41 23.9 +2.4**
WBK Wadi Bani Khal 33.04 280 P **P** **10 41 25.1 +3.5**
SNR=97
WBK P **P** **10 41 25.1 +3.5**
SNR=97
XMI Christmas Isla 33.06 160 P **P** **10 41 22.7 +1.0**
XMIS Christmas Isla 33.08 160 IAmb IAmb 10 41 23.8
comp=Z,716nm,0.7s
XMIS Christmas Isla 33.08 160 P **P** **10 41 22.7 +0.9**
KS19 Wonju Array Si 33.21 53 P **P** **10 41 22.4 -0.4**
KSRS Korea Array 33.24 53 P **P** **10 41 22.2 -0.8**
comp=Z,82nm,0.6s,baz=241,slow=8.6,SNR=191
KSRS PcP **PcP** **10 44 05.1 +1.5**
comp=Z,139nm,0.8s,baz=245,slow=2.8,SNR=17
KSRS ScP **ScP** **10 47 38.2 -2.0**
comp=Z,161nm,1.1s,baz=255,slow=3.8,SNR=17
KSRS PKiKP **PKiKP** **10 51 29.2 -0.1**
comp=Z,3.8nm,0.6s,baz=278,slow=1.4,SNR=5.7
KSRS LR LR 10 56 39.0
comp=Z,67µm,18.5s,baz=245,slow=39
KSRS PKPPKP **P'P'df** **11 14 50.1 -2.8**
comp=Z,2.0nm,0.9s,baz=55,slow=1.5,SNR=4.3
comp=Z,82nm,0.6s
PCJI Pacitan 33.25 149 P **P** **10 41 22.2 -1.1**
comp=Z,49µmcomp=Z,10µmcomp=Z,237nm,1.4s
WSAR Wadi Sarin 33.31 281 P **P** **10 41 25.8 +1.9**
comp=Z,388nm,1.0s,baz=112,slow=8.7,SNR=60
comp=Z,388nm,1.0s
PWJI Pagerwojo 33.41 148 P **P** **10 41 25.0 +0.3**
comp=Z,18µmcomp=Z,876nm,1.1s
KSBUS Busan 33.47 57 IAmb IAmb 10 41 27.8
comp=Z,440nm,0.9s
JTU Tsushima 33.51 59 P **P** **10 41 25.4 0.0**
JTU Tsushima 33.51 59 P **P** **10 41 24.1 -1.2**
MRSI Marisa 33.61 124 P **P** **10 41 26.7 +0.2**
comp=Z,98µmcomp=Z,30µmcomp=Z,1µm,0.6s

KMMI	**Kalianget**	**33.73**	**144**		P		**P**		**10 41 28.3**	**+0.8**
	comp=Z,81µmcomp=Z,42µmcomp=Z,4µm,1.0s									
JSU	**Suzuyama**	**33.75**	**64**		P		**P**		**10 41 27.3**	**-0.3**
BIDO	**Bidbid**	**33.76**	**281**		P		**P**		**10 41 31.0**	**+3.2**
	SNR=291									
BIDO					P		**P**		**10 41 31.0**	**+3.2**
	SNR=291									
BRZS	**Berezniki**	**33.76**	**334**	*e*	P		**P**		**10 41 27.7**	**+0.3**
BRZS				*e*	S		**S**		**10 46 44.8**	**+0.3**
BRZS					pmax		pmax			
	comp=Z,441nm,1.2s									
BRZS					smax		smax			
	comp=N,4µm,8.6s									
BRZS	**Berezniki**	**33.76**	**334**	*e*	P		**P**		**10 41 27.8**	**+0.3**
	comp=N,441nm,1.2s,baz=334									
BRZS				*e*	S		**S**		**10 46 44.9**	**+0.3**
	comp=N,4µm,8.6s,baz=334									
ZAA0	**Zalesovo Array**	**33.78**	**350**		IAmb		IAmb		10 41 58.0	
	comp=Z,1µm,1.1s									
ZALV	**Zalesovo Beam**	**33.78**	**350**		P		**P**		**10 41 28.0**	**+0.5**
	comp=Z,802nm,0.8s,baz=171,slow=8.2,SNR=583									
ZALV					S		**S**		**10 46 45.6**	**+1.0**
	comp=Z,52nm,0.7s,baz=167,slow=13,SNR=4.3									
ZALV					ScP		**ScP**		**10 47 40.8**	**-0.9**
	comp=Z,79nm,0.8s,baz=162,slow=3.1,SNR=5.8									
ZALV					P3KPbc				11 12 33.5	
	comp=Z,11nm,0.7s,baz=334,slow=5.0,SNR=21									
	comp=Z,802nm,0.8s									
I46RU	**ZALESOVO INFRA**	**33.78**	**350**		P		**P**		**10 41 26.1**	**-1.4**
	baz=159,slow=10.0,SNR=2.5									
JMDO	**Jabal Madar**	**33.85**	**279**		P		**P**		**10 41 32.0**	**+3.4**
	SNR=116									
JMDO					P		**P**		**10 41 32.0**	**+3.4**
	SNR=116									
SMDO	**Samad**	**33.85**	**280**		P		**P**		**10 41 32.0**	**+3.3**
	SNR=224									
SMDO					P		**P**		**10 41 32.0**	**+3.3**
	SNR=224									
HHU	**Hamhung**	**33.89**	**49**		P		**P**		**10 41 27.8**	**-0.8**
HHU					pP		**pP**		**10 41 50.0**	**+0.9**
HHU					S		**S**		**10 46 45.3**	**-1.4**
HHU					AmB					
	comp=Z,5µm,2.4s									
HHU					AMS		AMS			
	comp=N,95µm,20.4s									
HHU					AMS		AMS			
	comp=E,38µm,8.2s									
HHU					AMS		AMS			
	comp=Z,44µm,9.5s									
BLJI	**Banyuglugur**	**34.10**	**145**		P		**P**		**10 41 31.2**	**+0.5**
	comp=Z,36µmcomp=Z,15µmcomp=Z,956nm,1.0s									
MHTO	**MHTO**	**34.11**	**277**		P		**P**		**10 41 33.1**	**+2.3**
	SNR=165									
MHTO					P		**P**		**10 41 33.1**	**+2.3**
	SNR=165									
APSI	**Ampana**	**34.27**	**126**		P		**P**		**10 41 32.4**	**+0.2**
	comp=Z,54µmcomp=Z,14µmcomp=Z,711nm,0.6s									
CN2	**Changchun**	**34.33**	**41**	*e*	P		**P**		**10 41 30.8**	**-1.6**
CN2					PP		**PnPn**		**10 42 48.3**	**-1.5**
CN2					S		**S**		**10 46 50.6**	**-2.8**
CN2					pmax		pmax			
	comp=Z,100nm,0.6s									
CN2					pmax		pmax			
	comp=Z,15µm,6.7s									
CN2					LR		LR			
	comp=Z,27µm,16.0s									
CN2					LR		LR			
	comp=Z,41µm,16.0s									
CN2					LR		LR			
	comp=Z,39µm,24.0s									
CIT	**Chita**	**34.36**	**21**	*e*	P		**P**		**10 41 32.4**	**-0.2**
CIT				*e*					10 41 56.4	
CIT				*e*					10 42 09.2	
CIT				*e*					10 42 46.8	
CIT				*e*					10 43 17.0	
CIT				*e*					10 44 06.6	
CIT				*e*					10 46 52.8	
CIT					pmax		pmax			
	comp=Z,911nm,2.4s									
TTSI	**Tana Toraja**	**34.38**	**131**		P		**P**		**10 41 34.0**	**+0.9**
	comp=Z,81µmcomp=Z,21µmcomp=Z,787nm,0.9s									
JNU	**Nakatsue**	**34.39**	**62**		P		**P**		**10 41 32.7**	**-0.5**
GMJI	**Gumukmas**	**34.46**	**146**		P		**P**		**10 41 33.4**	**-0.4**
	comp=Z,18µmcomp=Z,536nm,1.2s									
ABJI	**Asem Bagus**	**34.49**	**144**		P		**P**		**10 41 35.3**	**+1.2**
	comp=Z,72µmcomp=Z,29µmcomp=Z,1µm,1.1s									
HOQ	**Hoqain**	**34.50**	**281**		P		**P**		**10 41 37.0**	**+2.8**
	SNR=273									
HOQ					P		**P**		**10 41 37.0**	**+2.8**
	SNR=273									
DQM	**DQM**	**34.65**	**275**		P		**P**		**10 41 39.0**	**+3.5**
	SNR=73									
DQM					P		**P**		**10 41 39.0**	**+3.5**
	SNR=73									
BSY	**Bisya**	**34.66**	**280**		P		**P**		**10 41 39.0**	**+3.4**
	SNR=329									
BSY					P		**P**		**10 41 39.0**	**+3.4**
	SNR=329									
HIA	**Hailar**	**34.66**	**29**		P		**P**		**10 41 34.8**	**-0.4**
HIA	**Hailar**	**34.66**	**29**		P		**P**		**10 41 34.8**	**-0.4**
HIA					pmax		pmax			
	comp=Z,485nm,1.1s									
SGSI	**Sangihe**	**34.67**	**115**		P		**P**		**10 41 35.8**	**+0.1**
	comp=Z,3µmcomp=Z,6µmcomp=Z,829nm,0.8s									
SPSI	**Sidrap Palu**	**34.99**	**132**		P		**P**		**10 41 38.5**	**+0.1**
	comp=Z,81µmcomp=Z,54µmcomp=Z,1µm,2.8s									
JAGI	**Jajag, Banyuwa**	**35.01**	**145**		P		**P**		**10 41 37.8**	**-0.8**
JAGI					IAmb		IAmb		10 41 42.1	
	comp=Z,876nm,0.8s									
JAGI	**Jajag, Banyuwa**	**35.01**	**145**		P		**P**		**10 41 37.7**	**-0.8**
	comp=Z,60µmcomp=Z,21µmcomp=Z,1µm,0.9s									
JAGI	**Jajag, Banyuwa**	**35.01**	**145**		P		**P**		**10 41 39.6**	**+1.1**
KMSI	**Cibinong**	**35.16**	**121**		P		**P**		**10 41 39.9**	**0.0**
	comp=Z,2µmcomp=Z,17µmcomp=Z,2µm,0.7s									
SOHO	**SOHO**	**35.19**	**282**		P		**P**		**10 41 42.1**	**+2.1**
SOHO					P		**P**		**10 41 42.1**	**+2.1**
SOHO	**SOHO**	**35.19**	**282**	*i*	P		**P**		**10 41 41.5**	**+1.5**
	SNR=208									
LUWI	**Luwuk**	**35.21**	**125**		P		**P**		**10 41 40.4**	**+0.1**
	comp=Z,85µmcomp=Z,35µmcomp=Z,2µm,0.7s									
LUWI	**Luwuk**	**35.21**	**125**		P		**P**		**10 41 41.8**	**+1.5**
ARQ	**Araqi**	**35.24**	**281**		P		**P**		**10 41 43.1**	**+2.5**
	SNR=146									
ARQ					P		**P**		**10 41 43.1**	**+2.5**
	SNR=146									
SRBI	**Singaraja**	**35.28**	**143**		P		**P**		**10 41 41.8**	**+1.0**
	comp=Z,71µmcomp=Z,43µmcomp=Z,2µm,1.3s									
MDH	**Madha**	**35.37**	**284**		P		**P**		**10 41 42.2**	**+0.6**
	SNR=88									
MDH	**Madha**	**35.37**	**284**	*i*	P		**P**		**10 41 41.8**	**+0.2**
	SNR=129									
UOSS	**Minazif**	**35.46**	**284**		P		**P**		**10 41 42.9**	**+0.5**
UOSS					IAmb		IAmb		10 41 52.9	
	comp=Z,545nm,1.1s									
UOSS	**Minazif**	**35.46**	**284**		P		**P**		**10 41 44.0**	**+1.6**
UOSS					P		**P**		**10 41 44.0**	**+1.6**
UOSS	**Minazif**	**35.46**	**284**	*i*	P		**P**		**10 41 43.3**	**+0.8**
	SNR=48									
UOSS	**Minazif**	**35.46**	**284**		P		**P**		**10 41 43.2**	**+0.8**
UOSS					ScP		**ScP**		**10 47 47.5**	**-0.9**
MSFE	**Esma-Masafi**	**35.49**	**285**	*i*	P		**P**		**10 41 43.5**	**+0.8**
	SNR=111									
MASF	**Masafi**	**35.49**	**285**		P		**P**		**10 41 44.1**	**+1.4**
	SNR=78									
MASF					P		**P**		**10 41 44.1**	**+1.4**
	SNR=78									
SHME	**Shamm**	**35.50**	**286**		P		**P**		**10 41 44.8**	**+2.0**
	SNR=65									
SHME					P		**P**		**10 41 44.8**	**+2.0**
	SNR=65									
SHME	**Shamm**	**35.50**	**286**	*i*	P		**P**		**10 41 44.0**	**+1.2**
	SNR=137									
HATD	**Hatta, Dubai**	**35.53**	**284**		P		**P**		**10 41 45.2**	**+2.2**
	SNR=131									
HATD					P		**P**		**10 41 45.2**	**+2.2**
	SNR=131									
HATD	**Hatta, Dubai**	**35.53**	**284**	*i*	P		**P**		**10 41 44.1**	**+1.1**
	SNR=86									
DGAR	**Diego Garcia**	**35.57**	**220**		P		**P**		**10 41 44.0**	**+0.6**
DGAR					IAmb		IAmb		10 42 25.0	
	comp=Z,841nm,1.1s									
DGAR	**Diego Garcia**	**35.57**	**220**	*i*	P		**P**		**10 41 44.1**	**+0.7**
DGAR					pmax		pmax			
	comp=Z,454nm,1.2s									
DGAR	**Diego Garcia**	**35.57**	**220**		P		**P**		**10 41 44.4**	**+1.1**
DGAR					P		**P**		**10 41 44.4**	**+1.1**
ASHO	**Ashiyiah**	**35.60**	**283**		P		**P**		**10 41 46.0**	**+2.4**
	SNR=202									
ASHO					P		**P**		**10 41 46.0**	**+2.4**
	SNR=202									
ASHO	**Ashiyiah**	**35.60**	**283**	*i*	P		**P**		**10 41 45.4**	**+1.8**
	SNR=380									
GEYT	**Alibeck**	**35.69**	**306**		P		**P**		**10 41 46.5**	**+2.2**
	comp=Z,777nm,0.9s,baz=144,slow=8.1,SNR=84									
GEYT					PcP		**PcP**		**10 44 13.3**	**+2.5**
	comp=Z,245nm,0.8s,baz=198,slow=2.9,SNR=12									
GEYT					ScP		**ScP**		**10 47 49.9**	**+0.8**
	comp=Z,310nm,1.0s,baz=188,slow=3.0,SNR=14									
GEYT					LR		LR		10 59 04.5	
	comp=Z,57µm,20.4s,baz=120,slow=41									
GEYT					P3KPbc				11 12 26.8	
	comp=Z,9.6nm,0.9s,baz=261,slow=8.4,SNR=8.9									
	comp=Z,777nm,0.9s									
GYA0	**ALIBECK ARRAY**	**35.69**	**306**		P		**P**		**10 41 46.1**	**+1.8**
GYA0B	**ALIBECK ARRAY**	**35.69**	**306**		IAmb		IAmb		10 41 53.3	
	comp=Z,1µm,1.1s									
H08S3	**Diego Garcia H**	**35.72**	**220**		P		**P**		**10 41 47.4**	**+3.0**
H08S2	**Diego Garcia H**	**35.73**	**220**		P		**P**		**10 41 47.4**	**+3.0**
KAPI	**Kappang**	**35.74**	**133**		P		**P**		**10 41 44.9**	**+0.1**
	comp=Z,916nm,0.9s,baz=286,slow=12,SNR=58									
KAPI					PcP		**PcP**		**10 44 13.6**	**+2.4**
	comp=Z,303nm,1.0s,baz=125,slow=4.0,SNR=7.5									
KAPI					ScP		**ScP**		**10 47 48.1**	**-1.4**
	comp=Z,146nm,1.2s,baz=252,slow=2.7,SNR=6.9									
KAPI					LR		LR		11 00 27.2	
	comp=Z,25µm,18.4s,baz=307,slow=43									
	comp=Z,916nm,0.9s									
KAPI	**Kappang**	**35.74**	**133**		P		**P**		**10 41 44.7**	**-0.1**
KAPI	**Kappang**	**35.74**	**133**		P		**P**		**10 41 45.1**	**+0.2**
KAPI					P		**P**		**10 41 45.1**	**+0.2**
KAPI	**Kappang**	**35.74**	**133**		P		**P**		**10 41 46.1**	**+1.3**
KAPI	**Kappang**	**35.74**	**133**		P		**P**		**10 41 45.0**	**+0.1**
KAPI					pP		**pP**		**10 42 02.8**	**-2.6**
KAPI					sP		**sP**		**10 42 14.5**	**-1.0**
KAPI					ScP		**ScP**		**10 47 50.1**	**+0.6**
H08S1	**Diego Carcia H**	**35.74**	**220**		P		**P**		**10 41 44.7**	**+0.1**
DNP	**Denpasar**	**35.76**	**143**		P		**P**		**10 41 44.1**	**-0.9**
	comp=Z,58µmcomp=Z,40µmcomp=Z,2µm,0.8s									
ALNE	**Al Ain**	**35.90**	**282**		P		**P**		**10 41 48.6**	**+2.3**
	SNR=160									
ALNE					P		**P**		**10 41 48.6**	**+2.3**
	SNR=160									
ALNE	**Al Ain**	**35.90**	**282**	*i*	P		**P**		**10 41 48.6**	**+2.3**
	SNR=46									
UMQ	**Umm Al-Quwin**	**35.94**	**285**		P		**P**		**10 41 49.8**	**+3.4**
	SNR=19									
UMQ					P		**P**		**10 41 49.8**	**+3.4**
	SNR=19									
UMQ	**Umm Al-Quwin**	**35.94**	**285**	*i*	P		**P**		**10 41 48.4**	**+2.0**
	SNR=14									
NAZ	**Nazwa, Dubai**	**35.95**	**284**		P		**P**		**10 41 48.9**	**+2.3**
	SNR=68									
NAZ					P		**P**		**10 41 48.9**	**+2.3**
	SNR=68									
NAZ	**Nazwa, Dubai**	**35.95**	**284**	*i*	P		**P**		**10 41 50.0**	**+3.4**
	SNR=45									
FAQ	**Al Faqa, Dubai**	**36.02**	**284**		P		**P**		**10 41 48.8**	**+1.6**
	SNR=94									
FAQ					P		**P**		**10 41 48.8**	**+1.6**
	SNR=94									
FAQ	**Al Faqa, Dubai**	**36.02**	**284**	*i*	P		**P**		**10 41 48.5**	**+1.3**
	SNR=92									
BKSI	**Bulukumba**	**36.21**	**133**		P		**P**		**10 41 48.5**	**-0.4**
	comp=Z,70µmcomp=Z,16µmcomp=Z,747nm,0.9s									
ASUD	**Al Ashush, Dub**	**36.26**	**283**		P		**P**		**10 41 51.4**	**+2.1**
	SNR=50									
ASUD					P		**P**		**10 41 51.4**	**+2.1**
	SNR=50									
ASUD	**Al Ashush, Dub**	**36.26**	**283**	*i*	P		**P**		**10 41 51.4**	**+2.1**
	SNR=68									
BNX	**BinXian**	**36.53**	**40**	⇑	P		**P**		**10 41 50.8**	**-0.4**
BNX					PP		**PnPn**		**10 43 18.1**	**+1.4**
BNX					S		**S**		**10 47 28.4**	**+1.3**
BNX					pmax		pmax			
	comp=Z,170nm,1.3s									
BNX					pmax		pmax			
	comp=Z,15µm,12.0s									
BNX					LR		LR			
	comp=Z,42µm,16.7s									
BNX					LR		LR			
	comp=Z,26µm,21.6s									
BNX					LR		LR			
	comp=Z,38µm,16.5s									
AJN	**Ajban**	**36.58**	**283**		P		**P**		**10 41 53.3**	**+1.4**
	SNR=95									
AJN					P		**P**		**10 41 53.3**	**+1.4**
	SNR=95									
AJN	**Ajban**	**36.58**	**283**	*i*	P		**P**		**10 41 53.2**	**+1.2**
	SNR=78									
JHS	**Saijyo**	**36.59**	**59**		IAmb		IAmb		10 41 55.7	
	comp=Z,602nm,0.8s									
JHS	**Saijyo**	**36.59**	**59**		P		**P**		**10 41 51.9**	**-0.1**
SHAO	**Shalim**	**36.75**	**272**		P		**P**		**10 41 55.9**	**+2.4**
	SNR=21									
SHAO					P		**P**		**10 41 55.9**	**+2.4**
	SNR=21									
SHAO	**Shalim**	**36.75**	**272**	*i*	P		**P**		**10 41 55.1**	**+1.6**
	SNR=46									
TWSI	**Taliwang, Sumb**	**36.77**	**141**		P		**P**		**10 41 51.8**	**-1.8**
	comp=Z,33µmcomp=Z,11µmcomp=Z,307nm,0.7s									
JMN	**Monobe**	**36.97**	**61**		P		**P**		**10 41 55.1**	**-0.1**
JMN					IAmb		IAmb		10 41 58.6	
	comp=Z,927nm,1.0s									
JMN	**Monobe**	**36.97**	**61**		P		**P**		**10 41 55.3**	**+0.1**
BVA0	**Borovoye Array**	**37.03**	**336**	*i*	P		**P**		**10 41 55.5**	**+0.1**
BVAR	**Borovoye Array**	**37.03**	**336**		P		**P**		**10 41 55.6**	**+0.2**
	comp=Z,49nm,0.4s,baz=132,slow=8.2,SNR=160									
BVAR					pP		**pP**		**10 42 19.5**	**+3.4**
	comp=Z,187nm,0.6s,baz=139,slow=9.5,SNR=9.4									
BVAR					PcP		**PcP**		**10 44 16.9**	**+2.4**
	comp=Z,60nm,0.5s,baz=176,slow=2.9,SNR=6.2									
BVAR					LR		LR		10 59 54.5	
	comp=Z,23µm,18.8s,baz=138,slow=40									
BVAR					P3KPbc				11 12 21.5	
	comp=Z,11nm,0.7s,baz=322,slow=3.5,SNR=33									
	comp=Z,49nm,0.4s									
BSSI	**Bau Bau, Buton**	**37.06**	**134**		P		**P**		**10 41 55.2**	**-0.9**
	comp=Z,40µmcomp=Z,10µmcomp=Z,470nm,0.8s									
BRVK	**Borovoye**	**37.09**	**336**		P		**P**		**10 41 56.1**	**+0.2**
BRVK					IAmb		IAmb		10 42 23.9	
	comp=Z,1µm,1.3s									
BRVK	**Borovoye**	**37.09**	**336**	*c i*	P		**P**		**10 41 56.5**	**+0.6**
BRVK					pmax		pmax			
	comp=Z,257nm,0.8s									
BRVK					MLR		MLR			
	comp=Z,46µm,18.0s									
BRVK	**Borovoye**	**37.09**	**336**		P		**P**		**10 41 56.1**	**+0.2**
BRVK					P		**P**		**10 41 56.1**	**+0.2**
BRVK	**Borovoye**	**37.09**	**336**		P		**P**		**10 41 56.3**	**+0.4**
BRVK					sP		**pP**		**10 42 20.1**	**+3.5**
BRVK					ScP		**ScP**		**10 47 55.5**	**+1.7**
MDJ	**Mudanjiang**	**37.32**	**43**		P		**P**		**10 41 57.2**	**-0.8**
MDJ	**Mudanjiang**	**37.32**	**43**		P		**P**		**10 41 58.2**	**+0.2**
	comp=Z,369nm,1.3s									
MDJ	**Mudanjiang**	**37.32**	**43**		P		**P**		**10 41 57.3**	**-0.7**
MDJ					pP		**pP**		**10 42 13.0**	**-5.5**
MDJ					sP		sP		10 42 20.8	-8.0
MDJ					ScP		**ScP**		**10 47 53.2**	**-1.7**
PLAI	**Plampang**	**37.37**	**140**		P		**P**		**10 41 56.9**	**-1.8**
	comp=Z,61µmcomp=Z,28µmcomp=Z,2µm,1.0s									
PLAI	**Plampang**	**37.37**	**140**		P		**P**		**10 42 00.0**	**+1.3**
JAD	**Aida**	**37.43**	**60**		P		**P**		**10 41 59.0**	**0.0**
DMTO	**DMTO**	**37.44**	**272**		P		**P**		**10 42 01.5**	**+2.1**
	SNR=22									
DMTO					P		**P**		**10 42 01.5**	**+2.1**
	SNR=22									
MSHR	**Mys Shultsa**	**37.46**	**46**	*c i*	P		**P**		**10 41 58.4**	**-0.8**
MSHR					pmax		pmax			
	comp=Z,446nm,1.3s									
BBSI	**Bau Bau**	**38.03**	**131**		P		**P**		**10 42 04.7**	**+0.4**
	comp=Z,917nmcomp=Z,77nm,0.9s									
MZR	**Muzera**	**38.06**	**281**		P		**P**		**10 42 05.9**	**+1.4**
	SNR=256									
MZR					P		**P**		**10 42 05.9**	**+1.4**
	SNR=256									
MZR	**Muzera**	**38.06**	**281**	*i*	P		**P**		**10 42 05.3**	**+0.8**
	SNR=347									
VLA	**Vladivostok**	**38.17**	**46**	*c i*	P		**P**		**10 42 01.5**	**-3.6**
VLA					pmax		pmax			
	comp=Z,694nm,0.9s									
VLA					MLR		MLR			
	comp=Z,39µm,17.0s									
RBK	**Rabkut**	**38.18**	**272**		P		**P**		**10 42 07.8**	**+2.1**
	SNR=82									
SANI	**Sanana**	**38.34**	**123**		P		**P**		**10 42 04.9**	**-2.0**
	comp=Z,80µmcomp=Z,17µmcomp=Z,161nm,1.2s									
SANI	**Sanana**	**38.34**	**123**		P		**P**		**10 42 07.3**	**+0.4**
JWT	**Wachi**	**38.48**	**59**		P		**P**		**10 42 07.7**	**-0.2**
JRN	**Qarnain Island**	**38.50**	**284**		P		**P**		**10 42 09.1**	**+0.9**
	SNR=101									
JRN					P		**P**		**10 42 09.1**	**+0.9**
	SNR=101									
WHFO	**Wadi Hawf**	**38.50**	**273**		P		**P**		**10 42 09.8**	**+1.4**
	SNR=71									
WHFO					P		**P**		**10 42 09.8**	**+1.4**
	SNR=71									
USA0B	**Ussuriysk Arra**	**38.68**	**44**		P		**P**		**10 42 09.5**	**+0.1**
USA0B	**Ussuriysk Arra**	**38.68**	**44**		P		**P**		**10 42 09.5**	**+0.1**
USA0B					pmax		pmax			
	comp=Z,244nm,1.1s									
USRK	**Ussuriysk Ar.**	**38.68**	**44**		P		**P**		**10 42 08.4**	**-1.0**
	comp=Z,259nm,0.8s,baz=249,slow=7.0,SNR=122									
USRK					pP		**pP**		**10 42 32.9**	**+2.8**
	comp=Z,683nm,1.2s,baz=235,slow=6.7,SNR=6.9									
USRK					PcP		**PcP**		**10 44 21.6**	**+1.9**
	comp=Z,72nm,0.6s,baz=227,slow=2.0,SNR=7.3									
USRK					ScP		**S**		**10 47 57.5**	**-2.1**
	comp=Z,25nm,0.7s,baz=272,slow=2.4,SNR=7.5									
USRK					PKiKP		**PKiKP**		**10 51 32.8**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=14,slow=0.7,SNR=4.8									
USRK					LR		LR		10 58 13.1	
	comp=Z,85µm,18.0s,baz=156,slow=36									
	comp=Z,259nm,0.8s									
USRK	**Ussuriysk Ar.**	**38.68**	**44**		P		**P**		**10 42 08.8**	**-0.5**
LBMI	**Labuha**	**38.70**	**120**		P		**P**		**10 42 08.9**	**-1.1**
	comp=Z,53µmcomp=Z,13µmcomp=Z,422nm,0.9s									
WBSI	**Waikabubak, Su**	**38.99**	**139**		P		**P**		**10 42 09.5**	**-2.8**
	comp=Z,49µmcomp=Z,34µmcomp=Z,3µm,0.7s									
ABTO	**Aybut**	**39.06**	**272**		P		**P**		**10 42 14.3**	**+1.3**
	SNR=43									
ABTO					P		**P**		**10 42 14.3**	**+1.3**
	SNR=43									
JIE	**Ise**	**39.39**	**61**		P		**P**		**10 42 14.6**	**-0.9**
AB31	**Akbulak array**	**39.42**	**324**	*i*	P		**P**		**10 42 17.0**	**+1.5**
ABKAR	**Akbulak array**	**39.42**	**324**		P		**P**		**10 42 16.6**	**+1.1**
ABKAR					IAmb		IAmb		10 42 45.8	
	comp=Z,820nm,1.0s									
BOD	**Bodaibo**	**39.48**	**16**	*e*	P		**P**		**10 42 16.9**	**+1.0**
BOD					pmax		pmax			
	comp=Z,605nm,1.3s									
EDFI	**Ende, Flores**	**39.78**	**135**		P		**P**		**10 42 16.4**	**-2.6**
	comp=Z,37µmcomp=Z,13µmcomp=Z,773nm,0.7s									
INU	**Inuyama**	**39.80**	**60**		P		**P**		**10 42 18.3**	**-0.6**
INU					IAmb		IAmb		10 42 23.2	
	comp=Z,935nm,0.7s									
INU	**Inuyama**	**39.80**	**60**		P		**P**		**10 42 19.2**	**+0.4**
INU	**Inuyama**	**39.80**	**60**		P		**P**		**10 42 18.5**	**-0.3**
INU					pP		**pP**		**10 42 35.5**	**-4.2**
INU					sP		**sP**		**10 42 42.5**	**-7.3**
INU					ScP		**ScP**		**10 48 02.9**	**-1.6**
NLAI	**Namlea**	**39.94**	**123**		P		**P**		**10 42 20.6**	**+0.4**
	comp=Z,16µmcomp=Z,438nm,0.7s									
MMRI	**Maumere**	**40.05**	**134**		P		**P**		**10 42 19.7**	**-1.5**
MMRI					IAmb		IAmb		10 42 23.6	
	comp=Z,976nm,0.7s									
MMRI	**Maumere**	**40.05**	**134**		P		**P**		**10 42 19.5**	**-1.7**
	comp=Z,69µmcomp=Z,35µmcomp=Z,2µm,0.7s									
MMRI	**Maumere**	**40.05**	**134**		P		**P**		**10 42 21.1**	**-0.1**
JGF	**Kuroka**	**40.11**	**59**		P		**P**		**10 42 20.6**	**-0.9**
SHMA	**Al-Shehemyia**	**40.16**	**286**		P		**P**		**10 42 23.1**	**+1.1**
BASI	**Baing, Sumba**	**40.17**	**138**		P		**P**		**10 42 20.2**	**-1.9**
	comp=Z,34µmcomp=Z,27µmcomp=Z,3µm,0.9s									
JGN	**Niukaw**	**40.19**	**58**		P		**P**		**10 42 20.8**	**-1.4**
SAKB	**Bahrain**	**40.54**	**286**		P		**P**		**10 42 26.4**	**+1.2**
JSG	**Sagara**	**40.64**	**61**		P		**P**		**10 42 27.2**	**+1.4**
KLR	**Kul'dur**	**40.85**	**37**		P		**P**		**10 42 26.4**	**-1.0**
	comp=Z,132nm,1.0s,baz=254,slow=8.1,SNR=83									
KLR					PcP		**PcP**		**10 44 27.9**	**+1.3**
	comp=Z,222nm,0.9s,baz=234,slow=6.3,SNR=7.0									
KLR					ScP		**ScP**		**10 48 07.0**	**-1.3**
	comp=Z,99nm,1.0s,baz=239,slow=3.1,SNR=7.7									
KLR					LR		LR		11 00 41.7	
	comp=Z,36µm,19.4s,baz=236,slow=38									
	comp=Z,132nm,1.0s									
MAJO	**Matsushiro**	**40.95**	**58**		P		**P**		**10 42 27.4**	**-1.0**
MAJO	**Matsushiro**	**40.95**	**58**	*c i*	P		**P**		**10 42 27.2**	**-1.2**
MAJO					pmax		pmax			
	comp=Z,322nm,0.8s									
MAJO			

TEY pmax pmax
comp=Z,10µm,7.5s
TEY pmax pmax
comp=E,4µm,8.6s
TEY smax smax
comp=N,7µm,12.0s
TEY smax smax
comp=E,8µm,9.1s
TEY MLR MLR
comp=E,17µm,13.0s
TEY MLR MLR
comp=N,17µm,16.0s
TEY MLR MLR
comp=Z,31µm,15.0s
BATI Baumata 42.16 134 P **P** **10 42 37.6 -0.8**
comp=Z,3µm,0.7s,baz=266,slow=0.6,SNR=149
BATI PcP **PcP** **10 44 33.1 +1.7**
comp=Z,1µm,0.5s,baz=40,slow=0.6,SNR=13
BATI ScP **ScP** **10 48 11.3 -2.8**
comp=Z,120nm,0.6s,baz=324,slow=1.7,SNR=3.8
comp=Z,3µm,0.7s
BATI Baumata 42.16 134 P **P** **10 42 36.4 -2.0**
comp=Z,29µmcomp=Z,24µmcomp=Z,3µm,0.8s
JYT Yasato 42.48 59 P **P** **10 42 39.5 -1.3**
JYA Atsumi 42.51 55 P **P** **10 42 40.4 -0.6**
BNDI Bandanaira 42.93 122 P **P** **10 42 43.4 -1.3**
comp=Z,92µmcomp=Z,45µmcomp=Z,1µm,0.8s
BNDI Bandanaira 42.93 122 P **P** **10 42 46.2 +1.5**
JMM Marumori 43.21 57 IAmb IAmb 10 43 10.6
comp=Z,2µm,1.8s
JMM Marumori 43.21 57 P **P** **10 42 45.5 -1.2**
JSH Shimam 43.67 50 P **P** **10 42 49.7 -0.7**
CBIJ Chichi jima 43.74 72 P **P** **10 42 48.9 -2.2**
JCJ Chichijima 43.74 72 P **P** **10 42 49.6 -1.5**
comp=Z,124nm,0.4s,baz=279,slow=15,SNR=12
JCJ PcP **PcP** **10 44 37.2 +0.6**
comp=Z,336nm,0.8s,baz=151,slow=21,SNR=3.9
comp=Z,124nm,0.4s
JCJ Chichijima 43.74 72 IAmb IAmb 10 43 36.1
comp=Z,1µm,1.4s
JCJ Chichijima 43.74 72 P **P** **10 42 53.9 +2.8**
comp=Z,523nm,1.3s
JOM Ohasama 43.88 54 P **P** **10 42 51.1 -0.9**
FAKI Fak Fak 43.89 118 P **P** **10 42 51.6 -0.9**
FAKI IAmb IAmb 10 43 17.7
comp=Z,962nm,1.1s
FAKI Fak Fak 43.89 118 P **P** **10 42 51.6 -0.9**
comp=Z,76µmcomp=Z,21µmcomp=Z,860nm,1.1s
FAKI Fak Fak 43.89 118 P **P** **10 42 53.1 +0.6**
JTM Tenmabayashi 43.98 53 IAmb IAmb 10 43 18.1
comp=Z,1µm,1.4s
JTM Tenmabayashi 43.98 53 P **P** **10 42 52.2 -0.7**
JOT Ohata 44.09 52 P **P** **10 42 52.8 -0.9**
GRNR Gornyy 44.23 37⇑ *i*P **P** **10 42 54.2 -0.6**
GRNR *e*SS SS 10 52 30.9 -12
GRNR pmax pmax
comp=E,60nm,0.7s
GRNR pmax pmax
comp=N,50nm,1.1s
GRNR pmax pmax
comp=Z,160nm,1.3s
GRNR MLR MLR
comp=E,31µm,16.0s
GRNR MLR MLR
comp=N,23µm,14.0s
GRNR MLR MLR
comp=Z,27µm,16.0s
ARU Arti 44.30 332 P3KPbc 11 11 50.9
comp=Z,3.9nm,0.5s,baz=300,slow=4.6,SNR=6.3
ARU Arti 44.30 332 P **P** **10 42 55.4 +0.2**
ARU IAmb IAmb 10 43 23.3
comp=Z,1µm,1.1s
ARU Arti 44.30 332*c i*P **P** **10 42 55.4 +0.2**
ARU *PP **pP** **10 43 19.4 +3.0**
ARU 10 44 40.2
ARU PPP PPP 10 45 22.1
ARU S **S** **10 49 24.3 +1.8**
ARU *SS **sS** **10 50 05.3 +6.5**
ARU SS **SS** **10 52 41.8 -1.9**
ARU SSS SSS 10 53 31.3
ARU pmax pmax
comp=Z,362nm,0.6s
ARU Arti 44.30 332 P **P** **10 42 55.5 +0.3**
ARU sP **pP** **10 43 20.1 +3.7**
ARU ScP **ScP** **10 48 25.2 +3.1**
JEW Eniwo 44.72 50 P **P** **10 42 58.4 -0.4**
MAK Makhachkala 44.85 310 *e*P **P** **10 42 59.6 -0.2**
MAK *e*PP **pP** **10 43 22.4 +1.3**
MAK *e*SP **sP** **10 43 34.5 +3.3**
MAK *e* 10 44 50.2
MAK *e*S **S** **10 49 30.3 -0.5**
MAK pmax pmax
comp=Z,760nm,1.0s
RAYN Ar Rayn 45.30 283 P **P** **10 43 04.1 +0.4**
RAYN IAmb IAmb 10 43 09.2
comp=Z,1µm,1.4s
RAYN Ar Rayn 45.30 283 P **P** **10 43 04.1 +0.4**
RAYN pmax pmax
comp=Z,1µm,1.4s
RAYN Ar Rayn 45.30 283 P **P** **10 43 04.8 +1.0**
RAYN Ar Rayn 45.30 283 *i* P **P** **10 43 04.7 +1.0**
SNR=938
RAYN Ar Rayn 45.30 283 P **P** **10 43 04.7 +1.0**
RAYN ScP **ScP** **10 48 27.2 +0.2**
JWK2 Keihoku 45.68 46 P **P** **10 43 06.5 +0.2**
ERM Erimo 45.77 51*c i*P **P** **10 43 06.7 -0.3**
ERM pmax pmax
comp=Z,550nm,1.0s
ERM MLR MLR
comp=Z,71µm,21.0s
ERM Erimo 45.77 51 P **P** **10 43 07.9 +0.9**
ERM Erimo 45.77 51 P **P** **10 43 06.7 -0.3**
ERM pP **pP** **10 43 23.6 -4.6**
ERM sP **sP** **10 43 33.1 -5.2**
JEM Erimo 45.77 51 P **P** **10 43 06.6 -0.4**
ASAJ Asahikawa 45.85 48 P **P** **10 43 06.9 -0.7**
MSEY Mahe Island 46.01 241 P **P** **10 43 10.8 +1.5**
MSEY P **P** **10 43 10.8 +1.5**
MSEY P **P** **10 43 11.1 +1.8**
MSEY P **P** **10 43 11.1 +1.8**
MSEY Mahe Island 46.01 241 *i* P **P** **10 43 10.7 +1.4**
SNR=12
MSEY Mahe Island 46.01 241 P **P** **10 43 10.7 +1.4**
MSEY pP **pP** **10 43 27.3 -3.3**
MSEY sP **sP** **10 43 35.5 -5.1**
MSEY ScP **ScP** **10 48 30.5 +0.5**
GROC Groznyy 46.13 310 *e*P **P** **10 43 10.9 +1.1**
GROC *e*SP **sP** **10 43 41.2 -0.1**
GROC *e*S **S** **10 49 51.7 +2.5**
GROC MLR MLR
comp=Z,2µm,10.0s
SAUI Saumlaki 46.15 125 P **P** **10 43 09.0 -1.4**
SAUI IAmb IAmb 10 44 49.6
comp=Z,868nm,1.1s
SAUI Saumlaki 46.15 125 P **P** **10 43 09.1 -1.2**
comp=Z,79µmcomp=Z,26µmcomp=Z,585nm,0.8s
SAUI Saumlaki 46.15 125 P **P** **10 43 14.1 +3.8**
BAKI Biak 46.22 113 P **P** **10 43 10.1 -0.8**
comp=Z,26µmcomp=Z,1µm,0.9s
GNI Garni 46.32 306 P **P** **10 43 13.1 +1.5**
comp=Z,266nm,1.0s,baz=171,slow=0.5,SNR=41
GNI LR LR 11 07 09.7
comp=Z,16µm,18.7s,baz=97,slow=42
comp=Z,266nm,1.0s
GNI Garni 46.32 306 P **P** **10 43 14.6 +3.0**
GNI Garni 46.32 306 P **P** **10 43 13.2 +1.5**
GNI IAmb IAmb 10 43 55.1
comp=Z,1µm,1.4s
GNI Garni 46.32 306*c i*P **P** **10 43 14.0 +2.4**
GNI pmax pmax
comp=Z,479nm,0.9s
GNI MLR MLR
comp=Z,28µm,21.0s
GNI Garni 46.32 306 P **P** **10 43 14.3 +2.7**
GNI P **P** **10 43 14.3 +2.7**
GNI Garni 46.32 306 P **P** **10 43 13.9 +2.2**
GNI Garni 46.32 306 P **P** **10 43 14.2 +2.6**
GNI pP **pP** **10 43 32.3 -0.8**
JMP Maruseppu 46.35 49 P **P** **10 43 11.0 -0.6**
SRPI Serui, Papua 46.68 114 P **P** **10 43 13.6 -0.9**
comp=Z,42µmcomp=Z,12µmcomp=Z,215nm,1.0s
TASB TASBURUN-IGDIR 46.68 306 P **P** **10 43 16.4 +2.1**
YSS Yuzh-Sakhalins 46.72 45 P **P** **10 43 14.1 -0.3**
YSS IAmb IAmb 10 43 17.9
comp=Z,902nm,1.1s

YSS Yuzh-Sakhalins 46.72 45*e e*P **P** **10 43 13.9 -0.4**
YSS *e**PP **pP** **10 43 36.8 +1.2**
YSS *e* 10 44 47.5
YSS *e* 10 45 03.5
YSS *e*PPP PPP 10 45 47.5
YSS *e*S **S** **10 49 56.7 -0.7**
YSS *e**SS **sS** **10 50 37.9 +3.9**
YSS *e* 10 52 56.8
YSS pmax pmax
comp=Z,19µm,7.9s
YSS pmax pmax
comp=E,7µm,8.4s
YSS pmax pmax
comp=N,130nm,1.1s
YSS pmax pmax
comp=Z,710nm,1.1s
YSS pmax pmax
comp=E,260nm,1.0s
YSS pmax pmax
comp=Z,15µm,8.9s
YSS pmax pmax
comp=N,4µm,12.4s
YSS pmax pmax
comp=E,6µm,9.1s
YSS smax smax
comp=E,8µm,15.7s
YSS MLR MLR
comp=N,22µm,18.0s
YSS MLR MLR
comp=Z,38µm,18.0s
YSS MLR MLR
comp=E,20µm,13.0s
YSS Yuzh-Sakhalins 46.72 45 P **P** **10 43 15.7 +1.4**
YSS Yuzh-Sakhalins 46.72 45 P **P** **10 43 14.0 -0.3**
YSS pP **pP** **10 43 32.5 -3.1**
YSS sP **sP** **10 43 41.5 -4.2**
YSS ScP **ScP** **10 48 31.8 -0.5**
CLDR Caldiran 46.81 304 P **P** **10 43 16.7 +1.2**
CUKT Cukurca 46.83 302 P **P** **10 43 16.7 +1.1**
VANB Van 47.15 304 P **P** **10 43 19.9 +1.9**
GIRL Giralia 47.39 155 P **P** **10 43 20.8 +1.0**
baz=48,SNR=72
GIRL Giralia 47.39 155 P **P** **10 43 21.1 +1.3**
ZEI Tsey 47.40 309 *e*P **P** **10 43 20.1 0.0**
ZEI pmax pmax
comp=Z,3µm,1.3s
AKDM Akdamar-Van 47.44 303 P **P** **10 43 21.8 +1.4**
AKH Akhalkalaki 47.46 307 P **P** **10 43 24.1 +3.6**
AGRB Hanur-Agry 47.57 305 P **P** **10 43 23.8 +2.4**
YAK Yakutsk 47.64 22 P **P** **10 43 22.1 +0.8**
comp=Z,670nm,0.7s,baz=224,slow=2.4,SNR=129
YAK ScP **ScP** **10 48 34.4 -1.5**
comp=Z,30nm,0.5s,baz=226,slow=4.5,SNR=2.5
YAK LR LR 11 05 16.5
comp=Z,31µm,20.5s,baz=220,slow=38
comp=Z,670nm,0.7s
YAK Yakutsk 47.64 22 P **P** **10 43 20.6 -0.7**
YAK Yakutsk 47.64 22*c i*P **P** **10 43 20.1 -1.2**
YAK *e* 10 45 14.0
YAK *e*S **S** **10 50 08.5 -1.6**
YAK *e* 10 52 56.9
YAK pmax pmax
comp=Z,854nm,0.9s
YAK pmax pmax
comp=N,234nm,0.9s
YAK pmax pmax
comp=E,228nm,0.9s
YAK pmax pmax
comp=Z,3µm,4.3s
YAK pmax pmax
comp=N,1µm,4.1s
YAK pmax pmax
comp=E,1µm,3.3s
YAK smax smax
comp=E,1µm,1.8s
YAK smax smax
comp=N,2µm,2.0s
YAK MLR MLR
comp=Z,29µm,21.0s
YAK MLR MLR
comp=N,22µm,22.0s
YAK MLR MLR
comp=E,20µm,20.0s
YAK Yakutsk 47.64 22 P **P** **10 43 21.6 +0.3**
YAK ScP **ScP** **10 48 34.9 -0.9**
KARS Kars 47.65 306 P **P** **10 43 24.9 +3.0**
ONI Oni 47.69 309 P **P** **10 43 25.2 +3.1**
NCK Nalchik 47.76 310 *i* P **P** **10 43 24.1 +1.5**
NCK pmax pmax
comp=Z,453nm,0.9s
BELG Belogornoye 47.78 323 LR LR 11 07 25.5
comp=Z,44µm,21.0s,baz=116,slow=41
BELG Belogornoye 47.78 323*c i*P **P** **10 43 22.3 -0.2**
BELG pmax pmax
comp=Z,190nm,0.9s
BELG MLR MLR
comp=Z,6µm,20.0s
MLAZ Malazgirt-MUS 47.86 304 P **P** **10 43 27.3 +3.7**
YUK Yuzh-Kuril'sk 48.12 49 *e*P **P** **10 43 21.3 -4.0**
YUK *e* 10 44 48.1
YUK *e* 10 45 14.4
YUK *e*PPP PPP 10 46 04.2
YUK *e*S **S** **10 50 12.9 -4.6**
YUK *e* 10 53 05.7
YUK *e*SS **SS** **10 53 44.5 -3.0**
YUK *e*SSS SSS 10 55 00.0
YUK pmax pmax
comp=Z,2µm,1.2s
YUK pmax pmax
comp=Z,2µm,1.3s
YUK pmax pmax
comp=N,593nm,1.4s
YUK pmax pmax
comp=E,2µm,1.3s
YUK MLR MLR
comp=Z,20µm,14.0s
YUK MLR MLR
comp=N,14µm,15.0s
SENK Senkaya-Erzuru 48.19 306 P **P** **10 43 28.9 +2.7**
GURO Guroymak-BITLI 48.20 303 P **P** **10 43 28.6 +2.4**
GURO Guroymak-BITLI 48.20 303 IAmb IAmb 10 43 32.9
comp=Z,1µm,1.3s
PYA1 Pyatigorsk 48.23 311 *i* P **P** **10 43 26.8 +0.6**
PYA1 pmax pmax
comp=Z,17nm,1.4s
KBZ Khabaz 48.30 310 P **P** **10 43 28.1 +1.3**
comp=Z,177nm,0.9s,baz=106,slow=7.5,SNR=82
KBZ LR LR 11 09 54.5
comp=Z,25µm,18.9s,baz=116,slow=43
comp=Z,177nm,0.9s
KBZ Khabaz 48.30 310*c i*P **P** **10 43 28.0 +1.3**
KBZ pmax pmax
comp=Z,247nm,0.9s
NEY Neytrino 48.34 310 *i* P **P** **10 43 29.7 +2.5**
NEY pmax pmax
comp=Z,8.0nm,0.8s
GUMO Guam 48.45 90 P **P** **10 43 28.1 -0.1**
comp=Z,72nm,0.4s,baz=241,slow=2.1,SNR=12
GUMO LR LR 11 03 57.8
comp=Z,37µm,20.4s,baz=277,slow=36
comp=Z,72nm,0.4s
GUMO Guam 48.45 90 P **P** **10 43 27.5 -0.8**
GUMO IAmb IAmb 10 44 59.3
comp=Z,676nm,1.4s
GUMO Guam 48.45 90 P **P** **10 43 29.9 +1.7**
GUMO Guam 48.45 90 P **P** **10 43 27.0 -1.3**
GUMO pP **pP** **10 43 42.3 -7.4**
GUMO sP sP 10 43 50.3 -9.4
GOF Gofitskoye 48.47 312⇑ *i*P **P** **10 43 30.0 +2.0**
GOF *e*S **S** **10 50 25.2 +2.8**
GOF pmax pmax
comp=Z,842nm,0.8s
GOF smax smax
comp=N,1µm,1.3s
GOF smax smax
comp=E,870nm,1.3s
SHA1 Shidzhatmaz 48.48 310*d i*P **P** **10 43 29.4 +1.0**
KVAR Kislovodsk Arr 48.49 311 P **P** **10 43 30.1 +1.8**
comp=E,121nm,0.9s,baz=83,slow=22,SNR=28
comp=E,121nm,0.9s
KOPR Koprukoy-ERZUR 48.49 305 P **P** **10 43 31.6 +3.1**
KIV Kislovodsk 48.50 311 P **P** **10 43 30.3 +2.0**
KIV Kislovodsk 48.50 311 P **P** **10 43 29.9 +1.5**
KIV IAmb IAmb 10 44 08.7
comp=Z,926nm,0.9s

KIV Kislovodsk 48.50 311 *e*P **P** **10 43 29.9 +1.5**
KIV *e**PP **pP** **10 43 53.0 +3.1**
KIV *e*S **S** **10 50 25.6 +2.6**
KIV *e*SSS SSS 10 55 16.2
KIV pmax pmax
comp=Z,667nm,1.0s
KIV pmax pmax
comp=Z,993nm,3.4s
KIV Kislovodsk 48.50 311 P **P** **10 43 30.1 +1.8**
KIV P **P** **10 43 30.1 +1.8**
KIV Kislovodsk 48.50 311 *i* P **P** **10 43 30.0 +1.6**
SNR=93
KIV Kislovodsk 48.50 311 P **P** **10 43 30.1 +1.8**
KIV pP **pP** **10 43 48.0 -1.9**
KIV sP **sP** **10 43 56.8 -3.1**
MBWA Marble Bar 48.55 148 P **P** **10 43 28.5 -0.3**
MBWA Marble Bar 48.55 148 P **P** **10 43 29.1 +0.3**
MBWA P **P** **10 43 29.1 +0.3**
MBWA Marble Bar 48.55 148 P **P** **10 43 29.2 +0.4**
MBWA Marble Bar 48.55 148 P **P** **10 43 28.8 0.0**
MBWA pP **pP** **10 43 48.5 -1.7**
MBWA sP **sP** **10 43 55.6 -4.5**
MBWA ScP **ScP** **10 48 40.0 -0.3**
NRIK Noril'sk 48.59 357 P **P** **10 43 28.9 +0.5**
comp=Z,841nm,0.5s,baz=153,slow=6.2,SNR=527
NRIK ScP **ScP** **10 48 40.6 +0.8**
comp=Z,480nm,1.0s,baz=183,slow=3.6,SNR=9.7
NRIK LR LR 11 08 03.7
comp=Z,6µm,18.2s,baz=179,slow=41
comp=Z,841nm,0.5s
NRIK Noril'sk 48.59 357 P **P** **10 43 28.9 +0.5**
NRIK Noril'sk 48.59 357*c i*P **P** **10 43 28.7 +0.2**
NRIK pmax pmax
comp=Z,1µm,1.1s
NRIK MLR MLR
comp=Z,25µm,20.0s
VRTB Varto-Mus 48.71 304 P **P** **10 43 33.2 +3.1**
SVAN Silvan-Diyarba 48.81 303 P **P** **10 43 33.1 +2.3**
BCA Borcka 48.86 307⇓ P **P** **10 43 34.6 +3.6**
BCA Borcka 48.86 307 P **P** **10 43 34.7 +3.6**
SMPI Sarmi 48.86 112 P **P** **10 43 31.4 0.0**
comp=Z,55µmcomp=Z,18µmcomp=Z,306nm,1.6s
PSA00 Pilbara Seismi 48.95 148 IAmb IAmb 10 43 35.0
comp=Z,2µm,1.2s
PSA00 Pilbara Seismi 48.95 148 P **P** **10 43 32.4 +0.5**
KARO Karlova-Bingo 49.04 304 P **P** **10 43 36.1 +3.4**
MARD Mardin 49.08 302 IAmb IAmb 10 44 07.4
comp=Z,770nm,0.8s
MTN Manton Dam 49.19 130 P **P** **10 43 32.4 -1.4**
baz=49,SNR=106
MTN Manton Dam 49.19 130 P **P** **10 43 34.3 +0.5**
BNGB Bingl 49.29 304 P **P** **10 43 37.1 +2.6**
FITZ Fitzroy Crossi 49.34 140 P **P** **10 43 35.5 +0.7**
comp=Z,2µm,0.9s,baz=340,slow=7.7,SNR=392
FITZ PcP **PcP** **10 44 57.5 +1.2**
comp=Z,252nm,0.7s,baz=299,slow=1.8,SNR=2.7
FITZ ScP **ScP** **10 48 41.8 -2.0**
comp=Z,55nm,0.7s,baz=224,slow=3.4,SNR=5.3
comp=Z,2µm,0.9s
FITZ Fitzroy Crossi 49.34 140 P **P** **10 43 34.7 -0.1**
baz=50,SNR=346
FITZ Fitzroy Crossi 49.34 140 P **P** **10 43 34.6 -0.3**
FITZ Fitzroy Crossi 49.34 140 P **P** **10 43 35.2 +0.3**
CHOM Cayeli-Rize 49.45 307 P **P** **10 43 38.7 +3.1**
KNRA Kununurra 49.52 135 P **P** **10 43 35.9 -0.4**
baz=50,SNR=1000
KNRA Kununurra 49.52 135 P **P** **10 43 36.9 +0.6**
KOPT Kop Dagi 49.53 305 IAmb IAmb 10 44 10.0
comp=Z,865nm,1.3s
KIRV Kirov 49.60 331 LR LR 11 08 09.3
comp=Z,57µm,21.8s,baz=126,slow=40
KIRV Kirov 49.60 331*c i*P **P** **10 43 36.0 -0.4**
DYBB Diyarbakir 49.63 302 P **P** **10 43 39.7 +2.6**
KUR Kuril'sk 49.76 48*c i*P **P** **10 43 37.7 -0.1**
KUR *e* 10 45 39.5
KUR *i*S **S** **10 50 40.3 -0.1**
KUR *e*SSS SSS 10 55 46.3
KUR pmax pmax
comp=Z,20µm,7.4s
KUR pmax pmax
comp=Z,2µm,1.6s
KUR pmax pmax
comp=N,371nm,1.1s
KUR pmax pmax
comp=E,342nm,1.2s
KUR MLR MLR
comp=Z,29µm,16.0s
KUR MLR MLR
comp=N,20µm,19.0s
KDU Kakadu 50.06 129 P **P** **10 43 38.8 -1.6**
baz=50,SNR=110
KDU Kakadu 50.06 129 P **P** **10 43 40.3 -0.1**
ERZN Erzincan 50.09 305 P **P** **10 43 42.7 +2.1**
KTUT Trabzon 50.19 306⇑ P **P** **10 43 42.7 +1.6**
KTUT Trabzon 50.19 306 P **P** **10 43 43.5 +2.4**
ATD Arta Tunnel 50.33 268 LR LR 11 04 35.0
comp=N,22µm,19.6s,baz=70,slow=35
ATD Arta Tunnel 50.33 268 P **P** **10 43 43.3 +0.6**
ATD Arta Tunnel 50.33 268 *e*S **S** **10 50 55.1 +5.7**
ATD Arta Tunnel 50.33 268 *e*P **P** **10 43 45.3 +2.6**
ATD Arta Tunnel 50.33 268 *e*P **P** **10 43 42.8 +0.1**
ATD *e*S **S** **10 50 50.0 +0.7**
ATD Arta Tunnel 50.33 268 *e*P **P** **10 43 43.4 +0.8**
ATD Arta Tunnel 50.33 268 P **P** **10 43 45.6 +2.9**
ATD ScP **ScP** **10 48 50.1 +1.8**
GENI Genyem 50.42 112 P **P** **10 43 43.0 -0.2**
comp=N,80µmcomp=N,27µmcomp=N,1µm,0.9s
GENI Genyem 50.42 112 P **P** **10 43 45.6 +2.4**
SOC Sochi 50.55 310 *e*P **P** **10 43 44.0 +0.1**
SOC *e**SP **sP** **10 44 14.8 -0.9**
SOC *e* 10 45 38.8
SOC *e*PPP PPP 10 46 38.1
SOC *e*S **S** **10 50 49.0 -2.5**
SOC *e*SS **SS** **10 54 27.4 +0.9**
SOC pmax pmax
comp=Z,284nm,0.7s
URFA Urfa 50.65 302 P **P** **10 43 42.2 -2.6**
VRH Novokhopyorsk 50.84 320 *e*P **P** **10 43 45.8 0.0**
VRH *e*S **S** **10 50 50.7 -4.5**
VRH pmax pmax
comp=Z,1µm,1.0s
VRH pmax pmax
comp=Z,780nm,0.7s
VRH smax smax
comp=N,19µm,10.6s
VRH MLR MLR
comp=Z,17µm,15.0s
ESPY Espiye-Giresun 50.97 306 P **P** **10 43 48.5 +1.5**
ARPR Arapgir-MALATY 51.12 304 P **P** **10 43 51.3 +2.9**
DARE Darende-Malaty 51.76 303 P **P** **10 43 55.7 +2.6**
RSDY Resadiye-TOKAT 51.98 305 P **P** **10 43 56.7 +2.0**
KMRS Kahramanmaras 52.18 302 P **P** **10 43 58.1 +1.9**
SVSK Karacayir 52.20 305 P **P** **10 43 58.7 +2.5**
ASF Jabal al Asfar 52.23 295 LR LR 11 08 41.7
comp=Z,26µm,21.8s,baz=103,slow=39
ANN Anapa 52.35 311 *e*P **P** **10 43 57.2 0.0**
ANN *e* 10 45 55.7
ANN *e*PPP PPP 10 47 06.9
ANN *e*S **S** **10 51 14.8 -1.3**
ANN *e**SS sS 10 52 02.2 +9.0
ANN pmax pmax
comp=N,61nm,0.7s
ANN pmax pmax
comp=Z,232nm,0.8s
ANN pmax pmax
comp=E,39nm,0.6s
ANN pmax pmax
comp=Z,4µm,6.1s
ANN pmax pmax
comp=N,1µm,6.2s
ANN pmax pmax
comp=E,493nm,2.7s
ANN smax smax
comp=E,5µm,9.5s
ANN smax smax
comp=Z,6µm,9.1s
ANN smax smax
comp=N,22µm,10.0s
VSR Storozhevoye 52.39 319 *e*P **P** **10 43 57.1 -0.3**
VSR *e*S **S** **10 51 11.7 -4.9**
VSR pmax pmax
comp=Z,280nm,0.7s
VSR pmax pmax
comp=Z,460nm,0.9s

VSR smax smax
comp=N,19μm,11.6s
VSR MLR MLR
comp=Z,21μm,19.0s
VORR Voronezh 52.48 320 *e*P **P 10 43 58.4 +0.4**
VORR *e**PP **sP 10 44 27.6 -2.2**
VORR *e*S **S 10 51 17.1 -0.6**
VORR pmax pmax
comp=Z,750nm,0.6s
VORR pmax pmax
comp=Z,2μm,1.2s
VORR smax smax
comp=E,2μm,1.1s
TOKT Tokat 52.58 305 P **P 10 44 01.1 +2.0**
SARI SarD1z-Kayseri 52.59 303 P **P 10 44 00.8 +1.5**
TOKA Tokat 52.63 305 P **P 10 44 01.5 +2.0**
PRGR Permogore 52.73 333 *e*P **P 10 43 59.3 -0.4**
PRGR *e**PP **pP 10 44 22.6 +1.1**
PRGR *e* 10 45 56.3
PRGR *e*S **S 10 51 18.5 -2.4**
PRGR pmax pmax
comp=Z,1μm,1.0s
TAHT Tahtakopru-Hat 52.73 300 P **P 10 44 01.8 +1.6**
MEEK Meekatharra 52.74 153 P **P 10 44 00.3 +0.1**
baz=53,SNR=106
MEEK Meekatharra 52.74 153 P **P 10 44 01.3 +1.0**
LPSR Galich'ya Gora 52.88 321 *e*P **P 10 44 00.9 -0.1**
LPSR *e*S **S 10 51 16.4 -6.7**
LPSR pmax pmax
comp=Z,1μm,0.9s
LPSR pmax pmax
comp=Z,1μm,0.9s
LPSR smax smax
comp=N,17μm,11.7s
LPSR MLR MLR
comp=Z,36μm,25.0s
HWQ Hawqa 52.95 298 *e*P **P 10 44 04.0 +2.0**
KVT Kavak 53.00 306 P **P 10 44 04.1 +1.9**
KOZT Kozan 53.03 302 P **P 10 44 03.6 +1.2**
BNN Bunyan 53.05 303 P **P 10 44 03.2 +0.5**
RCY Rachaya 53.07 297 *e*P **P 10 44 04.2 +1.3**
CEYT Ceyhan 53.09 301 P **P 10 44 04.5 +1.7**
QRWL Qaraoun 53.20 297 *e*P **P 10 44 05.0 +1.3**
BHL Bhannes 53.21 297 *e*P **P 10 44 05.2 +1.3**
DQRL Deir Qamar 53.28 297 *e*P **P 10 44 06.0 +1.6**
KRTS Karatas 53.39 301 P **P 10 44 07.9 +2.9**
GHAJ Ghor Haditha 53.41 294 IAmb IAmb 10 44 10.8
comp=Z,441nm,0.8s
MMAI Mount Meron Ar 53.45 296 LR LR 11 11 13.6
comp=Z,34μm,19.2s,baz=256,slow=41
UJAP Al Uja 53.46 295 P **P 10 44 07.9 +2.3**
MMLI Mount Malkishu 53.47 295 P **P 10 44 07.5 +1.8**
YOZ Yozgat 53.48 304 P **P 10 44 07.3 +1.4**
DIKM Dikmen 53.63 307 ⇑P **P 10 44 08.1 +1.4**
DIKM Dikmen 53.63 307 P **P 10 44 08.2 +1.5**
CMRD Camardi-Nigde 53.70 302 P **P 10 44 09.8 +2.4**
KOZK Kozakli-Nevseh 53.82 304 P **P 10 44 10.0 +1.7**
ANKE Ethiopia-Afar 53.84 267 *i* P **P 10 44 11.5 +2.4**
ANKE *e*S **S 10 51 34.0 -4.0**
ANKE Ethiopia-Afar 53.84 267 *e*P **P 10 44 10.9 +1.8**
ANKE *e*S **S 10 51 41.8 +3.7**
MORW Morawa 53.87 157 P **P 10 44 09.1 +0.6**
baz=54,SNR=312
MORW Morawa 53.87 157 IAmb IAmb 10 44 12.4
comp=Z,1μm,1.1s
MORW Morawa 53.87 157 P **P 10 44 09.4 +0.9**
CORM Corum 54.03 305 P **P 10 44 10.6 +0.8**
MERS Mersin 54.07 301 P **P 10 44 10.1 0.0**
EIL Elat 54.08 292 LR LR 11 11 04.0
comp=Z,19μm,18.0s,baz=98,slow=40
EIL Elat 54.08 292 P **P 10 44 11.1 +0.9**
GULA Gulagac 54.30 303 P **P 10 44 12.7 +0.9**
ERKN Erenkoy 54.38 299 P **P 10 44 13.8 +1.6**
KIZK Mersin 54.38 300 P **P 10 44 13.2 +1.0**
TIXI Tiksi 54.44 13 P **P 10 44 11.1 -0.9**
comp=Z,857nm,0.4s,baz=126,slow=7.3,SNR=461
TIXI LR LR 11 11 10.5
comp=Z,12μm,19.5s,baz=182,slow=40
comp=Z,857nm,0.4s
TIXI Tiksi 54.44 13 *c* iP **P 10 44 11.2 -0.9**
TIXI Tiksi 54.44 13 *c* iP **P 10 44 10.9 -1.1**
TIXI pmax pmax
comp=Z,2μm,1.3s
TIXI MLR MLR
comp=Z,43μm,24.0s
TIXI Tiksi 54.44 13 P **P 10 44 11.5 -0.5**
MOS Moscow 54.44 324 *e*P **P 10 44 09.4 -2.9**
MOS *e**PP **pP 10 44 32.2 -2.0**
MOS *e* 10 46 18.2
MOS *i* S **S 10 51 39.7 -4.4**
MOS *e* 10 53 49.8
MOS pmax pmax
comp=Z,2μm,1.5s
MOS pmax pmax
comp=Z,899nm,1.2s
MOS smax smax
comp=N,6μm,3.2s
MOS smax smax
comp=E,2μm,2.1s
SILI Silifke-Mersin 54.56 300 P **P 10 44 14.6 +1.1**
BZK Bozkurt 54.58 307 ⇑P **P 10 44 13.7 +0.1**
BZK Bozkurt 54.58 307 P **P 10 44 13.7 +0.1**
YAYX Yaylak 54.64 303 P **P 10 44 15.2 +1.0**
YESY Yesilyurt 54.69 302 P **P 10 44 16.4 +1.8**
SIM Simferopol' 54.71 311 *e*P **P 10 44 15.1 +0.6**
SIM *e*S S 10 51 57.4 +9.3
SIM pmax pmax
comp=Z,328nm,0.9s
SIM pmax pmax
comp=Z,2μm,18.2s
KAMT Kaman 54.72 304 P **P 10 44 15.6 +0.8**
KEBE Keben-Mersin 54.73 300 P **P 10 44 15.6 +0.7**
IKL Isikli 54.75 300 P **P 10 44 15.6 +0.6**
BR131 Keskin Array S 54.78 304 IAmb IAmb 10 44 45.4
comp=Z,609nm,1.1s
BR131 Keskin Array S 54.78 304 *c* iP **P 10 44 15.8 +0.5**
BRTR Keskin Array B 54.78 304 P **P 10 44 15.6 +0.3**
comp=Z,147nm,1.0s,baz=108,slow=5.9,SNR=76
BRTR ScP **ScP 10 49 06.1 -1.3**
comp=Z,21nm,1.0s,baz=110,slow=3.6,SNR=2.4
BRTR S **S 10 51 52.5 +2.9**
comp=Z,9.7nm,1.0s,baz=65,slow=11,SNR=5.2
BRTR LR LR 11 12 17.7
comp=Z,19μm,19.0s,baz=108,slow=41
comp=Z,147nm,1.0s
BRTR Keskin Array B 54.78 304 P **P 10 44 16.0 +0.7**
BRTR Keskin Array B 54.78 304 *ce*P **P 10 44 15.6 +0.3**
BRTR pmax pmax
comp=Z,111nm,0.8s
CANT Cankiri 54.82 305 P **P 10 44 17.8 +2.4**
SERE Sereflikochisa 54.83 303 P **P 10 44 17.2 +1.6**
OBN Obninsk 54.86 323 LR LR 11 12 03.4
comp=Z,10μm,21.9s,baz=110,slow=41
OBN Obninsk 54.86 323 P **P 10 44 15.3 -0.1**
OBN Obninsk 54.86 323 *c* iP **P 10 44 15.1 -0.3**
OBN *i* *PP **pP 10 44 40.2 +3.0**
OBN *e* 10 46 23.5
OBN *i* S **S 10 51 45.7 -4.0**
OBN *i* 10 53 57.4
OBN pmax pmax
comp=Z,2μm,1.6s
OBN pmax pmax
comp=Z,1μm,1.6s
OBN MLR MLR
comp=Z,32μm,17.0s
OBN Obninsk 54.86 323 P **P 10 44 15.0 -0.3**
OBN ScP **ScP 10 49 08.0 +0.9**
AKKU Akkuyu-Mersin 54.87 300 P **P 10 44 16.3 +0.5**
SULT Sultanhani-AKS 54.87 303 P **P 10 44 17.4 +1.5**
LFK Lefkose 54.91 299 P **P 10 44 20.4 +4.2**
AAE Adis Abeba 54.93 266 *e*S S 10 51 30.6 -22
AAE Adis Abeba 54.93 266 *e*P **P 10 44 20.4 +3.5**
AAE Adis Abeba 54.93 266 *e*P **P 10 44 17.4 +0.5**
AAE *e*S **S 10 51 49.4 -3.1**
AAE Adis Abeba 54.93 266 *e*P **P 10 44 18.8 +1.9**
AAE *e*S **S 10 51 55.9 +3.4**
TEVE Tevekalti-Mers 54.95 300 P **P 10 44 17.8 +1.4**
FURI Furi 55.05 266 *e*S **S 10 51 59.1 +4.9**
FURI Furi 55.05 266 *e*P **P 10 44 21.3 +3.5**
FURI Furi 55.05 266 *e*P **P 10 44 19.7 +1.9**
FURI *e*S **S 10 51 51.1 -3.1**
FURI Furi 55.05 266 *e*P **P 10 44 19.4 +1.6**
CSS Mathiatis 55.09 299 P **P 10 44 18.6 +1.2**
CSS Mathiatis 55.09 299 IAmb IAmb 10 44 50.9
comp=Z,481nm,0.9s
KLMR Klimovskoe 55.10 331 *e*P **P 10 44 15.3 -1.7**
KLMR *e**SP **sP 10 44 47.0 -1.8**
KLMR *e* 10 46 18.5
KLMR *e*S **S 10 51 50.3 -2.5**
KLMR pmax pmax
comp=Z,908nm,1.2s
KLMR MLR MLR
comp=Z,28μm,18.0s
KLMR Klimovskoe 55.10 331 *e*P **P 10 44 15.4 -1.6**
KLMR AMP 10 44 18.9
comp=Z,908nm,1.2s
KLMR *es*P **sP 10 44 47.1 -1.8**
KLMR *e*PP **PP 10 46 18.5 -2.5**
KLMR *e*S **S 10 51 50.4 -2.4**
KLMR *e*S **S 10 51 50.4 -2.4**
KLMR LR LR 11 08 23.6
KLMR AMP 11 11 23.8
comp=Z,28μm,17.9s
BERE Bereket-Mersin 55.12 300 P **P 10 44 18.6 +0.8**
TEKE Tekeli-Mersin 55.22 300 P **P 10 44 18.7 +0.4**
MA2 Magadan 55.22 31 P **P 10 44 18.2 +0.3**
comp=Z,1μm,1.1s,baz=251,slow=6.5,SNR=56
MA2 ScP **ScP 10 49 07.6 -1.0**
comp=Z,138nm,0.9s,baz=237,slow=4.3,SNR=7.2
MA2 LR LR 11 12 14.8
comp=Z,17μm,18.0s,baz=256,slow=41
comp=Z,1μm,1.1s
MA2 Magadan 55.22 31 P **P 10 44 17.7 -0.2**
MA2 IAmb IAmb 10 44 21.1
comp=Z,884nm,0.9s
MA2 Magadan 55.22 31 *c* iP **P 10 44 17.4 -0.5**
MA2 pmax pmax
comp=Z,1μm,1.0s
MA2 MLR MLR
comp=Z,18μm,16.0s
MA2 Magadan 55.22 31 P **P 10 44 18.9 +1.0**
MA2 Magadan 55.22 31 P **P 10 44 17.9 0.0**
MA2 sP **pP 10 44 43.6 +3.8**
MA2 ScP **ScP 10 49 07.7 -1.0**
KULU Kulu 55.27 304 P **P 10 44 19.6 +0.8**
CHBY Cihanbeyli 55.36 303 P **P 10 44 20.9 +1.5**
ANTO Ankara 55.44 305 ⇑P **P 10 44 20.9 +0.9**
ANTO Ankara 55.44 305 P **P 10 44 22.4 +2.5**
ANTO Ankara 55.44 305 P **P 10 44 20.7 +0.8**
ANTO IAmb IAmb 10 44 50.7
comp=Z,573nm,1.0s
ANTO Ankara 55.44 305 P **P 10 44 20.7 +0.8**
ANTO pmax pmax
comp=Z,573nm,1.0s
ANTO Ankara 55.44 305 P **P 10 44 20.9 +0.9**
ANTO Ankara 55.44 305 P **P 10 44 20.7 +0.8**
ANTO pP **pP 10 44 38.4 -3.7**
ANTO sP **sP 10 44 46.9 -5.1**
LEF Lefka 55.44 299 P **P 10 44 21.5 +1.6**
BR231 Keskin MP Arra 55.45 305 IAmb IAmb 10 44 27.3
comp=Z,364nm,0.8s
LOD Lodumlu 55.46 305 P **P 10 44 20.4 +0.3**
BLDU Ballidu 55.51 157 P **P 10 44 20.5 +0.2**
baz=56,SNR=263
BLDU Ballidu 55.51 157 P **P 10 44 21.0 +0.7**
KURC Kurucasile-Bar 55.52 307 P **P 10 44 22.6 +2.2**
SBV Sambava 55.60 236 P **P 10 44 21.9 +0.7**
SNR=6.6
SBV Sambava 55.60 236 P **P 10 44 23.4 +2.1**
LADK Ladik-KONYA 55.77 303 P **P 10 44 21.7 -0.7**
KONT Konya-~Tatoy 55.78 302 P **P 10 44 23.6 +1.2**
GAZI Gazipasa 55.86 300 P **P 10 44 22.9 -0.1**
SKR Severo-Kuril's 56.13 42 *e*P **P 10 44 23.8 -0.7**
SKR *e* 10 45 20.8
SKR *e* 10 46 30.3
SKR *e*PPP PPP 10 47 55.4
SKR *e*S **S 10 52 00.6 -6.2**
SKR pmax pmax
comp=Z,7μm,19.4s
SKR pmax pmax
comp=Z,260nm,0.9s
SKR smax smax
comp=N,4μm,13.7s
SKR smax smax
comp=E,3μm,11.1s
SKR MLR MLR
comp=Z,16μm,19.0s
KIZT Kizilcal 56.14 303 P **P 10 44 25.3 +0.3**
SEYD Seydisehir-KON 56.21 302 P **P 10 44 26.8 +1.3**
WRKA Warakurna 56.26 143 P **P 10 44 26.1 +0.3**
baz=56,SNR=626
WRKA Warakurna 56.26 143 P **P 10 44 26.6 +0.8**
WRA Warramunga Arr 56.27 134 P **P 10 44 26.0 0.0**
comp=Z,992nm,0.8s,baz=303,slow=12,SNR=789
WRA pP **pP 10 44 50.9 +3.0**
comp=Z,159nm,0.8s,baz=316,slow=8.0,SNR=2.1
WRA PcP **PcP 10 45 24.0 +1.5**
comp=Z,718nm,1.1s,baz=324,slow=4.2,SNR=7.3
WRA S **S 10 52 07.7 -1.8**
comp=Z,44nm,1.1s,baz=320,slow=14,SNR=8.5
WRA PKPPKP **P'P'df 11 14 22.5 +0.7**
comp=Z,11nm,1.0s,baz=108,slow=1.6,SNR=6.7
comp=Z,992nm,0.8s
WRAB Tennant Creek 56.28 134 P **P 10 44 25.9 -0.1**
WRAB Tennant Creek 56.28 134 *c* iP **P 10 44 25.7 -0.3**
WRAB pmax pmax
comp=Z,2μm,1.0s
WRAB MLR MLR
comp=Z,27μm,23.0s
WRAB Tennant Creek 56.28 134 P **P 10 44 26.4 +0.4**
WRAB Tennant Creek 56.28 134 P **P 10 44 26.0 0.0**
YUVA Yuva-Kibriscik 56.29 305 P **P 10 44 28.1 +2.1**
MTKN Mount Kenneth 56.37 158 P **P 10 44 28.6 +2.2**
comp=Z,3μm,1.0s
AUSIV SIVRIHISAR 56.40 304 P **P 10 44 27.7 +0.8**
SVRH Sivrihisar-ESK 56.42 304 P **P 10 44 27.8 +0.9**
RER Riviere de l'E 56.47 225 P **P 10 44 26.7 -0.7**
RER IAmb IAmb 10 45 02.1
comp=Z,471nm,1.3s
RER Riviere de l'E 56.47 225 P **P 10 44 30.4 +2.9**
KDZE Karadeniz Ereo 56.48 306 ⇓P **P 10 44 27.8 +0.6**
KDZE Karadeniz Ereo 56.48 306 P **P 10 44 27.8 +0.6**
MUN Mundaring 56.56 158 P **P 10 44 28.1 +0.3**
baz=57,SNR=629
MUN Mundaring 56.56 158 P **P 10 44 28.5 +0.7**
MDUB Mudurnu 56.66 305 P **P 10 44 28.9 +0.2**
CIFT Cifteler, Eski 56.77 304 P **P 10 44 30.3 +0.8**
KLBR Kellerberrin 56.78 156 P **P 10 44 29.4 0.0**
baz=57,SNR=163
KLBR Kellerberrin 56.78 156 P **P 10 44 29.9 +0.6**
SUTC Sutluce-Ispart 56.87 302 P **P 10 44 30.8 +0.6**
SEY Seymchan 57.07 27 P **P 10 44 30.6 -0.4**
comp=Z,143nm,0.8s,baz=252,slow=7.6,SNR=76
SEY PcP **PcP 10 45 25.6 +0.7**
comp=Z,215nm,0.9s,baz=269,slow=6.5,SNR=6.3
SEY ScP **ScP 10 49 15.8 -1.0**
comp=Z,110nm,1.1s,baz=274,slow=5.5,SNR=4.7
SEY LR LR 11 09 48.9
comp=Z,32μm,18.6s,baz=245,slow=37
SEY PKPPKP **P'P'df 11 14 23.3 +0.8**
comp=Z,10.0nm,1.1s,baz=174,slow=9.9,SNR=3.8
comp=Z,143nm,0.8s
SEY Seymchan 57.07 27 *c* iP **P 10 44 29.8 -1.2**
SEY pmax pmax
comp=Z,257nm,1.0s
SEY MLR MLR
comp=Z,28μm,17.0s
SRCK Saricakaya, Es 57.10 305 P **P 10 44 32.4 +0.7**
ANTB Antalya 57.17 301 P **P 10 44 32.4 +0.2**
GULT Gulveren 57.18 305 P **P 10 44 33.2 +0.9**
SHUT Suhut-Afyon 57.19 303 P **P 10 44 33.7 +1.2**
BCK Bucak 57.20 302 P **P 10 44 32.4 -0.1**
BORA Eskisehir 57.24 305 P **P 10 44 33.4 +0.7**
BORA Eskisehir 57.24 305 IAmb IAmb 10 45 02.6
comp=Z,445nm,0.9s
ISP Isparta 57.24 302 P **P 10 44 33.1 +0.3**
ISP Isparta 57.24 302 IAmb IAmb 10 45 02.3
comp=Z,984nm,1.2s
ISP Isparta 57.24 302 *c* iP **P 10 44 32.8 0.0**
ISP pmax pmax
comp=Z,402nm,0.9s
ISP MLR MLR
comp=Z,30μm,19.0s
SAUV Serdivan-Sakar 57.32 306 P **P 10 44 33.2 0.0**
KORT Korkueli 57.41 301 P **P 10 44 34.6 +0.6**
PEA0B Petropavlovsk- 57.45 40 P **P 10 44 33.6 -0.2**
PEA0B Petropavlovsk- 57.45 40 *c* iP **P 10 44 32.3 -1.6**
PETK Petropavlovsk- 57.45 40 P **P 10 44 33.3 -0.6**
comp=Z,158nm,1.0s,baz=222,slow=2.0,SNR=38
PETK PcP **PcP 10 45 26.3 -0.4**
comp=Z,49nm,0.6s,baz=254,slow=2.7,SNR=7.9
PETK ScP **ScP 10 49 16.4 -2.3**
comp=Z,21nm,0.9s,baz=11,slow=2.3,SNR=3.6
PETK LR LR 11 10 58.8
comp=Z,22μm,21.6s,baz=256,slow=38
PETK PKPPKP **P'P'df 11 14 24.0 +1.7**
comp=Z,10.0nm,1.1s,baz=101,slow=7.7,SNR=5.3
comp=Z,158nm,1.0s
AUBOZ BOZOYUK 57.56 305 P **P 10 44 35.5 +0.5**
CAVI Cavuskoy 57.70 305 P **P 10 44 36.5 +0.6**
ELL Elmali 57.77 301 P **P 10 44 37.4 +0.8**
ADVT Abdulvahap 57.78 305 P **P 10 44 37.1 +0.7**
PURM Purcari 57.78 312 ⇓P **P 10 44 38.0 +1.7**
NWAO Narrogin (SRO) 57.79 157 P **P 10 44 36.4 0.0**
NWAO Narrogin (SRO) 57.79 157 P **P 10 44 36.4 0.0**
NWAO pmax pmax
comp=Z,2μm,1.3s
NWAO Narrogin (SRO) 57.79 157 P **P 10 44 36.5 +0.1**
NWAO P **P 10 44 36.5 +0.1**
NWAO Narrogin (SRO) 57.79 157 P **P 10 44 37.2 +0.8**
NWAO Narrogin (SRO) 57.79 157 P **P 10 44 36.4 0.0**
NWAO sP **pP 10 45 00.5 +2.1**
NWAO ScP **ScP 10 49 20.0 -0.3**
HRT Hereke 57.82 306 P **P 10 44 37.9 +1.1**
SILT Sile 57.84 306 P **P 10 44 38.5 +1.7**
PET Petropavlovsk 58.01 40 P **P 10 44 36.9 -0.9**
PET IAmb IAmb 10 44 41.1
comp=Z,524nm,1.1s
PET Petropavlovsk 58.01 40 *c* iP **P 10 44 36.5 -1.3**
PET *e**PP **pP 10 45 02.8 +3.0**
PET *e**SP **sP 10 45 13.9 +4.3**
PET *e* 10 45 27.4
PET *e* 10 46 46.7
PET *i* S **S 10 52 26.1 -5.3**
PET pmax pmax
comp=Z,12μm,9.0s
PET pmax pmax
comp=Z,626nm,1.0s
PET pmax pmax
comp=Z,15μm,15.8s
PET pmax pmax
comp=Z,133nm,1.5s
PET smax smax
comp=N,5μm,14.7s
PET smax smax
comp=N,9μm,15.9s
PET MLR MLR
comp=Z,34μm,17.0s
PET MLR MLR
comp=Z,30μm,16.0s
PET Petropavlovsk 58.01 40 P **P 10 44 37.4 -0.4**
comp=Z,2μm,1.1s
PET Petropavlovsk 58.01 40 P **P 10 44 36.6 -1.1**
PET sP **pP 10 45 01.7 +1.9**
PET ScP **ScP 10 49 19.0 -2.1**
TVSB Tavsanli 58.01 304 P **P 10 44 37.8 -0.4**
AKAS Kas 58.05 300 P **P 10 44 37.2 -1.4**
AKAS Kas 58.05 300 P **P 10 44 37.0 -1.6**
AKAS IAmb IAmb 10 45 07.1
comp=Z,846nm,1.1s
YLV Yalova 58.05 305 P **P 10 44 39.0 +0.6**
GEDZ Gediz 58.06 304 P **P 10 44 39.8 +1.3**
GEMT Gemlik 58.20 305 P **P 10 44 40.1 +0.8**
APMY Acipayam-Deniz 58.22 302 P **P 10 44 39.5 -0.2**
CAME Cameli-Denizli 58.25 301 *e*P **P 10 44 40.9 +0.9**
KAVV Kandilli-Istan 58.28 306 P **P 10 44 40.3 +0.4**
ISK Istanbul-Kandi 58.28 306 P **P 10 44 40.7 +0.8**
ISK Istanbul-Kandi 58.28 306 P **P 10 44 40.3 +0.4**
KLYT Kilyos 58.29 306 P **P 10 44 41.0 +1.1**
MDNY Mudanya-Bursa 58.43 305 P **P 10 44 41.6 +0.7**
ARMT Armutlu 58.44 305 P **P 10 44 41.6 +0.5**
FETY Fethiye 58.44 301 P **P 10 44 41.1 -0.1**
TLCR 58.47 311 ⇓P **P 10 44 42.5 +1.4**
AKASG Malin Array Be 58.51 317 P **P 10 44 40.4 -0.9**
comp=Z,80nm,0.5s,baz=80,slow=6.9,SNR=232
AKASG pP **pP 10 45 04.7 +1.2**
comp=Z,67nm,0.5s,baz=79,slow=6.8,SNR=3.8
AKASG ScP **ScP 10 49 23.8 +0.4**
comp=Z,13nm,0.7s,baz=81,slow=4.2,SNR=4.0
AKASG S **S 10 52 37.4 -0.6**
comp=Z,58nm,1.0s,baz=90,slow=12,SNR=15
AKASG PKP2bc 11 14 28.0
comp=Z,15nm,1.1s,baz=282,slow=2.5,SNR=7.5
AKASG LR LR 11 14 34.2
comp=Z,47μm,20.5s,baz=95,slow=41
comp=Z,80nm,0.5s
AKASG Malin Array Be 58.51 317 IAmb IAmb 10 45 10.2
comp=Z,1μm,1.4s
AKASG Malin Array Be 58.51 317 *ce*P **P 10 44 40.4 -0.9**
AKASG pmax pmax
comp=Z,130nm,0.5s
AKBB Malin Array Si 58.51 317 *c* iP **P 10 44 40.5 -0.8**
AKBB pmax pmax
comp=Z,522nm,0.9s
AKBB MLR MLR
comp=Z,52μm,20.0s
KIS Kishinev 58.53 313 ⇑*i* P **P 10 44 41.2 -0.3**
comp=Z,2μm,5.9s
KIS Kishinev 58.53 313 *c* iP **P 10 44 41.2 -0.3**
KIS *i* PPP PPP 10 48 18.0
KIS *i* S **S 10 52 33.7 -4.8**
KIS pmax pmax
comp=Z,2μm,5.9s
KIS smax smax
comp=E,6μm,18.3s
KIS smax smax
comp=N,7μm,12.8s
KIS MLR MLR
comp=Z,6μm,19.5s
KIS MLR MLR
comp=E,6μm,20.0s
MILM Milestii Mici 58.53 313 ⇑P **P 10 44 42.2 +0.6**
MILM Milestii Mici 58.53 313 ⇑*i* P **P 10 44 41.0 -0.5**
comp=E,560nm,0.9s
MILM *e*pP **pP 10 45 02.0 -1.7**
MILM Milestii Mici 58.53 313 *e*PcP **PcP 10 45 26.0 -5.0**
MILM Milestii Mici 58.53 313 *e*PP PP 10 47 04.0 +12
MILM Milestii Mici 58.53 313 *c* iP **P 10 44 41.0 -0.5**
MILM *e* 10 45 12.0
MILM *e* 10 45 26.0
MILM *e*PPP PPP 10 48 18.0
MILM *e*S **S 10 52 32.0 -6.5**
MILM pmax pmax
comp=Z,4μm,6.1s
MILM smax smax
comp=E,15μm,5.3s
MILM smax smax
comp=N,9μm,10.3s
MILM MLR MLR
comp=Z,16μm,19.5s
MILM MLR MLR
comp=E,15μm,21.0s
H01W3 Cape Leeuwin H 58.55 161 P **P 10 44 41.9 +0.5**
baz=320,slow=4.1,SNR=148
TSCT Constanta Port 58.57 310 ⇑P **P 10 44 43.0 +1.2**
H01W2 Cape Leeuwin H 58.57 161 P **P 10 44 42.0 +0.5**
baz=320,slow=4.1,SNR=123
H01W1 Cape Leeuwin H 58.57 161 P **P 10 44 42.0 +0.4**
baz=320,slow=4.1,SNR=97
EFOR EFORIE 58.58 310 ⇑P **P 10 44 42.4 +0.5**
AS31 Alice Springs 58.61 137 P **P 10 44 42.8 +0.4**
AS31 IAmb IAmb 10 44 45.6
comp=Z,349nm,0.6s
ASAR Alice Springs 58.61 137 P **P 10 44 42.6 +0.2**
comp=Z,1μm,0.8s,baz=317,slow=5.7,SNR=1365
ASAR pP **pP 10 45 07.9 +3.4**
comp=Z,183nm,0.8s,baz=314,slow=7.5,SNR=2.4
ASAR S **S 10 52 38.7 -1.4**
comp=Z,30nm,1.1s,baz=324,slow=17,SNR=6.5
ASAR ScS **ScS 10 54 19.8 -4.5**
comp=Z,26nm,1.0s,baz=309,slow=7.6,SNR=6.9
ASAR PKP2bc 11 14 23.3
comp=Z,12nm,0.8s,baz=137,slow=2.8,SNR=12
comp=Z,1μm,0.8s
KULA Kula-Manisa 58.67 303 P **P 10 44 43.5 +0.7**
KULA Kula-Manisa 58.67 303 P **P 10 44 42.9 +0.1**
CTKS Kestanelik-??a 58.69 306 P **P 10 44 42.4 -0.4**
TIRR Tirgusor 58.75 310 ⇓P **P 10 44 43.9 +0.9**
TIRR Tirgusor 58.75 310 P **P 10 44 43.6 +0.5**
TIRR Tirgusor 58.75 310 P **P 10 44 43.5 +0.5**
TIRR Tirgusor 58.75 310 P **P 10 44 43.5 +0.5**
TIRR pmax pmax

comp=Z,1µm,1.2s
TPGR Topolog 58.75 310 ⇓P **P** **10 44 44.1 +1.0**
MANT Manisa 58.75 303 IAmb IAmb 10 45 13.2
comp=Z,582nm,1.1s
DALY Dalyan (Mula) 58.78 301 P **P** **10 44 43.5 +0.1**
CTYL Yalikoy Yolu 58.85 307 P **P** **10 44 44.3 +0.5**
LEOM Leova 58.90 312 ⇓P **P** **10 44 45.7 +1.6**
PSN Preselentsi 58.91 309 P **P** **10 44 45.7 +1.5**
SLVT Silivri 58.92 306 P **P** **10 44 45.2 +0.9**
CFR Carcaliu 58.95 311 ⇑P **P** **10 44 44.8 +0.3**
JAWL J.Aulia 58.96 276 *i* P **P** **10 44 45.0 0.0**
JAWL *i* 10 44 58.2
baz=265,slow=4.6
JAWL *i* S **S** **10 52 45.5 +0.5**
VLDR Vladesti 59.00 312 ⇓P **P** **10 44 45.9 +1.1**
TLBR Topalu 59.01 310 ⇓P **P** **10 44 45.6 +0.8**
COEN Coen 59.03 122 P **P** **10 44 45.2 -0.1**
baz=59,SNR=362
COEN Coen 59.03 122 P **P** **10 44 45.0 -0.4**
COEN IAmb IAmb 10 45 36.8
comp=Z,822nm,1.2s
COEN Coen 59.03 122 P **P** **10 44 46.6 +1.2**
YER Yerkesik 59.05 301 P **P** **10 44 45.6 +0.1**
YER Yerkesik 59.05 301 P **P** **10 44 45.5 +0.1**
SCTR Scanteiesti 59.06 311 ⇑P **P** **10 44 46.0 +0.8**
HARR Harsova 59.09 310 ⇓P **P** **10 44 45.8 +0.4**
TURN Turunc 59.11 301 P **P** **10 44 46.5 +0.8**
VARL Varlezi 59.17 312 ⇓P **P** **10 44 47.8 +1.8**
ICOR Ion Corvin 59.18 310 ⇓P **P** **10 44 47.4 +1.3**
PUL Pulkovo 59.19 328 *ce*P **P** **10 44 46.5 +0.6**
PUL pmax pmax
comp=Z,937nm,0.8s
PUL MLR MLR
comp=Z,30µm,19.0s
EDC Edincik 59.21 305 P **P** **10 44 46.7 +0.3**
SLCR Slobozia Conac 59.22 311 ⇓P **P** **10 44 48.3 +2.0**
RKGY Rocky Gully 59.22 159 P **P** **10 44 47.0 +0.6**
baz=60,SNR=92
RKGY Rocky Gully 59.22 159 P **P** **10 44 47.7 +1.4**
VASR Vaslui 59.22 313 ⇓P **P** **10 44 47.1 +0.7**
ARG Arkhangelos 59.24 300 P **P** **10 44 47.2 +0.5**
ARG Arkhangelos 59.24 300 P **P** **10 44 47.8 +1.1**
ARG Arkhangelos 59.24 300 IAmb IAmb 10 45 21.1
comp=Z,649nm,1.0s
VALR Valaam 59.26 330 *c* *i*P **P** **10 44 46.0 -0.3**
VALR pmax pmax
comp=Z,712nm,0.9s
VALR MLR MLR
comp=Z,15µm,16.0s
CRLT Corlu 59.28 306 P **P** **10 44 48.3 +1.5**
TUDR 59.29 311 ⇓P **P** **10 44 48.2 +1.4**
AYDB Zeytinkoy-Aydi 59.31 302 P **P** **10 44 47.8 +0.5**
BIR Birlad 59.33 312 ⇓P **P** **10 44 48.4 +1.4**
IAS Iasi 59.40 313 ⇓P **P** **10 44 48.3 +0.7**
PHSR Pinarhisar 59.42 307 P **P** **10 44 49.1 +1.3**
PRD Provadia 59.48 309 P **P** **10 44 50.1 +2.0**
AMRR Amara 59.52 310 ⇓P **P** **10 44 50.2 +1.9**
LVZ Lovozero 59.58 338 P **P** **10 44 48.2 -0.2**
LVZ Lovozero 59.58 338 *c* *i*P **P** **10 44 48.1 -0.4**
LVZ pmax pmax
comp=Z,484nm,1.0s
LVZ MLR MLR
comp=Z,26µm,19.0s
LVZ Lovozero 59.58 338 P **P** **10 44 48.1 -0.4**
PANC Panciu 59.66 312 ⇑P **P** **10 44 49.5 +0.2**
MNK Minsk 59.70 322 *i* P **P** **10 44 49.7 +0.3**
MNK *i* 10 45 35.4
MNK *i* 10 47 02.5
MNK *i* PPP PPP 10 48 25.3
MNK *i* S **S** **10 52 54.4 +1.2**
MNK *i* 10 54 31.3
MNK *i* SS **SS** **10 56 53.0 +3.0**
MNK pmax pmax
comp=N,10.0nm,0.9s
MNK pmax pmax
comp=Z,756nm,0.9s
MNK pmax pmax
comp=E,105nm,0.9s
MNK MLR MLR
comp=E,5µm,26.0s
MNK MLR MLR
comp=Z,41µm,25.0s
MNK MLR MLR
comp=N,32nm,21.0s
MNK Minsk 59.70 322 *i* P **P** **10 44 49.7 +0.3**
comp=E,105nm,0.9s
MNK *i* P **P** **10 44 49.7 +0.3**
comp=N,10.0nm,0.9s
MNK *i* P **P** **10 44 49.7 +0.3**
comp=Z,756nm,0.8s,baz=95
MNK *i* pP **pP** **10 45 12.2 +0.6**
MNK *i* PP **PP** **10 47 02.5 +0.6**
MNK *i* PPP PPP 10 48 25.3
MNK *i* S **S** **10 52 54.5 +1.2**
MNK *i* sS **sS** **10 53 33.5 +1.8**
MNK *i* SS **SS** **10 56 53.1 +3.0**
MNK *i* SSS SSS 10 59 32.8
MNK *i* LQ LQ 11 06 33.2
MNK *i* LR LR 11 10 11.2
MNK *i* LRM MLR 11 13 16.1
comp=E,5µm,25.8s
MNK *i* LRM MLR 11 13 16.1
comp=Z,41µm,24.5s
MNK *i* LRM MLR 11 13 30.0
comp=N,32nm,20.6s
RKY Sarkoy-Tekirda 59.72 306 P **P** **10 44 50.1 +0.2**
BODT Bodrum 59.83 301 P **P** **10 44 50.1 -0.6**
BODT Bodrum 59.83 301 P **P** **10 44 49.8 -0.9**
GCAM G?zelcaml? 59.85 302 P **P** **10 44 52.3 +1.5**
LEHL Lehliu 59.89 310 ⇓P **P** **10 44 51.6 +0.7**
APA Apatity 59.92 337 ⇑*i*P **P** **10 44 50.4 -0.3**
APA *i* *PP **pP** **10 45 13.5 +0.6**
APA *i* 10 45 40.2
APA *i* S **S** **10 52 54.0 -1.7**
APA *i* 10 54 30.0
APA pmax pmax
comp=Z,209nm,0.8s
KIBK Kibwezi 59.93 254 P **P** **10 44 52.0 +0.2**
KIBK Kibwezi 59.93 254 P **P** **10 44 52.5 +0.7**
SNR=29
BLCB Balcova 59.95 303 P **P** **10 44 53.1 +1.6**
BLCB Balcova 59.95 303 P **P** **10 44 52.2 +0.7**
VRI Vrincioaia 59.95 312 ⇓P **P** **10 44 53.1 +1.7**
VRI Vrincioaia 59.95 312 P **P** **10 44 52.3 +0.9**
NIS1 Nisyros Isl. 59.98 301 P **P** **10 44 51.7 0.0**
EDRB Edirne 60.00 307 P **P** **10 44 52.5 +0.7**
EDRB Edirne 60.00 307 P **P** **10 44 52.1 +0.3**
PLOR Plostina 60.00 312 ⇑P **P** **10 44 53.5 +1.7**
TESR Tescani 60.01 312 ⇑P **P** **10 44 52.4 +0.6**
DKL Dikili 60.01 304 P **P** **10 44 52.6 +0.7**
LODK Lodwar 60.06 262 IAmb IAmb 10 45 28.8
comp=Z,700nm,1.2s
LODK Lodwar 60.06 262 P **P** **10 44 54.0 +1.3**
SNR=80
LODK Lodwar 60.06 262 *e*S **S** **10 52 52.4 -7.0**
LODK Lodwar 60.06 262 *i* P **P** **10 44 55.4 +2.7**
LODK Lodwar 60.06 262 *e*P **P** **10 44 54.4 +1.6**
LODK *e*S **S** **10 52 53.5 -5.9**
LODK Lodwar 60.06 262 *e*P **P** **10 44 53.6 +0.9**
LODK *e*S **S** **10 53 00.2 +0.9**
ISR Istrita 60.08 311 ⇑P **P** **10 44 54.2 +1.9**
KARP Karpathos 60.08 300 P **P** **10 44 53.3 +0.8**
KARP Karpathos 60.08 300 P **P** **10 44 53.0 +0.5**
JMB Yambol 60.10 308 P **P** **10 44 51.1 -1.3**
UKOP Uzunkopru-Edir 60.11 306 P **P** **10 44 54.7 +2.2**
KOSK Kos Island 60.12 301 P **P** **10 44 54.1 +1.4**
RAZG Razgrad 60.12 309 ⇑P **P** **10 44 53.4 +0.8**
KMBO Kilima Mbogo 60.13 256 P **P** **10 44 54.0 +0.6**
comp=Z,153nm,0.7s,baz=55,slow=11,SNR=70
KMBO ScP **ScP** **10 49 31.8 +0.2**
comp=Z,35nm,1.0s,baz=33,slow=8.5,SNR=3.2
KMBO LR LR 11 11 43.2
comp=Z,22µm,19.3s,baz=50,slow=37
KMBO PKPPKP **P'P'df** **11 14 16.7 -1.6**
comp=Z,7.1nm,1.2s,baz=215,slow=3.6,SNR=4.3
comp=Z,153nm,0.7s
KMBO Kilima Mbogo 60.13 256 P **P** **10 44 54.0 +0.6**
KMBO IAmb IAmb 10 45 29.0
comp=Z,485nm,1.2s
KMBO Kilima Mbogo 60.13 256 *d* *i*P **P** **10 44 53.7 +0.3**
KMBO Kilima Mbogo 60.13 256 P **P** **10 44 54.3 +0.9**
KMBO P **P** **10 44 54.3 +0.9**
KMBO Kilima Mbogo 60.13 256 *e*S S 10 52 47.4 -13
KMBO Kilima Mbogo 60.13 256 *e*P **P** **10 44 55.4 +2.0**
KMBO Kilima Mbogo 60.13 256 *e*P **P** **10 44 54.4 +0.9**
KMBO *e*S S 10 52 51.2 -9.3
KMBO Kilima Mbogo 60.13 256 *e*P **P** **10 44 53.6 +0.3**
KMBO *e*S **S** **10 53 01.4 +0.9**
KMBO Kilima Mbogo 60.13 256 *i* P **P** **10 44 53.8 +0.3**
SNR=29
KMBO Kilima Mbogo 60.13 256 P **P** **10 44 54.0 +0.6**
KMBO pP **pP** **10 45 11.2 -4.5**
KMBO sP **sP** **10 45 21.4 -4.2**
KMBO ScP **ScP** **10 49 31.7 +0.2**
SMG Samos 60.16 302 P **P** **10 44 53.0 +0.1**
NEHR Nehoiu 60.25 311 ⇓P **P** **10 44 54.6 +1.1**
GELI Tayfur-Gelibol 60.27 305 P **P** **10 44 54.9 +1.3**
SULR 60.29 310 ⇓P **P** **10 44 54.4 +0.8**
URLA Izmir 60.30 303 P **P** **10 44 53.9 0.0**
COVR Voineasa-Covas 60.31 312 ⇓P **P** **10 44 54.6 +0.7**
QIS Mount Isa 60.35 130 P **P** **10 44 54.6 +0.2**
baz=60,SNR=1000
QIS Mount Isa 60.35 130 P **P** **10 44 55.4 +1.0**
NACGM Naroch 60.37 322 *i* P **P** **10 44 54.4 +0.4**
baz=96
EZN Ezine 60.41 305 P **P** **10 44 55.4 +0.8**
EZN Ezine 60.41 305 P **P** **10 44 55.1 +0.5**
PRK Paraskevi 60.49 304 P **P** **10 44 57.9 +2.8**
ENEZ Enez 60.49 306 P **P** **10 44 55.9 +0.8**
SGRR Singureni 60.50 310 ⇓P **P** **10 44 55.8 +0.7**
MLR Muntele Rosu 60.50 311 ⇑P **P** **10 44 56.6 +1.3**
MLR Muntele Rosu 60.50 311 LR LR 11 17 14.0
comp=Z,35µm,20.0s,baz=68,slow=42
SZH Strazhica 60.55 309 P **P** **10 44 56.3 +0.8**
ALN Alexandroupoli 60.57 306 P **P** **10 44 55.9 +0.3**
ALN Alexandroupoli 60.57 306 P **P** **10 44 56.4 +0.8**
ALN Alexandroupoli 60.57 306 IAmb IAmb 10 45 30.5
comp=Z,712nm,1.2s
AIS Amsterdam Isla 60.57 195 P **P** **10 44 55.4 -0.1**
AIS Amsterdam Isla 60.57 195 P **P** **10 44 57.6 +2.1**
AIS sP **sP** **10 45 24.2 -3.3**
OZUR 60.61 312 ⇑P **P** **10 44 56.6 +0.7**
BOZC Bozcaada 60.62 305 P **P** **10 44 55.9 -0.1**
FORT Forrest 60.67 147 P **P** **10 44 57.3 +1.0**
baz=61,SNR=43
FORT Forrest 60.67 147 P **P** **10 44 57.4 +1.0**
FORT Forrest 60.67 147 P **P** **10 44 58.6 +2.3**
GADA Gvkgeada 60.72 305 P **P** **10 44 56.8 +0.1**
CHOS Chios island 60.72 303 P **P** **10 44 58.2 +1.3**
CHOS Chios island 60.72 303 P **P** **10 44 58.1 +1.2**
VSU Vasula 60.80 326 *c* *i*P **P** **10 44 56.2 -0.7**
VSU pmax pmax
comp=Z,1µm,1.5s
VSU MLR MLR
comp=Z,116µm,27.0s
VSU Vasula 60.80 326 *e*P **P** **10 44 56.5 -0.4**
ISAL Salakas 60.81 323 *e*P **P** **10 44 57.2 +0.2**
SIGR SIGRI 60.82 304 P **P** **10 44 58.2 +0.8**
SIGR SIGRI 60.82 304 P **P** **10 44 59.1 +1.7**
DOPR Dopca 60.88 312 ⇑P **P** **10 44 58.4 +0.7**
DIM Dimitrovgrad 60.89 307 P **P** **10 44 59.4 +1.6**
ZKR Zakros 60.89 299 P **P** **10 44 58.6 +0.6**
ZKR Zakros 60.89 299 P **P** **10 44 59.8 +1.8**
RDO Rodhopi 60.94 306 P **P** **10 44 58.6 +0.5**
RDO Rodhopi 60.94 306 P **P** **10 44 58.7 +0.6**
RDO Rodhopi 60.94 306 IAmb IAmb 10 45 33.6
comp=Z,742nm,1.3s
ZIMR 60.95 309 ⇓P **P** **10 45 00.1 +1.9**
AMGA Amorgos Island 60.98 301 P **P** **10 45 01.8 +3.2**
STIA Sitia Lasithi 60.99 299 P **P** **10 44 59.3 +0.7**
BURAR Bucovina Array 60.99 314 ⇑P **P** **10 44 59.0 +0.5**
KDZ Kurdzhali 61.00 307 P **P** **10 44 59.7 +1.1**
BUR08 Bucovina Ar. S 61.01 314 IAmb IAmb 10 45 29.0
comp=Z,493nm,1.2s
ABPO Ambohimpanom 61.03 233 P **P** **10 44 59.4 +0.2**
ABPO IAmb IAmb 10 45 27.8
comp=Z,752nm,1.3s
ABPO Ambohimpanom 61.03 233 P **P** **10 44 59.4 +0.2**
ABPO pmax pmax
comp=Z,752nm,1.3s
ABPO Ambohimpanom 61.03 233 P **P** **10 44 59.6 +0.4**
ABPO ScP **ScP** **10 49 34.6 -0.6**
MTUR Matau 61.12 311 ⇑P **P** **10 45 01.4 +1.9**
VOIR 61.13 311 ⇓P **P** **10 44 59.1 -0.4**
HUMR Humele 61.20 310 ⇑P **P** **10 45 01.0 +1.1**
STFAR Stefanesti-Arg 61.21 310 ⇓P **P** **10 45 01.2 +1.3**
APE Apeiranthos 61.25 302 ⇓P **P** **10 45 00.5 +0.1**
APE Apeiranthos 61.25 302 P **P** **10 45 00.5 +0.1**
APE Apeiranthos 61.25 302 *d* *i*P **P** **10 45 01.5 +1.1**
APE pmax pmax
comp=Z,213nm,1.4s
APE MLR MLR
comp=Z,19µm,19.0s
LIA Limnos Island 61.29 305 P **P** **10 45 02.3 +1.8**
SANT Santorini 61.38 301 ⇓P **P** **10 45 01.3 0.0**
SANT Santorini 61.38 301 P **P** **10 45 01.3 0.0**
SANT Santorini 61.38 301 P **P** **10 45 01.1 -0.3**
SANT Santorini 61.38 301 P **P** **10 45 00.8 -0.5**
ARR Arges 61.42 311 ⇑P **P** **10 45 01.8 +0.3**
ARR Arges 61.42 311 ⇑P **P'P'df** **11 14 18.1 +1.6**
PLD Plovdiv 61.51 307 P **P** **10 45 02.9 +0.9**
PLD Plovdiv 61.51 307 P **P** **10 45 03.8 +1.8**
RZN Rozhen 61.52 307 P **P** **10 45 03.0 +0.7**
FIA1 FINESS Array S 61.55 329 IAmb IAmb 10 45 08.2
comp=Z,322nm,0.8s
FINES FINESS Array B 61.55 329 P **P** **10 45 01.5 -0.4**
comp=Z,182nm,0.6s,baz=103,slow=6.7,SNR=276
FINES pP **pP** **10 45 26.9 +2.7**
comp=Z,101nm,0.6s,baz=71,slow=7.1,SNR=3.2
FINES S **S** **10 53 15.7 -0.9**
comp=Z,16nm,0.9s,baz=100,slow=14,SNR=2.8
FINES PKPPKP **P'P'df** **11 14 15.3 -0.2**
comp=Z,4.5nm,0.9s,baz=298,slow=3.0,SNR=4.4
FINES LR LR 11 16 18.7
comp=Z,43µm,21.4s,baz=104,slow=40
comp=Z,182nm,0.6s
FINES FINESS Array B 61.55 329 *i* P **P** **10 45 01.5 -0.4**
FINES pmax pmax
comp=Z,183nm,0.6s
ARCR ARCALIA 61.59 313 ⇓P **P** **10 45 04.2 +1.7**
THAS Thassos island 61.59 306 P **P** **10 45 03.6 +1.1**
KRVT Keravat (AS076 61.66 107 P **P** **10 45 03.0 -0.5**
comp=Z,288nm,1.0s,baz=246,slow=1.9,SNR=2.1
KRVT LR LR 11 09 29.6
comp=Z,18µm,21.8s,baz=80,slow=34
comp=Z,288nm,1.0s
KAVA Kavala 61.72 306 P **P** **10 45 04.0 +0.6**
RABL Rabaul 61.74 107 P **P** **10 45 06.8 +2.8**
HRKL Herakleio 61.78 300 P **P** **10 45 04.5 +0.6**
LVV L'vov 61.79 316 *e*P **P** **10 45 03.7 -0.1**
LVV *e*PPP PPP 10 48 53.0
LVV *e*S **S** **10 53 16.7 -3.5**
LVV *e*PS **PnS** **10 53 58.4 +11**
LVV pmax pmax
comp=Z,1µm,1.6s
PGB Panagyurishte 61.88 308 P **P** **10 45 06.1 +1.5**
IDI Anoyia 61.95 300 ⇑P **P** **10 45 05.0 -0.2**
IDI Anoyia 61.95 300 PKPPKP 11 14 11.6
comp=Z,17nm,0.9s,baz=335,slow=3.0,SNR=3.9
IDI Anoyia 61.95 300 P **P** **10 45 06.5 +1.3**
IDI Anoyia 61.95 300 P **P** **10 45 06.1 +0.9**
IDI Anoyia 61.95 300 IAmb IAmb 10 45 36.1
comp=Z,607nm,0.9s
PABE Paberze 62.03 323 *e*P **P** **10 45 05.5 +0.3**
LOT Lotru 62.03 311 ⇓P **P** **10 45 06.3 +0.7**
LOT Lotru 62.03 311 P **P** **10 45 05.5 -0.1**
VSVD Vaisvydziai 62.08 323 *e*P **P** **10 45 06.4 +0.9**
CBBR Cluj-Babes-Bol 62.14 313 ⇑P **P** **10 45 07.4 +1.3**
MPEP Malo Peshtene 62.15 309 P **P** **10 45 07.2 +0.9**
BMR Baia Mare 62.16 314 ⇓P **P** **10 45 08.2 +1.9**
OUR Ouranopolis 62.17 305 P **P** **10 45 06.9 +0.5**
OUR Ouranopolis 62.17 305 P **P** **10 45 07.0 +0.5**
NVR Nevrokopi 62.19 307 P **P** **10 45 06.9 +0.3**
MEF Metsahovi 62.20 328 *e*P **P** **10 45 05.7 -0.6**
MMB Musomiste 62.27 307 P **P** **10 45 07.9 +0.7**
MTSU Mount Surprise 62.34 125 P **P** **10 45 08.2 +0.3**
baz=62,SNR=117
MTSU Mount Surprise 62.34 125 P **P** **10 45 09.6 +1.7**
MTSE Matsula 62.35 326 *e*P **P** **10 45 07.0 -0.3**
AOS Alonnisos 62.35 304 P P 10 45 19.1 +11
SRS Serrai 62.41 306 P **P** **10 45 08.1 0.0**
DION Dionisos Attik 62.41 303 P **P** **10 45 09.2 +1.0**
PAIG Paliouri 62.44 305 P **P** **10 45 10.0 +1.8**
PAIG Paliouri 62.44 305 P **P** **10 45 08.8 +0.6**
SRE Strehaia 62.46 310 ⇓P **P** **10 45 09.9 +1.6**
MESR Meseseni 62.54 313 ⇓P **P** **10 45 10.5 +1.7**
VLY Voula,Athens 62.55 303 P **P** **10 45 08.5 -0.5**
VTS Vitosha 62.56 308 ⇓P **P** **10 45 09.9 +0.6**
VTS Vitosha 62.56 308 P **P** **10 45 10.2 +1.0**
VTS Vitosha 62.56 308 P **P** **10 45 10.0 +0.8**
SOH Sokhos 62.61 306 P **P** **10 45 09.6 +0.1**
DEV Deva 62.62 312 ⇓P **P** **10 45 11.1 +1.7**
KWP Kalwaria Pacla 62.65 316 *i* P **P** **10 45 10.1 +0.6**
KWP *e*S **S** **10 53 30.1 -0.9**
KWP *e*sS **sS** **10 54 16.9 +6.9**
KWP *e*SSS SSS 11 00 39.5
KWP *e*L L 11 12 43.2
comp=Z,45µm,31.9s
GVDS Gavdos 62.66 299 P **P** **10 45 09.9 +0.1**
GVDS Gavdos 62.66 299 P **P** **10 45 10.0 +0.1**
GVD Gavdhos 62.66 299 P **P** **10 45 10.3 +0.4**
GVD Gavdhos 62.66 299 P **P** **10 45 10.0 +0.1**
IMMV Iera Moni Meta 62.67 300 P **P** **10 45 10.8 +0.9**
IMMV Iera Moni Meta 62.67 300 P **P** **10 45 10.5 +0.6**
OOD Oodnadatta 62.69 139 P **P** **10 45 11.3 +1.3**
DRGR 62.72 313 ⇑P **P** **10 45 10.9 +0.8**
KKB Krupnik 62.73 307 P **P** **10 45 11.3 +1.1**
GZR Gura Zlata 62.73 311 ⇑P **P** **10 45 10.5 +0.3**
KEV Kevo 62.78 339 P **P** **10 45 10.1 +0.1**
KEV IAmb IAmb 10 45 38.2
comp=Z,1µm,1.3s
KEV Kevo 62.78 339 P **P** **10 45 10.1 +0.1**
KEV pmax pmax
comp=Z,1µm,1.3s
KEV Kevo 62.78 339 P **P** **10 45 10.0 0.0**
KEV pP **pP** **10 45 28.6 -3.8**
KEV sP **sP** **10 45 36.1 -6.0**
XOR Xorichti 62.86 304 P **P** **10 45 11.8 +0.7**
VILL Villia 62.89 303 P **P** **10 45 10.4 -1.0**
BLKB Belogradchik 62.90 309 ⇓P **P** **10 45 11.5 +0.2**
THE Thessaloniki 62.92 306 P **P** **10 45 11.2 -0.2**
KNT Kendrikon 62.92 306 P **P** **10 45 11.4 -0.1**
UZH Uzhgorod 62.94 315 ⇑*i*P **P** **10 45 12.8 +1.4**
UZH *e* 10 45 37.2
UZH *i* S **S** **10 53 32.8 -1.8**
UZH *i* SS **SS** **10 57 44.0 +2.9**
UZH MLR MLR
comp=Z,2µm,18.0s
KOLS Kolonicke sedl 62.95 315 *e*P **P** **10 45 12.7 +1.2**
KOLS pmax pmax
comp=Z,48nm,0.9s
KOLS Kolonicke sedl 62.95 315 *e*P **P** **10 45 12.7 +1.2**
DJES Djerdap 62.95 310 ⇑P **P** **10 45 12.8 +1.2**
HERR Herculane 63.01 311 ⇑P **P** **10 45 13.1 +1.1**
SLIT Slitere, Latvi 63.08 325 *e*P **P** **10 45 11.0 -1.1**
PATS Pohnpei 63.10 93 P **P** **10 45 14.9 +1.8**
baz=63,SNR=74
PATS Pohnpei 63.10 93 P **P** **10 45 15.7 +2.6**
KRND KRANIDI 63.11 302 P **P** **10 45 12.1 -0.6**
VOI Vohitsoka 63.14 230 P **P** **10 45 13.4 +0.2**
VOI IAmb IAmb 10 45 42.0
comp=Z,449nm,0.9s
VOI Vohitsoka 63.14 230 P **P** **10 45 13.5 +0.2**
SNR=18
VOI Vohitsoka 63.14 230 P **P** **10 45 14.2 +0.9**
VAY Valandovo 63.16 307 *i* P **P** **10 45 12.8 -0.2**
ANKY Antikythira Is 63.17 300 P **P** **10 45 13.6 +0.4**
LTK Loutraki 63.18 303 P **P** **10 45 11.6 -1.6**
PBUR Paburge 63.20 323 *e*P **P** **10 45 12.9 -0.1**
ARA0 ARCESS Array S 63.24 338 *e*P **P** **10 45 13.3 +0.2**
ARA0 IVmBBB 10 45 14.6
comp=Z,4µm,1.6s
ARA0 *e*S **S** **10 53 36.1 -1.6**
ARA0 *e*SS **SS** **10 57 44.7 -0.3**
ARA0 IVMs_BB IVMs_BB 11 19 02.9
comp=Z,13µm,14.1s
ARCES ARCESS Array B 63.24 338 P **P** **10 45 12.9 -0.1**
comp=Z,68nm,0.4s,baz=84,slow=6.9,SNR=428
ARCES pP **pP** **10 45 38.6 +3.1**
comp=Z,190nm,0.8s,baz=91,slow=4.9,SNR=6.4
ARCES PKPPKP **P'P'df** **11 14 11.0 -1.6**
comp=Z,6.0nm,1.0s,baz=247,slow=2.5,SNR=5.2
ARCES PKP2bc 11 14 20.6
comp=Z,10nm,0.8s,baz=284,slow=1.0,SNR=8.8
ARCES LR LR 11 18 44.6
comp=Z,16µm,18.1s,baz=109,slow=42
comp=Z,68nm,0.4s
ARCES ARCESS Array B 63.24 338 IAmb IAmb 10 45 40.7
comp=Z,1µm,1.6s
LTVH Ltavrtes, Hu 63.25 313 P **P** **10 45 16.6 +3.2**
KTHA Kythira Island 63.31 301 P **P** **10 45 13.8 -0.4**
KTHA Kythira Island 63.31 301 P **P** **10 45 13.6 -0.6**
GRG Griva 63.32 306 P **P** **10 45 13.5 -0.6**
GRG Griva 63.32 306 P **P** **10 45 14.0 -0.1**
LIT Litokhoron 63.33 305 P **P** **10 45 13.8 -0.4**
AXAR Agios Charalam 63.34 304 P **P** **10 45 14.7 +0.4**
BORR Bors 63.34 313 ⇑P **P** **10 45 14.5 +0.4**
VLI Veliai 63.35 301 P **P** **10 45 13.3 -1.1**
KTHR Kythira 63.36 301 P **P** **10 45 13.9 -0.6**
STIP Stip 63.41 307 *i* P **P** **10 45 13.1 -1.6**
SIRR Siria 63.47 312 ⇑P **P** **10 45 16.1 +1.1**
CRVS Cervenica-Dubn 63.48 315 *e*P **P** **10 45 16.4 +1.3**
CRVS pmax pmax
comp=Z,559nm,1.3s
CRVS Cervenica-Dubn 63.48 315 *e*P **P** **10 45 16.4 +1.3**
MDVR Moldovita 63.52 311 ⇑P **P** **10 45 16.3 +0.9**
BZS Buzias 63.53 311 ⇑P **P** **10 45 15.8 +0.4**
BZS Buzias 63.53 311 P **P** **10 45 16.2 +0.8**
MULG Mulgathing 63.54 142 P **P** **10 45 16.5 +0.9**
RAF Rauma 63.57 329 *e*P **P** **10 45 15.5 +0.1**
BOVS Bovan 63.60 309 ⇑P **P** **10 45 16.7 +0.7**
MAKR Makrakomi, Fth 63.72 304 P **P** **10 45 15.8 -1.0**
THL Klokotos Trika 63.75 305 P **P** **10 45 15.8 -1.1**
KLV Kalavryta, Ach 63.82 303 P **P** **10 45 16.6 -0.9**
BEL Belsk 63.84 318 *i* P **P** **10 45 17.6 +0.3**
BEL *e*PPP PPP 10 49 12.0
BEL *e*S **S** **10 53 43.6 -2.1**
BEL *e*sS **sS** **10 54 30.7 +5.9**
BEL *e*ScS **ScS** **10 55 03.9 +1.1**
BEL *e*SS **SS** **10 57 50.4 -4.6**
BEL *e*SSS SSS 11 00 51.5
BEL *e*L L 11 11 44.4
comp=Z,55µm,32.4s
KZN Kozani 63.86 306 P **P** **10 45 17.3 -0.5**
BANR Banloc 63.89 311 ⇑P **P** **10 45 18.7 +1.0**
BILL Bilibino 63.93 23 P **P** **10 45 17.1 -0.5**
BILL IAmb IAmb 10 45 21.2
comp=Z,745nm,0.8s
BILL Bilibino 63.93 23 *d* *i*P **P** **10 45 16.8 -0.8**
BILL *i* *SP **pP** **10 45 43.5 +3.5**
BILL *i* 10 45 53.4
BILL *e* 10 47 41.8
BILL *i* S **S** **10 53 41.6 -4.6**
BILL *i* *sS **sS** **10 54 19.5 -4.9**
BILL *e*SS **SS** **10 58 01.1 +5.4**
BILL pmax pmax
comp=Z,1µm,6.4s
BILL pmax pmax
comp=Z,875nm,0.9s
BILL MLR MLR
comp=Z,22µm,13.0s
BILL Bilibino 63.93 23 P **P** **10 45 17.4 -0.2**
ANX Ano Chora 63.93 304 P **P** **10 45 17.2 -1.1**
KTK1 Kautokeino 63.93 338 *e*P **P** **10 45 17.5 -0.1**
KTK1 IVmBBB 10 45 18.9
comp=Z,3µm,0.8s
KTK1 *e*PP **PP** **10 47 39.6 +0.7**
KTK1 *e*S **S** **10 53 43.1 -3.3**
KTK1 *e* 10 54 57.1
KTK1 IVMs_BB IVMs_BB 11 16 15.5
comp=Z,10µm,20.3s
SKO Skopje 63.94 307 *i* P **P** **10 45 17.9 -0.3**
EVR Evrytania 63.98 304 P **P** **10 45 17.7 -0.9**
HAMF Hammerfest 64.08 339 *e*P **P** **10 45 18.7 +0.2**
HAMF IVmB_BB 10 45 20.1
comp=Z,8µm,1.5s
HAMF *e*PP **PP** **10 47 42.1 +2.0**
HAMF *e*S **S** **10 53 45.3 -2.7**
HAMF *e*ScS **ScS** **10 55 05.8 +1.9**
HAMF *e*SS **SS** **10 58 00.8 +2.9**
HAMF IVMs_BB IVMs_BB 11 14 51.6
comp=Z,9µm,14.5s
ITM Ithomi 64.10 302 P **P** **10 45 18.8 -0.5**
ITM Ithomi 64.10 302 P **P** **10 45 18.6 -0.7**
ITM Ithomi 64.10 302 IAmb IAmb 10 46 01.8
comp=Z,955nm,1.1s
KECS Kecovo 64.15 315 *e*P **P** **10 45 19.7 +0.3**

KECS pmax pmax
comp=Z,104nm,1.3s
KECS Kecovo 64.15 315 *e*P **P** **10 45 19.6 +0.2**
KLNR Kaliningrad 64.16 322*c i*P **P** **10 45 19.2 -0.1**
KLNR pmax pmax
comp=Z,520nm,0.6s
KLNR MLR MLR
comp=Z,38µm,24.0s
DRO Drossia 64.17 303 P **P** **10 45 19.5 -0.3**
NIE Niedzica 64.23 316 *i* P **P** **10 45 21.0 +1.1**
NIE *e*PPP PPP 10 49 19.5
NIE *e*S **S** **10 53 49.6 -1.0**
NIE *e*sS **sS** **10 54 27.1 -2.7**
NIE *e*SSS SSS 11 01 08.5
PVO Paravola 64.23 304 P **P** **10 45 21.0 +0.8**
PYL PYLOS 64.28 302 P **P** **10 45 20.6 +0.1**
OHR Ohrid 64.51 307 *i* P **P** **10 45 22.1 +0.1**
OJC Ojcow 64.52 317 *e*P **P** **10 45 21.0 -0.8**
OJC *e*pP **pP** **10 45 46.6 +2.3**
OJC *e*PPP PPP 10 49 19.7
OJC *e*S **S** **10 53 50.6 -3.5**
OJC *e*SSS SSS 11 01 15.0
OJC *e*L L 11 10 57.9
comp=Z,42µm,36.4s
OJC Ojcow 64.52 317 P **P** **10 45 20.9 -0.9**
OJC Ojcow 64.52 317 P **P** **10 45 20.9 -0.9**
OJC pmax pmax
comp=Z,335nm,1.0s
KBN Korca 64.57 306 IAmb IAmb 10 45 51.6
comp=Z,877nm,1.2s
PSZ Piszkesteto 64.57 314 ⇑P **P** **10 45 22.6 +0.3**
PSZ Piszkesteto 64.57 314 P **P** **10 45 23.3 +1.0**
PSZ PP **pP** **10 45 43.5 -1.3**
LANS Liptovska Anna 64.78 315 *e*P **P** **10 45 24.4 +0.8**
LANS pmax pmax
comp=Z,35nm,1.0s
LANS Liptovska Anna 64.78 315 *e*P **P** **10 45 24.4 +0.8**
LANS *e*PP **PP** **10 47 48.5 +1.6**
DIVS Divibare 64.80 310 IAmb IAmb 10 45 53.4
comp=Z,678nm,1.2s
DIVS Divibare 64.80 310⇑ *i*P **P** **10 45 24.1 +0.2**
FRGS Fruska Gora 64.84 311 ⇑P **P** **10 45 24.3 +0.3**
FRGS Fruska Gora 64.84 311⇑ *i*P **P** **10 45 24.2 +0.2**
FOMA Nahampoana Res 64.97 228 P **P** **10 45 25.6 +0.6**
FOMA pP **pP** **10 45 42.3 -5.2**
FOMA sP **sP** **10 45 52.1 -5.1**
CTA Charters Tower 64.97 125 P **P** **10 45 25.5 +0.4**
comp=Z,504nm,1.0s,baz=305,slow=7.6,SNR=166
CTA LR LR 11 15 31.6
comp=Z,8µm,21.1s,baz=296,slow=38
comp=Z,504nm,1.0s
CTA Charters Tower 64.97 125 P **P** **10 45 26.2 +1.1**
CTAO Charters Tower 64.97 125 P **P** **10 45 25.3 +0.2**
CTAO IAmb IAmb 10 45 29.1
comp=Z,2µm,1.4s
CTAO Charters Tower 64.97 125 P **P** **10 45 25.3 +0.2**
CTAO pmax pmax
comp=Z,2µm,1.5s
CTAO Charters Tower 64.97 125 P **P** **10 45 26.2 +1.1**
CTAO Charters Tower 64.97 125 P **P** **10 45 25.5 +0.4**
IVA Berane 64.99 309⇑ *i*P **P** **10 45 25.2 +0.1**
JETT Jettan, Norway 65.01 338 *e*P **P** **10 45 24.7 0.0**
JETT IVmBBB 10 45 26.7
comp=Z,4µm,0.4s
JETT *e*S **S** **10 53 57.4 -2.2**
JETT *e*ScS **ScS** **10 55 12.6 +1.4**
HOPEN Hopen 65.03 346 *e*P **P** **10 45 25.0 +0.3**
HOPEN IVmBBB 10 45 26.5
comp=Z,5µm,1.7s
HOPEN *e*PP **PP** **10 47 50.7 +2.3**
HOPEN *e*S **S** **10 53 59.2 -0.4**
HOPEN *e*ScS **ScS** **10 55 13.8 +2.7**
HOPEN IVMs_BB IVMs_BB 11 20 44.4
comp=Z,9µm,17.9s
BUD Budapest 65.19 314 P **P** **10 45 27.7 +1.5**
VYHS Vyhne 65.24 315 *e*P **P** **10 45 26.8 +0.2**
VYHS pmax pmax
comp=Z,105nm,1.0s
VYHS Vyhne 65.24 315 *e*P **P** **10 45 26.8 +0.2**
VYHS *e*PP **PP** **10 47 56.9 +6.0**
KOME Kolasin 65.27 309⇑ *i*P **P** **10 45 26.9 0.0**
RUDO Rudo 65.30 309 *e*P **P** **10 45 26.6 -0.4**
PLE Pljevlja 65.31 309⇑ *i*P **P** **10 45 28.1 +0.9**
PDG Podgorica 65.51 308 P **P** **10 45 28.4 +0.1**
PDG Podgorica 65.51 308 IAmb IAmb 10 45 57.3
comp=Z,905nm,1.2s
TTG Podgorica 65.51 308⇑ *i*P **P** **10 45 28.0 -0.3**
TRO Tromso 65.53 338 *e*P **P** **10 45 27.4 -0.6**
TRO IVmB_BB 10 45 54.2
comp=Z,7µm,1.2s
TRO *e*PP **PP** **10 47 55.0 +2.1**
TRO *e*S **S** **10 54 03.2 -2.7**
TRO *e*SS **SS** **10 58 24.3 +3.8**
TRO IVMs_BB IVMs_BB 11 15 38.5
comp=Z,10µm,15.2s
RAC Raciborz 65.55 317 *e*P **P** **10 45 29.5 +1.0**
RAC *e*S **S** **10 53 59.8 -7.0**
RAC LMZ LR 11 18 28.9
comp=Z,25nm,20.6s
RAC Raciborz 65.55 317 *e*P **P** **10 45 29.5 +1.0**
RAC *e*S **S** **10 53 59.8 -7.0**
RAC MLR MLR
comp=Z,25µm,20.6s
MORH Mrgy, Hungar 65.56 312 ⇓P **P** **10 45 28.9 +0.3**
MORH Mrgy, Hungar 65.56 312 P **P** **10 45 28.6 0.0**
VLO Vlora 65.56 306 IAmb IAmb 10 46 07.9
comp=Z,711nm,1.2s
ULC Ulcinj 65.57 308⇑ *i*P **P** **10 45 28.8 0.0**
DRME Dracevica, Mon 65.59 308⇑ *i*P **P** **10 45 28.6 -0.3**
DRME Dracevica, Mon 65.59 308⇑ *i*P **P** **10 45 28.6 -0.3**
OKC Ostrava-Krasne 65.60 316 *e*P **P** **10 45 29.4 +0.6**
OKC *e*S **S** **10 53 59.6 -7.8**
OKC MLR MLR
comp=Z,12µm,17.2s
OKC Ostrava-Krasne 65.60 316 *e*P **P** **10 45 29.4 +0.6**
OKC *e*S **S** **10 53 59.6 -7.8**
OKC AMS AMS 11 18 30.0
comp=Z,12µm,17.2s
UPM Unac-Piva 65.68 309 *e*P **P** **10 45 29.6 -0.1**
UPM Unac-Piva 65.68 309⇑ *i*P **P** **10 45 29.6 -0.1**
NKME Niksic 65.69 308⇑ *i*P **P** **10 45 29.4 -0.2**
CSKK Cskako 65.72 314 P **P** **10 45 30.0 +0.4**
CEME Cevo 65.74 308⇑ *i*P **P** **10 45 29.7 -0.2**
BUM Brajici-Budva 65.79 308⇑ *i*P **P** **10 45 30.0 -0.3**
INKA Innaminka 65.86 135 P **P** **10 45 32.2 +1.5**
MBAR Mbarara 65.87 259 LR LR 11 15 28.2
comp=Z,15µm,18.2s,baz=48,slow=37
MBAR Mbarara 65.87 259 P **P** **10 45 31.8 +0.4**
MBAR Mbarara 65.87 259*d i*P **P** **10 45 32.1 +0.8**
MBAR pmax pmax
comp=Z,305nm,0.9s
MBAR MLR MLR
comp=Z,20µm,17.0s
MBAR Mbarara 65.87 259 P **P** **10 45 33.0 +1.6**
MBAR P **P** **10 45 33.0 +1.6**
MBAR Mbarara 65.87 259 *e*S **S** **10 54 04.9 -7.2**
MBAR Mbarara 65.87 259 *i* P **P** **10 45 33.2 +1.9**
MBAR Mbarara 65.87 259 *e*P **P** **10 45 30.1 -1.2**
MBAR *e*S **S** **10 54 04.9 -7.2**
MBAR Mbarara 65.87 259 *e*P **P** **10 45 32.1 +0.8**
MBAR *e*S **S** **10 54 13.8 +1.8**
MBAR Mbarara 65.87 259 P **P** **10 45 32.0 +0.7**
MBAR sP **PcP** **10 45 58.7 -3.0**
GKP Gorka Klasztor 65.96 320 *e*P **P** **10 45 30.9 -0.1**
GKP *e*PPP PPP 10 49 39.3
GKP *e*S **S** **10 54 10.4 -1.2**
GKP *e*sS **sS** **10 54 51.1 +0.6**
GKP *e*ScS **ScS** **10 55 19.9 +0.9**
GKP *e*SS **SS** **10 58 19.8 -7.9**
GKP *e*SSS SSS 11 01 49.5
GKP *e*L L 11 13 37.1
comp=Z,43µm,32.6s
GKP Gorka Klasztor 65.96 320 *e*P **P** **10 45 29.9 -1.1**
BRY Bratogost 65.98 309⇑ *i*P **P** **10 45 31.4 -0.2**
BRY Bratogost 65.98 309⇑ *i*P **P** **10 45 31.3 -0.3**
JAVC Velka Javorina 65.98 315⇑ *i*P **P** **10 45 32.5 +1.1**
JAVC *e*S **S** **10 54 13.5 +1.3**
JAVC *e*PKPPKP P'P'df 11 13 56.5 -12
MORC Moravsky Berou 66.00 316 ⇑P **P** **10 45 32.2 +0.8**
MORC Moravsky Berou 66.00 316 IAmb IAmb 10 46 00.9
comp=Z,1µm,1.9s
MORC Moravsky Berou 66.00 316⇑ *i*P **P** **10 45 31.8 +0.4**

MORC *e*S **S** **10 54 10.8 -1.5**
MORC *e*PKPPKP P'P'df 11 13 58.2 -11
TIH Tihany 66.01 313 P **P** **10 45 32.4 +1.0**
HCY Herceg Novi 66.07 308 *e*P **P** **10 45 31.4 -0.5**
HCY Herceg Novi 66.07 308⇑ *i*P **P** **10 45 31.9 0.0**
DOB Doboj 66.09 311 *e*P **P** **10 45 31.7 -0.3**
BJO1 Bjornoya 66.11 343 *e*P **P** **10 45 31.5 -0.1**
BJO1 IVmB_BB 10 45 56.5
comp=Z,7µm,2.6s
BJO1 *e*PP **PP** **10 47 58.9 +1.1**
BJO1 *e*S **S** **10 54 10.5 -2.2**
BJO1 *e*ScS **ScS** **10 55 21.0 +1.5**
BJO1 *e*SS **SS** **10 58 33.4 +4.1**
BJO1 IVMs_BB IVMs_BB 11 16 21.2
comp=Z,9µm,26.6s
LCRK Leigh Creek 66.13 139 P **P** **10 45 33.4 +1.0**
SMOL Smolenice 66.17 315 *e*P **P** **10 45 33.9 +1.4**
SMOL pmax pmax
comp=Z,55nm,1.2s
A252A Venje 66.19 311 *i* P **P** **10 45 32.9 +0.2**
MODS Modra-Piesok 66.29 315 *e*P **P** **10 45 33.5 +0.2**
MODS pmax pmax
comp=Z,309nm,1.2s
MODS Modra-Piesok 66.29 315 *e*P **P** **10 45 33.5 +0.2**
MODS *e*PP **PP** **10 48 03.4 +3.4**
DBRK Dubrovnik 66.29 308 *i* P **P** **10 45 32.8 -0.6**
EGYH Egyhazaskeszo 66.34 314 P **P** **10 45 34.5 +0.9**
SCTE Santa Cesarea 66.40 306 IAmb IAmb 10 46 08.0
comp=Z,674nm,0.8s
ZST Bratislava 66.42 315 *e*P **P** **10 45 34.3 +0.2**
ZST pmax pmax
comp=Z,1µm,2.0s
ZST Bratislava 66.42 315 *e*P **P** **10 45 34.3 +0.2**
ZST *e*PP **PP** **10 48 06.2 +5.1**
KRLC Kraliky 66.46 317 *e*P **P** **10 45 34.5 +0.1**
KRLC *e*S **S** **10 54 12.2 -5.7**
KRLC MLR MLR
comp=Z,20µm,18.5s
KRLC Kraliky 66.46 317 *e*P **P** **10 45 34.5 +0.1**
KRLC *e*S **S** **10 54 12.2 -5.7**
KRLC AMS AMS 11 18 50.0
comp=Z,20µm,18.5s
BBOO Buckleboo 66.56 143 P **P** **10 45 35.2 +0.1**
baz=67,SNR=733
BBOO Buckleboo 66.56 143 P **P** **10 45 35.8 +0.7**
STON Ston 66.59 309⇑ *i*P **P** **10 45 33.5 -1.8**
STON Ston 66.59 309 *i* P **P** **10 45 33.5 -1.8**
VRAC Vranov 66.65 316 PKPPKP 11 14 05.6
comp=Z,11nm,1.0s,baz=313,slow=2.6,SNR=4.3
VRAC LR LR 11 19 41.6
comp=Z,12µm,21.0s,baz=80,slow=40
VRAC Vranov 66.65 316⇑ *i*P **P** **10 45 36.3 +0.7**
VRAC *e*S **S** **10 54 19.4 -0.8**
KSP Ksiaz 66.71 317 *i* P **P** **10 45 36.6 +0.7**
KSP *e*pP **pP** **10 46 00.6 +2.1**
KSP *e*PP PP 10 48 24.6 +21
KSP *e*S **S** **10 54 18.1 -2.7**
KSP *e*SS SS 10 59 00.5 +21
KSP *e*SSS SSS 11 02 00.8
KSP *e*L L 11 12 04.7
comp=Z,47µm,32.8s
FAUS Fauske 66.73 336 *e*P **P** **10 45 35.2 -0.5**
FAUS IVmBBB 10 45 36.6
comp=Z,3µm,1.2s
FAUS *e*PP **PP** **10 48 04.3 +0.9**
FAUS *e*S **S** **10 54 16.7 -3.8**
FAUS *e*SS **SS** **10 58 42.8 +3.6**
FAUS IVMsBB 11 14 16.9
comp=Z,13µm,24.8s
DPC Dobruska-Polom 66.73 317 *e*P **P** **10 45 36.5 +0.4**
DPC *e*S **S** **10 54 15.8 -5.4**
DPC MLR MLR
comp=Z,23µm,21.4s
DPC Dobruska-Polom 66.73 317 *e*P **P** **10 45 36.5 +0.4**
DPC *e*S **S** **10 54 15.8 -5.4**
DPC *e*PKPPKP P'P'df 11 13 57.8 -10
DPC AMS AMS 11 19 10.0
comp=Z,23µm,21.4s
BLY Banja Luka 66.73 311⇑ *i*P **P** **10 45 36.7 +0.6**
STEI Steigen 66.76 336 *e*P **P** **10 45 35.0 -0.9**
STEI IVmBBB 10 45 36.8
comp=Z,4µm,1.7s
STEI *e*PP **PP** **10 48 05.2 +1.6**
STEI *e*S **S** **10 54 18.1 -2.7**
STEI *e*ScS **ScS** **10 55 26.2 +1.6**
STEI IVMs_BB IVMs_BB 11 17 23.5
comp=Z,14µm,18.1s
OSTC Ostas 66.78 317 *e*P **P** **10 45 37.1 +0.7**
OSTC *e*S **S** **10 54 14.0 -7.7**
OSTC *e*PKPPKP P'P'df 11 13 57.2 -10
OSTC AMS AMS 11 19 10.0
comp=Z,22µm,19.8s
KRUC Moravsky 66.80 316⇑ *i*P **P** **10 45 36.9 +0.4**
KRUC *e*S **S** **10 54 20.4 -1.6**
KRUC *e*PKPPKP **P'P'df** **11 13 59.9 -7.5**
SRKY Kupres RS 66.83 310 *e*P **P** **10 45 36.9 0.0**
SOP Sopron 66.83 314 P **P** **10 45 36.9 +0.2**
MGRS Mrkonjic Grad 66.84 310 *e*P **P** **10 45 37.4 +0.5**
A051A Mrakovica 66.90 311⇑ *i*P **P** **10 45 37.4 +0.1**
UPC Upice 66.92 317 *e*P **P** **10 45 37.3 +0.1**
UPC *e*S S 10 54 14.0 -9.3
UPC MLR MLR
comp=Z,27µm,19.9s
UPC Upice 66.92 317 *e*P **P** **10 45 37.3 +0.1**
UPC *e*S S 10 54 14.0 -9.3
UPC AMS AMS 11 19 20.0
comp=Z,27µm,19.9s
RICI Ricice 66.93 309 *i* P **P** **10 45 36.9 -0.5**
MOSL Moslavina 66.93 312 *i* P **P** **10 45 37.5 +0.1**
RONA Rosalia, Austr 67.01 314 *i* P **P** **10 45 37.9 0.0**
comp=Z,140nm,1.4s,SNR=48
MAKA Makarska 67.03 309 *i* P **P** **10 45 37.3 -0.8**
MOR8 Moi Rana 67.05 334 *e*P **P** **10 45 36.7 -1.1**
MOR8 IVmBBB 10 45 38.1
comp=Z,5µm,0.9s
MOR8 *e*PP **PP** **10 48 06.6 +0.4**
MOR8 *e*S **S** **10 54 20.3 -4.1**
MOR8 *e*SS **SS** **10 58 45.7 +1.4**
MOR8 *e* 11 01 48.6
MOR8 IVMs_BB IVMs_BB 11 15 51.7
comp=Z,12µm,33.6s
KALN Kalnik 67.08 312 *i* P **P** **10 45 38.5 +0.1**
WAKE Wake Island 67.17 77 P **P** **10 45 39.1 -0.2**
WAKE Wake Island 67.17 77 P **P** **10 45 39.1 -0.2**
SPA0 Spitsbergen Ar 67.22 347 *e*P **P** **10 45 38.8 +0.2**
SPA0 IVmBBB 10 45 40.3
comp=Z,6µm,1.4s
SPA0 *e*S **S** **10 54 25.1 -1.1**
SPA0 IVMs_BB IVMs_BB 11 22 18.2
comp=Z,8µm,16.6s
SPITS Spitsbergen Ar 67.22 347 LR LR 11 20 54.1
comp=Z,17µm,21.6s,baz=72,slow=41
A050A Klekovaca 67.23 311⇑ *i*P **P** **10 45 39.5 +0.1**
HSPB Hornsund (broa 67.27 346 *e*P **P** **10 45 39.4 +0.4**
HSPB *e*pP **pP** **10 46 03.5 +2.0**
HSPB *i* S **S** **10 54 23.8 -2.9**
HSPB *e*SS **SS** **10 58 51.1 +4.0**
HSPB *e*SSS SSS 11 01 57.6
HSPB Hornsund (broa 67.27 346 *e*P **P** **10 45 39.2 +0.2**
HSPB IVmBBB 10 45 40.6
comp=Z,4µm,1.6s
CONA Conrad Observa 67.28 314 *e*P **P** **10 45 39.8 +0.1**
comp=Z,339nm,1.4s,SNR=78
H11N1 WAKE ISLAND Hy 67.28 77 P **P** **10 45 40.6 +0.8**
SNR=20
H11N2 WAKE ISLAND Hy 67.28 77 P **P** **10 45 39.6 -0.1**
baz=232,slow=74,SNR=14
H11N3 WAKE ISLAND Hy 67.29 77 P **P** **10 45 41.4 +1.6**
baz=42,slow=74,SNR=12
A251A Rujevac 67.33 311 *i* P **P** **10 45 40.2 +0.3**
LOBO Lobor 67.34 312 *i* P **P** **10 45 39.9 -0.1**
SHEM Shemya Is, Ala 67.34 40 LR LR 11 18 06.8
comp=Z,6µm,19.3s,baz=278,slow=38
TREC Trest 67.37 316 *e*P **P** **10 45 40.4 +0.2**
TREC *e*S **S** **10 54 23.0 -5.9**
TREC MLR MLR
comp=Z,40µm,31.6s
TREC Trest 67.37 316 *e*P **P** **10 45 40.4 +0.2**
TREC *e*S **S** **10 54 23.0 -5.9**
TREC AMS AMS 11 15 10.0
comp=Z,40µm,31.6s
KIJV Kijevo 67.38 310 *i* P **P** **10 45 40.0 -0.2**
LOF Lofoten 67.41 336 *e*P **P** **10 45 39.0 -0.9**

LOF IVmBBB 10 45 40.4
comp=Z,3µm,0.7s
LOF *e*PP **PP** **10 48 10.6 +1.4**
LOF *e*S **S** **10 54 24.9 -3.7**
LOF IVMs_BB IVMs_BB 11 17 43.5
comp=Z,14µm,16.3s
H11S3 WAKE ISLAND Hy 67.41 78 P **P** **10 45 42.5 +1.8**
baz=241,slow=7.2,SNR=6.1
H11S1 WAKE ISLAND Hy 67.42 78 P **P** **10 45 42.7 +2.0**
baz=241,slow=7.2,SNR=6.7
H11S2 WAKE ISLAND Hy 67.43 78 P **P** **10 45 42.6 +1.8**
baz=241,slow=7.2,SNR=9.8
ZAG Zagreb 67.44 312 *i* P **P** **10 45 41.2 +0.6**
PTJ Puntijarka 67.44 312 *i* P **P** **10 45 40.9 +0.1**
QLP Quilpie 67.46 132 P **P** **10 45 42.1 +1.2**
baz=68,SNR=1000
QLP Quilpie 67.46 132 P **P** **10 45 42.5 +1.6**
HFS Hagfors 67.54 328 PKP2bc 11 13 56.0
comp=Z,5.0nm,1.1s,baz=224,slow=4.1,SNR=4.6
HFS LR LR 11 20 43.5
comp=Z,19µm,18.4s,baz=91,slow=41
KONS Konsvik 67.58 335 *e*P **P** **10 45 40.7 -0.3**
KONS IVmBBB 10 45 41.9
comp=Z,2µm,1.5s
KONS *e*S **S** **10 54 34.1 +3.5**
ARSA Arzberg 67.58 314 *e*P **P** **10 45 41.7 +0.1**
comp=Z,107nm,0.9s,SNR=48
ARSA *e*S **S** **10 54 36.6 +5.1**
comp=Z,23nm,1.4s
ARSA Arzberg 67.58 314 ⇑P **P** **10 45 41.8 +0.3**
WHYH Whyalla 67.59 142 P **P** **10 45 41.8 +0.2**
comp=Z,2µm,0.9s
AMUR Altamura 67.68 307 S **P** **10 45 43.0 +0.7**
GROS Grobnik 67.69 313 *i* P **P** **10 45 42.6 +0.3**
GROS *i* PcP **PcP** **10 46 08.4 -0.2**
GROS *e*S **S** **10 54 30.9 -2.0**
UDBI Udbina 67.77 311 *i* P **P** **10 45 42.6 -0.2**
CRES Cresnjev 67.81 312 *e*P **P** **10 45 42.5 -0.4**
PLIT Plitvice 67.82 311 *i* P **P** **10 45 42.9 -0.1**
OZLJ Ozalj 67.83 312 *i* P **P** **10 45 42.9 -0.1**
PVCC Panska Ves 67.83 317 *e*P **P** **10 45 43.3 +0.3**
PVCC *e*S S 10 54 23.0 -11
PVCC MLR MLR
comp=Z,25µm,20.2s
PVCC Panska Ves 67.83 317 *e*P **P** **10 45 43.3 +0.3**
PVCC *e*S S 10 54 23.0 -11
PVCC AMS AMS 11 16 00.0
comp=Z,25µm,20.2s
MORI Morici 67.90 310 *i* P **P** **10 45 43.3 -0.3**
PRU Pruhonice 67.91 317 *e*P **P** **10 45 44.1 +0.6**
PRU *e*S S 10 54 24.7 -10
PRU MLR MLR
comp=Z,31µm,32.0s
PRU Pruhonice 67.91 317 *e*P **P** **10 45 44.1 +0.6**
PRU *e*S S 10 54 24.7 -10
PRU AMS AMS 11 15 10.0
comp=Z,31µm,32.0s
SERS Sersale 67.92 305 P **P** **10 45 42.2 -1.7**
PERS Pernice 67.94 313 *i* P **P** **10 45 44.1 +0.3**
PERS *e* 10 48 40.5
SOKA Soboth 67.99 313 *i* P **P** **10 45 44.5 +0.3**
comp=Z,155nm,0.9s,SNR=53
BOJS Bojanci 67.99 312⇑ *i*P **P** **10 45 44.6 +0.5**
BOJS Bojanci 67.99 312 S **P** **10 45 45.0 +0.9**
NSS Namsos 68.12 332 *e*P **P** **10 45 43.8 -0.7**
NSS IVmBBB 10 45 45.2
comp=Z,4µm,1.4s
NSS *e*PP **PP** **10 48 16.9 +1.4**
NSS *e*S **S** **10 54 34.5 -2.7**
NSS IVMs_BB IVMs_BB 11 19 11.6
comp=Z,13µm,20.3s
KBS Kingsbay 68.17 348 P **P** **10 45 44.0 -0.6**
KBS Kingsbay 68.17 348*c i*P **P** **10 45 44.5 -0.1**
KBS pmax pmax
comp=Z,461nm,2.5s
KBS Kingsbay 68.17 348⇑ *i*P **P** **10 45 44.3 -0.3**
KBS Kingsbay 68.17 348 *e*P **P** **10 45 44.4 -0.1**
KBS IVmBBB 10 45 45.8
comp=Z,3µm,1.9s
KBS *e*S **S** **10 54 35.9 -1.5**
KBS IVMs_BB IVMs_BB 11 24 41.7
comp=Z,9µm,14.8s
KBS Kingsbay 68.17 348 P **P** **10 45 44.5 -0.1**
RGN Rugen 68.17 322 IAmb IAmb 10 45 54.1
comp=Z,427nm,0.8s
BRG Berggiesshubel 68.19 318⇑ *i*P **P** **10 45 45.8 +0.6**
BRG Amp 10 45 48.0
comp=Z,413nm,1.2s
BRG pP **PcP** **10 46 11.2 +0.7**
BRG Amp 10 46 13.7
comp=Z,525nm,1.3s
BRG Berggiesshubel 68.19 318⇑ *i*P **P** **10 45 45.8 +0.6**
BRG 10 46 11.1
BRG S **S** **10 54 33.0 -5.5**
BRG SS **SKiKP** **10 55 21.0 -11**
BRG pmax pmax
comp=Z,413nm,1.3s
BRG pmax pmax
comp=Z,525nm,1.3s
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,12nm,1.3s
BRG pmax pmax
comp=Z,98nm,1.5s
BRG MLR MLR
comp=E,32µm,27.2s
BRG MLR MLR
comp=Z,32µm,22.5s
BRG MLR MLR
comp=N,15µm,28.6s
SGRT San Giovanni R 68.19 308 IAmb IAmb 10 46 14.4
comp=Z,746nm,1.2s
CKRC Cesky Krumlov 68.20 315 *e*P **P** **10 45 45.8 +0.5**
CKRC *e*S **S** **10 54 37.3 -1.5**
PLAC Placanica 68.21 304 P **P** **10 45 45.4 -0.2**
VIRC Vir 68.30 311 *i* P **P** **10 45 45.1 -0.9**
OBKA Obir 68.34 313⇑ *i*P **P** **10 45 46.7 +0.3**
OBKA Obir 68.34 313 *i* P **P** **10 45 46.7 +0.3**
comp=Z,154nm,1.0s,SNR=44
DUGI Dugi Otok 68.35 310 *i* P **P** **10 45 46.0 -0.3**
MOA Molln 68.35 314 *e*P **P** **10 45 46.4 +0.1**
comp=Z,122nm,0.5s,SNR=70
NVLJ Novalja 68.39 311 *i* P **P** **10 45 46.0 -0.6**
LJU Ljubljana 68.42 312 *i* P **P** **10 45 47.5 +0.7**
LJU *e*PcP **PcP** **10 46 12.6 +1.0**
LJU *e*S **S** **10 54 40.4 -1.1**
LJU *e* 10 55 29.1
RABC Rab 68.43 311 *i* P **P** **10 45 46.1 -0.6**
NC405 NORSAR Array S 68.45 329 P **P** **10 45 46.1 -0.6**
NC405 IAmb IAmb 10 46 14.9
comp=Z,692nm,1.0s
CEY Cerknica 68.53 312⇑ *i*P **P** **10 45 47.9 +0.4**
RIY Rijeka 68.56 312 *i* P **P** **10 45 47.0 -0.6**
COP Copenhagen 68.56 323⇑ *i*P **P** **10 45 47.9 +0.5**
COP IAmb IAmb 10 45 49.6
comp=Z,437nm,1.1s
NC602 NORSAR Array S 68.57 328 IAmb IAmb 10 45 51.6
comp=Z,692nm,1.0s
GERES GERESS Array B 68.59 316 P **P** **10 45 47.5 -0.5**
comp=Z,112nm,0.7s,baz=177,slow=2.7,SNR=327
GERES pP **PcP** **10 46 12.7 +0.3**
comp=Z,87nm,0.6s,baz=79,slow=6.9,SNR=3.6
GERES PKP2bc 11 14 03.5
comp=Z,22nm,1.1s,baz=318,slow=1.8,SNR=14
GERES LR LR 11 22 10.9
comp=Z,16µm,18.2s,baz=82,slow=41
comp=Z,112nm,0.7s
KHC Kasperske Hory 68.64 316 *e*P **P** **10 45 48.2 +0.1**
KHC *e* 10 46 12.5
KHC *e*S **S** **10 54 38.4 -5.6**
KHC MLR MLR
comp=Z,27µm,24.5s
KHC Kasperske Hory 68.64 316 *e*P **P** **10 45 48.2 +0.1**
KHC *e*pP **PcP** **10 46 12.5 0.0**
KHC *ex* x 10 46 57.5
KHC *e*S **S** **10 54 38.4 -5.6**
KHC *e*PKPPKP P'P'df 11 13 55.6 -8.8
KHC *ex* x 11 14 00.0
KHC AMS AMS 11 15 50.0
comp=Z,27µm,24.5s
HTT Hallett 68.66 141 P **P** **10 45 49.0 +0.6**
baz=69,SNR=768
HTT Hallett 68.66 141 P **P** **10 45 49.5 +1.1**

NB2	**NORSAR Subarra**	**68.70**	**329**	P		**P**	**10 45 47.7**	**-0.6**
	comp=Z,443nm,1.0s,baz=85,slow=6.5							
NB2	**NORSAR Subarra**	**68.70**	**329**	P		**P**	**10 45 47.7**	**-0.6**
	baz=85,slow=6.5							
NOA	**NORSAR Array B**	**68.70**	**329**	P		**P**	**10 45 47.4**	**-0.9**
	comp=Z,195nm,0.8s,baz=86,slow=6.2,SNR=550							
NOA				pP		**PcP**	**10 46 13.5**	**+1.0**
	comp=Z,103nm,0.8s,baz=86,slow=6.1,SNR=2.9							
NOA				S		**S**	**10 54 45.7**	**+1.4**
	comp=Z,11nm,1.0s,baz=100,slow=12,SNR=3.8							
NOA				PKP2bc			11 14 00.6	
	comp=Z,7.6nm,1.1s,baz=282,slow=2.6,SNR=6.7							
NOA				LR		LR	11 19 04.8	
	comp=Z,27μm,20.4s,baz=90,slow=39							
	comp=Z,195nm,0.8s							
CLL	**Collm**	**68.72**	**318**	⇑*i*P		**P**	**10 45 48.7**	**+0.2**
CLL				*i* *PP		**pP**	**10 46 11.2**	**0.0**
CLL				*e*S		**S**	**10 54 42.0**	**-2.8**
CLL				*i* *SS		**SKiKP**	**10 55 30.3**	**-2.1**
CLL				pmax		pmax		
	comp=Z,252nm,1.0s							
CLL	**Collm**	**68.72**	**318**	⇑*i*P		**P**	**10 45 48.7**	**+0.2**
	comp=Z,252nm,1.0s							
CLL				*i* x		x	10 45 54.4	
	comp=Z,189nm,1.0s							
CLL				*i* pP		**pP**	**10 46 11.2**	**0.0**
CLL				*e*PcP		**PcP**	**10 46 14.0**	**+1.3**
CLL				*e*sP		**sP**	**10 46 22.0**	**+1.0**
CLL				*e*PP		**PP**	**10 48 20.0**	**-1.0**
CLL				*e*pPP			10 48 38.0	
CLL				*e*sPP			10 48 48.0	
CLL				*i* x		x	10 49 00.0	
CLL				*e*PPP		PPP	10 50 06.0	
CLL				*e*PPPP			10 50 54.0	
CLL				*e*S		**S**	**10 54 42.0**	**-2.8**
	comp=N,18μm,25.4s							
CLL				*e*S		**S**	**10 54 42.0**	**-2.8**
	comp=E,13μm,19.8s							
CLL				*e*SP		**SPn**	**10 55 04.0**	**-3.7**
CLL				*i* sS		**SKiKP**	**10 55 30.3**	**-2.1**
CLL				*e*SS		**SS**	**10 59 06.0**	**-4.6**
CLL				*e*sSS			11 00 00.0	
CLL				*e*x		x	11 01 54.0	
CLL				*e*SSS		SSS	11 02 31.0	
CLL				*e*PKPPKPdf		**P'P'df**	**11 14 00.0**	**-4.0**
	comp=Z,521nm,3.0s							
CLL				*i* x		x	11 14 55.7	
	comp=Z,270nm,2.2s							
CLL				*e*SKPPKPdf			11 17 22.0	
CLL				*e*SKPPKPbc			11 17 36.0	
BIOA	**Bad Ischl, Aus**	**68.79**	**314**	*e*P		**P**	**10 45 48.9**	**-0.2**
	comp=Z,43nm,0.5s,SNR=38							
BIOA				*e*S		**S**	**10 54 48.0**	**+2.1**
	comp=Z,27nm,1.3s							
SMRN	**Sveta Marina**	**68.83**	**311**	*i* P		**P**	**10 45 48.0**	**-1.2**
SKDS	**Skadanscina**	**68.85**	**312**	⇑*i*P		**P**	**10 45 49.2**	**-0.3**
NC204	**NORSAR Array S**	**68.90**	**329**	IAmb		IAmb	10 45 50.7	
	comp=Z,513nm,0.7s							
STRU	**Stroemstad**	**68.90**	**327**	*e*P		**P**	**10 45 49.1**	**-0.4**
NBO00	**NORSAR Array S**	**68.91**	**329**	IAmb		IAmb	10 46 24.4	
	comp=Z,614nm,1.1s							
MYKA	**Terra Mystica**	**68.94**	**313**	*e*P		**P**	**10 45 49.8**	**-0.3**
	comp=Z,88nm,1.5s,SNR=16							
TBLU	**Trondheim**	**68.96**	**331**	*e*P		**P**	**10 45 48.4**	**-1.3**
TBLU				IVmBBB			10 45 49.5	
	comp=Z,4μm,1.4s							
TBLU				*e*			10 53 03.9	
TBLU				*e*			10 54 35.2	
TBLU				*i*			11 02 28.1	
TRI	**Trieste**	**69.00**	**312**	IAmb		IAmb	10 46 19.6	
	comp=Z,2μm,1.6s							
OSL	**Oslo**	**69.04**	**328**	*e*P		**P**	**10 45 50.6**	**+0.3**
OSL				IVmBBB			10 45 51.8	
	comp=Z,9μm,0.9s							
OSL				*e*S		**S**	**10 54 46.1**	**-2.1**
OSL				*i*			10 55 32.3	
OSL				*e*			11 02 33.7	
SABO	**M.te Sabotino**	**69.07**	**312**	IAmb		IAmb	10 46 19.7	
	comp=Z,2μm,1.8s							
KBA	**Koelnbreinsper**	**69.08**	**314**	*e*P		**P**	**10 45 50.6**	**-0.5**
	comp=Z,83nm,0.6s,SNR=75							
KBA				*e*S		**S**	**10 54 54.6**	**+5.1**
	comp=Z,51nm,1.4s							
ROBS	**Robic**	**69.09**	**313**	*e*S		**S**	**10 54 46.4**	**-3.0**
ROBS	**Robic**	**69.09**	**313**	*i* P		**P**	**10 45 50.7**	**-0.2**
BRJN	**Brijuni**	**69.13**	**311**	*i* P		**P**	**10 45 50.2**	**-0.9**
MILZ	**Milazzo**	**69.17**	**304**	P		**P**	**10 45 50.3**	**-1.2**
STKA	**Stephens Creek**	**69.20**	**138**	P		**P**	**10 45 52.0**	**+0.3**
	comp=Z,1μm,0.8s,baz=318,slow=7.2,SNR=467							
STKA				PKPPKP		**P'P'df**	**11 14 01.9**	**+1.4**
	comp=Z,15nm,0.9s,baz=120,slow=4.2,SNR=13							
STKA				LR		LR	11 19 20.7	
	comp=Z,16μm,20.0s,baz=306,slow=38							
	comp=Z,1μm,0.8s							
STKA	**Stephens Creek**	**69.20**	**138**	P		**P**	**10 45 52.0**	**+0.3**
	baz=69,SNR=1000							
STKA	**Stephens Creek**	**69.20**	**138***c*	*i*P		**P**	**10 45 52.3**	**+0.6**
STKA	**Stephens Creek**	**69.20**	**138**	P		**P**	**10 45 52.4**	**+0.7**
GHSS	**Government Hou**	**69.54**	**142**	P		**P**	**10 45 55.2**	**+1.5**
	comp=Z,3μm,0.9s							
EPZF	**Pizzo Felice**	**69.55**	**304**	P		**P**	**10 45 54.9**	**+0.8**
TWOA	**Tennyson Woods**	**69.61**	**143**	P		**P**	**10 45 54.8**	**+0.7**
	comp=Z,2μm,1.0s							
DOMB	**Dombas**	**69.63**	**330**	*e*P		**P**	**10 45 53.9**	**-0.1**
DOMB				IVmBBB			10 45 55.2	
	comp=Z,4μm,0.9s							
DOMB				*e*S		**S**	**10 54 55.9**	**+0.6**
DOMB				*e*SS		**SS**	**10 59 28.4**	**+4.1**
DOMB				IVMs_BB		IVMs_BB	11 12 28.0	
	comp=Z,11μm,26.4s							
STAL	**STALIGIAL**	**69.64**	**313**	IAmb		IAmb	10 46 22.6	
	comp=Z,439nm,0.8s							
KONO	**Kongsberg**	**69.64**	**327**	P		**P**	**10 45 53.4**	**-0.6**
KONO	**Kongsberg**	**69.64**	**327***c*	*i*P		**P**	**10 45 53.2**	**-0.8**
KONO				pmax		pmax		
	comp=Z,290nm,1.3s							
KONO				MLR		MLR		
	comp=Z,32μm,25.0s							
KONO	**Kongsberg**	**69.64**	**327**	*e*P		**P**	**10 45 53.9**	**-0.1**
KONO				IVmBBB			10 45 55.1	
	comp=Z,3μm,1.5s							
KONO				*e*PP		**PP**	**10 48 30.5**	**+1.8**
KONO				*e*S		**S**	**10 54 54.0**	**-1.3**
KONO				*e*SS		**SS**	**10 59 29.5**	**+5.1**
KONO				IVMs_BB		IVMs_BB	11 12 44.1	
	comp=Z,14μm,31.8s							
KONO	**Kongsberg**	**69.64**	**327**	P		**P**	**10 45 53.6**	**-0.4**
ABTA	**Abfaltersbach**	**69.69**	**313**	*i* P		**P**	**10 45 53.9**	**-0.9**
	comp=Z,90nm,1.0s,SNR=48							
ABTA				S		**S**	**10 55 01.7**	**+5.1**
	comp=Z,45nm,1.4s							
AQU	**L'Aquila**	**69.81**	**309**	IAmb		IAmb	10 46 25.3	
	comp=Z,949nm,1.1s							
CIMO	**Cimolais**	**69.81**	**313**	IAmb		IAmb	10 46 23.8	
	comp=Z,303nm,0.9s							
RISI	**Rein**	**69.95**	**314**	⇓P		P	10 45 50.5	-6.0
VAE	**Valguarnera**	**69.96**	**303**	PKPPKP			11 14 00.1	
	comp=Z,18nm,0.7s,baz=56,slow=3.0,SNR=4.1							
GRA1	**Grafenberg Arr**	**70.08**	**317**	IAmb		IAmb	10 46 25.8	
	comp=Z,1μm,1.6s							
GRFO	**Grafenberg**	**70.08**	**317**	P		**P**	**10 45 57.8**	**+0.9**
GRFO				IAmb		IAmb	10 46 25.8	
	comp=Z,1μm,1.6s							
GRFO	**Grafenberg**	**70.08**	**317**	P		**P**	**10 45 57.8**	**+0.9**
GRFO				pmax		pmax		
	comp=Z,1μm,1.6s							
RK1H	**Rockhampton Ha**	**70.08**	**126**	P		**P**	**10 45 57.8**	**+0.5**
	comp=Z,2μm,1.0s							
SKAR	**Skarslia**	**70.16**	**329**	⇑*i*P		**P**	**10 45 57.8**	**+0.5**
SKAR				*e*PP		**PP**	**10 48 33.8**	**+0.6**
SKAR				*e*S		**S**	**10 55 02.0**	**+0.5**
SKAR				*e*			11 02 58.7	
SKAR				IVMsBB			11 13 56.0	
	comp=Z,10μm,21.8s							
GOET	**G??ttrup**	**70.17**	**325**	*i* P		**P**	**10 45 58.4**	**+1.1**
GOET				IAmb		IAmb	10 45 60.0	
	comp=Z,553nm,1.1s							
WTTA	**Wattenberg**	**70.20**	**314**	*i* P		**P**	**10 45 57.1**	**-0.8**
	comp=Z,255nm,1.3s,SNR=76							
WTTA	**Wattenberg**	**70.20**	**314**	⇓P		**P**	**10 45 57.1**	**-0.8**
WATA	**Walderalm**	**70.23**	**314**	*i* P		**P**	**10 45 57.3**	**-0.8**
	comp=Z,225nm,1.1s,SNR=70							
WATA				*e*S		**S**	**10 55 09.6**	**+6.6**
	comp=Z,38nm,1.3s							
MOL	**Molde**	**70.27**	**331**	*e*P		**P**	**10 45 57.2**	**-0.6**
MOL				IVmBBB			10 45 58.5	
	comp=Z,3μm,0.8s							
MOL				*e*S		**S**	**10 55 00.9**	**-1.7**
MOL				*e*SS		**SS**	**10 59 37.5**	**+3.6**
MOL				IVMs_BB		IVMs_BB	11 20 44.1	
	comp=Z,17μm,24.6s							
MUD	**Monsted U'grnd**	**70.28**	**324**	⇑*i*P		**P**	**10 45 58.8**	**+0.8**
MUD				IAmb		IAmb	10 46 00.6	
	comp=Z,505nm,1.1s							
CGRP	**Cima Grappa**	**70.33**	**313**	S		**P**	**10 45 59.0**	**+0.3**
CLTA	**Licata**	**70.38**	**303**	P		**P**	**10 45 57.8**	**-1.2**
HOMB	**Homborsund**	**70.38**	**326**	IVmBBB			10 45 59.9	
	comp=Z,2μm,1.7s							
HOMB				*e*PP		**PP**	**10 48 37.1**	**+2.0**
HOMB				*e*S		**S**	**10 55 01.1**	**-2.8**
HOMB				*e*SS		**SS**	**10 59 40.6**	**+4.9**
HOMB				*e*			11 03 00.3	
HOMB				IVMs_BB		IVMs_BB	11 21 08.1	
	comp=Z,15μm,16.9s							
SQTA	**Sankt Quirin**	**70.49**	**314**	*e*P		**P**	**10 45 59.0**	**-0.6**
	comp=Z,105nm,0.6s,SNR=49							
SQTA				S		**S**	**10 55 06.3**	**+0.3**
	comp=Z,31nm,1.1s							
MOTA	**Moosalm**	**70.54**	**314**	*i* P		**P**	**10 45 59.3**	**-0.7**
	comp=Z,210nm,0.9s,SNR=133							
AKN	**Aaknes**	**70.58**	**330**	*e*P		**P**	**10 46 00.3**	**+0.6**
AKN				IVmBBB			10 46 01.5	
	comp=Z,2μm,0.9s							
AKN				*e*S		**S**	**10 55 06.5**	**+0.2**
AKN				*e*SS		**SS**	**10 59 44.2**	**+5.5**
AKN				IVMs_BB		IVMs_BB	11 21 27.2	
	comp=Z,12μm,17.6s							
RMQ	**Roma**	**70.59**	**130**	P		**P**	**10 46 02.0**	**+1.7**
	baz=71,SNR=313							
RMQ	**Roma**	**70.59**	**130**	P		**P**	**10 46 02.8**	**+2.4**
DOSS	**Dosso del Somm**	**70.75**	**313**	S		**P**	**10 46 02.0**	**+0.7**
RETA	**Reutte**	**70.75**	**314**	*i* P		**P**	**10 46 00.5**	**-0.7**
	comp=Z,171nm,0.7s,SNR=122							
RETA				*e*S		**S**	**10 55 11.0**	**+2.1**
	comp=Z,52nm,1.3s							
FETA	**Feichten**	**70.85**	**314**	*e*P		**P**	**10 46 01.4**	**-0.5**
	comp=Z,174nm,1.1s,SNR=112							
FETA				*e*S		**S**	**10 55 07.2**	**-3.1**
	comp=Z,43nm,1.5s							
ROVR	**Rover Verones**	**70.87**	**312**	S		**P**	**10 46 03.0**	**+1.0**
CLTB	**Caltabellotta**	**70.87**	**304**	⇑P		P	10 45 57.1	-5.0
LATE	**Laterza**	**70.92**	**309**	IAmb		IAmb	10 46 31.7	
	comp=Z,1μm,1.1s							
HNR	**Honiara**	**70.97**	**108**	P		**P**	**10 46 03.3**	**+0.4**
	comp=Z,751nm,0.7s,baz=224,slow=4.3,SNR=15							
HNR				LR		LR	11 15 21.6	
	comp=Z,24μm,21.9s,baz=296,slow=34							
	comp=Z,751nm,0.7s							
HNR	**Honiara**	**70.97**	**108**	P		**P**	**10 46 02.1**	**-0.7**
HNR				IAmb		IAmb	10 46 06.6	
	comp=Z,776nm,0.8s							
HNR	**Honiara**	**70.97**	**108**	P		**P**	**10 46 04.6**	**+1.7**
HNR	**Honiara**	**70.97**	**108**	P		**P**	**10 46 02.7**	**-0.1**
SNART	**Snartemo**	**71.05**	**326**	*e*P		**P**	**10 46 03.2**	**+0.6**
SNART				IVmB_BB			10 46 04.3	
	comp=Z,11μm,2.5s							
SNART				*e*S		**S**	**10 55 09.2**	**-2.5**
ODD1	**Odda**	**71.09**	**328**	*e*P		**P**	**10 46 03.1**	**+0.2**
ODD1				IVmBBB			10 46 04.5	
	comp=Z,1μm,0.8s							
ODD1				*e*S		**S**	**10 55 12.8**	**+0.5**
ODD1				*e*SS		**SS**	**10 59 49.5**	**+2.7**
HYA	**Hoyanger**	**71.11**	**329**	*e*P		**P**	**10 46 03.7**	**+0.8**
HYA				IVmBBB			10 46 04.4	
	comp=Z,2μm,2.1s							
HYA				*e*PP		**PP**	**10 48 42.5**	**+1.3**
HYA				*e*S		**S**	**10 55 13.6**	**+1.3**
HYA				*e*ScS		**ScS**	**10 56 00.7**	**+1.7**
OSSC	**Osservatorio P**	**71.15**	**310**	IAmb		IAmb	10 46 38.2	
	comp=Z,592nm,1.0s							
MAGA	**Magasa**	**71.15**	**313**	S		**P**	**10 46 04.0**	**+0.3**
ZCCA	**Zocca**	**71.18**	**311**	IAmb		IAmb	10 46 58.7	
	comp=Z,767nm,1.0s							
SALO	**Salr**	**71.25**	**313**	IAmb		IAmb	10 46 11.7	
	comp=Z,541nm,0.7s							
BLS5	**Blasjo**	**71.26**	**327**	*e*P		**P**	**10 46 04.5**	**+0.6**
BLS5				IVmBBB			10 46 05.7	
	comp=Z,3μm,1.0s							
BLS5				*e*PP		**PP**	**10 48 44.3**	**+1.6**
BLS5				*e*S		**S**	**10 55 13.0**	**-1.2**
BLS5				*e*ScS		**ScS**	**10 56 02.4**	**+2.0**
BLS5				*e*SS		**SS**	**10 59 49.1**	**-0.2**
BLS5				*e*			11 03 20.9	
DAVA	**Damuels**	**71.37**	**314**	*i* P		**P**	**10 46 04.7**	**-0.3**
	comp=Z,242nm,1.0s,SNR=114							
DAVOX	**Davos/Dischmat**	**71.47**	**314**	PKPPKP			11 13 54.8	
	comp=Z,34nm,1.1s,baz=293,slow=1.8,SNR=13							
DAVOX	**Davos/Dischmat**	**71.47**	**314**	⇑P		**P**	**10 46 05.7**	**0.0**
STU	**Stuttgart**	**71.55**	**316**	IAmb		IAmb	10 46 34.1	
	comp=Z,2μm,2.0s							
PRMA	**PARMA**	**71.56**	**312**	IAmb		IAmb	10 47 32.1	
	comp=Z,714nm,1.2s							
FOO	**Floro**	**71.58**	**330**	*e*P		**P**	**10 46 06.0**	**+0.3**
FOO				IVmBBB			10 46 07.0	
	comp=Z,2μm,1.5s							
FOO				*e*S		**S**	**10 55 16.3**	**-1.4**
FOO				*e*SS		**SS**	**10 59 57.9**	**+3.9**
FOO				*e*			11 03 31.4	
FOO				IVMs_BB		IVMs_BB	11 20 32.8	
	comp=Z,11μm,22.6s							
CMSA	**Cobar Meteorol**	**71.59**	**136**	P		**P**	**10 46 07.2**	**+0.9**
	baz=72,SNR=1000							
CMSA	**Cobar Meteorol**	**71.59**	**136**	P		**P**	**10 46 07.6**	**+1.3**
VLC	**Villacollemand**	**71.63**	**311**	IAmb		IAmb	10 46 45.8	
	comp=Z,1μm,1.3s							
EIDS	**Eidsvold**	**71.64**	**127**	P		**P**	**10 46 07.4**	**+0.7**
	baz=72,SNR=292							
EIDS	**Eidsvold**	**71.64**	**127**	P		**P**	**10 46 06.5**	**-0.2**
EIDS				IAmb		IAmb	10 46 10.8	
	comp=Z,1μm,1.0s							
EIDS	**Eidsvold**	**71.64**	**127**	P		**P**	**10 46 08.4**	**+1.7**
BER	**Bergen**	**71.65**	**328**	*e*P		**P**	**10 46 07.3**	**+1.1**
BER				IVmBBB			10 46 07.7	
	comp=Z,3μm,1.2s							
BER				*e*S		**S**	**10 55 19.2**	**+0.6**
BER				*e*ScS		**ScS**	**10 56 07.3**	**+3.9**
BER				*e*			10 59 52.0	
BER				*e*			11 03 30.5	
BER				IVMs_BB		IVMs_BB	11 14 23.0	
	comp=Z,11μm,41.9s							
ASK	**Askoy**	**71.70**	**329**	*e*P		**P**	**10 46 06.8**	**+0.4**
ASK				IVmBBB			10 46 07.9	
	comp=Z,5μm,1.6s							
ASK				*e*S		**S**	**10 55 21.4**	**+2.2**
ASK				*e*ScS		**ScS**	**10 56 05.7**	**+1.9**
PLONS	**Plons/SG**	**71.75**	**314**	⇑P		**P**	**10 46 07.2**	**-0.1**
SUE	**Sulen**	**71.81**	**329**	*e*P		**P**	**10 46 07.7**	**+0.6**
SUE				IVmBBB			10 46 08.7	
	comp=Z,3μm,1.1s							
SUE				*e*			10 48 42.4	
SUE				*e*S		**S**	**10 55 18.5**	**-1.9**
SUE				*e*SS		**SS**	**11 00 01.1**	**+3.6**
SUE				IVMs_BB		IVMs_BB	11 14 47.9	
	comp=Z,12μm,44.2s							
KMY	**Karmoy**	**71.91**	**327**	*e*P		**P**	**10 46 08.7**	**+0.9**
KMY				IVmB_BB			10 46 09.4	
	comp=Z,4μm,1.0s							
KMY				*e*S		**S**	**10 55 22.3**	**+0.8**
KMY				*e*SS		**SS**	**11 00 02.1**	**+3.1**
BFO	**Black Forest**	**72.19**	**316**	P		**P**	**10 46 09.7**	**-0.1**
BFO	**Black Forest**	**72.19**	**316**	P		**P**	**10 46 09.7**	**-0.1**
BFO				pmax		pmax		
	comp=Z,135nm,0.9s							
MSSA	**Maissana**	**72.21**	**311**	S		**P**	**10 46 10.0**	**0.0**
FUSIO	**Fusio**	**72.36**	**314**	⇓P		P	10 46 03.8	-7.2
BNALP	**Bannalp**	**72.43**	**314**	⇑P		**P**	**10 46 11.6**	**+0.2**
NOR	**Nord**	**72.44**	**352**	⇑*i*P		**P**	**10 46 10.1**	**-0.5**
NOR				IAmb		IAmb	10 46 12.8	
	comp=Z,511nm,1.2s							
ARPS	**Mount Arapiles**	**72.70**	**142**	P		**P**	**10 46 13.3**	**+0.5**
	baz=73,SNR=347							
ARPS	**Mount Arapiles**	**72.70**	**142**	P		**P**	**10 46 14.1**	**+1.3**
ADK	**Adak**	**73.06**	**40**	P		**P**	**10 46 14.0**	**-0.8**
ADK	**Adak**	**73.06**	**40**	P		**P**	**10 46 14.0**	**-0.8**
ADK	**Adak**	**73.06**	**40**	P		**P**	**10 46 16.8**	**+2.0**
	comp=Z,182nm,0.9s							
GAMB	**Gambell**	**73.07**	**28**	IAmb		IAmb	10 46 18.0	
	comp=Z,783nm,0.9s							
GAMB	**Gambell**	**73.07**	**28**	P		**P**	**10 46 14.3**	**-0.3**
	baz=283							
GAMB				S		**S**	**10 55 31.5**	**-3.1**
	baz=283							
BTNL	**Ternell**	**73.13**	**318**	*d*P		**P**	**10 46 15.7**	**+0.4**
BTNL				*dx*		x	10 46 42.5	
MEM	**Membach**	**73.20**	**318**	*d*P		**P**	**10 46 16.1**	**+0.5**
BHOU	**Houvegnez**	**73.26**	**318**	*d*P		**P**	**10 46 16.2**	**+0.2**
BHOU				*dx*		x	10 46 42.8	
SENIN	**Lac Senin/Sane**	**73.30**	**314**	P		**P**	**10 46 16.8**	**+0.2**
SENIN				IAmb		IAmb	10 46 45.1	
	comp=Z,2μm,1.9s							
WLF	**Walferdange**	**73.31**	**317**	P		**P**	**10 46 17.3**	**+1.0**
WLF				IAmb		IAmb	10 46 48.9	
	comp=Z,1μm,1.1s							
WLF	**Walferdange**	**73.31**	**317**	P		**P**	**10 46 17.3**	**+1.0**
WLF				pmax		pmax		
	comp=Z,1μm,1.1s							
WLF	**Walferdange**	**73.31**	**317**	*d*P		**P**	**10 46 17.3**	**+1.0**
WLF				*dx*		x	10 46 43.6	
BEBN	**Eben Emael**	**73.36**	**319**	*d*P		**P**	**10 46 16.9**	**+0.3**
BEBN				*dx*		x	10 46 42.8	
VSL	**Villasalto**	**73.38**	**306**	S		**P**	**10 46 18.0**	**+1.0**
CGL	**Cagliari Serpe**	**73.47**	**306**	S		**P**	**10 46 18.0**	**+0.4**
BSTI	**Sart Tilman**	**73.48**	**318**	*d*P		**P**	**10 46 18.0**	**+0.7**
BSTI				*dx*		x	10 46 44.0	
REMY	**Saint-Rhmy-en**	**73.51**	**313**	⇑P		**P**	**10 46 18.6**	**+0.7**
MRGE	**Morge**	**73.59**	**313**	P		**P**	**10 46 18.8**	**+0.5**
BCLA	**Clavier**	**73.68**	**318**	*d*P		**P**	**10 46 18.8**	**+0.3**
BCLA				*dx*		x	10 46 44.2	
RCHB	**Rochefort**	**73.79**	**318**	*d*P		**P**	**10 46 19.4**	**+0.3**
BNI	**Bardonecchia**	**74.02**	**313**	P		**P**	**10 46 20.6**	**-0.1**
BNI	**Bardonecchia**	**74.02**	**313**	P		**P**	**10 46 20.6**	**-0.1**
BNI				pmax		pmax		
	comp=Z,334nm,1.1s							
BMRD	**Maredsous**	**74.04**	**318**	*d*P		**P**	**10 46 20.9**	**+0.4**
BMRD				*dx*		x	10 46 47.3	
DOU	**Dourbes**	**74.20**	**318**	*d*P		**P**	**10 46 21.9**	**+0.4**
TNA	**Tin City**	**74.20**	**25**	P		**P**	**10 46 20.9**	**-0.3**
TNA	**Tin City**	**74.20**	**25**	P		**P**	**10 46 21.0**	**-0.2**
	baz=286							
TNA				S		**S**	**10 55 45.0**	**-2.4**
	baz=286							
KEST	**Kesra**	**74.32**	**303**	P		**P**	**10 46 23.1**	**+0.5**
	comp=Z,126nm,0.9s,baz=317,slow=3.0,SNR=43							
KEST				S		**S**	**10 55 50.3**	**+0.3**
	comp=Z,6.3nm,0.7s,baz=150,slow=21,SNR=5.9							
	comp=Z,126nm,0.9s							
KEST	**Kesra**	**74.32**	**303**	IAmb		IAmb	10 46 54.5	
	comp=Z,2μm,1.5s							
LSZ	**Lusaka**	**74.42**	**247**	LR		LR	11 18 34.6	
	comp=Z,16μm,18.9s,baz=56,slow=35							
LSZ	**Lusaka**	**74.42**	**247**	P		**P**	**10 46 23.6**	**+0.2**
LSZ				IAmb		IAmb	10 46 53.1	
	comp=Z,819nm,1.3s							
LSZ	**Lusaka**	**74.42**	**247**	P		**P**	**10 46 23.6**	**+0.2**
LSZ				pmax		pmax		
	comp=Z,819nm,1.3s							
BRAT	**Ballarat**	**74.45**	**141**	P		**P**	**10 46 24.2**	**+1.2**
	comp=Z,662nm,0.9s							
ATKA	**Atka Island**	**74.48**	**40**	P		**P**	**10 46 24.9**	**+1.8**
JMIC	**Jan Mayen**	**74.54**	**341**	LR		LR	11 23 49.6	
	comp=Z,8μm,19.1s,baz=82,slow=39							
JMIC	**Jan Mayen**	**74.54**	**341**	*e*P		**P**	**10 46 24.1**	**+1.0**
JMIC				IVmB_BB			10 46 25.5	
	comp=Z,5μm,2.9s							
JMIC				*e*S		**S**	**10 55 53.5**	**+2.5**
JMIC				*e*			11 00 44.7	
JMIC				IVMs_BB		IVMs_BB	11 20 25.0	
	comp=Z,4μm,27.4s							
DAG	**Danmarks Havn**	**74.87**	**347**	⇑*i*P		**P**	**10 46 24.4**	**-0.5**
DAG				IAmb		IAmb	10 46 26.3	
	comp=Z,640nm,1.2s							
LRW	**Lerwick**	**74.87**	**329**	⇑*e*P		**P**	**10 46 25.2**	**+0.1**
LRW				IAmb		IAmb	10 46 27.1	
	comp=Z,1μm,2.1s							
ARMA	**Armidale**	**74.94**	**131**	P		**P**	**10 46 28.1**	**+2.0**
	baz=75,SNR=118							
ARMA	**Armidale**	**74.94**	**131**	IAmb		IAmb	10 46 30.9	
	comp=Z,659nm,0.8s							
ARMA	**Armidale**	**74.94**	**131**	P		**P**	**10 46 27.8**	**+1.6**
GEXS	**Deakin Univers**	**75.10**	**142**	P		**P**	**10 46 29.2**	**+2.5**
	comp=Z,1μm,1.1s							
MLBS	**Spotswood, Mel**	**75.21**	**141**	P		**P**	**10 46 29.8**	**+2.5**
	comp=Z,657nm,1.1s							
RDOG	**Red Dog Mine**	**75.34**	**22**	S		**S**	**10 55 59.2**	**-0.9**
	baz=289							
TOO	**Toolangi**	**75.39**	**140**	P		**P**	**10 46 29.7**	**+1.2**
	baz=76,SNR=734							
TOO	**Toolangi**	**75.39**	**140**	P		**P**	**10 46 29.5**	**+1.0**
TOO	**Toolangi**	**75.39**	**140**	P		**P**	**10 46 29.5**	**+1.0**
TOO				pmax		pmax		
	comp=Z,1μm

MATP IAmb IAmb 10 46 39.0
comp=Z,531nm,0.9s
MATP Matopo 76.55 242 *i* P **P 10 46 36.1 +0.6**
MATP Matopo 76.55 242 *i* P **P 10 46 36.1 +0.6**
HMNX Herstmonceux 76.62 319⇑ *eP* **P 10 46 35.0 -0.3**
HMNX IAMs_20 IAMs_20 11 23 02.9
comp=Z,35µm,24.4s
MCD Coleburn Disti 76.64 327⇑ *eP* **P 10 46 36.0 +0.7**
BIGH Upper Bighouse 76.69 328⇑ *eP* **P 10 46 36.5 +0.9**
BIGH IAmb IAmb 10 46 38.1
comp=Z,1µm,2.0s
BIGH IAMs_20 IAMs_20 11 17 16.9
comp=Z,38µm,23.4s
EDMD Edmundbyers 76.79 324⇑ *eP* **P 10 46 36.2 0.0**
EDMD IAmb IAmb 10 46 38.3
comp=Z,397nm,1.0s
EDMD IAMs_20 IAMs_20 11 22 36.0
comp=Z,35µm,21.8s
ESY Stoneypath 76.82 325⇑ *eP* **P 10 46 36.6 +0.3**
EDU Dundee 76.84 326⇑ *eP* **P 10 46 37.4 +1.0**
HPK Haverah Park 76.86 323⇑ *eP* **P 10 46 37.4 +0.8**
HPK IAmb IAmb 10 46 39.3
comp=Z,696nm,1.4s
CWF Charnwood Fore 77.05 322⇑ *eP* **P 10 46 36.6 -1.1**
CWF IAMs_20 IAMs_20 11 19 22.9
comp=Z,43µm,30.8s
MAHO Mahon 77.09 308 P **P 10 46 37.9 -0.3**
MAHO S **S 10 56 17.7 -2.4**
LBWR Ladybower, Pea 77.09 322⇑ *eP* **P 10 46 38.2 +0.3**
LBWR IAmb IAmb 10 46 43.3
comp=Z,399nm,1.0s
EBL Broad Law 77.09 325⇑ *eP* **P 10 46 38.3 +0.4**
EKA Eskdalemuir Ar 77.29 325 LR LR 11 25 38.6
comp=Z,23µm,20.1s,baz=85,slow=39
MILA Mila 77.30 138 P **P 10 46 40.0 +0.7**
baz=78,SNR=179
ESK Eskdalemuir 77.32 325⇑ *eP* **P 10 46 39.7 +0.5**
ESK IAmb IAmb 10 46 46.1
comp=Z,316nm,0.7s
ESK Eskdalemuir 77.32 325 P **P 10 46 39.7 +0.5**
ESK Eskdalemuir 77.32 325 P **P 10 46 39.7 +0.5**
ESK pmax pmax
comp=Z,354nm,0.9s
CRZF Crozet Islands 77.37 209 IAmb IAmb 10 47 09.8
comp=Z,586nm,0.8s
NIKH Nikolski High 77.40 38 P **P 10 46 37.8 -1.9**
baz=288,SNR=5.5
NIKH S **S 10 56 15.2 -7.9**
baz=288
INVG Invergeldie, C 77.42 326⇑ *eP* **P 10 46 40.0 +0.3**
INVG IAmb IAmb 10 46 41.8
comp=Z,383nm,1.8s
LINV Loch Inver, As 77.45 328⇑ *eP* **P 10 46 40.4 +0.6**
LINV IAmb IAmb 10 46 42.3
comp=Z,259nm,1.3s
STNC Stoke 77.46 322 *eP* **P 10 46 40.4 +0.5**
POGA Pongola 77.46 234 *eP* **P 10 46 40.9 +0.5**
POGA IAmb IAmb 10 46 46.2
comp=Z,331nm,0.7s
KESW Keswick, Cumbr 77.50 324⇑ *eP* **P 10 46 40.7 +0.5**
KESW IAmb IAmb 10 46 42.5
comp=Z,365nm,1.0s
EAB Aberfoyle 77.65 326⇑ *eP* **P 10 46 41.5 +0.5**
KAC Achnashellach 77.71 327⇑ *eP* **P 10 46 41.6 +0.3**
SWN1 Swindon 77.71 321 *eP* **P 10 46 41.7 +0.3**
PGBU Glenifferbraes 77.85 325⇑ *eP* **P 10 46 42.9 +0.8**
PGBU IAmb IAmb 10 46 44.6
comp=Z,345nm,0.9s
NEWG New Galloway 77.94 325⇑ *eP* **P 10 46 43.2 +0.6**
NEWG IAmb IAmb 10 46 45.1
comp=Z,206nm,1.0s
KPL Plockton 77.95 327⇑ *eP* **P 10 46 43.1 +0.5**
KPL IAmb IAmb 10 46 44.9
comp=Z,143nm,1.0s
HLM1 Long Mynd 78.03 322⇑ *eP* **P 10 46 43.6 +0.5**
HLM1 IAmb IAmb 10 46 50.6
comp=Z,203nm,0.7s
HLM1 IAMs_20 IAMs_20 11 19 53.0
comp=Z,46µm,31.0s
CRLN Carolina, Mapu 78.06 236 *eP* **P 10 46 45.3 +1.4**
CRLN IAmb IAmb 10 46 47.5
comp=Z,74nm,0.9s
FOEL Foel Wylfa 78.09 322⇑ *eP* **P 10 46 42.9 -0.6**
FOEL IAmb IAmb 10 46 45.0
comp=Z,269nm,0.9s
FOEL IAMs_20 IAMs_20 11 21 32.8
comp=Z,31µm,25.7s
OLDB Oldbury-Upon-S 78.11 321⇑ *eP* **P 10 46 43.9 +0.3**
OLDB IAmb IAmb 10 46 48.7
comp=Z,455nm,0.9s
LAWE Loch Awe, Argy 78.18 326 *eP* **P 10 46 44.6 +0.7**
LAWE IAmb IAmb 10 46 46.4
comp=Z,320nm,1.1s
MONM Monmouth 78.20 321 *eP* **P 10 46 44.1 0.0**
MONM IAmb IAmb 10 46 50.8
comp=Z,291nm,0.9s
MCH1 Michaelchurch 78.26 321⇑ *eP* **P 10 46 44.7 +0.2**
MCH1 IAmb IAmb 10 46 50.5
comp=Z,320nm,0.8s
IOMK Kirk Michael 78.41 324⇑ *eP* **P 10 46 45.6 +0.4**
IOMK IAmb IAmb 10 46 47.9
comp=Z,669nm,0.9s
IOMK IAMs_20 IAMs_20 11 19 05.7
comp=Z,69µm,30.9s
UNV Unalaska Valle 78.46 37 P **P 10 46 43.2 -2.2**
baz=290,SNR=16
UNV S **S 10 56 27.5 -6.8**
baz=290
UNV Unalaska Vale 78.46 37 P **P 10 46 44.5 -1.0**
WIM Isle of Man 78.51 324⇑ *eP* **P 10 46 46.8 +1.0**
WME Myndd Eilian 78.55 323⇑ *eP* **P 10 46 46.8 +0.8**
YLL Llanberis 78.56 323⇑ *eP* **P 10 46 46.7 +0.6**
JQE Queens East 78.59 318 *eP* **P 10 46 46.4 +0.2**
C23K Itkillik River 78.63 19 P **P 10 46 46.5 +0.4**
baz=300,SNR=666
C23K S **S 10 56 33.8 -1.8**
baz=300
WLF1 Llynfaes 78.64 323 *eP* **P 10 46 47.3 +0.8**
WLF1 IAmb IAmb 10 46 49.1
comp=Z,656nm,0.9s
TARA Tarawa 78.66 93 P **P 10 46 49.9 +2.6**
WPS Cemaes, Angles 78.66 323⇑ *eP* **P 10 46 47.4 +0.8**
WPS IAmb IAmb 10 46 53.1
comp=Z,304nm,0.9s
JSA Saint Aubin 78.67 318⇑ *eP* **P 10 46 46.9 +0.2**
JSA IAmb IAmb 10 46 48.7
comp=Z,224nm,1.0s
JSA IAMs_20 IAMs_20 11 17 40.8
comp=Z,48µm,49.4s
JVM Valle D.L. Mar 78.69 318⇑ *eP* **P 10 46 46.9 +0.1**
LEPH Lephalale, Lim 78.76 239 *eP* **P 10 46 47.7 0.0**
LEPH IAmb IAmb 10 46 51.1
comp=Z,205nm,0.9s
AKUT Akutan 78.76 36 IAmb IAmb 10 46 49.1
comp=Z,860nm,1.0s
MIDW Midway 78.77 64 P **P 10 46 47.3 -0.3**
MIDW Midway 78.77 64 P **P 10 46 50.1 +2.4**
comp=Z,291nm,0.9s
SCO Scoresbysund 78.78 342 *i* P **P 10 46 47.9 +0.9**
SCO IAmb IAmb 10 46 49.8
comp=Z,192nm,1.1s
GCSA Galena City Sc 78.86 24 P **P 10 46 47.7 +0.2**
baz=295,SNR=604
GCSA S **S 10 56 35.3 -2.8**
baz=295
CORO Coronation Par 78.90 143 P **P 10 46 50.1 +2.1**
comp=Z,521nm,1.0s
CLGH Cloghs, Cushen 78.97 325⇑ *eP* **P 10 46 47.9 -0.4**
CLGH IAmb IAmb 10 46 50.9
comp=Z,256nm,1.2s
CLGH IAMs_20 IAMs_20 11 22 54.6
comp=Z,37µm,25.6s
F21K Alatna River 78.98 22 P **P 10 46 48.2 0.0**
baz=298,SNR=1000
F21K S **S 10 56 36.3 -3.3**
baz=298
NWCL Newcastle 79.04 235 *eP* **P 10 46 49.6 +0.4**
NWCL IAmb IAmb 10 46 52.6
comp=Z,198nm,0.9s
D23K Nanushuk River 79.05 20 P **P 10 46 48.8 +0.3**
baz=300,SNR=1000
D23K S **S 10 56 38.0 -2.2**
baz=300
GLAD Gladstone 79.10 142 P **P 10 46 51.1 +2.1**
comp=Z,970nm,1.0s

E22K Anaktuvuk Pass 79.10 20 P **P 10 46 49.1 +0.2**
baz=299
E22K S **S 10 56 37.5 -3.4**
baz=299
GMM Mts of Mourne 79.18 324⇑ *eP* **P 10 46 50.1 +0.7**
EUNU Eureka 79.19 0 IAmb IAmb 10 46 52.3
comp=Z,1µm,1.0s
C24K Franklin Bluff 79.26 18 P **P 10 46 50.1 +0.5**
baz=302
C24K S **S 10 56 40.7 -1.6**
baz=302
F22K John River 79.29 21 P **P 10 46 50.2 +0.4**
baz=299,SNR=944
F22K S **S 10 56 40.1 -2.7**
baz=299
SLR Silverton 79.29 237 *eP* **P 10 46 51.4 +0.7**
SLR IAmb IAmb 10 46 54.8
comp=Z,208nm,0.7s
RSBS Rosebush, Pemb 79.30 322⇑ *eP* **P 10 46 50.9 +0.7**
RSBS IAmb IAmb 10 46 52.5
comp=Z,436nm,1.0s
G21K Allakaket 79.31 22 P **P 10 46 50.1 +0.2**
baz=298
G21K S **S 10 56 39.8 -3.3**
baz=298
DYA Yadsworthy 79.34 320⇑ *eP* **P 10 46 50.0 -0.3**
DYA IAMs_20 IAMs_20 11 20 14.6
comp=Z,42µm,31.7s
ILTH Belurgan, Co L 79.47 324 *eP* **P 10 46 51.5 +0.5**
HTL Hartland 79.48 321⇑ *eP* **P 10 46 51.4 +0.3**
HTL IAmb IAmb 10 46 53.6
comp=Z,199nm,1.0s
D24K Happy Valley 79.52 19 P **P 10 46 51.6 +0.6**
baz=302
D24K S **S 10 56 42.8 -2.4**
baz=302
TOLK Toolik Lake Re 79.56 20 IAmb IAmb 10 46 57.0
comp=Z,1µm,0.8s
TOLK Toolik Lake Re 79.56 20 P **P 10 46 51.8 +0.4**
baz=301,SNR=563
TOLK S **S 10 56 43.5 -2.2**
baz=301
MOO Moorlands 79.58 143 P **P 10 46 53.1 +1.4**
baz=80,SNR=47
MOO Moorlands 79.58 143 P **P 10 46 54.0 +2.3**
KOUNC Koumac, New Ca 79.67 117 P **P 10 46 54.9 +2.3**
FALS False Pass 79.79 35 P **P 10 46 50.8 -1.9**
baz=292
FALS S **S 10 56 46.5 -1.9**
baz=292
FALS False Pass 79.79 35 P **P 10 46 53.1 +0.4**
G22K Bettles 79.80 21 P **P 10 46 52.5 0.0**
baz=300
G22K S **S 10 56 45.5 -2.7**
baz=300
HRAO HartRAO 79.83 237 *eP* **P 10 46 54.0 +0.4**
N16K Nishlik Lake 79.88 29 P **P 10 46 53.3 +0.2**
baz=295,SNR=644
N16K S **S 10 56 47.4 -1.9**
baz=295
TAU Tasmania Unive 79.95 144 P **P 10 46 54.5 +0.9**
TAU IAmb IAmb 10 46 57.5
comp=Z,997nm,0.8s
TAU Tasmania Unive 79.95 144 P **P 10 46 54.5 +0.9**
TAU pmax pmax
comp=Z,997nm,0.9s
TAU Tasmania Unive 79.95 144 P **P 10 46 55.6 +1.9**
H21K Melozitna Rive 79.97 23 P **P 10 46 53.9 +0.4**
baz=299,SNR=1000
H21K S **S 10 56 48.2 -1.9**
baz=299
TTA Tatalina 80.00 26 IAmb IAmb 10 46 57.6
comp=Z,607nm,1.1s
TTA Tatalina 80.00 26 P **P 10 46 53.9 0.0**
baz=296,SNR=212
TTA S **S 10 56 49.4 -1.2**
baz=296
D25K Kavik River 80.16 18 P **P 10 46 54.9 +0.3**
baz=304,SNR=1000
D25K S **S 10 56 50.6 -1.5**
baz=304
J20K Nowinta River 80.17 24 IAmb IAmb 10 46 59.5
comp=Z,2µm,1.6s
J20K Nowinta River 80.17 24 P **P 10 46 55.1 +0.5**
baz=298,SNR=525
J20K S **S 10 56 49.8 -2.4**
baz=298
CCA1 Carmmenellis 80.20 320⇑ *eP* **P 10 46 55.4 +0.4**
CCA1 IAMs_20 IAMs_20 11 19 43.3
comp=Z,44µm,36.3s
E24K Your Creek 80.20 20 P **P 10 46 55.4 +0.5**
baz=302,SNR=1000
E24K S **S 10 56 51.0 -1.5**
baz=302
C26K Camden Bay 80.25 18 P **P 10 46 55.8 +0.9**
baz=305,SNR=71
C26K S **S 10 56 52.1 -0.6**
baz=305
WDLM Western Deep L 80.30 237 *eP* **P 10 46 58.6 +2.4**
WDLM IAmb IAmb 10 47 24.8
comp=Z,204nm,1.2s
IWEX Carrickbyrne, 80.32 322⇑ *eP* **P 10 46 56.4 +0.8**
H22K Ishtalitna Cre 80.36 22 P **P 10 46 56.2 +0.5**
baz=300,SNR=1000
H22K S **S 10 56 52.7 -1.5**
baz=300
G23K Bananza Creek 80.42 21 P **P 10 46 56.2 +0.3**
baz=301,SNR=1000
G23K S **S 10 56 52.2 -2.6**
baz=301
KSR Koster 80.44 238 *eP* **P 10 46 57.5 +0.6**
KSR IAmb IAmb 10 47 01.1
comp=Z,338nm,0.7s
I21K Tanana 80.50 23 IAmb IAmb 10 46 59.3
comp=Z,1µm,1.1s
I21K Tanana 80.50 23 P **P 10 46 56.6 +0.3**
baz=300,SNR=711
I21K S **S 10 56 54.8 -0.8**
baz=300
O16K Kokwok River B 80.55 29 P **P 10 46 56.8 0.0**
baz=295,SNR=319
O16K S **S 10 56 54.3 -2.0**
baz=295
K20K Telida 80.59 25 IAmb IAmb 10 46 59.8
comp=Z,838nm,1.0s
K20K Telida 80.59 25 P **P 10 46 57.3 +0.4**
baz=298,SNR=625
K20K S **S 10 56 55.3 -1.3**
baz=298
PRYS Parys 80.59 237 *eP* **P 10 46 57.9 +0.2**
PRYS IAmb IAmb 10 47 04.3
comp=Z,89nm,0.6s
F24K Squaw Lake 80.69 20 P **P 10 46 57.7 +0.3**
baz=303,SNR=675
F24K S **S 10 56 55.3 -2.4**
baz=303
C27K Jago River 80.75 18 P **P 10 46 58.5 +0.8**
baz=306,SNR=554
C27K S **S 10 56 55.9 -2.2**
baz=306
L19K White Mountain 80.82 26 IAmb IAmb 10 47 02.8
comp=Z,1µm,1.1s
L19K White Mountain 80.82 26 P **P 10 46 58.5 +0.4**
baz=298,SNR=682
L19K S **S 10 56 56.5 -2.6**
baz=298
P16K Nushagak River 80.84 30 P **P 10 46 58.0 -0.2**
baz=295,SNR=98
P16K S **S 10 56 55.6 -3.7**
baz=295
LHI Lord Howe Isla 80.87 129 P **P 10 47 01.6 +2.8**
baz=81,SNR=20
LHI Lord Howe Isla 80.87 129 IAmb IAmb 10 47 02.9
comp=Z,1µm,0.9s
LHI Lord Howe Isla 80.87 129 P **P 10 47 02.4 +3.5**
SNKL Senekal, Frees 80.93 235 *eP* **P 10 46 60.0 +0.5**
SNKL IAmb IAmb 10 47 05.1
comp=Z,333nm,0.9s
O17K Koliganek Bris 80.93 29 P **P 10 46 58.6 -0.1**
baz=296,SNR=169
O17K S **S 10 56 57.9 -2.3**
baz=296
KSTD Kokstad 80.94 232 *eP* **P 10 47 01.4 +1.9**
KSTD IAmb IAmb 10 47 08.2
comp=Z,137nm,1.2s
SVW2 Sparrevohn 81.01 28 IAmb IAmb 10 47 03.9
comp=Z,1µm,1.1s

CHUM Lake Minchumin 81.02 24 P **P 10 46 59.7 +0.6**
baz=300,SNR=595
CHUM S **S 10 56 59.7 -1.3**
baz=300
MLY Manley 81.03 23 IAmb IAmb 10 47 01.8
comp=Z,1µm,0.9s
MLY Manley 81.03 23 P **P 10 46 59.5 +0.2**
baz=301,SNR=1000
MLY S **S 10 56 59.0 -2.3**
baz=301
H23K Yukon River 81.05 22 IAmb IAmb 10 47 03.7
comp=Z,747nm,0.8s
H23K Yukon River 81.05 22 P **P 10 46 59.9 +0.6**
baz=302,SNR=853
H23K S **S 10 56 59.9 -1.4**
baz=302
N18K Kilae Creek 81.06 28 P **P 10 46 59.7 +0.2**
N18K IAmb IAmb 10 47 03.4
comp=Z,583nm,0.8s
N18K Kilae Creek 81.06 28 P **P 10 46 59.5 0.0**
baz=297,SNR=280
N18K S **S 10 56 59.2 -2.5**
baz=297
LBTB Lobatse 81.08 239 LR LR 11 23 05.2
comp=Z,12µm,18.0s,baz=58,slow=36
LBTB Lobatse 81.08 239 P **P 10 47 00.5 +0.3**
LBTB Lobatse 81.08 239 P **P 10 47 00.5 +0.3**
LBTB pmax pmax
comp=Z,431nm,1.0s
LBTB Lobatse 81.08 239 *eP* **P 10 47 01.2 +0.9**
LBTB IAmb IAmb 10 47 04.3
comp=Z,186nm,0.8s
LBTB Lobatse 81.08 239 *i* P **P 10 47 01.1 +0.9**
LBTB Lobatse 81.08 239 *i* P **P 10 47 01.1 +0.9**
L20K Farewell, AK 81.08 26 P **P 10 46 59.9 +0.4**
baz=298,SNR=529
L20K S **S 10 56 59.5 -2.3**
baz=298
E25K Arctic Village 81.09 19 P **P 10 46 59.9 +0.4**
baz=305,SNR=461
E25K S **S 10 57 00.1 -1.6**
baz=305
M19K Big River Lodg 81.14 27 IAmb IAmb 10 47 04.1
comp=Z,450nm,0.8s
M19K Big River Lodg 81.14 27 P **P 10 47 00.1 +0.2**
baz=298
M19K S **S 10 57 01.5 -0.9**
baz=298
SDPT Sand Point 81.16 34 IAmb IAmb 10 47 02.1
comp=Z,1µm,1.0s
SDPT Sand Point 81.16 34 P **P 10 46 58.2 -1.8**
baz=294,SNR=66
SDPT S **S 10 56 56.2 -6.5**
baz=294
S14K Fog Glacier 81.25 33 P **P 10 46 59.2 -1.4**
baz=295,SNR=23
S14K S **S 10 56 59.6 -4.2**
baz=295
G24K Hadweenzic Riv 81.28 21 P **P 10 47 01.0 +0.5**
baz=303,SNR=799
G24K S **S 10 57 02.2 -1.5**
baz=303
CAST Castle Rocks 81.34 25 P **P 10 47 00.9 0.0**
baz=300,SNR=1000
CAST S **S 10 57 02.0 -2.5**
baz=300
F25K Christian Rive 81.37 20 P **P 10 47 02.1 +1.1**
baz=305,SNR=1000
F25K S **S 10 57 04.3 -0.4**
baz=305
BPAW Bear Paw Mtn. 81.42 24 P **P 10 47 01.4 0.0**
baz=301,SNR=959
BPAW S **S 10 57 01.6 -3.7**
baz=301
I23K Minto, Yukon-K 81.47 23 P **P 10 47 01.7 +0.3**
baz=302
I23K S **S 10 57 04.3 -1.3**
baz=302
P17K Kvichak River 81.49 29 P **P 10 47 01.9 +0.1**
baz=297,SNR=167
P17K S **S 10 57 02.8 -3.2**
baz=297
PPLA Purkeypile 81.56 25 P **P 10 47 02.4 +0.2**
baz=300
PPLA S **S 10 57 03.9 -3.0**
baz=300
SUMG Summit 81.56 347 IAmb IAmb 10 47 06.1
comp=Z,533nm,0.8s
SUMG Summit 81.56 347⇑ *i* P **P 10 47 02.2 -0.1**
SUMG IAmb IAmb 10 47 04.4
comp=Z,576nm,0.9s
BORG Borgarnes 81.60 337 LR LR 11 27 52.0
comp=Z,8µm,19.1s,baz=65,slow=39
BORG Borgarnes 81.60 337 P **P 10 47 02.8 +0.6**
BORG Borgarnes 81.60 337 P **P 10 47 02.8 +0.6**
BORG pmax pmax
comp=Z,503nm,1.3s
N19K Bonanza Creek 81.62 28 IAmb IAmb 10 47 06.9
comp=Z,1µm,0.9s
N19K Bonanza Creek 81.62 28 P **P 10 47 02.8 +0.3**
baz=298,SNR=613
N19K S **S 10 57 05.4 -2.2**
baz=298
H24K Noodor Dome 81.62 22 P **P 10 47 02.7 +0.3**
baz=303,SNR=479
H24K S **S 10 57 05.6 -1.7**
baz=303
Q16K King Salmon 81.62 30 P **P 10 47 01.9 -0.5**
baz=297,SNR=110
Q16K S **S 10 57 03.5 -3.9**
baz=297
M20K Styx River 81.67 26 IAmb IAmb 10 47 07.5
comp=Z,666nm,0.7s
M20K Styx River 81.67 26 P **P 10 47 03.2 +0.4**
baz=299,SNR=550
M20K S **S 10 57 06.2 -1.9**
baz=299
R16K Pilot Point 81.68 31 P **P 10 47 01.5 -1.2**
baz=296
R16K S **S 10 57 03.5 -4.5**
baz=296
CART Cartagena 81.72 307 P **P 10 47 02.8 -0.5**
CART S **S 10 57 06.0 -3.2**
O18K Koktuh Hills 81.75 29 IAmb IAmb 10 47 08.5
comp=Z,988nm,1.1s
O18K Koktuh Hills 81.75 29 P **P 10 47 03.1 0.0**
baz=298,SNR=123
O18K S **S 10 57 07.1 -1.6**
baz=298
DVP Devils Point 81.75 112 P **P 10 47 05.5 +1.7**
F26K Sheenjek River 81.78 19 P **P 10 47 03.9 +0.8**
baz=306,SNR=642
F26K S **S 10 57 08.1 -0.8**
baz=306
CHGN Chignik 81.81 33 P **P 10 47 01.7 -1.7**
baz=296,SNR=13
CHGN S **S 10 57 02.1 -7.4**
baz=296
CHNA Chernabura Isl 81.83 34 P **P 10 47 02.3 -1.3**
baz=295,SNR=124
CHNA S **S 10 57 05.4 -4.3**
baz=295
NEA2 Nenana 81.87 23 P **P 10 47 03.6 0.0**
baz=302,SNR=597
NEA2 S **S 10 57 07.2 -2.6**
baz=302
P18K Big Mountain, 81.95 29 IAmb IAmb 10 47 07.3
comp=Z,860nm,1.1s
P18K Big Mountain, 81.95 29 P **P 10 47 03.6 -0.7**
baz=298
P18K S **S 10 57 07.4 -3.5**
baz=298
O19K Port Alsworth 81.98 28 IAmb IAmb 10 47 08.3
comp=Z,1µm,1.1s
O19K Port Alsworth 81.98 28 P **P 10 47 04.2 0.0**
baz=298,SNR=224
O19K S **S 10 57 08.9 -2.1**
baz=298
TRF Thorofare Moun 82.02 24 IAmb IAmb 10 47 08.5
comp=Z,777nm,1.0s
TRF Thorofare Moun 82.02 24 P **P 10 47 04.0 -0.7**
baz=301,SNR=34
TRF S **S 10 57 07.4 -4.3**
baz=301
NOUC Port Laguerre 82.04 117 P **P 10 47 08.2 +3.0**
H25K Birch Creek 82.07 21 P **P 10 47 05.5 +0.8**
baz=305,SNR=268
H25K S **S 10 57 11.0 -0.8**

baz=305
DZM Mont Dzumac 82.14 117 PKKPbc PKKPbc 11 05 36.4 +2.0
comp=Z,10nm,0.9s,baz=259,slow=7.5,SNR=6.2
DZM LR LR 11 23 51.5
comp=Z,5µm,22.0s,baz=287,slow=36
DZM Mont Dzumac 82.14 117 *e*P **P 10 47 07.5 +1.6**
comp=Z,2µm,1.1s
DZM Mont Dzumac 82.14 117 *e*LR LR 11 12 57.0
comp=Z,35µm,34.7s
DZM Mont Dzumac 82.14 117 IAmb IAmb 10 47 10.7
comp=Z,629nm,0.9s
DZM Mont Dzumac 82.14 117 P **P 10 47 09.0 +3.1**
TCOL CIGO, UAF Yank 82.15 22 P **P 10 47 04.9 -0.2**
baz=303,SNR=105
TCOL S **S 10 57 09.0 -3.7**
baz=303
COLA College 82.16 22*c i*P **P 10 47 04.2 -0.9**
COLA pmax pmax
comp=Z,1µm,1.4s
COLA MLR MLR
comp=Z,12µm,22.0s
COLA College 82.16 22 P **P 10 47 04.8 -0.3**
baz=303
COLA S **S 10 57 09.2 -3.4**
baz=303
POKR Poker Plat Res 82.17 22 P **P 10 47 05.5 +0.3**
baz=304,SNR=236
POKR S **S 10 57 11.5 -1.4**
baz=304
TULEG Thule 82.20 356⇑ *i*P **P 10 47 04.9 -0.3**
TULEG IAmb IAmb 10 47 06.2
comp=Z,582nm,0.8s
R17K Ugashik Creek 82.22 31 P **P 10 47 04.2 -1.3**
baz=297,SNR=34
R17K S **S 10 57 10.4 -3.2**
baz=297
E27K Coleen River 82.24 18 P **P 10 47 06.0 +0.4**
baz=308,SNR=306
E27K S **S 10 57 13.2 -0.4**
baz=308
LIFNC LIFOU 82.25 116 P **P 10 47 08.9 +2.6**
ONTNC Ouen Toro 82.26 117 IAmb IAmb 10 47 11.3
comp=Z,769nm,0.9s
ONTNC Ouen Toro 82.26 117 P **P 10 47 08.5 +2.2**
SWZ Schweizer 82.30 237 *e*P **P 10 47 07.0 +0.3**
SWZ IAmb IAmb 10 47 12.8
comp=Z,144nm,0.8s
G26K Porcupine Rive 82.33 20 P **P 10 47 07.3 +1.3**
baz=307,SNR=1000
G26K S **S 10 57 14.2 -0.2**
baz=307
MCK McKinley 82.38 24 P **P 10 47 06.0 -0.4**
baz=302,SNR=227
MCK S **S 10 57 09.9 -5.3**
baz=302
N20K Mount Spurr 82.40 27 P **P 10 47 06.2 -0.4**
baz=300
N20K S **S 10 57 11.6 -3.9**
baz=300
SPCR Spurr Chakacha 82.40 27 P **P 10 47 06.0 -0.6**
baz=300,SNR=69
SPCR S **S 10 57 11.6 -3.9**
baz=300
UCM Universidad Co 82.41 310 P **P 10 47 06.8 -0.2**
UCM S **S 10 57 14.0 -2.4**
YATNC Mamie plateau, 82.51 117 P **P 10 47 11.0 +3.3**
ILAR Eielson Array 82.56 22 P **P 10 47 06.5 -0.8**
comp=Z,353nm,0.7s,baz=294,slow=4.0,SNR=396
ILAR pP **pP 10 47 32.6 +2.0**
comp=Z,188nm,0.9s,baz=315,slow=4.8,SNR=1.9
ILAR PP **PP 10 50 15.8 -1.3**
comp=Z,28nm,1.0s,baz=311,slow=7.0,SNR=2.6
ILAR PKKP **PKKPdf 11 05 23.9 +0.7**
comp=Z,2.6nm,0.9s,baz=224,slow=2.7,SNR=4.3
ILAR PKKPbc **PKKPbc 11 05 32.2 -1.6**
comp=Z,7.9nm,0.8s,baz=154,slow=1.6,SNR=13
ILAR LR LR 11 26 53.4
comp=Z,11µm,21.6s,baz=288,slow=38
comp=Z,353nm,0.7s
CUT Chulitna 82.57 25 IAmb IAmb 10 47 10.2
comp=Z,1µm,1.2s
CUT Chulitna 82.57 25 P **P 10 47 06.4 -0.9**
baz=302,SNR=68
CUT S **S 10 57 12.8 -4.2**
baz=302
ILSW Iliamna Southw 82.60 28 IAmb IAmb 10 47 10.0
comp=Z,521nm,1.0s
PRP Porcupine Dome 82.61 21 P **P 10 47 08.0 +0.4**
baz=305,SNR=891
PRP S **S 10 57 15.9 -1.7**
baz=305
OUENC Ouen Island, N 82.63 117 P **P 10 47 11.8 +3.5**
P19K Oil Pt 82.72 28 IAmb IAmb 10 47 11.2
comp=Z,884nm,0.9s
P19K Oil Pt 82.72 28 P **P 10 47 06.6 -1.6**
baz=299,SNR=69
P19K S **S 10 57 15.5 -3.3**
baz=299
HDA Harding Lake 82.74 23 P **P 10 47 06.8 -1.4**
baz=304,SNR=231
HDA S **S 10 57 14.4 -4.3**
baz=304
HDA S **S 10 57 14.4 -4.3**
baz=304
O20K Slope Mountain 82.78 28 P **P 10 47 07.4 -1.1**
baz=300,SNR=48
O20K S **S 10 57 13.6 -5.8**
baz=300
SOEG Soedalen 82.83 342⇑ *i*P **P 10 47 08.8 +0.3**
SOEG IAmb IAmb 10 47 10.3
comp=Z,168nm,0.9s
SUA Susitna One 82.87 26 P **P 10 47 08.6 -0.5**
baz=301
SUA S **S 10 57 13.7 -6.7**
baz=301
Q19K Cape Douglas, 82.89 29 P **P 10 47 07.1 -2.0**
baz=299,SNR=20
Q19K S **S 10 57 13.9 -6.6**
baz=299
GAMM Gam 82.89 245 *i* P **P 10 47 11.1 +1.2**
GAMM *i* S **pP 10 47 38.5 +5.3**
M22K Willow 82.97 26 P **P 10 47 08.7 -0.7**
baz=302,SNR=366
M22K S **S 10 57 15.7 -5.4**
baz=302
WAT1 Susitna Watana 83.02 24 P **P 10 47 08.8 -0.9**
baz=303
WAT1 S **S 10 57 17.0 -4.7**
baz=303
BOSA Boshof 83.03 236 P **P 10 47 10.6 +0.1**
comp=Z,261nm,0.8s,baz=64,slow=3.8,SNR=100
BOSA PKKP **PKKPdf 11 05 20.8 -3.4**
comp=Z,5.1nm,0.9s,baz=239,slow=3.1,SNR=3.2
BOSA PKKPbc **PKKPbc 11 05 33.6 +0.9**
comp=Z,31nm,0.5s,baz=240,slow=2.2,SNR=49
BOSA SKKP 11 09 01.0
comp=Z,2.5nm,0.7s,baz=265,slow=4.5,SNR=2.1
BOSA PKPPKP **P'P'df 11 13 37.2 0.0**
comp=Z,15nm,1.1s,baz=258,slow=7.8,SNR=6.3
BOSA LR LR 11 19 18.0
comp=Z,40µm,21.9s,baz=68,slow=32
comp=Z,261nm,0.8s
BOSA Boshof 83.03 236 P **P 10 47 10.3 -0.1**
BOSA IAmb IAmb 10 47 39.8
comp=Z,932nm,1.4s
BOSA Boshof 83.03 236 *e*P **P 10 47 10.3 -0.1**
BOSA IAmb IAmb 10 47 16.0
comp=Z,302nm,0.8s
BOSA Boshof 83.03 236 *i* P **P 10 47 10.8 +0.4**
BOSA Boshof 83.03 236 *i* P **P 10 47 10.8 +0.4**
CAPN Captain Cook N 83.06 27 P **P 10 47 10.4 +0.6**
baz=301,SNR=16
CAPN S **S 10 57 16.7 -5.3**
baz=301
G27K Doyon Strip 83.08 19 P **P 10 47 10.1 +0.1**
baz=308,SNR=239
G27K S **S 10 57 19.8 -2.5**
baz=308
ESDC Sonseca Array 83.16 310 P **P 10 47 11.3 +0.4**
comp=Z,57nm,0.8s,baz=56,slow=4.8,SNR=130
ESDC PP **PP 10 50 25.6 +2.8**
comp=Z,23nm,1.0s,baz=56,slow=8.0,SNR=4.1
ESDC S **S 10 57 22.9 -1.0**
comp=Z,6.1nm,1.1s,baz=62,slow=4.6,SNR=4.3
ESDC PKKPbc **PKKPbc 11 05 32.5 +0.9**
comp=Z,13nm,0.9s,baz=285,slow=2.1,SNR=18
ESDC PKPPKP **P'P'df 11 13 34.6 -4.2**
comp=Z,4.2nm,1.2s,baz=287,slow=2.2,SNR=5.6
ESDC LR LR 11 31 25.0
comp=Z,12µm,19.6s,baz=54,slow=41
comp=Z,57nm,0.8s
J25K Salcha River, 83.18 22 P **P 10 47 09.4 -1.2**
baz=305,SNR=442
J25K S **S 10 57 18.6 -4.7**
baz=305
MARNC Mare, Loyalty 83.21 116 P **P 10 47 14.9 +3.6**
PINNC Pines Island, 83.21 117 IAmb IAmb 10 47 16.7
comp=Z,799nm,1.2s
PINNC Pines Island, 83.21 117 P **P 10 47 13.0 +1.7**
DHY Denali Highway 83.33 24 P **P 10 47 11.2 -0.3**
baz=304,SNR=86
DHY S **S 10 57 19.7 -5.4**
baz=304
HOM Homer 83.42 28 IAmb IAmb 10 47 14.1
comp=Z,737nm,0.9s
HOM Homer 83.42 28 P **P 10 47 10.4 -1.3**
baz=301,SNR=27
HOM S **S 10 57 19.0 -6.7**
baz=301
CHIR Chirikof Islan 83.43 32 IAmb IAmb 10 47 15.4
comp=Z,761nm,0.9s
CHIR Chirikof Islan 83.43 32 P **P 10 47 11.5 -0.4**
baz=298,SNR=11
CHIR S **S 10 57 22.7 -3.3**
baz=298
A36M Sachs Harbour 83.44 12 P **P 10 47 11.8 +0.2**
baz=323,SNR=1000
A36M S **S 10 57 22.6 -2.8**
baz=323
PMR Palmer 83.46 26 IAmb IAmb 10 47 15.5
comp=Z,1µm,1.2s
PMR Palmer 83.46 26 P **P 10 47 11.3 -0.6**
baz=302,SNR=352
PMR S **S 10 57 22.0 -4.0**
baz=302
WAT6 Susitna Watana 83.47 24 P **P 10 47 11.6 -0.5**
baz=304,SNR=170
WAT6 S **S 10 57 20.6 -5.9**
baz=304
PAB San Pablo 83.48 310 P **P**
PAB San Pablo 83.48 310 P **P 10 47 12.8 +0.2**
PAB pmax pmax **10 47 12.8 +0.2**
comp=Z,450nm,1.6s
RC01 Rabbit Creek A 83.48 26 P **P 10 47 11.5 -0.6**
baz=302,SNR=170
RC01 S **S 10 57 21.0 -5.3**
baz=302
H27K Steamboat Moun 83.49 20 P **P 10 47 12.7 +0.6**
baz=309,SNR=353
H27K S **S 10 57 25.9 -0.4**
baz=309
K24K Donnelly Dome 83.51 23 P **P 10 47 11.7 -0.5**
baz=305,SNR=735
K24K S **S 10 57 21.9 -4.7**
baz=305
I26K Coal Creek Min 83.53 21 P **P 10 47 12.6 +0.4**
baz=307
I26K S **S 10 57 25.8 -0.8**
baz=307
Q20K Shuyak Island 83.62 29 P **P 10 47 11.7 -1.0**
baz=300,SNR=66
Q20K S **S 10 57 20.9 -6.8**
baz=300
KANON KANO 83.64 247 *i* P P 10 47 19.0 +5.3
CHAS Isla Isabel II 83.64 305 P **P 10 47 13.7 +0.3**
CHAS S **S 10 57 26.0 -2.9**
SML Sawmill 83.66 25 P **P 10 47 12.8 -0.3**
baz=303,SNR=243
SML S **S 10 57 24.1 -4.2**
baz=303
BRLK Bradley Lake 83.69 28 IAmb IAmb 10 47 14.1
comp=Z,881nm,0.8s
BRSE Bradley Lake S 83.77 28 P **P 10 47 12.4 -1.2**
baz=301,SNR=63
BRSE S **S 10 57 22.7 -6.6**
baz=301
SII Sitkinak Islan 83.79 31 IAmb IAmb 10 47 18.3
comp=Z,490nm,0.8s
SII Sitkinak Islan 83.79 31 P **P 10 47 13.0 -0.7**
baz=299,SNR=20
SII S **S 10 57 26.9 -2.7**
baz=299
SII Sitkinak Islan 83.79 31 P **P 10 47 14.5 +0.8**
HVD Gariep Dam 83.79 234 *e*P **P 10 47 15.2 +0.9**
HVD IAmb IAmb 10 47 18.0
comp=Z,369nm,1.2s
O22K Cooper Landing 83.81 27 IAmb IAmb 10 47 19.7
comp=Z,916nm,0.9s
O22K Cooper Landing 83.81 27 P **P 10 47 12.5 -1.2**
baz=302,SNR=61
O22K S **S 10 57 24.0 -5.6**
baz=302
KNK Knik Glacier 83.83 26 P **P 10 47 13.7 -0.1**
baz=303,SNR=236
KNK S **S 10 57 25.7 -4.1**
baz=303
I27K Kandik River 83.85 20 P **P 10 47 14.7 +0.7**
baz=309,SNR=288
I27K S **S 10 57 28.7 -1.4**
baz=309
J26L Joseph Creek 83.88 22 P **P 10 47 14.0 -0.1**
baz=307,SNR=454
J26L S **S 10 57 27.6 -2.8**
baz=307
RIDG Independent Ri 83.88 23 P **P 10 47 13.7 -0.5**
baz=306
RIDG S **S 10 57 23.9 -6.5**
baz=306
OHAK Old Harbor 83.89 30 IAmb IAmb 10 47 17.6
comp=Z,862nm,1.1s
OHAK Old Harbor 83.89 30 P **P 10 47 13.7 -0.5**
baz=300,SNR=66
OHAK S **S 10 57 25.2 -5.3**
baz=300
M23K Glacier View 83.91 25 P **P 10 47 14.0 -0.3**
baz=304,SNR=192
M23K S **S 10 57 25.9 -4.8**
baz=304
KDAK Kodiak Island 83.94 30 P **P 10 47 13.8 -0.6**
KDAK IAmb IAmb 10 47 18.0
comp=Z,683nm,1.1s
KDAK Kodiak Island 83.94 30 P **P 10 47 13.8 -0.6**
KDAK pmax pmax
comp=Z,683nm,1.1s
KDAK Kodiak Island 83.94 30 P **P 10 47 13.9 -0.6**
baz=300
KDAK S **S 10 57 24.8 -6.2**
baz=300
WMELI Melilla 83.99 305 P **P 10 47 15.3 +0.1**
WMELI S **S 10 57 29.1 -3.2**
SCM Sheep Creek Mo 84.05 25 P **P 10 47 15.2 +0.2**
baz=304,SNR=101
SCM S **S 10 57 26.6 -5.6**
baz=304
SCRK Sand Creek 84.05 22 P **P 10 47 14.9 -0.2**
baz=307,SNR=438
SCRK S **S 10 57 27.8 -4.4**
baz=307
PAX Paxson 84.11 23 P **P 10 47 15.2 -0.1**
baz=306,SNR=231
PAX S **S 10 57 27.5 -5.3**
baz=306
SEW Seward 84.13 27 IAmb IAmb 10 47 18.9
comp=Z,1µm,1.4s
SEW Seward 84.13 27 P **P 10 47 14.6 -0.7**
baz=302,SNR=46
SEW S **S 10 57 25.1 -7.6**
baz=302
PWL Port Wells 84.18 26 P **P 10 47 15.6 0.0**
baz=303,SNR=152
PWL S **S 10 57 27.3 -6.1**
baz=303
PBRG Braganca 84.31 313 *e*P **P 10 47 17.0 +0.3**
comp=Z,371nm,1.7s
PBRG Braganca 84.31 313 *e*PP PP 10 50 36.4 +4.2
M24K Tolsona, Glenn 84.34 24 P **P 10 47 17.1 +0.6**
baz=305,SNR=244
M24K S **S 10 57 29.9 -5.1**
baz=305
ICESG Greenland Ices 84.39 345⇑ *i*P **P 10 47 16.5 -0.4**
ICESG IAmb IAmb 10 47 20.4
comp=Z,670nm,0.8s
INK Inuvik 84.39 16 PKKPbc PKKPbc 11 05 30.2 +0.5
comp=Z,8.8nm,0.9s,baz=76,slow=6.8,SNR=6.9
INK LR LR 11 30 26.1
comp=Z,11µm,20.4s,baz=301,slow=40
INK Inuvik 84.39 16 P **P 10 47 16.5 -0.1**
baz=316
INK S **S 10 57 28.2 -6.9**
baz=316
RES Resolute Bay 84.40 3 P **P 10 47 16.4 -0.1**
RES IAmb IAmb 10 47 20.2
comp=Z,1µm,1.1s
RES Resolute Bay 84.40 3 P **P 10 47 16.4 -0.1**
RES pmax pmax
comp=Z,1µm,1.1s
UPNV Upernavik 84.46 352⇑ *i*P **P 10 47 16.6 -0.2**
UPNV IAmb IAmb 10 47 18.6
comp=Z,577nm,1.0s
EGAK Eagle 84.52 21 P **P 10 47 17.1 -0.2**
baz=309,SNR=153
EGAK S **S 10 57 32.7 -3.9**
baz=309
HARP HAARP 84.56 24 P **P 10 47 18.1 +0.6**
baz=306,SNR=366
HARP S **S 10 57 32.2 -4.9**
baz=306
EMAL Malaga-Limoner 84.57 307 P **P 10 47 15.9 -2.1**
EMAL S S 10 57 27.6 -10
GLI Glacier Island 84.67 26 IAmb IAmb 10 47 21.4
comp=Z,488nm,0.9s
GLI Glacier Island 84.67 26 P **P 10 47 17.8 -0.3**
baz=304,SNR=31
GLI S **S 10 57 32.8 -5.4**
baz=304
K27K Chicken 84.68 22 P **P 10 47 18.8 +0.7**
baz=308
K27K S **S 10 57 34.1 -4.1**
baz=308
SOE Somerset East 84.75 232 IAmb IAmb 10 47 49.3
comp=Z,689nm,1.1s
SOE Somerset East 84.75 232 *e*P **P 10 47 20.6 +1.6**
SOE IAmb IAmb 10 47 22.8
comp=Z,333nm,1.0s
MVO Moncorvo 84.76 312 *e*P **P 10 47 19.8 +0.7**
comp=Z,411nm,1.2s
MVO Moncorvo 84.76 312 *e*PP PP 10 50 37.8 +1.9
MVO *e*SKSac **SKSac 10 57 36.9 +1.3**
MVO Moncorvo 84.76 312 *e*LR LR 11 16 28.5
comp=Z,8µm,18.0s
MENT Mentasta 84.77 23 IAmb IAmb 10 47 24.4
comp=Z,643nm,0.8s
KLU Klutina 84.79 25 P **P 10 47 19.2 +0.4**
baz=305,SNR=381
KLU S **S 10 57 33.4 -6.2**
baz=305
L26K Log Cabin Wild 84.85 23 IAmb IAmb 10 47 22.1
comp=Z,1µm,1.4s
L26K Log Cabin Wild 84.85 23 P **P 10 47 19.6 +0.6**
baz=307,SNR=203
L26K S **S 10 57 36.2 -3.8**
baz=307
EPYK Eagle Plains 84.87 18 P **P 10 47 18.5 -0.5**
baz=313,SNR=357
EPYK S **S 10 57 36.3 -3.8**
baz=313
P23K Montague Islan 85.05 26 P **P 10 47 19.9 -0.1**
baz=304,SNR=30
P23K S **S 10 57 37.8 -4.1**
baz=304
DIV Divide 85.06 25 IAmb IAmb 10 47 24.6
comp=Z,790nm,1.0s
I29M Ogilvie Camp, 85.07 20 P **P 10 47 19.4 -0.7**
baz=312,SNR=74
I29M S **S 10 57 37.8 -4.3**
baz=312
PVLZ Peæn de 85.07 306 P **P 10 47 18.4 -2.2**
PVLZ S S 10 57 30.6 -12
NUUG Nuugaatsiaq 85.12 350⇑ *i*P **P 10 47 20.0 -0.2**
NUUG IAmb IAmb 10 47 21.3
comp=Z,162nm,1.2s
PVRL Vila Real 85.19 312 *e*P **P 10 47 21.8 +0.6**
comp=Z,313nm,1.5s
PVRL Vila Real 85.19 312 *e*PP PP 10 50 42.4 +3.0
POLO Lamas de Olo 85.20 312 *e*P **P 10 47 22.4 +1.1**
comp=Z,153nm,1.6s
POLO Lamas de Olo 85.20 312 *e*PP PP 10 50 42.8 +3.3
PCAB Cabril 85.23 313 *e*P **P 10 47 22.3 +0.9**
comp=Z,489nm,1.5s
PCAB Cabril 85.23 313 *e*PP PP 10 50 43.6 +4.0
TSUM Tsumeb 85.24 248 LR LR 11 23 33.7
comp=Z,18µm,19.6s,baz=65,slow=34
TSUM Tsumeb 85.24 248 P **P 10 47 21.4 -0.5**
TSUM IAmb IAmb 10 48 11.0
comp=Z,1µm,2.4s
TSUM Tsumeb 85.24 248 *e*P **P 10 47 24.2 +2.4**
TSUM IAmb IAmb 10 47 48.4
comp=Z,1µm,2.9s
N25K Chitina, Valde 85.24 24 P **P 10 47 21.7 +0.6**
baz=306,SNR=846
N25K S **S 10 57 39.3 -4.7**
baz=306
PGAV Gavieira, Arco 85.29 313 *e*P **P 10 47 22.4 +0.7**
comp=Z,492nm,1.8s
PGAV Gavieira, Arco 85.29 313 *e*PP PP 10 50 44.3 +4.1
PGAV *e*SKSac **SKSac 10 57 40.3 +1.2**
PGAV Gavieira, Arco 85.29 313 *e*LR LR 11 18 23.9
comp=Z,8µm,18.0s
GRAF Camdeboo Natio 85.34 233 *e*P **P 10 47 23.0 +1.0**
GRAF IAmb IAmb 10 47 28.6
comp=Z,501nm,0.9s
M26K Nabesna, AK 85.36 23 P **P 10 47 22.5 +0.9**
baz=308,SNR=503
M26K S **S 10 57 41.2 -3.9**
baz=308
L27K Beaver Creek, 85.38 22 P **P 10 47 22.6 +0.9**
baz=309,SNR=101
L27K S **S 10 57 42.5 -2.7**
baz=309
EYAK Cordova Ski Ar 85.41 26 P **P 10 47 22.3 +0.5**
baz=306,SNR=113
EYAK S **S 10 57 42.7 -2.7**
baz=306
MTE Manteigas 85.42 311 *e*P **P 10 47 21.9 -0.5**
comp=Z,472nm,1.3s
MTE Manteigas 85.42 311 *e*PP PP 10 50 43.2 +1.9
MTE *e*SKSac **SKSac 10 57 37.3 -2.5**
MTE Manteigas 85.42 311 *e*LR LR 11 16 57.4
comp=Z,5µm,20.0s
PKA Prieska 85.46 236 *e*P **P 10 47 23.4 +0.7**
PKA IAmb IAmb 10 47 28.9
comp=Z,140nm,0.9s
PVIS Viseu 85.54 312 *e*P **P 10 47 24.1 +1.2**
comp=Z,341nm,1.3s
DAWY Dawson 85.57 21 P **P 10 47 22.4 -0.2**
baz=311,SNR=84
DAWY S **S 10 57 45.3 -1.8**
baz=311
PCBR Castelo Branco 85.59 311 *e*P **P 10 47 24.3 +1.2**
comp=Z,414nm,1.5s
PCBR Castelo Branco 85.59 311 *e*PP PP 10 50 47.2 +4.6
CEU Ceuta 85.60 307 P **P 10 47 21.9 -1.3**
CEU S **SKSac 10 57 31.5 -9.4**
BMRM Bremner River 85.62 25 P **P 10 47 22.9 0.0**
baz=306,SNR=608
BMRM S **S 10 57 44.3 -3.3**
baz=306
GLB Gilahina Butte 85.64 24 IAmb IAmb 10 47 25.7
comp=Z,822nm,1.0s
PMRV Marv??o 85.70 311 *e*P **P 10 47 24.5 +0.8**
comp=Z,339nm,1.2s
PMRV Marv??o 85.70 311 *e*PP PP 10 50 46.5 +3.0
PMRV *e*SKSac **SKSac 10 57 38.1 -3.4**
PMRV Marv??o 85.70 311 *e*LR LR 11 16 56.5
comp=Z,7µm,20.0s
J29M Klondike Camp 85.70 20 IAmb IAmb 10 47 27.4
comp=Z,556nm,0.8s
J29M Klondike Camp 85.70 20 P **P 10 47 23.7 +0.4**
baz=312,SNR=26
J29M S **S 10 57 46.6 -1.8**
baz=312
BFON Badsfontein, M 85.72 234 *e*P **P 10 47 25.1 +1.1**
BFON IAmb IAmb 10 47 53.5
comp=Z,511nm,0.9s
M27K Edge Creek, AK 85.80 23 P **P 10 47 24.7 +0.8**
baz=309,SNR=239
M27K S **S 10 57 47.1 -2.5**
baz=309
C36M Paulatuk 85.81 13 P **P 10 47 22.9 -0.7**
baz=324,SNR=319
C36M S **S 10 57 44.6 -4.4**
baz=324
Q23K Middleton Isla 85.81 27 P **P 10 47 23.8 0.0**

Q23K baz=305 S **S** **10 57 47.4 -2.0**
PTO **Porto** **85.86 312** *e*P **P** **10 47 26.7 +2.3**
comp=Z,424nm,1.6s
HOCHN **Hochfeld** **85.94 245** *i* P P 10 47 16.2 -9.1
HOCHN *i* S sP 10 48 01.6 +3.3
PBAR **Barrancos** **85.94 309** *e*P **P** **10 47 25.9 +1.0**
comp=Z,628nm,1.4s
PBAR **Barrancos** **85.94 309** *e*PP PP 10 50 47.2 +1.7
MCARA **McCarthy VSAT** **85.98 24** P **P** **10 47 25.4 +0.8**
baz=308,SNR=511
MCARA S **S** **10 57 48.6 -2.5**
baz=308
SFS **San Fernando** **86.00 307** P **P** **10 47 24.1 -1.1**
SFS S S 10 57 38.8 -13
UPI **Upington** **86.05 238** *e*P **P** **10 47 25.7 +0.1**
UPI IAmb IAmb 10 47 32.0
comp=Z,84nm,0.9s
PESTR **Estremoz** **86.06 310** *e*P **P** **10 47 26.3 +0.8**
comp=Z,291nm,1.9s
PESTR **Estremoz** **86.06 310** *e*PP PP 10 50 50.7 +4.2
KROM **Kromhout** **86.13 231** *e*P **P** **10 47 26.9 +1.2**
KROM IAmb IAmb 10 47 32.1
comp=Z,371nm,0.9s
BVCY **Beaver Creek** **86.13 23** P **P** **10 47 26.1 +0.7**
baz=310,SNR=75
BVCY S **S** **10 57 51.2 -1.4**
baz=310
ROOI **Rooidraai Farm** **86.15 233** *e*P **P** **10 47 27.4 +1.4**
ROOI IAmb IAmb 10 47 32.1
comp=Z,344nm,1.0s
ROSN **Rosenhof** **86.17 231** *e*P **P** **10 47 28.6 +2.7**
ROSN IAmb IAmb 10 47 29.4
comp=Z,247nm,1.1s
MDT **Midelt** **86.19 304** LR LR 11 30 59.2
comp=Z,6µm,21.9s,baz=84,slow=39
PCAS **Casmilo, Conde** **86.23 311** *e*P **P** **10 47 27.4 +1.1**
comp=Z,284nm,1.4s
KAIM **Kayak Island** **86.31 26** P **P** **10 47 27.0 +0.8**
baz=307,SNR=34
KAIM S **S** **10 57 51.5 -2.9**
baz=307
IFR **Ifrane** **86.33 304** P **P** **10 47 28.0 +0.8**
IFR S S 10 57 44.3 -12
K29M **Barlow Dome** **86.34 21** P **P** **10 47 26.6 +0.1**
baz=312,SNR=281
K29M S **S** **10 57 52.8 -1.9**
baz=312
NFK **Norfolk Island** **86.43 123** P **P** **10 47 26.8 -0.5**
baz=86,SNR=5.0
NFK **Norfolk Island** **86.43 123** P **P** **10 47 28.3 +1.0**
KEIM **Keimoes** **86.43 238** *e*P **P** **10 47 27.8 +0.3**
KEIM IAmb IAmb 10 47 33.5
comp=Z,174nm,0.8s
PMTG **Montargil** **86.44 310** *e*P **P** **10 47 27.8 +0.5**
comp=Z,381nm,1.4s
PMTG **Montargil** **86.44 310** *e*PP PP 10 50 52.4 +3.0
EVO **Evora** **86.50 310** P **P** **10 47 26.7 -0.9**
EVO S S 10 57 42.4 -15
EVO **Evora** **86.50 310** *e*P **P** **10 47 28.6 +0.9**
comp=Z,396nm,1.3s
PBEJ **Beja** **86.60 309** *e*P **P** **10 47 29.8 +1.6**
comp=Z,360nm,1.3s
BGLC **Bering Glacier** **86.65 25** P **P** **10 47 28.7 +0.8**
baz=308,SNR=9.9
BGLC S **S** **10 57 54.4 -3.2**
baz=308
PSBE **So Bento** **86.66 311** *e*P **P** **10 47 28.6 +0.2**
comp=Z,564nm,1.9s
YUK3 **Moose Creek** **86.69 23** P **P** **10 47 28.9 +0.6**
baz=310,SNR=68
YUK3 S **S** **10 57 53.9 -4.5**
baz=310
WEWE **WEWE** **86.71 246** *i* P P 10 47 41.3 +12
PVAQ **Vaqueiros** **86.74 309** IAmb IAmb 10 48 15.2
comp=Z,923nm,2.0s
PVAQ **Vaqueiros** **86.74 309** *e*P **P** **10 47 30.3 +1.4**
comp=Z,491nm,1.4s
PVAQ **Vaqueiros** **86.74 309** *e*PP PP 10 50 55.7 +3.7
PVAQ **Vaqueiros** **86.74 309** *e*LR LR 11 17 28.2
comp=Z,7µm,18.0s
ILULI **Ilulissat** **86.77 348**⇑ *i*P **P** **10 47 28.1 -0.2**
ILULI IAmb IAmb 10 47 29.9
comp=Z,292nm,1.0s
CTG **Chitna Glacier** **86.88 24** P **P** **10 47 30.1 +0.9**
baz=309,SNR=220
CTG S **S** **10 57 58.0 -2.1**
baz=309
AUGR **Augrabies** **86.88 238** *e*P **P** **10 47 31.6 +2.0**
AUGR IAmb IAmb 10 48 05.8
comp=Z,2µm,2.3s
PCVE **Castro Verde** **86.89 309** *e*P **P** **10 47 30.9 +1.4**
comp=Z,288nm,1.7s
PCVE **Castro Verde** **86.89 309** *e*PP PP 10 50 57.3 +4.2
MESJ **Messejana** **86.93 309** *e*P **P** **10 47 30.8 +1.0**
MESJ IAmb IAmb 10 47 59.5
comp=Z,271nm,1.3s
MESJ *e*SKSac **SKSac** **10 57 48.3 -0.9**
MESJ **Messejana** **86.93 309** *e*P **P** **10 47 30.7 +1.0**
MESJ *e* 10 57 48.3
MESJ pmax pmax
comp=Z,271nm,1.3s
MESJ **Messejana** **86.93 309** *e*P **P** **10 47 31.3 +1.5**
comp=Z,427nm,1.6s
MESJ **Messejana** **86.93 309** *e*PP PP 10 50 57.3 +3.8
OTJO **Outjo** **86.95 247** *i* P P 10 47 23.2 -7.0
OTJO *i* S sP 10 48 00.9 -2.5
M29M **Somme Creek** **86.96 22** P **P** **10 47 30.3 +0.8**
baz=312,SNR=275
M29M S **S** **10 57 57.7 -3.1**
baz=312
PBDV **Barranco-do-Ve** **86.97 309** *e*P **P** **10 47 31.2 +1.2**
comp=Z,715nm,1.6s
PACT **Alcochete** **86.99 310** *e*P **P** **10 47 32.4 +2.4**
MAYO **Mayo, Yukon** **87.04 20** P **P** **10 47 29.8 0.0**
baz=314,SNR=177
MAYO S **S** **10 57 58.7 -2.6**
baz=314
PNCL **Nicolau / Gran** **87.04 310** *e*P **P** **10 47 31.3 +1.0**
comp=Z,376nm,1.3s
PNCL **Nicolau / Gran** **87.04 310** *e*PP PP 10 50 59.3 +5.0
LOGN **Logan Glacier** **87.09 24** IAmb IAmb 10 47 35.3
comp=Z,811nm,1.0s
GRAN **Grantham** **87.10 234** *e*P **P** **10 47 31.9 +1.3**
GRAN IAmb IAmb 10 47 38.3
comp=Z,44nm,0.8s
MESA **MESA** **87.14 25** P **P** **10 47 31.5 +1.0**
baz=309,SNR=81
MESA S **S** **10 58 02.3 -0.4**
baz=309
PMAFR **Mafra** **87.23 311** *e*P **P** **10 47 32.9 +1.7**
comp=Z,700nm,1.4s
PMAFR **Mafra** **87.23 311** *e*PP PP 10 51 00.2 +4.3
LIS **Lisbon** **87.24 310** *e*P **P** **10 47 32.2 +0.9**
LIS IAmb IAmb 10 47 42.3
comp=Z,99nm,0.7s
LIS *e*PP **PP** **10 50 57.1 +1.2**
LIS *e*SKSac **SKSac** **10 57 49.9 -1.1**
LIS **Lisbon** **87.24 310** *e*P **P** **10 47 32.1 +0.9**
LIS *e* 10 50 57.1
LIS *e* 10 57 49.8
LIS pmax pmax
comp=Z,99nm,0.7s
PMST **Lisbon--Monsan** **87.25 310** *e*P **P** **10 47 32.1 +0.8**
comp=Z,518nm,1.4s
PMST **Lisbon--Monsan** **87.25 310** *e*PP PP 10 51 00.3 +4.3
TABL **Table Mountain** **87.28 24** IAmb IAmb 10 47 42.6
comp=Z,426nm,0.9s
PTEO **Sao Teotonio** **87.42 309** *e*P **P** **10 47 33.6 +1.5**
comp=Z,614nm,1.8s
O28M **Mount Upton** **87.43 24** P **P** **10 47 32.7 +0.6**
baz=310,SNR=79
O28M S **S** **10 58 03.1 -2.6**
baz=310
M30M **Minto, Yukon** **87.44 21** IAmb IAmb 10 47 36.4
comp=Z,598nm,1.1s
M30M **Minto, Yukon** **87.44 21** P **P** **10 47 31.8 0.0**
baz=313,SNR=418
M30M S **S** **10 58 03.8 -1.5**
baz=313
MORF **Marmelete** **87.46 309** *e*P **P** **10 47 33.3 +0.9**
MORF IAmb IAmb 10 48 02.8
comp=Z,140nm,1.1s
MORF *e*PP **PP** **10 50 59.0 +1.1**
MORF *e*SKSac **SKSac** **10 57 51.6 -0.9**
MORF **Marmelete** **87.46 309** *e*P **P** **10 47 33.3 +0.9**
MORF *e* 10 50 58.9
MORF *e* 10 57 51.6
MORF pmax pmax
comp=Z,140nm,1.0s
MORF **Marmelete** **87.46 309** *e*P **P** **10 47 33.6 +1.2**
comp=Z,400nm,1.5s
FRAZ **Fraserburg** **87.51 235** *e*P **P** **10 47 32.8 +0.1**
FRAZ IAmb IAmb 10 47 53.4
comp=Z,177nm,1.2s
YUK4 **Talbot Arm** **87.62 23** P **P** **10 47 33.1 +0.2**
baz=312,SNR=144
YUK4 S **S** **10 58 06.4 -1.0**
baz=312
PFVI **Vila Bisbo** **87.66 309** *e*P **P** **10 47 34.9 +1.6**
comp=Z,586nm,1.6s
PFVI **Vila Bisbo** **87.66 309** *e*PP PP 10 51 05.9 +6.5
MERW **Merweville** **87.75 234** *e*P **P** **10 47 35.7 +1.9**
MERW IAmb IAmb 10 47 48.3
comp=Z,58nm,0.7s
CASY **Casey** **87.79 174** P **P** **10 47 33.1 +0.1**
CASY IAmb IAmb 10 47 35.8
comp=Z,399nm,1.1s
PCA **Pinnacle** **87.84 24** IAmb IAmb 10 47 36.8
comp=Z,747nm,1.0s
PINM **Pinnacle** **87.85 24** P **P** **10 47 34.5 +0.7**
baz=310,SNR=75
PINM S **S** **10 58 06.8 -2.5**
baz=310
WP01 **e3381** **87.94 246** *i* P P **10 47 38.5 +3.6**
WP01 *i* S **sP** **10 48 05.3 -2.7**
TOA0 **Torodi Ar. Sit** **88.00 283** P **P** **10 47 35.4 +0.2**
TORD **Torodi Ar. Bea** **88.00 283** P **P** **10 47 35.4 +0.2**
comp=Z,97nm,0.8s,baz=68,slow=4.3,SNR=129
TORD pP **pP** **10 48 01.6 +2.7**
comp=Z,101nm,0.8s,baz=70,slow=4.9,SNR=7.4
TORD PP **PP** **10 51 03.6 +0.8**
comp=Z,164nm,1.0s,baz=60,slow=6.9,SNR=10
TORD PKKPbc **PKKPbc** **11 05 20.7 +1.1**
comp=Z,19nm,0.5s,baz=298,slow=2.2,SNR=29
TORD SKKP 11 08 49.3
comp=Z,4.7nm,0.9s,baz=293,slow=3.1,SNR=3.7
TORD PKPPKP P'P'df 11 13 21.4 -8.7
comp=Z,4.4nm,1.0s,baz=246,slow=2.3,SNR=4.3
TORD LR LR 11 32 28.1
comp=Z,8µm,20.3s,baz=74,slow=39
comp=Z,97nm,0.8s
TORD **Torodi Ar. Bea** **88.00 283** P **P** **10 47 35.2 0.0**
TORD IAmb IAmb 10 48 11.8
comp=Z,1µm,2.1s
YUK6 **Outpost Mounta** **88.00 23** P **P** **10 47 35.3 +0.6**
baz=312,SNR=360
YUK6 S **S** **10 58 09.5 -1.5**
baz=312
DY2G **Dye2** **88.02 345**⇑ *i*P **P** **10 47 34.8 +0.2**
DY2G IAmb IAmb 10 47 36.9
comp=Z,1µm,1.4s
N30M **Aishikik Lake** **88.10 22** P **P** **10 47 35.7 +0.7**
baz=313,SNR=446
N30M S **S** **10 58 11.9 +0.2**
baz=313
SUR **Sutherland** **88.16 234** LR LR 11 22 13.3
comp=Z,35µm,21.9s,baz=60,slow=32
SUR **Sutherland** **88.16 234** P **P** **10 47 36.1 +0.2**
SUR **Sutherland** **88.16 234** P **P** **10 47 39.3 +3.5**
AVE **Averroes** **88.17 305** P **P** **10 47 36.0 +0.2**
AVE S **SKSac** **10 57 53.3 -3.6**
AVE **Averroes** **88.17 305** IAmb IAmb 10 48 31.3
comp=Z,543nm,1.3s
BCPM **Bancas Point** **88.18 24** P **P** **10 47 35.9 +0.6**
BCPM IAmb IAmb 10 47 41.3
comp=Z,333nm,0.8s
O29M **Mount Kennedy** **88.34 23** P **P** **10 47 36.8 +0.5**
baz=312,SNR=47
O29M S **S** **10 58 14.9 +0.8**
baz=312
HYT **Haines Junctio** **88.39 23** IAmb IAmb 10 47 39.3
comp=Z,475nm,1.0s
HYT **Haines Junctio** **88.39 23** P **P** **10 47 36.6 +0.2**
baz=312,SNR=310
HYT S **S** **10 58 13.2 -1.3**
baz=312
PNL **Peninsula** **88.45 24** P **P** **10 47 37.0 +0.4**
baz=311,SNR=98
PNL S **S** **10 58 14.2 -0.8**
baz=311
M31M **Drury Creek, Y** **88.51 21** IAmb IAmb 10 47 39.2
comp=Z,407nm,0.9s
M31M **Drury Creek, Y** **88.51 21** P **P** **10 47 36.9 0.0**
baz=315,SNR=348
M31M S **S** **10 58 13.2 -2.2**
baz=315
N31M **Braeburn, Yuko** **88.54 22** P **P** **10 47 37.4 +0.4**
baz=314,SNR=722
N31M S **S** **10 58 15.2 -0.6**
baz=314
SFJD **Kangerlussuaq** **88.56 347** LR LR 11 32 37.1
comp=Z,18µm,20.9s,baz=29,slow=39
SFJD **Kangerlussuaq** **88.56 347** P **P** **10 47 37.2 +0.3**
SFJD IAmb IAmb 10 47 38.9
comp=Z,592nm,1.0s
SFJD **Kangerlussuaq** **88.56 347** P **P** **10 47 37.2 +0.3**
SFJD pmax pmax
comp=Z,592nm,1.0s
SFJD **Kangerlussuaq** **88.56 347**⇑ *i*P **P** **10 47 36.6 -0.3**
SFJD IAmb IAmb 10 47 38.6
comp=Z,604nm,1.0s
CVNA **Calvinia** **88.58 236** *e*P **P** **10 47 37.8 0.0**
CVNA IAmb IAmb 10 47 43.9
comp=Z,139nm,0.8s
MATJ **Matjiesfontein** **88.72 234** *e*P **P** **10 47 39.6 +1.3**
MATJ IAmb IAmb 10 48 07.5
comp=Z,182nm,1.2s
FARO **Faro, Yukon** **88.83 20** IAmb IAmb 10 47 42.2
comp=Z,497nm,1.0s
FARO **Faro, Yukon** **88.83 20** P **P** **10 47 38.4 +0.1**
baz=316,SNR=371
FARO S **S** **10 58 17.1 -1.3**
baz=316
O30N **Mendenhall** **88.93 22** P **P** **10 47 39.5 +0.7**
baz=314,SNR=648
O30N S **S** **10 58 18.2 -1.2**
baz=314
P30M **Million Dollar** **89.06 23** P **P** **10 47 40.0 +0.5**
baz=313
P30M S **S** **10 58 19.5 -1.2**
baz=313
P29M **Windy Craggy** **89.11 24** IAmb IAmb 10 47 44.4
comp=Z,488nm,0.9s
P29M **Windy Craggy** **89.11 24** P **P** **10 47 40.0 +0.3**
baz=312,SNR=162
P29M S **S** **10 58 20.1 -1.1**
baz=312
MMPY **Sheldon Lake,** **89.20 19** P **P** **10 47 40.7 +0.5**
baz=318,SNR=873
MMPY S **S** **10 58 20.2 -1.8**
baz=318
WHY **Whitehorse** **89.43 22** P **P** **10 47 41.5 +0.2**
baz=315,SNR=202
WHY S **S** **10 58 23.1 -1.2**
baz=315
JOHN **Johnston Islan** **89.47 72** P **P** **10 47 42.8 +0.7**
JOHN IAmb IAmb 10 47 45.5
comp=Z,671nm,1.1s
JOHN **Johnston Islan** **89.47 72** P **P** **10 47 44.3 +2.2**
N32M **Quiet Lake** **89.70 21** P **P** **10 47 42.6 +0.1**
baz=316
N32M S **S** **10 58 25.9 -0.7**
baz=316
CER **Ceres** **89.74 234** *e*P P 10 47 32.1 -11
PLBC **Pleasant Camp** **89.74 23** P **P** **10 47 43.0 +0.4**
baz=314,SNR=234
PLBC S **S** **10 58 25.8 -1.1**
baz=314
ELIM **Elim** **89.93 233** *e*P **P** **10 47 45.7 +1.9**
ELIM IAmb IAmb 10 47 49.8
comp=Z,57nm,0.9s
SKAG **Skagway** **90.12 23** P **P** **10 47 45.1 +0.8**
baz=314,SNR=304
SKAG S **S** **10 58 30.6 +0.3**
baz=314
MSVF **Nonsavu** **90.39 109** LR LR 11 28 21.5
comp=Z,4µm,19.3s,baz=293,slow=36
MSVF **Nonsavu** **90.39 109***c* *i*P **P** **10 47 47.2 +0.8**
MSVF pmax pmax
comp=Z,584nm,1.2s
MSVF MLR MLR
comp=Z,7µm,19.0s
MSVF **Nonsavu** **90.39 109** P **P** **10 47 49.8 +3.4**
P33M **Teslin, Yukon** **90.47 22** IAmb IAmb 10 47 48.6
comp=Z,294nm,0.9s
P33M **Teslin, Yukon** **90.47 22** P **P** **10 47 46.4 +0.3**
baz=317,SNR=240
P33M S **S** **10 58 34.1 +0.3**
baz=317
P32M **Atlin** **90.61 22** P **P** **10 47 47.5 +0.7**
baz=316,SNR=254
P32M S **S** **10 58 36.0 +1.0**
baz=316
BESE **Bessie Mountai** **90.91 23** IAmb IAmb 10 47 53.3
comp=Z,458nm,1.1s
TGTN **Hyland Airport** **90.95 19** P **P** **10 47 49.1 +0.8**
baz=321,SNR=231
TGTN S **S** **10 58 35.7 -2.4**
baz=321
WRGLY **Wrigley** **90.96 16** P **P** **10 47 48.4 +0.2**
baz=325,SNR=32
WRGLY S **S** **10 58 33.2 -4.6**
baz=325
NUUK **Nuuk** **91.20 346** *i* P **P** **10 47 49.3 +0.1**
NUUK IAmb IAmb 10 47 51.3
comp=Z,391nm,0.9s
JIS **Juneau Island** **91.30 23** IAmb IAmb 10 47 53.1
comp=Z,404nm,1.0s
MAW **Mawson** **91.34 192** P **P** **10 47 50.9 +1.3**
comp=Z,52nm,1.0s,baz=17,slow=6.3,SNR=50
MAW PKKPbc **PKKPdf** **11 05 11.7 +0.7**
comp=Z,71nm,0.8s,baz=176,slow=3.0,SNR=32
MAW PKPPKP **P'P'df** **11 13 20.7 +2.0**
comp=Z,7.7nm,0.8s,baz=244,slow=5.7,SNR=5.4
MAW LR LR 11 22 15.8
comp=Z,13µm,21.2s,baz=22,slow=31
comp=Z,52nm,1.0s
MAW **Mawson** **91.34 192** P **P** **10 47 50.3 +0.7**
baz=92,SNR=37
MAW **Mawson** **91.34 192** P **P** **10 47 50.4 +0.9**
R33M **Jennings River** **91.71 21** P **P** **10 47 52.8 +0.9**
baz=318,SNR=496
R33M S **S** **10 58 42.6 -2.6**
baz=318
SIT **Sitka** **91.81 25** IAmb IAmb 10 47 55.4
comp=Z,320nm,1.0s
SIT **Sitka** **91.81 25** P **P** **10 47 53.0 +0.8**
baz=314,SNR=45
SIT S **S** **10 58 45.9 +0.1**
baz=314
TAVE **Taveuni** **91.83 107** P **P** **10 47 55.8 +2.8**
NRS **Narsarsuaq** **92.08 342** IAmb IAmb 10 48 21.0
comp=Z,281nm,1.2s
NRS **Narsarsuaq** **92.08 342** *i* P **P** **10 47 53.1 -0.2**
NRS IAmb IAmb 10 47 55.1
comp=Z,207nm,1.1s
KOWA **Kowa** **92.66 287** P **P** **10 47 57.4 +0.4**
KOWA IAmb IAmb 10 48 27.5
comp=Z,347nm,1.2s
DLBC **Dease Lake** **92.75 22** LR LR 11 35 47.7
comp=Z,11µm,19.8s,baz=306,slow=39
DLBC **Dease Lake** **92.75 22** IAmb IAmb 10 48 01.9
comp=Z,431nm,1.2s
DLBC **Dease Lake** **92.75 22** P **P** **10 47 57.5 +0.8**
baz=319,SNR=181
DLBC S **S** **10 58 52.7 -1.7**
baz=319
S34M **Telegraph Cree** **92.76 22** P **P** **10 47 57.7 +1.1**
baz=318,SNR=274
S34M S **S** **10 58 52.7 -1.6**
baz=318
IVI **Ivigtut** **92.82 343** IAmb IAmb 10 48 00.1
comp=Z,237nm,1.3s
IVI **Ivigtut** **92.82 343**⇑ *i*P **P** **10 47 56.0 -0.7**
IVI IAmb IAmb 10 47 57.8
comp=Z,144nm,1.2s
T33K **Petersburg** **92.89 24** P **P** **10 47 58.0 +0.8**
baz=316,SNR=7.2
T33K S **S** **10 58 54.5 -0.9**
baz=316
MCQ **Macquarie Isla** **93.04 148** P **P** **10 47 58.7 +1.0**
baz=93,SNR=5.8
MCQ **Macquarie Isla** **93.04 148** P **P** **10 47 58.6 +0.9**
DCZ **Deep Cove** **93.20 138** IAmb IAmb 10 48 02.2
comp=Z,346nm,1.0s
LKBA **Tubou, Lakemba** **93.35 108** P **P** **10 48 03.6 +3.6**
OUZ **Omahuta** **93.36 126** IAmb IAmb 10 48 04.5
comp=Z,348nm,1.0s
FLDN **Fort Liard** **93.40 18** P **P** **10 48 00.6 +1.1**
baz=325,SNR=165
FLDN S **S** **10 58 54.4 -5.5**
baz=325
WRAK **Wrangell Islan** **93.41 24** IAmb IAmb 10 48 03.6
comp=Z,205nm,1.0s
WRAK **Wrangell Islan** **93.41 24** P **P** **10 48 00.3 +0.7**
baz=317,SNR=77
WRAK S **S** **10 58 59.0 -1.0**
baz=317
YKA **Yellowknife Ar** **93.69 13** P **P** **10 48 00.3 -0.4**
comp=Z,376nm,1.0s,baz=327,slow=4.2,SNR=428
YKA pP **pP** **10 48 28.4 +3.9**
comp=Z,54nm,1.0s,baz=281,slow=24,SNR=2.5
YKA PP **PP** **10 51 45.4 -0.6**
comp=Z,44nm,0.8s,baz=337,slow=7.8,SNR=7.8
YKA S **SKSac** **10 58 24.4 -2.8**
comp=Z,3.0nm,0.8s,baz=348,slow=5.7,SNR=1.9
YKA PKKPbc **PKKPdf** **11 05 04.8 +0.7**
comp=Z,6.4nm,0.7s,baz=154,slow=2.5,SNR=10.0
YKA SKKP 11 08 34.9
comp=Z,1.6nm,0.7s,baz=155,slow=2.4,SNR=4.6
YKA PKPPKP **P'P'df** **11 13 16.9 -0.9**
comp=Z,5.9nm,1.0s,baz=143,slow=2.6,SNR=6.5
YKA LR LR 11 35 57.9
comp=Z,9µm,19.4s,baz=320,slow=39
comp=Z,376nm,1.0s
T35M **Bob Quinn** **93.77 23** P **P** **10 48 02.5 +1.2**
baz=319,SNR=133
T35M S **S** **10 59 02.3 -1.0**
baz=319
CRAG **Craig** **93.80 25** IAmb IAmb 10 48 05.5
comp=Z,143nm,0.9s
CRAG **Craig** **93.80 25** P **P** **10 48 02.0 +0.5**
baz=316,SNR=29
CRAG S **S** **10 59 02.4 -1.1**
baz=316
WHZ **Wether Hill Ro** **93.89 138** IAmb IAmb 10 48 05.0
comp=Z,294nm,1.1s
WKZ **Wanaka** **94.10 137** IAmb IAmb 10 48 22.5
comp=Z,292nm,1.2s
V35K **Ketchikan** **94.49 24** P **P** **10 48 04.5 -0.1**
baz=318,SNR=11
V35K S **S** **10 59 07.7 -1.9**
baz=318
FRB **Frobisher Bay** **94.56 353** LR LR 11 35 17.7
comp=Z,6µm,20.8s,baz=14,slow=38
LBZ **Lake Benmore** **94.67 136** IAmb IAmb 10 48 09.0
comp=Z,418nm,1.0s
QRZ **Quartz Range** **94.80 132** P **P** **10 48 07.8 +1.6**
RPZ **Rata Peaks** **94.97 135** PKKPbc PKKPbc 11 05 04.3 +0.8
comp=Z,14nm,0.8s,baz=20,slow=0.6,SNR=6.3
RPZ LR LR 11 35 24.8
comp=Z,11µm,19.4s,baz=282,slow=38
PMPST **Porto Santo, M** **94.97 308** *e*P **P** **10 48 09.3 +2.0**
NBEZ **Newall Road No** **95.14 130** P **P** **10 48 11.6 +3.8**
MKAZ **Moumakai** **95.25 128** P **P** **10 48 10.7 +2.4**
NEZ **North Egmont** **95.30 130** P **P** **10 48 12.4 +3.8**
LTZ **Lake Taylor** **95.40 134** IAmb IAmb 10 48 12.0
comp=Z,252nm,1.1s
THZ **Tophouse** **95.43 133** IAmb IAmb 10 48 14.6
comp=Z,242nm,0.7s
OXZ **Oxford** **95.46 134** IAmb IAmb 10 48 12.8
comp=Z,325nm,0.9s
NNZ **Nelson** **95.55 132** IAmb IAmb 10 48 13.7
comp=Z,237nm,1.1s
NNZ **Nelson** **95.55 132** P **P** **10 48 09.6 0.0**
HIZ **Hauiti** **95.56 129** P **P** **10 48 11.9 +2.1**
PMAR **Madeira** **95.57 308** *e*P **P** **10 48 11.2 +0.9**
comp=Z,260nm,1.3s
LREZ **Lake Rotokare** **95.59 130** P **P** **10 48 11.7 +1.8**
FUL **Funchal** **95.59 308** *e*P **P** **10 48 11.8 +1.7**
DIB **Dawson Inlet,** **95.71 26** IAmb IAmb 10 48 12.4
comp=Z,125nm,0.9s
H02S1 **DAWSON INLET T** **95.71 26** P **P** **10 48 10.6 +0.4**
SNR=43
VRZ **Vera Road** **95.72 130** P **P** **10 48 11.5 +1.1**
PMOZ **Porto Moniz, M** **95.73 308** *e*P **P** **10 48 11.8 +0.9**
PMOZ **Porto Moniz, M** **95.73 308** *e*SKSac **SKSac** **10 58 45.7 +6.1**
PMOZ **Porto Moniz, M** **95.73 308** *e*LR LR 11 23 26.2

comp=Z,7µm,18.0s
TOZ Tahuroa Road 95.74 128 P **P** **10 48 12.4 +1.9**
DUWZ D'Urville Isla 95.77 131 P **P** **10 48 11.3 +0.7**
KEKH Kekaha 95.92 64 IAmb IAmb 10 48 15.0
comp=Z,162nm,1.0s
TLZ Tolley Road 95.99 129 P **P** **10 48 13.9 +2.1**
KHZ Kahutara 96.12 133 P **P** **10 48 12.7 +0.6**
WAZ Wanganui 96.12 130 P **P** **10 48 14.4 +2.1**
TCW Tory Channel 96.17 132 P **P** **10 48 13.0 +0.6**
FWVZ Far West T-bar 96.34 130 P **P** **10 48 14.4 +0.9**
NGZ Ngauruhoe 96.35 129 P **P** **10 48 14.6 +1.1**
DBIC Dimbokro 96.36 280 P **P** **10 48 13.7 -0.3**
comp=Z,30nm,0.8s,baz=85,slow=4.9,SNR=19
DBIC pP **pP** **10 48 39.9 +2.2**
comp=Z,76nm,1.0s,baz=71,slow=5.3,SNR=5.2
DBIC PP **PP** **10 52 06.3 -2.3**
comp=Z,56nm,0.9s,baz=61,slow=5.9,SNR=5.7
DBIC PKKPbc **PKKPdf** **11 04 59.5 0.0**
comp=Z,19nm,0.4s,baz=255,slow=2.9,SNR=22
DBIC LR LR 11 39 14.9
comp=Z,8µm,18.6s,baz=70,slow=40
comp=Z,30nm,0.8s
DBIC Dimbokro 96.36 280 IAmb IAmb 10 48 45.0
comp=Z,211nm,1.4s
DBIC Dimbokro 96.36 280 *e*P **P** **10 48 14.1 +0.1**
DRZ Dome Shelter 96.36 130 P **P** **10 48 17.6 +3.9**
KIC Kosan Boka 96.37 279ⁿ *e*P **P** **10 48 12.6 -1.4**
comp=Z,34nm,0.7s
NTVZ North Tongarir 96.37 129 P **P** **10 48 14.9 +1.3**
WHVZ Whangaehu Hut 96.38 130 P **P** **10 48 14.6 +0.8**
SNVZ South Ngauruho 96.38 129 P **P** **10 48 14.9 +1.3**
OTVZ Oturere 96.39 129 P P 10 48 07.3 -6.4
TMVZ Te Maari 96.40 129 P **P** **10 48 15.0 +1.3**
WNVZ Wahianoa 96.40 130 P **P** **10 48 14.7 +0.9**
ETVZ East Tongariro 96.41 129 P **P** **10 48 15.1 +1.3**
KIW Kapiti Island 96.48 131 P **P** **10 48 14.7 +0.8**
KIW S **PP** **10 52 06.8 -2.5**
SNZO South Karori 96.51 132 P **P** **10 48 14.4 +0.5**
SNZO South Karori 96.51 132 P **P** **10 48 14.3 +0.4**
OMRZ Omania 96.52 128 P **P** **10 48 16.9 +2.7**
TIC Toumodi 96.52 280ⁿ *e*P **P** **10 48 15.6 +0.9**
comp=Z,43nm,0.9s
MOVZ Moawhango 96.54 130 P **P** **10 48 14.8 +0.5**
HATZ Hinemaiaia 96.60 129 P **P** **10 48 15.5 +1.0**
OGWZ Otaki Gorge 96.65 131 P **P** **10 48 15.6 +1.0**
LIC Lamto 96.68 279 *e*P **P** **10 48 16.3 +0.9**
comp=Z,68nm,1.0s
CAW Cannon Point 96.68 131 P **P** **10 48 15.9 +1.1**
CAW S **PP** **10 52 04.6 -6.2**
BHHZ Black Hill Sta 96.80 130 P **P** **10 48 16.0 +0.6**
MRHZ Matea Rd 96.81 129 P **P** **10 48 16.2 +0.7**
MRZ Mangatainoka R 96.88 131 P **P** **10 48 16.1 +0.4**
POWZ Post Office Ro 96.92 131 P **P** **10 48 16.8 +0.9**
HOWZ Holdsworth Sta 96.92 131 P **P** **10 48 16.5 +0.6**
HOWZ S **PP** **10 52 09.1 -3.6**
MSWZ Moikau Station 96.92 132 P **P** **10 48 17.1 +1.2**
PLWZ Palliser 96.99 132 P **P** **10 48 17.5 +1.3**
BKZ Black Stump Fm 96.99 129 P **P** **10 48 17.6 +1.4**
BKZ Black Stump Fm 96.99 129 P **P** **10 48 16.8 +0.5**
MTW Mount Morrison 97.01 131 P Pdif 10 48 17.3 +1.0
KWHZ Kaweka Forest 97.03 129 P Pdif 10 48 18.6 +2.0
KWHZ S **PP** **10 52 08.0 -5.6**
PAWZ Paruwai Farm 97.04 132 P Pdif 10 48 17.8 +1.3
PNHZ Pukenui 97.05 130 P Pdif 10 48 17.2 +0.6
PNHZ S **PP** **10 52 14.9 +1.2**
KRHZ Kereru 97.07 130 P Pdif 10 48 18.7 +2.0
KRHZ S **PP** **10 52 13.9 0.0**
URZ Urewera 97.12 128 S **SKSac** **10 58 39.9 -6.1**
comp=Z,28nm,1.0s,baz=145,slow=22,SNR=12
URZ PKKPbc PKKPbc 11 04 58.4 +1.0
comp=Z,19nm,0.7s,baz=53,slow=3.3,SNR=14
URZ LR LR 11 37 47.4
comp=Z,9µm,18.8s,baz=292,slow=39
URZ Urewera 97.12 128 IAmb IAmb 10 48 19.0
comp=Z,282nm,1.1s
PRWZ Pori Road 97.12 131 P Pdif 10 48 17.9 +1.0
MTHZ Maungataniwha 97.13 129 P Pdif 10 48 17.9 +0.9
TIWZ Tintock 97.14 131 P Pdif 10 48 18.9 +1.9
DVHZ Dannevirke 97.16 130 P Pdif 10 48 17.8 +0.7
DVHZ S **PP** **10 52 08.2 -6.4**
TRWZ Traveller 97.23 131 P Pdif 10 48 19.3 +2.0
TMWZ Te Maipa 97.26 131 P Pdif 10 48 19.9 +2.4
WPHZ Waipukurau 97.28 130 P Pdif 10 48 18.9 +1.3
RAHZ Arahi 97.33 129 P Pdif 10 48 18.9 +1.0
BFZ Birch Farm 97.36 131 P Pdif 10 48 18.6 +0.7
BFZ Birch Farm 97.36 131 P Pdif 10 48 19.2 +1.3
ANWZ Angora Road 97.44 130 P Pdif 10 48 19.4 +1.2
SNGZ Shannon Statio 97.47 129 P Pdif 10 48 19.7 +1.2
OPA Opana 97.47 63 IAmb IAmb 10 48 22.3
comp=Z,207nm,1.1s
PRHZ Porangahau 97.49 130 P Pdif 10 48 19.7 +1.3
KAHZ Kahuranaki 97.49 130 P Pdif 10 48 20.3 +1.7
PXZ Pawanui 97.57 130 P Pdif 10 48 20.1 +1.3
TKGZ Te Karaka 97.72 128 P Pdif 10 48 21.7 +2.2
RIGZ Rimuhau 97.75 128 P Pdif 10 48 21.1 +1.4
PUZ Puketiti 97.89 128 P Pdif 10 48 23.5 +3.1
BBB Bella Bella 98.23 25 LR LR 11 34 38.5
comp=Z,10µm,21.9s,baz=318,slow=36
BART Pico Bartolome 98.65 316 *e*PKiKP PP 10 52 35.1 +10
PCALD Caldeiras da R 98.85 316 *e*PKiKP **PP** **10 52 25.7 -1.0**
PSET Sete Cidades 98.98 316 *e*PKiKP **PP** **10 52 27.7 0.0**
PSMN Pico do Norte, 99.02 315 *e*PKiKP **PP** **10 52 29.7 +1.6**
PSMA Santa Maria 99.07 315 *e*PKiKP **PP** **10 52 28.4 0.0**
PSCM Serra do Cume 99.36 318 *e*PKiKP **PP** **10 52 27.0 -3.6**
PAGU Agualva, Azore 99.37 318 *e*PKiKP **PP** **10 52 29.7 -0.9**
PGRA Graciosa 99.71 318 *e*PKiKP **PP** **10 52 26.4 -6.8**
SRBC Serra Branca 99.74 318 *e*PKiKP **PP** **10 52 31.1 -2.3**
ROSA Rosais 100.06 318 *e*PKiKP **PP** **10 52 31.1 -4.7**
PID Ribeirinha 100.15 318 *e*PKiKP **PP** **10 52 33.8 -2.7**
PPNO Prainha do Nor 100.22 318 *e*PKiKP PP 10 52 27.0 -10
PICO Pico 100.30 318 *e*PKiKP **PP** **10 52 34.5 -3.3**
PCAN Candelaria 100.36 318 *e*PKiKP PP 10 52 27.0 -11
PCED Cedros 100.40 318 *e*PKiKP PP 10 52 27.0 -11
CALA Caldeira 100.43 318 *e*PKiKP **PP** **10 52 37.9 -0.8**
H07S1 FLORES T-PHASE 101.47 320 *e*PKiKP PP 10 52 37.9 -8.5
SCHQ Schefferville 102.86 349 P **Pdif** **10 48 42.6 +0.3**
comp=Z,24nm,0.8s,baz=31,slow=3.9,SNR=16
SCHQ PP **PP** **10 52 55.8 -0.4**
comp=Z,58nm,0.9s,baz=14,slow=7.5,SNR=6.5
SCHQ PKKPbc **PKKPbc** **11 04 39.1 -2.2**
comp=Z,38nm,0.9s,baz=68,slow=0.6,SNR=18
SCHQ SKKPbc SKKPbc 11 08 11.3 -1.3
comp=Z,18nm,0.9s,baz=155,slow=2.5,SNR=5.8
F04D Rainier, OR 105.11 26 Pdiff **Pdif** **10 48 52.3 -0.1**
baz=324
NEW Newport 105.50 21 Pdiff **Pdif** **10 48 54.0 -0.1**
baz=329
VNDA Vanda 105.57 168 Pdiff **Pdif** **10 48 54.9 +1.3**
comp=Z,7.3nm,0.9s,baz=290,slow=5.3,SNR=18
VNDA PKiKP **PKiKP** **10 53 06.8 +0.5**
comp=Z,7.2nm,0.9s,baz=295,slow=7.9,SNR=3.2
VNDA PKKPbc **PKKPbc** **11 04 32.6 -1.4**
comp=Z,12nm,0.9s,baz=107,slow=1.5,SNR=13
G03D McMinnville, O 105.70 27 Pdiff **Pdif** **10 48 55.1 0.0**
baz=324
I02E Swisshome, OR 106.33 28 Pdiff **Pdif** **10 48 57.9 0.0**
baz=323
H04D Lebanon 106.48 27 Pdiff **Pdif** **10 48 59.3 +0.8**
baz=324
G05D Wamic, OR 106.48 26 Pdiff **Pdif** **10 48 59.5 +1.0**
baz=325
I03D Drain, OR 106.88 28 Pdiff **Pdif** **10 49 01.5 +1.1**
baz=323
J01E Myrtle Point 107.05 28 Pdiff **Pdif** **10 49 02.5 +1.4**
baz=323
I04A Tendick Farm, 107.20 27 Pdiff **Pdif** **10 49 01.8 0.0**
baz=324
I05D Terrebonne, OR 107.21 26 Pdiff **Pdif** **10 49 02.3 +0.4**
baz=325
K02D Willamette Mer 107.54 29 Pdiff **Pdif** **10 49 04.3 +0.9**
baz=323
J04D Umpqua Nationa 107.78 27 Pdiff **Pdif** **10 49 05.0 +0.3**
baz=324
MSO Missoula 107.80 20 Pdiff **Pdif** **10 49 04.3 -0.3**
baz=332
EGMT Eagleton 107.97 17 Pdiff **Pdif** **10 49 04.4 -0.9**
baz=336
L02F Cave Junction 108.04 29 Pdiff **Pdif** **10 49 06.4 +0.8**
baz=323
J05D Fort Rock, OR 108.12 27 Pdiff **Pdif** **10 49 07.0 +0.9**
baz=325
K04D Chiloquin, OR 108.43 27 Pdiff **Pdif** **10 49 08.5 +1.0**
baz=324
L04D Klamath Falls 108.52 28 Pdiff **Pdif** **10 49 08.2 +0.3**
baz=324
ULM Lac du Bonnet 108.52 7 Pdiff **Pdif** **10 49 07.3 -0.2**
comp=Z,11nm,1.1s,baz=360,slow=5.5,SNR=6.8
ULM PKiKP **PKiKP** **10 53 13.3 +0.6**
comp=Z,46nm,0.8s,baz=1.9,slow=2.2,SNR=15
ULM SKP 10 56 39.8
comp=Z,16nm,0.8s,baz=348,slow=4.0,SNR=3.0
ULM PKKPbc **PKKPbc** **11 04 22.4 -1.5**
comp=Z,12nm,0.8s,baz=148,slow=2.8,SNR=7.9
YBH Yreka Blue Hor 108.73 29 PKKPbc PKKPbc 11 04 21.0 -2.1
comp=Z,4.6nm,0.7s,baz=86,slow=6.1,SNR=6.7
DGMT Dagmar 108.89 13 P **Pdif** **10 49 10.4 +1.1**
baz=342
DGMT Dagmar 108.89 13 Pdiff **Pdif** **10 49 08.6 -0.6**
baz=342
BOZ Bozeman (W) 109.63 19 Pdiff **Pdif** **10 49 13.0 +0.3**
baz=334
LAO LASA Array 110.11 15 Pdiff **Pdif** **10 49 15.1 +0.3**
baz=339
MDND Maddock 110.36 10 Pdiff **Pdif** **10 49 15.8 0.0**
baz=346
TROLL Troll, Antarti 110.36 199 P'P'df P'P'df 11 12 40.6 -2.5
TROLL Troll, Antarti 110.36 199 PKKPbc PKKPbc 11 04 17.7 -1.3
TROLL Troll, Antarti 110.36 199 PKiKP **PKiKP** **10 53 16.6 +1.0**
TROLL Troll, Antarti 110.36 199 Pdiff **Pdif** **10 49 18.5 +3.3**
TROLL Troll, Antarti 110.36 199 SKPdf **SKiKP** **10 56 40.4 -2.7**
AGMN Agassiz Nation 110.45 7 P **Pdif** **10 49 15.8 -0.4**
baz=350
AGMN Agassiz Nation 110.45 7 Pdiff **Pdif** **10 49 15.0 -1.1**
baz=331
HLID Hailey 110.52 22 Pdiff **Pdif** **10 49 17.0 +0.2**
baz=352
B35A Bob, Littlefor 110.62 6 P **Pdif** **10 49 16.9 0.0**
baz=352
RLMT Red Lodge 110.76 18 Pdiff **Pdif** **10 49 16.8 -1.1**
baz=336
QSPA South Pole Qui 110.77 180 Pdiff **Pdif** **10 49 19.4 +2.3**
comp=Z,2.2nm,0.6s,baz=296,slow=1.4,SNR=20
QSPA PKiKP **PKiKP** **10 53 17.5 +1.1**
comp=Z,62nm,1.1s,baz=13,slow=0.9,SNR=21
QSPA SKP 10 56 42.5
comp=Z,30nm,0.8s,baz=242,slow=2.4,SNR=5.1
QSPA PKKPbc **PKKPbc** **11 04 16.2 -1.8**
comp=Z,69nm,0.8s,baz=240,slow=0.6,SNR=33
H17A Grant Village 111.03 19 Pdiff **Pdif** **10 49 20.3 +1.1**
baz=335
EYMN Ely 111.22 4 Pdiff **Pdif** **10 49 18.8 -0.8**
baz=354
SNAA Sanae 112.03 200 P'P'df P'P'df 11 12 35.4 -4.4
SNAA Sanae 112.03 200 PKKPbc PKKPbc 11 04 11.0 -2.3
SNAA Sanae 112.03 200 PKiKP **PKiKP** **10 53 18.7 0.0**
SNAA Sanae 112.03 200 Pdiff **Pdif** **10 49 26.1 +3.6**
SNAA x x 11 12 36.8
SNAA Sanae 112.03 200 PKKPbc PKKPbc 11 04 11.5 -1.8
comp=Z,15nm,0.9s,baz=265,slow=8.4,SNR=12
SNAA Sanae 112.03 200*c* PKiKP **PKiKP** **10 53 18.2 -0.5**
SNAA pmax pmax
comp=Z,39nm,1.3s
SNAA Sanae 112.03 200 *e*P **Pdif** **10 49 21.5 -1.1**
PKME Peaks-Kenny Pk 112.48 348 Pdiff **Pdif** **10 49 26.8 +1.5**
baz=16
E38A The Farm, Brul 112.54 5 P **Pdif** **10 49 25.9 +0.4**
baz=354
F33A 5 Mile Ranch, 112.81 8 P **Pdif** **10 49 26.3 -0.4**
baz=349
F33A P **PKiKP** **10 53 21.7 +0.8**
baz=349
BW06 Boulder Array 112.82 19 Pdiff **Pdif** **10 49 25.8 -1.4**
baz=336
PDAR Pinedale Array 112.82 19 Pdiff **Pdif** **10 49 28.9 +1.7**
comp=Z,2.4nm,0.8s,baz=18,slow=3.9,SNR=14
PDAR PKiKP **PKiKP** **10 53 22.1 +0.6**
comp=Z,46nm,0.6s,baz=117,slow=1.3,SNR=56
PDAR SKP 10 56 49.0
comp=Z,6.7nm,0.7s,baz=53,slow=2.1,SNR=4.1
PDAR PKKPbc **PKKPbc** **11 04 09.1 -1.1**
comp=Z,11nm,1.1s,baz=160,slow=4.7,SNR=7.3
E43A Lone Tree Farm 112.99 1 P **PKiKP** **10 53 21.8 +0.5**
baz=358
E46A Sault Ste Mari 113.00 359 P **PKiKP** **10 53 22.0 +0.7**
baz=1.1
RSSD Black Hills 113.05 14 Pdiff **Pdif** **10 49 28.3 +0.2**
baz=341
F36A Milaca 113.11 6 P **PKiKP** **10 53 22.1 +0.6**
baz=352
NVAR Mina Array Bea 113.38 28 Pdiff **Pdif** **10 49 31.4 +1.7**
comp=Z,0.2nm,0.6s,baz=231,slow=9.4,SNR=2.3
NVAR PKiKP **PKiKP** **10 53 24.5 +1.9**
comp=Z,100nm,0.8s,baz=308,slow=1.9,SNR=105
NVAR SKP 10 56 52.8
comp=Z,4.3nm,0.8s,baz=277,slow=1.8,SNR=4.0
NVAR PKKPbc **PKKPbc** **11 04 08.8 +0.6**
comp=Z,12nm,1.0s,baz=169,slow=4.1,SNR=7.5
NVAR SKKPbc SKKPbc 11 07 44.0 +0.7
comp=Z,5.3nm,0.8s,baz=169,slow=4.4,SNR=5.9
VNA2 Neumayer--Watz 113.53 201 P'P'df P'P'df 11 12 35.3 -1.6
VNA2 Neumayer--Watz 113.53 201 PKKPbc PKKPbc 11 04 06.1 -2.1
VNA2 Neumayer--Watz 113.53 201 PKiKP **PKiKP** **10 53 22.1 +0.6**
baz=77,slow=2.1
VNA2 Neumayer--Watz 113.53 201 Pdiff **Pdif** **10 49 32.9 +3.8**
baz=77,slow=3.6
VNA2 Neumayer--Watz 113.53 201 SKPdf **SKiKP** **10 56 49.7 +0.6**
SUSD Miller 113.77 11 P **PKiKP** **10 53 23.7 +0.8**
baz=346
SUSD Miller 113.77 11 Pdiff **Pdif** **10 49 30.1 -0.9**
baz=346
BMNY Brushton-Moira 113.78 352 P **Pdif** **10 49 30.4 -0.6**
baz=11
K22A Casper 113.80 17 P **Pdif** **10 49 31.3 -0.1**
baz=338
K22A Casper 113.80 17 Pdiff **Pdif** **10 49 30.9 -0.5**
baz=338
MLAC Mammoth, Mamm 113.80 29 Pdiff **Pdif** **10 49 31.6 0.0**
baz=326
SPMN Marine on St. 113.81 6 P **Pdif** **10 49 29.3 -1.8**
baz=252
SPMN Marine on St. 113.81 6 Pdiff **Pdif** **10 49 30.4 -0.8**
baz=352
VNA1 Neumayer--Stat 113.84 201 PKKPbc PKKPbc 11 04 05.4 -1.7
VNA1 Neumayer--Stat 113.84 201 PKiKP **PKiKP** **10 53 22.8 +0.8**
VNA1 Neumayer--Stat 113.84 201 Pdiff **Pdif** **10 49 33.3 +2.8**
VNA1 Neumayer--Stat 113.84 201 SKPdf **SKPdf** **10 56 48.9 -0.7**
LBNH Lisbon 113.96 349 Pdiff **Pdif** **10 49 31.9 0.0**
baz=14
LONY Lake Ozonia 114.00 352 Pdiff **Pdif** **10 49 31.9 -0.1**
baz=11
DUG Dugway, Tooele 114.04 23 Pdiff **Pdif** **10 49 33.9 +1.4**
baz=332
VNA3 Neumayer Olymp 114.24 200 P'P'df P'P'df 11 12 35.2 -0.3
VNA3 Neumayer Olymp 114.24 200 PKKPbc PKKPbc 11 04 03.9 -1.9
VNA3 Neumayer Olymp 114.24 200 PKiKP **PKiKP** **10 53 23.1 +0.3**
VNA3 Neumayer Olymp 114.24 200 Pdiff **Pdif** **10 49 36.7 +4.4**
VNA3 Neumayer Olymp 114.24 200 SKPdf **SKiKP** **10 56 50.6 +0.1**
SADO Sadowa 114.35 355 SKP 10 56 52.4
comp=Z,13nm,0.7s,baz=272,slow=4.7,SNR=3.6
SADO PKKPbc PKKPbc 11 04 07.5 +2.8
comp=Z,38nm,0.8s,baz=236,slow=2.2,SNR=16
GLMI Grayling 114.55 359 P PKPdf 10 53 24.5 +0.1
baz=0.8
GLMI Grayling 114.55 359 Pdiff **Pdif** **10 49 33.9 -0.6**
baz=0.8
TIN Tinemaha, Big 114.55 28 Pdiff **Pdif** **10 49 34.9 +0.1**
baz=326
R11A Troy Canyon, C 114.58 26 Pdiff **Pdif** **10 49 35.9 +0.9**
baz=329
NCB Newcomb 114.59 351 P PKPdf 10 53 24.5 0.0
baz=12
VOG Vail Oaks Go 114.63 30 Pdiff **Pdif** **10 49 35.3 +0.3**
baz=325
ECSD EROS Data Cent 114.83 9 P **Pdif** **10 49 36.2 +0.4**
baz=348
ECSD P PKPdf 10 53 25.0 +0.1
baz=348
ECSD EROS Data Cent 114.83 9 Pdiff **Pdif** **10 49 35.4 -0.4**
baz=348
H43A Windswept, Lux 114.87 2 P PKPdf 10 53 25.4 +0.4
baz=358
UNH University of 114.88 348 P PKPdf 10 53 26.4 +1.4
baz=15
J61A Chester 114.94 350 P PKPdf 10 53 25.8 +0.6
baz=13
J61A P PKPdf 10 53 25.8 +0.6
baz=13
I37B Waseca 114.95 6 P PKPdf 10 53 25.8 +0.7
baz=352
GRAC Grapevine Rang 114.98 28 Pdiff **Pdif** **10 49 36.6 0.0**
baz=327
ACCN Adirondack Com 115.08 351 P **PKPdf** **10 53 25.4 0.0**
baz=12
J59A Piesco 115.13 351 P **PKPdf** **10 53 26.3 +0.8**
baz=11
J59A P **PKPdf** **10 53 26.3 +0.8**
baz=11
CWC Cottonwood Cre 115.13 29 Pdiff **Pdif** **10 49 37.4 0.0**
baz=326
SMMC Simmler 115.16 31 Pdiff **Pdif** **10 49 37.9 +0.5**
baz=324
VES Vestal, Richgr 115.16 30 Pdiff **Pdif** **10 49 36.8 -0.6**
baz=325
I40A Norwalk 115.31 4 P **PKPdf** **10 53 26.4 +0.6**
baz=355
J58A Remsen 115.34 352 P **PKPdf** **10 53 26.6 +0.6**
baz=10
J58A P **PKPdf** **10 53 26.6 +0.6**
baz=10
I45A Fountain 115.34 1 P **PKPdf** **10 53 26.3 +0.4**
baz=359
I45A P **PKPdf** **10 53 26.3 +0.4**
baz=359
J57A Williamstown 115.38 352 P **PKPdf** **10 53 26.6 +0.6**
baz=9.7
J57A P **PKPdf** **10 53 26.6 +0.6**
baz=9.7
I49A Point Hope 115.39 358 P **PKPdf** **10 53 26.4 +0.4**
baz=2.7
I49A P **PKPdf** **10 53 26.4 +0.4**
baz=2.7
I42A Draeger Farm, 115.41 3 P **PKiKP** **10 53 25.8 -0.2**
baz=356
TPNV Topopah Spring 115.50 27 Pdiff **Pdif** **10 49 39.7 +0.6**
baz=328
K62A Royalston 115.55 349 P **PKPdf** **10 53 27.3 +1.0**
baz=14
K62A P **PKPdf** **10 53 27.3 +1.0**
baz=14
K31A O'Neill 115.57 11 P **PKPdf** **10 53 26.9 +0.5**
baz=346
HRV Adam Dziewonsk 115.58 349 **PKPdf** **10 53 26.9 +0.5**
HRV Adam Dziewonsk 115.58 349 PKIKP **PKPdf** **10 53 26.9 +0.5**
HRV Adam Dziewonsk 115.58 349 P **PKPdf** **10 53 27.3 +1.0**
baz=14
HRV Adam Dziewonsk 115.58 349 Pdiff **Pdif** **10 49 40.3 +1.2**
baz=14
ISA Isabella, Lake 115.59 29 Pdiff **Pdif** **10 49 39.0 -0.4**
baz=326
PKM Mcpherson Peak 115.59 31 Pdiff **Pdif** **10 49 39.5 -0.1**
baz=324
N23A Red Feather La 115.59 17 Pdiff **Pdif** **10 49 40.1 +0.5**
baz=339
O20A White River Ci 115.63 19 Pdiff **Pdif** **10 49 39.2 -0.4**
baz=336
FURC Furnace Creek, 115.64 28 PKiKP **PKPdf** **10 53 27.4 +0.8**
baz=327
BCX Boston College 115.67 348 **PKPdf** **10 53 27.1 +0.5**
MPMC Manual Prospec 115.71 28 PKiKP **PKPdf** **10 53 27.6 +0.5**
baz=327
J55A Hilton 115.72 354 P **PKPdf** **10 53 26.9 +0.3**
baz=7.9
J55A P **PKPdf** **10 53 26.9 +0.3**
baz=7.9
J54A Appleton 115.80 354 P **PKPdf** **10 53 27.3 +0.5**
baz=7.0
J54A P **PKPdf** **10 53 27.3 +0.5**
baz=7.0
L61B Northampton 115.83 350 P **PKPdf** **10 53 27.8 +0.9**
baz=13
L61B Northampton 115.83 350 PKiKP **PKPdf** **10 53 27.7 +0.9**
baz=13
HCNY Howe Caverns 115.86 351 P **PKPdf** **10 53 28.1 +1.2**
baz=11
ARVC Arvin 115.86 30 PKiKP **PKPdf** **10 53 27.8 +0.6**
baz=325
L64A Middleborough 115.99 348 P **PKPdf** **10 53 28.2 +1.0**
baz=15
L64A P **PKPdf** **10 53 28.2 +1.0**
baz=15
SBC Santa Barbara 116.00 31 PKiKP **PKPdf** **10 53 27.8 +0.4**
baz=324
LRMC Laurel Mtn Rad 116.10 29 PKiKP **PKPdf** **10 53 28.4 +0.6**
baz=326
K57A Scipio Center 116.11 353 P **PKPdf** **10 53 28.3 +0.9**
baz=9.2
J47A Sunmer 116.14 359 P **PKiKP** **10 53 27.3 -0.2**
baz=0.6
J47A P **PKiKP** **10 53 27.3 -0.2**
baz=0.6
JFWS Jewell Farm 116.31 4 P **PKiKP** **10 53 27.7 -0.1**
baz=355
JFWS Jewell Farm 116.31 4 PKiKP **PKPdf** **10 53 28.1 +0.3**
baz=355
OSI Osito Audit: C 116.33 30 PKiKP **PKiKP** **10 53 28.9 +0.7**
baz=325
K38A Parkersburg 116.37 6 P **PKiKP** **10 53 27.9 0.0**
baz=352
SHOC Shoshone, Teco 116.38 28 PKiKP **PKiKP** **10 53 29.1 +0.9**
baz=328
SCZ2 Santa Cruz Isl 116.40 31 PKiKP **PKiKP** **10 53 28.6 +0.3**
baz=324
L59A Walton 116.45 351 P **PKiKP** **10 53 28.5 +0.4**
baz=11
L59A P **PKiKP** **10 53 28.5 +0.4**
baz=11
EDW2 Edwards Air Fo 116.46 30 PKiKP **PKiKP** **10 53 29.0 +0.6**
baz=326
OGNE Ogallala 116.53 14 P **PKiKP** **10 53 29.1 +0.7**
baz=343
OGNE Ogallala 116.53 14 PKiKP **PKPdf** **10 53 27.9 -0.5**
baz=343
K50A Casco 116.55 358 P **PKiKP** **10 53 28.8 +0.6**
baz=2.9
K50A P **PKiKP** **10 53 28.8 +0.6**
baz=2.9
BINY Binghamton 116.57 352 P **PKiKP** **10 53 28.9 +0.6**
baz=9.8
BINY Binghamton 116.57 352 PKiKP **PKiKP** **10 53 28.7 +0.3**
baz=9.8
L34A Svendsen Farm, 116.60 9 P **PKPdf** **10 53 28.3 0.0**
baz=349
K43A Burlington 116.62 2 P **PKiKP** **10 53 29.1 +0.7**
baz=357
GSC Goldstone, Bar 116.64 28 PKiKP **PKiKP** **10 53 29.4 +0.6**
baz=327
WVNY West Valley, N 116.65 354 P **PKiKP** **10 53 28.7 +0.2**
baz=7.1
ISCO Idaho Springs 116.71 17 P **PKiKP** **10 53 29.9 +0.8**
baz=339
ISCO Idaho Springs 116.71 17 PKiKP **PKPdf** **10 53 28.9 -0.2**
baz=339
M63A Gales Ferry 116.74 349 P **PKiKP** **10 53 29.6 +1.0**
baz=14
M63A P **PKiKP** **10 53 29.6 +1.0**
baz=14
NPNY Mohonk Preserv 116.75 351 P **PKPdf** **10 53 28.1 -0.5**
baz=12
DECC Green Verdugo 116.81 30 PKiKP **PKiKP** **10 53 29.6 +0.6**
baz=325
L56A Greenwood 116.82 353 P **PKiKP** **10 53 29.0 +0.2**
baz=8.2
L56A P **PKiKP** **10 53 29.0 +0.2**
baz=8.2
BGNE Belgrade 116.86 11 P **PKiKP** **10 53 29.0 0.0**
baz=347
BGNE Belgrade 116.86 11 PKiKP **PKiKP** **10 53 28.9 0.0**
baz=347
RRX Edison Barstow 116.92 29 PKiKP **PKiKP** **10 53 30.0 +0.8**
baz=327
TUQ Turquoise Moun 116.92 28 PKiKP **PKiKP** **10 53 29.8 +0.4**
baz=328
AAM Ann Arbor 117.05 359 **PKiKP** **10 53 30.0 +0.8**
AAM Ann Arbor 117.05 359 PKIKP **PKiKP** **10 53 30.0 +0.8**
AAM Ann Arbor 117.05 359 P **PKiKP** **10 53 30.4 +1.1**
baz=1.9
AAM Ann Arbor 117.05 359 PKiKP **PKPdf** **10 53 29.2 0.0**
baz=1.9
ERPA Erie 117.06 355 P **PKiKP** **10 53 30.2 +1.0**
baz=5.7
ERPA Erie 117.06 355 PKiKP **PKPdf** **10 53 29.1 -0.1**
baz=5.7
SCIA State Center 117.06 7 P **PKiKP** **10 53 29.7 +0.4**
baz=352
SCIA State Center 117.06 7 PKiKP **PKPdf** **10 53 29.0 -0.3**
baz=352
SNCC San Nicolas Is 117.06 32 PKiKP **PKiKP** **10 53 29.8 +0.3**
baz=324
BRNY Black Rk. Fore 117.06 350 P **PKiKP** **10 53 29.9 +0.6**

	baz=12								
L40A	Anamosa	117.09	5	P		PKPdf	10 53 29.3	0.0	
	baz=354								
BFSC	Mount Baldy Ra	117.14	30	PKiKP		PKiKP	10 53 30.0	+0.2	
	baz=326								
L44A	Lake County Fo	117.16	2			PKPdf	10 53 29.2	-0.2	
L44A	Lake County Fo	117.16	2	P		PKiKP	10 53 30.2	+0.8	
	baz=357								
L44A	Lake County Fo	117.16	2	PKiKP		PKPdf	10 53 29.0	-0.4	
	baz=357								
KSPA	Keystone Colle	117.17	352	P		PKiKP	10 53 30.1	+0.6	
	baz=10								
HEC	Hector,Ludlow	117.25	28	PKiKP		PKiKP	10 53 30.6	+0.7	
	baz=327								
L42A	Oliver, Polo	117.25	4	P		PKiKP	10 53 29.7	+0.1	
	baz=356								
FMP	Fort Macarthur	117.28	31	PKiKP		PKiKP	10 53 30.3	+0.4	
	baz=325								
L46A	Eue Claire	117.36	1	P		PKiKP	10 53 30.5	+0.6	
	baz=359								
L46A				P		PKiKP	10 53 30.5	+0.6	
	baz=359								
L48A	N Adams	117.42	359	P		PKiKP	10 53 30.2	+0.2	
	baz=1.0								
L48A				P		PKiKP	10 53 30.2	+0.2	
	baz=1.0								
PAL	Palisades	117.44	350	P		PKiKP	10 53 30.8	+0.8	
	baz=12								
PAL	Palisades	117.44	350	PKiKP		PKiKP	10 53 30.5	+0.5	
	baz=12								
N62A	Caumsett State	117.44	350	P		PKiKP	10 53 30.8	+0.8	
	baz=13								
N62A				P		PKiKP	10 53 30.8	+0.8	
	baz=13								
BBRC	Big Bear Solar	117.46	29	PKiKP		PKiKP	10 53 30.6	+0.1	
	baz=327								
CIS	Catalina Islan	117.47	31	PKiKP		PKiKP	10 53 30.5	+0.1	
	baz=325								
ODNJ	Ogdensburg	117.47	351	P		PKiKP	10 53 30.8	+0.8	
	baz=11								
ALLY	Alegheny Colle	117.53	356	P		PKiKP	10 53 30.9	+0.7	
	baz=5.5								
M57A	Sunshine Farm,	117.56	353	P		PKiKP	10 53 31.1	+0.9	
	baz=8.7								
M57A				P		PKiKP	10 53 31.1	+0.9	
	baz=8.7								
FOR	Fordham	117.58	350	P		PKiKP	10 53 31.5	+1.2	
	baz=12								
GMRC	Granite Mounta	117.58	28	PKiKP		PKiKP	10 53 31.6	+1.0	
	baz=328								
M55A	Ridgway	117.60	354	P		PKiKP	10 53 30.7	+0.3	
	baz=7.0								
M55A				P		PKiKP	10 53 30.7	+0.3	
	baz=7.0								
Q24A	Divide	117.61	17	PKiKP		PKPdf	10 53 30.1	-0.7	
	baz=339								
N33B	J Bar K, Exete	117.63	10	P		PKPdf	10 53 30.1	-0.3	
	baz=347								
M52A	Chesterland	117.72	357	P		PKiKP	10 53 30.6	+0.1	
	baz=4.3								
M52A				P		PKiKP	10 53 30.6	+0.1	
	baz=4.3								
M53A	WI Miller and	117.78	356	PKiKP		PKPdf	10 53 30.2	-0.5	
	baz=5.0								
N35A	Tabor	117.79	9	P		PKiKP	10 53 30.8	0.0	
	baz=349								
BRNJ	Basking Ridge	117.86	351	P		PKiKP	10 53 31.6	+0.8	
	baz=11								
MURC	Murrieta	117.89	30	PKiKP		PKiKP	10 53 31.8	+0.7	
	baz=326								
M50A	Fremont	117.93	358	P		PKiKP	10 53 31.5	+0.5	
	baz=2.5								
M50A				P		PKiKP	10 53 31.5	+0.5	
	baz=2.5								
PSDB	Penn State Uni	117.94	354	P		PKiKP	10 53 31.6	+0.6	
	baz=7.0								
M44A	Midewin, Midew	117.94	2	P		PKiKP	10 53 31.3	+0.4	
	baz=357								
N58A	Sunbury	118.00	353	P		PKiKP	10 53 31.6	+0.5	
	baz=9.2								
N58A				P		PKiKP	10 53 31.6	+0.5	
	baz=9.2								
NEE2	Needles Airpor	118.05	27	PKiKP		PKiKP	10 53 31.6	+0.2	
	baz=329								
BELC	Belle Mtn. Jos	118.10	29	PKiKP		PKiKP	10 53 32.2	+0.5	
	baz=328								
N38A	Joes South For	118.16	7	P		PKPdf	10 53 31.3	-0.1	
	baz=352								
PANJ	Princeton	118.18	351	P		PKiKP	10 53 31.9	+0.5	
	baz=11								
MVCO	Mesa Verde	118.21	21	PKiKP		PKiKP	10 53 32.0	+0.1	
	baz=336								
PFO	Pinyon Flats O	118.21	29	PKKPbc		PKKPbc	11 03 52.4	+1.3	
	comp=Z,24nm,1.0s,baz=139,slow=5.3,SNR=11								
PFO	Pinyon Flats O	118.21	29			PKiKP	10 53 33.0	+1.1	
PFO	Pinyon Flats O	118.21	29	⇑ i/PKIKP		PKPdf	10 53 31.2	-0.7	
PFO				MLR		MLR			
	comp=Z,11µm,23.0s								
PFO	Pinyon Flats O	118.21	29	PKiKP		PKiKP	10 53 32.7	+0.7	
	baz=327								
TPFO	Pinon Flats	118.22	29	PKiKP		PKiKP	10 53 32.3	+0.4	
	baz=327								
KSCO	Kaye Shedlock'	118.23	15	P		PKiKP	10 53 32.0	+0.1	
	baz=342								
KSCO	Kaye Shedlock'	118.23	15	PKiKP		PKPdf	10 53 31.3	-0.5	
	baz=342								
S22A	4UR Ranch, Cre	118.25	19	PKiKP		PKiKP	10 53 32.1	0.0	
	baz=337								
SSPA	Standing Stone	118.33	353			PKPdf	10 53 31.5	-0.2	
SSPA	Standing Stone	118.33	353	P		PKiKP	10 53 32.4	+0.6	
	baz=8.0								
SSPA	Standing Stone	118.33	353	PKiKP		PKiKP	10 53 32.0	+0.3	
	baz=8.0								
IRM	Iron Mountain	118.34	28	PKiKP		PKiKP	10 53 33.1	+1.1	
	baz=328								
N51A	Ashland	118.39	357	P		PKiKP	10 53 32.2	+0.3	
	baz=3.2								
N51A				P		PKiKP	10 53 32.2	+0.3	
	baz=3.2								
N53A	Lisbon	118.42	356	P		PKiKP	10 53 32.5	+0.6	
	baz=4.9								
N53A				P		PKiKP	10 53 32.5	+0.6	
	baz=4.9								
N49A	Columbus Grove	118.44	359	P		PKiKP	10 53 32.1	+0.1	
	baz=1.3								
N49A				P		PKiKP	10 53 32.1	+0.1	
	baz=1.3								
TUPA	Temple Univers	118.46	351	P		PKiKP	10 53 32.3	+0.3	
	baz=11								
N41A	Harden Midland	118.46	5	P		PKiKP	10 53 32.3	+0.3	
	baz=354								
N47A	Urbana	118.49	0	P		PKPdf	10 53 31.9	-0.1	
	baz=360								
N47A				P		PKPdf	10 53 31.9	-0.1	
	baz=360								
109C	Camp Elliot, M	118.52	30	PKiKP		PKiKP	10 53 33.0	+0.7	
	baz=326								
BC3	Big Chuckawall	118.63	28	PKiKP		PKiKP	10 53 33.5	+0.7	
	baz=328								
PDMCI	Parker Dam,Lak	118.65	27	PKiKP		PKiKP	10 53 33.3	+0.7	
	baz=329								
SDCO	Great Sand Dun	118.65	18	P		PKiKP	10 53 33.2	+0.4	
	baz=339								
SDCO	Great Sand Dun	118.65	18	PKiKP		PKPdf	10 53 32.5	-0.4	
	baz=339								
UPAO	U. Pittsburgh	118.68	355	P		PKiKP	10 53 33.1	+0.6	
	baz=5.7								
WUAZ	Wupatki	118.70	24	PKiKP		PKPdf	10 53 32.6	-0.2	
	baz=332								
HDIL	Hopedale	118.71	3	P		PKPdf	10 53 32.2	-0.3	
	baz=356								
HDIL	Hopedale	118.71	3	PKiKP		PKPdf	10 53 31.8	-0.7	
	baz=356								
PSUB	Penn St. - Bra	118.73	351	P		PKiKP	10 53 32.6	+0.1	
	baz=11								
MONP2	Monument Peak	118.83	30	PKiKP		PKiKP	10 53 34.2	+1.0	
	baz=327								
GEDE	Greenville	118.87	351	P		PKiKP	10 53 33.0	+0.2	
	baz=10								
SFIN	Lafayette	118.98	1	P		PKiKP	10 53 33.1	+0.1	
	baz=358								
SFIN	Lafayette	118.98	1	PKiKP		PKPdf	10 53 32.9	-0.1	
	baz=358								
O53A	New Philadelph	119.00	356	PKiKP		PKPdf	10 53 32.7	-0.3	
	baz=4.5								
O54A	Avella	119.01	356	P		PKiKP	10 53 33.9	+0.8	
	baz=5.4								
O54A				P		PKiKP	10 53 33.9	+0.8	
	baz=5.4								
CBKS	Cedar Bluff	119.07	13	P		PKiKP	10 53 33.4	0.0	
	baz=345								
CBKS	Cedar Bluff	119.07	13	PKiKP		PKPdf	10 53 32.9	-0.4	
	baz=345								
SWSC	Sam W. Stewart	119.07	29	PKiKP		PKiKP	10 53 34.1	+0.7	
	baz=327								
ACSO	Alum Creek Sta	119.10	358	P		PKiKP	10 53 33.5	+0.2	
	baz=2.6								
ACSO	Alum Creek Sta	119.10	358	PKiKP		PKPdf	10 53 32.9	-0.3	
	baz=2.6								
O48B	Farmland	119.12	360	P		PKPdf	10 53 33.1	-0.1	
	baz=0.3								
O48B	Farmland	119.12	360	PKiKP		PKPdf	10 53 32.9	-0.4	
	baz=0.3								
O44A	Mansfield	119.16	3	P		PKiKP	10 53 33.5	+0.1	
	baz=357								
O52A	Adamsville	119.16	357	P		PKiKP	10 53 33.5	+0.1	
O52A						P	PKiKP	10 53 33.5	+0.1
	baz=3.8								
O49A	Covington	119.18	359	P		PKiKP	10 53 33.4	0.0	
	baz=1.2								
O49A				P		PKiKP	10 53 33.4	0.0	
	baz=1.2								
IKP	In-Ko-Pah, Jac	119.18	30	PKiKP		PKiKP	10 53 34.5	+0.7	
	baz=327								
P38A	Dawn	119.28	7	P		PKiKP	10 53 33.7	+0.1	
	baz=351								
KSU1	Kansas State U	119.36	10	P		PKiKP	10 53 34.4	+0.5	
	baz=348								
KSU1	Kansas State U	119.36	10	PKiKP		PKPdf	10 53 33.4	-0.4	
	baz=348								
GLA	Glamis	119.42	28	PKiKP		PKiKP	10 53 35.2	+1.0	
	baz=328								
SDMD	Soldier's Deli	119.42	352	P		PKiKP	10 53 34.8	+0.9	
	baz=9.2								
MCWV	Mont Chateau	119.49	355	P		PKiKP	10 53 35.0	+1.0	
	baz=6.0								
MCWV	Mont Chateau	119.49	355	PKiKP		PKiKP	10 53 34.1	0.0	
	baz=6.0								
P57A	Homestead Farm	119.49	353	P		PKiKP	10 53 34.5	+0.5	
	baz=7.9								
P57A				P		PKiKP	10 53 34.5	+0.5	
	baz=7.9								
T25A	Trinidad	119.53	17	PKiKP		PKPdf	10 53 33.9	-0.5	
	baz=340								
P40A	Paris	119.53	6	P		PKiKP	10 53 34.2	+0.1	
	baz=353								
P43A	Skaggs, Pawnee	119.61	4	P		PKiKP	10 53 34.6	+0.3	
	baz=356								
R32A	Long Quarter,	119.65	12	P		PKiKP	10 53 34.5	0.0	
	baz=346								
P52A	Corning	119.66	357	PKiKP		PKPdf	10 53 33.4	-0.9	
	baz=3.5								
W18A	Petrified Fore	119.67	23	PKiKP		PKiKP	10 53 35.2	+0.4	
	baz=334								
PPT	Papeete	119.72	99	PKP		PKiKP	10 53 36.6	+1.7	
	comp=Z,261nm,1.0s,baz=70,slow=4.2,SNR=15								
PPT				SKP			10 57 03.5		
	comp=Z,157nm,1.0s,baz=43,slow=9.8,SNR=5.2								
PPT2	Papeete2	119.72	99	*e*P		PKPdf	10 53 35.0	0.0	
	comp=Z,260nm,1.1s								
PPT2	Papeete2	119.72	99	*e*PP		PP	10 54 59.2	-0.1	
	comp=Z,9µm,20.2s								
PPT2				*e*SKPdf		SKPdf	10 57 01.5	-1.1	
	comp=Z,192nm,1.1s								
PPT2	Papeete2	119.72	99	*e*PS		PS	11 04 50.5	+0.7	
	comp=Z,20µm,18.2s								
PPT2				*e*SS		SS	11 11 17.4	-0.6	
	comp=Z,13µm,23.0s								
PPT2	Papeete2	119.72	99	*e*LR		LR	11 30 22.4		
	comp=Z,87µm,33.0s								
PPT2				*e*LR		LR	11 30 22.7		
	comp=Z,60µm,39.0s								
P46A	Rosedale	119.73	2	P		PKiKP	10 53 34.6	+0.1	
	baz=358								
PPTF	Pamatai, Papee	119.73	99			PKiKP	10 53 36.0	+0.9	
P53A	Whipple	119.77	356	P		PKiKP	10 53 34.9	+0.3	
	baz=4.3								
P53A				P		PKiKP	10 53 34.9	+0.3	
	baz=4.3								
P49A	Miami Univ. Ec	119.83	359	P		PKPdf	10 53 34.3	-0.3	
	baz=0.8								
P49A	Miami Univ. Ec	119.83	359	PKiKP		PKPdf	10 53 33.5	-1.1	
	baz=0.8								
P51A	Williamsport	119.85	358	P		PKPdf	10 53 34.4	-0.3	
	baz=2.5								
P51A				P		PKPdf	10 53 34.4	-0.3	
	baz=2.5								
P48A	Milroy	119.91	360	P		PKPdf	10 53 34.8	0.0	
	baz=360								
P48A				P		PKPdf	10 53 34.8	0.0	
	baz=360								
TIAR	Tiarei	119.93	99	*e*P		PKiKP	10 53 35.8	+0.4	
	comp=Z,31nm,0.9s								
TIAR				*e*SKPdf		SKPdf	10 57 01.5	-1.5	
	comp=Z,15nm,1.0s								
Q56A	Snyder Ridge,	120.04	354	P		PKiKP	10 53 35.9	+0.8	
	baz=6.7								
Q56A				P		PKiKP	10 53 35.9	+0.8	
	baz=6.7								
TVO	Taravao	120.07	99	*e*P		PKiKP	10 53 36.0	+0.3	
	comp=Z,113nm,1.1s								
TVO				*e*SKPdf		SKiKP	10 57 04.4	+0.8	
	comp=Z,58nm,1.0s								
Q54A	Coxs Mills	120.23	356	P		PKiKP	10 53 35.8	+0.3	
	baz=5.0								
Q54A				P		PKiKP	10 53 35.8	+0.3	
	baz=5.0								
R61A	Willards	120.28	351	P		PKPdf	10 53 35.4	-0.1	
	baz=11								
R61A				P		PKPdf	10 53 35.4	-0.1	
	baz=11								
Q51A	Peebles	120.31	358	P		PKPdf	10 53 35.3	-0.3	
	baz=2.2								
Q51A				P		PKPdf	10 53 35.3	-0.3	
	baz=2.2								
Q52A	Bidwell	120.34	357	P		PKiKP	10 53 35.9	+0.2	
	baz=3.4								
Q52A				P		PKiKP	10 53 35.9	+0.2	
	baz=3.4								
Q44A	Meyer Farm, Va	120.38	3	P		PKPdf	10 53 35.7	0.0	
	baz=356								
SLM	Saint Louis	120.57	4	P		PKPdf	10 53 36.1	0.0	
	baz=355								
OLIL	Olney	120.59	2	P		PKiKP	10 53 36.6	+0.4	
	baz=357								
PMOR	Pomariorio Ree	120.62	95	*e*P		PKiKP	10 53 38.0	+1.3	
	comp=Z,585nm,1.1s								
PMOR				*e*SKPdf		SKPdf	10 57 04.3	0.0	
	comp=Z,246nm,1.2s								
CBN	Corbin Frederi	120.68	353	P		PKiKP	10 53 37.2	+0.8	
	baz=8.7								
CBN	Corbin Frederi	120.68	353	PKiKP		PKiKP	10 53 36.9	+0.5	
	baz=8.7								
R40A	Eddies Statio	120.73	6	P		PKPdf	10 53 36.4	0.0	
	baz=353								
R55A	Marlinton	120.88	355	P		PKiKP	10 53 37.9	+1.0	
	baz=5.8								
R55A				P		PKiKP	10 53 37.9	+1.0	
	baz=5.8								
VAH	Vaihoa	120.93	96	*e*P		PKiKP	10 53 37.9	+0.6	
	comp=Z,294nm,1.0s								
ANMO	Albuquerque	120.94	20	SKP			10 57 05.6		
	comp=Z,37nm,0.9s,baz=326,slow=1.0,SNR=6.0								
ANMO				PKKPbc		PKKPbc	11 03 41.3	0.0	
	comp=Z,4.5nm,0.9s,baz=162,slow=6.5,SNR=5.7								
ANMO				SKKPbc		SKKPbc	11 07 21.1	+1.3	
	comp=Z,3.6nm,1.1s,baz=165,slow=9.0,SNR=3.6								
ANMO	Albuquerque	120.94	20			PKiKP	10 53 37.7	+0.4	
ANMO	Albuquerque	120.94	20	PKIKP		PKiKP	10 53 37.7	+0.4	
ANMO	Albuquerque	120.94	20	P		PKiKP	10 53 38.9	+1.6	
	baz=337								
ANMO	Albuquerque	120.94	20	PKiKP		PKiKP	10 53 37.5	+0.1	
	baz=337								
R53A	Hurricane	120.95	357	P		PKiKP	10 53 37.1	+0.2	
	baz=3.8								
R53A				P		PKiKP	10 53 37.1	+0.2	
	baz=3.8								
S61A	Accomac	120.97	351	P		PKiKP	10 53 37.9	+0.9	
	baz=11								
S61A				P		PKiKP	10 53 37.9	+0.9	
	baz=11								
R58B	Mineral	120.98	353	P		PKiKP	10 53 37.7	+0.7	
	baz=8.2								
R58B				P		PKiKP	10 53 37.7	+0.7	
	baz=8.2								
CCM	Cathedral Cave	121.06	5			PKPdf	10 53 36.5	-0.6	
CCM	Cathedral Cave	121.06	5	PKiKP		PKPdf	10 53 36.5	-0.6	
CCM	Cathedral Cave	121.06	5	P		PKPdf	10 53 36.9	-0.2	
	baz=354								
CCM	Cathedral Cave	121.06	5	PKiKP		PKPdf	10 53 36.3	-0.8	
	baz=354								
R49A	Shelbyville	121.08	360	P		PKiKP	10 53 37.3	+0.1	
	baz=0.3								
R49A				P		PKiKP	10 53 37.3	+0.1	
	baz=0.3								
R50A	Paris	121.08	359	P		PKPdf	10 53 37.1	0.0	
	baz=1.2								
R50A				P		PKPdf	10 53 37.1	0.0	
	baz=1.2								
TBI	Tubuai	121.10	105	*e*P		PKiKP	10 53 38.0	+0.5	
	comp=Z,489nm,1.0s								
TBI	Tubuai	121.10	105	*e*PP		PP	10 55 08.0	-0.6	
TBI	Tubuai	121.10	105	*e*PS		PS	11 05 00.7	-1.1	
	comp=Z,15µm,20.2s								
TBI	Tubuai	121.10	105	*e*LR		LR	11 30 59.0		
	comp=Z,573µm,36.0s								
TBI				*e*LR		LR	11 30 59.8		
	comp=Z,65µm,36.0s								
MEH	Mehetia	121.19	99	*e*P		PKPdf	10 53 37.5	-0.2	
	comp=Z,95nm,1.1s								
FVM	French Village	121.20	5	P		PKPdf	10 53 37.4	0.0	
	baz=355								
S39A	Bolivar	121.21	7	P		PKiKP	10 53 37.6	+0.1	
	baz=351								
214A	Organ Pipe Nat	121.23	27	PKiKP		PKiKP	10 53 38.4	+0.7	
	baz=330								
S57A	Dark Hollow, R	121.29	354	P		PKiKP	10 53 38.1	+0.5	
	baz=7.0								
S57A				P		PKiKP	10 53 38.1	+0.5	
	baz=7.0								
S54A	Dingess, Beckl	121.44	356	P		PKiKP	10 53 38.3	+0.3	
	baz=4.5								
S54A				P		PKiKP	10 53 38.3	+0.3	
	baz=4.5								
T35B	Sooner Cattle	121.51	10	P		PKiKP	10 53 38.6	+0.5	
	baz=348								
U32A	Winter Ranch,	121.56	13	P		PKiKP	10 53 38.6	+0.3	
	baz=345								
S44A	Carbondale	121.57	4	P		PKiKP	10 53 38.9	+0.7	
	baz=356								
Y22D	IRIS PASSCAL I	121.59	21	P		PKiKP	10 53 40.6	+2.1	
	baz=336								
Y22D	IRIS PASSCAL I	121.59	21	PKiKP		PKiKP	10 53 38.9	+0.3	
	baz=336								
T60A	Surry	121.65	352	P		PKiKP	10 53 38.7	+0.4	
	baz=9.5								
T60A				P		PKiKP	10 53 38.7	+0.4	
	baz=9.5								
Y22A	Socorro	121.70	21	P		PKiKP	10 53 40.4	+1.6	
	baz=336								
S51A	Beattyville	121.70	358	P		PKiKP	10 53 38.7	+0.2	
	baz=2.0								
S51A				P		PKiKP	10 53 38.7	+0.2	
	baz=2.0								
TUC	Tucson	121.76	25			PKiKP	10 53 39.8	+1.0	
TUC	Tucson	121.76	25	PKiKP		PKiKP	10 53 39.8	+1.0	
TUC	Tucson	121.76	25	PKiKP		PKiKP	10 53 39.5	+0.6	
	baz=332								
T59A	Double "B" Far	121.92	353	P		PKiKP	10 53 39.6	+0.8	
	baz=8.6								
T59A				P		PKiKP	10 53 39.6	+0.8	
	baz=8.6								
BLA	Blacksburg	121.96	355	P		PKiKP	10 53 39.2	+0.1	
	baz=5.5								
BLA	Blacksburg	121.96	355	PKiKP		PKPdf	10 53 38.6	-0.3	
	baz=5.5								
T57A	Hurt	122.08	354	P		PKiKP	10 53 39.5	+0.3	
	baz=6.8								
T57A				P		PKiKP	10 53 39.5	+0.3	
	baz=6.8								
T45B	Paducah	122.27	3	P		PKiKP	10 53 40.0	+0.5	
	baz=356								
U38A	Gravette	122.31	9	P		PKPdf	10 53 39.3	-0.2	
	baz=350								
T50A	Nancy	122.35	359	P		PKiKP	10 53 39.7	0.0	
	baz=0.6								
T50A				P		PKiKP	10 53 39.7	0.0	
	baz=0.6								
T47A	Sharon Grove	122.36	2	P		PKPdf	10 53 39.4	-0.2	
	baz=358								
AMTX	Amarillo	122.38	16	P		PKPdf	10 53 39.8	-0.1	
	baz=342								
AMTX	Amarillo	122.38	16	PKiKP		PKPdf	10 53 39.3	-0.5	
	baz=342								
HHAR	Hobbs	122.52	8	P		PKPdf	10 53 39.8	-0.2	
	baz=351								
U59A	Littleton	122.56	353	P		PKPdf	10 53 39.9	-0.1	
	baz=8.4								
U59A				P		PKPdf	10 53 39.9	-0.1	
	baz=8.4								
TUL1	Leonard	122.61	10	P		PKPdf	10 53 40.2	+0.1	
	baz=348								
TUL1	Leonard	122.61	10	PKiKP		PKPdf	10 53 39.8	-0.4	
	baz=348								
121A	Cookes Peak, D	122.69	22	P		PKiKP	10 53 41.7	+0.9	
	baz=335								
121A	Cookes Peak, D	122.69	22	PKiKP		PKiKP	10 53 41.1	+0.3	
	baz=335								
U54A	Nelsons Funny	122.74	357	P		PKiKP	10 53 40.8	+0.2	
	baz=4.0								
U54A				P		PKiKP	10 53 40.8	+0.2	
	baz=4.0								
TZTN	Tazewell	122.80	358	P		PKiKP	10 53 41.2	+0.5	
	baz=2.1								
TZTN	Tazewell	122.80	358	PKiKP		PKPdf	10 53 40.5	0.0	
	baz=2.1								
U56A	King	122.82	355	P		PKiKP	10 53 41.2	+0.5	
	baz=5.6								
U56A				P		PKiKP	10 53 41.2	+0.5	
	baz=5.6								
U49A	Red Boiling Sp	122.85	0	P		PKiKP	10 53 40.7	0.0	
	baz=360								
MSTX	Muleshoe	122.95	17	P		PKPdf	10 53 41.0	0.0	
	baz=341								
MSTX	Muleshoe	122.95	17	PKiKP		PKPdf	10 53 40.9	-0.1	
	baz=341								
LCAR	Lake Charles	123.04	6	P		PKPdf	10 53 40.6	-0.3	
	baz=354								
WVT	Waverly	123.19	2	P		PKiKP	10 53 41.5	+0.1	
	baz=357								
WVT	Waverly	123.19	2	PKiKP		PKPdf	10 53 41.0	-0.2	
	baz=357								
WMOK	Wichita Mounta	123.19	13	P		PKiKP	10 53 41.6	+0.1	
	baz=345								
WMOK	Wichita Mounta	123.19	13	PKiKP		PKPdf	10 53 41.0	-0.3	
	baz=345								
V58A	Windy Hill, Pi	123.25	354	P		PKiKP	10 53 41.5	0.0	
	baz=7.0								
V58A				P		PKiKP	10 53

W45A	Hickory Valley baz=356	124.10	4	P		PKPdf	10 53 42.6	-0.3		
W50A	Signal Mountai baz=0.1	124.17	360	P		PKPdf	10 53 43.2	+0.1		
W52A	Murphy baz=1.7	124.25	358	P		PKiKP	10 53 43.5	-0.1		
MNTX	Cornudas Mount baz=337	124.28	21	P		PKiKP	10 53 43.7	0.0		
MNTX	Cornudas Mount baz=337	124.28	21	PKiKP		PKiKP	10 53 43.8	0.0		
MIAR	Mount Ida baz=351	124.28	8	P		PKiKP	10 53 43.6	0.0		
MIAR	Mount Ida baz=351	124.28	8	PKiKP		PKiKP	10 53 43.7	0.0		
CASEE	Lake Jocassee baz=2.8	124.32	357	P		PKPdf	10 53 43.5	0.0		
PAULI	Pauline baz=4.1	124.44	356	P		PKiKP	10 53 44.0	+0.1		
X58A	Rowland baz=6.9	124.50	354	P		PKiKP	10 53 43.9	-0.1		
X58A	baz=6.9			P		PKiKP	10 53 43.9	-0.1		
BIRD	Birdtown, Kers baz=5.6	124.52	355	P		PKPdf	10 53 43.8	0.0		
OXF	Oxford baz=356	124.72	4	P		PKPdf	10 53 43.7	-0.5		
OXF	Oxford baz=356	124.72	4	PKiKP		PKPdf	10 53 43.7	-0.5		
X51A	Calhoun baz=0.6	124.80	359	P		PKPdf	10 53 44.5	+0.2		
X51A	baz=0.6			P		PKPdf	10 53 44.5	+0.2		
Z35A	Perchaven, San baz=347	124.87	12	P		PKPdf	10 53 44.3	-0.2		
X48A	Hartselle baz=358	124.89	2	P		PKPdf	10 53 44.2	-0.3		
Y60A	Bolivia baz=8.2	124.92	353	P		PKiKP	10 53 44.8	-0.1		
Y60A	baz=8.2			P		PKiKP	10 53 44.8	-0.1		
Y59A	Loris baz=7.5	125.01	353	P		PKiKP	10 53 44.9	-0.2		
Y59A	baz=7.5			P		PKiKP	10 53 44.9	-0.2		
ABTX	Abilene, Hawle baz=344	125.03	15	P		PKPdf	10 53 45.0	+0.1		
ABTX	Abilene, Hawle baz=344	125.03	15	PKiKP		PKPdf	10 53 45.0	+0.1		
HODGE	Hodges baz=3.6	125.05	357	P		PKPdf	10 53 44.9	+0.1		
CCAR	Cane Creek baz=353	125.11	6	P		PKiKP	10 53 45.2	-0.1		
Y58A	Scranton baz=6.6	125.18	354	P		PKiKP	10 53 45.3	-0.1		
Y58A	baz=6.6			P		PKiKP	10 53 45.3	-0.1		
Z38A	Mt. Pleasant baz=349	125.34	10	P		PKiKP	10 53 45.6	-0.2		
Y45A	Yeager Farm, C baz=355	125.36	4	P		PKiKP	10 53 45.6	-0.2		
Y52A	Lilburn baz=1.6	125.48	359	P		PKPdf	10 53 45.9	+0.2		
Y52A	baz=1.6			P		PKPdf	10 53 45.9	+0.2		
Y49A	Blount Mountai baz=359	125.50	1	P		PKPdf	10 53 45.0	-0.7		
HAW	Hawthorne Fire baz=4.4	125.88	356	P		PKPdf	10 53 46.4	0.0		
GOGA	Godfrey baz=2.2	125.92	358	P		PKPdf	10 53 46.6	+0.1		
GOGA	Godfrey baz=2.2	125.92	358	PKiKP		PKPdf	10 53 46.6	+0.1		
NHSC	New Hope baz=6.0	126.02	355	PKiKP		PKiKP	10 53 46.9	-0.2		
TAOE	Nuku Hiva Isla comp=Z,816nm,0.9s	126.03	86	*e*P		PKPdf	10 53 46.9	-0.3		
TAOE	Nuku Hiva Isla comp=Z,5µm,26.1s	126.03	86	*e*PP		PP	10 55 41.5	-0.4		
TAOE	Nuku Hiva Isla comp=Z,19µm,27.3s	126.03	86	*e*SS		SS	11 12 37.4	-0.6		
TAOE	Nuku Hiva Isla comp=Z,46µm,38.4s	126.03	86	*e*LR		LR	11 33 18.9			
Z51A	Franklin baz=0.3	126.04	360	P		PKPdf	10 53 46.9	+0.2		
Z47A	Carrollton baz=357	126.10	3	P		PKPdf	10 53 46.7	-0.1		
WHTX	Lake Whitney, baz=346	126.12	13	P		PKPdf	10 53 46.9	0.0		
WHTX	Lake Whitney, baz=346	126.12	13	PKiKP		PKPdf	10 53 46.9	0.0		
LRAL	Lakeview Retre baz=358	126.31	2	P		PKPdf	10 53 47.0	-0.3		
LRAL	Lakeview Retre baz=358	126.31	2	PKiKP		PKPdf	10 53 47.0	-0.3		
143A	Socs Landing, baz=353	126.35	6	P		PKiKP	10 53 47.6	-0.2		
237A	Washetta, Mont baz=348	126.43	11	P		PKPdf	10 53 47.6	+0.1		
146A	Union baz=356	126.61	4	P		PKiKP	10 53 48.4	+0.1		
152A	Waverly Hall baz=0.8	126.69	359	P		PKiKP	10 53 48.3	-0.2		
154A	Montrose baz=2.7	126.70	358	P		PKiKP	10 53 48.5	0.0		
NATX	Nacogdoches baz=349	126.86	10	P		PKiKP	10 53 48.8	0.0		
NATX	Nacogdoches baz=349	126.86	10	PKiKP		PKPdf	10 53 48.6	+0.2		
VBMS	Vicksburg baz=354	126.92	5	P		PKiKP	10 53 48.9	0.0		
VBMS	Vicksburg baz=354	126.92	5	PKiKP		PKiKP	10 53 49.0	0.0		
TX31	Lajitas Ar. Si baz=339	127.02	20	P		PKPdf	10 53 48.5	-0.3		
TXAR	Lajitas Array comp=Z,182nm,0.7s,baz=211,slow=0.3,SNR=148	127.02	20	PKP		PKiKP	10 53 50.3	+0.9		
TXAR	comp=Z,54nm,0.8s,baz=11,slow=0.6,SNR=2.8			pPKP		pPKPdf	10 54 15.9	+2.5		
TXAR	comp=Z,2.1nm,0.8s,baz=171,slow=6.6,SNR=4.0			PKKPab		PKKPdf	11 03 25.1	-37		
TXAR	comp=Z,2.8nm,0.9s,baz=140,slow=4.2,SNR=4.7			PKKP			11 04 02.8			
TXAR	comp=Z,18nm,1.0s,baz=168,slow=4.4,SNR=9.9			SKKPbc		SKKPbc	11 07 00.6	+1.1		
JCT	Junction City baz=343	127.04	16	P		PKPdf	10 53 49.0	+0.2		
JCT	Junction City baz=343	127.04	16	PKiKP		PKiKP	10 53 49.3	0.0		
435B	Jarrell baz=346	127.27	13	P		PKPdf	10 53 49.2	+0.1		
435B	Jarrell baz=346	127.27	13	PKiKP		PKPdf	10 53 49.3	+0.1		
255A	Hazlehurst baz=3.5	127.35	357	P		PKiKP	10 53 49.6	-0.2		
250A	Grady baz=359	127.37	1	P		PKiKP	10 53 49.8	-0.1		
342B	Flagon Creek P baz=352	127.56	7	P		PKiKP	10 53 50.4	+0.1		
344A	Westbrook Farm baz=354	127.66	6	P		PKiKP	10 53 50.2	-0.2		
346A	Big Creek Wild baz=355	127.83	4	P		PKPdf	10 53 50.4	+0.2		
352A	Blakely baz=0.6	127.87	359	P		PKiKP	10 53 50.9	0.0		
TIGA	Tifton baz=2.2	127.89	358	P		PKiKP	10 53 50.8	-0.1		
TIGA	Tifton baz=2.2	127.89	358	PKiKP		PKiKP	10 53 50.8	-0.1		
441A	DeRidder baz=351	128.07	8	P		PKiKP	10 53 51.6	+0.4		
BRAL	Brewton baz=358	128.16	2	P		PKiKP	10 53 51.3	-0.1		
BRAL	Brewton baz=358	128.16	2	PKiKP		PKiKP	10 53 51.4	0.0		
HKT	Hockley	128.42	12			PKiKP	10 53 51.9	0.0		
HKT	Hockley	128.42	12	c *i*	PKiKP	PKPdf	10 53 50.6	-0.7		
HKT	Hockley baz=348	128.42	12	P		PKiKP	10 53 51.9	0.0		
456A	Hilliard baz=4.0	128.52	356	P		PKiKP	10 53 52.2	0.0		
451A	Vernon baz=360	128.74	0	P		PKiKP	10 53 52.7	+0.1		
545B	Wilberts Farm, baz=354	129.07	6	P		PKiKP	10 53 53.4	+0.1		
735A	Kenedy baz=345	129.07	14	P		PKiKP	10 53 53.5	+0.1		
833A	Chaparral WMA, baz=343	129.20	16	P		PKiKP	10 53 53.3	-0.2		
833A	Chaparral WMA, baz=343	129.20	16	PKiKP		PKiKP	10 53 53.4	-0.2		
RCBR	Riachuelo	129.73	280			PKPdf	10 53 52.0	-2.3		
RCBR	Riachuelo	129.73	280	PKiKP		PKPdf	10 53 52.0	-2.3		
656A	Willston baz=3.5	129.90	357	P		PKPdf	10 53 54.4	+0.2		
KVTX	Kingsville baz=345	130.31	15	P		PKiKP	10 53 56.3	+0.5		
HOPE	Hope Point	130.37	215			PKiKP	10 53 54.6	-0.4		
HOPE	Hope Point	130.37	215	PKiKP		PKiKP	10 53 54.6	-0.4		
DWPF	Disney Wildern baz=4.9	131.08	355	P		PKiKP	10 53 57.2	-0.2		
DWPF	Disney Wildern baz=4.9	131.08	355	PKiKP		PKiKP	10 53 57.0	-0.4		
060A	Indiantown baz=6.3	132.05	354	P		PKiKP	10 53 58.9	-0.5		
061Z	Ochoppi baz=5.8	133.26	354	P		PKPdf	10 54 01.0	+0.4		
PMSA	Palmer Station	133.95	193	PKhKP		PKPpre	10 53 55.1			
PMSA	comp=Z,19nm,0.8s,baz=87,slow=5.9,SNR=5.9			SKKPbc		SKKPbc	11 06 34.9	-3.7		
PMSA	Palmer Station	133.95	193			PKPpre	10 53 55.5			
ANWB	Willy Bob	135.16	327	*e*P		PKPdf	10 54 01.8	-2.6		
ANBD	Bethesda, Anti	135.67	327	*e*P		PKPpre	10 53 58.8			
ROSB	Rosrio	135.96	288	*e*P		PKPdf	10 54 04.8	-1.1		
ABD	La Joyeuse, An	136.00	326	*e*P		PKPpre	10 53 55.8			
MLYT	Lee's Yard	136.16	327	*e*P		PKiKP	10 54 13.8	+5.8		
MAGL	Barre de l'ile	136.33	325	*e*P		PKPpre	10 53 55.8			
CDVI	St. Croix	136.52	331	*e*P		PKPpre	10 53 55.8			
DLPL	La Plaine	136.82	325	*e*P		PKPdf	10 54 07.8	+0.2		
SJG	San Juan	136.82	333	PKhKP		PKPpre	10 54 01.1			
SJG	comp=Z,9.7nm,0.4s,baz=317,slow=21,SNR=2.7 San Juan	136.82	333			PKPdf	10 54 04.4	-3.0		
SJG	San Juan	136.82	333	PKiKP		PKPdf	10 54 04.4	-3.0		
SJG	San Juan	136.82	333	*e*P		PKPdf	10 54 03.7	-3.7		
AOPR	Arecibo Observ	136.87	334	*e*P		PKPdf	10 54 04.8	-2.8		
MDN	Morne-Daniel	136.91	325	*e*P		PKPdf	10 54 07.2	-0.5		
ILAM	Ilet Lapin Mar	137.07	324	*e*P		PKPpre	10 54 04.8			
FDF	Fort de France	137.26	324	*e*P		PKPpre	10 53 58.8			
MPOM	Morne Pois Mar	137.34	323	*e*P		PKPpre	10 53 58.8			
BIM	Bigot	137.39	324	*e*P		PKPpre	10 54 01.8			
BBGH	Gun Hill	137.63	321	*e*P		PKPpre	10 53 55.8			
SDDR	Presa de Saban	137.97	340	*e*P		PKPdf	10 54 09.0	-0.6		
MCLT	Moule a Chique	137.98	323	*e*P		PKPpre	10 53 55.8			
SJMB	Sao Joao De Ma	138.39	265	*e*P		PKPdf	10 54 08.1	-2.2		
SVB	Belmont	138.51	323	*e*P		PKPpre	10 54 04.8			
MDP	Montagnes des comp=Z,7.6nm,0.4s,baz=78,slow=3.4,SNR=7.5	138.69	305	PKhKP		PKPpre	10 54 03.3			
TEIG	Tepich	138.99	4			PKPpre	10 54 02.1			
TEIG	Tepich	138.99	4	*e*P		PKPpre	10 54 01.8			
TMAB	Tom-Au,PA,Br	139.20	292	*e*P		PKPdf	10 54 10.7	-1.2		
GCMP	Grenada, Carri	139.24	322	*e*P		PKPpre	10 54 04.8			
GRGR	Grenville	139.66	322	*e*P		PKPpre	10 53 58.8			
TOSP	Speyside	139.67	320	*e*P		PKPpre	10 54 01.8			
MTDJ	Mount Denham	140.31	348	*e*P		PKPpre	10 54 07.9			
STH	Stony Hill	140.31	347	*i* P		PKPpre	10 54 07.5			
SDBA	SAO DESIDERIO	140.33	276	*e*P		PKPdf	10 54 11.9	-2.1		
HOJ	Hope	140.36	347	*i* P		PKPdf	10 54 11.9	-2.0		
JANB	Januaria	140.52	272	*e*P		PKPdf	10 54 11.9	-2.4		
MC01	Montes Claros	140.56	269	*e*P		PKPdf	10 54 12.1	-2.3		
MCJ	Malvern	140.63	348	*i* P		PKPpre	10 54 10.3			
MCJ				*i* S		SKPbc	10 57 42.6	-0.6		
DIAM	Diamantina, MG	140.64	266	*e*P		PKPdf	10 54 12.1	-2.5		
CMIG	Matias Romero	141.09	14	PKhKP		PKPpre	10 54 08.4			
CMIG	comp=Z,18nm,0.9s,baz=60,slow=3.5,SNR=7.4			SKKPbc		SKKPbc	11 06 07.8	+0.3		
MAN01	Angra dos Reis	141.55	259	*e*P		PKPdf	10 54 14.6	-1.4		
SMTB	Santa Maria do	141.60	282	*e*P		PKPdf	10 54 13.9	-2.3		
PRPB	Parauapebas	142.50	288	*e*P		PKPdf	10 54 14.3	-3.6		
EFI	East Falkland	142.64	208			PKPpre	10 54 13.7			
EFI	East Falkland	142.64	208	PKiKP		PKPdf	10 54 13.7	-3.2		
PARB	Paraibuna	143.11	259	*e*P		PKPdf	10 54 17.9	-0.9		
PMNB	Patos De Minas	143.26	267	*e*P		PKPbc	10 54 17.4	+1.0		
USHA	Ushuaia comp=Z,100nm,0.9s,baz=141,slow=3.1,SNR=19	143.80	197	PKhKP		PKPpre	10 54 17.5			
BDFB	Brasilia	144.12	272	PKP		PKPdf	10 54 20.1	-0.7		
BDFB	comp=Z,96nm,0.8s,baz=108,slow=3.0,SNR=47			SKP			10 57 53.7			
BDFB	comp=Z,284nm,1.2s,baz=25,slow=7.7,SNR=5.3			SKKPbc		SKKPbc	11 05 54.3	-1.9		
BDFB	comp=Z,31nm,0.9s,baz=235,slow=2.6,SNR=8.7 Brasilia	144.12	272	*e*P		PKPbc	10 54 19.4	+0.3		
MALB	Monte Alegre	144.16	298	*e*P		PKPbc	10 54 19.4	+0.3		
VAO	Valinhos	144.32	259	*e*P		PKPbc	10 54 19.6	+0.2		
PET01	Itanhaem-SP	144.68	257	*e*P		PKPab	10 54 19.0	-1.3		
RCLB	Rio Claro- Sao	144.79	261	*e*P		PKPab	10 54 19.0	-1.8		
IPMB	Ipameri, GO	144.82	268	*e*P		PKPab	10 54 19.3	-1.7		
URIC	Uribia, Colomb	144.97	337	⇑ *i*P		PKPdf	10 54 21.9	-0.3		
TGUH	Tegucigalpa,Un	145.17	3	⇑ *i*P		PKPdf	10 54 23.1	+0.4		
SNET	Serv Nac Est T	145.39	6			PKPbc	10 54 21.0	-2.0		
PRVC	Isla de Provid	145.66	353	*e*P		PKPbc	10 54 23.8	+0.1		
PACA	Pacayal	145.69	5	*e*P		PKPab	10 54 24.4	+0.1		
CRJC	Cerrejon, Guaj	145.92	338	⇑ *i*P		PKPbc	10 54 24.4	-0.3		
SNDB	Serra Nova Dou	146.11	280	*e*P		PKPdf	10 54 22.3	-1.8		
SMRC	Santa Marta, M	146.24	340	⇑ *i*P		PKPbc	10 54 25.3	-0.2		
BOAV	Boa Vista	146.32	311			PKPbc	10 54 25.4	-0.4		
BOAV	Boa Vista	146.32	311	*e*P		PKPdf	10 54 22.3	-2.3		
MG04	Isla Riesco	146.39	195			PKPab	10 54 26.1	+0.3		
CRIN	San Cristobal	146.53	3	⇑ *i*P		PKPdf	10 54 25.0	0.0		
CRIN	San Cristobal	146.53	3	*e*P		PKPdf	10 54 25.5	+0.6		
TEL3	Telica 3	146.67	2	*e*P		PKPdf	10 54 25.7	+0.6		
CNGN	Cerro Negro	146.74	2	⇑ *i*P		PKPdf	10 54 24.5	-0.8		
CNGN	Cerro Negro	146.74	2	*e*P		PKPbc	10 54 26.3	-0.7		
ITTB	Itaituba	146.76	296	*e*P		PKPdf	10 54 23.2	-2.1		
BOAB	BOACO BROADBAND	146.81	0			PKPdf	10 54 25.5	+0.2		
SDV	Santo Domingo comp=Z,3µm,0.8s,baz=38,slow=2.2,SNR=133	146.97	332	PKPbc		PKPbc	10 54 27.3	-0.6		
SDV	Santo Domingo	146.97	332			PKPdf	10 54 25.8	-0.1		
SDV	Santo Domingo	146.97	332	*e*P		PKPdf	10 54 24.4	-1.5		
COPN	Copaltepe	147.06	2	*e*P		PKPdf	10 54 26.4	+0.7		
WILN	Americas 2	147.09	1	*e*P		PKPbc	10 54 26.9	-1.0		
MGAN	Managua	147.11	1	*e*P		PKPdf	10 54 24.1	-1.7		
ITRB	Iturama	147.11	266	*e*P		PKPdf	10 54 24.7	-1.0		
TISN	Laguna Tiscapa	147.11	1	*e*P		PKPdf	10 54 26.8	+1.0		
LL6C	La Loma 6 Bece	147.25	337	⇑ *i*P		PKPdf	10 54 26.8	+0.7		
ACON	Acoyapa	147.29	359	⇑ *e*P		PKPdf	10 54 26.4	+0.3		
LL5C	La Loma 5 El P	147.39	338	*e*P		PKPab	10 54 30.0	-0.8		
ARGC	Ariguani, Magd	147.47	339	*e*P		PKPbc	10 54 28.3	-0.8		
LL1C	La Loma 1 Cana	147.53	338	⇑ *i*P		PKPdf	10 54 27.3	+0.8		
CNLB	Canela	147.68	248	*e*P		PKPdf	10 54 24.4	-2.1		
SJCC	San Jacinto, C	147.73	341	⇑ *i*P		PKPbc	10 54 28.7	-1.1		
NPGB	Novo Progresso	147.78	291	*e*P		PKPdf	10 54 24.1	-2.9		
PCMB	Pacaembu	148.17	263	*e*P		PKPdf	10 54 25.0	-2.4		
VERA	Finca Concepci	148.40	359	*e*P		PKPdf	10 54 28.1	+0.2		
VMAR	Armenia, Volca	148.44	359	*e*P		PKPdf	10 54 27.0	-1.1		
BUEV	Buena Vista	148.46	360	*e*P		PKPdf	10 54 28.2	0.0		
VRLE	La Escondida,	148.47	360	*e*P		PKPdf	10 54 27.1	-1.2		
GPS2	Hotel Rincn d	148.50	360	*e*P		PKPdf	10 54 28.8	+0.5		
COVE	Coope Vega, Sa	148.52	358	⇑ *e*P		PKPdf	10 54 26.9	-1.3		
PTEN	Parque Tenorio	148.54	359	*e*P		PKPdf	10 54 26.2	-2.1		
HORNC	Hornillas	148.54	359	*e*P		PKPdf	10 54 28.3	0.0		
GUAB	Guayabo de Bag	148.55	360	*e*P		PKPbc	10 54 30.7	-1.3		
COLC	Colonia	148.59	360	*e*P		PKPdf	10 54 28.0	-0.3		
CUI	Cuipilapa	148.59	359	*e*P		PKPdf	10 54 28.1	-0.2		
ACAL	Aguas Claras	148.62	359	*e*P		PKPbc	10 54 31.4	-0.7		
OCAC	Ocana	148.65	336	⇑ *i*P		PKPdf	10 54 29.2	+0.6		
OCAC				*e*P		PKPbc	10 54 30.1	-2.3		
CEDE	Laguna Cedeo	148.76	359	*e*P		PKPbc	10 54 30.7	-1.8		
FORC	Fortuna	148.78	359	*e*P		PKPbc	10 54 31.9	-0.6		
CASO	Castillo	148.81	359	*e*P		PKPbc	10 54 31.9	-0.7		
RIFO	Rio Frio, Sara	148.90	357	*e*P		PKPdf	10 54 28.4	-0.4		
JTS	Las Juntas de	148.96	359			PKPdf	10 54 28.5	-0.4		
JTS	Las Juntas de	148.96	359	PKiKP		PKPdf	10 54 28.5	-0.4		
JTS	Las Juntas de	148.96	359	*e*P		PKPdf	10 54 27.2	-1.7		
JTS	Las Juntas de	148.96	359	*e*P		PKPdf	10 54 30.0	+1.1		
ITAB	Concordia	149.01	252	*e*P		PKPdf	10 54 26.5	-2.1		
PTGB	Pitanga	149.04	257	*e*P		PKPdf	10 54 26.5	-2.4		
LCBC	Los crdobas,	149.07	342	*e*P		PKPdf	10 54 30.9	+1.9		
NICO	Nicoya	149.12	360	*e*P		PKPdf	10 54 30.1	+1.0		
PAMC	Pamplona, Colo	149.23	335	*e*P		PKPdf	10 54 31.2	+1.3		
C2SB	Chapadao do Su	149.28	268	*e*P		PKPdf	10 54 27.1	-2.1		
CHPO	Chepo, Panama	149.43	348	*e*P		PKiKP	10 54 35.4	+0.2		
CHPO	Chepo, Panama	149.43	348	*e*P		PKiKP	10 54 35.4	+0.2		
TRCB	Terra Rica	149.52	260	*e*P		PKPdf	10 54 28.3	-1.3		
CAPC	Capurgana	149.55	344	*e*P		PKPdf	10 54 30.5	+0.7		
BCIP	Isla Barro Col	149.57	349	*e*P		PKPdf	10 54 29.4	-0.5		
PLTB	Pedras Altas	149.60	243	*e*P		PKPdf	10 54 28.0	-1.5		
TAMC	Tame, Arauca	149.66	332	*i* P		PKPdf	10 54 31.7	+1.6		
CNI2	El Empalme, Bo	149.68	354	*e*P		PKPbc	10 54 32.8	-1.9		
CNI2				*e*S		pPKPdf	10 54 55.0	+0.3		
CNI2	El Empalme, Bo	149.68	354	*e*P		PKPbc	10 54 32.8	-1.9		
CNI2				*e*S		pPKPdf	10 54 55.0	+0.3		
UPA	Univ. de Panam	149.70	348	⇑ *i*P		PKPdf	10 54 30.1	0.0		
UPA	Univ. de Panam	149.70	348	*i* P		PKPdf	10 54 31.3	+1.3		
UPA	Univ. de Panam	149.70	348	*i* P		PKPdf	10 54 31.3	+1.3		
CPSB	Cacapava Do Su	149.74	245	*e*P		PKPdf	10 54 27.1	-2.6		
UPD2	Meteti	149.80	345	*e*P		PKiKP	10 54 36.0	0.0		
UPD2	Meteti	149.80	345	⇓ *e*P		PKPbc	10 54 34.5	-0.5		
UPD2	Meteti	149.80	345	⇓ *e*P		PKPbc	10 54 34.5	-0.5		
CHOR3	La Chorrera	149.82	349	⇓ *i*P		PKPdf	10 54 31.6	+1.4		
CHOR3	La Chorrera	149.82	349	⇓ *i*P		PKPdf	10 54 31.6	+1.4		
CLDB	Colider	149.83	285	*e*P		PKPdf	10 54 28.6	-1.7		
BRRC	Barranca, Sant	149.83	336	⇑ *i*P		PKPdf	10 54 31.2	+0.9		
UREC	San Jos de Ur	149.87	340	⇑ *i*P		PKPdf	10 54 31.3	+1.0		
UREC	San Jos de Ur	149.87	340	⇑ *i*P		PKPdf	10 54 30.9	+0.5		
UREC	San Jos de Ur	149.87	340	⇑ *i*P		PKPdf	10 54 30.9	+0.5		
ZARC	Zaragoza, Cauc	149.89	339	⇑ *i*P		PKPdf	10 54 31.0	+0.6		
DRK0	Durika	149.90	356	⇑ *i*P		PKPdf	10 54 31.0	+0.4		
DRK0	Durika	149.90	356	⇑ *i*P		PKPdf	10 54 31.0	+0.4		
BARC	Barichara	150.10	335	*e*P		PKPdf	10 54 32.5	+1.4		
MACA	Manacapuru-AM	150.11	303	*e*P		PKPdf	10 54 29.1	-1.6		
VTON	El Valle, Cocl	150.16	349	⇓ *i*P		PKPdf	10 54 32.9	+2.0		
VTON	El Valle, Cocl	150.16	349	⇓ *i*P		PKPdf	10 54 32.9	+2.0		
BRU2	Volcan	150.32	354	*e*P		PKPdf	10 54 31.4	+0.1		
BRU2	Volcan baz=50,slow=2.6	150.32	354	⇑ *i*P		PKPdf	10 54 31.7	+0.4		
BRU2				*e*S		PP	10 58 04.3	-6.1		
BRU2	Volcan baz=50,slow=2.6	150.32	354	⇑ *i*P		PKPdf	10 54 31.7	+0.4		
BRU2				*e*S		PP	10 58 04.3	-6.1		
PNME	Penonome	150.32	350	*e*P		PKPdf	10 54 30.8	-0.3		
PTBC	PUERTO BERRIO	150.63	337	⇑ *i*P		PKPdf	10 54 32.0	+0.4		
DVD	David	150.66	354	⇑ *i*P		PKPbc	10 54 37.0	0.0		
DVD	David	150.66	354	⇑ *i*P		PKPbc	10 54 37.0	0.0		
RUSC	La Rusia	150.70	334	⇑ *i*P		PKPdf	10 54 32.6	+0.4		
DBBC	Dabeiba	150.77	341	*e*P		PKiKP	10 54 40.2	+2.1		
STIA3	Santiago, Vera	150.81	351	⇓ *i*P		PKPdf	10 54 32.9	+1.1		
STIA3	Santiago, Vera	150.81	351	⇓ *i*P		PKPdf	10 54 32.9	+1.1		
PDRB	Porto dos Gac	150.96	284	*e*P		PKPdf	10 54 30.6	-1.4		
AZU	Azuero	151.00	349	⇑ *e*P		PKPdf	10 54 32.5	+0.4		
AZU	Azuero	151.00	349	⇑ *i*P		PKPdf	10 54 32.5	+0.4		
AZU	Azuero	151.00	349	⇑ *i*P		PKPdf	10 54 32.5	+0.4		
PTAC	Punta Ardita,	151.09	344	⇑ *i*P		PKPdf	10 54 33.1	+0.9		
SPBC	San Pablo de B	151.31	336	⇑ *i*P		PKPdf	10 54 33.6	+0.9		
HELC	Santa Helena	151.33	339	⇑ *i*P		PKPdf	10 54 33.6	+0.5		
ACHO3	Achotines, Los	151.34	349	*e*P		PKPdf	10 54 34.8	+2.1		
ACHO3	Achotines, Los	151.34	349	*e*P		PKPdf	10 54 34.8	+2.1		
SALV	Santo Antonio	151.35	275	*e*P		PKPdf	10 54 29.8	-2.8		
CACAO	El Cacao, Vera	151.53	350	⇑ *e*P		PKPdf	10 54 33.2	+0.3		
NORC	Norcasia	151.68	337	⇑ *i*P		PKPdf	10 54 34.0	+0.8		
CBOC	Ciudad Bolivar	151.79	340	⇑ *i*P		PKPdf	10 54 34.2	+0.6		
PTGC	Puerto Gaitan,	151.80	331	⇑ *i*P		PKPdf	10 54 33.2	-0.1		
SOLC	Bahia Solano	151.87	343	*e*P		PKiKP	10 54 41.8	+1.5		
LPA	La Plata	152.10	234	*i* PKiKP		PKPdf	10 54 27.0	-6.1		
LPA				PKiKP		PKiKP	10 54 40.4	+0.3		
CHIC	Chingaza	152.10	334	⇑ *i*P

PB16	**IPOC Station P**	**164.76**	**277**	*i* P	**PKPdf**	**10 54 50.1**	**+0.6**
PB09	**IPOC Station P**	**164.88**	**264**	*i* P	**PKPdf**	**10 54 49.9**	**+0.9**
PB15	**IPOC Station P**	**165.02**	**258**	*i* P	**PKPdf**	**10 54 50.1**	**+1.0**
PB01	**IPOC Station P**	**165.09**	**267**	*i* P	**PKPdf**	**10 54 49.7**	**+0.6**
PB06	**IPOC Station P**	**165.15**	**260**	*i* P	**PKPdf**	**10 54 49.4**	**+0.2**
PB07	**IPOC Station P**	**165.47**	**264**	*i* P	**PKPdf**	**10 54 49.8**	**+0.3**
PB02	**IPOC Station P**	**165.48**	**266**	*i* P	**PKPdf**	**10 54 47.2**	**-2.2**
PB12	**IPOC Station P**	**165.58**	**277**	*i* P	**PKPdf**	**10 54 49.5**	**-0.1**
PB14	**IPOC Station P**	**165.65**	**252**	*i* P	**PKPdf**	**10 54 50.5**	**+0.8**
PB04	**IPOC Station P**	**165.70**	**262**	*i* P	**PKPdf**	**10 54 49.1**	**-0.5**
NNA	**Nana**	**167.86**	**316**	PKP	**PKPdf**	**10 54 53.1**	**+1.7**
	comp=Z,96nm,0.9s,baz=300,slow=1.8,SNR=32						
NNA				PKPab	**PKPab**	**10 56 00.2**	**+1.7**
	comp=Z,44nm,0.8s,baz=82,slow=3.0,SNR=1.9						
NNA	**Nana**	**167.86**	**316**	*i* P	**PKPdf**	**10 54 51.9**	**+0.6**

MAN 24 10:41:00, 10.08N×123.10E, h30km, Ms3.5, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.74**	**170**	*i* P	Pb	10 41 14.4	-0.2
SNPH				*i* S	Sb	10 41 24.3	-0.1
LLP	**Lapu-Lapu**	**0.88**	**74**	*e*P	Pn	10 41 15.9	-0.5
LLP				*e*S	Sn	10 41 27.6	-0.7
JAP	**San Jose, Anti**	**1.31**	**300**	*e*P	Pb	10 41 27.9	+3.8

ROM 24 10:44:48.1±0.3, 42.742N±0.006×13.233E±0.010, h16km±3km, ML2.7/5, Error ellipse: s-maj=0.8km s-min=0.1km az=79.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.20**	**226**	P	Pb	10 44 53.5	0.0
LNSS				S	Sb	10 44 57.3	+0.2
LNSS				AML	AML		
	comp=E,1057μm,0.8s						
LNSS				AML	AML		
	comp=N,2905μm,0.6s						
LNSS				AML	AML		
	comp=E,1058μm,0.8s						
LNSS				AML	AML		
	comp=E,294μm,0.3s						
LNSS				AML	AML		
	comp=N,1213μm,0.3s						
RM33	**Pellescritta (**	**0.23**	**183**	P	Pb	10 44 54.2	+0.1
RM33				S	Sg	10 44 57.5	+0.5
CAMP	**Campotosto**	**0.24**	**148**	P	Pb	10 44 54.1	-0.1
CAMP				S	Sg	10 44 57.0	-0.4
TERO	**Teramo**	**0.30**	**113**	P	Pb	10 44 54.8	-0.3
TERO				S	Sg	10 44 58.9	+0.1
FDMO	**Fiordimonte**	**0.31**	**340**	P	Pg	10 44 55.1	+0.3
FDMO				S	Sg	10 44 59.4	+0.1
GUMA	**Gualdo di Mace**	**0.33**	**13**	S	Sb	10 45 00.6	-0.2
GUMA	**Gualdo di Mace**	**0.33**	**13**	P	Pg	10 44 55.2	+0.1
CSP1	**Cessapalombo**	**0.35**	**357**	P	Pg	10 44 55.4	-0.1
CSP1				S	Sg	10 45 00.4	0.0
CESI	**CESI - Serrava**	**0.36**	**318**	P	Pg	10 44 55.5	-0.1
CESI				S	Sg	10 45 00.9	+0.3
ARRO	**Arrone**	**0.38**	**245**	P	Pb	10 44 56.7	+0.1
ARRO				S	Sb	10 45 01.8	-0.4
GIGS	**Gran Sasso**	**0.38**	**140**	P	Pb	10 44 56.4	-0.2
GIGS				S	Sg	10 44 59.8	-1.5
OFFI	**Offida**	**0.39**	**60**	P	Pb	10 44 56.8	+0.2
OFFI				S	Sb	10 45 03.0	+0.7
CESX	**Cesi**	**0.50**	**255**	P	Pb	10 44 58.5	-0.1
CESX				S	Sg	10 45 04.2	-0.6
ASSB	**Assisi San Ben**	**0.52**	**306**	S	Sb	10 45 06.1	-0.1

*IDC **24** 10:57:15.6±1.7, 20.76N×94.50E, h92km±18km, mb3.8/11, mbtmp4.1/12, Error ellipse: s-maj=40.7km s-min=11.2km az=49.0*
*NEIC **24** 10:57:16.3±1.6, 20.93N±0.08×94.67E±0.08, h93km±8km, mb4.5/14, Error ellipse: s-maj=13.3km s-min=8.8km az=222.0*
*NDI **24** 10:57:17.2±2.9, 20.88N×94.45E, h90km, ML4.0, mb4.5(NEIC)*
ISC 24 10:57:14.5±0.6, 20.82N±0.06×94.46E±0.05, h91km, n57, σ2s27/66, mb4.3/18, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MND	**Mandalay**	**1.95**	**52**		**Pn**	**10 57 45.2**	**-0.9**
MND				Sn	**Sn**	**10 58 07.0**	**-3.2**
BRDH	**Bariadhala**	**3.20**	**306**	P	**Pn**	**10 58 06.0**	**+3.2**
	0.9nm,0.4s,baz=90,slow=24,SNR=19						
BRDH				S	**Sn**	**10 58 43.1**	**+3.1**
	1.2nm,0.3s,baz=90,slow=24,SNR=11						
IMP	**Imphal**	**4.02**	**353**	*e*P	**Pn**	**10 58 17.4**	**+3.6**
IMP				*i* x	x	10 58 24.4	
CHTO	**Chiang Mai**	**4.67**	**115**		**Pn**	**10 58 22.1**	**-0.6**
CM31	**Chiang Mai Arr**	**4.84**	**118**		**Pn**	**10 58 24.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**4.84**	**118**	P	**Pn**	**10 58 24.4**	**-0.6**
	4.6nm,0.4s,baz=291,slow=14,SNR=23						
CMAR	**Chiang Mai Arr**	**4.84**	**118**	Pn	**Pn**	**10 58 24.5**	**-0.5**
KOHI	**KOHIMA**	**4.88**	**356**	*e*P	**Pn**	**10 58 28.1**	**+2.4**
KOHI				*e*S	**Sn**	**10 59 19.8**	**-1.3**
SHL	**Shillong**	**5.28**	**334**		**Pn**	**10 58 32.3**	**+1.1**
SHL	**Shillong**	**5.28**	**334**	*e*P	**Pn**	**10 58 31.9**	**+0.8**
SHL				*e*S	**Sn**	**10 59 27.4**	**-3.4**
SHL				IAML		10 59 31.6	
	comp=E,177nm,0.1s						
SHL				IAML		10 59 31.7	
	comp=N,369nm,0.2s						
CRAI	**Chiangrai**	**5.58**	**95**	Pn	**Pn**	**10 58 34.6**	**-0.5**
GUWA	**GUWAHATI**	**5.92**	**335**	*e*P	**Pn**	**10 58 40.2**	**+0.6**
GUWA				*e*S	**Sn**	**10 59 43.3**	**-2.7**
TEZP	**TEZPUR**	**5.96**	**346**	*e*P	**Pn**	**10 58 40.7**	**+0.5**
TEZP				*e*S	**Sn**	**10 59 43.0**	**-4.1**
TEZP				IAML		10 59 47.1	
	comp=N,272nm,0.2s						
TEZP				IAML		10 59 47.2	
	comp=E,348nm,0.1s						
TURI	**Tura**	**6.04**	**322**	*e*S	**Sn**	**10 59 45.1**	**-4.0**
DHUB	**DHUBRI**	**6.60**	**322**	*ex*	**Pn**	**10 58 46.7**	**-2.2**
DHUB				*e*S	**Sn**	**10 59 59.6**	**-3.0**
BWNR	**Bhubaneshwar**	**8.12**	**268**	*e*P	**Pn**	**10 59 11.0**	**+1.3**
BWNR				*e*S	**Sn**	**11 00 33.9**	**-6.0**
TAPN	**Taplejung**	**8.95**	**318**	*e*Pn	**Pn**	**10 59 21.7**	**+0.4**
TAPN				*e*Sn	Sn	11 00 49.7	-11
RAMN	**Ramite**	**9.42**	**312**	*e*Pn	**Pn**	**10 59 27.9**	**+0.2**
RAMN				*e*Sn	Sn	11 00 59.5	-12
JIRN	**Jiri**	**10.15**	**314**	*e*Pn	**Pn**	**10 59 38.2**	**+0.5**
RAGD	**RAYAGADA**	**10.46**	**263**	*e*S	**Sn**	**11 01 29.2**	**-7.7**
GUN	**Gumba**	**10.53**	**314**	*e*Pn	**Pn**	**10 59 43.4**	**+0.6**
PKI	**Pulchoki**	**10.64**	**311**	*e*Pn	**Pn**	**10 59 44.1**	**-0.2**
PKIN	**Phulchoki**	**10.65**	**311**	*e*Pn	**Pn**	**10 59 44.2**	**-0.2**
GKN	**Gorkha**	**11.45**	**311**	*e*Pn	**Pn**	**10 59 54.8**	**-0.3**
GKN				*e*Sn	Sn	11 01 46.3	-15
BLSP	**Bilaspur**	**11.55**	**279**	*e*P	**Pn**	**10 59 57.2**	**+0.8**
BLSP				*i* x	x	10 59 59.5	
BLSP				*e*S	**Sn**	**11 01 56.4**	**-7.1**
KOLN	**Koldanda**	**12.07**	**307**	*e*Pn	**Pn**	**11 00 03.3**	**-0.2**
DANN	**Dangsing**	**12.28**	**310**	*e*Pn	**Pn**	**11 00 05.5**	**-0.9**
PYUN	**Piuthan**	**12.70**	**307**	*e*Pn	**Pn**	**11 00 11.6**	**-0.4**
HYBB	**Hyderabad (bro**	**15.41**	**260**	*e*P	**P**	**11 00 53.8**	**+4.2**
BJT	**Baijiatuau**	**26.64**	**39**	P	**P**	**11 02 41.6**	**-3.1**
BJT				IAmb	IAmb	11 02 42.2	
	comp=Z,14nm,0.8s						
MK31	**Makanchi Array**	**27.74**	**342**	P	**P**	**11 02 54.3**	**-0.1**
MKAR	**Makanchi Array**	**27.74**	**342**	P	**P**	**11 02 56.4**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=153,slow=9.6,SNR=13						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**27.74**	**342**	P	**P**	**11 02 54.6**	**+0.1**
KURBB	**Kurchatov Arra**	**32.28**	**341**	P	**P**	**11 03 36.2**	**+1.7**
	comp=Z,1.7nm,0.4s,baz=151,slow=8.5,SNR=11						
	comp=Z,1.7nm,0.4s						
KURK	**Kurchatov**	**32.34**	**341**	P	**P**	**11 03 36.3**	**+1.3**
ZALV	**Zalesovo Beam**	**33.88**	**350**	P	**P**	**11 03 49.9**	**+1.6**
	comp=Z,1.8nm,0.5s,baz=174,slow=7.2,SNR=5.4						
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**33.88**	**350**	P	**P**	**11 03 49.4**	**+1.1**
AKTO	**Aktyubinsk**	**41.15**	**325**	P	**P**	**11 04 52.1**	**+2.3**
	comp=Z,0.9nm,0.3s,baz=131,slow=8.5,SNR=4.7						
	comp=Z,0.9nm,0.3s						
NRIK	**Noril'sk**	**48.70**	**357**	P	**P**	**11 05 50.4**	**+1.1**
	comp=Z,3.3nm,0.4s,baz=140,slow=7.9,SNR=2.6						
	comp=Z,3.3nm,0.4s						
NRIK	**Noril'sk**	**48.70**	**357**	P	**P**	**11 05 50.4**	**+1.1**
NRIK				IAmb	IAmb	11 05 50.4	
	comp=Z,6.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**49.30**	**139**	P	**P**	**11 05 54.3**	**-0.3**
FITZ				IAmb	IAmb	11 06 03.9	
	comp=Z,5.9nm,1.1s						
KNRA	**Kununurra**	**49.50**	**134**	P	**P**	**11 05 56.3**	**+0.2**
MORW	**Morawa**	**53.80**	**156**	P	**P**	**11 06 28.8**	**+0.9**
MORW				IAmb	IAmb	11 06 31.8	
	comp=Z,11nm,1.4s						
TIXI	**Tiksi**	**54.57**	**13**	P	**P**	**11 06 32.3**	**-0.7**
WB0	**Warramunga Arr**	**56.17**	**133**	P	**P**	**11 06 45.5**	**+0.3**
WB0				IAmb	IAmb	11 06 47.8	
	comp=Z,3.7nm,0.9s						
WRA	**Warramunga Arr**	**56.26**	**133**	P	**P**	**11 06 46.1**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=314,slow=8.2,SNR=10						
	comp=Z,0.7nm,0.4s						
WRAB	**Tennant Creek**	**56.26**	**133**	P	**P**	**11 06 46.6**	**+0.8**
WRAB				IAmb	IAmb	11 06 47.0	
	comp=Z,8.7nm,1.2s						
WB2	**Warramunga Arr**	**56.26**	**133**	P	**P**	**11 06 46.3**	**+0.4**
WB2				IAmb	IAmb	11 06 46.9	
	comp=Z,7.3nm,1.2s						
WR0	**Warramunga Arr**	**56.40**	**133**	P	**P**	**11 06 47.4**	**+0.6**
WR0				IAmb	IAmb	11 07 07.1	
	comp=Z,7.7nm,1.3s						
ASAR	**Alice Springs**	**58.58**	**137**	P	**P**	**11 07 02.6**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=317,slow=7.1,SNR=19						
	comp=Z,1.3nm,0.6s						
ARCES	**ARCESS Array B**	**63.32**	**338**	P	**P**	**11 07 34.2**	**+0.7**
	comp=Z,5.2nm,1.0s,baz=94,slow=6.6,SNR=2.4						
	comp=Z,5.2nm,1.0s						
HFS	**Hagfors**	**67.60**	**328**	P	**P**	**11 08 01.7**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=106,slow=4.9,SNR=4.4						
	comp=Z,1.1nm,0.5s						
NOA	**NORSAR Array B**	**68.76**	**329**	P	**P**	**11 08 08.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=99,slow=5.5,SNR=3.2						
	comp=Z,0.4nm,0.5s						
NC204	**NORSAR Array S**	**68.96**	**329**	P	**P**	**11 08 10.7**	**+0.9**
STKA	**Stephens Creek**	**69.17**	**138**	P	**P**	**11 08 11.6**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=300,slow=11,SNR=3.5						
	comp=Z,1.6nm,0.6s						
STKA	**Stephens Creek**	**69.17**	**138**	P	**P**	**11 08 12.3**	**+0.9**
TXAR	**Lajitas Array**	**127.16**	**20**	PKP	**PKiKP**	**11 16 10.7**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=18,slow=1.3,SNR=5.9						

*IDC **24** 11:08:36.9±1.4, 67.38N×143.39W, h0km, mb3.5/3, mbtmp3.6/7, ML3.5/4, Error ellipse: s-maj=22.6km s-min=12.8km az=142.0*
*NEIC **24** 11:08:36.9±1.7, 67.22N±0.02×143.07W±0.06, h11km±5km, Error ellipse: s-maj=3.8km s-min=3.2km az=53.0*
*AEIC **24** 11:08:36.7±1.6, 67.20N±0.02×143.07W±0.03, h8km±5km, ML3.8/110, ML3.9/88(NEIC), Error ellipse: s-maj=3.0km s-min=1.7km az=190.0*
*PGC **24** 11:08:41.4±1.6, 66.98N×142.04W, h1km, ML3.8, ML3.8/6, 332km west of Fort McPherson, Nt Northern Alaska*
ISC 24 11:08:36.8±1.1, 67.21N±0.02×143.10W±0.02, h5km±9km, n192, σ1s37/210, mb3.6/3, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
G26K	**Porcupine Rive**	**0.38**	**226**		**Pg**	**11 08 44.0**	**0.0**
G26K					**Sg**	**11 08 48.8**	**-0.1**
BM01	**Burnt Mountain**	**0.60**	**294**		**Pg**	**11 08 48.6**	**+0.2**
BMAR	**Burnt Mountain**	**0.62**	**292**		**Pg**	**11 08 49.3**	**+0.7**
BM03	**Burnt Mountain**	**0.62**	**290**		**Pg**	**11 08 49.1**	**+0.4**
F26K	**Sheenjek River**	**0.63**	**321**		**Pb**	**11 08 49.8**	**-0.6**
F26K					**Sg**	**11 08 57.9**	**+0.7**
G27K	**Doyon Strip**	**0.69**	**125**		**Pg**	**11 08 48.7**	**-1.4**
F25K	**Christian Rive**	**1.06**	**293**		**Pb**	**11 08 57.5**	**-0.2**
F25K					**Sg**	**11 09 10.9**	**+0.2**
FYU	**Fort Yukon**	**1.06**	**233**		**Pg**	**11 08 57.1**	**-0.1**
FYU				Sg	**Sb**	**11 09 11.7**	**-0.2**
E27K	**Coleen River**	**1.14**	**30**		**Pg**	**11 08 58.4**	**-0.2**
E27K					**Sb**	**11 09 13.9**	**-0.1**
H27K	**Steamboat Moun**	**1.17**	**147**		**Pg**	**11 08 58.2**	**-0.9**
H27K					**Sg**	**11 09 13.6**	**-0.6**
E25K	**Arctic Village**	**1.31**	**315**		**Pg**	**11 09 02.0**	**-0.1**
E25K					**Sg**	**11 09 18.4**	**-0.6**
H25K	**Birch Creek**	**1.44**	**230**		**Pn**	**11 09 02.3**	**-1.2**
H25K					**Sb**	**11 09 22.3**	**-0.3**
I27K	**Kandik River**	**1.72**	**159**		**Pn**	**11 09 08.0**	**+0.6**
G24K	**Hadweenzic Riv**	**1.80**	**255**		**Pn**	**11 09 06.9**	**-1.6**
G24K					**Sb**	**11 09 33.1**	**+0.1**
F24K	**Squaw Lake**	**1.88**	**282**		**Pn**	**11 09 08.8**	**-0.9**
I26K	**Coal Creek Min**	**1.91**	**181**		**Pn**	**11 09 09.1**	**-0.9**
I26K				IAML		11 09 43.2	
	comp=E,953nm,0.8s						
I26K	**Coal Creek Min**	**1.91**	**181**	P	**Pn**	**11 09 09.1**	**-0.9**
	baz=1.1						
PRP	**Porcupine Dome**	**1.96**	**211**		**Pn**	**11 09 09.9**	**-1.0**
PRP				Sn	**Sn**	**11 09 36.1**	**+0.2**
PRP	**Porcupine Dome**	**1.96**	**211**	P	**Pn**	**11 09 09.8**	**-1.1**
	baz=29						
E24K	**Your Creek**	**2.24**	**295**		**Pn**	**11 09 14.3**	**-0.2**
H24K	**Noodor Dome**	**2.36**	**236**		**Pn**	**11 09 14.7**	**-1.6**
H24K				IAML		11 09 50.1	
	comp=E,966nm,0.7s						
H24K				IAML		11 09 50.5	
	comp=N,832nm,0.8s						
H24K	**Noodor Dome**	**2.36**	**236**	P	**Pn**	**11 09 16.2**	**-0.1**
	baz=52						
C27K	**Jago River**	**2.44**	**355**		**Pn**	**11 09 18.6**	**+1.4**
D25K	**Kavik River**	**2.45**	**332**		**Pn**	**11 09 18.8**	**+1.3**
EGAK	**Eagle**	**2.57**	**161**		**Pn**	**11 09 18.8**	**-0.3**
EGAK	**Eagle**	**2.57**	**161**	P	**Pn**	**11 09 18.6**	**-0.4**
	baz=343						
EPYK	**Eagle Plains**	**2.66**	**106**		**Pn**	**11 09 19.4**	**-1.0**
EPYK				IAML		11 10 11.0	
	comp=N,664nm,0.9s						
EPYK	**Eagle Plains**	**2.66**	**106**	Pn	**Pn**	**11 09 19.6**	**-0.8**
EPYK				Sn	**Sn**	**11 09 46.3**	**-6.7**
EPYK	**Eagle Plains**	**2.66**	**106**	P	**Pn**	**11 09 19.9**	**-0.5**
	baz=291						
PS04	**TAPS Pump Stn4**	**2.67**	**300**		**Pn**	**11 09 20.9**	**+0.4**
I29M	**Ogilvie Camp,**	**2.68**	**132**		**Pn**	**11 09 19.9**	**-0.8**
I29M				IAML		11 10 06.2	
	comp=E,365nm,0.7s						
I29M	**Ogilvie Camp,**	**2.68**	**132**	Pn	**Pn**	**11 09 19.6**	**-1.0**
J26L	**Joseph Creek**	**2.73**	**184**		**Pn**	**11 09 20.5**	**-0.8**
J26L	**Joseph Creek**	**2.73**	**184**	P	**Pn**	**11 09 20.6**	**-0.7**
	baz=4.1						
POKR	**Poker Plat Res**	**2.74**	**222**		**Pn**	**11 09 20.9**	**-0.6**
POKR				IAML		11 10 06.6	
	comp=E,596nm,0.8s						
POKR				IAML		11 10 07.5	
	comp=N,379nm,0.6s						
POKR	**Poker Plat Res**	**2.74**	**222**	P	**Pn**	**11 09 21.0**	**-0.4**
	baz=38						
J25K	**Salcha River,**	**2.77**	**201**		**Pn**	**11 09 21.1**	**-0.8**
J25K				IAML		11 10 07.6	
	comp=E,328nm,0.6s						
J25K	**Salcha River,**	**2.77**	**201**	P	**Pn**	**11 09 21.1**	**-0.8**
	baz=19						
G23K	**Bananza Creek**	**2.77**	**263**		**Pn**	**11 09 22.7**	**+0.8**
C26K	**Camden Bay**	**2.80**	**347**		**Pn**	**11 09 21.4**	**-0.9**
PS07	**TAPS Pump Stn7**	**2.83**	**230**		**Pn**	**11 09 22.8**	**+0.1**
TOLK	**Toolik Lake Re**	**2.84**	**303**		**Pn**	**11 09 23.3**	**+0.5**
TOLK				IAML		11 10 12.2	
	comp=E,569nm,1.3s						
TOLK				IAML		11 10 13.0	
	comp=N,562nm,0.8s						
TOLK	**Toolik Lake Re**	**2.84**	**303**	P	**Pn**	**11 09 23.4**	**+0.5**
	baz=118						
D24K	**Happy Valley**	**2.90**	**315**		**Pn**	**11 09 22.9**	**-0.6**
IL31		**2.90**	**214**		**Pn**	**11 09 22.7**	**-0.8**
ILAR	**Eielson Array**	**2.90**	**214**	Pn	**Pn**	**11 09 22.6**	**-0.9**
	comp=N,1.6nm,0.3s,baz=25,slow=14,SNR=53						
ILAR				Pg	**Pb**	**11 09 29.8**	**+0.8**
	comp=N,16nm,0.3s,baz=26,slow=17,SNR=62						
ILAR				Lg	Lg	11 10 04.4	
	comp=N,49nm,0.3s,baz=27,slow=30,SNR=10						
	comp=N,8.8nm,0.5s						
ILAR	**Eielson Array**	**2.90**	**214**		**Pn**	**11 09 23.0**	**-0.6**
H23K	**Yukon River**	**2.93**	**245**		**Pn**	**11 09 23.2**	**-1.0**
H23K				IAML		11 10 15.6	
	comp=E,577nm,0.8s						
H23K				IAML		11 10 17.6	
	comp=N,490nm,0.7s						
H23K	**Yukon River**	**2.93**	**245**	P	**Pn**	**11 09 23.1**	**-1.0**
	baz=59						
PS06	**TAPS Pump Stn6**	**2.98**	**246**		**Pn**	**11 09 24.6**	**-0.2**
PS05	**TAPS Pump Stn5**	**3.00**	**266**		**Pn**	**11 09 25.0**	**+0.1**
COLA	**College**	**3.04**	**222**		**Pn**	**11 09 24.6**	**-1.0**
TCOL	**CIGO, UAF Yank**	**3.05**	**222**		**Pn**	**11 09 24.7**	**-0.9**
TCOL	**CIGO, UAF Yank**	**3.05**	**222**	P	**Pn**	**11 09 24.9**	**-0.7**
	baz=38						
MDM	**Murphy Dome**	**3.08**	**225**		**Pn**	**11 09 24.9**	**-1.2**
MDM				IAML		11 10 19.0	
	comp=N,370nm,0.5s						
MDM				IAML		11 10 20.5	
	comp=E,388nm,0.8s						
PS08	**TAPS Pump Stn8**	**3.08**	**211**		**Pn**	**11 09 25.3**	**-0.8**
CCB	**Clear Creek Bu**	**3.22**	**219**		**Pn**	**11 09 26.7**	**-1.3**
CCB				IAML		11 10 20.6	
	comp=E,360nm,0.6s						
K27K	**Chicken**	**3.22**	**172**	Pn	**Pn**	**11 09 27.1**	**-1.0**
K27K	**Chicken**	**3.22**	**172**	P	**Pn**	**11 09 27.9**	**-0.1**
	baz=353						
HDA	**Harding Lake**	**3.23**	**211**		**Pn**	**11 09 26.8**	**-1.4**
HDA				IAML		11 10 20.4	
	comp=N,353nm,0.7s						
HDA	**Harding Lake**	**3.23**	**211**	P	**Pn**	**11 09 27.4**	**-0.8**
	baz=28						
C24K	**Franklin Bluff**	**3.26**	**323**		**Pn**	**11 09 28.7**	**+0.2**
SCRK	**Sand Creek**	**3.27**	**187**		**Pn**	**11 09 28.5**	**-0.3**
SCRK	**Sand Creek**	**3.27**	**187**	P	**Pn**	**11 09 28.5**	**-0.3**
	baz=6.3						
I23K	**Minto, Yukon-K**	**3.28**	**234**		**Pn**	**11 09 27.7**	**-1.0**
I23K				IAML		11 10 26.9	
	comp=N,427nm,1.1s						
I23K				IAML		11 10 27.6	
	comp=E,432nm,1.2s						
I23K	**Minto, Yukon-K**	**3.28**	**234**	P	**Pn**	**11 09 29.1**	**+0.3**
	baz=48						
G22K	**Bettles**	**3.31**	**269**		**Pn**	**11 09 30.0**	**+0.8**
D23K	**Nanushuk River**	**3.35**	**305**		**Pn**	**11 09 29.7**	**-0.1**
J29M	**Klondike Camp**	**3.42**	**142**		**Pn**	**11 09 31.8**	**+1.0**
J29M	**Klondike Camp**	**3.42**	**142**	Pn	**Pn**	**11 09 31.6**	**+0.8**
J29M				Sn	**Sn**	**11 10 05.8**	**-6.0**
WRH	**Wood River Hil**	**3.43**	**219**		**Pn**	**11 09 29.9**	**-1.0**
WRH				IAML		11 10 29.6	
	comp=E,308nm,1.0s						
E22K	**Anaktuvuk Pass**	**3.46**	**290**		**Pn**	**11 09 31.8**	**+0.5**
DAWY	**Dawson**	**3.51**	**152**		**Pn**	**11 09 31.3**	**-0.7**
DAWY				IAML		11 10 30.4	
	comp=N,210nm,0.8s						
DAWY	**Dawson**	**3.51**	**152**	Pn	**Pn**	**11 09 31.9**	**-0.2**
DAWY				Sn	**Sn**	**11 10 09.0**	**-5.0**
DAWY	**Dawson**	**3.51**	**152**	P	**Pn**	**11 09 32.0**	**0.0**
	baz=336						
F22K	**John River**	**3.53**	**279**		**Pn**	**11 09 32.2**	**-0.1**
RIDG	**Independent Ri**	**3.56**	**193**		**Pn**	**11 09 31.6**	**-1.2**
RIDG				IAML		11 10 37.0	
	comp=E,317nm,0.9s						
RIDG				IAML		11 10 37.5	
	comp=N,231nm,0.8s						
RIDG	**Independent Ri**	**3.56**	**193**	P	**Pn**	**11 09 32.5**	**-0.3**
	baz=11						
H22K	**Ishtalitna Cre**	**3.56**	**252**		**Pn**	**11 09 32.0**	**-0.8**
NEA2	**Nenana**	**3.59**	**226**		**Pn**	**11 09 31.6**	**-1.5**
NEA2				IAML		11 10 34.6	
	comp=E,168nm,0.5s						
NEA2				IAML		11 10 38.6	
	comp=N,195nm,1.1s						
NEA2	**Nenana**	**3.59**	**226**	P	**Pn**	**11 09 31.8**	**-1.3**
	baz=41						
K24K	**Donnelly Dome**	**3.60**	**199**		**Pn**	**11 09 32.9**	**-0.4**
DOT	**Dot Lake**	**3.60**	**187**		**Pn**	**11 09 31.7**	**-1.6**
DOT	**Dot Lake**	**3.60**	**187**	Pn	**Pn**	**11 09 32.9**	**-0.3**
DOT				Sg	**Sg**	**11 10 29.9**	**-3.2**
MLY	**Manley**	**3.80**	**238**		**Pn**	**11 09 34.7**	**-1.3**
MLY				IAML		11 10 44.1	
	comp=E,189nm,1.0s						
MLY	**Manley**	**3.80**	**238**	P	**Pn**	**11 09 35.5**	**-0.5**
	baz=52						
INK	**Inuvik**	**3.80**	**69**	Pn	**Pn**	**11 09 36.0**	**0.0**
	comp=E,1.6nm,0.3s,baz=257,slow=17,SNR=59						
INK				Pg	**Pb**	**11 09 46.0**	**+1.7**
	comp=E,5.9nm,0.3s,baz=245,slow=16,SNR=18						
INK				Sn	**Sn**	**11 10 19.5**	**-1.5**
	comp=E,9.9nm,0.3s,baz=104,slow=21,SNR=7.2						
INK				Lg	Lg	11 10 36.4	
	comp=E,13nm,0.3s,baz=149,slow=27,SNR=5.6						
	comp=E,6.4nm,0.3s						
INK	**Inuvik**	**3.80**	**69**		**Pn**	**11 09 35.9**	**-0.1**
INK	**Inuvik**	**3.80**	**69**	Pn	**Pn**	**11 09 36.4**	**+0.4**
INK	**Inuvik**	**3.80**	**69**	P	**Pn**	**11 09 35.9**	**-0.1**
	baz=257						
C23K	**Itkillik River**	**3.82**	**317**		**Pn**	**11 09 36.7**	**+0.5**
BWN	**Browne**	**4.03**	**224**		**Pn**	**11 09 38.0**	**-1.1**
F21K	**Datna River**	**

KTH				IAML			11 11 27.7	
	comp=E,101nm,1.3s							
WAT6	**Susitna Watana**	**5.05**	**205**		**Pn**		**11 09 53.5**	**+0.3**
WAT6	**Susitna Watana**	**5.05**	**205**	P	**Pn**		**11 09 53.5**	**+0.3**
	baz=21							
CHUM	**Lake Minchumin**	**5.08**	**233**		**Pn**		**11 09 53.6**	**+0.1**
CHUM	**Lake Minchumin**	**5.08**	**233**	P	**Pn**		**11 09 53.6**	**+0.1**
	baz=45							
M29M	**Somme Creek**	**5.18**	**155**		**Pn**		**11 09 55.1**	**+0.1**
WACK	**Wrangell Chich**	**5.27**	**186**		**Pn**		**11 09 55.8**	**-0.6**
M24K	**Tolsona, Glenn**	**5.29**	**196**		**Pn**		**11 09 55.5**	**-1.0**
M24K	**Tolsona, Glenn**	**5.29**	**196**	P	**Pn**		**11 09 56.1**	**-0.5**
	baz=13							
WASW	**Wrangell South**	**5.32**	**185**		**Pn**		**11 09 56.5**	**-0.6**
CAST	**Castle Rocks**	**5.35**	**229**	P	**Pn**		**11 09 56.2**	**-1.1**
	baz=41							
M30M	**Minto, Yukon**	**5.37**	**147**		**Pn**		**11 09 57.0**	**-0.6**
M30M				IAML			11 11 35.5	
	comp=E,69nm,1.7s							
M30M	**Minto, Yukon**	**5.37**	**147**	Pn	**Pn**		**11 09 56.1**	**-1.5**
J20K	**Nowinta River**	**5.48**	**241**		**Pn**		**11 09 58.6**	**-0.5**
J20K	**Nowinta River**	**5.48**	**241**	P	**Pn**		**11 09 58.6**	**-0.5**
	baz=52							
YUK2	**White River**	**5.53**	**169**		**Pn**		**11 09 60.0**	**+0.1**
YUK2	**White River**	**5.53**	**169**	Pn	**Pn**		**11 09 59.7**	**-0.2**
YUK2				Sg	**Sb**		**11 11 25.5**	**+5.1**
YUK3	**Moose Creek**	**5.57**	**167**		**Pn**		**11 10 00.2**	**-0.4**
YUK3	**Moose Creek**	**5.57**	**167**	Pn	**Pn**		**11 10 00.4**	**-0.1**
YUK3				Sg	**Sb**		**11 11 24.4**	**+2.6**
YUK3	**Moose Creek**	**5.57**	**167**	P	**Pn**		**11 10 00.2**	**-0.4**
	baz=350							
N25K	**Chitina, Valde**	**5.66**	**187**		**Pn**		**11 10 01.9**	**+0.2**
N25K	**Chitina, Valde**	**5.66**	**187**	P	**Pn**		**11 10 01.9**	**+0.2**
	baz=6.1							
PPLA	**Purkeypile**	**5.79**	**226**		**Pn**		**11 10 02.9**	**-0.6**
PPLA	**Purkeypile**	**5.79**	**226**	P	**Pn**		**11 10 02.8**	**-0.6**
	baz=38							
GLB	**Gilahina Butte**	**5.80**	**183**		**Pn**		**11 10 04.2**	**+0.8**
KLU	**Klutina**	**5.87**	**193**		**Pn**		**11 10 03.7**	**-0.8**
KLU	**Klutina**	**5.87**	**193**	P	**Pn**		**11 10 03.7**	**-0.8**
	baz=11							
SML	**Sawmill**	**5.88**	**205**		**Pn**		**11 10 04.8**	**+0.3**
K20K	**Telida**	**6.01**	**235**		**Pn**		**11 10 05.9**	**-0.3**
K20K	**Telida**	**6.01**	**235**	P	**Pn**		**11 10 06.0**	**-0.3**
	baz=45							
PTPK	**Patty Peak**	**6.05**	**177**	Pn	**Pn**		**11 10 08.0**	**+0.9**
YUK4	**Talbot Arm**	**6.20**	**160**	Pn	**Pn**		**11 10 08.1**	**-1.0**
YUK4	**Talbot Arm**	**6.20**	**160**	P	**Pn**		**11 10 08.2**	**-0.9**
	baz=343							
DIV	**Divide**	**6.21**	**192**	Pn	**Pn**		**11 10 12.3**	**+3.1**
M31M	**Drury Creek, Y**	**6.25**	**139**	Pn	**Pn**		**11 10 13.1**	**+3.4**
M31M				Pg	Pb		11 10 21.1	-5.0
BMRM	**Bremner River**	**6.30**	**187**		**Pn**		**11 10 09.7**	**-0.7**
BMRM	**Bremner River**	**6.30**	**187**	P	**Pn**		**11 10 09.6**	**-0.7**
	baz=5.5							
CTG	**Chitna Glacier**	**6.32**	**172**	P	**Pn**		**11 10 09.8**	**-0.8**
	baz=354							
CTGM	**Chitina Glacie**	**6.32**	**172**		**Pn**		**11 10 11.4**	**+0.8**
CTGM	**Chitina Glacie**	**6.32**	**172**	Pn	**Pn**		**11 10 11.5**	**+0.8**
N30M	**Aishikik Lake**	**6.33**	**153**		**Pn**		**11 10 09.8**	**-1.0**
LOGN	**Logan Glacier**	**6.48**	**171**	Pn	**Pn**		**11 10 11.1**	**-1.8**
LOGN	**Logan Glacier**	**6.48**	**171**	Pn	**Pn**		**11 10 13.1**	**+0.2**
YUK5	**Granite Creek**	**6.51**	**157**	Pn	**Pn**		**11 10 13.3**	**-0.1**
N31M	**Braeburn, Yuko**	**6.56**	**148**	Pn	**Pn**		**11 10 13.9**	**0.0**
O28M	**Mount Upton**	**6.59**	**167**		**Pn**		**11 10 13.6**	**-0.9**
YUK6	**Outpost Mounta**	**6.62**	**160**	Pn	**Pn**		**11 10 15.3**	**+0.3**
MMPY	**Sheldon Lake,**	**6.81**	**127**	Pn	**Pn**		**11 10 16.1**	**-1.3**
HYT	**Haines Junctio**	**6.86**	**156**		**Pn**		**11 10 18.0**	**-0.1**
HYT	**Haines Junctio**	**6.86**	**156**	Pn	**Pn**		**11 10 17.4**	**-0.7**
HYT				Sn	Sn		11 11 26.7	-10
HYT				Sg	**Sb**		**11 12 04.7**	**+6.0**
M20K	**Styx River**	**6.87**	**224**		**Pn**		**11 10 18.5**	**+0.3**
M20K	**Styx River**	**6.87**	**224**	P	**Pn**		**11 10 17.3**	**-0.9**
	baz=35							
TT01	**Tatalina**	**6.96**	**238**		**Pn**		**11 10 18.3**	**-1.0**
C36M	**Paulatuk**	**7.37**	**64**	Pn	**Pn**		**11 10 23.2**	**-1.6**
C36M	**Paulatuk**	**7.37**	**64**	Pn	**Pn**		**11 10 23.6**	**-1.3**
WHY	**Whitehorse**	**7.50**	**147**	Pn	**Pn**		**11 10 26.1**	**-0.7**
A36M	**Sachs Harbour**	**7.84**	**44**	Pn	**Pn**		**11 10 30.2**	**-1.1**
A36M	**Sachs Harbour**	**7.84**	**44**	Pn	**Pn**		**11 10 31.1**	**-0.2**
DLBC	**Dease Lake**	**10.61**	**140**	Pn	**Pn**		**11 11 10.9**	**+1.5**
	comp=E,0.2nm,0.3s,baz=347,slow=9.2,SNR=8.2							
DLBC				Lg	Lg		11 14 07.7	
	comp=E,0.1nm,0.3s,baz=85,slow=20,SNR=7.1							
	comp=E,1.8nm,0.6s							
KUKN	**Kugluktuk,NWT**	**10.70**	**74**	Pn	**Pn**		**11 11 09.1**	**-1.4**
YKA	**Yellowknife Ar**	**12.92**	**98**	Pn	**Pn**		**11 11 38.0**	**-2.9**
	comp=E,0.5nm,0.3s,baz=301,slow=13,SNR=17							
YKA				Sn	Sn		11 13 53.7	-11
	comp=E,0.4nm,0.3s,baz=305,slow=22,SNR=5.3							
	comp=E,3.5nm,0.7s							
AMKA	**Amchitka**	**24.34**	**248**	P	**P**		**11 13 53.1**	**-2.0**
NVAR	**Mina Array Bea**	**32.02**	**142**	P	**P**		**11 15 07.9**	**+3.8**
	comp=E,0.6nm,0.8s,baz=352,slow=5.5,SNR=4.4							
	comp=E,0.6nm,0.8s							
TXAR	**Lajitas Array**	**44.63**	**128**	P	**P**		**11 16 53.5**	**+3.4**
	comp=E,0.3nm,0.8s,baz=345,slow=6.5,SNR=2.3							
	comp=E,0.3nm,0.8s							
FINES	**FINESS Array B**	**51.40**	**7**	P	**P**		**11 17 42.0**	**0.0**
	comp=E,0.7nm,0.5s,baz=0.0,slow=11,SNR=5.2							
	comp=E,0.7nm,0.5s							

ROM 24 11:23:58.4±0.1, 42°.765N±0°.003 × 13°.166E±0°.006, h10km, ML2.7/22, 6C-6D, Error ellipse: s-maj=0.4km s-min=0.3km az=73.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.18**	**137**	P	Pg	11 24 03.0	+0.7
SMA1				S	Sg	11 24 06.4	+1.3
SMA1				AML	AML		
	comp=E,4145μm,1.1s						
SMA1				AML	AML		
	comp=N,10215μm,0.3s						
SMA1				AML	AML		
	comp=N,37100μm,0.6s						
SMA1				AML	AML		
	comp=E,44400μm,0.2s						
SMA1				AML	AML		
	comp=N,5416μm,0.3s						
SMA1				AML	AML		
	comp=E,4001μm,0.6s						
LNSS	**Leonessa**	**0.19**	**210**	P	Pg	11 24 03.1	+0.7
LNSS				S	Sg	11 24 06.5	+1.4
LNSS				AML	AML		
	comp=E,3075μm,0.6s						
LNSS				AML	AML		
	comp=E,3080μm,0.6s						
LNSS				AML	AML		
	comp=N,10460μm,0.4s						
LNSS				AML	AML		
	comp=E,2979μm,0.1s						
LNSS				AML	AML		
	comp=N,10443μm,0.4s						
FEMA	**Monte Fema**	**0.21**	**337**	P	Pg	11 24 03.4	+0.5
FEMA				S	Sg	11 24 06.9	+0.8
FEMA				AML	AML		
	comp=N,5305μm,0.3s						
FEMA				AML	AML		
	comp=E,6565μm,0.7s						
FEMA				AML	AML		
	comp=E,6565μm,0.7s						
FEMA				AML	AML		
	comp=N,4197μm,0.1s						
RM33	**Pellescritta (**	**0.26**	**172**	P	Pb	11 24 04.5	-0.7
RM33				S	Sb	11 24 08.8	-0.9
RM33				AML	AML		
	comp=E,1830μm,0.7s						
RM33				AML	AML		
	comp=N,2115μm,1.1s						
RM33				AML	AML		
	comp=E,1855μm,0.7s						
RM33				AML	AML		
	comp=E,1835μm,0.7s						
RM33				AML	AML		
	comp=N,2110μm,1.1s						
RM33				AML	AML		
	comp=N,1955μm,1.1s						
RM33				AML	AML		
	comp=E,5680μm,0.1s						
RM33				AML	AML		
	comp=N,3755μm,1.1s						
RM33				AML	AML		
	comp=E,5715μm,0.1s						
RM33				AML	AML		
	comp=N,3815μm,1.1s						
RM33				AML	AML		
	comp=E,1643μm,0.1s						
RM33				AML	AML		
	comp=N,1830μm,0.1s						
RM33				AML	AML		
	comp=N,1855μm,0.1s						
RM33				AML	AML		
	comp=E,1633μm,0.3s						
FDMO	**Fiordimonte**	**0.28**	**348**	P	Pg	11 24 04.4	+0.4
FDMO				S	Sg	11 24 08.1	+0.3
FDMO				AML	AML		
	comp=E,1825μm,0.8s						
FDMO				AML	AML		
	comp=N,1630μm,1.1s						
FDMO				AML	AML		
	comp=E,1830μm,0.8s						
FDMO				AML	AML		
	comp=N,1546μm,0.2s						
FDMO				AML	AML		
	comp=E,1749μm,0.3s						
CAMP	**Campotosto**	**0.29**	**142**	P	Pg	11 24 04.7	+0.4
CAMP				S	Sg	11 24 09.2	+1.0
CAMP				AML	AML		
	comp=E,1515μm,0.9s						
CAMP				AML	AML		
	comp=N,984μm,0.5s						
CAMP				AML	AML		
	comp=N,840μm,0.4s						
CAMP				AML	AML		
	comp=E,1397μm,0.2s						
CESI	**CESI - Serrava**	**0.31**	**321**	⇑P	Pg	11 24 04.9	+0.3
CESI				S	Sg	11 24 09.8	+1.1
CESI				AML	AML		
	comp=E,2945μm,1.0s						
CESI				AML	AML		
	comp=N,5675μm,0.3s						
CESI				AML	AML		
	comp=N,5670μm,0.3s						
CESI				AML	AML		
	comp=E,2872μm,0.2s						
GUMA	**Gualdo di Mace**	**0.32**	**23**	⇑P	Pb	11 24 05.6	-0.7
GUMA				S	Sb	11 24 11.2	-0.4
GUMA				AML	AML		
	comp=E,6900μm,0.7s						
GUMA				AML	AML		
	comp=N,9275μm,0.3s						
GUMA				AML	AML		
	comp=E,9565μm,0.3s						
GUMA				AML	AML		
	comp=N,9250μm,0.3s						
GUMA				AML	AML		
	comp=N,7725μm,0.6s						
GUMA				AML	AML		
	comp=E,6905μm,0.7s						
GUMA				AML	AML		
	comp=E,6904μm,0.7s						
GUMA				AML	AML		
	comp=N,9273μm,0.3s						
GUMA				AML	AML		
	comp=E,9569μm,0.3s						
GUMA				AML	AML		
	comp=N,7728μm,0.6s						
CSP1	**Cessapalombo**	**0.33**	**5**	P	Pg	11 24 05.5	+0.5
CSP1				S	Sg	11 24 10.5	+1.1
CSP1				AML	AML		
	comp=E,1635μm,0.4s						
CSP1				AML	AML		
	comp=N,2500μm,0.4s						
CSP1				AML	AML		
	comp=E,1634μm,0.4s						
CSP1				AML	AML		
	comp=N,2500μm,0.4s						
CSP1				AML	AML		
	comp=E,1631μm,0.4s						
ARRO	**Arrone**	**0.35**	**238**	⇑P	Pg	11 24 05.7	+0.4
ARRO				S	Sb	11 24 11.2	-1.0
ARRO				AML	AML		
	comp=E,1265μm,1.5s						
ARRO				AML	AML		
	comp=E,1265μm,0.4s						
ARRO				AML	AML		
	comp=N,1505μm,0.2s						
ARRO				AML	AML		
	comp=E,1270μm,0.4s						
ARRO				AML	AML		
	comp=N,1507μm,0.2s						
ARRO				AML	AML		
	comp=E,1210μm,0.2s						
TERO	**Teramo**	**0.35**	**114**	⇓P	Pg	11 24 05.8	+0.4
TERO				S	Sb	11 24 11.3	-1.1
TERO				AML	AML		
	comp=E,1845μm,0.7s						
TERO				AML	AML		
	comp=N,2045μm,1.5s						
TERO				AML	AML		
	comp=E,2015μm,0.8s						
TERO				AML	AML		
	comp=N,2265μm,0.2s						
TERO				AML	AML		
	comp=N,2040μm,1.5s						
TERO				AML	AML		
	comp=E,3380μm,0.3s						
TERO				AML	AML		
	comp=N,5010μm,0.6s						
TERO				AML	AML		
	comp=N,6115μm,0.1s						
TERO				AML	AML		
	comp=E,4250μm,0.3s						
TERO				AML	AML		
	comp=E,1980μm,0.3s						
TERO				AML	AML		
	comp=E,1812μm,0.3s						
TERO				AML	AML		
	comp=N,2043μm,0.2s						
TERO				AML	AML		
	comp=N,2267μm,0.2s						
GIGS	**Gran Sasso**	**0.43**	**137**	P	Pg	11 24 06.9	+0.1
GIGS				S	Sg	11 24 13.5	+0.9
GIGS				AML	AML		
	comp=N,338μm,0.1s						
GIGS				AML	AML		
	comp=E,315μm,0.6s						
GIGS				AML	AML		
	comp=E,552μm,0.2s						
GIGS				AML	AML		
	comp=N,481μm,0.1s						
GIGS				AML	AML		
	comp=E,274μm,0.1s						
GIGS				AML	AML		
	comp=N,338μm,0.1s						
MNTP	**Montappone**	**0.43**	**31**	⇑P	Pb	11 24 07.9	-0.2
MNTP				AML	AML		
	comp=E,2040μm,0.3s						
MNTP				AML	AML		
	comp=N,2370μm,0.3s						
MNTP				AML	AML		
	comp=N,2695μm,0.2s						
MNTP				AML	AML		
	comp=E,3250μm,0.2s						
AQU	**L'Aquila**	**0.45**	**157**	P	Pg	11 24 07.5	+0.3
AQU				S	Sb	11 24 14.7	-0.4
AQU				AML	AML		
	comp=E,584μm,1.5s						
AQU				AML	AML		
	comp=N,766μm,0.3s						
AQU				AML	AML		
	comp=E,610μm,0.3s						
AQU				AML	AML		
	comp=N,748μm,0.3s						
AQU				AML	AML		
	comp=E,815μm,0.4s						
AQU				AML	AML		
	comp=N,847μm,0.7s						
AQU				AML	AML		
	comp=N,896μm,0.7s						
AQU				AML	AML		
	comp=E,812μm,1.0s						
AQU				AML	AML		
	comp=N,766μm,0.3s						
AQU				AML	AML		
	comp=E,610μm,0.3s						
AQU				AML	AML		
	comp=N,748μm,0.3s						
AQU				AML	AML		
	comp=E,562μm,0.3s						
CESX	**Cesi**	**0.46**	**250**	P	Pg	11 24 07.3	0.0
CESX				S	Sb	11 24 14.8	-0.6
CESX				AML	AML		
	comp=E,898μm,0.5s						
CESX				AML	AML		
	comp=N,850μm,0.3s						
CESX				AML	AML		
	comp=N,850μm,0.3s						
CESX				AML	AML		
	comp=E,897μm,0.5s						
ASSB	**Assisi San Ben**	**0.47**	**307**	⇑P	Pg	11 24 07.5	0.0
ASSB				S	Sb	11 24 14.9	-0.8
ASSB				AML	AML		
	comp=E,2050μm,0.3s						
ASSB				AML	AML		
	comp=N,1960μm,0.1s						
ASSB				AML	AML		
	comp=E,2049μm,0.3s						
FIAM	**Fiamignano**	**0.50**	**184**	P	Pg	11 24 08.3	+0.2
FIAM				S	Sb	11 24 15.9	-0.7
FIAM				AML	AML		
	comp=E,702μm,1.6s						
FIAM				AML	AML		
	comp=N,698μm,1.4s						
FIAM				AML	AML		
	comp=E,665μm,0.2s						
FIAM				AML	AML		
	comp=N,594μm,0.2s						
TRTR	**Tortoreto Alta**	**0.55**	**85**	P	Pg	11 24 09.3	+0.2
TRTR				AML	AML		
	comp=E,1970μm,0.4s						
TRTR				AML	AML		
	comp=N,1560μm,0.3s						
TRTR				AML	AML		
	comp=N,1680μm,1.3s						
FAGN	**Fagnano**	**0.59**	**148**	P	Pg	11 24 09.6	-0.1
FAGN				AML	AML		
	comp=E,918μm,0.5s						
FAGN				AML	AML		
	comp=N,762μm,0.5s						
FAGN				AML	AML		
	comp=E,1106μm,0.5s						
FAGN				AML	AML		
	comp=N,1355μm,0.2s						
FOSV	**Fossato di Vic**	**0.61**	**331**	P	Pg	11 24 10.3	+0.1
FOSV				S	Sb	11 24 19.5	-0.2
FOSV				AML	AML		
	comp=E,389μm,0.4s						
FOSV				AML	AML		
	comp=N,457μm,1.4s						
FOSV				AML	AML		
	comp=E,388μm,0.4s						
FOSV				AML	AML		
	comp=N,458μm,1.4s						
FOSV				AML	AML		
	comp=E,389μm,0.4s						
FOSV				AML	AML		
	comp=N,411μm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**126**	⇓P	Pg	11 24 10.8	+0.3
VCEL				AML	AML		
	comp=E,950μm,0.5s						
VCEL				AML	AML		
	comp=N,838μm,0.2s						
VCEL				AML	AML		
	comp=E,1165μm,0.3s						
VCEL				AML	AML		
	comp=N,1240μm,1.2s						
MURB	**Monte Urbino**	**0.69**	**317**	P	Pg	11 24 11.6	0.0
MURB				AML	AML		
	comp=E,1705μm,0.2s						
MURB				AML	AML		
	comp=N,1605μm,0.2s						
PP3	**Marolino**	**0.69**	**28**	P	Pb	11 24 12.7	+0.1
PP3				AML	AML		
	comp=E,4430μm,0.4s						
PP3				AML	AML		
	comp=E,4590μm,0.4s						
PP3				AML	AML		
	comp=N,1855μm,0.5s						
PP3				AML	AML		
	comp=N,1595μm,0.8s						
T0110	**Collepietro**	**0.70**	**140**	P	Pg	11 24 11.7	-0.3
T0110				AML	AML		
	comp=E,590μm,0.6s						
T0110				AML	AML		
	comp=N,784μm,0.2s						
T0110				AML	AML		
	comp=E,652μm,0.6s						
T0110				AML	AML		
	comp=N,783μm,0.2s						
SRES	**S.Oreste - Sor**	**0.72**	**223**	⇓P	Pg	11 24 12.4	+0.2
SRES				AML	AML		
	comp=N,246μm,0.3s						
SRES				AML	AML		
	comp=E,234μm,0.6s						
SRES				AML	AML		
	comp=N,246μm,0.3s						
SSFR	**Montelago di S**	**0.73**	**337**	⇑P	Pg	11 24 12.6	+0.1
SSFR				AML	AML		
	comp=E,624μm,0.3s						
SSFR				AML	AML		
	comp=N,704μm,1.3s						
ATTE	**AVT- Monte Tez**	**0.74**	**306**	⇓P	Pg	11 24 12.7	+0.1
ATTE				AML	AML		
	comp=E,274μm,1.6s						
ATTE				AML	AML		
	comp=N,272μm,0.4s						
ATFO	**Monte Foce - G**	**0.74**	**324**	⇓P	Pg	11 24 12.9	+0.2
ATFO				AML	AML		
	comp=E,316μm,0.5s						
ATFO				AML	AML		
	comp=N,426μm,0.4s						
ATFO				AML	AML		
	comp=E,316μm,0.5s						
ARVD	**Arcevia**	**0.75**	**347**	⇓P	Pg	11 24 12.9	0.0
ARVD				S	Sn	11 24 25.4	-1.1
ARVD				AML	AML		
	comp=N,187μm,1.3s						
ARVD				AML	AML		
	comp=E,261μm,1.5s						
ARVD				AML	AML		
	comp=N,186μm,1.3s						
MGAB	**Montegabbione**	**0.79**	**281**	AML	AML		
	comp=N,544μm,0.4s						
MGAB				AML	AML		
	comp=N,610μm,0.4s						
MGAB				AML	AML		
	comp=E,734μm,0.3s						
MGAB				AML	AML		
	comp=N,611μm,0.4s						
MGAB				AML	AML		
	comp=N,544μm,0.4s						
MGAB				AML	AML		
	comp=E,615μm,1.4s						
FRON	**Frontone**	**0.82**	**337**	AML	AML		
	comp=N,316μm,1.4s						
FRON				AML	AML		
	comp=E,184μm,0.5s						
CERT	**Cerreto**	**0.83**	**190**	AML	AML		
	comp=N,369μm,0.3s						
CERT				AML	AML		
	comp=E,396μm,1.3s						
CERT				AML	AML		
	comp=E,396μm,1.3s						
ATVO	**AVT- Monte Val**	**0.83**	**318**	AML	AML		
	comp=E,244μm,0.9s						
ATVO				AML	AML		
	comp=N,276μm,0.6s						
PIEI	**Pieia**	**0.90**	**329**	AML	AML		
	comp=N,146μm,1.3s						
PIEI				AML	AML		
	comp=E,262μm,0.3s						
PIEI				AML	AML		
	comp=N,146μm,1.3s						
SACS	**San Casciano d**	**0.93**	**276**	AML	AML		
	comp=N,210μm,0.9s						
SACS				AML	AML		
	comp=E,228μm,1.1s						
INTR	**Introdacqua**	**0.93**	**144**	AML	AML		
	comp=E,205μm,0.7s						
INTR				AML	AML		
	comp=N,436μm,0.9s						
INTR				AML	AML		
	comp=N,435μm,0.9s						
NARO	**Abbazia di Nar**	**0.95**	**333**	AML	AML		
	comp=E,116μm,0.3s						
NARO				AML	AML		

	comp=N,183µm,0.6s									
FSSB	**Fossombrone**	**0.97**	**343**		AML	AML				
	comp=N,766µm,0.3s									
FSSB					AML	AML				
	comp=E,482µm,0.4s									
CAFI	**Castiglion Fio**	**1.04**	**303**		AML	AML				
	comp=E,178µm,0.6s									
CAFI					AML	AML				
	comp=N,144µm,1.6s									
GIUL	**Giuliano Di Ro**	**1.21**	**177**		AML	AML				
	comp=E,83µm,0.5s									
GIUL					AML	AML				
	comp=N,102µm,1.3s									

ROM 24 11:24:50.6±0.1, 42°644N±0'.004×13°252E±0'.005, h12km±1km, ML2.3/13, 8C-3D, Error ellipse: s-maj=0.4km s-min=0.1km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
RM33	**Pellescritta (**	**0.14**	**192**	⇑P	Pg	11	24	54.5	+0.5
RM33				S	Sg	11	24	57.2	+0.8
RM33				AML	AML				
	comp=E,5715µm,0.1s								
RM33				AML	AML				
	comp=N,3810µm,1.1s								
RM33				AML	AML				
	comp=E,5680µm,0.1s								
RM33				AML	AML				
	comp=N,3815µm,1.1s								
RM33				AML	AML				
	comp=N,3755µm,1.1s								
CAMP	**Campotosto**	**0.16**	**133**	⇑P	Pg	11	24	54.7	+0.3
CAMP				S	Sg	11	24	57.5	+0.5
CAMP				AML	AML				
	comp=N,984µm,0.5s								
CAMP				AML	AML				
	comp=E,866µm,1.5s								
CAMP				AML	AML				
	comp=N,980µm,0.5s								
LNSS	**Leonessa**	**0.16**	**255**	⇑P	Pg	11	24	54.8	+0.4
LNSS				S	Sg	11	24	57.8	+0.7
LNSS				AML	AML				
	comp=E,1810µm,0.2s								
LNSS				AML	AML				
	comp=N,4315µm,0.4s								
TERO	**Teramo**	**0.26**	**95**	P	Pg	11	24	56.1	+0.1
TERO				S	Sg	11	25	00.2	+0.6
TERO				AML	AML				
	comp=E,3385µm,0.3s								
TERO				AML	AML				
	comp=E,4255µm,0.3s								
TERO				AML	AML				
	comp=E,4250µm,0.3s								
TERO				AML	AML				
	comp=N,6115µm,0.1s								
TERO				AML	AML				
	comp=E,3380µm,0.3s								
TERO				AML	AML				
	comp=N,5010µm,0.6s								
GIGS	**Gran Sasso**	**0.30**	**130**	P	Pg	11	24	56.9	+0.1
GIGS				S	Sg	11	25	01.8	+0.9
GIGS				AML	AML				
	comp=E,552µm,0.2s								
GIGS				AML	AML				
	comp=N,482µm,0.1s								
GIGS				AML	AML				
	comp=N,481µm,0.1s								
AQU	**L'Aquila**	**0.31**	**159**	P	Pb	11	24	57.7	-0.4
AQU				S	Sb	11	25	02.6	-0.5
AQU				AML	AML				
	comp=N,896µm,0.7s								
AQU				AML	AML				
	comp=E,812µm,1.0s								
AQU				AML	AML				
	comp=N,847µm,0.7s								
AQU				AML	AML				
	comp=E,815µm,0.4s								
ARRO	**Arrone**	**0.36**	**260**	P	Pg	11	24	58.1	+0.2
ARRO				S	Sb	11	25	04.0	-0.7
ARRO				AML	AML				
	comp=E,1225µm,0.2s								
ARRO				AML	AML				
	comp=N,610µm,0.2s								
FIAM	**Fiamignano**	**0.39**	**195**	P	Pg	11	24	58.6	+0.3
FIAM				S	Sg	11	25	04.5	+1.0
FIAM				AML	AML				
	comp=E,584µm,0.4s								
FIAM				AML	AML				
	comp=N,554µm,1.1s								
FIAM				AML	AML				
	comp=N,554µm,1.1s								
FIAM				AML	AML				
	comp=E,584µm,0.4s								
FDMO	**Fiordimonte**	**0.41**	**343**	⇓P	Pg	11	24	58.7	0.0
FDMO				S	Sg	11	25	04.7	+0.5
FDMO				AML	AML				
	comp=E,427µm,0.2s								
FDMO				AML	AML				
	comp=N,424µm,0.6s								
GUMA	**Gualdo di Mace**	**0.42**	**8**	⇑P	Pg	11	24	59.2	+0.3
GUMA				S	Sb	11	25	06.0	-0.4
GUMA				AML	AML				
	comp=E,3425µm,0.3s								
GUMA				AML	AML				
	comp=N,3825µm,0.2s								
GUMA				AML	AML				
	comp=N,2670µm,0.7s								
GUMA				AML	AML				
	comp=E,5625µm,0.2s								
OFFI	**Offida**	**0.43**	**48**	⇑P	Pb	11	24	59.9	-0.2
OFFI				AML	AML				
	comp=E,2120µm,0.3s								
OFFI				AML	AML				
	comp=N,1815µm,0.6s								
CESI	**CESI - Serrava**	**0.44**	**325**	P	Pg	11	24	59.4	+0.1
CESI				S	Sg	11	25	06.1	+0.9
CESI				AML	AML				
	comp=E,364µm,0.2s								
CESI				AML	AML				
	comp=N,658µm,0.2s								
CESI				AML	AML				
	comp=N,658µm,0.2s								
CSP1	**Cessapalombo**	**0.45**	**356**	P	Pg	11	24	59.3	-0.2
CSP1				S	Sg	11	25	06.1	+0.7
FAGN	**Fagnano**	**0.45**	**147**	P	Pg	11	24	59.8	+0.3
FAGN				AML	AML				
	comp=E,1103µm,0.5s								
FAGN				AML	AML				
	comp=E,1106µm,0.5s								
FAGN				AML	AML				
	comp=N,1355µm,0.2s								
FAGN				AML	AML				
	comp=E,1106µm,0.5s								
FAGN				AML	AML				
	comp=N,1360µm,0.2s								
CESX	**Cesi**	**0.50**	**266**	P	Pg	11	25	00.2	-0.1
CESX				S	Sb	11	25	07.9	-0.7
CESX				AML	AML				
	comp=N,524µm,0.4s								
CESX				AML	AML				
	comp=E,496µm,1.6s								
VCEL	**Villa Celiera**	**0.50**	**120**	P	Pg	11	25	00.8	+0.4
VCEL				AML	AML				
	comp=N,1240µm,1.2s								
VCEL				AML	AML				
	comp=E,1165µm,0.3s								
TRTR	**Tortoreto Alta**	**0.51**	**71**	⇑P	Pb	11	25	01.9	+0.3
T0110	**Collepietro**	**0.57**	**137**	P	Pg	11	25	01.8	+0.1
T0110				AML	AML				
	comp=E,652µm,0.6s								
T0110				AML	AML				
	comp=N,740µm,0.4s								
T0110				AML	AML				
	comp=E,651µm,0.6s								
ASSB	**Assisi San Ben**	**0.59**	**313**	⇓P	Pb	11	25	02.8	-0.1
ASSB				AML	AML				
	comp=E,242µm,0.8s								
ASSB				AML	AML				
	comp=N,245µm,0.8s								
SNTG	**Esanatoglia**	**0.65**	**340**	P	Pg	11	25	03.0	-0.3
SNTG				AML	AML				
	comp=N,156µm,0.3s								
SNTG				AML	AML				
	comp=E,178µm,0.2s								
SRES	**S.Oreste - Sor**	**0.68**	**234**	⇑P	Pg	11	25	04.0	+0.2
CERT	**Cerreto**	**0.72**	**196**	P	Pg	11	25	04.2	-0.4
CERT				AML	AML				
	comp=N,278µm,1.1s								
CERT				AML	AML				
	comp=E,288µm,0.4s								
PP3	**Marolino**	**0.78**	**20**	P	Pb	11	25	06.1	+0.1
MGAB	**Montegabbione**	**0.88**	**288**	⇓P	Pn	11	25	10.0	+1.1
LPEL	**Lama dei Pelig**	**0.91**	**131**	S	Sn	11	25	22.0	-0.4
CAFI	**Castiglion Fio**	**1.17**	**306**	⇑P	Pg	11	25	14.1	+1.1

*ISK **24** 11:41:49.2, 35°.14N×27°.35E, h13km, ML2.9/12*
*DDA **24** 11:41:51.8±0.0, 35°.48N×27°.02E, h13km±2km, ML2.5*
*ATH **24** 11:41:52.0, 35°.26N×27°.29E, h17km±3km, ML2.8/3, Error ellipse: s-maj=6.7km s-min=1.3km az=330.0*
*THE **24** 11:41:52.3, 35°.29N×27°.33E, h8km±4km, ML2.6/3, Error ellipse: s-maj=6.1km s-min=1.6km az=327.0*

ISC 24 11:41:50.6±1.8, 35°22N±0'.06×27°33E±0'.04, h13km±11km, n27, σ0s87/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
KARP	**Karpathos**	**0.35**	**337**	P	**Pb**	**11**	**41**	**58.5**	**-0.3**
KARP				S	**Sg**	**11**	**42**	**02.8**	**+0.1**
	2µm,0.1s								
KARP	**Karpathos**	**0.35**	**337**	PG	**Pb**	**11**	**41**	**58.6**	**-0.3**
KARP				SG	**Sb**	**11**	**42**	**04.6**	**+0.2**
KARP	**Karpathos**	**0.35**	**337**	P	**Pb**	**11**	**41**	**58.5**	**-0.3**
KARP				S	**Sg**	**11**	**42**	**02.7**	**+0.1**
KARP				AML	AML	11	42	06.4	
	comp=N,4418µm,0.1s								
KARP				AML	AML	11	42	06.6	
	comp=E,4599µm,0.2s								
ZKR	**Zakros**	**0.92**	**264**	P	**Pb**	**11**	**42**	**08.8**	**+0.4**
ZKR				S	**Sn**	**11**	**42**	**23.6**	**+1.3**
	comp=E,470nm,0.6s								
ZKR	**Zakros**	**0.92**	**264**	P	**Pb**	**11**	**42**	**08.5**	**+0.1**
ZKR				S	**Sg**	**11**	**42**	**21.2**	**+0.9**
ZKR				AML	AML	11	42	28.4	
	comp=N,748µm,0.8s								
ZKR				AML	AML	11	42	30.9	
	comp=E,1130µm,0.4s								
STIA	**Sitia Lasithi**	**1.01**	**269**	P	**Pb**	**11**	**42**	**10.1**	**0.0**
STIA				S	**Sb**	**11**	**42**	**22.5**	**-0.7**
STIA				AML	AML	11	42	31.9	
	comp=N,1031µm,0.4s								
STIA				AML	AML	11	42	32.5	
	comp=E,935µm,0.8s								
ARG	**Arkhangelos**	**1.19**	**33**	P	**Pb**	**11**	**42**	**13.3**	**+0.3**
ARG				S	**Sb**	**11**	**42**	**27.9**	**-0.4**
	comp=E,240nm,0.5s								
ARG	**Arkhangelos**	**1.19**	**33**	PN	**Pb**	**11**	**42**	**12.9**	**-0.1**
ARG				SN	**Sn**	**11**	**42**	**30.1**	**+1.1**
ARG	**Arkhangelos**	**1.19**	**33**	P	**Pb**	**11**	**42**	**13.0**	**0.0**
ARG				S	**Sn**	**11**	**42**	**29.1**	**+0.1**
FRMA	**Ierapetra Chan**	**1.32**	**262**	P	**Pn**	**11**	**42**	**13.1**	**-1.7**
KOSK	**Kos Island**	**1.55**	**350**	PN	**Pb**	**11**	**42**	**18.9**	**-0.4**
TURN	**Turunc**	**1.72**	**25**	PN	**Pn**	**11**	**42**	**20.8**	**+0.5**
TURN	**Turunc**	**1.72**	**25**	P	**Pb**	**11**	**42**	**21.9**	**-0.2**
TURN				S	**Sg**	**11**	**42**	**45.0**	**-1.0**
BODT	**Bodrum**	**1.84**	**360**	PN	**Pn**	**11**	**42**	**22.6**	**+0.7**
BDRM	**Kayabasi**	**1.84**	**3**	P	**Pn**	**11**	**42**	**22.4**	**+0.3**
BDRM				S	**Sn**	**11**	**42**	**44.3**	**-1.0**
DALY	**Dalyan (Mula)**	**1.92**	**34**	PN	**Pn**	**11**	**42**	**23.4**	**+0.4**
YER	**Yerkesik**	**2.06**	**22**	PN	**Pn**	**11**	**42**	**25.5**	**+0.5**
AKAS	**Kas**	**2.11**	**61**	PN	**Pn**	**11**	**42**	**24.8**	**-1.0**
MULA	**Mugla, Merkez-**	**2.19**	**21**	P	**Pb**	**11**	**42**	**29.2**	**-0.9**
MULA				S	**Sb**	**11**	**42**	**55.8**	**-1.3**
MULA				*i* AML	AML	11	43	01.0	
	comp=E,30nm,0.7s								
CAME	**Cameli-Denizli**	**2.35**	**42**	PN	**Pn**	**11**	**42**	**29.3**	**+0.2**
APE	**Apeiranthos**	**2.35**	**322**	PN	**Pn**	**11**	**42**	**29.2**	**+0.2**
AYDN	**Tasoluk**	**2.48**	**10**	P	**Pn**	**11**	**42**	**32.9**	**+2.1**
AYDN				S	**Sn**	**11**	**42**	**58.8**	**-2.0**
CAEL	**Denizli, Camel**	**2.49**	**40**	P	**Pb**	**11**	**42**	**34.9**	**-0.4**
CAEL				S	**Sb**	**11**	**43**	**07.3**	**+1.3**
CAEL				*i* AML	AML	11	43	30.0	
	comp=E,45nm,1.0s								
CAEL				*i* AML	AML	11	43	33.0	
	comp=E,43nm,0.9s								
TAVA	**DENIZLI_Tavas**	**2.58**	**29**	P	**Pn**	**11**	**42**	**33.4**	**+1.2**
TAVA				S	**Sb**	**11**	**43**	**08.7**	**+0.1**
TAVA				*i* AML	AML	11	43	15.0	
	comp=E,19nm,0.6s								
TAVA				*i* AML	AML	11	43	15.0	
	comp=E,32nm,0.5s								
GOLH	**Golhisar**	**2.70**	**41**	P	**Pn**	**11**	**42**	**34.3**	**+0.3**
GOLH				S	**Sn**	**11**	**43**	**07.9**	**+1.3**
GOLH				*i* AML	AML	11	43	21.0	
	comp=E,23nm,0.6s								
APMY	**Acipayam-Deniz**	**2.75**	**35**	PN	**Pn**	**11**	**42**	**34.6**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**2.76**	**9**	PN	**Pn**	**11**	**42**	**35.6**	**+0.9**

*LDG **24** 11:50:29.3±0.1, 42°.81N×13°.12E, h10km, Ml4.3/37, Error ellipse: s-maj=3.0km s-min=1.8km az=39.0*
*BJI **24** 11:50:29.2±0.0, 42°.80N×13°.02E, h12km, mb4.8/48, mB5.4/13, Ms5.3/5, Ms7 5.2/5*
*ROM **24** 11:50:30.6±0.0, 42°.820N±0°.002×13°.160E±0°.004, h10km, ML4.7/113, Mw4.5, Error ellipse: s-maj=0.2km s-min=0.2km az=78.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.88; $M_{\theta\theta}$2.92; $M_{\phi\phi}$3.95; $M_{r\theta}$2.16; $M_{\theta\phi}$-3.51; $M_{\phi r}$-2.97; Fault plane solution: $M_0$7.84578×10^{15} NP1:φs137.00000°, δ31.00000°, λ-94.00000°. NP2:φs321.00000°, δ59.00000°, λ-88.00000°.*
*IDC **24** 11:50:30.5±0.4, 42°.95N×13°.05E, h0km, mb4.8/44, mbtmp4.7/58, ML4.0/13 Error ellipse: s-maj=8.5km s-min=7.6km az=102.0*
*PDG **24** 11:50:30.9±0.6, 42°.84N×13°.16E, h15km, MD4.9/5, ML4.8/14, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*NEIC **24** 11:50:31.5±1.5, 42°.90N±0°.04×13°.08E±0°.05, h10km±1km, mb4.9/262, Mwr4.6/10, ML4.7(VIE), ML4.7(ROM), Error ellipse: s-maj=8.2km s-min=6.1km az=33.0*
*MOS **24** 11:50:31.1±1.0, 42°.95N×13°.15E, h16km, mb5.1/39, MS4.0/6, Error ellipse: s-maj=5.5km s-min=2.9km az=76.0*
*PRU **24** 11:50:31.2±0.0, 42°.88N×13°.19E, h0km, M4.9*
*BGR **24** 11:50:32.0±0.9, 42°.78N×13°.42E, h5km, ML5.1/9, Error ellipse: s-maj=16.7km s-min=13.3km az=138.0*
*NEIC **24** 11:50:32, 42°.89N×13°.08E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-7.40; $M_{\theta\theta}$3.04; $M_{\phi\phi}$4.36; $M_{r\theta}$5.16; $M_{\theta\phi}$-3.56; $M_{\phi r}$-3.22; Fault plane solution: $M_0$9.55000×10^{15} NP1:φs150.52000°, δ26.70000°, λ-70.62000°. NP2:φs309.03000°, δ64.92000°, λ-99.47000°. Principal axes: T 9.3553, Plg19.0000°, Azm46.0000°; N 0.3750, Plg9.0000°, Azm313.0000°; P -9.7302, Plg69.0000°, Azm200.0000°;*
*TIR **24** 11:50:32.0, 42°.77N×13°.56E, h13km, Md4.8*
*BEO **24** 11:50:33.7±0.8, 42°.93N×13°.39E, h3km±5km, ML4.8/10*
*STR **24** 11:50:33.6±0.2, 43°.N±5°×1°.3E±°, h10km, mb5.0/22*
*GEN **24** 11:50:47.3, 43°.47N×11°.96E, h26km±1km, Ml0.0*

ISC 24 11:50:31.6±0.4, 42°81N±0'.01×13°13E±0'.01, h12km±2km, n1213, σ1s58/1182, mb4.9/206, 148C-52D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
T1212	**Cascia, Frazio**	**0.09**	**227**	⇑P	**Pg**	**11**	**50**	**34.0**	**-0.3**
T1212				S	**Sg**	**11**	**50**	**36.1**	**-0.2**
MC2	**Monte Cornacci**	**0.11**	**23**	⇑P	**Pg**	**11**	**50**	**33.6**	**-1.1**
MC2				S	**Sg**	**11**	**50**	**35.8**	**-1.2**
AQT1	**Arquata del Tr**	**0.12**	**108**	⇓P	**Pg**	**11**	**50**	**33.9**	**-0.8**
AQT1				S	**Sg**	**11**	**50**	**36.4**	**-0.6**
FEMA	**Monte Fema**	**0.16**	**338**	⇑P	**Pg**	**11**	**50**	**34.7**	**-0.7**
FEMA				S	**Sg**	**11**	**50**	**37.5**	**-0.6**
FEMA				AML	AML				
FEMA				AML	AML				
FEMA				AML	AML				
FEMA				AML	AML				
MMO1	**Montemonaco**	**0.17**	**59**	⇑P	**Pg**	**11**	**50**	**34.3**	**-1.2**
MMO1				S	**Sg**	**11**	**50**	**36.9**	**-1.3**
LNSS	**Leonessa**	**0.22**	**198**	⇑P	**Pg**	**11**	**50**	**36.1**	**-0.2**
LNSS				S	**Sg**	**11**	**50**	**40.4**	**+0.8**
T1241	**Roccafluvione,**	**0.22**	**79**	⇑P	**Pg**	**11**	**50**	**35.3**	**-1.1**
T1241				S	**Sg**	**11**	**50**	**38.7**	**-0.9**
FDMO	**Fiordimonte**	**0.23**	**352**	⇑P	**Pg**	**11**	**50**	**35.6**	**-0.8**
FDMO				S	**Sg**	**11**	**50**	**39.2**	**-0.5**
FDMO				AML	AML				
FDMO				AML	AML				
SMA1	**SAN MARTINO**	**0.23**	**140**	⇑P	**Pg**	**11**	**50**	**36.0**	**-0.6**
SMA1				S	**Sg**	**11**	**50**	**39.9**	**-0.1**
CESI	**CESI - Serrava**	**0.26**	**319**	⇑P	**Pg**	**11**	**50**	**36.5**	**-0.5**
CESI				S	**Sg**	**11**	**50**	**40.7**	**+0.2**
T1243	**Rocca Santa Ma**	**0.26**	**116**	P	**Pg**	**11**	**50**	**36.1**	**-0.9**
T1243				S	**Sg**	**11**	**50**	**40.5**	**-0.2**
CSP1	**Cessapalombo**	**0.28**	**11**	⇑P	**Pg**	**11**	**50**	**36.5**	**-1.0**
CSP1				S	**Sg**	**11**	**50**	**40.9**	**-0.5**
CSP1				AML	AML				
CSP1				AML	AML				
RM33	**Pellescritta (**	**0.31**	**169**	⇑P	**Pg**	**11**	**50**	**37.3**	**-0.6**
RM33				S	**Sg**	**11**	**50**	**42.9**	**+0.8**
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
CAMP	**Campotosto**	**0.34**	**143**	⇓P	**Pg**	**11**	**50**	**37.6**	**-1.0**
CAMP				S	**Sg**	**11**	**50**	**43.2**	**0.0**
T1211	**Morro Reatino**	**0.35**	**216**	⇑P	**Pg**	**11**	**50**	**38.2**	**-0.3**
T1211				S	**Sb**	**11**	**50**	**44.6**	**-0.7**
ARRO	**Arrone**	**0.36**	**229**	⇑P	**Pg**	**11**	**50**	**38.5**	**-0.3**
ARRO				AML	AML				
	comp=N,91400µm,1.1s								
ARRO				AML	AML				
	comp=E,90350µm,0.8s								
SEF1	**Sefro**	**0.36**	**338**	P	**Pg**	**11**	**50**	**38.1**	**-0.8**
SEF1				S	**Sg**	**11**	**50**	**43.8**	**+0.1**
SEF1				AML	AML				
SEF1				AML	AML				
SEF1				AML	AML				
MDAR	**Monte D'Aria**	**0.38**	**1**	⇑P	**Pg**	**11**	**50**	**38.1**	**-1.1**
MDAR				S	**Sg**	**11**	**50**	**44.0**	**-0.3**
MDAR				AML	AML				
MDAR				AML	AML				
MDAR				AML	AML				
PIO1	**Pioraco**	**0.38**	**343**	⇑P	**Pg**	**11**	**50**	**38.4**	**-0.9**
PIO1				S	**Sg**	**11**	**50**	**44.3**	**0.0**
PIO1				AML	AML				
PIO1				AML	AML				
PIO1				AML	AML				
TERO	**Teramo**	**0.40**	**118**	⇑P	**Pg**	**11**	**50**	**38.3**	**-1.1**
TERO				S	**Sg**	**11**	**50**	**44.4**	**-0.3**
TERO				AML	AML				
TERO				AML	AML				
TERO				AML	AML				
TERO				AML	AML				
TERO				AML	AML				
TERO				AML	AML				
FIU1	**Fiuminata**	**0.40**	**339**	⇑P	**Pg**	**11**	**50**	**38.7**	**-0.9**
FIU1				S	**Sg**	**11**	**50**	**45.1**	**+0.1**
FIU1				AML	AML				
FIU1				AML	AML				
MNTP	**Montappone**	**0.41**	**37**	P	**Pg**	**11**	**50**	**39.1**	**-0.6**
MNTP				AML	AML				
MNTP				AML	AML				
ASSB	**Assisi San Ben**	**0.42**	**304**	⇑P	**Pg**	**11**	**50**	**39.2**	**-0.7**
SSM1	**San Severino M**	**0.42**	**4**	⇑P	**Pg**	**11**	**50**	**38.8**	**-1.0**
SSM1				S	**Sg**	**11**	**50**	**45.3**	**-0.1**
OFFI	**Offida**	**0.42**	**73**	⇑P	**Pg**	**11**	**50**	**39.5**	**-0.5**
OFFI				AML	AML				
OFFI				AML	AML				
GAG1	**Gagliole**	**0.43**	**354**	⇑P	**Pg**	**11**	**50**	**39.2**	**-0.9**
GAG1				S	**Sg**	**11**	**50**	**45.9**	**+0.1**
GAG1				AML	AML				
GAG1				AML	AML				
GAG1				AML	AML				
MTL1	**Matelica**	**0.45**	**349**	⇑P	**Pg**	**11**	**50**	**39.6**	**-0.9**
MTL1				S	**Sg**	**11**	**50**	**46.7**	**+0.1**
MTL1				AML	AML				
MTL1				AML	AML				
CESX	**Cesi**	**0.46**	**244**	⇑P	**Pg**	**11**	**50**	**40.0**	**-0.5**
CESX				S	**Sb**	**11**	**50**	**47.6**	**-0.7**
CESX				AML	AML				
CESX				AML	AML				
SNTG	**Esanatoglia**	**0.46**	**342**	⇑P	**Pg**	**11**	**50**	**39.8**	**-1.0**
SNTG				S	**Sg**	**11**	**50**	**47.0**	**+0.1**
SNTG				AML	AML				
SNTG				AML	AML				
	comp=E,13400µm,0.8s								
SNTG				AML	AML				
SNTG				AML	AML				
	comp=N,14500µm,0.4s								
GIGS	**Gran Sasso**	**0.48**	**138**	P	**Pg**	**11**	**50**	**39.8**	**-1.3**
GIGS				S	**Sg**	**11**	**50**	**47.2**	**-0.3**
GIGS				AML	AML				
	comp=E,32400µm,0.6s								
GIGS				AML	AML				
	comp=N,22500µm,0.7s								
AQU	**L'Aquila**	**0.50**	**156**		**Pg**	**11**	**50**	**40.7**	**-0.7**
AQU				Sg	**Sb**	**11**	**50**	**49.4**	**-0.3**
AQU	**L'Aquila**	**0.50**	**156**	P	**Pg**	**11**	**50**	**40.7**	**-0.7**
AQU						11	50	49.4	
AQU	**L'Aquila**	**0.50**	**156**	⇑P	**Pg**	**11**	**50**	**40.5**	**-0.9**
AQU				AML	AML				
AQU				AML	AML				
AQU				AML	AML				
AQU				AML	AML				
TRE1	**Treia**	**0.52**	**15**	⇑P	**Pg**	**11**	**50**	**41.0**	**-0.7**
TRE1				AML	AML				
TRE1				AML	AML				
ATCC	**AVT- Casa Cast**	**0.52**	**316**	⇓P	**Pg**	**11**	**50**	**41.0**	**-0.7**
ATCC				S	**Sg**	**11**	**50**	**49.4**	**+0.7**
ATCC				AML	AML				
ATCC				AML	AML				
FIAM	**Fiamignano**	**0.54**	**181**	⇑P	**Pg**	**11**	**50**	**41.3**	**-0.9**
FIAM				S	**Sg**	**11**	**50**	**50.0**	**+0.6**
FIAM				AML	AML				
	comp=N,75650µm,1.3s								
FIAM				AML	AML				
	comp=E,88700µm,0.9s								
FOSV	**Fossato di Vic**	**0.55**	**331**	⇓P	**Pg**	**11**	**50**	**41.4**	**-1.0**
FOSV				S	**Sg**	**11**	**50**	**50.0**	**+0.2**
FOSV				AML	AML				
	comp=E,71950µm,1.4s								
FOSV				AML	AML				
FOSV				AML	AML				
	comp=E,71900µm,1.4s								
CING	**Cingoli**	**0.56**	**5**	⇑P	**Pg**	**11**	**50**	**41.4**	**-1.3**
TRTR	**Tortoreto Alta**	**0.57**	**90**	⇑P	**Pg**	**11**	**50**	**42.6**	**-0.2**
TRTR				AML	AML				
TRTR				AML	AML				
CADA	**Capodarco di F**	**0.60**	**50**	P	**Pg**	**11**	**50**	**43.1**	**-0.1**
CADA				AML	AML				
CADA				AML	AML				
CADA				AML	AML				
CIMA	**Civitanova Mar**	**0.63**	**38**	P	**Pg**	**11**	**50**	**43.5**	**-0.3**
CIMA				AML	AML				
CIMA				AML	AML				
CIMA				AML	AML				
MURB	**Monte Urbino**	**0.63**	**316**		**Pg**	**11**	**50**	**43.0**	**-0.9**
MURB				Sg	**Sb**	**11**	**50**	**53.5**	**-0.1**
MURB	**Monte Urbino**	**0.63**	**316**	⇑P	**Pg**	**11**	**50**	**43.2**	**-0.7**
MURB				S	**Sg**	**11**	**50**	**52.7**	**+0.4**
MURB				AML	AML				
MURB				AML	AML				
MURB				AML	AML				
MURB				AML	AML				
MURB				AML	AML				
MMUR	**Monte Murano**	**0.64**	**351**	P	**Pg**	**11**	**50**	**42.9**	**-1.1**
MMUR				S	**Sg**	**11**	**50**	**52.6**	**+0.2**
MMUR				AML	AML				
MMUR				AML	AML				
FAGN	**Fagnano**	**0.64**	**148**	⇑P	**Pg**	**11**	**50**	**42.6**	**-1.4**
FAGN				AML	AML				
	comp=N,93450µm,0.4s								
FAGN				AML	AML				
PP3	**Marolino**	**0.67**	**32**	⇑P	**Pg**	**11**	**50**	**44.0**	**-

ATFO	**Monte Foce - G**	**0.69**	**324**	P	**Pg**	**11**	**50**	**44.0**	**-1.0**
ATFO				AML	AML				
	comp=E,78100µm,0.9s								
ATFO				AML	AML				
	comp=N,59700µm,0.7s								
ARVD	**Arcevia**	**0.70**	**349**	⇑P	**Pg**	**11**	**50**	**43.9**	**-1.3**
ARVD				S	**Sg**	**11**	**50**	**54.5**	**+0.1**
ARVD				AML	AML				
	comp=N,46850µm,0.8s								
ARVD				AML	AML				
	comp=E,45150µm,1.5s								
SRES	**S.Oreste - Sor**	**0.74**	**219**	⇑P	**Pg**	**11**	**50**	**44.9**	**-0.9**
SRES				AML	AML				
	comp=N,40750µm,1.3s								
SRES				AML	AML				
	comp=E,77650µm,0.7s								
T0110	**Collepietro**	**0.76**	**141**	⇑P	**Pg**	**11**	**50**	**44.6**	**-1.6**
T0110				AML	AML				
	comp=E,98500µm,0.5s								
T0110				AML	AML				
	comp=N,85950µm,0.5s								
MGAB	**Montegabbione**	**0.76**	**278**	⇑P	**Pg**	**11**	**50**	**45.6**	**-0.6**
MGAB				AML	AML				
MGAB				AML	AML				
MGAB				AML	AML				
MGAB				AML	AML				
FRON	**Frontone**	**0.77**	**337**	⇑P	**Pg**	**11**	**50**	**45.0**	**-1.4**
FRON				S	**Sg**	**11**	**50**	**56.4**	**0.0**
FRON				AML	AML				
	comp=E,66800µm,0.2s								
FRON				AML	AML				
ATVO	**AVT- Monte Val**	**0.78**	**317**	⇑P	**Pg**	**11**	**50**	**45.6**	**-1.0**
ATVO				AML	AML				
	comp=E,54500µm,1.0s								
ATVO				AML	AML				
	comp=N,39850µm,1.2s								
AOI	**Ancona**	**0.81**	**25**	⇑P	**Pg**	**11**	**50**	**46.0**	**-1.3**
AOI				AML	AML				
	comp=E,80050µm,1.3s								
AOI				AML	AML				
	comp=N,78500µm,1.0s								
PTQR	**Pietraquaria**	**0.81**	**166**	⇑P	**Pg**	**11**	**50**	**45.8**	**-1.6**
PTQR				AML	AML				
	comp=N,24400µm,1.0s								
PTQR				AML	AML				
	comp=E,44700µm,0.7s								
ATMI	**Monte Miggiano**	**0.82**	**310**	P	**Pg**	**11**	**50**	**47.2**	**-0.3**
ATMI				AML	AML				
ATMI				AML	AML				
	comp=E,94750µm,1.6s								
COR1	**Corinaldo**	**0.82**	**353**	⇑P	**Pg**	**11**	**50**	**47.0**	**-0.5**
COR1				AML	AML				
	comp=E,89850µm,0.9s								
COR1				AML	AML				
COR1				AML	AML				
COR1				AML	AML				
ATPI	**Pietralunga -**	**0.83**	**320**	⇑P	**Pg**	**11**	**50**	**46.6**	**-1.1**
ATPI				AML	AML				
	comp=N,38050µm,1.2s								
ATPI				AML	AML				
	comp=E,54000µm,0.8s								
MTCE	**Montecelio**	**0.84**	**200**	⇑P	**Pg**	**11**	**50**	**46.3**	**-1.5**
MTCE				AML	AML				
	comp=E,76350µm,0.5s								
MTCE				AML	AML				
	comp=N,42950µm,1.4s								
PIEI	**Pieia**	**0.84**	**329**	⇑P	**Pg**	**11**	**50**	**46.5**	**-1.4**
PIEI				AML	AML				
	comp=E,37150µm,0.3s								
PIEI				AML	AML				
	comp=N,33300µm,0.7s								
MPAG	**Monte Paganucc**	**0.86**	**342**	⇑P	**Pg**	**11**	**50**	**46.8**	**-1.4**
MPAG				AML	AML				
	comp=E,88150µm,0.3s								
MPAG				AML	AML				
	comp=E,88850µm,0.3s								
MPAG				AML	AML				
	comp=N,54950µm,1.2s								
MPAG				AML	AML				
	comp=N,53250µm,1.3s								
CERT	**Cerreto**	**0.87**	**187**	⇑P	**Pg**	**11**	**50**	**46.7**	**-1.6**
CERT				AML	AML				
	comp=N,85350µm,0.5s								
CERT				AML	AML				
NARO	**Abbazia di Nar**	**0.89**	**333**	⇑P	**Pg**	**11**	**50**	**47.3**	**-1.6**
NARO				AML	AML				
	comp=N,25900µm,1.0s								
NARO				AML	AML				
	comp=E,43400µm,0.8s								
SENI	**Senigallia**	**0.90**	**5**	P	**Pg**	**11**	**50**	**48.1**	**-0.7**
SENI				AML	AML				
SENI				AML	AML				
	comp=N,90350µm,1.0s								
SENI				AML	AML				
	comp=E,76050µm,1.2s								
SENI				AML	AML				
	comp=N,90250µm,1.0s								
SENI				AML	AML				
SENI				AML	AML				
SACS	**San Casciano d**	**0.90**	**273**	⇑P	**Pg**	**11**	**50**	**48.3**	**-0.6**
SACS				AML	AML				
SACS				AML	AML				
	comp=N,91350µm,0.8s								
SACS				AML	AML				
	comp=N,92150µm,0.8s								
SACS				AML	AML				
APEC	**Apecchio**	**0.91**	**325**	P	**Pg**	**11**	**50**	**48.0**	**-1.1**
FSSB	**Fossombrone**	**0.92**	**344**	⇑P	**Pg**	**11**	**50**	**47.9**	**-1.4**
FSSB				AML	AML				
FSSB				AML	AML				
BADI	**Badiali**	**0.95**	**317**	⇑P	**Pg**	**11**	**50**	**48.8**	**-1.2**
BADI				AML	AML				
	comp=E,3540µm,0.5s								
BADI				AML	AML				
	comp=E,3530µm,0.5s								
BADI				AML	AML				
	comp=N,45050µm,1.6s								
RCAV	**Rocca di Cave**	**0.97**	**188**	P	**Pg**	**11**	**50**	**48.8**	**-1.6**
RCAV				AML	AML				
	comp=E,74100µm,0.5s								
RCAV				AML	AML				
	comp=N,84200µm,0.4s								
INTR	**Introdacqua**	**0.98**	**144**	P	**Pg**	**11**	**50**	**48.5**	**-2.0**
INTR				AML	AML				
	comp=E,38100µm,0.6s								
INTR				AML	AML				
PE3	**Peglio**	**1.00**	**332**	⇑P	**Pg**	**11**	**50**	**49.6**	**-1.2**
PE3				AML	AML				
	comp=N,97400µm,0.3s								
PE3				AML	AML				
	comp=E,286µm,0.5s								
CAFI	**Castiglion Fio**	**1.00**	**302**	⇑P	**Pg**	**11**	**50**	**49.8**	**-1.0**
CAFI				AML	AML				
	comp=E,35000µm,0.7s								
CAFI				AML	AML				
	comp=N,48500µm,0.9s								
CAFI				AML	AML				
	comp=N,51150µm,0.9s								
CAFI				AML	AML				
	comp=E,35100µm,0.7s								
LATE	**Laterza**	**1.00**	**259**	Pg	**Pg**	**11**	**50**	**50.1**	**-0.8**
LATE	**Laterza**	**1.00**	**259**	⇑P	**Pg**	**11**	**50**	**50.1**	**-0.8**
VVLD	**Villa Vallelon**	**1.01**	**159**	P	**Pg**	**11**	**50**	**49.8**	**-1.2**
VVLD				AML	AML				
	comp=E,36300µm,0.8s								
VVLD				AML	AML				
	comp=N,39100µm,1.2s								
GUAR	**Guarcino**	**1.03**	**172**	P	**Pg**	**11**	**50**	**49.9**	**-1.4**
GUAR				AML	AML				
	comp=E,47350µm,1.4s								
GUAR				AML	AML				
	comp=N,67850µm,0.6s								
RMP	**Rome, Mte Porz**	**1.05**	**198**	⇑P	**Pb**	**11**	**50**	**50.0**	**-1.7**
RMP				AML	AML				
	comp=E,86850µm,0.9s								
RMP				AML	AML				
	comp=N,65150µm,0.8s								
SSP9	**Sansepolcro**	**1.06**	**316**	P	**Pb**	**11**	**50**	**50.9**	**-1.0**
SSP9				AML	AML				
	comp=E,39100µm,1.3s								
SSP9				AML	AML				
	comp=N,37200µm,1.3s								
PARC	**Parchiule**	**1.06**	**322**	P	**Pb**	**11**	**50**	**50.7**	**-1.3**
PARC				AML	AML				
	comp=E,52050µm,0.8s								
PARC				AML	AML				
	comp=N,48450µm,1.2s								
SF03	**Valle Cupa**	**1.06**	**270**	P	**Pb**	**11**	**50**	**51.1**	**-0.9**
CAFR	**Castel Frentan**	**1.07**	**123**	P	**Pb**	**11**	**50**	**50.6**	**-1.5**
CAFR				AML	AML				
	comp=E,163µm,0.6s								
CAFR				AML	AML				
	comp=N,27450µm,0.8s								
SF11	**Podere del Sol**	**1.07**	**274**	⇑P	**Pb**	**11**	**50**	**51.2**	**-0.9**
MCIV	**Monte Civitell**	**1.07**	**269**	⇑P	**Pb**	**11**	**50**	**50.9**	**-1.2**
MCIV				AML	AML				
	comp=E,29350µm,0.6s								
MCIV				AML	AML				
	comp=N,34200µm,0.6s								
SF04	**Casetta**	**1.08**	**272**	AML	AML				
	comp=E,37700µm,0.4s								
SF04				AML	AML				
	comp=N,24850µm,1.6s								
LPEL	**Lama dei Pelig**	**1.09**	**134**	P	**Pb**	**11**	**50**	**50.1**	**-2.3**
LPEL				AML	AML				
	comp=N,34650µm,1.1s								
LPEL				AML	AML				
	comp=E,43300µm,0.6s								
VIVA	**Pratoni del Vi**	**1.09**	**194**	P	**Pb**	**11**	**50**	**50.8**	**-1.7**
VIVA				AML	AML				
	comp=N,82400µm,0.6s								
VIVA				AML	AML				
RDP	**Rocca di Papa**	**1.10**	**196**	⇑P	**Pb**	**11**	**50**	**50.8**	**-1.7**
RDP				AML	AML				
RDP				AML	AML				
MA9	**Marino**	**1.10**	**199**	P	**Pb**	**11**	**50**	**50.5**	**-2.1**
SAMA	**S.Maria delle**	**1.11**	**201**	⇑P	**Pb**	**11**	**50**	**51.0**	**-1.7**
SF14	**Selvena**	**1.12**	**268**	P	**Pb**	**11**	**50**	**51.9**	**-1.0**
TOLF	**Tolfa**	**1.12**	**229**	⇑P	**Pb**	**11**	**50**	**51.9**	**-1.1**
PESA	**Pesaro**	**1.15**	**349**	⇑P	**Pb**	**11**	**50**	**52.3**	**-1.1**
PESA				AML	AML				
PESA				AML	AML				
CPGN	**Carpegna, Ital**	**1.15**	**329**	P	**Pb**	**11**	**50**	**52.9**	**-0.7**
CPGN				AML	AML				
CPGN				AML	AML				
SF01	**Poggio Pratacc**	**1.16**	**271**	P	**Pb**	**11**	**50**	**53.0**	**-0.5**
SF01				AML	AML				
	comp=E,59250µm,0.8s								
SF01				AML	AML				
	comp=N,37650µm,0.8s								
POFI	**Posta Fibreno**	**1.18**	**158**	⇑P	**Pb**	**11**	**50**	**51.7**	**-2.2**
POFI				AML	AML				
	comp=E,27100µm,0.7s								
POFI				AML	AML				
	comp=N,18850µm,0.8s								
LAV9	**Lanuvio**	**1.18**	**196**	P	**Pb**	**11**	**50**	**52.5**	**-1.4**
CRE	**Caprese Michel**	**1.18**	**313**	⇓P	**Pb**	**11**	**50**	**52.9**	**-1.2**
CRE				AML	AML				
	comp=N,24850µm,1.0s								
CRE				AML	AML				
	comp=E,21050µm,1.0s								
LRP	**Arpino**	**1.21**	**164**	P	**Pn**	**11**	**50**	**53.8**	**-0.7**
LRP				AML	AML				
	comp=N,20600µm,0.9s								
LRP				AML	AML				
	comp=E,15050µm,1.5s								
ARCI	**Arcidosso**	**1.22**	**272**	⇑P	**Pn**	**11**	**50**	**53.9**	**-0.7**
ARCI				AML	AML				
	comp=E,11300µm,1.0s								
ARCI				AML	AML				
	comp=N,11400µm,1.3s								
RSM	**Repubblica di**	**1.22**	**336**	P	**Pn**	**11**	**50**	**54.1**	**-0.5**
RSM				AML	AML				
	comp=N,75600µm,0.9s								
RSM				AML	AML				
	comp=E,49350µm,1.3s								
GIUL	**Giuliano Di Ro**	**1.26**	**176**	P	**Pn**	**11**	**50**	**53.5**	**-1.5**
GIUL				AML	AML				
	comp=E,25450µm,0.8s								
GIUL				AML	AML				
	comp=N,21650µm,1.2s								
LATB	**Latina**	**1.32**	**186**	P	**Pn**	**11**	**50**	**54.1**	**-1.8**
LATB				AML	AML				
	comp=N,8440µm,1.6s								
LATB				AML	AML				
	comp=E,10415µm,0.6s								
RNI2	**Rionero Sannit**	**1.34**	**145**	AML	AML				
	comp=E,36600µm,1.6s								
RNI2				AML	AML				
	comp=N,36500µm,1.0s								
RNI2				AML	AML				
	comp=E,37300µm,1.6s								
RNI2				AML	AML				
	comp=N,35900µm,1.0s								
LIK	**San Giovanni I**	**1.34**	**166**	P	**Pn**	**11**	**50**	**55.6**	**-0.6**
LIK				AML	AML				
	comp=E,37300µm,1.0s								
LIK				AML	AML				
	comp=N,39350µm,1.6s								
CERA	**Filignano**	**1.38**	**151**	⇓P	**Pn**	**11**	**50**	**55.6**	**-1.1**
CERA				AML	AML				
	comp=E,33950µm,0.7s								
CERA				AML	AML				
	comp=N,25450µm,0.6s								
CERA				AML	AML				
	comp=N,26700µm,0.6s								
CERA				AML	AML				
	comp=E,35050µm,0.7s								
ASQU	**Asqua**	**1.39**	**316**	P	**Pn**	**11**	**50**	**55.7**	**-1.2**
ASQU				S	Sn	11	51	00.2	-15
ASQU	**Asqua**	**1.39**	**316**	⇓P	**Pn**	**11**	**50**	**55.6**	**-1.3**
ASQU				AML	AML				
	comp=N,17300µm,1.0s								
ASQU				AML	AML				
	comp=E,19450µm,0.8s								
FRES	**Fresagrandinar**	**1.41**	**126**	P	**Pn**	**11**	**50**	**55.9**	**-1.3**
BLLA	**Bellaria**	**1.42**	**340**	AML	AML				
	comp=N,56400µm,1.2s								
BLLA				AML	AML				
	comp=E,63050µm,1.4s								
SFI	**Santa Sofia**	**1.44**	**320**	⇓P	**Pn**	**11**	**50**	**56.7**	**-0.8**
SFI				AML	AML				
	comp=E,19300µm,0.7s								
SFI				AML	AML				
	comp=N,21800µm,1.1s								
SFI				AML	AML				
	comp=E,18900µm,0.7s								
SFI				AML	AML				
	comp=N,21400µm,1.1s								
TRIV	**Trivento**	**1.48**	**134**	P	**Pn**	**11**	**50**	**58.5**	**+0.3**
TRIV				AML	AML				
	comp=E,24400µm,1.0s								
TRIV				AML	AML				
	comp=N,24600µm,1.0s								
TRIV				AML	AML				
	comp=E,23200µm,1.0s								
TRIV				AML	AML				
	comp=N,22900µm,0.9s								
CSNT	**Castellina Chi**	**1.50**	**297**	P	**Pn**	**11**	**50**	**57.8**	**-0.6**
CSNT	**Castellina Chi**	**1.50**	**297**	⇓P	**Pn**	**11**	**50**	**57.8**	**-0.6**
CSNT				AML	AML				
	comp=E,7355µm,0.6s								
CSNT				AML	AML				
	comp=N,8490µm,0.7s								
FROS	**Frosini**	**1.50**	**286**	P	**Pn**	**11**	**50**	**57.9**	**-0.5**
FROS	**Frosini**	**1.50**	**286**	⇓P	**Pn**	**11**	**50**	**57.9**	**-0.5**
FROS				AML	AML				
	comp=E,15350µm,0.8s								
FROS				AML	AML				
	comp=N,16300µm,0.7s								
OSSC	**Osservatorio P**	**1.55**	**298**		**Pn**	**11**	**50**	**58.5**	**-0.6**
OSSC	**Osservatorio P**	**1.55**	**298**	P	**Pn**	**11**	**50**	**58.5**	**-0.6**
OSSC	**Osservatorio P**	**1.55**	**298**	⇓P	**Pn**	**11**	**50**	**58.6**	**-0.6**
OSSC				AML	AML				
	comp=E,10750µm,0.8s								
OSSC				AML	AML				
	comp=N,10750µm,0.8s								
OSSC				AML	AML				
	comp=N,8530µm,1.0s								
OSSC				AML	AML				
	comp=E,8565µm,1.0s								
RUFI	**Rufina**	**1.57**	**311**	P	**Pn**	**11**	**50**	**58.2**	**-1.1**
RUFI	**Rufina**	**1.57**	**311**	P	**Pn**	**11**	**50**	**58.7**	**-0.6**
RUFI				AML	AML				
	comp=N,16100µm,1.0s								
RUFI				AML	AML				
	comp=E,10970µm,0.8s								
VAGA	**Valle Agricola**	**1.62**	**149**	P	**Pn**	**11**	**50**	**59.9**	**-0.2**
VAGA				AML	AML				
	comp=E,9400µm,0.7s								
VAGA				AML	AML				
	comp=N,13850µm,1.1s								
VAGA				AML	AML				
	comp=N,14300µm,1.1s								
VAGA				AML	AML				
	comp=E,8985µm,0.7s								
LMD	**Lutirano**	**1.64**	**321**	P	**Pn**	**11**	**50**	**60.0**	**-0.3**
LMD	**Lutirano**	**1.64**	**321**	⇓P	**Pn**	**11**	**50**	**59.9**	**-0.3**
LMD				AML	AML				
	comp=E,15850µm,1.6s								
LMD				AML	AML				
	comp=N,12600µm,0.8s								
TRIF	**Trifonti**	**1.66**	**281**	⇓P	**Pn**	**11**	**51**	**00.1**	**-0.6**
TRIF				AML	AML				
	comp=E,8450µm,0.8s								
TRIF				AML	AML				
	comp=N,7665µm,0.8s								
BSSO	**Busso**	**1.67**	**139**	P	**Pn**	**11**	**51**	**01.0**	**+0.2**
BSSO				AML	AML				
	comp=E,17250µm,1.6s								
BSSO				AML	AML				
	comp=N,13500µm,1.6s								
BSSO				AML	AML				
	comp=N,6200µm,1.6s								
BSSO				AML	AML				
	comp=E,7205µm,1.3s								
CASP	**Castiglione de**	**1.67**	**270**		**Pn**	**11**	**50**	**59.9**	**-0.7**
CASP	**Castiglione de**	**1.67**	**270**	⇓P	**Pn**	**11**	**50**	**60.0**	**-0.7**
CASP				AML	AML				
	comp=N,4855µm,1.0s								
CASP				AML	AML				
	comp=E,4640µm,1.6s								
CIGN	**Sant'Elia a Pi**	**1.75**	**131**	P	**Pn**	**11**	**51**	**02.0**	**+0.2**
CIGN				AML	AML				
	comp=E,8000µm,1.3s								
CIGN				AML	AML				
	comp=N,10045µm,0.8s								
MODR	**Mondragone**	**1.75**	**161**	P	**Pn**	**11**	**51**	**02.5**	**+0.6**
MODR				AML	AML				
	comp=E,9070µm,1.6s								
MODR				AML	AML				
	comp=N,6240µm,0.8s								
BRIS	**BRISIGHELLA**	**1.78**	**319**	P	**Pn**	**11**	**51**	**02.1**	**-0.1**
BRIS				AML	AML				
	comp=E,11600µm,1.0s								
BRIS				AML	AML				
	comp=N,5095µm,1.6s								
BRIS				AML	AML				
	comp=N,24100µm,0.7s								
BRIS				AML	AML				
	comp=E,5025µm,1.6s								
PIGN	**Pignataro Magg**	**1.79**	**154**	P	**Pn**	**11**	**51**	**02.5**	**+0.1**
PIGN				AML	AML				
	comp=N,9260µm,1.3s								
PIGN				AML	AML				
	comp=E,6325µm,1.5s								
PIGN				AML	AML				
	comp=E,7115µm,1.6s								
PIGN				AML	AML				
	comp=N,8640µm,1.0s								
SEI	**Scarperia**	**1.79**	**314**	P	**Pn**	**11**	**51**	**02.2**	**-0.2**
SEI				AML	AML				
	comp=E,12050µm,0.5s								
SEI				AML	AML				
	comp=N,23550µm,0.6s								
DUGI	**Dugi Otok**	**1.83**	**49**	*e*Pn	**Pn**	**11**	**51**	**01.8**	**-1.1**
IMOL	**Imola, Italy**	**1.85**	**327**	P	**Pg**	**11**	**51**	**06.8**	**-0.2**
MELA	**Melanico ??? S**	**1.85**	**126**	P	**Pn**	**11**	**51**	**03.8**	**+0.7**
MELA				AML	AML				
	comp=N,25350µm,1.6s								
MELA				AML	AML				
	comp=N,26350µm,1.6s								
MELA				AML	AML				
	comp=E,34350µm,1.6s								
MELA				AML	AML				
	comp=E,35700µm,1.6s								
GATE	**Gambatesa**	**1.85**	**134**	P	**Pb**	**11**	**51**	**05.0**	**-0.4**
GATE				AML	AML				
	comp=E,9125µm,0.8s								
GATE				AML	AML				
	comp=E,5965µm,1.5s								
GATE				AML	AML				
	comp=N,7180µm,1.2s								
GATE				AML	AML				
	comp=N,7285µm,1.2s								
CRMI	**Carmignano**	**1.86**	**302**	P	**Pn**	**11**	**51**	**03.4**	**+0.1**
CRMI	**Carmignano**	**1.86**	**302**	P	**Pn**	**11**	**51**	**03.1**	**-0.2**
CRMI				AML	AML				
	comp=E,758µm,1.6s								
CRMI				AML	AML				
	comp=N,740µm,1.1s								
MPPT	**Montemurlo**	**1.88**	**308**	P	**Pn**	**11**	**51**	**03.0**	**-0.6**
MPPT				AML	AML				
	comp=E,8945µm,1.2s								
MPPT				AML	AML				
	comp=N,10040µm,0.9s								
TREM	**Isole Tremiti**	**1.89**	**111**	P	**Pn**	**11**	**51**	**03.8**	**+0.1**
TREM				AML	AML				
	comp=N,30800µm,0.7s								
TREM				AML	AML				
	comp=E,29050µm,1.6s								
MTCR	**Monte La Croce**	**1.97**	**309**	P	**Pn**	**11**	**51**	**04.1**	**-0.9**
MTCR	**Monte La Croce**	**1.97**	**309**	P	**Pn**	**11**	**51**	**04.3**	**-0.7**
MTCR				AML	AML				
	comp=E,7465µm,0.7s								
MTCR				AML	AML				
	comp=N,14600µm,0.8s								
VITU	**Vitulano (BN)**	**1.97**	**145**	P	**Pn**	**11**	**51**	**05.9**	**+0.9**
VITU				AML	AML				
	comp=E,6260µm,0.6s								
VITU				AML	AML				
	comp=N,7305µm,0.7s								
VITU				AML	AML				
	comp=E,2505µm,1.5s								
VITU				AML	AML				
	comp=N,7080µm,0.7s								
FNVD	**Fontana Vidola**	**1.99**	**314**	P	**Pn**	**11**	**51**	**05.2**	**0.0**
FNVD	**Fontana Vidola**	**1.99**	**314**	P	**Pn**	**11**	**51**	**05.2**	**0.0**
FNVD				AML	AML				
	comp=E,10620µm,0.9s								
FNVD				AML	AML				
	comp=N,9685µm,1.6s								
VENT	**Ventotene**	**2.03**	**174**	P	**Pn**	**11**	**51**	**05.6**	**0.0**
VENT				AML	AML				
	comp=N,10700µm,1.6s								
VENT				AML	AML				
	comp=E,7865µm,1.1s								
VIRC	**Vir**	**2.04**	**43**	*e*Pn	**Pn**	**11**	**51**	**04.3**	**-1.3**
APRC	**Apricena**	**2.08**	**120**	⇑P	**Pn**	**11**	**51**	**06.3**	**0.0**
APRC				AML	AML				
	comp=N,14550µm,0.5s								
APRC				AML	AML				
	comp=E,13750µm,1.6s								
PAOL	**Paolisi**	**2.08**	**148**		**Pn**	**11**	**51**	**05.5**	**-0.8**
PAOL	**Paolisi**	**2.08**	**148**	P	**Pn**	**11**	**51**	**05.6**	**-0.8**
PAOL				AML	AML				
	comp=N,5370µm,1.3s								
PAOL				AML	AML				
	comp=E,3670µm,1.1s								
PAOL				AML	AML				
	comp=N,5040µm,1.3s								
PAOL				AML	AML				
	comp=E,3505µm,1.1s								
MOCO	**Biccari - m.te**	**2.09**	**133**	⇑P	**Pb**	**11**	**51**	**08.0**	**-1.4**
MOCO				AML	AML				
	comp=E,5865µm,1.6s								
MOCO				AML	AML				
	comp=E,5755µm,1.6s								
MOCO				AML	AML				
	comp=N,3860µm,1.5s								
MOCO				AML	AML				
	comp=N,4145µm,1.5s								
PII	**Pisa**	**2.11**	**296**	P	**Pn**	**11**	**51**	**07.1**	**+0.4**
PII	**Pisa**	**2.11**	**296**	AML	AML				
	comp=N,5265µm,0.6s								
PII				AML	AML				
	comp=E,5855µm,0.8s								
POPM	**Popiglio**	**2.12**	**306**	P	**Pn**	**11**	**51**	**06.6**	**-0.4**
POPM	**Popiglio**	**2.12**	**306**	P	**Pn**	**11**	**51**	**06.6**	**-0.4**
POPM				AML	AML				
	comp=E,4865µm,1.4s								
POPM				AML	AML				
	comp=N,4595µm,0.7s								
BRJN	**Brijuni**	**2.14**	**12**	*e*Pn	**Pn**	**11**	**51**	**06.0**	**-1.1**
BRJN	**Brijuni**	**2.14**	**12**	⇑P	**Pn**	**11**	**51**	**06.2**	**-0.9**
CELB	**S.Piero in Cam**	**2.15**	**269**	⇓P	**Pn**	**11**	**51**	**06.7**	**-0.7**
CELB				AML	AML				

comp=E,1880µm,0.9s
CELB AML AML

comp=N,1985µm,0.8s
MORI Morici 2.15 60 *e*Pn **Pn 11 51 06.5 -0.8**
NVLJ Novalja 2.16 35 *e*Pn **Pn 11 51 06.5 -0.9**
ZCCA Zocca 2.19 315 Pn 11 51 07.9 -0.1
SGRT San Giovanni R 2.21 118 Pn 11 51 08.2 +0.1
SGRT San Giovanni R 2.21 118 P **Pn 11 51 08.8 +0.6**
baz=121
SGRT S **Sn 11 51 35.0 -0.5**

baz=121
SGRT San Giovanni R 2.21 118 ⇑P **Pn 11 51 08.4 +0.2**
SGRT AML AML

comp=N,13300µm,1.1s
SGRT AML AML

comp=E,12100µm,0.9s
MAIM Mastiano 2.22 301 P **Pn 11 51 07.7 -0.5**
MAIM Mastiano 2.22 301 P **Pn 11 51 07.6 -0.7**
MAIM AML AML

comp=N,3410µm,0.9s
MAIM AML AML

comp=E,3950µm,0.9s
RABC Rab 2.28 31 *i* Pn **Pn 11 51 08.3 -0.7**
CARD Cardoso 2.28 303 P **Pn 11 51 08.7 -0.4**
CARD Cardoso 2.28 303 P **Pn 11 51 08.5 -0.6**
CARD AML AML

comp=N,4615µm,1.6s
CARD AML AML

comp=E,4220µm,0.6s
MSAG Monte S. Angel 2.34 117 ⇑P **Pn 11 51 10.1 +0.1**
MSAG AML AML

comp=N,22000µm,0.7s
MSAG AML AML

comp=N,22550µm,0.7s
MSAG AML AML

comp=E,12650µm,1.0s
MSAG AML AML

comp=E,13150µm,1.0s
SMRN Sveta Marina 2.34 18 *e*Pn **Pn 11 51 08.8 -1.2**
SGTA Sant Agata di 2.36 134 P **Pn 11 51 10.2 -0.1**
SGTA AML AML

comp=E,6555µm,0.9s
SGTA AML AML

comp=E,6820µm,0.7s
SGTA AML AML

comp=N,5655µm,1.2s
SGTA AML AML

comp=N,5770µm,1.2s
CAFE Carife 2.38 138 P **Pn 11 51 10.6 0.0**
CAFE AML AML

comp=E,7610µm,1.1s
CAFE AML AML

comp=N,5745µm,1.3s
CAFE AML AML

comp=E,7440µm,1.1s
CAFE AML AML

comp=N,5545µm,1.4s
GSCL Gusciola 2.41 311 P **Pn 11 51 11.0 +0.1**
GSCL Gusciola 2.41 311 P **Pn 11 51 11.0 +0.1**
GSCL AML AML

comp=N,6160µm,0.9s
GSCL AML AML

comp=E,5625µm,0.9s
VLC Villacollemand 2.41 305 Pn 11 51 09.7 -1.2
VLC Villacollemand 2.41 305 P **Pn 11 51 10.1 -0.8**
VLC Villacollemand 2.41 305 P **Pn 11 51 10.1 -0.8**
VLC AML AML

comp=E,3320µm,0.9s
VLC AML AML

comp=N,3425µm,1.2s
VLC AML AML

comp=E,3380µm,0.9s
VLC AML AML

comp=N,3405µm,1.2s
SARO Sassorosso 2.42 306 P **Pn 11 51 10.6 -0.4**
SNAL S. Angelo Dei 2.44 140 P **Pn 11 51 12.7 +1.4**
SNAL AML AML

comp=E,7930µm,1.6s
SNAL AML AML

comp=N,9155µm,1.3s
SNAL AML AML

comp=E,7775µm,1.6s
SNAL AML AML

comp=N,9200µm,1.4s
EQUI Equi 2.56 303 P **Pn 11 51 12.3 -0.6**
EQUI Equi 2.56 303 P **Pn 11 51 12.3 -0.6**
EQUI AML AML

comp=E,2190µm,1.6s
EQUI AML AML

comp=N,2895µm,0.8s
UDBI Udbina 2.57 47 *e*Pn **Pn 11 51 13.3 +0.2**
CAPA Cerignola FG 2.59 129 AML AML

comp=E,12250µm,1.6s
CAPA AML AML

comp=N,14850µm,1.1s
A250A Rusevo Krmpots 2.61 29 *e*Pn **Pn 11 51 13.1 -0.5**
VULT Monte Vulture 2.62 134 P **Pn 11 51 14.0 +0.1**
VULT AML AML

comp=N,7845µm,0.7s
VULT AML AML

comp=N,8060µm,0.7s
VULT AML AML

comp=E,6225µm,0.8s
VULT AML AML

comp=E,6325µm,0.8s
KIJV Kijevo 2.67 62 *e*Pn **Pn 11 51 14.2 -0.2**
PLMA Palmaria, Port 2.69 298 P **Pn 11 51 14.5 -0.2**
PLMA AML AML

comp=E,1470µm,0.5s
PLMA AML AML

comp=N,1795µm,1.2s
RIY Rijeka 2.69 21 *i* Pn **Pn 11 51 14.4 -0.4**
RIY Rijeka 2.69 21 *e*Pn **Pn 11 51 14.3 -0.4**
RIY *e*Sn **Sn 11 51 47.7 +0.4**
MRLC Muro Lucano 2.71 139 P **Pn 11 51 15.1 +0.1**
MRLC AML AML

comp=E,2315µm,1.2s
MRLC AML AML

comp=N,2095µm,0.9s
MRLC AML AML

comp=N,1900µm,1.6s
MRLC AML AML

comp=E,2345µm,1.1s
PLIT Plitvice 2.74 40 *e*Pn **Pn 11 51 15.4 0.0**
TEOL Teolo 2.76 338 Pn 11 51 15.5 -0.2
TEOL Teolo 2.76 338 P **Pn 11 51 15.8 +0.1**
TEOL AML AML

comp=N,15900µm,1.5s
TEOL AML AML

comp=E,18750µm,0.9s
LSTV Lastovo 2.77 90 *e*Pn **Pn 11 51 14.9 -0.9**
GRAM Graiana 2.79 308 AML AML

comp=N,4990µm,1.5s
GRAM AML AML

comp=E,5580µm,0.9s
SKDS Skadanscina 2.81 13⇑ *i*Pn **Pn 11 51 15.3 -1.1**
SKDS Skadanscina 2.81 13⇑ *e*Pn **Pn 11 51 15.3 -1.1**
SKDS *e*Sn **Sn 11 51 49.3 -0.8**
SKDS IAML 11 51 52.3

comp=Z,1µm,0.4s
PALZ Palazzo San Ge 2.82 131 P **Pn 11 51 17.2 +0.7**
PALZ AML AML

comp=N,12750µm,1.0s
PALZ AML AML

comp=E,11625µm,1.6s
PRMA PARMA 2.82 315 Pn 11 51 16.0 -0.6
OPPE Oppeano 2.87 331 P **Pn 11 51 18.7 +1.6**
OPPE AML AML

comp=E,12200µm,0.8s
OPPE AML AML

comp=N,13800µm,1.0s
MRVN Minervino Murg 2.88 126 P **Pn 11 51 17.7 +0.4**
MRVN AML AML

comp=N,2050µm,0.7s
MRVN AML AML

comp=E,2490µm,0.8s
MAKA Makarska 2.89 79 *e*Pn **Pn 11 51 17.1 -0.4**
ACER Acerenza 2.92 133 P **Pn 11 51 17.5 -0.4**
ACER AML AML

comp=N,5040µm,0.9s
ACER AML AML

comp=N,5265µm,0.9s
ACER AML AML

comp=E,5050µm,0.8s
ACER AML AML

comp=E,4835µm,0.8s
TRI Trieste 2.93 9 Pn 11 51 16.3 -1.7
TRI Trieste 2.93 9 P **Pn 11 51 16.3 -1.7**
SMPL Sampolo 2.94 257 P **Pn 11 51 17.8 -0.3**
SMPL AML AML

comp=N,484µm,1.1s
SMPL AML AML

comp=E,568µm,0.9s
CMPR Campora 2.98 146 AML AML

comp=E,1485µm,1.1s
CMPR AML AML

comp=N,899µm,1.0s
A050A Klekovaca 2.98 55⇑ *i*Pn **Pn 11 51 19.3 +0.5**
RICI Ricice 3.01 76 *e*Pn **Pn 11 51 18.7 -0.4**
MSSA Maissana 3.03 301 Pn 11 51 19.2 -0.2
MSSA Maissana 3.03 301 P **Pn 11 51 18.9 -0.5**
MSSA AML AML

comp=E,2080µm,1.0s
MSSA AML AML

comp=N,1885µm,1.6s
PGF Pioggiola 3.06 266 *e*P **Pn 11 51 19.5 -0.4**
PGF *e*Sn **Sn 11 51 49.5 -7.0**

comp=N,871nm,0.9s
CEY Cerknica 3.07 17⇑ *i*Pn **Pn 11 51 19.0 -1.0**
BOJS Bojanci 3.09 29⇑ *i*Pn **Pn 11 51 19.8 -0.5**
BOJS Bojanci 3.09 29⇑ *e*Pn **Pn 11 51 19.9 -0.4**
BOJS IAML 11 52 24.1

comp=Z,4µm,1.2s
BOJS Bojanci 3.09 29 P **Pn 11 51 19.8 -0.5**
PTRP Pietrapertosa 3.17 135 AML AML

comp=E,4220µm,0.8s
PTRP AML AML

comp=N,5690µm,0.7s
SABO M.te Sabotino 3.19 6 Pn 11 51 20.7 -0.8
SABO M.te Sabotino 3.19 6 AML AML

comp=E,8385µm,0.9s
SABO AML AML

comp=E,37800µm,0.9s
SABO AML AML

comp=N,44000µm,0.7s
SABO AML AML

comp=N,11550µm,0.7s
MCEL Monticello 3.19 140 AML AML

comp=E,2020µm,0.9s
MCEL AML AML

comp=E,1980µm,0.9s
MCEL AML AML

comp=N,2030µm,1.1s
MCEL AML AML

comp=N,2090µm,1.1s
SRKY Kupres RS 3.19 65⇑ *i*Pn **Pn 11 51 22.7 +0.9**
ROVR Rover Verones 3.20 333 AML AML

comp=N,1680µm,1.5s
ROVR AML AML

comp=E,1535µm,0.6s
ROVR AML AML

comp=N,4195µm,1.5s
ROVR AML AML

comp=E,3775µm,0.6s
CGRP Cima Grappa 3.21 343 AML AML

comp=E,8415µm,0.7s
CGRP AML AML

comp=E,8365µm,0.7s
CGRP AML AML

comp=N,9420µm,0.7s
CGRP AML AML

comp=N,9400µm,1.0s
MTSN Montesano sull 3.21 141 AML AML

comp=N,1162µm,0.8s
MTSN AML AML

comp=E,1290µm,0.8s
AMUR Altamura 3.22 125 AML AML

comp=N,3120µm,0.6s
AMUR AML AML

comp=E,3400µm,1.2s
VARN Col Varnada, M 3.27 347 AML AML

comp=N,7740µm,1.0s
VARN AML AML

comp=E,11750µm,0.6s
VARN AML AML

comp=N,7750µm,1.0s
VARN AML AML

comp=E,11600µm,0.6s
OZLJ Ozalj 3.27 30 *e*Pn **Pn 11 51 22.5 -0.1**
MGRS Mrkonjic Grad 3.29 59⇑ *i*Pn **Pn 11 51 24.0 +1.0**
GORR Gorreto 3.31 304 AML AML

comp=E,2555µm,1.4s
GORR AML AML

comp=N,1735µm,1.4s
MIGL Miglionico 3.32 131 AML AML

comp=N,15000µm,1.0s
MIGL AML AML

comp=E,10300µm,0.7s
SIRI Monte Sirino - 3.33 141 AML AML

comp=E,1560µm,1.2s
SIRI AML AML

comp=N,1495µm,1.2s
SIRI AML AML

comp=N,1515µm,1.2s
SIRI AML AML

comp=E,1590µm,1.2s
AJAC Base Areonaval 3.36 256 AML AML

comp=N,1225µm,1.5s
AJAC AML AML

comp=E,1425µm,0.8s
STON Ston 3.36 87⇑ *i*Pn **Pn 11 51 22.3 -1.6**
STON Ston 3.36 87 *e*Pn **Pn 11 51 22.2 -1.6**
STON Ston 3.36 87 *e*Pn **Pn 11 51 21.8 -2.1**
STON *e*Sn **Sn 11 52 00.6 -3.1**
STON Ston 3.36 87 AML AML

comp=N,1760µm,1.1s
STON AML AML

comp=E,1685µm,1.3s
PRIJ Prijedor 3.37 49 *e*Pn **Pb 11 51 30.8 -0.5**
SALO Salr 3.37 327 Pn 11 51 23.3 -0.9
SALO Salr 3.37 327 AML AML

comp=N,6540µm,1.3s
SALO AML AML

comp=E,4620µm,1.6s
SALO AML AML

comp=N,6395µm,1.3s
SALO AML AML

comp=E,4845µm,1.6s
LJU Ljubljana 3.38 17⇑ *i*Pn **Pn 11 51 24.2 0.0**
LJU *i* Sn **Sn 11 52 06.6 +2.2**
LJU IAML 11 52 39.3

comp=Z,3µm,0.8s
LJU Ljubljana 3.38 17 AML AML

comp=E,27750µm,1.3s
LJU AML AML

comp=N,35550µm,0.9s
SCHR S. Chirico Rap 3.42 139 AML AML

comp=N,954µm,1.3s
SCHR AML AML

comp=E,894µm,1.3s
MPRI Monte Prat 3.43 358 AML AML

comp=E,7285µm,0.7s
MPRI AML AML

comp=N,8105µm,1.2s
MPRI AML AML

comp=N,10590µm,1.2s
MPRI AML AML

comp=E,9640µm,0.7s
MATE Matera 3.44 128⇓P **Pn 11 51 25.8 +0.9**
MATE Matera 3.44 128 AML AML

comp=N,2425µm,0.9s
MATE AML AML

comp=E,3165µm,1.0s
CRES Cresnjev 3.44 28 *e*Pn **Pn 11 51 23.9 -1.2**
RNCA Ronca, Sant'Ol 3.46 300 AML AML

comp=E,537µm,1.0s
RNCA AML AML

comp=N,515µm,0.9s
STAL STALIGIAL 3.46 355 Pn 11 51 24.9 -0.5
STAL STALIGIAL 3.46 355 AML AML

comp=N,3470µm,0.6s
STAL AML AML

comp=E,5490µm,0.8s
STAL AML AML

comp=N,4210µm,0.7s
STAL AML AML

comp=E,6710µm,0.7s
CUC Castrocucco 3.46 143 Pn 11 51 27.4 +2.0
CUC Castrocucco 3.46 143 AML AML

comp=N,1080µm,1.1s
CUC AML AML

comp=E,1495µm,1.0s
CUC AML AML

comp=E,1225µm,1.0s
CUC AML AML

comp=N,1284µm,1.1s
MAGA Magasa 3.46 330 AML AML

comp=N,7055µm,0.5s
MAGA AML AML

comp=E,11155µm,0.5s
BLY Banja Luka 3.52 55⇑ *i*Pn **Pn 11 51 26.2 +0.1**
LUSI Trento, Gardas 3.52 334 AML AML

comp=E,4465µm,0.8s
LUSI AML AML

comp=N,6000µm,1.3s
CIMO Cimolais 3.53 352 Pn 11 51 26.1 -0.2
CIMO Cimolais 3.53 352 AML AML

comp=E,1850µm,0.6s
CIMO AML AML

comp=E,1870µm,0.6s
CIMO AML AML

comp=N,1995µm,0.8s
CIMO AML AML

comp=N,1950µm,0.8s
LTRZ Laterza 3.53 127 AML AML

comp=N,2825µm,1.0s
LTRZ AML AML

comp=E,2245µm,0.6s
AGOR Agordo 3.56 348 AML AML

comp=E,4160µm,1.0s
AGOR AML AML

comp=E,3335µm,1.0s
AGOR AML AML

comp=N,2115µm,1.6s
AGOR AML AML

comp=N,2650µm,1.3s
NOCI Noci 3.57 123 P **Pn 11 51 27.6 +0.7**
baz=125
NOCI S **Sn 11 52 07.9 -1.0**

baz=125
NOCI Noci 3.57 123 AML AML

comp=E,2815µm,0.8s
NOCI AML AML

comp=N,3985µm,0.9s
PTCC Patocco-Chiusa 3.60 2 AML AML

comp=E,3690µm,0.8s
PTCC AML AML

comp=N,2340µm,1.5s
GAGG Gaggia 3.62 335 AML AML

comp=N,7815µm,1.1s
GAGG AML AML

comp=N,5210µm,1.0s
GAGG AML AML

comp=E,4995µm,1.0s
GAGG AML AML

comp=E,8060µm,1.1s
PRED Cave del Predi 3.64 5 Pn 11 51 27.2 -0.7
CLUD Cludinico 3.65 357 Pn 11 51 27.6 -0.4
CLUD Cludinico 3.65 357 AML AML

comp=N,3600µm,0.9s
CLUD AML AML

comp=E,4930µm,1.1s
CLUD AML AML

comp=N,3550µm,0.9s
CLUD AML AML

comp=E,4980µm,1.1s
ZONE Zone 3.66 325 AML AML

comp=N,766µm,0.8s
ZONE AML AML

comp=E,527µm,0.5s
ZONE AML AML

comp=E,1955µm,0.5s
ZONE AML AML

comp=N,2970µm,0.3s
DBRK Dubrovnik 3.70 91 *e*Pn **Pn 11 51 27.2 -1.3**
PTJ Puntijarka 3.70 32 *e*Pn **Pn 11 51 27.7 -1.0**
ACOM Acomizza, Ital 3.75 4 AML AML

comp=N,8110µm,1.0s
ACOM AML AML

comp=E,7335µm,0.9s
ACOM AML AML

comp=E,7570µm,0.9s
ACOM AML AML

comp=N,8415µm,1.0s
MABI Malga Bissina 3.75 331 AML AML

comp=E,1143µm,0.7s
MABI AML AML

comp=N,1505µm,0.6s
ZOU Zoufplan 3.75 358 AML AML

comp=N,5315µm,1.4s
ZOU AML AML

comp=E,7025µm,1.3s
ZOU AML AML

comp=E,6915µm,1.3s
ZOU AML AML

comp=N,5300µm,1.4s
QLNO Quiliano 3.79 295 AML AML

comp=E,428µm,1.0s
QLNO AML AML

comp=N,978µm,1.1s
SALB San Lorenzo Be 3.80 139 AML AML

comp=E,716µm,1.1s
SALB AML AML

comp=E,1489µm,1.2s
SALB AML AML

comp=N,653µm,0.7s
SALB AML AML

comp=N,1036µm,1.6s
CANO Canova, Maglio 3.82 293 AML AML

comp=N,1018µm,0.3s
CANO AML AML

comp=E,2920µm,1.1s
OBKA Obir 3.83 15⇑ *i*Pn **Pn 11 51 29.7 -0.8**
OBKA Obir 3.83 15 *i* Pn **Pn 11 51 29.8 -0.7**

comp=E,31nm,0.3s,SNR=26
OBKA Obir 3.83 15 *e*Pn **Pn 11 51 29.7 -0.8**
MYKA Terra Mystica 3.83 5 *i* Pn **Pn 11 51 30.4 -0.1**
comp=E,52nm,0.2s,SNR=71
MYKA *e*Sn **Sn 11 52 15.6 0.0**

comp=E,303nm,0.4s
KOSI Kohlern 3.86 342 AML AML

comp=E,5200µm,0.8s
KOSI AML AML

comp=N,4570µm,1.1s
APPI Appiano 3.91 340 AML AML

comp=N,3390µm,0.9s
APPI AML AML

comp=E,2985µm,0.4s
LOBO Lobor 3.95 31 *e*Pn **Pn 11 51 31.0 -1.1**
ABTA Abfaltersbach 3.96 354 *i* Pn **Pn 11 51 32.6 +0.3**
comp=E,391nm,0.5s,SNR=606
ABTA *e*Sn **Sn 11 52 20.2 +1.5**

comp=E,629nm,0.7s
HCY Herceg Novi 3.97 93 *e*Pn **Pn 11 51 32.6 +0.2**
HCY Herceg Novi 3.97 93⇑ *i*Pn **Pn 11 51 32.6 +0.2**
HCY *i* Sn **Sn 11 52 19.2 +0.3**
BRY Bratogost 3.98 87⇑ *i*Pn **Pn 11 51 32.7 +0.2**
BRY Bratogost 3.98 87⇑ *i*Pn **Pn 11 51 32.6 +0.1**
BRY *i* Sn **Sn 11 52 19.4 +0.2**
PERS Pernice 4.08 20⇑ *e*Pn **Pn 11 51 32.8 -1.0**
PERS IAML 11 52 55.5

comp=Z,2µm,1.3s
KALN Kalnik 4.08 34 *e*Pn **Pn 11 51 32.6 -1.2**
SOKA Soboth 4.09 19 *e*Pn **Pn 11 51 33.4 -0.7**
comp=Z,42nm,0.6s,SNR=38
BRMO Bormio 4.16 333 AML AML

comp=E,1385µm,1.1s
BRMO AML AML

comp=N,834µm,0.7s
RISI Rein 4.20 350 AML AML

comp=N,5340µm,0.5s
RISI AML AML

comp=E,5355µm,0.5s
MOSI Grossmontoni 4.22 335 AML AML

comp=E,5655µm,1.0s
MOSI AML AML

comp=N,8135µm,0.8s
BERNI Berninapass 4.23 329 AML AML

comp=N,1058µm,1.0s
BERNI AML AML

comp=E,1078µm,1.0s
UPM Unac-Piva 4.25 83 *e*Pn **Pn 11 51 37.7 +1.3**
UPM Unac-Piva 4.25 83⇑ *i*Pn **Pn 11 51 37.1 +0.7**
UPM *i* Sn **Sn 11 52 26.3 +0.3**
KOGS Kog 4.26 30 AML AML

comp=E,20150µm,1.1s
KOGS AML AML

comp=N,28100µm,0.9s
KBA Koelnbreinsper 4.27 2 *i* Pn **Pn 11 51 36.8 +0.2**
comp=N,140nm,0.5s,SNR=117

KBA eSn **Sn** 11 52 24.8 -1.6
comp=N,284nm,0.5s
KBA Koelnbreinsper 4.27 2 ePn **Pn** 11 51 36.9 +0.2
CEME Cevo 4.27 92⇑ iPn **Pn** 11 51 36.7 +0.1
CEME iSn **Sn** 11 52 26.4 0.0
MUGIO Muggio 4.27 318 AML AML
comp=N,924µm,0.9s
MUGIO AML AML
comp=E,930µm,1.4s
NKME Niksic 4.28 89⇑ iPn **Pn** 11 51 37.1 +0.4
NKME iSn **Sn** 11 52 26.8 +0.2
SBF Sospel 4.29 286 eP **Pn** 11 51 36.1 -0.6
SBF eSn **Sn** 11 52 19.9 -6.8
comp=E,459nm,0.5s
BUM Brajici-Budva 4.29 95⇑ iPn **Pn** 11 51 36.9 +0.2
BUM iSn **Sn** 11 52 26.7 0.0
A252A Venje 4.29 51 ePn **Pn** 11 51 35.8 -0.9
ROSI Rosskopf 4.29 344 AML AML
comp=E,4315µm,1.2s
ROSI AML AML
comp=N,6315µm,1.1s
NKY Niksic 4.31 88⇑ iPn **Pn** 11 51 36.9 -0.2
NKY iSn **Sn** 11 52 27.6 +0.2
FUORN Ofenpass-Fuorn 4.32 333 **Pn** 11 51 39.4 +2.0
VSL Villasalto 4.36 222 AML AML
VSL AML AML
VARE Varese 4.37 316 AML AML
comp=N,1525µm,0.6s
VARE AML AML
comp=E,1785µm,0.8s
MONC Moncucco Torin 4.39 303 AML AML
comp=E,1805µm,1.6s
MONC AML AML
comp=N,1595µm,1.1s
STV Sant Anna di V 4.46 291 AML AML
comp=N,340µm,0.6s
STV AML AML
comp=E,328µm,0.5s
CGL Cagliari Serpe 4.50 221 AML AML
comp=N,1950µm,0.5s
CGL AML AML
comp=E,1600µm,1.1s
DRME Dracevica, Mon 4.52 96⇑ iPn **Pn** 11 51 40.7 +0.8
DRME Dracevica, Mon 4.52 96⇑ iPn **Pn** 11 51 40.4 +0.5
DRME iSn **Sn** 11 52 32.4 +0.1
PDG Podgorica 4.53 93 **Pn** 11 51 40.6 +0.6
PDG Podgorica 4.53 93 ePn **Pn** 11 51 40.8 +0.7
PDG eSn **Sn** 11 52 30.8 -1.9
PDG Podgorica 4.53 93 AML AML
comp=N,2110µm,1.1s
PDG AML AML
comp=E,2155µm,1.1s
PDG AML AML
comp=N,1630µm,1.1s
PDG AML AML
comp=E,1720µm,1.1s
TTG Podgorica 4.53 93⇓ iPn **Pn** 11 51 40.5 +0.4
TTG iSn **Sn** 11 52 32.9 +0.2
FETA Feichten 4.54 339 i Pn **Pn** 11 51 41.5 +1.2
comp=E,119nm,0.7s,SNR=108
FETA eSn **Sn** 11 52 36.0 +2.9
comp=E,145nm,0.4s
WTTA Wattenberg 4.58 347 i Pn **Pn** 11 51 41.8 +1.0
comp=E,78nm,0.4s,SNR=103
WTTA eSn **Sn** 11 52 35.8 +1.8
comp=E,885nm,0.7s
WTTA Wattenberg 4.58 347 AML AML
comp=N,3030µm,1.5s
WTTA AML AML
comp=E,4000µm,0.9s
WTTA Wattenberg 4.58 347 ePn **Pn** 11 51 41.9 +1.0
DAVOX Davos/Dischmat 4.59 331 Pn **Pn** 11 51 43.7 +2.6
comp=E,44nm,0.3s,baz=153,slow=14,SNR=177
DAVOX Sn **Sn** 11 52 36.2 +1.8
comp=E,34nm,0.3s,baz=130,slow=22,SNR=5.3
ULC Ulcinj 4.61 99⇑ iPn **Pn** 11 51 41.3 +0.2
ULC iSn **Sn** 11 52 34.2 -0.3
PLE Pljevlja 4.61 81⇓ iPn **Pn** 11 51 42.1 +0.8
PLE iSn **Sn** 11 52 34.7 -0.1
SQTA Sankt Quirin 4.61 343 **Pn** 11 51 42.7 +1.4
SQTA **Sn** 11 52 36.2 +1.4
SQTA Sankt Quirin 4.61 343 i Pn **Pn** 11 51 42.7 +1.4
comp=E,119nm,0.4s,SNR=91
SQTA eSn **Sn** 11 52 36.2 +1.4
comp=E,332nm,0.4s
RUDO Rudo 4.63 78⇑ iPn **Pn** 11 51 41.8 +0.4
WATA Walderalm 4.66 347 **Pn** 11 51 42.9 +1.0
WATA **Sn** 11 52 36.4 +0.4
WATA Walderalm 4.66 347 P **Pn** 11 51 42.9 +1.0
WATA 11 52 36.4
WATA Walderalm 4.66 347 i Pn **Pn** 11 51 42.9 +1.0
comp=E,79nm,0.2s,SNR=121
WATA eSn **Sn** 11 52 36.3 +0.4
comp=E,228nm,0.4s
KOME Kolasin 4.69 87⇑ iPn **Pn** 11 51 42.8 +0.4
KOME iSn **Sn** 11 52 36.7 -0.1
BBLS Lazići 4.70 75 ePn **Pn** 11 51 43.4 +1.0
ARSA Arzberg 4.75 20 i Pn **Pn** 11 51 42.3 -0.8
comp=E,79nm,0.4s,SNR=72
ARSA eSn **Sn** 11 52 35.1 -3.0
comp=E,167nm,0.4s
ARSA Arzberg 4.75 20 AML AML
comp=N,685µm,1.5s
ARSA AML AML
comp=E,850µm,1.3s
ARSA Arzberg 4.75 20 ePn **Pn** 11 51 42.1 -0.9
MOTA Moosalm 4.75 343 **Pn** 11 51 44.6 +1.4
MOTA **Sn** 11 52 40.4 +2.0
MOTA Moosalm 4.75 343 P **Pn** 11 51 44.6 +1.4
MOTA 11 52 40.4
MOTA Moosalm 4.75 343 i Pn **Pn** 11 51 44.6 +1.4
comp=E,144nm,0.5s,SNR=133
MOTA eSn **Sn** 11 52 40.4 +2.0
comp=E,271nm,0.5s
KOVH Kovagotottos 4.83 46 P **Pn** 11 51 42.9 -1.3
KOVH S **Sn** 11 52 35.9 -4.2
ZUGS Zugspitze, Sch 4.85 342 ePn **Pn** 11 51 46.3 +1.6
ZUGS eSn **Sn** 11 52 39.0 -1.9
SCTE Santa Cesarea 4.86 123 **Pn** 11 51 44.8 +0.4
SCTE Santa Cesarea 4.86 123 P **Pn** 11 51 46.4 +1.9
baz=124
SCTE S **Sn** 11 52 40.0 -0.6
baz=124
BLJ Bijeljina 4.86 64⇑ iPn **Pn** 11 51 43.0 -1.5
BIOA Bad Ischl, Aus 4.89 4 **Pn** 11 51 45.0 0.0
BIOA **Sn** 11 52 42.1 +0.5
BIOA Bad Ischl, Aus 4.89 4 i Pn **Pn** 11 51 45.0 0.0
comp=E,83nm,0.3s,SNR=129
BIOA eSn **Sn** 11 52 42.1 +0.5
comp=E,829nm,0.8s
PART Garmisch-Parte 4.90 344 ePn **Pn** 11 51 46.6 +1.5
RJOB Jochberg 4.93 357 ePn **Pn** 11 51 46.1 +0.5
RJOB eSn **Sn** 11 52 36.0 -6.6
TEKS Tekeris 4.95 67 ePn **Pn** 11 51 43.8 -2.1
RETA Reutte 4.97 341 i Pn **Pn** 11 51 47.8 +1.7
comp=E,46nm,0.3s,SNR=78
RETA eSn **Sn** 11 52 46.0 +2.6
comp=E,150nm,0.6s
IVA Berane 4.97 87⇑ iPn **Pn** 11 51 46.4 +0.2
IVA i Sn **Sn** 11 52 43.6 0.0
MBDF Montbardon 4.99 295 eP **Pn** 11 51 46.4 -0.1
MBDF eSn **Sn** 11 52 37.9 -6.2
comp=E,422nm,0.8s
PLONS Plons/SG 5.00 329 ePn **Pn** 11 51 48.5 +1.9
CEL Celeste 5.01 154 **Pn** 11 51 47.5 +0.8
OBER Oberstdorf 5.01 337 ePn **Pn** 11 51 48.4 +1.7
DAVA Damuels 5.03 334 i Pn **Pn** 11 51 48.9 +1.8
comp=E,316nm,0.8s,SNR=123
DAVA Damuels 5.03 334 ePn **Pn** 11 51 49.2 +2.1
SJES Sjenica 5.03 83 ePn **Pn** 11 51 46.9 -0.2
SJES eSn **Sn** 11 52 42.4 -2.8
PVY Plav 5.04 90⇓ iPn **Pn** 11 51 47.4 +0.3
PVY i Sn **Sn** 11 52 45.1 -0.2
MOA Molln 5.10 9 i Pn **Pn** 11 51 47.9 0.0
comp=E,28nm,0.3s,SNR=79
MOA eSn **Sn** 11 52 46.4 -0.3
comp=E,254nm,0.5s
MOA Molln 5.10 9 ePn **Pn** 11 51 47.7 -0.2
BCI Bajram Curri 5.14 93 P **Pn** 11 51 49.8 +1.3
baz=92
BCI S **Sn** 11 52 49.3 +1.6
baz=92
DIVS Divibare 5.16 73 **Pn** 11 51 48.4 -0.3
DIVS Divibare 5.16 73⇑ iPn **Pn** 11 51 48.4 -0.3

DIVS Divibare 5.16 73 ePn **Pn** 11 51 47.9 -0.8
BNI Bardonecchia 5.17 298 **Pn** 11 51 49.6 +0.7
BNI Bardonecchia 5.17 298 P **Pn** 11 51 49.6 +0.7
IVAS Ivanjica 5.19 79 ePn **Pn** 11 51 49.3 +0.2
IVAS eSn **Sn** 11 52 46.7 -2.3
MORH Mrgy, Hungar 5.21 47 P **Pn** 11 51 48.6 -0.7
TIR Tirane 5.22 104⇑ P **Pn** 11 51 50.1 +0.6
TIR Tirane 5.22 104 **Pn** 11 51 49.9 +0.4
TIR Tirane 5.22 104 P **Pn** 11 51 49.9 +0.4
TIR Tirane 5.22 104 ePn **Pn** 11 51 50.0 +0.5
TIR eSn **Sn** 11 52 47.7 -1.9
TIR Tirane 5.22 104 P **Pn** 11 51 49.7 +0.2
baz=104
TIR S **Sn** 11 52 48.7 -0.9
baz=104
CLTB Caltabellotta 5.23 179 Pn 11 51 54.8 +5.1
TIH Tihany 5.31 38 P **Pn** 11 51 50.7 0.0
VLO Vlora 5.31 114 P **Pn** 11 51 51.7 +0.9
baz=115
VLO S **Sn** 11 52 50.3 -1.6
baz=115
UBR Ueberruh 5.32 337 ePn **Pn** 11 51 52.1 +1.2
LPG La Plagne 5.32 302 eP **Pn** 11 51 51.7 +0.6
LPG eSn **Sn** 11 52 45.5 -6.9
comp=E,303nm,0.8s
LPL La Plagne 5.34 303 eP **Pn** 11 51 51.5 +0.2
LPL eSn Sn 11 52 43.5 -9.4
comp=E,120nm,0.6s
FRGS Fruska Gora 5.36 62⇓ P **Pn** 11 51 50.8 -0.6
FRGS Fruska Gora 5.36 62⇑ iPn **Pn** 11 51 50.4 -1.0
FRGS Fruska Gora 5.36 62 ePn **Pn** 11 51 50.6 -0.8
MPLH Magyarpolny 5.36 34 P **Pn** 11 51 50.1 -1.3
RONA Rosalia, Austr 5.37 23 **Pn** 11 51 50.9 -0.8
RONA **Sn** 11 52 51.4 -2.0
RONA Rosalia, Austr 5.37 23 i Pn **Pn** 11 51 50.8 -0.8
comp=E,76nm,0.6s,SNR=56
RONA eSn **Sn** 11 52 51.4 -2.0
comp=E,58nm,0.4s
VAE Valguarnera 5.42 169 Pn **Pn** 11 51 56.6 +4.3
comp=E,2.6nm,0.3s,baz=133,slow=19,SNR=1.4
comp=E,9.9nm,0.3s
SOP Sopron 5.44 25 P **Pn** 11 51 52.0 -0.5
CONA Conrad Observa 5.46 20 i Pn **Pn** 11 51 52.1 -0.8
comp=E,121nm,0.5s,SNR=144
CONA eSn **Sn** 11 52 53.6 -2.2
comp=E,113nm,0.7s
SENIN Lac Senin/Sane 5.47 312 **Pn** 11 51 55.1 +1.9
TRUS Trudelj 5.47 73 ePn **Pn** 11 51 52.8 -0.2
EGYH Egyhazaskeszo 5.48 31 P **Pn** 11 51 52.6 -0.5
WILA Wila 5.49 328 ePn **Pn** 11 51 54.6 +1.3
FUR Furstenfeldbru 5.51 347 ePn **Pn** 11 51 54.8 +1.3
PHP Peshkopia 5.54 99 P **Pn** 11 51 55.2 +1.2
baz=99
PHP S **Sn** 11 52 57.6 -0.1
baz=99
SMRF Simiane la Rot 5.63 284 eP **Pn** 11 51 55.4 +0.3
SMRF eSn **Sn** 11 52 52.4 -7.4
comp=E,89nm,0.8s
GRUS Gruza 5.63 76 ePn **Pn** 11 51 54.9 -0.3
ORIF Oris-en-Rattie 5.65 294 eP **Pn** 11 51 56.4 +0.9
ORIF eSn Sn 11 52 51.2 -9.2
comp=E,134nm,0.6s
CSKK Cskako 5.82 37 P **Pn** 11 51 56.7 -1.0
SELS Selova 5.87 83 ePn **Pn** 11 51 58.1 -0.3
SELS eSn **Sn** 11 52 59.8 -5.9
KEK Kerkira 5.90 119 **Pn** 11 51 59.8 +1.0
SULZ Cheisacher 5.90 325 ePn **Pn** 11 51 58.8 -0.1
SLE Schleitheim 5.94 328 ePn **Pn** 11 51 59.0 -0.3
BALST Balsthal 5.94 321 ePn **Pn** 11 51 59.3 -0.1
SRN Sarande 5.94 117 P **Pn** 11 52 00.3 +0.9
baz=118
SRN S **Sn** 11 53 07.5 +0.1
baz=118
OHR Ohrid 5.96 104 i Pn **Pn** 11 52 01.1 +1.4
GEC2 GERESS Array S 6.05 4 Pn **Pn** 11 51 59.9 -1.1
GEC2 GERESS Array S 6.05 4 ePn **Pn** 11 51 59.6 -1.4
GERES GERESS Array B 6.05 4 Pn **Pn** 11 51 59.8 -1.1
comp=E,12nm,0.3s,baz=181,slow=13,SNR=174
GERES Sn **Sn** 11 53 06.2 -3.9
comp=E,38nm,0.3s,baz=161,slow=25,SNR=9.6
comp=E,22nm,0.3s
SVIS Svilajnac 6.05 73 ePn **Pn** 11 52 01.9 +1.0
ZST Bratislava 6.06 26 eP **Pn** 11 52 00.0 -1.1
ZST e 11 53 06.4
ZST MLR MLR
comp=Z,400nm,1.3s
ZST Bratislava 6.06 26 ePN **Pn** 11 52 00.0 -1.1
ZST eSN **Sn** 11 53 06.4 -4.0
ZST eLG Lg 11 53 14.5
CKRC Cesky Krumlov 6.07 7 ePN **Pn** 11 52 00.0 -1.1
CKRC eSN **Sn** 11 53 06.8 -3.6
KBN Korca 6.13 108 Pn **Pn** 11 52 03.1 +1.1
KBN Korca 6.13 108 P **Pn** 11 52 03.2 +1.1
KBN Korca 6.13 108 P **Pn** 11 52 03.3 +1.2
baz=109
KBN S **Sn** 11 53 13.1 +0.9
baz=109
LSK Leskovik 6.21 113 P **Pn** 11 52 04.1 +1.0
baz=114
LSK S **Sn** 11 53 14.9 +0.9
baz=114
SKO Skopje 6.21 95 i Pn **Pn** 11 52 04.0 +0.9
BUD Budapest 6.26 40 P **Pn** 11 52 07.4 +3.7
MODS Modra-Piesok 6.28 26 eP **Pn** 11 52 03.0 -1.0
MODS e 11 53 12.4
MODS MLR MLR
comp=Z,200nm,0.9s
MODS Modra-Piesok 6.28 26 ePN **Pn** 11 52 03.0 -1.0
MODS eSN **Sn** 11 53 12.4 -3.2
MODS eLG Lg 11 53 23.2
CABF La Chapelle 6.29 310 eP **Pn** 11 52 04.1 -0.2
CABF eSn Sn 11 53 07.1 -9.1
comp=Z,146nm,0.6s
BOVS Bovan 6.32 80⇑ P **Pn** 11 52 04.0 -0.5
BOVS Bovan 6.32 80 ePn **Pn** 11 52 03.9 -0.7
KHC Kasperske Hory 6.33 3 **Pn** 11 52 03.7 -1.0
KHC Kasperske Hory 6.33 3 eP **Pn** 11 52 03.5 -1.2
KHC e 11 53 12.8
KHC Kasperske Hory 6.33 3 ePN **Pn** 11 52 03.5 -1.2
KHC eSN **Sn** 11 53 12.8 -4.1
WET Wettzell 6.33 358 ePn **Pn** 11 52 03.6 -1.2
BARS Barje 6.39 87 ePn **Pn** 11 52 03.4 -0.1
KUBS Kuzevo 6.40 73 ePn **Pn** 11 52 04.5 -1.3
SMOL Smolenice 6.45 26 eP **Pn** 11 52 05.0 -1.3
SMOL e 11 53 15.6
SMOL MLR MLR
comp=Z,100nm,1.2s
VIVF Saint-Julien-l 6.45 291 eP **Pn** 11 52 06.6 +0.2
VIVF eSn Sn 11 53 10.2 -10
comp=Z,24nm,0.6s
BFO Black Forest 6.46 330 **Pn** 11 52 06.8 +0.2
BFO Black Forest 6.46 330 P **Pn** 11 52 06.8 +0.2
BFO Black Forest 6.46 330 P **Pn** 11 52 07.5 +0.9
BFO Black Forest 6.46 330 ePn **Pn** 11 52 06.4 -0.2
MDVR Moldovita 6.51 69⇑ P **Pn** 11 52 06.9 -0.4
STU Stuttgart 6.56 337 ePn **Pn** 11 52 09.0 +1.1
PRVS Prvonek 6.60 90 ePn **Pn** 11 52 08.5 0.0
KRUC Moravsky 6.65 19 ePN **Pn** 11 52 07.7 -1.4
KRUC eSN **Sn** 11 53 21.2 -3.6
KRUC eSG **Sb** 11 53 55.3 +8.8
HINF Hinteralfeld 6.68 321 eP **Pn** 11 52 08.8 -0.8
HINF eSn **Sn** 11 53 17.6 -8.0
comp=Z,178nm,0.4s
TREC Trest 6.69 13 eP **Pn** 11 52 08.4 -1.3
TREC e 11 53 22.3
TREC Trest 6.69 13 ePN **Pn** 11 52 08.4 -1.3
TREC eSN **Sn** 11 53 22.3 -3.5
BZS Buzias 6.71 62⇑ P **Pn** 11 52 10.8 +0.8
ZAGS Zajecar 6.71 78 ePn **Pn** 11 52 08.9 -1.1
STIP Stip 6.81 96 i Pn **Pn** 11 52 13.7 +2.3
JAVC Velka Javorina 6.83 26 ePN **Pn** 11 52 11.0 -0.6
ECH Echery 6.84 324 **Pn** 11 52 10.6 -1.1
ECH Echery 6.84 324 P **Pn** 11 52 10.6 -1.1
LASF Ste Croix 6.87 284 eP **Pn** 11 52 12.2 0.0
LASF eSn Sn 11 53 19.7 -11
comp=Z,27nm,0.7s
BOSS Bosilegrad 6.90 89 ePn **Pn** 11 52 12.5 -0.1
VRAC Vranov 6.93 19⇓ P **Pn** 11 52 12.0 -0.9
VRAC Vranov 6.93 19 Pn **Pn** 11 52 12.0 -0.9
comp=Z,3.7nm,0.3s,baz=205,slow=13,SNR=25
VRAC Sn **Sn** 11 53 27.0 -4.7
comp=Z,10nm,0.3s,baz=275,slow=6.3,SNR=5.9
comp=Z,15nm,0.4s

VRAC Vranov 6.93 19 ePN **Pn** 11 52 11.5 -1.4
VRAC eSN **Sn** 11 53 28.6 -3.1
VRAC eSG Sg 11 54 04.7 -9.1
CDF Champ du Feu 6.94 326 eP **Pn** 11 52 13.0 -0.2
CDF eSn **Sn** 11 53 24.9 -7.3
comp=Z,222nm,0.7s
VYHS Vyhne 6.95 33 eP **Pn** 11 52 11.9 -1.3
VYHS e 11 53 30.0
VYHS MLR MLR
comp=Z,100nm,0.7s
VYHS Vyhne 6.95 33 ePN **Pn** 11 52 11.9 -1.3
VYHS eSN **Sn** 11 53 30.0 -2.1
VYHS eLG Lg 11 53 43.7
ZAPS Zavoj 6.98 83 ePn **Pn** 11 52 14.1 +0.4
PSZ Piszkesteto 6.98 41 **Pn** 11 52 12.8 -0.9
PSZ Piszkesteto 6.98 41 P **Pn** 11 52 12.8 -0.9
PSZ Piszkesteto 6.98 41 P **Pn** 11 52 15.1 +1.4
SIRR Siria 7.00 58⇓ P **Pn** 11 52 14.9 +0.9
GRA1 Grafenberg Arr 7.01 350 **Pn** 11 52 13.8 -0.3
GRF Grafenberg Arr 7.01 350 P **Pn** 11 52 13.8 -0.3
GRF Grafenberg Arr 7.01 350 ePn **Pn** 11 52 15.1 +1.1
GRFO Grafenberg 7.01 350 **Pn** 11 52 13.6 -0.4
GRFO Grafenberg 7.01 350 P **Pn** 11 52 13.6 -0.4
BLKB Belogradchik 7.02 80⇑ P **Pn** 11 52 14.7 +0.4
HERR Herculane 7.02 70⇓ P **Pn** 11 52 14.3 0.0
DJES Djerdap 7.05 72⇓ P **Pn** 11 52 15.0 +0.4
DJES Djerdap 7.05 72 ePn **Pn** 11 52 14.3 -0.3
HAU Haudompre 7.05 320 eP **Pn** 11 52 14.2 -0.5
HAU eSn Sn 11 53 25.4 -9.4
comp=Z,201nm,0.3s
VAY Valandovo 7.18 99 i Pn **Pn** 11 52 16.9 +0.5
PRU Pruhonice 7.24 7 eP **Pn** 11 52 15.8 -1.5
PRU e 11 53 35.6
PRU Pruhonice 7.24 7 ePN **Pn** 11 52 15.8 -1.5
PRU eSN **Sn** 11 53 35.6 -3.8
PUNG Punghina 7.27 75⇓ P **Pn** 11 52 18.4 +0.8
MAHO Mahon 7.28 249 **Pn** 11 52 18.1 +0.4
GZR Gura Zlata 7.41 66⇑ P **Pn** 11 52 20.4 +0.8
KKB Krupnik 7.43 94 P **Pn** 11 52 21.2 +1.3
VTS Vitosha 7.44 88⇓ P **Pn** 11 52 21.3 +1.1
VTS Vitosha 7.44 88 **Pn** 11 52 20.2 0.0
VTS Vitosha 7.44 88 P **Pn** 11 52 20.2 0.0
VTS Vitosha 7.44 88 P **Pn** 11 52 21.0 +0.8
SRE Strehaia 7.53 72⇑ P **Pn** 11 52 22.2 +1.1
MORC Moravsky Berou 7.61 22⇑ P **Pn** 11 52 22.2 -0.1
MORC Moravsky Berou 7.61 22 ePN **Pn** 11 52 21.0 -1.3
MORC eSN **Sn** 11 53 44.3 -4.1
SMF Signal de Mont 7.64 303 eP **Pn** 11 52 22.4 -0.4
SMF eSn Sn 11 53 39.3 -10
comp=Z,101nm,0.6s
DEV Deva 7.65 63⇑ P **Pn** 11 52 23.5 +0.7
KEST Kesra 7.66 204 Pn **Pn** 11 52 26.7 +3.7
comp=Z,3.7nm,0.3s,baz=304,slow=4.5,SNR=30
KEST Sn **Sn** 11 53 52.9 +3.2
baz=19,slow=22
comp=Z,24nm,0.5s
KEST Kesra 7.66 204 **Pn** 11 52 23.8 +0.8
KECS Kecovo 7.66 40 eP **Pn** 11 52 24.5 +1.5
KECS Kecovo 7.66 40 ePN **Pn** 11 52 24.5 +1.5
KRLC Kraliky 7.69 18 eP **Pn** 11 52 22.5 -0.9
KRLC Kraliky 7.69 18 ePN **Pn** 11 52 22.5 -0.9
LANS Liptovska Anna 7.72 33 eP **Pn** 11 52 23.6 -0.3
LANS e 11 53 45.3
LANS Liptovska Anna 7.72 33 ePN **Pn** 11 52 23.6 -0.3
LANS eSN **Sn** 11 53 45.3 -5.9
LANS eLG Lg 11 54 03.6
PAGF Fort de Pagny 7.74 320 eP **Pn** 11 52 23.8 -0.2
baz=138
PAGF eSn **Sn** 11 53 43.0 -8.5
comp=Z,142nm,0.5s
PVCC Panska Ves 7.78 7 eP **Pn** 11 52 23.3 -1.3
PVCC Panska Ves 7.78 7 ePN **Pn** 11 52 23.3 -1.3
MPEP Malo Peshtene 7.79 82 P **Pn** 11 52 26.3 +1.6
SFTF Sexfontaines 7.83 316 eP **Pn** 11 52 25.2 -0.2
baz=132
SFTF eSn **Sn** 11 53 45.6 -8.3
comp=Z,108nm,0.6s
OKC Ostrava-Krasne 7.83 25 eP **Pn** 11 52 25.1 -0.3
OKC e 11 53 49.6
OKC MLR MLR
comp=Z,700nm,14.7s
OKC Ostrava-Krasne 7.83 25 ePN **Pn** 11 52 25.1 -0.3
OKC eSN **Sn** 11 53 49.6 -4.4
DPC Dobruska-Polom 7.85 15 eP **Pn** 11 52 24.3 -1.4
DPC Dobruska-Polom 7.85 15 ePN **Pn** 11 52 24.3 -1.4
DRGR 7.89 56⇓ P **Pn** 11 52 27.3 +1.2
MOX Moxa 7.90 353 ePn **Pn** 11 52 25.2 -1.1
MOX eSn **Sn** 11 53 50.7 -5.0
LOR Lormes 7.93 307 eP **Pn** 11 52 25.7 -1.1
baz=127
LOR eSn Sn 11 53 46.8 -10
comp=Z,154nm,0.7s
UPC Upice 7.95 13 eP **Pn** 11 52 26.7 -0.2
UPC MLR MLR
comp=Z,2µm,20.5s
UPC Upice 7.95 13 ePN **Pn** 11 52 26.7 -0.2
MMB Musomiste 7.96 95 P **Pn** 11 52 28.2 +1.0
MTLF Montolieu 8.01 277 eP **Pn** 11 52 27.8 0.0
MTLF eSn Sn 11 53 48.7 -10
comp=Z,55nm,0.9s
AVF Avril sur Loir 8.01 303 eP **Pn** 11 52 27.4 -0.4
AVF eSn **Sn** 11 53 50.2 -8.1
comp=Z,23nm,0.5s
MEZF Maizieres J'vi 8.02 318 eP **Pn** 11 52 27.7 -0.2
MEZF eSn Sn 11 53 48.4 -10
comp=Z,99nm,0.6s
OSTC Ostas 8.03 14 ePN **Pn** 11 52 27.0 -1.1
SSF Saint Saulge 8.04 305 eP **Pn** 11 52 27.8 -0.4
SSF eSn Sn 11 53 49.1 -10
comp=Z,66nm,0.7s
SAVF Savonnieres en 8.06 319 eP **Pn** 11 52 28.7 +0.2
SAVF eSn Sn 11 53 50.1 -9.5
comp=Z,69nm,0.7s
BRG Berggiesshubel 8.08 4 eP **Pn** 11 52 26.6 -2.1
BRG Amp 11 52 30.9
comp=Z,10nm,0.6s
BRG ex x 11 52 36.4
BRG Amp 11 52 39.6
comp=Z,21nm,0.6s
BRG ex x 11 53 22.4
BRG ex x 11 53 39.7
BRG ex x 11 53 54.1
BRG ex x 11 54 56.4
BRG Amp 11 55 21.1
comp=Z,319nm,1.4s
BRG Berggiesshubel 8.08 4 eP **Pn** 11 52 26.6 -2.1
BRG e 11 53 54.1
BRG pmax pmax
comp=Z,11nm,0.6s
BRG pmax pmax
comp=Z,21nm,0.6s
BRG pmax pmax
comp=Z,319nm,1.4s
TNS Taunus Mts 8.08 338 ePn **Pn** 11 52 29.0 +0.1
LOT Lotru 8.09 67⇑ P **Pn** 11 52 30.0 +1.0
PGB Panagyurishte 8.13 88 P **Pn** 11 52 31.1 +1.5
MESR Meseneni 8.20 55⇑ P **Pn** 11 52 31.9 +1.6
NIE Niedzica 8.27 35 eP **Pn** 11 52 33.2 +1.9
NIE eS **Sn** 11 53 59.6 -5.1
CAF Calviac 8.27 289 eP **Pn** 11 52 32.2 +0.8
CAF eSn Sn 11 53 55.7 -9.1
comp=Z,5.5nm,0.5s
KSP Ksiaz 8.32 14 eP **Pn** 11 52 30.8 -1.2
KSP eS Sn 11 53 55.9 -10
WLF Walferdange 8.38 327 **Pn** 11 52 32.9 0.0
WLF Walferdange 8.38 327 P **Pn** 11 52 32.9 0.0
WLF Walferdange 8.38 327 dP **Pn** 11 52 33.6 +0.7
WLF Walferdange 8.38 327 ePn **Pn** 11 52 33.6 +0.7
CBBR Cluj-Babes-Bol 8.40 58⇑ P **Pn** 11 52 33.2 +0.1
CJR Cluj-Napoca 8.40 59⇑ P **Pn** 11 52 34.0 +0.7
CRVS Cervenica-Dubn 8.41 41 eP **Pn** 11 52 34.8 +1.5
CRVS Cervenica-Dubn 8.41 41 ePN **Pn** 11 52 34.8 +1.5
CLL Collm 8.50 359 **Pn** 11 52 32.4 -2.0
CLL Collm 8.50 359 eP **Pn** 11 52 33.0 -1.5
CLL Collm 8.50 359 ePn **Pn** 11 52 33.0 -1.5
CLL ex x 11 52 40.0
CLL ePg **Pg** 11 53 11.0 -3.2
CLL eSn Sn 11 53 55.0 -15
CLL ex x 11 54 09.0
CLL ex x 11 54 41.0
CLL ex x 11 54 53.0
CLL eSg **Sg** 11 55 01.0 -3.1

	comp=Z,275nm,1.1s									
TCF	**Toulx Ste Croi**	**8.54**	**298**		*e*Pn		**Pn**	**11 52 30.8**	**-4.3**
TCF					*e*Sn		Sn	11 54 00.0	-11
	comp=Z,10.0nm,0.4s									
PLD	**Plovdiv**	**8.59**	**91**		P		**Pn**	**11 52 36.6**	**+0.9**
UZH	**Uzhgorod**	**8.65**	**45**	⇑	*i*P		**Pn**	**11 52 39.7**	**+3.1**
UZH					*e*S		**Sn**	**11 54 19.1**	**+5.1**
UZH					MLR		MLR			
	comp=Z,220nm,18.0s									
HYF	**Humbligny**	**8.66**	**305**		*e*P		**Pn**	**11 52 38.3**	**+1.6**
HYF					*e*Sn		Sn	11 54 05.2	-9.1
ARR	**Arges**	**8.66**	**69**	⇓	P		**Pn**	**11 52 38.5**	**+1.7**
RZN	**Rozhen**	**8.67**	**94**		P		**Pn**	**11 52 38.4**	**+1.4**
OJC	**Ojcow**	**8.71**	**29**		*e*P		**Pn**	**11 52 37.4**	**-0.1**
OJC					*e*S		**Sn**	**11 54 06.6**	**-9.0**
RJF	**Les Rejaudoux**	**8.73**	**291**		*e*P		**Pn**	**11 52 38.3**	**+0.7**
RJF					*e*Sn		Sn	11 54 06.6	-9.4
	comp=Z,20nm,0.8s									
ITM	**Ithomi**	**8.78**	**127**				**Pn**	**11 52 38.9**	**+0.5**
KOLS	**Kolonicke sedl**	**8.84**	**43**		*e*P		**Pn**	**11 52 43.1**	**+4.0**
KOLS	**Kolonicke sedl**	**8.84**	**43**		*e*PN		**Pn**	**11 52 43.1**	**+4.0**
MTUR	**Matau**	**8.93**	**70**	⇓	P		**Pn**	**11 52 40.8**	**+0.3**
PVL	**Pavlikeni**	**8.95**	**83**		P		**Pn**	**11 52 40.3**	**-0.4**
VOIR		**8.96**	**69**	⇑	P		**Pn**	**11 52 43.0**	**+2.1**
ZIMR		**8.97**	**80**	⇑	P		**Pn**	**11 52 41.9**	**+0.9**
BHOU	**Houvegnez**	**8.99**	**329**		*d*P		**Pn**	**11 52 42.9**	**+1.6**
ARCR	**ARCALIA**	**9.03**	**58**	⇑	P		**Pn**	**11 52 43.1**	**+1.4**
BTNL	**Ternell**	**9.14**	**331**		*d*P		**Pn**	**11 52 45.1**	**+1.8**
RCHB	**Rochefort**	**9.14**	**326**		*d*P		**Pn**	**11 52 43.6**	**+0.3**
KDZ	**Kurdzhali**	**9.19**	**93**		P		**Pn**	**11 52 44.1**	**+0.1**
LFF	**La Frestale**	**9.20**	**288**		*e*P		**Pn**	**11 52 44.9**	**+0.8**
MEM	**Membach**	**9.20**	**330**		*d*P		**Pn**	**11 52 45.4**	**+1.3**
MEM					*d*S		**Sn**	**11 54 21.3**	**-6.2**
DIM	**Dimitrovgrad**	**9.20**	**91**		P		**Pn**	**11 52 44.7**	**+0.5**
GIVF	**Givet**	**9.27**	**325**		*e*P		**Pn**	**11 52 46.2**	**+1.2**
GIVF					*e*Sn		Sn	11 54 18.8	-10
	comp=Z,50nm,0.6s									
BCLA	**Clavier**	**9.32**	**327**		*d*P		**Pn**	**11 52 47.6**	**+2.0**
DOPR	**Dopca**	**9.32**	**66**	⇓	P		**Pn**	**11 52 47.2**	**+1.4**
DOU	**Dourbes**	**9.36**	**324**		*d*P		**Pn**	**11 52 46.6**	**+0.3**
DOU					*d*S		**Sn**	**11 54 28.3**	**-3.2**
RDO	**Rodhopi**	**9.39**	**96**				**Pn**	**11 52 47.2**	**+0.6**
EPF	**Esparros**	**9.39**	**276**		*e*P		**Pn**	**11 52 48.4**	**+1.6**
EPF					*e*Sn		Sn	11 54 20.9	-11
	comp=Z,2.4nm,0.3s									
SGRR	**Singureni**	**9.44**	**77**	⇑	P		**Pn**	**11 52 47.8**	**+0.5**
BMRD	**Maredsous**	**9.45**	**325**		*d*P		**Pn**	**11 52 49.8**	**+2.3**
BMRD					*d*S		**Sn**	**11 54 31.6**	**-1.9**
MLR	**Muntele Rosu**	**9.59**	**69**	⇑	P		**Pn**	**11 52 51.1**	**+1.5**
MLR	**Muntele Rosu**	**9.59**	**69**		Pn		**Pn**	**11 52 51.4**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=169,slow=8.6,SNR=16									
	comp=Z,28nm,0.8s									
MLR	**Muntele Rosu**	**9.59**	**69**				**Pn**	**11 52 48.5**	**-1.0**
OZUR		**9.63**	**66**	⇑	P		**Pn**	**11 52 51.2**	**+1.2**
BURAR	**Bucovina Array**	**9.78**	**56**	⇑	P		**Pn**	**11 52 53.0**	**+0.8**
RAZG	**Razgrad**	**9.80**	**81**	⇓	P		**Pn**	**11 52 52.7**	**+0.4**
ALN	**Alexandroupoli**	**9.82**	**97**				**Pn**	**11 52 52.9**	**+0.2**
ALN	**Alexandroupoli**	**9.82**	**97**		P		**Pn**	**11 52 52.9**	**+0.2**
JMB	**Yambol**	**9.92**	**87**		P		**Pn**	**11 52 51.6**	**-2.4**
ISR	**Istrita**	**9.94**	**72**	⇑	P		**Pn**	**11 52 55.2**	**+0.9**
ETSF	**Etsaut**	**10.06**	**275**		*e*P		**Pn**	**11 52 57.5**	**+1.6**
ETSF					*e*Sn		Sn	11 54 36.7	-12
	comp=Z,4.9nm,0.5s									
BIZ	**Bicaz**	**10.09**	**61**	⇓	P		**Pn**	**11 52 57.7**	**+1.5**
PLOR	**Plostina**	**10.15**	**68**	⇓	P		**Pn**	**11 52 58.0**	**+0.8**
MFF	**Saint Martin d**	**10.18**	**296**		*e*P		**Pn**	**11 52 58.1**	**+0.6**
VRI	**Vrincioaia**	**10.21**	**68**	⇑	P		**Pn**	**11 52 58.6**	**+0.7**
LVV	**L'vov**	**10.29**	**49**		*e*P		**Pn**	**11 53 01.4**	**+2.5**
TESR	**Tescani**	**10.31**	**64**	⇓	P		**Pn**	**11 53 00.3**	**+0.9**
PRD	**Provadia**	**10.46**	**83**		P		**Pn**	**11 53 02.5**	**+1.2**
SJPF	**Ste Jean**	**10.53**	**277**		*e*P		**Pn**	**11 53 03.2**	**+0.8**
SJPF					*e*Sn		Sn	11 54 47.8	-12
	comp=Z,2.7nm,0.4s									
ICOR	**Ion Corvin**	**10.74**	**78**	⇑	P		**Pn**	**11 53 05.8**	**+0.6**
HARR	**Harsova**	**10.87**	**75**	⇑	P		**Pn**	**11 53 07.8**	**+0.9**
LDF	**La Druitiere**	**10.92**	**307**		*e*P		**Pn**	**11 53 09.0**	**+1.4**
LDF					*e*Sn		Sn	11 54 56.5	-13
	comp=Z,32nm,0.6s									
TLBR	**Topalu**	**10.94**	**76**	⇓	P		**Pn**	**11 53 08.7**	**+0.8**
FLN	**La Foliniere**	**11.21**	**307**		*e*P		**Pn**	**11 53 12.2**	**+0.6**
FLN					*e*Sn		Sn	11 55 03.0	-14
	comp=Z,8.1nm,0.3s									
TPGR	**Topolog**	**11.23**	**74**	⇑	P		**Pn**	**11 53 12.7**	**+0.7**
GRR	**Gorron**	**11.27**	**304**		*e*P		**Pn**	**11 53 12.9**	**+0.5**
GRR					*e*Sn		Sn	11 55 06.5	-12
	comp=Z,9.5nm,0.5s									
SANT	**Santorini**	**11.47**	**120**				**Pn**	**11 53 15.6**	**+0.3**
IDI	**Anoyia**	**11.82**	**126**		Pn		**Pn**	**11 53 21.2**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=312,slow=15,SNR=9.0									
IDI					Sn		**Sn**	**11 55 23.3**	**-8.7**
	comp=Z,1.8nm,0.3s,baz=286,slow=23,SNR=6.0									
	comp=Z,19nm,0.9s									
SORM	**Soroca**	**11.93**	**58**	⇑	P		**Pn**	**11 53 21.8**	**+0.3**
MANT	**Manisa**	**12.48**	**105**		Pn		**Pn**	**11 53 28.1**	**-1.2**
KLNR	**Kaliningrad**	**12.68**	**19**		*i* P		**Pn**	**11 53 31.5**	**-0.2**
ESBB	**Sonseca Array**	**13.24**	**262**				**Pn**	**11 53 37.9**	**-1.6**
ESDC	**Sonseca Array**	**13.24**	**262**		Pn		**Pn**	**11 53 39.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=23									
	comp=Z,4.9nm,0.9s									
BORA	**Eskisehir**	**13.34**	**97**		Pn		**Pn**	**11 53 39.8**	**-1.0**
AKASG	**Malin Array Be**	**13.54**	**49**		Pn		**Pn**	**11 53 42.2**	**-1.3**
	comp=Z,7.9nm,0.9s,baz=241,slow=12,SNR=5.8									
AKBB	**Malin Array Si**	**13.54**	**49**				**Pn**	**11 53 42.5**	**-1.0**
AKBB	**Malin Array Si**	**13.54**	**49**		*c*eP		**Pn**	**11 53 42.6**	**-0.8**
PAB	**San Pablo**	**13.57**	**262**				**Pn**	**11 53 42.7**	**-1.2**
PAB	**San Pablo**	**13.57**	**262**		P		**Pn**	**11 53 42.7**	**-1.2**
PAB	**San Pablo**	**13.57**	**262**		P		**Pn**	**11 53 48.0**	**+4.1**
AKAS	**Kas**	**14.30**	**112**				**Pn**	**11 53 53.9**	**-0.1**
PABE	**Paberze**	**14.52**	**25**				**Pn**	**11 53 56.3**	**-0.5**
PABE	**Paberze**	**14.52**	**25**		*e*P		**Pn**	**11 53 56.4**	**-0.4**
PBRG	**Braganca**	**14.74**	**273**		A		A	11 54 17.5	
	comp=Z,24nm,1.6s									
VSVD	**Vaisvydziai**	**14.91**	**24**		*e*P		**P**	**11 54 06.9**	**-0.8**
VSVD					IAmb		IAmb	11 54 14.4	
	comp=Z,29nm,0.3s									
NACGM	**Naroch**	**15.03**	**32**	⇓	*e*P		**Pn**	**11 54 02.9**	**-0.8**
	baz=222									
MVO	**Moncorvo**	**15.08**	**271**		A		A	11 54 17.6	
	comp=Z,40nm,1.7s									
IIGN	**Ignalina**	**15.16**	**30**		*e*P		**Pn**	**11 54 05.0**	**-0.5**
IIGN					IAmb		IAmb	11 54 17.7	
	comp=Z,16nm,0.8s									
MNK	**Minsk**	**15.19**	**35**		*i* P		**Pn**	**11 54 03.2**	**-2.5**
MNK					*i* S		**Sn**	**11 56 50.1**	**-3.6**
MNK					pmax		pmax			
	comp=Z,18nm,0.7s									
MNK					pmax		pmax			
	comp=E,3.0nm,0.9s									
MNK					pmax		pmax			
	comp=N,7.0nm,0.9s									
MNK					MLR		MLR			
	comp=Z,12µm,20.0s									
MNK					MLR		MLR			
	comp=N,8.0nm,15.0s									
MNK					MLR		MLR			
	comp=E,307nm,19.0s									
MNK	**Minsk**	**15.19**	**35**		*i* P		**Pn**	**11 54 03.3**	**-2.5**
	comp=E,3.0nm,0.9s									
MNK					*i* P		**Pn**	**11 54 03.3**	**-2.5**
	comp=N,7.0nm,0.8s									
MNK					*i* P		**Pn**	**11 54 03.3**	**-2.5**
	comp=Z,18nm,0.7s,baz=223									
MNK					*i* PP		**P**	**11 54 11.3**	**+0.5**
MNK					*i* PPP		PPP	11 54 19.0	
MNK					*i* S		**Sn**	**11 56 50.2**	**-3.6**
MNK					*i* SS		**SnSn**	**11 57 04.0**	**-2.3**
MNK					*i* SSS		SSS	11 57 16.7	
MNK					*i* LQ		LQ	11 58 27.1	
MNK					*i* LR		LR	11 59 35.5	
MNK					*i* LRM		MLR	12 00 30.1	
	comp=N,8.0nm,14.8s									
MNK					*i* LRM		MLR	12 00 30.1	
	comp=Z,12µm,20.0s									
MNK					*i* LRM		MLR	12 00 35.9	
	comp=E,307nm,18.7s									
ISAL	**Salakas**	**15.30**	**29**		*e*P		**Pn**	**11 54 06.9**	**-0.3**
PVRL	**Vila Real**	**15.56**	**271**		*ep*P		**pP**	**11 54 17.0**	**-1.7**
PVRL					A		A	11 54 22.4	
	comp=E,40nm,1.7s									
POLO	**Lamas de Olo**	**15.60**	**272**		*ep*P		**P**	**11 54 17.3**	**+1.7**
POLO					A		A	11 54 26.5	
	comp=E,20nm,1.5s									
MTE	**Manteigas**	**15.65**	**268**		P		**Pn**	**11 54 10.7**	**-1.3**
MTE	**Manteigas**	**15.65**	**268**		*ep*P		**P**	**11 54 17.4**	**+1.2**
MTE					A		A	11 54 22.4	
	comp=E,41nm,1.2s									
PCAB	**Cabril**	**15.71**	**273**		*ep*P		**P**	**11 54 18.3**	**+1.6**
PCAB					A		A	11 54 19.9	
	comp=E,37nm,1.8s									
BR131	**Keskin Array S**	**15.72**	**94**				**Pn**	**11 54 12.3**	**-0.7**
BR131	**Keskin Array S**	**15.72**	**94**		*e*P		**Pn**	**11 54 11.6**	**-1.4**
BRTR	**Keskin Array B**	**15.72**	**94**		Pn		**Pn**	**11 54 13.5**	**+0.5**
	comp=E,0.1nm,0.3s,baz=294,slow=10,SNR=3.5									
	comp=E,3.5nm,0.9s									
BRTR	**Keskin Array B**	**15.72**	**94**		Pn		**Pn**	**11 54 12.7**	**-0.3**
PCBR	**Castelo Branco**	**15.76**	**266**		*ep*P		**P**	**11 54 18.3**	**+1.0**
PCBR					A		A	11 54 24.4	
	comp=E,24nm,1.1s									
PMRV	**Marv??o**	**15.83**	**265**		*ep*P		**P**	**11 54 19.7**	**+1.6**
PMRV					A		A	11 54 23.7	
	comp=E,34nm,1.3s									
PVIS	**Viseu**	**15.83**	**270**		*ep*P		**P**	**11 54 19.6**	**+1.5**
PGAV	**Gavieira, Arco**	**15.84**	**274**		*ep*P		**P**	**11 54 18.9**	**+0.7**
SLIT	**Slitere, Latvi**	**15.92**	**18**		*e*P		**P**	**11 54 17.8**	**-1.1**
PBAR	**Barrancos**	**16.02**	**260**		*ep*P		**pP**	**11 54 22.4**	**-1.3**
PBAR					A		A	11 54 31.7	
	comp=E,56nm,1.9s									
PESTR	**Estremoz**	**16.16**	**263**		P		**P**	**11 54 23.4**	**+1.6**
PESTR	**Estremoz**	**16.16**	**263**		*ep*P		**pP**	**11 54 23.6**	**-1.7**
PESTR					A		A	11 54 37.8	
	comp=E,38nm,1.6s									
EKA	**Eskdalemuir Ar**	**16.41**	**325**		Pn		**Pn**	**11 54 20.5**	**-1.0**
	baz=132,slow=15									
	comp=E,2.3nm,0.4s									
ESK	**Eskdalemuir**	**16.41**	**325**				**Pn**	**11 54 20.8**	**-0.8**
ESK	**Eskdalemuir**	**16.41**	**325**		P		**Pn**	**11 54 20.8**	**-0.8**
ESK					pmax		pmax			
	comp=Z,53nm,1.5s									
ESK	**Eskdalemuir**	**16.41**	**325**		P		**P**	**11 54 27.8**	**+3.4**
PMTG	**Montargil**	**16.56**	**264**		*ep*P		**P**	**11 54 27.8**	**+1.7**
PMTG					A		A	11 54 32.7	
	comp=E,54nm,1.4s									
EVO	**Evora**	**16.59**	**262**		*ep*P		**pP**	**11 54 28.6**	**-1.4**
EVO					A		A	11 54 40.5	
	comp=E,39nm,2.0s									
KONO	**Kongsberg**	**17.00**	**354**		P		**P**	**11 54 35.1**	**+4.2**
KONO	**Kongsberg**	**17.00**	**354**		*c*eP		**Pn**	**11 54 29.6**	**+0.6**
KONO					pmax		pmax			
	comp=E,39nm,1.7s									
KONO	**Kongsberg**	**17.00**	**354**		P		**P**	**11 54 37.9**	**+7.0**
MDT	**Midelt**	**17.18**	**240**		P		**P**	**11 54 33.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=72,slow=11,SNR=9.2									
	comp=Z,1.6nm,0.7s									
MTSE	**Matsula**	**17.26**	**19**		*e*P		**Pn**	**11 54 31.6**	**-0.6**
HFS	**Hagfors**	**17.35**	**1**		P		**Pn**	**11 54 32.1**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=157,slow=9.5,SNR=10									
	comp=Z,6.3nm,0.8s									
CSS	**Mathiatis**	**17.54**	**110**		P		**Pn**	**11 54 36.0**	**0.0**
ANN	**Anapa**	**17.64**	**75**		*e*P		**Pn**	**11 54 36.7**	**-0.4**
ANN					pmax		pmax			
	comp=Z,73nm,1.1s									
VSU	**Vasula**	**17.83**	**24**		*d* iP		**Pn**	**11 54 37.4**	**-1.9**
VSU					pmax		pmax			
	comp=Z,117nm,0.7s									
VSU	**Vasula**	**17.83**	**24**		*e*P		**Pn**	**11 54 37.7**	**-1.6**
NB2	**NORSAR Subarra**	**18.29**	**357**		P		**Pn**	**11 54 44.0**	**-1.1**
	comp=Z,20nm,1.0s,baz=175,slow=11									
NB2	**NORSAR Subarra**	**18.29**	**357**		P		**Pn**	**11 54 44.0**	**-1.1**
	baz=175,slow=11									
NOA	**NORSAR Array B**	**18.29**	**357**		P		**Pn**	**11 54 43.5**	**-1.6**
	baz=175,slow=11,SNR=23									
NOA					PcP		**PcP**	**11 59 17.1**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=147,slow=1.6,SNR=3.3									
	comp=Z,5.1nm,0.8s									
NB201	**NORSAR Array S**	**18.30**	**357**		P		**Pn**	**11 54 44.4**	**-0.8**
NBO00	**NORSAR Array S**	**18.30**	**356**		*e*P		**P**	**11 54 46.1**	**+0.8**
NBO00					IAmb		IAmb	11 54 52.9	
	comp=Z,18nm,1.1s									
NC204	**NORSAR Array S**	**18.55**	**356**		P		**P**	**11 54 47.2**	**-0.8**
MEF	**Metsahovi**	**18.74**	**18**		*e*P		**Pn**	**11 54 50.5**	**+0.1**
RAF	**Rauma**	**18.97**	**13**		*e*P		**Pn**	**11 54 53.1**	**-0.1**
SOC	**Sochi**	**19.37**	**79**		*e*P		**Pn**	**11 55 00.6**	**+2.4**
SOC					*e*			11 58 40.2	
SOC					pmax		pmax			
	comp=Z,28nm,0.7s									
SOC					MLR		MLR			
	comp=Z,1µm,19.0s									
DOMB	**Dombas**	**19.41**	**354**		*e*P		**Pn**	**11 54 59.0**	**+0.3**
DOMB					IAmb		IAmb	11 55 05.2	
	comp=Z,16nm,1.2s									
VSR	**Storozhevoye**	**19.56**	**56**		*e*P		**P**	**11 54 57.8**	**-1.3**
VSR					pmax		pmax			
	comp=Z,50nm,0.9s									
OBN	**Obninsk**	**19.59**	**43**		P		**P**	**11 54 60.0**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=258,slow=3.6,SNR=9.9									
	comp=Z,19nm,0.8s									
OBN	**Obninsk**	**19.59**	**43**		P		**P**	**11 54 59.1**	**-0.2**
OBN					IAmb		IAmb	11 55 03.5	
	comp=Z,95nm,1.0s									
OBN	**Obninsk**	**19.59**	**43**	*c*	*i*P		**P**	**11 54 59.8**	**+0.4**
OBN					S		**S**	**11 58 34.0**	**-6.1**
OBN					pmax		pmax			
	comp=Z,53nm,0.7s									
OBN					MLR		MLR			
	comp=Z,2µm,17.0s									
OBN	**Obninsk**	**19.59**	**43**		P		**Pn**	**11 55 02.2**	**+1.5**
VORR	**Voronezh**	**19.71**	**54**		*e*P		**P**	**11 54 56.9**	**-3.8**
VORR					pmax		pmax			
	comp=Z,60nm,0.4s									
LPSR	**Galich'ya Gora**	**19.83**	**51**		*e*P		**P**	**11 55 01.4**	**-0.6**
LPSR					pmax		pmax			
	comp=Z,50nm,0.8s									
MMAI	**Mount Meron Ar**	**20.06**	**112**		P		Pn	11 55 06.5	-0.1
	comp=Z,46nm,0.8s,baz=316,slow=9.6,SNR=26									
	comp=Z,46nm,0.8s									
MOL	**Molde**	**20.06**	**352**		*e*P		Pn	11 55 11.1	+4.8
FINES	**FINESS Array B**	**20.21**	**18**		P		**P**	**11 55 05.2**	**-0.9**
	comp=Z,17nm,0.7s,baz=191,slow=8.9,SNR=45									
	comp=Z,17nm,0.7s									
FINES	**FINESS Array B**	**20.21**	**18**		P		**P**	**11 55 04.4**	**-1.7**
FIA1	**FINESS Array S**	**20.21**	**18**		P		**P**	**11 55 06.2**	**+0.1**
MOS	**Moscow**	**20.42**	**42**		*e*P		**P**	**11 55 06.2**	**-2.2**
MOS					*e*			11 55 44.8	
MOS					*e*S		**S**	**11 58 55.4**	**-1.3**
MOS					pmax		pmax			
	comp=Z,100nm,1.1s									
MOS					pmax		pmax			
	comp=Z,123nm,1.1s									
KOPT	**Kop Dagi**	**20.68**	**88**		IAmb		IAmb	11 55 24.9		
	comp=Z,90nm,1.3s									
TAM	**Tamanrasset**	**20.95**	**200**		P		**P**	**11 55 10.8**	**-3.7**
TAM	**Tamanrasset**	**20.95**	**200**		P		**P**	**11 55 10.8**	**-3.7**
TAM					pmax		pmax			
	comp=Z,19nm,1.1s									
VRH	**Novokhopyorsk**	**21.12**	**57**		*e*P		**P**	**11 55 15.2**	**-0.8**
VRH					pmax		pmax			
	comp=Z,120nm,0.9s									
VALR	**Valaam**	**21.41**	**24**		*e*P		**P**	**11 55 16.8**	**-2.2**
VALR					pmax		pmax			
	comp=Z,35nm,0.8s									
KIV	**Kislovodsk**	**21.46**	**77**		P		**P**	**11 55 20.0**	**+0.1**
KIV					IAmb		IAmb	11 55 29.6		
	comp=Z,74nm,1.0s									
KIV	**Kislovodsk**	**21.46**	**77**		*e*P		**P**	**11 55 20.5**	**+0.6**
KIV					pmax		pmax			
	comp=Z,83nm,1.0s									
KIV	**Kislovodsk**	**21.46**	**77**		P		**P**	**11 55 21.4**	**+1.5**
KIV	**Kislovodsk**	**21.46**	**77**		P		**P**	**11 55 21.2**	**+1.3**
KVAR	**Kislovodsk Arr**	**21.47**	**77**		P		**P**	**11 55 21.9**	**+1.9**
	comp=Z,7.8nm,0.7s,baz=243,slow=23,SNR=3.4									
	comp=Z,7.8nm,0.7s									
ASF	**Jabal al Asfar**	**21.57**	**112**		P		**P**	**11 55 24.5**	**+3.3**
	comp=Z,22nm,0.9s,baz=293,slow=4.2,SNR=23									
	comp=Z,22nm,0.9s									
KBZ	**Khabaz**	**21.64**	**77**		P		**P**	**11 55 23.1**	**+1.4**
	comp=Z,50nm,1.1s,baz=284,slow=8.5,SNR=30									
	comp=Z,50nm,1.1s									
KBZ	**Khabaz**	**21.64**	**77**	*c*	eP		**P**	**11 55 23.0**	**+1.3**
KBZ					pmax		pmax			
	comp=Z,66nm,1.1s									
NSS	**Namsos**	**21.77**	**359**		*e*P		**P**	**11 55 22.8**	**-0.1**
NSS					IAmb		IAmb	11 55 29.8		
	comp=Z,15nm,0.8s									
MARD	**Mardin**	**21.81**	**95**		P		**P**	**11 55 24.0**	**+0.3**
EIL	**Elat**	**21.87**	**120**		P		**P**	**11 55 27.5**	**+3.3**
	comp=Z,15nm,1.0s,baz=18,slow=7.8,SNR=3.6									
	comp=Z,15nm,1.0s									
GURO	**Guroymak-BITLI**	**22.27**	**91**		IAmb		IAmb	11 55 45.4		
	comp=Z,44nm,1.2s									
ZEI	**Tsey**	**22.52**	**80**		*e*P		**P**	**11 55 32.2**	**+0.8**
ZEI					pmax		pmax			
	comp=Z,34nm,1.3s									
MOR8	**Moi Rana**	**23.42**	**1**		*e*P		**P**	**11 55 40.6**	**+0.3**
GNI	**Garni**	**23.76**	**86**		P		**P**	**11 55 45.0**	**+1.0**
	comp=Z,17nm,0.8s,baz=43,slow=1.5,SNR=9.8									
	comp=Z,17nm,0.8s									
GNI	**Garni**	**23.76**	**86**		P		**P**	**11 55 43.9**	**-0.1**
GNI					IAmb		IAmb	11 55 52.1		
	comp=Z,36nm,1.1s									
GNI	**Garni**	**23.76**	**86**	*c*	eP		**P**	**11 55 44.2**	**+0.2**
GNI					pmax		pmax			
	comp=Z,58nm,1.7s									
GNI	**Garni**	**23.76**	**86**		P		**P**	**11 55 48.1**	**+4.1**
KLMR	**Klimovskoe**	**24.05**	**32**		*e*P		**P**	**11 55 44.1**	**-2.3**
KLMR					pmax		pmax			
	comp=Z,109nm,1.2s									
KLMR	**Klimovskoe**	**24.05**	**32**		*e*P		**P**	**11 55 44.2**	**-2.2**
KLMR					AMP			11 55 50.4		
	comp=Z,109nm,1.2s									
FAUS	**Fauske**	**24.65**	**2**		*e*P		**P**	**11 55 51.4**	**-0.4**
BELG	**Belogornoye**	**24.94**	**55**		P		**P**	**11 55 55.4**	**+0.9**
	comp=Z,96nm,0.9s,baz=70,slow=4.7,SNR=19									
	comp=Z,96nm,0.9s									
BELG	**Belogornoye**	**24.94**	**55**	*c*	*i*P		**P**	**11 55 54.5**	**0.0**
BELG					pmax		pmax			
	comp=Z,18nm,0.9s									
MAK	**Makhachkala**	**25.09**	**78**		*e*P		**P**	**11 55 50.2**	**-5.7**
MAK					*e*S		**S**	**12 00 12.4**	**-7.7**
MAK					pmax		pmax			
	comp=Z,330nm,1.0s									
MAK					MLR		MLR			
	comp=Z,2µm,15.0s									
STEI	**Steigen**	**25.20**	**2**		*e*P		**P**	**11 55 56.9**	**+0.2**
STEI					IAmb		IAmb	11 56 01.8		
	comp=Z,25nm,1.1s									
LOF	**Lofoten**	**25.38**	**0**		*e*P		**P**	**11 55 58.0**	**-0.3**
LOF					IAmb		IAmb	11 56 06.1		
	comp=Z,17nm,1.1s									
KTK1	**Kautokeino**	**26.79**	**8**		*e*P		**P**	**11 56 11.1**	**0.0**
PRGR	**Permogore**	**26.96**	**34**		*e*P		**P**	**11 56 11.7**	**-1.0**
KIRV	**Kirov**	**27.44**	**42**		P		**P**	**11 56 17.3**	**+0.3**
	comp=Z,26nm,0.5s,baz=264,slow=8.5,SNR=9.9									
	comp=Z,26nm,0.5s									
KIRV	**Kirov**	**27.44**	**42**	*c*	eP		**P**	**11 56 17.7**	**+0.7**
ARCES	**ARCESS Array B**	**27.54**	**9**		P		**P**	**11 56 17.9**	**0.0**
	comp=Z,1.8nm,0.6s,baz=173,slow=4.2,SNR=12									
ARCES					PcP		**PcP**	**11 59 34.8**	**-0.6**
	comp=Z,4.9nm,1.0s,baz=62,slow=2.9,SNR=3.8									
	comp=Z,1.8nm,0.6s									
TOA0	**Torodi Ar. Sit**	**31.17**	**202**		P		**P**	**11 56 51.0**	**+0.4**

KURBB PP PP 12 00 18.4 -4.5
comp=Z,3.1nm,0.2s,baz=296,slow=9.1,SNR=27
comp=Z,0.9nm,0.2s,baz=280,slow=11,SNR=2.0
KURK Kurchatov 44.21 56 P P 11 58 39.6 -0.8
KURK IAmb IAmb 11 58 42.6
comp=Z,3.1nm,0.2s
comp=Z,19nm,0.8s
KURK Kurchatov 44.21 56*c iP* P 11 58 40.1 -0.3
KURK pmax pmax
comp=Z,43nm,1.7s
KURK Kurchatov 44.21 56 P P 11 58 40.6 +0.3
KUU Kurty 44.96 66 *eP* P 11 58 47.2 +0.8
KUU pmax pmax
comp=Z,10.0nm,0.9s
KUU Kurty 44.96 66 *eP* P 11 58 47.2 +0.8
comp=Z,10nm,0.9s,baz=66
NRIK Noril'sk 45.32 29 P P 11 58 50.1 +1.1
comp=Z,12nm,0.9s,baz=286,slow=5.1,SNR=7.7
comp=Z,12nm,0.9s
NRIK Noril'sk 45.32 29 P P 11 58 48.9 -0.1
NRIK IAmb IAmb 11 58 53.9
comp=Z,15nm,1.1s
NRIK Noril'sk 45.32 29*c iP* P 11 58 49.7 +0.8
MDOK Medeo 45.71 67 *eP* P 11 58 53.9 +1.3
MDOK Medeo 45.71 67 *eP* P 11 58 54.0 +1.3
baz=67
KSH Kashi 46.45 72 P P 11 58 59.8 +1.3
KSH pP pP 11 59 01.9 -0.6
KSH sP sP 11 59 08.0 +4.1
KSH pmax pmax
comp=Z,23nm,1.0s
SATY Saty 46.67 66 *eP* P 11 59 01.4 +1.3
SATY Saty 46.67 66 *eP* P 11 59 01.5 +1.3
baz=66
KPKS Kokpek 46.69 66 *eP* P 11 59 01.2 +1.0
KPKS Kokpek 46.69 66 *eP* P 11 59 01.3 +1.0
baz=66
ZAA0 Zalesovo Array 46.93 50 IAmb IAmb 11 59 07.4
comp=Z,13nm,1.0s
ZALV Zalesovo Beam 46.93 50 P P 11 59 01.7 -0.2
comp=Z,8.3nm,0.7s,baz=290,slow=7.7,SNR=24
ZALV PP PP 12 00 52.4 +0.4
comp=Z,3.8nm,0.8s,baz=295,slow=11,SNR=4.2
comp=Z,8.3nm,0.7s
ZALV Zalesovo Beam 46.93 50 P P 11 59 01.3 -0.5
UZB Uzynbulak 47.05 66 *eP* P 11 59 04.0 +0.9
UZB Uzynbulak 47.05 66 *eP* P 11 59 04.1 +0.9
baz=66
NIL Nilore 47.21 80 P P 11 59 04.5 +0.1
NIL Nilore 47.21 80 P P 11 59 04.5 +0.1
NIL pmax pmax
comp=Z,21nm,1.1s
NIL Nilore 47.21 80 P P 11 59 08.0 +3.6
MAKZ Makanchi 47.58 60 P P 11 59 07.1 0.0
MAKZ IAmb IAmb 11 59 14.0
comp=Z,8.5nm,1.0s
MAKZ Makanchi 47.58 60 P P 11 59 07.1 0.0
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
MAKZ Makanchi 47.58 60 P P 11 59 08.6 +1.6
MKAR Makanchi Array 47.79 60 P P 11 59 09.2 +0.5
comp=Z,12nm,0.7s,baz=288,slow=6.8,SNR=50
comp=Z,12nm,0.7s
MKAR Makanchi Array 47.79 60 P P 11 59 08.8 +0.2
KMBO Kilima Mbogo 48.83 147 P P 11 59 18.3 +1.0
comp=Z,1.4nm,0.4s,baz=322,slow=8.6,SNR=4.0
comp=Z,1.4nm,0.4s
KMBO Kilima Mbogo 48.83 147 P P 11 59 18.4 +1.1
FRB Frobisher Bay 49.17 324 P P 11 59 18.3 -0.7
ZSN Zaisan 49.17 58 *eP* P 11 59 20.1 +0.8
ZSN pmax pmax
comp=Z,10.0nm,1.1s
ZSN Zaisan 49.17 58 *eP* P 11 59 20.2 +0.9
comp=Z,9.9nm,1.1s,baz=59
EUNU Eureka 49.79 347 P P 11 59 22.9 -0.7
EUNU IAmb IAmb 11 59 25.4
comp=Z,19nm,0.9s
DGZ Jazzator, Alta 49.89 55⇑*iP* P 11 59 25.5 +0.6
DGZ pmax pmax
comp=Z,15nm,0.7s
SCHQ Schefferville 51.21 313 P P 11 59 33.3 -1.3
comp=Z,8.1nm,0.7s,baz=81,slow=3.7,SNR=9.6
comp=Z,8.1nm,0.7s
SCHQ Schefferville 51.21 313 P P 11 59 32.9 -1.7
SCHQ IAmb IAmb 11 59 34.7
comp=Z,16nm,0.9s
WMQ Urumqi 52.48 62 *eP* P 11 59 49.3 +4.9
WMQ sP sP 11 59 54.8 +4.9
WMQ pmax pmax
comp=Z,43nm,0.7s
RES Resolute Bay 53.68 342 P P 11 59 52.3 -0.3
comp=Z,14nm,1.0s,baz=115,slow=4.3,SNR=4.0
comp=Z,14nm,1.0s
ASCN Ascension 56.38 213 P P 12 00 11.2 -1.6
PKME Peaks-Kenny Pk 56.77 303 P P 12 00 13.9 -1.5
baz=61
MOY Mondy 56.85 48 *eP* P 12 00 17.2 +1.2
MOY pmax pmax
comp=Z,25nm,2.1s
PYUN Piuthan 57.24 80 *eP* P 12 00 19.7 +0.5
TIXI Tiksi 57.24 20⇑*iP* P 12 00 18.3 0.0
TIXI pmax pmax
comp=Z,19nm,1.3s
DANN Dangsing 57.66 80 *eP* P 12 00 22.4 +0.2
KOLN Koldanda 57.87 80 *eP* P 12 00 23.7 +0.1
comp=Z,11nm,1.9s
GKN Gorkha 58.49 80 *eP* P 12 00 28.3 +0.4
comp=Z,75nm,1.0s
ZAK Zakamensk 58.74 48 *eP* P 12 00 30.6 +1.3
ZAK pmax pmax
comp=Z,7.0nm,1.1s
ZAK pmax pmax
comp=Z,4.0nm,1.4s
PKIN Phulchoki 59.28 80 *eP* P 12 00 33.4 -0.2
comp=Z,43nm,1.0s
PKI Pulchoki 59.30 80 *eP* P 12 00 33.3 -0.4
comp=Z,41nm,1.0s
GUN Gumba 59.44 79 *eP* P 12 00 35.0 +0.3
comp=Z,85nm,1.0s
JIRN Jiri 59.81 79 *eP* P 12 00 37.7 +0.4
HYBB Hyderabad (bro 60.42 93 *eP* P 12 00 41.7 +0.5
RAMN Ramite 60.52 79 *eP* P 12 00 41.8 -0.2
comp=Z,53nm,0.8s
GOMU GeErMu 61.04 66 P P 12 00 48.9 +3.3
GOMU sP sP 12 00 50.8 -0.3
GOMU pmax pmax
comp=Z,4.0nm,0.8s
TAPN Taplejung 61.09 78 *eP* P 12 00 45.8 -0.2
comp=Z,63nm,1.0s
ODAN Odare 61.14 79 *eP* P 12 00 46.6 +0.3
A36M Sachs Harbour 61.81 346 P P 12 00 48.0 -1.8
baz=34
SONM Songino Array 61.83 50 P P 12 00 51.5 +1.1
comp=Z,24nm,0.9s,baz=289,slow=7.6,SNR=43
comp=Z,24nm,0.9s
SONM Songino Array 61.83 50 P P 12 00 51.9 +1.4
SONM Songino Array 61.83 50 P P 12 00 51.9 +1.4
SONM pmax pmax
comp=Z,30nm,1.0s
ULN Ulaanbaatar 62.18 49⇑*iP* P 12 00 54.8 +1.9
ULN pmax pmax
comp=Z,18nm,1.2s
ULN Ulaanbaatar 62.18 49 P P 12 00 56.3 +3.4
BINY Binghamton 62.51 303 P P 12 00 52.3 -2.7
baz=56
GTA Gaotai 62.54 61 ⇑P P 12 00 57.3 +1.9
GTA pP sP 12 01 03.9 +3.0
GTA sP pP 12 01 07.6 +8.1
GTA pmax pmax
comp=Z,4.0nm,1.2s
YAK Yakutsk 63.76 28 P P 12 01 03.9 +1.0
comp=Z,18nm,0.7s,baz=97,slow=3.5,SNR=5.6
comp=Z,18nm,0.7s
YAK Yakutsk 63.76 28 *eP* P 12 01 02.7 -0.2
YAK pmax pmax
comp=Z,33nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.8s
C36M Paulatuk 63.80 344 P P 12 01 01.8 -1.3
baz=34
SSPA Standing Stone 64.58 303 P P 12 01 07.0 -1.6
baz=54
M53A WI Miller and 65.81 305 P P 12 01 15.0 -1.7
baz=54

INK Inuvik 66.42 347 P P 12 01 20.0 -0.1
comp=E,14nm,1.1s,baz=19,slow=8.6,SNR=9.9
comp=E,14nm,1.1s
INK Inuvik 66.42 347 P P 12 01 18.7 -1.4
INK IAmb IAmb 12 01 23.7
comp=Z,13nm,1.1s
INK Inuvik 66.42 347 P P 12 01 20.0 -0.1
INK Inuvik 66.42 347 P P 12 01 18.4 -1.7
baz=26
C26K Camden Bay 66.44 352 P P 12 01 19.0 -1.2
baz=17
C27K Jago River 66.59 351 P P 12 01 20.4 -0.8
baz=18,SNR=12
YKA Yellowknife Ar 67.01 336 P P 12 01 24.5 +0.5
comp=Z,18nm,0.9s,baz=44,slow=6.4,SNR=54
comp=Z,18nm,0.9s
C23K Itkillik River 67.03 354 P P 12 01 22.6 -1.4
baz=13
LZH Lanzhou 67.06 62 *eP* P 12 01 27.0 +2.0
LZH sP sP 12 01 35.9 +5.3
LZH pmax pmax
comp=Z,25nm,1.3s
D25K Kavik River 67.16 352 P P 12 01 23.6 -1.3
baz=16
D24K Happy Valley 67.55 353 P P 12 01 26.8 -0.6
baz=14
BILL Bilibino 67.64 11*de*P P 12 01 28.8 +1.0
BILL *PP pP 12 01 32.0 0.0
BILL *SP sP 12 01 33.0 -0.4
BILL *i* 12 01 51.4
BILL S S 12 10 14.0 -10
BILL pmax pmax
BILL comp=Z,7.0nm,0.5s MLR MLR
comp=Z,529nm,17.0s
E27K Coleen River 67.71 350 P P 12 01 28.1 -0.2
baz=20,SNR=18
D23K Nanushuk River 67.89 354 P P 12 01 28.4 -1.1
baz=13,SNR=12
EYMN Ely 67.89 315 P P 12 01 29.8 0.0
baz=50
TOLK Toolik Lake Re 68.12 353 P P 12 01 29.3 -1.7
baz=14,SNR=9.9
BTO Baotou 68.17 55 *eP* P 12 01 32.5 +0.7
E25K Arctic Village 68.23 352 P P 12 01 30.3 -1.4
baz=17,SNR=10
LBTB Lobatse 68.46 168 P P 12 01 33.0 -0.6
LBTB Lobatse 68.46 168 P P 12 01 33.0 -0.6
LBTB pmax pmax
comp=Z,24nm,0.5s
F26K Sheenjek River 68.48 351 P P 12 01 32.0 -1.3
baz=18,SNR=14
E24K Your Creek 68.57 353 P P 12 01 32.3 -1.5
baz=14
ULM Lac du Bonnet 68.57 319 P P 12 01 33.5 -0.5
comp=Z,5.8nm,0.6s,baz=42,slow=6.5,SNR=8.5
comp=Z,5.8nm,0.6s
ULM Lac du Bonnet 68.57 319 IAmb IAmb 12 01 39.8
comp=Z,14nm,1.1s
EPYK Eagle Plains 68.70 347 P P 12 01 33.6 -1.0
baz=23,SNR=12
F25K Christian Rive 68.75 351 P P 12 01 34.5 -0.4
baz=17
E38A The Farm, Brul 68.79 314 IAmb IAmb 12 01 41.4
comp=Z,8.0nm,0.9s
E22K Anaktuvuk Pass 68.80 354 P P 12 01 34.1 -1.1
baz=12
WRGLY Wrigley 68.80 341 P P 12 01 34.8 -0.4
baz=33,SNR=8.0
G27K Doyon Strip 69.02 350 P P 12 01 36.3 -0.2
baz=20,SNR=18
F24K Squaw Lake 69.06 352 P P 12 01 37.0 +0.1
baz=15,SNR=12
G26K Porcupine Rive 69.15 350 P P 12 01 37.4 +0.1
baz=18,SNR=27
O48B Farmland 69.22 306 P P 12 01 38.4 +0.2
baz=51
F22K John River 69.44 354 P P 12 01 39.9 +0.7
baz=12
H27K Steamboat Moun 69.55 349 P P 12 01 40.1 +0.3
baz=20,SNR=36
XLT XiLinHaoTe 69.59 49 *eP* P 12 01 42.4 +1.8
XLT pP sP 12 01 46.8 +0.6
XLT sP pP 12 01 49.9 +5.2
XLT pmax pmax
comp=Z,11nm,1.0s
SEY Seymchan 69.69 19⇑*iP* P 12 01 42.2 +1.5
SEY pmax pmax
comp=Z,15nm,0.9s
G24K Hadweenzic Riv 69.81 352 P P 12 01 41.7 +0.3
baz=15
F21K Alatna River 69.82 354 P P 12 01 41.8 +0.3
baz=10,SNR=28
AGMN Agassiz Nation 69.87 318 P P 12 01 42.1 0.0
baz=48
I29M Ogilvie Camp, 69.89 348 P P 12 01 42.4 +0.4
baz=22,SNR=27
G22K Bettles 69.97 354 P P 12 01 41.9 -0.5
baz=12
G23K Bananza Creek 70.05 353 P P 12 01 43.5 +0.5
baz=13,SNR=12
H25K Birch Creek 70.05 351 P P 12 01 43.7 +0.9
baz=16,SNR=12
I27K Kandik River 70.15 349 P P 12 01 44.0 +0.4
baz=20,SNR=8.7
CD2 Chengdu 70.17 66 *eP* P 12 01 42.6 -1.7
G21K Allakaket 70.52 354 P P 12 01 46.5 +0.7
baz=0
I26K Coal Creek Min 70.64 350 IAmb IAmb 12 02 23.2
comp=Z,8.1nm,0.9s
I26K Coal Creek Min 70.64 350 P P 12 01 47.4 +0.8
baz=18
H24K Noodor Dome 70.69 352 IAmb IAmb 12 01 49.1
comp=Z,9.6nm,1.1s
H24K Noodor Dome 70.69 352 P P 12 01 47.1 +0.3
baz=15,SNR=10
PRP Porcupine Dome 70.74 351 IAmb IAmb 12 01 52.4
comp=Z,9.7nm,1.0s
PRP Porcupine Dome 70.74 351 P P 12 01 48.1 +0.8
baz=16
H23K Yukon River 70.87 353 IAmb IAmb 12 01 54.3
comp=Z,18nm,1.1s
H23K Yukon River 70.87 353 P P 12 01 48.5 +0.5
baz=13,SNR=19
EGAK Eagle 70.87 349 IAmb IAmb 12 01 52.8
comp=Z,15nm,1.4s
EGAK Eagle 70.87 349 P P 12 01 48.3 +0.3
baz=20,SNR=7.7
H22K Ishtalitna Cre 70.97 353 P P 12 01 49.3 +0.8
baz=12,SNR=15
MMPY Sheldon Lake, 71.11 343 P P 12 01 50.0 +0.5
baz=27,SNR=7.5
MAYO Mayo, Yukon 71.12 346 P P 12 01 50.0 +0.5
baz=24
K29M Barlow Dome 71.17 347 P P 12 01 50.1 +0.2
baz=22
DAWY Dawson 71.27 348 P P 12 01 51.1 +0.6
baz=21,SNR=25
H21K Melozitna Rive 71.31 354 P P 12 01 51.5 +0.8
baz=11,SNR=44
FLDN Fort Liard 71.33 339 P P 12 01 51.8 +1.0
baz=32
POKR Poker Plat Res 71.34 351 P P 12 01 51.5 +0.7
baz=15
TGTN Hyland Airport 71.42 342 P P 12 01 52.1 +0.8
baz=29,SNR=7.0
J26L Joseph Creek 71.47 350 P P 12 01 52.5 +0.9
baz=18,SNR=28
I23K Minto, Yukon-K 71.51 352 IAmb IAmb 12 01 57.2
comp=Z,13nm,1.1s
I23K Minto, Yukon-K 71.51 352 P P 12 01 52.2 +0.4
baz=14
PZH PanZhiHua 71.55 71 P P 12 01 53.3 +0.5
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,100nm,5.5s
MDM Murphy Dome 71.58 352 IAmb IAmb 12 01 57.5
comp=Z,17nm,1.0s
J25K Salcha River, 71.59 350 P P 12 01 52.6 +0.2
baz=16
XAN Xi'an 71.60 61 ⇑P P 12 01 54.3 +1.4
XAN pP pP 12 01 57.6 +0.5
XAN sP sP 12 02 00.9 +2.4
XAN pmax pmax
comp=Z,16nm,1.1s
IL31 71.61 351 IAmb IAmb 12 01 57.5

comp=Z,9.5nm,0.9s
ILAR Eielson Array 71.61 351 P P 12 01 53.5 +1.0
comp=Z,7.1nm,0.9s,baz=9.6,slow=5.5,SNR=44
comp=Z,7.1nm,0.9s
COLA College 71.62 352⇑*iP* P 12 01 53.6 +1.2
COLA pmax pmax
comp=Z,9.0nm,1.1s
COLA College 71.62 352 P P 12 01 53.5 +1.0
baz=15
COLA College 71.62 352 P P 12 01 54.6 +2.2
TCOL CIGO, UAF Yank 71.62 352 P P 12 01 53.5 +1.0
baz=15
K27K Chicken 71.71 349 IAmb IAmb 12 01 58.9
comp=Z,13nm,1.0s
K27K Chicken 71.71 349 P P 12 01 53.7 +0.7
baz=19
I21K Tanana 71.72 353 P P 12 01 53.8 +0.7
baz=12,SNR=18
F33A 5 Mile Ranch, 71.75 316 IAmb IAmb 12 01 58.7
comp=Z,8.2nm,1.0s
MLY Manley 71.76 353 IAmb IAmb 12 01 59.0
comp=Z,15nm,1.0s
MLY Manley 71.76 353 P P 12 01 53.7 +0.4
baz=12,SNR=16
FARO Faro, Yukon 71.89 344 IAmb IAmb 12 02 00.3
comp=Z,18nm,1.1s
FARO Faro, Yukon 71.89 344 P P 12 01 55.2 +1.0
baz=25,SNR=16
BOSA Boshof 71.94 169 P P 12 01 55.0 +0.1
comp=Z,5.4nm,0.6s,baz=352,slow=12,SNR=1.2
comp=Z,5.4nm,0.6s
BOSA Boshof 71.94 169 P P 12 01 55.0 +0.1
HDA Harding Lake 71.97 351 P P 12 01 55.2 +0.6
baz=15,SNR=17
NEA2 Nenana 72.02 352 IAmb IAmb 12 01 59.9
comp=Z,17nm,1.2s
NEA2 Nenana 72.02 352 P P 12 01 55.4 +0.5
baz=14,SNR=15
SCRK Sand Creek 72.02 350 IAmb IAmb 12 02 00.5
comp=Z,8.7nm,1.0s
SCRK Sand Creek 72.02 350 P P 12 01 55.5 +0.4
baz=18,SNR=13
WRH Wood River Hil 72.04 352 IAmb IAmb 12 02 00.3
comp=Z,15nm,1.1s
M31M Drury Creek, Y 72.12 345 IAmb IAmb 12 01 58.2
comp=Z,8.8nm,0.9s
M31M Drury Creek, Y 72.12 345 P P 12 01 56.3 +0.8
baz=24,SNR=9.0
BJI Beijing 72.16 52 P P 12 01 56.8 +0.7
BJI sP sP 12 02 03.5 +1.8
BJI PcP PcP 12 02 15.1 +0.7
BJI pmax pmax
comp=Z,12nm,0.8s
M30M Minto, Yukon 72.22 346 P P 12 01 56.7 +0.5
baz=23
DOT Dot Lake 72.35 350 IAmb IAmb 12 02 02.1
comp=Z,12nm,1.0s
RIDG Independent Ri 72.36 350 P P 12 01 58.0 +1.0
baz=17,SNR=41
K24K Donnelly Dome 72.42 350 P P 12 01 58.4 +1.0
baz=16
GCSA Galena City Sc 72.50 356 P P 12 01 58.5 +0.9
baz=7.7
L27K Beaver Creek, 72.59 348 IAmb IAmb 12 02 04.2
comp=Z,14nm,1.1s
L27K Beaver Creek, 72.59 348 P P 12 01 59.1 +0.8
baz=19,SNR=15
M29M Somme Creek 72.64 347 P P 12 01 59.4 +0.7
baz=22,SNR=6.1
BPAW Bear Paw Mtn. 72.69 353 IAmb IAmb 12 02 03.5
comp=Z,18nm,1.1s
BPAW Bear Paw Mtn. 72.69 353 P P 12 01 59.0 0.0
baz=12,SNR=11
N32M Quiet Lake 72.81 344 P P 12 02 00.3 +0.6
baz=25
L26K Log Cabin Wild 72.85 349 P P 12 02 00.1 +0.3
baz=18,SNR=17
MCK McKinley 72.85 352 P P 12 02 00.5 +0.7
baz=14
J20K Nowinta River 72.88 354 IAmb IAmb 12 02 05.0
comp=Z,16nm,1.1s
J20K Nowinta River 72.88 354 P P 12 02 00.6 +0.6
baz=9.7,SNR=10
MENT Mentasta 72.98 349 IAmb IAmb 12 02 06.5
comp=Z,16nm,1.4s
CHUM Lake Minchumin 73.02 353 P P 12 02 02.0 +1.2
baz=11,SNR=12
HNS HongShan 73.03 55 ⇑P P 12 02 02.8 +1.5
HNS pmax pmax
comp=Z,7.0nm,1.0s
N31M Braeburn, Yuko 73.04 345 IAmb IAmb 12 02 03.5
comp=Z,15nm,1.1s
N31M Braeburn, Yuko 73.04 345 P P 12 02 01.4 +0.4
baz=23
BVCY Beaver Creek 73.06 348 P P 12 02 02.2 +1.0
baz=20
RND Reindeer 73.16 352 IAmb IAmb 12 02 06.0
comp=Z,22nm,1.4s
PAX Paxson 73.18 350 IAmb IAmb 12 02 07.0
comp=Z,9.7nm,1.2s
PAX Paxson 73.18 350 P P 12 02 02.4 +0.4
baz=16
KTH Kantishna Hill 73.22 353 IAmb IAmb 12 02 06.7
comp=Z,9.1nm,1.0s
M27K Edge Creek, AK 73.27 348 IAmb IAmb 12 02 08.6
comp=Z,15nm,1.0s
M27K Edge Creek, AK 73.27 348 P P 12 02 03.0 +0.5
baz=19
N30M Aishikik Lake 73.31 346 P P 12 02 03.9 +1.2
baz=22,SNR=12
DHY Denali Highway 73.31 351 P P 12 02 03.0 +0.2
baz=15,SNR=27
ECSD EROS Data Cent 73.37 315 IAmb IAmb 12 02 09.5
comp=Z,8.2nm,0.9s
ECSD EROS Data Cent 73.37 315 P P 12 02 02.6 -0.6
baz=46,SNR=7.4
M26K Nabesna, AK 73.39 349 IAmb IAmb 12 02 08.9
comp=Z,16nm,1.2s
M26K Nabesna, AK 73.39 349 P P 12 02 03.5 +0.4
baz=18,SNR=8.7
CAST Castle Rocks 73.46 353 IAmb IAmb 12 02 08.6
comp=Z,18nm,1.1s
CAST Castle Rocks 73.46 353 P P 12 02 03.8 +0.3
baz=11,SNR=12
WVT Waverly 73.49 304 P P 12 02 02.4 -1.7
WVT IAmb IAmb 12 02 07.2
comp=Z,11nm,1.1s
WVT Waverly 73.49 304 P P 12 02 02.4 -1.7
WVT pmax pmax
comp=Z,11nm,1.2s
WVT Waverly 73.49 304 P P 12 02 05.1 +1.0
baz=49
WVT Waverly 73.49 304 P P 12 02 06.5 +2.4
YUK3 Moose Creek 73.60 347 P P 12 02 04.7 +0.2
baz=20,SNR=8.2
P33M Teslin, Yukon 73.61 343 IAmb IAmb 12 02 06.6
comp=Z,11nm,0.8s
P33M Teslin, Yukon 73.61 343 P P 12 02 04.9 +0.5
baz=25,SNR=13
WHY Whitehorse 73.62 344 P P 12 02 04.4 -0.2
baz=24
K20K Telida 73.69 354 IAmb IAmb 12 02 08.2
comp=Z,13nm,0.8s
K20K Telida 73.69 354 P P 12 02 05.5 +0.7
baz=9.8,SNR=10
WAT1 Susitna Watana 73.69 351 P P 12 02 04.6 -0.3
baz=14
HARP HAARP 73.69 350 P P 12 02 05.4 +0.5
baz=16
YUK4 Talbot Arm 73.69 346 P P 12 02 04.8 -0.3
baz=21,SNR=7.8
DGMT Dagmar 73.70 322 P P 12 02 05.9 +0.7
baz=43
KLR Kul'dur 73.72 37 P P 12 02 06.1 +0.9
comp=Z,5.4nm,0.9s,baz=325,slow=8.5,SNR=13
comp=Z,5.4nm,0.9s
KLR Kul'dur 73.72 37*c iP* P 12 02 05.9 +0.7
KLR pmax pmax
comp=Z,5.0nm,1.0s
O30N Mendenhall 73.76 345 P P 12 02 06.1 +0.8
baz=23,SNR=10
WAT6 Susitna Watana 73.84 351 P P 12 02 06.0 +0.1
baz=14
R33M Jennings River 73.93 342 P P 12 02 07.6 +1.2
baz=27,SNR=14
HYT Haines Junctio 73.97 346 IAmb IAmb 12 02 09.0
comp=Z,8.7nm,0.9s
HYT Haines Junctio 73.97 346 P P 12 02 07.2 +0.5

baz=22,SNR=6.7
PPLA Purkeypile 73.98 353 P **P** **12 02 07.0 +0.3**
baz=11
YUK6 Outpost Mounta 74.02 346 P **P** **12 02 08.1 +1.0**
baz=21,SNR=9.0
X48A Hartselle 74.11 302 IAmb IAmb 12 02 15.4
comp=Z,27nm,1.5s
TTA Tatalina 74.25 355 IAmb IAmb 12 02 10.8
comp=Z,11nm,1.1s
TTA Tatalina 74.25 355 P **P** **12 02 09.3 +1.1**
baz=8.2
P32M Atlin 74.36 343 P **P** **12 02 08.1 -0.8**
baz=25
MCARA McCarthy VSAT 74.37 348 P **P** **12 02 07.6 -1.2**
baz=18
N25K Chitina, Valde 74.38 349 P **P** **12 02 09.3 +0.3**
baz=17
ENH Enshi 74.39 63 IAmb IAmb 12 02 20.3
comp=Z,11nm,0.7s
PLAL Pickwick Lake 74.39 303 IAmb IAmb 12 02 14.6
comp=Z,8.8nm,0.9s
CHTO Chiang Mai 74.46 79 P **P** **12 02 09.2 -0.8**
CHTO IAmb IAmb 12 02 12.0
comp=Z,8.9nm,0.9s
CHTO Chiang Mai 74.46 79 P **P** **12 02 09.2 -0.8**
CHTO pmax pmax
comp=Z,9.0nm,0.9s
CHTO Chiang Mai 74.46 79 P **P** **12 02 10.8 +0.8**
O28M Mount Upton 74.50 347 P **P** **12 02 10.4 +0.5**
baz=20,SNR=8.7
CTGM Chitina Glacie 74.50 347 IAmb IAmb 12 02 12.1
comp=Z,16nm,1.0s
CTG Chitna Glacier 74.50 347 P **P** **12 02 09.8 0.0**
baz=19
SCM Sheep Creek Mo 74.51 351 P **P** **12 02 10.7 +1.0**
baz=15,SNR=8.7
P30M Million Dollar 74.53 345 P **P** **12 02 09.8 0.0**
baz=22
L20K Farewell, AK 74.54 354 P **P** **12 02 10.0 +0.1**
baz=9.8,SNR=7.9
DLBC Dease Lake 74.56 341 P **P** **12 02 10.6 +0.5**
baz=27
CRAI Chiangrai 74.57 77 P **P** **12 02 12.4 +1.7**
LOGN Logan Glacier 74.58 347 IAmb IAmb 12 02 15.3
comp=Z,17nm,0.9s
M23K Glacier View 74.60 351 P **P** **12 02 10.8 +0.7**
baz=14
CN2 Changchun 74.65 44 *e*P **P** **12 02 12.3 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
O29M Mount Kennedy 74.66 346 P **P** **12 02 10.2 -0.5**
baz=21
SML Sawmill 74.66 351 P **P** **12 02 11.1 +0.5**
baz=14
KLU Klutina 74.67 350 IAmb IAmb 12 02 15.8
comp=Z,20nm,1.1s
KLU Klutina 74.67 350 P **P** **12 02 10.6 -0.1**
baz=16
CM31 Chiang Mai Arr 74.69 79 P **P** **12 02 09.7 -1.6**
CM31 IAmb IAmb 12 02 15.4
comp=Z,9.0nm,0.7s
CMAR Chiang Mai Arr 74.69 79 P **P** **12 02 11.2 -0.1**
comp=Z,7.1nm,0.8s,baz=303,slow=7.3,SNR=35
comp=Z,7.1nm,0.8s
SKAG Skagway 74.82 344 IAmb IAmb 12 02 13.6
comp=Z,14nm,1.0s
SKAG Skagway 74.82 344 P **P** **12 02 11.7 +0.4**
baz=23,SNR=5.3
SKT Skwentna 74.83 353 IAmb IAmb 12 02 16.0
comp=Z,15nm,1.2s
SKT Skwentna 74.83 353 P **P** **12 02 10.9 -0.6**
baz=12
M22K Willow 74.91 352 P **P** **12 02 11.8 0.0**
baz=13
L19K White Mountain 74.91 354 P **P** **12 02 12.0 0.0**
L19K IAmb IAmb 12 02 18.6
comp=Z,12nm,1.0s
L19K White Mountain 74.91 354 P **P** **12 02 12.5 +0.5**
baz=9.1,SNR=9.9
PMR Palmer 74.96 351 IAmb IAmb 12 02 17.6
comp=Z,15nm,1.2s
PMR Palmer 74.96 351 P **P** **12 02 12.5 +0.3**
baz=13
BMRM Bremner River 74.99 349 P **P** **12 02 13.1 +0.6**
baz=17
PLBC Pleasant Camp 75.03 344 P **P** **12 02 13.0 +0.3**
baz=23
KNK Knik Glacier 75.06 351 P **P** **12 02 12.8 0.0**
baz=14
M20K Styx River 75.07 353 P **P** **12 02 13.1 +0.2**
baz=10
P29M Windy Craggy 75.13 345 P **P** **12 02 14.1 +0.8**
baz=22,SNR=10
PINM Pinnacle 75.15 347 P **P** **12 02 14.1 +0.7**
baz=20
M19K Big River Lodg 75.15 354 IAmb IAmb 12 02 20.6
comp=Z,16nm,0.9s
M19K Big River Lodg 75.15 354 P **P** **12 02 13.8 +0.4**
baz=9.4,SNR=14
SUR Sutherland 75.16 173 P **P** **12 02 16.7 +2.9**
comp=Z,6.4nm,0.4s
comp=Z,6.4nm,0.4s
SUA Susitna One 75.26 352 P **P** **12 02 14.9 +0.8**
baz=12
S34M Telegraph Cree 75.30 341 P **P** **12 02 14.9 +0.7**
baz=26
MESA MESA 75.35 347 P **P** **12 02 14.9 +0.2**
baz=19
PNL Peninsula 75.40 346 P **P** **12 02 15.5 +0.6**
baz=20
RC01 Rabbit Creek A 75.52 351 P **P** **12 02 15.2 -0.2**
baz=13
LAO LASA Array 75.95 322 P **P** **12 02 19.3 +1.1**
baz=41
SVW2 Sparrevohn 76.04 354 IAmb IAmb 12 02 24.2
comp=Z,11nm,1.0s
N19K Bonanza Creek 76.24 354 P **P** **12 02 21.0 +1.3**
N19K IAmb IAmb 12 02 24.8
comp=Z,11nm,1.1s
N18K Kilae Creek 76.47 354 P **P** **12 02 22.0 +1.0**
baz=8.3
EGMT Eagleton 76.49 325 P **P** **12 02 22.2 +0.9**
baz=39,SNR=8.5
RSSD Black Hills 76.83 319 P **P** **12 02 22.6 -0.9**
RSSD Black Hills 76.83 319 P **P** **12 02 22.6 -0.9**
RSSD pmax pmax
comp=Z,5.0nm,0.9s
RSSD Black Hills 76.83 319 P **P** **12 02 23.9 +0.4**
baz=42
RSSD Black Hills 76.83 319 P **P** **12 02 25.3 +1.8**
WRAK Wrangell Islan 76.94 341 P **P** **12 02 24.3 +0.7**
baz=25
HHAR Hobbs 77.03 308 IAmb IAmb 12 02 30.4
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 77.58 40 P **P** **12 02 28.7 +1.3**
comp=Z,7.3nm,1.0s,baz=293,slow=4.4,SNR=6.0
comp=Z,7.3nm,1.0s
O16K Kokwok River B 77.70 355 P **P** **12 02 29.0 +1.2**
baz=6.6
R32A Long Quarter, 78.23 312 pP 12 02 34.1 -1.2
CBKS Cedar Bluff 78.50 313 P **P** **12 02 33.6 +0.8**
baz=44
RLMT Red Lodge 78.52 322 IAmb IAmb 12 02 40.2
comp=Z,8.2nm,0.9s
RLMT Red Lodge 78.52 322 P **P** **12 02 33.3 +0.4**
baz=39,SNR=9.5
BLOK Blackwell 78.58 310 IAmb IAmb 12 02 40.0
comp=Z,26nm,1.0s
KDAK Kodiak Island 79.06 352 P **P** **12 02 35.5 +0.2**
baz=11
KDAK Kodiak Island 79.06 352 P P 12 02 41.2 +5.8
K22A Casper 79.14 319 P **P** **12 02 36.1 -0.2**
baz=40
NJ2 Nanjing 79.15 56 *e*P **P** **12 02 36.0 -0.3**
NJ2 pmax pmax
comp=Z,12nm,0.5s
MSO Missoula 79.18 326 IAmb IAmb 12 02 42.3
comp=Z,10nm,0.9s
MSO Missoula 79.18 326 P **P** **12 02 37.4 +1.0**
baz=37,SNR=9.0
BOZ Bozeman (W) 79.19 324 IAmb IAmb 12 02 43.2
comp=Z,16nm,0.9s
BOZ Bozeman (W) 79.19 324 P **P** **12 02 38.4 +1.9**
baz=38,SNR=12
NEW Newport 79.28 329 IAmb IAmb 12 02 38.7
comp=Z,14nm,0.9s
NEW Newport 79.28 329 P **P** **12 02 38.1 +1.4**
baz=35,SNR=9.4

SDV Santo Domingo 79.46 272 P **P** **12 02 37.5 -1.0**
SDV IAmb IAmb 12 02 40.1
comp=Z,12nm,0.9s
SDV Santo Domingo 79.46 272 *e*P **P** **12 02 39.0 +0.6**
YHL Hebgen Lake 79.58 323 IAmb IAmb 12 02 45.8
comp=Z,19nm,1.1s
PHWY Pilot Hill 79.64 318 IAmb IAmb 12 02 45.9
comp=Z,12nm,0.9s
H17A Grant Village 79.67 323 P **P** **12 02 42.4 +3.2**
baz=38,SNR=8.3
PETK Petropavlovsk- 79.70 21 P **P** **12 02 39.1 +0.1**
comp=Z,6.1nm,0.8s,baz=222,slow=5.6,SNR=4.9
comp=Z,6.1nm,0.8s
KSCO Kaye Shedlock' 79.90 315 P **P** **12 02 42.2 +1.7**
baz=42
B08A Colville Reser 80.03 330 IAmb IAmb 12 02 49.0
comp=Z,15nm,1.3s
YSS Yuzh-Sakhalins 80.11 32 P **P** **12 02 40.8 -0.4**
YSS Yuzh-Sakhalins 80.11 32 *e*P **P** **12 02 42.2 +1.0**
YSS pmax pmax
comp=Z,70nm,0.8s
YSS Yuzh-Sakhalins 80.11 32 P **P** **12 02 43.0 +1.8**
N23A Red Feather La 80.18 318 IAmb IAmb 12 02 50.7
comp=Z,17nm,1.2s
N23A Red Feather La 80.18 318 P **P** **12 02 43.0 +0.9**
baz=41
IMW Indian Meadow 80.22 323 IAmb IAmb 12 02 49.1
comp=Z,10nm,0.9s
MOOW Moose Ponds 80.25 322 IAmb IAmb 12 02 49.9
comp=Z,12nm,0.9s
PDAR Pinedale Array 80.48 321 P **P** **12 02 43.8 +0.2**
comp=Z,2.5nm,0.7s,baz=54,slow=4.9,SNR=23
comp=Z,2.5nm,0.7s
BW06 Boulder Array 80.48 321 P **P** **12 02 44.2 +0.5**
baz=39,SNR=6.8
KSRS Korea Array 80.53 47 P **P** **12 02 44.5 +0.8**
comp=Z,15nm,0.8s,baz=324,slow=4.5,SNR=18
comp=Z,5.5nm,0.8s
TPAW Teton Pass 80.55 322 IAmb IAmb 12 02 51.0
comp=Z,13nm,1.0s
REDW Red Top Meadow 80.60 322 IAmb IAmb 12 02 51.2
comp=Z,10nm,1.0s
TLCB Telegraph Cove 80.68 335 IAmb IAmb 12 02 51.6
comp=Z,18nm,1.0s
BDFB Brasilia 80.75 239 P **P** **12 02 46.2 +1.0**
comp=Z,7.2nm,0.7s,baz=39,slow=4.5,SNR=8.9
comp=Z,7.2nm,0.7s
BDFB Brasilia 80.75 239 P **P** **12 02 44.9 -0.3**
BDFB IAmb IAmb 12 02 47.8
comp=Z,11nm,0.9s
BDFB Brasilia 80.75 239 *e*P **P** **12 02 45.5 +0.3**
ISCO Idaho Springs 80.85 317 IAmb IAmb 12 02 52.3
comp=Z,13nm,0.9s
ISCO Idaho Springs 80.85 317 P **P** **12 02 46.2 +0.4**
baz=41
WMOK Wichita Mounta 80.91 309 IAmb IAmb 12 02 52.8
comp=Z,11nm,0.9s
D08A Wollman Farm, 80.96 329 IAmb IAmb 12 02 52.6
comp=Z,12nm,1.0s
TJN Taejon 81.02 48 ⇑*i*P **P** **12 02 47.6 +1.3**
AHID Auburn Hatcher 81.18 322 IAmb IAmb 12 02 54.2
comp=Z,11nm,1.1s
PGC Sidney 81.24 333 IAmb IAmb 12 02 49.0
comp=Z,14nm,0.8s
Q24A Divide 81.24 316 IAmb IAmb 12 02 54.1
comp=Z,9.4nm,0.9s
Q24A Divide 81.24 316 P **P** **12 02 47.8 -0.1**
baz=41
CLRS Cowichan Lake 81.32 333 IAmb IAmb 12 02 52.8
comp=Z,18nm,1.3s
PLID Pearl Lake 81.43 326 IAmb IAmb 12 02 53.2
comp=Z,12nm,1.2s
HAWA Hanford 81.75 329 IAmb IAmb 12 02 52.3
comp=Z,12nm,0.8s
O20A White River Ci 81.89 319 IAmb IAmb 12 02 56.8
comp=Z,10nm,0.7s
O20A White River Ci 81.89 319 P **P** **12 02 51.7 +0.6**
baz=39,SNR=11
PMNB Patos De Minas 81.97 236 *e*P **P** **12 02 53.0 +1.5**
D05A Enumclaw 81.98 331 IAmb IAmb 12 02 53.0
comp=Z,13nm,1.0s
HLID Hailey 82.01 324 P **P** **12 02 52.5 +0.8**
baz=36,SNR=9.9
T25A Trinidad 82.23 314 P **P** **12 02 53.3 +0.3**
baz=41
F07A Phinny Hill Vi 82.31 329 IAmb IAmb 12 03 00.2
comp=Z,16nm,0.9s
SDCO Great Sand Dun 82.34 315 P **P** **12 02 54.9 +1.2**
baz=40,SNR=11
G08A Pilot Rock 82.45 328 IAmb IAmb 12 02 55.1
comp=Z,13nm,1.3s
TCUT Toone Canyon 82.62 321 IAmb IAmb 12 03 06.2
comp=Z,11nm,0.9s
S22A 4UR Ranch, Cre 83.02 316 IAmb IAmb 12 02 59.3
comp=Z,8.1nm,1.1s
S22A 4UR Ranch, Cre 83.02 316 P **P** **12 02 57.6 +0.4**
baz=40,SNR=8.2
JLU Jordanelle 83.05 321 IAmb IAmb 12 03 03.5
comp=Z,8.8nm,0.8s
CTU Camp Tracy 83.12 321 IAmb IAmb 12 03 03.5
comp=Z,8.6nm,0.9s
P18A Peston Nutter 83.25 320 IAmb IAmb 12 03 05.2
comp=Z,14nm,0.8s
G05D Wamic, OR 83.39 329 P **P** **12 02 58.7 0.0**
baz=32
BGU Big Grassy Mou 83.52 322 IAmb IAmb 12 03 06.0
comp=Z,12nm,1.1s
PDRB Porto dos Gac 83.52 248 *e*P **P** **12 03 00.7 +1.0**
MPU Maple Canyon 83.60 321 IAmb IAmb 12 03 06.6
comp=Z,8.7nm,1.1s
I07A Izee 83.67 328 IAmb IAmb 12 03 02.5
comp=Z,7.2nm,0.9s
PV13 Radium Mtn., P 83.71 318 IAmb IAmb 12 03 07.2
comp=Z,13nm,1.0s
J08A Circle Bar Ran 83.87 327 IAmb IAmb 12 03 03.3
comp=Z,7.8nm,1.0s
TMUT Trail Mountain 83.97 320 IAmb IAmb 12 03 09.2
comp=Z,6.3nm,0.8s
DUG Dugway, Tooele 84.01 321 IAmb IAmb 12 03 08.3
comp=Z,9.3nm,0.9s
DUG Dugway, Tooele 84.01 321 P **P** **12 03 02.7 +0.6**
baz=37,SNR=13
G03D McMinnville, O 84.13 331 P **P** **12 03 02.9 +0.5**
baz=31
I05D Terrebonne, OR 84.16 329 P **P** **12 03 03.2 +0.5**
baz=32
Q16A Castle Valley 84.25 320 IAmb IAmb 12 03 09.1
comp=Z,7.2nm,0.9s
MVCO Mesa Verde 84.28 317 IAmb IAmb 12 03 10.4
comp=Z,10.0nm,0.9s
MVCO Mesa Verde 84.28 317 P **P** **12 03 05.0 +1.4**
baz=39,SNR=12
H04D Lebanon 84.53 330 P **P** **12 03 05.4 +1.0**
baz=31
ELK Elko 84.65 323 IAmb IAmb 12 03 07.8
comp=Z,8.7nm,1.3s
WVOR Wild Horse Val 84.70 326 IAmb IAmb 12 03 11.9
comp=Z,7.6nm,1.1s
ANMO Albuquerque 84.97 314 P **P** **12 03 06.6 -0.5**
ANMO IAmb IAmb 12 03 14.6
comp=Z,8.5nm,1.0s
ANMO Albuquerque 84.97 314 P **P** **12 03 06.6 -0.5**
ANMO pmax pmax
comp=Z,9.0nm,1.0s
ANMO Albuquerque 84.97 314 P **P** **12 03 08.1 +1.0**
baz=40
ANMO Albuquerque 84.97 314 P **P** **12 03 09.1 +2.0**
J05D Fort Rock, OR 85.02 328 P **P** **12 03 07.9 +0.8**
baz=32,SNR=17
I04A Tendick Farm, 85.03 329 P **P** **12 03 07.5 +0.4**
baz=31
TCRU Three Creeks R 85.10 320 IAmb IAmb 12 03 14.3
comp=Z,7.0nm,0.7s
J04D Umpqua Nationa 85.39 329 P **P** **12 03 09.3 +0.2**
baz=31
MTPU Mount Pierson 85.43 320 IAmb IAmb 12 03 11.8
comp=Z,6.6nm,0.8s
I03D Drain, OR 85.46 330 P **P** **12 03 09.2 +0.1**
baz=30
SPR3 Spring Creek 3 85.66 322 IAmb IAmb 12 03 16.4
comp=Z,2.3nm,0.8s
K04D Chiloquin, OR 85.78 328 P **P** **12 03 10.5 -0.4**
baz=31
PSUT Pine Spring 85.82 321 IAmb IAmb 12 03 21.5
comp=Z,5.7nm,0.7s
MOD Modoc Plateau 85.82 327 IAmb IAmb 12 03 13.5
comp=Z,12nm,1.1s
PKCU Pink Cliffs 85.97 319 IAmb IAmb 12 03 14.5

comp=Z,7.5nm,0.6s
J01E Myrtle Point 86.14 330 P **P** **12 03 12.5 0.0**
baz=30
SAML Samuel 86.14 254 P **P** **12 03 14.0 +1.2**
SAML Samuel 86.14 254 P **P** **12 03 14.0 +1.2**
SAML pmax pmax
comp=Z,5.0nm,1.2s
SAML Samuel 86.14 254 P **P** **12 03 15.4 +2.6**
L04D Klamath Falls 86.34 329 P **P** **12 03 14.0 +0.3**
baz=31
K02D Willamette Mer 86.44 330 P **P** **12 03 14.5 +0.4**
baz=30
MJAR Matsushiro Arr 86.51 41 P **P** **12 03 15.3 +0.8**
comp=Z,4.1nm,1.0s,baz=331,slow=4.8,SNR=4.5
comp=Z,4.1nm,1.0s
R11A Troy Canyon, C 86.76 322 P **P** **12 03 15.8 -0.1**
baz=35
MNTX Cormudas Mount 86.87 311 P **P** **12 03 16.9 +0.5**
baz=40
L02F Cave Junction 86.90 329 P **P** **12 03 16.0 -0.3**
baz=30
WUAZ Wupatki 87.04 318 IAmb IAmb 12 03 19.1
comp=Z,8.2nm,1.4s
WUAZ Wupatki 87.04 318 P **P** **12 03 17.6 +0.3**
baz=37
121A Cookes Peak, D 87.53 314 P **P** **12 03 20.4 +0.7**
baz=39
TX32 Lajitas Array 87.69 309 IAmb IAmb 12 03 22.5
comp=Z,6.9nm,1.1s
TXAR Lajitas Array 87.69 309 P **P** **12 03 21.7 +1.3**
comp=Z,3.3nm,0.9s,baz=53,slow=5.0,SNR=14
comp=Z,3.3nm,0.9s
YERR Yerington 87.84 325 IAmb IAmb 12 03 22.8
comp=Z,6.1nm,0.8s
PTLB Pontes e Lacer 87.89 247 P **P** **12 03 22.6 +1.4**
PTLB IAmb IAmb 12 03 29.3
comp=Z,6.2nm,1.1s
NVAR Mina Array Bea 87.90 324 P **P** **12 03 21.9 +0.4**
comp=Z,0.9nm,0.6s,baz=35,slow=5.0,SNR=9.7
comp=Z,0.9nm,0.6s
X16A Lo Mia Camp, P 87.95 317 IAmb IAmb 12 03 23.9
comp=Z,4.5nm,0.9s
LHV Little Huntoon 88.13 324 IAmb IAmb 12 03 27.0
comp=Z,4.5nm,0.9s
TPNV Topopah Spring 88.21 322 P **P** **12 03 22.8 0.0**
baz=34
V12A Nelson 88.56 320 IAmb IAmb 12 03 29.7
comp=Z,11nm,1.4s
ETMB Extrema 88.89 256 P **P** **12 03 25.4 -0.7**
ETMB IAmb IAmb 12 03 27.3
comp=Z,4.0nm,1.1s
GWY Greenwater Val 89.03 322 IAmb IAmb 12 03 28.7
comp=Z,4.1nm,0.7s
TUC Tucson 89.28 315 P **P** **12 03 26.7 -1.2**
TUC IAmb IAmb 12 03 34.7
comp=Z,7.0nm,1.1s
TUC Tucson 89.28 315 P **P** **12 03 26.7 -1.2**
TUC pmax pmax
comp=Z,7.0nm,1.1s
TUC Tucson 89.28 315 P **P** **12 03 28.7 +0.8**
baz=38
TUC Tucson 89.28 315 P **P** **12 03 29.4 +1.5**
PDMCI Parker Dam,Lak 89.37 319 P **P** **12 03 28.4 +0.2**
baz=36
CWC Cottonwood Cre 89.45 323 P **P** **12 03 28.4 -0.3**
baz=34
MPMC Manual Prospec 89.51 322 P **P** **12 03 28.7 -0.3**
baz=34
GMRC Granite Mounta 89.71 320 P **P** **12 03 30.4 +0.5**
baz=35
GSC Goldstone, Bar 89.82 321 P **P** **12 03 30.8 +0.4**
baz=34
IRM Iron Mountain 89.97 319 P **P** **12 03 31.2 +0.2**
baz=35
ISA Isabella, Lake 90.28 322 P **P** **12 03 31.7 -0.8**
baz=33
BELC Belle Mtn. Jos 90.51 320 P **P** **12 03 34.2 +0.5**
baz=35
BC3 Big Chuckawall 90.53 319 P **P** **12 03 34.2 +0.4**
baz=35
214A Organ Pipe Nat 90.60 317 P **P** **12 03 34.1 +0.1**
baz=36
BBRC Big Bear Solar 90.73 321 P **P** **12 03 35.3 +0.5**
baz=34
PFO Pinyon Flats O 91.05 320 P **P** **12 03 35.3 -0.9**
PFO IAmb IAmb 12 03 42.9
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 91.05 320 P **P** **12 03 35.3 -0.9**
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 91.05 320 P **P** **12 03 36.5 +0.3**
baz=34
TPFO Pinon Flats 91.05 320 P **P** **12 03 36.3 +0.2**
baz=34
BFSC Mount Baldy Ra 91.09 321 P **P** **12 03 36.5 +0.1**
baz=34
MONP2 Monument Peak 91.62 320 P **P** **12 03 39.4 +0.4**
baz=34
IKP In-Ko-Pah, Jac 91.67 319 P **P** **12 03 39.6 +0.6**
baz=35
GO01 Chusmiza 97.70 250 P **P** **12 04 06.7 -0.4**
WRA Warramunga Arr 126.03 84 PKP **PKPdf** **12 09 32.7 -1.2**
comp=Z,1.6nm,1.0s,baz=324,slow=1.9,SNR=6.6
ASAR Alice Springs 127.99 88 PKP **PKPdf** **12 09 37.0 -0.6**
comp=Z,1.3nm,0.8s,baz=304,slow=1.1,SNR=11
ASAR Alice Springs 127.99 88 PKIKP **PKPdf** **12 09 37.0 -0.6**
SBA Scott Base 143.27 171 P **PKPdf** **12 10 04.9 +0.6**

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*IDC **24** 11:59:57.3±0.6,54.98S×31.46W,h0km,mb4.1/11, mbtmp4.1/12,ML2.9/1,Error ellipse: s-maj=21.4km s-min=16.0km az=54.0*
*NEIC **24** 11:59:59.0±1.3,55.05S±0.10×31.7W±0.2,h10km±1km, mb4.6/31,Error ellipse: s-maj=18.2km s-min=15.1km az=51.0*

ISC 24 11:59:58.5±0.5,54.99S±0.07×31.62W±0.09,h10km,n61, σ0.961/57,mb4.5/23,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.92**	**282**			**Pn**	**12 00 44.8**	**-0.1**
ORCD	**Orcadas**	**9.05**	**225**			**Pn**	**12 02 07.7**	**-1.4**
VNA1	**Neumayer--Stat**	**18.76**	**156**	P		**Pn**	**12 04 18.4**	**+0.6**
PMSA	**Palmer Station**	**18.77**	**226**	P		**Pn**	**12 04 19.0**	**+1.2**
	baz=74,slow=14,SNR=2.3							
	3.6nm,0.9s							
PMSA	**Palmer Station**	**18.77**	**226**			P	12 04 09.4	-7.9
VNA3	**Neumayer Olymp**	**18.88**	**158**	P		**Pn**	**12 04 19.5**	**+0.3**
VNA2	**Neumayer--Watz**	**19.16**	**156**	P		**Pn**	**12 04 22.4**	**-0.2**
	baz=317,slow=11							
SNAA	**Sanae**	**20.76**	**155**	P		**P**	**12 04 39.0**	**-0.2**
SNAA	**Sanae**	**20.76**	**155**	P		**P**	**12 04 38.9**	**-0.2**
	7.0nm,0.8s,baz=300,slow=8.9,SNR=18							
	7.0nm,0.8s							
SNAA	**Sanae**	**20.76**	**155**	P		**P**	**12 04 38.6**	**-0.6**
TROLL	**Troll, Antarti**	**22.33**	**153**	P		**P**	**12 04 57.5**	**+1.3**
BELA	**Belgrano 2**	**23.01**	**182**	P		**P**	**12 05 02.8**	**-0.3**
TRQA	**Tornquist**	**26.59**	**297**	P		**P**	**12 05 35.8**	**-0.9**
TRQA						IAmb	IAmb	12 05 45.7
	comp=Z,12nm,1.2s							
PLCA	**Paso Flores**	**29.32**	**283**	P		**P**	**12 06 00.5**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=152,slow=16,SNR=2.3							
	comp=Z,1.0nm,0.8s							
PLCA	**Paso Flores**	**29.32**	**283**	P		**P**	**12 06 02.0**	**+0.8**
PLCA						IAmb	IAmb	12 06 17.2
	comp=Z,13nm,1.6s							
CPUP	**Villa Florida**	**34.26**	**316**	P		**P**	**12 06 44.9**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=143,slow=8.1,SNR=5.1							
	comp=Z,3.8nm,0.9s							
CPUP	**Villa Florida**	**34.26**	**316**	P		**P**	**12 06 43.9**	**-0.6**
CPUP						IAmb	IAmb	12 06 55.2
	comp=Z,5.3nm,1.0s							
MT03	**Universidad Ad**	**34.54**	**292**	P		**P**	**12 06 46.9**	**-0.2**
MT09	**Talagante**	**34.58**	**291**	P		**P**	**12 06 47.5**	**0.0**
MT09						IAmb	IAmb	12 06 48.8
	comp=Z,6.7nm,0.8s							
MT01	**Popeta**	**34.66**	**291**	P		**P**	**12 06 48.7**	**+0.8**
MT01						IAmb	IAmb	12 07 09.7
	comp=Z,9.8nm,1.1s							
MT02	**Curacav**	**35.06**	**292**	P		**P**	**12 06 51.8**	**+0.3**
MT02						IAmb	IAmb	12 06 53.4
	comp=Z,9.0nm,1.0s							
QSPA	**South Pole Qui**	**35.27**	**180**	P		**P**	**12 06 53.1**	**0.0**
	comp=Z,3.1nm,1.0s,baz=198,slow=2.6,SNR=12							
	comp=Z,3.1nm,1.0s							
QSPA	**South Pole Qui**	**35.27**	**180**	P		**P**	**12 06 53.0**	**0.0**

QSPA					IAmb	IAmb	12 07 08.4		
	comp=Z,21nm,1.6s								
VA01	**Torpederas**	**35.51**	**292**	P	**P**		**12 06 55.8**	**+0.5**	
VA06	**Catapilco**	**35.68**	**292**	P	**P**		**12 06 57.0**	**+0.2**	
AC05	**El Transito**	**38.10**	**297**	P	**P**		**12 07 16.5**	**-1.0**	
AC04	**Llanos de Chal**	**39.02**	**297**	P	**P**		**12 07 24.8**	**-0.3**	
GO02	**Mina Guanaco**	**40.78**	**301**	P	**P**		**12 07 40.3**	**+0.2**	
GO02					IAmb	IAmb	12 07 44.9		
	comp=Z,23nm,1.4s								
BDFB	**Brasilia**	**41.27**	**336**	P	**P**		**12 07 43.9**	**-0.1**	
BDFB					IAmb	IAmb	12 08 08.7		
	comp=Z,16nm,1.5s								
MAW	**Mawson**	**42.48**	**146**	P	**P**		**12 07 52.5**	**-0.7**	
	comp=Z,1.9nm,0.8s,baz=233,slow=7.4,SNR=5.1								
	comp=Z,1.9nm,0.8s								
LVC	**Limon Verde**	**42.60**	**304**	P	**P**		**12 07 55.8**	**+0.6**	
	comp=Z,4.9nm,0.8s,baz=49,slow=3.8,SNR=4.7								
	comp=Z,4.9nm,0.8s								
PB01	**IPOC Station P**	**44.22**	**305**	P	**P**		**12 08 07.8**	**-0.1**	
PB01					IAmb	IAmb	12 08 12.8		
	comp=Z,9.4nm,1.0s								
PTLB	**Pontes e Lacer**	**44.83**	**321**	P	**P**		**12 08 12.5**	**-0.2**	
PTLB					IAmb	IAmb	12 08 24.1		
	comp=Z,16nm,1.4s								
GO01	**Chusmiza**	**45.26**	**306**	P	**P**		**12 08 17.3**	**+0.7**	
GO01					IAmb	IAmb	12 08 25.9		
	comp=Z,6.2nm,1.0s								
SBA	**Scott Base**	**46.94**	**185**	P	**P**		**12 08 29.5**	**+0.9**	
VNDA	**Vanda**	**47.49**	**184**	P	**P**		**12 08 33.7**	**+0.8**	
	comp=Z,1.2nm,0.8s,baz=192,slow=5.5,SNR=11								
	comp=Z,1.2nm,0.8s								
VNDA	**Vanda**	**47.49**	**184**	P	**P**		**12 08 33.6**	**+0.7**	
LPAZ	**La Paz**	**47.73**	**309**	P	**P**		**12 08 37.5**	**+1.3**	
	comp=Z,3.9nm,0.5s,baz=83,slow=5.1,SNR=12								
	comp=Z,3.9nm,0.5s								
LPAZ	**La Paz**	**47.73**	**309**	P	**P**		**12 08 37.4**	**+1.2**	
BOSA	**Boshof**	**48.22**	**81**	P	**P**		**12 08 39.2**	**-0.1**	
	comp=Z,2.7nm,0.9s,baz=2.1,slow=14,SNR=1.9								
	comp=Z,2.7nm,0.9s								
BOSA	**Boshof**	**48.22**	**81**	P	**P**		**12 08 40.0**	**+0.6**	
H10N1	**ASCENSION HYDR**	**48.97**	**23**	T	T		13 01 25.9		
	baz=192,slow=75,SNR=18								
H10N3	**ASCENSION HYDR**	**48.97**	**23**	T	T		13 01 25.8		
	baz=192,slow=75,SNR=19								
H10N2	**ASCENSION HYDR**	**48.98**	**23**	T	T		13 01 28.8		
	baz=192,slow=75,SNR=35								
LBTB	**Lobatse**	**51.18**	**78**	P	**P**		**12 09 01.1**	**-0.8**	
	comp=Z,1.5nm,0.6s,baz=244,slow=12,SNR=2.0								
	comp=Z,1.5nm,0.6s								
SAML	**Samuel**	**52.31**	**319**	P	**P**		**12 09 10.3**	**+0.1**	
SAML					IAmb	IAmb	12 09 21.6		
	comp=Z,11nm,1.3s								
ETMB	**Extrema**	**52.70**	**315**	P	**P**		**12 09 13.4**	**+0.3**	
ETMB					IAmb	IAmb	12 09 24.7		
	comp=Z,4.7nm,1.0s								
BOAV	**Boa Vista**	**61.96**	**327**	P	**P**		**12 10 18.2**	**-0.3**	
BOAV					IAmb	IAmb	12 10 20.8		
	comp=Z,4.3nm,0.8s								
OTAV	**Otavalo**	**66.99**	**308**	P	**P**		**12 10 51.4**	**-0.6**	
OTAV					IAmb	IAmb	12 10 58.2		
	comp=Z,8.0nm,1.1s								
TOA0	**Torodi Ar. Sit**	**73.47**	**34**	P	**P**		**12 11 31.4**	**+0.4**	
TOA0					IAmb	IAmb	12 11 45.7		
	comp=Z,7.0nm,1.3s								
TORD	**Torodi Ar. Bea**	**73.47**	**34**	P	**P**		**12 11 31.0**	**0.0**	
	comp=Z,1.4nm,0.6s,baz=194,slow=6.3,SNR=7.3								
	comp=Z,1.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.47**	**34**	P	**P**		**12 11 31.4**	**+0.4**	
TORD					IAmb	IAmb	12 11 50.6		
	comp=Z,5.0nm,1.4s								
MATN	**Matagalpa**	**81.60**	**307**	P	**P**		**12 12 16.8**	**+0.2**	
FINES	**FINESS Array B**	**124.66**	**30**	PKP	**PKPdf**		**12 18 56.8**	**0.0**	
	comp=Z,1.3nm,0.6s,baz=168,slow=3.7,SNR=5.1								
CMAR	**Chiang Mai Arr**	**127.80**	**114**	PKP	**PKiKP**		**12 19 04.8**	**+0.1**	
	comp=Z,1.2nm,0.4s,baz=233,slow=3.9,SNR=6.3								
ARCES	**ARCESS Array B**	**130.92**	**23**	PKP	**PKPdf**		**12 19 08.4**	**0.0**	
	comp=Z,2.6nm,0.8s,baz=207,slow=0.3,SNR=5.1								
YKA	**Yellowknife Ar**	**133.72**	**320**	PKP	**PKiKP**		**12 19 15.2**	**0.0**	
	comp=Z,0.5nm,0.6s,baz=135,slow=1.9,SNR=4.7								
MKAR	**Makanchi Array**	**138.96**	**73**	PKP	**PKiKP**		**12 19 25.9**	**-0.5**	
	comp=Z,0.2nm,0.5s,baz=248,slow=4.1,SNR=3.6								
ZALV	**Zalesovo Beam**	**144.18**	**65**	PKP	**PKPab**		**12 19 31.3**	**+0.3**	
	comp=Z,0.9nm,0.3s,baz=247,slow=3.0,SNR=4.7								
ILAR	**Eielson Array**	**147.54**	**314**	PKPbc	**PKPbc**		**12 19 41.4**	**-0.1**	
	comp=Z,3.1nm,1.0s,baz=154,slow=1.5,SNR=14								
SONM	**Songino Array**	**153.19**	**88**	PKPbc	**PKPbc**		**12 19 55.5**	**-0.2**	
	comp=Z,1.1nm,0.5s,baz=248,slow=3.2,SNR=5.5								

ROM ***24*** *11:59:59.8±0.1, 42°.833N±0°.003×13°.144E±0°.005, h10km, ML3.5/46, Error ellipse: s-maj=0.3km s-min=0.2km az=71.0*

PRU ***24*** *12:00:00.6±0.0, 42°.88N×13°.34E, h0km*

BEO ***24*** *12:00:01.1±1.0, 43°.03N×13°.23E, h0km, ML3.3/6*

ISC 24 11:59:59.9±0.8, **42°.84N**±0°.01×**13°.15E**±0°.02, **h16**km±4km, **n154**, σ1§**04**/190, **18C-11D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.08**	**19**	⇓P	**Pg**	**12 00 02.8**	**-0.6**
MC2				S	**Sg**	**12 00 04.8**	**-0.9**
T1212	**Cascia, Frazio**	**0.12**	**224**	⇑P	**Pg**	**12 00 03.3**	**-0.3**
T1212				S	**Sg**	**12 00 05.7**	**-0.3**
AQT1	**Arquata del Tr**	**0.12**	**121**	⇑P	**Pg**	**12 00 03.5**	**-0.1**
AQT1				S	**Sb**	**12 00 06.2**	**-0.3**
MMO1	**Montemonaco**	**0.14**	**64**	⇑P	**Pg**	**12 00 03.7**	**-0.3**
MMO1				S	**Sb**	**12 00 06.4**	**-0.8**
FEMA	**Monte Fema**	**0.15**	**329**	⇓P	**Pg**	**12 00 03.7**	**-0.4**
FEMA				S	**Sg**	**12 00 06.2**	**-0.6**
FEMA				AML	AML		
	comp=E,52300μm,0.3s						
FEMA				AML	AML		
	comp=N,66250μm,0.4s						
FEMA				AML	AML		
	comp=E,52300μm,0.3s						
T1241	**Roccafluvione,**	**0.20**	**84**	⇑P	**Pb**	**12 00 04.8**	**-0.6**
T1241				S	**Sb**	**12 00 08.3**	**-0.6**
FDMO	**Fiordimonte**	**0.21**	**346**	⇑P	**Pg**	**12 00 04.5**	**-0.3**
FDMO				S	**Sg**	**12 00 08.0**	**-0.1**
FDMO				AML	AML		
	comp=N,32650μm,0.3s						
FDMO				AML	AML		
	comp=E,30450μm,0.3s						
LNSS	**Leonessa**	**0.25**	**200**	⇑P	**Pg**	**12 00 05.5**	**0.0**
LNSS				S	**Sg**	**12 00 09.7**	**+0.4**
LNSS				AML	AML		
	comp=E,26900μm,0.6s						
LNSS				AML	AML		
	comp=E,26850μm,0.6s						
LNSS				AML	AML		
	comp=N,38300μm,0.4s						
CESI	**CESI - Serrava**	**0.25**	**313**	⇓P	**Pg**	**12 00 05.3**	**-0.2**
CESI				S	**Sg**	**12 00 09.4**	**+0.1**
CESI				AML	AML		
	comp=E,18450μm,0.2s						
CESI				AML	AML		
	comp=N,35100μm,0.6s						
CSP1	**Cessapalombo**	**0.26**	**8**	⇑P	**Pg**	**12 00 05.5**	**-0.2**
CSP1				S	**Sb**	**12 00 09.9**	**-0.7**
CSP1				AML	AML		
	comp=N,45600μm,1.0s						
CSP1				AML	AML		
	comp=E,35900μm,1.3s						
CSP1				AML	AML		
	comp=E,35850μm,1.3s						
CSP1				AML	AML		
	comp=N,45550μm,1.0s						
T1243	**Rocca Santa Ma**	**0.26**	**123**	⇓P	**Pg**	**12 00 05.5**	**-0.1**
T1243				S	**Sb**	**12 00 10.1**	**-0.4**
RM33	**Pellescritta (**	**0.33**	**172**	P	**Pg**	**12 00 06.7**	**-0.2**
RM33				S	**Sg**	**12 00 12.1**	**+0.5**
RM33				AML	AML		
	comp=N,15100μm,0.3s						
RM33				AML	AML		
	comp=E,17450μm,0.2s						
RM33				AML	AML		
	comp=E,17600μm,0.2s						
RM33				AML	AML		
	comp=N,15050μm,0.3s						
RM33				AML	AML		
	comp=N,15000μm,0.3s						
RM33				AML	AML		
	comp=E,17400μm,0.2s						
SEF1	**Sefro**	**0.34**	**334**	P	**Pg**	**12 00 06.9**	**-0.2**
SEF1				S	**Sb**	**12 00 12.5**	**-0.5**
SEF1				AML	AML		
	comp=E,16100μm,0.3s						
SEF1				AML	AML		
	comp=N,11800μm,0.6s						
SEF1				AML	AML		
	comp=N,11850μm,0.6s						
CAMP	**Campotosto**	**0.35**	**148**	⇑P	**Pg**	**12 00 07.1**	**-0.2**
CAMP				S	**Sg**	**12 00 12.8**	**+0.5**
CAMP				AML	AML		
	comp=N,9100μm,0.4s						
CAMP				AML	AML		
	comp=E,9240μm,0.2s						
MDAR	**Monte D'Aria**	**0.36**	**359**	P	**Pg**	**12 00 07.1**	**-0.2**
MDAR				S	**Sb**	**12 00 12.7**	**-0.7**
PIO1	**Pioraco**	**0.36**	**340**	P	**Pg**	**12 00 07.1**	**-0.4**
PIO1				S	**Sb**	**12 00 13.1**	**-0.5**
T1211	**Morro Reatino**	**0.38**	**216**	⇑P	**Pg**	**12 00 07.5**	**-0.1**
T1211				S	**Sg**	**12 00 13.9**	**+1.0**
MNTP	**Montappone**	**0.38**	**37**	P	**Pb**	**12 00 08.3**	**0.0**
MNTP				S	**Sb**	**12 00 15.1**	**+1.1**
MNTP				AML	AML		
	comp=E,16900μm,0.3s						
MNTP				AML	AML		
	comp=N,20300μm,0.3s						
ARRO	**Arrone**	**0.39**	**228**	⇑P	**Pg**	**12 00 07.7**	**-0.1**
ARRO				S	**Sb**	**12 00 14.5**	**+0.4**
ARRO				AML	AML		
	comp=N,4480μm,0.2s						
ARRO				AML	AML		
	comp=E,5040μm,0.3s						
ARRO				AML	AML		
	comp=N,4475μm,0.2s						
FIU1	**Fiuminata**	**0.39**	**335**	P	**Pg**	**12 00 07.5**	**-0.4**
FIU1				S	**Sb**	**12 00 13.8**	**-0.5**
SSM1	**San Severino M**	**0.39**	**2**	P	**Pg**	**12 00 07.8**	**-0.2**
TERO	**Teramo**	**0.39**	**123**	⇓P	**Pg**	**12 00 07.8**	**-0.2**
TERO				S	**Sb**	**12 00 14.1**	**-0.3**
TERO				AML	AML		
	comp=E,10805μm,0.3s						
TERO				AML	AML		
	comp=E,12400μm,0.3s						
TERO				AML	AML		
	comp=N,8550μm,0.5s						
TERO				AML	AML		
	comp=E,10810μm,0.3s						
TERO				AML	AML		
	comp=N,7680μm,0.5s						
TERO				AML	AML		
	comp=N,7675μm,0.5s						
TERO				AML	AML		
	comp=E,10815μm,0.3s						
OFFI	**Offida**	**0.40**	**76**	⇑P	**Pb**	**12 00 08.9**	**+0.3**
OFFI				AML	AML		
	comp=E,11300μm,0.6s						
OFFI				AML	AML		
	comp=N,19850μm,0.7s						
GAG1	**Gagliole**	**0.41**	**351**	P	**Pg**	**12 00 08.1**	**-0.1**
GAG1				S	**Sb**	**12 00 14.7**	**-0.1**
GAG1				AML	AML		
	comp=E,21550μm,0.4s						
GAG1				AML	AML		
	comp=N,23300μm,0.4s						
GAG1				AML	AML		
	comp=E,21600μm,0.4s						
ASSB	**Assisi San Ben**	**0.42**	**300**	P	**Pg**	**12 00 08.2**	**-0.2**
ASSB				S	**Sg**	**12 00 14.6**	**+0.4**
MTL1	**Matelica**	**0.43**	**346**	P	**Pg**	**12 00 08.6**	**-0.1**
MTL1				S	**Sb**	**12 00 15.6**	**+0.1**
MTL1				AML	AML		
	comp=N,22950μm,0.9s						
MTL1				AML	AML		
	comp=E,14200μm,0.6s						
MTL1				AML	AML		
	comp=N,22950μm,1.0s						
SNTG	**Esanatoglia**	**0.45**	**340**	P	**Pg**	**12 00 08.7**	**-0.3**
SNTG				S	**Sb**	**12 00 15.7**	**-0.3**
SNTG				AML	AML		
	comp=E,497μm,0.9s						
SNTG				AML	AML		
	comp=N,444μm,0.6s						
SNTG				AML	AML		
	comp=N,3600μm,0.6s						
SNTG				AML	AML		
	comp=E,4005μm,0.9s						
SNTG				AML	AML		
	comp=N,443μm,0.6s						
CESX	**Cesi**	**0.48**	**242**	⇑P	**Pg**	**12 00 09.2**	**-0.3**
CESX				S	**Sg**	**12 00 15.8**	**-0.1**
CESX				AML	AML		
	comp=E,4155μm,1.3s						
CESX				AML	AML		
	comp=N,5060μm,0.7s						
TRE1	**Treia**	**0.49**	**14**	P	**Pb**	**12 00 10.1**	**-0.1**
TRE1				AML	AML		
	comp=E,18000μm,0.4s						
TRE1				AML	AML		
	comp=N,17300μm,0.4s						
GIGS	**Gran Sasso**	**0.49**	**141**	⇓P	**Pg**	**12 00 09.2**	**-0.5**
GIGS				S	**Sg**	**12 00 16.6**	**+0.2**
GIGS				AML	AML		
	comp=N,1685μm,0.7s						
GIGS				AML	AML		
	comp=E,2290μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.51**	**313**	P	**Pg**	**12 00 10.0**	**-0.2**
ATCC				S	**Sb**	**12 00 18.1**	**+0.2**
ATCC				AML	AML		
	comp=E,5195μm,0.6s						
ATCC				AML	AML		
	comp=N,5140μm,1.0s						
AQU	**L'Aquila**	**0.52**	**159**	P	**Pg**	**12 00 09.9**	**-0.3**
AQU				S	**Sb**	**12 00 17.9**	**0.0**
AQU				AML	AML		
	comp=E,5685μm,0.7s						
AQU				AML	AML		
	comp=N,6150μm,1.2s						
AQU				AML	AML		
	comp=N,6145μm,1.2s						
AQU				AML	AML		
	comp=N,5895μm,1.2s						
AQU				AML	AML		
	comp=E,5790μm,0.7s						
CING	**Cingoli**	**0.54**	**3**	P	**Pg**	**12 00 10.2**	**-0.5**
FOSV	**Fossato di Vic**	**0.54**	**328**	⇓P	**Pg**	**12 00 10.4**	**-0.3**
FOSV				S	**Sg**	**12 00 18.2**	**+0.3**
FOSV				AML	AML		
	comp=E,3335μm,0.9s						
FOSV				AML	AML		
	comp=N,3920μm,0.3s						
FOSV				AML	AML		
	comp=N,3915μm,0.3s						
FOSV				AML	AML		
	comp=E,3330μm,0.9s						
TRTR	**Tortoreto Alta**	**0.56**	**93**	⇑P	**Pb**	**12 00 12.2**	**+0.8**
TRTR				AML	AML		
	comp=E,13250μm,0.3s						
TRTR				AML	AML		
	comp=N,17950μm,0.4s						
FIAM	**Fiamignano**	**0.57**	**183**	⇑P	**Pg**	**12 00 10.8**	**-0.5**
FIAM				S	**Sg**	**12 00 19.4**	**+0.6**
FIAM				AML	AML		
	comp=N,4670μm,0.4s						
FIAM				AML	AML		
	comp=E,4755μm,0.3s						
CADA	**Capodarco di F**	**0.57**	**51**	P	**Pn**	**12 00 12.4**	**-1.0**
CADA				AML	AML		
	comp=E,7945μm,0.4s						
CADA				AML	AML		
	comp=N,7680μm,0.5s						
CIMA	**Civitanova Mar**	**0.60**	**39**	P	**Pb**	**12 00 12.7**	**+0.6**
MURB	**Monte Urbino**	**0.63**	**313**	P	**Pg**	**12 00 12.0**	**-0.3**
MURB				AML	AML		
	comp=E,6185μm,0.9s						
MURB				AML	AML		
	comp=N,5875μm,1.5s						
MURB				AML	AML		
	comp=E,6930μm,1.0s						
MURB				AML	AML		
	comp=N,5880μm,1.5s						
MURB				AML	AML		
	comp=E,6185μm,1.0s						
MURB				AML	AML		
	comp=N,6450μm,1.5s						
PP3	**Marolino**	**0.64**	**31**	⇑P	**Pb**	**12 00 13.1**	**+0.4**
PP3				AML	AML		
	comp=E,6260μm,0.4s						
PP3				AML	AML		
	comp=N,8660μm,0.4s						
PP3				AML	AML		
	comp=E,6290μm,1.4s						
PP3				AML	AML		
	comp=N,8770μm,0.4s						
PP3				AML	AML		
	comp=N,8650μm,0.4s						
PP3				AML	AML		
	comp=E,6260μm,0.5s						
PP3				AML	AML		
	comp=N,8760μm,0.4s						
FAGN	**Fagnano**	**0.65**	**151**	P	**Pg**	**12 00 12.1**	**-0.6**
FAGN				AML	AML		
	comp=N,8740μm,0.4s						
FAGN				AML	AML		
	comp=E,9560μm,1.2s						
SSFR	**Montelago di S**	**0.66**	**336**	P	**Pg**	**12 00 12.5**	**-0.4**
SSFR				AML	AML		
	comp=E,5650μm,0.2s						
SSFR				AML	AML		
	comp=N,5200μm,0.2s						
SSFR				AML	AML		
	comp=E,5570μm,0.2s						
SSFR				AML	AML		
	comp=N,5200μm,0.2s						
SSFR				AML	AML		
	comp=E,5650μm,0.2s						
SSFR				AML	AML		
	comp=N,5205μm,0.2s						
VCEL	**Villa Celiera**	**0.67**	**131**	⇓P	**Pg**	**12 00 13.0**	**-0.2**
VCEL				AML	AML		
	comp=E,6870μm,0.3s						
VCEL				AML	AML		
	comp=N,6180μm,1.5s						
ARVD	**Arcevia**	**0.68**	**347**	P	**Pg**	**12 00 12.7**	**-0.5**
ARVD				S	**Sb**	**12 00 23.3**	**+0.7**
ARVD				AML	AML		
	comp=N,1785μm,0.6s						
ARVD				AML	AML		
	comp=E,2475μm,0.5s						
ATFO	**Monte Foce - G**	**0.68**	**321**	⇓P	**Pg**	**12 00 12.8**	**-0.5**
ATFO				AML	AML		
	comp=E,2300μm,1.2s						
ATFO				AML	AML		
	comp=N,2060μm,0.7s						
ATSC	**Scheggia e Pas**	**0.68**	**330**	P	**Pg**	**12 00 12.8**	**-0.5**
ATTE	**AVT- Monte Tez**	**0.69**	**302**	P	**Pg**	**12 00 13.1**	**-0.3**
ATTE				AML	AML		
	comp=N,976μm,0.3s						
ATTE				AML	AML		
	comp=E,1204μm,0.4s						
ATLO	**AVT- Montelove**	**0.73**	**311**	P	**Pg**	**12 00 13.7**	**-0.5**
FRON	**Frontone**	**0.75**	**335**	P	**Pg**	**12 00 13.9**	**-0.7**
FRON				AML	AML		
	comp=E,1980μm,1.3s						
FRON				AML	AML		
	comp=N,2710μm,1.6s						
SRES	**S.Oreste - Sor**	**0.77**	**219**	⇑P	**Pg**	**12 00 13.9**	**-0.9**
SRES				AML	AML		
	comp=N,1850μm,0.4s						
SRES				AML	AML		
	comp=E,1390μm,0.7s						
T0110	**Collepietro**	**0.77**	**143**	⇓P	**Pg**	**12 00 14.1**	**-0.7**
T0110				AML	AML		
	comp=E,3710μm,0.2s						
T0110				AML	AML		
	comp=N,6240μm,0.3s						
MGAB	**Montegabbione**	**0.77**	**276**	P	**Pg**	**12 00 14.8**	**-0.1**
MGAB				AML	AML		
	comp=N,2665μm,0.8s						
MGAB				AML	AML		
	comp=N,2715μm,0.5s						
MGAB				AML	AML		
	comp=N,2660μm,0.8s						
MGAB				AML	AML		
	comp=E,3185μm,0.4s						
MGAB				AML	AML		
	comp=E,2750μm,0.5s						
ATVO	**AVT- Monte Val**	**0.77**	**315**	⇓P	**Pg**	**12 00 14.3**	**-0.7**
ATVO				AML	AML		
	comp=E,1130μm,0.4s						
ATVO				AML	AML		
	comp=N,1385μm,1.3s						
ATBU	**Serra di Buran**	**0.78**	**325**	P	**Pg**	**12 00 14.3**	**-0.8**
AOI	**Ancona**	**0.79**	**25**	P	**Pb**	**12 00 15.0**	**-0.2**
AOI				AML	AML		
	comp=N,2105μm,0.4s						
AOI				AML	AML		
	comp=E,1675μm,0.4s						
TB03	**Pietralunga**	**0.79**	**316**	P	**Pg**	**12 00 14.2**	**-1.0**
COR1	**Corinaldo**	**0.80**	**352**	⇑P	**Pn**	**12 00 16.3**	**-0.3**
COR1				AML	AML		
	comp=E,6545μm,0.4s						
COR1				AML	AML		
	comp=N,4350μm,0.6s						
ATMI	**Monte Miggiano**	**0.82**	**308**	P	**Pn**	**12 00 16.6**	**-0.2**
ATPC	**Poggio Castell**	**0.82**	**322**	P	**Pg**	**12 00 15.3**	**-0.6**
ATPI	**Pietralunga -**	**0.82**	**318**	P	**Pg**	**12 00 15.3**	**-0.7**
ATPI				AML	AML		
	comp=E,1265μm,0.5s						
ATPI				AML	AML		
	comp=N,1030μm,0.5s						
PIEI	**Pieia**	**0.83**	**327**	P	**Pg**	**12 00 15.4**	**-0.8**
PIEI				AML	AML		
	comp=E,1075μm,1.4s						
PIEI				AML	AML		
	comp=N,1090μm,0.4s						
PTQR	**Pietraquaria**	**0.83**	**167**	P	**Pg**	**12 00 15.3**	**-0.9**
MPAG	**Monte Paganucc**	**0.84**	**340**	P	**Pg**	**12 00 15.7**	**-0.7**
MPAG				AML	AML		
	comp=E,2015μm,0.9s						
MPAG				AML	AML		
	comp=N,1625μm,0.6s						
MPAG				AML	AML		
	comp=N,1620μm,0.6s						
MTCE	**Montecelio**	**0.87**	**201**	P	**Pg**	**12 00 15.5**	**-1.3**
MTCE				AML	AML		
	comp=N,1077μm,1.3s						
MTCE				AML	AML		
	comp=E,1790μm,0.4s						
MTCE				AML	AML		
	comp=N,1078μm,1.3s						
SENI	**Senigallia**	**0.87**	**4**	P	**Pb**	**12 00 17.1**	**+0.4**
SENI				AML	AML		
	comp=E,2275μm,0.8s						
SENI				AML	AML		
	comp=N,1930μm,1.0s						
NARO	**Abbazia di Nar**	**0.88**	**332**	P	**Pg**	**12 00 16.2**	**-0.8**
CERT	**Cerreto**	**0.90**	**188**	P	**Pg**	**12 00 16.3**	**-1.0**
CERT				AML	AML		
	comp=N,1980μm,0.9s						
CERT				AML	AML		
	comp=E,4055μm,0.5s						
FSSB	**Fossombrone**	**0.90**	**342**	P	**Pg**	**12 00 16.9**	**-0.5**
FSSB				AML	AML		
	comp=E,5575μm,0.4s						
FSSB				AML	AML		
	comp=N,10100μm,0.4s						
FSSB				AML	AML		
	comp=E,5580μm,0.4s						
SACS	**San Casciano d**	**0.92**	**271**	P	**Pb**	**12 00 17.2**	**-0.2**
SACS				AML	AML		
	comp=N,1745μm,0.8s						
SACS				AML	AML		
	comp=E,1311μm,0.6s						
SACS				AML	AML		
	comp=E,1280μm,0.6s						
SACS				AML	AML		
	comp=N,1790μm,0.8s						
ATMC	**Monte Cedrone**	**0.93**	**311**	P	**Pn**	**12 00 19.0**	**+0.6**
INTR	**Introdacqua**	**0.99**	**146**	P	**Pb**	**12 00 17.5**	**-1.3**
INTR				AML	AML		
	comp=N,2460μm,0.5s						
INTR				AML	AML		
	comp=E,1355μm,0.8s						
CAFI	**Castiglion Fio**	**1.00**	**300**	P	**Pb**	**12 00 18.9**	**+0.1**
CAFI				AML	AML		
	comp=N,898μm,0.9s						
CAFI				AML	AML		
	comp=E,782μm,0.7s						
RCAV	**Rocca di Cave**	**1.00**	**189**	P	**Pb**	**12 00 18.4**	**-0.5**
RCAV				AML	AML		
	comp=E,3005μm,0.6s						
RCAV				AML	AML		
	comp=N,2155μm,0.7s						
VVLD	**Villa Vallelon**	**1.02**	**160**	P	**Pb**	**12 00 19.1**	**-0.2**

VVLD					AML	AML			
	comp=E,1150µm,0.4s								
VVLD					AML	AML			
	comp=N,1235µm,0.9s								
GUAR	**Guarcino**	**1.05**	**174**		P	**Pb**	**12 00 20.1**	**+0.4**	
GUAR					AML	AML			
	comp=N,2030µm,1.1s								
GUAR					AML	AML			
	comp=E,1555µm,0.7s								
SSP9	**Sansepolcro**	**1.05**	**315**		P	**Pn**	**12 00 20.6**	**+0.6**	
PARC	**Parchiule**	**1.05**	**321**		P	**Pb**	**12 00 19.7**	**-0.1**	
PARC					AML	AML			
	comp=N,872µm,1.6s								
PARC					AML	AML			
	comp=E,988µm,1.0s								
RMP	**Rome, Mte Porz**	**1.08**	**198**		P	**Pb**	**12 00 20.4**	**+0.3**	
MCIV	**Monte Civitell**	**1.09**	**267**		P	**Pb**	**12 00 20.7**	**+0.3**	
LPEL	**Lama dei Pelig**	**1.10**	**136**		P	**Pb**	**12 00 19.8**	**-0.8**	
LPEL					AML	AML			
	comp=N,1500µm,0.7s								
LPEL					AML	AML			
	comp=E,1375µm,0.4s								
RDP	**Rocca di Papa**	**1.12**	**197**		P	**Pb**	**12 00 20.2**	**-0.8**	
PESA	**Pesaro**	**1.13**	**348**		P	**Pg**	**12 00 21.8**	**+0.1**	
CPGN	**Carpegna, Ital**	**1.14**	**328**		AML	AML			
	comp=N,44400µm,0.6s								
CPGN					AML	AML			
	comp=E,64600µm,0.8s								
TOLF	**Tolfa**	**1.15**	**228**	⇑	P	**Pn**	**12 00 21.0**	**-0.4**	
TOLF					AML	AML			
	comp=E,802µm,0.6s								
TOLF					AML	AML			
	comp=N,740µm,0.7s								
CRE	**Caprese Michel**	**1.18**	**312**		P	**Pb**	**12 00 22.2**	**+0.3**	
POFI	**Posta Fibreno**	**1.19**	**159**		P	**Pn**	**12 00 22.4**	**+0.4**	
LRP	**Arpino**	**1.23**	**165**		AML	AML			
	comp=E,530µm,0.9s								
LRP					AML	AML			
	comp=N,846µm,0.3s								
ARCI	**Arcidosso**	**1.23**	**271**		P	**Pb**	**12 00 23.5**	**+0.6**	
GIUL	**Giuliano Di Ro**	**1.28**	**177**		P	**Pb**	**12 00 23.9**	**+0.3**	
GIUL					AML	AML			
	comp=N,792µm,0.7s								
GIUL					AML	AML			
	comp=E,839µm,0.5s								
LATB	**Latina**	**1.35**	**186**		P	**Pn**	**12 00 24.4**	**+0.3**	
ASQU	**Asqua**	**1.38**	**314**		P	**Pg**	**12 00 26.4**	**-0.2**	
ASQU					AML	AML			
	comp=E,352µm,1.5s								
ASQU					AML	AML			
	comp=N,420µm,0.8s								
CERA	**Filignano**	**1.39**	**152**		P	**Pb**	**12 00 25.5**	**-0.1**	
SFI	**Santa Sofia**	**1.43**	**319**		P	**Pb**	**12 00 26.7**	**+0.5**	
FROS	**Frosini**	**1.51**	**285**		P	**Pb**	**12 00 27.5**	**-0.1**	
RUFI	**Rufina**	**1.56**	**310**		P	**Pb**	**12 00 28.5**	**0.0**	
VAGA	**Valle Agricola**	**1.63**	**150**		P	**Pb**	**12 00 30.5**	**+0.8**	
BSSO	**Busso**	**1.68**	**140**		P	**Pg**	**12 00 31.7**	**-0.4**	
CASP	**Castiglione de**	**1.69**	**269**		P	**Pn**	**12 00 29.0**	**+0.3**	
DUGI	**Dugi Otok**	**1.81**	**50**		*e*Pn	**Pn**	**12 00 31.0**	**+0.6**	
VITU	**Vitulano (BN)**	**1.98**	**146**		P	**Pb**	**12 00 35.6**	**-0.1**	
VIRC	**Vir**	**2.01**	**43**		*e*Pn	**Pn**	**12 00 33.9**	**+0.8**	
APRC	**Apricena**	**2.08**	**121**		P	**Pb**	**12 00 36.1**	**-1.1**	
BRJN	**Brijuni**	**2.11**	**12**		*e*Pn	**Pn**	**12 00 35.1**	**+0.5**	
MORI	**Morici**	**2.13**	**60**		*e*Pn	**Pn**	**12 00 36.1**	**+1.4**	
NVLJ	**Novalja**	**2.13**	**35**		*e*Pn	**Pn**	**12 00 35.4**	**+0.6**	
RABC	**Rab**	**2.25**	**31**		*i* Pn	**Pn**	**12 00 37.2**	**+0.8**	
SMRN	**Sveta Marina**	**2.31**	**18**		*e*Pn	**Pn**	**12 00 37.4**	**+0.1**	
MSAG	**Monte S. Angel**	**2.33**	**118**		P	**Pb**	**12 00 40.0**	**-1.7**	
MSAG					AML	AML			
	comp=N,768µm,0.5s								
MSAG					AML	AML			
	comp=E,499µm,0.4s								
UDBI	**Udbina**	**2.54**	**47**		*e*Pn	**Pn**	**12 00 42.4**	**+1.9**	
KIJV	**Kijevo**	**2.64**	**63**		*e*Pn	**Pn**	**12 00 43.8**	**+1.9**	
RIY	**Rijeka**	**2.67**	**21**		*e*Pn	**Pn**	**12 00 43.3**	**+1.1**	
RIY					*e*Sn	**Sn**	**12 01 11.6**	**-2.6**	
PLIT	**Plitvice**	**2.71**	**40**		*e*Pn	**Pn**	**12 00 44.4**	**+1.5**	
LSTV	**Lastovo**	**2.75**	**90**		*e*Pn	**Pn**	**12 00 45.2**	**+1.8**	
SKDS	**Skadanscina**	**2.78**	**13**		*e*Pn	**Pn**	**12 00 44.3**	**+0.5**	
SKDS					*e*Sn	**Sn**	**12 01 17.9**	**+0.9**	
SKDS					IAML		12 01 20.0		
	comp=Z,38nm,0.3s								
RICI	**Ricice**	**2.98**	**76**		*e*Pn	**Pn**	**12 00 48.7**	**+2.1**	
BOJS	**Bojanci**	**3.06**	**29**		P	**Pn**	**12 00 49.2**	**+1.5**	
SABO	**M.te Sabotino**	**3.16**	**6**		AML	AML			
	comp=E,1026µm,0.8s								
SABO					AML	AML			
	comp=N,1275µm,0.6s								
SABO					AML	AML			
	comp=E,249µm,0.8s								
SABO					AML	AML			
	comp=N,334µm,0.6s								
CGRP	**Cima Grappa**	**3.19**	**343**		P	**Pn**	**12 00 51.4**	**+1.8**	
CGRP					AML	AML			
	comp=N,184µm,0.9s								
CGRP					AML	AML			
	comp=E,200µm,0.8s								
OZLJ	**Ozalj**	**3.24**	**30**		*e*Pn	**Pn**	**12 00 51.4**	**+1.4**	
STON	**Ston**	**3.34**	**88**		*e*Pn	**Pn**	**12 00 52.0**	**+0.5**	
STON	**Ston**	**3.34**	**88**		*e*Pn	**Pn**	**12 00 52.2**	**+0.7**	
STON					*e*Sn	**Sn**	**12 01 30.9**	**+0.1**	
STON	**Ston**	**3.34**	**88**		P	**Pn**	**12 00 52.1**	**+0.6**	
STON					AML	AML			
	comp=E,60µm,0.9s								
STON					AML	AML			
	comp=N,55µm,0.4s								
LJU	**Ljubljana**	**3.35**	**17**		AML	AML			
	comp=E,608µm,0.5s								
LJU					AML	AML			
	comp=N,808µm,0.7s								
MAGA	**Magasa**	**3.45**	**329**		P	**Pn**	**12 00 55.6**	**+2.4**	
BLY	**Banja Luka**	**3.49**	**55**		*e*Pn	**Pn**	**12 00 54.6**	**+1.1**	
BLY					*e*Sn	**Sn**	**12 01 36.2**	**+1.8**	
NOCI	**Noci**	**3.57**	**124**		P	**Pn**	**12 00 56.7**	**+2.1**	
NOCI					AML	AML			
	comp=E,89µm,1.3s								
NOCI					AML	AML			
	comp=N,132µm,1.0s								
PTCC	**Patocco-Chiusa**	**3.57**	**2**		P	**Pn**	**12 00 55.3**	**+0.6**	
PTCC					AML	AML			
	comp=E,70µm,0.7s								
PTCC					AML	AML			
	comp=N,80µm,0.4s								
GAGG	**Gaggia**	**3.61**	**335**		P	**Pn**	**12 00 58.0**	**+2.7**	
ACOM	**Acomizza, Ital**	**3.72**	**4**		P	**Pn**	**12 00 58.0**	**+1.2**	
ACOM					AML	AML			
	comp=N,158µm,0.6s								
ACOM					AML	AML			
	comp=E,157µm,0.7s								
ACOM					AML	AML			
	comp=E,142µm,0.7s								
ACOM					AML	AML			
	comp=N,188µm,0.6s								
ZOU	**Zoufplan**	**3.72**	**358**		P	**Pn**	**12 00 58.0**	**+1.1**	
ZOU					AML	AML			
	comp=N,99µm,1.2s								
ZOU					AML	AML			
	comp=E,120µm,1.1s								
MOSL	**Moslavina**	**3.79**	**42**		*e*Pn	**Pn**	**12 00 57.7**	**-0.1**	
OBKA	**Obir**	**3.81**	**15**		*e*Pn	**Pn**	**12 00 58.0**	**+0.1**	
	comp=E,2.3nm,0.2s								
MYKA	**Terra Mystica**	**3.81**	**5**		*e*Pn	**Pn**	**12 00 58.4**	**+0.4**	
	comp=E,2.8nm,0.3s								
KOSI	**Kohlern**	**3.84**	**341**		P	**Pn**	**12 01 00.6**	**+2.1**	
KOSI					AML	AML			
	comp=E,134µm,0.7s								
KOSI					AML	AML			
	comp=N,101µm,1.4s								
ABTA	**Abfaltersbach**	**3.94**	**354**		*i* Pn	**Pn**	**12 01 01.7**	**+1.9**	
	comp=N,27nm,0.4s,SNR=14								
SOKA	**Soboth**	**4.07**	**19**		*e*Pn	**Pn**	**12 01 03.0**	**+1.4**	
	comp=N,1.1nm,0.2s								
KBA	**Koelnbreinsper**	**4.24**	**2**		*i* Pn	**Pn**	**12 01 05.9**	**+1.9**	
	comp=N,3.0nm,0.2s,SNR=7.5								
VSL	**Villasalto**	**4.39**	**222**		P	**Pn**	**12 01 08.0**	**+2.1**	
PDG	**Podgorica**	**4.52**	**93**		*e*Pn	**Pn**	**12 01 10.6**	**+2.9**	
PDG					*e*Sn	**Sn**	**12 02 00.6**	**+0.7**	
FETA	**Feichten**	**4.53**	**338**		*e*Pn	**Pn**	**12 01 10.3**	**+2.4**	
	comp=N,6.4nm,0.7s								
WTTA	**Wattenberg**	**4.56**	**347**		*e*Pn	**Pn**	**12 01 11.3**	**+2.9**	
	comp=N,5.2nm,0.5s								
WATA	**Walderalm**	**4.64**	**347**		*e*Pn	**Pn**	**12 01 11.5**	**+2.1**	
	comp=N,6.6nm,0.3s								
BBLS	**Lazići**	**4.67**	**75**		*e*Pn	**Pn**	**12 01 12.7**	**+2.8**	
BBLS					*e*Sn	**Sn**	**12 02 04.5**	**+0.7**	
ARSA	**Arzberg**	**4.72**	**20**		*e*Pn	**Pn**	**12 01 11.6**	**+1.1**	
	comp=N,3.1nm,0.3s								
MOTA	**Moosalm**	**4.74**	**343**		*e*Pn	**Pn**	**12 01 14.1**	**+3.3**	
	comp=N,2.5nm,0.3s								
BIOA	**Bad Ischl, Aus**	**4.87**	**4**		*e*Pn	**Pn**	**12 01 13.0**	**+0.5**	
	comp=N,3.4nm,0.2s,SNR=6.2								
MOA	**Molln**	**5.07**	**8**		*e*Pn	**Pn**	**12 01 16.7**	**+1.4**	
	comp=N,2.8nm,0.3s								
IVAS	**Ivanjica**	**5.17**	**79**		*e*Pn	**Pn**	**12 01 17.9**	**+1.2**	
IVAS					*e*Sn	**Sn**	**12 02 16.8**	**+0.8**	
CONA	**Conrad Observa**	**5.44**	**20**		*e*Pn	**Pn**	**12 01 21.2**	**+0.9**	
	comp=N,5.7nm,0.4s,SNR=8.2								
CKRC	**Cesky Krumlov**	**6.04**	**7**		*e*PN	**Pn**	**12 01 29.0**	**+0.4**	
KHC	**Kasperske Hory**	**6.30**	**3**		*e*PN	**Pn**	**12 01 32.2**	**0.0**	
KHC					*e*SN	**Sn**	**12 02 43.1**	**-0.8**	
BARS	**Barje**	**6.37**	**87**		*e*Pn	**Pn**	**12 01 34.5**	**+1.4**	
ZAGS	**Zajecar**	**6.69**	**79**		*e*Pn	**Pn**	**12 01 38.3**	**+0.8**	
CLL	**Collm**	**8.48**	**359**		*e*Sn	**Sn**	**12 03 32.0**	**-5.2**	
CLL					*e*Sg		12 04 41.0		

LDG ***24*** *12:06:08.7±0.1, 42°.83N×13°.15E, h6km, Ml3.1/22, Error ellipse: s-maj=2.0km s-min=1.3km az=41.0*
ROM ***24*** *12:06:09.3±0.0, 42°.835N±0°.002×13°.151E±0°.004, h10km, ML3.6/98, Error ellipse: s-maj=0.2km s-min=0.2km az=69.0*
IDC ***24*** *12:06:10.6±1.3, 42°.98N×13°.12E, h0km, mb3.5/4, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=30.8km s-min=14.7km az=93.0*
PRU ***24*** *12:06:10.6±0.0, 42°.83N×13°.57E, h8km*
ISC 24 12:06:09.9±0.7, 42°.82N±0°.01×13°.12E±0°.02, h13km±4km, n199, σ1s98/257, mb3.8/3, 30C-8D, Central Italy

Code	Station Name	Δ°	AZ°		Phase	ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.09**	**216**	⇑	P	**Pg**		**12 06 12.9**	**+0.1**
T1212					S	**Sg**		**12 06 15.2**	**+0.3**
MC2	**Monte Cornacci**	**0.10**	**31**	⇓	P	**Pg**		**12 06 12.4**	**-0.8**
MC2					S	**Sg**		**12 06 14.5**	**-1.0**
AQT1	**Arquata del Tr**	**0.14**	**111**	⇑	P	**Pg**		**12 06 13.1**	**-0.4**
AQT1					S	**Sg**		**12 06 15.6**	**-0.4**
FEMA	**Monte Fema**	**0.15**	**340**	⇑	P	**Pg**		**12 06 13.2**	**-0.4**
FEMA					S	**Sg**		**12 06 15.8**	**-0.4**
FEMA					AML	AML			
FEMA					AML	AML			
FEMA					AML	AML			
FEMA					AML	AML			
MMO1	**Montemonaco**	**0.17**	**64**		P	**Pg**		**12 06 13.2**	**-0.7**
MMO1					S	**Sg**		**12 06 15.8**	**-1.0**
FDMO	**Fiordimonte**	**0.21**	**354**	⇑	P	**Pg**		**12 06 14.1**	**-0.5**
FDMO					S	**Sg**		**12 06 17.6**	**-0.2**
FDMO					AML	AML			
	comp=E,54100µm,1.2s								
FDMO					AML	AML			
	comp=N,69650µm,0.4s								
LNSS	**Leonessa**	**0.23**	**194**	⇑	P	**Pg**		**12 06 15.0**	**+0.1**
LNSS					S	**Sb**		**12 06 19.4**	**-0.6**
LNSS					AML	AML			
	comp=N,52800µm,0.5s								
LNSS					AML	AML			
	comp=E,39000µm,1.5s								
T1241	**Roccafluvione,**	**0.23**	**82**	⇑	P	**Pg**		**12 06 14.4**	**-0.6**
T1241					S	**Sg**		**12 06 17.9**	**-0.4**
CESI	**CESI - Serrava**	**0.24**	**319**	⇑	P	**Pg**		**12 06 14.9**	**-0.2**
CESI					S	**Sg**		**12 06 19.0**	**+0.4**
CESI					AML	AML			
	comp=N,53000µm,0.3s								
CESI					AML	AML			
	comp=E,41750µm,0.4s								
SMA1	**SAN MARTINO**	**0.25**	**140**	⇑	P	**Pg**		**12 06 14.9**	**-0.4**
SMA1					S	**Sg**		**12 06 19.3**	**+0.4**
CSP1	**Cessapalombo**	**0.28**	**13**	⇑	P	**Pg**		**12 06 15.0**	**-0.7**
CSP1					S	**Sg**		**12 06 19.5**	**-0.2**
CSP1					AML	AML			
	comp=N,58950µm,0.4s								
CSP1					AML	AML			
	comp=E,42550µm,0.3s								
CSP1					AML	AML			
	comp=N,59000µm,0.4s								
T1243	**Rocca Santa Ma**	**0.28**	**118**		P	**Pg**		**12 06 15.0**	**-0.7**
T1243					S	**Sg**		**12 06 19.7**	**+0.1**
GUMA	**Gualdo di Mace**	**0.29**	**34**	⇑	P	**Pg**		**12 06 15.5**	**-0.4**
GUMA					S	**Sg**		**12 06 20.2**	**+0.3**
GUMA					AML	AML			
	comp=E,52950µm,0.7s								
GUMA					AML	AML			
	comp=N,70650µm,0.6s								
GUMA					AML	AML			
	comp=N,57700µm,0.5s								
GUMA					AML	AML			
	comp=E,53000µm,0.7s								
GUMA					AML	AML			
	comp=E,58250µm,0.7s								
RM33	**Pellescritta (**	**0.32**	**167**	⇑	P	**Pg**		**12 06 16.3**	**-0.2**
RM33					S	**Sg**		**12 06 21.9**	**+0.9**
RM33					AML	AML			
	comp=E,26000µm,1.0s								
RM33					AML	AML			
	comp=N,18750µm,0.1s								
RM33					AML	AML			
	comp=E,26000µm,1.0s								
RM33					AML	AML			
	comp=E,25650µm,1.0s								
RM33					AML	AML			
	comp=N,18800µm,0.1s								
RM33					AML	AML			
	comp=N,18450µm,0.1s								
SEF1	**Sefro**	**0.35**	**339**	⇓	P	**Pg**		**12 06 16.5**	**-0.4**
SEF1					S	**Sg**		**12 06 21.9**	**+0.2**
SEF1					AML	AML			
	comp=E,42650µm,1.6s								
SEF1					AML	AML			
	comp=N,33700µm,1.3s								
SEF1					AML	AML			
	comp=N,33700µm,1.4s								
SEF1					AML	AML			
	comp=N,33750µm,1.4s								
SEF1					AML	AML			
	comp=E,42650µm,1.6s								
T1211	**Morro Reatino**	**0.35**	**214**	⇑	P	**Pg**		**12 06 17.1**	**+0.1**
T1211					S	**Sb**		**12 06 23.6**	**+0.1**
ARRO	**Arrone**	**0.36**	**227**	⇑	P	**Pg**		**12 06 17.3**	**+0.2**
ARRO					S	**Sb**		**12 06 23.6**	**+0.1**
ARRO					AML	AML			
	comp=N,9510µm,0.6s								
ARRO					AML	AML			
	comp=E,12100µm,0.2s								
ARRO					AML	AML			
	comp=N,9515µm,0.6s								
CAMP	**Campotosto**	**0.36**	**143**	⇑	P	**Pg**		**12 06 16.7**	**-0.5**
CAMP					S	**Sg**		**12 06 22.3**	**+0.2**
CAMP					AML	AML			
	comp=N,9960µm,0.6s								
CAMP					AML	AML			
	comp=E,14800µm,0.8s								
PIO1	**Pioraco**	**0.37**	**345**		P	**Pg**		**12 06 16.8**	**-0.5**
PIO1					S	**Sg**		**12 06 22.5**	**+0.2**
PIO1					AML	AML			
	comp=N,29450µm,1.4s								
PIO1					AML	AML			
	comp=N,29500µm,1.4s								
PIO1					AML	AML			
	comp=E,12850µm,1.3s								
MDAR	**Monte D'Aria**	**0.37**	**3**		P	**Pg**		**12 06 16.7**	**-0.7**
MDAR					S	**Sg**		**12 06 22.4**	**0.0**
FIU1	**Fiuminata**	**0.39**	**340**		P	**Pg**		**12 06 17.3**	**-0.4**
FIU1					S	**Sg**		**12 06 23.3**	**+0.3**
FIU1					AML	AML			
	comp=E,19500µm,0.6s								
FIU1					AML	AML			
	comp=E,19500µm,0.5s								
FIU1					AML	AML			
	comp=N,17300µm,0.3s								
ASSB	**Assisi San Ben**	**0.40**	**303**	⇓	P	**Pg**		**12 06 17.7**	**-0.2**
ASSB					S	**Sg**		**12 06 24.1**	**+0.7**
ASSB					AML	AML			
	comp=N,10220µm,1.1s								
ASSB					AML	AML			
	comp=E,9315µm,0.5s								
MNTP	**Montappone**	**0.41**	**39**	⇑	P	**Pg**		**12 06 17.8**	**-0.2**
MNTP					AML	AML			
	comp=E,14550µm,0.7s								
MNTP					AML	AML			
	comp=E,14500µm,0.7s								
MNTP					AML	AML			
	comp=N,14850µm,1.4s								
SSM1	**San Severino M**	**0.41**	**6**	⇑	P	**Pg**		**12 06 17.3**	**-0.7**
SSM1					S	**Sg**		**12 06 23.7**	**+0.2**
TERO	**Teramo**	**0.41**	**119**	⇑	P	**Pg**		**12 06 17.3**	**-0.8**
TERO					S	**Sg**		**12 06 23.6**	**-0.1**
TERO					AML	AML			
	comp=E,9445µm,0.5s								
TERO					AML	AML			
	comp=N,8475µm,1.6s								
TERO					AML	AML			
	comp=E,10650µm,0.5s								
TERO					AML	AML			
	comp=N,9280µm,1.6s								
TERO					AML	AML			
	comp=E,10600µm,0.5s								
GAG1	**Gagliole**	**0.41**	**355**		P	**Pg**		**12 06 17.7**	**-0.5**
GAG1					S	**Sg**		**12 06 24.1**	**+0.4**
GAG1					AML	AML			
	comp=E,42400µm,0.3s								
GAG1					AML	AML			
	comp=N,43100µm,0.8s								
GAG1					AML	AML			
	comp=E,42350µm,0.3s								
OFFI	**Offida**	**0.43**	**75**	⇑	P	**Pg**		**12 06 18.5**	**0.0**
OFFI					AML	AML			
	comp=N,25400µm,0.7s								
OFFI					AML	AML			
	comp=E,14350µm,0.8s								
MTL1	**Matelica**	**0.44**	**350**		P	**Pg**		**12 06 18.2**	**-0.5**
MTL1					S	**Sg**		**12 06 25.2**	**+0.7**
MTL1					AML	AML			
	comp=N,30400µm,0.9s								
MTL1					AML	AML			
	comp=E,37650µm,0.5s								
MTL1					AML	AML			
	comp=N,30400µm,0.9s								
CESX	**Cesi**	**0.45**	**242**	⇑	P	**Pg**		**12 06 18.8**	**0.0**
CESX					S	**Sb**		**12 06 26.0**	**-0.3**
CESX					AML	AML			
	comp=E,13750µm,0.4s								
CESX					AML	AML			
	comp=N,16500µm,0.6s								
SNTG	**Esanatoglia**	**0.45**	**343**	⇑	P	**Pg**		**12 06 18.1**	**-0.7**
SNTG					S	**Sg**		**12 06 25.0**	**+0.1**
SNTG					AML	AML			
	comp=E,1325µm,0.9s								
SNTG					AML	AML			
	comp=N,1220µm,0.9s								
SNTG					AML	AML			
	comp=N,10345µm,0.7s								
SNTG					AML	AML			
	comp=N,1219µm,0.9s								
SNTG					AML	AML			
	comp=E,10710µm,0.9s								
SNTG					AML	AML			
	comp=E,1325µm,0.9s								
GIGS	**Gran Sasso**	**0.50**	**138**	⇑	P	**Pg**		**12 06 18.7**	**-1.0**
GIGS					S	**Sg**		**12 06 26.2**	**-0.3**
GIGS					AML	AML			
	comp=E,2755µm,0.9s								
GIGS					AML	AML			
	comp=N,2110µm,0.2s								
ATCC	**AVT- Casa Cast**	**0.50**	**316**		P	**Pg**		**12 06 19.4**	**-0.4**
ATCC					S	**Sb**		**12 06 27.7**	**-0.1**
ATCC					AML	AML			
	comp=E,9535µm,0.5s								
ATCC					AML	AML			
	comp=N,7555µm,0.8s								
ATCC					AML	AML			
	comp=E,9540µm,0.5s								
TRE1	**Treia**	**0.51**	**16**		P	**Pg**		**12 06 19.5**	**-0.4**
TRE1					AML	AML			
	comp=N,22950µm,0.5s								
TRE1					AML	AML			
	comp=E,21550µm,0.5s								
TRE1					AML	AML			
	comp=N,22900µm,0.5s								
AQU	**L'Aquila**	**0.52**	**156**	⇑	P	**Pg**		**12 06 19.4**	**-0.6**
AQU					S	**Sg**		**12 06 27.5**	**+0.6**
AQU					AML	AML			
	comp=E,8445µm,0.7s								
AQU					AML	AML			
	comp=N,6560µm,0.8s								
AQU					AML	AML			
	comp=E,8460µm,0.7s								
AQU					AML	AML			
	comp=N,6365µm,0.5s								
FOSV	**Fossato di Vic**	**0.54**	**331**		P	**Pg**		**12 06 19.8**	**-0.7**
FOSV					S	**Sg**		**12 06 28.1**	**+0.5**
FOSV					AML	AML			
	comp=N,8920µm,0.3s								
FOSV					AML	AML			
	comp=N,8910µm,0.3s								
FOSV					AML	AML			
	comp=E,6985µm,1.4s								
CING	**Cingoli**	**0.55**	**6**	⇑	P	**Pg**		**12 06 19.9**	**-0.9**
CING					S	**Sg**		**12 06 28.6**	**+0.5**
FIAM	**Fiamignano**	**0.56**	**180**	⇑	P	**Pg**		**12 06 20.3**	**-0.5**
FIAM					S	**Sb**		**12 06 29.2**	**-0.2**
FIAM					AML	AML			
	comp=E,8105µm,0.5s								
FIAM					AML	AML			
	comp=N,6280µm,1.2s								
TRTR	**Tortoreto Alta**	**0.59**	**91**		P	**Pg**		**12 06 21.7**	**+0.3**
TRTR					AML	AML			
	comp=E,14050µm,0.7s								
TRTR					AML	AML			
	comp=N,16900µm,0.6s								
CADA	**Capodarco di F**	**0.60**	**52**		P	**Pg**		**12 06 22.1**	**+0.5**
CADA					AML	AML			
	comp=E,11700µm,0.7s								
CADA					AML	AML			
	comp=N,9950µm,0.6s								
CADA					AML	AML			
	comp=N,9940µm,0.6s								
CADA					AML	AML			
	comp=E,11700µm,0.7s								
MURB	**Monte Urbino**	**0.62**	**315**		P	**Pg**		**12 06 21.5**	**-0.4**
MURB					AML	AML			
	comp=E,14000µm,0.4s								
MURB					AML	AML			
	comp=N,12950µm,0.4s								
MURB					AML	AML			
	comp=E,14950µm,0.4s								
MURB					AML	AML			
	comp=N,11450µm,0.4s								
MMUR	**Monte Murano**	**0.62**	**352**		P	**Pg**		**12 06 21.2**	**-0.9**
FAGN	**Fagnano**	**0.66**	**148**		P	**Pg**		**12 06 21.7**	**-1.0**
FAGN					AML	AML			
	comp=N,8535µm,0.2s								
FAGN					AML	AML			
	comp=E,10375µm,1.2s								
FAGN					AML	AML			
	comp=N,8530µm,0.2s								
SSFR	**Montelago di S**	**0.66**	**338**		P	**Pg**		**12 06 22.1**	**-0.7**
SSFR					AML	AML			
	comp=E,14200µm,1.2s								
SSFR					AML	AML			
	comp=N,12850µm,0.2s								
SSFR					AML	AML			
	comp=E,15810µm,0.2s								
SSFR					AML	AML			
	comp=N,13850µm,0.3s								
PP3	**Marolino**	**0.66**	**33**	⇑	P	**Pg**		**12 06 22.6**	**-0.1**
PP3					AML	AML			
	comp=E,11750µm,0.3s								
PP3					AML	A

comp=N,4360µm,0.8s
ATSC Scheggia e Pas 0.68 332 P Pg 12 06 22.2 -0.9
VCEL Villa Celiera 0.69 129 P Pg 12 06 22.5 -0.7
VCEL AML AML
comp=N,6310µm,1.1s
VCEL AML AML
comp=N,6305µm,1.1s
VCEL AML AML
comp=E,6790µm,0.6s
ARVD Arcevia 0.69 349 ⇑P Pg 12 06 22.3 -1.0
ARVD S Sg 12 06 32.9 +0.6
ARVD AML AML
comp=E,5015µm,0.5s
ARVD AML AML
comp=N,3920µm,0.7s
ATLO AVT- Montelove 0.71 314 P Pg 12 06 23.1 -0.7
SRES S.Oreste - Sor 0.74 218 ⇑P Pg 12 06 23.7 -0.5
SRES AML AML
comp=E,2600µm,1.2s
SRES AML AML
comp=N,3885µm,0.5s
MGAB Montegabbione 0.74 277 P Pg 12 06 24.4 +0.1
MGAB AML AML
comp=E,8985µm,1.5s
MGAB AML AML
comp=N,8525µm,0.3s
MGAB AML AML
comp=E,8980µm,1.5s
MGAB AML AML
comp=N,8830µm,0.3s
MGAB AML AML
comp=E,10200µm,1.6s
TB01 Gubbio 0.75 318 ⇓P Pg 12 06 23.7 -0.7
FRON Frontone 0.75 338 P Pg 12 06 23.4 -1.0
FRON S Sg 12 06 34.9 +0.6
FRON AML AML
comp=E,4735µm,0.6s
FRON AML AML
comp=N,5070µm,0.2s
TB02 Pietralunga 0.75 317 P Pg 12 06 23.7 -0.8
ATVA AVT- Monte Val 0.76 307 P Pg 12 06 23.9 -0.7
ATVO AVT- Monte Val 0.76 317 ⇓P Pg 12 06 23.8 -0.8
ATVO AML AML
comp=E,2485µm,0.3s
ATVO AML AML
comp=N,2475µm,0.4s
T0110 Collepietro 0.77 140 ⇓P Pg 12 06 23.7 -1.2
T0110 AML AML
comp=E,6095µm,0.2s
T0110 AML AML
comp=N,6010µm,0.4s
ATBU Serra di Buran 0.77 328 ⇓P Pg 12 06 24.2 -0.6
TB03 Pietralunga 0.78 318 P Pg 12 06 24.1 -0.8
ATMI Monte Miggiano 0.80 310 P Pg 12 06 25.2 -0.3
ATMI AML AML
comp=E,6145µm,0.4s
ATMI AML AML
comp=N,5565µm,0.5s
AOI Ancona 0.81 26 P Pg 12 06 24.6 -0.9
AOI AML AML
comp=E,3065µm,0.4s
AOI AML AML
comp=N,2660µm,0.5s
COR1 Corinaldo 0.81 354 P Pg 12 06 25.4 -0.2
COR1 AML AML
comp=E,6535µm,0.5s
COR1 AML AML
comp=E,12650µm,0.6s
COR1 AML AML
comp=N,8290µm,0.4s
COR1 AML AML
comp=N,8700µm,0.4s
ATPC Poggio Castell 0.81 324 P Pg 12 06 24.8 -0.9
ATPI Pietralunga - 0.82 320 P Pg 12 06 24.9 -0.8
ATPI AML AML
comp=N,2075µm,0.7s
ATPI AML AML
comp=E,2170µm,0.6s
PIEI Pieia 0.83 329 P Pg 12 06 25.0 -0.9
PIEI AML AML
comp=E,2830µm,0.5s
PIEI AML AML
comp=N,2445µm,0.7s
PTQR Pietraquaria 0.83 165 P Pg 12 06 24.6 -1.3
PTQR AML AML
comp=N,1555µm,0.5s
PTQR AML AML
comp=E,1320µm,0.3s
MPAG Monte Paganucc 0.85 342 ⇑P Pg 12 06 25.2 -1.0
MPAG AML AML
comp=E,4270µm,0.4s
MPAG AML AML
comp=E,4500µm,0.4s
MPAG AML AML
comp=N,4025µm,0.5s
MPAG AML AML
comp=E,4275µm,0.4s
MPAG AML AML
comp=N,4115µm,0.5s
MPAG AML AML
comp=N,4030µm,0.5s
MPAG AML AML
comp=E,4495µm,0.4s
MTCE Montecelio 0.85 199 ⇑P Pg 12 06 25.1 -1.1
MTCE AML AML
comp=E,3080µm,1.5s
MTCE AML AML
comp=N,1765µm,1.5s
CERT Cerreto 0.88 187 ⇑P Pg 12 06 25.6 -1.3
CERT AML AML
comp=E,6290µm,0.6s
CERT AML AML
comp=N,2495µm,0.6s
SENI Senigallia 0.89 5 P Pg 12 06 26.5 -0.5
SACS San Casciano d 0.89 272 P Pg 12 06 26.9 -0.2
SACS AML AML
comp=E,3120µm,0.6s
SACS AML AML
comp=N,4215µm,0.8s
SACS AML AML
comp=N,4360µm,0.8s
SACS AML AML
comp=E,3105µm,0.6s
APEC Apecchio 0.89 325 P Pg 12 06 26.6 -0.5
APEC AML AML
comp=N,2565µm,1.2s
APEC AML AML
comp=E,2765µm,0.6s
FSSB Fossombrone 0.90 344 P Pg 12 06 26.2 -1.1
FSSB AML AML
comp=N,24450µm,0.4s
FSSB AML AML
comp=E,13300µm,0.4s
ATMC Monte Cedrone 0.92 313 P Pg 12 06 27.0 -0.7
BADI Badiali 0.94 317 P Pg 12 06 27.3 -0.6
PE3 Peglio 0.98 333 P Pb 12 06 27.9 -0.9
PE3 AML AML
comp=N,21µm,1.4s
PE3 AML AML
comp=E,24µm,0.5s
CAFI Castiglion Fio 0.98 301 P Pb 12 06 28.1 -0.7
CAFI AML AML
comp=N,1515µm,0.8s
CAFI AML AML
comp=E,1350µm,1.0s
RCAV Rocca di Cave 0.98 188 P Pb 12 06 27.5 -1.3
RCAV AML AML
comp=N,3895µm,0.6s
RCAV AML AML
comp=E,5065µm,0.4s
LATE Laterza 0.99 258 P Pb 12 06 28.7 -0.2
INTR Introdacqua 1.00 144 P Pb 12 06 27.3 -1.8
INTR AML AML
comp=N,3250µm,0.9s
INTR AML AML
comp=E,2440µm,0.8s
INTR AML AML
comp=N,2µm,0.9s
INTR AML AML
comp=E,2µm,0.8s
VVLD Villa Vallelon 1.02 158 P Pb 12 06 28.3 -1.2
GUAR Guarcino 1.04 172 P Pb 12 06 29.2 -0.5
GUAR AML AML
comp=E,2290µm,1.1s
GUAR AML AML
comp=N,2895µm,0.7s

SSP9 Sansepolcro 1.04 316 P Pb 12 06 29.1 -0.7
PARC Parchiule 1.04 322 P Pb 12 06 28.8 -1.0
PARC AML AML
comp=N,1905µm,1.2s
PARC AML AML
comp=E,2020µm,0.7s
SF03 Valle Cupa 1.05 269 P Pb 12 06 29.9 -0.1
SF11 Podere del Sol 1.06 273 P Pb 12 06 29.9 -0.2
MCIV Monte Civitell 1.06 268 P Pb 12 06 29.9 -0.2
SF04 Casetta 1.07 271 P Pb 12 06 30.2 -0.1
SF13 Bagnolo 1.10 270 P Pb 12 06 30.7 -0.2
RDP Rocca di Papa 1.11 196 P Pb 12 06 30.2 -0.7
LPEL Lama dei Pelig 1.11 134 P Pb 12 06 29.2 -1.7
LPEL AML AML
comp=E,1675µm,0.7s
LPEL AML AML
comp=N,1965µm,0.7s
MA9 Marino 1.11 198 P Pb 12 06 30.6 -0.3
SF14 Selvena 1.11 267 P Pb 12 06 30.7 -0.2
TOLF Tolfa 1.12 228 P Pb 12 06 30.6 -0.6
TOLF AML AML
comp=N,2080µm,0.4s
TOLF AML AML
comp=E,1900µm,0.6s
PESA Pesaro 1.13 350 P Pb 12 06 30.8 -0.6
PESA AML AML
comp=N,6240µm,0.6s
PESA AML AML
comp=E,6275µm,0.4s
SF01 Poggio Pratacc 1.14 270 P Pb 12 06 31.2 -0.3
SF01 AML AML
comp=E,1646µm,1.0s
SF01 AML AML
comp=N,2568µm,0.5s
CRE Caprese Michel 1.17 313 P Pb 12 06 31.2 -0.8
LAV9 Lanuvio 1.19 195 P Pn 12 06 31.8 -0.4
LAV9 AML AML
comp=N,6010µm,0.5s
LAV9 AML AML
comp=N,5950µm,0.5s
LAV9 AML AML
comp=E,5290µm,0.4s
LAV9 AML AML
comp=E,5235µm,0.4s
POFI Posta Fibreno 1.19 158 P Pn 12 06 31.2 -1.1
POFI AML AML
comp=E,1355µm,0.6s
POFI AML AML
comp=N,1275µm,0.7s
RSM Repubblica di 1.21 336 P Pn 12 06 31.8 -0.7
LRP Arpino 1.23 163 P Pn 12 06 32.2 -0.6
LRP AML AML
comp=N,1095µm,0.4s
LRP AML AML
comp=E,814µm,0.6s
GIUL Giuliano Di Ro 1.27 175 P Pn 12 06 32.6 -0.7
GIUL AML AML
comp=E,1140µm,0.4s
GIUL AML AML
comp=N,1320µm,0.9s
LATB Latina 1.33 185 P Pn 12 06 33.8 -0.4
LATB AML AML
comp=N,364µm,0.6s
LATB AML AML
comp=E,486µm,0.6s
RNI2 Rionero Sannit 1.36 145 P Pn 12 06 34.2 -0.4
CERA Filignano 1.40 151 P Pn 12 06 34.6 -0.5
CERA AML AML
comp=E,1585µm,0.7s
CERA AML AML
comp=N,1585µm,0.9s
SFI Santa Sofia 1.42 320 P Pn 12 06 35.5 0.0
FRES Fresagrandinar 1.43 126 P Pn 12 06 35.0 -0.6
CSNT Castellina Chi 1.48 296 P Pn 12 06 36.5 +0.1
CSNT AML AML
comp=N,278µm,0.7s
CSNT AML AML
comp=E,341µm,0.6s
TRIV Trivento 1.50 134 P Pn 12 06 36.8 +0.3
TRIV AML AML
comp=N,769µm,0.8s
TRIV AML AML
comp=E,978µm,0.9s
OSSC Osservatorio P 1.54 298 P Pn 12 06 37.5 +0.5
OSSC AML AML
comp=N,548µm,0.8s
OSSC AML AML
comp=E,272µm,0.8s
RUFI Rufina 1.55 311 P Pn 12 06 37.3 +0.1
LMD Lutirano 1.62 321 P Pn 12 06 38.5 +0.4
VAGA Valle Agricola 1.64 149 P Pn 12 06 38.6 +0.2
TRIF Trifonti 1.65 281 P Pn 12 06 39.0 +0.4
TRIF AML AML
comp=N,313µm,0.9s
TRIF AML AML
comp=E,296µm,0.7s
CASP Castiglione de 1.66 270 P Pn 12 06 38.6 -0.1
CASP AML AML
comp=E,200µm,1.0s
CASP AML AML
comp=N,238µm,1.1s
BSSO Busso 1.68 139 P Pn 12 06 38.8 -0.3
MODR Mondragone 1.77 161 P Pn 12 06 40.9 +0.7
MODR AML AML
comp=E,401µm,1.5s
MODR AML AML
comp=N,316µm,1.0s
APRC Apricena 2.09 120 P Pn 12 06 44.8 +0.1
APRC AML AML
comp=N,532µm,1.1s
APRC AML AML
comp=E,452µm,0.4s
POPM Popiglio 2.11 306 P Pn 12 06 45.5 +0.6
POPM AML AML
comp=N,198µm,0.5s
POPM AML AML
comp=E,171µm,1.1s
BRJN Brijuni 2.13 12 P Pn 12 06 44.9 -0.2
CELB S.Piero in Cam 2.14 269 P Pn 12 06 45.3 0.0
CELB AML AML
comp=N,103µm,0.6s
CELB AML AML
comp=E,104µm,0.6s
MAIM Mastiano 2.20 301 P Pn 12 06 46.7 +0.6
MAIM AML AML
comp=E,172µm,0.7s
MAIM AML AML
comp=N,176µm,0.5s
BDI Bagni Di Lucca 2.21 305 P Pn 12 06 45.9 -0.5
BDI AML AML
comp=E,88µm,1.0s
BDI AML AML
comp=N,89µm,1.0s
SGRT San Giovanni R 2.22 118 P Pn 12 06 46.5 +0.1
SGRT AML AML
comp=N,549µm,0.7s
SGRT AML AML
comp=E,520µm,0.6s
MSAG Monte S. Angel 2.35 117 P Pn 12 06 49.2 +0.9
MSAG AML AML
comp=E,572µm,0.7s
MSAG AML AML
comp=N,832µm,0.5s
EQUI Equi 2.54 303 P Pn 12 06 51.2 +0.4
EQUI AML AML
comp=E,81µm,0.7s
EQUI AML AML
comp=N,122µm,0.9s
SKDS Skadanscina 2.80 13 *i* Pn **Pn 12 06 53.8 -0.6**
SKDS *e*Sn **Sn 12 07 28.0 +0.1**
SKDS IAML 12 07 31.2
comp=Z,48nm,0.3s
MRVN Minervino Murg 2.89 126 P Pn 12 06 56.3 +0.6
MRVN AML AML
comp=N,96µm,0.6s
MRVN AML AML
comp=E,93µm,0.9s
PGF Pioggiola 3.05 266 *e*P **Pn 12 06 58.8 +0.9**
PGF *e*Sn **Sn 12 07 31.3 -3.0**
comp=E,5.9nm,0.4s
BOJS Bojanci 3.09 29 P Pn 12 06 58.6 +0.3
SABO M.te Sabotino 3.17 6 P Pn 12 06 59.6 +0.1
SABO AML AML
comp=E,2320µm,0.5s
SABO AML AML
comp=N,2240µm,0.6s

SABO AML AML
comp=N,590µm,0.6s
SABO AML AML
comp=E,518µm,0.7s
ROVR Rover Verones 3.18 333 P Pn 12 07 00.3 +0.6
ROVR AML AML
comp=N,105µm,0.8s
ROVR AML AML
comp=E,85µm,0.5s
CGRP Cima Grappa 3.20 343 P Pn 12 07 00.6 +0.6
CGRP AML AML
comp=N,396µm,1.1s
CGRP AML AML
comp=N,330µm,1.0s
CGRP AML AML
comp=E,364µm,0.9s
CGRP AML AML
comp=E,350µm,0.8s
SALO Salr 3.36 327 P Pn 12 07 01.8 -0.2
STON Ston 3.37 88 AML AML
comp=N,68µm,0.9s
STON AML AML
comp=E,70µm,1.0s
LJU Ljubljana 3.37 17 P Pn 12 07 02.8 +0.5
LJU AML AML
comp=E,1054µm,1.2s
LJU AML AML
comp=N,1345µm,0.5s
MPRI Monte Prat 3.42 358 P Pn 12 07 03.1 +0.3
MPRI AML AML
comp=E,421µm,0.6s
MPRI AML AML
comp=N,320µm,0.5s
STAL STALIGIAL 3.45 355 P Pn 12 07 03.0 -0.3
STAL AML AML
comp=N,295µm,0.3s
STAL AML AML
comp=N,216µm,0.3s
STAL AML AML
comp=E,348µm,0.8s
STAL AML AML
comp=E,274µm,1.5s
MAGA Magasa 3.45 330 P Pn 12 07 04.1 +0.7
MAGA AML AML
comp=E,532µm,0.6s
MAGA AML AML
comp=N,319µm,0.4s
LUSI Trento, Gardas 3.50 334 P Pn 12 07 05.0 +1.0
LUSI AML AML
comp=E,215µm,1.5s
LUSI AML AML
comp=N,196µm,0.8s
CIMO Cimolais 3.52 352 P Pn 12 07 04.1 -0.1
CIMO AML AML
comp=N,84µm,0.8s
CIMO AML AML
comp=N,101µm,0.6s
CIMO AML AML
comp=E,89µm,0.8s
CIMO AML AML
comp=E,92µm,0.8s
NOCI Noci 3.58 123 P Pn 12 07 05.9 +0.8
PTCC Patocco-Chiusa 3.58 3 P Pn 12 07 04.7 -0.5
PTCC AML AML
comp=N,122µm,0.4s
PTCC AML AML
comp=E,150µm,0.7s
GAGG Gaggia 3.61 335 P Pn 12 07 07.0 +1.4
ZOU Zoufplan 3.73 358 P Pn 12 07 07.4 +0.1
ZOU AML AML
comp=E,244µm,1.0s
ZOU AML AML
comp=N,194µm,1.2s
ACOM Acomizza, Ital 3.73 4 P Pn 12 07 07.6 +0.3
ACOM AML AML
comp=N,269µm,0.7s
ACOM AML AML
comp=E,224µm,1.1s
ACOM AML AML
comp=N,271µm,0.7s
ACOM AML AML
comp=E,234µm,1.2s
OBKA Obir 3.82 15 *i* Pn **Pn 12 07 09.0 +0.5**
comp=E,1.7nm,0.2s
MYKA Terra Mystica 3.82 5 *e*Pn **Pn 12 07 07.3 -1.2**
comp=E,9.1nm,0.3s,SNR=5.4
KOSI Kohlern 3.84 342 P Pn 12 07 10.1 +1.2
KOSI AML AML
comp=N,198µm,1.3s
KOSI AML AML
comp=E,250µm,0.8s
ABTA Abfaltersbach 3.95 354 *i* Pn **Pn 12 07 10.8 +0.6**
comp=E,57nm,0.5s,SNR=35
SOKA Soboth 4.09 19 *i* Pn **Pn 12 07 12.5 +0.3**
comp=E,1.6nm,0.2s
RISI Rein 4.19 350 P Pn 12 07 15.4 +1.8
KBA Koelnbreinsper 4.26 2 *e*Pn **Pn 12 07 15.2 +0.7**
comp=E,6.4nm,0.2s,SNR=8.9
MUGIO Muggio 4.26 318 AML AML
comp=N,42µm,0.5s
MUGIO AML AML
comp=E,33µm,1.4s
SBF Sospel 4.27 286 *e*P **Pn 12 07 15.8 +1.1**
SBF *e*Sn **Sn 12 08 00.4 -4.0**
comp=E,17nm,0.4s
ROSI Rosskopf 4.28 344 P Pn 12 07 16.2 +1.3
VSL Villasalto 4.36 222 P Pn 12 07 17.0 +1.1
FETA Feichten 4.53 339 *e*Pn **Pn 12 07 20.4 +2.1**
comp=E,7.6nm,0.5s
WTTA Wattenberg 4.56 347 *e*Pn **Pn 12 07 21.3 +2.5**
comp=E,2.8nm,0.2s,SNR=5.4
DAVOX Davos/Dischmat 4.58 331 Pn Pn 12 07 21.4 +2.5
comp=E,2.0nm,0.3s,baz=170,slow=20,SNR=20
DAVOX Sn **Sn 12 08 13.4 +1.3**
comp=E,2.1nm,0.3s,baz=114,slow=22,SNR=4.0
comp=E,18nm,0.8s
SQTA Sankt Quirin 4.60 344 *e*Pn **Pn 12 07 21.0 +1.8**
comp=E,7.3nm,0.3s
WATA Walderalm 4.64 347 *e*Pn **Pn 12 07 22.1 +2.3**
comp=E,5.3nm,0.3s,SNR=5.7
MOTA Moosalm 4.74 343 *e*Pn **Pn 12 07 24.2 +3.0**
comp=E,2.2nm,0.2s,SNR=7.7
ARSA Arzberg 4.74 20 *e*Pn **Pn 12 07 20.8 -0.3**
comp=E,4.0nm,0.4s
LMR La Mourre 4.87 278 *e*P **Pn 12 07 23.5 +0.8**
LMR *e*Sn **Sn 12 08 14.5 -4.4**
comp=E,0.9nm,0.2s
BIOA Bad Ischl, Aus 4.88 4 *e*Pn **Pn 12 07 23.4 +0.4**
comp=E,17nm,0.3s,SNR=12
MBDF Montbardon 4.97 295 *e*P **Pn 12 07 26.5 +2.1**
MBDF *e*Sn **Sn 12 08 17.2 -4.6**
comp=E,3.0nm,0.4s
DAVA Damuels 5.02 334 *e*Pn **Pn 12 07 27.8 +2.8**
comp=E,2.9nm,0.2s
MOA Molln 5.09 9 *i* Pn **Pn 12 07 26.6 +0.7**
comp=E,2.7nm,0.2s
LPG La Plagne 5.30 302 *e*P **Pn 12 07 31.3 +2.3**
LPG *e*Sn **Sn 12 08 25.3 -4.8**
comp=E,7.2nm,0.2s
LPL La Plagne 5.32 303 *e*P **Pn 12 07 31.4 +2.2**
LPL *e*Sn **Sn 12 08 25.3 -5.2**
comp=E,9.9nm,0.6s
RONA Rosalia, Austr 5.37 24 *e*Pn **Pn 12 07 29.9 +0.2**
comp=E,1.0nm,0.2s
CONA Conrad Observa 5.46 20 *i* Pn **Pn 12 07 31.1 +0.2**
comp=E,4.9nm,0.3s
SMRF Simiane la Rot 5.61 284 *e*P **Pn 12 07 35.6 +2.5**
SMRF *e*Sn **Sn 12 08 32.5 -4.9**
comp=E,2.2nm,0.4s
ORIF Oris-en-Rattie 5.63 294 *e*P **Pn 12 07 36.2 +2.8**
GERES GERESS Array B 6.04 4 Pn Pn 12 07 38.5 -0.3
comp=E,0.7nm,0.3s,baz=180,slow=13,SNR=11
GERES Sn **Sn 12 08 47.7 -0.2**
comp=E,2.4nm,0.3s,baz=176,slow=24,SNR=7.8
comp=E,1.4nm,0.4s
CKRC Cesky Krumlov 6.05 7 *e*PN **Pn 12 07 38.5 -0.6**
CKRC *e*SN **Sn 12 08 46.0 -2.2**
CABF La Chapelle 6.28 309 *e*P **Pn 12 07 44.8 +2.6**
CABF *e*Sn **Sn 12 08 48.1 -5.7**
comp=E,4.0nm,0.2s
KHC Kasperske Hory 6.32 3 *e*PN **Pn 12 07 42.2 -0.5**
KHC *e*SN **Sn 12 08 52.3 -2.4**
VIVF Saint-Julien-I 6.44 291 *e*P **Pn 12 07 47.1 +2.8**
VIVF *e*Sn **Sn 12 08 52.9 -4.7**
comp=E,1.1nm,0.3s
HINF Hinteralfeld 6.66 321 *e*P **Pn 12 07 50.1 +2.6**
HINF *e*Sn **Sn 12 08 57.2 -6.0**

comp=E,17nm,0.6s
LASF Ste Croix 6.86 284 *e*P **Pn** **12 07 51.8 +1.7**
LASF *e*Sn **Sn** **12 09 02.0 -5.9**
comp=E,1.1nm,0.4s
CDF Champ du Feu 6.93 326 *e*P **Pn** **12 07 52.0 +0.9**
CDF *e*Sn **Sn** **12 09 03.5 -6.3**
comp=E,6.8nm,0.4s
HAU Haudompre 7.04 320 *e*P **Pn** **12 07 54.4 +1.8**
HAU *e*Sn **Sn** **12 09 06.1 -6.3**
comp=E,13nm,0.4s
SMF Signal de Mont 7.63 303 *e*P **Pn** **12 08 03.9 +3.2**
SMF *e*Sn **Sn** **12 09 20.4 -6.5**
comp=E,1.7nm,0.3s
KEST Kesra 7.66 204 Pn Pn 12 08 06.5 +5.3
comp=E,0.6nm,0.3s,baz=208,slow=17,SNR=3.6
comp=E,3.9nm,0.5s
LOR Lormes 7.92 307 *e*P **Pn** **12 08 07.0 +2.4**
baz=124
LOR *e*Sn **Sn** **12 09 27.4 -6.7**
comp=E,5.3nm,0.5s
AVF Avril sur Loir 7.99 303 *e*P **Pn** **12 08 09.2 +3.5**
AVF *e*Sn **Sn** **12 09 29.3 -6.6**
comp=E,1.3nm,0.4s
MTLF Montolieu 8.00 277 *e*P **Pn** **12 08 08.8 +3.1**
BGF Bois d'Agland 8.21 301 *e*P **Pn** **12 08 11.9 +3.2**
BGF *e*Sn **Sn** **12 09 34.3 -7.0**
comp=E,2.7nm,0.5s
CAF Calviac 8.26 289 *e*P **Pn** **12 08 11.9 +2.6**
CAF *e*Sn **Sn** **12 09 35.3 -7.1**
comp=E,0.9nm,0.3s
TCF Toulx Ste Croi 8.52 298 *e*P **Pn** **12 08 16.2 +3.2**
RJF Les Rejaudoux 8.71 290 *e*P **Pn** **12 08 18.6 +3.0**
RJF *e*Sn **Sn** **12 09 46.5 -7.1**
comp=E,1.3nm,0.3s
LFF La Frestale 9.19 288 *e*P **Pn** **12 08 25.4 +3.4**
LFF *e*Sn **Sn** **12 09 57.5 -7.7**
comp=E,3.1nm,0.3s
FINES FINESS Array B 20.20 18 P **P** **12 10 44.5 +0.4**
comp=E,0.9nm,0.6s,baz=178,slow=11,SNR=1.6
comp=E,0.9nm,0.6s
KBZ Khabaz 21.65 77 P **P** **12 11 02.7 +2.8**
comp=E,1.1nm,0.3s,baz=341,slow=2.2,SNR=6.1
comp=E,1.1nm,0.3s
TORD Torodi Ar. Bea 31.18 202 P **P** **12 12 32.1 +3.4**
comp=E,0.4nm,0.8s,baz=21,slow=6.8,SNR=1.6
comp=E,0.4nm,0.8s
ZALV Zalesovo Beam 46.93 50 P **P** **12 14 42.6 +2.7**
comp=E,0.5nm,0.5s,baz=295,slow=11,SNR=1.8
comp=E,0.5nm,0.5s

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*IDC **24** 12:06:17.2±1.0,54°.72S×30°.36W,h0km,mb3.8/6, mbtmp3.8/6,Error ellipse: s-maj=46.8km s-min=21.5km az=60.0*

ISC 24 12:06:18.8±0.9,**54°.7S**±0°.2×**30°.4W**±0°.3,**h10**km,**n11,**
σ1§25/8,mb3.9/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.69**	**156**	P	**P**	**12 10 58.9**	**+0.2**
	1.3nm,0.7s,baz=307,slow=10,SNR=10						
	1.3nm,0.7s						
CPUP	**Villa Florida**	**34.58**	**314**	P	**P**	**12 13 09.4**	**+1.8**
	0.8nm,0.4s,baz=163,slow=11,SNR=3.5						
	0.8nm,0.4s						
MAW	**Mawson**	**42.28**	**145**	P	**P**	**12 14 12.3**	**+0.5**
	1.7nm,0.8s,baz=48,slow=1.8,SNR=3.7						
	1.7nm,0.8s						
VNDA	**Vanda**	**47.79**	**184**	P	**P**	**12 14 55.4**	**0.0**
	0.6nm,0.8s,baz=277,slow=7.6,SNR=2.5						
	0.6nm,0.8s						
LPAZ	**La Paz**	**48.13**	**308**	P	**P**	**12 14 58.3**	**-1.2**
	1.2nm,0.4s,baz=133,slow=5.0,SNR=4.7						
	1.2nm,0.4s						
H10N1	**ASCENSION HYDR**	**48.47**	**21**	T	T	13 07 36.4	
	baz=192						
H10N3	**ASCENSION HYDR**	**48.47**	**21**	T	T	13 07 35.2	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**48.48**	**21**	T	T	13 07 36.3	
	baz=192,slow=74						
TORD	**Torodi Ar. Bea**	**72.87**	**33**	P	**P**	**12 17 47.9**	**+0.2**
	0.5nm,0.7s,baz=202,slow=6.1,SNR=3.0						
	0.5nm,0.7s						
ILAR	**Eielson Array**	**147.88**	**314**	PKPbc	**PKPbc**	**12 26 01.1**	**-1.4**
	0.3nm,0.8s,baz=108,slow=0.9,SNR=4.4						
SONM	**Songino Array**	**152.47**	**86**	PKPbc	**PKPbc**	**12 26 13.5**	**-0.8**
	0.4nm,0.5s,baz=261,slow=3.6,SNR=1.7						

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*IDC **24** 12:06:56.5±2.0,7°.75S×122°.55E,h0km,mb3.6/1, mbtmp3.6/3,ML3.7/2,Error ellipse: s-maj=248.0km s-min=29.2km az=56.0*

ISC 24 12:06:57.9±1.3,**7°.9S**±0°.1×**122°.72E**±0°.10,**h10**km,**n13,**
σ2§56/11,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**4.98**	**259**	P	**Pg**	**12 08 32.3**	**-1.1**
MTN	**Manton Dam**	**9.62**	**121**	P	Pn	12 09 28.6	+12
KNRA	**Kununurra**	**9.74**	**143**	P	Pn	12 09 29.7	+12
FITZ	**Fitzroy Crossi**	**10.54**	**165**	P	Pn	12 09 41.8	+13
KDU	**Kakadu**	**10.71**	**117**	P	Pn	12 09 42.0	+11
WRA	**Warramunga Arr**	**16.44**	**138**	Pn	**P**	**12 10 52.7**	**+1.1**
	0.2nm,0.3s,baz=312,slow=13,SNR=20						
WRA				Sn	**Sn**	**12 13 47.3**	**-4.2**
	0.3nm,0.3s,baz=321,slow=25,SNR=5.6						
	0.4nm,0.4s						
WRAB	**Tennant Creek**	**16.44**	**138**	P	**P**	**12 10 53.2**	**+1.6**
WRKA	**Warakurna**	**17.86**	**163**	P	**P**	**12 11 09.8**	**+2.4**
ASAR	**Alice Springs**	**19.00**	**147**	P	**Pn**	**12 11 21.9**	**+1.3**
	0.4nm,0.3s,baz=324,slow=11,SNR=39						
ASAR				S	**Sn**	**12 14 49.6**	**-4.0**
	0.3nm,0.7s,baz=313,slow=20,SNR=2.5						
	3.0nm,0.7s						
MEEK	**Meekatharra**	**19.05**	**191**	P	**Pn**	**12 11 23.2**	**+2.0**
QIS	**Mount Isa**	**20.62**	**129**	P	**P**	**12 11 38.5**	**+0.9**
COEN	**Coen**	**20.96**	**108**	P	**P**	**12 11 41.6**	**+0.3**
MKAR	**Makanchi Array**	**65.23**	**331**	P	**P**	**12 17 38.5**	**-1.2**
	0.4nm,0.6s,baz=125,slow=7.7,SNR=4.7						
	0.4nm,0.6s						

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*KRNET **24** 12:09:06.5±0.1,39°.43N×73°.76E,mb3.5*
*SOME **24** 12:09:09.6,39°.77N×73°.15E,h0km*
*ISU **24** 12:09:11,39°.54N×73°.57E,h9km*
*NNC **24** 12:09:13.0±1.3,39°.60N×73°.60E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=11.9km s-min=7.6km az=155.0*

ISC 24 12:09:11.7±1.6,**39°.53N**±0°.06×**73°.58E**±0°.03,**h2**km±11km,
n30,σ2§23/53,14C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.17**	**329**	⇓*i*P	**Pn**	**12 09 31.8**	**-3.4**
	baz=26						
OHH				⇓*i*S	**Sb**	**12 09 50.3**	**-0.1**
	baz=26						
TSTA	**Tashata**	**1.35**	**322**	P	**Pn**	**12 09 36.0**	**-1.7**
TSTA				S	**Sn**	**12 09 54.7**	**-1.5**
ANR	**Andizhan**	**1.54**	**323**	P	**Pg**	**12 09 42.5**	**+1.2**
ANR				S	**Sg**	**12 10 03.8**	**+2.4**
FRG	**Fergana**	**1.62**	**302**	P	**Pn**	**12 09 40.4**	**-1.0**
FRG				S	**Sb**	**12 10 02.4**	**-0.9**
NAM	**Namangan**	**2.08**	**315**	P	**Pg**	**12 09 51.4**	**-0.1**
NAM				S	**Sg**	**12 10 19.4**	**+1.0**
BTK	**Batken**	**2.19**	**285**	⇓*e*P	**Pn**	**12 09 48.8**	**-0.5**
	baz=86						
BTK				⇓*i*S	**Sb**	**12 10 19.5**	**-0.3**
	baz=86						
MINT	**Mingtut**	**2.21**	**296**	S	**Sn**	**12 10 16.7**	**-0.7**
GAR	**Garm**	**2.59**	**259**	⇑*e*P	**Pn**	**12 09 53.7**	**-1.0**
	baz=62						
GAR				⇑*i*S	**Sb**	**12 10 28.1**	**-3.1**
	baz=62						
CHDK	**Chadak**	**2.60**	**305**	P	**Pn**	**12 09 55.1**	**+0.2**
CHDK				S	**Sb**	**12 10 30.4**	**-1.2**
UCH	**Uchtor**	**2.79**	**14**	⇑*i*P	**Pn**	**12 09 55.7**	**-2.1**
	baz=11						
UCH				⇑*i*S	**Sn**	**12 10 31.5**	**-0.8**
	baz=11						
EKS2	**Erkin-Say**	**3.14**	**3**	⇑*i*P	**Pn**	**12 10 00.7**	**-1.6**
	baz=0.0						
EKS2				⇑*i*S	**Sn**	**12 10 40.3**	**-0.1**
	baz=0.0						
AAK	**Ala-Archa**	**3.19**	**12**	⇑*i*P	**Pn**	**12 10 01.0**	**-2.0**
	baz=10.0						
AAK				⇑*i*S	**Sn**	**12 10 40.8**	**-0.8**
	baz=10.0						
CHMS	**Chumysh**	**3.58**	**14**	⇓Pn	**Pn**	**12 10 09.5**	**+1.1**
	4.3nm,0.5s						
CHMS				⇑Lg	Lg	12 11 06.5	
	19nm,0.6s						
TKM2	**Tokmak 2**	**3.72**	**23**	⇑Pn	**Pn**	**12 10 11.2**	**+0.9**
	2.2nm,0.8s						
TKM2				⇑Pg	**Pb**	**12 10 19.6**	**+1.3**
	6.4nm,0.7s						
TKM2				⇑Lg	Lg	12 11 09.8	
	12nm,0.6s						
IUG	**Iuzhnay**	**3.76**	**315**	*e*P	**Pn**	**12 10 11.7**	**+0.9**
	156nm,0.4s						
IUG				*e*S	**Sn**	**12 10 56.6**	**+0.9**
	28nm,0.7s						
KST	**Kastek**	**3.95**	**26**	*e*P	**Pb**	**12 10 22.3**	**+0.2**
	6.6nm,0.5s						
KST				*e*S	**Sb**	**12 11 14.9**	**+4.6**
	27nm,0.9s						
KST	**Kastek**	**3.95**	**26**	Pg	**Pb**	**12 10 22.3**	**+0.2**
	6.6nm,0.5s						
KST				Lg	Lg	12 11 14.9	
	27nm,0.9s						
KK31	**Karatay Array**	**4.26**	**328**	Pn	**Pn**	**12 10 18.0**	**+0.4**
	2.1nm,0.5s,baz=134,slow=16,SNR=20						
KK31				⇓Pg	**Pb**	**12 10 29.9**	**+2.6**
	3.1nm,0.6s,baz=158,slow=15,SNR=5.1						
KK31				⇑Sn	**Sn**	**12 11 09.3**	**+1.5**
	3.6nm,0.7s,baz=145,slow=15,SNR=3.5						
KK31				⇑Lg	Lg	12 11 27.9	
	12nm,0.5s,baz=165,slow=30,SNR=4.0						
KRBS	**Karabastau**	**4.45**	**20**	*e*P	**Pb**	**12 10 31.9**	**+1.2**
	3.2nm,0.5s						
KRBS				*e*S	**Sg**	**12 11 31.5**	**-3.3**
	11nm,0.7s						
KRBS	**Karabastau**	**4.45**	**20**	Pg	**Pb**	**12 10 31.9**	**+1.2**
	3.2nm,0.5s						
KRBS				Lg	Lg	12 11 31.5	
	11nm,0.7s						
MDOK	**Medeo**	**4.47**	**35**	*e*P	**Pb**	**12 10 33.6**	**+2.5**
	5.0nm,0.6s						
MDOK				*e*S	**Sg**	**12 11 34.2**	**-1.3**
	21nm,0.8s						
MDOK	**Medeo**	**4.47**	**35**	Pg	**Pb**	**12 10 33.7**	**+2.5**
	5.0nm,0.6s						
MDOK				Lg	Lg	12 11 34.2	
	21nm,0.8s						
KUU	**Kurty**	**4.83**	**24**	*e*P	**Pb**	**12 10 38.1**	**+1.1**
	2.4nm,0.4s						
KUU				*e*S	**Sg**	**12 11 42.6**	**-4.2**
	14nm,0.9s						
KUU	**Kurty**	**4.83**	**24**	Pg	**Pb**	**12 10 38.1**	**+1.1**
	2.4nm,0.4s						
KUU				Lg	Lg	12 11 42.6	
	14nm,0.9s						
UZB	**Uzynbulak**	**5.46**	**47**	*e*P	**Pg**	**12 10 53.6**	**-2.8**
	0.7nm,0.1s						
UZB				*e*S	**Sg**	**12 12 07.9**	**+0.7**
	5.7nm,0.4s						
KPKS	**Kokpek**	**5.49**	**43**	*e*P	**Pb**	**12 10 51.0**	**+2.6**
	2.0nm,0.1s						
KPKS				*e*S	**Sg**	**12 12 03.7**	**-4.5**
	7.2nm,0.5s						
BTLS	**Baital**	**5.52**	**3**	*e*P	**Pb**	**12 10 51.3**	**+2.4**
	1.6nm,0.6s						
BTLS				*e*S	**Sg**	**12 12 04.1**	**-5.0**
	6.4nm,0.7s						
BTLS	**Baital**	**5.52**	**3**	Pg	**Pb**	**12 10 51.3**	**+2.4**
	1.6nm,0.6s						
BTLS				Lg	Lg	12 12 04.1	
	6.4nm,0.7s						
SHLS	**Shalkode**	**5.72**	**49**	*e*P	**Pg**	**12 11 01.3**	**-0.1**
	1.7nm,0.1s						
SHLS				*e*S	**Sg**	**12 12 21.6**	**+6.1**
	3.5nm,0.5s						
SHLS	**Shalkode**	**5.72**	**49**	Pg	**Pg**	**12 11 01.3**	**-0.1**
	1.7nm,0.1s						
SHLS				Lg	Lg	12 12 21.6	
	3.5nm,0.5s						

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*IDC **24** 12:09:41.4±0.8,54°.97S×31°.38W,h0km,mb4.1/8, mbtmp4.1/9,ML3.1/1,Error ellipse: s-maj=28.9km s-min=18.0km az=54.0*
*NEIC **24** 12:09:43.5±1.0,54°.94S±0°.09×31°.59W±0°.08,h10km±1km, mb4.4/20,Error ellipse: s-maj=15.7km s-min=5.2km az=158.0*

ISC 24 12:09:42.9±0.6,**54°.95S**±0°.08×**31°.5W**±0°.1,**h10**km,**n43,**
σ0§64/40,mb4.3/13,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.97**	**281**		**Pn**	**12 10 29.9**	**-0.2**
ORCD	**Orcadas**	**9.13**	**225**		**Pn**	**12 11 54.5**	**0.0**
VNA1	**Neumayer--Stat**	**18.78**	**156**	P	**Pn**	**12 14 02.8**	**+0.5**
PMSA	**Palmer Station**	**18.84**	**226**	P	**Pn**	**12 14 04.4**	**+1.3**
	0.1nm,0.3s,baz=98,slow=8.4,SNR=4.1						
	5.5nm,0.9s						
VNA3	**Neumayer Olymp**	**18.90**	**158**	P	**P**	**12 14 03.3**	**+0.1**
VNA2	**Neumayer--Watz**	**19.18**	**156**	P	**Pn**	**12 14 06.9**	**-0.2**
	baz=318,slow=11						
SNAA	**Sanae**	**20.77**	**155**	P	**P**	**12 14 23.4**	**-0.3**
SNAA	**Sanae**	**20.77**	**155**	P	**P**	**12 14 23.2**	**-0.5**
	3.9nm,0.7s,baz=314,slow=9.1,SNR=27						
	3.9nm,0.7s						
SNAA	**Sanae**	**20.77**	**155**	P	**P**	**12 14 23.5**	**-0.2**
MG02	**Cerro Sombrero**	**22.17**	**260**	P	**P**	**12 14 37.6**	**-1.2**
TROLL	**Troll, Antarti**	**22.34**	**153**	P	**P**	**12 14 41.8**	**+1.2**
BELA	**Belgrano 2**	**23.06**	**182**	P	**P**	**12 14 47.4**	**-0.6**
PLCA	**Paso Flores**	**29.37**	**283**	P	**P**	**12 15 46.6**	**+0.6**
	0.8nm,0.8s,baz=100,slow=6.0,SNR=3.3						
	0.8nm,0.8s						
PLCA	**Paso Flores**	**29.37**	**283**	P	**P**	**12 15 46.6**	**+0.6**
PLCA				IAmb	IAmb	12 15 52.8	
	comp=Z,6.2nm,1.4s						
CPUP	**Villa Florida**	**34.27**	**316**	P	**P**	**12 16 28.3**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=141,slow=8.1,SNR=3.7						
	comp=Z,2.8nm,0.8s						
CPUP	**Villa Florida**	**34.27**	**316**	P	**P**	**12 16 28.9**	**-0.1**
CPUP				IAmb	IAmb	12 16 41.2	
	comp=Z,3.5nm,1.0s						
QSPA	**South Pole Qui**	**35.31**	**180**	P	**P**	**12 16 37.9**	**0.0**
QSPA				IAmb	IAmb	12 17 01.8	
	comp=Z,5.0nm,1.1s						
VA06	**Catapilco**	**35.72**	**292**	P	**P**	**12 16 41.1**	**-0.3**
MAW	**Mawson**	**42.48**	**146**	P	**P**	**12 17 37.1**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=216,slow=2.5,SNR=4.9						
	comp=Z,2.3nm,0.8s						
MAW	**Mawson**	**42.48**	**146**	P	**P**	**12 17 37.8**	**+0.2**
LVC	**Limon Verde**	**42.63**	**304**	P	**P**	**12 17 39.5**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=184,slow=8.7,SNR=2.4						
	comp=Z,2.9nm,0.6s						
PB01	**IPOC Station P**	**44.24**	**305**	P	**P**	**12 17 52.4**	**-0.1**
PB01				IAmb	IAmb	12 17 57.8	
	comp=Z,4.6nm,0.8s						
PTLB	**Pontes e Lacer**	**44.84**	**321**	P	**P**	**12 17 56.9**	**-0.1**
PTLB				IAmb	IAmb	12 18 01.2	
	comp=Z,3.1nm,0.8s						
GO01	**Chusmiza**	**45.29**	**306**	P	**P**	**12 18 01.7**	**+0.4**
GO01				IAmb	IAmb	12 18 03.1	
	comp=Z,5.8nm,1.1s						
VNDA	**Vanda**	**47.54**	**184**	P	**P**	**12 18 16.2**	**-1.5**
	comp=Z,1.3nm,0.9s,baz=206,slow=4.2,SNR=7.7						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**47.54**	**184**	P	**P**	**12 18 18.4**	**+0.7**
VNDA				IAmb	IAmb	12 18 34.5	
	comp=Z,5.8nm,1.4s						
LPAZ	**La Paz**	**47.75**	**309**	P	**P**	**12 18 22.1**	**+1.4**
	comp=Z,4.1nm,0.7s,baz=151,slow=3.8,SNR=11						
	comp=Z,4.1nm,0.7s						
LPAZ	**La Paz**	**47.75**	**309**	P	**P**	**12 18 22.1**	**+1.4**
LPAZ				IAmb	IAmb	12 18 25.9	
	comp=Z,5.7nm,0.9s						
H10N1	**ASCENSION HYDR**	**48.90**	**23**	T	T	13 11 10.3	
	baz=192,slow=75,SNR=39						
H10N3	**ASCENSION HYDR**	**48.90**	**23**	T	T	13 11 10.7	
	baz=192,slow=75,SNR=70						
H10N2	**ASCENSION HYDR**	**48.92**	**23**	T	T	13 11 13.0	
	baz=192,slow=75,SNR=69						
SAML	**Samuel**	**52.31**	**319**	P	**P**	**12 18 55.0**	**+0.4**
SAML				IAmb	IAmb	12 18 55.7	
	comp=Z,5.7nm,1.2s						
ETMB	**Extrema**	**52.71**	**315**	P	**P**	**12 18 57.7**	**+0.1**
ETMB				IAmb	IAmb	12 19 00.5	
	comp=Z,3.0nm,1.0s						
BOAV	**Boa Vista**	**61.95**	**327**	P	**P**	**12 20 02.4**	**-0.4**
BOAV				IAmb	IAmb	12 20 13.4	
	comp=Z,7.2nm,1.4s						
BAUV	**El Baul**	**70.62**	**321**	P	**P**	**12 20 58.2**	**-0.2**
SDV	**Santo Domingo**	**71.52**	**319**	P	**P**	**12 21 04.3**	**+0.3**
TOA0	**Torodi Ar. Sit**	**73.40**	**34**	P	**P**	**12 21 16.0**	**+1.0**
TOA0				IAmb	IAmb	12 21 17.7	
	comp=Z,3.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.40**	**34**	P	**P**	**12 21 15.0**	**0.0**
	comp=Z,1.0nm,0.6s,baz=206,slow=6.6,SNR=5.9						
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.40**	**34**	P	**P**	**12 21 15.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**127.76**	**114**	PKP	**PKiKP**	**12 28 49.0**	**0.0**
	comp=Z,0.4nm,0.3s,baz=243,slow=4.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**144.10**	**65**	PKP	**PKPdf**	**12 29 17.4**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=187,slow=3.7,SNR=3.7						
ILAR	**Eielson Array**	**147.56**	**314**	PKPbc	**PKPbc**	**12 29 25.9**	**+0.1**
	comp=Z,3.8nm,1.1s,baz=114,slow=1.1,SNR=13						
SONM	**Songino Array**	**153.12**	**88**	PKPbc	**PKPbc**	**12 29 39.3**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=271,slow=3.0,SNR=4.8						

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*ROM **24** 12:18:27.0±0.1,42°.821N±0°.006×13°.13E±0°.01,h8km±1km, ML3.4/55,Error ellipse: s-maj=0.8km s-min=0.5km az=53.0*
*PRU **24** 12:18:28.2±0.0,42°.84N×13°.56E,h7km*
*PDG **24** 12:18:33.4±0.1,42°.51N×13°.68E,h11km±11km,ML3.7/7, Error ellipse: s-maj=2.2km s-min=95.2km az=0.0*

ISC 24 12:18:27.4±0.8,**42°.82N**±0°.02×**13°.19E**±0°.02,**h12**km±5km,
n114,σ1§22/143,18C-36D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.05**	**281**		AML	AML	
NRCA					AML	AML	
NRCA					AML	AML	
NRCA					AML	AML	
NRCA					AML	AML	
FEMA	**Monte Fema**	**0.17**	**324**	⇓P	**Pg**	**12 18 31.0**	**-0.4**
FEMA				S	**Sg**	**12 18 33.8**	**-0.4**
FEMA					AML	AML	
	comp=E,58750μm,0.6s						
FEMA					AML	AML	
	comp=E,58750μm,0.6s						
FEMA					AML	AML	
	comp=N,69250μm,0.4s						
FDMO	**Fiordimonte**	**0.23**	**341**	⇓P	**Pg**	**12 18 31.9**	**-0.4**
FDMO				S	**Sg**	**12 18 35.5**	**-0.1**
FDMO					AML	AML	
	comp=E,27700μm,0.3s						
FDMO					AML	AML	
	comp=E,29400μm,0.3s						
FDMO					AML	AML	
	comp=N,32150μm,0.2s						
LNSS	**Leonessa**	**0.24**	**206**	P	**Pg**	**12 18 32.6**	**0.0**
LNSS				S	**Sb**	**12 18 37.0**	**+0.9**
CESI	**CESI - Serrava**	**0.28**	**311**	⇓P	**Pg**	**12 18 32.7**	**-0.5**
CESI				S	**Sg**	**12 18 36.8**	**-0.2**
CESI					AML	AML	
	comp=E,19100μm,0.4s						
CESI					AML	AML	
	comp=N,36900μm,0.4s						
RM33	**Pellescritta (**	**0.32**	**176**	P	**Pg**	**12 18 34.0**	**+0.1**
RM33				S	**Sb**	**12 18 39.5**	**-0.7**
RM33					AML	AML	
	comp=E,18400μm,0.2s						
RM33					AML	AML	
	comp=N,14600μm,0.2s						
RM33					AML	AML	
	comp=E,18050μm,0.2s						
RM33					AML	AML	
	comp=N,14650μm,0.2s						
RM33					AML	AML	
	comp=E,18350μm,0.2s						
TERO	**Teramo**	**0.37**	**123**	P	**Pg**	**12 18 35.0**	**+0.2**
TERO				S	**Sb**	**12 18 41.3**	**-0.3**
TERO					AML	AML	
	comp=E,13700μm,0.8s						
TERO					AML	AML	
	comp=E,15550μm,0.8s						
TERO					AML	AML	
	comp=N,11200μm,0.5s						
TERO					AML	AML	
	comp=N,11150μm,0.5s						
TERO					AML	AML	
	comp=N,13000μm,0.5s						
SEF1	**Sefro**	**0.37**	**332**	⇓P	**Pg**	**12 18 34.3**	**-0.5**
SEF1					AML	AML	
	comp=E,21100μm,1.6s						
SEF1					AML	AML	
	comp=N,17350μm,1.6s						
SEF1					AML	AML	
	comp=N,17400μm,1.6s						
MNTP	**Montappone**	**0.38**	**33**	⇑P	**Pb**	**12 18 35.6**	**-0.5**
MNTP					AML	AML	
	comp=N,20750μm,0.3s						
MNTP					AML	AML	
	comp=E,18200μm,0.4s						
OFFI	**Offida**	**0.38**	**73**	P	**Pb**	**12 18 36.1**	**-0.1**
OFFI					AML	AML	
	comp=E,16650μm,0.6s						
OFFI					AML	AML	
	comp=N,28150μm,0.7s						
PIO1	**Pioraco**	**0.39**	**337**	⇓P	**Pg**	**12 18 34.7**	**-0.4**
PIO1					AML	AML	
	comp=N,12190μm,1.2s						
PIO1					AML	AML	
	comp=N,12215μm,1.2s						
PIO1					AML	AML	
	comp=E,6670μm,0.6s						
ARRO	**Arrone**	**0.39**	**232**	P	**Pg**	**12 18 34.9**	**-0.3**
ARRO					AML	AML	
	comp=N,3440μm,1.1s						
ARRO					AML	AML	
	comp=N,3435μm,1.1s						
ARRO					AML	AML	
	comp=E,3180μm,0.5s						
SSM1	**San Severino M**	**0.41**	**359**	P	**Pg**	**12 18 35.3**	**-0.2**
FIU1	**Fiuminata**	**0.41**	**333**	P	**Pg**	**12 18 35.3**	**-0.3**
FIU1					AML	AML	
	comp=E,8785μm,0.2s						
FIU1					AML	AML	
	comp=N,7160μm,0.3s						
FIU1					AML	AML	
	comp=E,8785μm,0.2s						
FIU1					AML	AML	
	comp=N,7155μm,0.3s						
GAG1	**Gagliole**	**0.42**	**348**	⇑P	**Pg**	**12 18 35.6**	**-0.3**
GAG1					AML	AML	
	comp=E,19750μm,0.4s						
GAG1					AML	AML	
	comp=N,25500μm,1.1s						
ASSB	**Assisi San Ben**	**0.45**	**300**	⇓P	**Pg**	**12 18 35.5**	**-0.8**
ASSB				S	**Sg**	**12 18 42.3**	**+0.2**
ASSB					AML	AML	
	comp=E,4995μm,0.4s						
ASSB					AML	AML	
	comp=N,5100μm,0.2s						
MTL1	**Matelica**	**0.45**	**343**	⇑P	**Pg**	**12 18 36.6**	**+0.2**
MTL1					AML	AML	
	comp=E,15950μm,0.9s						
MTL1					AML	AML	
	comp=N,18350μm,0.8s						
MTL1					AML	AML	
	comp=E,16000μm,0.9s						
GIGS	**Gran Sasso**	**0.47**	**143**	P	**Pg**	**12 18 36.5**	**-0.2**
GIGS				S	**Sb**	**12 18 44.0**	**-0.6**
GIGS					AML	AML	
	comp=E,2855μm,0.5s						
GIGS					AML	AML	
	comp=N,2230μm,1.3s						
SNTG	**Esanatoglia**	**0.47**	**337**	⇓P	**Pg**	**12 18 36.0**	**-0.7**
SNTG					AML	AML	
	comp=N,490μm,0.3s						
SNTG					AML	AML	
	comp=N,4675μm,0.9s					

TRE1 AML AML
comp=N,18615µm,1.0s
TRE1 AML AML
comp=E,21350µm,0.7s
TRTR Tortoreto Alta 0.54 91 P **Pb** 12 18 39.4 +0.6
TRTR S **Sn** 12 18 49.5 -0.3
ATCC AVT- Casa Cast 0.54 312 P **Pg** 12 18 37.2 -0.8
ATCC AML AML
comp=N,5300µm,0.7s
ATCC AML AML
comp=E,5680µm,0.5s
ATCC AML AML
comp=N,5295µm,0.7s
FIAM Fiamignano 0.56 185 P **Pg** 12 18 38.0 -0.4
FIAM S **Sb** 12 18 46.7 -0.4
FIAM AML AML
comp=E,4250µm,0.4s
FIAM AML AML
comp=N,5115µm,0.8s
FOSV Fossato di Vic 0.56 327 ⇓P **Pg** 12 18 37.8 -0.7
FOSV AML AML
comp=E,4380µm,0.8s
FOSV AML AML
comp=N,3720µm,0.3s
MMUR Monte Murano 0.63 347 P **Pg** 12 18 39.7 -0.1
MMUR AML AML
comp=E,8700µm,0.6s
MMUR AML AML
comp=N,6440µm,1.5s
MMUR AML AML
comp=N,6435µm,1.5s
PP3 Marolino 0.64 29 P **Pg** 12 18 39.9 +0.1
PP3 AML AML
comp=N,13200µm,1.2s
PP3 AML AML
comp=N,12900µm,1.2s
PP3 AML AML
comp=E,7290µm,0.6s
PP3 AML AML
comp=E,7540µm,0.6s
MURB Monte Urbino 0.65 312 ⇑P **Pg** 12 18 39.5 -0.7
MURB S **Sb** 12 18 50.0 0.0
MURB AML AML
comp=E,6125µm,1.5s
MURB AML AML
comp=N,4925µm,0.3s
MURB AML AML
comp=E,6640µm,1.5s
MURB AML AML
comp=N,5245µm,1.5s
MURB AML AML
comp=N,4930µm,0.3s
MURB AML AML
comp=E,6120µm,1.5s
ARVD Arcevia 0.70 345 ⇓P **Pg** 12 18 39.0 -2.0
ARVD S **Sb** 12 18 51.0 -0.2
ARVD AML AML
comp=N,1860µm,0.6s
ARVD AML AML
comp=E,2850µm,0.9s
ARVD AML AML
comp=N,1291µm,0.0s
ATFO Monte Foce - G 0.70 321 ⇓P **Pg** 12 18 40.2 -0.9
ATFO AML AML
comp=N,2340µm,0.6s
ATFO AML AML
comp=E,2155µm,0.9s
ATTE AVT- Monte Tez 0.72 302 ⇓P **Pg** 12 18 40.4 -0.9
ATTE AML AML
comp=E,1057µm,0.6s
ATTE AML AML
comp=N,943µm,0.4s
T0110 Collepietro 0.74 143 P **Pg** 12 18 41.3 -0.4
T0110 S **Sn** 12 18 53.8 -1.2
AOI Ancona 0.79 23 P **Pg** 12 18 42.7 0.0
AOI AML AML
comp=N,3090µm,0.4s
AOI AML AML
comp=E,2415µm,0.7s
AOI AML AML
comp=N,1885µm,0.4s
MGAB Montegabbione 0.80 277 ⇓P **Pg** 12 18 42.1 -0.7
MGAB AML AML
comp=E,2885µm,0.5s
MGAB AML AML
comp=N,2440µm,0.9s
MGAB AML AML
comp=N,2230µm,1.0s
MGAB AML AML
comp=E,2430µm,0.5s
ATVO AVT- Monte Val 0.80 315 ⇓P **Pg** 12 18 41.8 -1.1
ATVO AML AML
comp=N,1380µm,1.3s
ATVO AML AML
comp=E,1500µm,0.7s
PTQR Pietraquaria 0.82 169 P **Pg** 12 18 42.7 -0.6
COR1 Corinaldo 0.82 351 ⇑P **Pb** 12 18 43.5 -0.2
COR1 AML AML
comp=E,7360µm,0.7s
COR1 AML AML
comp=N,5025µm,1.3s
COR1 AML AML
comp=N,4185µm,0.0s
ATPI Pietralunga - 0.85 318 P **Pg** 12 18 43.0 -0.9
ATPI AML AML
comp=N,1300µm,1.0s
ATPI AML AML
comp=E,1500µm,0.7s
PIEI Pieia 0.86 326 P **Pg** 12 18 43.0 -1.0
PIEI S **Sb** 12 18 56.0 +0.2
PIEI AML AML
comp=E,1505µm,0.8s
PIEI AML AML
comp=N,1260µm,1.2s
PIEI AML AML
comp=E,1510µm,0.8s
MPAG Monte Paganucc 0.86 339 ⇓P **Pg** 12 18 43.2 -0.9
MPAG AML AML
comp=E,2040µm,0.9s
MPAG AML AML
comp=N,1605µm,1.0s
MPAG AML AML
comp=E,2197µm,0.9s
CERT Cerreto 0.89 190 P **Pg** 12 18 43.5 -1.0
NARO Abbazia di Nar 0.90 331 ⇑P **Pg** 12 18 43.7 -1.2
NARO S **Sn** 12 18 59.0 0.0
NARO AML AML
comp=N,850µm,1.1s
NARO AML AML
comp=E,1270µm,0.7s
FSSB Fossombrone 0.92 341 P **Pb** 12 18 44.2 -1.1
FSSB S **Sn** 12 18 59.0 -0.4
FSSB AML AML
comp=E,5690µm,0.3s
FSSB AML AML
comp=N,9275µm,0.4s
SACS San Casciano d 0.94 272 ⇓P **Pb** 12 18 45.0 -0.7
SACS AML AML
comp=N,1965µm,0.9s
SACS AML AML
comp=E,1037µm,1.2s
SACS AML AML
comp=N,1931µm,0.9s
INTR Introdacqua 0.97 146 P **Pb** 12 18 45.3 -1.0
INTR S **Sn** 12 19 00.2 -0.5
BADI Badiali 0.97 315 ⇓P **Pb** 12 18 46.0 -0.2
PE3 Peglio 1.01 330 ⇓P **Pb** 12 18 46.5 -0.4
CAFI Castiglion Fio 1.03 300 ⇑P **Pb** 12 18 46.3 -0.9
CAFI AML AML
comp=N,1052µm,0.7s
CAFI AML AML
comp=E,652µm,0.5s
LPEL Lama dei Pelig 1.07 136 P **Pb** 12 18 47.0 -1.0
LPEL S **Sn** 12 19 03.8 +0.6
PARC Parchiule 1.08 320 ⇓P **Pg** 12 18 48.1 -0.1
PARC AML AML
comp=N,1170µm,1.6s
PARC AML AML
comp=E,1280µm,0.9s
PESA Pesaro 1.15 347 ⇑P **Pg** 12 18 49.5 0.0
PESA AML AML
comp=N,4045µm,1.2s
PESA AML AML
comp=E,3225µm,0.4s
SFI Santa Sofia 1.46 318 ⇑P **Pg** 12 18 55.7 +0.3
SFI AML AML
comp=N,552µm,1.1s
SFI AML AML
comp=E,578µm,0.7s
SFI AML AML
comp=N,588µm,1.1s
LMD Lutirano 1.65 320 ⇓P **Pg** 12 19 01.2 +2.1
CASP Castiglione de 1.71 270 ⇓P **Pn** 12 18 56.9 -0.2
CASP AML AML
comp=N,103µm,1.0s
CASP AML AML
comp=E,94µm,1.6s
PTRJ Pietraroja 1.77 145 P Pn 12 18 51.0 -7.0
DUGI Dugi Otok 1.80 49 *e*Pn **Pn** 12 18 58.3 +0.1
VIRC Vir 2.00 42 *e*Pn **Pn** 12 19 01.3 +0.3
MORI Morici 2.11 60 *e*Pn **Pn** 12 19 03.2 +0.6
BRJN Brijuni 2.12 11 *e*Pn **Pn** 12 19 02.3 -0.4
NVLJ Novalja 2.13 35 *e*Pn **Pn** 12 19 02.6 -0.2
POPM Popiglio 2.15 305 ⇑P **Pb** 12 19 05.5 -0.8
POPM AML AML
comp=N,128µm,0.7s
POPM AML AML
comp=E,135µm,1.1s
RABC Rab 2.25 30 *e*Pn **Pn** 12 19 04.7 +0.2
SMRN Sveta Marina 2.32 17 *e*Pn **Pn** 12 19 05.0 -0.4
UDBI Udbina 2.53 47 *e*Pn **Pn** 12 19 09.6 +1.2
CAVE Cavezzo 2.58 323 S **Sn** 12 19 42.0 +1.7
KIJV Kijevo 2.63 62 *e*Pn **Pn** 12 19 11.0 +1.3
PLIT Plitvice 2.71 40 *e*Pn **Pn** 12 19 11.8 +0.9
LSTV Lastovo 2.73 90 *e*Pn **Pn** 12 19 12.0 +0.9
SKDS Skadanscina 2.79 12 *e*Pn **Pn** 12 19 11.8 -0.1
SKDS *i* Sn **Sn** 12 19 45.6 +0.1
SKDS IAML 12 19 49.1
comp=Z,21nm,0.2s
RICI Ricice 2.96 76 *e*Pn **Pn** 12 19 16.0 +1.6
BOJS Bojanci 3.06 28 P **Pn** 12 19 16.7 +1.0
SABO M.te Sabotino 3.17 5 ⇓P **Pn** 12 19 17.3 +0.1
SABO AML AML
comp=E,304µm,0.6s
SABO AML AML
comp=N,367µm,0.6s
AMUR Altamura 3.19 126 P **Pn** 12 19 17.1 -0.4
ROVR Rover Verones 3.21 332 ⇓P **Pn** 12 19 20.2 +2.5
ROVR AML AML
comp=E,54µm,0.7s
ROVR AML AML
comp=N,66µm,0.7s
CGRP Cima Grappa 3.21 342 ⇑P **Pn** 12 19 18.4 +0.5
CGRP AML AML
comp=E,273µm,0.9s
CGRP AML AML
comp=N,255µm,0.7s
LJU Ljubljana 3.36 16 P **Pn** 12 19 19.6 -0.2
LJU AML AML
comp=E,763µm,0.8s
LJU AML AML
comp=N,1046µm,0.8s
DOSS Dosso del Somm 3.38 336 ⇓P **Pn** 12 19 22.4 +2.3
SALO Salr 3.39 327 ⇓P **Pn** 12 19 22.3 +2.1
SALO AML AML
comp=E,167µm,1.2s
SALO AML AML
comp=N,174µm,1.3s
STAL STALIGIAL 3.45 355 ⇓P **Pn** 12 19 21.4 +0.4
STAL AML AML
comp=N,117µm,1.0s
STAL AML AML
comp=E,178µm,0.7s
MAGA Magasa 3.48 329 ⇓P **Pn** 12 19 22.5 +1.0
MAGA AML AML
comp=N,199µm,0.5s
MAGA AML AML
comp=E,322µm,0.6s
RNCA Ronca, Sant'Ol 3.49 300 ⇑P **Pb** 12 19 31.1 +2.0
LUSI Trento, Gardas 3.52 334 P **Pn** 12 19 24.2 +2.1
CIMO Cimolais 3.53 352 ⇓P **Pn** 12 19 22.7 +0.6
CIMO AML AML
comp=E,60µm,0.6s
CIMO AML AML
comp=N,61µm,1.1s
CIMO AML AML
comp=E,67µm,0.7s
CIMO AML AML
comp=N,64µm,1.4s
GAGG Gaggia 3.63 335 ⇓P **Pn** 12 19 25.8 +2.1
GAGG AML AML
comp=E,200µm,0.8s
GAGG AML AML
comp=N,124µm,1.0s
SARZ Sarezzano 3.71 305 ⇓P **Pn** 12 19 27.6 +3.1
ACOM Acomizza, Ital 3.73 3 ⇓P **Pn** 12 19 25.9 +0.8
ACOM AML AML
comp=E,180µm,1.0s
ACOM AML AML
comp=N,211µm,0.8s
ZOU Zoufplan 3.74 358 P **Pn** 12 19 25.4 +0.3
ZOU AML AML
comp=N,148µm,1.1s
ZOU AML AML
comp=E,160µm,0.9s
MYKA Terra Mystica 3.82 5 *e*Pn **Pn** 12 19 25.0 -1.1
comp=E,4.0nm,0.3s,SNR=4.2
KOSI Kohlern 3.86 341 ⇓P **Pn** 12 19 28.0 +1.2
KOSI AML AML
comp=E,142µm,1.3s
KOSI AML AML
comp=N,130µm,1.5s
HCY Herceg Novi 3.93 94 ⇓*i*Pn **Pn** 12 19 29.8 +2.1
HCY *i* Sn **Sn** 12 20 13.3 -0.5
BRY Bratogost 3.94 87 ⇑*i*Pn **Pn** 12 19 30.4 +2.6
BRY *i* Sn **Sn** 12 20 14.1 +0.1
ABTA Abfaltersbach 3.95 353 *e*Pn **Pn** 12 19 29.0 +1.0
comp=N,36nm,0.5s,SNR=26
SOKA Soboth 4.07 18 *i* Pn **Pn** 12 19 30.0 +0.3
comp=N,1.5nm,0.2s
CEME Cevo 4.24 92 ⇑*i*Pn **Pn** 12 19 33.8 +2.0
CEME *i* Sn **Sn** 12 20 20.9 -0.4
NKME Niksic 4.24 89 ⇑*i*Pn **Pn** 12 19 34.7 +2.7
NKME *i* Sn **Sn** 12 20 21.3 -0.2
BUM Brajici-Budva 4.25 95 ⇓*i*Pn **Pn** 12 19 34.3 +2.3
BUM *i* Sn **Sn** 12 20 20.7 -0.9
KBA Koelnbreinsper 4.26 1 *e*Pn **Pn** 12 19 32.8 +0.6
comp=N,3.1nm,0.2s,SNR=12
DRME Dracevica, Mon 4.48 96 ⇑*i*Pn **Pn** 12 19 37.4 +2.2
DRME *i* Sn **Sn** 12 20 25.8 -1.4
TTG Podgorica 4.50 93 ⇓*i*Pn **Pn** 12 19 37.7 +2.3
TTG *i* Sn **Sn** 12 20 26.5 -1.1
FETA Feichten 4.55 338 *e*Pn **Pn** 12 19 38.1 +1.9
comp=N,2.3nm,0.4s,SNR=5.9
ULC Ulcinj 4.57 99 ⇑*i*Pn **Pn** 12 19 38.3 +1.9
ULC *i* Sn **Sn** 12 20 27.6 -1.8
WTTA Wattenberg 4.57 347 *e*Pn **Pn** 12 19 39.0 +2.4
comp=N,3.0nm,0.2s
SQTA Sankt Quirin 4.62 343 *e*Pn **Pn** 12 19 39.6 +2.4
comp=N,1.0nm,0.5s
WATA Walderalm 4.65 346 *e*Pn **Pn** 12 19 40.1 +2.4
comp=N,8.6nm,0.4s,SNR=4.2
KOME Kolasin 4.66 88 ⇓*i*Pn **Pn** 12 19 40.6 +3.0
KOME *i* Sn **Sn** 12 20 31.1 -0.5
MOTA Moosalm 4.76 343 *e*Pn **Pn** 12 19 42.1 +3.0
comp=N,12nm,0.7s
BIOA Bad Ischl, Aus 4.88 4 *e*Pn **Pn** 12 19 40.7 +0.1
comp=N,7.7nm,0.2s,SNR=6.5
IVA Berane 4.93 87 ⇑*i*Pn **Pn** 12 19 44.3 +2.9
IVA *i* Sn **Sn** 12 20 38.0 -0.5
DAVA Damuels 5.04 333 *e*Pn **Pn** 12 19 45.3 +2.3
comp=N,3.3nm,0.3s
MOA Molln 5.08 8 *e*Pn **Pn** 12 19 44.0 +0.5
comp=N,0.6nm,0.1s
RONA Rosalia, Austr 5.35 23 *e*Pn **Pn** 12 19 46.7 -0.4
comp=N,1.9nm,0.3s
CONA Conrad Observa 5.44 19 *e*Pn **Pn** 12 19 48.7 +0.3
comp=N,2.7nm,0.3s,SNR=9.2
CKRC Cesky Krumlov 6.05 7 *e*SN **Sn** 12 21 02.9 -3.0
KHC Kasperske Hory 6.32 2 *e*PN **Pn** 12 20 00.0 -0.4
KHC *e*SN **Sn** 12 21 10.1 -2.3

IDC **24** *13:06:47.3±0.7, 18°.39S×167°.75E, h0km, mb4.3/16, mbtmp4.4/19, ML4.8/3, MS4.2/1, Error ellipse: s-maj=19.0km s-min=16.8km az=140.0*
NOU **24** *13:06:49.5, 18°.31S×167°.63E, h16km, MLv4.9/15, Vanuatu Islands*
NEIC **24** *13:06:49.6±2.1, 18°.42S±0°.05×167°.53E±0°.08, h9km±4km, mb4.9/26, Error ellipse: s-maj=10.5km s-min=7.6km az=90.0*
BJI **24** *13:06:50.4±0.0, 18°.61S×166°.98E, h10km, mb4.7/14, mB5.0/4, Ms5.2/2, Ms7 5.1/2*
ISC 24 13:06:51.3±0.4, 18°.36S±0°.05×167°.63E±0°.05, h25km, n77, σ1§49/75, mb4.7/28, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.83**	**40**	P	**Pb**	**13 07 05.2**	**-1.8**
RTV	**Rentapao**	**0.95**	**53**	P	**Pn**	**13 07 07.3**	**-1.7**
LIFNC	**LIFOU**	**2.43**	**189**		**Pn**	**13 07 27.1**	**-2.3**
MARNC	**Mare, Loyalty**	**3.13**	**173**	Pn	**Pn**	**13 07 36.6**	**-2.4**
MARNC	**Mare, Loyalty**	**3.13**	**173**	P	**Pn**	**13 07 38.0**	**-1.0**
YATNC	**Mamie plateau,**	**3.74**	**191**	P	**Pn**	**13 07 46.3**	**-1.2**
KOUNC	**Koumac, New Ca**	**3.83**	**235**	Pn	**Pn**	**13 07 47.2**	**-1.4**
KOUNC	**Koumac, New Ca**	**3.83**	**235**	P	**Pn**	**13 07 48.1**	**-0.6**
DZM	**Mont Dzumac**	**3.85**	**197**	Pn	**Pn**	**13 07 48.2**	**-0.9**
	8.4nm,0.3s,baz=320,slow=6.6,SNR=96						
DZM				Sn	**Sn**	**13 08 28.9**	**-4.8**
	13nm,0.3s,baz=309,slow=20,SNR=7.3						
	18nm,0.3s						
DZM	**Mont Dzumac**	**3.85**	**197**		**Pn**	**13 07 47.5**	**-1.6**
NOUC	**Port Laguerre**	**3.92**	**198**	P	**Pn**	**13 07 49.9**	**-0.1**
ONTNC	**Ouen Toro**	**4.08**	**195**	Pn	**Pn**	**13 07 51.3**	**-0.8**
ONTNC	**Ouen Toro**	**4.08**	**195**	P	**Pn**	**13 07 52.7**	**+0.6**
OUENC	**Ouen Island, N**	**4.10**	**190**		**Pn**	**13 07 51.3**	**-1.1**
OUENC	**Ouen Island, N**	**4.10**	**190**	P	**Pn**	**13 07 52.3**	**-0.1**
PINNC	**Pines Island,**	**4.23**	**182**		**Pn**	**13 07 54.3**	**+0.1**
PINNC	**Pines Island,**	**4.23**	**182**	P	**Pn**	**13 07 54.5**	**+0.3**
MSVF	**Nonsavu**	**9.94**	**88**	Pn	**Pn**	**13 09 10.8**	**-1.8**
	0.8nm,0.3s,baz=238,slow=20,SNR=3.1						
	12nm,0.8s						
MSVF	**Nonsavu**	**9.94**	**88**	Pn	Pn	13 09 17.7	+5.1
HNR	**Honiara**	**11.59**	**319**	Pn	**Pn**	**13 09 35.0**	**-0.2**
	4.9nm,0.3s,baz=107,slow=3.7,SNR=4.7						
HNR				Sn	**Sn**	**13 11 38.1**	**-5.8**
	4.5nm,0.3s,baz=217,slow=20,SNR=2.0						
	106nm,1.0s						
HNR	**Honiara**	**11.59**	**319**	Pn	**Pn**	**13 09 34.5**	**-0.7**
EIDS	**Eidsvold**	**16.86**	**243**	P	**Pn**	**13 10 43.6**	**-2.1**
RAO	**Raoul Island**	**17.08**	**132**	LR	LR	13 15 56.3	
	comp=Z,39nm,20.1s,baz=162,slow=32						
RAO	**Raoul Island**	**17.08**	**132**	P	**P**	**13 10 49.5**	**-0.6**
CTA	**Charters Tower**	**20.25**	**262**	P	Pn	13 11 27.3	+0.2
	29nm,0.8s,baz=84,slow=10,SNR=40						
	29nm,0.8s						
CTAO	**Charters Tower**	**20.25**	**262**		Pn	13 11 25.9	-1.1
CTAO				IAmb	IAmb	13 11 31.8	
	comp=Z,39nm,0.9s						
RABL	**Rabaul**	**20.66**	**311**	P	**P**	**13 11 28.6**	**-0.9**
RABL				IAmb	IAmb	13 11 44.3	
	comp=Z,54nm,1.1s						
KRVT	**Keravat (AS076**	**20.68**	**311**	P	Pn	13 11 31.6	-0.5
	comp=Z,40nm,0.5s,baz=137,slow=8.6,SNR=3.9						
	comp=Z,40nm,0.5s						
URZ	**Urewera**	**21.49**	**159**	P	**P**	**13 11 38.1**	**0.0**
	comp=Z,5.8nm,0.8s,baz=5.8,slow=10,SNR=2.0						
	comp=Z,5.8nm,0.8s						
URZ	**Urewera**	**21.49**	**159**	P	**P**	**13 11 39.7**	**+1.6**
URZ				IAmb	IAmb	13 11 52.1	
	comp=Z,114nm,1.6s						
NNZ	**Nelson**	**23.31**	**169**	P	**P**	**13 11 58.4**	**+1.0**
COEN	**Coen**	**23.88**	**277**	P	**P**	**13 12 03.9**	**+0.8**
STKA	**Stephens Creek**	**27.05**	**235**	P	**P**	**13 12 33.0**	**+1.2**
	comp=Z,13nm,0.8s,baz=64,slow=7.1,SNR=21						
	comp=Z,13nm,0.8s						
STKA	**Stephens Creek**	**27.05**	**235**	P	**P**	**13 12 32.2**	**+0.3**
WRAB	**Tennant Creek**	**31.45**	**262**	P	**P**	**13 13 09.6**	**-1.4**
WRAB				IAmb	IAmb	13 13 33.0	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**31.46**	**262**	P	**P**	**13 13 10.3**	**-0.8**
	comp=Z,3.4nm,1.0s,baz=91,slow=8.6,SNR=12						
	comp=Z,3.4nm,1.0s						
WRA	**Warramunga Arr**	**31.46**	**262**	P	**P**	**13 13 09.7**	**-1.4**
BBOO	**Buckleboo**	**31.76**	**237**	P	**P**	**13 13 12.3**	**-1.2**
BBOO				IAmb	IAmb	13 13 19.0	
	comp=Z,27nm,1.2s						
AS31	**Alice Springs**	**31.87**	**255**	P	**P**	**13 13 14.4**	**-0.3**
ASAR	**Alice Springs**	**31.87**	**255**	P	**P**	**13 13 14.6**	**-0.1**
	comp=Z,9.3nm,0.8s,baz=82,slow=8.6,SNR=45						
	comp=Z,9.3nm,0.8s						
ASAR	**Alice Springs**	**31.87**	**255**	P	**P**	**13 13 13.9**	**-0.8**
KNRA	**Kununurra**	**37.21**	**268**	P	**P**	**13 14 01.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**39.81**	**264**	P	**P**	**13 14 23.1**	**+0.3**
	comp=Z,20nm,0.8s,baz=128,slow=6.7,SNR=29						
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.81**	**264**	P	**P**	**13 14 23.8**	**+0.9**
FITZ				IAmb	IAmb	13 14 36.6	
	comp=Z,35nm,0.9s						
VNDA	**Vanda**	**59.26**	**181**	P	**P**	**13 16 49.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=63,slow=2.3,SNR=2.0						
	comp=Z,0.4nm,0.8s						
SBA	**Scott Base**	**59.53**	**180**	P	**P**	**13 16 54.0**	**+2.0**
SBA				IAmb	IAmb	13 17 16.3	
	comp=Z,7.4nm,1.1s						
NJ2	**Nanjing**	**68.52**	**317**	*e*P	**P**	**13 17 54.0**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**70.27**	**334**	P	**P**	**13 18 02.3**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=191,slow=6.9,SNR=1.5						
	comp=Z,1.4nm,0.7s						
QSPA	**South Pole Qui**	**71.69**	**180**	P	**P**	**13 18 11.4**	**+0.4**
QSPA				IAmb	IAmb	13 18 20.6	
	comp=Z,7.0nm,1.0s						
PETK	**Petropavlovsk-**	**71.69**	**354**	P	**P**	**13 18 11.5**	**+0.7**
	comp=Z,6.1nm,1.0s,baz=161,slow=13,SNR=2.9						
	comp=Z,6.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**76.75**	**295**	P	**P**	**13 18 42.7**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=140,slow=4.0,SNR=6.2						
	comp=Z,0.8nm,0.4s						
PZH	**PanZhiHua**	**77.95**	**303**	P	**P**	**13 18 49.8**	**+2.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
MAW	**Mawson**	**78.67**	**202**	P	**P**	**13 18 49.9**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=138,slow=6.0,SNR=3.2						
	comp=Z,1.9nm,0.8s						
LZH	**Lanzhou**	**81.01**	**313**	*e*P	**P**	**13 19 04.8**	**+0.5**
LZH				pP	pP	13 19 08.1	-2.2
LZH				pmax	pmax		
	comp=Z,25nm,1.5s						
BELA	**Belgrano 2**	**83.09**	**175**	P	**P**	**13 19 15.1**	**+0.7**
GTA	**Gaotai**	**85.42**	**314**	*e*P	**P**	**13 19 29.1**	**+2.1**
GTA				pP	pP	13 19 32.5	-0.4
GTA				sP	sP	13 19 35.8	+0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
L19K	**White Mountain**	**85.59**	**17**	P	**P**	**13 19 29.4**	**+2.3**
L19K				IAmb	IAmb	13 19 30.0	
	comp=Z,13nm,1.2s						
SONM	**Songino Array**	**85.61**	**324**	P	**P**	**13 19 29.1**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=164,slow=7.2,SNR=1.9						
	comp=Z,0.5nm,0.4s						
MDPB	**Devils Postpil**	**88.49**	**50**	P	**P**	**13 19 42.4**	**+0.3**
MPK	**Martis Peak**	**88.51**	**48**	P	**P**	**13 19 42.9**	**+0.8**
MPK				IAmb	IAmb	13 20 06.9	
	comp=Z,12nm,1.4s						
BEKR	**Beckworth**	**88.52**	**47**	P	**P**	**13 19 42.2**	**+0.1**
OMMB	**Old Mammoth Mi**	**88.54**	**50**	P	**P**	**13 19 42.0**	**-0.4**
OMMB				IAmb	IAmb	13 20 03.5	
	comp=Z,9.6nm,1.6s						

IDC 24 12:22:05.6±2.3, 55°.21S×31°.15W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=93.3km s-min=50.5km az=8.0, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**48.08**	**309**	P	P	12 30 47.2	-0.3
	0.7nm,0.5s,baz=175,slow=7.0,SNR=2.8						
H10N1	**ASCENSION HYDR**	**49.07**	**22**	T	T	13 23 55.4	
	baz=192,slow=75,SNR=13						
H10N3	**ASCENSION HYDR**	**49.07**	**22**	T	T	13 23 52.7	
	baz=192,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**49.09**	**22**	T	T	13 23 56.6	
	baz=192,slow=75,SNR=25						
TORD	**Torodi Ar. Bea**	**73.51**	**33**	P	P	12 33 40.0	+0.1
	0.6nm,0.7s,baz=199,slow=6.5,SNR=4.9						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**147.89**	**313**	PKPbc	PKPbc	12 41 50.6	-0.5
	0.7nm,0.9s,baz=106,slow=1.6,SNR=5.6						
SONM	**Songino Array**	**152.93**	**88**	PKPbc	PKPbc	12 42 03.7	-0.2
	0.4nm,0.6s,baz=222,slow=3.9,SNR=2.0						

TROLL	**Troll, Antarti**	**89.29**	**185**	P	**P**	**13 19 46.7**	**+1.6**
NVAR	**Mina Array Bea**	**89.38**	**49**	P	**P**	**13 19 45.9**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=227,slow=8.3,SNR=11						
	comp=Z,1.5nm,0.8s						
NV11	**Mina Array Sit**	**89.48**	**49**	P	**P**	**13 19 47.0**	**+0.4**
NV11				IAmb	IAmb	13 19 56.3	
	comp=Z,7.5nm,1.4s						
ILAR	**Eielson Array**	**89.86**	**18**	P	**P**	**13 19 46.3**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=241,slow=5.7,SNR=12						
	comp=Z,1.3nm,0.9s						
SNAA	**Sanae**	**89.96**	**183**	P	**P**	**13 19 49.4**	**+1.2**
VNA3	**Neumayer Olymp**	**90.61**	**181**	P	**P**	**13 19 52.3**	**+1.1**
VNA2	**Neumayer--Watz**	**90.88**	**182**	P	**P**	**13 19 53.9**	**+1.5**
	baz=172,slow=3.5						
VNA2				S	**S**	**13 30 45.8**	**-1.8**
VNA1	**Neumayer--Stat**	**91.18**	**181**	P	**P**	**13 19 55.4**	**+1.7**
PRN	**Pahroc Range**	**91.34**	**51**	P	**P**	**13 19 55.4**	**+0.2**
U15A	**North Rim**	**93.05**	**53**	P	**P**	**13 20 04.3**	**+0.9**
U15A				IAmb	IAmb	13 20 05.0	
	comp=Z,2.7nm,0.9s						
MFID	**Camas Ranch**	**93.06**	**45**	P	**P**	**13 20 02.8**	**-0.3**
MFID				IAmb	IAmb	13 20 10.6	
	comp=Z,14nm,2.0s						
WMQ	**Urumqi**	**95.50**	**314**	*e*P	**P**	**13 20 16.3**	**+2.1**
TXAR	**Lajitas Array**	**97.69**	**62**	P	**P**	**13 20 24.0**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=263,slow=6.3,SNR=1.4						
	comp=Z,0.4nm,0.9s						
KECS	**Kecovo**	**139.87**	**326**	*e*PDIFF	**Pdif**	**13 23 32.7**	**+1.2**
GERES	**GERESS Array B**	**143.00**	**331**	PKP	**PKPdf**	**13 26 22.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=326,slow=8.3,SNR=2.0						

*STR **24** 13:27:38.8±1.2, 42.1°N×11.°×±.°, h11km, MLv2.6/13, Error ellipse: s-maj=0.0km s-min=0.0km az=0.2, preliminary*
*MDD **24** 13:27:38.7±0.4, 41.63N×4.30E, h37km, mb_Lg2.4/11, Error ellipse: s-maj=4.4km s-min=2.8km az=160.0*
*LDG **24** 13:27:39.0±0.1, 41.59N×4.27E, h30km, Ml2.8/20, Error ellipse: s-maj=3.2km s-min=1.7km az=156.0*

ISC 24 13:27:32.9±1.4, 41.59N±0.03×4.30E±0.03, h12km±10km, n59, σ2s09/100, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EJON	**La Jonquera**	**1.36**	**310**	Pg	**Pg**	**13 27 59.6**	**+0.5**
EJON				Sg	**Sb**	**13 28 15.3**	**-0.3**
EJON				*i* Vmb_Lg		13 28 17.3	
SJAF	**Saint Jean de**	**1.39**	**311**	Pn	**Pg**	**13 27 59.7**	**+0.2**
SJAF				Sn	**Sg**	**13 28 16.4**	**-1.2**
FILF	**Fillols**	**1.62**	**308**	Pn	**Pg**	**13 28 04.8**	**+0.8**
FILF				Sn	**Sg**	**13 28 25.0**	**-0.1**
FNEB	**Nbias**	**2.10**	**310**	Pn	**Pb**	**13 28 10.2**	**-0.6**
FNEB				Sn	**Sn**	**13 28 34.9**	**+1.2**
EMIR	**Miracle**	**2.10**	**280**	Pn	**Pb**	**13 28 09.7**	**-1.2**
EMIR				Sn	**Sn**	**13 28 34.4**	**+0.4**
EMIR				*i* Vmb_Lg		13 28 35.8	
ETOS	**Mallorca**	**2.14**	**212**	Pn	**Pb**	**13 28 11.0**	**-0.6**
ETOS				Sn	**Sn**	**13 28 33.1**	**-1.8**
ETOS				*i* Vmb_Lg		13 28 35.4	
ARTF	**Artigues**	**2.29**	**29**	Pn	**Pb**	**13 28 14.0**	**-0.1**
ARTF				Sn	**Sn**	**13 28 40.2**	**+1.7**
FLAF	**Flassans-sur-I**	**2.31**	**38**	Pn	**Pb**	**13 28 14.1**	**-0.2**
FLAF				Sn	**Sn**	**13 28 39.5**	**+0.6**
MTLF	**Montolieu**	**2.33**	**319**	*e*Pn	**Pb**	**13 28 13.0**	**-1.9**
MTLF				*e*Sn	**Sn**	**13 28 39.6**	**-0.1**
	12nm,0.3s						
MTLF	**Montolieu**	**2.33**	**319**	Sn	**Sn**	**13 28 39.3**	**-0.4**
MTLF	**Montolieu**	**2.33**	**319**	Pn	**Pb**	**13 28 13.3**	**-1.6**
LMR	**La Mourre**	**2.39**	**42**	*e*Pn	**Pb**	**13 28 15.2**	**-0.7**
LMR				*e*Sn	**Sn**	**13 28 40.8**	**-0.3**
EPOB	**Poblet**	**2.43**	**266**	Pn	**Pb**	**13 28 15.6**	**-1.0**
EPOB				Sn	**Sn**	**13 28 41.1**	**-1.1**
EPOB				*i* Vmb_Lg		13 28 45.0	
LASF	**Ste Croix**	**2.51**	**353**	*e*Pn	**Pb**	**13 28 16.3**	**-1.6**
LASF				*e*Sn	**Sn**	**13 28 43.2**	**-0.8**
	10.0nm,0.2s						
RUSF	**Rustrel**	**2.51**	**20**	Pn	**Pb**	**13 28 18.0**	**+0.1**
SMRF	**Simiane la Rot**	**2.57**	**21**	*e*Pn	**Pb**	**13 28 18.6**	**-0.3**
SMRF				*e*Sn	**Sn**	**13 28 46.6**	**+1.1**
	3.9nm,0.3s						
TRIGF	**Trigance**	**2.66**	**35**	Pn	**Pb**	**13 28 19.4**	**-1.1**
TRIGF				Sn	**Sn**	**13 28 48.4**	**+0.6**
BLAF	**les Blancs**	**2.69**	**28**	Pn	**Pb**	**13 28 20.1**	**-0.8**
CALF	**Calern**	**2.90**	**41**	P	**Pb**	**13 28 22.4**	**-2.3**
CALF				S	**Sn**	**13 28 53.5**	**-0.3**
ERTA	**Horta de San J**	**3.06**	**259**	Pn	**Pn**	**13 28 23.6**	**+2.6**
ERTA				Sn	**Sn**	**13 28 56.9**	**-0.5**
ERTA				*i* Vmb_Lg		13 28 59.8	
ESCA	**l'Escarene**	**3.19**	**44**	Pn	**Pb**	**13 28 26.3**	**-3.1**
ESCA				Sn	**Sn**	**13 29 00.4**	**-0.3**
ECOL	**Islas Columbre**	**3.22**	**240**	Pn	**Pn**	**13 28 25.2**	**+2.0**
ECOL				Sn	**Sn**	**13 29 01.5**	**0.0**
ECHI	**Chisagues Biel**	**3.24**	**291**	Pn	**Pb**	**13 28 27.8**	**-2.5**
ECHI				Sn	**Sn**	**13 29 01.4**	**-0.7**
ECHI				*i* Vmb_Lg		13 29 07.0	
ECHI	**Chisagues Biel**	**3.24**	**291**	P	**Pb**	**13 28 27.9**	**-2.5**
SBF	**Sospel**	**3.24**	**44**	*e*Pn	**Pn**	**13 28 26.6**	**+3.0**
SBF				*e*Sn	**Sn**	**13 29 01.8**	**-0.4**
	11nm,0.3s						
EPF	**Esparros**	**3.27**	**298**	*e*Pn	**Pn**	**13 28 26.8**	**+2.8**
EPF	**Esparros**	**3.27**	**298**	*e*P	**Pb**	**13 28 29.6**	**-1.3**
EPF				*e*Sn	**Sn**	**13 29 02.1**	**-0.8**
	3.7nm,0.3s						
SPIF	**crte de Spivo**	**3.28**	**40**	Pn	**Pn**	**13 28 27.7**	**+3.6**
VIVF	**Saint-Julien-l**	**3.28**	**5**	*e*Pn	**Pn**	**13 28 27.3**	**+3.2**
VIVF				*e*Sn	**Sn**	**13 29 01.1**	**-1.9**
	6.3nm,0.2s						
TURF	**col de Turini**	**3.30**	**43**	Pn	**Pn**	**13 28 27.9**	**+3.4**
TURF				Sn	**Sn**	**13 29 03.2**	**-0.5**
EIBI	**Ibiza**	**3.41**	**222**	Pn	**Pb**	**13 28 28.7**	**+2.8**
EIBI				Sn	**Sn**	**13 29 03.7**	**-2.5**
EIBI				*i* Vmb_Lg		13 29 08.3	
ORIF	**Oris-en-Rattie**	**3.53**	**19**	*e*Pn	**Pn**	**13 28 30.5**	**+3.0**
ORIF	**Oris-en-Rattie**	**3.53**	**19**	*e*P	**Pb**	**13 28 33.5**	**-1.7**
ORIF				*e*Sn	**Sn**	**13 29 08.8**	**-0.4**
	2.9nm,0.3s						
ESAC	**San Caprasio**	**3.58**	**274**	Pn	**Pn**	**13 28 29.8**	**+1.6**
ESAC				Sn	**Sn**	**13 29 09.7**	**-0.7**
MBDF	**Montbardon**	**3.62**	**29**	*e*P	**Pb**	**13 28 34.5**	**-2.4**
MBDF				*e*Sn	**Sn**	**13 29 10.4**	**-1.3**
	3.8nm,0.5s						
PGF	**Pioggiola**	**3.63**	**73**	*e*Pn	**Pn**	**13 28 30.9**	**+2.0**
PGF				*e*Sn	**Sn**	**13 29 09.4**	**-2.3**
	14nm,0.3s						
PGF	**Pioggiola**	**3.63**	**73**	Sn	**Sn**	**13 29 08.8**	**-2.9**
PGF	**Pioggiola**	**3.63**	**73**	Pn	**Pn**	**13 28 30.8**	**+1.8**
SSB	**Saint Sauveur**	**3.70**	**3**	S	**Sn**	**13 29 10.6**	**-2.7**
CAF	**Calviac**	**3.72**	**335**	*e*Pn	**Pn**	**13 28 33.0**	**+2.9**
CAF				*e*Sn	**Sn**	**13 29 13.0**	**-0.8**
	4.2nm,0.4s						
SMPL	**Sampolo**	**3.76**	**81**	Pn	**Pn**	**13 28 32.6**	**+1.9**
SMPL				Sn	**Sn**	**13 29 11.7**	**-3.0**
EMOS	**Mosqueruela**	**3.81**	**253**	Pn	**Pn**	**13 28 34.7**	**+3.1**
EMOS				Sn	**Sn**	**13 29 16.2**	**-0.2**
EMOS				*i* Vmb_Lg		13 29 19.9	
ETSF	**Etsaut**	**3.84**	**292**	*e*P	**Pb**	**13 28 36.5**	**-4.1**
GDM	**Grand'Maison**	**3.85**	**19**	P	**Pb**	**13 28 37.0**	**-3.8**
GDM				S	**Sn**	**13 29 17.6**	**+0.3**
RJF	**Les Rejaudoux**	**4.23**	**332**	*e*Pn	**Pn**	**13 28 40.0**	**+2.8**
RJF				*e*Sn	**Sn**	**13 29 25.5**	**-1.0**
	2.0nm,0.2s						
LFF	**La Frestale**	**4.24**	**323**	*e*Pn	**Pn**	**13 28 39.7**	**+2.4**
LFF				*e*Sn	**Sn**	**13 29 24.9**	**-1.8**
	2.6nm,0.2s						
LPG	**La Plagne**	**4.30**	**24**	*e*P	**Pb**	**13 28 44.3**	**-4.2**
LPL	**La Plagne**	**4.31**	**23**	*e*Pn	**Pn**	**13 28 41.3**	**+2.9**
LPL	**La Plagne**	**4.31**	**23**	*e*P	**Pb**	**13 28 44.4**	**-4.2**
LPL				*e*Sn	**Sn**	**13 29 28.0**	**-0.7**
	2.2nm,0.3s						
SJPF	**Ste Jean**	**4.37**	**292**	*e*Pn	**Pn**	**13 28 41.6**	**+2.5**
SJPF				*e*Sn	**Sn**	**13 29 28.1**	**-1.8**
	1.7nm,0.3s						
ETOR	**Torete**	**4.86**	**263**	Pn	**Pn**	**13 28 49.9**	**+4.1**
ETOR				Sn	**Sn**	**13 29 41.2**	**-0.7**
TCF	**Toulx Ste Croi**	**4.94**	**343**	*e*Pn	**Pn**	**13 28 49.7**	**+2.8**
TCF				*e*Sn	**Sn**	**13 29 42.6**	**-1.3**
	2.2nm,0.3s						
SMF	**Signal de Mont**	**5.07**	**356**	*e*Pn	**Pn**	**13 28 51.4**	**+2.7**
SMF	**Signal de Mont**	**5.07**	**356**	*e*P	Pb	13 28 55.3	-6.2
SMF				*e*Sn	**Sn**	**13 29 44.6**	**-2.5**
	4.8nm,0.5s						
BGF	**Bois d'Agland**	**5.08**	**349**	*e*Pn	**Pn**	**13 28 52.0**	**+3.2**
BGF				*e*Sn	**Sn**	**13 29 44.5**	**-2.9**
	4.8nm,0.3s						
CABF	**La Chapelle**	**5.19**	**14**	*e*Pn	**Pn**	**13 28 53.5**	**+3.2**
AVF	**Avril sur Loir**	**5.25**	**353**	*e*Pn	**Pn**	**13 28 53.7**	**+2.6**
AVF				*e*Sn	**Sn**	**13 29 49.6**	**-1.9**
	1.2nm,0.3s						
GUD	**Guadarrama**	**6.45**	**264**	Pn	**Pn**	**13 29 11.2**	**+3.4**
GUD				Sn	**Sn**	**13 30 19.5**	**-1.9**
LBWR	**Ladybower, Pea**	**12.50**	**343**	Pn	**Pn**	**13 30 30.7**	**+0.3**

*IDC **24** 13:37:38.0±2.2, 19.°66S×178.°18W, h551km±22km, mb3.0/4, mbtmp3.9/6, Error ellipse: s-maj=40.2km s-min=26.3km az=160.0*

ISC 24 13:37:37.8±1.2, 19.°66S±0.°2×178.°2W±0.°2, h550km, n7, σ1s19/8, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.03**	**297**	P	**P**	**13 39 00.0**	**0.0**
	7.8nm,0.8s,baz=102,slow=19,SNR=10						
URZ	**Urewera**	**18.99**	**191**	P	**P**	**13 41 24.5**	**-0.1**
	3.4nm,0.5s,baz=71,slow=17,SNR=0.4						
CTA	**Charters Tower**	**33.40**	**263**	P	**P**	**13 43 32.3**	**+0.9**
	1.4nm,0.3s,baz=88,slow=12,SNR=12						
	1.4nm,0.3s						
ASAR	**Alice Springs**	**44.54**	**256**	P	**P**	**13 45 01.1**	**-0.2**
	1.6nm,0.5s,baz=95,slow=7.7,SNR=31						
ASAR				PcP	**PcP**	**13 46 32.5**	**-0.1**
	0.3nm,0.9s,baz=102,slow=3.2,SNR=4.6						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**44.54**	**261**	P	**P**	**13 45 01.1**	**-0.2**
	0.4nm,0.3s,baz=99,slow=8.5,SNR=27						
	0.4nm,0.3s						
TXAR	**Lajitas Array**	**86.75**	**57**	P	**P**	**13 49 25.2**	**+1.0**
	0.2nm,0.7s,baz=230,slow=5.6,SNR=2.7						
	0.2nm,0.7s						
AKASG	**Malin Array Be**	**142.18**	**331**	PKP	**PKPdf**	**13 56 05.3**	**-2.3**
	2.5nm,0.7s,baz=40,slow=3.6,SNR=6.6						

*IDC **24** 13:39:01.4±2.0, 8.°97S×110.°33E, h0km, mb3.3/3, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=107.7km s-min=22.1km az=43.0*
*DJA **24** 13:39:07.8±0.9, 9.°5S×6.°×11.°0E±.°, h10km, M3.8/7, MLv3.8/7*

ISC 24 13:39:06.4±1.2, 9.°14S±0.°10×110.°27E±0.°07, h51km, n11, σ2s49/14, mb2.8/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.25**	**12**	P	**Pn**	**13 39 27.6**	**0.0**
UGM				S	**Sn**	**13 39 40.9**	**-2.4**
PCJI	**Pacitan**	**1.30**	**44**	P	**Pn**	**13 39 25.5**	**-2.8**
YOGI	**Yogyakarta**	**1.32**	**1**	P	**Pn**	**13 39 29.5**	**+1.0**
YOGI				S	**Sn**	**13 39 45.2**	**+0.2**
PWJI	**Pagerwojo**	**1.89**	**54**	P	**Pn**	**13 39 34.0**	**-2.2**
SMRI	**Semarang**	**2.09**	**5**	P	**Pn**	**13 39 41.8**	**+2.8**
NGJI	**Ngawi**	**2.12**	**34**	P	**Pn**	**13 39 42.0**	**+2.5**
LEM	**Lembang**	**3.49**	**311**	Pn	**Pn**	**13 39 58.3**	**-0.1**
	5.9nm,0.3s,baz=120,slow=20,SNR=1.9						
LEM				Sn	**Sn**	**13 40 33.5**	**-5.0**
	8.1nm,0.3s,baz=48,slow=15,SNR=4.1						
	9.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**17.38**	**122**	P	**P**	**13 43 06.1**	**-0.1**
	0.2nm,0.7s,baz=309,slow=12,SNR=0.8						
FITZ				S	Sn	13 46 02.5	-16
	0.8nm,0.9s,baz=350,slow=19,SNR=3.1						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**25.62**	**117**	P	**P**	**13 44 33.2**	**+1.8**
	0.3nm,0.9s,baz=287,slow=11,SNR=2.2						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**26.82**	**125**	P	**P**	**13 44 44.5**	**+2.4**
	0.2nm,0.7s,baz=302,slow=8.7,SNR=2.1						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**61.02**	**338**	P	**P**	**13 49 15.1**	**+0.4**
	0.3nm,0.4s,baz=149,slow=7.3,SNR=8.8						
	0.3nm,0.4s						

*BJI **24** 13:48:41.4±0.0, 3.°04S×100.°33E, h11km, mb5.8/92, mB5.8/68, Ms5.9/97, Ms7 5.8/92*
*KLM **24** 13:48:41, 3.°20S×99.°75E, h14km, mb5.9*
*IDC **24** 13:48:42.4±0.3, 2.°87S×100.°34E, h0km, mb5.5/41, mbtmp5.5/44, ML4.9/3, MS5.3/58, Error ellipse: s-maj=12.6km s-min=8.1km az=41.0*
*MOS **24** 13:48:44.1±1.1, 2.°80S×100.°33E, h21km, mb6.0/70, MS5.3/36, Error ellipse: s-maj=7.0km s-min=3.9km az=110.6*
*NEIC **24** 13:48:45.6±1.7, 2.°91S±0.°04×100.°18E±0.°04, h19km±1km, mb5.8/114, Ms_20 5.6/372, Mww5.6, Error ellipse: s-maj=8.9km s-min=5.5km az=315.0*
*DJA **24** 13:48:46.5±0.3, 3.°S±2.°×10.°0E±.°, h25km±2km, M5.7/96, mB6.0/85, mb5.7/96, MLv6.0/27, Mw(mB)5.6/85, MwMwp5.5/7, Mwp5.6/7*
*GCMT **24** 13:48:48.6±0.3, 3.°44S±0.°02×99.°80E±0.°03, h45km±1km, MW5.7/80, Moment Tensor Solution. s51,c58; s80,c105; Duration: 1s8 Moment tensor: Scale 10^17^Nm; Mrr4.15±.28; Mθθ-2.65±.17; Mϕϕ-1.50±.20; Mrθ2.01±.16; Mθϕ2.54±.10; Mϕr-1.00±.19; Best double couple: M~o~4.95600×10^17^ NP1:ϕs123.00000°, δ59.00000°, λ83.00000°. NP2:ϕs316.00000°, δ32.00000°, λ101.00000°. Principal axes: T 4.7160, Plg75.0000°, Azm13.0000°; N 0.4810, Plg6.0000°, Azm126.0000°; P -5.1970, Plg13.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **24** 13:48:51, 2.°96S×99.°95E, h18km, Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10^17^Nm; Mrr1.19; Mθθ-0.48; Mϕϕ-0.71; Mrθ1.83; Mθθ0.82; Mθr-1.63; Fault plane solution: M~o~2.78000×10^17^ NP1: ϕs328.00000°, δ14.00000°, λ106.00000°. NP2: ϕs132.00000°, δ76.00000°, λ86.00000°. Principal axes: T 2.6677, Plg59.0000°, Azm37.0000°; N 0.2160, Plg4.0000°, Azm133.0000°; P -2.8837, Plg31.0000°, Azm226.0000°;*

ISC 24 13:48:46.9±0.3, 2.°84S±0.°03×100.°22E±0.°03, h28km±1km, h28km:pP-P, n1508, σ1s76/1491, mb5.7/247, MS5.6/299, 129C-24D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.22**	**290**	P	**Pb**	**13 48 53.0**	**-0.1**
PPSI				S	**Sb**	**13 48 58.0**	**+0.6**
KRJI	**Kerinci**	**1.45**	**59**	P	**Pb**	**13 49 13.6**	**+0.4**
SISI	**Saibi**	**1.88**	**323**	P	**Pn**	**13 49 16.9**	**-0.3**
SISI				S	**Sn**	**13 49 40.3**	**+0.3**
MASI	**Maura Aman, Be**	**2.04**	**98**	P	**Pn**	**13 49 20.1**	**+0.7**
MASI				S	**Sb**	**13 49 54.8**	**+6.5**
KSI	**Kapahiang**	**2.50**	**109**	P	**Pn**	**13 49 26.4**	**+0.6**
MNAI	**Manna**	**3.12**	**119**	Pn	**Pn**	**13 49 34.0**	**-0.3**
MNAI	**Manna**	**3.12**	**119**	P	**Pn**	**13 49 34.8**	**+0.5**
MNAI				S	**Sn**	**13 50 10.5**	**-0.2**
BKNI	**Bangkinang**	**3.25**	**15**	Pn	**Pn**	**13 49 37.1**	**+1.0**
BKNI	**Bangkinang**	**3.25**	**15**	P	**Pn**	**13 49 38.1**	**+2.0**
JMBI	**JAMBI**	**3.62**	**71**	P	**Pn**	**13 49 43.2**	**+2.0**
LWLI	**Liwa**	**4.40**	**120**	P	**Pn**	**13 49 52.9**	**+0.9**
PMBI	**Palembang**	**4.55**	**91**		**Pn**	**13 49 53.3**	**-0.6**
PMBI	**Palembang**	**4.55**	**91**	P	**Pn**	**13 49 55.4**	**+1.5**
GSI	**Gunungsitoli**	**4.89**	**327**	Pn	**Pn**	**13 49 57.3**	**-1.3**
GSI	**Gunungsitoli**	**4.89**	**327**	P	**Pn**	**13 49 58.2**	**-0.4**
DSRI	**Dabo**	**4.95**	**62**	P	**Pn**	**13 50 01.1**	**+1.7**
	7.3nm35μm17μm1μm,1.0s						
KASI	**Kota Agung**	**5.03**	**122**	P	**Pn**	**13 50 00.5**	**0.0**
	21nm43μm1μm,0.7s						
KLI	**Kotabumi**	**5.04**	**114**	P	**Pn**	**13 50 02.4**	**+1.7**
	19nm22μm26μm3μm,1.0s						
BLSI	**Bandar Lampung**	**5.61**	**117**	P	**Pn**	**13 50 10.1**	**+1.6**
	7.0nm17μm16μm1μm,0.8s						
RPSI	**Rantau Prapat**	**5.65**	**347**	Pn	**Pn**	**13 50 08.6**	**-0.4**
RPSI	**Rantau Prapat**	**5.65**	**347**		**Pn**	**13 50 08.9**	**-0.2**
TPRI	**Tanjung Pinang**	**5.70**	**49**	P	**Pn**	**13 50 11.6**	**+1.9**
	10nm12μm1μm,1.0s						
PSI	**Prapat**	**5.75**	**347**	Pn	**Pn**	**13 50 08.9**	**-1.7**
	8.7nm,0.3s,baz=162,slow=12,SNR=28						
PSI				Sn	**Sn**	**13 51 11.1**	**-4.6**
	12nm,0.3s,baz=180,slow=14,SNR=4.4						
	87nm,0.5s						
PSI	**Prapat**	**5.75**	**347**	P	**Pn**	**13 50 08.6**	**-2.0**
MYKOM	**Kota Tinggi**	**5.86**	**38**		**Pn**	**13 50 13.2**	**+1.2**
MYKOM	**Kota Tinggi**	**5.86**	**38**	P	**Pn**	**13 50 14.0**	**+2.1**
PPBI	**Pangkal Pinang**	**5.95**	**84**	P	**Pn**	**13 50 15.3**	**+2.1**
	4.2nm31μm23μm228nm,1.0s						
TSI	**Tuntungan**	**6.51**	**345**	P	**Pn**	**13 50 23.6**	**+2.7**
	8.1nm17μm1μm,0.9s						
SBJI	**Serang**	**6.73**	**119**	P	**Pn**	**13 50 25.6**	**+1.7**
	7.3nm13μm613nm,0.9s						
KCSI	**Kotacane, Aceh**	**6.78**	**339**	P	**Pn**	**13 50 25.0**	**+0.4**
	5.1nm8μm671nm,1.0s						
JRMM	**Jerantut**	**7.05**	**19**	P	**Pn**	**13 50 31.0**	**+2.7**
TNG	**Tangerang**	**7.21**	**118**	P	**Pn**	**13 50 33.6**	**+3.1**
	12nm32μm2μm,1.1s						
TNG				P	Pb	13 50 37.6	-14
IPM	**Ipoh**	**7.32**	**6**	Pn	**Pn**	**13 50 33.9**	**+1.9**
IPM	**Ipoh**	**7.32**	**6**	P	**Pn**	**13 50 35.0**	**+3.0**
TPI	**Tanjungpandan**	**7.43**	**90**	P	**Pn**	**13 50 34.5**	**+1.0**
	1.7nm2μm124nm,0.9s						
DBJI	**Dramaga**	**7.48**	**120**	P	**Pn**	**13 50 34.5**	**+0.3**
	5.3nm16μm12μm571nm,0.9s						
SKJI	**Sukabumi**	**7.55**	**123**	P	**Pn**	**13 50 36.5**	**+1.4**
	6.1nm10μm880nm,0.7s						
KULM	**Kulim**	**8.09**	**3**	Pn	**Pn**	**13 50 42.9**	**+0.3**
KULM	**Kulim**	**8.09**	**3**	P	**Pn**	**13 50 44.0**	**+1.4**
CNJI	**Cibinong**	**8.19**	**123**	P	**Pn**	**13 50 41.2**	**-2.8**
	12μm1μm,0.9s						
LEM	**Lembang**	**8.37**	**119**	Pn	**Pn**	**13 50 45.6**	**-0.9**
	42nm,0.3s,baz=228,slow=11,SNR=43						
LEM				Sn	**Sn**	**13 52 19.6**	**-0.7**
	12nm,0.3s,baz=279,slow=20,SNR=1.7						
	133nm,0.6s						
LEM	**Lembang**	**8.37**	**119**	P	**Pn**	**13 50 47.4**	**+0.9**
	5μm388nm,0.8s						
LHMI	**Lhok Sumawe**	**8.66**	**338**	Pn	**Pn**	**13 50 50.2**	**-0.2**
LHMI	**Lhok Sumawe**	**8.66**	**338**	P	**Pn**	**13 50 46.2**	**-4.2**
JCJI	**Jatiwangi**	**8.80**	**115**	P	**Pn**	**13 50 55.4**	**+3.0**
	3.7nm11μm641nm,0.8s						
COCO	**West Island**	**9.88**	**200**		**Pn**	13 51 01.9	-5.2
COCO	**West Island**	**9.88**	**200**	P	**Pn**	13 51 01.9	-5.2
SMRI	**Semarang**	**11.01**	**113**	Pn	**Pn**	**13 51 23.8**	**+1.2**
SMRI	**Semarang**	**11.01**	**113**	P	**Pn**	**13 51 24.4**	**+1.8**
	10μm566nm,1.1s						
YOGI	**Yogyakarta**	**11.18**	**117**	P	**Pn**	13 51 39.5	+14
SRIT	**Nakonsritamara**	**11.38**	**357**		**Pn**	**13 51 25.3**	**-2.4**
UGM	**Wanagama**	**11.43**	**117**	Pn	**Pn**	**13 51 26.7**	**-1.7**
UGM	**Wanagama**	**11.43**	**117**	P	**Pn**	**13 51 28.3**	**-0.1**
	473nm,1.2s						
PBKI	**Pangkalan Bun**	**11.44**	**90**	P	**Pn**	**13 51 31.5**	**+3.0**
	9μm469nm,1.1s						
STKI	**Sintang**	**11.62**	**76**	P	**Pn**	**13 51 35.0**	**+4.0**
	175nm,1.4s						
NGJI	**Ngawi**	**12.06**	**112**	P	**Pn**	**13 51 36.8**	**-0.3**
	8μm334nm,1.0s						
PCJI	**Pacitan**	**12.13**	**116**	P	**Pn**	**13 51 39.5**	**+1.5**
	215nm,1.4s						
PWJI	**Pagerwojo**	**12.63**	**115**	P	**Pn**	**13 51 44.1**	**-0.7**
	3μm188nm,1.0s						
SBUM	**Sibu**	**13.10**	**66**		**Pn**	**13 51 54.3**	**+3.1**
SBUM	**Sibu**	**13.10**	**66**	P	**Pn**	**13 51 55.0**	**+3.8**
GMJI	**Gumukmas**	**14.22**	**113**	P	**Pn**	**13 52 03.0**	**-3.6**
	3μm90nm,0.8s						
KMMI	**Kalianget**	**14.32**	**107**	P	**Pn**	**13 52 06.2**	**-1.7**
	7μm404nm,1.2s						
BBKI	**Banjar Baru**	**14.61**	**93**	P	**Pn**	**13 52 13.6**	**+1.7**
	7μm436nm,1.2s						
MTKI	**Muara Teweh, K**	**14.79**	**83**	P	**Pn**	**13 52 16.1**	**+1.8**
	15μm346nm,0.9s						
ABJI	**Asem Bagus**	**14.79**	**110**	P	**Pn**	**13 52 14.0**	**-0.4**
	8μm466nm,1.3s						
JAGI	**Jajag, Banyuwa**	**14.95**	**113**		**Pn**	**13 52 12.6**	**-3.8**
JAGI	**Jajag, Banyuwa**	**14.95**	**113**	P	**Pn**	**13 52 12.9**	**-3.5**
	4μm300nm,0.9s						
SRBI	**Singaraja**	**15.80**	**110**	P	**Pn**	**13 52 25.7**	**-1.9**
	4μm270nm,0.9s						
PBA	**Port Blair**	**16.21**	**333**	P	**P**	**13 52 35.7**	**+0.1**
	SNR=13						
PBA	**Port Blair**	**16.21**	**333**	*e*P	**Pn**	**13 52 31.8**	**-1.0**
PBA				*i* x	x	14 00 13.1	
PBA				*ex*	x	14 00 55.3	
BKB	**Balikpapan**	**16.74**	**85**	Pn	**Pn**	**13 52 39.6**	**+0.

LUWI **Luwuk** 22.61 86 P **P** 13 53 44.2 -1.4
LUWI **Luwuk** 22.61 86 P **P** 13 53 44.7 -1.0
comp=Z,13µmcomp=Z,693nm,1.4s
LUWI **Luwuk** 22.61 86 P **P** 13 53 46.3 +0.6
MMRI **Maumere** 22.64 106 P **P** 13 53 45.2 -0.8
comp=Z,2µmcomp=Z,110nm,0.9s
MMRI **Maumere** 22.64 106 P **P** 13 53 44.3 -1.7
CRAI **Chiangrai** 22.93 0 P **P** 13 53 46.7 -2.2
GTOI **Gorontalo** 23.04 82 P **P** 13 53 47.3 -2.9
comp=Z,3µmcomp=Z,183nm,1.2s
QIZ **Qiongzhong** 23.70 23 P **P** 13 53 56.3 -0.3
QIZ IAmb IAmb 13 53 57.9
comp=Z,180nm,1.0s
QIZ **Qiongzhong** 23.70 23 P **P** 13 53 56.4 -0.3
QIZ sP **pP** 13 54 03.8 -0.7
QIZ pmax pmax
comp=Z,190nm,0.9s
QIZ LR LR
comp=Z,12µm,13.5s
QIZ LR LR
comp=Z,10µm,11.2s
QIZ LR LR
comp=Z,13µm,14.3s
QIZ **Qiongzhong** 23.70 23 P **P** 13 53 56.7 +0.1
GIRL **Giralia** 23.92 147 P **P** 13 53 59.8 +1.1
baz=24,SNR=5.0
GIRL **Giralia** 23.92 147 P **P** 13 53 59.8 +1.1
KMSI **Cibinong** 23.99 82 P **P** 13 54 00.8 +1.3
comp=Z,6µmcomp=Z,728nm,1.1s
BATI **Baumata** 24.40 109 P **P** 13 54 00.5 -2.7
comp=Z,120nm,0.9s,baz=21,slow=3.3,SNR=10
BATI S **S** 13 58 14.4 -7.1
comp=Z,24nm,0.6s,baz=198,slow=20,SNR=2.2
comp=Z,120nm,0.9s
BATI **Baumata** 24.40 109 P **P** 13 53 58.4 -4.8
comp=Z,1µmcomp=Z,75nm,0.8s
SANI **Sanana** 25.76 89 P **P** 13 54 14.3 -1.2
comp=Z,2µmcomp=Z,188nm,1.2s
SANI **Sanana** 25.76 89 P **P** 13 54 14.5 -1.0
SGSI **Sangihe** 26.11 76 P **P** 13 54 19.3 +0.6
comp=Z,3µmcomp=Z,335nm,1.1s
MBWA **Marble Bar** 26.31 135 IAMs_20 IAMs_20 14 05 25.6
comp=Z,15µm,21.0s
MBWA **Marble Bar** 26.31 135 P **P** 13 54 21.0 +0.5
MBWA **Marble Bar** 26.31 135 P **P** 13 54 21.3 +0.8
TGY **Tagaytay City** 26.56 50 P **P** 13 54 20.6 -2.2
comp=Z,180nm,0.6s,baz=270,slow=8.1
comp=Z,180nm,0.6s
PSA00 **Pilbara Seismi** 26.66 136 P **P** 13 54 22.2 -1.4
PSA00 **Pilbara Seismi** 26.66 136 P **P** 13 54 22.7 -1.0
PSA00 IAmb IAmb 13 54 32.2
comp=Z,72nm,1.2s
PSA00 **Pilbara Seismi** 26.66 136 P **P** 13 54 24.2 +0.6
BRDH **Bariadhaia** 26.71 342 S **S** 13 58 59.5 +1.6
comp=Z,1.3nm,0.3s,baz=270,slow=24,SNR=2.1
NLAI **Namlea** 26.84 92 P **P** 13 54 27.2 +1.8
comp=Z,3µmcomp=Z,81nm,1.0s
BWNR **Bhubaneshwar** 26.99 329⇑ *i*P **P** 13 54 27.8 +1.3
DAV **Davao City (W)** 27.16 69 P **P** 13 54 25.9 -2.3
comp=Z,205nm,0.3s,baz=223,slow=19,SNR=2.2
DAV LR LR 14 06 25.2
comp=Z,11µm,19.8s,baz=222,slow=39
PCHI **Peechi** 27.23 300 *e*P **P** 13 54 30.8 +2.1
PCHI *e*S **S** 13 59 12.7 +6.4
LBMI **Labuha** 27.36 86 P **P** 13 54 28.8 -1.2
comp=Z,4µmcomp=Z,298nm,1.2s
RAGD **RAYAGADA** 27.45 324⇑ *i*P **P** 13 54 31.9 +1.2
KMI **Kunming** 27.90 5 ⇑P **P** 13 54 36.1 +1.1
KMI pP pP 13 54 41.1 -2.0
KMI pmax pmax
comp=Z,96nm,1.2s
KMI pmax pmax
comp=Z,1µm,7.9s
KMI LR LR
comp=Z,14µm,18.0s
KMI LR LR
comp=Z,9µm,13.7s
KMI LR LR
comp=Z,13µm,18.9s
AAI **Ambon** 27.94 92 P P 13 54 48.6 +13
AGT **Agartala** 27.96 342 *e*P **P** 13 54 36.9 +1.7
H08S2 **Diego Garcia H** 28.01 259 T T 14 23 35.8
baz=82,slow=76
H08S3 **Diego Garcia H** 28.02 259 T T 14 23 36.3
baz=82,slow=76
H08S1 **Diego Carcia H** 28.03 259 T T 14 23 37.4
baz=82,slow=76
KOHI **KOHIMA** 29.00 349⇑ *i*P **P** 13 54 44.9 +0.2
FITZ **Fitzroy Crossi** 29.17 123 P **P** 13 54 44.6 -1.4
comp=Z,40nm,1.0s,baz=309,slow=9.2,SNR=17
FITZ S **S** 13 59 30.4 -6.5
comp=Z,3.9nm,0.9s,baz=267,slow=17,SNR=1.2
FITZ LR LR 14 08 01.0
comp=Z,13µm,20.6s,baz=308,slow=40
comp=Z,40nm,1.0s
FITZ **Fitzroy Crossi** 29.17 123 P **P** 13 54 45.6 -0.4
baz=29,SNR=16
FITZ **Fitzroy Crossi** 29.17 123 P **P** 13 54 44.9 -1.1
FITZ **Fitzroy Crossi** 29.17 123 P **P** 13 54 45.8 -0.2
PZH **PanZhiHua** 29.21 3 ⇓P **P** 13 54 47.0 +0.6
PZH pP **pP** 13 54 54.3 -0.3
PZH sP **sP** 13 54 57.0 -1.1
PZH S **S** 13 59 43.1 +5.6
PZH sS **sS** 13 59 50.4 -0.5
PZH pmax pmax
comp=Z,40nm,1.0s
PZH pmax pmax
comp=Z,210nm,4.1s
PZH LR LR
comp=Z,8µm,20.1s
PZH LR LR
comp=Z,10µm,20.3s
PZH LR LR
comp=Z,8µm,21.3s
JHSG **JHARSUGUGA** 29.27 327 *e*P **P** 13 54 48.6 +1.7
HYBB **Hyderabad (bro** 29.36 314 *e*P **P** 13 54 48.0 +0.2
HYBB *es*P **pP** 13 54 55.9 -0.1
HYBB *e*S **S** 13 59 37.5 -2.5
SHL **Shillong** 29.37 345 P **P** 13 54 48.3 +0.4
SHL IAmb IAmb 13 54 57.1
comp=Z,210nm,1.0s
SHL **Shillong** 29.37 345 P **P** 13 54 48.3 +0.4
SHL pmax pmax
comp=Z,210nm,1.0s
SHL **Shillong** 29.37 345 P **P** 13 54 48.4 +0.4
SNR=68
SHL **Shillong** 29.37 345⇑ *i*P **P** 13 54 48.4 +0.4
SHL IAmb IAmb 13 54 56.8
comp=Z,265nm,1.2s
MOKO **MOKOCHONG** 29.51 350⇑ *i*P **P** 13 54 49.9 +0.7
MEEK **Meekatharra** 29.51 145 P **P** 13 54 50.0 +1.0
baz=30,SNR=6.9
MEEK **Meekatharra** 29.51 145 P **P** 13 54 49.9 +0.8
GYA **Guiyang** 29.79 12⇑ *i*P **P** 13 54 51.8 +0.2
GYA pP pP 13 55 00.3 +0.5
GYA S S 13 59 56.3 +10
GYA pmax pmax
comp=Z,140nm,1.5s
GYA pmax pmax
comp=Z,1µm,5.4s
GYA LR LR
comp=Z,18µm,15.6s
GYA LR LR
comp=Z,14µm,17.0s
GYA LR LR
comp=Z,26µm,17.4s
BOK **Bokaro** 29.93 333⇑ *i*P **P** 13 54 55.0 +2.3
BOK IAmb IAmb 13 54 56.2
comp=Z,117nm,1.0s
JORH **JORHAT** 29.97 349⇑ *i*P **P** 13 54 53.3 +0.3
GUWA **GUWAHATI** 30.02 345⇑ *i*P **P** 13 54 54.1 +0.6
MORW **Morawa** 30.11 152 P **P** 13 54 58.8 +4.5
baz=30,SNR=3.6
MORW **Morawa** 30.11 152 P **P** 13 54 55.9 +1.6
TEZP **TEZPUR** 30.15 347⇑ *i*P **P** 13 54 54.8 +0.2
TEZP IAmb IAmb 13 54 57.6
comp=Z,97nm,0.7s
LKP **Lekhapani** 30.29 352 *e*P **P** 13 54 55.9 +0.1
ITAN **ITANAGAR** 30.46 349⇑ *i*P **P** 13 54 58.5 +1.1
ITAN IAmb IAmb 13 55 05.7
comp=Z,338nm,0.9s
BLSP **Bilaspur** 30.47 325⇑ *i*P **P** 13 54 58.5 +0.9
DIBR **DIBRUGARH** 30.56 351⇑ *i*P **P** 13 54 58.4 +0.1
ZIRO **ZIRO** 30.81 349⇑ *i*P **P** 13 55 01.1 +0.4
ZIRO IAmb IAmb 13 55 07.2
comp=Z,276nm,0.9s

KNRA **Kununurra** 30.86 116 P **P** 13 54 59.6 -1.5
baz=31,SNR=27
KNRA **Kununurra** 30.86 116 P **P** 13 54 59.0 -2.1
KNRA IAmb IAmb 13 55 09.8
comp=Z,127nm,1.1s
KNRA **Kununurra** 30.86 116 P **P** 13 55 00.1 -1.0
SWI **Sorong** 31.09 87 P **P** 13 55 02.2 -0.9
comp=Z,3µmcomp=Z,193nm,1.2s
SIJI **Sorong** 31.09 87 S **S** 14 00 01.2 -6.0
comp=Z,4.5nm,0.5s,baz=194,slow=23,SNR=1.1
SLGI **Shiliguri** 31.50 340 *e*P **P** 13 55 08.8 +2.3
BLDU **Ballidu** 31.73 152 P **P** 13 55 13.2 +4.7
baz=32,SNR=4.6
FAKI **Fak Fak** 31.99 91 P **P** 13 55 08.8 -2.3
FAKI IAmb IAmb 13 55 11.0
comp=Z,183nm,1.4s
FAKI **Fak Fak** 31.99 91 P **P** 13 55 09.7 -1.4
comp=Z,2µmcomp=Z,90nm,1.1s
FAKI **Fak Fak** 31.99 91 P **P** 13 55 10.0 -1.1
GTK **Tadong** 32.01 340⇑ *i*P **P** 13 55 12.8 +1.7
ODAN **Odare** 32.02 338 *e*P **P** 13 55 12.9 +1.5
comp=Z,92nm,1.4s
MTN **Manton Dam** 32.16 110 P **P** 13 55 10.6 -1.8
baz=32,SNR=13
MTN **Manton Dam** 32.16 110 P **P** 13 55 10.1 -2.4
MTN IAmb IAmb 13 55 11.6
comp=Z,164nm,1.4s
MTN **Manton Dam** 32.16 110 P **P** 13 55 10.8 -1.7
TAPN **Taplejung** 32.35 339 *e*P **P** 13 55 16.3 +1.9
comp=Z,574nm,0.9s
KNMB **Chin-men Tao** 32.38 32 IAMs_20 IAMs_20 14 08 42.4
comp=Z,12µm,19.0s
RAMN **Ramite** 32.40 337 *e*P **P** 13 55 16.6 +1.8
comp=Z,208nm,0.7s
VAR **Varanasi** 32.57 330 *e*P **P** 13 55 17.4 +1.4
TWG **Pinlang** 32.63 38 P **P** 13 55 17.1 +0.5
MUN **Mundaring** 32.66 154 P **P** 13 55 18.6 +1.9
baz=33,SNR=7.0
MUN **Mundaring** 32.66 154 P **P** 13 55 18.0 +1.3
TPUB **Ta-pu** 32.73 36 P **P** 13 55 17.9 +0.5
TPUB **Ta-pu** 32.73 36 P **P** 13 55 18.2 +0.8
QZH **Quanzhou** 32.88 32⇑ *i*P **P** 13 55 19.3 +0.7
QZH sP **pP** 13 55 26.5 -0.2
QZH PP **PP** 13 56 31.8 -1.5
QZH pmax pmax
comp=Z,100nm,1.4s
QZH pmax pmax
comp=Z,600nm,5.2s
QZH LR LR
comp=Z,8µm,14.7s
QZH LR LR
comp=Z,5µm,14.2s
QZH LR LR
comp=Z,10µm,17.5s
KLBR **Kellerberrin** 33.03 152 P **P** 13 55 22.9 +2.9
baz=33,SNR=5.5
KLBR **Kellerberrin** 33.03 152 P **P** 13 55 23.1 +3.1
CNSH **ChangSha** 33.18 21 ⇑P **P** 13 55 21.5 +0.3
CNSH S **S** 14 00 42.0 +2.7
CNSH pmax pmax
comp=Z,170nm,1.3s
CNSH LR LR
comp=Z,23µm,17.0s
CNSH LR LR
comp=Z,11µm,15.1s
CNSH LR LR
comp=Z,27µm,15.9s
ALBI **Allahabad** 33.19 329⇑ *i*P **P** 13 55 22.6 +1.2
YULB **Yu-li** 33.19 37 P **P** 13 55 22.0 +0.5
YULB IAmb IAmb 13 55 24.2
comp=Z,211nm,1.5s
JIRN **Jiri** 33.20 337 *e*P **P** 13 55 23.5 +1.6
comp=Z,445nm,0.8s
SSLB **Suanglung** 33.29 36 P **P** 13 55 22.5 +0.2
SSLB IAmb IAmb 13 55 24.9
comp=Z,177nm,1.2s
SSLB **Suanglung** 33.29 36 P **P** 13 55 23.7 +1.4
KDU **Kakadu** 33.38 109 P **P** 13 55 20.9 -2.2
baz=33,SNR=15
KDU **Kakadu** 33.38 109 P **P** 13 55 20.8 -2.4
PKI **Pulchoki** 33.44 336 *e*P **P** 13 55 24.9 +1.0
PKIN **Phulchoki** 33.45 336 *e*P **P** 13 55 25.0 +1.1
comp=Z,80nm,0.8s
LSA **Lhasa** 33.50 346 P **P** 13 55 25.4 +0.8
LSA IAmb IAmb 13 55 33.4
comp=Z,191nm,1.0s
LSA **Lhasa** 33.50 346 P **P** 13 55 26.3 +1.7
LSA S **S** 14 00 44.3 -0.9
LSA pmax pmax
comp=Z,140nm,1.0s
LSA LR LR
comp=Z,5µm,24.2s
LSA LR LR
comp=Z,4µm,20.3s
LSA LR LR
comp=Z,2µm,22.8s
LSA **Lhasa** 33.50 346 P **P** 13 55 25.4 +0.8
LSA pmax pmax
comp=Z,191nm,1.0s
LSA MLR MLR
comp=Z,4µm,20.0s
LSA **Lhasa** 33.50 346 P **P** 13 55 26.2 +1.6
GUN **Gumba** 33.55 337 *e*P **P** 13 55 26.5 +1.6
comp=Z,232nm,0.6s
DMN **Daman** 33.59 335 *e*P **P** 13 55 26.5 +1.3
comp=Z,250nm,1.0s
KKN **Kakani** 33.68 336 *e*P **P** 13 55 27.1 +1.2
KKN **Kakani** 33.68 336 *e*P **P** 13 55 27.2 +1.3
CD2 **Chengdu** 33.73 5 ⇑P **P** 13 55 25.5 -0.6
CD2 pP pP 13 55 30.8 -3.5
CD2 sP sP 13 55 34.0 -3.8
CD2 S **S** 14 00 56.0 +8.1
CD2 pmax pmax
comp=Z,110nm,0.8s
CD2 LR LR
comp=Z,20µm,14.9s
CD2 LR LR
comp=Z,15µm,15.1s
CD2 LR LR
comp=Z,22µm,14.1s
VLK **Valmikinagar** 33.88 333 *e*P **P** 13 55 30.0 +2.7
NWAO **Narrogin (SRO)** 33.91 154 P **P** 13 55 26.0 -1.6
NWAO IAmb IAmb 13 55 36.7
comp=Z,98nm,1.1s
NWAO **Narrogin (SRO)** 33.91 154 IAMs_20 IAMs_20 14 08 23.7
comp=Z,9µm,20.0s
NWAO **Narrogin (SRO)** 33.91 154 P **P** 13 55 26.0 -1.6
NWAO pmax pmax
comp=Z,98nm,1.1s
NWAO MLR MLR
comp=Z,9µm,20.0s
NWAO **Narrogin (SRO)** 33.91 154 P **P** 13 55 28.1 +0.5
NWAO **Narrogin (SRO)** 33.91 154 P **P** 13 55 28.2 +0.5
ENH **Enshi** 34.10 14 P **P** 13 55 28.0 -1.3
ENH IAMs_20 IAMs_20 14 11 05.0
comp=Z,9µm,19.0s
GKN **Gorkha** 34.14 335 *e*P **P** 13 55 31.1 +1.3
BHPL **Bhopal** 34.14 321⇑ *i*P **P** 13 55 29.3 -0.5
BHPL IAmb IAmb 13 55 30.8
comp=Z,29nm,0.6s
YHNB **Yeheng** 34.21 36 P **P** 13 55 29.7 -0.7
YHNB IAmb IAmb 13 55 40.1
comp=Z,215nm,1.4s
YHNB **Yeheng** 34.21 36 P **P** 13 55 30.7 +0.3
KOLN **Koldanda** 34.39 333 *e*P **P** 13 55 32.2 +0.2
H01W3 **Cape Leeuwin H** 34.41 160 T T 14 31 37.2
baz=335,slow=76,SNR=153
H01W2 **Cape Leeuwin H** 34.42 160 T T 14 31 38.2
baz=335,slow=76,SNR=300
H01W1 **Cape Leeuwin H** 34.42 160 T T 14 31 28.4
baz=335,slow=76,SNR=327
TATO **Taipei** 34.51 36 P **P** 13 55 32.3 -0.5
TATO IAmb IAmb 13 55 35.3
comp=Z,167nm,1.2s
DANN **Dangsing** 34.81 334 *e*P **P** 13 55 36.9 +1.1
comp=Z,310nm,0.6s
WRKA **Warakurna** 34.90 132 P **P** 13 55 37.1 +0.7
baz=35,SNR=5.6
WRKA **Warakurna** 34.90 132 P **P** 13 55 36.9 +0.5
PYUN **Piuthan** 34.94 333 *e*P **P** 13 55 38.1 +1.2
JHNI **Jhansi** 35.12 325⇑ *i*P **P** 13 55 37.9 -0.3
BRCI **Bahraich** 35.16 330 *e*P **P** 13 55 40.1 +1.7
RKGY **Rocky Gully** 35.25 156 P P 13 55 48.4 +9.3
baz=36,SNR=5.4
RKGY **Rocky Gully** 35.25 156 P **P** 13 55 40.9 +1.8

WHN **Wuhan** 35.83 21 ⇑P **P** 13 55 45.1 +0.9
WHN sP **pP** 13 55 53.1 +0.8
WHN PcP **PcP** 13 58 12.3 +0.9
WHN pmax pmax
comp=Z,580nm,1.2s
WHN LR LR
comp=Z,30µm,15.3s
WHN LR LR
comp=Z,12µm,13.6s
WHN LR LR
comp=Z,46µm,18.4s
BAKI **Biak** 35.90 88 P **P** 13 55 44.8 -0.3
comp=Z,2µmcomp=Z,120nm,1.3s
WB0 **Warramunga Arr** 37.37 119 P **P** 13 55 56.1 -1.4
WB0 IAmb IAmb 13 56 14.7
comp=Z,133nm,0.9s
LGTI **Lohaghat** 37.38 331⇑ *i*P **P** 13 55 58.8 +1.5
WRA **Warramunga Arr** 37.38 120 P **P** 13 55 56.6 -1.1
comp=Z,28nm,0.8s,baz=293,slow=11,SNR=57
WRA PcP **PcP** 13 58 15.8 -0.6
comp=Z,15nm,1.0s,baz=305,slow=2.9,SNR=2.7
WRA S **S** 14 01 39.5 -4.8
comp=Z,21nm,1.0s,baz=293,slow=15,SNR=10
WRA LR LR 14 13 15.3
comp=Z,7µm,20.5s,baz=286,slow=40
comp=Z,28nm,0.8s
WRA **Warramunga Arr** 37.38 120 P **P** 13 55 56.5 -1.1
WRA **Warramunga Arr** 37.38 120 P **P** 13 55 56.5 -1.1
WRA pmax pmax
comp=Z,9.0nm,1.0s
WRAB **Tennant Creek** 37.39 120 P **P** 13 55 56.5 -1.2
WRAB IAmb IAmb 13 56 14.6
comp=Z,148nm,1.1s
WRAB **Tennant Creek** 37.39 120 IAMs_20 IAMs_20 14 12 54.0
comp=Z,8µm,20.0s
WRAB **Tennant Creek** 37.39 120*c**e*P **P** 13 55 57.0 -0.7
WRAB pmax pmax
comp=Z,88nm,1.3s
WRAB MLR MLR
comp=Z,7µm,20.0s
WRAB **Tennant Creek** 37.39 120 P **P** 13 55 57.1 -0.7
WB2 **Warramunga Arr** 37.40 120 P **P** 13 55 56.5 -1.3
WB2 IAmb IAmb 13 56 14.5
comp=Z,152nm,1.1s
PTH **Pithoragarh** 37.47 331⇑ *i*P **P** 13 55 59.8 +1.4
XAN **Xi'an** 37.59 12 ⇑P **P** 13 55 58.9 -0.3
XAN pP pP 13 56 06.3 -1.2
XAN sP sP 13 56 09.6 -1.3
XAN PP **PP** 13 57 25.8 +0.5
XAN S **S** 14 01 48.4 +1.3
XAN pmax pmax
comp=Z,280nm,1.0s
XAN pmax pmax
comp=Z,2µm,6.5s
XAN LR LR
comp=Z,20µm,15.6s
XAN LR LR
comp=Z,13µm,15.9s
XAN LR LR
comp=Z,31µm,15.9s
SONA **Sohna** 38.09 326 *e*P **P** 13 56 03.3 -0.1
SONA *i*x x 13 56 13.7
AJM **Ajmer** 38.22 321 *e*P **P** 13 56 05.0 +0.4
AJM *i*x x 13 57 44.8
FORT **Forrest** 38.26 140 P **P** 13 56 02.6 -2.2
FORT **Forrest** 38.26 140 P **P** 13 56 05.8 +0.9
SMPI **Sarmi** 38.47 90 P **P** 13 56 09.4 +2.6
comp=Z,45nm,1.6s
ASAR **Alice Springs** 38.59 125 P **P** 13 56 07.4 -0.4
comp=Z,104nm,1.0s,baz=301,slow=8.0,SNR=149
ASAR PcP **PcP** 13 58 20.3 +0.2
comp=Z,2.2nm,0.6s,baz=309,slow=2.7,SNR=0.9
ASAR S **S** 14 01 59.6 -3.0
comp=Z,9.2nm,1.0s,baz=297,slow=16,SNR=9.3
ASAR LR LR 14 13 54.2
comp=Z,13µm,20.6s,baz=300,slow=39
comp=Z,104nm,1.0s
AS31 **Alice Springs** 38.59 125 P **P** 13 56 07.0 -0.8
LZH **Lanzhou** 38.87 5 ⇑P **P** 13 56 10.8 +0.7
LZH pP pP 13 56 15.8 -2.6
LZH PP **PnPn** 13 57 46.4 +4.5
LZH PcP **PcP** 13 58 22.8 +2.0
LZH S **S** 14 02 07.9 +1.2
LZH sS sS 14 02 19.9 -0.5
LZH SS **SnSn** 14 04 55.8 -2.3
LZH ScS **ScS** 14 06 18.1 -0.3
LZH pmax pmax
comp=Z,230nm,1.4s
LZH pmax pmax
comp=Z,1µm,4.2s
LZH LR LR
comp=Z,12µm,15.1s
LZH LR LR
comp=Z,12µm,16.8s
LZH LR LR
comp=Z,17µm,18.6s
LYN **LuoYang** 38.94 16⇑ *i*P **P** 13 56 10.8 +0.3
LYN pP pP 13 56 16.8 -1.8
LYN sP sP 13 56 18.9 -3.3
LYN S **S** 14 02 08.3 +1.0
LYN SS **SnSn** 14 04 47.8 -12
LYN ScS **ScS** 14 06 18.9 +0.4
LYN pmax pmax
comp=Z,550nm,0.9s
LYN pmax pmax
comp=Z,950nm,7.3s
LYN LR LR
comp=Z,10µm,15.5s
LYN LR LR
comp=Z,8µm,17.3s
NJ2 **Nanjing** 38.95 26⇑ *i*P **P** 13 56 11.3 +0.7
NJ2 pP **pP** 13 56 15.0 -3.7
NJ2 sP **sP** 13 56 19.1 -3.1
NJ2 PP **PP** 13 57 42.0 +1.8
NJ2 sS **sS** 14 02 23.3 +2.1
NJ2 pmax pmax
comp=Z,71nm,1.2s
NJ2 pmax pmax
comp=Z,990nm,3.5s
NJ2 LR LR
comp=Z,11µm,15.2s
NJ2 LR LR
comp=Z,9µm,14.7s
NJ2 LR LR
comp=Z,16µm,16.7s
GOMU **GeErMu** 39.16 353 P **P** 13 56 13.8 +1.0
GOMU pP pP 13 56 18.8 -2.3
GOMU PcP **PcP** 13 58 23.4 +1.4
GOMU pmax pmax
comp=Z,32nm,0.9s
GOMU LR LR
comp=Z,3µm,17.5s
GOMU LR LR
comp=Z,4µm,17.6s
GOMU LR LR
comp=Z,3µm,17.2s
DDI **Dehra Dun** 39.19 329⇑ *i*P **P** 13 56 13.8 +1.1
SSE **Sheshan** 39.22 29 P **P** 13 56 13.9 +1.1
SSE S **S** 14 02 19.3 +7.7
SSE pmax pmax
comp=Z,68nm,1.2s
SSE pmax pmax
comp=Z,570nm,3.5s
SSE LR LR
comp=Z,5µm,14.6s
SSE LR LR
comp=Z,2µm,13.8s
GENI **Genyem** 39.90 91 P **P** 13 56 17.5 -1.4
comp=Z,2µmcomp=Z,134nm,1.2s
GENI **Genyem** 39.90 91 P **P** 13 56 17.8 -1.1
SMLA **Simla** 40.29 329⇑ *i*P **P** 13 56 22.6 +0.8
TIY **Taiyuan** 41.91 15 ⇑P **P** 13 56 35.8 +0.7
TIY pP **pP** 13 56 43.9 +0.6
TIY S **S** 14 02 51.6 -0.2
TIY pmax pmax
comp=Z,140nm,1.0s
TIY pmax pmax
comp=Z,1µm,5.3s
TIY LR LR
comp=Z,8µm,13.7s
TIY LR LR
comp=Z,6µm,13.1s
TIY LR LR
comp=Z,6µm,13.7s
TIA **Tai'an** 41.94 21 ⇑P **P** 13 56 35.3 0.0

TIA					PcP	**PcP**	**13 58 31.4**	**+0.9**
TIA					pmax	pmax		
	comp=Z,82nm,0.7s							
TIA					LR	LR		
	comp=Z,10μm,14.2s							
TIA					LR	LR		
	comp=Z,8μm,14.2s							
TIA					LR	LR		
	comp=Z,18μm,13.3s							
OOD	**Oodnadatta**	**41.97**	**130**		P	**P**	**13 56 36.5**	**+0.8**
GTA	**Gaotai**	**42.05**	**360**	⇑	P	**P**	**13 56 37.0**	**+0.7**
GTA					pP	pP	13 56 42.1	-2.5
GTA					sP	sP	13 56 45.1	-2.9
GTA					PP	**PP**	**13 58 16.9**	**+2.9**
GTA					PcP	**PcP**	**13 58 31.4**	**+0.5**
GTA					ScP	**ScP**	**14 02 21.0**	**+1.3**
GTA					S	**S**	**14 02 53.6**	**-0.3**
GTA					SS	**SS**	**14 05 55.1**	**-6.8**
GTA					ScS	**ScS**	**14 06 34.9**	**-2.3**
GTA					pmax	pmax		
	comp=Z,120nm,1.5s							
GTA					pmax	pmax		
	comp=Z,1μm,7.3s							
GTA					LR	LR		
	comp=Z,9μm,14.9s							
GTA					LR	LR		
	comp=Z,9μm,17.1s							
GTA					LR	LR		
	comp=Z,10μm,17.8s							
MULG	**Mulgathing**	**42.07**	**134**		P	**P**	**13 56 37.1**	**+0.6**
THN	**Thein Dam**	**42.07**	**328**	⇑*i*	P	**P**	**13 56 36.8**	**+0.4**
THN				*i*	x	x	13 56 52.2	
QIS	**Mount Isa**	**42.22**	**118**		P	**P**	**13 56 37.5**	**-0.4**
	baz=42,SNR=23							
QIS	**Mount Isa**	**42.22**	**118**		P	**P**	**13 56 37.7**	**-0.2**
HNS	**HongShan**	**42.24**	**17**	⇑⇑	P	**P**	**13 56 38.6**	**+0.9**
HNS					S	S	14 03 05.8	+9.4
HNS					pmax	pmax		
	comp=Z,200nm,1.2s							
HNS					pmax	pmax		
	comp=Z,2μm,6.1s							
HNS					LR	LR		
	comp=Z,7μm,14.7s							
HNS					LR	LR		
	comp=Z,6μm,17.5s							
HNS					LR	LR		
	comp=Z,8μm,15.1s							
JMU	**Jammu**	**42.73**	**328**	⇑*i*	P	**P**	**13 56 43.2**	**+1.5**
COEN	**Coen**	**43.82**	**107**		P	**P**	**13 56 49.6**	**-1.3**
	baz=44,SNR=11							
COEN	**Coen**	**43.82**	**107**		P	**P**	**13 56 48.6**	**-2.3**
COEN	**Coen**	**43.82**	**107**		P	**P**	**13 56 49.6**	**-1.3**
BTO	**Baotou**	**44.16**	**11**	*eP*		**P**	**13 56 55.1**	**+1.8**
BTO					S	**S**	**14 03 30.8**	**+6.0**
BTO					LR	LR		
	comp=Z,33μm,15.4s							
NIL	**Nilore**	**44.32**	**327**		P	**P**	**13 56 54.0**	**-0.7**
NIL					IAmb	IAmb	13 56 56.0	
	comp=Z,164nm,0.8s							
NIL	**Nilore**	**44.32**	**327**		P	**P**	**13 56 54.0**	**-0.7**
NIL					pmax	pmax		
	comp=Z,164nm,0.9s							
NIL					MLR	MLR		
	comp=Z,4μm,21.0s							
JSU	**Suzuyama**	**44.65**	**38**		P	**P**	**13 56 56.9**	**-0.4**
JSU					IAmb	IAmb	13 56 58.9	
	comp=Z,235nm,1.0s							
BBOO	**Buckleboo**	**44.90**	**136**		P	**P**	**13 56 59.8**	**+0.5**
	baz=45,SNR=5.1							
BBOO	**Buckleboo**	**44.90**	**136**		P	**P**	**13 56 58.7**	**-0.5**
BBOO					IAmb	IAmb	13 57 10.5	
	comp=Z,140nm,1.5s							
BBOO	**Buckleboo**	**44.90**	**136**		P	**P**	**13 57 00.5**	**+1.2**
BJT	**Baijiatuau**	**45.09**	**17**		P	**P**	**13 57 01.2**	**+0.6**
BJT					IAmb	IAmb	13 57 03.3	
	comp=Z,290nm,1.3s							
BJT	**Baijiatuau**	**45.09**	**17**		P	**P**	**13 57 01.2**	**+0.6**
BJT					pmax	pmax		
	comp=Z,290nm,1.3s							
BJT					MLR	MLR		
	comp=Z,17μm,18.0s							
BJI	**Beijing**	**45.11**	**17**		P	**P**	**13 57 01.6**	**+0.8**
BJI					PcP	**PcP**	**13 58 42.3**	**+1.2**
BJI					S	**S**	**14 03 42.8**	**+4.4**
BJI					sS	**sS**	**14 03 51.0**	**-1.0**
BJI					pmax	pmax		
	comp=Z,180nm,1.1s							
BJI					pmax	pmax		
	comp=Z,2μm,7.4s							
BJI					LR	LR		
	comp=Z,3μm,14.5s							
BJI					LR	LR		
	comp=Z,7μm,14.1s							
BJI					LR	LR		
	comp=Z,18μm,14.5s							
LCRK	**Leigh Creek**	**45.21**	**131**		P	**P**	**13 57 02.7**	**+0.9**
MTSU	**Mount Surprise**	**45.79**	**113**		P	**P**	**13 57 06.3**	**-0.3**
	baz=46,SNR=30							
MTSU	**Mount Surprise**	**45.79**	**113**		P	**P**	**13 57 06.6**	**0.0**
INKA	**Innaminka**	**45.92**	**127**		P	**P**	**13 57 08.3**	**+0.9**
DL2	**Dalian**	**45.99**	**23**	⇑*i*	P	**P**	**13 57 08.5**	**+0.7**
DL2					S	**S**	**14 03 55.0**	**+3.8**
DL2					pmax	pmax		
	comp=Z,150nm,1.3s							
DL2					pmax	pmax		
	comp=Z,1μm,5.7s							
DL2					LR	LR		
	comp=Z,4μm,17.1s							
DL2					LR	LR		
	comp=Z,5μm,15.9s							
DL2					LR	LR		
	comp=Z,8μm,16.9s							
WHYH	**Whyalla**	**46.08**	**135**		P	**P**	**13 57 10.0**	**+1.4**
PTPS	**Port Pirie**	**46.45**	**135**		P	**P**	**13 57 11.6**	**+0.1**
TJN	**Taejon**	**46.51**	**30**		P	**P**	**13 57 11.4**	**-0.5**
TJN	**Taejon**	**46.51**	**30**	*ce*	P	**P**	**13 57 11.9**	**0.0**
TJN	**Taejon**	**46.51**	**30**		P	**P**	**13 57 12.1**	**+0.2**
RER	**Riviere de l'E**	**46.93**	**244**		P	**P**	**13 57 17.1**	**+1.5**
INCN	**Inchon**	**47.02**	**29**		P	**P**	**13 57 15.1**	**-0.8**
INCN	**Inchon**	**47.02**	**29**		P	**P**	**13 57 15.1**	**-0.8**
INCN					pmax	pmax		
	comp=Z,55nm,1.0s							
INCN					MLR	MLR		
	comp=Z,4μm,19.0s							
INCN	**Inchon**	**47.02**	**29**		P	**P**	**13 57 15.6**	**-0.3**
	comp=Z,70nm,1.1s							
HJU	**Haeju**	**47.04**	**28**		P	**P**	**13 57 16.0**	**0.0**
HJU					pP	**pP**	**13 57 23.6**	**-0.7**
HJU					S	S	14 04 18.9	+13
HJU					AmB			
	comp=Z,2μm,3.0s							
HJU					AMS	AMS		
	comp=N,7μm,13.9s							
HJU					AMS	AMS		
	comp=E,7μm,13.7s							
HJU					AMS	AMS		
	comp=Z,7μm,13.9s							
GUMO	**Guam**	**47.20**	**69**		P	**P**	**13 57 16.9**	**-0.7**
	comp=Z,32nm,0.4s,baz=196,slow=19,SNR=2.3							
GUMO					LR	LR	14 16 32.7	
	comp=Z,2μm,21.5s,baz=226,slow=36							
	comp=Z,32nm,0.4s							
KSCHJ	**Chungju**	**47.21**	**31**		P	**P**	**13 57 16.6**	**-0.7**
HTT	**Hallett**	**47.25**	**135**		P	**P**	**13 57 18.6**	**+0.8**
	baz=47,SNR=18							
HTT	**Hallett**	**47.25**	**135**		P	**P**	**13 57 18.4**	**+0.5**
KBL	**Kabul**	**47.34**	**324**		P	**P**	**13 57 17.5**	**-1.2**
KBL					IAmb	IAmb	13 57 43.9	
	comp=Z,60nm,0.9s							
KBL	**Kabul**	**47.34**	**324**		P	**P**	**13 57 17.5**	**-1.2**
KBL					pmax	pmax		
	comp=Z,60nm,0.9s							
KBL	**Kabul**	**47.34**	**324**		P	**P**	**13 57 18.5**	**-0.2**
	SNR=35							
WBK	**Wadi Bani Khal**	**47.54**	**304**		P	**P**	**13 57 21.6**	**+1.4**
KSAR	**Wonju Array Be**	**47.60**	**30**		P	**P**	**13 57 20.4**	**0.0**
KSAR	**Wonju Array Be**	**47.60**	**30**		P	**P**	**13 57 20.4**	**0.0**
DQM	**DQM**	**47.61**	**300**		P	**P**	**13 57 21.1**	**+0.3**
KSRS	**Korea Array**	**47.63**	**30**		P	**P**	**13 57 20.5**	**-0.1**
	comp=Z,70nm,1.0s,baz=224,slow=8.4,SNR=191							
KSRS					S	**S**	**14 04 12.8**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=169,slow=9.8,SNR=1.4							
KSRS					LR	LR	14 18 01.5	
	comp=Z,3μm,18.8s,baz=210,slow=37							
	comp=Z,70nm,1.0s							
KS19	**Wonju Array Si**	**47.64**	**30**		P	**P**	**13 57 21.3**	**+0.6**
KS19					IAmb	IAmb	13 57 22.5	
	comp=Z,175nm,1.2s							
MHTO	**MHTO**	**47.67**	**302**		P	**P**	**13 57 22.1**	**+0.8**
KSH	**Kashi**	**47.68**	**335**		P	**P**	**13 57 20.8**	**-0.4**
KSH					pP	pP	13 57 26.4	-3.2
KSH					sP	sP	13 57 31.8	-1.2
KSH					PP	**PP**	**13 59 14.9**	**+1.8**
KSH					S	**S**	**14 04 13.3**	**-2.3**
KSH					SS	**SS**	**14 07 40.4**	**-3.8**
KSH					pmax	pmax		
	comp=Z,130nm,0.9s							
KSH					pmax	pmax		
	comp=Z,1μm,4.9s							
KSH					LR	LR		
	comp=Z,3μm,21.3s							
KSH					LR	LR		
	comp=Z,5μm,19.4s							
KSH					LR	LR		
	comp=Z,6μm,22.2s							
WMQ	**Urumqi**	**47.80**	**348**	⇑	P	**P**	**13 57 23.9**	**+2.0**
WMQ					sP	sP	13 57 32.6	-1.1
WMQ					PP	**PP**	**13 59 13.0**	**-1.0**
WMQ					S	**S**	**14 04 18.9**	**+2.0**
WMQ					ScS	**ScS**	**14 07 14.3**	**+0.7**
WMQ					pmax	pmax		
	comp=Z,410nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,1μm,4.5s							
WMQ					LR	LR		
	comp=Z,3μm,20.5s							
WMQ					LR	LR		
	comp=Z,3μm,20.5s							
WMQ					LR	LR		
	comp=Z,4μm,21.5s							
PYAG	**Pyongyang**	**47.87**	**27**		P	**P**	**13 57 22.7**	**+0.2**
TWOA	**Tennyson Woods**	**47.87**	**137**		P	**P**	**13 57 23.7**	**+1.1**
CTA	**Charters Tower**	**48.05**	**115**		P	**P**	**13 57 24.0**	**-0.2**
	comp=Z,110nm,1.0s,baz=286,slow=8.2,SNR=72							
CTA					S	**S**	**14 04 17.5**	**-3.7**
	comp=Z,1.9nm,0.8s,baz=216,slow=17,SNR=8.7							
CTA					LR	LR	14 20 00.1	
	comp=Z,8μm,20.2s,baz=286,slow=39							
	comp=Z,110nm,1.0s							
CTA	**Charters Tower**	**48.05**	**115**		P	**P**	**13 57 24.2**	**0.0**
CTAO	**Charters Tower**	**48.05**	**115**		P	**P**	**13 57 23.4**	**-0.8**
CTAO	**Charters Tower**	**48.05**	**115**		IAMs_20	IAMs_20	14 19 47.9	
	comp=Z,8μm,20.0s							
CTAO	**Charters Tower**	**48.05**	**115**		P	**P**	**13 57 23.4**	**-0.8**
CTAO					pmax	pmax		
	comp=Z,235nm,1.2s							
CTAO					MLR	MLR		
	comp=Z,8μm,20.0s							
CTAO	**Charters Tower**	**48.05**	**115**		P	**P**	**13 57 24.3**	**0.0**
WSAR	**Wadi Sarin**	**48.10**	**305**		LR	LR	14 16 12.3	
	comp=Z,4μm,19.5s,baz=139,slow=34							
JMDO	**Jabal Madar**	**48.15**	**304**		P	**P**	**13 57 25.6**	**+0.7**
SUJ	**Sinuiju**	**48.18**	**25**		P	**P**	**13 57 24.4**	**-0.5**
SUJ					pP	**pP**	**13 57 31.9**	**-1.2**
SUJ					S	S	14 04 36.4	+14
SUJ					AmB			
	comp=Z,2μm,3.9s							
SUJ					AMS	AMS		
	comp=N,28μm,14.9s							
SUJ					AMS	AMS		
	comp=E,31μm,16.4s							
SUJ					AMS	AMS		
	comp=Z,30μm,15.7s							
JMN	**Monobe**	**48.27**	**38**		P	**P**	**13 57 26.2**	**+0.5**
SOCY	**Socotra**	**48.30**	**289**		IAMs_20	IAMs_20	14 14 49.1	
	comp=Z,5μm,19.0s							
QLP	**Quilpie**	**48.31**	**124**		P	**P**	**13 57 26.8**	**+0.7**
	baz=48,SNR=19							
QLP	**Quilpie**	**48.31**	**124**		P	**P**	**13 57 26.9**	**+0.8**
SEHB	**SEOHWA**	**48.43**	**30**		P	**P**	**13 57 26.8**	**0.0**
STKA	**Stephens Creek**	**48.43**	**131**		P	**P**	**13 57 27.5**	**+0.5**
	comp=Z,75nm,1.0s,baz=304,slow=8.3,SNR=81							
STKA					S	**S**	**14 04 22.1**	**-4.1**
	comp=Z,2.7nm,1.0s,baz=301,slow=21,SNR=2.0							
STKA					LR	LR	14 19 22.3	
	comp=Z,9μm,21.0s,baz=294,slow=38							
	comp=Z,75nm,1.0s							
STKA	**Stephens Creek**	**48.43**	**131**		P	**P**	**13 57 27.5**	**+0.5**
	baz=49,SNR=20							
STKA	**Stephens Creek**	**48.43**	**131**		P	**P**	**13 57 26.3**	**-0.7**
STKA	**Stephens Creek**	**48.43**	**131**		P	**P**	**13 57 27.7**	**+0.7**
SMDO	**Samad**	**48.50**	**304**		P	**P**	**13 57 28.7**	**+1.0**
	SNR=5.2							
SMDO					P	**P**	**13 57 28.7**	**+1.0**
	SNR=5.2							
BIDO	**Bidbid**	**48.64**	**305**		P	**P**	**13 57 29.7**	**+1.0**
	SNR=7.5							
XLT	**XiLinHaoTe**	**48.66**	**15**	⇑*i*	P	**P**	**13 57 29.6**	**+1.0**
XLT					pP	pP	13 57 33.9	-3.2
XLT					sP	sP	13 57 36.3	-4.2
XLT					ScP	**ScP**	**14 02 46.4**	**-0.5**
XLT					PcS	**PcS**	**14 02 48.9**	**-0.9**
XLT					S	**S**	**14 04 30.4**	**+1.2**
XLT					sS	sS	14 04 44.3	+1.4
XLT					pmax	pmax		
	comp=Z,340nm,1.1s							
XLT					pmax	pmax		
	comp=Z,1μm,4.1s							
XLT					LR	LR		
	comp=Z,790nm,16.8s							
XLT					LR	LR		
	comp=Z,5μm,15.6s							
XLT					LR	LR		
	comp=Z,8μm,17.7s							
JHS	**Saijyo**	**48.67**	**36**		P	**P**	**13 57 28.8**	**+0.1**
BSY	**Bisya**	**49.06**	**304**		P	**P**	**13 57 33.4**	**+1.4**
	SNR=10							
SNY	**Shenyang**	**49.26**	**23**	⇑	P	**P**	**13 57 32.8**	**-0.3**
SNY					S	**S**	**14 04 35.3**	**-2.2**
SNY					pmax	pmax		
	comp=Z,130nm,1.2s							
SNY					pmax	pmax		
	comp=Z,1μm,7.1s							
SNY					LR	LR		
	comp=Z,7μm,16.3s							
SNY					LR	LR		
	comp=Z,5μm,15.9s							
SNY					LR	LR		
	comp=Z,11μm,15.5s							
HOQ	**Hoqain**	**49.34**	**305**		P	**P**	**13 57 35.5**	**+1.5**
	SNR=13							
HHU	**Hamhung**	**49.38**	**28**		P	**P**	**13 57 34.4**	**+0.3**
HHU					pP	**pP**	**13 57 42.0**	**-0.3**
HHU					S	S	14 04 53.8	+14
HHU					AmB			
	comp=Z,1μm,2.9s							
HHU					AMS	AMS		
	comp=N,10μm,16.4s							
HHU					AMS	AMS		
	comp=E,9μm,14.2s							
HHU					AMS	AMS		
	comp=Z,7μm,11.4s							
SHLS	**Shalkode**	**49.47**	**340**	*ci*	P	**P**	**13 57 35.8**	**+1.0**
SHLS					*e*S	**S**	**14 04 41.2**	**+0.6**
SHLS					pmax	pmax		
	comp=Z,209nm,1.4s							
SHLS	**Shalkode**	**49.47**	**340**	⇑*i*	P	**P**	**13 57 35.8**	**+1.0**
	comp=Z,210nm,1.4s,baz=340							
SHLS					*e*S	**S**	**14 04 41.3**	**+0.6**
	baz=340							
UZB	**Uzunbulak**	**49.61**	**340**	*i*	P	**P**	**13 57 37.6**	**+1.7**
UZB				*i*	S	**S**	**14 04 44.3**	**+1.6**
UZB					pmax	pmax		
	comp=Z,72nm,1.6s							
UZB					smax	smax		
	comp=N,282nm,4.9s							
UZB	**Uzunbulak**	**49.61**	**340**	*i*	P	**P**	**13 57 37.7**	**+1.7**
	comp=N,72nm,1.6s,baz=340							
UZB				*i*	S	**S**	**14 04 44.3**	**+1.6**
	comp=N,282nm,4.9s,baz=340							
RBK	**Rabkut**	**49.67**	**296**		P	**P**	**13 57 38.4**	**+1.7**
SATY	**Saty**	**49.75**	**339**	*ci*	P	**P**	**13 57 38.8**	**+1.8**
SATY				*i*	S	**S**	**14 04 46.9**	**+2.3**
SATY					pmax	pmax		
	comp=Z,229nm,1.4s							
SATY					smax	smax		
	comp=E,215nm,2.9s							
SATY	**Saty**	**49.75**	**339**	⇑*i*	P	**P**	**13 57 38.8**	**+1.8**
	comp=E,229nm,1.4s,baz=339							
SATY				*i*	S	**S**	**14 04 47.0**	**+2.3**
	comp=E,215nm,2.9s,baz=339							
ZHN	**Zhinishke**	**49.83**	**339**	*e*	P	**P**	**13 57 39.1**	**+1.5**
ZHN				*e*	S	**S**	**14 04 47.9**	**+2.2**
ZHN	**Zhinishke**	**49.83**	**339**	*e*	P	**P**	**13 57 39.1**	**+1.5**
	baz=339							
ZHN				*e*	S	**S**	**14 04 48.0**	**+2.2**
	baz=339							
ULHL	**Ulahol**	**49.86**	**337**		P	**P**	**13 57 39.0**	**+1.0**
	SNR=37							
GAR	**Garm**	**49.92**	**329**		P	**P**	**13 57 37.6**	**-0.8**
JASK	**Jask - Hormozg**	**49.94**	**308**		P	**P**	**13 57 40.7**	**+2.1**
KPKS	**Kokpek**	**50.01**	**340**	*ci*	P	**P**	**13 57 40.2**	**+1.3**
KPKS					*e*S	**S**	**14 04 50.1**	**+2.0**
KPKS					smax	smax		
	comp=E,160nm,2.8s							
KPKS	**Kokpek**	**50.01**	**340**	⇑*i*	P	**P**	**13 57 40.2**	**+1.3**
	baz=340							
KPKS				*e*	S	**S**	**14 04 50.2**	**+2.1**
	comp=E,160nm,2.8s,baz=340							
WHFO	**Wadi Hawf**	**50.20**	**296**		P	**P**	**13 57 41.5**	**+0.8**
SOHO	**SOHO**	**50.22**	**305**		P	**P**	**13 57 42.1**	**+1.3**
SOHO	**SOHO**	**50.22**	**305**		P	**P**	**13 57 41.5**	**+0.8**
CHGR	**Chuyangaron**	**50.26**	**328**		P	**P**	**13 57 40.0**	**-1.0**
CHGR	**Chuyangaron**	**50.26**	**328**		P	**P**	**13 57 40.0**	**-1.0**
CHGR					pmax	pmax		
	comp=Z,245nm,1.0s							
MDOK	**Medeo**	**50.33**	**338**	*i*	P	**P**	**13 57 43.0**	**+1.6**
MDOK				*i*	S	**S**	**14 04 54.9**	**+2.1**
MDOK					MLR	MLR		
	comp=Z,1μm,19.0s							
MDOK	**Medeo**	**50.33**	**338**	*i*	P	**P**	**13 57 43.1**	**+1.6**
	baz=338							
MDOK				*i*	S	**S**	**14 04 55.0**	**+2.1**
	baz=338							
MDOK					LR	LR	14 19 07.5	
	comp=Z,1μm,19.4s,baz=338							
UCH	**Uchtor**	**50.55**	**335**		P	**P**	**13 57 44.9**	**+1.5**
	SNR=8.8							
TKM2	**Tokmak 2**	**50.69**	**337**		P	**P**	**13 57 45.1**	**+1.0**
	SNR=96							
TKM2	**Tokmak 2**	**50.69**	**337**		P	**P**	**13 57 45.2**	**+1.0**
KBK	**Karagaybulak**	**50.72**	**336**		P	**P**	**13 57 46.3**	**+1.8**
	SNR=41							
SONM	**Songino Array**	**50.75**	**5**		P	**P**	**13 57 45.8**	**+1.3**
	comp=Z,234nm,0.8s,baz=188,slow=8.9,SNR=871							
SONM					PcP	**PcP**	**13 59 02.0**	**+0.7**
	comp=Z,29nm,0.8s,baz=207,slow=1.5,SNR=2.1							
SONM					S	**S**	**14 04 55.0**	**-3.4**
	comp=Z,0.3nm,0.4s,baz=162,slow=9.8,SNR=1.4							
	comp=Z,234nm,0.8s							
SONM	**Songino Array**	**50.75**	**5**		P	**P**	**13 57 45.7**	**+1.1**
AML	**Almayashu**	**50.81**	**335**		P	**P**	**13 57 46.7**	**+1.3**
	SNR=97							
ALNE	**Al Ain**	**50.83**	**304**		P	**P**	**13 57 46.8**	**+1.4**
	SNR=11							
ALNE	**Al Ain**	**50.83**	**304**	*i*	P	**P**	**13 57 46.2**	**+0.8**
	SNR=6.2							
UOSS	**Minazif**	**50.85**	**306**		P	**P**	**13 57 46.5**	**+1.0**
UOSS	**Minazif**	**50.85**	**306**		P	**P**	**13 57 45.6**	**+0.2**
ASHO	**Ashiyiah**	**50.85**	**305**		P	**P**	**13 57 46.6**	**+1.0**
ASHO	**Ashiyiah**	**50.85**	**305**	*i*	P	**P**	**13 57 46.3**	**+0.7**
	SNR=8.2							
ULN	**Ulaanbaatar**	**50.85**	**6**		P	**P**	**13 57 46.1**	**+0.9**
ULN	**Ulaanbaatar**	**50.85**	**6**	*ce*	P	**P**	**13 57 46.5**	**+1.2**
ULN					pmax	pmax		
	comp=Z,376nm,1.3s							
ULN	**Ulaanbaatar**	**50.85**	**6**		P	**P**	**13 57 47.0**	**+1.7**
HATD	**Hatta, Dubai**	**50.85**	**305**		P	**P**	**13 57 46.5**	**+0.9**
	SNR=8.2							
HATD	**Hatta, Dubai**	**50.85**	**305**	*i*	P	**P**	**13 57 46.4**	**+0.9**
	SNR=7.4							
AAK	**Ala-Archa**	**50.89**	**336**		P	**P**	**13 57 47.1**	**+1.3**
	SNR=18							
AAK	**Ala-Archa**	**50.89**	**336**		P	**P**	**13 57 46.2**	**+0.5**
AAK					IAmb	IAmb	13 57 58.9	
	comp=Z,116nm,1.1s							
AAK	**Ala-Archa**	**50.89**	**336**	*ce*	P	**P**	**13 57 47.1**	**+1.3**
AAK					pmax	pmax		
	comp=Z,175nm,2.5s							
AAK					MLR	MLR		
	comp=Z,2μm,24.0s							
AAK	**Ala-Archa**	**50.89**	**336**		P	**P**	**13 57 47.3**	**+1.6**
AAK					P	**P**	**13 57 47.3**	**+1.6**
AAK	**Ala-Archa**	**50.89**	**336**	*i*	P	**P**	**13 57 47.1**	**+1.3**
	SNR=20							
MDH	**Madha**	**50.93**	**306**		P	**P**	**13 57 45.9**	**-0.2**
ARPS	**Mount Arapiles**	**51.03**	**137**		P	**P**	**13 57 47.7**	**+1.0**
	baz=51,SNR=5.4							
ARPS	**Mount Arapiles**	**51.03**	**137**		P	**P**	**13 57 48.0**	**+1.3**
MSFE	**Esma-Masafi**	**51.07**	**306**	*i*	P	**P**	**13 57 48.2**	**+1.0**
	SNR=6.0							
MASF	**Masafi**	**51.07**	**306**		P	**P**	**13 57 48.4**	**+1.2**
	SNR=9.2							
CHMS	**Chumysh**	**51.09**	**336**		P	**P**	**13 57 48.0**	**+1.0**
	SNR=21							
EKS2	**Erkin-Say**	**51.21**	**335**		P	**P**	**13 57 49.7**	**+1.7**
	SNR=97							
KUU	**Kurty**	**51.23**	**338**	*ci*	P	**P**	**13 57 48.7**	**+0.7**
KUU					*e*S	**S**	**14 05 05.5**	**+0.7**
KUU					pmax	pmax		
	comp=Z,466nm,1.7s							
KUU					smax	smax		
	comp=E,644nm,4.7s							
KUU					MLR	MLR		
	comp=Z,2μm,21.0s							
KUU	**Kurty**	**51.23**	**338**	⇑*i*	P	**P**	**13 57 48.7**	**+0.7**
	comp=Z,466nm,1.7s,baz=338							
KUU				*e*	S	**S**	**14 05 05.6**	**+0.7**
	comp=Z,644nm,4.7s,baz=338							
KUU					LR	LR	14 20 34.3	
	comp=Z,2μm,21.0s,baz=338							
FAQ	**Al Faqa, Dubai**	**51.26**	**305**		P	**P**	**13 57 49.3**	**+0.8**
	SNR=6.0							
FAQ	**Al Faqa, Dubai**	**51.26**	**305**	*i*	P	**P**	**13 57 49.0**	**+0.4**
	SNR=6.8							
INU	**Inuyama**	**51.28**	**39**		P	**P**	**13 57 49.0**	**+0.4**
NAZ	**Nazwa, Dubai**	**51.31**	**305**		P	**P**	**13 57 49.8**	**+0.8**
NAZ	**Nazwa, Dubai**	**51.31**	**305**		P	**P**	**13 57 49.0**	**0.0**
SHME	**Shamm**	**51.39**	**307**		P	**P**	**13 57 50.6**	**+1.0**
USP	**Ospenovka**	**51.41**	**336**		P	**P**	**13 57 50.6**	**+1.1**
	SNR=82							
CMSA	**Cobar Meteorol**	**51.42**	**129**		P	**P**	**13 57 50.5**	**+0.8**
	baz=52,SNR=49							
CMSA	**Cobar Meteorol**	**51.42**	**129**		P	**P**	**13 57 50.6**	**+0.9**
ASUD	**Al Ashush, Dub**	**51.42**	**305**		P	**P**	**13 57 51.1**	**+1.2**
ASUD	**Al Ashush, Dub**	**51.42**	**305**		P	**P**	**13 57 51.0**	**+1.2**
HRA	**Herat**	**51.43**	**319**		P	**P**	**13 57 49.2**	**-0.7**
TDK	**Taldyqorghan**	**51.45**	**340**	*ci*	P	**P**	**13 57 50.7**	**+1.0**
TDK					*e*S	**S**	**14 05 08.5**	**+0.6**
TDK					pmax	pmax		
	comp=Z,341nm,1.5s							
TDK					smax	smax		
	comp=N,362nm,2.5s							
TDK					MLR	MLR		
	comp=Z,2μm,18.0s							
TDK	**Taldyqorghan**	**51.45**	**340**	⇑*i*	P	**P**	**13 57 50.8**	**+1.0**
	comp=Z,341nm,1.5s,baz=340							
TDK				*e*	S	**S**	**14

ZSN pmax pmax
comp=Z,209nm,1.9s
ZSN smax smax
comp=E,370nm,6.8s
ZSN Zaisan 51.86 347⇑ *i*P **P 13 57 54.4 +1.6**
comp=E,209nm,1.9s,baz=347
ZSN *e*S **S 14 05 15.8 +2.3**
comp=E,370nm,6.8s,baz=347
MK31 Makanchi Array 51.89 344 P **P 13 57 53.5 +0.5**
MK31 IAmb IAmb 13 57 55.1
comp=Z,201nm,0.8s
MK31 Makanchi Array 51.89 344*c i*P **P 13 57 53.8 +0.8**
MKAR Makanchi Array 51.89 344 P **P 13 57 53.5 +0.6**
comp=Z,227nm,0.7s,baz=148,slow=8.0,SNR=1321
MKAR S **S 14 05 15.3 +1.3**
comp=Z,6.1nm,1.0s,baz=151,slow=15,SNR=7.8
MKAR LR LR 14 24 52.2
comp=Z,2µm,18.5s,baz=171,slow=42
MKAR PKPPKP **P'P'df 14 28 26.6 -0.6**
comp=Z,0.5nm,0.9s,baz=305,slow=4.3,SNR=3.6
comp=Z,227nm,0.7s
MKAR Makanchi Array 51.89 344 *i* P **P 13 57 53.9 +0.9**
MKAR pmax pmax
comp=Z,228nm,0.7s
MAKZ Makanchi 51.99 344 P **P 13 57 54.0 +0.4**
MAKZ IAmb IAmb 13 57 55.8
comp=Z,164nm,1.0s
MAKZ Makanchi 51.99 344 P **P 13 57 53.2 -0.5**
RMQ Roma 52.08 122 P **P 13 57 55.9 +1.2**
baz=52,SNR=12
RMQ Roma 52.08 122 P **P 13 57 55.9 +1.2**
MZR Muzera 52.30 302 P **P 13 57 57.2 +0.8**
SNR=9.4
MZR Muzera 52.30 302 *i* P **P 13 57 57.6 +1.2**
SNR=17
DZA Taraz 52.46 333 *e*P **P 13 57 57.5 +0.3**
DZA Taraz 52.46 333 *e*P **P 13 57 57.6 +0.3**
baz=333
IUG Iuzhnay 52.47 332*c i*P **P 13 57 58.1 +0.7**
IUG *e*S **S 14 05 22.4 +0.1**
IUG smax smax
comp=N,211nm,3.8s
IUG Iuzhnay 52.47 332⇑ *i*P **P 13 57 58.2 +0.7**
baz=332
IUG *e*S **S 14 05 22.4 +0.1**
comp=N,211nm,3.8s,baz=332
RK1H Rockhampton Ha 52.70 117 P **P 13 57 59.6 +0.2**
MAJO Matsushiro 52.79 38 P **P 13 57 58.9 -0.9**
MAJO IAmb IAmb 13 58 00.5
comp=Z,158nm,1.1s
MAJO Matsushiro 52.79 38*c i*P **P 13 57 59.4 -0.4**
MAJO pmax pmax
comp=Z,164nm,1.2s
MAJO MLR MLR
comp=Z,3µm,19.0s
MAJO Matsushiro 52.79 38 P **P 13 57 58.6 -1.2**
MJAR Matsushiro Arr 52.79 38 P **P 13 57 59.3 -0.5**
comp=Z,95nm,1.0s,baz=214,slow=6.5,SNR=110
MJAR LR LR 14 21 42.4
comp=Z,3µm,19.3s,baz=240,slow=38
comp=Z,95nm,1.0s
BRAT Ballarat 52.87 136 P **P 13 58 02.6 +2.3**
KK31 Karatay Array 53.00 333 P **P 13 58 00.7 -0.5**
KK31 IAmb IAmb 13 58 03.2
comp=Z,226nm,2.0s
KK31 Karatay Array 53.00 333 *i* P **P 13 58 01.0 -0.2**
KKAR Karatay Array 53.00 333 P **P 13 58 00.6 -0.6**
KKAR IAmb IAmb 13 58 03.1
comp=Z,226nm,2.0s
KKAR Karatay Array 53.00 333 P **P 13 58 00.6 -0.6**
BTLS Baital 53.07 337*c i*P **P 13 58 01.8 +0.1**
BTLS *e*S **S 14 05 28.6 -1.5**
BTLS pmax pmax
comp=Z,73nm,2.0s
BTLS smax smax
comp=E,63nm,4.0s
BTLS Baital 53.07 337⇑ *i*P **P 13 58 01.8 +0.1**
comp=E,73nm,2.0s,baz=337
BTLS *e*S **S 14 05 28.6 -1.5**
comp=E,63nm,4.0s,baz=337
ZAK Zakamensk 53.08 2 *e*P **P 13 58 02.0 +0.2**
ZAK *e* 13 59 07.6
ZAK pmax pmax
comp=Z,57nm,1.4s
ZAK pmax pmax
comp=Z,43nm,1.2s
MSHR Mys Shultsa 53.16 28*ce*P **P 13 58 03.1 +0.7**
MSHR pmax pmax
comp=Z,27nm,0.8s
DGZ Jazzator, Alta 53.49 350*c i*P **P 13 58 06.0 +1.1**
DGZ pmax pmax
comp=Z,231nm,1.0s
DGZ MLR MLR
comp=Z,28µm,19.0s
JRN Qarnain Island 53.60 304 P **P 13 58 06.8 +0.9**
EIDS Eidsvold 53.75 120 P **P 13 58 07.4 +0.3**
baz=54,SNR=13
EIDS Eidsvold 53.75 120 P **P 13 58 07.4 +0.3**
EIDS Eidsvold 53.75 120 P **P 13 58 07.7 +0.6**
JSD Sado 53.78 37 P **P 13 58 06.4 -0.6**
JSD IAmb IAmb 13 58 07.8
comp=Z,130nm,0.9s
VLA Vladivostok 53.92 28*c i*P **P 13 58 05.4 -2.5**
VLA pmax pmax
comp=Z,109nm,1.0s
VLA MLR MLR
comp=Z,261µm,19.0s
TOO Toolangi 53.96 136 P **P 13 58 10.7 +2.3**
baz=54,SNR=5.3
TOO Toolangi 53.96 136 P **P 13 58 10.5 +2.1**
MDJ Mudanjiang 54.04 26 P **P 13 58 09.9 +1.1**
BNX BinXian 54.05 23⇑ P **P 13 58 09.4 +0.6**
BNX sP **pP 13 58 17.8 +0.6**
BNX PP **PP 14 00 14.1 +3.5**
BNX S **S 14 05 44.4 +1.1**
BNX sS **sS 14 05 55.5 -1.7**
BNX pmax pmax
comp=Z,190nm,1.5s
BNX pmax pmax
comp=Z,1µm,4.1s
BNX LR LR
comp=Z,9µm,15.0s
BNX LR LR
comp=Z,5µm,15.0s
BNX LR LR
comp=Z,9µm,14.9s
ABPO Ambohimpanom 54.22 249 IAMs_20 IAMs_20 14 17 27.8
comp=Z,5µm,18.0s
MOY Mondy 54.30 1 *e*P **P 13 58 11.8 +1.1**
MOY pmax pmax
comp=Z,159nm,2.0s
USRK Ussuriysk Ar. 54.79 28 P **P 13 58 14.9 +0.7**
comp=Z,270nm,0.9s,baz=222,slow=6.2,SNR=242
USRK S **S 14 05 49.0 -4.4**
comp=Z,2.4nm,0.7s,baz=201,slow=28,SNR=0.8
USRK LR LR 14 22 41.0
comp=Z,4µm,19.4s,baz=200,slow=37
comp=Z,270nm,0.9s
USRK Ussuriysk Ar. 54.79 28 P **P 13 58 15.0 +0.7**
IRK Irkutsk 54.98 3 *e*P **P 13 58 16.4 +0.9**
IRK *e*S **S 14 05 54.0 -1.8**
IRK pmax pmax
comp=Z,292nm,2.0s
VOI Vohitsoka 55.18 245 P **P 13 58 18.1 +0.4**
VOI Vohitsoka 55.18 245 P P 13 58 26.6 +8.9
CAN Canberra 55.49 132 P **P 13 58 20.3 +0.7**
SHMA Al-Shehemyia 55.53 304 P **P 13 58 20.5 +0.6**
FOMA Nahampoana Res 55.73 242 IAMs_20 IAMs_20 14 17 41.6
comp=Z,3µm,19.0s
ARMA Armidale 55.74 125 P **P 13 58 23.3 +1.8**
baz=56,SNR=4.7
ARMA Armidale 55.74 125 P **P 13 58 23.1 +1.5**
CNB Canberra Magne 55.76 132 P **P 13 58 22.4 +0.8**
baz=56,SNR=5.0
CNB Canberra Magne 55.76 132 P **P 13 58 22.7 +1.1**
CIT Chita 55.82 10 *e*P **P 13 58 23.2 +1.6**
CIT *e* 13 58 29.0
CIT *e* 14 00 24.4
CIT *e* 14 06 14.6
CIT pmax pmax
comp=Z,781nm,1.6s
SAKB Bahrain 55.93 304 P **P 13 58 23.8 +1.0**
GEYT Alibeck 56.23 320 P **P 13 58 25.0 +0.2**
comp=Z,48nm,0.9s,baz=159,slow=8.7,SNR=63
GEYT S **S 14 06 08.6 -4.4**
comp=Z,1.4nm,0.4s,baz=30,slow=22,SNR=1.5
GEYT LR LR 14 25 04.0
comp=Z,2µm,20.8s,baz=150,slow=39
comp=Z,48nm,0.9s
GYA0 ALIBECK ARRAY 56.23 320 P **P 13 58 24.3 -0.5**
OTUK Ortayu 56.39 338 P **P 13 58 25.7 0.0**
KURBB Kurchatov Arra 56.41 344 S **S 14 06 11.1 -3.7**
comp=Z,1.2nm,0.5s,baz=56,slow=14,SNR=1.4
KURBB LR LR 14 27 30.0
comp=Z,3µm,18.1s,baz=142,slow=41
KURK Kurchatov 56.47 344 P **P 13 58 26.3 +0.2**
KURK Kurchatov 56.47 344 IAMs_20 IAMs_20 14 27 19.0
comp=Z,3µm,19.0s
KURK Kurchatov 56.47 344*ce*P **P 13 58 26.7 +0.5**
KURK pmax pmax
comp=Z,450nm,1.3s
KURK MLR MLR
comp=Z,4µm,25.0s
KURK Kurchatov 56.47 344 P **P 13 58 26.9 +0.7**
JTM Tenmabayashi 57.20 36 P **P 13 58 31.2 -0.4**
MOO Moorlands 57.48 140 P **P 13 58 36.2 +2.6**
baz=58,SNR=4.0
TEY Ternei 57.63 30⇑ *e*P **P 13 58 33.5 -1.0**
TEY *e* 14 06 29.1
TEY pmax pmax
comp=N,20nm,1.3s
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=Z,30nm,1.3s
TEY pmax pmax
comp=Z,100nm,5.6s
TEY MLR MLR
comp=E,100nm,20.0s
TEY MLR MLR
comp=N,100nm,17.0s
TEY MLR MLR
comp=Z,100nm,19.0s
BRZS Berezniki 57.72 339*c i*P **P 13 58 35.0 0.0**
BRZS *e*S **S 14 06 31.7 -0.3**
BRZS Berezniki 57.72 339⇑ *i*P **P 13 58 35.1 0.0**
baz=339
BRZS *e*S **S 14 06 31.8 -0.3**
baz=339
TAU Tasmania Unive 57.80 141 IAMs_20 IAMs_20 14 23 15.3
comp=Z,4µm,19.0s
TAU Tasmania Unive 57.80 141 P **P 13 58 38.0 +2.2**
ZALV Zalesovo Beam 58.03 349 P **P 13 58 37.6 +0.5**
comp=Z,166nm,0.9s,baz=172,slow=4.5,SNR=500
ZALV PKPPKP **P'P'df 14 28 15.2 -2.8**
comp=Z,0.3nm,0.3s,baz=319,slow=4.2,SNR=1.6
ZALV PKP2bc 14 28 29.9
comp=Z,0.3nm,0.2s,baz=294,slow=4.3,SNR=4.5
comp=Z,166nm,0.9s
KLR Kul'dur 58.61 24 P **P 13 58 41.4 +0.1**
comp=Z,96nm,1.0s,baz=234,slow=6.2,SNR=184
KLR S **S 14 06 43.6 -0.1**
comp=Z,5.1nm,1.4s,baz=204,slow=7.3,SNR=2.3
comp=Z,96nm,1.0s
KLR Kul'dur 58.61 24*ce*P **P 13 58 41.8 +0.5**
KLR pmax pmax
comp=Z,292nm,1.5s
KLR MLR MLR
comp=Z,5µm,20.0s
JEW Eniwo 58.73 35 P **P 13 58 42.1 -0.1**
ATD Arta Tunnel 58.80 285 LR LR 14 21 56.9
comp=Z,434nm,18.1s,baz=100,slow=34
ERM Erimo 59.20 36 P **P 13 58 45.2 -0.3**
ERM IAmb IAmb 13 58 55.1
comp=Z,64nm,0.9s
ERM Erimo 59.20 36*ce*P **P 13 58 45.9 +0.4**
ERM pmax pmax
comp=Z,54nm,1.3s
ERM MLR MLR
comp=Z,2µm,17.0s
ERM Erimo 59.20 36 P **P 13 58 46.1 +0.6**
RAYN Ar Rayn 59.34 299 P **P 13 58 45.9 -1.0**
RAYN Ar Rayn 59.34 299 IAMs_20 IAMs_20 14 28 01.6
comp=Z,4µm,18.0s
RAYN Ar Rayn 59.34 299 P **P 13 58 45.9 -1.0**
RAYN pmax pmax
comp=Z,44nm,1.2s
RAYN MLR MLR
comp=Z,4µm,18.0s
RAYN Ar Rayn 59.34 299 P **P 13 58 46.9 0.0**
RAYN Ar Rayn 59.34 299*i* P **P 13 58 46.8 -0.1**
SNR=14
HNR Honiara 59.68 99 P **P 13 58 48.5 -0.9**
comp=Z,327nm,0.9s,baz=209,slow=5.2,SNR=8.7
HNR LR LR 14 29 12.7
comp=Z,858nm,18.2s,baz=256,slow=41
comp=Z,327nm,0.9s
HNR Honiara 59.68 99 P **P 13 58 47.8 -1.6**
HNR Honiara 59.68 99 P **P 13 58 47.8 -1.6**
HNR pmax pmax
comp=Z,418nm,1.0s
HNR MLR MLR
comp=Z,1µm,21.0s
HNR Honiara 59.68 99 P **P 13 58 48.9 -0.5**
ZEA Zeya 60.73 18 *e*P **P 13 58 56.8 +1.0**
ZEA *e*S **S 14 07 17.2 +6.3**
ZEA pmax pmax
comp=E,100nm,2.2s
ZEA pmax pmax
comp=N,200nm,1.9s
ZEA pmax pmax
comp=Z,500nm,2.3s
ZEA pmax pmax
comp=N,70nm,1.0s
ZEA pmax pmax
comp=E,40nm,1.0s
ZEA pmax pmax
comp=Z,90nm,1.4s
ZEA smax smax
comp=E,300nm,9.6s
ZEA smax smax
comp=N,600nm,12.6s
ZEA MLR MLR
comp=N,4µm,17.0s
ZEA MLR MLR
comp=Z,4µm,17.0s
BVA0 Borovoye Array 61.04 340 *i* P **P 13 58 57.1 -0.9**
BVAR Borovoye Array 61.04 340 LR LR 14 30 28.0
comp=Z,2µm,18.2s,baz=149,slow=41
BRVK Borovoye 61.11 340 P **P 13 58 57.8 -0.6**
BRVK IAmb IAmb 13 59 13.5
comp=Z,49nm,1.1s
BRVK Borovoye 61.11 340*ce*P **P 13 58 58.0 -0.4**
BRVK pmax pmax
comp=Z,87nm,1.7s
BRVK MLR MLR
comp=Z,2µm,23.0s
BRVK Borovoye 61.11 340 P **P 13 58 58.1 -0.3**
BOD Bodaibo 61.48 8⇓ *i*P **P 13 59 01.2 +0.4**
BOD pmax pmax
comp=Z,353nm,1.7s
GRNR Gornyy 61.72 25⇑ *i*P **P 13 59 03.4 +0.8**
GRNR *e*S **S 14 07 30.6 +6.9**
GRNR pmax pmax
comp=E,10.0nm,1.2s
GRNR pmax pmax
comp=N,10.0nm,0.9s
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR smax smax
comp=E,1.0nm,0.9s
GRNR MLR MLR
comp=E,2µm,17.0s
GRNR MLR MLR
comp=N,4µm,16.0s
GRNR MLR MLR
comp=Z,5µm,17.0s
YUK Yuzh-Kuril'sk 61.99 36*c i*P **P 13 59 04.7 +0.1**
YSS Yuzh-Sakhalins 62.08 32 P **P 13 59 05.2 +0.1**
YSS Yuzh-Sakhalins 62.08 32*α i*P **P 13 59 05.7 +0.7**
YSS *e**PP **pP 13 59 13.7 0.0**
YSS *e**SP **sP 13 59 16.5 -0.4**
YSS *e*S S 14 07 17.3 -11
YSS *e*PPS PPS 14 07 45.4
YSS pmax pmax
comp=Z,380nm,1.2s
YSS pmax pmax
comp=Z,1µm,4.8s
YSS pmax pmax
comp=N,500nm,3.9s
YSS MLR MLR
comp=Z,3µm,17.0s
YSS MLR MLR
comp=N,3µm,15.0s
YSS MLR MLR
comp=E,3µm,15.0s
YSS Yuzh-Sakhalins 62.08 32 P **P 13 59 05.7 +0.7**
AB31 Akbulak array 62.48 331 *i* P **P 13 59 06.9 -0.8**
ABKAR Akbulak array 62.48 331 P **P 13 59 07.4 -0.3**
ABKAR IAmb IAmb 13 59 08.9
comp=Z,156nm,1.1s
ABKAR Akbulak array 62.48 331 P **P 13 59 07.1 -0.6**
KMBO Kilima Mbogo 62.95 270 P **P 13 59 12.8 +1.0**
comp=Z,2.4nm,0.7s,baz=55,slow=8.9,SNR=5.1
KMBO S **S 14 07 41.6 +0.8**
comp=Z,0.7nm,0.4s,baz=59,slow=19,SNR=1.3
KMBO LR LR 14 20 55.0
comp=Z,2µm,21.5s,baz=92,slow=31
KMBO Kilima Mbogo 62.95 270 P **P 13 59 12.8 +1.0**
KMBO Kilima Mbogo 62.95 270 *i* P **P 13 59 13.2 +1.3**
SNR=6.8
UGL Uglegorsk 63.12 29⇓ *i*P **P 13 59 10.1 -1.8**
UGL *e*S **S 14 07 39.8 -1.4**
UGL pmax pmax
comp=Z,240nm,1.1s
UGL MLR MLR
comp=N,3µm,18.0s
UGL MLR MLR
comp=E,6µm,18.0s
UGL MLR MLR
comp=Z,4µm,11.0s
CASY Casey 63.73 175 IAMs_20 IAMs_20 14 20 53.8
comp=Z,4µm,20.0s
KUR Kuril'sk 63.86 36*c i*P **P 13 59 17.4 +0.5**
KUR pmax pmax
comp=Z,430nm,1.2s
AKTO Aktyubinsk 64.19 331 LR LR 14 31 26.0
comp=Z,1µm,20.4s,baz=140,slow=40
AKTO Aktyubinsk 64.19 331 P **P 13 59 18.2 -0.9**
KOUNC Koumac, New Ca 64.75 111 P **P 13 59 24.3 +1.0**
LODK Lodwar 65.12 275 IAMs_20 IAMs_20 14 26 22.1
comp=Z,3µm,18.0s
LODK Lodwar 65.12 275 P **P 13 59 28.6 +2.7**
SNR=7.2
MAK Makhachkala 65.75 320 *e*P P 13 59 22.8 -6.5
MAK *e*SS SS 14 12 27.3 -1.6
MAK pmax pmax
comp=Z,420nm,1.4s
GNI Garni 66.28 316 S **S 14 08 18.3 -2.7**
comp=Z,6.8nm,0.6s,baz=41,slow=20,SNR=1.6
GNI Garni 66.28 316 P **P 13 59 32.5 -0.5**
GNI IAmb IAmb 13 59 56.2
comp=Z,105nm,1.1s
GNI Garni 66.28 316*ce*P **P 13 59 33.7 +0.7**
GNI pmax pmax
comp=Z,100nm,1.7s
GNI MLR MLR
comp=Z,1µm,23.0s
GNI Garni 66.28 316 P **P 13 59 34.0 +0.9**
GNI Garni 66.28 316 P **P 13 59 33.4 +0.4**
NOUC Port Laguerre 66.80 113 P **P 13 59 37.5 +1.0**
DZM Mont Dzumac 66.93 113 LR LR 14 31 14.9
comp=Z,4µm,19.4s,baz=276,slow=38
DZM Mont Dzumac 66.93 113 eLR LR 14 19 47.8
comp=Z,4µm,21.6s
DZM Mont Dzumac 66.93 113 P **P 13 59 38.8 +1.4**
GROC Groznyy 66.96 320 *e*P **P 13 59 36.9 -0.2**
GROC *e* 14 00 05.2
GROC *e*S **S 14 08 29.0 +0.3**
GROC pmax pmax
comp=Z,175nm,0.8s
OUENC Ouen Island, N 67.33 113 P **P 13 59 39.7 -0.2**
OUENC IAmb IAmb 13 59 41.4
comp=Z,62nm,1.1s
OUENC Ouen Island, N 67.33 113 P **P 13 59 40.7 +0.8**
YATNC Mamie plateau, 67.34 113 P **P 13 59 41.2 +1.3**
LIFNC LIFOU 67.53 111 IAMs_20 IAMs_20 14 30 44.9
comp=Z,4µm,22.0s
KARS Kars 67.63 316 P **P 13 59 42.4 +0.8**
KARS Kars 67.63 316 P **P 13 59 42.4 +0.8**
KARS pmax pmax
comp=Z,394nm,1.2s
MARD Mardin 67.97 312 P **P 13 59 43.3 -0.5**
MARD IAmb IAmb 13 59 54.2
comp=Z,69nm,0.7s
ZEI Tsey 68.01 319 *e*P **P 13 59 44.1 +0.1**
ZEI pmax pmax
comp=Z,51nm,1.0s
ARU Arti 68.06 337 LR LR 14 32 20.4
comp=Z,3µm,20.4s,baz=126,slow=38
ARU Arti 68.06 337 P **P 13 59 42.9 -0.9**
ARU IAmb IAmb 14 00 05.0
comp=Z,126nm,1.3s
ARU IAMs_20 IAMs_20 14 32 07.3
comp=Z,3µm,19.0s
ARU Arti 68.06 337*c i*P **P 13 59 43.6 -0.1**
ARU 14 00 09.2
ARU 14 02 10.4
ARU S **S 14 08 45.8 +4.4**
ARU 14 09 44.9
ARU SS **SS 14 13 12.2 +8.0**
ARU pmax pmax
comp=Z,69nm,1.0s
ARU MLR MLR
comp=Z,3µm,19.0s
YAK Yakutsk 68.50 14 P **P 13 59 45.9 -0.5**
comp=Z,37nm,0.5s,baz=211,slow=3.8,SNR=54
YAK S **S 14 08 44.7 -1.7**
comp=Z,3.5nm,0.4s,baz=227,slow=2.6,SNR=1.2
YAK LR LR 14 34 23.2
comp=Z,5µm,18.1s,baz=217,slow=40
comp=Z,37nm,0.5s
YAK Yakutsk 68.50 14 P **P 13 59 46.0 -0.3**
YAK Yakutsk 68.50 14*c i*P **P 13 59 45.8 -0.5**
YAK *e*S **S 14 08 44.1 -2.2**
YAK *e**SS **sS 14 09 08.3 +7.4**
YAK *e* 14 09 36.4
YAK *e*SS **SS 14 13 13.3 +2.6**
YAK pmax pmax
comp=Z,218nm,0.9s
YAK pmax pmax
comp=N,67nm,0.9s
YAK pmax pmax
comp=E,51nm,0.9s
YAK pmax pmax
comp=Z,229nm,3.5s
YAK pmax pmax
comp=N,222nm,3.0s
YAK pmax pmax
comp=E,174nm,3.7s
YAK smax smax
comp=N,218nm,2.9s
YAK smax smax
comp=E,209nm,2.9s
YAK MLR MLR
comp=Z,6µm,17.0s
YAK MLR MLR
comp=N,2µm,14.0s
YAK MLR MLR
comp=E,2µm,13.0s
BCA Borcka 68.97 317⇑ P **P 13 59 50.7 +0.9**
KBZ Khabaz 69.08 319 P **P 13 59 51.0 +0.5**
comp=E,49nm,0.9s,baz=115,slow=4.8,SNR=69
KBZ S **S 14 08 52.0 -2.0**
comp=E,0.8nm,0.5s,baz=56,slow=18,SNR=1.4
comp=E,49nm,0.9s
KBZ Khabaz 69.08 319*ce*P **P 13 59 50.9 +0.5**
KBZ pmax pmax
comp=Z,103nm,1.3s
KOPT Kop Dagi 69.19 315 P **P 13 59 52.2 +0.7**
KOPT IAmb IAmb 14 00 15.2
comp=Z,250nm,1.8s
ASF Jabal al Asfar 69.25 306 S **S 14 08 58.0 +1.3**
comp=Z,0.8nm,0.3s,baz=180,slow=3.0,SNR=1.7
ASF LR LR 14 31 10.5
comp=Z,3µm,18.0s,baz=115,slow=37
KVAR Kislovodsk Arr 69.31 319 S **S 14 08 54.3 -2.7**
comp=Z,2.2nm,0.4s,baz=191,slow=12,SNR=1.7
KIV Kislovodsk 69.32 319⇑ P **P 13 59 52.4 +0.4**
KIV Kislovodsk 69.32 319 P **P 13 59 51.8 -0.2**
KIV IAmb IAmb 13 59 53.8
comp=Z,88nm,1.1s
KIV Kislovodsk 69.32 319 *e*P **P 13 59 52.5 +0.5**
KIV *e*S **S 14 08 58.6 +1.5**
KIV *e*SS **SS 14 13 27.9 +3.5**
KIV pmax pmax
comp=Z,76nm,1.0s
KIV pmax pmax

comp=Z,97nm,3.5s
KIV Kislovodsk 69.32 319 P **P** **13 59 52.2 +0.2**
KIV Kislovodsk 69.32 319 *i* P **P** **13 59 52.5 +0.5**
SNR=8.3
MOPA Mopani 69.47 246 *e*P **P** **13 59 53.0 -0.2**
MOPA IAmb IAmb 14 00 03.0
comp=Z,30nm,1.1s
MBAR Mbarara 69.48 270 LR LR 14 27 40.8
comp=Z,1μm,19.0s,baz=71,slow=34
MBAR Mbarara 69.48 270 P **P** **13 59 55.8 +2.1**
MAW Mawson 69.53 194 P **P** **13 59 53.3 +0.6**
comp=Z,4.5nm,0.9s,baz=36,slow=7.7,SNR=10
MAW S **S** **14 08 57.3 -1.2**
comp=Z,0.6nm,0.6s,baz=64,slow=14,SNR=1.5
MAW LR LR 14 23 55.4
comp=Z,3μm,21.8s,baz=34,slow=30
MAW PKP2bc 14 27 57.6
comp=Z,16nm,1.1s,baz=205,slow=4.9,SNR=15
MAW Mawson 69.53 194 P **P** **13 59 54.0 +1.3**
baz=70,SNR=7.2
MAW Mawson 69.53 194 P **P** **13 59 53.5 +0.8**
GOF Gofitskoye 69.57 321⇑ *e*P P 13 59 47.5 -5.9
GOF *e*S **S** **14 09 00.3 +0.5**
GOF pmax pmax
comp=Z,174nm,1.2s
POGA Pongola 69.64 242 *e*P **P** **13 59 54.8 +0.6**
POGA IAmb IAmb 14 00 05.0
comp=Z,53nm,1.2s
GHAJ Ghor Haditha 70.09 305 IAMs_20 IAMs_20 14 30 22.5
comp=Z,4μm,20.0s
EIL Elat 70.16 303 S **S** **14 09 03.3 -4.0**
comp=Z,3.5nm,0.8s,baz=192,slow=11,SNR=1.6
EIL LR LR 14 30 22.9
comp=Z,4μm,19.1s,baz=103,slow=36
BELG Belogornoye 70.56 329 S **S** **14 09 05.5 -5.4**
comp=Z,4.9nm,0.6s,baz=72,slow=20,SNR=1.1
BELG Belogornoye 70.56 329*c i*P **P** **13 59 58.3 -0.9**
BELG pmax pmax
comp=Z,24nm,1.3s
HWQ Hawqa 70.64 308 *e*P **P** **14 00 01.1 +0.7**
MMAI Mount Meron Ar 70.71 306 S **S** **14 09 13.1 -0.6**
comp=Z,0.6nm,0.2s,baz=181,slow=9.8,SNR=2.2
MMAI LR LR 14 31 50.6
comp=Z,3μm,18.6s,baz=270,slow=36
MUSN Musina, Limpop 70.76 248 *e*P **P** **14 00 01.1 -0.2**
MUSN IAmb IAmb 14 00 10.6
comp=Z,248nm,2.4s
BHL Bhannes 70.77 307 *e*P **P** **14 00 01.9 +0.8**
SOC Sochi 71.12 318 *e*P **P** **14 00 01.1 -1.8**
SOC *e* 14 02 39.9
SOC *e*S **S** **14 09 19.8 +1.9**
SOC pmax pmax
comp=Z,42nm,0.6s
SOC MLR MLR
comp=Z,1μm,21.0s
NWCL Newcastle 71.29 242 *e*P **P** **14 00 04.5 0.0**
NWCL IAmb IAmb 14 00 15.0
comp=Z,52nm,1.1s
SKR Severo-Kuril's 71.44 34 *e*P **P** **14 00 02.5 -2.2**
SKR *e*S **S** **14 09 26.6 +5.3**
SKR pmax pmax
comp=Z,300nm,6.7s
SKR pmax pmax
comp=Z,176nm,1.0s
SKR MLR MLR
comp=Z,800nm,13.0s
BLWY Bulawayo 71.76 250⇓ *i*P **P** **14 00 07.7 +0.2**
BLWY IAmb IAmb 14 00 18.0
comp=Z,181nm,1.1s
MATP Matopo 71.89 250 LR LR 14 27 20.1
comp=Z,3μm,20.2s,baz=64,slow=32
MATP Matopo 71.89 250 *e*P **P** **14 00 08.5 +0.3**
MATP IAmb IAmb 14 00 18.8
comp=Z,329nm,1.6s
LSZ Lusaka 71.92 255 LR LR 14 27 25.6
comp=Z,2μm,19.8s,baz=96,slow=32
LSZ Lusaka 71.92 255 IAMs_20 IAMs_20 14 29 19.4
comp=Z,3μm,18.0s
BNN Bunyan 72.15 312 P **P** **14 00 08.2 -1.2**
BNN IAmb IAmb 14 00 09.8
comp=Z,112nm,1.1s
KSTD Kokstad 72.15 239 *e*P **P** **14 00 10.4 +0.7**
KSTD IAmb IAmb 14 00 21.1
comp=Z,284nm,2.6s
SLR Silverton 72.51 244 *e*P **P** **14 00 10.8 -1.1**
SLR IAmb IAmb 14 00 22.3
comp=Z,44nm,1.1s
NRIK Noril'sk 72.55 355 P **P** **14 00 10.7 -0.3**
comp=Z,88nm,1.1s,baz=165,slow=5.0,SNR=47
NRIK S **S** **14 09 26.8 -6.6**
comp=Z,1.3nm,0.3s,baz=146,slow=11,SNR=1.6
NRIK LR LR 14 35 59.6
comp=Z,4μm,19.7s,baz=172,slow=39
comp=Z,88nm,1.1s
NRIK Noril'sk 72.55 355 P **P** **14 00 10.5 -0.5**
NRIK IAmb IAmb 14 00 12.3
comp=Z,154nm,1.1s
NRIK Noril'sk 72.55 355*ce*P **P** **14 00 10.9 -0.1**
NRIK pmax pmax
comp=Z,177nm,1.3s
NRIK MLR MLR
comp=Z,4μm,20.0s
LEPH Lephalale, Lim 72.78 246 *e*P **P** **14 00 11.2 -2.3**
LEPH IAmb IAmb 14 00 23.8
comp=Z,42nm,1.0s
TARA Tarawa 72.80 88 P **P** **14 00 12.2 -1.4**
TARA IAmb IAmb 14 00 14.7
comp=Z,98nm,0.9s
TARA Tarawa 72.80 88 P **P** **14 00 14.4 +0.8**
CSS Mathiatis 72.91 308 P **P** **14 00 14.1 +0.2**
CSS IAmb IAmb 14 00 49.0
comp=Z,79nm,1.2s
CSS IAMs_20 IAMs_20 14 35 44.2
comp=Z,2μm,19.0s
ANN Anapa 73.11 319 *e*P **P** **14 00 13.4 -1.4**
ANN *e*S **S** **14 09 36.1 -4.5**
ANN pmax pmax
comp=Z,34nm,1.0s
VRH Novokhopyorsk 73.14 326 *e*P **P** **14 00 14.2 -0.6**
VRH pmax pmax
comp=Z,160nm,0.9s
SNKL Senekal, Frees 73.21 241 *e*P **P** **14 00 15.8 -0.2**
SNKL IAmb IAmb 14 00 28.3
comp=Z,47nm,1.1s
KIRV Kirov 73.22 335 LR LR 14 36 52.0
comp=Z,1μm,18.2s,baz=126,slow=39
KIRV Kirov 73.22 335*c i*P **P** **14 00 15.2 +0.1**
PRYS Parys 73.44 243 *e*P **P** **14 00 16.2 -1.2**
PRYS IAmb IAmb 14 00 27.6
comp=Z,121nm,1.8s
PEA0B Petropavlovsk- 73.47 32*ce*P **P** **14 00 16.1 -0.7**
PETK Petropavlovsk- 73.47 32 P **P** **14 00 15.8 -1.0**
comp=Z,29nm,0.9s,baz=211,slow=8.4,SNR=18
PETK LR LR 14 34 50.5
comp=Z,1μm,18.1s,baz=255,slow=38
comp=Z,29nm,0.9s
PETK Petropavlovsk- 73.47 32 P **P** **14 00 16.3 -0.5**
MA2 Magadan 73.70 24 P **P** **14 00 17.7 -0.2**
comp=Z,42nm,0.8s,baz=201,slow=7.6,SNR=8.2
MA2 LR LR 14 35 01.4
comp=Z,2μm,19.1s,baz=227,slow=38
comp=Z,42nm,0.8s
MA2 Magadan 73.70 24 IAMs_20 IAMs_20 14 37 30.6
comp=Z,3μm,18.0s
MA2 Magadan 73.70 24*ce*P **P** **14 00 18.2 +0.2**
MA2 pmax pmax
comp=Z,165nm,1.7s
MA2 Magadan 73.70 24 P **P** **14 00 19.3 +1.3**
PET Petropavlovsk 73.94 32 P **P** **14 00 18.8 -0.7**
PET IAmb IAmb 14 00 20.9
comp=Z,130nm,1.0s
PET Petropavlovsk 73.94 32 *e*P **P** **14 00 19.6 +0.1**
PET *e* 14 03 02.9
PET *e*S **S** **14 09 48.9 -0.9**
PET *e*PS **PnS** **14 10 19.1 -6.2**
PET *e*PPS PPS 14 10 34.7
PET *e*SS **SS** **14 14 41.4 +6.8**
PET pmax pmax
comp=Z,179nm,1.0s
PET pmax pmax
comp=Z,1μm,6.3s
PET pmax pmax
comp=Z,400nm,8.3s
PET Petropavlovsk 73.94 32 P **P** **14 00 19.8 +0.3**
BRTR Keskin Array B 74.05 313 P **P** **14 00 20.4 -0.3**
comp=Z,24nm,0.8s,baz=132,slow=7.1,SNR=86
BRTR LR LR 14 33 12.4
comp=Z,1μm,21.2s,baz=111,slow=36
comp=Z,24nm,0.8s
BRTR Keskin Array B 74.05 313 P **P** **14 00 19.2 -1.5**
BRTR Keskin Array B 74.05 313 *i* P **P** **14 00 20.0 -0.6**
BRTR pmax pmax
comp=Z,24nm,0.8s
RPZ Rata Peaks 74.24 135 LR LR 14 32 15.5
comp=Z,6μm,21.9s,baz=276,slow=35
BZK Bozkurt 74.48 315⇑P **P** **14 00 22.6 -0.3**
VSR Storozhevoye 74.59 325 *e*P **P** **14 00 22.9 -0.4**
VSR pmax pmax
comp=Z,110nm,0.8s
ANTO Ankara 74.71 313⇓P **P** **14 00 24.2 -0.2**
ANTO Ankara 74.71 313 P **P** **14 00 23.5 -0.9**
ANTO IAmb IAmb 14 00 25.5
comp=Z,68nm,1.1s
ANTO Ankara 74.71 313 P **P** **14 00 23.5 -0.9**
ANTO pmax pmax
comp=Z,68nm,1.1s
ANTO Ankara 74.71 313 P **P** **14 00 24.2 -0.2**
VORR Voronezh 74.76 326 *e*P **P** **14 00 23.5 -0.8**
VORR pmax pmax
comp=Z,120nm,0.6s
LBTB Lobatse 74.87 245 LR LR 14 29 09.9
comp=Z,3μm,18.4s,baz=84,slow=32
LBTB Lobatse 74.87 245 *e*P **P** **14 00 26.8 +1.1**
LBTB IAmb IAmb 14 00 36.2
comp=Z,83nm,1.6s
SWZ Schweizer 75.27 243 *e*P **P** **14 00 27.5 -0.5**
SWZ IAmb IAmb 14 00 38.3
comp=Z,157nm,1.8s
LPSR Galich'ya Gora 75.31 326 *e*P **P** **14 00 26.9 -0.5**
LPSR pmax pmax
comp=Z,100nm,0.9s
SIM Simferopol' 75.36 318 *e*P **P** **14 00 26.8 -1.2**
SIM *e* 14 00 40.0
SIM *e* 14 03 21.1
SIM pmax pmax
comp=Z,94nm,1.5s
SIM pmax pmax
comp=Z,455nm,26.9s
BOSA Boshof 75.45 241 P **P** **14 00 29.1 +0.1**
comp=Z,7.1nm,0.9s,baz=91,slow=5.9,SNR=6.7
BOSA LR LR 14 30 03.9
comp=Z,3μm,18.1s,baz=90,slow=33
comp=Z,7.1nm,0.9s
BOSA Boshof 75.45 241 P **P** **14 00 27.0 -2.0**
BOSA Boshof 75.45 241 P **P** **14 00 27.0 -2.0**
BOSA pmax pmax
comp=Z,30nm,1.2s
BOSA Boshof 75.45 241⇓ *i*P **P** **14 00 29.1 +0.1**
BOSA IAmb IAmb 14 00 43.4
comp=Z,107nm,1.9s
MDUB Mudurnu 76.06 313 P **P** **14 00 30.9 -1.2**
HIZ Hauiti 76.22 129 IAMs_20 IAMs_20 14 34 02.3
comp=Z,4μm,21.0s
SEY Seymchan 76.32 22 P **P** **14 00 32.5 -0.5**
comp=Z,47nm,1.1s,baz=242,slow=6.9,SNR=16
comp=Z,47nm,1.1s
SEY Seymchan 76.32 22 *i* P **P** **14 00 32.6 -0.5**
SEY pmax pmax
comp=Z,101nm,1.3s
SEY MLR MLR
comp=Z,3μm,16.0s
GRAF Camdeboo Natio 76.42 238 *e*P P 14 00 42.8 +8.4
GRAF IAmb IAmb 14 00 43.6
comp=Z,137nm,1.8s
PRGR Permogore 76.52 336 *e*P **P** **14 00 32.8 -1.3**
PRGR *e*S **S** **14 10 19.6 +1.5**
TIXI Tiksi 76.65 9 P **P** **14 00 34.1 -0.6**
comp=Z,46nm,1.0s,baz=270,slow=20,SNR=14
TIXI S **S** **14 10 14.4 -4.7**
comp=Z,5.1nm,0.6s,baz=274,slow=24,SNR=1.4
TIXI LR LR 14 40 03.7
comp=Z,6μm,18.2s,baz=181,slow=40
comp=Z,46nm,1.0s
TIXI Tiksi 76.65 9 P **P** **14 00 33.5 -1.2**
TIXI IAmb IAmb 14 00 43.6
comp=Z,142nm,1.2s
TIXI Tiksi 76.65 9 P **P** **14 00 33.5 -1.2**
TIXI pmax pmax
comp=Z,142nm,1.2s
FWVZ Far West T-bar 76.86 130 P **P** **14 00 37.9 +1.0**
WNVZ Wahianoa 76.90 130 P **P** **14 00 38.8 +1.8**
SNVZ South Ngauruho 76.92 129 P **P** **14 00 38.7 +1.5**
BFON Badsfontein, M 77.06 238 *e*P **P** **14 00 39.0 +0.9**
BFON IAmb IAmb 14 00 46.9
comp=Z,487nm,2.6s
MYRZ Mayor Island 77.17 127 P P 14 00 52.7 +14
BHHZ Black Hill Sta 77.28 130 P **P** **14 00 40.3 +1.3**
MOS Moscow 77.33 329 *e*P **P** **14 00 35.2 -3.6**
MOS *e* 14 00 45.8
MOS *e*S **S** **14 10 21.2 -5.9**
MOS *e* 14 10 48.7
MOS pmax pmax
comp=Z,500nm,2.0s
MOS pmax pmax
comp=Z,222nm,1.4s
MOS smax smax
comp=N,1μm,5.8s
MOS smax smax
comp=E,500nm,4.8s
HLRZ Highlands Stat 77.36 128 P P 14 00 44.4 +4.8
MSVF Nonsavu 77.55 107 IAMs_20 IAMs_20 14 37 22.2
comp=Z,2μm,20.0s
MSVF Nonsavu 77.55 107 P **P** **14 00 42.7 +1.7**
BKZ Black Stump Fm 77.57 129 P **P** **14 00 39.1 -1.7**
BKZ Black Stump Fm 77.57 129 P **P** **14 00 41.3 +0.6**
BKZ Black Stump Fm 77.57 129 P **P** **14 00 41.4 +0.7**
OBN Obninsk 77.62 328⇑P **P** **14 00 40.8 +0.4**
OBN Obninsk 77.62 328 S **S** **14 10 26.3 -3.9**
comp=Z,5.3nm,0.4s,baz=169,slow=12,SNR=1.5
OBN LR LR 14 38 00.4
comp=Z,199nm,21.7s,baz=120,slow=38
OBN Obninsk 77.62 328*c i*P **P** **14 00 40.6 +0.1**
OBN *e* 14 00 44.4
OBN *i* 14 00 48.0
OBN 14 03 42.0
OBN *i* S **S** **14 10 27.5 -2.8**
OBN *i* 14 10 43.5
OBN *i* PS **PnS** **14 11 20.3 +7.7**
OBN *e*SS **SS** **14 15 37.0 +6.7**
OBN pmax pmax
comp=Z,231nm,1.4s
BRAK Brakfontein 77.73 238 *e*P **P** **14 00 42.5 +0.7**
BRAK IAmb IAmb 14 01 00.5
comp=Z,404nm,2.1s
MTHZ Maungataniwha 77.81 129 P **P** **14 00 42.7 +0.7**
KARP Karpathos 77.94 307 P **P** **14 00 42.8 -0.1**
KARP IAmb IAmb 14 00 44.6
comp=Z,195nm,1.1s
URZ Urewera 77.95 128 LR LR 14 39 11.8
comp=Z,3μm,18.6s,baz=298,slow=39
URZ Urewera 77.95 128 P **P** **14 00 42.3 -0.4**
URZ IAmb IAmb 14 00 54.5
comp=Z,147nm,1.6s
URZ IAMs_20 IAMs_20 14 35 51.6
comp=Z,3μm,20.0s
URZ Urewera 77.95 128 P **P** **14 00 43.3 +0.5**
MWZ Matawai 78.29 128 P **P** **14 00 44.7 0.0**
GRAN Grantham 78.39 238 *e*P P 14 00 53.0 +7.6
GRAN IAmb IAmb 14 00 57.0
comp=Z,28nm,1.3s
TWGZ Tauwhareparae 78.63 128 P **P** **14 00 46.9 +0.3**
SMG Samos 78.66 309 P P 14 00 55.0 +8.3
KLMR Klimovskoe 78.68 334 *e*P **P** **14 00 44.3 -1.9**
KLMR *e* 14 03 41.8
KLMR *e*S **S** **14 10 41.2 -0.2**
KLMR *e*SS **SS** **14 15 46.3 +0.4**
KLMR pmax pmax
comp=Z,169nm,1.5s
KLMR Klimovskoe 78.68 334 *e*P **P** **14 00 44.4 -1.8**
KLMR AMP 14 00 48.1
comp=Z,169nm,1.5s
KLMR *e*PP **PP** **14 03 41.9 -2.6**
KLMR *e*S **S** **14 10 41.2 -0.2**
KLMR *e*S **S** **14 10 41.2 -0.2**
KLMR *e*SS **SS** **14 15 46.4 +0.5**
KLMR *e*SS **SS** **14 15 46.4 +0.5**
KLMR LQ LQ 14 29 47.1
KLMR LQ LQ 14 29 47.1
KLMR LR LR 14 36 47.2
KLMR AMP 14 42 23.7
comp=Z,1μm,15.1s
UPI Upington 78.95 242 *e*P **P** **14 00 52.6 +4.0**
UPI IAmb IAmb 14 01 07.3
comp=Z,39nm,1.5s
FRAZ Fraserburg 79.01 238 *e*P **P** **14 00 49.7 +0.8**
FRAZ IAmb IAmb 14 01 02.5
comp=Z,308nm,2.4s
TLCR 79.02 317⇑P **P** **14 00 48.7 +0.3**
TIRR Tirgusor 79.11 316⇓P **P** **14 00 49.1 +0.1**
TPGR Topolog 79.21 317⇑P **P** **14 00 49.5 -0.1**
KEIM Keimoes 79.21 241 *e*P **P** **14 00 50.9 +0.8**
KEIM IAmb IAmb 14 01 01.5
comp=Z,66nm,1.3s
TLBR Topalu 79.38 316⇑P **P** **14 00 50.9 +0.5**
PRK Paraskevi 79.43 311 P **P** **14 00 51.8 +1.0**
SANT Santorini 79.47 308⇑P **P** **14 00 50.6 -0.6**
CFR Carcaliu 79.48 317⇓P **P** **14 00 51.0 +0.1**
MILM Milestii Mici 79.49 319⇓P **P** **14 00 50.7 -0.3**
MILM Milestii Mici 79.49 319⇓ *i*P **P** **14 00 50.5 -0.5**
comp=Z,230nm,1.3s
MILM Milestii Mici 79.49 319 *e*PcP **PcP** **14 00 58.0 -0.9**
MILM Milestii Mici 79.49 319 *e*PP PP 14 03 51.0 -0.6
MILM *e*S **S** **14 10 45.0 -5.6**
MILM Milestii Mici 79.49 319*d i*P **P** **14 00 50.5 -0.5**
MILM *e* 14 00 58.0
MILM *e* 14 03 51.0
MILM *e*S **S** **14 10 45.0 -5.6**
MILM *e*PS **PnS** **14 11 27.0 -10**
MILM pmax pmax
comp=Z,230nm,1.3s
HARR Harsova 79.50 316⇑P **P** **14 00 51.3 +0.2**
KIS Kishinev 79.50 319⇑ *i*P **P** **14 00 51.0 -0.1**
comp=Z,76nm,1.2s
KIS Kishinev 79.50 319 *e*PcP **PcP** **14 00 58.0 -1.0**
KIS *e*L L 14 35 23.0
KIS LQM 14 35 58.0
KIS comp=Z,1μm,19.0s LRM MLR 14 44 06.0
comp=Z,400nm,17.5s
KIS Kishinev 79.50 319*c i*P **P** **14 00 51.0 -0.1**
KIS *e* 14 00 58.0
KIS pmax pmax
comp=Z,76nm,1.2s
SUR Sutherland 79.54 238 LR LR 14 32 05.9
comp=Z,3μm,18.1s,baz=96,slow=33
IDI Anoyia 79.71 306⇓P **P** **14 00 53.3 +0.7**
IDI Anoyia 79.71 306 P **P** **14 00 52.6 +0.1**
comp=Z,24nm,0.8s,baz=82,slow=9.7,SNR=7.7
IDI S **S** **14 10 48.5 -5.2**
comp=Z,4.0nm,0.8s,baz=54,slow=11,SNR=1.1
IDI LR LR 14 40 38.8
comp=Z,442nm,18.6s,baz=88,slow=39
comp=Z,24nm,0.8s
AUGR Augrabies 79.76 242 *e*P **P** **14 00 52.5 -0.4**
AUGR IAmb IAmb 14 01 04.3
comp=Z,38nm,1.1s
JMB Yambol 79.92 314 P **P** **14 00 51.0 -2.4**
ALN Alexandroupoli 79.96 312 P **P** **14 00 53.4 -0.3**
SORM Soroca 80.11 320⇑P **P** **14 00 53.7 -0.6**
SMTH Samothraki Isl 80.25 312 P **P** **14 00 54.7 -0.6**
GVDS Gavdos 80.27 306 P **P** **14 00 55.0 -0.5**
AKASG Malin Array Be 80.28 322 P **P** **14 00 54.7 -0.5**
comp=Z,7.6nm,0.8s,baz=83,slow=5.2,SNR=60
AKASG PP **PP** **14 03 53.9 -4.1**
comp=Z,0.4nm,0.4s,baz=92,slow=6.7,SNR=5.0
AKASG S **S** **14 10 54.2 -4.6**
comp=Z,0.2nm,0.3s,baz=90,slow=2.9,SNR=5.7
comp=Z,7.6nm,0.8s
AKASG Malin Array Be 80.28 322 *i* P **P** **14 00 54.7 -0.5**
AKASG pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 80.28 322*ce*P **P** **14 00 54.3 -0.9**
CVNA Calvinia 80.38 239 *e*P **P** **14 00 56.4 0.0**
CVNA IAmb IAmb 14 01 16.2
comp=Z,30nm,1.1s
RDO Rodhopi 80.39 312 P **P** **14 00 55.5 -0.5**
SZH Strazhica 80.56 315 P **P** **14 00 56.2 -0.7**
VRI Vrincioaia 80.61 317⇑P **P** **14 00 58.2 +1.0**
SULR 80.66 316⇑P **P** **14 00 58.5 +1.1**
PLOR Plostina 80.66 317⇑P **P** **14 00 58.2 +0.8**
NEHR Nehoiu 80.80 317⇑P **P** **14 00 59.5 +1.3**
TESR Tescani 80.82 318⇓P **P** **14 00 58.9 +0.7**
CER Ceres 80.86 237 *e*P P 14 00 49.8 -9.0
CER IAmb IAmb 14 00 56.1
comp=Z,344nm,2.2s
ZIMR 81.05 315⇑P **P** **14 00 59.9 +0.4**
MLR Muntele Rosu 81.06 317⇑P **P** **14 01 00.3 +0.6**
MLR Muntele Rosu 81.06 317 P **P** **14 01 00.3 +0.6**
comp=Z,56nm,1.0s,baz=65,slow=2.2,SNR=44
MLR PP **PP** **14 04 12.1 +7.2**
comp=Z,4.4nm,0.7s,baz=121,slow=5.5,SNR=2.0
MLR S **S** **14 11 03.7 -3.8**
comp=Z,1.7nm,0.6s,baz=185,slow=11,SNR=1.7
comp=Z,56nm,1.0s
RZN Rozhen 81.10 313 P **P** **14 00 59.8 -0.3**
KAVA Kavala 81.11 312 P **P** **14 00 59.7 -0.2**
PLD Plovdiv 81.20 313 P **P** **14 01 00.6 +0.3**
BIZ Bicaz 81.29 318⇑P **P** **14 01 01.5 +0.8**
VNDA Vanda 81.30 169 P **P** **14 01 00.3 +0.1**
comp=Z,6.0nm,1.1s,baz=302,slow=5.3,SNR=17
VNDA S **S** **14 11 06.3 -2.4**
comp=Z,0.5nm,0.8s,baz=270,slow=6.1,SNR=5.8
VNDA LR LR 14 32 15.0
comp=Z,1μm,21.6s,baz=314,slow=32
comp=Z,6.0nm,1.1s
VNDA Vanda 81.30 169 P **P** **14 01 00.6 +0.4**
OUR Ouranopolis 81.38 311 P **P** **14 01 00.9 -0.4**
KOKK Kokkinochori, 81.46 312 P **P** **14 01 01.2 -0.5**
VILL Villia 81.48 309 P **P** **14 01 01.2 -0.8**
RAO Raoul Island 81.52 119 LR LR 14 38 20.0
comp=Z,2μm,20.4s,baz=282,slow=37
RAO Raoul Island 81.52 119 IAMs_20 IAMs_20 14 38 08.8
comp=Z,3μm,19.0s
PAIG Paliouri 81.53 311 P **P** **14 01 01.6 -0.5**
DOPR Dopca 81.55 317⇑P **P** **14 01 02.5 +0.4**
VOIR 81.66 317⇓P **P** **14 01 02.6 -0.2**
NVR Nevrokopi 81.66 312 P **P** **14 01 02.1 -0.8**
PGB Panagyurishte 81.68 314 P **P** **14 01 02.9 0.0**
MMB Musomiste 81.81 313 P **P** **14 01 02.4 -1.2**
LKR Lokris 81.81 310 P **P** **14 00 59.5 -4.1**
SRS Serrai 81.82 312 P **P** **14 01 03.1 -0.5**
ARR Arges 81.93 316⇓P **P** **14 01 03.8 -0.4**
BURAR Bucovina Array 82.03 319⇓P **P** **14 01 05.7 +1.0**
BURAR Bucovina Array 82.03 319 P **P** **14 01 05.4 +0.7**
BUR08 Bucovina Ar. S 82.05 319 P **P** **14 01 05.6 +0.8**
TSUM Tsumeb 82.12 251 LR LR 14 33 58.5
comp=Z,3μm,19.8s,baz=132,slow=33
TSUM Tsumeb 82.12 251 IAMs_20 IAMs_20 14 33 07.3
comp=Z,3μm,19.0s
TSUM Tsumeb 82.12 251 *e*P **P** **14 01 04.9 -0.9**
TSUM IAmb IAmb 14 01 18.8
comp=Z,21nm,1.1s
MNK Minsk 82.14 326 *i* P **P** **14 01 05.4 +0.4**
MNK *i* 14 04 13.2
MNK *i* PPP PPP 14 06 03.9
MNK *i* S **S** **14 11 21.0 +3.0**
MNK *i* SS **SS** **14 16 41.4 +3.5**
MNK *i* SSS SSS 14 20 09.3
MNK pmax pmax
comp=N,11nm,1.1s
MNK pmax pmax
comp=Z,83nm,1.0s
MNK pmax pmax
comp=E,12nm,1.2s
MNK MLR MLR
comp=E,82nm,21.0s
MNK MLR MLR
comp=N,4.0nm,13.0s
MNK MLR MLR
comp=Z,296nm,22.0s
MNK Minsk 82.14 326 *i* P **P** **14 01 05.4 +0.4**
comp=E,12nm,1.2s
MNK *i* P **P** **14 01 05.4 +0.4**
comp=N,11nm,1.1s
MNK *i* P **P** **14 01 05.4 +0.4**
comp=Z,83nm,1.0s,baz=286
MNK *i* PP **PP** **14 04 13.3 -0.1**
MNK *i* PPP PPP 14 06 03.9
MNK *i* S **S** **14 11 21.1 +3.0**
MNK *i* SS **SS** **14 16 41.5 +3.5**
MNK *i* SSS SSS 14 20 09.4
MNK *i* LQ LQ 14 32 14.5
MNK *i* LR LR 14 37 53.1
MNK *i* LRM MLR 14 39 20.0
comp=E,82nm,20.6s

MNK *i* LRM MLR 14 39 20.0
comp=N,4.0nm,12.9s
MNK *i* LRM MLR 14 39 20.0
comp=Z,296nm,21.9s
MPEP Malo Peshtene 82.14 314 P **P** **14 01 05.5 +0.2**
KKB Krupnik 82.34 313 P **P** **14 01 05.5 -0.8**
KNT Kendrikon 82.34 312 P **P** **14 01 05.9 -0.5**
VTS Vitosha 82.37 313 ⇓P **P** **14 01 06.6 0.0**
VTS Vitosha 82.37 313 P **P** **14 01 05.2 -1.4**
VTS Vitosha 82.37 313 P **P** **14 01 05.2 -1.4**
VTS pmax pmax
comp=Z,52nm,1.1s
VTS Vitosha 82.37 313 P **P** **14 01 06.5 -0.2**
KLV Kalavryta, Ach 82.37 309 P **P** **14 01 05.6 -1.1**
SBA Scott Base 82.39 169 P **P** **14 01 06.9 +1.0**
SBA IAmb IAmb 14 01 58.8
comp=Z,78nm,1.4s
SBA Scott Base 82.39 169 P **P** **14 01 06.9 +1.0**
SBA pmax pmax
comp=Z,78nm,1.4s
LIT Litokhoron 82.46 311 P **P** **14 01 06.3 -0.7**
SERG Sergoula 82.50 309 P **P** **14 01 06.3 -1.0**
LAKA Lakka 82.53 309 P **P** **14 01 07.2 -0.3**
ANX Ano Chora 82.64 309 P **P** **14 01 07.4 -0.7**
GRG Griva 82.67 312 P **P** **14 01 07.4 -0.8**
DRO Drossia 82.69 309 P **P** **14 01 09.0 +0.7**
THL Klokotos Trika 82.73 310 P **P** **14 01 06.7 -1.7**
NACGM Naroch 82.86 326 ⇓*e*P **P** **14 01 09.8 +1.1**
baz=106
CJR Cluj-Napoca 82.92 318 ⇑P **P** **14 01 09.8 +0.5**
PVO Paravola 82.95 309 P **P** **14 01 09.4 -0.2**
BLKB Belogradchik 82.96 314 ⇓P **P** **14 01 09.0 -0.6**
GZR Gura Zlata 83.22 316 ⇑P **P** **14 01 11.2 +0.3**
LVV L'vov 83.28 321 *c*eP **P** **14 01 11.3 +0.2**
LVV *e*S **S** **14 11 28.0 -1.9**
LVV pmax pmax
comp=Z,150nm,1.3s
IIGN Ignalina 83.29 326 *e*P **P** **14 01 11.3 +0.4**
HERR Herculane 83.37 316 ⇓P **P** **14 01 11.8 +0.2**
ISAL Salakas 83.40 327 *e*P **P** **14 01 12.8 +1.3**
DRGR 83.53 318 ⇓P **P** **14 01 13.0 +0.5**
LVZ Lovozero 83.64 340 P **P** **14 01 12.4 -0.1**
LVZ IAMs_20 IAMs_20 14 42 44.5
comp=Z,2µm,20.0s
LVZ Lovozero 83.64 340 *c*eP **P** **14 01 12.5 -0.1**
LVZ pmax pmax
comp=Z,77nm,1.3s
LKD2 Lefkada island 83.64 309 P **P** **14 01 13.2 0.0**
BOVS Bovan 83.65 314 ⇑P **P** **14 01 12.5 -0.6**
KBN Korca 83.83 311 P **P** **14 01 13.6 -0.6**
KBN Korca 83.83 311 P **P** **14 01 13.6 -0.6**
KBN pmax pmax
comp=Z,30nm,0.8s
VSU Vasula 83.84 330 *e*P **P** **14 01 13.8 +0.2**
MDVR Moldovita 83.85 315 ⇑P **P** **14 01 14.7 +0.6**
BILL Bilibino 83.86 20 IAMs_20 IAMs_20 14 42 58.5
comp=Z,2µm,18.0s
BILL Bilibino 83.86 20 *d i*P **P** **14 01 13.3 -0.3**
BILL *e* 14 01 21.8
BILL *e*PPS PPS 14 12 53.2
BILL pmax pmax
comp=Z,30nm,1.3s
APA Apatity 83.95 339 ⇑*i*P **P** **14 01 13.7 -0.4**
APA *i* 14 04 24.0
APA *i* PPP PPP 14 06 25.0
APA *i* S **S** **14 11 34.0 -1.9**
APA *i* SS **SS** **14 17 09.0 +4.8**
APA pmax pmax
comp=Z,27nm,1.0s
BZS Buzias 84.06 316 ⇓P **P** **14 01 15.6 +0.5**
KWP Kalwaria Pacla 84.09 320 *e*P **P** **14 01 15.5 +0.3**
KWP *e*S **S** **14 11 36.7 -1.3**
KWP *e*L L 14 44 50.6
comp=Z,880nm,22.3s
SIRR Siria 84.15 317 ⇑P **P** **14 01 16.2 +0.6**
UZH Uzhgorod 84.16 319 ⇑*i*P **P** **14 01 14.8 -0.7**
UZH *i* 14 01 21.6
KOLS Kolonicke sedl 84.23 320 *e*P **P** **14 01 17.8 +1.9**
KOLS pmax pmax
comp=Z,136nm,0.9s
KOLS Kolonicke sedl 84.23 320 *e*P **P** **14 01 17.8 +1.9**
PHP Peshkopia 84.25 312 P **P** **14 01 15.1 -1.2**
KEK Kerkira 84.44 310 P **P** **14 01 16.7 -0.5**
PABE Paberze 84.57 326 IAMs_20 IAMs_20 14 46 34.9
comp=Z,2µm,20.0s
PABE Paberze 84.57 326 *e*P **P** **14 01 17.6 +0.1**
CRVS Cervenica-Dubn 84.75 319 *e*P **P** **14 01 19.5 +0.9**
CRVS pmax pmax
comp=Z,51nm,1.2s
CRVS Cervenica-Dubn 84.75 319 *e*P **P** **14 01 19.5 +0.9**
FINES FINESS Array B 84.95 332 P **P** **14 01 19.9 +0.7**
comp=Z,17nm,0.7s,baz=106,slow=6.3,SNR=26
FINES S **S** **14 11 41.2 -5.0**
comp=Z,0.5nm,0.6s,baz=179,slow=12,SNR=1.4
FINES LR LR 14 43 43.5
comp=Z,1µm,20.3s,baz=102,slow=39
comp=Z,17nm,0.7s
FINES FINESS Array B 84.95 332 P **P** **14 01 20.0 +0.7**
PDG Podgorica 85.24 313 ⇓P **P** **14 01 20.9 -0.2**
PDG Podgorica 85.24 313 P **P** **14 01 20.3 -0.8**
PDG IAmb IAmb 14 04 29.1
comp=Z,86nm,0.7s
FRGS Fruska Gora 85.24 316 ⇑P **P** **14 01 20.9 -0.2**
KECS Kecovo 85.31 319 *e*P **P** **14 01 22.6 +1.2**
KECS pmax pmax
comp=Z,20nm,1.0s
KECS Kecovo 85.31 319 *e*P **P** **14 01 22.6 +1.2**
MTSE Matsula 85.38 329 *e*P **P** **14 01 22.0 +0.5**
MEF Metsahovi 85.44 331 *e*P **P** **14 01 22.3 +0.6**
NIE Niedzica 85.59 320 *e*P **P** **14 01 23.8 +1.0**
NIE *e*PP **PP** **14 04 40.8 -1.0**
NIE *e*S **S** **14 11 53.2 +0.1**
NIE *e*L L 14 45 46.3
comp=Z,670nm,21.4s
PSZ Piszkesteto 85.61 318 ⇑P **P** **14 01 23.6 +0.6**
PSZ Piszkesteto 85.61 318 P **P** **14 01 23.2 +0.2**
PSZ Piszkesteto 85.61 318 P **P** **14 01 23.3 +0.2**
BEL Belsk 85.69 322 *e*P **P** **14 01 24.0 +0.8**
BEL *e*S **S** **14 11 55.5 +1.6**
PBUR Paburge 85.81 327 *e*P **P** **14 01 23.8 +0.2**
SLIT Slitere, Latvi 85.94 328 *e*P **P** **14 01 23.8 -0.4**
OJC Ojcow 86.04 321 *e*P **P** **14 01 24.4 -0.6**
OJC *e*S **S** **14 11 55.2 -2.2**
LANS Liptovska Anna 86.08 319 *e*P **P** **14 01 26.2 +0.9**
LANS pmax pmax
comp=Z,7.0nm,1.0s
LANS Liptovska Anna 86.08 319 *e*P **P** **14 01 26.2 +0.9**
BUD Budapest 86.13 318 P **P** **14 01 25.9 +0.5**
MORH Mrgy, Hungar 86.20 316 ⇑P **P** **14 01 26.2 +0.4**
MORH Mrgy, Hungar 86.20 316 P **P** **14 01 25.4 -0.5**
MORH Mrgy, Hungar 86.20 316 P **P** **14 01 25.8 0.0**
VYHS Vyhne 86.40 319 *e*P **P** **14 01 26.8 0.0**
VYHS pmax pmax
comp=Z,35nm,1.3s
VYHS Vyhne 86.40 319 *e*P **P** **14 01 26.8 0.0**
KOVH Kovagotottos 86.56 316 P **P** **14 01 27.6 0.0**
KOVH Kovagotottos 86.56 316 P **P** **14 01 28.0 +0.3**
CSKK Cskako 86.62 318 P **P** **14 01 27.5 -0.4**
CSKK Cskako 86.62 318 P **P** **14 01 28.7 +0.8**
NVL N'lazarevskaya 86.80 199 *e*P P 14 01 38.3 +10
NVL *e*S **S** **14 12 01.9 -2.1**
NVL pmax pmax
comp=Z,12nm,1.0s
NVL MLR MLR
comp=Z,560nm,16.0s
TIH Tihany 86.81 317 P **P** **14 01 29.9 +1.1**
RAF Rauma 86.88 331 *e*P **P** **14 01 29.7 +0.9**
KEV Kevo 86.89 341 P **P** **14 01 28.8 +0.1**
KEV IAmb IAmb 14 01 30.1
comp=Z,70nm,1.1s
KEV IAMs_20 IAMs_20 14 48 09.5
comp=Z,2µm,20.0s
KEV Kevo 86.89 341 P **P** **14 01 28.8 +0.1**
KEV pmax pmax
comp=Z,70nm,1.1s
OKC Ostrava-Krasne 87.04 320 *e*S **S** **14 12 06.1 -1.0**
OKC AMS AMS 14 50 10.0
comp=Z,700nm,14.7s
MPLH Magyarpolny 87.09 317 P **P** **14 01 30.5 +0.3**
QSPA South Pole Qui 87.13 180 LR LR 14 37 45.1
comp=Z,2µm,18.6s,baz=324,slow=34
QSPA South Pole Qui 87.13 180 P **P** **14 01 30.9 +0.8**
QSPA South Pole Qui 87.13 180 IAMs_20 IAMs_20 14 34 35.9
comp=Z,2µm,21.0s
JAVC Velka Javorina 87.22 319 *e*P **P** **14 01 32.1 +1.3**
CEL Celeste 87.28 308 P **P** **14 01 31.8 +0.4**
CEL IAmb IAmb 14 01 34.0
comp=Z,100nm,1.2s
ARCES ARCESS Array B 87.33 340 P **P** **14 01 31.5 +0.6**
comp=Z,33nm,0.8s,baz=100,slow=5.0,SNR=69
ARCES PP **PP** **14 04 51.5 -3.8**
comp=Z,3.0nm,0.8s,baz=44,slow=11,SNR=6.2
ARCES S **S** **14 12 02.3 -6.9**
comp=Z,1.0nm,0.9s,baz=57,slow=4.5,SNR=1.0
ARCES LR LR 14 45 51.2
comp=Z,1µm,19.9s,baz=106,slow=39
comp=Z,33nm,0.8s
AFI Afiamalu 87.39 104 LR LR 14 42 44.7
comp=Z,453nm,19.6s,baz=260,slow=37
MODS Modra-Piesok 87.41 319 *e*P **P** **14 01 32.2 +0.4**
MODS pmax pmax
comp=Z,123nm,1.4s
MODS Modra-Piesok 87.41 319 *e*P **P** **14 01 32.2 +0.4**
MORC Moravsky Berou 87.42 320 ⇑P **P** **14 01 32.6 +0.8**
MORC Moravsky Berou 87.42 320 *e*P **P** **14 01 32.3 +0.5**
ZST Bratislava 87.51 318 *e*P **P** **14 01 33.0 +0.8**
ZST pmax pmax
comp=Z,139nm,1.3s
ZST Bratislava 87.51 318 *e*P **P** **14 01 33.0 +0.8**
KRLC Kraliky 87.94 320 *e*P **P** **14 01 35.4 +1.1**
KRLC *e* 14 01 44.3
KRLC *e* 14 12 15.9
KRLC MLR MLR
comp=Z,800nm,21.7s
KRLC Kraliky 87.94 320 *e*P **P** **14 01 35.4 +1.1**
KRLC *ex* x 14 01 44.3
KRLC *e*S **S** **14 12 15.9 0.0**
KRLC AMS AMS 14 48 40.0
comp=Z,800nm,21.7s
VRAC Vranov 87.97 319 P **P** **14 01 34.7 +0.3**
comp=Z,4.9nm,1.0s,baz=116,slow=4.6,SNR=12
comp=Z,4.9nm,1.0s
VRAC Vranov 87.97 319 *e*P **P** **14 01 34.4 0.0**
RONA Rosalia, Austr 87.99 318 *i*P **P** **14 01 35.0 +0.4**
comp=Z,15nm,1.4s,SNR=5.2
GKP Gorka Klasztor 88.06 323 *e*P **P** **14 01 35.3 +0.6**
GKP *e*S **S** **14 12 15.7 -0.9**
GKP *e*L L 14 48 01.9
comp=Z,2µm,20.5s
GKP Gorka Klasztor 88.06 323 *e*P **P** **14 01 33.8 -0.8**
KRUC Moravsky 88.07 319 *e*P **P** **14 01 35.1 +0.2**
GOLS Golise 88.27 316 *i*P **P** **14 01 36.9 +1.0**
DPC Dobruska-Polom 88.27 320 *e*P **P** **14 01 37.1 +1.3**
DPC *e* 14 01 46.1
DPC *e* 14 12 15.3
DPC MLR MLR
comp=Z,1µm,19.5s
DPC Dobruska-Polom 88.27 320 *e*P **P** **14 01 37.1 +1.3**
DPC *ex* x 14 01 46.1
DPC *e*S **S** **14 12 15.3 -3.7**
DPC AMS AMS 14 48 50.0
comp=Z,1µm,19.5s
CONA Conrad Observa 88.30 318 *i*P **P** **14 01 36.7 +0.6**
comp=Z,18nm,1.5s,SNR=7.1
KSP Ksiaz 88.34 321 *e*P **P** **14 01 37.2 +1.2**
KSP *e*S **S** **14 12 17.7 -1.8**
KSP *e*L L 14 49 35.3
comp=Z,1µm,23.1s
OSTC Ostas 88.36 321 *e*P **P** **14 01 37.5 +1.3**
OSTC *e*S **S** **14 12 17.8 -2.0**
OSTC AMS AMS 14 49 00.0
comp=Z,1µm,19.6s
VAE Valguarnera 88.38 307 P **P** **14 01 38.4 +1.7**
comp=Z,6.1nm,0.3s,baz=62,slow=6.3,SNR=3.6
comp=Z,6.1nm,0.3s
ARSA Arzberg 88.46 317 *i*P **P** **14 01 37.7 +0.9**
comp=Z,51nm,1.6s,SNR=17
UPC Upice 88.48 321 *e*S **S** **14 12 20.2 -0.7**
UPC AMS AMS 14 49 00.0
comp=Z,2µm,20.5s
PERS Pernice 88.68 317 *i*P **P** **14 01 38.7 +0.8**
PERS *i*S **S** **14 12 23.0 0.0**
PDKS Podkum 88.70 316 *i*P **P** **14 01 38.9 +0.9**
SOKA Soboth 88.74 317 *i*P **P** **14 01 38.8 +0.6**
comp=Z,47nm,1.1s,SNR=32
OBKA Obir 89.06 316 *i*P **P** **14 01 40.6 +1.0**
comp=Z,32nm,1.4s,SNR=6.7
MOA Molln 89.36 318 *i*P **P** **14 01 41.7 +0.6**
comp=Z,31nm,1.8s,SNR=9.1
PRU Pruhonice 89.37 320 *e*P **P** **14 01 42.2 +1.3**
PRU *e* 14 12 30.1
PRU MLR MLR
comp=Z,1µm,20.5s
PRU Pruhonice 89.37 320 *e*P **P** **14 01 42.2 +1.3**
PRU *e*S **S** **14 12 30.1 +0.9**
PRU AMS AMS 14 49 20.0
comp=Z,1µm,20.5s
PVCC Panska Ves 89.40 320 *e*P **P** **14 01 42.8 +1.7**
PVCC MLR MLR
comp=Z,800nm,18.4s
PVCC Panska Ves 89.40 320 *e*P **P** **14 01 42.8 +1.7**
PVCC AMS AMS 14 51 10.0
comp=Z,800nm,18.4s
CKRC Cesky Krumlov 89.42 319 *e*P **P** **14 01 42.6 +1.4**
CKRC *e*SKS **S** **14 12 22.4 -7.4**
CADS Cadrg 89.59 316 *i*P **P** **14 01 42.5 +0.4**
CADS *i*S **S** **14 12 30.6 -1.0**
MYKA Terra Mystica 89.69 317 *i*P **P** **14 01 43.3 +0.7**
comp=Z,41nm,1.6s,SNR=10
TROLL Troll, Antarti 89.70 198 P **P** **14 01 44.3 +2.0**
PRED Cave del Predi 89.73 316 P **P** **14 01 42.6 -0.2**
PRED IAmb IAmb 14 04 33.5
comp=Z,77nm,0.8s
BIOA Bad Ischl, Aus 89.77 318 *i*P **P** **14 01 43.4 +0.5**
comp=Z,33nm,1.6s,SNR=6.7
GERES GERESS Array B 89.82 319 P **P** **14 01 43.8 +0.5**
comp=Z,20nm,1.0s,baz=114,slow=3.3,SNR=88
GERES S **S** **14 12 24.9 -8.8**
comp=Z,0.3nm,0.3s,baz=194,slow=16,SNR=1.2
comp=Z,20nm,1.0s
BRG Berggiesshubel 89.83 321 *i*P **P** **14 01 44.2 +1.2**
BRG Amp 14 01 46.4
comp=Z,43nm,1.1s
BRG *ex* x 14 01 52.2
BRG Amp 14 01 53.8
comp=Z,31nm,1.4s
BRG *ex* x 14 02 07.5
BRG Amp 14 02 08.6
comp=Z,66nm,1.6s
BRG Berggiesshubel 89.83 321 *i*P **P** **14 01 44.2 +1.2**
BRG *e* 14 01 52.2
BRG pmax pmax
comp=Z,43nm,1.1s
BRG pmax pmax
comp=Z,31nm,1.4s
BRG pmax pmax
comp=Z,66nm,1.6s
KHC Kasperske Hory 89.92 319 *e*P **P** **14 01 44.6 +1.0**
KHC *e* 14 01 51.5
KHC *e* 14 12 26.6
KHC MLR MLR
comp=Z,1µm,16.5s
KHC Kasperske Hory 89.92 319 *e*P **P** **14 01 44.6 +1.0**
KHC *e*pP **pP** **14 01 51.5 -1.2**
KHC *e*S S **14 12 26.6 -7.9**
KHC AMS AMS 14 50 00.0
comp=Z,1µm,16.5s
KBA Koelnbreinsper 89.93 317 *i*P **P** **14 01 44.1 +0.3**
comp=Z,28nm,1.3s,SNR=7.1
CLL Collm 90.45 321 ⇑*i*P **P** **14 01 46.5 +0.5**
CLL *e**PP **pP** **14 01 52.0 -3.0**
CLL *e*S **S** **14 12 33.0 -6.2**
CLL pmax pmax
comp=Z,37nm,1.2s
CLL MLR MLR
comp=Z,1µm,18.7s
CLL Collm 90.45 321 ⇑*i*P **P** **14 01 46.5 +0.5**
comp=Z,37nm,1.2s
CLL *e*pP **pP** **14 01 52.0 -3.0**
CLL *e*sP **sP** **14 01 54.0 -4.2**
CLL *e*PP **PP** **14 05 18.0 -2.6**
CLL *e*SKKSac S 14 12 29.0 -10
CLL *e*S **ScS** **14 12 41.0 -1.8**
CLL *ex* x 14 13 29.0
CLL *e*PS **PnS** **14 13 54.0 +4.4**
CLL *e*SS **SS** **14 18 36.0 -4.0**
CLL *e*SSS SSS 14 22 12.0
CLL *ex* x 14 24 00.0
CLL *e*SSSS 14 25 18.0
CLL LmH 14 47 00.0
comp=N,1µm,21.5s
CLL LmH 14 47 00.0
comp=E,400nm,20.0s
CLL LmV 14 51 00.0
comp=Z,1µm,18.7s
CLL Lmax 14 51 00.0
ABTA Abfaltersbach 90.47 317 *i*P **P** **14 01 46.3 0.0**
comp=Z,20nm,1.0s,SNR=9.3
RGN Rugen 90.49 324 IAMs_20 IAMs_20 14 50 05.3
comp=Z,2µm,19.0s
HFS Hagfors 90.70 330 P **P** **14 01 47.3 +0.3**
comp=Z,22nm,0.9s,baz=116,slow=3.4,SNR=27
HFS PP **PP** **14 05 21.2 -1.2**
comp=Z,6.0nm,0.9s,baz=78,slow=14,SNR=2.8
HFS LR LR 14 47 49.0
comp=Z,932nm,19.9s,baz=92,slow=39
comp=Z,22nm,0.9s
TEOL Teolo 90.98 315 P **P** **14 01 49.0 +0.4**
WTTA Wattenberg 91.10 317 *i*P **P** **14 01 49.5 +0.2**
comp=Z,47nm,1.2s,SNR=13
WATA Walderalm 91.14 317 *i*P **P** **14 01 49.5 0.0**
comp=Z,38nm,1.3s,SNR=8.5
SQTA Sankt Quirin 91.39 317 *i*P **P** **14 01 50.9 +0.3**
comp=Z,22nm,0.9s,SNR=8.6
SNAA Sanae 91.42 198 P **P** **14 01 51.6 +1.5**
SNAA Sanae 91.42 198 LR LR 14 35 29.6
comp=Z,2µm,22.0s,baz=54,slow=31
SNAA Sanae 91.42 198 IAMs_20 IAMs_20 14 35 08.3
comp=Z,2µm,20.0s
SNAA Sanae 91.42 198 *e*P **P** **14 01 50.9 +0.7**
ZCCA Zocca 91.42 314 P **P** **14 01 51.6 +0.9**
MOTA Moosalm 91.47 317 *i*P **P** **14 01 51.1 +0.1**
comp=Z,39nm,1.1s,SNR=13
SPITS Spitsbergen Ar 91.50 348 LR LR 14 51 19.9
comp=Z,3µm,18.3s,baz=74,slow=41
GAMB Gambell 91.67 26 IAMs_20 IAMs_20 14 50 28.5
comp=Z,2µm,18.0s
GAMB Gambell 91.67 26 P **P** **14 01 51.3 0.0**
baz=267
RETA Reutte 91.70 317 *i*P **P** **14 01 52.4 +0.4**
comp=Z,27nm,0.9s,SNR=11
FETA Feichten 91.71 317 *i*P **P** **14 01 52.8 +0.7**
comp=Z,25nm,1.1s,SNR=11
SALO Salr 91.80 315 P **P** **14 01 53.0 +0.6**
NC602 NORSAR Array S 91.81 331 P **P** **14 01 52.1 0.0**
NC602 IAmb IAmb 14 01 53.0
comp=Z,37nm,1.0s
NB2 NORSAR Subarra 91.98 331 P **P** **14 01 52.9 0.0**
comp=Z,28nm,1.1s,baz=93,slow=4.6
NB2 NORSAR Subarra 91.98 331 P **P** **14 01 52.9 0.0**
baz=93,slow=4.6
NOA NORSAR Array B 91.98 331 P **P** **14 01 52.9 0.0**
comp=Z,11nm,0.9s,baz=95,slow=5.0,SNR=25
NOA PP **PP** **14 05 28.8 -3.7**
comp=Z,2.3nm,0.9s,baz=92,slow=7.8,SNR=4.5
NOA LR LR 14 46 50.3
comp=Z,747nm,21.8s,baz=80,slow=38
comp=Z,11nm,0.9s
SPIA Saint Paul Isl 92.11 33 P **P** **14 01 53.5 0.0**
baz=268
NBO00 NORSAR Array S 92.19 331 P **P** **14 01 53.9 0.0**
NBO00 IAmb IAmb 14 01 55.6
comp=Z,55nm,1.1s
DAVOX Davos/Dischmat 92.28 317 P **P** **14 01 55.5 +0.6**
comp=Z,23nm,1.1s,baz=116,slow=4.4,SNR=32
DAVOX LR LR 14 49 44.4
comp=Z,511nm,18.3s,baz=76,slow=40
comp=Z,23nm,1.1s
DAVA Damuels 92.30 317 *i*P **P** **14 01 56.1 +1.2**
comp=Z,43nm,1.1s,SNR=9.2
KEST Kesra 92.35 305 P **P** **14 01 56.5 +1.2**
comp=Z,58nm,1.0s,baz=9.1,slow=1.6,SNR=22
KEST S S 14 12 33.7 -24
comp=Z,1.1nm,0.5s,baz=46,slow=7.5,SNR=0.9
comp=Z,58nm,1.0s
NIKH Nikolski High 92.81 37 P **P** **14 01 56.7 -0.1**
baz=269
VNA2 Neumayer--Watz 93.03 198 P **P** **14 01 57.4 -0.1**
TNA Tin City 93.34 25 P **P** **14 01 59.4 +0.4**
baz=270
VNA1 Neumayer--Stat 93.39 198 P **P** **14 02 00.7 +1.5**
UNV Unalaska Valle 94.21 36 P **P** **14 02 03.9 +0.6**
baz=271
ANM Nome 94.45 26 IAMs_20 IAMs_20 14 50 12.7
comp=Z,2µm,18.0s
ANM Nome 94.45 26 P **P** **14 02 04.4 +0.3**
baz=273
RDOG Red Dog Mine 95.19 22 IAMs_20 IAMs_20 14 53 51.1
comp=Z,2µm,20.0s
TAM Tamanrasset 95.42 293 IAMs_20 IAMs_20 14 46 46.2
comp=Z,1µm,18.0s
FALS False Pass 95.98 35 P **P** **14 02 11.3 0.0**
baz=274
SDPT Sand Point 97.62 35 P Pdif 14 02 19.1 +0.3
baz=276
N16K Nishlik Lake 97.89 29 P Pdif 14 02 20.6 +0.6
baz=278
GCSA Galena City Sc 98.06 25 P Pdif 14 02 21.1 +0.5
baz=280
RAR Rarotonga 98.29 112 LR LR 14 47 19.1
comp=Z,295nm,20.5s,baz=250,slow=36
O16K Kokwok River B 98.35 30 P **P** **14 02 22.0 0.0**
baz=279
CHGN Chignik 98.66 34 P Pdif 14 02 23.8 +0.4
baz=278
JMIC Jan Mayen 98.72 342 LR LR 14 55 12.2
comp=Z,1µm,18.9s,baz=72,slow=40
TTA Tatalina 98.77 27 P Pdif 14 02 24.0 +0.1
baz=281,SNR=5.5
F21K Alatna River 98.89 22 P Pdif 14 02 24.7 +0.4
baz=284,SNR=11
TORD Torodi Ar. Bea 98.94 283 P **P** **14 02 24.9 -0.7**
comp=Z,4.2nm,0.4s,baz=66,slow=3.5,SNR=6.8
TORD PP **PP** **14 06 28.7 +0.9**
comp=Z,0.2nm,0.5s,baz=127,slow=2.4,SNR=2.4
TORD S S 14 13 12.9 -42
comp=Z,0.2nm,0.5s,baz=81,slow=7.3,SNR=1.5
TORD LR LR 14 45 08.5
comp=Z,728nm,19.6s,baz=72,slow=34
comp=Z,4.2nm,0.4s
G21K Allakaket 99.05 23 P **Pdif** **14 02 25.3 +0.3**
baz=284
IMAR Indian Mountai 99.08 23 P **Pdif** **14 02 25.0 -0.1**
C23K Itkillik River 99.20 19 P **Pdif** **14 02 26.0 +0.5**
baz=287
P17K Kvichak River 99.25 30 P **Pdif** **14 02 26.1 +0.1**
baz=280
N18K Kilae Creek 99.26 29 IAMs_20 IAMs_20 14 52 29.2
comp=Z,1µm,20.0s
E22K Anaktuuk Pass 99.27 21 P **Pdif** **14 02 26.0 +0.1**
baz=286
F22K John River 99.30 22 P **Pdif** **14 02 26.6 +0.5**
baz=285,SNR=6.8
J20K Nowinta River 99.33 25 IAMs_20 IAMs_20 14 54 16.8
comp=Z,1µm,19.0s
J20K Nowinta River 99.33 25 P **Pdif** **14 02 26.9 +0.7**
baz=283,SNR=8.2
D23K Nanushuk River 99.43 20 P **Pdif** **14 02 27.8 +1.1**
baz=287
L19K White Mountain 99.45 27 IAMs_20 IAMs_20 14 52 42.1
comp=Z,1µm,20.0s
L19K White Mountain 99.45 27 P **Pdif** **14 02 27.6 +0.7**
baz=282
H21K Melozitna Rive 99.54 24 P **Pdif** **14 02 28.1 +0.9**
baz=284,SNR=14
K20K Telida 99.55 26 P **Pdif** **14 02 28.0 +0.7**
baz=283,SNR=9.2
G22K Bettles 99.71 22 P **Pdif** **14 02 28.5 +0.6**
baz=286
M19K Big River Lodg 99.72 28 IAMs_20 IAMs_20 14 55 35.3
comp=Z,2µm,18.0s
M19K Big River Lodg 99.72 28 P **Pdif** **14 02 28.5 +0.5**
baz=282
O18K Koktuh Hills 99.75 30 P **Pdif** **14 02 28.9 +0.7**
baz=281
L20K Farewell, AK 99.83 27 P **Pdif** **14 02 28.9 +0.3**
baz=283
P18K Big Mountain, 99.83 30 IAMs_20 IAMs_20 14 54 28.4
comp=Z,2µm,18.0s
C24K Franklin Bluff 99.87 19 P **Pdif** **14 02 28.8 +0.3**
baz=289
N19K Bonanza Creek 99.91 29 IAMs_20 IAMs_20 14 53 16.3
comp=Z,2µm,18.0s
N19K Bonanza Creek 99.91 29 P **Pdif** **14 02 29.7 +0.7**
baz=282
TOLK Toolik Lake Re 99.92 20 P **Pdif** **14 02 29.3 +0.5**

baz=288
EKA **Eskdalemuir Ar** 99.93 326 P Pdif 14 02 28.8 -0.3
comp=Z,5.0nm,1.1s,baz=90,slow=6.7,SNR=4.2
EKA PP PP 14 06 17.8 -16
comp=Z,2.6nm,0.9s,baz=96,slow=8.5,SNR=5.0
I21K **Tanana** 99.99 24 IAMs_20 IAMs_20 14 53 31.1
comp=Z,1µm,18.0s
I21K **Tanana** 99.99 24 P Pdif 14 02 30.1 +1.0
baz=285,SNR=6.2
D24K **Happy Valley** 100.01 20 P Pdif 14 02 29.8 +0.7
baz=289
H22K **Ishtalitna Cre** 100.04 23 P Pdif 14 02 30.4 +1.0
baz=286,SNR=8.5
O19K **Port Alsworth** 100.12 29 IAMs_20 IAMs_20 14 54 33.9
comp=Z,2µm,18.0s
CHUM **Lake Minchumin** 100.18 25 P Pdif 14 02 30.7 +0.6
baz=285,SNR=5.4
M20K **Styx River** 100.31 27 P Pdif 14 02 31.0 +0.2
baz=284
G23K **Bananza Creek** 100.33 22 P Pdif 14 02 31.9 +1.2
baz=287,SNR=8.5
CAST **Castle Rocks** 100.40 26 IAMs_20 IAMs_20 14 50 04.1
comp=Z,1µm,20.0s
CAST **Castle Rocks** 100.40 26 P Pdif 14 02 31.9 +0.9
baz=285,SNR=8.2
E24K **Your Creek** 100.48 21 P Pdif 14 02 31.7 +0.3
baz=289
MLY **Manley** 100.54 24 IAMs_20 IAMs_20 14 53 48.5
comp=Z,2µm,20.0s
MLY **Manley** 100.54 24 P Pdif 14 02 32.0 +0.3
baz=286,SNR=5.4
BPAW **Bear Paw Mtn.** 100.69 25 IAMs_20 IAMs_20 14 54 11.7
comp=Z,1µm,21.0s
BPAW **Bear Paw Mtn.** 100.69 25 P Pdif 14 02 32.5 +0.1
baz=286,SNR=11
Q19K **Cape Douglas,** 100.72 30 IAMs_20 IAMs_20 14 54 40.1
comp=Z,2µm,19.0s
H23K **Yukon River** 100.78 23 IAMs_20 IAMs_20 14 54 30.0
comp=Z,2µm,19.0s
H23K **Yukon River** 100.78 23 P Pdif 14 02 33.3 +0.6
baz=288,SNR=5.1
F24K **Squaw Lake** 100.88 21 P Pdif 14 02 33.9 +0.8
baz=289
SKT **Skwentna** 101.02 27 P Pdif 14 02 33.0 -0.8
baz=285
I23K **Minto, Yukon-K** 101.06 24 IAMs_20 IAMs_20 14 52 57.2
comp=Z,2µm,21.0s
I23K **Minto, Yukon-K** 101.06 24 P Pdif 14 02 34.5 +0.6
baz=288
TRF **Thorofare Moun** 101.17 26 IAMs_20 IAMs_20 14 57 19.4
comp=Z,1µm,18.0s
TRF **Thorofare Moun** 101.17 26 P Pdif 14 02 33.1 -1.6
baz=286
G24K **Hadweenzic Riv** 101.30 22 P Pdif 14 02 34.9 -0.1
baz=290
BWN **Browne** 101.31 25 IAMs_20 IAMs_20 14 53 51.9
comp=Z,2µm,18.0s
NEA2 **Nenana** 101.35 24 IAMs_20 IAMs_20 14 53 50.0
comp=Z,2µm,20.0s
H24K **Noodor Dome** 101.43 23 IAMs_20 IAMs_20 14 55 00.1
comp=Z,2µm,18.0s
H24K **Noodor Dome** 101.43 23 P Pdif 14 02 36.3 +0.6
baz=289
CAPN **Captain Cook N** 101.51 28 IAMs_20 IAMs_20 14 52 50.6
comp=Z,2µm,19.0s
SUA **Susitna One** 101.51 28 IAMs_20 IAMs_20 14 56 42.0
comp=Z,2µm,18.0s
SUA **Susitna One** 101.51 28 P Pdif 14 02 35.8 -0.4
baz=286
KDAK **Kodiak Island** 101.52 31 IAMs_20 IAMs_20 14 55 52.3
comp=Z,2µm,18.0s
HOM **Homer** 101.55 30 IAMs_20 IAMs_20 14 55 27.8
comp=Z,2µm,18.0s
MDM **Murphy Dome** 101.58 24 IAMs_20 IAMs_20 14 55 49.0
comp=Z,1µm,19.0s
F25K **Christian Rive** 101.66 21 P Pdif 14 02 36.7 0.0
baz=292
MCK **McKinley** 101.67 25 P Pdif 14 02 36.8 +0.1
baz=288
M22K **Willow** 101.72 27 IAMs_20 IAMs_20 14 56 22.2
comp=Z,2µm,19.0s
M22K **Willow** 101.72 27 P Pdif 14 02 36.9 0.0
baz=286
TCOL **CIGO, UAF Yank** 101.75 24 IAMs_20 IAMs_20 14 56 40.7
comp=Z,1µm,19.0s
COLA **College** 101.76 24 IAMs_20 IAMs_20 14 56 40.7
comp=Z,1µm,19.0s
CNPM **China Poot** 101.79 30 IAMs_20 IAMs_20 14 56 26.1
comp=Z,1µm,18.0s
FIS **Fire Island** 101.84 28 IAMs_20 IAMs_20 14 58 05.5
comp=Z,1µm,18.0s
POKR **Poker Plat Res** 101.84 24 IAMs_20 IAMs_20 14 56 59.1
comp=Z,2µm,18.0s
CCB **Clear Creek Bu** 101.85 24 IAMs_20 IAMs_20 14 53 09.2
comp=Z,1µm,20.0s
BRLK **Bradley Lake** 101.90 29 IAMs_20 IAMs_20 14 56 52.8
comp=Z,1µm,18.0s
RC01 **Rabbit Creek A** 102.08 28 IAMs_20 IAMs_20 14 57 19.8
comp=Z,1µm,18.0s
F26K **Sheenjek River** 102.15 21 P Pdif 14 02 39.1 +0.3
baz=293
ILAR **Eielson Array** 102.18 24 P Pdif 14 02 37.5 -1.4
comp=Z,0.2nm,0.5s,baz=264,slow=1.8,SNR=4.0
ILAR PP PP 14 06 37.8 -13
comp=Z,1.4nm,1.0s,baz=293,slow=7.2,SNR=4.6
ILAR PKKPbc **PKKPbc** 14 18 41.4 -3.1
comp=Z,1.3nm,1.0s,baz=86,slow=1.2,SNR=6.6
FYU **Fort Yukon** 102.19 22 IAMs_20 IAMs_20 14 53 10.9
comp=Z,2µm,22.0s
GHO **Glory Hole Cre** 102.26 27 IAMs_20 IAMs_20 14 58 18.4
comp=Z,2µm,20.0s
O22K **Cooper Landing** 102.26 28 IAMs_20 IAMs_20 14 57 21.6
comp=Z,2µm,18.0s
HDA **Harding Lake** 102.28 24 IAMs_20 IAMs_20 14 53 21.6
comp=Z,1µm,20.0s
PRP **Porcupine Dome** 102.46 23 IAMs_20 IAMs_20 14 55 32.2
comp=Z,2µm,20.0s
SML **Sawmill** 102.52 27 P Pdif 14 02 40.5 0.0
baz=288
DHY **Denali Highway** 102.54 26 IAMs_20 IAMs_20 14 55 20.6
comp=Z,1µm,19.0s
G26K **Porcupine Rive** 102.57 21 P Pdif 14 02 41.6 +1.0
baz=293
KNK **Knik Glacier** 102.58 27 IAMs_20 IAMs_20 14 57 33.9
comp=Z,1µm,19.0s
KNK **Knik Glacier** 102.58 27 P Pdif 14 02 40.8 0.0
baz=288
ESDC **Sonseca Array** 102.72 310 P Pdif 14 02 42.1 +0.1
comp=Z,0.5nm,0.6s,baz=49,slow=5.6,SNR=3.7
J25K **Salcha River,** 102.85 24 IAMs_20 IAMs_20 14 53 58.6
comp=Z,2µm,20.0s
SCM **Sheep Creek Mo** 102.96 27 IAMs_20 IAMs_20 14 56 28.9
comp=Z,1µm,19.0s
SCM **Sheep Creek Mo** 102.96 27 P Pdif 14 02 42.3 -0.3
baz=289
SCO **Scoresbysund** 103.01 343 IAMs_20 IAMs_20 14 58 26.4
comp=Z,2µm,19.0s
GLI **Glacier Island** 103.38 28 IAMs_20 IAMs_20 14 56 34.9
comp=Z,1µm,19.0s
RIDG **Independent Ri** 103.38 24 IAMs_20 IAMs_20 14 59 02.7
comp=Z,1µm,20.0s
RIDG **Independent Ri** 103.38 24 P Pdif 14 02 44.3 0.0
baz=292
M24K **Tolsona, Glenn** 103.39 26 IAMs_20 IAMs_20 14 56 33.1
comp=Z,2µm,19.0s
PAX **Paxson** 103.39 25 P Pdif 14 02 43.7 -0.8
baz=291
G27K **Doyon Strip** 103.39 21 P Pdif 14 02 44.8 +0.4
baz=295
I26K **Coal Creek Min** 103.46 23 IAMs_20 IAMs_20 14 55 51.4
comp=Z,2µm,20.0s
J26L **Joseph Creek** 103.61 24 IAMs_20 IAMs_20 14 56 59.8
comp=Z,2µm,19.0s
J26L **Joseph Creek** 103.61 24 P Pdif 14 02 45.1 -0.3
baz=293
SCRK **Sand Creek** 103.64 24 IAMs_20 IAMs_20 14 54 42.6
comp=Z,2µm,18.0s
SCRK **Sand Creek** 103.64 24 P Pdif 14 02 45.5 -0.1
baz=292
H27K **Steamboat Moun** 103.69 22 P Pdif 14 02 45.2 -0.5
baz=295
FID **Port Fidalgo** 103.70 28 IAMs_20 IAMs_20 14 57 22.4
comp=Z,1µm,18.0s
KLU **Klutina** 103.71 27 IAMs_20 IAMs_20 14 57 09.7
comp=Z,1µm,18.0s
HIN **Hinchinbrook I** 103.81 28 IAMs_20 IAMs_20 14 55 39.4
comp=Z,1µm,18.0s
MDT **Midelt** 103.99 303 PP PKiKP 14 07 02.2 -3.1
comp=Z,2.7nm,1.1s,baz=177,slow=4.9,SNR=4.0

N25K **Chitina, Valde** 104.26 27 IAMs_20 IAMs_20 14 57 21.3
comp=Z,1µm,20.0s
L26K **Log Cabin Wild** 104.27 25 IAMs_20 IAMs_20 14 57 45.4
comp=Z,1µm,18.0s
L26K **Log Cabin Wild** 104.27 25 P Pdif 14 02 48.7 +0.4
baz=293
K27K **Chicken** 104.40 24 IAMs_20 IAMs_20 14 54 36.9
comp=Z,2µm,22.0s
EGAK **Eagle** 104.45 23 IAMs_20 IAMs_20 14 56 30.8
comp=Z,2µm,21.0s
KOWA **Kowa** 104.49 284 IAMs_20 IAMs_20 14 50 07.5
comp=Z,1µm,20.0s
BMRM **Bremner River** 104.49 27 P Pdif 14 02 49.3 -0.1
baz=291
M26K **Nabesna, AK** 104.67 25 IAMs_20 IAMs_20 14 55 57.8
comp=Z,2µm,20.0s
M26K **Nabesna, AK** 104.67 25 P Pdif 14 02 50.5 +0.3
baz=293
RAGM **Ragged Mountai** 104.67 28 IAMs_20 IAMs_20 14 57 57.0
comp=Z,2µm,19.0s
GLB **Gilahina Butte** 104.67 27 IAMs_20 IAMs_20 14 57 34.1
comp=Z,1µm,19.0s
MVO **Moncorvo** 104.83 312 *e*PP PKiKP 14 07 08.6 +2.0
MVO **Moncorvo** 104.83 312 *e*LR LR 14 49 03.1
comp=Z,426nm,20.0s
HMT **Hamilton** 104.88 28 IAMs_20 IAMs_20 14 56 25.6
comp=Z,2µm,20.0s
SFS **San Fernando** 104.88 307 IAMs_20 IAMs_20 14 52 59.6
comp=Z,1µm,20.0s
L27K **Beaver Creek,** 104.89 25 IAMs_20 IAMs_20 14 56 00.8
comp=Z,1µm,19.0s
L27K **Beaver Creek,** 104.89 25 P PKiKP 14 07 04.9 -1.1
baz=294
KAIM **Kayak Island** 104.95 28 IAMs_20 IAMs_20 14 57 52.6
comp=Z,1µm,22.0s
KAIM **Kayak Island** 104.95 28 P PKiKP 14 07 06.0 -0.2
baz=291
MCARA **McCarthy VSAT** 105.05 26 IAMs_20 IAMs_20 14 59 58.0
comp=Z,1µm,18.0s
MCARA **McCarthy VSAT** 105.05 26 P PKiKP 14 07 06.1 -0.2
baz=293
BERG **Berg Lake** 105.11 28 IAMs_20 IAMs_20 14 58 18.9
comp=Z,2µm,18.0s
SUCK **Suckling Hills** 105.20 28 IAMs_20 IAMs_20 14 56 20.1
comp=Z,2µm,19.0s
I29M **Ogilvie Camp,** 105.27 22 P PKiKP 14 07 06.4 -0.2
baz=298
MTE **Manteigas** 105.34 311 *e*PP PKiKP 14 07 15.0 +7.5
MTE **Manteigas** 105.34 311 *e*LR LR 14 49 42.9
comp=Z,622nm,18.0s
EPYK **Eagle Plains** 105.35 21 P PKiKP 14 07 06.3 -0.5
baz=300
A36M **Sachs Harbour** 105.35 13 P PKiKP 14 07 06.2 -0.4
baz=312
TGL **Tana Glacier** 105.38 27 IAMs_20 IAMs_20 14 57 47.8
comp=Z,1µm,20.0s
PMRV **Marv??o** 105.38 310 *e*LR LR 14 49 35.1
comp=Z,461nm,18.0s
INK **Inuvik** 105.38 18 P PKiKP 14 07 06.3 -0.4
baz=303
WAX **Waxell Ridge** 105.48 27 IAMs_20 IAMs_20 14 56 55.6
comp=Z,1µm,22.0s
SNH **Sunshine Point** 105.59 28 IAMs_20 IAMs_20 14 57 00.5
comp=Z,2µm,19.0s
PGAV **Gavieira, Arco** 105.61 313 *e*PP PKiKP 14 07 16.5 +8.5
PGAV **Gavieira, Arco** 105.61 313 *e*LR LR 14 47 34.6
comp=Z,431nm,18.0s
SUMG **Summit** 105.84 348 IAMs_20 IAMs_20 14 57 08.3
comp=Z,2µm,19.0s
PVAQ **Vaqueiros** 105.94 308 *e*LR LR 14 47 10.4
comp=Z,576nm,18.0s
CTGM **Chitina Glacie** 105.97 26 IAMs_20 IAMs_20 14 58 16.2
comp=Z,2µm,19.0s
MESA **MESA** 106.00 27 IAMs_20 IAMs_20 14 58 22.4
comp=Z,2µm,21.0s
YAH **Yahtse** 106.02 27 IAMs_20 IAMs_20 14 50 35.9
comp=Z,1µm,21.0s
LOGN **Logan Glacier** 106.17 27 IAMs_20 IAMs_20 14 58 21.7
comp=Z,2µm,20.0s
TABL **Table Mountain** 106.27 27 IAMs_20 IAMs_20 14 59 50.3
comp=Z,2µm,20.0s
AVE **Averroes** 106.28 304 IAMs_20 IAMs_20 14 52 11.7
comp=Z,2µm,19.0s
BCPM **Bancas Point** 107.15 27 IAMs_20 IAMs_20 15 01 15.7
comp=Z,1µm,20.0s
M30M **Minto, Yukon** 107.18 24 IAMs_20 IAMs_20 14 59 57.2
comp=Z,2µm,18.0s
M30M **Minto, Yukon** 107.18 24 P PKiKP 14 07 10.3 0.0
baz=299
TBI **Tubuai** 107.42 115 *e*LR LR 14 38 32.8
comp=Z,2µm,23.8s
C36M **Paulatuk** 107.44 15 IAMs_20 IAMs_20 15 00 21.1
comp=Z,2µm,19.0s
N31M **Braeburn, Yuko** 108.13 25 IAMs_20 IAMs_20 15 01 06.3
comp=Z,2µm,18.0s
N31M **Braeburn, Yuko** 108.13 25 P PKiKP 14 07 12.5 +0.4
baz=299
P29M **Windy Craggy** 108.16 27 IAMs_20 IAMs_20 14 58 56.3
comp=Z,1µm,20.0s
PPT2 **Papeete2** 108.31 109 *e*LR LR 14 38 58.3
comp=Z,2µm,23.8s
M31M **Drury Creek, Y** 108.34 24 IAMs_20 IAMs_20 14 59 58.8
comp=Z,1µm,20.0s
M31M **Drury Creek, Y** 108.34 24 P PKiKP 14 07 12.9 +0.4
baz=301
P32M **Atlin** 109.97 26 P PKiKP 14 07 15.5 -0.1
baz=301
P33M **Teslin, Yukon** 110.03 25 IAMs_20 IAMs_20 15 01 46.6
comp=Z,1µm,18.0s
JIS **Juneau Island** 110.33 27 IAMs_20 IAMs_20 15 01 35.8
comp=Z,1µm,20.0s
TGTN **Hyland Airport** 111.12 23 P PKiKP 14 07 19.0 +1.3
baz=307
S34M **Telegraph Cree** 112.00 27 P PKiKP 14 07 19.3 -0.1
baz=303
DLBC **Dease Lake** 112.20 26 P PKiKP 14 07 19.8 -0.1
baz=304
WRAK **Wrangell Islan** 112.23 28 IAMs_20 IAMs_20 15 02 25.1
comp=Z,2µm,20.0s
WRAK **Wrangell Islan** 112.23 28 P PKiKP 14 07 20.0 +0.2
baz=301
CRAG **Craig** 112.33 30 P PKiKP 14 07 20.4 +0.4
baz=300
T35M **Bob Quinn** 112.91 27 P PKiKP 14 07 21.3 +0.1
baz=303
V35K **Ketchikan** 113.15 29 P PKiKP 14 07 22.4 +0.8
baz=301
PMOZ **Porto Moniz, M** 114.44 305 *e*PP PP 14 08 22.1 +0.7
PMOZ **Porto Moniz, M** 114.44 305 *e*LR LR 14 53 02.3
comp=Z,672nm,22.0s
YKA **Yellowknife Ar** 115.11 17 PKP PKiKP 14 07 24.9 -0.3
comp=Z,5.8nm,0.9s,baz=318,slow=2.3,SNR=14
YKA PP PP 14 08 22.9 -1.7
comp=Z,6.4nm,1.0s,baz=324,slow=6.5,SNR=9.8
TAOE **Nuku Hiva Isla** 118.72 102 *e*LR LR 14 43 48.9
comp=Z,976nm,23.9s
G03D **McMinnville, O** 123.17 36 IAMs_20 IAMs_20 15 07 48.3
comp=Z,852nm,19.0s
G03D **McMinnville, O** 123.17 36 P PKPdf 14 07 40.6 -0.7
baz=305
I02E **Swisshome, OR** 123.44 37 P PKPdf 14 07 40.6 -1.1
baz=304
H04D **Lebanon** 123.87 36 P PKiKP 14 07 43.0 +0.2
baz=305
J01E **Myrtle Point** 123.91 38 P PKiKP 14 07 42.9 -0.1
baz=303
I03D **Drain, OR** 123.97 37 P PKiKP 14 07 43.0 -0.1
baz=304,SNR=6.1
G05D **Wamic, OR** 124.27 35 P PKiKP 14 07 43.6 -0.1
baz=307
K02D **Willamette Mer** 124.33 38 P PKPdf 14 07 43.0 -0.7
baz=303
I04A **Tendick Farm,** 124.48 37 P PKPdf 14 07 43.5 -0.4
baz=305,SNR=8.4
HAWA **Hanford** 124.54 33 IAMs_20 IAMs_20 15 08 48.4
comp=Z,919nm,21.0s
NEW **Newport** 124.56 29 IAMs_20 IAMs_20 15 12 02.2
comp=Z,867nm,18.0s
NEW **Newport** 124.56 29 P PKPdf 14 07 43.7 -0.2
baz=313
L02F **Cave Junction** 124.70 39 P PKiKP 14 07 45.3 +0.7
baz=303
J04D **Umpqua Nationa** 124.97 37 P PKPdf 14 07 44.9 -0.1
baz=305,SNR=14
L04D **Klamath Falls** 125.43 38 P PKPdf 14 07 45.9 0.0
baz=304,SNR=5.5
J05D **Fort Rock, OR** 125.47 36 P PKiKP 14 07 46.4 +0.1
baz=306,SNR=15

K04D **Chiloquin, OR** 125.54 37 P PKiKP 14 07 46.3 -0.1
baz=305
BMO **Blue Mountains** 126.73 33 IAMs_20 IAMs_20 15 10 22.3
comp=Z,1µm,20.0s
MSO **Missoula** 127.10 29 P PKPdf 14 07 48.8 -0.1
baz=315,SNR=12
SCHQ **Schefferville** 127.11 351 PKP PKPdf 14 07 47.8 -0.7
comp=Z,14nm,1.0s,baz=53,slow=1.4,SNR=6.3
SCHQ PP PP 14 09 46.4 +0.1
comp=Z,6.8nm,0.9s,baz=2.0,slow=7.7,SNR=3.0
EGMT **Eagleton** 128.12 25 IAMs_20 IAMs_20 15 10 26.3
comp=Z,1µm,20.0s
EGMT **Eagleton** 128.12 25 P PKiKP 14 07 51.2 -0.1
baz=321,SNR=9.4
SAO **San Andreas Ge** 128.94 43 IAMs_20 IAMs_20 15 10 19.1
comp=Z,901nm,21.0s
BOZ **Bozeman (W)** 129.10 29 IAMs_20 IAMs_20 15 15 51.7
comp=Z,1µm,18.0s
BOZ **Bozeman (W)** 129.10 29 P PKiKP 14 07 53.2 -0.3
baz=317,SNR=13
HLID **Hailey** 129.14 32 IAMs_20 IAMs_20 15 14 36.0
comp=Z,1µm,20.0s
HLID **Hailey** 129.14 32 P PKiKP 14 07 53.4 -0.2
baz=313,SNR=11
DGMT **Dagmar** 129.94 21 P PKPdf 14 07 54.5 +0.4
baz=328
NVAR **Mina Array Bea** 130.10 40 PKP PKPdf 14 07 55.2 +0.2
comp=Z,1.1nm,0.5s,baz=270,slow=1.8,SNR=8.8
NVAR PP PP 14 10 04.5 -2.7
comp=Z,0.5nm,0.4s,baz=293,slow=4.6,SNR=1.6
NVAR SKPab **SKPab** 14 11 14.7 -1.1
comp=Z,3.5nm,1.0s,baz=278,slow=5.2,SNR=4.4
ELK **Elko** 130.55 35 IAMs_20 IAMs_20 15 15 40.7
comp=Z,1µm,20.0s
RLMT **Red Lodge** 130.56 27 P PKiKP 14 07 56.4 -0.1
baz=320
LAO **LASA Array** 130.64 24 IAMs_20 IAMs_20 15 09 12.9
comp=Z,1µm,20.0s
LAO **LASA Array** 130.64 24 P PKiKP 14 07 57.6 +1.1
baz=324
LAO **LASA Array** 130.64 24 P PKiKP 14 07 56.5 +0.1
baz=324,SNR=5.7
FXWY **Fox Creek** 130.83 30 IAMs_20 IAMs_20 15 14 44.5
comp=Z,1µm,20.0s
ULM **Lac du Bonnet** 130.83 14 PKP PKPdf 14 07 55.5 -0.2
comp=Z,25nm,1.0s,baz=328,slow=5.6,SNR=16
ULM PP PP 14 10 07.8 -2.9
comp=Z,7.4nm,1.1s,baz=307,slow=2.7,SNR=3.4
MOOW **Moose Ponds** 130.89 30 IAMs_20 IAMs_20 15 15 26.8
comp=Z,1µm,18.0s
PKM **Mcpherson Peak** 131.05 45 P PKiKP 14 07 58.1 +0.3
baz=302
LOHW **Long Hollow** 131.06 30 IAMs_20 IAMs_20 15 15 30.5
comp=Z,1µm,18.0s
CWC **Cottonwood Cre** 131.39 42 P PKiKP 14 07 58.1 -0.3
baz=304
AHID **Auburn Hatcher** 131.43 31 IAMs_20 IAMs_20 15 15 17.4
comp=Z,1µm,18.0s
GRAC **Grapevine Rang** 131.54 41 P PKiKP 14 07 58.6 +0.1
baz=306
ISA **Isabella, Lake** 131.56 43 P PKiKP 14 07 58.2 -0.4
baz=304
R11A **Troy Canyon, C** 131.86 38 P PKPdf 14 07 58.7 +0.4
baz=308,SNR=37
MPMC **Manual Prospec** 132.00 42 P PKPdf 14 07 59.0 +0.3
baz=305,SNR=10
HWUT **Hardware Ranch** 132.01 32 IAMs_20 IAMs_20 15 16 51.8
comp=Z,2µm,20.0s
MDND **Maddock** 132.01 18 P PKPdf 14 07 58.5 +0.4
baz=333
FURC **Furnace Creek,** 132.18 41 P PKiKP 14 07 59.4 -0.3
baz=306
LRMC **Laurel Mtn Rad** 132.20 43 P PKiKP 14 07 59.7 -0.3
baz=304
BW06 **Boulder Array** 132.20 30 IAMs_20 IAMs_20 15 15 51.7
comp=Z,1µm,19.0s
BW06 **Boulder Array** 132.20 30 P PKPdf 14 07 58.5 -0.4
baz=318
PDAR **Pinedale Array** 132.20 30 PKhKP PKPpre 14 07 50.1
comp=Z,1.1nm,0.9s,baz=162,slow=0.9,SNR=5.3
PDAR PKP PKPdf 14 07 57.7 -1.2
comp=Z,4.9nm,1.0s,baz=101,slow=1.5,SNR=12
PDAR PP PP 14 10 18.2 -2.1
comp=Z,4.3nm,1.2s,baz=256,slow=6.0,SNR=3.0
PDAR SKPbc **SKPab** 14 11 28.2 +3.7
comp=Z,0.8nm,0.7s,baz=51,slow=3.6,SNR=1.9
TPNV **Topopah Spring** 132.29 40 P PKiKP 14 07 59.8 -0.4
baz=307
DUG **Dugway, Tooele** 132.30 34 IAMs_20 IAMs_20 15 18 31.0
comp=Z,848nm,20.0s
DUG **Dugway, Tooele** 132.30 34 P PKiKP 14 07 59.8 -0.3
baz=313
EDW2 **Edwards Air Fo** 132.31 43 P PKPdf 14 07 59.4 +0.3
baz=303,SNR=7.2
AGMN **Agassiz Nation** 132.65 15 P PKPdf 14 07 58.7 -0.5
baz=338
AGMN **Agassiz Nation** 132.65 15 P PKPdf 14 07 58.4 -0.8
baz=338
GSC **Goldstone, Bar** 132.89 42 P PKiKP 14 08 01.1 -0.2
baz=305,SNR=8.7
BFSC **Mount Baldy Ra** 132.90 44 P PKPdf 14 08 00.8 +0.5
baz=303
B35A **Bob, Littlefor** 133.09 13 P PKPdf 14 08 00.6 +0.5
baz=341
HEC **Hector,Ludlow** 133.47 42 P PKiKP 14 08 02.5 0.0
baz=305
MURC **Murrieta** 133.57 44 P PKiKP 14 08 02.2 -0.5
baz=303
RSSD **Black Hills** 133.63 24 IAMs_20 IAMs_20 15 13 29.9
comp=Z,1µm,20.0s
RSSD **Black Hills** 133.63 24 P PKPdf 14 08 00.9 -0.6
baz=326
RSSD **Black Hills** 133.63 24 P PKPdf 14 08 01.2 -0.3
baz=326
K22A **Casper** 133.73 27 P PKPdf 14 08 01.4 -0.3
baz=322
K22A **Casper** 133.73 27 P PKPdf 14 08 01.5 -0.1
baz=322
EYMN **Ely** 133.94 11 P PKPdf 14 08 02.2 +0.5
baz=344
GMRC **Granite Mounta** 133.95 42 P PKiKP 14 08 03.7 +0.1
baz=306
NBRF **Rio Formoso -** 134.03 255 *e*P PKiKP 14 08 08.0 +3.9
PFO **Pinyon Flats O** 134.07 44 P PKPdf 14 08 02.9 +0.3
baz=304,SNR=6.7
TPFO **Pinon Flats** 134.08 44 P PKPdf 14 08 02.7 +0.1
baz=304,SNR=6.6
RWWY **Rawlins** 134.15 29 IAMs_20 IAMs_20 15 16 59.3
comp=Z,1µm,19.0s
BELC **Belle Mtn. Jos** 134.17 43 P PKiKP 14 08 04.1 0.0
baz=305
MONP2 **Monument Peak** 134.50 45 P PKPdf 14 08 04.1 +0.7
baz=303,SNR=5.6
IRM **Iron Mountain** 134.66 42 P PKPdf 14 08 03.8 +0.3
baz=306
BC3 **Big Chuckawall** 134.74 43 P PKPdf 14 08 04.1 +0.4
baz=305
F33A **5 Mile Ranch,** 134.80 16 P PKPdf 14 08 03.4 +0.1
baz=336
O20A **White River Ci** 134.81 31 P PKPdf 14 08 04.0 +0.2
baz=318
IKP **In-Ko-Pah, Jac** 134.85 45 P PKiKP 14 08 04.9 -0.5
baz=304
SWSC **Sam W. Stewart** 134.90 44 P PKiKP 14 08 05.3 0.0
baz=304
NBAN **Anadia - AL** 134.91 253 *e*P PKiKP 14 08 09.6 +3.7
ALF01 **Guarapari-ES** 135.18 237 *e*P PKiKP 14 08 09.6 +3.3
E38A **The Farm, Brul** 135.22 12 P PKPdf 14 08 02.9 -1.2
baz=343
SUSD **Miller** 135.24 20 P PKPdf 14 08 04.7 +0.4
baz=332
PDMCI **Parker Dam,Lak** 135.25 42 P PKPdf 14 08 04.1 -0.4
baz=307
PHWY **Pilot Hill** 135.28 28 IAMs_20 IAMs_20 15 19 38.1
comp=Z,992nm,18.0s
D41A **Chassel** 135.30 9 P PKPdf 14 08 04.8 +0.5
baz=348
RCBR **Riachuelo** 135.34 259 IAMs_20 IAMs_20 15 06 50.2
comp=Z,1µm,19.0s
RCBR **Riachuelo** 135.34 259 *e*P PKiKP 14 08 09.8 +3.0
N23A **Red Feather La** 135.37 28 P PKPdf 14 08 05.1 +0.1
baz=321
CAM01 **Campos-RJ** 135.39 235 *e*P PKiKP 14 08 09.8 +3.2
RIB01 **Linhares ES** 135.47 239 *e*P PKiKP 14 08 10.2 +3.3
F36A **Milaca** 135.49 14 P PKPdf 14 08 04.7 0.0
baz=340
GLA **Glamis** 135.52 43 P PKiKP 14 08 06.1 -0.6
baz=305

PLCA Paso Flores 135.82 190 SKPbc SKPbc 14 11 34.9 -0.6
comp=Z,2.9nm,1.0s,baz=122,slow=4.2,SNR=3.0
PLCA Paso Flores 135.82 190 eP PKiKP 14 08 09.1 +1.9
DUB01 Friburgo-RJ 135.85 234 eP PKiKP 14 08 11.6 +3.9
GUA01 Guaratinga, BA 136.05 243 eP PKiKP 14 08 11.2 +3.1
TRQA Tornquist 136.09 200 IAMs_20 IAMs_20 15 12 12.5
comp=Z,1µm,19.0s
E43A Lone Tree Farm 136.18 7 P PKPdf 14 08 06.1 +0.2
baz=350
CMC01 Camacan, BA 136.25 244 eP PKiKP 14 08 11.6 +3.1
WUAZ Wupatki 136.26 38 IAMs_20 IAMs_20 15 22 08.2
comp=Z,776nm,19.0s
WUAZ Wupatki 136.26 38 P PKiKP 14 08 07.9 -0.4
baz=311,SNR=7.7
F62A Pittston Farm, 136.26 350 P PKPdf 14 08 06.3 +0.2
baz=14
F62A P PKPdf 14 08 06.3 +0.2
baz=14
ISCO Idaho Springs 136.38 29 IAMs_20 IAMs_20 15 19 04.1
comp=Z,1µm,20.0s
ISCO Idaho Springs 136.38 29 P PKPdf 14 08 06.7 -0.2
baz=321
SJMB Sao Joao De Ma 136.40 239 eP PKiKP 14 08 12.0 +3.2
VAS01 Vassouras-RJ 136.61 233 eP PKiKP 14 08 12.0 +2.9
ECSD EROS Data Cent 136.62 18 IAMs_20 IAMs_20 15 17 15.6
comp=Z,1µm,20.0s
ECSD EROS Data Cent 136.62 18 P PKPdf 14 08 06.7 -0.1
baz=335,SNR=11
MAN01 Angra dos Reis 136.72 232 eP PKiKP 14 08 12.4 +3.0
PKME Peaks-Kenny Pk 136.75 349 P PKiKP 14 08 07.9 -0.8
baz=15
MVCO Mesa Verde 136.80 34 IAMs_20 IAMs_20 15 19 07.3
comp=Z,947nm,18.0s
MVCO Mesa Verde 136.80 34 P PKPdf 14 08 08.4 +0.8
baz=316
GDU01 Guandu, BA 136.86 247 eP PKiKP 14 08 10.6 +0.8
K31A O'Neill 136.92 21 P PKiKP 14 08 08.4 -0.8
baz=332
TER01 Tubaro-SC 137.11 221 eP PKiKP 14 08 14.2 +4.2
Q24A Divide 137.26 29 P PKPdf 14 08 08.6 +0.1
baz=321
I37B Waseca 137.26 14 P PKiKP 14 08 09.0 -0.8
baz=340
S22A 4UR Ranch, Cre 137.32 32 P PKPdf 14 08 09.2 +0.5
baz=318
W18A Petrified Fore 137.53 37 P PKPdf 14 08 09.9 +0.9
baz=312,SNR=16
214A Organ Pipe Nat 137.54 43 P PKPdf 14 08 09.7 +0.8
baz=306
PLTB Pedras Altas 137.54 214 eP PKiKP 14 08 13.0 +2.2
CNLB Canela 137.69 219 eP PKiKP 14 08 15.1 +3.8
PARB Paraibuna 137.75 230 eP PKiKP 14 08 14.1 +2.5
BMNY Brushton-Moira 137.92 354 P PKPdf 14 08 09.6 +0.5
baz=7.9
SDCO Great Sand Dun 138.01 31 IAMs_20 IAMs_20 15 20 21.6
comp=Z,1µm,21.0s
SDCO Great Sand Dun 138.01 31 P PKPdf 14 08 09.9 0.0
baz=320
LONY Lake Ozonia 138.14 354 P PKPdf 14 08 09.3 -0.4
baz=7.9
LBNH Lisbon 138.19 352 IAMs_20 IAMs_20 15 17 36.8
comp=Z,1µm,20.0s
LBNH Lisbon 138.19 352 P PKPdf 14 08 10.0 +0.3
baz=12
BGNE Belgrade 138.20 21 P PKPdf 14 08 09.6 -0.2
baz=332
KSCO Kaye Shedlock' 138.41 27 P PKPdf 14 08 10.0 -0.5
baz=324
PET01 Itanhaem-SP 138.46 228 eP PKiKP 14 08 15.7 +2.8
CPSB Cacapava Do Su 138.46 215 eP PKiKP 14 08 16.6 +3.9
TUC Tucson 138.69 41 IAMs_20 IAMs_20 15 21 47.9
comp=Z,1µm,20.0s
TUC Tucson 138.69 41 P PKPdf 14 08 09.8 -1.2
baz=309
DIAM Diamantina, MG 138.70 238 eP PKiKP 14 08 15.7 +2.0
NCB Newcomb 138.75 354 P PKPdf 14 08 11.5 +0.7
baz=8.5
VAO Valinhos 138.97 230 eP PKiKP 14 08 17.1 +3.0
JFWS Jewell Farm 139.02 12 P PKPdf 14 08 10.5 -0.8
baz=344
T25A Trinidad 139.04 31 P PKPdf 14 08 11.5 -0.3
baz=321
TIJ01 Guaruva-PR 139.09 225 eP PKiKP 14 08 16.5 +2.2
SCIA State Center 139.28 15 IAMs_20 IAMs_20 15 17 01.6
comp=Z,1µm,21.0s
ALGR Alto Alegre (B 139.39 217 eP PKiKP 14 08 18.5 +3.7
RODS Rosario do Sul 139.50 214 eP PKiKP 14 08 17.1 +2.2
ANMO Albuquerque 139.57 35 IAMs_20 IAMs_20 15 21 24.5
comp=Z,1µm,20.0s
ANMO Albuquerque 139.57 35 P PKPdf 14 08 11.9 -0.9
baz=316
MC01 Montes Claros 139.63 240 eP PKiKP 14 08 16.9 +1.4
K62A Royalston 139.78 351 P PKPdf 14 08 12.7 0.0
baz=12,SNR=5.4
K62A P PKPdf 14 08 12.7 0.0
baz=12,SNR=5.4
HRV Adam Dziewonsk 139.83 351 P PKPdf 14 08 12.4 -0.3
baz=13
CBKS Cedar Bluff 139.83 24 IAMs_20 IAMs_20 15 18 22.1
comp=Z,1µm,20.0s
TRY Troy 139.91 353 IAMs_20 IAMs_20 15 15 43.2
comp=Z,1µm,21.0s
Y22D IRIS PASSCAL I 139.93 36 IAMs_20 IAMs_20 15 18 42.0
comp=Z,1µm,21.0s
L61B Northampton 140.05 352 P PKPdf 14 08 12.6 -0.6
baz=11
UNIS Unistalda (Bra 140.40 215 eP PKiKP 14 08 18.5 +1.8
121A Cookes Peak, D 140.47 39 P PKPdf 14 08 14.1 -0.3
baz=313
JANB Januaria 140.64 242 eP PKiKP 14 08 15.1 +0.1
BINY Binghamton 140.67 356 P PKPdf 14 08 14.4 +0.1
baz=6.1
BINY Binghamton 140.67 356 P PKPdf 14 08 14.6 +0.3
baz=6.1
KSU1 Kansas State U 140.79 21 IAMs_20 IAMs_20 15 22 19.0
comp=Z,1µm,18.0s
KSU1 Kansas State U 140.79 21 P PKPdf 14 08 14.3 -0.3
baz=333
L56A Greenwood 140.82 357 P PKPdf 14 08 15.1 +0.4
baz=3.6,SNR=6.0
L56A P PKPdf 14 08 15.1 +0.4
baz=3.6,SNR=6.0
ERPA Erie 140.90 0 IAMs_20 IAMs_20 15 16 00.5
comp=Z,2µm,21.0s
ERPA Erie 140.90 0 P PKPdf 14 08 14.2 -0.4
baz=360
PMNB Patos De Minas 140.90 236 eP PKiKP 14 08 19.3 +1.2
RFA San Rafael 141.11 195 iP PKPdf 14 08 16.4 +1.0
YLE Yale 141.20 352 IAMs_20 IAMs_20 15 21 13.3
comp=Z,1µm,19.0s
HDIL Hopedale 141.48 12 P PKPdf 14 08 15.4 -0.4
baz=345
M53A WI Miller and 141.56 1 P PKPdf 14 08 15.3 -0.6
baz=359
PTGB Pitanga 141.60 223 eP PKiKP 14 08 21.9 +2.5
PAL Palisades 141.64 353 P PKPdf 14 08 15.8 -0.2
baz=9.5
ODNJ Ogdensburg 141.64 354 P PKPdf 14 08 17.0 +0.9
baz=8.4,SNR=6.2
EPT El Paso 141.78 38 IAMs_20 IAMs_20 15 22 32.3
comp=Z,714nm,20.0s
OK035 E0210 Rd and N 142.05 25 IAMs_20 IAMs_20 15 22 03.6
comp=Z,1µm,18.0s
SFIN Lafayette 142.05 9 P PKPdf 14 08 17.0 +0.2
baz=348
N58A Sunbury 142.07 356 P PKPdf 14 08 17.6 +0.8
baz=5.1,SNR=5.5
N58A P PKPdf 14 08 17.6 +0.8
baz=5.1,SNR=5.5
AMTX Amarillo 142.17 30 IAMs_20 IAMs_20 15 19 41.8
comp=Z,1µm,20.0s
AMTX Amarillo 142.17 30 P PKPdf 14 08 17.1 -0.2
baz=323
SDBA SAO DESIDERIO 142.18 246 eP PKiKP 14 08 22.4 +1.6
OK038 West end E0370 142.23 25 IAMs_20 IAMs_20 15 25 32.7
comp=Z,1µm,20.0s
MSTX Muleshoe 142.32 32 P PKPdf 14 08 14.7 -3.0
baz=320
MSTX Muleshoe 142.32 32 P PKPdf 14 08 17.0 -0.7
baz=320
SSPA Standing Stone 142.34 358 IAMs_20 IAMs_20 15 19 39.7
comp=Z,1µm,19.0s
SSPA Standing Stone 142.34 358 P PKPdf 14 08 17.3 0.0
baz=3.2
O48B Farmland 142.44 7 P PKPdf 14 08 13.7 -3.8
baz=351
O48B Farmland 142.44 7 P PKPdf 14 08 17.1 -0.4
baz=351
MNTX Cornudas Mount 142.51 37 P PKPdf 14 08 15.5 -2.4
baz=315,SNR=28
MNTX Cornudas Mount 142.51 37 P PKPdf 14 08 17.9 -0.1
baz=315
IPMB Ipameri, GO 142.64 235 eP PKiKP 14 08 22.6 +1.0
ACSO Alum Creek Sta 142.67 4 P PKPdf 14 08 13.6 -4.3
baz=355
ACSO Alum Creek Sta 142.67 4 P PKPdf 14 08 17.4 -0.5
baz=355
O53A New Philadelph 142.74 2 P PKPdf 14 08 17.4 -0.7
baz=358
T35B Sooner Cattle 142.75 22 P PKPdf 14 08 14.9 -3.3
baz=332
AAGR Agrelo 142.80 195 iP PKPdf 14 08 20.1 +1.5
O52A Adamsville 142.85 3 P PKPdf 14 08 13.6 -4.6
baz=357
O52A P PKPdf 14 08 13.6 -4.6
baz=357
R40A Maddies Statio 142.91 16 P PKPdf 14 08 14.5 -3.9
baz=339
PCMB Pacaembu 143.00 228 eP PKiKP 14 08 24.4 +2.2
ARCO CERRO ARCO 143.06 195 iP PKPdf 14 08 19.4 +0.3
S39A Bolivar 143.16 18 P PKPab 14 08 15.0 +0.6
baz=337
P48A Milroy 143.19 7 P PKPbc 14 08 15.5 -0.2
baz=351
P48A P PKPbc 14 08 15.5 -0.2
baz=351
P49A Miami Univ. Ec 143.20 6 P PKPdf 14 08 18.1 -0.8
baz=352
ASAL Salagasta 143.27 196 iP PKPdf 14 08 18.9 -0.5
P52A Corning 143.31 3 P PKPdf 14 08 18.5 -0.5
baz=356
MCWV Mont Chateau 143.35 0 IAMs_20 IAMs_20 15 15 59.7
comp=Z,1µm,22.0s
MCWV Mont Chateau 143.35 0 P PKPdf 14 08 18.5 -0.7
baz=360
P51A Williamsport 143.41 4 P PKPbc 14 08 15.8 -0.5
baz=355
P51A P PKPbc 14 08 15.8 -0.5
baz=355
CCM Cathedral Cave 143.41 15 P PKPab 14 08 15.5 +0.2
baz=341
CCM Cathedral Cave 143.41 15 P PKPdf 14 08 18.8 -0.5
baz=341
ITRB Ituverava 143.43 231 eP PKiKP 14 08 24.8 +1.6
OK031 S. Brethren Rd 143.47 24 IAMs_20 IAMs_20 15 19 02.2
comp=Z,1µm,22.0s
OLIL Olney 143.48 11 P PKPbc 14 08 17.0 +0.4
baz=346
P57A Homestead Farm 143.49 358 P PKPbc 14 08 16.4 -0.2
baz=3.0
P57A P PKPbc 14 08 16.4 -0.2
baz=3.0
P53A Whipple 143.49 2 P PKPbc 14 08 16.4 -0.2
baz=357,SNR=7.6
P53A P PKPbc 14 08 16.4 -0.2
baz=357,SNR=7.6
BDFB Brasilia 143.60 239 PKP PKPbc 14 08 18.4 +0.6
comp=Z,6.8nm,0.9s,baz=180,slow=1.0,SNR=5.2
BDFB Brasilia 143.60 239 eP PKiKP 14 08 24.2 +0.5
WMOK Wichita Mounta 143.67 27 IAMs_20 IAMs_20 15 20 50.1
comp=Z,1µm,20.0s
WMOK Wichita Mounta 143.67 27 P PKPbc 14 08 17.4 +0.1
baz=327,SNR=40
WMOK Wichita Mounta 143.67 27 P PKPdf 14 08 19.6 -0.3
baz=327
FVM French Village 143.69 14 P PKPbc 14 08 17.2 0.0
baz=342
CPUP Villa Florida 143.77 215 PKP PKPbc 14 08 18.6 +0.8
comp=Z,4.4nm,0.8s,baz=76,slow=1.8,SNR=7.3
CPUP Villa Florida 143.77 215 eP PKiKP 14 08 24.6 +1.0
Q51A Peebles 143.84 5 P PKPab 14 08 17.3 +0.3
baz=354,SNR=20
Q51A P PKPab 14 08 17.3 +0.3
baz=354,SNR=20
ROSB Rosrio 143.91 261 eP PKiKP 14 08 25.4 +1.1
TUL1 Leonard 143.91 22 IAMs_20 IAMs_20 15 21 43.9
comp=Z,1µm,19.0s
TUL1 Leonard 143.91 22 P PKPbc 14 08 18.3 +0.4
baz=332,SNR=11
TUL1 Leonard 143.91 22 P PKPdf 14 08 20.4 +0.2
baz=332
U38A Gravette 143.95 20 P PKPab 14 08 17.7 +0.2
baz=335,SNR=15
ACHE Chepes 143.95 199 iP PKPbc 14 08 19.4 +1.0
Q52A Bidwell 143.97 3 P PKPbc 14 08 17.9 -0.1
baz=356,SNR=14
Q52A P PKPbc 14 08 17.9 -0.1
baz=356,SNR=14
Q54A Coxs Mills 144.01 1 P PKPbc 14 08 18.2 +0.1
baz=358,SNR=23
Q54A P PKPbc 14 08 18.2 +0.1
baz=358,SNR=23
S44A Carbondale 144.24 13 P PKPbc 14 08 19.3 +0.4
baz=344,SNR=21
HHAR Hobbs 144.24 20 P PKPab 14 08 18.6 0.0
baz=335
R49A Shelbyville 144.37 7 P PKPbc 14 08 19.2 -0.1
baz=351,SNR=53
R49A P PKPbc 14 08 19.2 -0.1
baz=351,SNR=53
R50A Paris 144.48 6 P PKPab 14 08 19.3 -0.1
baz=352,SNR=42
R50A P PKPab 14 08 19.3 -0.1
baz=352,SNR=42
APLL PUNTA DE LOS L 144.61 200 iP PKPbc 14 08 20.9 +0.5
R53A Hurricane 144.62 3 P PKPbc 14 08 20.1 0.0
baz=356,SNR=38
R53A P PKPbc 14 08 20.1 0.0
baz=356,SNR=38
AVFE Valle Fertil 144.67 199 iP PKPdf 14 08 22.1 +0.3
R55A Marlinton 144.72 0 P PKPbc 14 08 20.5 0.0
baz=360,SNR=41
R55A P PKPbc 14 08 20.5 0.0
baz=360,SNR=41
CBN Corbin Frederi 144.73 357 P PKPbc 14 08 20.4 0.0
baz=4.2
ABTX Abilene, Hawle 145.00 30 P PKPbc 14 08 21.9 +0.3
baz=324,SNR=20
ABTX Abilene, Hawle 145.00 30 P PKPbc 14 08 21.9 +0.3
baz=324,SNR=20
R58B Mineral 145.00 357 P PKPab 14 08 21.2 -0.1
baz=3.4,SNR=46
R58B P PKPab 14 08 21.2 -0.1
baz=3.4,SNR=46
T45B Paducah 145.02 12 P PKPbc 14 08 21.4 0.0
baz=345,SNR=10
S54A Dingess, Beckl 145.18 2 P PKPbc 14 08 21.8 -0.2
baz=357,SNR=43
S54A P PKPbc 14 08 21.8 -0.2
baz=357,SNR=43
S51A Beattyville 145.19 5 P PKPbc 14 08 21.9 -0.1
baz=353,SNR=155
S51A P PKPbc 14 08 21.9 -0.1
baz=353,SNR=155
ACCO Cerro Coronel 145.22 196 iP PKPdf 14 08 23.8 +0.7
TX31 Lajitas Ar. Si 145.23 38 P PKPdf 14 08 23.9 +1.0
baz=315
TXAR Lajitas Array 145.23 38 PKPbc PKPdf 14 08 23.4 +0.6
comp=Z,124nm,0.9s,baz=286,slow=1.7,SNR=859
X37A Clayton 145.24 23 P PKPab 14 08 22.4 +0.1
baz=332,SNR=45
S57A Dark Hollow, R 145.24 359 P PKPdf 14 08 22.6 +0.1
baz=1.5,SNR=82
S57A P PKPdf 14 08 22.6 +0.1
baz=1.5,SNR=82
LCAR Lake Charles 145.30 16 P PKPbc 14 08 22.2 -0.2
baz=340,SNR=184
T47A Sharon Grove 145.35 10 P PKPbc 14 08 22.4 0.0
baz=347,SNR=54
Z35A Perchaven, San 145.54 26 P PKPbc 14 08 23.2 0.0
baz=328,SNR=42
ACDV Cuesta del Vie 145.63 196 iP PKPab 14 08 24.9 +0.9
ACLC CERRO LA CRUZ 145.64 200 iP PKPbc 14 08 23.9 0.0
T50A Nancy 145.67 7 P PKPdf 14 08 22.6 -0.6
baz=351
T50A P PKPdf 14 08 22.6 -0.6
baz=351
AROD Rodeo 145.73 196 iP PKPab 14 08 25.6 +0.9
T60A Surry 145.75 356 P PKPbc 14 08 23.6 -0.1
baz=5.5,SNR=13
T60A P PKPbc 14 08 23.6 -0.1
baz=5.5,SNR=13
BLA Blacksburg 145.79 1 P PKPdf 14 08 23.7 +0.2
baz=359,SNR=14
BLA Blacksburg 145.79 1 P PKPdf 14 08 23.7 +0.2
baz=359,SNR=14
SMTB Santa Maria do 145.87 250 eP PKiKP 14 08 28.1 -0.3
HBAR Harrisburg 145.92 16 P PKPab 14 08 24.6 -0.1
baz=340,SNR=11
MIAR Mount Ida 145.94 21 P PKPab 14 08 24.7 -0.2
baz=335,SNR=94
MIAR Mount Ida 145.94 21 P PKPab 14 08 24.7 -0.2
baz=335,SNR=94
T59A Double "B" Far 145.97 357 P PKPbc 14 08 24.6 +0.2
baz=4.1,SNR=46
T59A P PKPbc 14 08 24.6 +0.2
baz=4.1,SNR=46
T57A Hurt 146.00 359 P PKPbc 14 08 24.5 -0.1
baz=1.0,SNR=47
T57A P PKPbc 14 08 24.5 -0.1
baz=1.0,SNR=47
U49A Red Boiling Sp 146.04 9 P PKPdf 14 08 23.8 -0.1
baz=349,SNR=43
WVT Waverly 146.05 12 P PKPdf 14 08 23.9 0.0
baz=346,SNR=180
WVT Waverly 146.05 12 P PKPab 14 08 25.1 -0.2
baz=346
GO04 Tololo Observa 146.07 194 iP PKiKP 14 08 31.2 +2.5
ANTJ Antonio Joao (146.09 222 eP PKiKP 14 08 29.4 +0.7
TZTN Tazewell 146.28 5 P PKPdf 14 08 24.6 +0.3
baz=353,SNR=33
TZTN Tazewell 146.28 5 P PKPbc 14 08 25.0 -0.5
baz=353
U54A Nelsons Funny 146.43 3 P PKPbc 14 08 25.7 -0.2
baz=356,SNR=21
U54A P PKPbc 14 08 25.7 -0.2
baz=356,SNR=21
Z38A Mt. Pleasant 146.56 23 P PKPbc 14 08 26.6 +0.3
baz=332,SNR=19
WHTX Lake Whitney, 146.57 28 P PKPbc 14 08 26.1 -0.3
baz=327,SNR=11
WHTX Lake Whitney, 146.57 28 P PKPbc 14 08 26.5 +0.1
baz=327,SNR=11
U59A Littleton 146.60 357 P PKPbc 14 08 26.2 -0.1
baz=3.7,SNR=12
U59A P PKPbc 14 08 26.2 -0.1
baz=3.7,SNR=12
JCT Junction City 146.61 32 IAMs_20 IAMs_20 15 24 43.7
comp=Z,1µm,19.0s
JCT Junction City 146.61 32 P PKPdf 14 08 25.5 +0.4
baz=322,SNR=72
JCT Junction City 146.61 32 P PKPbc 14 08 27.0 +0.4
baz=322
V48A Smith Brothers 146.62 10 P PKPdf 14 08 25.6 +0.7
baz=347,SNR=57
U56A King 146.65 1 P PKPbc 14 08 26.4 -0.1
baz=359,SNR=18
U56A P PKPbc 14 08 26.4 -0.1
baz=359,SNR=18
W45A Hickory Valley 146.68 14 P PKPdf 14 08 25.7 +0.7
baz=343,SNR=21
AQDB Aquidauana 146.91 224 eP PKiKP 14 08 30.8 +0.5
V51A Loudon 146.93 7 P PKPdf 14 08 25.3 -0.1
baz=352,SNR=27
V52A Sevierville 146.97 6 P PKPdf 14 08 25.9 +0.4
baz=353,SNR=51
CCAR Cane Creek 147.12 19 P PKPbc 14 08 27.5 -0.4
baz=338,SNR=8.9
TKL Tuckaleechee C 147.14 6 P PKPdf 14 08 26.2 +0.4
baz=353,SNR=44
V58A Windy Hill, Pi 147.20 359 P PKPbc 14 08 28.4 +0.3
baz=1.3,SNR=28
V58A P PKPbc 14 08 28.4 +0.3
baz=1.3,SNR=28
V53A Saluda 147.21 5 P PKPdf 14 08 26.4 +0.5
baz=354,SNR=80
V53A P PKPdf 14 08 26.4 +0.5
baz=354,SNR=80
OXF Oxford 147.24 15 P PKPdf 14 08 25.9 0.0
baz=342,SNR=36
OXF Oxford 147.24 15 P PKPbc 14 08 27.7 -0.4
baz=342
237A Washetta, Mont 147.31 26 P PKPbc 14 08 29.0 +0.5
baz=329,SNR=7.2
W50A Signal Mountai 147.40 8 P PKPdf 14 08 26.8 +0.5
baz=350,SNR=30
AHML Horco Molle 147.41 204 iP PKPbc 14 08 29.8 +0.8
435B Jarrell 147.51 29 IAMs_20 IAMs_20 15 27 36.0
comp=Z,874nm,18.0s
435B Jarrell 147.51 29 P PKPbc 14 08 29.5 +0.4
baz=326,SNR=11
435B Jarrell 147.51 29 P PKPbc 14 08 29.4 +0.4
baz=326
W52A Murphy 147.68 6 P PKPdf 14 08 27.8 +1.0
baz=352,SNR=30
CNNC Cliffs of the 147.72 357 P PKPbc 14 08 29.9 +0.4
baz=3.6
Y45A Yeager Farm, C 147.81 15 P PKPbc 14 08 30.1 +0.4
baz=342,SNR=7.0
KMSC Kings Mountain 147.83 2 P PKPdf 14 08 27.9 +0.9
baz=357,SNR=46
KMSC Kings Mountain 147.83 2 P PKPbc 14 08 29.6 -0.3
baz=357,SNR=46
X48A Hartselle 147.83 11 P PKPdf 14 08 26.7 -0.2
baz=346,SNR=72
W57A Gilead 147.85 0 P PKPbc 14 08 30.0 +0.2
baz=360,SNR=21
W57A P PKPbc 14 08 30.0 +0.2
baz=360,SNR=21
CASEE Lake Jocassee 147.88 5 P PKPdf 14 08 28.3 +1.2
baz=354,SNR=85
TMAB Tom-Au,PA,Br 147.91 261 eP PKiKP 14 08 31.9 -0.7
NATX Nacogdoches 148.00 24 IAMs_20 IAMs_20 15 26 26.4
comp=Z,1µm,18.0s
NATX Nacogdoches 148.00 24 P PKPbc 14 08 30.9 +0.5
baz=331,SNR=8.4
NATX Nacogdoches 148.00 24 P PKPbc 14 08 30.9 +0.5
baz=331,SNR=8.4
X51A Calhoun 148.08 8 P PKPdf 14 08 28.6 +1.2
baz=350,SNR=22
X51A P PKPdf 14 08 28.6 +1.2
baz=350,SNR=22
SNDB Serra Nova Dou 148.09 242 eP PKiKP 14 08 32.3 -0.6
PAULI Pauline 148.12 3 P PKPdf 14 08 28.6 +1.1
baz=356,SNR=22
FSA Cafayete 148.27 204 iP PKPbc 14 08 32.1 +0.6
BIRD Birdtown, Kers 148.35 1 P PKPdf 14 08 28.5 +0.8
baz=359,SNR=19
143A Socs Landing, 148.35 19 P PKPbc 14 08 31.6 +0.4
baz=338,SNR=5.5
GO03 Copiap 148.38 196 iP PKPab 14 08 36.8 +2.2
833A Chaparral WMA, 148.50 35 P PKiKP 14 08 32.8 -0.5
baz=320
833A Chaparral WMA, 148.50 35 P PKPbc 14 08 32.2 +0.4
baz=320,SNR=20
Y49A Blount Mountai 148.53 11 P PKPbc 14 08 31.2 -0.6
baz=347,SNR=76
HODGE Hodges 148.68 4 P PKPbc 14 08 32.2 +0.1
baz=355,SNR=34
JSC Jenkinsville 148.69 2 P PKPbc 14 08 31.9 -0.2
baz=357,SNR=15
PRPB Parauapebas 148.77 253 eP PKPbc 14 08 32.9 0.0
Z47A Carrollton 148.82 14 P PKPbc 14 08 32.5 +0.1
baz=344,SNR=8.7
Y52A Lilburn 148.88 7 P PKPbc 14 08 33.0 +0.4
baz=352,SNR=18
Y52A P PKPbc 14 08 33.0 +0.4
baz=352,SNR=18
735A Kenedy 148.96 32 P PKiKP 14 08 34.3 0.0
baz=323,SNR=11
Y60A Bolivia 148.96 357 P PKPbc 14 08 32.9 +0.2
baz=3.1,SNR=8.0
Y60A P PKPbc 14 08 32.9 +0.2
baz=3.1,SNR=8.0
HKT Hockley 149.04 28 P PKiKP 14 08 33.8 -0.6
baz=328
VBMS Vicksburg 149.08 18 IAMs_20 IAMs_20 15 24 17.3
comp=Z,1µm,20.0s
VBMS Vicksburg 149.08 18 P PKiKP 14 08 34.0 -0.4
baz=339,SNR=7.4
VBMS Vicksburg 149.08 18 P PKPbc 14 08 33.1 0.0
baz=339,SNR=7.4
Y58A Scranton 149.09 360 P PKPbc 14 08 33.7 +0.6
baz=0.3,SNR=6.6
Y58A P PKPbc 14 08 33.7 +0.6
baz=0.3,SNR=6.6
146A Union 149.11 15 P PKiKP 14 08 34.4 -0.1
baz=342,SNR=6.7
LRAL Lakeview Retre 149.21 12 P PKPdf 14 08 30.2 +1.0
baz=346,SNR=18
LRAL Lakeview Retre 149.21 12 P PKPbc 14 08 33.2 -0.3
baz=346,SNR=18
342B Flagon Creek P 149.25 21 P PKiKP 14 08 34.5 -0.2

baz=335
Z51A Franklin 149.26 9 P PKPbc 14 08 33.6 0.0
baz=350,SNR=11
ALOL LOMAS DE OLMED 149.36 209 *i* P PKiKP 14 08 36.3 +1.0
GOGA Godfrey 149.39 6 P PKPbc 14 08 34.1 +0.2
baz=353,SNR=13
GOGA Godfrey 149.39 6 P PKPbc 14 08 34.0 +0.2
baz=353,SNR=13
441A DeRidder 149.48 23 P PKiKP 14 08 35.2 -0.1
baz=333,SNR=5.5
AZAP Zapla 149.53 207 *i* P PKPab 14 08 39.1 -0.5
HAW Hawthorne Fire 149.59 3 P PKPbc 14 08 34.8 +0.4
baz=356,SNR=11
344A Westbrook Farm 149.72 19 P PKiKP 14 08 35.6 -0.2
baz=338,SNR=8.2
SALV Santo Antonio 149.76 231 *e*P PKPbc 14 08 35.0 -0.3
NHSC New Hope 149.89 1 P PKPbc 14 08 35.2 +0.1
baz=359
KVTX Kingsville 149.94 33 P PKiKP 14 08 37.2 +0.8
baz=322
152A Waverly Hall 149.97 8 P PKPbc 14 08 35.5 +0.1
baz=350,SNR=51
346A Big Creek Wild 150.17 17 P PKiKP 14 08 36.6 -0.1
baz=340
154A Montrose 150.22 6 P PKPbc 14 08 36.2 +0.2
baz=353,SNR=10
250A Grady 150.38 11 P PKPbc 14 08 36.5 +0.1
baz=347,SNR=13
HJA Humahuaca 150.56 208 *i* P PKPdf 14 08 33.6 +1.5
255A Hazlehurst 150.96 5 P PKiKP 14 08 38.2 -0.1
baz=355,SNR=8.2
BRAL Brewton 151.00 13 P PKiKP 14 08 38.8 +0.4
baz=345,SNR=9.5
BRAL Brewton 151.00 13 P PKiKP 14 08 38.6 +0.2
baz=345,SNR=9.5
352A Blakely 151.10 9 P PKiKP 14 08 38.5 -0.1
baz=349,SNR=12
PB14 IPOC Station P 151.22 198 *i* P PKiKP 14 08 39.5 0.0
TIGA Tifton 151.33 7 P PKiKP 14 08 39.2 +0.1
baz=352
TIGA Tifton 151.33 7 P PKiKP 14 08 38.9 -0.2
baz=352
451A Vernon 151.80 11 P PKiKP 14 08 40.6 +0.5
baz=347,SNR=7.7
PB15 IPOC Station P 152.23 201 *i* P PKiKP 14 08 42.5 +1.0
LVC Limon Verde 152.57 202 *e*P PKPbc 14 08 39.0 -3.1
PTLB Pontes e Lacer 152.66 228 *e*P PKPbc 14 08 39.6 -2.3
PDRB Porto dos Gac 152.95 238 *e*P PKPbc 14 08 39.9 -2.9
PB09 IPOC Station P 153.43 202 *i* P PKPdf 14 08 37.9 +1.7
NPGB Novo Progresso 153.72 248 *e*P PKPbc 14 08 41.1 -3.4
PB07 IPOC Station P 153.74 201 *e*P PKiKP 14 08 46.0 +1.4
MALB Monte Alegre 154.07 260 *e*P PKPbc 14 08 41.7 -3.5
ITTB Itaituba 154.93 253 *e*P PKPdf 14 08 42.3 +4.0
UNM Universidad Na 154.94 48 IAMs_20 IAMs_20 15 19 54.1
comp=Z,933nm,22.0s
ABD La Joyeuse, An 157.48 308 IAMs_20 IAMs_20 15 27 41.6
comp=Z,977nm,19.0s
LPAZ La Paz 157.78 211 PKP PKPdf 14 08 43.0 +0.3
comp=Z,7.7nm,1.1s,baz=75,slow=1.9,SNR=16
LPAZ La Paz 157.78 211 *e*P PKPdf 14 08 46.3 +3.6
MPOM Morne Pois Mar 158.05 303 IAMs_20 IAMs_20 15 32 46.1
comp=Z,806nm,20.0s
SVN Savane Anatole 158.11 304 IAMs_20 IAMs_20 15 32 22.6
comp=Z,830nm,20.0s
FDF Fort de France 158.15 304 IAMs_20 IAMs_20 15 31 55.6
comp=Z,812nm,21.0s
BIM Bigot 158.19 303 IAMs_20 IAMs_20 15 32 12.8
comp=Z,986nm,21.0s
SJG San Juan 159.78 320 IAMs_20 IAMs_20 15 26 11.5
comp=Z,950nm,21.0s
GRGR Grenville 159.81 298 IAMs_20 IAMs_20 15 38 01.9
comp=Z,907nm,20.0s
BOAV Boa Vista 160.76 269 *e*P PKPdf 14 08 49.6 +4.1
ETMB Extrema 161.54 227 *e*P PKPdf 14 08 50.4 +4.1
CZSB Cruzeiro do Su 167.35 214 *e*P PKPdf 14 08 56.2 +4.8
SDV Santo Domingo 169.10 304 *e*P PKPdf 14 08 56.7 +3.8
ROSC El Rosal 174.20 290 PKP PKPdf 14 08 54.9 -0.7
comp=Z,8.2nm,0.3s,baz=3.5,slow=19,SNR=4.9
ROSC PP PP 14 14 21.6 +1.9
comp=Z,4.7nm,0.4s,baz=158,slow=5.4,SNR=1.3
OTAV Otavalo 177.09 207 *e*P PKPdf 14 08 60.0 +3.5

ROM 24 13:55:01.9±0.1, 42°.61N±0°.01×13°.26E±0°.01, h11km, ML2.5/5, 3C-1D, Error ellipse: s-maj=1.5km s-min=0.8km az=343.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**200**	P		Pg	13 55 05.3	+0.4
RM33				S		Sg	13 55 07.5	+0.6
RM33				AML		AML		
	comp=E,1390μm,0.8s							
RM33				AML		AML		
	comp=N,894μm,1.4s							
RM33				AML		AML		
	comp=E,1335μm,0.7s							
RM33				AML		AML		
	comp=N,874μm,1.5s							
RM33				AML		AML		
	comp=E,3460μm,1.5s							
RM33				AML		AML		
	comp=E,3410μm,0.6s							
RM33				AML		AML		
	comp=N,3210μm,0.3s							
RM33				AML		AML		
	comp=E,3455μm,1.6s							
RM33				AML		AML		
	comp=E,3405μm,0.6s							
RM33				AML		AML		
	comp=N,3285μm,0.3s							
RM33				AML		AML		
	comp=N,847μm,0.8s							
RM33				AML		AML		
	comp=E,1335μm,0.7s							
RM33				AML		AML		
	comp=E,1168μm,0.3s							
RM33				AML		AML		
	comp=N,768μm,0.2s							
CAMP	**Campotosto**	**0.13**	**123**	P		Pg	13 55 05.7	+0.5
CAMP				S		Sg	13 55 08.2	+0.6
CAMP				AML		AML		
	comp=E,172μm,0.7s							
CAMP				AML		AML		
	comp=N,138μm,0.5s							
CAMP				AML		AML		
	comp=E,1315μm,0.8s							
CAMP				AML		AML		
	comp=N,896μm,0.3s							
CAMP				AML		AML		
	comp=N,896μm,0.3s							
CAMP				AML		AML		
	comp=E,173μm,0.7s							
CAMP				AML		AML		
	comp=N,138μm,0.5s							
LNSS	**Leonessa**	**0.16**	**269**	⇑P		Pg	13 55 06.2	+0.5
LNSS				S		Sg	13 55 09.2	+0.8
LNSS				AML		AML		
	comp=E,1215μm,0.4s							
LNSS				AML		AML		
	comp=N,1795μm,1.5s							
LNSS				AML		AML		
	comp=E,5975μm,0.8s							
LNSS				AML		AML		
	comp=N,10270μm,0.4s							
LNSS				AML		AML		
	comp=E,1216μm,0.4s							
LNSS				AML		AML		
	comp=N,1514μm,0.2s							
TERO	**Teramo**	**0.25**	**86**	⇑P		Pg	13 55 07.5	+0.3
TERO				S		Sg	13 55 11.5	+0.8
TERO				AML		AML		
	comp=N,3535μm,0.1s							
TERO				AML		AML		
	comp=E,1880μm,0.2s							
TERO				AML		AML		
	comp=N,4005μm,0.1s							
TERO				AML		AML		
	comp=E,1695μm,0.2s							
TERO				AML		AML		
	comp=E,301μm,0.2s							
TERO				AML		AML		
	comp=E,335μm,0.2s							
TERO				AML		AML		
	comp=N,287μm,0.2s							
TERO				AML		AML		
	comp=N,317μm,0.2s							
GIGS	**Gran Sasso**	**0.28**	**125**	P		Pg	13 55 07.9	+0.2
GIGS				S		Sg	13 55 12.2	+0.8
GIGS				AML		AML		
	comp=E,68μm,0.3s							
GIGS				AML		AML		
	comp=N,33μm,1.2s							
GIGS				AML		AML		
	comp=E,340μm,0.3s							
GIGS				AML		AML		
	comp=E,340μm,0.3s							
GIGS				AML		AML		
	comp=N,222μm,0.9s							
GIGS				AML		AML		
	comp=E,68μm,0.3s							
GIGS				AML		AML		
	comp=N,32μm,0.1s							
FIAM	**Fiamignano**	**0.36**	**198**	P		Pg	13 55 09.4	+0.3
FIAM				S		Sg	13 55 14.9	+1.0
FIAM				AML		AML		
	comp=E,111μm,0.6s							
FIAM				AML		AML		
	comp=N,85μm,0.8s							
FIAM				AML		AML		
	comp=E,580μm,0.2s							
FIAM				AML		AML		
	comp=N,450μm,1.4s							
FIAM				AML		AML		
	comp=N,450μm,1.4s							
FIAM				AML		AML		
	comp=E,580μm,0.2s							
FIAM				AML		AML		
	comp=N,85μm,0.8s							
FIAM				AML		AML		
	comp=E,111μm,0.6s							
ARRO	**Arrone**	**0.37**	**266**	⇑P		Pg	13 55 09.5	+0.2
ARRO				S		Sg	13 55 15.2	+1.0
ARRO				AML		AML		
	comp=E,152μm,0.2s							
ARRO				AML		AML		
	comp=N,132μm,0.2s							
VCEL	**Villa Celiera**	**0.48**	**116**	S		Sb	13 55 20.0	+0.5
CSP1	**Cessapalombo**	**0.49**	**355**	P		Pg	13 55 11.6	0.0
CSP1				S		Sb	13 55 19.5	-0.3
CSP1				AML		AML		
	comp=E,5355μm,1.5s							
CSP1				AML		AML		
	comp=N,10120μm,0.4s							
CSP1				AML		AML		
	comp=E,143μm,4.1s							
CSP1				AML		AML		
	comp=N,150μm,1.9s							
CESX	**Cesi**	**0.50**	**271**	P		Pg	13 55 12.2	+0.4
CESX				S		Sb	13 55 20.0	-0.2
CESX				AML		AML		
	comp=E,61μm,0.2s							
CESX				AML		AML		
	comp=N,85μm,0.7s							
CESX				AML		AML		
	comp=N,1178μm,0.4s							
CESX				AML		AML		
	comp=E,823μm,0.4s							
CESX				AML		AML		
	comp=N,65μm,1.7s							
CESX				AML		AML		
	comp=E,57μm,0.3s							
ASSB	**Assisi San Ben**	**0.62**	**315**	⇓P		Pg	13 55 14.4	+0.3
ASSB				S		Sb	13 55 23.7	+0.1
ASSB				AML		AML		
	comp=N,1325μm,0.4s							
ASSB				AML		AML		
	comp=E,1260μm,0.2s							
ASSB				AML		AML		
	comp=N,59μm,0.4s							
ASSB				AML		AML		
	comp=E,56μm,0.3s							
SRES	**S.Oreste - Sor**	**0.67**	**237**	S		Sn	13 55 27.0	-0.8

ROM 24 13:55:41.1±0.1, 42°.785N±0°.004×13°.176E±0°.007, h7km, ML2.7/18, 7C-9D, Error ellipse: s-maj=0.6km s-min=0.1km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**317**	⇑P		Pg	13 55 43.6	+0.6
NRCA				S		Sg	13 55 44.9	+0.5
NRCA				AML		AML		
	comp=E,27800μm,0.1s							
NRCA				AML		AML		
	comp=N,31050μm,0.5s							
NRCA				AML		AML		
	comp=E,27800μm,0.1s							
NRCA				AML		AML		
	comp=E,29800μm,1.0s							
NRCA				AML		AML		
	comp=E,27800μm,0.1s							
NRCA				AML		AML		
	comp=N,34300μm,0.5s							
NRCA				AML		AML		
	comp=N,31100μm,0.5s							
FEMA	**Monte Fema**	**0.20**	**333**	P		Pg	13 55 45.9	+0.7
FEMA				S		Sg	13 55 49.5	+1.5
LNSS	**Leonessa**	**0.21**	**209**	P		Pg	13 55 46.3	+1.1
LNSS				S		Sg	13 55 50.2	+2.1
LNSS				AML		AML		
	comp=N,10270μm,0.4s							
LNSS				AML		AML		
	comp=E,5975μm,0.8s							
FDMO	**Fiordimonte**	**0.26**	**346**	P		Pg	13 55 46.8	+0.5
FDMO				S		Sg	13 55 51.1	+1.3
RM33	**Pellescritta (**	**0.28**	**174**	⇑P		Pb	13 55 47.5	-0.9
RM33				S		Sb	13 55 52.3	-1.0
RM33				AML		AML		
	comp=E,3455μm,1.5s							
RM33				AML		AML		
	comp=N,3290μm,0.3s							
RM33				AML		AML		
	comp=E,3455μm,1.6s							
RM33				AML		AML		
	comp=N,3210μm,0.3s							
RM33				AML		AML		
	comp=E,3460μm,1.5s							
RM33				AML		AML		
	comp=E,3410μm,0.6s							
RM33				AML		AML		
	comp=N,3285μm,0.3s							
RM33				AML		AML		
	comp=E,3405μm,0.6s							
CESI	**CESI - Serrava**	**0.30**	**318**	P		Pg	13 55 47.6	+0.6
CESI				S		Sb	13 55 52.5	-1.4
CAMP	**Campotosto**	**0.30**	**145**	⇑P		Pg	13 55 47.8	+0.8
CAMP				S		Sb	13 55 52.8	-1.3
CAMP				AML		AML		
	comp=N,896μm,0.3s							
CAMP				AML		AML		
	comp=N,896μm,0.3s							
CAMP				AML		AML		
	comp=E,1315μm,0.8s							
GUMA	**Gualdo di Mace**	**0.30**	**23**	P		Pg	13 55 47.9	+0.9
GUMA				S		Sb	13 55 53.8	-0.3
CSP1	**Cessapalombo**	**0.31**	**4**	P		Pg	13 55 47.7	+0.5
CSP1				S		Sb	13 55 52.9	-1.4
TERO	**Teramo**	**0.35**	**117**	⇓P		Pg	13 55 48.6	+0.6
TERO				S		Sb	13 55 54.3	-1.2
TERO				AML		AML		
	comp=N,3530μm,0.1s							
TERO				AML		AML		
	comp=E,1880μm,0.2s							
TERO				AML		AML		
	comp=E,1695μm,0.2s							
TERO				AML		AML		
	comp=N,4005μm,0.1s							
TERO				AML		AML		
	comp=N,3535μm,0.1s							
ARRO	**Arrone**	**0.36**	**236**	⇑P		Pg	13 55 49.0	+0.8
ARRO				S		Sb	13 55 55.4	-0.4
OFFI	**Offida**	**0.40**	**68**	⇑P		Pb	13 55 50.4	-0.1
OFFI				S		Sb	13 55 58.3	+1.4
OFFI				AML		AML		
	comp=N,5110μm,0.7s							
OFFI				AML		AML		
	comp=E,3320μm,0.2s							
MNTP	**Montappone**	**0.41**	**31**	P		Pb	13 55 50.3	-0.4
GIGS	**Gran Sasso**	**0.44**	**139**	P		Pg	13 55 50.0	+0.3
GIGS				S		Sb	13 55 56.9	-1.1
GIGS				AML		AML		
	comp=E,340μm,0.3s							
GIGS				AML		AML		
	comp=E,340μm,0.3s							
GIGS				AML		AML		
	comp=N,222μm,0.9s							
SSM1	**San Severino M**	**0.44**	**0**	P		Pg	13 55 50.1	+0.4
SSM1				S		Sb	13 55 57.3	-0.7
ASSB	**Assisi San Ben**	**0.46**	**304**	P		Pg	13 55 50.4	+0.4
ASSB				S		Sb	13 55 57.5	-1.1
GAG1	**Gagliole**	**0.46**	**350**	P		Pg	13 55 50.5	+0.5
GAG1				S		Sb	13 55 58.3	-0.3
AQU	**L'Aquila**	**0.46**	**159**	⇓P		Pg	13 55 50.7	+0.7
AQU				AML		AML		
	comp=E,714μm,1.1s							
AQU				AML		AML		
	comp=N,738μm,1.0s							
AQU				AML		AML		
	comp=E,738μm,1.1s							
AQU				AML		AML		
	comp=N,744μm,1.0s							
AQU				AML		AML		
	comp=E,714μm,1.1s							
CESX	**Cesi**	**0.47**	**249**	⇓P		Pg	13 55 50.9	+0.6
CESX				S		Sb	13 55 58.5	-0.4
CESX				AML		AML		
	comp=E,823μm,0.4s							
CESX				AML		AML		
	comp=N,1178μm,0.4s							
SNTG	**Esanatoglia**	**0.50**	**340**	P		Pg	13 55 51.0	+0.2
SNTG				S		Sb	13 55 59.1	-0.7
FIAM	**Fiamignano**	**0.52**	**185**	⇑P		Pg	13 55 51.6	+0.5
FIAM				AML		AML		
	comp=E,580μm,0.2s							
FIAM				AML		AML		
	comp=N,450μm,1.4s							
FIAM				AML		AML		
	comp=N,450μm,1.4s							
FIAM				AML		AML		
	comp=E,580μm,0.2s							
TRTR	**Tortoreto Alta**	**0.54**	**87**	⇓P		Pb	13 55 53.4	+0.5
TRTR				AML		AML		
	comp=E,1805μm,0.5s							
TRTR				AML		AML		
	comp=N,1695μm,0.4s							
EL6	**Elcito**	**0.55**	**354**	P		Pg	13 55 51.9	+0.3
EL6				S		Sb	13 56 00.9	-0.3
ATCC	**AVT- Casa Cast**	**0.56**	**316**	P		Pg	13 55 52.3	+0.4
ATCC				S		Sb	13 56 01.2	-0.3
FOSV	**Fossato di Vic**	**0.59**	**329**	P		Pg	13 55 52.8	+0.3
FOSV				S		Sb	13 56 02.0	-0.4
FAGN	**Fagnano**	**0.60**	**150**	⇓P		Pb	13 55 53.5	-0.4
FAGN				AML		AML		
	comp=E,1165μm,0.4s							
FAGN				AML		AML		
	comp=N,1022μm,0.4s							
VCEL	**Villa Celiera**	**0.63**	**128**	⇓P		Pb	13 55 53.9	-0.5
VCEL				S		Sb	13 56 05.0	+1.6
VCEL				AML		AML		
	comp=N,724μm,0.4s							
VCEL				AML		AML		
	comp=E,652μm,0.4s							
PP3	**Marolino**	**0.67**	**28**	P		Pb	13 55 55.2	+0.1
PP3				S		Sn	13 56 07.9	+0.2
MURB	**Monte Urbino**	**0.68**	**315**	P		Pg	13 55 54.5	+0.4
MURB				S		Sb	13 56 05.3	+0.5
T0110	**Collepietro**	**0.71**	**141**	⇓P		Pg	13 55 54.9	+0.1
T0110				AML		AML		
	comp=N,634μm,0.4s							
T0110				AML		AML		
	comp=E,655μm,0.6s							
ATFO	**Monte Foce - G**	**0.73**	**323**	P		Pg	13 55 55.5	+0.3
ATFO				S		Sb	13 56 07.2	+0.8
ARVD	**Arcevia**	**0.73**	**347**	P		Pg	13 55 51.9	-3.3
ARVD				AML		AML		
	comp=E,572μm,0.2s							
ARVD				AML		AML		
	comp=N,330μm,0.2s							
SRES	**S.Oreste - Sor**	**0.74**	**222**	S		Sn	13 56 09.0	-0.3
CERT	**Cerreto**	**0.85**	**190**	⇑P		Pg	13 55 57.3	-0.1
CERT				AML		AML		
	comp=E,500μm,0.4s							
CERT				AML		AML		
	comp=N,354μm,0.4s							
INTR	**Introdacqua**	**0.94**	**145**	⇓P		Pg	13 55 58.8	-0.4
INTR				AML		AML		
	comp=N,290μm,1.0s							
INTR				AML		AML		
	comp=E,134μm,0.7s							
GUAR	**Guarcino**	**0.99**	**174**	⇓P		Pn	13 56 02.9	+1.4
GUAR				AML		AML		
	comp=E,250μm,0.4s							
GUAR				AML		AML		
	comp=N,291μm,0.4s							
MYKA	**Terra Mystica**	**3.86**	**5**	*e*Pn		Pn	13 56 40.9	0.0
	comp=N,1.4nm,0.3s							
ABTA	**Abfaltersbach**	**3.99**	**353**	*e*Pn		Pn	13 56 40.7	-2.0
	comp=N,1.1nm,0.2s							
SOKA	**Soboth**	**4.11**	**18**	*e*Pn		Pn	13 56 44.6	+0.2
	comp=N,0.4nm,0.2s							
KBA	**Koelnbreinsper**	**4.29**	**2**	*e*Pn		Pn	13 56 46.9	0.0
	comp=N,0.8nm,0.2s							

ROM 24 13:59:29.4±0.1, 42°.660N±0°.004×13°.201E±0°.007, h10km, ML2.3/19, 10C-4D, Error ellipse: s-maj=0.6km s-min=0.4km az=225.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**244**	⇑P		Pg	13 59 33.3	+0.7
LNSS				S		Sg	13 59 35.6	+0.7
LNSS				AML		AML		
	comp=N,8345μm,0.5s							
LNSS				AML		AML		
	comp=E,7770μm,0.2s							
RM33	**Pellescritta (**	**0.15**	**176**	P		Pb	13 59 33.6	-0.7
RM33				S		Sg	13 59 36.5	+1.2
RM33				AML		AML		
	comp=E,7965μm,1.4s							
RM33				AML		AML		
	comp=N,4815μm,1.1s							
RM33				AML		AML		
	comp=E,7970μm,1.4s							
RM33				AML		AML		
	comp=E,7855μm,0.2s							
RM33				AML		AML		
	comp=N,4795μm,1.1s							
RM33				AML		AML		
	comp=N,4820μm,1.1s							
NRCA	**Norcia**	**0.18**	**340**	⇑P		Pg	13 59 33.9	+0.4
NRCA				S		Sg	13 59 36.8	+0.6
NRCA				AML		AML		
	comp=E,3465μm,0.1s							
NRCA				AML		AML		
	comp=N,2690μm,0.4s							
NRCA				AML		AML		
	comp=E,9200μm,0.1s							
NRCA				AML		AML		
	comp=N,6035μm,0.1s							
NRCA				AML		AML		
	comp=E,3463μm,0.1s							
NRCA				AML		AML		
	comp=N,2451μm,0.1s							
CAMP	**Campotosto**	**0.20**	**129**	⇑P		Pg	13 59 34.3	+0.6
CAMP				S		Sg	13 59 37.6	+1.1
CAMP				AML		AML		
	comp=E,1055μm,0.9s							
CAMP				AML		AML		
	comp=N,818μm,1.2s							
TERO	**Teramo**	**0.30**	**97**	⇑P		Pg	13 59 35.7	+0.3
TERO				S		Sg	13 59 40.2	+0.7
TERO				AML		AML		
	comp=E,1545μm,0.1s							
TERO				AML		AML		
	comp=N,2745μm,0.1s							
TERO				AML		AML		
	comp=N,2740μm,0.1s							
TERO				AML		AML		
	comp=E,1550μm,0.1s							
TERO				AML		AML		
	comp=E,1850μm,0.1s							
TERO				AML		AML		
	comp=N,3280μm,0.1s							
ARRO	**Arrone**	**0.33**	**256**	⇑P		Pg	13 59 36.4	+0.4
ARRO				AML		AML		
	comp=E,452μm,0.2s							

ARRO				AML	AML		
	comp=N,630μm,0.2s						
ARRO				AML	AML		
	comp=E,452μm,0.2s						
AQU	**L'Aquila**	**0.34**	**154**	P	Pb	13 59 37.1	-0.4
AQU				S	Sb	13 59 42.3	-0.7
AQU				AML	AML		
	comp=E,402μm,1.5s						
AQU				AML	AML		
	comp=E,456μm,1.5s						
AQU				AML	AML		
	comp=N,544μm,0.3s						
AQU				AML	AML		
	comp=N,570μm,0.3s						
GIGS	**Gran Sasso**	**0.34**	**128**	⇑P	Pg	13 59 36.5	+0.2
GIGS				S	Sg	13 59 41.8	+0.9
GIGS				AML	AML		
	comp=N,408μm,0.4s						
GIGS				AML	AML		
	comp=E,423μm,0.3s						
FDMO	**Fiordimonte**	**0.39**	**347**	P	Pg	13 59 37.2	+0.2
FDMO				AML	AML		
	comp=N,226μm,1.1s						
FDMO				AML	AML		
	comp=E,276μm,0.6s						
FDMO				AML	AML		
	comp=N,226μm,1.1s						
FDMO				AML	AML		
	comp=N,219μm,0.3s						
FDMO				AML	AML		
	comp=E,220μm,0.3s						
FIAM	**Fiamignano**	**0.40**	**189**	⇑P	Pg	13 59 37.6	+0.3
FIAM				S	Sg	13 59 43.5	+1.0
FIAM				AML	AML		
	comp=E,830μm,0.6s						
FIAM				AML	AML		
	comp=N,612μm,0.3s						
CESI	**CESI - Serrava**	**0.41**	**328**	⇑P	Pg	13 59 37.8	+0.3
CESI				S	Sb	13 59 44.1	-1.0
CESI				AML	AML		
	comp=N,384μm,0.3s						
CESI				AML	AML		
	comp=E,248μm,1.0s						
CSP1	**Cessapalombo**	**0.43**	**0**	P	Pg	13 59 38.1	+0.2
CSP1				S	Sb	13 59 44.7	-1.0
OFFI	**Offida**	**0.45**	**52**	⇑P	Pb	13 59 39.3	-0.1
OFFI				S	Sb	13 59 47.7	+1.5
OFFI				AML	AML		
	comp=N,836μm,0.3s						
OFFI				AML	AML		
	comp=E,621μm,1.6s						
OFFI				AML	AML		
	comp=E,574μm,0.8s						
CESX	**Cesi**	**0.46**	**264**	⇑P	Pg	13 59 38.5	+0.1
CESX				S	Sg	13 59 45.4	+0.8
CESX				AML	AML		
	comp=E,284μm,1.6s						
CESX				AML	AML		
	comp=N,308μm,0.3s						
CESX				AML	AML		
	comp=N,223μm,1.8s						
CESX				AML	AML		
	comp=E,218μm,1.8s						
VCEL	**Villa Celiera**	**0.54**	**119**	⇓P	Pb	13 59 40.5	-0.5
VCEL				AML	AML		
	comp=E,710μm,0.4s						
VCEL				AML	AML		
	comp=N,786μm,1.1s						
TRTR	**Tortoreto Alta**	**0.55**	**74**	⇓P	Pb	13 59 41.4	+0.3
ASSB	**Assisi San Ben**	**0.55**	**314**	P	Pg	13 59 40.5	+0.3
ASSB				S	Sb	13 59 48.7	-0.5
ASSB				AML	AML		
	comp=N,304μm,0.4s						
ASSB				AML	AML		
	comp=E,314μm,0.4s						
T0110	**Collepietro**	**0.61**	**135**	⇓P	Pg	13 59 41.2	0.0
T0110				AML	AML		
	comp=E,428μm,1.3s						
T0110				AML	AML		
	comp=N,506μm,0.3s						
CERT	**Cerreto**	**0.73**	**193**	⇓P	Pg	13 59 43.3	-0.2
CERT				AML	AML		
	comp=E,218μm,0.6s						
CERT				AML	AML		
	comp=N,124μm,1.5s						
INTR	**Introdacqua**	**0.83**	**141**	P	Pg	13 59 44.8	-0.6
INTR				AML	AML		
	comp=E,112μm,1.4s						
INTR				AML	AML		
	comp=N,194μm,1.2s						
INTR				AML	AML		
	comp=N,132μm,1.1s						
MGAB	**Montegabbione**	**0.84**	**288**	P	Pb	13 59 46.0	-0.1
MGAB				AML	AML		
	comp=E,288μm,1.1s						
MGAB				AML	AML		
	comp=N,120μm,0.4s						
MGAB				AML	AML		
	comp=E,232μm,0.6s						
MGAB				AML	AML		
	comp=N,196μm,0.7s						
MA9	**Marino**	**0.98**	**205**	S	Sg	13 59 60.0	-0.9
RNI2	**Rionero Sannit**	**1.19**	**143**	S	Sb	14 00 06.0	-1.5

*IDC **24** 14:01:56.3±1.0,54˚.73S×30˚.73W,h0km,mb4.3/7, mbtmp4.3/8,ML3.9/1,Error ellipse: s-maj=30.7km s-min=19.4km az=63.0*
*NEIC **24** 14:01:57.6±1.4,54˚.66S±0˚.08×31˚.1W±0˚.1,h10km±1km, mb4.6/21,Error ellipse: s-maj=16.3km s-min=6.5km az=143.0*

ISC 24 14:01:57.1±0.6,**54˚.66S**±0˚.08×**30˚.93W**±0˚.09,**h10**km,**n40,** σ1§**18**/37,**mb4.5**/14,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.27**	**274**			**Pn**	**Pn**	**14 02 47.4**	**-0.9**
ORCD	**Orcadas**	**9.57**	**225**		Pn	**Pn**	**Pn**	**14 04 14.7**	**0.0**
VNA1	**Neumayer--Stat**	**18.91**	**157**		P	**P**	**P**	**14 06 15.4**	**-2.0**
VNA3	**Neumayer Olymp**	**19.04**	**159**		P	**P**	**P**	**14 06 19.3**	**+0.3**
PMSA	**Palmer Station**	**19.29**	**225**		P	**P**	**P**	**14 06 22.3**	**+0.7**
	0.3nm,0.3s,baz=45,slow=14,SNR=8.6 4.8nm,0.7s								
PMSA	**Palmer Station**	**19.29**	**225**		P	**P**		**14 06 21.0**	**-0.6**
VNA2	**Neumayer--Watz**	**19.31**	**157**		P	**P**		**14 06 19.7**	**-2.2**
	baz=310,slow=11								
SNAA	**Sanae**	**20.89**	**155**		P	**P**		**14 06 36.2**	**-3.0**
SNAA	**Sanae**	**20.89**	**155**		P	**P**		**14 06 38.6**	**-0.6**
	4.4nm,0.7s,baz=293,slow=9.5,SNR=24 4.4nm,0.7s								
SNAA	**Sanae**	**20.89**	**155**		P	**P**		**14 06 38.2**	**-0.9**
SMAI	**San Martin Ant**	**21.52**	**217**		P	**P**		**14 06 46.4**	**+0.6**
SMAI					IAmb	IAmb		14 06 50.2	
	comp=Z,7.7nm,0.7s								
TROLL	**Troll, Antarti**	**22.45**	**153**		P	**P**		**14 06 56.8**	**+0.9**
BELA	**Belgrano 2**	**23.36**	**182**		P	**P**		**14 07 05.5**	**+0.3**
BELA					IAmb	IAmb		14 07 07.1	
	comp=Z,6.6nm,0.9s								
LL02	**Futaleuf**	**28.82**	**276**		P	**P**		**14 07 53.8**	**-1.4**
LL02					IAmb	IAmb		14 08 12.9	
	comp=Z,11nm,1.2s								
PLCA	**Paso Flores**	**29.64**	**282**		P	**P**		**14 08 05.9**	**+3.4**
	comp=Z,2.8nm,1.0s,baz=119,slow=6.0,SNR=4.1 comp=Z,2.8nm,1.0s								
ITQB	**Itaqui**	**31.07**	**313**		P	**P**		**14 08 15.3**	**+0.2**
ITAB	**Concordia**	**31.48**	**322**	*e*	P	**P**		**14 08 18.5**	**-0.3**
BI05	**Punta Hualpn**	**33.88**	**284**		P	**P**		**14 08 39.4**	**-0.3**
CPUP	**Villa Florida**	**34.30**	**315**		P	**P**		**14 08 43.1**	**-0.3**
QSPA	**South Pole Qui**	**35.60**	**180**		P	**P**		**14 08 55.1**	**+0.6**
	comp=Z,3.9nm,0.6s,baz=198,slow=3.8,SNR=28 comp=Z,3.9nm,0.6s								
QSPA	**South Pole Qui**	**35.60**	**180**		P	**P**		**14 08 54.3**	**-0.2**
QSPA					IAmb	IAmb		14 08 57.1	
	comp=Z,6.3nm,0.8s								
MAW	**Mawson**	**42.52**	**146**		P	**P**		**14 09 51.2**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=238,slow=6.8,SNR=9.6 comp=Z,3.8nm,0.7s								
MAW	**Mawson**	**42.52**	**146**		P	**P**		**14 09 52.1**	**0.0**
PB06	**IPOC Station P**	**42.99**	**302**		P	**P**		**14 09 55.9**	**-0.8**
PB06					IAmb	IAmb		14 10 05.0	
	comp=Z,15nm,0.9s								
SHEL	**Horse Pasture**	**43.26**	**37**		P	**P**		**14 09 58.0**	**-0.7**
AP01	**Chacalluta**	**47.06**	**305**		P	**P**		**14 10 29.2**	**+0.4**
SBA	**Scott Base**	**47.30**	**185**		P	**P**		**14 10 31.1**	**+1.1**
SBA					IAmb	IAmb		14 11 04.0	
	comp=Z,4.3nm,1.4s								
LPAZ	**La Paz**	**47.83**	**308**		P	**P**		**14 10 36.0**	**+0.4**
	comp=Z,3.3nm,0.6s,baz=78,slow=5.4,SNR=6.1 comp=Z,3.3nm,0.6s								
LPAZ	**La Paz**	**47.83**	**308**		P	**P**		**14 10 33.7**	**-1.9**
LPAZ					IAmb	IAmb		14 10 40.5	
	comp=Z,5.6nm,0.9s								
VNDA	**Vanda**	**47.85**	**184**		P	**P**		**14 10 34.4**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=175,slow=5.3,SNR=8.9 comp=Z,0.8nm,0.7s								
VNDA	**Vanda**	**47.85**	**184**		P	**P**		**14 10 34.9**	**+0.6**
H10N1	**ASCENSION HYDR**	**48.51**	**22**		T	T		15 03 04.0	
	baz=192,slow=75,SNR=5.5								
H10N3	**ASCENSION HYDR**	**48.51**	**22**		T	T		15 03 03.8	
	baz=192,slow=75,SNR=9.2								
H10N2	**ASCENSION HYDR**	**48.52**	**22**		T	T		15 03 04.8	
	baz=192,slow=75,SNR=9.8								
NNA	**Nana**	**55.70**	**302**		P	**P**		**14 11 33.1**	**-0.5**
NNA					IAmb	IAmb		14 11 43.7	
	comp=Z,27nm,1.4s								
VOI	**Vohitsoka**	**65.38**	**93**		P	**P**		**14 12 40.0**	**+0.2**
VOI					IAmb	IAmb		14 12 43.1	
	comp=Z,20nm,1.3s								
TOA0	**Torodi Ar. Sit**	**72.97**	**33**		P	**P**		**14 13 27.4**	**+0.7**
TOA0					IAmb	IAmb		14 13 29.8	
	comp=Z,8.9nm,1.4s								
TORD	**Torodi Ar. Bea**	**72.97**	**33**		P	**P**		**14 13 28.4**	**+1.7**
	comp=Z,4.6nm,0.5s,baz=195,slow=6.3,SNR=4.0 comp=Z,4.6nm,0.5s								
TORD	**Torodi Ar. Bea**	**72.97**	**33**		P	**P**		**14 13 27.5**	**+0.8**
TORD					IAmb	IAmb		14 13 55.8	
	comp=Z,6.1nm,0.5s								
ILAR	**Eielson Array**	**147.60**	**314**		PKPbc	**PKPbc**		**14 21 40.2**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=134,slow=2.2,SNR=7.2								

*PRU **24** 14:02:19.7±0.0,42˚.73N×13˚.32E,h0km,M4.3*
*LDG **24** 14:02:20.6±0.1,42˚.80N×13˚.25E,h6km,Md3.9/1,Ml3.4/21, Error ellipse: s-maj=2.9km s-min=1.9km az=43.0*
*IDC **24** 14:02:20.7±1.0,42˚.86N×13˚.14E,h0km,mb4.0/10, mbtmp3.8/16,ML3.8/4,Error ellipse: s-maj=20.4km s-min=12.4km az=88.0*
*ROM **24** 14:02:20.8±0.0,42˚.800N±0˚.002×13˚.240E±0˚.003, h8km,ML3.9/104,Mw3.8,Error ellipse: s-maj=0.2km s-min=0.1km az=75.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.15; $M_{\theta\theta}$-2.05; $M_{\phi\phi}$6.21; $M_{r\theta}$1.67; $M_{\theta\phi}$0.36; $M_{r\phi}$0.77; Fault plane solution: M_o5.69803×10^{14} NP1:ϕ_s336.00000°,δ47.00000°, λ-130.00000°. NP2:ϕ_s207.00000°,δ56.00000°, λ-55.00000°*
*PDG **24** 14:02:21.6±0.6,42˚.80N×13˚.23E,h11km,ML4.0/13 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **24** 14:02:22.4±0.6,42˚.67N×13˚.03E,h22km±5km,ML4.1/9*
*NEIC **24** 14:02:22.4±1.5,42˚.80N±0˚.05×13˚.15E±0˚.06,h10km±1km, mb4.3/7,ML3.9(ROM),Error ellipse: s-maj=9.4km s-min=7.3km az=200.0*
*STR **24** 14:02:26.1±1.7,43˚.N±8˚.×1˚.3E±1˚.6,h5km,mb3.9/12,Error ellipse: s-maj=0.0km s-min=0.0km az=82.9,preliminary*

ISC 24 14:02:21.7±0.7,**42˚.80N**±0˚.01×**13˚.20E**±0˚.01,**h8**km±4km, **n363,**σ1§**74**/497,**mb4.1**/12,**62C-26D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AQT1	**Arquata del Tr**	**0.07**	**108**	⇑P		**Pg**		**14 02 22.9**	**-0.8**
AQT1				S		**Sg**		**14 02 23.9**	**-1.2**
NRCA	**Norcia**	**0.07**	**301**			**Pg**		**14 02 23.1**	**-0.6**
NRCA	**Norcia**	**0.07**	**301**	⇑P		**Pg**		**14 02 23.7**	**0.0**
NRCA				S		**Sg**		**14 02 25.5**	**+0.3**
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
T1213	**Norcia, Frazio**	**0.09**	**218**	P		**Pg**		**14 02 24.1**	**+0.2**
T1213				S		**Sg**		**14 02 27.3**	**+1.8**
MC2	**Monte Cornacci**	**0.12**	**356**	⇓P		**Pg**		**14 02 24.0**	**-0.4**
MC2				S		**Sg**		**14 02 26.2**	**-0.2**
T1212	**Cascia, Frazio**	**0.12**	**249**	⇑P		**Pg**		**14 02 24.8**	**+0.4**
T1241	**Roccafluvione,**	**0.18**	**70**	⇑P		**Pg**		**14 02 24.7**	**-0.7**
T1241				S		**Sg**		**14 02 27.2**	**-0.7**
FEMA	**Monte Fema**	**0.20**	**326**	⇑P		**Pg**		**14 02 25.8**	**0.0**
FEMA				S		**Sg**		**14 02 29.6**	**+1.0**
FEMA				AML	AML				
FEMA				AML	AML				
T1243	**Rocca Santa Ma**	**0.21**	**119**	⇑P		**Pg**		**14 02 25.3**	**-0.6**
T1243				S		**Sg**		**14 02 28.6**	**-0.2**
LNSS	**Leonessa**	**0.23**	**211**	⇓P		**Pg**		**14 02 26.7**	**+0.4**
LNSS				S		**Sg**		**14 02 31.1**	**+1.8**
LNSS				AML	AML				
LNSS				AML	AML				
	comp=N,87550μm,0.5s								
FDMO	**Fiordimonte**	**0.25**	**341**	⇑P		**Pg**		**14 02 26.5**	**-0.3**
FDMO				S		**Sg**		**14 02 30.9**	**+0.7**
FDMO				AML	AML				
	comp=N,62750μm,0.3s								
FDMO				AML	AML				
	comp=E,42700μm,0.5s								
RM33	**Pellescritta (**	**0.29**	**178**	⇓P		**Pg**		**14 02 27.4**	**0.0**
RM33				S		**Sg**		**14 02 32.5**	**+1.3**
RM33				AML	AML				
	comp=E,42900μm,0.9s								
RM33				AML	AML				
	comp=N,31600μm,0.9s								
RM33				AML	AML				
	comp=E,42900μm,1.6s								
RM33				AML	AML				
	comp=N,31550μm,0.9s								
RM33				AML	AML				
	comp=E,42950μm,1.6s								
RM33				AML	AML				
	comp=N,32700μm,0.9s								
RM33				AML	AML				
	comp=E,42900μm,0.9s								
RM33				AML	AML				
	comp=N,32750μm,0.9s								
CSP1	**Cessapalombo**	**0.29**	**1**	⇓P		**Pg**		**14 02 27.1**	**-0.4**
CSP1				S		**Sg**		**14 02 31.9**	**+0.4**
CSP1				AML	AML				
	comp=E,82950μm,0.6s								
CSP1				AML	AML				
CSP1				AML	AML				
	comp=E,82600μm,0.6s								
CSP1				AML	AML				
	comp=E,82700μm,0.6s								
CESI	**CESI - Serrava**	**0.30**	**314**	⇑P		**Pg**		**14 02 27.7**	**0.0**
CESI				S		**Sg**		**14 02 33.1**	**+1.4**
CESI				AML	AML				
	comp=E,68300μm,0.7s								
CESI				AML	AML				
CAMP	**Campotosto**	**0.30**	**149**	⇓P		**Pg**		**14 02 27.2**	**-0.5**
CAMP				S		**Sg**		**14 02 32.0**	**+0.3**
CAMP				AML	AML				
	comp=N,23750μm,0.8s								
CAMP				AML	AML				
	comp=E,27000μm,1.2s								
TERO	**Teramo**	**0.34**	**120**	⇑P		**Pg**		**14 02 27.6**	**-0.8**
TERO				S		**Sg**		**14 02 32.9**	**-0.1**
TERO				AML	AML				
	comp=E,45650μm,0.5s								
TERO				AML	AML				
	comp=N,80550μm,0.5s								
TERO				AML	AML				
	comp=N,80900μm,0.5s								
TERO				AML	AML				
	comp=N,80650μm,0.5s								
TERO				AML	AML				
	comp=N,84450μm,0.5s								
TERO				AML	AML				
	comp=E,47850μm,0.9s								
TERO				AML	AML				
	comp=N,80850μm,0.5s								
T1211	**Morro Reatino**	**0.37**	**224**	⇓P		**Pg**		**14 02 29.1**	**+0.2**
T1211				S		**Sb**		**14 02 35.7**	**-0.7**
OFFI	**Offida**	**0.38**	**69**	⇑P		**Pg**		**14 02 29.1**	**0.0**
OFFI				S		**Sb**		**14 02 36.1**	**-0.8**
OFFI				AML	AML				
	comp=E,56050μm,0.7s								
OFFI				AML	AML				
	comp=N,82700μm,0.7s								
ARRO	**Arrone**	**0.39**	**236**	⇑P		**Pg**		**14 02 29.4**	**+0.2**
ARRO				S		**Sb**		**14 02 36.3**	**-0.6**
ARRO				AML	AML				
	comp=E,14950μm,1.3s								
ARRO				AML	AML				
	comp=N,13900μm,0.5s								
ARRO				AML	AML				
	comp=N,13950μm,0.5s								
ARRO				AML	AML				
	comp=E,14900μm,1.3s								
MNTP	**Montappone**	**0.39**	**30**	P		**Pg**		**14 02 29.2**	**-0.1**
MNTP				AML	AML				
	comp=E,38450μm,0.4s								
MNTP				AML	AML				
	comp=N,37650μm,0.7s								
MNTP				AML	AML				
	comp=E,38500μm,0.4s								
MNTP				AML	AML				
	comp=N,37650μm,0.7s								
SEF1	**Sefro**	**0.40**	**332**	⇑P		**Pg**		**14 02 29.2**	**-0.2**
SEF1				S		**Sg**		**14 02 35.9**	**+1.2**
SEF1				AML	AML				
	comp=N,64800μm,0.4s								
SEF1				AML	AML				
	comp=E,51050μm,1.1s								
MDAR	**Monte D'Aria**	**0.40**	**354**	P		**Pg**		**14 02 29.1**	**-0.4**
MDAR				S		**Sg**		**14 02 35.5**	**+0.7**
PIO1	**Pioraco**	**0.41**	**337**	P		**Pg**		**14 02 29.3**	**-0.4**
PIO1				S		**Sg**		**14 02 36.3**	**+1.1**
PIO1				AML	AML				
	comp=E,34050μm,0.5s								
PIO1				AML	AML				
	comp=N,68500μm,0.4s								
SSM1	**San Severino M**	**0.43**	**358**	P		**Pg**		**14 02 29.7**	**-0.4**
SSM1				S		**Sg**		**14 02 36.7**	**+0.9**
FIU1	**Fiuminata**	**0.44**	**333**	P		**Pg**		**14 02 29.9**	**-0.3**
FIU1				S		**Sb**		**14 02 37.3**	**-1.2**
FIU1				AML	AML				
	comp=N,17850μm,1.0s								
FIU1				AML	AML				
	comp=N,17850μm,1.0s								
FIU1				AML	AML				
	comp=E,16950μm,0.7s								
GIGS	**Gran Sasso**	**0.44**	**142**	⇓P		**Pg**		**14 02 29.2**	**-1.0**
GIGS				S		**Sg**		**14 02 35.9**	**-0.1**
GIGS				AML	AML				
	comp=E,5530μm,0.6s								
GIGS				AML	AML				
	comp=E,5535μm,0.6s								
GIGS				AML	AML				
	comp=N,5700μm,0.8s								
GAG1	**Gagliole**	**0.45**	**348**	P		**Pg**		**14 02 30.2**	**-0.3**
GAG1				S		**Sb**		**14 02 37.7**	**-1.2**
GAG1				AML	AML				
	comp=E,79850μm,0.7s								
GAG1				AML	AML				
	comp=N,83450μm,0.5s								
GAG1				AML	AML				
	comp=E,79800μm,0.7s								
GAG1				AML	AML				
	comp=N,83450μm,0.5s								
AQU	**L'Aquila**	**0.47**	**161**			**Pg**		**14 02 30.2**	**-0.5**
AQU	**L'Aquila**	**0.47**	**161**	⇓P		**Pg**		**14 02 30.2**	**-0.5**
AQU				AML	AML				
	comp=E,14800μm,1.6s								
AQU				AML	AML				
	comp=N,20300μm,0.8s								
AQU				AML	AML				
	comp=N,20250μm,0.8s								
AQU				AML	AML				
	comp=E,14550μm,1.6s								
AQU				AML	AML				
	comp=N,20350μm,0.8s								
ASSB	**Assisi San Ben**	**0.47**	**302**	⇑P		**Pg**		**14 02 30.6**	**-0.2**
ASSB				S		**Sb**		**14 02 38.4**	**-1.0**
ASSB				AML	AML				
	comp=E,18450μm,0.3s								
ASSB				AML	AML				
	comp=N,21900μm,0.8s								
MTL1	**Matelica**	**0.48**	**343**	P		**Pg**		**14 02 30.8**	**-0.2**
MTL1				S		**Sb**		**14 02 38.9**	**-0.8**
MTL1				AML	AML				
	comp=E,77400μm,0.5s								
MTL1				AML	AML				
	comp=N,67050μm,0.6s								
CESX	**Cesi**	**0.49**	**248**	⇑P		**Pg**		**14 02 31.1**	**-0.1**
CESX				S		**Sb**		**14 02 39.4**	**-0.6**
CESX				AML	AML				
	comp=N,13950μm,1.2s								
CESX				AML	AML				
	comp=E,14400μm,1.2s								
SNTG	**Esanatoglia**	**0.50**	**338**	⇑P		**Pg**		**14 02 30.8**	**-0.5**
SNTG				S		**Sg**		**14 02 38.8**	**+1.0**
SNTG				AML	AML				
	comp=E,1935μm,0.9s								
SNTG				AML	AML				
	comp=N,2815μm,1.0s								
SNTG				AML	AML				
	comp=N,23200μm,1.0s								
SNTG				AML	AML				
	comp=E,1930μm,0.9s								
SNTG				AML	AML				
	comp=N,2820μm,1.0s								
SNTG				AML	AML				
	comp=E,15500μm,0.9s								
TRE1	**Treia**	**0.52**	**9**	P		**Pg**		**14 02 31.7**	**0.0**
TRE1				S		**Sb**		**14 02 41.2**	**+0.4**
TRE1				AML	AML				
	comp=E,43950μm,0.5s								
TRE1				AML	AML				
	comp=N,38650μm,0.6s								
TRTR	**Tortoreto Alta**	**0.53**	**88**	⇑P		**Pg**		**14 02 32.1**	**+0.3**
TRTR				AML	AML				
	comp=N,99700μm,0.6s								
TRTR				AML	AML				
	comp=E,71100μm,0.6s								
FIAM	**Fiamignano**	**0.53**	**187**	⇓P		**Pg**		**14 02 31.6**	**-0.4**
FIAM				S		**Sg**		**14 02 40.1**	**+1.2**
FIAM				AML	AML				
	comp=E,11900μm,1.3s								
FIAM				AML	AML				
	comp=N,12050μm,0.8s								
EL6	**Elcito**	**0.54**	**352**	⇓P		**Pg**		**14 02 31.6**	**-0.5**
EL6				S		**Sg**		**14 02 40.1**	**+0.9**
EL6				AML	AML				
	comp=N,44650μm,0.6s								
EL6				AML	AML				
	comp=N,44600μm,0.6s								
EL6				AML	AML				
	comp=E,42750μm,0.4s								
ATCC	**AVT- Casa Cast**	**0.57**	**314**	⇑P		**Pg**		**14 02 32.4**	**-0.2**
ATCC				S		**Sb**		**14 02 41.6**	**-0.6**
ATCC				AML	AML				
	comp=E,33900μm,1.0s								
ATCC				AML	AML				
	comp=N,26800μm,0.9s								
CADA	**Capodarco di F**	**0.57**	**46**	P		**Pb**		**14 02 33.3**	**-0.7**
CADA				S		**Sn**		**14 02 43.9**	**-1.9**
CADA				AML	AML				
	comp=N,47500μm,1.1s								
CADA				AML	AML				
	comp=E,56950μm,0.7s								
CING	**Cingoli**	**0.58**	**360**	P		**Pg**		**14 02 32.2**	**-0.7**
CING				S		**Sb**		**14 02 41.4**	**-1.2**
FOSV	**Fossato di Vic**	**0.59**	**327**	⇑P		**Pg**		**14 02 32.7**	**-0.4**
FOSV				S		**Sb**		**14 02 42.3**	**-0.6**
FOSV				AML	AML				
	comp=E,21800μm,0.3s								
FOSV				AML	AML				
	comp=N,83850μm,0.3s								
FAGN	**Fagnano**	**0.60**	**152**	⇓P		**Pg**		**14 02 32.1**	**-1.2**
FAGN				AML	AML				
	comp=E,20700μm,0.5s								
FAGN				AML	AML				
	comp=N,15400μm,0.5s								
VCEL	**Villa Celiera**	**0.62**	**130**	⇓P		**Pg**		**14 02 32.9**	**-0.7**
VCEL				S		**Sg**		**14 02 42.1**	**+0.3**
VCEL				AML	AML				
	comp=N,19450μm,0.9s								
VCEL				AML	AML				
	comp=E,17950μm,1.2s								
VCEL				AML	AML				
	comp=N,19400μm,0.9s								
PP3	**Marolino**	**0.65**	**27**	P		**Pg**		**14 02 34.2**	**-0.1**
PP3				S		**Sb**		**14 02 45.6**	**+0.9**
PP3				AML	AML				
	comp=N,24550μm,0.9s								
PP3				AML	AML				
	comp=E,31000μm,0.5s								

PP3 AML AML
comp=N,25300µm,0.9s
PP3 AML AML
comp=E,28450µm,0.5s
MURB Monte Urbino 0.68 314 Pg 14 02 34.4 -0.4
MURB Monte Urbino 0.68 314 ⇑P Pg 14 02 34.5 -0.4
MURB S **Sb 14 02 45.9 +0.4**
MURB AML AML
comp=N,24200µm,1.1s
MURB AML AML
comp=E,26600µm,1.0s
MURB AML AML
comp=N,25450µm,1.1s
MURB AML AML
comp=E,29150µm,1.1s
SSFR Montelago di S 0.71 335 P Pg 14 02 34.8 -0.6
SSFR S **Sb 14 02 46.1 -0.2**
T0110 Collepietro 0.71 143 ⇓P Pg 14 02 34.2 -1.2
T0110 S **Sb 14 02 46.3 -0.1**
T0110 AML AML
comp=N,13750µm,1.1s
T0110 AML AML
comp=E,15250µm,0.5s
ARVD Arcevia 0.73 345 ⇑P Pg 14 02 34.9 -0.8
ARVD S **Sb 14 02 46.5 -0.3**
ARVD AML AML
comp=E,8475µm,0.5s
ARVD AML AML
comp=N,6345µm,0.7s
ATSC Scheggia e Pas 0.73 329 ⇑P Pg 14 02 35.0 -0.8
ATSC S **Sb 14 02 46.7 -0.3**
ATFO Monte Foce - G 0.73 321 ⇑P Pg 14 02 35.3 -0.5
ATFO S **Sg 14 02 45.8 +0.5**
ATFO AML AML
comp=N,11650µm,0.5s
ATFO AML AML
comp=E,11050µm,1.6s
ATTE AVT- Monte Tez 0.74 303 ⇑P Pg 14 02 35.5 -0.5
ATTE S **Sb 14 02 47.0 -0.2**
ATTE AML AML
comp=N,6160µm,0.8s
ATTE AML AML
comp=E,7265µm,0.8s
SRES S.Oreste - Sor 0.76 223 P Pg 14 02 36.0 -0.2
SRES AML AML
comp=N,4550µm,0.5s
SRES AML AML
comp=E,6320µm,0.6s
ATLO AVT- Montelove 0.78 312 ⇑P Pg 14 02 36.0 -0.7
PTQR Pietraquaria 0.79 169 ⇓P Pg 14 02 35.5 -1.4
FRON Frontone 0.80 334 ⇑P Pg 14 02 36.1 -0.9
FRON S **Sb 14 02 48.8 -0.1**
FRON AML AML
comp=E,9090µm,0.4s
FRON AML AML
comp=N,17200µm,0.4s
AOI Ancona 0.81 21 P Pg 14 02 36.4 -0.8
AOI S **Sb 14 02 49.6 +0.5**
AOI AML AML
comp=E,6960µm,0.4s
AOI AML AML
comp=N,5245µm,0.5s
MGAB Montegabbione 0.81 279 ⇑P Pg 14 02 37.0 -0.2
MGAB S **Sn 14 02 51.6 0.0**
MGAB AML AML
comp=E,11000µm,1.6s
MGAB AML AML
comp=E,11900µm,1.6s
MGAB AML AML
comp=N,14700µm,0.8s
MGAB AML AML
comp=N,14050µm,0.8s
MGAB AML AML
comp=E,10990µm,1.6s
TB01 Gubbio 0.81 317 ⇑P Pg 14 02 36.6 -0.6
TB01 S **Sb 14 02 49.4 +0.2**
ATVO AVT- Monte Val 0.82 315 ⇑P Pg 14 02 36.8 -0.7
ATVO S **Sb 14 02 49.4 -0.2**
ATVO AML AML
comp=N,8990µm,0.5s
ATVO AML AML
comp=E,6240µm,1.6s
ATVA AVT- Monte Val 0.83 306 ⇑P Pg 14 02 36.9 -0.7
TB03 Pietralunga 0.84 317 ⇑P Pg 14 02 37.0 -0.8
TB03 S **Sb 14 02 50.3 +0.3**
MTCE Montecelio 0.84 204 ⇓P Pg 14 02 36.8 -1.1
MTCE AML AML
comp=N,4005µm,0.9s
MTCE AML AML
comp=E,9590µm,0.8s
COR1 Corinaldo 0.85 350 P Pg 14 02 38.0 +0.1
COR1 S **Sn 14 02 52.2 -0.4**
COR1 AML AML
comp=N,14950µm,1.1s
COR1 AML AML
comp=N,15200µm,1.1s
COR1 AML AML
comp=E,26000µm,0.9s
COR1 AML AML
comp=E,13500µm,0.9s
CERT Cerreto 0.86 191 P Pg 14 02 36.9 -1.3
CERT AML AML
comp=N,5115µm,0.7s
CERT AML AML
comp=E,6875µm,0.9s
ATMI Monte Miggiano 0.87 309 P Pg 14 02 37.9 -0.5
ATMI AML AML
comp=N,14450µm,0.9s
ATMI AML AML
comp=E,19800µm,0.5s
ATPI Pietralunga - 0.88 318 ⇑P Pg 14 02 37.8 -0.7
ATPI S **Sb 14 02 51.5 +0.3**
ATPI AML AML
comp=E,9480µm,0.7s
ATPI AML AML
comp=N,6770µm,0.6s
PIEI Pieia 0.89 327 ⇑P Pg 14 02 37.6 -1.1
PIEI S **Sn 14 02 52.5 -1.1**
PIEI AML AML
comp=E,5915µm,0.4s
PIEI AML AML
comp=N,5660µm,1.0s
MPAG Monte Paganucc 0.89 339 ⇑P Pg 14 02 37.9 -0.9
MPAG S **Sb 14 02 52.1 +0.5**
MPAG AML AML
comp=E,10115µm,0.4s
MPAG AML AML
comp=E,9940µm,0.4s
MPAG AML AML
comp=N,9745µm,0.5s
MPAG AML AML
comp=N,9295µm,0.5s
SENI Senigallia 0.91 2 P Pg 14 02 38.9 -0.2
SENI S **Sn 14 02 55.4 +1.3**
SENI AML AML
comp=E,9150µm,0.9s
SENI AML AML
comp=N,6535µm,0.6s
INTR Introdacqua 0.94 146 ⇓P Pg 14 02 37.8 -1.9
INTR AML AML
comp=E,5µm,0.7s
INTR AML AML
comp=E,5310µm,0.7s
INTR AML AML
comp=N,9645µm,0.8s
INTR AML AML
comp=E,5µm,0.7s
INTR AML AML
comp=N,6µm,0.8s
FSSB Fossombrone 0.95 341 ⇑P Pg 14 02 38.9 -0.9
FSSB S **Sn 14 02 54.2 -0.9**
FSSB AML AML
comp=E,20450µm,0.4s
FSSB AML AML
comp=N,21700µm,0.4s
SACS San Casciano d 0.95 274 ⇑P Pg 14 02 39.6 -0.3
SACS AML AML
comp=E,6325µm,1.4s
SACS AML AML
comp=N,4725µm,1.6s
SACS AML AML
comp=N,5200µm,1.6s
SACS AML AML
comp=E,6220µm,1.4s
RCAV Rocca di Cave 0.97 191 P Pg 14 02 39.0 -1.2
RCAV AML AML
comp=N,8010µm,0.6s
RCAV AML AML
comp=E,6070µm,1.1s
VVLD Villa Vallelon 0.98 161 P Pg 14 02 38.9 -1.5
VVLD AML AML
comp=E,4610µm,0.9s
VVLD AML AML
comp=N,4430µm,0.7s
BADI Badiali 1.00 316 ⇑P Pg 14 02 40.0 -0.8
GUAR Guarcino 1.00 175 P Pg 14 02 40.5 -0.5
GUAR S **Sn 14 02 59.2 +2.7**
GUAR AML AML
comp=E,4055µm,0.7s
GUAR AML AML
comp=N,4680µm,1.1s
LPEL Lama dei Pelig 1.04 135 P Pg 14 02 39.7 -2.0
LPEL AML AML
comp=E,5090µm,0.6s
LPEL AML AML
comp=N,4445µm,1.5s
LATE Laterza 1.04 260 Pg 14 02 40.2 -1.5
LATE Laterza 1.04 260 P Pg 14 02 41.7 0.0
CAFI Castiglion Fio 1.05 301 P Pg 14 02 41.0 -0.8
CAFI S **Sn 14 02 57.0 -0.6**
RMP Rome, Mte Porz 1.05 201 P Pg 14 02 40.7 -1.1
RMP S **Sn 14 02 59.2 +1.6**
RMP AML AML
comp=N,5620µm,0.5s
RMP AML AML
comp=E,4960µm,0.6s
VIVA Pratoni del Vi 1.09 197 AML AML
comp=E,8015µm,0.9s
VIVA AML AML
comp=N,9040µm,0.5s
RDP Rocca di Papa 1.10 199 P Pg 14 02 41.4 -1.3
RDP S **Sn 14 03 01.1 +2.3**
RDP AML AML
comp=E,10105µm,0.6s
RDP AML AML
comp=N,11875µm,0.8s
SSP9 Sansepolcro 1.10 315 P Pg 14 02 41.7 -1.2
SSP9 AML AML
comp=N,6710µm,1.2s
SSP9 AML AML
comp=E,6880µm,1.6s
PARC Parchiule 1.10 321 P Pg 14 02 41.8 -1.0
PARC AML AML
comp=N,5970µm,0.7s
PARC AML AML
comp=E,5600µm,0.7s
SF03 Valle Cupa 1.11 271 P Pg 14 02 43.2 +0.1
SF11 Podere del Sol 1.12 274 P Pb 14 02 43.6 +0.2
MCIV Monte Civitell 1.12 270 P Pg 14 02 42.6 -0.6
MCIV AML AML
comp=N,2010µm,1.0s
MCIV AML AML
comp=E,2050µm,0.9s
SF04 Casetta 1.13 273 P Pg 14 02 42.9 -0.5
SF04 AML AML
comp=N,2045µm,1.1s
SF04 AML AML
comp=E,2115µm,0.5s
POFI Posta Fibreno 1.14 160 P Pg 14 02 41.6 -2.0
POFI AML AML
comp=N,2180µm,0.7s
POFI AML AML
comp=E,3970µm,0.8s
TOLF Tolfa 1.15 231 P Pg 14 02 42.7 -1.0
TOLF AML AML
comp=E,3740µm,1.3s
TOLF AML AML
comp=N,3780µm,0.9s
PESA Pesaro 1.17 347 P Pg 14 02 43.6 -0.6
PESA AML AML
comp=N,10060µm,0.6s
PESA AML AML
comp=E,12500µm,0.7s
LRP Arpino 1.18 166 AML AML
comp=E,2145µm,1.2s
LRP AML AML
comp=N,2605µm,0.9s
CPGN Carpegna, Ital 1.19 328 AML AML
CPGN AML AML
SF01 Poggio Pratacc 1.21 271 P Pg 14 02 44.6 -0.1
CRE Caprese Michel 1.23 312 P Pb 14 02 44.0 -1.2
CRE AML AML
comp=E,2965µm,0.6s
CRE AML AML
comp=N,2830µm,0.8s
GIUL Giuliano Di Ro 1.24 178 P Pb 14 02 43.5 -1.9
GIUL AML AML
comp=E,2295µm,0.7s
GIUL AML AML
comp=N,2635µm,0.7s
RSM Repubblica di 1.26 334 P Pb 14 02 45.7 0.0
ARCI Arcidosso 1.27 273 P Pn 14 02 44.8 -1.1
ARCI AML AML
comp=E,814µm,0.9s
ARCI AML AML
comp=N,1165µm,1.0s
RNI2 Rionero Sannit 1.30 147 P Pn 14 02 46.0 -0.2
LATB Latina 1.31 188 P Pn 14 02 44.7 -1.6
LATB AML AML
comp=E,992µm,0.9s
LATB AML AML
comp=N,1335µm,1.0s
CERA Filignano 1.34 153 P Pn 14 02 45.1 -1.7
CERA AML AML
comp=N,4820µm,0.8s
CERA AML AML
comp=N,4600µm,0.8s
CERA AML AML
comp=E,4220µm,1.6s
CERA AML AML
comp=E,4400µm,1.6s
ASQU Asqua 1.44 315 P Pn 14 02 47.5 -0.6
ASQU AML AML
comp=E,2415µm,0.7s
ASQU AML AML
comp=N,2465µm,1.1s
TRIV Trivento 1.44 135 P Pn 14 02 47.8 -0.3
TRIV AML AML
comp=N,5665µm,1.0s
TRIV AML AML
comp=N,5490µm,1.1s
TRIV AML AML
comp=E,4480µm,0.9s
TRIV AML AML
comp=E,5220µm,0.9s
SFI Santa Sofia 1.48 319 P Pn 14 02 48.2 -0.5
SFI AML AML
comp=E,2285µm,1.4s
SFI AML AML
comp=N,2995µm,1.1s
SFI AML AML
comp=E,2340µm,1.2s
SFI AML AML
comp=N,2965µm,1.1s
CSNT Castellina Chi 1.55 296 P Pn 14 02 49.4 -0.3
CSNT AML AML
comp=N,1040µm,1.1s
CSNT AML AML
comp=E,1166µm,1.1s
FROS Frosini 1.56 286 ⇑P Pn 14 02 49.4 -0.3
VAGA Valle Agricola 1.58 151 P Pn 14 02 49.3 -0.8
OSSC Osservatorio P 1.60 298 Pn 14 02 50.1 -0.3
OSSC Osservatorio P 1.60 298 P Pn 14 02 50.6 +0.2
OSSC AML AML
comp=E,1650µm,1.0s
OSSC AML AML
comp=E,1395µm,0.8s
OSSC AML AML
comp=N,1640µm,1.0s
OSSC AML AML
comp=N,1335µm,0.8s
RUFI Rufina 1.62 311 P Pn 14 02 50.7 +0.2
BSSO Busso 1.62 140 P Pn 14 02 51.1 +0.4
LMD Lutirano 1.68 320 P Pb 14 02 52.5 -0.4
CIGN Sant'Elia a Pi 1.71 131 P Pn 14 02 51.0 -0.7
TRIF Trifonti 1.72 281 ⇑P Pn 14 02 51.7 -0.2
TRIF AML AML
comp=N,816µm,1.0s
TRIF AML AML
comp=E,867µm,0.9s
CASP Castiglione de 1.72 271 Pn 14 02 51.2 -0.7
CASP Castiglione de 1.72 271 ⇑P Pn 14 02 51.4 -0.5
CASP AML AML
comp=N,388µm,0.9s
CASP AML AML
comp=E,457µm,0.9s
MODR Mondragone 1.73 163 AML AML
comp=N,1018µm,0.9s
MODR AML AML
comp=E,920µm,0.8s
SACR S. Croce Del S 1.79 141 P Pn 14 02 53.0 0.0
MELA Melanico ??? S 1.80 127 ⇓P Pn 14 02 53.5 +0.6
DUGI Dugi Otok 1.81 48 eP Pn 14 02 52.5 -0.6
GATE Gambatesa 1.81 135 P Pb 14 02 54.9 -0.2
BRIS BRISIGHELLA 1.83 318 P Pb 14 02 55.5 +0.1
MPPT Montemurlo 1.93 308 P Pn 14 02 54.6 -0.3
VITU Vitulano (BN) 1.93 146 AML AML
comp=E,980µm,0.6s
VITU AML AML
comp=N,989µm,0.9s
PSB1 Pescosannita 1.98 142 P Pn 14 02 55.7 +0.1
VIRC Vir 2.01 41 i Pn Pn 14 02 55.3 -0.7
MTCR Monte La Croce 2.02 308 P Pn 14 02 54.1 -2.1
APRC Apricena 2.02 120 P Pn 14 02 56.0 -0.2
APRC AML AML
comp=E,1640µm,0.7s
APRC AML AML
comp=N,1995µm,0.6s
PAOL Paolisi 2.04 149 Pn 14 02 57.1 +0.8
FNVD Fontana Vidola 2.04 313 P Pn 14 02 56.0 -0.5
MORI Morici 2.12 59 eP Pn 14 02 57.1 -0.3
NVLJ Novalja 2.14 34 eP Pn 14 02 57.0 -0.7
BRJN Brijuni 2.15 10 eP Pn 14 02 57.2 -0.6
BRJN Brijuni 2.15 10 P Pn 14 02 57.5 -0.3
SGRT San Giovanni R 2.16 118 Pn 14 02 57.9 -0.1
SGRT San Giovanni R 2.16 118 P Pn 14 02 57.9 -0.1
SGRT AML AML
comp=E,1355µm,0.7s
SGRT AML AML
comp=N,1815µm,0.7s
POPM Popiglio 2.17 306 P Pn 14 02 58.1 -0.1
POPM AML AML
comp=E,615µm,0.8s
POPM AML AML
comp=N,533µm,1.2s
ZCCA Zocca 2.24 315 Pn 14 03 00.0 +0.8
RABC Rab 2.27 30 ePn Pn 14 02 58.7 -0.7
MSAG Monte S. Angel 2.29 117 P Pn 14 03 00.2 +0.5
SGTA Sant Agata di 2.31 135 P Pn 14 03 01.6 +1.3
SGTA AML AML
comp=E,1280µm,0.8s
SGTA AML AML
comp=E,1235µm,0.8s
SGTA AML AML
comp=N,806µm,0.9s
SGTA AML AML
comp=N,822µm,0.9s
SMRN Sveta Marina 2.34 17 ePn Pn 14 02 59.7 -0.8
VLC Villacollemand 2.46 305 Pn 14 03 02.3 +0.2
UDBI Udbina 2.54 46 ePn Pn 14 03 03.9 +0.6
VULT Monte Vulture 2.58 135 P Pn 14 03 04.8 +1.0
VULT AML AML
comp=E,942µm,0.8s
VULT AML AML
comp=N,1280µm,0.8s
VULT AML AML
comp=E,880µm,0.6s
VULT AML AML
comp=N,1212µm,0.8s
KIJV Kijevo 2.63 62 ePn Pn 14 03 04.7 +0.2
LSTV Lastovo 2.72 89 ePn Pn 14 03 05.0 -0.6
PLIT Plitvice 2.72 39 ePn Pn 14 03 06.0 +0.2
PALZ Palazzo San Ge 2.77 131 P Pn 14 03 06.4 0.0
PALZ AML AML
comp=E,1570µm,1.1s
PALZ AML AML
comp=N,1540µm,1.5s
TEOL Teolo 2.79 337 Pn 14 03 07.7 +1.0
TEOL Teolo 2.79 337 P Pn 14 03 07.6 +1.0
SKDS Skadanscina 2.81 12 i Pn Pn 14 03 06.2 -0.7
SKDS i Sn **Sn 14 03 41.8 +0.8**
SKDS IAML 14 04 08.7
comp=Z,152nm,0.4s
MRVN Minervino Murg 2.83 127 P Pn 14 03 07.5 +0.2
MRVN AML AML
comp=E,468µm,0.7s
MRVN AML AML
comp=N,302µm,1.0s
ACER Acerenza 2.87 133 P Pn 14 03 07.4 -0.4
ACER AML AML
comp=E,776µm,0.7s
ACER AML AML
comp=E,707µm,0.7s
ACER AML AML
comp=N,792µm,0.9s
ACER AML AML
comp=N,781µm,0.9s
PRMA PARMA 2.87 314 Pn 14 03 07.5 -0.2
RICI Ricice 2.96 75 ePn Pn 14 03 09.4 +0.4
SMPL Sampolo 2.98 258 P Pn 14 03 10.2 +0.9
SMPL Sampolo 2.98 258 P Pn 14 03 10.6 +1.2
SMPL AML AML
comp=N,49µm,1.6s
SMPL AML AML
comp=E,43µm,1.6s
MSSA Maissana 3.08 301 Pn 14 03 10.6 -0.1
MSSA Maissana 3.08 301 P Pn 14 03 11.1 +0.4
MSSA AML AML
comp=E,346µm,1.4s
MSSA AML AML
comp=N,336µm,0.9s
BOJS Bojanci 3.08 28 P Pn 14 03 11.1 +0.4
PGF Pioggiola 3.11 267 eP Pn 14 03 11.3 +0.2
PGF eSn **Sn 14 03 44.8 -3.7**
comp=N,27nm,0.7s
PGF Pioggiola 3.11 267 P Pn 14 03 11.7 +0.5
AMUR Altamura 3.17 125 P Pn 14 03 12.3 +0.5
AMUR AML AML
comp=E,743µm,0.7s
AMUR AML AML
comp=N,376µm,0.7s
SABO M.te Sabotino 3.20 5 Pn 14 03 11.4 -0.9
SABO M.te Sabotino 3.20 5 P Pn 14 03 11.9 -0.4
SABO AML AML
comp=E,3410µm,0.6s
SABO AML AML
comp=N,4195µm,0.6s
SABO AML AML
comp=E,776µm,0.7s
SABO AML AML
comp=N,1077µm,0.6s
A251A Rujevac 3.21 42 ePn Pn 14 03 12.6 +0.1
ROVR Rover Verones 3.23 333 P Pn 14 03 13.9 +1.0
CGRP Cima Grappa 3.24 342 P Pn 14 03 14.0 +1.0
CGRP AML AML
comp=N,1022µm,0.5s
CGRP AML AML
comp=E,1421µm,0.7s
CGRP AML AML
comp=E,1380µm,0.7s
CGRP AML AML
comp=N,1064µm,0.5s
STON Ston 3.31 87 ePn Pn 14 03 12.5 -1.3
STON Ston 3.31 87 ePn Pn 14 03 12.7 -1.0
STON eSn **Sn 14 03 51.4 -1.9**
STON Ston 3.31 87 P Pn 14 03 12.8 -1.0
STON AML AML
comp=N,236µm,1.4s
STON AML AML
comp=E,178µm,0.6s
LJU Ljubljana 3.38 16 P Pn 14 03 15.2 +0.4
LJU AML AML
comp=E,3145µm,0.7s
LJU AML AML
comp=N,3460µm,0.7s
MATE Matera 3.39 128 ⇓P Pn 14 03 16.3 +1.5
MATE ⇑S **Sn 14 03 57.3 +2.0**
AJAC Base Areonaval 3.40 257 P Pn 14 03 16.0 +1.0
DOSS Dosso del Somm 3.41 336 P Pn 14 03 16.2 +0.9
SALO Salr 3.42 327 Pn 14 03 15.9 +0.6
SALO Salr 3.42 327 P Pn 14 03 16.7 +1.4
SALO AML AML
comp=E,813µm,1.4s
SALO AML AML
comp=N,944µm,1.0s
SALO AML AML
comp=N,956µm,1.0s

SALO					AML	AML			
	comp=E,792μm,0.9s								
CUC	**Castrocucco**	**3.42**	**144**			**Pn**	**Pn**	**14 03 16.1**	**+0.7**
MPRI	**Monte Prat**	**3.45**	**358**	⇑	P	**Pn**	**Pn**	**14 03 15.7**	**-0.1**
MPRI					AML	AML			
	comp=E,714μm,0.8s								
MPRI					AML	AML			
	comp=N,1105μm,1.0s								
STAL	**STALIGIAL**	**3.48**	**354**			**Pn**	**Pn**	**14 03 16.0**	**-0.2**
BLY	**Banja Luka**	**3.48**	**55**	*e*Pn		**Pn**	**Pn**	**14 03 19.7**	**+3.5**
LTRZ	**Laterza**	**3.48**	**128**	P		**Pn**	**Pn**	**14 03 16.9**	**+0.7**
MAGA	**Magasa**	**3.50**	**329**	P		**Pn**	**Pn**	**14 03 17.3**	**+0.7**
MAGA					AML	AML			
	comp=N,789μm,1.1s								
MAGA					AML	AML			
	comp=E,1360μm,0.6s								
NOCI	**Noci**	**3.52**	**123**	P		**Pn**	**Pn**	**14 03 17.2**	**+0.5**
NOCI					AML	AML			
	comp=N,438μm,1.0s								
NOCI					AML	AML			
	comp=E,374μm,0.7s								
LUSI	**Trento, Gardas**	**3.55**	**334**	P		**Pn**	**Pn**	**14 03 18.3**	**+1.1**
LUSI					AML	AML			
	comp=E,469μm,0.8s								
LUSI					AML	AML			
	comp=N,471μm,1.0s								
CIMO	**Cimolais**	**3.56**	**351**	Pn		**Pn**	**Pn**	**14 03 17.4**	**+0.2**
CIMO	**Cimolais**	**3.56**	**351**	P		**Pn**	**Pn**	**14 03 16.9**	**-0.3**
CIMO					AML	AML			
	comp=N,205μm,0.7s								
CIMO					AML	AML			
	comp=E,230μm,0.9s								
CIMO					AML	AML			
	comp=N,214μm,0.6s								
CIMO					AML	AML			
	comp=E,230μm,0.8s								
PTCC	**Patocco-Chiusa**	**3.61**	**2**	P		**Pn**	**Pn**	**14 03 17.4**	**-0.6**
PTCC					AML	AML			
	comp=E,318μm,0.8s								
PTCC					AML	AML			
	comp=N,304μm,0.7s								
PRED	**Cave del Predi**	**3.66**	**4**			**Pn**	**Pn**	**14 03 18.9**	**+0.3**
GAGG	**Gaggia**	**3.66**	**335**	P		**Pn**	**Pn**	**14 03 19.9**	**+1.2**
DGI	**Dorgali Grotta**	**3.66**	**229**	P		**Pn**	**Pn**	**14 03 19.5**	**+0.9**
CLUD	**Cludinico**	**3.67**	**357**	Pn		**Pn**	**Pn**	**14 03 19.0**	**+0.3**
ACOM	**Acomizza, Ital**	**3.76**	**3**	P		**Pn**	**Pn**	**14 03 20.5**	**+0.4**
ACOM					AML	AML			
	comp=N,604μm,0.8s								
ACOM					AML	AML			
	comp=N,553μm,0.8s								
ACOM					AML	AML			
	comp=E,534μm,0.6s								
ACOM					AML	AML			
	comp=E,520μm,0.6s								
ZOU	**Zoufplan**	**3.76**	**358**	P		**Pn**	**Pn**	**14 03 20.1**	**-0.2**
ZOU					AML	AML			
	comp=N,454μm,1.2s								
ZOU					AML	AML			
	comp=E,394μm,1.0s								
ZOU					AML	AML			
	comp=E,398μm,1.0s								
ZOU					AML	AML			
	comp=N,434μm,1.2s								
OBKA	**Obir**	**3.83**	**14**	*e*Pn		**Pn**	**Pn**	**14 03 21.6**	**+0.5**
	comp=N,0.1nm,0.1s								
OBKA					*e*Sn	**Sn**	**Sn**	**14 04 10.2**	**+3.8**
	comp=N,58nm,0.4s								
MYKA	**Terra Mystica**	**3.85**	**5**	Pn		**Pn**	**Pn**	**14 03 21.5**	**+0.3**
	comp=N,5.4nm,0.3s,SNR=9.9								
MYKA					*e*Sn	**Sn**	**Sn**	**14 04 06.8**	**+0.1**
	comp=N,48nm,0.8s								
KOSI	**Kohlern**	**3.89**	**341**	P		**Pn**	**Pn**	**14 03 22.8**	**+0.9**
KOSI					AML	AML			
	comp=E,986μm,0.8s								
KOSI					AML	AML			
	comp=N,728μm,1.4s								
HCY	**Herceg Novi**	**3.92**	**93**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 22.6**	**+0.4**
HCY					*i* Sn	**Sn**	**Sn**	**14 04 09.5**	**+1.1**
BRY	**Bratogost**	**3.93**	**87**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 23.0**	**+0.6**
BRY					*i* Sn	**Sn**	**Sn**	**14 04 09.8**	**+1.0**
ABTA	**Abfaltersbach**	**3.98**	**353**	*i* Pn		**Pn**	**Pn**	**14 03 23.8**	**+0.7**
	comp=N,42nm,0.5s,SNR=52								
ABTA					*e*Sn	**Sn**	**Sn**	**14 04 11.1**	**+1.1**
	comp=N,108nm,0.6s								
SOKA	**Soboth**	**4.09**	**18**	*e*Pn		**Pn**	**Pn**	**14 03 25.4**	**+0.7**
	comp=N,2.1nm,0.4s								
SOKA					*e*Sn	**Sn**	**Sn**	**14 04 13.3**	**+0.5**
	comp=N,11nm,0.4s								
UPM	**Unac-Piva**	**4.20**	**83**	⇓	*i* Pn	**Pn**	**Pn**	**14 03 26.9**	**+0.6**
UPM					*i* Sn	**Sn**	**Sn**	**14 04 16.6**	**+0.9**
CEME	**Cevo**	**4.22**	**91**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 26.8**	**+0.4**
CEME					*i* Sn	**Sn**	**Sn**	**14 04 16.7**	**+0.7**
BUM	**Brajici-Budva**	**4.24**	**95**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 27.3**	**+0.7**
BUM					*i* Sn	**Sn**	**Sn**	**14 04 17.1**	**+0.8**
NKME	**Niksic**	**4.24**	**88**	⇓	*i* Pn	**Pn**	**Pn**	**14 03 27.3**	**+0.7**
NKME					*i* Sn	**Sn**	**Sn**	**14 04 17.5**	**+1.3**
KBA	**Koelnbreinsper**	**4.28**	**1**	*i* Pn		**Pn**	**Pn**	**14 03 27.7**	**+0.3**
	comp=N,6.9nm,0.2s,SNR=9.4								
KBA					*e*Sn	**Sn**	**Sn**	**14 04 16.8**	**-0.8**
	comp=N,38nm,0.5s								
SBF	**Sospel**	**4.34**	**286**	*e*P		**Pn**	**Pn**	**14 03 28.7**	**+0.7**
SBF					*e*Sn	**Sn**	**Sn**	**14 04 14.3**	**-4.5**
	comp=N,64nm,0.6s								
FUORN	**Ofenpass-Fuorn**	**4.36**	**332**			**Pn**	**Pn**	**14 03 30.2**	**+1.7**
ESCA	**l'Escarene**	**4.38**	**286**	P		**Pn**	**Pn**	**14 03 29.2**	**+0.8**
VSL	**Villasalto**	**4.38**	**222**	P		**Pn**	**Pn**	**14 03 29.6**	**+1.0**
VSL					AML	AML			
VSL					AML	AML			
TURF	**col de Turini**	**4.39**	**288**	P		**Pn**	**Pn**	**14 03 31.3**	**+2.4**
DRME	**Dracevica, Mon**	**4.47**	**96**	⇓	*i* Pn	**Pn**	**Pn**	**14 03 30.4**	**+0.7**
DRME					*i* Sn	**Sn**	**Sn**	**14 04 22.9**	**+1.0**
PDG	**Podgorica**	**4.48**	**93**	⇑	P	**Pn**	**Pn**	**14 03 30.9**	**+1.0**
PDG				⇑	S	**Sn**	**Sn**	**14 04 20.2**	**-2.1**
PDG	**Podgorica**	**4.48**	**93**			**Pn**	**Pn**	**14 03 31.4**	**+1.5**
PDG	**Podgorica**	**4.48**	**93**	*e*Pn		**Pn**	**Pn**	**14 03 30.9**	**+1.0**
PDG					*e*Sn	**Sn**	**Sn**	**14 04 23.2**	**+0.9**
TTG	**Podgorica**	**4.48**	**93**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 30.7**	**+0.8**
TTG					*i* Sn	**Sn**	**Sn**	**14 04 23.1**	**+0.8**
CGL	**Cagliari Serpe**	**4.52**	**222**	⇑	P	**Pn**	**Pn**	**14 03 32.2**	**+1.6**
ULC	**Ulcinj**	**4.55**	**98**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 31.2**	**+0.3**
ULC					*i* Sn	**Sn**	**Sn**	**14 04 24.7**	**+0.6**
PLE	**Pljevlja**	**4.57**	**81**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 32.2**	**+1.0**
PLE					*i* Sn	**Sn**	**Sn**	**14 04 25.3**	**+0.8**
FETA	**Feichten**	**4.57**	**338**	Pn		**Pn**	**Pn**	**14 03 33.9**	**+2.6**
	comp=N,9.7nm,0.6s,SNR=9.1								
FETA					*e*Sn	**Sn**	**Sn**	**14 04 30.7**	**+5.9**
	comp=N,11nm,0.4s								
WTTA	**Wattenberg**	**4.60**	**347**	Pn		**Pn**	**Pn**	**14 03 33.9**	**+2.2**
	comp=N,8.0nm,0.4s,SNR=8.4								
WTTA					*e*Sn	**Sn**	**Sn**	**14 04 28.4**	**+3.0**
	comp=N,31nm,0.4s								
DAVOX	**Davos/Dischmat**	**4.63**	**330**	Pn		**Pn**	**Pn**	**14 03 34.8**	**+2.7**
	comp=N,9.2nm,0.3s,baz=158,slow=18,SNR=32								
DAVOX					Sn	**Sn**	**Sn**	**14 04 28.1**	**+1.9**
	comp=N,4.2nm,0.3s,baz=123,slow=22,SNR=6.4								
SQTA	**Sankt Quirin**	**4.64**	**343**	Pn		**Pn**	**Pn**	**14 03 34.5**	**+2.3**
	comp=N,29nm,0.5s,SNR=8.8								
SQTA					*e*Sn	**Sn**	**Sn**	**14 04 30.4**	**+4.0**
	comp=N,37nm,0.4s								
KOME	**Kolasin**	**4.64**	**87**	⇓	*i* Pn	**Pn**	**Pn**	**14 03 33.3**	**+1.1**
KOME					*i* Sn	**Sn**	**Sn**	**14 04 27.1**	**+0.7**
BBLS	**Lazići**	**4.65**	**75**	*e*Pn		**Pn**	**Pn**	**14 03 33.7**	**+1.4**
CALF	**Calern**	**4.68**	**284**	P		**Pn**	**Pn**	**14 03 33.3**	**+0.5**
WATA	**Walderalm**	**4.68**	**346**	Pn		**Pn**	**Pn**	**14 03 35.3**	**+2.5**
	comp=N,18nm,0.4s,SNR=10								
WATA					*e*Sn	**Sn**	**Sn**	**14 04 29.1**	**+1.7**
	comp=N,22nm,0.4s								
ISO	**Isola**	**4.69**	**289**	P		**Pn**	**Pn**	**14 03 35.6**	**+2.9**
ARSA	**Arzberg**	**4.75**	**19**	*e*Pn		**Pn**	**Pn**	**14 03 34.0**	**+0.5**
	comp=N,2.9nm,0.3s								
ARSA					*e*Sn	**Sn**	**Sn**	**14 04 26.4**	**-2.5**
	comp=N,8.0nm,0.3s								
MOTA	**Moosalm**	**4.78**	**343**	*i* Pn		**Pn**	**Pn**	**14 03 37.2**	**+3.0**
	comp=N,18nm,0.6s,SNR=8.9								
MOTA					*e*Sn	**Sn**	**Sn**	**14 04 34.4**	**+4.5**
	comp=N,62nm,0.9s								
BIOA	**Bad Ischl, Aus**	**4.91**	**3**	*i* Pn		**Pn**	**Pn**	**14 03 36.9**	**+1.2**
	comp=N,18nm,0.4s,SNR=7.2								
BIOA					*e*Sn	**Sn**	**Sn**	**14 04 37.1**	**+4.4**
	comp=N,79nm,0.5s								
IVA	**Berane**	**4.92**	**87**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 36.5**	**+0.5**
IVA					*i* Sn	**Sn**	**Sn**	**14 04 33.9**	**+0.7**
LMR	**La Mourre**	**4.93**	**279**	*e*P		**Pn**	**Pn**	**14 03 36.4**	**+0.3**
LMR					*e*Sn	**Sn**	**Sn**	**14 04 28.1**	**-5.2**
	comp=N,14nm,0.7s								

CEL	**Celeste**	**4.97**	**155**	Pn		**Pn**	**Pn**	**14 03 38.9**	**+2.1**
PVY	**Plav**	**4.99**	**90**	⇑	*i* Pn	**Pn**	**Pn**	**14 03 37.7**	**+0.8**
PVY					*i* Sn	**Sn**	**Sn**	**14 04 35.5**	**+0.7**
SJES	**Sjenica**	**4.99**	**82**	*e*Pn		**Pn**	**Pn**	**14 03 38.6**	**+1.6**
SJES					*e*Sn	**Sn**	**Sn**	**14 04 34.6**	**-0.3**
RETA	**Reutte**	**5.00**	**341**	*e*Pn		**Pn**	**Pn**	**14 03 39.4**	**+2.4**
	comp=N,1.4nm,0.2s								
RETA					*e*Sn	**Sn**	**Sn**	**14 04 38.9**	**+3.9**
	comp=N,28nm,0.6s								
MBDF	**Montbardon**	**5.04**	**295**	*e*P		**Pn**	**Pn**	**14 03 38.7**	**+1.0**
MBDF					*e*Sn	**Sn**	**Sn**	**14 04 31.0**	**-5.2**
	comp=N,15nm,0.5s								
TRIGF	**Trigance**	**5.05**	**283**	P		**Pn**	**Pn**	**14 03 39.0**	**+1.2**
TRIGF					S	**Sb**	**Sb**	**14 04 46.5**	**-4.8**
DAVA	**Damuels**	**5.07**	**333**	*e*Pn		**Pn**	**Pn**	**14 03 42.0**	**+3.9**
	comp=N,17nm,0.4s								
DAVA					*e*Sn	**Sn**	**Sn**	**14 04 40.4**	**+3.5**
	comp=N,22nm,0.6s								
MOA	**Molln**	**5.11**	**8**	*e*Pn		**Pn**	**Pn**	**14 03 39.2**	**+0.7**
MOA					*e*Sn	**Sn**	**Sn**	**14 04 37.3**	**-0.4**
MOA	**Molln**	**5.11**	**8**	*e*Pn		**Pn**	**Pn**	**14 03 39.0**	**+0.4**
	comp=N,2.0nm,0.3s								
MOA					*e*Sn	**Sn**	**Sn**	**14 04 39.5**	**+1.8**
	comp=N,14nm,0.3s								
OGAG	**Argentiere**	**5.11**	**291**	P		Pn		14 03 43.8	+5.2
DIVS	**Divibare**	**5.11**	**73**	Pn		**Pn**	**Pn**	**14 03 41.7**	**+3.0**
DIVS	**Divibare**	**5.11**	**73**	*e*Pn		**Pn**	**Pn**	**14 03 40.0**	**+1.3**
FLAF	**Flassans-sur-I**	**5.12**	**279**	P		**Pn**	**Pn**	**14 03 39.4**	**+0.7**
IVAS	**Ivanjica**	**5.14**	**79**	*e*Pn		**Pn**	**Pn**	**14 03 39.5**	**+0.5**
IVAS					*e*Sn	**Sn**	**Sn**	**14 04 37.2**	**-1.4**
TIR	**Tirane**	**5.17**	**104**	⇑	P	**Pn**	**Pn**	**14 03 40.1**	**+0.7**
TIR				⇑	S	**Sn**	**Sn**	**14 04 39.0**	**-0.2**
TIR	**Tirane**	**5.17**	**104**			**Pn**	**Pn**	**14 03 39.4**	**+0.1**
TIR	**Tirane**	**5.17**	**104**	*e*Pn		**Pn**	**Pn**	**14 03 39.9**	**+0.6**
TIR					*e*Sn	**Sn**	**Sn**	**14 04 35.9**	**-3.2**
MORH	**Mrgy, Hungar**	**5.18**	**47**	⇑	P	**Pn**	**Pn**	**14 03 40.4**	**+0.9**
CLTB	**Caltabellotta**	**5.21**	**180**	Pn		**Pn**	**Pn**	**14 03 40.7**	**+0.6**
BNI	**Bardonecchia**	**5.22**	**298**			**Pn**	**Pn**	**14 03 40.2**	**0.0**
VLO	**Vlora**	**5.26**	**114**			**Pn**	**Pn**	**14 03 41.1**	**+0.6**
FRGS	**Fruska Gora**	**5.32**	**61**	⇑	P	**Pn**	**Pn**	**14 03 42.2**	**+0.7**
FRGS	**Fruska Gora**	**5.32**	**61**	*e*Pn		**Pn**	**Pn**	**14 03 41.6**	**+0.1**
LPG	**La Plagne**	**5.37**	**302**	*e*P		**Pn**	**Pn**	**14 03 44.7**	**+2.3**
LPG					*e*Sn	**Sn**	**Sn**	**14 04 39.6**	**-4.9**
	comp=N,9.1nm,0.4s								
RONA	**Rosalia, Austr**	**5.37**	**23**	*e*Pn		**Pn**	**Pn**	**14 03 42.2**	**+0.1**
	comp=N,3.7nm,0.3s								
RONA					*e*Sn	**Sn**	**Sn**	**14 04 43.3**	**-0.8**
	comp=N,6.7nm,0.4s								
LPL	**La Plagne**	**5.39**	**303**	*e*P		**Pn**	**Pn**	**14 03 45.3**	**+2.7**
LPL					*e*Sn	**Sn**	**Sn**	**14 04 40.1**	**-4.8**
	comp=N,19nm,0.6s								
TRUS	**Trudelj**	**5.43**	**72**	*e*Pn		**Pn**	**Pn**	**14 03 43.7**	**+0.7**
TRUS					*e*Sn	**Sn**	**Sn**	**14 04 46.6**	**+1.0**
ARTF	**Artigues**	**5.46**	**281**	P		**Pn**	**Pn**	**14 03 44.6**	**+1.2**
CONA	**Conrad Observa**	**5.46**	**19**	*i* Pn		**Pn**	**Pn**	**14 03 44.0**	**+0.5**
	comp=N,6.1nm,0.5s,SNR=7.8								
CONA					*e*Sn	**Sn**	**Sn**	**14 04 49.2**	**+2.7**
	comp=N,12nm,0.4s								
SENIN	**Lac Senin/Sane**	**5.52**	**312**			**Pn**	**Pn**	**14 03 45.6**	**+1.2**
RSL	**Roselend**	**5.54**	**304**	P		**Pn**	**Pn**	**14 03 46.6**	**+2.1**
GRUS	**Gruza**	**5.59**	**76**	*e*Pn		**Pn**	**Pn**	**14 03 45.8**	**+0.7**
GRUS					*e*Sn	**Sn**	**Sn**	**14 04 47.5**	**-2.0**
BSTF	**la Bastide-des**	**5.62**	**284**	P		**Pn**	**Pn**	**14 03 46.8**	**+1.3**
GDM	**Grand'Maison**	**5.65**	**298**	P		**Pn**	**Pn**	**14 03 49.8**	**+3.7**
SMRF	**Simiane la Rot**	**5.68**	**285**	*e*P		**Pn**	**Pn**	**14 03 48.3**	**+1.9**
SMRF					*e*Sn	**Sn**	**Sn**	**14 04 45.9**	**-5.9**
	comp=N,6.3nm,0.4s								
ORIF	**Oris-en-Rattie**	**5.70**	**294**	*e*P		**Pn**	**Pn**	**14 03 49.6**	**+2.8**
ORIF					*e*Sn	**Sn**	**Sn**	**14 04 47.3**	**-5.1**
	comp=N,24nm,0.8s								
RUSF	**Rustrel**	**5.74**	**284**	P		**Pn**	**Pn**	**14 03 50.1**	**+2.9**
SELS	**Selova**	**5.82**	**83**	*e*Pn		**Pn**	**Pn**	**14 03 48.6**	**+0.3**
SELS					*e*Sn	**Sn**	**Sn**	**14 04 54.0**	**-1.3**
OHR	**Ohrid**	**5.91**	**104**	*i* Pn		**Pn**	**Pn**	**14 03 51.4**	**+1.8**
BALST	**Balsthal**	**5.98**	**321**	P		**Pn**	**Pn**	**14 03 52.1**	**+1.6**
ZST	**Bratislava**	**6.06**	**26**	*e*PN		**Pn**	**Pn**	**14 03 49.1**	**-2.4**
ZST					*e*SN	**Sn**	**Sn**	**14 04 55.5**	**-5.5**
GEC2	**GERESS Array S**	**6.06**	**3**			**Pn**	**Pn**	**14 03 52.0**	**+0.3**
GERES	**GERESS Array B**	**6.06**	**3**	Pn		**Pn**	**Pn**	**14 03 51.5**	**-0.1**
	comp=N,1.6nm,0.3s,baz=170,slow=13,SNR=21								
GERES					Sn	**Sn**	**Sn**	**14 04 58.8**	**-2.4**
	comp=N,4.5nm,0.3s,baz=163,slow=24,SNR=8.2								
	comp=N,2.9nm,0.4s								
GERES	**GERESS Array B**	**6.06**	**3**			**Pn**		**14 03 50.4**	**-1.2**
CKRC	**Cesky Krumlov**	**6.07**	**7**	*e*PN		**Pn**		**14 03 51.1**	**-0.7**
KBN	**Korca**	**6.08**	**108**			**Pn**		**14 03 52.6**	**+0.7**
SKO	**Skopje**	**6.16**	**95**	*i* Pn		**Pn**		**14 03 54.7**	**+1.8**
BOURR	**Bourrignon**	**6.24**	**319**	P		**Pn**		**14 03 53.4**	**+1.3**
FELD	**Feldberg im Sc**	**6.26**	**326**	S		**Sn**		**14 05 05.1**	**-1.2**
FELD	**Feldberg im Sc**	**6.26**	**326**	P		**Pn**		**14 03 55.6**	**+1.1**
MODS	**Modra-Piesok**	**6.27**	**26**	*e*PN		**Pn**		**14 03 54.3**	**-0.1**
MODS					*e*SN	**Sn**		**14 05 04.6**	**-1.6**
BOVS	**Bovan**	**6.27**	**79**	⇑	P	**Pn**		**14 03 54.4**	**-0.1**
BOVS	**Bovan**	**6.27**	**79**	*e*Pn		**Pn**		**14 03 54.4**	**-0.1**
BOVS					*e*Sn	**Sn**		**14 05 03.5**	**-2.8**
BARS	**Barje**	**6.34**	**87**	*e*Pn		**Pn**		**14 03 55.9**	**+0.5**
BARS					*e*Sn	**Sn**		**14 05 07.3**	**-0.7**
KHC	**Kasperske Hory**	**6.34**	**2**			**Pn**		**14 03 55.7**	**+0.2**
KHC	**Kasperske Hory**	**6.34**	**2**	*e*PN		**Pn**		**14 03 55.2**	**-0.3**
KHC					*e*SN	**Sn**		**14 05 07.4**	**-0.7**
CABF	**La Chapelle**	**6.34**	**309**	*e*P		**Pn**		**14 03 53.6**	**-1.9**
CABF					*e*Sn	**Sn**		**14 05 02.5**	**-5.7**
	comp=N,13nm,0.5s								
KIZ	**Kirchzarten**	**6.36**	**326**	S		**Sn**		**14 05 08.3**	**-0.2**
KIZ	**Kirchzarten**	**6.36**	**326**	P		**Pn**		**14 03 56.4**	**+0.7**
CHMF	**Charmoille**	**6.43**	**316**	P		**Pn**		**14 03 57.7**	**+1.0**
VIVF	**Saint-Julien-l**	**6.50**	**291**	*e*P		**Pn**		**14 04 00.1**	**+2.4**
VIVF					*e*Sn	**Sn**		**14 05 06.2**	**-5.9**
	comp=N,1.8nm,0.4s								
BFO	**Black Forest**	**6.50**	**330**	Pn		**Pn**		**14 03 58.8**	**+1.1**
PRVS	**Prvonek**	**6.55**	**90**	*e*Pn		**Pn**		**14 03 58.7**	**+0.3**
PRVS					*e*Sn	**Sn**		**14 05 12.0**	**-1.3**
VOGT	**Vogtsburg - To**	**6.56**	**326**	S		**Sn**		**14 05 12.1**	**-1.4**
VOGT	**Vogtsburg - To**	**6.56**	**326**	P		**Pn**		**14 03 58.9**	**+0.4**
KRUC	**Moravsky**	**6.65**	**18**	*e*PN		**Pn**		**14 03 58.8**	**-0.9**
ZAGS	**Zajecar**	**6.67**	**78**	*e*Pn		**Pn**		**14 03 59.8**	**-0.1**
ZAGS					*e*Sn	**Sn**		**14 05 15.6**	**-0.5**
BZS	**Buzias**	**6.67**	**62**	⇑	P	**Pn**		**14 04 00.0**	**0.0**
OPP	**Oppenau**	**6.70**	**330**	P		**Pn**		**14 04 01.1**	**+0.8**
HINF	**Hinteralfeld**	**6.72**	**320**	*e*P		**Pn**		**14 04 02.7**	**+2.0**
HINF					*e*Sn	**Sn**		**14 05 11.7**	**-5.8**
	comp=N,44nm,0.6s								
STIP	**Stip**	**6.76**	**96**	*i* Pn		**Pn**		**14 04 03.8**	**+2.6**
JAVC	**Velka Javorina**	**6.82**	**26**	*e*PN		**Pn**		**14 04 02.5**	**+0.5**
BOSS	**Bosilegrad**	**6.85**	**89**	*e*Pn		**Pn**		**14 04 03.2**	**+0.8**
BOSS					*e*Sn	**Sn**		**14 05 18.8**	**-1.8**
ECH	**Echery**	**6.88**	**324**			**Pn**		**14 04 02.9**	**0.0**
ECH	**Echery**	**6.88**	**324**	P		**Pn**		**14 04 03.3**	**+0.5**
ECH					S	**Sn**		**14 05 20.3**	**-1.1**
LASF	**Ste Croix**	**6.92**	**284**	*e*P		**Pn**		**14 04 04.9**	**+1.5**
LASF					*e*Sn	**Sn**		**14 05 15.6**	**-6.8**
	comp=N,1.9nm,0.5s								
VRAC	**Vranov**	**6.93**	**19**	Pn		**Pn**		**14 04 00.6**	**-2.9**
	comp=N,0.2nm,0.3s,baz=215,slow=14,SNR=1.4								
VRAC					Sn	**Sn**		**14 05 18.9**	**-3.5**
	comp=N,0.4nm,0.3s,baz=296,slow=18,SNR=1.8								
VRAC	**Vranov**	**6.93**	**19**	*e*PN		**Pn**		**14 04 03.3**	**-0.2**
ZAPS	**Zavoj**	**6.93**	**83**	*e*Pn		**Pn**		**14 04 04.7**	**+1.1**
ZAPS					*e*Sn	**Sn**		**14 05 21.1**	**-1.5**
VYHS	**Vyhne**	**6.93**	**33**	*e*PN		**Pn**		**14 04 04.5**	**+1.0**
VYHS					*e*SN	**Sn**		**14 05 20.2**	**-2.4**
WLS	**Welschbruch**	**6.95**	**326**	P		**Pn**		**14 04 04.6**	**+0.7**
BLKB	**Belogradchik**	**6.97**	**80**	⇑	P	**Pn**		**14 04 04.3**	**+0.1**
CDF	**Champ du Feu**	**6.98**	**326**	*e*P		**Pn**		**14 04 05.1**	**+0.8**
CDF					*e*Sn	**Sn**		**14 05 17.9**	**-6.1**
	comp=N,10nm,0.4s								
HAU	**Haudompre**	**7.10**	**320**	*e*P		**Pn**		**14 04 08.0**	**+2.2**
HAU					*e*Sn	**Sn**		**14 05 20.7**	**-6.0**
	comp=N,56nm,0.6s								
VAY	**Valandovo**	**7.13**	**99**	*i* Pn		**Pn**		**14 04 07.1**	**+0.9**
GZR	**Gura Zlata**	**7.37**	**66**	⇑	P	**Pn**		**14 04 10.7**	**+1.1**
VTS	**Vitosha**	**7.39**	**88**	⇑	P	**Pn**		**14 04 10.1**	**+0.1**
VTS	**Vitosha**	**7.39**	**88**	Pn		**Pn**		**14 04 09.8**	**-0.2**
VTS	**Vitosha**	**7.39**	**88**	*e*Pn		**Pn**		**14 04 09.8**	**-0.2**
VTS					*e*Sn	**Sn**		**14 05 32.5**	**-1.7**
MORC	**Moravsky Berou**	**7.60**	**22**	⇓	P	**Pn**		**14 04 14.2**	**+1.5**
KEST	**Kesra**	**7.66**	**204**	Pn		**Pn**		**14 04 13.8**	**+0.2**
	comp=N,0.7nm,0.3s,baz=320,slow=18,SNR=2.2								
	comp=N,4.6nm,0.9s								
PAGF	**Fort de Pagny**	**7.78**	**320**	*e*P		**Pn**		**14 04 18.4**	**+3.2**
PAGF					*e*Sn	**Sn**		**14 05 37.3**	**-6.1**
	comp=N,5.7nm,0.2s								

SFTF	**Sexfontaines**	**7.88**	**316**	*e*P		**Pn**		**14 04 19.6**	**+3.1**
SFTF					*e*Sn	**Sn**		**14 05 39.2**	**-6.7**
	comp=N,10nm,0.4s								
SRS	**Serrai**	**7.92**	**99**	*e*Pn		**Pn**		**14 04 17.5**	**+0.3**
SRS					*e*Sn	**Sn**		**14 05 43.8**	**-3.3**
LOR	**Lormes**	**7.98**	**307**	*e*P		**Pn**		**14 04 20.9**	**+2.9**
	baz=122								
LOR					*e*Sn	**Sn**		**14 05 41.5**	**-7.0**
	comp=N,4.1nm,0.2s								
MTLF	**Montolieu**	**8.06**	**278**	*e*P		**Pn**		**14 04 21.2**	**+2.1**
MTLF					*e*Sn	**Sn**		**14 05 42.8**	**-7.6**
	comp=N,0.4nm,0.2s								
MEZF	**Maizieres J'vi**	**8.07**	**318**	*e*P		**Pn**		**14 04 22.5**	**+3.4**
BRG	**Berggiesshubel**	**8.10**	**3**	*e*P		**Pn**		**14 04 18.8**	**-0.7**
BRG					Amp			14 04 26.8	
	comp=Z,4.2nm,0.7s								
BRG					*e*x	x		14 05 34.4	
BRG					*e*x	x		14 06 09.6	
BRG					*e*x	x		14 06 49.7	
BRG					Amp			14 07 02.5	
	comp=Z,24nm,1.2s								
CAF	**Calviac**	**8.32**	**289**	*e*P		**Pn**		**14 04 24.6**	**+1.9**
CAF					*e*

UKR	**Ust'-Kan**	**4.82**	**220**	Pn		**Pn**	**14 04 38.3**	**-0.6**
UKR				Pg		**Pb**	**14 04 51.3**	**+0.9**
UKR				Sg		**Sg**	**14 05 58.6**	**-1.2**
DGZ	**Jazzator, Alta**	**5.21**	**196**	Pn		**Pn**	**14 04 44.6**	**+0.2**
DGZ				Pg		**Pb**	**14 04 58.0**	**+0.9**
DGZ				Sg		**Sg**	**14 06 08.9**	**-3.5**
ERNS	**Erzin**	**5.57**	**141**	Pn		**Pn**	**14 04 49.4**	**+0.2**
ERNS				Pg		**Pb**	**14 05 02.3**	**-0.9**
ERNS				Sg		**Sb**	**14 06 14.5**	**+4.1**
MOY	**Mondy**	**7.44**	**110**	Pg		**Pb**	**14 05 35.3**	**+0.2**
MOY				Sg		**Sb**	**14 07 08.1**	**+3.8**
KURK	**Kurchatov**	**7.83**	**244**	⇑Lg		Lg	14 07 32.5	
	40nm,1.1s							
KURBB	**Kurchatov Arra**	**7.92**	**243**	⇑Pn		**Pn**	**14 05 19.1**	**-2.4**
	1.4nm,0.3s							
KURBB				⇑Lg		Lg	14 07 35.9	
	45nm,0.7s							
MK31	**Makanchi Array**	**9.21**	**214**	⇑Pn		**Pn**	**14 05 39.6**	**+0.6**
	0.7nm,0.4s,baz=27,slow=13,SNR=25							
MK31				Lg		Lg	14 08 21.3	
	10nm,0.7s,baz=37,slow=32,SNR=4.0							
MAKZ	**Makanchi**	**9.30**	**215**	⇑Pn		**Pn**	**14 05 42.3**	**+2.0**
	4.0nm,0.8s							
MAKZ				⇓Sn		**Sn**	**14 07 29.5**	**+3.9**
	4.5nm,0.6s							
MAKZ				⇓Lg		Lg	14 08 24.0	
	21nm,1.1s							

*IDC **24** 14:11:22.2±0.7,54°.99S×31°.46W,h0km,mb4.1/9, mbtmp4.1/10,ML3.5/1,Error ellipse: s-maj=21.9km s-min=18.2km az=54.0*

*NEIC **24** 14:11:23.6±2.1,54°.89S±0°.05×31°.9W±0°.2,h10km±1km, mb4.4/16,Error ellipse: s-maj=19.0km s-min=6.9km az=73.0*

ISC 24 14:11:23.4±0.5,54°.89S±0°.08×31°.79W±0°.09,h10km,n39, σ1§19/35,mb4.4/12,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.80**	**281**		**Pn**	**14 12 07.0**	**-1.2**
ORCD	**Orcadas**	**9.05**	**224**	Pn	**Pn**	**14 13 34.0**	**+0.1**
PMSA	**Palmer Station**	**18.77**	**225**	P	**P**	**14 15 42.9**	**+0.7**
	0.1nm,0.3s,baz=112,slow=10,SNR=2.8						
	2.2nm,0.6s						
PMSA	**Palmer Station**	**18.77**	**225**	P	**P**	**14 15 42.5**	**+0.3**
VNA3	**Neumayer Olymp**	**19.01**	**158**	P	**P**	**14 15 45.0**	**+0.1**
VNA2	**Neumayer--Watz**	**19.30**	**156**	P	**Pn**	**14 15 51.0**	**+1.9**
	baz=310,slow=12						
SNAA	**Sanae**	**20.90**	**155**	P	**P**	**14 16 05.5**	**0.0**
SNAA	**Sanae**	**20.90**	**155**	P	**P**	**14 16 04.7**	**-0.8**
	2.3nm,0.8s,baz=291,slow=12,SNR=12						
	2.3nm,0.8s						
SNAA	**Sanae**	**20.90**	**155**	P	**P**	**14 16 04.6**	**-1.0**
SNAA				IAmb	IAmb	14 16 20.6	
	comp=Z,15nm,1.4s						
SMAI	**San Martin Ant**	**21.03**	**217**	P	**P**	**14 16 07.5**	**+0.6**
BELA	**Belgrano 2**	**23.11**	**182**	P	**P**	**14 16 28.2**	**-0.8**
AY01	**Puyuhuapi**	**28.06**	**275**	P	**P**	**14 17 13.2**	**-1.4**
AY01				IAmb	IAmb	14 17 54.8	
	comp=Z,14nm,1.2s						
PLCA	**Paso Flores**	**29.20**	**283**	P	**P**	**14 17 28.0**	**+3.0**
	comp=Z,2.0nm,1.0s,baz=177,slow=3.4,SNR=4.2						
	comp=Z,2.0nm,1.0s						
CPUP	**Villa Florida**	**34.11**	**316**	P	**P**	**14 18 10.8**	**+2.6**
	comp=Z,1.0nm,0.5s,baz=149,slow=11,SNR=3.2						
	comp=Z,1.0nm,0.5s						
CPUP	**Villa Florida**	**34.11**	**316**	P	**P**	**14 18 06.3**	**-1.8**
CPUP				IAmb	IAmb	14 18 19.0	
	comp=Z,3.2nm,1.0s						
MT01	**Popeta**	**34.52**	**291**	P	**P**	**14 18 10.9**	**-0.8**
MT01				IAmb	IAmb	14 18 26.2	
	comp=Z,7.8nm,0.9s						
QSPA	**South Pole Qui**	**35.37**	**180**	P	**P**	**14 18 18.4**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=240,slow=2.1,SNR=8.4						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**35.37**	**180**	P	**P**	**14 18 18.7**	**-0.1**
QSPA				IAmb	IAmb	14 18 25.6	
	comp=Z,8.5nm,1.4s						
VA06	**Catapilco**	**35.55**	**292**	P	**P**	**14 18 20.4**	**-0.1**
GO02	**Mina Guanaco**	**40.64**	**301**	P	**P**	**14 19 03.2**	**-0.6**
GO02				IAmb	IAmb	14 19 09.0	
	comp=Z,10.0nm,1.1s						
MAW	**Mawson**	**42.62**	**146**	P	**P**	**14 19 17.6**	**-1.6**
	comp=Z,3.5nm,0.8s,baz=226,slow=7.7,SNR=9.2						
	comp=Z,3.5nm,0.8s						
MAW	**Mawson**	**42.62**	**146**	P	**P**	**14 19 18.6**	**-0.6**
TA02	**Huaiquique**	**45.04**	**305**	P	**P**	**14 19 39.2**	**0.0**
LPAZ	**La Paz**	**47.59**	**310**	P	**P**	**14 20 01.4**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=146,slow=8.7,SNR=3.8						
	comp=Z,1.9nm,0.6s						
LPAZ	**La Paz**	**47.59**	**310**	P	**P**	**14 20 00.1**	**+0.1**
LPAZ				IAmb	IAmb	14 20 09.5	
	comp=Z,5.3nm,1.1s						
BOSA	**Boshof**	**48.30**	**81**	P	**P**	**14 20 04.0**	**-0.9**
	comp=Z,4.3nm,0.9s,baz=202,slow=5.4,SNR=1.9						
	comp=Z,4.3nm,0.9s						
H10N3	**ASCENSION HYDR**	**48.91**	**23**	T	T	15 13 27.6	
	baz=192,slow=75,SNR=23						
H10N1	**ASCENSION HYDR**	**48.91**	**23**	T	T	15 13 25.3	
	baz=192,slow=75,SNR=24						
H10N2	**ASCENSION HYDR**	**48.93**	**23**	T	T	15 13 26.5	
	baz=192,slow=75,SNR=19						
LBTB	**Lobatse**	**51.26**	**78**	P	**P**	**14 20 26.7**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=228,slow=10,SNR=3.9						
	comp=Z,4.5nm,0.8s						
LBTB	**Lobatse**	**51.26**	**78**	P	**P**	**14 20 28.0**	**+0.6**
LBTB				IAmb	IAmb	14 20 29.4	
	comp=Z,7.6nm,1.0s						
DBIC	**Dimbokro**	**65.33**	**30**	P	**P**	**14 22 05.2**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=243,slow=2.3,SNR=1.7						
	comp=Z,2.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.45**	**34**	P	**P**	**14 22 57.0**	**+1.2**
	comp=Z,2.7nm,1.0s,baz=205,slow=6.7,SNR=8.0						
RIMA	**Rio Macho**	**77.73**	**307**	P	**P**	**14 23 20.4**	**-0.2**
STVI	**Saint Thomas**	**78.23**	**328**	P	**P**	**14 23 21.7**	**-1.3**
CMAR	**Chiang Mai Arr**	**127.93**	**114**	PKP	**PKPdf**	**14 30 28.9**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=223,slow=3.0,SNR=5.9						
YKA	**Yellowknife Ar**	**133.58**	**321**	PKP	**PKPdf**	**14 30 38.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=118,slow=1.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**144.22**	**65**	PKP	PKPbc	14 30 57.1	+0.5
	comp=Z,3.5nm,0.7s,baz=254,slow=3.8,SNR=9.9						
ILAR	**Eielson Array**	**147.40**	**314**	PKPbc	**PKPdf**	**14 31 05.5**	**+2.1**
	comp=Z,2.6nm,0.9s,baz=124,slow=1.7,SNR=15						

IDC 24 14:17:08.9±1.4,54°.99S×31°.91W,h0km,mb3.6/2, mbtmp3.7/2,MS3.8/1,Error ellipse: s-maj=59.6km s-min=35.2km az=57.0,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.84**	**154**	P	P	14 21 51.8	0.0
	1.6nm,1.0s,baz=312,slow=14,SNR=2.8						
	1.6nm,1.0s						
LVC	**Limon Verde**	**42.46**	**305**	LR	LR	14 42 53.7	
	comp=Z,117nm,20.6s,baz=174,slow=36						
LPAZ	**La Paz**	**47.60**	**310**	P	P	14 25 46.7	-0.4
	0.9nm,0.5s,baz=180,slow=8.1,SNR=2.2						
	0.9nm,0.5s						
H10N1	**ASCENSION HYDR**	**49.03**	**23**	T	T	15 18 57.5	
	baz=193						
H10N3	**ASCENSION HYDR**	**49.03**	**23**	T	T	15 19 00.3	
	baz=193						
H10N2	**ASCENSION HYDR**	**49.05**	**23**	T	T	15 18 59.2	
	baz=193						
TORD	**Torodi Ar. Bea**	**73.57**	**34**	P	P	14 28 43.7	+0.1
	1.0nm,1.0s,baz=197,slow=6.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**144.33**	**65**	PKP	PKPbc	14 36 44.2	+0.1
	1.1nm,0.7s,baz=233,slow=2.8,SNR=4.1						
ILAR	**Eielson Array**	**147.42**	**314**	PKPbc	PKPbc	14 36 52.8	-0.4
	1.1nm,0.8s,baz=107,slow=1.2,SNR=8.6						

*IDC **24** 14:18:17.8±0.7,21°.96S×169°.27E,h0km,mb4.5/15, mbtmp4.5/18,ML4.8/3,MS4.0/1,Error ellipse: s-maj=22.1km s-min=16.0km az=144.0*

*NEIC **24** 14:18:18.1±1.2,22°.0S±0°.1×169°.24E±0°.07,h3km±5km, mb5.0/62,Error ellipse: s-maj=15.8km s-min=6.9km az=206.0*

*NOU **24** 14:18:20.8,21°.89S×169°.17E,h12km,mb5.0/44, Southeast of Loyalty Islands*

ISC 24 14:18:22.5±0.4,21°.95S±0°.06×169°.23E±0°.06,h31km,n215, σ1§04/209,mb5.0/51,13C-2D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.21**	**293**		**Pn**	**14 18 42.0**	**-1.2**
MARNC				Sg	**Sn**	**14 18 57.6**	**-0.9**
MARNC	**Mare, Loyalty**	**1.21**	**293**	P	**Pn**	**14 18 41.9**	**-1.3**
PINNC	**Pines Island,**	**1.77**	**248**	Pn	**Pn**	**14 18 49.4**	**-1.6**
PINNC	**Pines Island,**	**1.77**	**248**	P	**Pn**	**14 18 49.5**	**-1.6**
YATNC	**Mamie plateau,**	**2.17**	**267**	P	**Pn**	**14 18 55.1**	**-1.4**
LIFNC	**LIFOU**	**2.19**	**302**		**Pn**	**14 18 54.4**	**-2.4**
LIFNC	**LIFOU**	**2.19**	**302**	P	**Pn**	**14 18 56.0**	**-0.8**
OUENC	**Ouen Island, N**	**2.26**	**258**		**Pn**	**14 18 56.7**	**-1.0**
OUENC	**Ouen Island, N**	**2.26**	**258**	P	**Pn**	**14 18 56.9**	**-0.8**
DZM	**Mont Dzumac**	**2.58**	**267**	Pn	**Pn**	**14 19 01.8**	**-0.5**
	111nm,0.3s,baz=124,slow=23,SNR=1527						
DZM				Sn	**Sn**	**14 19 31.5**	**-1.3**
	80nm,0.3s,baz=114,slow=22,SNR=7.1						
	377nm,0.5s						
DZM	**Mont Dzumac**	**2.58**	**267**		**Pn**	**14 19 01.3**	**-1.0**
DZM	**Mont Dzumac**	**2.58**	**267**	P	**Pn**	**14 19 01.9**	**-0.4**
NOUC	**Port Laguerre**	**2.72**	**266**	P	**Pn**	**14 19 03.3**	**-0.7**
RTV	**Rentapao**	**4.21**	**350**	P	**Pn**	**14 19 24.9**	**+0.4**
DVP	**Devils Point**	**4.32**	**347**	P	**Pn**	**14 19 24.9**	**-1.1**
KOUNC	**Koumac, New Ca**	**4.81**	**286**		**Pn**	**14 19 32.7**	**-0.2**
KOUNC	**Koumac, New Ca**	**4.81**	**286**	P	**Pn**	**14 19 33.3**	**+0.4**
NFK	**Norfolk Island**	**7.16**	**189**	P	**Pn**	**14 20 03.7**	**-1.4**
	baz=7.2,SNR=4.6						
NFK	**Norfolk Island**	**7.16**	**189**	P	**Pn**	**14 20 05.7**	**+0.6**
MSVF	**Nonsavu**	**9.30**	**65**	Pn	**Pn**	**14 20 34.3**	**-0.3**
	0.3nm,0.3s,baz=264,slow=17,SNR=5.1						
MSVF				LR	LR	14 23 20.4	
	comp=Z,1μm,20.8s,baz=262,slow=33						
	8.9nm,1.0s						
HNR	**Honiara**	**15.31**	**323**	Pn	**Pn**	**14 21 57.0**	**+0.4**
	12nm,0.3s,baz=166,slow=1.8,SNR=2.6						
	73nm,0.5s						
EIDS	**Eidsvold**	**16.97**	**255**	P	**Pn**	**14 22 16.6**	**-1.0**
	baz=16,SNR=5.1						
EIDS	**Eidsvold**	**16.97**	**255**	Pn	**Pn**	**14 22 16.1**	**-1.5**
EIDS	**Eidsvold**	**16.97**	**255**	P	**Pn**	**14 22 16.9**	**-0.7**
ARMA	**Armidale**	**17.89**	**238**	P	**Pn**	**14 22 28.6**	**-0.5**
	baz=17,SNR=4.5						
ARMA	**Armidale**	**17.89**	**238**	P	**Pn**	**14 22 28.9**	**-0.2**
RMQ	**Roma**	**19.20**	**252**	P	**Pn**	**14 22 44.3**	**-0.7**
	baz=18,SNR=6.9						
RMQ	**Roma**	**19.20**	**252**	P	**Pn**	**14 22 46.0**	**+1.0**
SYDH	**Sydney Hard Ro**	**20.10**	**230**	P	Pn	14 22 56.1	+0.5
CTA	**Charters Tower**	**21.52**	**271**	P	**P**	**14 23 09.2**	**0.0**
	15nm,0.8s,baz=99,slow=12,SNR=20						
	15nm,0.8s						
CTA	**Charters Tower**	**21.52**	**271**	P	**P**	**14 23 09.0**	**-0.2**
CTAO	**Charters Tower**	**21.52**	**271**		**P**	**14 23 08.8**	**-0.4**
CTAO	**Charters Tower**	**21.52**	**271**	P	**P**	**14 23 09.0**	**-0.2**
CNB	**Canberra Magne**	**21.88**	**228**	P	**P**	**14 23 15.1**	**+2.1**
	baz=21,SNR=6.2						
CNB	**Canberra Magne**	**21.88**	**228**	P	**P**	**14 23 15.0**	**+2.1**
CAN	**Canberra**	**22.14**	**229**	P	**P**	**14 23 16.4**	**+0.7**
MILA	**Mila**	**22.99**	**225**	P	**P**	**14 23 26.2**	**+1.5**
	baz=23,SNR=3.2						
CMSA	**Cobar Meteorol**	**23.04**	**241**	P	**P**	**14 23 26.2**	**+1.0**
	baz=22,SNR=86						
CMSA	**Cobar Meteorol**	**23.04**	**241**	P	**P**	**14 23 26.5**	**+1.2**
QLP	**Quilpie**	**23.23**	**254**	P	**P**	**14 23 28.0**	**+0.8**
	baz=23,SNR=25						
QLP	**Quilpie**	**23.23**	**254**	P	**P**	**14 23 27.3**	**+0.1**
MTSU	**Mount Surprise**	**23.70**	**275**	P	**P**	**14 23 30.9**	**-0.9**
	baz=23,SNR=19						
MTSU	**Mount Surprise**	**23.70**	**275**	P	**P**	**14 23 32.8**	**+1.0**
RABL	**Rabaul**	**24.20**	**314**	P	**P**	**14 23 36.2**	**-0.3**
RABL				IAmb	IAmb	14 24 01.0	
	comp=Z,33nm,1.1s						
TOO	**Toolangi**	**25.72**	**227**	P	**P**	**14 23 52.0**	**+1.8**
	baz=25,SNR=5.0						
TOO	**Toolangi**	**25.72**	**227**	P	**P**	**14 23 47.4**	**-2.8**
TOO				IAmb	IAmb	14 24 20.6	
	comp=Z,50nm,1.8s						
TOO	**Toolangi**	**25.72**	**227**	P	**P**	**14 23 51.6**	**+1.4**
	comp=Z,13nm,1.4s						
COEN	**Coen**	**26.00**	**283**	P	**P**	**14 23 51.7**	**-1.2**
	baz=25,SNR=8.1						
COEN	**Coen**	**26.00**	**283**	P	**P**	**14 23 52.6**	**-0.2**
COEN	**Coen**	**26.00**	**283**	P	**P**	**14 23 53.8**	**+0.9**
STKA	**Stephens Creek**	**26.48**	**242**	P	**P**	**14 23 57.8**	**+0.7**
	comp=Z,9.7nm,0.8s,baz=92,slow=13,SNR=18						
	comp=Z,9.7nm,0.8s						
STKA	**Stephens Creek**	**26.48**	**242**	P	**P**	**14 23 58.0**	**+0.9**
	baz=26,SNR=14						
STKA	**Stephens Creek**	**26.48**	**242**	P	**P**	**14 23 56.4**	**-0.7**
STKA	**Stephens Creek**	**26.48**	**242**	P	**P**	**14 23 58.9**	**+1.8**
LCRK	**Leigh Creek**	**29.01**	**247**	P	**P**	**14 24 20.2**	**+0.5**
HTT	**Hallett**	**29.07**	**240**	P	**P**	**14 24 20.8**	**+0.6**
	baz=28,SNR=3.7						
PATS	**Pohnpei**	**30.55**	**338**	P	**P**	**14 24 33.2**	**-0.1**
	baz=30,SNR=3.7						
PATS	**Pohnpei**	**30.55**	**338**	P	**P**	**14 24 32.8**	**-0.5**
OOD	**Oodnadatta**	**30.92**	**252**	P	**P**	**14 24 37.8**	**+1.2**
MULG	**Mulgathing**	**32.55**	**248**	P	**P**	**14 24 51.1**	**+0.2**
AS31	**Alice Springs**	**32.56**	**260**	P	**P**	**14 24 50.1**	**-1.1**
ASAR	**Alice Springs**	**32.56**	**260**	P	**P**	**14 24 50.8**	**-0.4**
	comp=Z,7.8nm,0.7s,baz=78,slow=9.0,SNR=128						
	comp=Z,7.8nm,0.7s						
ASAR	**Alice Springs**	**32.56**	**260**	P	**P**	**14 24 50.0**	**-1.1**
WRAB	**Tennant Creek**	**32.59**	**267**	P	**P**	**14 24 50.6**	**-0.9**
WRA	**Warramunga Arr**	**32.60**	**267**	P	**P**	**14 24 50.5**	**-1.0**
	comp=Z,5.1nm,0.9s,baz=98,slow=8.0,SNR=36						
WRA				PcP	**PcP**	**14 27 39.2**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=114,slow=2.7,SNR=1.6						
	comp=Z,5.1nm,0.9s						
WRA	**Warramunga Arr**	**32.60**	**267**	P	**P**	**14 24 49.9**	**-1.6**
MTN	**Manton Dam**	**37.38**	**278**	P	**P**	**14 25 31.9**	**-0.8**
	baz=37,SNR=4.5						
MTN	**Manton Dam**	**37.38**	**278**	P	**P**	**14 25 32.6**	**-0.1**
WRKA	**Warakurna**	**37.56**	**257**	P	**P**	**14 25 34.2**	**-0.2**
	baz=37,SNR=12						
WRKA	**Warakurna**	**37.56**	**257**	P	**P**	**14 25 35.5**	**+1.2**
KNRA	**Kununurra**	**38.72**	**272**	P	**P**	**14 25 43.4**	**-0.6**
	baz=38,SNR=16						
KNRA	**Kununurra**	**38.72**	**272**	P	**P**	**14 25 43.5**	**-0.6**
KNRA				IAmb	IAmb	14 25 44.4	
	comp=Z,22nm,0.8s						
KNRA	**Kununurra**	**38.72**	**272**	P	**P**	**14 25 44.0**	**-0.1**
FAKI	**Fak Fak**	**40.58**	**293**	P	**P**	**14 25 59.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**41.03**	**267**	P	**P**	**14 26 03.5**	**+0.2**
	baz=40,SNR=53						
FITZ	**Fitzroy Crossi**	**41.03**	**267**	P	**P**	**14 26 03.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**41.03**	**267**	P	**P**	**14 26 03.9**	**+0.6**
PSA00	**Pilbara Seismi**	**45.70**	**261**	P	**P**	**14 26 40.5**	**-0.4**
PSA00				IAmb	IAmb	14 26 41.8	
	comp=Z,20nm,1.1s						
PSA00	**Pilbara Seismi**	**45.70**	**261**	P	**P**	**14 26 41.1**	**+0.2**
MBWA	**Marble Bar**	**45.88**	**261**	P	**P**	**14 26 41.9**	**-0.4**
MBWA	**Marble Bar**	**45.88**	**261**	P	**P**	**14 26 42.8**	**+0.5**
MEEK	**Meekatharra**	**46.13**	**254**	P	**P**	**14 26 43.8**	**-0.5**
	baz=45,SNR=11						
MEEK	**Meekatharra**	**46.13**	**254**	P	**P**	**14 26 44.0**	**-0.3**
SANI	**Sanana**	**46.44**	**289**	P	P	14 26 58.9	+12
KLBR	**Kellerberrin**	**46.59**	**247**	P	**P**	**14 26 47.2**	**-0.7**
	baz=46,SNR=6.0						
KLBR	**Kellerberrin**	**46.59**	**247**	P	**P**	**14 26 46.8**	**-1.0**
	comp=Z,41nm,0.9s						
NWAO	**Narrogin (SRO)**	**47.01**	**245**	P	**P**	**14 26 50.9**	**-0.2**
BLDU	**Ballidu**	**47.52**	**248**	P	**P**	**14 26 54.5**	**-0.6**
	baz=47,SNR=8.1						
BLDU	**Ballidu**	**47.52**	**248**	P	**P**	**14 26 53.9**	**-1.2**
	comp=Z,30nm,1.2s						
MORW	**Morawa**	**48.19**	**250**	P	**P**	**14 26 59.9**	**-0.4**
	baz=48,SNR=4.5						
MORW	**Morawa**	**48.19**	**250**	P	**P**	**14 26 59.4**	**-0.9**
MORW				IAmb	IAmb	14 27 01.2	
	comp=Z,17nm,1.1s						
VNDA	**Vanda**	**55.73**	**182**	P	**P**	**14 27 56.2**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=348,slow=4.3,SNR=1.7						
SBA	**Scott Base**	**55.97**	**181**	P	**P**	**14 27 58.0**	**+0.6**
MJAR	**Matsushiro Arr**	**65.14**	**333**	P	**P**	**14 29 00.0**	**-0.5**
	comp=Z,5.0nm,1.0s,baz=157,slow=7.6,SNR=8.2						
	comp=Z,5.0nm,1.0s						
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**14 29 18.3**	**-1.0**
KSRS	**Korea Array**	**70.73**	**326**	P	**P**	**14 29 36.5**	**+0.9**
	comp=Z,9.0nm,0.9s,baz=144,slow=6.2,SNR=32						
	comp=Z,9.0nm,0.9s						
KSAR	**Wonju Array Be**	**70.75**	**326**	P	**P**	**14 29 37.5**	**+1.8**
INCN	**Inchon**	**71.43**	**325**	P	**P**	**14 29 40.8**	**+0.9**
USRK	**Ussuriysk Ar.**	**74.14**	**333**	P	**P**	**14 29 56.8**	**+1.0**
	comp=Z,4.5nm,0.8s,baz=165,slow=7.9,SNR=7.1						
	comp=Z,4.5nm,0.8s						

USRK	**Ussuriysk Ar.**	**74.14**	**333**	P		**P**	**14 29 56.5**	**+0.8**
PETK	**Petropavlovsk-**	**75.41**	**353**	P		**P**	**14 30 03.3**	**+0.4**
	comp=Z,5.7nm,0.8s,baz=156,slow=7.4,SNR=5.6							
	comp=Z,5.7nm,0.8s							
MAW	**Mawson**	**75.93**	**202**	P		**P**	**14 30 05.9**	**0.0**
	comp=Z,4.1nm,1.0s,baz=129,slow=9.3,SNR=5.5							
	comp=Z,4.1nm,1.0s							
CN2	**Changchun**	**76.76**	**329**	*e*P		**P**	**14 30 10.8**	**0.0**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.2s							
HNS	**HongShan**	**78.21**	**319**	⇑P		**P**	**14 30 20.8**	**+1.7**
KLR	**Kul'dur**	**78.33**	**336**	P		**P**	**14 30 20.3**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=129,slow=4.5,SNR=12							
	comp=Z,2.5nm,0.6s							
BELA	**Belgrano 2**	**79.41**	**175**	P		**P**	**14 30 23.6**	**-1.6**
BELA				IAmb	IAmb		14 33 20.0	
	comp=Z,8.2nm,0.7s							
KMI	**Kunming**	**79.70**	**302**	⇑P		**P**	**14 30 30.4**	**+2.6**
KMI				pmax	pmax			
	comp=Z,11nm,0.5s							
PZH	**PanZhiHua**	**81.16**	**303**	P		**P**	**14 30 38.3**	**+2.7**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.2s							
PZH				pmax	pmax			
	comp=Z,100nm,5.3s							
CD2	**Chengdu**	**81.88**	**308**	*e*P		**P**	**14 30 41.0**	**+1.9**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
LZH	**Lanzhou**	**84.53**	**312**	*e*P		**P**	**14 30 54.1**	**+1.2**
LZH				pP	pP		14 30 58.8	-3.0
LZH				sP	sP		14 31 01.9	-2.3
LZH				pmax	pmax			
	comp=Z,13nm,1.0s							
TROLL	**Troll, Antarti**	**85.84**	**184**	P		**P**	**14 30 57.8**	**-1.1**
TROLL	**Troll, Antarti**	**85.84**	**184**	pP		**P**	**14 31 02.7**	**+3.8**
SNAA	**Sanae**	**86.46**	**183**	P		**P**	**14 31 01.1**	**-0.8**
SNAA	**Sanae**	**86.46**	**183**	pP		**P**	**14 31 05.5**	**+3.6**
SNAA	**Sanae**	**86.46**	**183**	P		**P**	**14 31 00.5**	**-1.4**
SNAA				IAmb	IAmb		14 31 11.2	
	comp=Z,10nm,1.1s							
VNA3	**Neumayer Olymp**	**87.05**	**180**	P		**P**	**14 31 03.4**	**-1.3**
VNA3	**Neumayer Olymp**	**87.05**	**180**	pP		**P**	**14 31 08.2**	**+3.5**
VNA2	**Neumayer--Watz**	**87.34**	**181**	P		**P**	**14 31 05.5**	**-0.6**
	baz=170,slow=4.5							
VNA2	**Neumayer--Watz**	**87.34**	**181**	pP		**P**	**14 31 09.8**	**+3.7**
VNA1	**Neumayer--Stat**	**87.64**	**181**	P		**P**	**14 31 07.1**	**-0.3**
ORV	**Oroville**	**88.95**	**46**	P		**P**	**14 31 14.3**	**+0.2**
ORV				IAmb	IAmb		14 31 15.6	
	comp=Z,17nm,1.4s							
CMB	**Columbia Colle**	**88.97**	**48**	P		**P**	**14 31 14.0**	**-0.3**
CMB				IAmb	IAmb		14 31 15.0	
	comp=Z,8.0nm,0.9s							
ISA	**Isabella, Lake**	**89.19**	**51**	P		**P**	**14 31 14.9**	**-0.5**
ISA				IAmb	IAmb		14 31 16.3	
	comp=Z,11nm,0.9s							
SONM	**Songino Array**	**89.37**	**323**	P		**P**	**14 31 16.9**	**+0.8**
	comp=Z,5.2nm,0.9s,baz=139,slow=5.4,SNR=22							
	comp=Z,5.2nm,0.9s							
SONM	**Songino Array**	**89.37**	**323**	P		**P**	**14 31 15.9**	**-0.1**
SONM				IAmb	IAmb		14 31 17.8	
	comp=Z,10nm,1.1s							
MDPB	**Devils Postpil**	**89.68**	**49**	P		**P**	**14 31 17.6**	**-0.3**
MDPB				IAmb	IAmb		14 31 19.5	
	comp=Z,12nm,1.2s							
OMMB	**Old Mammoth Mi**	**89.73**	**49**	P		**P**	**14 31 18.6**	**+0.3**
OMMB				IAmb	IAmb		14 31 19.8	
	comp=Z,9.1nm,1.2s							
MPK	**Martis Peak**	**89.82**	**47**	P		**P**	**14 31 18.4**	**-0.2**
MPK				IAmb	IAmb		14 31 19.5	
	comp=Z,12nm,1.0s							
BEKR	**Beckworth**	**89.87**	**46**	P		**P**	**14 31 17.9**	**-0.8**
BEKR				IAmb	IAmb		14 31 19.4	
	comp=Z,7

DPC	**Dobruska-Polom**	**144.57 330**	*e*PKP		**PKPdf**	**14 37 54.8**	**-1.0**	
BZS	**Buzias**	**144.58 320**	⇑P		PKPbc	14 37 54.5	-0.1	
BLKB	**Belogradchik**	**144.89 316**	⇑P		**PKPdf**	**14 37 56.9**	**+0.3**	
JAVC	**Velka Javorina**	**144.90 327**	*e*PKP		**PKPdf**	**14 37 57.5**	**+1.0**	
MDVR	**Moldovita**	**144.95 318**	⇑P		**PKPdf**	**14 37 56.6**	**-0.1**	
VTS	**Vitosha**	**144.97 314**	⇑P		**PKPdf**	**14 37 57.3**	**+0.4**	
VRAC	**Vranov**	**145.15 328**	*e*PKP		**PKPdf**	**14 37 57.2**	**+0.4**	
PVCC	**Panska Ves**	**145.25 331**	*e*PKP		**PKPdf**	**14 37 57.3**	**+0.4**	
BRG	**Berggiesshubel**	**145.27 332**	*e*PKP		**PKPdf**	**14 37 57.0**	**+0.1**	
BRG			Amp			14 37 58.0		
	comp=Z,18nm,0.9s							
BRG			*ex*	x		14 38 07.7		
BRG			Amp			14 38 08.5		
	comp=Z,19nm,1.1s							
BRG			Amp			14 50 35.0		
	comp=E,0.8nm,19.5s							
BRG			Amp			14 50 36.0		
	comp=N,0.4nm,19.1s							
BRG			Amp			14 50 40.0		
	comp=Z,1.0nm,20.5s							
CLL	**Collm**	**145.35 334**	*i* PKPbc		**PKPab**	**14 37 56.9**	**-0.2**	
	comp=Z,15nm,0.8s							
CLL			*i* x	x		14 38 06.9		
CLL			*ex*	x		14 38 10.0		
KRUC	**Moravsky**	**145.41 328**	*e*PKP		**PKPab**	**14 37 57.6**	**+0.2**	
MODS	**Modra-Piesok**	**145.41 326**	*e*PKP		**PKPab**	**14 37 58.2**	**+0.7**	
BOVS	**Bovan**	**145.51 316**	⇑P		**PKPab**	**14 37 57.7**	**-0.2**	
ZST	**Bratislava**	**145.62 326**	*e*PKP		**PKPab**	**14 37 58.5**	**+0.3**	
PRU	**Pruhonice**	**145.65 331**	*e*PKP		**PKPab**	**14 37 58.6**	**+0.3**	
FRGS	**Fruska Gora**	**145.91 320**	⇓P		**PKPab**	**14 37 58.8**	**-0.6**	
MORH	**Mrgy, Hungar**	**145.99 322**	⇑P		**PKPab**	**14 37 59.8**	**+0.2**	
RONA	**Rosalia, Austr**	**146.35 326**	*e*P		**PKPab**	**14 38 00.4**	**-0.6**	
	comp=Z,7.7nm,1.1s							
CONA	**Conrad Observa**	**146.43 327**	*e*P		**PKPab**	**14 38 01.3**	**-0.1**	
	comp=Z,5.7nm,1.1s							
CKRC	**Cesky Krumlov**	**146.58 329**	*e*PKP		**PKPab**	**14 38 01.5**	**-0.4**	
KHC	**Kasperske Hory**	**146.70 330**	*e*PKP		**PKPab**	**14 38 01.4**	**-1.0**	
GERES	**GERESS Array B**	**146.85 330**	PKPbc		**PKPbc**	**14 38 01.9**	**+0.2**	
	comp=Z,4.1nm,0.9s,baz=27,slow=0.6,SNR=19							
MOA	**Molln**	**147.27 328**	*e*P		**PKPab**	**14 38 03.9**	**-0.7**	
	comp=Z,7.2nm,1.1s							
PDG	**Podgorica**	**147.66 316**	⇑P		**PKPbc**	**14 38 04.3**	**+0.3**	
SOKA	**Soboth**	**147.67 326**	*e*P		**PKPbc**	**14 38 04.0**	**0.0**	
	comp=Z,6.8nm,1.2s							
BIOA	**Bad Ischl, Aus**	**147.69 329**	*e*P		**PKPab**	**14 38 07.0**	**+0.8**	
	comp=Z,2.3nm,0.7s							
OBKA	**Obir**	**148.03 326**	*e*P		**PKPab**	**14 38 06.9**	**-0.9**	
	comp=Z,8.6nm,1.1s							
KBA	**Koelnbreinsper**	**148.26 328**	*e*P		**PKPbc**	**14 38 05.9**	**+0.2**	
	comp=Z,3.8nm,0.7s							
MYKA	**Terra Mystica**	**148.42 327**	*e*P		**PKPab**	**14 38 09.5**	**+0.2**	
	comp=Z,5.6nm,0.6s							
ABTA	**Abfaltersbach**	**148.90 328**	*e*P		**PKPbc**	**14 38 07.1**	**-0.1**	
	comp=Z,13nm,0.9s							
WATA	**Walderalm**	**148.92 330**	*e*P		**PKiKP**	**14 38 07.6**	**-1.1**	
	comp=Z,0.8nm,0.5s							
WTTA	**Wattenberg**	**148.95 330**	*e*P		**PKPbc**	**14 38 07.3**	**-0.1**	
	comp=Z,3.1nm,0.5s							
MOTA	**Moosalm**	**149.13 330**	*e*P		**PKPbc**	**14 38 07.7**	**-0.2**	
	comp=Z,6.0nm,0.7s							
SQTA	**Sankt Quirin**	**149.18 330**	*e*P		**PKPbc**	**14 38 08.1**	**+0.1**	
	comp=Z,2.2nm,0.4s							
RETA	**Reutte**	**149.18 331**	*e*P		**PKPbc**	**14 38 08.1**	**+0.2**	
	comp=Z,5.0nm,0.8s							
FETA	**Feichten**	**149.54 330**	*e*P		**PKPbc**	**14 38 08.2**	**-0.7**	
	comp=Z,8.0nm,1.1s							
DAVA	**Damuels**	**149.73 332**	*e*P		**PKiKP**	**14 38 10.1**	**-0.3**	
	comp=Z,3.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**165.24 236**	PKP		**PKPdf**	**14 38 24.4**	**-0.2**	
	comp=Z,0.8nm,1.1s,baz=119,slow=2.3,SNR=2.7							
TORD			PKPab		**PKPab**	**14 39 22.7**	**+0.7**	
	comp=Z,0.6nm,0.9s,baz=132,slow=2.9,SNR=1.9							

*ROM **24** 14:45:10.4±0.1, 42°.729N±0°.004×13°.197E±0°.009, h8km, ML3.2/10, Error ellipse: s-maj=0.6km s-min=0.3km az=245.0*
*PRU **24** 14:45:11.3±0.0, 42°.71N×13°.72E, h3km*
ISC 24 14:45:11.1±0.8, 42°.71N±0°.02×13°.18E±0°.02, h12km±6km, n51, σ1§38/71, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.13**	**337**	P	**Pg**	**14 45 13.8**	**-0.7**
NRCA				S	**Sg**	**14 45 15.8**	**-1.1**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,96200µm,0.1s						
NRCA				AML	AML		
LNSS	**Leonessa**	**0.15**	**224**	P	**Pb**	**14 45 15.0**	**-1.0**
LNSS				S	**Sg**	**14 45 18.5**	**+1.2**
RM33	**Pellescritta (**	**0.20**	**173**	P	**Pb**	**14 45 15.8**	**-1.0**
RM33				S	**Sg**	**14 45 19.8**	**+1.2**
RM33				AML	AML		
	comp=N,10420µm,0.9s						
RM33				AML	AML		
	comp=N,10415µm,0.9s						
RM33				AML	AML		
	comp=N,10055µm,0.9s						
RM33				AML	AML		
	comp=E,14000µm,1.4s						
RM33				AML	AML		
	comp=N,10045µm,0.9s						
RM33				AML	AML		
	comp=E,14250µm,1.4s						
CAMP	**Campotosto**	**0.24**	**136**	P	**Pg**	**14 45 16.2**	**0.0**
CAMP				S	**Sg**	**14 45 20.5**	**+0.8**
FEMA	**Monte Fema**	**0.27**	**339**	P	**Pg**	**14 45 16.2**	**-0.5**
TERO	**Teramo**	**0.32**	**106**	P	**Pg**	**14 45 17.3**	**-0.4**
TERO				S	**Sb**	**14 45 22.6**	**-1.4**
TERO				AML	AML		
	comp=N,8415µm,1.1s						
TERO				AML	AML		
	comp=E,9940µm,1.3s						
TERO				AML	AML		
	comp=N,9420µm,1.1s						
TERO				AML	AML		
	comp=E,9935µm,1.3s						
TERO				AML	AML		
	comp=E,10955µm,1.3s						
FDMO	**Fiordimonte**	**0.33**	**348**	P	**Pg**	**14 45 17.1**	**-0.7**
FDMO				S	**Sg**	**14 45 22.3**	**0.0**
FDMO				AML	AML		
	comp=N,5120µm,0.7s						
FDMO				AML	AML		
	comp=E,4790µm,0.9s						
FDMO				AML	AML		
	comp=N,4093µm,0.5s						
FDMO				AML	AML		
	comp=E,4792µm,0.9s						
ARRO	**Arrone**	**0.34**	**247**	P	**Pg**	**14 45 17.9**	**0.0**
ARRO				S	**Sb**	**14 45 24.3**	**0.0**
CESI	**CESI - Serrava**	**0.36**	**325**	P	**Pg**	**14 45 17.8**	**-0.5**
CESI				S	**Sg**	**14 45 23.4**	**+0.3**
GUMA	**Gualdo di Mace**	**0.37**	**18**	P	**Pg**	**14 45 18.1**	**-0.3**
CSP1	**Cessapalombo**	**0.38**	**2**	P	**Pg**	**14 45 18.0**	**-0.7**
CSP1				S	**Sg**	**14 45 23.8**	**-0.1**
CSP1				AML	AML		
	comp=N,19800µm,0.3s						
CSP1				AML	AML		
	comp=E,10000µm,0.3s						
CSP1				AML	AML		
	comp=E,9960µm,0.3s						
GIGS	**Gran Sasso**	**0.39**	**132**	P	**Pg**	**14 45 18.4**	**-0.4**
GIGS				S	**Sb**	**14 45 24.6**	**-1.3**
GIGS				AML	AML		
	comp=E,1565µm,0.1s						
GIGS				AML	AML		
	comp=N,1086µm,0.4s						
AQU	**L'Aquila**	**0.39**	**156**	P	**Pg**	**14 45 18.6**	**-0.3**
AQU				S	**Sb**	**14 45 26.0**	**0.0**
FIAM	**Fiamignano**	**0.45**	**186**	P	**Pb**	**14 45 20.0**	**-1.0**
FIAM				S	**Sb**	**14 45 27.4**	**-0.2**
CESX	**Cesi**	**0.46**	**257**	P	**Pg**	**14 45 19.8**	**-0.3**
SEF1	**Sefro**	**0.47**	**338**	P	**Pg**	**14 45 19.6**	**-0.7**
SEF1				S	**Sg**	**14 45 27.0**	**+0.5**
MNTP	**Montappone**	**0.47**	**26**	P	**Pg**	**14 45 20.4**	**0.0**
MNTP				S	**Sb**	**14 45 28.5**	**+0.2**
ASSB	**Assisi San Ben**	**0.51**	**311**	P	**Pg**	**14 45 20.4**	**-0.6**
ASSB				S	**Sb**	**14 45 29.1**	**-0.3**
FAGN	**Fagnano**	**0.54**	**146**	P	**Pg**	**14 45 21.2**	**-0.3**
TRTR	**Tortoreto Alta**	**0.55**	**80**	P	**Pb**	**14 45 22.4**	**-0.2**
TRTR				S	**Sn**	**14 45 32.2**	**-1.5**
SNTG	**Esanatoglia**	**0.57**	**342**	P	**Pg**	**14 45 21.4**	**-0.8**
SNTG				S	**Sg**	**14 45 30.3**	**+0.4**
TRE1	**Treia**	**0.61**	**9**	S	**Sb**	**14 45 33.0**	**+0.8**
ATCC	**AVT- Casa Cast**	**0.62**	**320**	P	**Pg**	**14 45 22.5**	**-0.7**
ATCC				S	**Sb**	**14 45 32.3**	**-0.2**
EL6	**Elcito**	**0.62**	**355**	P	**Pg**	**14 45 22.2**	**-1.0**
EL6				S	**Sb**	**14 45 32.3**	**-0.3**
T0110	**Collepietro**	**0.66**	**138**	P	**Pg**	**14 45 23.3**	**-0.6**
FOSV	**Fossato di Vic**	**0.66**	**332**	P	**Pg**	**14 45 23.0**	**-0.9**
FOSV				S	**Sb**	**14 45 33.4**	**-0.3**
SRES	**S.Oreste - Sor**	**0.69**	**227**	P	**Pg**	**14 45 24.0**	**-0.5**
MURB	**Monte Urbino**	**0.73**	**319**	P	**Pg**	**14 45 24.6**	**-0.7**
ATFO	**Monte Foce - G**	**0.79**	**326**	P	**Pg**	**14 45 25.5**	**-0.9**
ATFO				S	**Sb**	**14 45 38.5**	**+0.8**
MPAG	**Monte Paganucc**	**0.97**	**341**	S	**Sn**	**14 45 44.0**	**-0.3**
VAGA	**Valle Agricola**	**1.51**	**149**	S	Sn	14 45 43.0	-15
CSNT	**Castellina Chi**	**1.58**	**299**	AML	AML		
	comp=E,110µm,0.5s						
OBKA	**Obir**	**3.92**	**14**	*e*Pn	**Pb**	**14 46 20.0**	**-0.2**
	comp=E,5.3nm,0.5s						
MYKA	**Terra Mystica**	**3.93**	**5**	*e*Pn	**Pn**	**14 46 14.1**	**+2.8**
	comp=E,1.3nm,0.2s						
ABTA	**Abfaltersbach**	**4.06**	**353**	*e*Pn	**Pn**	**14 46 14.2**	**+1.0**
	comp=E,8.3nm,0.3s						
SOKA	**Soboth**	**4.18**	**18**	*e*Pn	**Pn**	**14 46 17.9**	**+3.2**
	comp=E,0.6nm,0.2s						
KBA	**Koelnbreinsper**	**4.37**	**1**	*e*Pn	**Pn**	**14 46 18.3**	**+0.9**
	comp=E,1.2nm,0.2s						
FETA	**Feichten**	**4.65**	**339**	*e*Pn	**Pn**	**14 46 23.8**	**+2.6**
	comp=E,0.9nm,0.3s						
WTTA	**Wattenberg**	**4.68**	**347**	*e*Pn	**Pn**	**14 46 18.2**	**-3.5**
	comp=E,2.3nm,0.3s						
SQTA	**Sankt Quirin**	**4.72**	**343**	*e*Pn	**Pn**	**14 46 24.9**	**+2.7**
	comp=E,5.1nm,0.2s						
WATA	**Walderalm**	**4.76**	**347**	*e*Pn	**Pn**	**14 46 25.5**	**+2.7**
	comp=E,1.8nm,0.2s						
ARSA	**Arzberg**	**4.83**	**19**	*e*Pn	**Pn**	**14 46 27.5**	**+3.8**
	comp=E,0.9nm,0.2s						
MOTA	**Moosalm**	**4.86**	**343**	*e*Pn	**Pn**	**14 46 25.3**	**+1.2**
	comp=E,1.4nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.99**	**4**	*e*Pn	**Pn**	**14 46 24.8**	**-1.0**
	comp=E,2.9nm,0.3s						
DAVA	**Damuels**	**5.14**	**334**	*e*Pn	**Pn**	**14 46 30.7**	**+2.7**
	comp=E,1.6nm,0.2s						
MOA	**Molln**	**5.19**	**8**	*e*Pn	**Pn**	**14 46 31.0**	**+2.3**
	comp=E,1.1nm,0.3s						
RONA	**Rosalia, Austr**	**5.45**	**23**	*e*Pn	**Pn**	**14 46 33.1**	**+0.9**
	comp=E,0.8nm,0.2s						
CONA	**Conrad Observa**	**5.55**	**19**	*e*Pn	**Pn**	**14 46 33.6**	**+0.1**
	comp=E,1.5nm,0.3s						
CKRC	**Cesky Krumlov**	**6.16**	**7**	*e*SN	**Sn**	**14 47 49.5**	**-2.7**
KHC	**Kasperske Hory**	**6.43**	**2**	*e*PN	**Pn**	**14 46 46.0**	**+0.5**
KHC				*e*SN	**Sn**	**14 47 57.5**	**-1.3**
CLL	**Collm**	**8.60**	**359**	*e*Sg	**Sg**	**14 49 50.0**	**+3.1**

*IDC **24** 14:59:06.1±1.8, 25°.26S×179°.89E, h486km±18km, mb3.5/9, mbtmp4.3/12, Error ellipse: s-maj=19.3km s-min=17.4km az=134.0*
*NOU **24** 14:59:06.3, 25°.17S×179°.57W, h543km, mb4.3/27, South of Fiji Islands*
ISC 24 14:59:07.4±0.7, 25°.14S±0°.07×179°.8E±0°.1, h500km, n55, σ1§43/65, mb4.0/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.57**	**155**	P	**P**	**15 00 32.8**	**+2.3**
GLKZ				S	**S**	**15 01 36.9**	**-1.4**
MSVF	**Nonsavu**	**7.55**	**347**	P	**P**	**15 00 58.6**	**-0.8**
	1.9nm,0.5s,baz=108,slow=20,SNR=1.6						
OUZ	**Omahuta**	**11.40**	**207**	P	**P**	**15 01 42.0**	**+2.5**
OUZ	**Omahuta**	**11.40**	**207**	P	**P**	**15 01 41.8**	**+2.4**
WCZ	**Waipu Caves**	**11.76**	**202**	P	**P**	**15 01 45.9**	**+2.7**
HAZ	**Te Kaha**	**12.70**	**187**	P	**P**	**15 01 53.9**	**+0.7**
HAZ				S	**S**	**15 04 12.0**	**+2.1**
TOZ	**Tahuroa Road**	**13.09**	**195**	P	**P**	**15 01 58.0**	**+0.8**
TWGZ	**Tauwhareparae**	**13.10**	**186**	P	**P**	**15 01 58.7**	**+1.3**
TWGZ				S	**S**	**15 04 21.1**	**+3.4**
URZ	**Urewera**	**13.29**	**189**	P	**P**	**15 01 55.8**	**-3.6**
	10.0nm,0.6s,baz=343,slow=1.6,SNR=11						
URZ				S	**S**	**15 04 17.4**	**-3.8**
	9.3nm,0.8s,baz=3.9,slow=21,SNR=2.2						
URZ	**Urewera**	**13.29**	**189**	P	**P**	**15 01 58.3**	**-1.0**
URZ				S	**S**	**15 04 18.8**	**-2.3**
URZ	**Urewera**	**13.29**	**189**	P	**P**	**15 01 57.2**	**-2.2**
MWZ	**Matawai**	**13.30**	**188**	P	**P**	**15 01 58.5**	**-1.1**
MWZ				S	**S**	**15 04 21.5**	**-0.1**
NMHZ	**Naumai**	**14.15**	**190**	P	**P**	**15 02 08.2**	**-0.4**
NMHZ				S	**S**	**15 04 36.1**	**-1.9**
BKZ	**Black Stump Fm**	**14.27**	**191**	P	**P**	**15 02 09.5**	**-0.3**
TMVZ	**Te Maari**	**14.37**	**193**	P	**P**	**15 02 10.5**	**-0.4**
OTVZ	**Oturere**	**14.42**	**193**	P	**P**	**15 02 11.2**	**-0.3**
KWHZ	**Kaweka Forest**	**14.54**	**191**	P	**P**	**15 02 11.7**	**-0.9**
KWHZ				S	**S**	**15 04 45.7**	**+0.4**
WNVZ	**Wahianoa**	**14.59**	**193**	P	**P**	**15 02 12.4**	**-0.9**
BHHZ	**Black Hill Sta**	**14.66**	**192**	P	**P**	**15 02 11.8**	**-2.1**
BHHZ				S	**S**	**15 04 47.8**	**0.0**
BFZ	**Birch Farm**	**15.79**	**190**	P	**P**	**15 02 23.7**	**-1.9**
SNZO	**South Karori**	**16.69**	**194**	P	**P**	**15 02 32.6**	**-2.3**
QRZ	**Quartz Range**	**16.79**	**200**	P	**P**	**15 02 34.7**	**-1.4**
KHZ	**Kahutara**	**18.00**	**195**	P	**P**	**15 02 45.6**	**-1.9**
RPZ	**Rata Peaks**	**19.88**	**199**	P	**P**	**15 03 02.9**	**-1.8**
	9.5nm,0.5s,baz=35,slow=3.4,SNR=9.0						
RPZ	**Rata Peaks**	**19.88**	**199**	P	**P**	**15 03 03.5**	**-1.2**
CTA	**Charters Tower**	**31.35**	**272**	P	**P**	**15 04 47.3**	**+0.8**
	6.2nm,0.4s,baz=94,slow=10,SNR=36						
	6.2nm,0.4s						
CTA	**Charters Tower**	**31.35**	**272**	P	**P**	**15 04 47.4**	**+0.8**
CTAO	**Charters Tower**	**31.35**	**272**	P	**P**	**15 04 47.4**	**+0.8**
MTSU	**Mount Surprise**	**33.67**	**275**	P	**P**	**15 05 07.2**	**+0.9**
STKA	**Stephens Creek**	**34.14**	**250**	P	**P**	**15 05 10.1**	**0.0**
	2.4nm,0.5s,baz=94,slow=12,SNR=10.0						
	2.4nm,0.5s						
STKA	**Stephens Creek**	**34.14**	**250**	P	**P**	**15 05 10.5**	**+0.4**
HTT	**Hallett**	**36.44**	**247**	P	**P**	**15 05 29.2**	**-0.2**
LCRK	**Leigh Creek**	**37.05**	**252**	P	**P**	**15 05 34.2**	**-0.1**
PTPS	**Port Pirie**	**37.21**	**248**	P	**P**	**15 05 35.6**	**0.0**
QIS	**Mount Isa**	**37.26**	**269**	P	**P**	**15 05 36.1**	**-0.1**
OOD	**Oodnadatta**	**39.45**	**256**	P	**P**	**15 05 54.4**	**+0.4**
MULG	**Mulgathing**	**40.64**	**252**	P	**P**	**15 06 02.7**	**-0.8**
ASAR	**Alice Springs**	**41.70**	**262**	P	**P**	**15 06 11.8**	**-0.3**
	2.1nm,0.4s,baz=95,slow=7.1,SNR=148						
ASAR				ScP	**ScP**	**15 10 59.2**	**-0.4**
	0.5nm,0.9s,baz=101,slow=4.8,SNR=3.4						
	2.1nm,0.4s						
WRAB	**Tennant Creek**	**42.18**	**268**	P	**P**	**15 06 15.3**	**-0.6**
WRA	**Warramunga Arr**	**42.19**	**268**	P	**P**	**15 06 15.3**	**-0.7**
	5.6nm,0.5s,baz=104,slow=7.6,SNR=78						
WRA				ScP	**ScP**	**15 11 03.0**	**+1.4**
	0.5nm,0.9s,baz=92,slow=3.6,SNR=3.0						
	5.6nm,0.5s						
FORT	**Forrest**	**45.75**	**251**	P	**P**	**15 06 42.4**	**-1.0**
KDU	**Kakadu**	**46.26**	**276**	P	**P**	**15 06 46.9**	**-0.6**
WRKA	**Warakurna**	**46.43**	**259**	P	**P**	**15 06 48.1**	**-0.7**
KNRA	**Kununurra**	**48.54**	**271**	P	**P**	**15 07 04.7**	**0.0**
FITZ	**Fitzroy Crossi**	**50.59**	**267**	P	**P**	**15 07 19.5**	**-0.3**
	5.2nm,0.7s,baz=94,slow=5.9,SNR=22						
	5.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**50.59**	**267**	P	**P**	**15 07 20.0**	**+0.2**
KLBR	**Kellerberrin**	**54.38**	**248**	P	**P**	**15 07 45.9**	**-1.0**
BLDU	**Ballidu**	**55.44**	**249**	P	**P**	**15 07 53.1**	**-1.2**
PLAI	**Plampang**	**61.04**	**274**	P	**P**	**15 08 32.1**	**-0.4**
MAW	**Mawson**	**76.55**	**201**	P	**P**	**15 10 05.4**	**+0.2**
	1.2nm,0.5s,baz=138,slow=5.6,SNR=4.6						
	1.2nm,0.5s						
NVAR	**Mina Array Bea**	**85.74**	**44**	P	**P**	**15 10 54.1**	**+0.7**
	0.7nm,0.8s,baz=219,slow=8.5,SNR=4.7						
	0.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.81**	**290**	P	**P**	**15 11 12.7**	**0.0**
	0.3nm,0.3s,baz=138,slow=5.6,SNR=1.7						
	0.3nm,0.3s						
TXAR	**Lajitas Array**	**91.21**	**58**	P	**P**	**15 11 19.4**	**+0.4**
	0.6nm,0.8s,baz=214,slow=6.0,SNR=7.6						
	0.6nm,0.8s						
NOA	**NORSAR Array B**	**143.27**	**351**	PKP	PKPab	15 17 41.2	-0.4
	0.6nm,0.6s,baz=21,slow=3.9,SNR=3.7						
AKASG	**Malin Array Be**	**145.92**	**326**	PKPbc	**PKPbc**	**15 17 50.1**	**-0.2**
	0.3nm,0.2s,baz=40,slow=1.6,SNR=2.5						

ROM 24 15:08:23.2±0.1, 42°.689N±0°.004×13°.217E±0°.009, h11km, ML2.3/20, 4C-4D, Error ellipse: s-maj=0.6km s-min=0.5km az=239.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.16**	**237**	P	**Pg**	**15 08 27.3**	**+0.5**
LNSS				S	**Sg**	**15 08 30.3**	**+1.0**
LNSS				AML	AML		
	comp=E,4615µm,0.3s						
LNSS				AML	AML		
	comp=N,5675µm,0.3s						
LNSS				AML	AML		
	comp=E,7940µm,0.2s						
LNSS				AML	AML		
	comp=E,4615µm,0.3s						
RM33	**Pellescritta (**	**0.18**	**181**	P	**Pg**	**15 08 27.6**	**+0.5**
RM33				S	**Sg**	**15 08 31.1**	**+1.2**
RM33				AML	AML		
	comp=E,2285µm,0.7s						
RM33				AML	AML		
	comp=N,1695µm,0.2s						
RM33				AML	AML		
	comp=N,1760µm,0.2s						
RM33				AML	AML		
	comp=E,2280µm,0.7s						
RM33				AML	AML		
	comp=E,2270µm,0.7s						
RM33				AML	AML		
	comp=N,1765µm,0.2s						
RM33				AML	AML		
	comp=N,1695µm,0.2s						
RM33				AML	AML		
	comp=E,2265µm,0.7s						
TERO	**Teramo**	**0.29**	**103**	P	**Pg**	**15 08 29.0**	**-0.1**
TERO				S	**Sg**	**15 08 33.4**	**+0.3**
TERO				AML	AML		
	comp=E,1330µm,0.7s						
TERO				AML	AML		
	comp=N,1004µm,0.4s						
TERO				AML	AML		
	comp=N,1007µm,0.4s						
TERO				AML	AML		
	comp=N,1110µm,0.1s						
TERO				AML	AML		
	comp=E,1510µm,0.7s						
TERO				AML	AML		
	comp=E,1330µm,0.0s						
TERO				AML	AML		
	comp=N,1000µm,0.1s						
ARRO	**Arrone**	**0.35**	**252**	P	**Pg**	**15 08 30.4**	**+0.3**
ARRO				AML	AML		
	comp=E,586µm,0.2s						
ARRO				AML	AML		
	comp=N,738µm,0.2s						
GIGS	**Gran Sasso**	**0.35**	**132**	P	**Pg**	**15 08 30.0**	**-0.2**
GIGS				S	**Sg**	**15 08 35.5**	**+0.5**
GIGS				AML	AML		
	comp=E,336µm,1.6s						
GIGS				AML	AML		
	comp=N,161µm,0.9s						
FDMO	**Fiordimonte**	**0.36**	**345**	P	**Pg**	**15 08 30.5**	**+0.1**
FDMO				S	**Sg**	**15 08 36.1**	**+0.9**
FDMO				AML	AML		
	comp=E,592µm,0.3s						
FDMO				AML	AML		
	comp=N,622µm,0.2s						
FDMO				AML	AML		
	comp=E,283µm,0.1s						
FDMO				AML	AML		
	comp=N,570µm,0.2s						
AQU	**L'Aquila**	**0.36**	**158**	P	**Pg**	**15 08 31.0**	**+0.6**
AQU				S	**Sb**	**15 08 36.4**	**-0.9**
AQU				AML	AML		
	comp=N,350µm,0.3s						
AQU				AML	AML		
	comp=N,332µm,1.5s						
AQU				AML	AML		
	comp=E,366µm,0.4s						
AQU				AML	AML		
	comp=E,364µm,0.4s						
GUMA	**Gualdo di Mace**	**0.38**	**13**	P	**Pg**	**15 08 31.1**	**+0.3**
GUMA				S	**Sb**	**15 08 37.4**	**-0.6**
GUMA				AML	AML		
	comp=N,2240µm,0.4s						
GUMA				AML	AML		
	comp=E,2655µm,0.3s						
GUMA				AML	AML		
	comp=E,1980µm,0.3s						
GUMA				AML	AML		
	comp=N,2410µm,0.5s						
CESI	**CESI - Serrava**	**0.39**	**324**	P	**Pg**	**15 08 31.0**	**0.0**
CESI				S	**Sg**	**15 08 37.2**	**+1.0**
CESI				AML	AML		
	comp=E,525µm,1.3s						
CESI				AML	AML		
	comp=N,897µm,1.6s						
CESI				AML	AML		
	comp=E,1100µm,0.3s						
CESI				AML	AML		
	comp=N,2100µm,0.5s						
CESI				AML	AML		
	comp=E,1105µm,0.3s						
CESI				AML	AML		
	comp=N,829µm,0.4s						
CESI				AML	AML		
	comp=E,525µm,1.3s						
CSP1	**Cessapalombo**	**0.40**	**359**	P	**Pg**	**15 08 31.4**	**+0.3**
CSP1				S	**Sb**	**15 08 37.6**	**-1.0**
CSP1				AML	AML		
	comp=N,884µm,0.3s						
CSP1				AML	AML		
	comp=E,535µm,0.3s						
OFFI	**Offida**	**0.42**	**54**	P	**Pb**	**15 08 32.3**	**-0.4**
OFFI				AML	AML		
	comp=N,1250µm,0.5s						
OFFI				AML	AML		
	comp=E,716µm,0.6s						
FIAM	**Fiamignano**	**0.43**	**190**	P	**Pg**	**15 08 31.9**	**+0.3**
FIAM				S	**Sb**	**15 08 38.4**	**-0.8**
CESX	**Cesi**	**0.48**	**261**	P	**Pg**	**15 08 32.4**	**-0.1**
CESX				AML	AML		
	comp=N,426µm,0.3s						
CESX				AML	AML		
	comp=E,274µm,0.2s						
FAGN	**Fagnano**	**0.50**	**147**	P	**Pb**

CING				AML	AML			
	comp=N,126μm,0.9s							
SRES	**S.Oreste - Sor**	**0.69**	**229**	P	Pg	15 08 36.8	+0.2	
SRES				AML	AML			
	comp=N,101μm,0.7s							
SRES				AML	AML			
	comp=E,125μm,1.0s							
FOSV	**Fossato di Vic**	**0.69**	**331**	⇓P	Pg	15 08 36.7	+0.1	
FOSV				AML	AML			
	comp=N,249μm,0.2s							
FOSV				AML	AML			
	comp=E,156μm,0.3s							
FOSV				AML	AML			
	comp=N,248μm,0.2s							
FOSV				AML	AML			
	comp=E,156μm,0.3s							
FOSV				AML	AML			
	comp=N,167μm,0.2s							
CERT	**Cerreto**	**0.76**	**193**	P	Pg	15 08 37.5	-0.3	
CERT				AML	AML			
	comp=N,145μm,1.3s							
CERT				AML	AML			
	comp=E,208μm,0.4s							
ARVD	**Arcevia**	**0.83**	**346**	S	Sn	15 08 53.0	-0.2	
INTR	**Introdacqua**	**0.85**	**143**	⇑P	Pg	15 08 38.8	-0.7	
INTR				AML	AML			
	comp=E,98μm,1.6s							
INTR				AML	AML			
	comp=N,152μm,1.6s							
INTR				AML	AML			
	comp=N,149nm,1.0s							
INTR				AML	AML			
	comp=E,104nm,1.5s							
INTR				AML	AML			
	comp=E,98μm,1.6s							
LPEL	**Lama dei Pelig**	**0.96**	**132**	⇓P	Pg	15 08 40.8	-0.9	
LPEL				AML	AML			
	comp=N,97μm,1.5s							
LPEL				AML	AML			
	comp=N,97μm,1.5s							
LPEL				AML	AML			
	comp=E,128μm,1.4s							
MPAG	**Monte Paganucc**	**1.00**	**341**	S	Sn	15 08 58.0	+0.7	
FSSB	**Fossombrone**	**1.05**	**342**	⇑P	Pn	15 08 44.3	+0.4	
FSSB				S	Sn	15 08 59.0	+0.4	
FSSB				AML	AML			
	comp=E,264μm,1.4s							
FSSB				AML	AML			
	comp=N,202μm,0.4s							
FSSB				AML	AML			
	comp=E,264μm,1.4s							
FSSB				AML	AML			
	comp=N,262μm,1.3s							
VBKN	**Vesuvio Bunker**	**2.07**	**154**	S	Sg	15 09 31.0	+1.4	
CDRU	**Civita di Ruta**	**2.70**	**144**	P	Pn	15 09 06.1	-0.5	

ROM 24 15:09:06.6±0.1, 42°.807N±0°.003×13°.194E±0°.006, h8km, ML2.2/12, 1C-2D, Error ellipse: s-maj=0.5km s-min=0.2km az=254.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.19**	**326**	P	Pg	15 09 11.3	+0.8
FEMA				S	Sg	15 09 14.4	+1.1
FEMA				AML	AML		
	comp=N,2610μm,0.1s						
FEMA				AML	AML		
	comp=E,2910μm,0.5s						
LNSS	**Leonessa**	**0.23**	**209**	P	Pg	15 09 12.3	+1.0
LNSS				S	Sg	15 09 16.5	+1.9
LNSS				AML	AML		
	comp=N,3395μm,0.4s						
LNSS				AML	AML		
	comp=N,3400μm,0.4s						
LNSS				AML	AML		
	comp=E,7940μm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**341**	P	Pg	15 09 12.1	+0.6
FDMO				S	Sg	15 09 16.0	+1.1
FDMO				AML	AML		
	comp=N,622μm,0.2s						
FDMO				AML	AML		
	comp=E,592μm,0.3s						
GUMA	**Gualdo di Mace**	**0.28**	**22**	P	Pb	15 09 13.2	-0.6
GUMA				S	Sb	15 09 18.1	-0.6
GUMA				AML	AML		
	comp=N,1385μm,0.5s						
GUMA				AML	AML		
	comp=N,1643μm,0.5s						
GUMA				AML	AML		
	comp=E,1485μm,0.6s						
CSP1	**Cessapalombo**	**0.28**	**2**	P	Pg	15 09 12.8	+0.5
CSP1				S	Sg	15 09 17.6	+1.4
CSP1				AML	AML		
	comp=E,731μm,0.4s						
CSP1				AML	AML		
	comp=N,674μm,0.3s						
CESI	**CESI - Serrava**	**0.29**	**313**	P	Pg	15 09 13.1	+0.7
CESI				S	Sg	15 09 17.7	+1.3
CESI				AML	AML		
	comp=E,1100μm,0.3s						
CESI				AML	AML		
	comp=N,2100μm,0.5s						
CESI				AML	AML		
	comp=E,1105μm,0.3s						
RM33	**Pellescritta (**	**0.30**	**177**	⇓P	Pb	15 09 13.6	-0.7
RM33				S	Sb	15 09 18.4	-0.9
RM33				AML	AML		
	comp=E,444μm,0.3s						
RM33				AML	AML		
	comp=N,390μm,1.3s						
RM33				AML	AML		
	comp=N,480μm,0.8s						
RM33				AML	AML		
	comp=E,443μm,0.3s						
RM33				AML	AML		
	comp=N,390μm,1.3s						
RM33				AML	AML		
	comp=E,439μm,1.5s						
CAMP	**Campotosto**	**0.31**	**150**	P	Pg	15 09 13.5	+0.7
CAMP				S	Sb	15 09 18.6	-1.3
CAMP				AML	AML		
	comp=E,782μm,0.2s						
CAMP				AML	AML		
	comp=N,480μm,0.1s						
TERO	**Teramo**	**0.35**	**121**	P	Pg	15 09 14.2	+0.6
TERO				S	Sb	15 09 19.8	-1.1
TERO				AML	AML		
	comp=E,870μm,0.8s						
TERO				AML	AML		
	comp=N,834μm,0.2s						
OFFI	**Offida**	**0.38**	**70**	P	Pb	15 09 15.8	+0.2
GIGS	**Gran Sasso**	**0.45**	**142**	P	Pg	15 09 15.7	+0.3
GIGS				S	Sb	15 09 22.7	-1.0
GIGS				AML	AML		
	comp=N,89μm,1.0s						
GIGS				AML	AML		
	comp=N,89μm,1.0s						
GIGS				AML	AML		
	comp=E,95μm,0.6s						
ASSB	**Assisi San Ben**	**0.46**	**301**	P	Pg	15 09 16.2	+0.6
ASSB				S	Sb	15 09 23.0	-0.9
ASSB				AML	AML		
	comp=N,566μm,0.2s						
ASSB				AML	AML		
	comp=E,439μm,0.5s						
SNTG	**Esanatoglia**	**0.48**	**338**	P	Pg	15 09 16.5	+0.5
SNTG				S	Sb	15 09 24.0	-0.7
SNTG				AML	AML		
	comp=E,140μm,1.0s						
SNTG				AML	AML		
	comp=N,154μm,0.2s						
CESX	**Cesi**	**0.49**	**247**	⇓P	Pg	15 09 16.8	+0.6
CESX				S	Sb	15 09 24.2	-0.7
CESX				AML	AML		
	comp=E,177μm,0.4s						
CESX				AML	AML		
	comp=N,121μm,0.4s						
EL6	**Elcito**	**0.53**	**353**	P	Pg	15 09 17.3	+0.5
EL6				S	Sb	15 09 26.0	+0.1
FIAM	**Fiamignano**	**0.54**	**186**	P	Pg	15 09 17.7	+0.6
FIAM				S	Sb	15 09 25.8	-0.5
FIAM				AML	AML		
	comp=E,152μm,0.6s						
FIAM				AML	AML		
	comp=N,102μm,3.4s						

ATCC	**AVT- Casa Cast**	**0.56**	**313**	P	Pg	15 09 17.9	+0.5	
ATCC				S	Sb	15 09 26.5	-0.2	
ATCC				AML	AML			
	comp=E,268μm,0.9s							
ATCC				AML	AML			
	comp=N,277μm,1.9s							
FOSV	**Fossato di Vic**	**0.58**	**327**	P	Pg	15 09 18.3	+0.4	
FOSV				S	Sb	15 09 27.1	-0.4	
FOSV				AML	AML			
	comp=E,156μm,0.3s							
FOSV				AML	AML			
	comp=N,249μm,0.2s							
FOSV				AML	AML			
	comp=E,156μm,0.3s							
FOSV				AML	AML			
	comp=N,248μm,0.2s							
VCEL	**Villa Celiera**	**0.63**	**131**	P	Pb	15 09 19.5	-0.5	
ARVD	**Arcevia**	**0.71**	**345**	S	Sn	15 09 33.0	-1.2	
ATFO	**Monte Foce - G**	**0.72**	**321**	P	Pg	15 09 20.8	+0.2	
ATFO				AML	AML			
	comp=E,86μm,1.8s							
ATFO				AML	AML			
	comp=N,75μm,0.4s							
T0110	**Collepietro**	**0.72**	**143**	⇑P	Pg	15 09 20.9	+0.3	
VIVA	**Pratoni del Vi**	**1.10**	**197**	S	Sg	15 09 41.0	-1.1	

*ECX **24** 15:25:23.7±0.3, 25°.86N×110°.23W, h13km±20km, MD3.7, ML3.0*
*IDC **24** 15:25:24.6±1.7, 25°.56N×109°.71W, h0km, mb3.1/1, mbtmp3.2/5, ML3.7/4, Error ellipse: s-maj=30.9km s-min=21.0km az=111.0*
*MEX **24** 15:25:26.6±1.3, 25°.86N×110°.21W, h16km, MD3.9*
ISC 24 15:25:23.1±0.9, 25°.70N±0°.05×110°.14W±0°.05, h10km, n24, σ1s 84/23, 3C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**1.00**	**96**	*e*P	**Pb**	**15 25 42.6**	**+0.2**
TSIG				*i* S	**Sn**	**15 25 57.4**	**+0.1**
TSIG	**Topolobambo**	**1.00**	**96**	⇑*i*P	**Pb**	**15 25 42.7**	**+0.2**
TSIG				*e*S	**Sn**	**15 25 57.5**	**+0.2**
LPIG	**La Paz**	**1.60**	**185**	Pn	**Pb**	**15 25 53.0**	**+0.3**
	2.5nm,0.3s,baz=333,slow=2.3,SNR=5.7						
LPIG				Sn	**Sn**	**15 26 11.8**	**-0.3**
	30nm,0.3s,baz=117,slow=3.4,SNR=10						
LPIG	**La Paz**	**1.60**	**185**	⇓*i*P	**Pg**	**15 25 53.2**	**-0.6**
CSIG	**Choix**	**1.95**	**54**	*e*P	**Pn**	**15 25 56.3**	**+0.1**
SLBS	**Sierra La Lagu**	**2.01**	**175**	*e*P	**Pb**	**15 25 60.0**	**+0.1**
SLBS	**Sierra La Lagu**	**2.01**	**175**	*e*P	**Pb**	**15 25 59.8**	**-0.1**
GUYB	**Guaymas**	**2.28**	**344**	*e*P	**Pn**	**15 25 58.5**	**-2.3**
GUYB	**Guaymas**	**2.28**	**344**	⇑*e*P	**Pn**	**15 25 58.6**	**-2.2**
GUYB				IAML		15 26 50.6	
	comp=N,124nm,0.5s						
GUYB				IAML		15 27 00.5	
	comp=E,111nm,1.4s						
GUYB				⇓*e*		15 27 00.5	
NE79	**San Jose del V**	**2.59**	**172**	*e*P	**Pb**	**15 26 08.6**	**-1.1**
SSIG	**Sanalona**	**2.86**	**107**	*e*P	**Pb**	**15 26 14.0**	**-0.2**
HSIG		**3.38**	**348**	*e*P	**Pn**	**15 26 19.1**	**+3.1**
HSIG		**3.38**	**348**	*e*P	**Pn**	**15 26 13.7**	**-2.3**
HPIG		**4.20**	**72**	*e*P	**Pn**	**15 26 27.2**	**-0.2**
PDIG	**Papasquiaro**	**4.34**	**98**	*e*P	**Pb**	**15 26 38.4**	**-1.2**
TXAR	**Lajitas Array**	**6.79**	**56**	Pn	**Pn**	**15 27 02.4**	**-0.6**
	comp=E,0.3nm,0.3s,baz=228,slow=14,SNR=30						
TXAR				Sn	**Sn**	**15 28 17.3**	**-3.1**
	comp=E,0.3nm,0.3s,baz=233,slow=25,SNR=1.5 comp=E,0.5nm,0.2s						
ANMO	**Albuquerque**	**9.75**	**18**	Lg	Lg	15 30 23.1	
	comp=E,0.1nm,0.3s,baz=149,slow=9.1,SNR=2.0						
NVAR	**Mina Array Bea**	**14.45**	**333**	Pn	**P**	**15 28 55.4**	**+0.6**
	comp=E,0.1nm,0.3s,baz=158,slow=11,SNR=1.5 comp=E,0.2nm,0.3s						
ELK	**Elko**	**15.59**	**345**	Pn	**P**	**15 29 11.5**	**+4.0**
	comp=E,0.1nm,0.3s,baz=160,slow=13,SNR=3.2 comp=E,0.3nm,0.3s						
PDAR	**Pinedale Array**	**17.03**	**1**	P	**P**	**15 29 26.9**	**+3.5**
	comp=E,0.1nm,0.3s,baz=174,slow=9.5,SNR=2.0 comp=E,0.2nm,0.4s						
ILAR	**Eielson Array**	**45.61**	**339**	P	P	15 33 50.0	+6.8
	comp=E,0.2nm,0.7s,baz=116,slow=6.1,SNR=1.4 comp=E,0.2nm,0.7s						
H03N2	**Juan Fernandez**	**65.88**	**152**	T	T	16 47 58.9	
	baz=331,slow=77,SNR=4.7						
H03N1	**Juan Fernandez**	**65.89**	**152**	T	T	16 47 58.0	
	baz=331,slow=77,SNR=5.3						
H03N3	**Juan Fernandez**	**65.90**	**152**	T	T	16 48 00.1	
	baz=331,slow=77,SNR=5.9						

ROM 24 15:38:33.8±0.1, 42°.662N±0°.008×13°.313E±0°.005, h6km, Md1.4/6, 7C-2D, Error ellipse: s-maj=0.8km s-min=0.5km az=187.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.14**	**151**	⇓P	Pg	15 38 37.5	+0.6
CAMP				S	Sg	15 38 39.9	+1.0
CAMP				AML	AML		
	comp=E,2450μm,0.8s						
CAMP				AML	AML		
	comp=N,2675μm,0.8s						
CAMP				AML	AML		
	comp=E,362μm,0.2s						
CAMP				AML	AML		
	comp=N,379μm,0.3s						
CAMP				END			
RM33	**Pellescritta (**	**0.17**	**205**	⇓P	Pg	15 38 37.9	+0.6
RM33				S	Sg	15 38 40.6	+1.1
RM33				AML	AML		
	comp=E,688μm,0.6s						
RM33				AML	AML		
	comp=N,524μm,0.4s						
RM33				AML	AML		
	comp=E,610μm,0.6s						
RM33				AML	AML		
	comp=N,542μm,0.4s						
RM33				AML	AML		
	comp=E,5440μm,0.8s						
RM33				AML	AML		
	comp=N,3595μm,0.4s						
RM33				AML	AML		
	comp=E,5415μm,0.8s						
RM33				AML	AML		
	comp=N,3585μm,0.3s						
RM33				AML	AML		
	comp=E,509μm,0.6s						
RM33				AML	AML		
	comp=N,513μm,0.3s						
RM33				AML	AML		
	comp=N,515μm,0.3s						
RM33				AML	AML		
	comp=E,458μm,0.2s						
RM33				END			
LNSS	**Leonessa**	**0.21**	**254**	⇑P	Pg	15 38 38.5	+0.5
LNSS				S	Sg	15 38 42.4	+1.6
LNSS				AML	AML		
	comp=E,502μm,0.3s						
LNSS				AML	AML		
	comp=N,690μm,0.4s						
LNSS				AML	AML		
	comp=E,11700μm,0.5s						
LNSS				AML	AML		
	comp=N,8270μm,1.4s						
LNSS				END			
TERO	**Teramo**	**0.22**	**100**	P	Pg	15 38 38.9	+0.7
TERO				S	Sg	15 38 42.5	+1.5
TERO				AML	AML		
	comp=E,916μm,0.1s						
TERO				AML	AML		
	comp=N,598μm,0.3s						
TERO				AML	AML		
	comp=E,4170μm,0.2s						
TERO				AML	AML		
	comp=N,5445μm,0.2s						
TERO				AML	AML		
	comp=E,4550μm,0.2s						
TERO				AML	AML		
	comp=N,5770μm,0.2s						
TERO				AML	AML		
	comp=N,598μm,0.3s						
TERO				AML	AML		
	comp=E,916μm,0.1s						
TERO				AML	AML		
	comp=E,818μm,0.1s						
TERO				AML	AML		
	comp=N,538μm,0.3s						
TERO				END			
NRCA	**Norcia**	**0.23**	**320**	S	Sg	15 38 43.0	+1.7
GIGS	**Gran Sasso**	**0.28**	**138**	P	Pg	15 38 39.8	+0.4
GIGS				S	Sg	15 38 44.6	+1.5
GIGS				AML	AML		
	comp=E,38μm,0.4s						
GIGS				AML	AML		
	comp=N,43μm,0.9s						
GIGS				AML	AML		
	comp=E,659μm,0.9s						
GIGS				AML	AML		
	comp=N,501μm,0.9s						
GIGS				AML	AML		
	comp=N,43μm,0.9s						
GIGS				END			
FDMO	**Fiordimonte**	**0.41**	**336**	⇑P	Pg	15 38 42.6	+0.8
FDMO				AML	AML		
	comp=E,3495μm,0.2s						
FDMO				AML	AML		
	comp=N,4745μm,0.8s						
ARRO	**Arrone**	**0.41**	**259**	⇑P	Pg	15 38 42.2	+0.4
CSP1	**Cessapalombo**	**0.44**	**350**	⇑P	Pb	15 38 43.2	-0.8
CSP1				AML	AML		
	comp=E,6925μm,1.2s						
CSP1				AML	AML		
	comp=N,10515μm,0.2s						
CESI	**CESI - Serrava**	**0.46**	**319**	⇑P	Pg	15 38 43.3	+0.7
CESI				AML	AML		
	comp=E,84μm,0.4s						
CESI				AML	AML		
	comp=N,172μm,0.4s						
CESI				AML	AML		
	comp=E,4865μm,1.1s						
CESI				AML	AML		
	comp=N,6395μm,0.4s						
VCEL	**Villa Celiera**	**0.47**	**124**	⇑P	Pb	15 38 43.9	-0.7
VCEL				S	Sb	15 38 51.9	0.0
VCEL				AML	AML		
	comp=E,226μm,1.6s						
VCEL				AML	AML		
	comp=N,188μm,1.6s						
VCEL				AML	AML		
	comp=E,1635μm,0.5s						
VCEL				AML	AML		
	comp=N,1495μm,0.8s						
VCEL				AML	AML		
	comp=N,221μm,1.9s						
VCEL				END			
T0110	**Collepietro**	**0.56**	**141**	⇑P	Pg	15 38 44.8	+0.3
T0110				AML	AML		
	comp=E,1500μm,0.5s						
T0110				AML	AML		
	comp=N,1560μm,0.4s						

*ROM **24** 15:39:27.8±0.1, 42°.797N±0°.004×13°.241E±0°.006, h9km, ML3.1/31, Error ellipse: s-maj=0.5km s-min=0.2km az=57.0*
*PRU **24** 15:39:29.9±0.0, 42°.77N×13°.62E, h10km*
ISC 24 15:39:27.9±0.8, 42°.77N±0°.02×13°.28E±0°.02, h11km±6km, n64, σ1s 82/85, 6C-10D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.14**	**300**	AML	AML		
	comp=N,52100μm,0.5s						
NRCA				AML	AML		
	comp=E,44050μm,0.3s						
NRCA				AML	AML		
	comp=E,44100μm,0.2s						
NRCA				AML	AML		
	comp=N,52150μm,0.5s						
NRCA				AML	AML		
	comp=E,45900μm,0.3s						
NRCA				AML	AML		
	comp=N,56850μm,0.5s						
NRCA				AML	AML		
	comp=E,44050μm,0.2s						
MMO1	**Montemonaco**	**0.14**	**16**	P	**Pg**	**15 39 30.9**	**-0.3**
MMO1				S	**Sg**	**15 39 33.3**	**-0.3**
MMO1				AML	AML		
	comp=E,24750μm,0.4s						
MMO1				AML	AML		
	comp=N,23250μm,0.4s						
T1243	**Rocca Santa Ma**	**0.14**	**119**	P	**Pb**	**15 39 32.6**	**-0.1**
T1243				S	**Sg**	**15 39 35.7**	**+1.9**
T1243				AML	AML		
	comp=N,30700μm,0.8s						
T1243				AML	AML		
	comp=E,32900μm,0.2s						
T1243				AML	AML		
	comp=E,32850μm,0.2s						
T1243				AML	AML		
	comp=N,30650μm,0.8s						
T1243				AML	AML		
	comp=E,33050μm,0.2s						
MC2	**Monte Cornacci**	**0.16**	**337**	P	**Pg**	**15 39 31.0**	**-0.7**
MC2				S	**Sg**	**15 39 34.0**	**-0.3**
MC2				AML	AML		
	comp=N,22350μm,0.7s						
MC2				AML	AML		
	comp=E,22300μm,1.5s						
MC2				AML	AML		
	comp=N,22300μm,0.7s						
MC2				AML	AML		
	comp=E,22250μm,1.5s						
LNSS	**Leonessa**	**0.24**	**227**	P	**Pb**	**15 39 33.6**	**-0.7**
LNSS				S	**Sg**	**15 39 38.0**	**+1.7**
LNSS				AML	AML		
	comp=N,8275μm,1.4s						
LNSS				AML	AML		
	comp=N,8270μm,1.4s						
LNSS				AML	AML		
	comp=E,11700μm,0.5s						
CAMP	**Campotosto**	**0.25**	**157**	P	**Pb**	**15 39 34.2**	**-0.3**
CAMP				S	**Sb**	**15 39 39.1**	**+0.2**
CAMP				AML	AML		
	comp=N,2675μm,0.8s						
CAMP				AML	AML		
	comp=E,2450μm,0.8s						
FEMA	**Monte Fema**	**0.26**	**320**	P	**Pg**	**15 39 33.0**	**-0.3**
FEMA				S	**Sg**	**15 39 36.6**	**-0.2**
FEMA				AML	AML		
	comp=N,8740μm,0.7s						
FEMA				AML	AML		
	comp=E,11450μm,0.6s						
RM33	**Pellescritta (**	**0.26**	**190**	P	**Pb**	**15 39 34.2**	**-0.5**
RM33				S	**Sb**	**15 39 39.5**	**+0.3**
RM33				AML	AML		
	comp=E,5445μm,0.8s						
RM33				AML	AML		
	comp=N,3595μm,0.3s						
RM33				AML	AML		
	comp=E,5440μm,0.8s						
RM33				AML	AML		
	comp=E,5415μm,0.8s						
RM33				AML	AML		
	comp=N,3585μm,0.3s						
RM33				AML	AML		
	comp=N,3595μm,0.4s						
RM33				AML	AML		
	comp=E,5410μm,0.8s						
TERO	**Teramo**	**0.28**	**121**	P	**Pb**	**15 39 34.8**	**-0.2**
TERO				S	**Sb**	**15 39 40.0**	**+0.3**
TERO				AML	AML		
	comp=E,4165μm,0.2s						
TERO				AML	AML		
	comp=N,5440μm,0.2s						
TERO				AML	AML		
	comp=E,4550μm,0.2s						
TERO				AML	AML		
	comp=E,4170μm,0.2s						
TERO				AML	AML		
	comp=N,5445μm,0.2s						
TERO				AML	AML		
	comp=N,5770μm,0.2s						
FDMO	**Fiordimonte**	**0.30**	**333**	P	**Pg**	**15 39 33.6**	**-0.4**
FDMO				S	**Sg**	**15 39 38.2**	**0.0**
FDMO				AML	AML		
	comp=E,3495μm,0.2s						
FDMO				AML	AML		
	comp=N,4745μm,0.8s						
CSP1	**Cessapalombo**	**0.33**	**351**	P	**Pg**	**15 39 34.3**	**-0.3**
CSP1				S	**Sg**	**15 39 39.3**	**+0.3**
CSP1				AML	AML		

comp=N,10505µm,0.2s
CSP1 AML AML
comp=E,6920µm,1.2s
CSP1 AML AML
comp=N,10500µm,0.2s
CSP1 AML AML
comp=N,10530µm,0.2s
CSP1 AML AML
comp=E,6915µm,1.2s
OFFI Offida 0.35 61 AML AML
comp=E,8575µm,0.8s
OFFI AML AML
comp=N,9835µm,0.5s
CESI CESI - Serrava 0.36 311 P **Pg** 15 39 34.7 -0.4
CESI S **Sg** 15 39 40.1 +0.1
CESI AML AML
comp=N,6395µm,0.4s
CESI AML AML
comp=E,4865µm,1.1s
SEF1 Sefro 0.45 328 P **Pg** 15 39 36.4 -0.3
SEF1 S **Sg** 15 39 43.3 +0.5
SEF1 AML AML
comp=E,4845µm,0.2s
SEF1 AML AML
comp=N,4345µm,1.3s
SEF1 AML AML
comp=E,4845µm,0.2s
SEF1 AML AML
comp=N,4340µm,1.3s
ASSB Assisi San Ben 0.53 302 P **Pg** 15 39 37.6 -0.6
ASSB S **Sg** 15 39 45.3 0.0
ASSB AML AML
comp=E,1835µm,1.1s
ASSB AML AML
comp=N,1545µm,0.7s
CESX Cesi 0.54 253 P **Pg** 15 39 38.3 0.0
CESX S **Sb** 15 39 46.7 -0.3
CESX AML AML
comp=N,2315µm,0.4s
CESX AML AML
comp=E,1790µm,1.0s
SNTG Esanatoglia 0.55 333 S **Sb** 15 39 47.0 -0.4
SNTG AML AML
comp=E,1270µm,0.6s
SNTG AML AML
comp=N,1370µm,0.6s
EL6 Elcito 0.58 347 ⇓P **Pg** 15 39 36.4 -2.7
EL6 S **Sb** 15 39 48.0 -0.3
CING Cingoli 0.61 355 ⇓P **Pg** 15 39 39.4 -0.4
ATCC AVT- Casa Cast 0.63 312 P **Pg** 15 39 39.6 -0.5
ATCC S **Sb** 15 39 48.8 -0.9
ATCC AML AML
comp=N,1835µm,1.1s
ATCC AML AML
comp=E,2690µm,0.6s
ATCC AML AML
comp=N,1840µm,1.1s
FOSV Fossato di Vic 0.65 325 ⇑P **Pg** 15 39 40.0 -0.6
FOSV S **Sb** 15 39 50.0 -0.4
FOSV AML AML
comp=E,2785µm,0.3s
FOSV AML AML
comp=N,2065µm,0.3s
PP3 Marolino 0.66 22 ⇓P **Pb** 15 39 42.0 +0.6
PP3 S **Sn** 15 39 54.0 +0.5
PP3 AML AML
comp=N,5640µm,0.5s
PP3 AML AML
comp=E,6455µm,0.5s
PP3 AML AML
comp=E,6400µm,0.5s
PP3 AML AML
comp=N,5720µm,0.4s
MURB Monte Urbino 0.74 312 ⇓P **Pg** 15 39 41.7 -0.5
MURB S **Sb** 15 39 54.0 +0.9
MURB AML AML
comp=E,2285µm,1.0s
MURB AML AML
comp=N,2475µm,0.2s
MURB AML AML
comp=E,2405µm,1.0s
MURB AML AML
comp=N,2165µm,1.1s
ARVD Arcevia 0.77 342 ⇓P **Pg** 15 39 42.2 -0.6
ARVD S **Sn** 15 39 55.0 -1.4
ARVD AML AML
comp=E,675µm,0.4s
ARVD AML AML
comp=N,512µm,0.6s
ATFO Monte Foce - G 0.79 320 ⇑P **Pg** 15 39 42.5 -0.7
ATFO AML AML
comp=N,1084µm,0.5s
ATFO AML AML
comp=E,798µm,0.9s
FRON Frontone 0.85 332 ⇑P **Pg** 15 39 43.4 -0.9
FRON S **Sn** 15 39 57.0 -1.4
FRON AML AML
comp=N,1022µm,0.3s
FRON AML AML
comp=E,615µm,0.8s
MGAB Montegabbione 0.87 280 ⇓P **Pb** 15 39 45.0 0.0
MGAB AML AML
comp=E,1258µm,1.5s
MGAB AML AML
comp=N,1165µm,0.6s
MGAB AML AML
comp=N,1215µm,0.5s
MGAB AML AML
comp=E,1420µm,1.5s
MGAB AML AML
comp=E,1256µm,1.5s
ATVO AVT- Monte Val 0.89 314 ⇓P **Pg** 15 39 44.0 -1.0
ATVO AML AML
comp=N,536µm,0.6s
ATVO AML AML
comp=E,512µm,0.4s
ATPI Pietralunga - 0.94 317 ⇓P **Pg** 15 39 45.0 -1.0
ATPI AML AML
comp=N,454µm,0.5s
ATPI AML AML
comp=E,548µm,0.7s
MPAG Monte Paganucc 0.94 337 ⇑P **Pg** 15 39 45.2 -0.8
MPAG S **Sn** 15 39 60.0 -0.7
MPAG AML AML
comp=E,640µm,0.7s
MPAG AML AML
comp=N,574µm,0.5s
PIEI Pieia 0.94 325 ⇓P **Pg** 15 39 45.2 -0.8
PIEI S **Sn** 15 39 60.0 -0.6
PIEI AML AML
comp=E,422µm,0.3s
PIEI AML AML
comp=N,454µm,0.5s
PIEI AML AML
comp=E,422µm,0.3s
NARO Abbazia di Nar 0.98 329 ⇑P **Pg** 15 39 45.7 -1.2
NARO AML AML
comp=E,372µm,1.1s
NARO AML AML
comp=N,456µm,0.6s
FSSB Fossombrone 0.99 339 ⇓P **Pg** 15 39 46.6 -0.5
FSSB S **Sn** 15 40 03.0 +1.1
FSSB AML AML
comp=N,2210µm,1.6s
FSSB AML AML
comp=E,2310µm,0.3s
BADI Badiali 1.06 315 ⇑P **Pg** 15 39 47.4 -0.8
DUGI Dugi Otok 1.79 46 *e*Pn **Pn** 15 39 59.6 +1.0
VIRC Vir 2.00 40 *e*Pn **Pn** 15 40 02.5 +0.9
NVLJ Novalja 2.14 32 *e*Pn **Pn** 15 40 03.9 +0.4
BRJN Brijuni 2.17 9 *e*Pn **Pn** 15 40 04.2 +0.4
RABC Rab 2.26 28 *e*Pn **Pn** 15 40 06.0 +0.8
MCRV Calabrutti - M 2.44 144 S **Sn** 15 40 33.0 -4.6
KIJV Kijevo 2.60 60 *e*Pn **Pn** 15 40 09.9 +0.1
LSTV Lastovo 2.66 89 *e*Pn **Pn** 15 40 11.8 +1.1
VENL Venezia Lido 2.73 347 S **Sb** 15 40 49.0 -1.1
NDIM Novi di Modena 2.73 322 S **Sn** 15 40 43.0 -1.6
RICI Ricice 2.92 74 *e*Pn **Pn** 15 40 17.1 +2.9
CNCS Concesio 3.59 323 S **Sg** 15 41 22.0 -1.2
OBKA Obir 3.85 13 *e*Pn **Pn** 15 40 30.5 +3.4
comp=E,2.8nm,0.4s
TDS Terranova Siba 3.87 142 P **Pn** 15 40 27.5 +0.2
ABTA Abfaltersbach 4.02 352 *e*Pn **Pn** 15 40 31.0 +1.6
comp=E,9.0nm,0.5s
SOKA Soboth 4.11 17 *e*Pn **Pb** 15 40 35.6 -4.6
comp=E,0.9nm,0.3s
KBA Koelnbreinsper 4.31 1 *e*Pn **Pn** 15 40 37.1 +3.5
comp=E,2.8nm,0.4s
FETA Feichten 4.62 338 *e*Pn Pn 15 40 42.8 +5.0
comp=E,1.2nm,0.6s
WTTA Wattenberg 4.64 346 *e*Pn **Pn** 15 40 40.9 +2.7
comp=E,1.0nm,0.2s
SQTA Sankt Quirin 4.69 342 *e*Pn **Pn** 15 40 39.5 +0.8
comp=E,1.9nm,0.4s
WATA Walderalm 4.72 346 *e*Pn **Pn** 15 40 41.4 +2.2
comp=E,4.0nm,0.6s
ARSA Arzberg 4.76 19 *e*Pn **Pn** 15 40 43.2 +3.6
comp=E,1.2nm,0.5s
MOTA Moosalm 4.83 342 *e*Pn **Pn** 15 40 43.8 +3.2
comp=E,0.5nm,0.2s
BIOA Bad Ischl, Aus 4.93 3 *e*Pn **Pn** 15 40 46.6 +4.6
comp=E,2.9nm,0.3s
RETA Reutte 5.04 340 *e*Pn **Pn** 15 40 46.4 +2.9
comp=E,1.1nm,0.3s
MOA Molln 5.13 7 *e*Pn **Pn** 15 40 46.7 +2.0
comp=E,1.0nm,0.4s
CONA Conrad Observa 5.47 19 *e*Pn **Pn** 15 40 51.2 +1.7
comp=E,0.7nm,0.4s
CKRC Cesky Krumlov 6.10 6 *e*SN **Sn** 15 42 07.0 -0.7
KHC Kasperske Hory 6.37 2 *e*SN **Sn** 15 42 11.5 -2.9
CLL Collm 8.55 359 *e*(Sg) **Sg** 15 44 10.0 +8.0

*IDC **24** 15:45:15.4±0.8,54°.74S×30°.73W,h0km,mb4.1/6, mbtmp4.2/6,Error ellipse: s-maj=36.1km s-min=17.8km az=67.0*
*NEIC **24** 15:45:19.2±0.9,54°.9S±0°.1×31°.2W±0°.3,h15km±6km, mb4.2/9,Error ellipse: s-maj=22.8km s-min=16.2km az=86.0*
ISC 24 15:45:17.3±0.7,54°.77S±0°.09×31°.0W±0°.1,h10km,n29, σ1s33/25,mb4.2/9,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.22**	**277**	Pn	**Pn**	**15 46 06.6**	**-1.2**
ORCD	**Orcadas**	**9.45**	**225**	Pn	**Pn**	**15 47 32.6**	**-0.5**
VNA1	**Neumayer--Stat**	**18.82**	**156**	P	Pn	15 49 43.7	+6.5
VNA3	**Neumayer Olymp**	**18.95**	**159**	P	**Pn**	**15 49 39.2**	**+0.4**
PMSA	**Palmer Station**	**19.16**	**225**	P	**P**	**15 49 38.2**	**-2.2**
	4.3nm,0.6s,baz=170,slow=21,SNR=9.6						
PMSA	**Palmer Station**	**19.16**	**225**	P	**P**	**15 49 38.0**	**-2.4**
VNA2	**Neumayer--Watz**	**19.22**	**156**	P	**P**	**15 49 40.8**	**-0.3**
	baz=316,slow=11						
SNAA	**Sanae**	**20.81**	**155**	P	**P**	**15 49 57.7**	**-0.8**
SNAA	**Sanae**	**20.81**	**155**	P	**P**	**15 49 57.6**	**-0.8**
	5.0nm,0.7s,baz=301,slow=10,SNR=57						
	5.0nm,0.7s						
SNAA	**Sanae**	**20.81**	**155**	P	**P**	**15 49 57.2**	**-1.2**
SNAA				IAmb	IAmb	15 49 58.7	
	comp=Z,5.0nm,0.7s						
SMAI	**San Martin Ant**	**21.39**	**217**	P	**P**	**15 50 08.2**	**+3.6**
SMAI				IAmb	IAmb	15 50 09.3	
	comp=Z,8.3nm,0.8s						
BELA	**Belgrano 2**	**23.24**	**182**	P	**P**	**15 50 24.9**	**+0.7**
BELA				IAmb	IAmb	15 50 27.9	
	comp=Z,13nm,1.5s						
CPUP	**Villa Florida**	**34.34**	**315**	P	**P**	**15 52 05.3**	**+1.4**
	comp=Z,2.3nm,0.7s,baz=162,slow=8.6,SNR=5.0						
	comp=Z,2.3nm,0.7s						
QSPA	**South Pole Qui**	**35.48**	**180**	P	**P**	**15 52 14.1**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=197,slow=3.4,SNR=40						
	comp=Z,3.3nm,0.6s						
QSPA	**South Pole Qui**	**35.48**	**180**	P	**P**	**15 52 14.2**	**+0.5**
MAW	**Mawson**	**42.46**	**146**	P	**P**	**15 53 11.0**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=227,slow=7.6,SNR=15						
	comp=Z,2.6nm,0.5s						
MAW	**Mawson**	**42.46**	**146**	P	**P**	**15 53 11.0**	**-0.7**
VNDA	**Vanda**	**47.73**	**184**	P	**P**	**15 53 53.5**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=169,slow=4.2,SNR=5.4						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**47.73**	**184**	P	**P**	**15 53 54.0**	**+0.4**
VNDA				IAmb	IAmb	15 54 07.3	
	comp=Z,2.5nm,1.3s						
LPAZ	**La Paz**	**47.86**	**309**	P	**P**	**15 53 56.4**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=188,slow=2.1,SNR=8.8						
	comp=Z,2.2nm,0.6s						
LPAZ	**La Paz**	**47.86**	**309**	P	**P**	**15 53 56.3**	**+0.4**
H10N1	**ASCENSION HYDR**	**48.64**	**22**	T	T	16 46 14.3	
	baz=191,slow=75,SNR=6.4						
H10N3	**ASCENSION HYDR**	**48.64**	**22**	T	T	16 46 15.5	
	baz=191,slow=75,SNR=5.1						
H10N2	**ASCENSION HYDR**	**48.65**	**22**	T	T	16 46 15.0	
	baz=191,slow=75,SNR=4.6						
CASY	**Casey**	**55.82**	**162**	P	**P**	**15 54 55.0**	**+1.0**
CASY				IAmb	IAmb	15 54 55.5	
	comp=Z,4.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.10**	**33**	P	**P**	**15 56 47.4**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=190,slow=6.4,SNR=3.5						
MKAR	**Makanchi Array**	**138.57**	**72**	PKP	**PKPdf**	**16 04 41.2**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=236,slow=4.7,SNR=1.7						
ILAR	**Eielson Array**	**147.64**	**314**	PKPbc	**PKPdf**	**16 04 58.5**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=97,slow=1.4,SNR=9.5						
SONM	**Songino Array**	**152.84**	**87**	PKPbc	**PKPbc**	**16 05 12.0**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=226,slow=3.8,SNR=3.4						

*NEIC **24** 15:45:52.4±1.3,6°.4S±0°.1×150°.6E±0°.2,h10km±1km, mb4.5/15,Error ellipse: s-maj=31.1km s-min=12.5km az=123.0*
*DJA **24** 15:45:53.9±0.4,6°.S±4°×15°.1E±°,h10km,M4.5/6,mB6.0/1, mb4.4/6,MLv4.5/2,Mw(mB)5.6/1*
*IDC **24** 15:45:56.8±1.7,6°.33S×150°.53E,h65km±16km,mb3.7/10, mbtmp4.0/11,MS3.3/5,Error ellipse: s-maj=30.1km s-min=12.1km az=122.0*
ISC 24 15:45:53.0±0.6,6°.26S±0°.10×150°.7E±0°.1,h33km,n49, σ1s17/47,mb4.1/14,MS3.2/3,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.36**	**35**	P	**Pb**	**15 46 35.3**	**+0.3**
	529nm,0.6s,baz=288,slow=0.3,SNR=36						
KRVT				LR	LR	15 47 05.2	
	comp=Z,282nm,19.6s,baz=329,slow=27						
KRVT				S	**Sb**	**15 47 05.8**	**+2.0**
	420nm,0.7s,baz=154,slow=22,SNR=5.8						
RABL	**Rabaul**	**2.54**	**36**		**Pb**	**15 46 36.2**	**-1.7**
MANU	**Manus Island**	**5.33**	**322**	Pn	Pn	15 47 17.4	+7.1
COEN	**Coen**	**10.63**	**223**	Pn	**Pn**	**15 48 22.5**	**-0.6**
COEN	**Coen**	**10.63**	**223**	P	**Pn**	**15 48 22.5**	**-0.6**
	7.3nm,2.6s						
CTA	**Charters Tower**	**14.40**	**197**	LR	LR	15 54 48.0	
	comp=Z,140nm,20.6s,baz=356,slow=37						
QIS	**Mount Isa**	**17.81**	**216**	P	**P**	**15 50 01.7**	**+2.7**
	16nm,2.3s						
EIDS	**Eidsvold**	**19.01**	**179**	P	**P**	**15 50 12.6**	**+0.5**
EIDS				IAmb	IAmb	15 50 15.6	
	comp=Z,36nm,1.5s						
KDU	**Kakadu**	**19.04**	**249**	P	**P**	**15 50 12.1**	**-0.5**
	comp=Z,11nm,1.1s						
RMQ	**Roma**	**20.20**	**185**	P	Pn	15 50 27.6	+0.4
	comp=Z,23nm,0.9s						
MTN	**Manton Dam**	**20.34**	**250**	P	**P**	**15 50 26.3**	**-0.4**
MTN				IAmb	IAmb	15 50 31.8	
	comp=Z,13nm,0.9s						
MTN	**Manton Dam**	**20.34**	**250**	P	**P**	**15 50 27.1**	**+0.4**
	comp=Z,19nm,1.2s						
GUMO	**Guam**	**20.54**	**344**	LR	LR	15 56 42.6	
	comp=Z,82nm,20.8s,baz=120,slow=31						
WB0	**Warramunga Arr**	**20.75**	**228**	P	**P**	**15 50 31.1**	**-0.1**
WB0				IAmb	IAmb	15 50 35.9	
	comp=Z,16nm,0.7s						
WR0	**Warramunga Arr**	**20.76**	**228**	P	**P**	**15 50 31.1**	**-0.2**
WR0				IAmb	IAmb	15 50 36.5	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**20.88**	**228**	P	**P**	**15 50 32.7**	**+0.1**
WRAB				IAmb	IAmb	15 50 37.3	
	comp=Z,15nm,0.7s						
WRAB	**Tennant Creek**	**20.88**	**228**	P	**P**	**15 50 32.9**	**+0.3**
	comp=Z,27nm,0.8s						
WB2	**Warramunga Arr**	**20.89**	**228**	P	**P**	**15 50 32.5**	**-0.2**
WB2				IAmb	IAmb	15 50 47.5	
	comp=Z,20nm,0.9s						
WRA	**Warramunga Arr**	**20.90**	**228**	P	**P**	**15 50 32.6**	**-0.2**
	comp=Z,13nm,0.7s,baz=56,slow=12,SNR=42						
WRA				PcP	**PcP**	**15 54 40.7**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=42,slow=2.0,SNR=4.3						
WRA				ScP	**ScP**	**15 58 13.1**	**-1.7**
	comp=Z,0.6nm,1.0s,baz=53,slow=3.0,SNR=2.4						
	comp=Z,13nm,0.7s						
WRA	**Warramunga Arr**	**20.90**	**228**	P	**P**	**15 50 31.3**	**-1.5**
DZM	**Mont Dzumac**	**21.89**	**137**	LR	LR	15 58 24.9	
	comp=Z,132nm,18.4s,baz=18,slow=34						
KNRA	**Kununurra**	**23.43**	**245**	P	**P**	**15 50 59.9**	**+0.4**
KNRA				IAmb	IAmb	15 51 40.5	
	comp=Z,10nm,0.7s						
KNRA	**Kununurra**	**23.43**	**245**	P	**P**	**15 51 00.7**	**+1.2**
	comp=Z,13nm,0.7s						
ASAR	**Alice Springs**	**23.66**	**221**	P	**P**	**15 51 01.7**	**0.0**
	comp=Z,1.3nm,0.5s,baz=56,slow=9.3,SNR=26						
ASAR				LR	LR	15 59 51.9	
	comp=Z,74nm,19.6s,baz=50,slow=36						
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	**23.66**	**221**	P	**P**	**15 51 01.2**	**-0.5**
CMSA	**Cobar Meteorol**	**25.58**	**190**	P	**P**	**15 51 20.6**	**+1.5**
	comp=Z,10nm,2.5s						
OOD	**Oodnadatta**	**25.71**	**212**	P	**P**	**15 51 22.3**	**+1.9**
	comp=Z,17nm,0.8s						
LCRK	**Leigh Creek**	**26.76**	**204**	P	**P**	**15 51 33.0**	**+3.2**
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek**	**26.86**	**197**	P	**P**	**15 51 30.2**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=0.3,slow=8.1,SNR=10						
	comp=Z,4.4nm,0.9s						
STKA	**Stephens Creek**	**26.86**	**197**	P	**P**	**15 51 31.0**	**+0.2**
STKA	**Stephens Creek**	**26.86**	**197**	P	**P**	**15 51 32.5**	**+1.7**
	comp=Z,1.8nm,2.2s						
FITZ	**Fitzroy Crossi**	**27.10**	**242**	P	**P**	**15 51 32.7**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=51,slow=8.3,SNR=21						
	comp=Z,2.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**27.10**	**242**	P	**P**	**15 51 32.7**	**-0.4**
FITZ				IAmb	IAmb	15 51 45.7	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**27.10**	**242**	P	**P**	**15 51 32.9**	**-0.2**
	comp=Z,8.1nm,1.0s						
WRKA	**Warakurna**	**28.42**	**227**	P	**P**	**15 51 44.9**	**0.0**
TOO	**Toolangi**	**31.52**	**188**	P	**P**	**15 52 12.6**	**+0.4**
FORT	**Forrest**	**32.33**	**218**	P	**P**	**15 52 20.3**	**+1.0**
PSA00	**Pilbara Seismi**	**33.47**	**240**	P	**P**	**15 52 29.9**	**+0.6**
KSRS	**Korea Array**	**48.40**	**336**	P	**P**	**15 54 32.7**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=149,slow=7.0,SNR=7.2						
	comp=Z,1.6nm,0.9s						
SONM	**Songino Array**	**66.45**	**329**	P	**P**	**15 56 37.8**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=144,slow=5.2,SNR=2.4						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**71.47**	**177**	P	**P**	**15 57 08.1**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=345,slow=6.2,SNR=1.1						
	comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**71.47**	**177**	P	**P**	**15 57 08.1**	**-1.7**
MKAR	**Makanchi Array**	**80.04**	**320**	P	**P**	**15 57 58.5**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=106,slow=7.7,SNR=2.0						
	comp=Z,0.3nm,0.8s						
IMAR	**Indian Mountai**	**82.46**	**20**	P	**P**	**15 58 13.5**	**+1.6**
QSPA	**South Pole Qui**	**83.71**	**180**	P	**P**	**15 58 17.4**	**-1.1**
QSPA				IAmb	IAmb	15 58 33.0	
	comp=Z,6.3nm,1.2s						
ILAR	**Eielson Array**	**84.30**	**22**	P	**P**	**15 58 20.3**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=254,slow=5.5,SNR=8.8						
	comp=Z,1.1nm,0.8s						
NVAR	**Mina Array Bea**	**94.65**	**52**	P	**P**	**15 59 11.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=255,slow=5.3,SNR=2.5						
	comp=Z,0.6nm,0.3s						
GERES	**GERESS Array B**	**124.15**	**327**	PKP	**PKPdf**	**16 04 48.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=64,slow=3.1,SNR=9.2						
TORD	**Torodi Ar. Bea**	**148.69**	**285**	PKPbc	**PKPbc**	**16 05 37.2**	**-0.8**
	comp=Z,3.0nm,0.6s,baz=63,slow=3.1,SNR=21						

*KRNET **24** 15:47:09.8±0.1,40°.99N×73°.58E,h17km,mb2.5*
*NNC **24** 15:47:11.6±1.7,41°.04N×73°.45E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=15.7km s-min=7.4km az=170.0*
*ISU **24** 15:47:12,41°.00N×73°.36E,h23km*
ISC 24 15:47:09.2±1.3,40°.97N±0°.05×73°.61E±0°.04,h11km±13km, n17,σ0s59/29,19C-7D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.77**	**235**	⇑*i*P	**Pb**	**15 47 24.4**	**-0.2**
	baz=33						
OHH				⇑*i*S	**Sg**	**15 47 34.9**	**+0.8**
	baz=33						
ARLS	**Aral**	**1.04**	**31**	⇑*i*P	**Pb**	**15 47 29.2**	**-0.2**
	baz=33						
ARLS				⇑*i*S	**Sg**	**15 47 43.4**	**+0.6**
	baz=33						
ARK	**Arkit**	**1.50**	**304**	⇑*i*P	**Pb**	**15 47 36.8**	**-0.3**
	baz=4.0						
ARK				⇑*i*S	**Sg**	**15 47 56.8**	**-0.5**
	baz=4.0						
ARK	**Arkit**	**1.50**	**304**	P	**Pb**	**15 47 37.0**	**-0.1**
ARK				S	**Sb**	**15 47 55.8**	**-0.3**
FRG	**Fergana**	**1.51**	**248**	P	**Pg**	**15 47 38.2**	**0.0**
FRG				S	**Sg**	**15 47 57.8**	**0.0**
EKS2	**Erkin-Say**	**1.70**	**4**	⇑*i*P	**Pb**	**15 47 40.9**	**+0.4**
	baz=5.0						
EKS2				⇑*i*S	**Sg**	**15 48 03.6**	**-0.3**
	baz=5.0						
AAK	**Ala-Archa**	**1.80**	**21**	⇑*i*P	**Pb**	**15 47 42.7**	**+0.5**
	baz=22						
AAK				⇑*i*S	**Sg**	**15 48 06.7**	**-0.3**
	baz=22						
TRKS	**Terek-Say**	**1.95**	**288**	⇑*i*P	**Pb**	**15 47 44.1**	**-0.7**
	baz=85						
TRKS				⇑*i*S	**Sb**	**15 48 09.3**	**+0.1**
	baz=85						
MINT	**Mingtut**	**2.07**	**257**	P	**Sn**	**15 48 09.4**	**-0.2**
CHMS	**Chumysh**	**2.20**	**22**	⇑Pn	**Pb**	**15 47 49.4**	**+0.4**
	3.2nm,0.6s						
CHMS				⇓Sn	**Sg**	**15 48 18.6**	**-1.3**
	11nm,1.0s						
CHMS	**Chumysh**	**2.20**	**22**	⇑*i*P	**Pb**	**15 47 48.6**	**-0.4**
	baz=23						
CHMS				⇑*i*S	**Sb**	**15 48 17.2**	**+0.9**
	baz=23						
BOOM	**Boomskoye usch**	**2.31**	**48**	⇓*e*P	**Pb**	**15 47 50.5**	**-0.5**
	baz=49						
BOOM				⇓*i*S	**Sb**	**15 48 20.4**	**+0.7**
	baz=49						
ULHL	**Ulahol**	**2.35**	**56**	⇓*i*P	**Pb**	**15 47 51.3**	**-0.4**
	baz=57						
ULHL				⇓*i*S	**Sb**	**15 48 21.6**	**+0.8**
	baz=57						
TKM2	**Tokmak 2**	**2.45**	**36**	⇑Pn	**Pb**	**15 47 53.2**	**-0.2**
	3.3nm,0.7s						
TKM2				⇑Lg	Lg	15 48 28.9	
	3.8nm,0.5s						
TKM2	**Tokmak 2**	**2.45**	**36**	⇓*i*P	**Pb**	**15 47 52.6**	**-0.8**
	baz=37						
TKM2				⇓*i*S	**Sb**	**15 48 23.6**	**-0.1**
	baz=37						
KK31	**Karatay Array**	**3.15**	**314**	Pg	**Pb**	**15 48 06.2**	**+1.1**
	0.5nm,0.3s,baz=134,slow=15,SNR=18						
KK31				⇑Lg	Lg	15 48 46.4	
	3.2nm,0.3s,baz=130,slow=29,SNR=13						
MDOK	**Medeo**	**3.37**	**48**	⇑Lg	Lg	15 48 58.9	
	4.4nm,0.6s						

*UCR **24** 15:48:24.8±1.5,9°.42N×83°.64W,h13km±7km,MW3.6*
*UPA **24** 15:48:24.0±1.6,9°.44N×83°.68W,h6km±9km,MW3.3*
ISC 24 15:48:24.4±0.9,9°.46N±0°.05×83°.68W±0°.04,h28km±8km, n21,σ0s63/29,2C,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDM	**Cerro de Muert**	**0.13**	**318**	*e*P	**Pn**	**15 48 30.6**	**-0.5**
CDM				*e*S	**Sb**	**15 48 34.9**	**+0.9**
EDDO	**Dominical**	**0.28**	**222**	*e*P	**Pb**	**15 48 30.9**	**-0.5**
EDDO				*e*S	**Sb**	**15 48 35.9**	**-0.1**
RIMA	**Rio Macho**	**0.36**	**329**	*e*P	**Pb**	**15 48 33.1**	**-0.9**
RIMA				*e*S	**Sn**	**15 48 39.7**	**-0.6**
LCR2	**La Lucha 2**	**0.43**	**311**	*e*P	**Pb**	**15 48 33.5**	**-0.3**
DRK0	**Durika**	**0.47**	**114**	*e*P	**Pb**	**15 48 34.3**	**-0.1**
DRK0				*e*S	**Sb**	**15 48 41.0**	**-0.2**
HDC	**Heredia**	**0.69**	**321**	*e*P	**Pn**	**15 48 38.9**	**+0.4**
HDC	**Heredia**	**0.69**	**321**	⇑*i*P	**Pn**	**15 48 38.8**	**+0.4**
HDC				*e*S	**Sn**	**15 48 49.3**	**+1.0**
JACO	**JACO, Garabito**	**0.99**	**282**	*e*P	**Pn**	**15 48 42.7**	**+0.2**
SRA1	**San Ramn**	**1.01**	**308**	*e*P	**Pb**	**15 48 43.2**	**-0.1**
BRU2	**Volcan**	**1.18**	**124**	⇑*i*P	**Pn**	**15 48 44.5**	**-0.8**
BRU2				*e*S	**Sn**	**15 49 00.1**	**-0.3**
CDITO	**Canoas**	**1.19**	**138**	*e*S	**Sb**	**15 49 02.5**	**+1.2**
CNI2	**El Empalme, Bo**	**1.19**	**92**	*e*P	**Pn**	**15 48 45.2**	**0.0**
CNI2				*e*S	**Sb**	**15 49 01.5**	**+0.1**
LAFE	**Finca La Fe, P**	**1.26**	**286**	*e*P	**Pb**	**15 48 48.2**	**+0.6**
CEDE	**Laguna Cedeo**	**1.44**	**315**	*e*P	**Pb**	**15 48 50.8**	**+0.2**
COVE	**Coope Vega, Sa**	**1.44**	**330**	*e*P	**Pb**	**15 48 50.8**	**+0.2**
JTS	**Las Juntas de**	**1.50**	**303**	*e*P	**Pb**	**15 48 51.0**	**-0.7**
JTS	**Las Juntas de**	**1.50**	**303**	*e*P	**Pb**	**15 48 51.1**	**-0.6**

JTS			*e*S	**Sb**	**15 49 10.5**	**+0.1**
DVD	**David**	**1.58**	**130**	*e*S	**Sb**	**15 49 14.1**	**+1.5**
ACAL	**Aguas Claras**	**1.77**	**311**	*e*P	**Pb**	**15 48 56.0**	**-0.3**
COLC	**Colonia**	**1.92**	**309**	*e*P	**Pb**	**15 48 58.4**	**-0.4**
HORNC	**Hornillas**	**1.93**	**310**	*e*P	**Pb**	**15 48 58.3**	**-0.8**

*HVO **24** 15:52:37.4±0.8, 19°.348N±0°.008×155°.217W±0°.009, h7km±1km, ML2.7/29, ML2.6/42(NEIC), Error ellipse: s-maj=1.2km s-min=1.1km az=165.0*
NEIC 24 15:52:38.0±1.1, 19°.342N±0°.009×155°.215W±0°.009, h4km±3km, Error ellipse: s-maj=1.6km s-min=0.6km az=138.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUH	**Pauahi**	**0.03**	**358**	Pg	Pg	15 52 39.1	+0.1
PUH				Sg	Sg	15 52 40.2	+0.4
KNHH	**Kane Nui o Ham**	**0.06**	**49**		Pg	15 52 39.5	+0.1
KKO	**Keanakako`i**	**0.07**	**319**	Pg	Pg	15 52 39.6	0.0
KKO				Sg	Sg	15 52 41.1	+0.3
RIM	**Rim**	**0.08**	**314**	Pg	Pg	15 52 39.7	0.0
RIM				Sg	Sg	15 52 41.3	+0.4
BYL	**Byron's Ledge**	**0.08**	**329**	Pg	Pg	15 52 39.5	-0.3
BYL				Sg	Sg	15 52 41.4	+0.4
SDHHI	**Sand Hill**	**0.09**	**302**	Pg	Pg	15 52 39.9	0.0
SDHHI				Sg	Sg	15 52 41.6	+0.4
SDHHI				IAML		15 52 41.6	
	comp=E,3μm,0.4s						
HATHI	**Halema'uma'u T**	**0.09**	**332**	Pg	Pg	15 52 39.8	-0.1
HATHI				Sg	Sg	15 52 41.5	+0.3
HATHI				IAML		15 52 41.8	
	comp=N,4μm,0.3s						
HATHI				IAML		15 52 41.9	
	comp=E,5μm,0.4s						
NPH	**North Pit**	**0.09**	**318**		Pg	15 52 39.8	-0.2
HLP	**Hilina Pali**	**0.10**	**243**		Pg	15 52 40.0	0.0
HLP				Sg	Sg	15 52 42.0	+0.6
HLP				IAML		15 52 42.4	
	comp=E,4μm,0.3s						
HLP				IAML		15 52 42.4	
	comp=N,4μm,0.2s						
SBLHI	**Steaming Bluff**	**0.10**	**329**	Pg	Pg	15 52 39.8	-0.2
SBLHI				Sg	Sg	15 52 41.6	+0.2
SBLHI				IAML		15 52 41.9	
	comp=E,4μm,0.4s						
SBLHI				IAML		15 52 42.1	
	comp=N,3μm,0.7s						
OBL	**Observatory Le**	**0.10**	**319**	Pg	Pg	15 52 39.9	-0.2
OBL				IAML		15 52 41.7	
	comp=N,4μm,0.5s						
OBL				Sg	Sg	15 52 41.9	+0.4
OBL				IAML		15 52 42.3	
	comp=E,4μm,0.5s						
UWB	**Uwekahuna B**	**0.10**	**324**	Pg	Pg	15 52 39.8	-0.3
UWB				Sg	Sg	15 52 41.7	+0.1
UWB				IAML		15 52 42.0	
	comp=E,2μm,0.6s						
WRMHI	**West Rim**	**0.10**	**309**	Pg	Pg	15 52 39.8	-0.3
WRMHI				Sg	Sg	15 52 41.9	+0.2
WRMHI				IAML		15 52 42.4	
	comp=E,4μm,0.5s						
WRMHI				IAML		15 52 42.5	
	comp=N,3μm,0.6s						
UWE	**Uwekahuna**	**0.11**	**317**		Pg	15 52 40.0	-0.2
UWE				Sg	Sg	15 52 41.9	+0.1
UWE				IAML		15 52 42.4	
	comp=N,2μm,0.6s						
UWE				IAML		15 52 42.7	
	comp=E,3μm,0.5s						
NPOC	**North of Pu'u**	**0.11**	**63**		Pg	15 52 40.2	0.0
NPOC				Sg	Sg	15 52 42.2	+0.4
NPOC				IAML		15 52 42.5	
	comp=E,1μm,0.2s						
NPOC				IAML		15 52 42.8	
	comp=N,3μm,0.4s						
JCUZ	**Jacuzzi**	**0.12**	**68**		Pg	15 52 40.2	-0.1
JCUZ				Sg	Sg	15 52 42.3	+0.4
JCUZ				IAML		15 52 42.7	
	comp=N,3μm,0.6s						
JCUZ				IAML		15 52 42.8	
	comp=E,1μm,0.2s						
RSD	**Rainshed**	**0.14**	**334**		Pg	15 52 40.4	-0.4
RSD				Sg	Sg	15 52 42.5	-0.1
HTC	**Hot Caves**	**0.20**	**239**		Pg	15 52 41.9	0.0
JOKA	**Jonika Flow**	**0.22**	**65**		Pg	15 52 41.6	-0.6
JOKA					Sg	15 52 44.1	-1.0
MLH	**Mauna Loa**	**0.22**	**313**		Pg	15 52 42.0	-0.4
MLH				Sg	Sg	15 52 45.5	+0.2
MLH				IAML		15 52 49.2	
	comp=N,677nm,0.4s						
AIN	**Ainahou**	**0.23**	**278**		Pg	15 52 42.3	-0.2
AIN				Sg	Sg	15 52 46.0	+0.4
HMH	**Humu'ula Sheep**	**0.36**	**316**	Pg	Pg	15 52 44.5	-0.6
HMH				Sg	Sg	15 52 50.6	+0.7
HMH				IAML		15 52 51.3	
	comp=N,1μm,0.3s						
HMH				IAML		15 52 51.5	
	comp=E,994nm,0.3s						
MWH	**Moku'aweowe**	**0.39**	**292**	Pg	Pg	15 52 44.9	-0.7
MWH				Sg	Sg	15 52 51.2	+0.5
KHU	**Kahuku**	**0.39**	**256**	Pg	Pg	15 52 44.9	-0.6
KHU				Sg	Sg	15 52 50.9	+0.2
KHU				IAML		15 52 51.6	
	comp=N,706nm,0.4s						
MLOA	**Mauna Loa Obse**	**0.39**	**300**	Pg	Pg	15 52 44.8	-0.8
MLOA				Sg	Sg	15 52 51.1	+0.2
ALEP	**Alea Permanent**	**0.45**	**296**		Pg	15 52 46.1	-0.6
ALEP					Sg	15 52 53.0	+0.3
POHA	**Pohakuloa**	**0.51**	**324**	Pg	Pg	15 52 46.6	-1.2
POHA				Sg	Sg	15 52 53.7	-0.8
POHA	**Pohakuloa**	**0.51**	**324**	IAML		15 52 54.7	
	comp=N,1μm,0.5s						
POHA				IAML		15 52 54.9	
	comp=N,1μm,0.5s						
HUH	**Hualalai**	**0.68**	**300**	Pg	Pg	15 52 49.5	-1.5
HUH				Sg	Sb	15 53 01.2	-1.2
CPH	**Captain Cook**	**0.68**	**283**		Pg	15 52 49.6	-1.4
KHLU	**Kahalu`u**	**0.69**	**291**	Pg	Pg	15 52 49.0	-2.1
KHLU				Sg	Sg	15 52 58.7	-1.5
HPAH	**Hawaii Prepara**	**0.82**	**327**	Pg	Pg	15 52 50.9	-2.9
HPAH				Sg	Sg	15 53 03.0	-1.4
MHA	**Mahukona**	**1.06**	**323**	Pg	Pg	15 52 54.4	-4.0

*BEO **24** 15:56:45.7±1.0, 42°.09N×13°.29E, h0km, ML3.2/3*
*PRU **24** 15:56:45.8±0.0, 42°.69N×12°.91E, h10km*
ISC 24 15:56:50.4±3.1, 43°.1N±0°.1×13°.5E±0°.1, h17km, n18, σ1s71/25, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUGI	**Dugi Otok**	**1.48**	**50**	*e*Pn	**Pb**	**15 57 17.2**	**-0.4**
VIRC	**Vir**	**1.69**	**42**	*e*Pn	**Pb**	**15 57 20.1**	**-0.9**
MORI	**Morici**	**1.82**	**63**	*e*Pn	**Pb**	**15 57 21.7**	**-1.5**
NVLJ	**Novalja**	**1.82**	**33**	*e*Pn	**Pn**	**15 57 20.6**	**-0.3**
BRJN	**Brijuni**	**1.86**	**6**	*e*Pn	**Pn**	**15 57 21.7**	**+0.1**
RABC	**Rab**	**1.94**	**29**	*e*Pn	**Pb**	**15 57 23.4**	**-1.9**
SMRN	**Sveta Marina**	**2.04**	**14**	*e*Pn	**Pn**	**15 57 24.1**	**+0.1**
KJIV	**Kijevo**	**2.33**	**65**	*e*Pn	**Pn**	**15 57 28.6**	**+0.6**
RICI	**Ricice**	**2.71**	**79**	*e*Pn	**Pn**	**15 57 33.7**	**+0.5**
STON	**Ston**	**3.11**	**92**	*e*Pn	**Pn**	**15 57 37.5**	**-1.1**
STON				*e*Sn	**Sn**	**15 58 17.4**	**+2.1**
BLY	**Banja Luka**	**3.17**	**56**	*e*Pn	**Pb**	**15 57 47.3**	**+1.0**
PDG	**Podgorica**	**4.30**	**96**	*e*Pn	**Pn**	**15 57 53.3**	**-1.8**
PDG				*e*Sn	**Sn**	**15 58 45.5**	**+0.7**
BBLS	**Lazići**	**4.39**	**77**	*e*Pn	**Pn**	**15 57 58.5**	**+2.1**
BBLS				*e*Sn	**Sb**	**15 58 55.8**	**-4.1**
IVAS	**Ivanjica**	**4.90**	**82**	*e*Pn	**Pn**	**15 58 04.1**	**+0.7**
IVAS				*e*Sn	**Sn**	**15 59 03.0**	**+3.3**
SELS	**Selova**	**5.59**	**86**	*e*Pn	**Pn**	**15 58 13.7**	**+0.8**
KHC	**Kasperske Hory**	**6.08**	**1**	*e*PN	**Pn**	**15 58 20.5**	**+1.0**
KHC				*e*SN	**Sn**	**15 59 30.2**	**+1.5**
BARS	**Barje**	**6.13**	**89**	*e*Pn	**Pn**	**15 58 20.7**	**+0.5**
BARS				*e*Sn	**Sn**	**15 59 32.4**	**+2.6**
ZAPS	**Zavoj**	**6.70**	**85**	*e*Pn	**Pn**	**15 58 29.5**	**+1.4**
ZAPS				*e*Sn	**Sn**	**15 59 44.8**	**+0.8**

*IDC **24** 15:58:59.9±3.6, 3°.06S×100°.12E, h0km, mb3.5/6, mbtmp3.6/6, Error ellipse: s-maj=146.2km s-min=22.3km az=57.0*

*DJA **24** 15:59:04.4±0.8, 3°S±11°×10°0E±°, h31km±6km, M3.4/5, MLv3.4/5*
ISC 24 15:59:04.7±1.6, 2°.9S±0°.2×100°.1E±0°.1, h32km±9km, n17, σ1s30/13, mb3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.17**	**323**	P	**Pn**	**15 59 10.5**	**-0.6**
PPSI				S	**Sb**	**15 59 15.2**	**+0.1**
KRJI	**Kerinci**	**1.57**	**59**	P	**Pn**	**15 59 29.8**	**-0.6**
SISI	**Saibi**	**1.87**	**327**	P	**Pn**	**15 59 34.5**	**+0.1**
SISI				S	**Sn**	**15 59 54.2**	**-2.7**
MASI	**Maura Aman, Be**	**2.14**	**97**	P	**Pn**	**15 59 37.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**21.25**	**357**	P	**P**	**16 03 49.8**	**+1.4**
	0.5nm,0.3s,baz=173,slow=9.1,SNR=2.0						
	0.5nm,0.3s						
H08S2	**Diego Garcia H**	**27.90**	**259**	T	T	16 33 54.0	
	baz=82,slow=76,SNR=475						
H08S3	**Diego Garcia H**	**27.90**	**259**	T	T	16 33 54.6	
	baz=82,slow=76,SNR=546						
H08S1	**Diego Garcia H**	**27.91**	**259**	T	T	16 33 53.6	
	baz=82,slow=76,SNR=316						
H01W3	**Cape Leeuwin H**	**34.39**	**159**	T	T	16 41 49.3	
	baz=335,slow=76,SNR=21						
H01W2	**Cape Leeuwin H**	**34.40**	**159**	T	T	16 41 49.3	
	baz=335,slow=76,SNR=24						
H01W1	**Cape Leeuwin H**	**34.41**	**159**	T	T	16 41 51.5	
	baz=335,slow=76,SNR=17						
WRA	**Warramunga Arr**	**37.45**	**120**	P	**P**	**16 06 14.7**	**-0.7**
	0.4nm,0.9s,baz=308,slow=8.3,SNR=1.2						
	0.4nm,0.9s						
ASAR	**Alice Springs**	**38.64**	**125**	P	**P**	**16 06 24.2**	**-1.3**
	0.3nm,0.7s,baz=303,slow=7.6,SNR=4.7						
	0.3nm,0.7s						
SONM	**Songino Array**	**50.82**	**5**	P	**P**	**16 08 03.0**	**+0.8**
	0.8nm,0.8s,baz=200,slow=8.3,SNR=3.7						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**51.92**	**345**	P	**P**	**16 08 11.4**	**+1.0**
	0.6nm,0.5s,baz=154,slow=8.5,SNR=9.0						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**58.07**	**349**	P	**P**	**16 08 55.6**	**+1.0**
	0.5nm,0.4s,baz=168,slow=7.6,SNR=4.1						
	0.5nm,0.4s						
TXAR	**Lajitas Array**	**145.34**	**38**	PKPbc	**PKPdf**	**16 18 40.5**	**+0.3**
	0.1nm,0.6s,baz=294,slow=1.2,SNR=3.5						

MAN 24 16:16:49.5±5.6, 5°.65N×124°.07E, h537km, Ms4.2, Mindanao

*NEIC **24** 16:38:15.3±1.1, 55°.70N±0°.04×160°.20W±0°.09, h87km±6km, Error ellipse: s-maj=8.3km s-min=4.8km az=129.0*
AEIC 24 16:38:15.8±0.8, 55°.66N±0°.05×160°.14W±0°.09, h87km±4km, ML2.6/23, ML3.2/16(NEIC), Error ellipse: s-maj=9.1km s-min=4.8km az=132.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.36**	**212**		Pn	16 38 28.4	-0.7
SDPT					Sn	16 38 38.8	-0.2
VNFG	**Fog Glacier, M**	**0.71**	**27**		Pn	16 38 31.8	-0.4
VNFG					Sn	16 38 44.0	-0.5
VNSG	**Veniaminof 6**	**0.76**	**51**		Pn	16 38 31.7	-0.9
VNHG	**Veniaminof 1**	**0.79**	**44**		Pn	16 38 32.1	-0.9
VNHG					Sn	16 38 45.9	+0.1
CNBA	**Chernabura Isl**	**0.90**	**159**		Pn	16 38 33.0	-1.0
CNBA				Sn	Sn	16 38 47.7	+0.1
PS4A	**Pavlof South-4**	**1.02**	**253**		Pn	16 38 34.7	-0.8
HAG	**Hague Volcano**	**1.06**	**252**		Pn	16 38 35.3	-0.7
PN7A	**Pavlof North-7**	**1.08**	**259**		Pn	16 38 35.4	-0.8
CHGN	**Chignik**	**1.17**	**56**	Pn	Pn	16 38 35.8	-1.4
CHGN				Sn	Sn	16 38 52.3	-1.0
CHGN				IAML		16 38 54.7	
	comp=E,482nm,0.1s						
CHGN				IAML		16 38 59.0	
	comp=N,219nm,0.1s						
DT1	**Dutton Round H**	**1.34**	**247**		Pn	16 38 38.6	-0.7
ANNE	**Aniakchak Nort**	**1.71**	**42**		Pn	16 38 44.3	+0.1
FALS	**False Pass**	**2.04**	**248**	Pn	Pn	16 38 46.9	-1.4
ISNN	**Isanotski Nort**	**2.24**	**250**		Pn	16 38 50.7	-0.3
ISLZ	**Isanotski Laza**	**2.25**	**247**		Pn	16 38 50.7	-0.5
SSBA	**Shishaldin**	**2.45**	**250**		Pn	16 38 53.0	-0.8
CHIR	**Chirikof Islan**	**2.56**	**84**	Pn	Pn	16 38 55.6	+0.3
CHIR				IAML		16 39 35.4	
	comp=E,98nm,1.9s						
CHIR				IAML		16 40 21.7	
	comp=N,153nm,2.2s						
R17K	**Ugashik Creek**	**2.87**	**45**		Pn	16 38 59.1	-0.4
WECS	**Westdahl Cape**	**2.89**	**249**		Pn	16 38 58.6	-1.2
SII	**Sitkinak Islan**	**3.46**	**72**	Pn	Pn	16 39 09.1	+1.8
UNV	**Unalaska Valle**	**4.11**	**246**	Pn	Pn	16 39 15.5	-0.6
OHAK	**Old Harbor**	**4.12**	**65**	Pn	Pn	16 39 12.7	-3.6
OHAK				IAML		16 40 22.2	
	comp=N,31nm,2.7s						
P18K	**Big Mountain,**	**4.59**	**33**	Pn	Pn	16 39 23.4	+0.7
P18K				IAML		16 40 31.2	
	comp=E,14nm,2.9s						
P18K				IAML		16 40 59.3	
	comp=N,22nm,2.4s						
KDAK	**Kodiak Island**	**4.68**	**60**	Pn	Pn	16 39 21.4	-2.5
KDAK				IAML		16 40 44.4	
	comp=N,26nm,3.0s						

*ASRS **24** 16:39:14.6±0.4, 49°.N±2°.×91°.3E±1°.0, h10km, MLh3.7/18, Error ellipse: s-maj=5.2km s-min=2.1km az=174.9, confirmed*
*NNC **24** 16:39:20.4±5.3, 48°.92N×91°.05E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=75.6km s-min=40.1km az=176.0*
ISC 24 16:39:16.8±1.1, 48°.99N±0°.05×91°.21E±0°.03, h10km, n19, σ2s14/37, 4C-2D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**2.17**	**302**	Pg	**Pb**	**16 39 56.1**	**-0.1**
CUR				Sg	**Sg**	**16 40 25.5**	**-0.9**
DGZ	**Jazzator, Alta**	**2.57**	**288**	Pg	**Pb**	**16 40 02.6**	**-0.4**
DGZ				Sg	**Sg**	**16 40 39.7**	**+0.4**
ULGR	**Ulagan, Altay**	**2.66**	**309**	Pg	**Pb**	**16 40 04.9**	**+0.2**
ULGR				Sg	**Sg**	**16 40 43.3**	**+0.9**
AKAR	**Aktash**	**2.68**	**301**	Pg	**Pb**	**16 40 03.6**	**-1.4**
AKAR				Sg	**Sg**	**16 40 43.1**	**+0.1**
CHBI	**Chibit, Altay**	**2.75**	**300**	Pg	**Pb**	**16 40 05.6**	**-0.5**
CHBI				Sg	**Sg**	**16 40 46.3**	**+1.3**
ERNS	**Erzin**	**2.87**	**62**	Pg	**Pb**	**16 40 08.9**	**+0.8**
ERNS				Sg	**Sb**	**16 40 44.5**	**+1.2**
KZLR	**Kyzyl**	**3.42**	**36**	Pg	**Pb**	**16 40 17.0**	**-0.5**
KZLR				Sg	**Sb**	**16 41 00.5**	**+1.3**
ARTR	**Artybash**	**3.77**	**320**	Pn	**Pb**	**16 40 19.2**	**-4.3**
ARTR				Pg	**Pg**	**16 40 27.4**	**-1.6**
ARTR				Sg	**Sg**	**16 41 17.4**	**-0.4**
DJO	**Djoy, Khakassi**	**3.80**	**0**	Pg	**Pg**	**16 40 28.1**	**-1.4**
DJO				Sg	**Sb**	**16 41 13.5**	**+3.5**
ARDR	**Aradan**	**3.86**	**21**	Pg	**Pb**	**16 40 25.8**	**+0.7**
ARDR				Sg	**Sg**	**16 41 16.6**	**-4.2**
CERR	**Cheremushki**	**3.87**	**2**	Pg	**Pb**	**16 40 24.9**	**-0.3**
CERR				Sg	**Sg**	**16 41 17.5**	**-3.6**
TASR	**Tashtagol**	**4.32**	**332**	Pg	**Pg**	**16 40 39.0**	**-0.6**
TASR				Sg	**Sg**	**16 41 33.8**	**-1.8**
KNGR	**Kungurtug, Tuv**	**4.40**	**66**	Pg	**Pb**	**16 40 36.0**	**+1.8**
KNGR				Sg	**Sg**	**16 41 34.5**	**-3.5**
UKR	**Ust'-Kan**	**4.59**	**298**	Pn	**Pn**	**16 40 29.5**	**+3.3**
UKR				Pg	**Pg**	**16 40 43.8**	**-0.8**
UKR				Sg	**Sg**	**16 41 43.7**	**-0.4**
LUZB	**Luzhba, Kemero**	**4.90**	**344**	Pg	**Pg**	**16 40 50.3**	**-0.2**
LUZB				Sg	**Sg**	**16 41 50.6**	**-3.3**
ELT	**Eltsovka**	**5.30**	**326**	Pg	**Pg**	**16 40 56.7**	**-1.5**
ELT				Sg	**Sg**	**16 42 05.3**	**-1.5**
MK31	**Makanchi Array**	**6.38**	**253**	⇑Pn	**Pn**	**16 40 53.6**	**+2.7**
	0.1nm,0.3s,baz=57,slow=12,SNR=7.3						
MK31				⇑Pg	**Pg**	**16 41 14.7**	**-4.3**
	0.8nm,0.5s,baz=77,slow=18,SNR=6.5						
MK31				⇓Lg	Lg	16 42 39.3	
	4.9nm,0.6s,baz=81,slow=32,SNR=5.6						
MAKZ	**Makanchi**	**6.58**	**254**	⇓Pg	**Pg**	**16 41 19.8**	**-2.9**
	1.5nm,0.6s						
MAKZ				⇑Lg	Lg	16 42 44.6	
	8.4nm,0.9s						
KURK	**Kurchatov**	**8.32**	**287**	⇑Lg	Lg	16 43 42.2	
	8.5nm,0.8s						

IDC 24 16:54:39.6±1.4, 5°.83S×149°.82E, h0km, mb3.3/3, mbtmp3.5/4, ML3.5/1, MS3.3/1, Error ellipse: s-maj=83.3km s-min=20.8km az=141.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.66**	**56**	Pn	Pn	16 55 23.7	-0.1
	8.8nm,0.3s,baz=198,slow=1.3,SNR=9.5						
KRVT				Sn	Sn	16 55 58.6	+1.8
	7.7nm,0.3s,baz=315,slow=20,SNR=2.3						
	55nm,0.6s						
WRA	**Warramunga Arr**	**20.58**	**226**	P	P	16 59 21.1	+0.7
	1.5nm,0.6s,baz=51,slow=11,SNR=17						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**23.44**	**219**	P	P	16 59 50.2	-0.6
	0.5nm,0.9s,baz=56,slow=9.5,SNR=14						
	0.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**26.57**	**241**	P	P	17 00 19.6	0.0
	0.5nm,0.5s,baz=61,slow=10,SNR=1.0						
	0.5nm,0.5s						
URZ	**Urewera**	**40.69**	**146**	LR	LR	17 19 27.3	
	comp=Z,40nm,18.8s,baz=18,slow=37						
TORD	**Torodi Ar. Bea**	**147.76**	**285**	PKPbc	PKPbc	17 14 26.9	-0.7
	0.2nm,0.4s,baz=83,slow=2.1,SNR=2.8						

*RSNC **24** 17:08:41.2±1.4, 6°.97N×76°.26W, h0km±3km, ML3.2, Mw3.9*
*IDC **24** 17:08:42.5±2.2, 2°.30N×75°.57W, h0km, mbtmp3.9/1, ML2.4/1, Error ellipse: s-maj=125.8km s-min=21.6km az=119.0*
ISC 24 17:08:40.3±0.9, 6°.95N±0°.02×76°.26W±0°.03, h7km±6km, n31, σ1s65/56, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.08**	**39**	⇑*i*P	**Pg**	**17 08 42.4**	**-0.1**
DBBC				*e*S	**Sg**	**17 08 44.5**	**+0.6**
DBBC				*i*		17 08 45.6	
	comp=Z,15μm,0.7s						
HELC	**Santa Helena**	**1.05**	**136**	*e*P	**Pg**	**17 08 58.5**	**-2.1**
HELC				*e*S	**Sg**	**17 09 13.2**	**-1.1**
HELC				*i*		17 09 17.1	
	comp=Z,291nm,0.3s						
UREC	**San Jos de Ur**	**1.07**	**42**	*e*P	**Pg**	**17 09 00.6**	**-0.4**
UREC				*e*S	**Sb**	**17 09 16.0**	**+0.5**
UREC				*i*		17 09 18.6	
	comp=Z,934nm,0.3s						
CBOC	**Ciudad Bolivar**	**1.11**	**167**	*e*P	**Pg**	**17 09 00.3**	**-1.4**
CBOC				*e*S	**Sg**	**17 09 17.2**	**+1.0**
CBOC				*i*		17 09 18.9	
	comp=Z,442nm,0.3s						
SOLC	**Bahia Solano**	**1.35**	**238**	*e*P	**Pn**	**17 09 06.0**	**+0.4**
SOLC				*e*S	**Sg**	**17 09 24.8**	**+0.9**
ZARC	**Zaragoza, Cauc**	**1.49**	**69**	⇑*i*P	**Pn**	**17 09 06.9**	**-0.6**
ZARC				*e*S	**Sn**	**17 09 27.5**	**+0.2**
ZARC				*i*		17 09 33.0	
	comp=Z,485nm,0.4s						
PTAC	**Punta Arlita,**	**1.55**	**277**	*e*P	**Pn**	**17 09 07.7**	**-0.6**
PTAC				*e*S	**Sb**	**17 09 29.5**	**+0.3**
PTAC				*i*		17 09 33.0	
	comp=Z,163nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.84**	**103**	*e*P	**Pn**	**17 09 12.3**	**0.0**
PTBC				*e*S	**Sn**	**17 09 36.8**	**+1.0**
PTBC				*i*		17 09 42.4	
	comp=Z,445nm,0.6s						
LCBC	**Los crdobas,**	**1.89**	**357**	*e*P	**Pn**	**17 09 13.6**	**+0.5**
LCBC				*e*S	**Sn**	**17 09 37.8**	**+0.6**
LCBC				*i*		17 09 51.6	
	comp=Z,76nm,0.4s						
GUY2C	**Guyana, Caldas**	**1.94**	**153**	*e*P	**Pn**	**17 09 14.4**	**+0.3**
GUY2C				*e*S	**Sb**	**17 09 41.5**	**+0.7**
GUY2C				*i*		17 09 47.1	
	comp=Z,235nm,0.6s						
NORC	**Norcasia**	**1.96**	**135**	*e*P	**Pn**	**17 09 14.4**	**+0.5**
NORC				*e*S	**Sn**	**17 09 38.9**	**0.0**
NORC				*i*		17 09 44.2	
	comp=Z,294nm,0.4s						
CAPC	**Capurgana**	**1.99**	**327**	*e*P	**Pn**	**17 09 15.3**	**+0.9**
CAPC				*e*S	**Sn**	**17 09 40.5**	**+0.9**
CAPC				*i*		17 09 50.9	
	comp=Z,96nm,0.4s						
PLMC	**San Jos del P**	**2.04**	**181**	*e*P	**Pn**	**17 09 16.7**	**+1.6**
PLMC				*e*S	**Sg**	**17 09 47.4**	**+1.5**
PLMC				*i*		17 09 56.3	
	comp=Z,137nm,0.7s						
SPBC	**San Pablo de B**	**2.53**	**121**	*e*P	**Pn**	**17 09 23.9**	**+1.9**
SPBC				*e*S	**Sb**	**17 09 57.2**	**-0.3**
SPBC				*i*		17 10 07.2	
	comp=Z,153nm,0.8s						
BRRC	**Barranca, Sant**	**2.53**	**86**	*e*P	**Pn**	**17 09 23.8**	**+1.9**
BRRC				*e*S	**Sb**	**17 09 57.3**	**-0.3**
BRRC				*i*		17 10 06.4	
	comp=Z,125nm,0.5s						
ANIL	**Santa Ana**	**2.59**	**161**	*e*P	**Pb**	**17 09 26.1**	**-1.2**
ANIL				*e*S	**Sg**	**17 10 04.6**	**+0.9**
ANIL				*i*		17 10 18.9	
	comp=Z,99nm,0.5s						
ROSC	**El Rosal**	**2.85**	**137**	Pn	**Pn**	**17 09 29.5**	**+2.8**
	comp=Z,13nm,0.3s,baz=270,slow=2.0,SNR=7.5						
ROSC				Lg	Lg	17 10 12.2	
	comp=Z,20nm,0.3s,baz=205,slow=20,SNR=6.1						
	comp=Z,40nm,0.4s						
ROSC	**El Rosal**	**2.85**	**137**	*e*P	**Pb**	**17 09 31.2**	**-0.6**
ROSC				*e*S	**Sg**	**17 10 10.6**	**-1.5**
ROSC				*i*		17 10 16.8	
	comp=Z,83nm,0.6s						
YOTC	**Yotoco, Valle**	**2.95**	**182**	*e*P	**Pn**	**17 09 28.2**	**+0.4**
YOTC				*e*S	**Sb**	**17 10 08.9**	**-0.8**
YOTC				*i*		17 10 14.2	
	comp=Z,30nm,0.5s						
BARC	**Barichara**	**3.08**	**97**	*e*P	**Pn**	**17 09 31.9**	**+2.2**
BARC				*e*S	**Sb**	**17 10 12.3**	**-1.1**
OCAC	**Ocana**	**3.18**	**66**	*e*S	**Sn**	**17 10 10.4**	**+1.1**
RUSC

explosion
ISC 24 17:11:03.9±0.5, 51.50N±0.02×16.05E±0.02, h0km, n167, σ2s39/266, mb3.7/8, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**167**	*i* Pg	**Pb**	**17 11 18.5**	**-0.1**
KSP				*e*		17 11 25.5	
KSP				*e*Sg	**Sb**	**17 11 27.8**	**-0.7**
KSP	**Ksiaz**	**0.68**	**167**	*e*Pg	**Pb**	**17 11 18.5**	**-0.1**
KSP	**Ksiaz**	**0.68**	**167**	Pg	**Pb**	**17 11 18.4**	**-0.1**
CHVC	**Chvalec**	**0.92**	**180**	*e*PG	**Pb**	**17 11 23.4**	**+0.7**
CHVC	**Chvalec**	**0.92**	**180**	Pg	**Pb**	**17 11 23.3**	**+0.6**
OSTC	**Ostas**	**0.95**	**174**	*e*PG	**Pn**	**17 11 24.4**	**-0.2**
OSTC				*e*SG	**Sb**	**17 11 36.9**	**+0.4**
OSTC	**Ostas**	**0.95**	**174**	Pg	**Pb**	**17 11 23.9**	**+0.6**
UPC	**Upice**	**1.00**	**181**	*e*PG	**Pb**	**17 11 24.9**	**+0.9**
UPC				*e*SG	**Sb**	**17 11 38.2**	**+0.5**
	comp=Z,420nm,0.5s						
UPC	**Upice**	**1.00**	**181**	Pg	**Pb**	**17 11 24.5**	**+0.5**
DPC	**Dobruska-Polom**	**1.17**	**171**	*e*PG	**Pb**	**17 11 27.6**	**+0.6**
DPC				*e*SG	**Sb**	**17 11 43.0**	**+0.3**
DPC	**Dobruska-Polom**	**1.17**	**171**	*e*Pg	**Pb**	**17 11 27.4**	**+0.4**
DPC				*e*Sg	**Sb**	**17 11 43.3**	**+0.6**
PVCC	**Panska Ves**	**1.35**	**224**	*e*PG	**Pb**	**17 11 32.0**	**+1.9**
PVCC				*e*SG	**Sn**	**17 11 51.1**	**+2.5**
	comp=Z,834nm,0.8s						
BRG	**Berggiesshubel**	**1.47**	**245**	Pn	**Pb**	**17 11 32.8**	**+0.8**
BRG				Pg	**Pg**	**17 11 34.5**	**+2.5**
BRG				Sg	**Sn**	**17 11 54.7**	**+3.2**
BRG				Amp		17 11 55.5	
	comp=Z,337nm,0.4s						
BRG	**Berggiesshubel**	**1.47**	**245**	*e*Pn	**Pb**	**17 11 32.8**	**+0.8**
BRG				*e*Pg	**Pg**	**17 11 34.4**	**+2.4**
BRG				*e*Sg	**Sn**	**17 11 54.3**	**+2.8**
KRLC	**Kraliky**	**1.50**	**162**	*e*PG	**Pb**	**17 11 33.0**	**+0.3**
KRLC				*e*SG	**Sn**	**17 11 53.8**	**+1.3**
	comp=Z,1μm,1.3s						
RUE	**Ruedersdorf**	**1.71**	**306**	*e*P	**Pb**	**17 11 35.9**	**-0.3**
RUE				*e*S	**Sg**	**17 12 03.6**	**+4.8**
RUE	**Ruedersdorf**	**1.71**	**306**	Pn	**Pb**	**17 11 36.2**	**0.0**
FBE	**Freiberg**	**1.79**	**252**	*e*Pn	**Pg**	**17 11 39.2**	**+1.0**
FBE				*e*Sg	**Sg**	**17 12 04.6**	**+3.2**
PRU	**Pruhonice**	**1.79**	**213**	*e*PN	**Pb**	**17 11 37.5**	**-0.1**
PRU				*e*PG	**Pg**	**17 11 39.2**	**+1.0**
PRU				*e*SG	**Sg**	**17 12 04.8**	**+3.4**
	comp=Z,162nm,0.4s						
GKP	**Gorka Klasztor**	**1.91**	**22**	*e*P	**Pg**	**17 11 44.1**	**+3.5**
CLL	**Collm**	**1.92**	**265**	*e*Pn	**Pb**	**17 11 39.0**	**-0.7**
CLL				*e*Pg	**Pg**	**17 11 43.0**	**+2.4**
CLL				*i* x	x	17 11 45.5	
CLL				*i* x	x	17 11 46.7	
CLL				*e*Sg	**Sg**	**17 12 08.0**	**+2.6**
	comp=Z,159nm,0.6s						
CLL	**Collm**	**1.92**	**265**	*e*Pn	**Pb**	**17 11 39.2**	**-0.5**
RAC	**Raciborz**	**1.97**	**135**	*e*PG	**Pg**	**17 11 42.4**	**+0.8**
RAC				*e*SG	**Sg**	**17 12 08.5**	**+1.4**
MORC	**Moravsky Berou** baz=334	**1.97**	**151**	*e*Pn	**Pn**	**17 11 39.2**	**+0.6**
MORC				*e*Sg	**Sb**	**17 12 06.6**	**+0.8**
	comp=Z,490nm,1.3s,baz=334						
MORC	**Moravsky Berou**	**1.97**	**151**	*e*PN	**Pn**	**17 11 39.2**	**+0.6**
MORC				*e*SG	**Sb**	**17 12 06.7**	**+0.9**
MORC	**Moravsky Berou**	**1.97**	**151**	*e*Pn	**Pn**	**17 11 39.4**	**+0.8**
OKC	**Ostrava-Krasne**	**2.14**	**140**	*e*PN	**Pn**	**17 11 41.1**	**+0.3**
OKC				*e*PG	**Pg**	**17 11 45.4**	**+0.6**
OKC				*e*SG	**Sg**	**17 12 12.3**	**-0.2**
	comp=Z,413nm,0.8s						
OKC	**Ostrava-Krasne**	**2.14**	**140**	*e*Pn	**Pn**	**17 11 42.1**	**+1.3**
VRAC	**Vranov**	**2.23**	**171**	Pn	**Pb**	**17 11 44.0**	**-1.0**
	comp=Z,8.5nm,0.3s,baz=348,slow=16,SNR=28						
VRAC				Lg	Lg	17 12 15.5	
	comp=Z,18nm,0.3s,baz=264,slow=21,SNR=12						
	comp=Z,34nm,0.5s						
VRAC	**Vranov** baz=353	**2.23**	**171**	*e*Pn	**Pn**	**17 11 43.1**	**+1.1**
VRAC				*e*Sg	**Sb**	**17 12 14.8**	**+1.7**
	comp=Z,374nm,1.1s,baz=353						
VRAC	**Vranov**	**2.23**	**171**	*e*PN	**Pn**	**17 11 43.1**	**+1.1**
VRAC				*e*SG	**Sg**	**17 12 14.9**	**-0.4**
TREC	**Trest**	**2.24**	**189**	*e*SG	**Sg**	**17 12 17.0**	**+1.2**
KRUC	**Moravsky** baz=357	**2.45**	**175**	*e*Pn	**Pn**	**17 11 46.4**	**+1.2**
KRUC	**Moravsky** baz=357	**2.45**	**175**	*e*Pg	**Pb**	**17 11 50.3**	**+1.4**
KRUC				*e*Sg	**Sg**	**17 12 22.3**	**-0.4**
	comp=Z,376nm,1.7s,baz=357						
KRUC	**Moravsky**	**2.45**	**175**	*e*PN	**Pn**	**17 11 46.4**	**+1.2**
KRUC				*e*PG	**Pb**	**17 11 50.3**	**+1.4**
KRUC				*e*SG	**Sg**	**17 12 22.4**	**-0.3**
TANN	**Tannenbergstha**	**2.52**	**246**	*e*Pn	**Pn**	**17 11 47.8**	**+1.7**
TANN				*e*Pg	**Pg**	**17 11 54.8**	**+2.7**
WERD	**Werda**	**2.59**	**247**	*e*Pn	**Pn**	**17 11 49.0**	**+1.9**
WERD				*e*Pg	**Pg**	**17 11 56.6**	**+3.1**
WERD				*e*Sg	**Sg**	**17 12 31.2**	**+4.2**
OJC	**Ojcow**	**2.70**	**117**	*e*Pn	**Pn**	**17 11 46.9**	**-1.7**
OJC				*e*Pg	**Pg**	**17 11 55.4**	**-0.2**
OJC				*i* Sg	**Sg**	**17 12 31.0**	**+0.3**
OJC	**Ojcow**	**2.70**	**117**	*e*Pn	**Pn**	**17 11 47.5**	**-1.1**
JAVC	**Velka Javorina**	**2.84**	**158**	*e*PN	**Pn**	**17 11 51.8**	**+1.2**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**17 11 52.0**	**+1.3**
KHC				*e*PG	**Pg**	**17 11 58.6**	**0.0**
KHC				*e*SN	**Sn**	**17 12 26.6**	**+0.8**
KHC				*e*SG	**Sg**	**17 12 36.2**	**+0.7**
	comp=Z,99nm,0.6s						
CKRC	**Cesky Krumlov**	**2.91**	**203**	*e*PG	**Pg**	**17 11 59.4**	**-0.2**
CKRC				*e*SG	**Sg**	**17 12 38.3**	**+1.0**
MOX	**Moxa**	**2.92**	**255**	*e*Pn	**Pn**	**17 11 53.2**	**+1.5**
MOX				*e*Pg	**Pg**	**17 12 02.3**	**+2.4**
MOX				*e*Sg	**Sg**	**17 12 41.4**	**+3.7**
GEC2	**GERESS Array S**	**3.06**	**210**	*e*Pn	**Pn**	**17 11 55.5**	**+2.0**
GERES	**GERESS Array B**	**3.06**	**210**	Pn	**Pn**	**17 11 55.5**	**+2.0**
	comp=Z,6.8nm,0.3s,baz=32,slow=12,SNR=149						
GERES				Pg	**Pg**	**17 12 02.4**	**0.0**
	comp=Z,16nm,0.3s,baz=27,slow=18,SNR=40						
GERES				Lg	Lg	17 12 41.6	
	comp=Z,19nm,0.3s,baz=32,slow=26,SNR=8.0						
	comp=Z,13nm,0.4s						
WET	**Wettzell**	**3.11**	**222**	*e*Pn	**Pn**	**17 11 56.0**	**+1.8**
LANS	**Liptovska Anna**	**3.22**	**136**	*e*PN	**Pn**	**17 11 57.3**	**+1.6**
LANS				*e*PG	**Pg**	**17 12 06.6**	**+1.1**
LANS				*e*SG	**Sg**	**17 12 47.9**	**+0.7**
LANS				*e*LG	Lg	17 12 59.0	
MODS	**Modra-Piesok**	**3.23**	**165**	*e*PN	**Pn**	**17 11 58.0**	**+2.1**
MODS				*e*PG	**Pg**	**17 12 07.2**	**+1.4**
MODS				*e*SG	**Sg**	**17 12 49.5**	**+1.8**
MODS				*e*LG	Lg	17 12 59.5	
ZST	**Bratislava**	**3.38**	**168**	*e*PN	**Pn**	**17 11 59.2**	**+1.3**
ZST				*e*PG	**Pg**	**17 12 08.9**	**+0.2**
ZST				*e*SG	**Sg**	**17 12 53.4**	**+1.0**
ZST				*e*LG	Lg	17 13 08.0	
NIE	**Niedzica**	**3.43**	**126**	*e*Pn	**Pn**	**17 12 00.2**	**+1.6**
NIE				*e*Pg	**Pg**	**17 12 10.2**	**+0.6**
NIE				*e*Sg	**Sg**	**17 12 56.1**	**+2.2**
VYHS	**Vyhne**	**3.51**	**148**	*e*PN	**Pn**	**17 12 00.7**	**+1.0**
VYHS				*e*PG	**Pg**	**17 12 12.5**	**+1.4**
VYHS				*e*SG	**Sg**	**17 12 57.6**	**+1.0**
VYHS				*e*LG	Lg	17 13 07.0	
CLZ	**Clausthal**	**3.55**	**278**	*e*Pn	**Pn**	**17 12 02.4**	**+2.2**
GRF	**Grafenberg Arr**	**3.57**	**241**	*e*Pn	**Pn**	**17 12 02.2**	**+1.7**
CONA	**Conrad Observa**	**3.58**	**182**	*i* Pn	**Pn**	**17 12 02.5**	**+1.8**
	comp=Z,3.4nm,0.2s,SNR=20						
CONA				*e*Sn	**Sg**	**17 13 00.4**	**+1.5**
	comp=Z,56nm,0.4s						
RONA	**Rosalia, Austr**	**3.81**	**177**	*e*Pn	**Pn**	**17 12 05.7**	**+1.9**
	comp=Z,0.9nm,0.2s						
RONA				*e*Sn	**Sg**	**17 13 05.2**	**-1.1**
	comp=Z,19nm,0.5s						
MOA	**Moln**	**3.84**	**198**	Pn	**Pn**	**17 12 06.3**	**+2.1**
	comp=Z,12nm,0.3s,SNR=28						
MOA				*e*Sn	**Sg**	**17 13 09.3**	**+2.2**
	comp=Z,31nm,0.4s						
SOP	**Sopron**	**3.84**	**175**	P	**Pn**	**17 12 06.5**	**+2.3**
BIOA	**Bad Ischl, Aus**	**4.12**	**203**	*i* Pn	**Pn**	**17 12 10.3**	**+2.1**
	comp=Z,12nm,0.3s,SNR=21						
BIOA				*e*Sn	**Sg**	**17 13 12.8**	**-3.5**
	comp=Z,24nm,0.3s						
KECS	**Kecovo**	**4.16**	**135**	*e*PG	**Pg**	**17 12 24.3**	**+0.6**
KECS				*e*SG	**Sg**	**17 13 18.4**	**+0.8**
KECS				*e*LG	Lg	17 13 29.4	
ARSA	**Arzberg**	**4.27**	**185**	Pn	**Pn**	**17 12 13.6**	**+3.4**
	comp=Z,3.0nm,0.3s,SNR=8.4						
ARSA				*e*Sn	**Sb**	**17 13 14.8**	**+2.9**
	comp=Z,25nm,0.7s						
CRVS	**Cervenica-Dubn**	**4.34**	**125**	*e*PN	**Pn**	**17 12 10.1**	**-1.1**
CRVS				*e*PG	**Pg**	**17 12 28.3**	**+1.2**
CRVS				*e*SG	**Sg**	**17 13 24.0**	**+0.6**
CRVS				*e*LG	Lg	17 13 51.4	
PSZ	**Piszkesteto**	**4.37**	**144**	P	**Pn**	**17 12 13.7**	**+2.1**
LUNU	**Lund**	**4.42**	**340**	P	**Pn**	**17 12 12.0**	**-0.1**
LUNU				*i* P	**Pn**	**17 12 12.0**	**-0.1**
LUNU				*e*S	**Sn**	**17 13 01.2**	**-3.0**
LUNU				S	**Sn**	**17 13 02.3**	**-1.9**
LUNU	**Lund**	**4.42**	**340**	P	**Pn**	**17 12 12.0**	**-0.1**
LUNU				S	**Sn**	**17 13 02.3**	**-1.9**
MPLH	**Magyarpolny**	**4.45**	**167**	P	**Pn**	**17 12 14.9**	**+2.3**
KOLS	**Kolonicke sedl**	**4.75**	**120**	*e*PN	**Pn**	**17 12 17.4**	**+0.6**
KOLS				*e*PG	**Pg**	**17 12 35.5**	**+0.5**
KOLS				*e*SG	**Sg**	**17 13 36.7**	**+0.2**
KOLS				*e*LG	Lg	17 14 05.1	
KBA	**Koelnbreinsper**	**4.77**	**203**	Pn	**Pn**	**17 12 19.7**	**+2.5**
	comp=Z,14nm,0.4s,SNR=19						
KBA				*e*Sn	**Sg**	**17 13 36.7**	**-0.3**
	comp=Z,15nm,0.5s						
BLEU	**Blekinge**	**4.81**	**358**	*e*P	**Pn**	**17 12 18.2**	**+0.7**
BLEU				P	**Pn**	**17 12 18.4**	**+0.8**
BLEU				S	**Sn**	**17 13 10.2**	**-3.7**
BLEU				*e*S	**Sn**	**17 13 12.0**	**-1.9**
BLEU	**Blekinge**	**4.81**	**358**	P	**Pn**	**17 12 18.4**	**+0.8**
BLEU				S	**Sn**	**17 13 10.2**	**-3.7**
SOKA	**Soboth**	**4.88**	**188**	Pn	**Pn**	**17 12 20.9**	**+2.4**
	comp=Z,2.3nm,0.4s,SNR=4.7						
SOKA				*e*Sn	**Sb**	**17 13 35.4**	**+6.1**
	comp=Z,2.4nm,0.4s						
BJUU	**Bjuv**	**4.92**	**340**	*e*P	**Pn**	**17 12 17.6**	**-1.4**
BJUU				P	**Pn**	**17 12 18.5**	**-0.5**
BJUU				*e*S	**Sn**	**17 13 10.8**	**-5.7**
BJUU	**Bjuv**	**4.92**	**340**	P	**Pn**	**17 12 18.5**	**-0.5**
WATA	**Walderalm**	**5.09**	**217**	Pn	**Pn**	**17 12 24.8**	**+3.2**
	comp=Z,4.7nm,0.4s,SNR=6.0						
WATA				*e*Sn	**Sg**	**17 13 44.9**	**-2.4**
	comp=Z,19nm,0.5s						
OBKA	**Obir**	**5.09**	**192**	*e*Pn	**Pn**	**17 12 22.9**	**+1.3**
	comp=Z,0.5nm,0.2s						
OBKA				*e*Sn	**Sg**	**17 13 47.2**	**-0.2**
	comp=Z,16nm,0.7s						
MYKA	**Terra Mystica**	**5.13**	**199**	*e*Pn	**Pn**	**17 12 17.9**	**-4.1**
	comp=Z,0.6nm,0.2s						
MYKA				*e*Sn	**Sg**	**17 13 51.2**	**+2.7**
	comp=Z,18nm,0.7s						
WTTA	**Wattenberg**	**5.13**	**216**	Pn	**Pn**	**17 12 25.3**	**+3.2**
	comp=Z,3.0nm,0.3s,SNR=4.4						
WTTA				*e*Sn	**Sg**	**17 13 50.9**	**+2.4**
	comp=Z,19nm,0.5s						
DEL	**Delary**	**5.14**	**346**	*i* P	**Pn**	**17 12 21.0**	**-1.0**
DEL				P	**Pn**	**17 12 22.1**	**+0.1**
DEL				*e*S	**Sn**	**17 13 18.0**	**-4.0**
DEL	**Delary**	**5.14**	**346**	P	**Pn**	**17 12 22.1**	**+0.1**
MOTA	**Moosalm**	**5.26**	**220**	Pn	**Pn**	**17 12 26.1**	**+2.2**
	comp=Z,6.8nm,0.4s,SNR=5.6						
MOTA				*e*Sn	**Sg**	**17 13 53.8**	**+0.8**
	comp=Z,21nm,0.9s						
RETA	**Reutte**	**5.29**	**223**	*e*Pn	**Pn**	**17 12 26.2**	**+2.0**
	comp=Z,2.1nm,0.2s						
RETA				*e*Sn	**Sg**	**17 13 55.7**	**+1.9**
	comp=Z,54nm,0.8s						
ABTA	**Abfaltersbach**	**5.29**	**207**	Pn	**Pn**	**17 12 27.2**	**+3.0**
	comp=Z,2.6nm,0.4s,SNR=11						
ABTA				*e*Sn	**Sg**	**17 13 53.0**	**-0.9**
	comp=Z,17nm,0.6s						
SQTA	**Sankt Quirin**	**5.33**	**218**	*i* Pn	**Pn**	**17 12 28.2**	**+3.5**
	comp=Z,8.4nm,0.4s,SNR=5.9						
SQTA				*e*Sn	**Sg**	**17 13 57.6**	**+2.7**
	comp=Z,9.6nm,0.4s						
VXJU	**Vaexsjoe**	**5.47**	**354**	P	**Pn**	**17 12 26.7**	**+0.2**
VXJU	**Vaexsjoe**	**5.47**	**354**	*e*Pn	**Pn**	**17 12 26.7**	**+0.2**
MORH	**Mrgy, Hungar**	**5.56**	**161**	P	**Pn**	**17 12 29.3**	**+1.5**
KOVH	**Kovagotottos**	**5.59**	**165**	P	**Pn**	**17 12 30.7**	**+2.5**
FETA	**Feichten**	**5.68**	**220**	*i* Pn	**Pn**	**17 12 32.1**	**+2.5**
	comp=Z,2.0nm,0.4s,SNR=5.2						
FETA				*e*Sn	**Sg**	**17 14 06.5**	**+0.3**
	comp=Z,3.3nm,0.4s						
PBUR	**Paburge**	**5.72**	**35**	*e*P	**Pn**	**17 12 34.4**	**+4.5**
PBUR				IAML		17 14 33.5	
	comp=Z,23nm,0.6s						
BYXU	**Byxelkrok**	**5.83**	**5**	P	**Pn**	**17 12 32.6**	**+1.1**
BYXU	**Byxelkrok**	**5.83**	**5**	P	**Pn**	**17 12 32.6**	**+1.1**
DAVA	**Damuels**	**5.83**	**226**	*e*Pn	**Pn**	**17 12 32.8**	**+1.1**
	comp=Z,2.6nm,0.4s						
DAVA				*e*Sn	**Sn**	**17 13 44.7**	**+5.4**
	comp=Z,16nm,0.5s						
FABU	**Falkenberg**	**5.84**	**342**	*e*P	**Pn**	**17 12 31.3**	**-0.3**
FABU				P	**Pn**	**17 12 31.7**	**0.0**
FABU				*e*S	**Sn**	**17 13 33.5**	**-5.8**
FABU	**Falkenberg**	**5.84**	**342**	P	**Pn**	**17 12 31.7**	**0.0**
PABE	**Paberze**	**6.20**	**47**	*e*P	**Pn**	**17 12 37.3**	**+0.7**
PABE				IAML		17 14 34.7	
	comp=Z,16nm,0.7s						
DAVOX	**Davos/Dischmat**	**6.22**	**223**	Pn	**Pn**	**17 12 39.9**	**+2.8**
	comp=Z,1.2nm,0.3s,baz=27,slow=11,SNR=11						
DAVOX				Lg	Lg	17 14 20.1	
	comp=Z,1.0nm,0.3s,baz=197,slow=7.8,SNR=4.1						
	comp=Z,3.8nm,0.5s						
CDF	**Champ du Feu**	**6.45**	**245**	*e*Pn	**Pn**	**17 12 41.6**	**+1.5**
CDF	**Champ du Feu**	**6.45**	**245**	*e*Pg	**Pg**	**17 13 05.9**	**-1.5**
CDF				*e*Sg	**Sg**	**17 14 27.8**	**-3.1**
	comp=Z,628nm,1.9s						
HINF	**Hinteralfeld**	**7.01**	**242**	*e*Pn	**Pn**	**17 12 46.2**	**-1.7**
HINF	**Hinteralfeld**	**7.01**	**242**	*e*Pg	**Pg**	**17 13 15.3**	**-2.9**
HINF				*e*Sg	**Sg**	**17 14 43.3**	**-5.8**
	comp=Z,20nm,0.7s						
SLIT	**Slitere, Latvi**	**7.13**	**28**	*e*P	**Pn**	**17 12 50.0**	**+0.7**
HAU	**Haudompre**	**7.19**	**245**	*e*Pn	**Pn**	**17 12 50.7**	**+0.4**
HAU	**Haudompre**	**7.19**	**245**	*e*Pg	**Pg**	**17 13 19.0**	**-2.6**
HAU				*e*Sg	**Sg**	**17 14 49.3**	**-5.4**
GIVF	**Givet**	**7.25**	**263**	*e*Pn	**Pn**	**17 12 51.5**	**+0.5**
GIVF				*e*Sg	**Sg**	**17 14 52.1**	**-4.5**
	comp=Z,6.7nm,0.3s						
PAGF	**Fort de Pagny**	**7.27**	**250**	*e*Pn	**Pn**	**17 12 52.9**	**+1.5**
PAGF	**Fort de Pagny**	**7.27**	**250**	*e*Pg	**Pg**	**17 13 20.6**	**-2.6**
PAGF				*e*Sg	**Sg**	**17 14 51.1**	**-6.2**
	comp=Z,57nm,0.8s						
MI28	**Mi28,Pidlybu**	**7.33**	**90**	Pn	**Pn**	**17 12 51.6**	**-0.4**
MI28				pP	Pb	17 12 52.4	-19
MI29	**MI29, Kamyanyy**	**7.54**	**94**	Pn	**Pn**	**17 12 56.1**	**+1.2**
MI29				pP	Pb	17 12 56.9	-18
SAVF	**Savonnieres en**	**7.60**	**252**	*e*Pn	**Pn**	**17 12 56.5**	**+0.7**
SAVF	**Savonnieres en**	**7.60**	**252**	*e*Pg	**Pg**	**17 13 27.0**	**-2.4**
SAVF				*e*Sg	**Sg**	**17 15 03.4**	**-4.4**
	comp=Z,6.0nm,0.5s						
LUBAR	**Lubar, Ukraine**	**7.60**	**97**	Pn	**Pn**	**17 12 55.6**	**-0.3**
LUBAR				pP	**Pn**	**17 12 56.7**	**+0.8**
MEZF	**Maizieres J'vi**	**7.70**	**251**	*e*Sg	**Sg**	**17 15 06.9**	**-3.9**
	comp=Z,30nm,0.6s						
SFTF	**Sexfontaines**	**7.84**	**249**	*e*Pn	**Pn**	**17 13 00.0**	**+0.8**
SFTF	**Sexfontaines**	**7.84**	**249**	*e*Pg	**Pg**	**17 13 31.7**	**-2.4**
SFTF				*e*Sg	**Sg**	**17 15 10.9**	**-4.7**
	comp=Z,8.8nm,0.4s						
CABF	**La Chapelle**	**8.17**	**237**	*e*Pn	**Pn**	**17 13 04.3**	**+0.6**
CABF	**La Chapelle**	**8.17**	**237**	*e*Pg	**Pg**	**17 13 37.7**	**-2.6**
CABF				*e*Sg	**Sg**	**17 15 20.6**	**-5.4**
	comp=Z,201nm,1.3s						
AK22	**Malin Array Si**	**8.23**	**90**	Pn	**Pn**	**17 13 03.8**	**-0.6**
AK17	**Malin Array Si**	**8.23**	**91**	Pn	**Pn**	**17 13 03.7**	**-0.8**
AK13	**Malin Array Si**	**8.25**	**91**	Pn	**Pn**	**17 13 03.9**	**-0.8**
AK14	**Malin Array Si**	**8.28**	**91**	Pn	**Pn**	**17 13 04.2**	**-0.9**
AK11	**Malin Array Si**	**8.30**	**91**	Pn	**Pn**	**17 13 04.7**	**-0.8**
AK03	**Malin Array Si**	**8.33**	**90**	Pn	**Pn**	**17 13 05.0**	**-0.8**
AK01	**Malin Array Si**	**8.33**	**90**	Pn	**Pn**	**17 13 05.2**	**-0.6**
AK02	**Malin Array Si**	**8.33**	**91**	Pn	**Pn**	**17 13 05.1**	**-0.8**
AKASG	**Malin Array Be**	**8.34**	**90**	Pn	**Pn**	**17 13 05.2**	**-0.7**
	comp=Z,3.0nm,0.3s,baz=281,slow=12,SNR=14						
AKASG				Sn	**Sn**	**17 14 36.2**	**-4.4**
	comp=Z,1.6nm,0.3s,baz=268,slow=24,SNR=5.9						
AKASG				Lg	Lg	17 15 32.9	
	comp=Z,0.5nm,0.3s,baz=273,slow=26,SNR=5.1						
	comp=Z,2.3nm,0.5s						
AKBB	**Malin Array Si**	**8.34**	**90**	Pn	**Pn**	**17 13 05.2**	**-0.7**
LPL	**La Plagne**	**8.61**	**230**	*e*Pn	**Pn**	**17 13 09.7**	**-0.1**
LPL	**La Plagne**	**8.61**	**230**	*e*Pg	Pg	17 13 43.0	-5.7
LPL				*e*Sg	**Sg**	**17 15 35.8**	**-4.3**
	comp=Z,7.2nm,0.5s						
LPG	**La Plagne**	**8.61**	**229**	*e*Pn	**Pn**	**17 13 09.3**	**-0.7**
LPG	**La Plagne**	**8.61**	**229**	*e*Pg	**Pg**	**17 13 44.6**	**-4.1**
LPG				*e*Sg	**Sg**	**17 15 32.2**	**-8.0**
	comp=Z,21nm,0.8s						
HFS	**Hagfors**	**8.75**	**352**	Pn	**Pn**	**17 13 11.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=160,slow=14,SNR=6.6						
HFS				Sn	**Sn**	**17 14 47.6**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=171,slow=23,SNR=2.9						
HFS				Lg	Lg	17 15 43.7	
	baz=173,slow=28						
	comp=Z,1.0nm,0.4s						
LOR	**Lormes** baz=69	**9.01**	**247**	*e*Pn	**Pn**	**17 13 14.9**	**-0.2**
LOR	**Lormes**	**9.01**	**247**	*e*Pg	Pn	17 13 51.4	+36
LOR				*e*Sn	**Sn**	**17 14 51.3**	**-5.9**
LOR				*e*Sg		17 15 46.0	
	comp=Z,10nm,0.6s						
MBDF	**Montbardon**	**9.18**	**226**	*e*Pn	**Pn**	**17 13 16.9**	**-0.8**
MBDF				*e*Sg	Sn	17 15 52.0	+50
	comp=Z,5.3nm,0.6s						
VSU	**Vasula**	**9.28**	**37**	*e*P	**Pn**	**17 13 21.6**	**+2.7**
SSF	**Saint Saulge**	**9.32**	**246**	*e*Pn	**Pn**	**17 13 18.8**	**-0.6**
SSF				*e*Sn	**Sn**	**17 14 59.1**	**-5.8**
SSF				*e*Sg		17 15 57.3	
	comp=Z,1.6nm,0.3s						
SMF	**Signal de Mont**	**9.37**	**244**	*e*Pn	**Pn**	**17 13 20.6**	**+0.5**
SMF				*e*Sg	Sn	17 15 58.6	+53
	comp=Z,10nm,0.5s						
ORIF	**Oris-en-Rattie**	**9.45**	**230**	*e*Pn	**Pn**	**17 13 21.6**	**+0.3**
ORIF				*e*Sg	Sn	17 16 02.0	+54
	comp=Z,67nm,1.3s						
AVF	**Avril sur Loir**	**9.56**	**245**	*e*Pn	**Pn**	**17 13 21.4**	**-1.3**
AVF	**Avril sur Loir**	**9.56**	**245**	*e*Pg	Pn	17 14 03.5	+41
AVF				*e*Sn	**Sn**	**17 15 02.4**	**-8.3**
AVF				*e*Sg		17 16 06.0	
	comp=Z,8.7nm,0.6s						
SBF	**Sospel**	**9.59**	**221**	*e*Pn	**Pn**	**17 13 24.6**	**+1.4**
MEF	**Metsahovi**	**9.91**	**25**	*e*P	**Pn**	**17 13 28.4**	**+1.0**
MEF				*e*S	**Sn**	**17 15 15.1**	**-4.0**
NOA	**NORSAR Array B** baz=225,slow=18,SNR=5.7	**9.93**	**346**	Pn	**Pn**	**17 13 26.1**	**-1.6**
NOA				Sn	**Sn**	**17 15 16.4**	**-3.4**
	baz=282,slow=19,SNR=1.7						
NOA				Lg	Lg	17 16 22.2	
	baz=283,slow=17,SNR=1.6						
	comp=Z,0.5nm,0.7s						
BGF	**Bois d'Agland**	**9.98**	**245**	*e*Pn	**Pn**	**17 13 28.1**	**-0.3**
BGF				*e*Sn	**Sn**	**17 15 13.5**	**-7.5**
BGF				*e*Sg		17 16 19.7	
	comp=Z,8.4nm,0.5s						
RAF	**Rauma**	**10.05**	**16**	*e*P	**Pn**	**17 13 29.8**	**+0.4**
VIVF	**Saint-Julien-l**	**10.09**	**233**	*e*Pn	**Pn**	**17 13 29.6**	**-0.4**
VIVF				*e*Sn	**Sn**	**17 15 15.9**	**-7.9**
VIVF				*e*Sg		17 16 23.5	
	comp=Z,2.1nm,0.4s						
SMRF	**Simiane la Rot**	**10.31**	**227**	*e*Pn	**Pn**	**17 13 32.4**	**-0.6**
SMRF				*e*Sg	Sn	17 16 24.7	+55
	comp=Z,3.3nm,0.4s						
LMR	**La Mourre**	**10.41**	**222**	*e*Pn	**Pn**	**17 13 32.8**	**-1.5**
TCF	**Toulx Ste Croi**	**10.49**	**246**	*e*Pn	**Pn**	**17 13 35.4**	**-0.1**
TCF	**Toulx Ste Croi**	**10.49**	**246**	*

CAPC	**Capurgana**	**2.01**	**327**	*eP*		**Pb**	**17 18 06.7**	**-1.0**
CAPC				*eS*		**Sb**	**17 18 32.4**	**-0.6**
CAPC				*i*			17 18 41.7	
	comp=Z,150nm,0.4s							
PLMC	**San Jos del P**	**2.02**	**181**	*eP*		**Pb**	**17 18 07.3**	**-0.7**
PLMC				*eS*		**Sb**	**17 18 34.3**	**+0.8**
PLMC				*i*			17 18 44.1	
	comp=Z,574nm,0.5s							
SPBC	**San Pablo de B**	**2.51**	**121**	*eP*		**Pb**	**17 18 14.8**	**-1.4**
SPBC				*eS*		**Sb**	**17 18 48.3**	**+0.9**
SPBC				*i*			17 18 54.8	
	comp=Z,158nm,0.4s							
BRRC	**Barranca, Sant**	**2.51**	**86**	*eP*		**Pb**	**17 18 14.5**	**-1.8**
BRRC				*eS*		**Sb**	**17 18 47.1**	**-0.5**
BRRC				*i*			17 18 57.5	
	comp=Z,218nm,0.5s							
ANIL	**Santa Ana**	**2.57**	**161**	*eP*		**Pb**	**17 18 16.8**	**-0.7**
ANIL				*eS*		**Sg**	**17 18 52.1**	**-1.4**
ANIL				*i*			17 19 04.7	
	comp=Z,377nm,0.4s							
ROSC	**El Rosal**	**2.83**	**137**	Pn		**Pb**	**17 18 21.3**	**-0.7**
	comp=Z,31nm,0.3s,baz=137,slow=18,SNR=14							
ROSC				Sn		**Sg**	**17 19 00.0**	**-1.8**
	comp=Z,26nm,0.3s,baz=350,slow=23,SNR=7.3							
	comp=Z,111nm,0.5s							
YOTC	**Yotoco, Valle**	**2.94**	**182**	*eP*		**Pn**	**17 18 18.3**	**+0.2**
YOTC				*eS*		**Sn**	**17 18 54.5**	**+0.7**
YOTC				*i*			17 19 05.3	
	comp=Z,79nm,0.5s							
BARC	**Barichara**	**3.06**	**96**	*eP*		**Pb**	**17 18 22.7**	**-3.0**
BARC				*eS*		**Sb**	**17 19 00.0**	**-3.3**
MALC	**Bahia Malaga**	**3.11**	**201**	*eP*		**Pb**	**17 18 26.4**	**0.0**
MALC				*eS*		**Sb**	**17 19 03.4**	**-1.2**
SJCC	**San Jacinto, C**	**3.12**	**20**	*eP*		**Pn**	**17 18 21.4**	**+0.8**
SJCC				*eS*		**Sn**	**17 18 58.1**	**0.0**
OCAC	**Ocana**	**3.17**	**66**	*eP*		**Pn**	**17 18 22.8**	**+1.5**
OCAC				*eS*		**Sn**	**17 19 01.5**	**+2.1**
RUSC	**La Rusia**	**3.31**	**108**	*eP*		**Pn**	**17 18 25.0**	**+1.6**
RUSC				*eS*		**Sb**	**17 19 09.3**	**-1.5**
RUSC				*i*			17 19 18.8	
	comp=Z,147nm,0.6s							
CHIC	**Chingaza**	**3.39**	**132**	*eP*		**Pb**	**17 18 29.1**	**-2.4**
CHIC				*eS*		**Sb**	**17 19 09.8**	**-3.3**
CHIC				*i*			17 19 25.5	
	comp=Z,72nm,0.6s							
PRAC	**Prado**	**3.48**	**157**	*eP*		**Pb**	**17 18 29.4**	**-3.4**
PRAC				*eS*		**Sb**	**17 19 16.8**	**+1.5**
PRAC				*i*			17 19 29.1	
	comp=Z,120nm,0.6s							
PAMC	**Pamplona, Colo**	**3.54**	**83**	*eP*		**Pn**	**17 18 29.2**	**+2.6**
PAMC				*eS*		**Sn**	**17 19 10.4**	**+1.4**
PAMC				*i*			17 19 28.8	
	comp=Z,112nm,0.5s							
VILC	**Villavicencio,**	**3.79**	**138**	*eP*		**Pb**	**17 18 35.4**	**-2.6**
VILC				*eS*		**Sb**	**17 19 22.0**	**-2.2**
VILC				*i*			17 19 37.4	
	comp=Z,99nm,0.5s							
BETC	**Betania**	**4.31**	**169**	*eP*		**Pn**	**17 18 40.0**	**+3.1**
BETC				*eS*		**Sb**	**17 19 33.5**	**-5.7**
BETC				*i*			17 19 41.9	
	comp=Z,48nm,0.4s							
POPC	**Popayan, Colom**	**4.39**	**186**	*eP*		**Pn**	**17 18 40.0**	**+1.7**
POPC				*eS*		**Sn**	**17 19 31.3**	**+1.4**
POPC				*i*			17 19 39.9	
	comp=Z,18nm,0.4s							
TAMC	**Tame, Arauca**	**4.45**	**96**	*eP*		**Pn**	**17 18 42.0**	**+3.2**
TAMC				*eS*		**Sn**	**17 19 33.1**	**+2.2**
TAMC				*i*			17 19 48.1	
	comp=Z,43nm,0.5s							
GARC	**Garzon, Huila**	**4.78**	**171**	*eP*		**Pn**	**17 18 46.1**	**+2.5**
GARC				*eS*		**Sn**	**17 19 40.4**	**+1.0**
GARC				*i*			17 20 12.5	
	comp=Z,16nm,0.2s							
PTGC	**Puerto Gaitan,**	**4.91**	**123**	*eP*		**Pn**	**17 18 47.5**	**+2.3**
PTGC				*eS*		**Sn**	**17 19 46.0**	**+3.7**
PTGC				*i*			17 20 04.4	
	comp=Z,36nm,0.4s							
BBAC	**Balboa, Cauca**	**4.99**	**192**	*eP*		**Pn**	**17 18 50.5**	**+4.1**
BBAC				*eS*		**Sn**	**17 19 48.4**	**+3.9**
BBAC				*i*			17 19 59.1	
	comp=Z,14nm,0.7s							
CRJC	**Cerrejon, Guaj**	**5.24**	**39**	*eP*		**Pn**	**17 18 51.5**	**+1.8**
CRJC				*eS*		**Sn**	**17 19 47.9**	**-2.6**
CRJC				*i*			17 19 52.7	
	comp=Z,32nm,0.4s							
MACC	**Macarena, Meta**	**5.33**	**153**	*eP*		**Pn**	**17 18 52.3**	**+1.4**
MACC				*eS*		**Sn**	**17 19 54.1**	**+1.5**
MACC				*i*			17 20 28.0	
	comp=Z,29nm,0.5s							
FLOC	**Florencia**	**5.36**	**174**	*eP*		**Pn**	**17 18 52.2**	**+0.9**
FLOC				*eS*		**Sb**	**17 20 01.5**	**-7.9**
FLOC				*i*			17 20 17.6	
	comp=Z,8.6nm,0.6s							
SOCV	**Socops**	**5.50**	**76**	*eP*		**Pn**	**17 18 56.3**	**+3.1**
SOCV				*eS*		**Sn**	**17 19 59.1**	**+2.2**
SDV	**Santo Domingo**	**5.88**	**70**	Pn		**Pn**	**17 18 58.9**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=277,slow=14,SNR=6.0							
SDV				Sn		**Sn**	**17 20 04.7**	**-1.8**
	comp=Z,2.9nm,0.3s,baz=254,slow=12,SNR=1.8							
	comp=Z,8.0nm,0.5s							
PTLC	**Puerto Leguiza**	**6.88**	**168**	*eP*		Pn	17 19 20.8	+8.6
PTLC				*eS*		**Sb**	**17 20 51.1**	**-2.1**
PTLC				*i*			17 21 20.0	
	comp=Z,9.6nm,0.5s							
ATAH	**Atahualpa**	**14.15**	**189**	LR		LR	17 27 58.4	
	comp=Z,61nm,18.6s,baz=304,slow=43							
CMIG	**Matias Romero**	**20.82**	**301**	LR		LR	17 30 18.9	
	comp=Z,59nm,19.4s,baz=198,slow=38							
SIV	**San Ignacio**	**27.29**	**147**	P		**P**	**17 23 16.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=327,slow=14,SNR=3.3							
	comp=Z,1.0nm,0.6s							
TKL	**Tuckaleechee C**	**29.41**	**347**	LR		LR	17 36 41.2	
	comp=Z,24nm,18.1s,baz=150,slow=40							
PLCA	**Paso Flores**	**47.73**	**174**	P		**P**	**17 26 12.3**	**+3.8**
	comp=Z,1.0nm,0.8s,baz=2.5,slow=5.5,SNR=3.5							
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.75**	**78**	P		**P**	**17 29 22.6**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=272,slow=7.4,SNR=2.1							
ASAR	**Alice Springs**	**146.62**	**237**	PKPbc		**PKPdf**	**17 37 12.4**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=111,slow=3.5,SNR=7.3							
WRA	**Warramunga Arr**	**147.65**	**243**	PKPbc		**PKPbc**	**17 37 15.9**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=116,slow=0.6,SNR=5.7							

ROM 24 17:37:08.3±0.1, 42°.803N±0°.003×13°.190E±0°.007, h6km, ML2.7/23, 11C-7D, Error ellipse: s-maj=0.5km s-min=0.3km az=260.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.24**	**342**	P		Pg	17 37 14.0	+0.9
FDMO				S		Sg	17 37 17.9	+1.5
FDMO				AML		AML		
	comp=N,572μm,0.2s							
FDMO				AML		AML		
	comp=E,422μm,1.5s							
FDMO				AML		AML		
	comp=N,573μm,0.2s							
FDMO				AML		AML		
	comp=N,6150μm,0.7s							
FDMO				AML		AML		
	comp=E,6500μm,0.2s							
FDMO				AML		AML		
	comp=N,573μm,0.2s							
FDMO				AML		AML		
	comp=E,398μm,0.2s							
CSP1	**Cessapalombo**	**0.29**	**2**	⇑P		Pg	17 37 14.8	+0.8
CSP1				S		Sg	17 37 19.4	+1.6
CSP1				AML		AML		
	comp=E,712μm,0.5s							
CSP1				AML		AML		
	comp=N,686μm,0.6s							
CSP1				AML		AML		
	comp=E,7515μm,1.4s							
CSP1				AML		AML		
	comp=N,10570μm,1.2s							
RM33	**Pellescritta (**	**0.29**	**176**	⇓P		Pb	17 37 15.3	-0.7
RM33				S		Sb	17 37 20.0	-1.1
RM33				AML		AML		
	comp=E,494μm,1.4s							
RM33				AML		AML		
	comp=N,370μm,0.5s							
RM33				AML		AML		
	comp=N,1502μm,1.2s							
RM33				AML		AML		
	comp=E,1705μm,0.5s							
RM33				AML		AML		
	comp=N,1565μm,1.2s							
RM33				AML		AML		
	comp=E,1725μm,0.5s							
ARRO	**Arrone**	**0.38**	**235**	P		Pb	17 37 16.9	-0.6
ARRO				S		Sb	17 37 23.5	-0.2
ARRO				AML		AML		
	comp=E,242μm,0.1s							
ARRO				AML		AML		
	comp=N,220μm,1.2s							
ARRO				AML		AML		
	comp=E,1280μm,0.2s							
ARRO				AML		AML		
	comp=N,722μm,0.6s							
OFFI	**Offida**	**0.39**	**70**	⇓P		Pb	17 37 17.2	-0.3
OFFI				S		Sb	17 37 24.8	+1.0
OFFI				AML		AML		
	comp=E,339μm,0.5s							
OFFI				AML		AML		
	comp=N,468μm,0.3s							
OFFI				AML		AML		
	comp=N,3255μm,0.6s							
OFFI				AML		AML		
	comp=E,4030μm,0.8s							
GIGS	**Gran Sasso**	**0.45**	**141**	⇑P		Pg	17 37 17.4	+0.4
GIGS				S		Sb	17 37 24.7	-1.0
GIGS				AML		AML		
	comp=E,63μm,0.6s							
GIGS				AML		AML		
	comp=N,63μm,0.7s							
GIGS				AML		AML		
	comp=E,66μm,0.4s							
GIGS				AML		AML		
	comp=N,108μm,0.5s							
GIGS				AML		AML		
	comp=E,504μm,0.5s							
GIGS				AML		AML		
	comp=N,288μm,1.1s							
GIGS				AML		AML		
	comp=N,63μm,0.7s							
ASSB	**Assisi San Ben**	**0.46**	**302**	P		Pb	17 37 18.0	-0.8
ASSB				S		Sb	17 37 25.1	-0.7
ASSB				AML		AML		
	comp=E,456μm,0.2s							
ASSB				AML		AML		
	comp=N,402μm,0.2s							
ASSB				AML		AML		
	comp=E,2565μm,0.7s							
ASSB				AML		AML		
	comp=N,2530μm,0.7s							
SNTG	**Esanatoglia**	**0.49**	**338**	⇓P		Pg	17 37 18.3	+0.6
SNTG				S		Sb	17 37 26.3	-0.4
SNTG				AML		AML		
	comp=E,129μm,0.2s							
SNTG				AML		AML		
	comp=N,244μm,0.3s							
SNTG				AML		AML		
	comp=N,1435μm,0.7s							
SNTG				AML		AML		
	comp=E,1380μm,0.5s							
CESX	**Cesi**	**0.49**	**247**	P		Pb	17 37 18.6	-0.7
CESX				S		Sb	17 37 27.5	+0.8
CESX				AML		AML		
	comp=E,91μm,0.5s							
CESX				AML		AML		
	comp=N,113μm,0.5s							
CESX				AML		AML		
	comp=E,776μm,1.3s							
CESX				AML		AML		
	comp=N,727μm,1.3s							
EL6	**Elcito**	**0.53**	**353**	P		Pg	17 37 19.1	+0.6
EL6				S		Sb	17 37 27.8	-0.2
EL6				AML		AML		
	comp=N,3245μm,1.0s							
EL6				AML		AML		
	comp=E,2840μm,0.3s							
FIAM	**Fiamignano**	**0.54**	**186**	⇑P		Pg	17 37 19.3	+0.7
FIAM				S		Sb	17 37 27.5	-0.7
FIAM				AML		AML		
	comp=E,119μm,0.7s							
FIAM				AML		AML		
	comp=N,84μm,0.8s							
FIAM				AML		AML		
	comp=E,119μm,0.7s							
FIAM				AML		AML		
	comp=N,84μm,0.8s							
FIAM				AML		AML		
	comp=N,497μm,0.8s							
FIAM				AML		AML		
	comp=E,476μm,0.8s							
FIAM				AML		AML		
	comp=N,84μm,0.8s							
ATCC	**AVT- Casa Cast**	**0.56**	**314**	⇑P		Pg	17 37 19.7	+0.7
ATCC				S		Sb	17 37 28.6	-0.1
ATCC				AML		AML		
	comp=E,296μm,0.2s							
ATCC				AML		AML		
	comp=N,432μm,0.9s							
CING	**Cingoli**	**0.57**	**0**	⇑P		Pg	17 37 20.0	+0.7
CING				S		Sb	17 37 29.0	-0.2
FOSV	**Fossato di Vic**	**0.58**	**328**	⇑P		Pg	17 37 20.1	+0.5
FOSV				AML		AML		
	comp=E,328μm,0.3s							
FOSV				AML		AML		
	comp=N,281μm,0.3s							
FOSV				AML		AML		
	comp=E,1505μm,0.2s							
FOSV				AML		AML		
	comp=N,4435μm,0.3s							
FAGN	**Fagnano**	**0.61**	**151**	P		Pb	17 37 21.2	-0.2
FAGN				AML		AML		
	comp=E,161μm,0.2s							
FAGN				AML		AML		
	comp=N,202μm,1.4s							
FAGN				AML		AML		
	comp=E,179μm,0.3s							
FAGN				AML		AML		
	comp=N,240μm,0.5s							
FAGN				AML		AML		
	comp=E,1495μm,1.2s							
FAGN				AML		AML		
	comp=N,1190μm,0.3s							
FAGN				AML		AML		
	comp=N,153μm,1.6s							
VCEL	**Villa Celiera**	**0.63**	**130**	⇓P		Pg	17 37 21.1	+0.6
VCEL				S		Sb	17 37 31.2	+0.3
VCEL				AML		AML		
	comp=E,287μm,0.2s							
VCEL				AML		AML		
	comp=N,236μm,0.4s							
VCEL				AML		AML		
	comp=E,1320μm,0.4s							
VCEL				AML		AML		
	comp=N,1380μm,1.3s							
VCEL				AML		AML		
	comp=E,287μm,0.2s							
PP3	**Marolino**	**0.65**	**28**	S		Sn	17 37 34.0	-0.6
ARVD	**Arcevia**	**0.72**	**345**	⇑P		Pg	17 37 22.6	+0.5
ARVD				AML		AML		
	comp=E,78μm,0.2s							
ARVD				AML		AML		
	comp=N,72μm,0.9s							
ARVD				AML		AML		
	comp=E,848μm,0.5s							
ARVD				AML		AML		
	comp=N,388μm,1.2s							
T0110	**Collepietro**	**0.72**	**143**	⇑P		Pg	17 37 22.2	+0.1
T0110				S		Sb	17 37 34.2	+0.8
T0110				AML		AML		
	comp=E,120μm,0.8s							
T0110				AML		AML		
	comp=N,143μm,0.3s							
T0110				AML		AML		
	comp=E,194μm,0.5s							
T0110				AML		AML		
	comp=N,230μm,0.3s							
T0110				AML		AML		
	comp=E,970μm,0.5s							
T0110				AML		AML		
	comp=N,1148μm,0.5s							
T0110				AML		AML		
	comp=E,120μm,0.8s							
CERT	**Cerreto**	**0.87**	**190**	⇓P		Pn	17 37 28.8	+1.7
CERT				AML		AML		
	comp=E,64μm,0.4s							
CERT				AML		AML		
	comp=N,66μm,0.9s							
CERT				AML		AML		
	comp=E,396μm,1.3s							
CERT				AML		AML		
	comp=N,226μm,1.1s							
PIEI	**Pieia**	**0.88**	**327**	P		Pb	17 37 25.7	-0.2
PIEI				AML		AML		
	comp=E,93μm,1.6s							
PIEI				AML		AML		
	comp=N,87μm,0.8s							
PIEI				AML		AML		
	comp=E,436μm,1.6s							
PIEI				AML		AML		
	comp=N,278μm,1.2s							
SENI	**Senigallia**	**0.90**	**2**	S		Sg	17 37 36.0	-1.3
INTR	**Introdacqua**	**0.95**	**146**	⇑P		Pg	17 37 26.1	-0.5
INTR				AML		AML		
	comp=E,62μm,0.3s							
INTR				AML		AML		
	comp=N,100μm,1.6s							
INTR				AML		AML		
	comp=E,226μm,0.9s							
INTR				AML		AML		
	comp=N,474μm,0.6s							
TOLF	**Tolfa**	**1.15**	**230**	P		Pg	17 37 30.3	0.0
TOLF				AML		AML		
	comp=E,40μm,1.0s							
TOLF				AML		AML		
	comp=N,47μm,0.8s							
TOLF				AML		AML		
	comp=E,153μm,0.3s							
TOLF				AML		AML		
	comp=N,147μm,0.4s							
PTRJ	**Pietraroja**	**1.75**	**145**	P		Pg	17 37 43.5	+1.7
VITU	**Vitulano (BN)**	**1.94**	**146**	⇑P		Pg	17 37 46.6	+1.1
VITU				AML		AML		
	comp=E,52μm,0.4s							
VITU				AML		AML		
	comp=N,59μm,0.8s							
MAIM	**Mastiano**	**2.26**	**300**	P		Pg	17 37 53.0	+1.4
MSAG	**Monte S. Angel**	**2.29**	**117**	S		Sg	17 38 24.0	+2.0
NDIM	**Novi di Modena**	**2.66**	**322**	S		Sn	17 38 26.0	+1.8
PZUN	**Potenza**	**2.91**	**137**	⇓P		Pn	17 37 55.5	+0.4
PZUN				AML		AML		
	comp=N,94μm,1.5s							
PZUN				AML		AML		
	comp=E,77μm,1.6s							
CIMO	**Cimolais**	**3.55**	**352**	S		Sn	17 38 48.0	+1.8
SALB	**San Lorenzo Be**	**3.77**	**140**	⇑P		Pn	17 38 08.6	+1.6
SALB				AML		AML		
	comp=E,35μm,0.3s							
SALB				AML		AML		
	comp=N,32μm,0.7s							
CET2	**Cetraro**	**3.88**	**147**	P		Pn	17 38 06.5	-2.0
KOGS	**Kog**	**4.25**	**30**	P		Pb	17 38 21.6	-1.8
VSL	**Villasalto**	**4.38**	**222**	S		Sn	17 39 04.0	-2.7
VARE	**Varese**	**4.41**	**316**	P		Pb	17 38 21.4	-4.8
DIVS	**Divibare**	**5.12**	**73**	⇓P		Pb	17 38 40.5	+2.3
SRN	**Sarande**	**5.90**	**117**	P		Pb	17 38 49.1	-2.4

*ROM **24** 17:38:00.4±0.1, 42°.801N±0°.003×13°.249E±0°.006, h8km, ML3.0/18, Error ellipse: s-maj=0.5km s-min=0.2km az=67.0*
*PRU **24** 17:38:02.3±0.0, 42°.82N×13°.41E, h0km*
ISC 24 17:38:00.9±0.8, 42°.80N±0°.02×13°.25E±0°.02, h12km±5km, n76, σ1$03/100, 12C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.22**	**318**	P		**Pg**	**17 38 05.7**	**-0.1**
FEMA				S		**Sg**	**17 38 09.6**	**+0.5**
LNSS	**Leonessa**	**0.25**	**219**	⇓P		**Pb**	**17 38 06.6**	**-0.8**
LNSS				S		**Sb**	**17 38 10.4**	**+0.6**
LNSS				AML		AML		
	comp=N,4490μm,0.7s							
LNSS				AML		AML		
	comp=E,6430μm,0.4s							
FDMO	**Fiordimonte**	**0.27**	**333**	P		**Pg**	**17 38 06.2**	**-0.3**
FDMO				S		**Sg**	**17 38 10.6**	**+0.3**
FDMO				AML		AML		
	comp=E,6500μm,0.2s							
FDMO				AML		AML		
	comp=N,6150μm,0.7s							
GUMA	**Gualdo di Mace**	**0.27**	**13**	P		**Pb**	**17 38 06.7**	**-1.1**
GUMA				S		**Sb**	**17 38 11.6**	**-0.8**
GUMA				AML		AML		
	comp=E,12900μm,0.4s							
GUMA				AML		AML		
	comp=E,10905μm,0.6s							
GUMA				AML		AML		
	comp=N,9530μm,0.6s							
GUMA				AML		AML		
	comp=N,8950μm,0.5s							
CAMP	**Campotosto**	**0.28**	**156**	P		**Pg**	**17 38 07.0**	**+0.1**
CAMP				S		**Sb**	**17 38 12.0**	**-0.8**
CAMP				AML		AML		
	comp=N,2120μm,0.4s							
CAMP				AML		AML		
	comp=E,1850μm,0.3s							
RM33	**Pellescritta (**	**0.29**	**186**	P		**Pb**	**17 38 07.3**	**-0.8**
RM33				AML		AML		
	comp=E,1725μm,0.5s							
RM33				AML		AML		
	comp=N,1505μm,1.2s							
RM33				AML		AML		
	comp=E,1710μm,0.5s							
RM33				AML		AML		
	comp=N,1565μm,1.2s							
RM33				AML		AML		
	comp=N,2145μm,0.3s							
RM33				AML		AML		
	comp=E,1825μm,0.6s							
RM33				AML		AML		
	comp=N,2185μm,0.3s							
RM33				AML		AML		
	comp=N,2140μm,0.3s							
RM33				AML		AML		
	comp=E,1810μm,0.6s							
RM33				AML		AML		
	comp=N,1178μm,0.4s							
RM33				AML		AML		
	comp=E,1709μm,0.5s							
RM33				AML		AML		
	comp=E,1726μm,0.5s							
RM33				AML		AML		
	comp=N,1138μm,0.5s							
CSP1	**Cessapalombo**	**0.30**	**353**	P		**Pg**	**17 38 06.8**	**-0.3**
CSP1				S		**Sg**	**17 38 11.6**	**+0.4**
CSP1				AML		AML		
	comp=E,7505μm,1.4s							
CSP1				AML		AML		
	comp=N,10520μm,1.2s							
CSP1				AML		AML		
	comp=N,10525μm,1.2s							
CSP1				AML		AML		
	comp=N,10570μm,1.2s							
CSP1				AML		AML		
	comp=E,7515μm,1.4s							
CSP1				AML		AML		
	comp=E,7510μm,1.4s							
TERO	**Teramo**	**0.31**	**124**	P		**Pg**	**17 38 07.4**	**+0.1**
TERO				S		**Sb**	**17 38 12.8**	**-0.7**
TERO				AML		AML		
	comp=N,8700μm,0.5s							
TERO				AML		AML		
	comp=N,8740μm,0.5s							
TERO				AML		AML		
	comp=N,8715μm,0.5s							
TERO				AML		AML		
	comp=N,9375μm,0.5s							
TERO				AML		AML		
	comp=N,8720μm,0.5s							
TERO				AML		AML		
	comp=E,6445μm,0.2s							
TERO				AML		AML		
	comp=E,6015μm,0.2s							
CESI	**CESI - Serrava**	**0.33**	**309**	P		**Pg**	**17 38 07.5**	**-0.2**
CESI				S		**Sb**	**17 38 12.9**	**-1.2**
CESI				AML		AML		
	comp=E,4160μm,0.3s							
CESI				AML		AML		
	comp=N,8415μm,0.2s							
CESI				AML		AML		
	comp=E,4155μm,0.3s							
OFFI	**Offida**	**0.35**	**66**	P		**Pb**	**17 38 08.9**	**-0.2**

OFFI AML AML
comp=N,3255µm,0.6s
OFFI AML AML
comp=E,4030µm,0.8s
MNTP Montappone 0.38 25 S Sg 17 38 11.0 -2.5
SEF1 Sefro 0.42 327 P Pg 17 38 08.9 -0.2
SEF1 S Sb 17 38 15.8 -0.6
SEF1 AML AML
comp=E,7450µm,0.2s
SEF1 AML AML
comp=N,5345µm,0.2s
GIGS Gran Sasso 0.42 146 P Pg 17 38 09.2 0.0
GIGS S Sb 17 38 15.9 -0.7
GIGS AML AML
comp=N,288µm,1.1s
GIGS AML AML
comp=E,504µm,0.5s
GIGS AML AML
comp=N,288µm,1.1s
ARRO Arrone 0.42 239 ⇓P Pb 17 38 09.7 -0.6
ARRO AML AML
comp=E,1275µm,0.2s
ARRO AML AML
comp=N,722µm,0.6s
ARRO AML AML
comp=N,722µm,0.6s
ARRO AML AML
comp=E,1280µm,0.2s
AQU L'Aquila 0.46 166 P Pg 17 38 10.1 +0.1
GAG1 Gagliole 0.46 343 P Pb 17 38 10.0 -1.0
GAG1 S Sb 17 38 17.4 -0.4
GAG1 AML AML
comp=N,6170µm,0.5s
GAG1 AML AML
comp=E,6380µm,0.2s
TRTR Tortoreto Alta 0.49 88 ⇓P Pb 17 38 11.9 +0.5
TRTR AML AML
comp=N,4065µm,0.4s
TRTR AML AML
comp=E,5930µm,0.4s
ASSB Assisi San Ben 0.50 300 P Pg 17 38 10.4 -0.4
ASSB S Sb 17 38 18.3 -0.6
ASSB AML AML
comp=E,2565µm,0.7s
ASSB AML AML
comp=N,2530µm,0.7s
SNTG Esanatoglia 0.51 334 P Pg 17 38 10.6 -0.4
SNTG S Sb 17 38 18.7 -0.6
SNTG AML AML
comp=N,1435µm,0.7s
SNTG AML AML
comp=E,1380µm,0.5s
CESX Cesi 0.53 250 P Pg 17 38 11.1 -0.2
CESX AML AML
comp=E,776µm,1.3s
CESX AML AML
comp=N,728µm,1.3s
CESX AML AML
comp=N,727µm,1.3s
CESX AML AML
comp=E,777µm,1.3s
FIAM Fiamignano 0.54 191 ⇓P Pg 17 38 11.5 +0.1
FIAM AML AML
comp=E,476µm,0.8s
FIAM AML AML
comp=N,498µm,0.8s
FIAM AML AML
comp=N,497µm,0.8s
EL6 Elcito 0.54 348 ⇑P Pg 17 38 11.2 -0.3
EL6 S Sb 17 38 21.0 +0.7
EL6 AML AML
comp=E,2840µm,0.3s
EL6 AML AML
comp=N,3245µm,1.0s
EL6 AML AML
comp=E,2835µm,0.3s
EL6 AML AML
comp=N,3265µm,1.0s
CING Cingoli 0.58 356 ⇓P Pg 17 38 12.0 -0.2
FAGN Fagnano 0.58 155 ⇓P Pb 17 38 12.6 -0.5
FAGN AML AML
comp=E,1495µm,1.2s
FAGN AML AML
comp=E,1500µm,1.2s
FAGN AML AML
comp=N,1190µm,0.3s
VCEL Villa Celiera 0.59 133 ⇓P Pb 17 38 12.7 -0.5
VCEL AML AML
comp=E,1320µm,0.4s
VCEL AML AML
comp=N,1380µm,1.3s
VCEL AML AML
comp=E,1315µm,0.4s
VCEL AML AML
comp=N,1385µm,1.3s
ATCC AVT- Casa Cast 0.59 311 P Pg 17 38 12.2 -0.3
ATCC S Sb 17 38 21.8 +0.1
FOSV Fossato di Vic 0.61 324 ⇑P Pg 17 38 12.5 -0.4
FOSV AML AML
comp=N,4435µm,0.3s
FOSV AML AML
comp=E,1505µm,0.2s
FOSV AML AML
comp=N,4430µm,0.3s
FOSV AML AML
comp=E,1500µm,0.2s
PP3 Marolino 0.64 24 ⇑P Pg 17 38 12.3 -1.0
PP3 AML AML
comp=E,1375µm,0.3s
PP3 AML AML
comp=N,1360µm,0.3s
PP3 AML AML
comp=N,1455µm,0.5s
PP3 AML AML
comp=E,1292µm,0.5s
T0110 Collepietro 0.69 145 ⇓P Pg 17 38 13.2 -1.1
T0110 AML AML
comp=E,970µm,0.5s
T0110 AML AML
comp=N,1149µm,0.5s
T0110 AML AML
comp=E,970µm,0.5s
T0110 AML AML
comp=N,1148µm,0.5s
T0110 AML AML
comp=E,970µm,0.5s
MURB Monte Urbino 0.71 311 P Pg 17 38 14.4 -0.2
MURB S Sn 17 38 27.0 -0.7
MURB AML AML
comp=N,2915µm,0.9s
MURB AML AML
comp=E,4310µm,0.2s
MURB AML AML
comp=E,3755µm,0.3s
MURB AML AML
comp=N,2765µm,1.3s
SSFR Montelago di S 0.73 332 ⇓P Pb 17 38 14.8 -0.7
SSFR AML AML
comp=E,3190µm,0.2s
SSFR AML AML
comp=E,3055µm,0.2s
SSFR AML AML
comp=N,2625µm,1.2s
SSFR AML AML
comp=N,2755µm,1.3s
ARVD Arcevia 0.74 342 ⇑P Pg 17 38 14.7 -0.5
ARVD S Sb 17 38 27.0 +1.3
ARVD AML AML
comp=N,388µm,1.2s
ARVD AML AML
comp=E,848µm,0.5s
ATFO Monte Foce - G 0.76 319 ⇓P Pg 17 38 15.2 -0.4
ATFO S Sn 17 38 28.0 -0.9
ATFO AML AML
comp=N,546µm,0.7s
ATFO AML AML
comp=E,542µm,0.6s
ATTE AVT- Monte Tez 0.77 302 ⇓P Pb 17 38 16.7 +0.4
ATTE AML AML
comp=N,302µm,0.3s
ATTE AML AML
comp=E,350µm,1.0s
FRON Frontone 0.82 332 S Sb 17 38 29.0 +0.9
MGAB Montegabbione 0.85 278 ⇑P Pn 17 38 19.5 +0.8
MGAB AML AML
comp=E,500µm,1.2s
MGAB AML AML
comp=N,623µm,0.4s
MGAB AML AML
comp=E,550µm,1.3s
MGAB AML AML
comp=N,667µm,0.4s
ATVO AVT- Monte Val 0.85 314 ⇑P Pg 17 38 16.7 -0.7
ATVO AML AML
comp=N,357µm,1.1s
ATVO AML AML
comp=E,394µm,1.3s
ATMI Monte Miggiano 0.90 307 ⇓P Pb 17 38 18.4 0.0
ATMI S Sn 17 38 33.0 +0.6
ATMI AML AML
comp=N,1045µm,1.0s
ATMI AML AML
comp=E,1050µm,0.4s
ATPI Pietralunga - 0.90 317 ⇑P Pg 17 38 17.4 -1.0
ATPI S Sn 17 38 33.0 +0.5
ATPI AML AML
comp=E,353µm,0.3s
ATPI AML AML
comp=N,345µm,0.5s
MPAG Monte Paganucc 0.91 337 P Pg 17 38 18.0 -0.5
MPAG AML AML
comp=N,474µm,0.3s
MPAG AML AML
comp=E,498µm,0.4s
PIEI Pieia 0.91 325 ⇓P Pg 17 38 17.6 -0.9
PIEI S Sn 17 38 33.0 +0.5
PIEI AML AML
comp=N,278µm,1.2s
PIEI AML AML
comp=E,436µm,1.6s
INTR Introdacqua 0.92 148 ⇓P Pg 17 38 17.7 -1.0
INTR AML AML
comp=E,226µm,0.9s
INTR AML AML
comp=N,474µm,0.6s
FSSB Fossombrone 0.96 339 ⇓P Pg 17 38 18.9 -0.5
FSSB S Sn 17 38 36.0 +2.2
FSSB AML AML
comp=N,1445µm,0.4s
FSSB AML AML
comp=E,974µm,0.5s
SACS San Casciano d 0.99 273 ⇓P Pn 17 38 21.5 +0.8
SACS AML AML
comp=E,246µm,1.1s
SACS AML AML
comp=N,190µm,1.5s
LPEL Lama dei Pelig 1.02 137 ⇑P Pb 17 38 20.5 0.0
LPEL AML AML
comp=E,274µm,0.9s
LPEL AML AML
comp=N,234µm,0.6s
LPEL AML AML
comp=E,273µm,0.9s
BADI Badiali 1.03 314 S Sn 17 38 37.0 +1.6
CAFI Castiglion Fio 1.08 300 ⇓P Pg 17 38 19.3 -2.5
CAFI S Sb 17 38 36.0 +0.3
CAFI AML AML
comp=E,213µm,0.6s
CAFI AML AML
comp=N,162µm,1.5s
PARC Parchiule 1.13 319 ⇓P Pg 17 38 21.9 -0.8
PARC AML AML
comp=E,278µm,0.4s
PARC AML AML
comp=N,313µm,0.9s
POFI Posta Fibreno 1.13 162 ⇑P Pn 17 38 25.3 +2.7
POFI AML AML
comp=E,123µm,1.5s
POFI AML AML
comp=N,140µm,1.1s
LAV9 Lanuvio 1.19 200 P Pn 17 38 24.2 +0.8
CERA Filignano 1.33 154 ⇑P Pg 17 38 28.1 +1.7
CERA AML AML
comp=N,136µm,1.6s
CERA AML AML
comp=E,125µm,1.2s
SFI Santa Sofia 1.51 318 ⇓P Pg 17 38 30.5 +0.6
SFI AML AML
comp=E,88µm,1.1s
SFI AML AML
comp=N,119µm,0.6s
RUFI Rufina 1.65 310 ⇑P Pb 17 38 31.1 0.0
PAOL Paolisi 2.02 150 S Sg 17 39 06.0 +0.2
FIU Minerbio Fiu 2.24 326 ⇓P Pb 17 38 41.6 +0.3
FIU AML AML
comp=N,880µm,1.2s
FIU AML AML
comp=E,2395µm,0.1s
CGRP Cima Grappa 3.25 342 P Pn 17 38 53.6 +1.7
CGRP AML AML
comp=E,53µm,1.3s
CGRP AML AML
comp=N,49µm,1.6s
CGRP AML AML
comp=E,205µm,1.6s
CGRP AML AML
comp=N,130µm,1.6s
DOSS Dosso del Somm 3.42 335 ⇓P Pn 17 38 57.7 +3.5
DOSS AML AML
comp=E,32µm,0.5s
DOSS AML AML
comp=N,29µm,0.8s
LEOD Capriano del C 3.49 321 S Sg 17 39 51.0 -1.8
RNCA Ronca, Sant'Ol 3.54 300 S Sb 17 39 46.0 -0.4
SALB San Lorenzo Be 3.73 140 S Sn 17 39 43.0 +0.7
EUCT Pavia 3.82 310 ⇑P Pb 17 39 09.8 +1.6
OBKA Obir 3.83 14 ePn Pn 17 38 59.8 +0.1
comp=N,0.9nm,0.2s
MILN Milano 3.95 314 P Pg 17 39 15.7 -0.8
ABTA Abfaltersbach 3.99 353 ePn Pn 17 39 02.8 +1.0
comp=N,5.9nm,0.4s
SOKA Soboth 4.08 17 ePn Pn 17 39 04.4 +1.2
comp=N,0.7nm,0.4s
IST3 Stromboli 3 4.27 159 S Sg 17 40 14.0 -3.9
KBA Koelnbreinsper 4.28 1 ePn Pn 17 39 06.7 +0.7
comp=N,0.6nm,0.2s
BERNI Berninapass 4.29 329 S Sb 17 40 09.0 +0.8
FETA Feichten 4.59 338 ePn Pn 17 39 10.2 0.0
comp=N,0.8nm,0.4s
WTTA Wattenberg 4.61 346 ePn Pn 17 39 10.4 -0.2
comp=N,1.2nm,0.2s
SQTA Sankt Quirin 4.66 343 ePn Pn 17 39 10.6 -0.5
comp=N,1.8nm,0.3s
WATA Walderalm 4.69 346 ePn Pn 17 39 11.5 -0.1
comp=N,2.5nm,0.5s
ARSA Arzberg 4.74 19 ePn Pn 17 39 12.2 +0.1
comp=N,1.0nm,0.3s
MOTA Moosalm 4.80 342 ePn Pn 17 39 13.1 0.0
BIOA Bad Ischl, Aus 4.90 3 ePn Pn 17 39 15.0 +0.6
comp=N,3.0nm,0.3s
KHC Kasperske Hory 6.34 2 ePN Pn 17 39 36.0 +1.9
KHC eSN Sn 17 40 46.0 -0.4

IDC ***24*** *17:41:59.6±2.2, 18°.53N×145°.75E, h197km±22km, mb3.3/10, mbtmp3.9/11, Error ellipse: s-maj=22.8km s-min=14.5km az=102.0*
NEIC ***24*** *17:42:01.2±1.7, 18°.51N±0°.10×145°.6E±0°.1, h205km±9km, mb4.3/31, Error ellipse: s-maj=19.6km s-min=13.9km az=96.0*

ISC 24 17:42:00.1±0.5, 18°.50N±0°.06×145°.7E±0°.1, h200km, n56, σ1ᵍ05/51, mb4.1/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.94**	**189**	P	P	**Pn**	**17 43 15.2**	**+1.5**
	28nm,0.3s,baz=357,slow=2.8,SNR=16			S				
GUMO						**Sn**	**17 44 11.7**	**-0.1**
	35nm,0.3s,baz=354,slow=21,SNR=2.1							
GUMO	**Guam**	**4.94**	**189**	Pn	**Pn**		**17 43 15.5**	**+1.8**
PATS	**Pohnpei**	**16.92**	**132**	P	**P**		**17 45 44.5**	**+0.3**
JOW	**Kunigami**	**18.04**	**300**	P	**P**		**17 45 55.6**	**-0.8**
JMM	**Marumori**	**19.76**	**349**	P	**P**		**17 46 15.9**	**+1.1**
JMM					IAmb	IAmb	17 46 51.9	
	comp=Z,40nm,1.4s							
H11S3	**WAKE ISLAND Hy**	**19.95**	**87**	T	T		18 07 47.8	
	baz=274							
H11S1	**WAKE ISLAND Hy**	**19.96**	**87**	T	T		18 07 32.2	
	baz=274							
H11S2	**WAKE ISLAND Hy**	**19.97**	**87**	T	T		18 07 39.2	
	baz=274							
H11N1	**WAKE ISLAND Hy**	**20.11**	**83**	T	T		18 08 04.3	
	baz=265							
H11N2	**WAKE ISLAND Hy**	**20.11**	**83**	T	T		18 08 16.7	
	baz=265							
H11N3	**WAKE ISLAND Hy**	**20.12**	**83**	T	T		18 08 03.3	
	baz=265							
MANU	**Manus Island**	**20.48**	**175**	P	**P**		**17 46 21.9**	**-0.8**
MANU					IAmb	IAmb	17 46 25.2	
	comp=Z,8.1nm,0.7s							
SAUI	**Saumlaki**	**29.88**	**210**	P	**P**		**17 47 47.2**	**-2.0**
COEN	**Coen**	**32.34**	**185**	P	**P**		**17 48 11.4**	**+0.7**
COEN					IAmb	IAmb	17 48 14.0	
	comp=Z,14nm,1.5s							
MTN	**Manton Dam**	**34.28**	**206**	P	**P**		**17 48 27.2**	**-0.2**
MTN					IAmb	IAmb	17 48 53.3	
	comp=Z,10nm,1.2s							
KNRA	**Kununurra**	**37.81**	**207**	P	**P**		**17 48 57.8**	**+0.3**
KNRA					IAmb	IAmb	17 49 00.6	
	comp=Z,9.2nm,0.9s							
WB0	**Warramunga Arr**	**39.60**	**197**	P	**P**		**17 49 12.9**	**+0.6**
WB0					IAmb	IAmb	17 49 16.6	
	comp=Z,7.3nm,1.1s							
WR0	**Warramunga Arr**	**39.74**	**196**	P	**P**		**17 49 13.2**	**-0.2**
WR0					IAmb	IAmb	17 49 14.9	
	comp=Z,14nm,1.4s							
WB2	**Warramunga Arr**	**39.78**	**197**	P	**P**		**17 49 14.2**	**+0.5**
WB2					IAmb	IAmb	17 49 17.7	
	comp=Z,24nm,1.5s							
WRA	**Warramunga Arr**	**39.78**	**197**	P	**P**		**17 49 14.0**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=16,slow=8.9,SNR=28							
	comp=Z,1.2nm,0.3s							
WRA	**Warramunga Arr**	**39.78**	**197**	P	**P**		**17 49 11.5**	**-2.3**
FITZ	**Fitzroy Crossi**	**41.34**	**210**	P	**P**		**17 49 26.2**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=38,slow=8.2,SNR=11							
	comp=Z,1.0nm,0.4s							
FITZ	**Fitzroy Crossi**	**41.34**	**210**	P	**P**		**17 49 27.1**	**+0.5**
FITZ					IAmb	IAmb	17 49 31.0	
	comp=Z,11nm,1.4s							
AMKA	**Amchitka**	**42.20**	**31**	P	**P**		**17 49 33.5**	**+0.4**
SONM	**Songino Array**	**43.27**	**322**	P	**P**		**17 49 41.3**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=137,slow=8.4,SNR=1.9							
	comp=Z,0.3nm,0.7s							
AS31	**Alice Springs**	**43.45**	**196**	P	**P**		**17 49 42.3**	**-1.2**
ASAR	**Alice Springs**	**43.45**	**196**	P	**P**		**17 49 43.8**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=16,slow=6.0,SNR=18							
	comp=Z,0.5nm,0.5s							
ASAR	**Alice Springs**	**43.45**	**196**	P	**P**		**17 49 42.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**44.20**	**278**	P	**P**		**17 49 51.9**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=72,slow=8.6,SNR=4.3							
	comp=Z,0.3nm,0.3s							
FALS	**False Pass**	**52.91**	**34**	P	**P**		**17 50 53.7**	**-1.7**
MHA	**Mahukona**	**54.92**	**78**	P	**P**		**17 51 10.2**	**-0.4**
CNBA	**Chernabura Isl**	**54.97**	**35**	P	**P**		**17 51 10.8**	**+0.5**
MKAR	**Makanchi Array**	**58.57**	**314**	P	**P**		**17 51 35.8**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=89,slow=8.4,SNR=7.3							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**58.57**	**314**	P	**P**		**17 51 36.1**	**+0.2**
K20K	**Telida**	**60.42**	**27**	P	**P**		**17 51 49.3**	**+1.1**
K20K					IAmb	IAmb	17 52 17.6	
	comp=Z,4.4nm,1.1s							
J20K	**Nowinta River**	**60.66**	**26**	P	**P**		**17 51 51.1**	**+1.4**
IMAR	**Indian Mountai**	**61.42**	**24**	P	**P**		**17 51 55.7**	**+0.9**
H21K	**Melozitna Rive**	**61.68**	**24**	P	**P**		**17 51 57.7**	**+1.0**
BPAW	**Bear Paw Mtn.**	**61.95**	**26**	P	**P**		**17 51 58.8**	**+0.3**
BPAW					IAmb	IAmb	17 52 14.2	
	comp=Z,2.3nm,0.9s							
GHO	**Glory Hole Cre**	**62.28**	**29**	P	**P**		**17 52 00.1**	**-0.7**
GHO					IAmb	IAmb	17 52 20.2	
	comp=Z,16nm,1.4s							
MLY	**Manley**	**62.32**	**25**	P	**P**		**17 52 01.3**	**+0.3**
MLY					IAmb	IAmb	17 52 02.2	
	comp=Z,1.8nm,0.6s							
MDM	**Murphy Dome**	**63.33**	**26**	P	**P**		**17 52 08.4**	**+0.9**
MDM					IAmb	IAmb	17 52 25.8	
	comp=Z,5.0nm,1.2s							
ILAR	**Eielson Array**	**63.84**	**26**	P	**P**		**17 52 09.5**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=249,slow=5.1,SNR=8.7							
	comp=Z,0.8nm,0.6s							
PAX	**Paxson**	**64.10**	**28**	P	**P**		**17 52 12.0**	**-0.7**
PAX					IAmb	IAmb	17 52 13.8	
	comp=Z,6.9nm,1.4s							
KAIM	**Kayak Island**	**64.12**	**32**	P	**P**		**17 52 11.5**	**-1.2**
J25K	**Salcha River,**	**64.45**	**26**	P	**P**		**17 52 12.5**	**-2.4**
J26L	**Joseph Creek**	**65.20**	**27**	P	**P**		**17 52 20.0**	**+0.2**
BMAR	**Burnt Mountain**	**65.32**	**23**	P	**P**		**17 52 21.6**	**+1.2**
L27K	**Beaver Creek,**	**65.76**	**28**	P	**P**		**17 52 23.7**	**+0.4**
L27K					IAmb	IAmb	17 53 07.6	
	comp=Z,6.2nm,1.4s							
BCAR	**Beaver Creek A**	**65.78**	**28**	P	**P**		**17 52 24.0**	**+0.5**
M30M	**Minto, Yukon**	**68.03**	**29**	P	**P**		**17 52 38.5**	**+0.8**
C36M	**Paulatuk**	**72.95**	**22**	P	**P**		**17 53 07.1**	**-0.1**
PINE	**Pine Mountain**	**79.83**	**47**	P	**P**		**17 53 47.9**	**+1.3**
PINE					IAmb	IAmb	17 53 48.5	
	comp=Z,4.4nm,0.8s							
NVAR	**Mina Array Bea**	**83.30**	**52**	P	**P**		**17 54 05.6**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=270,slow=6.4,SNR=10							
	comp=Z,1.4nm,0.6s							
FINES	**FINESS Array B**	**87.05**	**335**	P	**P**		**17 54 21.5**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=68,slow=5.1,SNR=2.3							
	comp=Z,0.9nm,0.7s							
PDAR	**Pinedale Array**	**88.00**	**45**	P	**P**		**17 54 27.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=267,slow=1.8,SNR=2.0							
	comp=Z,0.2nm,0.4s							

IDC 24 17:45:60.0±2.1, 1°.31S×133°.70E, h0km, mb3.4/2, mbtmp3.4/4, ML3.3/2, MS2.4/1, Error ellipse: s-maj=47.5km s-min=24.9km az=56.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.48**	**280**	Pn	Pn		17 46 40.9	-0.7
	12nm,0.3s,baz=177,slow=22,SNR=40							
SIJI					Sn	Sb	17 47 15.5	-0.9
	3.7nm,0.3s,baz=157,slow=23,SNR=1.7							
SIJI					LR	LR	17 47 52.0	
	comp=Z,89nm,21.9s,baz=252,slow=45							
	27nm,0.2s							
WRA	**Warramunga Arr**	**18.53**	**178**	P	P		17 50 17.9	-0.3
	0.1nm,0.3s,baz=354,slow=11,SNR=2.2							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**22.22**	**180**	P	P		17 50 58.3	-0.1
	0.6nm,0.6s,baz=7.6,slow=11,SNR=7.7							
	0.6nm,0.6s							
MKAR	**Makanchi Array**	**65.68**	**324**	P	P		17 56 46.5	+0.2
	0.4nm,0.5s,baz=111,slow=8.2,SNR=4.7							
	0.4nm,0.5s							

BGR ***24*** *17:46:05.6±0.7, 42°.20N×13°.65E, h5km, ML4.8/15, Error ellipse: s-maj=15.6km s-min=12.2km az=106.0*
LDG ***24*** *17:46:08.8±0.1, 42°.66N×13°.20E, h6km, Ml4.1/41, Error ellipse: s-maj=2.5km s-min=1.4km az=42.0*
PDG ***24*** *17:46:09.7±0.6, 42°.67N×13°.23E, h13km, ML4.4/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
IDC ***24*** *17:46:09.1±0.5, 42°.79N×13°.11E, h0km, mb4.3/27, mbtmp4.3/39, ML3.9/11, MS3.4/40, Error ellipse: s-maj=10.5km s-min=8.3km az=118.0*
ROM ***24*** *17:46:09.5±0.0, 42°.659N±0°.002×13°.215E±0°.004, h10km, ML4.4/95, Mw4.2, Error ellipse: s-maj=0.3km s-min=0.0km az=72.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.42; $M_{\theta\theta}$0.08; $M_{\phi\phi}$2.33; $M_{r\theta}$0.38; $M_{\theta\phi}$-1.01; $M_{\phi r}$-1.07; Fault plane solution: M_o2.80501×10^{15} NP1:ϕ_s158.00000°, δ33.00000°, λ-91.00000°. NP2:ϕ_s340.00000°, δ57.00000°, λ-89.00000°.*
MED_RC ***24*** *17:46:09.0±0.7, 42°.47N×13°.30E, h12km, MW4.5/9, Moment Tensor Solution. Mantle waves: s9,c14; Duration: 1!0 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.43±.53; $M_{\theta\theta}$-2.05±.55; $M_{\phi\phi}$5.48±.29; $M_{r\theta}$-4.07±1.55; $M_{\theta\phi}$-2.36±.34; $M_{\phi r}$-0.03±.88; Best double couple: M_o6.69000×10^{15} NP1:ϕ_s129.00000°, δ65.00000°, λ-137.00000°. NP2: ϕ_s17.00000°, δ52.00000°, λ-33.00000°. Principal axes: T 6.3100, Plg8.0000°, Azm251.0000°; N 0.7600, Plg41.0000°, Azm154.0000°; P -7.0600, Plg48.0000°, Azm349.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
MOS ***24*** *17:46:09.4±1.2, 42°.75N×13°.23E, h11km, mb4.7/20 Error ellipse: s-maj=5.5km s-min=3.1km az=76.9*
BEO ***24*** *17:46:10.6±0.5, 42°.69N×13°.24E, h0km, ML4.5/12*
STR ***24*** *17:46:10.9±0.6, 43°N±6°×1°3E±°, h5km, mb4.3/33, Error*

ellipse: s-maj=0.0km s-min=0.0km az=34.0,preliminary
PRU ***24*** *17:46:10.4±0.0,42°.69N×13°.21E,h5km,M4.6*
NEIC ***24*** *17:46:11.1,42°.72N×13°.19E,h8km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=2.89; $M_{\theta\theta}$=-0.10; $M_{\phi\phi}$=2.99; $M_{r\theta}$=0.66; $M_{r\phi}$=-0.74; $M_{\theta\phi}$=-1.88; Fault plane solution: $M_0$3.63000×10^{15} NP1:ϕ_s171.50000°, δ28.58000°,λ-82.89000°. NP2:ϕ_s343.42000°,δ61.66000°, λ-93.86000°. Principal axes: T 3.7497, Plg17.0000°, Azm76.0000°; N -0.2548, Plg3.0000°, Azm345.0000°; P -3.4949, Plg73.0000°, Azm244.0000°;*
NEIC ***24*** *17:46:11.2±1.5,42°.73N±0°.05×13°.21E±0°.06,h10km±1km, mb4.6/67,Mwr4.3/58,ML4.4(ROM),ML4.4(VIE) Error ellipse: s-maj=8.0km s-min=6.9km az=25.0*

ISC 24 17:46:10.5±0.5,42°.66N±0°.01×13°.19E±0°.02,h13km±2km, n898,σ1§98/994,mb4.5/88,MS3.5/31,130C-26D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1201	**Domo (RI)**	**0.04**	**89**	P	**Pg**	**17 46 12.0**	**-0.9**
T1201				S	**Sg**	**17 46 13.6**	**-1.2**
T1213	**Norcia, Frazio**	**0.08**	**324**	P	**Pg**	**17 46 12.4**	**-0.9**
T1213				S	**Sg**	**17 46 14.4**	**-1.0**
T1214	**Arquata del Tr**	**0.10**	**6**	P	**Pg**	**17 46 12.6**	**-1.1**
T1214				S	**Sg**	**17 46 14.7**	**-1.3**
LNSS	**Leonessa**	**0.12**	**245**	↑P	**Pg**	**17 46 13.3**	**-0.5**
LNSS				S	**Sg**	**17 46 16.3**	**+0.1**
LNSS				AML	AML		
LNSS				AML	AML		
AQT1	**Arquata del Tr**	**0.14**	**32**	P	**Pg**	**17 46 13.1**	**-1.0**
AQT1				S	**Sg**	**17 46 15.5**	**-1.1**
T1212	**Cascia, Frazio**	**0.14**	**311**	P	**Pg**	**17 46 13.3**	**-0.8**
T1212				S	**Sg**	**17 46 16.3**	**-0.4**
RM33	**Pellescritta (**	**0.15**	**174**	↑P	**Pg**	**17 46 13.7**	**-0.5**
RM33				S	**Sg**	**17 46 16.6**	**-0.2**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
T1242	**Castelluccio d**	**0.17**	**3**	↑P	**Pg**	**17 46 13.9**	**-0.7**
T1242				S	**Sg**	**17 46 16.9**	**-0.6**
NRCA	**Norcia**	**0.19**	**342**		**Pg**	**17 46 13.2**	**-1.5**
NRCA	**Norcia**	**0.19**	**342**	P	**Pg**	**17 46 14.0**	**-0.7**
NRCA				S	**Sg**	**17 46 16.9**	**-0.8**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1243	**Rocca Santa Ma**	**0.19**	**78**	↑P	**Pg**	**17 46 13.8**	**-1.0**
T1243				S	**Sg**	**17 46 16.9**	**-1.0**
CAMP	**Campotosto**	**0.20**	**127**	↑P	**Pg**	**17 46 14.2**	**-0.8**
CAMP				S	**Sg**	**17 46 17.4**	**-0.7**
CAMP				AML	AML		
CAMP				AML	AML		
MC2	**Monte Cornacci**	**0.26**	**360**	P	**Pg**	**17 46 15.1**	**-0.9**
MC2				S	**Sg**	**17 46 19.6**	**-0.1**
MMO1	**Montemonaco**	**0.26**	**22**	P	**Pg**	**17 46 15.2**	**-0.9**
MMO1				S	**Sg**	**17 46 19.2**	**-0.5**
T1241	**Roccafluvione,**	**0.27**	**41**	P	**Pg**	**17 46 15.1**	**-1.0**
T1241				S	**Sg**	**17 46 19.1**	**-0.8**
T1211	**Morro Reatino**	**0.28**	**244**	P	**Pg**	**17 46 15.8**	**-0.5**
T1211				S	**Sg**	**17 46 20.9**	**+0.7**
TERO	**Teramo**	**0.30**	**96**	↑P	**Pg**	**17 46 15.6**	**-1.1**
TERO				S	**Sg**	**17 46 20.1**	**-0.9**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
FEMA	**Monte Fema**	**0.32**	**341**	P	**Pg**	**17 46 16.5**	**-0.6**
FEMA				S	**Sg**	**17 46 21.6**	**0.0**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
ARRO	**Arrone**	**0.33**	**256**	↑P	**Pg**	**17 46 16.5**	**-0.6**
ARRO				S	**Sb**	**17 46 22.7**	**-0.6**
ARRO				AML	AML		
	comp=N,63250μm,0.9s						
ARRO				AML	AML		
	comp=E,77200μm,1.0s						
AQU	**L'Aquila**	**0.34**	**153**		**Pg**	**17 46 16.6**	**-0.7**
AQU	**L'Aquila**	**0.34**	**153**	P	**Pg**	**17 46 16.7**	**-0.7**
AQU	**L'Aquila**	**0.34**	**153**	↑P	**Pg**	**17 46 16.8**	**-0.6**
AQU				AML	AML		
	comp=E,87000μm,1.5s						
AQU				AML	AML		
	comp=E,91850μm,0.9s						
AQU				AML	AML		
	comp=N,72150μm,0.7s						
AQU				AML	AML		
	comp=N,69700μm,0.7s						
GIGS	**Gran Sasso**	**0.35**	**127**	↑P	**Pg**	**17 46 16.5**	**-1.0**
GIGS				S	**Sg**	**17 46 21.6**	**-0.6**
GIGS				AML	AML		
	comp=N,22900μm,0.9s						
GIGS				AML	AML		
	comp=E,41100μm,0.4s						
FDMO	**Fiordimonte**	**0.39**	**348**	↑P	**Pg**	**17 46 17.4**	**-0.8**
FDMO				S	**Sg**	**17 46 23.4**	**-0.1**
FDMO				AML	AML		
	comp=N,63000μm,0.8s						
FDMO				AML	AML		
	comp=E,99550μm,0.3s						
FIAM	**Fiamignano**	**0.39**	**188**	↑P	**Pg**	**17 46 17.7**	**-0.6**
FIAM				S	**Sg**	**17 46 24.1**	**+0.5**
FIAM				AML	AML		
FIAM				AML	AML		
	comp=N,79450μm,0.8s						
CESI	**CESI - Serrava**	**0.41**	**329**	↑P	**Pg**	**17 46 17.7**	**-0.9**
CESI				S	**Sg**	**17 46 24.4**	**+0.3**
CESI				AML	AML		
CESI				AML	AML		
	comp=E,92300μm,0.5s						
CSP1	**Cessapalombo**	**0.43**	**1**	P	**Pg**	**17 46 18.1**	**-1.0**
CSP1				S	**Sg**	**17 46 24.9**	**-0.1**
CSP1				AML	AML		
	comp=E,99450μm,0.4s						
CSP1				AML	AML		
CSP1				AML	AML		
	comp=E,99350μm,0.4s						
CSP1				AML	AML		
CESX	**Cesi**	**0.46**	**264**	↑P	**Pg**	**17 46 18.8**	**-0.6**
CESX				AML	AML		
	comp=E,56000μm,0.5s						
CESX				AML	AML		
	comp=N,69850μm,0.6s						
OFFI	**Offida**	**0.46**	**52**	↑P	**Pg**	**17 46 19.2**	**-0.3**
OFFI				AML	AML		
OFFI				AML	AML		
FAGN	**Fagnano**	**0.49**	**143**	↑P	**Pg**	**17 46 19.0**	**-1.0**
FAGN				AML	AML		
FAGN				AML	AML		
	comp=E,93500μm,0.5s						
MNTP	**Montappone**	**0.52**	**23**	P	**Pg**	**17 46 20.1**	**-0.6**
MNTP				S	**Sb**	**17 46 28.8**	**-0.2**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
SEF1	**Sefro**	**0.52**	**340**	P	**Pg**	**17 46 19.8**	**-0.9**
SEF1				S	**Sg**	**17 46 28.0**	**+0.3**
SEF1				AML	AML		
	comp=N,52150μm,0.3s						
SEF1				AML	AML		
	comp=E,80200μm,0.7s						
SEF1				AML	AML		
	comp=N,52100μm,0.3s						
PIO1	**Pioraco**	**0.54**	**344**	P	**Pg**	**17 46 20.2**	**-0.9**
PIO1				S	**Sg**	**17 46 28.6**	**+0.2**
PIO1				AML	AML		
	comp=E,41650μm,0.5s						
PIO1				AML	AML		
	comp=N,73800μm,0.7s						
VCEL	**Villa Celiera**	**0.55**	**118**	↑P	**Pg**	**17 46 20.1**	**-1.1**
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
ASSB	**Assisi San Ben**	**0.55**	**315**	↑P	**Pg**	**17 46 20.4**	**-0.9**
ASSB				S	**Sg**	**17 46 29.0**	**+0.4**
ASSB				AML	AML		
	comp=E,53800μm,0.7s						
ASSB				AML	AML		
	comp=N,55750μm,0.3s						
TRTR	**Tortoreto Alta**	**0.55**	**74**	↑P	**Pg**	**17 46 21.2**	**-0.1**
TRTR				AML	AML		
TRTR				AML	AML		
FIU1	**Fiuminata**	**0.56**	**340**	P	**Pg**	**17 46 20.6**	**-0.9**
FIU1				S	**Sg**	**17 46 29.3**	**+0.2**
FIU1				AML	AML		
	comp=N,31700μm,0.7s						
FIU1				AML	AML		
	comp=E,29050μm,1.2s						
SSM1	**San Severino M**	**0.57**	**359**	P	**Pg**	**17 46 20.7**	**-0.9**
T0110	**Collepietro**	**0.61**	**135**	↑P	**Pg**	**17 46 21.1**	**-1.3**
T0110				AML	AML		
	comp=E,87550μm,0.5s						
T0110				AML	AML		
	comp=N,90950μm,0.4s						
MTL1	**Matelica**	**0.61**	**347**	P	**Pg**	**17 46 21.6**	**-0.9**
MTL1				AML	AML		
	comp=N,99000μm,0.5s						
MTL1				AML	AML		
	comp=N,98950μm,0.5s						
MTL1				AML	AML		
	comp=E,63350μm,0.4s						
SNTG	**Esanatoglia**	**0.63**	**343**	↑P	**Pg**	**17 46 21.5**	**-1.2**
SNTG				S	**Sg**	**17 46 31.4**	**+0.4**
SNTG				AML	AML		
	comp=E,19700μm,1.5s						
SNTG				AML	AML		
	comp=N,24050μm,0.7s						
SNTG				AML	AML		
	comp=E,2425μm,1.5s						
SNTG				AML	AML		
	comp=N,2875μm,0.7s						
PTQR	**Pietraquaria**	**0.65**	**166**	↑P	**Pg**	**17 46 21.9**	**-1.3**
PTQR				AML	AML		
	comp=E,12100μm,0.8s						
PTQR				AML	AML		
	comp=N,12750μm,1.2s						
SRES	**S.Oreste - Sor**	**0.66**	**231**	↑P	**Pg**	**17 46 22.2**	**-1.0**
SRES				AML	AML		
	comp=N,19000μm,0.6s						
SRES				AML	AML		
	comp=E,17700μm,0.8s						
TRE1	**Treia**	**0.66**	**8**	P	**Pg**	**17 46 22.7**	**-0.6**
TRE1				AML	AML		
TRE1				AML	AML		
ATCC	**AVT- Casa Cast**	**0.67**	**323**	↑P	**Pg**	**17 46 22.4**	**-1.0**
EL6	**Elcito**	**0.68**	**354**	↑P	**Pg**	**17 46 22.4**	**-1.2**
EL6				AML	AML		
	comp=E,68500μm,0.6s						
EL6				AML	AML		
	comp=N,75500μm,0.3s						
EL6				AML	AML		
	comp=N,75550μm,0.3s						
EL6				AML	AML		
	comp=E,68450μm,0.6s						
CADA	**Capodarco di F**	**0.68**	**38**	P	**Pg**	**17 46 23.5**	**-0.2**
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
FOSV	**Fossato di Vic**	**0.71**	**334**	↑P	**Pg**	**17 46 23.1**	**-1.2**
FOSV				AML	AML		
	comp=E,29600μm,0.5s						
FOSV				AML	AML		
	comp=N,24450μm,0.6s						
MTCE	**Montecelio**	**0.72**	**208**	↑P	**Pg**	**17 46 23.0**	**-1.4**
MTCE				AML	AML		
	comp=E,27250μm,1.3s						
MTCE				AML	AML		
	comp=N,16450μm,0.8s						
CING	**Cingoli**	**0.72**	**0**	↑P	**Pg**	**17 46 23.1**	**-1.3**
CERT	**Cerreto**	**0.72**	**193**	↑P	**Pg**	**17 46 23.2**	**-1.3**
CERT				AML	AML		
	comp=E,33700μm,0.5s						
CERT				AML	AML		
	comp=N,21750μm,0.5s						
MURB	**Monte Urbino**	**0.78**	**321**		**Pg**	**17 46 24.3**	**-1.3**
MURB	**Monte Urbino**	**0.78**	**321**	↑P	**Pg**	**17 46 24.5**	**-1.1**
MURB				AML	AML		
	comp=E,96550μm,0.4s						
MURB				AML	AML		
	comp=N,99300μm,1.1s						
MURB				AML	AML		
MURB				AML	AML		
	comp=E,96450μm,0.4s						
MURB				AML	AML		
	comp=N,99350μm,1.1s						
MURB				AML	AML		
PP3	**Marolino**	**0.78**	**23**	↑P	**Pg**	**17 46 25.1**	**-0.5**
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
PP3				AML	AML		
ATTE	**AVT- Monte Tez**	**0.82**	**312**	↑P	**Pg**	**17 46 25.1**	**-1.2**
ATTE				AML	AML		
	comp=E,26650μm,0.6s						
ATTE				AML	AML		
	comp=N,28900μm,0.5s						
RCAV	**Rocca di Cave**	**0.83**	**193**	↑P	**Pg**	**17 46 25.0**	**-1.5**
RCAV				AML	AML		
	comp=E,35750μm,0.5s						
RCAV				AML	AML		
	comp=E,35700μm,0.5s						
RCAV				AML	AML		
	comp=N,39600μm,0.5s						
INTR	**Introdacqua**	**0.83**	**140**	↑P	**Pg**	**17 46 24.8**	**-1.8**
INTR				AML	AML		
	comp=E,30μm,0.9s						
INTR				AML	AML		
	comp=N,30μm,1.0s						
INTR				AML	AML		
	comp=N,45400μm,1.0s						
INTR				AML	AML		
	comp=E,30μm,0.9s						
INTR				AML	AML		
	comp=N,30μm,1.0s						
INTR				AML	AML		
	comp=E,29500μm,0.9s						
MGAB	**Montegabbione**	**0.84**	**288**	↑P	**Pg**	**17 46 25.7**	**-1.0**
MGAB				AML	AML		
	comp=E,96150μm,0.9s						
MGAB				AML	AML		
	comp=N,83700μm,0.6s						
MGAB				AML	AML		
	comp=E,94950μm,1.6s						
MGAB				AML	AML		
	comp=N,81400μm,0.7s						
ATFO	**Monte Foce - G**	**0.84**	**327**	↑P	**Pg**	**17 46 25.6**	**-1.2**
ATFO				AML	AML		
	comp=E,31200μm,0.8s						
ATFO				AML	AML		
	comp=N,27800μm,0.5s						
VVLD	**Villa Vallelon**	**0.85**	**158**	P	**Pg**	**17 46 25.3**	**-1.5**
VVLD				AML	AML		
	comp=N,19050μm,1.4s						
VVLD				AML	AML		
	comp=E,16300μm,0.8s						
ARVD	**Arcevia**	**0.86**	**348**	P	**Pg**	**17 46 25.9**	**-1.2**
ARVD				AML	AML		
	comp=E,25650μm,0.7s						
ARVD				AML	AML		
	comp=N,35300μm,0.7s						
GUAR	**Guarcino**	**0.87**	**174**	P	**Pg**	**17 46 26.1**	**-1.1**
GUAR				AML	AML		
	comp=E,20750μm,1.2s						
GUAR				AML	AML		
	comp=N,33600μm,0.7s						
RMP	**Rome, Mte Porz**	**0.92**	**203**	↑P	**Pg**	**17 46 26.6**	**-1.6**
RMP				AML	AML		
	comp=E,34300μm,0.9s						
RMP				AML	AML		
	comp=N,45300μm,0.7s						
FRON	**Frontone**	**0.93**	**338**	P	**Pg**	**17 46 26.8**	**-1.6**
AOI	**Ancona**	**0.94**	**18**	↑P	**Pg**	**17 46 27.2**	**-1.4**
AOI				AML	AML		
	comp=E,39200μm,0.4s						
AOI				AML	AML		
	comp=N,29550μm,0.3s						
LPEL	**Lama del Pelig**	**0.95**	**129**	P	**Pg**	**17 46 26.5**	**-2.4**
LPEL				AML	AML		
	comp=N,19200μm,0.4s						
LPEL				AML	AML		
	comp=E,31400μm,0.7s						
CAFR	**Castel Frentan**	**0.96**	**116**	P	**Pg**	**17 46 27.6**	**-1.3**
CAFR				AML	AML		
	comp=E,100μm,0.3s						
CAFR				AML	AML		
	comp=N,24300μm,0.4s						
ATMI	**Monte Miggiano**	**0.96**	**315**	P	**Pg**	**17 46 27.8**	**-1.1**
ATMI				AML	AML		
	comp=N,50950μm,0.9s						
ATMI				AML	AML		
	comp=E,78300μm,0.6s						
VIVA	**Pratoni del Vi**	**0.96**	**199**	P	**Pg**	**17 46 27.4**	**-1.6**
VIVA				AML	AML		
	comp=E,49300μm,0.5s						
VIVA				AML	AML		
	comp=N,46450μm,0.6s						
SACS	**San Casciano d**	**0.96**	**282**	↑P	**Pg**	**17 46 28.1**	**-1.0**
SACS				AML	AML		
	comp=E,29600μm,0.5s						
SACS				AML	AML		
	comp=N,26950μm,0.7s						
SACS				AML	AML		
	comp=N,24750μm,0.7s						
SACS				AML	AML		
	comp=E,27500μm,0.9s						
RDP	**Rocca di Papa**	**0.96**	**202**	P	**Pg**	**17 46 27.3**	**-1.8**
RDP				AML	AML		
	comp=E,58700μm,0.6s						
RDP				AML	AML		
	comp=N,73000μm,1.6s						
MA9	**Marino**	**0.97**	**204**	P	**Pb**	**17 46 27.5**	**-1.6**
MA9				AML	AML		
	comp=N,53200μm,0.6s						
MA9				AML	AML		
	comp=E,34000μm,0.5s						
ATPI	**Pietralunga -**	**0.98**	**324**	↑P	**Pb**	**17 46 28.0**	**-1.4**
COR1	**Corinaldo**	**0.98**	**352**	P	**Pb**	**17 46 28.8**	**-0.6**
COR1				AML	AML		
COR1				AML	AML		
	comp=N,58700μm,1.2s						
COR1				AML	AML		
	comp=E,67750μm,0.6s						
COR1				AML	AML		
	comp=E,35800μm,0.6s						
PIEI	**Pieia**	**1.00**	**331**	P	**Pb**	**17 46 28.6**	**-1.1**
PIEI				AML	AML		
	comp=E,19050μm,0.3s						
PIEI				AML	AML		
	comp=N,12050μm,0.9s						
POFI	**Posta Fibreno**	**1.01**	**157**	P	**Pb**	**17 46 28.6**	**-1.4**
POFI				AML	AML		
	comp=E,12800μm,0.7s						
POFI				AML	AML		
	comp=N,10815μm,1.6s						
MPAG	**Monte Paganucc**	**1.02**	**342**	↑P	**Pb**	**17 46 28.6**	**-1.5**
MPAG				AML	AML		
	comp=E,23750μm,0.8s						
MPAG				AML	AML		
	comp=N,21200μm,0.6s						
MPAG				AML	AML		
	comp=E,24400μm,0.8s						
MPAG				AML	AML		
	comp=N,21650μm,0.6s						
LATE	**Laterza**	**1.03**	**268**	Pg	**Pb**	**17 46 29.2**	**-0.9**
LATE	**Laterza**	**1.03**	**268**	↑P	**Pb**	**17 46 29.2**	**-0.9**
LAV9	**Lanuvio**	**1.04**	**201**	P	**Pb**	**17 46 29.2**	**-1.2**
LAV9				AML	AML		
	comp=N,37900μm,0.4s						
LAV9				AML	AML		
	comp=N,38400μm,0.5s						
LAV9				AML	AML		
	comp=E,40800μm,0.5s						
LAV9				AML	AML		
	comp=E,38950μm,0.5s						
SENI	**Senigallia**	**1.05**	**2**	AML	AML		
	comp=E,27050μm,1.0s						
SENI				AML	AML		
	comp=N,25700μm,0.8s						
LRP	**Arpino**	**1.05**	**164**	P	**Pb**	**17 46 29.7**	**-0.8**
LRP				AML	AML		
	comp=N,12650μm,0.6s						
LRP				AML	AML		
	comp=E,10090μm,0.9s						
TOLF	**Tolfa**	**1.06**	**237**	↑P	**Pb**	**17 46 29.6**	**-1.1**
TOLF				AML	AML		
	comp=N,9570μm,1.0s						
TOLF				AML	AML		
	comp=E,14550μm,0.6s						
FSSB	**Fossombrone**	**1.08**	**344**	P	**Pb**	**17 46 29.7**	**-1.3**
FSSB				AML	AML		
	comp=N,59300μm,0.5s						
FSSB				AML	AML		
	comp=E,54350μm,0.5s						
GIUL	**Giuliano Di Ro**	**1.10**	**178**	P	**Pb**	**17 46 30.0**	**-1.4**
GIUL				AML	AML		
	comp=E,9430μm,0.6s						
GIUL				AML	AML		
	comp=N,11750μm,0.9s						
BADI	**Badiali**	**1.10**	**321**	P	**Pb**	**17 46 30.3**	**-1.1**
CAFI	**Castiglion Fio**	**1.12**	**307**	↑P	**Pb**	**17 46 30.7**	**-1.1**
CAFI				AML	AML		
	comp=E,14750μm,0.9s						
CAFI				AML	AML		
	comp=E,15300μm,0.9s						
CAFI				AML	AML		
	comp=N,15450μm,1.2s						
CAFI				AML	AML		
	comp=N,14950μm,1.2s						
MCIV	**Monte Civitell**	**1.12**	**277**	↑P	**Pb**	**17 46 30.6**	**-1.2**
MCIV				AML	AML		
	comp=N,9835μm,1.3s						
MCIV				AML	AML		
	comp=E,10390μm,0.5s						
SF04	**Casetta**	**1.14**	**280**	P	**Pb**	**17 46 30.8**	**-1.3**
SF04				AML	AML		
	comp=N,10360μm,1.5s						
SF04				AML	AML		
	comp=E,17150μm,0.4s						
PE3	**Peglio**	**1.16**	**334**	P	**Pb**	**17 46 31.5**	**-0.9**
LATB	**Latina**	**1.18**	**188**	P	**Pn**	**17 46 30.4**	**-2.1**
LATB				AML	AML		
	comp=E,5265μm,1.3s						
LATB				AML	AML		
	comp=N,4605μm,0.9s						
LIK	**San Giovanni I**	**1.18**	**167**	AML	AML		
	comp=N,22050μm,0.6s						
LIK				AML	AML		
	comp=E,21050μm,1.0s						
SSP9	**Sansepolcro**	**1.20**	**320**	P	**Pn**	**17 46 32.1**	**-0.9**
SSP9				AML	AML		
	comp=E,17200μm,0.7s						
SSP9				AML	AML		
	comp=N,21600μm,1.3s						
SF01	**Poggio Pratacc**	**1.21**	**278**	P	**Pn**	**17 46 32.4**	**-0.7**
SF01				AML	AML		
	comp=E,18350μm,0.9s						
SF01				AML	AML		
	comp=N,15750μm,0.8s						
PARC	**Parchiule**	**1.21**	**325**	P	**Pn**	**17 46 32.5**	**-0.6**
PARC				AML	AML		
	comp=E,24250μm,0.7s						
PARC				AML	AML		
	comp=N,27100μm,0.6s						
CERA	**Filignano**	**1.22**	**150**	↑P	**Pn**	**17 46 31.2**	**-2.1**
CERA				AML	AML		
	comp=E,12700μm,1.0s						
CERA				AML	AML		
	comp=N,14500μm,1.0s						
CERA				AML	AML		
	comp=E,12250μm,1.0s						
CERA				AML	AML		
	comp=N,13850μm,1.0s						
ARCI	**Arcidosso**	**1.28**	**279**	↑P	**Pn**	**17 46 33.5**	**-0.6**
ARCI				AML	AML		
	comp=E,5815μm,0.9s						
ARCI				AML	AML		
	comp=N,4435μm,0.7s						

PESA	**Pesaro**	**1.31 349**	P	**Pn**	**17 46 33.8**	**-0.7**		
PESA			AML	AML				
	comp=N,30200µm,0.5s							
PESA			AML	AML				
	comp=E,27900µm,0.5s							
CRE	**Caprese Michel**	**1.32 317**	P	**Pn**	**17 46 33.8**	**-1.0**		
CRE			AML	AML				
	comp=N,9835µm,0.6s							
CRE			AML	AML				
	comp=E,9350µm,1.2s							
TRIV	**Trivento**	**1.34 131**	P	**Pn**	**17 46 33.7**	**-1.3**		
TRIV			AML	AML				
	comp=N,10780µm,1.0s							
TRIV			AML	AML				
	comp=N,10500µm,1.2s							
TRIV			AML	AML				
	comp=E,13700µm,1.1s							
TRIV			AML	AML				
	comp=E,14600µm,1.1s							
VAGA	**Valle Agricola**	**1.46 148**	P	**Pn**	**17 46 36.0**	**-0.6**		
VAGA			AML	AML				
	comp=N,7455µm,0.7s							
VAGA			AML	AML				
	comp=E,3520µm,1.0s							
VAGA			AML	AML				
	comp=N,7165µm,0.7s							
VAGA			AML	AML				
	comp=E,3385µm,1.0s							
BSSO	**Busso**	**1.52 136**	P	**Pn**	**17 46 37.3**	**-0.2**		
BSSO			AML	AML				
	comp=E,4940µm,1.2s							
BSSO			AML	AML				
	comp=N,6905µm,1.6s							
BSSO			AML	AML				
	comp=E,1855µm,1.1s							
BSSO			AML	AML				
	comp=N,2875µm,1.6s							
ASQU	**Asqua**	**1.53 318**	P	**Pn**	**17 46 36.8**	**-0.9**		
ASQU			AML	AML				
	comp=N,9285µm,0.6s							
ASQU			AML	AML				
	comp=E,6645µm,1.0s							
SFI	**Santa Sofia**	**1.59 322**	P	**Pn**	**17 46 37.7**	**-0.6**		
SFI			AML	AML				
	comp=N,6725µm,0.8s							
SFI			AML	AML				
	comp=E,5245µm,0.6s							
SFI			AML	AML				
	comp=N,6940µm,0.8s							
SFI			AML	AML				
	comp=E,5250µm,0.6s							
MODR	**Mondragone**	**1.59 161**	P	**Pn**	**17 46 38.3**	**-0.1**		
MODR			AML	AML				
	comp=N,3255µm,0.8s							
MODR			AML	AML				
	comp=E,3405µm,1.1s							
FROS	**Frosini**	**1.59 291**	P	**Pn**	**17 46 38.4**	**0.0**		
FROS			AML	AML				
	comp=N,6100µm,1.0s							
FROS			AML	AML				
	comp=E,8965µm,0.6s							
CSNT	**Castellina Chi**	**1.61 301**	P	**Pn**	**17 46 38.4**	**-0.3**		
CSNT			AML	AML				
	comp=E,3740µm,0.5s							
CSNT			AML	AML				
	comp=N,3760µm,1.0s							
CIGN	**Sant'Elia a Pi**	**1.62 128**	P	**Pn**	**17 46 38.6**	**-0.1**		
CIGN			AML	AML				
	comp=E,4585µm,0.7s							
CIGN			AML	AML				
	comp=N,4835µm,1.2s							
PIGN	**Pignataro Magg**	**1.63 153**	P	**Pn**	**17 46 39.0**	**+0.2**		
PIGN			AML	AML				
	comp=N,2850µm,1.4s							
PIGN			AML	AML				
	comp=N,2720µm,1.3s							
PIGN			AML	AML				
	comp=E,3115µm,1.3s							
PIGN			AML	AML				
	comp=E,3230µm,1.3s							
OSSC	**Osservatorio P**	**1.67 302**		**Pn**	**17 46 39.5**	**+0.1**		
OSSC	**Osservatorio P**	**1.67 302**	P	**Pn**	**17 46 39.6**	**+0.1**		
OSSC			AML	AML				
	comp=E,3825µm,1.0s							
OSSC			AML	AML				
	comp=N,3695µm,1.4s							
OSSC			AML	AML				
	comp=E,3770µm,1.4s							
OSSC			AML	AML				
	comp=N,3765µm,1.0s							
SACR	**S. Croce Del S**	**1.69 138**	⇑P	**Pb**	**17 46 41.2**	**-0.2**		
RUFI	**Rufina**	**1.71 314**	P	**Pn**	**17 46 39.6**	**-0.3**		
RUFI			AML	AML				
	comp=N,5590µm,0.8s							
RUFI			AML	AML				
	comp=E,7275µm,0.7s							
GATE	**Gambatesa**	**1.71 131**	P	**Pb**	**17 46 41.8**	**0.0**		
CASP	**Castiglione de**	**1.72 275**		**Pn**	**17 46 39.8**	**-0.4**		
CASP	**Castiglione de**	**1.72 275**	P	**Pn**	**17 46 39.7**	**-0.4**		
CASP			AML	AML				
	comp=N,2125µm,0.8s							
CASP			AML	AML				
	comp=E,1725µm,0.6s							
MELA	**Melanico ??? S**	**1.72 123**	P	**Pn**	**17 46 40.2**	**+0.1**		
MELA			AML	AML				
	comp=E,16800µm,0.6s							
MELA			AML	AML				
	comp=N,17300µm,0.7s							
MELA			AML	AML				
	comp=N,17950µm,0.7s							
MELA			AML	AML				
	comp=E,17600µm,0.5s							
TRIF	**Trifonti**	**1.74 286**	P	**Pn**	**17 46 40.4**	**-0.1**		
TRIF			AML	AML				
	comp=E,3485µm,0.9s							
TRIF			AML	AML				
	comp=N,4275µm,0.7s							
TREM	**Isole Tremiti**	**1.80 106**	P	**Pn**	**17 46 41.3**	**+0.1**		
TREM			AML	AML				
	comp=N,12540µm,0.6s							
TREM			AML	AML				
	comp=E,14850µm,1.3s							
VITU	**Vitulano (BN)**	**1.82 143**	P	**Pn**	**17 46 42.1**	**+0.6**		
VITU			AML	AML				
	comp=N,4025µm,0.7s							
VITU			AML	AML				
	comp=N,4245µm,0.7s							
VITU			AML	AML				
	comp=E,3730µm,1.2s							
VITU			AML	AML				
	comp=E,1365µm,1.2s							
PSB1	**Pescosannita**	**1.87 139**	P	**Pb**	**17 46 44.4**	**-0.1**		
PSB1			AML	AML				
	comp=E,4000µm,1.1s							
PSB1			AML	AML				
	comp=N,3575µm,0.9s							
PSB1			AML	AML				
	comp=E,4130µm,0.9s							
PSB1			AML	AML				
	comp=N,3315µm,1.5s							
DUGI	**Dugi Otok**	**1.91 45**	*e*Pn	**Pn**	**17 46 41.9**	**-0.8**		
PAOL	**Paolisi**	**1.92 147**		**Pn**	**17 46 43.3**	**+0.4**		
SEI	**Scarperia**	**1.94 317**	P	**Pn**	**17 46 43.0**	**-0.1**		
SEI			AML	AML				
	comp=E,8150µm,0.5s							
SEI			AML	AML				
	comp=N,15150µm,0.6s							
MOCO	**Biccari - m.te**	**1.95 131**	P	**Pb**	**17 46 44.9**	**-0.9**		
MOCO			AML	AML				
	comp=E,2645µm,0.7s							
MOCO			AML	AML				
	comp=N,1835µm,0.8s							
MOCO			AML	AML				
	comp=N,1745µm,0.8s							
MOCO			AML	AML				
	comp=E,2555µm,0.7s							
APRC	**Apricena**	**1.96 116**	⇑P	**Pn**	**17 46 43.9**	**+0.3**		
APRC			AML	AML				
	comp=E,6845µm,1.4s							
APRC			AML	AML				
	comp=N,11950µm,0.4s							
SGRT	**San Giovanni R**	**2.10 115**		**Pn**	**17 46 45.8**	**+0.4**		
SGRT	**San Giovanni R**	**2.10 115**	⇑P	**Pn**	**17 46 45.8**	**+0.4**		
SGRT			AML	AML				
	comp=E,7275µm,0.4s							
SGRT			AML	AML				
	comp=N,5400µm,0.8s							
MTCR	**Monte La Croce**	**2.11 311**		AML	AML			
	comp=N,4625µm,0.9s							
MTCR				AML	AML			
	comp=E,3665µm,1.0s							
VIRC	**Vir**	**2.12 39**	*e*Pn	**Pn**	**17 46 45.3**	**-0.3**		
FNVD	**Fontana Vidola**	**2.13 316**	P	**Pn**	**17 46 46.2**	**+0.4**		
FNVD			AML	AML				
	comp=N,4955µm,0.8s							
FNVD			AML	AML				
	comp=E,5345µm,0.8s							
MORI	**Morici**	**2.20 56**	*e*Pn	**Pn**	**17 46 46.4**	**-0.3**		
CELB	**S.Piero in Cam**	**2.20 273**	P	**Pn**	**17 46 46.3**	**-0.5**		
CELB			AML	AML				
	comp=N,916µm,0.8s							
CELB			AML	AML				
	comp=E,766µm,0.6s							
PII	**Pisa**	**2.22 300**	P	**Pn**	**17 46 47.3**	**+0.3**		
PII			AML	AML				
	comp=E,2715µm,0.5s							
PII			AML	AML				
	comp=N,2485µm,0.8s							
SGTA	**Sant Agata di**	**2.22 132**	P	**Pn**	**17 46 48.6**	**+1.5**		
SGTA			AML	AML				
	comp=E,3765µm,0.7s							
SGTA			AML	AML				
	comp=N,2460µm,1.1s							
SGTA			AML	AML				
	comp=E,3660µm,0.7s							
SGTA			AML	AML				
	comp=N,2340µm,1.1s							
MSAG	**Monte S. Angel**	**2.23 114**	⇑P	**Pn**	**17 46 47.6**	**+0.4**		
MSAG			AML	AML				
	comp=N,14750µm,0.6s							
MSAG			AML	AML				
	comp=N,15100µm,0.6s							
MSAG			AML	AML				
	comp=E,7925µm,1.1s							
MSAG			AML	AML				
	comp=E,8385µm,1.2s							
CAFE	**Carife**	**2.23 136**	AML	AML				
	comp=N,2700µm,1.1s							
CAFE			AML	AML				
	comp=E,3145µm,0.7s							
CAFE			AML	AML				
	comp=N,2705µm,1.1s							
CAFE			AML	AML				
	comp=E,3010µm,0.7s							
POPM	**Popiglio**	**2.25 309**	P	**Pn**	**17 46 47.4**	**-0.1**		
NVLJ	**Novalja**	**2.26 32**	*e*Pn	**Pn**	**17 46 46.9**	**-0.7**		
BRJN	**Brijuni**	**2.28 10**	*e*Pn	**Pn**	**17 46 47.1**	**-0.7**		
BRJN	**Brijuni**	**2.28 10**	⇑P	**Pn**	**17 46 47.3**	**-0.6**		
ZCCA	**Zocca**	**2.34 317**		**Pn**	**17 46 50.6**	**+2.0**		
ZCCA	**Zocca**	**2.34 317**	P	**Pb**	**17 46 51.6**	**-0.8**		
ZCCA			AML	AML				
	comp=N,2890µm,1.6s							
ZCCA			AML	AML				
	comp=N,3040µm,1.0s							
ZCCA			AML	AML				
	comp=E,3280µm,1.6s							
ZCCA			AML	AML				
	comp=E,3215µm,1.6s							
MAIM	**Mastiano**	**2.34 303**	P	**Pn**	**17 46 48.8**	**+0.1**		
BDI	**Bagni Di Lucca**	**2.36 307**	P	**Pn**	**17 46 48.5**	**-0.4**		
BDI			AML	AML				
	comp=N,2345µm,1.0s							
BDI			AML	AML				
	comp=N,1048µm,0.9s							
BDI			AML	AML				
	comp=E,1405µm,0.5s							
BDI			AML	AML				
	comp=E,3370µm,0.5s							
RABC	**Rab**	**2.39 28**	*e*Pn	**Pn**	**17 46 48.7**	**-0.6**		
CARD	**Cardoso**	**2.41 306**	P	**Pn**	**17 46 49.5**	**-0.1**		
CAPA	**Cerignola FG**	**2.46 127**	AML	AML				
	comp=E,7185µm,1.1s							
CAPA			AML	AML				
	comp=N,7160µm,0.8s							
SMRN	**Sveta Marina**	**2.48 16**	*e*Pn	**Pn**	**17 46 49.6**	**-0.9**		
VULT	**Monte Vulture**	**2.48 132**	AML	AML				
	comp=N,4295µm,1.4s							
VULT			AML	AML				
	comp=N,4010µm,1.4s							
VULT			AML	AML				
	comp=E,2835µm,0.9s							
VULT			AML	AML				
	comp=E,2925µm,0.9s							
VLC	**Villacollemand**	**2.54 307**	Pn	**Pn**	**17 46 50.7**	**-0.7**		
VLC	**Villacollemand**	**2.54 307**	P	**Pn**	**17 46 51.1**	**-0.3**		
VLC			AML	AML				
	comp=E,1365µm,1.0s							
VLC			AML	AML				
	comp=N,1310µm,0.9s							
VLC			AML	AML				
	comp=N,1320µm,0.9s							
VLC			AML	AML				
	comp=E,1380µm,1.0s							
GSCL	**Gusciola**	**2.54 313**	P	**Pn**	**17 46 51.9**	**+0.4**		
MRLC	**Muro Lucano**	**2.56 137**	P	**Pn**	**17 46 53.6**	**+1.9**		
MRLC			AML	AML				
	comp=E,1360µm,1.2s							
MRLC			AML	AML				
	comp=E,1185µm,1.2s							
MRLC			AML	AML				
	comp=N,1305µm,1.4s							
MRLC			AML	AML				
	comp=N,1185µm,1.4s							
UDBI	**Udbina**	**2.64 44**	*e*Pn	**Pn**	**17 46 53.6**	**+0.8**		
EQUI	**Equi**	**2.68 305**	P	**Pn**	**17 46 53.5**	**+0.1**		
PALZ	**Palazzo San Ge**	**2.69 129**	P	**Pn**	**17 46 54.1**	**+0.7**		
PALZ			AML	AML				
	comp=E,5450µm,1.0s							
PALZ			AML	AML				
	comp=N,4100µm,0.9s							
KIJV	**Kijevo**	**2.70 59**	*i* Pn	**Pn**	**17 46 54.3**	**+0.6**		
LSTV	**Lastovo**	**2.73 86**	*e*Pn	**Pn**	**17 46 53.6**	**-0.4**		
MRVN	**Minervino Murg**	**2.75 124**	P	**Pn**	**17 46 54.9**	**+0.5**		
MRVN			AML	AML				
	comp=E,1150µm,0.9s							
MRVN			AML	AML				
	comp=N,1343µm,0.8s							
ACER	**Acerenza**	**2.78 131**	⇑P	**Pn**	**17 46 55.7**	**+0.9**		
ACER			AML	AML				
	comp=N,2400µm,0.6s							
ACER			AML	AML				
	comp=E,2820µm,0.8s							
ACER			AML	AML				
	comp=N,2490µm,0.6s							
ACER			AML	AML				
	comp=E,2940µm,0.8s							
PLMA	**Palmaria, Port**	**2.81 301**	⇑P	**Pn**	**17 46 55.4**	**+0.3**		
PLMA			AML	AML				
	comp=E,1034µm,0.7s							
PLMA			AML	AML				
	comp=N,901µm,0.4s							
RIY	**Rijeka**	**2.83 19**	*e*Pn	**Pn**	**17 46 54.8**	**-0.5**		
PLIT	**Plitvice**	**2.83 38**	*e*Pn	**Pn**	**17 46 55.6**	**+0.1**		
MAKA	**Makarska**	**2.88 76**	*e*Pn	**Pn**	**17 46 55.3**	**-0.7**		
TEOL	**Teolo**	**2.92 338**	Pn	**Pn**	**17 46 56.8**	**+0.2**		
SKDS	**Skadanscina**	**2.95 11**	⇑*i*Pn	**Pn**	**17 46 56.4**	**-0.6**		
SKDS	**Skadanscina**	**2.95 11**	⇑*i*Pn	**Pn**	**17 46 56.4**	**-0.6**		
SKDS			*e*Sn	**Sn**	**17 47 30.4**	**-1.9**		
SKDS			IAML		17 47 35.9			
	comp=Z,558nm,0.4s							
SMPL	**Sampolo**	**2.95 260**	P	**Pn**	**17 46 56.8**	**-0.3**		
SMPL	**Sampolo**	**2.95 260**	⇑P	**Pn**	**17 46 56.7**	**-0.3**		
SMPL			AML	AML				
	comp=E,174µm,0.6s							
SMPL			AML	AML				
	comp=N,205µm,1.6s							
PRMA	**PARMA**	**2.97 316**		**Pn**	**17 46 58.2**	**+0.9**		
RICI	**Ricice**	**3.01 72**	*e*Pn	**Pn**	**17 46 58.0**	**+0.2**		
PTRP	**Pietrapertosa**	**3.03 134**	P	**Pn**	**17 47 00.3**	**+2.1**		
PTRP			AML	AML				
	comp=E,2455µm,0.8s							
PTRP			AML	AML				
	comp=N,2540µm,1.0s							
A050A	**Klekovaca**	**3.04 52**	⇑*i*Pn	**Pn**	**17 46 59.2**	**+0.9**		
MCEL	**Monticello**	**3.04 139**	AML	AML				
	comp=N,1088µm,1.4s							
MCEL			AML	AML				
	comp=N,1068µm,1.4s							
MCEL			AML	AML				
	comp=E,864µm,1.1s							
MCEL			AML	AML				
	comp=E,880µm,1.1s							
MTSN	**Montesano sull**	**3.07 140**	AML	AML				
	comp=N,522µm,1.1s							
MTSN			AML	AML				
	comp=E,856µm,0.7s							
TRI	**Trieste**	**3.08 7**	Pn	**Pn**	**17 46 57.7**	**-1.1**		
TRI	**Trieste**	**3.08 7**	P	**Pn**	**17 46 57.7**	**-1.1**		
AMUR	**Altamura**	**3.09 123**	P	**Pn**	**17 46 59.8**	**+0.8**		
AMUR			AML	AML				
	comp=N,1880µm,0.9s							
AMUR			AML	AML				
	comp=E,2700µm,0.7s							
PGF	**Pioggiola**	**3.10 269**	*e*P	**Pn**	**17 46 59.6**	**+0.4**		
PGF			*e*Sn	**Sn**	**17 47 31.8**	**-4.3**		
	comp=E,203nm,0.5s							
PGF	**Pioggiola**	**3.10 269**	P	**Pn**	**17 46 59.7**	**+0.6**		
MSSA	**Maissana**	**3.15 303**	Pn	**Pn**	**17 47 00.6**	**+0.7**		
MSSA	**Maissana**	**3.15 303**	P	**Pn**	**17 47 00.2**	**+0.4**		
MSSA			AML	AML				
	comp=N,1655µm,0.7s							
MSSA			AML	AML				
	comp=E,840µm,0.9s							
SIRI	**Monte Sirino -**	**3.19 140**	AML	AML				
	comp=N,667µm,1.1s							
SIRI			AML	AML				
	comp=E,560µm,0.8s							
SIRI			AML	AML				
	comp=E,580µm,0.8s							
SIRI			AML	AML				
	comp=N,662µm,1.1s							
CEY	**Cerknica**	**3.21 16**	⇑*i*Pn	**Pn**	**17 47 00.0**	**-0.6**		
BOJS	**Bojanci**	**3.21 27**	⇑*i*Pn	**Pn**	**17 47 00.6**	**0.0**		
BOJS	**Bojanci**	**3.21 27**	⇑*e*Pn	**Pn**	**17 47 00.6**	**0.0**		
BOJS			*i* Sn	**Sn**	**17 47 39.1**	**+0.4**		
BOJS			IAML		17 48 14.3			
	comp=Z,952nm,0.9s							
BOJS	**Bojanci**	**3.21 27**	P	**Pn**	**17 47 00.6**	**0.0**		
SRKY	**Kupres RS**	**3.22 63**	⇑*i*Pn	**Pn**	**17 47 02.1**	**+1.2**		
SCHR	**S. Chirico Rap**	**3.27 138**	AML	AML				
	comp=N,450µm,1.2s							
SCHR			AML	AML				
	comp=E,458µm,1.1s							
MATE	**Matera**	**3.31 126**	⇓P	**Pn**	**17 47 03.1**	**+1.2**		
MATE			⇑S	**Sn**	**17 47 43.7**	**+2.6**		
MATE	**Matera**	**3.31 126**	AML	AML				
	comp=N,1710µm,1.1s							
MATE			AML	AML				
	comp=E,1930µm,0.9s							
CUC	**Castrocucco**	**3.31 143**		**Pn**	**17 47 04.6**	**+2.6**		
CUC	**Castrocucco**	**3.31 143**	AML	AML				
	comp=E,457µm,1.2s							
CUC			AML	AML				
	comp=N,467µm,1.1s							
CUC			AML	AML				
	comp=N,380µm,1.0s							
CUC			AML	AML				
	comp=E,550µm,1.2s							
A251A	**Rujevac**	**3.32 41**	*e*Pn	**Pn**	**17 47 02.5**	**+0.4**		
STON	**Ston**	**3.33 85**	⇑*i*Pn	**Pn**	**17 47 01.2**	**-0.9**		
STON	**Ston**	**3.33 85**	*e*Pn	**Pn**	**17 47 01.0**	**-1.1**		
STON	**Ston**	**3.33 85**	*e*Pn	**Pn**	**17 47 01.4**	**-0.8**		
STON			*e*Sn	**Sn**	**17 47 40.3**	**-1.2**		
STON	**Ston**	**3.33 85**	⇑P	**Pn**	**17 47 01.3**	**-0.9**		
STON			AML	AML				
	comp=N,1405µm,1.1s							
STON			AML	AML				
	comp=E,1125µm,0.3s							
MGRS	**Mrkonjic Grad**	**3.33 57**	⇑*i*Pn	**Pn**	**17 47 03.7**	**+1.4**		
SABO	**M.te Sabotino**	**3.33 5**		**Pn**	**17 47 02.0**	**-0.3**		
SABO	**M.te Sabotino**	**3.33 5**	AML	AML				
	comp=E,3170µm,0.6s							
SABO			AML	AML				
	comp=N,3790µm,0.8s							
SABO			AML	AML				
	comp=N,14200µm,0.8s							
SABO			AML	AML				
	comp=E,13550µm,0.6s							
ROVR	**Rover Verones**	**3.36 334**	AML	AML				
	comp=N,1036µm,0.4s							
ROVR			AML	AML				
	comp=E,711µm,0.6s							
ROVR			AML	AML				
	comp=N,2665µm,0.4s							
ROVR			AML	AML				
	comp=E,1720µm,0.5s							
AJAC	**Base Areonaval**	**3.37 259**	P	**Pn**	**17 47 03.7**	**+0.9**		
AJAC			S	**Sn**	**17 47 44.4**	**+1.8**		
AJAC	**Base Areonaval**	**3.37 259**	AML	AML				
	comp=E,901µm,0.4s							
AJAC			AML	AML				
	comp=N,579µm,0.8s							
CGRP	**Cima Grappa**	**3.37 343**	P	**Pn**	**17 47 03.2**	**+0.1**		
CGRP			AML	AML				
	comp=E,3760µm,0.5s							
CGRP			AML	AML				
	comp=N,4470µm,0.5s							
CGRP			AML	AML				
	comp=N,4570µm,0.5s							
CGRP			AML	AML				
	comp=E,3765µm,0.5s							
OZLJ	**Ozalj**	**3.38 28**	*e*Pn	**Pn**	**17 47 03.0**	**+0.1**		
LTRZ	**Laterza**	**3.41 126**	AML	AML				
	comp=N,1520µm,0.5s							
LTRZ			AML	AML				
	comp=E,1610µm,0.8s							
VARN	**Col Varnada, M**	**3.43 347**	AML	AML				
	comp=N,3250µm,0.7s							
VARN			AML	AML				
	comp=N,3285µm,0.7s							
VARN			AML	AML				
	comp=E,4420µm,0.5s							
VARN			AML	AML				
	comp=E,4485µm,0.5s							
PRIJ	**Prijedor**	**3.45 47**	*e*Pn	**Pn**	**17 47 05.5**	**+1.7**		
NOCI	**Noci**	**3.45 121**	AML	AML				
	comp=N,1630µm,0.8s							
NOCI			AML	AML				
	comp=E,1230µm,0.8s							
LJU	**Ljubljana**	**3.52 15**	⇑*i*Pn	**Pn**	**17 47 05.2**	**+0.4**		
LJU	**Ljubljana**	**3.52 15**	⇑P	**Pn**	**17 47 05.1**	**+0.2**		
LJU			AML	AML				
	comp=N,12850µm,0.8s							
LJU			AML	AML				
	comp=E,11100µm,0.6s							
SALO	**Salr**	**3.53 328**		**Pn**	**17 47 05.4**	**+0.4**		
SALO	**Salr**	**3.53 328**	AML	AML				
	comp=E,2160µm,0.6s							
SALO			AML	AML				
	comp=N,2810µm,0.3s							
SALO			AML	AML				
	comp=E,2285µm,0.6s							
SALO			AML	AML				
	comp=N,2770µm,0.4s							
DOSS	**Dosso del Somm**	**3.53 337**	AML	AML				
	comp=E,1885µm,0.6s							
DOSS			AML	AML				
	comp=N,1815µm,0.6s							
DOSS			AML	AML				
	comp=E,1880µm,0.4s							
DOSS			AML	AML				
	comp=N,1920µm,0.4s							
BLY	**Banja Luka**	**3.57 53**	⇑*i*Pn	**Pn**	**17 47 06.1**	**+0.6**		
BLY	**Banja Luka**	**3.57 53**	*e*Pn	**Pn**	**17 47 06.7**	**+1.2**		
BLY	**Banja Luka**	**3.57 53**	AML	AML				
	comp=E,2025µm,1.0s							
BLY			AML	AML				
	comp=E,2035µm,0.8s							
BLY			AML	AML				
	comp=N,1840µm,0.8s							
BLY			AML	AML				
	comp=N,1780µm,0.8s							
A051A	**Mrakovica**	**3.57 48**	⇑*i*Pn	**Pn**	**17 47 06.1**	**+0.4**		
MPRI	**Monte Prat**	**3.59 358**	AML	AML				
	comp=N,4340µm,0.4s							
MPRI			AML	AML				
	comp=E,1970µm,0.5s							
MPRI			AML	AML				
	comp=N,3400µm,0.4s							
MPRI			AML	AML				
	comp=E,2570µm,0.5s							
STAL	**STALIGIAL**	**3.62 355**		**Pn**	**17 47 06.0**	**-0.3**		
STAL	**STALIGIAL**	**3.62 355**	AML	AML				
	comp=E,2025µm,1.3s							
STAL			AML	AML				
	comp=E,2705µm,0.4s							
STAL			AML	AML				
	comp=N,1800µm,0.3s							
STAL			AML	AML				

comp=N,1780µm,1.0s
MAGA Magasa 3.62 330 AML AML
comp=E,6360µm,1.0s
MAGA AML AML
comp=N,4050µm,0.4s
DBRK Dubrovnik 3.65 88 *e*Pn **Pn 17 47 06.0 -0.7**
LUSI Trento, Gardas 3.67 335 AML AML
comp=N,2365µm,1.6s
LUSI AML AML
comp=E,1890µm,0.8s
CIMO Cimolais 3.69 352 **Pn 17 47 06.9 -0.3**
CIMO Cimolais 3.69 352 AML AML
comp=E,566µm,0.9s
CIMO AML AML
comp=E,557µm,0.9s
CIMO AML AML
comp=N,640µm,0.9s
CIMO AML AML
comp=N,660µm,0.9s
PTCC Patocco-Chiusa 3.75 2 AML AML
comp=N,913µm,0.8s
PTCC AML AML
comp=E,858µm,0.6s
GAGG Gaggia 3.78 336 AML AML
comp=E,1495µm,0.6s
GAGG AML AML
comp=E,1885µm,1.0s
GAGG AML AML
comp=N,1565µm,0.6s
GAGG AML AML
comp=N,1880µm,1.3s
PRED Cave del Predi 3.79 4 Pn **Pn 17 47 08.3 -0.4**
CLUD Cludinico 3.81 357 Pn **Pn 17 47 08.5 -0.3**
PTJ Puntijarka 3.81 31 *i* Pn **Pn 17 47 09.2 +0.2**
ZONE Zone 3.81 326 AML AML
comp=N,2310µm,0.4s
ZONE AML AML
comp=E,454µm,0.7s
ZONE AML AML
comp=E,2075µm,0.6s
ZONE AML AML
comp=N,576µm,0.4s
EUCT Pavia 3.88 312 AML AML
comp=N,1905µm,1.1s
EUCT AML AML
comp=E,2015µm,0.9s
ACOM Acomizza, Ital 3.90 3 AML AML
comp=E,2300µm,1.6s
ACOM AML AML
comp=N,2020µm,0.5s
ACOM AML AML
comp=N,1990µm,0.5s
ACOM AML AML
comp=E,2235µm,1.6s
MABI Malga Bissina 3.90 331 AML AML
comp=E,736µm,1.5s
MABI AML AML
comp=N,769µm,0.7s
MOSL Moslavina 3.91 40 *e*Pn **Pn 17 47 09.4 -0.9**
HCY Herceg Novi 3.92 91⇑ *i* Pn **Pn 17 47 10.8 +0.4**
HCY *i* Sn **Sn 17 47 57.1 +0.8**
BRY Bratogost 3.94 85⇑ *i* Pn **Pn 17 47 11.2 +0.4**
BRY *i* Sn **Sn 17 47 57.4 +0.4**
OBKA Obir 3.97 14 *i* Pn **Pn 17 47 10.8 -0.4**
OBKA Obir 3.97 14 *i* Pn **Pn 17 47 11.5 +0.3**
comp=N,30nm,0.3s,SNR=21
OBKA *e*Sn **Sn 17 47 58.6 +0.9**
comp=N,290nm,0.5s
OBKA Obir 3.97 14 *e*Pn **Pn 17 47 11.2 +0.1**
MYKA Terra Mystica 3.99 4 *i* Pn **Pn 17 47 11.5 +0.2**
comp=N,24nm,0.4s,SNR=36
MYKA *e*Sn **Sn 17 47 59.2 +1.3**
comp=N,130nm,0.3s
KOSI Kohlern 4.02 342 AML AML
comp=E,1665µm,1.5s
KOSI AML AML
comp=N,1895µm,0.8s
LOBO Lobor 4.06 30 *e*Pn **Pn 17 47 11.6 -0.7**
APPI Appiano 4.07 341 AML AML
comp=E,1655µm,0.5s
APPI AML AML
comp=N,1085µm,0.6s
ABTA Abfaltersbach 4.12 353 *i* Pn **Pn 17 47 14.0 +0.8**
comp=N,265nm,0.6s,SNR=271
ABTA *e*Sn **Sn 17 48 01.6 +0.4**
comp=N,5.3nm,0.2s
DOB Doboj 4.12 58⇑ *i* Pn **Pn 17 47 12.4 -0.7**
KALN Kalnik 4.19 33 *e*Pn **Pn 17 47 13.1 -1.0**
SOKA Soboth 4.23 17 *i* Pn **Pn 17 47 14.8 +0.1**
comp=N,17nm,0.3s,SNR=27
SOKA *e*Sn **Sn 17 48 06.2 +2.2**
comp=N,118nm,0.6s
UPM Unac-Piva 4.23 81⇑ *i* Pn **Pn 17 47 15.1 +0.3**
UPM *i* Sn **Sn 17 48 04.3 +0.2**
BUM Brajici-Budva 4.23 93⇑ *i* Pn **Pn 17 47 15.0 +0.3**
BUM *i* Sn **Sn 17 48 04.3 +0.3**
NKME Niksic 4.25 87⇑ *i* Pn **Pn 17 47 15.5 +0.6**
NKME *i* Sn **Sn 17 48 04.4 +0.1**
NKY Niksic 4.28 86⇓ *i* Pn **Pn 17 47 15.3 0.0**
NKY *i* Sn **Sn 17 48 05.9 +0.8**
BRMO Bormio 4.32 333 AML AML
comp=N,524µm,1.1s
BRMO AML AML
comp=E,569µm,0.6s
A252A Venje 4.36 49 *e*Pn **Pn 17 47 15.4 -0.9**
RISI Rein 4.36 350 AML AML
comp=N,3515µm,0.5s
RISI AML AML
comp=E,2980µm,0.5s
KOGS Kog 4.38 29 AML AML
comp=N,6010µm,1.0s
KOGS AML AML
comp=E,7080µm,0.9s
SBF Sospel 4.38 288 *e*P **Pn 17 47 16.0 -0.7**
SBF *e*Sn **Sn 17 48 02.2 -5.3**
comp=E,168nm,0.5s
BERNI Berninapass 4.39 330 AML AML
comp=N,684µm,0.5s
BERNI AML AML
comp=E,632µm,0.8s
ESCA l'Escarene 4.41 287 P **Pn 17 47 17.4 +0.2**
CGL Cagliari Serpe 4.42 223 AML AML
comp=N,156µm,0.7s
CGL AML AML
comp=E,134µm,0.5s
MUGIO Muggio 4.42 319 AML AML
comp=E,514µm,0.5s
MUGIO AML AML
comp=N,495µm,0.5s
KBA Koelnbreinsper 4.42 1 *i* Pn **Pn 17 47 18.0 +0.6**
comp=N,48nm,0.3s,SNR=57
KBA *e*Sn **Sn 17 48 08.8 -0.1**
comp=N,184nm,0.4s
KBA Koelnbreinsper 4.42 1 *e*Pn **Pn 17 47 17.9 +0.4**
KBA *e*Sn **Sn 17 48 05.9 -3.0**
TURF col de Turini 4.43 289 P **Pn 17 47 18.0 +0.5**
ROSI Rosskopf 4.46 344 AML AML
comp=E,1980µm,0.9s
ROSI AML AML
comp=N,3120µm,0.4s
FUORN Ofenpass-Fuorn 4.48 333 Pn **Pn 17 47 19.9 +1.6**
PDG Podgorica 4.49 91⇑ P **Pn 17 47 18.7 +0.6**
PDG ⇑S **Sn 17 48 10.3 +0.2**
PDG Podgorica 4.49 91 Pn **Pn 17 47 19.1 +1.1**
PDG Podgorica 4.49 91 *e*Pn **Pn 17 47 19.2 +1.1**
PDG *e*Sn **Sn 17 48 10.3 +0.2**
PDG Podgorica 4.49 91 AML AML
comp=E,1034µm,0.4s
PDG AML AML
comp=E,838µm,0.4s
PDG AML AML
comp=N,1098µm,0.6s
PDG AML AML
comp=N,1400µm,1.5s
TTG Podgorica 4.49 91⇑ *i* Pn **Pn 17 47 18.8 +0.7**
TTG *i* Sn **Sn 17 48 10.8 +0.7**
EILF Villa Eilenroc 4.53 283 P **Pn 17 47 18.6 0.0**
ULC Ulcinj 4.54 97⇑ *i* Pn **Pn 17 47 19.3 +0.4**
ULC *i* Sn **Sn 17 48 11.9 +0.3**
SPIF crte de Spivo 4.56 290 P **Pn 17 47 20.4 +1.1**
MVIF Mont Vial 4.58 288 P **Pn 17 47 20.1 +0.5**
PLE Pljevlja 4.59 79⇓ *i* Pn **Pn 17 47 19.9 +0.2**
PLE *i* Sn **Sn 17 48 12.9 -0.1**
RUDO Rudo 4.62 76 *e*Pn **Pn 17 47 20.4 +0.4**
BBLS Lazići 4.70 73 *e*Pn **Pn 17 47 22.2 +1.1**
BBLS *e*Sn **Sn 17 48 16.9 +1.5**

FETA Feichten 4.70 339 *i* Pn **Pn 17 47 23.3 +2.0**
comp=N,35nm,0.5s,SNR=90
FETA *e*Sn **Sn 17 48 16.2 +0.4**
comp=N,68nm,0.5s
CALF Calern 4.71 286 P **Pn 17 47 22.0 +0.7**
ISO Isola 4.73 291 P **Pn 17 47 24.1 +2.6**
SCTE Santa Cesarea 4.74 121 Pn **Pn 17 47 22.8 +1.2**
SCTE Santa Cesarea 4.74 121 AML AML
comp=E,1045µm,1.0s
SCTE AML AML
comp=N,858µm,1.1s
WTTA Wattenberg 4.74 347 *i* Pn **Pn 17 47 23.9 +2.2**
comp=N,62nm,0.5s,SNR=66
WTTA *e*Sn **Sn 17 48 18.1 +1.5**
comp=N,361nm,0.4s
WTTA Wattenberg 4.74 347 *e*Pn **Pn 17 47 23.4 +1.6**
WTTA *e*Sn **Sn 17 48 19.0 +2.3**
DAVOX Davos/Dischmat 4.75 331 Pn **Pn 17 47 24.1 +2.1**
comp=N,25nm,0.3s,baz=153,slow=19,SNR=106
DAVOX Sn **Sn 17 48 16.4 -0.5**
comp=N,15nm,0.3s,baz=294,slow=23,SNR=7.7
DAVOX LR LR 17 49 41.5
comp=N,301nm,21.0s,baz=128,slow=46
SQTA Sankt Quirin 4.78 344 **Pn 17 47 24.1 +1.9**
SQTA **Sn 17 48 18.5 +1.0**
SQTA Sankt Quirin 4.78 344 P **Pn 17 47 24.1 +1.9**
SQTA 17 48 18.5
SQTA Sankt Quirin 4.78 344 *i* Pn **Pn 17 47 24.1 +1.9**
comp=N,103nm,0.4s,SNR=61
SQTA *e*Sn **Sn 17 48 18.5 +1.0**
comp=N,208nm,0.6s
WATA Walderalm 4.82 347 **Pn 17 47 24.9 +2.1**
WATA **Sn 17 48 20.3 +1.8**
WATA Walderalm 4.82 347 P **Pn 17 47 24.9 +2.1**
WATA 17 48 20.3
WATA Walderalm 4.82 347 *i* Pn **Pn 17 47 24.9 +2.1**
comp=N,44nm,0.3s,SNR=58
WATA *e*Sn **Sn 17 48 20.3 +1.8**
comp=N,126nm,0.4s
CEL Celeste 4.85 154 **Pn 17 47 25.9 +2.7**
ARSA Arzberg 4.88 19 *i* Pn **Pn 17 47 23.4 -0.2**
comp=N,9.3nm,0.3s,SNR=32
ARSA *e*Sn **Sn 17 48 17.0 -3.0**
comp=N,30nm,0.4s
ARSA Arzberg 4.88 19 AML AML
comp=E,256µm,1.5s
ARSA AML AML
comp=N,248µm,0.7s
ARSA Arzberg 4.88 19 *e*Pn **Pn 17 47 23.2 -0.4**
BLJ Bijeljina 4.89 62 *e*Pn **Pn 17 47 22.1 -1.5**
KOVH Kovagotottos 4.91 44 P **Pn 17 47 23.3 -0.7**
KOVH S **Sn 17 48 17.7 -3.0**
MOTA Moosalm 4.92 343 **Pn 17 47 26.2 +2.1**
MOTA **Sn 17 48 22.2 +1.2**
MOTA Moosalm 4.92 343 P **Pn 17 47 26.3 +2.1**
MOTA 17 48 22.2
MOTA Moosalm 4.92 343 *i* Pn **Pn 17 47 26.2 +2.1**
comp=N,69nm,0.7s,SNR=64
MOTA *e*Sn **Sn 17 48 22.2 +1.2**
comp=N,237nm,0.6s
IVA Berane 4.94 85 *e*Pn **Pn 17 47 25.5 +1.1**
IVA *i* Sn **Sn 17 48 21.8 +0.4**
LMR La Mourre 4.95 280 *e*P **Pn 17 47 24.1 -0.4**
LMR *e*Sn **Sn 17 48 15.5 -6.1**
comp=N,23nm,0.5s
TEKS Tekeris 4.97 65 *e*Pn **Pn 17 47 24.1 -0.8**
PVY Plav 4.99 88 *e*Pn **Pn 17 47 26.3 +1.1**
PVY *i* Sn **Sn 17 48 22.6 -0.3**
ZUGS Zugspitze, Sch 5.01 343 *e*Pn **Pn 17 47 28.3 +2.7**
ZUGS *e*Sn **Sn 17 48 27.2 +3.6**
SJES Sjenica 5.01 81 *e*Pn **Pn 17 47 27.1 +1.6**
SJES *e*Sn **Sn 17 48 24.0 +0.7**
BIOA Bad Ischl, Aus 5.04 3 **Pn 17 47 26.2 +0.4**
BIOA **Sn 17 48 25.9 +1.9**
BIOA Bad Ischl, Aus 5.04 3 *i* Pn **Pn 17 47 26.2 +0.4**
comp=N,51nm,0.3s,SNR=52
BIOA *e*Sn **Sn 17 48 25.9 +1.9**
comp=N,326nm,0.6s
PART Garmisch-Parte 5.06 344 *e*Pn **Pn 17 47 28.2 +2.2**
CLTB Caltabellotta 5.07 180 Pn Pn 17 47 31.5 +5.2
TRIGF Trigance 5.08 285 P **Pn 17 47 27.4 +1.1**
RJOB Jochberg 5.09 357 *e*Pn **Pn 17 47 27.1 +0.6**
RJOB *e*Sn **Sn 17 48 27.8 +2.7**
MBDF Montbardon 5.09 296 *e*P **Pn 17 47 27.7 +1.1**
MBDF *e*Sn **Sn 17 48 19.3 -6.1**
comp=N,114nm,0.6s
RETA Reutte 5.13 341 *i* Pn **Pn 17 47 29.2 +2.2**
comp=N,21nm,0.4s,SNR=30
RETA *e*Sn **Sn 17 48 28.7 +2.6**
comp=N,106nm,0.5s
FLAF Flassans-sur-I 5.14 280 P **Pn 17 47 27.9 +0.8**
TIR Tirane 5.14 102⇑ P **Pn 17 47 27.8 +0.7**
TIR ⇑S **Sn 17 48 26.2 -0.1**
TIR Tirane 5.14 102 P **Pn 17 47 27.8 +0.7**
TIR Tirane 5.14 102 **Pn 17 47 27.8 +0.7**
TIR Tirane 5.14 102 P **Pn 17 47 27.8 +0.7**
TIR Tirane 5.14 102 *e*Pn **Pn 17 47 28.2 +1.1**
TIR *e*Sn **Sn 17 48 24.1 -2.2**
TIR Tirane 5.14 102 AML AML
comp=N,744µm,1.3s
TIR AML AML
comp=E,1180µm,1.5s
OGAG Argentiere 5.16 293 P **Pn 17 47 30.6 +3.1**
PLONS Plons/SG 5.16 330 *e*Pn **Pn 17 47 29.5 +2.1**
DIVS Divibare 5.16 71 Pn **Pn 17 47 27.8 +0.3**
DIVS Divibare 5.16 71⇑ *i* Pn **Pn 17 47 27.4 -0.1**
DIVS Divibare 5.16 71 *e*Pn **Pn 17 47 28.6 +1.1**
DIVS *e*Sn **Sn 17 48 27.0 +0.1**
OBER Oberstdorf 5.17 338 *e*Pn **Pn 17 47 30.1 +2.4**
IVAS Ivanjica 5.18 77 *e*Pn **Pn 17 47 28.2 +0.5**
IVAS *e*Sn **Sn 17 48 26.4 -0.9**
DAVA Damuels 5.19 334 *i* Pn **Pn 17 47 30.2 +2.2**
comp=E,31nm,0.4s,SNR=80
DAVA *e*Sn **Sn 17 48 29.8 +2.0**
comp=E,171nm,0.4s
DAVA Damuels 5.19 334 *e*Pn **Pn 17 47 30.2 +2.2**
DAVA *e*Sn **Sn 17 48 30.6 +2.8**
VLO Vlora 5.21 113 Pn **Pn 17 47 29.5 +1.5**
VLO Vlora 5.21 113 P **Pn 17 47 29.5 +1.5**
OGDI Digne 5.23 288 P **Pn 17 47 31.3 +2.9**
MOA Molln 5.25 8 *e*Pn **Pn 17 47 28.9 +0.2**
MOA *e*Sn **Sn 17 48 29.4 +0.4**
MOA Molln 5.25 8 *i* Pn **Pn 17 47 29.1 +0.4**
comp=E,8.2nm,0.5s,SNR=51
MOA *e*Sn **Sn 17 48 29.3 +0.4**
comp=E,206nm,0.5s
MOA Molln 5.25 8 *e*Pn **Pn 17 47 28.8 +0.2**
MOA *e*Sn **Sn 17 48 30.2 +1.2**
VAE Valguarnera 5.26 169 Pn **Pb 17 47 37.6 -4.6**
comp=E,0.2nm,0.3s,baz=3.4,slow=19,SNR=2.1
MORH Mrgy, Hungar 5.28 46⇑ P **Pn 17 47 27.8 -1.3**
MORH Mrgy, Hungar 5.28 46 *e*Pn **Pn 17 47 28.1 -0.9**
MORH Mrgy, Hungar 5.28 46 P **Pn 17 47 29.4 +0.4**
BNI Bardonecchia 5.28 299 Pn **Pn 17 47 30.0 +0.8**
BNI Bardonecchia 5.28 299 P **Pn 17 47 30.0 +0.8**
OGMO Fort Saint-Gob 5.35 301 P **Pn 17 47 31.8 +1.7**
BLAF les Blancs 5.37 286 P **Pn 17 47 32.0 +1.7**
DIX Grande Dixence 5.38 312 P **Pn 17 47 31.4 +0.8**
DIX Grande Dixence 5.38 312 S **Sn 17 48 35.3 +2.8**
FRGS Fruska Gora 5.39 60⇓ P **Pn 17 47 30.3 -0.4**
FRGS Fruska Gora 5.39 60⇓ *i* Pn **Pn 17 47 30.2 -0.4**
FRGS Fruska Gora 5.39 60 *e*Pn **Pn 17 47 30.5 -0.1**
TIH Tihany 5.40 37 P **Pn 17 47 32.9 +2.3**
LPG La Plagne 5.44 304 *e*P **Pn 17 47 32.9 +1.4**
LPG *e*Sn **Sn 17 48 28.0 -6.1**
comp=E,40nm,0.4s
LPL La Plagne 5.46 304 *e*P **Pn 17 47 33.8 +2.1**
LPL *e*Sn **Sn 17 48 28.4 -6.1**
comp=E,43nm,0.4s
MPLH Magyarpolny 5.47 33 P **Pn 17 47 30.6 -1.0**
PHP Peshkopia 5.47 98 P **Pn 17 47 32.9 +1.1**
UBR Ueberruh 5.48 338 *e*Pn **Pn 17 47 33.5 +1.7**
TRUS Trudelj 5.48 71 *e*Pn **Pn 17 47 32.3 +0.5**
TRUS *e*Sn **Sn 17 48 33.7 -1.0**
ARTF Artigues 5.49 282 P **Pn 17 47 33.2 +1.3**
RONA Rosalia, Austr 5.50 22 **Pn 17 47 31.7 -0.4**
RONA **Sn 17 48 33.6 -1.6**
RONA Rosalia, Austr 5.50 22 *i* Pn **Pn 17 47 31.7 -0.4**
comp=E,10nm,0.3s,SNR=50
RONA *e*Sn **Sn 17 48 33.6 -1.6**
comp=E,34nm,0.5s
SOP Sopron 5.56 24 P **Pn 17 47 32.5 -0.3**
SOP S **Sn 17 48 34.6 -2.0**

EGYH Egyhazaskeszo 5.59 30 P **Pn 17 47 33.6 +0.4**
CONA Conrad Observa 5.60 19 *i* Pn **Pn 17 47 33.4 0.0**
comp=E,12nm,0.3s,SNR=54
CONA *e*Sn **Sn 17 48 36.9 -0.8**
comp=E,40nm,0.3s
RSL Roselend 5.61 305 P **Pn 17 47 36.5 +2.8**
SENIN Lac Senin/Sane 5.61 313 Pn **Pn 17 47 34.3 +0.5**
GRUS Gruza 5.63 75 *e*Pn **Pn 17 47 34.5 +0.7**
GRUS *e*Sn **Sn 17 48 38.0 -0.3**
WILA Wila 5.64 329 *e*Pn **Pn 17 47 35.5 +1.4**
FUR Furstenfeldbru 5.67 347 *e*Pn **Pn 17 47 35.9 +1.5**
GDM Grand'Maison 5.71 299 P **Pn 17 47 38.6 +3.5**
SMRF Simiane la Rot 5.71 286 *e*P **Pn 17 47 36.5 +1.5**
SMRF *e*Sn **Sn 17 48 34.4 -6.1**
comp=E,31nm,0.7s
OGSI Sixt 5.74 309 P **Pn 17 47 36.7 +1.3**
ORIF Oris-en-Rattie 5.76 296 *e*P **Pn 17 47 38.7 +3.0**
ORIF *e*Sn **Sn 17 48 35.0 -6.6**
comp=E,108nm,0.7s
RUSF Rustrel 5.77 285 P **Pn 17 47 37.3 +1.5**
AIGLE Aigle 5.79 312 P **Pn 17 47 37.1 +1.1**
KEK Kerkira 5.79 118 P **Pn 17 47 37.0 +1.0**
KEK Kerkira 5.79 118 Pn **Pn 17 47 37.4 +1.4**
ARBF Arbois 5.82 281 P **Pn 17 47 37.8 +1.4**
SELS Selova 5.85 82 *e*Pn **Pn 17 47 37.2 +0.4**
SELS *e*Sn **Sn 17 48 43.5 -0.2**
OHR Ohrid 5.88 103 *i* Pn **Pn 17 47 39.3 +1.9**
SAUF chteau de Sau 6.04 285 P **Pn 17 47 40.7 +1.2**
KBN Korca 6.04 107 P **Pn 17 47 41.5 +1.9**
KBN Korca 6.04 107 **Pn 17 47 41.0 +1.4**
KBN Korca 6.04 107 P **Pn 17 47 41.0 +1.4**
SULZ Cheisacher 6.05 325 P **Pn 17 47 40.7 +1.1**
SULZ Cheisacher 6.05 325 S **Sn 17 48 47.8 -1.0**
SULZ Cheisacher 6.05 325 *e*Pn **Pn 17 47 40.8 +1.1**
TORNY Torny/Romont 6.05 315 P **Pn 17 47 40.5 +0.8**
SVIS Svilajnac 6.06 72 *e*Pn **Pn 17 47 39.0 -0.7**
SVIS *e*Sn **Sn 17 48 47.5 -1.3**
BALST Balsthal 6.09 322 P **Pn 17 47 40.7 +0.5**
BALST Balsthal 6.09 322 S **Sn 17 48 48.4 -1.3**
BALST Balsthal 6.09 322 *e*Pn **Pn 17 47 40.9 +0.7**
SLE Schleitheim 6.09 329 P **Pn 17 47 40.4 +0.2**
SLE Schleitheim 6.09 329 S **Sn 17 48 47.6 -2.2**
SLE Schleitheim 6.09 329 *e*Pn **Pn 17 47 41.0 +0.7**
LSK Leskovik 6.11 112 P **Pn 17 47 41.9 +1.4**
SKO Skopje 6.15 94 *i* Pn **Pn 17 47 42.4 +1.4**
ZST Bratislava 6.18 25 *e*P **Pn 17 47 40.9 -0.5**
ZST *e* 17 48 48.5
ZST MLR MLR
comp=Z,100nm,0.8s
ZST Bratislava 6.18 25 *e*PN **Pn 17 47 40.9 -0.5**
ZST *e*SN **Sn 17 48 48.5 -3.5**
ZST *e*LG Lg 17 48 59.4
ZST Bratislava 6.18 25 *e*SG **Sg 17 49 30.6 +1.8**
GEC2 GERESS Array S 6.20 3 Pn **Pn 17 47 41.0 -0.8**
GEC2 GERESS Array S 6.20 3 *e*Pn **Pn 17 47 41.0 -0.8**
GERES GERESS Array B 6.20 3 Pn **Pn 17 47 40.9 -0.8**
comp=Z,3.9nm,0.3s,baz=177,slow=12,SNR=60
GERES Sn **Sn 17 48 48.5 -4.0**
comp=Z,7.6nm,0.3s,baz=183,slow=20,SNR=4.2
comp=Z,14nm,0.6s
GERES GERESS Array B 6.20 3 Pn **Pn 17 47 41.1 -0.7**
GERES GERESS Array B 6.20 3 P **Pn 17 47 41.1 -0.7**
CKRC Cesky Krumlov 6.21 7 *e*PN **Pn 17 47 41.0 -0.9**
CKRC *e*SN **Sn 17 48 49.5 -3.2**
GIMEL St. Georges / 6.28 310 P **Pn 17 47 43.3 +0.4**
BOVS Bovan 6.30 78⇑ P **Pn 17 47 42.9 -0.1**
BOVS ⇑S **Sn 17 48 52.2 -2.8**
BOVS Bovan 6.30 78 *e*Pn **Pn 17 47 43.0 -0.1**
BOVS *e*Sn **Sn 17 48 52.8 -2.2**
NEST Nestorio 6.31 108 P **Pn 17 47 45.2 +2.0**
NORI Noerdlinger Ri 6.33 344 *e*Pn **Pn 17 47 43.4 +0.1**
BOURR Bourrignon 6.35 320 P **Pn 17 47 43.3 -0.4**
BOURR Bourrignon 6.35 320 S **Sn 17 48 55.4 -0.7**
BUD Budapest 6.35 39 P **Pn 17 47 46.0 +2.3**
BARS Barje 6.35 86 *e*Pn **Pn 17 47 44.3 +0.5**
BARS *e*Sn **Sn 17 48 55.0 -1.2**
FELD Feldberg im Sc 6.37 327 P **Pn 17 47 43.7 -0.5**
MODS Modra-Piesok 6.40 25 *e*P **Pn 17 47 43.6 -0.8**
MODS *e* 17 48 54.2
MODS MLR MLR
comp=Z,100nm,0.8s
MODS Modra-Piesok 6.40 25 *e*PN **Pn 17 47 43.6 -0.8**
MODS *e*SN **Sn 17 48 54.2 -3.0**
MODS *e*LG Lg 17 49 03.1
KUBS Kucevo 6.41 71 *e*Pn **Pn 17 47 43.9 -0.7**
BRMT Les Verrieres 6.42 314 P **Pn 17 47 45.1 +0.3**
CABF La Chapelle 6.43 310 *e*P **Pn 17 47 45.8 +0.9**
CABF *e*Sn **Sn 17 48 51.5 -6.6**
comp=Z,133nm,0.8s
OG35 Corcelles 6.43 304 P **Pn 17 47 45.6 +0.7**
KIZ Kirchzarten 6.47 327 P **Pn 17 47 45.0 -0.5**
KHC Kasperske Hory 6.48 2 **Pn 17 47 44.6 -1.0**
KHC Kasperske Hory 6.48 2 *e*P **Pn 17 47 45.0 -0.6**
KHC *e* 17 48 55.9
KHC Kasperske Hory 6.48 2 *e*PN **Pn 17 47 45.0 -0.6**
KHC *e*SN **Sn 17 48 55.9 -3.5**
WET Wettzell 6.49 358 *e*Pn **Pn 17 47 44.5 -1.2**
JAN Janina 6.51 115 P **Pn 17 47 46.8 +0.8**
CHMF Charmoille 6.53 317 P **Pn 17 47 46.5 +0.3**
MDVR Moldovita 6.53 68⇑ P **Pn 17 47 45.8 -0.4**
VIVF Saint-Julien-l 6.55 293 *e*P **Pn 17 47 47.8 +1.3**
VIVF *e*Sn **Sn 17 48 54.1 -7.0**
comp=Z,14nm,0.6s
PRVS Prvonek 6.56 88 *e*Pn **Pn 17 47 47.6 +0.9**
PRVS *e*Sn **Sn 17 49 00.2 -1.1**
SMOL Smolenice 6.57 25 *e*P **Pn 17 47 49.5 +2.8**
SMOL *e* 17 48 59.2
RIVEL MONT RIVEL 6.61 311 P **Pn 17 47 47.6 +0.3**
BFO Black Forest 6.62 331 Pn **Pn 17 47 47.2 -0.3**
BFO Black Forest 6.62 331 P **Pn 17 47 47.2 -0.3**
BFO Black Forest 6.62 331 P **Pn 17 47 48.5 +1.0**
BFO Black Forest 6.62 331 *e*Pn **Pn 17 47 48.0 +0.6**
VOGT Vogtsburg - To 6.67 326 P **Pn 17 47 48.1 -0.1**
ZAGS Zajecar 6.70 77 *e*Pn **Pn 17 47 48.7 +0.1**
ZAGS *e*Sn **Sn 17 49 01.8 -3.0**
STU Stuttgart 6.72 337 *e*Pn **Pn 17 47 52.5 +3.7**
BOUC Bouclans 6.73 315 P **Pn 17 47 49.0 +0.1**
BZS Buzias 6.74 61⇑ P **Pn 17 47 48.7 -0.4**
BZS Buzias 6.74 61 *e*Pn **Pn 17 47 48.7 -0.4**
BZS *e*Sn **Sn 17 49 01.5 -4.3**
STIP Stip 6.75 95 *i* Pn **Pn 17 47 52.1 +2.9**
SSB Saint Sauveur 6.77 296 Pn **Pn 17 47 50.5 +1.0**
SSB Saint Sauveur 6.77 296 P **Pn 17 47 50.5 +1.0**
SSB Saint Sauveur 6.77 296 P **Pn 17 47 50.0 +0.5**
KRUC Moravsky 6.78 18 *e*PN **Pn 17 47 49.1 -0.6**
KRUC *e*SN **Sn 17 49 04.6 -2.2**
OPP Oppenau 6.81 331 P **Pn 17 47 49.9 -0.2**
HINF Hinteralfeld 6.83 321 *e*Pn **Pn 17 47 47.8 -2.5**
HINF *e*Sn **Sn 17 49 01.5 -6.4**
comp=Z,233nm,0.6s
TREC Trest 6.83 13 *e*P **Pn 17 47 49.8 -0.5**
TREC *e* 17 49 05.2
TREC Trest 6.83 13 *e*PN **Pn 17 47 49.8 -0.5**
TREC *e*SN **Sn 17 49 05.2 -2.7**
TSLK Tsoukalades, L 6.84 122 P **Pn 17 47 52.1 +1.7**
RONF Ronchamp 6.85 320 P **Pn 17 47 50.3 -0.3**
KZN Kozani 6.86 107 P **Pn 17 47 51.8 +1.0**
BOSS Bosilegrad 6.86 88 *e*Pn **Pn 17 47 51.2 +0.5**
BOSS *e*Sn **Sn 17 49 06.6 -2.0**
LKD2 Lefkada island 6.86 122 P **Pn 17 47 52.1 +1.3**
DRAG Dragano-Lefkad 6.87 123 P **Pn 17 47 53.3 +2.4**
NYDR Nydri-Lefkada 6.93 122 P **Pn 17 47 53.3 +1.6**
JAVC Velka Javorina 6.95 25 *e*PN **Pn 17 47 52.2 +0.2**
LASF Ste Croix 6.95 285 *e*P **Pn 17 47 52.5 +0.5**
LASF *e*Sn **Sn 17 49 04.2 -6.7**
comp=Z,28nm,0.7s
ZAPS Zavoj 6.95 82 *e*Pn **Pn 17 47 52.8 +0.7**
ZAPS *e*Sn **Sn 17 49 09.1 -1.9**
EVGI Lefkada island 6.96 123 P **Pn 17 47 53.5 +1.4**
ECH Echery 6.99 325 **Pn 17 47 51.3 -1.3**
ECH Echery 6.99 325 P **Pn 17 47 51.3 -1.3**
ECH Echery 6.99 325 P **Pn 17 47 51.7 -0.9**
BLKB Belogradchik 7.00 79⇓ P **Pn 17 47 53.5 +0.8**
BLKB ⇓S **Sn 17 49 11.0 -1.2**
HERR Herculane 7.04 68⇑ P **Pn 17 47 53.3 +0.1**
SIRR Siria 7.05 56⇑ P **Pn 17 47 53.6 +0.2**
VYHS Vyhne 7.05 32 *e*P **Pn 17 47 53.2 -0.2**
VYHS *e* 17 49 11.8
VYHS MLR MLR
comp=Z,100nm,1.5s
VYHS Vyhne 7.05 32 *e*PN **Pn 17 47 53.2 -0.2**

VYHS eSN Sn 17 49 11.8 -1.6
VYHS eLG Lg 17 50 21.3
DJES Djerdap 7.06 70 ⇑P Pn 17 47 54.1 +0.6
VRAC Vranov 7.06 18 ⇑P Pn 17 47 53.3 -0.2
VRAC Vranov 7.06 18 Pn Pn 17 47 52.5 -1.0
comp=Z,2.4nm,0.3s,baz=206,slow=15,SNR=14
VRAC Sn Sn 17 49 09.6 -4.0
comp=Z,3.1nm,0.3s,baz=274,slow=7.7,SNR=2.1
VRAC LR LR 17 50 42.5
comp=Z,174nm,19.6s,baz=212,slow=39
comp=Z,8.6nm,0.5s
VRAC Vranov 7.06 18 ePN Pn 17 47 52.8 -0.7
VRAC eSN Sn 17 49 12.3 -1.3
WLS Welschbruch 7.07 327 P Pn 17 47 53.2 -0.4
PSZ Piszkesteto 7.07 40 ⇓P Pn 17 47 54.2 +0.5
PSZ Piszkesteto 7.07 40 Pn Pn 17 47 53.9 +0.2
PSZ Piszkesteto 7.07 40 P Pn 17 47 53.9 +0.2
PSZ Piszkesteto 7.07 40 P Pn 17 47 53.9 +0.2
CDF Champ du Feu 7.10 326 eP Pn 17 47 54.2 +0.1
CDF eSn Sn 17 49 07.6 -7.0
comp=Z,270nm,0.7s
VAY Valandovo 7.11 98 i Pn Pn 17 47 55.3 +1.1
GRA1 Grafenberg Arr 7.17 350 Pn 17 47 55.1 +0.1
GRF Grafenberg Arr 7.17 350 P Pn 17 47 55.1 +0.1
GRF Grafenberg Arr 7.17 350 ePn Pn 17 47 54.7 -0.3
GRFO Grafenberg 7.17 350 Pn Pn 17 47 55.1 +0.2
GRFO Grafenberg 7.17 350 P Pn 17 47 55.2 +0.2
HAU Haudompre 7.20 320 eP Pn 17 47 55.9 +0.5
HAU eSn Sn 17 49 10.1 -6.9
comp=Z,114nm,0.3s
PUNG Punghina 7.27 74 ⇑P Pn 17 47 56.0 -0.4
THL Klokotos Trika 7.34 112 P Pn 17 47 58.2 +0.9
KKB Krupnik 7.38 93 eP Pn 17 47 59.1 +1.2
KNT Kendrikon 7.39 98 P Pn 17 47 58.9 +0.8
PRU Pruhonice 7.39 7 eP Pn 17 47 58.2 +0.2
PRU e 17 49 16.7
PRU Pruhonice 7.39 7 ePN Pn 17 47 58.2 +0.2
PRU eSN Sn 17 49 16.7 -5.0
VTS Vitosha 7.41 87 ⇑P Pn 17 47 59.1 +0.7
VTS Vitosha 7.41 87 Pn Pn 17 47 58.7 +0.3
VTS Vitosha 7.41 87 P Pn 17 47 58.7 +0.3
VTS Vitosha 7.41 87 ePn Pn 17 47 59.1 +0.7
VTS eSn Sn 17 49 20.0 -2.3
VTS Vitosha 7.41 87 eP Pn 17 47 59.0 +0.6
GZR Gura Zlata 7.43 65 ⇑P Pn 17 47 58.6 0.0
LIT Litokhoron 7.44 107 Pn Pn 17 47 58.7 -0.1
LIT Litokhoron 7.44 107 P Pn 17 47 58.7 -0.1
PVO Paravola 7.51 120 P Pn 17 48 01.5 +1.8
EVR Evrytania 7.53 117 P Pn 17 48 02.2 +2.2
KEST Kesra 7.53 205 Pn Pn 17 48 04.1 +4.0
comp=Z,1.6nm,0.3s,baz=341,slow=6.0,SNR=12
KEST Sn Sn 17 49 27.5 +2.2
baz=191,slow=20
KEST LR LR 17 50 54.3
comp=Z,378nm,19.3s,baz=152,slow=37
KEST Kesra 7.53 205 Pn Pn 17 48 03.9 +3.9
SRE Strehaia 7.53 71 ⇑P Pn 17 48 00.8 +0.8
SJAF Saint Jean de 7.61 272 P Pn 17 48 00.3 -0.8
MAKR Makrakomi, Fth 7.69 115 P Pn 17 48 04.5 +2.3
HORT Hortiatis 7.70 102 P Pn 17 48 02.2 -0.2
MORC Moravsky Berou 7.73 21 ⇑P Pn 17 48 02.7 0.0
MORC Moravsky Berou 7.73 21 Pn Pn 17 48 01.7 -1.0
MORC Moravsky Berou 7.73 21 P Pn 17 48 01.7 -1.0
MORC Moravsky Berou 7.73 21 ePN Pn 17 48 02.0 -0.7
KECS Kecovo 7.75 39 eP Pn 17 48 07.1 +4.1
KECS e 17 49 25.8
KECS Kecovo 7.75 39 ePN Pn 17 48 07.0 +4.1
KECS eSN Sn 17 49 24.0 -4.8
KECS eLG Lg 17 50 09.4
SMF Signal de Mont 7.77 304 eP Pn 17 48 05.3 +2.1
SMF eSn Sn 17 49 23.4 -7.6
comp=Z,75nm,0.6s
ANX Ano Chora 7.78 119 P Pn 17 48 05.7 +2.2
KRLC Kraliky 7.82 17 eP Pn 17 48 03.6 -0.4
KRLC Kraliky 7.82 17 ePN Pn 17 48 03.6 -0.4
LANS Liptovska Anna 7.83 32 eP Pn 17 48 07.4 +3.4
LANS Liptovska Anna 7.83 32 ePN Pn 17 48 07.3 +3.3
FILF Fillols 7.84 273 P Pn 17 48 05.1 +0.8
EFP Efpalio 7.86 120 P Pn 17 48 07.0 +2.5
PAGF Fort de Pagny 7.88 321 eP Pn 17 48 06.8 +2.0
PAGF eSn Sn 17 49 26.3 -7.5
comp=Z,163nm,0.7s
MMB Musomiste 7.90 94 eP Pn 17 48 06.3 +1.2
SRS Serrai 7.91 98 P Pn 17 48 05.6 +0.4
SRS Serrai 7.91 98 ePn Pn 17 48 05.9 +0.7
SRS eSn Sn 17 49 30.6 -3.9
DRGR 7.94 55 ⇑P Pn 17 48 04.8 -0.8
PYM Petit Puy Mans 7.94 296 P Pn 17 48 07.1 +1.4
SERG Sergoula 7.97 119 P Pn 17 48 08.7 +2.7
SFTF Sexfontaines 7.98 317 eP Pn 17 48 08.1 +2.1
SFTF eSn Sn 17 49 28.1 -8.0
comp=Z,54nm,0.6s
DPC Dobruska-Polom 7.99 15 eP Pn 17 48 05.2 -1.1
DPC Dobruska-Polom 7.99 15 ePN Pn 17 48 05.2 -1.1
DRO Drossia 8.03 123 P Pn 17 48 09.2 +2.4
NVR Nevrokopi 8.05 96 P Pn 17 48 07.8 +0.7
LOR Lormes 8.06 308 eP Pn 17 48 08.3 +1.0
baz=124
LOR eSn Sn 17 49 30.8 -7.5
comp=Z,38nm,0.5s
LOR Lormes 8.06 308 P Pn 17 48 07.1 -0.1
MOX Moxa 8.06 353 ePn Pn 17 48 06.5 -0.8
MTLF Montolieu 8.07 279 eP Pn 17 48 09.9 +2.5
MTLF eSn Sn 17 49 30.8 -7.8
comp=Z,12nm,0.5s
MTLF Montolieu 8.07 279 P Pn 17 48 07.2 -0.2
PGB Panagyurishte 8.10 87 eP Pn 17 48 09.6 +1.8
AVF Avril sur Loir 8.13 304 eP Pn 17 48 09.0 +0.8
AVF eSn Sn 17 49 32.5 -7.4
comp=Z,15nm,0.5s
FNEB Nbias 8.16 275 P Pn 17 48 08.8 +0.2
MEZF Maizieres J'vi 8.17 318 eP Pn 17 48 09.6 +0.9
MEZF eSn Sn 17 49 33.3 -7.5
comp=Z,55nm,0.5s
SSF Saint Saulge 8.17 306 eP Pn 17 48 10.0 +1.3
SSF eSn Sn 17 49 33.0 -7.8
comp=Z,16nm,0.4s
AXAR Agios Charalam 8.17 115 P Pn 17 48 10.5 +1.7
OSTC Ostas 8.17 14 ePN Pn 17 48 08.1 -0.6
CHVC Chvalec 8.17 13 ePN Pn 17 48 08.8 0.0
SAVF Savonnieres en 8.21 319 eP Pn 17 48 11.7 +2.5
SAVF eSn Sn 17 49 34.2 -7.6
comp=Z,16nm,0.3s
ABH Alteburg 8.21 334 P Pn 17 48 10.4 +1.1
BRG Berggiesshubel 8.24 3 eP Pn 17 48 08.2 -1.4
BRG Amp 17 48 12.2
comp=Z,5.8nm,0.7s
BRG ex x 17 48 33.8
BRG ex x 17 49 36.3
BRG ex x 17 50 48.7
BRG Amp 17 50 53.4
comp=Z,118nm,1.4s
BRG Amp 17 51 50.0
comp=N,0.4nm,7.2s
BRG Amp 17 51 52.0
comp=Z,0.4nm,10.3s
BRG Amp 17 51 55.0
comp=E,0.5nm,7.6s
BRG Berggiesshubel 8.24 3 eP Pn 17 48 08.1 -1.4
BRG e 17 49 36.3
BRG pmax pmax
comp=Z,6.0nm,0.7s
BRG pmax pmax
comp=Z,118nm,1.4s
BRG MLR MLR
comp=N,438nm,7.2s
BRG MLR MLR
comp=Z,373nm,10.3s
BRG MLR MLR
comp=E,512nm,7.6s
XOR Xorichti 8.24 110 P Pn 17 48 09.6 -0.2
KLV Kalavryta, Ach 8.24 121 P Pn 17 48 11.3 +1.5
TNS Taunus Mts 8.24 338 ePn Pn 17 48 10.7 +1.0
MESR Meseseni 8.25 54 ⇑P Pn 17 48 10.0 +0.2
KOKK Kokkinochori, 8.29 99 P Pn 17 48 10.8 +0.5
BGF Bois d'Agland 8.35 301 eP Pn 17 48 13.4 +2.3
BGF eSn Sn 17 49 37.1 -8.1
comp=E,38nm,0.6s
CAF Calviac 8.36 290 eP Pn 17 48 13.1 +1.7
CAF eSn Sn 17 49 38.0 -7.7
comp=E,4.5nm,0.5s
ATAL Atalanti 8.45 115 P Pn 17 48 13.8 +1.2
CRVS Cervenica-Dubn 8.51 40 eP Pn 17 48 16.1 +2.8
CRVS Cervenica-Dubn 8.51 40 ePN Pn 17 48 16.1 +2.8
PLD Plovdiv 8.54 90 ePn Pn 17 48 15.3 +1.5
PLD Plovdiv 8.54 90 eP Pn 17 48 14.9 +1.1
WLF Walferdange 8.54 328 Pn Pn 17 48 14.2 +0.4
WLF Walferdange 8.54 328 P Pn 17 48 14.2 +0.4
WLF Walferdange 8.54 328 P Pn 17 48 14.4 +0.7
WLF Walferdange 8.54 328 dP Pn 17 48 14.9 +1.1
WLF dS Sn 17 49 48.4 -1.6
WLF Walferdange 8.54 328 ePn Pn 17 48 14.3 +0.5
RZN Rozhen 8.61 93 eP Pn 17 48 16.3 +1.3
KAVA Kavala 8.62 97 P Pn 17 48 15.5 +0.7
TCF Toulx Ste Croi 8.65 299 ePn Pn 17 48 12.1 -3.2
TCF eSn Sn 17 49 45.2 -7.5
comp=E,15nm,0.5s
ITM Ithomi 8.65 126 Pn Pn 17 48 17.4 +2.0
CLL Collm 8.66 359 Pn Pn 17 48 14.3 -1.1
CLL Collm 8.66 359 eP Pn 17 48 15.0 -0.3
CLL Collm 8.66 359 ePn Pn 17 48 15.0 -0.3
CLL eSn Sn 17 49 38.0 -15
CLL ex x 17 49 52.0
CLL i x x 17 50 02.3
CLL ex x 17 50 12.0
CLL eSg Sg 17 50 44.0 -4.0
comp=Z,81nm,1.1s
CLL Lm MLR 17 51 00.0
comp=N,200nm,21.0s
CLL Lm MLR 17 51 00.0
comp=E,600nm,18.8s
CLL eLmax 17 51 20.0
ARR Arges 8.68 68 ⇑P Pn 17 48 16.4 +0.7
UZH Uzhgorod 8.73 44 eP Pn 17 48 19.7 +3.3
UZH eS Sn 17 49 50.1 -4.5
UZH MLR MLR
comp=Z,50nm,16.0s
HYF Humbligny 8.79 305 eP Pn 17 48 19.7 +2.5
HYF eSn Sn 17 49 47.8 -8.2
comp=Z,232nm,0.7s
RJF Les Rejaudoux 8.83 291 eP Pn 17 48 19.9 +2.2
RJF eSn Sn 17 49 49.2 -7.8
comp=Z,8.5nm,0.6s
OJC Ojcow 8.83 29 Pn Pn 17 48 17.7 0.0
OJC Ojcow 8.83 29 P Pn 17 48 17.7 0.0
MONQ Montcuq 8.89 285 P Pn 17 48 19.8 +1.3
VOIR 8.98 68 ⇑P Pn 17 48 20.7 +0.8
KDZ Kurdzhali 9.14 92 eP Pn 17 48 21.8 -0.2
LFF La Frestale 9.29 288 eP Pn 17 48 25.8 +1.7
LFF eSn Sn 17 49 59.8 -8.6
comp=Z,5.5nm,0.5s
BTNL Ternell 9.30 331 dP Pn 17 48 24.8 +0.7
BTNL dS Sn 17 50 08.8 +0.2
RCHB Rochefort 9.30 327 P Pn 17 48 25.3 +1.2
RCHB Rochefort 9.30 327 dP Pn 17 48 25.3 +1.2
RCHB dS Sn 17 50 00.7 -7.8
RDO Rodhopi 9.33 95 Pn Pn 17 48 25.1 +0.5
DOPR Dopca 9.35 65 ⇑P Pn 17 48 25.0 +0.2
CLF Chambon-Foret 9.38 309 Pn Pn 17 48 26.0 +0.7
GIVF Givet 9.42 325 eP Pn 17 48 28.8 +2.9
GIVF eSn Sn 17 50 03.1 -8.5
comp=Z,64nm,0.8s
SGRR Singureni 9.43 76 ⇑P Pn 17 48 26.5 +0.6
EPF Esparros 9.45 277 eP Pn 17 48 29.4 +3.1
BCLA Clavier 9.47 328 dP Pn 17 48 27.9 +1.4
BCLA dS Sn 17 50 07.1 -5.7
BSTI Sart Tilman 9.50 329 dS Sn 17 50 08.8 -4.7
DOU Dourbes 9.52 324 dP Pn 17 48 31.1 +4.0
DOU dS Sn 17 50 14.2 +0.3
ECHI Chisagues Biel 9.58 274 P Pn 17 48 29.3 +1.1
BMRD Maredsous 9.60 326 eP Pn 17 48 30.3 +2.0
BMRD dS Sn 17 50 08.7 -7.2
KWP Kalwaria Pacla 9.60 40 Pn Pn 17 48 31.7 +3.4
KWP Kalwaria Pacla 9.60 40 P Pn 17 48 31.7 +3.4
MLR Muntele Rosu 9.61 69 ⇑P Pn 17 48 28.6 +0.1
MLR Muntele Rosu 9.61 69 Pn Pn 17 48 30.7 +2.2
comp=Z,2.0nm,0.3s,baz=286,slow=15,SNR=27
MLR LR LR 17 53 06.1
comp=Z,210nm,19.4s,baz=269,slow=43
comp=Z,27nm,0.8s
MLR Muntele Rosu 9.61 69 Pn Pn 17 48 29.3 +0.8
OZUR 9.65 65 ⇓P Pn 17 48 28.5 -0.5
ALN Alexandroupoli 9.76 96 Pn Pn 17 48 31.1 +0.6
ALN Alexandroupoli 9.76 96 P Pn 17 48 31.1 +0.6
RAZG Razgrad 9.78 80 ⇑P Pn 17 48 31.4 +0.6
BURAR Bucovina Array 9.83 56 ⇑P Pn 17 48 31.6 +0.1
NEHR Nehoiu 9.83 69 ⇑P Pn 17 48 32.0 +0.4
COVR Voineasa-Covas 9.87 67 ⇑P Pn 17 48 31.9 -0.1
ISR Istrita 9.95 71 ⇑P Pn 17 48 33.8 +0.7
LEHL Lehliu 10.06 75 ⇑P Pn 17 48 35.2 +0.7
CANF Canfranc 10.10 275 P Pn 17 48 39.8 +4.6
ETSF Etsaut 10.12 276 eP Pn 17 48 38.1 +2.6
ETSF eSn Sn 17 50 19.9 -8.9
comp=Z,4.4nm,0.6s
BIZ Bicaz 10.12 61 ⇑P Pn 17 48 35.6 +0.1
PLOR Plostina 10.17 67 ⇑P Pn 17 48 35.9 -0.3
VRI Vrincioaia 10.22 67 ⇑P Pn 17 48 37.7 +0.8
MFF Saint Martin d 10.29 297 eP Pn 17 48 40.8 +3.0
MFF eSn Sn 17 50 24.0 -9.0
comp=Z,10.0nm,0.7s
GIRR Girov 10.38 61 ⇑P Pn 17 48 38.8 -0.2
SJPF Ste Jean 10.59 277 eP Pn 17 48 44.8 +2.9
SJPF eSn Sn 17 50 31.4 -9.0
comp=Z,1.4nm,0.3s
ICOR Ion Corvin 10.73 77 ⇑P Pn 17 48 44.0 +0.2
TLBR Topalu 10.94 75 ⇑P Pn 17 48 47.4 +0.8
LDF La Druitiere 11.05 307 eP Pn 17 48 50.5 +2.4
LDF eSn Sn 17 50 42.0 -9.4
comp=Z,6.5nm,0.6s
CFR Carcaliu 11.07 72 ⇑P Pn 17 48 48.2 -0.2
TPGR Topolog 11.23 74 ⇑P Pn 17 48 50.3 -0.4
FLN La Foliniere 11.34 307 eP Pn 17 48 55.4 +3.4
FLN eSn Sn 17 50 48.7 -10
comp=Z,12nm,0.7s
GRR Gorron 11.39 305 eP Pn 17 48 55.7 +2.9
GRR eSn Sn 17 50 50.1 -10
comp=Z,2.8nm,0.6s
IDI Anoyia 11.70 125 Pn Pn 17 48 58.0 +0.8
comp=Z,0.6nm,0.3s,baz=306,slow=15,SNR=2.4
IDI Sn Sn 17 51 01.3 -6.3
comp=Z,1.3nm,0.3s,baz=280,slow=23,SNR=2.7
IDI LR LR 17 54 10.7
comp=Z,69nm,19.5s,baz=272,slow=41
comp=Z,10.0nm,0.5s
MILM Milestii Mici 11.89 64 ⇑P Pn 17 48 59.7 +0.1
MILM Milestii Mici 11.89 64 eP Pn 17 49 01.0 +1.5
MILM eL L 17 52 02.0
MILM LRM MLR 17 54 31.0
comp=Z,500nm,12.0s
MILM Milestii Mici 11.89 64 eP Pn 17 49 01.0 +1.5
MILM MLR MLR
comp=Z,500nm,12.0s
SORM Soroca 11.97 58 ⇑P Pn 17 49 00.1 -0.7
ESDC Sonseca Array 13.27 263 Pn Pn 17 49 18.3 -0.2
comp=Z,0.1nm,0.3s,baz=64,slow=14,SNR=22
comp=Z,2.4nm,0.8s
AKASG Malin Array Be 13.61 48 Pn Pn 17 49 23.0 -0.1
comp=Z,0.8nm,0.6s,baz=239,slow=12,SNR=2.7
AKASG LR LR 17 55 13.8
comp=Z,98nm,18.4s,baz=265,slow=40
AKASG Malin Array Be 13.61 48 P Pn 17 49 23.0 -0.1
AKBB Malin Array Si 13.61 48 Pn Pn 17 49 22.8 -0.3
AKBB Malin Array Si 13.61 48 ceP Pn 17 49 22.4 -0.7
MDUB Mudurnu 13.66 93 Pn Pn 17 49 25.0 +1.1
ELL Elmali 14.15 109 P P 17 49 36.9 -1.4
ELL Elmali 14.15 109 P P 17 49 36.9 -1.4
PABE Paberze 14.64 25 eP Pn 17 49 39.4 +2.3
MVO Moncorvo 15.13 271 eLR LR 17 54 15.0
comp=Z,130nm,18.0s
NACGM Naroch 15.14 31 ⇓eP Pn 17 49 44.3 +0.4
baz=222
IIGN Ignalina 15.28 29 eP Pn 17 49 45.6 -0.1
IIGN IAmb IAmb 17 49 52.0
comp=Z,17nm,0.9s
MNK Minsk 15.29 34 i P Pn 17 49 40.9 -4.9
MNK i S Sn 17 52 29.1 -5.8
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=N,13nm,17.0s
MNK MLR MLR
comp=Z,121nm,20.0s
MNK MLR MLR
comp=E,10.0nm,16.0s
MNK Minsk 15.29 34 i P Pn 17 49 41.0 -4.9
comp=E,2.0nm,0.8s
MNK i P Pn 17 49 41.0 -4.9
comp=N,8.0nm,0.9s
MNK i P Pn 17 49 41.0 -4.9
comp=Z,8.0nm,0.8s,baz=46
MNK i PP P 17 49 49.0 -1.7
MNK i PPP PPP 17 49 56.7
MNK i S Sn 17 52 29.1 -5.8
MNK i SS SnSn 17 52 43.1 -4.5
MNK i SSS SSS 17 52 55.7
MNK i LQ LQ 17 54 17.8
MNK i LR LR 17 55 15.9
MNK i LRM MLR 17 56 08.0
comp=N,13nm,17.4s
MNK i LRM MLR 17 56 11.5
comp=Z,121nm,20.0s
MNK i LRM MLR 17 56 13.8
comp=E,10.0nm,16.1s
ISAL Salakas 15.41 29 eP Pn 17 49 47.5 +0.1
ISAL IAmb IAmb 17 49 55.3
comp=Z,6.2nm,0.8s
BR131 Keskin Array S 15.67 94 i P Pn 17 49 52.0 +1.0
BRTR Keskin Array B 15.67 94 Pn P 17 49 53.4 -1.7
comp=Z,0.1nm,0.3s,baz=281,slow=11,SNR=7.2
BRTR LR LR 17 56 38.2
comp=Z,122nm,18.4s,baz=303,slow=40
comp=Z,1.9nm,0.7s
BRTR Keskin Array B 15.67 94 P P 17 49 54.2 -0.9
MTE Manteigas 15.69 269 epP pP 17 49 58.9 -0.3
MTE eLR LR 17 54 33.2
comp=Z,193nm,18.0s
PMRV Marv??o 15.86 265 eLR LR 17 54 33.6
comp=Z,163nm,16.0s
PGAV Gavieira, Arco 15.89 275 eLR LR 17 54 41.0
comp=Z,226nm,18.0s
PBAR Barrancos 16.04 261 epP pP 17 50 01.4 -1.6
PESTR Estremoz 16.19 263 epP P 17 50 02.3 +1.5
EKA Eskdalemuir Ar 16.56 326 Pn Pn 17 50 02.6 +0.4
baz=137,slow=14
EKA Sn Sn 17 53 00.9 -4.8
baz=137,slow=20
EKA LR LR 17 57 19.1
comp=Z,107nm,18.4s,baz=140,slow=41
comp=Z,1.4nm,0.5s
ESK Eskdalemuir 16.57 326 Pn Pn 17 50 01.4 -0.9
ESK Eskdalemuir 16.57 326 P Pn 17 50 01.4 -0.9
ESK pmax pmax
comp=Z,24nm,1.4s
PVAQ Vaqueiros 16.84 259 eLR LR 17 53 34.2
comp=Z,81nm,18.0s
MDT Midelt 17.14 241 P P 17 50 11.8 +0.4
comp=Z,0.1nm,0.3s,baz=71,slow=13,SNR=1.8
comp=Z,1.6nm,1.0s
MTSE Matsula 17.39 19 eP Pn 17 50 12.4 -0.2
HFS Hagfors 17.50 1 P Pn 17 50 13.8 -0.3
comp=Z,0.3nm,0.3s,baz=172,slow=12,SNR=12
HFS LR LR 17 57 07.3
comp=Z,87nm,19.5s,baz=186,slow=38
comp=Z,4.8nm,0.7s
ANN Anapa 17.64 75 eP Pn 17 50 12.4 -3.4
ANN pmax pmax
comp=Z,22nm,0.7s
ANN MLR MLR
comp=Z,128nm,10.0s
VSU Vasula 17.95 24 i P Pn 17 50 18.8 -0.7
VSU Vasula 17.95 24 eP Pn 17 50 17.8 -1.7
NC602 NORSAR Array S 18.13 357 P P 17 50 22.2 +0.1
NC602 NORSAR Array S 18.13 357 eP P 17 50 23.0 +0.9
NC602 IAmb IAmb 17 50 23.3
comp=Z,13nm,0.8s
NAO01 NORSAR Array S 18.27 356 P P 17 50 23.7 +0.1
NAO01 IAmb IAmb 17 50 27.3
comp=Z,46nm,1.2s
NB2 NORSAR Subarra 18.45 357 P Pn 17 50 26.3 +0.6
comp=Z,10nm,1.0s,baz=175,slow=11
NB2 NORSAR Subarra 18.45 357 P Pn 17 50 26.3 +0.6
baz=175,slow=11
NOA NORSAR Array B 18.45 357 P P 17 50 24.9 -0.7
baz=176,slow=11,SNR=15
NOA LR LR 17 58 21.2
comp=Z,82nm,19.5s,baz=180,slow=40
comp=Z,3.5nm,0.8s
NB201 NORSAR Array S 18.46 357 P Pn 17 50 26.3 +0.5
NBO00 NORSAR Array S 18.46 356 P P 17 50 25.2 -0.5
NC405 NORSAR Array S 18.51 358 P P 17 50 26.3 +0.1
NC405 IAmb IAmb 17 50 35.9
comp=Z,40nm,0.8s
NC303 NORSAR Array S 18.63 357 P Pn 17 50 28.1 +0.2
NC204 NORSAR Array S 18.71 356 Pn Pn 17 50 29.0 +0.2
NC204 IAmb IAmb 17 50 33.9
comp=Z,39nm,1.0s
MEF Metsahovi 18.87 17 eP P 17 50 29.2 -1.0
RAF Rauma 19.11 13 eP P 17 50 32.8 0.0
VSR Storozhevoye 19.61 55 eP P 17 50 37.5 -0.9
VSR pmax pmax
comp=Z,30nm,1.0s
OBN Obninsk 19.67 43 P P 17 50 39.6 +0.7
comp=Z,0.6nm,0.3s,baz=78,slow=18,SNR=4.1
OBN LR LR 17 59 05.3
comp=Z,40nm,18.2s,baz=16,slow=40
comp=Z,2.7nm,0.4s
OBN Obninsk 19.67 43 ⇓eP P 17 50 37.0 -2.0
OBN pmax pmax
comp=Z,20nm,1.0s
OBN MLR MLR
comp=Z,89nm,14.0s
VORR Voronezh 19.77 54 eP P 17 50 38.6 -1.4
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 19.89 51 eP P 17 50 41.1 -0.3
LPSR pmax pmax
comp=Z,10.0nm,0.8s
AKN Aaknes 19.90 351 eP Pn 17 50 42.8 -0.2
MMAI Mount Meron Ar 19.96 112 P Pn 17 50 43.5 -0.5
comp=Z,4.9nm,0.7s,baz=315,slow=9.4,SNR=7.7
comp=Z,4.9nm,0.7s
FINES FINESS Array B 20.34 18 P P 17 50 46.0 -0.2
comp=Z,12nm,0.8s,baz=195,slow=9.1,SNR=30
FINES LR LR 17 59 03.9
comp=Z,94nm,18.8s,baz=205,slow=38
comp=Z,12nm,0.8s
FINES FINESS Array B 20.34 18 P P 17 50 46.7 +0.5
FINES FINESS Array B 20.34 18 P P 17 50 46.7 +0.5
FIA1 FINESS Array S 20.34 18 P P 17 50 46.7 +0.5
FIA1 IAmb IAmb 17 50 56.0
comp=Z,21nm,0.9s
MOS Moscow 20.50 42 eP P 17 50 46.2 -1.8
MOS pmax pmax
comp=Z,40nm,0.8s
KOPT Kop Dagi 20.64 88 P Pn 17 50 52.7 +0.4
KOPT IAmb IAmb 17 51 04.5
comp=Z,21nm,1.0s
TBLU Trondheim 20.70 356 eP Pn 17 50 52.6 +0.1
TBLU IAmb IAmb 17 50 53.2
comp=Z,18nm,0.8s
TAM Tamanrasset 20.82 200 P P 17 50 50.9 -0.9
TAM Tamanrasset 20.82 200 P P 17 50 50.9 -0.9
TAM pmax pmax
comp=Z,17nm,1.1s
BCA Borcka 21.11 84 ⇓P P 17 50 56.3 +1.5
VRH Novokhopyorsk 21.17 56 eP P 17 50 55.8 +0.6
VRH pmax pmax
comp=Z,50nm,0.7s
KIV Kislovodsk 21.45 76 P P 17 51 00.1 +1.6
KIV IAmb IAmb 17 51 25.2
comp=Z,19nm,0.8s
KIV Kislovodsk 21.45 76 eP P 17 50 59.2 +0.7
KIV pmax pmax
comp=Z,23nm,1.1s
KIV MLR MLR
comp=Z,38nm,14.0s
KIV Kislovodsk 21.45 76 P P 17 51 00.5 +1.9
SHA1 Shidzhatmaz 21.46 77 i P P 17 51 00.7 +2.0
KVAR Kislovodsk Arr 21.46 76 P P 17 51 01.7 +3.1
comp=Z,5.7nm,0.8s,baz=288,slow=19,SNR=3.4
ASF Jabal al Asfar 21.47 111 P P 17 51 03.0 +4.3
comp=Z,6.5nm,0.7s,baz=291,slow=8.5,SNR=9.8
KBZ Khabaz 21.64 77 P P 17 51 02.1 +1.8
comp=Z,20nm,0.9s,baz=298,slow=7.6,SNR=20
KBZ LR LR 18 01 08.4
comp=Z,49nm,19.6s,baz=290,slow=42
comp=Z,20nm,0.9s
KBZ Khabaz 21.64 77 ceP P 17 51 01.7 +1.4

KBZ pmax pmax
comp=Z,25nm,0.9s
MARD Mardin 21.75 95 P **P** 17 51 02.2 +0.4
MARD IAmb IAmb 17 51 16.5
comp=Z,15nm,0.9s
EIL Elat 21.75 119 P P 17 51 09.4 +7.7
comp=Z,6.4nm,0.9s,baz=333,slow=14,SNR=2.7
NSS Namsos 21.93 359 *eP* **P** **17 51 03.9 +0.7**
NSS IAmb IAmb 17 51 08.2
comp=Z,20nm,1.3s
GURO Guroymak-BITLI 22.23 91 P **P** **17 51 07.7 +0.8**
GURO IAmb IAmb 17 51 23.6
comp=Z,12nm,0.9s
ZEI Tsey 22.50 79 *eP* **P** **17 51 12.0 +2.1**
ZEI pmax pmax
comp=Z,12nm,0.8s
MOR8 Moi Rana 23.57 1 *eP* **P** **17 51 22.5 +2.0**
MOR8 IAmb IAmb 17 51 32.1
comp=Z,12nm,0.8s
GNI Garni 23.73 85 P **P** **17 51 24.6 +2.2**
comp=Z,7.0nm,0.7s,baz=321,slow=6.5,SNR=3.5
comp=Z,7.0nm,0.7s
GROC Groznyy 23.80 78 *eP* **P** **17 51 20.4 -2.5**
GROC *e* 17 51 48.8
GROC *eS* **S** **17 55 38.4 +0.3**
KLMR Klimovskoe 24.16 32 *eP* **P** **17 51 24.4 -1.7**
KLMR *e* 17 55 05.7
KLMR pmax pmax
comp=Z,21nm,1.3s
KLMR Klimovskoe 24.16 32 *eP* **P** **17 51 24.4 -1.7**
KLMR AMP 17 51 34.0
comp=Z,21nm,1.3s
KLMR *ePP* **PnPn** **17 51 52.4 -2.9**
KLMR *ePcP* **PcP** **17 55 05.7 -0.7**
FAUS Fauske 24.81 2 *eP* **P** **17 51 31.7 -0.2**
FAUS IAmb IAmb 17 51 42.8
comp=Z,8.6nm,0.9s
BELG Belogornoye 24.99 55 P **P** **17 51 34.4 +0.8**
comp=Z,63nm,0.9s,baz=104,slow=3.6,SNR=12
comp=Z,63nm,0.9s
BELG Belogornoye 24.99 55 *iP* **P** **17 51 31.7 -1.9**
BELG pmax pmax
comp=Z,11nm,0.9s
MAK Makhachkala 25.08 78 *eP* **P** **17 51 29.2 -5.3**
MAK *eS* **S** **17 55 51.3 -7.2**
MAK pmax pmax
comp=Z,358nm,1.3s
MAK MLR MLR
comp=Z,160nm,15.0s
STEI Steigen 25.36 2 *eP* **P** **17 51 38.5 +1.7**
STEI IAmb IAmb 17 51 41.0
comp=Z,18nm,1.4s
PRGR Permogore 27.06 34 *eP* **P** **17 51 52.6 +0.3**
KIRV Kirov 27.52 42 *ceP* **P** **17 51 57.8 +1.4**
ARCES ARCESS Array B 27.69 9 P **P** **17 51 56.8 -1.1**
comp=Z,1.4nm,0.8s,baz=187,slow=7.2,SNR=7.0
comp=Z,1.4nm,0.8s
TOA0 Torodi Ar. Sit 31.04 202 P **P** **17 52 28.9 +0.8**
TORD Torodi Ar. Bea 31.04 202 P **P** **17 52 28.9 +0.9**
comp=Z,14nm,0.9s,baz=13,slow=8.8,SNR=60
TORD LR LR 18 06 06.1
comp=Z,124nm,18.9s,baz=323,slow=38
KOWA Kowa 31.74 213 P **P** **17 52 35.7 +1.4**
comp=Z,4.8nm,0.9s,baz=32,slow=11,SNR=4.6
KOWA LR LR 18 05 55.8
comp=Z,76nm,20.6s,baz=72,slow=37
comp=Z,4.8nm,0.9s
KOWA Kowa 31.74 213 P **P** **17 52 36.0 +1.8**
KOWA IAmb IAmb 17 52 41.5
comp=Z,4.3nm,0.9s
KOWA Kowa 31.74 213 P **P** **17 52 37.7 +3.5**
ARU Arti 31.87 48 LR LR 18 06 03.6
comp=Z,92nm,20.1s,baz=244,slow=38
ARU Arti 31.87 48 P **P** **17 52 34.5 -0.5**
ARU Arti 31.87 48 *c iP* **P** **17 52 35.0 0.0**
ARU 17 53 39.0
ARU 17 55 23.8
ARU S **S** **17 57 45.6 +0.5**
ARU SS **SnSn** **17 59 30.1 -2.8**
ARU pmax pmax
comp=Z,17nm,0.6s
ABKAR Akbulak array 32.73 62 P **P** **17 52 42.8 +0.1**
ABKAR Akbulak array 32.73 62 P **P** **17 52 42.6 0.0**
GEYT Alibeck 34.28 82 P **P** **17 52 57.6 +1.3**
comp=Z,3.1nm,0.7s,baz=237,slow=15,SNR=6.1
comp=Z,3.1nm,0.7s
GEYT Alibeck 34.28 82 P **P** **17 52 57.2 +0.8**
BBTS Babate 37.83 231 LR LR 18 09 55.8
comp=Z,82nm,18.0s,baz=64,slow=38
BRVK Borovoye 38.72 54 P **P** **17 53 35.0 +1.0**
BRVK IAmb IAmb 17 53 36.7
comp=Z,15nm,0.9s
BRVK Borovoye 38.72 54 P **P** **17 53 35.0 +1.0**
BRVK pmax pmax
comp=Z,15nm,1.0s
BRVK Borovoye 38.72 54 P **P** **17 53 35.5 +1.5**
BVAR Borovoye Array 38.79 54 LR LR 18 10 22.5
comp=Z,62nm,18.9s,baz=295,slow=38
DBIC Dimbokro 39.23 209 P **P** **17 53 38.8 +0.2**
comp=Z,12nm,1.1s,baz=25,slow=8.5,SNR=6.7
DBIC LR LR 18 10 23.6
comp=Z,74nm,18.2s,baz=30,slow=37
comp=Z,12nm,1.1s
TIC Toumodi 39.31 209 ⇓ *iP* **P** **17 53 40.2 +0.9**
comp=Z,4.3nm,0.2s
UOSS Minazif 39.39 103 P **P** **17 53 40.6 +0.7**
UOSS IAmb IAmb 17 53 50.3
comp=Z,8.7nm,0.9s
UOSS Minazif 39.39 103 P P 17 53 48.0 +8.1
KIC Kosan Boka 39.48 209 *eP* **P** **17 53 41.3 +0.6**
comp=Z,5.0nm,0.4s
LIC Lamto 39.70 209 *eP* **P** **17 53 43.1 +0.6**
comp=Z,16nm,0.4s
KK31 Karatay Array 41.29 69 P **P** **17 53 56.7 +1.2**
KK31 Karatay Array 41.29 69 P **P** **17 53 56.7 +1.2**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 41.29 69 P **P** **17 53 56.6 +1.1**
KKAR Karatay Array 41.29 69 P **P** **17 53 56.4 +1.0**
KKAR IAmb IAmb 17 53 58.5
comp=Z,5.6nm,0.9s
KKAR Karatay Array 41.29 69 P **P** **17 53 56.6 +1.1**
CHGR Chuyangaron 41.99 76 P **P** **17 54 02.1 +0.7**
CHGR IAmb IAmb 17 54 06.5
comp=Z,8.2nm,0.6s
CHGR Chuyangaron 41.99 76 P **P** **17 54 02.1 +0.7**
CHGR pmax pmax
comp=Z,8.0nm,0.6s
GAR Garm 42.68 75 P **P** **17 54 07.4 +0.4**
GAR IAmb IAmb 17 54 12.6
comp=Z,8.4nm,0.6s
AAK Ala-Archa 44.19 68 *ceP* **P** **17 54 19.7 +0.5**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 44.19 68 P **P** **17 54 22.3 +3.1**
KURBB Kurchatov Arra 44.23 56 LR LR 18 13 18.0
comp=Z,60nm,20.6s,baz=110,slow=37
KURK Kurchatov 44.26 56 P **P** **17 54 19.2 -0.2**
KURK Kurchatov 44.26 56 *ceP* **P** **17 54 20.1 +0.7**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 44.26 56 P **P** **17 54 20.5 +1.0**
NRIK Noril'sk 45.43 29 *ceP* **P** **17 54 28.4 -0.1**
NRIK pmax pmax
comp=Z,16nm,1.5s
KSH Kashi 46.46 72 P **P** **17 54 38.3 +1.1**
KSH sP sP 17 54 47.8 +4.5
KSH pmax pmax
comp=Z,8.0nm,0.8s
ZAA0 Zalesovo Array 47.00 50 P **P** **17 54 41.7 +0.7**
ZAA0 IAmb IAmb 17 54 51.4
comp=Z,5.0nm,1.1s
ZALV Zalesovo Beam 47.00 50 P **P** **17 54 41.3 +0.3**
comp=Z,2.4nm,0.5s,baz=292,slow=7.8,SNR=11
ZALV LR LR 18 15 51.1
comp=Z,46nm,19.9s,baz=35,slow=38
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 47.00 50 P **P** **17 54 41.4 +0.4**
ZALV Zalesovo Beam 47.00 50 P **P** **17 54 41.4 +0.4**
NIL Nilore 47.20 80 P **P** **17 54 44.7 +1.8**
NIL Nilore 47.20 80 P **P** **17 54 44.7 +1.8**
NIL pmax pmax
comp=Z,13nm,1.1s
MAKZ Makanchi 47.62 60 P **P** **17 54 46.5 +0.4**
MAKZ Makanchi 47.62 60 P **P** **17 54 46.5 +0.4**
MAKZ pmax pmax
comp=Z,3.0nm,1.1s
MAKZ Makanchi 47.62 60 P P 17 54 51.4 +5.4
MK31 Makanchi Array 47.83 60 P **P** **17 54 48.4 +0.7**
MK31 IAmb IAmb 17 54 49.5
comp=Z,3.5nm,0.7s
MK31 Makanchi Array 47.83 60 P **P** **17 54 48.4 +0.7**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 47.83 60 P **P** **17 54 48.3 +0.7**
comp=Z,4.9nm,0.7s,baz=289,slow=6.2,SNR=64
MKAR LR LR 18 17 46.8
comp=Z,28nm,18.2s,baz=262,slow=40
comp=Z,4.9nm,0.7s
MKAR Makanchi Array 47.83 60 P **P** **17 54 47.9 +0.3**
DGZ Jazzator, Alta 49.94 55 *i P* **P** **17 55 04.4 +0.4**
DGZ pmax pmax
comp=Z,5.0nm,0.7s
SCHQ Schefferville 51.35 313 P **P** **17 55 15.4 +1.1**
comp=Z,2.6nm,0.6s,baz=45,slow=5.7,SNR=2.0
SCHQ LR LR 18 14 51.5
comp=Z,47nm,20.1s,baz=48,slow=34
comp=Z,2.6nm,0.6s
WMQ Urumqi 52.52 62 *eP* **P** **17 55 26.4 +3.1**
KNGR Kungurtug, Tuv 55.47 50 *i P* **P** **17 55 44.8 0.0**
KNGR pmax pmax
comp=Z,4.0nm,0.7s
PYUN Piuthan 57.22 80 *eP* **P** **17 55 58.3 +0.6**
TIXI Tiksi 57.38 20 LR LR 18 24 37.7
comp=Z,30nm,18.6s,baz=183,slow=40
DANN Dangsing 57.64 80 *eP* **P** **17 56 02.2 +1.4**
KOLN Koldanda 57.85 80 *eP* **P** **17 56 03.2 +1.0**
PKIN Phulchoki 59.27 80 *eP* **P** **17 56 12.2 +0.1**
PKI Pulchoki 59.28 80 *eP* **P** **17 56 12.3 0.0**
GUN Gumba 59.43 79 *eP* **P** **17 56 13.8 +0.5**
JIRN Jiri 59.79 79 *eP* **P** **17 56 16.3 +0.4**
RAMN Ramite 60.50 79 *eP* **P** **17 56 20.6 0.0**
SONM Songino Array 61.89 50 P **P** **17 56 31.5 +1.9**
comp=Z,5.5nm,0.7s,baz=294,slow=8.4,SNR=25
SONM LR LR 18 25 46.5
comp=Z,60nm,18.1s,baz=312,slow=38
comp=Z,5.5nm,0.7s
SONM Songino Array 61.89 50 P **P** **17 56 30.8 +1.2**
SONM IAmb IAmb 17 56 34.4
comp=Z,6.0nm,0.9s
SONM Songino Array 61.89 50 P **P** **17 56 30.8 +1.2**
SONM pmax pmax
comp=Z,6.0nm,0.9s
ULN Ulaanbaatar 62.24 49 *i P* **P** **17 56 33.6 +1.6**
ULN pmax pmax
comp=Z,6.0nm,1.5s
ULN Ulaanbaatar 62.24 49 P P 17 56 36.9 +4.9
GTA Gaotai 62.58 61 *eP* **P** **17 56 38.3 +4.0**
GTA pP sP 17 56 45.1 +4.7
GTA sP pP 17 56 49.6 +11
GTA pmax pmax
comp=Z,3.0nm,0.7s
SADO Sadowa 63.10 307 LR LR 18 22 54.9
comp=Z,54nm,19.0s,baz=172,slow=35
YAK Yakutsk 63.88 28 LR LR 18 25 36.8
comp=Z,24nm,18.7s,baz=268,slow=37
YAK Yakutsk 63.88 28 P **P** **17 56 44.2 +1.9**
YAK Yakutsk 63.88 28 *eP* **P** **17 56 45.4 +3.1**
YAK pmax pmax
comp=Z,15nm,0.9s
YAK Yakutsk 63.88 28 P **P** **17 56 45.7 +3.4**
RCBR Riachuelo 65.64 236 LR LR 18 24 03.2
comp=Z,30nm,18.5s,baz=132,slow=35
RCBR Riachuelo 65.64 236 *eP* **P** **17 56 54.6 +0.1**
INK Inuvik 66.58 347 LR LR 18 29 15.3
comp=Z,23nm,19.0s,baz=322,slow=39
LZH Lanzhou 67.10 62 *eP* **P** **17 57 07.9 +4.0**
LZH pP sP 17 57 12.4 +2.4
LZH pmax pmax
comp=Z,10.0nm,1.1s
YKA Yellowknife Ar 67.17 337 P **P** **17 57 03.5 -0.1**
comp=Z,4.0nm,0.9s,baz=41,slow=5.8,SNR=8.3
YKA LR LR 18 27 09.4
comp=Z,64nm,18.5s,baz=50,slow=37
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 67.17 337 *i P* **P** **17 57 04.0 +0.4**
YKA pmax pmax
comp=Z,4.0nm,0.9s
BILL Bilibino 67.78 11 ⇓ *eP* **P** **17 57 08.5 +1.1**
BILL *e*PP* **pP** **17 57 12.1 +0.1**
BILL *e*SP* **sP** **17 57 14.1 +0.4**
BILL PS PnS 18 06 42.0 +15
BILL pmax pmax
comp=Z,10.0nm,1.0s
LBTB Lobatse 68.30 168 LR LR 18 28 02.1
comp=Z,30nm,19.3s,baz=358,slow=37
PALK Pallekele 68.60 100 LR LR 18 29 46.6
comp=Z,25nm,18.7s,baz=246,slow=38
ROSB Rosrio 68.66 244 *eP* **P** **17 57 13.7 +0.1**
NBAN Anadia - AL 68.90 233 *eP* **P** **17 57 15.9 +0.8**
XLT XiLinHaoTe 69.66 49 *eP* **P** **17 57 23.0 +3.3**
XLT pmax pmax
comp=Z,7.0nm,0.8s
XLT pmax pmax
comp=Z,100nm,4.6s
I29M Ogilvie Camp, 70.05 348 P **P** **17 57 22.0 +0.3**
I29M IAmb IAmb 17 57 23.1
comp=Z,5.4nm,1.1s
TMAB Tom-Au,PA,Br 70.95 248 *eP* **P** **17 57 28.0 +0.2**
TKL Tuckaleechee C 71.40 301 LR LR 18 28 01.7
comp=Z,34nm,18.8s,baz=63,slow=35
DAWY Dawson 71.43 348 P **P** **17 57 31.4 +1.3**
DAWY IAmb IAmb 17 57 46.9
comp=Z,4.1nm,1.1s
H21K Melozitna Rive 71.47 354 P **P** **17 57 32.4 +2.1**
PZH PanZhiHua 71.56 71 P **P** **17 57 33.6 +2.1**
PZH pmax pmax
comp=Z,7.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,4.5s
J26L Joseph Creek 71.63 350 P **P** **17 57 32.6 +1.3**
J26L IAmb IAmb 17 57 33.3
comp=Z,3.2nm,0.8s
XAN Xi'an 71.64 61 ⇑ P **P** **17 57 32.9 +1.1**
XAN pP sP 17 57 37.8 -0.2
XAN sP pP 17 57 40.5 +4.1
XAN pmax pmax
comp=Z,7.0nm,0.8s
ILAR Eielson Array 71.78 351 P **P** **17 57 33.4 +1.3**
comp=Z,1.5nm,1.0s,baz=11,slow=5.8,SNR=7.7
comp=Z,1.5nm,1.0s
BOSA Boshof 71.78 169 P **P** **17 57 32.8 +0.2**
comp=Z,3.8nm,0.9s,baz=352,slow=8.8,SNR=3.6
comp=Z,3.8nm,0.9s
MLY Manley 71.92 353 P **P** **17 57 34.6 +1.6**
MLY IAmb IAmb 17 57 35.5
comp=Z,7.1nm,1.2s
FARO Faro, Yukon 72.05 344 P **P** **17 57 35.8 +2.0**
FARO IAmb IAmb 17 57 39.7
comp=Z,5.2nm,1.1s
HDA Harding Lake 72.13 351 P **P** **17 57 34.9 +0.7**
MA2 Magadan 72.30 21 LR LR 18 32 34.6
comp=Z,60nm,18.1s,baz=314,slow=39
RIDG Independent Ri 72.52 350 P **P** **17 57 38.0 +1.4**
BCAR Beaver Creek A 72.74 348 P **P** **17 57 39.3 +1.4**
L26K Log Cabin Wild 73.01 349 P **P** **17 57 41.4 +1.9**
L26K IAmb IAmb 17 57 42.2
comp=Z,5.7nm,1.0s
DHY Denali Highway 73.47 351 P **P** **17 57 43.6 +1.2**
P33M Teslin, Yukon 73.77 343 P **P** **17 57 45.4 +1.3**
P33M IAmb IAmb 17 57 46.2
comp=Z,3.8nm,0.8s
KLR Kul'dur 73.82 37 P **P** **17 57 43.6 -0.8**
comp=Z,2.2nm,1.0s,baz=331,slow=11,SNR=2.6
comp=Z,2.2nm,1.0s
KLR Kul'dur 73.82 37 *ceP* **P** **17 57 47.4 +2.9**
KLR pmax pmax
comp=Z,6.0nm,1.3s
K20K Telida 73.84 354 P **P** **17 57 45.1 +0.7**
K20K IAmb IAmb 17 57 48.0
comp=Z,6.0nm,1.1s
EDM Edmonton 74.02 330 P **P** **17 57 46.0 +0.4**
EDM Edmonton 74.02 330 P **P** **17 57 46.0 +0.4**
EDM pmax pmax
comp=Z,20nm,1.5s
GDU01 Guandu, BA 74.06 234 *eP* **P** **17 57 46.7 +0.5**
CHTO Chiang Mai 74.44 79 P **P** **17 57 48.5 -0.1**
CHTO IAmb IAmb 17 57 52.5
comp=Z,4.4nm,0.8s
CHTO Chiang Mai 74.44 79 P **P** **17 57 48.5 -0.1**
CHTO pmax pmax
comp=Z,4.0nm,0.9s
CHTO Chiang Mai 74.44 79 P **P** **17 57 49.2 +0.6**
CMAR Chiang Mai Arr 74.67 79 P **P** **17 57 50.2 +0.3**
comp=Z,2.9nm,0.8s,baz=305,slow=7.4,SNR=19
comp=Z,2.9nm,0.8s
CMAR Chiang Mai Arr 74.67 79 P **P** **17 57 50.1 +0.2**
MALB Monte Alegre 74.87 253 *eP* **P** **17 57 51.5 +0.5**
P29M Windy Craggy 75.29 345 P **P** **17 57 54.2 +1.3**
M19K Big River Lodg 75.31 354 P **P** **17 57 54.6 +1.7**
M19K IAmb IAmb 17 58 30.1
comp=Z,11nm,1.4s
EGMT Eagleton 76.64 325 P **P** **17 58 02.0 +1.2**
WALA Waterton Lakes 77.54 328 P **P** **17 58 06.2 +0.3**
ITTB Itaituba 77.68 252 *eP* **P** **17 58 07.5 +0.5**
JANB Januaria 77.96 236 *eP* **P** **17 58 09.5 +1.0**
SJMB Sao Joao De Ma 78.93 232 *eP* **P** **17 58 14.0 +0.3**
RIB01 Linhares ES 78.95 231 *eP* **P** **17 58 14.7 +0.8**
MC01 Montes Claros 79.00 235 *eP* **P** **17 58 15.0 +0.7**
BOZ Bozeman (W) 79.34 324 P **P** **17 58 17.3 +1.3**
BOZ IAmb IAmb 17 58 21.5
comp=Z,3.9nm,0.8s
BOZ Bozeman (W) 79.34 324 P **P** **17 58 17.3 +1.3**
BOZ pmax pmax
comp=Z,4.0nm,0.9s
NEW Newport 79.43 329 P **P** **17 58 16.0 -0.3**
comp=Z,2.6nm,0.8s,baz=45,slow=4.3,SNR=3.1
comp=Z,2.6nm,0.8s
NEW Newport 79.43 329 P **P** **17 58 16.0 -0.3**
SDV Santo Domingo 79.51 272 P **P** **17 58 17.2 -0.2**
comp=Z,3.5nm,0.3s,baz=27,slow=6.8,SNR=3.8
comp=Z,3.5nm,0.3s
PETK Petropavlovsk- 79.83 21 LR LR 18 38 53.9
comp=Z,24nm,18.1s,baz=60,slow=40
YSS Yuzh-Sakhalins 80.21 32 P **P** **17 58 21.4 +1.0**
YSS Yuzh-Sakhalins 80.21 32 *eP* **P** **17 58 21.1 +0.6**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 80.21 32 P **P** **17 58 22.6 +2.1**
C09A Chrisman Ranch 80.25 329 P **P** **17 58 21.0 +0.3**
C09A IAmb IAmb 17 58 25.8
comp=Z,7.1nm,0.8s
IMW Indian Meadow 80.37 323 P **P** **17 58 22.0 +0.2**
MOOW Moose Ponds 80.40 322 P **P** **17 58 21.3 -0.6**
MCMT McKenzie Canyo 80.47 324 P **P** **17 58 22.1 -0.2**
KSAR Wonju Array Be 80.59 47 P **P** **17 58 22.3 -0.4**
KSAR Wonju Array Be 80.59 47 P **P** **17 58 22.3 -0.4**
KSRS Korea Array 80.61 47 P **P** **17 58 23.1 +0.3**
comp=Z,3.1nm,0.9s,baz=324,slow=5.2,SNR=11
KSRS LR LR 18 38 17.9
comp=Z,21nm,18.2s,baz=240,slow=39
comp=Z,3.1nm,0.9s
PDAR Pinedale Array 80.62 321 P **P** **17 58 23.2 +0.1**
comp=Z,0.5nm,0.5s,baz=71,slow=5.0,SNR=3.8
PDAR LR LR 18 33 32.7
comp=Z,41nm,18.6s,baz=68,slow=35
comp=Z,0.5nm,0.5s
TPAW Teton Pass 80.70 322 P **P** **17 58 23.7 +0.2**
BDFB Brasilia 80.71 239 P **P** **17 58 24.5 +0.9**
comp=Z,4.1nm,0.4s,baz=70,slow=5.2,SNR=5.2
comp=Z,4.1nm,0.4s
BDFB Brasilia 80.71 239 P **P** **17 58 24.1 +0.4**
BDFB IAmb IAmb 17 58 25.6
comp=Z,10.0nm,1.1s
BDFB Brasilia 80.71 239 *eP* **P** **17 58 23.9 +0.4**
WMOK Wichita Mounta 81.05 309 P **P** **17 58 25.8 +0.6**
WMOK Wichita Mounta 81.05 309 P **P** **17 58 25.8 +0.6**
WMOK pmax pmax
comp=Z,4.0nm,1.1s
E09A Wood Farm, Sta 81.27 328 P **P** **17 58 26.0 -0.1**
E09A IAmb IAmb 17 58 31.3
comp=Z,4.9nm,0.9s
Q24A Divide 81.38 316 P **P** **17 58 27.1 -0.2**
Q24A IAmb IAmb 17 58 34.7
comp=Z,4.0nm,0.9s
HAWA Hanford 81.90 329 P **P** **17 58 30.5 +1.0**
HAWA IAmb IAmb 17 58 31.7
comp=Z,2.9nm,0.7s
BMO Blue Mountains 82.31 327 P **P** **17 58 32.2 +0.4**
BMO Blue Mountains 82.31 327 P **P** **17 58 32.2 +0.4**
BMO pmax pmax
comp=Z,8.0nm,0.9s
CLDB Colider 82.34 248 *eP* **P** **17 58 32.3 +0.1**
PV07 Paradox Valley 83.55 318 P **P** **17 58 37.8 -0.7**
PV07 IAmb IAmb 17 58 43.4
comp=Z,4.6nm,0.9s
PV23 Carpenter Ridg 83.72 318 P **P** **17 58 38.6 -0.9**
PV11 David Mesa, Pa 83.77 318 P **P** **17 58 40.0 +0.4**
SRU San Rafael Swe 83.94 319 P **P** **17 58 40.5 0.0**
SRU IAmb IAmb 17 58 46.0
comp=Z,4.0nm,0.9s
SRU San Rafael Swe 83.94 319 P **P** **17 58 40.5 0.0**
SRU pmax pmax
comp=Z,4.0nm,0.9s
ELK Elko 84.80 323 P **P** **17 58 45.1 +0.2**
comp=Z,0.5nm,0.8s,baz=34,slow=7.3,SNR=2.1
comp=Z,0.5nm,0.8s
ANMO Albuquerque 85.11 314 LR LR 18 35 08.8
comp=Z,44nm,19.7s,baz=40,slow=35
MJAR Matsushiro Arr 86.60 41 P **P** **17 58 56.1 +2.5**
comp=Z,0.9nm,0.6s,baz=349,slow=2.5,SNR=2.1
MJAR LR LR 18 41 17.8
comp=Z,29nm,18.4s,baz=254,slow=38
comp=Z,0.9nm,0.6s
TXAR Lajitas Array 87.82 309 P **P** **17 59 01.6 +1.9**
comp=Z,0.5nm,0.7s,baz=92,slow=2.9,SNR=5.3
TXAR LR LR 18 37 46.9
comp=Z,26nm,19.9s,baz=9.0,slow=35
comp=Z,0.5nm,0.7s
NVAR Mina Array Bea 88.05 324 P **P** **17 59 01.0 +0.1**
comp=Z,0.5nm,0.8s,baz=50,slow=4.8,SNR=2.2
comp=Z,0.5nm,0.8s
ETMB Extrema 88.89 256 *eP* **P** **17 59 05.0 +0.3**
WRA Warramunga Arr 126.00 84 PKP **PKPdf** **18 05 12.3 -0.3**
comp=Z,0.6nm,0.9s,baz=292,slow=3.3,SNR=3.1
ASAR Alice Springs 127.95 88 PKP **PKPdf** **18 05 16.1 -0.1**
comp=Z,0.7nm,0.8s,baz=316,slow=1.4,SNR=11

ROM 24 17:49:56.8±0.1, 42.759N±0.004×13.249E±0.007, h8km, ML2.5/20, 12C-8D, Error ellipse: s-maj=0.6km s-min=0.3km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**307**	⇓P		Pg	17 49 59.9	+0.3
NRCA				S		Sg	17 50 02.3	+0.7
NRCA				AML	AML			
	comp=E,12950μm,0.1s							
NRCA				AML	AML			
	comp=N,9075μm,0.7s							
NRCA				AML	AML			
	comp=E,13000μm,0.1s							
NRCA				AML	AML			
	comp=N,9085μm,0.7s							
NRCA				AML	AML			
	comp=E,14200μm,0.1s							
NRCA				AML	AML			
	comp=N,9690μm,0.2s							
NRCA				AML	AML			
	comp=N,18550μm,0.1s							
NRCA				AML	AML			
	comp=E,29800μm,0.1s							
NRCA				AML	AML			
	comp=N,20550μm,0.1s							
NRCA				AML	AML			
	comp=N,18500μm,0.1s							
NRCA				AML	AML			
	comp=E,27700μm,0.1s							
LNSS	**Leonessa**	**0.22**	**225**	P		Pg	17 50 02.1	+0.8
LNSS				S		Sg	17 50 06.2	+1.9
LNSS				AML	AML			
	comp=N,5375μm,0.6s							
LNSS				AML	AML			
	comp=N,5370μm,0.6s							
LNSS				AML	AML			
	comp=E,8160μm,1.4s							
RM33	**Pellescritta (**	**0.25**	**186**	⇓P		Pb	17 50 03.1	-0.6
RM33				S		Sb	17 50 07.6	-0.7
RM33				AML	AML			
	comp=E,1000μm,0.2s							
RM33				AML	AML			
	comp=N,982μm,0.8s							
RM33				AML	AML			
	comp=N,940μm,1.2s							
RM33				AML	AML			

comp=E,998μm,0.3s
RM33 AML AML
comp=N,984μm,0.8s
RM33 AML AML
comp=E,994μm,0.3s
RM33 AML AML
comp=N,937μm,1.2s
RM33 AML AML
comp=E,1000μm,0.2s
RM33 AML AML
comp=N,984μm,0.8s
RM33 AML AML
comp=N,938μm,1.2s
RM33 AML AML
comp=E,994μm,0.3s
CAMP Campotosto 0.25 152 ⇑P Pg 17 50 02.7 +0.8
CAMP S Sg 17 50 06.8 +1.5
CAMP AML AML
comp=E,472μm,0.8s
CAMP AML AML
comp=E,700μm,0.3s
CAMP AML AML
comp=N,606μm,0.9s
TERO Teramo 0.29 117 ⇓P Pg 17 50 03.3 +0.6
TERO S Sb 17 50 08.2 -1.3
TERO AML AML
comp=N,1021μm,1.0s
TERO AML AML
comp=N,1110μm,1.0s
TERO AML AML
comp=E,1315μm,0.4s
TERO AML AML
comp=N,1650μm,0.5s
TERO AML AML
comp=E,1415μm,0.4s
TERO AML AML
comp=N,1920μm,0.5s
TERO AML AML
comp=N,1648μm,0.5s
GUMA Gualdo di Mace 0.31 12 ⇑P Pb 17 50 03.9 -0.8
GUMA S Sb 17 50 10.0 0.0
GUMA AML AML
comp=E,2075μm,0.5s
GUMA AML AML
comp=N,3350μm,0.3s
GUMA AML AML
comp=E,2080μm,0.5s
GUMA AML AML
comp=E,3115μm,0.6s
GUMA AML AML
comp=N,2855μm,0.3s
GUMA AML AML
comp=N,3345μm,0.3s
CSP1 Cessapalombo 0.33 354 P Pg 17 50 04.0 +0.5
CSP1 S Sb 17 50 09.9 -0.8
CSP1 AML AML
comp=E,944μm,0.5s
CSP1 AML AML
comp=N,929μm,0.4s
CSP1 AML AML
comp=E,945μm,0.5s
CSP1 AML AML
comp=N,924μm,0.4s
CSP1 AML AML
comp=E,942μm,0.5s
CSP1 AML AML
comp=N,926μm,0.4s
CESI CESI - Serrava 0.35 314 ⇑P Pg 17 50 04.1 +0.3
CESI S Sg 17 50 09.4 +1.0
CESI AML AML
comp=E,1895μm,0.2s
CESI AML AML
comp=E,1890μm,0.2s
CESI AML AML
comp=N,2495μm,0.6s
OFFI Offida 0.37 61 ⇑P Pb 17 50 05.7 +0.1
OFFI S Sb 17 50 13.1 +1.6
OFFI AML AML
comp=N,1435μm,0.3s
OFFI AML AML
comp=E,1365μm,0.6s
GIGS Gran Sasso 0.39 142 P Pb 17 50 05.3 -0.7
GIGS S Sb 17 50 11.7 -0.5
ARRO Arrone 0.40 243 ⇑P Pg 17 50 05.0 +0.5
ARRO AML AML
comp=N,466μm,0.2s
ARRO AML AML
comp=E,490μm,0.6s
FIAM Fiamignano 0.50 191 ⇓P Pg 17 50 07.1 +0.6
FIAM S Sb 17 50 14.8 -0.6
FIAM AML AML
comp=E,287μm,1.1s
FIAM AML AML
comp=N,305μm,0.6s
FIAM AML AML
comp=N,306μm,0.6s
FIAM AML AML
comp=E,288μm,1.1s
CESX Cesi 0.52 253 ⇑P Pg 17 50 06.9 +0.1
CESX S Sb 17 50 15.5 -0.3
CESX AML AML
comp=N,310μm,1.1s
CESX AML AML
comp=E,319μm,1.1s
ASSB Assisi San Ben 0.52 303 ⇑P Pg 17 50 06.9 0.0
ASSB S Sb 17 50 14.8 -1.1
ASSB AML AML
comp=E,1135μm,0.2s
ASSB AML AML
comp=N,1034μm,1.6s
SNTG Esanatoglia 0.55 336 P Pg 17 50 07.7 +0.3
SNTG S Sb 17 50 16.2 -0.5
SNTG AML AML
comp=N,300μm,1.1s
SNTG AML AML
comp=E,256μm,1.5s
VCEL Villa Celiera 0.57 130 ⇓P Pb 17 50 08.8 -0.3
EL6 Elcito 0.58 349 P Pg 17 50 08.4 +0.4
EL6 S Sb 17 50 18.0 +0.2
ATCC AVT- Casa Cast 0.62 314 ⇑P Pg 17 50 08.8 +0.1
ATCC S Sb 17 50 18.7 -0.1
ATCC AML AML
comp=E,849μm,0.3s
ATCC AML AML
comp=N,674μm,1.5s
ATCC AML AML
comp=E,850μm,0.3s
FOSV Fossato di Vic 0.64 326 ⇑P Pg 17 50 09.2 0.0
FOSV S Sb 17 50 19.2 -0.3
FOSV AML AML
comp=N,651μm,0.3s
FOSV AML AML
comp=E,270μm,1.3s
MURB Monte Urbino 0.73 314 P Pg 17 50 10.9 0.0
MURB S Sb 17 50 22.6 +0.4
MURB AML AML
comp=N,1125μm,0.3s
MURB AML AML
comp=E,1010μm,0.3s
SSFR Montelago di S 0.76 333 ⇓P Pg 17 50 11.8 +0.4
SSFR S Sb 17 50 23.3 +0.5
SSFR AML AML
comp=N,638μm,0.2s
SSFR AML AML
comp=E,640μm,0.2s
SSFR AML AML
comp=E,718μm,0.2s
SSFR AML AML
comp=N,510μm,0.2s
ATFO Monte Foce - G 0.78 321 P Pg 17 50 11.9 -0.1
MGAB Montegabbione 0.85 281 ⇑P Pg 17 50 13.3 +0.1
MGAB AML AML
comp=N,224μm,0.5s
MGAB AML AML
comp=N,225μm,0.5s
MGAB AML AML
comp=E,236μm,0.8s
MGAB AML AML
comp=E,238μm,1.1s
MGAB AML AML
comp=N,224μm,0.4s
ATVO AVT- Monte Val 0.88 316 ⇓P Pg 17 50 13.3 -0.4
ATVO S Sb 17 50 26.9 +0.7
PIEI Pieia 0.94 326 ⇑P Pg 17 50 15.0 +0.2
PIEI S Sn 17 50 29.3 -0.7
PIEI AML AML
comp=E,142μm,1.2s
PIEI AML AML
comp=N,113μm,1.4s
PIEI AML AML
comp=N,113μm,1.4s
MPAG Monte Paganucc 0.94 338 ⇑P Pg 17 50 14.8 -0.1
MPAG S Sn 17 50 30.0 -0.2
RMP Rome, Mte Porz 1.03 203 S Sg 17 50 29.0 -1.0
CAFI Castiglion Fio 1.10 302 ⇓P Pg 17 50 18.0 +0.1

ROM 24 17:50:54.6±0.1, 42°.739N±0°.005×13°.195E±0°.009, h10km, ML2.4/9, 5C-7D, Error ellipse: s-maj=0.6km s-min=0.4km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**328**	⇑P	Pg	17 50 58.0	+0.5
NRCA				S	Sg	17 51 00.1	+0.6
NRCA				AML	AML		
	comp=N,18550μm,0.1s						
NRCA				AML	AML		
	comp=E,27700μm,0.1s						
NRCA				AML	AML		
	comp=E,29800μm,0.1s						
NRCA				AML	AML		
	comp=N,20550μm,0.1s						
NRCA				AML	AML		
	comp=N,18500μm,0.1s						
LNSS	**Leonessa**	**0.18**	**220**	P	Pg	17 50 58.9	+0.4
LNSS				S	Sg	17 51 02.5	+1.4
LNSS				AML	AML		
	comp=E,3285μm,0.1s						
LNSS				AML	AML		
	comp=N,2055μm,0.4s						
FDMO	**Fiordimonte**	**0.31**	**345**	⇓P	Pg	17 51 01.2	+0.4
FDMO				S	Sg	17 51 06.2	+1.2
FDMO				AML	AML		
	comp=E,426μm,0.2s						
FDMO				AML	AML		
	comp=E,426μm,0.2s						
FDMO				AML	AML		
	comp=N,454μm,0.2s						
TERO	**Teramo**	**0.32**	**111**	P	Pg	17 51 01.6	+0.5
TERO				S	Sb	17 51 06.6	-1.2
TERO				AML	AML		
	comp=E,974μm,0.1s						
TERO				AML	AML		
	comp=N,1650μm,0.5s						
TERO				AML	AML		
	comp=E,1125μm,0.1s						
TERO				AML	AML		
	comp=N,1920μm,0.5s						
TERO				AML	AML		
	comp=E,975μm,0.1s						
TERO				AML	AML		
	comp=N,1648μm,0.5s						
GUMA	**Gualdo di Mace**	**0.34**	**18**	⇑P	Pb	17 51 02.2	-0.6
GUMA				S	Sb	17 51 08.2	-0.2
GUMA				AML	AML		
	comp=N,1700μm,0.5s						
GUMA				AML	AML		
	comp=E,2390μm,0.4s						
GUMA				AML	AML		
	comp=N,1685μm,0.5s						
GUMA				AML	AML		
	comp=E,1720μm,0.4s						
CESI	**CESI - Serrava**	**0.34**	**321**	⇓P	Pg	17 51 01.9	+0.4
CESI				S	Sb	17 51 07.5	-0.9
CESI				AML	AML		
	comp=E,485μm,0.2s						
CESI				AML	AML		
	comp=N,868μm,0.3s						
CESI				AML	AML		
	comp=N,867μm,0.3s						
CESI				AML	AML		
	comp=E,486μm,0.2s						
CSP1	**Cessapalombo**	**0.35**	**1**	⇑P	Pg	17 51 02.1	+0.4
ARRO	**Arrone**	**0.35**	**243**	P	Pb	17 51 02.5	-0.5
ARRO				AML	AML		
	comp=E,240μm,0.2s						
ARRO				AML	AML		
	comp=E,240μm,0.2s						
ARRO				AML	AML		
	comp=N,304μm,0.2s						
GIGS	**Gran Sasso**	**0.40**	**136**	P	Pg	17 51 02.9	+0.4
GIGS				S	Sb	17 51 09.2	-0.9
GIGS				AML	AML		
	comp=E,136μm,0.5s						
GIGS				AML	AML		
	comp=N,119μm,0.2s						
GIGS				AML	AML		
	comp=E,135μm,0.5s						
GIGS				AML	AML		
	comp=N,119μm,0.2s						
OFFI	**Offida**	**0.41**	**61**	⇓P	Pg	17 51 03.2	+0.5
OFFI				S	Sb	17 51 12.2	+1.8
CESX	**Cesi**	**0.47**	**254**	P	Pg	17 51 03.2	-0.7
CESX				S	Sb	17 51 12.0	-0.1
ASSB	**Assisi San Ben**	**0.50**	**308**	⇑P	Pb	17 51 05.0	-0.5
ASSB				AML	AML		
	comp=E,248μm,1.2s						
ASSB				AML	AML		
	comp=N,269μm,0.2s						
SNTG	**Esanatoglia**	**0.55**	**340**	⇑P	Pg	17 51 05.4	+0.1
SNTG				S	Sb	17 51 15.0	+0.6
VCEL	**Villa Celiera**	**0.59**	**126**	⇓P	Pb	17 51 06.8	-0.3
VCEL				S	Sb	17 51 16.7	+1.2
EL6	**Elcito**	**0.59**	**353**	⇓P	Pg	17 51 06.3	+0.1
T0110	**Collepietro**	**0.67**	**140**	⇓P	Pg	17 51 07.8	+0.2
LMD	**Lutirano**	**1.72**	**321**	⇓P	Pn	17 51 23.8	-0.9

ROM 24 17:54:34.5±0.1, 42°.618N±0°.005×13°.241E±0°.005, h11km, ML2.7/14, 3C-1D, Error ellipse: s-maj=0.6km s-min=0.3km az=201.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.11**	**190**	⇑P	Pg	17 54 38.1	+0.6
RM33				S	Sg	17 54 40.4	+0.7
RM33				AML	AML		
	comp=E,5555μm,1.4s						
RM33				AML	AML		
	comp=N,5830μm,0.1s						
RM33				AML	AML		
	comp=N,5945μm,0.1s						
RM33				AML	AML		
	comp=E,5550μm,1.4s						
RM33				AML	AML		
	comp=N,5825μm,0.1s						
RM33				AML	AML		
	comp=E,5375μm,1.4s						
RM33				AML	AML		
	comp=E,5395μm,0.2s						
CAMP	**Campotosto**	**0.15**	**124**	AML	AML		
	comp=E,502μm,1.0s						
CAMP				AML	AML		
	comp=N,738μm,1.2s						
LNSS	**Leonessa**	**0.15**	**264**	⇑P	Pg	17 54 38.6	+0.6
LNSS				S	Sg	17 54 41.4	+0.9
LNSS				AML	AML		
	comp=E,2160μm,0.4s						
LNSS				AML	AML		
	comp=N,2095μm,1.3s						
LNSS				AML	AML		
	comp=E,6215μm,0.4s						
LNSS				AML	AML		
	comp=N,4295μm,0.5s						
LNSS				AML	AML		
	comp=E,2160μm,0.4s						
LNSS				END			
TERO	**Teramo**	**0.27**	**89**	P	Pg	17 54 40.0	0.0
TERO				S	Sg	17 54 43.9	+0.2
TERO				AML	AML		
	comp=E,1011μm,1.1s						
TERO				AML	AML		
	comp=N,1485μm,0.2s						
TERO				AML	AML		
	comp=E,1105μm,1.0s						
TERO				AML	AML		
	comp=N,1665μm,0.2s						
TERO				AML	AML		
	comp=N,3380μm,0.5s						
TERO				AML	AML		
	comp=N,3665μm,0.4s						
TERO				AML	AML		
	comp=E,1770μm,0.4s						
TERO				AML	AML		
	comp=E,1920μm,0.4s						
TERO				AML	AML		
	comp=E,991μm,1.0s						
AQU	**L'Aquila**	**0.29**	**156**	P	Pg	17 54 40.7	+0.3
AQU				S	Sb	17 54 45.6	-0.9
AQU				AML	AML		
	comp=E,584μm,1.6s						
AQU				AML	AML		
	comp=N,535μm,1.1s						
AQU				AML	AML		
	comp=E,592μm,1.6s						
AQU				AML	AML		
	comp=N,528μm,1.1s						
AQU				AML	AML		
	comp=E,245μm,0.2s						
AQU				AML	AML		
	comp=N,293μm,0.3s						
GIGS	**Gran Sasso**	**0.29**	**125**	P	Pg	17 54 40.6	0.0
GIGS				S	Sg	17 54 45.1	+0.5
GIGS				AML	AML		
	comp=E,304μm,0.1s						
GIGS				AML	AML		
	comp=N,220μm,0.5s						
GIGS				AML	AML		
	comp=N,220μm,0.5s						
GIGS				AML	AML		
	comp=E,303μm,0.1s						
ARRO	**Arrone**	**0.35**	**264**	P	Pg	17 54 41.9	+0.4
ARRO				S	Sb	17 54 47.5	-0.9
ARRO				AML	AML		
	comp=E,1130μm,0.2s						
ARRO				AML	AML		
	comp=N,942μm,0.9s						
ARRO				AML	AML		
	comp=N,231μm,1.0s						
FIAM	**Fiamignano**	**0.36**	**195**	P	Pg	17 54 42.1	+0.3
FIAM				S	Sb	17 54 47.9	-0.7
FIAM				AML	AML		
	comp=E,345μm,0.4s						
FIAM				AML	AML		
	comp=N,202μm,0.4s						
FIAM				AML	AML		
	comp=E,699μm,1.5s						
FIAM				AML	AML		
	comp=N,426μm,0.5s						
FIAM				AML	AML		
	comp=E,345μm,0.4s						
FDMO	**Fiordimonte**	**0.43**	**345**	P	Pg	17 54 43.3	+0.2
FDMO				S	Sb	17 54 50.0	-0.7
FDMO				AML	AML		
	comp=E,179μm,0.3s						
FDMO				AML	AML		
	comp=N,202μm,1.1s						
FDMO				AML	AML		
	comp=E,2175μm,1.5s						
FDMO				AML	AML		
	comp=N,2425μm,0.9s						
FDMO				AML	AML		
	comp=N,193μm,0.2s						
OFFI	**Offida**	**0.46**	**46**	P	Pb	17 54 44.2	-0.3
OFFI				AML	AML		
	comp=N,2970μm,0.5s						
OFFI				AML	AML		
	comp=E,1715μm,0.7s						
OFFI				AML	AML		
	comp=E,577μm,0.4s						
CESI	**CESI - Serrava**	**0.46**	**327**	P	Pg	17 54 42.9	-0.7
CESI				S	Sb	17 54 51.1	-0.4
CESI				AML	AML		
	comp=E,3585μm,0.5s						
CESI				AML	AML		
	comp=N,8100μm,0.2s						
CESI				AML	AML		
	comp=E,107μm,0.3s						
CSP1	**Cessapalombo**	**0.47**	**357**	P	Pg	17 54 43.8	-0.1
CSP1				S	Sg	17 54 51.0	+0.8
CSP1				AML	AML		
	comp=E,2425μm,0.3s						
CSP1				AML	AML		
	comp=N,3490μm,0.2s						
CSP1				AML	AML		
	comp=E,175μm,0.2s						
VCEL	**Villa Celiera**	**0.50**	**117**	P	Pg	17 54 44.5	+0.3
VCEL				S	Sb	17 54 52.6	+0.1
VCEL				AML	AML		
	comp=E,694μm,0.4s						
VCEL				AML	AML		
	comp=N,758μm,1.1s						
VCEL				AML	AML		
	comp=E,396μm,1.1s						
TRTR	**Tortoreto Alta**	**0.53**	**69**	⇑P	Pb	17 54 45.9	0.0
TRTR				AML	AML		
	comp=E,2110μm,0.5s						
TRTR				AML	AML		
	comp=N,2380μm,1.4s						
T0110	**Collepietro**	**0.56**	**134**	P	Pg	17 54 45.3	-0.1
T0110				S	Sb	17 54 54.1	-0.2
T0110				AML	AML		
	comp=E,1034μm,0.5s						
T0110				AML	AML		
	comp=N,903μm,0.7s						
SRES	**S.Oreste - Sor**	**0.66**	**235**	S	Sn	17 54 59.0	-1.2
CERT	**Cerreto**	**0.70**	**196**	⇓P	Pg	17 54 47.8	-0.2
EL6	**Elcito**	**0.72**	**352**	P	Pb	17 54 48.8	-0.3
EL6				S	Sb	17 54 59.7	+0.8
PTRJ	**Pietraroja**	**1.58**	**142**	S	Sg	17 55 28.0	+2.7
VITU	**Vitulano (BN)**	**1.77**	**144**	S	Sg	17 55 32.0	+0.6
CDRU	**Civita di Ruta**	**2.63**	**143**	P	Pn	17 55 16.7	-0.3

*ROM **24** 17:55:23.2±0.1, 42°.804N±0°.004×13°.246E±0°.007, h9km, ML2.9/29, Error ellipse: s-maj=0.5km s-min=0.4km az=259.0*

ISC 24 17:55:23.7±0.8, 42°.80N±0°.02×13°.25E±0°.02, h11km, n44, σ0973/64, 12C-11D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**287**	P	**Pg**	**17 55 26.2**	**-0.3**
NRCA				S	**Sg**	**17 55 28.0**	**-0.6**
NRCA				AML	AML		
	comp=E,32700μm,1.2s						
NRCA				AML	AML		
	comp=N,47850μm,0.1s						
NRCA				AML	AML		
	comp=E,35550μm,1.2s						
NRCA				AML	AML		
	comp=N,50800μm,0.1s						
NRCA				AML	AML		
	comp=N,50150μm,0.1s						
NRCA				AML	AML		
	comp=E,44700μm,0.1s						
NRCA				AML	AML		
	comp=N,53900μm,0.1s						
NRCA				AML	AML		
	comp=E,40250μm,0.1s						
T1243	**Rocca Santa Ma**	**0.18**	**126**	END			
LNSS	**Leonessa**	**0.25**	**217**	⇓P	**Pg**	**17 55 29.2**	**+0.3**
LNSS				S	**Sb**	**17 55 33.5**	**-1.3**
LNSS				AML	AML		
	comp=E,6215μm,0.4s						
LNSS				AML	AML		
	comp=N,4290μm,0.5s						
LNSS				AML	AML		
	comp=E,7690μm,0.5s						
LNSS				AML	AML		
	comp=N,7235μm,0.7s						
LNSS				AML	AML		
	comp=N,3389μm,1.0s						
FDMO	**Fiordimonte**	**0.26**	**333**	P	**Pg**	**17 55 29.3**	**+0.2**
FDMO				S	**Sg**	**17 55 33.4**	**+0.7**
FDMO				AML	AML		
	comp=E,3320μm,1.2s						
FDMO				AML	AML		
	comp=N,3520μm,0.4s						
FDMO				AML	AML		
	comp=E,2065μm,0.2s						
GUMA	**Gualdo di Mace**	**0.27**	**14**	AML	AML		
	comp=N,6945μm,1.6s						
GUMA				AML	AML		
	comp=E,8250μm,0.3s						
GUMA				AML	AML		
	comp=N,8645μm,1.6s						

GUMA AML AML
comp=E,10650µm,0.4s
CSP1 Cessapalombo 0.29 354 P **Pg** **17 55 29.9 +0.2**
CSP1 S **Sb** **17 55 35.0 -0.9**
CAMP Campotosto 0.29 156 ⇑P **Pg** **17 55 29.8 +0.1**
CAMP S **Sg** **17 55 34.6 +0.9**
CAMP AML AML
comp=N,2005µm,0.2s
CAMP AML AML
comp=E,4335µm,0.2s
CAMP AML AML
comp=N,1183µm,0.6s
RM33 Pellescritta (0.30 185 P **Pg** **17 55 29.9 +0.2**
RM33 S **Sb** **17 55 35.3 -0.7**
RM33 AML AML
comp=N,2505µm,1.2s
RM33 AML AML
comp=N,2555µm,1.2s
RM33 AML AML
comp=E,1985µm,0.9s
RM33 AML AML
comp=N,2505µm,1.2s
RM33 AML AML
comp=E,1935µm,0.9s
RM33 AML AML
comp=N,2550µm,1.2s
RM33 AML AML
comp=N,2510µm,1.2s
RM33 AML AML
comp=E,2890µm,0.8s
RM33 AML AML
comp=E,2940µm,0.7s
RM33 AML AML
comp=N,1176µm,1.4s
TERO Teramo 0.32 124 ⇑P **Pg** **17 55 30.3 +0.1**
TERO S **Sb** **17 55 35.5 -1.2**
TERO AML AML
comp=E,1770µm,0.4s
TERO AML AML
comp=N,3385µm,0.5s
TERO AML AML
comp=E,1920µm,0.4s
TERO AML AML
comp=N,3665µm,0.4s
TERO AML AML
comp=N,4755µm,0.3s
TERO AML AML
comp=E,2590µm,0.3s
TERO AML AML
comp=E,2400µm,0.3s
TERO AML AML
comp=N,4535µm,0.3s
TERO AML AML
comp=N,3664µm,0.5s
CESI CESI - Serrava 0.32 309 P **Pg** **17 55 30.2 0.0**
CESI S **Sg** **17 55 35.4 +0.8**
CESI AML AML
comp=N,8715µm,0.5s
CESI AML AML
comp=E,4950µm,1.2s
CESI AML AML
comp=E,3583µm,0.5s
OFFI Offida 0.35 68 P **Pb** **17 55 31.9 0.0**
OFFI AML AML
comp=E,2245µm,1.1s
OFFI AML AML
comp=N,4475µm,0.6s
ARRO Arrone 0.42 238 P **Pg** **17 55 32.1 +0.2**
ARRO S **Sb** **17 55 38.7 -0.8**
ARRO AML AML
comp=E,1130µm,0.2s
ARRO AML AML
comp=N,943µm,0.9s
ARRO AML AML
comp=N,944µm,0.9s
ARRO AML AML
comp=E,1380µm,0.8s
ARRO AML AML
comp=N,1016µm,1.1s
ARRO AML AML
comp=E,1021µm,1.9s
GIGS Gran Sasso 0.43 146 ⇑P **Pg** **17 55 32.2 +0.1**
GIGS S **Sg** **17 55 38.5 +0.7**
GIGS AML AML
comp=E,234µm,0.4s
GIGS AML AML
comp=N,185µm,0.5s
GIGS AML AML
comp=N,186µm,0.5s
GIGS AML AML
comp=E,418µm,0.7s
GIGS AML AML
comp=N,320µm,0.8s
TRTR Tortoreto Alta 0.49 89 ⇑P **Pb** **17 55 34.9 +0.5**
TRTR AML AML
comp=E,2110µm,0.5s
TRTR AML AML
comp=N,2380µm,1.4s
TRTR AML AML
comp=N,3080µm,0.9s
TRTR AML AML
comp=E,2690µm,0.4s
ASSB Assisi San Ben 0.49 299 P **Pg** **17 55 33.1 -0.2**
ASSB S **Sb** **17 55 40.9 -0.8**
ASSB AML AML
comp=E,1895µm,0.3s
ASSB AML AML
comp=N,1455µm,0.8s
ASSB AML AML
comp=E,3245µm,1.1s
ASSB AML AML
comp=N,2255µm,1.4s
ASSB AML AML
comp=N,1452µm,0.8s
SNTG Esanatoglia 0.50 334 ⇓P **Pg** **17 55 33.7 +0.2**
SNTG S **Sb** **17 55 42.0 0.0**
SNTG AML AML
comp=E,866µm,0.5s
SNTG AML AML
comp=N,1175µm,0.2s
SNTG AML AML
comp=N,699µm,0.2s
CESX Cesi 0.53 249 P **Pb** **17 55 34.6 -0.3**
CESX S **Sb** **17 55 43.0 +0.4**
EL6 Elcito 0.54 349 ⇓P **Pg** **17 55 34.2 0.0**
EL6 S **Sn** **17 55 45.0 -1.5**
FIAM Fiamignano 0.54 190 ⇓P **Pg** **17 55 34.1 -0.2**
FIAM AML AML
comp=E,698µm,1.5s
FIAM AML AML
comp=N,426µm,0.5s
FIAM AML AML
comp=E,861µm,0.9s
FIAM AML AML
comp=N,712µm,0.6s
FIAM AML AML
comp=E,699µm,1.5s
ATCC AVT- Casa Cast 0.59 311 ⇑P **Pg** **17 55 35.0 -0.1**
ATCC S **Sb** **17 55 45.0 +0.7**
ATCC AML AML
comp=E,1470µm,0.3s
ATCC AML AML
comp=N,1395µm,0.9s
ATCC AML AML
comp=E,2040µm,1.6s
ATCC AML AML
comp=N,1420µm,0.5s
ATCC AML AML
comp=E,1473µm,0.3s
VCEL Villa Celiera 0.60 133 ⇓P **Pb** **17 55 35.6 -0.6**
VCEL S **Sn** **17 55 47.0 -1.0**
VCEL AML AML
comp=E,694µm,0.4s
VCEL AML AML
comp=N,758µm,1.1s
VCEL AML AML
comp=N,1380µm,1.5s
VCEL AML AML
comp=E,1300µm,0.4s
FOSV Fossato di Vic 0.61 324 ⇑P **Pg** **17 55 35.3 -0.2**
FOSV S **Sb** **17 55 45.0 +0.1**
FOSV AML AML
comp=E,1110µm,0.2s
FOSV AML AML
comp=N,2420µm,0.3s
FOSV AML AML
comp=N,3220µm,0.4s
FOSV AML AML
comp=E,1415µm,0.2s
FOSV AML AML
comp=N,2418µm,0.3s
T0110 Collepietro 0.70 146 ⇓P **Pg** **17 55 37.0 -0.2**
T0110 AML AML
comp=E,1034µm,0.5s
T0110 AML AML
comp=N,903µm,0.7s
T0110 AML AML
comp=E,1525µm,0.5s
T0110 AML AML
comp=N,1330µm,0.6s
T0110 AML AML
comp=E,1032µm,0.5s
MURB Monte Urbino 0.70 311 ⇑P **Pg** **17 55 37.1 -0.1**
MURB S **Sn** **17 55 49.0 -1.5**
MURB AML AML
comp=E,1590µm,1.2s
MURB AML AML
comp=N,1650µm,1.0s
MURB AML AML
comp=E,1695µm,0.3s
MURB AML AML
comp=N,1790µm,1.1s
MURB AML AML
comp=N,3610µm,1.0s
MURB AML AML
comp=N,3605µm,0.2s
MURB AML AML
comp=E,4005µm,0.3s
MURB AML AML
comp=E,4440µm,0.3s
MURB AML AML
comp=N,1624µm,0.2s
ARVD Arcevia 0.73 342 ⇓P **Pg** **17 55 37.2 -0.6**
ARVD S **Sn** **17 55 50.0 -1.1**
ARVD AML AML
comp=E,294µm,0.9s
ARVD AML AML
comp=N,207µm,0.3s
ARVD AML AML
comp=N,512µm,1.5s
ARVD AML AML
comp=E,715µm,1.4s
ARVD AML AML
comp=E,266µm,0.3s
ATFO Monte Foce - G 0.75 319 ⇓P **Pg** **17 55 38.0 -0.2**
ATFO AML AML
comp=E,416µm,0.3s
ATFO AML AML
comp=N,335µm,0.3s
ATFO AML AML
comp=N,514µm,1.0s
ATFO AML AML
comp=E,762µm,0.5s
ATFO AML AML
comp=E,384µm,0.2s
ATTE AVT- Monte Tez 0.76 301 ⇓P **Pn** **17 55 40.9 +0.4**
ATTE S **Sn** **17 55 51.0 -1.1**
ATTE AML AML
comp=E,386µm,0.6s
ATTE AML AML
comp=N,292µm,0.3s
ATVO AVT- Monte Val 0.84 313 P **Pg** **17 55 39.4 -0.6**
ATVO AML AML
comp=E,260µm,0.9s
ATVO AML AML
comp=N,305µm,0.5s
ATVO AML AML
comp=E,461µm,0.9s
ATVO AML AML
comp=N,429µm,0.7s
ATMI Monte Miggiano 0.89 307 ⇑P **Pb** **17 55 41.4 +0.2**
ATMI AML AML
comp=E,762µm,0.4s
ATMI AML AML
comp=N,737µm,0.3s
ATMI AML AML
comp=E,1176µm,1.5s
ATMI AML AML
comp=N,1104µm,1.5s
ATPI Pietralunga - 0.90 317 ⇓P **Pg** **17 55 40.5 -0.5**
ATPI S **Sn** **17 55 55.0 -0.2**
ATPI AML AML
comp=E,342µm,1.0s
ATPI AML AML
comp=N,232µm,1.2s
ATPI AML AML
comp=E,460µm,0.8s
ATPI AML AML
comp=N,295µm,0.3s
ATPI AML AML
comp=E,342µm,1.0s
PIEI Pieia 0.90 325 ⇑P **Pg** **17 55 40.5 -0.6**
PIEI AML AML
comp=E,258µm,0.8s
PIEI AML AML
comp=N,208µm,1.0s
PIEI AML AML
comp=E,444µm,0.9s
PIEI AML AML
comp=N,414µm,0.3s
INTR Introdacqua 0.93 148 ⇑P **Pg** **17 55 40.8 -0.8**
INTR AML AML
comp=E,230µm,0.8s
INTR AML AML
comp=N,380µm,0.5s
INTR AML AML
comp=E,322µm,0.7s
FSSB Fossombrone 0.95 339 ⇑P **Pb** **17 55 41.9 -0.3**
FSSB S **Sn** **17 55 58.0 +1.4**
FSSB AML AML
comp=E,1535µm,1.1s
FSSB AML AML
comp=N,1795µm,0.2s
CAFI Castiglion Fio 1.07 300 P **Pb** **17 55 43.9 -0.4**
CAFI AML AML
comp=N,219µm,0.6s
CAFI AML AML
comp=E,218µm,0.9s
CAFI AML AML
comp=N,144µm,0.8s
VIVA Pratoni del Vi 1.11 199 ⇓P **Pn** **17 55 45.8 +0.6**
VIVA AML AML
comp=E,586µm,1.2s
VIVA AML AML
comp=N,585µm,0.5s
RUFI Rufina 1.64 310 P **Pb** **17 55 53.9 0.0**
LMD Lutirano 1.70 319 P **Pb** **17 55 54.7 -0.2**
VENL Venezia Lido 2.69 347 ⇑P **Pn** **17 56 06.4 -0.4**
ABTA Abfaltersbach 3.98 353 *e*Pn **Pn** **17 56 26.5 +1.9**
comp=N,3.6nm,0.4s
FETA Feichten 4.58 338 *e*Pn **Pn** **17 56 34.1 +1.1**
comp=N,8.4nm,0.0s
SQTA Sankt Quirin 4.65 343 *e*Pn **Pn** **17 56 34.3 +0.4**
comp=N,1.1nm,0.2s
WATA Walderalm 4.68 346 *e*Pn **Pn** **17 56 34.5 +0.1**
comp=N,0.6nm,0.2s
MOTA Moosalm 4.79 342 *e*Pn **Pn** **17 56 35.5 -0.4**
comp=N,0.4nm,0.2s
DAVA Damuels 5.08 333 *e*Pn **Pn** **17 56 41.9 +2.1**
comp=N,0.7nm,0.4s

ROM ***24*** *17:56:16.5±0.1, 42°.797N±0°.004×13°.231E±0°.009, h9km, ML2.9/31, Error ellipse: s-maj=0.7km s-min=0.3km az=252.0*
ISC 24 17:56:17.1±0.8, **42°.80N**±0°.02×**13°.23E**±0°.02, **h11**km±6km, **n55**, σ0**99**/78, **17C-17D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.09**	**290**	⇑P	**Pg**	**17 56 19.3**	**-0.5**
NRCA				S	**Sg**	**17 56 21.1**	**-0.6**
NRCA				AML	AML		
	comp=E,40200µm,0.1s						
NRCA				AML	AML		
	comp=N,50100µm,0.1s						
NRCA				AML	AML		
	comp=E,44700µm,0.1s						
NRCA				AML	AML		
	comp=N,50150µm,0.1s						
NRCA				AML	AML		
	comp=N,53900µm,0.1s						
NRCA				AML	AML		
	comp=E,40250µm,0.1s						
FEMA Monte Fema 0.21 321 ⇑P **Pg** **17 56 21.6 0.0**
FEMA S **Sg** **17 56 25.2 +0.5**
FEMA AML AML
comp=E,9660µm,1.4s
FEMA AML AML
comp=N,8935µm,0.4s
FEMA AML AML
comp=E,9665µm,1.4s
FEMA AML AML
comp=N,8920µm,0.4s
LNSS Leonessa 0.24 215 ⇓P **Pg** **17 56 22.1 -0.1**
LNSS S **Sg** **17 56 26.0 +0.4**
LNSS AML AML
comp=E,7685µm,0.5s
LNSS AML AML
comp=N,7230µm,0.7s
LNSS AML AML
comp=E,7690µm,0.5s
LNSS AML AML
comp=N,7235µm,0.7s
FDMO Fiordimonte 0.26 336 ⇑P **Pg** **17 56 22.3 -0.1**
FDMO S **Sg** **17 56 26.6 +0.7**
FDMO AML AML
comp=N,3520µm,0.4s
FDMO AML AML
comp=E,3320µm,1.2s
GUMA Gualdo di Mace 0.27 17 ⇓P **Pg** **17 56 23.0 +0.3**
GUMA S **Sb** **17 56 28.0 -0.7**
GUMA AML AML
comp=E,19400µm,0.3s
GUMA AML AML
comp=N,13600µm,1.5s
GUMA AML AML
comp=N,13400µm,0.4s
GUMA AML AML
comp=E,15400µm,0.3s
CSP1 Cessapalombo 0.29 357 ⇓P **Pg** **17 56 22.9 -0.2**
CSP1 S **Sg** **17 56 27.9 +0.8**
CSP1 AML AML
comp=E,4415µm,0.2s
CSP1 AML AML
comp=N,7135µm,0.6s
CSP1 AML AML
comp=E,4410µm,0.2s
RM33 Pellescritta (0.29 182 ⇓P **Pg** **17 56 22.9 -0.2**
RM33 S **Sb** **17 56 28.3 -1.1**
RM33 AML AML
comp=E,2890µm,0.8s
RM33 AML AML
comp=N,1635µm,0.5s
RM33 AML AML
comp=N,1585µm,0.5s
RM33 AML AML
comp=E,2890µm,0.7s
RM33 AML AML
comp=E,2940µm,0.7s
RM33 AML AML
comp=N,1585µm,0.5s
RM33 AML AML
comp=E,2935µm,0.7s
RM33 AML AML
comp=N,1640µm,0.5s
CAMP Campotosto 0.30 153 P **Pg** **17 56 22.8 -0.4**
CAMP S **Sg** **17 56 27.6 +0.3**
CAMP AML AML
comp=N,1500µm,0.9s
CAMP AML AML
comp=E,1795µm,0.6s
CESI CESI - Serrava 0.31 310 ⇑P **Pg** **17 56 23.4 -0.1**
CESI S **Sb** **17 56 28.7 -1.3**
CESI AML AML
comp=N,8715µm,0.5s
CESI AML AML
comp=E,4950µm,1.2s
CESI AML AML
comp=E,4945µm,1.2s
TERO Teramo 0.33 123 P **Pg** **17 56 23.4 -0.4**
TERO S **Sg** **17 56 28.6 +0.4**
TERO AML AML
comp=E,2405µm,0.3s
TERO AML AML
comp=N,4755µm,0.3s
TERO AML AML
comp=E,2400µm,0.3s
TERO AML AML
comp=E,2590µm,0.3s
TERO AML AML
comp=N,4535µm,0.3s
OFFI Offida 0.36 68 ⇑P **Pb** **17 56 25.0 -0.6**
OFFI AML AML
comp=N,4475µm,0.6s
OFFI AML AML
comp=E,2245µm,1.1s
SEF1 Sefro 0.40 329 ⇑P **Pg** **17 56 25.2 +0.1**
SEF1 AML AML
comp=E,5870µm,1.0s
SEF1 AML AML
comp=N,7230µm,0.2s
SEF1 AML AML
comp=N,7240µm,0.2s
SEF1 AML AML
comp=N,7265µm,0.2s
SEF1 AML AML
comp=E,5875µm,1.0s
ARRO Arrone 0.41 237 P **Pb** **17 56 25.6 -0.7**
SSM1 San Severino M 0.43 355 P **Pg** **17 56 23.2 -2.3**
GIGS Gran Sasso 0.43 144 P **Pg** **17 56 25.5 -0.1**
GIGS AML AML
comp=N,320µm,0.8s
GIGS AML AML
comp=N,320µm,0.8s
GIGS AML AML
comp=E,418µm,0.7s
GAG1 Gagliole 0.45 345 ⇓P **Pg** **17 56 26.2 +0.2**
GAG1 AML AML
comp=N,4825µm,0.5s
GAG1 AML AML
comp=N,4820µm,0.5s
GAG1 AML AML
comp=E,6030µm,1.0s
AQU L'Aquila 0.47 164 P **Pg** **17 56 25.4 -0.8**
AQU AML AML
comp=N,1209µm,0.9s
AQU AML AML
comp=N,1120µm,0.8s
AQU AML AML
comp=N,1206µm,0.9s
AQU AML AML
comp=E,833µm,0.8s
AQU AML AML
comp=E,883µm,0.8s
ASSB Assisi San Ben 0.48 300 ⇑P **Pg** **17 56 26.3 -0.3**
ASSB S **Sb** **17 56 33.9 -0.9**
ASSB AML AML
comp=N,2255µm,1.4s
ASSB AML AML
comp=E,3245µm,1.1s
SNTG Esanatoglia 0.50 335 P **Pg** **17 56 26.6 -0.3**
SNTG S **Sb** **17 56 35.0 -0.3**
SNTG AML AML
comp=N,1175µm,0.2s
SNTG AML AML
comp=E,866µm,0.5s
TRTR Tortoreto Alta 0.50 89 ⇓P **Pb** **17 56 28.1 +0.1**
TRTR AML AML
comp=E,3315µm,0.6s
TRTR AML AML
comp=N,3910µm,1.2s
TRTR AML AML
comp=E,2690µm,0.4s
CESX Cesi 0.52 248 P **Pb** **17 56 27.5 -0.7**
CESX S **Sb** **17 56 36.4 +0.7**
CESX AML AML
comp=N,1250µm,0.5s
CESX AML AML
comp=E,1230µm,1.0s
EL6 Elcito 0.54 350 ⇑P **Pg** **17 56 27.4 -0.2**
EL6 S **Sb** **17 56 37.0 +0.6**
FIAM Fiamignano 0.54 189 ⇓P **Pg** **17 56 27.1 -0.5**
FIAM AML AML
comp=E,862µm,0.9s
FIAM AML AML
comp=N,712µm,0.6s
FIAM AML AML
comp=E,861µm,0.9s
ATCC AVT- Casa Cast 0.58 312 ⇑P **Pg** **17 56 28.1 -0.3**

ATCC				S	**Sb**	**17 56 38.0**	**+0.5**	
ATCC				AML	AML			
	comp=E,2040μm,1.6s							
ATCC				AML	AML			
	comp=N,1420μm,0.5s							
ATCC				AML	AML			
	comp=N,1415μm,0.5s							
FAGN	**Fagnano**	**0.60**	**154**	S	**Sb**	**17 56 39.0**	**+0.9**	
FOSV	**Fossato di Vic**	**0.60**	**325**	⇑P	**Pg**	**17 56 28.5**	**-0.3**	
FOSV				S	**Sb**	**17 56 39.0**	**+0.8**	
FOSV				AML	AML			
	comp=N,3220μm,0.4s							
FOSV				AML	AML			
	comp=E,1415μm,0.2s							
FOSV				AML	AML			
	comp=E,1420μm,0.2s							
VCEL	**Villa Celiera**	**0.61**	**132**	⇑P	**Pg**	**17 56 29.0**	**0.0**	
VCEL				AML	AML			
	comp=E,1305μm,0.4s							
VCEL				AML	AML			
	comp=N,1380μm,1.5s							
VCEL				AML	AML			
	comp=E,1300μm,0.4s							
PP3	**Marolino**	**0.64**	**26**	⇑P	**Pb**	**17 56 30.7**	**+0.4**	
PP3				AML	AML			
	comp=E,3765μm,0.4s							
PP3				AML	AML			
	comp=N,4540μm,0.3s							
PP3				AML	AML			
	comp=N,4535μm,0.3s							
PP3				AML	AML			
	comp=E,4160μm,0.5s							
PP3				AML	AML			
	comp=N,4435μm,0.3s							
MURB	**Monte Urbino**	**0.69**	**312**	⇓P	**Pg**	**17 56 30.2**	**-0.3**	
MURB				S	**Sb**	**17 56 42.0**	**+1.1**	
MURB				AML	AML			
	comp=E,4000μm,0.3s							
MURB				AML	AML			
	comp=N,3610μm,1.0s							
MURB				AML	AML			
	comp=E,4445μm,0.3s							
MURB				AML	AML			
	comp=N,3610μm,0.9s							
MURB				AML	AML			
	comp=N,3605μm,0.2s							
MURB				AML	AML			
	comp=E,4440μm,0.3s							
MURB				AML	AML			
	comp=E,4005μm,0.3s							
MURB				AML	AML			
	comp=E,4000μm,0.2s							
ARVD	**Arcevia**	**0.73**	**343**	⇓P	**Pg**	**17 56 30.8**	**-0.4**	
ARVD				S	**Sb**	**17 56 43.0**	**+1.2**	
ARVD				AML	AML			
	comp=N,512μm,1.5s							
ARVD				AML	AML			
	comp=E,715μm,1.4s							
ATFO	**Monte Foce - G**	**0.74**	**320**	⇓P	**Pg**	**17 56 31.1**	**-0.3**	
ATFO				S	**Sn**	**17 56 44.0**	**-1.0**	
ATFO				AML	AML			
	comp=N,513μm,1.0s							
ATFO				AML	AML			
	comp=E,762μm,0.5s							
ATFO				AML	AML			
	comp=N,514μm,1.0s							
ATFO				AML	AML			
	comp=E,761μm,0.5s							
ATTE	**AVT- Monte Tez**	**0.75**	**302**	⇓P	**Pn**	**17 56 34.0**	**+0.2**	
MGAB	**Montegabbione**	**0.83**	**278**	⇓P	**Pb**	**17 56 33.5**	**-0.1**	
MGAB				AML	AML			
	comp=E,746μm,1.0s							
MGAB				AML	AML			
	comp=N,1062μm,0.3s							
MGAB				AML	AML			
	comp=E,746μm,1.0s							
MGAB				AML	AML			
	comp=N,1060μm,0.3s							
MGAB				AML	AML			
	comp=N,1155μm,1.3s							
MGAB				AML	AML			
	comp=E,780μm,0.9s							
ATVO	**AVT- Monte Val**	**0.84**	**314**	⇓P	**Pg**	**17 56 32.6**	**-0.6**	
ATVO				S	**Sb**	**17 56 46.0**	**+1.0**	
ATVO				AML	AML			
	comp=N,487μm,0.8s							
ATVO				AML	AML			
	comp=E,461μm,0.9s							
CERT	**Cerreto**	**0.87**	**192**	⇓P	**Pb**	**17 56 34.0**	**-0.3**	
CERT				AML	AML			
	comp=N,276μm,1.1s							
CERT				AML	AML			
	comp=E,392μm,0.6s							
ATPI	**Pietralunga -**	**0.89**	**317**	⇓P	**Pg**	**17 56 33.9**	**-0.3**	
ATPI				S	**Sn**	**17 56 48.0**	**-0.5**	
ATPI				AML	AML			
	comp=N,295μm,1.1s							
ATPI				AML	AML			
	comp=N,295μm,0.3s							
ATPI				AML	AML			
	comp=E,460μm,0.8s							
ATPI				AML	AML			
	comp=N,294μm,0.3s							
PIEI	**Pieia**	**0.89**	**326**	⇓P	**Pg**	**17 56 33.8**	**-0.5**	
PIEI				S	**Sn**	**17 56 48.0**	**-0.6**	
PIEI				AML	AML			
	comp=E,444μm,0.9s							
PIEI				AML	AML			
	comp=N,414μm,0.3s							
MPAG	**Monte Paganucc**	**0.90**	**338**	⇑P	**Pb**	**17 56 34.3**	**-0.4**	
MPAG				S	**Sn**	**17 56 49.0**	**+0.3**	
FSSB	**Fossombrone**	**0.95**	**340**	⇑P	**Pg**	**17 56 35.2**	**-0.2**	
FSSB				S	**Sn**	**17 56 51.0**	**+1.0**	
FSSB				AML	AML			
	comp=E,1535μm,1.1s							
FSSB				AML	AML			
	comp=N,1795μm,0.2s							
RCAV	**Rocca di Cave**	**0.98**	**193**	⇑P	**Pb**	**17 56 36.1**	**0.0**	
CAFI	**Castiglion Fio**	**1.06**	**300**	⇑P	**Pg**	**17 56 37.2**	**-0.4**	
CAFI				AML	AML			
	comp=N,219μm,0.6s							
CAFI				AML	AML			
	comp=E,218μm,0.9s							
GIUL	**Giuliano Di Ro**	**1.24**	**179**	P	**Pg**	**17 56 41.6**	**+0.6**	
GIUL				AML	AML			
	comp=N,121μm,0.5s							
GIUL				AML	AML			
	comp=E,110μm,0.6s							
PAOL	**Paolisi**	**2.03**	**150**	P	**Pg**	**17 56 56.7**	**+0.6**	
VENL	**Venezia Lido**	**2.68**	**347**	⇑P	**Pn**	**17 56 58.3**	**-1.9**	
CDRU	**Civita di Ruta**	**2.79**	**145**	P	**Pg**	**17 57 09.5**	**-1.0**	
MNTV	**Mantova**	**2.93**	**324**	⇓P	**Pg**	**17 57 11.6**	**-1.8**	
OBKA	**Obir**	**3.82**	**14**	*e*Pn	**Pn**	**17 57 14.1**	**-1.9**	
	comp=E,3.8nm,0.6s							
ABTA	**Abfaltersbach**	**3.98**	**353**	*e*Pn	**Pn**	**17 57 20.2**	**+2.1**	
SOKA	**Soboth**	**4.08**	**18**	*e*Pn	**Pn**	**17 57 19.5**	**-0.1**	
	comp=E,1.4nm,0.4s							
KBA	**Koelnbreinsper**	**4.28**	**1**	*e*Pn	**Pn**	**17 57 21.3**	**-1.0**	
	comp=E,2.6nm,0.4s							
FETA	**Feichten**	**4.58**	**338**	*e*Pn	Pn	17 57 31.9	+5.5	
	comp=E,0.6nm,0.3s							
WTTA	**Wattenberg**	**4.60**	**346**	*e*Pn	**Pn**	**17 57 28.9**	**+2.1**	
	comp=E,0.6nm,0.2s							
SQTA	**Sankt Quirin**	**4.64**	**343**	*e*Pn	**Pn**	**17 57 31.8**	**+4.5**	
	comp=E,1.4nm,0.2s							
WATA	**Walderalm**	**4.68**	**346**	*e*Pn	**Pn**	**17 57 29.6**	**+1.7**	
	comp=E,1.0nm,0.2s							
CONA	**Conrad Observa**	**5.45**	**19**	*e*Pn	**Pn**	**17 57 37.2**	**-1.1**	
	comp=E,0.5nm,0.3s							

*IDC **24** 17:57:53.6±1.3, 40°.64N×143°.60E, h0km, mb3.6/7, mbtmp3.6/9, ML2.3/2, MS2.9/1, Error ellipse: s-maj=31.7km s-min=23.3km az=78.0*
*NIED **24** 17:57:55.1, 40°.63N×143°.69E, h28km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr2.99; Mϑϑ1.24; Mϕϕ-4.23; Mrϑ1.65; Mϑϕ-1.80; Mϕr1.29; Fault plane solution: M0 4.56000×10^14^ NP1: ϕs168.00000°, δ41.00000°, λ45.00000°. NP2:ϕs41.00000°, δ63.00000°, λ121.00000°.*
*JMA **24** 17:57:55.1±0.2, 40°.6N±0°.6×14°.4E±°, h28km, MV3.6/34, FAR E OFF SANRIKU*
ISC 24 17:57:54.8±3.0, 40°.69N±0°.05×143°.69E±0°.07, h11km±17km, n33, σ1§16/37, mb3.5/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.38**	**343**	P	**Pn**	**17 58 20.1**	**+0.1**
JEM				*e*S	**Sg**	**17 58 38.6**	**-0.7**
JTH	**Tanohata**	**1.58**	**242**	P	**Pn**	**17 58 21.8**	**-0.9**
JTH				*e*S	**Sn**	**17 58 41.7**	**-1.5**
JKEN	**Kujiedanarisaw**	**1.58**	**253**	P	**Pn**	**17 58 21.7**	**-1.0**
JKEN				*e*S	**Sn**	**17 58 40.9**	**-2.2**
JTHR	**Tokachihiroo**	**1.63**	**350**	*e*P	**Pn**	**17 58 23.6**	**+0.3**
JTHR				*e*S	**Sn**	**17 58 44.0**	**-0.3**
JANG	**Nango**	**1.68**	**260**	P	**Pn**	**17 58 23.5**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.74**	**337**	*e*P	**Pn**	**17 58 25.3**	**+0.5**
JCH	**Churui**	**1.94**	**353**	P	**Pn**	**17 58 27.9**	**+0.3**
JCH				*e*S	**Sn**	**17 58 51.4**	**-0.5**
JOT	**Ohata**	**2.11**	**290**	*e*P	**Pn**	**17 58 30.5**	**+0.5**
JOM	**Ohasama**	**2.20**	**237**	P	**Pn**	**17 58 31.3**	**+0.1**
JOM				*e*S	**Sn**	**17 58 57.7**	**-0.7**
JAK	**Akkeshi**	**2.43**	**18**	P	**Pn**	**17 58 34.2**	**-0.1**
JAK				*e*S	**Sn**	**17 59 02.2**	**-1.7**
JMK	**Ichinoseki**	**2.57**	**228**	P	**Pn**	**17 58 36.4**	**0.0**
JAR	**Ashorobuto**	**2.61**	**1**	P	**Pn**	**17 58 36.5**	**-0.3**
JAR				*e*S	**Sn**	**17 59 06.6**	**-1.9**
NEM2	**Nemuro 2**	**3.08**	**29**	P	**Pn**	**17 58 42.9**	**-0.4**
NEM2				S	**Sn**	**17 59 16.7**	**-3.4**
JYK	**Kaneyama**	**3.11**	**236**	P	**Pn**	**17 58 44.2**	**+0.5**
JTKR	**Abashiri--Toko**	**3.28**	**3**	P	**Pn**	**17 58 46.2**	**+0.1**
JTKR				S	**Sn**	**17 59 24.7**	**-0.4**
JRA	**Rausu**	**3.42**	**18**	*e*P	**Pn**	**17 58 48.6**	**+0.7**
JRA				*e*S	**Sn**	**17 59 25.4**	**-3.0**
JOSM	**Okushiri--Mats**	**3.46**	**295**	P	**Pn**	**17 58 49.0**	**+0.4**
MJAR	**Matsushiro Arr**	**5.96**	**228**	Pn	**Pn**	**17 59 23.1**	**+0.2**
	0.1nm,0.3s,baz=34,slow=16,SNR=5.6 1.1nm,0.5s						
USRK	**Ussuriysk Ar.**	**9.33**	**296**	Pn	**Pn**	**18 00 08.2**	**-0.9**
	0.3nm,0.3s,baz=110,slow=12,SNR=2.4 1.8nm,0.6s						
KSRS	**Korea Array**	**12.67**	**260**	LR	LR	18 05 46.2	
	comp=Z,59nm,20.3s,baz=190,slow=37						
SONM	**Songino Array**	**27.44**	**298**	P	**P**	**18 03 41.1**	**+0.5**
	0.6nm,0.7s,baz=79,slow=7.8,SNR=3.7 0.6nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.80**	**130**	T	T	18 33 54.6	
	baz=322,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.81**	**130**	T	T	18 34 18.8	
	baz=322,slow=74,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	**28.82**	**130**	T	T	18 34 14.3	
	baz=322,slow=74,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**29.65**	**131**	T	T	18 35 30.1	
	baz=323						
H11S3	**WAKE ISLAND Hy**	**29.65**	**131**	T	T	18 35 32.7	
	baz=323						
H11S2	**WAKE ISLAND Hy**	**29.67**	**131**	T	T	18 35 58.1	
	baz=323						
ZALV	**Zalesovo Beam**	**40.87**	**309**	P	**P**	**18 05 37.0**	**+0.6**
	1.6nm,0.6s,baz=99,slow=9.2,SNR=7.7 1.6nm,0.6s						
MKAR	**Makanchi Array**	**43.78**	**299**	P	**P**	**18 06 00.5**	**+0.2**
	1.6nm,0.9s,baz=82,slow=9.2,SNR=12 1.6nm,0.9s						
ILAR	**Eielson Array**	**45.47**	**34**	P	**P**	**18 06 15.2**	**+1.7**
	0.3nm,0.8s,baz=254,slow=6.5,SNR=1.9 0.3nm,0.8s						
WRA	**Warramunga Arr**	**60.94**	**190**	P	**P**	**18 08 07.9**	**+0.1**
	0.3nm,0.7s,baz=7.9,slow=6.9,SNR=2.2 0.3nm,0.7s						
ASAR	**Alice Springs**	**64.67**	**190**	P	**P**	**18 08 32.5**	**0.0**
	0.1nm,0.7s,baz=10,slow=7.7,SNR=1.6 0.1nm,0.7s						
FINES	**FINESS Array B**	**66.41**	**332**	P	**P**	**18 08 43.6**	**+0.2**
	1.2nm,0.6s,baz=32,slow=9.0,SNR=4.9 1.2nm,0.6s						

*IDC **24** 17:59:31.2±1.7, 43°.86N×105°.60W, h0km, mb3.8/1, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=58.6km s-min=8.6km az=148.0*
*NEIC **24** 17:59:31.6±2.2, 43°.76N±0°.05×105°.29W±0°.06, h0km±2km, ML3.2/59, Error ellipse: s-maj=9.5km s-min=4.9km az=319.0*
ISC 24 17:59:30.7±0.9, 43°.75N±0°.06×105°.31W±0°.06, h0km, n75, σ1§38/75, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.99**	**68**		**Pg**	**17 59 50.2**	**+0.5**
K22A	**Casper**	**1.41**	**219**		**Pn**	**17 59 57.0**	**-0.8**
K22A				IAML		18 00 23.9	
	comp=E,465nm,0.3s						
PHWY	**Pilot Hill**	**2.45**	**183**		**Pn**	**18 00 13.2**	**+0.9**
PHWY				IAML		18 00 51.4	
	comp=E,91nm,0.3s						
PHWY				IAML		18 00 53.7	
	comp=E,114nm,0.5s						
RWWY	**Rawlins**	**2.49**	**215**		**Pn**	**18 00 14.5**	**+1.8**
N23A	**Red Feather La**	**2.89**	**190**	Pn	**Pn**	**18 00 19.8**	**+1.6**
N23A				IAML		18 01 02.9	
	comp=E,82nm,0.4s						
LAO	**LASA Array**	**3.01**	**348**		**Pn**	**18 00 21.3**	**+1.7**
RLMT	**Red Lodge**	**3.15**	**297**		**Pn**	**18 00 22.6**	**+0.8**
RLMT				IAML		18 01 13.5	
	comp=E,68nm,0.6s						
RLMT				IAML		18 01 14.9	
	comp=E,79nm,0.4s						
BW06	**Boulder Array**	**3.25**	**254**		**Pn**	**18 00 24.3**	**+1.1**
BW06				IAML		18 01 12.4	
	comp=E,60nm,0.4s						
BW06				IAML		18 01 18.0	
	comp=E,55nm,0.6s						
PD31	**Pinedale Array**	**3.25**	**254**		**Pn**	**18 00 24.1**	**+1.0**
PDAR	**Pinedale Array**	**3.25**	**254**	Pn	**Pn**	**18 00 24.7**	**+1.5**
	comp=E,3.5nm,0.3s,baz=70,slow=14,SNR=29						
PDAR				Lg	Lg	18 01 06.9	
	comp=E,8.0nm,0.3s,baz=72,slow=33,SNR=4.5 comp=E,6.3nm,0.3s						
PDAR	**Pinedale Array**	**3.25**	**254**	Pn	**Pn**	**18 00 24.2**	**+1.0**
GCMT	**Greycliff**	**3.71**	**305**		**Pn**	**18 00 30.4**	**+1.0**
OGNE	**Ogallala**	**3.71**	**138**	Pn	**Pn**	**18 00 30.9**	**+1.5**
LOHW	**Long Hollow**	**3.84**	**270**		**Pn**	**18 00 32.5**	**+1.2**
FLWY	**Flagg Ranch**	**3.91**	**277**		**Pn**	**18 00 33.5**	**+1.3**
FLWY				IAML		18 01 41.8	
	comp=E,36nm,1.6s						
FLWY				IAML		18 01 46.8	
	comp=E,24nm,1.5s						
MOOW	**Moose Ponds**	**3.94**	**272**	Pn	**Pn**	**18 00 35.0**	**+2.4**
ISCO	**Idaho Springs**	**3.96**	**183**		**Pn**	**18 00 34.9**	**+2.0**
ISCO				IAML		18 01 40.4	
	comp=E,20nm,0.9s						
YNR	**Norris Junctio**	**3.98**	**286**	Pg	**Pb**	**18 00 42.0**	**+0.3**
YNR				IAML		18 01 51.7	
	comp=E,16nm,0.7s						
YPP	**Pitchstone Pla**	**4.00**	**279**		**Pn**	**18 00 35.2**	**+1.7**
REDW	**Red Top Meadow**	**4.04**	**266**	Pn	**Pn**	**18 00 35.3**	**+1.2**
REDW				IAML		18 01 45.5	
	comp=E,35nm,0.7s						
IMW	**Indian Meadow**	**4.07**	**274**		**Pn**	**18 00 37.0**	**+2.5**
IMW				IAML		18 01 49.1	
	comp=E,33nm,0.6s						
IMW				IAML		18 02 07.7	
	comp=E,23nm,0.7s						
TPAW	**Teton Pass**	**4.10**	**268**		**Pn**	**18 00 35.6**	**+0.7**
TPAW				IAML		18 01 58.0	
	comp=E,22nm,1.2s						
TPAW				IAML		18 02 00.1	
	comp=E,27nm,0.6s						
FXWY	**Fox Creek**	**4.14**	**270**		**Pn**	**18 00 34.1**	**-1.3**
O20A	**White River Ci**	**4.22**	**212**		**Pn**	**18 00 38.1**	**+1.6**
O20A				IAML		18 01 50.7	
	comp=N,28nm,0.7s						
E28A	**Huff**	**4.32**	**48**	Pn	**Pn**	**18 00 37.9**	**+0.3**
AHID	**Auburn Hatcher**	**4.34**	**259**		**Pn**	**18 00 39.4**	**+1.3**
AHID				IAML		18 01 51.8	
	comp=N,32nm,0.7s						
AHID				IAML		18 01 56.4	
	comp=N,32nm,0.6s						
YHL	**Hebgen Lake**	**4.36**	**287**	Pn	**Pn**	**18 00 40.5**	**+2.1**
YHL				IAML		18 02 07.6	
	comp=N,20nm,0.7s						
YHL				IAML		18 02 15.1	
	comp=E,22nm,0.7s						
RDMU	**Red Mountain**	**4.48**	**226**	Pn	**Pn**	**18 00 39.7**	**-0.4**
RDMU				IAML		18 01 57.5	
	comp=E,20nm,1.3s						
RDMU				IAML		18 01 58.5	
	comp=N,24nm,0.8s						
QLMT	**Earthquake Lak**	**4.52**	**286**	Pn	**Pn**	**18 00 40.0**	**-0.6**
DGMT	**Dagmar**	**4.78**	**9**		**Pn**	**18 00 46.0**	**+2.0**
Q24A	**Divide**	**4.79**	**178**	Pn	**Pn**	**18 00 45.7**	**+1.4**
Q24A				IAML		18 02 03.6	
	comp=N,15nm,0.3s						
BOZ	**Bozeman (W)**	**4.87**	**294**	Pn	**Pn**	**18 00 44.5**	**-0.8**
BOZ				IAML		18 02 07.4	
	comp=N,17nm,0.6s						
BOZ				IAML		18 02 08.8	
	comp=N,12nm,0.6s						
HWUT	**Hardware Ranch**	**5.08**	**247**		**Pn**	**18 00 49.2**	**+0.9**
EGMT	**Eagleton**	**5.28**	**326**		**Pn**	**18 00 50.5**	**-0.4**
HRY	**Holter Researc**	**5.47**	**305**	Pn	**Pn**	**18 00 52.8**	**-0.8**
LRM	**Limekiln Ridge**	**5.49**	**295**		**Pn**	**18 00 54.5**	**+0.6**
MCMT	**McKenzie Canyo**	**5.52**	**284**	Pn	**Pn**	**18 00 54.4**	**+0.1**
P18A	**Preston Nutter**	**5.53**	**224**		**Pn**	**18 00 55.7**	**+1.1**
JLU	**Jordanelle**	**5.54**	**237**	Pn	**Pn**	**18 00 53.1**	**-1.6**
PV22	**Blue Mesa, Par**	**5.83**	**208**	Pn	**Pn**	**18 00 56.8**	**-1.8**
HVU	**Hansel Valley**	**5.83**	**253**		**Pn**	**18 00 58.6**	**0.0**
PV07	**Paradox Valley**	**5.88**	**206**		**Pn**	**18 00 59.9**	**+0.7**
PV21	**Cone Mtn., Par**	**5.88**	**209**	Pn	**Pn**	**18 00 58.6**	**-0.7**
P17A	**Butcher Ranch,**	**5.90**	**225**		**Pn**	**18 00 58.9**	**-0.6**
PV15	**Paradox Valley**	**5.91**	**205**		**Pn**	**18 01 00.2**	**+0.5**
PV23	**Carpenter Ridg**	**5.99**	**209**		**Pn**	**18 00 59.4**	**-1.4**
PV04	**Paradox Valley**	**6.00**	**208**	Pn	**Pn**	**18 01 01.3**	**+0.4**
SDCO	**Great Sand Dun**	**6.00**	**181**	Pn	**Pn**	**18 00 58.6**	**-2.4**
MPU	**Maple Canyon**	**6.01**	**234**	Pn	**Pn**	**18 01 00.3**	**-0.8**
PV12	**Saucer Basin,**	**6.04**	**207**	Pn	**Pn**	**18 01 02.6**	**+1.2**
PV14	**Lion Creek, Pa**	**6.06**	**209**	Pn	**Pn**	**18 01 02.9**	**+1.2**
SRU	**San Rafael Swe**	**6.07**	**222**		**Pn**	**18 01 01.9**	**+0.1**
PV20	**West Nyswonger**	**6.07**	**208**	Pn	**Pn**	**18 01 03.1**	**+1.2**
PV11	**David Mesa, Pa**	**6.08**	**207**		**Pn**	**18 01 02.7**	**+0.8**
PV16	**Nyswonger Mesa**	**6.08**	**208**	Pn	**Pn**	**18 01 02.4**	**+0.4**
PV19	**Morning Glory**	**6.10**	**208**	Pn	**Pn**	**18 01 03.8**	**+1.5**
PV03	**Paradox Valley**	**6.11**	**207**	Pn	**Pn**	**18 01 01.8**	**-0.6**
S22A	**4UR Ranch, Cre**	**6.11**	**191**		**Pn**	**18 01 04.1**	**+1.6**
PV02	**Paradox Valley**	**6.11**	**206**	Pn	**Pn**	**18 00 59.1**	**-3.4**
PV17	**East Wray Mesa**	**6.12**	**208**	Pn	**Pn**	**18 01 00.2**	**-2.4**
PV01	**Paradox Valley**	**6.13**	**205**	Pn	**Pn**	**18 01 04.2**	**+1.5**
PV18	**Skein Mesa, Pa**	**6.13**	**208**	Pn	**Pn**	**18 01 02.5**	**-0.3**
PV13	**Radium Mtn., P**	**6.18**	**207**		**Pn**	**18 01 05.0**	**+1.6**
TMUT	**Trail Mountain**	**6.27**	**227**		**Pn**	**18 01 01.8**	**-2.9**
PV05	**Paradox Valley**	**6.35**	**208**	Pn	**Pn**	**18 01 05.6**	**-0.2**
Q16A	**Castle Valley**	**6.54**	**224**	Pn	**Pn**	**18 01 07.3**	**-1.0**
HLID	**Hailey**	**6.61**	**272**	Pn	**Pn**	**18 01 10.9**	**+1.8**
DUG	**Dugway, Tooele**	**6.62**	**240**		**Pn**	**18 01 09.9**	**+0.5**
T25A	**Trinidad**	**6.64**	**174**	Pn	**Pn**	**18 01 11.0**	**+1.2**
MSU	**Marysvale**	**7.36**	**227**	Pn	**Pn**	**18 01 20.1**	**+0.4**
MVU	**Marysvale**	**7.39**	**227**	Pn	**Pn**	**18 01 17.8**	**-2.2**
ELK	**Elko**	**7.95**	**251**	Pn	**Pn**	**18 01 29.6**	**+1.8**
	comp=N,0.5nm,0.3s,baz=76,slow=7.6,SNR=8.7 comp=N,0.8nm,0.3s						
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**18 01 42.5**	**-1.4**
	comp=N,1.6nm,0.3s,baz=236,slow=13,SNR=9.9						
ULM				Lg	Lg	18 04 16.6	
	comp=N,0.3nm,0.3s,baz=130,slow=20,SNR=2.9 comp=N,3.3nm,0.3s						
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**18 02 11.9**	**+0.4**
	comp=N,0.1nm,0.3s,baz=54,slow=11,SNR=3.8 comp=N,0.6nm,0.6s						
MKAR	**Makanchi Array**	**89.59**	**355**	P	**P**	**18 12 29.7**	**-0.4**
	comp=N,0.3nm,0.6s,baz=11,slow=5.2,SNR=4.6 comp=N,0.3nm,0.6s						

*JMA **24** 18:08:49.6±0.2, 24°N±1°×12°2E±°, h45km±4km, MV2.6/9, TAIWAN REGION*
*TAP **24** 18:08:50.5, 24°.46N×121°.92E, h16km, ML3.2, C*
ISC 24 18:08:50.1±0.9, 24°.46N±0°.01×121°.96E±0°.02, h14km±6km, n99, σ0§78/173, 10C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.17**	**264**	P	**Pb**	**18 08 53.3**	**-1.6**
EWUT				S	**Sb**	**18 08 56.2**	**-2.0**
	baz=265						
TWC	**Suao**	**0.18**	**326**	⇑*i*P	**Pg**	**18 08 54.8**	**+0.6**
TWC				*i* S	**Sg**	**18 08 57.4**	**+0.3**
	baz=339						
ENA	**Nanau**	**0.20**	**260**	⇓*i*P	**Pb**	**18 08 54.9**	**-0.7**
ENA				*i* S	**Sb**	**18 08 57.8**	**-1.4**
	baz=259						
EHP	**Heping Village**	**0.25**	**232**	P	**Pg**	**18 08 55.6**	**+0.1**
EHP				S	**Sg**	**18 08 59.5**	**+0.4**
	baz=228						
NDS	**Dongshan**	**0.28**	**308**	P	**Pg**	**18 08 55.6**	**-0.4**
NDS				S	**Sg**	**18 08 59.1**	**-0.8**
	baz=313						
ILA	**Ilan**	**0.36**	**328**	⇑*i*P	**Pb**	**18 08 58.4**	**+0.2**
ILA				*i* S	**Sb**	**18 09 03.5**	**-0.2**
	baz=325						
TWE	**Neicheng**	**0.37**	**314**	⇑*i*P	**Pb**	**18 08 58.2**	**-0.2**
TWE				*i* S	**Sg**	**18 09 03.0**	**+0.4**
	baz=319						
EGS		**0.38**	**356**	⇑*i*P	**Pb**	**18 08 58.7**	**+0.1**
EGS				*e*S	**Sb**	**18 09 04.4**	**+0.1**
	baz=1.0						
ENTT	**Nioudou**	**0.40**	**296**	⇓*i*P	**Pg**	**18 08 57.7**	**-0.4**
ENTT				*i* S	**Sg**	**18 09 02.8**	**-0.7**
	baz=299						
LATG	**Datong**	**0.40**	**280**	⇓*i*P	**Pg**	**18 08 58.5**	**+0.4**
LATG				*i* S	**Sg**	**18 09 03.8**	**+0.2**
	baz=282						
NTC	**Toucheng**	**0.41**	**343**	P	**Pb**	**18 08 59.1**	**0.0**
NTC				S	**Sb**	**18 09 04.7**	**-0.4**
	baz=346						
NDT	**Datong Townshi**	**0.43**	**289**	⇓*i*P	**Pb**	**18 08 59.6**	**+0.2**
NDT				S	**Sg**	**18 09 04.8**	**+0.3**
	baz=291						
ETL	**Fush Village**	**0.43**	**225**	P	**Pg**	**18 08 58.8**	**+0.1**
ETL				S	**Sg**	**18 09 04.8**	**+0.3**
	baz=224						
NACB	**Ninganchiao**	**0.44**	**229**	⇓*i*P	**Pg**	**18 08 58.4**	**-0.5**
NACB				*i* S	**Sg**	**18 09 04.7**	**-0.1**
	baz=228						
FUSB	**Fushanzhiwuyua**	**0.45**	**311**	⇑*i*P	**Pb**	**18 08 59.9**	**+0.1**
FUSB				*i* S	**Sg**	**18 09 05.5**	**+0.4**
	baz=314						
ETLH	**Xiulin Townshi**	**0.50**	**240**	P	**Pg**	**18 08 59.6**	**-0.5**
ETLH				S	**Sg**	**18 09 06.4**	**-0.4**
	baz=240						
TWD	**Chiawan**	**0.51**	**221**	P	**Pg**	**18 08 59.6**	**-0.4**
TW

HWA				*e*S		**Sg**	**18 09 10.6**	**+1.4**
	baz=221								
NSK	**Sanguang**	**0.59**	**291**	⇓*i*P		**Pb**	**18 09 01.1**	**-1.1**
NSK	baz=295			*i* S		**Sg**	**18 09 08.4**	**-1.0**
TWA	**Mucha**	**0.62**	**327**	P		**Pg**	**18 09 03.2**	**+1.1**
TWA	baz=329			S		**Sg**	**18 09 11.0**	**+0.6**
NWF	**Wu-fen Shan**	**0.63**	**345**	⇑*i*P		**Pn**	**18 09 03.5**	**-1.1**
NWF	baz=337			*i* S		**Sg**	**18 09 11.7**	**+1.0**
WFSB	**Wu-fen Shan**	**0.63**	**345**	⇑P		**Pn**	**18 09 03.4**	**-1.1**
WFSB	baz=337			S		**Sg**	**18 09 11.4**	**+0.7**
SXI1	**Grass Mountain**	**0.63**	**353**	⇑*i*P		**Pg**	**18 09 03.5**	**+1.0**
SXI1	baz=359			S		**Sg**	**18 09 11.9**	**+1.0**
NHDH	**Xindian Distri**	**0.63**	**322**	*e*P		**Pn**	**18 09 03.8**	**-0.9**
NHDH	baz=312			*e*S		**Sg**	**18 09 11.7**	**+0.8**
TEYL	**Yanliau Villag**	**0.68**	**209**	*e*P		**Pg**	**18 09 04.3**	**+0.9**
TEYL	baz=217			*e*S		**Sn**	**18 09 15.8**	**+0.1**
FUSS	**Fushou**	**0.69**	**252**	P		**Pb**	**18 09 03.3**	**-0.7**
FUSS	baz=252			S		**Sb**	**18 09 12.4**	**-1.0**
TAP1	**Taipei**	**0.70**	**325**	*e*P		**Pn**	**18 09 06.3**	**+0.8**
TAP1	baz=318			*e*S		**Sg**	**18 09 14.0**	**+1.2**
TNOU	**National Taiwa**	**0.70**	**346**	*e*P		**Pn**	**18 09 04.8**	**-0.8**
TNOU	baz=341			*e*S		**Sg**	**18 09 13.6**	**+0.5**
TAP	**Taipei**	**0.70**	**324**	*e*P		**Pn**	**18 09 05.2**	**-0.4**
TAP	baz=316			*e*S		**Sn**	**18 09 14.5**	**-1.8**
WHF	**Hehuan Shan**	**0.71**	**243**	⇓*i*P		**Pb**	**18 09 03.4**	**-1.0**
WHF	baz=243			S		**Sb**	**18 09 13.1**	**-1.1**
TWT	**Tachien**	**0.74**	**254**	P		**Pb**	**18 09 04.9**	**-0.1**
TWT	baz=248			*e*S		**Sb**	**18 09 14.9**	**-0.1**
TDCB	**Techi**	**0.76**	**254**	⇓*i*P		**Pb**	**18 09 04.8**	**-0.4**
TDCB	baz=248			S		**Sb**	**18 09 14.1**	**-1.3**
YM01	**YM01**	**0.77**	**333**	⇓*i*P		**Pn**	**18 09 06.2**	**-0.3**
YM01	baz=341			*e*S		**Sg**	**18 09 15.7**	**+0.6**
NFF	**Wufeng Townshi**	**0.78**	**283**	*e*P		**Pb**	**18 09 04.8**	**-0.7**
NFF	baz=283			*e*S		**Sb**	**18 09 14.3**	**-1.8**
TWS1	**Kuangyinshan**	**0.80**	**322**	*e*P		**Pn**	**18 09 07.1**	**+0.1**
TWS1	baz=316			*e*S		**Sn**	**18 09 18.2**	**-0.5**
ESL	**Shilin**	**0.81**	**217**	P		**Pb**	**18 09 05.1**	**-0.7**
ESL	baz=222			*e*S		**Sg**	**18 09 17.2**	**+0.9**
CHGB	**Renai**	**0.82**	**241**	P		**Pb**	**18 09 05.7**	**-0.6**
CHGB	baz=248			*e*S		**Sb**	**18 09 15.9**	**-1.4**
ANP	**Anpu**	**0.82**	**331**	P		**Pn**	**18 09 07.2**	**-0.2**
ANP	baz=340			*e*S		**Sn**	**18 09 18.2**	**-1.2**
NTST	**Danshui**	**0.84**	**327**	*e*P		**Pn**	**18 09 07.2**	**-0.2**
NTST	baz=327			*e*S		**Sn**	**18 09 19.8**	**+0.2**
NCU	**National Centr**	**0.86**	**306**	*e*P		**Pn**	**18 09 08.8**	**+1.0**
NCU	baz=307			*e*S		**Sn**	**18 09 20.6**	**+0.3**
NCUH	**Zhongli**	**0.86**	**306**	*e*P		**Pg**	**18 09 07.2**	**+0.4**
NCUH	baz=306			S		**Sn**	**18 09 20.5**	**+0.2**
TWY	**Chenhua**	**0.87**	**338**	P		**Pn**	**18 09 08.3**	**+0.4**
TWY	baz=339			*e*S		**Sg**	**18 09 18.8**	**+0.4**
OWD	**Renai**	**0.88**	**235**	P		**Pb**	**18 09 06.9**	**-0.3**
OWD	baz=242			S		**Sb**	**18 09 18.2**	**-0.6**
LIOB	**Emei**	**0.88**	**282**	*e*P		**Pn**	**18 09 08.3**	**+0.3**
NSTT	**Nanjuang**	**0.89**	**281**	*e*P		**Pb**	**18 09 07.0**	**-0.3**
NSTT	baz=273			S		**Sn**	**18 09 20.0**	**-0.8**
JYNG	**Yonagunijimaku**	**0.90**	**91**	P		**Pb**	**18 09 07.1**	**-0.4**
JYNG				S		**Sb**	**18 09 19.2**	**-0.1**
WUSB	**Renai**	**0.90**	**239**	P		**Pb**	**18 09 07.4**	**-0.2**
WUSB	baz=246			*e*S		**Sb**	**18 09 18.9**	**-0.5**
EGFH	**Guangfu**	**0.93**	**212**	P		**Pb**	**18 09 08.1**	**+0.1**
EGFH	baz=228			*e*S		**Sb**	**18 09 20.7**	**+0.5**
WHP	**Taichung City**	**0.94**	**259**	*e*P		**Pb**	**18 09 07.9**	**-0.3**
WHP	baz=259			S		**Sg**	**18 09 21.4**	**+0.8**
SBCB	**Hsinchu**	**0.94**	**290**	*e*P		**Pn**	**18 09 10.1**	**+1.1**
SBCB	baz=286			*e*S		**Sn**	**18 09 23.5**	**+1.3**
YOJ	**Yonaguni jima**	**0.96**	**90**	*e*P		**Pb**	**18 09 07.8**	**-0.7**
YOJ	**Yonaguni jima**	**0.96**	**90**	P		**Pb**	**18 09 08.1**	**-0.4**
YOJ	baz=89			S		**Sb**	**18 09 21.0**	**0.0**
NHW	**Xinwu Township**	**0.99**	**303**	*e*P		**Pn**	**18 09 09.4**	**-0.2**
NHW	baz=304			*e*S		**Sn**	**18 09 23.4**	**+0.1**
VWDT	**VWDT**	**1.03**	**227**	P		**Pn**	**18 09 10.2**	**+0.1**
VWDT	baz=234			*e*S		**Sn**	**18 09 24.1**	**-0.2**
WCS	**Beigang Elemen**	**1.04**	**247**	*e*P		**Pb**	**18 09 09.2**	**-0.6**
NMLH	**Miaoli**	**1.07**	**274**	*e*P		**Pg**	**18 09 11.4**	**+0.7**
HGSD	**Ruisui**	**1.08**	**207**	*e*P		**Pn**	**18 09 11.2**	**+0.4**
TWQ1	**Liyutan**	**1.09**	**264**	*e*P		**Pg**	**18 09 12.0**	**+1.0**
NSY	**Sanyi**	**1.09**	**268**	*e*P		**Pn**	**18 09 10.9**	**-0.1**
EHY	**Hungye**	**1.12**	**212**	*e*P		**Pn**	**18 09 10.8**	**-0.5**
SMLT	**Sun Moon Lake**	**1.13**	**239**	*e*P		**Pb**	**18 09 11.7**	**+0.2**
SSLB	**Suanglung**	**1.14**	**234**	*e*P		**Pn**	**18 09 11.3**	**-0.3**
PCYT	**Pengchaiyu**	**1.17**	**5**	*e*P		**Pb**	**18 09 11.8**	**-0.2**
YULB	**Yu-li**	**1.23**	**210**	*e*P		**Pn**	**18 09 12.1**	**-0.7**
EYUL	**Yuli**	**1.26**	**208**	*e*P		**Pn**	**18 09 12.9**	**-0.3**
TWF1	**Yuli**	**1.26**	**209**	*e*P		**Pb**	**18 09 13.9**	**+0.3**
TWF1	baz=228			*e*S		**Sg**	**18 09 31.3**	**+0.5**
WJS	**Zhushan**	**1.29**	**241**	*e*P		**Pg**	**18 09 15.7**	**+0.8**
WJS	baz=241			*e*S		**Sg**	**18 09 34.2**	**+2.4**
WNT	**Mingjian**	**1.30**	**244**	*e*P		**Pg**	**18 09 16.2**	**+1.0**
YUS	**Yu-Shan**	**1.34**	**224**	*e*P		**Pn**	**18 09 15.0**	**+0.2**
YUS	baz=227			*e*S		**Sb**	**18 09 33.1**	**+0.7**
FULB	**Fuli**	**1.40**	**206**	*e*P		**Pn**	**18 09 15.7**	**+0.5**
FULB	baz=225			*e*S		**Sg**	**18 09 35.1**	**-0.1**
ALS	**Alishan**	**1.42**	**228**	*e*P		**Pb**	**18 09 16.8**	**+0.3**
WDLH	**Douliu**	**1.51**	**240**	*e*P		**Pg**	**18 09 19.2**	**+0.1**
WDLH	baz=252			*e*S		**Sg**	**18 09 41.0**	**+2.3**
ELDTW	**Lidau**	**1.53**	**214**	*e*P		**Pn**	**18 09 17.0**	**-0.2**
EDH	**Donghe**	**1.60**	**202**	*e*P		**Pn**	**18 09 17.2**	**-0.8**
EDH	baz=192			*e*S		**Sb**	**18 09 40.0**	**+0.5**
WCKO	**Fanlu**	**1.60**	**231**	*e*P		**Pb**	**18 09 20.0**	**+0.5**
IRIF	**Iriomote-Funau**	**1.62**	**94**	P		**Pn**	**18 09 17.5**	**-0.7**
IRIF				S		**Sn**	**18 09 37.4**	**-1.5**
TPUB	**Ta-pu**	**1.68**	**227**	*e*P		**Pb**	**18 09 21.5**	**+0.7**
TPUB	baz=230			*e*S		**Sg**	**18 09 45.0**	**+0.9**
STYH	**Taoyuan**	**1.68**	**220**	*e*P		**Pn**	**18 09 19.6**	**+0.6**
WTP	**Ta-pu**	**1.73**	**226**	P		**Pb**	**18 09 22.2**	**+0.6**
WTP	baz=229			*e*S		**Sg**	**18 09 46.0**	**+0.3**
WSF	**Szhu**	**1.79**	**243**	*e*P		**Pb**	**18 09 22.7**	**+0.1**
WSF	baz=255			*e*S		**Sg**	**18 09 48.2**	**+0.6**
SNST	**Tainan City**	**1.82**	**228**	*e*P		**Pb**	**18 09 24.1**	**+0.9**
SNST	baz=232			*e*S		**Sg**	**18 09 48.6**	**-0.2**
CHN1	**Nanshi**	**1.83**	**226**	*e*P		**Pb**	**18 09 23.6**	**+0.3**
CHN1	baz=231			*e*S		**Sg**	**18 09 48.3**	**-0.6**
LDUT	**Ludao**	**1.84**	**194**	*e*P		**Pn**	**18 09 19.0**	**-2.2**
SGST	**Jiashian**	**1.86**	**223**	*e*P		**Pn**	**18 09 22.8**	**+1.2**
SGST	baz=227			*e*S		**Sb**	**18 09 47.4**	**+0.2**
JKRS	**Kuro-shima**	**1.88**	**96**	P		**Pn**	**18 09 21.7**	**-0.2**
JKRS				S		**Sn**	**18 09 44.4**	**-1.0**
JIJ	**Ishigaki jima**	**1.99**	**92**	P		**Pn**	**18 09 22.8**	**-0.6**
JIJ				S		**Sn**	**18 09 47.0**	**-1.1**
ECL	**Taimali**	**2.07**	**207**	*e*P		**Pn**	**18 09 24.5**	**0.0**
SSD	baz=196 **Sandimen**	**2.10**	**216**	*e*P		**Pb**	**18 09 27.1**	**-0.8**
MASBT	baz=218 **Mashibuluo**	**2.21**	**214**	*e*P		**Pn**	**18 09 27.2**	**+0.9**
EAST	baz=215 **Anshuo**	**2.31**	**206**	*e*P		**Pn**	**18 09 29.6**	**+1.9**
VWUC	baz=197 **VWUC**	**2.34**	**283**	*e*P		**Pn**	**18 09 29.1**	**+1.0**
WDGT	baz=283 **Dungji**	**2.42**	**241**	*e*P		**Pn**	**18 09 30.8**	**+1.5**
JTJ	baz=250 **Tarama**	**2.50**	**85**	P		**Pn**	**18 09 30.6**	**+0.2**
JTJ				S		**Sn**	**18 10 01.0**	**+0.3**

ROM 24 18:37:09.6±0.1, 42°.659N±0'.004×13°.228E±0'.005, h10km, Md1.6/7, 5C-1D, Error ellipse: s-maj=0.4km s-min=0.3km az=225.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.15**	**248**	⇑P	Pg		18 37 13.6	+0.6
LNSS				S	Sg		18 37 16.3	+0.9
LNSS				AML	AML			
	comp=E,1225μm,1.2s							
LNSS				AML	AML			
	comp=N,1640μm,0.6s							
LNSS				AML	AML			
	comp=E,29850μm,0.3s							
LNSS				AML	AML			
	comp=N,22300μm,0.4s							
LNSS				AML	AML			
	comp=E,1086μm,0.6s							
RM33	**Pellescritta (**	**0.15**	**184**	P	Pg		18 37 13.7	+0.7
RM33				S	Sg		18 37 16.5	+1.1
RM33				AML	AML			
	comp=E,1485μm,0.8s							
RM33				AML	AML			
	comp=N,2605μm,0.2s							
RM33				AML	AML			
	comp=E,1525μm,0.8s							
RM33				AML	AML			
	comp=N,2565μm,0.1s							
RM33				AML	AML			
	comp=E,11000μm,0.4s							
RM33				AML	AML			
	comp=N,6900μm,0.9s							
RM33				AML	AML			
	comp=E,10650μm,0.4s							
RM33				AML	AML			
	comp=N,7170μm,0.8s							
RM33				AML	AML			
	comp=E,1478μm,0.0s							
RM33				AML	AML			
	comp=N,2605μm,0.1s							
RM33				AML	AML			
	comp=E,1388μm,0.2s							
RM33				AML	AML			
	comp=N,2562μm,0.1s							
CAMP	**Campotosto**	**0.18**	**133**	P	Pg		18 37 14.3	+0.7
CAMP				AML	AML			
	comp=E,1660μm,0.2s							
CAMP				AML	AML			
	comp=N,1665μm,0.4s							
CAMP				END				
NRCA	**Norcia**	**0.19**	**334**	P	Pg		18 37 14.2	+0.4
NRCA				S	Sg		18 37 17.2	+0.6
NRCA				AML	AML			
	comp=E,3470μm,0.2s							
NRCA				AML	AML			
	comp=N,3760μm,0.1s							
NRCA				AML	AML			
	comp=E,3695μm,0.2s							
NRCA				AML	AML			
	comp=N,4265μm,0.1s							
NRCA				AML	AML			
	comp=E,26850μm,0.2s							
NRCA				AML	AML			
	comp=N,18400μm,0.1s							
NRCA				AML	AML			
	comp=E,28450μm,0.2s							
NRCA				AML	AML			
	comp=N,20050μm,1.1s							
NRCA				AML	AML			
	comp=E,3346μm,0.2s							
NRCA				AML	AML			
	comp=N,4264μm,0.1s							
NRCA				AML	AML			
	comp=E,3697μm,0.2s							
NRCA				AML	AML			
	comp=N,3757μm,0.1s							
NRCA				END				
TERO	**Teramo**	**0.28**	**97**	⇑P	Pg		18 37 15.8	+0.5
TERO				S	Sg		18 37 20.2	+1.2
TERO				AML	AML			
	comp=E,620μm,0.1s							
TERO				AML	AML			
	comp=N,1028μm,0.1s							
TERO				AML	AML			
	comp=E,2235μm,0.4s							
TERO				AML	AML			
	comp=N,3865μm,0.6s							
TERO				AML	AML			
	comp=E,2935μm,0.4s							
TERO				AML	AML			
	comp=N,4710μm,0.1s							
TERO				AML	AML			
	comp=N,975μm,0.0s							
TERO				AML	AML			
	comp=E,521μm,0.1s							
TERO				AML	AML			
	comp=E,620μm,0.1s							
TERO				AML	AML			
	comp=N,823μm,0.1s							
TERO				END				
GIGS	**Gran Sasso**	**0.33**	**130**	⇑P	Pg		18 37 16.7	+0.6
GIGS				S	Sb		18 37 21.7	-1.2
GIGS				AML	AML			
	comp=E,384μm,0.3s							
GIGS				AML	AML			
	comp=N,365μm,0.9s							
GIGS				AML	AML			
	comp=E,67μm,0.3s							
GIGS				AML	AML			
	comp=N,64μm,0.9s							
GIGS				END				
ARRO	**Arrone**	**0.35**	**257**	⇑P	Pg		18 37 16.8	+0.3
ARRO				S	Sg		18 37 22.2	+1.0
ARRO				END				
FDMO	**Fiordimonte**	**0.39**	**345**	P	Pg		18 37 17.6	+0.3
FDMO				S	Sb		18 37 23.8	-0.9
FDMO				AML	AML			
	comp=E,1385μm,0.3s							
FDMO				AML	AML			
	comp=N,1670μm,1.0s							
FDMO				AML	AML			
	comp=N,142μm,0.0s							
FDMO				AML	AML			
	comp=E,194μm,0.4s							
FDMO				END				
FIAM	**Fiamignano**	**0.40**	**192**	P	Pg		18 37 17.8	+0.3
FIAM				S	Sb		18 37 24.0	-1.0
FIAM				AML	AML			
	comp=E,2730μm,0.3s							
FIAM				AML	AML			
	comp=N,1650μm,0.5s							
FIAM				AML	AML			
	comp=E,284μm,0.0s							
FIAM				END				
CESI	**CESI - Serrava**	**0.42**	**326**	P	Pb		18 37 18.5	-0.6
CESI				S	Sb		18 37 25.4	-0.2
CESI				AML	AML			
	comp=E,1276μm,0.2s							
CESI				AML	AML			
	comp=N,2245μm,0.4s							
CESI				AML	AML			
	comp=E,140μm,0.2s							
CSP1	**Cessapalombo**	**0.43**	**358**	P	Pg		18 37 18.5	+0.4
CSP1				S	Sb		18 37 25.3	-0.7
CSP1				AML	AML			
	comp=E,1774μm,0.3s							
CSP1				AML	AML			
	comp=N,1875μm,0.9s							
CESX	**Cesi**	**0.48**	**264**	⇓P	Pg		18 37 19.0	0.0
CESX				S	Sb		18 37 26.8	-0.4
CESX				AML	AML			
	comp=E,1090μm,0.2s							
CESX				AML	AML			
	comp=N,1470μm,1.5s							
LAV9	**Lanuvio**	**1.06**	**202**	⇑P	Pn		18 37 30.9	+0.5
LAV9				AML	AML			
	comp=E,1355μm,1.4s							
LAV9				AML	AML			
	comp=N,1032μm,1.4s							
LAV9				AML	AML			
	comp=E,1305μm,1.4s							
LAV9				AML	AML			
	comp=N,1000μm,1.5s							

ROM 24 18:37:53.5±0.1, 42°.652N±0'.006×13°.226E±0'.009, h10km, ML2.7/28, 18C-6D, Error ellipse: s-maj=0.7km s-min=0.4km az=222.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.14**	**183**	⇑P	Pg		18 37 57.5	+0.7
RM33				S	Sg		18 38 00.3	+1.1
RM33				AML	AML			
	comp=N,6905μm,0.8s							
RM33				AML	AML			
	comp=E,11000μm,0.4s							
RM33				AML	AML			
	comp=E,10650μm,0.4s							
RM33				AML	AML			
	comp=N,7170μm,0.8s							
RM33				AML	AML			
	comp=N,7165μm,0.8s							
RM33				AML	AML			
	comp=N,6900μm,0.8s							
RM33				AML	AML			
	comp=E,11000μm,0.4s							
RM33				AML	AML			
	comp=N,6900μm,0.9s							
RM33				AML	AML			
	comp=E,10950μm,0.4s							
LNSS	**Leonessa**	**0.15**	**250**	⇑P	Pg		18 37 57.5	+0.6
LNSS				S	Sg		18 38 00.4	+1.1
LNSS				AML	AML			
	comp=N,22300μm,0.4s							
LNSS				AML	AML			
	comp=E,29850μm,0.3s							
CAMP	**Campotosto**	**0.18**	**131**	P	Pg		18 37 57.9	+0.5
CAMP				S	Sg		18 38 00.9	+0.8
CAMP				AML	AML			
	comp=E,1660μm,0.2s							
CAMP				AML	AML			
	comp=N,1665μm,0.4s							
NRCA	**Norcia**	**0.20**	**336**	P	Pg		18 37 58.1	+0.3
NRCA				S	Sg		18 38 01.2	+0.5
NRCA				AML	AML			
	comp=E,27050μm,0.1s							
NRCA				AML	AML			
	comp=N,24400μm,1.0s							
NRCA				AML	AML			
	comp=N,26500μm,0.5s							
NRCA				AML	AML			
	comp=E,29350μm,0.1s							
NRCA				AML	AML			
	comp=E,26824μm,0.2s							
NRCA				AML	AML			
	comp=N,19850μm,0.1s							
NRCA				AML	AML			
	comp=N,18409μm,0.1s							
NRCA				AML	AML			
	comp=E,28429μm,0.2s							
TERO	**Teramo**	**0.28**	**96**	P	Pg		18 37 59.3	+0.1
TERO				S	Sg		18 38 03.5	+0.5
TERO				AML	AML			
	comp=E,2230μm,0.4s							
TERO				AML	AML			
	comp=N,3865μm,0.6s							
TERO				AML	AML			
	comp=E,2935μm,0.4s							
TERO				AML	AML			
	comp=N,4710μm,0.1s							
TERO				AML	AML			
	comp=E,2235μm,0.4s							
GIGS	**Gran Sasso**	**0.32**	**128**	P	Pg		18 38 00.3	+0.3
GIGS				S	Sg		18 38 05.2	+0.9
GIGS				AML	AML			
	comp=E,384μm,0.3s							
GIGS				AML	AML			
	comp=N,365μm,0.9s							
GIGS				AML	AML			
	comp=N,364μm,0.9s							
AQU	**L'Aquila**	**0.33**	**156**	⇑P	Pb		18 38 00.9	-0.4
AQU				AML	AML			
	comp=E,1131μm,0.4s							
AQU				AML	AML			
	comp=N,906μm,1.1s							
AQU				AML	AML			
	comp=E,1126μm,0.4s							
AQU				AML	AML			
	comp=E,1129μm,0.4s							
AQU				AML	AML			
	comp=E,1130μm,0.4s							
AQU				AML	AML			
	comp=N,906μm,1.1s							
AQU				AML	AML			
	comp=N,820μm,1.1s							
ARRO	**Arrone**	**0.35**	**258**	⇑P	Pg		18 38 00.8	+0.4
ARRO				S	Sg		18 38 05.7	+0.7
ARRO				AML	AML			

	comp=N,2370µm,0.7s								
ARRO					AML	AML			
	comp=N,2375µm,0.7s								
ARRO					AML	AML			
	comp=E,2500µm,0.7s								
FIAM	**Fiamignano**	**0.39**	**192**		P	Pg	18 38 01.6	+0.3	
FIAM					S	Sb	18 38 07.8	-0.8	
FIAM					AML	AML			
	comp=E,2730µm,0.3s								
FIAM					AML	AML			
	comp=N,1645µm,0.5s								
FIAM					AML	AML			
	comp=N,1650µm,0.5s								
GUMA	**Gualdo di Mace**	**0.42**	**11**	⇑	P	Pg	18 38 02.2	+0.4	
GUMA					S	Sb	18 38 09.0	-0.4	
GUMA					AML	AML			
	comp=E,6760µm,0.3s								
GUMA					AML	AML			
	comp=N,6080µm,0.5s								
GUMA					AML	AML			
	comp=N,5895µm,0.5s								
GUMA					AML	AML			
	comp=E,6755µm,0.3s								
GUMA					AML	AML			
	comp=N,6075µm,0.5s								
GUMA					AML	AML			
	comp=E,9105µm,0.3s								
CESI	**CESI - Serrava**	**0.42**	**326**		P	Pb	18 38 03.2	+0.1	
CESI					AML	AML			
	comp=E,1276µm,0.2s								
CESI					AML	AML			
	comp=E,1276µm,0.2s								
CESI					AML	AML			
	comp=N,2245µm,0.4s								
CESI					AML	AML			
	comp=E,1275µm,0.2s								
CSP1	**Cessapalombo**	**0.44**	**358**	⇓	P	Pg	18 38 02.3	+0.1	
CSP1					AML	AML			
	comp=N,1890µm,0.9s								
CSP1					AML	AML			
	comp=E,1774µm,0.3s								
CSP1					AML	AML			
	comp=N,1875µm,0.9s								
CSP1					AML	AML			
	comp=E,1775µm,0.3s								
CSP1					AML	AML			
	comp=N,1886µm,0.9s								
CESX	**Cesi**	**0.48**	**265**		P	Pg	18 38 02.8	0.0	
VCEL	**Villa Celiera**	**0.52**	**119**		P	Pb	18 38 04.5	-0.3	
VCEL					AML	AML			
	comp=E,1076µm,0.5s								
VCEL					AML	AML			
	comp=E,1078µm,0.5s								
VCEL					AML	AML			
	comp=E,1074µm,0.5s								
VCEL					AML	AML			
	comp=N,1105µm,0.6s								
TRTR	**Tortoreto Alta**	**0.53**	**73**	⇑	P	Pb	18 38 05.0	+0.2	
TRTR					AML	AML			
	comp=N,2085µm,1.0s								
TRTR					AML	AML			
	comp=E,3130µm,0.5s								
ASSB	**Assisi San Ben**	**0.57**	**313**		P	Pg	18 38 04.5	-0.1	
ASSB					AML	AML			
	comp=E,885µm,1.5s								
ASSB					AML	AML			
	comp=N,830µm,0.8s								
T0110	**Collepietro**	**0.59**	**136**	⇓	P	Pg	18 38 05.3	+0.4	
T0110					AML	AML			
	comp=N,804µm,0.7s								
T0110					AML	AML			
	comp=E,917µm,0.5s								
T0110					AML	AML			
	comp=N,803µm,0.7s								
SRES	**S.Oreste - Sor**	**0.67**	**232**		P	Pg	18 38 06.2	-0.3	
SRES					AML	AML			
	comp=N,256µm,0.4s								
SRES					AML	AML			
	comp=E,288µm,0.3s								
EL6	**Elcito**	**0.68**	**352**	⇑	P	Pg	18 38 06.8	0.0	
EL6					S	Sb	18 38 18.0	+1.0	
ATCC	**AVT- Casa Cast**	**0.69**	**321**	⇑	P	Pg	18 38 05.7	-1.0	
ATCC					AML	AML			
	comp=E,618µm,0.2s								
ATCC					AML	AML			
	comp=N,506µm,0.4s								
ATCC					AML	AML			
	comp=N,505µm,0.4s								
ATCC					AML	AML			
	comp=E,617µm,0.2s								
CING	**Cingoli**	**0.72**	**358**	⇑	P	Pg	18 38 07.5	0.0	
CING					AML	AML			
	comp=E,739µm,0.6s								
CING					AML	AML			
	comp=N,706µm,0.5s								
CERT	**Cerreto**	**0.72**	**195**	⇑	P	Pg	18 38 07.0	-0.5	
CERT					AML	AML			
	comp=E,958µm,0.4s								
CERT					AML	AML			
	comp=N,832µm,0.4s								
FOSV	**Fossato di Vic**	**0.73**	**332**		S	Sb	18 38 18.0	-0.3	
PP3	**Marolino**	**0.78**	**21**	⇑	P	Pb	18 38 09.1	+0.1	
PP3					AML	AML			
	comp=E,2225µm,0.7s								
PP3					AML	AML			
	comp=N,1174µm,0.5s								
PP3					AML	AML			
	comp=N,1225µm,0.5s								
PP3					AML	AML			
	comp=N,1174µm,0.5s								
PP3					AML	AML			
	comp=E,2230µm,0.7s								
PP3					AML	AML			
	comp=E,2195µm,0.6s								
GUAR	**Guarcino**	**0.86**	**176**		P	Pn	18 38 13.2	+1.6	
GUAR					AML	AML			
	comp=E,406µm,0.4s								
GUAR					AML	AML			
	comp=N,528µm,0.4s								
MGAB	**Montegabbione**	**0.86**	**288**	⇓	P	Pb	18 38 10.4	0.0	
MGAB					AML	AML			
	comp=E,932µm,1.3s								
MGAB					AML	AML			
	comp=E,957µm,1.3s								
MGAB					AML	AML			
	comp=N,568µm,1.0s								
MGAB					AML	AML			
	comp=N,633µm,0.8s								
MGAB					AML	AML			
	comp=E,934µm,1.3s								
ARVD	**Arcevia**	**0.87**	**346**	⇑	P	Pg	18 38 09.9	-0.3	
ARVD					S	Sn	18 38 24.0	-0.5	
ARVD					AML	AML			
	comp=N,252µm,0.5s								
ARVD					AML	AML			
	comp=N,253µm,0.5s								
ARVD					AML	AML			
	comp=E,256µm,0.5s								
LPEL	**Lama dei Peligi**	**0.93**	**130**		S	Sn	18 38 26.0	0.0	
ATVO	**AVT- Monte Val**	**0.95**	**321**	⇓	P	Pg	18 38 11.4	-0.3	
ATVO					AML	AML			
	comp=N,270µm,0.4s								
ATVO					AML	AML			
	comp=N,270µm,0.4s								
ATVO					AML	AML			
	comp=E,300µm,1.5s								
VIVA	**Pratoni del Vi**	**0.96**	**201**		S	Sg	18 38 24.0	-0.5	
ATMI	**Monte Miggiano**	**0.98**	**314**	⇑	P	Pn	18 38 14.1	+0.9	
ATMI					AML	AML			
	comp=N,774µm,0.9s								
ATMI					AML	AML			
	comp=E,716µm,0.4s								
SACS	**San Casciano d**	**0.99**	**282**	⇑	P	Pb	18 38 12.6	-0.1	
SACS					AML	AML			
	comp=N,328µm,1.0s								
SACS					AML	AML			
	comp=E,326µm,1.2s								
SAMA	**S.Maria delle**	**0.99**	**209**	⇑	P	Pn	18 38 14.2	+0.8	
COR1	**Corinaldo**	**0.99**	**350**	⇓	P	Pn	18 38 13.4	0.0	
ATPI	**Pietralunga -**	**1.00**	**323**	⇑	P	Pg	18 38 11.6	-1.1	
ATPI					AML	AML			
	comp=N,260µm,0.5s								
ATPI					AML	AML			
	comp=E,312µm,0.6s								
TOLF	**Tolfa**	**1.08**	**238**	⇓	P	Pn	18 38 15.0	+0.4	
TOLF					AML	AML			
	comp=N,164µm,1.4s								
TOLF					AML	AML			
	comp=E,146µm,0.7s								
GIUL	**Giuliano Di Ro**	**1.09**	**179**	⇑	P	Pn	18 38 16.6	+1.8	
GIUL					AML	AML			
	comp=E,211µm,0.9s								
GIUL					AML	AML			
	comp=N,212µm,0.5s								
SF01	**Poggio Pratacc**	**1.24**	**278**	⇑	P	Pg	18 38 17.8	+0.6	
SF01					AML	AML			
	comp=E,180µm,1.0s								
SF01					AML	AML			
	comp=N,175µm,0.6s								
ARCI	**Arcidosso**	**1.30**	**279**		P	Pn	18 38 16.5	-1.2	
ARCI					AML	AML			
	comp=E,46µm,0.9s								
ARCI					AML	AML			
	comp=E,46µm,0.9s								
ARCI					AML	AML			
	comp=N,49µm,0.7s								
MSAG	**Monte S. Angel**	**2.20**	**114**		S	Sb	18 38 60.0	-0.8	

*HVO **24** 18:39:24.3±0.8, 19°.22N±0°.04×155°.47W±0°.02, h39km±4km, Md2.7/41, ML2.4/44(NEIC), Error ellipse: s-maj=6.4km s-min=2.0km az=154.0*

NEIC 24 18:39:23.1±0.7, 19°.25N±0°.03×155°.47W±0°.02, h42km±3km, Error ellipse: s-maj=4.6km s-min=1.9km az=171.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.07**	**97**		Pn	18 39 30.3	+0.4
AIN	**Ainahou**	**0.13**	**6**		Pn	18 39 30.8	+0.5
KHU	**Kahuku**	**0.13**	**270**		Pn	18 39 30.6	+0.2
HLP	**Hilina Pali**	**0.16**	**72**		Pn	18 39 30.6	+0.2
SDHHI	**Sand Hill**	**0.22**	**50**		Sn	18 39 36.2	-0.2
SDHHI	**Sand Hill**	**0.22**	**50**		Pn	18 39 31.0	+0.1
SDHHI				IAML		18 39 36.5	
	comp=E,2µm,0.4s						
SDHHI				IAML		18 39 37.1	
	comp=N,2µm,0.1s						
WRMHI	**West Rim**	**0.23**	**46**		Pn	18 39 31.1	+0.1
WRMHI				IAML		18 39 36.7	
	comp=N,928nm,0.5s						
WRMHI				IAML		18 39 36.7	
	comp=E,998nm,0.3s						
RIM	**Rim**	**0.24**	**52**		Pn	18 39 31.1	+0.1
RIM	**Rim**	**0.24**	**52**	IAML		18 39 36.8	
	comp=N,890nm,1.0s						
RIM				IAML		18 39 36.8	
	comp=E,859nm,1.1s						
UWE	**Uwekahuna**	**0.24**	**44**		Pn	18 39 31.2	+0.1
UWE					Sn	18 39 36.4	-0.4
UWE	**Uwekahuna**	**0.24**	**44**	IAML		18 39 36.7	
	comp=N,768nm,0.6s						
UWE				IAML		18 39 37.2	
	comp=E,944nm,0.4s						
NPH	**North Pit**	**0.24**	**48**		Sn	18 39 36.0	-0.7
KKO	**Keanakako`i**	**0.25**	**52**		Sn	18 39 36.1	-0.7
KKO	**Keanakako`i**	**0.25**	**52**		Pn	18 39 31.2	+0.1
KKO				IAML		18 39 38.1	
	comp=E,586nm,1.1s						
KKO	**Keanakako`i**	**0.25**	**52**	IAML		18 39 35.0	
	comp=N,691nm,1.0s						
OBL	**Observatory Le**	**0.25**	**46**		Pn	18 39 31.2	0.0
OBL					Sn	18 39 36.3	-0.5
OBL	**Observatory Le**	**0.25**	**46**	IAML		18 39 36.5	
	comp=E,1µm,0.6s						
OBL				IAML		18 39 37.6	
	comp=N,1µm,0.5s						
UWB	**Uwekahuna B**	**0.26**	**46**		Sn	18 39 35.7	-1.2
UWB	**Uwekahuna B**	**0.26**	**46**		Pn	18 39 30.9	-0.3
UWB	**Uwekahuna B**	**0.26**	**46**	IAML		18 39 35.5	
	comp=E,165nm,0.9s						
UWB	**Uwekahuna B**	**0.26**	**46**	IAML		18 39 36.8	
	comp=N,210nm,0.4s						
BYL	**Byron's Ledge**	**0.26**	**51**		Sn	18 39 36.3	-0.7
BYL	**Byron's Ledge**	**0.26**	**51**		Pn	18 39 31.3	0.0
BYL				IAML		18 39 36.9	
	comp=E,438nm,0.7s						
BYL	**Byron's Ledge**	**0.26**	**51**	IAML		18 39 35.2	
	comp=N,468nm,1.1s						
MLH	**Mauna Loa**	**0.26**	**18**		Pn	18 39 31.8	+0.4
MLH	**Mauna Loa**	**0.26**	**18**		Sn	18 39 37.1	-0.1
MLH	**Mauna Loa**	**0.26**	**18**	IAML		18 39 37.5	
	comp=N,734nm,0.2s						
MLH				IAML		18 39 37.5	
	comp=E,454nm,0.1s						
SBLHI	**Steaming Bluff**	**0.26**	**47**	IAML		18 39 36.5	
	comp=E,442nm,0.8s						
SBLHI				IAML		18 39 36.6	
	comp=N,838nm,0.2s						
SBLHI	**Steaming Bluff**	**0.26**	**47**		Pn	18 39 31.2	-0.1
SBLHI					Sn	18 39 36.2	-0.9
MWH	**Moku'aweowe**	**0.27**	**334**		Pn	18 39 31.7	-0.1
MWH				IAML		18 39 32.5	
	comp=N,378nm,0.1s						
HATHI	**Halema'uma'u T**	**0.27**	**49**		Pn	18 39 31.3	0.0
HATHI					Sn	18 39 36.3	-0.8
HATHI	**Halema'uma'u T**	**0.27**	**49**	IAML		18 39 37.1	
	comp=N,643nm,0.8s						
HATHI				IAML		18 39 38.7	
	comp=E,567nm,0.5s						
PUH	**Pauahi**	**0.27**	**62**		Pn	18 39 31.3	-0.1
PUH				IAML		18 39 36.8	
	comp=E,370nm,0.2s						
PUH				IAML		18 39 38.0	
	comp=N,455nm,0.3s						
RSD	**Rainshed**	**0.28**	**40**		Pn	18 39 31.4	-0.1
MLOA	**Mauna Loa Obse**	**0.30**	**341**		Pn	18 39 32.2	+0.1
MLOA	**Mauna Loa Obse**	**0.30**	**341**	IAML		18 39 38.1	
	comp=N,195nm,0.3s						
MLOA				IAML		18 39 38.1	
	comp=E,216nm,0.9s						
KNHH	**Kane Nui o Ham**	**0.32**	**65**		Pn	18 39 31.8	0.0
KNHH					Sn	18 39 37.4	-0.6
ALEP	**Alea Permanent**	**0.34**	**331**		Pn	18 39 32.2	-0.1
HMH	**Humu'ula Sheep**	**0.35**	**358**		Pn	18 39 33.0	+0.5
HMH	**Humu'ula Sheep**	**0.35**	**358**		Sn	18 39 39.6	+0.6
NPOC	**North of Pu'u**	**0.37**	**67**		Sn	18 39 37.9	-1.1
JCUZ	**Jacuzzi**	**0.38**	**69**		Pn	18 39 32.5	0.0
JCUZ					Sn	18 39 37.5	-1.6
JCUZ	**Jacuzzi**	**0.38**	**69**	IAML		18 39 38.5	
	comp=E,567nm,0.6s						
JCUZ				IAML		18 39 38.5	
	comp=N,476nm,0.3s						
JOKA	**Jonika Flow**	**0.48**	**67**		Pn	18 39 33.4	-0.3
JOKA					Sn	18 39 40.2	-1.0
CPH	**Captain Cook**	**0.48**	**300**		Sn	18 39 40.5	-0.8
POHA	**Pohakuloa**	**0.51**	**354**	Pn	Pn	18 39 34.2	-0.1
KHLU	**Kahalu`u**	**0.53**	**311**		Pn	18 39 34.3	-0.1
KHLU					Sn	18 39 41.6	-0.8
KHLU	**Kahalu`u**	**0.53**	**311**	IAML		18 39 41.8	
	comp=E,361nm,0.3s						
KHLU				IAML		18 39 42.1	
	comp=N,498nm,0.1s						
HUH	**Hualalai**	**0.56**	**322**		Pn	18 39 35.1	+0.2
HUH	**Hualalai**	**0.56**	**322**	IAML		18 39 44.7	
	comp=E,245nm,0.1s						
HPAH	**Hawaii Prepara**	**0.81**	**345**		Sn	18 39 47.6	-1.4

*IPEC **24** 18:39:57.0±0.3, 51°.58N×16°.24E, h1km, ML1.9/4, Error ellipse: s-maj=1.8km s-min=1.5km az=42.0*
*PRU **24** 18:39:58.2±0.0, 51°.51N×16°.09E, h0km*
*VIE **24** 18:39:59.4±1.5, 51°.41N×16°.11E, h0km, mb2.2/3, ml2.4/4, Error ellipse: s-maj=9.0km s-min=8.3km az=21.0 72 km WNW of Wroclaw Suspected Mining induced.*

ISC 24 18:39:57.4±1.2, 51°.55N±0°.06×16°.14E±0°.03, h0km, n27, σ1.9°01/54, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**172**	*e*PG	**Pg**	**18 40 11.5**	**+0.5**
KSP				*e*Sg	**Sg**	**18 40 21.1**	**+0.9**
CHVC	**Chvalec**	**0.96**	**183**	*e*PG	**Pg**	**18 40 16.3**	**+0.5**
OSTC	**Ostas**	**0.99**	**177**	*e*PG	**Pg**	**18 40 16.9**	**+0.5**
OSTC				*e*SG	**Sb**	**18 40 30.2**	**-0.9**
	comp=Z,25nm,0.5s						
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pg**	**18 40 17.6**	**+0.2**
UPC				*e*SG	**Sg**	**18 40 31.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**18 40 20.4**	**0.0**
DPC				*e*SG	**Sg**	**18 40 36.0**	**0.0**
	comp=Z,21nm,0.5s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pn**	**18 40 24.8**	**+0.3**
PVCC				*e*SG	**Sn**	**18 40 43.7**	**-0.2**
	comp=Z,103nm,0.4s						
KRLC	**Kraliky**	**1.53**	**164**	*e*PG	**Pn**	**18 40 25.2**	**-0.8**
KRLC				*e*SG	**Sn**	**18 40 46.7**	**+0.1**
	comp=Z,11nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**245**	Pg	**Pn**	**18 40 26.6**	**+0.5**
BRG				Sg	**Sn**	**18 40 47.0**	**+0.3**
BRG				Amp		18 40 48.5	
	comp=Z,56nm,0.4s						
PRU	**Pruhonice**	**1.86**	**214**	*e*PG	**Pb**	**18 40 32.4**	**+0.2**
PRU				*e*SG	**Sb**	**18 40 56.1**	**+0.1**
	comp=Z,19nm,0.3s						
CLL	**Collm**	**1.98**	**264**	*e*Pg	**Pb**	**18 40 34.0**	**-0.2**
CLL				*ex*	x	18 40 39.0	
CLL				*e*Sg	**Sb**	**18 41 00.0**	**+0.6**
	comp=Z,18nm,0.4s						
MORC	**Moravsky Berou baz=336**	**1.98**	**153**	*e*Pn	**Pn**	**18 40 31.7**	**-0.6**
MORC				*e*Sg	**Sb**	**18 40 59.4**	**-0.3**
	comp=Z,7.1nm,0.2s,baz=336						
MORC	**Moravsky Berou**	**1.98**	**153**	*e*PN	**Pn**	**18 40 31.7**	**-0.6**
MORC				*e*SG	**Sb**	**18 40 59.4**	**-0.3**
VRAC	**Vranov baz=354**	**2.26**	**172**	*e*Pn	**Pn**	**18 40 35.9**	**-0.1**
VRAC				*e*Sg	**Sg**	**18 41 08.7**	**-1.2**
	comp=Z,6.2nm,0.3s,baz=354						
VRAC	**Vranov**	**2.26**	**172**	*e*PN	**Pn**	**18 40 36.0**	**-0.1**
VRAC				*e*SG	**Sg**	**18 41 08.8**	**-1.2**
KRUC	**Moravsky baz=358**	**2.49**	**176**	*e*Pn	**Pn**	**18 40 39.4**	**+0.2**
KRUC	**Moravsky baz=358**	**2.49**	**176**	*e*Pg	**Pb**	**18 40 43.1**	**+0.1**
KRUC				*e*Sg	**Sg**	**18 41 16.0**	**-1.4**
	comp=Z,3.4nm,0.2s,baz=358						
KRUC	**Moravsky**	**2.49**	**176**	*e*PN	**Pn**	**18 40 39.4**	**+0.2**
KRUC				*e*PG	**Pb**	**18 40 43.2**	**+0.2**
KRUC				*e*SG	**Sg**	**18 41 16.0**	**-1.4**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**18 40 48.5**	**-0.1**
OJC				*e*Sg	**Sg**	**18 41 23.6**	**+0.4**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**18 40 44.8**	**-0.3**
KHC				*e*PG	**Pb**	**18 40 51.2**	**+0.8**
KHC				*e*SN	**Sn**	**18 41 19.5**	**-1.4**
KHC				*e*SG	**Sg**	**18 41 29.5**	**-1.7**
	comp=Z,6.9nm,0.4s						
CKRC	**Cesky Krumlov**	**2.97**	**204**	*e*SG	**Sg**	**18 41 30.8**	**-2.0**
	comp=Z,8.0nm,0.5s						
LANS	**Liptovska Anna**	**3.21**	**137**	*e*PG	**Pb**	**18 40 56.4**	**+1.1**
LANS				*e*SN	Sn	18 41 17.8	-10
LANS				*e*SG	**Sg**	**18 41 39.7**	**-0.8**
LANS				*e*LG	Lg	18 41 56.5	
MODS	**Modra-Piesok**	**3.26**	**166**	*e*PG	**Pg**	**18 41 00.4**	**+0.5**
MODS				*e*SG	**Sg**	**18 41 45.1**	**+3.0**
NIE	**Niedzica**	**3.41**	**127**	*e*P	**Pg**	**18 41 02.2**	**-0.5**
NIE				*e*S	**Sg**	**18 41 46.1**	**-0.7**
VYHS	**Vyhne**	**3.52**	**149**	*e*PG	**Pg**	**18 41 05.2**	**+0.4**
VYHS				*e*SN	Sn	18 41 25.0	-11
VYHS				*e*SG	**Sg**	**18 41 52.1**	**+1.8**
CONA	**Conrad Observa**	**3.62**	**183**	*e*Pn	**Pn**	**18 40 53.8**	**-1.1**
	comp=Z,0.3nm,0.2s						
CONA				*e*Sg	**Sg**	**18 41 52.9**	**-0.9**
	comp=Z,5.1nm,0.6s						
MOA	**Molln**	**3.89**	**199**	*e*Pn	**Pn**	**18 40 58.8**	**+0.3**
	comp=Z,2.2nm,0.3s						
MOA				*e*Sg	**Sg**	**18 42 02.6**	**+0.2**
	comp=Z,2.9nm,0.4s						
ARSA	**Arzberg**	**4.32**	**186**	*e*Pn	**Pn**	**18 41 03.3**	**-1.0**
	comp=Z,1.4nm,0.4s						
ARSA				*e*Sg	**Sg**	**18 42 19.4**	**+3.3**
	comp=Z,4.7nm,0.7s						

*PRU **24** 18:42:30.8±0.0, 42°.72N×13°.74E, h11km*
*IDC **24** 18:42:30.2±5.5, 42°.88N×13°.26E, h0km, mb3.2/2, mbtmp3.2/3, ML3.0/1, MS2.2/1, Error ellipse: s-maj=111.0km s-min=27.4km az=73.0*
*ROM **24** 18:42:30.1±0.1, 42°.776N±0°.003×13°.166E±0°.005, h10km, ML3.1/60, Error ellipse: s-maj=0.4km s-min=0.1km az=259.0*

ISC 24 18:42:30.6±0.8, 42°.77N±0°.02×13°.16E±0°.02, h12km±5km, n119, σ1.3°33/139, 40C-23D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**331**	⇑	**Pg**	**18 42 32.8**	**-0.5**
NRCA				S	**Sg**	**18 42 34.2**	**-1.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
LNSS	**Leonessa**	**0.19**	**208**	⇑	**Pg**	**18 42 35.0**	**+0.1**
LNSS				S	**Sg**	**18 42 38.6**	**+0.8**
LNSS				AML	AML		
	comp=E,60600µm,0.3s						
LNSS				AML	AML		
	comp=N,37850µm,0.3s						
FEMA	**Monte Fema**	**0.21**	**337**	⇑	**Pg**	**18 42 35.0**	**-0.2**
FEMA				S	**Sg**	**18 42 38.5**	**+0.1**
FEMA				AML	AML		
	comp=N,9970µm,0.4s						
FEMA				AML	AML		
	comp=N,9990µm,0.4s						
FEMA				AML	AML		
	comp=E,14950µm,1.2s						
RM33	**Pellescritta (**	**0.26**	**172**	⇑	**Pg**	**18 42 36.3**	**+0.1**
RM33				S	**Sb**	**18 42 41.0**	**-1.0**
RM33				AML	AML		
	comp=N,5840µm,0.2s						
RM33				AML	AML		
	comp=N,6040µm,0.2s						
RM33				AML	AML		
	comp=N,5845µm,0.2s						
RM33				AML	AML		
	comp=E,6960µm,0.9s						
RM33				AML	AML		
	comp=N,6035µm,0.2s						
RM33				AML	AML		
	comp=E,6800µm,1.5s						
FDMO	**Fiordimonte**	**0.27**	**348**	⇑	**Pg**	**18 42 36.0**	**-0.3**
FDMO				S	**Sg**	**18 42 40.4**	**+0.3**
FDMO				AML	AML		
	comp=E,5450µm,0.5s						
FDMO				AML	AML		
	comp=N,6075µm,0.3s						
CAMP	**Campotosto**	**0.30**	**142**	⇑	**Pg**	**18 42 36.6**	**-0.1**
CAMP				S	**Sb**	**18 42 41.5**	**-1.4**
CAMP				AML	AML		
	comp=E,4830µm,0.3s						
CAMP				AML	AML		
	comp=N,4330µm,0.6s						
CESI	**CESI - Serrava**	**0.30**	**321**	⇑	**Pg**	**18 42 36.7**	**-0.2**
CESI				S	**Sb**	**18 42 41.5**	**-1.6**
CESI				AML	AML		
	comp=E,9925µm,0.6s						
CESI				AML	AML		
	comp=E,9930µm,0.6s						
CESI				AML	AML		
	comp=N,14200µm,0.3s						
CSP1	**Cessapalombo**	**0.32**	**6**	⇑	**Pg**	**18 42 37.0**	**-0.3**
CSP1				S	**Sb**	**18 42 42.1**	**-1.6**
CSP1				AML	AML		
	comp=E,7615µm,0.8s						
CSP1				AML	AML		
	comp=N,14650µm,0.4s						
ARRO	**Arrone**	**0.35**	**237**	⇑	**Pg**	**18 42 37.7**	**0.0**
ARRO				AML	AML		
	comp=N,3875µm,0.6s						
ARRO				AML	AML		
	comp=E,3210µm,0.2s						
ARRO				AML	AML		
	comp=N,3880µm,0.6s						
TERO	**Teramo**	**0.36**	**114**	⇑	**Pg**	**18 42 37.5**	**-0.3**
TERO				S	**Sg**	**18 42 43.1**	**+0.4**
TERO				AML	AML		
	comp=N,7970µm,0.6s						
TERO				AML	AML		
	comp=N,7510µm,0.6s						
TERO				AML	AML		
	comp=E,6815µm,1.1s						
TERO				AML	AML		
	comp=E,5950µm,1.1s						
SEF1	**Sefro**	**0.41**	**337**	⇑	**Pg**	**18 42 38.5**	**-0.3**

SEF1 S **Sb** 18 42 45.0 -1.0
SEF1 AML AML
comp=N,6300µm,0.8s
SEF1 AML AML
comp=E,5260µm,0.7s
OFFI Offida 0.42 67 ⇑P **Pb** 18 42 39.5 -0.5
OFFI AML AML
comp=N,8570µm,1.1s
OFFI AML AML
comp=E,8450µm,0.9s
MNTP Montappone 0.43 31 P **Pb** 18 42 39.6 -0.6
MNTP AML AML
comp=E,11650µm,0.3s
MNTP AML AML
comp=N,8900µm,0.4s
GIGS Gran Sasso 0.44 137 P **Pg** 18 42 38.8 -0.5
GIGS S **Sg** 18 42 45.4 +0.2
GIGS AML AML
comp=N,1112µm,0.4s
GIGS AML AML
comp=E,1110µm,0.7s
FIU1 Fiuminata 0.45 338 P **Pg** 18 42 39.4 -0.2
FIU1 S **Sb** 18 42 46.1 -1.2
AQU L'Aquila 0.45 157 ⇑P **Pg** 18 42 39.4 -0.2
AQU AML AML
comp=E,2860µm,0.7s
AQU AML AML
comp=N,2970µm,1.4s
AQU AML AML
comp=E,2690µm,0.7s
AQU AML AML
comp=N,2905µm,1.4s
CESX Cesi 0.46 250 ⇑P **Pg** 18 42 39.4 -0.3
CESX S **Sb** 18 42 46.7 -0.7
CESX AML AML
comp=E,3680µm,0.8s
CESX AML AML
comp=N,3340µm,0.3s
SSM1 San Severino M 0.46 1 ⇑P **Pg** 18 42 39.4 -0.3
ASSB Assisi San Ben 0.46 307 ⇑P **Pg** 18 42 39.3 -0.4
ASSB S **Sb** 18 42 46.5 -1.1
ASSB AML AML
comp=N,3130µm,0.5s
ASSB AML AML
comp=E,4110µm,0.4s
GAG1 Gagliole 0.47 352 ⇓P **Pg** 18 42 39.7 -0.3
GAG1 AML AML
comp=N,6180µm,0.4s
GAG1 AML AML
comp=E,8225µm,0.3s
GAG1 AML AML
comp=N,6175µm,0.4s
FIAM Fiamignano 0.50 184 ⇑P **Pg** 18 42 40.2 -0.3
FIAM S **Sb** 18 42 48.0 -0.8
FIAM AML AML
comp=E,2195µm,0.7s
FIAM AML AML
comp=N,1975µm,0.4s
SNTG Esanatoglia 0.51 342 ⇑P **Pg** 18 42 40.1 -0.6
SNTG S **Sb** 18 42 49.0 0.0
SNTG AML AML
comp=N,1830µm,0.5s
SNTG AML AML
comp=E,208µm,0.9s
SNTG AML AML
comp=N,284µm,1.4s
SNTG AML AML
comp=E,1395µm,0.5s
TRTR Tortoreto Alta 0.55 86 ⇑P **Pb** 18 42 42.3 0.0
TRTR AML AML
comp=N,7790µm,0.5s
TRTR AML AML
comp=E,7870µm,1.0s
EL6 Elcito 0.56 355 ⇑P **Pg** 18 42 41.0 -0.6
EL6 S **Sb** 18 42 51.0 +0.5
EL6 AML AML
comp=E,2955µm,0.3s
EL6 AML AML
comp=N,4010µm,0.3s
ATCC AVT- Casa Cast 0.56 317 ⇑P **Pg** 18 42 41.3 -0.4
FAGN Fagnano 0.59 148 P **Pg** 18 42 41.0 -1.2
FAGN AML AML
comp=N,3215µm,0.4s
FAGN AML AML
comp=E,4150µm,0.4s
FOSV Fossato di Vic 0.60 331 ⇑P **Pg** 18 42 41.9 -0.5
FOSV AML AML
comp=E,1680µm,0.5s
FOSV AML AML
comp=N,2050µm,0.4s
CING Cingoli 0.61 2 ⇑P **Pg** 18 42 41.9 -0.6
CING AML AML
comp=N,1800µm,0.2s
CING AML AML
comp=E,1935µm,0.4s
MURB Monte Urbino 0.68 317 P **Pg** 18 42 43.5 -0.4
MURB AML AML
comp=E,3470µm,0.4s
MURB AML AML
comp=N,5370µm,0.2s
MURB AML AML
comp=E,3810µm,0.3s
MURB AML AML
comp=N,5315µm,0.3s
PP3 Marolino 0.69 28 ⇑P **Pb** 18 42 44.1 -0.5
PP3 AML AML
comp=E,9350µm,0.4s
PP3 AML AML
comp=E,9340µm,0.4s
PP3 AML AML
comp=N,9550µm,0.3s
PP3 AML AML
comp=N,10355µm,0.4s
T0110 Collepietro 0.71 140 ⇓P **Pg** 18 42 41.4 -3.0
SRES S.Oreste - Sor 0.72 222 ⇓P **Pg** 18 42 44.3 -0.2
SRES AML AML
comp=N,788µm,0.7s
SRES AML AML
comp=E,1175µm,0.6s
ATTE AVT- Monte Tez 0.73 306 ⇑P **Pb** 18 42 44.8 -0.6
ATTE AML AML
comp=N,1090µm,0.5s
ATTE AML AML
comp=E,1445µm,0.5s
ATFO Monte Foce - G 0.74 324 ⇓P **Pg** 18 42 44.5 -0.5
ATFO AML AML
comp=N,1235µm,0.9s
ATFO AML AML
comp=E,1205µm,0.5s
ARVD Arcevia 0.75 348 ⇓P **Pg** 18 42 44.4 -0.7
ARVD S **Sb** 18 42 56.0 +0.2
ARVD AML AML
comp=E,1108µm,0.5s
ARVD AML AML
comp=N,731µm,0.6s
MGAB Montegabbione 0.79 281 ⇑P **Pb** 18 42 45.9 -0.4
MGAB AML AML
comp=N,2800µm,0.6s
MGAB AML AML
comp=N,2795µm,0.6s
MGAB AML AML
comp=N,2545µm,0.5s
MGAB AML AML
comp=E,3075µm,0.5s
MGAB AML AML
comp=E,3720µm,0.5s
MTCE Montecelio 0.81 203 ⇓P **Pg** 18 42 45.5 -0.8
MTCE AML AML
comp=E,1370µm,0.7s
MTCE AML AML
comp=N,823µm,1.2s
FRON Frontone 0.81 337 S **Sn** 18 42 59.0 -1.0
ATVO AVT- Monte Val 0.82 318 ⇑P **Pg** 18 42 45.8 -0.9
ATVO AML AML
comp=E,973µm,1.3s
ATVO AML AML
comp=N,915µm,0.4s
AOI Ancona 0.84 22 ⇑P **Pb** 18 42 47.0 -0.3
AOI AML AML
comp=E,1650µm,0.3s
AOI AML AML
comp=N,1740µm,0.4s
ATMI Monte Miggiano 0.86 311 P **Pg** 18 42 47.0 -0.4
ATMI AML AML
comp=E,2015µm,0.6s
ATMI AML AML
comp=N,3355µm,0.7s
COR1 Corinaldo 0.87 352 P **Pb** 18 42 47.5 -0.2
COR1 AML AML
comp=E,1485µm,0.5s
COR1 AML AML
comp=N,3035µm,0.6s
ATPI Pietralunga - 0.88 321 ⇓P **Pg** 18 42 47.2 -0.4
ATPI AML AML
comp=E,976µm,0.5s
ATPI AML AML
comp=N,905µm,0.5s
PIEI Pieia 0.89 329 P **Pg** 18 42 47.2 -0.7
PIEI S **Sn** 18 43 01.0 -1.0
PIEI AML AML
comp=N,962µm,0.4s
PIEI AML AML
comp=E,753µm,0.4s
MPAG Monte Paganucc 0.91 341 ⇓P **Pg** 18 42 47.4 -0.8
MPAG S **Sn** 18 43 03.0 +0.6
MPAG AML AML
comp=E,872µm,1.0s
MPAG AML AML
comp=N,1055µm,0.7s
SACS San Casciano d 0.93 275 ⇓P **Pb** 18 42 48.3 -0.4
SACS AML AML
comp=N,1082µm,1.2s
SACS AML AML
comp=E,1085µm,1.0s
SACS AML AML
comp=E,1100µm,0.9s
SACS AML AML
comp=N,1108µm,1.2s
INTR Introdacqua 0.94 144 ⇑P **Pg** 18 42 47.4 -1.3
INTR AML AML
comp=E,1µm,1.4s
INTR AML AML
comp=N,1µm,0.6s
INTR AML AML
comp=E,1054µm,1.4s
INTR AML AML
comp=N,1960µm,1.0s
FSSB Fossombrone 0.96 343 ⇓P **Pg** 18 42 48.5 -0.8
FSSB S **Sn** 18 43 04.0 +0.3
FSSB AML AML
comp=E,3005µm,0.5s
FSSB AML AML
comp=N,3335µm,0.4s
BADI Badiali 1.00 318 ⇓P **Pb** 18 42 49.7 -0.2
CAFI Castiglion Fio 1.04 303 P **Pg** 18 42 49.9 -0.8
CAFI AML AML
comp=E,732µm,0.7s
CAFI AML AML
comp=N,946µm,0.9s
LPEL Lama dei Pelig 1.05 133 ⇓P **Pg** 18 42 50.1 -0.7
LPEL S **Sn** 18 43 05.0 -0.8
LPEL AML AML
comp=E,854µm,0.5s
LPEL AML AML
comp=N,837µm,0.7s
SF04 Casetta 1.11 274 P **Pn** 18 42 51.9 -0.2
PARC Parchiule 1.11 323 P **Pb** 18 42 50.9 -0.9
PARC AML AML
comp=E,698µm,0.5s
PARC AML AML
comp=N,840µm,0.7s
TOLF Tolfa 1.11 231 P **Pb** 18 42 51.1 -0.7
TOLF AML AML
comp=E,674µm,0.5s
TOLF AML AML
comp=N,498µm,0.4s
SF01 Poggio Pratacc 1.18 273 ⇓P **Pg** 18 42 54.0 +0.7
GIUL Giuliano Di Ro 1.21 177 ⇑P **Pg** 18 42 54.8 +0.8
GIUL AML AML
comp=E,604µm,0.6s
GIUL AML AML
comp=N,434µm,1.5s
CRE Caprese Michel 1.23 314 P **Pg** 18 42 54.7 +0.5
CRE AML AML
comp=N,408µm,0.5s
CRE AML AML
comp=E,292µm,1.2s
ARCI Arcidosso 1.24 274 ⇓P **Pg** 18 42 55.2 +0.6
ARCI AML AML
comp=E,192µm,1.0s
ARCI AML AML
comp=N,137µm,0.6s
TRIV Trivento 1.44 134 ⇑P **Pg** 18 42 58.3 +0.1
TRIV AML AML
comp=E,464µm,1.1s
TRIV AML AML
comp=N,406µm,0.9s
CSNT Castellina Chi 1.54 298 ⇑P **Pb** 18 42 58.7 -0.4
CSNT AML AML
comp=N,142µm,0.6s
CSNT AML AML
comp=E,128µm,0.7s
OSSC Osservatorio P 1.59 299 ⇓P **Pb** 18 42 59.7 -0.3
OSSC AML AML
comp=E,121µm,0.6s
OSSC AML AML
comp=N,226µm,0.8s
RUFI Rufina 1.61 312 ⇓P **Pb** 18 42 59.4 -0.9
CASP Castiglione de 1.69 271 ⇑P **Pn** 18 43 00.0 0.0
CASP AML AML
comp=N,94µm,1.2s
CASP AML AML
comp=E,98µm,0.7s
MELA Melanico ??? S 1.81 125 ⇑P **Pb** 18 43 03.2 -0.4
MELA AML AML
comp=E,508µm,0.6s
MELA AML AML
comp=N,926µm,0.6s
MELA AML AML
comp=N,888µm,0.5s
MELA AML AML
comp=E,475µm,0.6s
DUGI Dugi Otok 1.84 48 *e*Pn **Pn** 18 43 02.4 +0.3
MTRZ Monterenzio 2.02 323 P **Pg** 18 43 09.1 -0.4
VIRC Vir 2.05 41 *e*Pn **Pn** 18 43 05.0 +0.1
MORI Morici 2.16 59 *e*Pn **Pn** 18 43 06.9 +0.5
SGRT San Giovanni R 2.17 117 ⇓P **Pb** 18 43 08.1 -1.8
SGRT AML AML
comp=E,248µm,0.4s
SGRT AML AML
comp=N,253µm,0.8s
NVLJ Novalja 2.18 34 *e*Pn **Pn** 18 43 06.4 -0.3
RABC Rab 2.30 30 *e*Pn **Pn** 18 43 08.8 +0.4
SMRN Sveta Marina 2.38 17 *e*Pn **Pn** 18 43 09.2 -0.2
UDBI Udbina 2.58 46 *e*Pn **Pn** 18 43 13.9 +1.6
KIJV Kijevo 2.67 61 *e*Pn **Pn** 18 43 14.2 +0.8
NDIM Novi di Modena 2.68 323 S **Sg** 18 43 56.0 -0.6
LSTV Lastovo 2.75 89 *e*Pn **Pn** 18 43 14.7 +0.2
PLIT Plitvice 2.76 39 *e*Pn **Pn** 18 43 15.1 +0.4
BOJS Bojanci 3.12 28 S **Sn** 18 43 59.0 +2.2
CGRP Cima Grappa 3.26 343 ⇓P **Pn** 18 43 23.3 +1.6
CGRP AML AML
comp=E,156µm,0.4s
CGRP AML AML
comp=N,134µm,0.8s
OZLJ Ozalj 3.29 29 *e*Pn **Pn** 18 43 22.6 +0.6
STON Ston 3.34 87 *e*Pn **Pn** 18 43 22.2 -0.5
DOSS Dosso del Somm 3.42 336 ⇑P **Pn** 18 43 26.3 +2.4
SALO Salr 3.42 327 ⇑P **Pn** 18 43 26.1 +2.3
MAGA Magasa 3.51 330 P **Pn** 18 43 26.0 +0.8
MAGA AML AML
comp=E,227µm,0.5s
MAGA AML AML
comp=N,170µm,0.4s
LUSI Trento, Gardas 3.56 334 ⇑P **Pn** 18 43 27.5 +1.7
CIMO Cimolais 3.58 352 ⇓P **Pn** 18 43 27.0 +1.0
CIMO AML AML
comp=E,27µm,1.3s
CIMO AML AML
comp=N,31µm,0.6s
ZAG Zagreb 3.67 33 P **Pn** 18 43 28.7 +1.6
GAGG Gaggia 3.67 335 ⇓P **Pn** 18 43 29.9 +2.5
SALB San Lorenzo Be 3.75 139 S **Sb** 18 44 25.0 +2.6
ZOU Zoufplan 3.79 358 ⇑P **Pn** 18 43 29.9 +0.8
ZOU AML AML
comp=E,72µm,0.8s
ZOU AML AML
comp=E,103µm,1.2s
ZOU AML AML
comp=N,103µm,0.8s
ZOU AML AML
comp=N,60µm,1.4s
CANO Canova, Maglio 3.86 294 S **Sg** 18 44 30.0 -4.6
OBKA Obir 3.87 14 *e*Pn **Pn** 18 43 31.1 +1.1
comp=N,0.6nm,0.2s
MYKA Terra Mystica 3.88 5 *e*Pn **Pn** 18 43 31.2 +1.1
comp=N,2.2nm,0.4s
KOSI Kohlern 3.91 342 ⇓P **Pn** 18 43 32.4 +1.8
ABTA Abfaltersbach 4.00 354 *e*Pn **Pn** 18 43 33.3 +1.4
comp=N,3.8nm,0.5s
SOKA Soboth 4.13 18 *e*Pn **Pn** 18 43 36.5 +2.9
comp=N,0.4nm,0.2s
SPS2 Spezzano della 4.22 144 ⇓P **Pb** 18 43 46.4 +1.6
KBA Koelnbreinsper 4.31 2 *e*Pn **Pn** 18 43 37.8 +1.6
comp=N,1.8nm,0.3s
VSL Villasalto 4.34 222 ⇑P **Pn** 18 43 38.4 +2.0
ENR Entracque 4.42 291 ⇑P **Pb** 18 43 49.5 +1.2
FETA Feichten 4.59 339 *e*Pn **Pn** 18 43 42.3 +2.3
comp=N,0.4nm,0.2s
WTTA Wattenberg 4.62 347 *e*Pn **Pn** 18 43 43.4 +2.9
comp=N,0.8nm,0.2s
SQTA Sankt Quirin 4.66 343 *e*Pn **Pn** 18 43 44.1 +3.2
comp=N,3.0nm,0.3s
WATA Walderalm 4.70 347 *e*Pn **Pn** 18 43 44.5 +2.9
comp=N,1.3nm,0.2s
ARSA Arzberg 4.78 20 *e*Pn **Pn** 18 43 44.7 +2.2
comp=N,0.1nm,0.1s
MOTA Moosalm 4.80 343 *e*Pn Pn 18 43 47.4 +4.5
comp=N,1.2nm,0.3s
BIOA Bad Ischl, Aus 4.93 4 *e*Pn **Pn** 18 43 47.6 +3.1
comp=N,3.2nm,0.3s
DAVA Damuels 5.08 334 *e*Pn Pn 18 43 51.9 +5.2
comp=N,1.0nm,0.2s
MOA Molln 5.14 8 *e*Pn **Pn** 18 43 49.2 +1.8
comp=N,0.2nm,0.1s
BNI Bardonecchia 5.21 298 ⇓P Pn 18 43 54.3 +5.8
RONA Rosalia, Austr 5.40 23 *e*Pn **Pn** 18 43 54.5 +3.5
comp=N,0.5nm,0.1s
CONA Conrad Observa 5.50 19 *e*Pn **Pn** 18 43 53.5 +1.1
comp=N,1.4nm,0.4s
GERES GERESS Array B 6.09 3 Pn **Pn** 18 44 00.8 +0.2
comp=N,0.2nm,0.3s,baz=174,slow=14,SNR=3.6
GERES Sn **Sn** 18 45 08.4 -1.7
comp=N,0.8nm,0.3s,baz=173,slow=24,SNR=6.0
comp=N,0.4nm,0.3s
CKRC Cesky Krumlov 6.10 7 *e*SN **Sn** 18 45 08.4 -2.0
KHC Kasperske Hory 6.37 2 *e*PN **Pn** 18 44 04.4 +0.1
KHC *e*SN **Sn** 18 45 14.0 -2.9
CLL Collm 8.54 359 *e*Sg **Sg** 18 47 09.0 +4.5
IDI Anoyia 11.78 125 LR LR 18 51 56.2
comp=N,12nm,18.7s,baz=266,slow=48
FINES FINESS Array B 20.24 18 P **P** 18 47 05.1 -0.3
comp=N,1.0nm,0.7s,baz=211,slow=7.8,SNR=1.5
comp=N,1.0nm,0.7s
MKAR Makanchi Array 47.79 60 P **P** 18 51 08.0 +0.3
comp=N,0.2nm,0.6s,baz=282,slow=7.2,SNR=3.6
comp=N,0.2nm,0.6s

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*IDC **24** 18:53:29.3±1.8, 7°.73S×160°.28E, h0km, mb4.0/3, mbtmp4.0/4, ML3.7/1, Error ellipse: s-maj=40.5km s-min=25.8km az=85.0*
*NEIC **24** 18:53:32.5±1.1, 7°.78S±0°.09×160°.6E±0°.1, h34km±8km, mb4.2/12, Error ellipse: s-maj=16.8km s-min=12.5km az=78.0*
ISC 24 18:53:32.6±1.1, 7°.76S±0°.08×160°.6E±0°.2, h35km, n27, σ1§11/24, mb4.2/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**1.79**	**201**	Pn		**Pn**	**18 54 01.0**	**0.0**
	90nm,0.3s,baz=11,slow=2.0,SNR=56							
HNR				Sn		**Sn**	**18 54 24.5**	**+2.0**
	497nm,0.3s,baz=13,slow=22,SNR=20							
HNR	**Honiara**	**1.79**	**201**	Pn		**Pn**	**18 54 00.5**	**-0.4**
RABL	**Rabaul**	**9.11**	**292**	Pn		**Pn**	**18 55 41.3**	**-0.3**
PATS	**Pohnpei**	**14.67**	**351**	Pn		**Pn**	**18 56 57.5**	**-0.3**
DZM	**Mont Dzumac**	**15.31**	**159**	Pn		**P**	**18 57 09.6**	**-1.0**
	0.3nm,0.3s,baz=332,slow=19,SNR=1.9							
	4.4nm,0.9s							
DZM	**Mont Dzumac**	**15.31**	**159**	P		**P**	**18 57 10.6**	**-0.1**
DZM				IAmb		IAmb	18 57 13.4	
	comp=Z,14nm,1.2s							
COEN	**Coen**	**18.18**	**249**	P		**P**	**18 57 42.8**	**+0.3**
CTA	**Charters Tower**	**18.53**	**227**	P		**Pn**	**18 57 48.6**	**+1.9**
	comp=Z,2.0nm,0.6s,baz=49,slow=14,SNR=1.7							
CTAO	**Charters Tower**	**18.53**	**227**	P		**Pn**	**18 57 45.3**	**-1.4**
CTAO				IAmb		IAmb	18 58 11.5	
	comp=Z,21nm,1.4s							
EIDS	**Eidsvold**	**19.73**	**206**	Pn		**Pn**	**18 58 00.4**	**-0.6**
EIDS				IAmb		IAmb	18 58 16.1	
	comp=Z,14nm,1.2s							
H11S2	**WAKE ISLAND Hy**	**26.77**	**13**	T		T	19 27 10.8	
	baz=193,slow=76,SNR=3838							
H11S3	**WAKE ISLAND Hy**	**26.77**	**13**	T		T	19 27 10.8	
	baz=193,slow=76,SNR=1633							
H11S1	**WAKE ISLAND Hy**	**26.78**	**13**	T		T	19 27 12.1	
	baz=193,slow=76,SNR=1286							
H11N1	**WAKE ISLAND Hy**	**27.99**	**13**	T		T	19 28 41.6	
	baz=193,slow=76,SNR=1147							
H11N3	**WAKE ISLAND Hy**	**28.00**	**13**	T		T	19 28 43.3	
	baz=193,slow=76,SNR=985							
WR0	**Warramunga Arr**	**28.01**	**242**	P		**P**	**18 59 20.4**	**-0.2**
WR0				IAmb		IAmb	18 59 24.5	
	comp=Z,7.5nm,1.2s							
H11N2	**WAKE ISLAND Hy**	**28.01**	**13**	T		T	19 28 44.5	
	baz=193,slow=76,SNR=1229							
WB0	**Warramunga Arr**	**28.06**	**242**	P		**P**	**18 59 20.7**	**-0.3**
WB0				IAmb		IAmb	18 59 21.2	
	comp=Z,3.7nm,0.7s							
WB2	**Warramunga Arr**	**28.16**	**242**	P		**P**	**18 59 21.6**	**-0.3**
WRA	**Warramunga Arr**	**28.18**	**242**	P		**P**	**18 59 21.9**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=67,slow=9.2,SNR=36							
WRA				PcP		**PcP**	**19 02 36.6**	**+1.1**
	comp=Z,0.3nm,0.9s,baz=72,slow=3.3,SNR=1.8							
	comp=Z,2.9nm,0.6s							
WRA	**Warramunga Arr**	**28.18**	**242**	P		**P**	**18 59 20.6**	**-1.5**
AS31	**Alice Springs**	**30.09**	**235**	P		**P**	**18 59 37.9**	**-1.1**
ASAR	**Alice Springs**	**30.09**	**235**	P		**P**	**18 59 37.7**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=63,slow=10.0,SNR=26							
ASAR				PcP		**PcP**	**19 02 41.0**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=76,slow=3.9,SNR=1.9							
	comp=Z,0.8nm,0.5s							
KNRA	**Kununurra**	**32.12**	**253**	P		**P**	**18 59 55.5**	**-1.4**
BBOO	**Buckleboo**	**33.75**	**219**	P		**P**	**19 00 09.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**35.52**	**250**	P		**P**	**19 00 26.3**	**-0.2**
FITZ				IAmb		IAmb	19 00 52.1	
	comp=Z,12nm,1.5s							
MKAR	**Makanchi Array**	**87.67**	**318**	P		**P**	**19 06 19.7**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=85,slow=4.9,SNR=3.1							
	comp=Z,0.2nm,0.6s							

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*JMA **24** 19:00:28.5±0.2, 24°.6N±0°.3×121°.9E±0°.5, h63km±2km, MV2.0/9, TAIWAN REGION*
*TAP **24** 19:00:29.2, 24°.62N×121°.86E, h54km, ML3.1, B*
ISC 24 19:00:29.9±1.2, 24°.65N±0°.02×121°.91E±0°.02, h52km±5km, n101, σ0§92/177, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWC	**Suao**	**0.07**	**233**	*i* P		**Pn**	**19 00 37.9**	**0.0**
	baz=162							
TWC				S		**Sn**	**19 00 44.3**	**+0.8**
	baz=162							
NDS	**Dongshan**	**0.18**	**264**	P		**Pn**	**19 00 37.4**	**-0.9**
	baz=277							
NDS				S		**Sn**	**19 00 44.1**	**-0.3**
	baz=277							
ILA	**Ilan**	**0.19**	**307**	P		**Pn**	**19 00 38.9**	**+0.5**
	baz=328							
ILA				S		**Sn**	**19 00 46.2**	**+1.8**
	baz=328							
EGS		**0.19**	**6**	*i* P		**Pn**	**19 00 39.0**	**+0.5**
	baz=19							
NTC	**Toucheng**	**0.21**	**340**	*e*P		**Pn**	**19 00 38.8**	**+0.2**
	baz=354							
NTC				*e*S		**Sn**	**19 00 45.6**	**+0.9**
	baz=354							
TWE	**Neicheng**	**0.23**	**287**	*i* P		**Pn**	**19 00 38.7**	**+0.1**
	baz=302							
TWE				*e*S		**Sn**	**19 00 45.9**	**+0.9**
	baz=302							
EWUT	**Wuta**	**0.24**	**210**	P		**Pn**	**19 00 37.5**	**-1.2**
	baz=202							
EWUT				S		**Sn**	**19 00 44.5**	**-0.5**
	baz=202							

ENA	**Nanau** baz=207	**0.27 215**	*i* P	**Pn**	**19 00 38.8**	**-0.2**
ENA	baz=207		*e*S	**Sn**	**19 00 45.7**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=295	**0.31 290**	*i* P	**Pn**	**19 00 39.4**	**-0.1**
FUSB	baz=295		S	**Sn**	**19 00 46.6**	**+0.3**
ENTT	**Nioudou** baz=279	**0.31 268**	P	**Pn**	**19 00 38.4**	**-0.9**
ENTT	baz=279		*e*S	**Sn**	**19 00 45.7**	**-0.4**
TIPB	**Shuangxi** baz=346	**0.33 346**	*i* P	**Pn**	**19 00 39.6**	**0.0**
TIPB	baz=346		S	**Sn**	**19 00 47.0**	**+0.6**
TWB1	**Santiao Chiao** baz=18	**0.36 11**	*e*P	**Pn**	**19 00 39.5**	**-0.3**
TWB1	baz=18		*e*S	**Sn**	**19 00 47.0**	**+0.1**
NDT	**Datong Townshi** baz=275	**0.36 262**	P	**Pn**	**19 00 40.2**	**+0.3**
NDT	baz=275		S	**Sn**	**19 00 46.9**	**0.0**
LATG	**Datong** baz=250	**0.37 252**	*i* P	**Pn**	**19 00 39.7**	**-0.3**
LATG	baz=250		S	**Sn**	**19 00 47.3**	**+0.1**
NWF	**Wu-fen Shan** baz=351	**0.43 344**	P	**Pn**	**19 00 40.7**	**0.0**
NWF	baz=351		*e*S	**Sn**	**19 00 49.0**	**+0.6**
WFSB	**Wu-fen Shan** baz=351	**0.43 344**	P	**Pn**	**19 00 40.7**	**+0.2**
WFSB	baz=351		S	**Sn**	**19 00 48.9**	**+0.7**
SXI1	**Grass Mountain** baz=352	**0.44 356**	P	**Pn**	**19 00 40.6**	**-0.1**
SXI1	baz=352		*e*S	**Sn**	**19 00 49.0**	**+0.5**
TWA	**Mucha** baz=326	**0.44 318**	*i* P	**Pn**	**19 00 40.6**	**0.0**
TWA	baz=326		*e*S	**Sn**	**19 00 49.0**	**+0.7**
NHDH	**Xindian Distri** baz=319	**0.47 312**	P	**Pn**	**19 00 40.7**	**-0.2**
NHDH	baz=319		*e*S	**Sn**	**19 00 49.1**	**+0.3**
YHNB	**Yeheng** baz=277	**0.49 272**	P	**Pn**	**19 00 40.8**	**-0.4**
YHNB	baz=277		S	**Sn**	**19 00 48.9**	**-0.4**
NHY	**Taipei** baz=328	**0.49 321**	*e*P	**Pn**	**19 00 41.7**	**+0.5**
NHY	baz=328		*e*S	**Sn**	**19 00 50.9**	**+1.5**
NSK	**Sanguang** baz=277	**0.50 273**	P	**Pn**	**19 00 39.8**	**-1.6**
NSK	baz=277		*e*S	**Sn**	**19 00 48.0**	**-1.7**
TNOU	**National Taiwa** baz=359	**0.51 346**	P	**Pn**	**19 00 41.1**	**-0.3**
TNOU	baz=359		*e*S	**Sn**	**19 00 49.8**	**+0.1**
TAP1	**Taipei** baz=323	**0.52 318**	*e*S	**Sn**	**19 00 50.4**	**+0.5**
NNSB	**Datong** baz=241	**0.53 245**	P	**Pn**	**19 00 41.3**	**-0.5**
NNSB	baz=241		S	**Sn**	**19 00 49.7**	**-0.6**
NNSH	**Datong** baz=247	**0.53 245**	P	**Pn**	**19 00 41.4**	**-0.4**
NNSH	baz=247		S	**Sn**	**19 00 49.7**	**-0.6**
NNS	**Nan Shan** baz=248	**0.53 247**	P	**Pn**	**19 00 40.3**	**-1.5**
NNS	baz=248		*e*S	**Sn**	**19 00 48.8**	**-1.6**
TAP	**Taipei** baz=323	**0.53 316**	*e*P	**Pn**	**19 00 41.1**	**-0.6**
TAP	baz=323		*e*S	**Sn**	**19 00 50.8**	**+0.7**
ETL	**Fush Village** baz=213	**0.56 208**	P	**Pn**	**19 00 41.3**	**-0.7**
ETL	baz=213		*e*S	**Sn**	**19 00 50.7**	**0.0**
NACB	**Ninganchiao** baz=216	**0.56 211**	*e*P	**Pn**	**19 00 40.9**	**-1.0**
NACB	baz=216		*e*S	**Sn**	**19 00 50.7**	**+0.1**
YM01	**YM01** baz=334	**0.58 328**	*e*P	**Pn**	**19 00 42.1**	**-0.3**
YM01	baz=334		*e*S	**Sn**	**19 00 51.5**	**+0.2**
ETLH	**Xiulin Townshi** baz=227	**0.59 222**	*e*P	**Pn**	**19 00 41.7**	**-0.8**
ETLH	baz=227		*e*S	**Sn**	**19 00 50.7**	**-0.9**
YM08	**YM08** baz=337	**0.61 331**	*e*P	**Pn**	**19 00 42.1**	**-0.5**
YM08	baz=337		*e*S	**Sn**	**19 00 51.5**	**-0.3**
TWS1	**Kuangyinshan** baz=327	**0.63 315**	*e*P	**Pn**	**19 00 42.7**	**-0.2**
TWS1	baz=327		*e*S	**Sn**	**19 00 53.1**	**+0.8**
TWD	**Chiawan** baz=214	**0.64 207**	P	**Pn**	**19 00 41.9**	**-1.0**
TWD	baz=214		*e*S	**Sn**	**19 00 52.6**	**+0.2**
ANP	**Anpu** baz=332	**0.64 326**	*e*P	**Pn**	**19 00 42.6**	**-0.5**
ANP	baz=332		*e*S	**Sn**	**19 00 52.2**	**-0.4**
NTY	**Taoyuan** baz=311	**0.66 302**	P	**Pn**	**19 00 43.0**	**-0.2**
NTY	baz=311		*e*S	**Sn**	**19 00 53.6**	**+0.8**
TWY	**Chenhua** baz=341	**0.68 336**	*e*P	**Pn**	**19 00 43.4**	**-0.1**
TWY	baz=341		*e*S	**Sn**	**19 00 54.1**	**+0.8**
NFF	**Wufeng Townshi** baz=279	**0.72 269**	*e*P	**Pn**	**19 00 42.6**	**-1.5**
NFF	baz=279		*e*S	**Sn**	**19 00 53.0**	**-1.3**
HWA	**Hwalien** baz=208	**0.73 203**	*e*P	**Pn**	**19 00 44.7**	**+0.7**
FUSS	**Fushou** baz=232	**0.73 237**	*e*P	**Pn**	**19 00 44.0**	**-0.4**
FUSS	baz=232		*e*S	**Sn**	**19 00 54.0**	**-0.8**
NCU	**National Centr** baz=300	**0.73 296**	*e*P	**Pn**	**19 00 45.2**	**+1.1**
NCU	baz=300		*e*S	**Sn**	**19 00 54.8**	**+0.3**
NCUH	**Zhongli** baz=299	**0.73 296**	P	**Pn**	**19 00 43.8**	**-0.4**
NCUH	baz=299		*e*S	**Sn**	**19 00 55.0**	**+0.5**
WHF	**Hehuan Shan** baz=224	**0.78 230**	*e*P	**Pn**	**19 00 44.7**	**-0.4**
WHF	baz=224		*e*S	**Sn**	**19 00 56.5**	**+0.3**
TWT	**Tachien** baz=232	**0.78 240**	P	**Pn**	**19 00 44.9**	**0.0**
TWT	baz=232		*e*S	**Sn**	**19 00 56.2**	**+0.3**
ETM	**Tongmen** baz=207	**0.78 209**	*e*P	**Pn**	**19 00 43.2**	**-1.6**
TDCB	**Techi** baz=233	**0.79 240**	P	**Pn**	**19 00 44.9**	**-0.2**
TDCB	baz=233		*e*S	**Sn**	**19 00 56.0**	**-0.1**
LIOB	**Emei** baz=281	**0.81 270**	P	**Pn**	**19 00 44.8**	**-0.5**
LIOB	baz=281		*e*S	**Sn**	**19 00 56.5**	**+0.1**
NSTT	**Nanjuang** baz=280	**0.83 269**	*e*P	**Pn**	**19 00 44.9**	**-0.5**
NSTT	baz=280		*e*S	**Sn**	**19 00 56.5**	**-0.2**
SBCB	**Hsinchu** baz=291	**0.85 280**	*e*P	**Pn**	**19 00 45.1**	**-0.6**
SBCB	baz=291		*e*S	**Sn**	**19 00 57.5**	**+0.2**
NHW	**Xinwu Township** baz=297	**0.86 294**	*e*P	**Pn**	**19 00 44.9**	**-0.9**
NHW	baz=297		*e*S	**Sn**	**19 00 58.0**	**+0.5**
CHGB	**Renai** baz=225	**0.89 229**	*e*P	**Pn**	**19 00 46.1**	**-0.4**
ESL	**Shilin** baz=205	**0.94 208**	*e*P	**Pn**	**19 00 44.9**	**-2.0**
WHP	**Taichung City** baz=247	**0.95 247**	*e*P	**Pn**	**19 00 47.6**	**+0.4**
WHP	baz=247		*e*S	**Sn**	**19 01 00.6**	**+0.7**
JYNG	**Yonagunijimaku** baz=215	**0.96 102**	P	**Pn**	**19 00 46.9**	**-0.2**
JYNG			*e*S	**Sn**	**19 01 00.3**	**+0.4**
OWD	**Renai** baz=215	**0.96 224**	*e*P	**Pn**	**19 00 46.7**	**-0.6**
OWD	baz=215		*e*S	**Sn**	**19 00 59.3**	**-0.8**
WUSB	**Renai** baz=227	**0.98 228**	*e*P	**Pn**	**19 00 47.1**	**-0.4**
YOJ	**Yonaguni jima** baz=91	**1.02 100**	*e*P	**Pn**	**19 00 47.7**	**-0.2**
YOJ	baz=91		*e*S	**Sn**	**19 01 01.2**	**-0.1**
YOJ	**Yonaguni jima**	**1.02 100**	P	**Pn**	**19 00 47.8**	**-0.2**
YOJ			S	**Sn**	**19 01 01.1**	**-0.1**
NMLH	**Miaoli** baz=275	**1.03 264**	*e*P	**Pn**	**19 00 47.4**	**-0.7**
NMLH	baz=275		*e*S	**Sn**	**19 01 01.6**	**+0.2**
NSY	**Sanyi** baz=258	**1.07 258**	*e*P	**Pn**	**19 00 50.4**	**+1.7**
NSY	baz=258		*e*S	**Sn**	**19 01 03.0**	**+0.5**
EGFH	**Guangfu** baz=209	**1.07 204**	*e*P	**Pn**	**19 00 49.0**	**+0.3**
EGFH	baz=209		*e*S	**Sn**	**19 01 01.9**	**-0.6**
WPL	**Puli Township** baz=231	**1.08 234**	*e*P	**Pn**	**19 00 49.1**	**+0.3**
TWQ1	**Liyutan** baz=254	**1.08 254**	*e*P	**Pn**	**19 00 49.4**	**+0.6**
TWQ1	baz=254		*e*S	**Sn**	**19 01 03.1**	**+0.4**
WCS	**Beigang Elemen** baz=236	**1.09 237**	*e*P	**Pn**	**19 00 48.1**	**-0.7**
WCS	baz=236		*e*S	**Sn**	**19 01 02.7**	**-0.2**
VWDT	**VWDT** baz=208	**1.14 218**	*e*P	**Pn**	**19 00 48.9**	**-0.6**
VWDT	baz=208		*e*S	**Sn**	**19 01 04.6**	**+0.5**
SMLT	**Sun Moon Lake** baz=220	**1.20 231**	*e*P	**Pn**	**19 00 50.4**	**0.0**
SSLB	**Suanglung** baz=225	**1.23 226**	*e*P	**Pn**	**19 00 50.5**	**-0.3**
HGSD	**Ruisui** baz=209	**1.24 201**	*e*P	**Pn**	**19 00 50.6**	**-0.3**
HGSD	baz=209		*e*S	**Sn**	**19 01 07.9**	**+1.4**
EHY	**Hungye** baz=209	**1.26 205**	*e*P	**Pn**	**19 00 50.3**	**-0.9**
EHY	baz=209		*e*S	**Sn**	**19 01 05.5**	**-1.6**
WNT	**Mingjian** baz=248	**1.36 236**	*e*P	**Pn**	**19 00 53.2**	**+0.7**
WJS	**Zhushan** baz=245	**1.36 233**	*e*P	**Pn**	**19 00 53.3**	**+0.8**
YULB	**Yu-li** baz=203	**1.37 204**	*e*P	**Pn**	**19 00 51.3**	**-1.4**
EYUL	**Yuli** baz=208	**1.41 203**	*e*P	**Pn**	**19 00 53.1**	**-0.1**
YUS	**Yu-Shan** baz=208	**1.45 217**	*e*P	**Pn**	**19 00 53.8**	**-0.5**
YUS	baz=208		*e*S	**Sn**	**19 01 13.7**	**+1.3**
ALS	**Alishan** baz=231	**1.52 222**	*e*P	**Pn**	**19 00 55.3**	**+0.3**
FULB	**Fuli** baz=207	**1.55 201**	*e*P	**Pn**	**19 00 53.8**	**-1.4**
WDLH	**Douliu** baz=244	**1.58 233**	*e*P	**Pn**	**19 00 54.8**	**-0.7**
ELDTW	**Lidau** baz=199	**1.67 209**	*e*P	**Pn**	**19 00 55.9**	**-1.0**
ELDTW	baz=199		*e*S	**Sn**	**19 01 17.0**	**-0.2**
IRIF	**Iriomote-Funau**	**1.69 100**	*e*P	**Pn**	**19 00 56.4**	**-0.6**
IRIF			S	**Sn**	**19 01 17.5**	**0.0**
WTK	**Tuku** baz=234	**1.69 236**	*e*P	**Pn**	**19 00 56.2**	**-0.8**
WTK	baz=234		*e*S	**Sn**	**19 01 19.1**	**+1.6**
EDH	**Donghe** baz=186	**1.76 199**	*e*P	**Pn**	**19 00 56.7**	**-1.4**
EDH	baz=186		*e*S	**Sn**	**19 01 16.6**	**-2.7**
TPUB	**Ta-pu** baz=230	**1.78 221**	*e*P	**Pn**	**19 00 58.8**	**+0.4**
TPUB	baz=230		*e*S	**Sn**	**19 01 22.2**	**+2.3**
STYH	**Taoyuan** baz=207	**1.80 215**	*e*P	**Pn**	**19 00 57.4**	**-1.1**
STYH	baz=207		*e*S	**Sn**	**19 01 20.4**	**+0.1**
HATJ	**Hateruma jima**	**1.83 109**	P	**Pn**	**19 00 58.4**	**-0.5**
WTP	**Ta-pu** baz=231	**1.83 221**	*e*P	**Pn**	**19 00 58.8**	**-0.3**
WTP	baz=231		*e*S	**Sn**	**19 01 23.9**	**+2.7**
WSF	**Szhu** baz=236	**1.84 237**	*e*S	**Sn**	**19 01 22.2**	**+1.0**
WSL	**Shuilin Townsh** baz=244	**1.91 234**	*e*P	**Pn**	**19 00 59.4**	**-0.5**
WSL	baz=244		*e*S	**Sn**	**19 01 23.7**	**+0.9**
SNST	**Tainan City** baz=235	**1.93 222**	*e*P	**Pn**	**19 01 01.1**	**+0.9**
SNST	baz=235		*e*S	**Sn**	**19 01 25.6**	**+2.3**
CHN1	**Nanshi** baz=234	**1.93 221**	*e*P	**Pn**	**19 01 01.1**	**+0.7**
JKRS	**Kuro-shima**	**1.96 102**	P	**Pn**	**19 01 00.8**	**+0.1**
JKRS			*e*S	**Sn**	**19 01 24.1**	**+0.1**
SGST	**Jiashian** baz=228	**1.98 218**	*e*P	**Pn**	**19 01 00.9**	**-0.1**
SGST	baz=228		*e*S	**Sn**	**19 01 26.9**	**+2.2**
JIJ	**Ishigaki jima**	**2.05 98**	P	**Pn**	**19 01 01.7**	**-0.2**
JIJ			*e*S	**Sn**	**19 01 25.6**	**-0.8**
SSD	**Sandimen** baz=210	**2.23 212**	*e*P	**Pn**	**19 01 05.1**	**+0.7**
SSD	baz=210		*e*S	**Sn**	**19 01 33.3**	**+2.5**
TSMG	**Majia** baz=199	**2.26 211**	*e*P	**Pn**	**19 01 05.8**	**+1.0**
TSMG	baz=199		*e*S	**Sn**	**19 01 33.3**	**+1.8**
VWUC	**VWUC** baz=279	**2.26 279**	*e*P	**Pn**	**19 01 03.3**	**-1.5**
MATB	**Ma-tsu** baz=310	**2.32 310**	*e*P	**Pn**	**19 01 04.0**	**-1.6**
MASBT	**Mashibuluo** baz=208	**2.34 210**	*e*P	**Pn**	**19 01 07.1**	**+1.1**
MASBT	baz=208		*e*S	**Sn**	**19 01 36.2**	**+2.6**
EAST	**Anshuo** baz=193	**2.46 204**	*e*P	**Pn**	**19 01 09.4**	**+1.8**
XPSS	**Dashiqiu** baz=327	**2.75 326**	*e*P	**Pn**	**19 01 10.0**	**-1.5**
AXDP	**Jialang** baz=273	**3.59 275**	*e*P	**Pn**	**19 01 21.7**	**-1.4**

*IDC **24** 19:04:46.1±5.6, 2°.63S×100°.25E, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=188.8km s-min=82.2km az=54.0, Southern Sumatera*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H** baz=82,slow=76,SNR=247	**28.08**	**259**	T	T	19 39 42.2	
H08S3	**Diego Garcia H** baz=82,slow=76,SNR=269	**28.09**	**259**	T	T	19 39 36.3	
H08S1	**Diego Carcia H** baz=82,slow=76,SNR=190	**28.10**	**259**	T	T	19 39 37.7	
H01W3	**Cape Leeuwin H** baz=336,slow=76,SNR=6.1	**34.59**	**160**	T	T	19 47 39.5	
H01W2	**Cape Leeuwin H** baz=336,slow=76,SNR=6.6	**34.61**	**160**	T	T	19 47 40.4	
H01W1	**Cape Leeuwin H**	**34.61**	**160**	T	T	19 47 40.5	
	baz=336,slow=76,SNR=4.5						
SONM	**Songino Array** 0.7nm,0.7s,baz=195,slow=8.9,SNR=6.4 0.7nm,0.7s	**50.54**	**5**	P	P	19 13 46.2	-0.2
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=157,slow=8.2,SNR=10.0 0.8nm,0.6s	**51.70**	**344**	P	P	19 13 55.0	0.0
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=289,slow=0.4,SNR=3.7	**145.04**	**38**	PKPbc	PKPbc	19 24 24.7	-0.9

*IDC **24** 19:07:53.6±2.1, 6°.88S×129°.74E, h152km±25km, mb3.1/1, mbtmp3.8/6, Error ellipse: s-maj=35.3km s-min=19.7km az=96.0*

ISC 24 19:07:53.2±0.8, 6°.93S±0°.06×129°.65E±0°.07, h150km, n19, σ3s40/24, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.94**	**123**	P	**Pn**	**19 08 31.4**	**+3.7**
MTN	**Manton Dam**	**6.05**	**166**	P	**Pn**	**19 09 22.8**	**+2.1**
SIJI	**Sorong** 2.4nm,0.3s,baz=158,slow=5.4,SNR=14	**6.23**	**15**	P	**Pn**	**19 09 22.3**	**-0.8**
SIJI	8.5nm,0.2s,baz=229,slow=23,SNR=14			S	**Sn**	**19 10 26.9**	**-6.6**
KDU	**Kakadu**	**6.36**	**154**	P	**Pn**	**19 09 26.3**	**+1.5**
BATI	**Baumata** 21nm,0.4s,baz=98,slow=2.5,SNR=17	**6.76**	**241**	P	**Pn**	**19 09 32.9**	**+2.8**
BATI	21nm,0.6s,baz=137,slow=22,SNR=2.1			S	**Sn**	**19 10 42.0**	**-4.0**
KNRA	**Kununurra**	**8.74**	**186**	P	**Pn**	**19 09 57.7**	**+1.2**
FITZ	**Fitzroy Crossi** 0.7nm,0.5s,baz=17,slow=11,SNR=17	**11.77**	**199**	P	**Pn**	**19 10 37.2**	**+0.7**
FITZ	2.6nm,0.5s,baz=121,slow=21,SNR=7.7			S	**Sn**	**19 12 42.2**	**-4.5**
FITZ	**Fitzroy Crossi**	**11.77**	**199**	P	**Pn**	**19 10 37.9**	**+1.4**
PLAI	**Plampang**	**11.91**	**260**	P	**Pn**	**19 10 42.5**	**+4.0**
WRA	**Warramunga Arr** 0.7nm,0.4s,baz=337,slow=13,SNR=17	**13.71**	**161**	P	**Pn**	**19 11 00.7**	**-0.9**
WRA	1.5nm,0.6s,baz=329,slow=23,SNR=5.0			S	**Sn**	**19 13 26.9**	**-6.7**
COEN	**Coen**	**15.02**	**119**	P	**P**	**19 11 21.6**	**+1.9**
QIS	**Mount Isa**	**16.63**	**146**	P	**Pn**	**19 11 40.0**	**+2.3**
ASAR	**Alice Springs** 1.3nm,0.5s,baz=343,slow=9.9,SNR=33	**17.14**	**167**	P	**Pn**	**19 11 44.8**	**+1.0**
ASAR	0.3nm,0.6s,baz=350,slow=21,SNR=1.9			S	**S**	**19 14 48.6**	**-5.6**
WRKA	**Warakurna**	**18.05**	**184**	P	**Pn**	**19 11 56.1**	**+1.4**
MTSU	**Mount Surprise**	**18.12**	**129**	P	**Pn**	**19 11 57.8**	**+2.2**
OOD	**Oodnadatta**	**21.53**	**165**	P	**P**	**19 12 32.6**	**+2.1**
MULG	**Mulgathing**	**23.60**	**170**	P	**P**	**19 12 53.6**	**+3.2**
LCRK	**Leigh Creek**	**24.74**	**162**	P	**P**	**19 13 03.4**	**+2.6**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=131,slow=8.8,SNR=6.5 0.2nm,0.3s	**67.98**	**327**	P	**P**	**19 18 36.2**	**+0.1**

*IDC **24** 19:22:54.6±1.0, 3°.44N×126°.15E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=97.1km s-min=18.6km az=72.0*

ISC 24 19:23:07.5±0.9, 3°.5N±0°.2×126°.0E±0°.5, h116km, n7, σ1s93/8, mb3.6/6, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.12**	**335**	*e*P	**Pn**	**19 24 06.4**	**-2.3**
WRA	**Warramunga Arr** 0.8nm,0.5s,baz=334,slow=11,SNR=17 0.8nm,0.5s	**24.66**	**161**	P	**P**	**19 28 16.5**	**-1.1**
ASAR	**Alice Springs** 0.1nm,0.5s,baz=346,slow=8.4,SNR=1.5	**28.04**	**164**	P	**P**	**19 28 47.1**	**-0.9**
ASAR	0.2nm,0.8s,baz=350,slow=2.0,SNR=2.2 0.1nm,0.5s			PcP	**PcP**	**19 32 02.8**	**+2.7**
KSRS	**Korea Array** 0.5nm,0.4s,baz=183,slow=10,SNR=4.3 0.5nm,0.4s	**33.87**	**3**	P	**P**	**19 29 39.1**	**+0.1**
STKA	**Stephens Creek** 0.8nm,0.5s,baz=341,slow=14,SNR=1.5 0.8nm,0.5s	**38.15**	**158**	P	**P**	**19 30 14.8**	**-0.7**
SONM	**Songino Array** 0.3nm,0.6s,baz=158,slow=6.3,SNR=2.4 0.3nm,0.6s	**47.32**	**342**	P	**P**	**19 31 30.2**	**+0.6**
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=126,slow=8.3,SNR=9.4 0.7nm,0.6s	**57.36**	**326**	P	**P**	**19 32 45.5**	**+1.8**

*IDC **24** 19:46:50.5±2.0, 14°.44S×172°.28E, h578km±23km, mb3.5/5, mbtmp4.4/7, Error ellipse: s-maj=39.3km s-min=30.7km az=21.0*

*NEIC **24** 19:46:51.0±1.5, 14°.6S±0°.1×172°.6E±0°.1, h615km±13km, mb4.4/21, Error ellipse: s-maj=21.7km s-min=16.3km az=140.0*

ISC 24 19:46:50.3±1.0, 14°.6S±0°.1×172°.5E±0°.1, h600km, n36, σ1s08/35, mb4.4/16, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 20nm,0.5s,baz=274,slow=10,SNR=22	**6.17**	**121**	P	**P**	**19 48 34.4**	**+1.5**
MSVF	**Nonsavu**	**6.17**	**121**	P	**P**	**19 48 34.2**	**+1.2**
MARNC	**Mare, Loyalty**	**8.07**	**211**	P	**P**	**19 48 48.7**	**-1.5**
DZM	**Mont Dzumac** 2.0nm,0.4s,baz=312,slow=13,SNR=6.6	**9.41**	**217**	P	**P**	**19 49 03.2**	**0.0**
HNR	**Honiara** 46nm,0.4s,baz=98,slow=4.1,SNR=5.4	**13.32**	**291**	P	P	19 49 36.8	-5.7
HNR	**Honiara**	**13.32**	**291**	P	P	19 49 36.2	-6.3
KRVT	**Keravat (AS076** 35nm,0.6s,baz=180,slow=7.1,SNR=4.1 35nm,0.6s	**22.62**	**295**	P	**P**	**19 51 06.2**	**-1.5**
CTA	**Charters Tower** 12nm,1.3s,baz=90,slow=10,SNR=3.0 12nm,1.3s	**25.64**	**254**	P	**P**	**19 51 33.9**	**-0.4**
QRZ	**Quartz Range**	**26.13**	**180**	P	**P**	**19 51 38.8**	**+0.5**
NNZ	**Nelson**	**26.54**	**179**	P	**P**	**19 51 41.4**	**-0.4**
TUWZ	**Tuamarina**	**26.77**	**178**	P	**P**	**19 51 42.6**	**-1.2**
MSWZ	**Moikau Station**	**26.83**	**175**	P	**P**	**19 51 42.9**	**-1.5**
BSWZ	**Blackbirch Sta**	**27.05**	**178**	P	**P**	**19 51 45.2**	**-1.1**
THZ	**Tophouse**	**27.07**	**179**	P	**P**	**19 51 46.0**	**-0.6**
KHZ	**Kahutara**	**27.74**	**178**	P	**P**	**19 51 50.4**	**-1.9**
LTZ	**Lake Taylor**	**28.09**	**180**	P	**P**	**19 51 55.1**	**-0.3**
COEN	**Coen**	**28.43**	**268**	P	**P**	**19 52 00.1**	**+1.4**
COEN	comp=Z,16nm,1.5s			IAmb	IAmb	19 52 35.2	
LBZ	**Lake Benmore**	**29.76**	**183**	P	**P**	**19 52 08.6**	**-1.2**
LBZ	comp=Z,48nm,1.3s			IAmb	IAmb	19 52 38.9	
STKA	**Stephens Creek** comp=Z,1.4nm,0.5s,baz=52,slow=9.7,SNR=7.8 comp=Z,1.4nm,0.5s	**33.05**	**233**	P	**P**	**19 52 38.7**	**+0.8**
STKA	**Stephens Creek**	**33.05**	**233**	P	**P**	**19 52 38.8**	**+0.9**
WR0	**Warramunga Arr**	**36.59**	**256**	P	**P**	**19 53 07.2**	**-0.3**
WR0	comp=Z,16nm,1.4s			IAmb	IAmb	19 53 07.9	
WB0	**Warramunga Arr**	**36.73**	**256**	P	**P**	**19 53 08.4**	**-0.2**
WB0	comp=Z,5.6nm,0.6s			IAmb	IAmb	19 53 08.9	
WB2	**Warramunga Arr**	**36.77**	**256**	P	**P**	**19 53 08.8**	**-0.2**
WB2	comp=Z,16nm,1.4s			IAmb	IAmb	19 53 38.1	
WRAB	**Tennant Creek**	**36.77**	**256**	P	**P**	**19 53 08.3**	**-0.7**
WRAB	comp=Z,6.1nm,1.1s			IAmb	IAmb	19 53 28.5	
WRA	**Warramunga Arr** comp=Z,1.7nm,0.5s,baz=89,slow=8.8,SNR=58 comp=Z,1.7nm,0.5s	**36.78**	**256**	P	**P**	**19 53 08.8**	**-0.3**
WRA	**Warramunga Arr**	**36.78**	**256**	P	**P**	**19 53 08.5**	**-0.6**
AS31	**Alice Springs**	**37.48**	**250**	P	**P**	**19 53 14.8**	**+0.1**
ASAR	**Alice Springs** comp=Z,2.4nm,0.5s,baz=78,slow=9.2,SNR=137	**37.48**	**250**	P	**P**	**19 53 14.8**	**0.0**
ASAR	comp=Z,0.5nm,1.0s,baz=101,slow=4.8,SNR=4.2 comp=Z,2.4nm,0.5s			ScP	**ScP**	**19 58 10.7**	**+2.9**
ASAR	**Alice Springs**	**37.48**	**250**	P	**P**	**19 53 14.6**	**-0.1**
BBOO	**Buckleboo**	**37.74**	**235**	P	**P**	**19 53 16.9**	**+0.2**
BBOO	comp=Z,29nm,1.4s			IAmb	IAmb	19 53 43.5	
MTN	**Manton Dam**	**40.20**	**267**	P	**P**	**19 53 37.9**	**+1.2**
MTN	comp=Z,6.4nm,0.6s			IAmb	IAmb	19 53 38.2	
KNRA	**Kununurra**	**42.19**	**263**	P	**P**	**19 53 52.9**	**+0.6**
KNRA	comp=Z,5.9nm,0.8s			IAmb	IAmb	19 53 53.6	
FITZ	**Fitzroy Crossi**	**45.02**	**259**	P	**P**	**19 54 15.5**	**+1.4**

JAGI	**Jajag, Banyuwa**	**57.38**	**269**	P	**P**	**19 55 43.2**	**-0.1**
JAGI				IAmb	IAmb	19 56 18.9	
	comp=Z,40nm,1.1s						
QSPA	**South Pole Qui**	**75.44**	**180**	P	**P**	**19 57 34.0**	**+0.3**
EMB	**Emerald Bay**	**82.34**	**47**	P	**P**	**19 58 09.4**	**-1.4**
EMB				IAmb	IAmb	19 58 10.0	
	comp=Z,9.6nm,0.9s						

IDC ***24*** *19:52:30.6±1.4, 37°.90N×100°.17E, h0km, mb3.6/2, mbtmp3.3/6, ML3.0/3, MS3.2/1, Error ellipse: s-maj=53.0km s-min=24.5km az=71.0*

ISC 24 19:52:35.4±1.1, 38°.0N±0°.1×100°.5E±0°.2, h35km, n7, σ2s 12/6, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**10.72**	**22**	Pn	**Pn**	**19 55 08.1**	**+1.7**
	0.3nm,0.3s,baz=204,slow=15,SNR=11						
SONM				Sn	**Sn**	**19 57 02.6**	**-2.5**
	0.2nm,0.3s,baz=198,slow=11,SNR=2.3						
SONM				Lg	Lg	19 58 08.3	
	0.2nm,0.3s,baz=210,slow=29,SNR=8.6						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**16.00**	**309**	Pn	Pn	19 56 08.7	-9.1
	baz=111,slow=13,SNR=1.8						
	0.3nm,0.9s						
ZALV	**Zalesovo Beam**	**19.21**	**331**	P	**P**	**19 56 55.3**	**-0.8**
	0.2nm,0.3s,baz=143,slow=12,SNR=1.8						
	0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**19.54**	**184**	P	**P**	**19 56 58.3**	**-1.7**
	0.1nm,0.3s,baz=348,slow=11,SNR=2.3						
ARU	**Arti**	**33.22**	**317**	LR	LR	20 13 10.9	
	comp=Z,36nm,18.6s,baz=226,slow=37						
FINES	**FINESS Array B**	**50.20**	**323**	P	**P**	**20 01 28.0**	**+0.7**
	1.1nm,0.8s,baz=100,slow=7.2,SNR=3.5						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**68.94**	**147**	P	**P**	**20 03 37.6**	**+0.7**
	0.2nm,0.7s,baz=335,slow=6.3,SNR=2.1						
	0.2nm,0.7s						

IDC 24 19:55:52.2±1.6, 11°.33N×142°.63E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=45.8km s-min=34.0km az=110.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.12**	**195**	P	P	20 02 21.3	-0.2
	0.2nm,0.6s,baz=16,slow=9.8,SNR=1.7						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.72**	**285**	P	P	20 03 52.1	+0.6
	0.1nm,0.4s,baz=94,slow=8.2,SNR=1.9						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**61.62**	**317**	P	P	20 06 11.2	-0.5
	0.1nm,0.6s,baz=90,slow=8.6,SNR=1.9						
	0.1nm,0.6s						
ILAR	**Eielson Array**	**71.54**	**25**	P	P	20 07 14.8	0.0
	0.5nm,0.5s,baz=247,slow=6.3,SNR=7.1						
	0.5nm,0.5s						

IDC 24 19:58:49.5±2.0, 6°.25N×124°.51E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=156.7km s-min=23.8km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**24.22**	**177**	P	P	20 04 07.8	-0.4
	1.2nm,0.9s,baz=352,slow=7.1,SNR=1.0						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**27.76**	**160**	P	P	20 04 40.2	0.0
	0.3nm,0.6s,baz=344,slow=13,SNR=8.9						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**31.11**	**163**	P	P	20 05 10.2	+0.2
	0.6nm,0.3s,baz=338,slow=7.4,SNR=21						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**54.24**	**325**	P	P	20 08 17.2	-0.1
	0.3nm,0.3s,baz=120,slow=7.7,SNR=9.2						
	0.3nm,0.3s						

PRU ***24*** *20:21:35.9±0.0, 42°.79N×13°.66E, h0km*

LDG ***24*** *20:21:35.5±0.1, 42°.79N×13°.16E, h10km, Ml2.9/19, Error ellipse: s-maj=4.4km s-min=2.9km az=41.0*

ROM ***24*** *20:21:36.1±0.0, 42°.781N±0°.001×13°.148E±0°.003, h9km, ML3.6/8, Mw3.3, Error ellipse: s-maj=0.2km s-min=0.1km az=79.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.98; Mθθ=0.01; Mφφ=0.97; Mrθ=0.50; Mθφ=0.44; Mφr=0.08; Fault plane solution: M0=1.18149×10^14 NP1:φs=180.00000°, δ=43.00000°, λ=-56.00000°. NP2:φs=317.00000°, δ=56.00000°, λ=-117.00000°.*

IDC ***24*** *20:21:37.0±1.2, 42°.88N×13°.11E, h0km, mb3.4/4, mbtmp3.5/10, ML3.3/6, MS2.1/2 Error ellipse: s-maj=21.8km s-min=16.4km az=83.0*

BEO ***24*** *20:21:38.2±0.7, 42°.59N×12°.95E, h32km±7km, ML3.3/7*

ISC 24 20:21:36.2±0.7, 42°.77N±0°.01×13°.11E±0°.01, h11km±3km, n259, σ2s 01/356, mb3.4/4, 33C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.05**	**167**	⇑P	**Pg**	**20 21 38.6**	**+0.2**
T1213				S	**Sg**	**20 21 40.0**	**-0.1**
T1212	**Cascia, Frazio**	**0.05**	**247**	⇑P	**Pg**	**20 21 39.1**	**+0.6**
T1212				S	**Sg**	**20 21 40.9**	**+0.7**
NRCA	**Norcia**	**0.06**	**2**	⇓P	**Pg**	**20 21 38.5**	**-0.1**
NRCA				S	**Sg**	**20 21 39.7**	**-0.7**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1214	**Arquata del Tr**	**0.07**	**100**	⇓P	**Pg**	**20 21 38.5**	**-0.3**
T1214				S	**Sg**	**20 21 39.7**	**-1.0**
T1242	**Castelluccio d**	**0.09**	**51**	⇓P	**Pg**	**20 21 38.5**	**-0.4**
T1242				S	**Sg**	**20 21 39.8**	**-1.1**
T1202	**Accumoli, Fraz**	**0.11**	**130**	P	**Pg**	**20 21 39.3**	**+0.1**
T1202				S	**Sg**	**20 21 41.3**	**0.0**
AQT1	**Arquata del Tr**	**0.13**	**90**	⇑P	**Pg**	**20 21 39.4**	**-0.1**
AQT1				S	**Sg**	**20 21 41.4**	**-0.4**
MC2	**Monte Cornacci**	**0.15**	**23**	⇓P	**Pg**	**20 21 39.7**	**-0.1**
MC2				S	**Sg**	**20 21 42.3**	**-0.1**
T1201	**Domo (RI)**	**0.15**	**138**	P	**Pg**	**20 21 40.4**	**+0.6**
LNSS	**Leonessa**	**0.18**	**197**	⇑P	**Pb**	**20 21 40.9**	**-0.6**
LNSS				S	**Sg**	**20 21 44.2**	**+1.3**
LNSS				AML	AML		
	comp=N,61250μm,0.7s						
LNSS				AML	AML		
	comp=E,94950μm,0.4s						
FEMA	**Monte Fema**	**0.19**	**347**	⇓P	**Pg**	**20 21 40.8**	**+0.3**
FEMA				S	**Sg**	**20 21 43.9**	**+0.4**
MMO1	**Montemonaco**	**0.20**	**51**	⇑P	**Pg**	**20 21 40.3**	**-0.3**
MMO1				S	**Sg**	**20 21 43.3**	**-0.3**
T1241	**Roccafluvione,**	**0.25**	**70**	⇑P	**Pg**	**20 21 41.2**	**-0.2**
T1241				S	**Sg**	**20 21 45.0**	**+0.1**
T1243	**Rocca Santa Ma**	**0.26**	**107**	⇑P	**Pg**	**20 21 41.4**	**-0.2**
T1243				S	**Sg**	**20 21 45.2**	**0.0**
FDMO	**Fiordimonte**	**0.26**	**356**	P	**Pg**	**20 21 41.8**	**+0.1**
FDMO				S	**Sg**	**20 21 46.1**	**+0.8**
FDMO				AML	AML		
	comp=N,14950μm,1.5s						
FDMO				AML	AML		
	comp=E,14700μm,1.5s						
RM33	**Pellescritta (**	**0.28**	**164**	⇓P	**Pg**	**20 21 42.3**	**+0.5**
RM33				S	**Sb**	**20 21 46.8**	**-1.1**
RM33				AML	AML		
	comp=E,15400μm,0.6s						
RM33				AML	AML		
	comp=E,15100μm,0.6s						
RM33				AML	AML		
	comp=N,17150μm,0.9s						
RM33				AML	AML		
	comp=E,15450μm,0.6s						
RM33				AML	AML		
	comp=N,17400μm,0.9s						
RM33				AML	AML		
	comp=E,15050μm,0.6s						
CESI	**CESI - Serrava**	**0.28**	**327**	P	**Pg**	**20 21 42.5**	**+0.5**
CESI				S	**Sb**	**20 21 47.2**	**-0.8**
CESI				AML	AML		
	comp=E,21150μm,0.4s						
CESI				AML	AML		
	comp=N,48550μm,0.4s						
CESI				AML	AML		
	comp=E,21200μm,0.4s						
T1211	**Morro Reatino**	**0.30**	**218**	⇑P	**Pb**	**20 21 43.3**	**-0.4**
T1211				S	**Sb**	**20 21 48.7**	**0.0**
ARRO	**Arrone**	**0.32**	**233**	P	**Pb**	**20 21 43.6**	**-0.3**
ARRO				S	**Sb**	**20 21 49.3**	**+0.2**
CAMP	**Campotosto**	**0.32**	**137**	⇑P	**Pg**	**20 21 42.8**	**0.0**
CAMP				S	**Sg**	**20 21 47.9**	**+0.8**
CAMP				AML	AML		
	comp=N,13450μm,0.4s						
CAMP				AML	AML		
	comp=N,13500μm,0.4s						
CAMP				AML	AML		
	comp=E,11650μm,0.6s						
CSP1	**Cessapalombo**	**0.33**	**12**	P	**Pg**	**20 21 42.8**	**0.0**
CSP1				S	**Sg**	**20 21 48.0**	**+0.8**
CSP1				AML	AML		
	comp=N,30650μm,1.5s						
CSP1				AML	AML		
	comp=E,28400μm,0.6s						
CSP1				AML	AML		
	comp=N,30700μm,1.5s						
SEF1	**Sefro**	**0.39**	**342**	P	**Pg**	**20 21 44.2**	**+0.3**
SEF1				S	**Sb**	**20 21 50.4**	**-0.8**
TERO	**Teramo**	**0.39**	**112**	P	**Pg**	**20 21 43.7**	**-0.3**
TERO				S	**Sg**	**20 21 49.7**	**+0.4**
TERO				AML	AML		
	comp=E,10010μm,0.5s						
TERO				AML	AML		
	comp=N,12395μm,0.4s						
TERO				AML	AML		
	comp=E,10025μm,0.5s						
TERO				AML	AML		
	comp=N,12430μm,0.4s						
TERO				AML	AML		
	comp=N,12435μm,0.4s						
TERO				AML	AML		
	comp=E,10580μm,0.5s						
TERO				AML	AML		
	comp=E,10045μm,0.5s						
TERO				AML	AML		
	comp=N,13100μm,0.4s						
PIO1	**Pioraco**	**0.42**	**347**	P	**Pg**	**20 21 44.5**	**+0.1**
MDAR	**Monte D'Aria**	**0.42**	**3**	P	**Pg**	**20 21 44.5**	**0.0**
MDAR				S	**Sb**	**20 21 51.2**	**-0.9**
CESX	**Cesi**	**0.42**	**248**	⇑P	**Pb**	**20 21 45.2**	**-0.5**
CESX				S	**Sb**	**20 21 52.4**	**+0.3**
ASSB	**Assisi San Ben**	**0.43**	**309**	⇑P	**Pg**	**20 21 45.1**	**+0.5**
ASSB				S	**Sb**	**20 21 52.0**	**-0.3**
FIU1	**Fiuminata**	**0.44**	**342**	S	**Sb**	**20 21 52.0**	**-0.5**
FIU1	**Fiuminata**	**0.44**	**342**	P	**Pg**	**20 21 45.2**	**+0.4**
MNTP	**Montappone**	**0.45**	**36**	P	**Pg**	**20 21 45.4**	**+0.4**
MNTP				S	**Sb**	**20 21 52.1**	**-0.8**
OFFI	**Offida**	**0.45**	**69**	⇑iP	**Pg**	**20 21 45.5**	**+0.4**
OFFI				S	**Sg**	**20 21 51.8**	**+0.7**
SSM1	**San Severino M**	**0.46**	**6**	P	**Pg**	**20 21 45.2**	**0.0**
SSM1				S	**Sb**	**20 21 52.4**	**-0.8**
GAG1	**Gagliole**	**0.47**	**356**	P	**Pg**	**20 21 45.6**	**+0.2**
GAG1				S	**Sb**	**20 21 52.7**	**-0.6**
GIGS	**Gran Sasso**	**0.47**	**134**	P	**Pg**	**20 21 45.1**	**-0.2**
GIGS				AML	AML		
	comp=N,1860μm,1.5s						
GIGS				AML	AML		
	comp=E,3120μm,0.2s						
AQU	**L'Aquila**	**0.47**	**153**	P	**Pg**	**20 21 45.4**	**0.0**
AQU				S	**Sb**	**20 21 52.7**	**-0.8**
MTL1	**Matelica**	**0.49**	**351**	P	**Pg**	**20 21 46.0**	**+0.2**
MTL1				S	**Sb**	**20 21 53.7**	**-0.3**
SNTG	**Esanatoglia**	**0.50**	**346**	P	**Pg**	**20 21 46.0**	**0.0**
SNTG				S	**Sb**	**20 21 53.7**	**-0.6**
SNTG				AML	AML		
	comp=E,442μm,0.5s						
SNTG				AML	AML		
	comp=N,524μm,0.4s						
SNTG				AML	AML		
	comp=E,3705μm,0.8s						
SNTG				AML	AML		
	comp=N,4290μm,0.4s						
FIAM	**Fiamignano**	**0.51**	**179**	P	**Pg**	**20 21 46.3**	**+0.2**
FIAM				S	**Sb**	**20 21 54.2**	**-0.3**
FIAM				AML	AML		
	comp=E,4770μm,0.6s						
FIAM				AML	AML		
	comp=N,4390μm,0.9s						
ATCC	**AVT- Casa Cast**	**0.54**	**320**	P	**Pg**	**20 21 47.0**	**+0.4**
ATCC				S	**Sb**	**20 21 55.6**	**+0.2**
ATCC				AML	AML		
	comp=E,7080μm,0.8s						
ATCC				AML	AML		
	comp=N,6265μm,0.7s						
EL6	**Elcito**	**0.56**	**359**	P	**Pg**	**20 21 47.0**	**-0.1**
EL6				S	**Sb**	**20 21 56.1**	**+0.1**
TRE1	**Treia**	**0.56**	**15**	P	**Pb**	**20 21 47.6**	**-0.4**
TRE1				S	**Sb**	**20 21 55.8**	**-0.2**
FOSV	**Fossato di Vic**	**0.58**	**334**	P	**Pg**	**20 21 47.6**	**0.0**
FOSV				S	**Sb**	**20 21 56.6**	**-0.1**
TRTR	**Tortoreto Alta**	**0.59**	**86**	P	**Pg**	**20 21 48.1**	**+0.4**
CING	**Cingoli**	**0.61**	**6**	P	**Pg**	**20 21 47.8**	**-0.2**
CING				S	**Sb**	**20 21 57.3**	**-0.1**
FAGN	**Fagnano**	**0.62**	**145**	P	**Pg**	**20 21 47.8**	**-0.4**
FAGN				S	**Sb**	**20 21 57.1**	**-0.5**
MURB	**Monte Urbino**	**0.65**	**319**	P	**Pg**	**20 21 49.1**	**+0.3**
MURB				S	**Sb**	**20 21 59.1**	**+0.4**
VCEL	**Villa Celiera**	**0.66**	**125**	P	**Pg**	**20 21 48.6**	**-0.4**
VCEL				S	**Sg**	**20 21 58.0**	**+0.4**
MMUR	**Monte Murano**	**0.67**	**353**	P	**Pg**	**20 21 49.1**	**-0.1**
SRES	**S.Oreste - Sor**	**0.70**	**220**	P	**Pg**	**20 21 49.8**	**+0.1**
ATTE	**AVT- Monte Tez**	**0.70**	**308**	P	**Pg**	**20 21 49.9**	**+0.2**
SSFR	**Montelago di S**	**0.70**	**340**	P	**Pg**	**20 21 49.3**	**-0.5**
SSFR				S	**Sb**	**20 22 00.8**	**+0.5**
PP3	**Marolino**	**0.71**	**31**	P	**Pg**	**20 21 49.9**	**+0.1**
PP3				S	**Sb**	**20 22 00.1**	**-0.1**
ATFO	**Monte Foce - G**	**0.71**	**327**	P	**Pg**	**20 21 50.0**	**0.0**
ATSC	**Scheggia e Pas**	**0.72**	**335**	P	**Pg**	**20 21 49.9**	**-0.2**
ARVD	**Arcevia**	**0.73**	**350**	P	**Pg**	**20 21 50.2**	**-0.2**
T0110	**Collepietro**	**0.74**	**138**	P	**Pg**	**20 21 49.9**	**-0.6**
T0110				S	**Sb**	**20 22 00.8**	**-0.3**
T0110				AML	AML		
	comp=N,8270μm,0.4s						
T0110				AML	AML		
	comp=E,7285μm,0.5s						
ATLO	**AVT- Montelove**	**0.75**	**317**	P	**Pg**	**20 21 50.5**	**-0.2**
MGAB	**Montegabbione**	**0.75**	**281**	P	**Pb**	**20 21 51.0**	**-0.2**
MGAB				S	**Sb**	**20 22 02.0**	**+0.5**
PTQR	**Pietraquaria**	**0.78**	**164**	P	**Pg**	**20 21 50.8**	**-0.5**
PTQR				S	**Sb**	**20 22 02.7**	**+0.2**
TB01	**Gubbio**	**0.78**	**321**	P	**Pg**	**20 21 51.3**	**-0.1**
TB01				S	**Sb**	**20 22 03.5**	**+1.0**
TB02	**Pietralunga**	**0.79**	**320**	P	**Pg**	**20 21 51.2**	**-0.2**
ATVA	**AVT- Monte Val**	**0.79**	**310**	P	**Pg**	**20 21 51.5**	**+0.1**
FRON	**Frontone**	**0.80**	**339**	P	**Pg**	**20 21 51.2**	**-0.4**
ATVO	**AVT- Monte Val**	**0.80**	**320**	P	**Pg**	**20 21 51.4**	**-0.2**
MTCE	**Montecelio**	**0.80**	**200**	P	**Pg**	**20 21 51.4**	**-0.2**
MTCE				S	**Sb**	**20 22 03.5**	**+0.6**
TB03	**Pietralunga**	**0.81**	**321**	P	**Pg**	**20 21 51.7**	**-0.2**
ATBU	**Serra di Buran**	**0.81**	**330**	P	**Pg**	**20 21 51.9**	**0.0**
CERT	**Cerreto**	**0.83**	**187**	P	**Pg**	**20 21 52.0**	**-0.2**
ATMI	**Monte Miggiano**	**0.83**	**313**	P	**Pb**	**20 21 52.5**	**-0.2**
ATMI				S	**Sb**	**20 22 03.8**	**-0.1**
ATPI	**Pietralunga -**	**0.85**	**323**	P	**Pg**	**20 21 52.5**	**-0.1**
ATPC	**Poggio Castell**	**0.85**	**326**	P	**Pg**	**20 21 52.6**	**-0.1**
AOI	**Ancona**	**0.86**	**25**	P	**Pg**	**20 21 52.3**	**-0.4**
AOI				S	**Sg**	**20 22 04.4**	**+0.5**
COR1	**Corinaldo**	**0.86**	**355**	P	**Pg**	**20 21 52.4**	**-0.5**
PIEI	**Pieia**	**0.87**	**331**	P	**Pg**	**20 21 52.5**	**-0.5**
SACS	**San Casciano d**	**0.89**	**275**	P	**Pb**	**20 21 53.7**	**+0.1**
SACS				S	**Sb**	**20 22 05.8**	**+0.3**
MPAG	**Monte Paganucc**	**0.89**	**343**	P	**Pg**	**20 21 53.3**	**-0.2**
MPAG				S	**Sb**	**20 22 05.9**	**+0.2**
RCAV	**Rocca di Cave**	**0.93**	**188**	P	**Pb**	**20 21 54.4**	**-0.1**
FSSB	**Fossombrone**	**0.95**	**345**	P	**Pg**	**20 21 54.2**	**-0.3**
FSSB				S	**Sb**	**20 22 07.4**	**+0.1**
ATMC	**Monte Cedrone**	**0.95**	**315**	P	**Pg**	**20 21 54.4**	**-0.1**
INTR	**Introdacqua**	**0.96**	**142**	P	**Pg**	**20 21 53.6**	**-1.1**
BADI	**Badiali**	**0.97**	**320**	P	**Pg**	**20 21 54.9**	**-0.1**
VVLD	**Villa Vallelon**	**0.98**	**157**	P	**Pg**	**20 21 54.2**	**-0.8**
GUAR	**Guarcino**	**0.99**	**171**	P	**Pb**	**20 21 55.4**	**+0.1**
CAFI	**Castiglion Fio**	**1.01**	**304**	P	**Pb**	**20 21 55.6**	**-0.1**
CAFI				S	**Sn**	**20 22 09.7**	**-0.7**
PE3	**Peglio**	**1.03**	**334**	P	**Pg**	**20 21 55.7**	**-0.2**
SF03	**Valle Cupa**	**1.05**	**272**	P	**Pn**	**20 21 56.6**	**-0.3**
RDP	**Rocca di Papa**	**1.05**	**196**	P	**Pb**	**20 21 55.9**	**-0.5**
MCIV	**Monte Civitell**	**1.06**	**271**	P	**Pg**	**20 21 56.4**	**-0.1**
SF11	**Podere del Sol**	**1.06**	**276**	P	**Pb**	**20 21 56.3**	**-0.3**
SF04	**Casetta**	**1.07**	**274**	P	**Pn**	**20 21 57.1**	**0.0**
SSP9	**Sansepolcro**	**1.07**	**319**	P	**Pb**	**20 21 56.3**	**-0.5**
LPEL	**Lama dei Pelig**	**1.08**	**132**	P	**Pb**	**20 21 55.7**	**-1.1**
PARC	**Parchiule**	**1.08**	**324**	P	**Pb**	**20 21 56.9**	**-0.1**
TOLF	**Tolfa**	**1.08**	**230**	P	**Pg**	**20 21 57.0**	**0.0**
SF14	**Selvena**	**1.10**	**270**	P	**Pb**	**20 21 57.1**	**-0.2**
SF01	**Poggio Pratacc**	**1.14**	**272**	P	**Pb**	**20 21 57.7**	**-0.3**
POFI	**Posta Fibreno**	**1.15**	**157**	P	**Pb**	**20 21 57.6**	**-0.5**
LRP	**Arpino**	**1.18**	**162**	P	**Pb**	**20 21 58.2**	**-0.3**
PESA	**Pesaro**	**1.18**	**350**	P	**Pb**	**20 21 57.8**	**-0.8**
CRE	**Caprese Michel**	**1.20**	**315**	P	**Pb**	**20 21 58.6**	**-0.3**
ARCI	**Arcidosso**	**1.21**	**274**	P	**Pb**	**20 21 58.2**	**-0.8**
GIUL	**Giuliano Di Ro**	**1.22**	**175**	P	**Pn**	**20 21 59.1**	**-0.1**
LATB	**Latina**	**1.28**	**185**	P	**Pn**	**20 21 59.8**	**-0.2**
RNI2	**Rionero Sannit**	**1.32**	**144**	P	**Pn**	**20 22 00.6**	**0.0**
CERA	**Filignano**	**1.35**	**150**	P	**Pb**	**20 22 01.4**	**-0.2**
ASQU	**Asqua**	**1.41**	**317**	P	**Pb**	**20 22 02.5**	**+0.1**
SFI	**Santa Sofia**	**1.46**	**321**	P	**Pb**	**20 22 03.2**	**-0.1**
TRIV	**Trivento**	**1.47**	**133**	P	**Pb**	**20 22 03.3**	**-0.2**
FROS	**Frosini**	**1.50**	**288**	P	**Pb**	**20 22 03.7**	**-0.3**
CSNT	**Castellina Chi**	**1.50**	**298**	P	**Pn**	**20 22 03.5**	**+0.4**
OSSC	**Osservatorio P**	**1.56**	**299**	P	**Pb**	**20 22 04.5**	**-0.5**
RUFI	**Rufina**	**1.58**	**313**	P	**Pb**	**20 22 05.0**	**-0.4**
VAGA	**Valle Agricola**	**1.59**	**148**	P	**Pb**	**20 22 05.5**	**-0.1**
BSSO	**Busso**	**1.65**	**138**	P	**Pb**	**20 22 06.0**	**-0.6**
TRIF	**Trifonti**	**1.66**	**283**	P	**Pb**	**20 22 06.1**	**-0.6**
DUGI	**Dugi Otok**	**1.87**	**49**	*e*Pn	**Pn**	**20 22 08.4**	**+0.2**
VIRC	**Vir**	**2.08**	**42**	*e*Pn	**Pn**	**20 22 11.2**	**+0.3**
BRJN	**Brijuni**	**2.18**	**12**	*e*Pn	**Pn**	**20 22 12.3**	**-0.1**
MORI	**Morici**	**2.19**	**59**	*e*Pn	**Pn**	**20 22 12.7**	**+0.3**
NVLJ	**Novalja**	**2.20**	**35**	*e*Pn	**Pn**	**20 22 12.8**	**+0.2**
RABC	**Rab**	**2.32**	**31**	*e*Pn	**Pn**	**20 22 14.4**	**+0.2**
UDBI	**Udbina**	**2.60**	**47**	*e*Pn	**Pn**	**20 22 19.8**	**+1.5**
KIJV	**Kijevo**	**2.70**	**62**	*e*Pn	**Pn**	**20 22 20.8**	**+1.3**
PLIT	**Plitvice**	**2.78**	**40**	*e*Pn	**Pn**	**20 22 21.7**	**+1.0**
LSTV	**Lastovo**	**2.78**	**89**	*e*Pn	**Pn**	**20 22 21.2**	**+0.5**
SKDS	**Skadanscina**	**2.85**	**13**	*e*Pn	**Pn**	**20 22 20.7**	**-0.9**
SKDS	**Skadanscina**	**2.85**	**13**	*e*Pn	**Pn**	**20 22 21.8**	**+0.2**
SKDS				*e*Sn	**Sn**	**20 22 56.2**	**+0.4**
SKDS				IAML		20 22 58.6	
	comp=Z,34nm,0.3s						
MAKA	**Makarska**	**2.91**	**78**	*e*Pn	**Pn**	**20 22 23.5**	**+1.1**
A050A	**Klekovaca**	**3.01**	**54**	*i*Pn	**Pn**	**20 22 25.3**	**+1.4**
RICI	**Ricice**	**3.03**	**75**	*e*Pn	**Pn**	**20 22 25.4**	**+1.3**
PGF	**Pioggiola**	**3.04**	**267**	*e*P	**Pn**	**20 22 25.9**	**+1.6**
PGF				*e*Sn	**Sn**	**20 22 57.0**	**-3.7**
	comp=Z,5.9nm,0.4s						
CEY	**Cerknica**	**3.11**	**17**	*e*Pn	**Pn**	**20 22 25.5**	**+0.3**
BOJS	**Bojanci**	**3.13**	**29**	*e*Pn	**Pn**	**20 22 26.5**	**+1.0**
BOJS	**Bojanci**	**3.13**	**29**	P	**Pn**	**20 22 26.5**	**+1.0**
AMUR	**Altamura**	**3.21**	**124**	P	**Pn**	**20 22 26.5**	**0.0**
SRKY	**Kupres RS**	**3.23**	**65**	*e*Pn	**Pn**	**20 22 29.5**	**+2.7**
CGRP	**Cima Grappa**	**3.25**	**344**	P	**Pn**	**20 22 28.0**	**+0.8**
A251A	**Rujevac**	**3.28**	**43**	*e*Pn	**Pn**	**20 22 28.5**	**+1.1**
OZLJ	**Ozalj**	**3.31**	**30**	*e*Pn	**Pn**	**20 22 28.4**	**+0.5**
GORR	**Gorreto**	**3.32**	**305**	⇑P	**Pb**	**20 22 31.6**	**-3.5**
MGRS	**Mrkonjic Grad**	**3.32**	**59**	*i*Pn	**Pn**	**20 22 30.3**	**+2.2**
STON	**Ston**	**3.38**	**87**	*i*Pn	**Pn**	**20 22 28.9**	**+0.1**
STON	**Ston**	**3.38**	**87**	*e*Pn	**Pn**	**20 22 28.8**	**0.0**
STON				*e*Sn	**Sn**	**20 23 06.3**	**-2.0**
SALO	**Salr**	**3.40**	**328**	P	**Pn**	**20 22 30.7**	**+1.5**
DOSS	**Dosso del Somm**	**3.40**	**337**	P	**Pn**	**20 22 30.2**	**+1.0**
LJU	**Ljubljana**	**3.42**	**17**	P	**Pn**	**20 22 30.3**	**+0.8**
MATE	**Matera**	**3.43**	**127**	⇑P	**Pn**	**20 22 31.0**	**+1.5**
MATE				⇑S	**Sn**	**20 23 12.7**	**+2.6**
MPRI	**Monte Prat**	**3.47**	**359**	⇑P	**Pn**	**20 22 32.1**	**+2.0**
CRES	**Cresnjev**	**3.49**	**28**	*e*Pn	**Pn**	**20 22 30.2**	**-0.1**
MAGA	**Magasa**	**3.49**	**330**	P	**Pn**	**20 22 32.1**	**+1.6**
A051A	**Mrakovica**	**3.54**	**49**	⇑*i*Pn	**Pn**	**20 22 32.1**	**+1.0**
LUSI	**Trento, Gardas**	**3.54**	**335**	P	**Pn**	**20 22 31.7**	**+0.5**
BLY	**Banja Luka**	**3.55**	**55**	⇑*i*Pn	**Pb**	**20 22 37.3**	**-1.7**
BLY	**Banja Luka**	**3.55**	**55**	*e*Pn	**Pb**	**20 22 35.6**	**-3.4**
CIMO	**Cimolais**	**3.57**	**353**	P	**Pn**	**20 22 32.3**	**+0.8**
PTCC	**Patocco-Chiusa**	**3.64**	**3**	P	**Pn**	**20 22 33.1**	**+0.6**
GAGG	**Gaggia**	**3.65**	**336**	P	**Pn**	**20 22 33.6**	**+0.9**
ACOM	**Acomizza, Ital**	**3.79**	**4**	P	**Pn**	**20 22 35.7**	**+1.1**
MOSL	**Moslavina**	**3.86**	**41**	*e*Pn	**Pn**	**20 22 35.3**	**-0.2**
OBKA	**Obir**	**3.87**	**15**	*e*Pn	**Pn**	**20 22 36.0**	**+0.3**
OBKA	**Obir**	**3.87**	**15**	*e*Pn	**Pn**	**20 22 35.8**	**+0.1**
	comp=Z,1.1nm,0.3s						
MYKA	**Terra Mystica**	**3.88**	**5**	*i*Pn	**Pn**	**20 22

FRGS	**Fruska Gora**	**5.39**	**61**	ǁP		**Pn**	**20 22 59.1**	**+2.6**
FRGS	**Fruska Gora**	**5.39**	**61**	*e*Pn		**Pn**	**20 22 55.8**	**-0.7**
FRGS	**Fruska Gora**	**5.39**	**61**	*e*Pn		**Pn**	**20 22 57.2**	**+0.7**
FRGS				*e*Sn		**Sn**	**20 24 00.2**	**+1.7**
RONA	**Rosalia, Austr**	**5.42**	**23**	*e*Pn		**Pn**	**20 22 57.6**	**+0.7**
	comp=Z,1.6nm,0.4s							
TRUS	**Trudelj**	**5.50**	**72**	*e*Pn		**Pn**	**20 23 00.5**	**+2.5**
CONA	**Conrad Observa**	**5.51**	**20**	*e*Pn		**Pn**	**20 22 58.5**	**+0.3**
	comp=Z,2.0nm,0.5s							
SMRF	**Simiane la Rot**	**5.62**	**285**	*e*P		**Pn**	**20 23 02.1**	**+2.4**
SMRF				*e*Sn		**Sn**	**20 23 58.7**	**-5.6**
	comp=Z,0.6nm,0.3s							
ORIF	**Oris-en-Rattie**	**5.65**	**295**	*e*P		**Pn**	**20 23 04.3**	**+4.1**
ORIF				*e*Sn		**Sn**	**20 23 59.0**	**-6.1**
	comp=Z,4.7nm,0.6s							
GRUS	**Gruza**	**5.66**	**76**	*e*Pn		**Pn**	**20 23 03.1**	**+2.9**
SELS	**Selova**	**5.89**	**83**	*e*Pn		**Pn**	**20 23 04.9**	**+1.5**
GERES	**GERESS Array B**	**6.09**	**4**	Pn		**Pn**	**20 23 06.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=183,slow=12,SNR=19							
GERES				Sn		**Sn**	**20 24 13.6**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=187,slow=23,SNR=2.7							
GERES				Lg	Lg		20 24 51.1	
	baz=178,slow=26							
	comp=Z,0.9nm,0.3s							
CKRC	**Cesky Krumlov**	**6.11**	**7**	*e*PN		**Pn**	**20 23 06.3**	**0.0**
CKRC				*e*SN		**Sn**	**20 24 13.7**	**-2.4**
CABF	**La Chapelle**	**6.31**	**310**	*e*P		**Pn**	**20 23 11.9**	**+2.8**
CABF				*e*Sn		**Sn**	**20 24 14.5**	**-6.7**
	comp=Z,3.5nm,0.5s							
MODS	**Modra-Piesok**	**6.32**	**26**	*e*PN		**Pn**	**20 23 11.6**	**+2.4**
MODS				*e*SN		**Sn**	**20 24 23.9**	**+2.6**
MODS				*e*SG		**Sg**	**20 25 03.0**	**+4.1**
BOVS	**Bovan**	**6.34**	**79**	⇑P		**Pn**	**20 23 10.6**	**+1.0**
BOVS				⇑S		**Sn**	**20 24 22.3**	**+0.4**
KHC	**Kasperske Hory**	**6.37**	**3**	*e*PN		**Pn**	**20 23 10.6**	**+0.7**
KHC				*e*SN		**Sn**	**20 24 21.4**	**-1.2**
BARS	**Barje**	**6.40**	**87**	*e*Pn		**Pn**	**20 23 12.1**	**+1.7**
BARS				*e*Sn		**Sn**	**20 24 23.9**	**+0.4**
MDVR	**Moldovita**	**6.54**	**69**	ǁP		**Pn**	**20 23 13.7**	**+1.3**
PRVS	**Prvonek**	**6.62**	**89**	*e*Pn		**Pn**	**20 23 15.0**	**+1.6**
PRVS				*e*Sn		**Sn**	**20 24 28.8**	**0.0**
KRUC	**Moravsky**	**6.69**	**19**	*e*PN		**Pn**	**20 23 14.5**	**+0.1**
HINF	**Hinteralfeld**	**6.70**	**321**	*e*P		**Pn**	**20 23 16.0**	**+1.5**
HINF				*e*Sn		**Sn**	**20 24 24.0**	**-6.8**
	comp=Z,5.1nm,0.4s							
ZAGS	**Zajecar**	**6.74**	**78**	*e*Pn		**Pn**	**20 23 15.7**	**+0.7**
BZS	**Buzias**	**6.74**	**62**	⇑P		**Pn**	**20 23 17.1**	**+2.0**
BZS	**Buzias**	**6.74**	**62**	*e*Pn		**Pn**	**20 23 16.5**	**+1.5**
LASF	**Ste Croix**	**6.86**	**284**	*e*P		**Pn**	**20 23 18.9**	**+2.2**
CDF	**Champ du Feu**	**6.97**	**326**	*e*P		**Pn**	**20 23 19.5**	**+1.3**
CDF				*e*Sn		**Sn**	**20 24 30.0**	**-7.4**
	comp=Z,4.6nm,0.5s							
VRAC	**Vranov**	**6.97**	**19**	Lg	Lg		20 25 17.8	
	comp=Z,0.2nm,0.3s,baz=92,slow=11,SNR=1.6							
VYHS	**Vyhne**	**6.99**	**33**	*e*PN		**Pn**	**20 23 19.7**	**+1.3**
VYHS				*e*PG		**Pg**	**20 23 52.9**	**+3.0**
VYHS				*e*SN		**Sn**	**20 24 38.1**	**+0.3**
ZAPS	**Zavoj**	**7.00**	**83**	*e*Pn		**Pn**	**20 23 20.8**	**+2.2**
ZAPS				*e*Sn		**Sn**	**20 24 37.0**	**-1.1**
BLKB	**Belogradchik**	**7.04**	**80**	⇑P		**Pn**	**20 23 20.8**	**+1.6**
BLKB				⇑S		**Sn**	**20 24 39.6**	**+0.4**
HERR	**Herculane**	**7.05**	**69**	⇑P		**Pn**	**20 23 21.3**	**+2.0**
HAU	**Haudompre**	**7.07**	**320**	*e*P		**Pn**	**20 23 21.6**	**+2.0**
HAU				*e*Sn		**Sn**	**20 24 32.5**	**-7.4**
	comp=Z,6.5nm,0.3s							
GZR	**Gura Zlata**	**7.44**	**66**	ǁP		**Pn**	**20 23 26.2**	**+1.6**
VTS	**Vitosha**	**7.46**	**88**	ǁP		**Pn**	**20 23 26.6**	**+1.5**
VTS				⇑S		**Sn**	**20 24 47.4**	**-2.3**
VTS	**Vitosha**	**7.46**	**88**	*e*Pn		**Pn**	**20 23 26.7**	**+1.6**
VTS				*e*Sn		**Sn**	**20 24 46.0**	**-3.7**
KEST	**Kesra**	**7.61**	**204**	Pn		Pn	20 23 32.5	+5.5
	comp=Z,0.2nm,0.3s,baz=230,slow=3.0,SNR=4.3							
KEST				Sn		**Sn**	**20 24 52.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=230,slow=18,SNR=1.0							
	comp=Z,3.4nm,0.9s							
SMF	**Signal de Mont**	**7.65**	**304**	*e*P		**Pn**	**20 23 30.2**	**+2.6**
SMF				*e*Sn		**Sn**	**20 24 46.7**	**-7.5**
	comp=Z,3.0nm,0.5s							
PAGF	**Fort de Pagny**	**7.76**	**321**	*e*P		**Pn**	**20 23 31.1**	**+2.2**
PAGF				*e*Sn		**Sn**	**20 24 48.9**	**-7.8**
	comp=Z,1.0nm,0.3s							
LANS	**Liptovska Anna**	**7.76**	**33**	*e*PG		**Pg**	**20 24 03.4**	**-1.3**
SFTF	**Sexfontaines**	**7.85**	**317**	*e*P		**Pn**	**20 23 32.6**	**+2.4**
LOR	**Lormes**	**7.95**	**308**	*e*P		**Pn**	**20 23 34.3**	**+2.7**
	baz=124							
LOR				*e*Sn		**Sn**	**20 24 53.8**	**-7.6**
	comp=Z,2.7nm,0.3s							
AVF	**Avril sur Loir**	**8.02**	**303**	*e*P		**Pn**	**20 23 35.2**	**+2.7**
AVF				*e*Sn		**Sn**	**20 24 55.5**	**-7.7**
	comp=Z,0.4nm,0.3s							
SSF	**Saint Saulge**	**8.05**	**305**	*e*P		**Pn**	**20 23 36.0**	**+3.0**
SSF				*e*Sn		**Sn**	**20 24 56.1**	**-7.9**
	comp=Z,1.1nm,0.4s							
BGF	**Bois d'Agland**	**8.24**	**301**	*e*P		**Pn**	**20 23 38.5**	**+3.0**
CAF	**Calviac**	**8.27**	**289**	*e*P		**Pn**	**20 23 38.6**	**+2.6**
CLL	**Collm**	**8.54**	**360**	*e*Pg		**Pg**	**20 24 16.0**	**-3.5**
CLL				*ex*		x	20 25 27.0	
CLL				*e*Sg		**Sg**	**20 26 09.0**	**-1.0**
VOIR		**8.99**	**69**	⇑P		**Pn**	**20 23 46.6**	**+0.6**
MLR	**Muntele Rosu**	**9.62**	**69**	⇑P		**Pn**	**20 23 55.0**	**+0.3**
MLR	**Muntele Rosu**	**9.62**	**69**	Pn		**Pn**	**20 23 57.6**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=169,slow=12,SNR=2.2							
MLR				LR		LR	20 29 11.2	
	comp=Z,12nm,18.8s,baz=231,slow=47							
	comp=Z,1.3nm,0.6s							
IDI	**Anoyia**	**11.81**	**125**	Pn		**Pn**	**20 24 28.1**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=61,slow=17,SNR=2.2							
IDI				Sn		**Sn**	**20 26 29.9**	**-6.5**
	comp=Z,0.2nm,0.3s,baz=182,slow=19,SNR=1.8							
	comp=Z,9.9nm,1.0s							
EKA	**Eskdalemuir Ar**	**16.43**	**326**	Pn		**P**	**20 25 29.2**	**0.0**
	baz=136,slow=14							
	comp=Z,0.2nm,0.6s							
FINES	**FINESS Array B**	**20.25**	**18**	P		**P**	**20 26 11.8**	**+0.6**
	comp=Z,3.2nm,1.1s,baz=183,slow=9.5,SNR=4.8							
	comp=Z,3.2nm,1.1s							
TORD	**Torodi Ar. Bea**	**31.13**	**202**	P		**P**	**20 27 56.5**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=30,slow=8.9,SNR=2.6							
BVAR	**Borovoye Array**	**38.77**	**54**	P		**P**	**20 29 02.6**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=309,slow=9.1,SNR=3.1							
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**47.82**	**60**	P		**P**	**20 30 15.9**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=273,slow=6.5,SNR=4.2							
	comp=Z,0.3nm,0.7s							
SONM	**Songino Array**	**61.86**	**50**	P		**P**	**20 31 57.6**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=311,slow=9.1,SNR=1.9							
	comp=Z,0.4nm,0.7s							

*IDC **24** 20:22:03.4±1.1, 13°.03N×145°.73E, h0km, mb3.8/7, mbtmp3.8/7, MS2.9/2, Error ellipse: s-maj=28.1km s-min=18.2km az=65.0*

ISC 24 20:22:09.6±1.1, 13°.0N±0°.2×145°.7E±0°.2, h43km, n11, σ0.73/10, mb3.7/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.95**	**307**	Pn		**Pn**	**20 22 25.9**	**-0.8**
	122nm,0.3s,baz=144,slow=10,SNR=51							
GUMO				Sn		**Sn**	**20 22 39.9**	**+0.8**
	173nm,0.3s,baz=196,slow=23,SNR=8.2							
GUMO				LR		LR	20 22 49.6	
	comp=Z,442nm,18.3s,baz=225,slow=46							
JHJ	**Hachijo jima 2**	**20.72**	**346**	LR		LR	20 33 38.6	
	comp=Z,40nm,21.8s,baz=84,slow=34							
MJAR	**Matsushiro Arr**	**24.37**	**345**	LR		LR	20 35 39.5	
	comp=Z,31nm,20.2s,baz=168,slow=34							
WRA	**Warramunga Arr**	**34.59**	**199**	P		**P**	**20 28 54.3**	**-0.3**
	1.2nm,0.6s,baz=12,slow=9.6,SNR=25							
	1.2nm,0.6s							
ASAR	**Alice Springs**	**38.22**	**198**	P		**P**	**20 29 25.7**	**+0.1**
	0.8nm,0.8s,baz=20,slow=10,SNR=11							
	0.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**45.19**	**283**	P		**P**	**20 30 23.3**	**+0.5**
	0.6nm,0.5s,baz=129,slow=41,SNR=2.1							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**62.43**	**316**	P		**P**	**20 32 27.5**	**-1.0**
	0.2nm,0.5s,baz=85,slow=9.1,SNR=4.6							
	0.2nm,0.5s							
ILAR	**Eielson Array**	**68.77**	**25**	P		**P**	**20 33 09.2**	**+0.3**
	0.5nm,0.9s,baz=260,slow=5.2,SNR=4.6							
	0.5nm,0.9s							
ARCES	**ARCESS Array B**	**87.86**	**342**	P		**P**	**20 34 53.9**	**-0.4**
	1.0nm,0.8s,baz=68,slow=7.9,SNR=1.6							
	1.0nm,0.8s							
FINES	**FINESS Array B**	**92.00**	**335**	P		**P**	**20 35 14.3**	**+0.6**
	1.2nm,0.9s,baz=96,slow=1.9,SNR=5.3							
	1.2nm,0.9s							
DBIC	**Dimbokro**	**144.77**	**302**	PKP		**PKPdf**	**20 41 43.7**	**+0.8**
	5.4nm,0.9s,baz=214,slow=11,SNR=2.4							

*MOS **24** 21:03:03.3±1.0, 46°.74N×152°.85E, h49km, mb4.5/15, Error ellipse: s-maj=8.6km s-min=6.3km az=88.2*
*BJI **24** 21:03:03.6±0.0, 46°.61N×152°.93E, h61km, mb4.4/34, mB4.8/19, Ms3.9/4, Ms7 3.7/5*
*SKHL **24** 21:03:04.6±0.6, 46°.60N×153°.00E, h65km±3km, mb4.4/6*
*NEIC **24** 21:03:04.1±2.8, 46°.78N±0°.10×152°.8E±0°.1, h35km±2km, mb4.5/46, Error ellipse: s-maj=18.9km s-min=11.6km az=138.0*
*IDC **24** 21:03:05.9±2.7, 46°.76N×152°.69E, h56km±23km, mb3.9/27, mbtmp4.1/32, ML3.0/4, MS3.2/28, Error ellipse: s-maj=16.8km s-min=12.9km az=137.0*

ISC 24 21:03:03.7±0.5, 46°.61N±0°.06×152°.92E±0°.06, h40km, n256, σ1.26/252, mb4.4/76, MS3.5/24, 32C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.79**	**251**	*e*PN		**Pn**	**21 04 00.9**	**+1.4**
KUR				*e*S		**Sn**	**21 04 43.0**	**+0.2**
KUR				pmax	pmax			
	comp=N,121nm,0.3s							
KUR				pmax	pmax			
	comp=Z,182nm,0.3s							
KUR				smax	smax			
	comp=N,345nm,0.6s							
KUR				smax	smax			
	comp=E,692nm,0.6s							
KUR	**Kuril'sk**	**3.79**	**251**	*e*P		**Pn**	**21 04 00.8**	**+1.3**
KUR				AMB	AMB		21 04 03.2	
	comp=E,180nm,0.5s							
KUR				*e*S		**Sn**	**21 04 43.0**	**+0.2**
KUR				A	A		21 05 01.1	
	comp=E,300nm,0.6s							
KUR				A	A		21 05 01.1	
	comp=E,570nm,0.6s							
SKR	**Severo-Kuril's**	**4.59**	**26**	*e*PN		**Pn**	**21 04 11.9**	**+1.3**
SKR				*e*S		**Sn**	**21 05 01.9**	**-0.7**
SKR				pmax	pmax			
	comp=Z,71nm,0.9s							
SKR				smax	smax			
	comp=N,104nm,0.9s							
SKR				smax	smax			
	comp=E,133nm,0.6s							
SKR	**Severo-Kuril's**	**4.59**	**26**	*e*P		**Pn**	**21 04 11.9**	**+1.3**
SKR				AMB	AMB		21 04 15.5	
	comp=E,50nm,0.7s							
SKR				*e*S		**Sn**	**21 05 01.9**	**-0.7**
SKR				A	A		21 05 09.5	
	comp=E,70nm,0.4s							
SKR				A	A		21 05 09.5	
	comp=E,200nm,0.4s							
PAU	**Pauzhetka**	**5.49**	**26**	*e*P		**Pn**	**21 04 25.2**	**+2.3**
PAU				AMB	AMB		21 04 28.6	
	comp=E,20nm,0.8s							
PAU				*e*S		**Sn**	**21 05 26.1**	**+1.3**
PAU				A	A		21 05 31.0	
	comp=E,100nm,0.3s							
PAU				A	A		21 05 31.0	
	comp=E,60nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**5.60**	**245**	*i* PN		**Pn**	**21 04 25.4**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**5.60**	**245**	*e*P		**Pn**	**21 04 26.0**	**+1.5**
YUK				AMB	AMB		21 04 27.5	
	comp=E,20nm,0.4s							
YUK				*e*S		**Sn**	**21 05 28.4**	**+0.9**
YUK				A	A		21 05 38.6	
	comp=E,360nm,0.6s							
YUK				A	A		21 05 38.6	
	comp=E,520nm,0.6s							
NMR	**Nemuro--Hokkai**	**6.04**	**240**	*e*P		**Pn**	**21 04 29.7**	**-0.8**
NMR				*e*S		**Sn**	**21 05 35.1**	**-3.2**
AKK	**Akkeshi**	**6.78**	**241**	*e*P		**Pn**	**21 04 39.7**	**-0.8**
AKK				*e*S		**Sn**	**21 05 53.0**	**-3.3**
YSS	**Yuzh-Sakhalins**	**6.99**	**277**	Pn		**Pn**	**21 04 44.4**	**+0.9**
YSS	**Yuzh-Sakhalins**	**6.99**	**277**	*e*PN		**Pn**	**21 04 46.2**	**+2.7**
YSS				pmax	pmax			
	comp=Z,50nm,0.8s							
YSS				MLR	MLR			
	comp=Z,300nm,12.0s							
YSS				MLR	MLR			
	comp=N,100nm,14.0s							
YSS	**Yuzh-Sakhalins**	**6.99**	**277**	*e*P		**Pn**	**21 04 46.2**	**+2.7**
YSS				AMB	AMB		21 04 50.4	
	comp=N,30nm,0.8s							
PEA0B	**Petropavlovsk-**	**7.20**	**24**	Pn		**Pn**	**21 04 46.1**	**-0.2**
PEA0B	**Petropavlovsk-**	**7.20**	**24**	PN		**Pn**	**21 04 46.1**	**-0.2**
PETK	**Petropavlovsk-**	**7.20**	**24**	P		**Pn**	**21 04 47.6**	**+1.3**
	comp=N,0.4nm,0.3s,baz=189,slow=16,SNR=2.6							
PETK				LR		LR	21 07 27.7	
	comp=N,66nm,20.9s,baz=200,slow=37							
	comp=N,4.2nm,0.8s							
PETK	**Petropavlovsk-**	**7.20**	**24**	Pn		**Pn**	**21 04 46.2**	**-0.1**
TYV	**Tymovskoe**	**8.01**	**306**	*e*PN		Pn	21 05 02.0	+4.6
TYV				*e*S		**Sn**	**21 06 28.4**	**+1.8**
TYV				pmax	pmax			
	comp=Z,16nm,0.8s							
TYV				pmax	pmax			
	comp=Z,100nm,3.3s							
TYV				smax	smax			
	comp=N,21nm,1.5s							
TYV				smax	smax			
	comp=E,15nm,1.5s							
TYV				smax	smax			
	comp=N,400nm,3.5s							
TYV	**Tymovskoe**	**8.01**	**306**	*e*P		**Pn**	**21 05 00.5**	**+3.1**
TYV				AMB	AMB		21 05 02.1	
	comp=N,20nm,0.8s							
ERM	**Erimo**	**8.37**	**240**	Pn		**Pn**	**21 05 03.4**	**+1.0**
ERM	**Erimo**	**8.37**	**240**	PN		**Pn**	**21 05 03.4**	**+1.0**
JEW	**Eniwo**	**8.99**	**249**			**Pn**	**21 05 11.7**	**+0.8**
MA2	**Magadan**	**13.05**	**355**	P		**Pn**	**21 06 05.6**	**-0.8**
	comp=N,3.7nm,0.3s,baz=164,slow=13,SNR=4.8							
MA2				LR		LR	21 10 55.4	
	comp=N,72nm,19.1s,baz=119,slow=36							
MA2	**Magadan**	**13.05**	**355**	Pn		**Pn**	**21 06 05.2**	**-1.2**
KLR	**Kul'dur**	**14.43**	**288**	P		**Pn**	**21 06 24.5**	**-0.7**
	comp=N,0.1nm,0.3s,baz=23,slow=9.9,SNR=2.8							
KLR				LR		LR	21 12 08.2	
	comp=N,98nm,19.2s,baz=65,slow=38							
	comp=N,0.3nm,0.3s							
KLR	**Kul'dur**	**14.43**	**288**	*i* P		**Pn**	**21 06 26.4**	**+1.2**
KLR	**Kul'dur**	**14.43**	**288**	*e*P		**Pn**	**21 06 26.4**	**+1.2**
MAJO	**Matsushiro**	**14.89**	**233**	*i* P		**P**	**21 06 35.1**	**-1.4**
MJAR	**Matsushiro Arr**	**14.89**	**233**	P		**Pn**	**21 06 32.9**	**+1.6**
	comp=N,0.1nm,0.3s,baz=40,slow=10,SNR=2.8							
MJAR				LR		LR	21 12 47.2	
	comp=N,37nm,19.3s,baz=48,slow=39							
	comp=N,2.5nm,0.6s							
USRK	**Ussuriysk Ar.**	**14.90**	**268**	P		**Pn**	**21 06 31.7**	**+0.3**
	comp=N,1.2nm,0.3s,baz=74,slow=12,SNR=12							
	comp=N,4.7nm,0.6s							
SHEM	**Shemya Is, Ala**	**14.99**	**58**	LR		LR	21 11 07.0	
	comp=N,411nm,21.0s,baz=201,slow=32							
JHJ	**Hachijo jima 2**	**16.80**	**221**	LR		LR	21 13 37.6	
	comp=N,12nm,20.4s,baz=318,slow=38							
ZEA	**Zeya**	**17.86**	**303**	*e*P		**P**	**21 07 12.8**	**+3.6**
SEHB	**SEOHWA**	**19.96**	**254**	P		**P**	**21 07 33.2**	**+0.8**
YAK	**Yakutsk**	**20.37**	**328**	P		**P**	**21 07 35.7**	**-0.9**
	comp=N,6.9nm,0.5s,baz=96,slow=1.7,SNR=7.5							
YAK				LR		LR	21 15 32.6	
	comp=N,49nm,18.1s,baz=97,slow=37							
	comp=N,6.9nm,0.5s							
YAK	**Yakutsk**	**20.37**	**328**	P		**P**	**21 07 34.9**	**-1.7**
YAK				IAmb	IAmb	IAmb	21 07 42.0	
	comp=Z,22nm,0.8s							
YAK	**Yakutsk**	**20.37**	**328**	*i* P		**P**	**21 07 36.0**	**-0.6**
YAK				pmax	pmax			
	comp=Z,12nm,0.6s							
YAK	**Yakutsk**	**20.37**	**328**	*e*P		**P**	**21 07 36.0**	**-0.6**
KSRS	**Korea Array**	**20.63**	**253**	P		**P**	**21 07 40.3**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=61,slow=9.7,SNR=16							
KSRS				LR		LR	21 14 30.9	
	comp=Z,36nm,20.6s,baz=50,slow=33							
	comp=Z,3.1nm,0.6s							
KS19	**Wonju Array Si**	**20.64**	**253**	P		Pn	21 07 41.1	-1.0
KS19				IAmb	IAmb	IAmb	21 07 51.4	
	comp=Z,12nm,0.9s							
KSAR	**Wonju Array Be**	**20.66**	**253**	P		**P**	**21 07 40.9**	**+1.0**
KSAR	**Wonju Array Be**	**20.66**	**253**	P		**P**	**21 07 40.9**	**+1.0**
XLT	**XiLinHaoTe**	**25.93**	**278**	*e*P		**P**	**21 08 32.3**	**+0.2**
XLT				pP		sP	21 08 47.3	+0.6
XLT				sP		pwP	21 08 54.5	+8.8
XLT				pmax	pmax			
	comp=Z,8.0nm,0.8s							
XLT				pmax	pmax			
	comp=Z,92nm,4.0s							
TIXI	**Tiksi**	**27.57**	**344**	LR		LR	21 20 08.2	
	comp=Z,59nm,20.3s,baz=182,slow=37							
H11N2	**WAKE ISLAND Hy**	**29.15**	**152**	T		T	21 40 28.7	
	baz=340,slow=76,SNR=1085							
H11N1	**WAKE ISLAND Hy**	**29.17**	**152**	T		T	21 40 27.7	
	baz=340,slow=76,SNR=851							
H11N3	**WAKE ISLAND Hy**	**29.17**	**152**	T		T	21 40 30.0	
	baz=340,slow=76,SNR=774							
NJ2	**Nanjing**	**29.83**	**253**	*e*P		**P**	**21 09 07.4**	**+0.5**
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.6s							
H11S1	**WAKE ISLAND Hy**	**30.24**	**153**	T		T	21 41 50.6	
	baz=341,slow=76,SNR=970							
H11S3	**WAKE ISLAND Hy**	**30.25**	**153**	T		T	21 41 48.1	
	baz=341,slow=76,SNR=901							
H11S2	**WAKE ISLAND Hy**	**30.26**	**153**	T		T	21 41 51.8	
	baz=341,slow=76,SNR=910							
ULN	**Ulaanbaatar**	**30.82**	**289**	*i* P		**P**	**21 09 17.5**	**+1.7**
ULN				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ULN	**Ulaanbaatar**	**30.82**	**289**	*e*P		**P**	**21 09 17.5**	**+1.7**
SONM	**Songino Array**	**31.26**	**290**	P		**P**	**21 09 18.2**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.6,SNR=2.5							
SONM				PcP		**PcP**	**21 12 12.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=73,slow=2.0,SNR=3.1							
SONM				LR		LR	21 22 44.1	
	comp=Z,59nm,19.4s,baz=78,slow=38							
	comp=Z,0.6nm,0.5s							
J20K	**Nowinta River**	**33.57**	**39**	P		**P**	**21 09 41.0**	**+1.6**
IMAR	**Indian Mountai**	**33.96**	**36**	P		**P**	**21 09 43.3**	**+0.4**
H21K	**Melozitna Rive**	**34.30**	**37**	P		**P**	**21 09 47.1**	**+1.3**
H21K				IAmb		IAmb	21 09 48.0	
	comp=Z,3.8nm,1.0s							
XAN	**Xi'an**	**35.37**	**265**	P		**P**	**21 09 55.3**	**-0.1**
XAN				pP		sP	21 10 11.9	+1.7
XAN				pmax	pmax			
	comp=Z,5.0nm,0.8s							
H23K	**Yukon River**	**35.66**	**37**	P		**P**	**21 09 59.4**	**+1.9**
SML	**Sawmill**	**36.16**	**43**	P		**P**	**21 10 03.0**	**+1.1**
WRH	**Wood River Hil**	**36.22**	**39**	P		**P**	**21 10 03.6**	**+1.3**
WRH				IAmb		IAmb	21 10 17.2	
	comp=Z,4.4nm,1.1s							
H24K	**Noodor Dome**	**36.35**	**37**	P		**P**	**21 10 04.5**	**+1.1**
H24K				IAmb		IAmb	21 10 31.6	
	comp=Z,8.0nm,1.3s							
ILAR	**Eielson Array**	**36.74**	**38**	P		**P**	**21 10 06.6**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=254,slow=5.9,SNR=7.4							
	comp=Z,1.1nm,0.9s							
BMAR	**Burnt Mountain**	**37.71**	**34**	P		**P**	**21 10 17.0**	**+2.0**
LZH	**Lanzhou**	**37.76**	**272**	*e*P		**P**	**21 10 17.3**	**+1.4**
LZH				pP		pP	21 10 27.4	+1.1
LZH				sP		sP	21 10 36.0	+5.3
LZH				pmax	pmax			
	comp=Z,11nm,1.3s							
GTA	**Gaotai**	**38.86**	**279**	*e*P		**P**	**21 10 25.3**	**+0.2**
GTA				pP		pwP	21 10 39.0	0.0
GTA				sP		sP	21 10 44.5	+4.6
GTA				pmax	pmax			
	comp=Z,2.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,60nm,4.7s							
GTA				LR	LR			
	comp=Z,52nm,16.7s							
GTA				LR	LR			
	comp=Z,120nm,18.9s							
GTA				LR	LR			
	comp=Z,61nm,16.7s							
K27K	**Chicken**	**38.86**	**39**	P		**P**	**21 10 25.7**	**+1.0**
L27K	**Beaver Creek,**	**39.08**	**41**	P		**P**	**21 10 28.1**	**+1.7**
BCAR	**Beaver Creek A**	**39.09**	**41**	P		**P**	**21 10 28.2**	**+1.5**
HYT	**Haines Junctio**	**41.47**	**44**	P		**P**	**21 10 48.5**	**+2.0**
INK	**Inuvik**	**41.84**	**32**	P		**P**	**21 10 49.2**	**0.0**
	comp=Z,1.3nm,0.3s,baz=282,slow=9.3,SNR=1.3							
	comp=Z,1.3nm,0.3s							
ZAA0	**Zalesovo Array**	**42.59**	**306**	P		**P**	**21 10 52.9**	**

comp=Z,2.0nm,0.8s
SHL Shillong 52.24 268 P P 21 12 10.2 -0.8
SHL IAmb IAmb 21 12 14.1
comp=Z,5.6nm,0.6s
SHL Shillong 52.24 268 P P 21 12 10.2 -0.8
SHL pmax pmax
comp=Z,6.0nm,0.6s
AAK Ala-Archa 53.78 296 *i* P **P 21 12 22.3 +0.1**
AAK pmax pmax
comp=Z,2.0nm,1.3s
AAK Ala-Archa 53.78 296 *eP* **P 21 12 22.3 +0.1**
TAPN Taplejung 53.98 273 *eP* **P 21 12 24.1 +0.1**
JIRN Jiri 54.83 275 *eP* **P 21 12 30.4 +0.2**
comp=Z,34nm,0.6s
GUN Gumba 54.88 275 *eP* **P 21 12 30.7 +0.1**
comp=Z,15nm,0.4s
RAMN Ramite 54.99 274 *eP* **P 21 12 31.0 -0.3**
comp=Z,50nm,0.8s
ARU Arti 55.03 317 LR LR 21 38 19.2
comp=Z,39nm,18.6s,baz=0.0,slow=39
KKN Kakani 55.37 275 *eP* **P 21 12 34.4 +0.4**
comp=Z,5.1nm,0.9s
PKI Pulchoki 55.42 275 *eP* **P 21 12 34.3 -0.1**
comp=Z,13nm,0.6s
PKIN Phulchoki 55.42 275 *eP* **P 21 12 34.1 -0.3**
comp=Z,12nm,0.5s
DMN Daman 55.60 275 *eP* **P 21 12 36.0 +0.3**
comp=Z,38nm,0.7s
GKN Gorkha 55.68 276 *eP* **P 21 12 36.2 +0.1**
comp=Z,32nm,0.6s
DANN Dangsing 56.06 277 *eP* **P 21 12 39.4 +0.4**
comp=Z,39nm,0.6s
ARCES ARCESS Array B 57.94 341 P **P 21 12 50.1 -1.3**
comp=Z,0.4nm,0.4s,baz=33,slow=7.3,SNR=8.6
comp=Z,0.4nm,0.4s
AKTO Aktyubinsk 58.72 312 LR LR 21 40 37.7
comp=Z,72nm,18.1s,baz=47,slow=38
NIL Nilore 59.83 288 P **P 21 13 04.5 -0.5**
NIL Nilore 59.83 288 P **P 21 13 04.5 -0.5**
NIL pmax pmax
comp=Z,11nm,1.0s
SUMG Summit 60.85 4 P **P 21 13 11.4 -0.5**
SUMG Summit 60.85 4 P **P 21 13 11.4 -0.5**
SUMG pmax pmax
comp=Z,14nm,1.2s
SUMG Summit 60.85 4 *i* P **P 21 13 11.0 -0.9**
COEN Coen 60.92 191 P **P 21 13 13.6 +1.1**
BELG Belogornoye 62.55 318 LR LR 21 42 40.6
comp=Z,29nm,18.5s,baz=170,slow=38
ELK Elko 62.99 58 LR LR 21 38 16.6
comp=Z,10nm,20.0s,baz=126,slow=34
FIA1 FINESS Array S 64.11 335 P **P 21 13 31.9 -1.4**
FINES FINESS Array B 64.11 335 P **P 21 13 32.0 -1.3**
comp=Z,3.2nm,0.4s,baz=30,slow=7.3,SNR=58
comp=Z,3.2nm,0.4s
FINES FINESS Array B 64.11 335 P **P 21 13 31.7 -1.5**
AFI Afiamalu 68.08 143 LR LR 21 41 20.3
comp=Z,34nm,18.9s,baz=150,slow=34
NC405 NORSAR Array S 68.14 341 P **P 21 13 58.4 -0.8**
NB2 NORSAR Subarra 68.32 341 P **P 21 13 59.3 -1.0**
comp=Z,2.1nm,0.6s,baz=28,slow=6.5
NOA NORSAR Array B 68.32 341 P **P 21 13 59.6 -0.7**
comp=Z,4.1nm,0.8s,baz=28,slow=6.4,SNR=22
NOA LR LR 21 47 29.8
comp=Z,12nm,18.1s,baz=5.0,slow=39
comp=Z,4.1nm,0.8s
WB2 Warramunga Arr 68.33 199 P **P 21 14 00.5 -0.2**
WB2 IAmb IAmb 21 14 12.4
comp=Z,10nm,1.5s
WRA Warramunga Arr 68.34 199 P **P 21 14 00.5 -0.3**
comp=Z,0.8nm,0.8s,baz=17,slow=6.9,SNR=5.2
comp=Z,0.8nm,0.8s
WRA Warramunga Arr 68.34 199 P **P 21 14 00.6 -0.1**
WRA Warramunga Arr 68.34 199 P **P 21 14 00.6 -0.1**
WRA pmax pmax
comp=Z,1.0nm,1.4s
HFS Hagfors 68.54 339 P **P 21 14 00.7 -1.0**
comp=Z,5.1nm,0.5s,baz=60,slow=5.8,SNR=62
HFS LR LR 21 46 09.5
comp=Z,23nm,20.2s,baz=21,slow=38
comp=Z,5.1nm,0.5s
MNK Minsk 69.05 329 *i* P **P 21 14 03.5 -1.4**
MNK *i* *PP **pwP 21 14 17.7 -1.6**
MNK *i* 21 14 28.1
MNK *i* 21 16 35.1
MNK *i* PPP PPP 21 18 14.6
MNK *i* S **S 21 23 02.5 -4.2**
MNK *i* *SS **sS 21 23 26.8 +1.4**
MNK *i* 21 24 02.2
MNK *i* SS **SS 21 27 33.3 +1.3**
MNK pmax pmax
comp=Z,4.0nm,0.8s
MNK pmax pmax
comp=N,8.0nm,1.0s
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK MLR MLR
comp=Z,31nm,16.0s
MNK MLR MLR
comp=N,18nm,16.0s
MNK MLR MLR
comp=E,7.0nm,15.0s
MNK Minsk 69.05 329 *i* P **P 21 14 03.5 -1.4**
comp=E,2.0nm,1.1s
MNK *i* P **P 21 14 03.5 -1.4**
comp=N,8.0nm,1.0s
MNK *i* P **P 21 14 03.5 -1.4**
comp=Z,4.0nm,0.8s,baz=218
MNK *i* pP **pwP 21 14 17.7 -1.6**
MNK *i* PP **PP 21 16 35.1 -2.0**
MNK *i* PPP PPP 21 18 14.6
MNK *i* S **S 21 23 02.6 -4.2**
MNK *i* sS **sS 21 23 26.9 +1.4**
MNK *i* SS **SS 21 27 33.4 +1.3**
MNK *i* SSS SSS 21 30 45.2
MNK *i* LR LR 21 43 10.5
MNK *i* LRM MLR 21 46 40.8
comp=Z,31nm,16.1s
MNK *i* LRM MLR 21 46 46.2
comp=N,18nm,16.1s
MNK *i* LRM MLR 21 47 20.7
comp=E,7.0nm,15.3s
AKASG Malin Array Be 71.59 326 P **P 21 14 19.1 -1.3**
comp=E,3.3nm,0.5s,baz=34,slow=6.3,SNR=13
comp=E,3.3nm,0.5s
AKASG Malin Array Be 71.59 326 P **P 21 14 19.0 -1.4**
AKASG Malin Array Be 71.59 326 *i* P **P 21 14 19.2 -1.3**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 71.59 326 P **P 21 14 19.1 -1.4**
AKBB IAmb IAmb 21 14 19.8
comp=Z,5.2nm,0.7s
AKBB Malin Array Si 71.59 326 P **P 21 14 19.1 -1.4**
AKBB pmax pmax
comp=Z,5.0nm,0.7s
AS31 Alice Springs 72.03 198 P **P 21 14 24.2 +0.9**
ASAR Alice Springs 72.03 198 P **P 21 14 24.4 +1.0**
comp=Z,1.2nm,0.6s,baz=11,slow=5.6,SNR=25
comp=Z,1.2nm,0.6s
ASAR Alice Springs 72.03 198 P **P 21 14 24.0 +0.7**
ASAR Alice Springs 72.03 198 P **P 21 14 24.0 +0.7**
GNI Garni 72.52 310 LR LR 21 48 35.7
comp=Z,26nm,20.7s,baz=70,slow=38
SORM Soroca 73.99 325 ⇑P **P 21 14 32.8 -1.9**
SORM Soroca 73.99 325 ⇑P **P 21 14 32.8 -1.9**
KWP Kalwaria Pacla 74.88 329 P **P 21 14 39.7 -0.2**
KWP Kalwaria Pacla 74.88 329 P **P 21 14 39.7 -0.2**
KWP pmax pmax
comp=Z,77nm,1.1s
OJC Ojcow 75.38 331 P **P 21 14 41.3 -1.5**
OJC IAmb IAmb 21 14 42.1
comp=Z,5.9nm,1.2s
OJC Ojcow 75.38 331 P **P 21 14 41.3 -1.5**
OJC pmax pmax
comp=Z,6.0nm,1.2s
BUR08 Bucovina Ar. S 75.62 326 P **P 21 14 43.9 -0.4**
BUR08 IAmb IAmb 21 14 44.8
comp=Z,5.2nm,0.8s
KOLS Kolonicke sedl 75.62 329 *eP* **P 21 14 43.7 -0.5**
KOLS pmax pmax
comp=Z,4.0nm,0.9s
KOLS Kolonicke sedl 75.62 329 *eP* **P 21 14 43.7 -0.5**
BURAR Bucovina Array 75.63 326 ⇑P **P 21 14 44.1 -0.3**
BIZ Bicaz 75.85 326 ⇑P **P 21 14 44.6 -0.9**
TESR Tescani 75.99 325 ⇑P **P 21 14 45.5 -0.8**
DPC Dobruska-Polom 76.39 333 *eP* **P 21 14 48.1 -0.5**
DPC Dobruska-Polom 76.39 333 *eP* **P 21 14 48.1 -0.5**
LANS Liptovska Anna 76.41 331 *eP* **P 21 14 49.1 +0.3**
LANS pmax pmax
comp=Z,3.0nm,0.7s
LANS Liptovska Anna 76.41 331 *eP* **P 21 14 49.0 +0.3**
BZK Bozkurt 76.48 318 ⇑P P 21 14 58.5 +9.4
KRLC Kraliky 76.49 333 *eP* **P 21 14 47.9 -1.3**
KRLC Kraliky 76.49 333 *eP* **P 21 14 47.9 -1.3**
MORC Moravsky Berou 76.50 332 ⇑P **P 21 14 48.8 -0.5**
MORC Moravsky Berou 76.50 332 P **P 21 14 48.7 -0.5**
MORC IAmb IAmb 21 14 49.8
comp=Z,3.4nm,0.8s
MORC Moravsky Berou 76.50 332 ⇑P **P 21 14 48.8 -0.5**
MORC Moravsky Berou 76.50 332 *eP* **P 21 14 48.7 -0.5**
PLOR Plostina 76.53 325 ⇑P P 21 14 55.8 +6.3
PLOR Plostina 76.53 325 ⇑P P 21 14 55.8 +6.3
CLL Collm 76.54 335 P **P 21 14 48.3 -1.0**
CLL IAmb IAmb 21 14 49.6
comp=Z,6.2nm,0.9s
CLL Collm 76.54 335 *i* P **P 21 14 48.2 -1.1**
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 76.54 335 *i* P **P 21 14 48.2 -1.1**
comp=Z,6.0nm,1.0s
TPGR Topolog 76.62 323 ⇑P **P 21 14 49.5 -0.5**
KECS Kecovo 76.63 330 *eP* **P 21 14 52.4 +2.5**
KECS pmax pmax
comp=Z,16nm,0.4s
KECS Kecovo 76.63 330 *eP* **P 21 14 52.4 +2.5**
UOSS Minazif 76.67 292 P **P 21 14 50.1 -0.5**
UOSS IAmb IAmb 21 14 50.8
comp=Z,5.4nm,0.7s
MLR Muntele Rosu 77.11 325 ⇑P **P 21 14 52.2 -0.6**
MLR Muntele Rosu 77.11 325 P **P 21 14 51.8 -1.0**
comp=Z,3.0nm,0.5s,baz=307,slow=7.1,SNR=6.2
MLR LR LR 21 50 34.5
comp=Z,17nm,20.3s,baz=56,slow=37
comp=Z,3.0nm,0.5s
MLR Muntele Rosu 77.11 325 P **P 21 14 52.3 -0.6**
MLR IAmb IAmb 21 14 54.9
comp=Z,4.9nm,0.9s
MLR Muntele Rosu 77.11 325 ⇑P **P 21 14 52.2 -0.6**
VYHS Vyhne 77.19 331 *eP* **P 21 14 52.8 -0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.0s
VYHS Vyhne 77.19 331 *eP* **P 21 14 52.8 -0.3**
VRAC Vranov 77.22 332 P **P 21 14 52.4 -0.8**
comp=Z,2.8nm,0.7s,baz=26,slow=5.6,SNR=4.0
comp=Z,2.8nm,0.7s
VRAC Vranov 77.22 332 *eP* **P 21 14 52.9 -0.3**
PRU Pruhonice 77.26 334 *eP* **P 21 14 53.3 -0.1**
PRU Pruhonice 77.26 334 *eP* **P 21 14 53.3 -0.1**
JAVC Velka Javorina 77.26 332 *eP* **P 21 14 54.2 +0.7**
DRGR 77.26 327 ⇑P **P 21 14 53.2 -0.4**
DRGR 77.26 327 ⇑P **P 21 14 53.2 -0.4**
LPIG La Paz 77.30 68 LR LR 21 45 33.7
comp=Z,12nm,19.2s,baz=208,slow=33
PSZ Piszkesteto 77.32 330 ⇑P **P 21 14 57.2 +3.3**
PSZ Piszkesteto 77.32 330 ⇑P **P 21 14 57.2 +3.3**
KRUC Moravsky 77.50 332 *eP* **P 21 14 54.5 -0.3**
VOIR 77.50 325 ⇑P **P 21 14 55.0 0.0**
VOIR 77.50 325 ⇑P **P 21 14 55.0 0.0**
TXAR Lajitas Array 77.68 60 P **P 21 14 57.4 +1.1**
comp=Z,0.5nm,0.7s,baz=297,slow=5.5,SNR=3.4
comp=Z,0.5nm,0.7s
ARR Arges 77.72 326 ⇓P **P 21 14 56.9 +0.7**
MODS Modra-Piesok 77.81 332 *eP* **P 21 14 54.1 -2.5**
MODS pmax pmax
comp=Z,5.0nm,1.0s
MODS Modra-Piesok 77.81 332 *eP* **P 21 14 54.1 -2.5**
KHC Kasperske Hory 78.31 334 P **P 21 14 58.9 -0.4**
KHC IAmb IAmb 21 15 00.1
comp=Z,3.9nm,0.8s
KHC Kasperske Hory 78.31 334 *eP* **P 21 14 58.8 -0.6**
KHC Kasperske Hory 78.31 334 *eP* **P 21 14 58.8 -0.6**
CKRC Cesky Krumlov 78.36 334 *eP* **P 21 14 58.9 -0.7**
BRTR Keskin Array B 78.40 317 P **P 21 15 00.1 -0.1**
comp=Z,1.3nm,0.8s,baz=49,slow=3.9,SNR=5.2
comp=Z,1.3nm,0.8s
BRTR Keskin Array B 78.40 317 *i* P **P 21 15 00.7 +0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
GZR Gura Zlata 78.42 327 ⇑P **P 21 14 59.4 -0.6**
GZR Gura Zlata 78.42 327 ⇑P **P 21 14 59.4 -0.6**
COPA Copaceanca 78.52 324 ⇑P **P 21 14 59.3 -1.2**
GERES GERESS Array B 78.53 334 P **P 21 15 00.2 -0.5**
comp=Z,0.9nm,0.5s,baz=30,slow=6.2,SNR=10
comp=Z,0.9nm,0.5s
GERES GERESS Array B 78.53 334 P **P 21 14 59.8 -0.8**
CONA Conrad Observa 78.66 332 *eP* **P 21 15 01.4 0.0**
comp=Z,3.7nm,0.7s
BZS Buzias 78.66 327 ⇑P **P 21 15 00.3 -1.0**
BZS Buzias 78.66 327 ⇑P **P 21 15 00.3 -1.0**
RONA Rosalia, Austr 78.72 332 *eP* **P 21 15 02.3 +0.6**
comp=Z,3.7nm,0.8s
HERR Herculane 78.99 327 ⇑P **P 21 15 02.2 -0.9**
MORH Mrgy, Hungar 79.22 330 ⇑P **P 21 15 02.9 -1.5**
MDVR Moldovita 79.34 327 ⇑P **P 21 15 03.9 -1.2**
FRGS Fruska Gora 79.72 328 ⇑P **P 21 15 05.8 -1.3**
RAR Rarotonga 79.88 136 LR LR 21 46 00.6
comp=Z,24nm,20.4s,baz=278,slow=32
SOKA Soboth 80.03 332 *eP* **P 21 15 08.6 -0.2**
comp=Z,5.6nm,0.9s
KBA Koelnbreinsper 80.21 333 *eP* **P 21 15 10.3 +0.4**
comp=Z,3.7nm,0.5s
BOVS Bovan 80.31 326 ⇑P **P 21 15 08.6 -1.7**
WATA Walderalm 80.51 334 *eP* **P 21 15 11.6 0.0**
comp=Z,3.0nm,0.6s
WTTA Wattenberg 80.56 334 *eP* **P 21 15 12.2 +0.4**
comp=Z,5.0nm,0.5s
VTS Vitosha 80.58 325 ⇑P **P 21 15 11.7 -0.3**
VTS Vitosha 80.58 325 P **P 21 15 11.4 -0.6**
VTS IAmb IAmb 21 15 13.1
comp=Z,6.3nm,0.8s
VTS Vitosha 80.58 325 ⇑P **P 21 15 11.7 -0.3**
RETA Reutte 80.62 335 *eP* **P 21 15 10.8 -1.2**
comp=Z,5.4nm,1.4s
MOTA Moosalm 80.64 335 *eP* **P 21 15 12.0 -0.3**
comp=Z,6.9nm,1.1s
SQTA Sankt Quirin 80.73 335 *eP* **P 21 15 12.8 +0.2**
comp=Z,5.4nm,1.2s
FETA Feichten 81.05 335 *eP* **P 21 15 15.4 +1.0**
comp=Z,3.0nm,1.2s
DAVA Damuels 81.05 336 *eP* **P 21 15 14.6 +0.2**
comp=Z,3.7nm,1.0s
DAVOX Davos/Dischmat 81.51 335 P **P 21 15 17.2 +0.3**
comp=Z,1.6nm,0.6s,baz=46,slow=11,SNR=4.8
comp=Z,1.6nm,0.6s
ASF Jabal al Asfar 82.69 310 P **P 21 15 23.0 -0.2**
comp=Z,2.8nm,0.6s,baz=80,slow=5.8,SNR=4.9
comp=Z,2.8nm,0.6s
MMAI Mount Meron Ar 82.81 311 P **P 21 15 23.8 0.0**
comp=Z,3.2nm,0.7s,baz=40,slow=6.6,SNR=14
comp=Z,5.2nm,0.7s
TKL Tuckaleechee C 83.56 43 LR LR 21 53 57.0
comp=Z,13nm,20.6s,baz=228,slow=36
BNI Bardonecchia 83.99 337 P **P 21 15 29.5 -0.2**
BNI IAmb IAmb 21 15 31.7
comp=Z,1.6nm,0.8s
BNI Bardonecchia 83.99 337 P **P 21 15 29.5 -0.2**
BNI pmax pmax
comp=Z,2.0nm,0.8s
EIL Elat 85.68 310 LR LR 21 59 31.0
comp=Z,21nm,18.3s,baz=86,slow=40
ATD Arta Tunnel 95.05 292 LR LR 22 04 12.1
comp=Z,18nm,19.4s,baz=33,slow=39
H03N2 Juan Fernandez 138.88 90 T T 23 57 45.7
baz=308,slow=77,SNR=29
H03N1 Juan Fernandez 138.90 90 T T 23 57 47.0
baz=308,slow=77,SNR=31
H03N3 Juan Fernandez 138.90 90 T T 23 57 48.4
baz=308,slow=77,SNR=21
BDFB Brasilia 144.53 36 PKP **PKPab 21 22 33.9 -0.6**
comp=Z,1.0nm,0.3s,baz=156,slow=7.8,SNR=3.9
PLCA Paso Flores 148.32 95 PKPbc **PKPbc 21 22 44.9 -0.3**
comp=Z,1.8nm,0.9s,baz=245,slow=7.2,SNR=3.9
CPUP Villa Florida 148.65 60 PKPbc **PKPbc 21 22 46.4 +0.1**
comp=Z,1.2nm,0.5s,baz=156,slow=6.3,SNR=3.0
TROLL Troll, Antarti 151.02 198 PKPdf **PKPbc 21 22 51.5 +0.5**
SNAA Sanae 152.38 196 PKPdf **PKPbc 21 22 53.8 -0.2**
VNA2 Neumayer--Watz 153.83 195 PKPdf **PKPbc 21 22 57.3 +0.2**
VNA3 Neumayer Olymp 153.93 193 PKPdf **PKPbc 21 22 57.2 -0.1**

IDC ***24*** *21:08:38.6±0.6, 42.70N×46.96E, h0km, mb3.7/9, mbtmp3.8/18, ML3.4/8, MS2.8/2, Error ellipse: s-maj=10.9km s-min=8.1km az=161.0*
MOS ***24*** *21:08:39.6±0.0, 42.66N×47.06E, h10km, MPVA4.5*
AZER ***24*** *21:08:39.5±0.1, 42.59N×47.00E, h3km, Error ellipse: s-maj=2.4km s-min=0.6km az=316.0*
TIF ***24*** *21:08:40.3, 42.66N×47.04E, h11km±2km*
DRS ***24*** *21:08:40.9±0.0, 42.68N×47.06E, h12km*
NEIC ***24*** *21:08:41.4±2.2, 42.85N±0.07×47.10E±0.08, h10km±1km, mb4.3/11, Error ellipse: s-maj=12.6km s-min=9.0km az=199.0*
NORS ***24*** *21:08:42.4±0.0, 42.77N×46.85E, h1km, MPVA4.2, Felt III-IV MSK at Gergebil'*
NNC ***24*** *21:08:47.9±4.2, 42.84N×47.54E, h36km±57km, mb3.8, Error ellipse: s-maj=44.2km s-min=18.9km az=95.0*
ISC 24 21:08:40.7±0.6, **42.70N**±0.01×**47.07E**±0.01, **h14**km±3km, **n206, σ1s82/329, mb3.9/19, 13C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARKR	**Arakani**				**0.11 209**	⇑*i*PG	**Pg**	**21 08 43.4**	**-0.7**
ARKR						*e*S	**Sg**	**21 08 45.8**	**-0.5**
ARKR						pmax	pmax		
	comp=Z,7μm,0.2s								
ARKR						smax	smax		
	comp=N,51μm,0.2s								
ARKR	**Arakani**				**0.11 209**	*i* Pg	**Pg**	**21 08 43.4**	**-0.7**
ARKR						*e*Sg	**Sg**	**21 08 45.3**	**-1.1**
BUJR	**Buynaksk**				**0.13 13**	⇓*i*PG	**Pg**	**21 08 45.0**	**+0.7**
BUJR						*e*S	**Sg**	**21 08 48.6**	**+1.9**
BUJR						pmax	pmax		
	comp=Z,8μm,0.2s								
BUJR						smax	smax		
	comp=E,17μm,0.3s								
BUJR	**Buynaksk**				**0.13 13**	*i* Pg	**Pg**	**21 08 45.0**	**+0.7**
BUJR						*e*Sg	**Sg**	**21 08 48.3**	**+1.6**
KRNR	**Karanay**				**0.17 317**	*e*PG	**Pg**	**21 08 45.1**	**+0.1**
KRNR						*e*S	**Sg**	**21 08 48.8**	**+0.9**
KRNR						pmax	pmax		
	comp=Z,2μm,0.2s								
KRNR						smax	smax		
	comp=N,10μm,0.4s								
KRNR	**Karanay**				**0.17 317**	*e*Pg	**Pg**	**21 08 45.1**	**+0.1**
KRNR						*e*Sg	**Sg**	**21 08 48.2**	**+0.3**
UNCR	**Uncukul**				**0.20 274**	⇑*i*PG	**Pg**	**21 08 45.1**	**-0.3**
UNCR						*e*S	**Sg**	**21 08 48.8**	**+0.3**
UNCR						pmax	pmax		
	comp=Z,1μm,0.3s								
UNCR						smax	smax		
	comp=N,6μm,0.5s								
UNCR	**Uncukul**				**0.20 274**	*i* Pg	**Pg**	**21 08 45.1**	**-0.3**
UNCR						*e*Sg	**Sg**	**21 08 48.1**	**-0.4**
XNZR	**Khunzakh**				**0.31 240**	*e*PG	**Pg**	**21 08 47.0**	**-0.3**
XNZR						*e*S	**Sg**	**21 08 51.9**	**+0.2**
XNZR						pmax	pmax		
	comp=Z,3μm,0.4s								
XNZR						smax	smax		
	comp=E,6μm,0.3s								
XNZR	**Khunzakh**				**0.31 240**	*e*Pg	**Pg**	**21 08 47.0**	**-0.3**
XNZR						*e*Sg	**Sg**	**21 08 51.4**	**-0.4**
DBC	**Dubki**				**0.36 332**	*e*PG	**Pg**	**21 08 48.5**	**+0.3**
DBC						*e*S	**Sb**	**21 08 54.7**	**0.0**
DBC						pmax	pmax		
	comp=Z,896nm,0.3s								
DBC						smax	smax		
	comp=N,3μm,0.4s								
DBC	**Dubki**				**0.36 332**	*e*Pg	**Pg**	**21 08 48.5**	**+0.3**
DBC						*e*Sg	**Sg**	**21 08 54.1**	**+0.8**
MAK	**Makhachkala**				**0.41 51**	*e*PG	**Pb**	**21 08 50.4**	**+0.6**
MAK						*e*S	**Sb**	**21 08 58.0**	**+2.0**
MAK						pmax	pmax		
	comp=Z,2μm,0.2s								
MAK						smax	smax		
	comp=N,10μm,0.3s								
MAK						smax	smax		
	comp=E,7μm,0.6s								
MAK						smax	smax		
	comp=N,8μm,0.4s								
MAK	**Makhachkala**				**0.41 51**	*e*Pg	**Pb**	**21 08 50.5**	**+0.6**
MAK						*e*Sg	**Sb**	**21 08 56.8**	**+0.8**
DLMR	**Dylym**				**0.49 319**	*e*PG	**Pg**	**21 08 50.9**	**+0.4**
DLMR						*e*S	**Sb**	**21 08 59.5**	**+1.3**
DLMR						pmax	pmax		
	comp=Z,698nm,0.2s								
DLMR						smax	smax		
	comp=E,7μm,0.4s								
DLMR	**Dylym**				**0.49 319**	*e*Pg	**Pg**	**21 08 50.7**	**+0.3**
DLMR						*e*Sg	**Sb**	**21 08 59.2**	**+1.0**
SGKR	**Sergokala**				**0.50 119**	*e*PG	**Pg**	**21 08 51.1**	**+0.5**
SGKR						*e*S	**Sb**	**21 08 58.6**	**+0.2**
SGKR						pmax	pmax		
	comp=Z,1μm,0.1s								
SGKR						smax	smax		
	comp=E,4μm,0.2s								
SGKR						smax	smax		
	comp=N,5μm,0.3s								
SGKR						smax	smax		
	comp=N,3μm,0.3s								
SGKR	**Sergokala**				**0.50 119**	*e*Pg	**Pg**	**21 08 51.0**	**+0.4**
SGKR						*e*Sg	**Sb**	**21 08 58.5**	**+0.1**
KMKR	**Kumukh**				**0.57 178**	⇑*i*PG	**Pg**	**21 08 51.9**	**-0.1**
KMKR						*e*S	**Sb**	**21 09 00.6**	**0.0**
KMKR						pmax	pmax		
	comp=Z,2μm,0.2s								
KMKR						smax	smax		
	comp=N,9μm,0.2s								
KMKR	**Kumukh**				**0.57 178**	*i* Pg	**Pg**	**21 08 51.9**	**-0.1**
KMKR						*e*Sg	**Sg**	**21 08 60.0**	**+0.4**
KANR	**Karaman**				**0.58 32**	*e*PG	**Pg**	**21 08 52.4**	**+0.2**
KANR						*e*S	**Sb**	**21 09 02.0**	**+1.2**
KANR						pmax	pmax		
	comp=Z,660nm,0.6s								
KANR						smax	smax		
	comp=E,7μm,0.5s								
KANR						smax	smax		
	comp=N,4μm,0.6s								
KANR						smax	smax		
	comp=E,6μm,0.6s								
KANR	**Karaman**				**0.58 32**	*e*Pg	**Pn**	**21 08 54.8**	**+0.2**
KANR						*e*Sg	**Sb**	**21 09 02.1**	**+1.2**
URKR	**Urkarakh**				**0.68 142**	*e*PG	**Pg**	**21 08 54.2**	**+0.2**
URKR						*e*S	**Sb**	**21 09 04.2**	**+0.6**
URKR						pmax	pmax		
	comp=Z,493nm,0.3s								
URKR						smax	smax		
	comp=N,2μm,0.6s								
URKR						smax	smax		
	comp=E,2μm,0.2s								
URKR						smax	smax		
	comp=N,2μm,0.6s								
URKR	**Urkarakh**				**0.68 142**	*e*Pg	**Pg**	**21 08 54.2**	**+0.2**
URKR						*e*Sg	**Sb**	**21 09 04.2**	**+0.6**
DVE	**Vedeno**				**0.74 291**	*e*PG	**Pg**	**21 08 55.2**	**0.0**
DVE						*e*S	**Sb**	**21 09 05.7**	**+0.3**
DVE	**Vedeno**				**0.74 291**	*e*Pg	**Pg**	**21 08 55.2**	**0.0**
DVE						*e*Sg	**Sb**	**21 09 05.7**	**+0.3**
LGD	**Lagodekhi**				**1.06 216**	P	**Pg**	**21 08 59.9**	**-1.3**
LGD						S	**Sg**	**21 09 14.2**	**-0.8**
LGD	**Lagodekhi**				**1.06 216**	⇓PG	**Pg**	**21 08 59.9**	**-1.3**
LGD						S	**Sg**	**21 09 14.2**	**-0.8**
GROC	**Groznyy**				**1.06 299**	*e*PG	**Pn**	**21 09 01.5**	**+0.4**
GROC						*e*		21 09 18.3	
GROC						pmax	pmax		
	comp=Z,260nm,0.7s								
GROC						smax	smax		
	comp=N,496nm,0.5s								
GROC						smax	smax		
	comp=N,533nm,0.4s								
GROC						smax	smax		
	comp=E,221nm,0.4s								
GROC	**Groznyy**				**1.06 299**	*e*Pg	**Pn**	**21 09 01.8**	**+0.6**
GROC						*e*Sg	**Sn**	**21 09 18.5**	**+2.8**
ZKTA	**Zakatala** SNR=50				**1.11 197**	P	**Pb**	**21 09 01.2**	**-0.5**
ZKTA						S	**Sb**	**21 09 16.9**	**+0.9**
AKT	**Akhty**				**1.31 158**	*e*PG	**Pn**	**21 09 04.9**	**+0.2**
AKT						*e*S	**Sg**	**21 09 23.5**	**+0.4**
AKT						pmax	pmax		
	comp=Z,354nm,0.2s								
AKT						smax	smax		
	comp=E,2μm,0.3s								
AKT	**Akhty**				**1.31 158**	*i* Pg	**Pn**	**21 09 04.5**	**-0.2**
AKT						*e*Sg	**Sb**	**21 09 22.8**	**+0.9**

KSMR Kasumkent 1.35 144 *e*PG **Pg** **21 09 06.7 0.0**
KSMR *e*S **Sg** **21 09 24.9 +0.6**
KSMR pmax pmax
comp=Z,6.0nm,0.1s
KSMR smax smax
comp=E,40nm,0.2s
KSMR Kasumkent 1.35 144 *e*Pg **Pg** **21 09 06.7 0.0**
KSMR *e*Sg **Sn** **21 09 24.1 +1.2**
DDFL Dedoflistskaro 1.44 210 P **Pg** **21 09 08.7 +0.3**
DDFL Dedoflistskaro 1.44 210 PG **Pg** **21 09 08.7 +0.3**
QSAR Qusar 1.48 143 P **Pb** **21 09 08.8 +0.8**
SNR=198
QSAR S **Sg** **21 09 30.6 +2.2**
SEKA Sheki 1.49 176 PG **Pn** **21 09 08.1 +1.0**
SEKA Sheki 1.49 176 P **Pn** **21 09 07.9 +0.8**
SNR=37
SEKA S **Sg** **21 09 30.1 +1.3**
KMGR Komgaron 1.66 283 *e*PN **Pg** **21 09 12.7 +0.1**
KMGR *e*S **Sg** **21 09 37.6 +3.5**
KMGR Komgaron 1.66 283 *e*Pg **Pg** **21 09 12.3 -0.3**
KMGR *e*Sg **Sg** **21 09 37.6 +3.5**
QUBA Quba, Azerbaij 1.71 141 P **Pb** **21 09 13.0 +1.0**
SNR=36
QUBA S **Sg** **21 09 37.2 +1.4**
XNQ Khinaliq 1.72 152 P **Pb** **21 09 12.8 +0.5**
SNR=189
XNQ S **Sg** **21 09 37.4 +1.2**
DGRG David-gareji 1.77 226 P **Pb** **21 09 12.8 -0.3**
DGRG S **Sg** **21 09 40.7 +2.9**
DGRG David-gareji 1.77 226 PN **Pb** **21 09 12.7 -0.3**
DGRG S **Sg** **21 09 40.7 +2.9**
VLKR Vladikavkaz 1.79 282 *e*PN **Pg** **21 09 16.2 +1.1**
VLKR *e*S **Sg** **21 09 41.0 +2.6**
PNSH Pansheti 1.81 269 P **Pn** **21 09 12.9 +1.3**
PNSH S **Sb** **21 09 36.2 -0.1**
PNSH Pansheti 1.81 269 PN **Pn** **21 09 12.9 +1.3**
QBL Gabala 1.84 162 P **Pb** **21 09 14.5 +0.3**
SNR=35
QBL S **Sg** **21 09 41.4 +1.4**
SEAG Tbilisi Sea 1.92 242 P **Pb** **21 09 16.5 +0.9**
SEAG Tbilisi Sea 1.92 242 PN **Pb** **21 09 16.5 +0.9**
MNGR Mingechevir, A 1.92 180 PN **Pb** **21 09 16.3 +0.7**
MNGR Mingechevir, A 1.92 180 P **Pb** **21 09 15.8 +0.3**
SNR=8.2
MNGR S **Sg** **21 09 42.5 -0.1**
GUDG Gudauri 1.93 264 P **Pb** **21 09 15.2 -0.5**
GUDG Gudauri 1.93 264 PN **Pb** **21 09 15.2 -0.5**
BTNK Botanikuri 1.97 240 P Pn 21 09 09.3 -4.3
BTNK Botanikuri 1.97 240 PN Pn 21 09 09.3 -4.4
BTKR Batakoyurt 1.97 291 *e*PN **Pg** **21 09 19.8 +1.3**
BTKR *e*S **Sg** **21 09 47.2 +3.1**
BTKR Batakoyurt 1.97 291 *e*Pg **Pg** **21 09 18.0 -0.5**
BTKR *e*Sg **Sg** **21 09 46.4 +2.3**
TRKR Terskaya 1.99 302 *e*PN **Pg** **21 09 19.1 +0.2**
TRKR *e*S **Sg** **21 09 46.6 +1.8**
TRKR Terskaya 1.99 302 *e*Pg **Pg** **21 09 18.1 -0.9**
TRKR *e*Sg **Sg** **21 09 45.0 +0.2**
LACR Lac 2.04 275 *e*PN **Pb** **21 09 17.4 -0.3**
LACR *e*S **Sg** **21 09 45.0 -1.5**
LACR Lac 2.04 275 *e*Pg **Pb** **21 09 17.1 -0.6**
LACR *e*Sg **Sb** **21 09 44.7 +1.7**
IML Ismayilli 2.08 156 P **Pb** **21 09 18.6 +0.4**
SNR=31
IML S **Sg** **21 09 47.4 -0.2**
ARNR Ardon 2.10 284 *e*PN **Pg** **21 09 20.9 -0.1**
ARNR *e*S **Sg** **21 09 49.3 +1.1**
ARNR Ardon 2.10 284 *e*Pg **Pb** **21 09 18.2 -0.3**
ARNR *e*Sg **Sg** **21 09 48.1 -0.1**
SIZA Siyzn 2.12 139 P **Pb** **21 09 18.6 -0.4**
SNR=18
SIZA S **Sg** **21 09 47.7 -1.3**
GANJ Ganja 2.13 195 PN **Pn** **21 09 17.0 +1.2**
GANJ Ganja 2.13 195 P **Pn** **21 09 17.0 +1.2**
SNR=88
GANJ S **Sb** **21 09 46.2 +0.9**
GDB GEDABAY 2.21 207 P **Pn** **21 09 17.9 +0.8**
SNR=96
GDB S **Sb** **21 09 49.2 +1.4**
PQL Pirkuli 2.22 149 P **Pb** **21 09 21.4 +0.6**
SNR=18
PQL S **Sg** **21 09 51.8 -0.4**
KORR Kora 2.24 281 *e*PN **Pg** **21 09 23.2 -0.5**
KORR *e*S **Sg** **21 09 53.0 +0.3**
KORR Kora 2.24 281 *e*Pg **Pb** **21 09 20.9 0.0**
KORR *e*Sg **Sb** **21 09 50.3 +1.8**
PRTR Priterechnaya 2.29 298 *e*PN **Pb** **21 09 23.3 +1.5**
PRTR *e*S **Sg** **21 09 54.2 -0.2**
PRTR Priterechnaya 2.29 298 *e*Pn **Pb** **21 09 23.3 +1.5**
PRTR *e*Sn **Sb** **21 09 49.8 -0.2**
STDR Stavd-Durt 2.30 288 *e*PN **Pb** **21 09 22.9 +0.9**
STDR *e*S **Sg** **21 09 54.3 -0.4**
STDR Stavd-Durt 2.30 288 *e*Pn **Pb** **21 09 22.2 +0.2**
STDR *e*Sn **Sb** **21 09 52.5 +2.2**
ATGJ Altiaghaj 2.31 142 P **Pb** **21 09 22.3 +0.1**
SNR=8.2
ATGJ S **Sg** **21 09 53.7 -1.2**
ZEI Tsey 2.33 273 *e*PN **Pb** **21 09 23.9 +1.2**
ZEI *e*S **Sg** **21 09 54.9 -0.9**
ZEI Tsey 2.33 273 *e*Pn **Pb** **21 09 21.9 -0.8**
ZEI *e*Sn **Sb** **21 09 53.0 +1.6**
KZRT Kazreti 2.38 237 P **Pn** **21 09 21.8 +2.4**
KZRT Kazreti 2.38 237 PN **Pn** **21 09 21.8 +2.4**
BRDA Brd 2.44 178 P **Pb** **21 09 23.3 -1.0**
SNR=14
BRDA S **Sb** **21 09 55.2 +1.1**
LSNR Lesken 2.45 285 *e*PN **Pb** **21 09 24.9 +0.4**
LSNR *e*S **Sg** **21 09 57.9 -1.5**
LSNR Lesken 2.45 285 *e*Pn **Pb** **21 09 23.4 -1.2**
LSNR *e*Sn **Sb** **21 09 53.3 -1.3**
ZRD Zardab 2.46 169 P **Pn** **21 09 23.1 +2.7**
SNR=9.2
ZRD S **Sb** **21 09 55.1 +0.3**
KDMR Kurdemir 2.47 160 P **Pb** **21 09 23.9 -0.9**
SNR=5.2
KDMR S **Sb** **21 09 55.4 +0.4**
TRLG Trialeti 2.49 243 P **Pb** **21 09 24.5 -0.8**
TRLG S **Sg** **21 09 59.5 -1.3**
TRLG Trialeti 2.49 243 PN **Pb** **21 09 24.5 -0.8**
TRLG S **Sg** **21 09 59.5 -1.3**
DMNI Dmanisi 2.54 238 P **Pn** **21 09 24.1 +2.4**
DMNI S **Sb** **21 09 56.4 -1.0**
DMNI Dmanisi 2.54 238 PN **Pn** **21 09 24.0 +2.4**
DMNI S **Sb** **21 09 56.4 -1.0**
DIGR Digorskoe uzhe 2.57 276 *e*PN **Pb** **21 09 26.3 -0.5**
DIGR *e*S **Sb** **21 09 59.9 +1.6**
DIGR Digorskoe uzhe 2.57 276 *e*Pn **Pb** **21 09 26.0 -0.8**
DIGR *e*Sn **Sb** **21 09 57.7 -0.6**
GBS Qobustan 2.58 146 P **Pn** **21 09 24.9 +2.8**
GBS S **Sb** **21 09 59.3 +1.0**
AGDM Agdam 2.59 179 P **Pn** **21 09 24.7 +2.5**
SNR=43
AGDM S **Sb** **21 09 58.4 -0.2**
BRNG Burnasheti 2.64 247 P **Pb** **21 09 27.3 -0.6**
BRNG S **Sg** **21 10 04.7 -0.8**
NCK Nalchik 2.66 289 *i* PN **Pb** **21 09 26.7 -1.5**
NCK Nalchik 2.66 289 *e*Pn **Pn** **21 09 26.0 +2.8**
NCK *e*Sn **Sb** **21 09 59.8 -1.0**
ONI Oni 2.67 269 P **Pb** **21 09 28.2 -0.1**
ONI Oni 2.67 269 PN **Pb** **21 09 28.2 -0.1**
BKRG Bakuriani 2.79 252 P **Pb** **21 09 28.5 -2.0**
BKRG S **Sg** **21 10 08.6 -1.9**
BKRG Bakuriani 2.79 252 PN **Pb** **21 09 28.5 -2.0**
BKRG S **Sg** **21 10 08.6 -1.9**
KBTC Kuba-Taba 2.90 294 *e*Pn **Pb** **21 09 30.9 -1.3**
KBTC *e*Sn **Sb** **21 10 05.2 -2.3**
AKH Akhalkalaki 2.96 245 P **Pb** **21 09 32.8 -0.5**
AKH S **Sb** **21 10 11.9 +2.5**
AKH Akhalkalaki 2.96 245 PN **Pb** **21 09 32.8 -0.5**
AKH S **Sb** **21 10 11.8 +2.5**
AKH Akhalkalaki 2.96 245 *e*Pn **Pb** **21 09 31.2 -2.0**
AKH *e*Sn **Sn** **21 10 06.3 +3.6**
BGD Bogdanovka 2.96 242 P **Pn** **21 09 30.7 +3.3**
BGD S **Sb** **21 10 12.2 +2.9**
BGD Bogdanovka 2.96 242 PN **Pn** **21 09 30.7 +3.3**
BGD S **Sb** **21 10 12.2 +2.9**
BLQ Beylaqan 3.00 173 P **Pn** **21 09 30.2 +2.4**
SNR=8.3
BLQ S **Sn** **21 10 07.3 +3.8**
GOBA Gobu 3.04 138 P **Pb** **21 09 32.9 -1.8**
GOBA S **Sb** **21 10 11.6 -0.1**
GNI Garni 3.09 215 Pn **Pn** **21 09 31.6 +2.4**
comp=E,16nm,0.3s,baz=291,slow=4.0,SNR=25
GNI Sn **Sn** **21 10 09.5 +3.5**
comp=E,4.0nm,0.3s,baz=61,slow=23,SNR=1.4
GNI Garni 3.09 215 *ce*PN **Pb** **21 09 33.6 -1.9**
GNI pmax pmax
comp=Z,50nm,0.7s
GNI Garni 3.09 215 *i* Pn **Pb** **21 09 33.8 -1.8**
GNI *e*Sn **Sn** **21 10 09.8 +3.8**
ALIB Äli-Bayra 3.10 151 P **Pb** **21 09 33.6 -2.0**
ALIB S **Sb** **21 10 13.1 -0.2**
KBZ Khabaz 3.22 290 Pn **Pn** **21 09 31.5 +0.7**
comp=Z,1.1nm,0.3s,baz=33,slow=1.0,SNR=34
KBZ Sn **Sn** **21 10 10.8 +1.9**
comp=Z,2.7nm,0.3s,baz=98,slow=8.1,SNR=4.2
comp=Z,4.7nm,0.2s
KBZ Khabaz 3.22 290 *e*Pn **Pn** **21 09 31.6 +0.7**
KBZ *e*Sn **Sn** **21 10 11.4 +2.6**
NEY Neytrino 3.24 281 *i* PN **Pn** **21 09 34.1 +2.9**
NEY Neytrino 3.24 281 *e*Pn **Pn** **21 09 33.4 +2.2**
NEY *e*Sn **Sn** **21 10 13.7 +4.0**
QRD Qoradiz 3.24 177 P **Pn** **21 09 33.5 +2.4**
SNR=6.7
QRD S **Sn** **21 10 12.9 +3.4**
ABS Abastumani 3.30 255 P **Pn** **21 09 35.5 +3.4**
ABS S **Sg** **21 10 24.3 -2.3**
ABS Abastumani 3.30 255 PN **Pn** **21 09 35.5 +3.4**
ABS S **Sg** **21 10 24.3 -2.3**
BEYR Belyy Ugol+ 3.37 294 *e*Pn **Pn** **21 09 33.8 +0.9**
BEYR *e*Sn **Sn** **21 10 13.4 +0.8**
SHA1 Shidzhatmaz 3.39 289 *i* PN **Pn** **21 09 33.6 +0.2**
SHA1 Shidzhatmaz 3.39 289 *e*Pn **Pn** **21 09 33.8 +0.4**
SHA1 *e*Sn **Sn** **21 10 15.8 +2.4**
HYR Heyderabad 3.41 210 P **Pn** **21 09 36.9 +3.4**
SNR=8.7
HYR S **Sb** **21 10 19.8 -2.6**
KIV0 Kislovodsk Arr 3.43 293 *e*Pn **Pn** **21 09 34.8 +1.0**
KIV0 *e*Sn **Sn** **21 10 15.5 +1.3**
KVAR Kislovodsk Arr 3.43 293 Pn **Pn** **21 09 34.8 +1.0**
baz=285,slow=22
KVAR Sn **Sn** **21 10 15.6 +1.3**
baz=97,slow=21
comp=Z,2.5nm,0.3s
KIV Kislovodsk 3.43 293 **Pn** **21 09 34.8 +0.9**
KIV Kislovodsk 3.43 293 *e*Pn **Pn** **21 09 35.3 +1.4**
KIV *e*Sn **Sn** **21 10 16.3 +1.9**
SBZ Shahbuz 3.49 200 P **Pn** **21 09 37.2 +2.5**
SNR=9.7
SBZ S **Sn** **21 10 20.4 +4.6**
GLBA Clilabad 3.60 163 P **Pn** **21 09 38.5 +2.5**
SNR=5.7
GLBA S **Sn** **21 10 21.4 +3.1**
KARS Kars 3.63 237 **Pn** **21 09 40.9 +4.2**
KARS Kars 3.63 237 PN **Pn** **21 09 40.9 +4.2**
ALER Alexandrovskoy 3.65 306 *e*Pn **Pn** **21 09 38.8 +2.1**
ALER *e*Sn **Sn** **21 10 20.7 +1.1**
GOF Gofitskoye 3.75 310 ⇑*e*PN **Pn** **21 09 41.0 +2.9**
GOF *e*S **Sn** **21 10 24.9 +3.0**
GOF pmax pmax
comp=E,11nm,0.5s
GOF smax smax
comp=E,53nm,0.6s
GOF smax smax
comp=N,53nm,0.5s
GOF Gofitskoye 3.75 310 *e*Pn **Pn** **21 09 40.9 +2.8**
GOF *e*Sn **Sn** **21 10 25.1 +3.1**
ORD Ordubad 3.85 193 S **Sn** **21 10 29.7 +4.9**
YRD Yardimli 3.88 166 P **Pn** **21 09 42.0 +1.9**
SNR=18
YRD S **Sn** **21 10 29.4 +3.8**
DOMR Dombai 4.04 280 *i* PN **Pn** **21 09 44.0 +1.8**
LRK Lerik 4.17 166 S **Sn** **21 10 36.9 +4.3**
NVNR Nevinnomyssk 4.17 299 *e*Pn **Pn** **21 09 46.2 +2.3**
LKRN Lenkeran, Azer 4.19 161 S **Sn** **21 10 36.1 +3.2**
ARXR Arkhyz 4.33 283 *i* PN **Pn** **21 09 49.1 +2.9**
ASTR Astara 4.34 162 P **Pn** **21 09 48.8 +2.6**
ASTR S **Sn** **21 10 40.2 +3.7**
KOPT Kop Dagi 5.62 244 Pn **Pn** **21 10 07.9 +3.8**
GEYT Alibeck 9.69 116 Pn **Pn** **21 10 59.2 -0.4**
comp=N,1.3nm,0.3s,baz=292,slow=16,SNR=17
GEYT Sn **Sn** **21 12 43.7 -4.6**
comp=N,0.3nm,0.3s,baz=89,slow=14,SNR=1.5
comp=N,2.8nm,0.4s
GEYT Alibeck 9.69 116 Pn **Pn** **21 11 00.4 +0.7**
GYA0 ALIBECK ARRAY 9.69 116 P **Pn** **21 11 00.5 +0.8**
GYA0B ALIBECK ARRAY 9.69 116 Pn **Pn** **21 11 01.0 +1.3**
GYA0B ALIBECK ARRAY 9.69 116 ⇑Pn **Pn** **21 11 00.5 +0.8**
BELG Belogornoye 9.71 2 Pn **Pn** **21 10 59.8 0.0**
comp=N,1.3nm,0.3s,baz=156,slow=21,SNR=6.7
BELG Sn **Sn** **21 12 41.3 -7.2**
comp=N,1.5nm,0.3s,baz=227,slow=23,SNR=6.7
comp=N,6.5nm,0.5s
BELG Belogornoye 9.71 2 *i* P **Pn** **21 10 59.6 -0.2**
VORR Voronezh 10.44 332 *e*P Pn 21 11 20.7 +11
VORR pmax pmax
comp=Z,20nm,0.5s
AKTO Aktyubinsk 10.79 40 Pn **Pn** **21 11 13.3 -1.4**
comp=Z,0.7nm,0.3s,baz=215,slow=8.9,SNR=16
AKTO Sn Sn 21 13 06.8 -8.4
comp=Z,0.2nm,0.3s,baz=102,slow=19,SNR=1.8
comp=Z,1.8nm,0.3s
AKTO Aktyubinsk 10.79 40 ⇓Pn **Pn** **21 11 14.6 -0.1**
comp=Z,2.1nm,0.5s
AKTO ⇑Sn **Sn** **21 13 11.5 -3.7**
comp=Z,5.4nm,0.7s
AB31 Akbulak array 11.09 49 P **Pn** **21 11 18.4 -0.4**
AB31 Akbulak array 11.09 49 Pn **Pn** **21 11 18.4 -0.4**
comp=Z,0.8nm,0.3s,baz=229,slow=11,SNR=50
AB31 ⇑Sn **Sn** **21 13 17.4 -5.2**
comp=Z,1.5nm,0.4s,baz=34,slow=26,SNR=6.4
ABKAR Akbulak array 11.09 49 Pn **Pn** **21 11 18.4 -0.4**
ABKAR Akbulak array 11.09 49 **Pn** **21 11 18.6 -0.3**
ARU Arti 15.60 24 Pn **Pn** **21 12 16.7 -3.3**
baz=214,slow=9.9,SNR=4.6
ARU Sn Sn 21 14 55.2 -17
baz=298,slow=19,SNR=1.7
ARU LR LR 21 19 59.4
comp=Z,24nm,18.1s,baz=243,slow=44
comp=Z,1.5nm,0.3s
ARU Arti 15.60 24 **Pn** **21 12 16.4 -3.6**
ARU IAmb IAmb 21 12 31.4
comp=Z,4.7nm,0.6s
ARU Arti 15.60 24 P **Pn** **21 12 21.7 +1.7**
ARU S **Sn** **21 15 16.2 +3.7**
KIRV Kirov 15.97 4 LR LR 21 20 21.1
comp=Z,50nm,19.5s,baz=291,slow=44
KK31 Karatay Array 17.18 81 **Pn** **21 12 40.0 -0.2**
KK31 Karatay Array 17.18 81 P **Pn** **21 12 40.0 -0.2**
KK31 pmax pmax
comp=Z,2.0nm,0.6s
KK31 Karatay Array 17.18 81 Pn **Pn** **21 12 41.4 +1.2**
comp=Z,1.7nm,0.7s,baz=49,slow=8.2,SNR=9.0
KKAR Karatay Array 17.18 81 Pn **Pn** **21 12 39.2 -1.0**
KKAR Karatay Array 17.18 81 P **Pn** **21 12 39.2 -1.0**
MNK Minsk 17.27 320 *i* P **Pn** **21 12 38.4 -2.7**
MNK *i* S **Sn** **21 15 52.2 -0.6**
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,3.0nm,0.8s
MNK MLR MLR
comp=E,41nm,23.0s
MNK MLR MLR
comp=N,15nm,19.0s
MNK MLR MLR
comp=Z,74nm,24.0s
MNK Minsk 17.27 320 *i* P **Pn** **21 12 38.4 -2.7**
MNK *i* P **Pn** **21 12 38.4 -2.7**
comp=N,8.0nm,0.8s
MNK *i* P **Pn** **21 12 38.4 -2.7**
comp=Z,3.0nm,0.8s,baz=123
MNK *i* PP **sP** **21 12 48.4 -0.6**
MNK *i* PPP PPP 21 12 56.1
MNK *i* S **Sn** **21 15 52.2 -0.6**
MNK *i* SS **SnSn** **21 16 07.0 +0.9**
MNK *i* SSS SSS 21 16 19.7
MNK *i* LR LR 21 19 23.9
MNK *i* LRM MLR 21 20 41.0
comp=E,41nm,22.9s
MNK *i* LRM MLR 21 20 51.2
comp=N,15nm,18.6s
MNK *i* LRM MLR 21 21 18.3
comp=Z,74nm,23.8s
GAR Garm 17.96 94 P **P** **21 12 51.4 +0.8**
GAR IAmb IAmb 21 13 07.9
comp=Z,36nm,0.5s
BRVK Borovoye 18.62 48 **P** **21 12 56.0 -1.6**
BRVK Borovoye 18.62 48 *ce*P **P** **21 12 58.1 +0.5**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 18.62 48 ⇑Pn **P** **21 12 58.0 +0.5**
comp=Z,4.0nm,0.8s
BVA0 Borovoye Array 18.67 48 P **P** **21 12 58.4 +0.3**
BVA0 Borovoye Array 18.67 48 Pn **P** **21 12 58.4 +0.3**
comp=Z,2.8nm,0.8s,baz=244,slow=12,SNR=11
BVAR Borovoye Array 18.67 48 P **P** **21 12 58.1 0.0**
comp=Z,0.4nm,0.3s,baz=244,slow=13,SNR=9.4
BVAR S **Sn** **21 16 18.0 -8.8**
comp=Z,0.1nm,0.3s,baz=245,slow=27,SNR=1.2
comp=Z,0.8nm,0.4s
IDI Anoyia 18.73 254 P **P** **21 12 57.2 -1.8**
comp=Z,0.2nm,0.3s,baz=73,slow=19,SNR=1.0
comp=Z,3.0nm,0.9s
IDI Anoyia 18.73 254 P **P** **21 12 59.5 +0.5**
IDI IAmb IAmb 21 13 18.2
comp=Z,32nm,1.5s
AAK Ala-Archa 20.14 81 *ce*P **P** **21 13 15.4 +0.9**
AAK pmax pmax
comp=Z,3.0nm,1.0s
KSH Kashi 21.96 89 P **P** **21 13 33.8 -0.3**
KSH pmax pmax
comp=Z,5.0nm,0.6s
FIA1 FINESS Array S 22.59 333 P **P** **21 13 39.1 -1.3**
FIA1 IAmb IAmb 21 13 52.2
comp=Z,15nm,1.2s
FINES FINESS Array B 22.59 333 P **P** **21 13 40.8 +0.4**
comp=Z,1.8nm,0.5s,baz=134,slow=12,SNR=6.4
comp=Z,1.8nm,0.5s
FINES FINESS Array B 22.59 333 P **P** **21 13 39.8 -0.7**
KURBB Kurchatov Arra 22.87 59 P **P** **21 13 44.0 +0.5**
comp=Z,1.4nm,0.7s,baz=268,slow=11,SNR=12
comp=Z,1.4nm,0.7s
KURK Kurchatov 22.94 59 *ce*P **P** **21 13 46.3 +2.1**
KURK pmax pmax
comp=Z,2.0nm,0.5s
GERES GERESS Array B 23.94 296 P **P** **21 13 54.6 +0.3**
comp=Z,0.3nm,0.3s,baz=107,slow=7.4,SNR=4.3
comp=Z,0.3nm,0.3s
CLL Collm 24.59 302 *e*P **P** **21 14 00.0 -0.1**
MK31 Makanchi Array 25.21 68 P **P** **21 14 06.8 +0.9**
MK31 IAmb IAmb 21 14 07.7
comp=Z,1.6nm,0.7s
MK31 Makanchi Array 25.21 68 *i* P **P** **21 14 06.4 +0.5**
MKAR Makanchi Array 25.21 68 P **P** **21 14 06.9 +1.0**
comp=Z,1.7nm,0.8s,baz=281,slow=7.6,SNR=16
comp=Z,1.7nm,0.6s
LVZ Lovozero 26.12 349 P **P** **21 14 14.6 +0.7**
LVZ Lovozero 26.12 349 P **P** **21 14 14.6 +0.7**
LVZ pmax pmax
comp=Z,52nm,1.4s
HFS Hagfors 26.74 322 P **P** **21 14 19.1 -0.3**
comp=Z,0.8nm,0.4s,baz=106,slow=9.1,SNR=2.3
comp=Z,0.8nm,0.4s
NC405 NORSAR Array S 28.04 323 P **P** **21 14 30.8 -0.4**
NC405 IAmb IAmb 21 14 44.9
comp=Z,29nm,1.5s
NOA NORSAR Array B 28.23 323 P **P** **21 14 31.0 -1.9**
comp=Z,0.5nm,0.9s,baz=112,slow=8.6,SNR=1.5
comp=Z,0.5nm,0.9s
ARCES ARCESS Array B 29.11 345 P **P** **21 14 41.0 +0.4**
comp=Z,1.1nm,0.8s,baz=155,slow=9.3,SNR=6.5
comp=Z,1.1nm,0.8s
SONM Songino Array 41.18 62 P **P** **21 16 24.7 0.0**
comp=Z,0.4nm,0.7s,baz=280,slow=8.6,SNR=2.3
comp=Z,0.4nm,0.7s
ULN Ulaanbaatar 41.59 61 *i* P **P** **21 16 28.2 +0.1**
ULN pmax pmax
comp=Z,2.0nm,1.0s
TIXI Tiksi 47.61 25 P **P** **21 17 16.1 +0.5**
TIXI Tiksi 47.61 25 P **P** **21 17 16.1 +0.5**
TIXI pmax pmax
comp=Z,20nm,1.2s
TOA0 Torodi Ar. Sit 48.91 247 P **P** **21 17 26.6 +0.3**
TOA0 IAmb IAmb 21 17 31.9
comp=Z,4.9nm,1.4s
TORD Torodi Ar. Bea 48.91 247 P **P** **21 17 26.1 -0.3**
comp=Z,14nm,0.3s,baz=42,slow=7.9,SNR=2.1
CMAR Chiang Mai Arr 49.86 102 P **P** **21 17 34.0 +0.4**
comp=Z,0.7nm,0.5s,baz=304,slow=9.4,SNR=6.5
comp=Z,0.7nm,0.5s
CMAR Chiang Mai Arr 49.86 102 *ce*P **P** **21 17 34.7 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.5s

ROM 24 21:12:27.5±0.2, 42°.754N±0°.005×13°.187E±0°.010,
h10km=1km, ML2.4/13, 1C, Error ellipse: s-maj=0.7km
s-min=0.5km az=102.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.19**	**216**	P	Pg		21 12 32.1	+0.7
LNSS				S	Sg		21 12 35.6	+1.4
LNSS				AML	AML			
	comp=E,1042μm,0.2s							
LNSS				AML	AML			
	comp=N,818μm,1.2s							
LNSS				AML	AML			
	comp=N,3340μm,0.5s							
LNSS				AML	AML			
	comp=E,2745μm,0.5s							
LNSS				AML	AML			
	comp=E,1039μm,0.2s							
LNSS				AML	AML			
	comp=N,969μm,2.2s							
RM33	**Pellescritta (**	**0.25**	**175**	P	Pg		21 12 32.9	+0.3
RM33				AML	AML			
	comp=E,6755μm,0.3s							
RM33				AML	AML			
	comp=N,5235μm,0.3s							
RM33				AML	AML			
	comp=N,5265μm,1.2s							
RM33				AML	AML			
	comp=E,6475μm,0.3s							
RM33				AML	AML			
	comp=E,389μm,4.1s							
RM33				AML	AML			
	comp=N,264μm,1.4s							
RM33				AML	AML			
	comp=E,295μm,2.3s							
RM33				AML	AML			
	comp=N,230μm,1.4s							
FDMO	**Fiordimonte**	**0.29**	**346**	P	Pg		21 12 33.7	+0.3
FDMO				S	Sb		21 12 38.6	-1.2
FDMO				AML	AML			
	comp=E,160μm,0.1s							
FDMO				AML	AML			
	comp=N,171μm,0.5s							
FDMO				AML	AML			
	comp=E,204μm,1.3s							
FDMO				AML	AML			
	comp=N,237μm,0.6s							
FDMO				AML	AML			
	comp=E,204μm,1.3s							
FDMO				AML	AML			
	comp=N,236μm,0.6s							
FDMO				AML	AML			
	comp=N,171μm,0.5s							
FDMO				AML	AML			
	comp=E,160μm,0.1s							
TERO	**Teramo**	**0.33**	**113**	P	Pg		21 12 34.3	+0.2
TERO				S	Sg		21 12 39.7	+1.1
TERO				AML	AML			
	comp=E,182μm,0.3s							
TERO				AML	AML			
	comp=N,327μm,0.3s							
TERO				AML	AML			
	comp=E,1660μm,1.3s							
TERO				AML	AML			
	comp=E,1790μm,0.5s							
TERO				AML	AML			
	comp=E,1658μm,1.3s							
TERO				AML	AML			
	comp=N,2160μm,0.1s							
TERO				AML	AML			
	comp=N,1830μm,0.1s							
TERO				AML	AML			
	comp=N,287μm,10.3s							
TERO				AML	AML			
	comp=E,264μm,11.0s							
TERO				AML	AML			
	comp=E,182μm,0.3s							
TERO				AML	AML			
	comp=N,327μm,0.3s							

CSP1	**Cessapalombo**	**0.34**	**2**	P	Pg	21 12 34.5	+0.2	
CSP1				S	Sb	21 12 40.0	-1.2	
ARRO	**Arrone**	**0.36**	**241**	P	Pg	21 12 35.0	+0.5	
ARRO				S	Sb	21 12 41.0	-0.5	
CESX	**Cesi**	**0.47**	**252**	P	Pg	21 12 36.8	+0.2	
CESX				AML	AML			
	comp=E,73μm,1.4s							
CESX				AML	AML			
	comp=N,71μm,0.7s							
CESX				AML	AML			
	comp=E,259μm,0.7s							
CESX				AML	AML			
	comp=N,298μm,0.6s							
CESX				AML	AML			
	comp=N,71μm,2.6s							
CESX				AML	AML			
	comp=E,75μm,14.4s							
ASSB	**Assisi San Ben**	**0.48**	**307**	P	Pg	21 12 37.0	0.0	
ASSB				S	Sb	21 12 44.6	-0.8	
ASSB				AML	AML			
	comp=E,200μm,1.6s							
ASSB				AML	AML			
	comp=N,192μm,0.2s							
ASSB				AML	AML			
	comp=E,95μm,2.7s							
ASSB				AML	AML			
	comp=N,83μm,0.5s							
FIAM	**Fiamignano**	**0.49**	**186**	P	Pg	21 12 37.2	+0.2	
FIAM				AML	AML			
	comp=E,56μm,0.7s							
FIAM				AML	AML			
	comp=N,55μm,0.3s							
FIAM				AML	AML			
	comp=N,238μm,0.5s							
FIAM				AML	AML			
	comp=E,358μm,0.4s							
FIAM				AML	AML			
	comp=N,238μm,0.5s							
FIAM				AML	AML			
	comp=N,55μm,2.9s							
FIAM				AML	AML			
	comp=E,59μm,3.6s							
SNTG	**Esanatoglia**	**0.53**	**340**	P	Pg	21 12 38.2	+0.3	
SNTG				S	Sb	21 12 46.1	-0.6	
SNTG				AML	AML			
	comp=N,103μm,0.3s							
SNTG				AML	AML			
	comp=E,85μm,1.1s							
SNTG				AML	AML			
	comp=N,103μm,0.3s							
FAGN	**Fagnano**	**0.57**	**149**	P	Pb	21 12 39.6	0.0	
FAGN				AML	AML			
	comp=E,682μm,0.6s							
FAGN				AML	AML			
	comp=E,683μm,0.6s							
FAGN				AML	AML			
	comp=E,89μm,1.9s							
FAGN				AML	AML			
	comp=N,500μm,0.4s							
EL6	**Elcito**	**0.58**	**354**	S	Sb	21 12 49.0	+0.9	
VCEL	**Villa Celiera**	**0.60**	**126**	⇑P	Pb	21 12 40.2	0.0	
VCEL				AML	AML			
	comp=N,811μm,0.3s							
VCEL				AML	AML			
	comp=E,743μm,1.0s							
VCEL				AML	AML			
	comp=E,744μm,1.0s							
CING	**Cingoli**	**0.62**	**1**	P	Pg	21 12 39.6	+0.1	
CING				S	Sb	21 12 49.5	+0.2	
CING				AML	AML			
	comp=E,211μm,0.4s							
CING				AML	AML			
	comp=N,152μm,0.3s							
CING				AML	AML			
	comp=E,210μm,0.4s							
CING				AML	AML			
	comp=N,57μm,0.8s							
CING				AML	AML			
	comp=E,62μm,6.8s							
SSFR	**Montelago di S**	**0.74**	**337**	S	Sg	21 12 50.0	-1.6	
ARVD	**Arcevia**	**0.77**	**347**	P	Pg	21 12 42.2	0.0	
ARVD				AML	AML			
	comp=E,47μm,1.0s							
ARVD				AML	AML			
	comp=N,38μm,0.7s							
ARVD				AML	AML			
	comp=N,24μm,1.4s							
ARVD				AML	AML			
	comp=E,30μm,3.2s							

ROM 24 21:13:21.5±0.1, 42°.616N±0°.004×13°.291E±0°.006, h10km, ML2.2/23, 18C-7D, Error ellipse: s-maj=0.5km s-min=0.4km az=210.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**133**	⇑P		Pg		21 13 25.1	+0.7
CAMP				S		Sg		21 13 27.5	+0.9
CAMP				AML		AML			
	comp=E,1243μm,0.6s								
CAMP				AML		AML			
	comp=N,1185μm,0.5s								
RM33	**Pellescritta (**	**0.12**	**208**	P		Pg		21 13 25.1	+0.6
RM33				S		Sg		21 13 27.3	+0.7
RM33				AML		AML			
	comp=E,6750μm,0.3s								
RM33				AML		AML			
	comp=N,5235μm,0.3s								
RM33				AML		AML			
	comp=E,6475μm,0.3s								
RM33				AML		AML			
	comp=N,5265μm,1.2s								
RM33				AML		AML			
	comp=N,5230μm,0.3s								
RM33				AML		AML			
	comp=E,6755μm,0.3s								
LNSS	**Leonessa**	**0.18**	**266**	⇑P		Pg		21 13 26.0	+0.5
LNSS				S		Sg		21 13 29.0	+0.8
LNSS				AML		AML			
	comp=E,2740μm,0.5s								
LNSS				AML		AML			
	comp=N,3345μm,0.5s								
LNSS				AML		AML			
	comp=E,2745μm,0.5s								
LNSS				AML		AML			
	comp=N,3340μm,0.5s								
TERO	**Teramo**	**0.23**	**88**	⇑P		Pg		21 13 26.8	+0.6
TERO				S		Sg		21 13 30.5	+1.0
TERO				AML		AML			
	comp=N,1825μm,0.1s								
TERO				AML		AML			
	comp=E,1660μm,1.3s								
TERO				AML		AML			
	comp=E,1660μm,1.3s								
TERO				AML		AML			
	comp=E,1790μm,0.5s								
TERO				AML		AML			
	comp=N,2160μm,0.1s								
TERO				AML		AML			
	comp=E,1658μm,1.3s								
TERO				AML		AML			
	comp=N,1830μm,0.1s								
NRCA	**Norcia**	**0.25**	**329**	⇑P		Pg		21 13 27.1	+0.4
NRCA				AML		AML			
	comp=E,3500μm,0.7s								
NRCA				AML		AML			
	comp=N,2875μm,0.1s								
NRCA				AML		AML			
	comp=E,3875μm,0.7s								
NRCA				AML		AML			
	comp=N,2690μm,0.1s								
GIGS	**Gran Sasso**	**0.26**	**129**	⇓P		Pg		21 13 27.4	+0.6
GIGS				S		Sg		21 13 31.6	+1.1
GIGS				AML		AML			
	comp=E,298μm,0.5s								
GIGS				AML		AML			
	comp=N,186μm,0.2s								
AQU	**L'Aquila**	**0.28**	**163**	P		Pg		21 13 27.8	+0.7
AQU				S		Sb		21 13 32.5	-0.8
AQU				AML		AML			
	comp=E,376μm,0.6s								
AQU				AML		AML			
	comp=N,530μm,1.1s								
AQU				AML		AML			
	comp=E,358μm,0.6s								
AQU				AML		AML			
	comp=N,535μm,0.6s								
AQU				AML		AML			
	comp=N,531μm,1.1s								
FIAM	**Fiamignano**	**0.37**	**200**	⇑P		Pg		21 13 29.2	+0.3
FIAM				AML		AML			
	comp=E,358μm,0.4s								
FIAM				AML		AML			
	comp=N,238μm,0.5s								
FIAM				AML		AML			
	comp=E,358μm,0.4s								
FIAM				AML		AML			
	comp=N,238μm,0.5s								
FAGN	**Fagnano**	**0.41**	**148**	⇓P		Pg		21 13 30.1	+0.5
FAGN				AML		AML			
	comp=E,683μm,0.6s								
FAGN				AML		AML			
	comp=E,682μm,0.6s								
FAGN				AML		AML			
	comp=N,500μm,0.4s								
OFFI	**Offida**	**0.43**	**42**	⇓P		Pb		21 13 31.3	+0.1
OFFI				AML		AML			
	comp=E,668μm,0.6s								
OFFI				AML		AML			
	comp=N,981μm,0.4s								
FDMO	**Fiordimonte**	**0.45**	**340**	⇑P		Pg		21 13 30.6	+0.4
FDMO				S		Sb		21 13 37.6	-0.6
FDMO				AML		AML			
	comp=E,204μm,1.3s								
FDMO				AML		AML			
	comp=N,237μm,0.6s								
FDMO				AML		AML			
	comp=E,204μm,1.3s								
FDMO				AML		AML			
	comp=N,236μm,0.6s								
GUMA	**Gualdo di Mace**	**0.45**	**4**	⇑P		Pb		21 13 30.9	-0.6
GUMA				S		Sb		21 13 38.3	0.0
VCEL	**Villa Celiera**	**0.46**	**118**	P		Pb		21 13 31.3	-0.5
VCEL				AML		AML			
	comp=E,744μm,1.0s								
VCEL				AML		AML			
	comp=E,743μm,1.0s								
VCEL				AML		AML			
	comp=N,811μm,0.3s								
CSP1	**Cessapalombo**	**0.48**	**352**	⇑P		Pg		21 13 31.1	+0.2
CSP1				S		Sb		21 13 38.6	-0.7
CESI	**CESI - Serrava**	**0.48**	**324**	⇑P		Pg		21 13 31.2	+0.3
CESI				AML		AML			
	comp=E,198μm,0.4s								
CESI				AML		AML			
	comp=E,198μm,0.4s								
CESI				AML		AML			
	comp=N,454μm,0.2s								
TRTR	**Tortoreto Alta**	**0.50**	**67**	⇑P		Pb		21 13 32.8	+0.4
TRTR				AML		AML			
	comp=E,686μm,0.5s								
TRTR				AML		AML			
	comp=N,790μm,1.0s								
CESX	**Cesi**	**0.53**	**270**	⇓P		Pg		21 13 31.6	-0.1
CESX				AML		AML			
	comp=N,298μm,0.6s								
CESX				AML		AML			
	comp=E,259μm,0.7s								
T0110	**Collepietro**	**0.53**	**137**	⇑P		Pg		21 13 32.2	+0.3
T0110				AML		AML			
	comp=N,400μm,0.6s								
T0110				AML		AML			
	comp=E,428μm,0.5s								
ASSB	**Assisi San Ben**	**0.63**	**313**	⇓P		Pg		21 13 33.8	+0.1
ASSB				AML		AML			
	comp=E,200μm,1.6s								
ASSB				AML		AML			
	comp=N,192μm,0.2s								
SNTG	**Esanatoglia**	**0.69**	**338**	⇑P		Pg		21 13 35.0	+0.2
SNTG				AML		AML			
	comp=N,103μm,0.3s								
SNTG				AML		AML			
	comp=E,85μm,1.1s								
SNTG				AML		AML			
	comp=N,103μm,0.3s								
SRES	**S.Oreste - Sor**	**0.69**	**237**	⇓P		Pg		21 13 35.1	+0.3
SRES				AML		AML			
	comp=N,69μm,1.1s								
SRES				AML		AML			
	comp=E,67μm,0.5s								
CERT	**Cerreto**	**0.70**	**199**	P		Pg		21 13 33.4	-1.7
EL6	**Elcito**	**0.73**	**349**	⇑P		Pb		21 13 36.0	-0.3
ATCC	**AVT- Casa Cast**	**0.74**	**320**	⇑P		Pb		21 13 37.0	+0.5
ATCC				AML		AML			
	comp=N,144μm,0.1s								
ATCC				AML		AML			
	comp=N,144μm,0.1s								
ATCC				AML		AML			
	comp=E,164μm,0.5s								
INTR	**Introdacqua**	**0.76**	**143**	⇓P		Pg		21 13 36.0	-0.1
INTR				AML		AML			
	comp=N,125μm,1.6s								
INTR				AML		AML			
	comp=N,124μm,1.6s								
INTR				AML		AML			
	comp=E,75μm,0.7s								
CING	**Cingoli**	**0.76**	**355**	⇑P		Pg		21 13 36.3	0.0
CING				AML		AML			
	comp=E,211μm,0.4s								
CING				AML		AML			
	comp=N,152μm,0.3s								
CING				AML		AML			
	comp=E,210μm,0.4s								
FOSV	**Fossato di Vic**	**0.78**	**330**	⇑P		Pn		21 13 39.0	+0.3
ATTE	**AVT- Monte Tez**	**0.90**	**310**	⇑P		Pn		21 13 41.3	+1.0
MGAB	**Montegabbione**	**0.92**	**289**	⇑P		Pg		21 13 39.1	-0.1
MGAB				S		Sn		21 13 53.0	-0.8
MGAB				AML		AML			
	comp=E,208μm,0.6s								
MGAB				AML		AML			
	comp=N,118μm,0.5s								

*KRNET **24** 21:29:16.9±0.1, 39°.41N×73°.10E, mb3.2*
*SOME **24** 21:29:23.3, 39°.83N×72°.90E, h0km*
*NNC **24** 21:29:24.9±1.8, 39°.88N×72°.87E, h0km±10km, mb3.6, mpv3.3, Error ellipse: s-maj=14.8km s-min=7.5km az=173.0*

ISC 24 21:29:19.2±1.2, 39°.57N±0°.06×73°.09E±0°.04, h10km, n32, σ1s 86/54, 12C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.98**	**346**	⇑*i*P			**Pb**	**21 29 38.6**	**+0.2**
	baz=48								
OHH				⇑*i*S			**Sn**	**21 29 54.5**	**+1.4**
	baz=48								
BTK	**Batken**	**1.81**	**286**	⇑*i*P			**Pb**	**21 29 51.8**	**-0.8**
	baz=91								
BTK				⇑*i*S			**Sg**	**21 30 17.1**	**-0.4**
	baz=91								
GAR	**Garm**	**2.22**	**256**	⇑*i*P			**Pn**	**21 29 56.7**	**+0.4**
	baz=60								
GAR				⇑*i*S			**Sb**	**21 30 25.5**	**-1.7**
	baz=60								
ARK	**Arkit**	**2.38**	**339**	⇑*i*P			**Pb**	**21 30 01.5**	**-0.8**
	baz=41								
ARK				⇑*i*S			**Sg**	**21 30 34.0**	**-1.8**
	baz=41								
ARLS	**Aral**	**2.47**	**22**	⇑*e*P			**Pb**	**21 30 02.5**	**-1.4**
	baz=21								
ARLS				⇑*i*S			**Sb**	**21 30 35.9**	**+1.5**
	baz=21								
EKS2	**Erkin-Say**	**3.13**	**9**	⇓*i*P			**Pb**	**21 30 12.0**	**-3.1**
	baz=9.0								
EKS2				⇓*i*S			**Sb**	**21 30 52.0**	**-1.3**
	baz=9.0								
IUG	**Iuzhnay**	**3.46**	**319**	*e*P			**Pb**	**21 30 22.7**	**+2.0**
	85nm,0.6s								
IUG				*e*S			**Sb**	**21 31 05.1**	**+2.2**
	15nm,0.5s								
IUG	**Iuzhnay**	**3.46**	**319**	Pg			**Pn**	**21 30 16.0**	**+2.7**
	110nm,0.3s								
IUG				Lg			Lg	21 30 54.1	
	13nm,0.6s								
TKM2	**Tokmak 2**	**3.84**	**29**	⇑Pn			**Pn**	**21 30 22.8**	**+4.2**
	0.9nm,0.3s								
TKM2				⇓Pg			**Pg**	**21 30 31.3**	**-1.6**
	2.6nm,0.6s								
TKM2				⇑Lg			Lg	21 31 22.6	
	7.7nm,0.6s								
KK31	**Karatay Array**	**4.03**	**332**	Pn			**Pn**	**21 30 23.2**	**+2.2**
	0.5nm,0.3s,baz=128,slow=11,SNR=38								
KK31				⇓Pg			**Pb**	**21 30 32.1**	**+1.9**
	0.5nm,0.2s,baz=134,slow=12,SNR=6.2								
KK31				Lg			Lg	21 31 19.4	
	8.0nm,0.5s,baz=149,slow=27,SNR=5.2								
KST	**Kastek**	**4.09**	**31**	*e*P			**Pg**	**21 30 35.5**	**-2.1**
	2.3nm,0.4s								
KST				*e*S			**Sg**	**21 31 28.1**	**-2.5**
	8.4nm,0.6s								
KST	**Kastek**	**4.09**	**31**	Pg			**Pg**	**21 30 35.5**	**-2.1**
	2.3nm,0.4s								
KST				Lg			Lg	21 31 28.1	
	8.4nm,0.6s								
DGS	**Degeres**	**4.19**	**28**	*e*P			**Pg**	**21 30 39.9**	**+0.4**
	4.3nm,0.7s								
DGS				*e*S			**Sg**	**21 31 34.7**	**+1.0**
	11nm,0.5s								
MTBS	**Maitube**	**4.36**	**34**	*e*P			**Pg**	**21 30 43.0**	**+0.3**
	2.1nm,0.1s								
MTBS				*e*S			**Sg**	**21 31 40.6**	**+1.6**
	4.3nm,0.2s								
MTBS	**Maitube**	**4.36**	**34**	Pg			**Pg**	**21 30 43.0**	**+0.3**
	2.1nm,0.1s								
MTBS				Lg			Lg	21 31 40.6	
	4.3nm,0.2s								
KRBS	**Karabastau**	**4.55**	**24**	*e*P			**Pg**	**21 30 45.3**	**-1.2**
	3.2nm,0.5s								
KRBS				*e*S			**Sg**	**21 31 44.9**	**-0.5**
	8.4nm,0.8s								
KRBS	**Karabastau**	**4.55**	**24**	Pg			**Pg**	**21 30 45.3**	**-1.2**
KRBS				Lg			Lg	21 31 44.9	
MDOK	**Medeo**	**4.66**	**38**	*e*P			**Pg**	**21 30 47.8**	**-0.8**
	1.5nm,0.4s								
MDOK				*e*S			**Sg**	**21 31 48.8**	**-0.2**
	7.2nm,0.9s								
MDOK	**Medeo**	**4.66**	**38**	Pg			**Pg**	**21 30 47.8**	**-0.8**
	1.5nm,0.4s								
MDOK				Pg			Pb	21 30 48.4	+7.2
	4.0nm,0.7s								
MDOK				Lg			Lg	21 31 48.8	
	7.2nm,0.9s								
MDOK				⇓Lg			Lg	21 31 50.3	
	7.8nm,0.7s								
KOTS	**Kotyrbulak**	**4.75**	**38**	*e*P			**Pg**	**21 30 50.0**	**-0.2**
	1.1nm,0.2s								
KOTS				*e*S			**Sg**	**21 31 52.1**	**+0.4**
	14nm,0.9s								
KTBS	**Karatobe**	**4.94**	**32**	*e*P			**Pg**	**21 30 50.9**	**-2.8**
	1.6nm,0.5s								
KTBS				*e*S			**Sg**	**21 31 54.7**	**-3.0**
	9.3nm,0.5s								
KTBS	**Karatobe**	**4.94**	**32**	Pg			**Pg**	**21 30 50.9**	**-2.8**
	1.6nm,0.5s								
KTBS				Lg			Lg	21 31 54.7	
	9.3nm,0.5s								
KUU	**Kurty**	**4.96**	**28**	*e*P			**Pg**	**21 30 51.8**	**-2.4**
	3.0nm,0.5s								
KUU				*e*S			**Sg**	**21 31 56.5**	**-1.9**
	8.5nm,0.6s								
KUU	**Kurty**	**4.96**	**28**	Pg			**Pg**	**21 30 51.8**	**-2.4**
	3.0nm,0.5s								
KUU				Lg			Lg	21 31 56.5	
	8.5nm,0.6s								
SATY	**Saty**	**5.31**	**47**	*e*P			**Pg**	**21 30 59.8**	**-1.1**
	1.5nm,0.3s								
SATY				*e*S			**Sg**	**21 32 09.2**	**-0.4**
	2.5nm,0.3s								
SATY	**Saty**	**5.31**	**47**	Pg			**Pg**	**21 30 59.8**	**-1.1**
	1.5nm,0.3s								
SATY				Lg			Lg	21 32 09.2	
	2.5nm,0.3s								
BTLS	**Baital**	**5.51**	**7**	*e*P			**Pg**	**21 31 01.9**	**-2.8**
	1.8nm,0.5s								
BTLS				*e*S			**Sg**	**21 32 12.6**	**-3.6**
	5.2nm,0.7s								
UZB	**Uzynbulak**	**5.72**	**49**	*e*P			**Pg**	**21 31 07.9**	**-0.8**
	0.7nm,0.3s								
UZB				*e*S			**Sg**	**21 32 22.9**	**+0.1**
	2.7nm,0.6s								
KPKS	**Kokpek**	**5.73**	**45**	*e*P			**Pg**	**21 31 08.3**	**-0.5**
	1.0nm,0.3s								
KPKS				*e*S			**Sg**	**21 32 23.6**	**+0.6**
	4.4nm,0.7s								
ARXS	**Arharly**	**5.83**	**36**	*e*P			**Pg**	**21 31 08.8**	**-2.1**
	3.5nm,0.6s								
ARXS				*e*S			**Sg**	**21 32 24.5**	**-1.9**
	5.7nm,0.5s								
SHLS	**Shalkode**	**5.99**	**51**	*e*P			Pg	21 31 20.2	+6.3
	1.3nm,0.3s								
SHLS				*e*S			Sg	21 32 43.8	+12
	3.2nm,0.7s								
BLB	**Baldybastay**	**6.05**	**40**	*e*P			**Pg**	**21 31 12.7**	**-2.4**
	3.7nm,0.4s								
BLB				*e*S			**Sg**	**21 32 31.3**	**-2.3**
	7.1nm,0.9s								

*IDC **24** 21:33:32.0±2.2, 41°.90N×113°.36W, h0km, mbtmp1.7/1, ML2.9/1, Error ellipse: s-maj=74.2km s-min=5.2km az=150.0*
*NEIC **24** 21:33:33.9±1.1, 41°.091N±0°.009×112°.87W±0°.05, h0km±2km, ML1.9/32, Error ellipse: s-maj=6.5km s-min=3.1km az=266.0*

ISC 24 21:33:33.4±1.0, 41°.07N±0°.03×112°.78W±0°.04, h0km, n28, σ0s 67/28, Utah

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.24**	**233**				**Pg**	**21 33 38.1**	**0.0**
HVU	**Hansel Valley**	**0.71**	**0**				**Pg**	**21 33 46.1**	**-0.9**
HVU						IAML		21 34 00.0	
	comp=N,62nm,0.4s								
HVU						IAML		21 34 00.8	
	comp=E,64nm,0.4s								
CTU	**Camp Tracy**	**0.86**	**116**				**Pn**	**21 33 52.4**	**-0.7**
CTU						IAML		21 34 09.6	
	comp=N,35nm,0.5s								
CTU						IAML		21 34 11.7	
	comp=E,28nm,0.4s								
DUG	**Dugway, Tooele**	**0.87**	**182**				**Pb**	**21 33 51.7**	**+0.2**
DUG						IAML		21 34 07.3	
	comp=E,28nm,0.4s								
DUG						IAML		21 34 14.5	
	comp=E,46nm,0.5s								
TCUT	**Toone Canyon**	**1.03**	**87**				**Pn**	**21 33 55.4**	**-0.1**
HWUT	**Hardware Ranch**	**1.06**	**59**				**Pb**	**21 33 54.5**	**-0.2**
HWUT						IAML		21 34 19.0	
	comp=E,21nm,0.5s								
JLU	**Jordanelle**	**1.11**	**114**				**Pn**	**21 33 56.1**	**-0.3**
NLU	**North Lily Min**	**1.23**	**154**	Pg			**Pn**	**21 33 57.9**	**-0.3**
ELK	**Elko**	**1.90**	**261**	Pg			**Pn**	**21 34 06.2**	**-1.0**
	comp=E,2.5nm,0.3s,baz=70,slow=10,SNR=23								
ELK				Lg			Lg	21 34 30.1	
	comp=E,2.3nm,0.3s,baz=94,slow=12,SNR=12								
ELK	**Elko**	**1.90**	**261**				**Pn**	**21 34 06.2**	**-1.0**
ELK						IAML		21 34 34.7	
	comp=E,8.8nm,0.4s								
AHID	**Auburn Hatcher**	**2.11**	**36**				**Pn**	**21 34 10.7**	**+0.6**
ECR	**Eagle Creek**	**2.24**	**27**	Pn			**Pn**	**21 34 13.1**	**+1.0**
P18A	**Preston Nutter**	**2.41**	**126**				**Pb**	**21 34 17.4**	**-0.5**
MSU	**Marysvale**	**2.60**	**170**				**Pn**	**21 34 16.9**	**0.0**
SRU	**San Rafael Swe**	**2.61**	**138**	Pn			**Pn**	**21 34 18.0**	**+1.0**
PSUT	**Pine Spring**	**2.67**	**199**				**Pn**	**21 34 17.9**	**0.0**
REDW	**Red Top Meadow**	**2.70**	**31**	Pn			**Pn**	**21 34 18.5**	**+0.2**
HLID	**Hailey**	**2.77**	**335**				**Pn**	**21 34 19.0**	**-0.2**
HLID						IAML		21 35 05.3	
	comp=E,4.8nm,2.9s								
HLID						IAML		21 35 07.1	
	comp=E,5.4nm,2.0s								
FXWY	**Fox Creek**	**2.88**	**26**				**Pn**	**21 34 21.4**	**+0.6**
FXWY						IAML		21 35 09.2	
	comp=E,3.6nm,3.9s								
FXWY						IAML		21 36 11.3	
	comp=E,5.1nm,4.5s								
BW06	**Boulder Array**	**2.94**	**54**				**Pn**	**21 34 22.6**	**+1.0**
BW06						IAML		21 35 09.1	
	comp=E,4.8nm,0.5s								
BW06						IAML		21 35 15.2	
	comp=E,4.8nm,1.1s								
PDAR	**Pinedale Array**	**2.94**	**54**	Pn			**Pn**	**21 34 20.9**	**-0.8**
	comp=E,0.2nm,0.3s,baz=267,slow=7.1,SNR=3.2								
PDAR				Pg			**Pb**	**21 34 27.4**	**+0.6**
	comp=E,0.8nm,0.3s,baz=235,slow=13,SNR=14								
PDAR				Lg			Lg	21 35 04.5	
	comp=E,0.8nm,0.3s,baz=245,slow=17,SNR=2.9								
	comp=E,0.2nm,0.3s								

PDAR	**Pinedale Array**	**2.94**	**54**		**Pn**	**21 34 22.4**	**+0.8**
LOHW	**Long Hollow**	**3.01**	**32**		**Pn**	**21 34 22.4**	**-0.2**
MOOW	**Moose Ponds**	**3.07**	**29**	Pn	**Pn**	**21 34 23.8**	**+0.4**
MOOW				IAML		21 35 14.9	
	comp=E,4.4nm,3.7s						
MOOW				IAML		21 35 40.9	
	comp=E,4.1nm,4.5s						
MCMT	**McKenzie Canyo**	**3.76**	**359**		**Pn**	**21 34 32.9**	**+0.1**
KVN	**Kaiserville**	**4.55**	**245**	Pn	**Pn**	**21 34 43.7**	**-0.1**
NVAR	**Mina Array Bea**	**5.01**	**240**	Pg	**Pb**	**21 35 03.4**	**+1.3**
	comp=E,0.1nm,0.3s,baz=52,slow=15,SNR=2.3						
NVAR				Lg	Lg	21 36 12.8	
	comp=E,0.3nm,0.3s,baz=59,slow=39,SNR=2.0						
I56US	**NEWPORT INFRAS**	**7.83**	**338**	*i*		22 18 02.0	
	baz=158,slow=322,SNR=5.4						

ROM 24 22:02:02.6±0.1, 42.664N±0.004×13.300E±0.009, h1km, ML2.2/14, 5C-4D, Error ellipse: s-maj=0.7km s-min=0.5km az=277.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.15**	**148**	P	Pg		22 02 06.3	+0.8
CAMP				S	Sg		22 02 08.8	+1.3
CAMP				AML	AML			
	comp=E,672μm,1.5s							
CAMP				AML	AML			
	comp=N,706μm,0.2s							
CAMP				AML	AML			
	comp=N,706μm,0.2s							
CAMP	**Campotosto**	**0.15**	**148**	S	Sg		22 02 08.8	+1.3
CAMP				AML	AML			
	comp=E,672μm,1.5s							
CAMP				AML	AML			
	comp=N,706μm,0.2s							
CAMP				AML	AML			
	comp=N,706μm,0.2s							
CAMP				AML	AML			
	comp=E,672μm,1.5s							
CAMP				AML	AML			
	comp=N,706μm,0.2s							
CAMP				AML	AML			
	comp=E,672μm,1.5s							
RM33	**Pellescritta (**	**0.17**	**202**	P	Pg		22 02 06.6	+0.7
RM33				S	Sg		22 02 09.4	+1.3
RM33				AML	AML			
	comp=E,2360μm,1.0s							
RM33				AML	AML			
	comp=E,2380μm,1.0s							
RM33				AML	AML			
	comp=N,2350μm,0.4s							
RM33				AML	AML			
	comp=N,2380μm,0.4s							
RM33				AML	AML			
	comp=N,149μm,0.1s							
RM33				AML	AML			
	comp=N,178μm,1.3s							
RM33				AML	AML			
	comp=E,146μm,0.3s							
RM33				AML	AML			
	comp=E,111μm,0.1s							
RM33	**Pellescritta (**	**0.17**	**202**	S	Sg		22 02 09.3	+1.3
RM33				AML	AML			
	comp=E,2360μm,0.9s							
RM33				AML	AML			
	comp=N,2380μm,0.4s							
RM33				AML	AML			
	comp=E,2380μm,1.0s							
RM33				AML	AML			
	comp=N,2350μm,0.4s							
LNSS	**Leonessa**	**0.20**	**252**	P	Pg		22 02 07.2	+0.7
LNSS				S	Sg		22 02 10.5	+1.4
LNSS				AML	AML			
	comp=E,938μm,1.5s							
LNSS				AML	AML			
	comp=N,969μm,0.8s							
LNSS				AML	AML			
	comp=N,966μm,0.8s							
LNSS				AML	AML			
	comp=E,938μm,1.5s							
LNSS				AML	AML			
	comp=E,542μm,0.2s							
LNSS				AML	AML			
	comp=N,512μm,0.3s							
LNSS	**Leonessa**	**0.20**	**252**	P	Pg		22 02 06.8	+0.2
LNSS				S	Sg		22 02 10.6	+1.4
LNSS				AML	AML			
	comp=E,938μm,1.5s							
LNSS				AML	AML			
	comp=N,969μm,0.8s							
LNSS				AML	AML			
	comp=E,938μm,1.5s							
LNSS				AML	AML			
	comp=N,966μm,0.8s							
LNSS				AML	AML			
	comp=E,938μm,1.5s							
LNSS				AML	AML			
	comp=N,966μm,0.8s							
LNSS				AML	AML			
	comp=E,938μm,1.5s							
LNSS				AML	AML			
	comp=N,969μm,0.8s							
TERO	**Teramo**	**0.23**	**100**	P	Pg		22 02 07.6	+0.6
TERO				S	Sg		22 02 11.2	+1.2
TERO				AML	AML			
	comp=E,1801μm,1.4s							
TERO				AML	AML			
	comp=N,1990μm,1.5s							
TERO				AML	AML			
	comp=N,2455μm,0.1s							
TERO				AML	AML			
	comp=N,1992μm,1.5s							
TERO				AML	AML			
	comp=E,2120μm,0.9s							
TERO				AML	AML			
	comp=E,1802μm,1.4s							
TERO	**Teramo**	**0.23**	**100**	P	Pg		22 02 07.7	+0.7
TERO				S	Sg		22 02 11.2	+1.2
TERO				AML	AML			
	comp=E,1801μm,1.4s							
TERO				AML	AML			
	comp=N,1990μm,1.5s							
TERO				AML	AML			
	comp=E,2120μm,0.9s							
TERO				AML	AML			
	comp=N,2455μm,0.1s							
TERO				AML	AML			
	comp=E,1802μm,1.4s							
TERO				AML	AML			
	comp=N,1992μm,1.5s							
TERO				AML	AML			
	comp=N,2455μm,0.1s							
TERO				AML	AML			
	comp=E,2120μm,0.9s							
TERO				AML	AML			
	comp=E,1802μm,1.4s							
TERO				AML	AML			
	comp=E,2120μm,0.9s							
TERO				AML	AML			
	comp=N,2455μm,0.1s							
TERO				AML	AML			
	comp=N,1992μm,1.5s							
GIGS	**Gran Sasso**	**0.29**	**137**	P	Pg		22 02 08.5	+0.3
GIGS				S	Sg		22 02 12.9	+0.9
GIGS				AML	AML			
	comp=N,172μm,1.3s							
GIGS				AML	AML			
	comp=E,277μm,0.8s							
GIGS	**Gran Sasso**	**0.29**	**137**	P	Pg		22 02 08.4	+0.2
GIGS				S	Sg		22 02 13.1	+1.1
GIGS				AML	AML			
	comp=E,277μm,0.8s							
GIGS				AML	AML			
	comp=N,172μm,1.3s							
GIGS				AML	AML			
	comp=E,277μm,0.8s							
GIGS				AML	AML			
	comp=N,172μm,1.3s							
GIGS				AML	AML			
	comp=E,277μm,0.8s							
GIGS				AML	AML			
	comp=N,172μm,1.3s							
GIGS				AML	AML			
	comp=E,277μm,0.8s							
AQU	**L'Aquila**	**0.32**	**166**	⇓P	Pb		22 02 10.3	-0.9
AQU				S	Sg		22 02 14.1	+1.2
AQU				AML	AML			
	comp=E,204μm,0.5s							
AQU				AML	AML			
	comp=N,328μm,1.1s							
AQU				AML	AML			
	comp=E,234μm,1.1s							
AQU				AML	AML			
	comp=N,317μm,1.1s							
AQU				AML	AML			
	comp=N,328μm,1.1s							
AQU				AML	AML			
	comp=N,317μm,1.1s							
AQU				AML	AML			
	comp=E,204μm,0.5s							
AQU				AML	AML			
	comp=E,234μm,1.1s							
AQU				AML	AML			
	comp=N,328μm,1.1s							
AQU				AML	AML			
	comp=N,317μm,1.1s							
AQU				AML	AML			
	comp=E,204μm,0.5s							
AQU				AML	AML			
	comp=E,234μm,1.1s							
OFFI	**Offida**	**0.39**	**46**	P	Pb		22 02 11.6	-0.8
OFFI				AML	AML			
	comp=N,1002μm,0.4s							
OFFI				AML	AML			
	comp=E,1195μm,0.4s							
OFFI	**Offida**	**0.39**	**46**	⇑P	Pb		22 02 11.8	-0.7
OFFI				S	Sb		22 02 18.1	-0.9
OFFI				AML	AML			
	comp=E,1195μm,0.4s							
OFFI				AML	AML			
	comp=N,1002μm,0.4s							
OFFI				AML	AML			
	comp=E,1195μm,0.4s							
OFFI				AML	AML			
	comp=N,1002μm,0.4s							
OFFI				AML	AML			
	comp=E,1195μm,0.4s							
OFFI				AML	AML			
	comp=N,1002μm,0.4s							
GUMA	**Gualdo di Mace**	**0.40**	**4**	P	Pb		22 02 11.5	-1.1
GUMA				AML	AML			
	comp=E,724μm,0.3s							
GUMA				AML	AML			
	comp=N,1245μm,0.5s							
GUMA				AML	AML			
	comp=N,1260μm,0.5s							
GUMA				AML	AML			
	comp=E,858μm,0.3s							
GUMA	**Gualdo di Mace**	**0.40**	**4**	P	Pb		22 02 11.5	-1.1
GUMA				S	Sb		22 02 18.4	-0.9
GUMA				AML	AML			
	comp=E,724μm,0.4s							
GUMA				AML	AML			
	comp=N,1250μm,0.5s							
GUMA				AML	AML			
	comp=E,858μm,0.3s							
GUMA				AML	AML			
	comp=N,1260μm,0.5s							
GUMA				AML	AML			
	comp=N,1260μm,0.5s							
GUMA				AML	AML			
	comp=N,1250μm,0.5s							
GUMA				AML	AML			
	comp=E,858μm,0.3s							
GUMA				AML	AML			
	comp=E,724μm,0.4s							
ARRO	**Arrone**	**0.40**	**258**	P	Pg		22 02 10.6	+0.3
ARRO				S	Sg		22 02 16.9	+1.3
ARRO				AML	AML			
	comp=N,200μm,0.6s							
ARRO				AML	AML			
	comp=E,194μm,0.2s							
ARRO				AML	AML			
	comp=E,17μm,0.1s							
ARRO	**Arrone**	**0.40**	**258**	P	Pg		22 02 08.7	-1.7
ARRO				AML	AML			
	comp=E,194μm,0.2s							
ARRO				AML	AML			
	comp=N,200μm,0.6s							
ARRO				AML	AML			
	comp=E,194μm,0.2s							
ARRO				AML	AML			
	comp=N,200μm,0.6s							
ARRO				AML	AML			
	comp=E,194μm,0.2s							
ARRO				AML	AML			
	comp=N,200μm,0.6s							
FDMO	**Fiordimonte**	**0.40**	**337**	AML	AML			
	comp=E,70μm,1.1s							
FDMO				AML	AML			
	comp=N,79μm,1.0s							
FDMO				AML	AML			
	comp=N,93μm,0.3s							
FDMO				AML	AML			
	comp=E,98μm,0.5s							
FIAM	**Fiamignano**	**0.42**	**199**	P	Pg		22 02 10.7	0.0
FIAM				S	Sg		22 02 16.9	+0.8
FIAM				AML	AML			
	comp=E,250μm,0.4s							
FIAM				AML	AML			
	comp=N,178μm,0.7s							
CSP1	**Cessapalombo**	**0.43**	**351**	P	Pg		22 02 11.6	+0.6
CSP1	**Cessapalombo**	**0.43**	**351**	P	Pg		22 02 11.8	+0.9
CSP1				S	Sb		22 02 18.8	-1.5
CESI	**CESI - Serrava**	**0.45**	**320**	P	Pg		22 02 11.4	+0.1
CESI				AML	AML			
	comp=N,174μm,0.3s							
CESI				AML	AML			
	comp=E,124μm,0.5s							
CESI				AML	AML			
	comp=E,75μm,0.2s							
CESI				AML	AML			
	comp=N,146μm,0.3s							
FAGN	**Fagnano**	**0.45**	**152**	⇓P	Pb		22 02 13.4	-0.1
FAGN				AML	AML			
	comp=E,534μm,0.3s							
FAGN				AML	AML			
	comp=N,488μm,0.3s							
FAGN				AML	AML			
	comp=E,534μm,0.3s							
FAGN				AML	AML			
	comp=N,488μm,0.3s							
FAGN				AML	AML			
	comp=E,534μm,0.3s							
FAGN				AML	AML			
	comp=N,488μm,0.3s							
FAGN				AML	AML			
	comp=E,534μm,0.3s							
FAGN				AML	AML			
	comp=N,488μm,0.3s							
TRTR	**Tortoreto Alta**	**0.47**	**72**	⇑P	Pb		22 02 13.5	-0.3
TRTR				AML	AML			
	comp=E,654μm,1.4s							
TRTR				AML	AML			
	comp=N,766μm,1.1s							
TRTR				AML	AML			
	comp=N,766μm,1.1s							
TRTR				AML	AML			
	comp=E,654μm,1.4s							
VCEL	**Villa Celiera**	**0.48**	**124**	⇓P	Pg		22 02 12.4	+0.5
VCEL				AML	AML			
	comp=E,545μm,0.8s							
VCEL				AML	AML			
	comp=N,529μm,0.7s							
VCEL				AML	AML			
	comp=E,545μm,0.8s							
VCEL				AML	AML			
	comp=N,530μm,0.7s							
VCEL				AML	AML			
	comp=N,530μm,0.7s							
VCEL				AML	AML			
	comp=E,545μm,0.8s							
VCEL				AML	AML			
	comp=E,545μm,0.8s							
VCEL				AML	AML			
	comp=N,530μm,0.7s							
CESX	**Cesi**	**0.53**	**264**	⇓P	Pg		22 02 12.8	0.0
CESX				AML	AML			
	comp=E,196μm,0.5s							
CESX				AML	AML			
	comp=N,197μm,0.5s							
CESX				AML	AML			
	comp=E,196μm,0.5s							
CESX				AML	AML			
	comp=N,197μm,0.5s							
CESX				AML	AML			
	comp=N,197μm,0.5s							
CESX				AML	AML			
	comp=E,196μm,0.5s							
CESX				AML	AML			
	comp=N,197μm,0.5s							
CESX				AML	AML			
	comp=E,196μm,0.5s							
T0110	**Collepietro**	**0.56**	**141**	⇑P	Pg		22 02 13.7	+0.3
T0110				S	Sb		22 02 23.0	-1.0
T0110				AML	AML			
	comp=E,396μm,1.4s							
T0110				AML	AML			
	comp=N,418μm,0.3s							
T0110				AML	AML			
	comp=N,418μm,0.3s							
T0110				AML	AML			
	comp=E,396μm,1.4s							
T0110				AML	AML			
	comp=N,418μm,0.3s							
T0110				AML	AML			
	comp=E,396μm,1.4s							
INTR	**Introdacqua**	**0.79**	**145**	⇑P	Pg		22 02 17.5	-0.3
INTR				AML	AML			
	comp=E,73μm,1.3s							
INTR				AML	AML			
	comp=N,122μm,0.4s							
INTR				AML	AML			
	comp=N,122μm,0.4s							
INTR				AML	AML			
	comp=E,73μm,1.3s							
ARVD	**Arcevia**	**0.87**	**343**	⇑P	Pb		22 02 20.2	-0.4
CAFR	**Castel Frentan**	**0.89**	**119**	S	Sn		22 02 36.0	+0.1
LPEL	**Lama dei Pelig**	**0.90**	**133**	S	Sb		22 02 33.0	-0.6
MOCO	**Biccari - m.te**	**1.90**	**132**	P	Pb		22 02 37.8	-0.3
MAIM	**Mastiano**	**2.40**	**302**	P	Pn		22 02 40.0	-3.1
MNTV	**Mantova**	**3.08**	**325**	S	Sg		22 03 41.0	-0.5

IDC 24 22:06:45.9±1.9, 11.09N×92.15E, h0km, mb3.6/5, mbtmp3.5/6, Error ellipse: s-maj=63.9km s-min=22.2km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.84**	**41**	Pn	Pn		22 09 07.5	-1.2
	0.3nm,0.4s,baz=237,slow=15,SNR=4.2							
H08S3	**Diego Garcia H**	**27.00**	**227**	T	T		22 41 04.5	
	baz=46,slow=76,SNR=71							
H08S2	**Diego Garcia H**	**27.00**	**227**	T	T		22 41 04.6	
	baz=46,slow=76,SNR=95							
H08S1	**Diego Garcia H**	**27.02**	**227**	T	T		22 41 07.4	
	baz=46,slow=76,SNR=64							
MKAR	**Makanchi Array**	**36.56**	**349**	P	P		22 13 53.3	-0.1
	0.7nm,0.8s,baz=180,slow=6.1,SNR=5.4							
	0.7nm,0.8s							
SONM	**Songino Array**	**38.54**	**15**	P	P		22 14 10.3	-0.1
	0.3nm,0.4s,baz=195,slow=8.8,SNR=3.1							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**40.98**	**347**	P	P		22 14 30.9	+0.4
	0.4nm,0.2s,baz=162,slow=7.9,SNR=4.1							
	0.4nm,0.2s							
WRA	**Warramunga Arr**	**51.72**	**126**	P	P		22 15 55.1	-0.3
	0.3nm,0.4s,baz=302,slow=9.5,SNR=20							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**53.47**	**131**	P	P		22 16 08.4	0.0
	0.2nm,0.4s,baz=306,slow=7.0,SNR=2.3							
	0.2nm,0.4s							

*IPEC **24** 22:12:29.8±0.3, 51.50N×16.16E, h1km, ML2.7/4, Error ellipse: s-maj=3.1km s-min=1.7km az=63.0*
*PRU **24** 22:12:30.3±0.0, 51.50N×16.09E, h0km*
*IDC **24** 22:12:31.1±0.8, 51.47N×15.99E, h0km, mbtmp3.2/6, ML2.7/6, Error ellipse: s-maj=14.0km s-min=7.6km az=114.0*
*VIE **24** 22:12:32.6±1.1, 51.31N×16.02E, h0km, mb2.6/18, ml2.6/15, ms3.1/1, Error ellipse: s-maj=7.2km s-min=6.5km az=154.0 73 km WNW of Wroclaw Suspected Mining induced.*

ISC 24 22:12:27.7±0.7, 51.60N±0.03×16.18E±0.03, h0km, n54, σ1s54/103, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**175**	*e*Pg	**Pg**		**22 12 43.0**	**+0.6**
KSP				*e*Sg	**Sg**		**22 12 52.0**	**-0.3**
CHVC	**Chvalec**	**1.02**	**185**	*e*PG	**Pg**		**22 12 47.6**	**+0.3**
OSTC	**Ostas**	**1.05**	**179**	*e*PG	**Pg**		**22 12 48.5**	**+0.7**
OSTC				*e*SG	**Sg**		**22 13 00.7**	**-0.7**
	comp=Z,55nm,0.4s							
UPC	**Upice**	**1.10**	**186**	*e*PG	**Pg**		**22 12 49.2**	**+0.4**
UPC				*e*SG	**Sg**		**22 13 02.3**	**-0.8**
	comp=Z,74nm,0.4s							
DPC	**Dobruska-Polom**	**1.26**	**176**	*e*PG	**Pg**		**22 12 51.8**	**0.0**
DPC				*e*SG	**Sg**		**22 13 06.7**	**-1.4**
	comp=Z,58nm,0.6s							
PVCC	**Panska Ves**	**1.48**	**224**	*e*PG	**Pn**		**22 12 56.0**	**+0.3**
PVCC				*e*SG	**Sg**		**22 13 14.7**	**-0.6**
	comp=Z,165nm,0.8s							
KRLC	**Kraliky**	**1.58**	**166**	*e*PG	**Pn**		**22 12 57.4**	**+0.4**
KRLC				*e*SG	**Sg**		**22 13 17.7**	**-0.6**
	comp=Z,67nm,0.5s							
BRG	**Berggiesshubel**	**1.59**	**243**	Pg	**Pb**		**22 12 58.8**	**+0.9**
BRG				Sg	**Sn**		**22 13 18.6**	**+0.3**
BRG				Amp			22 13 20.3	
	comp=Z,49nm,0.5s							
PRU	**Pruhonice**	**1.92**	**213**	*e*PN	**Pn**		**22 13 01.7**	**0.0**
PRU				*e*PG	**Pb**		**22 13 03.3**	**-0.4**
PRU				*e*SG	**Sn**		**22 13 27.4**	**+0.8**
	comp=Z,49nm,0.6s							
CLL	**Collm**	**2.01**	**263**	*e*Pn	**Pn**		**22 13 03.0**	**+0.1**
CLL				*e*Pg	**Pb**		**22 13 06.0**	**+0.8**
CLL				*i* x	x		22 13 09.5	
CLL				*e*Sg	**Sb**		**22 13 32.0**	**+1.2**
	comp=Z,25nm,0.6s							
MORC	**Moravsky Berou**	**2.02**	**154**	*e*Pn	**Pn**		**22 13 03.6**	**+0.5**
	baz=334							
MORC				*e*Sg	**Sb**		**22 13 30.7**	**-0.3**
	comp=Z,46nm,0.5s,baz=334							
MORC	**Moravsky Berou**	**2.02**	**154**	*e*PN	**Pn**		**22 13 03.6**	**+0.5**
MORC				*e*SG	**Sb**		**22 13 30.8**	**-0.3**
OKC	**Ostrava-Krasne**	**2.16**	**144**	*e*SG	**Sg**		**22 13 36.3**	**-0.9**
	comp=Z,56nm,0.6s							
VRAC	**Vranov**	**2.31**	**173**	Pn	**Pn**		**22 13 08.5**	**+1.5**
	comp=Z,2.0nm,0.3s,baz=353,slow=17,SNR=12							
VRAC				Lg	Lg		22 13 40.5	
	comp=Z,4.2nm,0.3s,baz=93,slow=14,SNR=11							
	comp=Z,7.0nm,0.5s							
VRAC	**Vranov**	**2.31**	**173**	*e*Pn	**Pn**		**22 13 07.7**	**+0.6**
	baz=353							
VRAC				*e*Sg	**Sb**		**22 13 38.8**	**-0.6**
	comp=Z,30nm,0.8s,baz=353							
VRAC	**Vranov**	**2.31**	**173**	*e*PN	**Pn**		**22 13 07.7**	**+0.6**
VRAC				*e*SG	**Sb**		**22 13 38.9**	**-0.5**
TREC	**Trest**	**2.35**	**191**	*e*SG	**Sb**		**22 13 41.1**	**+0.5**
KRUC	**Moravsky**	**2.55**	**177**	*e*Pn	**Pn**		**22 13 10.9**	**+0.7**
	baz=357							
KRUC	**Moravsky**	**2.55**	**177**	*e*Pg	**Pb**		**22 13 14.5**	**+0.2**
	baz=357							
KRUC				*e*Sg	**Sb**		**22 13 46.6**	**+0.4**
	comp=Z,40nm,0.9s,baz=357							
KRUC	**Moravsky**	**2.55**	**177**	*e*PN	**Pn**		**22 13 11.0**	**+0.7**
KRUC				*e*PG	**Pb**		**22 13 14.5**	**+0.2**
KRUC				*e*SG	**Sb**		**22 13 46.7**	**+0.5**
OJC	**Ojcow**	**2.67**	**120**	*e*Pg	**Pg**		**22 13 19.3**	**+0.3**
OJC				*e*Sg	**Sg**		**22 13 54.9**	**+1.2**
JAVC	**Velka Javorina**	**2.91**	**160**	*e*PN	**Pn**		**22 13 16.4**	**+1.1**
KHC	**Kasperske Hory**	**2.98**	**215**	*e*PN	**Pn**		**22 13 16.8**	**+0.5**
KHC				*e*PG	**Pb**		**22 13 22.7**	**+0.9**
KHC				*e*SN	**Sn**		**22 13 50.8**	**-2.0**
KHC				*e*SG	**Sb**		**22 14 00.2**	**+1.4**
	comp=Z,18nm,0.6s							

CKRC	**Cesky Krumlov**	**3.04**	**204**	*e*PN		**Pn**	**22 13 18.0**	**+1.0**
CKRC				*e*PG		**Pb**	**22 13 23.8**	**+1.2**
CKRC				*e*SG		**Sb**	**22 14 02.2**	**+2.0**
	comp=Z,19nm,0.5s							
GERES	**GERESS Array B**	**3.19**	**211**	Pn		**Pn**	**22 13 20.1**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=34,slow=12,SNR=39							
GERES				Pg		**Pb**	**22 13 26.1**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=29,slow=17,SNR=24							
GERES				Lg	Lg		22 14 06.2	
	comp=Z,2.6nm,0.3s,baz=31,slow=26,SNR=8.8							
	comp=Z,2.4nm,0.4s							
LANS	**Liptovska Anna**	**3.23**	**138**	*e*PN		**Pn**	**22 13 20.6**	**+0.9**
LANS				*e*PG		**Pg**	**22 13 29.7**	**+0.1**
LANS				*e*SG		**Sb**	**22 14 08.5**	**+2.6**
LANS				*e*LG	Lg		22 14 22.9	
MODS	**Modra-Piesok**	**3.31**	**167**	*e*PN		**Pn**	**22 13 20.8**	**0.0**
MODS				*e*PG		**Pg**	**22 13 30.6**	**-0.5**
MODS				*e*SG		**Sg**	**22 14 12.4**	**-1.6**
MODS				*e*LG	Lg		22 14 19.1	
NIE	**Niedzica**	**3.42**	**128**	*e*Pg		**Pg**	**22 13 34.1**	**+0.9**
NIE				*e*SG		**Sg**	**22 14 19.2**	**+1.7**
VYHS	**Vyhne**	**3.55**	**150**	*e*PG		**Pg**	**22 13 35.4**	**-0.4**
VYHS				*e*SG		**Sg**	**22 14 21.2**	**-0.5**
VYHS				*e*LG	Lg		22 14 31.0	
CONA	**Conrad Observa**	**3.69**	**183**	*e*Pn		**Pn**	**22 13 27.0**	**+1.0**
	comp=Z,0.7nm,0.2s							
CONA				*e*Sg		**Sg**	**22 14 23.1**	**-2.9**
	comp=Z,15nm,0.6s							
RONA	**Rosalia, Austr**	**3.91**	**179**	*e*Pn		**Pn**	**22 13 29.4**	**+0.3**
	comp=Z,1.3nm,0.3s							
RONA				*e*Sg		**Sg**	**22 14 30.1**	**-3.1**
	comp=Z,2.4nm,0.5s							
MOA	**Molln**	**3.96**	**199**	*e*Pn		**Pn**	**22 13 30.6**	**+0.9**
	comp=Z,2.9nm,0.3s							
MOA				*e*Sg		**Sg**	**22 14 33.5**	**-1.3**
	comp=Z,11nm,0.4s							
BIOA	**Bad Ischl, Aus**	**4.25**	**204**	*e*Pn		**Pn**	**22 13 33.5**	**-0.2**
	comp=Z,2.9nm,0.4s							
BIOA				*e*Sg		**Sg**	**22 14 42.3**	**-1.9**
	comp=Z,9.5nm,0.4s							
ARSA	**Arzberg**	**4.38**	**186**	*e*Pn		**Pn**	**22 13 36.7**	**+1.2**
	comp=Z,0.7nm,0.3s							
ARSA				*e*Sg		**Sg**	**22 14 49.3**	**+1.0**
	comp=Z,11nm,0.6s							
MPLH	**Magyarpolny**	**4.53**	**168**	P		**Pn**	**22 13 38.7**	**+1.2**
KOLS	**Kolonicke sedl**	**4.73**	**122**	*e*PN		**Pn**	**22 13 41.2**	**+0.9**
KOLS				*e*PG		**Pg**	**22 13 58.7**	**+0.3**
KBA	**Koelnbreinsper**	**4.89**	**203**	*e*Pn		**Pn**	**22 13 44.0**	**+1.3**
	comp=Z,1.3nm,0.1s							
KBA				*e*Sg		**Sg**	**22 15 04.6**	**-0.3**
	comp=Z,4.4nm,0.4s							
SOKA	**Soboth**	**4.99**	**189**	*e*Pn		**Pn**	**22 13 45.9**	**+2.0**
	comp=Z,0.4nm,0.2s							
SOKA				*e*Sg		**Sg**	**22 15 07.0**	**-0.8**
OBKA	**Obir**	**5.21**	**193**	*e*Pn		**Pn**	**22 13 47.7**	**+0.7**
	comp=Z,0.6nm,0.3s							
OBKA				*e*Sg		**Sg**	**22 15 17.1**	**+2.0**
	comp=Z,7.7nm,0.7s							
WATA	**Walderalm**	**5.22**	**217**	*e*Pn		**Pn**	**22 13 48.7**	**+1.5**
	comp=Z,1.8nm,0.4s							
WATA				*e*Sg		**Sg**	**22 15 19.6**	**+4.3**
	comp=Z,2.1nm,0.4s							
MYKA	**Terra Mystica**	**5.25**	**200**	*e*Sg		**Sg**	**22 15 14.6**	**-1.7**
	comp=Z,3.9nm,0.6s							
WTTA	**Wattenberg**	**5.26**	**216**	*e*Pn		**Pn**	**22 13 49.2**	**+1.5**
	comp=Z,1.0nm,0.3s							
WTTA				*e*Sg		**Sg**	**22 15 21.0**	**+4.4**
	comp=Z,3.5nm,0.4s							
MOTA	**Moosalm**	**5.40**	**220**	*e*Pn		**Pn**	**22 13 50.2**	**+0.6**
	comp=Z,1.4nm,0.5s							
MOTA				*e*Sg		**Sg**	**22 15 16.1**	**-4.9**
	comp=Z,3.4nm,0.6s							
ABTA	**Abfaltersbach**	**5.42**	**208**	*e*Pn		**Pn**	**22 13 52.4**	**+2.5**
	comp=Z,1.8nm,0.5s							
ABTA				*e*Sg		**Sg**	**22 15 18.2**	**-3.7**
	comp=Z,2.5nm,0.7s							
RETA	**Reutte**	**5.42**	**223**	*e*Pn		**Pn**	**22 13 50.1**	**+0.2**
	comp=Z,0.5nm,0.2s							
RETA				*e*Sg		**Sg**	**22 15 21.5**	**-0.3**
	comp=Z,4.8nm,0.6s							
SQTA	**Sankt Quirin**	**5.46**	**218**	*e*Pn		**Pn**	**22 13 51.9**	**+1.5**
	comp=Z,1.4nm,0.3s							
SQTA				*e*Sg		**Sg**	**22 15 22.1**	**-0.9**
	comp=Z,2.7nm,0.5s							
FETA	**Feichten**	**5.81**	**220**	*e*Pn		**Pn**	**22 13 54.6**	**-0.6**
	comp=Z,0.1nm,0.1s							
FETA				*e*Sg		**Sg**	**22 15 37.4**	**+3.1**
	comp=Z,3.3nm,0.7s							
DAVA	**Damuels**	**5.96**	**226**	*e*Pn		**Pn**	**22 13 57.2**	**-0.2**
	comp=Z,0.8nm,0.3s							
DAVA				*e*Sg		**Sg**	**22 15 40.7**	**+1.6**
	comp=Z,4.3nm,0.7s							
DAVOX	**Davos/Dischmat**	**6.35**	**223**	Pn		**Pn**	**22 14 04.3**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=36,slow=14,SNR=2.8							
DAVOX				Lg	Lg		22 15 46.6	
	comp=Z,0.2nm,0.3s,baz=230,slow=20,SNR=2.4							
	comp=Z,1.4nm,0.6s							
AKASG	**Malin Array Be**	**8.25**	**91**	Pn		**Pn**	**22 14 31.1**	**+2.5**
	comp=Z,0.6nm,0.3s,baz=280,slow=12,SNR=5.7							
	comp=Z,0.9nm,0.6s							
HFS	**Hagfors**	**8.66**	**352**	Pn		**Pn**	**22 14 36.3**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=162,slow=10,SNR=2.0							
	comp=Z,1.1nm,0.9s							
FINES	**FINESS Array B**	**11.26**	**25**	Pn		**Pn**	**22 15 10.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=208,slow=17,SNR=4.3							
FINES				Sn	Sn		22 17 11.3	-4.8
	comp=Z,0.1nm,0.3s,baz=220,slow=24,SNR=1.6							
	comp=Z,2.3nm,0.9s							
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn		**Pn**	**22 15 19.3**	**-2.1**
	baz=98,slow=13							
ARCES	**ARCESS Array B**	**18.52**	**10**	P		**P**	**22 16 44.2**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=193,slow=12,SNR=1.8							

HVO ***24*** *22:17:54.8±0.5, 19°.385N±0°.010×155°.241W±0°.007, h3km±2km, ML3.8/16, ML3.3/42(NEIC), Error ellipse: s-maj=1.4km s-min=0.9km az=166.0*

NEIC 24 22:17:55.4±0.7, 19°.36N±0°.01×155°.247W±0°.008, h1km±6km, Error ellipse: s-maj=2.1km s-min=0.9km az=164.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUH	**Pauahi**	**0.03**	**60**		Pg	22 17 56.2	+0.1
PUH				Sg	Sg	22 17 56.9	+0.4
KKO	**Keanakako`i**	**0.04**	**336**		Pg	22 17 56.2	-0.1
KKO				Sg	Sg	22 17 56.9	0.0
RIM	**Rim**	**0.05**	**326**		Pg	22 17 56.3	0.0
SDHHI	**Sand Hill**	**0.06**	**306**		Pg	22 17 56.6	+0.1
SDHHI				IAML		22 17 57.5	
	comp=E,50μm,0.5s						
BYL	**Byron's Ledge**	**0.06**	**347**		Pg	22 17 56.2	-0.3
BYL				Sg	Sg	22 17 57.1	-0.2
NPH	**North Pit**	**0.06**	**329**		Pg	22 17 56.4	-0.3
NPH				IAML		22 17 57.4	
	comp=E,38μm,0.4s						
NPH				Sg	Sg	22 17 57.5	-0.1
HATHI	**Halema'uma'u T**	**0.07**	**348**		Pg	22 17 56.5	-0.3
HATHI				IAML		22 17 57.3	
	comp=E,44μm,0.3s						
HATHI				IAML		22 17 57.3	
	comp=N,41μm,0.5s						
HATHI				Sg	Sg	22 17 57.6	-0.1
OBL	**Observatory Le**	**0.07**	**330**		Pg	22 17 56.7	-0.1
OBL				IAML		22 17 57.3	
	comp=N,21μm,0.3s						
OBL				IAML		22 17 57.5	
	comp=E,22μm,0.4s						
WRMHI	**West Rim**	**0.07**	**314**		Pg	22 17 56.8	0.0
WRMHI				IAML		22 17 57.8	
	comp=E,26μm,0.3s						
SBLHI	**Steaming Bluff**	**0.07**	**344**		Pg	22 17 56.5	-0.3
SBLHI				Sg	Sg	22 17 57.7	-0.2
UWB	**Uwekahuna B**	**0.07**	**336**		Pg	22 17 56.6	-0.3
UWB				IAML	Sg	22 17 57.8	-0.1
	comp=N,52μm,0.5s						
UWB				Sg	Sg	22 17 57.8	-0.1
KNHH	**Kane Nui o Ham**	**0.08**	**73**		Pg	22 17 57.0	+0.1
UWE	**Uwekahuna**	**0.08**	**326**		Pg	22 17 58.1	+1.1
HLP	**Hilina Pali**	**0.08**	**224**	Pg	Pg	22 17 57.8	+0.8
HLP				IAML		22 18 00.6	
	comp=N,21μm,0.6s						
RSD	**Rainshed**	**0.11**	**344**		Pg	22 17 57.2	-0.3
NPOC	**North of Pu'u**	**0.13**	**75**		Pg	22 17 59.7	+1.7
NPOC	**North of Pu'u**	**0.13**	**75**	IAML		22 18 00.3	
	comp=E,11μm,0.3s						

JCUZ	**Jacuzzi**	**0.14**	**79**			Pg	22 17 58.1	0.0
JCUZ						Sg	22 18 00.2	+0.3
JCUZ	**Jacuzzi**	**0.14**	**79**	IAML			22 18 01.2	
	comp=E,16μm,0.7s							
HTC	**Hot Caves**	**0.19**	**230**			Pg	22 17 59.6	+0.6
MLH	**Mauna Loa**	**0.19**	**316**			Pg	22 17 59.1	0.0
MLH				IAML			22 18 03.0	
	comp=E,7μm,0.7s							
MLH				IAML			22 18 03.3	
	comp=N,6μm,1.1s							
AIN	**Ainahou**	**0.20**	**274**			Pg	22 17 59.6	+0.4
JOKA	**Jonika Flow**	**0.24**	**72**			Pg	22 17 59.5	-0.5
JOKA						Sg	22 18 02.9	-0.3
HMH	**Humu'ula Sheep**	**0.33**	**318**			Pg	22 18 01.5	-0.2
HMH				IAML			22 18 09.9	
	comp=N,2μm,0.8s							
MWH	**Moku'aweowe**	**0.35**	**291**			Pg	22 18 02.1	-0.1
MLOA	**Mauna Loa Obse**	**0.36**	**300**			Sg	22 18 07.4	+0.4
MLOA	**Mauna Loa Obse**	**0.36**	**300**			Pg	22 18 02.1	-0.2
MLOA	**Mauna Loa Obse**	**0.36**	**300**	IAML			22 18 09.9	
	comp=N,2μm,0.7s							
MLOA				IAML			22 18 10.0	
	comp=E,3μm,0.6s							
KHU	**Kahuku**	**0.36**	**252**			Pg	22 18 02.1	-0.2
KHU	**Kahuku**	**0.36**	**252**			Sg	22 18 08.9	+1.8
KHU	**Kahuku**	**0.36**	**252**	IAML			22 18 09.6	
	comp=N,3μm,0.5s							
KHU				IAML			22 18 13.0	
	comp=E,2μm,0.5s							
ALEP	**Alea Permanent**	**0.42**	**296**			Pg	22 18 02.9	-0.5
POHA	**Pohakuloa**	**0.48**	**326**			Pg	22 18 04.2	-0.4
POHA				IAML			22 18 11.6	
	comp=E,3μm,0.6s							
POHA				IAML			22 18 11.7	
	comp=E,3μm,0.7s							
HUH	**Hualalai**	**0.64**	**300**			Pg	22 18 07.5	-0.2
KHLU	**Kahalu`u**	**0.65**	**291**			Pg	22 18 07.1	-0.8
HPAH	**Hawaii Prepara**	**0.79**	**328**			Pg	22 18 09.2	-1.4
MHA	**Mahukona**	**1.03**	**323**	Pg		Pg	22 18 12.8	-2.4

IDC ***24*** *22:22:11.6±4.3, 20°.84S×70°.14W, h0km, mb4.6/1, mbtmp4.2/2, ML3.6/1, MS3.0/3, Error ellipse: s-maj=153.2km s-min=64.2km az=99.0*

NEIC ***24*** *22:22:12.5±1.6, 19°.93S±0°.04×71°.2W±0°.1, h25km±7km, mb4.0/3, ML3.5(GUC), Error ellipse: s-maj=16.2km s-min=5.1km az=88.0*

GUC ***24*** *22:22:13.2±0.6, 19°.85S×71°.13W, h35km±4km, ML3.5*

ISC 24 22:22:12.5±2.8, 19°.93S±0°.04×71°.15W±0°.09, h25km±19km, n45, σ1°08/43, mb4.1/4, 4C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**1.02**	**110**	*e*P	**Pn**	**22 22 30.4**	**-0.8**
TA02				*i* S	**Sb**	**22 22 43.6**	**-0.8**
TA02				IAML		22 22 45.5	
	comp=N,2μm,0.1s						
TA01	**Diego Aracena**	**1.11**	**125**		**Pn**	**22 22 32.1**	**-0.4**
TA01	**Diego Aracena**	**1.11**	**125**	↑*i*P	**Pn**	**22 22 32.1**	**-0.4**
TA01				*i* S	**Sn**	**22 22 45.4**	**-1.6**
TA01				IAML		22 22 47.0	
	comp=E,986nm,0.7s						
PB12	**IPOC Station P**	**1.52**	**31**		**Pn**	**22 22 37.7**	**-0.6**
PB12				Sn	**Sn**	**22 22 56.0**	**-1.4**
PB12	**IPOC Station P**	**1.52**	**31**	↑*i*P	**Pn**	**22 22 37.4**	**-0.9**
PB12				*i* S	**Sn**	**22 22 55.3**	**-2.1**
APN	**Chacalluta**	**1.73**	**26**		**Pn**	**22 22 40.6**	**-0.4**
PB02	**IPOC Station P**	**1.82**	**140**		**Pn**	**22 22 42.5**	**+0.2**
PB02				Sn	**Sn**	**22 23 03.9**	**-0.7**
PB02	**IPOC Station P**	**1.82**	**140**	*e*P	**Pn**	**22 22 42.6**	**+0.2**
PB02				IAML		22 23 16.8	
	comp=E,1μm,0.5s						
GO01	**Chusmiza**	**1.86**	**82**		**Pn**	**22 22 43.0**	**-0.3**
GO01	**Chusmiza**	**1.86**	**82**	↑*i*P	**Pn**	**22 22 43.0**	**-0.3**
GO01				*i* S	**Sb**	**22 23 07.1**	**-2.2**
PB01	**IPOC Station P**	**1.91**	**126**		**Pn**	**22 22 43.9**	**+0.2**
PB01	**IPOC Station P**	**1.91**	**126**	*e*P	**Pn**	**22 22 43.8**	**+0.2**
PB01				IAML		22 23 16.9	
	comp=N,519nm,0.5s						
PB07	**IPOC Station P**	**2.15**	**147**		**Pn**	**22 22 47.1**	**+0.3**
PB07	**IPOC Station P**	**2.15**	**147**	*e*P	**Pn**	**22 22 47.2**	**+0.3**
PB07				IAML		22 23 30.9	
	comp=E,338nm,0.9s						
PB16	**IPOC Station P**	**2.22**	**45**		**Pn**	**22 22 48.3**	**0.0**
PB16	**IPOC Station P**	**2.22**	**45**	↑*i*P	**Pn**	**22 22 48.1**	**-0.2**
PB16				*i* S	**Sn**	**22 23 16.8**	**+1.5**
PB16				IAML		22 23 26.6	
	comp=N,782nm,0.7s						
PB04	**IPOC Station P**	**2.57**	**159**	Pn	**Pn**	**22 22 52.6**	**-0.1**
PB04	**IPOC Station P**	**2.57**	**159**	*e*P	**Pn**	**22 22 52.8**	**+0.1**
PB09	**IPOC Station P**	**2.58**	**136**		**Pn**	**22 22 53.4**	**+0.5**
PB09	**IPOC Station P**	**2.58**	**136**	*e*P	**Pn**	**22 22 54.3**	**+1.4**
PB09				*i* S	**Sb**	**22 23 30.6**	**+1.1**
PB09				IAML		22 23 42.5	
	comp=N,440nm,0.4s						
PB06	**IPOC Station P**	**3.13**	**152**	Pn	**Pn**	**22 22 59.8**	**-0.7**
PB06	**IPOC Station P**	**3.13**	**152**	*e*P	**Pn**	**22 23 00.4**	**0.0**
LVC	**Limon Verde**	**3.39**	**142**	Pn	**Pn**	**22 23 05.0**	**+0.8**
PB10	**IPOC Station P**	**3.61**	**171**	Pn	**Pn**	**22 23 06.2**	**-0.8**
PB15	**IPOC Station P**	**3.62**	**155**		**Pn**	**22 23 06.8**	**-0.4**
LPAZ	**La Paz**	**4.62**	**39**	Pn	Pb	22 23 27.3	-6.1
	comp=N,1.4nm,0.3s,baz=228,slow=9.3,SNR=22						
	comp=N,4.1nm,0.4s						
LPAZ	**La Paz**	**4.62**	**39**		**Pn**	**22 23 24.3**	**+2.9**
GO02	**Mina Guanaco**	**5.40**	**165**		**Pn**	**22 23 30.3**	**-1.5**
AC01	**Pan de Azucar**	**6.21**	**175**	Pn	**Pn**	**22 23 42.3**	**-0.4**
SIV	**San Ignacio**	**10.36**	**69**	LR	LR	22 29 10.5	
	comp=N,112nm,18.6s,baz=288,slow=42						
VILB	**Vilhena**	**12.59**	**58**		**Pn**	**22 25 11.4**	**+1.3**
SAML	**Samuel**	**13.36**	**36**	Pn	**Pn**	**22 25 23.3**	**+2.5**
CPUP	**Villa Florida**	**14.22**	**119**	LR	LR	22 30 33.0	
	comp=N,26nm,21.6s,baz=305,slow=39						
H03N1	**Juan Fernandez**	**15.13**	**206**	T	T	22 42 13.4	
	baz=32,slow=73,SNR=5.7						
H03N2	**Juan Fernandez**	**15.14**	**206**	T	T	22 41 58.7	
	baz=32,slow=73,SNR=5.6						
H03N3	**Juan Fernandez**	**15.15**	**206**	T	T	22 42 11.4	
	baz=32,slow=73,SNR=4.2						
BOAV	**Boa Vista**	**24.52**	**26**	P	**P**	**22 27 30.1**	**-0.1**
BOAV				IAmb	IAmb	22 27 39.9	
	comp=Z,2.6nm,0.8s						
SNAA	**Sanae**	**64.44**	**161**	P	**P**	**22 32 47.1**	**+0.6**
SNAA				IAmb	IAmb	22 33 15.2	
	comp=Z,1.2nm,1.2s						
TOA0	**Torodi Ar. Sit**	**78.83**	**72**	P	**P**	**22 34 13.4**	**-0.6**
TOA0				IAmb	IAmb	22 34 23.3	
	comp=Z,3.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.83**	**72**	P	**P**	**22 34 13.7**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=251,slow=5.3,SNR=1.4						
	comp=Z,2.3nm,0.4s						
MBAR	**Mbarara**	**100.97**	**95**	LR	LR	23 17 27.6	
	comp=Z,12nm,19.4s,baz=85,slow=33						
H11S2	**WAKE ISLAND Hyl**	**25.58**	**279**	T	T	01 00 36.8	
	baz=101						
H11S1	**WAKE ISLAND Hyl**	**25.59**	**279**	T	T	01 00 38.4	
	baz=101						
H11S3	**WAKE ISLAND Hyl**	**25.60**	**279**	T	T	01 00 37.5	
	baz=101						
MKAR	**Makanchi Array**	**145.53**	**33**	PKPbc	**PKiKP**	**22 41 51.8**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=305,slow=4.3,SNR=3.6						

ROM 24 23:03:02.7±0.1, 42°.741N±0°.005×13°.234E±0°.007, h9km, ML2.3/22, 8C-10D, Error ellipse: s-maj=0.6km s-min=0.4km az=233.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**317**	↑P	Pg	23 03 06.1	+0.5
NRCA				S	Sg	23 03 08.3	+0.5
NRCA				AML	AML		
	comp=E,8320μm,0.9s						
NRCA				AML	AML		
	comp=N,10250μm,0.5s						
NRCA				AML	AML		
	comp=E,9370μm,0.9s						
NRCA				AML	AML		
	comp=N,10240μm,0.5s						
NRCA				AML	AML		
	comp=E,9365μm,0.9s						
NRCA				AML	AML		
	comp=N,10260μm,0.5s						
NRCA				AML	AML		
	comp=N,11450μm,0.5s						

LNSS	**Leonessa**	**0.20**	**226**	P		Pg	23 03 07.5	+0.7
LNSS				S		Sg	23 03 11.1	+1.4
RM33	**Pellescritta (**	**0.23**	**184**	AML	AML			
	comp=N,922μm,1.5s							
RM33				AML	AML			
	comp=E,1645μm,0.1s							
RM33				AML	AML			
	comp=N,919μm,1.5s							
RM33				AML	AML			
	comp=E,1620μm,0.1s							
CAMP	**Campotosto**	**0.24**	**148**	AML	AML			
	comp=E,1155μm,0.2s							
CAMP				AML	AML			
	comp=N,1028μm,0.2s							
TERO	**Teramo**	**0.30**	**113**	P		Pg	23 03 09.2	+0.6
TERO				S		Sb	23 03 14.3	-1.0
TERO				AML	AML			
	comp=E,878μm,0.3s							
TERO				AML	AML			
	comp=N,1430μm,0.6s							
TERO				AML	AML			
	comp=N,2315μm,1.6s							
TERO				AML	AML			
	comp=E,878μm,0.3s							
TERO				AML	AML			
	comp=E,2435μm,1.3s							
FDMO	**Fiordimonte**	**0.32**	**340**	P		Pg	23 03 09.6	+0.6
FDMO				S		Sb	23 03 14.6	-1.2
FDMO				AML	AML			
	comp=E,483μm,1.0s							
FDMO				AML	AML			
	comp=N,440μm,0.2s							
GUMA	**Gualdo di Mace**	**0.33**	**13**	↑P		Pb	23 03 10.2	-0.6
GUMA				S		Sb	23 03 16.2	0.0
GUMA				AML	AML			
	comp=E,4795μm,0.2s							
GUMA				AML	AML			
	comp=N,3455μm,1.4s							
GUMA				AML	AML			
	comp=N,3995μm,0.6s							
GUMA				AML	AML			
	comp=E,5590μm,0.2s							
GUMA				AML	AML			
	comp=E,4790μm,0.2s							
CSP1	**Cessapalombo**	**0.35**	**357**	P		Pg	23 03 10.3	+0.6
CSP1				S		Sb	23 03 15.9	-1.1
CSP1				AML	AML			
	comp=E,670μm,0.8s							
CSP1				AML	AML			
	comp=N,820μm,0.3s							
CSP1				AML	AML			
	comp=E,674μm,0.8s							
CESI	**CESI - Serrava**	**0.36**	**318**	⇓P		Pg	23 03 10.2	+0.4
CESI				S		Sb	23 03 15.9	-1.2
CESI				AML	AML			
	comp=E,544μm,0.5s							
CESI				AML	AML			
	comp=N,1105μm,0.3s							
CESI				AML	AML			
	comp=E,544μm,0.5s							
ARRO	**Arrone**	**0.38**	**245**	⇓P		Pb	23 03 10.9	-0.7
ARRO				AML	AML			
	comp=E,389μm,0.2s							
ARRO				AML	AML			
	comp=N,338μm,0.2s							
GIGS	**Gran Sasso**	**0.38**	**139**	⇓P		Pb	23 03 11.0	-0.7
GIGS				S		Sb	23 03 16.5	-1.2
GIGS				AML	AML			
	comp=N,138μm,0.4s							
GIGS				AML	AML			
	comp=E,150μm,0.5s							
GIGS				AML	AML			
	comp=N,138μm,0.4s							
OFFI	**Offida**	**0.39**	**60**	↑P		Pb	23 03 11.8	+0.1
OFFI				AML	AML			
	comp=E,748μm,0.5s							
OFFI				AML	AML			
	comp=N,878μm,0.5s							
AQU	**L'Aquila**	**0.41**	**162**	↑P		Pg	23 03 11.2	+0.6
AQU				AML	AML			
	comp=N,290μm,1.1s							
AQU				AML	AML			
	comp=E,238μm,0.7s							
FIAM	**Fiamignano**	**0.48**	**190**	⇓P		Pg	23 03 11.9	-0.1
FIAM				AML	AML			
	comp=N,265μm,0.3s							
FIAM				AML	AML			
	comp=N,266μm,0.3s							
FIAM				AML	AML			
	comp=E,290μm,0.2s							
CESX	**Cesi**	**0.50**	**255**	↑P		Pg	23 03 12.4	+0.1
CESX				S		Sb	23 03 21.0	0.0
CESX				AML	AML			
	comp=E,224μm,1.6s							
CESX				AML	AML			
	comp=N,218μm,0.8s							
TRTR	**Tortoreto Alta**	**0.51**	**82**	AML	AML			
	comp=N,752μm,0.4s							
TRTR				AML	AML			
	comp=E,779μm,0.3s							
ASSB	**Assisi San Ben**	**0.52**	**306**	⇓P		Pg	23 03 12.9	+0.2
ASSB				S		Sb	23 03 21.0	-0.7
ASSB				AML	AML			
	comp=E,349μm,0.7s							
ASSB				AML	AML			
	comp=N,343μm,0.2s							
FAGN	**Fagnano**	**0.54**	**151**	⇓P		Pg	23 03 12.9	-0.2
FAGN				AML	AML			
	comp=E,546μm,0.2s							
FAGN				AML	AML			
	comp=E,545μm,0.2s							
FAGN				AML	AML			
	comp=N,404μm,1.6s							
SNTG	**Esanatoglia**	**0.56**	**337**	⇓P		Pg	23 03 13.8	+0.3
SNTG				S		Sb	23 03 23.0	+0.2
SNTG				AML	AML			
	comp=N,129μm,0.1s							
SNTG				AML	AML			
	comp=E,120μm,0.4s							
VCEL	**Villa Celiera**	**0.57**	**127**	⇓P		Pb	23 03 14.5	-0.3
VCEL				S		Sn	23 03 25.0	-1.6
VCEL				AML	AML			
	comp=N,388μm,0.8s							
VCEL				AML	AML			
	comp=N,387μm,0.8s							
VCEL				AML	AML			
	comp=E,434μm,0.4s							
VCEL				AML	AML			
	comp=N,388μm,0.8s							
EL6	**Elcito**	**0.60**	**351**	↑P		P

comp=N,94μm,0.3s
ARVD Arcevia 0.79 344 P Pg 23 03 18.1 +0.2
ARVD S Sn 23 03 31.0 -0.9
ARVD AML AML
comp=N,66μm,1.0s
ARVD AML AML
comp=E,68μm,1.0s
ARVD AML AML
comp=E,68μm,1.0s
MGAB Montegabbione 0.84 282 ⇓P Pb 23 03 20.0 +0.5
FRON Frontone 0.86 335 P Pg 23 03 19.2 0.0
PIEI Pieia 0.94 327 S Sn 23 03 36.0 +0.1

ROM 24 23:03:51.2±0.1, 42°.813N±0°.003×13°.197E±0°.006, h9km, ML2.0/6, 3C, Error ellipse: s-maj=0.5km s-min=0.2km az=90.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.06**	**289**	⇑P	Pg	23 03 53.8	+0.4
NRCA				S	Sg	23 03 55.2	+0.3
NRCA				AML	AML		
	comp=N,3680μm,0.1s						
NRCA				AML	AML		
	comp=E,4810μm,0.5s						
NRCA				AML	AML		
	comp=E,4805μm,0.5s						
NRCA				AML	AML		
	comp=N,4080μm,1.0s						
NRCA				AML	AML		
	comp=E,4415μm,0.2s						
NRCA				AML	AML		
	comp=N,3680μm,0.1s						
FDMO	**Fiordimonte**	**0.24**	**340**	P	Pg	23 03 56.7	+0.6
FDMO				S	Sg	23 04 00.6	+1.2
FDMO				AML	AML		
	comp=N,241μm,0.3s						
FDMO				AML	AML		
	comp=E,167μm,0.7s						
LNSS	**Leonessa**	**0.24**	**209**	P	Pg	23 03 56.9	+0.7
LNSS				S	Sg	23 04 00.9	+1.5
GUMA	**Gualdo di Mace**	**0.27**	**22**	P	Pb	23 03 57.7	-0.6
GUMA				S	Sb	23 04 02.4	-0.7
GUMA				AML	AML		
	comp=N,506μm,0.3s						
GUMA				AML	AML		
	comp=E,652μm,0.2s						
CSP1	**Cessapalombo**	**0.28**	**1**	P	Pg	23 03 57.4	+0.5
CESI	**CESI - Serrava**	**0.29**	**312**	⇑P	Pg	23 03 57.7	+0.6
CESI				S	Sb	23 04 02.5	-1.1
CESI				AML	AML		
	comp=N,513μm,0.2s						
CESI				AML	AML		
	comp=N,512μm,0.2s						
CESI				AML	AML		
	comp=E,282μm,0.2s						
RM33	**Pellescritta (**	**0.30**	**178**	P	Pg	23 03 58.0	+0.7
RM33				S	Sb	23 04 03.1	-0.9
OFFI	**Offida**	**0.38**	**71**	S	Sg	23 03 60.0	-3.7
ARRO	**Arrone**	**0.40**	**234**	P	Pb	23 03 59.7	-0.7
ARRO				S	Sb	23 04 05.9	-0.6
ASSB	**Assisi San Ben**	**0.46**	**300**	⇑P	Pg	23 04 00.5	+0.3
ASSB				S	Sb	23 04 07.9	-0.5
ASSB				AML	AML		
	comp=E,92μm,1.2s						
ASSB				AML	AML		
	comp=N,70μm,1.4s						
SNTG	**Esanatoglia**	**0.48**	**337**	P	Pg	23 04 01.0	+0.4
EL6	**Elcito**	**0.52**	**352**	P	Pg	23 04 01.9	+0.5
EL6				S	Sb	23 04 11.0	+0.7
ATCC	**AVT- Casa Cast**	**0.55**	**312**	P	Pg	23 04 02.4	+0.4
CING	**Cingoli**	**0.56**	**360**	P	Pb	23 04 02.8	-0.5

*IDC **24** 23:10:03.5±1.4, 2°.77S×139°.11E, h0km, mb3.9/6, mbtmp3.9/7, ML4.1/1, MS3.3/1, Error ellipse: s-maj=57.5km s-min=21.0km az=99.0*

ISC 24 23:10:09.5±1.3, 2°.9S±0°.1×139°.1E±0°.4, h46km, n8, σ1s 12/7, mb4.0/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.57**	**195**	P	**Pn**	**23 14 09.6**	**-1.5**
	0.6nm,0.3s,baz=15,slow=12,SNR=15						
	0.6nm,0.3s						
KAPI	**Kappang**	**19.46**	**263**	LR	LR	23 22 48.2	
	comp=Z,78nm,18.4s,baz=322,slow=39						
FITZ	**Fitzroy Crossi**	**20.08**	**220**	P	**P**	**23 14 39.5**	**+0.3**
	1.0nm,0.5s,baz=41,slow=11,SNR=2.1						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**21.25**	**193**	P	**P**	**23 14 53.4**	**+1.5**
	1.7nm,0.4s,baz=18,slow=10,SNR=22						
	1.7nm,0.4s						
KLR	**Kul'dur**	**52.32**	**354**	P	**P**	**23 19 16.9**	**+0.3**
	1.6nm,0.5s,baz=164,slow=7.4,SNR=6.0						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	**70.21**	**322**	P	**P**	**23 21 17.7**	**0.0**
	1.4nm,0.7s,baz=111,slow=7.6,SNR=16						
	1.4nm,0.7s						
KURBB	**Kurchatov Arra**	**74.14**	**325**	P	**P**	**23 21 40.5**	**-0.6**
	0.3nm,0.3s,baz=122,slow=6.5,SNR=5.2						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**85.83**	**24**	P	**P**	**23 22 43.8**	**-0.1**
	1.0nm,0.6s,baz=258,slow=5.1,SNR=9.1						
	1.0nm,0.6s						

*HVO **24** 23:12:54.0±0.6, 19°.38N±0°.01×155°.239W±0°.008, h2km±3km, ML3.5/17, ML2.3/41(NEIC), Error ellipse: s-maj=1.8km s-min=1.0km az=162.0*

NEIC 24 23:12:54.8±0.8, 19°.41N±0°.01×155°.236W±0°.006, h3km±2km, Error ellipse: s-maj=1.7km s-min=0.8km az=173.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BYL	**Byron's Ledge**	**0.02**	**287**	Pg	Pg	23 12 55.4	-0.2
BYL					Sg	23 12 56.4	+0.2
KKO	**Keanakako`i**	**0.03**	**256**	Pg	Pg	23 12 55.3	-0.4
KKO					Sg	23 12 56.1	-0.2
HATHI	**Halema'uma'u T**	**0.03**	**308**	Pg	Pg	23 12 55.7	0.0
HATHI					Sg	23 12 56.9	+0.5
PUH	**Pauahi**	**0.04**	**148**	Pg	Pg	23 12 55.2	-0.6
PUH					Sg	23 12 55.9	-0.5
RIM	**Rim**	**0.04**	**255**	Pg	Pg	23 12 55.4	-0.4
RIM				IAML		23 12 55.5	
	comp=N,4μm,0.1s						
RIM				IAML		23 12 55.8	
	comp=E,5μm,0.1s						
RIM					Sg	23 12 56.5	+0.1
SBLHI	**Steaming Bluff**	**0.04**	**306**	Pg	Pg	23 12 55.8	0.0
SBLHI					Sg	23 12 57.0	+0.6
NPH	**North Pit**	**0.04**	**279**	Pg	Pg	23 12 55.6	-0.2
NPH					Sg	23 12 56.7	+0.1
UWB	**Uwekahuna B**	**0.04**	**297**	Pg	Pg	23 12 55.8	-0.1
UWB				IAML		23 12 56.7	
	comp=E,3μm,0.3s						
UWB					Sg	23 12 57.0	+0.3
OBL	**Observatory Le**	**0.05**	**286**	Pg	Pg	23 12 55.9	0.0
OBL				IAML		23 12 56.6	
	comp=N,4μm,0.1s						
OBL				IAML		23 12 56.7	
	comp=E,5μm,0.2s						
OBL					Sg	23 12 57.2	+0.5
UWE	**Uwekahuna**	**0.06**	**287**	Pg	Pg	23 12 56.2	+0.1
UWE					Sg	23 12 57.7	+0.7
SDHHI	**Sand Hill**	**0.06**	**254**	Pg	Pg	23 12 55.9	-0.2
SDHHI					Sg	23 12 57.3	+0.3
WRMHI	**West Rim**	**0.06**	**272**	Pg	Pg	23 12 56.1	0.0
WRMHI				IAML		23 12 56.6	
	comp=N,4μm,0.1s						
WRMHI				Sg	Sg	23 12 57.8	+0.7
KNHH	**Kane Nui o Ham**	**0.07**	**112**		Pg	23 12 56.1	-0.1
RSD	**Rainshed**	**0.07**	**326**		Pg	23 12 56.4	+0.1
NPOC	**North of Pu'u**	**0.12**	**96**		Pg	23 12 57.1	0.0
NPOC				IAML		23 12 59.1	
	comp=E,1μm,0.6s						
NPOC				IAML		23 12 59.8	
	comp=N,2μm,0.7s						
HLP	**Hilina Pali**	**0.13**	**212**		Pg	23 12 57.0	-0.3
HLP				IAML		23 12 59.5	
	comp=N,2μm,0.3s						
JCUZ	**Jacuzzi**	**0.13**	**99**		Pg	23 12 56.9	-0.5
JCUZ				IAML		23 13 00.6	
	comp=N,2μm,0.7s						
JCUZ				IAML		23 13 00.7	
	comp=E,1μm,0.4s						
MLH	**Mauna Loa**	**0.17**	**302**		Pg	23 12 58.4	+0.2
MLH				IAML		23 13 02.3	
	comp=E,576nm,0.7s						
MLH				IAML		23 13 02.6	
	comp=N,765nm,0.7s						
AIN	**Ainahou**	**0.21**	**261**		Pg	23 12 59.0	+0.1
AIN	**Ainahou**	**0.21**	**261**	IAML		23 13 03.0	
	comp=E,831nm,0.4s						
AIN				IAML		23 13 04.6	
	comp=N,546nm,0.5s						
JOKA	**Jonika Flow**	**0.22**	**83**		Pg	23 12 58.7	-0.3
JOKA					Sg	23 13 02.4	+0.5
HTC	**Hot Caves**	**0.23**	**222**		Pg	23 12 58.8	-0.3
HMH	**Humu'ula Sheep**	**0.30**	**310**		Pg	23 13 00.7	0.0
HMH	**Humu'ula Sheep**	**0.30**	**310**	IAML		23 13 06.1	
	comp=E,270nm,0.6s						
MLOA	**Mauna Loa Obse**	**0.35**	**292**	Pg	Pg	23 13 01.4	-0.1
MLOA				IAML		23 13 10.3	
	comp=E,396nm,0.9s						
MLOA				IAML		23 13 12.7	
	comp=N,266nm,0.8s						
MWH	**Moku'aweowe**	**0.35**	**283**		Pg	23 13 01.5	-0.1
MWH	**Moku'aweowe**	**0.35**	**283**	IAML		23 13 11.0	
	comp=N,550nm,0.8s						
KHU	**Kahuku**	**0.39**	**246**		Pg	23 13 02.2	-0.2
KHU					Sg	23 13 08.6	+1.1
KHU	**Kahuku**	**0.39**	**246**	IAML		23 13 11.2	
	comp=N,245nm,2.4s						
KHU				IAML		23 13 12.3	
	comp=E,264nm,1.4s						
ALEP	**Alea Permanent**	**0.41**	**289**		Pg	23 13 02.3	-0.4
ALEP					Sg	23 13 08.6	+0.5
POHA	**Pohakuloa**	**0.45**	**322**		Pg	23 13 03.4	0.0
POHA				IAML		23 13 10.9	
	comp=E,365nm,0.6s						
POHA				IAML		23 13 14.0	
	comp=E,314nm,0.4s						
HUH	**Hualalai**	**0.63**	**296**		Pg	23 13 06.9	0.0
KHLU	**Kahalu`u**	**0.65**	**287**		Pg	23 13 06.3	-0.9

*DDA **24** 23:20:30.5±0.0, 38°.76N×27°.78E, h7km±2km, ML1.3*

ISK 24 23:20:29.3, 38.78N×27.84E, h5km, ML1.7/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.10**	**348**	PG	Pg	23 20 31.9	+0.5
AKS				SG	Sg	23 20 33.8	+0.9
ZEDA	**zmir-Bergama**	**0.62**	**287**	P	Pb	23 20 42.2	-0.4
ZEDA				S	Sb	23 20 50.5	-1.1
ZEDA				*i* AML	AML	23 20 51.0	
	comp=N,16nm,0.3s						
ZEDA				*i* AML	AML	23 20 51.0	
	comp=E,7.4nm,0.2s						
KULA	**Kula-Manisa**	**0.70**	**112**	PG	Pg	23 20 43.3	+0.6
KULA				SG	Sb	23 20 53.2	-0.7
DEMI	**Demirci**	**0.73**	**69**	P	Pb	23 20 44.1	-0.5
BLCB	**Balcova**	**0.74**	**238**	PG	Pb	23 20 44.5	-0.1
BLCB				SG	Sb	23 20 54.3	-0.7
AYDB	**Zeytinkoy-Aydi**	**0.84**	**177**	PG	Pb	23 20 46.2	-0.2
AYDB				SG	Sb	23 20 57.8	-0.2
DURS	**Dursunbey**	**0.95**	**31**	P	Pn	23 20 49.8	+0.4
DURS				S	Sn	23 21 03.6	+0.2
DURS				*i* AML	AML	23 21 04.0	
	comp=E,10nm,0.7s						
DURS				*i* AML	AML	23 21 05.0	
	comp=N,8.6nm,0.7s						
DGB	**zmir**	**1.05**	**226**	P	Pb	23 20 49.8	0.0
DGB				*i* AML	AML	23 21 06.0	
	comp=N,17nm,1.3s						
DGB				*i* AML	AML	23 21 07.0	
	comp=E,19nm,1.3s						
TVSB	**Tavsanli**	**1.43**	**62**	PN	Pg	23 20 56.7	0.0

ROM 24 23:21:22.8±0.1, 42°.731N±0°.004×13°.254E±0°.007, h8km, Md1.6/5, 10C-17D, Error ellipse: s-maj=0.6km s-min=0.3km az=237.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.14**	**315**	P	Pg	23 21 26.7	+0.7
NRCA				S	Sg	23 21 29.2	+1.1
NRCA				AML	AML		
	comp=E,47300μm,0.5s						
NRCA				AML	AML		
	comp=N,37550μm,0.5s						
NRCA				AML	AML		
	comp=E,51350μm,0.5s						
NRCA				AML	AML		
	comp=N,41900μm,0.1s						
NRCA				AML	AML		
	comp=E,7550μm,0.1s						
NRCA				AML	AML		
	comp=N,6721μm,0.1s						
NRCA				AML	AML		
	comp=E,8426μm,0.1s						
NRCA				END			
RM33	**Pellescritta (**	**0.22**	**187**	⇓P	Pg	23 21 28.4	+1.1
RM33				S	Sg	23 21 32.2	+1.8
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
CAMP	**Campotosto**	**0.23**	**149**	⇓P	Pg	23 21 28.3	+0.9
CAMP				S	Sg	23 21 32.1	+1.6
CAMP				AML	AML		
CAMP				AML	AML		
CAMP				AML	AML		
	comp=E,2673μm,0.3s						
CAMP				AML	AML		
	comp=N,1399μm,0.2s						
FEMA	**Monte Fema**	**0.28**	**327**	P	Pg	23 21 28.9	+0.5
FEMA				S	Sg	23 21 33.3	+1.2
FEMA				AML	AML		
	comp=E,9850μm,0.4s						
FEMA				AML	AML		
	comp=N,9070μm,1.4s						
FEMA				AML	AML		
	comp=E,16750μm,0.9s						
FEMA				AML	AML		
	comp=N,13250μm,1.0s						
FEMA				AML	AML		
	comp=E,1979μm,0.5s						
FEMA				AML	AML		
	comp=N,1987μm,1.7s						
FEMA				END			
TERO	**Teramo**	**0.28**	**113**	P	Pg	23 21 28.9	+0.6
TERO				S	Sb	23 21 33.6	-1.4
TERO				AML	AML		
	comp=E,50900μm,1.1s						
TERO				AML	AML		
	comp=N,54600μm,0.3s						
TERO				AML	AML		
	comp=E,54450μm,1.1s						
TERO				AML	AML		
	comp=N,57400μm,0.3s						
TERO				END			
CSP1	**Cessapalombo**	**0.36**	**354**	P	Pg	23 21 30.4	+0.4
CSP1				S	Sg	23 21 36.0	+1.2
CSP1				AML	AML		
	comp=E,8945μm,0.5s						
CSP1				AML	AML		
	comp=N,11855μm,0.9s						
CSP1				AML	AML		
	comp=E,1254μm,2.2s						
CSP1				AML	AML		
	comp=N,1698μm,2.1s						
CSP1				END			
GIGS	**Gran Sasso**	**0.36**	**140**	AML	AML		
	comp=N,172μm,1.5s						
GIGS				AML	AML		
	comp=E,152μm,0.4s						
GIGS				AML	AML		
	comp=E,38650μm,0.5s						
GIGS				AML	AML		
	comp=N,27800μm,0.7s						
OFFI	**Offida**	**0.38**	**57**	P	Pb	23 21 31.6	-0.2
OFFI				AML	AML		
	comp=E,1130μm,0.7s						
OFFI				AML	AML		
	comp=N,2100μm,0.6s						
OFFI				AML	AML		
	comp=E,8120μm,0.8s						
OFFI				AML	AML		
	comp=N,7610μm,0.9s						
OFFI				AML	AML		
	comp=E,37600μm,1.4s						
OFFI				AML	AML		
	comp=N,37700μm,0.7s						
AQU	**L'Aquila**	**0.39**	**164**	⇓P	Pg	23 21 31.2	+0.7
AQU				S	Sb	23 21 37.3	-1.0
AQU				AML	AML		
	comp=E,450μm,1.4s						
AQU				AML	AML		
	comp=N,614μm,1.1s						
AQU				AML	AML		
	comp=E,416μm,1.5s						
AQU				AML	AML		
	comp=N,602μm,1.1s						
AQU				AML	AML		
	comp=E,54100μm,1.1s						
AQU				AML	AML		
	comp=E,56000μm,1.1s						
AQU				AML	AML		
	comp=E,54700μm,1.6s						
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
	comp=N,618μm,3.0s						
AQU				AML	AML		
	comp=N,607μm,1.7s						
AQU				AML	AML		
	comp=E,451μm,1.4s						
AQU				AML	AML		
	comp=E,451μm,4.9s						
FIAM	**Fiamignano**	**0.47**	**192**	⇑P	Pg	23 21 32.4	+0.4
FIAM				S	Sb	23 21 39.8	-0.8
FIAM				AML	AML		
FIAM				AML	AML		
	comp=N,78200μm,1.4s						
TRTR	**Tortoreto Alta**	**0.49**	**81**	P	Pb	23 21 33.9	+0.2
TRTR				AML	AML		
	comp=E,1062μm,0.5s						
TRTR				AML	AML		
	comp=N,1195μm,0.6s						
TRTR				AML	AML		
	comp=E,5865μm,0.5s						
TRTR				AML	AML		
	comp=N,5620μm,0.8s						
TRTR				AML	AML		
	comp=E,29500μm,0.6s						
TRTR				AML	AML		
	comp=N,23800μm,0.4s						
CESX	**Cesi**	**0.51**	**257**	⇑P	Pb	23 21 33.5	-0.5
CESX				S	Sb	23 21 41.0	-0.7
CESX				AML	AML		
	comp=E,7610μm,0.8s						
CESX				AML	AML		
	comp=N,9890μm,0.3s						
CESX				AML	AML		
	comp=E,10600μm,0.4s						
CESX				AML	AML		
	comp=E,280μm,5.6s						
FAGN	**Fagnano**	**0.53**	**152**	⇑P	Pb	23 21 33.9	-0.5
FAGN				AML	AML		
	comp=E,917μm,0.4s						
FAGN				AML	AML		
	comp=N,800μm,0.4s						
FAGN				AML	AML		
FAGN				AML	AML		
ASSB	**Assisi San Ben**	**0.54**	**306**	⇑P	Pg	23 21 33.2	0.0
ASSB				S	Sb	23 21 42.0	-0.5
ASSB				AML	AML		
	comp=E,1600μm,1.0s						
ASSB				AML	AML		
	comp=N,3240μm,1.1s						
ASSB				AML	AML		
	comp=E,7515μm,1.1s						
ASSB				AML	AML		
	comp=N,9535μm,1.0s						
ASSB				AML	AML		
	comp=N,302μm,1.7s						
ASSB				AML	AML		
	comp=E,370μm,2.3s						
VCEL	**Villa Celiera**	**0.55**	**128**	⇑P	Pb	23 21 34.1	-0.6
VCEL				AML	AML		
	comp=E,508μm,0.9s						
VCEL				AML	AML		
	comp=N,699μm,0.3s						
VCEL				AML	AML		
	comp=E,99850μm,0.6s						
VCEL				AML	AML		
	comp=N,87500μm,0.6s						
VCEL				AML	AML		
	comp=E,99950μm,0.6s						
VCEL				AML	AML		
	comp=N,87550μm,0.6s						
SNTG	**Esanatoglia**	**0.57**	**336**	⇑P	Pg	23 21 33.9	0.0
SNTG				S	Sb	23 21 43.0	-0.5
SNTG				AML	AML		
	comp=E,304μm,0.1s						
SNTG				AML	AML		
	comp=N,278μm,1.0s						
SNTG				AML	AML		
	comp=E,495μm,0.3s						
SNTG				AML	AML		
	comp=N,843μm,1.4s						
SNTG				AML	AML		
	comp=E,408μm,1.1s						
SNTG				AML	AML		
	comp=N,427μm,0.9s						
SNTG				AML	AML		
	comp=E,3205μm,1.1s						
SNTG				AML	AML		
	comp=N,3045μm,0.8s						
EL6	**Elcito**	**0.61**	**350**	⇑P	Pg	23 21 34.7	+0.1
EL6				S	Sb	23 21 45.0	+0.4
EL6				AML	AML		
	comp=E,5280μm,1.2s						
EL6				AML	AML		
	comp=N,8140μm,0.9s						
T0110	**Collepietro**	**0.64**	**142**	⇓P	Pg	23 21 35.2	+0.1
T0110				AML	AML		
	comp=N,64300μm,0.5s						
T0110				AML	AML		
	comp=E,64750μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.64**	**315**	⇓P	Pg	23 21 35.3	+0.1
ATCC				S	Sb	23 21 45.2	-0.2
ATCC				AML	AML		
	comp=E,1475μm,0.2s						
ATCC				AML	AML		
	comp=N,956μm,0.9s						
ATCC				AML	AML		
	comp=E,7495μm,0.9s						
ATCC				AML	AML		
	comp=N,6745μm,1.0s						
ATCC				AML	AML		
	comp=N,279μm,0.3s						
ATCC				AML	AML		
	comp=E,378μm,2.5s						
CING	**Cingoli**	**0.65**	**356**	⇓P	Pg	23 21 35.5	+0.2
CING				S	Sb	23 21 45.7	+0.1
CING				AML	AML		
	comp=E,7315μm,0.7s						
CING				AML	AML		
	comp=N,4005μm,0.9s						
CING				AML	AML		
	comp=E,471μm,0.5s						
CING				AML	AML		
	comp=N,380μm,1.5s						
FOSV	**Fossato di Vic**	**0.67**	**328**	⇓P	Pg	23 21 35.1	-0.6
FOSV				AML	AML		
	comp=E,590μm,1.2s						
FOSV				AML	AML		
	comp=N,682μm,1.0s						
FOSV				AML	AML		
	comp=E,3450μm,0.7s						
FOSV				AML	AML		
	comp=N,3375μm,1.4s						
PP3	**Marolino**	**0.70**	**22**	⇓P	Pb	23 21 37.3	+0.1
PP3				AML	AML		
	comp=E,1038μm,1.2s						
PP3				AML	AML		
	comp=N,1700μm,1.1s						
PP3				AML	AML		
	comp=E,944μm,1.2s						

PP3				AML	AML			
	comp=N,1640μm,1.0s							
PP3				AML	AML			
	comp=E,13100μm,1.2s							
PP3				AML	AML			
	comp=N,13300μm,1.1s							
PP3				AML	AML			
	comp=E,13200μm,1.2s							
PP3				AML	AML			
	comp=N,13050μm,1.1s							
SRES	**S.Oreste - Sor**	**0.74**	**228**	⇓P	Pg	23 21 37.1	+0.1	
SRES				AML	AML			
	comp=E,4600μm,0.4s							
SRES				AML	AML			
	comp=N,3860μm,1.5s							
SRES				AML	AML			
	comp=E,9475μm,0.6s							
SRES				AML	AML			
	comp=N,8425μm,1.6s							
SSFR	**Montelago di S**	**0.79**	**334**	AML	AML			
	comp=N,3975μm,0.9s							
SSFR				AML	AML			
	comp=E,3660μm,0.3s							
SSFR				AML	AML			
	comp=N,4205μm,0.7s							
SSFR				AML	AML			
	comp=E,3525μm,0.7s							
ARVD	**Arcevia**	**0.80**	**344**	⇓P	Pg	23 21 38.1	-0.1	
ARVD				S	Sb	23 21 50.4	+0.3	
ARVD				AML	AML			
	comp=E,524μm,0.7s							
ARVD				AML	AML			
	comp=N,795μm,1.0s							
ARVD				AML	AML			
	comp=E,2735μm,1.2s							
ARVD				AML	AML			
	comp=N,2800μm,1.1s							
ARVD				AML	AML			
	comp=N,121μm,2.3s							
ARVD				AML	AML			
	comp=E,182μm,4.1s							
CERT	**Cerreto**	**0.81**	**195**	⇓P	Pg	23 21 38.0	-0.4	
CERT				AML	AML			
	comp=E,34950μm,0.4s							
CERT				AML	AML			
	comp=N,14350μm,0.4s							
CERT				AML	AML			
	comp=N,17050μm,1.0s							
ATFO	**Monte Foce - G**	**0.81**	**322**	P	Pg	23 21 37.7	-0.7	
ATFO				AML	AML			
	comp=E,780μm,0.5s							
ATFO				AML	AML			
	comp=N,643μm,0.6s							
ATFO				AML	AML			
	comp=E,2830μm,1.2s							
ATFO				AML	AML			
	comp=N,2465μm,1.1s							
MGAB	**Montegabbione**	**0.86**	**283**	⇑P	Pn	23 21 41.6	+0.4	
MGAB				AML	AML			
	comp=E,17850μm,0.8s							
MGAB				AML	AML			
	comp=N,9015μm,1.0s							
MGAB				AML	AML			
	comp=E,19000μm,0.8s							
MGAB				AML	AML			
	comp=N,7065μm,1.1s							
INTR	**Introdacqua**	**0.87**	**146**	⇓P	Pg	23 21 39.0	-0.4	
INTR				AML	AML			
	comp=E,8μm,0.5s							
INTR				AML	AML			
	comp=N,7μm,1.6s							
INTR				AML	AML			
	comp=E,8025μm,0.5s							
INTR				AML	AML			
	comp=N,10550μm,1.6s							
INTR				AML	AML			
	comp=E,22μm,1.0s							
INTR				AML	AML			
	comp=N,20μm,1.0s							
INTR				AML	AML			
	comp=E,22050μm,1.0s							
INTR				AML	AML			
	comp=N,29600μm,1.0s							
FRON	**Frontone**	**0.88**	**334**	⇑P	Pg	23 21 39.2	-0.4	
FRON				S	Sb	23 21 52.4	+0.2	
FRON				AML	AML			
	comp=E,2900μm,0.8s							
FRON				AML	AML			
	comp=N,3640μm,0.5s							
ATVO	**AVT- Monte Val**	**0.90**	**317**	P	Pg	23 21 40.0	-0.1	
ATVO				AML	AML			
	comp=E,622μm,1.1s							
ATVO				AML	AML			
	comp=N,570μm,0.8s							
ATVO				AML	AML			
	comp=E,3450μm,1.1s							
ATVO				AML	AML			
	comp=N,2170μm,0.9s							
COR1	**Corinaldo**	**0.92**	**348**	⇑P	Pb	23 21 41.4	+0.3	
COR1				AML	AML			
	comp=E,6155μm,1.1s							
COR1				AML	AML			
	comp=N,9315μm,0.7s							
COR1				AML	AML			
	comp=E,3645μm,0.8s							
COR1				AML	AML			
	comp=N,9325μm,1.0s							
PIEI	**Pieia**	**0.96**	**327**	AML	AML			
	comp=N,316μm,1.3s							
PIEI				AML	AML			
	comp=E,682μm,0.3s							
PIEI				AML	AML			
	comp=E,2495μm,1.2s							
PIEI				AML	AML			
	comp=N,1755μm,0.9s							
MPAG	**Monte Paganucc**	**0.97**	**338**	⇓P	Pg	23 21 41.6	+0.1	
MPAG				AML	AML			
	comp=E,596μm,1.1s							
MPAG				AML	AML			
	comp=N,527μm,0.8s							
MPAG				AML	AML			
	comp=E,2815μm,1.3s							
MPAG				AML	AML			
	comp=N,2161μm,0.8s							
MPAG				AML	AML			
	comp=E,2710μm,1.3s							
MPAG				AML	AML			
	comp=N,2470μm,0.9s							
LPEL	**Lama dei Pelig**	**0.97**	**134**	S	Sn	23 21 56.0	-0.8	
SACS	**San Casciano d**	**1.00**	**277**	P	Pn	23 21 43.7	+0.5	
SACS				AML	AML			
	comp=E,5075μm,0.8s							
SACS				AML	AML			
	comp=N,5420μm,0.8s							
SACS				AML	AML			
	comp=E,5060μm,0.8s							
SACS				AML	AML			
	comp=N,5395μm,0.8s							
NARO	**Abbazia di Nar**	**1.01**	**331**	⇓P	Pg	23 21 41.8	-0.4	
NARO				AML	AML			
	comp=E,2075μm,0.9s							
NARO				AML	AML			
	comp=N,1865μm,1.2s							
FSSB	**Fossombrone**	**1.02**	**340**	P	Pg	23 21 42.3	-0.2	
FSSB				AML	AML			
	comp=E,912μm,0.4s							
FSSB				AML	AML			
	comp=N,1550μm,1.6s							
FSSB				AML	AML			
	comp=E,4660μm,1.2s							
FSSB				AML	AML			
	comp=N,5465μm,1.2s							
FSSB				AML	AML			
	comp=N,505μm,2.1s							
CAFI	**Castiglion Fio**	**1.12**	**303**	⇓P	Pb	23 21 44.4	0.0	
CAFI				AML	AML			
	comp=E,2445μm,1.4s							
CAFI				AML	AML			
	comp=N,2260μm,0.8s							
CAFI				AML	AML			
	comp=E,2575μm,1.4s							
CAFI				AML	AML			
	comp=N,2320μm,0.8s							
PTRJ	**Pietraroja**	**1.66**	**145**	P	Pg	23 21 57.2	+2.5	
VITU	**Vitulano (BN)**	**1.86**	**146**	S	Sb	23 22 20.0	-0.4	
DOSS	**Dosso del Somm**	**3.48**	**336**	⇓P	Pn	23 22 19.1	+1.7	
DOSS				AML	AML			
	comp=E,181μm,0.6s							
DOSS				AML	AML			
	comp=N,234μm,1.2s							
DOSS				AML	AML			
	comp=E,270μm,1.2s							
DOSS				AML	AML			
	comp=N,188μm,0.7s							
LUSI	**Trento, Gardas**	**3.63**	**334**	⇓P	Pn	23 22 20.8	+1.4	
LUSI				AML	AML			
	comp=E,184μm,1.5s							
LUSI				AML	AML			
	comp=N,278μm,1.4s							

LDG **24** *23:22:05.5±0.1, 42˚.64N×13˚.22E, h6km, Ml3.3/18, Error ellipse: s-maj=2.9km s-min=2.0km az=40.0*
ROM **24** *23:22:05.8±0.0, 42˚.654N±0˚.002×13˚.210E±0˚.002, h12km, ML3.8/101, Mw4.0, Error ellipse: s-maj=0.2km s-min=0.0km az=256.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.94; Mθθ 0.06; Mφφ 0.89; Mrθ 0.27; Mθφ -0.43; Mφr-0.66; Fault plane solution: M0 1.23389×10¹⁵ NP1:φs 156.00000°, δ27.00000°, λ-91.00000°. NP2:φs 338.00000°, δ63.00000°, λ-89.00000°.*
BEO **24** *23:22:06.4±0.6, 42˚.61N×13˚.16E, h0km, ML3.9/9*
NEIC **24** *23:22:06.6±1.3, 42˚.66N±0˚.05×13˚.18E±0˚.07, h5km±4km, mb4.2/12, Mwr4.1/31, ML3.8(ROM), Error ellipse: s-maj=9.8km s-min=3.8km az=221.0*
PDG **24** *23:22:06.4±0.6, 42˚.64N×13˚.22E, h12km, ML4.0/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
IDC **24** *23:22:06.6±1.1, 42˚.76N×13˚.20E, h0km, mb4.0/7, mbtmp3.8/17, ML3.5/9, MS3.2/26, Error ellipse: s-maj=17.2km s-min=12.3km az=79.0*
NEIC **24** *23:22:06.7, 42˚.67N×13˚.14E, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.13; Mθθ-0.25; Mφφ 1.38; Mrθ 0.82; Mθφ-0.48; Mφr-1.15; Fault plane solution: M0 1.96000×10¹⁵ NP1:φs 328.22000°, δ69.46000°, λ-105.22000°. NP2:φs 186.01000°, δ25.37000°, λ-54.99000°. Principal axes: T 2.0768, Plg23.0000°, Azm70.0000°; N -0.2563, Plg14.0000°, Azm334.0000°; P -1.8205, Plg63.0000°, Azm215.0000°;*
STR **24** *23:22:06.7±2.0, 43˚.N-9˚×1˚.3E±1˚.5, h15km, MLv3.9/19 Error ellipse: s-maj=0.0km s-min=0.0km az=111.7, preliminary*
PRU **24** *23:22:07.8±0.0, 42˚.62N×13˚.29E, h5km, M4.1*

ISC 24 23:22:07.1±0.6, 42˚.66N±0˚.01×13˚.19E±0˚.02, h12km±3km, n494, σ1§61/542, mb4.2/11, MS3.3/16, 76C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
T1201	**Domo (RI)**	**0.05**	**89**	⇓P	**Pg**	**23**	**22**	**08.4**	**-1.0**
T1202	**Accumoli, Fraz**	**0.06**	**31**	⇓P	**Pg**	**23**	**22**	**08.6**	**-1.0**
T1202				S	**Sg**	**23**	**22**	**10.5**	**-0.9**
T1213	**Norcia, Frazio**	**0.08**	**327**	⇓P	**Pg**	**23**	**22**	**08.9**	**-0.9**
T1214	**Arquata del Tr**	**0.10**	**9**	⇓P	**Pg**	**23**	**22**	**09.1**	**-1.0**
T1214				S	**Sg**	**23**	**22**	**11.0**	**-1.3**
LNSS	**Leonessa**	**0.12**	**244**	⇑P	**Pg**	**23**	**22**	**09.7**	**-0.6**
LNSS				S	**Sg**	**23**	**22**	**12.5**	**-0.1**
LNSS				AML	AML				
LNSS				AML	AML				
T1212	**Cascia, Frazio**	**0.14**	**312**	⇑P	**Pg**	**23**	**22**	**09.8**	**-0.7**
T1212				S	**Sg**	**23**	**22**	**12.6**	**-0.4**
AQT1	**Arquata del Tr**	**0.14**	**34**	⇑P	**Pg**	**23**	**22**	**09.6**	**-1.0**
AQT1				S	**Sg**	**23**	**22**	**12.1**	**-0.9**
RM33	**Pellescritta (**	**0.15**	**172**	⇑P	**Pg**	**23**	**22**	**09.9**	**-0.8**
RM33				S	**Sg**	**23**	**22**	**12.7**	**-0.5**
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
RM33				AML	AML				
T1242	**Castelluccio d**	**0.17**	**4**	⇑P	**Pg**	**23**	**22**	**10.2**	**-0.8**
NRCA	**Norcia**	**0.18**	**343**		**Pg**	**23**	**22**	**10.2**	**-1.0**
NRCA	**Norcia**	**0.18**	**343**	P	**Pg**	**23**	**22**	**10.5**	**-0.8**
NRCA				S	**Sg**	**23**	**22**	**14.2**	**+0.1**
NRCA				AML	AML				
	comp=E,47300μm,0.5s								
NRCA				AML	AML				
	comp=E,47250μm,0.5s								
NRCA				AML	AML				
	comp=N,37550μm,0.5s								
NRCA				AML	AML				
	comp=E,51350μm,0.5s								
NRCA				AML	AML				
	comp=N,37550μm,0.5s								
NRCA				AML	AML				
	comp=N,41900μm,0.1s								
NRCA				AML	AML				
	comp=E,51300μm,0.5s								
NRCA				AML	AML				
	comp=E,47250μm,0.5s								
T1243	**Rocca Santa Ma**	**0.20**	**78**	⇑P	**Pg**	**23**	**22**	**10.1**	**-1.3**
T1243				S	**Sg**	**23**	**22**	**13.2**	**-1.3**
CAMP	**Campotosto**	**0.20**	**126**	⇑P	**Pg**	**23**	**22**	**10.5**	**-1.1**
CAMP				S	**Sg**	**23**	**22**	**13.7**	**-0.9**
CAMP				AML	AML				
CAMP				AML	AML				
MC2	**Monte Cornacci**	**0.26**	**1**	P	**Pg**	**23**	**22**	**11.6**	**-0.9**
MC2				S	**Sg**	**23**	**22**	**16.4**	**+0.2**
MMO1	**Montemonaco**	**0.26**	**23**	⇑P	**Pg**	**23**	**22**	**11.5**	**-1.1**
MMO1				S	**Sg**	**23**	**22**	**15.4**	**-0.9**
T1241	**Roccafluvione,**	**0.27**	**42**	⇑P	**Pg**	**23**	**22**	**11.4**	**-1.2**
T1241				S	**Sg**	**23**	**22**	**15.6**	**-0.8**
T1211	**Morro Reatino**	**0.27**	**243**	⇑P	**Pg**	**23**	**22**	**12.1**	**-0.6**
T1211				S	**Sg**	**23**	**22**	**17.0**	**+0.4**
TERO	**Teramo**	**0.31**	**96**	⇑P	**Pg**	**23**	**22**	**11.9**	**-1.5**
TERO				S	**Sg**	**23**	**22**	**16.4**	**-1.2**
TERO				AML	AML				
	comp=N,54550μm,0.3s								
TERO				AML	AML				
	comp=E,54450μm,1.1s								
TERO				AML	AML				
	comp=N,57400μm,0.3s								
TERO				AML	AML				
	comp=E,50900μm,1.1s								
TERO				AML	AML				
	comp=N,54600μm,0.3s								
ARRO	**Arrone**	**0.32**	**256**	⇑P	**Pg**	**23**	**22**	**12.9**	**-0.6**
ARRO				AML	AML				
	comp=E,14700μm,1.1s								
ARRO				AML	AML				
	comp=N,11850μm,0.8s								
ARRO				AML	AML				
	comp=E,14750μm,1.1s								
ARRO				AML	AML				
	comp=N,11800μm,0.8s								
FEMA	**Monte Fema**	**0.32**	**342**	P	**Pg**	**23**	**22**	**12.9**	**-0.8**
FEMA				S	**Sg**	**23**	**22**	**18.5**	**+0.4**
AQU	**L'Aquila**	**0.34**	**152**	Pg	**Pg**	**23**	**22**	**12.9**	**-1.0**
AQU	**L'Aquila**	**0.34**	**152**	⇑P	**Pg**	**23**	**22**	**13.0**	**-1.0**
AQU				AML	AML				
AQU				AML	AML				
	comp=E,54700μm,1.6s								
AQU				AML	AML				
AQU				AML	AML				
	comp=E,56000μm,1.1s								
GIGS	**Gran Sasso**	**0.35**	**126**	⇑P	**Pg**	**23**	**22**	**12.8**	**-1.4**
GIGS				S	**Sg**	**23**	**22**	**17.7**	**-1.1**
GIGS				AML	AML				
	comp=E,38650μm,0.5s								
GIGS				AML	AML				
	comp=N,27800μm,0.7s								
FDMO	**Fiordimonte**	**0.39**	**349**		**Pg**	**23**	**22**	**13.9**	**-1.0**
FDMO	**Fiordimonte**	**0.39**	**349**	P	**Pg**	**23**	**22**	**13.8**	**-1.0**
FDMO				AML	AML				
	comp=N,5815μm,0.9s								
FDMO				AML	AML				
	comp=E,5715μm,0.8s								
FIAM	**Fiamignano**	**0.39**	**188**	⇑P	**Pg**	**23**	**22**	**14.0**	**-0.9**
FIAM				S	**Sg**	**23**	**22**	**20.1**	**0.0**
FIAM				AML	AML				
FIAM				AML	AML				
	comp=N,78200μm,1.4s								
CESI	**CESI - Serrava**	**0.41**	**329**	P	**Pg**	**23**	**22**	**14.4**	**-0.7**
CESI				AML	AML				
	comp=E,7335μm,0.9s								
CESI				AML	AML				
	comp=E,7330μm,0.9s								
CESI				AML	AML				
	comp=N,9770μm,0.9s								
GUMA	**Gualdo di Mace**	**0.42**	**15**	⇑P	**Pg**	**23**	**22**	**14.6**	**-0.8**
GUMA				AML	AML				
	comp=E,34300μm,0.3s								
GUMA				AML	AML				
	comp=N,37200μm,0.3s								
GUMA				AML	AML				
	comp=E,31900μm,0.4s								
GUMA				AML	AML				
	comp=N,40600μm,0.3s								
GUMA				AML	AML				
	comp=E,34350μm,0.4s								
CSP1	**Cessapalombo**	**0.43**	**2**	⇑P	**Pg**	**23**	**22**	**14.6**	**-1.1**
CSP1				AML	AML				
	comp=E,8945μm,0.5s								
CSP1				AML	AML				
	comp=N,11855μm,0.9s								
CSP1				AML	AML				
	comp=N,11795μm,0.9s								
CSP1				AML	AML				
	comp=E,8965μm,0.5s								
CESX	**Cesi**	**0.45**	**264**	⇑P	**Pg**	**23**	**22**	**15.0**	**-1.0**
CESX				S	**Sg**	**23**	**22**	**21.6**	**-0.3**
CESX				AML	AML				
	comp=N,9890μm,0.3s								
CESX				AML	AML				
	comp=E,10600μm,0.4s								
OFFI	**Offida**	**0.46**	**53**	⇑P	**Pg**	**23**	**22**	**15.6**	**-0.5**
OFFI				AML	AML				
	comp=N,37700μm,0.7s								
OFFI				AML	AML				
	comp=E,37600μm,1.4s								
FAGN	**Fagnano**	**0.49**	**143**	⇑P	**Pg**	**23**	**22**	**15.2**	**-1.4**
FAGN				AML	AML				
FAGN				AML	AML				
SEF1	**Sefro**	**0.52**	**340**	P	**Pg**	**23**	**22**	**16.3**	**-1.0**
MNTP	**Montappone**	**0.52**	**23**	P	**Pg**	**23**	**22**	**16.5**	**-0.8**
MNTP				AML	AML				
	comp=E,15600μm,0.2s								
MNTP				AML	AML				
	comp=N,11950μm,0.9s								
MDAR	**Monte D'Aria**	**0.54**	**357**	P	**Pg**	**23**	**22**	**16.6**	**-1.0**
PIO1	**Pioraco**	**0.54**	**344**	P	**Pg**	**23**	**22**	**16.8**	**-0.9**
ASSB	**Assisi San Ben**	**0.55**	**315**	⇑P	**Pg**	**23**	**22**	**16.8**	**-1.0**
ASSB				AML	AML				
	comp=E,7515μm,1.1s								
ASSB				AML	AML				
	comp=N,9535μm,1.0s								
VCEL	**Villa Celiera**	**0.55**	**118**	⇑P	**Pg**	**23**	**22**	**16.4**	**-1.4**
VCEL				S	**Sg**	**23**	**22**	**25.4**	**+0.3**
VCEL				AML	AML				
	comp=E,99850μm,0.6s								
VCEL				AML	AML				
	comp=N,87500μm,0.6s								
VCEL				AML	AML				
	comp=E,99950μm,0.6s								
VCEL				AML	AML				
VCEL				AML	AML				
	comp=N,87550μm,0.6s								
TRTR	**Tortoreto Alta**	**0.56**	**74**	⇑P	**Pg**	**23**	**22**	**17.5**	**-0.4**
TRTR				AML	AML				
	comp=N,27700μm,0.9s								
TRTR				AML	AML				
	comp=E,29500μm,0.6s								
TRTR				AML	AML				
	comp=E,29450μm,0.6s								
SSM1	**San Severino M**	**0.57**	**359**	P	**Pg**	**23**	**22**	**17.1**	**-1.1**
GAG1	**Gagliole**	**0.59**	**352**		**Pb**	**23**	**22**	**20.3**	**+0.9**
GAG1	**Gagliole**	**0.59**	**352**	P	**Pg**	**23**	**22**	**17.7**	**-0.9**
GAG1				AML	AML				
	comp=N,13550μm,0.5s								
GAG1				AML	AML				
	comp=E,9430μm,0.5s								
MTL1	**Matelica**	**0.61**	**348**	P	**Pg**	**23**	**22**	**18.0**	**-1.0**
T0110	**Collepietro**	**0.61**	**134**	⇑P	**Pg**	**23**	**22**	**17.3**	**-1.7**
T0110				AML	AML				
	comp=E,64750μm,0.4s								
T0110				AML	AML				
	comp=N,64300μm,0.5s								
SNTG	**Esanatoglia**	**0.62**	**343**	P	**Pg**	**23**	**22**	**18.1**	**-1.2**
SNTG				AML	AML				
	comp=N,3045μm,0.8s								
SNTG				AML	AML				
	comp=N,427μm,0.9s								
SNTG				AML	AML				
	comp=E,3205μm,1.1s								
SNTG				AML	AML				
	comp=E,408μm,1.1s								
SRES	**S.Oreste - Sor**	**0.65**	**230**	⇑P	**Pg**	**23**	**22**	**18.4**	**-1.3**
SRES				AML	AML				
	comp=E,9475μm,0.6s								
SRES				AML	AML				
	comp=N,8425μm,1.6s								
PTQR	**Pietraquaria**	**0.65**	**166**	P	**Pg**	**23**	**22**	**18.1**	**-1.6**
PTQR				AML	AML				
	comp=N,8320μm,0.6s								
PTQR				AML	AML				
	comp=E,14750μm,0.4s								
TRE1	**Treia**	**0.66**	**8**	P	**Pg**	**23**	**22**	**19.1**	**-0.9**
ATCC	**AVT- Casa Cast**	**0.66**	**323**	P	**Pg**	**23**	**22**	**18.9**	**-1.0**
ATCC				AML	AML				
	comp=E,7495μm,0.9s								
ATCC				AML	AML				
	comp=N,6745μm,1.0s								
EL6	**Elcito**	**0.68**	**355**	P	**Pg**	**23**	**22**	**18.6**	**-1.6**
EL6				AML	AML				
	comp=E,5280μm,1.2s								
EL6				AML	AML				
	comp=E,5285μm,1.2s								
EL6				AML	AML				
	comp=N,8190μm,0.6s								
CADA	**Capodarco di F**	**0.68**	**38**	P	**Pg**	**23**	**22**	**20.2**	**-0.1**
CADA				AML	AML				
	comp=E,15950μm,1.1s								
CADA				AML	AML				
	comp=N,16250μm,1.2s								
FOSV	**Fossato di Vic**	**0.71**	**334**		**Pg**	**23**	**22**	**18.4**	**-2.4**
FOSV	**Fossato di Vic**	**0.71**	**334**	P	**Pg**	**23**	**22**	**20.1**	**-0.8**
FOSV				AML	AML				
	comp=N,3375μm,1.4s								
FOSV				AML	AML				
	comp=E,3450μm,0.7s								
FOSV				AML	AML				
	comp=N,3370μm,1.4s								
MTCE	**Montecelio**	**0.71**	**208**	⇑P	**Pg**	**23**	**22**	**19.2**	**-1.7**
MTCE				AML	AML				
	comp=E,17800μm,1.1s								
MTCE				AML	AML				
	comp=N,13100μm,1.5s								
CING	**Cingoli**	**0.72**	**1**	P	**Pg**	**23**	**22**	**19.6**	**-1.4**
CING				AML	AML				
	comp=E,7315μm,0.7s								
CING				AML	AML				
	comp=N,4005μm,0.9s								
CERT	**Cerreto**	**0.72**	**192**	P	**Pg**	**23**	**22**	**19.4**	**-1.7**
CERT				AML	AML				
	comp=N,17050μm,1.0s								
CERT				AML	AML				
	comp=E,34950μm,0.4s								
MURB	**Monte Urbino**	**0.78**	**322**		**Pg**	**23**	**22**	**20.9**	**-1.2**
MURB	**Monte Urbino**	**0.78**	**322**	P	**Pg**	**23**	**22**	**21.1**	**-1.1**
PP3	**Marolino**	**0.79**	**23**	⇑P	**Pg**	**23**	**22**	**21.4**	**-0.9**
PP3				AML	AML				
	comp=E,13100μm,1.2s								
PP3				AML	AML				
	comp=N,13050μm,1.1s								
PP3				AML	AML				
	comp=E,13200μm,1.2s								
PP3				AML	AML				
	comp=N,13300μm,1.1s								
ATTE	**AVT- Monte Tez**	**0.82**	**312**	P	**Pg**	**23**	**22**	**21.8**	**-1.1**
ATTE				AML	AML				
	comp=N,3355μm,0.5s								
ATTE				AML	AML				
	comp=E,3320μm,0.9s								
RCAV	**Rocca di Cave**	**0.83**	**193**	P	**Pg**	**23**	**22**	**21.1**	**-1.9**
MGAB	**Montegabbione**	**0.83**	**288**		**Pg**	**23**	**22**	**22.9**	**-0.2**
MGAB	**Montegabbione**	**0.83**	**288**	⇑P	**Pg**	**23**	**22**	**22.1**	**-1.0**
MGAB				AML	AML				
	comp=E,17850μm,0.8s								
MGAB				AML	AML				
	comp=N,9015μm,1.0s								
MGAB				AML	AML				
	comp=N,7065μm,1.1s								

MGAB			AML	AML	
	comp=E,19000μm,0.8s				
MGAB			AML	AML	
	comp=N,9010μm,1.0s				
MGAB			AML	AML	
	comp=E,17900μm,0.8s				
SSFR	**Montelago di S**	**0.83 339**	P	**Pg**	**23 22 22.1 -1.1**
SSFR			AML	AML	
	comp=E,3660μm,0.3s				
SSFR			AML	AML	
	comp=E,3525μm,0.7s				
SSFR			AML	AML	
	comp=E,3665μm,0.3s				
SSFR			AML	AML	
	comp=N,4205μm,0.7s				
SSFR			AML	AML	
	comp=N,3975μm,0.9s				
INTR	**Introdacqua**	**0.84 140**	P	**Pg**	**23 22 20.9 -2.3**
INTR			AML	AML	
	comp=E,22μm,1.0s				
INTR			AML	AML	
	comp=N,20μm,1.0s				
INTR			AML	AML	
	comp=E,22050μm,1.0s				
INTR			AML	AML	
	comp=N,29600μm,1.0s				
INTR			AML	AML	
	comp=E,22μm,1.0s				
ATFO	**Monte Foce - G**	**0.84 328**	P	**Pg**	**23 22 22.3 -1.0**
ATFO			AML	AML	
	comp=E,2830μm,1.2s				
ATFO			AML	AML	
	comp=E,2835μm,1.2s				
ATFO			AML	AML	
	comp=N,2500μm,0.5s				
VVLD	**Villa Vallelon**	**0.85 157**	P	**Pg**	**23 22 22.1 -1.4**
VVLD			AML	AML	
	comp=N,15800μm,0.5s				
VVLD			AML	AML	
	comp=E,11410μm,0.6s				
ARVD	**Arcevia**	**0.86 348**	P	**Pg**	**23 22 22.4 -1.2**
ARVD			AML	AML	
	comp=E,2735μm,1.2s				
ARVD			AML	AML	
	comp=N,2800μm,1.1s				
GUAR	**Guarcino**	**0.87 174**	P	**Pg**	**23 22 22.6 -1.2**
GUAR			AML	AML	
	comp=E,17650μm,0.8s				
GUAR			AML	AML	
	comp=N,17200μm,0.5s				
ATLO	**AVT- Montelove**	**0.87 319**	P	**Pg**	**23 22 22.5 -1.4**
ATVA	**AVT- Monte Val**	**0.91 314**	P	**Pg**	**23 22 23.2 -1.4**
TB02	**Pietralunga**	**0.91 322**	P	**Pg**	**23 22 23.3 -1.4**
RMP	**Rome, Mte Porz**	**0.92 203**	P	**Pg**	**23 22 24.2 -0.5**
RMP			AML	AML	
	comp=E,20450μm,0.5s				
RMP			AML	AML	
	comp=N,23800μm,0.4s				
ATVO	**AVT- Monte Val**	**0.92 322**		**Pg**	**23 22 23.2 -1.8**
ATVO	**AVT- Monte Val**	**0.92 322**	P	**Pg**	**23 22 23.1 -1.8**
ATVO			AML	AML	
	comp=N,2170μm,0.9s				
ATVO			AML	AML	
	comp=N,2165μm,0.9s				
ATVO			AML	AML	
	comp=E,3450μm,1.1s				
FRON	**Frontone**	**0.93 339**	P	**Pg**	**23 22 23.4 -1.6**
FRON			AML	AML	
	comp=E,2900μm,0.8s				
FRON			AML	AML	
	comp=N,3640μm,0.5s				
FRON			AML	AML	
	comp=E,2905μm,0.8s				
AOI	**Ancona**	**0.94 19**	P	**Pg**	**23 22 23.9 -1.4**
AOI			AML	AML	
	comp=N,2640μm,0.5s				
AOI			AML	AML	
	comp=E,3170μm,0.7s				
ATMI	**Monte Miggiano**	**0.95 315**		**Pn**	**23 22 26.7 +0.3**
ATMI	**Monte Miggiano**	**0.95 315**	P	**Pg**	**23 22 24.9 -0.6**
ATMI			AML	AML	
	comp=N,7335μm,0.4s				
ATMI			AML	AML	
	comp=E,7035μm,0.8s				
VIVA	**Pratoni del Vi**	**0.96 199**		**Pg**	**23 22 25.2 -0.3**
VIVA	**Pratoni del Vi**	**0.96 199**	P	**Pg**	**23 22 23.7 -1.8**
VIVA			AML	AML	
	comp=E,32150μm,0.4s				
VIVA			AML	AML	
	comp=N,37500μm,0.4s				
LPEL	**Lama dei Pelig**	**0.96 129**	P	**Pg**	**23 22 23.1 -2.4**
LPEL			AML	AML	
	comp=N,13650μm,0.5s				
LPEL			AML	AML	
	comp=E,17200μm,1.2s				
CAFR	**Castel Frentan**	**0.96 116**	P	**Pg**	**23 22 23.7 -1.9**
CAFR			AML	AML	
	comp=E,59μm,0.5s				
CAFR			AML	AML	
	comp=N,11150μm,0.7s				
SACS	**San Casciano d**	**0.96 282**	⇑P	**Pg**	**23 22 24.4 -1.2**
SACS			AML	AML	
	comp=E,5080μm,0.8s				
SACS			AML	AML	
	comp=N,5420μm,0.8s				
SACS			AML	AML	
	comp=E,5075μm,0.8s				
SACS			AML	AML	
	comp=N,5395μm,0.8s				
SACS			AML	AML	
	comp=N,5415μm,0.8s				
SACS			AML	AML	
	comp=E,5060μm,0.8s				
RDP	**Rocca di Papa**	**0.96 201**	P	**Pg**	**23 22 23.8 -1.8**
RDP			AML	AML	
	comp=N,50400μm,0.5s				
RDP			AML	AML	
	comp=E,35600μm,0.5s				
MA9	**Marino**	**0.97 204**	P	**Pg**	**23 22 23.7 -2.0**
MA9			AML	AML	
	comp=E,26750μm,0.7s				
MA9			AML	AML	
	comp=N,33500μm,0.6s				
ATPI	**Pietralunga -**	**0.98 324**	P	**Pg**	**23 22 24.5 -1.5**
ATPI			AML	AML	
	comp=N,3580μm,1.2s				
ATPI			AML	AML	
	comp=E,4405μm,1.1s				
COR1	**Corinaldo**	**0.98 352**		**Pg**	**23 22 25.9 -0.1**
COR1	**Corinaldo**	**0.98 352**	P	**Pg**	**23 22 24.7 -1.4**
COR1			AML	AML	
	comp=N,9325μm,1.0s				
COR1			AML	AML	
	comp=E,7935μm,0.8s				
COR1			AML	AML	
	comp=E,4100μm,0.9s				
COR1			AML	AML	
	comp=N,9315μm,0.7s				
COR1			AML	AML	
	comp=N,9365μm,1.0s				
PIEI	**Pieia**	**1.00 332**	P	**Pg**	**23 22 25.0 -1.3**
PIEI			AML	AML	
	comp=E,2495μm,1.2s				
PIEI			AML	AML	
	comp=N,1755μm,0.9s				
POFI	**Posta Fibreno**	**1.02 157**	P	**Pg**	**23 22 24.7 -1.9**
POFI			AML	AML	
	comp=E,8365μm,0.8s				
POFI			AML	AML	
	comp=N,8505μm,0.7s				
POFI			AML	AML	
	comp=N,8405μm,0.7s				
POFI			AML	AML	
	comp=E,8950μm,0.5s				
LATE	**Laterza**	**1.02 268**		**Pg**	**23 22 25.6 -1.1**
LATE	**Laterza**	**1.02 268**	⇑P	**Pg**	**23 22 25.5 -1.2**
MPAG	**Monte Paganucc**	**1.02 342**	P	**Pg**	**23 22 25.4 -1.4**
MPAG			AML	AML	
	comp=N,2470μm,0.9s				
MPAG			AML	AML	
	comp=E,2710μm,1.3s				
LAV9	**Lanuvio**	**1.04 200**	P	**Pg**	**23 22 25.4 -1.7**
LAV9			AML	AML	
	comp=N,24700μm,1.1s				
LAV9			AML	AML	
	comp=E,27950μm,0.7s				
LAV9			AML	AML	
	comp=N,24200μm,1.2s				
LAV9			AML	AML	
	comp=E,29150μm,0.7s				
LRP	**Arpino**	**1.05 163**	AML	AML	
	comp=N,8460μm,0.9s				
LRP			AML	AML	
	comp=E,6380μm,0.5s				
NARO	**Abbazia di Nar**	**1.05 335**	P	**Pb**	**23 22 25.6 -1.6**
NARO			AML	AML	
	comp=N,1865μm,1.2s				
NARO			AML	AML	
	comp=E,2075μm,0.9s				
NARO			AML	AML	
	comp=N,1860μm,1.2s				
TOLF	**Tolfa**	**1.06 236**	⇑P	**Pb**	**23 22 25.8 -1.6**
TOLF			AML	AML	
	comp=N,3520μm,0.4s				
TOLF			AML	AML	
	comp=E,4770μm,0.5s				
FSSB	**Fossombrone**	**1.08 344**	P	**Pb**	**23 22 26.5 -1.2**
FSSB			AML	AML	
	comp=E,4660μm,1.2s				
FSSB			AML	AML	
	comp=N,5525μm,0.4s				
FSSB			AML	AML	
	comp=E,4665μm,1.2s				
BADI	**Badiali**	**1.10 321**		**Pn**	**23 22 29.3 +1.0**
BADI	**Badiali**	**1.10 321**	P	**Pb**	**23 22 26.7 -1.3**
GIUL	**Giuliano Di Ro**	**1.10 177**	AML	AML	
	comp=E,8420μm,0.6s				
GIUL			AML	AML	
	comp=N,9345μm,0.8s				
CAFI	**Castiglion Fio**	**1.12 307**		**Pb**	**23 22 27.5 -0.8**
CAFI	**Castiglion Fio**	**1.12 307**	P	**Pb**	**23 22 27.3 -1.1**
CAFI			AML	AML	
	comp=N,2260μm,0.8s				
CAFI			AML	AML	
	comp=E,2575μm,1.4s				
CAFI			AML	AML	
	comp=N,2320μm,0.8s				
CAFI			AML	AML	
	comp=E,2445μm,1.4s				
CAFI			AML	AML	
	comp=E,2580μm,1.4s				
MCIV	**Monte Civitell**	**1.12 277**	P	**Pb**	**23 22 27.1 -1.3**
MCIV			AML	AML	
	comp=E,2315μm,0.8s				
MCIV			AML	AML	
	comp=N,1995μm,0.9s				
SF04	**Casetta**	**1.14 280**	P	**Pb**	**23 22 27.4 -1.4**
RNI2	**Rionero Sannit**	**1.19 143**	P	**Pb**	**23 22 27.5 -2.2**
SF01	**Poggio Pratacc**	**1.21 278**	P	**Pn**	**23 22 29.1 -0.8**
SF01			AML	AML	
	comp=N,4135μm,0.9s				
SF01			AML	AML	
	comp=E,5505μm,0.8s				
PARC	**Parchiule**	**1.21 325**	P	**Pn**	**23 22 28.1 -1.7**
PARC			AML	AML	
	comp=E,2290μm,1.1s				
PARC			AML	AML	
	comp=N,1735μm,1.2s				
CERA	**Filignano**	**1.23 149**	AML	AML	
	comp=E,9815μm,0.6s				
CERA			AML	AML	
	comp=E,9430μm,0.6s				
CERA			AML	AML	
	comp=N,7460μm,0.6s				
CERA			AML	AML	
	comp=N,7780μm,0.6s				
ARCI	**Arcidosso**	**1.27 279**	P	**Pn**	**23 22 30.2 -0.6**
ARCI			AML	AML	
	comp=E,876μm,1.0s				
ARCI			AML	AML	
	comp=N,912μm,0.9s				
FRES	**Fresagrandinar**	**1.29 121**	P	**Pn**	**23 22 30.9 -0.1**
PESA	**Pesaro**	**1.31 349**	P	**Pn**	**23 22 31.0 -0.2**
PESA			AML	AML	
	comp=N,2580μm,1.4s				
PESA			AML	AML	
	comp=E,2975μm,1.2s				
CRE	**Caprese Michel**	**1.32 317**		**Pb**	**23 22 31.8 -0.1**
CRE	**Caprese Michel**	**1.32 317**	P	**Pn**	**23 22 31.2 -0.2**
CRE			AML	AML	
	comp=N,1001μm,0.8s				
CRE			AML	AML	
	comp=E,1180μm,1.1s				
TRIV	**Trivento**	**1.35 131**		**Pg**	**23 22 32.5 -0.4**
TRIV	**Trivento**	**1.35 131**	P	**Pn**	**23 22 31.2 -0.6**
TRIV			AML	AML	
	comp=E,7895μm,1.0s				
TRIV			AML	AML	
	comp=E,9615μm,1.0s				
TRIV			AML	AML	
	comp=N,8445μm,1.1s				
TRIV			AML	AML	
	comp=N,9470μm,1.1s				
VAGA	**Valle Agricola**	**1.47 147**	P	**Pn**	**23 22 33.0 -0.4**
VAGA			AML	AML	
	comp=E,3310μm,0.8s				
VAGA			AML	AML	
	comp=N,3715μm,0.7s				
VAGA			AML	AML	
	comp=E,3435μm,0.8s				
VAGA			AML	AML	
	comp=N,3850μm,0.7s				
BSSO	**Busso**	**1.53 136**	AML	AML	
	comp=N,4745μm,1.2s				
BSSO			AML	AML	
	comp=E,3270μm,1.4s				
BSSO			AML	AML	
	comp=N,1960μm,1.2s				
BSSO			AML	AML	
	comp=E,1400μm,1.4s				
ASQU	**Asqua**	**1.53 319**	P	**Pn**	**23 22 33.7 -0.6**
ASQU			AML	AML	
	comp=N,971μm,1.1s				
ASQU			AML	AML	
	comp=E,825μm,1.3s				
SFI	**Santa Sofia**	**1.58 322**	P	**Pb**	**23 22 36.2 -0.1**
FROS	**Frosini**	**1.59 291**	P	**Pn**	**23 22 34.7 -0.4**
MODR	**Mondragone**	**1.59 161**	P	**Pn**	**23 22 34.7 -0.4**
MODR			AML	AML	
	comp=E,1870μm,0.8s				
MODR			AML	AML	
	comp=N,2035μm,0.9s				
CSNT	**Castellina Chi**	**1.61 301**	P	**Pn**	**23 22 34.8 -0.6**
CIGN	**Sant'Elia a Pi**	**1.62 128**	P	**Pn**	**23 22 34.7 -0.8**
PIGN	**Pignataro Magg**	**1.63 153**	P	**Pn**	**23 22 34.7 -0.9**
OSSC	**Osservatorio P**	**1.67 302**		**Pn**	**23 22 35.8 -0.3**
OSSC	**Osservatorio P**	**1.67 302**	P	**Pn**	**23 22 36.0 -0.1**
OSSC			AML	AML	
	comp=E,850μm,1.2s				
OSSC			AML	AML	
	comp=N,686μm,1.0s				
OSSC			AML	AML	
	comp=N,810μm,1.3s				
OSSC			AML	AML	
	comp=E,672μm,1.0s				
SACR	**S. Croce Del S**	**1.69 138**	P	**Pb**	**23 22 37.9 -0.3**
SACR			AML	AML	
	comp=E,2385μm,1.1s				
SACR			AML	AML	
	comp=N,1980μm,0.9s				
RUFI	**Rufina**	**1.70 315**	P	**Pn**	**23 22 36.3 -0.3**
RUFI			AML	AML	
	comp=E,680μm,1.1s				
RUFI			AML	AML	
	comp=N,734μm,1.2s				
CASP	**Castiglione de**	**1.71 275**	Pn	**Pn**	**23 22 36.0 -0.8**
GATE	**Gambatesa**	**1.72 131**	P	**Pb**	**23 22 38.0 -0.6**
MELA	**Melanico ??? S**	**1.73 123**	P	**Pn**	**23 22 36.2 -0.8**
TRIF	**Trifonti**	**1.74 286**	P	**Pn**	**23 22 36.9 -0.2**
TRIF			AML	AML	
	comp=N,564μm,0.8s				
TRIF			AML	AML	
	comp=E,574μm,0.8s				
VITU	**Vitulano (BN)**	**1.82 143**	P	**Pn**	**23 22 37.0 -1.3**
DUGI	**Dugi Otok**	**1.91 45**	*e*Pn	**Pn**	**23 22 38.5 -1.0**
PAOL	**Paolisi**	**1.92 147**	Pn	**Pn**	**23 22 40.2 +0.5**
MOCO	**Biccari - m.te**	**1.95 131**	P	**Pn**	**23 22 38.8 -1.3**
APRC	**Apricena**	**1.97 116**		**Pn**	**23 22 40.1 -0.2**
APRC	**Apricena**	**1.97 116**	⇑P	**Pn**	**23 22 39.9 -0.4**
APRC			AML	AML	
	comp=E,2000μm,0.4s				
APRC			AML	AML	
	comp=N,3820μm,1.3s				
SGRT	**San Giovanni R**	**2.10 115**		**Pn**	**23 22 42.4 +0.2**
SGRT	**San Giovanni R**	**2.10 115**	P	**Pn**	**23 22 41.8 -0.4**
SGRT			AML	AML	
	comp=E,2845μm,0.6s				
SGRT			AML	AML	
	comp=N,2780μm,1.0s				
VIRC	**Vir**	**2.13 39**	*e*Pn	**Pn**	**23 22 41.5 -0.9**
MORI	**Morici**	**2.20 56**	*e*Pn	**Pn**	**23 22 42.8 -0.7**
SGTA	**Sant Agata di**	**2.23 132**	P	**Pb**	**23 22 46.0 -1.3**
MSAG	**Monte S. Angel**	**2.23 114**	P	**Pn**	**23 22 44.3 +0.4**
MSAG			AML	AML	
	comp=E,2585μm,1.5s				
MSAG			AML	AML	
	comp=E,2740μm,0.5s				
MSAG			AML	AML	
	comp=N,5425μm,1.0s				
MSAG			AML	AML	
	comp=N,5280μm,1.0s				
CAFE	**Carife**	**2.23 136**	P	**Pb**	**23 22 45.8 -1.7**
NVLJ	**Novalja**	**2.27 32**	*e*Pn	**Pn**	**23 22 43.2 -1.1**
BRJN	**Brijuni**	**2.29 10**	*e*Pn	**Pn**	**23 22 45.4 +0.8**
SNAL	**S. Angelo Dei**	**2.30 138**	P	**Pb**	**23 22 47.2 -1.3**
SNAL			AML	AML	
	comp=N,1740μm,1.4s				
SNAL			AML	AML	
	comp=E,2245μm,1.1s				
SNAL			AML	AML	
	comp=N,1855μm,1.3s				
SNAL			AML	AML	
	comp=E,2160μm,1.1s				
ZCCA	**Zocca**	**2.33 317**		**Pn**	**23 22 45.6 +0.2**
RABC	**Rab**	**2.39 28**	*e*Pn	**Pn**	**23 22 45.5 -0.6**
CAPA	**Cerignola FG**	**2.47 126**		**Pn**	**23 22 47.9 +0.8**
CAPA	**Cerignola FG**	**2.47 126**	AML	AML	
	comp=N,2970μm,1.1s				
CAPA			AML	AML	
	comp=E,3680μm,1.1s				
SMRN	**Sveta Marina**	**2.48 16**	*e*Pn	**Pn**	**23 22 45.5 -1.8**
VLC	**Villacollemand**	**2.53 307**		**Pn**	**23 22 48.2 +0.2**
VLC	**Villacollemand**	**2.53 307**	AML	AML	
	comp=E,238μm,1.3s				
VLC			AML	AML	
	comp=E,220μm,1.3s				
VLC			AML	AML	
	comp=N,206μm,1.6s				
VLC			AML	AML	
	comp=N,222μm,1.6s				
GSCL	**Gusciola**	**2.54 313**		**Pn**	**23 22 49.5 +1.4**
GSCL	**Gusciola**	**2.54 313**	P	**Pn**	**23 22 48.8 +0.7**
GSCL			AML	AML	
	comp=E,468μm,1.1s				
GSCL			AML	AML	
	comp=N,388μm,0.9s				
UDBI	**Udbina**	**2.65 44**	*e*Pn	**Pn**	**23 22 50.0 +0.4**
PALZ	**Palazzo San Ge**	**2.69 129**	P	**Pn**	**23 22 48.6 -1.5**
PALZ			AML	AML	
	comp=N,2160μm,1.3s				
PALZ			AML	AML	
	comp=E,2170μm,1.1s				
KIJV	**Kijevo**	**2.71 59**	*i* Pn	**Pn**	**23 22 50.8 +0.4**
LSTV	**Lastovo**	**2.73 86**	*e*Pn	**Pn**	**23 22 50.1 -0.6**
RIY	**Rijeka**	**2.83 19**	*e*Pn	**Pn**	**23 22 51.5 -0.5**
PLIT	**Plitvice**	**2.84 38**	*e*Pn	**Pn**	**23 22 51.9 -0.3**
MAKA	**Makarska**	**2.88 76**	*e*Pn	**Pn**	**23 22 52.4 -0.4**
TEOL	**Teolo**	**2.92 338**	Pn	**Pn**	**23 22 53.1 -0.2**
SMPL	**Sampolo**	**2.94 260**	P	**Pn**	**23 22 53.1 -0.6**
SMPL	**Sampolo**	**2.94 260**	P	**Pn**	**23 22 53.3 -0.4**
SMPL			AML	AML	
	comp=E,44μm,0.6s				
SMPL			AML	AML	
	comp=N,87μm,0.8s				
SKDS	**Skadanscina**	**2.95 11**	⇑*i*Pn	**Pn**	**23 22 52.5 -1.3**
PRMA	**PARMA**	**2.96 316**		**Pn**	**23 22 53.5 -0.4**
RICI	**Ricice**	**3.01 73**	*e*Pn	**Pn**	**23 22 54.7 +0.1**
A050A	**Klekovaca**	**3.04 52**	*e*Pn	**Pn**	**23 22 55.6 +0.5**
TRI	**Trieste**	**3.08 8**		**Pn**	**23 22 54.6 -0.9**
PGF	**Pioggiola**	**3.09 269**	*e*P	**Pn**	**23 22 56.7 +0.9**
PGF			*e*Sn	**Sn**	**23 23 28.8 -4.0**
	comp=N,117nm,1.1s				
PGF	**Pioggiola**	**3.09 269**	P	**Pn**	**23 22 56.1 +0.3**
AMUR	**Altamura**	**3.10 123**	P	**Pn**	**23 22 55.9 +0.1**
AMUR			AML	AML	
	comp=N,608μm,0.5s				
AMUR			AML	AML	
	comp=E,746μm,0.5s				
MSSA	**Maissana**	**3.14 303**		**Pn**	**23 22 56.5 +0.1**
CEY	**Cerknica**	**3.21 16**	⇑*i*Pn	**Pn**	**23 22 58.0 +0.7**
BOJS	**Bojanci**	**3.21 27**	*e*Pn	**Pn**	**23 22 58.3 +1.0**
BOJS	**Bojanci**	**3.21 27**	P	**Pn**	**23 22 56.8 -0.5**
SRKY	**Kupres RS**	**3.23 63**	⇑*i*Pn	**Pn**	**23 22 58.7 +1.1**
MATE	**Matera**	**3.31 126**	⇑P	**Pn**	**23 22 59.4 +0.8**
MATE			⇑S	**Sn**	**23 23 39.0 +1.0**
CUC	**Castrocucco**	**3.32 142**	Pn	**Pn**	**23 23 00.5 +1.6**
A251A	**Rujevac**	**3.33 41**	*e*Pn	**Pn**	**23 22 58.9 0.0**
STON	**Ston**	**3.33 85**		**Pn**	**23 22 57.9 -1.1**
STON	**Ston**	**3.33 85**	*e*Pn	**Pn**	**23 22 57.2 -1.7**
STON	**Ston**	**3.33 85**	*e*Pn	**Pn**	**23 22 57.5 -1.4**
STON	**Ston**	**3.33 85**	*e*Pn	**Pn**	**23 22 57.8 -1.1**
STON			*e*Sn	**Sn**	**23 23 37.2 -1.2**
STON	**Ston**	**3.33 85**	P	**Pn**	**23 22 57.9 -1.1**
STON			AML	AML	
	comp=E,270μm,1.0s				
STON			AML	AML	
	comp=N,261μm,1.1s				
MGRS	**Mrkonjic Grad**	**3.34 57**	⇑*i*Pn	**Pn**	**23 23 00.7 +1.6**
SABO	**M.te Sabotino**	**3.34 5**		**Pn**	**23 22 58.6 -0.5**
SABO	**M.te Sabotino**	**3.34 5**	P	**Pn**	**23 22 58.5 -0.6**
SABO			AML	AML	
	comp=E,403μm,0.8s				
SABO			AML	AML	
	comp=N,2075μm,0.9s				
SABO			AML	AML	
	comp=N,560μm,0.9s				
SABO			AML	AML	
	comp=E,1800μm,0.7s				
AJAC	**Base Areonaval**	**3.36 259**	P	**Pn**	**23 23 00.1 +0.8**
AJAC	**Base Areonaval**	**3.36 259**	P	**Pn**	**23 22 59.9 +0.6**
AJAC			AML	AML	
	comp=E,152μm,0.3s				
AJAC			AML	AML	
	comp=N,218μm,0.7s				
CGRP	**Cima Grappa**	**3.37 343**	P	**Pn**	**23 22 59.2 -0.5**
CGRP			AML	AML	
	comp=E,557μm,1.1s				
CGRP			AML	AML	
	comp=N,386μm,0.8s				
OZLJ	**Ozalj**	**3.38 28**	*e*Pn	**Pn**	**23 22 59.6 -0.1**
PRIJ	**Prijedor**	**3.45 47**	*e*Pn	**Pg**	**23 23 14.4 +1.3**
NOCI	**Noci**	**3.45 121**	P	**Pn**	**23 23 01.2 +0.5**
NOCI			AML	AML	
	comp=E,419μm,1.4s				
NOCI			AML	AML	
	comp=N,646μm,1.0s				
LJU	**Ljubljana**	**3.52 15**	AML	AML	
	comp=N,1725μm,1.1s				
LJU			AML	AML	
	comp=E,1605μm,0.8s				
SALO	**Salr**	**3.53 328**		**Pn**	**23 23 02.0 +0.3**
SALO	**Salr**	**3.53 328**	P	**Pn**	**23 23 02.8 +1.1**
SALO			AML	AML	
	comp=N,402μm,1.1s				
SALO			AML	AML	
	comp=E,317μm,1.6s				
DOSS	**Dosso del Somm**	**3.53 337**	P	**Pn**	**23 23 01.5 -0.3**
DOSS			AML	AML	
	comp=E,270μm,1.2s				
DOSS			AML	AML	
	comp=N,228μm,0.8s				
DOSS			AML	AML	
	comp=E,269μm,1.2s				
DOSS			AML	AML	
	comp=N,246μm,0.9s				
DOSS			AML	AML	
	comp=E,220μm,0.8s				
CRES	**Cresnjev**	**3.56 26**	*e*Pn	**Pn**	**23 23 04.4 +2.2**
BLY	**Banja Luka**	**3.57 53**	*e*Pn	**Pn**	**23 23 01.9 -0.4**
BLY	**Banja Luka**	**3.57 53**	*e*Pn	**Pn**	**23 23 03.5 +1.2**
A051A	**Mrakovica**	**3.58 48**	*e*Pn	**Pn**	**23 23 03.2 +0.8**
STAL	**STALIGIAL**	**3.62 355**		**Pn**	**23 23 03.1 +0.1**
STAL	**STALIGIAL**	**3.62 355**	P	**Pn**	**23 23 02.6 -0.4**
STAL			AML	AML	
	comp=E,266μm,0.9s				
STAL			AML	AML	
	comp=E,344μm,0.9s				

STAL AML AML
comp=N,332µm,0.8s
STAL AML AML
comp=N,230µm,0.9s
MAGA Magasa 3.62 330 P **Pn** 23 23 03.0 0.0
MAGA AML AML
comp=E,742µm,0.5s
MAGA AML AML
comp=N,490µm,0.5s
DBRK Dubrovnik 3.66 88 *e*Pn **Pn** 23 23 02.3 -1.2
LUSI Trento, Gardas 3.67 335 P **Pn** 23 23 03.5 -0.3
LUSI AML AML
comp=N,278µm,1.4s
LUSI AML AML
comp=E,198µm,1.1s
CIMO Cimolais 3.69 352 **Pn** 23 23 03.7 -0.3
CIMO Cimolais 3.69 352 P **Pn** 23 23 03.7 -0.3
GAGG Gaggia 3.78 336 P **Pn** 23 23 05.9 +0.6
GAGG AML AML
comp=N,213µm,0.9s
GAGG AML AML
comp=E,372µm,0.8s
PRED Cave del Predi 3.80 4 **Pn** 23 23 05.7 +0.2
CLUD Cludinico 3.81 357 Pn **Pn** 23 23 05.6 +0.1
CLUD Cludinico 3.81 357 P **Pn** 23 23 05.6 +0.1
CLUD AML AML
comp=N,176µm,1.2s
CLUD AML AML
comp=E,207µm,0.9s
ZONE Zone 3.81 326 AML AML
comp=E,175µm,1.5s
ZONE AML AML
comp=E,148µm,0.8s
ZONE AML AML
comp=N,202µm,1.0s
ZONE AML AML
comp=N,229µm,0.7s
ACOM Acomizza, Ital 3.90 3 P **Pn** 23 23 07.1 +0.2
ACOM AML AML
comp=N,330µm,0.7s
ACOM AML AML
comp=E,404µm,0.9s
ACOM AML AML
comp=N,350µm,0.7s
ACOM AML AML
comp=E,384µm,0.9s
MABI Malga Bissina 3.90 331 AML AML
comp=E,92µm,1.2s
MABI AML AML
comp=N,76µm,0.9s
ZOU Zoufplan 3.90 358 P **Pn** 23 23 06.8 -0.2
ZOU AML AML
comp=E,265µm,1.2s
ZOU AML AML
comp=N,248µm,1.1s
ZOU AML AML
comp=E,292µm,1.2s
ZOU AML AML
comp=N,240µm,1.2s
MOSL Moslavina 3.92 40 *e*Pn **Pn** 23 23 06.0 -1.0
HCY Herceg Novi 3.93 91 *e*Pn **Pn** 23 23 07.1 -0.1
HCY Herceg Novi 3.93 91 ⇑*i*Pn **Pn** 23 23 07.2 0.0
HCY *i* Sn **Sn** 23 23 53.9 +0.7
BRY Bratogost 3.95 85 *e*Pn **Pn** 23 23 07.4 -0.2
BRY Bratogost 3.95 85 ⇓*i*Pn **Pn** 23 23 07.9 +0.3
BRY *i* Sn **Sn** 23 23 54.8 +0.9
A052A Srbac 3.97 51 *e*Pn **Pn** 23 23 06.5 -1.2
OBKA Obir 3.97 14 ⇑*i*Pn **Pn** 23 23 07.4 -0.5
OBKA Obir 3.97 14 *e*Pn **Pn** 23 23 08.2 +0.3
comp=N,1.2nm,0.1s
MYKA Terra Mystica 3.99 5 Pn **Pn** 23 23 09.5 +1.5
comp=N,10nm,0.5s,SNR=12
KOSI Kohlern 4.02 342 P **Pn** 23 23 09.4 +0.8
APPI Appiano 4.07 341 P **Pn** 23 23 10.2 +1.0
APPI AML AML
comp=N,181µm,0.4s
APPI AML AML
comp=E,204µm,0.5s
ABTA Abfaltersbach 4.12 354 Pn **Pn** 23 23 10.5 +0.6
comp=E,10nm,0.4s,SNR=29
DOB Doboj 4.12 58 *e*Pn **Pn** 23 23 08.9 -1.0
ROTM Rocchetta Tana 4.13 304 AML AML
comp=N,400µm,1.2s
ROTM AML AML
comp=E,290µm,1.6s
PIPA Pietrapaola 4.19 138 AML AML
comp=E,102µm,1.0s
PIPA AML AML
comp=N,104µm,1.4s
SOKA Soboth 4.23 18 Pn **Pn** 23 23 13.0 +1.6
comp=N,1.5nm,0.2s,SNR=12
CEME Cevo 4.23 90 ⇑*i*Pn **Pn** 23 23 12.0 +0.6
CEME *e*Sn **Sn** 23 24 01.4 +0.6
UPM Unac-Piva 4.24 81 *e*Pn **Pn** 23 23 12.4 +0.8
UPM Unac-Piva 4.24 81 ⇓*i*Pn **Pn** 23 23 11.2 -0.4
UPM *i* Sn **Sn** 23 24 01.7 +0.7
BUM Brajici-Budva 4.24 93 ⇑*i*Pn **Pn** 23 23 12.1 +0.6
BUM *e*Sn **Sn** 23 24 01.3 +0.4
VSL Villasalto 4.27 224 P **Pn** 23 23 12.3 +0.4
VSL AML AML
VSL AML AML
A252A Venje 4.36 49 *e*Pn **Pn** 23 23 12.3 -0.8
RISI Rein 4.36 350 AML AML
comp=E,330µm,0.6s
RISI AML AML
comp=N,332µm,0.6s
SBF Sospel 4.37 288 *e*P **Pn** 23 23 13.5 +0.2
SBF *e*Sn **Sn** 23 24 07.2 +3.0
comp=N,30nm,0.8s
ESCA l'Escarene 4.41 287 P **Pn** 23 23 15.3 +1.5
KBA Koelnbreinsper 4.42 1 *i* Pn **Pn** 23 23 16.3 +2.2
comp=N,10nm,0.4s,SNR=15
TURF col de Turini 4.43 289 P **Pn** 23 23 14.7 +0.4
ROSI Rosskopf 4.45 344 AML AML
comp=N,326µm,0.5s
ROSI AML AML
comp=E,276µm,0.6s
DRME Dracevica, Mon 4.46 94 ⇑*i*Pn **Pn** 23 23 15.0 +0.4
DRME Dracevica, Mon 4.46 94 ⇑*i*Pn **Pn** 23 23 15.2 +0.6
DRME *i* Sn **Sn** 23 24 06.9 +0.4
FUORN Ofenpass-Fuorn 4.48 333 **Pn** 23 23 15.1 +0.1
PDG Podgorica 4.49 91 ⇑⇑P **Pn** 23 23 15.6 +0.7
PDG ⇑⇑S **Sn** 23 24 04.5 -2.5
PDG Podgorica 4.49 91 Pn **Pn** 23 23 15.4 +0.5
PDG Podgorica 4.49 91 *e*Pn **Pn** 23 23 15.6 +0.7
PDG *e*Sn **Sn** 23 24 08.5 +1.5
PDG Podgorica 4.49 91 P **Pn** 23 23 15.4 +0.5
PDG AML AML
comp=E,209µm,0.9s
PDG AML AML
comp=N,262µm,0.6s
PDG AML AML
comp=N,326µm,0.6s
PDG AML AML
comp=E,272µm,0.9s
TTG Podgorica 4.49 91 ⇓*i*Pn **Pn** 23 23 15.1 +0.2
TTG *i* Sn **Sn** 23 24 07.3 +0.3
ULC Ulcinj 4.55 97 ⇑*i*Pn **Pn** 23 23 16.2 +0.5
ULC *i* Sn **Sn** 23 24 08.5 0.0
SPIF crte de Spivo 4.56 290 P **Pn** 23 23 17.4 +1.5
MVIF Mont Vial 4.58 288 P **Pn** 23 23 17.2 +1.0
PLE Pljevlja 4.60 79 ⇑*i*Pn **Pn** 23 23 17.0 +0.5
PLE *i* Sn **Sn** 23 24 10.2 +0.3
RUDO Rudo 4.63 76 *e*Pn **Pn** 23 23 16.8 0.0
KOME Kolasin 4.67 85 ⇓*i*Pn **Pn** 23 23 18.4 +1.0
KOME *i* Sn **Sn** 23 24 12.2 +0.7
BBLS Lazići 4.70 73 *e*Pn **Pn** 23 23 19.1 +1.2
FETA Feichten 4.70 339 *i* Pn **Pn** 23 23 20.0 +2.1
comp=E,9.6nm,0.6s,SNR=18
CALF Calern 4.71 286 P **Pn** 23 23 18.4 +0.4
ISO Isola 4.72 291 P **Pn** 23 23 20.1 +1.9
WTTA Wattenberg 4.74 347 *i* Pn **Pn** 23 23 20.7 +2.2
comp=E,9.7nm,0.6s,SNR=12
SCTE Santa Cesarea 4.74 121 Pn **Pn** 23 23 18.5 +0.2
DAVOX Davos/Dischmat 4.75 331 Pn **Pn** 23 23 20.5 +1.8
comp=E,1.9nm,0.3s,baz=160,slow=18,SNR=35
DAVOX Sn **Sn** 23 24 14.7 +1.0
comp=E,1.6nm,0.3s,baz=294,slow=20,SNR=2.6
comp=E,16nm,0.9s
SQTA Sankt Quirin 4.78 344 *i* Pn **Pn** 23 23 21.1 +2.2
comp=E,4.1nm,0.3s,SNR=11
WATA Walderalm 4.82 347 *i* Pn **Pn** 23 23 21.6 +2.1
comp=E,2.6nm,0.2s,SNR=13
ARSA Arzberg 4.88 19 *e*Pn **Pn** 23 23 19.7 -0.7
comp=E,2.3nm,0.4s

MOTA Moosalm 4.92 343 *e*Pn **Pn** 23 23 22.9 +2.0
comp=E,4.5nm,0.3s
KOVH Kovagotottos 4.92 44 P **Pn** 23 23 19.4 -1.3
KOVH S **Sn** 23 24 16.0 -1.6
IVA Berane 4.94 85 ⇑*i*Pn **Pn** 23 23 21.8 +0.6
IVA *i* Sn **Sn** 23 24 18.5 +0.2
LMR La Mourre 4.94 280 *e*P **Pn** 23 23 20.8 -0.3
LMR *e*Sn **Sn** 23 24 12.8 -5.4
comp=E,3.0nm,0.4s
PVY Plav 5.00 88 ⇑*i*Pn **Pn** 23 23 22.4 +0.4
PVY *i* Sn **Sn** 23 24 19.8 0.0
SJES Sjenica 5.02 81 *e*Pn **Pn** 23 23 23.4 +1.1
SJES *e*Sn **Sn** 23 24 21.5 +1.3
BIOA Bad Ischl, Aus 5.04 3 *i* Pn **Pn** 23 23 24.9 +2.4
comp=E,6.7nm,0.3s,SNR=15
TRIGF Trigance 5.07 285 P **Pn** 23 23 23.9 +0.8
MBDF Montbardon 5.09 296 *e*P **Pn** 23 23 25.0 +1.7
MBDF *e*Sn **Sn** 23 24 16.5 -5.6
comp=E,22nm,0.7s
RETA Reutte 5.13 341 *e*Pn **Pn** 23 23 25.9 +2.2
comp=E,2.0nm,0.4s
FLAF Flassans-sur-I 5.13 280 P **Pn** 23 23 24.0 +0.2
TIR Tirane 5.14 102 ⇑⇑P **Pn** 23 23 24.4 +0.5
TIR ⇑⇑S **Sn** 23 24 21.2 -2.0
TIR Tirane 5.14 102 P **Pn** 23 23 24.3 +0.4
TIR Tirane 5.14 102 Pn **Pn** 23 23 24.3 +0.4
TIR Tirane 5.14 102 *e*Pn **Pn** 23 23 24.4 +0.5
TIR *e*Sn **Sn** 23 24 21.4 -1.8
OGAG Argentiere 5.15 293 P Pn 23 23 29.7 +5.6
DIVS Divibare 5.17 71 Pn **Pn** 23 23 24.5 +0.3
DIVS Divibare 5.17 71 *e*Pn **Pn** 23 23 23.5 -0.8
DIVS Divibare 5.17 71 *e*Pn **Pn** 23 23 24.9 +0.6
DIVS *e*Sn **Sn** 23 24 24.4 +0.6
IVAS Ivanjica 5.18 77 *e*Pn **Pn** 23 23 24.8 +0.3
IVAS *e*Sn **Sn** 23 24 24.3 +0.1
DAVA Damuels 5.19 334 *i* Pn **Pn** 23 23 26.6 +2.0
comp=E,2.8nm,0.5s,SNR=8.0
VLO Vlora 5.21 113 Pn **Pn** 23 23 25.4 +0.6
OGDI Digne 5.22 288 P **Pn** 23 23 28.9 +3.8
MOA Molln 5.25 8 *e*Pn **Pn** 23 23 26.7 +1.3
MOA *e*Sn **Sn** 23 24 26.4 +0.6
MOA Molln 5.25 8 *i* Pn **Pn** 23 23 26.4 +1.1
comp=E,7.0nm,0.6s,SNR=11
VAE Valguarnera 5.26 169 Pn Pb 23 23 33.4 -5.6
comp=E,0.2nm,0.3s,baz=6.6,slow=16,SNR=2.3
BNI Bardonecchia 5.28 299 Pn **Pn** 23 23 26.2 +0.3
MORH Mrgy, Hungar 5.28 46 ⇑P **Pn** 23 23 27.3 +1.5
MORH Mrgy, Hungar 5.28 46 *e*Pn **Pn** 23 23 24.6 -1.2
MORH Mrgy, Hungar 5.28 46 P **Pn** 23 23 28.6 +2.8
BLAF les Blancs 5.37 286 P **Pn** 23 23 29.2 +2.1
DIX Grande Dixence 5.37 312 P **Pn** 23 23 28.0 +0.7
DIX Grande Dixence 5.37 312 S **Sn** 23 24 31.3 +2.1
FRGS Fruska Gora 5.40 60 ⇑P **Pn** 23 23 25.6 -1.8
FRGS Fruska Gora 5.40 60 *e*Pn **Pn** 23 23 24.9 -2.5
FRGS Fruska Gora 5.40 60 *e*Pn **Pn** 23 23 26.9 -0.5
LPG La Plagne 5.44 304 *e*P **Pn** 23 23 30.4 +2.2
LPG *e*Sn **Sn** 23 24 24.9 -5.9
comp=E,23nm,0.8s
LPL La Plagne 5.46 304 *e*P **Pn** 23 23 30.8 +2.4
LPL *e*Sn **Sn** 23 24 25.4 -5.8
comp=E,5.9nm,0.4s
MPLH Magyarpolny 5.47 33 P **Pn** 23 23 30.0 +1.7
PHP Peshkopia 5.48 98 P **Pn** 23 23 29.3 +0.8
ARTF Artigues 5.48 282 P **Pn** 23 23 29.6 +1.0
TRUS Trudelj 5.49 71 *e*Pn **Pn** 23 23 28.8 +0.2
RONA Rosalia, Austr 5.50 22 *i* Pn **Pn** 23 23 28.6 -0.2
comp=E,7.3nm,0.4s,SNR=7.4
CONA Conrad Observa 5.60 19 *i* Pn **Pn** 23 23 30.0 -0.2
comp=E,11nm,0.5s,SNR=11
RSL Roselend 5.61 305 P **Pn** 23 23 32.9 +2.5
SENIN Lac Senin/Sane 5.61 313 Pn **Pn** 23 23 31.4 +0.9
GRUS Gruza 5.63 75 *e*Pn **Pn** 23 23 30.9 +0.3
GRUS *e*Sn **Sn** 23 24 36.0 +0.8
BSTF la Bastide-des 5.64 285 P **Pn** 23 23 32.2 +1.5
SMRF Simiane la Rot 5.71 286 *e*P **Pn** 23 23 33.5 +1.8
SMRF *e*Sn **Sn** 23 24 31.0 -6.1
comp=E,3.7nm,0.6s
ORIF Oris-en-Rattie 5.75 296 *e*P **Pn** 23 23 35.4 +3.1
ORIF *e*Sn **Sn** 23 24 32.4 -5.9
comp=E,7.3nm,0.6s
ORIF Oris-en-Rattie 5.75 296 P **Pn** 23 23 35.5 +3.1
RUSF Rustrel 5.77 285 P **Pn** 23 23 34.3 +1.9
AIGLE Aigle 5.78 312 P **Pn** 23 23 35.2 +2.5
KEK Kerkira 5.79 118 P **Pn** 23 23 33.5 +0.7
KEK Kerkira 5.79 118 **Pn** 23 23 33.5 +0.7
ARBF Arbois 5.81 281 P **Pn** 23 23 34.4 +1.3
SRN Sarande 5.83 116 P **Pn** 23 23 34.1 +0.7
SELS Selova 5.85 82 *e*Pn **Pn** 23 23 33.5 -0.1
SELS *e*Sn **Sn** 23 24 40.0 -0.6
OHR Ohrid 5.89 103 *i* Pn **Pn** 23 23 35.5 +1.3
KBN Korca 6.05 107 P **Pn** 23 23 37.2 +0.8
KBN Korca 6.05 107 Pn **Pn** 23 23 37.0 +0.6
LSK Leskovik 6.11 112 P **Pn** 23 23 39.0 +1.7
SKP Skopje 6.11 94 *i* Pn **Pn** 23 23 38.6 +1.1
ZST Bratislava 6.19 25 *e*PN **Pn** 23 23 39.8 +1.6
GEC2 GERESS Array S 6.20 3 Pn **Pn** 23 23 39.2 +0.7
GERES GERESS Array B 6.20 3 Pn **Pn** 23 23 38.2 -0.3
comp=E,0.3nm,0.3s,baz=186,slow=12,SNR=12
GERES Sn **Sn** 23 24 48.7 -0.6
comp=E,2.0nm,0.3s,baz=170,slow=23,SNR=7.7
GERES LR LR 23 26 32.6
comp=E,140nm,20.8s,baz=212,slow=44
comp=E,1.2nm,0.5s
GERES GERESS Array B 6.20 3 *e*Pn **Pn** 23 23 39.5 +1.0
CKRC Cesky Krumlov 6.21 7 *e*PN **Pn** 23 23 39.1 +0.5
CKRC *e*SN **Sn** 23 24 48.1 -1.5
BOVS Bovan 6.31 78 ⇑P **Pn** 23 23 39.4 -0.4
BOVS ⇓S **Sn** 23 24 49.3 -2.5
BOVS Bovan 6.31 78 *e*Pn **Pn** 23 23 39.7 -0.2
NEST Nestorio 6.31 108 P **Pn** 23 23 41.9 +1.9
BOURR Bourrignon 6.34 320 P **Pn** 23 23 41.1 +0.7
BARS Barje 6.36 86 *e*Pn **Pn** 23 23 40.8 +0.2
BARS *e*Sn **Sn** 23 24 51.5 -1.6
FELD Feldberg im Sc 6.37 327 P **Pn** 23 23 40.4 -0.5
MODS Modra-Piesok 6.40 25 *e*PN **Pn** 23 23 42.3 +1.2
MODS *e*SN **Sn** 23 24 48.6 -5.5
MODS *e*Lg 23 24 56.9
MODS Modra-Piesok 6.40 25 *e*SG **Sg** 23 25 28.9 -3.4
BRANT Les Verrieres 6.41 314 S **Sn** 23 24 52.2 -2.3
BRANT Les Verrieres 6.41 314 P **Pn** 23 23 42.6 +1.2
CABF La Chapelle 6.42 310 *e*P **Pn** 23 23 43.8 +2.3
OG35 Corcelles 6.42 304 P **Pn** 23 23 43.3 +1.8
KIZ Kirchzarten 6.47 327 P **Pn** 23 23 42.2 +0.1
KHC Kasperske Hory 6.48 2 **Pn** 23 23 42.2 0.0
KHC Kasperske Hory 6.48 2 *e*PN **Pn** 23 23 42.3 0.0
KHC *ex* x 23 23 52.5
KHC *e*SN **Sn** 23 24 55.4 -0.8
JAN Janina 6.51 115 P **Pn** 23 23 42.7 0.0
CHMF Charmoille 6.52 317 P **Pn** 23 23 42.8 -0.1
MDVR Moldovita 6.53 68 ⇑P **Pn** 23 23 43.0 0.0
VIVF Saint-Julien-l 6.54 293 *e*P **Pn** 23 23 46.2 +3.0
VIVF *e*Sn **Sn** 23 24 51.2 -6.5
comp=E,4.2nm,0.7s
PRVS Prvonek 6.56 88 *e*Pn **Pn** 23 23 43.8 +0.4
PRVS *e*Sn **Sn** 23 24 57.4 -0.8
BFO Black Forest 6.62 331 Pn **Pn** 23 23 43.8 -0.4
VOGT Vogtsburg - To 6.67 326 P **Pn** 23 23 45.9 +1.0
ZAGS Zajecar 6.71 77 *e*Pn **Pn** 23 23 45.6 +0.2
BOUC Bouclans 6.72 315 P **Pn** 23 23 46.9 +1.3
BZS Buzias 6.75 61 ⇑P **Pn** 23 23 45.5 -0.4
BZS Buzias 6.75 61 *e*Pn **Pn** 23 23 45.2 -0.7
BZS *e*Sn **Sn** 23 25 00.2 -2.5
STIP Stip 6.76 95 *i* Pn **Pn** 23 23 48.3 +2.3
SSB Saint Sauveur 6.77 296 Pn **Pn** 23 23 47.3 +1.1
KRUC Moravsky 6.79 18 *e*PN **Pn** 23 23 46.0 -0.4
HINF Hinteralfeld 6.83 321 *e*P **Pn** 23 23 47.7 +0.7
HINF *e*Sn **Sn** 23 25 00.0 -4.6
comp=E,31nm,1.0s
TSLK Tsoukalades, L 6.84 122 P **Pn** 23 23 48.5 +1.3
BOSS Bosilegrad 6.86 88 *e*Pn **Pn** 23 23 47.6 +0.1
BOSS *e*Sn **Sn** 23 25 02.8 -2.8
LKD2 Lefkada island 6.86 122 P **Pn** 23 23 48.2 +0.6
LASF Ste Croix 6.95 285 *e*P **Pn** 23 23 49.6 +0.9
LASF *e*Sn **Sn** 23 25 00.8 -6.8
comp=E,3.4nm,0.9s
ZAPS Zavoj 6.96 82 *e*Pn **Pn** 23 23 49.4 +0.6
ZAPS *e*Sn **Sn** 23 25 07.1 -0.8
ECH Echery 6.99 325 Pn **Pn** 23 23 49.3 0.0
ECH Echery 6.99 325 P **Pn** 23 23 49.2 0.0
ECH S **Sn** 23 25 07.9 -0.8
BLKB Belogradchik 7.01 79 ⇑P **Pn** 23 23 49.8 +0.3

BLKB ⇑S **Sn** 23 25 06.3 -2.8
HERR Herculane 7.04 68 ⇑P **Pn** 23 23 50.3 +0.4
SIRR Siria 7.05 56 ⇑P **Pn** 23 23 49.8 -0.3
VYHS Vyhne 7.05 32 *e*PN **Pn** 23 23 53.4 +3.3
DJES Djerdap 7.06 70 ⇑P **Pn** 23 23 50.6 +0.4
VRAC Vranov 7.06 18 ⇑P **Pn** 23 23 52.6 +2.4
VRAC Vranov 7.06 18 Pn **Pn** 23 23 49.8 -0.5
comp=E,0.3nm,0.3s,baz=205,slow=12,SNR=5.1
VRAC LR LR 23 27 26.2
comp=E,101nm,20.0s,baz=214,slow=46
comp=E,2.3nm,0.7s
VRAC Vranov 7.06 18 *e*PN **Pn** 23 23 49.7 -0.5
WLS Welschbruch 7.06 327 P **Pn** 23 23 50.6 +0.3
WLS S **Sn** 23 25 09.4 -1.1
CDF Champ du Feu 7.09 326 *e*P **Pn** 23 23 50.5 -0.2
CDF *e*Sn **Sn** 23 25 09.3 -2.0
comp=E,40nm,1.0s
VAY Valandovo 7.12 98 *i* Pn **Pn** 23 23 51.9 +0.9
HAU Haudompre 7.20 320 *e*P **Pn** 23 23 52.2 +0.1
HAU *e*Sn **Sn** 23 25 09.0 -4.8
comp=E,33nm,0.7s
THL Klokotos Trika 7.35 112 P **Pn** 23 23 55.0 +0.9
KKB Krupnik 7.38 93 *e*P **Pn** 23 23 55.3 +0.6
PRU Pruhonice 7.39 7 *e*PN **Pn** 23 23 55.1 +0.4
PRU *e*SN **Sn** 23 25 15.6 -2.9
KNT Kendrikon 7.40 98 P **Pn** 23 23 55.0 +0.2
VTS Vitosha 7.41 87 ⇓P **Pn** 23 23 55.4 +0.3
VTS ⇑S **Sn** 23 25 17.2 -2.0
VTS Vitosha 7.41 87 Pn **Pn** 23 23 55.4 +0.3
VTS Vitosha 7.41 87 *e*Pn **Pn** 23 23 55.3 +0.1
VTS *e*Sn **Sn** 23 25 17.7 -1.5
VTS Vitosha 7.41 87 *e*P **Pn** 23 23 55.5 +0.3
GZR Gura Zlata 7.43 65 ⇓P **Pn** 23 23 55.5 +0.1
KEST Kesra 7.53 205 Pn **Pn** 23 24 00.8 +4.0
comp=E,1.7nm,0.3s,baz=320,slow=6.4,SNR=30
comp=E,6.2nm,0.5s
SJAF Saint Jean de 7.61 272 P **Pn** 23 23 57.0 -0.8
DEV Deva 7.68 62 ⇑P **Pn** 23 23 59.7 +0.9
MORC Moravsky Berou 7.74 21 ⇑P **Pn** 23 24 01.4 +2.0
MORC Moravsky Berou 7.74 21 Pn **Pn** 23 24 00.6 +1.1
MORC Moravsky Berou 7.74 21 *e*PN **Pn** 23 24 00.0 +0.5
SMF Signal de Mont 7.76 304 *e*P **Pn** 23 24 00.5 +0.6
ANX Ano Chora 7.78 119 P **Pn** 23 24 02.4 +2.2
KRLC Kraliky 7.83 17 *e*PN **Pn** 23 24 02.1 +1.4
FILF Fillols 7.84 273 P **Pn** 23 24 02.2 +1.2
EFP Efpalio 7.87 120 P **Pn** 23 24 03.3 +2.0
MMB Musomiste 7.91 94 *e*P **Pn** 23 24 03.1 +1.2
SRS Serrai 7.92 98 *e*Pn **Pn** 23 24 02.1 +0.1
SRS *e*Sn **Sn** 23 25 27.6 -3.8
DPC Dobruska-Polom 7.99 15 *e*PN **Pn** 23 24 04.1 +1.1
NVR Nevrokopi 8.06 96 P **Pn** 23 24 04.5 +0.6
LOR Lormes 8.06 308 *e*P **Pn** 23 24 06.3 +2.4
LOR *e*Sn **Sn** 23 25 27.4 -7.6
comp=E,3.0nm,0.4s
LOT Lotru 8.12 66 ⇑P **Pn** 23 24 05.6 +0.7
AVF Avril sur Loir 8.13 304 *e*P **Pn** 23 24 07.0 +2.2
SSF Saint Saulge 8.16 306 *e*P **Pn** 23 24 08.3 +3.0
SSF *e*Sn **Sn** 23 25 29.9 -7.6
comp=E,2.9nm,0.5s
OSTC Ostas 8.17 14 *e*PN **Pn** 23 24 07.2 +1.7
SAVF Savonnieres en 8.21 319 *e*P **Pn** 23 24 09.2 +3.3
MESR Meseseni 8.26 54 ⇓P **Pn** 23 24 07.3 +0.7
BGF Bois d'Agland 8.34 301 *e*P **Pn** 23 24 09.9 +2.1
CAF Calviac 8.36 290 *e*P **Pn** 23 24 10.7 +2.6
PLD Plovdiv 8.54 90 *e*Pn **Pn** 23 24 11.6 +1.0
RZN Rozhen 8.62 93 *e*P **Pn** 23 24 13.2 +1.4
CLL Collm 8.66 359 Pn **Pn** 23 24 12.2 +0.1
CLL Collm 8.66 359 *e*Pn **Pn** 23 24 13.0 +1.0
CLL *e*Pg **Pg** 23 24 48.0 -4.6
CLL *ex* x 23 25 17.0
CLL *e*Sn Sn 23 25 30.0 -20
CLL *ex* x 23 25 42.0
CLL *ex* x 23 25 51.0
CLL *ex* x 23 25 56.0
CLL *ex* x 23 25 58.0
CLL *ex* x 23 26 15.0
CLL *e*Sg **Sg** 23 26 37.0 -7.6
comp=Z,33nm,1.5s
CLL *ex* x 23 26 48.0
CLL Lm MLR 23 27 00.0
comp=Z,200nm,18.1s
CLL Lmax 23 27 00.0
ITM Ithomi 8.66 126 Pn **Pn** 23 24 12.9 +0.8
ARR Arges 8.68 68 ⇑P **Pn** 23 24 12.9 +0.3
RJF Les Rejaudoux 8.82 291 *e*P **Pn** 23 24 18.2 +3.8
MONQ Montcuq 8.88 285 P **Pn** 23 24 16.9 +1.7
VOIR 8.98 68 ⇑P **Pn** 23 24 17.3 +0.7
DIM Dimitrovgrad 9.16 90 *e*P **Pn** 23 24 20.1 +1.1
RDO Rodhopi 9.34 95 Pn **Pn** 23 24 21.7 +0.3
SGRR Singureni 9.44 76 ⇑P **Pn** 23 24 23.1 +0.3
SECR 9.61 71 ⇑P **Pn** 23 24 25.2 +0.1
MLR Muntele Rosu 9.61 69 ⇑P **Pn** 23 24 25.6 +0.3
MLR Muntele Rosu 9.61 69 Pn **Pn** 23 24 26.5 +1.2
comp=Z,0.2nm,0.3s,baz=130,slow=18,SNR=6.7
MLR LR LR 23 28 56.9
comp=Z,167nm,18.6s,baz=279,slow=43
comp=Z,4.3nm,0.7s
ALN Alexandroupoli 9.77 96 Pn **Pn** 23 24 27.9 +0.5
RAZG Razgrad 9.79 80 ⇑P **Pn** 23 24 27.3 -0.3
BURAR Bucovina Array 9.84 56 ⇑P **Pn** 23 24 29.2 +0.9
BUR08 Bucovina Ar. S 9.84 55 Pn **Pn** 23 24 29.2 +0.8
BIZ Bicaz 10.13 61 ⇑P **Pn** 23 24 33.1 +0.8
VRI Vrincioaia 10.23 67 ⇑P **Pn** 23 24 33.9 +0.2
IDI Anoyia 11.70 125 Pn **Pn** 23 24 55.6 +1.7
comp=Z,0.4nm,0.3s,baz=315,slow=11,SNR=1.7
IDI Sn **Sn** 23 26 57.5 -7.0
comp=Z,0.6nm,0.3s,baz=198,slow=20,SNR=2.1
IDI LR LR 23 30 07.9
comp=Z,38nm,20.7s,baz=261,slow=41
comp=Z,3.9nm,0.7s
IDI Anoyia 11.70 125 Pn **Pn** 23 24 54.4 +0.5
ESDC Sonseca Array 13.26 263 Pn **Pn** 23 25 15.5 +0.3
baz=65,slow=13,SNR=5.5
ESDC LR LR 23 30 21.3
comp=Z,134nm,18.1s,baz=84,slow=37
comp=Z,0.5nm,0.7s
AKASG Malin Array Be 13.62 48 LR LR 23 31 03.1
comp=Z,50nm,21.2s,baz=246,slow=40
BRTR Keskin Array B 15.67 94 LR LR 23 31 41.4
comp=Z,76nm,21.2s,baz=307,slow=37
EKA Eskdalemuir Ar 16.56 326 Pn **Pn** 23 25 59.6 +0.8
baz=139,slow=13
comp=Z,0.9nm,0.9s
MDT Midelt 17.13 241 LR LR 23 31 29.8
comp=Z,56nm,19.4s,baz=80,slow=33
HFS Hagfors 17.50 1 LR LR 23 33 30.3
comp=Z,58nm,18.6s,baz=182,slow=39
NC602 NORSAR Array S 18.13 357 **Pn** 23 26 18.6 0.0
NC602 IAmb IAmb 23 26 22.0
comp=Z,19nm,1.4s
NB2 NORSAR Subarra 18.45 357 P **P** 23 26 22.2 -0.2
comp=Z,3.8nm,0.9s,baz=175,slow=11
NOA NORSAR Array B 18.45 357 P **Pn** 23 26 22.6 +0.2
comp=Z,1.4nm,0.8s,baz=175,slow=11,SNR=8.0
NOA LR LR 23 34 28.6
comp=Z,57nm,18.0s,baz=175,slow=40
MMAI Mount Meron Ar 19.96 111 P **Pn** 23 26 42.4 +1.6
comp=Z,0.2nm,0.3s,baz=314,slow=13,SNR=3.1
comp=Z,2.5nm,0.8s
FINES FINESS Array B 20.34 18 P **P** 23 26 44.1 +1.1
comp=Z,6.1nm,1.0s,baz=210,slow=6.6,SNR=8.8
FINES LR LR 23 35 29.4
comp=Z,97nm,18.1s,baz=210,slow=40
comp=Z,6.1nm,1.0s
FINES FINESS Array B 20.34 18 P **P** 23 26 43.4 +0.4
FIA1 FINESS Array S 20.35 18 P **P** 23 26 43.6 +0.6
FIA1 IAmb IAmb 23 26 49.6
comp=Z,8.0nm,0.9s
KOPT Kop Dagi 20.64 88 P **P** 23 26 46.5 -0.3
KOPT IAmb IAmb 23 27 07.6
comp=Z,14nm,1.4s
TAM Tamanrasset 20.81 200 P **P** 23 26 47.3 -1.3
KIV Kislovodsk 21.46 76 P **P** 23 26 55.0 -0.4
KBZ Khabaz 21.64 77 P **P** 23 26 58.7 +1.6
comp=Z,2.7nm,0.8s,baz=287,slow=6.6,SNR=5.4
comp=Z,2.7nm,0.8s
MARD Mardin 21.76 95 P **P** 23 26 58.0 -0.6
MARD IAmb IAmb 23 27 10.2
comp=Z,9.1nm,1.1s
BELG Belogornoye 25.00 55 P **P** 23 27 31.6 +1.1
comp=Z,11nm,0.8s,baz=259,slow=6.4,SNR=6.1
comp=Z,11nm,0.8s
TOA0 Torodi Ar. Sit 31.04 202 P **P** 23 28 25.1 +0.3
TORD Torodi Ar. Bea 31.04 202 P **P** 23 28 25.5 +0.7

comp=Z,1.6nm,0.3s,baz=22,slow=8.6,SNR=1.9
comp=Z,1.6nm,0.3s
AKTO Aktyubinsk 31.39 60 LR LR 23 43 06.5
comp=Z,24nm,18.7s,baz=344,slow=40
KOWA Kowa 31.74 213 LR LR 23 41 49.0
comp=Z,43nm,18.0s,baz=80,slow=37
ARU Arti 31.87 48 LR LR 23 42 00.9
comp=Z,66nm,18.3s,baz=242,slow=38
ARU Arti 31.87 48 P **P** **23 28 32.0 +0.2**
BBTS Babate 37.83 231 LR LR 23 44 15.3
comp=Z,87nm,19.4s,baz=53,slow=35
DBIC Dimbokro 39.23 209 LR LR 23 46 40.3
comp=Z,58nm,19.2s,baz=22,slow=38
UOSS Minazif 39.40 103 P **P** **23 29 36.6 -0.1**
UOSS IAmb IAmb 23 29 40.9
comp=Z,12nm,1.3s
KKAR Karatay Array 41.29 69 P **P** **23 29 52.3 0.0**
KSH Kashi 46.46 72 P **P** **23 30 34.0 0.0**
KSH pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 47.00 50 P **P** **23 30 38.6 +0.8**
comp=Z,0.6nm,0.5s,baz=298,slow=9.6,SNR=2.1
ZALV LR LR 23 50 59.9
comp=Z,29nm,18.8s,baz=0.5,slow=37
comp=Z,0.6nm,0.5s
ZALV Zalesovo Beam 47.00 50 P **P** **23 30 37.6 -0.2**
MK31 Makanchi Array 47.83 60 P **P** **23 30 44.4 0.0**
MK31 IAmb IAmb 23 30 59.6
comp=Z,3.6nm,1.5s
MKAR Makanchi Array 47.83 60 P **P** **23 30 45.3 +0.9**
comp=Z,0.9nm,0.7s,baz=289,slow=5.2,SNR=9.4
MKAR LR LR 23 51 49.6
comp=Z,29nm,18.0s,baz=258,slow=37
comp=Z,0.9nm,0.7s
MKAR Makanchi Array 47.83 60 P **P** **23 30 44.8 +0.4**
FRB Frobisher Bay 49.32 325 LR LR 23 50 25.2
comp=Z,27nm,18.3s,baz=200,slow=34
SCHQ Schefferville 51.34 313 LR LR 23 51 53.8
comp=Z,36nm,18.0s,baz=101,slow=35
WMQ Urumqi 52.52 62 *eP* **P** **23 31 22.8 +2.7**
SONM Songino Array 61.90 50 P **P** **23 32 27.4 +1.0**
comp=Z,0.7nm,0.7s,baz=289,slow=9.1,SNR=6.6
comp=Z,0.7nm,0.7s
SADO Sadowa 63.09 307 LR LR 23 59 01.7
comp=Z,23nm,18.1s,baz=60,slow=35
MDP Montagnes des 58.87 257 LR LR 00 00 07.8
comp=Z,18nm,18.6s,baz=174,slow=33
IMAR Indian Mountai 71.22 354 P **P** **23 33 27.1 +1.6**
PZH PanZhiHua 71.56 71 P **P** **23 33 29.4 +1.1**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,5.4s
PDAR Pinedale Array 80.62 321 LR LR 00 09 20.6
comp=Z,32nm,18.9s,baz=338,slow=35
ELK Elko 84.80 323 LR LR 00 10 58.4
comp=Z,21nm,20.8s,baz=314,slow=35
ROSC El Rosal 84.92 272 LR LR 00 08 47.4
comp=Z,35nm,20.0s,baz=208,slow=33
PFO Pinyon Flats O 91.19 320 LR LR 00 16 29.7
comp=Z,11nm,18.8s,baz=182,slow=36

TRN ***24*** *23:44:26.2, 10˚.71N×62˚.58W, h102km, MD3.7*
FUNV ***24*** *23:44:27.9, 10˚.65N×62˚.53W, h84km, MW3.4*
ISC 24 23:44:25.1±1.3, 10˚.71N±0˚.05×62˚.58W±0˚.03, h113km±11km, n29, σ1§53/52, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
CRUV	**Carupano**	**0.64**	**267**	*eP*		**Pn**	**23 44 44.2**	**+1.0**
CRUV				*eS*		**Sn**	**23 44 53.5**	**-3.5**
TRN	**Trinidad (W)**	**1.16**	**93**	*eP*		**Pn**	**23 44 49.2**	**+1.0**
TRN	**Trinidad (W)**	**1.16**	**93**	*e*		**Pn**	**23 44 50.8**	**+2.6**
TRN				*eS*		**Sn**	**23 45 04.2**	**-1.5**
TPP	**Pointe-a-Pierr**	**1.18**	**109**	*eP*		**Pn**	**23 44 49.3**	**+0.9**
TPP				*eS*		**Sn**	**23 45 05.2**	**-0.9**
COAV	**Cumanacoa**	**1.34**	**246**	*eP*		**Pn**	**23 44 52.7**	**+2.4**
TBH	**Brigand Hill**	**1.51**	**98**	*eP*		**Pn**	**23 44 52.6**	**+0.4**
TBH				*eS*		**Sn**	**23 45 11.7**	**-1.1**
GRFF	**Grenada Fort F**	**1.57**	**32**	*eP*		**Pn**	**23 44 53.5**	**+0.6**
GRFF				*eS*		**Sn**	**23 45 13.6**	**-0.5**
CUMV	**Cumana_UDO**	**1.61**	**260**	*eP*		**Pn**	**23 44 55.6**	**+2.3**
CUMV				*eS*		**Sn**	**23 45 15.1**	**+0.2**
GRGR	**Grenville**	**1.68**	**33**	*eP*		**Pn**	**23 44 55.1**	**+0.8**
GRGR				*eS*		**Sn**	**23 45 15.9**	**-0.7**
TPR	**Prospect**	**1.84**	**75**	*eP*		**Pn**	**23 44 57.1**	**+0.9**
TPR				*eS*		**Sn**	**23 45 19.6**	**-0.4**
BOT	**Bacolet**	**1.89**	**76**	*eP*		**Pn**	**23 44 57.7**	**+0.9**
BOT				*eS*		**Sn**	**23 45 20.8**	**-0.2**
PCRV	**Puerto La Cruz**	**2.09**	**256**	*eP*		**Pn**	**23 45 01.1**	**+1.8**
PCRV				*eS*		**Sn**	**23 45 24.5**	**-1.1**
TOSP	**Speyside**	**2.10**	**74**	*eP*		**Pn**	**23 44 59.8**	**+0.4**
TOSP				*eS*		**Sn**	**23 45 24.4**	**-1.2**
GCMP	**Grenada, Carri**	**2.10**	**33**	*eP*		**Pn**	**23 45 00.6**	**+1.2**
GCMP				*eS*		**Sn**	**23 45 25.7**	**-0.1**
PRGV	**PARIAGUAN**	**2.81**	**227**	*eP*		**Pn**	**23 45 10.3**	**+1.6**
PRGV				*eS*		**Sn**	**23 45 40.1**	**-1.7**
SVB	**Belmont**	**2.86**	**27**	*eP*		**Pn**	**23 45 11.0**	**+1.6**
SVB				*eS*		**Sn**	**23 45 42.0**	**-1.6**
MCLT	**Moule a Chique**	**3.39**	**28**	*eP*		**Pn**	**23 45 16.3**	**0.0**
MCLT				*eS*		**Sn**	**23 45 54.3**	**-1.7**
BIRV	**Birongo**	**3.63**	**267**	*eP*		**Pn**	**23 45 21.5**	**+2.0**
BIRV				*eS*		**Sn**	**23 46 01.6**	**-0.1**
SLBI	**Saint Lucia, B**	**3.65**	**25**	*eP*		**Pn**	**23 45 20.8**	**+1.0**
SLBI				*eS*		**Sn**	**23 46 00.9**	**-1.3**
MERV	**Las Mercedes**	**3.93**	**249**	*eP*		**Pn**	**23 45 25.1**	**+1.5**
MERV				*eS*		**Sn**	**23 46 07.7**	**-1.3**
BIM	**Bigot**	**4.06**	**21**	*eP*		**Pn**	**23 45 27.0**	**+1.6**
BIM				*eS*		**Sn**	**23 46 10.7**	**-1.5**
MPOM	**Morne Pois Mar**	**4.08**	**24**	*eP*		**Pn**	**23 45 27.6**	**+2.0**
MPOM				*eS*		**Sn**	**23 46 10.9**	**-1.5**
TACV	**Tcata**	**4.41**	**263**	*eP*		**Pn**	**23 45 31.6**	**+1.6**
TACV				*eS*		**Sn**	**23 46 19.2**	**-1.2**
BENV	**Beln**	**4.99**	**262**	*eP*		**Pn**	**23 45 39.2**	**+1.3**
BENV				*eS*		**Sn**	**23 46 33.1**	**-1.4**
CACV	**CAICARA DEL OR**	**5.00**	**232**	*eP*		**Pn**	23 45 34.1	-3.9
CACV				*eS*		Sn	23 46 23.1	-12
BAUV	**El Baul**	**5.66**	**252**	*eP*		**Pn**	**23 45 47.3**	**+0.5**
BAUV	**El Baul**	**5.66**	**252**	*eS*		**Sn**	**23 46 48.2**	**-2.4**
BAUV	**El Baul**	**5.66**	**252**	*eP*		**Pn**	**23 45 47.5**	**+0.7**
BAUV				*eS*		**Sn**	**23 46 47.9**	**-2.7**
MAPV	**Macapo**	**5.84**	**262**	*eP*		**Pn**	**23 45 50.7**	**+1.3**
MAPV				*eS*		**Sn**	**23 46 52.6**	**-2.6**

SKHL ***24*** *23:47:34.5±0.4, 46˚.20N×150˚.70E, h149km±7km, mb5.5/5, msha5.8/3*
MOS ***24*** *23:47:36.0±1.2, 46˚.47N×150˚.24E, h149km, mb4.1/1, Error ellipse: s-maj=10.2km s-min=7.7km az=63.0*
JMA ***24*** *23:47:37.4±0.7, 46˚N±4˚×15˚1E±˚, h144km, MV4.4/14, KURILE ISLANDS REGION*
NEIC ***24*** *23:47:37.0±1.8, 46˚.5N±0˚.1×150˚.2E±0˚.1, h143km±8km, mb4.4/41, Error ellipse: s-maj=18.4km s-min=11.7km az=151.0*
IDC ***24*** *23:47:40.2±2.5, 46˚.64N×150˚.19E, h165km±22km, mb3.5/16, mbtmp4.1/20, MS2.4/1, Error ellipse: s-maj=17.1km s-min=11.1km az=149.0*
ISC 24 23:47:35.0±0.5, 46˚.10N±0˚.07×150˚.47E±0˚.06, h150km, n159, σ1§77/123, mb4.2/45, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
KUR	**Kuril'sk**	**2.02**	**245**	*c*	*i* P	**Pn**	**23 48 12.4**	**+2.1**
KUR				*eS*		**Sn**	**23 48 41.5**	**+4.1**
KUR				pmax	pmax			
	comp=Z,1μm,0.5s							
KUR				pmax	pmax			
	comp=N,279nm,0.4s							
KUR				pmax	pmax			
	comp=E,120nm,0.5s							
KUR				smax	smax			
	comp=N,565nm,0.3s							
KUR				smax	smax			
	comp=E,273nm,0.3s							
KUR	**Kuril'sk**	**2.02**	**245**	*i*	P	**Pn**	**23 48 12.4**	**+2.1**
KUR					AMB	AMB	23 48 13.0	
	comp=E,1μm,0.5s							
KUR				*eS*		**Sn**	**23 48 40.5**	**+3.1**
KUR				A		A	23 48 49.7	
	comp=E,570nm,0.3s							
KUR				A		A	23 48 49.7	
	comp=E,270nm,0.3s							

YUK	**Yuzh-Kuril'sk**	**3.86**	**239**	*e*	PN	**Pn**	**23 48 36.0**	**+2.6**
YUK				*eS*		**Sn**	**23 49 21.4**	**+2.7**
YUK				pmax	pmax			
	comp=Z,994nm,0.2s							
YUK				pmax	pmax			
	comp=N,311nm,0.3s							
YUK				pmax	pmax			
	comp=E,537nm,0.3s							
YUK				pmax	pmax			
	comp=Z,1μm,0.4s							
YUK				smax	smax			
	comp=E,583nm,0.4s							
YUK				smax	smax			
	comp=N,305nm,0.3s							
YUK				smax	smax			
	comp=E,381nm,0.7s							
YUK				smax	smax			
	comp=N,452nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**3.86**	**239**	*e*	P	**Pn**	**23 48 35.5**	**+2.1**
YUK					AMB	AMB	23 48 37.1	
	comp=N,980nm,0.3s							
YUK				*eS*		**Sn**	**23 49 21.0**	**+2.3**
YUK				A		A	23 49 25.3	
	comp=N,520nm,0.6s							
YUK				A		A	23 49 25.3	
	comp=N,570nm,0.6s							
NEM2	**Nemuro 2**	**4.34**	**233**	*e*	P	**Pn**	**23 48 40.6**	**+0.9**
NEM2				*eS*		**Sn**	**23 49 29.2**	**-0.7**
NMR	**Nemuro--Hokkai**	**4.34**	**233**	*e*	PN	**Pn**	**23 48 40.1**	**+0.4**
NMR				*eS*		**Sn**	**23 49 29.9**	**-0.1**
NMR	**Nemuro--Hokkai**	**4.34**	**233**	*e*	P	**Pn**	**23 48 40.1**	**+0.4**
NMR				*eS*		**Sn**	**23 49 29.9**	**-0.1**
JRA	**Rausu**	**4.37**	**242**	*e*	P	**Pn**	**23 48 42.6**	**+2.7**
JNK	**Nakash**	**4.80**	**240**	*e*	P	**Pn**	**23 48 48.2**	**+2.5**
JTKR	**Abashiri--Toko**	**5.12**	**248**	*e*	P	Pn	23 48 52.5	+2.7
JAK	**Akkeshi**	**5.16**	**235**	*e*	P	**Pn**	**23 48 51.3**	**+0.8**
JAK				*eS*		**Sn**	**23 49 49.2**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.39**	**282**		Pn	**Pn**	**23 48 50.0**	**-3.5**
YSS	**Yuzh-Sakhalins**	**5.39**	**282**	*e*	PN	Pn	23 48 55.8	+2.3
YSS				*eS*		**Sn**	**23 49 55.8**	**+1.0**
YSS				pmax	pmax			
	comp=Z,30nm,0.8s							
YSS				smax	smax			
	comp=N,50nm,0.9s							
YSS	**Yuzh-Sakhalins**	**5.39**	**282**	*e*	P	Pn	23 48 55.8	+2.3
YSS					AMB	AMB	23 48 56.4	
	comp=N,30nm,0.8s							
YSS				*eS*		**Sn**	**23 49 56.8**	**+2.0**
YSS				A		A	23 50 01.8	
	comp=N,50nm,0.9s							
YSS				A		A	23 50 01.8	
	comp=N,40nm,0.9s							
JAR	**Ashorobuto**	**5.54**	**242**	*e*	P	**Pn**	**23 48 58.0**	**+2.5**
JAR				*eS*		**Sn**	**23 50 01.5**	**+3.2**
JOB	**Onbets**	**5.72**	**238**	*e*	P	**Pn**	**23 49 59.5**	**+1.6**
JOB				*eS*		**Sn**	**23 50 03.0**	**+0.3**
JKK2	**Kamakawa 2**	**5.91**	**251**	*e*	P	Pn	23 49 03.7	+3.2
SKR	**Severo-Kuril's**	**5.93**	**37**	*e*	P	**Pn**	**23 48 58.6**	**-2.0**
SKR					AMB	AMB	23 48 59.7	
	comp=N,170nm,0.4s							
JCH	**Churui**	**6.17**	**238**	*e*	P	**Pn**	**23 49 04.7**	**+0.8**
JCH				*eS*		**Sn**	**23 50 11.2**	**-2.3**
JAB	**Ashibetsu**	**6.42**	**249**	*e*	P	Pn	23 49 11.0	+3.9
ERM	**Erimo**	**6.67**	**235**	*ce*	PN	**Pn**	**23 49 11.9**	**+1.4**
ERM				pmax	pmax			
	comp=Z,41nm,0.5s							
JNBK	**Urakawa-nobuka**	**6.73**	**238**	*e*	P	**Pn**	**23 49 11.3**	**-0.1**
JNBK				*eS*		**Sn**	**23 50 25.7**	**-1.3**
PAU	**Pauzhetka**	**6.81**	**36**	*e*	P	**Pn**	**23 49 10.3**	**-2.0**
PAU					AMB	AMB	23 49 11.2	
	comp=Z,240nm,0.4s							
PAU				*eS*		**Sn**	**23 50 23.3**	**-5.3**
PAU				A		A	23 50 26.8	
	comp=Z,50nm,0.3s							
PAU				A		A	23 50 26.8	
	comp=Z,50nm,0.3s							
JEW	**Eniwo**	**7.23**	**246**			**Pn**	**23 49 19.2**	**+1.2**
PEA0B	**Petropavlovsk-**	**8.44**	**31**		Pn	**Pn**	**23 49 32.4**	**-1.6**
PEA0B	**Petropavlovsk-**	**8.44**	**31**		PN	**Pn**	**23 49 32.4**	**-1.6**
PETK	**Petropavlovsk-**	**8.44**	**31**		P	**Pn**	**23 49 33.4**	**-0.6**
	comp=Z,12nm,0.4s,baz=215,slow=12,SNR=14							
PETK	**Petropavlovsk-**	**8.44**	**31**		Pn	**Pn**	**23 49 32.0**	**-2.0**
JTM	**Tenmabayashi**	**8.66**	**235**		Pn	**Pn**	**23 49 36.4**	**-0.7**
JANG	**Nango**	**8.69**	**232**		P	**Pn**	**23 49 36.6**	**-0.9**
JMM	**Marumori**	**10.93**	**225**		Pn	**Pn**	**23 50 06.4**	**-0.8**
JSD	**Sado**	**12.12**	**233**		Pn	**Pn**	**23 50 22.0**	**-0.8**
KLR	**Kul'dur**	**13.00**	**291**		P	**P**	**23 50 35.8**	**-3.0**
	comp=Z,16nm,1.0s,baz=92,slow=12,SNR=34							
KLR	**Kul'dur**	**13.00**	**291**	*ce*	PN	**Pn**	**23 50 31.3**	**-2.7**
KLR				pmax	pmax			
	comp=Z,26nm,1.3s							
KLR	**Kul'dur**	**13.00**	**291**	*e*	P	**Pn**	**23 50 31.3**	**-2.7**
USRK	**Ussuriysk Ar.**	**13.18**	**268**		P	**P**	**23 50 38.7**	**-2.2**
	comp=Z,3.3nm,0.5s,baz=70,slow=11,SNR=9.8							
MAJO	**Matsushiro**	**13.26**	**228**		Pn	**P**	**23 50 39.8**	**-2.0**
MAJO	**Matsushiro**	**13.26**	**228**	*i*	PN	**P**	**23 50 39.6**	**-2.2**
MJAR	**Matsushiro Arr**	**13.26**	**228**		P	**P**	**23 50 38.7**	**-3.1**
	comp=Z,2.2nm,0.5s,baz=36,slow=13,SNR=7.8							
ZEA	**Zeya**	**16.74**	**306**	*i*	P	**Pn**	**23 51 20.0**	**-0.4**
ZEA	**Zeya**	**16.74**	**306**	*e*	P	**Pn**	**23 51 20.0**	**-0.4**
SEHB	**SEOHWA**	**18.19**	**252**		P	**Pn**	**23 51 39.0**	**+1.1**
SEHB					IAmb	IAmb	23 52 07.2	
	comp=Z,15nm,1.2s							
KSRS	**Korea Array**	**18.86**	**251**		P	**Pn**	**23 51 48.0**	**+2.3**
	comp=Z,3.0nm,0.6s,baz=52,slow=11,SNR=11							
KSRS					LR	LR	23 58 39.9	
	comp=Z,11nm,19.6s,baz=60,slow=35							
KSRS	**Korea Array**	**18.86**	**251**		P	**Pn**	**23 51 48.0**	**+2.3**
KSRS	**Korea Array**	**18.86**	**251**	*e*	P	**Pn**	**23 51 48.0**	**+2.3**
KSCHJ	**Chungju**	**19.16**	**249**		P	**Pn**	**23 51 49.2**	**0.0**
KSCHJ					IAmb	IAmb	23 51 55.2	
	comp=Z,20nm,1.2s							
HIA	**Hailar**	**20.86**	**290**	*i*	P	Pn	23 52 12.5	+3.3
HIA					pmax	pmax		
	comp=Z,5.0nm,0.5s							
ADK	**Adak**	**22.19**	**63**		P	**P**	**23 52 21.3**	**+2.6**
ADK	**Adak**	**22.19**	**63**		P	**P**	**23 52 21.3**	**+2.6**
ADK					pmax	pmax		
	comp=Z,48nm,1.4s							
TIXI	**Tiksi**	**27.60**	**345**		P	**P**	**23 53 05.6**	**-2.1**
	comp=Z,2.8nm,0.4s,baz=102,slow=16,SNR=2.4							
	comp=Z,2.8nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**29.57**	**147**		T	T	00 24 48.3	
	baz=336,slow=75,SNR=408							
H11N1	**WAKE ISLAND Hy**	**29.59**	**147**		T	T	00 24 47.4	
	baz=336,slow=75,SNR=302							
H11N3	**WAKE ISLAND Hy**	**29.59**	**147**		T	T	00 24 50.1	
	baz=336,slow=75,SNR=366							
H11S1	**WAKE ISLAND Hy**	**30.62**	**149**		T	T	00 25 58.6	
	baz=336,slow=76,SNR=430							
H11S3	**WAKE ISLAND Hy**	**30.63**	**149**		T	T	00 26 01.4	
	baz=336,slow=76,SNR=265							
H11S2	**WAKE ISLAND Hy**	**30.64**	**149**		T	T	00 26 02.2	
	baz=336,slow=76,SNR=275							
TTA	**Tatalina**	**34.11**	**41**		P	P	23 54 06.5	+1.5
TTA					IAmb	IAmb	23 54 27.2	
	comp=Z,5.8nm,1.3s							
TTA	**Tatalina**	**34.11**	**41**		P	P	23 54 06.5	+1.5
TTA					pmax	pmax		
	comp=Z,6.0nm,1.3s							
IMAR	**Indian Mountai**	**35.37**	**36**		P	P	23 54 16.9	+1.2
H21K	**Melozitna Rive**	**35.72**	**36**		P	**P**	**23 54 19.8**	**+1.1**
H21K					IAmb	IAmb	23 54 44.4	
	comp=Z,9.5nm,1.4s							
KDAK	**Kodiak Island**	**35.92**	**50**		P	**P**	**23 54 21.6**	**+1.1**
KDAK	**Kodiak Island**	**35.92**	**50**		P	**P**	**23 54 21.6**	**+1.1**
KDAK					pmax	pmax		
	comp=Z,43nm,1.5s							
BPAW	**Bear Paw Mtn.**	**36.41**	**39**		P	P	23 54 26.4	+1.7
MLY	**Manley**	**36.55**	**38**		P	P	23 54 27.5	+1.7
MDM	**Murphy Dome**	**37.61**	**38**		P	P	23 54 36.1	+1.4
MDM					IAmb	IAmb	23 54 38.2	
	comp=Z,5.7nm,1.2s							
SML	**Sawmill**	**37.70**	**43**		P	P	23 54 37.5	+2.0
CCB	**Clear Creek Bu**	**37.80**	**38**		P	P	23 54 37.4	+1.2
CCB					IAmb	IAmb	23 54 39.0	
	comp=Z,2.4nm,0.5s							
IL31		**38.19**	**38**		P	P	23 54 40.8	+1.3
ILAR	**Eielson Array**	**38.19**	**38**		P	P	23 54 40.8	+1.3
	comp=Z,1.0nm,0.5s,baz=264,slow=7.2,SNR=16							
	comp=Z,1.0nm,0.5s							
ILAR	**Eielson Array**	**38.19**	**38**		P	**P**	**23 54 40.5**	**+1.0**
ILAR	**Eielson Array**	**38.19**	**38**		P	**P**	**23 54 40.5**	**+1.0**
BMAR	**Burnt Mountain**	**39.08**	**34**		P	P	23 54 49.0	+2.1

M26K	**Nabesna, AK**	**40.13**	**42**		P	P	23 54 57.9	+2.2
M26K					IAmb	IAmb	23 54 58.9	
	comp=Z,9.2nm,1.4s							
K27K	**Chicken**	**40.33**	**39**		P	P	23 54 59.2	+1.9
K27K					IAmb	IAmb	23 55 00.5	
	comp=Z,4.5nm,1.1s							
BCAR	**Beaver Creek A**	**40.58**	**40**		P	P	23 55 01.6	+2.1
ZALV	**Zalesovo Beam**	**41.50**	**306**		P	P	23 55 08.6	+1.6
	comp=Z,0.9nm,0.7s,baz=81,slow=8.9,SNR=2.1							
ZALV					PcP	**PcP**	**23 57 03.7**	**+2.2**
	comp=Z,3.8nm,0.6s,baz=76,slow=2.5,SNR=17							
	comp=Z,0.9nm,0.7s							
EPYK	**Eagle Plains**	**42.25**	**35**		P	**P**	**23 55 13.9**	**+1.0**
EPYK					IAmb	IAmb	23 55 17.0	
	comp=Z,12nm,1.2s							
HYT	**Haines Junctio**	**43.00**	**43**		P	P	23 55 21.8	+2.6
HYT					IAmb	IAmb	23 55 35.2	
	comp=Z,12nm,1.5s							
INK	**Inuvik**	**43.17**	**32**		P	P	23 55 22.2	+2.0
	comp=Z,1.2nm,0.4s,baz=225,slow=6.8,SNR=6.5							
	comp=Z,1.2nm,0.4s							
MK31	**Makanchi Array**	**45.61**	**297**		P	**P**	**23 55 40.0**	**0.0**
MK31	**Makanchi Array**	**45.61**	**297**		P	**P**	**23 55 40.0**	**0.0**
MK31					pmax	pmax		
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**45.61**	**297**		P	**P**	**23 55 40.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=61,slow=6.6,SNR=9.1							
MKAR					PcP	**PcP**	**23 57 17.7**	**+2.0**
	comp=Z,1.6nm,0.6s,baz=66,slow=4.2,SNR=11							
	comp=Z,0.6nm,0.5s							
MKAR	**Makanchi Array**	**45.61**	**297**		P	**P**	**23 55 40.0**	**+0.1**
KURK	**Kurchatov**	**46.19**	**303**		P	**P**	**23 55 43.4**	**-1.0**
KURK	**Kurchatov**	**46.19**	**303**		P	**P**	**23 55 43.4**	**-1.0**
KURK					pmax	pmax		
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**46.19**	**303**	*e*	P	**P**	**23 55 43.4**	**-1.0**
C36M	**Paulatuk**	**46.28**	**29**		P	P	23 55 46.4	+1.5
BRVK	**Borovoye**	**49.89**	**309**		P	**P**	**23 56 12.3**	**-0.5**
BRVK	**Borovoye**	**49.89**	**309**		P	**P**	**23 56 12.3**	**-0.5**
BRVK					pmax	pmax		
	comp=Z,5.0nm,1.5s							
BRVK	**Borovoye**	**49.89**	**309**	*e*	P	**P**	**23 56 12.3**	**-0.5**
EUNU	**Eureka**	**50.12**	**11**		P	**P**	**23 56 14.0**	**-0.2**
EUNU					IAmb	IAmb	23 56 22.8	
	comp=Z,6.5nm,1.1s							
CHTO	**Chiang Mai**	**50.19**	**255**		P	P	23 56 18.6	+3.2
CHTO	**Chiang Mai**	**50.19**	**255**		P	P	23 56 18.6	+3.2
CHTO					pmax	pmax		
	comp=Z,9.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**50.44**	**255**		P	P	23 56 21.4	+4.1
	comp=Z,4.2nm,0.7s,baz=38,slow=7.1,SNR=18							
	comp=Z,4.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**50.44**	**255**		P	P	23 56 20.1	+2.7
SHL	**Shillong**	**50.52**	**267**		P	**P**	**23 56 19.8**	**+1.7**
SHL	**Shillong**	**50.52**	**267**		P	**P**	**23 56 19.8**	**+1.7**
SHL					pmax	pmax		
	comp=Z,29nm,0.6s							
TAPN	**Taplejung**	**52.30**	**272**	*e*	P	P	23 56 34.0	+2.5
	comp=Z,7.8nm,0.3s							
JIRN	**Jiri**	**53.16**	**273**	*e*	P	P	23 56 40.6	+2.7
	comp=Z,18nm,0.3s							
GUN	**Gumba**	**53.23**	**274**	*e*	P	P	23 56 40.6	+2.3
	comp=Z,14nm,0.3s							
RAMN	**Ramite**	**53.32**	**272**	*e*	P	P	23 56 41.3	+2.4
	comp=Z,36nm,0.4s							
PKI	**Pulchoki**	**53.76**	**274**	*e*	P	P	23 56 44.5	+2.3
PKIN	**Phulchoki**	**53.77**	**274**	*e*	P	P	23 56 44.2	+2.0
GKN	**Gorkha**	**54.03**	**275**	*e*	P	P	23 56 46.3	+2.4
	comp=Z,8.2nm,0.3s							
DANN	**Dangsing**	**54.42**	**276**	*e*	P	P	23 56 49.6	+2.6
	comp=Z,12nm,0.4s							
KK31	**Karatay Array**	**54.70**	**298**		P	**P**	**23 56 48.9**	**+0.5**
KK31	**Karatay Array**	**54.70**	**298**		P	**P**	**23 56 48.9**	**+0.5**
KK31					pmax	pmax		
	comp=Z,2.0nm,1.2s							
KKAR	**Karatay Array**	**54.70**	**298**		P	**P**	**23 56 48.5**	**+0.1**
KKAR	**Karatay Array**	**54.70**	**298**		P	**P**	**23 56 48.5**	**+0.1**
GAR	**Garm**	**57.12**	**294**		P	P	23 57 07.1	+1.3
GAR					IAmb	IAmb	23 57 07.5	
	comp=Z,7.0nm,0.8s							
ABKAR	**Akbulak array**	**57.42**	**309**		P	**P**	**23 57 07.3**	**-0.3**
ABKAR	**Akbulak array**	**57.42**	**309**		P	**P**	**23 57 07.2**	**-0.3**
ABKAR					IAmb	IAmb	23 57 08.6	
	comp=Z,1.8nm,0.6s							
ARCES	**ARCESS Array B**	**57.85**	**340**		P	**P**	**23 57 10.2**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=27,slow=8.1,SNR=5.6							
	comp=Z,1.0nm,0.7s							
ARCES	**ARCESS Array B**	**57.85**	**340**		P	**P**	**23 57 10.7**	**+0.4**
ARCES					IAmb	IAmb	23 57 35.0	
	comp=Z,12nm,1.5s							
ARCES	**ARCESS Array B**	**57.85**	**340**		P	**P**	**23 57 10.7**	**+0.4**
ARCES					pmax	pmax		
	comp=Z,12nm,1.5s							
CHGR	**Chuyangaron**	**58.05**	**294**		P	**P**	**23 57 13.3**	**+1.0**
CHGR	**Chuyangaron**	**58.05**	**294**		P	**P**	**23 57 13.3**	**+1.0**
CHGR					pmax	pmax		
	comp=Z,12nm,0.8s							
SUMG	**Summit**	**61.46**	**3**		P	**P**	**23 57

comp=Z,0.4nm,0.5s
GERES GERESS Array B 78.21 332 P P 23 59 18.0 +0.3
GERES GERESS Array B 78.21 332 P P 23 59 18.0 +0.3
TXAR Lajitas Array 79.40 59 P P 23 59 27.4 +2.9
comp=Z,0.2nm,0.4s,baz=292,slow=3.9,SNR=6.3
comp=Z,0.2nm,0.4s
VNDA Vanda 123.55 177 PKP PKiKP 00 06 16.7 +3.6
comp=Z,0.3nm,0.7s,baz=333,slow=4.9,SNR=1.9
H03N2 Juan Fernandez 140.58 89 T T 02 43 36.1
baz=307,slow=77,SNR=6.9
H03N1 Juan Fernandez 140.60 89 T T 02 43 37.4
baz=307,slow=77,SNR=8.7
H03N3 Juan Fernandez 140.60 89 T T 02 43 36.9
baz=307,slow=77,SNR=7.3
BDFB Brasilia 145.91 33 PKPbc PKiKP 00 06 59.7 -0.7
comp=Z,0.8nm,0.3s,baz=4.9,slow=5.2,SNR=3.8
PLCA Paso Flores 149.97 95 PKPbc PKPab 00 07 10.9 -2.6
comp=Z,3.3nm,0.9s,baz=270,slow=3.0,SNR=5.8
TROLL Troll, Antarti 149.99 199 P PKPab 00 07 10.1 -2.6
SNAA Sanae 151.41 197 P PKPab 00 07 12.7 -5.8
VNA2 Neumayer--Watz 152.90 196 P PKiKP 00 07 16.4 +3.3
baz=131,slow=1.6
VNA3 Neumayer Olymp 153.04 194 P PKiKP 00 07 16.4 +3.1

*VIE **24** 23:59:36.6±0.7, 42.°81N×13.°78E, h4km, mb2.9/4, ml2.6/6, Error ellipse: s-maj=12.5km s-min=3.9km az=107.0 147 km NE of Rome*
*PRU **24** 23:59:36.6±0.0, 42.°68N×13.°82E, h10km*
*ROM **24** 23:59:36.9±0.1, 42.°829N±0.°004×13.°251E±0.°007, h8km, ML2.7/38, Error ellipse: s-maj=0.4km s-min=0.4km az=265.0*

ISC 24 23:59:37.8±0.9, 42.°83N±0.°02×13.°25E±0.°02, h9km±6km, n51, σ1s18/73, 25C-13D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**271**	⇓P		**Pg**	**23 59 40.0**	**-0.4**
NRCA				S		**Sg**	**23 59 42.0**	**-0.2**
NRCA				AML	AML			
	comp=E,20600μm,0.7s							
NRCA				AML	AML			
	comp=E,18650μm,0.7s							
NRCA				AML	AML			
	comp=E,18650μm,0.7s							
NRCA				AML	AML			
	comp=N,24750μm,0.2s							
NRCA				AML	AML			
	comp=N,26950μm,0.2s							
FEMA	**Monte Fema**	**0.20**	**312**	P		**Pg**	**23 59 41.6**	**-0.3**
FEMA				S		**Sg**	**23 59 45.2**	**+0.4**
FDMO	**Fiordimonte**	**0.24**	**330**	P		**Pg**	**23 59 42.2**	**-0.4**
FDMO				S		**Sg**	**23 59 46.2**	**+0.4**
FDMO				AML	AML			
	comp=N,6930μm,0.2s							
FDMO				AML	AML			
	comp=E,4695μm,1.0s							
CSP1	**Cessapalombo**	**0.26**	**353**	⇑P		**Pg**	**23 59 42.6**	**-0.5**
CSP1				S		**Sg**	**23 59 47.2**	**+0.5**
CSP1				AML	AML			
	comp=N,5400μm,0.4s							
CSP1				AML	AML			
	comp=E,4255μm,1.3s							
LNSS	**Leonessa**	**0.28**	**214**	⇑P		**Pg**	**23 59 43.3**	**0.0**
LNSS				S		**Sb**	**23 59 48.5**	**-1.2**
LNSS				AML	AML			
	comp=E,3230μm,0.8s							
LNSS				AML	AML			
	comp=N,2815μm,0.3s							
LNSS				AML	AML			
	comp=E,3235μm,0.8s							
LNSS				AML	AML			
	comp=N,2810μm,0.3s							
CESI	**CESI - Serrava**	**0.31**	**304**	⇑P		**Pg**	**23 59 43.6**	**-0.3**
CESI				S		**Sg**	**23 59 49.1**	**+1.1**
CESI				AML	AML			
	comp=E,4625μm,0.3s							
CESI				AML	AML			
	comp=N,7235μm,0.3s							
CAMP	**Campotosto**	**0.32**	**158**	⇑P		**Pg**	**23 59 43.8**	**-0.3**
CAMP				S		**Sg**	**23 59 49.0**	**+0.6**
CAMP				AML	AML			
	comp=E,792μm,0.6s							
CAMP				AML	AML			
	comp=N,1130μm,0.4s							
RM33	**Pellescritta (**	**0.32**	**184**	P		**Pg**	**23 59 44.1**	**-0.1**
RM33				S		**Sb**	**23 59 50.0**	**-1.1**
RM33				AML	AML			
	comp=N,888μm,0.3s							
RM33				AML	AML			
	comp=E,1182μm,0.5s							
RM33				AML	AML			
	comp=N,888μm,0.2s							
RM33				AML	AML			
	comp=E,1215μm,1.2s							
RM33				AML	AML			
	comp=N,892μm,0.3s							
RM33				AML	AML			
	comp=E,1183μm,0.5s							
RM33				AML	AML			
	comp=N,886μm,0.2s							
RM33				AML	AML			
	comp=N,887μm,0.2s							
RM33				AML	AML			
	comp=E,1185μm,0.5s							
TERO	**Teramo**	**0.34**	**129**	P		**Pg**	**23 59 44.0**	**-0.5**
TERO				S		**Sg**	**23 59 49.7**	**+0.8**
TERO				AML	AML			
	comp=E,1760μm,1.0s							
TERO				AML	AML			
	comp=N,2885μm,0.6s							
TERO				AML	AML			
	comp=E,1820μm,0.3s							
TERO				AML	AML			
	comp=N,2865μm,0.6s							
OFFI	**Offida**	**0.34**	**72**	P		**Pb**	**23 59 45.1**	**-0.8**
OFFI				AML	AML			
	comp=E,3045μm,0.5s							
OFFI				AML	AML			
	comp=N,4080μm,0.8s							
MNTP	**Montappone**	**0.34**	**28**	P		**Pg**	**23 59 44.9**	**+0.2**
MNTP				S		**Sb**	**23 59 51.3**	**-0.4**
MNTP				AML	AML			
	comp=N,2720μm,1.3s							
MNTP				AML	AML			
	comp=E,3805μm,0.8s							
ARRO	**Arrone**	**0.44**	**235**	⇑P		**Pg**	**23 59 46.1**	**-0.2**
ARRO				AML	AML			
	comp=E,476μm,0.3s							
ARRO				AML	AML			
	comp=N,457μm,0.3s							
GIGS	**Gran Sasso**	**0.45**	**148**	⇑P		**Pg**	**23 59 46.3**	**-0.3**
GIGS				AML	AML			
	comp=E,188μm,1.4s							
GIGS				AML	AML			
	comp=N,210μm,0.4s							
GIGS				AML	AML			
	comp=N,211μm,0.4s							
GIGS				AML	AML			
	comp=E,188μm,1.4s							
SNTG	**Esanatoglia**	**0.48**	**332**	⇑P		**Pg**	**23 59 46.5**	**-0.6**
SNTG				S		**Sb**	**23 59 55.0**	**-0.6**
SNTG				AML	AML			
	comp=N,754μm,0.4s							
SNTG				AML	AML			
	comp=E,701μm,0.1s							
ASSB	**Assisi San Ben**	**0.48**	**296**	⇑P		**Pg**	**23 59 46.7**	**-0.5**
ASSB				S		**Sb**	**23 59 54.5**	**-1.1**
ASSB				AML	AML			
	comp=N,2615μm,0.4s							
ASSB				AML	AML			
	comp=E,3820μm,0.2s							
AQU	**L'Aquila**	**0.49**	**167**	⇓P		**Pg**	**23 59 46.9**	**-0.4**
AQU				AML	AML			
	comp=N,564μm,0.7s							
AQU				AML	AML			
	comp=E,520μm,1.2s							
AQU				AML	AML			
	comp=E,446μm,1.2s							
AQU				AML	AML			
	comp=E,520μm,1.2s							
AQU				AML	AML			
	comp=N,478μm,0.7s							
AQU				AML	AML			
	comp=N,564μm,0.7s							
EL6	**Elcito**	**0.51**	**348**	⇑P		**Pg**	**23 59 47.0**	**-0.7**
EL6				AML	AML			
	comp=E,1600μm,0.3s							
EL6				AML	AML			
	comp=N,1850μm,0.8s							
CESX	**Cesi**	**0.54**	**246**	⇑P		**Pg**	**23 59 47.7**	**-0.6**
CESX				AML	AML			
	comp=E,551μm,1.2s							
CESX				AML	AML			
	comp=N,498μm,0.4s							
FIAM	**Fiamignano**	**0.57**	**190**	⇑P		**Pg**	**23 59 48.3**	**-0.6**
FIAM				S		**Sb**	**23 59 58.0**	**-0.3**
FIAM				AML	AML			
	comp=N,410μm,0.6s							
FIAM				AML	AML			
	comp=N,410μm,0.6s							
FIAM				AML	AML			
	comp=E,437μm,0.4s							
FOSV	**Fossato di Vic**	**0.58**	**322**	⇑P		**Pg**	**23 59 48.5**	**-0.6**
FOSV				S		**Sb**	**23 59 59.0**	**+0.4**
FOSV				AML	AML			
	comp=E,1430μm,0.2s							
FOSV				AML	AML			
	comp=N,5140μm,0.3s							
PP3	**Marolino**	**0.61**	**26**	⇓P		**Pg**	**23 59 49.8**	**+0.3**
PP3				AML	AML			
	comp=N,2090μm,1.6s							
PP3				AML	AML			
	comp=E,1830μm,1.4s							
PP3				AML	AML			
	comp=N,2065μm,1.6s							
PP3				AML	AML			
	comp=N,2070μm,1.6s							
PP3				AML	AML			
	comp=E,1755μm,1.4s							
FAGN	**Fagnano**	**0.62**	**156**	⇑P		**Pg**	**23 59 49.1**	**-0.6**
FAGN				AML	AML			
	comp=N,760μm,0.4s							
FAGN				AML	AML			
	comp=E,899μm,0.4s							
MURB	**Monte Urbino**	**0.68**	**309**	⇑P		**Pg**	**23 59 50.8**	**-0.2**
MURB				S		**Sb**	**00 00 02.0**	**+0.5**
MURB				AML	AML			
	comp=E,2115μm,0.3s							
MURB				AML	AML			
	comp=N,2770μm,0.9s							
MURB				AML	AML			
	comp=E,2410μm,0.3s							
MURB				AML	AML			
	comp=N,2910μm,0.9s							
MURB				AML	AML			
	comp=E,2120μm,0.3s							
ARVD	**Arcevia**	**0.70**	**341**	⇓P		**Pg**	**23 59 50.7**	**-0.7**
ARVD				S		**Sb**	**00 00 02.0**	**0.0**
ARVD				AML	AML			
	comp=N,260μm,0.2s							
ARVD				AML	AML			
	comp=E,364μm,1.0s							
T0110	**Collepietro**	**0.72**	**147**	⇓P		**Pg**	**23 59 50.9**	**-0.8**
ATFO	**Monte Foce - G**	**0.73**	**317**	⇓P		**Pg**	**23 59 51.2**	**-0.6**
ATFO				AML	AML			
	comp=N,338μm,1.5s							
ATFO				AML	AML			
	comp=E,362μm,0.3s							
ATFO				AML	AML			
	comp=N,338μm,1.5s							
ATTE	**AVT- Monte Tez**	**0.75**	**299**	P		**Pg**	**23 59 51.6**	**-0.6**
ATTE				AML	AML			
	comp=N,258μm,0.9s							
ATTE				AML	AML			
	comp=E,281μm,0.9s							
FRON	**Frontone**	**0.79**	**331**	⇑P		**Pg**	**23 59 51.9**	**-1.0**
FRON				AML	AML			
	comp=N,608μm,0.3s							
FRON				AML	AML			
	comp=E,356μm,0.8s							
SRES	**S.Oreste - Sor**	**0.81**	**223**	⇓P		**Pg**	**23 59 52.9**	**-0.4**
SRES				AML	AML			
	comp=N,150μm,0.5s							
SRES				AML	AML			
	comp=E,128μm,0.4s							
COR1	**Corinaldo**	**0.82**	**347**	⇑P		**Pb**	**23 59 53.8**	**-0.3**
ATVO	**AVT- Monte Val**	**0.83**	**312**	P		**Pg**	**23 59 52.8**	**-0.9**
MGAB	**Montegabbione**	**0.84**	**276**	⇑P		**Pg**	**23 59 53.2**	**-0.7**
MGAB				AML	AML			
	comp=E,572μm,0.5s							
MGAB				AML	AML			
	comp=N,686μm,0.5s							
MGAB				AML	AML			
	comp=E,730μm,0.5s							
MGAB				AML	AML			
	comp=N,696μm,0.4s							
MPAG	**Monte Paganucc**	**0.87**	**336**	⇑P		**Pg**	**23 59 54.1**	**-0.5**
MPAG				S		**Sn**	**00 00 09.0**	**-0.2**
ATPI	**Pietralunga -**	**0.88**	**315**	⇓P		**Pg**	**23 59 53.8**	**-0.8**
ATPI				AML	AML			
	comp=E,264μm,0.6s							
ATPI				AML	AML			
	comp=N,218μm,0.8s							
PIEI	**Pieia**	**0.88**	**324**	⇑P		**Pg**	**23 59 53.6**	**-1.0**
PIEI				S		**Sn**	**00 00 09.0**	**-0.2**
PIEI				AML	AML			
	comp=E,292μm,0.1s							
PIEI				AML	AML			
	comp=N,212μm,0.7s							
ATMI	**Monte Miggiano**	**0.88**	**305**	⇑P		**Pg**	**23 59 54.6**	**0.0**
ATMI				AML	AML			
	comp=N,836μm,0.3s							
ATMI				AML	AML			
	comp=N,836μm,0.3s							
ATMI				AML	AML			
	comp=E,948μm,0.5s							
CERT	**Cerreto**	**0.90**	**193**	⇑P		**Pn**	**23 59 57.1**	**+0.5**
NARO	**Abbazia di Nar**	**0.92**	**328**	⇑P		**Pg**	**23 59 54.4**	**-1.1**
NARO				S		**Sb**	**00 00 09.0**	**+0.8**
NARO				AML	AML			
	comp=E,169μm,1.0s							
NARO				AML	AML			
	comp=N,206μm,0.2s							
FSSB	**Fossombrone**	**0.93**	**338**	⇑P		**Pb**	**23 59 55.7**	**-0.3**
FSSB				S		**Sn**	**00 00 11.0**	**+0.6**
FSSB				AML	AML			
	comp=E,798μm,0.3s							
FSSB				AML	AML			
	comp=N,902μm,0.3s							
INTR	**Introdacqua**	**0.95**	**149**	⇓P		**Pg**	**23 59 55.9**	**-0.2**
INTR				AML	AML			
	comp=E,166μm,0.8s							
INTR				AML	AML			
	comp=N,462μm,0.6s							
SACS	**San Casciano d**	**0.98**	**271**	⇓P		**Pn**	**23 59 57.8**	**0.0**
CAFI	**Castiglion Fio**	**1.06**	**298**	⇓P		**Pg**	**23 59 57.2**	**-1.0**
CAFI				AML	AML			
	comp=N,164μm,0.6s							
CAFI				AML	AML			
	comp=E,163μm,0.3s							
PARC	**Parchiule**	**1.10**	**318**	⇑P		**Pg**	**23 59 58.5**	**-0.4**
PARC				AML	AML			
	comp=E,306μm,0.8s							
PARC				AML	AML			
	comp=N,170μm,1.1s							
SSP9	**Sansepolcro**	**1.10**	**313**	⇓P		**Pn**	**00 00 00.8**	**+1.5**
PESA	**Pesaro**	**1.15**	**345**	⇓P		**Pn**	**00 00 00.5**	**+0.5**
MCIV	**Monte Civitell**	**1.16**	**268**	⇑P		**Pb**	**00 00 00.0**	**+0.1**
MCIV				AML	AML			
	comp=E,68μm,0.3s							
MCIV				AML	AML			
	comp=N,84μm,1.2s							
GIUL	**Giuliano Di Ro**	**1.27**	**180**	P		**Pg**	**00 00 02.6**	**+0.4**
ABTA	**Abfaltersbach**	**3.95**	**353**	*i* Sn		**Sn**	**00 01 28.6**	**+3.6**
	comp=N,1.9nm,0.4s							
FETA	**Feichten**	**4.55**	**338**	*e*Pn		**Pn**	**00 00 51.1**	**+4.1**
	comp=N,0.7nm,0.4s							
FETA				*e*Sn		**Sb**	**00 01 47.3**	**-5.6**
	comp=N,1.5nm,0.6s							
CONA	**Conrad Observa**	**5.42**	**19**	Pn		**Pn**	**00 00 59.3**	**+0.6**
	comp=N,0.3nm,0.2s							
CONA				*e*Sn		**Sn**	**00 01 58.5**	**-2.7**
	comp=N,0.5nm,0.3s							
KHC	**Kasperske Hory**	**6.30**	**2**	*e*SN		**Sn**	**00 02 21.7**	**-1.3**

*ATH **25** 00:06:19.8, 37.°42N×20.°52E, h8km±2km, ML3.2/11, Error ellipse: s-maj=2.5km s-min=1.1km az=349.0*
*THE **25** 00:06:20.2, 37.°43N×20.°52E, h4km±1km, ML3.4/5, Error ellipse: s-maj=1.8km s-min=0.7km az=50.0*

ISC 25 00:06:20.4±1.6, 37.°45N±0.°05×20.°55E±0.°05, h7km±11km, n44, σ0s76/59, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.35**	**41**	P		**Pg**	**00 06 27.2**	**0.0**
LTHK				S		**Sg**	**00 06 32.4**	**+0.6**
	5μm,0.3s							
LTHK	**Lithakia**	**0.35**	**41**	P		**Pg**	**00 06 27.2**	**0.0**
LTHK				S		**Sg**	**00 06 32.3**	**+0.6**
VLS	**Valsamata**	**0.73**	**2**	P		**Pg**	**00 06 34.1**	**-0.4**
VLS				S		**Sg**	**00 06 45.1**	**+1.1**
	3μm,0.3s							
VLS	**Valsamata**	**0.73**	**2**	P		**Pg**	**00 06 33.7**	**-0.7**
VLS				S		**Sg**	**00 06 44.8**	**+0.8**
VLS				AML	AML		00 06 45.4	
	comp=E,4739μm,0.3s							
VLS				AML	AML		00 06 45.5	
	comp=N,7468μm,0.3s							
KEF3	**Kipouria, Keph**	**0.77**	**348**	P		**Pg**	**00 06 35.0**	**-0.2**
KEF3				S		**Sb**	**00 06 46.8**	**-0.1**
	comp=N,11μm,0.5s							
KEF3	**Kipouria, Keph**	**0.77**	**348**	P		**Pg**	**00 06 35.1**	**-0.2**
KEF3				S		**Sg**	**00 06 46.4**	**+1.1**
DMLN	**Damoulianata-K**	**0.80**	**350**	P		**Pg**	**00 06 35.3**	**-0.6**
DMLN				S		**Sb**	**00 06 47.7**	**-0.1**
	comp=N,5μm,0.6s							
KEF4	**Livadi, Kephal**	**0.82**	**353**	P		**Pg**	**00 06 35.6**	**-0.5**
KEF4				S		**Sb**	**00 06 48.2**	**0.0**
KEF4	**Livadi, Kephal**	**0.82**	**353**	P		**Pg**	**00 06 35.6**	**-0.5**
KEF4				S		**Sb**	**00 06 47.8**	**-0.3**
RLS	**Riolos of Patr**	**0.95**	**50**	P		**Pg**	**00 06 38.1**	**-0.5**
RLS	**Riolos of Patr**	**0.95**	**50**	P		**Pg**	**00 06 37.8**	**-0.9**
RLS				S		**Sg**	**00 06 51.6**	**+0.6**
RLS				AML	AML		00 06 57.8	
	comp=N,1669μm,0.8s							
RLS				AML	AML		00 07 00.7	
	comp=E,1586μm,0.5s							
FSK	**Fiskardo**	**1.01**	**1**	P		**Pg**	**00 06 39.7**	**-0.1**
FSK				S		**Sb**	**00 06 54.5**	**+0.7**
	comp=E,2μm,0.6s							
FSK	**Fiskardo**	**1.01**	**1**	P		**Pg**	**00 06 39.6**	**-0.3**
FSK				S		**Sb**	**00 06 53.8**	**0.0**
FSK				AML	AML		00 06 59.0	
	comp=N,4462μm,0.6s							
FSK				AML	AML		00 07 00.7	
	comp=E,3953μm,0.6s							
DRO	**Drossia**	**1.05**	**61**	P		**Pg**	**00 06 40.3**	**-0.3**
DRO	**Drossia**	**1.05**	**61**	P		**Pg**	**00 06 39.8**	**-0.7**
DRO				S		**Sg**	**00 06 54.4**	**+0.2**
DRO				AML	AML		00 07 00.3	
	comp=E,1721μm,0.6s							
DRO				AML	AML		00 07 03.5	
	comp=N,1835μm,0.5s							
PYL	**PYLOS**	**1.10**	**120**	P		**Pg**	**00 06 41.2**	**-0.3**
PYL	**PYLOS**	**1.10**	**120**	P		**Pg**	**00 06 41.2**	**-0.3**
ITM	**Ithomi**	**1.13**	**103**	P		**Pg**	**00 06 41.9**	**-0.2**
ITM	**Ithomi**	**1.13**	**103**	P		**Pg**	**00 06 41.8**	**-0.3**
ITM				AML	AML		00 07 03.6	
	comp=N,1188μm,0.8s							
ITM				AML	AML		00 07 05.1	
	comp=E,851μm,0.7s							
EVGI	**Lefkada island**	**1.18**	**4**	P		**Pg**	**00 06 41.9**	**-1.1**
EVGI	**Lefkada island**	**1.18**	**4**	P		**Pg**	**00 06 42.0**	**-1.0**
DRAG	**Dragano-Lefkad**	**1.23**	**1**	P		**Pg**	**00 06 42.8**	**-1.3**
NYDR	**Nydri-Lefkada**	**1.27**	**5**	P		**Pg**	**00 06 43.4**	**-1.4**
LKD2	**Lefkada island**	**1.34**	**4**	P		**Pg**	**00 06 44.8**	**-1.4**
LKD2	**Lefkada island**	**1.34**	**4**	P		**Pg**	**00 06 44.7**	**-1.5**
LKD2				AML	AML		00 07 08.4	
	comp=E,2696μm,0.6s							
LKD2				AML	AML		00 07 13.1	
	comp=N,2713μm,0.6s							
TSLK	**Tsoukalades, L**	**1.38**	**3**	P		**Pg**	**00 06 45.3**	**-1.6**
TSLK	**Tsoukalades, L**	**1.38**	**3**	P		**Pg**	**00 06 45.6**	**-1.3**
LAKA	**Lakka**	**1.38**	**55**	P		**Pg**	**00 06 46.3**	**-0.6**
LAKA	**Lakka**	**1.38**	**55**	P		**Pg**	**00 06 45.3**	**-1.6**
LAKA				S		**Sn**	**00 07 05.6**	**+0.9**
LAKA				AML	AML		00 07 16.4	
	comp=N,3905μm,0.8s							
LAKA				AML	AML		00 07 18.5	
	comp=E,4902μm,1.0s							
PVO	**Paravola**	**1.40**	**33**	P		**Pn**	**00 06 46.1**	**-0.3**
PVO	**Paravola**	**1.40**	**33**	P		**Pn**	**00 06 46.0**	**-0.4**
PVO				S		**Sg**	**00 07 05.2**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**64**	P		**Pg**	**00 06 46.6**	**-0.7**
KLV	**Kalavryta, Ach**	**1.40**	**64**	P		**Pg**	**00 06 46.4**	**-0.9**
KLV				AML	AML		00 07 14.9	
	comp=E,544μm,0.6s							
KLV				AML	AML		00 07 19.2	
	comp=N,611μm,0.8s							
EFP	**Efpalio**	**1.45**	**47**	P		**Pn**	**00 06 46.8**	**-0.3**
EFP	**Efpalio**	**1.45**	**47**	P		**Pn**	**00 06 46.5**	**-0.6**
SERG	**Sergoula**	**1.53**	**51**	P		**Pn**	**00 06 48.1**	**-0.2**
SERG	**Sergoula**	**1.53**	**51**	P		**Pn**	**00 06 48.1**	**-0.2**
ANX	**Ano Chora**	**1.57**	**43**	P		**Pn**	**00 06 48.9**	**0.0**
ANX	**Ano Chora**	**1.57**	**43**	P		**Pn**	**00 06 48.7**	**-0.2**
ANX				AML	AML		00 07 17.5	
	comp=N,1311μm,0.8s							
ANX				AML	AML		00 07 20.2	
	comp=E,1502μm,1.0s							
EVR	**Evrytania**	**1.77**	**34**	P		**Pn**	**00 06 52.4**	**+0.7**
EVR				AML	AML		00 07 24.9	
	comp=N,592μm,0.6s							
EVR				AML	AML		00 07 25.8	
	comp=E,715μm,0.5s							
MAKR	**Makrakomi, Fth**	**2.00**	**38**	P		**Pb**	**00 06 57.1**	**0.0**
MAKR				AML	AML		00 07 32.5	
	comp=E,887μm,0.5s							
MAKR				AML	AML		00 07 33.2	
	comp=N,1908μm,0.9s							
VLI	**Veliai**	**2.04**	**110**	P		**Pb**	**00 06 57.1**	**-0.7**
AXAR	**Agios Charalam**	**2.12**	**51**	P		**Pn**	**00 06 56.8**	**+0.4**
THL	**Klokotos Trika**	**2.41**	**28**	P		**Pn**	**00 07 01.8**	**+1.5**

*ROM **25** 00:12:34.7±0.0, 42.°606N±0.°001×13.°304E±0.°002, h11km, ML2.9/51, Error ellipse: s-maj=0.9km s-min=0.2km az=350.0*
*BEO **25** 00:12:36.8±0.9, 42.°57N×13.°33E, h0km, ML3.1/3*
*PRU **25** 00:12:40.2±0.0, 42.°84N×13.°67E, h0km*

ISC 25 00:12:35.4±0.8, 42.°60N±0.°02×13.°30E±0.°02, h10km±5km, n103, σ1s47/123, 20C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.11**	**130**	⇓P		**Pg**	**00 12 38.1**	**-0.2**
CAMP				S		**Sg**	**00 12 40.2**	**-0.1**
CAMP				AML	AML			
	comp=N,9360μm,0.3s							
CAMP				AML	AML			
	comp=E,7540μm,1.1s							
RM33	**Pellescritta (**	**0.11**	**214**	⇑P		**Pg**	**00 12 38.3**	**0.0**
RM33				S		**Sg**	**00 12 40.6**	**+0.2**
RM33				AML	AML			
	comp=E,16500μm,0.6s							
RM33				AML	AML			
	comp=N,23850μm,1.3s							
RM33				AML	AML			
	comp=N,23800μm,1.3s							
RM33				AML	AML			
	comp=E,16550μm,0.6s							
RM33				AML	AML			
	comp=E,16500μm,0.6s							
RM33				AML	AML			
	comp=N,23800μm,1.3s							
LNSS	**Leonessa**	**0.19**	**270**	⇑P		**Pg**	**00 12 39.3**	**-0.3**
LNSS				S		**Sg**	**00 12 42.6**	**+0.2**
LNSS				AML	AML			
	comp=E,9360μm,0.7s							
LNSS				AML	AML			
	comp=N,7730μm,0.7s							
TERO	**Teramo**	**0.23**	**85**	⇑P		**Pg**	**00 12 39.8**	**-0.4**
TERO				S		**Sg**	**00 12 43.5**	**+0.2**
TERO				AML	AML			
	comp=E,9930μm,0.1s							
TERO				AML	AML			
	comp=N,14050μm,0.3s							
TERO				AML	AML			
	comp=E,9925μm,0.1s							
TERO				AML	AML			
	comp=N,15300μm,0.3s							
TERO				AML	AML			
	comp=E,9895μm,0.1s							
TERO				AML	AML			
	comp=E,11150μm,0.1s							

TERO					AML	AML			
	comp=N,14100µm,0.3s								
GIGS	**Gran Sasso**	**0.25**	**128**	⇑P	**Pg**	**00 12 40.3**	**-0.3**		
GIGS				S	**Sg**	**00 12 44.5**	**+0.4**		
GIGS				AML	AML				
	comp=N,1595µm,0.4s								
GIGS				AML	AML				
	comp=E,1375µm,1.3s								
AQU	**L'Aquila**	**0.26**	**163**	⇑P	**Pg**	**00 12 40.8**	**+0.1**		
AQU				AML	AML				
	comp=E,3020µm,1.1s								
AQU				AML	AML				
	comp=N,3100µm,0.4s								
AQU				AML	AML				
	comp=E,2970µm,1.1s								
AQU				AML	AML				
	comp=E,3025µm,1.1s								
AQU				AML	AML				
	comp=N,3200µm,0.4s								
NRCA	**Norcia**	**0.27**	**329**	P	**Pg**	**00 12 40.3**	**-0.6**		
NRCA				S	**Sg**	**00 12 44.4**	**-0.2**		
NRCA				AML	AML				
	comp=E,20650µm,0.1s								
NRCA				AML	AML				
	comp=N,10900µm,1.1s								
NRCA				AML	AML				
	comp=N,12100µm,1.0s								
NRCA				AML	AML				
	comp=E,20600µm,0.1s								
NRCA				AML	AML				
	comp=E,22550µm,0.1s								
FIAM	**Fiamignano**	**0.36**	**202**	⇑P	**Pg**	**00 12 42.4**	**-0.2**		
FIAM				AML	AML				
	comp=N,1315µm,0.6s								
FIAM				AML	AML				
	comp=E,1900µm,0.7s								
ARRO	**Arrone**	**0.40**	**267**	⇑P	**Pg**	**00 12 42.7**	**-0.5**		
ARRO				AML	AML				
	comp=N,1750µm,1.2s								
ARRO				AML	AML				
	comp=E,1630µm,0.2s								
ARRO				AML	AML				
	comp=N,1745µm,1.2s								
FAGN	**Fagnano**	**0.40**	**148**	⇓P	**Pg**	**00 12 43.2**	**-0.1**		
FAGN				AML	AML				
	comp=N,4200µm,1.6s								
FAGN				AML	AML				
	comp=E,3785µm,0.3s								
OFFI	**Offida**	**0.44**	**41**	⇑P	**Pg**	**00 12 44.2**	**+0.3**		
OFFI				AML	AML				
	comp=E,4475µm,0.6s								
OFFI				AML	AML				
	comp=N,4865µm,0.5s								
VCEL	**Villa Celiera**	**0.45**	**117**	⇓P	**Pg**	**00 12 44.4**	**+0.1**		
VCEL				AML	AML				
	comp=E,6775µm,0.3s								
VCEL				AML	AML				
	comp=N,5040µm,0.9s								
GUMA	**Gualdo di Mace**	**0.46**	**3**	P	**Pg**	**00 12 44.0**	**-0.4**		
GUMA				S	**Sb**	**00 12 51.5**	**-1.0**		
GUMA				AML	AML				
	comp=E,6010µm,0.5s								
GUMA				AML	AML				
	comp=N,6070µm,0.5s								
GUMA				AML	AML				
	comp=E,6625µm,0.4s								
GUMA				AML	AML				
	comp=N,7310µm,0.5s								
FDMO	**Fiordimonte**	**0.46**	**340**	P	**Pg**	**00 12 43.6**	**-0.8**		
FDMO				S	**Sg**	**00 12 50.8**	**+0.2**		
FDMO				AML	AML				
	comp=N,1250µm,0.4s								
FDMO				AML	AML				
	comp=E,1002µm,0.7s								
CSP1	**Cessapalombo**	**0.49**	**352**	P	**Pg**	**00 12 44.3**	**-0.8**		
CSP1				S	**Sg**	**00 12 51.8**	**+0.2**		
CSP1				AML	AML				
	comp=E,1412µm,0.4s								
CSP1				AML	AML				
	comp=N,2035µm,0.9s								
CSP1				AML	AML				
	comp=N,2030µm,0.9s								
CSP1				AML	AML				
	comp=E,1410µm,0.4s								
CESI	**CESI - Serrava**	**0.49**	**324**	⇓P	**Pg**	**00 12 44.4**	**-0.7**		
CESI				S	**Sg**	**00 12 51.9**	**+0.2**		
CESI				AML	AML				
	comp=N,2370µm,0.5s								
CESI				AML	AML				
	comp=E,1350µm,0.4s								
TRTR	**Tortoreto Alta**	**0.50**	**66**	⇑P	**Pb**	**00 12 45.8**	**-0.4**		
TRTR				AML	AML				
	comp=N,3935µm,0.5s								
TRTR				AML	AML				
	comp=E,3065µm,0.8s								
TRTR				AML	AML				
	comp=N,3940µm,0.5s								
T0110	**Collepietro**	**0.52**	**137**	⇑P	**Pg**	**00 12 45.3**	**-0.2**		
T0110				AML	AML				
	comp=E,2585µm,0.4s								
T0110				AML	AML				
	comp=N,3085µm,0.4s								
CESX	**Cesi**	**0.53**	**271**	⇓P	**Pg**	**00 12 45.1**	**-0.7**		
CESX				AML	AML				
	comp=N,2140µm,0.8s								
CESX				AML	AML				
	comp=E,1690µm,0.4s								
MNTP	**Montappone**	**0.55**	**13**	P	**Pg**	**00 12 45.9**	**-0.2**		
MNTP				AML	AML				
	comp=E,6180µm,0.3s								
MNTP				AML	AML				
	comp=N,3515µm,0.2s								
PTQR	**Pietraquaria**	**0.59**	**173**	P	**Pg**	**00 12 46.0**	**-0.8**		
PTQR				AML	AML				
	comp=E,321µm,1.1s								
PTQR				AML	AML				
	comp=N,318µm,0.9s								
ASSB	**Assisi San Ben**	**0.64**	**313**	⇑P	**Pg**	**00 12 47.0**	**-0.9**		
ASSB				AML	AML				
	comp=E,1060µm,0.8s								
ASSB				AML	AML				
	comp=N,1120µm,1.5s								
SRES	**S.Oreste - Sor**	**0.69**	**238**	P	**Pg**	**00 12 48.1**	**-0.7**		
SRES				AML	AML				
	comp=E,480µm,0.9s								
SRES				AML	AML				
	comp=N,364µm,0.4s								
CERT	**Cerreto**	**0.69**	**200**	P	**Pg**	**00 12 48.1**	**-0.7**		
CERT				AML	AML				
	comp=E,1278µm,0.4s								
CERT				AML	AML				
	comp=N,888µm,1.2s								
CERT				AML	AML				
	comp=E,1278µm,0.4s								
SNTG	**Esanatoglia**	**0.70**	**338**	P	**Pg**	**00 12 47.8**	**-1.2**		
SNTG				AML	AML				
	comp=E,310µm,1.4s								
SNTG				AML	AML				
	comp=N,430µm,0.2s								
MTCE	**Montecelio**	**0.71**	**216**	P	**Pg**	**00 12 48.0**	**-1.2**		
MTCE				AML	AML				
	comp=N,644µm,0.5s								
MTCE				AML	AML				
	comp=E,1059µm,0.4s								
MTCE				AML	AML				
	comp=N,644µm,0.5s								
EL6	**Elcito**	**0.74**	**349**	P	**Pg**	**00 12 48.6**	**-1.1**		
INTR	**Introdacqua**	**0.74**	**143**	P	**Pg**	**00 12 48.8**	**-0.9**		
INTR				AML	AML				
	comp=N,1014µm,1.0s								
INTR				AML	AML				
	comp=E,434µm,0.7s								
ATCC	**AVT- Casa Cast**	**0.76**	**320**	P	**Pg**	**00 12 49.0**	**-1.0**		
ATCC				AML	AML				
	comp=E,1048µm,0.5s								
ATCC				AML	AML				
	comp=N,820µm,0.5s								
VVLD	**Villa Vallelon**	**0.77**	**162**	⇑P	**Pg**	**00 12 50.1**	**-0.2**		
VVLD				AML	AML				
	comp=E,362µm,0.5s								
VVLD				AML	AML				
	comp=N,392µm,0.7s								
VVLD				AML	AML				
	comp=N,392µm,0.7s								
CING	**Cingoli**	**0.78**	**354**	P	**Pg**	**00 12 49.3**	**-1.0**		
CING				AML	AML				
	comp=E,1038µm,1.6s								
CING				AML	AML				
	comp=N,794µm,0.4s								
FOSV	**Fossato di Vic**	**0.80**	**330**	P	**Pg**	**00 12 49.5**	**-1.3**		
FOSV				AML	AML				
	comp=E,430µm,0.7s								
FOSV				AML	AML				
	comp=N,438µm,1.2s								
PP3	**Marolino**	**0.81**	**16**	⇑P	**Pg**	**00 12 50.8**	**-0.2**		
PP3				AML	AML				
	comp=E,2175µm,0.6s								
PP3				AML	AML				
	comp=N,1235µm,0.8s								
PP3				AML	AML				
	comp=N,1325µm,0.8s								
PP3				AML	AML				
	comp=E,2270µm,0.6s								
LPEL	**Lama dei Pelig**	**0.86**	**130**	⇓P	**Pg**	**00 12 50.9**	**-1.1**		
LPEL				AML	AML				
	comp=N,536µm,0.2s								
LPEL				AML	AML				
	comp=N,535µm,0.2s								
LPEL				AML	AML				
	comp=E,591µm,0.6s								
CAFR	**Castel Frentan**	**0.86**	**116**	⇓P	**Pg**	**00 12 51.6**	**-0.4**		
CAFR				AML	AML				
	comp=E,2µm,0.6s								
CAFR				AML	AML				
	comp=N,358µm,0.9s								
ATTE	**AVT- Monte Tez**	**0.91**	**311**	P	**Pg**	**00 12 52.0**	**-1.0**		
ATTE				AML	AML				
	comp=N,336µm,0.5s								
ATTE				AML	AML				
	comp=E,324µm,0.4s								
SSFR	**Montelago di S**	**0.91**	**336**	P	**Pg**	**00 12 52.1**	**-1.0**		
SSFR				AML	AML				
	comp=E,1230µm,0.3s								
SSFR				AML	AML				
	comp=E,1065µm,0.3s								
SSFR				AML	AML				
	comp=N,865µm,0.2s								
SSFR				AML	AML				
	comp=N,1115µm,0.3s								
MGAB	**Montegabbione**	**0.93**	**290**	P	**Pg**	**00 12 52.5**	**-0.8**		
MGAB				AML	AML				
	comp=E,1200µm,1.0s								
MGAB				AML	AML				
	comp=N,1190µm,0.5s								
MGAB				AML	AML				
	comp=N,1117µm,0.5s								
MGAB				AML	AML				
	comp=E,1044µm,1.1s								
ARVD	**Arcevia**	**0.93**	**344**	⇑P	**Pg**	**00 12 52.0**	**-1.3**		
ARVD				AML	AML				
	comp=E,348µm,1.3s								
ARVD				AML	AML				
	comp=N,295µm,0.9s								
ARVD				AML	AML				
	comp=E,347µm,1.3s								
POFI	**Posta Fibreno**	**0.94**	**161**	⇓P	**Pn**	**00 12 54.8**	**+0.1**		
POFI				AML	AML				
	comp=E,374µm,0.7s								
POFI				AML	AML				
	comp=N,221µm,1.3s								
RDP	**Rocca di Papa**	**0.95**	**207**	⇑P	**Pn**	**00 12 54.9**	**+0.1**		
RDP				AML	AML				
	comp=N,1910µm,0.4s								
RDP				AML	AML				
	comp=E,1520µm,0.5s								
AOI	**Ancona**	**0.97**	**13**	P	**Pg**	**00 12 53.4**	**-0.7**		
AOI				AML	AML				
	comp=N,510µm,0.9s								
AOI				AML	AML				
	comp=E,472µm,1.2s								
FRON	**Frontone**	**1.01**	**335**	P	**Pg**	**00 12 53.2**	**-1.6**		
FRON				AML	AML				
	comp=N,494µm,0.7s								
FRON				AML	AML				
	comp=E,445µm,0.5s								
ATVO	**AVT- Monte Val**	**1.02**	**320**	⇑P	**Pg**	**00 12 53.8**	**-1.2**		
ATVO				AML	AML				
	comp=N,294µm,0.6s								
ATVO				AML	AML				
	comp=E,345µm,0.6s								
COR1	**Corinaldo**	**1.05**	**348**	⇓P	**Pb**	**00 12 55.6**	**0.0**		
ATMI	**Monte Miggiano**	**1.05**	**314**	AML	AML				
	comp=E,879µm,1.3s								
ATMI				AML	AML				
	comp=N,1135µm,0.4s								
SACS	**San Casciano d**	**1.05**	**284**	⇑P	**Pn**	**00 12 56.5**	**+0.3**		
SACS				AML	AML				
	comp=E,1990µm,1.5s								
SACS				AML	AML				
	comp=E,380µm,0.7s								
SACS				AML	AML				
	comp=N,421µm,1.0s								
SACS				AML	AML				
	comp=N,3780µm,1.5s								
ATPI	**Pietralunga -**	**1.07**	**322**	P	**Pg**	**00 12 54.7**	**-1.3**		
ATPI				AML	AML				
	comp=E,401µm,0.6s								
ATPI				AML	AML				
	comp=N,335µm,0.6s								
PIEI	**Pieia**	**1.09**	**329**	P	**Pg**	**00 12 54.6**	**-1.7**		
PIEI				AML	AML				
	comp=E,268µm,0.3s								
PIEI				AML	AML				
	comp=N,393µm,0.5s								
MPAG	**Monte Paganucc**	**1.10**	**339**	P	**Pg**	**00 12 55.3**	**-1.3**		
MPAG				AML	AML				
	comp=E,44µm,0.9s								
MPAG				AML	AML				
	comp=N,57µm,0.6s								
TOLF	**Tolfa**	**1.10**	**241**	⇓P	**Pg**	**00 12 55.7**	**-1.0**		
TOLF				AML	AML				
	comp=E,344µm,0.7s								
TOLF				AML	AML				
	comp=N,434µm,0.9s								
NARO	**Abbazia di Nar**	**1.14**	**333**	AML	AML				
	comp=N,245µm,1.0s								
NARO				AML	AML				
	comp=E,260µm,1.0s								
CAFI	**Castiglion Fio**	**1.22**	**307**	⇑P	**Pb**	**00 12 58.0**	**-0.5**		
CAFI				AML	AML				
	comp=N,196µm,0.9s								
CAFI				AML	AML				
	comp=E,232µm,0.6s								
SF04	**Casetta**	**1.23**	**281**	⇓P	**Pg**	**00 12 59.4**	**+0.4**		
APRC	**Apricena**	**1.87**	**116**	P	**Pg**	**00 13 11.1**	**-0.1**		
DUGI	**Dugi Otok**	**1.89**	**42**	*e*Pn	**Pn**	**00 13 07.5**	**-0.2**		
VIRC	**Vir**	**2.12**	**37**	*e*Pn	**Pn**	**00 13 10.6**	**-0.2**		
MORI	**Morici**	**2.17**	**54**	*e*Pn	**Pn**	**00 13 11.6**	**+0.1**		
FNVD	**Fontana Vidola**	**2.23**	**315**	S	**Sb**	**00 13 44.0**	**+0.6**		
NVLJ	**Novalja**	**2.27**	**30**	*e*Pn	**Pn**	**00 13 12.8**	**0.0**		
MCRV	**Calabrutti - M**	**2.30**	**142**	P	**Pn**	**00 13 11.3**	**-2.0**		
MCRV				AML	AML				
	comp=N,31µm,0.9s								
MCRV				AML	AML				
	comp=E,37µm,0.6s								
BRJN	**Brijuni**	**2.32**	**8**	*e*Pn	**Pn**	**00 13 13.2**	**-0.4**		
RABC	**Rab**	**2.40**	**26**	*e*Pn	**Pn**	**00 13 14.6**	**-0.1**		
SMRN	**Sveta Marina**	**2.51**	**14**	*e*Pn	**Pn**	**00 13 15.7**	**-0.5**		
UDBI	**Udbina**	**2.63**	**42**	*e*Pn	**Pn**	**00 13 18.9**	**+1.0**		
GROG	**Isola di Gorgo**	**2.63**	**289**	S	**Sn**	**00 13 51.0**	**+1.2**		
LSTV	**Lastovo**	**2.65**	**85**	*e*Pn	**Pn**	**00 13 18.6**	**+0.4**		
KIJV	**Kijevo**	**2.67**	**57**	*e*Pn	**Pn**	**00 13 19.3**	**+1.0**		
MAKA	**Makarska**	**2.82**	**75**	*e*Pn	**Pn**	**00 13 20.9**	**+0.6**		
RICI	**Ricice**	**2.95**	**71**	*e*Pn	**Pn**	**00 13 23.6**	**+1.4**		
STON	**Ston**	**3.25**	**84**	*e*Pn	**Pn**	**00 13 25.6**	**-0.7**		
STON	**Ston**	**3.25**	**84**	*e*Pn	**Pn**	**00 13 26.1**	**-0.3**		
STON				*e*Sn	**Sn**	**00 14 04.2**	**-0.9**		
STON	**Ston**	**3.25**	**84**	⇓P	**Pn**	**00 13 26.1**	**-0.3**		
A251A	**Rujevac**	**3.31**	**39**	*e*Pn	**Pn**	**00 13 27.8**	**+0.6**		
OZLJ	**Ozalj**	**3.39**	**27**	*e*Pn	**Pn**	**00 13 27.3**	**-1.0**		
BLY	**Banja Luka**	**3.54**	**51**	*e*Pn	**Pb**	**00 13 35.7**	**-2.4**		
DOSS	**Dosso del Somm**	**3.61**	**336**	⇑P	**Pn**	**00 13 33.2**	**+1.7**		
MAGA	**Magasa**	**3.71**	**330**	⇓P	**Pn**	**00 13 33.6**	**+0.8**		
LUSI	**Trento, Gardas**	**3.76**	**334**	⇑P	**Pn**	**00 13 35.0**	**+1.6**		
MOSL	**Moslavina**	**3.90**	**38**	*e*Pn	**Pn**	**00 13 35.1**	**-0.3**		
OBKA	**Obir**	**4.01**	**12**	*e*Pn	**Pn**	**00 13 39.6**	**+2.7**		
	comp=E,0.6nm,0.2s								
KOSI	**Kohlern**	**4.10**	**341**	⇓P	**Pn**	**00 13 39.3**	**+1.1**		
ABTA	**Abfaltersbach**	**4.18**	**353**	*e*Pn	**Pn**	**00 13 40.3**	**+1.1**		
	comp=E,9.1nm,0.6s								
ABTA				*e*Sn	**Sn**	**00 14 30.2**	**+2.0**		
	comp=E,6.4nm,0.7s								
SOKA	**Soboth**	**4.26**	**16**	*i* Pn	**Pn**	**00 13 43.1**	**+2.8**		
	comp=E,0.3nm,0.2s								
PDG	**Podgorica**	**4.41**	**90**	*e*Pn	**Pn**	**00 13 44.3**	**+2.1**		
PDG				*e*Sn	**Sn**	**00 14 34.4**	**+0.9**		
BBLS	**Lazići**	**4.64**	**72**	*e*Pn	**Pn**	**00 13 47.5**	**+2.0**		
BBLS				*e*Sn	**Sn**	**00 14 42.4**	**+3.0**		
FETA	**Feichten**	**4.78**	**338**	*e*Pn	**Pn**	**00 13 51.7**	**+4.2**		
	comp=E,1.0nm,0.4s								
FETA				*e*Sn	**Sn**	**00 14 47.2**	**+4.2**		
	comp=E,2.1nm,0.6s								
WTTA	**Wattenberg**	**4.81**	**346**	*e*Pn	**Pn**	**00 13 50.9**	**+3.0**		
	comp=E,0.6nm,0.2s								
SQTA	**Sankt Quirin**	**4.85**	**343**	*e*Pn	**Pn**	**00 13 52.0**	**+3.5**		
	comp=E,1.4nm,0.3s								
WATA	**Walderalm**	**4.89**	**346**	*e*Pn	**Pn**	**00 13 51.8**	**+2.8**		
	comp=E,0.7nm,0.2s								
ARSA	**Arzberg**	**4.91**	**18**	*e*Pn	**Pb**	**00 13 58.3**	**-3.1**		
	comp=E,1.4nm,0.4s								
SJES	**Sjenica**	**4.94**	**80**	*e*Pn	**Pn**	**00 13 52.0**	**+2.2**		
SJES				*e*Sn	**Sn**	**00 14 49.1**	**+2.1**		
MOTA	**Moosalm**	**4.99**	**343**	*e*Pn	**Pn**	**00 13 51.6**	**+1.2**		
	comp=E,0.3nm,0.2s								
IVAS	**Ivanjica**	**5.11**	**77**	*e*Pn	**Pn**	**00 13 53.2**	**+1.2**		
IVAS				*e*Sn	**Sn**	**00 14 51.3**	**+0.2**		
RETA	**Reutte**	**5.20**	**341**	*e*Pn	**Pn**	**00 13 55.5**	**+2.2**		
	comp=E,0.4nm,0.3s								
DAVA	**Damuels**	**5.27**	**334**	*e*Pn	**Pn**	**00 13 58.1**	**+3.7**		
	comp=E,0.5nm,0.2s								
MOA	**Molln**	**5.29**	**7**	*i* Pn	**Pn**	**00 13 57.5**	**+3.1**		
	comp=E,0.9nm,0.3s								
MOA				*e*Sn	**Sn**	**00 14 55.3**	**-0.1**		
	comp=E,2.6nm,0.6s								
CONA	**Conrad Observa**	**5.62**	**18**	*e*Pn	**Pn**	**00 14 02.2**	**+3.2**		
	comp=E,0.4nm,0.2s								
CKRC	**Cesky Krumlov**	**6.26**	**6**	*e*SN	**Sn**	**00 15 16.2**	**-3.0**		
BARS	**Barje**	**6.28**	**85**	*e*Pn	**Pn**	**00 14 09.5**	**+1.5**		
BARS				*e*Sn	**Sn**	**00 15 20.7**	**+1.0**		
PRVS	**Prvonek**	**6.48**	**88**	*e*Pn	**Pn**	**00 14 12.0**	**+1.2**		
PRVS				*e*Sn	**Sn**	**00 15 24.0**	**-0.8**		
KHC	**Kasperske Hory**	**6.53**	**2**	*e*PN	**Pn**	**00 14 14.1**	**+2.6**		
KHC				*e*SN	**Sn**	**00 15 23.6**	**-2.4**		
ZAPS	**Zavoj**	**6.88**	**81**	*e*Pn	**Pn**	**00 14 18.2**	**+1.9**		
ZAPS				*e*Sn	**Sn**	**00 15 33.1**	**-1.6**		

ATH 25 00:13:36.5,38°62N×23°43E,h10km±6km,ML1.5/2,Error ellipse: s-maj=6.0km s-min=0.9km az=85.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAL	**Atalanti**	**0.33**	**283**	P	Pg	00 13 42.4	-0.6
ATAL				S	Sg	00 13 47.2	-0.1
ATAL				AML	AML	00 13 49.0	
	comp=N,119µm,0.3s						
ATAL				AML	AML	00 13 55.5	
	comp=E,134µm,0.5s						
VIL2	**Platees**	**0.43**	**197**	P	Pg	00 13 45.1	+0.3
VIL2				S	Sb	00 13 52.0	-0.6
VIL2				AML	AML	00 13 53.3	
	comp=E,383µm,0.3s						
VIL2				AML	AML	00 13 53.3	
	comp=N,277µm,0.3s						
KYMI	**Kymi, Euboea I**	**0.53**	**88**	P	Pg	00 13 46.4	-0.4
KYMI				S	Sg	00 13 54.5	+0.8
AXAR	**Agios Charalam**	**0.62**	**284**	P	Pg	00 13 47.9	-0.5
AXAR				S	Sg	00 13 57.2	+0.7
DION	**Dionisos Attik**	**0.67**	**143**	P	Pg	00 13 49.1	-0.3
DION				S	Sg	00 13 58.3	0.0
LTK	**Loutraki**	**0.70**	**211**	P	Pg	00 13 49.4	-0.5
LTK				S	Sb	00 14 00.2	-0.2
ATHU	**Athens Univers**	**0.71**	**156**	P	Pg	00 13 49.5	-0.7
XOR	**Xorichti**	**0.77**	**346**	P	Pg	00 13 51.1	-0.1
XOR				S	Sg	00 14 01.2	-0.2
VLY	**Voula,Athens**	**0.82**	**159**	P	Pg	00 13 51.2	-1.1
VLY				S	Sg	00 14 02.9	-0.1
THAL	**Thalero**	**0.83**	**226**	P	Pg	00 13 52.0	-0.5
THAL				S	Sb	00 14 04.0	-0.4
KLV	**Kalavryta, Ach**	**1.16**	**241**	P	Pb	00 13 58.4	-0.2

ROM 25 00:16:15.0±0.1,42°754N±0°004×13°109E±0°006,h8km,ML2.5/20,5C-2D,Error ellipse: s-maj=0.4km s-min=0.3km az=243.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.07**	**86**	END			
NRCA	**Norcia**	**0.08**	**3**	P	Pg	00 16 17.5	+0.3
NRCA				AML	AML		
	comp=E,5990µm,0.2s						
NRCA				AML	AML		
	comp=E,6470µm,0.2s						
NRCA				AML	AML		
	comp=E,5985µm,0.2s						
NRCA				AML	AML		
	comp=N,5210µm,1.5s						
NRCA				AML	AML		
	comp=E,6465µm,0.2s						
NRCA				AML	AML		
	comp=N,5395µm,1.5s						
NRCA				AML	AML		
	comp=E,7790µm,0.1s						
NRCA				AML	AML		
	comp=N,5215µm,1.5s						
NRCA				AML	AML		
	comp=E,8475µm,0.1s						
NRCA				AML	AML		
	comp=N,5575µm,0.1s						
NRCA				AML	AML		
	comp=E,7795µm,0.1s						
NRCA				END			
T1202	**Accumoli, Fraz**	**0.10**	**120**	END			
T1242	**Castelluccio d**	**0.10**	**43**	END			
LNSS	**Leonessa**	**0.16**	**199**	P	Pg	00 16 19.3	+0.9
LNSS				END			
T1243	**Rocca Santa Ma**	**0.26**	**103**	END			
RM33	**Pellescritta (**	**0.26**	**162**	P	Pg	00 16 20.9	+0.7
RM33				S	Sb	00 16 25.4	-1.3
RM33				END			
FDMO	**Fiordimonte**	**0.28**	**357**	P	Pg	00 16 21.2	+0.5
FDMO				S	Sb	00 16 26.4	-1.0
FDMO				AML	AML		
	comp=E,461µm,1.1s						
FDMO				AML	AML		
	comp=N,442µm,0.5s						
FDMO				AML	AML		
	comp=N,650µm,0.3s						
FDMO				AML	AML		
	comp=E,488µm,1.1s						
FDMO				END			
T1211	**Morro Reatino**	**0.29**	**220**	END			
CESI	**CESI - Serrava**	**0.29**	**329**	P	Pg	00 16 21.6	+0.7
CESI				S	Sb	00 16 26.4	-1.3
CESI				AML	AML		
	comp=E,744µm,1.1s						
CESI				AML	AML		
	comp=N,1370µm,0.4s						
CESI				AML	AML		
	comp=E,745µm,1.1s						
CESI				AML	AML		
	comp=N,1375µm,0.4s						
CESI				END			
ARRO	**Arrone**	**0.31**	**236**	P	Pg	00 16 21.9	+0.9
ARRO				AML	AML		
	comp=E,618µm,1.3s						
ARRO				AML	AML		
	comp=N,544µm,1.2s						
ARRO				AML	AML		
	comp=E,617µm,1.3s						
ARRO				AML	AML		
	comp=N,544µm,1.2s						
CAMP	**Campotosto**	**0.31**	**134**	P	Pg	00 16 21.9	+0.7
CAMP				S	Sb	00 16 27.2	-1.0
CAMP				AML	AML		
	comp=N,2195µm,0.4s						
CAMP				AML	AML		
	comp=N,2190µm,0.4s						
CAMP				AML	AML		
	comp=E,5175µm,0.2s						
CAMP				END			
CSP1	**Cessapalombo**	**0.34**	**12**	P	Pg	00 16 22.5	+0.6
CSP1				S	Sb	00 16 28.1	-1.1
CSP1				AML	AML		
	comp=E,537µm,1.1s						
CSP1				AML	AML		
	comp=N,543µm,1.3s						

CSP1				END				
GUMA	**Gualdo di Mace**	**0.35**	**28**	P	Pb	00 16 22.9	-0.7	
GUMA				S	Sb	00 16 29.1	-0.2	
GUMA				AML	AML			
	comp=E,1370µm,0.4s							
GUMA				AML	AML			
	comp=N,2320µm,0.4s							
GUMA				AML	AML			
	comp=E,1395µm,0.3s							
GUMA				AML	AML			
	comp=E,1775µm,0.4s							
GUMA				AML	AML			
	comp=N,2315µm,0.4s							
GUMA				AML	AML			
	comp=N,2115µm,0.4s							
GUMA				AML	AML			
	comp=E,1735µm,0.5s							
GUMA				END				
TERO	**Teramo**	**0.39**	**110**	P	Pg	00 16 23.1	+0.5	
TERO				S	Sb	00 16 29.4	-1.0	
TERO				AML	AML			
	comp=N,4440µm,0.9s							
TERO				AML	AML			
	comp=E,4160µm,0.3s							
TERO				AML	AML			
	comp=E,4495µm,1.1s							
TERO				AML	AML			
	comp=N,5060µm,0.9s							
TERO				AML	AML			
	comp=E,4155µm,0.3s							
CESX	**Cesi**	**0.42**	**250**	P	Pg	00 16 23.9	+0.8	
CESX				S	Sb	00 16 30.3	-0.8	
CESX				AML	AML			
	comp=E,345µm,0.3s							
CESX				AML	AML			
	comp=N,374µm,0.2s							
CESX				AML	AML			
	comp=N,456µm,1.4s							
CESX				AML	AML			
	comp=E,360µm,0.7s							
ASSB	**Assisi San Ben**	**0.44**	**311**	P	Pb	00 16 24.7	-0.4	
ASSB				S	Sb	00 16 31.4	-0.5	
ASSB				AML	AML			
	comp=E,267µm,0.5s							
ASSB				AML	AML			
	comp=N,300µm,0.2s							
ASSB				AML	AML			
	comp=E,374µm,0.8s							
ASSB				AML	AML			
	comp=N,502µm,0.6s							
GIGS	**Gran Sasso**	**0.46**	**132**	P	Pg	00 16 24.5	+0.6	
GIGS				S	Sb	00 16 31.6	-0.7	
GIGS				AML	AML			
	comp=N,432µm,0.4s							
GIGS				AML	AML			
	comp=E,431µm,0.2s							
OFFI	**Offida**	**0.46**	**67**	P	Pb	00 16 25.5	+0.1	
OFFI				AML	AML			
	comp=E,722µm,0.4s							
OFFI				AML	AML			
	comp=N,691µm,0.8s							
OFFI				AML	AML			
	comp=E,2570µm,0.5s							
OFFI				AML	AML			
	comp=N,2030µm,0.6s							
ATCC	**AVT- Casa Cast**	**0.55**	**322**	⇑P	Pg	00 16 26.2	+0.5	
ATCC				AML	AML			
	comp=E,304µm,1.5s							
ATCC				AML	AML			
	comp=E,304µm,1.5s							
ATCC				AML	AML			
	comp=N,306µm,1.1s							
ATCC				AML	AML			
	comp=E,396µm,0.6s							
ATCC				AML	AML			
	comp=N,389µm,0.6s							
ATCC				AML	AML			
	comp=N,390µm,0.6s							
EL6	**Elcito**	**0.57**	**359**	⇓P	Pg	00 16 26.5	+0.3	
FOSV	**Fossato di Vic**	**0.60**	**335**	⇓P	Pg	00 16 26.9	+0.3	
FOSV				AML	AML			
	comp=E,122µm,0.3s							
FOSV				AML	AML			
	comp=N,180µm,1.4s							
FOSV				AML	AML			
	comp=E,204µm,0.7s							
FOSV				AML	AML			
	comp=N,216µm,0.9s							
FOSV				AML	AML			
	comp=E,205µm,0.7s							
FAGN	**Fagnano**	**0.60**	**144**	⇑P	Pg	00 16 26.8	+0.2	
FAGN				AML	AML			
	comp=E,1430µm,0.4s							
FAGN				AML	AML			
	comp=N,1270µm,0.8s							
FAGN				AML	AML			
	comp=E,1785µm,0.4s							
FAGN				AML	AML			
	comp=N,1770µm,0.3s							
CING	**Cingoli**	**0.62**	**6**	S	Sb	00 16 38.0	+0.8	
VCEL	**Villa Celiera**	**0.65**	**123**	P	Pb	00 16 28.6	-0.1	
VCEL				AML	AML			
	comp=E,1395µm,0.4s							
VCEL				AML	AML			
	comp=N,1915µm,0.3s							
VCEL				AML	AML			
	comp=N,2000µm,0.4s							
VCEL				AML	AML			
	comp=E,2180µm,0.3s							
VCEL				AML	AML			
	comp=N,2005µm,0.4s							
SRES	**S.Oreste - Sor**	**0.68**	**221**	P	Pb	00 16 29.2	0.0	
SRES				AML	AML			
	comp=E,75µm,0.9s							
SRES				AML	AML			
	comp=N,88µm,1.1s							
SRES				AML	AML			
	comp=E,178µm,0.4s							
SRES				AML	AML			
	comp=N,138µm,1.3s							
T0110	**Collepietro**	**0.72**	**137**	⇑P	Pg	00 16 29.0	+0.1	
T0110				AML	AML			
	comp=E,944µm,0.4s							
T0110				AML	AML			
	comp=N,959µm,0.5s							
T0110				AML	AML			
	comp=N,960µm,0.5s							
T0110				AML	AML			
	comp=E,949µm,0.7s							
ARVD	**Arcevia**	**0.75**	**351**	⇑P	Pb	00 16 30.1	-0.3	
ARVD				S	Sb	00 16 42.0	+1.1	
ARVD				AML	AML			
	comp=E,80µm,0.7s							
ARVD				AML	AML			
	comp=N,80µm,1.1s							
ARVD				AML	AML			
	comp=E,142µm,0.7s							
ARVD				AML	AML			
	comp=N,136µm,1.1s							
FRON	**Frontone**	**0.81**	**340**	⇑P	Pg	00 16 31.0	+0.4	
FRON				AML	AML			
	comp=E,84µm,0.7s							
FRON				AML	AML			
	comp=N,112µm,0.8s							
FRON				AML	AML			
	comp=E,202µm,0.6s							
FRON				AML	AML			
	comp=N,188µm,0.9s							
PTRJ	**Pietraroja**	**1.75**	**142**	S	Sn	00 17 08.0	-0.3	
GROG	**Isola di Gorgo**	**2.45**	**287**	S	Sn	00 17 26.0	+0.5	

ROM 25 00:17:03.0±0.1, 42°620N±0°004×13°297E±0°006, h8km, ML2.6/29, 17C-13D, Error ellipse: s-maj=0.5km s-min=0.3km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**135**	⇑P	Pg	00 17 06.3	+0.7
CAMP				S	Sg	00 17 08.4	+0.9
CAMP				AML	AML		
	comp=E,5175µm,0.2s						
CAMP				AML	AML		
	comp=N,2195µm,0.4s						
CAMP				AML	AML		
	comp=N,2190µm,0.4s						
RM33	**Pellescritta (**	**0.13**	**209**	P	Pg	00 17 06.4	+0.6
RM33				S	Sg	00 17 09.1	+1.4
RM33				AML	AML		
	comp=E,6965µm,0.6s						
RM33				AML	AML		
	comp=E,6890µm,0.6s						
RM33				AML	AML		
	comp=N,6035µm,0.3s						
RM33				AML	AML		
	comp=E,6885µm,0.6s						
RM33				AML	AML		
	comp=N,5975µm,0.3s						
RM33				AML	AML		
	comp=E,6970µm,0.6s						
LNSS	**Leonessa**	**0.19**	**265**	⇑P	Pg	00 17 07.6	+0.8
LNSS				S	Sg	00 17 11.3	+1.7
LNSS				AML	AML		
	comp=N,2325µm,0.1s						
LNSS				AML	AML		
	comp=N,2320µm,0.1s						
LNSS				AML	AML		
	comp=E,3210µm,0.4s						
TERO	**Teramo**	**0.23**	**89**	P	Pg	00 17 08.1	+0.5
TERO				S	Sg	00 17 11.6	+0.9
TERO				AML	AML		
	comp=E,4495µm,1.1s						
TERO				AML	AML		
	comp=N,5060µm,0.9s						
TERO				AML	AML		
	comp=E,4160µm,0.3s						
TERO				AML	AML		
	comp=E,4155µm,0.3s						
TERO				AML	AML		
	comp=N,4440µm,0.9s						
NRCA	**Norcia**	**0.25**	**328**	⇑P	Pg	00 17 08.8	+0.8
NRCA				S	Sg	00 17 12.8	+1.3
NRCA				AML	AML		
	comp=N,5115µm,0.1s						
NRCA				AML	AML		
	comp=E,7790µm,0.1s						
NRCA				AML	AML		
	comp=E,8475µm,0.1s						
NRCA				AML	AML		
	comp=E,7795µm,0.1s						
NRCA				AML	AML		
	comp=N,5575µm,0.1s						
GIGS	**Gran Sasso**	**0.26**	**130**	⇓P	Pg	00 17 08.7	+0.5
GIGS				S	Sg	00 17 13.0	+1.2
GIGS				AML	AML		
	comp=N,432µm,0.4s						
GIGS				AML	AML		
	comp=E,431µm,0.2s						
AQU	**L'Aquila**	**0.28**	**164**	P	Pg	00 17 09.1	+0.6
AQU				S	Sb	00 17 14.1	-1.1
FIAM	**Fiamignano**	**0.38**	**201**	⇑P	Pg	00 17 10.8	+0.4
FIAM				S	Sb	00 17 16.9	-1.1
FIAM				AML	AML		
	comp=E,571µm,0.5s						
FIAM				AML	AML		
	comp=N,472µm,0.8s						
FEMA	**Monte Fema**	**0.39**	**332**	P	Pg	00 17 11.3	+0.7
FEMA				S	Sb	00 17 17.3	-1.1
ARRO	**Arrone**	**0.39**	**264**	⇓P	Pg	00 17 11.1	+0.5
ARRO				S	Sg	00 17 17.0	+1.2
ARRO				AML	AML		
	comp=E,493µm,0.5s						
ARRO				AML	AML		
	comp=N,403µm,0.3s						
FAGN	**Fagnano**	**0.41**	**149**	⇑P	Pg	00 17 11.7	+0.6
FAGN				S	Sb	00 17 19.1	+0.1
FAGN				AML	AML		
	comp=E,1785µm,0.4s						
FAGN				AML	AML		
	comp=N,1770µm,0.3s						
OFFI	**Offida**	**0.42**	**42**	⇑P	Pb	00 17 12.5	-0.2
OFFI				S	Sb	00 17 19.7	+0.3
OFFI				AML	AML		
	comp=E,2570µm,0.5s						
OFFI				AML	AML		
	comp=N,2030µm,0.6s						
GUMA	**Gualdo di Mace**	**0.44**	**4**	⇑P	Pb	00 17 12.4	-0.7
GUMA				AML	AML		
	comp=N,1975µm,0.3s						
GUMA				AML	AML		
	comp=E,1735µm,0.5s						
GUMA				AML	AML		
	comp=E,1775µm,0.4s						
GUMA				AML	AML		
	comp=N,1970µm,0.3s						
GUMA				AML	AML		
	comp=N,1895µm,0.5s						
FDMO	**Fiordimonte**	**0.44**	**340**	⇑P	Pg	00 17 12.0	+0.4
FDMO				S	Sb	00 17 19.2	-0.7
FDMO				AML	AML		
	comp=E,488µm,1.1s						
FDMO				AML	AML		
	comp=N,650µm,0.3s						
VCEL	**Villa Celiera**	**0.46**	**119**	⇓P	Pb	00 17 12.9	-0.5
VCEL				AML	AML		
	comp=N,2000µm,0.4s						
VCEL				AML	AML		
	comp=E,2180µm,0.3s						
VCEL				AML	AML		
	comp=N,2005µm,0.4s						
CSP1	**Cessapalombo**	**0.48**	**352**	⇑P	Pg	00 17 12.7	+0.4
CESI	**CESI - Serrava**	**0.48**	**323**	⇑P	Pg	00 17 12.8	+0.5
CESI				S	Sb	00 17 20.3	-0.7
CESI				AML	AML		
	comp=E,704µm,0.4s						
CESI				AML	AML		
	comp=N,1076µm,0.4s						
CESI				AML	AML		
	comp=N,1075µm,0.4s						
CESI				AML	AML		
	comp=E,704µm,0.4s						
TRTR	**Tortoreto Alta**	**0.49**	**67**	⇑P	Pb	00 17 14.1	+0.2
TRTR				AML	AML		
	comp=E,2160µm,0.5s						
TRTR				AML	AML		
	comp=N,1395µm,0.3s						
CESX	**Cesi**	**0.53**	**269**	⇑P	Pg	00 17 13.6	+0.4
CESX				S	Sb	00 17 22.2	-0.1
CESX				AML	AML		
	comp=E,360µm,0.7s						
CESX				AML	AML		
	comp=N,456µm,1.4s						
T0110	**Collepietro**	**0.53**	**138**	⇓P	Pg	00 17 13.6	+0.4
T0110				AML	AML		
	comp=E,948µm,0.7s						
T0110				AML	AML		
	comp=E,949µm,0.7s						
T0110				AML	AML		
	comp=N,959µm,0.5s						
T0110				AML	AML		
	comp=N,960µm,0.5s						
ASSB	**Assisi San Ben**	**0.63**	**312**	⇓P	Pg	00 17 15.7	+0.6
ASSB				S	Sb	00 17 25.3	0.0
ASSB				AML	AML		
	comp=N,502µm,0.6s						
ASSB				AML	AML		
	comp=E,374µm,0.8s						
SNTG	**Esanatoglia**	**0.69**	**338**	⇓P	Pg	00 17 16.7	+0.5
SNTG				S	Sb	00 17 28.0	+1.1
SNTG				AML	AML		
	comp=E,269µm,0.1s						
SNTG				AML	AML		
	comp=N,202µm,0.1s						
SRES	**S.Oreste - Sor**	**0.70**	**237**	⇑P	Pg	00 17 16.6	+0.2
SRES				AML	AML		
	comp=N,138µm,1.3s						
SRES				AML	AML		
	comp=E,178µm,0.4s						
CERT	**Cerreto**	**0.71**	**199**	⇑P	Pb	00 17 17.5	-0.1
CERT				AML	AML		
	comp=E,516µm,0.6s						
CERT				AML	AML		
	comp=N,344µm,0.4s						
EL6	**Elcito**	**0.72**	**349**	S	Sb	00 17 29.0	+1.0
MTCE	**Montecelio**	**0.72**	**215**	⇓P	Pg	00 17 16.6	-0.3
MTCE				AML	AML		
	comp=E,564µm,0.4s						
MTCE				AML	AML		
	comp=N,272µm,1.3s						
ATCC	**AVT- Casa Cast**	**0.74**	**320**	⇓P	Pg	00 17 17.6	+0.4
ATCC				AML	AML		
	comp=E,395µm,0.6s						
ATCC				AML	AML		
	comp=N,389µm,0.6s						
ATCC				AML	AML		
	comp=E,396µm,0.6s						
ATCC				AML	AML		
	comp=N,390µm,0.6s						
INTR	**Introdacqua**	**0.76**	**143**	⇓P	Pg	00 17 17.1	-0.4
INTR				AML	AML		
	comp=E,266µm,0.5s						
INTR				AML	AML		
	comp=N,377µm,0.6s						
FOSV	**Fossato di Vic**	**0.78**	**330**	⇑P	Pg	00 17 18.1	+0.2
FOSV				AML	AML		
	comp=E,204µm,0.7s						
FOSV				AML	AML		
	comp=N,216µm,0.9s						
FOSV				AML	AML		
	comp=E,205µm,0.7s						
PP3	**Marolino**	**0.79**	**17**	⇑P	Pb	00 17 19.5	+0.5
PP3				AML	AML		
	comp=E,884µm,0.7s						
PP3				AML	AML		
	comp=E,932µm,0.7s						
PP3				AML	AML		
	comp=N,685µm,0.5s						
PP3				AML	AML		
	comp=E,928µm,0.7s						
PP3				AML	AML		
	comp=E,880µm,0.7s						
PP3				AML	AML		
	comp=N,672µm,0.6s						
PP3				AML	AML		
	comp=N,686µm,0.5s						
ARVD	**Arcevia**	**0.92**	**344**	S	Sn	00 17 35.0	-0.6
MGAB	**Montegabbione**	**0.92**	**289**	⇓P	Pb	00 17 21.1	-0.1
MGAB				AML	AML		
	comp=N,326µm,0.4s						
MGAB				AML	AML		
	comp=N,296µm,0.5s						
MGAB				AML	AML		
	comp=E,420µm,0.6s						
MGAB				AML	AML		
	comp=E,522µm,0.5s						
RDP	**Rocca di Papa**	**0.96**	**207**	⇓P	Pn	00 17 23.4	+0.6
COR1	**Corinaldo**	**1.03**	**348**	⇓P	Pn	00 17 23.9	+0.1
COR1				AML	AML		
	comp=E,8000µm,1.6s						
COR1				AML	AML		
	comp=N,850µm,1.6s						
PIEI	**Pieia**	**1.07**	**329**	⇑P	Pg	00 17 23.6	+0.1
PIEI				AML	AML		
	comp=N,108µm,1.5s						
PIEI				AML	AML		
	comp=E,99µm,0.5s						
NARO	**Abbazia di Nar**	**1.12**	**332**	⇓P	Pg	00 17 24.4	-0.1
NARO				AML	AML		
	comp=E,94µm,0.6s						
NARO				AML	AML		
	comp=N,87µm,1.3s						
NARO				AML	AML		
	comp=N,87µm,1.3s						
NARO				AML	AML		
	comp=E,95µm,0.6s						

ROM 25 00:19:15.4±0.1, 42°721N±0°004×13°208E±0°007, h10km, ML2.1/25, 15C-8D, Error ellipse: s-maj=0.6km s-min=0.2km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.13**	**329**	⇓P	Pg	00 19 19.1	+0.5
NRCA				S	Sg	00 19 21.3	+0.4
NRCA				AML	AML		
	comp=E,9560µm,1.3s						
NRCA				AML	AML		
	comp=N,14800µm,0.1s						
NRCA				AML	AML		
	comp=N,16200µm,0.1s						
NRCA				AML	AML		
	comp=E,9540µm,1.3s						
NRCA				AML	AML		
	comp=E,10300µm,0.1s						
NRCA				AML	AML		
	comp=E,9555µm,1.3s						
LNSS	**Leonessa**	**0.17**	**226**	⇑P	Pg	00 19 19.9	+0.7
LNSS				S	Sg	00 19 22.9	+1.1
LNSS				AML	AML		
	comp=E,1850µm,0.8s						
LNSS				AML	AML		
	comp=N,1710µm,0.4s						
LNSS				AML	AML		
	comp=N,1715µm,0.4s						
LNSS				AML	AML		
	comp=E,1845µm,0.8s						
RM33	**Pellescritta (**	**0.21**	**179**	⇑P	Pb	00 19 20.7	-0.7
RM33				S	Sg	00 19 24.3	+1.4
RM33				AML	AML		
	comp=E,356µm,0.1s						
RM33				AML	AML		
	comp=E,357µm,0.1s						
RM33				AML	AML		
	comp=N,455µm,0.2s						
CAMP	**Campotosto**	**0.24**	**141**	⇑P	Pg	00 19 21.0	+0.6
CAMP				S	Sg	00 19 24.9	+1.2
CAMP				AML	AML		
	comp=N,238µm,0.4s						
CAMP				AML	AML		
	comp=E,376µm,0.2s						
TERO	**Teramo**	**0.31**	**108**	⇑P	Pg	00 19 22.1	+0.4
TERO				AML	AML		
	comp=N,592µm,0.3s						
TERO				AML	AML		
	comp=E,584µm,0.2s						
TERO				AML	AML		
	comp=N,623µm,0.6s						
TERO				AML	AML		
	comp=N,622µm,0.6s						
TERO				AML	AML		
	comp=E,564µm,0.2s						
FDMO	**Fiordimonte**	**0.33**	**344**	⇑P	Pg	00 19 22.3	+0.3
FDMO				S	Sg	00 19 27.5	+1.1
FDMO				AML	AML		
	comp=N,2140µm,0.2s						
FDMO				AML	AML		
	comp=E,1595µm,0.2s						
GUMA	**Gualdo di Mace**	**0.35**	**15**	P	Pb	00 19 23.4	-0.5
GUMA				S	Sb	00 19 29.3	-0.1
GUMA				AML	AML		
	comp=N,2105µm,0.4s						
GUMA				AML	AML		
	comp=E,2355µm,0.2s						
GUMA				AML	AML		
	comp=N,2110µm,0.4s						
GUMA				AML	AML		
	comp=E,3300µm,0.2s						
GUMA				AML	AML		
	comp=E,2350µm,0.2s						
GUMA				AML	AML		
	comp=N,2200µm,0.4s						
ARRO	**Arrone**	**0.36**	**247**	⇑P	Pg	00 19 22.9	+0.4
ARRO				S	Sb	00 19 28.7	-0.7
ARRO				AML	AML		
	comp=E,258µm,1.5s						
ARRO				AML	AML		
	comp=N,154µm,1.0s						
ARRO				AML	AML		
	comp=E,258µm,1.5s						
CESI	**CESI - Serrava**	**0.36**	**322**	⇑P	Pg	00 19 22.9	+0.3
CESI				S	Sb	00 19 28.6	-1.1
CESI				AML	AML		
	comp=E,891µm,0.3s						
CESI				AML	AML		
	comp=N,1415µm,0.3s						
CESI				AML	AML		
	comp=E,890µm,0.3s						
CSP1	**Cessapalombo**	**0.37**	**360**	⇑P	Pg	00 19 23.2	+0.4
CSP1				AML	AML		
	comp=E,648µm,0.2s						
CSP1				AML	AML		
	comp=N,753µm,1.3s						
CSP1				AML	AML		
	comp=E,651µm,1.3s						
CSP1				AML	AML		
	comp=N,750µm,1.3s						
GIGS	**Gran Sasso**	**0.38**	**135**	⇓P	Pg	00 19 23.2	+0.3
GIGS				S	Sg	00 19 29.0	+1.0
GIGS				AML	AML		

	comp=E,91μm,0.1s							
GIGS					AML	AML		
	comp=E,92μm,0.1s							
GIGS					AML	AML		
	comp=N,52μm,1.4s							
GIGS					AML	AML		
	comp=E,92μm,0.1s							
GIGS					AML	AML		
	comp=N,51μm,1.4s							
AQU	**L'Aquila**	**0.39**	**159**	⇓P		Pg	00 19 23.7	+0.6
AQU					AML	AML		
	comp=N,125μm,0.9s							
AQU					AML	AML		
	comp=E,118μm,1.1s							
OFFI	**Offida**	**0.41**	**59**	⇑P		Pb	00 19 24.9	+0.1
OFFI					AML	AML		
	comp=N,660μm,1.2s							
OFFI					AML	AML		
	comp=E,542μm,1.1s							
FIAM	**Fiamignano**	**0.46**	**188**	⇑P		Pg	00 19 24.5	+0.1
FIAM					AML	AML		
	comp=E,117μm,0.4s							
FIAM					AML	AML		
	comp=N,100μm,0.5s							
FIAM					AML	AML		
	comp=E,117μm,0.4s							
FIAM					AML	AML		
	comp=N,99μm,0.5s							
CESX	**Cesi**	**0.48**	**257**	⇑P		Pg	00 19 25.2	+0.5
CESX					AML	AML		
	comp=E,104μm,1.2s							
CESX					AML	AML		
	comp=E,104μm,1.2s							
CESX					AML	AML		
	comp=N,111μm,0.3s							
ASSB	**Assisi San Ben**	**0.52**	**309**	⇓P		Pg	00 19 25.4	-0.1
ASSB					S	Sb	00 19 33.5	-0.6
ASSB					AML	AML		
	comp=E,696μm,0.3s							
ASSB					AML	AML		
	comp=N,520μm,0.3s							
TRTR	**Tortoreto Alta**	**0.53**	**80**	⇓P		Pb	00 19 27.3	+0.6
TRTR					AML	AML		
	comp=E,659μm,0.8s							
TRTR					AML	AML		
	comp=N,696μm,0.6s							
FAGN	**Fagnano**	**0.53**	**148**	⇑P		Pg	00 19 25.5	-0.3
FAGN					AML	AML		
	comp=N,171μm,0.3s							
FAGN					AML	AML		
	comp=E,216μm,0.5s							
FAGN					AML	AML		
	comp=N,170μm,0.3s							
SNTG	**Esanatoglia**	**0.57**	**340**	P		Pg	00 19 26.5	0.0
SNTG					AML	AML		
	comp=E,176μm,0.2s							
SNTG					AML	AML		
	comp=N,222μm,0.8s							
SNTG					AML	AML		
	comp=N,222μm,0.8s							
SNTG					AML	AML		
	comp=E,176μm,0.2s							
VCEL	**Villa Celiera**	**0.57**	**125**	P		Pb	00 19 27.1	-0.4
VCEL					AML	AML		
	comp=E,180μm,0.5s							
VCEL					AML	AML		
	comp=N,218μm,0.5s							
VCEL					AML	AML		
	comp=E,180μm,0.5s							
VCEL					AML	AML		
	comp=N,217μm,0.5s							
EL6	**Elcito**	**0.61**	**353**	⇓P		Pg	00 19 27.4	+0.1
T0110	**Collepietro**	**0.65**	**139**	P		Pg	00 19 28.0	0.0
T0110				S		Sb	00 19 39.0	+1.0
T0110					AML	AML		
	comp=E,148μm,0.5s							
T0110					AML	AML		
	comp=N,123μm,0.3s							
T0110					AML	AML		
	comp=N,123μm,0.3s							
T0110					AML	AML		
	comp=E,149μm,0.5s							
CING	**Cingoli**	**0.66**	**359**	P		Pb	00 19 28.7	-0.2
CING					AML	AML		
	comp=E,130μm,0.9s							
CING					AML	AML		
	comp=N,116μm,1.4s							
FOSV	**Fossato di Vic**	**0.66**	**330**	⇑P		Pg	00 19 28.4	+0.2
FOSV					AML	AML		
	comp=N,1070μm,0.3s							
FOSV					AML	AML		
	comp=N,1075μm,0.3s							
FOSV					AML	AML		
	comp=E,302μm,0.2s							
SRES	**S.Oreste - Sor**	**0.71**	**227**	S		Sn	00 19 42.0	-0.4
ARVD	**Arcevia**	**0.80**	**346**	⇓P		Pg	00 19 30.9	0.0
ARVD					AML	AML		
	comp=E,70μm,0.9s							
ARVD					AML	AML		
	comp=N,51μm,0.2s							
ARVD					AML	AML		
	comp=E,69μm,0.9s							
INTR	**Introdacqua**	**0.88**	**144**	⇑P		Pg	00 19 31.6	-0.7
ATVO	**AVT- Monte Val**	**0.88**	**319**	⇓P		Pn	00 19 33.9	0.0
ATVO					AML	AML		
	comp=E,72μm,1.5s							
ATVO					AML	AML		
	comp=N,57μm,0.3s							
ATVO					AML	AML		
	comp=E,72μm,1.5s							
NARO	**Abbazia di Nar**	**1.00**	**333**	⇑P		Pb	00 19 34.9	+0.1
NARO					AML	AML		
	comp=E,39μm,1.0s							
NARO					AML	AML		
	comp=N,44μm,1.6s							
GIUL	**Giuliano Di Ro**	**1.16**	**178**	P		Pb	00 19 35.2	-2.4

ROM 25 00:19:37.6±0.2, 42°.847N±0°.009×13°.263E±0°.010, h10km±1km, ML2.4/5, 5C-5D, Error ellipse: s-maj=1.0km s-min=0.7km az=20.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.05**	**247**	END			
MMO1	**Montemonaco**	**0.07**	**42**	END			
AQT1	**Arquata del Tr**	**0.08**	**163**	END			
MC2	**Monte Cornacci**	**0.08**	**321**	END			
T1214	**Arquata del Tr**	**0.10**	**204**	END			
NRCA	**Norcia**	**0.11**	**263**	⇑P		Pg	00 19 38.3	-2.1
T1241	**Roccafluvione,**	**0.12**	**86**	END			
T1202	**Accumoli, Fraz**	**0.15**	**191**	END			
FEMA	**Monte Fema**	**0.19**	**306**	P		Pg	00 19 43.0	+1.2
FEMA				S		Sg	00 19 46.0	+1.4
FEMA				END				
T1243	**Rocca Santa Ma**	**0.20**	**138**	END				
GUMA	**Gualdo di Mace**	**0.22**	**14**	P		Pg	00 19 42.6	+0.4
GUMA				S		Sg	00 19 47.2	+1.9
GUMA					AML	AML		
	comp=E,2355μm,0.2s							
GUMA					AML	AML		
	comp=N,2110μm,0.4s							
GUMA					AML	AML		
	comp=E,3300μm,0.2s							
GUMA					AML	AML		
	comp=N,2200μm,0.4s							
GUMA					AML	AML		
	comp=E,2350μm,0.2s							
FDMO	**Fiordimonte**	**0.23**	**326**	⇓P		Pg	00 19 42.7	+0.4
FDMO				S		Sg	00 19 46.5	+1.0
FDMO					AML	AML		
	comp=E,1595μm,0.2s							
FDMO					AML	AML		
	comp=N,2140μm,0.2s							
FDMO				END				
CSP1	**Cessapalombo**	**0.25**	**350**	⇑P		Pg	00 19 43.4	+0.7
CSP1				S		Sg	00 19 47.5	+1.3
CSP1				END				
LNSS	**Leonessa**	**0.29**	**214**	⇑P		Pg	00 19 43.3	-0.2
LNSS				S		Sb	00 19 49.2	-0.8
LNSS				END				
CESI	**CESI - Serrava**	**0.31**	**301**	⇑P		Pg	00 19 44.2	+0.4
CESI				S		Sb	00 19 49.5	-0.9
CESI					AML	AML		
	comp=E,891μm,0.3s							
CESI					AML	AML		
	comp=E,890μm,0.3s							
CESI					AML	AML		
	comp=N,1415μm,0.3s							
OFFI	**Offida**	**0.32**	**74**	⇓P		Pb	00 19 45.6	+0.2
CAMP	**Campotosto**	**0.33**	**161**	⇓P		Pg	00 19 44.5	+0.3
TERO	**Teramo**	**0.34**	**132**	⇓P		Pg	00 19 44.9	+0.6
TERO				S		Sb	00 19 50.3	-0.9
ARRO	**Arrone**	**0.45**	**234**	⇓P		Pg	00 19 46.5	+0.1
GIGS	**Gran Sasso**	**0.46**	**150**	P		Pg	00 19 46.7	+0.2
SNTG	**Esanatoglia**	**0.47**	**330**	⇑P		Pg	00 19 47.2	+0.4
SNTG					AML	AML		
	comp=E,176μm,0.2s							
SNTG					AML	AML		
	comp=E,176μm,0.2s							
SNTG					AML	AML		
	comp=N,222μm,0.8s							
ASSB	**Assisi San Ben**	**0.48**	**294**	P		Pg	00 19 47.3	+0.2
ASSB				S		Sb	00 19 54.9	-0.6
ASSB					AML	AML		
	comp=E,696μm,0.3s							
ASSB					AML	AML		
	comp=N,520μm,0.3s							
ARVD	**Arcevia**	**0.69**	**340**	S		Sn	00 20 03.0	-1.3
ATVO	**AVT- Monte Val**	**0.82**	**311**	S		Sn	00 20 07.0	-0.6
PIEI	**Pieia**	**0.87**	**323**	S		Sn	00 20 09.0	+0.2
ATPI	**Pietralunga -**	**0.87**	**314**	S		Sn	00 20 09.0	+0.2
NARO	**Abbazia di Nar**	**0.91**	**327**	S		Sn	00 20 10.0	+0.3

BEO ***25*** *00:28:15.1±1.3, 36°.09N×30°.48E, h122km±9km, ML3.6/6*
ATH ***25*** *00:28:23.3, 36°.34N×28°.34E, h60km±3km, ML3.9/9, Error ellipse: s-maj=5.0km s-min=2.9km az=77.0*
ISK ***25*** *00:28:24.9, 36°.34N×28°.39E, h49km±1km, ML4.0/39*
IDC ***25*** *00:28:24.0±1.1, 36°.33N×28°.38E, h42km±13km, mb3.6/13, mbtmp3.8/23, ML3.8/10, MS2.7/7, Error ellipse: s-maj=14.6km s-min=7.8km az=162.0*
NEIC ***25*** *00:28:25.9±1.8, 36°.25N±0°.04×28°.45E±0°.06, h59km±10km, mb3.8/17, ML4.0(ISK), ML3.9(ATH), ML4.1(THE), Error ellipse: s-maj=8.4km s-min=5.1km az=123.0*
NIC ***25*** *00:28:25.8±0.0, 36°.06N×28°.55E, h18km±1km, Ml4.3/8*
DDA ***25*** *00:28:25.4±0.0, 36°.37N×28°.30E, h48km, MW3.9*
THE ***25*** *00:28:27.0, 36°.40N×28°.38E, h36km±2km, ML4.1/4, Error ellipse: s-maj=2.4km s-min=0.9km az=167.0*
HLW ***25*** *00:28:27.9, 35°.91N×28°.43E, h22km±19km, Md4.2, Ml4.3*
GII ***25*** *00:28:31.7±0.6, 35°.88N×28°.85E, h60km, mb4.0/1, MD3.5/5, Mm3.7/3*

ISC 25 00:28:24.2±0.7, 36°.26N±0°.03×28°.43E±0°.03, h43km±6km, n268, σ1°90/329, mb3.7/15, 13C-3D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.25**	**259**	P	**Pn**	**00 28 34.0**	**+1.8**
ARG				S	**Sn**	**00 28 40.1**	**+2.2**
	43μm,0.2s						
ARG	**Arkhangelos**	**0.25**	**259**	PG	**Pn**	**00 28 34.1**	**+1.8**
ARG				SG	**Sn**	**00 28 40.0**	**+2.2**
ARG	**Arkhangelos**	**0.25**	**259**		**Pn**	**00 28 34.1**	**+1.8**
ARG				Sn	**Sn**	**00 28 40.2**	**+2.2**
ARG	**Arkhangelos**	**0.25**	**259**	P	**Pn**	**00 28 34.0**	**+1.8**
ARG				S	**Sn**	**00 28 40.0**	**+2.1**
ARG	**Arkhangelos**	**0.25**	**259**	P	**Pn**	**00 28 34.0**	**+1.8**
ARG				S	**Sn**	**00 28 39.9**	**+2.1**
ARG				AML	AML	00 28 40.4	
ARG				AML	AML	00 28 40.5	
	comp=E,70391μm,0.2s						
TURN	**Turunc**	**0.53**	**343**	PG	**Pn**	**00 28 36.3**	**+0.9**
TURN				SG	**Sn**	**00 28 43.9**	**+0.4**
TURN	**Turunc**	**0.53**	**343**	P	**Pn**	**00 28 36.3**	**+0.9**
TURN				S	**Sn**	**00 28 44.0**	**+0.6**
TURN				*i* AML	AML	00 28 45.0	
	comp=E,9μm,0.4s						
TURN				*i* AML	AML	00 28 45.0	
	comp=E,1μm,0.3s						
DALY	**Dalyan (Mula)**	**0.58**	**18**	PG	**Pn**	**00 28 37.3**	**+1.2**
DALY				SG	**Sn**	**00 28 45.4**	**+0.9**
FETY	**Fethiye**	**0.64**	**55**	PG	**Pn**	**00 28 37.5**	**+0.6**
FETY				SG	**Sn**	**00 28 47.6**	**+1.5**
DAT	**Datca**	**0.83**	**304**	PG	**Pn**	**00 28 40.6**	**+1.0**
DAT				SG	**Sn**	**00 28 51.5**	**+0.7**
YER	**Yerkesik**	**0.88**	**352**	P	**Pn**	**00 28 41.4**	**+1.2**
YER	**Yerkesik**	**0.88**	**352**	PG	**Pn**	**00 28 41.4**	**+1.2**
AKAS	**Kas**	**0.95**	**92**	PG	**Pn**	**00 28 42.6**	**+1.4**
AKAS	**Kas**	**0.95**	**92**		**Pn**	**00 28 42.5**	**+1.3**
AKAS				Sn	**Sn**	**00 28 56.2**	**+2.6**
AKAS	**Kas**	**0.95**	**92**	P	**Pn**	**00 28 42.6**	**+1.4**
AKAS				S	**Sn**	**00 28 56.2**	**+2.6**
AKAS				*i* AML	AML	00 29 00.0	
	comp=E,2μm,0.4s						
AKAS				*i* AML	AML	00 29 11.0	
	comp=E,927nm,0.4s						
CAME	**Cameli-Denizli**	**0.97**	**46**	PG	**Pn**	**00 28 43.6**	**+2.1**
CAME				SG	**Sn**	**00 28 55.4**	**+1.1**
MULA	**Mugla, Merkez-**	**0.99**	**355**	P	**Pn**	**00 28 43.4**	**+1.6**
MULA				S	**Sn**	**00 28 56.3**	**+1.6**
MULA				*i* AML	AML	00 28 59.0	
	comp=E,3μm,0.7s						
MULA				*i* AML	AML	00 29 01.0	
	comp=E,1μm,0.3s						
NIS1	**Nisyros Isl.**	**1.07**	**289**	P	**Pn**	**00 28 43.8**	**+1.1**
NIS1				S	**Sn**	**00 28 57.4**	**+1.0**
	comp=E,23μm,0.4s						
NIS1	**Nisyros Isl.**	**1.07**	**289**	PG	**Pn**	**00 28 43.8**	**+1.1**
NIS1				SG	**Sn**	**00 28 56.9**	**+0.5**
NISR	**Nisiros**	**1.11**	**289**	P	**Pn**	**00 28 44.2**	**+1.0**
NISR				S	**Sn**	**00 28 57.8**	**+0.5**
	comp=E,5μm,0.4s						
NISR	**Nisiros**	**1.11**	**289**	P	**Pn**	**00 28 44.1**	**+1.0**
NISR				S	**Sn**	**00 28 57.6**	**+0.3**
NISR				AML	AML	00 29 01.8	
	comp=E,13231μm,0.5s						
NISR				AML	AML	00 29 03.3	
	comp=N,8243μm,0.4s						
CAEL	**Denizli, Camel**	**1.11**	**39**	P	**Pn**	**00 28 45.9**	**+2.4**
CAEL				S	**Sn**	**00 29 01.7**	**+4.0**
CAEL				*i* AML	AML	00 29 06.0	
	comp=N,3μm,0.5s						
CAEL				*i* AML	AML	00 29 07.0	
	comp=N,2μm,0.6s						
BDRM	**Kayabasi**	**1.13**	**315**	P	**Pn**	**00 28 44.0**	**+0.5**
BDRM				S	**Sn**	**00 28 58.5**	**+0.6**
BDRM				*i* AML	AML	00 29 02.0	
	comp=N,1μm,0.3s						
BODT	**Bodrum**	**1.20**	**312**	P	**Pn**	**00 28 44.2**	**-0.4**
BODT				S	**Sn**	**00 28 58.9**	**-0.8**
BODT	**Bodrum**	**1.20**	**312**	PN	**Pn**	**00 28 44.2**	**-0.4**
KARP	**Karpathos**	**1.26**	**236**	P	**Pn**	**00 28 47.6**	**+2.3**
KARP				S	**Sn**	**00 29 05.2**	**+4.2**
	comp=N,5μm,0.2s						
KARP	**Karpathos**	**1.26**	**236**	PN	**Pn**	**00 28 47.4**	**+2.1**
KARP	**Karpathos**	**1.26**	**236**	Pn	**Pn**	**00 28 47.2**	**+1.9**
KARP	**Karpathos**	**1.26**	**236**	P	**Pn**	**00 28 47.6**	**+2.3**
KARP				S	**Sn**	**00 29 05.5**	**+4.5**
KARP				AML	AML	00 29 06.3	
	comp=N,12nm,0.3s						
KARP				AML	AML	00 29 06.3	
	comp=N,12nm,0.3s						
KARP	**Karpathos**	**1.26**	**236**	P	**Pn**	**00 28 47.6**	**+2.3**
KARP				S	**Sn**	**00 29 04.4**	**+3.4**
KARP				AML	AML	00 29 06.8	
	comp=N,11976μm,0.3s						
KARP				AML	AML	00 29 09.3	
	comp=E,6562μm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.26**	**18**	P	**Pn**	**00 28 47.1**	**+1.7**
TAVA				S	**Sn**	**00 29 03.2**	**+1.9**
TAVA				*i* AML	AML	00 29 04.0	
	comp=E,695nm,0.2s						
TAVA				*i* AML	AML	00 29 04.0	
	comp=E,1μm,0.2s						
KOSK	**Kos Island**	**1.27**	**293**	P	**Pn**	**00 28 46.2**	**+0.8**
KOSK	**Kos Island**	**1.27**	**293**	PN	**Pn**	**00 28 46.3**	**+0.8**
KOSK	**Kos Island**	**1.27**	**293**	P	**Pn**	**00 28 46.1**	**+0.8**
KOSK				S	**Sn**	**00 29 01.6**	**+0.3**
KOSK				AML	AML	00 29 03.3	
	comp=N,16815μm,0.4s						
KOSK				AML	AML	00 29 05.5	
	comp=E,15413μm,0.4s						
ELL	**Elmali**	**1.28**	**67**	PN	**Pn**	**00 28 47.8**	**+2.1**
ELL	**Elmali**	**1.28**	**67**		**Pn**	**00 28 48.5**	**+2.8**
ELL	**Elmali**	**1.28**	**67**	P	**Pn**	**00 28 48.4**	**+2.7**
ELL				S	**Sn**	**00 29 07.3**	**+5.5**
GOLH	**Golhisar**	**1.33**	**43**	P	**Pn**	**00 28 49.1**	**+2.7**
GOLH				S	**Sn**	**00 29 07.6**	**+4.7**
GOLH				*i* AML	AML	00 29 10.0	
	comp=E,1μm,0.3s						
GOLH				*i* AML	AML	00 29 12.0	
	comp=E,1μm,0.7s						
APMY	**Acipayam-Deniz**	**1.39**	**30**	PN	**Pn**	**00 28 48.5**	**+1.3**
AYDN	**Tasoluk**	**1.46**	**342**	P	**Pn**	**00 28 49.7**	**+1.5**
AYDN				S	**Sn**	**00 29 07.3**	**+1.1**
AYDN				*i* AML	AML	00 29 08.0	
	comp=E,3μm,0.2s						
AYDN				*i* AML	AML	00 29 08.0	
	comp=E,2μm,0.4s						
DDIM	**Aydin, Didim**	**1.53**	**322**	P	**Pn**	**00 28 49.7**	**+0.7**
DDIM				*i* AML	AML	00 29 16.0	
	comp=E,1μm,0.5s						
KORT	**Korkueli**	**1.71**	**64**	PN	**Pn**	**00 28 53.3**	**+1.7**
GCAM	**G?zelcaml?**	**1.73**	**327**	PN	**Pn**	**00 28 52.3**	**+0.6**
GCAM	**G?zelcaml?**	**1.73**	**327**	P	**Pn**	**00 28 52.3**	**+0.6**
GCAM				S	**Sn**	**00 29 12.0**	**-0.5**
GCAM				*i* AML	AML	00 29 24.0	
	comp=E,886nm,0.8s						
GCAM				*i* AML	AML	00 29 25.0	
	comp=E,639nm,0.8s						
AYDB	**Zeytinkoy-Aydi**	**1.73**	**346**	PN	**Pn**	**00 28 52.5**	**+0.6**
ANTB	**Antalya**	**1.90**	**70**	PN	**Pn**	**00 28 56.1**	**+2.1**
SMG	**Samos**	**1.93**	**319**	P	**Pn**	**00 28 54.5**	**+0.1**
SMG	**Samos**	**1.93**	**319**	P	**Pn**	**00 28 54.6**	**+0.1**
SMG					AML	AML	00 29 18.7	
	comp=N,4200μm,0.3s						
SMG					AML	AML	00 29 18.8	
	comp=E,4872μm,0.2s						
BASM	**Basmaki-Afyon**	**2.10**	**38**	PN	**Pn**	**00 28 58.0**	**+1.1**
BCK	**Bucak**	**2.10**	**55**	PN	**Pn**	**00 28 58.9**	**+2.0**
AMGA	**Amorgos Island**	**2.12**	**286**	P	**Pn**	**00 28 59.6**	**+2.4**
AMGA					AML	AML	00 29 39.5	
	comp=N,1327μm,0.6s						
AMGA					AML	AML	00 29 40.9	
	comp=E,1101μm,0.6s						
ZKR	**Zakros**	**2.14**	**238**	P	**Pn**	**00 29 00.6**	**+3.3**
ZKR	**Zakros**	**2.14**	**238**	PN	**Pn**	**00 29 00.2**	**+2.8**
ZKR	**Zakros**	**2.14**	**238**	P	**Pn**	**00 29 00.5**	**+3.1**
ZKR				S	**Sn**	**00 29 27.3**	**+4.7**
ZKR	**Zakros**	**2.14**	**238**	P	**Pn**	**00 29 00.6**	**+3.3**
ZKR				AML	AML	00 29 37.3	
	comp=N,1030μm,0.5s						
ZKR				AML	AML	00 29 38.0	
	comp=E,2383μm,0.7s						
DGB	**zmir**	**2.17**	**326**	P	**Pn**	**00 28 57.9**	**+0.1**
DGB				S	**Sn**	**00 29 22.6**	**-0.9**
DGB				*i* AML	AML	00 29 24.0	
	comp=E,300nm,0.2s						
DGB				*i* AML	AML	00 29 37.0	
	comp=E,209nm,0.7s						
STIA	**Sitia Lasithi**	**2.18**	**242**	P	**Pn**	**00 29 00.8**	**+2.9**
STIA	**Sitia Lasithi**	**2.18**	**242**	P	**Pn**	**00 29 00.5**	**+2.6**
STIA					AML	AML	00 29 33.2	
	comp=N,2628μm,0.5s						
STIA					AML	AML	00 29 36.6	
	comp=E,2197μm,0.4s						
MANT	**Manisa**	**2.23**	**3**		**Pn**	**00 29 01.4**	**+2.6**
KHL	**Karahalli**	**2.23**	**23**	PN	**Pn**	**00 28 59.6**	**+0.9**
KULA	**Kula-Manisa**	**2.25**	**5**	P	**Pn**	**00 28 59.5**	**+0.5**
KULA	**Kula-Manisa**	**2.25**	**5**	PN	**Pn**	**00 28 59.9**	**+0.9**
ISP	**Isparta**	**2.28**	**46**	PN	**Pn**	**00 29 01.6**	**+2.2**
ISP	**Isparta**	**2.28**	**46**	Pn	**Pn**	**00 29 01.4**	**+1.9**
SUTC	**Sutluce-Ispart**	**2.39**	**59**	PN	**Pn**	**00 29 03.3**	**+2.4**
THR8	**Santorini-Mono**	**2.39**	**274**	P	**Pn**	**00 29 01.9**	**+1.1**
BLCB	**Balcova**	**2.39**	**333**	P	**Pn**	**00 29 01.0**	**+0.2**
BLCB	**Balcova**	**2.39**	**333**	PN	**Pn**	**00 29 01.1**	**+0.2**
SANT	**Santorini**	**2.41**	**273**		**Pn**	**00 29 02.6**	**+1.5**
SFIR	**Foira Santorin**	**2.43**	**275**	P	**Pn**	**00 29 02.9**	**+1.5**
THT2	**Imerovigli**	**2.44**	**275**	P	**Pn**	**00 29 03.2**	**+1.7**
CMBO	**Columbo, Santo**	**2.45**	**276**	P	**Pn**	**00 29 03.0**	**+1.3**
CMBO				S	**Sn**	**00 29 31.1**	**+0.7**
THR3	**Thira Island,**	**2.45**	**274**	P	**Pn**	**00 29 03.2**	**+1.5**
THR6	**Thira Island,**	**2.45**	**273**	P	**Pn**	**00 29 03.4**	**+1.7**
APE	**Apeiranthos**	**2.47**	**290**	⇑P	**Pn**	**00 29 02.3**	**+0.4**
APE				⇑S	**Sn**	**00 29 30.0**	**-0.9**
APE	**Apeiranthos**	**2.47**	**290**	P	**Pn**	**00 29 03.0**	**+1.1**
APE	**Apeiranthos**	**2.47**	**290**	PN	**Pn**	**00 29 02.6**	**+0.7**
GOMA	**Golmarmara-Man**	**2.47**	**351**	PN	**Pn**	**00 29 02.6**	**+0.6**
THR9	**Santorini-Faro**	**2.49**	**273**	P	**Pn**	**00 29 03.8**	**+1.7**
THR5	**Thira Island,**	**2.50**	**274**	P	**Pn**	**00 29 04.0**	**+1.7**
FRMA	**Ierapetra Chan**	**2.53**	**241**	P	**Pn**	**00 29 04.4**	**+1.7**
FRMA	**Ierapetra Chan**	**2.53**	**241**	P	**Pn**	**00 29 04.2**	**+1.6**
FRMA					AML	AML	00 29 43.4	
	comp=N,1644μm,0.4s						
FRMA					AML	AML	00 29 43.8	
	comp=E,1947μm,0.5s						
URLA	**Izmir**	**2.56**	**326**	PN	**Pn**	**00 29 02.3**	**-0.8**
AKS	**Akhisar**	**2.66**	**349**	PN	**Pn**	**00 29 05.5**	**+1.0**
FOCM	**Foa**	**2.79**	**332**	PN	**Pn**	**00 29 07.4**	**+1.0**
SHUT	**Suhut-Afyon**	**2.84**	**36**	PN	**Pn**	**00 29 08.4**	**+1.3**
CHOS	**Chios island**	**2.84**	**319**	P	**Pn**	**00 29 07.8**	**+0.7**
CHOS	**Chios island**	**2.84**	**319**	PN	**Pn**	**00 29 08.2**	**+1.1**
SMAA	**Simav-Kutahya**	**2.87**	**9**	PN	**Pn**	**00 29 08.7**	**+1.3**
HRKL	**Herakleio**	**2.87**	**252**	P	**Pn**	**00 29 09.1**	**+1.7**
HRKL	**Herakleio**	**2.87**	**252**	PN	**Pn**	**00 29 09.7**	**+2.3**
GEDZ	**Gediz**	**2.88**	**15**	PN	**Pn**	**00 29 09.0**	**+1.4**
KSTL	**Kastelli Herak**	**2.90**	**252**	P	**Pn**	**00 29 07.8**	**0.0**
KSTL	**Kastelli Herak**	**2.90**	**252**	P	**Pn**	**00 29 07.7**	**0.0**
SEYD	**Seydisehir-KON**	**2.96**	**66**	PN	**Pn**	**00 29 11.1**	**+2.4**
IDI	**Anoyia**	**3.04**	**252**	⇓P	**Pn**	**00 29 11.5**	**+1.7**
IDI				⇑S	**Sn**	**00 29 46.0**	**+0.9**
IDI	**Anoyia**	**3.04**	**252**	P	**Pn**	**00 29 11.2**	**+1.4**
	comp=E,12nm,0.3s,baz=75,slow=6.7,SNR=116						
IDI				S	**Sn**	**00 29 44.1**	**-1.0**
	comp=E,221nm,0.5s,baz=100,slow=23,SNR=17						
IDI				LR	LR	00 30 47.1	
	comp=E,48nm,18.9s,baz=22,slow=47 comp=E,21nm,0.3s						
IDI	**Anoyia**	**3.04**	**252**	P	**Pn**	**00 29 11.4**	**+1.6**
IDI	**Anoyia**	**3.04**	**252**	PN	**Pn**	**00 29 11.6**	**+1.7**
DKL	**Dikili**	**3.05**	**337**	PN	**Pn**	**00 29 10.9**	**+1.0**
GAZI	**Gazipasa**	**3.14**	**89**	PN	**Pn**	**00 29 12.7**	**+1.6**
SIVA	**Sivas**	**3.20**	**248**	P	**Pn**	**00 29 15.2**	**+3.2**
TMBK	**Timbaki Herakl**	**3.21**	**249**	P	**Pn**	**00 29 14.9**	**+2.8**
TVSB	**Tavsanli**	**3.28**	**14**	PN	**Pn**	**00 29 13.0**	**-0.2**
AKMS	**Akamas**	**3.41**	**110**	P	**Pn**	**00 29 16.5**	**+1.7**
AKMS				S	**Sn**	**00 29 55.2**	**+1.1**
AKMS				AML	AML	00 29 59.4	
	comp=E,1.7nm,0.2s						
AKMS				AML	AML	00 29 59.4	
	comp=E,1.7nm,0.2s						
AKMS				AML	AML	00 30 00.6	
	comp=E,3.5nm,0.4s						
AKMS				AML	AML	00 30 00.6	
	comp=E,3.5nm,0.4s						
PRK	**Paraskevi**	**3.44**	**331**	P	**Pn**	**00 29 16.0**	**+0.9**
ALFC	**Alefka**	**3.56**	**107**	P	**Pn**	**00 29 18.3**	**+1.3**
ALFC				S	**Sn**	**00 29 59.0**	**+1.1**
ALFC				AML	AML	00 30 03.3	
	comp=E,1

SZAC AML AML 00 30 11.0
comp=E,2.1nm,0.3s
ATHAL Athalassa 4.19 104 P **Pn** **00 29 27.6 +2.0**
ATHAL AML AML 00 30 23.6
comp=E,1.5nm,0.4s
ATHAL AML AML 00 30 25.1
comp=E,1.4nm,0.7s
ASGA Asgata 4.19 109 P **Pn** **00 29 27.1 +1.5**
ASGA AML AML 00 30 19.1
comp=E,1.6nm,0.4s
ASGA AML AML 00 30 23.1
comp=E,1.2nm,0.3s
CSS Mathiatis 4.20 107 Pn **Pn** **00 29 27.2 +1.5**
CSS Mathiatis 4.20 107 P **Pn** **00 29 27.1 +1.5**
MVOU Mavrovouni 4.41 105 P **Pn** **00 29 29.8 +1.2**
MVOU AML AML 00 30 27.8
comp=E,0.6nm,0.5s
MVOU AML AML 00 30 29.3
comp=E,0.5nm,0.5s
VLI Veliai 4.45 277 P **Pn** **00 29 31.4 +2.3**
OSC2 CSNet OBS 4 4.48 134 P **Pn** **00 29 29.6 0.0**
PARAL Paralimni 4.74 104 P **Pn** **00 29 35.9 +2.8**
BR231 Keskin MP Arra 4.95 43 **Pn** **00 29 38.7 +2.6**
ANTO Ankara 4.98 42 **Pn** **00 29 38.4 +1.9**
ALN Alexandroupoli 4.99 339 **Pn** **00 29 37.7 +1.2**
ITM Ithomi 5.31 282 Pn **Pn** **00 29 44.4 +3.5**
BR131 Keskin Array S 5.37 48 Pn **Pn** **00 29 43.7 +1.8**
BRTR Keskin Array B 5.37 48 P **Pn** **00 29 43.0 +1.2**
comp=E,2.3nm,0.3s,baz=227,slow=14,SNR=58
BRTR S **Sn** **00 30 42.0 -0.5**
comp=E,3.4nm,0.4s,baz=242,slow=16,SNR=7.7
BRTR LR LR 00 32 34.1
comp=E,103nm,20.9s,baz=220,slow=47
comp=E,5.3nm,0.4s
BRTR Keskin Array B 5.37 48 Pn **Pn** **00 29 43.6 +1.7**
RDO Rodhopi 5.38 336 Pn **Pn** **00 29 43.1 +1.3**
SLUM Salum 5.46 210 P **Pn** **00 29 43.8 +0.8**
baz=213
SLUM S Sn 00 30 38.5 -6.1
baz=213
SRS Serrai 6.15 323 *e*Pn **Pn** **00 29 54.2 +1.8**
SRS *e*Sn **Sn** **00 31 02.7 +1.2**
BHL Bhannes 6.37 110 *e*P **Pn** **00 29 55.3 -0.2**
DQRL Deir Qamar 6.39 111 *e*P **Pn** **00 29 56.5 +0.6**
BNN Bunyan 6.43 64 Pn **Pn** **00 29 59.0 +2.6**
HWQ Hawqa 6.46 106 *e*P **Pn** **00 29 57.9 +1.2**
PLD Plovdiv 6.51 335 *e*Pn **Pn** **00 29 59.0 +1.6**
PLD *e*Sn **Sn** **00 31 07.7 -2.6**
OFRI `Ofer 6.52 122 Pn **Pn** **00 29 59.2 +1.7**
QRWL Qaraoun 6.54 112 *e*P **Pn** **00 29 59.2 +1.3**
MMA0B Mount Meron ar 6.59 117 Pn **Pn** **00 30 00.1 +1.5**
MMA0B Sn **Sn** **00 31 09.3 -3.3**
MMAI Mount Meron Ar 6.59 117 P **Pn** **00 29 59.6 +1.0**
comp=E,13nm,0.3s,baz=296,slow=12,SNR=87
MMAI S **Sn** **00 31 09.6 -2.9**
comp=E,14nm,0.3s,baz=323,slow=29,SNR=14
comp=E,6.7nm,0.3s
BLGI Bet Lehem HaGe 6.60 120 Pn **Pn** **00 30 00.0 +1.4**
RCY Rachaya 6.68 112 *e*P **Pn** **00 30 00.8 +0.9**
GEM Giv'at Ha'Em 6.69 115 Pn **Pn** **00 30 00.6 +0.8**
GEM Sn **Sn** **00 31 11.3 -3.4**
NATI Neve Ativ 6.71 114 Pn **Pn** **00 30 00.9 +0.7**
NATI Sn **Sn** **00 31 11.6 -3.7**
SLTI Sal'it 6.78 124 Pn **Pn** **00 30 02.4 +1.2**
SLTI Sn **Sn** **00 31 13.3 -3.8**
HNAT Natroun 6.86 164 P **Pn** **00 30 03.1 +0.9**
baz=162
MMLI Mount Malkishu 6.92 121 Pn **Pn** **00 30 04.8 +1.7**
KOT Kottamia 6.93 155 P **Pn** **00 30 04.2 +1.0**
baz=153
HHAG Hagoal 7.00 153 P **Pn** **00 30 05.7 +1.5**
baz=151
HMDT Nahal Hemdat 7.10 122 Pn **Pn** **00 30 07.1 +1.6**
HSAF As Saff 7.13 158 P **Pn** **00 30 06.5 +0.6**
baz=156
GLL Jalalah 7.21 157 P **Pn** **00 30 07.9 +0.8**
baz=155
KZIT Kziot 7.30 135 Pn **Pn** **00 30 09.2 +1.0**
KZIT Sn **Sn** **00 31 24.9 -4.9**
SUZ Suez 7.39 149 P **Pn** **00 30 10.5 +1.0**
baz=147
YTIR Yattir 7.40 129 Pn **Pn** **00 30 10.0 +0.3**
YTIR Sn **Sn** **00 31 28.7 -3.7**
DSI Dead Sea 7.43 127 Pn **Pn** **00 30 11.0 +1.0**
DSI Sn **Sn** **00 31 29.2 -3.8**
SWA2 7.44 201 P **Pn** **00 30 10.4 +0.3**
baz=202
VTS Vitosha 7.51 329 ⇑P **Pn** **00 30 12.7 +1.5**
VTS ⇓S **Sn** **00 31 34.9 -0.2**
VTS Vitosha 7.51 329 Pn **Pn** **00 30 13.5 +2.3**
VTS Vitosha 7.51 329 *e*Pn **Pn** **00 30 13.5 +2.3**
VTS *e*Sn **Sn** **00 31 34.9 -0.2**
MSBI Mazada 7.59 129 Pn **Pn** **00 30 13.0 +0.9**
KEK Kerkira 7.64 299 Pn **Pn** **00 30 17.5 +4.6**
GHAJ Ghor Haditha 7.73 128 Pn **Pn** **00 30 16.2 +2.2**
GHAJ Ghor Haditha 7.73 128 Pn **Pn** **00 30 15.9 +1.8**
BOSS Bosilegrad 7.74 325 *e*Pn **Pn** **00 30 16.9 +2.6**
BOSS *e*Sn **Sn** **00 31 44.2 +3.6**
PRVS Prvonek 7.94 324 *e*Pn **Pn** **00 30 19.7 +2.7**
PRVS *e*Sn **Sn** **00 31 48.6 +3.0**
PRNI Paran 8.06 135 Pn **Pn** **00 30 19.2 +0.5**
PRNI Sn **Sn** **00 31 44.4 -4.1**
KRMI Paran Flat 8.08 138 Pn **Pn** **00 30 19.7 +0.7**
ASF Jabal al Asfar 8.11 118 P **Pn** **00 30 20.8 +1.4**
comp=E,1.3nm,0.3s,baz=296,slow=3.0,SNR=11
ASF S **Sn** **00 31 48.7 -1.1**
comp=E,3.3nm,0.4s,baz=259,slow=19,SNR=2.0
comp=E,2.5nm,0.3s
TIRR Tirgusor 8.19 360 Pn **Pn** **00 30 22.5 +2.2**
BARS Barje 8.30 324 *e*Pn **Pn** **00 30 24.6 +2.7**
BARS *e*Sn **Sn** **00 31 57.4 +3.1**
ZAPS Zavoj 8.30 329 *e*Pn **Pn** **00 30 25.0 +3.0**
ZAPS *e*Sn **Sn** **00 31 54.1 -0.3**
HRFI Mount Harif 8.32 136 Pn **Pn** **00 30 22.4 +0.2**
HRFI Sn **Sn** **00 31 49.5 -5.4**
TIR Tirane 8.39 310 Pn Pn 00 30 29.9 +6.7
MBRI Mt Berech 8.44 138 Pn **Pn** **00 30 24.7 +0.8**
MBRI Sn **Sn** **00 31 53.0 -4.9**
EIL Elat 8.55 138 P **Pn** **00 30 26.6 +1.1**
comp=E,1.6nm,0.3s,baz=331,slow=5.2,SNR=22
EIL S Sn 00 31 54.0 -6.6
comp=E,11nm,0.3s,baz=336,slow=4.0,SNR=3.8
comp=E,4.5nm,0.4s
EIL Elat 8.55 138 Pn **Pn** **00 30 26.1 +0.7**
GRB Gharib 8.78 154 P **Pn** **00 30 29.4 +0.8**
baz=152
TAMRE El Minia 8.81 165 P **Pn** **00 30 29.5 +0.5**
baz=164
ZAGS Zajecar 8.91 330 *e*Pn **Pn** **00 30 31.9 +1.6**
NUB Nuweibaa 8.91 142 P **Pn** **00 30 31.8 +1.5**
baz=141
SELS Selova 8.94 323 *e*Pn **Pn** **00 30 32.6 +1.9**
BOVS Bovan 8.99 327 ⇑P **Pn** **00 30 32.7 +1.4**
BOVS Bovan 8.99 327 *e*Pn **Pn** **00 30 33.3 +2.0**
HKAT Jabal Katrina 9.03 147 P **Pn** **00 30 32.7 +0.5**
baz=145
PDG Podgorica 9.40 314 Pn Pn 00 30 44.0 +7.0
PDG Podgorica 9.40 314 *e*Pn Pn 00 30 44.2 +7.2
MLR Muntele Rosu 9.41 349 ⇑P **Pn** **00 30 38.9 +1.7**
MLR Muntele Rosu 9.41 349 P **Pn** **00 30 39.6 +2.4**
comp=E,2.7nm,0.6s,baz=167,slow=14,SNR=5.2
MLR S **Sn** **00 32 20.8 -0.8**
comp=E,2.2nm,0.7s,baz=127,slow=20,SNR=2.1
MLR LR LR 00 35 15.5
comp=E,56nm,20.0s,baz=120,slow=44
MLR Muntele Rosu 9.41 349 Pn **Pn** **00 30 40.0 +2.8**
ARR Arges 9.54 344 ⇑P **Pn** **00 30 39.4 +0.5**
SJES Sjenica 9.55 320 *e*Pn Pn 00 30 49.9 +11
VRI Vrincioaia 9.68 353 ⇑P **Pn** **00 30 41.1 +0.3**
IVAS Ivanjica 9.68 321 *e*Pn **Pn** **00 30 42.9 +2.0**
MDVR Moldovita 9.92 331 ⇑P **Pn** **00 30 44.6 +0.5**
GZR Gura Zlata 10.07 337 ⇑P **Pn** **00 30 47.0 +0.8**
CEL Celeste 10.19 285 Pn **Pn** **00 30 48.8 +0.9**
BBLS Lazići 10.27 320 *e*Pn Pn 00 30 59.0 +10
DEV Deva 10.47 338 ⇓P **Pn** **00 30 51.9 +0.2**
STON Ston 10.59 312 *e*Pn **Pn** **00 30 56.3 +3.1**
CUC Castrocucco 10.61 294 Pn **Pn** **00 30 55.5 +1.8**
BZS Buzias 10.67 333 ⇑P **Pn** **00 30 55.1 +0.8**
BZS Buzias 10.67 333 *e*Pn **Pn** **00 30 55.9 +1.6**
BIZ Bicaz 10.81 351 ⇑P **Pn** **00 30 57.6 +1.4**
SIRR Siria 11.21 335 ⇑P **Pn** **00 31 02.6 +0.8**
SGRT San Giovanni R 11.29 303 Pn **Pn** **00 31 05.3 +2.4**
VAE Valguarnera 11.30 280 P **Pn** **00 31 04.3 +1.3**
comp=E,0.4nm,0.3s,baz=84,slow=12,SNR=1.1
VAE S Sn 00 32 58.5 -9.5
comp=E,6.9nm,0.9s,baz=90,slow=20,SNR=1.8
comp=E,9.1nm,1.1s
PAOL Paolisi 11.84 298 Pn **Pn** **00 31 13.4 +3.1**
KBZ Khabaz 13.35 52 LR LR 00 37 57.3
comp=E,18nm,20.6s,baz=226,slow=43
AKASG Malin Array Be 14.44 2 LR LR 00 38 14.1
comp=E,22nm,18.4s,baz=11,slow=41
SABO M.te Sabotino 14.78 316 Pn **Pn** **00 31 52.2 +1.9**
STAL STALIGIAL 15.45 315 Pn **Pn** **00 32 00.9 +1.9**
STAL IAmb IAmb 00 32 14.1
comp=Z,15nm,1.5s
KEST Kesra 15.46 274 P **Pn** **00 32 00.3 +1.0**
comp=Z,0.1nm,0.3s,baz=93,slow=18,SNR=4.3
KEST S **Sn** **00 34 41.6 -7.9**
comp=Z,3.6nm,1.0s,baz=63,slow=16,SNR=2.2
comp=Z,11nm,0.8s
KEST Kesra 15.46 274 Pn **Pn** **00 32 00.2 +1.0**
KEST IAmb IAmb 00 32 05.2
comp=Z,10nm,0.8s
CIMO Cimolais 15.63 315 Pn **Pn** **00 32 02.7 +1.3**
CIMO IAmb IAmb 00 32 04.9
comp=Z,3.9nm,1.1s
VRAC Vranov 15.64 330 P **Pn** **00 32 01.7 +0.3**
comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=1.6
comp=Z,0.6nm,0.4s
VLC Villacollemand 15.86 305 Pn **Pn** **00 32 05.1 +0.7**
VLC IAmb IAmb 00 32 15.8
comp=Z,11nm,1.1s
KRLC Kraliky 16.18 332 *e*P **P** **00 32 11.7 +0.7**
CKRC Cesky Krumlov 16.27 325 *e*P **P** **00 32 13.5 +1.5**
MSSA Maissana 16.50 305 Pn **Pn** **00 32 13.2 +0.7**
MSSA IAmb IAmb 00 32 27.5
comp=Z,10nm,1.1s
GERES GERESS Array B 16.57 324 P **Pn** **00 32 13.7 +0.3**
comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=9.8
GERES S **Sn** **00 35 19.6 +3.3**
comp=Z,0.6nm,0.4s,baz=179,slow=26,SNR=7.3
comp=Z,0.7nm,0.4s
GERES GERESS Array B 16.57 324 P **P** **00 32 15.5 +0.1**
WTTA Wattenberg 16.63 317 *e*P **P** **00 32 18.0 +1.8**
comp=Z,2.3nm,0.6s
WATA Walderalm 16.71 317 *e*P **P** **00 32 18.5 +1.6**
comp=Z,1.4nm,0.4s
KHC Kasperske Hory 16.83 324 **P** **00 32 18.3 +0.1**
KHC Kasperske Hory 16.83 324 *e*P **P** **00 32 19.4 +1.2**
SQTA Sankt Quirin 16.84 316 *e*P **P** **00 32 20.8 +2.3**
comp=Z,1.8nm,0.4s
MOTA Moosalm 16.97 316 *e*P **P** **00 32 20.5 +0.5**
comp=Z,2.7nm,0.7s
FETA Feichten 17.01 315 *e*P **P** **00 32 21.5 +1.2**
comp=Z,3.2nm,0.7s
PRU Pruhonice 17.02 328 *e*P **P** **00 32 21.2 +1.0**
RETA Reutte 17.25 316 *e*P **P** **00 32 24.6 +1.8**
comp=Z,1.1nm,0.4s
DAVOX Davos/Dischmat 17.38 313 P **Pn** **00 32 23.7 +0.2**
comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=2.2
DAVOX LR LR 00 40 31.9
comp=Z,24nm,18.8s,baz=317,slow=42
comp=Z,0.5nm,0.4s
DAVA Damuels 17.64 314 *e*P **P** **00 32 27.7 +0.4**
comp=Z,1.8nm,0.4s
BRG Berggiesshubel 17.94 329 *e*(P) **P** **00 32 32.3 +1.9**
BRG Amp 00 32 34.0
comp=Z,2.4nm,0.8s
BNI Bardonecchia 18.65 305 **P** **00 32 39.3 +0.9**
CLL Collm 18.66 329 *i* P **P** **00 32 38.4 +0.2**
comp=Z,5.0nm,1.0s
SENIN Lac Senin/Sane 18.76 309 P **P** **00 32 39.5 -0.1**
ECH Echery 19.69 314 P **P** **00 32 49.6 -0.1**
ECH IAmb IAmb 00 32 52.7
comp=Z,3.4nm,1.2s
SSB Saint Sauveur 20.15 304 P **P** **00 32 52.9 -1.9**
SSB IAmb IAmb 00 33 05.0
comp=Z,2.0nm,0.6s
CLF Chambon-Foret 22.57 310 P **P** **00 33 20.7 +0.1**
GEYT Alibeck 23.69 77 P **P** **00 33 32.2 +0.3**
comp=Z,1.4nm,0.4s,baz=257,slow=13,SNR=4.8
comp=Z,1.4nm,0.4s
FINES FINESS Array B 25.25 357 P **P** **00 33 44.8 -1.0**
comp=Z,1.0nm,0.4s,baz=153,slow=11,SNR=13
FINES PcP **PcP** **00 37 18.0 -0.1**
comp=Z,0.7nm,0.5s,baz=187,slow=3.6,SNR=7.7
comp=Z,1.0nm,0.4s
FINES FINESS Array B 25.25 357 P **P** **00 33 44.7 -1.1**
FIA1 FINESS Array S 25.25 357 P **P** **00 33 45.1 -0.7**
AKTO Aktyubinsk 25.55 47 P **P** **00 33 49.2 +0.4**
comp=Z,0.8nm,0.7s,baz=255,slow=12,SNR=2.4
comp=Z,0.8nm,0.7s
ESBB Sonseca Array 25.69 287 P **P** **00 33 49.9 -0.3**
ESBB IAmb IAmb 00 33 50.6
comp=Z,2.9nm,0.7s
ESDC Sonseca Array 25.69 287 P **P** **00 33 49.5 -0.8**
comp=Z,2.2nm,0.7s,baz=82,slow=9.5,SNR=22
comp=Z,2.2nm,0.7s
ESDC Sonseca Array 25.69 287 P **P** **00 33 49.2 -1.0**
ESDC IAmb IAmb 00 33 54.8
comp=Z,3.0nm,1.4s
HFS Hagfors 25.70 343 P **P** **00 33 48.3 -1.7**
comp=Z,1.0nm,0.7s,baz=140,slow=12,SNR=6.3
HFS LR LR 00 45 26.4
comp=Z,26nm,18.0s,baz=2.0,slow=40
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 28.76 322 P **P** **00 34 15.4 -2.0**
comp=Z,0.1nm,0.3s,baz=115,slow=10,SNR=2.2
EKA PcP **PcP** **00 37 26.8 +0.3**
comp=Z,0.6nm,0.9s,baz=116,slow=3.2,SNR=3.6
comp=Z,0.1nm,0.3s
TOA0 Torodi Ar. Sit 33.26 233 P **P** **00 34 57.8 +0.3**
TORD Torodi Ar. Bea 33.26 233 P **P** **00 34 58.1 +0.6**
comp=Z,1.9nm,0.3s,baz=33,slow=9.1,SNR=1.4
TORD PcP **PcP** **00 37 39.6 +0.4**
comp=Z,16nm,0.3s,baz=22,slow=2.5,SNR=8.9
comp=Z,1.9nm,0.3s
ARCES ARCESS Array B 33.37 358 P **P** **00 34 56.7 -1.2**
comp=Z,1.2nm,0.8s,baz=172,slow=7.3,SNR=4.4
comp=Z,1.2nm,0.8s
KURBB Kurchatov Arra 38.35 52 P **P** **00 35 41.1 +0.4**
comp=Z,0.8nm,0.5s,baz=276,slow=8.8,SNR=6.5
KURBB PcP **PcP** **00 37 53.4 -0.3**
comp=Z,0.9nm,0.9s,baz=283,slow=4.2,SNR=2.4
comp=Z,0.8nm,0.5s
KURK Kurchatov 38.41 52 P **P** **00 35 41.6 +0.3**
KURK IAmb IAmb 00 35 42.2
comp=Z,1.0nm,0.8s
MK31 Makanchi Array 40.94 58 P **P** **00 36 01.3 -1.1**
MKAR Makanchi Array 40.94 58 P **P** **00 36 01.1 -1.3**
comp=Z,0.4nm,0.5s,baz=272,slow=8.1,SNR=4.3
comp=Z,0.4nm,0.5s
MKAR Makanchi Array 40.94 58 P **P** **00 36 01.6 -0.8**
ZALV Zalesovo Beam 42.31 47 P **P** **00 36 13.2 -0.3**
comp=Z,0.4nm,0.3s,baz=288,slow=10.0,SNR=2.7
comp=Z,0.4nm,0.3s
DBIC Dimbokro 42.35 234 P **P** **00 36 13.9 -0.3**
comp=Z,4.6nm,1.2s,baz=61,slow=6.4,SNR=1.2
comp=Z,4.6nm,1.2s
DBIC Dimbokro 42.35 234 P **P** **00 36 12.5 -1.7**
ILAR Eielson Array 79.23 358 P **P** **00 40 23.4 -0.9**
comp=Z,0.4nm,0.9s,baz=345,slow=4.5,SNR=4.1
comp=Z,0.4nm,0.9s

*ROM **25** 00:32:38.7±0.1,42°.641N±0°.004×13°.213E±0°.006,*
h10km,ML2.7/40,Error ellipse: s-maj=0.4km s-min=0.3km
az=225.0
*PRU **25** 00:32:46.8±0.0,42°.85N×13°.76E,h10km*
ISC 25 00:32:39.2±0.8,42°.64N±0°.02×13°.21E±0°.02,h13km±5km,
n62,σ0°76/79,15C-13D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**255**	⇑P		**Pg**	**00 32 42.4**	**-0.2**
LNSS				S		**Sg**	**00 32 45.0**	**0.0**
LNSS				AML	AML			
	comp=E,32350μm,0.3s							
LNSS				AML	AML			
	comp=N,32700μm,0.2s							
RM33	**Pellescritta (**	**0.13**	**177**	P		**Pg**	**00 32 42.5**	**-0.1**
RM33				S		**Sg**	**00 32 45.2**	**+0.2**
RM33				AML	AML			
	comp=E,12050μm,0.5s							
RM33				AML	AML			
	comp=E,12100μm,0.5s							
RM33				AML	AML			
	comp=N,17550μm,0.2s							
RM33				AML	AML			
	comp=N,17550μm,0.2s							
RM33				AML	AML			
	comp=E,12050μm,0.5s							
RM33				AML	AML			
	comp=N,17100μm,0.2s							
RM33				AML	AML			
	comp=N,17600μm,0.2s							
CAMP	**Campotosto**	**0.18**	**124**	⇑P		**Pg**	**00 32 43.2**	**-0.2**
CAMP				S		**Sg**	**00 32 46.2**	**0.0**
CAMP				AML	AML			
	comp=N,2945μm,0.6s							
CAMP				AML	AML			
	comp=E,3065μm,0.4s							
NRCA	**Norcia**	**0.21**	**341**	⇓P		**Pg**	**00 32 43.4**	**-0.4**
NRCA				S		**Sg**	**00 32 46.7**	**-0.3**
NRCA				AML	AML			
	comp=E,9425μm,0.2s							
NRCA				AML	AML			
	comp=N,6340μm,1.6s							
NRCA				AML	AML			
	comp=E,10150μm,0.2s							
NRCA				AML	AML			
	comp=N,6940μm,1.6s							
NRCA				AML	AML			
	comp=E,9420μm,0.2s							
NRCA				AML	AML			
	comp=N,6340μm,1.5s							
TERO	**Teramo**	**0.29**	**93**	P		**Pg**	**00 32 44.7**	**-0.6**
TERO				S		**Sg**	**00 32 49.4**	**+0.1**
TERO				AML	AML			
	comp=N,3025μm,1.0s							
TERO				AML	AML			
	comp=E,4375μm,0.1s							
TERO				AML	AML			
	comp=N,3320μm,1.0s							
TERO				AML	AML			
	comp=E,4005μm,0.3s							
AQU	**L'Aquila**	**0.32**	**153**	P		**Pg**	**00 32 45.5**	**-0.1**
AQU				AML	AML			
	comp=E,1570μm,1.6s							
AQU				AML	AML			
	comp=N,1350μm,1.1s							
AQU				AML	AML			
	comp=E,1565μm,1.6s							
AQU				AML	AML			
	comp=N,1415μm,1.1s							
AQU				AML	AML			
	comp=E,1610μm,1.6s							
GIGS	**Gran Sasso**	**0.33**	**125**	P		**Pg**	**00 32 45.5**	**-0.4**
GIGS				S		**Sg**	**00 32 50.5**	**+0.1**
GIGS				AML	AML			
	comp=E,1850μm,0.2s							
GIGS				AML	AML			
	comp=N,981μm,0.2s							
GIGS				AML	AML			
	comp=N,977μm,0.2s							
GIGS				AML	AML			
	comp=N,980μm,0.2s							
ARRO	**Arrone**	**0.33**	**260**	⇑P		**Pg**	**00 32 45.6**	**-0.3**
ARRO				S		**Sg**	**00 32 50.7**	**+0.3**
ARRO				AML	AML			
	comp=E,3300μm,0.8s							
ARRO				AML	AML			
	comp=N,2425μm,1.0s							
ARRO				AML	AML			
	comp=E,3305μm,0.8s							
ARRO				AML	AML			
	comp=N,2430μm,1.0s							
FIAM	**Fiamignano**	**0.37**	**190**	⇑P		**Pg**	**00 32 46.5**	**-0.2**
FIAM				S		**Sg**	**00 32 52.4**	**+0.6**
FIAM				AML	AML			
	comp=N,1470μm,1.1s							
FIAM				AML	AML			
	comp=E,2095μm,0.5s							
FDMO	**Fiordimonte**	**0.41**	**348**	P		**Pg**	**00 32 46.9**	**-0.5**
FDMO				S		**Sg**	**00 32 53.3**	**+0.4**
FDMO				AML	AML			
	comp=E,660μm,0.2s							
FDMO				AML	AML			
	comp=N,842μm,0.5s							
CESI	**CESI - Serrava**	**0.43**	**329**	AML	AML			
	comp=N,1400μm,0.3s							
CESI				AML	AML			
	comp=E,860μm,1.4s							
GUMA	**Gualdo di Mace**	**0.44**	**12**	⇑P		**Pg**	**00 32 47.6**	**-0.3**
GUMA				S		**Sb**	**00 32 54.6**	**-0.7**
GUMA				AML	AML			
	comp=N,3540μm,0.5s							
GUMA				AML	AML			
	comp=E,3220μm,0.3s							
GUMA				AML	AML			
	comp=N,3655μm,0.6s							
GUMA				AML	AML			
	comp=E,2865μm,0.4s							
CSP1	**Cessapalombo**	**0.46**	**360**	P		**Pg**	**00 32 47.7**	**-0.5**
CSP1				S		**Sg**	**00 32 54.8**	**+0.4**
CSP1				AML	AML			
	comp=E,834μm,1.3s							
CSP1				AML	AML			
	comp=N,882μm,0.5s							
OFFI	**Offida**	**0.46**	**50**	⇑P		**Pg**	**00 32 48.5**	**+0.2**
OFFI				AML	AML			
	comp=E,4585μm,0.6s							
OFFI				AML	AML			
	comp=E,4580μm,0.6s							
OFFI				AML	AML			
	comp=N,5385μm,0.7s							
CESX	**Cesi**	**0.46**	**267**	P		**Pg**	**00 32 47.7**	**-0.6**
CESX				S		**Sb**	**00 32 55.5**	**-0.5**
CESX				AML	AML			
	comp=E,1215μm,0.6s							
CESX				AML	AML			
	comp=N,1465μm,0.2s							
FAGN	**Fagnano**	**0.46**	**143**	P		**Pg**	**00 32 47.9**	**-0.4**
FAGN				S		**Sb**	**00 32 55.4**	**-0.7**
FAGN				AML	AML			
	comp=N,1790μm,0.3s							
FAGN				AML	AML			
	comp=E,2085μm,0.4s							
VCEL	**Villa Celiera**	**0.53**	**117**	P		**Pg**	**00 32 49.4**	**-0.2**
VCEL				S		**Sb**	**00 32 57.8**	**-0.2**
VCEL				AML	AML			
	comp=E,2185μm,0.6s							
VCEL				AML	AML			
	comp=E,2180μm,0.6s							
VCEL				AML	AML			
	comp=N,2150μm,0.8s							
TRTR	**Tortoreto Alta**	**0.55**	**72**	P		**Pb**	**00 32 50.4**	**-0.3**
TRTR				AML	AML			
	comp=N,1725μm,1.2s							
TRTR				AML	AML			
	comp=E,2040μm,0.4s							
ASSB	**Assisi San Ben**	**0.57**	**315**	P		**Pg**	**00 32 49.8**	**-0.6**
ASSB				S		**Sg**	**00 32 58.5**	**+0.5**
ASSB				AML	AML			
	comp=E,1145μm,1.3s							
ASSB				AML	AML			
	comp=N,1124μm,0.2s							
T0110	**Collepietro**	**0.59**	**134**	P		**Pg**	**00 32 50.0**	**-0.7**
T0110				AML	AML			
	comp=E,1350μm,0.6s							
T0110				AML	AML			
	comp=N,1875μm,0.3s							
SNTG	**Esanatoglia**	**0.65**	**343**	P		**Pg**	**00 32 51.1**	**-0.8**
SNTG				S		**Sb**	**00 33 02.0**	**+0.5**
SNTG				AML	AML			
	comp=E,258μm,0.6s							
SNTG				AML	AML			
	comp=N,281μm,0.5s							
SRES	**S.Oreste - Sor**	**0.65**	**233**	P		**Pg**	**00 32 51.6**	**-0.3**
SRES				AML	AML			
	comp=E,309μm,1.2s							
SRES				AML	AML			
	comp=N,274μm,0.4s							
ATCC	**AVT- Casa Cast**	**0.69**	**323**	⇑P		**Pg**	**00 32 51.9**	**-0.7**
ATCC				AML	AML			
	comp=N,832μm,0.6s							
ATCC				AML	AML			
	comp=E,752μm,0.3s							
EL6	**Elcito**	**0.70**	**354**	⇑P		**Pg**	**00 32 51.9**	**-0.9**
MTCE	**Montecelio**	**0.70**	**209**	⇑P		**Pg**	**00 32 51.8**	**-1.0**
MTCE				AML	AML			
	comp=N,223μm,1.5s							
MTCE				AML	AML			
	comp=N,224μm,1.5s							
MTCE				AML	AML			

	comp=E,452µm,0.6s							
CERT	**Cerreto**	**0.71**	**194**	⇓P		**Pg**	**00 32 52.1**	**-0.9**
CERT				AML		AML		
	comp=E,730µm,0.5s							
CERT				AML		AML		
	comp=N,461µm,0.3s							
FOSV	**Fossato di Vic**	**0.73**	**334**	⇓P		**Pg**	**00 32 52.6**	**-0.8**
FOSV				AML		AML		
	comp=E,246µm,0.6s							
FOSV				AML		AML		
	comp=N,322µm,1.2s							
FOSV				AML		AML		
	comp=E,245µm,0.6s							
FOSV				AML		AML		
	comp=N,322µm,1.2s							
CING	**Cingoli**	**0.74**	**359**	P		**Pg**	**00 32 52.9**	**-0.7**
CING				AML		AML		
	comp=E,362µm,0.4s							
CING				AML		AML		
	comp=N,393µm,0.4s							
PP3	**Marolino**	**0.80**	**22**	⇓P		**Pb**	**00 32 54.8**	**-0.2**
PP3				AML		AML		
	comp=E,1558µm,0.4s							
PP3				AML		AML		
	comp=N,1330µm,0.4s							
PP3				AML		AML		
	comp=E,1670µm,0.4s							
PP3				AML		AML		
	comp=N,1380µm,0.4s							
INTR	**Introdacqua**	**0.81**	**140**	⇓P		**Pg**	**00 32 53.6**	**-1.3**
INTR				AML		AML		
	comp=E,318µm,0.6s							
INTR				AML		AML		
	comp=N,612µm,0.9s							
INTR				AML		AML		
	comp=E,318µm,0.6s							
VVLD	**Villa Vallelon**	**0.82**	**158**	P		**Pg**	**00 32 55.0**	**-0.2**
VVLD				AML		AML		
	comp=E,192µm,0.9s							
VVLD				AML		AML		
	comp=N,274µm,0.5s							
VVLD				AML		AML		
	comp=E,192µm,0.9s							
VVLD				AML		AML		
	comp=N,275µm,0.5s							
MGAB	**Montegabbione**	**0.85**	**289**	P		**Pg**	**00 32 55.2**	**-0.4**
MGAB				AML		AML		
	comp=N,634µm,0.6s							
MGAB				AML		AML		
	comp=N,676µm,0.4s							
MGAB				AML		AML		
	comp=E,613µm,0.6s							
MGAB				AML		AML		
	comp=E,736µm,0.6s							
ATFO	**Monte Foce - G**	**0.87**	**328**	⇓P		**Pg**	**00 32 55.2**	**-0.7**
ATFO				AML		AML		
	comp=E,314µm,1.1s							
ATFO				AML		AML		
	comp=N,260µm,0.6s							
ATFO				AML		AML		
	comp=E,314µm,1.1s							
ARVD	**Arcevia**	**0.88**	**347**	⇑P		**Pg**	**00 32 55.5**	**-0.8**
ARVD				S		**Sn**	**00 33 10.0**	**-0.1**
ARVD				AML		AML		
	comp=E,254µm,0.9s							
ARVD				AML		AML		
	comp=N,288µm,0.7s							
ARVD				AML		AML		
	comp=E,254µm,0.9s							
LPEL	**Lama dei Pelig**	**0.93**	**129**	S		**Sb**	**00 33 10.0**	**+0.4**
VIVA	**Pratoni del Vi**	**0.94**	**200**	⇑P		**Pn**	**00 32 58.8**	**+0.6**
ATVO	**AVT- Monte Val**	**0.95**	**322**	⇓P		**Pg**	**00 32 56.5**	**-1.1**
ATVO				AML		AML		
	comp=E,294µm,0.6s							
ATVO				AML		AML		
	comp=N,250µm,0.6s							
SACS	**San Casciano d**	**0.98**	**283**	⇑P		**Pn**	**00 32 58.7**	**-0.1**
SACS				AML		AML		
	comp=N,280µm,0.8s							
SACS				AML		AML		
	comp=E,219µm,0.5s							
ATMI	**Monte Miggiano**	**0.98**	**316**	⇓P		**Pn**	**00 33 00.4**	**+1.6**
ATPI	**Pietralunga -**	**1.00**	**324**	⇑P		**Pg**	**00 32 57.7**	**-0.9**
ATPI				AML		AML		
	comp=E,261µm,0.6s							
ATPI				AML		AML		
	comp=N,229µm,0.6s							
PIEI	**Pieia**	**1.02**	**332**	⇓P		**Pb**	**00 32 58.3**	**-0.6**
PIEI				AML		AML		
	comp=N,135µm,0.7s							
PIEI				AML		AML		
	comp=E,182µm,1.5s							
MPAG	**Monte Paganucc**	**1.04**	**342**	⇑P		**Pn**	**00 32 59.7**	**0.0**
MPAG				AML		AML		
	comp=N,232µm,0.5s							
MPAG				AML		AML		
	comp=E,186µm,0.6s							
NARO	**Abbazia di Nar**	**1.08**	**335**	⇓P		**Pb**	**00 32 58.7**	**-1.0**
NARO				AML		AML		
	comp=E,164µm,0.7s							
NARO				AML		AML		
	comp=N,154µm,1.2s							
GIUL	**Giuliano Di Ro**	**1.08**	**178**	⇓P		**Pn**	**00 33 01.2**	**+1.1**
FSSB	**Fossombrone**	**1.10**	**344**	P		**Pb**	**00 32 59.5**	**-0.7**
FSSB				AML		AML		
	comp=N,476µm,0.3s							
FSSB				AML		AML		
	comp=E,564µm,0.4s							
MCIV	**Monte Civitell**	**1.14**	**278**	⇑P		**Pb**	**00 33 00.5**	**-0.3**
MCIV				AML		AML		
	comp=E,136µm,0.8s							
MCIV				AML		AML		
	comp=N,92µm,0.5s							
CAFI	**Castiglion Fio**	**1.14**	**308**	⇓P		**Pb**	**00 33 00.6**	**-0.3**
CAFI				AML		AML		
	comp=N,206µm,0.8s							
CAFI				AML		AML		
	comp=E,205µm,0.9s							
DUGI	**Dugi Otok**	**1.91**	**44**	*e*Pn		**Pn**	**00 33 12.0**	**+0.5**
APRC	**Apricena**	**1.94**	**116**	⇓P		**Pb**	**00 33 13.6**	**-0.9**
VIRC	**Vir**	**2.13**	**38**	*e*Pn		**Pn**	**00 33 14.4**	**-0.1**
MORI	**Morici**	**2.20**	**55**	*e*Pn		**Pn**	**00 33 15.9**	**+0.4**
NVLJ	**Novalja**	**2.27**	**32**	*e*Pn		**Pn**	**00 33 16.8**	**+0.3**
RABC	**Rab**	**2.40**	**28**	*e*Pn		**Pn**	**00 33 18.3**	**+0.1**
UDBI	**Udbina**	**2.65**	**44**	*e*Pn		**Pn**	**00 33 22.8**	**+1.1**
KIJV	**Kijevo**	**2.71**	**59**	*e*Pn		**Pn**	**00 33 23.6**	**+1.1**
STON	**Ston**	**3.32**	**84**	*e*Pn		**Pn**	**00 33 30.5**	**-0.3**
OBKA	**Obir**	**3.99**	**13**	*i* Pn		**Pn**	**00 33 39.2**	**-0.9**
	comp=E,0.7nm,0.4s							
ABTA	**Abfaltersbach**	**4.14**	**353**	*i* Pn		**Pn**	**00 33 44.6**	**+2.4**
	comp=E,2.2nm,0.3s							
ABTA				*i* Sn		**Sn**	**00 34 32.4**	**+1.9**
	comp=E,6.3nm,0.5s							
FETA	**Feichten**	**4.72**	**339**	*i* Pn		Pb	00 33 56.2	-5.8
	comp=E,1.1nm,0.5s							
CONA	**Conrad Observa**	**5.61**	**19**	*e*Pn		**Pn**	**00 34 04.7**	**+2.3**
	comp=E,0.5nm,0.3s							
CONA				*e*Sn		**Sn**	**00 35 08.1**	**+1.2**
	comp=E,1.6nm,0.5s							
CKRC	**Cesky Krumlov**	**6.23**	**7**	*e*SN		**Sn**	**00 35 21.3**	**-0.7**
KHC	**Kasperske Hory**	**6.50**	**2**	*e*SN		**Sn**	**00 35 28.2**	**-0.4**

IDC ***25*** *00:33:56.1±2.7,29°.75N×79°.94E,h0km,mb3.7/4, mbtmp3.7/5,ML3.3/1,MS3.7/1,Error ellipse: s-maj=106.2km s-min=31.0km az=69.0*
NDI ***25*** *00:34:04.5±2.4,29°.80N×80°.38E,h13km±6km,ML3.0*
ISC 25 00:34:00.8±1.0,**29°.91N**±0°.05×**80°.42E**±0°.08,**h23**km,**n13,**
σ1°29/16,mb3.6/3,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**0.40**	**206**	*e*Pg	**Pb**	**00 34 09.1**	**-0.4**
PTH				*i* Sg	**Sb**	**00 34 14.9**	**-0.4**
LGTI	**Lohaghat**	**0.48**	**198**	*e*Pg	**Pn**	**00 34 13.1**	**+0.8**
LGTI				*i* Sg	**Sn**	**00 34 21.9**	**+1.8**
DDI	**Dehra Dun**	**2.09**	**282**	*e*P	**Pb**	**00 34 39.3**	**+1.2**
DDI				*e*S	**Sb**	**00 35 04.7**	**+1.0**
SMLA	**Simla**	**3.06**	**294**	*e*Pn	**Pb**	**00 34 53.9**	**-0.7**
SMLA				*e*S	**Sb**	**00 35 30.0**	**-1.4**
SMLA				IAML		00 35 37.8	
	comp=N,77nm,0.2s						
SMLA				IAML		00 35 37.9	
	comp=E,76nm,0.2s						
KUDL	**Kundal**	**3.87**	**244**	*ex*	x	00 35 14.7	
KUDL				*e*S	**Sn**	**00 35 43.5**	**-0.1**
JHNI	**Jhansi**	**4.73**	**201**	*e*S	**Sn**	**00 36 05.3**	**+0.3**
BHPL	**Bhopal**	**7.16**	**203**	*ex*	x	00 35 43.2	
BHPL				*e*S	**Sn**	**00 37 01.7**	**-3.2**
MKAR	**Makanchi Array**	**16.92**	**4**	P	**P**	**00 37 58.5**	**+0.6**
	comp=E,0.1nm,0.3s,baz=192,slow=12,SNR=8.1						
	comp=E,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**20.74**	**357**	P	**P**	**00 38 39.5**	**-0.1**
	comp=E,1.8nm,0.2s,baz=183,slow=13,SNR=2.7						
	comp=E,1.8nm,0.2s						
ZALV	**Zalesovo Beam**	**24.23**	**6**	P	**P**	**00 39 15.7**	**0.0**
	comp=E,0.9nm,0.5s,baz=191,slow=9.2,SNR=6.7						
	comp=E,0.9nm,0.5s						
ASF	**Jabal al Asfar**	**37.17**	**285**	LR	LR	00 58 48.6	
	comp=E,112nm,20.2s,baz=108,slow=40						
ARCESS	**ARCESS Array B**	**50.21**	**338**	P	**P**	**00 42 53.5**	**-1.0**
	comp=E,0.8nm,0.8s,baz=113,slow=6.9,SNR=1.0						
	comp=E,0.8nm,0.8s						
WRA	**Warramunga Arr**	**71.77**	**127**	P	**P**	**00 45 22.2**	**+0.6**
	comp=E,0.2nm,0.5s,baz=319,slow=6.0,SNR=1.6						
	comp=E,0.2nm,0.5s						

ROM 25 00:34:35.5±0.1,**42°.535N**±0°.009×**13°.231E**±0°.007,
h9km,ML2.1/15,**12C,Error ellipse: s-maj=1.0km**
s-min=0.1km az=14.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.03**	**205**	P	Pg	00 34 38.0	+0.6
RM33				S	Sg	00 34 39.4	+0.6
RM33				AML	AML		
	comp=N,7110µm,0.3s						
RM33				AML	AML		
	comp=E,8350µm,0.2s						
RM33				AML	AML		
	comp=N,6790µm,0.2s						
RM33				AML	AML		
	comp=E,8355µm,0.2s						
RM33				AML	AML		
	comp=N,7110µm,0.2s						
RM33				AML	AML		
	comp=E,8485µm,0.2s						
RM33				END			
CAMP	**Campotosto**	**0.13**	**90**	⇑P	Pg	00 34 39.1	+0.5
CAMP				S	Sg	00 34 41.7	+0.9
CAMP				AML	AML		
	comp=N,856µm,0.3s						
CAMP				AML	AML		
	comp=E,1200µm,0.6s						
CAMP				END			
LNSS	**Leonessa**	**0.16**	**296**	⇑P	Pg	00 34 39.4	+0.4
LNSS				S	Sg	00 34 42.3	+0.8
LNSS				AML	AML		
	comp=E,4150µm,0.2s						
LNSS				AML	AML		
	comp=N,3665µm,0.3s						
LNSS				AML	AML		
	comp=E,6370µm,1.3s						
LNSS				AML	AML		
	comp=N,7820µm,0.1s						
LNSS				END			
AQU	**L'Aquila**	**0.22**	**145**	⇑P	Pg	00 34 40.5	+0.4
AQU				S	Sg	00 34 44.1	+0.9
AQU				AML	AML		
	comp=N,365µm,0.3s						
AQU				AML	AML		
	comp=N,366µm,0.3s						
AQU				AML	AML		
	comp=N,354µm,0.3s						
AQU				AML	AML		
	comp=E,423µm,0.4s						
AQU				AML	AML		
	comp=E,464µm,0.4s						
AQU				END			
T1243	**Rocca Santa Ma**	**0.23**	**45**	END			
GIGS	**Gran Sasso**	**0.26**	**109**	⇑P	Pg	00 34 41.2	+0.3
GIGS				S	Sg	00 34 45.4	+0.9
GIGS				AML	AML		
	comp=E,200µm,0.1s						
GIGS				AML	AML		
	comp=N,126µm,1.4s						
GIGS				AML	AML		
	comp=N,198µm,0.4s						
GIGS				AML	AML		
	comp=E,296µm,0.4s						
GIGS				END			
FIAM	**Fiamignano**	**0.28**	**198**	P	Pb	00 34 42.3	-0.5
FIAM				S	Sb	00 34 46.6	-1.0
FIAM				AML	AML		
	comp=E,344µm,0.6s						
FIAM				AML	AML		
	comp=N,212µm,0.8s						
FIAM				AML	AML		
	comp=E,790µm,1.4s						
FIAM				AML	AML		
	comp=N,312µm,0.7s						
TERO	**Teramo**	**0.29**	**72**	P	Pg	00 34 41.4	+0.1
TERO				S	Sg	00 34 45.9	+0.6
TERO				AML	AML		
	comp=E,1400µm,1.4s						
TERO				AML	AML		
	comp=E,1560µm,0.1s						
TERO				AML	AML		
	comp=N,3000µm,0.1s						
TERO				AML	AML		
	comp=N,2475µm,0.1s						
ARRO	**Arrone**	**0.35**	**277**	⇑P	Pg	00 34 42.6	+0.2
ARRO				S	Sb	00 34 48.6	-0.8
ARRO				AML	AML		
	comp=E,630µm,0.2s						
ARRO				AML	AML		
	comp=N,396µm,0.3s						
FAGN	**Fagnano**	**0.38**	**136**	⇑P	Pg	00 34 43.4	+0.5
FAGN				S	Sb	00 34 50.3	+0.1
FAGN				AML	AML		
	comp=E,557µm,0.8s						
FAGN				AML	AML		
	comp=N,488µm,0.2s						
FAGN				AML	AML		
	comp=N,502µm,0.3s						
FAGN				AML	AML		
	comp=E,564µm,0.7s						
VCEL	**Villa Celiera**	**0.47**	**107**	⇑P	Pg	00 34 45.4	+0.6
VCEL				AML	AML		
	comp=E,440µm,0.3s						
VCEL				AML	AML		
	comp=N,552µm,0.4s						
VCEL				AML	AML		
	comp=E,532µm,0.4s						
VCEL				AML	AML		
	comp=N,654µm,0.3s						
CESX	**Cesi**	**0.49**	**279**	⇑P	Pg	00 34 45.1	+0.1
CESX				S	Sb	00 34 52.8	-0.7
CESX				AML	AML		
	comp=E,104µm,0.4s						
CESX				AML	AML		
	comp=N,112µm,0.3s						
CESX				AML	AML		
	comp=N,315µm,1.4s						
CESX				AML	AML		
	comp=E,239µm,0.3s						
T0110	**Collepietro**	**0.51**	**127**	⇑P	Pg	00 34 45.8	+0.4
T0110				S	Sb	00 34 54.1	-0.1
T0110				AML	AML		
	comp=N,332µm,0.3s						
T0110				AML	AML		
	comp=E,393µm,0.4s						
OFFI	**Offida**	**0.52**	**40**	⇑P	Pb	00 34 46.3	-0.5
OFFI				S	Sb	00 34 55.3	+0.8
OFFI				AML	AML		
	comp=E,988µm,0.9s						
OFFI				AML	AML		
	comp=N,1355µm,0.7s						
CSP1	**Cessapalombo**	**0.56**	**358**	⇑P	Pg	00 34 46.9	+0.5
SRES	**S.Oreste - Sor**	**0.61**	**241**	P	Pg	00 34 47.7	+0.3
SRES				AML	AML		
	comp=E,82µm,0.4s						
SRES				AML	AML		
	comp=N,73µm,0.4s						
INTR	**Introdacqua**	**0.72**	**136**	P	Pg	00 34 49.3	-0.2
INTR				S	Sb	00 35 01.0	+0.7
INTR				AML	AML		
	comp=E,71µm,0.6s						
INTR				AML	AML		
	comp=N,110µm,0.6s						
LPEL	**Lama dei Pelig**	**0.86**	**124**	⇑P	Pg	00 34 51.4	-0.6
LPEL				S	Sb	00 35 04.0	-0.2
LPEL				AML	AML		
	comp=E,93µm,1.0s						
LPEL				AML	AML		
	comp=N,87µm,0.4s						

ROM 25 00:35:24.1±0.1,**42°.661N**±0°.006×**13°.256E**±0°.006,
h8km,ML2.4/11,**Error ellipse: s-maj=0.7km**
s-min=0.2km az=203.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1202	**Accumoli, Fraz**	**0.05**	**331**	END			
T1214	**Arquata del Tr**	**0.10**	**340**	END			
AQT1	**Arquata del Tr**	**0.12**	**14**	END			
T1243	**Rocca Santa Ma**	**0.15**	**76**	END			
RM33	**Pellescritta (**	**0.15**	**192**	P	Pg	00 35 28.3	+0.9
RM33				S	Sg	00 35 30.9	+1.2
RM33				AML	AML		
	comp=N,3760µm,0.3s						
RM33				AML	AML		
	comp=E,3880µm,0.6s						
RM33				AML	AML		
	comp=N,3765µm,0.3s						
RM33				AML	AML		
	comp=N,3765µm,0.3s						
RM33				AML	AML		
	comp=E,3870µm,0.6s						
RM33				END			
CAMP	**Campotosto**	**0.17**	**138**	P	Pg	00 35 28.5	+0.9
CAMP				S	Sg	00 35 30.8	+0.6
CAMP				AML	AML		
	comp=N,694µm,0.4s						
CAMP				AML	AML		
	comp=E,1200µm,0.6s						
LNSS	**Leonessa**	**0.17**	**250**	P	Pg	00 35 28.4	+0.8
LNSS				S	Sg	00 35 31.4	+1.2
LNSS				AML	AML		
	comp=N,7820µm,0.1s						
LNSS				AML	AML		
	comp=E,6370µm,1.3s						
LNSS				END			
NRCA	**Norcia**	**0.20**	**329**	P	Pg	00 35 29.2	+0.9
NRCA				S	Sg	00 35 31.6	+0.6
TERO	**Teramo**	**0.26**	**98**	P	Pg	00 35 30.0	+0.7
TERO				S	Sg	00 35 34.1	+1.3
TERO				AML	AML		
	comp=E,1400µm,1.4s						
TERO				AML	AML		
	comp=N,2475µm,0.1s						
TERO				AML	AML		
	comp=E,1560µm,0.1s						
TERO				AML	AML		
	comp=N,3000µm,0.1s						
GIGS	**Gran Sasso**	**0.31**	**132**	P	Pg	00 35 30.7	+0.4
GIGS				S	Sg	00 35 35.7	+1.2
GIGS				AML	AML		
	comp=E,296µm,0.4s						
GIGS				AML	AML		
	comp=N,198µm,0.4s						
ARRO	**Arrone**	**0.37**	**257**	P	Pg	00 35 31.6	+0.2
ARRO				S	Sb	00 35 38.1	-0.8
ARRO				AML	AML		
	comp=N,396µm,0.3s						
ARRO				AML	AML		
	comp=E,630µm,0.2s						
OFFI	**Offida**	**0.42**	**49**	P	Pb	00 35 33.9	+0.2
OFFI				AML	AML		
	comp=E,988µm,0.9s						
OFFI				AML	AML		
	comp=N,1355µm,0.7s						
CESI	**CESI - Serrava**	**0.43**	**323**	P	Pb	00 35 33.3	-0.7
CESI				S	Sb	00 35 40.2	-0.5
CESI				AML	AML		
	comp=N,362µm,0.6s						
CESI				AML	AML		
	comp=E,338µm,0.4s						
CESX	**Cesi**	**0.50**	**264**	P	Pg	00 35 33.9	+0.1
CESX				S	Sb	00 35 42.2	-0.4
VCEL	**Villa Celiera**	**0.51**	**121**	P	Pb	00 35 34.7	-0.6
VCEL				S	Sb	00 35 43.0	+0.2
T0110	**Collepietro**	**0.58**	**138**	P	Pg	00 35 35.7	+0.3
T0110				S	Sb	00 35 44.7	-0.3
SRES	**S.Oreste - Sor**	**0.70**	**233**	P	Pg	00 35 37.6	+0.1
SRES				S	Sb	00 35 47.4	-0.8

ROM 25 00:57:52.4±0.1,**42°.751N**±0°.004×**13°.200E**±0°.007,
h10km,ML2.5/43,**15C-9D,Error ellipse: s-maj=0.6km**
s-min=0.3km az=258.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**323**	P	Pg	00 57 55.5	+0.4
NRCA				S	Sg	00 57 57.3	+0.3
NRCA				AML	AML		
	comp=N,17750µm,1.3s						
NRCA				AML	AML		
	comp=E,23600µm,1.5s						
NRCA				AML	AML		
	comp=N,19900µm,1.3s						
NRCA				AML	AML		
	comp=E,23550µm,1.5s						
NRCA				AML	AML		
	comp=E,25500µm,1.5s						
NRCA				AML	AML		
	comp=N,17800µm,1.3s						
LNSS	**Leonessa**	**0.19**	**219**	P	Pg	00 57 57.1	+0.7
LNSS				S	Sg	00 58 00.6	+1.4
LNSS				AML	AML		
	comp=N,14150µm,0.2s						
LNSS				AML	AML		
	comp=E,11075µm,0.8s						
LNSS				AML	AML		
	comp=E,11035µm,0.8s						
FEMA	**Monte Fema**	**0.24**	**333**	P	Pg	00 57 58.0	+0.6
FEMA				S	Sg	00 58 02.0	+1.3
FEMA				AML	AML		
	comp=E,3400µm,0.7s						
FEMA				AML	AML		
	comp=N,2985µm,1.3s						
FEMA				AML	AML		
	comp=E,3405µm,0.7s						
CAMP	**Campotosto**	**0.26**	**144**	⇑P	Pg	00 57 58.4	+0.6
CAMP				S	Sg	00 58 02.7	+1.3
CAMP				AML	AML		
	comp=N,886µm,0.5s						
CAMP				AML	AML		
	comp=E,836µm,0.1s						
FDMO	**Fiordimonte**	**0.30**	**344**	P	Pg	00 57 58.8	+0.4
FDMO				S	Sb	00 58 03.7	-1.2
FDMO				AML	AML		
	comp=N,2215µm,0.3s						
FDMO				AML	AML		
	comp=E,2020µm,0.2s						
TERO	**Teramo**	**0.32**	**113**	P	Pg	00 57 59.4	+0.5
TERO				AML	AML		
	comp=E,890µm,0.9s						
TERO				AML	AML		
	comp=N,1175µm,0.1s						
GUMA	**Gualdo di Mace**	**0.33**	**18**	P	Pb	00 57 59.8	-0.6
GUMA				S	Sb	00 58 05.5	-0.3
GUMA				AML	AML		
	comp=E,7490µm,0.3s						
GUMA				AML	AML		
	comp=N,7725µm,0.2s						
GUMA				AML	AML		
	comp=N,10800µm,0.2s						
GUMA				AML	AML		
	comp=N,7720µm,0.2s						
GUMA				AML	AML		
	comp=E,6360µm,0.5s						
GUMA				AML	AML		
	comp=E,7485µm,0.3s						
CESI	**CESI - Serrava**	**0.33**	**320**	P	Pg	00 57 59.6	+0.5
CESI				S	Sb	00 58 04.9	-1.1
CESI				AML	AML		
	comp=E,1840µm,0.2s						
CESI				AML	AML		
	comp=N,3345µm,0.3s						
CSP1	**Cessapalombo**	**0.34**	**1**	P	Pg	00 57 59.7	+0.5
CSP1				S	Sb	00 58 05.4	-0.9
CSP1				AML	AML		
	comp=E,2855µm,0.3s						

CSP1 AML AML
comp=E,2850μm,0.3s
CSP1 AML AML
comp=N,3640μm,0.2s
ARRO Arrone 0.36 242 P Pg 00 58 00.1 +0.5
ARRO S Sb 00 58 06.2 -0.5
ARRO AML AML
comp=N,1155μm,0.7s
ARRO AML AML
comp=N,1154μm,0.7s
ARRO AML AML
comp=N,1154μm,0.7s
ARRO AML AML
comp=E,1135μm,0.2s
OFFI Offida 0.40 63 P Pb 00 58 01.6 0.0
OFFI AML AML
comp=E,1271μm,0.6s
OFFI AML AML
comp=N,1730μm,0.5s
OFFI AML AML
comp=E,1276μm,0.6s
GIGS Gran Sasso 0.41 138 P Pg 00 58 00.6 +0.2
GIGS S Sg 00 58 06.8 +1.0
GIGS AML AML
comp=E,186μm,0.3s
GIGS AML AML
comp=N,151μm,1.5s
GIGS AML AML
comp=E,186μm,0.3s
GIGS AML AML
comp=N,152μm,1.5s
AQU L'Aquila 0.42 159 ⇓P Pg 00 58 01.1 +0.4
AQU AML AML
comp=E,558μm,1.5s
AQU AML AML
comp=E,519μm,1.5s
AQU AML AML
comp=N,674μm,0.7s
AQU AML AML
comp=N,637μm,0.3s
SEF1 Sefro 0.44 335 P Pg 00 58 01.3 +0.3
CESX Cesi 0.48 253 P Pg 00 58 02.0 +0.3
CESX AML AML
comp=N,460μm,0.3s
CESX AML AML
comp=E,465μm,0.4s
SSM1 San Severino M 0.48 358 ⇑P Pb 00 58 02.4 -0.6
FIAM Fiamignano 0.49 187 ⇑P Pg 00 58 02.2 +0.3
FIAM AML AML
comp=E,602μm,0.6s
FIAM AML AML
comp=N,620μm,0.7s
ASSB Assisi San Ben 0.49 306 P Pg 00 58 02.3 +0.3
ASSB AML AML
comp=E,988μm,0.6s
ASSB AML AML
comp=N,668μm,0.1s
GAG1 Gagliole 0.50 349 ⇑P Pb 00 58 02.7 -0.6
SNTG Esanatoglia 0.54 339 P Pg 00 58 02.6 -0.3
SNTG S Sb 00 58 12.0 +0.1
SNTG AML AML
comp=N,592μm,0.5s
SNTG AML AML
comp=E,452μm,0.4s
FAGN Fagnano 0.56 149 ⇑P Pg 00 58 03.6 +0.3
FAGN AML AML
comp=E,964μm,0.4s
FAGN AML AML
comp=N,694μm,1.2s
VCEL Villa Celiera 0.59 127 P Pb 00 58 04.8 -0.2
VCEL AML AML
comp=E,554μm,0.4s
VCEL AML AML
comp=N,435μm,0.6s
VCEL AML AML
comp=E,553μm,0.4s
ATCC AVT- Casa Cast 0.60 317 P Pg 00 58 04.3 +0.3
ATCC AML AML
comp=E,552μm,0.9s
ATCC AML AML
comp=N,588μm,0.7s
CING Cingoli 0.62 360 ⇑P Pg 00 58 04.6 +0.1
CING AML AML
comp=E,588μm,1.3s
CING AML AML
comp=N,480μm,0.1s
FOSV Fossato di Vic 0.63 330 ⇑P Pg 00 58 04.6 -0.1
FOSV AML AML
comp=E,533μm,0.2s
FOSV AML AML
comp=E,532μm,0.2s
FOSV AML AML
comp=N,500μm,0.3s
T0110 Collepietro 0.68 141 P Pg 00 58 05.5 +0.1
T0110 AML AML
comp=E,370μm,0.3s
T0110 AML AML
comp=N,441μm,0.5s
PP3 Marolino 0.69 25 ⇑P Pb 00 58 07.1 +0.5
PP3 AML AML
comp=E,1920μm,0.5s
PP3 AML AML
comp=E,1780μm,0.5s
PP3 AML AML
comp=E,1920μm,0.5s
PP3 AML AML
comp=N,1585μm,0.5s
PP3 AML AML
comp=N,1710μm,0.5s
SRES S.Oreste - Sor 0.72 225 ⇓P Pg 00 58 06.7 +0.4
SRES AML AML
comp=E,178μm,0.9s
SRES AML AML
comp=N,154μm,0.4s
SRES AML AML
comp=N,154μm,0.4s
SSFR Montelago di S 0.75 336 ⇑P Pg 00 58 06.9 0.0
SSFR AML AML
comp=E,967μm,1.6s
SSFR AML AML
comp=N,920μm,1.2s
SSFR AML AML
comp=N,914μm,0.2s
SSFR AML AML
comp=E,881μm,0.2s
ATFO Monte Foce - G 0.77 323 P Pg 00 58 07.3 +0.1
ATFO AML AML
comp=E,225μm,0.4s
ATFO AML AML
comp=E,226μm,0.4s
ATFO AML AML
comp=N,310μm,0.2s
ARVD Arcevia 0.77 346 ⇑P Pg 00 58 07.2 -0.1
ARVD S Sn 00 58 20.0 -1.1
ARVD AML AML
comp=E,218μm,0.2s
ARVD AML AML
comp=N,206μm,0.2s
MTCE Montecelio 0.80 205 ⇑P Pg 00 58 07.4 -0.4
MTCE AML AML
comp=N,124μm,0.5s
MTCE AML AML
comp=E,165μm,0.4s
MTCE AML AML
comp=N,124μm,0.5s
MGAB Montegabbione 0.82 282 P Pb 00 58 08.7 0.0
MGAB AML AML
comp=E,419μm,0.4s
MGAB AML AML
comp=N,386μm,0.4s
MGAB AML AML
comp=E,492μm,0.4s
MGAB AML AML
comp=N,404μm,0.4s
CERT Cerreto 0.82 191 ⇑P Pg 00 58 07.9 -0.2
CERT AML AML
comp=N,176μm,0.8s
CERT AML AML
comp=E,252μm,0.8s
FRON Frontone 0.84 336 ⇓P Pg 00 58 08.4 -0.2
FRON AML AML
comp=E,225μm,0.2s
FRON AML AML
comp=N,250μm,0.4s
AOI Ancona 0.85 20 P Pb 00 58 09.4 +0.1
AOI AML AML
comp=E,286μm,0.3s
AOI AML AML
comp=N,248μm,1.0s
ATVO AVT- Monte Val 0.86 318 ⇓P Pg 00 58 09.0 0.0
ATVO AML AML
comp=E,186μm,0.3s
ATVO AML AML
comp=N,188μm,0.3s
COR1 Corinaldo 0.89 351 ⇑P Pb 00 58 10.2 +0.2
COR1 AML AML
comp=N,421μm,0.6s
COR1 AML AML
comp=E,220μm,1.1s
INTR Introdacqua 0.91 144 P Pg 00 58 09.1 -0.7
INTR AML AML
comp=E,99μm,0.9s
INTR AML AML
comp=N,188μm,1.1s
INTR AML AML
comp=N,187μm,1.1s
INTR AML AML
comp=E,99μm,0.9s
ATPI Pietralunga - 0.91 320 ⇓P Pg 00 58 09.8 -0.2
ATPI AML AML
comp=E,136μm,0.5s
ATPI AML AML
comp=N,104μm,0.3s
PIEI Pieia 0.92 328 ⇓P Pg 00 58 09.8 -0.4
PIEI AML AML
comp=E,180μm,0.3s
PIEI AML AML
comp=N,126μm,0.5s
MPAG Monte Paganucc 0.94 340 ⇑P Pg 00 58 10.1 -0.3
MPAG S Sn 00 58 25.0 -0.3
MPAG AML AML
comp=N,184μm,0.5s
MPAG AML AML
comp=E,196μm,0.8s
NARO Abbazia di Nar 0.97 332 ⇓P Pg 00 58 10.6 -0.5
NARO AML AML
comp=E,115μm,0.5s
NARO AML AML
comp=N,84μm,0.3s
NARO AML AML
comp=E,115μm,0.5s
NARO AML AML
comp=N,84μm,0.3s
FSSB Fossombrone 0.99 342 P Pg 00 58 11.4 -0.1
FSSB AML AML
comp=N,846μm,0.4s
FSSB AML AML
comp=N,845μm,0.4s
FSSB AML AML
comp=E,430μm,0.2s
LPEL Lama dei Pelig 1.01 134 ⇑P Pg 00 58 11.8 -0.1
LPEL AML AML
comp=E,122μm,0.8s
LPEL AML AML
comp=N,125μm,1.4s
BADI Badiali 1.03 318 P Pg 00 58 12.2 0.0
CAFI Castiglion Fio 1.07 303 ⇓P Pb 00 58 13.3 +0.2
CAFI AML AML
comp=E,98μm,0.7s
CAFI AML AML
comp=N,99μm,1.4s
GIUL Giuliano Di Ro 1.19 178 ⇓P Pg 00 58 17.2 +1.9
PESA Pesaro 1.22 348 P Pg 00 58 16.3 +0.5
DUGI Dugi Otok 1.84 47 *e*Pn Pn 00 58 24.8 +0.7
VIRC Vir 2.05 41 *e*Pn Pn 00 58 27.4 +0.5
MORI Morici 2.14 58 *e*Pn Pn 00 58 29.4 +1.1
NVLJ Novalja 2.18 33 *e*Pn Pn 00 58 29.2 +0.4
BRJN Brijuni 2.19 10 *e*Pn Pn 00 58 29.2 +0.3
RABC Rab 2.31 29 *e*Pn Pn 00 58 31.2 +0.7
SMRN Sveta Marina 2.39 16 *e*Pn Pn 00 58 31.8 +0.3
UDBI Udbina 2.57 45 *e*Pn Pn 00 58 36.0 +1.8
KIJV Kijevo 2.65 61 *e*Pn Pn 00 58 37.0 +1.7
PLIT Plitvice 2.76 39 *e*Pn Pn 00 58 37.9 +1.2
ABTA Abfaltersbach 4.03 353 *i* Pn Pn 00 58 56.3 +2.1
comp=N,1.1nm,0.3s
FETA Feichten 4.62 339 *e*Pn Pn 00 59 05.4 +3.0
comp=N,0.3nm,0.2s
WTTA Wattenberg 4.65 347 *e*Pn Pn 00 59 06.6 +3.7
comp=N,0.4nm,0.2s
SQTA Sankt Quirin 4.69 343 *e*Pn Pn 00 59 06.9 +3.6
comp=N,0.9nm,0.2s
MOTA Moosalm 4.83 343 *e*Pn Pn 00 59 08.9 +3.6

ROM 25 00:58:44.7±0.1, 42°07'N±0°.004×13°.156E±0°.006, h9km, ML2.2/4, 4C-1D, Error ellipse: s-maj=0.5km s-min=0.2km az=266.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**311**	⇑P	Pg	00 58 46.9	+0.3
NRCA				S	Sg	00 58 48.1	+0.1
NRCA				AML	AML		
	comp=N,5270μm,0.7s						
NRCA				AML	AML		
	comp=E,7950μm,0.6s						
NRCA				AML	AML		
	comp=E,7150μm,0.6s						
NRCA				AML	AML		
	comp=N,5930μm,0.7s						
NRCA	comp=N,5275μm,0.7s			AML	AML		
NRCA				END			
T1212	**Cascia, Frazio**	**0.10**	**236**	END			
LNSS	**Leonessa**	**0.22**	**203**	P	Pg	00 58 50.1	+0.9
LNSS				S	Sg	00 58 53.9	+1.6
LNSS				AML	AML		
	comp=N,1310μm,0.7s						
LNSS	comp=E,1330μm,0.5s			AML	AML		
LNSS				END			
FDMO	**Fiordimonte**	**0.23**	**348**	⇑P	Pg	00 58 50.3	+0.8
FDMO				S	Sg	00 58 54.6	+1.9
FDMO				END			
CESI	**CESI - Serrava**	**0.27**	**317**	⇑P	Pg	00 58 50.8	+0.6
CESI				S	Sb	00 58 55.2	-1.3
CESI				AML	AML		
	comp=N,308μm,0.5s						
CESI				AML	AML		
	comp=E,161μm,0.3s						
CESI				END			
CSP1	**Cessapalombo**	**0.29**	**7**	P	Pg	00 58 51.2	+0.7
CSP1				S	Sb	00 58 56.0	-1.1
CSP1				END			
GUMA	**Gualdo di Mace**	**0.29**	**27**	P	Pb	00 58 51.5	-0.5
GUMA				S	Sb	00 58 56.3	-0.7
ARRO	**Arrone**	**0.37**	**232**	P	Pg	00 58 52.5	+0.6
ARRO				S	Sb	00 58 58.7	-0.5
ARRO				AML	AML		
	comp=E,104μm,0.3s						
ARRO				AML	AML		
	comp=N,125μm,0.1s						
TERO	**Teramo**	**0.38**	**119**	P	Pg	00 58 52.7	+0.5
TERO				S	Sb	00 58 58.5	-1.0
TERO				AML	AML		
	comp=N,186μm,0.1s						
TERO				AML	AML		
	comp=N,186μm,0.1s						
TERO				AML	AML		
	comp=E,188μm,0.1s						
ASSB	**Assisi San Ben**	**0.43**	**303**	P	Pg	00 58 53.5	+0.3
ASSB				S	Sb	00 59 00.1	-1.1
CESX	**Cesi**	**0.47**	**245**	S	Sb	00 59 02.0	-0.1
SNTG	**Esanatoglia**	**0.47**	**341**	⇓P	Pg	00 58 54.5	+0.5
EL6	**Elcito**	**0.52**	**356**	S	Sb	00 59 04.0	+0.1
ATCC	**AVT- Casa Cast**	**0.54**	**315**	P	Pg	00 58 55.4	+0.4
ATCC				S	Sb	00 59 04.0	-0.1
FIAM	**Fiamignano**	**0.54**	**183**	S	Sb	00 59 04.0	-0.3
CING	**Cingoli**	**0.57**	**3**	⇑P	Pb	00 58 56.5	-0.4
ARVD	**Arcevia**	**0.71**	**347**	S	Sn	00 59 11.0	-1.0
SRES	**S.Oreste - Sor**	**0.74**	**220**	S	Sn	00 59 12.0	-0.8
PIEI	**Pieia**	**0.86**	**328**	S	Sn	00 59 16.0	+0.3

*NIED **25** 01:01:36.4, 38°.46N×141°.98E, h59km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.61; $M_{\theta\theta}$-2.87; $M_{\phi\phi}$0.26; $M_{r\theta}$-0.65; $M_{\theta\phi}$-0.85; $M_{\phi r}$-0.14; Fault plane solution: M_o2.93000×10^{14} NP1:ϕ_s75.00000°, δ38.00000°, λ89.00000°. NP2:ϕ_s256.00000°, δ52.00000°, λ91.00000°.*

*JMA **25** 01:01:36.4±0.1, 38°.5N±0°.2×142°.0E±0°.5, h59km, MV3.8/40, E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*IDC **25** 01:01:37.5±7.2, 38°.24N×141°.89E, h63km±50km, mb3.1/2, mbtmp3.5/5, ML2.3/2, MS2.6/1, Error ellipse: s-maj=89.1km s-min=20.9km az=77.0*

ISC 25 01:01:34.9±1.5, 38°37'N±0°.05×142°.1E±0°.1, h51km±13km, n25, σ0°84/29, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.53**	**263**	*i* P	**Pn**	**01 01 47.5**	**+0.9**
JIKH				S	**Sn**	**01 01 55.5**	**+0.4**
JIO	**Ouri**	**0.63**	**278**	*i* P	**Pn**	**01 01 48.1**	**+0.4**
JIO				S	**Sn**	**01 01 56.5**	**-0.6**
JKMT	**Kesennumamotoy**	**0.68**	**310**	*i* P	**Pn**	**01 01 48.6**	**+0.2**
JKMT				S	**Sn**	**01 01 57.3**	**-1.0**
OFUJ	**Ofunato**	**0.80**	**333**	⇓*i*P	**Pn**	**01 01 50.2**	**+0.3**
OFUJ				⇓S	**Sn**	**01 02 00.2**	**-0.7**
JMK	**Ichinoseki**	**0.92**	**309**	⇓*i*P	**Pn**	**01 01 51.6**	**0.0**
JMK				⇓S	**Sn**	**01 02 02.9**	**-1.0**
JOU	**Okura**	**1.16**	**270**	*i* P	**Pn**	**01 01 55.0**	**+0.2**
JOU				S	**Sn**	**01 02 08.7**	**-0.9**
JMM	**Marumori**	**1.18**	**245**	⇓*i*P	**Pn**	**01 01 55.3**	**+0.3**
JMM				⇓*e*S	**Sn**	**01 02 09.2**	**-0.7**
JOM	**Ohasama**	**1.28**	**329**	⇓*i*P	**Pn**	**01 01 56.5**	**0.0**
JOM				⇓*e*S	**Sn**	**01 02 11.4**	**-1.1**
JFK	**Kawauchi**	**1.42**	**225**	⇓*i*P	**Pn**	**01 01 59.3**	**+1.0**
JYK	**Kaneyama**	**1.50**	**292**	⇓*i*P	**Pn**	**01 01 59.3**	**-0.1**
JYK				⇓S	**Sn**	**01 02 16.5**	**-1.2**
JRG	**Rokugo**	**1.56**	**311**	*i* P	**Pn**	**01 02 00.1**	**-0.1**
JYS	**Shirataka**	**1.64**	**265**	*i* P	**Pn**	**01 02 01.8**	**+0.5**
JYS				S	**Sn**	**01 02 20.9**	**-0.3**
JFT	**Otama**	**1.66**	**240**	P	**Pn**	**01 02 02.7**	**+1.1**
MJAR	**Matsushiro Arr**	**3.62**	**241**	P	**Pn**	**01 02 28.6**	**+0.1**
	0.5nm,0.3s,baz=46,slow=11,SNR=10						
	1.9nm,0.3s						
JHJ	**Hachijo jima 2**	**5.58**	**201**	P	**Pn**	**01 02 55.8**	**+0.5**
	46nm,0.4s,baz=267,slow=16,SNR=1.3						
JHJ				S	**Sn**	**01 03 55.8**	**-2.4**
	134nm,0.8s,baz=250,slow=20,SNR=1.8						
USRK	**Ussuriysk Ar.**	**9.60**	**311**	P	**Pn**	**01 03 50.9**	**+0.6**
	0.2nm,0.3s,baz=120,slow=14,SNR=1.1						
	0.6nm,0.4s						
KLR	**Kul'dur**	**13.18**	**329**	LR	LR	01 09 07.7	
	comp=Z,24nm,19.8s,baz=244,slow=34						
H11N2	**WAKE ISLAND Hy**	**28.38**	**124**	T	T	01 37 46.6	
	baz=316,slow=75,SNR=236						
H11N1	**WAKE ISLAND Hy**	**28.39**	**124**	T	T	01 37 44.9	
	baz=316,slow=75,SNR=331						
H11N3	**WAKE ISLAND Hy**	**28.39**	**124**	T	T	01 37 44.3	
	baz=316,slow=75,SNR=263						
H11S1	**WAKE ISLAND Hy**	**29.14**	**126**	T	T	01 38 42.1	
	baz=318,slow=76,SNR=88						
H11S3	**WAKE ISLAND Hy**	**29.14**	**126**	T	T	01 38 42.3	
	baz=318,slow=76,SNR=97						
H11S2	**WAKE ISLAND Hy**	**29.16**	**126**	T	T	01 38 46.2	
	baz=318,slow=76,SNR=54						
MKAR	**Makanchi Array**	**43.91**	**301**	P	**P**	**01 09 37.2**	**+0.8**
	0.2nm,0.4s,baz=92,slow=9.6,SNR=2.1						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**58.47**	**189**	P	**P**	**01 11 25.6**	**0.0**
	0.3nm,0.5s,baz=5.2,slow=7.2,SNR=7.0						
	0.3nm,0.5s						

*IDC **25** 01:02:25.6±0.5, 29°.23S×61°.06E, h0km, mb4.4/20, mbtmp4.4/21, ML4.4/1, MS4.1/61, Error ellipse: s-maj=15.8km s-min=14.3km az=40.0*
*NEIC **25** 01:02:27.4±1.6, 29°.05S±0°.08×61°.0E±0°.1, h10km±1km, mb4.9/24, Error ellipse: s-maj=22.6km s-min=10.8km az=247.0*
*GCMT **25** 01:02:28.4±0.2, 29°.14S±0°.01×60°.99E±0°.03, h12km, MW5.0/90, Moment Tensor Solution. s34,c40; s90,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.86±.12; $M_{\theta\theta}$3.20±.10; $M_{\phi\phi}$-0.33±.13; $M_{r\theta}$1.08±.31; $M_{\theta\phi}$2.12±.10; $M_{\phi r}$-0.53±.44; Best double couple: M_o3.82100×10^{16} NP1:ϕ_s267.00000°, δ56.00000°, λ-60.00000°. NP2: ϕ_s41.00000°, δ44.00000°, λ-126.00000°. Principal axes: T 4.2740, Plg6.0000°, Azm336.0000°; N -0.9020, Plg24.0000°, Azm69.0000°; P -3.3680, Plg65.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 01:02:27.1±0.4, 29°.11S±0°.08×61°.03E±0°.09, h10km, n132, σ1°34/80, mb4.7/29, MS4.2/60, 16C-1D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.25**	**328**	Pn	**Pn**	**01 04 38.7**	**-2.0**
OPO	**Ambohidratompo**	**16.43**	**307**	Pn	**Pn**	**01 06 19.6**	**+1.6**
	0.1nm,0.3s,baz=128,slow=11,SNR=8.3						
OPO				Sn	Sn	01 09 07.8	-13
	0.1nm,0.3s,baz=69,slow=11,SNR=2.3						
OPO				LR	LR	01 11 14.3	
	comp=Z,627nm,18.8s,baz=6.0,slow=32						
	1.9nm,0.3s						
H08S1	**Diego Carcia H**	**23.92**	**29**	T	T	01 32 22.3	
	baz=203,slow=76,SNR=98						
H08S2	**Diego Garcia H**	**23.93**	**29**	T	T	01 32 22.8	
	baz=203,slow=76,SNR=59						
H08S3	**Diego Garcia H**	**23.94**	**29**	T	T	01 32 23.8	
	baz=203,slow=76,SNR=144						
POGA	**Pongola**	**25.87**	**267**	P	**P**	**01 07 59.1**	**-0.1**
BOSA	**Boshof**	**31.26**	**262**	P	**P**	**01 08 46.8**	**-0.6**
	7.1nm,1.0s,baz=93,slow=6.9,SNR=4.7						
BOSA				LR	LR	01 19 39.3	
	comp=Z,157nm,18.0s,baz=103,slow=33						
	7.1nm,1.0s						
LBTB	**Lobatse**	**31.74**	**269**	P	**P**	**01 08 50.8**	**-0.8**
	2.8nm,0.7s,baz=119,slow=6.9,SNR=5.1						
LBTB				LR	LR	01 20 27.0	
	comp=Z,152nm,18.2s,baz=109,slow=34						
	2.8nm,0.7s						
LSZ	**Lusaka**	**33.25**	**287**	P	**P**	**01 09 05.5**	**+0.6**
	8.8nm,0.5s,baz=127,slow=7.8,SNR=18						
	8.8nm,0.5s						
LSZ	**Lusaka**	**33.25**	**287**	P	**P**	**01 09 05.5**	**+0.6**
LSZ				IAmb	IAmb	01 09 08.8	
	comp=Z,14nm,0.8s						
SUR	**Sutherland**	**34.58**	**254**	LR	LR	01 20 52.5	
	comp=Z,211nm,19.6s,baz=108,slow=32						
KMBO	**Kilima Mbogo**	**35.89**	**317**	LR	LR	01 21 33.2	
	comp=Z,609nm,19.3s,baz=97,slow=32						
MAW	**Mawson**	**38.54**	**179**	P	**P**	**01 09 49.2**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=334,slow=7.4,SNR=5.7						
MAW				LR	LR	01 22 19.3	
	comp=Z,478nm,18.9s,baz=350,slow=31						
	comp=Z,3.5nm,0.9s						
MAW	**Mawson**	**38.54**	**179**	P	**P**	**01 09 49.3**	**-0.2**
MBAR	**Mbarara**	**40.48**	**309**	LR	LR	01 25 30.8	
	comp=Z,385nm,19.6s,baz=118,slow=34						
TSUM	**Tsumeb**	**40.65**	**274**	P	**P**	**01 10 08.4**	**+0.5**
	comp=Z,2.4nm,0.4s,baz=104,slow=5.6,SNR=4.1						
TSUM				LR	LR	01 25 30.4	
	comp=Z,228nm,19.7s,baz=134,slow=34						
	comp=Z,2.4nm,0.4s						
TSUM	**Tsumeb**	**40.65**	**274**	P	**P**	**01 10 08.6**	**+0.7**
ATD	**Arta Tunnel**	**44.05**	**334**	LR	LR	01 25 57.3	
	comp=Z,614nm,20.8s,baz=168,slow=32						
H01W2	**Cape Leeuwin H**	**44.97**	**112**	T	T	01 58 17.7	
	baz=261,slow=75,SNR=48						
H01W3	**Cape Leeuwin H**	**44.97**	**112**	T	T	01 58 18.0	
	baz=261,slow=75,SNR=52						
H01W1	**Cape Leeuwin H**	**44.99**	**112**	T	T	01 58 19.0	
	baz=261,slow=75,SNR=62						
PSI	**Prapat**	**48.22**	**55**	LR	LR	01 26 42.2	
	comp=Z,153nm,19.5s,baz=246,slow=30						
LEM	**Lembang**	**49.13**	**73**	LR	LR	01 27 25.1	
	comp=Z,68nm,20.2s,baz=206,slow=30						
HYBB	**Hyderabad (bro**	**49.26**	**22**	*e*P	**P**	**01 11 15.6**	**-0.5**
WSAR	**Wadi Sarin**	**52.10**	**357**	LR	LR	01 28 10.2	
	comp=Z,188nm,21.5s,baz=196,slow=30						
TROLL	**Troll, Antarti**	**52.98**	**199**	P	**P**	**01 11 43.2**	**-0.5**
RAYN	**Ar Rayn**	**54.42**	**342**	P	**P**	**01 11 53.3**	**-1.3**
RAYN				IAmb	IAmb	01 12 43.0	
	comp=Z,23nm,1.9s						
SNAA	**Sanae**	**54.47**	**200**	P	**P**	**01 11 54.8**	**+0.2**
SNAA	**Sanae**	**54.47**	**200**	P	**P**	**01 11 53.9**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=95,slow=7.7,SNR=8.8						
SNAA				LR	LR	01 30 45.8	
	comp=Z,208nm,19.7s,baz=52,slow=31						
	comp=Z,1.4nm,0.8s						

VNA2	Neumayer--Watz	55.74	202	P	P	01 12 03.4	-0.3
	baz=77,slow=5.5						
VNA1	Neumayer--Stat	55.98	202	P	P	01 12 13.1	+7.8
VNA3	Neumayer Olymp	56.53	201	P	P	01 12 08.8	-0.5
FITZ	Fitzroy Crossi	59.58	95	LR	LR	01 34 44.1	
	comp=Z,85nm,19.1s,baz=255,slow=33						
CMAR	Chiang Mai Arr	59.80	42	P	P	01 12 34.7	+1.9
	comp=Z,2.6nm,0.7s,baz=232,slow=7.0,SNR=15						
CMAR				LR	LR	01 34 54.3	
	comp=Z,70nm,20.0s,baz=230,slow=32						
	comp=Z,2.6nm,0.7s						
CMAR	Chiang Mai Arr	59.80	42	P	P	01 12 32.0	-0.8
KAPI	Kappang	60.35	78	LR	LR	01 35 05.0	
	comp=Z,69nm,20.1s,baz=278,slow=32						
QSPA	South Pole Qui	61.05	180	P	P	01 12 39.9	-1.0
	comp=Z,5.2nm,0.9s,baz=259,slow=2.0,SNR=8.1						
QSPA				LR	LR	01 35 29.2	
	comp=Z,326nm,20.9s,baz=278,slow=33						
	comp=Z,5.2nm,0.9s						
QSPA	South Pole Qui	61.05	180	P	P	01 12 40.4	-0.5
BATI	Baumata	61.24	86	LR	LR	01 35 45.6	
	comp=Z,164nm,19.1s,baz=214,slow=33						
SHL	Shillong	61.91	32	P	P	01 12 47.2	-0.1
EIL	Elat	63.53	335	LR	LR	01 37 12.9	
	comp=Z,314nm,19.4s,baz=111,slow=33						
VNDA	Vanda	64.11	166	P	P	01 13 00.5	-0.5
	comp=Z,2.7nm,1.0s,baz=259,slow=8.1,SNR=13						
VNDA				LR	LR	01 39 05.3	
	comp=Z,518nm,18.3s,baz=252,slow=34						
	comp=Z,2.7nm,1.0s						
VNDA	Vanda	64.11	166	P	P	01 13 00.8	-0.2
VNDA				IAmb	IAmb	01 13 09.3	
	comp=Z,10nm,1.2s						
ASAR	Alice Springs	64.57	104	P	P	01 13 04.7	-0.3
	comp=Z,3.9nm,0.8s,baz=243,slow=6.3,SNR=28						
ASAR				LR	LR	01 38 22.7	
	comp=Z,92nm,18.2s,baz=198,slow=33						
	comp=Z,3.9nm,0.8s						
ASAR	Alice Springs	64.57	104	P	P	01 13 04.5	-0.5
SBA	Scott Base	64.99	167	P	P	01 13 08.3	+1.5
ASF	Jabal al Asfar	65.12	338	LR	LR	01 40 06.6	
	comp=Z,161nm,18.1s,baz=107,slow=35						
WRA	Warramunga Arr	66.39	100	P	P	01 13 15.6	-1.2
	comp=Z,5.1nm,1.0s,baz=251,slow=6.6,SNR=14						
WRA				LR	LR	01 37 41.3	
	comp=Z,217nm,21.6s,baz=217,slow=32						
	comp=Z,5.1nm,1.0s						
WRA	Warramunga Arr	66.39	100	P	P	01 13 17.1	+0.3
MMAI	Mount Meron Ar	66.39	337	LR	LR	01 38 49.6	
	comp=Z,235nm,20.1s,baz=318,slow=33						
GEYT	Alibeck	66.75	357	P	P	01 13 21.5	+3.0
	comp=Z,1.1nm,0.6s,baz=195,slow=16,SNR=2.2						
CHGR	Chuyangaron	67.84	7	P	P	01 13 24.0	-1.5
GNI	Garni	70.55	347	LR	LR	01 42 50.2	
	comp=Z,300nm,19.9s,baz=180,slow=34						
TOA0	Torodi Ar. Sit	71.01	298	P	P	01 13 45.1	-0.4
TOA0				IAmb	IAmb	01 13 49.4	
	comp=Z,11nm,1.0s						
TORD	Torodi Ar. Bea	71.01	298	P	P	01 13 45.8	+0.3
	comp=Z,5.4nm,0.5s,baz=120,slow=4.7,SNR=3.1						
TORD				LR	LR	01 44 39.3	
	comp=Z,471nm,19.3s,baz=208,slow=36						
	comp=Z,5.4nm,0.5s						
DBIC	Dimbokro	72.58	288	P	P	01 13 56.1	+1.1
	comp=Z,9.4nm,1.0s,baz=106,slow=6.0,SNR=5.2						
DBIC				LR	LR	01 45 02.6	
	comp=Z,137nm,19.2s,baz=140,slow=35						
	comp=Z,9.4nm,1.0s						
BRTR	Keskin Array B	73.08	338	P	P	01 13 58.0	+0.5
	comp=Z,2.0nm,0.8s,baz=182,slow=5.6,SNR=9.4						
BRTR				LR	LR	01 43 23.4	
	comp=Z,150nm,20.1s,baz=146,slow=34						
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	73.08	338	P	P	01 13 57.5	0.0
KBZ	Khabaz	74.37	346	LR	LR	01 44 49.3	
	comp=Z,345nm,21.8s,baz=157,slow=34						
KVAR	Kislovodsk Arr	74.62	346	LR	LR	01 45 25.7	
	comp=Z,160nm,20.8s,baz=54,slow=34						
KIV	Kislovodsk	74.63	346	P	P	01 14 06.9	+0.4
KOWA	Kowa	76.28	295	P	P	01 14 15.4	-1.1
CTA	Charters Tower	76.48	106	LR	LR	01 43 50.6	
	comp=Z,90nm,20.5s,baz=252,slow=32						
PMSA	Palmer Station	77.19	201	LR	LR	01 39 46.4	
	comp=Z,168nm,20.6s,baz=137,slow=29						
MAKZ	Makanchi	77.90	15	P	P	01 14 24.3	-0.7
MAKZ				IAmb	IAmb	01 14 28.7	
	comp=Z,17nm,1.6s						
MK31	Makanchi Array	77.96	15	P	P	01 14 25.8	+0.6
MK31				IAmb	IAmb	01 14 28.8	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	77.96	15	P	P	01 14 25.1	-0.1
	comp=Z,3.0nm,0.8s,baz=188,slow=6.0,SNR=17						
MKAR				LR	LR	01 46 40.2	
	comp=Z,110nm,19.7s,baz=236,slow=34						
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	77.96	15	P	P	01 14 23.9	-1.3
ABKAR	Akbulak array	78.02	359	P	P	01 14 25.1	-0.4
ABKAR	Akbulak array	78.02	359	P	P	01 14 25.4	0.0
ABKAR				IAmb	IAmb	01 14 29.2	
	comp=Z,17nm,1.4s						
AKTO	Aktyubinsk	79.24	358	LR	LR	01 46 54.3	
	comp=Z,107nm,21.8s,baz=177,slow=34						
VAE	Valguarnera	79.34	324	LR	LR	01 50 09.0	
	comp=Z,118nm,19.1s,baz=144,slow=36						
TPGR	Topolog	79.39	337	⇑P	P	01 14 28.7	-4.5
VTS	Vitosha	79.40	333	P	P	01 14 34.6	+1.2
VTS	Vitosha	79.40	333	P	P	01 14 33.0	-0.5
CFR	Carcaliu	79.77	337	⇑P	P	01 14 32.0	-3.1
BLKB	Belogradchik	80.47	333	⇑P	P	01 14 37.9	-1.2
KEST	Kesra	80.79	320	LR	LR	01 52 12.6	
	comp=Z,305nm,18.0s,baz=116,slow=37						
MLR	Muntele Rosu	80.81	336	⇑P	P	01 14 36.7	-4.3
MLR	Muntele Rosu	80.81	336	LR	LR	01 50 43.2	
	comp=Z,104nm,18.4s,baz=172,slow=36						
VRI	Vrincioaia	80.86	336	⇑P	P	01 14 41.3	+0.3
BOVS	Bovan	80.87	332	⇑P	P	01 14 40.8	-0.4
PLOR	Plostina	80.87	336	⇑P	P	01 14 39.9	-1.3
KURBB	Kurchatov Arra	80.88	11	LR	LR	01 46 29.0	
	comp=Z,118nm,20.8s,baz=174,slow=33						
KURK	Kurchatov	80.99	11	P	P	01 14 41.8	+0.2
KURK				IAmb	IAmb	01 14 45.5	
	comp=Z,13nm,1.1s						
VOIR		81.09	335	⇑P	P	01 14 42.6	+0.2
HERR	Herculane	81.62	333	⇑P	P	01 14 44.2	-0.9
MDVR	Moldovita	81.81	333	⇑P	P	01 14 46.1	-0.1
BELG	Belogornoye	82.00	352	LR	LR	01 54 01.2	
	comp=Z,92nm,18.0s,baz=160,slow=38						
BVAR	Borovoye Array	82.19	6	LR	LR	01 48 46.2	
	comp=Z,200nm,21.2s,baz=206,slow=34						
DEV	Deva	82.27	334	⇑P	P	01 14 49.3	+0.8
BZS	Buzias	82.55	333	⇑P	P	01 14 45.9	-4.1
BURAR	Bucovina Array	82.89	336	⇑P	P	01 14 45.6	-6.3
SIRR	Siria	83.07	334	⇑P	P	01 14 51.3	-1.4
DRGR		83.10	335	⇓P	P	01 14 46.0	-6.9
RPZ	Rata Peaks	83.34	137	LR	LR	01 43 18.8	
	comp=Z,357nm,21.2s,baz=239,slow=30						
MORH	Mrgy, Hungar	84.23	332	⇑P	P	01 14 51.3	-7.3
AKASG	Malin Array Be	84.30	340	P	P	01 14 59.3	+0.5
	comp=Z,1.5nm,0.7s,baz=155,slow=3.4,SNR=6.3						
	comp=Z,1.5nm,0.7s						
ARU	Arti	85.22	359	LR	LR	01 51 42.6	
	comp=Z,75nm,19.7s,baz=173,slow=35						
ARU	Arti	85.22	359	P	P	01 15 03.7	+0.3
ZAA0	Zalesovo Array	85.24	14	P	P	01 15 03.0	-0.5
ZAA0				IAmb	IAmb	01 15 07.4	
	comp=Z,13nm,1.3s						
ZALV	Zalesovo Beam	85.24	14	P	P	01 15 03.3	-0.2
	comp=Z,4.1nm,0.8s,baz=208,slow=5.0,SNR=15						
ZALV				LR	LR	01 49 38.4	
	comp=Z,84nm,19.8s,baz=198,slow=33						
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	85.24	14	P	P	01 15 03.2	-0.3
OBN	Obninsk	86.47	346	LR	LR	01 53 58.9	
	comp=Z,36nm,19.0s,baz=172,slow=36						
BBTS	Babate	86.52	289	LR	LR	01 51 00.1	
	comp=Z,200nm,21.3s,baz=107,slow=34						
SONM	Songino Array	86.76	29	P	P	01 15 13.0	+1.6
	comp=Z,1.9nm,1.1s,baz=200,slow=6.4,SNR=5.8						
SONM				LR	LR	01 51 45.3	
	comp=Z,138nm,20.2s,baz=186,slow=34						
	comp=Z,1.9nm,1.1s						
VRAC	Vranov	87.53	333	LR	LR	01 53 13.5	
	comp=Z,44nm,21.8s,baz=158,slow=35						
MDT	Midelt	87.54	310	LR	LR	01 54 03.0	
	comp=Z,207nm,19.6s,baz=130,slow=35						
KIRV	Kirov	87.90	354	LR	LR	01 56 06.8	
	comp=Z,104nm,18.3s,baz=142,slow=37						
GERES	GERESS Array B	88.37	331	P	P	01 15 20.5	+1.5
	comp=Z,0.2nm,0.4s,baz=142,slow=6.8,SNR=4.6						
	comp=Z,0.2nm,0.4s						
DAVOX	Davos/Dischmat	88.53	328	LR	LR	01 55 25.2	
	comp=Z,43nm,20.6s,baz=141,slow=36						
BNI	Bardonecchia	88.85	325	P	P	01 15 21.7	+0.3
BNI				IAmb	IAmb	01 15 29.4	
	comp=Z,12nm,1.6s						
BRG	Berggiesshubel	89.83	332	*e*(P)	P	01 15 29.2	+3.5
BRG				Amp		01 15 35.0	
	comp=Z,4.3nm,1.2s						
URZ	Urewera	90.25	135	LR	LR	01 49 20.4	
	comp=Z,272nm,19.0s,baz=211,slow=31						
CLL	Collm	90.54	332	*e*Px	Px	01 15 34.0	
CLL				*e*PP	PP	01 19 04.0	-0.3
ESDC	Sonseca Array	91.28	316	P	P	01 15 34.3	+1.4
	comp=Z,2.7nm,1.0s,baz=114,slow=3.4,SNR=11						
ESDC				LR	LR	01 55 18.4	
	comp=Z,118nm,21.8s,baz=132,slow=35						
	comp=Z,2.7nm,1.0s						
ESDC	Sonseca Array	91.28	316	P	P	01 15 32.5	-0.3
ESDC				IAmb	IAmb	01 15 43.5	
	comp=Z,10nm,1.6s						
DZM	Mont Dzumac	92.00	117	LR	LR	01 50 18.7	
	comp=Z,95nm,20.0s,baz=222,slow=31						
RCBR	Riachuelo	93.22	262	LR	LR	01 50 06.6	
	comp=Z,51nm,20.9s,baz=286,slow=31						
FINES	FINESS Array B	94.58	344	LR	LR	01 58 42.2	
	comp=Z,88nm,20.4s,baz=148,slow=36						
HFS	Hagfors	97.02	338	LR	LR	02 00 43.8	
	comp=Z,63nm,18.3s,baz=120,slow=36						
PLCA	Paso Flores	97.28	215	LR	LR	01 55 09.0	
	comp=Z,65nm,18.0s,baz=145,slow=32						
MJAR	Matsushiro Arr	97.50	52	LR	LR	01 55 27.4	
	comp=Z,23nm,21.9s,baz=220,slow=33						
NOA	NORSAR Array B	98.51	338	LR	LR	02 00 42.9	
	comp=Z,65nm,19.5s,baz=130,slow=36						
RAO	Raoul Island	99.16	131	LR	LR	01 52 15.0	
	comp=Z,78nm,21.0s,baz=340,slow=30						
CPUP	Villa Florida	99.18	233	LR	LR	01 54 16.3	
	comp=Z,17nm,18.8s,baz=150,slow=31						
PETK	Petropavlovsk-	116.58	42	PP	PP	01 22 20.1	+1.3
	comp=Z,7.2nm,1.1s,baz=260,slow=8.6,SNR=3.7						
YKA	Yellowknife Ar	146.49	356	PKPbc	PKPdf	01 22 06.5	0.0
	comp=Z,2.9nm,0.7s,baz=356,slow=3.1,SNR=6.3						
ULM	Lac du Bonnet	152.60	327	PKPbc	PKiKP	01 22 24.9	+1.1
	comp=Z,7.9nm,0.9s,baz=46,slow=4.3,SNR=6.0						
PDAR	Pinedale Array	164.40	333	PKP	PKPdf	01 22 29.8	-1.5
	comp=Z,0.6nm,0.7s,baz=347,slow=3.7,SNR=5.5						
PDAR				PKPab	pPKPab	01 23 27.4	-0.1
	comp=Z,0.1nm,0.3s,baz=53,slow=6.1,SNR=1.5						
TXAR	Lajitas Array	166.63	275	PKP	PKPdf	01 22 32.7	-0.7
	comp=Z,1.2nm,1.1s,baz=126,slow=2.2,SNR=6.1						
NVAR	Mina Array Bea	170.69	357	PKP	PKPdf	01 22 36.6	+0.7
	comp=Z,0.4nm,0.7s,baz=37,slow=2.3,SNR=3.7						

PRU 25 01:16:31.6±0.0, 50.22N×19.02E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	Moravsky Berou	1.05	246	*e*PG	Pg	01 16 51.6	-0.1
MORC				*e*SG	Sg	01 17 05.8	+0.5
LANS	Liptovska Anna	1.11	165	*e*PG	Pn	01 16 54.3	-0.1
LANS				*e*SG	Sb	01 17 08.3	-0.4
LANS				*e*LG	Lg	01 17 12.8	
KRLC	Kraliky	1.45	265	*e*PG	Pn	01 16 57.3	-1.8
KRLC				*e*SG	Sg	01 17 17.0	-1.1
	comp=Z,3.1nm,1.2s						
VYHS	Vyhne	1.73	184	*e*SN	Sn	01 17 24.7	-1.1
DPC	Dobruska-Polom	1.73	275	*e*PG	Pb	01 17 03.8	-0.6
DPC				*e*SG	Sb	01 17 26.8	+0.1
	comp=Z,0.7nm,0.4s						

*HVO **25** 01:19:19.0±0.7, 19.°1N±0.°04×155.°48W±0.°06, h34km±7km, Md2.1, ML2.0/38(NEIC), Error ellipse: s-maj=8.0km s-min=6.2km az=77.0*

NEIC 25 01:19:17.4±0.5, 19.20N±0.°04×155.°482W±0.°008, h41km±3km, Error ellipse: s-maj=5.7km s-min=0.9km az=173.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	Hot Caves	0.09	62		Pn	01 19 24.4	+0.3
HPO	Honuapo	0.12	213		Pn	01 19 24.3	+0.1
KHU	Kahuku	0.14	292	Pg	Pn	01 19 24.7	+0.1
KHU				Sg	Sn	01 19 28.9	-0.7
AIN	Ainahou	0.18	7		Pn	01 19 25.2	+0.4
AIN				Sg	Sn	01 19 29.8	-0.2
HLP	Hilina Pali	0.19	58	Pg	Pn	01 19 25.0	+0.2
HLP				IAML		01 19 25.9	
	comp=N,275nm,1.5s						
HLP				Sg	Sn	01 19 29.7	-0.3
SDHHI	Sand Hill	0.26	42	Pg	Pn	01 19 25.5	0.0
SDHHI				Sg	Sn	01 19 30.9	-0.3
WRMHI	West Rim	0.27	39	Pg	Pn	01 19 25.6	0.0
RIM	Rim	0.28	45	Pg	Pn	01 19 25.5	-0.1
RIM				IAML		01 19 27.8	
	comp=E,402nm,1.2s						
KKO	Keanakako`i	0.29	45	Pg	Pn	01 19 25.7	0.0
KKO				IAML		01 19 31.8	
	comp=E,384nm,1.1s						
UWE	Uwekahuna	0.29	38	Pg	Pn	01 19 25.8	0.0
UWB	Uwekahuna B	0.30	40		Pn	01 19 25.6	-0.2
UWB	Uwekahuna B	0.30	40	IAML		01 19 26.0	
	comp=E,140nm,2.2s						
UWB				IAML		01 19 33.0	
	comp=N,187nm,1.1s						
BYL	Byron's Ledge	0.30	44	Pg	Pn	01 19 25.8	-0.1
BYL				IAML		01 19 26.6	
	comp=N,413nm,1.1s						
BYL				IAML		01 19 31.4	
	comp=E,300nm,1.3s						
SBLHI	Steaming Bluff	0.31	41	Pg	Pn	01 19 25.7	-0.2
SBLHI				IAML		01 19 35.4	
	comp=N,317nm,1.2s						
SBLHI				IAML		01 19 35.7	
	comp=E,247nm,0.7s						
HATHI	Halema'uma'u T	0.31	43	Pg	Pn	01 19 25.8	-0.1
HATHI				IAML		01 19 26.8	
	comp=N,311nm,0.8s						
HATHI				IAML		01 19 32.3	
	comp=E,375nm,0.8s						
PUH	Pauahi	0.31	55	Pg	Pn	01 19 25.7	-0.2
PUH				IAML		01 19 34.9	
	comp=N,166nm,1.0s						
MWH	Moku'aweowe	0.31	339	Pg	Pn	01 19 26.4	0.0
MWH				IAML		01 19 26.7	
	comp=N,181nm,1.6s						
MWH				IAML		01 19 27.5	
	comp=E,198nm,1.8s						
MLH	Mauna Loa	0.31	17		Sn	01 19 31.9	-0.3
MLH	Mauna Loa	0.31	17	Pg	Pn	01 19 26.3	+0.1
MLH				IAML		01 19 31.6	
	comp=N,154nm,1.4s						
MLH	Mauna Loa	0.31	17	IAML		01 19 31.9	
	comp=E,84nm,0.4s						
KNHH	Kane Nui o Ham	0.35	58		Pn	01 19 26.2	-0.2
MLOA	Mauna Loa Obse	0.35	345	Pg	Pn	01 19 26.7	0.0
MLOA				IAML		01 19 27.4	
	comp=E,119nm,3.6s						
HMH	Humu'ula Sheep	0.41	360		Pn	01 19 27.4	+0.1
HMH					Sn	01 19 34.3	+0.1
HMH	Humu'ula Sheep	0.41	360	IAML		01 19 34.9	
	comp=E,100nm,0.3s						
HMH				IAML		01 19 35.0	
	comp=N,114nm,0.1s						
JOKA	Jonika Flow	0.51	62		Sn	01 19 34.7	-1.3
KHLU	Kahalu`u	0.55	316		Sn	01 19 36.4	-0.8
KHLU	Kahalu`u	0.55	316		Pn	01 19 28.9	-0.1
KHLU	Kahalu`u	0.55	316	IAML		01 19 32.1	
	comp=E,69nm,2.0s						
KHLU	Kahalu`u	0.55	316	IAML		01 19 37.1	
	comp=N,91nm,0.1s						
HUH	Hualalai	0.59	326		Pn	01 19 29.8	+0.2
HUH	Hualalai	0.59	326	IAML		01 19 48.7	
	comp=E,139nm,1.9s						

IDC 25 01:22:14.7±67.0, 22.49S×179.41E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=1198.0km s-min=155.1km az=85.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.77	246	P	P	01 29 05.9	-1.1
	0.7nm,0.4s,baz=87,slow=7.5,SNR=4.3						
	0.7nm,0.4s						
ASAR	Alice Springs	41.75	259	P	P	01 30 05.6	-0.3
	0.4nm,0.3s,baz=93,slow=7.2,SNR=6.8						
	0.4nm,0.3s						
WRA	Warramunga Arr	41.98	265	P	P	01 30 08.6	+0.7
	0.9nm,0.3s,baz=98,slow=7.8,SNR=36						
	0.9nm,0.3s						

ROM 25 01:23:10.3±0.1, 42.805N±0.003×13.139E±0.007, h9km, ML2.0/5, 1D, Error ellipse: s-maj=0.6km s-min=0.1km az=267.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.03	327	P	Pg	01 23 12.4	+0.2
NRCA				S	Sg	01 23 13.6	+0.1
NRCA				AML	AML		
	comp=E,14850μm,0.2s						
NRCA				AML	AML		
	comp=N,7925μm,0.4s						
NRCA				AML	AML		
	comp=E,15850μm,0.2s						
NRCA				AML	AML		
	comp=N,8515μm,0.4s						
NRCA				AML	AML		
	comp=E,17350μm,0.2s						
NRCA				AML	AML		
	comp=N,14200μm,0.1s						
NRCA				AML	AML		
	comp=E,19200μm,0.2s						
NRCA				AML	AML		
	comp=N,15450μm,0.1s						
NRCA				AML	AML		
	comp=N,15450μm,0.1s						
NRCA				AML	AML		
	comp=E,19200μm,0.2s						
NRCA				AML	AML		
	comp=E,17400μm,0.2s						
NRCA				AML	AML		
	comp=N,14250μm,0.1s						
NRCA				AML	AML		
	comp=N,14200μm,0.1s						
NRCA				AML	AML		
	comp=E,19200μm,0.2s						
NRCA				AML	AML		
	comp=E,17350μm,0.2s						
NRCA				AML	AML		
	comp=N,15450μm,0.1s						
NRCA	Norcia	0.03	327	P	Pg	01 23 12.4	+0.2
NRCA				S	Sg	01 23 13.5	0.0
FEMA	Monte Fema	0.17	337	P	Pg	01 23 14.7	+0.6
FEMA				S	Sg	01 23 17.6	+1.0
LNSS	Leonessa	0.21	200	P	Pg	01 23 15.6	+0.8
LNSS				S	Sg	01 23 19.3	+1.5
LNSS	Leonessa	0.21	200	AML	AML		
	comp=N,1415μm,0.3s						
LNSS				AML	AML		
	comp=E,1885μm,0.2s						
LNSS				AML	AML		
	comp=N,1415μm,0.3s						
LNSS				AML	AML		
	comp=N,1415μm,0.3s						
LNSS				AML	AML		
	comp=E,1885μm,0.2s						
LNSS				AML	AML		
	comp=E,1885μm,0.2s						
FDMO	Fiordimonte	0.23	351	P	Pg	01 23 16.0	+0.9
FDMO				S	Sg	01 23 19.6	+1.3
FDMO				AML	AML		
	comp=E,572μm,0.5s						
FDMO				AML	AML		
	comp=N,604μm,0.2s						
FDMO				AML	AML		
	comp=E,572μm,0.5s						
FDMO				AML	AML		
	comp=N,604μm,0.2s						
FDMO				AML	AML		
	comp=E,572μm,0.5s						
FDMO				AML	AML		
	comp=N,604μm,0.2s						
FDMO				AML	AML		
	comp=E,572μm,0.5s						
FDMO	Fiordimonte	0.23	351	P	Pg	01 23 16.0	+0.9
FDMO				S	Sg	01 23 19.6	+1.3
CESI	CESI - Serrava	0.26	319	P	Pg	01 23 16.3	+0.6
CESI				S	Sb	01 23 20.7	-1.2
CESI				AML	AML		
	comp=E,831μm,0.2s						
CESI				AML	AML		
	comp=N,1810μm,0.3s						
CESI				AML	AML		
	comp=E,831μm,0.2s						
CESI				AML	AML		
	comp=N,1810μm,0.3s						
CESI				AML	AML		
	comp=N,1810μm,0.3s						
CESI				AML	AML		
	comp=E,831μm,0.2s						
CESI				AML	AML		
	comp=N,1810μm,0.3s						
CESI				AML	AML		
	comp=E,831μm,0.2s						
CESI	CESI - Serrava	0.26	319	P	Pg	01 23 16.2	+0.6
CESI				S	Sb	01 23 20.7	-1.2
CSP1	Cessapalombo	0.29	10	P	Pg	01 23 16.7	+0.5
CSP1				S	Sb	01 23 21.6	-1.1
CSP1	Cessapalombo	0.29	10	P	Pg	01 23 16.8	+0.6
CSP1				S	Sb	01 23 21.6	-1.1
GUMA	Gualdo di Mace	0.29	29	P	Pb	01 23 17.1	-0.6
GUMA				S	Sb	01 23 22.1	-0.7
GUMA	Gualdo di Mace	0.29	29	P	Pb	01 23 17.1	-0.7
GUMA				S	Sb	01 23 22.0	-0.7
RM33	Pellescritta (	0.30	169	P	Pg	01 23 17.1	+0.7
RM33				S	Sb	01 23 21.8	-1.2
RM33				AML	AML		
	comp=N,474μm,1.5s						
RM33				AML	AML		
	comp=N,472μm,1.5s						
RM33				AML	AML		
	comp=E,439μm,0.6s						
RM33				AML	AML		
	comp=N,474μm,1.5s						
RM33				AML	AML		
	comp=E,397μm,0.6s						
RM33				AML	AML		
	comp=N,200μm,0.2s						
RM33				AML	AML		
	comp=E,209μm,0.2s						
RM33				AML	AML		
	comp=E,264μm,0.2s						
RM33				AML	AML		
	comp=N,208μm,0.2s						
RM33	Pellescritta (	0.30	169	AML	AML		
	comp=E,439μm,0.6s						
RM33				AML	AML		
	comp=E,397μm,0.6s						
RM33				AML	AML		
	comp=N,472μm,1.5s						
RM33				AML	AML		
	comp=E,439μm,0.6s						
RM33				AML	AML		
	comp=N,474μm,1.5s						
RM33				AML	AML		
	comp=E,397μm,0.6s						
RM33				AML	AML		
	comp=E,439μm,0.6s						
RM33				AML	AML		
	comp=N,472μm,1.5s						
RM33				AML	AML		
	comp=E,439μm,0.6s						
RM33				AML	AML		
	comp=N,474μm,1.5s						
RM33				AML	AML		
	comp=E,397μm,0.6s						
RM33

ARRO				AML	AML			
	comp=E,240µm,0.3s							
ARRO				AML	AML			
	comp=N,258µm,1.6s							
ARRO				AML	AML			
	comp=E,240µm,0.3s							
ARRO				AML	AML			
	comp=N,258µm,1.6s							
ARRO				AML	AML			
	comp=E,240µm,0.3s							
ARRO				AML	AML			
	comp=N,258µm,1.6s							
ARRO	**Arrone**	**0.36**	**231**	S	Sb	01 23 23.8	-0.6	
ARRO				AML	AML			
	comp=E,240µm,0.3s							
ARRO				AML	AML			
	comp=N,258µm,1.6s							
ARRO				AML	AML			
	comp=N,258µm,1.6s							
ARRO				AML	AML			
	comp=E,240µm,0.3s							
ARRO				AML	AML			
	comp=N,121µm,0.2s							
ARRO				AML	AML			
	comp=E,105µm,0.2s							
SEF1	**Sefro**	**0.37**	**338**	P	Pg	01 23 18.2	+0.6	
SEF1				S	Sb	01 23 24.2	-0.7	
MDAR	**Monte D'Aria**	**0.39**	**0**	P	Pg	01 23 18.5	+0.5	
MDAR				S	Sb	01 23 24.7	-0.8	
TERO	**Teramo**	**0.39**	**118**	P	Pg	01 23 18.2	+0.3	
TERO				S	Sg	01 23 24.1	+1.1	
TERO				AML	AML			
	comp=E,202µm,0.4s							
TERO				AML	AML			
	comp=N,140µm,0.3s							
TERO				AML	AML			
	comp=E,538µm,0.1s							
TERO				AML	AML			
	comp=N,610µm,0.3s							
TERO				AML	AML			
	comp=E,538µm,0.1s							
TERO				AML	AML			
	comp=N,610µm,0.3s							
TERO				AML	AML			
	comp=E,538µm,0.1s							
TERO				AML	AML			
	comp=N,610µm,0.3s							
OFFI	**Offida**	**0.42**	**72**	P	Pb	01 23 19.7	-0.2	
OFFI				AML	AML			
	comp=E,376µm,1.1s							
OFFI				AML	AML			
	comp=N,562µm,0.6s							
OFFI				AML	AML			
	comp=E,378µm,0.5s							
OFFI				AML	AML			
	comp=N,562µm,0.6s							
OFFI				AML	AML			
	comp=N,317µm,0.3s							
ASSB	**Assisi San Ben**	**0.42**	**304**	P	Pg	01 23 18.9	+0.3	
ASSB				S	Sb	01 23 25.9	-0.6	
CESX	**Cesi**	**0.46**	**245**	⇓P	Pb	01 23 20.2	-0.3	
CESX				AML	AML			
	comp=E,184µm,0.5s							
CESX				AML	AML			
	comp=N,218µm,0.4s							
CESX				AML	AML			
	comp=E,184µm,0.5s							
CESX				AML	AML			
	comp=E,62µm,0.3s							
CESX				AML	AML			
	comp=N,67µm,0.2s							
SNTG	**Esanatoglia**	**0.47**	**342**	P	Pb	01 23 20.2	-0.6	
SNTG				S	Sb	01 23 27.5	-0.4	
GIGS	**Gran Sasso**	**0.48**	**138**	P	Pg	01 23 19.4	-0.1	
GIGS				S	Sg	01 23 26.4	+0.6	
GIGS				AML	AML			
	comp=E,79µm,0.1s							
GIGS				AML	AML			
	comp=N,82µm,1.0s							
GIGS				AML	AML			
	comp=N,82µm,1.0s							
GIGS				AML	AML			
	comp=E,79µm,0.1s							
GIGS				AML	AML			
	comp=N,82µm,1.0s							
GIGS				AML	AML			
	comp=E,79µm,0.1s							
GIGS	**Gran Sasso**	**0.48**	**138**	P	Pg	01 23 19.4	-0.2	
GIGS				S	Sg	01 23 26.7	+0.9	
EL6	**Elcito**	**0.52**	**357**	P	Pg	01 23 20.8	+0.3	
ATCC	**AVT- Casa Cast**	**0.53**	**316**	P	Pg	01 23 20.9	+0.4	
FIAM	**Fiamignano**	**0.54**	**182**	P	Pg	01 23 20.9	+0.2	
FIAM				S	Sb	01 23 29.1	-0.6	
FOSV	**Fossato di Vic**	**0.56**	**331**	P	Pg	01 23 21.5	+0.3	
CING	**Cingoli**	**0.57**	**4**	P	Pg	01 23 21.9	+0.5	
CING				S	Sb	01 23 30.6	-0.1	
FAGN	**Fagnano**	**0.63**	**148**	P	Pb	01 23 23.3	-0.2	
VCEL	**Villa Celiera**	**0.66**	**128**	P	Pg	01 23 23.3	+0.2	

ROM 25 01:28:46.9±0.1, 42°.758N±0°.003×13°.187E±0°.006, h10km, ML2.3/33, 20C-11D, Error ellipse: s-maj=0.5km s-min=0.1km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.09**	**325**	⇑P	Pg	01 28 49.9	+0.5
NRCA				S	Sg	01 28 51.6	+0.4
NRCA				AML	AML		
	comp=E,12800µm,0.7s						
NRCA				AML	AML		
	comp=E,11550µm,0.7s						
NRCA				AML	AML		
	comp=N,17900µm,0.7s						
NRCA				AML	AML		
	comp=N,19250µm,0.7s						
NRCA				AML	AML		
	comp=E,21000µm,0.1s						
NRCA				AML	AML		
	comp=N,20950µm,1.1s						
NRCA				AML	AML		
	comp=E,19200µm,0.1s						
NRCA				AML	AML		
	comp=N,23950µm,1.1s						
RM33	**Pellescritta (**	**0.25**	**175**	P	Pg	01 28 52.7	+0.7
RM33				S	Sg	01 28 57.1	+1.7
CAMP	**Campotosto**	**0.28**	**144**	⇑P	Pg	01 28 53.2	+0.7
CAMP				S	Sb	01 28 57.7	-1.1
CAMP				AML	AML		
	comp=E,1230µm,0.2s						
CAMP				AML	AML		
	comp=N,400µm,0.2s						
FDMO	**Fiordimonte**	**0.29**	**345**	⇑P	Pg	01 28 53.3	+0.6
FDMO				S	Sg	01 28 57.7	+1.1
FDMO				AML	AML		
	comp=E,908µm,1.1s						
FDMO				AML	AML		
	comp=N,936µm,0.2s						
CESI	**CESI - Serrava**	**0.32**	**320**	⇑P	Pg	01 28 54.0	+0.6
CESI				S	Sb	01 28 59.1	-1.0
CESI				AML	AML		
	comp=N,2585µm,1.0s						
CESI				AML	AML		
	comp=E,1720µm,0.1s						
CESI				AML	AML		
	comp=N,2590µm,1.0s						
GUMA	**Gualdo di Mace**	**0.32**	**20**	P	Pb	01 28 54.3	-0.5
GUMA				S	Sb	01 28 60.0	-0.2
GUMA				AML	AML		
	comp=E,4500µm,0.3s						
GUMA				AML	AML		
	comp=N,3760µm,1.5s						
GUMA				AML	AML		
	comp=N,4435µm,0.6s						
GUMA				AML	AML		
	comp=E,4580µm,0.8s						
CSP1	**Cessapalombo**	**0.33**	**2**	⇑P	Pg	01 28 54.2	+0.6
CSP1				S	Sb	01 28 59.5	-1.0
CSP1				AML	AML		
	comp=E,1240µm,0.3s						
CSP1				AML	AML		
	comp=N,1570µm,0.3s						
CSP1				AML	AML		
	comp=E,1238µm,0.3s						
CSP1				AML	AML		
	comp=N,1572µm,0.3s						

TERO	**Teramo**	**0.34**	**114**	⇑P	Pg	01 28 54.0	+0.5	
TERO				S	Sb	01 28 59.4	-1.0	
TERO				AML	AML			
	comp=E,982µm,0.9s							
TERO				AML	AML			
	comp=N,1135µm,0.5s							
ARRO	**Arrone**	**0.36**	**240**	⇑P	Pg	01 28 54.5	+0.5	
ARRO				S	Sb	01 29 00.6	-0.5	
ARRO				AML	AML			
	comp=N,489µm,0.2s							
ARRO				AML	AML			
	comp=E,738µm,1.2s							
OFFI	**Offida**	**0.41**	**64**	⇑P	Pb	01 28 56.3	+0.1	
OFFI				AML	AML			
	comp=E,1066µm,0.5s							
OFFI				AML	AML			
	comp=N,951µm,1.4s							
GIGS	**Gran Sasso**	**0.42**	**137**	⇓P	Pg	01 28 55.4	+0.3	
GIGS				S	Sg	01 29 01.7	+1.1	
GIGS				AML	AML			
	comp=N,170µm,0.9s							
GIGS				AML	AML			
	comp=E,222µm,1.4s							
AQU	**L'Aquila**	**0.43**	**158**	⇓P	Pb	01 28 56.1	-0.5	
AQU				S	Sb	01 29 03.3	0.0	
AQU				AML	AML			
	comp=E,258µm,0.8s							
AQU				AML	AML			
	comp=N,282µm,0.7s							
AQU				AML	AML			
	comp=N,257µm,0.7s							
AQU				AML	AML			
	comp=N,283µm,0.7s							
AQU				AML	AML			
	comp=E,258µm,0.6s							
CESX	**Cesi**	**0.47**	**252**	⇑P	Pg	01 28 56.3	+0.2	
CESX				S	Sb	01 29 03.5	-0.8	
CESX				AML	AML			
	comp=E,300µm,0.7s							
CESX				AML	AML			
	comp=N,366µm,0.5s							
ASSB	**Assisi San Ben**	**0.48**	**306**	⇑P	Pg	01 28 56.5	+0.3	
ASSB				S	Sb	01 29 03.9	-0.8	
ASSB				AML	AML			
	comp=N,530µm,1.2s							
ASSB				AML	AML			
	comp=E,594µm,0.9s							
FIAM	**Fiamignano**	**0.49**	**186**	⇑P	Pg	01 28 56.8	+0.3	
FIAM				AML	AML			
	comp=N,222µm,0.2s							
FIAM				AML	AML			
	comp=E,266µm,0.4s							
SNTG	**Esanatoglia**	**0.53**	**340**	⇑P	Pg	01 28 57.5	+0.3	
SNTG				AML	AML			
	comp=E,227µm,0.6s							
SNTG				AML	AML			
	comp=N,244µm,0.2s							
SNTG				AML	AML			
	comp=E,228µm,0.6s							
TRTR	**Tortoreto Alta**	**0.54**	**84**	⇓P	Pb	01 28 58.5	+0.1	
TRTR				AML	AML			
	comp=N,730µm,1.2s							
TRTR				AML	AML			
	comp=E,638µm,0.5s							
FAGN	**Fagnano**	**0.57**	**149**	⇓P	Pg	01 28 58.1	+0.2	
FAGN				AML	AML			
	comp=E,407µm,0.5s							
FAGN				AML	AML			
	comp=N,426µm,1.4s							
FAGN				AML	AML			
	comp=E,406µm,0.5s							
EL6	**Elcito**	**0.57**	**354**	P	Pb	01 29 00.0	+0.9	
EL6				S	Sb	01 29 09.0	+1.6	
ATCC	**AVT- Casa Cast**	**0.59**	**317**	P	Pg	01 28 58.6	+0.3	
ATCC				AML	AML			
	comp=N,379µm,0.6s							
ATCC				AML	AML			
	comp=E,412µm,0.4s							
VCEL	**Villa Celiera**	**0.60**	**127**	⇓P	Pb	01 28 59.3	-0.3	
VCEL				AML	AML			
	comp=E,348µm,0.4s							
VCEL				AML	AML			
	comp=N,488µm,0.9s							
CING	**Cingoli**	**0.62**	**1**	⇓P	Pg	01 28 59.1	+0.2	
CING				AML	AML			
	comp=E,292µm,1.1s							
CING				AML	AML			
	comp=N,322µm,0.4s							
FOSV	**Fossato di Vic**	**0.62**	**330**	P	Pg	01 28 59.1	+0.2	
FOSV				AML	AML			
	comp=N,222µm,1.5s							
FOSV				AML	AML			
	comp=E,207µm,1.0s							
T0110	**Collepietro**	**0.69**	**140**	⇓P	Pg	01 29 00.5	+0.3	
T0110				AML	AML			
	comp=N,306µm,0.3s							
T0110				AML	AML			
	comp=E,250µm,0.6s							
PP3	**Marolino**	**0.69**	**26**	⇑P	Pb	01 29 01.6	+0.6	
PP3				AML	AML			
	comp=E,1525µm,0.5s							
PP3				AML	AML			
	comp=N,1065µm,0.3s							
PP3				AML	AML			
	comp=E,1375µm,0.5s							
PP3				AML	AML			
	comp=E,1530µm,0.5s							
PP3				AML	AML			
	comp=N,1255µm,0.3s							
PP3				AML	AML			
	comp=N,1070µm,0.3s							
PP3				AML	AML			
	comp=E,1370µm,0.5s							
SRES	**S.Oreste - Sor**	**0.72**	**224**	⇑P	Pg	01 29 01.0	+0.2	
SRES				S	Sn	01 29 14.0	-0.3	
SRES				AML	AML			
	comp=N,78µm,1.4s							
SRES				AML	AML			
	comp=E,90µm,0.3s							
ATFO	**Monte Foce - G**	**0.76**	**324**	P	Pg	01 29 01.7	+0.2	
ATFO				AML	AML			
	comp=N,186µm,0.5s							
ATFO				AML	AML			
	comp=E,144µm,1.6s							
ARVD	**Arcevia**	**0.76**	**346**	⇑P	Pg	01 29 01.6	0.0	
ARVD				S	Sb	01 29 14.0	+1.3	
ARVD				AML	AML			
	comp=N,115µm,0.4s							
ARVD				AML	AML			
	comp=N,115µm,0.4s							
ARVD				AML	AML			
	comp=E,182µm,0.1s							
MGAB	**Montegabbione**	**0.81**	**281**	P	Pb	01 29 02.9	-0.1	
MGAB				AML	AML			
	comp=E,354µm,0.7s							
MGAB				AML	AML			
	comp=N,262µm,1.1s							
MGAB				AML	AML			
	comp=N,268µm,0.9s							
MGAB				AML	AML			
	comp=E,372µm,0.7s							
CERT	**Cerreto**	**0.82**	**191**	⇓P	Pg	01 29 02.5	-0.2	
CERT				AML	AML			
	comp=E,149µm,0.3s							
CERT				AML	AML			
	comp=N,140µm,0.5s							
FRON	**Frontone**	**0.83**	**336**	⇑P	Pg	01 29 02.9	0.0	
ATVO	**AVT- Monte Val**	**0.85**	**318**	⇓P	Pg	01 29 03.3	+0.1	
ATVO				AML	AML			
	comp=E,107µm,1.4s							
ATVO				AML	AML			
	comp=N,100µm,0.4s							
ATVO				AML	AML			
	comp=E,106µm,1.4s							
ATVO				AML	AML			
	comp=N,100µm,0.4s							
PIEI	**Pieia**	**0.91**	**329**	⇑P	Pg	01 29 04.5	+0.1	
PIEI				AML	AML			
	comp=E,114µm,0.3s							
PIEI				AML	AML			
	comp=N,65µm,0.2s							
INTR	**Introdacqua**	**0.92**	**144**	⇑P	Pg	01 29 04.1	-0.4	
INTR				AML	AML			
	comp=E,58µm,0.6s							
INTR				AML	AML			
	comp=N,104µm,0.6s							

MPAG	**Monte Paganucc**	**0.93**	**340**	⇑P	Pb	01 29 04.9	-0.2	
MPAG				AML	AML			
	comp=E,708µm,1.4s							
MPAG				AML	AML			
	comp=N,891µm,1.4s							
MPAG				AML	AML			
	comp=E,95µm,0.7s							
MPAG				AML	AML			
	comp=N,91µm,0.2s							
MPAG				AML	AML			
	comp=N,890µm,1.4s							
MPAG				AML	AML			
	comp=E,706µm,1.4s							
NARO	**Abbazia di Nar**	**0.96**	**333**	⇓P	Pg	01 29 05.3	-0.1	
NARO				AML	AML			
	comp=E,63µm,1.5s							
NARO				AML	AML			
	comp=N,45µm,0.7s							
LPEL	**Lama dei Pelig**	**1.02**	**134**	S	Sn	01 29 22.0	+0.1	
VIVA	**Pratoni del Vi**	**1.05**	**197**	⇓P	Pg	01 29 05.3	-1.8	
VIVA				AML	AML			
	comp=E,504µm,0.6s							
VIVA				AML	AML			
	comp=N,392µm,1.1s							
CAFI	**Castiglion Fio**	**1.06**	**303**	P	Pn	01 29 07.8	-0.1	
CAFI				S	Sn	01 29 24.0	+1.2	
LIK	**San Giovanni I**	**1.28**	**167**	⇑P	Pn	01 29 09.1	-1.7	

ROM 25 01:29:40.1±0.1, 42°.753N±0°.004×13°.192E±0°.006, h9km, ML2.1/20, 14C-15D, Error ellipse: s-maj=0.6km s-min=0.2km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**325**	⇓P	Pg	01 29 43.2	+0.5
NRCA				S	Sg	01 29 45.0	+0.4
NRCA				AML	AML		
	comp=E,19150µm,0.1s						
NRCA				AML	AML		
	comp=E,19150µm,0.1s						
NRCA				AML	AML		
	comp=N,20950µm,1.1s						
NRCA				AML	AML		
	comp=E,21000µm,0.1s						
NRCA				AML	AML		
	comp=E,19200µm,0.1s						
NRCA				AML	AML		
	comp=N,23950µm,1.1s						
CAMP	**Campotosto**	**0.27**	**144**	⇑P	Pg	01 29 46.3	+0.7
CAMP				S	Sb	01 29 50.7	-1.2
CAMP				AML	AML		
	comp=N,168µm,0.3s						
CAMP				AML	AML		
	comp=E,253µm,0.2s						
FDMO	**Fiordimonte**	**0.29**	**345**	⇓P	Pg	01 29 46.7	+0.7
FDMO				S	Sb	01 29 51.6	-1.0
FDMO				AML	AML		
	comp=E,566µm,1.1s						
FDMO				AML	AML		
	comp=N,416µm,0.8s						
GUMA	**Gualdo di Mace**	**0.33**	**19**	⇑P	Pb	01 29 47.6	-0.5
GUMA				S	Sb	01 29 53.5	0.0
GUMA				AML	AML		
	comp=E,1860µm,0.8s						
GUMA				AML	AML		
	comp=E,1860µm,0.8s						
GUMA				AML	AML		
	comp=E,1700µm,0.4s						
GUMA				AML	AML		
	comp=N,1660µm,0.2s						
GUMA				AML	AML		
	comp=N,1985µm,0.7s						
CESI	**CESI - Serrava**	**0.33**	**320**	⇑P	Pg	01 29 47.2	+0.5
CESI				S	Sb	01 29 52.4	-1.2
CESI				AML	AML		
	comp=E,560µm,1.0s						
CESI				AML	AML		
	comp=N,978µm,0.5s						
CESI				AML	AML		
	comp=E,559µm,1.0s						
CESI				AML	AML		
	comp=N,978µm,0.5s						
TERO	**Teramo**	**0.33**	**113**	P	Pg	01 29 47.2	+0.5
TERO				S	Sb	01 29 52.5	-1.1
TERO				AML	AML		
	comp=E,642µm,0.8s						
TERO				AML	AML		
	comp=E,643µm,0.8s						
TERO				AML	AML		
	comp=N,750µm,0.6s						
CSP1	**Cessapalombo**	**0.34**	**2**	⇑P	Pg	01 29 47.5	+0.6
CSP1				S	Sb	01 29 52.9	-1.0
CSP1				AML	AML		
	comp=E,545µm,0.5s						
CSP1				AML	AML		
	comp=N,591µm,1.0s						
CSP1				AML	AML		
	comp=N,598µm,1.0s						
CSP1				AML	AML		
	comp=E,542µm,0.5s						
CSP1				AML	AML		
	comp=N,602µm,1.0s						
ARRO	**Arrone**	**0.36**	**241**	⇑P	Pg	01 29 47.7	+0.5
ARRO				S	Sb	01 29 53.8	-0.6
ARRO				AML	AML		
	comp=E,343µm,0.2s						
ARRO				AML	AML		
	comp=N,300µm,0.6s						
ARRO				AML	AML		
	comp=E,342µm,0.2s						
ARRO				AML	AML		
	comp=N,300µm,0.6s						
OFFI	**Offida**	**0.41**	**63**	P	Pb	01 29 49.6	+0.1
OFFI				AML	AML		
	comp=N,763µm,0.4s						
OFFI				AML	AML		
	comp=E,792µm,0.8s						
GIGS	**Gran Sasso**	**0.41**	**137**	P	Pg	01 29 48.7	+0.5
GIGS				S	Sg	01 29 54.8	+1.1
GIGS				AML	AML		
	comp=E,94µm,0.2s						
GIGS				AML	AML		
	comp=E,94µm,0.2s						
GIGS				AML	AML		
	comp=N,61µm,1.5s						
AQU	**L'Aquila**	**0.43**	**159**	⇑P	Pb	01 29 49.3	-0.6
AQU				S	Sb	01 29 56.2	-0.2
AQU				AML	AML		
	comp=N,136µm,0.3s						
AQU				AML	AML		
	comp=E,139µm,0.6s						
CESX	**Cesi**	**0.47**	**253**	⇑P	Pg	01 29 49.5	+0.2
CESX				S	Sb	01 29 57.3	-0.4
CESX				AML	AML		
	comp=E,154µm,0.8s						
CESX				AML	AML		
	comp=N,150µm,0.5s						
ASSB	**Assisi San Ben**	**0.49**	**307**	⇓P	Pg	01 29 49.9	+0.2
ASSB				S	Sb	01 29 57.4	-0.8
ASSB				AML	AML		
	comp=N,258µm,0.1s						
ASSB				AML	AML		
	comp=E,311µm,0.9s						
FIAM	**Fiamignano**	**0.49**	**187**	⇑P	Pg	01 29 49.9	+0.3
FIAM				S	Sb	01 29 57.5	-0.7
FIAM				AML	AML		
	comp=E,192µm,1.4s						
FIAM				AML	AML		
	comp=N,156µm,0.2s						
SNTG	**Esanatoglia**	**0.53**	**340**	⇓P	Pg	01 29 50.8	+0.3
SNTG				AML	AML		
	comp=N,108µm,0.1s						
SNTG				AML	AML		
	comp=E,107µm,0.5s						
TRTR	**Tortoreto Alta**	**0.53**	**84**	⇑P	Pb	01 29 52.2	+0.6
FAGN	**Fagnano**	**0.57**	**149**	⇓P	Pb	01 29 52.2	0.0
EL6	**Elcito**	**0.58**	**353**	⇓P	Pg	01 29 51.7	+0.3
ATCC	**AVT- Casa Cast**	**0.59**	**317**	⇓P	Pg	01 29 51.9	+0.3
VCEL	**Villa Celiera**	**0.60**	**127**	⇓P	Pb	01 29 52.5	-0.3
CING	**Cingoli**	**0.62**	**0**	⇓P	Pg	01 29 52.6	+0.4
CING				AML	AML		
	comp=E,128µm,1.1s						
CING				AML	AML		
	comp=N,148µm,0.1s						
FOSV	**Fossato di Vic**	**0.63**	**330**	⇑P	Pg	01 29 52.6	+0.3

T0110	**Collepietro**	**0.68**	**140**	⇓P	Pg	01 29 53.8	+0.4		
T0110				S	Sb	01 30 04.0	+0.2		
PP3	**Marolino**	**0.69**	**26**	⇓P	Pb	01 29 55.0	+0.6		
PP3				AML	AML				
	comp=E,496µm,0.5s								
PP3				AML	AML				
	comp=N,752µm,0.4s								
SRES	**S.Oreste - Sor**	**0.72**	**225**	⇓P	Pg	01 29 54.2	+0.2		
ATFO	**Monte Foce - G**	**0.76**	**324**	⇑P	Pg	01 29 55.2	+0.4		
ARVD	**Arcevia**	**0.77**	**346**	⇑P	Pg	01 29 55.1	+0.2		
ARVD				S	Sn	01 30 08.0	-0.8		
ARVD				AML	AML				
	comp=N,53µm,1.0s								
ARVD				AML	AML				
	comp=N,53µm,1.0s								
ARVD				AML	AML				
	comp=E,77µm,1.1s								
MGAB	**Montegabbione**	**0.81**	**282**	⇓P	Pb	01 29 56.4	0.0		
MGAB				S	Sb	01 30 08.0	+0.6		
MGAB				AML	AML				
	comp=E,146µm,0.9s								
MGAB				AML	AML				
	comp=N,127µm,1.2s								
MGAB				AML	AML				
	comp=E,146µm,0.9s								
CERT	**Cerreto**	**0.82**	**191**	P	Pb	01 29 56.2	-0.3		
CERT				AML	AML				
	comp=E,110µm,1.3s								
CERT				AML	AML				
	comp=N,83µm,0.4s								
CERT				AML	AML				
	comp=E,110µm,1.3s								
CERT				AML	AML				
	comp=N,83µm,0.4s								
FRON	**Frontone**	**0.84**	**336**	P	Pg	01 29 56.2	0.0		
ATVO	**AVT- Monte Val**	**0.85**	**318**	⇑P	Pg	01 29 56.4	-0.1		
INTR	**Introdacqua**	**0.91**	**144**	⇓P	Pb	01 29 58.1	0.0		
PIEI	**Pieia**	**0.92**	**329**	⇓P	Pb	01 29 58.4	+0.1		
MPAG	**Monte Paganucc**	**0.93**	**340**	P	Pb	01 29 58.6	+0.1		
NARO	**Abbazia di Nar**	**0.97**	**333**	⇑P	Pg	01 29 58.6	-0.1		
TOLF	**Tolfa**	**1.12**	**232**	P	Pg	01 30 01.4	-0.2		
SGG	**Gregorio Mates**	**1.63**	**147**	S	Sb	01 30 31.0	0.0		
PTRJ	**Pietraroja**	**1.71**	**144**	S	Sg	01 30 37.0	+2.0		

IDC 25 01:31:53.2±3.1, 5°92N×92°27E, h0km, mb3.4/3, mbtmp3.5/4, ML4.2/1, Error ellipse: s-maj=106.9km s-min=30.3km az=65.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.06**	**27**	Pn	Pn	01 35 14.1	+0.3
	0.4nm,0.3s,baz=233,slow=14,SNR=2.0						
	0.6nm,0.3s						
H08S3	**Diego Garcia H**	**23.89**	**236**	T	T	02 02 52.5	
	baz=56,slow=75,SNR=32						
H08S2	**Diego Garcia H**	**23.89**	**236**	T	T	02 02 56.1	
	baz=56,slow=75,SNR=24						
H08S1	**Diego Carcia H**	**23.91**	**236**	T	T	02 02 50.2	
	baz=56,slow=75,SNR=20						
MKAR	**Makanchi Array**	**41.62**	**350**	P	P	01 39 43.0	-0.2
	0.1nm,0.4s,baz=189,slow=7.8,SNR=1.9						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**48.70**	**123**	P	P	01 40 39.2	-0.6
	0.3nm,0.7s,baz=304,slow=10,SNR=4.5						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**50.15**	**127**	P	P	01 40 51.2	+0.4
	0.5nm,0.5s,baz=295,slow=7.0,SNR=5.3						
	0.5nm,0.5s						

*IDC **25** 01:33:26.2±0.8, 36°.48N×11°.17W, h0km, mb4.2/11, mbtmp4.2/14, ML4.7/3, MS2.9/2, Error ellipse: s-maj=21.8km s-min=15.3km az=85.0*
*MDD **25** 01:33:27.1±0.4, 36°.53N×11°.44W, h22km±3km, Mb5.1/52, M_mb4.6/53, Error ellipse: s-maj=2.6km s-min=1.3km az=129.0*
*NEIC **25** 01:33:27.2±2.0, 36°.55N±0°.08×11°.28W±0°.09, h10km±2km, mb4.1/17, Error ellipse: s-maj=16.7km s-min=4.8km az=319.0*
*IGIL **25** 01:33:29.7, 36°.54N×11°.31W, h32km, ML4.2*
*LDG **25** 01:33:29.4±0.3, 36°.70N×11°.22W, h10km, Ml4.3/24, Error ellipse: s-maj=5.5km s-min=4.0km az=64.0*
*CNRM **25** 01:33:30.2, 36°.52N×10°.98W, h20km, ml4.7*
*INMG **25** 01:33:30.1±2.0, 36°.55N×11°.33W, h36km, ML4.1, Error ellipse: s-maj=3.3km s-min=1.8km az=119.0*

ISC 25 01:33:26.1±0.5, 36°.52N±0°.04×11°.34W±0°.04, h10km, n279, σ2.9 97/350, mb4.0/21, 72C-9D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSVI	**Cabo S. Vicent**	**1.94**	**74**	⇑eP	**Pn**	**01 33 59.5**	**+0.4**
PSVI				eS	**Sn**	**01 34 20.8**	**-2.8**
PSVI				A	A	01 34 24.7	
	941nm,0.5s						
PFVI	**Vila Bisbo**	**2.10**	**72**	Pn	**Pn**	**01 34 00.6**	**-0.7**
PFVI	**Vila Bisbo**	**2.10**	**72**	P	**Pn**	**01 34 01.1**	**-0.2**
PFVI				S	**Sn**	**01 34 23.1**	**-4.5**
PFVI	**Vila Bisbo**	**2.10**	**72**	⇑iP	**Pn**	**01 34 01.3**	**0.0**
PFVI				S	**Sn**	**01 34 23.8**	**-3.8**
PFVI				A	A	01 34 25.3	
	998nm,0.8s						
PALJ	**Aljezur**	**2.18**	**68**	eP	**Pn**	**01 34 02.5**	**+0.1**
PALJ				eS	**Sn**	**01 34 26.1**	**-3.4**
PALJ				A	A	01 34 27.4	
	1µm,0.6s						
PLAGO	**Lagos**	**2.20**	**74**	eP	**Pn**	**01 34 02.8**	**+0.1**
PLAGO				eS	**Sn**	**01 34 26.9**	**-3.0**
PLAGO				A	A	01 34 33.5	
	1µm,0.4s						
MORF	**Marmelete**	**2.29**	**69**	eP	**Pn**	**01 34 03.9**	**0.0**
MORF				eS	**Sn**	**01 34 28.6**	**-3.6**
MORF				IAML		01 34 29.4	
	comp=E,2µm,0.5s						
MORF	**Marmelete**	**2.29**	**69**	⇑iP	**Pn**	**01 34 03.9**	**0.0**
MORF				S	**Sn**	**01 34 29.2**	**-3.0**
MORF				A	A	01 34 31.2	
	comp=E,806nm,0.2s						
PTEO	**Sao Teotonio**	**2.33**	**63**	⇑iP	**Pn**	**01 34 04.4**	**0.0**
PTEO				S	**Sn**	**01 34 30.1**	**-2.9**
PTEO				A	A	01 34 41.3	
	comp=E,558nm,0.4s						
PPOR	**Portimao**	**2.33**	**74**	eP	**Pn**	**01 34 04.5**	**+0.1**
PPOR				eS	**Sn**	**01 34 29.2**	**-3.9**
PPOR				A	A	01 34 30.9	
	comp=E,820nm,0.3s						
PSINE	**Sines**	**2.44**	**53**	eP	**Pn**	**01 34 05.7**	**-0.2**
PSINE				eS	**Sn**	**01 34 31.9**	**-3.9**
PSINE				A	A	01 34 36.3	
	comp=E,681nm,0.6s						
PALBU	**Albufeira**	**2.54**	**76**	eP	**Pn**	**01 34 07.6**	**+0.2**
PALBU				eS	**Sn**	**01 34 35.1**	**-3.3**
PALBU				A	A	01 34 38.5	
	comp=E,592nm,0.5s						
PVERD	**Verdizela**	**2.74**	**34**	eP	**Pn**	**01 34 10.2**	**+0.1**
PVERD				eS	**Sn**	**01 34 38.8**	**-4.4**
PNCL	**Nicolau / Gran**	**2.74**	**54**	⇑iP	**Pn**	**01 34 10.2**	**+0.1**
PNCL				S	**Sn**	**01 34 39.4**	**-3.9**
PNCL				A	A	01 34 42.6	
	comp=E,414nm,0.2s						
PFARO	**Faro**	**2.79**	**79**	eP	**Pn**	**01 34 11.1**	**+0.4**
PFARO				eS	**Sn**	**01 34 41.2**	**-3.2**
PFARO				A	A	01 34 43.1	
	comp=E,718nm,0.3s						
LIS	**Lisbon**	**2.80**	**38**	eP	**Pn**	**01 34 10.7**	**-0.2**
LIS				eS	**Sn**	**01 34 40.6**	**-4.0**
LIS				IAML		01 34 44.8	
	comp=N,2µm,0.5s						
PSETU	**Set^{a}bal**	**2.81**	**44**	eS	**Sn**	**01 34 42.0**	**-3.0**
MESJ	**Messejana**	**2.81**	**61**	eP	**Pn**	**01 34 11.0**	**-0.1**
MESJ				eS	**Sn**	**01 34 41.0**	**-4.1**
MESJ				IAML		01 34 49.4	
	comp=N,492nm,0.6s						
MESJ	**Messejana**	**2.81**	**61**	⇑iP	**Pn**	**01 34 11.0**	**-0.1**
MESJ				eS	**Sn**	**01 34 41.6**	**-3.5**
MESJ				A	A	01 34 52.1	
	comp=N,387nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.82**	**74**	⇑iP	**Pn**	**01 34 11.5**	**+0.2**
PBDV				S	**Sn**	**01 34 42.1**	**-3.3**
PBDV				A	A	01 34 50.8	
	comp=N,286nm,0.7s						
INMG	**Instituto de M**	**2.85**	**37**	eP	**Pn**	**01 34 11.8**	**+0.2**
INMG				eS	**Sn**	**01 34 43.1**	**-2.9**
INMG				A	A	01 34 47.6	
	comp=N,951nm,0.7s						
PCVE	**Castro Verde**	**2.86**	**66**	⇑iP	**Pn**	**01 34 11.9**	**+0.2**
PCVE				S	**Sn**	**01 34 42.5**	**-3.7**
PCVE				A	A	01 34 45.6	
	comp=N,250nm,0.3s						
PMAFR	**Mafra**	**2.92**	**33**	⇑iP	**Pn**	**01 34 12.4**	**-0.2**
PMAFR				S	**Sn**	**01 34 43.5**	**-4.4**
PMAFR				A	A	01 34 53.5	
	comp=N,852nm,0.5s						
PTAV	**Tavira**	**3.01**	**77**	eP	**Pn**	**01 34 14.9**	**+1.1**
PTAV				eS	**Sn**	**01 34 46.9**	**-3.1**
PVAQ	**Vaqueiros**	**3.03**	**72**	Pn	**Pn**	**01 34 14.3**	**+0.2**
PVAQ	**Vaqueiros**	**3.03**	**72**	P	**Pn**	**01 34 13.7**	**-0.4**
PVAQ				S	**Sn**	**01 34 46.4**	**-4.0**
PVAQ	**Vaqueiros**	**3.03**	**72**	⇑iP	**Pn**	**01 34 14.3**	**+0.2**
PVAQ				eS	**Sn**	**01 34 46.6**	**-3.8**
PVAQ				A	A	01 34 54.6	
	comp=N,280nm,0.4s						
PVFX	**Vila Franca de**	**3.06**	**37**	eS	**Sn**	**01 34 48.4**	**-2.7**
PVFX				A	A	01 34 50.4	
	comp=N,2µm,0.5s						
PBEN	**Benavente**	**3.13**	**39**	eP	**Pn**	**01 34 15.6**	**+0.1**
PBEN				eS	**Sn**	**01 34 51.3**	**-1.7**
PBEJ	**Beja**	**3.15**	**60**	⇑eP	**Pn**	**01 34 15.4**	**-0.3**
PBEJ				eS	**Sn**	**01 34 49.4**	**-4.0**
PBEJ				A	A	01 34 51.5	
	comp=N,183nm,0.3s						
EGRO	**El Granado**	**3.25**	**71**	⇑P	**Pn**	**01 34 17.0**	**0.0**
EGRO				⇑iVmb_V		01 34 18.1	
	comp=N,3µm,SNR=20						
EGRO				S	**Sn**	**01 34 51.6**	**-4.1**
EVO	**Evora**	**3.32**	**52**	P	**Pn**	**01 34 17.7**	**-0.3**
EVO	**Evora**	**3.32**	**52**	eP	**Pn**	**01 34 17.7**	**-0.3**
EVO				S	**Sn**	**01 34 53.3**	**-4.2**
EVO				A	A	01 34 56.5	
	comp=N,381nm,0.3s						
PCDRA	**Caldas da Rain**	**3.37**	**30**	eP	**Pn**	**01 34 18.7**	**0.0**
PCDRA				eS	**Sn**	**01 34 56.8**	**-1.9**
PCDRA				A	A	01 35 07.0	
	comp=N,2µm,0.4s						
PMTG	**Montargil**	**3.54**	**43**	⇑iP	**Pn**	**01 34 20.5**	**-0.6**
PMTG				S	**Sn**	**01 34 58.7**	**-4.3**
PMTG				A	A	01 35 06.1	
	comp=N,201nm,0.5s						
PSBE	**So Bento**	**3.60**	**33**	⇑iP	**Pn**	**01 34 21.8**	**-0.1**
PSBE				S	**Sn**	**01 35 00.7**	**-3.8**
PSBE				A	A	01 35 04.0	
	comp=N,336nm,0.4s						
PESTR	**Estremoz**	**3.78**	**51**	Pn	**Pn**	**01 34 23.6**	**-0.8**
PESTR	**Estremoz**	**3.78**	**51**	P	**Pn**	**01 34 24.6**	**+0.1**
PESTR				S	**Sn**	**01 35 06.8**	**-2.2**
PESTR	**Estremoz**	**3.78**	**51**	P	**Pn**	**01 34 24.6**	**+0.1**
PESTR				S	**Sn**	**01 35 06.8**	**-2.2**
PESTR	**Estremoz**	**3.78**	**51**	⇑eP	**Pn**	**01 34 23.8**	**-0.6**
PESTR				S	**Sn**	**01 35 05.1**	**-3.9**
PESTR				A	A	01 35 08.1	
	comp=N,214nm,0.6s						
PBAR	**Barrancos**	**3.80**	**63**	eP	**Pn**	**01 34 24.5**	**-0.2**
PBAR				S	**Sn**	**01 35 05.1**	**-4.3**
PBAR				A	A	01 35 10.2	
	comp=N,196nm,0.4s						
EMIN	**Mina Concepcio**	**3.93**	**70**	P	**Pn**	**01 34 26.1**	**-0.3**
EMIN				⇑iVmb_V		01 34 27.1	
	comp=N,4µm,SNR=47						
EMIN				S	**Sn**	**01 35 07.8**	**-4.8**
EBAD	**Badajoz**	**4.09**	**56**	P	**Pn**	**01 34 28.0**	**-0.7**
EBAD				⇑iVmb_V		01 34 29.5	
	comp=N,3µm,SNR=31						
EBAD				S	**Sn**	**01 35 11.9**	**-4.7**
SFS	**San Fernando**	**4.13**	**89**	Pn	**Pn**	**01 34 29.6**	**+0.4**
PCAS	**Casmilo, Conde**	**4.17**	**31**	⇑iP	**Pn**	**01 34 29.6**	**-0.2**
PCAS				eS	**Sn**	**01 35 14.3**	**-4.3**
PCAS				A	A	01 35 17.3	
	comp=N,191nm,0.4s						
PMRV	**Marv??o**	**4.26**	**46**	⇑iP	**Pn**	**01 34 30.3**	**-0.7**
PMRV				S	**Sn**	**01 35 14.9**	**-5.9**
PMRV				A	A	01 35 18.2	
	comp=N,545nm,0.6s						
ESPR	**Espera**	**4.42**	**84**	⇑P	**Pn**	**01 34 33.4**	**+0.3**
ESPR				⇑iVmb_V		01 34 35.2	
	comp=N,11µm,SNR=110						
ESPR				S	**Sn**	**01 35 20.2**	**-4.4**
PCBR	**Castelo Branco**	**4.50**	**41**	eP	**Pn**	**01 34 33.6**	**-0.6**
PCBR				eS	**Sn**	**01 35 21.2**	**-5.4**
PCBR				A	A	01 35 24.0	
	comp=N,280nm,0.5s						
AVE	**Averroes**	**4.55**	**134**	P	**Pn**	**01 34 35.9**	**+0.9**
AVE	**Averroes**	**4.55**	**134**	Pn	**Pn**	**01 34 35.4**	**+0.5**
AVE	**Averroes**	**4.55**	**134**	P	**Pn**	**01 34 35.5**	**+0.5**
EJIF	**Jimena Fronter**	**4.73**	**89**	P	**Pn**	**01 34 38.3**	**+0.9**
EJIF				S	**Sn**	**01 35 30.5**	**-1.8**
RSA	**Sarsar**	**4.78**	**108**	P	**Pn**	**01 34 38.5**	**+0.3**
ECEU	**Ceuta**	**4.86**	**96**	⇓P	**Pn**	**01 34 40.4**	**+1.2**
ECEU				⇑iVmb_V		01 34 41.5	
	comp=N,878nm,SNR=5.4						
ECEU				S	**Sn**	**01 35 32.6**	**-2.9**
CEU	**Ceuta**	**4.86**	**96**	P	**Pn**	**01 34 41.0**	**+1.8**
MTE	**Manteigas**	**4.88**	**36**	Pn	**Pn**	**01 34 39.2**	**-0.4**
MTE	**Manteigas**	**4.88**	**36**	⇑iP	**Pn**	**01 34 39.0**	**-0.6**
MTE				eS	**Sn**	**01 35 31.2**	**-5.0**
MTE				A	A	01 35 33.0	
	comp=N,183nm,0.6s						
SMIR	**Smir Dam**	**4.89**	**98**	P	**Pn**	**01 34 40.1**	**+0.4**
ZHG	**ZHG**	**4.92**	**127**	P	**Pn**	**01 34 39.9**	**-0.3**
SRHM	**Skhour des Reh**	**4.94**	**144**	P	**Pn**	**01 34 40.6**	**+0.3**
ECAB	**El Cabril**	**4.97**	**70**	⇑P	**Pn**	**01 34 40.4**	**-0.3**
ECAB				⇑iVmb_V		01 34 41.8	
	comp=N,5µm,SNR=68						
ECAB				S	**Sn**	**01 35 32.4**	**-5.9**
PVIS	**Viseu**	**4.98**	**32**	⇑eP	**Pn**	**01 34 40.3**	**-0.6**
PVIS				eS	**Sn**	**01 35 32.7**	**-5.9**
PVIS				A	A	01 35 37.8	
	comp=N,170nm,0.6s						
EAH	**EAH**	**5.07**	**163**	P	**Pn**	**01 34 44.0**	**+1.8**
EAH	**EAH**	**5.07**	**163**	P	**Pn**	**01 34 41.9**	**-0.3**
PTO	**Porto**	**5.08**	**24**	eP	**Pn**	**01 34 41.6**	**-0.6**
PTO				eS	**Sn**	**01 35 34.9**	**-6.1**
PTO				A	A	01 35 39.2	
	comp=N,183nm,0.5s						
EMIJ	**Mijas**	**5.28**	**88**	P	**Pn**	**01 34 44.7**	**-0.4**
EMIJ				⇑iVmb_V		01 34 47.0	
	comp=N,766nm,SNR=7.9						
EMIJ				S	**Sn**	**01 35 41.3**	**-4.7**
PMPST	**Porto Santo, M**	**5.36**	**232**	eP	**Pn**	**01 34 45.6**	**-0.5**
PMPST				eS	Sn	01 35 38.7	-9.1
PMPST				A	A	01 35 45.2	
	comp=N,230nm,0.4s						
PMPS	**Porto Santo**	**5.37**	**231**	eP	**Pn**	**01 34 45.8**	**-0.4**
PMPS				eS	Sn	01 35 40.3	-7.8
PMPS				A	A	01 35 43.1	
	comp=N,86nm,0.3s						
PVRL	**Vila Real**	**5.52**	**30**	eP	**Pn**	**01 34 47.9**	**-0.5**
PVRL				eS	**Sn**	**01 35 46.0**	**-6.0**
PVRL				A	A	01 35 48.3	
	comp=N,144nm,0.5s						
EMAL	**Malaga-Limoner**	**5.56**	**85**	P	**Pn**	**01 34 49.5**	**+0.7**
POLO	**Lamas de Olo**	**5.58**	**29**	eP	**Pn**	**01 34 48.2**	**-1.0**
POLO				eS	**Sn**	**01 35 46.7**	**-6.7**
POLO				A	A	01 35 49.4	
	comp=N,52nm,0.4s						
EADA	**Adamuz**	**5.63**	**71**	⇑P	**Pn**	**01 34 49.2**	**-0.6**
EADA				⇑iVmb_V		01 34 51.0	
	comp=N,2µm,SNR=28						
EADA				S	**Sn**	**01 35 48.8**	**-5.8**
MVO	**Moncorvo**	**5.73**	**35**	⇑eP	**Pn**	**01 34 50.2**	**-1.0**
MVO				eS	**Sn**	**01 35 50.7**	**-6.3**
MVO				A	A	01 35 53.6	
	comp=N,224nm,0.5s						
PCAB	**Cabril**	**5.79**	**25**	eP	**Pn**	**01 34 51.2**	**-0.8**
PCAB				eS	**Sn**	**01 35 52.0**	**-6.4**
PCAB				A	A	01 36 03.9	
	comp=N,90nm,0.4s						
EGOR	**Sierra Gorda,**	**5.83**	**82**	P	**Pn**	**01 34 53.5**	**+0.8**
EGOR				⇑iVmb_V		01 34 53.9	
	comp=N,635nm,SNR=5.2						
EGOR				S	**Sn**	**01 35 56.2**	**-3.4**
PVLZ	**Peæn de**	**5.87**	**101**	P	**Pn**	**01 34 53.5**	**+0.4**
IFR	**Ifrane**	**5.91**	**119**	P	**Pn**	**01 34 53.0**	**-0.8**
ELOB	**Lobios**	**5.91**	**24**	⇑P	**Pn**	**01 34 53.0**	**-0.8**
ELOB				⇑iVmb_V		01 34 53.8	
	comp=N,2µm,SNR=24						
ELOB				S	**Sn**	**01 35 54.1**	**-7.6**
PGAV	**Gavieira, Arco**	**5.94**	**23**	eP	**Pn**	**01 34 53.3**	**-0.8**
PGAV				eS	**Sn**	**01 35 56.2**	**-6.0**
PGAV				A	A	01 35 59.8	
	comp=N,119nm,0.6s						
PMAR	**Madeira**	**5.96**	**232**	P	**Pn**	**01 34 54.3**	**-0.2**
PMAR	**Madeira**	**5.96**	**232**	⇓eP	**Pn**	**01 34 54.3**	**-0.2**
PMAR				eS	**Sn**	**01 35 56.3**	**-6.6**
PMAR				A	A	01 36 01.7	
	comp=N,232nm,0.3s						
EZAM	**Zamans**	**5.98**	**19**	P	**Pn**	**01 34 53.5**	**-1.2**
EZAM				⇑iVmb_V		01 34 54.2	
	comp=N,1µm,SNR=7.8						
EZAM				S	**Sn**	**01 35 56.3**	**-6.9**
FUL	**Funchal**	**5.99**	**231**	eP	**Pn**	**01 34 54.3**	**-0.5**
FUL				eS	Sn	01 35 55.8	-7.7
FUL				A	A	01 36 01.9	
	comp=N,135nm,0.5s						
CGR	**Cap Guir**	**6.00**	**168**	P	**Pn**	**01 34 55.2**	**+0.4**
LCRM	**LCR**	**6.01**	**116**	P	**Pn**	**01 34 54.5**	**-0.7**
LCRM	**LCR**	**6.01**	**116**	P	**Pn**	**01 34 54.5**	**-0.7**
OUK	**Oukaimeden**	**6.03**	**150**	P	**Pn**	**01 34 57.0**	**+1.3**
OUK	**Oukaimeden**	**6.03**	**150**	P	**Pn**	**01 34 55.5**	**-0.2**
PMOZ	**Porto Moniz, M**	**6.08**	**234**	Pn	**Pn**	**01 34 56.2**	**+0.2**
PMOZ	**Porto Moniz, M**	**6.08**	**234**	P	**Pn**	**01 34 56.1**	**+0.1**
PMOZ	**Porto Moniz, M**	**6.08**	**234**	eP	**Pn**	**01 34 56.3**	**+0.2**
PMOZ				eS	**Sn**	**01 36 00.6**	**-5.1**
PMOZ				A	A	01 36 03.7	
	comp=N,313nm,0.5s						
PALE	**Palemas**	**6.14**	**100**	P	**Pn**	**01 34 56.1**	**-0.8**
ELGU	**Los Guajares,**	**6.20**	**85**	P	**Pn**	**01 34 57.9**	**+0.2**
ELGU				⇑iVmb_V		01 34 59.3	
	comp=N,693nm,SNR=7.1						
ELGU				S	**Sn**	**01 36 04.6**	**-4.2**
CZD	**Col de Zad**	**6.24**	**122**	P	**Pn**	**01 34 58.2**	**-0.3**
PAB	**San Pablo**	**6.29**	**59**	Pn	**Pn**	**01 34 57.8**	**-1.1**
PAB	**San Pablo**	**6.29**	**59**	⇑P	**Pn**	**01 34 58.0**	**-0.9**
PAB				⇑iVmb_V		01 35 00.4	
	comp=N,952nm,SNR=17						
PAB				S	**Sn**	**01 36 04.3**	**-6.5**
EQUE	**Quentar**	**6.37**	**81**	P	**Pn**	**01 35 00.3**	**+0.3**
EQUE				⇑iVmb_V		01 35 02.3	
	comp=N,690nm,SNR=11						
EQUE				S	**Sn**	**01 36 09.0**	**-3.9**
PBRG	**Braganca**	**6.37**	**33**	eP	**Pn**	**01 34 59.2**	**-0.8**
PBRG				eS	**Sn**	**01 36 06.0**	**-6.8**
PBRG				A	A	01 36 10.6	
	comp=N,84nm,0.5s						
ECAL	**Calabor**	**6.48**	**32**	P	**Pn**	**01 35 00.6**	**-1.0**
ECAL				⇑iVmb_V		01 35 03.7	
	comp=N,1µm,SNR=16						
ECAL				S	**Sn**	**01 36 09.2**	**-6.5**
MD31	**MD31**	**6.53**	**122**	P	**Pn**	**01 35 01.5**	**-0.7**
ESDC	**Sonseca Array**	**6.61**	**59**	Pn	**Pn**	**01 35 02.4**	**-1.0**
	comp=N,24nm,0.3s,baz=246,slow=13,SNR=583						
ESDC				Sn	**Sn**	**01 36 12.7**	**-6.1**
	comp=N,17nm,0.3s,baz=247,slow=24,SNR=16						
ESDC				LR	LR	01 37 01.1	
	comp=N,44nm,20.7s,baz=300,slow=33						
ESDC	**Sonseca Array**	**6.61**	**59**		**Pn**	**01 35 00.1**	**-3.2**
ESDC	**Sonseca Array**	**6.61**	**59**	P	**Pn**	**01 35 02.4**	**-1.0**
ESDC				⇑iVmb_V		01 35 04.5	
	comp=N,1µm,SNR=23						
ESDC				S	**Sn**	**01 36 12.1**	**-6.7**
ESBB	**Sonseca Array**	**6.61**	**59**		**Pn**	**01 35 02.3**	**-1.0**
MDT	**Midelt**	**6.66**	**122**	Pn	**Pn**	**01 35 03.6**	**-0.5**
	comp=N,18nm,0.3s,baz=256,slow=6.7,SNR=551						
MDT				Sn	Sn	01 36 11.3	-8.9
	comp=N,56nm,0.3s,baz=327,slow=18,SNR=27						
	comp=N,67nm,0.5s						
MDT	**Midelt**	**6.66**	**122**	P	**Pn**	**01 35 03.6**	**-0.5**
EMAZ	**Mazaricos**	**6.67**	**15**	P	**Pn**	**01 35 01.6**	**-2.5**
EMAZ				⇑iVmb_V		01 35 04.3	
	comp=N,1µm,SNR=5.7						
EMAZ				S	Sn	01 36 10.4	-10
EQES	**Quesada**	**6.72**	**77**	P	**Pn**	**01 35 04.1**	**-0.8**
EQES				⇑iVmb_V		01 35 07.3	
	comp=N,598nm,SNR=8.4						
EQES				S	**Sn**	**01 36 15.5**	**-6.2**
EAGO	**Agolada(Pontev**	**6.75**	**21**	P	**Pn**	**01 35 03.7**	**-1.6**
EAGO				⇑iVmb_V		01 35 05.9	
	comp=N,1µm,SNR=10						
EAGO				S	**Sn**	**01 36 14.1**	**-8.1**
EBER	**Berja**	**6.79**	**84**	P	**Pn**	**01 35 05.8**	**-0.2**
EBER				⇑iVmb_V		01 35 07.3	
	comp=N,513nm,SNR=3.1						
EBER				S	**Sn**	**01 36 19.7**	**-3.8**
GOG	**Mont Gurugu**	**6.89**	**98**	P	**Pn**	**01 35 06.0**	**-1.3**
GOG	**Mont Gurugu**	**6.89**	**98**	P	**Pn**	**01 35 05.6**	**-1.7**
EMEL	**Melilla**	**6.91**	**98**	P	**Pn**	**01 35 06.5**	**-0.9**
EMEL				S	**Sn**	**01 36 19.1**	**-6.9**
GUD	**Guadarrama**	**6.97**	**52**	P	**Pn**	**01 35 07.5**	**-0.8**
GUD				⇑iVmb_V		01 35 09.3	
	comp=N,744nm,SNR=20						
GUD				S	**Sn**	**01 36 21.4**	**-6.3**
SFNM	**Sidi Ifni**	**7.23**	**172**	P	**Pn**	**01 35 10.9**	**-0.9**
ENIJ	**Nijar**	**7.34**	**84**	P	**Pn**	**01 35 12.9**	**-0.5**
ENIJ				⇑iVmb_V		01 35 13.9	
	comp=N,775nm,SNR=4.1						
ENIJ				S	**Sn**	**01 36 30.2**	**-6.5**
UCM	**Universidad Co**	**7.39**	**57**	P	**Pn**	**01 35 13.7**	**-0.3**
TAF	**Taforalt**	**7.46**	**101**	P	**Pn**	**01 35 14.0**	**-1.0**
TAF	**Taforalt**	**7.46**	**101**	P	**Pn**	**01 35 13.8**	**-1.2**
EPON	**Pontenova**	**7.52**	**24**	P	**Pn**	**01 35 14.7**	**-1.1**
EPON				⇑iVmb_V		01 35 15.5	
	comp=N,4µm,S

MACI ⇑*i*Vmb_V 01 35 40.1
comp=N,618nm,SNR=1.3
MACI S Sn 01 37 14.7 -11
EMOS Mosqueruela 9.35 62 P **Pn 01 35 40.6 -0.4**
EMOS ⇑*i*Vmb_V 01 35 42.8
comp=N,874nm,SNR=12
EMOS S **Sn 01 37 17.6 -8.6**
CRAJ Montana Rajada 9.35 210 S Sn 01 37 15.4 -11
CCAN Las Canadas 9.39 210 P Pn 01 35 38.0 -3.8
CCAN ⇑*i*Vmb_V 01 35 45.1
comp=N,343nm,SNR=1.1
CCAN S Sn 01 37 15.0 -13
CBOL Buenavista del 9.40 211 S Sn 01 37 16.4 -11
FIGM Figuig 9.41 115 P **Pn 01 35 41.9 +0.1**
TBT Taburiente 9.58 217 P **Pn 01 35 43.0 -1.1**
TBT ⇑*i*Vmb_V 01 35 47.6
comp=N,406nm,SNR=1.5
TBT S Sn 01 37 17.3 -15
EGOM La Gomera 9.70 212 P Pn 01 35 42.0 -3.7
EGOM ⇑*i*Vmb_V 01 35 44.3
comp=N,349nm,SNR=1.1
EGOM S Sn 01 37 22.2 -13
EARA Aranguren 9.77 47 P **Pn 01 35 46.8 +0.2**
EARA ⇑*i*Vmb_V 01 35 47.5
comp=N,361nm,SNR=3.9
ESAC San Caprasio 9.91 55 P **Pn 01 35 48.7 +0.1**
ESAC ⇑*i*Vmb_V 01 35 50.8
comp=N,994nm,SNR=9.3
ESAC S **Sn 01 37 32.7 -7.1**
EORO Oroz-Betelu 10.00 47 P **Pn 01 35 49.9 0.0**
EORO ⇑*i*Vmb_V 01 35 51.8
comp=N,338nm,SNR=6.9
EORO S **Sn 01 37 35.6 -6.6**
ECOL Islas Columbre 10.04 67 P **Pn 01 35 50.3 0.0**
ECOL S **Sn 01 37 35.7 -7.3**
EALK Alkurruntz 10.09 45 P **Pn 01 35 50.4 -0.6**
EALK ⇑*i*Vmb_V 01 35 53.5
comp=N,472nm,SNR=6.0
ERTA Horta de San J 10.13 61 P **Pn 01 35 51.0 -0.6**
ERTA S **Sn 01 37 37.7 -7.6**
SJPF Ste Jean 10.19 47 *e*Pn **Pn 01 35 51.7 -0.6**
SJPF *e*Sn Sn 01 37 35.9 -11
comp=N,26nm,0.4s
EIBI Ibiza 10.35 72 P **Pn 01 35 53.8 -0.7**
EIBI S **Sn 01 37 42.8 -7.6**
CCUM Cumbre, El Hie 10.42 215 ⇑*i*Vmb_V 01 35 56.1
comp=N,299nm,SNR=1.4
CCUM S Sn 01 37 42.5 -10
CTAN El Hierro 10.43 215 ⇑*i*Vmb_V 01 35 55.4
comp=N,324nm,SNR=0.8
CTAN S Sn 01 37 42.7 -10
ETSF Etsaut 10.46 49 *e*Pn **Pn 01 35 54.2 -1.9**
ETSF Etsaut 10.46 49 *e*P **Pn 01 35 59.8 +3.7**
ETSF *e*Sn Sn 01 37 42.0 -11
comp=N,21nm,0.5s
ECHI Chisagues Biel 10.80 52 P **Pn 01 36 01.0 +0.1**
ECHI ⇑*i*Vmb_V 01 36 01.2
comp=N,393nm,SNR=8.9
ECHI S **Sn 01 37 53.4 -8.5**
EPOB Poblet 10.80 60 P **Pn 01 35 59.1 -1.8**
EPOB ⇑*i*Vmb_V 01 36 00.3
comp=N,308nm,SNR=7.9
EPF Esparros 11.08 51 *e*Pn **Pn 01 36 03.5 -1.1**
EPF Esparros 11.08 51 *e*P **Pn 01 36 08.5 +3.9**
EPF *e*Sn Sn 01 37 57.7 -11
comp=N,49nm,0.6s
EMIR Miracle 11.33 58 P **Pn 01 36 07.6 -0.4**
EMIR ⇑*i*Vmb_V 01 36 08.0
comp=N,246nm,SNR=1.2
ETOS Mallorca 11.60 70 P **Pn 01 36 11.5 -0.3**
LFF La Frestale 12.42 44 *e*Pn **Pn 01 36 20.7 -2.2**
LFF *e*Sn Sn 01 38 29.6 -12
comp=N,9.4nm,0.5s
MTLF Montolieu 12.43 53 *e*Pn **Pn 01 36 20.3 -2.6**
MTLF *e*Sn Sn 01 38 28.4 -13
comp=N,18nm,0.8s
EJON La Jonquera 12.48 57 P **Pn 01 36 23.0 -0.6**
QUIF Quistinic 12.89 25 *e*Pn **Pn 01 36 26.8 -2.4**
QUIF *e*Sn Sn 01 38 38.4 -14
comp=N,19nm,0.5s
RJF Les Rejaudoux 13.08 44 *e*Pn **Pn 01 36 29.3 -2.6**
RJF *e*Sn Sn 01 38 44.2 -13
comp=N,20nm,0.8s
MFF Saint Martin d 13.09 36 *e*Pn **Pn 01 36 30.2 -1.8**
MFF *e*Sn Sn 01 38 43.2 -14
comp=N,16nm,0.8s
CAF Calviac 13.17 46 *e*Pn **Pn 01 36 30.7 -2.4**
CAF *e*Sn Sn 01 38 46.8 -13
comp=N,4.6nm,0.4s
ROSF Rostrenen 13.21 24 *e*Pn **Pn 01 36 31.7 -2.0**
ROSF *e*Sn Sn 01 38 46.9 -14
comp=N,13nm,0.5s
SGMF Saint Gilles 13.39 26 *e*Pn **Pn 01 36 32.8 -3.2**
SGMF *e*Sn Sn 01 38 50.5 -14
comp=N,106nm,1.7s
LASF Ste Croix 13.82 52 *e*Pn **Pn 01 36 39.7 -2.3**
LASF *e*Sn Sn 01 39 01.9 -14
comp=N,11nm,0.7s
TCF Toulx Ste Croi 14.07 42 *e*Pn **Pn 01 36 42.8 -2.6**
TCF *e*Sn Sn 01 39 06.4 -15
comp=N,16nm,0.7s
GRR Gorron 14.14 30 *e*Pn **Pn 01 36 44.9 -1.4**
GRR *e*Sn Sn 01 39 07.9 -15
comp=N,7.5nm,0.6s
JSA Saint Aubin 14.32 25 P **Pn 01 36 48.0 -0.7**
JSA S Sn 01 39 14.1 -13
BGF Bois d'Agland 14.59 42 *e*Pn **Pn 01 36 49.2 -3.2**
BGF *e*Sn Sn 01 39 19.3 -15
comp=N,29nm,0.5s
FLN La Foliniere 14.59 30 *e*Pn **Pn 01 36 51.0 -1.5**
baz=213
FLN *e*Sn Sn 01 39 20.0 -14
LDF La Druitiere 14.60 31 *e*Pn **Pn 01 36 49.9 -2.7**
LDF *e*Sn Sn 01 39 20.2 -14
comp=N,7.6nm,0.7s
VIVF Saint-Julien-l 14.71 51 *e*Pn **Pn 01 36 52.2 -1.9**
VIVF *e*Sn Sn 01 39 22.5 -15
comp=N,14nm,1.1s
SMRF Simiane la Rot 14.89 55 *e*Pn **Pn 01 36 55.3 -1.3**
DYA Yadsworthy 14.90 19 P **Pn 01 36 56.3 -0.4**
HYF Humbligny 14.93 40 *e*Pn **Pn 01 36 55.2 -1.9**
AVF Avril sur Loir 15.00 42 *e*Pn **Pn 01 36 55.7 -2.4**
AVF *e*Sn Sn 01 39 30.4 -14
comp=N,14nm,0.8s
SMF Signal de Mont 15.18 44 *e*Pn **Pn 01 36 57.7 -2.8**
SMF *e*Sn Sn 01 39 32.4 -16
comp=N,8.4nm,0.7s
CLF Chambon-Foret 15.25 37 **Pn 01 37 01.5 +0.2**
SSF Saint Saulge 15.25 42 *e*Pn **Pn 01 36 59.1 -2.3**
SSF *e*Sn Sn 01 39 36.4 -14
comp=N,5.8nm,0.6s
LMR La Mourre 15.27 58 *e*Pn **Pn 01 37 00.6 -1.1**
ORIF Oris-en-Rattie 15.49 52 *e*Pn **Pn 01 37 03.2 -1.5**
LOR Lormes 15.57 42 *e*Pn **Pn 01 37 03.4 -2.2**
baz=238
LOR *e*Sn Sn 01 39 42.2 -16
comp=N,13nm,1.0s
MBDF Montbardon 15.98 54 *e*Pn **Pn 01 37 10.5 -0.6**
BNI Bardonecchia 16.06 52 Pn **Pn 01 37 12.8 +0.7**
SBF Sospel 16.09 57 *e*P **Pn 01 37 14.5 +2.1**
LPL La Plagne 16.30 51 *e*Pn **Pn 01 37 13.8 -1.4**
LPG La Plagne 16.31 51 *e*Pn **Pn 01 37 14.2 -1.1**
CABF La Chapelle 16.45 47 *e*Pn **Pn 01 37 15.2 -1.8**
MCH1 Michaelchurch 16.57 18 S Sn 01 40 09.5 -13
KEST Kesra 16.73 87 Pn **Pn 01 37 20.2 -0.4**
comp=N,4.1nm,0.8s,baz=322,slow=4.1,SNR=5.6
KEST Kesra 16.73 87 Pn **Pn 01 37 20.8 +0.2**
KEST IAmb IAmb 01 37 25.0
comp=Z,16nm,1.2s
SFTF Sexfontaines 16.77 41 *e*Pn **Pn 01 37 20.3 -0.7**
PGF Pioggiola 16.79 63 *e*P **Pn 01 37 22.2 +0.9**
MEZF Maizieres J'vi 16.97 40 *e*Pn **Pn 01 37 22.7 -0.7**
baz=217
SENIN Lac Senin/Sane 17.05 49 P **P 01 37 26.7 +0.2**
SENIN Lac Senin/Sane 17.05 49 P **Pn 01 37 25.4 +0.7**
SAVF Savonnieres en 17.07 40 *e*Pn **Pn 01 37 24.3 -0.5**
baz=228
PAGF Fort de Pagny 17.35 41 *e*Pn **Pn 01 37 27.8 -0.4**
HAU Haudompre 17.36 43 *e*Pn **Pn 01 37 28.1 -0.3**
HAU Haudompre 17.36 43 *e*P **P 01 37 31.9 +2.2**
CWF Charnwood Fore 17.69 20 P **Pn 01 37 32.9 +0.6**
DOU Dourbes 17.80 35 P **Pn 01 37 30.4 -3.3**
DOU Dourbes 17.80 35 *d*P **Pn 01 37 34.2 +0.5**
comp=Z,10nm,0.7s

GIVF Givet 17.91 36 *e*P **P 01 37 37.5 +1.8**
BMRD Maredsous 18.02 35 *d*P **Pn 01 37 36.8 +0.4**
comp=Z,14nm,0.8s
CDF Champ du Feu 18.10 43 *e*P **P 01 37 40.7 +2.7**
WLF Walferdange 18.26 39 P **P 01 37 40.2 +0.6**
WLF IAmb IAmb 01 37 44.2
comp=Z,19nm,0.7s
WLF Walferdange 18.26 39 P **P 01 37 41.3 +1.7**
WLF Walferdange 18.26 39 *d*P **P 01 37 40.8 +1.1**
comp=Z,20nm,0.8s
BCLA Clavier 18.35 36 *d*P **P 01 37 41.1 +0.6**
comp=Z,6.1nm,0.6s
OSSC Osservatorio P 18.62 61 IAmb IAmb 01 37 48.6
comp=Z,9.9nm,1.0s
BHOU Houvegnez 18.64 37 *d*P **Pn 01 37 45.0 +0.9**
comp=Z,7.4nm,0.6s
ZCCA Zocca 18.66 58 IAmb IAmb 01 37 55.1
comp=Z,15nm,1.0s
MEM Membach 18.81 36 *d*P **P 01 37 46.3 +0.7**
DAVOX Davos/Dischmat 18.82 50 P **Pn 01 37 49.4 +2.9**
comp=Z,4.1nm,1.0s,baz=206,slow=10,SNR=7.6
BTNL Ternell 18.85 36 *d*P **Pn 01 37 47.3 +0.6**
CLGH Cloghs, Cushen 18.91 9 P **P 01 37 44.8 -1.8**
DAVA Damuels 19.05 49 *e*P **Pn 01 37 51.2 +2.0**
comp=Z,1.3nm,0.4s
FETA Feichten 19.45 51 *i* P **Pn 01 37 56.4 +2.3**
comp=Z,2.4nm,0.5s,SNR=6.9
EKA Eskdalemuir Ar 19.63 14 P **Pn 01 37 56.6 +0.6**
baz=193,slow=11
comp=Z,3.0nm,0.7s
RETA Reutte 19.67 49 *e*P **Pn 01 38 02.1 +5.5**
comp=Z,2.5nm,0.6s
MOTA Moosalm 19.82 50 *e*P **Pn 01 37 59.5 +1.0**
comp=Z,2.9nm,0.6s
SQTA Sankt Quirin 19.83 50 *e*P **Pn 01 38 03.6 +5.0**
comp=Z,2.5nm,0.4s
TAM Tamanrasset 20.00 129 IAmb IAmb 01 37 55.9
comp=Z,4.6nm,0.7s
WATA Walderalm 20.11 50 *e*P Pn 01 38 04.7 +2.8
comp=Z,1.5nm,0.3s
WTTA Wattenberg 20.12 51 *e*P Pn 01 38 02.9 +0.9
comp=Z,1.5nm,0.5s
CIMO Cimolais 20.27 54 IAmb IAmb 01 38 12.8
comp=Z,5.3nm,1.0s
ABTA Abfaltersbach 20.47 53 *e*P Pn 01 38 06.4 +0.3
comp=Z,1.6nm,0.4s
CLUD Cludinico 20.61 54 IAmb IAmb 01 38 10.7
comp=Z,9.5nm,0.8s
PRED Cave del Predi 21.05 54 P **P 01 38 11.8 +1.7**
PRED IAmb IAmb 01 38 13.0
comp=Z,5.1nm,0.8s
MYKA Terra Mystica 21.16 54 *e*P **P 01 38 13.4 +2.1**
comp=Z,3.5nm,0.7s
OBKA Obir 21.71 55 *e*P **P 01 38 19.4 +2.1**
comp=Z,2.1nm,0.5s
MOA Molln 21.99 51 *i* P **P 01 38 22.7 +2.5**
comp=Z,3.2nm,0.5s,SNR=6.9
GEC2 GERESS Array S 22.03 48 P **P 01 38 22.8 +2.0**
GERES GERESS Array B 22.03 48 P **P 01 38 22.1 +1.4**
comp=Z,5.9nm,0.8s,baz=233,slow=8.2,SNR=47
comp=Z,5.9nm,0.8s
KHC Kasperske Hory 22.08 47 IAmb IAmb 01 38 24.4
comp=Z,10nm,1.0s
KHC Kasperske Hory 22.08 47 *e*P **P 01 38 23.0 +1.8**
CKRC Cesky Krumlov 22.39 49 *e*P **P 01 38 25.5 +1.0**
KOWA Kowa 22.89 162 P **P 01 38 30.6 +0.7**
comp=Z,9.0nm,0.8s,baz=349,slow=9.3,SNR=8.8
comp=Z,9.0nm,0.8s
KOWA Kowa 22.89 162 P **P 01 38 30.7 +0.7**
PRU Pruhonice 23.02 46 *e*P **P 01 38 32.3 +1.2**
CONA Conrad Observa 23.02 52 *e*P **P 01 38 32.8 +1.6**
comp=Z,0.5nm,0.4s
RONA Rosalia, Austr 23.22 53 *e*P **P 01 38 33.3 +0.1**
comp=Z,5.3nm,0.7s
KRUC Moravsky 23.75 49 *e*P **P 01 38 38.8 +0.4**
VRAC Vranov 23.96 49 P **P 01 38 41.3 +0.9**
comp=Z,2.4nm,0.5s,baz=254,slow=10,SNR=8.9
comp=Z,2.4nm,0.5s
VRAC Vranov 23.96 49 *e*P **P 01 38 41.1 +0.7**
UPC Upice 24.09 46 *e*P **P 01 38 43.5 +1.9**
DPC Dobruska-Polom 24.21 46 *e*P **P 01 38 44.2 +1.4**
OSTC Ostas 24.23 46 *e*P **P 01 38 44.3 +1.3**
KRLC Kraliky 24.37 47 *e*P **P 01 38 45.8 +1.6**
MORC Moravsky Berou 24.71 49 P **P 01 38 48.4 +1.1**
MORC IAmb IAmb 01 38 50.4
comp=Z,5.7nm,1.3s
MORC Moravsky Berou 24.71 49 *e*P **P 01 38 47.5 +0.2**
TOA0 Torodi Ar. Sit 26.05 150 P **P 01 39 00.7 +1.1**
TORD Torodi Ar. Bea 26.05 150 P **P 01 38 60.0 +0.3**
comp=Z,4.1nm,0.5s,baz=332,slow=9.1,SNR=4.0
comp=Z,4.1nm,0.5s
NB2 NORSAR Subarra 28.39 23 P **P 01 39 21.7 +1.3**
comp=Z,2.6nm,1.0s,baz=222,slow=9.3
NOA NORSAR Array B 28.39 23 P **P 01 39 21.5 +1.1**
comp=Z,1.2nm,0.9s,baz=221,slow=8.7,SNR=5.0
comp=Z,1.2nm,0.9s
HFS Hagfors 28.56 26 P **P 01 39 23.3 +1.5**
comp=Z,2.5nm,0.8s,baz=230,slow=6.9,SNR=4.7
comp=Z,2.5nm,0.8s
DBIC Dimbokro 30.30 167 P **P 01 39 38.6 +1.0**
comp=Z,3.4nm,0.8s,baz=353,slow=10,SNR=3.8
comp=Z,3.4nm,0.8s
FINES FINESS Array B 34.20 31 P **P 01 40 12.8 +1.4**
comp=Z,4.8nm,0.9s,baz=244,slow=5.5,SNR=7.9
comp=Z,4.8nm,0.9s
ARCES ARCESS Array B 38.61 20 P **P 01 40 50.4 +1.4**
comp=Z,6.0nm,0.9s,baz=229,slow=8.5,SNR=18
ARCES PcP **PcP 01 43 02.0 +1.0**
comp=Z,3.2nm,1.2s,baz=47,slow=2.5,SNR=4.6
comp=Z,6.0nm,0.9s
SCHQ Schefferville 41.65 314 P **P 01 41 16.1 +1.8**
comp=Z,2.6nm,0.8s,baz=73,slow=11,SNR=2.1
comp=Z,2.6nm,0.8s
MDP Montagnes des 49.07 240 LR LR 01 59 48.7
comp=Z,38nm,21.3s,baz=94,slow=32
WMQ Urumqi 71.50 49 *e*P **P 01 44 49.9 +2.9**
ILAR Eielson Array 73.21 342 P **P 01 44 59.7 +2.9**
comp=Z,0.5nm,0.5s,baz=23,slow=5.4,SNR=7.6
comp=Z,0.5nm,0.5s
TXAR Lajitas Array 74.92 295 P **P 01 45 10.1 +2.6**
comp=Z,0.1nm,0.4s,baz=74,slow=6.7,SNR=1.7
PZH PanZhiHua 91.14 56 P **P 01 46 33.0 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.0s
WRA Warramunga Arr 145.77 71 PKPbc **PKPab 01 53 07.0 +0.9**
comp=Z,1.3nm,0.6s,baz=312,slow=3.0,SNR=17
ASAR Alice Springs 147.49 77 PKPbc **PKPbc 01 53 12.3 +1.5**
comp=Z,0.6nm,0.5s,baz=310,slow=2.8,SNR=7.4

*MAN **25** 01:40:43, 12.˝58N×125.˝94E, h15km, Ms2.8*
*IDC **25** 01:40:46.3±1.6, 12.˝30N×125.˝28E, h0km, mb3.5/5, mbtmp3.5/5, MS3.0/3, Error ellipse: s-maj=70.9km s-min=23.1km az=63.0*
ISC 25 01:40:51.2±1.1, 12.˚4N±0.˚1×125.˚42E±0.˚10, h33km, n15, σ1§46/8, mb3.6/5, 2C, Samar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**2.61**	**179**	⇑*e*P		**Pn**	**01 41 32.5**	**+1.4**
RCP	**Roxas**	**2.75**	**252**	⇑*e*P		**Pn**	**01 41 34.8**	**+1.8**
RCP				*e*S		**Sb**	**01 42 12.1**	**-1.0**
DAV	**Davao City (W)**	**5.31**	**178**	LR		LR	01 44 27.1	
	comp=Z,76nm,18.4s,baz=328,slow=42							
CMAR	**Chiang Mai Arr**	**26.20**	**287**	P		**P**	**01 46 22.3**	**-0.9**
	0.7nm,0.3s,baz=89,slow=6.8,SNR=4.4							
CMAR				LR		LR	01 56 34.2	
	comp=Z,19nm,18.3s,baz=230,slow=36							
	0.7nm,0.3s							
WRA	**Warramunga Arr**	**33.32**	**165**	P		**P**	**01 47 24.8**	**-1.5**
	0.2nm,0.7s,baz=347,slow=8.9,SNR=1.7							
	0.2nm,0.7s							
ASAR	**Alice Springs**	**36.80**	**167**	P		**P**	**01 47 56.0**	**-0.2**
	0.3nm,0.3s,baz=342,slow=7.1,SNR=2.5							
	0.3nm,0.3s							
SONM	**Songino Array**	**38.74**	**339**	P		**P**	**01 48 13.4**	**+1.0**
	0.2nm,0.5s,baz=156,slow=11,SNR=1.7							
	0.2nm,0.5s							
H11S3	**WAKE ISLAND Hy**	**40.17**	**76**	T		T	02 31 20.5	
	baz=271,slow=75,SNR=10							
H11S1	**WAKE ISLAND Hy**	**40.18**	**76**	T		T	02 31 28.6	
	baz=271,slow=75,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**40.18**	**76**	T		T	02 31 46.9	
	baz=271,slow=75,SNR=6.1							
H11N1	**WAKE ISLAND Hy**	**40.43**	**74**	T		T	02 31 44.4	
	baz=266,slow=74,SNR=40							
H11N2	**WAKE ISLAND Hy**	**40.43**	**74**	T		T	02 31 44.5	
	baz=266,slow=74,SNR=29							
H11N3	**WAKE ISLAND Hy**	**40.45**	**74**	T		T	02 31 46.4	
	baz=266,slow=74,SNR=31							
MKAR	**Makanchi Array**	**49.84**	**322**	P		**P**	**01 49 40.4**	**-0.7**
	0.4nm,0.5s,baz=117,slow=8.6,SNR=4.6							
	0.4nm,0.5s							
MA2	**Magadan**	**50.72**	**16**	LR		LR	02 12 56.0	
	comp=Z,37nm,18.6s,baz=294,slow=38							

ROM 25 01:41:29.5±0.1, 42.˝652N±0.˝007×13.˚299E±0.˝006, h7km, ML2.0/13, 6C-1D, Error ellipse: s-maj=0.7km s-min=0.4km az=186.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.14**	**145**	⇑P		Pg	01 41 33.2	+0.6
CAMP				S		Sg	01 41 35.7	+1.1
CAMP				AML		AML		
	comp=E,1205μm,0.2s							
CAMP				AML		AML		
	comp=N,673μm,0.2s							
RM33	**Pellescritta (**	**0.16**	**204**	⇑P		Pg	01 41 33.5	+0.7
RM33				S		Sg	01 41 36.5	+1.5
RM33				AML		AML		
	comp=E,840μm,0.2s							
RM33				AML		AML		
	comp=N,704μm,0.3s							
RM33				AML		AML		
	comp=E,821μm,0.2s							
RM33				AML		AML		
	comp=N,689μm,0.3s							
RM33				AML		AML		
	comp=E,938μm,0.9s							
RM33				AML		AML		
	comp=N,1029μm,0.2s							
RM33				AML		AML		
	comp=N,1003μm,0.2s							
RM33				AML		AML		
	comp=E,888μm,0.9s							
RM33				AML		AML		
	comp=N,1000μm,0.2s							
RM33				AML		AML		
	comp=E,887μm,0.9s							
LNSS	**Leonessa**	**0.20**	**256**	P		Pg	01 41 34.2	+0.7
LNSS				S		Sg	01 41 37.7	+1.4
LNSS				AML		AML		
	comp=E,708μm,0.8s							
LNSS				AML		AML		
	comp=N,760μm,1.0s							
LNSS				AML		AML		
	comp=E,2890μm,0.4s							
LNSS				AML		AML		
	comp=N,2410μm,0.1s							
NRCA	**Norcia**	**0.23**	**323**	AML		AML		
	comp=E,2320μm,1.0s							
NRCA				AML		AML		
	comp=N,2615μm,0.1s							
NRCA				AML		AML		
	comp=E,2585μm,1.0s							
NRCA				AML		AML		
	comp=N,2910μm,0.1s							
NRCA				AML		AML		
	comp=N,8575μm,0.5s							
NRCA				AML		AML		
	comp=E,13650μm,0.1s							
NRCA				AML		AML		
	comp=N,9405μm,0.5s							
NRCA				AML		AML		
	comp=E,14850μm,0.1s							
TERO	**Teramo**	**0.23**	**97**	⇑P		Pg	01 41 34.6	+0.6
TERO				S		Sg	01 41 38.3	+1.2
TERO				AML		AML		
	comp=E,660μm,0.3s							
TERO				AML		AML		
	comp=N,1009μm,0.1s							
GIGS	**Gran Sasso**	**0.28**	**135**	⇑P		Pg	01 41 35.8	+0.7
GIGS				S		Sg	01 41 39.9	+1.0
GIGS				AML		AML		
	comp=N,106μm,1.4s							
GIGS				AML		AML		
	comp=E,200μm,0.2s							
GIGS				AML		AML		
	comp=N,106μm,1.4s							
AQU	**L'Aquila**	**0.31**	**166**	P		Pg	01 41 36.3	+0.7
AQU				AML		AML		
	comp=N,238μm,1.0s							
AQU				AML		AML		
	comp=E,225μm,1.0s							
AQU				AML		AML		
	comp=N,241μm,1.0s							
AQU				AML		AML		
	comp=E,246μm,1.0s							
ARRO	**Arrone**	**0.40**	**260**	P		Pg	01 41 37.9	+0.6
ARRO				S		Sb	01 41 44.0	-1.3
OFFI	**Offida**	**0.40**	**45**	P		Pb	01 41 38.8	-0.2
FIAM	**Fiamignano**	**0.41**	**199**	⇓P		Pb	01 41 38.4	-0.7
GUMA	**Gualdo di Mace**	**0.41**	**4**	AML		AML		
	comp=E,656μm,0.4s							
GUMA				AML		AML		
	comp=N,398μm,0.5s							
GUMA				AML		AML		
	comp=N,710μm,0.6s							
FAGN	**Fagnano**	**0.44**	**151**	AML		AML		
	comp=E,332μm,0.7s							
FAGN				AML		AML		
	comp=N,282μm,0.4s							
FAGN				AML		AML		
	comp=N,282μm,0.4s							
VCEL	**Villa Celiera**	**0.48**	**123**	⇑P		Pb	01 41 39.6	-0.7
VCEL				S		Sb	01 41 47.4	-0.1
VCEL				AML		AML		
	comp=E,404μm,0.3s							
VCEL				AML		AML		
	comp=N,337μm,0.3s							
MNTP	**Montappone**	**0.50**	**14**	P		Pb	01 41 40.3	-0.4
CESX	**Cesi**	**0.53**	**266**	P		Pg	01 41 40.3	+0.5
CESX				S		Sb	01 41 48.5	-0.6
T0110	**Collepietro**	**0.55**	**140**	P		Pg	01 41 40.7	+0.5
T0110				S		Sb	01 41 49.6	-0.2
T0110				AML		AML		
	comp=N,238μm,0.3s							
T0110				AML		AML		
	comp=E,252μm,1.0s							
ASSB	**Assisi San Ben**	**0.61**	**310**	P		Pg	01 41 41.5	+0.2
ASSB				S		Sb	01 41 51.7	+0.2
INTR	**Introdacqua**	**0.78**	**145**	⇑P		Pg	01 41 44.4	-0.2
INTR				AML		AML		
	comp=N,96μm,0.8s							
INTR				AML		AML		
	comp=N,96μm,0.8s							
INTR				AML		AML		
	comp=E,62μm,0.9s							
ATFO	**Monte Foce - G**	**0.89**	**323**	AML		AML		
	comp=E,48μm,0.7s							
ATFO				AML		AML		
	comp=N,41μm,0.5s							

*ATH **25** 01:48:05.5, 37.˚43N×20.˚53E, h9km±3km, ML3.2/17, Error ellipse: s-maj=3.8km s-min=1.0km az=32.0*
*THE **25** 01:48:06.0, 37.˚45N×20.˚55E, h0km±2km, ML3.5/6, Error ellipse: s-maj=2.4km s-min=0.5km az=216.0*
ISC 25 01:48:06.1±1.5, 37.˚46N±0.˚05×20.˚55E±0.˚05, h12km±9km, n44, σ0§59/57, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.34**	**43**	P		**Pg**	**01 48 12.7**	**-0.2**
LTHK				S		**Sg**	**01 48 17.8**	**+0.4**
	5μm,0.4s							
LTHK	**Lithakia**	**0.34**	**43**	P		**Pg**	**01 48 12.9**	**0.0**
LTHK				S		**Sg**	**01 48 17.9**	**+0.4**
LTHK				AML		AML	01 48 19.4	
	comp=N,13496μm,0.4s							
LTHK				AML		AML	01 48 19.6	
	comp=E,7545μm,0.4s							
VLS	**Valsamata**	**0.71**	**3**	P		**Pg**	**01 48 19.8**	**-0.2**
VLS				S		**Sb**	**01 48 30.7**	**+0.4**
	comp=E,3μm,0.3s							
VLS	**Valsamata**	**0.71**	**3**	P		**Pg**	**01 48 19.8**	**-0.2**
VLS				S		**Sb**	**01 48 30.5**	**+0.2**
VLS				AML		AML	01 48 31.0	
	comp=N,8043μm,0.3s							

VLS					AML	AML	01 48 33.9	
	comp=E,4415μm,0.4s							
KEF3	**Kipouria, Keph**	**0.76**	**348**		P	**Pg**	**01 48 20.7**	**-0.1**
KEF3					S	**Sb**	**01 48 32.0**	**+0.5**
	comp=E,8μm,0.5s							
KEF3	**Kipouria, Keph**	**0.76**	**348**		P	**Pg**	**01 48 20.4**	**-0.4**
KEF3					S	**Sg**	**01 48 31.7**	**+1.0**
DMLN	**Damoulianata-K**	**0.79**	**350**		P	**Pg**	**01 48 20.8**	**-0.6**
DMLN					S	**Sb**	**01 48 32.8**	**+0.4**
	comp=E,4μm,0.6s							
KEF4	**Livadi, Kephal**	**0.80**	**353**		P	**Pg**	**01 48 21.4**	**-0.2**
KEF4					S	**Sb**	**01 48 33.3**	**+0.6**
	comp=E,9μm,0.4s							
KEF4	**Livadi, Kephal**	**0.80**	**353**		P	**Pg**	**01 48 21.1**	**-0.5**
KEF4					S	**Sg**	**01 48 32.2**	**+0.1**
RLS	**Riolos of Patr**	**0.94**	**51**		P	**Pg**	**01 48 23.6**	**-0.7**
RLS	**Riolos of Patr**	**0.94**	**51**		P	**Pg**	**01 48 23.5**	**-0.7**
RLS					S	**Sb**	**01 48 37.2**	**+0.4**
RLS					AML	AML	01 48 38.8	
	comp=N,1461μm,0.7s							
RLS					AML	AML	01 48 46.2	
	comp=E,1191μm,0.5s							
FSK	**Fiskardo**	**0.99**	**1**		P	**Pb**	**01 48 25.4**	**+0.1**
FSK					S	**Sn**	**01 48 39.8**	**-0.1**
	comp=E,2μm,0.7s							
FSK	**Fiskardo**	**0.99**	**1**		P	**Pb**	**01 48 25.4**	**+0.1**
FSK					S	**Sn**	**01 48 39.6**	**-0.3**
FSK					AML	AML	01 48 44.5	
	comp=N,3715μm,0.7s							
FSK					AML	AML	01 48 45.2	
	comp=E,3065μm,0.8s							
DRO	**Drossia**	**1.04**	**62**		P	**Pb**	**01 48 25.8**	**-0.3**
DRO	**Drossia**	**1.04**	**62**		P	**Pb**	**01 48 25.5**	**-0.6**
DRO					AML	AML	01 48 52.8	
	comp=E,2107μm,0.6s							
DRO					AML	AML	01 48 58.0	
	comp=N,1700μm,0.5s							
PYL	**PYLOS**	**1.11**	**120**		P	**Pb**	**01 48 26.6**	**-0.6**
PYL					S	**Sb**	**01 48 41.1**	**-0.5**
PYL					AML	AML	01 48 50.6	
	comp=E,561μm,0.8s							
PYL					AML	AML	01 48 55.2	
	comp=N,558μm,0.7s							
ITM	**Ithomi**	**1.14**	**104**		P	**Pb**	**01 48 27.5**	**-0.2**
ITM	**Ithomi**	**1.14**	**104**		P	**Pb**	**01 48 27.5**	**-0.2**
ITM					AML	AML	01 48 47.9	
	comp=E,1021μm,0.7s							
ITM					AML	AML	01 48 49.2	
	comp=N,979μm,0.7s							
EVGI	**Lefkada island**	**1.16**	**4**		P	**Pb**	**01 48 27.6**	**-0.5**
EVGI	**Lefkada island**	**1.16**	**4**		P	**Pb**	**01 48 27.1**	**-1.0**
DRAG	**Dragano-Lefkad**	**1.22**	**1**		P	**Pn**	**01 48 29.3**	**+0.3**
NYDR	**Nydri-Lefkada**	**1.25**	**5**		P	**Pn**	**01 48 29.2**	**-0.3**
LKD2	**Lefkada island**	**1.33**	**4**		P	**Pn**	**01 48 30.8**	**+0.3**
LKD2	**Lefkada island**	**1.33**	**4**		P	**Pn**	**01 48 30.1**	**-0.4**
LKD2					AML	AML	01 48 57.5	
	comp=E,2279μm,0.6s							
LKD2					AML	AML	01 48 58.6	
	comp=N,2269μm,0.6s							
TSLK	**Tsoukalades, L**	**1.36**	**4**		P	**Pn**	**01 48 31.0**	**0.0**
TSLK					AML	AML	01 48 55.9	
	comp=E,2132μm,0.6s							
TSLK					AML	AML	01 48 56.8	
	comp=N,2711μm,0.4s							
LAKA	**Lakka**	**1.37**	**55**		P	**Pb**	**01 48 31.9**	**+0.1**
LAKA	**Lakka**	**1.37**	**55**		P	**Pn**	**01 48 30.5**	**-0.6**
LAKA					AML	AML	01 49 01.9	
	comp=N,2409μm,0.9s							
LAKA					AML	AML	01 49 04.0	
	comp=E,3430μm,1.1s							
PVO	**Paravola**	**1.39**	**34**		P	**Pb**	**01 48 31.8**	**-0.2**
PVO	**Paravola**	**1.39**	**34**		P	**Pn**	**01 48 31.5**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**65**		P	**Pb**	**01 48 31.8**	**-0.4**
KLV	**Kalavryta, Ach**	**1.40**	**65**		P	**Pb**	**01 48 31.8**	**-0.4**
KLV					AML	AML	01 49 00.4	
	comp=E,539μm,0.6s							
KLV					AML	AML	01 49 10.7	
	comp=N,528μm,1.0s							
EFP	**Efpalio**	**1.44**	**48**		P	**Pb**	**01 48 32.5**	**-0.4**
EFP					AML	AML	01 48 58.6	
	comp=E,906μm,0.6s							
EFP					AML	AML	01 49 05.0	
	comp=N,1160μm,0.6s							
SERG	**Sergoula**	**1.52**	**51**		P	**Pb**	**01 48 33.8**	**-0.6**
SERG	**Sergoula**	**1.52**	**51**		P	**Pb**	**01 48 33.7**	**-0.6**
SERG					AML	AML	01 49 02.5	
	comp=E,841μm,0.5s							
SERG					AML	AML	01 49 02.8	
	comp=N,745μm,0.4s							
ANX	**Ano Chora**	**1.56**	**43**		P	**Pn**	**01 48 34.4**	**+0.5**
ANX	**Ano Chora**	**1.56**	**43**		P	**Pn**	**01 48 34.1**	**+0.2**
ANX					AML	AML	01 49 03.5	
	comp=N,1754μm,0.5s							
ANX					AML	AML	01 49 06.5	
	comp=E,1620μm,0.6s							
THAL	**Thalero**	**1.77**	**71**		P	**Pb**	**01 48 38.9**	**+0.4**
THAL					AML	AML	01 49 12.6	
	comp=E,1179μm,0.7s							
THAL					AML	AML	01 49 28.6	
	comp=N,775μm,0.6s							
MAKR	**Makrakomi, Fth**	**1.99**	**38**		P	**Pb**	**01 48 42.7**	**+0.4**
MAKR					AML	AML	01 49 15.9	
	comp=E,1034μm,0.9s							
MAKR					AML	AML	01 49 18.8	
	comp=N,1464μm,0.9s							
LTK	**Loutraki**	**2.00**	**73**		P	**Pb**	**01 48 41.1**	**-1.3**
VLI	**Veliai**	**2.05**	**111**		P	**Pb**	**01 48 42.6**	**-0.7**
AXAR	**Agios Charalam**	**2.11**	**51**		P	**Pb**	**01 48 43.3**	**-1.0**
AXAR					AML	AML	01 49 22.7	
	comp=E,822μm,0.5s							
AXAR					AML	AML	01 49 32.0	
	comp=N,1034μm,0.8s							
KTHR	**Kythira**	**2.31**	**121**		P	**Pn**	**01 48 45.6**	**+1.6**
KEK	**Kerkira**	**2.32**	**346**		P	**Pb**	**01 48 46.7**	**-1.2**
THL	**Klokotos Trika**	**2.39**	**28**		P	**Pn**	**01 48 46.3**	**+1.2**

ROM ***25*** *01:51:57.7±0.1, 42.962N±0.008, 13.160E±0.009, h9km, ML2.7/28, Error ellipse: s-maj=0.8km s-min=0.7km az=352.0*

ISC 25 01:51:58.7±0.9, **42.95N**±0.02, **13.16E**±0.03, **h5**km±8km, **n44**, σ1**s10**/44, **9C-10D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FEMA	**Monte Fema**	**0.08**	**280**	⇓	P	**Pg**	**01 52 00.3**	**-0.4**
FEMA					S	**Sg**	**01 52 02.3**	**+0.3**
FEMA					AML	AML		
	comp=E,17100μm,0.5s							
FEMA					AML	AML		
	comp=N,12690μm,0.7s							
FEMA					AML	AML		
	comp=E,17050μm,0.5s							
FEMA					AML	AML		
	comp=N,12690μm,0.8s							
FEMA					AML	AML		
	comp=N,12705μm,0.7s							
FEMA					AML	AML		
	comp=N,12316μm,0.6s							
FEMA					AML	AML		
	comp=E,17079μm,0.5s							
FDMO	**Fiordimonte**	**0.10**	**329**	⇓	P	**Pg**	**01 52 00.3**	**-0.7**
FDMO					S	**Sg**	**01 52 02.3**	**-0.2**
FDMO					AML	AML		
	comp=N,15450μm,0.3s							
FDMO					AML	AML		
	comp=E,11100μm,0.8s							
FDMO					AML	AML		
	comp=N,15438μm,0.3s							
FDMO					AML	AML		
	comp=E,11088μm,0.8s							
NRCA	**Norcia**	**0.12**	**197**		P	**Pg**	**01 52 01.3**	**+0.1**
NRCA					AML	AML		
	comp=E,25950μm,0.4s							
NRCA					AML	AML		
	comp=E,27850μm,0.4s							
NRCA					AML	AML		
	comp=E,25950μm,0.4s							
NRCA					AML	AML		
	comp=E,25900μm,0.4s							
NRCA					AML	AML		
	comp=N,80850μm,0.1s							
NRCA					AML	AML		
	comp=N,87100μm,0.1s							
NRCA					AML	AML		
	comp=N,80900μm,0.1s							
NRCA					AML	AML		
	comp=N,4511μm,0.4s							
NRCA					AML	AML		
	comp=E,6409μm,0.4s							
NRCA					AML	AML		
	comp=E,6663μm,0.4s							
NRCA					AML	AML		
	comp=N,4408μm,0.7s							
CSP1	**Cessapalombo**	**0.15**	**13**	⇑	P	**Pg**	**01 52 01.1**	**-0.6**
CSP1					S	**Sg**	**01 52 04.1**	**+0.3**
CSP1					AML	AML		
	comp=N,6990μm,0.7s							
CSP1					AML	AML		
	comp=E,5255μm,0.3s							
CSP1					AML	AML		
	comp=E,5250μm,0.3s							
CSP1					AML	AML		
	comp=N,6995μm,0.7s							
CSP1					AML	AML		
	comp=E,5252μm,0.3s							
CSP1					AML	AML		
	comp=N,7001μm,0.7s							
GUMA	**Gualdo di Mace**	**0.17**	**48**	⇓	P	**Pg**	**01 52 01.7**	**-0.5**
CESI	**CESI - Serrava**	**0.20**	**287**		P	**Pg**	**01 52 02.0**	**-0.6**
CESI					S	**Sg**	**01 52 06.2**	**+1.0**
CESI					AML	AML		
	comp=N,4305μm,0.3s							
CESI					AML	AML		
	comp=E,3830μm,0.4s							
CESI					AML	AML		
	comp=E,3825μm,0.4s							
CESI					AML	AML		
	comp=N,4306μm,0.3s							
CESI					AML	AML		
	comp=E,3828μm,0.4s							
SNTG	**Esanatoglia**	**0.35**	**332**	⇑	P	**Pg**	**01 52 04.9**	**-0.6**
SNTG					AML	AML		
	comp=E,755μm,0.5s							
SNTG					AML	AML		
	comp=N,776μm,0.4s							
SNTG					AML	AML		
	comp=N,775μm,0.4s							
SNTG					AML	AML		
	comp=N,775μm,0.4s							
SNTG					AML	AML		
	comp=N,167μm,1.3s							
SNTG					AML	AML		
	comp=E,737μm,0.5s							
SNTG					AML	AML		
	comp=E,148μm,1.8s							
LNSS	**Leonessa**	**0.36**	**194**		P	**Pg**	**01 52 05.6**	**0.0**
LNSS					AML	AML		
	comp=E,6480μm,0.2s							
LNSS					AML	AML		
	comp=N,5720μm,0.2s							
LNSS					AML	AML		
	comp=N,5725μm,0.2s							
LNSS					AML	AML		
	comp=E,6480μm,0.2s							
LNSS					AML	AML		
	comp=N,5723μm,0.2s							
ASSB	**Assisi San Ben**	**0.38**	**285**		P	**Pg**	**01 52 05.1**	**-1.0**
ASSB					S	**Sg**	**01 52 11.6**	**+0.5**
ASSB					AML	AML		
	comp=E,1480μm,1.1s							
ASSB					AML	AML		
	comp=N,1275μm,0.5s							
ASSB					AML	AML		
	comp=N,1274μm,0.5s							
ASSB					AML	AML		
	comp=E,1396μm,0.1s							
EL6	**Elcito**	**0.38**	**354**	⇓	P	**Pg**	**01 52 05.5**	**-0.7**
EL6					AML	AML		
	comp=N,1750μm,0.3s							
EL6					AML	AML		
	comp=E,1525μm,0.9s							
EL6					AML	AML		
	comp=N,1755μm,0.3s							
EL6					AML	AML		
	comp=E,1526μm,0.9s							
EL6					AML	AML		
	comp=N,1751μm,0.3s							
EL6					AML	AML		
	comp=E,1445μm,0.3s							
OFFI	**Offida**	**0.39**	**92**		P	**Pb**	**01 52 06.9**	**-1.2**
OFFI					AML	AML		
	comp=E,2220μm,0.5s							
OFFI					AML	AML		
	comp=N,3255μm,0.5s							
OFFI					AML	AML		
	comp=E,1648μm,0.2s							
OFFI					AML	AML		
	comp=N,3257μm,0.5s							
CING	**Cingoli**	**0.43**	**3**	⇓	P	**Pg**	**01 52 06.3**	**-0.7**
CING					AML	AML		
	comp=E,862μm,1.1s							
CING					AML	AML		
	comp=N,718μm,0.1s							
CING					AML	AML		
	comp=E,865μm,1.1s							
CING					AML	AML		
	comp=N,718μm,0.1s							
RM33	**Pellescritta (**	**0.44**	**175**		P	**Pg**	**01 52 06.8**	**-0.4**
RM33					S	**Sb**	**01 52 14.7**	**-1.3**
RM33					AML	AML		
	comp=E,1825μm,0.3s							
RM33					AML	AML		
	comp=N,1435μm,0.8s							
RM33					AML	AML		
	comp=N,1310μm,1.4s							
RM33					AML	AML		
	comp=N,1430μm,0.8s							
RM33					AML	AML		
	comp=E,1825μm,0.4s							
RM33					AML	AML		
	comp=N,1315μm,1.4s							
RM33					AML	AML		
	comp=E,1745μm,0.3s							
RM33					AML	AML		
	comp=E,1749μm,0.3s							
RM33					AML	AML		
	comp=N,1249μm,0.3s							
RM33					AML	AML		
	comp=E,1825μm,0.3s							
RM33					AML	AML		
	comp=N,1233μm,0.3s							
ATCC	**AVT- Casa Cast**	**0.45**	**302**	⇑	P	**Pg**	**01 52 06.7**	**-0.7**
ATCC					AML	AML		
	comp=E,1225μm,0.7s							
ATCC					AML	AML		
	comp=N,1220μm,0.5s							
ATCC					AML	AML		
	comp=E,1224μm,0.7s							
ATCC					AML	AML		
	comp=N,1218μm,0.5s							
CAMP	**Campotosto**	**0.45**	**156**		P	**Pg**	**01 52 06.5**	**-0.9**
CAMP					S	**Sg**	**01 52 14.2**	**+0.9**
CAMP					AML	AML		
	comp=E,1965μm,0.3s							
CAMP					AML	AML		
	comp=N,1630μm,1.5s							
CAMP					AML	AML		
	comp=N,1369μm,0.3s							
CAMP					AML	AML		
	comp=E,1966μm,0.3s							
FOSV	**Fossato di Vic**	**0.45**	**320**	⇓	P	**Pg**	**01 52 06.8**	**-0.7**
FOSV					AML	AML		
	comp=E,866μm,1.0s							
FOSV					AML	AML		
	comp=E,866μm,1.0s							
FOSV					AML	AML		
	comp=N,1280μm,0.3s							
FOSV					AML	AML		
	comp=N,1281μm,0.3s							
FOSV					AML	AML		
	comp=E,851μm,0.4s							
TERO	**Teramo**	**0.46**	**135**		P	**Pg**	**01 52 07.3**	**-0.3**
TERO					AML	AML		
	comp=N,1365μm,0.3s							
TERO					AML	AML		
	comp=E,1090μm,0.9s							
TERO					AML	AML		
	comp=E,1061μm,0.4s							
TERO					AML	AML		
	comp=N,1229μm,0.3s							
TERO					AML	AML		
	comp=N,1368μm,0.3s							
TERO					AML	AML		
	comp=E,981μm,0.4s							
PP3	**Marolino**	**0.54**	**37**	⇓	P	**Pb**	**01 52 09.6**	**-1.1**
PP3					AML	AML		
	comp=E,1074μm,0.4s							
PP3					AML	AML		
	comp=N,958μm,1.1s							
PP3					AML	AML		
	comp=E,1032μm,0.4s							
PP3					AML	AML		
	comp=N,1046μm,1.1s							
PP3					AML	AML		
	comp=E,1075μm,0.4s							
PP3					AML	AML		
	comp=N,958μm,1.1s							
PP3					AML	AML		
	comp=E,1028μm,0.4s							
PP3					AML	AML		
	comp=N,1045μm,1.1s							
CESX	**Cesi**	**0.55**	**232**	⇓	P	**Pg**	**01 52 08.6**	**-0.6**
CESX					S	**Sb**	**01 52 17.4**	**-1.6**
CESX					AML	AML		
	comp=E,713μm,0.3s							
CESX					AML	AML		
	comp=N,517μm,0.7s							
CESX					AML	AML		
	comp=E,713μm,0.3s							
CESX					AML	AML		
	comp=N,517μm,0.7s							
SSFR	**Montelago di S**	**0.56**	**331**		AML	AML		
	comp=N,1245μm,0.2s							
SSFR					AML	AML		
	comp=E,1565μm,0.2s							
SSFR					AML	AML		
	comp=N,1240μm,0.2s							
SSFR					AML	AML		
	comp=E,1345μm,0.2s							
SSFR					AML	AML		
	comp=N,1245μm,0.2s							
SSFR					AML	AML		
	comp=N,1240μm,0.2s							
SSFR					AML	AML		
	comp=E,1564μm,0.2s							
SSFR					AML	AML		
	comp=E,1342μm,0.2s							
ARVD	**Arcevia**	**0.57**	**344**	⇑	P	**Pg**	**01 52 09.0**	**-0.8**
ARVD					AML	AML		
	comp=E,422μm,0.8s							
ARVD					AML	AML		
	comp=N,240μm,0.9s							
ARVD					AML	AML		
	comp=E,402μm,0.3s							
ARVD					AML	AML		
	comp=N,240μm,0.9s							
GIGS	**Gran Sasso**	**0.58**	**149**		P	**Pg**	**01 52 09.4**	**-0.5**
GIGS					AML	AML		
	comp=N,196μm,0.2s							
GIGS					AML	AML		
	comp=E,268μm,0.4s							
GIGS					AML	AML		
	comp=N,196μm,0.2s							
ATFO	**Monte Foce - G**	**0.60**	**314**	⇑	P	**Pg**	**01 52 09.6**	**-0.7**
ATFO					AML	AML		
	comp=E,410μm,0.5s							
ATFO					AML	AML		
	comp=N,388μm,0.7s							
ATFO					AML	AML		
	comp=E,410μm,0.5s							
ATFO					AML	AML		
	comp=N,388μm,0.7s							
ATTE	**AVT- Monte Tez**	**0.64**	**293**		P	**Pg**	**01 52 11.0**	**-0.1**
ATTE					AML	AML		
	comp=E,231μm,0.4s							
ATTE					AML	AML		
	comp=E,232μm,0.4s							
ATTE					AML	AML		
	comp=N,217μm,0.6s							
ATTE					AML	AML		
	comp=N,217μm,0.6s							
ATTE					AML	AML		
	comp=E,231μm,0.4s							
FRON	**Frontone**	**0.65**	**331**		AML	AML		
	comp=N,467μm,0.6s							
FRON					AML	AML		
	comp=E,328μm,0.7s							
FRON					AML	AML		
	comp=E,327μm,0.7s							
FRON					AML	AML		
	comp=N,467μm,0.6s							
ATVO	**AVT- Monte Val**	**0.70**	**308**	⇓	P	**Pg**	**01 52 11.2**	**-1.0**
ATVO					AML	AML		
	comp=N,287μm,0.6s							
ATVO					AML	AML		
	comp=E,302μm,0.6s							
ATVO					AML	AML		
	comp=N,287μm,0.6s							
ATVO					AML	AML		
	comp=E,303μm,0.6s							
MPAG	**Monte Paganucc**	**0.74**	**337**		AML	AML		
	comp=N,1470μm,2.0s							
MPAG					AML	AML		
	comp=E,314μm,0.4s							
MPAG					AML	AML		
	comp=N,250μm,0.7s							
MPAG					AML	AML		
	comp=E,1430μm,2.0s							
MPAG					AML	AML		
	comp=E,314μm,0.4s							
MPAG					AML	AML		
	comp=N,249μm,0.7s							
PIEI	**Pieia**	**0.74**	**322**	⇑	P	**Pg**	**01 52 12.0**	**-1.1**
PIEI					AML	AML		
	comp=E,204μm,0.8s							
PIEI					AML	AML		
	comp=N,190μm,0.6s							
PIEI					AML	AML		
	comp=N,189μm,0.6s							
PIEI					AML	AML		
	comp=E,205μm,0.8s							
ATPI	**Pietralunga -**	**0.75**	**312**	⇑	P	**Pg**	**01 52 12.2**	**-0.9**
ATPI					AML	AML		
	comp=E,257μm,0.6s							
ATPI					AML	AML		
	comp=N,218μm,0.7s							
ATPI					AML	AML		
	comp=N,218μm,0.7s							
ATPI					AML	AML		
	comp=E,257μm,0.6s							
ATMI	**Monte Miggiano**	**0.76**	**301**		AML	AML		
	comp=N,781μm,0.7s							
ATMI					AML	AML		
	comp=E,692μm,0.6s							
ATMI					AML	AML		
	comp=N,781μm,0.7s							
ATMI					AML	AML		
	comp=E,693μm,0.6s							
MGAB	**Montegabbione**	**0.77**	**268**		P	**Pg**	**01 52 12.6**	**-1.0**
MGAB					AML	AML		
	comp=N,662μm,0.4s							
MGAB					AML	AML		
	comp=E,457μm,0.7s							
MGAB					AML	AML		
	comp=N,661μm,0.4s							
MGAB					AML	AML		
	comp=N,658μm,0.5s							
MGAB					AML	AML		
	comp=E,450μm,0.8s							
MGAB					AML	AML		
	comp=E,450μm,0.8s							
MGAB					AML	AML		
	comp=E,457μm,0.7s							
NARO	**Abbazia di Nar**	**0.79**	**328**		AML	AML		
	comp=N,138μm,0.6s							
NARO					AML	AML		
	comp=E,138μm,0.6s							
NARO					AML	AML		
	comp=N,138μm,0.6s							
BADI	**Badiali**	**0.87**	**310**	⇑	P	**Pg**	**01 52 14.6**	**-0.9**
BADI					AML	AML		
	comp=E,109μm,0.4s							
BADI					AML	AML		
	comp=N,186μm,0.7s							
BADI					AML	AML		
	comp=N,185μm,0.7s							
BADI					AML	AML		
	comp=E,109μm,0.4s							
CAFI	**Castiglion Fio**	**0.95**	**294**		AML	AML		

comp=E,139μm,0.9s
CAFI AML AML
comp=N,156μm,0.7s
CAFI AML AML
comp=N,156μm,0.7s
PARC Parchiule 0.97 316 AML AML
comp=E,173μm,0.6s
PARC AML AML
comp=N,193μm,0.7s
PARC AML AML
comp=E,173μm,0.6s
MTCE Montecelio 0.97 199 ⇓P **Pn 01 52 18.3 -0.8**
SGG Gregorio Mates 1.80 149 P **Pb 01 52 32.2 -0.1**
ABTA Abfaltersbach 3.83 353 *e*Pn **Pn 01 52 59.0 +0.6**
comp=E,6.4nm,0.5s
SALB San Lorenzo Be 3.89 141 ⇑P **Pb 01 53 08.7 +0.7**
FETA Feichten 4.42 338 *i* Pn Pn 01 53 10.8 +4.2
comp=E,0.8nm,0.5s
WTTA Wattenberg 4.45 346 *e*Pn **Pn 01 53 08.6 +1.5**
comp=E,0.5nm,0.2s
SQTA Sankt Quirin 4.49 343 *i* Pn **Pn 01 53 10.1 +2.5**
comp=E,0.1nm,0.1s
WATA Walderalm 4.53 346 *e*Pn **Pn 01 53 10.0 +1.9**
comp=E,2.7nm,0.6s
DAVA Damuels 4.92 333 *e*Pn **Pn 01 53 17.1 +3.6**
comp=E,0.6nm,0.3s

ROM 25 01:52:15.5±0.1, 42°839N±0′004×13°21E±0′01, h8km, ML2.7/10, 1C-3D, Error ellipse: s-maj=0.9km s-min=0.4km az=273.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**265**	⇑P	Pg	01 52 18.1	+0.4
NRCA				S	Sg	01 52 19.7	+0.5
NRCA				AML	AML		
	comp=E,25950μm,0.4s						
NRCA				AML	AML		
	comp=N,80900μm,0.1s						
NRCA				AML	AML		
	comp=N,80850μm,0.1s						
NRCA				AML	AML		
	comp=E,27850μm,0.4s						
NRCA				AML	AML		
	comp=N,87100μm,0.1s						
NRCA				AML	AML		
	comp=N,87114μm,0.1s						
NRCA				AML	AML		
	comp=E,25004μm,0.2s						
NRCA				AML	AML		
	comp=E,23374μm,0.1s						
NRCA				AML	AML		
	comp=N,80859μm,0.1s						
FEMA	**Monte Fema**	**0.17**	**316**	⇓P	Pg	01 52 19.8	+0.6
FEMA				S	Sg	01 52 22.9	+1.2
FEMA				AML	AML		
	comp=E,5130μm,0.2s						
FEMA				AML	AML		
	comp=N,3337μm,0.1s						
FDMO	**Fiordimonte**	**0.22**	**336**	⇓P	Pg	01 52 20.3	+0.3
FDMO				S	Sg	01 52 24.0	+1.0
FDMO				AML	AML		
	comp=N,2228μm,0.3s						
FDMO				AML	AML		
	comp=E,2485μm,0.1s						
CSP1	**Cessapalombo**	**0.25**	**359**	P	Pg	01 52 21.0	+0.3
CSP1				S	Sg	01 52 25.4	+1.3
CSP1				AML	AML		
	comp=E,4002μm,0.3s						
CSP1				AML	AML		
	comp=N,3211μm,0.4s						
LNSS	**Leonessa**	**0.27**	**208**	P	Pb	01 52 21.9	-0.7
LNSS				S	Sb	01 52 26.9	-0.4
CESI	**CESI - Serrava**	**0.28**	**307**	P	Pg	01 52 21.7	+0.6
CESI				S	Sb	01 52 26.7	-1.0
CESI				AML	AML		
	comp=E,2099μm,0.3s						
CESI				AML	AML		
	comp=N,4306μm,0.3s						
RM33	**Pellescritta (**	**0.33**	**179**	AML	AML		
	comp=E,1830μm,0.3s						
RM33				AML	AML		
	comp=E,1825μm,0.4s						
RM33				AML	AML		
	comp=E,1745μm,0.3s						
RM33				AML	AML		
	comp=N,1435μm,0.8s						
RM33				AML	AML		
	comp=N,1310μm,1.4s						
RM33				AML	AML		
	comp=N,1430μm,0.8s						
RM33				AML	AML		
	comp=N,1310μm,0.6s						
RM33				AML	AML		
	comp=N,1430μm,1.2s						
CAMP	**Campotosto**	**0.34**	**154**	P	Pg	01 52 22.1	-0.1
CAMP				S	Sg	01 52 28.0	+1.3
MNTP	**Montappone**	**0.35**	**32**	P	Pb	01 52 23.5	-0.6
MNTP				S	Sb	01 52 29.8	0.0
MNTP				AML	AML		
	comp=E,2154μm,0.6s						
MNTP				AML	AML		
	comp=N,1928μm,1.0s						
TERO	**Teramo**	**0.36**	**127**	AML	AML		
	comp=E,1090μm,0.9s						
TERO				AML	AML		
	comp=N,1365μm,0.3s						
OFFI	**Offida**	**0.36**	**75**	P	Pb	01 52 24.4	+0.2
GAG1	**Gagliole**	**0.41**	**345**	P	Pg	01 52 24.2	+0.6
GAG1				S	Sb	01 52 30.9	-0.6
GAG1				AML	AML		
	comp=N,3325μm,0.3s						
GAG1				AML	AML		
	comp=E,3742μm,2.4s						
ARRO	**Arrone**	**0.42**	**232**	S	Sg	01 52 25.0	-4.2
SNTG	**Esanatoglia**	**0.46**	**335**	P	Pg	01 52 24.6	+0.1
SNTG				S	Sb	01 52 32.2	-0.7
SNTG				AML	AML		
	comp=N,185μm,0.8s						
SNTG				AML	AML		
	comp=E,143μm,1.9s						
SNTG				AML	AML		
	comp=N,548μm,0.2s						
SNTG				AML	AML		
	comp=E,636μm,0.1s						
AQU	**L'Aquila**	**0.51**	**164**	P	Pg	01 52 25.2	-0.2
AQU				S	Sb	01 52 33.7	-0.5
CESX	**Cesi**	**0.52**	**244**	AML	AML		
	comp=N,517μm,0.7s						
CESX				AML	AML		
	comp=E,713μm,0.3s						
FIAM	**Fiamignano**	**0.57**	**187**	AML	AML		
	comp=N,340μm,0.4s						
FIAM				AML	AML		
	comp=E,641μm,0.5s						
PP3	**Marolino**	**0.61**	**28**	P	Pb	01 52 28.6	+0.2
PP3				AML	AML		
	comp=E,1076μm,0.4s						
PP3				AML	AML		
	comp=N,1046μm,1.1s						
PP3				AML	AML		
	comp=N,958μm,1.1s						
PP3				AML	AML		
	comp=E,1029μm,0.4s						
FAGN	**Fagnano**	**0.64**	**154**	AML	AML		
	comp=E,1070μm,0.5s						
FAGN				AML	AML		
	comp=N,726μm,0.2s						
FAGN				AML	AML		
	comp=E,1235μm,0.3s						
FAGN				AML	AML		
	comp=N,976μm,1.6s						
VCEL	**Villa Celiera**	**0.64**	**133**	AML	AML		
	comp=N,504μm,0.7s						
VCEL				AML	AML		
	comp=E,512μm,0.4s						
VCEL				AML	AML		
	comp=N,504μm,1.3s						
VCEL				AML	AML		
	comp=E,512μm,1.6s						
T0110	**Collepietro**	**0.74**	**145**	AML	AML		
	comp=N,664μm,0.4s						
T0110				AML	AML		
	comp=E,758μm,0.5s						
MTCE	**Montecelio**	**0.89**	**203**	AML	AML		
	comp=N,129μm,0.6s						
MTCE				AML	AML		
	comp=E,195μm,0.5s						
MTCE				AML	AML		
	comp=N,130μm,0.6s						
MTCE				AML	AML		
	comp=E,195μm,0.5s						
CAVE	**Cavezzo**	**2.58**	**323**	⇓P	Pg	01 53 06.4	+1.4

ROM 25 02:03:25.9±0.1, 42°807N±0′004×13°195E±0′007, h10km, ML2.0/15, 7C-9D, Error ellipse: s-maj=0.6km s-min=0.3km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**294**	⇓P	Pg	02 03 28.5	+0.3
NRCA				S	Sg	02 03 29.9	+0.1
NRCA				AML	AML		
	comp=E,3145μm,0.7s						
NRCA				AML	AML		
	comp=N,3160μm,1.0s						
NRCA				AML	AML		
	comp=N,3385μm,1.0s						
NRCA				AML	AML		
	comp=E,3145μm,0.7s						
NRCA				AML	AML		
	comp=N,3435μm,0.7s						
NRCA				AML	AML		
	comp=E,3525μm,0.7s						
NRCA				AML	AML		
	comp=N,3384μm,1.0s						
LNSS	**Leonessa**	**0.23**	**209**	⇓P	Pg	02 03 31.6	+0.8
LNSS				S	Sg	02 03 35.8	+1.8
LNSS				AML	AML		
	comp=E,888μm,0.2s						
LNSS				AML	AML		
	comp=N,488μm,0.4s						
LNSS				AML	AML		
	comp=E,1775μm,0.5s						
LNSS				AML	AML		
	comp=N,1690μm,0.2s						
LNSS				AML	AML		
	comp=E,865μm,0.2s						
LNSS				AML	AML		
	comp=N,435μm,0.0s						
FDMO	**Fiordimonte**	**0.24**	**341**	⇑P	Pg	02 03 31.5	+0.5
FDMO				S	Sg	02 03 35.4	+1.1
FDMO				AML	AML		
	comp=E,169μm,1.6s						
FDMO				AML	AML		
	comp=E,177μm,0.5s						
FDMO				AML	AML		
	comp=N,216μm,1.0s						
FDMO				AML	AML		
	comp=E,169μm,1.6s						
GUMA	**Gualdo di Mace**	**0.28**	**22**	⇓P	Pb	02 03 32.4	-0.7
GUMA				S	Sb	02 03 37.4	-0.4
GUMA				AML	AML		
	comp=E,932μm,0.3s						
GUMA				AML	AML		
	comp=E,1241μm,0.5s						
GUMA				AML	AML		
	comp=N,1095μm,0.3s						
GUMA				AML	AML		
	comp=E,934μm,0.3s						
GUMA				AML	AML		
	comp=N,1125μm,0.6s						
GUMA				AML	AML		
	comp=E,279μm,2.4s						
GUMA				AML	AML		
	comp=N,216μm,4.7s						
GUMA				AML	AML		
	comp=E,252μm,0.0s						
GUMA				AML	AML		
	comp=N,296μm,0.5s						
CSP1	**Cessapalombo**	**0.28**	**1**	⇓P	Pg	02 03 32.2	+0.4
CSP1				S	Sb	02 03 36.9	-1.3
CESI	**CESI - Serrava**	**0.29**	**313**	⇑P	Pg	02 03 32.5	+0.6
CESI				S	Sb	02 03 37.3	-1.0
CESI				AML	AML		
	comp=E,312μm,1.0s						
CESI				AML	AML		
	comp=E,348μm,0.5s						
CESI				AML	AML		
	comp=E,348μm,0.5s						
CESI				AML	AML		
	comp=E,313μm,1.0s						
CESI				AML	AML		
	comp=N,525μm,0.4s						
RM33	**Pellescritta (**	**0.30**	**177**	P	Pb	02 03 32.8	-0.7
RM33				AML	AML		
	comp=E,683μm,0.1s						
RM33				AML	AML		
	comp=N,822μm,0.2s						
RM33				AML	AML		
	comp=E,666μm,0.1s						
RM33				AML	AML		
	comp=N,819μm,0.2s						
RM33				AML	AML		
	comp=N,818μm,0.2s						
RM33				AML	AML		
	comp=N,819μm,0.2s						
RM33				AML	AML		
	comp=E,666μm,0.1s						
RM33				AML	AML		
	comp=E,683μm,0.2s						
RM33				AML	AML		
	comp=N,77μm,1.5s						
RM33				AML	AML		
	comp=E,144μm,1.1s						
CAMP	**Campotosto**	**0.31**	**150**	⇓P	Pg	02 03 32.6	+0.3
CAMP				AML	AML		
	comp=E,212μm,0.6s						
CAMP				AML	AML		
	comp=N,192μm,0.6s						
CAMP				AML	AML		
	comp=N,192μm,0.6s						
CAMP				AML	AML		
	comp=E,111μm,0.0s						
CAMP				AML	AML		
	comp=N,114μm,0.2s						
TERO	**Teramo**	**0.35**	**121**	⇑P	Pg	02 03 33.2	+0.3
TERO				S	Sg	02 03 38.7	+1.0
TERO				AML	AML		
	comp=N,979μm,0.1s						
TERO				AML	AML		
	comp=E,746μm,0.1s						
TERO				AML	AML		
	comp=E,235μm,0.3s						
TERO				AML	AML		
	comp=E,263μm,0.3s						
OFFI	**Offida**	**0.38**	**70**	⇓P	Pb	02 03 34.8	0.0
OFFI				AML	AML		
	comp=E,264μm,0.4s						
OFFI				AML	AML		
	comp=N,263μm,0.2s						
ARRO	**Arrone**	**0.39**	**234**	⇓P	Pb	02 03 34.3	-0.7
ARRO				AML	AML		
	comp=E,96μm,1.1s						
ARRO				AML	AML		
	comp=N,65μm,0.5s						
ARRO				AML	AML		
	comp=E,156μm,0.7s						
ARRO				AML	AML		
	comp=N,148μm,1.4s						
ARRO				AML	AML		
	comp=N,149μm,1.4s						
ARRO				AML	AML		
	comp=E,50μm,0.6s						
ARRO				AML	AML		
	comp=N,51μm,0.3s						
GIGS	**Gran Sasso**	**0.45**	**142**	⇓P	Pg	02 03 35.0	+0.2
GIGS				AML	AML		
	comp=E,23μm,1.1s						
GIGS				AML	AML		
	comp=N,24μm,0.8s						
GIGS				AML	AML		
	comp=E,59μm,0.2s						
GIGS				AML	AML		
	comp=N,45μm,0.6s						
GIGS				AML	AML		
	comp=E,59μm,0.2s						
GIGS				AML	AML		
	comp=N,45μm,0.6s						
GIGS				AML	AML		
	comp=E,22μm,0.0s						
GIGS				AML	AML		
	comp=N,26μm,2.1s						
ASSB	**Assisi San Ben**	**0.46**	**301**	⇑P	Pg	02 03 35.3	+0.3
ASSB				S	Sb	02 03 42.4	-0.7
ASSB				AML	AML		
	comp=E,238μm,0.2s						
ASSB				AML	AML		
	comp=N,176μm,0.8s						
ASSB				AML	AML		
	comp=N,115μm,0.0s						
ASSB				AML	AML		
	comp=E,121μm,0.1s						
SNTG	**Esanatoglia**	**0.48**	**337**	P	Pg	02 03 35.8	+0.4
SNTG				AML	AML		
	comp=E,63μm,0.9s						
SNTG				AML	AML		
	comp=N,60μm,0.9s						
EL6	**Elcito**	**0.53**	**353**	P	Pg	02 03 36.5	+0.3
EL6				S	Sb	02 03 46.0	+0.9
ATCC	**AVT- Casa Cast**	**0.56**	**313**	P	Pg	02 03 37.0	+0.2
ATCC				AML	AML		
	comp=E,155μm,0.2s						
ATCC				AML	AML		
	comp=N,117μm,0.2s						
ATCC				AML	AML		
	comp=N,60μm,0.0s						
ATCC				AML	AML		
	comp=E,55μm,0.0s						
CING	**Cingoli**	**0.57**	**0**	⇑P	Pg	02 03 37.3	+0.2
CING				AML	AML		
	comp=E,53μm,1.2s						
CING				AML	AML		
	comp=N,70μm,0.7s						
CING				AML	AML		
	comp=E,46μm,2.3s						
CING				AML	AML		
	comp=N,36μm,2.1s						
FOSV	**Fossato di Vic**	**0.58**	**327**	P	Pg	02 03 37.7	+0.4
FOSV				AML	AML		
	comp=E,42μm,0.0s						
FOSV				AML	AML		
	comp=N,47μm,0.0s						
VCEL	**Villa Celiera**	**0.63**	**131**	⇑P	Pg	02 03 38.5	+0.4
ARVD	**Arcevia**	**0.71**	**345**	⇓P	Pg	02 03 40.1	+0.3
ARVD				S	Sn	02 03 52.0	-1.3
FRON	**Frontone**	**0.79**	**334**	P	Pg	02 03 41.4	+0.3
PIEI	**Pieia**	**0.87**	**327**	S	Sn	02 03 58.0	+0.8
CSNT	**Castellina Chi**	**1.54**	**296**	⇑P	Pn	02 03 53.9	+0.3

ROM 25 02:03:55.5±0.1, 42°729N±0′004×13°205E±0′007, h9km, ML2.0/14, 14C-6D, Error ellipse: s-maj=0.7km s-min=0.4km az=229.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**327**	⇓P	Pg	02 03 58.8	+0.4
NRCA				S	Sg	02 04 00.6	+0.1
NRCA				AML	AML		
	comp=N,3080μm,1.0s						
NRCA				AML	AML		
	comp=N,3435μm,0.7s						
NRCA				AML	AML		
	comp=E,3130μm,0.1s						
NRCA				AML	AML		
	comp=N,3080μm,1.0s						
NRCA				AML	AML		
	comp=N,3085μm,1.0s						
NRCA				AML	AML		
	comp=E,3445μm,0.2s						
LNSS	**Leonessa**	**0.17**	**224**	⇑P	Pg	02 04 00.0	+0.7
LNSS				S	Sg	02 04 03.2	+1.3
LNSS				AML	AML		
	comp=N,1690μm,0.2s						
LNSS				AML	AML		
	comp=E,1775μm,0.5s						
RM33	**Pellescritta (**	**0.22**	**178**	P	Pg	02 04 00.9	+0.8
RM33				S	Sg	02 04 04.7	+1.5
RM33				AML	AML		
	comp=E,683μm,0.2s						
RM33				AML	AML		
	comp=N,820μm,0.2s						
RM33				AML	AML		
	comp=E,666μm,0.1s						
RM33				AML	AML		
	comp=N,818μm,0.2s						
RM33				AML	AML		
	comp=E,666μm,0.1s						
RM33				AML	AML		
	comp=N,818μm,0.2s						
RM33				AML	AML		
	comp=N,819μm,0.2s						
RM33				AML	AML		
	comp=N,819μm,0.2s						
RM33				AML	AML		
	comp=N,822μm,0.2s						
RM33				AML	AML		
	comp=E,683μm,0.1s						
CAMP	**Campotosto**	**0.24**	**142**	P	Pg	02 04 01.3	+0.8
CAMP				S	Sg	02 04 05.4	+1.5
CAMP				AML	AML		
	comp=E,212μm,0.6s						
CAMP				AML	AML		
	comp=N,192μm,0.6s						
CAMP				AML	AML		
	comp=N,192μm,0.6s						
TERO	**Teramo**	**0.31**	**110**	P	Pg	02 04 02.3	+0.5
TERO				S	Sb	02 04 07.4	-1.1
TERO				AML	AML		
	comp=E,746μm,0.1s						
TERO				AML	AML		
	comp=N,979μm,0.1s						
FDMO	**Fiordimonte**	**0.32**	**344**	⇑P	Pg	02 04 02.5	+0.6
FDMO				S	Sb	02 04 07.5	-1.2
FDMO				AML	AML		
	comp=N,172μm,0.3s						
FDMO				AML	AML		
	comp=E,177μm,0.5s						
GUMA	**Gualdo di Mace**	**0.35**	**16**	⇑P	Pb	02 04 03.5	-0.4
GUMA				S	Sb	02 04 09.6	+0.1
GUMA				AML	AML		
	comp=N,1095μm,0.3s						
GUMA				AML	AML		
	comp=E,1241μm,0.5s						
GUMA				AML	AML		
	comp=E,934μm,0.3s						
GUMA				AML	AML		
	comp=N,1125μm,0.6s						
GUMA				AML	AML		
	comp=E,932μm,0.3s						
CESI	**CESI - Serrava**	**0.35**	**321**	⇑P	Pg	02 04 02.9	+0.4
CESI				S	Sb	02 04 08.6	-1.2
CESI				AML	AML		
	comp=N,436μm,0.3s						
CESI				AML	AML		
	comp=N,436μm,0.3s						
CESI				AML	AML		
	comp=E,348μm,0.5s						
CESI				AML	AML		
	comp=E,348μm,0.5s						
ARRO	**Arrone**	**0.36**	**245**	⇑P	Pg	02 04 03.2	+0.6
ARRO				AML	AML		
	comp=N,148μm,1.4s						
ARRO				AML	AML		
	comp=E,156μm,0.7s						
ARRO				AML	AML		
	comp=N,149μm,1.4s						
ARRO				AML	AML		
	comp=N,148μm,1.4s						
CSP1	**Cessapalombo**	**0.36**	**360**	⇓P	Pg	02 04 03.4	+0.7
CSP1				S	Sb	02 04 09.5	-0.6
GIGS	**Gran Sasso**	**0.39**	**136**	⇑P	Pg	02 04 03.7	+0.6
GIGS				S	Sb	02 04 09.6	-1.1
GIGS				AML	AML		
	comp=E,59μm,0.2s						
GIGS				AML	AML		
	comp=E,59μm,0.2s						
GIGS				AML	AML		
	comp=N,45μm,0.6s						
GIGS				AML	AML		
	comp=N,45μm,0.6s						
OFFI	**Offida**	**0.41**	**60**	⇑P	Pb	02 04 05.1	+0.1
FIAM	**Fiamignano**	**0.47**	**188**	S	Sb	02 04 13.0	0.0
ASSB	**Assisi San Ben**	**0.51**	**308**	⇓P	Pg	02 04 05.6	+0.2
ASSB				S	Sb	02 04 13.7	-0.6
ASSB				AML	AML		
	comp=E,238μm,0.2s						

ASSB					AML	AML		
	comp=N,176μm,0.8s							
FAGN	**Fagnano**	**0.54 149**		S		Sn	02 04 17.0	-1.7
SNTG	**Esanatoglia**	**0.56 340**		S		Sb	02 04 16.0	+0.3
VCEL	**Villa Celiera**	**0.58 125**	⇓	P		Pb	02 04 07.6	-0.2
VCEL				S		Sn	02 04 18.0	-1.6
EL6	**Elcito**	**0.60 353**	⇑	P		Pg	02 04 07.4	+0.1
EL6				S		Sb	02 04 18.0	+1.0
ATCC	**AVT- Casa Cast**	**0.62 318**		P		Pg	02 04 07.6	+0.2
CING	**Cingoli**	**0.65 359**	⇑	P		Pg	02 04 07.0	-1.0
FOSV	**Fossato di Vic**	**0.65 330**	⇑	P		Pg	02 04 08.3	+0.2
T0110	**Collepietro**	**0.66 140**	⇑	P		Pg	02 04 08.6	+0.3
T0110					AML	AML		
	comp=N,142μm,0.3s							
T0110					AML	AML		
	comp=N,142μm,0.3s							
T0110					AML	AML		
	comp=E,124μm,0.5s							
ARVD	**Arcevia**	**0.79 346**	⇓	P		Pg	02 04 10.9	+0.1
CERT	**Cerreto**	**0.80 192**	⇑	P		Pb	02 04 12.0	+0.4
CERT					AML	AML		
	comp=N,29μm,0.4s							
CERT					AML	AML		
	comp=E,37μm,0.5s							
MGAB	**Montegabbione**	**0.82 283**	⇑	P		Pb	02 04 12.0	0.0
MGAB					AML	AML		
	comp=E,95μm,0.4s							
MGAB					AML	AML		
	comp=N,56μm,0.5s							
MGAB					AML	AML		
	comp=E,95μm,0.4s							
FRON	**Frontone**	**0.86 336**	⇑	P		Pb	02 04 12.5	-0.2
PIEI	**Pieia**	**0.94 329**	⇓	P		Pb	02 04 14.0	-0.1

*IPEC **25** 02:11:57.8±0.3,50°.29N×18°.83E, h1km, ML2.3/4, Error ellipse: s-maj=2.3km s-min=1.9km az=165.0*
*PRU **25** 02:11:58.6±0.0,50°.24N×18°.79E, h0km*
*IDC **25** 02:11:59.2±1.8,50°.16N×18°.84E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=34.2km s-min=10.3km az=135.0*
*VIE **25** 02:11:59.0,50°.40N×17°.75E, h0km, ML3.0/2 73 km NNW of Ostrava Suspected Mining induced.*

ISC 25 02:11:57.4±0.8, 50°.27N±0°.04×18°.82E±0°.03, h0km, n34, σ0§86/62, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAC	**Raciborz**	**0.44**	**246**	*e*PG		**Pb**	**02 12 08.0**	**-0.1**
RAC				*e*SG		**Sb**	**02 12 15.0**	**-0.2**
OKC	**Ostrava-Krasne**	**0.61**	**225**	*e*PG		**Pg**	**02 12 10.1**	**+1.0**
OKC				*e*SG		**Sg**	**02 12 17.4**	**+0.5**
	comp=Z,175nm,1.2s							
OJC	**Ojcow**	**0.63**	**94**	*e*Pg		**Pg**	**02 12 09.8**	**+0.2**
OJC				*e*Sg		**Sg**	**02 12 18.9**	**+1.2**
MORC	**Moravsky Berou**	**0.96**	**240**	*e*Pg		**Pb**	**02 12 16.5**	**-0.4**
	baz=58							
MORC				*e*Sg		**Sg**	**02 12 28.5**	**+0.4**
	56nm,0.5s,baz=58							
MORC	**Moravsky Berou**	**0.96**	**240**	*e*PG		**Pb**	**02 12 16.6**	**-0.4**
MORC				*e*SG		**Sg**	**02 12 28.6**	**+0.4**
NIE	**Niedzica**	**1.28**	**131**	*e*Pg		**Pn**	**02 12 23.1**	**+0.4**
NIE				*e*Sg		**Sn**	**02 12 41.6**	**+1.1**
KRLC	**Kraliky**	**1.32**	**262**	*e*PG		**Pg**	**02 12 22.3**	**-0.4**
KRLC				*e*SG		**Sb**	**02 12 40.4**	**-0.2**
	comp=Z,106nm,1.3s							
JAVC	**Velka Javorina**	**1.59**	**208**	*e*Pn		**Pn**	**02 12 27.4**	**+0.5**
	baz=27							
JAVC	**Velka Javorina**	**1.59**	**208**	*e*PN		**Pn**	**02 12 27.5**	**+0.5**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG		**Pn**	**02 12 27.2**	**+0.2**
DPC				*e*SG		**Sg**	**02 12 48.9**	**+0.1**
	comp=Z,22nm,0.8s							
OSTC	**Ostas**	**1.69**	**281**	*e*PG		**Pn**	**02 12 28.6**	**+0.4**
OSTC				*e*SG		**Sg**	**02 12 52.1**	**+0.4**
	comp=Z,9.8nm,0.5s							
KSP	**Ksiaz**	**1.71**	**291**	*e*Pb		**Pn**	**02 12 28.6**	**+0.2**
KSP				*e*Pg		**Pg**	**02 12 30.7**	**+0.5**
KSP				*e*Sg		**Sg**	**02 12 53.1**	**+0.8**
VRAC	**Vranov**	**1.73**	**237**	*e*Pn		**Pn**	**02 12 29.2**	**+0.4**
	3.7nm,0.3s,baz=59,slow=17,SNR=23							
VRAC				Lg		Lg	02 12 53.3	
	9.7nm,0.3s,baz=354,slow=22,SNR=17							
VRAC	**Vranov**	**1.73**	**237**	*e*Pn		**Pn**	**02 12 29.3**	**+0.5**
	baz=55							
VRAC				*e*Sg		**Sb**	**02 12 52.7**	**+0.4**
	20nm,0.4s,baz=55							
VRAC	**Vranov**	**1.73**	**237**	*e*PN		**Pn**	**02 12 29.3**	**+0.5**
VRAC				*e*SG		**Sb**	**02 12 52.8**	**+0.4**
VYHS	**Vyhne**	**1.77**	**180**	*e*PN		**Pn**	**02 12 29.7**	**+0.3**
VYHS				*e*SN		**Sn**	**02 12 52.8**	**+0.2**
VYHS				*e*LG		Lg	02 13 09.6	
CHVC	**Chvalec**	**1.79**	**281**	*e*SG		**Sg**	**02 12 56.2**	**+1.1**
UPC	**Upice**	**1.81**	**279**	*e*PG		**Pb**	**02 12 31.6**	**+0.2**
UPC				*e*SG		**Sg**	**02 12 56.6**	**+1.0**
	comp=Z,16nm,0.4s							
KRUC	**Moravsky**	**1.98**	**233**	*e*Pn		**Pn**	**02 12 32.6**	**+0.4**
	baz=51							
KRUC				*e*Sg		**Sb**	**02 13 00.4**	**+0.9**
	23nm,0.8s,baz=51							
KRUC	**Moravsky**	**1.98**	**233**	*e*PN		**Pn**	**02 12 32.7**	**+0.5**
KRUC				*e*SG		**Sb**	**02 13 00.5**	**+0.9**
KECS	**Kecovo**	**2.09**	**148**	*e*PN		**Pn**	**02 12 34.5**	**+0.8**
MODS	**Modra-Piesok**	**2.15**	**209**	*e*PN		**Pn**	**02 12 34.5**	**0.0**
MODS				*e*SN		**Sn**	**02 13 01.7**	**-0.1**
MODS				*e*LG		Lg	02 13 17.8	
TREC	**Trest**	**2.37**	**247**	*e*PG		**Pb**	**02 12 41.5**	**+0.6**
TREC				*e*SG		**Sg**	**02 13 12.7**	**-0.7**
	comp=Z,17nm,0.7s							
PVCC	**Panska Ves**	**2.73**	**277**	*e*SG		**Sg**	**02 13 26.2**	**+1.1**
	comp=Z,28nm,1.2s							
PRU	**Pruhonice**	**2.77**	**266**	*e*PG		**Pb**	**02 12 48.5**	**+0.8**
PRU				*e*SG		**Sg**	**02 13 26.2**	**0.0**
	comp=Z,14nm,0.9s							
CONA	**Conrad Observa**	**3.04**	**221**	*e*Pn		**Pn**	**02 12 45.9**	**-0.9**
	0.8nm,0.4s							
CONA				*e*Sn		**Sn**	**02 13 24.0**	**0.0**
	2.7nm,0.4s							
BRG	**Berggiesshubel**	**3.17**	**283**	Pg		**Pg**	**02 12 58.0**	**-0.1**
BRG				Sg		**Sg**	**02 13 39.5**	**+0.4**
BRG				Amp			02 13 45.1	
	comp=Z,5.0nm,0.6s							
CKRC	**Cesky Krumlov**	**3.27**	**245**	*e*PG		**Pb**	**02 12 57.0**	**+0.6**
CKRC				*e*SG		**Sg**	**02 13 40.9**	**-1.6**
KHC	**Kasperske Hory**	**3.59**	**254**	*e*PN		**Pn**	**02 12 55.0**	**+0.7**
KHC				*e*PG		**Pb**	**02 13 03.8**	**+2.1**
KHC				*e*SG		**Sg**	**02 13 51.2**	**-1.4**
	comp=Z,9.3nm,0.8s							
GERES	**GERESS Array B**	**3.62**	**249**	Pn		**Pn**	**02 12 56.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=66,slow=15,SNR=5.1							
GERES				Pg		**Pb**	**02 13 04.6**	**+2.2**
	comp=Z,0.7nm,0.3s,baz=66,slow=22,SNR=13							
GERES				Lg		Lg	02 13 52.1	
	comp=Z,1.3nm,0.3s,baz=64,slow=30,SNR=4.5							
	comp=Z,0.2nm,0.3s							
CLL	**Collm**	**3.83**	**288**	*e*Pg		**Pg**	**02 13 11.0**	**+0.1**
CLL				*e*Sg		**Sg**	**02 14 02.0**	**+1.5**
	comp=Z,8.0nm,1.1s							
MOA	**Molln**	**3.85**	**233**	Pn		**Pb**	**02 13 04.6**	**-1.6**
	comp=Z,0.5nm,0.2s							
MOA				*e*Sg		**Sb**	**02 13 53.7**	**+0.5**
	comp=Z,3.0nm,0.3s							
FINES	**FINESS Array B**	**11.91**	**17**	Pn		**Pn**	**02 14 45.9**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=10							
	comp=Z,1.5nm,0.7s							
ARCES	**ARCESS Array B**	**19.59**	**7**	Pn		**P**	**02 16 26.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=4.6							
	comp=Z,0.5nm,0.6s							

ROM 25 02:15:13.5±0.1, 42°.759N±0°.003×13°.241E±0°.006, h11km, ML1.9/5, 3C-5D, Error ellipse: s-maj=0.4km s-min=0.3km az=270.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NRCA	**Norcia**	**0.12**	**309**	⇓	P	Pg	02 15 17.0	+0.5
NRCA					S	Sg	02 15 19.2	+0.5
NRCA					AML	AML		
	comp=N,1385μm,1.0s							
NRCA					AML	AML		
	comp=E,1640μm,0.1s							
NRCA					AML	AML		
	comp=N,1380μm,1.0s							
LNSS	**Leonessa**	**0.21**	**224**	⇑	P	Pg	02 15 18.7	+0.6
LNSS					S	Sg	02 15 22.6	+1.4
RM33	**Pellescritta (**	**0.25**	**184**	⇓	P	Pg	02 15 19.4	+0.7
RM33					S	Sb	02 15 23.5	-1.1
RM33					AML	AML		
	comp=E,264μm,1.5s							
RM33					AML	AML		
	comp=N,274μm,0.2s							
RM33					AML	AML		
	comp=E,264μm,1.5s							
RM33					AML	AML		
	comp=N,274μm,0.2s							
CAMP	**Campotosto**	**0.26**	**151**	P		Pg	02 15 19.4	+0.5
CAMP				S		Sg	02 15 23.5	+1.1
CAMP				AML		AML		
	comp=N,91μm,0.2s							
CAMP				AML		AML		
	comp=E,87μm,0.3s							
FDMO	**Fiordimonte**	**0.30**	**338**	⇑	P	Pg	02 15 20.0	+0.3
FDMO				S		Sg	02 15 24.5	+0.8
TERO	**Teramo**	**0.30**	**117**	P		Pg	02 15 20.0	+0.4
TERO				S		Sg	02 15 24.8	+1.1
CSP1	**Cessapalombo**	**0.33**	**355**	⇓	P	Pg	02 15 20.6	+0.4
CSP1				S		Sg	02 15 25.8	+1.1
CESI	**CESI - Serrava**	**0.35**	**315**	⇑	P	Pg	02 15 20.9	+0.4
CESI				S		Sg	02 15 26.2	+1.0
CESI				AML		AML		
	comp=E,69μm,0.8s							
CESI				AML		AML		
	comp=N,122μm,0.2s							
CESI				AML		AML		
	comp=E,69μm,0.8s							
GIGS	**Gran Sasso**	**0.39**	**142**	P		Pg	02 15 21.7	+0.3
ARRO	**Arrone**	**0.39**	**243**	⇓	P	Pg	02 15 21.8	+0.5
ARRO				S		Sb	02 15 28.0	-0.6
ARRO				AML		AML		
	comp=N,42μm,2.0s							
ARRO				AML		AML		
	comp=E,47μm,0.9s							
FIAM	**Fiamignano**	**0.50**	**191**	⇓	P	Pg	02 15 23.4	+0.1
FIAM				AML		AML		
	comp=N,40μm,0.7s							
FIAM				AML		AML		
	comp=E,40μm,0.1s							

*HLW **25** 03:02:59.2, 34°.73N×27°.56E, h11km±18km, Md3.8*
*NIC **25** 03:03:03.4±0.0, 34°.32N×27°.36E, h36km±46km, Ml3.6/4*
*ISK **25** 03:03:03.4, 34°.69N×27°.38E, h16km, ML2.8/10*
*DDA **25** 03:03:04.0±0.0, 34°.85N×27°.41E, h6km±3km, ML2.4*
*THE **25** 03:03:07.1, 34°.65N×27°.23E, h12km±10km, ML2.1/1, Error ellipse: s-maj=13.4km s-min=1.2km az=132.0*
*GII **25** 03:03:08.0±0.0, 33°.76N×27°.63E, h10km, Mm3.0/3*

ISC 25 03:03:01.4±1.4, 34°.45N±0°.03×27°.41E±0°.04, h14km±11km, n59, σ1§61/74, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KARP	**Karpathos**	**1.12**	**349**	P		**Pg**	**03 03 23.9**	**+0.9**
KARP				S		**Sg**	**03 03 36.5**	**-1.1**
KARP	**Karpathos**	**1.12**	**349**	P		**Pg**	**03 03 23.6**	**+0.6**
ZKR	**Zakros**	**1.19**	**304**	P		**Pg**	**03 03 24.3**	**0.0**
ZKR				S		**Sg**	**03 03 38.1**	**-1.8**
	128nm,0.3s							
ZKR	**Zakros**	**1.19**	**304**	PG		**Pg**	**03 03 23.9**	**-0.4**
ZKR				SG		**Sg**	**03 03 39.0**	**-0.9**
ZKR	**Zakros**	**1.19**	**304**	P		**Pg**	**03 03 24.3**	**0.0**
STIA	**Sitia Lasithi**	**1.32**	**305**	P		**Pg**	**03 03 26.8**	**-0.1**
ARG	**Arkhangelos**	**1.86**	**18**	PN		Pn	03 03 32.4	-0.4
ARG				SN		**Sn**	**03 03 53.7**	**-2.4**
ARG	**Arkhangelos**	**1.86**	**18**	P		**Pn**	**03 03 34.6**	**+1.8**
SIVA	**Sivas**	**2.22**	**286**	P		**Pn**	**03 03 39.8**	**+2.1**
IDI	**Anoyia**	**2.24**	**293**	P		**Pn**	**03 03 39.3**	**+1.2**
IDI	**Anoyia**	**2.24**	**293**	PN		**Pn**	**03 03 39.4**	**+1.3**
IDI				SN		**Sn**	**03 04 05.7**	**+0.1**
TURN	**Turunc**	**2.42**	**16**	PN		**Pn**	**03 03 40.4**	**-0.1**
TURN				SN		**Sn**	**03 04 07.0**	**-2.9**
TURN	**Turunc**	**2.42**	**16**	P		**Pn**	**03 03 42.1**	**+1.6**
TURN				S		**Sn**	**03 04 10.3**	**+0.4**
TURN				*i* AML		AML	03 04 11.0	
	comp=E,15nm,0.2s							
TURN				*i* AML		AML	03 04 13.0	
	comp=N,28nm,0.5s							
AKAS	**Kas**	**2.53**	**44**	PN		**Pn**	**03 03 42.9**	**+0.8**
AKAS	**Kas**	**2.53**	**44**	P		**Pn**	**03 03 42.7**	**+0.6**
AKAS				S		**Sn**	**03 04 11.3**	**-1.5**
AKAS				*i* AML		AML	03 04 14.0	
	comp=E,32nm,0.3s							
AKAS				*i* AML		AML	03 04 15.0	
	comp=N,62nm,0.4s							
THR3	**Thira Island,**	**2.56**	**321**	P		Pn	03 03 42.2	-0.2
DALY	**Dalyan (Mula)**	**2.57**	**23**	PN		**Pn**	**03 03 42.6**	**0.0**
FETY	**Fethiye**	**2.57**	**31**	PN		**Pn**	**03 03 42.9**	**+0.2**
THR5	**Thira Island,**	**2.59**	**320**	P		Pn	03 03 43.1	+0.2
BODT	**Bodrum**	**2.61**	**358**	PN		Pn	03 03 42.8	-0.4
AMGA	**Amorgos Island**	**2.68**	**333**	P		**Pn**	**03 03 45.3**	**+1.1**
GVDS	**Gavdos**	**2.77**	**279**	P		**Pn**	**03 03 47.0**	**+1.7**
GVD	**Gavdhos**	**2.77**	**279**	P		**Pn**	**03 03 46.6**	**+1.3**
YER	**Yerkesik**	**2.77**	**14**	PN		**Pn**	**03 03 45.4**	**-0.1**
MULA	**Mugla, Merkez-**	**2.90**	**14**	P		**Pn**	**03 03 49.8**	**+2.6**
CAME	**Cameli-Denizli**	**2.93**	**31**	PN		**Pn**	**03 03 48.1**	**+0.5**
IMMV	**Iera Moni Meta**	**3.00**	**291**	P		**Pn**	**03 03 50.1**	**+1.7**
APE	**Apeiranthos**	**3.03**	**330**	PN		**Pn**	**03 03 49.0**	**0.0**
ELL	**Elmali**	**3.07**	**41**	P		**Pn**	**03 03 51.8**	**+2.3**
MATC	**Matruh**	**3.10**	**183**	P		**Pn**	**03 03 52.2**	**+2.5**
	baz=185							
RODP	**Rodopos**	**3.20**	**291**	P		**Pn**	**03 03 53.1**	**+1.8**
AYDN	**Tasoluk**	**3.23**	**7**	P		**Pn**	**03 03 51.8**	**+0.1**
TAVA	**DENIZLI_Tavas**	**3.25**	**22**	P		**Pn**	**03 03 53.1**	**+1.1**
TAVA				S		**Sn**	**03 04 29.7**	**-0.9**
TAVA				*i* AML		AML	03 04 34.0	
	comp=E,9.7nm,0.2s							
TAVA				*i* AML		AML	03 04 34.0	
	comp=N,14nm,0.4s							
GOLH	**Golhisar**	**3.29**	**31**	P		**Pn**	**03 03 55.1**	**+2.5**
GOLH				S		**Sn**	**03 04 32.1**	**+0.7**
GOLH				*i* AML		AML	03 04 34.0	
	comp=E,20nm,0.5s							
GOLH				*i* AML		AML	03 04 37.0	
	comp=N,13nm,0.4s							
OSC1	**CSNet OBS 1**	**3.34**	**105**	P		**Pn**	**03 03 54.2**	**+1.0**
OSC1				S		**Sn**	**03 04 33.6**	**+0.9**
SLUM	**Salum**	**3.48**	**213**	P		**Pn**	**03 03 56.6**	**+1.5**
	baz=212							
KORT	**Korkueli**	**3.49**	**42**	P		**Pn**	**03 03 58.1**	**+2.7**
KORT				S		**Sn**	**03 04 38.0**	**+1.4**
KORT				*i* AML		AML	03 04 42.0	
	comp=N,13nm,0.4s							
KORT				*i* AML		AML	03 04 42.0	
	comp=E,17nm,0.7s							
AKMS	**Akamas**	**4.09**	**81**	P		**Pn**	**03 04 04.5**	**+1.0**
AKMS					AML	AML	03 04 50.0	
	0.2nm,0.2s							
AKMS					AML	AML	03 04 51.1	
	0.2nm,0.5s							
NATA	**Nata**	**4.26**	**84**	P		**Pn**	**03 04 07.5**	**+1.6**
OSC2	**CSNet OBS 4**	**4.27**	**107**	P		**Pn**	**03 04 06.2**	**+0.3**
OSC2				S		**Sn**	**03 04 55.5**	**0.0**
ALFC	**Alefka**	**4.33**	**79**	P		**Pn**	**03 04 08.0**	**+1.3**
ALFC					AML	AML	03 04 56.4	
	0.2nm,0.3s							
ALFC					AML	AML	03 04 59.7	
	0.2nm,0.1s							
USAK	**Uak-Merkez**	**4.45**	**16**	P		**Pn**	**03 04 08.6**	**+0.1**
SZAC	**Souni**	**4.52**	**85**	P		**Pn**	**03 04 11.9**	**+2.4**
SZAC					AML	AML	03 05 05.2	
	0.1nm,0.5s							
SZAC					AML	AML	03 05 07.4	
	0.2nm,0.4s							
ASGA	**Asgata**	**4.82**	**84**	P		**Pn**	**03 04 15.8**	**+2.3**
ASGA					AML	AML	03 05 12.0	
	0.2nm,0.6s							
ASGA					AML	AML	03 05 16.0	
	0.2nm,0.7s							
CSS	**Mathiatis**	**4.90**	**82**	P		**Pn**	**03 04 17.4**	**+2.8**
MVOU	**Mavrovouni**	**5.15**	**82**	P		**Pn**	**03 04 20.9**	**+2.9**
SWA2		**5.45**	**198**	P		**Pn**	**03 04 24.0**	**+1.8**
	baz=199							
RYAN	**Fayoum**	**5.88**	**155**	P		**Pn**	**03 04 29.8**	**+1.8**
	baz=157							
RYAN				S		**Sn**	**03 05 34.6**	**-0.6**
	baz=157							
GLL	**Jalalah**	**6.07**	**142**	P		**Pn**	**03 04 31.6**	**+0.9**
	baz=144							
NBNS	**Bani Suef**	**6.68**	**149**	P		**Pn**	**03 04 39.5**	**+0.4**
	baz=151							
NBNS				S		**Sn**	**03 05 53.1**	**-2.0**
	baz=151							
KZIT	**Kziot**	**6.86**	**119**	Pn		**Pn**	**03 04 42.5**	**+0.9**
KZIT				Sn		**Sn**	**03 05 56.1**	**-3.4**
YTIR	**Yattir**	**7.17**	**113**	Pn		**Pn**	**03 04 47.2**	**+1.3**
YTIR				Sn		**Sn**	**03 06 04.8**	**-2.3**
DSI	**Dead Sea**	**7.28**	**111**	Pn		**Pn**	**03 04 49.7**	**+2.4**
HFRF	**Wahat Farafira**	**7.31**	**174**	P		**Pn**	**03 04 49.9**	**+2.1**
	baz=174							
MSBI	**Mazada**	**7.38**	**113**	Pn		**Pn**	**03 04 49.9**	**+1.3**
KRMI	**Paran Flat**	**7.54**	**123**	Pn		**Pn**	**03 04 51.8**	**+0.8**
KRMI				Sn		Sn	03 06 11.1	-5.2
PRNI	**Paran**	**7.61**	**120**	Pn		**Pn**	**03 04 52.7**	**+0.9**
PRNI				Sn		**Sn**	**03 06 13.9**	**-3.9**
TR2	**Tor 2**	**8.10**	**137**	P		**Pn**	**03 04 58.5**	**0.0**
	baz=138							
HKAT	**Jabal Katrina**	**8.15**	**135**	P		**Pn**	**03 04 59.0**	**-0.4**
	baz=136							

*IDC **25** 03:06:31.6±0.8, 6°.50S×106°.96E, h174km±5km, mb3.7/8, mbtmp4.3/9, MS3.4/1, Error ellipse: s-maj=26.0km s-min=13.9km az=49.0*
*DJA **25** 03:06:31.9±0.4, 7°.5±.5×10°.7E±°, h161km±5km, M4.1/14, MLv4.1/14*
*NEIC **25** 03:06:31.6±1.8, 6°.94S±0°.08×106°.86E±0°.08, h178km±5km, mb4.3/9, Error ellipse: s-maj=12.7km s-min=11.4km az=139.0*

ISC 25 03:06:30.9±0.6, 6°.85S±0°.06×106°.85E±0°.05, h178km, n52, σ1§36/51, mb4.0/12, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DBJI	**Dramaga**	**0.31**	**341**	P		**Pn**	**03 06 54.7**	**-0.2**
SKJI	**Sukabumi**	**0.33**	**242**	P		**Pn**	**03 06 55.0**	**+0.1**
CNJI	**Cibinong**	**0.54**	**149**	P		**Pn**	**03 06 55.4**	**-0.2**
CNJI				S		**Sn**	**03 07 12.4**	**-2.3**
LEM	**Lembang**	**0.76**	**88**	P		**Pn**	**03 06 57.4**	**+0.4**
	1μm,0.6s,baz=296,slow=3.5,SNR=124							
LEM				LR		LR	03 06 59.5	
	comp=Z,91nm,19.7s,baz=342,slow=38							
LEM				S		**Sn**	**03 07 17.4**	**+0.3**
	494nm,0.6s,baz=351,slow=23,SNR=3.6							
LEM	**Lembang**	**0.76**	**88**	P		**Pn**	**03 06 57.4**	**+0.4**
SBJI	**Serang**	**1.02**	**315**	P		**Pn**	**03 06 58.9**	**+0.3**
JCJI	**Jatiwangi**	**1.45**	**76**	P		**Pn**	**03 07 01.5**	**-0.8**
BLSI	**Bandar Lampung**	**2.17**	**313**	P		**Pn**	**03 07 10.9**	**+1.1**
KASI	**Kota Agung**	**2.68**	**299**	P		**Pn**	**03 07 16.6**	**+0.9**
KLI	**Kotabumi**	**2.80**	**315**	P		**Pn**	**03 07 17.7**	**+0.7**
LWLI	**Liwa**	**3.32**	**303**	P		**Pn**	**03 07 25.1**	**+1.6**
YOGI	**Yogyakarta**	**3.55**	**106**	P		**Pn**	**03 07 25.8**	**-0.5**
SMRI	**Semarang**	**3.57**	**93**				**03 07 26.4**	**-0.2**
SMRI	**Semarang**	**3.57**	**93**	P		**Pn**	**03 07 27.5**	**+0.9**
UGM	**Wanagama**	**3.79**	**106**	Pn		**Pn**	**03 07 29.4**	**0.0**
UGM	**Wanagama**	**3.79**	**106**	P		**Pn**	**03 07 29.4**	**0.0**
XMIS	**Christmas Isla**	**3.80**	**198**	Pn		**Pn**	**03 07 28.7**	**-0.8**
XMIS				Sn		**Sn**	**03 08 11.4**	**-3.9**
TPI	**Tanjungpandan**	**4.14**	**11**	P		**Pn**	**03 07 32.9**	**-0.9**
PCJI	**Pacitan**	**4.49**	**108**	P		**Pn**	**03 07 37.9**	**-0.4**
MNAI	**Manna**	**4.60**	**302**	Pn		**Pn**	**03 07 40.7**	**+1.0**
MNAI	**Manna**	**4.60**	**302**	P		**Pn**	**03 07 40.7**	**+1.0**
JAGI	**Jajag, Banyuwa**	**7.42**	**103**	Pn		**Pn**	**03 08 16.3**	**-0.3**
KAPI	**Kappang**	**12.96**	**83**	Pn		**Pn**	**03 09 25.9**	**-2.9**
BATI	**Baumata**	**16.96**	**103**	P		**Pn**	**03 10 18.5**	**+0.5**
	36nm,0.3s,baz=274,slow=3.7,SNR=4.5							
FITZ	**Fitzroy Crossi**	**21.46**	**123**	P		**P**	**03 11 07.1**	**+1.6**
	2.5nm,0.6s,baz=301,slow=8.0,SNR=8.9							
	2.5nm,0.6s							
FITZ	**Fitzroy Crossi**	**21.46**	**123**	P		**P**	**03 11 06.9**	**+1.4**
FITZ				IAmb		IAmb	03 11 09.0	
	comp=Z,5.3nm,0.9s							
KNRA	**Kununurra**	**23.19**	**114**	P		**P**	**03 11 22.7**	**+0.6**
MTN	**Manton Dam**	**24.64**	**106**	P		**P**	**03 11 35.5**	**+0.1**
H01W3	**Cape Leeuwin H**	**28.70**	**167**	T		T	03 42 24.5	
	baz=353,slow=74,SNR=7.9							
H01W1	**Cape Leeuwin H**	**28.71**	**167**	T		T	03 42 28.1	
H01W2	**Cape Leeuwin H**	**28.71**	**167**	T		T	03 42 28.9	
	baz=21,slow=74,SNR=8.2							
WRA	**Warramunga Arr**	**29.68**	**119**	P		**P**	**03 12 21.4**	**+1.1**
	comp=Z,1.7nm,0.4s,baz=305,slow=9.5,SNR=61							
WRA				PcP		**PcP**	**03 15 21.6**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=328,slow=1.8,SNR=1.8							
WRA				ScP		**ScP**	**03 18 47.4**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=329,slow=2.2,SNR=7.2							
	comp=Z,1.7nm,0.4s							
WRA	**Warramunga Arr**	**29.68**	**119**	P		**P**	**03 12 20.1**	**-0.2**
WB2	**Warramunga Arr**	**29.69**	**119**	P		**P**	**03 12 21.3**	**+1.0**
WB2				IAmb		IAmb	03 12 23.2	
	comp=Z,4.2nm,0.5s							
AS31	**Alice Springs**	**30.90**	**126**	P		**P**	**03 12 29.1**	**-1.9**
ASAR	**Alice Springs**	**30.90**	**126**	P		**P**	**03 12 32.6**	**+1.6**
	comp=Z,3.6nm,0.8s,baz=307,slow=8.7,

$M_{\theta\theta}$-0.13±.02; $M_{\theta r}$-0.49±.05; Best double couple: M_o0.92000×10^16 NP1:ϕ360.00000°,δ62.00000°, λ-81.00000°. NP2:ϕ162.00000°,δ30.00000°, λ-106.00000°. Principal axes: T 0.9300, Plg16.0000°, Azm83.0000°; N -0.0300, Plg8.0000°, Azm176.0000°; P -0.9000, Plg72.0000°, Azm291.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

*PDG **25** 03:17:17.1±0.6,42.78N×13.23E,h12km,MD4.6/1, ML4.5/13 Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*

*MOS **25** 03:17:17.2±1.4,42.82N×13.29E,h18km,mb4.8/26,Error ellipse: s-maj=5.3km s-min=3.1km az=73.1*

*LDG **25** 03:17:17.2±0.1,42.72N×13.17E,h2km,Ml4.5/27,Error ellipse: s-maj=4.6km s-min=2.7km az=41.0*

*NEIC **25** 03:17:18.7,42.80N×13.20E,h5km,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; M_{rr}-3.82; $M_{\theta\theta}$-0.01; $M_{r\theta}$3.84; $M_{r\theta}$1.28; $M_{\theta\theta}$-0.19; $M_{\theta r}$-2.08; Fault plane solution: M_o4.55000×10^15 NP1:ϕ190.49000°, δ31.85000°,λ-65.97000°. NP2:ϕ342.80000°,δ61.18000°, λ-104.20000°. Principal axes: T 4.4229, Plg15.0000°, Azm83.0000°; N 0.2386, Plg12.0000°, Azm350.0000°; P -4.6615, Plg70.0000°, Azm222.0000°;*

*BEO **25** 03:17:18.2±0.5,42.80N×13.22E,h0km,ML4.5/12*

*STR **25** 03:17:18.2±1.9,43˚N±9˚×1˚3E±1˚4,h5km,MLv4.7/27, Error ellipse: s-maj=0.0km s-min=0.0km az=119.7, preliminary*

ISC 25 03:17:17.5±0.5, 42.74N±0.01×13.18E±0.01, h10km±3km, n959, σ1ϕ66/1080, mb4.6/56, MS3.6/59, 171C-35D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op	ISC		h	m	s	ISC
T1214	**Arquata del Tr**	**0.02**	**52**	P	**Pg**		**03**	**17**	**18.7**	**-0.8**
T1214				S	**Sg**		**03**	**17**	**19.8**	**-1.0**
T1213	**Norcia, Frazio**	**0.05**	**245**	P	**Pg**		**03**	**17**	**19.2**	**-0.3**
T1213				S	**Sg**		**03**	**17**	**20.8**	**-0.2**
T1202	**Accumoli, Fraz**	**0.05**	**143**	P	**Pg**		**03**	**17**	**19.3**	**-0.3**
T1202				S	**Sg**		**03**	**17**	**20.9**	**-0.2**
T1242	**Castelluccio d**	**0.09**	**11**	⇓P	**Pg**		**03**	**17**	**19.4**	**-0.6**
T1242				S	**Sg**		**03**	**17**	**21.2**	**-0.7**
AQT1	**Arquata del Tr**	**0.09**	**70**	⇓P	**Pg**		**03**	**17**	**19.4**	**-0.5**
AQT1				S	**Sg**		**03**	**17**	**21.1**	**-0.6**
T1201	**Domo (RI)**	**0.10**	**150**	⇑P	**Pg**		**03**	**17**	**20.2**	**+0.1**
NRCA	**Norcia**	**0.10**	**331**	Pg	**Pg**		**03**	**17**	**19.1**	**-1.1**
NRCA				Sg	**Sg**		**03**	**17**	**20.5**	**-1.5**
NRCA	**Norcia**	**0.10**	**331**	⇑P	**Pg**		**03**	**17**	**19.8**	**-0.4**
NRCA				AML	AML					
NRCA				AML	AML					
NRCA				AML	AML					
NRCA				AML	AML					
NRCA				AML	AML					
NRCA				AML	AML					
T1212	**Cascia, Frazio**	**0.10**	**274**	⇑P	**Pg**		**03**	**17**	**20.1**	**-0.1**
T1212				S	**Sg**		**03**	**17**	**22.1**	**+0.1**
MC2	**Monte Cornacci**	**0.17**	**2**	P	**Pg**		**03**	**17**	**20.9**	**-0.4**
MC2				S	**Sg**		**03**	**17**	**23.8**	**-0.1**
LNSS	**Leonessa**	**0.18**	**217**	⇑P	**Pg**		**03**	**17**	**21.4**	**+0.1**
LNSS				S	**Sg**		**03**	**17**	**24.6**	**+0.7**
MMO1	**Montemonaco**	**0.19**	**34**	P	**Pg**		**03**	**17**	**21.0**	**-0.5**
MMO1				S	**Sg**		**03**	**17**	**24.1**	**-0.2**
T1243	**Rocca Santa Ma**	**0.20**	**104**	⇑P	**Pg**		**03**	**17**	**21.2**	**-0.5**
T1243				S	**Sg**		**03**	**17**	**24.7**	**0.0**
T1241	**Roccafluvione,**	**0.21**	**58**	⇑P	**Pg**		**03**	**17**	**21.4**	**-0.5**
T1241				S	**Sg**		**03**	**17**	**24.9**	**-0.1**
RM33	**Pellescritta (**	**0.24**	**174**	⇑P	**Pg**		**03**	**17**	**22.3**	**-0.1**
RM33				S	**Sg**		**03**	**17**	**26.6**	**+0.9**
RM33				AML	AML					
RM33				AML	AML					
RM33				AML	AML					
RM33				AML	AML					
FEMA	**Monte Fema**	**0.24**	**336**	⇑P	**Pg**		**03**	**17**	**22.1**	**-0.3**
FEMA				S	**Sg**		**03**	**17**	**26.1**	**+0.3**
FEMA				AML	AML					
FEMA				AML	AML					
CAMP	**Campotosto**	**0.27**	**141**	⇑P	**Pg**		**03**	**17**	**22.6**	**-0.4**
CAMP				S	**Sg**		**03**	**17**	**26.9**	**+0.3**
CAMP				AML	AML					
	comp=N,88400μm,0.4s									
CAMP				AML	AML					
	comp=E,92350μm,0.2s									
FDMO	**Fiordimonte**	**0.30**	**347**	⇓P	**Pg**		**03**	**17**	**23.1**	**-0.4**
FDMO				S	**Sg**		**03**	**17**	**27.8**	**+0.2**
FDMO				AML	AML					
FDMO				AML	AML					
T1211	**Morro Reatino**	**0.32**	**229**	⇑P	**Pg**		**03**	**17**	**23.8**	**-0.1**
T1211				S	**Sg**		**03**	**17**	**29.5**	**+1.3**
CESI	**CESI - Serrava**	**0.33**	**322**	⇑P	**Pg**		**03**	**17**	**23.8**	**-0.3**
CESI				S	**Sg**		**03**	**17**	**29.2**	**+0.7**
CESI				AML	AML					
CESI				AML	AML					
TERO	**Teramo**	**0.33**	**111**	⇑P	**Pg**		**03**	**17**	**23.4**	**-0.7**
TERO				S	**Sg**		**03**	**17**	**28.7**	**+0.1**
TERO				AML	AML					
	comp=E,85900μm,0.5s									
TERO				AML	AML					
TERO				AML	AML					
	comp=E,85850μm,0.5s									
TERO				AML	AML					
TERO				AML	AML					
	comp=E,90150μm,0.5s									
TERO				AML	AML					
CSP1	**Cessapalombo**	**0.35**	**3**	⇓P	**Pg**		**03**	**17**	**23.9**	**-0.5**
CSP1				S	**Sg**		**03**	**17**	**29.5**	**+0.4**
CSP1				AML	AML					
CSP1				AML	AML					
CSP1				AML	AML					
ARRO	**Arrone**	**0.35**	**242**	⇑P	**Pg**		**03**	**17**	**24.4**	**0.0**
ARRO				S	**Sb**		**03**	**17**	**30.4**	**-1.0**
ARRO				AML	AML					
ARRO				AML	AML					
GIGS	**Gran Sasso**	**0.41**	**136**	⇑P	**Pg**		**03**	**17**	**24.7**	**-0.8**
GIGS				S	**Sg**		**03**	**17**	**31.0**	**+0.1**
OFFI	**Offida**	**0.42**	**63**	⇑P	**Pg**		**03**	**17**	**25.8**	**+0.2**
OFFI				S	**Sb**		**03**	**17**	**33.4**	**0.0**
OFFI				AML	AML					
OFFI				AML	AML					
AQU	**L'Aquila**	**0.42**	**157**	Pg	**Pg**		**03**	**17**	**25.4**	**-0.4**
AQU				Sg	**Sg**		**03**	**17**	**30.7**	**-0.6**
AQU	**L'Aquila**	**0.42**	**157**	P	**Pg**		**03**	**17**	**25.4**	**-0.4**
AQU	**L'Aquila**	**0.42**	**157**	⇑P	**Pg**		**03**	**17**	**25.4**	**-0.4**
AQU				AML	AML					
	comp=N,82800μm,1.0s									
AQU				AML	AML					
	comp=N,77750μm,0.9s									
AQU				AML	AML					
	comp=E,80700μm,1.1s									
AQU				AML	AML					
	comp=N,82750μm,1.0s									
AQU				AML	AML					
	comp=E,77600μm,1.1s									
SEF1	**Sefro**	**0.44**	**337**	⇑P	**Pg**		**03**	**17**	**25.6**	**-0.5**
SEF1				S	**Sg**		**03**	**17**	**32.5**	**+0.6**
SEF1				AML	AML					
SEF1				AML	AML					
MNTP	**Montappone**	**0.45**	**28**	P	**Pg**		**03**	**17**	**26.3**	**+0.1**
MNTP				S	**Sb**		**03**	**17**	**34.1**	**-0.1**
MNTP				AML	AML					
MNTP				AML	AML					
MDAR	**Monte D'Aria**	**0.45**	**356**	P	**Pg**		**03**	**17**	**25.7**	**-0.6**
MDAR				S	**Sg**		**03**	**17**	**32.7**	**+0.5**
MDAR				AML	AML					
	comp=E,78400μm,0.9s									
MDAR				AML	AML					
	comp=N,95150μm,0.3s									
MDAR				AML	AML					
	comp=E,78400μm,1.0s									
MDAR				AML	AML					
	comp=N,95200μm,0.3s									
PIO1	**Pioraco**	**0.46**	**341**	⇑P	**Pg**		**03**	**17**	**25.9**	**-0.5**
PIO1				S	**Sg**		**03**	**17**	**33.2**	**+0.7**
PIO1				AML	AML					
	comp=E,92450μm,0.5s									
PIO1				AML	AML					
	comp=E,92350μm,0.5s									
PIO1				AML	AML					
CESX	**Cesi**	**0.46**	**253**	⇑P	**Pg**		**03**	**17**	**26.2**	**-0.3**
CESX				S	**Sb**		**03**	**17**	**34.2**	**-0.5**
CESX				AML	AML					
CESX				AML	AML					
FIAM	**Fiamignano**	**0.48**	**186**	⇓P	**Pg**		**03**	**17**	**26.5**	**-0.4**
FIAM				S	**Sb**		**03**	**17**	**34.3**	**-0.9**
FIAM				AML	AML					
	comp=E,55600μm,0.6s									
FIAM				AML	AML					
	comp=N,46300μm,0.8s									
FIU1	**Fiuminata**	**0.48**	**338**	P	**Pg**		**03**	**17**	**26.3**	**-0.6**
FIU1				S	**Sg**		**03**	**17**	**33.9**	**+0.7**
FIU1				AML	AML					
FIU1				AML	AML					
FIU1				AML	AML					
SSM1	**San Severino M**	**0.48**	**360**	P	**Pg**		**03**	**17**	**26.4**	**-0.6**
SSM1				S	**Sg**		**03**	**17**	**33.8**	**+0.5**
ASSB	**Assisi San Ben**	**0.49**	**308**	⇑P	**Pg**		**03**	**17**	**26.4**	**-0.5**
ASSB				S	**Sg**		**03**	**17**	**34.3**	**+0.9**
GAG1	**Gagliole**	**0.50**	**350**	⇑P	**Pg**		**03**	**17**	**26.8**	**-0.5**
GAG1				S	**Sg**		**03**	**17**	**34.7**	**+0.9**
GAG1				AML	AML					
GAG1				AML	AML					
GAG1				AML	AML					
MTL1	**Matelica**	**0.53**	**346**	⇑P	**Pg**		**03**	**17**	**27.3**	**-0.5**
MTL1				S	**Sb**		**03**	**17**	**35.7**	**-0.9**
MTL1				AML	AML					
MTL1				AML	AML					
MTL1				AML	AML					
SNTG	**Esanatoglia**	**0.54**	**341**	⇑P	**Pg**		**03**	**17**	**27.3**	**-0.7**
SNTG				S	**Sg**		**03**	**17**	**35.7**	**+0.6**
SNTG				AML	AML					
	comp=E,6820μm,0.2s									
SNTG				AML	AML					
	comp=E,55750μm,0.2s									
SNTG				AML	AML					
	comp=N,7195μm,1.6s									
SNTG				AML	AML					
	comp=N,58650μm,1.6s									
TRTR	**Tortoreto Alta**	**0.54**	**83**	⇑P	**Pg**		**03**	**17**	**28.4**	**+0.5**
TRTR				AML	AML					
TRTR				AML	AML					
FAGN	**Fagnano**	**0.56**	**148**	⇑P	**Pg**		**03**	**17**	**27.5**	**-0.9**
FAGN				AML	AML					
	comp=E,99100μm,1.6s									
FAGN				AML	AML					
TRE1	**Treia**	**0.57**	**10**	P	**Pg**		**03**	**17**	**28.5**	**-0.2**
TRE1				S	**Sb**		**03**	**17**	**38.2**	**+0.3**
TRE1				AML	AML					
TRE1				AML	AML					
EL6	**Elcito**	**0.59**	**354**	⇓P	**Pg**		**03**	**17**	**28.1**	**-0.8**
EL6				S	**Sb**		**03**	**17**	**37.7**	**-0.7**
EL6				AML	AML					
EL6				AML	AML					
ATCC	**AVT- Casa Cast**	**0.59**	**318**	⇑P	**Pg**		**03**	**17**	**28.4**	**-0.6**
ATCC				S	**Sb**		**03**	**17**	**38.0**	**-0.5**
VCEL	**Villa Celiera**	**0.60**	**126**	⇑P	**Pg**		**03**	**17**	**28.3**	**-0.8**
VCEL				S	**Sb**		**03**	**17**	**38.5**	**-0.2**
VCEL				AML	AML					
	comp=E,67550μm,1.6s									
VCEL				AML	AML					
	comp=N,70000μm,0.5s									
VCEL				AML	AML					
	comp=N,69950μm,0.5s									
CADA	**Capodarco di F**	**0.62**	**43**	P	**Pb**		**03**	**17**	**30.0**	**-0.4**
CADA				AML	AML					
CADA				AML	AML					
CING	**Cingoli**	**0.63**	**1**	⇓P	**Pg**		**03**	**17**	**28.8**	**-0.9**
CING				S	**Sb**		**03**	**17**	**39.2**	**-0.4**
FOSV	**Fossato di Vic**	**0.63**	**331**	⇑P	**Pg**		**03**	**17**	**29.0**	**-0.7**
FOSV				S	**Sg**		**03**	**17**	**38.6**	**+0.6**
FOSV				AML	AML					
	comp=E,54950μm,0.9s									
FOSV				AML	AML					
	comp=N,64500μm,1.6s									
CIMA	**Civitanova Mar**	**0.67**	**32**	P	**Pb**		**03**	**17**	**30.9**	**-0.3**
T0110	**Collepietro**	**0.68**	**139**	⇑P	**Pg**		**03**	**17**	**29.4**	**-1.2**
T0110				S	**Sb**		**03**	**17**	**41.0**	**0.0**
T0110				AML	AML					
	comp=E,88400μm,0.5s									
T0110				AML	AML					
	comp=N,64650μm,1.6s									
PP3	**Marolino**	**0.71**	**26**	⇑P	**Pg**		**03**	**17**	**31.0**	**-0.1**
PP3				AML	AML					
PP3				AML	AML					
PP3				AML	AML					
PP3				AML	AML					
MURB	**Monte Urbino**	**0.71**	**317**		**Pg**		**03**	**17**	**30.5**	**-0.7**
MURB				Sg	**Sb**		**03**	**17**	**41.6**	**-0.3**
MURB	**Monte Urbino**	**0.71**	**317**	⇑P	**Pg**		**03**	**17**	**30.5**	**-0.7**
MURB				AML	AML					
MURB				AML	AML					
MURB				AML	AML					
MURB				AML	AML					
MMUR	**Monte Murano**	**0.71**	**349**	P	**Pg**		**03**	**17**	**30.5**	**-0.7**
MMUR				S	**Sb**		**03**	**17**	**41.5**	**-0.4**
MMUR				AML	AML					
	comp=N,67200μm,0.5s									
MMUR				AML	AML					
	comp=E,93150μm,0.7s									
SRES	**S.Oreste - Sor**	**0.71**	**225**	P	**Pg**		**03**	**17**	**30.5**	**-0.7**
SRES				AML	AML					
	comp=N,32850μm,1.4s									
SRES				AML	AML					
	comp=E,36100μm,1.0s									
PTQR	**Pietraquaria**	**0.74**	**167**	⇓P	**Pg**		**03**	**17**	**30.5**	**-1.2**
PTQR				AML	AML					
	comp=E,15250μm,1.2s									
PTQR				AML	AML					
	comp=N,14950μm,0.9s									
SSFR	**Montelago di S**	**0.75**	**337**	⇑P	**Pg**		**03**	**17**	**31.0**	**-1.0**
SSFR				S	**Sb**		**03**	**17**	**42.9**	**-0.2**
SSFR				AML	AML					
SSFR				AML	AML					
SSFR				AML	AML					
SSFR				AML	AML					
ATTE	**AVT- Monte Tez**	**0.76**	**307**	⇑P	**Pg**		**03**	**17**	**31.3**	**-0.8**
ATTE				AML	AML					
	comp=N,49400μm,0.6s									
ATTE				AML	AML					
	comp=E,46400μm,0.4s									
ATFO	**Monte Foce - G**	**0.77**	**324**	⇑P	**Pg**		**03**	**17**	**31.4**	**-0.9**
ATFO				S	**Sb**		**03**	**17**	**43.8**	**+0.3**
ATFO				AML	AML					
	comp=E,51150μm,1.2s									
ATFO				AML	AML					
	comp=N,58500μm,1.0s									
ATSC	**Scheggia e Pas**	**0.77**	**332**	⇑P	**Pg**		**03**	**17**	**31.3**	**-1.1**
ARVD	**Arcevia**	**0.77**	**347**	⇑P	**Pg**		**03**	**17**	**31.5**	**-0.9**
ARVD				S	**Sb**		**03**	**17**	**43.5**	**-0.2**
ARVD				AML	AML					
	comp=E,28550μm,1.0s									
ARVD				AML	AML					
	comp=N,32650μm,0.7s									
MTCE	**Montecelio**	**0.79**	**204**	⇓P	**Pg**		**03**	**17**	**31.5**	**-1.2**
MTCE				AML	AML					
	comp=E,49550μm,0.4s									
MTCE				AML	AML					
	comp=N,21850μm,0.9s									
ATLO	**AVT- Montelove**	**0.81**	**315**	⇑P	**Pg**		**03**	**17**	**32.0**	**-1.0**
MGAB	**Montegabbione**	**0.81**	**282**	⇑P	**Pg**		**03**	**17**	**32.4**	**-0.6**
MGAB				AML	AML					
	comp=N,85450μm,0.4s									
MGAB				AML	AML					
	comp=E,89050μm,0.6s									
MGAB				AML	AML					
	comp=N,98550μm,0.4s									
MGAB				AML	AML					
	comp=E,75000μm,1.0s									
CERT	**Cerreto**	**0.81**	**191**	⇓P	**Pg**		**03**	**17**	**31.8**	**-1.3**
CERT				AML	AML					
	comp=E,55750μm,0.5s									
CERT				AML	AML					
	comp=N,39400μm,0.4s									
TB01	**Gubbio**	**0.84**	**320**	⇑P	**Pg**		**03**	**17**	**32.7**	**-1.0**
FRON	**Frontone**	**0.84**	**337**	⇑P	**Pg**		**03**	**17**	**32.5**	**-1.2**
FRON				S	**Sb**		**03**	**17**	**45.7**	**0.0**
FRON				AML	AML					
	comp=E,39450μm,0.5s									
FRON				AML	AML					
	comp=N,51050μm,0.3s									
TB02	**Pietralunga**	**0.84**	**318**	⇑P	**Pg**		**03**	**17**	**32.7**	**-1.0**
ATVA	**AVT- Monte Val**	**0.85**	**309**	⇑P	**Pg**		**03**	**17**	**32.8**	**-1.0**
ATVO	**AVT- Monte Val**	**0.85**	**319**	⇑P	**Pg**		**03**	**17**	**32.8**	**-1.1**
ATVO				AML	AML					
	comp=E,51500μm,1.6s									
ATVO				AML	AML					
	comp=N,34100μm,1.0s									
AOI	**Ancona**	**0.86**	**21**	⇑P	**Pg**		**03**	**17**	**33.2**	**-0.9**
AOI				AML	AML					
	comp=N,28300μm,1.1s									
AOI				AML	AML					
	comp=E,32700μm,0.3s									
ATBU	**Serra di Buran**	**0.87**	**328**	⇑P	**Pg**		**03**	**17**	**33.3**	**-0.9**
ATMI	**Monte Miggiano**	**0.89**	**312**	P	**Pg**		**03**	**17**	**33.8**	**-0.9**
ATMI				AML	AML					
ATMI				AML	AML					
	comp=N,98750μm,1.0s									
COR1	**Corinaldo**	**0.90**	**352**	P	**Pg**		**03**	**17**	**34.5**	**-0.3**
COR1				AML	AML					
	comp=E,96850μm,0.5s									
COR1				AML	AML					
	comp=E,48000μm,0.5s									
COR1				AML	AML					
COR1				AML	AML					
INTR	**Introdacqua**	**0.91**	**144**	⇑P	**Pg**		**03**	**17**	**33.2**	**-1.7**
INTR				AML	AML					
	comp=E,20μm,1.2s									
INTR				AML	AML					
	comp=N,29μm,0.8s									
INTR				AML	AML					
	comp=N,29μm,0.8s									
INTR				AML	AML					
	comp=N,42250μm,0.8s									
INTR				AML	AML					
	comp=E,20300μm,1.2s									
ATPC	**Poggio Castell**	**0.91**	**324**	⇑P	**Pg**		**03**	**17**	**33.9**	**-1.1**
ATPI	**Pietralunga -**	**0.91**	**321**	⇑P	**Pg**		**03**	**17**	**33.9**	**-1.1**
ATPI				AML	AML					
	comp=E,43550μm,0.6s									
ATPI				AML	AML					
	comp=N,30150μm,0.7s									
PIEI	**Pieia**	**0.92**	**329**	⇑P	**Pg**		**03**	**17**	**33.9**	**-1.4**
PIEI				S	**Sb**		**03**	**17**	**48.4**	**+0.4**
PIEI				AML	AML					
	comp=E,24650μm,1.2s									
PIEI				AML	AML					
	comp=N,27800μm,0.9s									
VVLD	**Villa Vallelon**	**0.93**	**159**	P	**Pg**		**03**	**17**	**33.8**	**-1.6**
VVLD				AML	AML					
	comp=N,22300μm,0.5s									
VVLD				AML	AML					
	comp=E,31500μm,1.1s									
MPAG	**Monte Paganucc**	**0.94**	**341**	⇑P	**Pg**		**03**	**17**	**34.4**	**-1.2**
SACS	**San Casciano d**	**0.94**	**277**	⇑P	**Pg**		**03**	**17**	**35.0**	**-0.6**
SACS				AML	AML					
	comp=E,63350μm,1.0s									
SACS				AML	AML					
	comp=N,40400μm,0.8s									
SACS				AML	AML					
	comp=E,63250μm,1.0s									
SACS				AML	AML					
	comp=N,41300μm,0.8s									
GUAR	**Guarcino**	**0.95**	**174**	P	**Pg**		**03**	**17**	**34.2**	**-1.7**
GUAR				AML	AML					
	comp=N,32100μm,0.4s									
GUAR				AML	AML					
	comp=E,29150μm,0.6s									
SENI	**Senigallia**	**0.96**	**2**	⇑P	**Pg**		**03**	**17**	**35.9**	**-0.1**
SENI				AML	AML					
SENI				AML	AML					
	comp=N,32850μm,0.6s									
SENI				AML	AML					
	comp=E,48700μm,0.9s									
SENI				AML	AML					
NARO	**Abbazia di Nar**	**0.97**	**333**	⇑P	**Pg**		**03**	**17**	**34.8**	**-1.4**
FSSB	**Fossombrone**	**0.99**	**343**	⇑P	**Pg**		**03**	**17**	**35.4**	**-1.1**
FSSB				AML	AML					
FSSB				AML	AML					
RMP	**Rome, Mte Porz**	**1.00**	**201**	P	**Pg**		**03**	**17**	**35.1**	**-1.5**
RMP				AML	AML					
	comp=E,39100μm,1.0s									
RMP				AML	AML					
	comp=N,40500μm,0.6s									
LPEL	**Lama dei Pelig**	**1.02**	**133**	P	**Pg**		**03**	**17**	**34.7**	**-2.3**
LPEL				AML	AML					
	comp=N,14450μm,0.4s									
LPEL				AML	AML					
	comp=E,27900μm,1.6s									
LATE	**Laterza**	**1.02**	**263**		**Pg**		**03**	**17**	**36.7**	**-0.5**
LATE	**Laterza**	**1.02**	**263**	⇑P	**Pg**		**03**	**17**	**36.4**	**-0.8**
BADI	**Badiali**	**1.03**	**318**	⇑P	**Pg**		**03**	**17**	**36.1**	**-1.1**
BADI				AML	AML					
	comp=N,28150μm,0.5s									
BADI				AML	AML					
	comp=E,2520μm,0.8s									
RDP	**Rocca di Papa**	**1.04**	**200**	P	**Pg**		**03**	**17**	**36.0**	**-1.6**
RDP				AML	AML					
	comp=N,90700μm,0.5s									
RDP				AML	AML					
	comp=E,77750μm,0.4s									
CAFI	**Castiglion Fio**	**1.07**	**304**	⇑P	**Pg**		**03**	**17**	**36.9**	**-1.1**
CAFI				AML	AML					
	comp=E,28300μm,0.7s									
CAFI				AML	AML					
	comp=N,26900μm,1.0s									
PE3	**Peglio**	**1.07**	**332**	⇑P	**Pg**		**03**	**17**	**37.0**	**-1.1**
PE3				AML	AML					
	comp=N,25550μm,1.3s									
PE3				AML	AML					
	comp=E,105μm,1.1s									
POFI	**Posta Fibreno**	**1.10**	**159**	⇑P	**Pg**		**03**	**17**	**36.4**	**-2.2**
POFI				AML	AML					
	comp=E,12785μm,0.6s									
POFI				AML	AML					
	comp=N,10930μm,1.3s									
POFI				AML	AML					
	comp=E,13300μm,0.6s									
POFI				AML	AML					
	comp=N,10805μm,1.4s									
TOLF	**Tolfa**	**1.11**	**233**	⇑P	**Pg**		**03**	**17**	**37.7**	**-1.1**
TOLF				AML	AML					
	comp=E,17100μm,0.5s									
TOLF				AML	AML					
	comp=N,14650μm,1.1s									
MCIV	**Monte Civitell**	**1.11**	**272**	⇑P	**Pg**		**03**	**17**	**37.7**	**-1.1**
MCIV				AML	AML					
	comp=N,16400μm,0.7s									
MCIV				AML	AML					
	comp=E,17200μm,0.8s									
SF04	**Casetta**	**1.12**	**275**	P	**Pg**		**03**	**17**	**38.5**	**-0.5**
SF04				AML	AML					
	comp=E,19900μm,0.3s									
SF04				AML	AML					
	comp=N,23900μm,0.3s									
LAV9	**Lanuvio**	**1.12**	**199**	P	**Pb**		**03**	**17**	**38.7**	**-0.4**
LAV9				AML	AML					
	comp=E,47950μm,0.4s									
LAV9				AML	AML					
	comp=E,51600μm,0.4s									
LAV9				AML	AML					
	comp=N,45450μm,0.5s									
LAV9				AML	AML					
	comp=N,43950μm,0.5s									
SSP9	**Sansepolcro**	**1.13**	**318**	P	**Pb**		**03**	**17**	**38.4**	**-0.8**
SSP9				AML	AML					
	comp=E,23400μm,0.9s									
SSP9				AML	AML					
	comp=N,24050μm,1.3s									
LRP	**Arpino**	**1.14**	**165**	P	**Pb**		**03**	**17**	**37.7**	**-1.6**
LRP				AML	AML					
	comp=N,11250μm,1.1s									
LRP				AML	AML					
	comp=E,11915μm,0.7s									
PARC	**Parchiule**	**1.14**	**323**	⇑P	**Pb**		**03**	**17**	**38.1**	**-1.2**
PARC				AML	AML					
	comp=E,26900μm,1.4s	

CPGN Carpegna, Ital 1.23 329 P Pb 03 17 40.9 0.0
CPGN AML AML
CPGN AML AML
CRE Caprese Michel 1.26 315 P Pn 03 17 40.5 -0.7
CRE AML AML
comp=E,11150µm,0.7s
CRE AML AML
comp=N,13400µm,0.7s
LATB Latina 1.26 188 P Pn 03 17 39.1 -2.0
LATB AML AML
comp=N,2580µm,1.3s
LATB AML AML
comp=E,5090µm,1.6s
ARCI Arcidosso 1.26 275 ⇑P Pn 03 17 40.5 -0.7
ARCI AML AML
comp=N,4600µm,1.3s
ARCI AML AML
comp=E,7440µm,0.8s
RNI2 Rionero Sannit 1.27 145 P Pn 03 17 39.7 -1.7
RNI2 AML AML
comp=N,18800µm,0.8s
RNI2 AML AML
comp=E,25800µm,1.4s
LIK San Giovanni I 1.27 167 P Pg 03 17 41.8 -0.1
LIK San Giovanni I 1.27 167 AML AML
comp=E,19500µm,0.7s
LIK AML AML
comp=N,18500µm,1.4s
RSM Repubblica di 1.30 336 P Pb 03 17 42.2 +0.1
RSM AML AML
comp=N,32900µm,1.1s
RSM AML AML
comp=E,34850µm,1.6s
CERA Filignano 1.30 151 P Pn 03 17 40.0 -1.9
CERA AML AML
comp=E,16700µm,1.0s
CERA AML AML
comp=N,18950µm,0.6s
FRES Fresagrandinar 1.34 124 ⇑P Pb 03 17 42.9 +0.1
TRIV Trivento 1.41 133 P **Pb 03 17 43.7 -0.2**
TRIV AML AML
comp=E,19500µm,0.8s
TRIV AML AML
comp=E,17450µm,0.7s
TRIV AML AML
comp=N,14900µm,1.2s
TRIV AML AML
comp=N,14500µm,1.2s
ASQU Asqua 1.46 316 P Pn 03 17 43.1 -0.9
ASQU AML AML
comp=E,9915µm,0.7s
ASQU AML AML
comp=N,12050µm,0.7s
SFI Santa Sofia 1.52 320 P Pn 03 17 44.4 -0.3
SFI AML AML
comp=E,9030µm,1.1s
SFI AML AML
comp=N,9715µm,0.8s
VAGA Valle Agricola 1.54 149 P Pn 03 17 44.6 -0.5
VAGA AML AML
comp=E,5335µm,1.6s
VAGA AML AML
comp=N,6370µm,1.5s
FROS Frosini 1.56 288 P Pn 03 17 45.3 0.0
FROS AML AML
comp=E,11480µm,0.9s
FROS AML AML
comp=N,7560µm,1.2s
CSNT Castellina Chi 1.56 298 P Pn 03 17 45.3 -0.1
CSNT AML AML
comp=E,4965µm,1.6s
CSNT AML AML
comp=N,5615µm,0.7s
BSSO Busso 1.59 138 P Pb 03 17 46.9 -0.2
BSSO AML AML
comp=E,3095µm,1.3s
BSSO AML AML
comp=E,7235µm,1.3s
BSSO AML AML
comp=N,3045µm,0.7s
BSSO AML AML
comp=N,7230µm,0.7s
OSSC Osservatorio P 1.62 299 Pn 03 17 46.3 +0.2
OSSC Sn **Sn 03 18 05.9 -1.2**
OSSC Osservatorio P 1.62 299 P **Pn 03 17 45.9 -0.2**
OSSC AML AML
comp=N,6830µm,0.9s
OSSC AML AML
comp=E,6840µm,0.9s
OSSC AML AML
comp=E,6405µm,0.7s
OSSC AML AML
comp=N,6665µm,0.7s
RUFI Rufina 1.64 312 P Pn 03 17 45.9 -0.5
RUFI AML AML
comp=E,7300µm,0.7s
RUFI AML AML
comp=N,10045µm,0.7s
MODR Mondragone 1.68 162 P Pn 03 17 47.4 +0.5
CIGN Sant'Elia a Pi 1.68 130 ⇑P Pb 03 17 48.0 -0.5
CIGN AML AML
comp=N,4730µm,0.8s
CIGN AML AML
comp=E,7425µm,1.6s
CASP Castiglione de 1.71 272 Pn 03 17 46.8 -0.5
CASP Castiglione de 1.71 272 ⇓P Pn 03 17 46.8 -0.5
LMD Lutirano 1.71 322 P **Pn 03 17 47.4 -0.1**
LMD AML AML
comp=N,6850µm,0.9s
LMD AML AML
comp=E,7610µm,0.8s
PIGN Pignataro Magg 1.71 154 P Pn 03 17 48.0 +0.6
PIGN AML AML
comp=E,3630µm,1.6s
PIGN AML AML
comp=N,3450µm,1.2s
PIGN AML AML
comp=N,3505µm,1.2s
PIGN AML AML
comp=E,3220µm,1.6s
TRIF Trifonti 1.71 283 P Pn 03 17 47.1 -0.4
TRIF AML AML
comp=E,4890µm,0.5s
TRIF AML AML
comp=N,5270µm,0.7s
SACR S. Croce Del S 1.76 139 ⇑P Pb 03 17 49.5 -0.4
SACR AML AML
comp=N,5555µm,1.2s
SACR AML AML
comp=E,4725µm,1.2s
MELA Melanico ??? S 1.78 125 ⇑P Pb 03 17 49.2 -0.9
MELA AML AML
comp=E,12655µm,0.8s
MELA AML AML
comp=E,13300µm,0.8s
MELA AML AML
comp=N,14000µm,1.2s
MELA AML AML
comp=N,14700µm,1.2s
GATE Gambatesa 1.78 133 P Pb 03 17 49.9 -0.3
GATE AML AML
comp=E,2875µm,1.3s
GATE AML AML
comp=E,4685µm,0.7s
GATE AML AML
comp=N,3390µm,1.2s
GATE AML AML
comp=N,3420µm,1.3s
TREM Isole Tremiti 1.83 109 ⇑P Pn 03 17 49.7 +0.7
TREM AML AML
comp=E,10485µm,1.5s
TREM AML AML
comp=N,9775µm,0.7s
DUGI Dugi Otok 1.85 47 *e*Pn **Pn 03 17 48.4 -1.0**
BRIS BRISIGHELLA 1.86 320 P **Pn 03 17 50.0 +0.6**
BRIS AML AML
comp=E,6070µm,1.3s
BRIS AML AML
comp=N,12450µm,1.5s
SEI Scarperia 1.87 315 P Pn 03 17 49.4 -0.2
SEI AML AML
comp=E,9725µm,0.5s
SEI AML AML
comp=N,24200µm,0.6s
VITU Vitulano (BN) 1.90 145 P Pn 03 17 51.0 +1.0
VITU AML AML
comp=N,5260µm,1.6s
VITU AML AML
comp=E,2145µm,1.4s
VITU AML AML
comp=N,5380µm,1.6s
VITU AML AML
comp=E,3885µm,0.6s
CRMI Carmignano 1.93 304 P Pn 03 17 50.3 -0.1
CRMI AML AML
comp=E,3085µm,0.8s
CRMI AML AML
comp=N,556µm,0.7s
CRMI AML AML
comp=E,412µm,0.8s
CRMI AML AML
comp=N,3915µm,0.7s
PSB1 Pescosannita 1.94 141 P Pb 03 17 52.6 -0.5
MPPT Montemurlo 1.95 309 P Pn 03 17 50.7 0.0
MPPT AML AML
comp=E,5690µm,0.7s
MPPT AML AML
comp=N,5985µm,1.6s
PAOL Paolisi 2.00 148 Pn 03 17 52.3 +0.9
PAOL Paolisi 2.00 148 P **Pb 03 17 54.2 +0.2**
APRC Apricena 2.01 119 ⇑P Pn 03 17 51.8 +0.2
APRC AML AML
comp=N,7835µm,1.1s
APRC AML AML
comp=E,6345µm,0.6s
MOCO Biccari - m.te 2.01 132 P Pb 03 17 53.1 -1.2
MOCO AML AML
comp=E,3245µm,1.1s
MOCO AML AML
comp=N,2250µm,1.6s
MOCO AML AML
comp=N,2335µm,1.6s
MOCO AML AML
comp=E,3260µm,1.1s
MTCR Monte La Croce 2.04 310 P Pn 03 17 51.9 -0.2
MTCR AML AML
comp=N,4960µm,0.7s
MTCR AML AML
comp=E,4610µm,0.5s
VIRC Vir 2.06 41 *e*Pn **Pn 03 17 51.6 -0.6**
FNVD Fontana Vidola 2.07 314 P Pn 03 17 52.7 +0.4
FNVD AML AML
comp=N,8565µm,0.8s
FNVD AML AML
comp=E,8870µm,0.8s
MRB1 Monte Rocchett 2.10 140 ⇑P Pb 03 17 55.0 -0.7
MRB1 AML AML
comp=E,6195µm,1.6s
MRB1 AML AML
comp=E,6350µm,1.6s
MRB1 AML AML
comp=N,6875µm,1.4s
MRB1 AML AML
comp=N,6645µm,1.4s
BIOG Biogem 2.12 136 P Pb 03 17 55.1 -0.9
VARP Vesuvio Array 2.13 154 P Pb 03 17 55.4 -0.8
SGRT San Giovanni R 2.14 117 Pn 03 17 53.5 +0.2
SGRT San Giovanni R 2.14 117 ⇑P Pn 03 17 53.6 +0.2
SGRT AML AML
comp=N,5480µm,0.5s
SGRT AML AML
comp=E,7550µm,1.0s
MORI Morici 2.16 58 *e*Pn **Pn 03 17 53.3 -0.2**
PII Pisa 2.17 298 P Pn 03 17 53.9 +0.1
PII AML AML
comp=N,4455µm,0.8s
PII AML AML
comp=E,4115µm,0.4s
CELB S.Piero in Cam 2.19 271 P Pn 03 17 53.4 -0.6
CELB AML AML
comp=N,1590µm,0.8s
CELB AML AML
comp=E,1052µm,0.6s
NVLJ Novalja 2.19 33 *e*Pn **Pn 03 17 53.5 -0.5**
POPM Popiglio 2.19 307 P Pn 03 17 53.7 -0.4
POPM AML AML
comp=E,3920µm,0.9s
POPM AML AML
comp=N,2820µm,0.5s
BRJN Brijuni 2.20 11 *e*Pn **Pn 03 17 53.3 -0.8**
BRJN Brijuni 2.20 11 ⇑P Pn 03 17 53.4 -0.7
ZCCA Zocca 2.27 316 Pn **Pn 03 17 56.0 +0.9**
ZCCA Zocca 2.27 316 P Pb 03 17 57.3 -1.3
ZCCA AML AML
comp=E,3270µm,1.6s
ZCCA AML AML
comp=N,4240µm,1.5s
ZCCA AML AML
comp=N,4280µm,1.0s
ZCCA AML AML
comp=E,3485µm,1.6s
MSAG Monte S. Angel 2.27 116 ⇑P Pn 03 17 55.6 +0.4
MSAG AML AML
comp=E,6665µm,0.5s
MSAG AML AML
comp=E,6050µm,0.5s
MSAG AML AML
comp=N,13200µm,1.3s
MSAG AML AML
comp=N,13500µm,1.3s
MAIM Mastiano 2.29 302 P Pn 03 17 55.2 0.0
SGTA Sant Agata di 2.29 134 ⇑P Pn 03 17 56.8 +1.4
SGTA AML AML
comp=N,2735µm,1.6s
SGTA AML AML
comp=E,3220µm,1.3s
SGTA AML AML
comp=E,3370µm,1.3s
SGTA AML AML
comp=N,2680µm,1.6s
BDI Bagni Di Lucca 2.30 306 P Pn 03 17 54.7 -0.8
BDI AML AML
comp=E,3690µm,1.3s
BDI AML AML
comp=E,1565µm,0.5s
BDI AML AML
comp=N,3510µm,0.9s
BDI AML AML
comp=N,1690µm,0.9s
CAFE Carife 2.30 138 ⇑P Pb 03 17 57.5 -1.7
CAFE AML AML
comp=N,2750µm,1.0s
CAFE AML AML
comp=N,2595µm,1.0s
CAFE AML AML
comp=E,3865µm,1.4s
CAFE AML AML
comp=E,3730µm,1.4s
RABC Rab 2.32 29 *i* Pn **Pn 03 17 55.4 -0.3**
CARD Cardoso 2.35 304 P Pn 03 17 55.8 -0.4
CARD AML AML
comp=N,4830µm,0.5s
CARD AML AML
comp=E,4610µm,0.8s
SNAL S. Angelo Dei 2.37 140 P Pb 03 17 58.5 -1.8
SNAL AML AML
comp=N,4510µm,1.6s
SNAL AML AML
comp=E,2960µm,1.2s
SMRN Sveta Marina 2.40 17 *e*Pn **Pn 03 17 56.0 -0.7**
GSCL Gusciola 2.48 311 P Pn 03 17 58.1 +0.1
GSCL AML AML
comp=E,4535µm,0.6s
GSCL AML AML
comp=N,4885µm,0.6s
VLC Villacollemand 2.48 306 Pn 03 17 57.0 -1.0
VLC Villacollemand 2.48 306 P Pn 03 17 57.4 -0.6
VLC AML AML
comp=N,1980µm,0.9s
VLC AML AML
comp=E,1815µm,1.3s
VLC AML AML
comp=N,1950µm,0.9s
VLC AML AML
comp=E,1805µm,1.3s
GROG Isola di Gorgo 2.50 287 P Pn 03 17 58.7 +0.4
GROG AML AML
comp=N,725µm,0.6s
GROG AML AML
comp=E,662µm,1.1s
CAPA Cerignola FG 2.52 128 ⇑P Pn 03 17 59.4 +0.8
CAPA AML AML
comp=N,7795µm,1.0s
CAPA AML AML
comp=E,6010µm,1.0s
VULT Monte Vulture 2.55 134 P Pn 03 18 00.3 +1.3
VULT AML AML
comp=E,3170µm,0.4s
VULT AML AML
comp=N,4835µm,0.4s
VULT AML AML
comp=E,3380µm,0.4s
VULT AML AML
comp=N,5085µm,0.5s
UDBI Udbina 2.59 46 *e*Pn **Pn 03 18 00.0 +0.5**
EQUI Equi 2.62 304 P Pn 03 17 59.7 -0.2
EQUI AML AML
comp=N,2410µm,0.7s
EQUI AML AML
comp=E,2080µm,0.5s
MRLC Muro Lucano 2.63 138 P Pn 03 18 02.0 +1.9
MRLC AML AML
comp=N,1645µm,1.6s
MRLC AML AML
comp=E,1390µm,1.0s
CAVE Cavezzo 2.64 324 P Pn 03 18 02.5 +2.3
SERM Sermide 2.64 330 P Pb 03 18 02.6 -2.3
SERM AML AML
comp=E,3625µm,0.7s
SERM AML AML
comp=N,3475µm,0.6s
SERM AML AML
comp=E,5638µm,1.0s
SERM AML AML
comp=N,6675µm,0.7s
KIJV Kijevo 2.67 61 *e*Pn **Pn 03 18 00.9 +0.4**
LSTV Lastovo 2.73 88 *e*Pn **Pn 03 18 01.0 -0.4**
RIY Rijeka 2.75 20 *i* Pn **Pn 03 18 01.6 0.0**
PALZ Palazzo San Ge 2.75 130 ⇑P Pn 03 18 02.6 +1.0
PLMA Palmaria, Port 2.76 299 P Pn 03 18 01.7 0.0
PLMA AML AML
comp=N,1295µm,1.1s
PLMA AML AML
comp=E,1135µm,1.0s
CDRU Civita di Ruta 2.76 144 P Pn 03 18 03.4 +1.5
PLIT Plitvice 2.77 39 *e*Pn **Pn 03 18 01.9 0.0**
MRVN Minervino Murg 2.81 126 ⇑P Pn 03 18 03.0 +0.5
MRVN AML AML
comp=N,1011µm,1.5s
MRVN AML AML
comp=E,1208µm,1.6s
TEOL Teolo 2.83 338 Pn 03 18 02.7 -0.1
TEOL Teolo 2.83 338 ⇓P Pn 03 18 03.5 +0.7
TEOL AML AML
comp=N,7435µm,1.1s
TEOL AML AML
comp=E,11450µm,1.2s
ACER Acerenza 2.84 133 ⇑P Pn 03 18 04.0 +1.0
ACER AML AML
comp=N,1860µm,0.6s
ACER AML AML
comp=N,1950µm,0.6s
ACER AML AML
comp=E,2030µm,0.9s
ACER AML AML
comp=E,2070µm,0.9s
GRAM Graiana 2.86 309 P Pn 03 18 04.1 +0.9
GRAM AML AML
comp=E,4435µm,0.7s
GRAM AML AML
comp=N,3460µm,0.4s
SKDS Skadanscina 2.87 12 ⇑ *i* Pn **Pn 03 18 02.4 -0.9**
SKDS Skadanscina 2.87 12 ⇑ *i* Pn **Pn 03 18 02.5 -0.7**
SKDS *i* Sn **Sn 03 18 37.1 -0.7**
SKDS IAML 03 18 41.6
comp=Z,936nm,0.5s
MAKA Makarska 2.87 78 *e*Pn **Pn 03 18 03.0 -0.2**
PRMA PARMA 2.90 315 Pn **Pn 03 18 03.5 -0.1**
CMPR Campora 2.90 146 P Pn 03 18 05.9 +2.1
CMPR AML AML
comp=N,586µm,0.9s
CMPR AML AML
comp=E,558µm,1.0s
OPPE Oppeano 2.94 331 P Pn 03 18 04.2 -0.1
OPPE AML AML
comp=E,5890µm,0.6s
OPPE AML AML
comp=N,4775µm,0.5s
SMPL Sampolo 2.96 259 P Pn 03 18 04.7 +0.1
SMPL Sampolo 2.96 259 P Pn 03 18 05.0 +0.4
SMPL AML AML
comp=E,334µm,0.8s
SMPL AML AML
comp=N,377µm,1.1s
A050A Klekovaca 2.99 53 ⇑ *i* Pn **Pn 03 18 05.8 +0.8**
RICI Ricice 2.99 74 *e*Pn **Pn 03 18 05.2 +0.2**
TRI Trieste 2.99 8 Pn 03 18 03.3 -1.7
TRI Trieste 2.99 8 P Pn 03 18 03.3 -1.7
PGF Pioggiola 3.09 268 *e*Pn **Pn 03 18 06.9 +0.4**
PGF *e*Sn **Sn 03 18 42.5 -1.1**
comp=N,400nm,0.8s
PGF Pioggiola 3.09 268 P Pn 03 18 07.0 +0.5
MSSA Maissana 3.09 302 Pn 03 18 06.7 +0.2
MSSA Maissana 3.09 302 P Pn 03 18 06.4 -0.1
MSSA AML AML
comp=E,1128µm,1.3s
MSSA AML AML
comp=N,1610µm,0.6s
CEY Cerknica 3.12 16 ⇑ *i* Pn **Pn 03 18 06.2 -0.6**
BULG Bulgheria - Ca 3.13 147 P Pn 03 18 09.2 +2.2
BOJS Bojanci 3.13 28 ⇑ *i* Pn **Pn 03 18 06.9 -0.1**
MTSN Montesano sull 3.14 141 ⇑P Pn 03 18 09.0 +1.9
MTSN AML AML
comp=E,698µm,1.5s
MTSN AML AML
comp=N,602µm,1.6s
AMUR Altamura 3.15 125 P Pn 03 18 08.1 +0.9
SRKY Kupres RS 3.19 64 ⇑ *i* Pn **Pn 03 18 09.1 +1.3**
SABO M.te Sabotino 3.25 5 Pn 03 18 07.5 -1.1
SABO M.te Sabotino 3.25 5 ⇑P Pn 03 18 08.1 -0.5
SABO AML AML
comp=E,4425µm,0.8s
SABO AML AML
comp=N,19000µm,1.6s
SABO AML AML
comp=E,19400µm,0.9s
SABO AML AML
comp=N,5190µm,1.6s
SIRI Monte Sirino - 3.26 141 P Pn 03 18 11.1 +2.3
A251A Rujevac 3.26 42 *e*Pn **Pn 03 18 08.9 +0.2**
ROVR Rover Verones 3.27 333 P Pn 03 18 09.3 +0.3
ROVR AML AML
comp=E,2050µm,1.5s
ROVR AML AML
comp=N,1245µm,0.5s
ROVR AML AML
comp=E,782µm,1.5s
ROVR AML AML
comp=N,3125µm,0.5s
CGRP Cima Grappa 3.29 343 ⇑P Pn 03 18 09.3 +0.1
CGRP AML AML
comp=N,5040µm,0.6s
CGRP AML AML
comp=N,5080µm,0.6s
CGRP AML AML
comp=E,5410µm,0.9s
CGRP AML AML
comp=E,5365µm,0.9s
MGRS Mrkonjic Grad 3.29 58 ⇑ *i* Pn **Pn 03 18 10.5 +1.4**
OZLJ Ozalj 3.31 29 *e*Pn **Pn 03 18 09.3 0.0**
STON Ston 3.33 86 ⇑ *i* Pn **Pn 03 18 08.5 -1.1**
STON Ston 3.33 86 *e*Pn **Pn 03 18 08.4 -1.1**
STON Ston 3.33 86 *e*Pn **Pn 03 18 08.8 -0.8**
STON *e*Sn **Sn 03 18 47.6 -1.5**
STON Ston 3.33 86 AML AML
comp=N,775µm,1.0s
STON AML AML
comp=E,1140µm,1.6s
VARN Col Varnada, M 3.34 347 P Pn 03 18 09.8 0.0
VARN AML AML
comp=N,3525µm,0.8s
VARN AML AML
comp=E,4290µm,1.1s
VARN AML AML
comp=E,4315µm,1.1s
VARN AML AML
comp=N,3530µm,0.7s

MATE	**Matera**	**3.37**	**127**	⇑P		**Pn**	**03 18 11.2**	**+1.1**
MATE				⇑S		**Sn**	**03 18 52.0**	**+1.9**
MATE	**Matera**	**3.37**	**127**	P		**Pn**	**03 18 11.2**	**+1.1**
MATE	comp=N,1370µm,0.6s			AML	AML			
MATE	comp=E,1084µm,0.4s			AML	AML			
AJAC	**Base Areonaval**	**3.38**	**258**	P		**Pn**	**03 18 11.5**	**+1.3**
AJAC				S		**Sn**	**03 18 53.3**	**+2.9**
AJAC	**Base Areonaval**	**3.38**	**258**	P		**Pn**	**03 18 11.2**	**+1.0**
AJAC	comp=N,992µm,0.7s			AML	AML			
AJAC	comp=E,1100µm,1.1s			AML	AML			
GORR	**Gorreto**	**3.38**	**305**	P		**Pn**	**03 18 11.6**	**+1.2**
GORR	comp=N,1530µm,0.8s			AML	AML			
GORR	comp=E,1404µm,0.9s			AML	AML			
CUC	**Castrocucco**	**3.39**	**143**			**Pn**	**03 18 08.9**	**-1.6**
CUC	**Castrocucco**	**3.39**	**143**	P		**Pn**	**03 18 12.6**	**+2.2**
PRIJ	**Prijedor**	**3.39**	**48**	*e*Pn		**Pn**	**03 18 12.2**	**+1.7**
CRAC	**Craco**	**3.41**	**133**	P		**Pn**	**03 18 12.3**	**+1.6**
CRAC	comp=E,2160µm,1.3s			AML	AML			
CRAC	comp=N,3040µm,1.3s			AML	AML			
LJU	**Ljubljana**	**3.44**	**16**	⇑*i*Pn		**Pn**	**03 18 11.3**	**+0.2**
LJU				*e*Sn		**Sn**	**03 18 50.7**	**-1.2**
LJU	comp=Z,1µm,1.1s			IAML			03 19 24.1	
LJU	**Ljubljana**	**3.44**	**16**	AML	AML			
LJU	comp=E,13050µm,1.2s			AML	AML			
DOSS	**Dosso del Somm**	**3.45**	**336**	P		**Pn**	**03 18 11.9**	**+0.5**
DOSS	comp=N,2140µm,0.6s			AML	AML			
DOSS	comp=E,2085µm,0.6s			AML	AML			
DOSS	comp=E,2365µm,1.0s			AML	AML			
DOSS	comp=N,2295µm,1.0s			AML	AML			
SALO	**Salr**	**3.45**	**327**			**Pn**	**03 18 10.5**	**-0.8**
SALO	**Salr**	**3.45**	**327**	P		**Pn**	**03 18 12.1**	**+0.8**
SALO	comp=E,3205µm,0.5s			AML	AML			
SALO	comp=N,5095µm,0.5s			AML	AML			
SALO	comp=E,3195µm,0.6s			AML	AML			
SALO	comp=N,5445µm,0.5s			AML	AML			
LTRZ	**Laterza**	**3.46**	**127**	⇑P		**Pn**	**03 18 12.4**	**+0.9**
LTRZ	comp=N,1095µm,1.0s			AML	AML			
LTRZ	comp=E,1090µm,0.7s			AML	AML			
CRES	**Cresnjev**	**3.49**	**27**	*e*Pn		**Pn**	**03 18 11.7**	**-0.1**
NOCI	**Noci**	**3.50**	**123**	⇑P		**Pn**	**03 18 12.6**	**+0.6**
NOCI	comp=N,1680µm,1.3s			AML	AML			
NOCI	comp=E,1060µm,0.4s			AML	AML			
A051A	**Mrakovica**	**3.52**	**49**	⇑*i*Pn		**Pn**	**03 18 12.7**	**+0.4**
BLY	**Banja Luka**	**3.52**	**54**	*e*Pn		**Pn**	**03 18 12.6**	**+0.3**
BLY	**Banja Luka**	**3.52**	**54**	*e*Pn		**Pn**	**03 18 14.0**	**+1.7**
BLY	**Banja Luka**	**3.52**	**54**	P		**Pn**	**03 18 13.8**	**+1.6**
BLY	comp=E,2405µm,0.8s			AML	AML			
BLY	comp=E,2435µm,0.8s			AML	AML			
BLY	comp=N,1675µm,0.7s			AML	AML			
BLY	comp=N,1735µm,0.8s			AML	AML			
RNCA	**Ronca, Sant'Ol**	**3.52**	**301**	P		**Pn**	**03 18 12.9**	**+0.6**
RNCA	comp=N,276µm,0.8s			AML	AML			
RNCA	comp=E,274µm,1.1s			AML	AML			
STAL	**STALIGIAL**	**3.53**	**355**			**Pn**	**03 18 11.9**	**-0.6**
STAL	**STALIGIAL**	**3.53**	**355**	⇑P		**Pn**	**03 18 12.2**	**-0.2**
STAL	comp=N,2170µm,0.3s			AML	AML			
STAL	comp=E,3480µm,0.4s			AML	AML			
STAL	comp=N,2335µm,0.8s			AML	AML			
STAL	comp=E,3080µm,0.3s			AML	AML			
MAGA	**Magasa**	**3.54**	**330**	P		**Pn**	**03 18 12.9**	**+0.3**
MAGA	comp=N,5265µm,0.4s			AML	AML			
MAGA	comp=E,8275µm,0.4s			AML	AML			
LUSI	**Trento, Gardas**	**3.59**	**334**	P		**Pn**	**03 18 13.9**	**+0.5**
LUSI	comp=E,1940µm,1.1s			AML	AML			
LUSI	comp=N,2595µm,0.6s			AML	AML			
CIMO	**Cimolais**	**3.60**	**352**			**Pn**	**03 18 12.5**	**-0.9**
CIMO	**Cimolais**	**3.60**	**352**	⇑P		**Pn**	**03 18 13.4**	**-0.1**
CIMO	comp=E,924µm,0.9s			AML	AML			
CIMO	comp=N,872µm,1.2s			AML	AML			
CIMO	comp=N,896µm,1.2s			AML	AML			
CIMO	comp=E,943µm,1.3s			AML	AML			
DGI	**Dorgali Grotta**	**3.62**	**229**	⇓P		**Pn**	**03 18 13.9**	**+0.3**
AGOR	**Agordo**	**3.63**	**347**	P		**Pn**	**03 18 14.0**	**+0.2**
AGOR	comp=E,2085µm,1.6s			AML	AML			
AGOR	comp=N,926µm,1.1s			AML	AML			
AGOR	comp=E,1705µm,1.6s			AML	AML			
AGOR	comp=N,1155µm,1.0s			AML	AML			
DBRK	**Dubrovnik**	**3.66**	**90**	*e*Pn		**Pn**	**03 18 12.9**	**-1.2**
PTCC	**Patocco-Chiusa**	**3.66**	**2**	⇑P		**Pn**	**03 18 13.6**	**-0.6**
PTCC	comp=N,1405µm,0.9s			AML	AML			
PTCC	comp=E,1340µm,0.8s			AML	AML			
GAGG	**Gaggia**	**3.70**	**335**	P		**Pn**	**03 18 15.6**	**+0.7**
GAGG	comp=E,2255µm,0.9s			AML	AML			
GAGG	comp=N,3465µm,1.0s			AML	AML			
GAGG	comp=N,2355µm,0.9s			AML	AML			
GAGG	comp=E,3605µm,1.0s			AML	AML			
PRED	**Cave del Predi**	**3.71**	**4**	Pn		**Pn**	**03 18 14.3**	**-0.6**
CLUD	**Cludinico**	**3.72**	**357**			**Pn**	**03 18 14.3**	**-0.7**
CLUD	**Cludinico**	**3.72**	**357**	⇑P		**Pn**	**03 18 14.8**	**-0.3**
CLUD	comp=N,2145µm,0.8s			AML	AML			
CLUD	comp=N,2190µm,0.8s			AML	AML			
CLUD	comp=E,2330µm,0.9s			AML	AML			
CLUD	comp=E,2335µm,0.9s			AML	AML			
SALB	**San Lorenzo Be**	**3.73**	**139**	P		**Pn**	**03 18 17.4**	**+2.2**
SALB	comp=N,334µm,1.2s			AML	AML			
SALB	comp=E,512µm,1.2s			AML	AML			
ZONE	**Zone**	**3.74**	**325**	P		**Pn**	**03 18 15.5**	**+0.2**
ZONE	comp=E,398µm,0.6s			AML	AML			
ZONE	comp=N,2490µm,0.4s			AML	AML			
ZONE	comp=E,1560µm,0.5s			AML	AML			
ZONE	comp=N,592µm,0.5s			AML	AML			
PTJ	**Puntijarka**	**3.74**	**31**	*e*Pn		**Pn**	**03 18 14.4**	**-1.0**
ACOM	**Acomizza, Ital**	**3.81**	**3**	P		**Pn**	**03 18 16.1**	**-0.3**
ACOM	comp=N,2580µm,1.0s			AML	AML			
ACOM	comp=E,2550µm,0.9s			AML	AML			
ACOM	comp=E,2500µm,0.9s			AML	AML			
ACOM	comp=N,2625µm,0.7s			AML	AML			
PCP	**Piancastagn**	**3.81**	**300**	P		**Pn**	**03 18 16.3**	**-0.1**
PCP	comp=E,422µm,1.3s			AML	AML			
PCP	comp=N,356µm,0.9s			AML	AML			
MABI	**Malga Bissina**	**3.82**	**331**	P		**Pn**	**03 18 17.4**	**+0.8**
MABI	comp=E,830µm,1.1s			AML	AML			
MABI	comp=N,1018µm,0.5s			AML	AML			
MOSL	**Moslavina**	**3.85**	**41**	*e*Pn		**Pn**	**03 18 15.8**	**-1.0**
CANO	**Canova, Maglio**	**3.88**	**294**	AML	AML			
CANO	comp=N,868µm,1.4s			AML	AML			
CANO	comp=E,2185µm,1.3s			AML	AML			
OBKA	**Obir**	**3.89**	**14**	⇑*i*Pn		**Pn**	**03 18 16.8**	**-0.6**
OBKA	**Obir**	**3.89**	**14**	*i* Pn		**Pn**	**03 18 17.2**	**-0.2**
OBKA	comp=E,16nm,0.4s,SNR=13			*i* Sn		**Sn**	**03 19 02.7**	**-0.5**
OBKA	comp=E,426nm,0.6s			*e*Pn		**Pn**	**03 18 17.3**	**-0.1**
OBKA				*e*Pg		**Pg**	**03 18 31.1**	**-0.9**
MYKA	**Terra Mystica**	**3.90**	**5**	*i* Pn		**Pn**	**03 18 17.8**	**+0.2**
MYKA	comp=E,80nm,0.6s,SNR=38			*e*Sn		**Sn**	**03 19 05.1**	**+1.7**
MYKA	comp=E,130nm,0.5s			*e*Pn		**Pn**	**03 18 17.3**	**-0.4**
A052A	**Srbac**	**3.92**	**52**	*e*Pn		**Pn**	**03 18 17.3**	**-0.4**
HCY	**Herceg Novi**	**3.93**	**93**	*e*Pn		**Pn**	**03 18 18.3**	**+0.4**
HCY	**Herceg Novi**	**3.93**	**93**	⇑*i*Pn		**Pn**	**03 18 18.3**	**+0.4**
HCY				*i* Sn		**Sn**	**03 19 04.5**	**+0.4**
KOSI	**Kohlern**	**3.94**	**342**	AML	AML			
KOSI	comp=N,2970µm,1.1s			AML	AML			
KOSI	comp=E,2840µm,1.0s			AML	AML			
BRY	**Bratogost**	**3.94**	**86**	⇑*i*Pn		**Pn**	**03 18 18.6**	**+0.4**
BRY	**Bratogost**	**3.94**	**86**	⇑*i*Pn		**Pn**	**03 18 18.7**	**+0.5**
BRY				*e*Sn		**Sn**	**03 19 05.0**	**+0.4**
RORO	**Rocca Rossa**	**3.97**	**292**	AML	AML			
RORO	comp=E,228µm,0.6s			AML	AML			
RORO	comp=N,138µm,1.6s			AML	AML			
BOSI	**Bolzano**	**3.98**	**341**	AML	AML			
BOSI	comp=E,6230µm,1.3s			AML	AML			
BOSI	comp=N,6900µm,0.8s			AML	AML			
APPI	**Appiano**	**3.99**	**340**	AML	AML			
APPI	comp=N,1990µm,0.5s			AML	AML			
APPI	comp=E,1865µm,0.6s			AML	AML			
LOBO	**Lobor**	**3.99**	**30**	*e*Pn		**Pn**	**03 18 17.9**	**-0.8**
ABTA	**Abfaltersbach**	**4.03**	**353**	*i* Pn		**Pn**	**03 18 20.1**	**+0.7**
ABTA	comp=E,224nm,0.5s,SNR=228			*i* Sn		**Sn**	**03 19 09.5**	**+2.8**
ABTA	comp=E,480nm,0.6s			*e*Pn		**Pn**	**03 18 18.9**	**-1.0**
DOB	**Doboj**	**4.08**	**59**	*e*Pn		**Pn**	**03 18 18.9**	**-1.0**
ROTM	**Rocchetta Tana**	**4.08**	**303**	AML	AML			
ROTM	comp=N,3120µm,0.7s			AML	AML			
ROTM	comp=E,2020µm,1.5s			AML	AML			
BRES	**Bressanone**	**4.09**	**346**	AML	AML			
BRES	comp=E,2100µm,0.4s			AML	AML			
BRES	comp=N,2058µm,0.4s			AML	AML			
KALN	**Kalnik**	**4.12**	**34**	*e*Pn		**Pn**	**03 18 19.2**	**-1.3**
SOKA	**Soboth**	**4.15**	**18**	*i* Pn		**Pn**	**03 18 22.0**	**+1.0**
CAR1	**CAROLEI**	**4.17**	**146**	AML	AML			
CAR1	comp=E,384µm,1.6s			AML	AML			
CAR1	comp=N,304µm,1.4s			AML	AML			
UPM	**Unac-Piva**	**4.22**	**82**	*e*Pn		**Pn**	**03 18 23.4**	**+1.3**
UPM	**Unac-Piva**	**4.22**	**82**	⇑*i*Pn		**Pn**	**03 18 23.2**	**+1.1**
UPM				*e*Sn		**Sn**	**03 19 11.8**	**+0.2**
CEME	**Cevo**	**4.24**	**91**	⇑*i*Pn		**Pn**	**03 18 22.6**	**+0.5**
CEME				*i* Sn		**Sn**	**03 19 12.2**	**+0.5**
BRMO	**Bormio**	**4.24**	**333**	AML	AML			
BRMO	comp=N,484µm,1.1s			AML	AML			
BRMO	comp=E,784µm,0.6s			AML	AML			
BUM	**Brajici-Budva**	**4.24**	**94**	⇓*i*Pn		**Pn**	**03 18 22.8**	**+0.5**
BUM				*i* Sn		**Sn**	**03 19 12.6**	**+0.7**
NKME	**Niksic**	**4.25**	**88**	⇑*i*Pn		**Pn**	**03 18 22.7**	**+0.4**
NKME				*i* Sn		**Sn**	**03 19 12.7**	**+0.7**
RISI	**Rein**	**4.28**	**350**	AML	AML			
RISI	comp=E,4230µm,0.5s			AML	AML			
RISI	comp=N,4465µm,0.4s			AML	AML			
NKY	**Niksic**	**4.28**	**87**	⇓*i*Pn		**Pn**	**03 18 23.2**	**+0.4**
NKY				*i* Sn		**Sn**	**03 19 13.1**	**+0.3**
KOGS	**Kog**	**4.30**	**30**	AML	AML			
KOGS	comp=E,10185µm,0.9s			AML	AML			
KOGS	comp=N,9980µm,1.0s			AML	AML			
A252A	**Venje**	**4.30**	**50**	*e*Pn		**Pn**	**03 18 22.4**	**-0.6**
VSL	**Villasalto**	**4.33**	**223**	AML	AML			
VSL				AML	AML			
KBA	**Koelnbreinsper**	**4.33**	**1**	*i* Pn		**Pn**	**03 18 24.1**	**+0.4**
KBA	comp=N,129nm,0.6s,SNR=145			*i* Sn		**Sn**	**03 19 12.9**	**-1.4**
KBA	comp=N,492nm,0.7s			*e*Pn		**Pn**	**03 18 24.0**	**+0.4**
KBA	**Koelnbreinsper**	**4.33**	**1**	*e*Pn		**Pn**	**03 18 24.0**	**+0.4**
SBF	**Sospel**	**4.34**	**287**	*e*Pn		**Pn**	**03 18 23.7**	**+0.1**
SBF	comp=N,373nm,0.4s			*e*Sn		**Sn**	**03 19 11.5**	**-2.8**
ROSI	**Rosskopf**	**4.37**	**344**	AML	AML			
ROSI	comp=N,3885µm,0.9s			AML	AML			
ROSI	comp=E,2105µm,0.8s			AML	AML			
ESCA	**l'Escarene**	**4.38**	**286**	P		**Pn**	**03 18 24.5**	**+0.4**
TURF	**col de Turini**	**4.40**	**288**	P		**Pn**	**03 18 24.9**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**4.40**	**333**	Pn		**Pn**	**03 18 23.2**	**-1.3**
VARE	**Varese**	**4.45**	**316**	AML	AML			
VARE	comp=E,1160µm,0.8s			AML	AML			
VARE	comp=N,946µm,0.5s			AML	AML			
DRME	**Dracevica, Mon**	**4.47**	**95**	⇑*i*Pn		**Pn**	**03 18 26.4**	**+1.0**
DRME	**Dracevica, Mon**	**4.47**	**95**	⇓*i*Pn		**Pn**	**03 18 26.2**	**+0.8**
DRME				*i* Sn		**Sn**	**03 19 18.0**	**+0.5**
CGL	**Cagliari Serpe**	**4.48**	**222**	AML	AML			
CGL	comp=E,1067µm,1.0s			AML	AML			
CGL	comp=N,912µm,0.4s			AML	AML			
PDG	**Podgorica**	**4.50**	**92**	⇑P		**Pn**	**03 18 26.6**	**+0.9**
PDG				⇓S		**Sn**	**03 19 17.8**	**-0.1**
PDG	**Podgorica**	**4.50**	**92**			**Pn**	**03 18 24.5**	**-1.1**
PDG	**Podgorica**	**4.50**	**92**	*e*Pn		**Pn**	**03 18 26.7**	**+1.1**
PDG				*e*Sn		**Sn**	**03 19 18.5**	**+0.6**
PDG	**Podgorica**	**4.50**	**92**	AML	AML			
PDG	comp=N,730µm,0.4s			AML	AML			
PDG	comp=E,574µm,1.2s			AML	AML			
PDG	comp=N,912µm,0.4s			AML	AML			
PDG	comp=E,728µm,1.2s			AML	AML			
TTG	**Podgorica**	**4.50**	**92**	⇑*i*Pn		**Pn**	**03 18 26.2**	**+0.6**
TTG				*i* Sn		**Sn**	**03 19 18.5**	**+0.6**
EILF	**Villa Eilenroc**	**4.50**	**282**	P		**Pn**	**03 18 25.3**	**-0.4**
SPIF	**crte de Spivo**	**4.53**	**289**	P		**Pn**	**03 18 27.4**	**+1.1**
MVIF	**Mont Vial**	**4.55**	**287**	P		**Pn**	**03 18 27.4**	**+0.9**
ULC	**Ulcinj**	**4.56**	**98**	⇑*i*Pn		**Pn**	**03 18 27.1**	**+0.5**
ULC				*i* Sn		**Sn**	**03 19 19.8**	**+0.2**
PLE	**Pljevlja**	**4.59**	**81**	⇓*i*Pn		**Pn**	**03 18 27.5**	**+0.5**
PLE				*i* Sn		**Sn**	**03 19 20.6**	**+0.2**
RUDO	**Rudo**	**4.61**	**77**	*e*Pn		**Pn**	**03 18 27.6**	**+0.4**
FETA	**Feichten**	**4.62**	**339**	*i* Pn		**Pn**	**03 18 29.3**	**+1.8**
FETA	comp=E,53nm,0.4s,SNR=83			*i* Sn		**Sn**	**03 19 21.9**	**+0.7**
FETA	comp=E,105nm,0.9s			*i* Pn		**Pn**	**03 18 29.5**	**+1.5**
WTTA	**Wattenberg**	**4.65**	**347**					
WTTA	comp=E,20nm,0.2s,SNR=34			*e*Sn		**Sn**	**03 19 24.5**	**+2.4**
WTTA	comp=E,489nm,0.5s			*e*Pn		**Pn**	**03 18 29.2**	**+1.2**
WTTA	**Wattenberg**	**4.65**	**347**	*e*Pg		**Pg**	**03 18 45.4**	**-1.1**
WTTA				*i* Pn		**Pn**	**03 18 29.5**	**+1.5**
KOME	**Kolasin**	**4.66**	**87**	⇑*i*Sn		**Sn**	**03 19 22.1**	**-0.1**
KOME						**Pn**	**03 18 30.5**	**+2.3**
DAVOX	**Davos/Dischmat**	**4.67**	**331**	Pn				
DAVOX	comp=E,24nm,0.3s,baz=144,slow=15,SNR=179			Sn		**Sn**	**03 19 24.2**	**+1.6**
DAVOX	comp=E,28nm,0.3s,baz=277,slow=22,SNR=5.6			LR		LR	03 20 48.6	
BBLS	**Lazići**	**4.68**	**74**	*e*Pn		**Pn**	**03 18 29.2**	**+1.0**
BBLS				*e*Sn		**Sn**	**03 19 24.2**	**+1.6**
CALF	**Calern**	**4.68**	**285**	P		**Pn**	**03 18 29.1**	**+0.7**
ISO	**Isola**	**4.69**	**290**	P		**Pn**	**03 18 30.0**	**+1.6**
SQTA	**Sankt Quirin**	**4.69**	**343**	*i* Pn		**Pn**	**03 18 30.3**	**+1.8**
SQTA	comp=E,25nm,0.3s,SNR=106			*i* Sn		**Sn**	**03 19 23.6**	**+0.6**
WATA	**Walderalm**	**4.73**	**347**	*i* Pn		**Pn**	**03 18 31.0**	**+2.0**
WATA	comp=E,9.2nm,0.3s,SNR=48			*e*Sn		**Sn**	**03 19 29.1**	**+5.1**
PZZ	**Stroppo**	**4.74**	**294**	AML	AML			
PZZ	comp=E,232µm,1.3s			AML	AML			
PZZ	comp=N,398µm,0.7s			AML	AML			
SCTE	**Santa Cesarea**	**4.79**	**122**			**Pn**	**03 18 28.2**	**-1.5**
SCTE	**Santa Cesarea**	**4.79**	**122**	AML	AML			
SCTE	comp=E,1022µm,1.2s			AML	AML			
ARSA	**Arzberg**	**4.80**	**19**	*i* Pn		**Pn**	**03 18 29.5**	**-0.4**
ARSA	comp=N,20nm,0.3s,SNR=28			*e*Sn		**Sn**	**03 19 23.5**	**-2.1**
ARSA	**Arzberg**	**4.80**	**19**	*e*Pn		**Pn**	**03 18 29.4**	**-0.4**
MOTA	**Moosalm**	**4.83**	**343**	*i* Pn		**Pn**	**03 18 32.3**	**+2.0**
MOTA	comp=N,83nm,0.6s,SNR=62			*i* Sn		**Sn**	**03 19 30.9**	**+4.4**
BLJ	**Bijeljina**	**4.86**	**63**	⇑*i*Pn		**Pn**	**03 18 29.5**	**-1.1**
KOVH	**Kovagotottos**	**4.86**	**45**	P		**Pn**	**03 18 29.9**	**-0.7**
ZUGS	**Zugspitze, Sch**	**4.92**	**342**	*e*Pn		**Pn**	**03 18 33.4**	**+1.5**
ZUGS				*e*Sn		**Sn**	**03 19 33.4**	**+4.3**
LMR	**La Mourre**	**4.93**	**279**	*e*Pn		**Pn**	**03 18 31.3**	**-0.3**
LMR	comp=N,41nm,0.5s			*e*Sn		**Sn**	**03 19 24.9**	**-3.7**
CEL	**Celeste**	**4.93**	**154**			**Pn**	**03 18 29.7**	**-2.0**
IVA	**Berane**	**4.94**	**86**	*e*Pn		**Pn**	**03 18 32.8**	**+1.0**
IVA				*i* Sn		**Sn**	**03 19 29.0**	**-0.1**
TEKS	**Tekeris**	**4.95**	**66**	*e*Pn		**Pn**	**03 18 31.7**	**-0.2**
BIOA	**Bad Ischl, Aus**	**4.96**	**4**	*i* Pn		**Pn**	**03 18 32.4**	**+0.4**
BIOA	comp=N,14nm,0.2s,SNR=85			*i* Sn		**Sn**	**03 19 32.1**	**+2.6**
BIOA	comp=N,265nm,0.4s			*e*Pn		**Pn**	**03 18 34.0**	**+1.7**
PART	**Garmisch-Parte**	**4.97**	**344**	*e*Pn		**Pn**	**03 18 34.2**	**+1.5**
PVY	**Plav**	**5.00**	**89**	*i* Sn		**Sn**	**03 19 30.2**	**-0.4**
PVY				*e*Pn		**Pn**	**03 18 33.4**	**+0.7**
RJOB	**Jochberg**	**5.00**	**357**	*e*Pn		**Pn**	**03 18 34.4**	**+1.6**
SJES	**Sjenica**	**5.01**	**82**	*e*Sn		**Sn**	**03 19 31.8**	**+1.0**
SJES	comp=N,11nm,0.2s,SNR=53			*i* Pn		**Pn**	**03 18 35.4**	**+2.2**
RETA	**Reutte**	**5.04**	**341**	*e*Sn		**Sn**	**03 19 34.4**	**+2.8**
RETA	comp=N,118nm,0.5s			*e*Pn		**Pn**	**03 18 33.3**	**-0.1**
MBDF	**Montbardon**	**5.05**	**295**	*e*Sn		**Sn**	**03 19 28.9**	**-3.0**
MBDF	comp=N,148nm,0.6s			P		**Pn**	**03 18 34.4**	**+1.0**
TRIGF	**Trigance**	**5.05**	**284**	*e*Pn		**Pn**	**03 18 35.8**	**+2.1**
PLONS	**Plons/SG**	**5.08**	**329**	*e*Sn		**Sn**	**03 19 36.8**	**+4.3**
PLONS				*e*Pn		**Pn**	**03 18 36.1**	**+2.2**
OBER	**Oberstdorf**	**5.09**	**337**	*i* Pn		**Pn**	**03 18 36.6**	**+2.3**
DAVA	**Damuels**	**5.11**	**334**	*i* Sn		**Sn**	**03 19 38.4**	**+5.1**
DAVA	comp=N,22nm,0.3s,SNR=36			*e*Pn		**Pn**	**03 18 36.5**	**+2.2**
DAVA	comp=N,154nm,0.3s			*e*Sn		**Sn**	**03 19 38.2**	**+4.9**
DAVA	**Damuels**	**5.11**	**334**	P		**Pn**	**03 18 35.0**	**+0.8**
DAVA				P		**Pn**	**03 18 37.2**	**+2.9**
FLAF	**Flassans-sur-I**	**5.12**	**280**	Pn		**Pn**	**03 18 30.5**	**-4.1**
OGAG	**Argentiere**	**5.12**	**292**	⇑*i*Pn		**Pn**	**03 18 34.7**	**+0.1**
DIVS	**Divibare**	**5.14**	**72**	*e*Pn		**Pn**	**03 18 35.1**	**+0.5**
DIVS	**Divibare**	**5.14**	**72**	*e*Sn		**Sn**	**03 19 32.5**	**-1.5**
DIVS	**Divibare**	**5.14**	**72**	*e*Pn		**Pn**	**03 18 35.1**	**+0.2**
DIVS				*e*Sn		**Sn**	**03 19 34.0**	**-0.5**
MOA	**Molln**	**5.16**	**8**	*e*Pn		**Pn**	**03 18 34.8**	**0.0**
MOA				*e*Sn		**Sn**	**03 19 34.4**	**-0.2**
IVAS	**Ivanjica**	**5.17**	**78**	*e*Pn		**Pn**	**03 18 35.4**	**+0.5**
IVAS				*e*Sn		**Sn**	**03 19 34.4**	**-0.2**
EMBD	**Embd, Matterta**	**5.17**	**314**	P		**Pn**	**03 18 36.7**	**+1.7**
TIR	**Tirane**	**5.17**	**103**	P		**Pn**	**03 18 35.6**	**+0.7**
TIR				⇑S		**Sn**	**03 19 34.1**	**-0.5**
TIR	**Tirane**	**5.17**	**103**	P		**Pn**	**03 18 35.8**	**+0.7**
TIR	**Tirane**	**5.17**	**103**			**Pn**	**03 18 31.9**	**-3.0**
TIR	**Tirane**	**5.17**	**103**	P		**Pn**	**03 18 31.9**	**-3.0**
TIR	**Tirane**	**5.17**	**103**	*e*Pn		**Pn**	**03 18 35.8**	**+0.9**
TIR				*e*Sn		**Sn**	**03 19 34.3**	**-0.3**
OGDI	**Digne**	**5.20**	**288**	P		**Pn**	**03 18 38.4**	**+3.1**
MORH	**Mrgy, Hungar**	**5.22**	**47**	⇑P		**Pn**	**03 18 34.9**	**-0.8**
MORH	**Mrgy, Hungar**	**5.22**	**47**	P		**Pn**	**03 18 35.3**	**-0.3**
BNI	**Bardonecchia**	**5.24**	**298**	Pn		**Pn**	**03 18 34.5**	**-1.4**
BNI	**Bardonecchia**	**5.24**	**298**	P		**Pn**	**03 18 34.5**	**-1.4**
VLO	**Vlora**	**5.25**	**114**	P		**Pn**	**03 18 37.3**	**+1.3**
VLO	**Vlora**	**5.25**	**114**	Pn		**Pn**	**03 18 34.0**	**-2.0**
VLO	**Vlora**	**5.25**	**114**	P		**Pn**	**03 18 34.0**	**-2.0**
DIX	**Grande Dixence**	**5.31**	**311**	P		**Pn**	**03 18 38.1**	**+0.9**
TIH	**Tihany**	**5.34**	**37**	P		**Pn**	**03 18 36.7**	**-0.5**
FRGS	**Fruska Gora**	**5.36**	**61**	⇑P		**Pn**	**03 18 37.1**	**-0.4**
FRGS	**Fruska Gora**	**5.36**	**61**	⇑*i*Pn		**Pn**	**03 18 37.0**	**-0.5**
FRGS	**Fruska Gora**	**5.36**	**61**	*e*Pn		**Pn**	**03 18 37.5**	**0.0**
LPG	**La Plagne**	**5.39**	**303**	*e*Pn		**Pn**	**03 18 38.1**	**0.0**
LPG	comp=N,186nm,0.6s			*e*Sn		**Sn**	**03 19 37.6**	**-2.7**
UBR	**Ueberruh**	**5.39**	**337**	*e*Pn		**Pn**	**03 18 39.4**	**+1.4**
MPLH	**Magyarpolny**	**5.40**	**33**	P		**Pn**	**03 18 37.1**	**-0.9**
LPL	**La Plagne**	**5.41**	**303**	*e*Pn		**Pn**	**03 18 39.0**	**+0.6**
LPL	comp=N,290nm,0.9s			*e*Sn		**Sn**	**03 19 37.5**	**-3.3**
RONA	**Rosalia, Austr**	**5.42**	**23**	*i* Pn		**Pn**	**03 18 38.4**	**0.0**
RONA	comp=N,6.2nm,0.4s,SNR=28			*e*Sn		**Sn**	**03 19 42.2**	**+1.3**
TRUS	**Trudelj**	**5.46**	**72**	*e*Pn		**Pn**	**03 18 39.3**	**+0.4**
TRUS	comp=N,54nm,0.4s			*e*Sn		**Sn**	**03 19 38.2**	**-3.6**
ARTF	**Artigues**	**5.46**	**281**	P		**Pn**	**03 18 39.8**	**+0.9**
SOP	**Sopron**	**5.48**	**25**	P		**Pn**	**03 18 38.6**	**-0.6**
SOP				S		**Sn**	**03 19 41.2**	**-1.1**
PHP	**Peshkopia**	**5.49**	**99**	P		**Pn**	**03 18 40.8**	**+1.4**
CONA	**Conrad Observa**	**5.52**	**19**	*i* Pn		**Pn**	**03 18 39.5**	**-0.2**
CONA	comp=N,34nm,0.3s,SNR=43			*e*Sn		**Sn**	**03 19 41.2**	**-2.1**
CONA	comp=N,95nm,0.5s			P		**Pn**	**03 18 39.4**	**-0.3**
EGYH	**Egyhazaskeszo**	**5.52**	**31**	Pn		**Pn**	**03 18 38.6**	**-1.7**
SENIN	**Lac Senin/Sane**	**5.55**	**313**	P		Pn	03 18 45.0	+4.9
MLYF	**Mely**	**5.55**	**285**	P		**Pn**	**03 18 42.3**	**+1.9**
RSL	**Roselend**	**5.55**	**304**	P		**Pn**	**03 18 41.9**	**+1.5**
WILA	**Wila**	**5.56**	**329**	*e*Pn		**Pn**	**03 18 42.6**	**+2.0**
FUR	**Furstenfeldbru**	**5.58**	**347**	*e*Pn		**Pn**	**03 18 41.5**	**+0.5**
GRUS	**

SLE	**Schleitheim**	**6.01**	**328**	*P*	**Pn**	**03 18 46.8**	**+0.3**
SLE	**Schleitheim**	**6.01**	**328**	*e*Pn	**Pn**	**03 18 47.2**	**+0.6**
BALST	**Balsthal**	**6.01**	**322**	*P*	**Pn**	**03 18 46.8**	**+0.3**
BALST	**Balsthal**	**6.01**	**322**	*e*Pn	**Pn**	**03 18 47.4**	**+0.9**
BALST				*e*Sn	**Sn**	**03 20 01.4**	**+5.9**
KBN	**Korca**	**6.08**	**108**	*P*	**Pn**	**03 18 48.7**	**+1.3**
KBN	**Korca**	**6.08**	**108**			**03 18 43.8**	**-3.6**
KBN	**Korca**	**6.08**	**108**	*P*	**Pn**	**03 18 43.8**	**-3.6**
OGSM	**Saint Maurice**	**6.10**	**301**	*P*	**Pn**	**03 18 49.1**	**+1.4**
ZST	**Bratislava**	**6.11**	**25**	*e*P	**Pn**	**03 18 47.2**	**-0.6**
ZST				*e*		03 19 54.9	
ZST				MLR	MLR		
	comp=Z,600nm,1.5s						
ZST	**Bratislava**	**6.11**	**25**	*e*PN	**Pn**	**03 18 47.2**	**-0.6**
ZST				*e*PG	**Pg**	**03 19 14.5**	**+0.1**
ZST				*e*SN	**Sn**	**03 19 54.9**	**-2.8**
ZST				*e*SG	Sg	03 20 43.6	+10
ZST				*e*LG	Lg	03 20 56.9	
GEC2	**GERESS Array S**	**6.11**	**3**	Pn	**Pn**	**03 18 45.0**	**-2.9**
GEC2	**GERESS Array S**	**6.11**	**3**	*e*Pn	**Pn**	**03 18 47.0**	**-0.9**
GERES	**GERESS Array B**	**6.11**	**3**	Pn	**Pn**	**03 18 47.1**	**-0.9**
	comp=Z,2.9nm,0.3s,baz=175,slow=13,SNR=71						
GERES				Sn	**Sn**	**03 19 55.7**	**-2.3**
	comp=Z,23nm,0.3s,baz=169,slow=22,SNR=11						
	comp=Z,15nm,0.6s						
CKRC	**Cesky Krumlov**	**6.13**	**7**	*e*PN	**Pn**	**03 18 47.1**	**-1.0**
CKRC				*e*SN	**Sn**	**03 19 55.1**	**-3.1**
LSK	**Leskovik**	**6.15**	**112**	*P*	**Pn**	**03 18 49.6**	**+1.2**
SKO	**Skopje**	**6.17**	**94**	*i* Pn	**Pn**	**03 18 49.8**	**+1.2**
GIMEL	**St. Georges /**	**6.22**	**310**	*P*	**Pn**	**03 18 50.8**	**+1.4**
NORI	**Noerdlinger Ri**	**6.24**	**344**	*e*Pn	**Pn**	**03 18 49.3**	**-0.3**
BOURR	**Bourrignon**	**6.27**	**320**	*P*	**Pn**	**03 18 50.5**	**+0.4**
BUD	**Budapest**	**6.29**	**39**	*P*	**Pn**	**03 18 51.0**	**+0.8**
BOVS	**Bovan**	**6.29**	**79**	⇑*P*	**Pn**	**03 18 50.2**	**-0.1**
BOVS	**Bovan**	**6.29**	**79**	*e*Pn	**Pn**	**03 18 50.3**	**-0.1**
BOVS				*e*Sn	**Sn**	**03 19 59.5**	**-2.8**
FELD	**Feldberg im Sc**	**6.30**	**326**	*P*	**Pn**	**03 18 51.1**	**+0.6**
MODS	**Modra-Piesok**	**6.32**	**26**	*e*P	**Pn**	**03 18 49.5**	**-1.2**
MODS				*e*		03 20 00.0	
MODS				MLR	MLR		
	comp=Z,200nm,1.2s						
MODS	**Modra-Piesok**	**6.32**	**26**	*e*PN	**Pn**	**03 18 49.5**	**-1.2**
MODS				*e*SN	**Sn**	**03 20 00.0**	**-3.0**
MODS				*e*SG	Sg	03 20 53.8	+14
MODS				*e*LG	Lg	03 21 15.4	
NEST	**Nestorio**	**6.34**	**109**	*P*	**Pn**	**03 18 52.6**	**+1.5**
BRANT	**Les Verrieres**	**6.35**	**314**	*P*	**Pn**	**03 18 52.1**	**+0.9**
BARS	**Barje**	**6.35**	**86**	*e*Pn	**Pn**	**03 18 51.8**	**+0.6**
CABF	**La Chapelle**	**6.37**	**310**	*e*Pn	**Pn**	**03 18 50.0**	**-1.4**
CABF				*e*Sn	**Sn**	**03 20 00.2**	**-4.0**
	comp=Z,199nm,0.9s						
OG35	**Corcelles**	**6.37**	**304**	*P*	**Pn**	**03 18 52.2**	**+0.7**
KUBS	**Kucevo**	**6.39**	**72**	*e*Pn	**Pn**	**03 18 51.3**	**-0.4**
KHC	**Kasperske Hory**	**6.39**	**2**		**Pn**	**03 18 50.2**	**-1.5**
KHC	**Kasperske Hory**	**6.39**	**2**	*e*P	**Pn**	**03 18 51.5**	**-0.2**
KHC				*e*		03 20 02.5	
KHC				MLR	MLR		
	comp=Z,1μm,13.0s						
KHC	**Kasperske Hory**	**6.39**	**2**	*e*PN	**Pn**	**03 18 51.5**	**-0.2**
KHC				*e*SN	**Sn**	**03 20 02.5**	**-2.3**
KHC				AMS	AMS	03 21 30.0	
	comp=Z,1μm,13.0s						
KIZ	**Kirchzarten**	**6.40**	**326**	*P*	**Pn**	**03 18 51.7**	**0.0**
WET	**Wettzell**	**6.40**	**358**	*e*Pn	**Pn**	**03 18 50.2**	**-1.7**
CHMF	**Charmoille**	**6.46**	**316**	*P*	**Pn**	**03 18 52.6**	**-0.1**
SMOL	**Smolenice**	**6.49**	**26**	*e*P	**Pn**	**03 18 51.4**	**-1.7**
SMOL				*e*		03 20 02.2	
SMOL				MLR	MLR		
	comp=Z,100nm,1.1s						
MDVR	**Moldovita**	**6.50**	**69**	⇑*P*	**Pn**	**03 18 53.4**	**+0.1**
MDVR				⇑*S*	**Sn**	**03 20 06.0**	**-1.5**
VIVF	**Saint-Julien-l**	**6.51**	**292**	*e*Pn	**Pn**	**03 18 53.2**	**-0.1**
BFO	**Black Forest**	**6.54**	**330**	*P*n	**Pn**	**03 18 52.3**	**-1.5**
BFO	**Black Forest**	**6.54**	**330**	*P*	**Pn**	**03 18 52.3**	**-1.5**
BFO	**Black Forest**	**6.54**	**330**	*e*Pn	**Pn**	**03 18 54.1**	**+0.3**
RIVEL	**MONT RIVEL**	**6.54**	**310**	*P*	**Pn**	**03 18 54.3**	**+0.5**
JAN	**Janina**	**6.55**	**116**	*P*	**Pn**	**03 18 54.5**	**+0.5**
PRVS	**Prvonek**	**6.56**	**89**	*e*Pn	**Pn**	**03 18 54.8**	**+0.7**
PRVS				*e*Sn	**Sn**	**03 20 08.5**	**-0.5**
STU	**Stuttgart**	**6.64**	**337**	*e*Pn	**Pn**	**03 18 58.7**	**+3.6**
BOUC	**Bouclans**	**6.66**	**315**	*P*	**Pn**	**03 18 55.2**	**-0.2**
ZAGS	**Zajecar**	**6.69**	**78**	*e*Pn	**Pn**	**03 18 55.8**	**0.0**
ZAGS				*e*Sn	**Sn**	**03 20 08.9**	**-3.2**
KRUC	**Moravsky**	**6.70**	**18**	*e*PN	**Pn**	**03 18 54.8**	**-1.2**
KRUC				*e*SN	**Sn**	**03 20 07.1**	**-5.3**
BZS	**Buzias**	**6.71**	**62**	⇑*P*	**Pn**	**03 18 55.9**	**-0.1**
BZS	**Buzias**	**6.71**	**62**	*e*Pn	**Pn**	**03 18 55.9**	**-0.1**
BZS				*e*Sn	**Sn**	**03 20 11.0**	**-1.5**
SSB	**Saint Sauveur**	**6.73**	**295**	Pn	**Pn**	**03 18 54.6**	**-1.7**
SSB	**Saint Sauveur**	**6.73**	**295**	*P*	**Pn**	**03 18 54.6**	**-1.7**
OPP	**Oppenau**	**6.73**	**330**	*P*	**Pn**	**03 18 57.0**	**+0.6**
TREC	**Trest**	**6.75**	**13**	*e*P	**Pn**	**03 18 56.3**	**-0.2**
TREC				*e*		03 20 09.8	
TREC				MLR	MLR		
	comp=Z,1μm,9.1s						
TREC	**Trest**	**6.75**	**13**	*e*PN	**Pn**	**03 18 56.3**	**-0.2**
TREC				*e*SN	**Sn**	**03 20 09.8**	**-3.6**
TREC				AMS	AMS	03 21 40.0	
	comp=Z,1μm,9.1s						
HINF	**Hinteralfeld**	**6.76**	**321**	*e*Pn	**Pn**	**03 18 55.7**	**-1.0**
HINF				*e*Sn	**Sn**	**03 20 09.3**	**-4.4**
	comp=Z,282nm,0.7s						
STIP	**Stip**	**6.77**	**96**	*i* Pn	**Pn**	**03 18 59.4**	**+2.5**
RONF	**Ronchamp**	**6.78**	**319**	*P*	**Pn**	**03 18 57.0**	**0.0**
BOSS	**Bosilegrad**	**6.86**	**89**	*e*Pn	**Pn**	**03 18 58.7**	**+0.5**
BOSS				*e*Sn	**Sn**	**03 20 14.9**	**-1.5**
JAVC	**Velka Javorina**	**6.87**	**26**	*e*PN	**Pn**	**03 18 58.2**	**-0.1**
KZN	**Kozani**	**6.89**	**108**	*P*	**Pn**	**03 18 59.1**	**+0.5**
TSLK	**Tsoukalades, L**	**6.89**	**122**	*P*	**Pn**	**03 19 00.3**	**+1.8**
LKD2	**Lefkada island**	**6.91**	**122**	*P*	**Pn**	**03 19 00.4**	**+1.5**
ECH	**Echery**	**6.92**	**324**		**Pn**	**03 18 57.5**	**-1.4**
ECH	**Echery**	**6.92**	**324**	*P*	**Pn**	**03 18 57.5**	**-1.4**
ECH	**Echery**	**6.92**	**324**	*P*	**Pn**	**03 18 58.6**	**-0.3**
LASF	**Ste Croix**	**6.92**	**284**	*e*Pn	**Pn**	**03 18 58.4**	**-0.6**
ZAPS	**Zavoj**	**6.95**	**82**	*e*Pn	**Pn**	**03 19 00.1**	**+0.7**
ZAPS				*e*Sn	**Sn**	**03 20 17.0**	**-1.5**
VRAC	**Vranov**	**6.98**	**19**	Pn	**Pn**	**03 18 58.6**	**-1.2**
	comp=Z,1.9nm,0.3s,baz=204,slow=14,SNR=8.8						
VRAC				Sn	**Sn**	**03 20 15.0**	**-4.1**
	comp=Z,2.7nm,0.3s,baz=131,slow=20,SNR=4.2						
	comp=Z,4.3nm,0.3s						
VRAC	**Vranov**	**6.98**	**19**	*e*PN	**Pn**	**03 18 58.6**	**-1.2**
VRAC				*e*SN	**Sn**	**03 20 13.7**	**-5.5**
VYHS	**Vyhne**	**6.98**	**33**	*e*P	**Pn**	**03 18 59.8**	**0.0**
VYHS				*e*		03 20 18.0	
VYHS				MLR	MLR		
	comp=Z,200nm,1.5s						
VYHS	**Vyhne**	**6.98**	**33**	*e*PN	**Pn**	**03 18 59.8**	**0.0**
VYHS				*e*SN	**Sn**	**03 20 18.0**	**-1.2**
VYHS				*e*LG	Lg	03 21 39.9	
NYDR	**Nydri-Lefkada**	**6.98**	**123**	*P*	**Pn**	**03 19 01.1**	**+1.3**
WLS	**Welschbruch**	**6.99**	**326**	*P*	**Pn**	**03 19 00.4**	**+0.5**
BLKB	**Belogradchik**	**7.00**	**80**	⇑*P*	**Pn**	**03 19 00.7**	**+0.7**
BLKB				⇑*S*	**Sn**	**03 20 17.9**	**-1.7**
PSZ	**Piszkesteto**	**7.01**	**40**	⇑*P*	**Pn**	**03 19 00.7**	**+0.5**
PSZ	**Piszkesteto**	**7.01**	**40**	Pn	**Pn**	**03 18 58.6**	**-1.6**
PSZ	**Piszkesteto**	**7.01**	**40**	*P*	**Pn**	**03 18 58.6**	**-1.6**
PSZ	**Piszkesteto**	**7.01**	**40**	*P*	**Pn**	**03 19 00.2**	**0.0**
SIRR	**Siria**	**7.01**	**57**	⇑*P*	**Pn**	**03 19 00.6**	**+0.4**
HERR	**Herculane**	**7.01**	**69**	⇓*P*	**Pn**	**03 19 00.5**	**+0.3**
HERR				⇑*S*	**Sn**	**03 20 18.8**	**-1.2**
EVGI	**Lefkada island**	**7.01**	**123**	*P*	**Pn**	**03 19 01.5**	**+1.2**
CDF	**Champ du Feu**	**7.02**	**326**	*e*Pn	**Pn**	**03 18 59.7**	**-0.7**
CDF				*e*Sn	**Sn**	**03 20 16.1**	**-4.2**
	comp=Z,183nm,0.5s						
DJES	**Djerdap**	**7.03**	**71**	⇓*P*	**Pn**	**03 19 01.3**	**+0.8**
GRFO	**Grafenberg**	**7.08**	**350**	Pn	**Pn**	**03 18 59.7**	**-1.4**
GRFO	**Grafenberg**	**7.08**	**350**	*P*	**Pn**	**03 18 59.7**	**-1.4**
GRA1	**Grafenberg Arr**	**7.08**	**350**		**Pn**	**03 18 59.8**	**-1.4**
GRF	**Grafenberg Arr**	**7.08**	**350**	*P*	**Pn**	**03 18 59.8**	**-1.4**
GRF	**Grafenberg Arr**	**7.08**	**350**	*e*Pn	**Pn**	**03 19 05.2**	**+4.0**
HAU	**Haudompre**	**7.13**	**320**	*e*Pn	**Pn**	**03 19 00.6**	**-1.2**
HAU				*e*Sn	**Sn**	**03 20 17.8**	**-5.1**
	comp=Z,355nm,0.6s						
VAY	**Valandovo**	**7.13**	**98**	*i* Pn	**Pn**	**03 19 02.5**	**+0.7**
PUNG	**Punghina**	**7.25**	**74**	⇑*P*	**Pn**	**03 19 03.3**	**-0.2**
VLS	**Valsamata**	**7.26**	**126**	*P*	**Pn**	**03 19 05.0**	**+1.4**
MAHO	**Mahon**	**7.29**	**250**	Pn	**Pn**	**03 19 02.6**	**-1.4**
PRU	**Pruhonice**	**7.31**	**7**	*e*P	**Pn**	**03 19 03.3**	**-0.9**
PRU				*e*		03 20 23.6	
PRU				MLR	MLR		
	comp=Z,700nm,16.9s						
PRU	**Pruhonice**	**7.31**	**7**	*e*PN	**Pn**	**03 19 03.3**	**-0.9**
PRU				*e*SN	**Sn**	**03 20 23.6**	**-3.6**
PRU				AMS	AMS	03 22 00.0	
	comp=Z,700nm,16.9s						
THL	**Klokotos Trika**	**7.38**	**113**	*P*	**Pn**	**03 19 06.2**	**+0.9**
KKB	**Krupnik**	**7.39**	**93**	*e*P	**Pn**	**03 19 06.8**	**+1.4**
GZR	**Gura Zlata**	**7.40**	**66**	⇑*P*	**Pn**	**03 19 06.2**	**+0.6**
VTS	**Vitosha**	**7.41**	**88**	⇓*P*	**Pn**	**03 19 06.7**	**+0.9**
VTS				⇑*S*	**Sn**	**03 20 28.6**	**-1.3**
VTS	**Vitosha**	**7.41**	**88**	*P*n	**Pn**	**03 19 05.2**	**-0.6**
VTS	**Vitosha**	**7.41**	**88**	*P*	**Pn**	**03 19 05.2**	**-0.6**
VTS	**Vitosha**	**7.41**	**88**	*e*Pn	**Pn**	**03 19 06.7**	**+0.9**
VTS				*e*Sn	**Sn**	**03 20 27.9**	**-2.1**
VTS	**Vitosha**	**7.41**	**88**	*e*P	**Pn**	**03 19 06.3**	**+0.5**
LIT	**Litokhoron**	**7.48**	**108**	Pn	**Pn**	**03 19 05.2**	**-1.4**
LIT	**Litokhoron**	**7.48**	**108**	*P*	**Pn**	**03 19 05.2**	**-1.4**
SRE	**Strehaia**	**7.51**	**72**	⇑*P*	**Pn**	**03 19 08.1**	**+1.1**
PVO	**Paravola**	**7.56**	**120**	*P*	**Pn**	**03 19 09.6**	**+1.8**
EVR	**Evrytania**	**7.58**	**117**	*P*	**Pn**	**03 19 09.8**	**+1.8**
KEST	**Kesra**	**7.61**	**204**	Pn	**Pn**	**03 19 12.8**	**+4.3**
	comp=Z,3.2nm,0.3s,baz=325,slow=3.6,SNR=38						
KEST				LR	LR	03 22 15.4	
	comp=Z,617nm,20.0s,baz=330,slow=39						
DEV	**Deva**	**7.64**	**62**	⇑*P*	**Pn**	**03 19 09.6**	**+0.7**
MORC	**Moravsky Berou**	**7.65**	**22**	⇓*P*	**Pn**	**03 19 09.7**	**+0.6**
MORC	**Moravsky Berou**	**7.65**	**22**	Pn	**Pn**	**03 19 07.8**	**-1.2**
MORC	**Moravsky Berou**	**7.65**	**22**	*P*	**Pn**	**03 19 07.8**	**-1.2**
MORC	**Moravsky Berou**	**7.65**	**22**	*e*PN	**Pn**	**03 19 08.7**	**-0.3**
MORC				*e*SN	**Sn**	**03 20 37.9**	**+2.1**
KECS	**Kecovo**	**7.69**	**39**	*e*P	**Pn**	**03 19 12.5**	**+3.0**
KECS	**Kecovo**	**7.69**	**39**	*e*PN	**Pn**	**03 19 12.5**	**+3.0**
SMF	**Signal de Mont**	**7.71**	**304**	*e*Pn	**Pn**	**03 19 08.6**	**-1.2**
SMF				*e*Sn	**Sn**	**03 20 31.9**	**-5.3**
	comp=Z,121nm,0.6s						
MAKR	**Makrakomi, Fth**	**7.74**	**116**	*P*	**Pn**	**03 19 11.8**	**+1.6**
KRLC	**Kraliky**	**7.74**	**17**	*e*P	**Pn**	**03 19 09.9**	**-0.4**
KRLC				*e*		03 20 33.0	
KRLC				MLR	MLR		
	comp=Z,1μm,9.4s						
KRLC	**Kraliky**	**7.74**	**17**	*e*PN	**Pn**	**03 19 09.9**	**-0.4**
KRLC				*e*SN	**Sn**	**03 20 33.0**	**-5.0**
KRLC				AMS	AMS	03 22 20.0	
	comp=Z,1μm,9.4s						
LANS	**Liptovska Anna**	**7.76**	**32**	*e*P	**Pn**	**03 19 12.3**	**+1.8**
LANS				*e*		03 20 41.8	
LANS	**Liptovska Anna**	**7.76**	**32**	*e*PN	**Pn**	**03 19 12.2**	**+1.8**
LANS				*e*SN	**Sn**	**03 20 41.8**	**+3.4**
LANS				*e*LG	Lg	03 21 43.2	
PAGF	**Fort de Pagny**	**7.81**	**321**	*e*Pn	**Pn**	**03 19 10.4**	**-0.8**
PAGF				*e*Sn	**Sn**	**03 20 34.6**	**-5.0**
	comp=Z,321nm,1.0s						
ANX	**Ano Chora**	**7.83**	**119**	*P*	**Pn**	**03 19 13.0**	**+1.5**
FILF	**Fillols**	**7.83**	**272**	*P*	**Pn**	**03 19 13.0**	**+1.4**
PVCC	**Panska Ves**	**7.84**	**6**	*e*P	**Pn**	**03 19 12.1**	**+0.5**
PVCC				*e*		03 20 36.5	
PVCC				MLR	MLR		
	comp=Z,500nm,15.1s						
PVCC	**Panska Ves**	**7.84**	**6**	*e*PN	**Pn**	**03 19 12.1**	**+0.5**
PVCC				*e*SN	**Sn**	**03 20 36.5**	**-3.9**
PVCC				AMS	AMS	03 22 40.0	
	comp=Z,500nm,15.1s						
OKC	**Ostrava-Krasne**	**7.88**	**24**	*e*SN	**Sn**	**03 20 36.6**	**-4.7**
OKC				AMS	AMS	03 23 30.0	
	comp=Z,1μm,7.4s						
DRGR		**7.89**	**56**	⇑*P*	**Pn**	**03 19 13.3**	**+0.9**
DRGR		**7.89**	**56**	*e*Pn	**Pn**	**03 19 13.7**	**+1.3**
SFTF	**Sexfontaines**	**7.91**	**316**	*e*Pn	**Pn**	**03 19 11.2**	**-1.3**
SFTF				*e*Sn	**Sn**	**03 20 36.8**	**-5.2**
	comp=Z,118nm,0.8s						
DPC	**Dobruska-Polom**	**7.91**	**15**	*e*P	**Pn**	**03 19 11.6**	**-0.9**
DPC				MLR	MLR		
	comp=Z,1μm,14.2s						
DPC	**Dobruska-Polom**	**7.91**	**15**	*e*PN	**Pn**	**03 19 11.6**	**-0.9**
DPC				AMS	AMS	03 22 20.0	
	comp=Z,1μm,14.2s						
EFP	**Efpalio**	**7.91**	**120**	*P*	**Pn**	**03 19 15.0**	**+2.4**
MMB	**Musomiste**	**7.92**	**95**	*e*P	**Pn**	**03 19 13.6**	**+0.9**
SRS	**Serrai**	**7.93**	**98**	*e*Pn	**Pn**	**03 19 13.8**	**+1.0**
SRS				*e*Sn	**Sn**	**03 20 39.7**	**-2.9**
MOX	**Moxa**	**7.98**	**353**	*e*Pn	**Pn**	**03 19 13.2**	**-0.3**
LOR	**Lormes**	**8.01**	**308**	*e*Pn	**Pn**	**03 19 12.9**	**-0.9**
	baz=126						
LOR				*e*Sn	**Sn**	**03 20 39.1**	**-5.3**
	comp=Z,75nm,0.5s						
LOR	**Lormes**	**8.01**	**308**	*P*	**Pn**	**03 19 13.6**	**-0.2**
UPC	**Upice**	**8.01**	**13**	*e*P	**Pn**	**03 19 13.5**	**-0.3**
UPC				MLR	MLR		
	comp=Z,1μm,10.3s						
UPC	**Upice**	**8.01**	**13**	*e*PN	**Pn**	**03 19 13.5**	**-0.3**
UPC				AMS	AMS	03 22 30.0	
	comp=Z,1μm,10.3s						
SERG	**Sergoula**	**8.02**	**120**	*P*	**Pn**	**03 19 16.4**	**+2.3**
MTLF	**Montolieu**	**8.05**	**278**	*e*Pn	**Pn**	**03 19 13.4**	**-1.1**
LAKA	**Lakka**	**8.07**	**121**	*P*	**Pn**	**03 19 16.7**	**+1.9**
AVF	**Avril sur Loir**	**8.08**	**303**	*e*Pn	**Pn**	**03 19 13.6**	**-1.2**
AVF				*e*Sn	**Sn**	**03 20 41.0**	**-5.2**
	comp=Z,44nm,0.7s						
DRO	**Drossia**	**8.08**	**123**	*P*	**Pn**	**03 19 17.1**	**+2.2**
LOT	**Lotru**	**8.09**	**67**	⇑*P*	**Pn**	**03 19 15.6**	**+0.6**
OSTC	**Ostas**	**8.09**	**14**	*e*PN	**Pn**	**03 19 14.5**	**-0.5**
OSTC				AMS	AMS	03 22 20.0	
	comp=Z,1μm,12.3s						
MEZF	**Maizieres J'vi**	**8.10**	**318**	*e*Pn	**Pn**	**03 19 14.2**	**-0.9**
	baz=141						
MEZF				*e*Sn	**Sn**	**03 20 41.1**	**-5.5**
	comp=Z,71nm,0.5s						
PGB	**Panagyurishte**	**8.10**	**88**	*e*P	**Pn**	**03 19 16.5**	**+1.3**
SSF	**Saint Saulge**	**8.11**	**305**	*e*Pn	**Pn**	**03 19 13.3**	**-2.0**
SSF				*e*Sn	**Sn**	**03 20 41.5**	**-5.5**
	comp=Z,50nm,0.5s						
ABH	**Alteburg**	**8.13**	**333**	*P*	**Pn**	**03 19 16.8**	**+1.2**
SAVF	**Savonnieres en**	**8.14**	**319**	*e*Pn	**Pn**	**03 19 14.9**	**-0.7**
SAVF				*e*Sn	**Sn**	**03 20 42.1**	**-5.6**
	comp=Z,70nm,0.6s						
BRG	**Berggiesshubel**	**8.15**	**3**	*e*Pn	**Pn**	**03 19 15.9**	**+0.1**
BRG				Amp		03 19 18.9	
	comp=Z,9.7nm,0.5s						
BRG				*ex*	x	03 20 42.5	
BRG				Amp		03 20 57.7	
	comp=Z,36nm,0.7s						
BRG				Amp		03 22 53.0	
	comp=N,0.6nm,11.4s						
BRG				Amp		03 22 56.0	
	comp=E,0.8nm,6.1s						
BRG				Amp		03 22 56.0	
	comp=Z,0.7nm,14.9s						
BRG	**Berggiesshubel**	**8.15**	**3**	*e*P	**Pn**	**03 19 15.8**	**+0.1**
BRG				*e*		03 20 42.5	
BRG				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BRG				pmax	pmax		
	comp=Z,36nm,0.7s						
BRG				MLR	MLR		
	comp=N,571nm,11.4s						
BRG				MLR	MLR		
	comp=E,804nm,6.1s						
BRG				MLR	MLR		
	comp=Z,672nm,14.9s						
TNS	**Taunus Mts**	**8.16**	**338**	*e*Pn	**Pn**	**03 19 17.0**	**+1.0**
MESR	**Meseseni**	**8.21**	**54**	⇑*P*	**Pn**	**03 19 18.4**	**+1.8**
BGF	**Bois d'Agland**	**8.30**	**301**	*e*Pn	**Pn**	**03 19 16.2**	**-1.6**
BGF				*e*Sn	**Sn**	**03 20 45.8**	**-5.8**
	comp=Z,69nm,0.7s						
KLV	**Kalavryta, Ach**	**8.30**	**121**	*P*	**Pn**	**03 19 19.9**	**+2.0**
NIE	**Niedzica**	**8.30**	**34**	*e*P	**Pn**	**03 19 21.4**	**+3.5**
NIE				*e*S	**Sn**	**03 20 58.0**	**+6.2**
CAF	**Calviac**	**8.33**	**289**	*e*Pn	**Pn**	**03 19 17.5**	**-0.8**
KSP	**Ksiaz**	**8.38**	**14**	*e*P	**Pn**	**03 19 19.3**	**+0.4**
KSP				*e*S	**Sn**	**03 20 51.0**	**-2.5**
CJR	**Cluj-Napoca**	**8.41**	**58**	⇑*P*	**Pn**	**03 19 20.7**	**+1.3**
CRVS	**Cervenica-Dubn**	**8.44**	**40**	*e*P	**Pn**	**03 19 22.9**	**+3.1**
CRVS	**Cervenica-Dubn**	**8.44**	**40**	*e*PN	**Pn**	**03 19 22.9**	**+3.1**
WLF	**Walferdange**	**8.46**	**327**	Pn	**Pn**	**03 19 18.9**	**-1.2**
WLF	**Walferdange**	**8.46**	**327**	*P*	**Pn**	**03 19 18.9**	**-1.2**
WLF	**Walferdange**	**8.46**	**327**	*dP*	**Pn**	**03 19 21.4**	**+1.3**
WLF				*dS*	**Sn**	**03 20 54.6**	**-1.0**
WLF	**Walferdange**	**8.46**	**327**	*e*Pn	**Pn**	**03 19 21.3**	**+1.3**
PLD	**Plovdiv**	**8.55**	**90**	*e*Pn	**Pn**	**03 19 22.8**	**+1.5**
PLD	**Plovdiv**	**8.55**	**90**	*e*P	**Pn**	**03 19 21.8**	**+0.5**
CLL	**Collm**	**8.57**	**359**	Pn	**Pn**	**03 19 19.6**	**-1.9**
CLL	**Collm**	**8.57**	**359**	*e*P	**Pn**	**03 19 21.0**	**-0.5**
CLL				*e*		03 20 49.0	
CLL	**Collm**	**8.57**	**359**	*e*Pn	**Pn**	**03 19 21.0**	**-0.5**
CLL				*ex*	x	03 19 35.0	
CLL				*e*Pg	**Pg**	**03 19 57.0**	**-4.4**
CLL				*e*Sn	Sn	03 20 49.0	-9.2
CLL				*ex*	x	03 20 56.0	
CLL				*ex*	x	03 21 06.0	
CLL				*e*Sg	**Sg**	**03 21 46.0**	**-6.2**
	comp=Z,162nm,1.2s						
CLL				Lm	MLR	03 22 00.0	
	comp=N,300nm,20.5s						
CLL				Lm	MLR	03 22 00.0	
	comp=E,500nm,18.0s						
CLL				*e*Lmax		03 22 21.0	
TCF	**Toulx Ste Croi**	**8.60**	**298**	*e*Pn	**Pn**	**03 19 21.3**	**-0.8**
TCF				*e*Sn	**Sn**	**03 20 53.1**	**-6.0**
	comp=E,41nm,0.9s						
RZN	**Rozhen**	**8.63**	**93**	*e*P	**Pn**	**03 19 23.3**	**+0.8**
ARR	**Arges**	**8.65**	**68**	⇑*P*	**Pn**	**03 19 23.2**	**+0.4**
UZH	**Uzhgorod**	**8.68**	**44**	*e*P	**Pn**	**03 19 23.0**	**0.0**
UZH				*e*S	**Sn**	**03 21 01.0**	**+0.2**
UZH				MLR	MLR		
	comp=Z,150nm,11.0s						
ITM	**Ithomi**	**8.71**	**127**	*P*n	**Pn**	**03 19 22.9**	**-0.6**
HYF	**Humbligny**	**8.73**	**305**	*e*Pn	**Pn**	**03 19 22.5**	**-1.3**
HYF				*e*Sn	**Sn**	**03 20 56.0**	**-6.2**
HUMR	**Humele**	**8.74**	**74**	⇑*P*	**Pn**	**03 19 23.6**	**-0.4**
OJC	**Ojcow**	**8.76**	**29**	*e*P	**Pn**	**03 19 25.8**	**+1.7**
OJC				*e*S	**Sn**	**03 21 06.1**	**+3.2**
RJF	**Les Rejaudoux**	**8.79**	**291**	*e*Pn	**Pn**	**03 19 23.1**	**-1.5**
MONQ	**Montcuq**	**8.86**	**285**	*P*	**Pn**	**03 19 26.8**	**+1.3**
KOLS	**Kolonicke sedl**	**8.86**	**43**	*e*P	Pn	03 19 31.5	+6.0
KOLS				*e*		03 20 59.8	
KOLS	**Kolonicke sedl**	**8.86**	**43**	*e*PN	Pn	03 19 31.5	+6.0
KOLS				*e*PG	**Pg**	**03 20 08.5**	**+1.5**
KOLS				*e*SN	**Sn**	**03 20 59.8**	**-5.6**
VOIR		**8.96**	**68**	⇑*P*	**Pn**	**03 19 28.2**	**+1.2**
BHOU	**Houvegnez**	**9.07**	**329**	*dP*	**Pn**	**03 19 30.0**	**+1.5**
DIM	**Dimitrovgrad**	**9.17**	**90**	*e*P	**Pn**	**03 19 30.7**	**+1.0**
BTNL	**Ternell**	**9.22**	**331**	*dx*	x	03 19 40.2	
RCHB	**Rochefort**	**9.22**	**326**	*dP*	**Pn**	**03 19 32.0**	**+1.5**
RCHB				*dS*	**Sn**	**03 21 10.4**	**-3.8**
LFF	**La Frestale**	**9.26**	**288**	*e*Pn	**Pn**	**03 19 29.8**	**-1.2**
DOPR	**Dopca**	**9.32**	**66**	⇑*P*	**

MNK *i* P **Pn** **03 20 50.4 -2.0**
comp=Z,11nm,0.9s,baz=225
MNK *i* PP **P** **03 20 58.4 +1.1**
MNK *i* PPP PPP 03 21 06.8
MNK *i* S **Sn** **03 23 39.6 -1.3**
MNK *i* SS **S** **03 24 04.7 +6.9**
MNK *i* LQ LQ 03 25 22.0
MNK *i* LR LR 03 26 35.5
MNK *i* LRM MLR 03 27 23.8
comp=E,90nm,14.6s
MNK *i* LRM MLR 03 27 38.0
comp=Z,598nm,14.6s
ISAL Salakas 15.34 29 *e*P **Pn** **03 20 53.5 -0.4**
ISAL IAmb IAmb 03 21 05.3
comp=Z,22nm,1.3s
POLO Lamas de Olo 15.64 272 *ep*P **P** **03 21 03.6 +1.4**
BR131 Keskin Array S 15.68 94 **Pn** **03 20 55.3 -3.3**
BR131 Keskin Array S 15.68 94 *i* P **Pn** **03 20 57.6 -1.0**
BRTR Keskin Array B 15.68 94 Pn **Pn** **03 20 59.4 +0.8**
comp=Z,0.1nm,0.3s,baz=278,slow=12,SNR=5.8
comp=Z,1.5nm,0.7s
BRTR Keskin Array B 15.68 94 P **Pn** **03 20 55.5 -3.1**
BRTR Keskin Array B 15.68 94 *i* P **Pn** **03 21 00.5 +1.9**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
MTE Manteigas 15.69 268 P **Pn** **03 20 57.3 -1.3**
MTE IAmb IAmb 03 21 05.0
comp=Z,26nm,1.2s
MTE Manteigas 15.69 268 *ep*P **P** **03 21 04.0 +1.3**
MTE *e*LQ LQ 03 23 15.9
MTE *e*LR LR 03 24 16.7
comp=Z,360nm,16.0s
PMRV Marv??o 15.86 265 *e*LQ LQ 03 23 11.7
PMRV *e*LR LR 03 24 19.8
comp=Z,298nm,18.0s
PGAV Gavieira, Arco 15.88 274 *ep*P **pP** **03 21 11.0 +3.1**
PGAV *e*LQ LQ 03 23 40.8
PGAV *e*LR LR 03 24 17.4
comp=Z,300nm,16.0s
EKA Eskdalemuir Ar 16.48 325 Pn **P** **03 21 10.3 -1.0**
baz=138,slow=14
comp=Z,1.2nm,0.4s
PVAQ Vaqueiros 16.85 259 *e*LR LR 03 24 42.1
comp=Z,24nm,22.0s
KONO Kongsberg 17.07 354 *ce*P **Pn** **03 21 16.5 +0.5**
KONO pmax pmax
comp=Z,26nm,2.5s
MDT Midelt 17.18 241 LR LR 03 26 56.1
comp=Z,92nm,18.2s,baz=47,slow=34
MTSE Matsula 17.31 19 *e*P **Pn** **03 21 18.6 -0.4**
HFS Hagfors 17.42 1 Pn **P** **03 21 21.2 -0.5**
comp=Z,0.2nm,0.3s,baz=178,slow=15,SNR=7.7
HFS LR LR 03 28 24.9
comp=Z,97nm,20.4s,baz=188,slow=38
comp=Z,2.6nm,0.6s
BNN Bunyan 17.58 95 P **P** **03 21 23.9 +0.1**
BNN IAmb IAmb 03 21 38.8
comp=Z,36nm,1.0s
ANN Anapa 17.62 75 *e*P **Pn** **03 21 19.5 -3.5**
ANN *e*S **Sn** **03 24 34.6 -4.6**
ANN pmax pmax
comp=Z,74nm,1.5s
ANN MLR MLR
comp=N,269nm,11.0s
ANN MLR MLR
comp=Z,235nm,12.0s
ANN MLR MLR
comp=E,224nm,12.0s
VSU Vasula 17.87 24 *e*P **Pn** **03 21 25.1 -0.9**
NC602 NORSAR Array S 18.05 357 P **P** **03 21 28.5 -0.1**
NAO01 NORSAR Array S 18.18 356 P **Pn** **03 21 28.2 -1.6**
NAO01 IAmb IAmb 03 21 45.7
comp=Z,28nm,1.1s
NB2 NORSAR Suburra 18.36 357 P **P** **03 21 33.1 +1.0**
comp=Z,15nm,1.4s,baz=175,slow=11
NOA NORSAR Array B 18.36 357 P **P** **03 21 32.8 +0.7**
baz=175,slow=12,SNR=14
NOA LR LR 03 29 15.1
comp=Z,125nm,18.6s,baz=180,slow=39
comp=Z,2.4nm,0.8s
NB201 NORSAR Array S 18.37 357 Pn **Pn** **03 21 28.5 -3.6**
NB201 IAmb IAmb 03 22 00.3
comp=Z,77nm,1.5s
NC405 NORSAR Array S 18.42 358 **P** **03 21 31.9 -0.8**
NC405 IAmb IAmb 03 21 43.2
comp=Z,35nm,0.8s
NC303 NORSAR Array S 18.54 357 P **P** **03 21 32.9 -1.1**
NC204 NORSAR Array S 18.62 356 P **P** **03 21 33.6 -1.3**
NC204 IAmb IAmb 03 21 42.4
comp=Z,26nm,0.9s
MEF Metsahovi 18.79 18 *e*P **P** **03 21 36.7 -0.1**
RAF Rauma 19.03 13 *e*P **Pn** **03 21 41.8 +1.7**
SOC Sochi 19.35 78 *e*P **P** **03 21 42.5 -0.5**
SOC *e* 03 25 20.2
SOC pmax pmax
comp=Z,8.0nm,0.6s
SOC MLR MLR
comp=Z,88nm,13.0s
VSR Storozhevoye 19.57 55 *e*P **P** **03 21 43.2 -2.1**
VSR pmax pmax
comp=Z,20nm,1.3s
OBN Obninsk 19.61 43 P **P** **03 21 46.3 +0.6**
comp=Z,0.7nm,0.3s,baz=75,slow=6.1,SNR=12
OBN LR LR 03 29 40.2
comp=Z,36nm,19.4s,baz=200,slow=38
comp=Z,5.8nm,0.7s
OBN Obninsk 19.61 43 P **P** **03 21 44.4 -1.4**
OBN IAmb IAmb 03 21 48.9
comp=Z,43nm,1.1s
OBN Obninsk 19.61 43 *e*P **P** **03 21 44.6 -1.2**
OBN pmax pmax
comp=Z,61nm,1.7s
OBN MLR MLR
comp=Z,465nm,10.0s
VORR Voronezh 19.72 54 *e*P **P** **03 21 47.2 +0.2**
VORR pmax pmax
comp=Z,60nm,0.6s
LPSR Galich'ya Gora 19.84 51 *e*P **P** **03 21 45.9 -2.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
MMAI Mount Meron Ar 20.00 112 P **Pn** **03 21 51.7 -0.3**
comp=Z,1.4nm,0.3s,baz=313,slow=11,SNR=13
MMAI LR LR 03 31 19.3
comp=Z,116nm,18.7s,baz=140,slow=42
comp=Z,5.6nm,0.6s
FINES FINESS Array B 20.26 18 P **P** **03 21 53.0 +0.2**
comp=Z,8.8nm,0.7s,baz=193,slow=7.8,SNR=24
FINES LR LR 03 30 09.1
comp=Z,155nm,19.4s,baz=210,slow=38
comp=Z,8.8nm,0.7s
FINES FINESS Array B 20.26 18 P **P** **03 21 51.7 -1.1**
FINES FINESS Array B 20.26 18 P **P** **03 21 53.0 +0.2**
FIA1 FINESS Array S 20.26 18 P **P** **03 21 52.0 -0.8**
FIA1 IAmb IAmb 03 21 59.7
comp=Z,24nm,0.8s
MOS Moscow 20.45 42 *e*P **P** **03 21 53.4 -1.4**
MOS *e* 03 22 10.8
MOS pmax pmax
comp=Z,100nm,1.2s
MOS pmax pmax
comp=Z,73nm,1.1s
MOS MLR MLR
comp=Z,600nm,12.0s
MOS MLR MLR
comp=E,400nm,11.0s
KOPT Kop Dagi 20.64 88 P **P** **03 21 55.1 -2.3**
KOPT IAmb IAmb 03 22 08.3
comp=Z,32nm,1.1s
TAM Tamanrasset 20.89 200 P **P** **03 21 56.5 -3.6**
TAM Tamanrasset 20.89 200 P **P** **03 21 56.5 -3.6**
TAM pmax pmax
comp=Z,13nm,1.2s
BCA Borcka 21.11 84 ⇓P **P** **03 22 03.3 +1.1**
VRH Novokhopyorsk 21.12 57 *e*P **P** **03 22 02.0 -0.2**
VRH pmax pmax
comp=Z,50nm,0.9s
KIV Kislovodsk 21.44 77 P **P** **03 22 02.1 -3.7**
KIV Kislovodsk 21.44 77 *e*P **P** **03 22 05.9 +0.1**
KIV *e*S **S** **03 26 04.1 +0.4**
KIV pmax pmax
comp=Z,42nm,1.1s
KIV MLR MLR
comp=Z,86nm,14.0s
SHA1 Shidzhatmaz 21.45 77 *i* P **P** **03 22 06.5 +0.4**
VALR Valaam 21.45 24 *i* P **P** **03 22 05.1 -0.5**
VALR pmax pmax
comp=Z,64nm,1.3s
ASF Jabal al Asfar 21.51 112 P **P** **03 22 10.7 +4.0**
comp=Z,7.2nm,0.8s,baz=276,slow=6.1,SNR=8.7
ASF LR LR 03 33 03.4
comp=Z,206nm,21.7s,baz=290,slow=44
GOF Gofitskoye 21.59 74 *e*P **P** **03 22 03.6 -3.7**
KBZ Khabaz 21.62 77 P **P** **03 22 09.3 +1.6**
comp=Z,19nm,1.0s,baz=286,slow=10,SNR=22
KBZ LR LR 03 32 04.9
comp=Z,166nm,20.1s,baz=278,slow=41
comp=Z,19nm,1.0s
KBZ Khabaz 21.62 77 *ce*P **P** **03 22 08.7 +1.1**
KBZ pmax pmax
comp=Z,23nm,1.0s
MARD Mardin 21.77 95 P **P** **03 22 08.1 -1.3**
MARD IAmb IAmb 03 22 24.9
comp=Z,18nm,0.9s
NCK Nalchik 22.16 78 *i* P **P** **03 22 13.7 +0.2**
NCK pmax pmax
comp=Z,25nm,1.0s
GURO Guroymak-BITLI 22.23 91 P **P** **03 22 12.4 -2.0**
GURO IAmb IAmb 03 22 25.5
comp=Z,20nm,1.1s
ZEI Tsey 22.50 79 *e*P **P** **03 22 18.6 +1.3**
ZEI pmax pmax
comp=Z,17nm,1.5s
GNI Garni 23.73 86 P **P** **03 22 31.4 +1.5**
comp=Z,5.5nm,0.6s,baz=308,slow=6.0,SNR=6.0
comp=Z,5.5nm,0.6s
GNI Garni 23.73 86 *i* P **P** **03 22 29.7 -0.2**
GNI pmax pmax
comp=Z,24nm,1.7s
GROC Groznyy 23.79 78 *e*P **P** **03 22 30.5 +0.3**
GROC *e* 03 22 58.1
GROC pmax pmax
comp=Z,23nm,0.6s
KLMR Klimovskoe 24.09 32 *e*P **P** **03 22 32.4 -0.5**
KLMR pmax pmax
comp=Z,54nm,1.4s
KLMR Klimovskoe 24.09 32 *e*P **P** **03 22 32.5 -0.5**
KLMR AMP 03 22 35.6
comp=Z,54nm,1.4s
BELG Belogornoye 24.95 55 P **P** **03 22 40.9 +0.2**
comp=Z,43nm,0.8s,baz=307,slow=0.1,SNR=16
BELG LR LR 03 33 23.9
comp=Z,175nm,18.1s,baz=306,slow=39
comp=Z,43nm,0.8s
BELG Belogornoye 24.95 55 *i* P **P** **03 22 40.4 -0.3**
BELG pmax pmax
comp=Z,11nm,1.0s
PRGR Permogore 27.00 34 *e*P **P** **03 22 54.9 -4.3**
KIRV Kirov 27.46 42 P **P** **03 23 04.3 +0.9**
comp=Z,6.5nm,0.5s,baz=257,slow=13,SNR=5.0
KIRV LR LR 03 34 26.2
comp=Z,104nm,20.9s,baz=245,slow=38
comp=Z,6.5nm,0.5s
KIRV Kirov 27.46 42 *ce*P **P** **03 23 04.5 +1.1**
ARCES ARCESS Array B 27.60 9 P **P** **03 23 05.4 +0.8**
comp=Z,1.2nm,0.6s,baz=198,slow=7.4,SNR=7.0
ARCES LR LR 03 33 13.5
comp=Z,23nm,20.7s,baz=282,slow=35
comp=Z,1.2nm,0.6s
BORG Borgarnes 29.39 330 LR LR 03 35 54.0
comp=Z,55nm,18.7s,baz=129,slow=38
TOA0 Torodi Ar. Sit 31.12 202 P **P** **03 23 33.2 -3.0**
TORD Torodi Ar. Bea 31.12 202 P **P** **03 23 37.1 +0.8**
comp=Z,9.4nm,0.8s,baz=12,slow=9.0,SNR=6.1
TORD LR LR 03 37 24.8
comp=Z,262nm,18.1s,baz=216,slow=39
comp=Z,9.4nm,0.8s
AKTO Aktyubinsk 31.35 60 LR LR 03 38 19.5
comp=Z,119nm,18.1s,baz=272,slow=40
KOWA Kowa 31.81 213 LR LR 03 37 57.1
comp=Z,108nm,18.2s,baz=65,slow=39
ARU Arti 31.81 49 P **P** **03 23 41.6 -0.4**
comp=Z,28nm,0.8s,baz=248,slow=6.2,SNR=30
ARU LR LR 03 37 07.9
comp=Z,180nm,20.0s,baz=254,slow=38
comp=Z,28nm,0.8s
ARU Arti 31.81 49 P **P** **03 23 40.8 -1.2**
ARU Arti 31.81 49 *c* P **P** **03 23 41.7 -0.3**
ARU 03 24 41.9
ARU PPP PPP 03 24 56.8
ARU S **S** **03 28 53.6 +1.5**
ARU SS **SnSn** **03 30 41.3 +2.1**
ARU pmax pmax
comp=Z,39nm,0.9s
ABKAR Akbulak array 32.70 62 P **P** **03 23 47.9 -2.0**
GEYT Alibeck 34.28 83 P **P** **03 24 05.0 +1.2**
comp=Z,3.0nm,0.7s,baz=325,slow=12,SNR=2.1
GEYT LR LR 03 41 58.6
comp=Z,78nm,18.0s,baz=355,slow=43
comp=Z,3.0nm,0.7s
BBTS Babate 37.88 231 LR LR 03 39 52.5
comp=Z,115nm,18.4s,baz=41,slow=36
BRVK Borovoye 38.67 54 P **P** **03 24 40.1 -1.0**
BRVK Borovoye 38.67 54 *ce*P **P** **03 24 41.7 +0.6**
BRVK pmax pmax
comp=Z,26nm,1.0s
BVAR Borovoye Array 38.74 54 LR LR 03 41 37.8
comp=Z,103nm,20.8s,baz=277,slow=38
DBIC Dimbokro 39.30 209 P **P** **03 24 47.9 +1.2**
comp=Z,15nm,1.2s,baz=33,slow=11,SNR=4.6
DBIC LR LR 03 41 54.9
comp=Z,101nm,20.6s,baz=22,slow=38
comp=Z,15nm,1.2s
UOSS Minazif 39.42 103 P **P** **03 24 45.5 -2.1**
UOSS IAmb IAmb 03 24 52.7
comp=Z,11nm,0.8s
BRZS Berezniki 40.72 58 *e*P **P** **03 24 57.8 -0.4**
BRZS Berezniki 40.72 58 *e*P **P** **03 24 57.9 -0.4**
baz=58
IUG Iuzhnay 41.26 71 *e*P **P** **03 25 03.4 +0.5**
IUG Iuzhnay 41.26 71 *e*P **P** **03 25 03.4 +0.5**
baz=71
KK31 Karatay Array 41.26 69 P **P** **03 25 01.1 -1.7**
KK31 Karatay Array 41.26 69 P **P** **03 25 01.1 -1.7**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 41.26 69 P **P** **03 25 01.1 -1.7**
KKAR Karatay Array 41.26 69 P **P** **03 25 00.9 -1.9**
KKAR Karatay Array 41.26 69 P **P** **03 25 00.9 -1.9**
KKAR pmax pmax
comp=Z,4.0nm,0.7s
SFJD Kangerlussuaq 41.44 328 LR LR 03 42 58.8
comp=Z,31nm,19.3s,baz=74,slow=37
DZA Taraz 41.90 69 *i* P **P** **03 25 08.9 +0.9**
DZA Taraz 41.90 69 *i* P **P** **03 25 09.0 +0.9**
baz=69
WSAR Wadi Sarin 42.21 103 LR LR 03 47 16.6
comp=Z,67nm,18.6s,baz=316,slow=43
AAK Ala-Archa 44.16 68 *ce*P **P** **03 25 27.5 +1.0**
AAK pmax pmax
comp=Z,11nm,1.7s
KURK Kurchatov 44.22 56 P **P** **03 25 25.7 -0.9**
KURK IAmb IAmb 03 25 29.2
comp=Z,5.8nm,0.8s
KURK Kurchatov 44.22 56 *ce*P **P** **03 25 26.5 -0.1**
KURK pmax pmax
comp=Z,19nm,1.7s
KUU Kurty 44.95 66 *e*P **P** **03 25 32.5 -0.1**
KUU Kurty 44.95 66 *e*P **P** **03 25 32.5 -0.1**
baz=66
SEM Semipalatinsk 45.30 56 *e*P **P** **03 25 34.7 -0.8**
SEM Semipalatinsk 45.30 56 *e*P **P** **03 25 34.7 -0.8**
baz=56
NRIK Noril'sk 45.36 29 LR LR 03 47 28.8
comp=Z,142nm,18.4s,baz=328,slow=40
NRIK Noril'sk 45.36 29 *i* P **P** **03 25 37.1 +1.7**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
MDOK Medeo 45.70 67 *e*P **P** **03 25 39.1 +0.4**
MDOK Medeo 45.70 67 *e*P **P** **03 25 39.1 +0.4**
baz=67
KSH Kashi 46.44 72 P **P** **03 25 45.6 +1.1**
KSH pP pP 03 25 47.5 -0.5
KSH pmax pmax
comp=Z,8.0nm,0.9s
ZALV Zalesovo Beam 46.95 50 P **P** **03 25 48.4 +0.2**
comp=Z,3.7nm,0.7s,baz=289,slow=9.2,SNR=9.6
ZALV PP **PP** **03 27 38.8 +0.5**
comp=Z,0.7nm,0.5s,baz=278,slow=10,SNR=3.7
ZALV LR LR 03 47 05.4
comp=Z,122nm,19.5s,baz=260,slow=38
comp=Z,3.7nm,0.7s
ZALV Zalesovo Beam 46.95 50 P **P** **03 25 47.4 -0.8**
SHLS Shalkode 47.33 66 *e*P **P** **03 25 52.8 +1.4**
baz=66
SHLS Shalkode 47.33 66 *e*P **P** **03 25 52.9 +1.4**
MK31 Makanchi Array 47.79 60 P **P** **03 25 53.9 -0.9**
MK31 IAmb IAmb 03 25 57.8
comp=Z,4.2nm,0.8s
MK31 Makanchi Array 47.79 60 *i* P **P** **03 25 54.6 -0.3**
MKAR Makanchi Array 47.79 60 P **P** **03 25 55.2 +0.4**
comp=Z,5.6nm,0.7s,baz=291,slow=6.1,SNR=35
MKAR LR LR 03 50 27.6
comp=Z,92nm,18.3s,baz=280,slow=42
comp=Z,5.6nm,0.7s
MKAR Makanchi Array 47.79 60 P **P** **03 25 53.1 -1.8**
MKAR Makanchi Array 47.79 60 P **P** **03 25 53.1 -1.8**
KMBO Kilima Mbogo 48.76 147 LR LR 03 48 47.5
comp=Z,31nm,20.1s,baz=254,slow=39
ZSN Zaisan 49.17 58 *e*P **P** **03 26 05.3 -0.2**
ZSN Zaisan 49.17 58 *e*P **P** **03 26 05.3 -0.2**
baz=58
FRB Frobisher Bay 49.24 324 LR LR 03 46 06.8
comp=Z,71nm,19.3s,baz=58,slow=35
EUNU Eureka 49.86 347 P **P** **03 26 10.0 -0.4**
DGZ Jazzator, Alta 49.90 55 *i* P **P** **03 26 12.2 +1.0**
DGZ pmax pmax
comp=Z,8.0nm,0.7s
SCHQ Schefferville 51.28 313 P **P** **03 26 20.9 -0.5**
comp=Z,2.4nm,0.7s,baz=67,slow=8.7,SNR=3.9
SCHQ LR LR 03 45 38.0
comp=Z,68nm,21.0s,baz=114,slow=33
comp=Z,2.4nm,0.7s
WMQ Urumqi 52.48 62 *e*P **P** **03 26 31.4 +0.8**
WMQ pmax pmax
comp=Z,28nm,0.7s
RES Resolute Bay 53.76 342 LR LR 03 51 13.3
comp=Z,39nm,18.2s,baz=336,slow=38
LSZ Lusaka 59.36 163 LR LR 03 56 38.1
comp=Z,42nm,18.8s,baz=155,slow=40
SONM Songino Array 61.84 50 P **P** **03 27 37.8 +1.1**
comp=Z,4.8nm,0.9s,baz=286,slow=7.8,SNR=19
comp=Z,4.8nm,0.9s
ULN Ulaanbaatar 62.19 49 *ce*P **P** **03 27 40.3 +1.1**
ULN pmax pmax
comp=Z,11nm,1.7s
GTA Gaotai 62.54 61 *e*P **P** **03 27 43.8 +2.2**
GTA pP sP 03 27 55.1 +8.6
GTA pmax pmax
comp=Z,2.0nm,0.9s
GTA pmax pmax
comp=Z,51nm,5.5s
GTA LR LR
comp=N,110nm,17.8s
GTA LR LR
comp=E,200nm,16.0s
GTA LR LR
comp=Z,91nm,16.7s
SADO Sadowa 63.04 307 LR LR 03 53 31.5
comp=Z,66nm,20.0s,baz=44,slow=34
YAK Yakutsk 63.80 28 LR LR 03 58 15.5
comp=Z,49nm,18.0s,baz=268,slow=39
RCBR Riachuelo 65.68 236 LR LR 03 55 32.5
comp=Z,40nm,18.4s,baz=156,slow=35
INK Inuvik 66.49 347 P **P** **03 28 08.1 +1.3**
baz=26
C26K Camden Bay 66.51 352 P **P** **03 28 09.5 +2.7**
baz=17
C27K Jago River 66.66 351 P **P** **03 28 09.2 +1.4**
baz=18
LZH Lanzhou 67.06 62 *e*P **P** **03 28 13.3 +2.1**
LZH pP sP 03 28 17.9 +1.8
LZH sP pP 03 28 21.4 +6.6
LZH pmax pmax
comp=Z,16nm,0.8s
YKA Yellowknife Ar 67.08 337 P **P** **03 28 11.3 +0.7**
comp=Z,4.9nm,0.9s,baz=41,slow=6.3,SNR=7.1
YKA LR LR 03 57 57.1
comp=Z,48nm,19.2s,baz=22,slow=36
comp=Z,4.9nm,0.9s
YKA Yellowknife Ar 67.08 337 *i* P **P** **03 28 11.5 +0.9**
YKA pmax pmax
comp=Z,5.0nm,0.9s
C23K Itkillik River 67.11 354 P **P** **03 28 12.1 +1.4**
baz=13
BILL Bilibino 67.70 11 *e*P **P** **03 28 15.7 +1.3**
BILL *e* 03 28 38.6
BILL *e* 03 30 43.6
BILL *e*PPP PPP 03 32 27.0
BILL pmax pmax
comp=Z,16nm,1.0s
BILL MLR MLR
comp=Z,25nm,19.0s
E27K Coleen River 67.78 350 P **P** **03 28 16.4 +1.4**
baz=20
D23K Nanushuk River 67.97 354 P **P** **03 28 17.8 +1.7**
baz=13
HIA Hailar 68.07 43 *i* P **P** **03 28 19.5 +2.4**
HIA pmax pmax
comp=Z,6.0nm,1.2s
BTO Baotou 68.18 55 *e*P **P** **03 28 18.5 +0.4**
TOLK Toolik Lake Re 68.19 353 P **P** **03 28 17.4 -0.1**
baz=14
E25K Arctic Village 68.31 352 P **P** **03 28 19.6 +1.3**
baz=17
F26K Sheenjek River 68.56 351 P **P** **03 28 21.2 +1.3**
baz=18
PALK Pallekele 68.62 100 LR LR 04 03 07.1
comp=Z,47nm,18.0s,baz=96,slow=40
ULM Lac du Bonnet 68.65 319 P **P** **03 28 23.4 +2.7**
comp=Z,2.7nm,0.5s,baz=66,slow=6.1,SNR=5.8
ULM LR LR 03 56 46.9
comp=Z,64nm,21.1s,baz=182,slow=34
comp=Z,2.7nm,0.5s
EPYK Eagle Plains 68.78 347 P **P** **03 28 22.2 +0.9**
baz=23
WRGLY Wrigley 68.88 341 P **P** **03 28 23.1 +1.3**
baz=33
MDP Montagnes des 68.89 257 LR LR 03 53 47.4
comp=Z,32nm,20.9s,baz=46,slow=32
G27K Doyon Strip 69.09 350 P **P** **03 28 24.5 +1.3**
baz=20
F24K Squaw Lake 69.13 352 P **P** **03 28 24.8 +1.3**
baz=15
G26K Porcupine Rive 69.23 351 P **P** **03 28 25.8 +1.8**
baz=18,SNR=5.9
F22K John River 69.51 354 P **P** **03 28 27.3 +1.5**
baz=11
H27K Steamboat Moun 69.62 349 P **P** **03 28 28.1 +1.6**
baz=20,SNR=6.0
SEY Seymchan 69.74 19 *ce*P **P** **03 28 30.0 +2.8**
SEY pmax pmax
comp=Z,6.0nm,1.0s
F21K Alatna River 69.89 355 P **P** **03 28 29.7 +1.6**
baz=10,SNR=6.0
AGMN Agassiz Nation 69.95 318 P **P** **03 28 29.2 +0.4**
baz=48
I29M Ogilvie Camp, 69.96 348 P **P** **03 28 29.4 +0.8**
baz=22
G22K Bettles 70.04 354 P **P** **03 28 29.6 +0.6**
baz=12
G23K Bananza Creek 70.12 353 P **P** **03 28 31.0 +1.5**
baz=13
H25K Birch Creek 70.12 351 P **P** **03 28 31.2 +1.7**
baz=16
SJG San Juan 70.21 277 LR LR 03 53 58.5
comp=Z,29nm,21.8s,baz=88,slow=31
I27K Kandik River 70.22 349 P **P** **03 28 31.3 +1.1**
baz=19
G21K Allakaket 70.59 354 P **P** **03 28 34.0 +1.5**
baz=10,SNR=5.3
I26K Coal Creek Min 70.72 350 P **P** **03 28 34.6 +1.4**
baz=18
H23K Yukon River 70.94 353 P **P** **03 28 36.0 +1.4**
baz=13
EGAK Eagle 70.94 349 P **P** **03 28 36.1 +1.6**
baz=20
H22K Ishtalitna Cre 71.04 353 P **P** **03 28 37.2 +2.0**
baz=12
MMPY Sheldon Lake, 71.18 343 P **P** **03 28 37.6 +1.4**
baz=27
DAWY Dawson 71.34 348 P **P** **03 28 38.4 +1.3**
baz=21,SNR=6.3
TKL Tuckaleechee C 71.35 301 LR LR 03 58 38.4
comp=Z,44nm,19.5s,baz=50,slow=35
H21K Melozitna Rive 71.39 354 P **P** **03 28 39.4 +2.2**
baz=11,SNR=16
POKR Poker Plat Res 71.41 351 P **P** **03 28 40.0 +2.6**
baz=15
PZH PanZhiHua 71.53 71 P **P** **03 28 41.1 +2.2**
PZH pmax pmax

comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,110nm,5.1s
J26L Joseph Creek 71.54 350 P P 03 28 39.5 +1.2
baz=18,SNR=5.0
I23K Minto, Yukon-K 71.58 352 P P 03 28 39.9 +1.6
baz=13
XAN Xi'an 71.60 61 ⇑P P 03 28 41.6 +2.5
XAN pP sP 03 28 47.0 +2.9
XAN pmax pmax
comp=Z,10.0nm,1.0s
ILAR Eielson Array 71.69 351 P P 03 28 40.5 +1.4
comp=Z,1.1nm,0.9s,baz=5.1,slow=6.2,SNR=13
ILAR LR LR 04 02 18.1
comp=Z,16nm,19.4s,baz=318,slow=38
comp=Z,1.1nm,0.9s
K27K Chicken 71.78 349 P P 03 28 41.1 +1.4
baz=19
I21K Tanana 71.79 353 P P 03 28 41.2 +1.6
baz=11
MLY Manley 71.83 353 P P 03 28 41.6 +1.6
baz=12
BOSA Boshof 71.87 169 P P 03 28 40.9 +0.3
comp=Z,3.5nm,0.7s,baz=345,slow=7.2,SNR=5.7
comp=Z,3.5nm,0.7s
FARO Faro, Yukon 71.96 344 P P 03 28 42.6 +1.8
baz=25,SNR=5.6
HDA Harding Lake 72.05 351 P P 03 28 42.6 +1.4
baz=15
NEA2 Nenana 72.10 352 P P 03 28 42.9 +1.3
baz=14
M31M Drury Creek, Y 72.19 345 P P 03 28 43.6 +1.5
baz=24
MA2 Magadan 72.22 21 LR LR 04 04 23.0
comp=Z,59nm,19.2s,baz=302,slow=39
RIDG Independent Ri 72.44 350 P P 03 28 45.0 +1.3
baz=17,SNR=8.6
L27K Beaver Creek, 72.67 348 P P 03 28 46.1 +1.1
baz=19
M29M Somme Creek 72.71 347 P P 03 28 46.7 +1.4
baz=22
BPAW Bear Paw Mtn. 72.77 353 P P 03 28 46.7 +1.1
baz=12
N32M Quiet Lake 72.88 344 P P 03 28 47.8 +1.4
baz=25
L26K Log Cabin Wild 72.92 349 P P 03 28 48.0 +1.5
baz=18
MCK McKinley 72.92 352 P P 03 28 46.1 -0.4
baz=14
J20K Nowinta River 72.95 354 P P 03 28 48.2 +1.6
baz=9.7,SNR=6.4
CHUM Lake Minchumin 73.10 353 P P 03 28 48.8 +1.3
baz=11,SNR=5.4
M27K Edge Creek, AK 73.34 348 P P 03 28 49.8 +0.6
baz=19
N30M Aishikik Lake 73.38 346 P P 03 28 50.6 +1.3
baz=22
DHY Denali Highway 73.39 351 P P 03 28 50.6 +1.2
baz=15,SNR=8.8
M26K Nabesna, AK 73.47 349 P P 03 28 51.2 +1.4
baz=18
CAST Castle Rocks 73.53 353 P P 03 28 51.6 +1.5
baz=11
P33M Teslin, Yukon 73.68 343 P P 03 28 52.5 +1.4
baz=25
KLR Kul'dur 73.75 37 LR LR 04 03 10.3
comp=Z,64nm,18.6s,baz=340,slow=37
KLR Kul'dur 73.75 37 *ce*P **P 03 28 52.8 +1.2**
KLR pmax pmax
comp=Z,7.0nm,1.7s
K20K Telida 73.76 354 P P 03 28 52.5 +1.1
baz=9.7
DGMT Dagmar 73.78 322 P P 03 28 53.0 +1.2
baz=43
O30N Mendenhall 73.83 345 P P 03 28 53.1 +1.1
baz=23
WAT6 Susitna Watana 73.91 351 P P 03 28 53.1 +0.6
baz=14
R33M Jennings River 74.01 342 P P 03 28 54.3 +1.2
baz=27
HYT Haines Junctio 74.05 346 P P 03 28 54.7 +1.4
baz=22
PPLA Purkeypile 74.06 353 P P 03 28 54.5 +1.1
baz=11
YUK6 Outpost Mounta 74.09 346 P P 03 28 55.1 +1.4
baz=21
BNX BinXian 74.27 42 ⇑P P 03 28 56.1 +1.4
BNX pmax pmax
comp=Z,5.0nm,0.9s
BNX pmax pmax
comp=Z,100nm,3.5s
MCARA McCarthy VSAT 74.44 348 P P 03 28 56.9 +1.4
baz=18
N25K Chitina, Valde 74.45 349 P P 03 28 57.2 +1.7
baz=17
P30M Million Dollar 74.60 345 P P 03 28 58.2 +1.7
baz=22
L20K Farewell, AK 74.61 354 P P 03 28 58.1 +1.7
baz=9.8
CMAR Chiang Mai Arr 74.66 79 P P 03 28 57.4 0.0
comp=Z,0.9nm,0.3s,baz=310,slow=6.8,SNR=8.8
CMAR LR LR 04 10 20.5
comp=Z,26nm,18.2s,baz=210,slow=43
comp=Z,0.9nm,0.3s
CN2 Changchun 74.67 44 *e*P **P 03 28 57.0 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
M23K Glacier View 74.67 351 P P 03 28 58.1 +1.3
baz=14
SML Sawmill 74.73 351 P P 03 28 58.3 +1.1
baz=14
L19K White Mountain 74.98 354 P P 03 28 59.9 +1.3
baz=9.1
BMRM Bremner River 75.07 349 P P 03 29 00.2 +1.1
baz=17
SUR Sutherland 75.09 173 LR LR 04 02 29.6
comp=Z,51nm,20.5s,baz=344,slow=36
P29M Windy Craggy 75.21 345 P P 03 29 01.3 +1.3
baz=22
M19K Big River Lodg 75.22 354 P P 03 29 01.5 +1.6
baz=9.4
SUA Susitna One 75.33 352 P P 03 29 01.8 +1.1
baz=12
RC01 Rabbit Creek A 75.59 352 P P 03 29 03.0 +1.0
baz=13
N18K Kilae Creek 76.55 354 P P 03 29 09.2 +1.7
baz=8.2
EGMT Eagleton 76.56 325 P P 03 29 09.2 +1.3
baz=39
USRK Ussuriysk Ar. 77.61 40 P P 03 29 14.7 +0.9
comp=Z,3.4nm,0.9s,baz=338,slow=2.8,SNR=4.9
comp=Z,3.4nm,0.9s
O16K Kokwok River B 77.77 355 P P 03 29 15.9 +1.5
baz=6.5
MIAR Mount Ida 78.09 306 P P 03 29 16.8 +0.2
baz=46
RLMT Red Lodge 78.59 322 P P 03 29 19.2 -0.3
baz=39
NJ2 Nanjing 79.15 56 *e*P **P 03 29 20.8 -1.7**
NJ2 pmax pmax
comp=Z,12nm,0.8s
MSO Missoula 79.26 326 P P 03 29 23.9 +0.9
baz=37
BOZ Bozeman (W) 79.26 324 P P 03 29 24.5 +1.4
baz=38
NEW Newport 79.35 329 LR LR 04 05 39.4
comp=Z,59nm,18.7s,baz=20,slow=37
NEW Newport 79.35 329 P P 03 29 25.1 +1.7
baz=35
SDV Santo Domingo 79.50 272 LR LR 04 02 22.7
comp=Z,21nm,19.1s,baz=50,slow=34
BBB Bella Bella 79.69 337 LR LR 04 07 22.8
comp=Z,23nm,18.4s,baz=32,slow=38
PETK Petropavlovsk- 79.75 21 LR LR 04 09 07.6
comp=Z,33nm,19.4s,baz=13,slow=39
YSS Yuzh-Sakhalins 80.14 32 *e*P **P 03 29 28.5 +0.9**
YSS pmax pmax
comp=Z,40nm,1.0s
YSS MLR MLR
comp=Z,200nm,15.0s
N23A Red Feather La 80.26 318 P P 03 29 30.1 +1.3
baz=41
KSRS Korea Array 80.55 47 P P 03 29 31.0 +1.0
comp=Z,1.6nm,0.8s,baz=331,slow=4.2,SNR=8.9
KSRS LR LR 04 08 06.3
comp=Z,28nm,19.2s,baz=330,slow=38
comp=Z,1.6nm,0.8s
KSRS Korea Array 80.55 47 P P 03 29 31.0 +1.0

PDAR Pinedale Array 80.55 321 P P 03 29 31.2 +1.0
comp=Z,0.5nm,0.4s,baz=44,slow=4.1,SNR=7.9
comp=Z,0.5nm,0.4s
BDFB Brasilia 80.75 239 P P 03 29 32.3 +1.0
comp=Z,4.4nm,0.7s,baz=187,slow=2.1,SNR=6.7
comp=Z,4.4nm,0.7s
ISCO Idaho Springs 80.92 317 P P 03 29 33.3 +1.0
baz=41
Q24A Divide 81.32 316 P P 03 29 35.5 +1.0
baz=41
O20A White River Ci 81.97 319 P P 03 29 39.4 +1.6
baz=39
HLID Hailey 82.08 324 P P 03 29 40.2 +1.9
baz=36
T25A Trinidad 82.31 314 P P 03 29 41.0 +1.4
baz=41
SDCO Great Sand Dun 82.42 315 P P 03 29 41.6 +1.3
baz=40
DUG Dugway, Tooele 84.08 321 P P 03 29 50.0 +1.4
baz=37
MVCO Mesa Verde 84.36 317 P P 03 29 51.6 +1.4
baz=39
ROSC El Rosal 84.91 272 LR LR 04 03 17.4
comp=Z,82nm,21.9s,baz=54,slow=32
ANMO Albuquerque 85.05 314 *ce*P **P 03 29 55.3 +1.6**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 85.05 314 P P 03 29 55.0 +1.4
baz=40
J05D Fort Rock, OR 85.09 328 P P 03 29 55.4 +1.7
baz=32
MJAR Matsushiro Arr 86.54 41 LR LR 04 12 24.0
comp=Z,65nm,18.2s,baz=318,slow=38
MNTX Cornudas Mount 86.94 311 P P 03 30 03.9 +1.0
baz=40
YBH Yreka Blue Hor 86.99 329 LR LR 04 08 30.6
comp=Z,34nm,19.4s,baz=19,slow=35
WUAZ Wupatki 87.12 318 P P 03 30 04.8 +0.9
baz=37
TXAR Lajitas Array 87.76 309 P P 03 30 08.7 +1.7
comp=Z,0.8nm,1.0s,baz=57,slow=4.6,SNR=8.0
TXAR LR LR 04 09 15.8
comp=Z,37nm,18.4s,baz=26,slow=36
comp=Z,0.8nm,1.0s
TUC Tucson 89.36 315 P P 03 30 15.9 +1.4
baz=38
JHJ Hachijo jima 2 90.05 42 LR LR 04 13 11.6
comp=Z,47nm,19.7s,baz=292,slow=37
CMIG Matias Romero 91.20 295 LR LR 04 10 17.6
comp=Z,23nm,19.7s,baz=46,slow=35
LPAZ La Paz 94.68 252 LR LR 04 10 20.4
comp=Z,18nm,18.5s,baz=102,slow=34
ATAH Atahualpa 95.94 266 LR LR 04 12 07.2
comp=Z,30nm,21.9s,baz=47,slow=34
NNA Nana 98.04 261 LR LR 04 13 54.7
comp=Z,15nm,18.7s,baz=38,slow=35
LVC Limon Verde 99.49 248 LR LR 04 13 52.6
comp=Z,21nm,19.4s,baz=135,slow=34

ROM 25 03:30:32.0±0.0, 42°.863N±0°.002×13°.018E±0°.004, h11km, ML2.6/7, Error ellipse: s-maj=0.3km s-min=0.2km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**112**	P	Pg	03 30 34.8	+0.4
NRCA				S	Sg	03 30 36.7	+0.4
NRCA				AML	AML		
	comp=E,3110μm,1.1s						
NRCA				AML	AML		
	comp=N,3375μm,0.1s						
NRCA				AML	AML		
	comp=E,3405μm,0.1s						
NRCA				AML	AML		
	comp=N,3780μm,0.1s						
NRCA				AML	AML		
	comp=N,21450μm,0.2s						
NRCA				AML	AML		
	comp=E,21550μm,0.1s						
NRCA				AML	AML		
	comp=N,19500μm,0.2s						
NRCA				AML	AML		
	comp=E,19000μm,0.4s						
CESI	**CESI - Serrava**	**0.17**	**330**	P	Pg	03 30 36.3	+0.6
CESI				S	Sg	03 30 39.4	+1.1
CESI				AML	AML		
	comp=E,2350μm,0.1s						
CESI				AML	AML		
	comp=N,3370μm,0.2s						
FDMO	**Fiordimonte**	**0.18**	**16**	P	Pg	03 30 36.5	+0.5
FDMO				S	Sg	03 30 39.8	+1.1
FDMO				AML	AML		
	comp=E,2840μm,0.4s						
FDMO				AML	AML		
	comp=N,3445μm,0.3s						
FDMO				AML	AML		
	comp=E,6230μm,0.2s						
LNSS	**Leonessa**	**0.26**	**176**	P	Pg	03 30 37.9	+0.5
LNSS				S	Sb	03 30 42.2	-1.1
LNSS				AML	AML		
	comp=E,664μm,0.2s						
LNSS				AML	AML		
	comp=N,572μm,0.7s						
LNSS				AML	AML		
	comp=N,3190μm,0.1s						
LNSS				AML	AML		
	comp=E,2300μm,0.2s						
CSP1	**Cessapalombo**	**0.27**	**31**	P	Pg	03 30 37.9	+0.4
CSP1				S	Sb	03 30 42.6	-1.0
ARRO	**Arrone**	**0.34**	**213**	P	Pg	03 30 39.2	+0.4
ARRO				S	Sb	03 30 44.6	-0.9
ARRO				AML	AML		
	comp=E,171μm,0.6s						
ARRO				AML	AML		
	comp=N,198μm,0.2s						
ARRO				AML	AML		
	comp=N,728μm,1.0s						
ARRO				AML	AML		
	comp=E,743μm,0.2s						
RM33	**Pellescritta (**	**0.38**	**158**	P	Pg	03 30 40.0	+0.4
RM33				S	Sb	03 30 46.2	-0.6
CAMP	**Campotosto**	**0.44**	**138**	P	Pg	03 30 40.7	+0.2
CAMP				S	Sb	03 30 47.4	-1.0
CAMP				AML	AML		
	comp=N,126μm,0.5s						
CAMP				AML	AML		
	comp=E,128μm,1.4s						

ROM 25 03:31:11.7±0.1, 42°.791N±0°.004×13°.152E±0°.006, h9km, ML2.2/1, Error ellipse: s-maj=0.5km s-min=0.3km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.05**	**327**	P	Pg	03 31 14.1	+0.4
NRCA				S	Sg	03 31 15.2	0.0
LNSS	**Leonessa**	**0.20**	**204**	P	Pg	03 31 16.8	+0.8
LNSS				S	Sg	03 31 20.3	+1.4
LNSS				AML	AML		
	comp=E,1070μm,0.2s						
LNSS				AML	AML		
	comp=N,1285μm,0.1s						
LNSS				AML	AML		
	comp=E,1065μm,0.2s						
CESI	**CESI - Serrava**	**0.28**	**320**	P	Pb	03 31 18.2	-0.7
CESI				S	Sb	03 31 22.8	-1.0
RM33	**Pellescritta (**	**0.29**	**171**	P	Pb	03 31 18.3	-0.7
RM33				S	Sb	03 31 22.8	-1.2
CAMP	**Campotosto**	**0.32**	**143**	P	Pg	03 31 18.8	+0.7
CAMP				S	Sb	03 31 23.9	-0.9
TERO	**Teramo**	**0.37**	**117**	P	Pg	03 31 19.7	+0.6
TERO				S	Sb	03 31 25.8	-0.6
CESX	**Cesi**	**0.46**	**247**	S	Sb	03 31 29.0	+0.1
GIGS	**Gran Sasso**	**0.46**	**138**	P	Pg	03 31 21.0	+0.3
GIGS				S	Sb	03 31 28.0	-0.9
SNTG	**Esanatoglia**	**0.49**	**342**	S	Sb	03 31 31.0	+1.2

*IDC **25** 03:32:08.7±1.7, 86°.67N×35°.22E, h0km, mb3.5/6, mbtmp3.5/8, ML3.4/2, MS3.0/4, Error ellipse: s-maj=75.4km s-min=18.6km az=89.0*
*IEPN **25** 03:32:10.0, 86°.40N×47°.69E, h10km*
ISC 25 03:32:08.3±1.0, 86°.41N±0°.08×45°.5E±0°.2, h10km, n16, σ2s61/13, mb3.3/6, MS3.0/4, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFI2	**Zemlya Franca-**	**5.64**	**177**	*e*P	Pn	**03 33 32.3**	**+0.3**
ZFI2				*e*S	Sn	**03 34 32.5**	**-4.2**
ZFI	**Zemlya Franca-**	**5.64**	**177**	*e*P	Pn	**03 33 32.3**	**+0.3**
ZFI				*e*S	Sn	**03 34 32.5**	**-4.2**
	56nm,1.3s						
KBS	**Kingsbay**	**8.38**	**227**	*e*P	Pn	03 34 06.4	-3.0
KBS				S	Sn	03 35 32.9	-11
SPA0	**Spitsbergen Ar**	**8.92**	**220**	*e*P	Pn	**03 34 16.8**	**-0.1**
SPA0				S	Sn	03 35 50.9	-6.3
SPITS	**Spitsbergen Ar**	**8.92**	**220**	Pn	Pn	**03 34 15.7**	**-1.2**
	baz=33,slow=13						
	2.9nm,0.7s						
ARCES	**ARCESS Array B**	**17.24**	**204**	P	P	**03 36 12.5**	**+2.3**
	0.1nm,0.3s,baz=7.9,slow=8.6,SNR=5.1						
	1.1nm,0.6s						
SUMG	**Summit**	**17.52**	**275**	*i* P	Pn	03 36 05.0	-7.5
FINES	**FINESS Array B**	**25.34**	**202**	P	P	**03 37 36.4**	**+1.7**
	2.1nm,0.8s,baz=1.3,slow=6.1,SNR=4.8						
FINES				LR	LR	03 47 02.9	
	comp=Z,51nm,18.8s,baz=86,slow=35						
	2.1nm,0.8s						
ILAR	**Eielson Array**	**28.92**	**11**	P	P	**03 38 07.4**	**+0.6**
	0.4nm,0.9s,baz=345,slow=9.8,SNR=2.8						
	0.4nm,0.9s						
BELG	**Belogornoye**	**34.18**	**178**	LR	LR	03 56 36.3	
	comp=Z,19nm,19.0s,baz=157,slow=42						
GERES	**GERESS Array B**	**38.31**	**214**	P	P	**03 39 30.7**	**+2.1**
	0.2nm,0.6s,baz=28,slow=4.4,SNR=3.5						
	0.2nm,0.6s						
DAVOX	**Davos/Dischmat**	**40.52**	**218**	LR	LR	03 57 55.7	
	comp=Z,10nm,18.0s,baz=56,slow=38						
MLR	**Muntele Rosu**	**41.31**	**201**	LR	LR	03 57 09.6	
	comp=Z,35nm,20.7s,baz=298,slow=36						
BRTR	**Keskin Array B**	**46.93**	**193**	P	P	**03 40 41.8**	**+3.1**
	1.2nm,0.7s,baz=6.9,slow=7.4,SNR=7.2						
	1.2nm,0.7s						
PDAR	**Pinedale Array**	**50.72**	**336**	P	P	**03 41 05.8**	**-2.1**
	0.1nm,0.4s,baz=40,slow=9.8,SNR=1.7						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**63.95**	**330**	P	P	**03 42 39.0**	**-2.2**
	0.2nm,0.7s,baz=342,slow=5.3,SNR=4.1						
	0.2nm,0.7s						

*DNK **25** 03:44:01.7±2.4, 51°.33N×16°.24E, h35km*
*IPEC **25** 03:44:01.8±0.3, 51°.55N×16°.23E, h0km, ML2.5/4, Error ellipse: s-maj=3.0km s-min=1.7km az=69.0*
*IDC **25** 03:44:03.8±1.0, 51°.44N×15°.95E, h0km, mbtmp3.3/5, ML2.6/5, Error ellipse: s-maj=21.3km s-min=9.3km az=97.0*
*PRU **25** 03:44:03.7±0.0, 51°.45N×16°.11E, h0km*
*VIE **25** 03:44:04.0, 51°.48N×15°.78E, h0km, ML2.6/3 90 km NNE of Liberec Suspected Mining induced.*
ISC 25 03:44:01.0±0.7, 51°.57N±0°.03×16°.16E±0°.03, h0km, n44, σ1s34/84, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.74**	**173**	*i* Pg	**Pg**	**03 44 15.8**	**+0.7**
KSP				*e*Sg	**Sg**	**03 44 24.4**	**-0.3**
CHVC	**Chvalec**	**0.99**	**184**	*e*SG	**Sg**	**03 44 31.3**	**-1.5**
OSTC	**Ostas**	**1.02**	**178**	*e*PG	**Pg**	**03 44 20.8**	**+0.3**
OSTC				*e*SG	**Sg**	**03 44 32.5**	**-1.2**
	comp=Z,59nm,0.4s						
UPC	**Upice**	**1.07**	**185**	*e*PG	**Pg**	**03 44 21.7**	**+0.2**
UPC				*e*SG	**Sg**	**03 44 33.9**	**-1.5**
	comp=Z,91nm,0.4s						
DPC	**Dobruska-Polom**	**1.23**	**175**	*e*PG	**Pg**	**03 44 24.4**	**-0.2**
DPC				*e*SG	**Sg**	**03 44 39.2**	**-1.3**
	comp=Z,38nm,0.6s						
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG	**Pn**	**03 44 28.9**	**+0.4**
PVCC				*e*SG	**Sg**	**03 44 47.5**	**-0.1**
	comp=Z,195nm,0.2s						
KRLC	**Kraliky**	**1.55**	**165**	*e*PG	**Pn**	**03 44 29.2**	**-0.8**
KRLC				*e*SG	**Sg**	**03 44 49.8**	**-1.0**
	comp=Z,56nm,0.7s						
BRG	**Berggiesshubel**	**1.56**	**244**	Pg	**Pg**	**03 44 31.4**	**+0.5**
BRG				Sg	**Sg**	**03 44 51.7**	**+0.6**
BRG				Amp		03 44 53.3	
	comp=Z,89nm,0.3s						
PRU	**Pruhonice**	**1.89**	**214**	*e*PG	**Pb**	**03 44 36.0**	**-0.4**
PRU				*e*SG	**Sn**	**03 44 59.8**	**+0.7**
	comp=Z,26nm,0.6s						
CLL	**Collm**	**1.99**	**264**	*e*Pn	**Pn**	**03 44 36.0**	**0.0**
CLL				*e*Pg	**Pb**	**03 44 39.0**	**+0.9**
CLL				*ex*	x	03 44 42.0	
CLL				*ex*	x	03 44 54.0	
CLL				*e*Sg	**Sg**	**03 45 05.0**	**0.0**
	comp=Z,33nm,0.5s						
MORC	**Moravsky Berou**	**2.00**	**153**	*e*Pn	**Pn**	**03 44 36.3**	**+0.1**
	baz=335						
MORC				*e*Sg	**Sb**	**03 45 03.2**	**-0.6**
	comp=Z,30nm,0.5s,baz=335						
MORC	**Moravsky Berou**	**2.00**	**153**	*e*PN	**Pn**	**03 44 36.4**	**+0.2**
MORC				*e*SG	**Sb**	**03 45 03.2**	**-0.6**
OKC	**Ostrava-Krasne**	**2.15**	**143**	*e*PG	**Pb**	**03 44 41.1**	**+0.3**
OKC				*e*SG	**Sb**	**03 45 08.6**	**+0.6**
	comp=Z,41nm,0.7s						
VRAC	**Vranov**	**2.29**	**173**	Pn	**Pn**	**03 44 40.4**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=349,slow=16,SNR=15						
VRAC				Lg	Lg	03 45 13.5	
	comp=Z,4.5nm,0.3s,baz=272,slow=22,SNR=8.4						
	comp=Z,5.0nm,0.3s						
VRAC	**Vranov**	**2.29**	**173**	*e*Pn	**Pn**	**03 44 40.2**	**+0.2**
	baz=354						
VRAC				*e*Sg	**Sb**	**03 45 12.5**	**+0.6**
	comp=Z,26nm,0.7s,baz=354						
VRAC	**Vranov**	**2.29**	**173**	*e*PN	**Pn**	**03 44 40.2**	**+0.2**
VRAC				*e*SG	**Sb**	**03 45 12.5**	**+0.6**
TREC	**Trest**	**2.32**	**191**	*e*PN	**Pn**	**03 44 41.9**	**+1.4**
TREC				*e*PG	**Pb**	**03 44 44.0**	**+0.2**
TREC				*e*SG	**Sb**	**03 45 13.2**	**+0.2**
	comp=Z,21nm,0.2s						
KRUC	**Moravsky**	**2.52**	**176**	*e*Pn	**Pn**	**03 44 43.4**	**+0.2**
	baz=358						
KRUC				*e*Sg	**Sb**	**03 45 19.7**	**+1.1**
	comp=Z,22nm,0.5s,baz=358						
KRUC	**Moravsky**	**2.52**	**176**	*e*PN	**Pn**	**03 44 43.5**	**+0.2**
KRUC				*e*SG	**Sb**	**03 45 19.7**	**+1.1**
OJC	**Ojcow**	**2.67**	**119**	*e*Pg	**Pg**	**03 44 52.4**	**+0.2**
OJC				*e*Sg	**Sg**	**03 45 27.8**	**+0.9**
JAVC	**Velka Javorina**	**2.88**	**160**	*e*Pn	**Pn**	**03 44 48.5**	**+0.2**
	baz=342						
JAVC	**Velka Javorina**	**2.88**	**160**	*e*PN	**Pn**	**03 44 48.6**	**+0.2**
KHC	**Kasperske Hory**	**2.95**	**215**	*e*PN	**Pn**	**03 44 49.7**	**+0.5**
KHC				*e*PG	**Pb**	**03 44 55.5**	**+1.0**
KHC				*e*SN	**Sn**	**03 45 24.7**	**-0.6**
KHC				*e*SG	**Sg**	**03 45 33.5**	**-2.3**
	comp=Z,21nm,0.6s						
CKRC	**Cesky Krumlov**	**3.00**	**204**	*e*PN	**Pn**	**03 44 51.0**	**+1.1**
CKRC				*e*PG	**Pb**	**03 44 55.7**	**+0.3**
CKRC				*e*SG	**Sg**	**03 45 35.0**	**-2.4**
GERES	**GERESS Array B**	**3.15**	**211**	Pn	**Pn**	**03 44 52.6**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=26,slow=13,SNR=25						
GERES				Lg	Lg	03 45 38.4	
	comp=Z,5.3nm,0.3s,baz=29,slow=25,SNR=6.9						
	comp=Z,1.7nm,0.4s						
LANS	**Liptovska Anna**	**3.22**	**138**	*e*PN	**Pn**	**03 44 48.8**	**-4.1**
LANS				*e*PG	**Pg**	**03 45 01.9**	**-0.8**
LANS				*e*SG	**Sg**	**03 45 42.3**	**-2.1**
LANS				*e*LG	Lg	03 45 54.4	
MODS	**Modra-Piesok**	**3.28**	**167**	*e*PN	Pn	03 44 49.0	-4.7
MODS				*e*PG	**Pg**	**03 45 03.3**	**-0.6**
MODS				*e*SG	**Sg**	**03 45 44.9**	**-1.6**
MODS				*e*LG	Lg	03 45 51.2	
NIE	**Niedzica**	**3.41**	**128**	*e*P	**Pg**	**03 45 07.1**	**+0.7**
NIE				*e*S	**Sg**	**03 45 52.2**	**+1.6**
ZST	**Bratislava**	**3.44**	**169**	*e*PG	**Pg**	**03 45 06.1**	**-0.7**
ZST				*e*SN	Sn	03 45 21.9	-15
ZST				*e*SG	**Sg**	**03 45 52.9**	**+1.6**
ZST				*e*LG	Lg	03 45 54.9	
VYHS	**Vyhne**	**3.53**	**150**	*e*PN	**Pn**	**03 44 57.4**	**+0.2**
VYHS				*e*PG	**Pg**	**03 45 09.2**	**+0.5**
VYHS				*e*SG	**Sg**	**03 45 55.0**	**+0.5**
VYHS				*e*LG	Lg	03 46 04.3	
CONA	**Conrad Observa**	**3.65**	**183**	*i* Pn	**Pn**	**03 45 00.2**	**+1.4**
	comp=Z,1.1nm,0.3s						
CONA				*e*Sg	**Sg**	**03 45 57.6**	**-0.8**
	comp=Z,9.0nm,0.4s						
RONA	**Rosalia, Austr**	**3.88**	**179**	*i* Sg	**Sg**	**03 46 02.8**	**-2.7**
	comp=Z,4.0nm,0.3s						

MOA	**Molln**	**3.92**	**199**	*i* Pn		**Pn**	**03**	**45**	**03.5 +0.9**
	comp=Z,1.2nm,0.2s								
MOA				*e*Sg		**Sg**	**03**	**46**	**05.5 -1.6**
	comp=Z,17nm,0.6s								
ARSA	**Arzberg**	**4.35**	**186**	*e*Pn		**Pn**	**03**	**45**	**12.4 +4.0**
	comp=Z,0.7nm,0.2s								
ARSA				*e*Sg		**Sg**	**03**	**46**	**21.4 +0.8**
	comp=Z,8.2nm,0.6s								
LUNU	**Lund**	**4.38**	**339**	*i* P		**Pn**	**03**	**45**	**09.8 +1.2**
LUNU				*e*S		**Sn**	**03**	**46**	**00.7 +0.4**
KOLS	**Kolonicke sedl**	**4.73**	**122**	*e*PN		**Pn**	**03**	**45**	**14.6 +1.0**
KOLS				*e*PG		**Pg**	**03**	**45**	**34.0 +2.4**
BLEU	**Blekinge**	**4.75**	**358**	*i* P		**Pn**	**03**	**45**	**14.6 +0.9**
BLEU				*e*S		**Sn**	**03**	**46**	**08.4 -1.0**
BJUU	**Bjuv**	**4.88**	**339**	*e*P		**Pn**	**03**	**45**	**18.8 +3.2**
BJUU				*e*S		**Sn**	**03**	**46**	**09.0 -3.6**
DEL	**Delary**	**5.09**	**346**	*i* P		**Pn**	**03**	**45**	**18.0 -0.5**
DEL				*e*S		**Sn**	**03**	**46**	**16.2 -1.7**
SQTA	**Sankt Quirin**	**5.42**	**218**	*i* Pn		**Pn**	**03**	**45**	**25.3 +2.1**
	comp=Z,1.5nm,0.2s								
HFS	**Hagfors**	**8.69**	**352**	Pn		**Pn**	**03**	**46**	**09.3 +1.4**
	comp=Z,0.1nm,0.3s,baz=158,slow=12,SNR=1.2								
	comp=Z,0.8nm,0.7s								
FINES	**FINESS Array B**	**11.29**	**25**	Pn		**Pn**	**03**	**46**	**43.9 +0.4**
	comp=Z,0.1nm,0.3s,baz=213,slow=9.1,SNR=3.4								
	comp=Z,1.7nm,0.9s								
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn		**Pn**	**03**	**46**	**52.1 -2.5**
	baz=98,slow=14								
ARCES	**ARCESS Array B**	**18.55**	**10**	Pn		**Pn**	**03**	**48**	**20.2 +1.1**
	comp=Z,0.1nm,0.3s,baz=195,slow=10.0,SNR=8.1								
	comp=Z,1.3nm,0.9s								

*IDC **25** 03:51:17.5±1.0,55°.08S×30°.86W,h0km,mb4.0/6, mbtmp4.0/6,Error ellipse: s-maj=43.6km s-min=20.6km az=68.0*
*NEIC **25** 03:51:18.8±0.8,55°.27S±0°.09×31°.1W±0°.2,h10km±2km, mb4.2/9,Error ellipse: s-maj=24.0km s-min=4.2km az=53.0*
ISC 25 03:51:19.3±0.8,55°.13S±0°.10×31°.2W±0°.1,h10km,n24, σ1s99/25,mb4.2/8,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
HOPE	**Hope Point**	**3.17**	**283**	Pn		**Pn**	**03**	**52**	**10.0 +0.9**
ORCD	**Orcadas**	**9.11**	**226**	Pn		**Pn**	**03**	**53**	**29.4 -1.2**
VNA1	**Neumayer--Stat**	**18.54**	**156**	P		**P**	**03**	**55**	**35.1 -0.5**
VNA3	**Neumayer Olymp**	**18.66**	**158**	P		**P**	**03**	**55**	**36.4 -0.5**
VNA3				S		**S**	**03**	**59**	**16.0 +6.7**
VNA2	**Neumayer--Watz**	**18.94**	**156**	P		**P**	**03**	**55**	**39.4 -0.6**
	baz=305,slow=13								
SNAA	**Sanae**	**20.54**	**155**	P		**P**	**03**	**55**	**54.8 -2.6**
SNAA	**Sanae**	**20.54**	**155**	P		**P**	**03**	**55**	**55.6 -1.8**
	1.1nm,0.9s,baz=295,slow=9.7,SNR=7.2								
	1.1nm,0.9s								
SNAA	**Sanae**	**20.54**	**155**	P		**P**	**03**	**55**	**55.1 -2.4**
TROLL	**Troll, Antarti**	**22.10**	**153**	P		**P**	**03**	**56**	**12.3 -2.1**
PLTB	**Pedras Altas**	**28.21**	**317**	P		**P**	**03**	**57**	**10.8 -1.2**
PLTB				IAmb		IAmb	03	57	54.0
	comp=Z,7.6nm,1.3s								
CPUP	**Villa Florida**	**34.52**	**316**	P		**P**	**03**	**58**	**07.2 -0.3**
	comp=Z,2.5nm,0.9s,baz=134,slow=6.2,SNR=4.2								
	comp=Z,2.5nm,0.9s								
QSPA	**South Pole Qui**	**35.12**	**180**	P		**P**	**03**	**58**	**12.6 0.0**
	comp=Z,1.2nm,0.9s,baz=178,slow=3.4,SNR=2.8								
	comp=Z,1.2nm,0.9s								
QSPA	**South Pole Qui**	**35.12**	**180**	P		**P**	**03**	**58**	**11.8 -0.7**
VA03	**San Esteban**	**35.39**	**293**	P		**P**	**03**	**58**	**15.3 +0.2**
VA06	**Catapilco**	**35.94**	**292**	P		**P**	**03**	**58**	**20.1 +0.4**
CO01	**Juntas del Tor**	**37.35**	**296**	P		**P**	**03**	**58**	**32.2 +0.2**
CO01				IAmb		IAmb	03	58	45.0
	comp=Z,4.8nm,1.1s								
PTLB	**Pontes e Lacer**	**45.08**	**320**	P		**P**	**03**	**59**	**35.3 -0.1**
PTLB				IAmb		IAmb	03	59	47.2
	comp=Z,3.3nm,1.2s								
VNDA	**Vanda**	**47.36**	**184**	P		**P**	**03**	**59**	**54.1 +1.4**
	comp=Z,0.9nm,0.8s,baz=168,slow=5.6,SNR=7.6								
	comp=Z,0.9nm,0.8s								
VNDA	**Vanda**	**47.36**	**184**	P		**P**	**03**	**59**	**50.5 -2.2**
VNDA				IAmb		IAmb	03	59	56.2
	comp=Z,2.0nm,1.1s								
LPAZ	**La Paz**	**47.99**	**309**	P		**P**	**04**	**00**	**00.2 +1.3**
	comp=Z,2.6nm,0.6s,baz=149,slow=5.5,SNR=16								
	comp=Z,2.6nm,0.6s								
LPAZ	**La Paz**	**47.99**	**309**	P		**P**	**03**	**59**	**59.6 +0.6**
LPAZ				IAmb		IAmb	04	00	00.6
	comp=Z,3.0nm,0.7s								
TORD	**Torodi Ar. Bea**	**73.47**	**34**	P		**P**	**04**	**02**	**52.0 +0.2**
	comp=Z,2.2nm,0.3s,baz=197,slow=6.6,SNR=2.4								
	comp=Z,2.2nm,0.3s								
ILAR	**Eielson Array**	**147.81**	**314**	PKPbc		**PKPdf**	**04**	**11**	**01.8 +1.9**
	comp=Z,1.3nm,0.7s,baz=122,slow=1.8,SNR=11								
SONM	**Songino Array**	**152.97**	**88**	PKPbc		**PKPbc**	**04**	**11**	**14.2 -1.8**
	comp=Z,0.3nm,0.4s,baz=164,slow=5.8,SNR=2.6								

*LDG **25** 04:04:10.7±0.1,41°.84N×2°.63E,h8km,Md2.5/2,Ml2.6/17, Error ellipse: s-maj=1.8km s-min=1.3km az=153.0*
*MDD **25** 04:04:11.0±0.3,41°.83N×2°.71E,h12km,mb_Lg2.6/13, Error ellipse: s-maj=3.0km s-min=1.9km az=113.0*
*MRB **25** 04:04:10.9±0.2,41°.84N×2°.66E,h8km±2km,ML2.2/24, Error ellipse: s-maj=0.8km s-min=0.5km az=292.0*
*STR **25** 04:04:12.6±0.7,42°.N±2°.×°.±°,h19km±6km,MLv2.4/13, Error ellipse: s-maj=0.0km s-min=0.0km az=105.4, preliminary*
ISC 25 04:04:10.4±0.8,41°.82N±0°.02×2°.69E±0°.02,h19km±6km, n71,σ1s37/131,4C-2D,Spain

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
CCAS	**Cassa de la Se**	**0.17**	**69**	P		**Pg**	**04**	**04**	**14.8 -0.2**
CCAS				S		**Sg**	**04**	**04**	**17.6 -0.6**
	204nm,0.2s								
CFON	**Fontmartina**	**0.20**	**253**	P		**Pg**	**04**	**04**	**14.7 -0.8**
CFON				S		**Sg**	**04**	**04**	**17.6 -1.4**
	973nm,0.2s								
CBEU	**Beuda**	**0.43**	**359**	P		**Pg**	**04**	**04**	**19.1 -0.3**
CBEU				S		**Sg**	**04**	**04**	**25.2 -0.3**
	61nm,0.1s								
FBR	**Fabra**	**0.59**	**227**	P		**Pg**	**04**	**04**	**21.8 -0.3**
FBR				S		**Sg**	**04**	**04**	**30.0 0.0**
	82nm,0.0s								
CBRU	**Bruguera**	**0.60**	**321**	P		**Pg**	**04**	**04**	**21.7 -0.7**
CBRU				S		**Sg**	**04**	**04**	**29.7 -0.8**
	52nm,0.2s								
CPAL	**Palau Saverder**	**0.60**	**36**	P		**Pg**	**04**	**04**	**22.3 -0.2**
CPAL				S		**Sb**	**04**	**04**	**30.7 +0.2**
	74nm,0.1s								
EJON	**La Jonquera**	**0.64**	**13**	⇓Pg		**Pg**	**04**	**04**	**22.9 -0.3**
EJON				Sg		**Sg**	**04**	**04**	**31.8 0.0**
EJON	**La Jonquera**	**0.64**	**13**	⇓Pg		**Pg**	**04**	**04**	**22.9 -0.3**
EJON				Sg		**Sg**	**04**	**04**	**31.8 0.0**
EJON				*i* Vmb_Lg			04	04	34.7
SJAF	**Saint Jean de**	**0.68**	**12**	P		**Pg**	**04**	**04**	**23.5 -0.3**
SJAF				S		**Sg**	**04**	**04**	**32.7 -0.2**
	136nm,0.1s								
SJAF	**Saint Jean de**	**0.68**	**12**	Pg		**Pg**	**04**	**04**	**23.5 -0.3**
SJAF				Pn		**Pb**	**04**	**04**	**24.6 +0.9**
SJAF				Sg		**Sg**	**04**	**04**	**32.6 -0.3**
FILF	**Fillols**	**0.74**	**353**	P		**Pb**	**04**	**04**	**24.8 0.0**
FILF				S		**Sg**	**04**	**04**	**35.4 +0.3**
	66nm,0.1s								
FILF	**Fillols**	**0.74**	**353**	⇑Pg		**Pb**	**04**	**04**	**24.8 0.0**
FILF				Sg		**Sb**	**04**	**04**	**35.0 +0.2**
CGAR	**Garraf**	**0.79**	**228**	P		**Pb**	**04**	**04**	**25.6 0.0**
CGAR				S		**Sb**	**04**	**04**	**35.9 +0.1**
	31nm,0.2s								
CLLI	**Llivia**	**0.85**	**321**	P		**Pb**	**04**	**04**	**25.9 -0.7**
CLLI				S		**Sb**	**04**	**04**	**37.3 -0.4**
	71nm,0.2s								
EMIR	**Miracle**	**0.88**	**276**	Pg		**Pb**	**04**	**04**	**26.9 -0.2**
EMIR				Sg		**Sb**	**04**	**04**	**38.4 -0.1**
EMIR	**Miracle**	**0.88**	**276**	Pg		**Pb**	**04**	**04**	**26.9 -0.2**
EMIR				Sg		**Sb**	**04**	**04**	**38.4 -0.1**
EMIR				*i* Vmb_Lg			04	04	40.8
ARBS	**La Rabassa**	**1.05**	**307**	P		**Pb**	**04**	**04**	**30.0 -0.2**
ARBS				S		**Sb**	**04**	**04**	**44.2 +0.4**
	81nm,0.3s								
CORG	**Organya**	**1.10**	**292**	P		**Pb**	**04**	**04**	**30.5 -0.5**
CORG				S		**Sb**	**04**	**04**	**45.1 +0.1**
	19nm,0.1s								
FNEB	**Nbias**	**1.17**	**338**	P		**Pn**	**04**	**04**	**31.7 -0.1**
FNEB				S		**Sb**	**04**	**04**	**47.0 +0.2**
	63nm,0.2s								
FNEB	**Nbias**	**1.17**	**338**	⇑Pg		**Pn**	**04**	**04**	**32.3 +0.4**
FNEB				Sg		**Sb**	**04**	**04**	**47.5 +0.7**
CSOR	**Sort**	**1.28**	**296**	P		**Pn**	**04**	**04**	**33.8 +0.2**
CSOR				S		**Sb**	**04**	**04**	**51.0 +0.7**
	55nm,0.2s								
EPOB	**Poblet**	**1.30**	**249**	P		**Pn**	**04**	**04**	**34.0 +0.4**
EPOB				S		**Sn**	**04**	**04**	**51.2 +0.6**
	24nm,0.2s								
EPOB	**Poblet**	**1.30**	**249**	⇑Pg		**Pn**	**04**	**04**	**34.5 +0.8**
EPOB				Sg		**Sn**	**04**	**04**	**50.9 +0.3**
EPOB				*i* Vmb_Lg			04	04	52.7
CEST	**Esterri de Car**	**1.32**	**307**	P		**Pn**	**04**	**04**	**34.5 +0.4**
CEST				S		**Sn**	**04**	**04**	**51.7 +0.5**
	30nm,0.2s								
CAVN	**Les Avellanes**	**1.45**	**273**	P		**Pn**	**04**	**04**	**36.4 +0.7**
CAVN				S		**Sb**	**04**	**04**	**55.7 +0.7**
	88nm,0.4s								
CTRE	**Tremp**	**1.51**	**290**	P		**Pn**	**04**	**04**	**37.7 +1.1**
CTRE				S		**Sb**	**04**	**04**	**57.6 +0.7**
	18nm,0.3s								
MTLF	**Montolieu**	**1.56**	**347**	*e*Pn		**Pn**	**04**	**04**	**37.4 +0.2**
MTLF	**Montolieu**	**1.56**	**347**	*e*Pg		**Pb**	**04**	**04**	**38.6 -0.1**
MTLF				*e*Sg		**Sb**	**04**	**04**	**58.8 +0.7**
	20nm,0.3s								
MTLF	**Montolieu**	**1.56**	**347**	⇑Pn		**Pn**	**04**	**04**	**37.4 +0.2**
CARA	**Val d'Aran**	**1.65**	**303**	P		**Pn**	**04**	**04**	**39.6 +1.1**
CARA				S		**Sb**	**04**	**05**	**01.0 +0.2**
	66nm,0.3s								
CBUD	**Illa de Buda**	**1.79**	**232**	S		**Sb**	**04**	**05**	**05.0 +0.2**
ERTA	**Horta de San J**	**1.97**	**245**	P		**Pn**	**04**	**04**	**44.0 +1.1**
ERTA				S		**Sn**	**04**	**05**	**09.1 +1.9**
	22nm,0.3s								
ERTA	**Horta de San J**	**1.97**	**245**	Pg		**Pb**	**04**	**04**	**45.1 -0.7**
ERTA				Sg		**Sb**	**04**	**05**	**12.5 +2.5**
ERTA				*i* Vmb_Lg			04	05	14.0
ECHI	**Chisagues Biel**	**2.04**	**295**	P		**Pn**	**04**	**04**	**44.8 +0.9**
ECHI				S		**Sn**	**04**	**05**	**10.2 +1.3**
	18nm,0.2s								
ECHI	**Chisagues Biel**	**2.04**	**295**	Pn		**Pn**	**04**	**04**	**45.0 +1.1**
ECHI				Pg		**Pb**	**04**	**04**	**47.2 +0.3**
ECHI				Sg		**Sb**	**04**	**05**	**13.3 +1.3**
ECHI				*i* Vmb_Lg			04	05	14.5
ECHI	**Chisagues Biel**	**2.04**	**295**	Pn		**Pn**	**04**	**04**	**45.0 +1.1**
ETOS	**Mallorca**	**2.05**	**177**	Pn		**Pn**	**04**	**04**	**44.2 +0.2**
ETOS				Sn		**Sn**	**04**	**05**	**06.8 -2.4**
CMAS	**Mas de Barbera**	**2.10**	**239**	P		**Pn**	**04**	**04**	**45.7 +1.1**
CMAS				S		**Sn**	**04**	**05**	**11.9 +1.6**
	15nm,0.1s								
EPF	**Esparros**	**2.12**	**306**	*e*Pn		**Pn**	**04**	**04**	**45.9 +0.9**
EPF	**Esparros**	**2.12**	**306**	*e*Pg		**Pb**	**04**	**04**	**47.6 -0.7**
EPF				*e*Sg		**Sb**	**04**	**05**	**14.7 +0.4**
	16nm,0.2s								
VIEF	**Viey**	**2.24**	**299**	Pn		**Pn**	**04**	**04**	**48.7 +2.0**
ESAC	**San Caprasio**	**2.37**	**269**	Pg		**Pb**	**04**	**04**	**51.4 -1.1**
ESAC				Sg		**Sg**	**04**	**05**	**24.9 -1.7**
ESAC				*i* Vmb_Lg			04	05	26.3
LASF	**Ste Croix**	**2.41**	**20**	*e*Pn		**Pn**	**04**	**04**	**48.9 0.0**
LASF				*e*Sg		**Sg**	**04**	**05**	**26.2 -1.8**
	3.4nm,0.3s								
ECOL	**Islas Columbre**	**2.45**	**219**	Sn		**Sn**	**04**	**05**	**18.2 -0.6**
CANF	**Canfranc**	**2.56**	**293**	Pn		**Pn**	**04**	**04**	**52.5 +1.4**
ETSF	**Etsaut**	**2.64**	**295**	*e*Pn		**Pn**	**04**	**04**	**52.7 +0.6**
ETSF	**Etsaut**	**2.64**	**295**	*e*Pg		**Pb**	**04**	**04**	**59.0 +1.8**
ETSF				*e*Sg		**Sb**	**04**	**05**	**32.1 +2.9**
	12nm,0.3s								
MONQ	**Montcuq**	**2.77**	**337**	Pn		**Pn**	**04**	**04**	**54.9 +1.1**
MONQ				Pg		**Pg**	**04**	**05**	**01.9 -1.7**
EMOS	**Mosqueruela**	**2.80**	**240**	P		**Pn**	**04**	**04**	**55.6 +1.2**
EMOS				S		**Sn**	**04**	**05**	**29.7 +1.9**
	4.3nm,0.5s								
EMOS	**Mosqueruela**	**2.80**	**240**	Pg		**Pb**	**04**	**05**	**02.6 +2.7**
EMOS				Sg		**Sg**	**04**	**05**	**38.8 -1.7**
ATE	**Arette**	**2.81**	**298**	P		**Pn**	**04**	**04**	**55.9 +1.5**
ATE				S		**Sn**	**04**	**05**	**28.7 +0.9**
	9.0nm,0.3s								
ATE	**Arette**	**2.81**	**298**	Pn		**Pn**	**04**	**04**	**56.1 +1.6**
ATE				Pg		**Pg**	**04**	**05**	**03.0 -1.3**
ARTF	**Artigues**	**2.90**	**51**	Pn		**Pn**	**04**	**04**	**56.2 +0.6**
EIBI	**Ibiza**	**2.98**	**201**	Sn		**Sn**	**04**	**05**	**30.1 -1.7**
EIBI				*i* Vmb_Lg			04	05	33.6
SMRF	**Simiane la Rot**	**3.02**	**44**	*e*Pg		**Pb**	**04**	**05**	**05.9 +2.2**
SMRF				*e*Sg		**Sg**	**04**	**05**	**45.1 -2.4**
	3.9nm,0.3s								
CAF	**Calviac**	**3.14**	**352**	*e*Pn		**Pn**	**04**	**04**	**58.4 -0.5**
CAF	**Calviac**	**3.14**	**352**	*e*Pg		**Pb**	**04**	**05**	**08.1 +2.5**
CAF				*e*Sn		**Sn**	**04**	**05**	**34.4 -1.5**
	1.8nm,0.3s								
CAF				*e*Sg		**Sg**	**04**	**05**	**48.7 -2.5**
	3.3nm,0.2s								
EORO	**Oroz-Betelu**	**3.15**	**291**	Pn		**Pn**	**04**	**05**	**00.2 +1.1**
EORO				Pg		**Pb**	**04**	**05**	**08.7 +2.8**
EORO				Sg		**Sg**	**04**	**05**	**49.4 -2.3**
EORO				*i* Vmb_Lg			04	05	58.4
SJPF	**Ste Jean**	**3.17**	**295**	*e*Pn		**Pn**	**04**	**04**	**59.2 -0.2**
SJPF	**Ste Jean**	**3.17**	**295**	*e*Pg		**Pb**	**04**	**05**	**08.5 +2.3**
SJPF				*e*Sg		**Sg**	**04**	**05**	**49.4 -2.9**
	4.7nm,0.3s								
LMR	**La Mourre**	**3.20**	**61**	*e*Pn		**Pn**	**04**	**04**	**59.1 -0.6**
LMR				*e*Sn		**Sn**	**04**	**05**	**36.5 -0.9**
	2.1nm,0.2s								
LMR				*e*Sg		**Sg**	**04**	**05**	**51.1 -2.1**
	2.2nm,0.3s								
OSSF	**Osses**	**3.25**	**297**	Pn		**Pn**	**04**	**05**	**02.3 +1.8**
TRIGF	**Trigance**	**3.34**	**54**	Pn		**Pn**	**04**	**05**	**02.6 +0.8**
VIVF	**Saint-Julien-l**	**3.36**	**25**	*e*Pn		**Pn**	**04**	**05**	**01.5 -0.5**
VIVF				*e*Sg		**Sb**	**04**	**05**	**53.4 +3.5**
	1.6nm,0.2s								
EALK	**Alkurruntz**	**3.40**	**296**	Pn		**Pn**	**04**	**05**	**04.5 +1.9**
LFF	**La Frestale**	**3.43**	**336**	*e*Pg		**Pb**	**04**	**05**	**12.9 +2.4**
LFF				*e*Sg		**Sg**	**04**	**05**	**58.2 -2.2**
	10nm,0.3s								
RJF	**Les Rejaudoux**	**3.58**	**347**	*e*Pg		**Pb**	**04**	**05**	**16.0 +2.8**
RJF				*e*Sn		**Sn**	**04**	**05**	**43.7 -3.2**
	1.7nm,0.2s								
RJF				*e*Sg		**Sg**	**04**	**06**	**02.0 -3.5**
	3.3nm,0.2s								
ETOR	**Torete**	**3.71**	**256**	Pn		**Pn**	**04**	**05**	**07.9 +1.0**
ETOR				Sn		**Sn**	**04**	**05**	**51.0 +0.8**
ETOR				Sg		**Sg**	**04**	**06**	**06.3 -3.3**
ETOR				*i* Vmb_Lg			04	06	10.9
TURF	**col de Turini**	**4.07**	**56**	Pn		**Pn**	**04**	**05**	**12.7 +0.9**
ETOB	**Tobarra**	**4.54**	**227**	Pn		**Pn**	**04**	**05**	**17.9 -0.3**
ETOB				*i* Vmb_Lg			04	07	42.4
PGF	**Pioggiola**	**4.74**	**79**	*e*Pn		**Pn**	**04**	**05**	**21.7 +0.6**
PGF				*e*Sn		**Sn**	**04**	**06**	**13.3 -2.3**
	1.3nm,0.2s								

*IDC **25** 04:05:43.5±0.9,55°.12S×30°.78W,h0km,mb4.1/6, mbtmp4.2/6,MS3.4/11,Error ellipse: s-maj=42.9km s-min=19.6km az=70.0*
*NEIC **25** 04:05:43.5±1.8,55°.0S±0°.1×30°.6W±0°.2,h10km±2km, mb4.5/18,Error ellipse: s-maj=26.8km s-min=16.6km az=43.0*
ISC 25 04:05:44.5±0.8,55°.1S±0°.1×30°.8W±0°.1,h10km,n42, σ1s05/31,mb4.4/12,MS3.5/10,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
HOPE	**Hope Point**	**3.41**	**281**			**Pn**	**04**	**06**	**39.4 +1.8**
VNA1	**Neumayer--Stat**	**18.50**	**156**	P		**Pn**	**04**	**10**	**01.2 +0.7**
VNA3	**Neumayer Olymp**	**18.63**	**159**	P		**Pn**	**04**	**10**	**02.8 +0.7**
VNA2	**Neumayer--Watz**	**18.90**	**156**	P		**Pn**	**04**	**10**	**05.1 -0.3**
	baz=309,slow=12								
PMSA	**Palmer Station**	**19.06**	**226**	LR		LR	04	15	57.8
	comp=Z,93nm,18.3s,baz=54,slow=32								
SNAA	**Sanae**	**20.49**	**155**	P		**P**	**04**	**10**	**21.7 -0.5**
SNAA	**Sanae**	**20.49**	**155**	P		**P**	**04**	**10**	**21.5 -0.6**
	1.7nm,0.7s,baz=294,slow=12,SNR=12								
SNAA				LR		LR	04	17	48.0
	comp=Z,40nm,18.1s,baz=7.5,slow=35								
	1.7nm,0.7s								
SNAA	**Sanae**	**20.49**	**155**	P		**P**	**04**	**10**	**20.9 -1.3**
TROLL	**Troll, Antarti**	**22.04**	**153**	P		**P**	**04**	**10**	**38.7 -0.3**
MG02	**Cerro Sombrero**	**22.56**	**260**	P		**P**	**04**	**10**	**45.1 +0.6**
BELA	**Belgrano 2**	**22.95**	**182**	P		**P**	**04**	**10**	**48.8 +0.3**
MG05	**Puerto Natales**	**24.85**	**260**	P		**P**	**04**	**11**	**06.1 -0.7**
TRQA	**Tornquist**	**27.06**	**296**	P		**P**	**04**	**11**	**25.0 -1.9**
TRQA				IAmb		IAmb	04	11	56.9
	comp=Z,7.8nm,1.4s								
CPUP	**Villa Florida**	**34.65**	**315**	P		**P**	**04**	**12**	**33.6 -0.2**
	comp=Z,2.4nm,0.9s,baz=167,slow=10,SNR=3.3								
CPUP				LR		LR	04	27	51.8
	comp=Z,33nm,18.1s,baz=162,slow=38								
	comp=Z,2.4nm,0.9s								
MT09	**Talagante**	**35.06**	**291**	P		**P**	**04**	**12**	**36.8 -0.8**
MT09				IAmb		IAmb	04	13	05.7
	comp=Z,16nm,1.4s								
QSPA	**South Pole Qui**	**35.19**	**180**	P		**P**	**04**	**12**	**39.0 +0.6**
	comp=Z,4.4nm,0.9s,baz=202,slow=4.7,SNR=12								
QSPA				LR		LR	04	27	12.4
	comp=Z,87nm,18.0s,baz=220,slow=37								
	comp=Z,4.4nm,0.9s								
QSPA	**South Pole Qui**	**35.19**	**180**	P		**P**	**04**	**12**	**37.8 -0.5**
QSPA				IAmb		IAmb	04	13	07.4
	comp=Z,12nm,1.3s								
VA06	**Catapilco**	**36.16**	**292**	P		**P**	**04**	**12**	**47.2 +0.4**
CO02	**Combarbal**	**37.05**	**293**	P		**P**	**04**	**12**	**53.0 -1.6**
CO02				IAmb		IAmb	04	13	31.2
	comp=Z,24nm,1.4s								
CO01	**Juntas del Tor**	**37.55**	**296**	P		**P**	**04**	**12**	**59.5 +0.5**
CO01				IAmb		IAmb	04	13	03.7
	comp=Z,3.1nm,0.7s								
AC05	**El Transito**	**38.56**	**296**	P		**P**	**04**	**13**	**06.2 -1.2**
AC05				IAmb		IAmb	04	13	37.0
	comp=Z,13nm,1.5s								
GO02	**Mina Guanaco**	**41.23**	**300**	P		**P**	**04**	**13**	**28.7 -1.1**
GO02				IAmb		IAmb	04	13	31.4
	comp=Z,9.3nm,0.9s								
PB01	**IPOC Station P**	**44.66**	**304**	P		**P**	**04**	**13**	**55.3 -2.0**
PTLB	**Pontes e Lacer**	**45.20**	**320**	P		**P**	**04**	**14**	**00.3 -1.2**
PTLB				IAmb		IAmb	04	14	07.4
	comp=Z,2.3nm,0.8s								
GO01	**Chusmiza**	**45.70**	**305**	P		**P**	**04**	**14**	**07.0 +0.9**
GO01				IAmb		IAmb	04	14	09.3
	comp=Z,5.3nm,1.1s								
VNDA	**Vanda**	**47.44**	**184**	P		**P**	**04**	**14**	**18.6 +0.1**
	comp=Z,2.3nm,0.8s,baz=195,slow=4.9,SNR=19								
	comp=Z,2.3nm,0.8s								
VNDA	**Vanda**	**47.44**	**184**	P		**P**	**04**	**14**	**18.3 -0.2**
VNDA				IAmb		IAmb	04	14	21.7
	comp=Z,2.5nm,0.8s								
LPAZ	**La Paz**	**48.15**	**309**	P		**P**	**04**	**14**	**26.7 +1.3**
	comp=Z,1.8nm,0.5s,baz=108,slow=7.4,SNR=18								
	comp=Z,1.8nm,0.5s								
LPAZ	**La Paz**	**48.15**	**309**	P		**P**	**04**	**14**	**24.9 -0.5**
LPAZ				IAmb		IAmb	04	14	44.6
	comp=Z,2.3nm,0.7s								
H10N1	**ASCENSION HYDR**	**48.86**	**22**	T		T	05	07	40.4
H10N3	**ASCENSION HYDR**	**48.86**	**22**	T		T	05	07	33.2
	baz=261,slow=74,SNR=6.6								
H10N2	**ASCENSION HYDR**	**48.88**	**22**	T		T	05	07	34.1
	baz=193,slow=74,SNR=4.7								
RCBR	**Riachuelo**	**49.27**	**353**	LR		LR	04	33	18.6
	comp=Z,24nm,18.0s,baz=322,slow=34								
MDP	**Montagnes des**	**62.65**	**335**	LR		LR	04	41	37.6
	comp=Z,20nm,21.4s,baz=261,slow=34								
DBIC	**Dimbokro**	**65.20**	**29**	LR		LR	04	38	45.1
	comp=Z,26nm,20.2s,baz=162,slow=30								
SDV	**Santo Domingo**	**71.89**	**318**	LR		LR	04	52	18.2
	comp=Z,33nm,18.2s,baz=126,slow=39								
KOWA	**Kowa**	**72.91**	**

AQU S Sb 04 12 25.4 -0.3
AQU AML AML
comp=E,5395µm,1.0s
AQU AML AML
comp=N,4740µm,1.5s
AQU AML AML
comp=E,5360µm,0.9s
AQU AML AML
comp=N,4885µm,0.2s
FDMO Fiordimonte 0.37 347 P Pg 04 12 19.2 -0.5
FDMO S Sb 04 12 25.3 -0.7
FDMO AML AML
comp=N,8285µm,1.6s
FDMO AML AML
comp=E,7765µm,0.2s
CESI CESI - Serrava 0.39 326 P Pg 04 12 19.8 -0.3
CESI S Sb 04 12 26.2 -0.6
CESI AML AML
comp=E,10395µm,0.4s
CESI AML AML
comp=N,13800µm,0.4s
FIAM Fiamignano 0.41 189 ⇑P Pg 04 12 20.6 +0.2
FIAM AML AML
comp=N,3260µm,0.7s
FIAM AML AML
comp=E,5110µm,0.6s
CSP1 Cessapalombo 0.41 0 ⇑P Pg 04 12 20.0 -0.6
CSP1 S Sb 04 12 26.9 -0.6
CSP1 AML AML
comp=E,7120µm,1.2s
CSP1 AML AML
comp=N,11150µm,0.4s
CSP1 AML AML
comp=N,11185µm,0.4s
CSP1 AML AML
comp=E,7115µm,1.2s
OFFI Offida 0.44 54 ⇑P Pb 04 12 21.1 -0.5
OFFI S Sb 04 12 29.0 +0.9
OFFI AML AML
comp=E,13850µm,0.4s
OFFI AML AML
comp=N,27200µm,0.6s
CESX Cesi 0.46 262 ⇑P Pg 04 12 21.3 -0.1
CESX AML AML
comp=E,3845µm,0.5s
CESX AML AML
comp=N,5310µm,0.2s
FAGN Fagnano 0.50 145 ⇑P Pg 04 12 21.5 -0.6
FAGN S Sn 04 12 32.0 -1.2
FAGN AML AML
comp=E,11995µm,0.3s
FAGN AML AML
comp=N,8475µm,0.4s
SEF1 Sefro 0.51 338 ⇑P Pg 04 12 21.7 -0.5
SEF1 S Sb 04 12 30.0 0.0
SEF1 AML AML
comp=E,8345µm,1.2s
SEF1 AML AML
comp=N,10165µm,0.2s
SEF1 AML AML
comp=N,10150µm,0.3s
TRTR Tortoreto Alta 0.54 76 ⇑P Pb 04 12 23.3 -0.1
TRTR AML AML
comp=E,9675µm,0.5s
TRTR AML AML
comp=N,9825µm,1.0s
ASSB Assisi San Ben 0.54 313 ⇑P Pg 04 12 22.4 -0.5
ASSB S Sb 04 12 31.1 +0.1
ASSB AML AML
comp=E,6230µm,0.5s
ASSB AML AML
comp=N,5700µm,1.5s
VCEL Villa Celiera 0.55 121 ⇑P Pg 04 12 22.4 -0.6
VCEL AML AML
comp=E,7920µm,1.5s
VCEL AML AML
comp=N,10900µm,0.8s
SSM1 San Severino M 0.55 358 P Pg 04 12 22.7 -0.4
GAG1 Gagliole 0.57 350 ⇑P Pg 04 12 23.2 -0.2
GAG1 AML AML
comp=E,9245µm,0.5s
GAG1 AML AML
comp=N,7765µm,0.4s
SNTG Esanatoglia 0.61 342 ⇑P Pg 04 12 23.3 -0.8
SNTG S Sb 04 12 34.0 +1.0
SNTG AML AML
comp=N,2250µm,0.7s
SNTG AML AML
comp=N,312µm,0.6s
SNTG AML AML
comp=E,257µm,0.9s
SNTG AML AML
comp=E,1695µm,0.9s
T0110 Collepietro 0.62 136 ⇑P Pg 04 12 23.6 -0.8
T0110 AML AML
comp=N,7665µm,0.4s
T0110 AML AML
comp=E,6655µm,1.0s
EL6 Elcito 0.66 354 ⇑P Pg 04 12 24.2 -0.8
EL6 AML AML
comp=N,5735µm,0.4s
EL6 AML AML
comp=E,25000µm,1.6s
CADA Capodarco di F 0.66 38 ⇓P Pb 04 12 25.8 +0.4
CADA AML AML
comp=E,7955µm,0.5s
CADA AML AML
comp=N,8665µm,0.5s
PTQR Pietraquaria 0.67 167 ⇓P Pg 04 12 24.8 -0.5
PTQR AML AML
comp=E,918µm,0.5s
PTQR AML AML
comp=N,820µm,1.1s
SRES S.Oreste - Sor 0.67 230 ⇑P Pg 04 12 25.1 -0.3
SRES AML AML
comp=E,1615µm,1.0s
SRES AML AML
comp=N,1515µm,0.5s
FOSV Fossato di Vic 0.70 333 ⇓P Pg 04 12 23.4 -2.4
FOSV S Sn 04 12 37.0 -1.1
FOSV AML AML
comp=N,3080µm,0.3s
FOSV AML AML
comp=E,1925µm,0.3s
CING Cingoli 0.70 360 ⇑P Pg 04 12 24.9 -0.9
CING AML AML
comp=N,1580µm,0.3s
CING AML AML
comp=E,2015µm,0.3s
MTCE Montecelio 0.74 208 ⇑P Pg 04 12 25.9 -0.6
MTCE AML AML
comp=N,1110µm,1.1s
MTCE AML AML
comp=E,3150µm,0.7s
CERT Cerreto 0.74 193 ⇓P Pg 04 12 26.2 -0.5
CERT AML AML
comp=E,2655µm,0.5s
CERT AML AML
comp=N,2225µm,1.3s
PP3 Marolino 0.76 23 ⇑P Pb 04 12 27.3 +0.2
PP3 AML AML
comp=N,4315µm,1.3s
PP3 AML AML
comp=N,4215µm,0.4s
PP3 AML AML
comp=E,11130µm,0.5s
PP3 AML AML
comp=E,11460µm,0.6s
MURB Monte Urbino 0.77 320 ⇓P Pg 04 12 26.9 -0.3
MURB S Sn 04 12 40.0 +0.1
MURB AML AML
comp=E,9185µm,1.6s
MURB AML AML
comp=E,8495µm,1.6s
MURB AML AML
comp=N,6385µm,0.8s
MURB AML AML
comp=N,6285µm,1.0s
ATTE AVT- Monte Tez 0.81 310 ⇑P Pg 04 12 27.3 -0.6
ATTE AML AML
comp=E,1410µm,0.5s
ATTE AML AML
comp=N,1675µm,0.7s
SSFR Montelago di S 0.82 338 ⇑P Pg 04 12 27.8 -0.3
SSFR AML AML
comp=E,4775µm,0.2s
SSFR AML AML
comp=E,4815µm,0.2s
SSFR AML AML
comp=N,3815µm,0.3s
SSFR AML AML
comp=N,3590µm,0.3s
ATFO Monte Foce - G 0.83 326 ⇑P Pg 04 12 27.6 -0.7
ATFO AML AML
comp=N,1730µm,0.3s
ATFO AML AML
comp=E,1525µm,1.4s
MGAB Montegabbione 0.84 287 ⇑P Pg 04 12 28.0 -0.4
MGAB AML AML
comp=N,5270µm,1.4s
MGAB AML AML
comp=E,4025µm,0.6s
MGAB AML AML
comp=E,4020µm,0.6s
MGAB AML AML
comp=N,5265µm,1.4s
MGAB AML AML
comp=N,4975µm,1.4s
ARVD Arcevia 0.84 347 ⇑P Pg 04 12 27.5 -1.0
ARVD S Sn 04 12 42.0 +0.3
ARVD AML AML
comp=E,1725µm,0.5s
ARVD AML AML
comp=N,1460µm,0.7s
INTR Introdacqua 0.84 142 ⇑P Pg 04 12 27.3 -1.3
INTR AML AML
comp=E,2µm,1.6s
INTR AML AML
comp=N,2µm,0.7s
INTR AML AML
comp=E,1645µm,1.6s
INTR AML AML
comp=E,2µm,1.6s
INTR AML AML
comp=N,2µm,0.7s
INTR AML AML
comp=N,2760µm,0.9s
VVLD Villa Vallelon 0.86 159 ⇑P Pg 04 12 28.2 -0.7
VVLD AML AML
comp=N,1590µm,0.7s
VVLD AML AML
comp=E,1180µm,0.7s
GUAR Guarcino 0.89 175 P Pn 04 12 30.1 0.0
GUAR AML AML
comp=E,1485µm,0.7s
GUAR AML AML
comp=N,1810µm,0.8s
FRON Frontone 0.91 338 ⇓P Pg 04 12 28.7 -1.1
FRON AML AML
comp=E,1680µm,0.7s
FRON AML AML
comp=N,1815µm,0.3s
ATVO AVT- Monte Val 0.92 321 P Pg 04 12 28.2 -1.7
ATVO AML AML
comp=E,1175µm,0.3s
ATVO AML AML
comp=N,1390µm,0.4s
AOI Ancona 0.92 18 ⇓P Pg 04 12 29.3 -0.7
AOI AML AML
comp=N,1640µm,0.4s
AOI AML AML
comp=E,1685µm,0.4s
RMP Rome, Mte Porz 0.94 203 ⇓P Pn 04 12 32.0 +1.1
RMP AML AML
comp=E,2095µm,0.4s
RMP AML AML
comp=N,2110µm,0.5s
ATMI Monte Miggiano 0.95 314 ⇓P Pg 04 12 30.6 +0.1
ATMI S Sn 04 12 45.0 +0.7
ATMI AML AML
comp=E,4635µm,0.8s
ATMI AML AML
comp=N,5100µm,0.4s
LPEL Lama dei Pelig 0.96 131 P Pb 04 12 29.3 -1.2
LPEL S Sb 04 12 44.0 +0.9
LPEL AML AML
comp=E,1940µm,0.3s
LPEL AML AML
comp=N,1355µm,0.2s
COR1 Corinaldo 0.97 351 ⇓P Pg 04 12 30.7 -0.2
COR1 AML AML
comp=N,2468µm,1.6s
COR1 AML AML
comp=E,1470µm,0.6s
SACS San Casciano d 0.97 281 ⇓P Pb 04 12 30.8 +0.1
SACS AML AML
comp=E,1815µm,0.6s
SACS AML AML
comp=N,1265µm,0.8s
SACS AML AML
comp=N,1355µm,0.8s
SACS AML AML
comp=E,1800µm,0.6s
ATPI Pietralunga - 0.97 323 ⇑P Pb 04 12 29.9 -0.8
ATPI AML AML
comp=E,1445µm,0.7s
ATPI AML AML
comp=N,1280µm,0.4s
PIEI Pieia 0.99 331 ⇓P Pb 04 12 30.4 -0.6
PIEI AML AML
comp=N,1272µm,1.1s
PIEI AML AML
comp=E,1800µm,0.3s
MA9 Marino 0.99 204 S Sn 04 12 47.0 +1.7
MPAG Monte Paganucc 1.01 341 ⇑P Pb 04 12 30.4 -0.9
MPAG S Sn 04 12 48.0 +2.2
MPAG AML AML
comp=E,1880µm,0.8s
MPAG AML AML
comp=N,1395µm,1.2s
MPAG AML AML
comp=E,1590µm,0.7s
MPAG AML AML
comp=N,1170µm,1.2s
SENI Senigallia 1.03 1 ⇓P Pn 04 12 32.4 +0.4
SENI AML AML
comp=N,4300µm,0.7s
SENI AML AML
comp=E,6655µm,0.3s
POFI Posta Fibreno 1.03 158 ⇓P Pb 04 12 31.2 -0.6
POFI AML AML
comp=E,734µm,0.8s
POFI AML AML
comp=N,662µm,0.9s
LATE Laterza 1.03 267 P Pg 04 12 32.2 +0.1
FSSB Fossombrone 1.06 343 ⇓P Pb 04 12 31.7 -0.6
FSSB AML AML
comp=E,5160µm,0.4s
FSSB AML AML
comp=N,3525µm,0.4s
TOLF Tolfa 1.08 236 ⇑P Pb 04 12 32.4 -0.1
TOLF AML AML
comp=E,784µm,0.9s
TOLF AML AML
comp=N,958µm,1.0s
BADI Badiali 1.09 320 ⇑P Pg 04 12 33.1 -0.1
CAFI Castiglion Fio 1.12 306 ⇑P Pb 04 12 32.9 -0.3
CAFI AML AML
comp=E,1190µm,0.5s
CAFI AML AML
comp=N,976µm,1.1s
GIUL Giuliano Di Ro 1.12 178 ⇓P Pg 04 12 35.0 +1.3
GIUL AML AML
comp=N,698µm,0.6s
GIUL AML AML
comp=E,656µm,0.5s
MCIV Monte Civitell 1.13 276 ⇑P Pg 04 12 33.9 0.0
MCIV AML AML
comp=N,650µm,0.8s
MCIV AML AML
comp=E,532µm,0.3s
PE3 Peglio 1.14 333 ⇓P Pb 04 12 33.3 -0.4
SF04 Casetta 1.15 279 ⇓P Pn 04 12 34.1 +0.4
PARC Parchiule 1.20 324 ⇓P Pn 04 12 34.6 +0.1
PARC AML AML
comp=E,1104µm,0.6s
PARC AML AML
comp=N,1255µm,0.8s
SF01 Poggio Pratacc 1.21 277 P Pb 04 12 35.2 +0.4
SF01 AML AML
comp=E,1282µm,0.6s
SF01 AML AML
comp=N,854µm,0.4s
CERA Filignano 1.24 150 ⇑P Pn 04 12 34.4 -0.6
CERA AML AML
comp=N,1020µm,0.8s
CERA AML AML
comp=E,1076µm,1.0s
CERA AML AML
comp=E,1111µm,1.0s
CERA AML AML
comp=N,976µm,0.8s
ARCI Arcidosso 1.28 278 ⇓P Pg 04 12 36.6 -0.2
ARCI AML AML
comp=N,274µm,0.9s
ARCI AML AML
comp=E,220µm,1.0s
PESA Pesaro 1.29 348 P Pb 04 12 36.1 -0.1
PESA AML AML
comp=N,1620µm,0.6s
PESA AML AML
comp=E,1570µm,1.5s
TRIV Trivento 1.35 132 ⇑P Pg 04 12 38.8 +0.6
TRIV AML AML
comp=N,726µm,0.9s
TRIV AML AML
comp=E,870µm,1.6s
VAGA Valle Agricola 1.48 148 ⇓P Pg 04 12 40.7 +0.2
VAGA AML AML
comp=E,324µm,1.6s
VAGA AML AML
comp=N,417µm,0.4s
BSSO Busso 1.53 137 ⇓P Pg 04 12 42.2 +0.6
MODR Mondragone 1.61 162 P Pg 04 12 42.7 -0.4
MODR AML AML
comp=E,162µm,0.6s
MODR AML AML
comp=N,224µm,1.0s
OSSC Osservatorio P 1.66 301 ⇓P Pb 04 12 42.1 -0.4
OSSC AML AML
comp=N,304µm,0.6s
OSSC AML AML
comp=E,217µm,0.7s
RUFI Rufina 1.70 314 ⇓P Pb 04 12 42.4 -0.6
CASP Castiglione de 1.73 275 ⇓P Pn 04 12 42.4 +0.7
CASP AML AML
comp=E,107µm,0.9s
CASP AML AML
comp=N,108µm,1.2s
MELA Melanico ??? S 1.73 123 P Pb 04 12 43.4 -0.2
MELA AML AML
comp=E,1084µm,0.7s
MELA AML AML
comp=N,1101µm,0.5s
MELA AML AML
comp=E,1003µm,0.7s
MELA AML AML
comp=N,1049µm,0.5s
TRIF Trifonti 1.75 285 P Pn 04 12 42.9 +1.0
TRIF AML AML
comp=E,253µm,0.8s
TRIF AML AML
comp=N,208µm,0.7s
DUGI Dugi Otok 1.89 45 *e*Pn Pn 04 12 43.8 0.0
APRC Apricena 1.97 117 ⇓P Pb 04 12 46.4 -1.3
APRC AML AML
comp=E,422µm,0.3s
APRC AML AML
comp=N,684µm,0.4s
MPPT Montemurlo 2.00 310 ⇑P Pb 04 12 47.2 -1.1
MPPT AML AML
comp=N,254µm,0.5s
MPPT AML AML
comp=E,241µm,0.8s
MRB1 Monte Rocchett 2.04 139 S Sg 04 13 16.0 -1.6
SGRT San Giovanni R 2.10 115 ⇓P Pb 04 12 48.6 -1.4
SGRT S Sb 04 13 17.0 +1.1
SGRT AML AML
comp=E,446µm,0.9s
SGRT AML AML
comp=N,430µm,0.4s
VIRC Vir 2.10 39 *e*Pn Pn 04 12 46.8 0.0
MORI Morici 2.18 56 *e*Pn Pn 04 12 48.5 +0.6
CELB S.Piero in Cam 2.21 273 ⇓P Pn 04 12 49.0 +0.7
MSAG Monte S. Angel 2.23 115 ⇓P Pb 04 12 50.7 -1.5
MSAG AML AML
comp=N,980µm,0.6s
MSAG AML AML
comp=E,632µm,0.6s
NVLJ Novalja 2.24 32 *e*Pn Pn 04 12 49.2 +0.5
POPM Popiglio 2.25 308 ⇓P Pn 04 12 49.9 +1.1
POPM AML AML
comp=N,148µm,0.2s
POPM AML AML
comp=E,138µm,0.7s
BRJN Brijuni 2.26 10 *e*Pn Pn 04 12 49.4 +0.4
SNAL S. Angelo Dei 2.31 139 ⇓P Pb 04 12 53.1 -0.3
ZCCA Zocca 2.33 317 ⇓P Pb 04 12 54.1 +0.3
MAIM Mastiano 2.33 303 P Pn 04 12 51.2 +1.2
MAIM AML AML
comp=E,132µm,0.9s
MAIM AML AML
comp=N,149µm,0.4s
RABC Rab 2.37 28 *e*Pn Pn 04 12 50.6 +0.1
CARD Cardoso 2.40 305 ⇑P Pn 04 12 52.2 +1.3
CARD S Sn 04 13 21.0 +1.0
CARD AML AML
comp=N,198µm,1.2s
CARD AML AML
comp=E,204µm,0.4s
SMRN Sveta Marina 2.46 16 *e*Pn Pn 04 12 51.5 -0.2
GSCL Gusciola 2.53 312 P Pn 04 12 54.6 +1.9
GSCL AML AML
comp=E,178µm,0.5s
GSCL AML AML
comp=N,130µm,0.4s
UDBI Udbina 2.62 44 *e*Pn Pn 04 12 55.1 +1.1
KIJV Kijevo 2.69 59 *e*Pn Pn 04 12 56.3 +1.4
LSTV Lastovo 2.72 87 *e*Pn Pn 04 12 55.9 +0.6
PLMA Palmaria, Port 2.80 300 P Pn 04 12 57.3 +0.9
PLMA AML AML
comp=E,68µm,0.6s
PLMA AML AML
comp=N,79µm,1.0s
RIY Rijeka 2.81 19 *e*Pn Pn 04 12 57.0 +0.5
PLIT Plitvice 2.81 38 *e*Pn Pn 04 12 57.5 +0.8
MAKA Makarska 2.87 76 *i* Pn Pn 04 12 58.0 +0.7
GRAM Graiana 2.91 310 ⇓P Pn 04 13 00.4 +2.4
GRAM AML AML
comp=E,176µm,0.4s
GRAM AML AML
comp=N,241µm,0.4s
SMPL Sampolo 2.96 260 ⇑P Pn 04 12 59.8 +1.2
SMPL AML AML
comp=E,21µm,0.8s
SMPL AML AML
comp=N,20µm,0.7s
RICI Ricice 2.99 73 *e*Pn Pn 04 13 00.2 +1.2
AMUR Altamura 3.10 124 ⇓P Pn 04 13 02.6 +2.1
AMUR AML AML
comp=N,230µm,0.3s
AMUR AML AML
comp=E,231µm,0.4s
PGF Pioggiola 3.10 269 *e*P Pn 04 13 01.9 +1.2
PGF *e*Sn Sn 04 13 33.2 -4.4
comp=E,12nm,0.6s
MSSA Maissana 3.14 303 ⇑P Pn 04 13 03.0 +1.8
MSSA AML AML
comp=E,71µm,0.9s
MSSA AML AML
comp=N,61µm,0.5s
BOJS Bojanci 3.19 27 P Pb 04 13 05.1 -3.4
BOJS S Sn 04 13 41.0 +1.5
A251A Rujevac 3.30 41 *e*Pn Pn 04 13 04.5 +1.2
MATE Matera 3.31 126 ⇓P Pn 04 13 04.0 +0.6
MATE ⇓S Sn 04 13 44.3 +1.8
SABO M.te Sabotino 3.31 5 ⇓P Pn 04 13 05.6 +2.1
SABO AML AML
comp=N,962µm,1.0s
SABO AML AML
comp=E,170µm,0.5s
SABO AML AML
comp=N,240µm,1.0s
SABO AML AML
comp=E,724µm,0.5s
STON Ston 3.32 85 *e*Pn Pn 04 13 03.2 -0.3
STON Ston 3.32 85 *e*Pn Pn 04 13 03.6 +0.1

STON					eSn		Sn	04 13 42.1	-0.5
STON	**Ston**	**3.32**	**85**	⇓	P		Pn	04 13 03.6	+0.1
STON					S		Sn	04 13 43.0	+0.4
STON					AML		AML		
	comp=E,84μm,1.2s								
STON					AML		AML		
	comp=N,71μm,1.1s								
CGRP	**Cima Grappa**	**3.36**	**343**	⇓	P		Pn	04 13 05.5	+1.3
CGRP					S		Sn	04 13 46.0	+2.1
CGRP					AML		AML		
	comp=E,221μm,0.5s								
CGRP					AML		AML		
	comp=N,310μm,0.5s								
LTRZ	**Laterza**	**3.41**	**126**	⇓	P		Pn	04 13 07.3	+2.5
LJU	**Ljubljana**	**3.50**	**15**		P		Pn	04 13 09.2	+3.2
DOSS	**Dosso del Somm**	**3.52**	**336**	⇑	P		Pn	04 13 08.2	+1.8
DOSS					AML		AML		
	comp=E,122μm,0.6s								
DOSS					AML		AML		
	comp=N,124μm,0.5s								
DOSS					AML		AML		
	comp=N,120μm,0.5s								
DOSS					AML		AML		
	comp=E,95μm,0.6s								
BLY	**Banja Luka**	**3.55**	**53**		ePn		Pb	04 13 11.3	-3.4
STAL	**STALIGIAL**	**3.60**	**355**	⇓	P		Pn	04 13 08.4	+1.0
STAL					AML		AML		
	comp=N,132μm,0.3s								
STAL					AML		AML		
	comp=E,146μm,0.3s								
MAGA	**Magasa**	**3.61**	**330**	⇑	P		Pn	04 13 09.1	+1.5
MAGA					AML		AML		
	comp=N,368μm,1.0s								
MAGA					AML		AML		
	comp=E,409μm,1.4s								
LUSI	**Trento, Gardas**	**3.66**	**335**	⇑	P		Pn	04 13 10.3	+2.0
LUSI					AML		AML		
	comp=E,102μm,0.8s								
LUSI					AML		AML		
	comp=N,152μm,0.6s								
SALB	**San Lorenzo Be**	**3.67**	**139**		P		Pn	04 13 05.1	-3.3
PTCC	**Patocco-Chiusa**	**3.73**	**2**	⇓	P		Pn	04 13 11.7	+2.4
GAGG	**Gaggia**	**3.77**	**336**	⇑	P		Pn	04 13 11.9	+2.1
GAGG					AML		AML		
	comp=N,92μm,0.9s								
GAGG					AML		AML		
	comp=E,130μm,0.9s								
EUCT	**Pavia**	**3.87**	**312**	⇓	P		Pb	04 13 17.3	-2.8
ACOM	**Acomizza, Ital**	**3.88**	**3**	⇓	P		Pn	04 13 14.7	+3.3
HCY	**Herceg Novi**	**3.92**	**92**	⇓	*i* Pn		Pn	04 13 12.7	+1.0
HCY					*i* Sn		Sn	04 13 57.3	-0.1
CANO	**Canova, Maglio**	**3.93**	**295**		P		Pg	04 13 28.0	+0.7
BRY	**Bratogost**	**3.94**	**85**	⇑	*i* Pn		Pn	04 13 13.8	+1.7
BRY					*i* Sn		Sn	04 13 58.4	+0.3
OBKA	**Obir**	**3.95**	**14**		*i* Pn		Pn	04 13 14.2	+1.9
	comp=E,1.6nm,0.2s								
MYKA	**Terra Mystica**	**3.96**	**4**		ePn		Pn	04 13 15.9	+3.4
	comp=E,1.8nm,0.2s								
MYKA					eSn		Sn	04 14 01.6	+2.9
	comp=E,7.6nm,0.3s								
KOSI	**Kohlern**	**4.00**	**342**	⇑	P		Pn	04 13 14.8	+1.8
KOSI					AML		AML		
	comp=E,102μm,0.5s								
KOSI					AML		AML		
	comp=N,100μm,0.8s								
ABTA	**Abfaltersbach**	**4.10**	**353**		*i* Pn		Pn	04 13 16.3	+1.9
	comp=N,7.6nm,0.3s,SNR=22								
ABTA					eSn		Sn	04 14 05.0	+2.9
	comp=N,22nm,0.5s								
SOKA	**Soboth**	**4.21**	**17**		ePn		Pn	04 13 17.9	+2.0
	comp=N,1.1nm,0.2s								
SOKA					eSn		Sn	04 14 05.1	+0.4
	comp=N,3.6nm,0.5s								
UPM	**Unac-Piva**	**4.22**	**81**	⇓	*i* Pn		Pn	04 13 17.9	+1.8
UPM					*i* Sn		Sn	04 14 06.2	+1.0
CEME	**Cevo**	**4.22**	**90**	⇑	*i* Pn		Pn	04 13 17.6	+1.6
CEME					*i* Sn		Sn	04 14 05.2	+0.2
BUM	**Brajici-Budva**	**4.23**	**93**	⇑	*i* Pn		Pn	04 13 17.7	+1.6
BUM					*i* Sn		Sn	04 14 05.2	0.0
NKME	**Niksic**	**4.24**	**87**	⇑	*i* Pn		Pn	04 13 17.8	+1.6
NKME					*i* Sn		Sn	04 14 05.4	0.0
VSL	**Villasalto**	**4.29**	**224**	⇓	P		Pn	04 13 19.0	+2.1
RISI	**Rein**	**4.34**	**350**	⇓	P		Pn	04 13 20.0	+2.2
SBF	**Sospel**	**4.38**	**288**		eP		Pn	04 13 19.4	+1.3
SBF					eSn		Sn	04 14 04.9	-3.9
	comp=N,15nm,0.4s								
KBA	**Koelnbreinsper**	**4.40**	**1**		Pn		Pn	04 13 20.7	+2.1
	comp=N,4.2nm,0.3s,SNR=9.1								
KBA					eSn		Sn	04 14 11.4	+1.8
	comp=N,12nm,0.5s								
MUGIO	**Muggio**	**4.41**	**319**	⇑	P		Pn	04 13 21.1	+2.5
DRME	**Dracevica, Mon**	**4.46**	**94**	⇑	*i* Pn		Pn	04 13 20.7	+1.6
DRME					*i* Sn		Sn	04 14 10.2	-0.5
PDG	**Podgorica**	**4.48**	**91**	⇑	P		Pn	04 13 21.7	+2.2
PDG				⇑	S		Sn	04 14 12.6	+1.3
PDG	**Podgorica**	**4.48**	**91**		ePn		Pn	04 13 21.5	+2.1
PDG					eSn		Sn	04 14 13.5	+2.2
TTG	**Podgorica**	**4.48**	**91**	⇓	*i* Pn		Pn	04 13 21.0	+1.6
TTG					*i* Sn		Sn	04 14 10.9	-0.4
ULC	**Ulcinj**	**4.54**	**97**	⇑	*i* Pn		Pn	04 13 19.7	-0.6
ULC					*i* Sn		Sn	04 14 10.4	-2.4
PLE	**Pljevlja**	**4.58**	**80**	⇑	*i* Pn		Pn	04 13 23.0	+2.0
PLE					*i* Sn		Sn	04 14 14.4	+0.3
KOME	**Kolasin**	**4.65**	**86**	⇑	*i* Pn		Pn	04 13 23.7	+1.8
KOME					*i* Sn		Sn	04 14 15.8	+0.1
BBLS	**Lazići**	**4.68**	**73**		ePn		Pn	04 13 24.5	+2.2
BBLS					eSn		Sn	04 14 19.1	+2.7
FETA	**Feichten**	**4.69**	**339**		ePn		Pn	04 13 25.3	+2.9
	comp=N,2.9nm,0.3s								
FETA					eSn		Sn	04 14 22.9	+6.3
	comp=N,4.7nm,0.5s								
WTTA	**Wattenberg**	**4.72**	**347**		ePn		Pn	04 13 26.7	+3.8
	comp=N,1.8nm,0.2s								
WTTA					eSn		Sn	04 14 21.2	+3.7
	comp=N,14nm,0.4s								
SQTA	**Sankt Quirin**	**4.76**	**343**		ePn		Pn	04 13 26.4	+3.0
	comp=N,2.2nm,0.2s								
SQTA					eSn		Sn	04 14 23.5	+5.2
	comp=N,27nm,0.6s								
WATA	**Walderalm**	**4.80**	**347**		Pn		Pn	04 13 28.2	+4.2
	comp=N,2.7nm,0.2s,SNR=5.3								
WATA					eSn		Sn	04 14 24.9	+5.5
	comp=N,21nm,0.4s								
ARSA	**Arzberg**	**4.86**	**19**		ePn		Pn	04 13 28.3	+3.5
	comp=N,2.4nm,0.3s								
ARSA					eSn		Sn	04 14 18.6	-2.2
	comp=N,3.7nm,0.6s								
ARSA	**Arzberg**	**4.86**	**19**	⇑	P		Pn	04 13 28.2	+3.5
MOTA	**Moosalm**	**4.90**	**343**		ePn		Pn	04 13 29.5	+4.1
	comp=N,2.6nm,0.3s								
MOTA					eSn		Sn	04 14 27.1	+5.3
	comp=N,5.2nm,0.3s								
LMR	**La Mourre**	**4.95**	**280**		eP		Pn	04 13 26.9	+1.0
LMR					eSn		Sn	04 14 17.9	-5.0
	comp=N,14nm,1.2s								
PVY	**Plav**	**4.99**	**89**	⇑	*i* Pn		Pn	04 13 28.4	+1.9
PVY					*i* Sn		Sn	04 14 23.5	-0.5
SJES	**Sjenica**	**5.00**	**81**		ePn		Pn	04 13 29.3	+2.5
SJES					eSn		Sn	04 14 24.8	+0.4
BIOA	**Bad Ischl, Aus**	**5.02**	**3**		ePn		Pn	04 13 30.8	+3.8
	comp=N,6.6nm,0.3s								
BIOA					eSn		Sn	04 14 28.5	+3.8
	comp=N,28nm,0.6s								
MBDF	**Montbardon**	**5.09**	**296**		eP		Pn	04 13 30.5	+2.5
MBDF					eSn		Sn	04 14 22.3	-4.3
	comp=N,7.2nm,0.6s								
RETA	**Reutte**	**5.11**	**341**		ePn		Pn	04 13 26.4	-1.8
	comp=N,0.7nm,0.2s								
RETA					eSn		Sn	04 14 31.4	+4.4
	comp=N,4.9nm,0.4s								
TIR	**Tirane**	**5.14**	**103**		ePn		Pn	04 13 30.3	+1.8
TIR					eSn		Sn	04 14 28.9	+1.3
IVAS	**Ivanjica**	**5.17**	**78**		ePn		Pn	04 13 30.3	+1.3
IVAS					eSn		Sn	04 14 27.7	-0.6
DAVA	**Damuels**	**5.18**	**334**		*i* Pn		Pn	04 13 34.6	+5.4
	comp=N,3.2nm,0.3s								
DAVA					eSn		Sn	04 14 33.6	+4.9
	comp=N,6.9nm,0.3s								
MOA	**Molln**	**5.23**	**8**		ePn		Pn	04 13 33.4	+3.6
MOA					eSn		Sn	04 14 31.6	+1.9
MOA	**Molln**	**5.23**	**8**		ePn		Pn	04 13 33.2	+3.4
	comp=N,3.5nm,0.3s								
MOA					eSn		Sn	04 14 31.7	+1.9
	comp=N,4.4nm,0.3s								
FRGS	**Fruska Gora**	**5.38**	**60**		ePn		Pn	04 13 32.6	+0.8
LPG	**La Plagne**	**5.43**	**303**		eP		Pn	04 13 35.0	+2.1
LPG					eSn		Sn	04 14 34.9	-0.3
	comp=N,13nm,1.0s								
LPL	**La Plagne**	**5.46**	**304**		eP		Pn	04 13 35.1	+2.0
LPL					eSn		Sn	04 14 30.6	-5.1
	comp=N,11nm,0.9s								
TRUS	**Trudelj**	**5.47**	**71**		ePn		Pn	04 13 35.5	+2.4
RONA	**Rosalia, Austr**	**5.48**	**22**		*i* Pn		Pn	04 13 36.6	+3.4
	comp=N,1.9nm,0.2s,SNR=5.0								
RONA					eSn		Sn	04 14 35.7	-0.3
	comp=N,0.9nm,0.2s								
CONA	**Conrad Observa**	**5.58**	**19**		*i* Pn		Pn	04 13 38.2	+3.6
	comp=N,2.8nm,0.3s,SNR=8.1								
CONA					eSn		Sn	04 14 38.4	-0.1
	comp=N,5.0nm,0.7s								
GRUS	**Gruza**	**5.62**	**75**		ePn		Pn	04 13 36.0	+0.9
SMRF	**Simiane la Rot**	**5.71**	**286**		eP		Pn	04 13 39.3	+2.8
SMRF					eSn		Sn	04 14 36.5	-5.3
	comp=N,9.9nm,1.2s								
ORIF	**Oris-en-Rattie**	**5.75**	**295**		eP		Pn	04 13 41.1	+4.0
ORIF					eSn		Sn	04 14 37.7	-5.1
	comp=N,3.8nm,0.5s								
SELS	**Selova**	**5.84**	**82**		ePn		Pn	04 13 39.2	+1.1
CKRC	**Cesky Krumlov**	**6.19**	**7**		ePN		Pn	04 13 44.7	+1.7
CKRC					eSN		Sn	04 14 54.4	+0.9
BOVS	**Bovan**	**6.29**	**78**	⇑	P		Pn	04 13 45.1	+0.7
BOVS				⇓	S		Sn	04 14 54.5	-1.5
BOVS	**Bovan**	**6.29**	**78**		ePn		Pn	04 13 47.5	+3.1
BARS	**Barje**	**6.34**	**86**		ePn		Pn	04 13 46.4	+1.3
BARS					eSn		Sn	04 14 56.7	-0.6
CABF	**La Chapelle**	**6.42**	**310**		ePn		Pn	04 13 47.3	+1.1
CABF					eSn		Sn	04 14 53.7	-5.5
	comp=N,4.6nm,0.5s								
KHC	**Kasperske Hory**	**6.46**	**2**		ePN		Pn	04 13 48.7	+2.0
KHC					eSN		Sn	04 15 00.3	+0.1
MDVR	**Moldovita**	**6.51**	**68**	⇑	P		Pn	04 13 43.6	-3.9
VIVF	**Saint-Julien-l**	**6.55**	**292**		eP		Pn	04 13 51.1	+3.2
PRVS	**Prvonek**	**6.55**	**88**		ePn		Pn	04 13 49.6	+1.6
PRVS					eSn		Sn	04 15 02.4	0.0
ZAGS	**Zajecar**	**6.69**	**77**		ePn		Pn	04 13 51.6	+1.7
HINF	**Hinteralfeld**	**6.82**	**321**		ePn		Pn	04 13 53.1	+1.5
HINF					eSn		Sn	04 15 03.4	-5.5
	comp=N,10nm,0.5s								
BOSS	**Bosilegrad**	**6.85**	**88**		ePn		Pn	04 13 53.6	+1.5
BOSS					eSn		Sn	04 15 09.4	-0.4
ZAPS	**Zavoj**	**6.94**	**82**		ePn		Pn	04 13 55.1	+1.7
ZAPS					eSn		Sn	04 15 10.8	-1.3
LASF	**Ste Croix**	**6.95**	**285**		eP		Pn	04 13 55.2	+1.8
BLKB	**Belogradchik**	**6.99**	**79**	⇓	P		Pn	04 13 55.4	+1.3
BLKB				⇑	S		Sn	04 15 07.9	-5.4
CDF	**Champ du Feu**	**7.08**	**326**		ePn		Pn	04 13 55.7	+0.4
CDF	**Champ du Feu**	**7.08**	**326**		ePg		Pn	04 13 55.7	+0.4
CDF					eSn		Sn	04 15 10.0	-5.6
	comp=N,7.3nm,0.4s								
HAU	**Haudompre**	**7.19**	**320**		ePn		Pn	04 13 57.7	+1.0
HAU					eSn		Sn	04 15 12.4	-5.7
	comp=N,10nm,0.3s								
VTS	**Vitosha**	**7.40**	**87**	⇓	P		Pn	04 14 01.4	+1.7
VTS	**Vitosha**	**7.40**	**87**		ePn		Pn	04 14 01.4	+1.7
GZR	**Gura Zlata**	**7.42**	**65**	⇓	P		Pn	04 14 00.6	+0.7
SMF	**Signal de Mont**	**7.76**	**304**		eP		Pn	04 14 05.7	+1.2
SMF					eSn		Sn	04 15 26.4	-5.7
	comp=N,6.8nm,0.7s								
KRLC	**Kraliky**	**7.80**	**17**		ePN		Pn	04 14 06.8	+1.7
PAGF	**Fort de Pagny**	**7.87**	**321**		ePn		Pn	04 14 07.1	+1.1
LOR	**Lormes**	**8.06**	**308**		ePn		Pn	04 14 09.4	+0.8
LOR					eSn		Sn	04 15 33.2	-6.2
	comp=N,5.9nm,0.6s								
MTLF	**Montolieu**	**8.08**	**278**		ePn		Pn	04 14 10.6	+1.7
AVF	**Avril sur Loir**	**8.13**	**304**		ePn		Pn	04 14 10.6	+1.1
AVF					eSn		Sn	04 15 34.8	-6.3
	comp=N,0.7nm,0.3s								
MEZF	**Maizieres J'vi**	**8.16**	**318**		ePn		Pn	04 14 12.7	+2.8
SSF	**Saint Saulge**	**8.16**	**306**		eP		Pn	04 14 11.7	+1.7
SSF					eSn		Sn	04 15 35.0	-6.9
	comp=N,15nm,1.4s								
SAVF	**Savonnieres en**	**8.20**	**319**		ePn		Pn	04 14 11.9	+1.4
CAF	**Calviac**	**8.36**	**289**		ePn		Pn	04 14 15.2	+2.4
RJF	**Les Rejaudoux**	**8.82**	**291**		ePn		Pn	04 14 21.8	+2.7
LFF	**La Frestale**	**9.29**	**288**		ePn		Pn	04 14 29.4	+3.9

SOME ***25*** *04:19:30.6,42.˚50N×78.˚42E,h10km*
KRNET ***25*** *04:19:30.5±0.1,42.˚51N×78.˚43E,h18km,mb3.9*
NNC ***25*** *04:19:31.3±0.7,42.˚54N×78.˚43E,h0km,mb4.0,mpv4.1,*
Error ellipse: s-maj=5.2km s-min=2.7km az=162.0

ISC 25 04:19:32.6±1.2, 42.˚59N±0.˚04×78.˚30E±0.˚02, h16km±8km,
n53, σ1ŝ58/103, 23C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.48**	**9**	*e*P	**Pg**	**04 19 41.5**	**-0.6**
	102nm,0.1s						
SATY				*e*S	**Sb**	**04 19 49.7**	**+0.1**
	590nm,0.2s						
SATY	**Saty**	**0.48**	**9**	P	**Pg**	**04 19 41.5**	**-0.6**
	102nm,0.1s						
SATY				S	**Sb**	**04 19 49.7**	**+0.1**
	590nm,0.2s						
SATY	**Saty**	**0.48**	**9**	*e*P	**Pg**	**04 19 41.6**	**-0.6**
	baz=58						
SATY				*e*S	**Sb**	**04 19 49.7**	**+0.1**
	baz=58						
ZHN	**Zhinishke**	**0.59**	**9**	*e*P	**Pg**	**04 19 43.6**	**-0.7**
	120nm,0.1s						
ZHN				*e*S	**Sb**	**04 19 53.1**	**+0.4**
	912nm,0.2s						
ZHN	**Zhinishke**	**0.59**	**9**	P	**Pg**	**04 19 43.6**	**-0.7**
	120nm,0.1s						
ZHN				S	**Sb**	**04 19 53.1**	**+0.4**
	912nm,0.2s						
ZHN	**Zhinishke**	**0.59**	**9**	*e*P	**Pg**	**04 19 43.6**	**-0.7**
	baz=0.0						
ZHN				*e*S	**Sb**	**04 19 53.1**	**+0.4**
	baz=0.0						
UZB	**Uzynbulak**	**0.77**	**43**	*e*P	**Pb**	**04 19 45.1**	**-2.6**
	10nm,0.1s						
UZB				*e*S	**Sb**	**04 19 55.8**	**-2.2**
	316nm,0.1s						
UZB	**Uzynbulak**	**0.77**	**43**	P	**Pb**	**04 19 45.1**	**-2.6**
	10nm,0.1s						
UZB				S	**Sb**	**04 19 55.7**	**-2.2**
	316nm,0.1s						
UZB	**Uzynbulak**	**0.77**	**43**	*e*P	**Pb**	**04 19 45.1**	**-2.6**
	baz=34						
UZB				*e*S	**Sb**	**04 19 55.7**	**-2.2**
	baz=34						
KURS	**Kuram**	**0.91**	**354**	*e*P	**Pn**	**04 19 49.6**	**-1.0**
	28nm,0.2s						
KURS				*e*S	**Sn**	**04 20 03.3**	**-0.2**
	38nm,0.2s						
KURS	**Kuram**	**0.91**	**354**	P	**Pn**	**04 19 49.7**	**-1.0**
	28nm,0.2s						
KURS				S	**Sn**	**04 20 03.3**	**-0.2**
	38nm,0.2s						
KURS	**Kuram**	**0.91**	**354**	*e*P	**Pn**	**04 19 49.7**	**-1.0**
	baz=49						
KURS				*e*S	**Sn**	**04 20 03.3**	**-0.2**
	baz=49						
KPKS	**Kokpek**	**0.92**	**18**	*e*P	**Pn**	**04 19 49.2**	**-1.8**
	47nm,0.1s						
KPKS				*e*S	**Sg**	**04 20 02.5**	**-0.1**
	355nm,0.3s						
SHLS	**Shalkode**	**1.02**	**56**	*e*P	**Pg**	**04 19 54.1**	**+1.7**
	39nm,0.1s						
SHLS				*e*S	**Sn**	**04 20 10.9**	**+4.4**
	120nm,0.3s						
SHLS	**Shalkode**	**1.02**	**56**	P	**Pg**	**04 19 54.1**	**+1.7**
	39nm,0.1s						
SHLS				S	**Sn**	**04 20 10.9**	**+4.4**
	120nm,0.3s						
SHLS	**Shalkode**	**1.02**	**56**	*e*P	**Pg**	**04 19 54.1**	**+1.7**
	baz=58						
SHLS				*e*S	**Sn**	**04 20 10.9**	**+4.4**
	baz=58						
KOTS	**Kotyrbulak**	**1.09**	**307**	*e*P	**Pg**	**04 19 53.7**	**+0.1**
	226nm,0.2s						
KOTS				*e*S	**Sg**	**04 20 10.2**	**+2.3**
	87nm,0.3s						
KOTS	**Kotyrbulak**	**1.09**	**307**	P	**Pg**	**04 19 53.7**	**+0.1**
	226nm,0.2s						
KOTS				S	**Sg**	**04 20 10.2**	**+2.3**
	87nm,0.3s						
KOTS	**Kotyrbulak**	**1.09**	**307**	*e*P	**Pg**	**04 19 53.7**	**+0.1**
	baz=7.0						
KOTS				*e*S	**Sg**	**04 20 10.2**	**+2.3**
	baz=7.0						
MDOK	**Medeo**	**1.09**	**302**	*e*P	**Pg**	**04 19 53.5**	**-0.1**
	174nm,0.2s						
MDOK				*e*S	**Sg**	**04 20 09.9**	**+2.1**
	118nm,0.6s						
MDOK	**Medeo**	**1.09**	**302**	⇓	P	**04 19 53.4**	**+0.3**
	75nm,0.3s						
MDOK				Pg	**Pg**	**04 19 53.5**	**-0.1**
	174nm,0.2s						
MDOK				⇑	S	**Sg**	**04 20 09.6**	**+1.8**
	110nm,0.6s						
MDOK				Lg	Lg	04 20 09.9	
	118nm,0.6s						
MDOK	**Medeo**	**1.09**	**302**	*e*P	**Pg**	**04 19 53.5**	**-0.1**
	baz=3.0						
MDOK				*e*S	**Sg**	**04 20 09.9**	**+2.1**
	baz=3.0						
TNSS	**Tian-Shan**	**1.09**	**295**	P	**Pg**	**04 19 53.7**	**-0.1**
	80nm,0.2s						
TNSS				S	**Sg**	**04 20 10.2**	**+2.1**
	133nm,0.2s						
KNDC	**Almaty**	**1.17**	**303**	⇓	P	**04 19 55.0**	**-0.1**
	74nm,0.4s						
KNDC				⇑	S	**Sg**	**04 20 12.6**	**+2.2**
	460nm,0.9s						
MTBS	**Maitube**	**1.48**	**292**	*e*P	**Pb**	**04 20 00.3**	**+0.5**
	43nm,0.3s						
MTBS				*e*S	**Sg**	**04 20 21.5**	**+1.1**
	130nm,0.2s						
MTBS	**Maitube**	**1.48**	**292**	P	**Pb**	**04 20 00.3**	**+0.5**
	43nm,0.3s						
MTBS				S	**Sg**	**04 20 21.5**	**+1.1**
	130nm,0.2s						
MTBS	**Maitube**	**1.48**	**292**	*e*P	**Pb**	**04 20 00.3**	**+0.5**
	baz=94						
MTBS				*e*S	**Sg**	**04 20 21.5**	**+1.1**
	baz=94						
BLB	**Baldybastay**	**1.51**	**5**	*e*P	**Pg**	**04 20 00.3**	**-1.4**
	348nm,0.2s						
BLB				*e*S	**Sg**	**04 20 21.6**	**+0.1**
	946nm,0.3s						
BLB	**Baldybastay**	**1.51**	**5**	P	**Pg**	**04 20 00.3**	**-1.4**
	348nm,0.2s						
BLB				S	**Sg**	**04 20 21.6**	**+0.1**
	946nm,0.3s						
ULHL	**Ulahol**	**1.56**	**258**	⇑	*i* P	**04 20 01.1**	**-0.2**
	baz=62						
ULHL				⇑	*i* S	**Sg**	**04 20 23.1**	**0.0**
	baz=62						
KTBS	**Karatobe**	**1.63**	**314**	*e*P	**Pg**	**04 20 03.5**	**-0.4**
	110nm,0.2s						
KTBS				*e*S	**Sg**	**04 20 27.7**	**+2.5**
	369nm,0.4s						
ARXS	**Arharly**	**1.66**	**348**	*e*P	**Pg**	**04 20 03.6**	**-0.9**
	156nm,0.3s						
ARXS				*e*S	**Sg**	**04 20 27.3**	**+1.2**
	169nm,0.2s						
ARXS	**Arharly**	**1.66**	**348**	P	**Pg**	**04 20 03.6**	**-0.9**
	156nm,0.3s						
ARXS				S	**Sg**	**04 20 27.3**	**+1.2**
	169nm,0.2s						
BOOM	**Boomskoye usch**	**1.75**	**268**	⇑	*e*P	**04 20 04.6**	**+0.2**
	baz=70						
BOOM				⇑	*i* S	**Sg**	**04 20 29.3**	**+0.4**
	baz=70						
KUU	**Kurty**	**1.94**	**313**	*e*P	**Pb**	**04 20 08.4**	**+0.9**
	204nm,0.2s						
KUU				*e*S	**Sg**	**04 20 35.4**	**+0.4**
	235nm,0.3s						
KUU	**Kurty**	**1.94**	**313**	Pg	**Pb**	**04 20 08.4**	**+0.9**
	204nm,0.2s						
KUU				Lg	Lg	04 20 35.4	
	235nm,0.3s						
KUU	**Kurty**	**1.94**	**313**	*e*P	**Pb**	**04 20 08.4**	**+0.9**
	baz=13						
KUU				*e*S	**Sg**	**04 20 35.4**	**+0.4**
	baz=13						
DGS	**Degeres**	**1.97**	**290**	*e*P	**Pb**	**04 20 08.8**	**+0.7**
	61nm,0.3s						
DGS				*e*S	**Sg**	**04 20 36.3**	**+0.2**
	188nm,0.2s						
DGS	**Degeres**	**1.97**	**290**	Pg	**Pb**	**04 20 08.8**	**+0.7**
	61nm,0.3s						
DGS				Lg	Lg	04 20 36.3	
	188nm,0.2s						
DGS	**Degeres**	**1.97**	**290**	*e*P	**Pb**	**04 20 08.8**	**+0.7**
	baz=91						
DGS				*e*S	**Sg**	**04 20 36.2**	**+0.2**
	baz=91						
TKM2	**Tokmak 2**	**2.02**	**280**	⇑	Pn	**04 20 09.4**	**+0.3**
	15nm,0.3s						
TKM2				⇑	Sn	**Sg**	**04 20 37.6**	**-0.1**
	47nm,0.2s						
TKM2	**Tokmak 2**	**2.02**	**280**	⇑	*e*P	**Pb**	**04 20 09.8**	**+0.8**
	baz=82						
TKM2				⇑	*i* S	**Sg**	**04 20 38.0**	**+0.4**
	baz=82						
TDK	**Taldyqorghan**	**2.41**	**2**	*e*P	**Pg**	**04 20 16.7**	**-2.1**
	49nm,0.2s						
TDK				*e*S	**Sg**	**04 20 50.0**	**-0.2**
	208nm,0.2s						
TDK	**Taldyqorghan**	**2.41**	**2**	Pg	**Pb**	**04 20 15.1**	**-0.6**
	78nm,0.2s						
TDK				Lg	Lg	04 20 46.8	
	176nm,0.2s						
KBK	**Karagaybulak**	**2.48**	**273**	⇑	*i* P	**04 20 15.6**	**-1.2**
	baz=74						
KBK

ADCV *i* AML AML 04 36 00.0
comp=N,2μm,0.5s
ADCV *i* AML AML 04 36 00.0
comp=E,2μm,0.5s
VANB Van 0.29 116 PG **Pb** **04 35 54.7 +0.2**
VANB SG **Sb** **04 36 00.4 +0.9**
VANB Van 0.29 116 *e*Pg **Pb** **04 35 54.2 -0.3**
ERCV ERCIS-VAN 0.37 36 PG **Pb** **04 35 54.8 -1.2**
ERCV SG **Sb** **04 36 01.1 -0.9**
ERCV ERCIS-VAN 0.37 36 *e*Pg **Pb** **04 35 54.8 -1.2**
AKDM Akdamar-Van 0.40 189 PG **Pb** **04 35 55.4 -1.0**
AKDM Akdamar-Van 0.40 189 *e*Pg **Pb** **04 35 55.1 -1.3**
GEVA Gevas 0.41 180 Pg **Pb** **04 35 55.6 -1.0**
GEVA Sg **Sb** **04 36 02.3 -0.7**
GEVA Gevas 0.41 180 *e*Pg **Pb** **04 35 55.6 -1.0**
GEVA Gevas 0.41 180 P **Pb** **04 35 55.6 -1.0**
GEVA S **Sb** **04 36 03.1 +0.1**
GEVA *i* AML AML 04 36 05.0
comp=N,7μm,0.4s
GEVA *i* AML AML 04 36 09.0
comp=E,7μm,0.6s
MLAZ Malazgirt-MUS 0.58 317 PG **Pb** **04 35 59.2 -0.4**
MLAZ SG **Sb** **04 36 08.2 +0.2**
MLAZ Malazgirt-MUS 0.58 317 *e*Pg **Pb** **04 35 59.0 -0.6**
OZAP Van, Ozalp-Mer 0.73 94 P **Pb** **04 36 02.4 +0.1**
OZAP S **Sn** **04 36 16.2 +0.8**
OZAP *i* AML AML 04 36 19.0
comp=N,2μm,0.7s
OZAP *i* AML AML 04 36 21.0
comp=E,3μm,0.7s
BLIS Bitlis-Merkez 0.80 248 *e*Pg **Pb** **04 36 03.4 +0.1**
BLIS Bitlis-Merkez 0.80 248 P **Pb** **04 36 03.4 +0.1**
BLIS S **Sb** **04 36 14.4 0.0**
BLIS *i* AML AML 04 36 15.0
comp=E,5μm,0.6s
BLIS *i* AML AML 04 36 16.0
comp=N,4μm,0.4s
GURO Guroymak-BITLI 0.82 258 PG **Pb** **04 36 03.3 -0.4**
GURO Guroymak-BITLI 0.82 258 **Pb** **04 36 03.4 -0.4**
GURO Sg **Sg** **04 36 13.8 +0.1**
GURO Guroymak-BITLI 0.82 258 *e*Pg **Pb** **04 36 03.3 -0.4**
AGRB Hanur-Agry 0.86 356 PG **Pb** **04 36 03.9 -0.4**
AGRB Hanur-Agry 0.86 356 *e*Pg **Pb** **04 36 03.6 -0.7**
DYDN Diyadin 0.96 31 *e*Pg **Pb** **04 36 05.5 -0.5**
DYDN Diyadin 0.96 31 P **Pb** **04 36 05.5 -0.5**
DYDN *i* AML AML 04 36 25.0
comp=E,2μm,0.7s
DYDN *i* AML AML 04 36 41.0
comp=N,997nm,1.0s
KOTA Agri, Merkez-K 1.09 6 P **Pb** **04 36 07.7 -0.6**
KOTA *i* AML AML 04 36 27.0
comp=N,784nm,0.8s
KOTA *i* AML AML 04 36 28.0
comp=E,876nm,0.8s
MUSM Mu-Merkez 1.21 271 *e*Pn **Pg** **04 36 09.7 -0.6**
MUSM Mu-Merkez 1.21 271 P **Pg** **04 36 09.8 -0.6**
MUSM *i* AML AML 04 36 28.0
comp=E,372nm,0.8s
MUSM *i* AML AML 04 36 33.0
comp=N,576nm,0.4s
EATA Eleskirt 1.22 339 *e*Pn **Pn** **04 36 10.7 -0.1**
EATA Eleskirt 1.22 339 P **Pn** **04 36 10.7 -0.1**
EATA S **Sn** **04 36 28.0 +0.3**
EATA *i* AML AML 04 36 31.0
comp=N,1μm,0.5s
EATA *i* AML AML 04 36 35.0
comp=E,1μm,0.6s
HAKT HAKKARI 1.27 156 *e*Pn **Pn** **04 36 10.6 -0.7**
HAKT HAKKARI 1.27 156 P **Pn** **04 36 10.6 -0.7**
HAKT S **Sn** **04 36 32.3 +3.7**
HAKT *i* AML AML 04 36 33.0
comp=E,3μm,0.6s
HAKT *i* AML AML 04 36 35.0
comp=N,2μm,0.5s
VRTB Varto-Mus 1.33 290 PN **Pg** **04 36 13.3 +0.7**
VRTB Varto-Mus 1.33 290 *e*Pn **Pg** **04 36 13.3 +0.7**
MAKU Maku 1.41 63 *e*Pg **Pg** **04 36 13.4 -0.9**
YOVA Hakkari_Yksek 1.49 139 *e*Pn **Pg** **04 36 15.0 -0.7**
YOVA Hakkari_Yksek 1.49 139 P **Pg** **04 36 15.1 -0.7**
YOVA S **Sg** **04 36 35.1 +0.1**
YOVA *i* AML AML 04 36 38.0
comp=N,1μm,1.0s
YOVA *i* AML AML 04 36 40.0
comp=E,2μm,0.6s
VNNZ Vanand 1.50 23 ⇓*i*P **Pg** **04 36 15.8 -0.2**
VNNZ ⇑*i*S **Sg** **04 36 38.8 +3.4**
TASB TASBURUN-IGDIR 1.56 36 PN **Pg** **04 36 16.3 -0.8**
TASB TASBURUN-IGDIR 1.56 36 *e*Pn **Pg** **04 36 16.2 -0.8**
SVAN Silvan-Diyarba 1.57 249 PN **Pg** **04 36 16.7 -0.5**
SVAN Silvan-Diyarba 1.57 249 *e*Pn **Pg** **04 36 16.7 -0.5**
KOPR Koprukoy-ERZUR 1.58 324 PN **Pg** **04 36 16.9 -0.5**
METS Metsamor 1.63 29 ⇑*i*P **Pb** **04 36 16.9 -0.6**
METS ⇓*i*S **Sg** **04 36 41.0 +1.4**
BTMN Batman 1.63 240 *e*Pn **Pg** **04 36 19.0 +0.6**
BTMN Batman 1.63 240 P **Pg** **04 36 19.0 +0.6**
BTMN S **Sg** **04 36 42.2 +2.5**
HYR Heyderabad 1.71 54 *e*Pn **Pg** **04 36 19.3 -0.6**
HYR Heyderabad 1.71 54 P **Pg** **04 36 19.3 -0.6**
SNR=56
HYR S **Sg** **04 36 45.9 +3.7**
NRKZ NAREK 1.78 44 ⇓*i*P **Pn** **04 36 18.3 +0.1**
NRKZ ⇓*i*S **Sg** **04 36 43.5 -0.9**
MIDY Mardin/Midyat- 1.85 226 P **Pg** **04 36 22.0 -0.6**
MIDY S **Sg** **04 36 47.6 +0.8**
BNGB Bingl 1.88 279 PN **Pb** **04 36 21.1 -0.6**
KARS Kars 1.91 0 PN **Pb** **04 36 21.1 -1.1**
KARS Kars 1.91 0 **Pn** **04 36 18.9 -1.1**
AMBZ Amberd 1.91 29 ⇑*i*P **Pg** **04 36 22.7 -1.0**
AMBZ ⇑*i*S **Sg** **04 36 51.0 +2.6**
SENK Senkaya-Erzuru 1.92 344 PN **Pb** **04 36 21.6 -0.8**
GNI Garni 1.93 42 Pn **Pb** **04 36 21.6 -1.0**
100nm,0.6s,baz=260,slow=3.2,SNR=36
GNI Lg 04 36 51.3
25nm,0.3s,baz=355,slow=7.1,SNR=6.2
GNI Garni 1.93 42 ⇑*i*P **Pb** **04 36 21.7 -1.0**
GNI ⇓*i*S **Sg** **04 36 50.4 +1.2**
GNI Garni 1.93 42 PN **Pb** **04 36 21.8 -0.8**
GNI Garni 1.93 42 Pn **Pb** **04 36 21.0 -1.6**
NAX Nakhchivan 1.95 76 *e*Pn **Pb** **04 36 21.4 -1.5**
NAX Nakhchivan 1.95 76 P **Pb** **04 36 21.4 -1.5**
SNR=74
NAX S **Sg** **04 36 50.9 +1.1**
BINT Bingol 2.02 275 *e*Pn **Pn** **04 36 21.0 -0.5**
KAPZ Kaputan 2.04 38 ⇓*i*P **Pb** **04 36 23.3 -1.2**
KAPZ ⇑*i*S **Sg** **04 36 52.0 -0.7**
ISHB Shabestar 2.05 101 *e*Pn **Pn** **04 36 22.1 0.0**
ISHB *e* 04 36 25.3
comp=Z,6μm,0.4s
SBZ Shahbuz 2.06 70 *e*Pn **Pb** **04 36 22.8 -1.9**
SBZ Shahbuz 2.06 70 P **Pb** **04 36 22.9 -1.9**
SNR=101
SBZ S **Sg** **04 36 54.5 +1.3**
IMRD Marand 2.07 89 *e*Pn **Pn** **04 36 22.9 +0.7**
IMRD *e* 04 37 14.1
comp=Z,9μm,0.7s
YEDI Yedisu-Bingol 2.08 291 PN **Pb** **04 36 24.2 -1.0**
MARD Mardin 2.28 233 Pn **Pn** **04 36 25.8 +0.7**
ORD Ordubad 2.30 84 *e*Pn **Pn** **04 36 26.2 +0.9**
ORD Ordubad 2.30 84 P **Pn** **04 36 26.2 +0.9**
SNR=105
ORD S **Sg** **04 36 59.0 -2.1**
KOPT Kop Dagi 2.37 304 Pn **Pn** **04 36 27.0 +0.5**
MAZI Mazidag 2.42 239 PN **Pb** **04 36 28.7 -2.2**
DYBB Diyarbakir 2.42 252 PN **Pb** **04 36 29.0 -1.9**
ITBZ Tabriz 2.47 100 *e*Pn **Pn** **04 36 28.1 +0.3**
IAZR Azarshahr 2.52 113 *e*Pn **Pn** **04 36 30.0 +1.4**
IAZR *e* 04 36 45.7
comp=Z,4μm,0.6s
MAHB Mahabad 2.86 132 *e*Pn **Pn** **04 36 34.3 +1.2**
MAHB *e* 04 36 41.4
comp=Z,4μm,0.5s
GDB GEDABAY 2.88 45 P **Pn** **04 36 35.4 +1.9**
SNR=14
GDB S **Sb** **04 37 15.6 +1.3**
QZX Qazax, Azerbai 2.94 37 P **Pb** **04 36 36.5 -3.2**
SNR=16
QZX S **Sb** **04 37 17.0 +1.4**
STKZ 3.07 68 *e*P **Pb** **04 36 42.8 +0.9**
STKZ *e*S **Sg** **04 37 26.0 +0.4**
IHRS Heris 3.15 96 *e*Pn **Pn** **04 36 38.6 +1.4**
IHRS *e* 04 36 49.2
comp=Z,2μm,0.7s
GANJ Ganja 3.17 52 P **Pn** **04 36 39.0 +1.8**
SNR=6.0
GANJ S **Sb** **04 37 23.8 +1.4**
IBST Bostanabad 3.19 107 *e*Pn **Pn** **04 36 38.4 +0.7**
AGDM Agdam 3.43 65 P **Pn** **04 36 42.3 +1.5**
SNR=17
AGDM S **Sb** **04 37 31.0 +1.2**
IHSH Hashtrud 3.61 112 *e*Pn **Pn** **04 36 44.9 +1.4**
IHSH *e* 04 37 02.1
comp=Z,1μm,0.7s
ISRB Sarab 3.73 102 *e*Pn **Pn** **04 36 46.8 +1.6**
ONI Oni 3.88 4 Pn **Pn** **04 36 46.6 -0.5**
YRD Yardimli 4.05 86 P **Pn** **04 36 50.8 +1.3**
SNR=11
YRD S **Sb** **04 37 46.7 -1.2**
IDHR Dehrash 4.82 145 *e*Pn **Pn** **04 37 02.3 +2.2**
IDHR *e* 04 38 34.4
comp=Z,852nm,0.8s
ZNJK Zanjan 4.91 113 *e*Pn **Pn** **04 37 03.2 +1.9**
ILIN Lien 4.92 139 *e*Pn **Pn** **04 37 03.8 +2.3**
ILIN *e* 04 38 44.2
comp=Z,551nm,1.3s
SNGE Sanandaj 4.99 135 *e*Pn **Pn** **04 37 04.8 +2.3**
KBZ Khabaz 5.00 359 LR LR 04 38 53.0
comp=Z,26nm,21.9s,baz=232,slow=36
IGHG Ghaleghazi 5.21 146 *e* 04 37 43.6
comp=Z,943nm,0.8s
IGHG *e*Pn **Pn** **04 37 07.7 +2.2**
KIV Kislovodsk 5.24 357 Pn **Pn** **04 37 06.3 +0.6**
BNN Bunyan 5.64 274 Pn **Pn** **04 37 10.8 -0.4**
IKOM Komasi 5.78 140 *e*Pn **Pn** **04 37 15.5 +2.2**
IDOB Doab 6.43 138 *e*Pn **Pn** **04 37 24.8 +2.6**
ASAO Ashtian 6.98 125 *e*Pn **Pn** **04 37 31.8 +2.0**
ASF Jabal al Asfar 8.24 219 Lg Lg 04 40 15.0
comp=Z,0.5nm,0.3s,baz=275,slow=22,SNR=2.3
MMAI Mount Meron Ar 8.43 230 LR LR 04 41 35.0
comp=Z,166nm,18.1s,baz=213,slow=42
EIL Elat 11.24 219 LR LR 04 43 22.5
comp=Z,127nm,18.5s,baz=90,slow=41
RAYN Ar Rayn 15.29 171 Pn **Pn** **04 39 24.1 +0.7**
AK05 Malin Array Si 15.42 325 Pn **Pn** **04 39 23.7 -1.0**
AK05 IAmb IAmb 04 39 31.6
comp=Z,7.9nm,0.8s
AKASG Malin Array Be 15.47 325 Pn **Pn** **04 39 25.5 +0.1**
comp=Z,0.4nm,0.3s,baz=134,slow=11,SNR=5.9
comp=Z,1.0nm,0.7s
AKBB Malin Array Si 15.47 325 Pn **Pn** **04 39 25.5 +0.1**
AKTO Aktyubinsk 15.80 37 Pn **Pn** **04 39 29.7 0.0**
comp=Z,0.3nm,0.3s,baz=240,slow=13,SNR=5.6
AKTO LR LR 04 46 43.7
comp=Z,32nm,19.2s,baz=235,slow=41
comp=Z,2.6nm,0.7s
ABKAR Akbulak array 16.04 44 Pn **Pn** **04 39 31.4 -1.5**
WSAR Wadi Sarin 20.36 135 LR LR 04 50 21.2
comp=Z,69nm,21.4s,baz=320,slow=43
ARU Arti 20.49 25 P Pn 04 40 26.4 -0.9
comp=Z,4.6nm,0.6s,baz=205,slow=14,SNR=3.8
comp=Z,4.6nm,0.6s
ARU Arti 20.49 25 P **P** **04 40 24.0 -1.1**
ARU IAmb IAmb 04 40 30.9
comp=Z,5.9nm,0.7s
KK31 Karatay Array 21.16 69 P **P** **04 40 31.4 -1.2**
KK31 IAmb IAmb 04 40 37.7
comp=Z,11nm,0.9s
KKAR Karatay Array 21.16 69 P **P** **04 40 30.7 -1.9**
KKAR Karatay Array 21.16 69 P **P** **04 40 30.9 -1.6**
KKAR IAmb IAmb 04 40 37.7
comp=Z,11nm,0.9s
GAR Garm 21.20 81 P **P** **04 40 32.2 -0.9**
GAR IAmb IAmb 04 40 35.8
comp=Z,19nm,1.1s
KLMR Klimovskoe 22.27 355 *e* **P** **04 40 46.5 +2.3**
KLMR AMP 04 40 58.1
comp=Z,24nm,1.5s
BRVK Borovoye 23.57 44 P **P** **04 40 56.2 -1.6**
BRVK IAmb IAmb 04 41 00.9
comp=Z,8.3nm,1.3s
BVAR Borovoye Array 23.62 44 P **P** **04 40 59.9 +1.6**
comp=Z,0.5nm,0.4s,baz=229,slow=11,SNR=5.4
comp=Z,0.5nm,0.4s
CLL Collm 24.50 311 *e*P **P** **04 41 07.0 +0.4**
FINES FINESS Array B 25.07 341 P **P** **04 41 12.2 +0.6**
comp=Z,1.0nm,0.6s,baz=134,slow=12,SNR=2.2
comp=Z,1.0nm,0.6s
KURBB Kurchatov Arra 27.62 53 P **P** **04 41 35.9 +1.1**
comp=Z,1.1nm,0.7s,baz=263,slow=9.0,SNR=8.6
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 29.66 61 P **P** **04 41 53.9 +0.8**
comp=Z,0.8nm,0.7s,baz=262,slow=8.5,SNR=5.6
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 29.66 61 P **P** **04 41 52.7 -0.4**
NC204 NORSAR Array S 30.13 329 P **P** **04 41 55.9 -1.2**
ESDC Sonseca Array 36.13 287 P **P** **04 42 49.8 +0.1**
comp=Z,0.9nm,0.7s,baz=72,slow=8.8,SNR=5.5
comp=Z,0.9nm,0.7s
TORD Torodi Ar. Bea 44.55 247 P **P** **04 43 58.5 -1.0**
comp=Z,1.9nm,0.4s,baz=38,slow=9.7,SNR=2.4
comp=Z,1.9nm,0.4s
KSRS Korea Array 64.34 62 P **P** **04 46 23.0 -0.3**
comp=Z,1.6nm,0.8s,baz=290,slow=7.5,SNR=3.0
comp=Z,1.6nm,0.8s

ROM 25 04:46:21.0±0.1, 42.795N±0.004×13.203E±0.006, h9km, ML2.6/39, 14C-18D, Error ellipse: s-maj=0.5km s-min=0.4km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
NRCA	**Norcia**	**0.08**	**300**	P	Op Pg	04 46 23.5	+0.3
NRCA				S	Sg	04 46 25.1	+0.3
NRCA				AML	AML		
	comp=N,54100μm,0.7s						
NRCA				AML	AML		
	comp=E,65900μm,0.1s						
NRCA				AML	AML		
	comp=E,60800μm,0.1s						
NRCA				AML	AML		
	comp=N,54150μm,0.7s						
NRCA				AML	AML		
	comp=E,60800μm,0.1s						
NRCA				AML	AML		
	comp=N,59000μm,0.7s						
FEMA	**Monte Fema**	**0.20**	**326**	⇓P	Pg	04 46 25.8	+0.6
FEMA				S	Sg	04 46 29.2	+1.1
FEMA				AML	AML		
	comp=E,7965μm,1.4s						
FEMA				AML	AML		
	comp=E,7970μm,1.4s						
FEMA				AML	AML		
	comp=N,8005μm,0.3s						
LNSS	**Leonessa**	**0.23**	**212**	⇓P	Pg	04 46 26.4	+0.8
LNSS				S	Sg	04 46 30.3	+1.5
LNSS				AML	AML		
	comp=E,5720μm,0.4s						
LNSS				AML	AML		
	comp=N,4535μm,1.6s						
FDMO	**Fiordimonte**	**0.26**	**341**	⇓P	Pg	04 46 26.7	+0.5
FDMO				S	Sg	04 46 30.9	+1.3
FDMO				AML	AML		
	comp=E,1915μm,1.6s						
FDMO				AML	AML		
	comp=N,2705μm,0.8s						
FDMO				AML	AML		
	comp=N,2700μm,0.8s						
GUMA	**Gualdo di Mace**	**0.28**	**20**	⇑P	Pb	04 46 27.6	-0.6
GUMA				S	Sb	04 46 32.9	-0.3
GUMA				AML	AML		
	comp=N,6190μm,0.3s						
GUMA				AML	AML		
	comp=E,7470μm,0.4s						
GUMA				AML	AML		
	comp=E,6580μm,0.2s						
GUMA				AML	AML		
	comp=N,5570μm,0.4s						
CSP1	**Cessapalombo**	**0.30**	**0**	⇑P	Pg	04 46 27.5	+0.6
CSP1				S	Sb	04 46 32.7	-1.0
CSP1				AML	AML		
	comp=E,1870μm,0.9s						
CSP1				AML	AML		
	comp=E,1865μm,0.9s						
CSP1				AML	AML		
	comp=E,1863μm,0.9s						
CSP1				AML	AML		
	comp=N,2234μm,0.2s						
CSP1				AML	AML		
	comp=N,2235μm,0.2s						
CESI	**CESI - Serrava**	**0.30**	**314**	P	Pg	04 46 27.7	+0.6
CESI				S	Sb	04 46 32.7	-1.1
CESI				AML	AML		
	comp=E,4130μm,0.2s						
CESI				AML	AML		
	comp=N,4745μm,0.2s						
TERO	**Teramo**	**0.34**	**120**	P	Pg	04 46 28.1	+0.3
TERO				S	Sg	04 46 33.5	+1.2
TERO				AML	AML		
	comp=N,2050μm,0.3s						
TERO				AML	AML		
	comp=E,1955μm,0.4s						
TERO				AML	AML		
	comp=N,1875μm,0.3s						
TERO				AML	AML		
	comp=E,1950μm,0.4s						
TERO				AML	AML		
	comp=E,2215μm,0.4s						
OFFI	**Offida**	**0.38**	**68**	P	Pb	04 46 29.8	-0.1
OFFI				AML	AML		
	comp=E,2020μm,0.2s						
OFFI				AML	AML		
	comp=N,2075μm,0.3s						
ARRO	**Arrone**	**0.39**	**236**	P	Pg	04 46 29.2	+0.7
ARRO				S	Sb	04 46 36.2	+0.1
ARRO				AML	AML		
	comp=E,1150μm,0.2s						
ARRO				AML	AML		
	comp=N,988μm,1.6s						
ARRO				AML	AML		
	comp=E,1155μm,0.2s						
ARRO				AML	AML		
	comp=N,987μm,1.6s						
ARRO				AML	AML		
	comp=N,894μm,0.2s						
ARRO				AML	AML		
	comp=E,1152μm,0.2s						
GIGS	**Gran Sasso**	**0.44**	**142**	⇓P	Pg	04 46 29.8	+0.3
GIGS				S	Sb	04 46 36.6	-1.1
GIGS				AML	AML		
	comp=E,234μm,0.3s						
GIGS				AML	AML		
	comp=N,258μm,0.3s						
ASSB	**Assisi San Ben**	**0.47**	**302**	P	Pg	04 46 30.5	+0.3
ASSB				S	Sb	04 46 37.9	-0.7
ASSB				AML	AML		
	comp=E,1760μm,0.2s						
ASSB				AML	AML		
	comp=N,1900μm,0.8s						
CESX	**Cesi**	**0.49**	**248**	P	Pg	04 46 31.1	+0.5
CESX				S	Sb	04 46 38.7	-0.5
CESX				AML	AML		
	comp=N,780μm,1.0s						
CESX				AML	AML		
	comp=E,1064μm,0.4s						
SNTG	**Esanatoglia**	**0.50**	**337**	⇓P	Pg	04 46 30.9	+0.3
SNTG				S	Sb	04 46 40.0	+0.6
SNTG				AML	AML		
	comp=E,856μm,0.5s						
SNTG				AML	AML		
	comp=N,804μm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**88**	P	Pb	04 46 32.6	+0.3
TRTR				AML	AML		
	comp=E,1530μm,1.1s						
TRTR				AML	AML		
	comp=N,1275μm,0.4s						
FIAM	**Fiamignano**	**0.53**	**187**	⇑P	Pg	04 46 31.5	+0.3
FIAM				AML	AML		
	comp=N,210μm,0.7s						
FIAM				AML	AML		
	comp=E,298μm,0.3s						
FIAM				AML	AML		
	comp=N,210μm,0.7s						
EL6	**Elcito**	**0.54**	**352**	⇓P	Pg	04 46 31.8	+0.3
EL6				AML	AML		
	comp=E,1000μm,1.4s						
EL6				AML	AML		
	comp=N,1450μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.57**	**313**	⇑P	Pg	04 46 32.4	+0.4
ATCC				AML	AML		
	comp=E,1225μm,1.2s						
ATCC				AML	AML		
	comp=N,924μm,0.4s						
ATCC				AML	AML		
	comp=N,928μm,0.4s						
ATCC				AML	AML		
	comp=E,1230μm,1.2s						
CING	**Cingoli**	**0.58**	**359**	⇓P	Pg	04 46 32.7	+0.5
CING				AML	AML		
	comp=E,684μm,0.1s						
CING				AML	AML		
	comp=N,566μm,0.4s						
FOSV	**Fossato di Vic**	**0.59**	**327**	⇑P	Pg	04 46 32.6	+0.1
FOSV				S	Sb	04 46 43.0	+0.9
FOSV				AML	AML		
	comp=E,926μm,0.3s						
FOSV				AML	AML		
	comp=N,1068μm,0.3s						
FOSV				AML	AML		
	comp=N,1069μm,0.3s						
FAGN	**Fagnano**	**0.60**	**152**	⇑P	Pg	04 46 32.8	+0.3
FAGN				AML	AML		
	comp=E,854μm,0.4s						
FAGN				AML	AML		
	comp=N,774μm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**130**	⇓P	Pg	04 46 33.3	+0.4
VCEL				AML	AML		
	comp=E,718μm,0.4s						
VCEL				AML	AML		
	comp=N,548μm,0.8s						
VCEL				AML	AML		
	comp=N,548μm,0.8s						
VCEL				AML	AML		
	comp=E,718μm,0.4s						
PP3	**Marolino**	**0.65**	**27**	⇓P	Pb	04 46 35.1	+0.6
PP3				AML	AML		
	comp=E,1805μm,0.3s						
PP3				AML	AML		
	comp=N,1460μm,0.4s						
PP3				AML	AML		
	comp=E,1835μm,0.3s						
PP3				AML	AML		
	comp=N,1415μm,0.3s						
T0110	**Collepietro**	**0.71**	**143**	⇓P	Pg	04 46 34.5	-0.2
T0110				S	Sn	04 46 47.0	-1.4
T0110				AML	AML		
	comp=E,626μm,0.3s						
T0110				AML	AML		
	comp=N,621μm,0.3s						
SSFR	**Montelago di S**	**0.71**	**334**	P	Pg	04 46 35.1	+0.4
SSFR				AML	AML		
	comp=N,1330μm,0.3s						
SSFR				AML	AML		
	comp=E,1215μm,0.2s						
SSFR				AML	AML		
	comp=E,1110μm,0.2s						
SSFR				AML	AML		
	comp=N,1160μm,0.2s						
ARVD	**Arcevia**	**0.73**	**345**	⇑P	Pg	04 46 35.1	+0.1
ARVD				S	Sn	04 46 48.0	-0.8
ARVD				AML	AML		
	comp=E,329μm,0.4s						
ARVD				AML	AML		
	comp=N,214μm,0.6s						
ATFO	**Monte Foce - G**	**0.73**	**321**	P	Pg	04 46 34.6	-0.5
ATFO				S	Sn	04 46 48.0	-1.0
ATFO				AML	AML		
	comp=N,314μm,0.9s						
ATFO				AML	AML		
	comp=N,313μm,0.9s						
ATFO				AML	AML		
	comp=E,394μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.74**	**303**	⇓P	Pn	04 46 38.2	+0.5
ATTE				AML	AML		
	comp=E,326μm,0.4s						
ATTE				AML	AML		
	comp=N,228μm,1.5s						
FRON	**Frontone**	**0.80**	**334**	⇑P	Pg	04 46 36.3	-0.1
FRON				AML	AML		
	comp=N,487μm,1.6s						
FRON				AML	AML		
	comp=E,286μm,0.7s						
AOI	**Ancona**	**0.81**	**21**	S	Sn	04 46 52.0	+1.2
MGAB	**Montegabbione**	**0.81**	**279**	⇓P	Pn	04 46 39.2	+0.6
MGAB				AML	AML		
	comp=N,418μm,1.0s						
MGAB				AML	AML		

	comp=E,492μm,0.3s							
MGAB				AML	AML			
	comp=E,442μm,0.3s							
MGAB				AML	AML			
	comp=N,460μm,1.6s							
ATVO	**AVT- Monte Val**	**0.83**	**315**	⇓P	Pg	04 46 36.6	-0.4	
ATVO				S	Sb	04 46 50.0	+1.2	
ATVO				AML	AML			
	comp=N,226μm,0.7s							
ATVO				AML	AML			
	comp=E,186μm,1.2s							
CERT	**Cerreto**	**0.86**	**191**	⇑P	Pb	04 46 38.6	+0.5	
CERT				AML	AML			
	comp=E,172μm,0.5s							
CERT				AML	AML			
	comp=N,173μm,0.3s							
ATMI	**Monte Miggiano**	**0.87**	**308**	⇑P	Pb	04 46 38.4	+0.1	
ATMI				S	Sn	04 46 52.0	-0.3	
ATMI				AML	AML			
	comp=N,575μm,0.8s							
ATMI				AML	AML			
	comp=E,620μm,0.7s							
ATPI	**Pietralunga -**	**0.88**	**318**	P	Pg	04 46 37.9	0.0	
ATPI				S	Sn	04 46 52.0	-0.5	
ATPI				AML	AML			
	comp=E,209μm,0.6s							
ATPI				AML	AML			
	comp=N,158μm,0.4s							
ATPI				AML	AML			
	comp=N,153μm,0.8s							
PIEI	**Pieia**	**0.89**	**327**	⇑P	Pg	04 46 38.0	0.0	
PIEI				S	Sn	04 46 53.0	+0.3	
PIEI				AML	AML			
	comp=E,217μm,0.2s							
PIEI				AML	AML			
	comp=N,140μm,0.8s							
MPAG	**Monte Paganucc**	**0.89**	**339**	⇑P	Pg	04 46 38.5	+0.3	
MPAG				S	Sn	04 46 53.0	0.0	
MPAG				AML	AML			
	comp=E,185μm,0.8s							
MPAG				AML	AML			
	comp=E,185μm,0.1s							
MPAG				AML	AML			
	comp=N,151μm,1.5s							
NARO	**Abbazia di Nar**	**0.93**	**331**	P	Pg	04 46 37.2	-1.7	
NARO				S	Sn	04 46 54.0	+0.2	
NARO				AML	AML			
	comp=N,95μm,0.2s							
NARO				AML	AML			
	comp=E,122μm,1.4s							
INTR	**Introdacqua**	**0.94**	**146**	⇓P	Pg	04 46 38.2	-0.9	
INTR				AML	AML			
	comp=E,128μm,1.3s							
INTR				AML	AML			
	comp=N,308μm,0.4s							
INTR				AML	AML			
	comp=N,308μm,0.4s							
INTR				AML	AML			
	comp=E,127μm,1.3s							
FSSB	**Fossombrone**	**0.95**	**341**	⇓P	Pg	04 46 39.0	-0.3	
FSSB				S	Sn	04 46 55.0	+0.8	
FSSB				AML	AML			
	comp=E,599μm,1.4s							
FSSB				AML	AML			
	comp=N,608μm,0.5s							
BADI	**Badiali**	**1.00**	**316**	P	Pn	04 46 41.0	-0.3	
PE3	**Peglio**	**1.04**	**330**	⇑P	Pn	04 46 41.7	0.0	
CAFI	**Castiglion Fio**	**1.05**	**301**	⇓P	Pb	04 46 41.6	+0.3	
CAFI				S	Sn	04 46 58.0	+1.2	
CAFI				AML	AML			
	comp=E,157μm,0.5s							
CAFI				AML	AML			
	comp=N,130μm,1.1s							
LAV9	**Lanuvio**	**1.18**	**199**	S	Sn	04 47 01.0	+1.2	
VITU	**Vitulano (BN)**	**1.93**	**146**	S	Sn	04 47 18.0	-0.5	
GRAM	**Graiana**	**2.84**	**308**	⇓P	Pn	04 47 07.8	+1.3	
PTRP	**Pietrapertosa**	**3.12**	**136**	⇓P	Pn	04 47 09.1	-1.3	
LEOD	**Capriano del C**	**3.46**	**321**	S	Sb	04 48 04.0	-0.6	
CIMO	**Cimolais**	**3.56**	**351**	S	Sn	04 47 55.0	-3.5	
ZAG	**Zagreb**	**3.63**	**32**	P	Pg	04 47 30.3	-0.2	
SALB	**San Lorenzo Be**	**3.75**	**140**	S	Sg	04 48 18.0	-3.5	
EUCT	**Pavia**	**3.80**	**311**	S	Sb	04 48 12.0	-2.2	
IST3	**Stromboli F**	**4.28**	**158**	S	Sn	04 48 14.0	-2.3	
LLI	**Lipari**	**4.54**	**162**	⇑P	Pb	04 47 44.2	+3.4	
TRAV	**Traversella**	**4.77**	**307**	P	Pn	04 47 35.6	+2.5	
MSFR	**San Fratello**	**4.87**	**167**	P	Pg	04 47 50.6	-3.7	

ROM 25 04:47:10.3±0.1, 42°.760N±0°.003×13°.206E±0°.005, h10km, ML2.5/5, Error ellipse: s-maj=0.4km s-min=0.2km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**317**	P	Pg	04 47 13.4	+0.4
NRCA				S	Sg	04 47 15.2	+0.4
NRCA				AML	AML		
	comp=E,6425μm,0.7s						
NRCA				AML	AML		
	comp=N,6270μm,0.5s						
NRCA				AML	AML		
	comp=N,6810μm,0.5s						
NRCA				AML	AML		
	comp=E,7010μm,0.7s						
NRCA				AML	AML		
	comp=N,6275μm,0.5s						
NRCA				AML	AML		
	comp=E,6425μm,0.7s						
LNSS	**Leonessa**	**0.20**	**218**	P	Pg	04 47 15.3	+0.8
LNSS				S	Sg	04 47 18.8	+1.4
LNSS				AML	AML		
	comp=N,2160μm,1.0s						
LNSS				AML	AML		
	comp=N,2165μm,1.0s						
LNSS				AML	AML		
	comp=E,1745μm,0.2s						
RM33	**Pellescritta (**	**0.25**	**179**	P	Pb	04 47 16.3	-0.8
RM33				S	Sb	04 47 20.7	-0.8
RM33				AML	AML		
	comp=E,377μm,0.2s						
CAMP	**Campotosto**	**0.27**	**146**	P	Pg	04 47 16.4	+0.6
CAMP				S	Sb	04 47 21.0	-1.1
CAMP				AML	AML		
	comp=E,306μm,0.3s						
FDMO	**Fiordimonte**	**0.29**	**342**	P	Pg	04 47 16.9	+0.7
FDMO				S	Sb	04 47 21.4	-1.2
FDMO				AML	AML		
	comp=E,276μm,0.2s						
GUMA	**Gualdo di Mace**	**0.32**	**17**	P	Pb	04 47 17.7	-0.5
GUMA				S	Sb	04 47 23.2	-0.2
GUMA				AML	AML		
	comp=N,1130μm,0.7s						
GUMA				AML	AML		
	comp=E,1720μm,0.2s						
TERO	**Teramo**	**0.32**	**115**	P	Pg	04 47 17.3	+0.6
TERO				S	Sb	04 47 22.7	-0.9
TERO				AML	AML		
	comp=E,370μm,0.1s						
CESI	**CESI - Serrava**	**0.33**	**318**	P	Pg	04 47 17.4	+0.5
CESI				S	Sg	04 47 22.6	+1.2
CESI				AML	AML		
	comp=E,530μm,0.2s						
CESI				AML	AML		
	comp=N,1046μm,0.3s						
CSP1	**Cessapalombo**	**0.33**	**360**	P	Pb	04 47 17.8	-0.6
CSP1				S	Sb	04 47 23.1	-0.9
CSP1				AML	AML		
	comp=E,244μm,0.3s						
ARRO	**Arrone**	**0.37**	**241**	P	Pg	04 47 18.3	+0.6
GIGS	**Gran Sasso**	**0.41**	**139**	P	Pg	04 47 18.6	+0.3
GIGS				S	Sb	04 47 25.0	-1.1
GIGS				AML	AML		
	comp=E,41μm,0.2s						
CESX	**Cesi**	**0.49**	**252**	P	Pb	04 47 20.4	-0.6
CESX				S	Sb	04 47 27.5	-0.7
CESX				AML	AML		
	comp=E,143μm,0.4s						
ASSB	**Assisi San Ben**	**0.49**	**305**	P	Pg	04 47 20.0	+0.1
ASSB				S	Sb	04 47 27.5	-0.9
ASSB				AML	AML		
	comp=E,245μm,0.3s						
ASSB				AML	AML		
	comp=N,204μm,0.1s						
SNTG	**Esanatoglia**	**0.53**	**339**	P	Pg	04 47 21.1	+0.4
SNTG				S	Sb	04 47 29.1	-0.5
SNTG				AML	AML		
	comp=E,81μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.59**	**316**	P	Pg	04 47 22.1	+0.2
ARVD	**Arcevia**	**0.76**	**345**	S	Sb	04 47 37.0	+0.8
NARO	**Abbazia di Nar**	**0.96**	**332**	S	Sn	04 47 45.0	+1.2
CIGN	**Sant'Elia a Pi**	**1.68**	**131**	S	Sg	04 48 04.0	-0.2
PTRJ	**Pietraroja**	**1.71**	**144**	P	Pg	04 47 42.7	-0.3

BGR ***25*** *04:51:38.2±0.9, 42°.27N×13°.61E, h5km, ML4.1/10, Error ellipse: s-maj=17.8km s-min=10.0km az=119.0*
MOS ***25*** *04:51:39.7±1.2, 42°.70N×13°.24E, h11km, mb4.4/12, Error ellipse: s-maj=8.3km s-min=4.4km az=77.3*
ROM ***25*** *04:51:40.2±0.1, 42°.632N±0°.003×13°.326E±0°.004, h8km, ML3.9/113, Mw3.8, Error ellipse: s-maj=0.3km s-min=0.1km az=64.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.79; $M_{\theta\theta}$1.73; $M_{\phi\phi}$3.06; $M_{r\theta}$-1.66; $M_{\theta\phi}$-2.04; $M_{\phi r}$2.09; Fault plane solution: M_o5.37697×10^{14} NP1:φs325.00000°, δ30.00000°, λ-88.00000°. NP2:φs143.00000°, δ60.00000°, λ-91.00000°.*
LDG ***25*** *04:51:40.9±0.1, 42°.60N×13°.22E, h10km, Ml3.7/29 Error ellipse: s-maj=4.4km s-min=3.0km az=44.0*
IDC ***25*** *04:51:40.7±0.8, 42°.75N×13°.19E, h0km, mb4.2/11, mbtmp4.0/19, ML3.7/8, MS3.1/19, Error ellipse: s-maj=14.4km s-min=12.3km az=85.0*
PDG ***25*** *04:51:40.8±0.6, 42°.65N×13°.34E, h10km, ML4.0/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
BEO ***25*** *04:51:41.5±0.5, 42°.67N×13°.28E, h0km, ML4.0/10*
NEIC ***25*** *04:51:41.0±1.2, 42°.64N±0°.06×13°.25E±0°.06, h10km±6km, mb4.2/7, ML3.9(ROM), Error ellipse: s-maj=8.9km s-min=5.8km az=208.0*
PRU ***25*** *04:51:41.2±0.0, 42°.63N×13°.48E, h0km, M4.2*
STR ***25*** *04:51:42.3±0.7, 43°.N±6°×1°.3E±°, h10km, mb4.0/29, Error ellipse: s-maj=0.0km s-min=0.0km az=72.2, preliminary*

ISC 25 04:51:40.9±0.6, 42°.64N±0°.01×13°.30E±0°.02, h12km±3km, n528, σ2s10/634, mb4.2/22, MS3.1/10, 43C-54D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.04**	**295**	⇑*i*P	Pg	04 51 42.5	-0.7
T1201				S	Sg	04 51 44.0	-0.8
T1202	**Accumoli, Fraz**	**0.08**	**319**	⇓*e*P	Pg	04 51 43.3	-0.3
T1202				S	Sg	04 51 45.7	+0.1
T1243	**Rocca Santa Ma**	**0.12**	**64**	⇑*i*P	Pg	04 51 43.1	-0.9
T1243				S	Sg	04 51 45.0	-1.4
AQT1	**Arquata del Tr**	**0.13**	**359**	⇑P	Pg	04 51 43.8	-0.4
AQT1				S	Sg	04 51 46.0	-0.5
CAMP	**Campotosto**	**0.13**	**142**	⇑P	Pg	04 51 43.5	-0.8
CAMP				S	Sg	04 51 45.6	-1.0
CAMP				AML	AML		
CAMP				AML	AML		
T1214	**Arquata del Tr**	**0.14**	**331**	⇓*e*P	Pg	04 51 44.1	-0.2
T1214				S	Sg	04 51 47.7	+0.9
RM33	**Pellescritta (**	**0.15**	**205**	⇑P	Pg	04 51 44.3	-0.1
RM33				S	Sg	04 51 47.3	+0.4
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
T1213	**Norcia, Frazio**	**0.15**	**304**	⇓*i*P	Pg	04 51 44.5	0.0
T1213				S	Sg	04 51 47.8	+0.8
LNSS	**Leonessa**	**0.19**	**259**	⇓P	Pg	04 51 45.3	+0.2
LNSS				S	Sg	04 51 49.1	+0.9
LNSS				AML	AML		
	comp=N,94400μm,0.7s						
LNSS				AML	AML		
T1242	**Castelluccio d**	**0.20**	**340**	⇓*e*P	Pg	04 51 45.1	-0.2
T1212	**Cascia, Frazio**	**0.22**	**301**	⇓*i*P	Pg	04 51 45.6	+0.1
T1212				S	Sg	04 51 49.9	+1.2
TERO	**Teramo**	**0.23**	**95**	⇑P	Pg	04 51 45.0	-0.7
TERO				S	Sg	04 51 48.5	-0.5
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
NRCA	**Norcia**	**0.23**	**325**		Pg	04 51 45.0	-0.8
NRCA	**Norcia**	**0.23**	**325**	⇓P	Pg	04 51 45.7	-0.1
NRCA				S	Sg	04 51 50.3	+1.1
NRCA				AML	AML		
	comp=E,59200μm,1.1s						
NRCA				AML	AML		
	comp=E,62950μm,1.1s						
NRCA				AML	AML		
	comp=E,59150μm,1.1s						
NRCA				AML	AML		
	comp=N,44600μm,1.1s						
NRCA				AML	AML		
	comp=N,42800μm,1.1s						
T1241	**Roccafluvione,**	**0.24**	**25**	⇑*i*P	Pg	04 51 45.4	-0.5
T1241				S	Sg	04 51 49.2	-0.1
MMO1	**Montemonaco**	**0.26**	**5**	⇓*e*P	Pg	04 51 46.0	-0.3
MMO1				S	Sg	04 51 50.4	+0.5
GIGS	**Gran Sasso**	**0.28**	**133**	⇓P	Pg	04 51 45.8	-0.8
GIGS				S	Sg	04 51 49.9	-0.5
GIGS				AML	AML		
	comp=N,23800μm,0.6s						
GIGS				AML	AML		
	comp=E,16850μm,1.2s						
MC2	**Monte Cornacci**	**0.28**	**344**	⇓*e*P	Pg	04 51 46.5	-0.2
AQU	**L'Aquila**	**0.30**	**165**		Pg	04 51 46.6	-0.4
AQU				Sg	Sg	04 51 51.2	+0.2
AQU	**L'Aquila**	**0.30**	**165**	P	Pg	04 51 46.6	-0.4
AQU	**L'Aquila**	**0.30**	**165**	⇓P	Pg	04 51 46.5	-0.4
AQU				S	Sg	04 51 51.4	+0.4
AQU				AML	AML		
	comp=E,73700μm,1.6s						
AQU				AML	AML		
	comp=E,72450μm,1.6s						
AQU				AML	AML		
	comp=N,79050μm,0.9s						
AQU				AML	AML		
	comp=N,79100μm,0.8s						
T1211	**Morro Reatino**	**0.34**	**252**	⇑*i*P	Pg	04 51 47.8	0.0
T1211				S	Sb	04 51 53.8	-0.7
FEMA	**Monte Fema**	**0.37**	**330**	P	Pg	04 51 48.0	-0.2
FEMA				AML	AML		
	comp=N,40700μm,0.5s						
FEMA				AML	AML		
	comp=N,40750μm,0.5s						
FEMA				AML	AML		
	comp=E,50250μm,0.4s						
FEMA				AML	AML		
	comp=N,40700μm,0.5s						
FIAM	**Fiamignano**	**0.40**	**200**	⇑P	Pg	04 51 48.5	-0.3
FIAM				S	Sg	04 51 54.8	+0.8
FIAM				AML	AML		
	comp=E,25050μm,1.2s						
FIAM				AML	AML		
	comp=N,22650μm,0.7s						
ARRO	**Arrone**	**0.40**	**261**	⇑P	Pg	04 51 48.8	0.0
ARRO				S	Sb	04 51 55.3	-0.6
ARRO				AML	AML		
	comp=E,17500μm,0.8s						
ARRO				AML	AML		
	comp=N,12900μm,1.0s						
OFFI	**Offida**	**0.41**	**44**	⇑P	Pg	04 51 49.4	+0.4
OFFI				S	Sb	04 51 56.0	-0.3
OFFI				AML	AML		
OFFI				AML	AML		
	comp=N,92250μm,1.0s						
GUMA	**Gualdo di Mace**	**0.42**	**4**	⇓P	Pg	04 51 49.2	0.0
GUMA				S	Sb	04 51 56.3	-0.4
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
FDMO	**Fiordimonte**	**0.42**	**339**	⇓P	Pg	04 51 48.9	-0.3
FDMO				S	Sb	04 51 56.1	-0.6
FDMO				AML	AML		
	comp=E,15250μm,0.7s						
FDMO				AML	AML		
	comp=N,20750μm,0.8s						
FAGN	**Fagnano**	**0.43**	**150**	⇓P	Pg	04 51 48.5	-0.8
FAGN				AML	AML		
	comp=N,87750μm,0.6s						
FAGN				AML	AML		
CSP1	**Cessapalombo**	**0.46**	**351**	⇓P	Pg	04 51 49.5	-0.4
CSP1				S	Sg	04 51 56.6	+0.6
CSP1				AML	AML		
	comp=E,24850μm,1.2s						
CSP1				AML	AML		
	comp=N,39350μm,0.5s						
CESI	**CESI - Serrava**	**0.46**	**322**	⇓P	Pg	04 51 49.8	-0.2
CESI				S	Sb	04 51 57.5	-0.5
CESI				AML	AML		
	comp=N,47200μm,0.4s						
CESI				AML	AML		
	comp=E,30050μm,0.7s						
VCEL	**Villa Celiera**	**0.47**	**121**	P	Pg	04 51 49.9	-0.3
VCEL				S	Sb	04 51 57.7	-0.4
VCEL				AML	AML		
	comp=E,39850μm,0.8s						
VCEL				AML	AML		
	comp=N,56950μm,0.8s						
TRTR	**Tortoreto Alta**	**0.48**	**70**	⇓P	Pb	04 51 51.0	-0.3
TRTR				AML	AML		
	comp=N,90350μm,0.5s						
TRTR				AML	AML		
	comp=E,92250μm,1.1s						
CESX	**Cesi**	**0.53**	**267**	⇓P	Pg	04 51 50.8	-0.4
CESX				AML	AML		
	comp=E,14500μm,1.1s						
CESX				AML	AML		
	comp=N,12640μm,0.6s						
T0110	**Collepietro**	**0.55**	**139**	⇓P	Pg	04 51 50.4	-1.1
T0110				S	Sg	04 51 59.4	+0.6
T0110				AML	AML		
	comp=N,44850μm,0.5s						
T0110				AML	AML		
	comp=E,34000μm,0.7s						
MDAR	**Monte D'Aria**	**0.56**	**348**	P	Pg	04 51 51.4	-0.5
SEF1	**Sefro**	**0.57**	**333**	P	Pg	04 51 51.6	-0.4
SEF1				AML	AML		
	comp=E,21050μm,0.6s						
SEF1				AML	AML		
	comp=N,15800μm,1.4s						
SEF1				AML	AML		
	comp=E,21000μm,0.6s						
SEF1				AML	AML		
	comp=N,15850μm,1.4s						
PIO1	**Pioraco**	**0.58**	**337**	P	Pg	04 51 52.1	-0.2
SSM1	**San Severino M**	**0.59**	**351**	P	Pg	04 51 52.1	-0.3
FIU1	**Fiuminata**	**0.61**	**334**	*e*P	Pg	04 51 52.5	-0.2
FIU1				S	Sb	04 52 02.7	+0.6
ASSB	**Assisi San Ben**	**0.62**	**311**	⇓P	Pg	04 51 52.5	-0.4
ASSB				AML	AML		
	comp=N,15450μm,1.0s						
ASSB				AML	AML		
	comp=E,15600μm,0.6s						
GAG1	**Gagliole**	**0.62**	**344**	P	Pg	04 51 52.3	-0.7
GAG1				AML	AML		
	comp=E,31800μm,0.4s						
GAG1				AML	AML		
	comp=N,33950μm,0.5s						
PTQR	**Pietraquaria**	**0.62**	**173**	P	Pg	04 51 51.8	-1.2
PTQR				AML	AML		
	comp=E,6145μm,0.6s						
PTQR				AML	AML		
	comp=N,6340μm,1.6s						
CADA	**Capodarco di F**	**0.65**	**32**	P	Pb	04 51 54.5	+0.4
MTL1	**Matelica**	**0.65**	**341**	P	Pg	04 51 53.2	-0.3
MTL1				S	Sb	04 52 03.4	+0.1
SNTG	**Esanatoglia**	**0.67**	**337**	⇓P	Pg	04 51 53.1	-0.7
SNTG				S	Sb	04 52 04.4	+0.6
SNTG				AML	AML		
	comp=E,879μm,1.3s						
SNTG				AML	AML		
	comp=N,950μm,1.6s						
SNTG				AML	AML		
	comp=N,7815μm,1.6s						
SNTG				AML	AML		
	comp=E,876μm,1.3s						
SNTG				AML	AML		
	comp=N,950μm,1.6s						
SNTG				AML	AML		
	comp=E,6595μm,1.3s						
SNTG				AML	AML		
	comp=E,880μm,1.3s						
SNTG				AML	AML		
	comp=N,7810μm,1.6s						
SNTG				AML	AML		
	comp=N,951μm,1.6s						
TRE1	**Treia**	**0.67**	**1**	P	Pg	04 51 53.9	0.0
EL6	**Elcito**	**0.70**	**348**	⇓P	Pg	04 51 53.8	-0.7
EL6				AML	AML		
	comp=E,14500μm,0.9s						
EL6				AML	AML		
	comp=N,18950μm,0.6s						
SRES	**S.Oreste - Sor**	**0.71**	**236**	P	Pg	04 51 54.2	-0.4
SRES				AML	AML		
	comp=N,5765μm,0.5s						
SRES				AML	AML		
	comp=E,5430μm,1.6s						
CIMA	**Civitanova Mar**	**0.72**	**22**	P	Pb	04 51 55.7	+0.4
ATCC	**AVT- Casa Cast**	**0.73**	**319**	⇓P	Pg	04 51 54.5	-0.5
ATCC				AML	AML		
	comp=E,16300μm,0.9s						
ATCC				AML	AML		
	comp=N,18200μm,0.6s						
ATCC				AML	AML		
	comp=E,16250μm,0.9s						
CERT	**Cerreto**	**0.73**	**199**	P	Pg	04 51 54.0	-1.0
CERT				AML	AML		
	comp=N,7040μm,0.5s						
CERT				AML	AML		
	comp=E,11900μm,0.6s						
CING	**Cingoli**	**0.74**	**354**	P	Pg	04 51 54.5	-0.6
CING				S	Sb	04 52 06.3	+0.5
CING				AML	AML		
	comp=E,11545μm,1.4s						
CING				AML	AML		
	comp=N,10390μm,0.7s						
MTCE	**Montecelio**	**0.74**	**214**	⇑P	Pg	04 51 54.3	-1.0
MTCE				AML	AML		
	comp=N,8365μm,1.3s						
MTCE				AML	AML		
	comp=E,9345μm,0.7s						
FOSV	**Fossato di Vic**	**0.76**	**329**	⇓P	Pg	04 51 54.9	-0.7
FOSV				S	Sb	04 52 07.3	+0.8
FOSV				AML	AML		
	comp=E,9210μm,0.6s						
FOSV				AML	AML		
	comp=N,8655μm,0.5s						
FOSV				AML	AML		
	comp=N,8660μm,0.5s						
FOSV				AML	AML		
	comp=E,9200μm,0.6s						
PP3	**Marolino**	**0.77**	**17**	⇓P	Pb	04 51 56.0	-0.2
PP3				AML	AML		
	comp=E,40300μm,0.5s						
PP3				AML	AML		
	comp=N,38700μm,0.4s						
PP3				AML	AML		
	comp=E,38400μm,0.5s						
PP3				AML	AML		
	comp=N,40100μm,0.4s						
PP3				AML	AML		
	comp=N,38700μm,0.4s						
PP3				AML	AML		
	comp=E,38350μm,0.5s						
PP3				AML	AML		
	comp=N,40150μm,0.4s						
PP3				AML	AML		
	comp=E,40300μm,0.5s						
INTR	**Introdacqua**	**0.77**	**144**	⇓P	Pg	04 51 54.5	-1.4
INTR				S	Sg	04 52 04.8	-1.2
INTR				AML	AML		
	comp=E,6μm,0.8s						
INTR				AML	AML		
	comp=N,9μm,0.7s						
INTR				AML	AML		
	comp=E,5715μm,0.8s						
INTR				AML	AML		
	comp=N,13250μm,0.7s						
VVLD	**Villa Vallelon**	**0.81**	**162**	P	Pg	04 51 55.3	-1.2
VVLD				AML	AML		
	comp=E,6555μm,0.9s						
VVLD				AML	AML		
	comp=N,8015μm,0.7s						

VVLD AML AML
comp=N,8020µm,0.7s
VVLD AML AML
comp=E,6550µm,0.9s
MMUR Monte Murano 0.83 345 P **Pg 04 51 56.3 -0.6**
RCAV Rocca di Cave 0.83 198 P **Pg 04 51 56.2 -0.8**
RCAV AML AML
comp=E,9265µm,0.4s
RCAV AML AML
comp=E,9285µm,0.4s
RCAV AML AML
comp=N,12900µm,0.4s
MURB Monte Urbino 0.84 318 **Pg 04 51 56.4 -0.7**
MURB Sg **Sg 04 52 07.0 -1.1**
MURB Monte Urbino 0.84 318 P **Pg 04 51 56.5 -0.7**
MURB AML AML
comp=E,22100µm,1.0s
MURB AML AML
comp=N,18200µm,1.0s
MURB AML AML
comp=E,22350µm,1.0s
MURB AML AML
comp=N,20750µm,1.0s
GUAR Guarcino 0.85 179 P **Pg 04 51 56.3 -0.9**
GUAR AML AML
comp=E,8040µm,1.1s
GUAR AML AML
comp=N,7780µm,0.9s
SSFR Montelago di S 0.88 335 P **Pg 04 51 57.0 -0.8**
SSFR AML AML
comp=E,13350µm,0.3s
SSFR AML AML
comp=N,9805µm,0.3s
SSFR AML AML
comp=E,12850µm,0.3s
SSFR AML AML
comp=N,9735µm,1.6s
LPEL Lama dei Pelig 0.89 132 P **Pg 04 51 55.5 -2.5**
LPEL AML AML
comp=N,7825µm,0.5s
LPEL AML AML
comp=E,9665µm,1.0s
ATTE AVT- Monte Tez 0.89 309 P **Pg 04 51 57.2 -0.8**
ATTE AML AML
comp=E,5530µm,1.1s
ATTE AML AML
comp=N,6735µm,0.6s
ARVD Arcevia 0.90 343 ⇓P **Pg 04 51 57.3 -0.9**
ARVD AML AML
comp=N,5845µm,0.6s
ARVD AML AML
comp=E,5490µm,1.2s
ATFO Monte Foce - G 0.90 324 ⇓P **Pg 04 51 57.4 -0.8**
ATFO AML AML
comp=E,8730µm,0.8s
ATFO AML AML
comp=N,9800µm,0.8s
MGAB Montegabbione 0.91 288 P **Pg 04 51 57.9 -0.6**
MGAB AML AML
comp=E,18450µm,1.5s
MGAB AML AML
comp=E,20400µm,1.6s
MGAB AML AML
comp=N,14850µm,0.9s
MGAB AML AML
comp=N,15950µm,0.9s
AOI Ancona 0.94 14 P **Pg 04 51 58.4 -0.5**
AOI AML AML
comp=E,8320µm,1.6s
AOI AML AML
comp=N,10115µm,1.1s
ATLO AVT- Montelove 0.94 316 P **Pg 04 51 57.8 -1.1**
RMP Rome, Mte Porz 0.94 208 P **Pg 04 51 58.2 -0.7**
RMP AML AML
comp=N,9060µm,0.5s
RMP AML AML
comp=E,9180µm,0.8s
FRON Frontone 0.97 335 ⇓P **Pg 04 51 58.5 -1.1**
FRON AML AML
comp=E,8265µm,0.8s
FRON AML AML
comp=N,9700µm,0.6s
POFI Posta Fibreno 0.97 161 ⇑P **Pg 04 51 58.0 -1.6**
POFI AML AML
comp=N,5045µm,0.7s
POFI AML AML
comp=E,8205µm,1.0s
POFI AML AML
comp=N,5445µm,0.7s
POFI AML AML
comp=E,8740µm,1.0s
RDP Rocca di Papa 0.98 206 P **Pg 04 51 59.3 -0.5**
RDP AML AML
comp=E,18850µm,0.6s
RDP AML AML
comp=N,23200µm,0.7s
ATVO AVT- Monte Val 0.99 319 ⇓P **Pg 04 51 58.9 -1.0**
ATVO AML AML
comp=N,5200µm,1.2s
ATVO AML AML
comp=E,6935µm,1.5s
MA9 Marino 0.99 209 AML AML
comp=E,22250µm,0.6s
MA9 AML AML
comp=N,12850µm,0.7s
COR1 Corinaldo 1.01 348 P **Pb 04 52 00.7 +0.3**
COR1 AML AML
comp=E,16950µm,0.6s
COR1 AML AML
comp=E,8730µm,0.6s
COR1 AML AML
comp=N,15000µm,0.7s
COR1 AML AML
comp=N,15050µm,1.0s
LRP Arpino 1.02 168 P **Pg 04 51 59.0 -1.4**
LRP AML AML
comp=E,2820µm,0.6s
LRP AML AML
comp=N,4040µm,0.8s
ATMI Monte Miggiano 1.02 313 P **Pg 04 52 00.5 -0.1**
ATMI AML AML
comp=E,14000µm,0.6s
ATMI AML AML
comp=N,11700µm,1.0s
SACS San Casciano d 1.04 282 ⇑P **Pg 04 52 00.4 -0.5**
SACS AML AML
comp=E,6285µm,1.6s
SACS AML AML
comp=N,4985µm,1.3s
SACS AML AML
comp=N,4665µm,1.0s
SACS AML AML
comp=E,6400µm,1.6s
PIEI Pieia 1.05 328 P **Pg 04 52 00.1 -1.1**
PIEI AML AML
comp=E,5505µm,0.6s
PIEI AML AML
comp=N,3380µm,1.5s
LAV9 Lanuvio 1.06 205 AML AML
comp=E,11900µm,0.4s
LAV9 AML AML
comp=E,11240µm,0.4s
LAV9 AML AML
comp=N,17100µm,1.4s
LAV9 AML AML
comp=N,17550µm,1.4s
MPAG Monte Paganucc 1.06 338 ⇓P **Pg 04 52 00.3 -1.1**
MPAG AML AML
comp=N,7005µm,0.5s
MPAG AML AML
comp=N,7585µm,0.5s
MPAG AML AML
comp=E,6990µm,0.7s
MPAG AML AML
comp=E,7110µm,0.7s
SENI Senigallia 1.06 358 P **Pn 04 52 01.8 +0.1**
GIUL Giuliano Di Ro 1.08 182 P **Pb 04 52 00.7 -0.9**
GIUL AML AML
comp=N,5175µm,1.6s
GIUL AML AML
comp=E,4470µm,0.8s
LATE Laterza 1.10 269 **Pb 04 52 01.5 -0.4**
LATE Laterza 1.10 269 P **Pb 04 52 01.5 -0.4**
NARO Abbazia di Nar 1.10 332 P **Pb 04 52 00.9 -1.0**
NARO AML AML
comp=E,5090µm,0.6s
NARO AML AML
comp=N,3810µm,1.0s
FSSB Fossombrone 1.12 340 P **Pb 04 52 01.3 -0.9**
FSSB AML AML
comp=N,13350µm,0.4s
FSSB AML AML
comp=E,14900µm,0.4s
TOLF Tolfa 1.12 239 ⇑P **Pb 04 52 01.3 -0.9**
TOLF AML AML
comp=E,4610µm,0.8s
TOLF AML AML
comp=N,4800µm,0.7s
RNI2 Rionero Sannit 1.13 146 P **Pb 04 52 00.8 -1.7**
BADI Badiali 1.16 319 ⇑P **Pb 04 52 02.4 -0.5**
CERA Filignano 1.17 153 P **Pb 04 52 00.7 -2.4**
CERA AML AML
comp=N,6020µm,0.9s
CERA AML AML
comp=E,6620µm,1.0s
CERA AML AML
comp=N,6280µm,0.9s
CERA AML AML
comp=E,6785µm,1.0s
CAFI Castiglion Fio 1.19 306 P **Pb 04 52 02.8 -0.7**
CAFI AML AML
comp=E,4260µm,1.1s
CAFI AML AML
comp=E,4290µm,1.1s
CAFI AML AML
comp=N,5805µm,0.8s
CAFI AML AML
comp=N,5450µm,0.8s
MCIV Monte Civitell 1.20 277 P **Pb 04 52 03.5 -0.2**
MCIV AML AML
comp=N,2535µm,1.3s
MCIV AML AML
comp=E,2880µm,0.9s
PE3 Peglio 1.21 331 AML AML
comp=E,23µm,0.4s
PE3 AML AML
comp=N,21µm,0.4s
SF04 Casetta 1.22 280 P **Pn 04 52 03.9 +0.1**
SF04 AML AML
comp=E,2240µm,1.0s
SF04 AML AML
comp=N,2450µm,0.7s
PARC Parchiule 1.27 323 AML AML
comp=N,4305µm,1.2s
PARC AML AML
comp=E,5220µm,0.6s
TRIV Trivento 1.28 133 AML AML
comp=N,3665µm,1.6s
TRIV AML AML
comp=E,3005µm,0.7s
TRIV AML AML
comp=E,3280µm,0.7s
TRIV AML AML
comp=N,3585µm,1.6s
SF01 Poggio Pratacc 1.29 278 P **Pb 04 52 05.3 +0.2**
SF01 AML AML
comp=E,7120µm,0.9s
SF01 AML AML
comp=N,5080µm,1.2s
PESA Pesaro 1.34 346 P **Pb 04 52 06.0 +0.1**
PESA AML AML
comp=E,7515µm,1.4s
PESA AML AML
comp=N,7300µm,1.3s
ARCI Arcidosso 1.36 280 P **Pb 04 52 06.4 +0.1**
ARCI AML AML
comp=E,1051µm,0.6s
ARCI AML AML
comp=N,1210µm,0.9s
CRE Caprese Michel 1.39 315 P **Pn 04 52 05.8 -0.4**
CRE AML AML
comp=N,2700µm,0.5s
CRE AML AML
comp=E,2275µm,1.6s
VAGA Valle Agricola 1.41 150 P **Pn 04 52 06.2 -0.3**
VAGA AML AML
comp=N,2680µm,1.3s
VAGA AML AML
comp=E,1765µm,0.9s
VAGA AML AML
comp=E,1695µm,1.3s
VAGA AML AML
comp=N,2545µm,1.3s
BSSO Busso 1.46 138 AML AML
comp=E,2235µm,1.6s
BSSO AML AML
comp=E,898µm,1.5s
BSSO AML AML
comp=N,2585µm,1.0s
BSSO AML AML
comp=N,984µm,1.0s
MODR Mondragone 1.56 164 P **Pb 04 52 09.2 -0.5**
MODR AML AML
comp=E,1145µm,1.0s
MODR AML AML
comp=N,1390µm,0.9s
PIGN Pignataro Magg 1.58 155 P **Pb 04 52 09.8 -0.3**
PIGN AML AML
comp=N,1245µm,0.8s
PIGN AML AML
comp=N,1175µm,0.8s
PIGN AML AML
comp=E,1270µm,1.6s
PIGN AML AML
comp=E,1270µm,0.9s
SFI Santa Sofia 1.65 321 P **Pn 04 52 09.9 +0.2**
SFI AML AML
comp=N,1745µm,1.6s
SFI AML AML
comp=E,1980µm,0.7s
MELA Melanico ??? S 1.65 124 AML AML
comp=E,4080µm,1.6s
MELA AML AML
comp=N,3875µm,1.0s
MELA AML AML
comp=E,3850µm,1.6s
MELA AML AML
comp=N,4065µm,1.1s
CSNT Castellina Chi 1.69 300 P **Pn 04 52 10.5 +0.2**
CSNT AML AML
comp=N,1160µm,1.0s
CSNT AML AML
comp=E,917µm,0.7s
OSSC Osservatorio P 1.74 301 **Pn 04 52 11.8 +0.8**
OSSC Osservatorio P 1.74 301 P **Pn 04 52 11.8 +0.8**
OSSC AML AML
comp=E,1218µm,1.1s
OSSC AML AML
comp=N,1186µm,1.1s
OSSC AML AML
comp=E,1390µm,1.0s
OSSC AML AML
comp=N,1330µm,1.0s
VITU Vitulano (BN) 1.76 145 P **Pb 04 52 12.6 -0.6**
VITU AML AML
comp=N,1655µm,0.6s
VITU AML AML
comp=E,1525µm,0.7s
VITU AML AML
comp=E,578µm,1.1s
VITU AML AML
comp=N,1700µm,0.6s
RUFI Rufina 1.77 313 P **Pn 04 52 12.0 +0.7**
RUFI AML AML
comp=N,1590µm,0.6s
RUFI AML AML
comp=E,1955µm,0.8s
CASP Castiglione de 1.80 276 Pn **Pn 04 52 11.8 0.0**
CASP Castiglione de 1.80 276 P **Pn 04 52 12.0 +0.3**
CASP AML AML
comp=E,361µm,1.6s
CASP AML AML
comp=N,434µm,1.2s
TRIF Trifonti 1.82 286 ⇓P **Pn 04 52 12.6 +0.5**
TRIF AML AML
comp=E,1000µm,1.0s
TRIF AML AML
comp=N,1275µm,0.5s
LMD Lutirano 1.84 322 P **Pn 04 52 13.0 +0.6**
LMD AML AML
comp=E,2280µm,0.8s
LMD AML AML
comp=N,1885µm,0.8s
VENT Ventotene 1.85 177 AML AML
comp=N,1335µm,1.6s
VENT AML AML
comp=E,2010µm,1.4s
DUGI Dugi Otok 1.86 43 *i* Pn **Pn 04 52 13.0 +0.4**
PAOL Paolisi 1.87 149 **Pn 04 52 13.6 +0.9**
APRC Apricena 1.89 117 P **Pn 04 52 13.1 +0.1**
APRC AML AML
comp=E,1470µm,0.9s
APRC AML AML
comp=N,2475µm,0.6s
BRIS BRISIGHELLA 1.99 320 P **Pb 04 52 16.9 -0.2**
BRIS AML AML
comp=E,1195µm,0.5s
BRIS AML AML
comp=N,2280µm,0.5s
SEI Scarperia 2.00 316 P **Pn 04 52 15.1 +0.5**
SEI AML AML
comp=E,2360µm,0.5s
SEI AML AML
comp=N,3085µm,0.5s
SGRT San Giovanni R 2.02 115 **Pn 04 52 16.1 +1.2**
SGRT San Giovanni R 2.02 115 P **Pn 04 52 15.5 +0.6**
SGRT AML AML
comp=E,1720µm,0.7s
SGRT AML AML
comp=N,1665µm,0.8s
MPPT Montemurlo 2.08 310 P **Pn 04 52 15.8 +0.2**
MPPT AML AML
comp=E,1046µm,1.2s
MPPT AML AML
comp=N,1290µm,0.8s
VIRC Vir 2.09 37 *i* Pn **Pn 04 52 16.1 +0.4**
MORI Morici 2.14 54 *e*Pn **Pn 04 52 17.1 +0.6**
MSAG Monte S. Angel 2.15 115 P **Pn 04 52 17.8 +1.1**
MSAG AML AML
comp=E,1985µm,0.5s
MSAG AML AML
comp=N,3575µm,0.5s
MSAG AML AML
comp=E,1870µm,0.5s
MSAG AML AML
comp=N,3480µm,0.5s
NVLJ Novalja 2.24 30 *e*Pn **Pn 04 52 17.9 +0.1**
BRJN Brijuni 2.29 8 *e*Pn **Pn 04 52 18.5 +0.1**
PII Pisa 2.30 299 AML AML
comp=N,831µm,1.0s
PII AML AML
comp=E,518µm,1.0s
POPM Popiglio 2.32 308 P **Pn 04 52 20.0 +1.0**
POPM AML AML
comp=E,676µm,1.1s
POPM AML AML
comp=N,505µm,0.6s
RABC Rab 2.37 27 *e*Pn **Pn 04 52 20.0 +0.5**
CAPA Cerignola FG 2.40 127 AML AML
comp=E,1555µm,1.1s
CAPA AML AML
comp=N,1570µm,1.0s
ZCCA Zocca 2.40 316 **Pn 04 52 21.3 +1.2**
ZCCA Zocca 2.40 316 P **Pb 04 52 23.1 -1.0**
ZCCA AML AML
comp=N,1290µm,1.4s
ZCCA AML AML
comp=E,910µm,1.1s
ZCCA AML AML
comp=N,1178µm,1.5s
ZCCA AML AML
comp=E,912µm,1.1s
MAIM Mastiano 2.41 303 P **Pn 04 52 20.7 +0.6**
MAIM AML AML
comp=E,534µm,0.7s
MAIM AML AML
comp=N,634µm,0.6s
SMRN Sveta Marina 2.47 14 *i* Pn **Pn 04 52 21.1 +0.1**
CARD Cardoso 2.48 305 P **Pn 04 52 21.7 +0.6**
CARD AML AML
comp=E,526µm,0.8s
CARD AML AML
comp=N,569µm,0.6s
UDBI Udbina 2.60 43 *e*Pn **Pn 04 52 24.3 +1.5**
VLC Villacollemand 2.61 307 Pn **Pn 04 52 22.8 -0.1**
VLC Villacollemand 2.61 307 P **Pn 04 52 23.0 +0.1**
VLC AML AML
comp=E,412µm,1.5s
VLC AML AML
comp=N,490µm,1.6s
VLC AML AML
comp=N,488µm,1.6s
VLC AML AML
comp=E,409µm,1.5s
PALZ Palazzo San Ge 2.62 130 AML AML
comp=N,1615µm,1.2s
PALZ AML AML
comp=E,1615µm,0.8s
GROG Isola di Gorgo 2.62 289 AML AML
comp=N,159µm,0.6s
GROG AML AML
comp=E,134µm,1.4s
KIJV Kijevo 2.65 58 *i* Pn **Pn 04 52 24.9 +1.5**
LSTV Lastovo 2.65 86 *e*Pn **Pn 04 52 23.7 +0.3**
ACER Acerenza 2.71 132 AML AML
comp=E,597µm,0.9s
ACER AML AML
comp=E,592µm,1.0s
ACER AML AML
comp=N,622µm,0.7s
ACER AML AML
comp=N,666µm,0.7s
EQUI Equi 2.75 305 P **Pn 04 52 25.5 +0.7**
EQUI AML AML
comp=E,256µm,1.0s
EQUI AML AML
comp=N,451µm,0.9s
PLIT Plitvice 2.80 36 *e*Pn **Pn 04 52 26.2 +0.7**
MAKA Makarska 2.81 75 *e*Pn **Pn 04 52 26.3 +0.7**
RIY Rijeka 2.82 17 *e*Pn **Pn 04 52 26.2 +0.5**
PLMA Palmaria, Port 2.88 300 P **Pn 04 52 27.7 +1.1**
PLMA AML AML
comp=N,204µm,0.8s
PLMA AML AML
comp=E,204µm,0.8s
RICI Ricice 2.94 72 *e*Pn **Pn 04 52 28.7 +1.3**
SKDS Skadanscina 2.95 10 *e*Pn **Pn 04 52 27.4 -0.2**
SKDS Skadanscina 2.95 10 ⇓*i* Pn **Pn 04 52 27.6 0.0**
SKDS *i* Sn **Sn 04 53 01.0 -2.0**
SKDS IAML 04 53 31.0
comp=Z,509nm,1.2s
TEOL Teolo 2.96 337 Pn **Pn 04 52 28.4 +0.7**
A050A Klekovaca 2.98 51 *e*Pn **Pn 04 52 29.8 +1.7**
GRAM Graiana 2.99 309 P **Pn 04 52 29.5 +1.4**
GRAM AML AML
comp=E,668µm,1.3s
GRAM AML AML
comp=N,590µm,1.0s
MTSN Montesano sull 3.01 141 AML AML
comp=E,228µm,0.8s
MTSN AML AML
comp=N,194µm,0.8s
AMUR Altamura 3.02 124 P **Pn 04 52 29.7 +1.1**
AMUR AML AML
comp=E,636µm,0.5s
AMUR AML AML
comp=N,402µm,1.1s
SMPL Sampolo 3.02 261 P **Pn 04 52 28.9 +0.4**
SMPL Sampolo 3.02 261 P **Pn 04 52 29.1 +0.5**
SMPL AML AML
comp=E,53µm,1.2s
SMPL AML AML
comp=N,44µm,1.6s
PRMA PARMA 3.03 315 Pn **Pn 04 52 28.4 -0.2**
TRI Trieste 3.08 6 **Pn 04 52 29.5 +0.1**
TRI Trieste 3.08 6 P **Pn 04 52 29.5 +0.1**
SRKY Kupres RS 3.16 62 *e*Pn **Pn 04 52 32.5 +1.9**
PGF Pioggiola 3.17 270 *e*P **Pn 04 52 32.0 +1.3**
PGF *e*Sn **Sn 04 53 03.2 -5.4**
comp=N,72nm,0.8s
PGF Pioggiola 3.17 270 P **Pn 04 52 32.0 +1.3**
BOJS Bojanci 3.19 26 *e*Pn **Pn 04 52 31.0 +0.1**
BOJS Bojanci 3.19 26 P **Pn 04 52 32.4 +1.5**
CEY Cerknica 3.20 14 *e*Pn **Pn 04 52 31.4 +0.3**
MSSA Maissana 3.22 303 Pn **Pn 04 52 31.6 +0.2**
MSSA Maissana 3.22 303 P **Pn 04 52 32.3 +0.9**
MSSA AML AML
comp=E,289µm,0.9s
MSSA AML AML
comp=N,304µm,0.8s

STON	Ston	3.25	84	*e*Pn	Pn	04 52 31.4	-0.2
STON	Ston	3.25	84	*e*Pn	Pn	04 52 31.1	-0.6
STON	Ston	3.25	84	*e*Pn	Pn	04 52 31.5	-0.2
STON				*e*Sn	Sn	04 53 10.6	+0.3
CUC	Castrocucco	3.25	144		Pn	04 52 31.6	-0.2
MGRS	Mrkonjic Grad	3.28	56	*e*Pn	Pn	04 52 34.3	+2.2
LTRZ	Laterza	3.33	126	P	Pn	04 52 34.0	+1.2
SABO	M.te Sabotino	3.34	4		Pn	04 52 32.3	-0.8
SABO	M.te Sabotino	3.34	4	⇓P	Pn	04 52 33.1	+0.1
SABO	comp=E,4040µm,0.7s			AML	AML		
SABO	comp=N,5075µm,0.7s			AML	AML		
SABO	comp=N,1330µm,0.7s			AML	AML		
SABO	comp=E,906µm,0.6s			AML	AML		
OZLJ	Ozalj	3.36	27	*e*Pn	Pn	04 52 34.1	+0.9
ROVR	Rover Verones	3.41	333	⇓P	Pn	04 52 34.8	+0.9
ROVR	comp=E,170µm,0.9s			AML	AML		
ROVR	comp=N,270µm,0.8s			AML	AML		
CGRP	Cima Grappa	3.41	342	P	Pn	04 52 34.4	+0.3
CGRP	comp=E,898µm,1.2s			AML	AML		
CGRP	comp=N,1110µm,0.7s			AML	AML		
CGRP	comp=N,1110µm,0.7s			AML	AML		
CGRP	comp=E,908µm,1.2s			AML	AML		
AJAC	Base Areonaval	3.44	260	P	Pn	04 52 35.9	+1.6
GORR	Gorreto	3.51	305	P	Pn	04 52 37.4	+2.1
LJU	Ljubljana	3.51	14	AML	AML		
LJU	comp=E,2535µm,0.9s			AML	AML		
LJU	comp=N,3735µm,0.7s			AML	AML		
BLY	Banja Luka	3.52	52	*e*Pn	Pn	04 52 37.8	+2.4
BLY	Banja Luka	3.52	52	*e*Pn	Pn	04 52 37.7	+2.4
A051A	Mrakovica	3.53	47	*e*Pn	Pn	04 52 36.7	+1.1
CRES	Cresnjev	3.54	25	*e*Pn	Pb	04 52 40.3	-3.2
DOSS	Dosso del Somm	3.58	336	P	Pn	04 52 37.1	+0.8
DOSS	comp=N,594µm,0.6s			AML	AML		
DOSS	comp=E,602µm,0.9s			AML	AML		
DOSS	comp=E,588µm,0.6s			AML	AML		
DOSS	comp=N,653µm,0.9s			AML	AML		
SALO	Salr	3.58	327		Pn	04 52 35.9	-0.4
SALO	Salr	3.58	327	⇓P	Pn	04 52 38.2	+1.9
SALO	comp=E,631µm,0.8s			AML	AML		
SALO	comp=N,762µm,0.6s			AML	AML		
SALO	comp=N,768µm,0.6s			AML	AML		
SALO	comp=E,654µm,0.7s			AML	AML		
MPRI	Monte Prat	3.61	357	⇓P	Pn	04 52 37.2	+0.6
MPRI	comp=E,839µm,0.9s			AML	AML		
MPRI	comp=N,948µm,1.2s			AML	AML		
DGI	Dorgali Grotta	3.62	231	P	Pn	04 52 37.4	+0.7
STAL	STALIGIAL	3.64	354		Pn	04 52 36.5	-0.6
STAL	STALIGIAL	3.64	354	P	Pn	04 52 37.3	+0.2
STAL	comp=E,704µm,0.7s			AML	AML		
STAL	comp=N,455µm,0.8s			AML	AML		
STAL	comp=E,920µm,0.7s			AML	AML		
STAL	comp=N,462µm,0.7s			AML	AML		
MAGA	Magasa	3.67	329	⇓P	Pn	04 52 38.7	+1.1
MAGA	comp=E,1440µm,0.5s			AML	AML		
MAGA	comp=N,1150µm,0.4s			AML	AML		
CIMO	Cimolais	3.72	351		Pn	04 52 38.5	+0.4
CIMO	Cimolais	3.72	351	⇓P	Pn	04 52 38.3	+0.2
CIMO	comp=N,182µm,1.0s			AML	AML		
CIMO	comp=E,189µm,1.4s			AML	AML		
CIMO	comp=N,165µm,0.9s			AML	AML		
CIMO	comp=E,188µm,1.0s			AML	AML		
LUSI	Trento, Gardas	3.72	334	P	Pn	04 52 39.1	+0.9
LUSI	comp=N,538µm,0.9s			AML	AML		
LUSI	comp=E,450µm,0.9s			AML	AML		
PTCC	Patocco-Chiusa	3.76	1	P	Pn	04 52 38.6	-0.2
PTCC	comp=E,314µm,0.8s			AML	AML		
PTCC	comp=N,329µm,0.6s			AML	AML		
PTJ	Puntijarka	3.79	30	*e*Pn	Pn	04 52 40.6	+1.4
PRED	Cave del Predi	3.81	3	Pn	Pn	04 52 39.9	+0.5
CLUD	Cludinico	3.83	356	Pn	Pn	04 52 39.6	-0.1
CLUD	Cludinico	3.83	356	P	Pn	04 52 39.8	+0.1
CLUD	comp=E,452µm,0.9s			AML	AML		
CLUD	comp=N,384µm,0.9s			AML	AML		
GAGG	Gaggia	3.83	335	P	Pn	04 52 40.8	+1.0
GAGG	comp=E,638µm,0.9s			AML	AML		
GAGG	comp=N,608µm,1.1s			AML	AML		
HCY	Herceg Novi	3.84	91	⇑*i* Pn	Pn	04 52 41.1	+1.2
HCY				*i* Sn	Sn	04 53 26.7	+1.7
BRY	Bratogost	3.87	84	⇑*i* Pn	Pn	04 52 41.3	+1.0
BRY				*i* Sn	Sn	04 53 27.2	+1.4
MOSL	Moslavina	3.88	39	*e*Pn	Pn	04 52 40.2	-0.1
ACOM	Acomizza, Ital	3.91	2	P	Pn	04 52 41.4	+0.5
ACOM	comp=E,956µm,1.5s			AML	AML		
ACOM	comp=N,650µm,0.7s			AML	AML		
ACOM	comp=N,637µm,0.7s			AML	AML		
ACOM	comp=E,908µm,1.5s			AML	AML		
ZOU	Zoufplan	3.92	357	⇓P	Pn	04 52 41.4	+0.3
ZOU	comp=E,494µm,1.3s			AML	AML		
ZOU	comp=E,464µm,1.4s			AML	AML		
ZOU	comp=N,562µm,1.2s			AML	AML		
ZOU	comp=N,568µm,1.2s			AML	AML		
OBKA	Obir	3.97	13	*e*Pn	Pn	04 52 42.3	+0.7
OBKA	Obir	3.97	13	*i* Pn	Pn	04 52 42.5	+0.8
OBKA	comp=N,7.7nm,0.4s,SNR=8.5 Obir	3.97	13	*e*Pn	Pn	04 52 42.4	+0.7
MYKA	Terra Mystica	4.00	3	*i* Pn	Pn	04 52 43.1	+1.0
MYKA	comp=N,23nm,0.5s,SNR=12			*e*Sn	Sn	04 53 29.7	+0.8
LOBO	Lobor	4.04	29	*e*Pn	Pn	04 52 42.5	0.0
KOSI	Kohlern	4.06	341	⇓P	Pn	04 52 44.4	+1.4
KOSI	comp=E,588µm,0.8s			AML	AML		
KOSI	comp=N,542µm,1.3s			AML	AML		
ABTA	Abfaltersbach	4.14	353	*i* Pn	Pn	04 52 45.3	+1.2
ABTA	comp=N,144nm,0.6s,SNR=78			*e*Sn	Sb	04 53 39.3	-4.6
CEME	Cevo	4.15	89	⇓*i* Pn	Pn	04 52 45.4	+1.3
CEME				*i* Sn	Sn	04 53 34.1	+1.5
BUM	Brajici-Budva	4.15	93	⇑*i* Pn	Pn	04 52 45.4	+1.2
BUM				*i* Sn	Sn	04 53 34.1	+1.4
UPM	Unac-Piva	4.16	80	⇑*i* Pn	Pn	04 52 45.4	+1.1
UPM				*i* Sn	Sn	04 53 34.4	+1.4
KALN	Kalnik	4.16	32	*e*Pn	Pn	04 52 43.8	-0.5
NKME	Niksic	4.17	86	⇑*i* Pn	Pn	04 52 45.5	+1.1
NKME				*e*Sn	Sn	04 53 34.7	+1.6
SOKA	Soboth	4.22	16	*i* Pn	Pn	04 52 47.3	+2.2
SOKA	comp=N,5,9nm,0.3s,SNR=8.1			*e*Sn	Sn	04 53 36.9	+2.5
A252A	Venje	4.31	48	*e*Pn	Pn	04 52 46.8	+0.5
VSL	Villasalto	4.32	225	P	Pn	04 52 47.7	+1.3
VSL				AML	AML		
VSL				AML	AML		
KOGS	Kog	4.35	28	AML	AML		
KOGS	comp=E,2005µm,1.0s			AML	AML		
KOGS	comp=N,2240µm,0.7s			AML	AML		
DRME	Dracevica, Mon	4.38	94	⇓*i* Pn	Pn	04 52 48.7	+1.4
DRME				*i* Sn	Sn	04 53 39.9	+1.6
RISI	Rein	4.39	349	⇓P	Pn	04 52 49.0	+1.5
RISI	comp=E,809µm,0.5s			AML	AML		
RISI	comp=N,732µm,0.5s			AML	AML		
PDG	Podgorica	4.41	91	⇑P	Pn	04 52 49.2	+1.6
PDG				⇑S	Sn	04 53 38.0	-0.8
PDG	Podgorica	4.41	91	Pn	Pn	04 52 48.6	+1.1
PDG	Podgorica	4.41	91	*e*Pn	Pn	04 52 49.7	+2.1
PDG				*e*Sn	Sn	04 53 40.6	+1.8
TTG	Podgorica	4.41	91	⇓*i* Pn	Pn	04 52 48.8	+1.2
TTG				*i* Sn	Sn	04 53 40.1	+1.3
MOSI	Grossmontoni	4.43	335	⇓P	Pn	04 52 50.3	+2.2
MOSI	comp=E,756µm,0.9s			AML	AML		
MOSI	comp=N,1036µm,0.8s			AML	AML		
KBA	Koelnbreinsper	4.44	0	*i* Pn	Pn	04 52 49.3	+1.1
KBA	comp=N,10nm,0.3s,SNR=26 Koelnbreinsper	4.44	0	*e*Pn	Pn	04 52 49.1	+0.9
KBA				*e*Sn	Sn	04 53 40.4	+0.6
SBF	Sospel	4.45	288	*e*P	Pn	04 52 48.7	+0.4
SBF	comp=N,62nm,0.6s			*e*Sn	Sn	04 53 35.0	-5.1
ULC	Ulcinj	4.46	97	⇑*i* Pn	Pn	04 52 49.7	+1.3
ULC				*i* Sn	Sn	04 53 41.9	+1.6
ESCA	l'Escarene	4.49	287	P	Pn	04 52 49.6	+0.9
ROSI	Rosskopf	4.49	343	⇓P	Pn	04 52 50.6	+1.7
ROSI	comp=E,488µm,0.8s			AML	AML		
ROSI	comp=N,566µm,0.9s			AML	AML		
TURF	col de Turini	4.51	289	P	Pn	04 52 50.4	+1.3
PLE	Pljevlja	4.52	79	⇑*i* Pn	Pn	04 52 50.4	+1.1
PLE				*i* Sn	Sn	04 53 43.2	+1.3
FUORN	Ofenpass-Fuorn	4.53	332	Pn	Pn	04 52 51.5	+2.0
RUDO	Rudo	4.55	76	*e*Pn	Pn	04 52 50.3	+0.7
KOME	Kolasin	4.58	85	⇑*i* Pn	Pn	04 52 51.5	+1.4
KOME				*e*Sn	Sn	04 53 44.5	+1.1
BBLS	Lazići	4.63	73	*e*Pn	Pn	04 52 52.4	+1.7
SPIF	crte de Spivo	4.64	290	P	Pn	04 52 52.8	+1.9
MVIF	Mont Vial	4.66	288	P	Pn	04 52 52.5	+1.3
FETA	Feichten	4.75	338	*i* Pn	Pn	04 52 54.8	+2.4
FETA	comp=N,21nm,0.4s,SNR=24			*e*Sn	Sb	04 53 55.6	-5.6
WTTA	comp=N,27nm,0.5s Wattenberg	4.77	346	*i* Pn	Pn	04 52 55.3	+2.5
WTTA	comp=N,26nm,0.5s,SNR=20			*e*Sn	Sn	04 53 52.1	+4.1
WTTA	comp=N,149nm,0.6s Wattenberg	4.77	346	*e*Pn	Pn	04 52 55.1	+2.4
CALF	Calern	4.79	286	P	Pn	04 52 54.3	+1.3
DAVOX	Davos/Dischmat	4.80	331	Pn	Pn	04 52 55.6	+2.5
DAVOX	comp=N,7.7nm,0.3s,baz=138,slow=13,SNR=59			Sn	Sn	04 53 51.7	+2.9
DAVOX	comp=N,4.9nm,0.3s,baz=279,slow=23,SNR=4.2			LR	LR	04 54 46.4	
DAVOX	comp=N,39nm,21.0s,baz=122,slow=40 Davos/Dischmat	4.80	331	P	Pn	04 52 56.2	+3.1
CEL	Celeste	4.80	155		Pn	04 52 53.5	+0.4
ISO	Isola	4.80	291	P	Pn	04 52 55.7	+2.5
SQTA	Sankt Quirin	4.81	343	*i* Pn	Pn	04 52 55.4	+2.1
SQTA	comp=N,20nm,0.2s,SNR=25			*e*Sn	Sn	04 53 56.1	+7.0
WATA	comp=N,58nm,0.6s Walderalm	4.85	346	*i* Pn	Pn	04 52 56.9	+3.1
WATA	comp=N,66nm,0.6s,SNR=30			*e*Sn	Sb	04 53 58.2	-6.0
IVA	comp=N,27nm,0.3s Berane	4.86	85	⇑*i* Pn	Pn	04 52 55.0	+1.1
IVA				*i* Sn	Sn	04 53 51.3	+1.1
KOVH	Kovagotottos	4.87	43	P	Pn	04 52 53.9	-0.1
KOVH				S	Sn	04 53 48.0	-2.3
ARSA	Arzberg	4.87	18	*i* Pn	Pn	04 52 56.0	+2.0
ARSA	comp=N,6.0nm,0.4s,SNR=11			*e*Sn	Sn	04 53 50.1	-0.2
ARSA	comp=N,17nm,0.4s Arzberg	4.87	18	*e*Pn	Pn	04 52 55.7	+1.7
PVY	Plav	4.92	88	⇑*i* Pn	Pn	04 52 56.2	+1.5
PVY				*e*Sn	Sn	04 53 52.5	+0.9
TRAV	Traversella	4.92	308	AML	AML		
TRAV	comp=N,67µm,0.9s			AML	AML		
TRAV	comp=E,79µm,1.2s						
SJES	Sjenica	4.94	81	*e*Pn	Pn	04 52 57.3	+2.3
SJES				*e*Sn	Sn	04 53 53.7	+1.6
MOTA	Moosalm	4.95	342	*i* Pn	Pn	04 52 58.2	+3.0
MOTA	comp=E,13nm,0.3s,SNR=20			*e*Sn	Sn	04 53 57.7	+5.1
LMR	comp=E,50nm,0.7s La Mourre	5.03	280	*e*P	Pn	04 52 56.4	+0.3
LMR				*e*Sn	Sn	04 53 47.9	-6.2
ZUGS	comp=E,15nm,0.7s Zugspitze, Sch	5.05	342	*e*Pn	Pn	04 52 59.1	+2.4
BIOA	Bad Ischl, Aus	5.06	3	*i* Pn	Pn	04 52 58.0	+1.5
BIOA	comp=E,18nm,0.3s,SNR=19			*e*Sn	Sn	04 53 59.1	+4.2
TIR	comp=E,46nm,0.4s Tirane	5.06	103	P	Pn	04 52 57.9	+1.3
TIR	Tirane	5.06	103		Pn	04 52 57.2	+0.6
TIR	Tirane	5.06	103	P	Pn	04 52 57.2	+0.6
TIR	Tirane	5.06	103	*e*Pn	Pn	04 52 57.9	+1.3
TIR				*e*Sn	Sn	04 53 56.0	+1.0
DIVS	Divibare	5.09	71		Pn	04 52 58.1	+1.0
DIVS	Divibare	5.09	71	*e*Pn	Pn	04 52 57.9	+0.8
DIVS	Divibare	5.09	71	*e*Pn	Pn	04 52 58.2	+1.1
DIVS				*e*Sn	Sn	04 53 56.0	+0.1
PART	Garmisch-Parte	5.10	343	*e*Pn	Pn	04 52 59.6	+2.5
IVAS	Ivanjica	5.11	77	*e*Pn	Pn	04 52 58.4	+1.2
IVAS				*e*Sn	Sn	04 53 56.3	+0.1
RJOB	Jochberg	5.11	356	*e*Pn	Pn	04 52 58.5	+1.2
RJOB				*e*Sn	Sn	04 53 59.1	+2.9
TRIGF	Trigance	5.16	285	P	Pn	04 52 59.8	+1.8
RETA	Reutte	5.17	341	*i* Pn	Pn	04 53 00.9	+2.8
RETA	comp=E,9.4nm,0.4s,SNR=11			*e*Sn	Sn	04 54 04.1	+6.4
MBDF	comp=E,29nm,0.5s Montbardon	5.17	296	*e*P	Pn	04 52 59.7	+1.5
MBDF				*e*Sn	Sn	04 53 52.7	-5.2
PLONS	comp=E,25nm,0.6s Plons/SG	5.21	329	*e*Pn	Pn	04 53 02.0	+3.2
FLAF	Flassans-sur-I	5.22	281	P	Pn	04 52 60.0	+1.3
OBER	Oberstdorf	5.22	337	*e*Pn	Pn	04 53 01.9	+3.1
OGAG	Argentiere	5.23	293	P	Pn	04 53 03.4	+4.3
MORH	Mrgy, Hungar	5.24	45	⇑P	Pn	04 52 59.6	+0.6
MORH	Mrgy, Hungar	5.24	45	P	Pn	04 53 00.5	+1.6
DAVA	Damuels	5.24	334	*i* Pn	Pn	04 53 01.7	+2.5
DAVA	comp=E,24nm,0.6s,SNR=20			*e*Sn	Sn	04 54 05.3	+5.7
DAVA	comp=E,40nm,0.7s Damuels	5.24	334	*e*Pn	Pn	04 53 01.5	+2.4
MOA	Molln	5.25	7	*e*Pn	Pn	04 53 00.2	+1.0
MOA				*e*Sn	Sn	04 54 00.2	+0.5
MOA	Molln	5.25	7	*i* Pn	Pn	04 53 00.4	+1.1
MOA	comp=E,35nm,0.6s,SNR=27			*e*Sn	Sn	04 54 00.5	+0.7
MOA	comp=E,47nm,0.5s Molln	5.25	7	*e*Pn	Pn	04 53 00.3	+1.0
MOA				*e*Sn	Sn	04 53 59.7	0.0
OGDI	Digne	5.31	288	P	Pn	04 53 03.5	+3.5
FRGS	Fruska Gora	5.34	60	⇑P	Pn	04 53 00.4	+0.1
FRGS	Fruska Gora	5.34	60	*e*Pn	Pn	04 53 00.6	+0.2
FRGS	Fruska Gora	5.34	60	*e*Pn	Pn	04 53 00.9	+0.5
BNI	Bardonecchia	5.36	299	Pn	Pn	04 53 00.3	-0.5
BNI	Bardonecchia	5.36	299	P	Pn	04 53 00.3	-0.5
PHP	Peshkopia	5.39	98	P	Pn	04 53 03.5	+2.3
TRUS	Trudelj	5.41	71	*e*Pn	Pn	04 53 02.2	+0.8
TRUS				*e*Sn	Sn	04 54 04.2	+0.6
OGMO	Fort Saint-Gob	5.42	301	P	Pn	04 53 03.3	+1.7
MPLH	Magyarpolny	5.44	32	P	Pn	04 53 01.7	0.0
DIX	Grande Dixence	5.44	311	P	Pn	04 53 03.7	+1.6
BLAF	les Blancs	5.45	286	P	Pn	04 53 03.7	+1.7
RONA	Rosalia, Austr	5.48	22	*i* Pn	Pn	04 53 03.2	+0.7
RONA	comp=E,8.3nm,0.5s,SNR=15			*e*Sn	Sn	04 54 07.1	+1.7
LPG	comp=E,9.2nm,0.4s La Plagne	5.51	303	*e*P	Pn	04 53 04.9	+1.9
LPG				*e*Sn	Sn	04 54 00.5	-6.0
UBR	comp=E,29nm,0.6s Ueberruh	5.52	337	*e*Pn	Pn	04 53 05.0	+2.0
LPL	La Plagne	5.53	304	*e*P	Pn	04 53 05.3	+2.0
LPL	comp=E,36nm,0.8s			*e*Sn	Sn	04 54 00.7	-6.2
SOP	Sopron	5.54	23	P	Pn	04 53 04.5	+1.4
GRUS	Gruza	5.56	75	*e*Pn	Pn	04 53 04.7	+1.3
GRUS				*e*Sn	Sn	04 54 07.3	+0.1
ARTF	Artigues	5.56	282	P	Pn	04 53 05.3	+1.8
CONA	Conrad Observa	5.59	18	*i* Pn	Pn	04 53 04.5	+0.6
CONA	comp=E,11nm,0.5s,SNR=21			*e*Sn	Sn	04 54 07.2	-0.9
MLYF	comp=E,16nm,0.4s Mely	5.66	286	P	Pn	04 53 10.3	+5.5
SENIN	Lac Senin/Sane	5.68	313	Pn	Pn	04 53 04.7	-0.6
RSL	Roselend	5.68	305	P	Pn	04 53 08.0	+2.8
KEK	Kerkira	5.71	119	P	Pn	04 53 07.0	+1.4
KEK	Kerkira	5.71	119	Pn	Pn	04 53 06.9	+1.4
BSTF	la Bastide-des	5.72	285	P	Pn	04 53 06.9	+1.2
SELS	Selova	5.77	82	*e*Pn	Pn	04 53 07.4	+1.0
SELS				*e*Sn	Sn	04 54 13.5	+1.0
GDM	Grand'Maison	5.78	299	P	Pn	04 53 10.6	+4.0
SMRF	Simiane la Rot	5.79	286	*e*P	Pn	04 53 08.4	+1.8
SMRF	comp=E,9.6nm,0.6s			*e*Sn	Sn	04 54 06.3	-6.7
OHR	Ohrid	5.80	103	*i* Pn	Pn	04 53 09.1	+2.3
OGSI	Sixt	5.81	308	P	Pn	04 53 08.8	+1.9
ORIF	Oris-en-Rattie	5.83	295	*e*P	Pn	04 53 10.6	+3.3
ORIF	comp=E,20nm,0.6s			*e*Sn	Sn	04 54 07.7	-6.4
ORIF	Oris-en-Rattie	5.83	295	P	Pn	04 53 11.1	+3.9
RUSF	Rustrel	5.85	285	P	Pn	04 53 09.6	+2.2
AIGLE	Aigle	5.85	311	P	Pn	04 53 09.9	+2.4
ARBF	Arbois	5.90	281	P	Pn	04 53 09.9	+1.9
KBN	Korca	5.96	107	P	Pn	04 53 10.9	+1.9
LSK	Leskovik	6.03	112	P	Pn	04 53 11.5	+1.5
SULZ	Cheisacher	6.11	325	P	Pn	04 53 12.8	+1.8
SULZ	Cheisacher	6.11	325	*e*Pn	Pn	04 53 12.4	+1.4
SAUF	chteau de Sau	6.12	285	P	Pn	04 53 13.3	+2.2
SLE	Schleitheim	6.14	328	P	Pn	04 53 12.4	+1.0
SLE	Schleitheim	6.14	328	*e*Pn	Pn	04 53 13.1	+1.7
BALST	Balsthal	6.15	322	*e*Pn	Pn	04 53 12.8	+1.3
ZST	Bratislava	6.17	24	*e*P	Pn	04 53 09.0	-2.8
ZST	Bratislava	6.17	24	*e*PN	Pn	04 53 08.9	-2.8
GUT	Gutenstein	6.18	333	P	Pn	04 53 14.3	+2.4
GEC2	GERESS Array S	6.21	2	Pn	Pn	04 53 12.7	+0.2
GEC2	GERESS Array S	6.21	2	*e*Pn	Pn	04 53 12.1	-0.4
GEC2				*e*Sn	Sn	04 54 22.9	-0.5
GERES	GERESS Array B	6.21	2	Pn	Pn	04 53 12.2	-0.2
GERES	comp=E,1.9nm,0.3s,baz=185,slow=14,SNR=29			Sn	Sn	04 54 23.3	-0.1
GERES	comp=E,5.1nm,0.3s,baz=171,slow=21,SNR=9.4 GERESS Array B	6.21	2	Pn	Pn	04 53 12.3	-0.1
GERES	comp=E,5.0nm,0.5s GERESS Array B	6.21	2	P	Pn	04 53 12.4	-0.1
CKRC	Cesky Krumlov	6.22	6	*e*PN	Pn	04 53 13.2	+0.7
CKRC				*e*SN	Sn	04 54 22.5	-1.0
NEST	Nestorio	6.23	108	P	Pn	04 53 14.9	+2.2
BOVS	Bovan	6.23	78	⇑P	Pn	04 53 13.2	+0.5
BOVS				⇑S	Sn	04 54 20.9	-2.9
BOVS	Bovan	6.23	78	*e*Pn	Pn	04 53 13.4	+0.8
BOVS				*e*Sn	Sn	04 54 23.1	-0.7
BARS	Barje	6.28	86	*e*Pn	Pn	04 53 14.6	+1.3
BARS				*e*Sn	Sn	04 54 25.3	+0.4
GIMEL	St. Georges /	6.35	310	P	Pn	04 53 15.4	+1.0
MODS	Modra-Piesok	6.38	25	*e*P	Pn	04 53 15.9	+1.2
MODS				*e*		04 54 25.5	
MODS	Modra-Piesok	6.38	25	*e*PN	Pn	04 53 15.9	+1.2
MODS				*e*SN	Sn	04 54 25.5	-1.9
MODS				*e*LG	Lg	04 55 30.3	
BOURR	Bourrignon	6.41	320	P	Pn	04 53 16.0	+0.9
BOURR	Bourrignon	6.41	320	S	Sn	04 54 29.8	+1.6
FELD	Feldberg im Sc	6.43	326	P	Pn	04 53 16.2	+0.7
MDVR	Moldovita	6.46	68	⇓P	Pn	04 53 16.2	+0.4
BRANT	Les Verrieres	6.48	314	P	Pn	04 53 18.1	+1.9
PRVS	Prvonek	6.48	88	*e*Pn	Pn	04 53 17.8	+1.7
PRVS				*e*Sn	Sn	04 54 30.6	+0.5
KHC	Kasperske Hory	6.49	2		Pn	04 53 15.9	-0.4
KHC	Kasperske Hory	6.49	2	*e*P	Pn	04 53 16.2	-0.1
KHC				*e*		04 54 28.8	
KHC	Kasperske Hory	6.49	2	*e*PN	Pn	04 53 16.2	-0.1
KHC				*e*SN	Sn	04 54 28.8	-1.5
CABF	La Chapelle	6.50	310	*e*P	Pn	04 53 18.0	+1.6
CABF	comp=E,46nm,0.9s			*e*Sn	Sn	04 54 24.0	-6.4
OG35	Corcelles	6.50	304	P	Pn	04 53 17.7	+1.3
WET	Wettzell	6.51	358	*e*Pn	Pn	04 53 16.6	+0.2
WET				*e*Sn	Sn	04 54 28.4	-2.3
KIR	Kirchzarten	6.53	326	P	Pn	04 53 17.7	+0.9
CHMF	Charmoille	6.59	317	P	Pn	04 53 18.6	+1.0
CHMF				S	Sn	04 54 34.6	+1.8
VIVF	Saint-Julien-l	6.63	292	*e*P	Pn	04 53 20.8	+2.7
VIVF	comp=E,7.3nm,0.8s			*e*Sn	Sn	04 54 26.7	-6.9
ZAGS	Zajecar	6.63	77	*e*Pn	Pn	04 53 19.0	+0.9
ZAGS				*e*Sn	Sn	04 54 33.8	+0.2
BFO	Black Forest	6.67	330	Pn	Pn	04 53 18.7	0.0
BFO	Black Forest	6.67	330	P	Pn	04 53 18.7	0.0
BFO	Black Forest	6.67	330	*e*Pn	Pn	04 53 19.7	+1.0
STIP	Stip	6.67	95	*i* Pn	Pn	04 53 22.0	+3.3
RIVEL	MONT RIVEL	6.67	311	P	Pn	04 53 20.1	+1.3
BZS	Buzias	6.68	61	⇓P	Pn	04 53 18.5	-0.4
BZS				⇑S	Sn	04 54 30.1	-4.8
BZS	Buzias	6.68	61	*e*Pn	Pn	04 53 19.5	+0.6
BZS				*e*Sn	Sn	04 54 32.2	-2.2
VOGT	Vogtsburg - To	6.73	326	P	Pn	04 53 20.2	+0.7
TSLK	Tsoukalades, L	6.76	122	P	Pn	04 53 22.3	+2.3
KRUC	Moravsky	6.78	18	*e*PN	Pn	04 53 19.6	-0.5
BOSS	Bosilegrad	6.78	88	*e*Pn	Pn	04 53 21.5	+1.3
BOSS				*e*Sn	Sn	04 54 35.9	-1.5
LKD2	Lefkada island	6.79	122	P	Pn	04 53 22.4	+2.1
SSB	Saint Sauveur	6.85	296	Pn	Pn	04 53 21.3	+0.2
SSB	Saint Sauveur	6.85	296	P	Pn	04 53 21.3	+0.2
SSB	Saint Sauveur	6.85	296	P	Pn	04 53 23.1	+2.0
OPP	Oppenau	6.87	330	P	Pn	04 53 22.4	+1.0
ZAPS	Zavoj	6.88	82	*e*Pn	Pn	04 53 23.4	+1.8
ZAPS				*e*Sn	Sn	04 54 39.2	-0.6
HINF	Hinteralfeld	6.89	321	*e*P	Pn	04 53 22.4	+0.7
HINF	comp=E,36nm,0.6s			*e*Sn	Sn	04 54 33.8	-6.2
RONF	Ronchamp	6.91	319	P	Pn	04 53 23.0	+1.0
JAVC	Velka Javorina	6.93	25	*e*PN	Pn	04 53 23.0	+0.7
BLKB	Belogradchik	6.93	79	⇑P	Pn	04 53 23.7	+1.4
BLKB				⇑S	Sn	04 54 39.6	-1.5
S

comp=E,39nm,0.4s
KKB Krupnik 7.30 93 *e*P Pn 04 53 28.9 +1.5
VTS Vitosha 7.33 87 ⇓P Pn 04 53 29.6 +1.8
VTS ⇓S Sn 04 54 48.8 -2.2
VTS Vitosha 7.33 87 Pn Pn 04 53 29.0 +1.1
VTS Vitosha 7.33 87 P Pn 04 53 29.0 +1.1
VTS Vitosha 7.33 87 *e*Pn Pn 04 53 29.4 +1.5
VTS *e*Sn Sn 04 54 49.7 -1.4
VTS Vitosha 7.33 87 *e*P Pn 04 53 29.4 +1.5
GZR Gura Zlata 7.37 65 ⇓P Pn 04 53 29.3 +1.0
PRU Pruhonice 7.40 6 *e*P Pn 04 53 29.7 +1.1
PRU *e* 04 54 50.6
PRU Pruhonice 7.40 6 *e*PN Pn 04 53 29.7 +1.1
PRU *e*SN Sn 04 54 50.6 -1.9
KEST Kesra 7.55 205 Pn Pn 04 53 36.4 +5.5
comp=E,1.5nm,0.3s,baz=313,slow=5.3,SNR=12
ANX Ano Chora 7.70 119 P Pn 04 53 35.3 +2.3
MORC Moravsky Berou 7.72 21 ⇑P Pn 04 53 33.6 +0.5
MORC Moravsky Berou 7.72 21 *e*PN Pn 04 53 33.5 +0.5
LANS Liptovska Anna 7.80 31 *e*P Pn 04 53 38.5 +4.3
LANS Liptovska Anna 7.80 31 *e*PN Pn 04 53 38.5 +4.3
KRLC Kraliky 7.82 17 *e*P Pn 04 53 35.0 +0.6
KRLC Kraliky 7.82 17 *e*PN Pn 04 53 35.0 +0.6
SRS Serrai 7.83 98 *e*Pn Pn 04 53 36.1 +1.5
SRS *e*Sn Sn 04 55 01.3 -1.9
SMF Signal de Mont 7.84 304 *e*P Pn 04 53 35.6 +0.9
SMF *e*Sn Sn 04 54 56.4 -7.0
comp=E,19nm,0.7s
FILF Fillols 7.92 273 P Pn 04 53 37.3 +1.3
PAGF Fort de Pagny 7.95 321 *e*Pn Pn 04 53 34.0 -2.1
PAGF *e*Sn Sn 04 54 58.7 -7.2
comp=E,41nm,0.7s
DPC Dobruska-Polom 7.99 14 *e*P Pn 04 53 37.0 +0.2
DPC Dobruska-Polom 7.99 14 *e*PN Pn 04 53 37.0 +0.2
PGB Panagyurishte 8.02 87 *e*P Pn 04 53 39.0 +1.7
SFTF Sexfontaines 8.04 317 *e*P Pn 04 53 39.9 +2.4
SFTF *e*Sn Sn 04 55 01.0 -7.3
comp=E,26nm,0.8s
LOR Lormes 8.13 308 *e*P Pn 04 53 39.9 +1.1
baz=117
LOR *e*Sn Sn 04 55 03.5 -7.1
comp=E,9.2nm,0.5s
LOR Lormes 8.13 308 P Pn 04 53 39.5 +0.8
MTLF Montolieu 8.15 279 *e*P Pn 04 53 42.0 +3.0
MTLF *e*Sn Sn 04 55 03.7 -7.4
comp=E,6.0nm,0.7s
MTLF Montolieu 8.15 279 P Pn 04 53 40.0 +0.9
OSTC Ostas 8.17 13 *e*PN Pn 04 53 39.5 +0.3
KLV Kalavryta, Ach 8.17 121 P Pn 04 53 41.6 +2.3
AVF Avril sur Loir 8.21 304 *e*P Pn 04 53 41.0 +1.3
AVF *e*Sn Sn 04 55 04.5 -7.8
comp=E,10nm,0.9s
MEZF Maizieres J'vi 8.23 318 *e*P Pn 04 53 42.1 +2.0
MEZF *e*Sn Sn 04 55 05.2 -7.7
comp=E,22nm,0.6s
FNEB Nbias 8.24 276 P Pn 04 53 41.0 +0.8
SSF Saint Saulge 8.24 306 *e*P Pn 04 53 41.6 +1.4
SSF *e*Sn Sn 04 55 05.3 -7.9
comp=E,22nm,0.9s
BRG Berggiesshubel 8.25 3 *e*P Pn 04 53 43.6 +3.3
BRG Amp 04 53 45.4
comp=Z,2.9nm,0.5s
BRG *ex* x 04 55 08.3
BRG *ex* x 04 56 09.9
BRG Amp 04 56 31.3
comp=Z,49nm,1.5s
BRG Amp 04 57 15.0
comp=E,0.1nm,15.0s
BRG Amp 04 57 15.0
comp=N,0.1nm,17.8s
BRG Amp 04 57 19.0
comp=Z,0.1nm,10.9s
BRG Berggiesshubel 8.25 3 *e*P Pn 04 53 43.6 +3.3
BRG *e* 04 55 08.3
BRG pmax pmax
comp=Z,3.0nm,0.5s
BRG pmax pmax
comp=Z,49nm,1.5s
BRG MLR MLR
comp=E,104nm,15.0s
BRG MLR MLR
comp=N,95nm,17.8s
BRG MLR MLR
comp=Z,123nm,10.9s
ABH Alteburg 8.26 333 P Pn 04 53 42.6 +2.1
SAVF Savonnieres en 8.27 319 *e*P Pn 04 53 43.6 +3.0
SAVF *e*Sn Sn 04 55 06.6 -7.4
comp=Z,10nm,0.4s
BGF Bois d'Agland 8.42 301 *e*P Pn 04 53 44.1 +1.4
BGF *e*Sn Sn 04 55 10.3 -7.4
comp=Z,56nm,1.4s
CAF Calviac 8.44 290 *e*P Pn 04 53 45.2 +2.2
CAF *e*Sn Sn 04 55 10.2 -8.0
comp=Z,1.1nm,0.4s
CLL Collm 8.67 359 *e*P Pn 04 53 48.0 +1.9
CLL Collm 8.67 359 *e*Pn Pn 04 53 48.0 +1.9
CLL *e*Pg Pg 04 54 25.0 -1.8
CLL *e*Sn Sn 04 55 08.0 -16
CLL *ex* x 04 55 29.0
CLL *ex* x 04 56 12.0
CLL *e*Sg Sg 04 56 17.0 -1.9
comp=Z,27nm,1.1s
CLL *ex* x 04 56 30.0
CLL Lm MLR 04 57 00.0
comp=Z,100nm,19.1s
CLL Lmax 04 57 00.0
TCF Toulx Ste Croi 8.73 298 *e*P Pn 04 53 49.8 +2.9
RJF Les Rejaudoux 8.90 291 *e*P Pn 04 53 52.2 +2.9
VOIR 8.91 68 ⇓P Pn 04 53 50.1 +0.6
MONQ Montcuq 8.96 285 P Pn 04 53 51.7 +1.6
LFF La Frestale 9.37 288 *e*Sn Sn 04 55 31.8 -9.1
comp=Z,9.1nm,0.8s
GIVF Givet 9.48 325 *e*P Pn 04 53 59.9 +2.7
MLR Muntele Rosu 9.54 68 ⇑P Pn 04 53 58.8 +0.7
MLR Muntele Rosu 9.54 68 Pn Pn 04 54 02.1 +3.9
comp=Z,0.5nm,0.3s,baz=142,slow=11,SNR=4.8
MLR LR LR 04 58 31.6
comp=Z,216nm,20.4s,baz=244,slow=43
comp=Z,5.9nm,0.7s
MLR Muntele Rosu 9.54 68 Pn Pn 04 53 59.3 +1.2
LVV L'vov 10.33 42 *e*P Pn 04 54 09.6 +0.8
LVV *e*S Sn 04 56 06.4 +2.0
LVV pmax pmax
comp=Z,40nm,1.8s
IDI Anoyia 11.63 125 LR LR 04 59 54.0
comp=Z,23nm,18.2s,baz=264,slow=42
ESDC Sonseca Array 13.34 263 Pn Pn 04 54 49.9 -0.1
baz=64,slow=13,SNR=5.6
ESDC LR LR 04 59 43.6
comp=Z,84nm,21.0s,baz=105,slow=36
comp=Z,0.6nm,0.7s
AKASG Malin Array Be 13.57 48 LR LR 05 01 08.9
comp=Z,74nm,18.0s,baz=236,slow=42
AKBB Malin Array Si 13.57 48 *i*P Pn 04 54 54.5 +1.5
MNK Minsk 15.26 34 *i*P Pn 04 55 12.1 -3.8
MNK *i*S Sn 04 57 59.4 -5.4
MNK pmax pmax
comp=Z,7.0nm,0.6s
MNK MLR MLR
comp=E,15nm,15.0s
MNK MLR MLR
comp=Z,118nm,15.0s
MNK Minsk 15.26 34 *i*P Pn 04 55 12.2 -3.8
MNK *i*P Pn 04 55 12.2 -3.8
MNK *i*P Pn 04 55 12.2 -3.8
comp=Z,7.0nm,0.6s,baz=225
MNK *i*PP P 04 55 20.2 -0.7
MNK *i*PPP PPP 04 55 29.0
MNK *i*S Sn 04 57 59.5 -5.4
MNK *i*SS SnSn 04 58 13.4 -4.0
MNK *i*SSS SSS 04 58 34.0
MNK *i*LQ LQ 04 59 12.0
MNK *i*LR LR 05 00 46.2
MNK *i*LRM MLR 05 01 41.0
comp=E,15nm,14.5s
MNK *i*LRM MLR 05 02 04.7
comp=Z,118nm,14.5s
BRTR Keskin Array B 15.59 94 Pn P 04 55 24.2 -0.6
baz=291,slow=9.3,SNR=4.2
BRTR LR LR 05 01 13.4
comp=Z,44nm,21.7s,baz=300,slow=36
comp=Z,1.0nm,0.8s
EKA Eskdalemuir Ar 16.61 326 Pn P 04 55 34.9 -1.0
baz=138,slow=14
comp=Z,0.7nm,0.5s
MDT Midelt 17.20 241 LR LR 05 01 23.9
comp=Z,39nm,20.2s,baz=80,slow=34
HFS Hagfors 17.52 1 LR LR 05 02 56.8
comp=Z,52nm,18.5s,baz=187,slow=39
NB2 NORSAR Subarra 18.47 357 P Pn 04 55 58.4 +1.9
comp=Z,4.1nm,0.8s,baz=175,slow=12
NOA NORSAR Array B 18.47 357 P P 04 55 56.6 +0.2
baz=176,slow=11,SNR=12
NOA LR LR 05 03 13.5
comp=Z,36nm,19.4s,baz=175,slow=38
comp=Z,2.6nm,0.8s
NC405 NORSAR Array S 18.52 358 P Pn 04 55 58.5 +1.3
NC405 IAmb IAmb 04 56 06.1
comp=Z,13nm,0.8s
OBN Obninsk 19.63 43 *e*P P 04 56 08.4 -0.7
OBN pmax pmax
comp=E,6.0nm,0.8s
OBN MLR MLR
comp=Z,47nm,10.0s
VORR Voronezh 19.71 54 *e*P P 04 56 10.1 +0.1
VORR pmax pmax
comp=Z,30nm,0.3s
MMAI Mount Meron Ar 19.88 112 P Pn 04 56 15.1 +1.4
comp=Z,1.0nm,0.3s,baz=348,slow=15,SNR=3.7
comp=Z,0.5nm,0.3s
FINES FINESS Array B 20.33 18 P P 04 56 17.6 +1.0
comp=Z,5.2nm,0.8s,baz=202,slow=11,SNR=12
comp=Z,5.2nm,0.8s
FINES FINESS Array B 20.33 18 P P 04 56 17.4 +0.7
FIA1 FINESS Array S 20.34 18 P P 04 56 16.8 +0.1
FIA1 IAmb IAmb 04 56 24.0
comp=Z,8.9nm,0.8s
KIV Kislovodsk 21.38 76 *e*P P 04 56 30.4 +2.1
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,24nm,14.0s
SHA1 Shidzhatmaz 21.39 77 *i*P P 04 56 31.4 +2.9
ASF Jabal al Asfar 21.40 111 P P 04 56 34.5 +6.0
comp=Z,3.6nm,0.6s,baz=340,slow=1.8,SNR=8.0
KBZ Khabaz 21.56 77 P P 04 56 32.9 +2.8
comp=Z,5.3nm,0.8s,baz=283,slow=11,SNR=8.0
KBZ LR LR 05 06 12.7
comp=Z,36nm,21.1s,baz=284,slow=40
comp=Z,5.3nm,0.8s
KBZ Khabaz 21.56 77*ce*P P 04 56 30.8 +0.7
KBZ pmax pmax
comp=Z,8.0nm,0.9s
ZEI Tsey 22.43 79 *e*P P 04 56 43.3 +3.6
ZEI pmax pmax
comp=Z,6.0nm,0.8s
KLMR Klimovskoe 24.14 32 *e*P P 04 56 57.8 +1.4
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 24.14 32 *e*P P 04 56 57.8 +1.4
KLMR AMP 04 57 06.3
comp=Z,12nm,1.2s
BELG Belogornoye 24.94 55 P P 04 57 05.7 +1.9
comp=Z,18nm,0.9s,baz=342,slow=3.1,SNR=8.1
BELG LR LR 05 07 56.7
comp=Z,73nm,19.1s,baz=202,slow=39
comp=Z,18nm,0.9s
BELG Belogornoye 24.94 55 *i*P P 04 57 04.6 +0.9
BELG pmax pmax
comp=Z,3.0nm,0.9s
PMOZ Porto Moniz, M 25.91 258 P P 04 57 09.6 -3.3
KIRV Kirov 27.48 42 LR LR 05 09 09.0
comp=Z,64nm,19.2s,baz=270,slow=38
TOA0 Torodi Ar. Sit 31.06 202 P P 04 57 59.1 +0.3
TOA0 IAmb IAmb 04 58 16.3
comp=Z,4.4nm,1.2s
TORD Torodi Ar. Bea 31.06 202 P P 04 58 00.4 +1.6
comp=Z,2.2nm,0.4s,baz=19,slow=9.1,SNR=2.1
comp=Z,2.2nm,0.4s
AKTO Aktyubinsk 31.33 60 LR LR 05 12 10.2
comp=Z,34nm,19.9s,baz=296,slow=39
ARU Arti 31.82 48 LR LR 05 11 46.5
comp=Z,33nm,18.1s,baz=258,slow=38
ARU Arti 31.82 48 P P 04 58 05.9 +0.8
ARU Arti 31.82 48*c i*P P 04 58 05.7 +0.5
ARU 04 59 06.9
ARU 05 00 54.6
ARU S S 05 03 17.5 +2.4
ARU SS SnSn 05 05 06.7 +4.3
ARU pmax pmax
comp=Z,13nm,0.7s
ABKAR Akbulak array 32.67 62 P P 04 58 11.8 -0.9
GEYT Alibeck 34.21 83 LR LR 05 16 08.4
comp=Z,28nm,19.3s,baz=345,slow=43
BBTS Babate 37.88 232 LR LR 05 15 17.1
comp=Z,54nm,18.4s,baz=66,slow=37
BRVK Borovoye 38.67 54 P P 04 59 05.8 +1.7
BRVK IAmb IAmb 04 59 08.1
comp=Z,7.4nm,1.0s
BRVK Borovoye 38.67 54*ce*P P 04 59 05.7 +1.6
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BVAR Borovoye Array 38.73 54 LR LR 05 16 11.9
comp=Z,45nm,20.9s,baz=293,slow=38
UOSS Minazif 39.31 103 P P 04 59 09.1 -0.7
UOSS IAmb IAmb 04 59 11.3
comp=Z,6.2nm,0.8s
KK31 Karatay Array 41.22 69 P P 04 59 26.2 +0.7
KK31 Karatay Array 41.22 69 P P 04 59 26.2 +0.7
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 41.22 69 P P 04 59 26.2 +0.7
KKAR Karatay Array 41.22 69 P P 04 59 26.2 +0.7
KURK Kurchatov 44.21 56 *i*P P 04 59 50.1 +0.5
KURK pmax pmax
comp=Z,8.0nm,2.8s
ZALV Zalesovo Beam 46.95 50 P P 05 00 12.2 +1.0
comp=Z,1.5nm,0.5s,baz=270,slow=7.4,SNR=5.3
comp=Z,1.5nm,0.5s
ZALV Zalesovo Beam 46.95 50 *i*P P 05 00 12.3 +1.0
ZALV pmax pmax
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 47.77 60 *i*P P 05 00 17.7 -0.1
MKAR Makanchi Array 47.77 60 P P 05 00 19.0 +1.2
comp=Z,1.2nm,0.7s,baz=283,slow=6.1,SNR=10
comp=Z,1.2nm,0.7s
MKAR Makanchi Array 47.77 60 P P 05 00 18.8 +1.0
MKAR Makanchi Array 47.77 60 P P 05 00 18.8 +1.0
DGZ Jazzator, Alta 49.89 55 *i*P P 05 00 35.0 +0.8
DGZ pmax pmax
comp=Z,1.0nm,0.7s
SCHQ Schefferville 51.41 313 P P 05 00 46.4 +1.0
comp=Z,2.4nm,0.8s,baz=63,slow=4.5,SNR=3.7
comp=Z,2.4nm,0.8s
SONM Songino Array 61.84 50 P P 05 02 01.5 +1.7
comp=Z,2.1nm,0.8s,baz=287,slow=7.5,SNR=12
comp=Z,2.1nm,0.8s
BILL Bilibino 67.78 11 *e*P P 05 02 36.5 -1.5
BILL *e* 05 02 58.9
BILL *e* 05 05 10.3
BILL *e*PPP PPP 05 06 49.8
BILL pmax pmax
comp=Z,6.0nm,1.0s
LBTB Lobatse 68.27 168 LR LR 05 33 56.0
comp=Z,50nm,18.4s,baz=152,slow=37
CMAR Chiang Mai Arr 74.60 79 P P 05 03 20.9 +0.8
comp=Z,1.2nm,0.3s,baz=307,slow=7.2,SNR=5.7
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 74.60 79*ce*P P 05 03 22.0 +1.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
PDAR Pinedale Array 80.69 321 P P 05 03 56.0 +2.0
comp=Z,0.1nm,0.4s,baz=25,slow=7.5,SNR=4.1
comp=Z,0.1nm,0.4s
BDFB Brasilia 80.77 239 P P 05 03 56.6 +2.1
comp=Z,2.3nm,0.5s,baz=91,slow=4.3,SNR=5.4
comp=Z,2.3nm,0.5s

IDC ***25*** *04:53:26.7±2.6,2.98N×128.64E,h220km±28km, mb3.4/11, mbtmp3.9/11, Error ellipse: s-maj=22.3km s-min=9.9km az=84.0*
DJA ***25*** *04:53:27.4±0.8,3.5N±5.5×12.8E±5.1°, h218km±7km, M4.3/9, mb4.1/4, mB4.9/2, MLv4.5/9, Mw(mB)4.2/2*
ISC 25 04:53:25.0±0.8, 3.05N±0.07×128.7E±0.1, h200km, n18, σ1 32/21, mb3.8/12, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**3.18**	**282**	P	**Pn**	**04 54 17.9**	**+1.1**
SGSI				S	**Sn**	**04 54 56.6**	**-0.6**
LBMI	**Labuha**	**3.84**	**197**	P	**Pn**	**04 54 25.9**	**+1.1**
LBMI				S	**Sn**	**04 55 13.5**	**+1.7**
KMSI	**Cibinong**	**5.27**	**242**	P	**Pn**	**04 54 43.4**	**+0.5**
SANI	**Sanana**	**5.72**	**208**	P	**Pn**	**04 54 47.3**	**-1.3**
0.5nm2µm107nm,0.8s							
GTOI	**Gorontalo**	**6.12**	**247**	P	**Pn**	**04 54 54.0**	**+0.1**
0.1nm12nm,0.7s							
NLAI	**Namlea**	**6.43**	**194**	P	**Pn**	**04 54 59.0**	**+1.1**
0.2nm2µm42nm,0.7s							
FITZ	**Fitzroy Crossi**	**21.22**	**188**	P	**P**	**04 57 53.7**	**-1.7**
1.6nm,0.5s,baz=9.7,slow=7.6,SNR=14							
1.6nm,0.5s							
LEM	**Lembang**	**23.17**	**245**	P	**P**	**04 58 14.3**	**0.0**
36nm,0.6s,baz=91,slow=7.1,SNR=6.1							
WRA	**Warramunga Arr**	**23.52**	**166**	P	**P**	**04 58 17.3**	**+0.1**
0.6nm,0.3s,baz=343,slow=10.0,SNR=8.9							
0.6nm,0.3s							
ASAR	**Alice Springs**	**27.04**	**169**	P	**P**	**04 58 48.5**	**-0.4**
0.8nm,0.4s,baz=352,slow=7.8,SNR=15							
ASAR				ScP	**ScP**	**05 05 22.6**	**-3.8**
0.5nm,0.5s,baz=349,slow=2.8,SNR=4.6							
0.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**32.87**	**300**	P	**P**	**04 59 41.3**	**+0.9**
0.7nm,0.3s,baz=106,slow=6.7,SNR=5.1							
0.7nm,0.3s							
KSRS	**Korea Array**	**34.25**	**359**	P	**P**	**04 59 52.7**	**+0.8**
1.9nm,0.5s,baz=177,slow=9.5,SNR=7.8							
1.9nm,0.5s							
MJAR	**Matsushiro Arr**	**34.48**	**14**	P	**P**	**04 59 53.6**	**-0.4**
4.2nm,0.7s,baz=179,slow=9.7,SNR=15							
4.2nm,0.7s							
STKA	**Stephens Creek**	**36.85**	**161**	P	**P**	**05 00 14.6**	**+0.5**
0.5nm,0.4s,baz=332,slow=12,SNR=4.2							
0.5nm,0.4s							
USRK	**Ussuriysk Ar.**	**41.09**	**4**	P	**P**	**05 00 50.0**	**+0.9**
1.8nm,0.6s,baz=179,slow=8.3,SNR=6.7							
1.8nm,0.6s							
SONM	**Songino Array**	**48.57**	**340**	P	**P**	**05 01 48.3**	**+0.1**
0.9nm,0.8s,baz=153,slow=9.7,SNR=3.8							
0.9nm,0.8s							
MKAR	**Makanchi Array**	**59.21**	**325**	P	**P**	**05 03 05.0**	**-0.2**
0.7nm,0.4s,baz=112,slow=7.9,SNR=7.5							
0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**62.07**	**332**	P	**P**	**05 03 23.1**	**-1.1**
0.3nm,0.3s,baz=108,slow=4.7,SNR=1.7							
0.3nm,0.3s							

IDC ***25*** *05:03:26.7±0.5,51°.83N×175°.24E, h0km, mb4.3/27, mbtmp4.3/28, ML3.4/1, MS3.5/26, Error ellipse: s-maj=15.5km s-min=10.7km az=165.0*
AEIC ***25*** *05:03:28.7±5.6,51°.65N±0°.07×174°.82E±0°.09, h68km±5km, Error ellipse: s-maj=11.6km s-min=7.0km az=207.0*
BJI ***25*** *05:03:29.1±0.0,51°.80N×175°.39E, h38km, mb4.8/40, mB4.8/19, Ms4.3/6, Ms7 4.0/8*
MOS ***25*** *05:03:30.2±1.0,51°.90N×175°.17E, h35km, mb4.9/29, Error ellipse: s-maj=9.7km s-min=7.5km az=100.7*
NEIC ***25*** *05:03:32.9±1.5,51°.98N±0°.08×175°.15E±0°.08, h40km±6km, mb4.7/202, ML4.4/24(AEIC), Error ellipse: s-maj=12.7km s-min=5.8km az=205.0*
ISC 25 05:03:31.2±1.7, 51°.88N±0°.07×175°.10E±0°.04, h29km±11km, n545, σ1 06/481, mb4.6/143, MS3.6/33, 14C-2D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**1.05**	**325**	Pn	**Pn**	**05 03 49.8**	**-0.2**
3µm,0.3s,baz=170,slow=4.0,SNR=1196							
SHEM				Sn	**Sb**	**05 04 04.2**	**0.0**
1µm,0.3s,baz=238,slow=1.3,SNR=7.6							
SHEM				LR	LR	05 04 05.9	
comp=Z,671nm,19.2s,baz=150,slow=34							
SMY	**Shemya**	**1.05**	**325**	Pn	**Pn**	**05 03 50.1**	**+0.1**
SMY					**Sb**	**05 04 04.2**	**+0.1**
SMY	**Shemya**	**1.05**	**325**	P	**Pn**	**05 03 50.1**	**+0.1**
SMY						05 04 04.2	
LSSA	**Little Sitkin**	**2.12**	**87**		**Pn**	**05 04 05.0**	**+0.4**
LSNW	**Little Sitkin**	**2.12**	**86**		**Pn**	**05 04 05.6**	**+0.9**
LSSE	**Little Sitkin**	**2.15**	**87**		**Pn**	**05 04 05.9**	**+0.8**
AMKA	**Amchitka**	**2.67**	**99**	Pn	**Pn**	**05 04 11.8**	**-0.4**
CESW	**Semis' Southwe**	**2.77**	**88**		**Pn**	**05 04 13.7**	**+0.1**
CESW					**Sn**	**05 04 47.9**	**+1.9**
CEPE	**Semis' Perret**	**2.82**	**86**		**Pn**	**05 04 15.2**	**+0.9**
CERAA	**Semis' Rag'd T**	**2.84**	**88**		**Pn**	**05 04 14.8**	**+0.2**
GALAA	**Gareloi Lava P**	**3.81**	**89**		**Pn**	**05 04 28.4**	**+0.6**
TASE	**Tanaga Southea**	**4.26**	**88**		**Pn**	**05 04 34.4**	**+0.3**
TAFP	**Tanaga Falls P**	**4.29**	**87**		**Pn**	**05 04 34.9**	**+0.4**
TAFP					**Sn**	**05 05 28.3**	**+4.8**
TAPA	**Tanaga Point A**	**4.40**	**88**		**Pn**	**05 04 36.8**	**+0.8**
KIMD	**Kanaga Island**	**4.76**	**88**		**Pn**	**05 04 41.5**	**+0.6**
KIKV	**Kanaga Island**	**4.79**	**87**		**Pn**	**05 04 42.1**	**+0.7**
KIWB	**Kanaga Island**	**4.80**	**87**		**Pn**	**05 04 42.0**	**+0.5**
ADK	**Adak**	**5.09**	**87**	Pn	**Pn**	**05 04 45.7**	**+0.2**
ADK	**Adak**	**5.09**	**87**	P	**Pn**	**05 04 45.7**	**+0.2**
GSTR	**Great Sitkin T**	**5.47**	**84**	Pn	**Pn**	**05 04 51.1**	**+0.3**
KOKL	**Mount Kliuchef**	**6.61**	**82**		**Pn**	**05 05 07.4**	**+1.0**
ATKA	**Atka Island**	**6.62**	**83**		**Pn**	**05 05 07.3**	**+0.9**
CLCO	**Concord Point,**	**9.34**	**78**		**Pn**	**05 05 46.2**	**+2.5**
NIKH	**Nikolski High**	**9.87**	**77**	Pn	**Pn**	**05 05 51.1**	**+0.1**
NIKH	**Nikolski High**	**9.87**	**77**	P	**Pn**	**05 05 52.8**	**+1.8**
baz=271							
SPIA	**Saint Paul Isl**	**10.03**	**52**	Pn	**Pn**	**05 05 53.5**	**+0.4**
SPIA	**Saint Paul Isl**	**10.03**	**52**	P	**Pn**	**05 05 54.2**	**+1.0**
baz=245							
PEA0B	**Petropavlovsk-**	**10.68**	**283**	Pn	**Pn**	**05 06 03.2**	**+1.1**
PEA0B	**Petropavlovsk-**	**10.68**	**283***ce*	P	**Pn**	**05 06 02.5**	**+0.3**
PETK	**Petropavlovsk-**	**10.68**	**283**	Pn	**Pn**	**05 06 03.5**	**+1.3**
1.4nm,0.3s,baz=112,slow=19,SNR=6.2							
PETK				Sn	**Sn**	**05 07 56.6**	**-4.0**
2.5nm,0.3s,baz=93,slow=25,SNR=5.0							
PETK				LR	LR	05 11 18.4	
comp=Z,94nm,18.1s,baz=93,slow=44							
4.4nm,0.6s							
PETK	**Petropavlovsk-**	**10.68**	**283**	Pn	**Pn**	**05 06 03.4**	**+1.2**
UNV	**Unalaska Valle**	**11.29**	**73**	Pn	**Pn**	**05 06 12.5**	**+2.0**
UNV	**Unalaska Valle**	**11.29**	**73**	P	**Pn**	**05 06 10.2**	**-0.3**
baz=268							
AKUT	**Akutan**	**11.74**	**71**	Pn	**Pn**	**05 06 17.8**	**+1.2**
FALS	**False Pass**	**13.16**	**68**		**Pn**	**05 06 34.6**	**-1.3**
GAMB	**Gambell**	**13.80**	**25**	Pn	**Pn**	**05 06 42.0**	**-2.7**
SDPT	**Sand Point**	**14.88**	**67**	Pn	**Pn**	**05 06 58.9**	**-0.4**
CHNA	**Chernabura Isl**	**15.37**	**69**	P	**Pn**	**05 07 05.9**	**0.0**
baz=270							
CNBA	**Chernabura Isl**	**15.37**	**69**	Pn	**Pn**	**05 07 04.2**	**-1.7**
CNBA				IAmb	IAmb	05 07 21.5	
comp=Z,50nm,1.4s							
S14K	**Fog Glacier**	**15.48**	**63**	P	**Pn**	**05 07 06.7**	**-0.6**
baz=264							
CHGN	**Chignik**	**16.11**	**64**	Pn	**Pn**	**05 07 15.1**	**-0.2**
ANM	**Nome**	**16.25**	**31**		**Pn**	**05 07 17.0**	**-0.1**
ANM				IAmb	IAmb	05 07 24.3	
comp=Z,41nm,1.3s							
ANM	**Nome**	**16.25**	**31**	P	**Pn**	**05 07 17.0**	**-0.1**
ANM				pmax	pmax		
comp=Z,41nm,1.3s							
BILL	**Bilibino**	**16.77**	**348**	*e*P	**P**	**05 07 26.6**	**+0.9**
BILL				pmax	pmax		
comp=Z,11nm,1.1s							
BILL				MLR	MLR		
comp=Z,185nm,16.0s							
N16K	**Nishlik Lake**	**16.80**	**49**	P	**Pn**	**05 07 23.4**	**-0.7**
baz=251							
O16K	**Kokwok River B**	**16.86**	**52**	P	**Pn**	**05 07 24.7**	**-0.2**
baz=255							
R17K	**Ugashik Creek**	**17.35**	**59**	P	**Pn**	**05 07 31.3**	**+0.3**
baz=263							
Q16K	**King Salmon**	**17.38**	**56**	P	**Pn**	**05 07 31.0**	**-0.3**
baz=260,SNR=12							
O17K	**Koliganek Bris**	**17.40**	**52**	P	**Pn**	**05 07 31.6**	**0.0**
baz=256							
P17K	**Kvichak River**	**17.59**	**54**	P	**Pn**	**05 07 32.8**	**-1.1**
baz=258							
CHIR	**Chirikof Islan**	**17.65**	**66**	P	**Pn**	**05 07 32.5**	**-2.2**
CHIR				IAmb	IAmb	05 07 53.2	
comp=Z,108nm,1.2s							
N18K	**Kilae Creek**	**18.22**	**50**	P	**Pn**	**05 07 41.1**	**-0.5**
N18K	**Kilae Creek**	**18.22**	**50**	P	**P**	**05 07 42.1**	**+0.3**
baz=254,SNR=8.5							
P18K	**Big Mountain,**	**18.24**	**54**	P	**Pn**	**05 07 39.9**	**-2.0**
P18K	**Big Mountain,**	**18.24**	**54**	P	**Pn**	**05 07 40.2**	**-1.7**
baz=259							
O18K	**Koktuh Hills**	**18.34**	**53**	P	**P**	**05 07 42.1**	**-1.0**
O18K				IAmb	IAmb	05 07 52.0	

	comp=Z,67nm,0.8s								
O18K	**Koktuh Hills**	**18.34**	**53**	P	**P**	**05 07 42.7**	**-0.4**		
	baz=258,SNR=8.0								
SII	**Sitkinak Islan**	**18.47**	**63**	P	**P**	**05 07 43.1**	**-1.4**		
SII				IAmb	IAmb	05 07 54.9			
	comp=Z,50nm,0.9s								
SII	**Sitkinak Islan**	**18.47**	**63**	P	**Pn**	**05 07 44.7**	**0.0**		
	baz=269								
SVW2	**Sparrevohn**	**18.48**	**49**	P	**P**	**05 07 43.0**	**-1.6**		
O19K	**Port Alsworth**	**18.85**	**52**	P	**P**	**05 07 48.7**	**+0.1**		
O19K				IAmb	IAmb	05 07 57.4			
	comp=Z,29nm,0.7s								
O19K	**Port Alsworth**	**18.85**	**52**	P	**P**	**05 07 47.5**	**-1.1**		
	baz=258								
TTA	**Tatalina**	**18.91**	**43**	P	**P**	**05 07 48.3**	**-1.0**		
	baz=248								
N19K	**Bonanza Creek**	**18.92**	**50**	P	**P**	**05 07 48.7**	**-0.8**		
N19K				IAmb	IAmb	05 08 01.3			
	comp=Z,39nm,0.8s								
N19K	**Bonanza Creek**	**18.92**	**50**	P	**P**	**05 07 49.4**	**-0.1**		
	baz=256								
Q19K	**Cape Douglas,**	**18.96**	**56**	P	**P**	**05 07 49.3**	**-0.7**		
Q19K	**Cape Douglas,**	**18.96**	**56**	P	**P**	**05 07 49.5**	**-0.5**		
	baz=262,SNR=6.2								
OHAK	**Old Harbor**	**18.99**	**61**	P	**P**	**05 07 48.6**	**-1.5**		
OHAK				IAmb	IAmb	05 08 02.5			
	comp=Z,37nm,1.0s								
OHAK	**Old Harbor**	**18.99**	**61**	P	**P**	**05 07 48.9**	**-1.2**		
	baz=267								
L19K	**White Mountain**	**19.14**	**46**	P	**P**	**05 07 50.8**	**-1.0**		
L19K	**White Mountain**	**19.14**	**46**	P	**P**	**05 07 51.7**	**-0.2**		
	baz=251								
M19K	**Big River Lodg**	**19.26**	**47**	P	**P**	**05 07 52.3**	**-0.9**		
M19K				IAmb	IAmb	05 08 08.7			
	comp=Z,20nm,0.7s								
M19K	**Big River Lodg**	**19.26**	**47**	P	**P**	**05 07 52.9**	**-0.3**		
	baz=253								
GCSA	**Galena City Sc**	**19.34**	**37**	P	**P**	**05 07 53.0**	**-0.9**		
	baz=242,SNR=15								
ILSW	**Iliamna Southw**	**19.39**	**53**	IAmb	IAmb	05 08 03.7			
	comp=Z,46nm,1.1s								
KDAK	**Kodiak Island**	**19.40**	**60**	P	**P**	**05 07 53.6**	**-1.0**		
KDAK	**Kodiak Island**	**19.40**	**60**	P	**P**	**05 07 53.6**	**-1.0**		
KDAK				pmax	pmax				
	comp=Z,58nm,0.7s								
KDAK	**Kodiak Island**	**19.40**	**60**	P	**P**	**05 07 53.7**	**-1.0**		
	baz=266								
Q20K	**Shuyak Island**	**19.57**	**57**	P	**P**	**05 07 55.3**	**-1.2**		
	baz=264,SNR=5.6								
L20K	**Farewell, AK**	**19.67**	**45**	P	**P**	**05 07 56.4**	**-1.2**		
	baz=252								
M20K	**Styx River**	**19.83**	**47**	IAmb	IAmb	05 08 13.6			
	comp=Z,23nm,0.9s								
M20K	**Styx River**	**19.83**	**47**	P	**P**	**05 07 58.6**	**-0.8**		
	baz=254								
K20K	**Telida**	**19.88**	**43**	P	**P**	**05 07 59.9**	**-0.1**		
K20K				IAmb	IAmb	05 08 05.5			
	comp=Z,21nm,0.8s								
K20K	**Telida**	**19.88**	**43**	P	**P**	**05 08 00.6**	**+0.7**		
	baz=249,SNR=14								
HOM	**Homer**	**20.08**	**54**	P	**P**	**05 08 01.1**	**-0.9**		
N20K	**Mount Spurr**	**20.09**	**50**	P	Pn	05 08 03.2	-0.9		
	baz=257								
SPCR	**Spurr Chakacha**	**20.09**	**50**	P	**P**	**05 08 02.2**	**0.0**		
	baz=257								
SPU	**Mount Spurr**	**20.16**	**50**	P	**P**	**05 08 02.2**	**-0.7**		
J20K	**Nowinta River**	**20.16**	**41**	P	**P**	**05 08 02.3**	**-0.6**		
J20K	**Nowinta River**	**20.16**	**41**	P	**P**	**05 08 03.7**	**+0.8**		
	baz=247,SNR=70								
CNPM	**China Poot**	**20.27**	**55**	P	**P**	**05 08 04.2**	**+0.1**		
CNPM				IAmb	IAmb	05 08 13.9			
	comp=Z,39nm,0.6s								
BRLK	**Bradley Lake**	**20.48**	**54**	P	**P**	**05 08 06.5**	**+0.1**		
BRLK				IAmb	IAmb	05 08 07.0			
	comp=Z,42nm,0.7s								
PPLA	**Purkeypile**	**20.54**	**45**	IAmb	IAmb	05 08 21.7			
	comp=Z,47nm,1.4s								
PPLA	**Purkeypile**	**20.54**	**45**	P	**P**	**05 08 06.4**	**-0.8**		
	baz=253								
BRSE	**Bradley Lake S**	**20.55**	**54**	P	**P**	**05 08 07.1**	**-0.1**		
	baz=263								
SKT	**Skwentna**	**20.59**	**48**	P	**P**	**05 08 07.5**	**0.0**		
SKT				IAmb	IAmb	05 08 20.0			
	comp=Z,16nm,0.7s								
SKT	**Skwentna**	**20.59**	**48**	P	**P**	**05 08 08.3**	**+0.7**		
	baz=256								
CAST	**Castle Rocks**	**20.75**	**43**	P	**P**	**05 08 10.4**	**+1.2**		
CAST				IAmb	IAmb	05 08 11.8			
	comp=Z,14nm,0.8s								
CAST	**Castle Rocks**	**20.75**	**43**	P	**P**	**05 08 08.7**	**-0.6**		
	baz=252,SNR=17								
CHUM	**Lake Minchumin**	**20.80**	**42**	P	**P**	**05 08 09.0**	**-0.9**		
	baz=250,SNR=21								
SUA	**Susitna One**	**20.83**	**49**	P	**P**	**05 08 09.7**	**-0.7**		
SUA				IAmb	IAmb	05 08 26.5			
	comp=Z,23nm,1.1s								
O22K	**Cooper Landing**	**21.15**	**52**	P	**P**	**05 08 13.7**	**+0.1**		
O22K	**Cooper Landing**	**21.15**	**52**	P	**P**	**05 08 14.1**	**+0.4**		
	baz=262								
SEW	**Seward**	**21.24**	**53**	P	**P**	**05 08 14.2**	**-0.3**		
SEW				IAmb	IAmb	05 08 31.6			
	comp=Z,16nm,0.7s								
KTH	**Kantishna Hill**	**21.29**	**44**	P	**P**	**05 08 16.7**	**+1.5**		
KTH				IAmb	IAmb	05 08 32.0			
	comp=Z,43nm,1.5s								
H21K	**Melozitna Rive**	**21.29**	**37**	P	**P**	**05 08 16.0**	**+0.9**		
H21K				IAmb	IAmb	05 08 29.6			
	comp=Z,24nm,1.2s								
H21K	**Melozitna Rive**	**21.29**	**37**	P	**P**	**05 08 15.2**	**+0.1**		
	baz=245,SNR=12								
I21K	**Tanana**	**21.41**	**39**	P	**P**	**05 08 17.4**	**+1.0**		
I21K	**Tanana**	**21.41**	**39**	P	**P**	**05 08 17.4**	**+1.0**		
	baz=247,SNR=6.4								
G21K	**Allakaket**	**21.41**	**35**	P	**P**	**05 08 17.1**	**+0.7**		
	baz=242,SNR=10								
BPAW	**Bear Paw Mtn.**	**21.43**	**42**	P	**P**	**05 08 17.9**	**+1.3**		
BPAW	**Bear Paw Mtn.**	**21.43**	**42**	P	**P**	**05 08 17.0**	**+0.4**		
	baz=251,SNR=7.3								
TRF	**Thorofare Moun**	**21.53**	**44**	P	**P**	**05 08 19.0**	**+1.2**		
	baz=254								
PMR	**Palmer**	**21.62**	**49**	P	**P**	**05 08 17.2**	**-1.4**		
PMR	**Palmer**	**21.62**	**49**	P	**P**	**05 08 17.2**	**-1.4**		
PMR				pmax	pmax				
	comp=Z,7.0nm,1.0s								
F21K	**Alatna River**	**21.76**	**33**	P	**P**	**05 08 20.8**	**+0.6**		
	baz=241,SNR=29								
MLY	**Manley**	**21.84**	**40**	P	**P**	**05 08 21.6**	**+0.5**		
	baz=249,SNR=8.7								
PWL	**Port Wells**	**21.88**	**51**	P	**P**	**05 08 20.3**	**-1.2**		
PWL				IAmb	IAmb	05 08 50.4			
	comp=Z,13nm,0.7s								
PWL	**Port Wells**	**21.88**	**51**	P	**P**	**05 08 21.9**	**+0.4**		
	baz=262								
KNK	**Knik Glacier**	**21.91**	**50**	P	**P**	**05 08 20.8**	**-0.9**		
	baz=261								
H22K	**Ishtalitna Cre**	**21.92**	**37**	P	**P**	**05 08 21.9**	**0.0**		
	baz=247								
SML	**Sawmill**	**22.03**	**49**	IAmb	IAmb	05 08 24.3			
	comp=Z,18nm,0.9s								
SML	**Sawmill**	**22.03**	**49**	P	**P**	**05 08 23.1**	**-0.1**		
	baz=260								
RND	**Reindeer**	**22.14**	**45**	P	**P**	**05 08 22.8**	**-1.5**		
RND	**Reindeer**	**22.14**	**45**	P	**P**	**05 08 22.8**	**-1.5**		
RND				pmax	pmax				
	comp=Z,6.0nm,0.8s								
P23K	**Montague Islan**	**22.25**	**54**	P	**P**	**05 08 25.6**	**+0.1**		
	baz=266								
G22K	**Bettles**	**22.31**	**35**	P	**P**	**05 08 25.6**	**-0.4**		
	baz=244								
M23K	**Glacier View**	**22.31**	**49**	P	**P**	**05 08 25.2**	**-1.0**		
	baz=261								
F22K	**John River**	**22.34**	**33**	P	**P**	**05 08 25.7**	**-0.7**		
	baz=242								
NEA2	**Nenana**	**22.38**	**42**	P	**P**	**05 08 26.3**	**-0.5**		
NEA2				IAmb	IAmb	05 08 29.3			
	comp=Z,14nm,0.6s								
NEA2	**Nenana**	**22.38**	**42**	P	**P**	**05 08 27.0**	**+0.3**		
	baz=252,SNR=18								
I23K	**Minto, Yukon-K**	**22.43**	**40**	P	**P**	**05 08 25.9**	**-1.4**		
I23K	**Minto, Yukon-K**	**22.43**	**40**	P	**P**	**05 08 26.5**	**-0.8**		
	baz=251,SNR=5.9								
WAT6	**Susitna Watana**	**22.45**	**47**	P	**P**	**05 08 27.4**	**-0.4**		
	baz=259								
GLI	**Glacier Island**	**22.49**	**52**	P	**P**	**05 08 26.5**	**-1.5**		
GLI				IAmb	IAmb	05 08 38.0			
	comp=Z,24nm,1.0s								
SCM	**Sheep Creek Mo**	**22.51**	**49**	P	**P**	**05 08 27.5**	**-0.8**		
SCM				IAmb	IAmb	05 08 56.0			
	comp=Z,17nm,0.7s								
SCM	**Sheep Creek Mo**	**22.51**	**49**	P	**P**	**05 08 27.5**	**-0.8**		
SCM				pmax	pmax				
	comp=Z,17nm,0.7s								
SCM	**Sheep Creek Mo**	**22.51**	**49**	P	**P**	**05 08 26.7**	**-1.5**		
	baz=261								
H23K	**Yukon River**	**22.60**	**38**	P	**P**	**05 08 28.3**	**-0.8**		
	baz=249								
DHY	**Denali Highway**	**22.71**	**46**	P	**P**	**05 08 29.0**	**-1.5**		
	baz=258								
WRH	**Wood River Hil**	**22.75**	**42**	P	**P**	**05 08 29.4**	**-1.3**		
G23K	**Bananza Creek**	**22.75**	**36**	P	**P**	**05 08 30.3**	**-0.5**		
	baz=246,SNR=7.2								
E22K	**Anaktuvuk Pass**	**22.77**	**32**	P	**P**	**05 08 30.1**	**-0.8**		
	baz=241								
FID	**Port Fidalgo**	**22.77**	**52**	P	**P**	**05 08 28.6**	**-2.4**		
FID				IAmb	IAmb	05 08 43.4			
	comp=Z,60nm,1.2s								
MDM	**Murphy Dome**	**22.83**	**41**	IAmb	IAmb	05 08 46.2			
	comp=Z,14nm,1.0s								
CCB	**Clear Creek Bu**	**22.91**	**42**	P	**P**	**05 08 31.0**	**-1.3**		
TCOL	**CIGO, UAF Yank**	**22.95**	**41**	P	**P**	**05 08 31.8**	**-1.0**		
TCOL	**CIGO, UAF Yank**	**22.95**	**41**	P	**P**	**05 08 32.4**	**-0.4**		
	baz=253								
COLA	**College**	**22.96**	**41**	P	**P**	**05 08 31.6**	**-1.3**		
COLA	**College**	**22.96**	**41**	*i* P	**P**	**05 08 32.1**	**-0.7**		
COLA				pmax	pmax				
	comp=Z,7.0nm,0.9s								
COLA	**College**	**22.96**	**41**	P	**P**	**05 08 32.6**	**-0.3**		
	baz=253								
M24K	**Tolsona, Glenn**	**23.09**	**49**	P	**P**	**05 08 33.9**	**-0.4**		
M24K				IAmb	IAmb	05 09 02.3			
	comp=Z,29nm,1.1s								
M24K	**Tolsona, Glenn**	**23.09**	**49**	P	**P**	**05 08 33.1**	**-1.2**		
	baz=262								
POKR	**Poker Plat Res**	**23.20**	**41**	P	**P**	**05 08 34.1**	**-1.2**		
POKR	**Poker Plat Res**	**23.20**	**41**	P	**P**	**05 08 35.7**	**+0.4**		
	baz=253								
HDA	**Harding Lake**	**23.21**	**43**	P	**P**	**05 08 34.5**	**-0.9**		
HDA	**Harding Lake**	**23.21**	**43**	P	**P**	**05 08 34.5**	**-0.9**		
	baz=256								
H24K	**Noodor Dome**	**23.24**	**39**	P	**P**	**05 08 35.6**	**-0.2**		
H24K	**Noodor Dome**	**23.24**	**39**	P	**P**	**05 08 35.4**	**-0.5**		
	baz=251,SNR=7.4								
IL31		**23.33**	**42**	P	**P**	**05 08 35.1**	**-1.4**		
ILAR	**Eielson Array**	**23.33**	**42**	P	**P**	**05 08 34.4**	**-2.2**		
	comp=Z,2.1nm,0.7s,baz=247,slow=8.9,SNR=20								
ILAR				PcP	**PcP**	**05 12 21.9**	**-0.7**		
	comp=Z,0.8nm,0.7s,baz=266,slow=2.9,SNR=5.5								
ILAR				LR	LR	05 17 55.8			
	comp=Z,152nm,19.2s,baz=244,slow=37								
	comp=Z,2.1nm,0.7s								
ILAR	**Eielson Array**	**23.33**	**42**	*e*P	**P**	**05 08 34.3**	**-2.3**		
ILAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
D23K	**Nanushuk River**	**23.54**	**31**	P	**P**	**05 08 38.9**	**+0.3**		
	baz=241,SNR=14								
PAX	**Paxson**	**23.55**	**47**	P	**P**	**05 08 37.7**	**-1.2**		
PAX				IAmb	IAmb	05 08 41.9			
	comp=Z,19nm,1.2s								
PAX	**Paxson**	**23.55**	**47**	P	**P**	**05 08 37.7**	**-1.2**		
PAX				pmax	pmax				
	comp=Z,19nm,1.2s								
PAX	**Paxson**	**23.55**	**47**	P	**P**	**05 08 37.7**	**-1.2**		
	baz=260,SNR=10								
K24K	**Donnelly Dome**	**23.57**	**44**	P	**P**	**05 08 37.9**	**-1.1**		
	baz=258								
G24K	**Hadweenzic Riv**	**23.69**	**37**	P	**P**	**05 08 40.1**	**0.0**		
	baz=250								
TOLK	**Toolik Lake Re**	**23.74**	**32**	P	**P**	**05 08 40.3**	**-0.3**		
TOLK	**Toolik Lake Re**	**23.74**	**32**	P	**P**	**05 08 40.8**	**+0.2**		
	baz=243,SNR=20								
N25K	**Chitina, Valde**	**23.77**	**50**	P	**P**	**05 08 40.6**	**-0.4**		
	baz=264								
F24K	**Squaw Lake**	**23.84**	**35**	P	**P**	**05 08 41.6**	**+0.1**		
	baz=248								
E24K	**Your Creek**	**23.85**	**33**	P	**P**	**05 08 41.7**	**0.0**		
	baz=246								
J25K	**Salcha River,**	**23.92**	**43**	P	**P**	**05 08 40.8**	**-1.6**		
J25K	**Salcha River,**	**23.92**	**43**	P	**P**	**05 08 41.0**	**-1.4**		
	baz=257								
RIDG	**Independent Ri**	**23.96**	**45**	P	**P**	**05 08 40.2**	**-2.5**		
RIDG	**Independent Ri**	**23.96**	**45**	P	**P**	**05 08 40.9**	**-1.8**		
	baz=259								
C23K	**Itkillik River**	**24.00**	**29**	P	**P**	**05 08 43.0**	**+0.1**		
	baz=239								
PRP	**Porcupine Dome**	**24.08**	**40**	P	**P**	**05 08 41.2**	**-2.7**		
PRP	**Porcupine Dome**	**24.08**	**40**	P	**P**	**05 08 42.8**	**-1.1**		
	baz=255								
GLB	**Gilahina Butte**	**24.13**	**51**	P	**P**	**05 08 44.0**	**-0.3**		
H25K	**Birch Creek**	**24.18**	**39**	P	**P**	**05 08 44.5**	**-0.2**		
	baz=253,SNR=7.5								
D24K	**Happy Valley**	**24.21**	**31**	P	**P**	**05 08 44.7**	**-0.3**		
	baz=243								
DOT	**Dot Lake**	**24.29**	**45**	P	**P**	**05 08 44.5**	**-1.3**		
MENT	**Mentasta**	**24.33**	**47**	IAmb	IAmb	05 09 04.5			
	comp=Z,9.0nm,0.6s								
SCRK	**Sand Creek**	**24.38**	**44**	P	**P**	**05 08 45.3**	**-1.3**		
SCRK				IAmb	IAmb	05 08 46.9			
	comp=Z,9.0nm,0.6s								
SCRK	**Sand Creek**	**24.38**	**44**	P	**P**	**05 08 45.5**	**-1.2**		
	baz=260,SNR=12								
FYU	**Fort Yukon**	**24.49**	**38**	IAmb	IAmb	05 08 59.9			
	comp=Z,34nm,1.4s								
MCARA	**McCarthy VSAT**	**24.50**	**51**	P	**P**	**05 08 47.0**	**-0.6**		
MCARA				IAmb	IAmb	05 08 59.3			
	comp=Z,26nm,0.8s								
MCARA	**McCarthy VSAT**	**24.50**	**51**	P	**P**	**05 08 47.5**	**-0.2**		
	baz=266								
L26K	**Log Cabin Wild**	**24.51**	**47**	P	**P**	**05 08 47.2**	**-0.6**		
L26K				IAmb	IAmb	05 08 50.0			
	comp=Z,7.1nm,0.6s								
L26K	**Log Cabin Wild**	**24.51**	**47**	P	**P**	**05 08 48.5**	**+0.7**		
	baz=262,SNR=6.0								
C24K	**Franklin Bluff**	**24.52**	**30**	P	**P**	**05 08 47.0**	**-0.7**		
	baz=242								
M26K	**Nabesna, AK**	**24.60**	**48**	P	**P**	**05 08 49.4**	**+0.8**		
	baz=264								
J26L	**Joseph Creek**	**24.66**	**43**	P	**P**	**05 08 47.9**	**-1.3**		
J26L				IAmb	IAmb	05 08 50.4			
	comp=Z,10nm,0.8s								
J26L	**Joseph Creek**	**24.66**	**43**	P	**P**	**05 08 47.9**	**-1.3**		
	baz=259,SNR=16								
F25K	**Christian Rive**	**24.67**	**36**	P	**P**	**05 08 48.9**	**-0.3**		
	baz=250,SNR=7.5								
E25K	**Arctic Village**	**24.88**	**34**	P	**P**	**05 08 51.0**	**-0.1**		
	baz=249,SNR=8.7								
MESA	**MESA**	**24.99**	**54**	P	**P**	**05 08 52.1**	**-0.2**		
	baz=270								
I26K	**Coal Creek Min**	**24.99**	**41**	P	**P**	**05 08 52.0**	**-0.1**		
	baz=258								
BMAR	**Burnt Mountain**	**25.00**	**36**	P	**P**	**05 08 51.9**	**-0.3**		
D25K	**Kavik River**	**25.07**	**31**	P	**P**	**05 08 53.4**	**+0.6**		
	baz=246,SNR=7.4								
M27K	**Edge Creek, AK**	**25.11**	**49**	P	**P**	**05 08 53.6**	**+0.2**		
	baz=265								
G26K	**Porcupine Rive**	**25.15**	**38**	P	**P**	**05 08 53.4**	**0.0**		
	baz=254,SNR=12								
L27K	**Beaver Creek,**	**25.20**	**47**	P	**P**	**05 08 54.0**	**0.0**		
	baz=264,SNR=7.2								
K27K	**Chicken**	**25.22**	**45**	P	**P**	**05 08 53.9**	**-0.2**		
	baz=262								
BCAR	**Beaver Creek A**	**25.22**	**47**	P	**P**	**05 08 53.1**	**-1.1**		
F26K	**Sheenjek River**	**25.24**	**36**	P	**P**	**05 08 54.8**	**+0.4**		
	baz=252,SNR=11								
I27K	**Kandik River**	**25.68**	**41**	P	**P**	**05 08 58.7**	**+0.3**		
	baz=259								
EGAK	**Eagle**	**25.73**	**43**	IAmb	IAmb	05 09 12.1			
	comp=Z,16nm,1.2s								
EGAK	**Eagle**	**25.73**	**43**	P	**P**	**05 08 57.7**	**-1.0**		
	baz=261,SNR=12								
C26K	**Camden Bay**	**25.79**	**31**	P	**P**	**05 09 00.0**	**+0.9**		
	baz=246,SNR=6.4								
PCA	**Pinnacle**	**25.84**	**54**	P	**P**	**05 08 59.0**	**-0.8**		
PCA				IAmb	IAmb	05 09 16.6			
	comp=Z,21nm,0.7s								
PINM	**Pinnacle**	**25.84**	**54**	P	**P**	**05 08 58.9**	**-0.9**		
	baz=272								
H27K	**Steamboat Moun**	**25.85**	**40**	P	**P**	**05 08 58.8**	**-1.1**		
	baz=258								
O28M	**Mount Upton**	**25.86**	**52**	P	**P**	**05 08 59.9**	**-0.4**		
	baz=270,SNR=8.1								
G27K	**Doyon Strip**	**25.93**	**38**	P	**P**	**05 09 00.1**	**-0.5**		
	baz=256								
C27K	**Jago River**	**26.06**	**32**	P	**P**	**05 09 01.5**	**-0.2**		
	baz=248,SNR=7.2								
YAK	**Yakutsk**	**26.21**	**311**	P	**P**	**05 09 03.0**	**-0.1**		
YAK	**Yakutsk**	**26.21**	**311**	*ce*P	**P**	**05 09 03.6**	**+0.5**		
YAK				pmax	pmax				
	comp=Z,23nm,0.6s								
PNL	**Peninsula**	**26.29**	**55**	P	**P**	**05 09 03.2**	**-0.7**		
	baz=273								
E27K	**Coleen River**	**26.31**	**35**	P	**P**	**05 09 04.1**	**+0.1**		
	baz=254								
DAWY	**Dawson**	**26.39**	**45**	P	**P**	**05 09 03.8**	**-1.0**		
DAWY	**Dawson**	**26.39**	**45**	P	**P**	**05 09 04.9**	**+0.1**		
	baz=264,SNR=11								
M29M	**Somme Creek**	**26.71**	**49**	P	**P**	**05 09 06.8**	**-0.9**		
	baz=268								
J29M	**Klondike Camp**	**26.94**	**44**	P	**P**	**05 09 06.9**	**-2.9**		
I29M	**Ogilvie Camp,**	**27.01**	**42**	P	**P**	**05 09 08.9**	**-1.4**		
I29M	**Ogilvie Camp,**	**27.01**	**42**	P	**P**	**05 09 08.9**	**-1.4**		
	baz=263								
P29M	**Windy Craggy**	**27.13**	**55**	P	**P**	**05 09 12.1**	**+0.7**		
	baz=275								
HYT	**Haines Junctio**	**27.17**	**52**	P	**P**	**05 09 11.2**	**-0.7**		
HYT				IAmb	IAmb	05 09 25.4			
	comp=Z,9.9nm,0.8s								
HYT	**Haines Junctio**	**27.17**	**52**	P	**P**	**05 09 11.6**	**-0.4**		
	baz=272								
K29M	**Barlow Dome**	**27.20**	**46**	P	**P**	**05 09 12.3**	**+0.2**		
	baz=266								
N30M	**Aishikik Lake**	**27.35**	**51**	P	**P**	**05 09 14.0**	**+0.5**		
	baz=272								
KLR	**Kul'dur**	**27.37**	**282**	P	**P**	**05 09 14.8**	**+1.1**		
	comp=Z,2.0nm,0.6s,baz=67,slow=8.6,SNR=7.2								
KLR				LR	LR	05 19 31.2			
	comp=Z,79nm,21.7s,baz=26,slow=35								
	comp=Z,2.0nm,0.6s								
KLR	**Kul'dur**	**27.37**	**282**	*ce*P	**P**	**05 09 14.0**	**+0.3**		
KLR				pmax	pmax				
	comp=Z,12nm,1.7s								
EPYK	**Eagle Plains**	**27.79**	**40**	P	**P**	**05 09 16.9**	**-0.3**		
	baz=262								
N31M	**Braeburn, Yuko**	**27.98**	**51**	P	**P**	**05 09 18.0**	**-1.1**		
	baz=273								
P32M	**Atlin**	**29.17**	**54**	P	**P**	**05 09 29.0**	**-0.7**		
	baz=278								
INK	**Inuvik**	**29.27**	**36**	P	**P**	**05 09 30.6**	**+0.2**		
	comp=Z,2.1nm,0.7s,baz=280,slow=7.8,SNR=8.8								
INK				LR	LR	05 22 24.8			
	comp=Z,82nm,18.6s,baz=350,slow=39								
	comp=Z,2.1nm,0.7s								
INK	**Inuvik**	**29.27**	**36**	P	**P**	**05 09 29.6**	**-0.8**		
	baz=262								
N32M	**Quiet Lake**	**29.30**	**51**	P	**P**	**05 09 29.6**	**-1.3**		
	baz=276								
USRK	**Ussuriysk Ar.**	**29.46**	**272**	P	**P**	**05 09 33.0**	**+0.6**		
	comp=Z,2.5nm,0.8s,baz=51,slow=11,SNR=6.0								
	comp=Z,2.5nm,0.8s								
USRK	**Ussuriysk Ar.**	**29.46**	**272**	P	**P**	**05 09 33.0**	**+0.6**		
P33M	**Teslin, Yukon**	**29.54**	**53**	P	**P**	**05 09 32.7**	**-0.3**		
	baz=277								
MMPY	**Sheldon Lake,**	**30.04**	**48**	P	**P**	**05 09 37.6**	**+0.3**		
	baz=274								
MJAR	**Matsushiro Arr**	**30.18**	**254**	LR	LR	05 19 43.8			
	comp=Z,66nm,21.3s,baz=40,slow=32								
R33M	**Jennings River**	**30.58**	**54**	P	**P**	**05 09 43.0**	**+0.8**		
	baz=280,SNR=9.2								
DLBC	**Dease Lake**	**31.25**	**56**	P	**P**	**05 09 49.0**	**+1.0**		
	comp=Z,3.5nm,0.9s,baz=286,slow=12,SNR=8.7								
DLBC				LR	LR	05 22 42.1			
	comp=Z,151nm,19.9s,baz=286,slow=37								
	comp=Z,3.5nm,0.9s								
DLBC	**Dease Lake**	**31.25**	**56**	P	**P**	**05 09 44.7**	**-3.3**		
DLBC	**Dease Lake**	**31.25**	**56**	P	**P**	**05 09 47.9**	**-0.2**		
	baz=282								
T35M	**Bob Quinn**	**31.46**	**59**	P	**P**	**05 09 48.7**	**-1.2**		
	baz=284								
BNX	**BinXian**	**31.53**	**278**	⇑P	**P**	**05 09 50.6**	**0.0**		
BNX				pmax	pmax				
	comp=Z,12nm,0.7s								
BNX				pmax	pmax				
	comp=Z,51nm,3.7s								
TGTN	**Hyland Airport**	**31.56**	**50**	P	**P**	**05 09 50.8**	**0.0**		
	baz=279								
JHJ	**Hachijo jima 2**	**31.66**	**248**	LR	LR	05 20 56.4			
	comp=Z,51nm,20.0s,baz=300,slow=33								
A36M	**Sachs Harbour**	**32.52**	**30**	P	**P**	**05 09 59.4**	**+0.4**		
	baz=264								
H11N2	**WAKE ISLAND Hy**	**32.72**	**194**	T	T	05 44 47.6			
	baz=9.6,slow=76,SNR=601								
H11N3	**WAKE ISLAND Hy**	**32.73**	**194**	T	T	05 44 48

KNGR **Kungurtug, Tuv** **46.40 301** *i* P **P** **05 11 55.2 +0.4**
KNGR pmax pmax
comp=Z,2.0nm,0.8s
EGMT **Eagleton** **46.51 63** P **P** **05 11 54.6 -1.2**
baz=304
BOZ **Bozeman (W)** **46.84 67** P **P** **05 11 56.8 -1.6**
baz=306
NVAR **Mina Array Bea** **47.23 79** P **P** **05 12 00.9 -0.8**
comp=Z,0.6nm,0.5s,baz=303,slow=7.1,SNR=6.5
NVAR PcP **PcP** **05 13 33.3 +0.7**
comp=Z,2.2nm,0.8s,baz=304,slow=1.4,SNR=7.6
comp=Z,0.6nm,0.5s
MDPB **Devils Postpil** **47.26 80** IAmb IAmb 05 12 04.1
comp=Z,3.9nm,0.8s
OMMB **Old Mammoth Mi** **47.32 80** P **P** **05 12 01.8 -0.7**
ELK **Elko** **47.63 75** LR LR 05 30 57.0
comp=Z,72nm,19.1s,baz=314,slow=35
PAGB **Antelope Grade** **47.77 83** IAmb IAmb 05 12 07.3
comp=Z,10.0nm,0.8s
TPH **Tonopah** **48.11 79** IAmb IAmb 05 12 08.6
comp=Z,8.6nm,0.8s
RLMT **Red Lodge** **48.47 66** P **P** **05 12 10.0 -1.2**
baz=307
PKM **Mcpherson Peak** **48.59 84** P **P** **05 12 11.4 -0.7**
baz=312
CWC **Cottonwood Cre** **48.64 81** P **P** **05 12 11.6 -0.9**
baz=311
R11A **Troy Canyon, C** **48.93 77** P **P** **05 12 13.7 -1.1**
baz=310
LAO **LASA Array** **49.24 63** P **P** **05 12 15.5 -1.4**
baz=307
MPMC **Manual Prospec** **49.25 81** P **P** **05 12 17.0 -0.3**
baz=311
FURC **Furnace Creek,** **49.37 80** P **P** **05 12 17.0 -0.8**
baz=311
DUG **Dugway, Tooele** **49.42 74** P **P** **05 12 17.6 -0.9**
baz=309
TPNV **Topopah Spring** **49.43 79** IAmb IAmb 05 12 20.4
comp=Z,4.1nm,0.8s
TPNV **Topopah Spring** **49.43 79** P **P** **05 12 17.9 -0.6**
baz=311,SNR=5.5
SPB2 **Spitsbergen Ar** **49.56 354** P **P** **05 12 18.8 0.0**
GWY **Greenwater Val** **49.67 80** P **P** **05 12 20.6 +0.2**
GWY IAmb IAmb 05 12 22.2
comp=Z,3.1nm,0.8s
EDW2 **Edwards Air Fo** **49.72 82** P **P** **05 12 19.3 -1.3**
baz=312
PDAR **Pinedale Array** **49.73 69** P **P** **05 12 19.2 -1.6**
comp=Z,0.9nm,0.8s,baz=337,slow=3.4,SNR=8.2
comp=Z,0.9nm,0.8s
XAN **Xi'an** **49.82 276** ⇑P **P** **05 12 22.3 +0.8**
XAN pP pP 05 12 28.6 -1.1
XAN pmax pmax
comp=Z,6.0nm,1.0s
SHOC **Shoshone, Teco** **50.10 80** P **P** **05 12 22.8 -0.6**
baz=311
GSC **Goldstone, Bar** **50.17 81** IAmb IAmb 05 12 25.5
comp=Z,6.3nm,0.8s
GSC **Goldstone, Bar** **50.17 81** P **P** **05 12 23.7 -0.4**
baz=312,SNR=7.2
TPUB **Ta-pu** **50.22 257** P **P** **05 12 24.6 +0.1**
BFSC **Mount Baldy Ra** **50.35 83** P **P** **05 12 25.5 0.0**
baz=312
ZALV **Zalesovo Beam** **50.87 310** P **P** **05 12 28.4 -0.6**
comp=Z,1.0nm,0.5s,baz=156,slow=7.5,SNR=3.6
ZALV PcP **PcP** **05 13 45.9 +0.6**
comp=Z,2.4nm,0.7s,baz=20,slow=5.2,SNR=6.0
comp=Z,1.0nm,0.5s
MURC **Murrieta** **51.06 83** P **P** **05 12 30.2 -0.6**
baz=313
RDMU **Red Mountain** **51.10 71** IAmb IAmb 05 12 34.5
comp=Z,3.7nm,0.8s
GMRC **Granite Mounta** **51.21 81** P **P** **05 12 31.1 -1.0**
baz=312
PFO **Pinyon Flats O** **51.51 83** LR LR 05 30 14.5
comp=Z,65nm,22.0s,baz=330,slow=31
BELC **Belle Mtn. Jos** **51.53 82** P **P** **05 12 33.6 -0.8**
baz=313
LZH **Lanzhou** **51.57 282** *e*P **P** **05 12 36.9 +2.1**
LZH pP sP 05 12 46.8 +0.8
LZH pmax pmax
comp=Z,15nm,0.9s
GTA **Gaotai** **51.82 288** *e*P **P** **05 12 37.8 +1.3**
GTA pP sP 05 12 46.5 -1.2
GTA sP pP 05 12 50.3 +5.8
GTA pmax pmax
comp=Z,7.0nm,0.9s
GTA pmax pmax
comp=Z,89nm,4.7s
GTA LR LR
comp=Z,120nm,14.2s
GTA LR LR
comp=Z,79nm,17.1s
GTA LR LR
comp=Z,120nm,18.2s
MONP2 **Monument Peak** **52.02 83** P **P** **05 12 38.0 -0.2**
baz=313
O20A **White River Ci** **52.16 71** P **P** **05 12 38.0 -1.1**
baz=310
U15A **North Rim** **52.17 77** IAmb IAmb 05 12 41.8
comp=Z,5.3nm,0.9s
DGZ **Jazzator, Alta** **52.18 305** *i* P **P** **05 12 39.0 -0.1**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
CBX **Cerro Bola** **52.26 84** P **P** **05 12 40.1 +0.2**
CBX IAmb IAmb 05 12 41.2
comp=Z,4.2nm,0.8s
IKP **In-Ko-Pah, Jac** **52.37 83** P **P** **05 12 40.3 -0.4**
baz=313
PDMCI **Parker Dam,Lak** **52.46 80** P **P** **05 12 40.8 -0.3**
baz=313
ULM **Lac du Bonnet** **52.53 54** P **P** **05 12 40.8 -0.7**
comp=Z,1.5nm,0.4s,baz=312,slow=10,SNR=2.4
ULM PcP **PcP** **05 13 51.3 -0.2**
comp=Z,1.7nm,0.7s,baz=286,slow=4.3,SNR=4.1
ULM LR LR 05 35 25.7
comp=Z,98nm,19.8s,baz=304,slow=37
comp=Z,1.5nm,0.4s
PV11 **David Mesa, Pa** **52.98 73** IAmb IAmb 05 12 49.1
comp=Z,4.8nm,0.7s
PV13 **Radium Mtn., P** **53.11 73** IAmb IAmb 05 12 50.1
comp=Z,5.9nm,0.9s
AGMN **Agassiz Nation** **53.77 56** IAmb IAmb 05 12 50.6
comp=Z,6.2nm,0.8s
AGMN **Agassiz Nation** **53.77 56** P **P** **05 12 49.4 -1.2**
baz=310,SNR=5.1
ISCO **Idaho Springs** **53.91 70** P **P** **05 12 51.2 -0.9**
baz=311
MVCO **Mesa Verde** **53.92 74** P **P** **05 12 50.3 -1.9**
baz=312
S22A **4UR Ranch, Cre** **54.56 72** P **P** **05 12 55.9 -1.0**
baz=312
214A **Organ Pipe Nat** **54.88 81** P **P** **05 12 59.0 0.0**
baz=314
SDCO **Great Sand Dun** **55.34 71** P **P** **05 13 01.9 -0.6**
baz=312
WMQ **Urumqi** **55.82 299** *e*P **P** **05 13 08.1 +2.4**
WMQ LR LR
comp=Z,61nm,24.1s
KURK **Kurchatov** **55.86 310** P **P** **05 13 03.4 -2.3**
KURK **Kurchatov** **55.86 310** P **P** **05 13 03.4 -2.3**
KURK pmax pmax
comp=Z,18nm,0.8s
TUC **Tucson** **55.87 80** P **P** **05 13 06.3 +0.1**
baz=314
K31A **O'Neill** **55.93 63** P **P** **05 13 06.5 +0.1**
EYMN **Ely** **56.21 54** **P** **05 13 07.1 -1.2**
EYMN IAmb IAmb 05 13 08.6
comp=Z,9.3nm,0.8s
EYMN **Ely** **56.21 54** P **P** **05 13 07.6 -0.7**
baz=312
ECSD **EROS Data Cent** **56.36 60** P **P** **05 13 08.1 -1.3**
ECSD IAmb IAmb 05 13 09.6
comp=Z,3.9nm,0.8s
ECSD **EROS Data Cent** **56.36 60** P **P** **05 13 07.9 -1.6**
baz=312
T25A **Trinidad** **56.39 71** P **P** **05 13 09.0 -1.0**
baz=313
GYA **Guiyang** **56.50 271** ⇓P **P** **05 13 11.8 +1.1**
GYA pmax pmax
comp=Z,11nm,0.8s
SFJD **Kangerlussuaq** **56.54 20** LR LR 05 38 45.8
comp=Z,31nm,21.5s,baz=322,slow=38
ANMO **Albuquerque** **56.67 74** LR LR 05 35 02.9
comp=Z,52nm,20.9s,baz=332,slow=34
MK31 **Makanchi Array** **56.68 305** P **P** **05 13 11.5 -0.2**
MK31 IAmb IAmb 05 13 12.2
comp=Z,3.0nm,0.7s
MK31 **Makanchi Array** **56.68 305** P **P** **05 13 11.5 -0.2**
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MKAR **Makanchi Array** **56.68 305** P **P** **05 13 11.5 -0.3**
comp=Z,3.4nm,0.6s,baz=52,slow=7.2,SNR=34
comp=Z,3.4nm,0.6s
MKAR **Makanchi Array** **56.68 305** P **P** **05 13 11.1 -0.6**
MKAR **Makanchi Array** **56.68 305** *e*P **P** **05 13 11.4 -0.3**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MAKZ **Makanchi** **56.83 305** P **P** **05 13 12.8 +0.1**
MAKZ IAmb IAmb 05 13 13.3
comp=Z,5.2nm,0.8s
MAKZ **Makanchi** **56.83 305** P **P** **05 13 12.8 +0.1**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
ARCES **ARCESS Array B** **56.87 348** P **P** **05 13 12.5 -0.1**
comp=Z,0.7nm,0.4s,baz=18,slow=5.6,SNR=12
ARCES LR LR 05 40 37.2
comp=Z,23nm,18.6s,baz=342,slow=39
comp=Z,0.7nm,0.4s
GOMU **GeErMu** **56.91 288** P **P** **05 13 14.3 +0.5**
GOMU PcP **PcP** **05 14 04.3 -4.8**
GOMU pmax pmax
comp=Z,5.0nm,0.5s
GOMU pmax pmax
comp=Z,30nm,4.1s
BGNE **Belgrade** **57.08 63** P **P** **05 13 13.7 -0.9**
BGNE **Belgrade** **57.08 63** P **P** **05 13 13.6 -0.9**
baz=313
E38A **The Farm, Brul** **57.09 55** P **P** **05 13 14.1 -0.4**
SPMN **Marine on St.** **57.38 57** IAmb IAmb 05 13 17.5
comp=Z,7.9nm,1.1s
SPMN **Marine on St.** **57.38 57** P **P** **05 13 16.0 -0.6**
baz=313
121A **Cookes Peak, D** **57.54 77** P **P** **05 13 17.3 -0.8**
baz=314
CBKS **Cerro Bluff** **57.95 67** P **P** **05 13 20.2 -0.5**
baz=313
BRVK **Borovoye** **58.00 317** P **P** **05 13 21.2 +0.4**
BRVK **Borovoye** **58.00 317** *ce*P **P** **05 13 20.9 +0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.5s
N35A **Tabor** **58.84 62** P **P** **05 13 27.0 +0.1**
SCIA **State Center** **59.44 60** P **P** **05 13 30.4 -0.6**
baz=314
PZH **PanZhiHua** **59.51 275** P **P** **05 13 32.5 +0.6**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,60nm,3.5s
E43A **Lone Tree Farm** **59.53 53** P **P** **05 13 31.2 -0.4**
MSTX **Muleshoe** **59.54 73** P **P** **05 13 31.1 -0.9**
baz=315
AMTX **Amarillo** **59.54 71** P **P** **05 13 31.9 -0.1**
baz=315
MNTX **Cornudas Mount** **59.58 76** IAmb IAmb 05 13 34.5
comp=Z,3.5nm,0.8s
MNTX **Cornudas Mount** **59.58 76** P **P** **05 13 31.6 -0.5**
baz=315,SNR=9.3
PRGR **Permogore** **59.92 335** *e*P **P** **05 13 37.1 +3.1**
QIZ **Qiongzhong** **60.01 263** P **P** **05 13 36.3 +1.0**
ARU **Arti** **60.09 325** P **P** **05 13 35.8 +0.6**
ARU **Arti** **60.09 325** *c i*P **P** **05 13 36.0 +0.7**
ARU S **S** **05 21 48.9 +2.8**
ARU SS **SS** **05 25 41.2 -1.0**
ARU pmax pmax
comp=Z,8.0nm,0.6s
N38A **Joes South For** **60.20 61** P **P** **05 13 35.3 -1.0**
JFWS **Jewell Farm** **60.30 57** P **P** **05 13 35.6 -1.4**
JFWS IAmb IAmb 05 13 49.3
comp=Z,6.0nm,0.8s
JFWS **Jewell Farm** **60.30 57** P **P** **05 13 35.6 -1.4**
JFWS pmax pmax
comp=Z,6.0nm,0.8s
JFWS **Jewell Farm** **60.30 57** P **P** **05 13 35.9 -1.0**
baz=315
L40A **Anamosa** **60.39 59** IAmb IAmb 05 13 37.1
comp=Z,8.6nm,0.9s
P38A **Dawn** **60.86 62** IAmb IAmb 05 13 40.5
comp=Z,5.0nm,0.7s
WMOK **Wichita Mounta** **61.34 69** IAmb IAmb 05 13 44.7
comp=Z,5.3nm,0.9s
WMOK **Wichita Mounta** **61.34 69** P **P** **05 13 43.4 -0.7**
baz=315
KIRV **Kirov** **61.38 331** *ce*P **P** **05 13 47.0 +3.1**
P40A **Paris** **61.73 61** P **P** **05 13 46.0 -0.7**
FNO **Franklin** **61.77 68** P **P** **05 13 46.9 -0.1**
SCHQ **Schefferville** **61.88 35** P **P** **05 13 47.3 -0.2**
comp=Z,12nm,0.7s,baz=348,slow=6.9,SNR=16
comp=Z,12nm,0.7s
SCHQ **Schefferville** **61.88 35** P **P** **05 13 47.5 0.0**
LPIG **La Paz** **62.02 86** LR LR 05 38 31.3
comp=Z,22nm,18.1s,baz=250,slow=34
KLMR **Klimovskoe** **62.13 337** *e*P **P** **05 13 48.8 -0.2**
KLMR pmax pmax
comp=Z,13nm,1.1s
KLMR **Klimovskoe** **62.13 337** *e*P **P** **05 13 48.9 -0.1**
KLMR AMP 05 13 59.9
comp=Z,13nm,1.1s
TX31 **Lajitas Ar. Si** **62.29 77** P **P** **05 13 50.4 -0.3**
TX32 **Lajitas Array** **62.29 77** IAmb IAmb 05 13 51.6
comp=Z,7.7nm,0.7s
TXAR **Lajitas Array** **62.30 77** P **P** **05 13 50.4 -0.3**
comp=Z,2.7nm,0.5s,baz=304,slow=5.5,SNR=70
comp=Z,2.7nm,0.5s
ABTX **Abilene, Hawle** **62.34 72** P **P** **05 13 50.6 -0.3**
baz=316
HDIL **Hopedale** **62.48 59** P **P** **05 13 50.6 -1.0**
baz=316
U38A **Gravette** **62.64 65** IAmb IAmb 05 13 52.0
comp=Z,3.4nm,0.8s
BORG **Borgarnes** **63.02 8** LR LR 05 43 09.0
comp=Z,14nm,18.5s,baz=350,slow=38
CCM **Cathedral Cave** **63.23 62** P **P** **05 13 54.9 -1.7**
baz=316
AAK **Ala-Archa** **63.55 306** P **P** **05 13 59.2 +0.3**
AAK IAmb IAmb 05 14 00.6
comp=Z,3.3nm,0.7s
AAK **Ala-Archa** **63.55 306** *ce*P **P** **05 13 59.1 +0.1**
AAK pmax pmax
comp=Z,2.0nm,0.7s
LSA **Lhasa** **63.66 285** P **P** **05 13 59.9 -0.3**
LSA **Lhasa** **63.66 285** P **P** **05 13 59.9 -0.3**
LSA pmax pmax
comp=Z,3μm,1.4s
SFIN **Lafayette** **63.77 58** P **P** **05 13 59.3 -0.9**
baz=317
JCT **Junction City** **63.79 73** P **P** **05 14 00.1 -0.4**
JCT IAmb IAmb 05 14 01.7
comp=Z,6.0nm,0.6s
JCT **Junction City** **63.79 73** P **P** **05 14 00.1 -0.4**
JCT pmax pmax
comp=Z,6.0nm,0.6s
JCT **Junction City** **63.79 73** P **P** **05 13 59.6 -0.9**
baz=317
SIJI **Sorong** **64.19 230** P **P** **05 14 03.1 -0.1**
comp=Z,38nm,0.8s,baz=258,slow=2.1,SNR=7.1
FCAR **Ozark Folk Cen** **64.31 64** P **P** **05 14 02.1 -1.7**
FINES **FINESS Array B** **64.36 344** P **P** **05 14 03.8 0.0**
comp=Z,2.4nm,0.8s,baz=0.0,slow=6.5,SNR=5.6
FINES LR LR 05 45 06.2
comp=Z,40nm,19.7s,baz=38,slow=39
comp=Z,2.4nm,0.8s
MIAR **Mount Ida** **64.46 66** IAmb IAmb 05 14 05.1
comp=Z,6.5nm,0.9s
MIAR **Mount Ida** **64.46 66** P **P** **05 14 04.7 -0.1**
baz=317,SNR=5.4
SADO **Sadowa** **64.48 49** LR LR 05 42 09.7
comp=Z,80nm,21.9s,baz=340,slow=36
O48B **Farmland** **64.86 56** P **P** **05 14 06.1 -1.3**
baz=318
435B **Jarrell** **64.88 72** P **P** **05 14 07.1 -0.5**
baz=317
CRAI **Chiangrai** **64.97 271** IAmb IAmb 05 14 10.2
comp=Z,4.6nm,0.9s
KSH **Kashi** **65.09 303** P **P** **05 14 13.1 +4.1**
KSH pmax pmax
comp=Z,9.0nm,0.7s
ABKAR **Akbulak array** **65.16 319** P **P** **05 14 10.1 +0.9**
ABKAR IAmb IAmb 05 14 10.8
comp=Z,4.7nm,0.7s
KK31 **Karatay Array** **65.17 309** P **P** **05 14 09.8 +0.4**
KK31 IAmb IAmb 05 14 10.6
comp=Z,3.9nm,0.8s
KK31 **Karatay Array** **65.17 309** P **P** **05 14 09.8 +0.4**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR **Karatay Array** **65.17 309** P **P** **05 14 09.7 +0.3**
KKAR **Karatay Array** **65.17 309** IAmb IAmb 05 14 10.6
comp=Z,3.9nm,0.8s
KKAR **Karatay Array** **65.17 309** P **P** **05 14 09.7 +0.3**
P48A **Milroy** **65.31 57** IAmb IAmb 05 14 09.8
comp=Z,7.1nm,0.7s
O49A **Covington** **65.34 56** IAmb IAmb 05 14 10.7
comp=Z,5.2nm,0.8s
833A **Chaparral WMA,** **65.60 75** P **P** **05 14 11.8 -0.5**
baz=318
ERPA **Erie** **66.07 52** P **P** **05 14 13.9 -1.2**
baz=319
M53A **WI Miller and** **66.25 53** P **P** **05 14 15.4 -0.9**
baz=319
T47A **Sharon Grove** **66.25 60** IAmb IAmb 05 14 17.3
comp=Z,1.0nm,0.8s
WVT **Waverly** **66.50 61** P **P** **05 14 16.6 -1.4**
baz=318
NC303 **NORSAR Array S** **66.50 351** P **P** **05 14 18.0 +0.4**
NC303 IAmb IAmb 05 14 27.7
comp=Z,9.1nm,1.2s
NC204 **NORSAR Array S** **66.50 352** P **P** **05 14 18.0 +0.3**
NB201 **NORSAR Array S** **66.68 352** P **P** **05 14 19.2 +0.4**
NB2 **NORSAR Subarra** **66.70 352** P **P** **05 14 18.9 0.0**
comp=Z,1.7nm,0.6s,baz=10,slow=6.5
NOA **NORSAR Array B** **66.70 352** P **P** **05 14 18.9 0.0**
comp=Z,1.8nm,0.6s,baz=11,slow=6.4,SNR=16
comp=Z,1.8nm,0.6s
OXF **Oxford** **66.83 63** P **P** **05 14 19.3 -0.8**
baz=318
O53A **New Philadelph** **66.88 54** P **P** **05 14 19.3 -1.1**
baz=319
P52A **Corning** **66.88 55** P **P** **05 14 18.9 -1.5**
baz=319
CHTO **Chiang Mai** **66.92 271** P **P** **05 14 21.3 +0.4**
CHTO IAmb IAmb 05 14 22.7
comp=Z,7.8nm,1.1s
CHTO **Chiang Mai** **66.92 271** P **P** **05 14 21.3 +0.4**
CHTO pmax pmax
comp=Z,8.0nm,1.1s
BELG **Belogornoye** **67.11 328** *i* P **P** **05 14 21.3 -0.3**
BELG pmax pmax
comp=Z,6.0nm,0.8s
CMAR **Chiang Mai Arr** **67.19 271** P **P** **05 14 22.6 0.0**
comp=Z,1.9nm,0.4s,baz=30,slow=7.5,SNR=4.4
comp=Z,1.9nm,0.4s
CMAR **Chiang Mai Arr** **67.19 271** P **P** **05 14 23.4 +0.8**
BTK **Batken** **67.32 306** IAmb IAmb 05 14 24.9
comp=Z,7.5nm,0.7s
TAPN **Taplejung** **67.44 286** *e*P **P** **05 14 25.1 +0.6**
ZAIG **Zacatecas** **67.77 81** P **P** **05 14 26.3 -0.3**
ZAIG IAmb IAmb 05 14 28.0
comp=Z,6.8nm,0.9s
OBN **Obninsk** **67.95 336** *e*P **P** **05 14 27.3 +0.4**
OBN *e* 05 14 47.0
OBN *e* 05 16 52.9
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,110nm,17.0s
GUN **Gumba** **68.11 288** *e*P **P** **05 14 29.7 +0.9**
comp=Z,40nm,0.7s
JIRN **Jiri** **68.11 287** *e*P **P** **05 14 29.8 +1.0**
comp=Z,42nm,0.7s
SSPA **Standing Stone** **68.22 52** P **P** **05 14 28.3 -0.5**
SSPA IAmb IAmb 05 14 29.2
comp=Z,12nm,1.0s
SSPA **Standing Stone** **68.22 52** P **P** **05 14 28.1 -0.8**
baz=320
H62A **Milan** **68.26 45** P **P** **05 14 28.4 -0.6**
H62A IAmb IAmb 05 14 29.3
comp=Z,9.1nm,1.0s
RAMN **Ramite** **68.39 286** *e*P **P** **05 14 31.1 +0.7**
comp=Z,52nm,0.7s
F64A **Sherman** **68.43 42** P **P** **05 14 29.1 -1.0**
F64A IAmb IAmb 05 14 29.8
comp=Z,8.6nm,0.8s
Z47A **Carrollton** **68.54 63** P **P** **05 14 30.5 -0.4**
Z47A IAmb IAmb 05 14 30.6
comp=Z,8.3nm,0.7s
N58A **Sunbury** **68.63 51** P **P** **05 14 30.8 -0.6**
N58A IAmb IAmb 05 14 32.0
comp=Z,10.0nm,0.8s
PKI **Pulchoki** **68.64 288** *e*P **P** **05 14 32.5 +0.5**
comp=Z,27nm,0.7s
PKIN **Phulchoki** **68.64 288** *e*P **P** **05 14 32.6 +0.6**
comp=Z,21nm,0.6s
GKN **Gorkha** **68.77 288** *e*P **P** **05 14 33.3 +0.6**
DMN **Daman** **68.79 288** *e*P **P** **05 14 33.8 +0.9**
comp=Z,22nm,0.7s
TKL **Tuckaleechee C** **69.03 59** LR LR 05 46 30.9
comp=Z,77nm,18.6s,baz=336,slow=38
DANN **Dangsing** **69.03 289** *e*P **P** **05 14 35.1 +0.7**
comp=Z,25nm,0.7s
L61B **Northampton** **69.26 47** P **P** **05 14 33.9 -1.4**
baz=322
LRAL **Lakeview Retre** **69.26 63** P **P** **05 14 33.7 -1.7**
baz=319
LUPA **Lehigh Univers** **69.46 50** IAmb IAmb 05 14 36.6
comp=Z,9.2nm,0.9s
KOLN **Koldanda** **69.56 289** *e*P **P** **05 14 38.1 +0.5**
comp=Z,1.8nm,0.8s
BLA **Blacksburg** **69.59 56** P **P** **05 14 36.3 -1.2**
baz=320
EMMW **East Machias** **69.73 42** P **P** **05 14 37.3 -0.8**
PAL **Palisades** **69.83 49** P **P** **05 14 37.4 -1.4**
baz=322
LMN **Caledonia Moun** **69.88 40** P **P** **05 14 38.5 -0.6**
LMN IAmb IAmb 05 14 57.0
comp=Z,15nm,1.2s
VORR **Voronezh** **70.32 333** *e*P P **05 14 47.3 +5.7**
VORR pmax pmax
comp=Z,50nm,0.4s
KMSC **Kings Mountain** **70.70 58** P **P** **05 14 43.8 -0.4**
KMSC IAmb IAmb 05 14 44.3
comp=Z,8.5nm,0.9s
KMSC **Kings Mountain** **70.70 58** P **P** **05 14 43.8 -0.4**
baz=320
NIL **Nilore** **70.94 300** P **P** **05 14 45.8 +0.1**
NIL IAmb IAmb 05 14 47.1
comp=Z,8.5nm,0.8s
NIL **Nilore** **70.94 300** P **P** **05 14 45.8 +0.1**
NIL pmax pmax
comp=Z,9.0nm,0.8s
TAOE **Nuku Hiva Isla** **71.64 133** *e*LR LR 05 36 43.9
comp=Z,102nm,26.1s
KBL **Kabul** **72.46 304** P **P** **05 14 54.5 -0.7**
KBL IAmb IAmb 05 14 55.4
comp=Z,7.7nm,0.7s
KBL **Kabul** **72.46 304** P **P** **05 14 54.5 -0.7**
KBL pmax pmax
comp=Z,8.0nm,0.7s
AKASG **Malin Array Be** **73.78 338** P **P** **05 15 02.7 +0.3**
comp=Z,4.0nm,0.6s,baz=26,slow=6.1,SNR=12
comp=Z,4.0nm,0.6s
AKBB **Malin Array Si** **73.78 338** P **P** **05 15 02.8 +0.4**
AKBB IAmb IAmb 05 15 03.6
comp=Z,6.4nm,0.8s
AKBB **Malin Array Si** **73.78 338** *ce*P **P** **05 15 02.0 -0.4**
AKBB pmax pmax
comp=Z,7.0nm,0.9s
DZM **Mont Dzumac** **74.02 188** *e*LR LR 05 37 52.8
comp=Z,116nm,24.9s
TLIG **Tlapa** **74.15 82** P **P** **05 15 05.9 +0.7**
GOF **Gofitskoye** **74.98 327** ⇑*e*P P 05 15 20.4 +11
GEYT **Alibeck** **75.05 313** LR LR 05 51 31.4
comp=Z,96nm,18.7s,baz=32,slow=38
PPT2 **Papeete2** **75.72 145** *e*LR LR 05 38 38.3
comp=Z,50nm,22.0s
KIV **Kislovodsk** **76.07 327** *e*P **P** **05 15 17.0 +1.2**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KWP **Kalwaria Pacla** **76.17 342** *e*P **P** **05 15 19.5 +3.3**
KBZ **Khabaz** **76.19 326** P **P** **05 15 18.2 +1.8**
comp=Z,6.4nm,0.9s,baz=134,slow=0.6,SNR=11
comp=Z,6.4nm,0.9s
KBZ **Khabaz** **76.19 326** *ce*P **P** **05 15 17.6 +1.2**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
SHA1 **Shidzhatmaz** **76.27 327** *i* P **P** **05 15 18.3 +1.1**
ZEI **Tsey** **76.67 325** *e*P **P** **05 15 20.1 +0.7**
ZEI pmax pmax
comp=Z,12nm,0.9s

BUR08	**Bucovina Ar. S**	**77.56**	**340**	IAmb	IAmb	05 15 26.3		
	comp=Z,7.4nm,0.7s							
GERES	**GERESS Array B**	**78.41**	**348**	P	**P**	**05 15 29.9**	**+1.1**	
	comp=Z,0.3nm,0.2s,baz=15,slow=5.5,SNR=4.4							
	comp=Z,0.3nm,0.2s							
MLR	**Muntele Rosu**	**79.44**	**338**	IAmb	IAmb	05 15 37.4		
	comp=Z,7.5nm,0.6s							
WB0	**Warramunga Arr**	**79.70**	**219**	P	**P**	**05 15 35.5**	**-0.5**	
WB0				IAmb	IAmb	05 15 35.9		
	comp=Z,5.9nm,0.8s							
WR0	**Warramunga Arr**	**79.82**	**218**	P	**P**	**05 15 36.2**	**-0.5**	
WR0				IAmb	IAmb	05 15 36.5		
	comp=Z,4.7nm,0.8s							
WRAB	**Tennant Creek**	**79.87**	**219**	*ce*P	**P**	**05 15 35.2**	**-1.7**	
WRAB				pmax	pmax			
	comp=Z,13nm,2.5s							
WB2	**Warramunga Arr**	**79.88**	**219**	P	**P**	**05 15 36.3**	**-0.7**	
WB2				IAmb	IAmb	05 15 37.4		
	comp=Z,11nm,0.9s							
WRA	**Warramunga Arr**	**79.88**	**219**	P	**P**	**05 15 36.5**	**-0.5**	
	comp=Z,4.3nm,0.8s,baz=32,slow=6.3,SNR=27							
	comp=Z,4.3nm,0.8s							
WRA	**Warramunga Arr**	**79.88**	**219**	P	**P**	**05 15 36.2**	**-0.8**	
WRA	**Warramunga Arr**	**79.88**	**219**	P	**P**	**05 15 36.2**	**-0.8**	
WRA				pmax	pmax			
	comp=Z,1.0nm,1.2s							
KBA	**Koelnbreinsper**	**80.19**	**347**	*e*P	**P**	**05 15 39.8**	**+1.0**	
	comp=Z,5.5nm,0.5s							
OBKA	**Obir**	**80.58**	**347**	*e*P	**P**	**05 15 38.4**	**-2.3**	
	comp=Z,1.2nm,0.3s							
TBI	**Tubuai**	**81.09**	**147**	*e*LR	LR	05 41 09.0		
	comp=Z,52nm,24.2s							
FITZ	**Fitzroy Crossi**	**81.89**	**227**	P	**P**	**05 15 48.5**	**+0.7**	
FITZ				IAmb	IAmb	05 16 03.9		
	comp=Z,7.8nm,1.1s							
MARD	**Mardin**	**82.63**	**325**	IAmb	IAmb	05 15 54.4		
	comp=Z,10nm,0.9s							
BR131	**Keskin Array S**	**82.79**	**331**	IAmb	IAmb	05 15 54.3		
	comp=Z,8.5nm,0.8s							
BR131	**Keskin Array S**	**82.79**	**331**	*i* P	**P**	**05 15 52.7**	**+0.1**	
BRTR	**Keskin Array B**	**82.79**	**331**	P	**P**	**05 15 53.3**	**+0.7**	
	comp=Z,5.1nm,0.7s,baz=58,slow=3.3,SNR=17							
	comp=Z,5.1nm,0.7s							
BRTR	**Keskin Array B**	**82.79**	**331**	P	**P**	**05 15 53.7**	**+1.2**	
BRTR	**Keskin Array B**	**82.79**	**331**	*e*P	**P**	**05 15 53.6**	**+1.0**	
BRTR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
BNI	**Bardonecchia**	**82.94**	**352**	IAmb	IAmb	05 15 56.9		
	comp=Z,3.9nm,0.8s							
MSSA	**Maissana**	**83.38**	**350**	P	**P**	**05 15 56.4**	**+1.0**	
ASAR	**Alice Springs**	**83.42**	**217**	P	**P**	**05 15 55.9**	**+0.2**	
	comp=Z,3.0nm,0.7s,baz=23,slow=5.1,SNR=26							
	comp=Z,3.0nm,0.7s							
MTDJ	**Mount Denham**	**86.10**	**65**	P	**P**	**05 16 10.0**	**+0.5**	
STKA	**Stephens Creek**	**88.43**	**208**	P	**P**	**05 16 20.8**	**+0.6**	
	comp=Z,2.7nm,0.7s,baz=332,slow=9.7,SNR=5.2							
	comp=Z,2.7nm,0.7s							
STKA	**Stephens Creek**	**88.43**	**208**	P	**P**	**05 16 20.9**	**+0.7**	
STKA				IAmb	IAmb	05 16 45.2		
	comp=Z,3.1nm,1.4s							
ESDC	**Sonseca Array**	**88.82**	**359**	P	**P**	**05 16 22.2**	**-0.1**	
	comp=Z,0.5nm,0.7s,baz=3.0,slow=5.7,SNR=2.6							
	comp=Z,0.5nm,0.7s							
SJG	**San Juan**	**92.36**	**57**	LR	LR	06 00 09.7		
	comp=Z,32nm,19.2s,baz=330,slow=37							
TORD	**Torodi Ar. Bea**	**115.00**	**353**	PKP	**PKiKP**	**05 22 08.3**	**-1.2**	
	comp=Z,1.8nm,0.3s,baz=15,slow=2.2,SNR=2.1							
SIV	**San Ignacio**	**123.15**	**73**	PKP	**PKPdf**	**05 22 24.4**	**-0.7**	
	comp=Z,1.0nm,0.7s,baz=199,slow=2.3,SNR=5.6							
H03N2	**Juan Fernandez**	**124.96**	**101**	T	T	07 39 40.4		
	baz=314,slow=77,SNR=12							
H03N1	**Juan Fernandez**	**124.97**	**101**	T	T	07 39 54.4		
	baz=314,slow=77,SNR=10							
H03N3	**Juan Fernandez**	**124.97**	**101**	T	T	07 39 40.9		
	baz=314,slow=77,SNR=10.0							
BDFB	**Brasilia**	**130.26**	**60**	PKP	**PKPdf**	**05 22 38.9**	**+0.1**	
	comp=Z,0.9nm,0.4s,baz=334,slow=2.6,SNR=4.2							
PLCA	**Paso Flores**	**134.77**	**103**	PKP	**PKPdf**	**05 22 46.9**	**+0.4**	
	comp=Z,1.6nm,0.8s,baz=283,slow=1.7,SNR=7.4							
MAW	**Mawson**	**144.55**	**218**	PKP	PKPbc	05 23 02.1	0.0	
	comp=Z,16nm,0.8s,baz=68,slow=3.2,SNR=18							
BOSA	**Boshof**	**147.68**	**304**	PKPbc	**PKPbc**	**05 23 13.1**	**+0.2**	
	comp=Z,4.4nm,0.7s,baz=19,slow=2.9,SNR=8.7							
TROLL	**Troll, Antarti**	**159.53**	**187**	PKPab	**PKPab**	**05 24 02.7**	**-1.2**	
SNAA	**Sanae**	**160.11**	**182**	PKPab	**PKPab**	**05 24 04.7**	**-1.6**	
VNA3	**Neumayer Olymp**	**160.44**	**175**	PKPab	**PKPab**	**05 24 06.6**	**-1.2**	
VNA2	**Neumayer--Watz**	**160.85**	**178**	PKPab	**PKPab**	**05 24 08.3**	**-1.2**	
VNA2	**Neumayer--Watz**	**160.85**	**178**	PKPdf	**PKPdf**	**05 23 26.9**	**0.0**	
	baz=32,slow=0.3							
VNA1	**Neumayer--Stat**	**161.10**	**177**	PKPab	**PKPab**	**05 24 09.5**	**-1.1**	
VNA1	**Neumayer--Stat**	**161.10**	**177**	PKPdf	**PKPdf**	**05 23 25.1**	**-2.0**	

*IDC **25** 05:10:31.5±1.3,27.89N×139.97E,h499km±21km,mb3.2/6, mbtmp4.0/8,Error ellipse: s-maj=62.8km s-min=14.2km az=81.0*
*JMA **25** 05:10:32.6±0.2,28°N±2°×14°0E±°,h497km,MV4.2/23,W OFF OGASAWARA*
ISC 25 05:10:31.5±0.8,27.8N±0.1°×140.1E±0.2,h500km,n20, σ1§00/23,mb3.5/6,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.01**	**111**	P	**P**	**P**	**05 11 37.2**	**+0.6**
CBIJ				S	**S**	**S**	**05 12 28.4**	**-1.2**
JCJ	**Chichijima**	**2.01**	**111**	P	**P**	**P**	**05 11 37.0**	**+0.3**
	139nm,0.3s,baz=294,slow=23,SNR=40							
JCJ				S	**S**	**S**	**05 12 27.7**	**-1.8**
	87nm,0.3s,baz=303,slow=22,SNR=7.6							
JHH2	**Haha-jima-NKT2**	**2.22**	**122**	P	*e*	**P**	**05 11 39.0**	**+1.3**
JHH2				S	*e*	**S**	**05 12 32.0**	**+0.4**
BSO1	**Boso 1**	**6.84**	**6**	P		**P**	**05 12 16.0**	**+0.7**
BSO4	**Boso 4**	**7.14**	**2**	*e*P		**P**	**05 12 18.6**	**-0.2**
JIE	**Ise**	**7.15**	**337**	*e*P		**P**	**05 12 20.7**	**+1.6**
JKN2	**Miekihoku**	**7.17**	**334**	P		**P**	**05 12 20.1**	**+0.9**
JRY	**Ryogami san**	**8.22**	**353**	*e*P		**P**	**05 12 30.3**	**+0.2**
JAG	**Ashikaga**	**8.59**	**357**	P		**P**	**05 12 32.7**	**-1.1**
JHO	**Hitachi**	**8.76**	**3**	P		**P**	**05 12 35.6**	**0.0**
MJAR	**Matsushiro Arr**	**8.83**	**350**	P		**P**	**05 12 35.8**	**-0.6**
	2.1nm,0.4s,baz=166,slow=11,SNR=6.1							
JFK	**Kawauchi**	**9.53**	**4**	P		**P**	**05 12 44.3**	**+0.5**
USRK	**Ussuriysk Ar.**	**17.58**	**340**	P		**P**	**05 14 09.7**	**+1.9**
	0.8nm,0.5s,baz=136,slow=10,SNR=2.1							
WRA	**Warramunga Arr**	**47.82**	**187**	P		**P**	**05 18 23.5**	**+0.3**
	1.7nm,0.3s,baz=2.1,slow=7.6,SNR=59							
	1.7nm,0.3s							
MKAR	**Makanchi Array**	**48.56**	**309**	P		**P**	**05 18 27.6**	**-0.9**
	0.4nm,0.4s,baz=89,slow=9.9,SNR=7.6							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**51.54**	**187**	P		**P**	**05 18 51.1**	**+0.5**
	0.5nm,0.4s,baz=14,slow=14,SNR=6.7							
	0.5nm,0.4s							
ARCES	**ARCESS Array B**	**72.23**	**340**	P		**P**	**05 21 05.2**	**+0.2**
	1.0nm,0.6s,baz=73,slow=9.2,SNR=6.6							
	1.0nm,0.6s							
FINES	**FINESS Array B**	**76.45**	**333**	P		**P**	**05 21 28.4**	**-0.5**
	2.1nm,0.3s,baz=69,slow=5.2,SNR=19							
	2.1nm,0.3s							
NB2	**NORSAR Subarra**	**82.23**	**338**	P		**P**	**05 21 58.6**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=44,slow=5.1							
NOA	**NORSAR Array B**	**82.23**	**338**	P		**P**	**05 21 58.6**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=45,slow=4.9,SNR=4.2							
	comp=Z,0.6nm,0.6s							

*DSN **25** 05:23:05.3±3.0,27.80N×58.34E,h10km,ML3.2/2,Error ellipse: s-maj=64.2km s-min=17.3km az=151.0*
*TEH **25** 05:23:07.1,27.97N×54.69E,h9km,ML3.5*
ISC 25 05:23:08.0±0.9,27.94N±0.04×54.73E±0.04,h17km,n48, σ1§95/50,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.41**	**229**	*e*Pg		**Pg**	**05 23 15.0**	**-1.4**
LAR1				*e*			05 23 28.3	
	comp=Z,91μm,0.5s							
JHRM	**Jahrom**	**1.16**	**299**	*e*Pg		**Pn**	**05 23 29.1**	**-0.4**
JHRM				*e*			05 24 06.0	
	comp=Z,19μm,0.4s							
GENO	**Geno**	**1.39**	**112**	*e*Pn		**Pn**	**05 23 33.5**	**+0.7**
GENO				*e*			05 24 06.7	
	comp=Z,5μm,0.6s							
LMD1	**Lamerd**	**1.51**	**247**	*e*Pg		**Pb**	**05 23 35.6**	**+0.1**
LMD1				*e*Sg		**Sg**	**05 23 57.0**	**+0.3**
LMD1				*e*			05 24 02.9	
	comp=Z,12μm,0.6s							
QIR1	**Qir**	**1.58**	**290**	*e*Pg		**Pg**	**05 23 37.0**	**-1.4**
QIR1				*e*			05 24 10.6	
	comp=N,13μm,0.6s							
SHME	**Shamm**	**2.27**	**146**	*e*Pn		**Pb**	**05 23 47.2**	**-1.3**
SHME	**Shamm**	**2.27**	**146**	P		**Pb**	**05 23 47.8**	**-0.7**
SHME				S		**Sg**	**05 24 20.7**	**-0.2**
NGRK	**Negar Kerman**	**2.44**	**46**	*e*Pn		**Pn**	**05 23 48.4**	**+0.9**
NGRK				*e*			05 24 37.2	
	comp=Z,2μm,0.3s							
KHNJ	**Kahnooj**	**2.64**	**89**	*e*Pn		**Pn**	**05 23 51.8**	**+2.0**
KRBR	**Kerman**	**2.71**	**41**	*e*Pn		**Pn**	**05 23 53.3**	**+2.3**
TVBK	**TV Kerman**	**2.71**	**41**	*e*Pn		**Pb**	**05 23 53.6**	**-2.6**
TVBK				*e*			05 24 39.5	
	comp=Z,3μm,0.2s							
ESRB	**Sir Abu**	**2.74**	**189**	*e*Pn		**Pn**	**05 23 53.3**	**+2.1**
KHGB	**Koh Gabri**	**2.87**	**32**	*e*Pn		**Pn**	**05 23 54.9**	**+1.7**
KHGB				*e*			05 24 02.9	
	comp=Z,1μm,0.6s							
MSFE	**Esma-Masafi**	**2.87**	**153**	*e*Pn		**Pn**	**05 23 56.2**	**+3.2**
MDH	**Madha**	**2.98**	**151**	*e*Pn		**Pn**	**05 23 57.9**	**+3.4**
CHMN	**Cheshme madani**	**3.12**	**52**	*e*Pn		**Pn**	**05 23 59.0**	**+2.2**
CHMN				*e*			05 24 51.3	
	comp=N,1μm,0.4s							
AHBU	**AHRAM**	**3.16**	**288**	*e*Pn		**Pn**	**05 23 58.1**	**+1.2**
UOSS	**Minazif**	**3.26**	**156**	*e*Pn		**Pn**	**05 24 01.7**	**+3.3**
UOSS	**Minazif**	**3.26**	**156**	P		**Pn**	**05 24 00.2**	**+1.8**
FAQ	**Al Faqa, Dubai**	**3.27**	**166**	*e*Pn		**Pn**	**05 24 01.4**	**+2.9**
ASUD	**Al Ashush, Dub**	**3.34**	**171**	*e*Pn		**Pn**	**05 24 02.8**	**+3.3**
HATD	**Hatta, Dubai**	**3.35**	**158**	*e*Pn		**Pn**	**05 24 02.4**	**+2.8**
IMEH	**Mehriz**	**3.44**	**358**	*e*Pn		**Pn**	**05 24 03.2**	**+2.2**
ASHO	**Ashiyiah**	**3.46**	**159**	*e*Pn		**Pn**	**05 24 02.3**	**+1.2**
ASHO	**Ashiyiah**	**3.46**	**159**	P		**Pn**	**05 24 01.7**	**+0.6**
JASK	**Jask - Hormozg**	**3.48**	**126**	*e*Pn		**Pn**	**05 24 04.6**	**+3.2**
JASK				*e*			05 25 28.5	
	comp=N,1μm,0.7s							
KBAM	**BAM**	**3.49**	**69**	*e*Pn		**Pn**	**05 24 03.0**	**+1.4**
KBAM				*e*			05 25 07.0	
	comp=Z,728nm,0.4s							
IBAF	**Bafgh**	**3.71**	**11**	*e*Pn		**Pn**	**05 24 06.3**	**+1.6**
ISAD	**Sadrabad**	**4.06**	**347**	*e*Pn		**Pn**	**05 24 12.0**	**+2.4**
ISAD				*e*			05 25 21.5	
	comp=Z,507nm,0.7s							
KLNJ	**Kolanjah**	**4.10**	**319**	*e*Pn		**Pn**	**05 24 10.6**	**+0.4**
ICHK	**Chekchek**	**4.30**	**356**	*e*Pn		**Pn**	**05 24 14.5**	**+1.7**
IRAM	**Ramesheh**	**4.36**	**333**	*e*Pn		**Pn**	**05 24 15.6**	**+1.9**
YZKH	**Yazd**	**4.44**	**359**	*e*Pn		**Pn**	**05 24 16.8**	**+2.2**
NASN	**Na'in**	**5.12**	**342**	*e*Pn		**Pn**	**05 24 26.3**	**+2.1**
TPRV	**Parvadeh(Tabas**	**5.35**	**18**	*e*Pn		**Pn**	**05 24 28.5**	**+1.4**
IZEF	**Zefreh**	**5.36**	**338**	*e*Pn		**Pn**	**05 24 28.1**	**+0.7**
BSRN	**Basiran**	**5.54**	**43**	*e*Pn		**Pn**	**05 24 31.3**	**+1.5**
ZHSF	**Zahedan**	**5.56**	**71**	*e*Pn		**Pn**	**05 24 32.8**	**+2.6**
IPIR	**Pirpir**	**5.77**	**326**	*e*Pn		**Pn**	**05 24 34.2**	**+1.0**
IKLH	**Kolahrood**	**6.01**	**334**	*e*Pn		**Pn**	**05 24 36.7**	**+0.3**
TKDS	**Koohdasht(Taba**	**6.02**	**19**	*e*Pn		**Pn**	**05 24 37.7**	**+1.3**
TABS	**Tabas**	**6.05**	**19**	*e*Pn		**Pn**	**05 24 38.9**	**+2.1**
TNSJ	**Nastanj**	**6.22**	**15**	*e*Pn		**Pn**	**05 24 39.8**	**+0.7**
KRSH	**Karshahi**	**6.41**	**340**	*e*Pn		**Pn**	**05 24 42.8**	**+1.0**
ISFB	**Sefidab**	**6.74**	**342**	*e*Pn		**Pn**	**05 24 48.1**	**+1.9**
KHMZ	**Khomeyn**	**7.08**	**326**	*e*Pn		**Pn**	**05 24 52.8**	**+1.7**
ASAO	**Ashtian**	**7.72**	**330**	*e*Pn		**Pn**	**05 25 01.7**	**+1.9**
SNGE	**Sanandaj**	**9.51**	**320**	*e*Pn		**Pn**	**05 25 26.8**	**+2.4**

*JMA **25** 05:28:43.1±1.1,45°N±4°×15°1E±°,h30km,MD4.8/16, MV5.0/16,KURILE ISLANDS REGION*
*BJI **25** 05:28:43.5±0.0,45°.15N×151°.33E,h58km,mb4.7/51, mB4.8/23,Ms4.5/30,Ms7 4.2/29*
*NIED **25** 05:28:43.1,45°.30N×151°.01E,h30km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.05; Mθθ-0.01; Mφφ-1.04; Mrθ0.44; Mθφ-0.42; Mφr0.49; Fault plane solution: M₀1.30000×10¹⁶ NP1: φs187.00000°,δ32.00000°,λ69.00000°. NP2:φs31.00000°, δ61.00000°,λ103.00000°.*
*SKHL **25** 05:28:44.0±0.0,45°.10N×151°.20E,h47km±9km,mb5.2/7*
*MOS **25** 05:28:45.0±0.9,45°.26N×150°.75E,h52km,mb5.0/40, MS3.9/9,Error ellipse: s-maj=8.2km s-min=6.3km az=83.8*
*IDC **25** 05:28:46.8±2.7,45°.38N×150°.81E,h48km±25km,mb4.2/23, mbtmp4.5/26,ML3.1/3,MS3.8/62,Error ellipse: s-maj=14.5km s-min=11.7km az=137.0*
*NEIC **25** 05:28:47.5±1.4,45°.32N±0°.07×150°.8E±0°.1,h55km±6km, mb4.7/210,Error ellipse: s-maj=11.4km s-min=9.2km az=115.0*
ISC 25 05:28:45.6±0.5,45°.13N±0°.05×150°.93E±0°.04,h45km±3km, h69km:pP-P,n644,σ1§26/558,mb4.7/190,MS4.0/72, 12C-11D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.17**	**274**	*e*PN		**Pn**	**05 29 17.7**	**-1.5**
KUR				*e*S		**Sn**	**05 29 43.5**	**-1.3**
KUR				pmax	pmax			
	comp=E,195nm,0.4s							
KUR				pmax	pmax			
	comp=Z,484nm,0.4s							
KUR				pmax	pmax			
	comp=N,186nm,0.2s							
KUR				smax	smax			
	comp=E,2μm,0.6s							
KUR				smax	smax			
	comp=N,1μm,0.4s							
KUR	**Kuril'sk**	**2.17**	**274**	*e*P		**Pn**	**05 29 19.4**	**+0.2**
KUR				AMB	AMB		05 29 26.4	
	comp=N,480nm,0.4s							
KUR				*e*S		**Sn**	**05 29 46.0**	**+1.2**
KUR				A	A		05 29 50.6	
	comp=N,1μm,0.5s							
KUR				A	A		05 29 50.6	
	comp=N,2μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**3.78**	**255**	PN		**Pn**	**05 29 41.1**	**-0.2**
YUK				*e*S		**Sn**	**05 30 25.0**	**+0.5**
YUK				smax	smax			
	comp=N,1μm,0.6s							
YUK				smax	smax			
	comp=E,911nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**3.78**	**255**	*e*P		**Pn**	**05 29 42.3**	**+1.0**
YUK				AMB	AMB		05 29 47.3	
	comp=E,540nm,0.3s							
YUK				*e*S		**Sn**	**05 30 26.0**	**+1.5**
YUK				A	A		05 30 30.3	
	comp=E,1μm,0.6s							
YUK				A	A		05 30 30.3	
	comp=E,910nm,0.6s							
NEM2	**Nemuro 2**	**4.12**	**247**	*e*P		**Pn**	**05 29 44.8**	**-1.2**
NEM2				*e*S		**Sn**	**05 30 30.5**	**-2.4**
NMR	**Nemuro--Hokkai**	**4.13**	**247**	*e*PN		**Pn**	**05 29 44.8**	**-1.3**
NMR				*e*S		**Sn**	**05 30 31.6**	**-1.5**
NMR	**Nemuro--Hokkai**	**4.13**	**247**	*e*P		**Pn**	**05 29 44.8**	**-1.3**
NMR				*e*S		**Sn**	**05 30 31.8**	**-1.3**
JRA	**Rausu**	**4.32**	**256**	*e*P		**Pn**	**05 29 50.1**	**+1.4**
JNSB	**Nemuroshibetsu**	**4.45**	**254**	A		A	05 29 49.2	
	comp=E,3.0nm,3.1s,comp=E,3.0nm,1.4s							
JNK	**Nakash**	**4.71**	**253**	*e*P		**Pn**	**05 29 54.4**	**+0.3**
JNK				*e*S		**Sn**	**05 30 47.4**	**-0.1**
JAK	**Akkeshi**	**4.97**	**247**	*e*P		**Pn**	**05 29 56.3**	**-1.3**
JAK	**Akkeshi**	**4.97**	**247**	A		A	05 29 56.3	
	comp=E,2.0nm,0.9s,comp=E,2.0nm,3.7s							
JTKR	**Abashiri--Toko**	**5.15**	**259**	*e*P		**Pn**	**05 30 01.1**	**+1.0**
JAR	**Ashorobuto**	**5.46**	**253**	*e*P		**Pn**	**05 30 05.2**	**+0.8**
JAR				*e*S		**Sn**	**05 31 06.7**	**+0.8**
JOB	**Onbets**	**5.58**	**249**	*e*P		**Pn**	**05 30 05.8**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.97**	**291**	Pn		**Pn**	**05 30 10.8**	**-0.6**
YSS	**Yuzh-Sakhalins**	**5.97**	**291**	*e*PN		**Pn**	**05 30 14.9**	**+3.5**
YSS				*e*S		**Sn**	**05 31 22.5**	**+4.0**
YSS				pmax	pmax			
	comp=Z,40nm,0.8s							
YSS				smax	smax			
	comp=E,40nm,0.6s							
YSS				MLR	MLR			
	comp=Z,2μm,14.0s							
YSS				MLR	MLR			
	comp=E,1μm,16.0s							
YSS	**Yuzh-Sakhalins**	**5.97**	**291**	*e*P		**Pn**	**05 30 13.4**	**+2.0**
YSS				AMB	AMB		05 30 14.3	
	comp=E,60nm,0.3s							
JKK2	**Kamakawa 2**	**5.98**	**261**	*e*P		**Pn**	**05 30 13.3**	**+1.7**
JCH	**Churui**	**6.02**	**248**	*e*P		**Pn**	**05 30 12.2**	**+0.2**
JCH	**Churui**	**6.02**	**248**	A		A	05 30 12.2	
	comp=E,3.0nm,1.1s							
JWK2	**Keihoku**	**6.38**	**275**	*e*P		**Pn**	**05 30 20.5**	**+3.5**
ERM	**Erimo**	**6.44**	**244**	Pn		**Pn**	**05 30 19.6**	**+1.7**
ERM	**Erimo**	**6.44**	**244**	*ce*PN		**Pn**	**05 30 19.9**	**+2.0**
ERM				pmax	pmax			
	comp=Z,345nm,0.6s							
JAB	**Ashibetsu**	**6.45**	**259**	*e*P		Pn	05 30 22.4	+4.4
SKR	**Severo-Kuril's**	**6.56**	**30**	*e*PN		**Pn**	**05 30 17.7**	**-1.7**
SKR				pmax	pmax			
	comp=Z,24nm,0.7s							
SKR				MLR	MLR			
	comp=Z,300nm,16.0s							
SKR	**Severo-Kuril's**	**6.56**	**30**	*e*P		**Pn**	**05 30 18.2**	**-1.2**
SKR				AMB	AMB		05 30 28.1	
	comp=Z,170nm,0.6s							
SKR				*e*S		**Sn**	**05 31 30.0**	**-2.9**
JNBK	**Urakawa-nobuka**	**6.57**	**247**	*e*P		**Pn**	**05 30 18.2**	**-1.4**
JNBK				*e*S		**Sn**	**05 31 30.9**	**-2.4**
JNBK	**Urakawa-nobuka**	**6.57**	**247**	A		A	05 30 18.2	
	comp=Z,5.0nm,1.0s,comp=Z,3.0nm,2.0s							
JEW	**Eniwo**	**7.21**	**255**			**Pn**	**05 30 29.6**	**+1.2**
PAU	**Pauzhetka**	**7.46**	**30**	*e*P		**Pn**	**05 30 31.0**	**-0.7**
PAU				AMB	AMB		05 30 38.2	
	comp=Z,70nm,0.4s							
PAU				*e*S		**Sn**	**05 31 50.8**	**-4.1**
PAU				A	A		05 32 01.1	
	comp=Z,150nm,0.6s							
PAU				A	A		05 32 01.1	
	comp=Z,90nm,0.6s							
TYV	**Tymovskoe**	**7.98**	**319**	*e*PN		Pn	05 30 44.0	+5.1
TYV				pmax	pmax			
	comp=Z,200nm,3.1s							
TYV				pmax	pmax			
	comp=Z,28nm,0.9s							
TYV				MLR	MLR			
	comp=Z,2μm,16.0s							
TYV	**Tymovskoe**	**7.98**	**319**	*e*P		Pn	05 30 42.7	+3.8
TYV				AMB	AMB		05 30 49.3	
	comp=Z,50nm,0.8s							
JANG	**Nango**	**8.40**	**239**	*e*P		**Pn**	**05 30 41.7**	**-3.0**
JANG				*e*S		**Sn**	**05 32 10.2**	**-7.9**
JTM	**Tenmabayashi**	**8.43**	**242**	Pn		**Pn**	**05 30 45.7**	**+0.6**
PEA0B	**Petropavlovsk-**	**9.13**	**27**			**Pn**	**05 30 55.0**	**+0.3**
PEA0B	**Petropavlovsk-**	**9.13**	**27**	*ce*PN		**Pn**	**05 30 57.4**	**+2.7**
PETK	**Petropavlovsk-**	**9.13**	**27**	P		**Pn**	**05 30 53.2**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=189,slow=8.5,SNR=12							
PETK				LR	LR		05 34 27.8	
	comp=Z,1μm,19.6s,baz=214,slow=38							
	comp=Z,2.7nm,0.6s							
PETK	**Petropavlovsk-**	**9.13**	**27**			**Pn**	**05 30 55.4**	**+0.7**
PETK	**Petropavlovsk-**	**9.13**	**27**	PN		**Pn**	**05 30 55.4**	**+0.7**
OKH	**Okha**	**9.91**	**331**	*de*PN		Pn	05 31 15.7	+10
OKH				MLR	MLR			
	comp=Z,700nm,12.0s							
OKH				MLR	MLR			
	comp=N,300nm,13.0s							
OKH				MLR	MLR			
	comp=E,800nm,13.0s							
OKH	**Okha**	**9.91**	**331**	*e*P		**Pn**	**05 31 06.4**	**+1.2**
TEY	**Ternei**	**10.13**	**275**	*e*PN		Pn	05 31 14.0	+5.6
TEY				*e*			05 33 03.8	
TEY				pmax	pmax			
	comp=E,30nm,0.8s							
TEY				pmax	pmax			
	comp=Z,30nm,0.8s							
TEY				pmax	pmax			
	comp=N,10.0nm,0.8s							
TEY	**Ternei**	**10.13**	**275**	*e*P		**Pn**	**05 31 12.0**	**+3.6**
TEY				AMB	AMB		05 31 15.6	
	comp=N,30nm,0.8s							
JMM	**Marumori**	**10.50**	**230**	Pn		**Pn**	**05 31 16.3**	**+2.9**
JSD	**Sado**	**11.83**	**238**	Pn		**Pn**	**05 31 29.5**	**-2.2**
MAJO	**Matsushiro**	**12.88**	**233**	Pn		**Pn**	**05 31 43.9**	**-2.1**
MAJO	**Matsushiro**	**12.88**	**233**	PN		**Pn**	**05 31 43.9**	**-2.1**
MJAR	**Matsushiro Arr**	**12.88**	**233**	P		**Pn**	**05 31 44.5**	**-1.5**
	comp=N,2.0nm,0.6s,baz=28,slow=14,SNR=6.9							
MJAR				LR	LR		05 37 12.9	
	comp=N,404nm,21.8s,baz=33,slow=39							
USRK	**Ussuriysk Ar.**	**13.52**	**273**	P		**Pn**	**05 31 54.8**	**+0.2**
	comp=N,0.1nm,0.3s,baz=84,slow=14,SNR=13							
USRK				LR	LR		05 37 08.2	
	comp=N,325nm,18.3s,baz=202,slow=37							
	comp=N,7.3nm,0.7s							
USRK	**Ussuriysk Ar.**	**13.52**	**273**	Pn		**Pn**	**05 31 53.3**	**-1.3**
KLR	**Kul'dur**	**13.67**	**294**	*i* P		**Pn**	**05 31 59.0**	**+2.3**
INU	**Inuyama**	**14.41**	**232**	Pn		**

XLT PP PnPn 05 34 38.8 +2.2
XLT S S 05 38 26.6 +4.3
XLT pmax pmax
comp=Z,21nm,0.8s
XLT pmax pmax
comp=Z,85nm,6.2s
XLT LR LR
comp=Z,410nm,17.7s
XLT LR LR
comp=Z,470nm,18.2s
SSE Sheshan 27.09 249 P P 05 34 24.1 0.0
SSE S S 05 39 03.5 +4.5
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,59nm,3.3s
SSE LR LR
comp=Z,75nm,18.2s
SSE LR LR
comp=Z,160nm,17.1s
NJ2 Nanjing 28.07 253 *e*P P 05 34 32.8 0.0
NJ2 pmax pmax
comp=Z,12nm,0.5s
H11N2 WAKE ISLAND Hy 28.58 147 T T 06 05 18.8
baz=336,slow=75,SNR=290
H11N1 WAKE ISLAND Hy 28.59 147 T T 06 05 19.9
baz=336,slow=75,SNR=263
H11N3 WAKE ISLAND Hy 28.60 147 T T 06 05 22.0
baz=336,slow=75,SNR=291
TIXI Tiksi 28.63 346 LR LR 05 46 26.6
comp=Z,192nm,18.9s,baz=174,slow=37
H11S1 WAKE ISLAND Hy 29.62 149 T T 06 07 36.0
baz=338,slow=76,SNR=890
H11S3 WAKE ISLAND Hy 29.63 149 T T 06 07 37.7
baz=338,slow=76,SNR=434
H11S2 WAKE ISLAND Hy 29.64 149 T T 06 07 37.5
baz=338,slow=76,SNR=582
ULN Ulaanbaatar 30.03 291 P P 05 34 49.6 -0.6
ULN Ulaanbaatar 30.03 291 *ce*P P 05 34 50.1 -0.1
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 30.03 291 *e*P P 05 34 50.1 -0.1
BTO Baotou 30.09 276 *e*P P 05 34 51.4 +0.6
BTO S S 05 39 45.3 -0.9
BTO LR LR
comp=Z,1μm,17.5s
BTO LR LR
comp=Z,950nm,16.9s
TNA Tin City 30.23 33 P P 05 34 52.7 +1.1
baz=248
SONM Songino Array 30.47 291 P P 05 34 54.0 -0.1
comp=Z,1.6nm,0.7s,baz=78,slow=7.2,SNR=8.7
SONM PcP PcP 05 37 53.5 +1.0
comp=Z,0.7nm,0.6s,baz=150,slow=3.3,SNR=3.5
SONM LR LR 05 48 10.2
comp=Z,414nm,18.1s,baz=52,slow=38
comp=Z,1.6nm,0.7s
SONM Songino Array 30.47 291 P P 05 34 52.9 -1.2
ANM Nome 30.90 36 P P 05 34 58.0 +0.4
baz=253
GUMO Guam 31.85 191 LR LR 05 46 03.6
comp=Z,134nm,21.4s,baz=331,slow=32
TPUB Ta-pu 32.88 239 P P 05 35 16.0 +0.6
TPUB pP sP 05 35 28.4 -2.1
N16K Nishlik Lake 33.12 44 P P 05 35 17.3 +0.1
baz=266
XAN Xi'an 33.87 266 P P 05 35 23.8 -0.1
XAN pmax pmax
comp=Z,4.0nm,1.0s
XAN LR LR
comp=Z,200nm,16.2s
XAN LR LR
comp=Z,250nm,15.9s
XAN LR LR
comp=Z,380nm,15.9s
O17K Koliganek Bris 33.92 46 P P 05 35 24.9 +0.9
baz=268
N18K Kilae Creek 34.55 44 P P 05 35 29.8 +0.3
baz=269
TTA Tatalina 34.65 40 P P 05 35 30.4 0.0
TTA Tatalina 34.65 40 P P 05 35 30.4 0.0
TTA pmax pmax
comp=Z,4.0nm,0.8s
TTA Tatalina 34.65 40 P P 05 35 30.7 +0.4
baz=265
SVW2 Sparrevohn 34.72 43 P P 05 35 30.8 -0.2
N19K Bonanza Creek 35.24 44 P P 05 35 36.0 +0.4
baz=269
M19K Big River Lodg 35.33 42 P P 05 35 36.7 +0.6
baz=268
K20K Telida 35.56 39 P P 05 35 38.9 +0.7
K20K Telida 35.56 39 P P 05 35 38.8 +0.6
baz=266
ENH Enshi 35.57 260 P P 05 35 38.1 -0.6
ENH IAmb IAmb 05 35 39.4
comp=Z,9.9nm,1.0s
L20K Farewell, AK 35.59 41 P P 05 35 38.2 -0.3
baz=267
J20K Nowinta River 35.60 38 P P 05 35 38.1 -0.4
J20K IAmb IAmb 05 35 40.3
comp=Z,4.8nm,0.7s
J20K Nowinta River 35.60 38 P P 05 35 38.8 +0.4
baz=265,SNR=8.6
M20K Styx River 35.92 42 P P 05 35 41.7 +0.3
baz=269
IMAR Indian Mountai 35.98 35 P P 05 35 41.6 -0.1
A21K Barrow 36.13 26 P P 05 35 42.9 -0.1
G21K Allakaket 36.15 34 P P 05 35 43.3 +0.1
baz=262,SNR=6.5
F21K Alatna River 36.26 33 P P 05 35 43.9 -0.3
baz=261
KDAK Kodiak Island 36.31 49 P P 05 35 44.9 +0.3
KDAK Kodiak Island 36.31 49 P P 05 35 44.9 +0.3
KDAK pmax pmax
comp=Z,41nm,1.4s
KDAK Kodiak Island 36.31 49 P P 05 35 44.5 -0.2
baz=275
H21K Melozitna Rive 36.32 36 P P 05 35 44.9 +0.2
H21K IAmb IAmb 05 35 45.8
comp=Z,5.0nm,0.8s
H21K Melozitna Rive 36.32 36 P P 05 35 45.0 +0.3
baz=264,SNR=7.9
CHUM Lake Minchumin 36.38 39 P P 05 35 45.5 +0.4
baz=267
LZH Lanzhou 36.42 272 *e*P P 05 35 42.1 -4.0
LZH pP pP 05 35 55.8 -1.2
LZH sP sP 05 36 05.8 +3.9
LZH pmax pmax
comp=Z,25nm,1.0s
LZH LR LR
comp=N,250nm,14.8s
LZH LR LR
comp=E,230nm,14.8s
LZH LR LR
comp=Z,290nm,16.3s
CAST Castle Rocks 36.46 39 P P 05 35 46.8 +0.9
CAST IAmb IAmb 05 35 48.2
comp=Z,5.7nm,0.8s
CAST Castle Rocks 36.46 39 P P 05 35 46.4 +0.5
baz=268,SNR=6.4
I21K Tanana 36.62 36 P P 05 35 47.8 +0.7
I21K IAmb IAmb 05 35 49.8
comp=Z,6.3nm,1.0s
I21K Tanana 36.62 36 P P 05 35 47.3 +0.2
baz=266,SNR=5.7
HOM Homer 36.68 46 P P 05 35 48.6 +0.8
baz=273
F22K John River 36.80 33 P P 05 35 48.9 +0.2
baz=262
H22K Ishtalitna Cre 36.93 35 P P 05 35 50.1 +0.2
baz=265,SNR=5.1
BPAW Bear Paw Mtn. 36.98 38 P P 05 35 50.9 +0.6
BPAW IAmb IAmb 05 35 52.2
comp=Z,4.9nm,0.9s
BPAW Bear Paw Mtn. 36.98 38 P P 05 35 50.3 0.0
baz=268,SNR=5.9
KTH Kantishna Hill 36.98 39 P P 05 35 51.3 +0.9
KTH IAmb IAmb 05 35 52.0
comp=Z,11nm,0.8s
G22K Bettles 36.99 34 P P 05 35 50.1 -0.1
baz=264
E22K Anaktuvuk Pass 37.03 32 P P 05 35 50.7 0.0
baz=262
MLY Manley 37.13 37 P P 05 35 52.4 +0.8
MLY IAmb IAmb 05 35 53.7
comp=Z,5.4nm,0.8s
MLY Manley 37.13 37 P P 05 35 52.1 +0.5
baz=267,SNR=8.7
TRF Thorofare Moun 37.27 39 P P 05 35 53.5 +0.6
baz=269
G23K Bananza Creek 37.55 34 P P 05 35 55.1 0.0
baz=265
D23K Nanushuk River 37.57 30 P P 05 35 55.5 +0.3
baz=262
H23K Yukon River 37.68 36 P P 05 35 57.2 +1.0
H23K IAmb IAmb 05 35 58.6
comp=Z,6.7nm,0.8s
H23K Yukon River 37.68 36 P P 05 35 56.7 +0.5
baz=267,SNR=8.6
I23K Minto, Yukon-K 37.72 37 P P 05 35 57.2 +0.7
I23K Minto, Yukon-K 37.72 37 P P 05 35 56.4 -0.1
baz=268
GTA Gaotai 37.73 280 *e*P P 05 35 56.9 -0.2
GTA PcP PcP 05 38 14.8 +1.5
GTA pmax pmax
comp=Z,9.0nm,0.9s
GTA pmax pmax
comp=Z,69nm,4.7s
GTA LR LR
comp=Z,190nm,14.5s
GTA LR LR
comp=Z,170nm,15.6s
GTA LR LR
comp=Z,230nm,17.1s
C23K Itkillik River 37.73 29 P P 05 35 56.8 +0.2
baz=261
NEA2 Nenana 37.83 38 IAmb IAmb 05 35 59.2
comp=Z,6.6nm,0.8s
NEA2 Nenana 37.83 38 P P 05 35 57.2 -0.2
baz=269
PMR Palmer 37.83 42 P P 05 35 58.2 +0.8
baz=273
MCK McKinley 37.87 39 P P 05 35 58.8 +0.9
baz=270
RND Reindeer 37.91 39 P P 05 35 58.0 -0.2
RND IAmb IAmb 05 36 00.3
comp=Z,11nm,1.3s
RND Reindeer 37.91 39 P P 05 35 58.0 -0.2
RND pmax pmax
comp=Z,11nm,1.3s
TOLK Toolik Lake Re 37.92 31 P P 05 35 58.2 -0.1
TOLK IAmb IAmb 05 36 02.2
comp=Z,6.5nm,0.8s
TOLK Toolik Lake Re 37.92 31 P P 05 35 57.9 -0.4
baz=263
KNK Knik Glacier 38.16 43 P P 05 36 00.6 +0.3
baz=274
MDM Murphy Dome 38.19 37 P 05 36 01.0 +0.5
MDM IAmb IAmb 05 36 02.5
comp=Z,6.6nm,0.7s
SML Sawmill 38.20 42 P P 05 36 00.7 0.0
SML Sawmill 38.20 42 P P 05 36 01.2 +0.5
baz=273,SNR=9.2
WRH Wood River Hil 38.25 38 IAmb IAmb 05 36 07.5
comp=Z,9.7nm,1.3s
D24K Happy Valley 38.26 30 P P 05 36 00.8 -0.1
baz=263
E24K Your Creek 38.26 32 P P 05 36 01.4 +0.3
baz=265
TCOL CIGO, UAF Yank 38.35 37 P P 05 36 02.6 +0.8
TCOL IAmb IAmb 05 36 03.5
comp=Z,12nm,0.8s
TCOL CIGO, UAF Yank 38.35 37 P P 05 36 02.1 +0.4
baz=270
COLA College 38.35 37 P P 05 36 02.2 +0.4
COLA IAmb IAmb 05 36 03.5
comp=Z,12nm,0.8s
COLA College 38.35 37 P P 05 36 02.2 +0.4
COLA pmax pmax
comp=Z,12nm,0.8s
COLA College 38.35 37 P P 05 36 01.8 0.0
baz=270
H24K Noodor Dome 38.36 36 IAmb IAmb 05 36 13.4
comp=Z,7.4nm,1.2s
H24K Noodor Dome 38.36 36 P P 05 36 01.9 -0.1
baz=268
C24K Franklin Bluff 38.37 29 P P 05 36 01.8 -0.1
baz=263
F24K Squaw Lake 38.45 33 P P 05 36 02.3 -0.4
baz=266
M23K Glacier View 38.48 42 P P 05 36 03.1 +0.1
baz=274
POKR Poker Plat Res 38.53 37 IAmb IAmb 05 36 05.7
comp=Z,14nm,0.8s
POKR Poker Plat Res 38.53 37 P P 05 36 03.2 -0.1
baz=270
G24K Hadweenzic Riv 38.56 34 P P 05 36 04.2 +0.6
baz=268,SNR=7.0
DHY Denali Highway 38.59 40 P P 05 36 03.6 -0.4
DHY Denali Highway 38.59 40 P P 05 36 03.6 -0.4
baz=272
HDA Harding Lake 38.74 38 P P 05 36 05.1 0.0
HDA IAmb IAmb 05 36 06.7
comp=Z,7.2nm,0.9s
HDA Harding Lake 38.74 38 P P 05 36 05.1 0.0
baz=271
IL31 38.77 37 P P 05 36 04.9 -0.4
ILAR Eielson Array 38.77 37 P P 05 36 04.6 -0.7
comp=Z,2.9nm,1.0s,baz=265,slow=7.7,SNR=18
ILAR PcP PcP 05 38 15.1 -0.8
comp=Z,1.0nm,0.9s,baz=248,slow=3.8,SNR=3.0
ILAR LR LR 05 53 55.4
comp=Z,121nm,18.8s,baz=270,slow=39
comp=Z,2.9nm,1.0s
D25K Kavik River 39.14 30 P P 05 36 08.2 -0.2
baz=266
H25K Birch Creek 39.21 35 P P 05 36 08.8 -0.2
baz=270
F25K Christian Rive 39.31 33 P P 05 36 10.1 +0.2
baz=268
PRP Porcupine Dome 39.33 36 P P 05 36 10.2 -0.1
PRP Porcupine Dome 39.33 36 P P 05 36 10.6 +0.3
baz=271
E25K Arctic Village 39.36 32 P P 05 36 10.5 +0.3
baz=268
KLU Klutina 39.37 42 P P 05 36 11.0 +0.5
KLU IAmb IAmb 05 36 13.2
comp=Z,13nm,1.0s
KLU Klutina 39.37 42 P P 05 36 10.0 -0.5
baz=276
NRIK Noril'sk 39.38 330 LR LR 05 53 04.7
comp=Z,168nm,20.0s,baz=78,slow=37
J25K Salcha River, 39.42 37 P P 05 36 10.1 -0.7
J25K Salcha River, 39.42 37 P P 05 36 10.2 -0.7
baz=272,SNR=5.2
RIDG Independent Ri 39.69 39 P P 05 36 13.3 +0.2
RIDG Independent Ri 39.69 39 P P 05 36 12.8 -0.3
baz=274
BMAR Burnt Mountain 39.72 33 P P 05 36 14.3 +1.1
GYA Guiyang 39.87 257 ⇓P P 05 36 16.4 +1.3
GYA pmax pmax
comp=Z,16nm,0.8s
F26K Sheenjek River 39.88 33 P P 05 36 15.1 +0.5
baz=270
N25K Chitina, Valde 39.99 42 P P 05 36 16.1 +0.5
baz=277
G26K Porcupine Rive 40.02 34 P P 05 36 16.3 +0.6
baz=271
SCRK Sand Creek 40.06 38 P P 05 36 16.3 +0.1
SCRK Sand Creek 40.06 38 P P 05 36 15.9 -0.3
baz=274
BMRM Bremner River 40.06 43 IAmb IAmb 05 36 40.4
comp=Z,17nm,1.1s
BMRM Bremner River 40.06 43 P P 05 36 16.5 +0.3
baz=277
C27K Jago River 40.10 30 P P 05 36 16.0 -0.3
baz=268
J26L Joseph Creek 40.21 38 P P 05 36 17.7 +0.3
J26L Joseph Creek 40.21 38 P P 05 36 17.1 -0.3
baz=274
L26K Log Cabin Wild 40.42 40 P P 05 36 19.6 +0.5
baz=276
M26K Nabesna, AK 40.65 41 P P 05 36 21.4 +0.3
M26K IAmb IAmb 05 36 24.1
comp=Z,12nm,0.9s
M26K Nabesna, AK 40.65 41 P P 05 36 22.0 +0.9
baz=277,SNR=11
MCARA McCarthy VSAT 40.76 42 P P 05 36 22.1 +0.1
baz=278
E27K Coleen River 40.85 32 P P 05 36 22.7 +0.1
baz=271
K27K Chicken 40.89 38 IAmb IAmb 05 36 25.3
comp=Z,10nm,0.9s
K27K Chicken 40.89 38 P P 05 36 23.2 +0.3
baz=276
H27K Steamboat Moun 40.95 35 P P 05 36 24.2 +0.7
baz=274,SNR=7.4
L27K Beaver Creek, 41.11 40 IAmb IAmb 05 36 27.5
comp=Z,9.7nm,0.8s
L27K Beaver Creek, 41.11 40 P P 05 36 25.7 +0.9
baz=277,SNR=13
BCAR Beaver Creek A 41.12 40 P P 05 36 25.8 +0.8
M27K Edge Creek, AK 41.17 41 IAmb IAmb 05 36 28.4
comp=Z,8.1nm,0.9s
M27K Edge Creek, AK 41.17 41 P P 05 36 26.5 +1.1
baz=278,SNR=5.6
EGAK Eagle 41.22 37 P P 05 36 25.2 -0.4
EGAK Eagle 41.22 37 P P 05 36 25.4 -0.2
baz=276,SNR=8.1
BVCY Beaver Creek 41.63 41 P P 05 36 30.2 +1.0
baz=279,SNR=6.2
CTG Chitna Glacier 41.63 43 P P 05 36 30.1 +0.9
baz=280
CTGM Chitina Glacie 41.64 43 IAmb IAmb 05 36 31.2
comp=Z,12nm,0.8s
YUK3 Moose Creek 41.92 41 P P 05 36 31.8 +0.2
baz=280
DAWY Dawson 42.06 38 P P 05 36 32.2 -0.4
baz=278
O28M Mount Upton 42.22 43 P P 05 36 34.6 +0.3
baz=281
ZALV Zalesovo Beam 42.34 307 PcP PcP 05 38 27.3 -0.3
comp=Z,3.7nm,0.7s,baz=70,slow=3.3,SNR=9.7
ZALV LR LR 05 55 16.9
comp=Z,278nm,18.9s,baz=58,slow=38
I29M Ogilvie Camp, 42.35 36 P P 05 36 35.2 +0.3
baz=278,SNR=6.5
GOMU GeErMu 42.73 278 P P 05 36 38.6 -0.2
GOMU pmax pmax
comp=Z,4.0nm,0.6s
GOMU pmax pmax
comp=Z,62nm,4.1s
GOMU LR LR
comp=Z,250nm,16.7s
GOMU LR LR
comp=Z,340nm,16.9s
GOMU LR LR
comp=Z,420nm,16.5s
M29M Somme Creek 42.73 40 P P 05 36 38.9 +0.8
baz=280,SNR=6.3
QIZ Qiongzhong 42.80 246 P P 05 36 38.6 -0.5
QIZ pP pwP 05 36 54.4 -0.9
QIZ sP sP 05 37 01.3 +6.5
QIZ S S 05 42 58.8 -1.3
QIZ sS sS 05 43 26.4 +8.2
QIZ LR LR
comp=Z,180nm,19.0s
QIZ LR LR
comp=Z,170nm,23.9s
QIZ LR LR
comp=Z,210nm,20.4s
YUK4 Talbot Arm 42.85 42 P P 05 36 39.7 +0.5
baz=282
EPYK Eagle Plains 42.87 34 IAmb IAmb 05 36 42.0
comp=Z,14nm,1.1s
EPYK Eagle Plains 42.87 34 P P 05 36 39.8 +0.6
baz=278,SNR=6.8
K29M Barlow Dome 42.91 38 P P 05 36 40.9 +1.3
baz=280
PZH PanZhiHua 43.27 262 P P 05 36 44.4 +1.5
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,90nm,4.3s
KMI Kunming 43.44 259 ⇑P P 05 36 46.1 +1.6
KMI pmax pmax
comp=Z,8.0nm,0.7s
M30M Minto, Yukon 43.47 40 P P 05 36 44.0 0.0
M30M Minto, Yukon 43.47 40 P P 05 36 45.1 +1.1
baz=282
HYT Haines Junctio 43.50 42 P P 05 36 43.2 -1.1
HYT IAmb IAmb 05 36 48.4
comp=Z,16nm,1.0s
HYT Haines Junctio 43.50 42 P P 05 36 46.2 +1.8
baz=283,SNR=9.5
N30M Aishikik Lake 43.56 42 P P 05 36 45.0 +0.2
baz=283
P29M Windy Craggy 43.66 44 IAmb IAmb 05 36 49.0
comp=Z,12nm,0.9s
P29M Windy Craggy 43.66 44 P P 05 36 46.9 +1.3
baz=284,SNR=5.6
INK Inuvik 43.83 31 P P 05 36 47.3 +0.5
INK Inuvik 43.83 31 P P 05 36 47.3 +0.5
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 43.83 31 P P 05 36 47.4 +0.7
baz=278,SNR=5.5
P30M Million Dollar 43.92 43 P P 05 36 49.3 +1.6
baz=284
WMQ Urumqi 44.10 292 *e*P P 05 36 50.4 +1.0
WMQ LR LR
comp=Z,290nm,16.7s
WMQ LR LR
comp=Z,280nm,19.9s
WMQ LR LR
comp=Z,160nm,19.9s
N31M Braeburn, Yuko 44.17 41 IAmb IAmb 05 36 53.1
comp=Z,11nm,0.9s
N31M Braeburn, Yuko 44.17 41 P P 05 36 51.2 +1.6
baz=284,SNR=6.0
O30N Mendenhall 44.19 42 P P 05 36 51.1 +1.3
baz=284
PLBC Pleasant Camp 44.38 44 P P 05 36 52.6 +1.3
baz=285
M31M Drury Creek, Y 44.64 40 P P 05 36 54.3 +1.0
baz=284,SNR=5.9
WHY Whitehorse 44.79 42 P P 05 36 56.3 +1.6
baz=285
FARO Faro, Yukon 45.11 40 P P 05 36 57.9 +0.8
baz=285,SNR=6.9
P33M Teslin, Yukon 45.90 42 P P 05 37 04.8 +1.4
P33M IAmb IAmb 05 37 07.2
comp=Z,12nm,1.1s
P33M Teslin, Yukon 45.90 42 P P 05 37 04.5 +1.0
baz=287,SNR=6.1
MMPY Sheldon Lake, 45.94 39 P P 05 37 04.8 +1.1
baz=286
A36M Sachs Harbour 45.98 25 P P 05 37 04.7 +1.0
baz=282,SNR=5.1
MK31 Makanchi Array 46.34 298 P P 05 37 06.2 -0.8
MK31 IAmb IAmb 05 37 07.8
comp=Z,4.7nm,0.8s
MK31 Makanchi Array 46.34 298 P P 05 37 06.2 -0.8
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 46.34 298 P P 05 37 06.1 -0.9
comp=Z,5.5nm,0.8s,baz=71,slow=7.5,SNR=29
MKAR PcP PcP 05 38 41.3 -0.2
comp=Z,2.4nm,0.7s,baz=55,slow=3.7,SNR=4.8
MKAR LR LR 05 57 33.6
comp=Z,362nm,19.7s,baz=76,slow=37
comp=Z,5.5nm,0.8s
MKAR Makanchi Array 46.34 298 P P 05 37 06.6 -0.4
MKAR Makanchi Array 46.34 298 P P 05 37 06.6 -0.4
MKAR Makanchi Array 46.34 298 *e*P P 05 37 06.6 -0.4
KURK Kurchatov 47.00 304 P P 05 37 11.5 -0.6
KURK IAmb IAmb 05 37 14.5
comp=Z,4.5nm,0.7s
KURK Kurchatov 47.00 304 *ce*P P 05 37 10.8 -1.3
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 47.00 304 *e*P P 05 37 10.8 -1.3
R33M Jennings River 47.04 43 P P 05 37 13.5 +1.1
baz=289,SNR=5.1
S34M Telegraph Cree 47.45 45 P P 05 37 17.1 +1.6
baz=290
DLBC Dease Lake 47.82 44 LR LR 06 00 53.9
comp=Z,60nm,18.4s,baz=295,slow=40
DLBC Dease Lake 47.82 44 P P 05 37 20.1 +1.7
DLBC IAmb IAmb 05 37 21.7
comp=Z,4.5nm,0.8s
DLBC Dease Lake 47.82 44 P P 05 37 20.2 +1.7
baz=291
T35M Bob Quinn 48.23 46 P P 05 37 23.4 +1.8
baz=292
CRAI Chiangrai 48.31 256 P P 05 37 22.5 -0.1
CRAI IAmb IAmb 05 37 24.7
comp=Z,4.1nm,0.9s
CHTO Chiang Mai 50.25 256 P P 05 37 37.8 +0.4
CHTO IAmb IAmb 05 37 39.5
comp=Z,6.7nm,0.8s

CHTO Chiang Mai 50.25 256 P **P** **05 37 37.8 +0.4**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 50.50 256 P **P** **05 37 40.5 +1.2**
comp=Z,1.9nm,0.7s,baz=38,slow=7.3,SNR=11
CMAR PcP **PcP** **05 38 58.3 +1.4**
comp=Z,1.3nm,0.3s,baz=355,slow=2.3,SNR=4.3
CMAR LR LR 06 01 05.8
comp=Z,141nm,18.8s,baz=55,slow=38
comp=Z,1.9nm,0.7s
BVAR Borovoye Array 50.72 310 LR LR 06 00 38.3
comp=Z,187nm,19.3s,baz=68,slow=38
BRVK Borovoye 50.76 310 *ce*P **P** **05 37 38.5 -2.3**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
SHL Shillong 50.80 268 P **P** **05 37 40.7 -1.0**
SHL Shillong 50.80 268 P **P** **05 37 40.7 -1.0**
SHL pmax pmax
comp=Z,16nm,0.9s
EUNU Eureka 51.01 11 P **P** **05 37 41.6 -0.9**
EUNU IAmb IAmb 05 37 42.4
comp=Z,11nm,0.8s
BBB Bella Bella 51.31 51 LR LR 06 01 03.9
comp=Z,27nm,18.8s,baz=280,slow=38
ULHL Ulahol 52.27 295 P **P** **05 37 52.6 +0.1**
SNR=8.3
BOOM Boomskoye usch 52.34 296 P **P** **05 37 53.0 -0.1**
BOOM Boomskoye usch 52.34 296 P **P** **05 37 53.0 -0.1**
TAPN Taplejung 52.66 273 *eP* **P** **05 37 56.8 +1.0**
comp=Z,30nm,0.7s
RES Resolute Bay 52.85 18 LR LR 06 03 18.0
comp=Z,144nm,20.0s,baz=318,slow=39
USP Ospenovka 52.86 297 P **P** **05 37 57.0 +0.3**
SNR=8.9
YKA Yellowknife Ar 53.13 35 P **P** **05 37 58.2 -0.1**
comp=Z,2.2nm,0.8s,baz=307,slow=8.0,SNR=4.4
YKA LR LR 06 02 28.4
comp=Z,71nm,20.7s,baz=314,slow=38
comp=Z,2.2nm,0.8s
AAK Ala-Archa 53.19 296 P **P** **05 37 59.5 +0.2**
SNR=5.1
AAK Ala-Archa 53.19 296 P **P** **05 37 58.7 -0.6**
AAK IAmb IAmb 05 38 00.7
comp=Z,7.1nm,0.8s
AAK Ala-Archa 53.19 296 *ce*P **P** **05 37 59.1 -0.2**
AAK pmax pmax
comp=Z,6.0nm,0.7s
AAK Ala-Archa 53.19 296 *eP* **P** **05 37 59.1 -0.2**
JIRN Jiri 53.55 274 *eP* **P** **05 38 02.6 +0.2**
comp=Z,36nm,0.7s
GUN Gumba 53.62 275 *eP* **P** **05 38 03.6 +0.8**
EKS2 Erkin-Say 53.63 297 P **P** **05 38 02.5 0.0**
SNR=7.4
RAMN Ramite 53.69 273 *eP* **P** **05 38 03.2 -0.1**
comp=Z,66nm,0.8s
KSH Kashi 53.86 292 P **P** **05 38 08.0 +3.8**
KSH sP sP 05 38 30.4 +10
KSH pmax pmax
comp=Z,8.0nm,1.0s
KSH LR LR
comp=Z,220nm,18.4s
KSH LR LR
comp=Z,230nm,18.4s
KSH LR LR
comp=Z,350nm,19.0s
AML Almayashu 53.95 296 P **P** **05 38 05.7 +0.5**
SNR=8.0
KKN Kakani 54.11 275 *eP* **P** **05 38 06.7 +0.4**
PKI Pulchoki 54.15 275 *eP* **P** **05 38 06.9 +0.2**
comp=Z,25nm,0.8s
PKIN Phulchoki 54.16 275 *eP* **P** **05 38 07.3 +0.6**
comp=Z,19nm,0.7s
DMN Daman 54.34 275 *eP* **P** **05 38 08.7 +0.7**
GKN Gorkha 54.44 276 *eP* **P** **05 38 09.0 +0.4**
comp=Z,51nm,0.9s
DANN Dangsing 54.85 277 *eP* **P** **05 38 12.2 +0.5**
comp=Z,47nm,0.8s
ARU Arti 55.18 317 LR LR 06 03 22.2
comp=Z,156nm,21.0s,baz=39,slow=38
ARU Arti 55.18 317 P **P** **05 38 11.5 -1.8**
ARU IAmb IAmb 05 38 14.6
comp=Z,6.7nm,1.0s
ARU Arti 55.18 317 *c i*P **P** **05 38 11.4 -1.9**
ARU 05 40 14.3
ARU S **S** **05 45 51.3 -1.7**
ARU SS **SS** **05 49 33.5 -3.3**
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU Arti 55.18 317 *eP* **P** **05 38 11.4 -1.9**
KOLN Koldanda 55.31 276 *eP* **P** **05 38 15.2 +0.2**
KK31 Karatay Array 55.44 299 P **P** **05 38 14.7 -0.8**
KK31 IAmb IAmb 05 38 16.4
comp=Z,5.4nm,0.8s
KK31 Karatay Array 55.44 299 P **P** **05 38 14.7 -0.8**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 55.44 299 P **P** **05 38 15.0 -0.5**
KKAR IAmb IAmb 05 38 16.5
comp=Z,5.4nm,0.8s
KKAR Karatay Array 55.44 299 P **P** **05 38 14.9 -0.6**
KKAR Karatay Array 55.44 299 P **P** **05 38 15.0 -0.5**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
GAR Garm 57.81 295 P **P** **05 38 31.5 -1.0**
KIRV Kirov 58.15 323 LR LR 06 05 59.0
comp=Z,335nm,18.6s,baz=50,slow=38
ABKAR Akbulak array 58.29 310 P **P** **05 38 34.0 -1.5**
ABKAR IAmb IAmb 05 38 36.6
comp=Z,3.1nm,0.8s
HOOD Mount Hood Mea 58.46 56 P **P** **05 38 37.8 +0.8**
HOOD IAmb IAmb 05 38 43.9
comp=Z,8.2nm,0.9s
EDM Edmonton 58.54 45 P **P** **05 38 38.0 +0.7**
EDM Edmonton 58.54 45 P **P** **05 38 38.0 +0.7**
EDM pmax pmax
comp=Z,12nm,0.7s
AKTO Aktyubinsk 58.67 312 LR LR 06 06 01.5
comp=Z,351nm,18.8s,baz=46,slow=38
CHGR Chuyangaron 58.75 295 P **P** **05 38 38.1 -1.0**
CHGR Chuyangaron 58.75 295 P **P** **05 38 38.1 -1.0**
CHGR pmax pmax
comp=Z,45nm,0.8s
ARCES ARCESS Array B 58.88 340 LR LR 06 09 16.9
comp=Z,82nm,18.3s,baz=52,slow=42
NIL Nilore 58.96 288 P **P** **05 38 40.2 -0.2**
NIL Nilore 58.96 288 P **P** **05 38 40.3 -0.2**
NIL pmax pmax
comp=Z,44nm,0.9s
COEN Coen 59.22 189 P **P** **05 38 44.2 +2.0**
COEN IAmb IAmb 05 38 44.9
comp=Z,2.9nm,0.7s
NEW Newport 59.38 51 LR LR 06 04 14.4
comp=Z,30nm,20.3s,baz=300,slow=36
NEW Newport 59.38 51 P **P** **05 38 44.6 +1.4**
baz=305
YBH Yreka Blue Hor 59.87 60 LR LR 05 59 54.4
comp=Z,49nm,21.9s,baz=298,slow=31
MTN Manton Dam 60.42 202 P **P** **05 38 52.0 +1.5**
WALA Waterton Lakes 60.65 49 P **P** **05 38 52.7 +0.7**
WALA IAmb IAmb 05 38 54.7
comp=Z,4.9nm,0.9s
KBL Kabul 61.24 291 P **P** **05 38 54.4 -1.9**
KBL Kabul 61.24 291 P **P** **05 38 54.4 -1.9**
KBL pmax pmax
comp=Z,27nm,0.9s
MSO Missoula 61.97 51 IAmb IAmb 05 39 03.7
comp=Z,12nm,1.4s
MSO Missoula 61.97 51 P **P** **05 39 01.3 +0.4**
baz=307
SUMG Summit 62.41 3 P **P** **05 39 03.0 -0.8**
SUMG Summit 62.41 3 P **P** **05 39 03.0 -0.8**
SUMG pmax pmax
comp=Z,33nm,0.9s
SUMG Summit 62.41 3 *i*P **P** **05 39 02.0 -1.8**
BELG Belogornoye 62.72 318 LR LR 06 08 23.8
comp=Z,120nm,18.5s,baz=142,slow=38
BELG Belogornoye 62.72 318 *i*P **P** **05 39 04.2 -1.4**
BELG pmax pmax
comp=Z,1.0nm,0.6s
HRY Holter Researc 63.19 50 P **P** **05 39 09.7 +0.7**
EGMT Eagleton 63.48 48 P **P** **05 39 11.2 +0.3**
EGMT IAmb IAmb 05 39 13.6
comp=Z,12nm,1.1s
EGMT Eagleton 63.48 48 P **P** **05 39 11.5 +0.6**
baz=309,SNR=5.2
YERR Yerington 63.63 60 IAmb IAmb 05 39 15.3
comp=Z,9.1nm,1.4s
BOZ Bozeman (W) 63.99 51 P **P** **05 39 15.1 +0.7**
BOZ IAmb IAmb 05 39 16.8
comp=Z,4.9nm,0.8s
BOZ Bozeman (W) 63.99 51 P **P** **05 39 15.1 +0.7**
BOZ pmax pmax
comp=Z,5.0nm,0.9s
BOZ Bozeman (W) 63.99 51 P **P** **05 39 14.9 +0.5**
baz=309,SNR=8.2
LHV Little Huntoon 64.54 61 IAmb IAmb 05 39 21.0
comp=Z,6.0nm,1.0s
NVAR Mina Array Bea 64.55 60 P **P** **05 39 19.3 +1.0**
comp=Z,1.5nm,0.6s,baz=296,slow=7.3,SNR=16
comp=Z,1.5nm,0.6s
FINES FINESS Array B 64.85 334 P **P** **05 39 17.4 -2.1**
comp=Z,2.2nm,0.5s,baz=40,slow=7.4,SNR=12
FINES LR LR 06 10 11.7
comp=Z,160nm,19.7s,baz=38,slow=38
comp=Z,2.2nm,0.5s
FINES FINESS Array B 64.85 334 *i*P **P** **05 39 17.7 -1.8**
FINES pmax pmax
comp=Z,2.0nm,0.5s
DBJI Dramaga 64.89 230 P P 05 39 29.4 +9.0
YMR Madison River 64.94 51 IAmb IAmb 05 39 23.3
ELK Elko 64.96 57 LR LR 06 03 19.6
comp=Z,48nm,21.9s,baz=326,slow=32
CTA Charters Tower 65.04 185 LR LR 06 03 17.8
comp=Z,41nm,21.8s,baz=74,slow=32
DSP Deep Springs 65.42 61 P **P** **05 39 25.3 +1.7**
RLMT Red Lodge 65.58 50 IAmb IAmb 05 39 28.7
comp=Z,4.2nm,0.8s
RLMT Red Lodge 65.58 50 P **P** **05 39 26.0 +1.2**
baz=310
VES Vestal, Richgr 65.68 63 P **P** **05 39 26.7 +1.4**
baz=309
TPAW Teton Pass 65.69 52 P **P** **05 39 26.1 +0.5**
TPAW IAmb IAmb 05 39 28.4
comp=Z,9.1nm,1.2s
HRA Herat 65.76 295 P **P** **05 39 25.0 -1.1**
HRA IAmb IAmb 05 39 27.4
comp=Z,7.4nm,0.8s
OBN Obninsk 65.77 325 *eP* **P** **05 39 26.2 +0.6**
OBN *e**PP **sP** **05 39 43.4 +0.8**
OBN *e* 05 39 58.4
OBN *e* 05 41 55.1
OBN *e*PPP PPP 05 43 24.0
OBN *e*S **S** **05 48 04.8 -3.6**
OBN *e*SS **SS** **05 52 22.4 -0.1**
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN MLR MLR
comp=Z,210nm,16.0s
OBN Obninsk 65.77 325 *eP* **P** **05 39 26.4 +0.8**
SNOW Snow King Moun 65.82 52 IAmb IAmb 05 39 31.3
comp=Z,4.4nm,0.9s
ICESG Greenland Ices 65.83 4 *i*P **P** **05 39 23.4 -2.9**
REDW Red Top Meadow 65.83 52 IAmb IAmb 05 39 30.7
comp=Z,6.7nm,1.1s
CWC Cottonwood Cre 65.93 62 P **P** **05 39 28.1 +0.9**
baz=310
GRAC Grapevine Rang 66.03 61 P **P** **05 39 28.6 +1.0**
baz=310
DGMT Dagmar 66.03 45 IAmb IAmb 05 39 29.0
comp=Z,9.5nm,0.8s
DGMT Dagmar 66.03 45 P **P** **05 39 27.7 +0.2**
baz=312
GEYT Alibeck 66.11 300 P **P** **05 39 28.2 0.0**
comp=Z,9.4nm,0.8s,baz=20,slow=4.7,SNR=7.7
comp=Z,9.4nm,0.8s
GEYT Alibeck 66.11 300 IAmb IAmb 05 39 29.6
comp=Z,9.9nm,0.8s
ISA Isabella, Lake 66.18 63 P **P** **05 39 28.2 -0.4**
baz=310
LAO LASA Array 66.18 47 IAmb IAmb 05 39 31.0
comp=Z,12nm,0.9s
LAO LASA Array 66.18 47 P **P** **05 39 29.7 +1.2**
baz=311,SNR=9.2
R11A Troy Canyon, C 66.26 59 P **P** **05 39 30.0 +0.7**
baz=310,SNR=5.3
ARVC Arvin 66.29 64 P **P** **05 39 30.1 +0.8**
baz=310
WR0 Warramunga Arr 66.47 197 IAmb IAmb 05 39 32.6
comp=Z,7.4nm,0.8s
WRAB Tennant Creek 66.49 197 P **P** **05 39 31.5 +1.0**
WRAB IAmb IAmb 05 39 32.7
comp=Z,11nm,0.8s
WRAB Tennant Creek 66.49 197 P **P** **05 39 31.5 +1.0**
WRAB pmax pmax
comp=Z,11nm,0.8s
WB2 Warramunga Arr 66.50 197 P **P** **05 39 31.4 +0.8**
WB2 IAmb IAmb 05 39 32.8
comp=Z,11nm,0.8s
WRA Warramunga Arr 66.50 197 P **P** **05 39 31.6 +1.0**
comp=Z,8.9nm,0.8s,baz=16,slow=6.8,SNR=46
WRA LR LR 06 06 34.3
comp=Z,38nm,21.5s,baz=307,slow=34
comp=Z,8.9nm,0.8s
WRA Warramunga Arr 66.50 197 P **P** **05 39 31.6 +1.0**
WRA Warramunga Arr 66.50 197 P **P** **05 39 31.6 +1.0**
WRA pmax pmax
comp=Z,1.0nm,0.9s
MPMC Manual Prospec 66.54 62 P **P** **05 39 31.8 +0.6**
baz=310
SPR3 Spring Creek 3 66.60 58 IAmb IAmb 05 39 34.3
comp=Z,1.8nm,0.8s
S11A Rachel 66.61 60 IAmb IAmb 05 39 36.5
comp=Z,5.2nm,0.8s
FURC Furnace Creek, 66.67 61 P **P** **05 39 32.6 +0.9**
baz=310
DUG Dugway, Tooele 66.74 56 P **P** **05 39 32.5 +0.2**
DUG Dugway, Tooele 66.74 56 P **P** **05 39 32.5 +0.2**
DUG pmax pmax
comp=Z,2.0nm,0.9s
DUG Dugway, Tooele 66.74 56 P **P** **05 39 32.6 +0.3**
baz=310
BW06 Boulder Array 66.94 52 IAmb IAmb 05 39 36.1
comp=Z,6.1nm,1.1s
BW06 Boulder Array 66.94 52 P **P** **05 39 33.5 -0.1**
baz=311
PD31 Pinedale Array 66.94 52 IAmb IAmb 05 39 36.1
comp=Z,7.0nm,1.2s
PDAR Pinedale Array 66.94 52 P **P** **05 39 33.6 0.0**
comp=Z,2.4nm,0.7s,baz=279,slow=1.7,SNR=23
comp=Z,2.4nm,0.7s
EDW2 Edwards Air Fo 66.97 63 P **P** **05 39 34.7 +1.0**
baz=310
FITZ Fitzroy Crossi 67.00 206 P **P** **05 39 35.8 +2.0**
comp=Z,6.1nm,1.0s,baz=51,slow=6.9,SNR=5.8
FITZ LR LR 06 12 33.1
comp=Z,38nm,18.8s,baz=186,slow=39
comp=Z,6.1nm,1.0s
SFJD Kangerlussuaq 67.00 9 LR LR 06 09 43.1
comp=Z,92nm,21.1s,baz=354,slow=37
MSVF Nonsavu 67.25 152 LR LR 06 03 05.6
comp=Z,108nm,20.4s,baz=20,slow=30
SHPR Sheep Range 67.70 60 P **P** **05 39 38.5 +0.1**
DZM Mont Dzumac 68.36 165 LR LR 06 09 21.5
comp=Z,76nm,18.1s,baz=31,slow=36
DZM Mont Dzumac 68.36 165 *e*LR LR 06 00 34.8
comp=Z,122nm,22.9s
RDMU Red Mountain 68.37 54 IAmb IAmb 05 39 45.6
comp=Z,12nm,1.1s
K22A Casper 68.70 51 IAmb IAmb 05 39 47.1
comp=Z,20nm,1.5s
K22A Casper 68.70 51 P **P** **05 39 45.2 +0.6**
baz=312
MDND Maddock 68.71 43 P **P** **05 39 44.9 +0.6**
baz=315
PFO Pinyon Flats O 68.76 63 LR LR 06 05 28.8
comp=Z,29nm,20.4s,baz=282,slow=32
RWWY Rawlins 68.96 52 IAmb IAmb 05 39 48.8
comp=Z,5.8nm,1.1s
RSSD Black Hills 69.04 48 P **P** **05 39 45.4 -1.3**
RSSD IAmb IAmb 05 39 48.3
comp=Z,7.6nm,0.9s
RSSD Black Hills 69.04 48 P **P** **05 39 45.4 -1.3**
RSSD pmax pmax
comp=Z,8.0nm,1.0s
RSSD Black Hills 69.04 48 P **P** **05 39 47.2 +0.4**
baz=313
E28A Huff 69.06 45 P **P** **05 39 47.0 +0.4**
NC204 NORSAR Array S 69.16 341 P **P** **05 39 45.6 -1.3**
NB201 NORSAR Array S 69.23 340 P **P** **05 39 46.2 -1.2**
NB2 NORSAR Subarra 69.26 340 P **P** **05 39 46.1 -1.5**
comp=Z,7.7nm,0.8s,baz=30,slow=6.5
NOA NORSAR Array B 69.26 340 P **P** **05 39 46.2 -1.3**
comp=Z,8.1nm,0.8s,baz=29,slow=6.3,SNR=30
NOA LR LR 06 14 46.5
comp=Z,75nm,18.0s,baz=25,slow=40
comp=Z,8.1nm,0.8s
NBO00 NORSAR Array S 69.37 341 P **P** **05 39 46.5 -1.7**
O20A White River Ci 69.42 54 P **P** **05 39 49.8 +0.6**
baz=312
HFS Hagfors 69.43 339 LR LR 06 13 28.9
comp=Z,111nm,19.8s,baz=30,slow=39
NACGM Naroch 69.69 329 *i*P **P** **05 39 46.8 -3.4**
baz=39
AGMN Agassiz Nation 70.16 41 IAmb IAmb 05 39 55.1
comp=Z,10nm,1.3s
AGMN Agassiz Nation 70.16 41 P **P** **05 39 53.1 -0.2**
baz=316
AS31 Alice Springs 70.20 197 P **P** **05 39 55.0 +1.3**
N23A Red Feather La 70.20 52 P **P** **05 39 54.5 +0.5**
baz=313
ASAR Alice Springs 70.20 197 P **P** **05 39 55.6 +1.9**
comp=Z,6.5nm,0.8s,baz=12,slow=5.6,SNR=52
ASAR LR LR 06 11 02.1
comp=Z,16nm,19.5s,baz=357,slow=36
comp=Z,6.5nm,0.8s
ASAR Alice Springs 70.20 197 P **P** **05 39 54.7 +1.0**
ASAR Alice Springs 70.20 197 P **P** **05 39 54.7 +1.0**
BORG Borgarnes 70.30 356 LR LR 06 11 33.6
comp=Z,30nm,18.5s,baz=341,slow=37
PV13 Radium Mtn., P 70.41 55 P **P** **05 39 55.6 +0.3**
PV13 IAmb IAmb 05 39 57.5
comp=Z,8.5nm,1.3s
KIV Kislovodsk 70.82 313 P **P** **05 39 57.0 -0.5**
KIV Kislovodsk 70.82 313 *eP* **P** **05 39 56.8 -0.7**
KIV pmax pmax
comp=Z,26nm,1.1s
KIV MLR MLR
comp=Z,156nm,18.0s
KIV Kislovodsk 70.82 313 *eP* **P** **05 39 56.8 -0.7**
KBZ Khabaz 70.87 313 P **P** **05 39 57.1 -0.6**
comp=Z,24nm,0.8s,baz=57,slow=4.0,SNR=38
KBZ LR LR 06 14 50.7
comp=Z,297nm,20.6s,baz=42,slow=39
comp=Z,24nm,0.8s
KBZ Khabaz 70.87 313 *ce*P **P** **05 39 57.6 -0.1**
KBZ pmax pmax
comp=Z,25nm,0.9s
KBZ Khabaz 70.87 313 *eP* **P** **05 39 57.6 -0.1**
SHA1 Shidzhatmaz 70.99 313 *i*P **P** **05 39 58.2 -0.5**
ZEI Tsey 71.01 312 *eP* **P** **05 39 57.4 -1.4**
ZEI pmax pmax
comp=Z,13nm,0.9s
ISCO Idaho Springs 71.13 52 P **P** **05 40 00.6 +0.8**
baz=314,SNR=5.4
MVCO Mesa Verde 71.24 56 P **P** **05 40 01.1 +0.8**
baz=313
F33A 5 Mile Ranch, 71.73 43 IAmb IAmb 05 40 04.8
comp=Z,12nm,0.9s
S22A 4UR Ranch, Cre 71.85 55 IAmb IAmb 05 40 07.3
comp=Z,9.0nm,1.5s
S22A 4UR Ranch, Cre 71.85 55 P **P** **05 40 05.1 +1.0**
baz=314
AKASG Malin Array Be 72.03 325 P **P** **05 40 03.1 -1.4**
comp=Z,18nm,1.1s,baz=35,slow=6.3,SNR=19
AKASG LR LR 06 14 10.2
comp=Z,125nm,18.3s,baz=60,slow=38
comp=Z,18nm,1.1s
AKASG Malin Array Be 72.03 325 *i*P **P** **05 40 03.2 -1.4**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 72.03 325 *i*P **P** **05 40 02.1 -2.4**
AKBB pmax pmax
comp=Z,6.0nm,0.9s
OGNE Ogallala 72.31 49 P **P** **05 40 07.3 +0.8**
baz=315,SNR=8.0
GNI Garni 72.40 309 LR LR 06 14 42.1
comp=Z,83nm,20.8s,baz=43,slow=38
SDCO Great Sand Dun 72.61 54 P **P** **05 40 08.7 +0.1**
baz=314
ANN Anapa 72.84 317 *eP* **P** **05 40 04.9 -4.5**
ANN *e**PP **pwP** **05 40 24.0 -1.8**
ANN *e*S S 05 49 23.7 -8.3
ANN pmax pmax
comp=Z,42nm,1.1s
ECSD EROS Data Cent 73.11 44 IAmb IAmb 05 40 13.0
comp=Z,20nm,1.4s
ECSD EROS Data Cent 73.11 44 P **P** **05 40 10.6 -0.5**
baz=317,SNR=7.9
TUC Tucson 73.18 61 P **P** **05 40 13.2 +1.3**
baz=313
NRS Narsarsuaq 73.24 8 P **P** **05 40 09.2 -2.3**
NRS Narsarsuaq 73.24 8 P **P** **05 40 09.2 -2.3**
NRS pmax pmax
comp=Z,41nm,0.7s
KSCO Kaye Shedlock' 73.34 51 P **P** **05 40 13.5 +0.8**
baz=315
E38A The Farm, Brul 73.38 40 P **P** **05 40 12.4 -0.2**
E38A IAmb IAmb 05 40 14.2
comp=Z,10nm,0.7s
T25A Trinidad 73.66 54 P **P** **05 40 15.5 +0.8**
baz=315
SPMN Marine on St. 73.84 41 P **P** **05 40 16.3 +0.9**
baz=319
ANMO Albuquerque 74.00 57 LR LR 06 09 12.8
comp=Z,52nm,21.7s,baz=335,slow=33
ANMO Albuquerque 74.00 57 *ce*P **P** **05 40 17.1 +0.4**
ANMO pmax pmax
comp=Z,2.0nm,1.3s
ANMO Albuquerque 74.00 57 P **P** **05 40 17.3 +0.5**
baz=314
KOPT Kop Dagi 74.78 312 IAmb IAmb 05 40 24.6
comp=Z,11nm,0.9s
GURO Guroymak-BITLI 75.01 310 IAmb IAmb 05 40 25.0
comp=Z,11nm,1.0s
CBKS Cedar Bluff 75.06 50 P **P** **05 40 22.2 -0.4**
baz=317
SCHQ Schefferville 75.39 21 P **P** **05 40 24.0 -0.2**
comp=Z,5.4nm,0.8s,baz=338,slow=6.1,SNR=5.7
SCHQ LR LR 06 15 47.1
comp=Z,80nm,20.3s,baz=104,slow=38
comp=Z,5.4nm,0.8s
WSAR Wadi Sarin 75.46 288 LR LR 06 17 35.6
comp=Z,56nm,19.8s,baz=78,slow=39
KAC Achnashellach 75.83 347 *eP* **P** **05 40 25.6 -1.1**
OJC Ojcow 75.98 330 *eP* **P** **05 40 25.6 -2.0**
OJC Ojcow 75.98 330 P **P** **05 40 25.9 -1.8**
OJC Ojcow 75.98 330 P **P** **05 40 25.9 -1.8**
OJC pmax pmax
comp=Z,17nm,0.8s
KPL Plockton 76.04 347 *eP* **P** **05 40 27.1 -0.7**
KPL IAmb IAmb 05 40 28.1
comp=Z,17nm,0.8s
SCIA State Center 76.14 44 P **P** **05 40 28.6 -0.1**
baz=319
KOLS Kolonicke sedl 76.15 328 *eP* **P** **05 40 28.2 -0.4**
KOLS pmax pmax
comp=Z,20nm,1.3s
KOLS Kolonicke sedl 76.15 328 *eP* **P** **05 40 28.2 -0.4**
NIE Niedzica 76.47 329 *eP* **P** **05 40 30.5 0.0**
CRVS Cervenica-Dubn 76.48 328 *eP* **P** **05 40 30.0 -0.5**
CRVS pmax pmax
comp=Z,9.0nm,1.1s
CRVS Cervenica-Dubn 76.48 328 *eP* **P** **05 40 30.0 -0.5**
KSU1 Kansas State U 76.52 48 P **P** **05 40 30.5 -0.4**
baz=318,SNR=6.0
INVG Invergeldie, C 76.65 346 *eP* **P** **05 40 29.7 -1.6**
INVG IAmb IAmb 05 40 31.7
comp=Z,10.0nm,0.8s
KSP Ksiaz 76.65 332 *eP* **P** **05 40 30.8 -0.6**
AMTX Amarillo 76.81 54 IAmb IAmb 05 40 34.9
comp=Z,8.0nm,0.8s
AMTX Amarillo 76.81 54 P **P** **05 40 33.2 +0.5**
baz=316
ESY Stoneypath 76.88 345 *eP* **P** **05 40 31.9 -0.7**
MNTX Cornudas Mount 76.91 58 P **P** **05 40 34.4 +1.2**
baz=315
EAB Aberfoyle 76.93 346 *eP* **P** **05 40 32.4 -0.5**
EDI Edinburgh 76.98 345 *eP* **P** **05 40 31.7 -1.5**
EDI IAmb IAmb 05 40 34.1
comp=Z,10nm,0.8s
LANS Liptovska Anna 77.00 330 *eP* **P** **05 40 33.8 +0.3**
LANS pmax pmax
comp=Z,11nm,0.8s
LANS Liptovska Anna 77.00 330 *eP* **P** **05 40 33.8 +0.3**
UPC Upice 77.03 332 *eP* **P** **05 40 33.6 0.0**
UPC Upice 77.03 332 *eP* **P** **05 40 33.6 0.0**
LAWE Loch Awe, Argy 77.04 347 *eP* **P** **05 40 32.6 -0.9**
LAWE IAmb IAmb 05 40 34.1

	comp=Z,14nm,0.9s								
DPC	**Dobruska-Polom**	**77.06**	**332**	*eP*		**P**	**05 40 33.2**	**-0.6**
DPC	**Dobruska-Polom**	**77.06**	**332**	*eP*		**P**	**05 40 33.2**	**-0.6**
STKA	**Stephens Creek**	**77.11**	**188**	P		**P**	**05 40 36.5**	**+2.5**
	comp=Z,2.5nm,0.8s,baz=345,slow=12,SNR=4.7								
STKA				LR		LR	06 15 55.0		
	comp=Z,65nm,19.8s,baz=210,slow=37								
	comp=Z,2.5nm,0.8s								
MORC	**Moravsky Berou**	**77.14**	**331**	*eP*		**P**	**05 40 33.6**	**-0.7**
KRLC	**Kraliky**	**77.14**	**332**	*eP*		**P**	**05 40 33.6**	**-0.7**
KRLC	**Kraliky**	**77.14**	**332**	*eP*		**P**	**05 40 33.6**	**-0.7**
KAN08	**Anthony NE Sta**	**77.17**	**50**	IAmb		IAmb	05 40 35.4		
	comp=Z,7.9nm,0.6s								
KECS	**Kecovo**	**77.19**	**329**	*eP*		**P**	**05 40 34.6**	**+0.1**
KECS				pmax		pmax			
	comp=Z,19nm,0.8s								
KECS	**Kecovo**	**77.19**	**329**	*eP*		**P**	**05 40 34.6**	**+0.1**
CLL	**Collm**	**77.29**	**334**	*i* P		**P**	**05 40 33.8**	**-1.2**
CLL				pmax		pmax			
	comp=Z,21nm,0.8s								
CLL	**Collm**	**77.29**	**334**	*i* P		**P**	**05 40 33.8**	**-1.2**
	comp=Z,21nm,0.8s								
CLL				LmV			06 18 00.0		
	comp=Z,100nm,18.7s								
BRG	**Berggiesshubel**	**77.38**	**334**	*i* P		**P**	**05 40 35.3**	**-0.3**
BRG				Amp			05 40 37.0		
	comp=Z,4.5nm,0.7s								
BRG	**Berggiesshubel**	**77.38**	**334**	*i* P		**P**	**05 40 35.2**	**-0.3**
BRG				pmax		pmax			
	comp=Z,5.0nm,0.7s								
BRG				MLR		MLR			
	comp=Z,119nm,21.1s								
BRG				MLR		MLR			
	comp=N,261nm,26.9s								
MLR	**Muntele Rosu**	**77.49**	**324**	IAmb		IAmb	05 40 38.5		
	comp=Z,8.3nm,0.9s								
ESK	**Eskdalemuir**	**77.56**	**345**	*eP*		**P**	**05 40 35.4**	**-1.0**
P38A	**Dawn**	**77.71**	**45**	IAmb		IAmb	05 40 38.8		
	comp=Z,11nm,0.8s								
VYHS	**Vyhne**	**77.78**	**330**	*eP*		**P**	**05 40 36.9**	**-0.9**
VYHS				pmax		pmax			
	comp=Z,7.0nm,0.9s								
VYHS	**Vyhne**	**77.78**	**330**	*eP*		**P**	**05 40 36.9**	**-0.9**
VRAC	**Vranov**	**77.86**	**331**	LR		LR	06 18 38.6		
	comp=Z,86nm,20.5s,baz=30,slow=39								
VRAC	**Vranov**	**77.86**	**331**	*eP*		**P**	**05 40 37.9**	**-0.4**
PSZ	**Piszkesteto**	**77.88**	**329**	IAmb		IAmb	05 40 40.0		
	comp=Z,12nm,0.9s								
JAVC	**Velka Javorina**	**77.88**	**331**	*eP*		**P**	**05 40 38.8**	**+0.4**
PRU	**Pruhonice**	**77.96**	**333**	*eP*		**P**	**05 40 38.5**	**-0.2**
PRU	**Pruhonice**	**77.96**	**333**	*eP*		**P**	**05 40 38.5**	**-0.2**
KRUC	**Moravsky**	**78.14**	**331**	*eP*		**P**	**05 40 39.4**	**-0.4**
T35A	**Sooner Cattle**	**78.19**	**49**	IAmb		IAmb	05 40 41.2		
	comp=Z,8.6nm,0.7s								
KESW	**Keswick, Cumbr**	**78.23**	**345**	*eP*		**P**	**05 40 39.0**	**-1.2**
KESW				IAmb		IAmb	05 40 40.9		
	comp=Z,21nm,0.8s								
SMOL	**Smolenice**	**78.26**	**330**	*eP*		**P**	**05 40 40.7**	**+0.3**
SMOL				pmax		pmax			
	comp=Z,6.0nm,0.9s								
CLGH	**Cloghs, Cushen**	**78.28**	**347**	*eP*		**P**	**05 40 39.1**	**-1.3**
MODS	**Modra-Piesok**	**78.43**	**330**	*eP*		**P**	**05 40 41.6**	**+0.2**
MODS				pmax		pmax			
	comp=Z,16nm,0.8s								
MODS	**Modra-Piesok**	**78.43**	**330**	*eP*		**P**	**05 40 41.6**	**+0.2**
BR131	**Keskin Array S**	**78.50**	**316**	IAmb		IAmb	05 40 43.7		
	comp=Z,6.4nm,0.8s								
BRTR	**Keskin Array B**	**78.50**	**316**	P		**P**	**05 40 41.7**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=72,slow=4.6,SNR=18								
BRTR				LR		LR	06 20 53.0		
	comp=Z,71nm,19.1s,baz=68,slow=40								
	comp=Z,4.1nm,0.8s								
BRTR	**Keskin Array B**	**78.50**	**316**	*i* P		**P**	**05 40 42.2**	**0.0**
BRTR				pmax		pmax			
	comp=Z,4.0nm,0.8s								
P40A	**Paris**	**78.52**	**45**	IAmb		IAmb	05 40 43.4		
	comp=Z,9.7nm,0.8s								
HPK	**Haverah Park**	**78.55**	**344**	*eP*		**P**	**05 40 41.6**	**-0.3**
WMOK	**Wichita Mounta**	**78.55**	**52**	IAmb		IAmb	05 40 44.4		
	comp=Z,6.6nm,1.1s								
WMOK	**Wichita Mounta**	**78.55**	**52**	P		**P**	**05 40 42.8**	**+0.4**
	baz=318,SNR=5.3								
ZST	**Bratislava**	**78.64**	**331**	*eP*		**P**	**05 40 40.4**	**-2.2**
ZST	**Bratislava**	**78.64**	**331**	*eP*		**P**	**05 40 40.4**	**-2.2**
WIM	**Isle of Man**	**78.94**	**346**	*eP*		**P**	**05 40 43.3**	**-0.8**
KHC	**Kasperske Hory**	**79.01**	**333**	*eP*		**P**	**05 40 44.0**	**-0.6**
KHC	**Kasperske Hory**	**79.01**	**333**	*eP*		**P**	**05 40 44.0**	**-0.6**
CKRC	**Cesky Krumlov**	**79.05**	**332**	*eP*		**P**	**05 40 44.5**	**-0.3**
HDIL	**Hopedale**	**79.07**	**42**	P		**P**	**05 40 44.9**	**-0.2**
	baz=322								
LBWR	**Ladybower, Pea**	**79.09**	**344**	*eP*		**P**	**05 40 44.5**	**-0.5**
LBWR				IAmb		IAmb	05 40 46.1		
	comp=Z,39nm,0.9s								
GEC2	**GERESS Array S**	**79.22**	**333**	IAmb		IAmb	05 40 46.7		
	comp=Z,6.9nm,0.9s								
GERES	**GERESS Array B**	**79.22**	**333**	P		**P**	**05 40 44.8**	**-1.0**
	comp=Z,4.8nm,0.8s,baz=35,slow=5.1,SNR=29								
	comp=Z,4.8nm,0.8s								
S39A	**Bolivar**	**79.28**	**47**	IAmb		IAmb	05 40 46.9		
	comp=Z,4.3nm,0.7s								
RAO	**Raoul Island**	**79.28**	**153**	LR		LR	06 13 17.8		
	comp=Z,51nm,18.7s,baz=266,slow=34								
CONA	**Conrad Observa**	**79.30**	**331**	*eP*		**P**	**05 40 46.5**	**+0.2**
	comp=Z,7.1nm,0.7s								
RONA	**Rosalia, Austr**	**79.35**	**331**	*eP*		**P**	**05 40 46.9**	**+0.4**
	comp=Z,7.3nm,0.8s								
TX31	**Lajitas Ar. Si**	**79.63**	**59**	P		**P**	**05 40 49.1**	**+0.7**
TX31				IAmb		IAmb	05 40 51.1		
	comp=Z,6.0nm,0.8s								
TXAR	**Lajitas Array**	**79.63**	**59**	P		**P**	**05 40 48.7**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=306,slow=3.8,SNR=22								
	comp=Z,1.8nm,0.7s								
U38A	**Gravette**	**79.67**	**48**	IAmb		IAmb	05 40 50.5		
	comp=Z,5.0nm,0.7s								
RAR	**Rarotonga**	**79.83**	**134**	LR		LR	06 15 15.1		
	comp=Z,90nm,19.8s,baz=300,slow=35								
FOEL	**Foel Wylfa**	**79.87**	**344**	*eP*		**P**	**05 40 47.6**	**-1.6**
FOEL				IAmb		IAmb	05 40 49.3		
	comp=Z,10nm,0.9s								
BTNL	**Ternell**	**79.89**	**338**	*dP*		**P**	**05 40 48.8**	**-0.6**
	comp=Z,9.8nm,0.9s								
MEM	**Membach**	**79.91**	**338**	*dP*		**P**	**05 40 48.9**	**-0.5**
	comp=Z,16nm,0.8s								
MOA	**Molin**	**79.91**	**332**	*eP*		**P**	**05 40 49.4**	**-0.1**
	comp=Z,4.3nm,0.7s								
HHAR	**Hobbs**	**80.03**	**48**	IAmb		IAmb	05 40 52.3		
	comp=Z,4.1nm,0.7s								
CCM	**Cathedral Cave**	**80.06**	**45**	P		**P**	**05 40 49.9**	**-0.6**
CCM				IAmb		IAmb	05 40 51.7		
	comp=Z,9.8nm,0.8s								
CCM	**Cathedral Cave**	**80.06**	**45**	P		**P**	**05 40 49.9**	**-0.6**
CCM				pmax		pmax			
	comp=Z,10.0nm,0.8s								
CCM	**Cathedral Cave**	**80.06**	**45**	P		**P**	**05 40 50.6**	**+0.1**
	baz=321								
SADO	**Sadowa**	**80.09**	**34**	LR		LR	06 19 16.0		
	comp=Z,60nm,19.2s,baz=348,slow=38								
BHOU	**Houvegnez**	**80.14**	**338**	*dP*		**P**	**05 40 50.1**	**-0.6**
BHOU				*d*PcP		**PcP**	**05 40 57.2**	**-0.7**
BIOA	**Bad Ischl, Aus**	**80.25**	**332**	*eP*		**P**	**05 40 51.5**	**+0.1**
	comp=Z,5.5nm,0.9s								
BCLA	**Clavier**	**80.26**	**339**	*dP*		**P**	**05 40 50.4**	**-0.9**
	comp=Z,9.1nm,0.9s								
BMRD	**Maredsous**	**80.51**	**339**	*dP*		**P**	**05 40 51.9**	**-0.7**
	comp=Z,14nm,0.8s								
FVM	**French Village**	**80.52**	**45**	IAmb		IAmb	05 40 54.2		
	comp=Z,6.9nm,0.8s								
RCHB	**Rochefort**	**80.52**	**338**	*dP*		**P**	**05 40 52.1**	**-0.6**
	comp=Z,7.1nm,0.8s								
SOKA	**Soboth**	**80.66**	**331**	*eP*		**P**	**05 40 53.3**	**-0.4**
	comp=Z,5.8nm,0.8s								
MCH1	**Michaelchurch**	**80.68**	**344**	*eP*		**P**	**05 40 53.1**	**-0.4**
MCH1				IAmb		IAmb	05 40 54.6		
	comp=Z,16nm,0.9s								
DOU	**Dourbes**	**80.74**	**339**	*dP*		**P**	**05 40 53.0**	**-0.9**
	comp=Z,4.0nm,0.8s								
MONM	**Monmouth**	**80.79**	**344**	*eP*		**P**	**05 40 53.2**	**-0.9**
MONM				IAmb		IAmb	05 40 55.3		
	comp=Z,23nm,0.9s								
KBA	**Koelnbreinsper**	**80.88**	**332**	*eP*		**P**	**05 40 55.4**	**+0.5**
	comp=Z,13nm,0.9s								
OBKA	**Obir**	**80.98**	**331**	*eP*		**P**	**05 40 54.1**	**-1.3**
	comp=Z,7.3nm,1.1s								
IWEX	**Carrickbyrne,**	**81.00**	**346**	*eP*		**P**	**05 40 54.1**	**-1.1**
JCT	**Junction City**	**81.10**	**56**	P		**P**	**05 40 57.5**	**+1.3**
	baz=318								
WATA	**Walderalm**	**81.23**	**333**	*eP*		**P**	**05 40 56.5**	**-0.3**
	comp=Z,6.1nm,0.6s								
FCAR	**Ozark Folk Cen**	**81.27**	**47**	P		**P**	**05 40 56.2**	**-0.8**
FCAR				IAmb		IAmb	05 40 57.8		
	comp=Z,10.0nm,0.7s								
WTTA	**Wattenberg**	**81.28**	**333**	*eP*		**P**	**05 40 57.0**	**-0.1**
	comp=Z,11nm,0.8s								
SIUC	**Southern Illin**	**81.33**	**44**	IAmb		IAmb	05 40 58.8		
	comp=Z,11nm,0.7s								
BFO	**Black Forest**	**81.33**	**336**	P		**P**	**05 40 56.5**	**-0.6**
BFO				IAmb		IAmb	05 40 58.2		
	comp=Z,7.9nm,0.9s								
BFO	**Black Forest**	**81.33**	**336**	P		**P**	**05 40 56.5**	**-0.6**
BFO				pmax		pmax			
	comp=Z,8.0nm,0.9s								
RETA	**Reutte**	**81.35**	**334**	*eP*		**P**	**05 40 57.6**	**+0.3**
	comp=Z,5.7nm,0.9s								
PRED	**Cave del Predi**	**81.37**	**332**	P		**P**	**05 40 55.8**	**-1.6**
PRED				IAmb		IAmb	05 40 57.6		
	comp=Z,6.1nm,0.9s								
MOTA	**Moosalm**	**81.37**	**334**	*eP*		**P**	**05 40 56.7**	**-0.9**
	comp=Z,12nm,1.0s								
PMOR	**Pomariorio Ree**	**81.48**	**121**	*eT*		T	07 10 57.8		
	comp=Z,5.7nm,0.2s								
MIAR	**Mount Ida**	**81.54**	**49**	IAmb		IAmb	05 40 60.0		
	comp=Z,7.8nm,0.8s								
MIAR	**Mount Ida**	**81.54**	**49**	P		**P**	**05 40 58.6**	**+0.2**
	baz=320,SNR=9.8								
WHAR	**Wooly Hollow**	**81.65**	**48**	IAmb		IAmb	05 41 00.6		
	comp=Z,8.2nm,1.0s								
TAOE	**Nuku Hiva Isla**	**81.75**	**111**	*e*LR		LR	06 06 45.0		
	comp=Z,118nm,24.2s								
ECH	**Echery**	**81.77**	**336**	IAmb		IAmb	05 41 00.4		
	comp=Z,7.0nm,0.9s								
FETA	**Feichten**	**81.78**	**334**	*eP*		**P**	**05 40 55.0**	**-4.7**
	comp=Z,3.3nm,1.1s								
P49A	**Miami Univ. Ec**	**82.02**	**40**	P		**P**	**05 41 00.5**	**-0.4**
	baz=324								
DAVOX	**Davos/Dischmat**	**82.26**	**334**	P		**P**	**05 41 02.0**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=345,slow=5.5,SNR=7.6								
DAVOX				LR		LR	06 21 01.7		
	comp=Z,148nm,20.4s,baz=48,slow=38								
	comp=Z,4.4nm,0.8s								
PPT	**Papeete**	**82.48**	**124**	LR		LR	06 17 13.6		
	comp=Z,102nm,18.3s,baz=328,slow=35								
PPT2	**Papeete2**	**82.50**	**124**	*e*LR		LR	06 07 06.2		
PPT2	comp=Z,158nm,22.8s			*e*LR		LR	06 07 06.8		
	comp=Z,178nm,24.5s								
T47A	**Sharon Grove**	**82.93**	**43**	IAmb		IAmb	05 41 07.0		
	comp=Z,6.8nm,0.8s								
WVT	**Waverly**	**83.26**	**44**	P		**P**	**05 41 07.4**	**0.0**
WVT				IAmb		IAmb	05 41 09.0		
	comp=Z,5.6nm,0.8s								
WVT	**Waverly**	**83.26**	**44**	P		**P**	**05 41 07.4**	**0.0**
WVT				pmax		pmax			
	comp=Z,6.0nm,0.9s								
WVT	**Waverly**	**83.26**	**44**	P		**P**	**05 41 07.9**	**+0.5**
	baz=323								
SENIN	**Lac Senin/Sane**	**83.41**	**336**	IAmb		IAmb	05 41 09.8		
	comp=Z,6.4nm,1.2s								
BINY	**Binghamton**	**83.49**	**33**	P		**P**	**05 41 08.8**	**+0.3**
	baz=329								
OXF	**Oxford**	**83.74**	**46**	P		**P**	**05 41 10.1**	**+0.3**
	baz=322								
U49A	**Red Boiling Sp**	**83.95**	**43**	IAmb		IAmb	05 41 12.5		
	comp=Z,4.9nm,0.8s								
T50A	**Nancy**	**83.99**	**42**	IAmb		IAmb	05 41 13.3		
	comp=Z,18nm,1.5s								
HRV	**Adam Dziewonsk**	**84.87**	**30**	P		**P**	**05 41 15.2**	**-0.3**
	baz=332								
SWET	**Sewanee**	**84.92**	**43**	P		**P**	**05 41 15.5**	**-0.4**
SWET				pP		**pP**	**05 41 27.8**	**+0.1**
SCTE	**Santa Cesarea**	**85.06**	**325**	P		**P**	**05 41 15.1**	**-1.4**
SCTE				pP		**pP**	**05 41 28.6**	**-0.1**
EIL	**Elat**	**85.53**	**308**	LR		LR	06 24 05.5		
	comp=Z,79nm,18.4s,baz=77,slow=39								
TKL	**Tuckaleechee C**	**85.60**	**42**	LR		LR	06 18 56.4		
	comp=Z,64nm,21.7s,baz=344,slow=35								
BLA	**Blacksburg**	**85.85**	**39**	P		**P**	**05 41 20.6**	**+0.1**
	baz=327								
LRAL	**Lakeview Retre**	**86.13**	**46**	P		**P**	**05 41 21.7**	**-0.2**
	baz=323								
URZ	**Urewera**	**86.30**	**160**	LR		LR	06 15 30.1		
	comp=Z,46nm,18.7s,baz=31,slow=32								
TBI	**Tubuai**	**87.09**	**127**	*e*LR		LR	06 09 13.5		
	comp=Z,101nm,23.5s								
TBI				*e*LR		LR	06 09 14.5		
	comp=Z,2μm,22.5s								
TBI	**Tubuai**	**87.09**	**127**	*eT*		T	07 18 01.3		
	comp=Z,2.6nm,0.3s								
KMSC	**Kings Mountain**	**87.16**	**40**	P		**P**	**05 41 26.8**	**-0.1**
	baz=326								
152A	**Waverly Hall**	**87.56**	**44**	IAmb		IAmb	05 41 30.7		
	comp=Z,8.2nm,1.0s								
BRAL	**Brewton**	**87.59**	**47**	P		**P**	**05 41 29.9**	**+0.9**
	baz=323								
TIGA	**Tifton**	**89.12**	**44**	P		**P**	**05 41 36.7**	**+0.4**
	baz=325								
NHSC	**New Hope**	**89.38**	**41**	P		**P**	**05 41 35.6**	**-1.8**
	baz=327								
KEST	**Kesra**	**92.33**	**330**	LR		LR	06 29 22.3		
	comp=Z,104nm,18.7s,baz=322,slow=40								
ESDC	**Sonseca Array**	**92.61**	**341**	P		**P**	**05 41 52.0**	**-0.4**
	comp=Z,1.3nm,1.1s,baz=0.0,slow=6.4,SNR=4.2								
ESDC				LR		LR	06 28 57.1		
	comp=Z,47nm,18.4s,baz=339,slow=39								
	comp=Z,1.3nm,1.1s								
CMIG	**Matias Romero**	**94.08**	**61**	LR		LR	06 20 07.6		
	comp=Z,18nm,19.7s,baz=306,slow=33								
MDT	**Midelt**	**99.30**	**339**	LR		LR	06 32 22.1		
	comp=Z,52nm,20.8s,baz=18,slow=38								
TORD	**Torodi Ar. Bea**	**115.65**	**326**	PKP		**PKiKP**	**05 47 23.1**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=321,slow=1.8,SNR=2.0								
VNDA	**Vanda**	**122.56**	**177**	PKP		**PKiKP**	**05 47 35.2**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=320,slow=3.5,SNR=4.9								
BOAV	**Boa Vista**	**125.03**	**40**	*eP*		**PKiKP**	**05 47 44.0**	**+2.3**
MATP	**Matopo**	**126.95**	**278**	PKP		**PKiKP**	**05 47 45.5**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=334,slow=6.5,SNR=3.6								
LPAZ	**La Paz**	**136.45**	**61**	PKP		**PKiKP**	**05 48 05.1**	**-0.1**
	comp=Z,2.1nm,1.2s,baz=288,slow=3.2,SNR=4.3								
H03N2	**Juan Fernandez**	**140.26**	**91**	T		T	08 24 45.6		
	baz=306,slow=77,SNR=32								
H03N3	**Juan Fernandez**	**140.28**	**91**	T		T	08 25 01.8		
	baz=306,slow=77,SNR=32								
H03N1	**Juan Fernandez**	**140.28**	**91**	T		T	08 24 46.6		
	baz=306,slow=77,SNR=28								
BDFB	**Brasilia**	**146.55**	**35**	PKPbc		**PKPbc**	**05 48 22.7**	**+0.3**
	comp=Z,11nm,0.8s,baz=270,slow=2.7,SNR=16								
BDFB	**Brasilia**	**146.55**	**35**	*eP*		**PKPab**	**05 48 23.6**	**+0.1**
IPMB	**Ipameri, GO**	**148.57**	**37**	*eP*		**PKPdf**	**05 48 25.9**	**+1.8**
MC01	**Montes Claros**	**149.04**	**29**	*eP*		**PKPdf**	**05 48 26.6**	**+1.7**
TROLL	**Troll, Antarti**	**149.17**	**199**	PKPdf		**PKiKP**	**05 48 29.0**	**-0.1**
PLCA	**Paso Flores**	**149.56**	**97**	PKPbc		**PKiKP**	**05 48 30.6**	**-0.2**
	comp=Z,4.2nm,0.7s,baz=252,slow=3.4,SNR=19								
SNAA	**Sanae**	**150.57**	**197**	PKPdf		**PKiKP**	**05 48 31.7**	**-0.2**
CPUP	**Villa Florida**	**150.60**	**60**	PKPbc		**PKiKP**	**05 48 32.9**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=250,slow=2.2,SNR=8.6								
NAN01	**Guarapari, ES**	**151.27**	**22**	*eP*		**PKPdf**	**05 48 31.0**	**+2.6**
SJMB	**Sao Joao De Ma**	**151.78**	**25**	*eP*		**PKPbc**	**05 48 33.0**	**-2.5**
VNA2	**Neumayer--Watz**	**152.04**	**195**	PKPdf		**PKiKP**	**05 48 35.2**	**+0.4**
	baz=120,slow=1.4								
VNA3	**Neumayer Olymp**	**152.17**	**193**	PKPdf		**PKiKP**	**05 48 35.3**	**+0.2**
PTGB	**Pitanga**	**152.42**	**50**	*eP*		**PKPdf**	**05 48 32.7**	**+2.6**
VNA1	**Neumayer--Stat**	**152.43**	**195**	PKPdf		**PKiKP**	**05 48 35.7**	**0.0**
BSCB	**Bom Sucesso**	**152.67**	**33**	*eP*		**PKPdf**	**05 48 32.5**	**+2.0**
CPSB	**Cacapava Do Su**	**155.90**	**61**	*eP*		**PKPdf**	**05 48 37.3**	**+2.7**
PLTB	**Pedras Altas**	**156.72**	**63**	*eP*		**PKPdf**	**05 48 38.6**	**+2.9**

ROM 25 05:38:08.1±0.1, 42.772N±0.003×13.14E±0.01, h8km, ML1.9/3,1C, Error ellipse: s-maj=0.9km s-min=0.1km az=87.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**344**	P	Pg	05 38 10.3	+0.2
NRCA				S	Sg	05 38 11.6	+0.1
NRCA				AML	AML		
	comp=E,3975μm,0.1s						
NRCA				AML	AML		
	comp=N,1835μm,0.1s						
NRCA				AML	AML		
	comp=N,2035μm,0.1s						
NRCA				AML	AML		
	comp=N,1830μm,0.1s						
NRCA				AML	AML		
	comp=E,4280μm,0.1s						
NRCA				AML	AML		
	comp=N,2030μm,0.1s						
NRCA				AML	AML		
	comp=E,3975μm,0.1s						
LNSS	**Leonessa**	**0.18**	**203**	P	Pg	05 38 12.6	+0.7
LNSS				S	Sg	05 38 15.9	+1.4
LNSS				AML	AML		
	comp=N,378μm,0.5s						
LNSS				AML	AML		
	comp=E,474μm,1.0s						
FDMO	**Fiordimonte**	**0.27**	**352**	P	Pb	05 38 14.4	-0.8
FDMO				S	Sb	05 38 18.6	-1.3
RM33	**Pellescritta (**	**0.27**	**168**	P	Pb	05 38 14.5	-0.7
RM33				S	Sb	05 38 18.5	-1.5
RM33				AML	AML		
	comp=E,208μm,0.3s						
RM33				AML	AML		
	comp=N,188μm,1.0s						
RM33				AML	AML		
	comp=N,189μm,1.0s						
RM33				AML	AML		
	comp=E,208μm,0.3s						
CESI	**CESI - Serrava**	**0.29**	**324**	P	Pb	05 38 14.9	-0.7
CESI				S	Sb	05 38 19.4	-1.2
CSP1	**Cessapalombo**	**0.32**	**9**	P	Pg	05 38 15.2	+0.7
CSP1				S	Sb	05 38 20.5	-1.1
ARRO	**Arrone**	**0.34**	**235**	P	Pg	05 38 15.5	+0.8
ARRO				S	Sb	05 38 20.7	-1.1
ARRO				AML	AML		
	comp=N,49μm,0.1s						
TERO	**Teramo**	**0.37**	**113**	⇑P	Pg	05 38 15.9	+0.5
TERO				AML	AML		
	comp=E,80μm,0.2s						
SNTG	**Esanatoglia**	**0.50**	**343**	P	Pb	05 38 18.9	-0.3
SNTG				S	Sb	05 38 26.6	-0.2
ATCC	**AVT- Casa Cast**	**0.55**	**319**	P	Pb	05 38 19.6	-0.4
SAMA	**S.Maria delle**	**1.07**	**202**	P	Pg	05 38 26.3	-2.3

ROM 25 05:47:47.1±0.1, 42.792N±0.003×13.216E±0.006, h10km, ML2.4/6,2C, Error ellipse: s-maj=0.5km s-min=0.2km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**299**	P	Pg	05 47 49.9	+0.4
NRCA				S	Sg	05 47 51.5	+0.2
NRCA				AML	AML		
	comp=E,12200μm,0.1s						
NRCA				AML	AML		
	comp=N,18000μm,0.5s						
NRCA				AML	AML		
	comp=E,12650μm,0.1s						
NRCA				AML	AML		
	comp=N,19450μm,0.4s						
NRCA				AML	AML		
	comp=E,12150μm,0.1s						
NRCA				AML	AML		
	comp=N,18000μm,0.4s						
NRCA				AML	AML		
	comp=E,12650μm,0.1s						
NRCA				AML	AML		
	comp=N,19450μm,0.4s						
NRCA				AML	AML		
	comp=E,12150μm,0.1s						
NRCA				AML	AML		
	comp=E,12650μm,0.1s						
NRCA				AML	AML		
	comp=N,18000μm,0.4s						
NRCA				AML	AML		
	comp=N,19450μm,0.4s						
NRCA				AML	AML		
	comp=E,2589μm,0.2s						
NRCA	**Norcia**	**0.09**	**299**	P	Pg	05 47 49.9	+0.3
NRCA				S	Sg	05 47 51.5	+0.2
FEMA	**Monte Fema**	**0.21**	**324**	P	Pg	05 47 52.2	+0.6
FEMA				S	Sg	05 47 55.7	+1.2
LNSS	**Leonessa**	**0.23**	**215**	P	Pg	05 47 52.7	+0.8
LNSS				S	Sg	05 47 56.6	+1.5
LNSS				AML	AML		
	comp=E,426μm,1.3s						
LNSS				AML	AML		
	comp=N,326μm,0.1s						
LNSS				AML	AML		
	comp=E,2255μm,0.7s						
LNSS				AML	AML		
	comp=N,2475μm,1.1s						
LNSS				AML	AML		
	comp=N,2475μm,1.1s						
LNSS				AML	AML		
	comp=E,2255μm,0.7s						
LNSS				AML	AML		
	comp=E,419μm,0.2s						
LNSS	**Leonessa**	**0.23**	**215**	P	Pg	05 47 52.6	+0.7
LNSS				S	Sg	05 47 56.5	+1.5
LNSS				AML	AML		
	comp=E,2250μm,0.7s						
LNSS				AML	AML		
	comp=E,2255μm,0.7s						
LNSS				AML	AML		
	comp=N,2475μm,1.1s						
FDMO	**Fiord

comp=N,392µm,0.2s
CSP1 Cessapalombo 0.30 358 P Pb 05 47 54.0 -0.7
CSP1 S Sb 05 47 58.9 -0.9
CSP1 Cessapalombo 0.30 358 P Pg 05 47 53.9 +0.7
CSP1 S Sb 05 47 58.9 -0.9
CESI CESI - Serrava 0.31 313 P Pg 05 47 54.0 +0.6
CESI S Sb 05 47 59.0 -1.1
CESI AML AML
comp=E,1210µm,0.2s
CESI AML AML
comp=N,1345µm,0.3s
CESI AML AML
comp=E,1215µm,0.2s
CESI AML AML
comp=N,1380µm,0.4s
CESI AML AML
comp=E,1215µm,0.2s
CESI AML AML
comp=N,1385µm,0.4s
CESI AML AML
comp=N,45µm,0.3s
CESI CESI - Serrava 0.31 313 S Sb 05 47 59.0 -1.1
CESI AML AML
comp=N,1380µm,0.4s
CESI AML AML
comp=E,1215µm,0.2s
CESI AML AML
comp=N,1385µm,0.4s
TERO Teramo 0.33 120 P Pg 05 47 54.2 +0.5
TERO S Sb 05 47 59.7 -0.9
TERO AML AML
comp=E,692µm,0.3s
TERO AML AML
comp=N,676µm,0.5s
TERO AML AML
comp=E,692µm,0.3s
TERO AML AML
comp=N,676µm,0.5s
TERO AML AML
comp=E,692µm,0.3s
TERO AML AML
comp=N,676µm,0.5s
TERO AML AML
comp=E,30µm,0.1s
TERO Teramo 0.33 120 P Pg 05 47 54.3 +0.6
TERO S Sb 05 47 59.8 -0.9
TERO AML AML
comp=N,676µm,0.5s
TERO AML AML
comp=E,692µm,0.3s
TERO AML AML
comp=N,676µm,0.5s
OFFI Offida 0.37 67 P Pb 05 47 56.1 +0.2
OFFI S Sb 05 48 03.7 +1.9
OFFI AML AML
comp=E,457µm,0.2s
OFFI AML AML
comp=N,482µm,0.9s
GIGS Gran Sasso 0.43 143 P Pg 05 47 56.1 +0.6
GIGS S Sb 05 48 02.6 -0.9
GIGS Gran Sasso 0.43 143 S Sb 05 48 02.4 -1.1
GIGS AML AML
comp=E,91µm,0.6s
GIGS AML AML
comp=N,73µm,0.3s
GIGS AML AML
comp=E,91µm,0.6s
GIGS AML AML
comp=N,73µm,0.3s
ASSB Assisi San Ben 0.48 302 P Pg 05 47 57.0 +0.5
ASSB S Sb 05 48 04.2 -0.8
ASSB AML AML
comp=E,521µm,0.2s
ASSB AML AML
comp=N,492µm,0.2s
CESX Cesi 0.50 249 P Pg 05 47 57.0 +0.2
CESX AML AML
comp=E,342µm,0.5s
CESX AML AML
comp=N,262µm,0.2s
SNTG Esanatoglia 0.51 337 AML AML
comp=E,163µm,0.6s
SNTG AML AML
comp=N,156µm,0.4s
EL6 Elcito 0.54 351 P Pg 05 47 58.2 +0.5
EL6 AML AML
comp=E,240µm,0.2s
EL6 AML AML
comp=N,288µm,1.3s
ATCC AVT- Casa Cast 0.58 313 P Pg 05 47 58.7 +0.4
ATCC S Sb 05 48 07.8 +0.1
ATCC AML AML
comp=E,302µm,1.2s
ATCC AML AML
comp=N,255µm,0.3s
CING Cingoli 0.58 359 P Pg 05 47 58.9 +0.4
CING AML AML
comp=N,154µm,0.9s
CING AML AML
comp=E,212µm,0.1s
FOSV Fossato di Vic 0.60 327 P Pg 05 47 59.2 +0.4
FOSV AML AML
comp=N,180µm,0.3s
FOSV AML AML
comp=E,129µm,0.2s
VCEL Villa Celiera 0.61 130 ⇑P Pb 05 47 59.6 -0.4
VCEL AML AML
comp=E,300µm,1.5s
VCEL AML AML
comp=N,302µm,1.3s
T0110 Collepietro 0.70 143 P Pg 05 48 01.1 +0.4
T0110 AML AML
comp=N,228µm,1.1s
T0110 AML AML
comp=E,213µm,0.7s
ARVD Arcevia 0.73 344 ⇑P Pb 05 48 01.8 -0.2
ARVD S Sn 05 48 14.0 -1.0
ARVD AML AML
comp=E,58µm,0.1s
ARVD AML AML
comp=N,67µm,1.5s
FRON Frontone 0.81 334 AML AML
comp=E,70µm,1.0s
FRON AML AML
comp=N,91µm,1.2s
PIEI Pieia 0.90 326 AML AML
comp=N,41µm,1.5s
PIEI AML AML
comp=E,60µm,0.2s

NNC 25 05:58:08.7±1.3, 43°.85N×86°.89E, h0km, mb4.0, mpv3.6, 6C, Error ellipse: s-maj=9.5km s-min=6.5km az=113.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**3.87**	**339**	Pg	Pg	05 59 21.5	-1.3
	27nm,0.4s						
ZSN				Lg	Lg	06 00 17.3	
	18nm,0.5s						
MK31	**Makanchi Array**	**4.38**	**314**	Pn	Pn	05 59 16.6	+0.1
	0.4nm,0.3s,baz=130,slow=14,SNR=31						
MK31				⇑Sn	Sn	06 00 10.2	+2.0
	2.6nm,0.4s,baz=279,slow=29,SNR=2.7						
MK31				Lg	Lg	06 00 29.7	
	3.8nm,0.5s,baz=130,slow=27,SNR=5.5						
MAKZ	**Makanchi**	**4.55**	**312**	⇑Pn	Pn	05 59 18.9	0.0
	2.5nm,0.4s						
MAKZ				⇑Sn	Sn	06 00 12.8	+0.3
	1.8nm,0.4s						
MAKZ				⇑Lg	Lg	06 00 31.5	
	7.1nm,0.7s						
SHLS	**Shalkode**	**5.45**	**265**	Pg	Pb	05 59 41.9	-2.8
	1.8nm,0.3s						
SHLS				Lg	Lg	06 00 51.4	
	6.6nm,0.4s						
KPKS	**Kokpek**	**5.96**	**269**	Pg	Pb	05 59 58.3	+4.7
	3.9nm,0.2s						
KPKS				Lg	Lg	06 01 19.4	
	7.6nm,0.4s						
BLB	**Baldybastay**	**6.07**	**275**	Pg	Pb	06 00 00.3	+4.8
	4.8nm,0.4s						
BLB				Lg	Lg	06 01 23.3	
	5.1nm,0.5s						
ARXS	**Arharly**	**6.54**	**276**	Pg	Pg	06 00 09.6	-4.5
	3.3nm,0.6s						
ARXS				Lg	Lg	06 01 39.2	
	9.1nm,0.7s						
KURBB	**Kurchatov Arra**	**8.84**	**323**	⇑Lg	Lg	06 02 52.0	
	11nm,0.8s						
KURK	**Kurchatov**	**8.87**	**324**	⇑Lg	Lg	06 02 52.0	
	7.2nm,1.1s						

IDC 25 06:31:43.2±1.4, 55°.17S×30°.44W, h0km, mb3.8/3, mbtmp3.9/3, Error ellipse: s-maj=61.9km s-min=36.3km az=57.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.31**	**155**	P	P	06 36 20.6	+0.2
	1.0nm,0.9s,baz=311,slow=11,SNR=2.5						
	1.0nm,0.9s						
H10S2	**ASCENSION HYDR**	**47.77**	**21**	T	T	07 31 59.9	
	baz=192,slow=74,SNR=4.1						
H10S3	**ASCENSION HYDR**	**47.77**	**21**	T	T	07 32 00.9	
	baz=28,slow=74,SNR=6.3						
LPAZ	**La Paz**	**48.37**	**308**	P	P	06 40 27.5	+0.1
	0.6nm,0.7s,baz=157,slow=5.9,SNR=2.1						
	0.6nm,0.7s						
H10N1	**ASCENSION HYDR**	**48.88**	**21**	T	T	07 33 23.2	
	baz=191,slow=75,SNR=6.3						
H10N3	**ASCENSION HYDR**	**48.88**	**21**	T	T	07 33 24.5	
	baz=191,slow=75,SNR=8.9						
H10N2	**ASCENSION HYDR**	**48.90**	**21**	T	T	07 33 23.0	
	baz=191,slow=75,SNR=9.5						
TORD	**Torodi Ar. Bea**	**73.25**	**33**	P	P	06 43 16.2	+0.1
	2.2nm,0.3s,baz=189,slow=6.4,SNR=0.8						
	2.2nm,0.3s						
ILAR	**Eielson Array**	**148.16**	**313**	PKPbc	PKPbc	06 51 28.5	-1.0
	0.7nm,0.5s,baz=117,slow=1.6,SNR=11						

IDC 25 06:33:33.6±0.8, 6°.02S×151°.11E, h0km, mb4.3/11, mbtmp4.3/11, MS3.5/27, Error ellipse: s-maj=24.8km s-min=14.6km az=114.0
NEIC 25 06:33:40.8±0.9, 6°.1S±0°.1×151°.1E±0°.2, h48km±6km, mb4.5/21, Error ellipse: s-maj=26.4km s-min=12.2km az=119.0
DJA 25 06:33:40.1±1.4, 6°.S±5°×15°.1E±°, h34km±16km, M5.1/9, mb4.5/9, mB4.6/1, MLv5.5/2, Mw(mB)3.8/1, MwMwp5.6/1, Mwp5.8/1
ISC 25 06:33:40.4±0.6, 6°.13S±0°.08×151°.1E±0°.1, h43km, n69, σ1$45/47, mb4.5/20, MS3.4/25, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.02**	**27**	Pn	Pn	**06 34 12.6**	**+0.6**
	328nm,0.3s,baz=171,slow=1.1,SNR=48						
KRVT				LR	LR	06 35 06.7	
	comp=Z,944nm,19.1s,baz=15,slow=48						
RABL	**Rabaul**	**2.19**	**28**		**Pn**	**06 34 13.9**	**-0.5**
RABL	**Rabaul**	**2.19**	**28**	P	**Pn**	**06 34 18.0**	**+3.7**
HNR	**Honiara**	**9.34**	**111**	LR	LR	06 39 11.6	
	comp=Z,235nm,18.4s,baz=274,slow=36						
COEN	**Coen**	**11.03**	**225**	Pn	**Pn**	**06 36 16.7**	**+1.0**
MTSU	**Mount Surprise**	**13.66**	**209**	P	**Pn**	**06 36 51.0**	**-0.6**
CTA	**Charters Tower**	**14.66**	**198**	LR	LR	06 43 01.6	
	comp=Z,242nm,18.2s,baz=33,slow=38						
QIS	**Mount Isa**	**18.18**	**217**	P	**Pn**	**06 37 49.5**	**-0.3**
EIDS	**Eidsvold**	**19.13**	**180**	P	**P**	**06 37 59.6**	**-0.5**
KDU	**Kakadu**	**19.51**	**249**	P	**Pn**	**06 38 04.9**	**-0.9**
RMQ	**Roma**	**20.37**	**186**	P	**P**	**06 38 10.7**	**-2.8**
SIJI	**Sorong**	**20.49**	**284**	LR	LR	06 47 34.4	
	comp=Z,131nm,20.8s,baz=165,slow=41						
GUMO	**Guam**	**20.55**	**342**	LR	LR	06 46 33.3	
	comp=Z,62nm,18.1s,baz=174,slow=38						
MTN	**Manton Dam**	**20.80**	**250**	P	**P**	**06 38 17.9**	**-0.4**
MTN				IAmb	IAmb	06 38 27.2	
	comp=Z,15nm,0.8s						
MTN	**Manton Dam**	**20.80**	**250**	P	Pn	06 38 21.4	+0.3
WB0	**Warramunga Arr**	**21.17**	**229**	P	**P**	**06 38 21.2**	**-1.1**
WB0				IAmb	IAmb	06 38 29.1	
	comp=Z,26nm,0.9s						
WR0	**Warramunga Arr**	**21.18**	**228**	P	**P**	**06 38 21.8**	**-0.5**
WRAB	**Tennant Creek**	**21.31**	**228**	P	**P**	**06 38 22.9**	**-0.8**
WRAB				IAmb	IAmb	06 38 30.3	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**21.31**	**228**	P	**P**	**06 38 22.9**	**-0.8**
WB2	**Warramunga Arr**	**21.31**	**228**	P	**P**	**06 38 22.8**	**-0.9**
WB2				IAmb	IAmb	06 38 30.4	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**21.32**	**228**	P	**P**	**06 38 22.3**	**-1.5**
	comp=Z,14nm,0.8s,baz=52,slow=11,SNR=76						
WRA				LR	LR	06 46 41.6	
	comp=Z,120nm,18.1s,baz=291,slow=37						
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**21.32**	**228**	P	**P**	**06 38 21.8**	**-2.0**
QLP	**Quilpie**	**21.38**	**197**	P	**P**	**06 38 24.3**	**-0.1**
DZM	**Mont Dzumac**	**21.69**	**138**	P	**P**	**06 38 27.2**	**-0.7**
	comp=Z,10nm,1.0s,baz=354,slow=23,SNR=4.8						
DZM				LR	LR	06 46 15.3	
	comp=Z,269nm,18.2s,baz=298,slow=35						
	comp=Z,10nm,1.0s						
DZM	**Mont Dzumac**	**21.69**	**138**	P	**P**	**06 38 27.7**	**-0.2**
KNRA	**Kununurra**	**23.89**	**245**	P	**P**	**06 38 51.2**	**+0.8**
AS31	**Alice Springs**	**24.05**	**222**	P	**P**	**06 38 51.3**	**-0.5**
ASAR	**Alice Springs**	**24.05**	**222**	P	**P**	**06 38 50.5**	**-1.3**
	comp=Z,12nm,0.8s,baz=56,slow=9.3,SNR=98						
ASAR				S	**S**	**06 43 11.9**	**+5.4**
	comp=Z,1.7nm,0.9s,baz=35,slow=23,SNR=7.1						
ASAR				ScP	**ScP**	**06 46 11.0**	**+3.0**
	comp=Z,1.1nm,0.8s,baz=36,slow=3.4,SNR=4.5						
ASAR				LR	LR	06 48 15.2	
	comp=Z,148nm,18.2s,baz=68,slow=36						
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**24.05**	**222**	P	**P**	**06 38 51.3**	**-0.5**
STKA	**Stephens Creek**	**27.12**	**198**	P	**P**	**06 39 20.3**	**+0.8**
	comp=Z,15nm,0.9s,baz=2.4,slow=9.1,SNR=14						
STKA				LR	LR	06 49 42.3	
	comp=Z,130nm,20.2s,baz=19,slow=36						
	comp=Z,15nm,0.9s						
FITZ	**Fitzroy Crossi**	**27.56**	**242**	P	**P**	**06 39 23.2**	**-0.4**
	comp=Z,6.2nm,0.7s,baz=59,slow=8.2,SNR=12						
	comp=Z,6.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**27.56**	**242**	P	**P**	**06 39 22.6**	**-0.9**
FITZ				IAmb	IAmb	06 39 35.0	
	comp=Z,12nm,1.1s						
DAV	**Davao City (W)**	**28.66**	**297**	LR	LR	06 48 10.8	
	comp=Z,48nm,22.0s,baz=162,slow=31						
MSVF	**Nonsavu**	**28.71**	**116**	LR	LR	06 50 19.7	
	comp=Z,86nm,18.2s,baz=157,slow=35						
KAPI	**Kappang**	**31.24**	**270**	LR	LR	06 54 17.0	
	comp=Z,58nm,18.7s,baz=98,slow=40						
JCJ	**Chichijima**	**34.14**	**346**	LR	LR	06 52 40.3	
	comp=Z,58nm,21.9s,baz=144,slow=34						
URZ	**Urewera**	**39.73**	**147**	LR	LR	06 55 05.4	
	comp=Z,82nm,21.3s,baz=32,slow=32						
JHJ	**Hachijo jima 2**	**40.49**	**345**	LR	LR	06 54 45.7	
	comp=Z,53nm,19.9s,baz=240,slow=32						
RPZ	**Rata Peaks**	**41.34**	**158**	LR	LR	06 58 15.2	
	comp=Z,110nm,19.2s,baz=298,slow=36						
MJAR	**Matsushiro Arr**	**44.14**	**345**	LR	LR	06 59 35.2	
	comp=Z,38nm,19.2s,baz=178,slow=36						
KSRS	**Korea Array**	**48.46**	**335**	P	**P**	**06 42 17.5**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=152,slow=14,SNR=1.9						
KSRS				LR	LR	07 00 57.9	
	comp=Z,18nm,20.4s,baz=125,slow=34						
	comp=Z,0.4nm,0.3s						
KLR	**Kul'dur**	**57.66**	**345**	LR	LR	07 06 43.1	
	comp=Z,40nm,18.2s,baz=258,slow=35						
PETK	**Petropavlovsk-**	**59.27**	**5**	LR	LR	07 04 18.8	
	comp=Z,25nm,20.9s,baz=195,slow=31						
SHEM	**Shemya Is, Ala**	**61.80**	**16**	LR	LR	07 08 43.0	
	comp=Z,46nm,18.4s,baz=262,slow=34						
MA2	**Magadan**	**65.49**	**360**	LR	LR	07 15 26.2	
	comp=Z,24nm,18.0s,baz=138,slow=38						
SONM	**Songino Array**	**66.57**	**329**	P	**P**	**06 44 26.2**	**-0.1**
	comp=Z,1.4nm,1.0s,baz=144,slow=5.8,SNR=5.2						
	comp=Z,1.4nm,1.0s						
VNDA	**Vanda**	**71.58**	**178**	P	**P**	**06 44 56.8**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=316,slow=7.6,SNR=8.5						
	comp=Z,1.3nm,0.8s						
VNDA	**Vanda**	**71.58**	**178**	P	**P**	**06 44 57.0**	**+0.3**
TIXI	**Tiksi**	**78.99**	**353**	LR	LR	07 18 47.6	
	comp=Z,12nm,21.1s,baz=192,slow=34						
L19K	**White Mountain**	**79.61**	**23**	P	**P**	**06 45 43.8**	**+0.9**
L19K				IAmb	IAmb	06 45 45.0	
	comp=Z,3.9nm,0.9s						
CNPM	**China Poot**	**79.63**	**26**	P	**P**	**06 45 43.0**	**0.0**
MKAR	**Makanchi Array**	**80.23**	**319**	P	**P**	**06 45 45.3**	**-1.4**
	comp=Z,1.3nm,0.9s,baz=101,slow=6.3,SNR=7.0						
ZALV	**Zalesovo Beam**	**81.33**	**327**	LR	LR	07 24 01.6	
	comp=Z,19nm,18.4s,baz=97,slow=37						
CAST	**Castle Rocks**	**81.36**	**22**	IAmb	IAmb	06 45 53.9	
	comp=Z,4.4nm,1.1s						
MLY	**Manley**	**82.72**	**21**	P	**P**	**06 45 59.1**	**-0.3**
MLY				IAmb	IAmb	06 46 00.5	
	comp=Z,3.8nm,0.7s						
MCK	**McKinley**	**82.72**	**23**	P	**P**	**06 45 59.2**	**-0.2**
NEA2	**Nenana**	**83.10**	**22**	P	**P**	**06 46 00.2**	**-1.2**
WRH	**Wood River Hil**	**83.41**	**22**	P	**P**	**06 46 01.7**	**-1.2**
WRH				IAmb	IAmb	06 46 03.8	
	comp=Z,5.9nm,1.2s						
CCB	**Clear Creek Bu**	**83.61**	**22**	P	**P**	**06 46 03.0**	**-0.9**
CCB				IAmb	IAmb	06 46 04.0	
	comp=Z,3.7nm,0.9s						
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**06 46 05.3**	**-0.1**
QSPA				IAmb	IAmb	06 46 09.0	
	comp=Z,4.7nm,1.1s						
ILAR	**Eielson Array**	**84.01**	**22**	P	**P**	**06 46 03.9**	**-2.1**
	comp=Z,5.0nm,1.1s,baz=249,slow=4.9,SNR=15						
	comp=Z,5.0nm,1.1s						
BVAR	**Borovoye Array**	**89.30**	**323**	LR	LR	07 28 08.4	
	comp=Z,23nm,18.6s,baz=71,slow=37						
DLBC	**Dease Lake**	**89.37**	**31**	LR	LR	07 21 18.0	
	comp=Z,30nm,19.6s,baz=140,slow=32						
YBH	**Yreka Blue Hor**	**91.18**	**48**	LR	LR	07 23 37.7	
	comp=Z,51nm,18.6s,baz=315,slow=33						
NVAR	**Mina Array Bea**	**94.21**	**52**	P	**P**	**06 46 56.4**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=262,slow=5.2,SNR=5.4						
	comp=Z,0.6nm,0.7s						
ARU	**Arti**	**96.48**	**326**	LR	LR	07 30 19.7	
	comp=Z,26nm,20.9s,baz=143,slow=35						
CLL	**Collm**	**123.18**	**330**	*e*PKPdf	**PKiKP**	**06 52 33.0**	**+0.3**
GERES	**GERESS Array B**	**124.28**	**327**	PKP	**PKiKP**	**06 52 34.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=184,slow=3.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**149.09**	**285**	PKPbc	**PKPbc**	**06 53 24.3**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=56,slow=3.3,SNR=2.0						

NEIC 25 06:40:00.5±0.9, 17°.7S±0°.2×178°.28W±0°.06, h591km±10km, mb4.1/20, Error ellipse: s-maj=25.4km s-min=8.2km az=177.0
IDC 25 06:40:04.0±1.9, 17°.45S×178°.87W, h604km±19km, mb3.1/7, mbtmp4.0/9, Error ellipse: s-maj=87.8km s-min=16.7km az=150.0
ISC 25 06:40:00.7±0.6, 17°.8S±0°.2×178°.41W±0°.10, h579km, n32, σ1$30/32, mb4.1/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.37**	**271**	P	**P**	**06 41 23.2**	**+2.7**
	22nm,0.6s,baz=255,slow=22,SNR=18						
MSVF	**Nonsavu**	**3.37**	**271**	P	**P**	**06 41 22.6**	**+2.0**
NIUE	**Niue**	**8.15**	**100**	P	**P**	**06 41 59.6**	**-1.3**
DZM	**Mont Dzumac**	**14.85**	**251**	P	**P**	**06 43 09.6**	**+1.3**
	2.3nm,0.6s,baz=117,slow=16,SNR=6.3						
ARMA	**Armidale**	**29.98**	**240**	P	**P**	**06 45 23.8**	**+0.1**
CTAO	**Charters Tower**	**33.46**	**260**	P	**P**	**06 45 52.7**	**-0.4**
CTAO				IAmb	IAmb	06 45 58.3	
	comp=Z,4.1nm,0.9s						
COEN	**Coen**	**37.10**	**270**	P	**P**	**06 46 23.0**	**-0.4**
COEN				IAmb	IAmb	06 46 24.5	
	comp=Z,3.9nm,0.8s						
TOO	**Toolangi**	**37.23**	**231**	P	**P**	**06 46 23.8**	**-0.4**
TOO				IAmb	IAmb	06 46 36.4	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**38.67**	**241**	P	**P**	**06 46 35.8**	**-0.1**
	comp=Z,2.3nm,0.4s,baz=105,slow=11,SNR=6.3						
	comp=Z,2.3nm,0.4s						
STKA	**Stephens Creek**	**38.67**	**241**	P	**P**	**06 46 35.6**	**-0.3**
BBOO	**Buckleboo**	**43.45**	**241**	P	**P**	**06 47 13.1**	**-0.6**
WR0	**Warramunga Arr**	**44.45**	**259**	P	**P**	**06 47 19.8**	**-1.8**
WR0				IAmb	IAmb	06 47 46.3	
	comp=Z,5.3nm,1.1s						
WB0	**Warramunga Arr**	**44.61**	**260**	P	**P**	**06 47 21.9**	**-0.9**
WB0				IAmb	IAmb	06 47 46.0	
	comp=Z,9.5nm,1.4s						
WB2	**Warramunga Arr**	**44.63**	**259**	P	**P**	**06 47 21.6**	**-1.4**
WB2				IAmb	IAmb	06 47 23.0	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**44.64**	**259**	P	**P**	**06 47 21.7**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=90,slow=8.1,SNR=93						
	comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**44.64**	**259**	P	**P**	**06 47 21.6**	**-1.4**
AS31	**Alice Springs**	**44.81**	**254**	P	**P**	**06 47 23.9**	**-0.4**
AS31				IAmb	IAmb	06 47 24.5	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**44.81**	**254**	P	**P**	**06 47 23.6**	**-0.7**
	comp=Z,11nm,0.6s,baz=87,slow=8.6,SNR=138						
	comp=Z,11nm,0.6s						
ASAR	**Alice Springs**	**44.81**	**254**	P	**P**	**06 47 23.2**	**-1.1**
FORT	**Forrest**	**50.04**	**245**	P	**P**	**06 48 02.0**	**-1.3**
KNRA	**Kununurra**	**50.49**	**264**	P	**P**	**06 48 06.3**	**-0.4**
KNRA				IAmb	IAmb	06 48 24.0	
	comp=Z,12nm,1.3s						
FITZ	**Fitzroy Crossi**	**53.04**	**260**	P	**P**	**06 48 24.8**	**-0.2**
PSA00	**Pilbara Seismi**	**57.93**	**255**	P	**P**	**06 48 57.4**	**-1.4**
PSA00				IAmb	IAmb	06 49 06.7	
	comp=Z,26nm,1.4s						
MBWA	**Marble Bar**	**58.09**	**256**	P	**P**	**06 48 58.9**	**-1.1**
SBA	**Scott Base**	**60.52**	**184**	P	**P**	**06 49 16.4**	**+1.3**
QSPA	**South Pole Qui**	**72.24**	**180**	P	**P**	**06 50 27.5**	**-0.4**
QSPA				IAmb	IAmb	06 50 43.9	
	comp=Z,4.1nm,1.4s						
KSBUS	**Busan**	**72.53**	**317**	P	**P**	**06 50 28.4**	**-1.4**
KSBUS				IAmb	IAmb	06 50 43.1	
	comp=Z,37nm,1.2s						
QSM	**Queen of Sheba**	**79.02**	**47**	P	**P**	**06 51 03.2**	**-2.5**
NVAR	**Mina Array Bea**	**79.36**	**44**	P	**P**	**06 51 09.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=218,slow=8.7,SNR=5.8						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**06 51 39.1**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=202,slow=4.4,SNR=4.4						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**85.95**	**58**	P	**P**	**06 51 42.8**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=223,slow=7.1,SNR=7.4						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**87.29**	**43**	P	**P**	**06 51 47.7**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=232,slow=1.7,SNR=3.7						
	comp=Z,0.3nm,0.5s						

SKO 25 06:52:04.3, 41°.89N×22°.16E, h18km, ML1.9
BEO 25 06:52:06.4±0.6, 41°.87N×22°.12E, h0km, ML1.4/7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.18**	**163**	*i* Pg	Pg	06 52 09.9	+0.1
STIP				*i* Sg	Sg	06 52 13.6	+1.4
PRVS	**Prvonek**	**0.64**	**357**	*e*Pg	Pg	06 52 17.4	-1.3
PRVS				*e*Sg	Sg	06 52 26.1	-0.9
VAY	**Valandovo**	**0.64**	**148**	*i* Pg	Pg	06 52 17.3	-1.4
VAY				*i* Sg	Sg	06 52 25.8	-1.3
VAY				*e*Lg	Lg	06 52 26.1	
	comp=N,50nm,0.4s						
BOSS	**Bosilegrad**	**0.68**	**23**	*e*Pg	Pg	06 52 18.4	-1.1
BOSS				*e*Sg	Sg	06 52 27.7	-0.7
KNT	**Kendrikon**	**0.92**	**140**	*i* Pg	Pg	06 52 22.4	-1.6
KNT				*i* Sg	Sg	06 52 34.5	-1.3
BARS	**Barje**	**0.97**	**347**	*e*Pg	Pg	06 52 25.0	-0.1
BARS				*e*Sg	Sg	06 52 37.2	-0.5
BARS	**Barje**	**0.97**	**347**	*i* Pg	Pg	06 52 23.9	-1.2
VTS	**Vitosha**	**1.12**	**48**	*e*Pg	Pg	06 52 26.1	-1.8
VTS				*e*Sg	Sg	06 52 41.3	-1.1
VTS	**Vitosha**	**1.12**	**48**	*i* Sg	Sg	06 52 41.4	-1.0
VTS				*i* Pg	Pg	06 52 26.1	-1.7
SRS	**Serrai**	**1.34**	**124**	*e*Pg	Pg	06 52 31.4	-0.7
SRS				*e*Sg	Sg	06 52 47.8	-1.6
ZAPS	**Zavoj**	**1.46**	**15**	*e*Pg	Pn	06 52 33.0	-1.0
ZAPS				*e*Sg	Sg	06 52 53.0	-0.2
ZAGS	**Zajecar**	**1.94**	**2**	*e*Pg	Pn	06 52 41.1	+0.4
ZAGS				*e*Sg	Sb	06 53 07.3	-0.2

IDC 25 07:00:24.3±2.7, 5°.98S×130°.54E, h0km, mb3.4/1, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=156.6km s-min=33.9km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.36**	**165**	Pn	Pn	07 03 48.6	-0.5
	0.1nm,0.3s,baz=348,slow=13,SNR=7.2						
WRA				Sn	Sn	07 06 13.9	-15

0.3nm,0.3s,baz=333,slow=23,SNR=8.8
0.5nm,1.1s
ASAR Alice Springs 17.88 170 P Pn 07 04 34.9 +0.2
baz=350,slow=10,SNR=1.9
0.2nm,0.6s
MKAR Makanchi Array 67.67 326 P P 07 11 23.5 +0.1
0.2nm,0.4s,baz=115,slow=9.8,SNR=2.1
0.2nm,0.4s

*IDC **25** 07:02:22.0±1.7,35.97N×22.69E,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=43.9km s-min=30.5km az=133.0*
*THE **25** 07:02:24.0,36.02N×22.50E,h4km±2km,ML2.9/5,Error ellipse: s-maj=2.3km s-min=0.5km az=29.0*
*ATH **25** 07:02:25.1,36.05N×22.58E,h18km±9km,ML2.9/12,Error ellipse: s-maj=9.1km s-min=1.2km az=230.0*
ISC 25 07:02:24.2±1.2,36.00N±0.04×22.59E±0.04,h20km±5km, n34,σ0 81/44,mb3.6/4,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KTHR	**Kythira**	**0.43**	**52**	P		**Pg**	**07 02 32.8**	**-0.3**
KTHR				S		**Sb**	**07 02 39.7**	**+0.5**
	8μm,0.2s							
KTHA	**Kythira Island**	**0.46**	**56**	P		**Pg**	**07 02 33.7**	**0.0**
KTHA				S		**Sb**	**07 02 41.3**	**+1.1**
	4μm,0.4s							
KTHA	**Kythira Island**	**0.46**	**56**	P		**Pg**	**07 02 33.8**	**0.0**
KTHA				S		**Sb**	**07 02 40.5**	**+0.2**
KTHA				AML	AML		07 02 41.6	
	comp=N,8861μm,0.4s							
KTHA				AML	AML		07 02 42.2	
	comp=E,6135μm,0.4s							
ANKY	**Antikythira Is**	**0.59**	**103**	P		**Pg**	**07 02 36.4**	**+0.3**
ANKY				S		**Sn**	**07 02 46.5**	**-0.2**
	comp=E,1μm,0.4s							
ANKY	**Antikythira Is**	**0.59**	**103**	P		**Pg**	**07 02 36.4**	**+0.3**
ANKY				S		**Sg**	**07 02 44.9**	**+0.8**
ANKY				AML	AML		07 02 47.3	
	comp=E,2797μm,0.4s							
ANKY				AML	AML		07 02 50.9	
	comp=N,2313μm,0.6s							
VLI	**Veliai**	**0.77**	**21**	P		**Pb**	**07 02 38.9**	**-0.1**
VLI				S		**Sg**	**07 02 49.8**	**+0.1**
	comp=N,555nm,0.3s							
VLI	**Veliai**	**0.77**	**21**	P		**Pb**	**07 02 38.9**	**-0.1**
VLI				S		**Sb**	**07 02 48.8**	**-0.3**
VLI				AML	AML		07 02 53.5	
	comp=N,1362μm,0.5s							
VLI				AML	AML		07 02 58.3	
	comp=E,1181μm,0.4s							
MNVA	**Monemvasia**	**0.78**	**28**	P		**Pg**	**07 02 39.3**	**-0.2**
MNVA				S		**Sb**	**07 02 48.7**	**-0.5**
RODP	**Rodopos**	**1.05**	**114**	P		**Pg**	**07 02 44.8**	**+0.2**
PYL	**PYLOS**	**1.12**	**323**	P		**Pn**	**07 02 43.8**	**-1.1**
PYL				S		**Sn**	**07 02 59.6**	**-0.2**
	comp=E,545nm,0.4s							
PYL	**PYLOS**	**1.12**	**323**	P		**Pn**	**07 02 43.7**	**-1.1**
PYL				S		**Sb**	**07 02 59.0**	**-0.2**
PYL				AML	AML		07 03 03.0	
	comp=N,898μm,0.5s							
PYL				AML	AML		07 03 03.3	
	comp=E,1363μm,0.5s							
IMMV	**Iera Moni Meta**	**1.26**	**115**	P		**Pg**	**07 02 48.1**	**-0.5**
IMMV	**Iera Moni Meta**	**1.26**	**115**	P		**Pg**	**07 02 48.3**	**-0.3**
IMMV				AML	AML		07 03 09.6	
	comp=E,1952μm,0.6s							
IMMV				AML	AML		07 03 09.9	
	comp=N,1618μm,0.4s							
ITM	**Ithomi**	**1.29**	**336**	P		**Pb**	**07 02 47.6**	**-0.2**
ITM	**Ithomi**	**1.29**	**336**	P		**Pb**	**07 02 47.7**	**-0.2**
ITM				AML	AML		07 03 13.5	
	comp=E,744μm,0.3s							
ITM				AML	AML		07 03 13.9	
	comp=N,736μm,0.6s							
KRND	**KRANIDI**	**1.45**	**18**	P		**Pb**	**07 02 50.7**	**+0.1**
KRND				AML	AML		07 03 20.0	
	comp=E,792μm,0.4s							
KRND				AML	AML		07 03 20.1	
	comp=N,569μm,0.4s							
MHLO	**Agia Marina, M**	**1.62**	**64**	P		**Pb**	**07 02 53.3**	**-0.2**
MHLO				AML	AML		07 03 26.4	
	comp=N,2339μm,0.6s							
MHLO				AML	AML		07 03 31.4	
	comp=E,2210μm,0.5s							
GVDS	**Gavdos**	**1.69**	**133**	P		**Pb**	**07 02 54.3**	**-0.3**
GVD	**Gavdhos**	**1.69**	**133**	P		**Pg**	**07 02 55.3**	**-1.4**
IDI	**Anoyia**	**2.01**	**110**	P		**Pb**	**07 02 59.3**	**-0.8**
IDI	**Anoyia**	**2.01**	**110**	P		**Pg**	**07 03 01.4**	**-1.4**
IDI				AML	AML		07 03 33.1	
	comp=N,226μm,0.5s							
IDI				AML	AML		07 03 34.6	
	comp=E,275μm,0.5s							
LTK	**Loutraki**	**2.04**	**8**	P		**Pb**	**07 03 00.6**	**-0.1**
KLV	**Kalavryta, Ach**	**2.07**	**350**	P		**Pb**	**07 03 00.9**	**-0.3**
KLV				AML	AML		07 03 38.7	
	comp=N,183μm,0.9s							
KLV				AML	AML		07 03 41.2	
	comp=E,146μm,0.5s							
DRO	**Drossia**	**2.07**	**340**	P		**Pb**	**07 03 01.0**	**-0.1**
DRO				AML	AML		07 03 42.8	
	comp=E,540μm,0.4s							
DRO				AML	AML		07 03 47.2	
	comp=N,523μm,0.6s							
VLY	**Voula,Athens**	**2.09**	**27**	P		**Pb**	**07 03 00.2**	**-1.2**
ATHU	**Athens Univers**	**2.19**	**26**	P		**Pb**	**07 03 01.5**	**-1.6**
VIL2	**Platees**	**2.27**	**14**	P		**Pb**	**07 03 03.8**	**-0.8**
LAKA	**Lakka**	**2.29**	**348**	P		**Pb**	**07 03 04.8**	**-0.1**
LAKA				AML	AML		07 03 51.9	
	comp=E,115μm,0.6s							
LAKA				AML	AML		07 03 53.8	
	comp=N,103μm,0.6s							
DION	**Dionisos Attik**	**2.34**	**27**	P		**Pb**	**07 03 03.9**	**-1.8**
SERG	**Sergoula**	**2.45**	**350**	P		**Pb**	**07 03 06.1**	**-1.4**
EKA	**Eskdalemuir Ar**	**26.16**	**326**	P		**P**	**07 07 59.1**	**+2.1**
	comp=N,0.5nm,0.4s,baz=124,slow=9.8,SNR=4.6							
	comp=N,0.5nm,0.4s							
TORD	**Torodi Ar. Bea**	**29.51**	**225**	P		**P**	**07 08 28.2**	**+0.8**
	comp=N,0.2nm,0.5s,baz=33,slow=9.6,SNR=2.1							
ARCES	**ARCESS Array B**	**33.63**	**2**	P		**P**	**07 09 03.0**	**-0.1**
	comp=N,0.8nm,0.7s,baz=191,slow=8.9,SNR=3.7							
	comp=N,0.8nm,0.7s							
MKAR	**Makanchi Array**	**45.07**	**57**	P		**P**	**07 10 39.4**	**+0.6**
	comp=N,0.5nm,0.4s,baz=267,slow=7.8,SNR=7.2							
	comp=N,0.5nm,0.4s							

*NEIC **25** 07:12:24.6±1.2,4.94N±0.09×127.7E±0.1,h130km±8km, mb4.4/38,Error ellipse: s-maj=19.6km s-min=12.1km az=80.0*
*MAN **25** 07:12:25,5.29N×127.60E,h164km,Ms3.8*
*IDC **25** 07:12:27.9±4.7,4.86N×127.77E,h170km±46km,mb3.8/16, mbtmp4.3/16,MS2.8/2,Error ellipse: s-maj=19.9km s-min=10.7km az=85.0*
*DJA **25** 07:12:27.4±1.1,5.1N×12.7E,h152km±6km,M4.7/8, mb4.8/6,mB4.8/4,MLv4.8/8,Mw(mB)4.1/4*
ISC 25 07:12:25.7±0.5,4.92N±0.05×127.56E±0.08,h150km,n81, σ1 34/83,mb4.3/34,3C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**2.37**	**239**	P		**Pn**	**07 13 03.4**	**-1.8**
SGSI				S		**Sn**	**07 13 33.3**	**-2.4**
GSPH	**General Santos**	**2.84**	**294**	*i* P		**Pn**	**07 13 08.6**	**-2.6**
GSPH				*i* S		**Sn**	**07 13 42.6**	**-3.8**
DAV	**Davao City (W)**	**2.90**	**317**	S		**Sn**	**07 13 50.1**	**+2.5**
	542nm,0.5s,baz=250,slow=23,SNR=7.6							
DAV				LR	LR		07 14 21.6	
	comp=Z,117nm,21.1s,baz=162,slow=37							
DAV	**Davao City (W)**	**2.90**	**317**	Pn		**Pn**	**07 13 10.4**	**-1.5**
KCP	**Kidapawan**	**3.21**	**310**	*e*P		**Pn**	**07 13 15.6**	**-0.2**
KCP				*i* S		Sn	07 14 04.1	+9.4
CTBH	**Cotabato--PC H**	**4.01**	**305**	*e*P		**Pn**	**07 13 24.4**	**-1.6**
LBMI	**Labuha**	**5.52**	**181**	P		**Pn**	**07 13 47.8**	**+1.7**
	0.3nm51nm,0.8s							
KMSI	**Cibinong**	**5.61**	**220**	P		**Pn**	**07 13 47.6**	**+0.4**
	1.6nm392nm,0.8s							
GTOI	**Gorontalo**	**6.23**	**227**	P		**Pn**	**07 13 54.2**	**-1.3**
	0.2nm514nm53nm,0.9s							
GTOI				S		Sn	07 15 01.2	-4.5
	0.2nm514nm53nm,0.9s							
MRSI	**Marisa**	**7.14**	**232**	P		**Pn**	**07 14 08.3**	**+0.6**
LUWI	**Luwuk**	**7.62**	**219**	Pn		**Pn**	**07 14 15.3**	**+1.3**

TOLI2	**Tolitoli**	**7.75**	**241**			**Pn**	**07 14 13.5**	**-2.4**
MYLDM	**Lahad Datu**	**9.03**	**272**	Pn		**Pn**	**07 14 34.4**	**+1.5**
KAPI	**Kappang**	**12.58**	**218**	LR		LR	07 20 20.2	
	comp=Z,72nm,19.7s,baz=294,slow=37							
KAPI	**Kappang**	**12.58**	**218**	Pn		**Pn**	**07 15 20.5**	**+0.9**
MMRI	**Maumere**	**14.48**	**202**	Pn		**Pn**	**07 15 43.6**	**-0.1**
SBUM	**Sibu**	**15.50**	**261**	P		**Pn**	**07 15 57.5**	**+1.0**
SBUM					IAmb	IAmb	07 16 00.7	
	comp=Z,26nm,0.8s							
MTN	**Manton Dam**	**18.00**	**169**	P		**P**	**07 16 25.0**	**-0.1**
JAGI	**Jajag, Banyuwa**	**18.86**	**225**	P		**P**	**07 16 36.3**	**+1.8**
SSLB	**Suanglung**	**19.81**	**342**	P		**Pn**	**07 16 44.4**	**-3.4**
SSLB					IAmb	IAmb	07 16 47.5	
	comp=Z,20nm,1.1s							
KNRA	**Kununurra**	**20.50**	**177**	P		**P**	**07 16 52.2**	**+0.1**
KNMB	**Chin-men Tao**	**21.34**	**336**	P		**P**	**07 16 59.6**	**-1.4**
FITZ	**Fitzroy Crossi**	**22.95**	**185**	P		**P**	**07 17 17.4**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=22,slow=2.5,SNR=5.6							
	comp=Z,2.0nm,0.7s							
FITZ	**Fitzroy Crossi**	**22.95**	**185**	P		**P**	**07 17 17.3**	**+0.2**
LEM	**Lembang**	**23.07**	**240**	P		**P**	**07 17 21.1**	**+2.6**
	comp=Z,55nm,0.8s,baz=322,slow=22,SNR=4.8							
	comp=Z,55nm,0.8s							
WB0	**Warramunga Arr**	**25.44**	**165**	P		**P**	**07 17 38.2**	**-1.5**
WB0					IAmb	IAmb	07 17 45.4	
	comp=Z,6.5nm,0.7s							
WRAB	**Tennant Creek**	**25.59**	**165**	P		**P**	**07 17 41.5**	**+0.5**
WRAB					IAmb	IAmb	07 18 25.7	
	comp=Z,5.3nm,0.6s							
WRA	**Warramunga Arr**	**25.59**	**165**	P		**P**	**07 17 39.9**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=348,slow=10,SNR=15							
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**25.59**	**165**	P		**P**	**07 17 41.3**	**+0.2**
JCJ	**Chichijima**	**26.09**	**31**	P		**P**	**07 17 45.0**	**-0.6**
	comp=Z,63nm,0.6s,baz=279,slow=8.0,SNR=4.1							
ASAR	**Alice Springs**	**29.08**	**168**	P		**P**	**07 18 11.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=12,slow=10,SNR=5.9							
ASAR				PcP		**PcP**	**07 21 16.5**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=358,slow=2.5,SNR=4.6							
	comp=Z,0.3nm,0.3s							
CMAR	**Cheng Mai Arr**	**31.02**	**298**	P		**P**	**07 18 31.8**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=97,slow=7.5,SNR=5.6							
	comp=Z,0.6nm,0.3s							
KSRS	**Korea Array**	**32.38**	**1**	P		**P**	**07 18 41.5**	**+0.5**
	comp=Z,7.4nm,0.7s,baz=177,slow=10.0,SNR=26							
	comp=Z,7.4nm,0.7s							
JSD	**Sado**	**34.37**	**15**	P		**P**	**07 18 57.5**	**-0.9**
JMM	**Marumori**	**34.94**	**18**	P		**P**	**07 19 03.1**	**-0.2**
BJT	**Baijiatuan**	**36.42**	**345**	P		**P**	**07 19 16.8**	**+1.0**
BBOO	**Buckleboo**	**38.38**	**168**	P		**P**	**07 19 31.6**	**-0.9**
BBOO					IAmb	IAmb	07 20 01.4	
	comp=Z,8.2nm,1.1s							
STKA	**Stephens Creek**	**38.96**	**161**	P		**P**	**07 19 36.7**	**-0.6**
	comp=Z,4.4nm,0.8s,baz=335,slow=6.3,SNR=7.9							
	comp=Z,4.4nm,0.8s							
STKA	**Stephens Creek**	**38.96**	**161**	P		**P**	**07 19 36.6**	**-0.7**
USRK	**Ussuriysk Ar.**	**39.31**	**5**	P		**P**	**07 19 40.9**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=180,slow=7.2,SNR=5.6							
	comp=Z,2.2nm,0.8s							
USRK	**Ussuriysk Ar.**	**39.31**	**5**	P		**P**	**07 19 40.6**	**+0.6**
ULN	**Ulaanbaatar**	**46.26**	**341**	P		**P**	**07 20 36.9**	**+0.8**
SONM	**Songino Array**	**46.45**	**340**	P		**P**	**07 20 38.7**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=151,slow=8.5,SNR=6.4							
	comp=Z,1.5nm,0.6s							
SONM	**Songino Array**	**46.45**	**340**	P		**P**	**07 20 38.0**	**+0.4**
PETK	**Petropavlovsk-**	**54.02**	**22**	P		**P**	**07 21 34.9**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=170,slow=4.2,SNR=16							
	comp=Z,4.0nm,0.6s							
MKAR	**Makanchi Array**	**57.06**	**324**	P		**P**	**07 21 57.3**	**+1.1**
	comp=Z,2.0nm,0.3s,baz=111,slow=7.8,SNR=14							
	comp=Z,2.0nm,0.3s							
MAKZ	**Makanchi**	**57.25**	**324**	P		**P**	**07 21 58.1**	**+0.6**
MAKZ					IAmb	IAmb	07 21 59.6	
	comp=Z,5.2nm,0.8s							
NIL	**Nilore**	**57.87**	**307**	P		**P**	**07 22 04.7**	**+2.6**
NIL					IAmb	IAmb	07 22 05.8	
	comp=Z,7.3nm,0.9s							
BOOM	**Boomskoye usch**	**59.01**	**317**	P		**P**	**07 22 11.4**	**+1.4**
ZALV	**Zalesovo Beam**	**59.91**	**332**	P		**P**	**07 22 15.2**	**-0.5**
KURK	**Kurchatov**	**61.19**	**327**	P		**P**	**07 22 25.1**	**+0.7**
BTK	**Batken**	**61.70**	**313**	P		**P**	**07 22 28.6**	**+0.4**
GAR	**Garm**	**61.74**	**312**	P		**P**	**07 22 29.6**	**+1.1**
KK31	**Karatay Array**	**62.94**	**316**	P		**P**	**07 22 37.2**	**+0.9**
KK31					IAmb	IAmb	07 22 38.0	
	comp=Z,7.2nm,1.4s							
KKAR	**Karatay Array**	**62.94**	**316**	P		**P**	**07 22 37.0**	**+0.7**
KKAR					IAmb	IAmb	07 22 38.0	
	comp=Z,7.2nm,1.4s							
KKAR	**Karatay Array**	**62.94**	**316**	P		**P**	**07 22 37.2**	**+0.9**
NRIK	**Noril'sk**	**69.48**	**346**	P		**P**	**07 23 18.1**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=127,slow=4.4,SNR=3.9							
	comp=Z,1.4nm,0.3s							
K20K	**Telida**	**80.41**	**27**	P		**P**	**07 24 21.4**	**+1.0**
K20K					IAmb	IAmb	07 24 22.6	
	comp=Z,4.4nm,0.9s							
IMAR	**Indian Mountai**	**80.92**	**24**	P		**P**	**07 24 23.3**	**+0.3**
I21K	**Tanana**	**81.55**	**25**	P		**P**	**07 24 26.7**	**+0.5**
I21K					IAmb	IAmb	07 24 28.4	
	comp=Z,4.3nm,0.8s							
BPAW	**Bear Paw Mtn.**	**81.86**	**26**	P		**P**	**07 24 28.8**	**+0.8**
BPAW					IAmb	IAmb	07 24 30.1	
	comp=Z,6.2nm,0.9s							
MLY	**Manley**	**82.06**	**25**	P		**P**	**07 24 29.7**	**+0.6**
MLY					IAmb	IAmb	07 24 30.7	
	comp=Z,4.4nm,0.8s							
NEA2	**Nenana**	**82.73**	**26**	P		**P**	**07 24 33.2**	**+0.7**
NEA2					IAmb	IAmb	07 24 34.2	
	comp=Z,5.4nm,1.0s							
MDM	**Murphy Dome**	**83.11**	**25**	P		**P**	**07 24 35.0**	**+0.5**
MDM					IAmb	IAmb	07 24 37.1	
	comp=Z,7.1nm,1.2s							
CCB	**Clear Creek Bu**	**83.28**	**26**	P		**P**	**07 24 35.1**	**-0.1**
CCB					IAmb	IAmb	07 24 35.7	
	comp=Z,4.4nm,1.0s							
H24K	**Noodor Dome**	**83.31**	**24**	P		**P**	**07 24 36.7**	**+1.2**
H24K					IAmb	IAmb	07 24 38.0	
	comp=Z,3.1nm,0.7s							
ILAR	**Eielson Array**	**83.68**	**25**	P		**P**	**07 24 36.9**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=246,slow=5.8,SNR=15							
	comp=Z,1.2nm,0.6s							
M24K	**Tolsona, Glenn**	**83.93**	**28**	P		**P**	**07 24 39.6**	**+0.8**
J25K	**Salcha River,**	**84.33**	**26**	P		**P**	**07 24 40.1**	**-0.6**
BMAR	**Burnt Mountain**	**84.66**	**23**	P		**P**	**07 24 42.8**	**+0.5**
KLMR	**Klimovskoe**	**84.78**	**331**	*e*P		**P**	**07 24 39.0**	**-3.9**
KLMR					AMP		07 24 43.6	
	comp=Z,7.0nm,1.0s							
GLB	**Gilahina Butte**	**85.06**	**29**	P		**P**	**07 24 45.5**	**+1.1**
GLB					IAmb	IAmb	07 24 46.1	
	comp=Z,5.1nm,0.8s							
L27K	**Beaver Creek,**	**85.93**	**27**	P		**P**	**07 24 49.3**	**+0.6**
BCAR	**Beaver Creek A**	**85.94**	**27**	P		**P**	**07 24 49.0**	**+0.2**
INK	**Inuvik**	**88.75**	**22**	P		**P**	**07 25 02.8**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=298,slow=4.8,SNR=4.5							
	comp=Z,1.2nm,0.8s							
INK	**Inuvik**	**88.75**	**22**	P		**P**	**07 25 02.9**	**+0.9**
INK					IAmb	IAmb	07 25 40.2	
	comp=Z,6.2nm,1.4s							
ARCES	**ARCESS Array B**	**89.62**	**340**	P		**P**	**07 25 05.4**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=69,slow=6.6,SNR=7.2							
	comp=Z,2.2nm,1.0s							
ARCES	**ARCESS Array B**	**89.62**	**340**	P		**P**	**07 25 04.6**	**-1.5**
BRTR	**Keskin Array B**	**89.90**	**310**	P		**P**	**07 25 08.4**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=96,slow=5.5,SNR=4.9							
	comp=Z,1.2nm,0.8s							
FARO	**Faro, Yukon**	**89.91**	**28**	P		**P**	**07 25 08.1**	**+0.5**
FARO					IAmb	IAmb	07 25 08.8	
	comp=Z,2.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**123.32**	**289**	PKP		**PKiKP**	**07 31 06.0**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=108,slow=3.2,SNR=0.5							

*IDC **25** 07:13:31.8±1.6,23.80N×120.68E,h0km,mb3.5/3, mbtmp3.7/4,ML3.7/1,MS3.2/10,Error ellipse: s-maj=97.8km s-min=27.0km az=77.0*
*JMA **25** 07:13:37.3±0.1,24.2N±0.6×121.7E±0.8,h37km±1km, MV3.5/10,TAIWAN REGION*
*NIED **25** 07:13:37.3,24.18N×121.66E,h37km,MW4.2,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr1.62; Mϑϑ-1.23; Mφφ-0.38; Mrϑ0.49; Mϑφ-0.81; Mφr1.37; Fault plane solution: M₀2.21000×10¹⁵ NP1: ϕs258.00000°,δ31.00000°,λ128.00000°. NP2: ϕs36.00000°,δ66.00000°,λ70.00000°.*
*TAP **25** 07:13:38.0,24.27N×121.70E,h29km,ML4.4,C*
*ASIES **25** 07:13:38.3,24.27N×121.69E,h26km,MW3.9*
*BJI **25** 07:13:41.7±0.0,24.58N×121.20E,h23km,mb3.8/4, mB4.3/3,ML3.6/4,Ms3.8/4,Ms7 3.8/4*
ISC 25 07:13:37.7±0.7,24.25N±0.01×121.71E±0.02,h31km±4km, n189,σ1 11/268,mb3.5/3,MS3.5/7,27C-30D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EHP	**Heping Village**	**0.07**	**27**	*i* P		**Pb**	**07 13 43.0**	**0.0**
	baz=51							
EHP				*i* S		**Sb**	**07 13 46.6**	**+0.1**
ETL	**Fush Village**	**0.12**	**220**	*i* P		**Pb**	**07 13 43.5**	**+0.2**
	baz=220							
ETL				*i* S		**Sb**	**07 13 47.4**	**+0.3**
	baz=220							
NACB	**Ninganchiao**	**0.13**	**233**	*i* P		**Pn**	**07 13 43.5**	**-0.1**
	baz=225							
NACB				*i* S		**Sb**	**07 13 47.5**	**+0.4**
	baz=225							
ENA	**Nanau**	**0.18**	**10**	*i* P		**Pb**	**07 13 43.8**	**0.0**
	baz=17							
ENA				*i* S		**Sb**	**07 13 48.1**	**+0.2**
	baz=17							
TWD	**Chiawan**	**0.20**	**211**	*i* P		**Pb**	**07 13 44.2**	**+0.2**
	baz=211							
TWD				*i* S		**Sb**	**07 13 48.7**	**+0.5**
	baz=211							
EWUT	**Wuta**	**0.20**	**18**	P		**Pb**	**07 13 43.1**	**-1.0**
	baz=23							
EWUT				S		**Sb**	**07 13 47.6**	**-0.7**
	baz=23							
ETLH	**Xiulin Townshi**	**0.21**	**258**	*i* P		**Pb**	**07 13 44.4**	**-0.5**
	baz=246							
ETLH				*i* S		**Sb**	**07 13 48.8**	**+0.1**
	baz=246							
HWA	**Hwalien**	**0.29**	**199**	*e*P		**Pn**	**07 13 45.9**	**+0.1**
	baz=203							
HWA				S		**Sn**	**07 13 51.9**	**+0.7**
	baz=203							
LATG	**Datong**	**0.33**	**330**	*i* P		**Pb**	**07 13 45.5**	**-0.2**
	baz=329							
LATG				*i* S		**Sn**	**07 13 51.4**	**-1.0**
	baz=329							
NNSB	**Datong**	**0.34**	**301**	*i* P		**Pb**	**07 13 46.0**	**0.0**
	baz=299							
NNSB				*i* S		**Sn**	**07 13 51.4**	**-1.3**
	baz=299							
NNSH	**Datong**	**0.34**	**301**	*i* P		**Pb**	**07 13 46.0**	**0.0**
	baz=303							
NNSH				S		**Sn**	**07 13 51.4**	**-1.4**
	baz=303							
ETM	**Tongmen**	**0.35**	**215**	P		**Pb**	**07 13 45.9**	**0.0**
	baz=216							
ETM				S		**Sb**	**07 13 52.0**	**+0.7**
	baz=216							
NNS	**Nan Shan**	**0.36**	**302**	*i* P		**Pb**	**07 13 45.1**	**-1.0**
	baz=304							
NNS				S		**Sb**	**07 13 50.8**	**-1.0**
	baz=304							
TWC	**Suao**	**0.38**	**20**	*i* P		**Pb**	**07 13 46.5**	**+0.2**
	baz=19							
TWC				S		**Sb**	**07 13 53.0**	**+0.8**
	baz=19							
NDS	**Dongshan**	**0.38**	**1**	*e*P		**Pb**	**07 13 45.3**	**-1.0**
	baz=358							
NDS				*i* S		**Sb**	**07 13 52.3**	**0.0**
	baz=358							
NDT	**Datong Townshi**	**0.39**	**333**	*i* P		**Pb**	**07 13 46.5**	**0.0**
	baz=336							
NDT				S		**Sn**	**07 13 52.7**	**-1.1**
	baz=336							
TEYL	**Yanliau Villag**	**0.40**	**195**	P		**Pb**	**07 13 47.1**	**+0.6**
	baz=198							
TEYL				S		**Sn**	**07 13 53.9**	**+0.1**
	baz=198							
ENTT	**Nioudou**	**0.41**	**342**	*e*P		**Pb**	**07 13 45.8**	**-1.0**
	baz=342							
ENTT				*e*S		**Sb**	**07 13 51.8**	**-1.1**
	baz=342							
WHF	**Hehuan Shan**	**0.42**	**255**	*i* P		**Pn**	**07 13 47.4**	**-0.6**
	baz=252							
WHF				*i* S		**Sn**	**07 13 53.8**	**-1.1**
	baz=252							
FUSS	**Fushou**	**0.42**	**270**	*i* P		**Pn**	**07 13 47.6**	**-0.4**
	baz=267							
FUSS				*i* S		**Sn**	**07 13 54.0**	**-0.9**
	baz=267							
TWE	**Neicheng**	**0.47**	**355**	*i* P		**Pb**	**07 13 47.7**	**0.0**
	baz=354							
TWE				S		**Sn**	**07 13 55.1**	**-0.5**
	baz=354							
TWT	**Tachien**	**0.49**	**270**	*i* P		**Pn**	**07 13 48.7**	**-0.1**
	baz=265							
TWT				*i* S		**Sn**	**07 13 55.7**	**-0.6**
	baz=265							
TDCB	**Techi**	**0.50**	**270**	*i* P		**Pn**	**07 13 48.7**	**-0.2**
	baz=265							
TDCB				*i* S		**Sn**	**07 13 55.6**	**-1.0**
	baz=265							
ESL	**Shilin**	**0.50**	**210**	*e*P		**Pb**	**07 13 47.7**	**-0.5**
	baz=208							
ILA	**Ilan**	**0.51**	**4**	P		**Pb**	**07 13 48.8**	**+0.4**
	baz=360							
ILA				S		**Sn**	**07 13 56.6**	**-0.1**
	baz=360							
YHNB	**Yeheng**	**0.52**	**324**	*i* P		**Pb**	**07 13 48.5**	**0.0**
	baz=323							
YHNB				*i* S		**Sb**	**07 13 55.5**	**-0.3**
	baz=323							
FUSB	**Fushanzhiwuyua**	**0.52**	**348**	*i* P		**Pb

NJD	**Zhudong**	**0.74**	**311**	*e*P	**Pn**	07 13 53.0	+0.9
	baz=310							
DPDB	**Guoxing**	**0.75**	**253**	*e*P	**Pn**	07 13 52.7	+0.5
	baz=246							
NSTT	**Nanjuang**	**0.75**	**301** ⇓	*i*P	**Pn**	07 13 52.8	+0.6
	baz=299							
NSTT				*i* S	**Sn**	07 14 02.8	+0.4
	baz=299							
TATO	**Taipei**	**0.75**	**345** ⇓	*i*P	**Pn**	07 13 52.4	+0.2
	baz=344							
TATO				*i* S	**Sb**	07 14 02.0	-0.2
	baz=344							
WCS	**Beigang Elemen**	**0.75**	**255**	*e*P	**Pb**	07 13 51.8	-0.5
	baz=254							
WCS				*e*S	**Sn**	07 14 02.3	-0.3
	baz=254							
BACT	**New Taipei Cit**	**0.78**	**342**	*e*P	**Pn**	07 13 54.0	+1.3
	baz=354							
NHY	**Taipei**	**0.80**	**351**	*e*P	**Pn**	07 13 53.6	+0.8
	baz=350							
TWB1	**Santiao Chiao**	**0.80**	**19**	*e*P	**Pb**	07 13 53.3	+0.2
	baz=20							
TWB1				S	**Sn**	07 14 04.6	+1.0
	baz=20							
HGSD	**Ruisui**	**0.80**	**199** ⇑	*e*P	**Pb**	07 13 52.4	-0.7
	baz=211							
HGSD				*e*S	**Sn**	07 14 06.4	+2.7
	baz=211							
TAP1	**Taipei**	**0.80**	**348**	*e*P	**Pn**	07 13 53.8	+0.9
	baz=347							
TAP1				*e*S	**Sn**	07 14 04.8	+1.0
	baz=347							
TAP	**Taipei**	**0.81**	**347**	*i* P	**Pn**	07 13 53.8	+0.8
	baz=347							
TAP				*i* S	**Sn**	07 14 03.9	0.0
	baz=347							
HSN1	**Hsinchu**	**0.82**	**310**	P	**Pn**	07 13 54.6	+1.5
	baz=316							
HSN1				S	**Sn**	07 14 05.7	+1.5
	baz=316							
NWF	**Wu-fen Shan**	**0.82**	**5**	P	**Pn**	07 13 53.8	+0.5
	baz=351							
NWF				S	**Sn**	07 14 05.2	+0.9
	baz=351							
WFSB	**Wu-fen Shan**	**0.82**	**5** ⇓	*i*P	**Pn**	07 13 53.9	+0.7
	baz=351							
WFSB				*i* S	**Sn**	07 14 05.4	+1.1
	baz=351							
EHY	**Hungye**	**0.82**	**206**	*e*P	**Pb**	07 13 51.7	-1.8
	baz=205							
SMLT	**Sun Moon Lake**	**0.82**	**244**	*e*P	**Pn**	07 13 53.9	+0.6
	baz=238							
SMLT				S	**Sn**	07 14 05.7	+1.2
	baz=238							
SSLB	**Suanglung**	**0.83**	**236** ⇑	*i*P	**Pb**	07 13 53.5	-0.2
	baz=230							
SSLB				*e*S	**Sb**	07 14 03.4	-1.1
	baz=230							
NTY	**Taoyuan**	**0.83**	**333**	*e*P	**Pn**	07 13 54.4	+1.0
	baz=336							
SBCB	**Hsinchu**	**0.85**	**309**	P	**Pn**	07 13 54.8	+1.2
	baz=315							
SBCB				*i* S	**Sn**	07 14 06.7	+1.7
	baz=315							
SXI1	**Grass Mountain**	**0.85**	**10** ⇓	*i*P	**Pn**	07 13 54.5	+0.8
	baz=356							
SXI1				*i* S	**Sn**	07 14 06.6	+1.4
	baz=356							
NCU	**National Centr**	**0.86**	**327**	*e*P	**Pb**	07 13 53.7	-0.5
	baz=326							
NCU				*e*S	**Sn**	07 14 06.7	+1.5
	baz=326							
NCUH	**Zhongli**	**0.86**	**326**	*e*P	**Pn**	07 13 54.5	+0.7
	baz=325							
NCUH				*e*S	**Sn**	07 14 07.1	+1.8
	baz=325							
TWQ1	**Liyutan**	**0.86**	**277** ⇓	*i*P	**Pn**	07 13 55.4	+1.6
	baz=280							
TWQ1				S	**Sn**	07 14 06.5	+1.2
	baz=280							
HSN	**Hsinchu**	**0.87**	**309**	*e*P	**Pn**	07 13 55.0	+1.2
	baz=311							
HSN				*i* S	**Sn**	07 14 07.3	+1.9
	baz=311							
NJN	**Zhunan**	**0.88**	**300**	*e*P	**Pn**	07 13 55.6	+1.7
	baz=295							
NSY	**Sanyi**	**0.88**	**281** ⇑	*i*P	**Pn**	07 13 55.9	+1.9
	baz=279							
NSY				S	**Sn**	07 14 08.3	+2.6
	baz=279							
NMLH	**Miaoli**	**0.88**	**289**	*e*P	**Pn**	07 13 55.6	+1.6
	baz=288							
TWS1	**Kuangyinshan**	**0.89**	**343**	*e*P	**Pn**	07 13 55.2	+1.1
	baz=352							
TWS1				*e*S	**Sn**	07 14 07.4	+1.4
	baz=352							
TNOU	**National Taiwa**	**0.90**	**4**	*e*P	**Pn**	07 13 54.9	+0.6
	baz=352							
YM01	**YM01**	**0.90**	**352**	*e*P	**Pn**	07 13 54.7	+0.4
	baz=340							
YM01				*e*S	**Sn**	07 14 07.6	+1.2
	baz=340							
YULB	**Yu-li**	**0.93**	**204** ⇑	P	**Pn**	07 13 53.3	-1.5
	baz=203							
NTST	**Danshui**	**0.94**	**346**	*e*P	**Pb**	07 13 56.1	+0.6
	baz=354							
NTST				*e*S	**Sn**	07 14 09.1	+1.9
	baz=354							
YM08	**YM08**	**0.94**	**353**	*e*P	**Pb**	07 13 55.3	-0.1
	baz=352							
WWF	**Wufeng**	**0.94**	**258**	P	**Pn**	07 13 56.1	+0.5
	baz=253							
WWF				S	**Sn**	07 14 09.9	+2.5
	baz=253							
ANP	**Anpu**	**0.95**	**350**	*e*P	**Pb**	07 13 55.6	-0.1
	baz=350							
ANP				*e*S	**Sn**	07 14 09.3	+1.7
	baz=350							
NWRT	**Kuosheng**	**0.95**	**357**	*e*P	**Pb**	07 13 56.4	+0.7
	baz=356							
TCU	**Taichung**	**0.95**	**264** ⇑	*e*P	**Pb**	07 13 56.8	+1.2
	baz=262							
TCU				*e*S	**Sn**	07 14 10.4	+3.0
	baz=262							
WHYT	**Xinyi Township**	**0.96**	**235**	*e*P	**Pb**	07 13 55.8	0.0
	baz=230							
NHW	**Xinwu Township**	**0.96**	**322**	P	**Pb**	07 13 56.3	+0.4
	baz=332							
NHW				S	**Sn**	07 14 09.6	+1.8
	baz=332							
EYUL	**Yuli**	**0.97**	**202**	*e*P	**Pb**	07 13 56.2	+0.2
	baz=212							
TWF1	**Yuli**	**0.97**	**203** ⇑	*e*P	**Pn**	07 13 53.8	-1.5
	baz=203							
TWF1				*e*S	**Sb**	07 14 08.4	-0.1
	baz=203							
WDJ	**Dajia District**	**0.98**	**276**	*e*P	**Pb**	07 13 57.0	+0.9
	baz=275							
WJS	**Zhushan**	**0.99**	**245**	*e*P	**Pb**	07 13 57.4	+1.0
	baz=244							
WJS				*e*S	**Sn**	07 14 11.4	+2.8
	baz=244							
WNT1	**Nantou City**	**1.00**	**250**	*e*P	**Pb**	07 13 57.8	+1.3
	baz=249							
WNT1				*e*S	**Sn**	07 14 12.0	+3.3
	baz=249							
WNT	**Mingjian**	**1.01**	**249**	P	**Pb**	07 13 57.6	+1.0
	baz=247							
WNT				S	**Sn**	07 14 11.8	+2.9
	baz=247							
TWY	**Chenhua**	**1.02**	**355**	*e*P	**Pb**	07 13 57.6	+0.7
	baz=339							
TWY				*e*S	**Sn**	07 14 11.6	+2.3
	baz=339							
YUS	**Yu-Shan**	**1.03**	**223** ⇑	P	**Pn**	07 13 56.8	+0.4
	baz=211							
YUS				S	**Sb**	07 14 10.1	-0.5
	baz=211							
WCHH	**Zhanghua**	**1.06**	**261**	*e*P	**Pb**	07 13 58.4	+0.8
	baz=260							
WYL	**Yuanlin Townsh**	**1.07**	**255**	*e*P	**Pb**	07 13 58.8	+1.1
	baz=253							
ALS	**Alishan**	**1.11**	**228** ⇑	*i*P	**Pb**	07 13 58.5	0.0
	baz=218							
ALS				*e*S	**Sb**	07 14 12.6	-0.1
	baz=218							
FULB	**Fuli**	**1.11**	**200**	*e*P	**Pn**	07 13 57.2	-0.1
	baz=209							
CHN5	**Tsauling**	**1.15**	**236**	*e*P	**Pb**	07 13 58.9	-0.1
	baz=235							
JYNG	**Yonagunijimaku**	**1.15**	**80**	P	**Pn**	07 13 58.1	+0.4
JYNG				*e*S	**Sn**	07 14 14.0	+1.7
CHKT	**Chengkung**	**1.19**	**195**	*e*P	**Pn**	07 13 57.8	-0.5
	baz=207							
WGK	**Gukeng**	**1.19**	**242**	P	**Pb**	07 14 00.4	+0.8
	baz=241							
WGK				*e*S	**Sb**	07 14 16.5	+1.8
	baz=241							
YOJ	**Yonaguni jima**	**1.21**	**80** ⇓	*i*P	**Pn**	07 13 59.2	+0.7
	baz=80							
YOJ				*e*S	**Sn**	07 14 15.0	+1.2
	baz=80							
YOJ	**Yonaguni jima**	**1.21**	**80**	P	**Pn**	07 13 59.2	+0.7
YOJ				*e*S	**Sn**	07 14 15.8	+1.9
WDLH	**Douliu**	**1.21**	**243** ⇑	P	**Pb**	07 14 00.8	+0.8
	baz=242							
ELDTW	**Lidau**	**1.23**	**211**	*e*P	**Pb**	07 13 58.2	-0.8
	baz=200							
ECS	**Chishang**	**1.23**	**201**	*e*P	**Pb**	07 14 01.4	+0.9
	baz=202							
WRL	**Guolierlin Hig**	**1.27**	**254**	*e*P	**Pn**	07 13 59.8	+0.5
	baz=253							
WCKO	**Fanlu**	**1.29**	**232**	*e*P	**Pb**	07 14 00.8	-0.6
	baz=221							
WCKO				*e*S	**Sb**	07 14 19.1	+1.4
	baz=221							
EDH	**Donghe**	**1.33**	**196**	*e*P	**Pn**	07 13 59.8	-0.4
	baz=208							
WTK	**Tuku**	**1.33**	**245**	*e*P	**Pb**	07 14 02.6	+0.5
	baz=244							
WTK				*e*S	**Sb**	07 14 20.6	+1.8
	baz=244							
CHN2	**Minshiung**	**1.34**	**238**	*e*P	**Pb**	07 14 03.0	+0.9
	baz=237							
CHN2				*e*S	**Sb**	07 14 20.7	+1.8
	baz=237							
CHN4	**Tsaushan**	**1.36**	**229** ⇑	*e*P	**Pn**	07 14 01.6	+1.0
	baz=219							
CHN4				*e*S	**Sb**	07 14 20.8	+1.3
	baz=219							
TPUB	**Ta-pu**	**1.37**	**226** ⇑	*i*P	**Pb**	07 14 02.7	-0.1
	baz=217							
TPUB				*i* S	**Sb**	07 14 20.8	+0.9
	baz=217							
STYH	**Taoyuan**	**1.37**	**219**	*e*P	**Pn**	07 14 00.6	-0.2
	baz=209							
STYT	**Tauyuan**	**1.39**	**219**	⇑P	**Pn**	07 14 02.3	+1.2
	baz=212							
STYT				*e*S	**Sb**	07 14 20.7	+0.2
	baz=212							
CHY	**Chiayi**	**1.39**	**238** ⇑	*e*P	**Pb**	07 14 03.4	+0.2
	baz=227							
PCYT	**Pengchaiyu**	**1.41**	**13**	*e*P	**Pn**	07 14 02.5	+1.2
	baz=12							
WTP	**Ta-pu**	**1.42**	**225** ⇑	*i*P	**Pb**	07 14 03.4	-0.1
	baz=213							
WTP				*e*S	**Sb**	07 14 22.1	+0.8
	baz=213							
LONT	**Longtian**	**1.44**	**202**	*e*P	**Pn**	07 14 00.9	-0.8
	baz=191							
TWK	**Hsinying**	**1.49**	**229** ⇑	*e*P	**Pb**	07 14 04.5	-0.2
	baz=218							
TWK				*e*S	**Sb**	07 14 23.9	+0.6
	baz=218							
WSF	**Szhu**	**1.49**	**246**	*e*P	**Pb**	07 14 04.2	-0.6
	baz=245							
WSF				*e*S	**Sb**	07 14 23.9	+0.6
	baz=245							
SNST	**Tainan City**	**1.51**	**227**	*e*P	**Pb**	07 14 05.2	+0.1
	baz=213							
CHN1	**Nanshi**	**1.52**	**226**	*e*P	**Pb**	07 14 05.0	-0.3
	baz=226							
WSL	**Shuilin Townsh**	**1.54**	**242**	*e*P	**Pb**	07 14 05.7	+0.1
	baz=241							
TWGBT	**Beinan**	**1.54**	**202**	*e*P	**Pn**	07 14 01.5	-1.5
	baz=191							
SGST	**Jiashian**	**1.56**	**222**	*e*P	**Pn**	07 14 04.5	+1.2
	baz=212							
SGST				*e*S	**Sb**	07 14 25.0	-0.2
	baz=212							
TTN	**Taitung**	**1.58**	**199**	*e*P	**Pn**	07 14 03.9	+0.3
	baz=200							
ICHU	**Yijhu**	**1.58**	**236**	*e*P	**Pb**	07 14 05.9	-0.4
	baz=236							
LDUT	**Ludao**	**1.59**	**188**	*e*P	**Pn**	07 14 01.9	-1.8
	baz=178							
SLGT	**Liugui**	**1.59**	**218**	*e*P	**Pb**	07 14 05.8	-0.6
	baz=219							
CHN3	**Shinhua**	**1.70**	**227**	*e*P	**Pb**	07 14 07.7	-0.6
	baz=227							
SSHA	**Shanhua**	**1.71**	**230**	*e*P	**Pb**	07 14 07.9	-0.6
	baz=230							
SHHT	**Tainan City**	**1.75**	**226**	*e*P	**Pb**	07 14 08.2	-0.9
	baz=226							
SCLT	**Jiali**	**1.75**	**233**	*e*P	**Pb**	07 14 08.6	-0.6
	baz=219							
SCST	**Cishan**	**1.76**	**220**	*e*P	**Pb**	07 14 08.9	-0.4
	baz=221							
ECL	**Taimali**	**1.79**	**203**	*e*P	**Pn**	07 14 08.1	+1.6
	baz=194							
SSD	**Sandimen**	**1.79**	**214**	*e*P	**Pb**	07 14 08.7	-1.2
	baz=204							
SSD				*e*S	**Sb**	07 14 31.0	-1.0
	baz=204							
TSMG	**Majia**	**1.82**	**213**	*e*P	**Pn**	07 14 08.8	+1.9
	baz=214							
IRIF	**Iriomote-Funau**	**1.85**	**87**	P	**Pn**	07 14 07.8	+0.6
IRIF				*e*S	**Sn**	07 14 29.8	+0.2
TWM1	**Shoushan**	**1.85**	**220**	*e*P	**Pb**	07 14 10.3	-0.6
	baz=221							
TSCK	**Chigu Township**	**1.85**	**234**	*e*P	**Pn**	07 14 08.4	+1.1
	baz=220							
MASBT	**Mashibuluo**	**1.91**	**211**	*e*P	**Pn**	07 14 09.2	+1.1
	baz=214							
HATJ	**Hateruma jima**	**1.93**	**95**	*e*S	**Sn**	07 14 32.6	+1.1
EAST	**Anshuo**	**2.02**	**203**	*e*P	**Pn**	07 14 11.4	+1.7
	baz=196							
TAW	**Tawu**	**2.03**	**202**	*e*P	**Pn**	07 14 11.5	+1.8
	baz=195							
TAWH	**Dawu Township**	**2.05**	**202**	*e*P	**Pn**	07 14 10.7	+0.6
	baz=195							
SSPT	**Xinbi**	**2.05**	**211**	*e*P	**Pb**	07 14 12.7	-1.6
	baz=215							
WSSB	**Gushan**	**2.08**	**220**	*e*P	**Pn**	07 14 12.6	+2.0
	baz=222							
PNG	**Penghu**	**2.08**	**251**	*e*P	**Pn**	07 14 10.9	+0.3
	baz=250							
PHUB	**P'eng-hu**	**2.09**	**250**	*e*P	**Pn**	07 14 11.2	+0.5
	baz=249							
JKRS	**Kuro-shima**	**2.10**	**90**	P	**Pn**	07 14 12.0	+1.2
JKRS				*e*S	**Sn**	07 14 37.5	+1.6
WDGT	**Dungji**	**2.12**	**243** ⇑	P	**Pn**	07 14 12.3	+1.3
	baz=241							
WDGT				*e*S	**Sn**	07 14 38.2	+1.8
	baz=241							
SCZT	**Fangliau**	**2.12**	**208**	*e*P	**Pn**	07 14 13.2	+2.2
	baz=198							
VWUC	**VWUC**	**2.18**	**290** ⇑	*e*P	**Pn**	07 14 12.1	+0.1
	baz=289							
SLIU	**Shizi**	**2.19**	**203**	*e*P	**Pn**	07 14 13.9	+1.9
	baz=194							
LAY	**Lan-yu**	**2.21**	**184**	*e*P	**Pn**	07 14 11.5	-0.8
	baz=177							
JIJ	**Ishigaki jima**	**2.22**	**87**	P	**Pn**	07 14 12.9	+0.4
JIJ				*e*S	**Sn**	07 14 38.7	-0.3
LYUB	**Lan-yu**	**2.24**	**183**	*e*P	**Pn**	07 14 12.1	-0.6
	baz=185							
TWP	**Hsiaoliuchiu**	**2.26**	**213**	*e*P	**Pb**	07 14 16.6	-1.3
	baz=217							
VCHM	**Qimei**	**2.33**	**244**	*e*P	**Pn**	07 14 15.1	+1.1
	baz=242							
VCHM				*e*S	**Sn**	07 14 42.4	+0.8
	baz=242							
TWK1	**Hengchun**	**2.44**	**200**	*e*P	**Pn**	07 14 16.7	+1.2
	baz=193							
TWKBT	**Hengchun**	**2.44**	**200**	*e*P	**Pn**	07 14 17.1	+1.6
	baz=195							
TSEB	**Hengchuen, Pin**	**2.46**	**198**	*e*P	**Pn**	07 14 18.0	+2.4
	baz=192							
MATB	**Ma-tsu**	**2.48**	**320**	*e*P	**Pn**	07 14 16.2	+0.3
	baz=319							
MSUT	**Lienchiang**	**2.50**	**320**	*e*P	**Pn**	07 14 17.3	+1.0
	baz=319							
JTJ	**Tarama**	**2.76**	**81**	*e*P	**Pn**	07 14 21.7	+1.9
JTJ				*e*S	**Sn**	07 14 54.1	+2.0
KNM	**Kinmen**	**2.99**	**274** ⇑	*e*P	**Pn**	07 14 25.2	+2.1
	baz=272							
XPSS	**Dashiqiu**	**3.00**	**333**	*e*P	**Pn**	07 14 23.1	-0.1
	baz=332							
KNMB	**Chin-men Tao**	**3.04**	**275** ⇑	*e*P	**Pn**	07 14 24.0	+0.4
	baz=273							
MHZQ	**Yeshan**	**3.04**	**308**	*e*P	**Pn**	07 14 24.4	+0.6
	baz=307							
AXDP	**Jialang**	**3.46**	**282** ⇑	*e*P	**Pn**	07 14 30.1	+0.5
	baz=280							
ZPLA	**Ao Xicun**	**3.63**	**266**	*e*P	**Pn**	07 14 32.5	+0.7
	baz=263							
DSXP	**Dongshan**	**3.95**	**263**	*e*P	**Pn**	07 14 36.7	+0.4
	baz=260							
SXFK	**Yanhouchang**	**4.25**	**301**	*e*P	**Pn**	07 14 40.5	+0.1
	baz=300							
VDOS	**Pratas Island**	**5.80**	**233**	*e*P	**Pn**	07 15 04.8	+3.0
	baz=228							
KSRS	**Korea Array**	**14.20**	**21**	Pn	**P**	07 17 04.7	+1.1
	0.3nm,0.3s,baz=202,slow=12,SNR=17							
KSRS				LR	LR	07 23 00.3		
	comp=Z,35nm,19.8s,baz=190,slow=38 4.0nm,0.7s							
JHJ	**Hachijo jima 2**	**18.14**	**57**	LR	LR	07 24 25.8		
	comp=Z,51nm,20.9s,baz=274,slow=34							
MJAR	**Matsushiro Arr**	**18.75**	**45**	LR	LR	07 25 50.7		
	comp=Z,71nm,19.2s,baz=224,slow=37							
CMAR	**Chiang Mai Arr**	**21.96**	**259**	LR	LR	07 27 54.5		
	comp=Z,43nm,18.9s,baz=75,slow=41							
GUMO	**Guam**	**24.30**	**112**	LR	LR	07 28 22.5		
	comp=Z,24nm,19.7s,baz=200,slow=36							
SONM	**Songino Array**	**26.49**	**336**	P	**P**	07 19 11.2	-1.2
	0.6nm,0.7s,baz=144,slow=9.2,SNR=2.5 0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**40.45**	**327**	LR	LR	07 39 17.1		
	comp=Z,39nm,19.5s,baz=109,slow=38							
H11N2	**WAKE ISLAND Hy**	**42.01**	**87**	T	T	08 06 54.1		
	baz=351,slow=74,SNR=4.3							
H11N3	**WAKE ISLAND Hy**	**42.02**	**87**	T	T	08 06 56.3		
	baz=283,slow=74,SNR=3.3							
H11S3	**WAKE ISLAND Hy**	**42.14**	**89**	T	T	08 06 57.9		
	baz=284,slow=74,SNR=10							
H11S1	**WAKE ISLAND Hy**	**42.15**	**89**	T	T	08 06 52.0		
	baz=284,slow=74,SNR=6.0							
H11S2	**WAKE ISLAND Hy**	**42.16**	**89**	T	T	08 06 49.8		
	baz=284,slow=74,SNR=3.9							
PALK	**Pallekele**	**42.72**	**254**	LR	LR	07 39 09.7		
	comp=Z,68nm,18.0s,baz=197,slow=37							
WRA	**Warramunga Arr**	**45.62**	**163**	P	**P**	07 21 52.8	-2.6
	0.8nm,0.8s,baz=344,slow=8.8,SNR=5.1 0.8nm,0.8s							
ASAR	**Alice Springs**	**49.08**	**165**	P	**P**	07 22 19.5	-2.9
	0.5nm,0.9s,baz=351,slow=7.8,SNR=2.7 0.5nm,0.9s							
GEYT	**Alibeck**	**55.18**	**300**	LR	LR	07 50 24.6		
	comp=Z,38nm,18.2s,baz=143,slow=40							
HFS	**Hagfors**	**77.74**	**331**	LR	LR	08 03 28.4		
	comp=Z,40nm,18.1s,baz=37,slow=39							
NOA	**NORSAR Array B**	**78.39**	**332**	LR	LR	08 03 43.6		
	comp=Z,26nm,18.6s,baz=30,slow=38							

IDC 25 07:22:53.±2.6, 6.48S×130.48E, h124km±35km, mb3.5/1, mbtmp4.2/5, Error ellipse: s-maj=71.4km s-min=20.9km az=88.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.62**	**8**	P	P	Pn	07 24 14.9	+0.1
	34nm,0.2s,baz=233,slow=20,SNR=69							
SIJI				S	S	Sn	07 25 12.7	-5.6
	96nm,0.2s,baz=225,slow=23,SNR=20							
FITZ	**Fitzroy Crossi**	**12.48**	**202**	P	P	Pn	07 25 46.4	-0.3
	4.8nm,0.3s,baz=28,slow=11,SNR=46							
FITZ				S	S	Sn	07 27 54.6	-10
	6.0nm,0.3s,baz=67,slow=21,SNR=7.6							
WRA	**Warramunga Arr**	**13.90**	**165**	P	P	Pn	07 26 04.7	-0.3
	1.5nm,0.4s,baz=348,slow=13,SNR=48							
WRA				S	S	Sn	07 28 32.3	-6.4
	1.8nm,0.3s,baz=345,slow=23,SNR=8.2							
ASAR	**Alice Springs**	**17.41**	**169**	P	P	Pn	07 26 48.8	+0.2
	1.8nm,0.6s,baz=352,slow=13,SNR=4.2							
ASAR				S	S	S	07 29 57.5	-5.5
	1.1nm,0.6s,baz=352,slow=26,SNR=6.3							
MKAR	**Makanchi Array**	**68.05**	**326**	P	P	P	07 33 39.4	0.0
	0.6nm,0.5s,baz=114,slow=9.1,SNR=10 0.6nm,0.5s							

ROM 25 07:27:16.4±0.1, 42.762N±0.004×13.200E±0.007, h10km, Md1.3/4, 3C-4D, Error ellipse: s-maj=0.6km s-min=0.3km az=248.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**319**	P	P	Pg	07 27 19.5	+0.4
NRCA				S	S	Sg	07 27 21.2	+0.3
NRCA				AML	AML			
	comp=E,4335μm,0.2s							
NRCA				AML	AML			
	comp=N,4655μm,0.1s							
NRCA				AML	AML			
	comp=E,4830μm,0.1s							
NRCA				AML	AML			
	comp=N,4970μm,0.1s							
NRCA				AML	AML			
	comp=E,41600μm,0.7s							
NRCA				AML	AML			
	comp=N,43050μm,0.1s							
NRCA				AML	AML			
	comp=E,45450μm,0.7s							
NRCA				AML	AML			
	comp=N,45000μm,0.1s							
NRCA				END				
LNSS	**Leonessa**	**0.20**	**216**	P	P	Pg	07 27 21.3	+0.6
LNSS				S	S	Sg	07 27 24.9	+1.4
LNSS				AML	AML			
	comp=E,2290μm,0.7s							
LNSS				AML	AML			
	comp=N,2575μm,1.0s							
LNSS				AML	AML			
	comp=E,2315μm,0.4s							
LNSS				AML	AML			
	comp=N,2570μm,1.0s							
LNSS				END				
RM33	**Pellescritta (**	**0.25**	**178**	P	P	Pg	07 27 22.4	+0.7
RM33				S	S	Sb	07 27 26.7	-1.0
RM33				AML	AML			
	comp=E,342μm,0.6s							
RM33				AML	AML			
	comp=N,438μm,0.8s							
RM33				AML	AML			
	comp=E,2360μm,1.4s							
RM33				AML	AML			
	comp=N,2345μm,0.3s							
RM33				AML	AML			
	comp=E,2355μm,1.4s							
RM33				AML	AML			
	comp=N,2210μm,0.3s							
CAMP	**Campotosto**	**0.27**	**146**	P	P	Pg	07 27 22.6	+0.5
CAMP				S	S	Sg	07 27 27.0	+1.3
CAMP				AML	AML			
	comp=E,687μm,0.2s							
CAMP				AML	AML			
	comp=N,794μm,0.3s							
CAMP				AML	AML			
	comp=E,376μm,0.2s							
CAMP				AML	AML			
	comp=N,220μm,0.3s							
CAMP				END				
FDMO	**Fiordimonte**	**0.29**	**343**	P	P	Pg	07 27 22.8	+0.5
FDMO				AML	AML			
	comp=E,314μm,0.2s							
FDMO				AML	AML			
	comp=N,278μm,1.0s							

CESI				AML	AML			
	comp=N,974μm,0.2s							
CSP1	**Cessapalombo**	**0.33**	**1**	P	Pb	07 27 23.9	-0.6	
CSP1				AML	AML			
	comp=E,1735μm,0.4s							
CSP1				AML	AML			
	comp=N,1990μm,1.4s							
TERO	**Teramo**	**0.33**	**115**	P	Pg	07 27 23.5	+0.5	
TERO				S	Sb	07 27 28.8	-1.0	
TERO				AML	AML			
	comp=E,411μm,0.3s							
TERO				AML	AML			
	comp=N,427μm,1.4s							
TERO				AML	AML			
	comp=E,834μm,0.3s							
TERO				AML	AML			
	comp=N,1043μm,1.4s							
TERO				AML	AML			
	comp=N,405μm,0.1s							
TERO				END				
ARRO	**Arrone**	**0.37**	**240**	P	Pg	07 27 24.2	+0.5	
ARRO				AML	AML			
	comp=E,388μm,0.2s							
ARRO				AML	AML			
	comp=N,324μm,1.3s							
GIGS	**Gran Sasso**	**0.41**	**139**	P	Pg	07 27 24.7	+0.1	
GIGS				S	Sg	07 27 31.1	+1.0	
GIGS				AML	AML			
	comp=E,60μm,0.2s							
GIGS				AML	AML			
	comp=N,55μm,0.2s							
GIGS				AML	AML			
	comp=E,100μm,0.5s							
GIGS				AML	AML			
	comp=N,99μm,0.2s							
GIGS				AML	AML			
	comp=N,50μm,0.1s							
GIGS				AML	AML			
	comp=E,57μm,0.0s							
CESX	**Cesi**	**0.48**	**252**	P	Pg	07 27 26.2	+0.3	
CESX				AML	AML			
	comp=E,148μm,0.6s							
CESX				AML	AML			
	comp=N,154μm,0.3s							
CESX				AML	AML			
	comp=E,298μm,0.7s							
CESX				AML	AML			
	comp=N,269μm,0.7s							
ASSB	**Assisi San Ben**	**0.49**	**305**	⇓P	Pg	07 27 26.2	+0.3	
ASSB				AML	AML			
	comp=E,531μm,0.2s							
ASSB				AML	AML			
	comp=N,645μm,1.3s							
ASSB				AML	AML			
	comp=E,223μm,0.3s							
FIAM	**Fiamignano**	**0.50**	**187**	P	Pb	07 27 26.8	-0.6	
FIAM				AML	AML			
	comp=E,520μm,0.8s							
FIAM				AML	AML			
	comp=N,433μm,0.7s							
SNTG	**Esanatoglia**	**0.53**	**339**	P	Pg	07 27 26.9	+0.2	
SNTG				S	Sb	07 27 35.3	-0.3	
SNTG				AML	AML			
	comp=E,344μm,0.1s							
SNTG				AML	AML			
	comp=N,320μm,1.0s							
EL6	**Elcito**	**0.57**	**353**	S	Sb	07 27 38.0	+1.1	
VCEL	**Villa Celiera**	**0.60**	**128**	P	Pb	07 27 28.9	-0.2	
VCEL				AML	AML			
	comp=E,474μm,0.3s							
VCEL				AML	AML			
	comp=N,434μm,0.4s							
CING	**Cingoli**	**0.61**	**360**	⇓P	Pb	07 27 29.0	-0.3	
CING				AML	AML			
	comp=E,646μm,0.2s							
CING				AML	AML			
	comp=N,945μm,0.3s							
T0110	**Collepietro**	**0.69**	**141**	P	Pg	07 27 30.0	+0.3	
T0110				AML	AML			
	comp=E,260μm,0.4s							
T0110				AML	AML			
	comp=N,357μm,0.4s							
FRON	**Frontone**	**0.83**	**335**	S	Sg	07 27 42.0	-1.3	
PIEI	**Pieia**	**0.91**	**328**	⇓P	Pg	07 27 34.1	+0.1	
PIEI				S	Sn	07 27 49.0	+0.3	
PIEI				AML	AML			
	comp=E,148μm,0.9s							
PIEI				AML	AML			
	comp=N,97μm,1.4s							
GUAR	**Guarcino**	**0.97**	**175**	⇑P	Pn	07 27 36.4	+0.2	
GUAR				AML	AML			
	comp=E,90μm,1.2s							
GUAR				AML	AML			
	comp=N,102μm,0.9s							
RMP	**Rome, Mte Porz**	**1.02**	**201**	⇑P	Pn	07 27 37.7	+0.9	
RMP				AML	AML			
	comp=E,144μm,0.5s							
RMP				AML	AML			
	comp=N,165μm,0.7s							
OSSC	**Osservatorio P**	**1.62**	**299**	P	Pn	07 27 44.3	-0.8	
BDI	**Bagni Di Lucca**	**2.30**	**305**	⇑P	Pg	07 28 02.7	+2.2	

ROM 25 07:27:54.4±0.1, 42°.756N±0°.004×13°.196E±0°.010, h11km, ML2.5/22, 4C-6D, Error ellipse: s-maj=0.8km s-min=0.3km az=253.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**322**	⇓P	Pg	07 27 57.7	+0.5
NRCA				S	Sg	07 27 59.8	+0.6
NRCA				AML	AML		
	comp=N,43050μm,0.1s						
NRCA				AML	AML		
	comp=E,41600μm,0.7s						
NRCA				AML	AML		
	comp=E,45450μm,0.7s						
NRCA				AML	AML		
	comp=N,45000μm,0.1s						
NRCA				AML	AML		
	comp=E,41600μm,0.7s						
LNSS	**Leonessa**	**0.19**	**217**	P	Pg	07 27 59.3	+0.7
LNSS				S	Sg	07 28 03.0	+1.5
LNSS				AML	AML		
	comp=E,2320μm,0.4s						
LNSS				AML	AML		
	comp=E,2315μm,0.4s						
LNSS				AML	AML		
	comp=N,1805μm,1.0s						
FEMA	**Monte Fema**	**0.23**	**333**	P	Pg	07 27 59.8	+0.4
FEMA				S	Sg	07 28 03.8	+1.1
RM33	**Pellescritta (**	**0.25**	**177**	P	Pg	07 28 00.1	+0.5
RM33				S	Sg	07 28 04.4	+1.4
RM33				AML	AML		
	comp=E,2360μm,1.4s						
RM33				AML	AML		
	comp=N,2345μm,0.3s						
RM33				AML	AML		
	comp=N,2215μm,0.3s						
RM33				AML	AML		
	comp=E,2365μm,1.4s						
RM33				AML	AML		
	comp=N,2345μm,0.3s						
RM33				AML	AML		
	comp=N,2210μm,0.3s						
RM33				AML	AML		
	comp=E,2355μm,1.4s						
CAMP	**Campotosto**	**0.27**	**144**	P	Pg	07 28 00.2	+0.2
CAMP				S	Sg	07 28 04.6	+0.9
CAMP				AML	AML		
	comp=E,687μm,0.2s						
CAMP				AML	AML		
	comp=N,794μm,0.3s						
FDMO	**Fiordimonte**	**0.29**	**344**	P	Pg	07 28 00.7	+0.3
FDMO				S	Sg	07 28 05.4	+1.0
FDMO				AML	AML		
	comp=E,952μm,0.6s						
FDMO				AML	AML		
	comp=E,951μm,0.6s						
FDMO				AML	AML		
	comp=N,1290μm,0.1s						
GUMA	**Gualdo di Mace**	**0.32**	**18**	AML	AML		
	comp=E,9385μm,0.2s						
GUMA				AML	AML		
	comp=N,10125μm,0.4s						
GUMA				AML	AML		
	comp=E,14550μm,0.2s						
GUMA				AML	AML		
	comp=N,7970μm,0.4s						
CESI	**CESI - Serrava**	**0.33**	**319**	⇓P	Pg	07 28 01.5	+0.4
CESI				S	Sb	07 28 06.9	-0.9
CESI				AML	AML		
	comp=E,1245μm,1.0s						
CESI				AML	AML		
	comp=N,2215μm,0.5s						
CESI				AML	AML		
	comp=N,2220μm,0.5s						
TERO	**Teramo**	**0.33**	**114**	P	Pg	07 28 01.0	0.0
TERO				AML	AML		
	comp=N,1043μm,1.4s						
TERO				AML	AML		
	comp=E,834μm,0.3s						
CSP1	**Cessapalombo**	**0.34**	**1**	P	Pg	07 28 01.4	+0.2
CSP1				S	Sg	07 28 06.8	+1.0
CSP1				AML	AML		
	comp=E,1735μm,0.4s						
CSP1				AML	AML		
	comp=N,1990μm,1.4s						
CSP1				AML	AML		
	comp=N,1985μm,1.4s						
CSP1				AML	AML		
	comp=E,1732μm,0.4s						
ARRO	**Arrone**	**0.36**	**241**	P	Pg	07 28 02.2	+0.5
ARRO				AML	AML		
	comp=N,324μm,1.3s						
ARRO				AML	AML		
	comp=E,388μm,0.2s						
ARRO				AML	AML		
	comp=E,388μm,0.2s						
OFFI	**Offida**	**0.40**	**63**	P	Pb	07 28 03.3	-0.3
OFFI				S	Sb	07 28 10.8	+1.0
OFFI				AML	AML		
	comp=E,1365μm,0.7s						
OFFI				AML	AML		
	comp=N,1525μm,0.4s						
GIGS	**Gran Sasso**	**0.41**	**138**	P	Pg	07 28 02.4	-0.2
GIGS				AML	AML		
	comp=E,100μm,0.5s						
GIGS				AML	AML		
	comp=N,100μm,0.2s						
GIGS				AML	AML		
	comp=E,100μm,0.5s						
GIGS				AML	AML		
	comp=N,99μm,0.2s						
GIGS				AML	AML		
	comp=E,99μm,0.5s						
GIGS				AML	AML		
	comp=N,99μm,0.2s						
MNTP	**Montappone**	**0.43**	**28**	AML	AML		
	comp=N,2410μm,1.1s						
MNTP				AML	AML		
	comp=E,2095μm,0.2s						
MNTP				AML	AML		
	comp=E,2090μm,0.2s						
CESX	**Cesi**	**0.48**	**252**	S	Sb	07 28 12.0	+0.1
ASSB	**Assisi San Ben**	**0.49**	**306**	P	Pg	07 28 04.2	+0.2
ASSB				S	Sb	07 28 11.8	-0.5
ASSB				AML	AML		
	comp=E,531μm,0.2s						
ASSB				AML	AML		
	comp=N,646μm,1.3s						
ASSB				AML	AML		
	comp=N,645μm,1.3s						
FIAM	**Fiamignano**	**0.49**	**187**	P	Pg	07 28 04.4	+0.3
FIAM				S	Sb	07 28 11.8	-0.6
FIAM				AML	AML		
	comp=E,520μm,0.8s						
FIAM				AML	AML		
	comp=N,433μm,0.7s						
TRTR	**Tortoreto Alta**	**0.53**	**84**	⇓P	Pb	07 28 06.1	+0.3
TRTR				AML	AML		
	comp=N,1470μm,0.5s						
TRTR				AML	AML		
	comp=E,1240μm,0.4s						
SNTG	**Esanatoglia**	**0.53**	**340**	P	Pg	07 28 04.8	0.0
SNTG				AML	AML		
	comp=N,320μm,1.0s						
SNTG				AML	AML		
	comp=N,320μm,1.0s						
SNTG				AML	AML		
	comp=E,344μm,0.1s						
FAGN	**Fagnano**	**0.57**	**149**	⇑P	Pb	07 28 06.1	-0.4
FAGN				AML	AML		
	comp=N,418μm,1.5s						
FAGN				AML	AML		
	comp=E,514μm,0.3s						
EL6	**Elcito**	**0.58**	**353**	⇓P	Pg	07 28 05.6	-0.1
EL6				AML	AML		
	comp=N,850μm,0.4s						
EL6				AML	AML		
	comp=E,755μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.59**	**317**	⇑P	Pg	07 28 06.2	+0.2
ATCC				AML	AML		
	comp=E,438μm,0.1s						
ATCC				AML	AML		
	comp=N,366μm,0.4s						
VCEL	**Villa Celiera**	**0.60**	**127**	⇑P	Pg	07 28 06.2	+0.1
VCEL				AML	AML		
	comp=E,474μm,0.3s						
VCEL				AML	AML		
	comp=E,474μm,0.3s						
VCEL				AML	AML		
	comp=N,434μm,0.4s						
CING	**Cingoli**	**0.62**	**360**	AML	AML		
	comp=N,945μm,0.3s						
CING				AML	AML		
	comp=E,646μm,0.2s						
FOSV	**Fossato di Vic**	**0.63**	**330**	AML	AML		
	comp=N,248μm,1.1s						
FOSV				AML	AML		
	comp=E,192μm,0.7s						
T0110	**Collepietro**	**0.68**	**141**	P	Pg	07 28 06.9	-0.8
T0110				AML	AML		
	comp=E,260μm,0.4s						
T0110				AML	AML		
	comp=N,357μm,0.4s						
PP3	**Marolino**	**0.69**	**26**	AML	AML		
	comp=E,1256μm,0.3s						
PP3				AML	AML		
	comp=N,1245μm,0.6s						
PP3				AML	AML		
	comp=E,1358μm,0.4s						
PP3				AML	AML		
	comp=N,1140μm,0.4s						
ARVD	**Arcevia**	**0.77**	**346**	P	Pg	07 28 08.0	-1.2
ARVD				AML	AML		
	comp=N,124μm,0.5s						
ARVD				AML	AML		
	comp=E,173μm,0.3s						
MGAB	**Montegabbione**	**0.81**	**281**	AML	AML		
	comp=N,306μm,0.4s						
MGAB				AML	AML		
	comp=E,265μm,1.6s						
MGAB				AML	AML		
	comp=E,292μm,1.6s						
MGAB				AML	AML		
	comp=N,308μm,0.4s						
CERT	**Cerreto**	**0.82**	**191**	P	Pn	07 28 12.6	+0.5
CERT				AML	AML		
	comp=E,320μm,0.9s						
CERT				AML	AML		
	comp=N,217μm,0.4s						
FRON	**Frontone**	**0.84**	**336**	AML	AML		
	comp=E,132μm,1.1s						
FRON				AML	AML		
	comp=N,192μm,1.2s						
AOI	**Ancona**	**0.85**	**20**	AML	AML		
	comp=N,233μm,0.2s						
AOI				AML	AML		
	comp=E,279μm,1.1s						
ATVO	**AVT- Monte Val**	**0.85**	**318**	AML	AML		
	comp=N,98μm,0.5s						
ATVO				AML	AML		
	comp=E,102μm,1.6s						
INTR	**Introdacqua**	**0.91**	**145**	⇓P	Pg	07 28 11.1	-0.9
INTR				AML	AML		
	comp=N,145μm,0.6s						
INTR				AML	AML		
	comp=E,62μm,1.2s						
INTR				AML	AML		
	comp=N,145μm,0.6s						
INTR				AML	AML		
	comp=E,62μm,1.2s						
PIEI	**Pieia**	**0.92**	**328**	⇑P	Pg	07 28 11.7	-0.4
PIEI				AML	AML		
	comp=E,148μm,0.9s						
PIEI				AML	AML		
	comp=N,97μm,1.4s						
PIEI				AML	AML		
	comp=N,97μm,1.4s						
MPAG	**Monte Paganucc**	**0.93**	**340**	AML	AML		
	comp=N,142μm,1.4s						
MPAG				AML	AML		
	comp=E,107μm,0.7s						
FSSB	**Fossombrone**	**0.98**	**342**	⇓P	Pg	07 28 13.3	-0.1
FSSB				AML	AML		
	comp=E,306μm,1.1s						
FSSB				AML	AML		
	comp=N,333μm,1.6s						
CAFI	**Castiglion Fio**	**1.07**	**303**	AML	AML		
	comp=E,92μm,0.7s						
CAFI				AML	AML		
	comp=N,77μm,1.1s						
TOLF	**Tolfa**	**1.12**	**232**	AML	AML		
	comp=N,52μm,0.5s						
TOLF				AML	AML		
	comp=E,46μm,1.4s						
GIUL	**Giuliano Di Ro**	**1.20**	**178**	AML	AML		
	comp=N,58μm,1.0s						
GIUL				AML	AML		
	comp=E,57μm,0.7s						

HEL 25 07:33:47.8±0.3, 67°.79N×20°.04E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.78**	**70**	PG	Pg	07 34 01.9	-0.8
LANU				SG	Sg	07 34 12.0	-0.8
KIF	**Kilpisjarvi**	**1.25**	**13**	MSG		07 34 26.7	
	comp=Z,4.0nm,0.2s						
KIF				SG	Sg	07 34 28.0	+0.1
PAJU	**Pajala**	**1.42**	**122**	PG	Pn	07 34 13.4	-1.4
PAJU				SG	Sg	07 34 32.2	-1.0
HEF	**Hetta**	**1.49**	**64**	PG	Pn	07 34 14.6	-1.2
	baz=243						
HEF				MSG		07 34 32.6	
	comp=Z,2.3nm,0.2s						
HEF				SG	Sg	07 34 33.6	-2.0
KLF	**Kolari**	**1.61**	**109**	PG	Pn	07 34 17.0	-0.4
	baz=294						
KLF				SN	Sn	07 34 38.4	-0.4
KTK1	**Kautokeino**	**1.70**	**43**	SN	Sn	07 34 40.8	-0.4
TOF	**Tornio**	**2.41**	**134**	PG	Pb	07 34 30.8	-1.1
TOF				MSG		07 34 59.1	
	comp=Z,2.0nm,0.2s						
TOF				SG	Sb	07 35 02.6	+0.5
SGF	**Sodankyl**	**2.51**	**95**	PG	Pb	07 34 32.4	-1.2
SGF				SG	Sb	07 35 04.6	-0.4
RNF	**Rovaniemi**	**2.61**	**114**	PG	Pb	07 34 33.7	-1.7
RNF				SB	Sn	07 35 05.6	+2.0
ARA0	**ARCESS Array S**	**2.66**	**46**	PB	Pn	07 34 32.8	+1.0
ARA0				SB	Sb	07 35 07.2	-2.1
KEV	**Kevo**	**3.21**	**49**	SN	Sn	07 35 18.8	+0.5
KEV				MSG		07 35 22.1	
	comp=Z,1.0nm,0.2s						
MSF	**Maaselka**	**4.02**	**114**	PB	Pb	07 34 56.2	-3.3
KU6	**Riekki**	**4.26**	**110**	PN	Pn	07 34 53.4	-0.5

*DJA **25** 07:36:47.6±0.8, 9°.5±3°.×11°.1E±°, h13km±7km, M4.6/18, mB5.4/4, mb4.6/6, MLv4.6/18, Mw(mB)4.8/4*
*NEIC **25** 07:36:50.2±2.7, 8°.76S±0°.07×111°.04E±0°.06, h77km±8km, mb4.2/12, Error ellipse: s-maj=11.2km s-min=8.4km az=211.0*
*IDC **25** 07:36:51.4±2.6, 8°.28S×111°.37E, h84km±26km, mb3.8/7, mbtmp4.2/9, MS3.2/2, Error ellipse: s-maj=36.0km s-min=12.7km az=44.0*

ISC 25 07:36:49.5±0.6, 8°.80S±0°.06×111°.11E±0°.06, h55km, n72, σ1§44/66, mb4.1/14, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.60**	**7**	P	**Pn**	**07 37 02.9**	**+0.6**
PWJI	**Pagerwojo**	**1.03**	**42**	P	**Pn**	**07 37 08.7**	**+0.9**
UGM	**Wanagama**	**1.05**	**327**		**Pn**	**07 37 09.3**	**+1.2**
UGM				Sn	**Sn**	**07 37 21.7**	**-0.2**
UGM	**Wanagama**	**1.05**	**327**	P	**Pn**	**07 37 08.9**	**+0.8**
UGM	**Wanagama**	**1.05**	**327**	P	**Pn**	**07 37 09.5**	**+1.4**
YOGI	**Yogyakarta**	**1.26**	**320**	P	**Pn**	**07 37 11.3**	**+0.4**
NGJI	**Ngawi**	**1.46**	**14**	P	**Pn**	**07 37 16.7**	**+3.1**
SMRI	**Semarang**	**1.86**	**339**		**Pn**	**07 37 20.5**	**+1.5**
SMRI				Sn	**Sn**	**07 37 39.7**	**-1.6**
SMRI	**Semarang**	**1.86**	**339**	P	**Pn**	**07 37 20.5**	**+1.5**
SMRI	**Semarang**	**1.86**	**339**	P	**Pn**	**07 37 21.0**	**+2.0**
TBJI	**Tambak Boyo**	**2.10**	**21**	P	**Pn**	**07 37 23.4**	**+1.1**
GMJI	**Gumukmas**	**2.37**	**78**	P	**Pn**	**07 37 26.9**	**+0.9**
BLJI	**Banyuglugur**	**2.67**	**67**	P	**Pn**	**07 37 31.7**	**+1.5**
JAGI	**Jajag, Banyuwa**	**3.03**	**84**		**Pn**	**07 37 36.3**	**+1.3**
JAGI	**Jajag, Banyuwa**	**3.03**	**84**	P	**Pn**	**07 37 36.5**	**+1.5**
JAGI	**Jajag, Banyuwa**	**3.03**	**84**	P	**Pn**	**07 37 36.8**	**+1.8**
ABJI	**Asem Bagus**	**3.25**	**72**	P	**Pn**	**07 37 40.2**	**+2.2**
BWJI	**Bawean**	**3.31**	**28**	P	**Pn**	**07 37 39.9**	**+1.1**
KMMI	**Kalianget**	**3.32**	**59**	P	**Pn**	**07 37 38.8**	**-0.2**
LEM	**Lembang**	**3.97**	**299**	P	**Pn**	**07 37 50.8**	**+2.7**
	136nm,0.4s,baz=98,slow=13,SNR=14						
LEM				S	**Sn**	**07 38 36.8**	**+3.3**
	177nm,0.6s,baz=19,slow=22,SNR=5.2						
LEM	**Lembang**	**3.97**	**299**	P	**Pn**	**07 37 50.6**	**+2.5**
SRBI	**Singaraja**	**4.12**	**80**	P	**Pn**	**07 37 51.7**	**+1.7**
CNJI	**Cibinong**	**4.21**	**290**	P	**Pn**	**07 37 51.9**	**+0.7**
SKJI	**Sukabumi**	**4.85**	**291**	P	**Pn**	**07 38 01.7**	**+1.8**
XMI	**Christmas Isla**	**5.59**	**252**	P	**Pn**	**07 38 10.9**	**+0.7**
	143nm,0.8s						
XMIS	**Christmas Isla**	**5.63**	**252**		**Pn**	**07 38 10.7**	**-0.1**
XMIS	**Christmas Isla**	**5.63**	**252**	P	**Pn**	**07 38 11.0**	**+0.2**
	167nm,0.6s						
TWSI	**Taliwang, Sumb**	**5.71**	**90**	P	**Pn**	**07 38 13.7**	**+1.9**
	0.3nm1μm27nm,0.7s						
PLAI	**Plampang**	**6.59**	**91**	P	**Pn**	**07 38 25.7**	**+1.8**
	0.4nm47nm,0.7s						
PLAI	**Plampang**	**6.59**	**91**	P	**Pn**	**07 38 26.2**	**+2.3**
	48nm,0.7s						
PPBI	**Pangkal Pinang**	**8.24**	**323**	P	**Pn**	**07 38 48.9**	**+2.4**
	6μm59nm,1.2s						
MNAI	**Manna**	**9.22**	**298**	Pn	**Pn**	**07 38 59.7**	**-0.2**
MNAI	**Manna**	**9.22**	**298**	P	**Pn**	**07 39 01.9**	**+2.0**
	344nm,1.6s						
BKB	**Balikpapan**	**9.45**	**38**	Pn	**Pn**	**07 39 04.3**	**+1.3**
EDFI	**Ende, Flores**	**10.46**	**91**	P	**Pn**	**07 39 15.1**	**-1.9**
	402nm13nm,0.6s						
LUWI	**Luwuk**	**13.94**	**57**		**Pn**	**07 40 04.5**	**+0.2**
GIRL	**Giralia**	**14.09**	**168**	Pn	**Pn**	**07 40 06.1**	**-0.3**
GIRL	**Giralia**	**14.09**	**168**	P	**Pn**	**07 40 06.6**	**+0.3**
	77nm,1.2s						
MBWA	**Marble Bar**	**14.84**	**147**	P	**Pn**	**07 40 14.2**	**-2.0**
	10nm,1.7s						
PSA00	**Pilbara Seismi**	**15.24**	**147**	Pn	**Pn**	**07 40 20.9**	**-0.5**
PSA00				IAmb	IAmb	07 40 43.5	
	comp=Z,29nm,1.5s						
PSA00	**Pilbara Seismi**	**15.24**	**147**	P	**Pn**	**07 40 19.7**	**-1.6**
	comp=Z,15nm,1.8s						
FITZ	**Fitzroy Crossi**	**16.88**	**125**	P	**Pn**	**07 40 42.4**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=293,slow=9.0,SNR=21						
FITZ				S	Sn	07 43 35.7	-13
	comp=Z,6.0nm,0.8s,baz=174,slow=16,SNR=4.9						
FITZ	**Fitzroy Crossi**	**16.88**	**125**	P	**Pn**	**07 40 42.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**16.88**	**125**	P	**Pn**	**07 40 42.2**	**+0.1**
	comp=Z,4.2nm,0.9s						
KNRA	**Kununurra**	**18.55**	**113**	P	**P**	**07 41 01.7**	**-0.2**
KNRA	**Kununurra**	**18.55**	**113**	P	**P**	**07 41 02.5**	**+0.6**
	comp=Z,12nm,1.4s						
WRKA	**Warakurna**	**23.00**	**137**	P	**P**	**07 41 50.8**	**+0.9**
	comp=Z,8.6nm,1.3s						
WB0	**Warramunga Arr**	**25.03**	**118**	P	**P**	**07 42 08.1**	**-0.6**
WB0				IAmb	IAmb	07 42 30.8	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**25.05**	**119**	P	**P**	**07 42 08.6**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=295,slow=11,SNR=28						
WRA				LR	LR	07 51 50.2	
	comp=Z,62nm,18.0s,baz=23,slow=36						
	comp=Z,2.7nm,0.7s						
WRA	**Warramunga Arr**	**25.05**	**119**	P	**P**	**07 42 07.8**	**-1.0**
WRAB	**Tennant Creek**	**25.05**	**119**	P	**P**	**07 42 08.5**	**-0.4**
	comp=Z,7.2nm,0.9s						
ASAR	**Alice Springs**	**26.35**	**127**	P	**P**	**07 42 20.5**	**-0.2**

comp=Z,1.9nm,0.5s,baz=301,slow=8.6,SNR=27
ASAR PcP **PcP** **07 45 44.9 -0.8**
comp=Z,0.5nm,0.4s,baz=302,slow=1.8,SNR=5.7
comp=Z,1.9nm,0.5s
CM31 Chiang Mai Arr 29.62 336 P P 07 42 44.8 -5.0
CMAR Chiang Mai Arr 29.62 336 LR LR 07 57 04.6
comp=Z,34nm,18.2s,baz=170,slow=42
OOD Oodnadatta 29.92 132 P **P** **07 42 52.8 +0.4**
comp=Z,9.6nm,2.6s
CHTO Chiang Mai 29.94 336 P P 07 42 47.9 -4.8
COEN Coen 31.83 102 P **P** **07 43 08.1 -1.4**
COEN IAmb IAmb 07 43 47.9
comp=Z,5.8nm,1.1s
COEN Coen 31.83 102 P **P** **07 43 09.1 -0.4**
comp=Z,4.4nm,1.1s
KNMB Chin-men Tao 33.81 12 P **P** **07 43 25.8 -0.8**
STKA Stephens Creek 36.44 133 P **P** **07 43 50.4 +1.2**
comp=Z,2.0nm,0.4s,baz=294,slow=6.5,SNR=5.2
STKA PcP **PcP** **07 46 11.9 -0.6**
comp=Z,1.8nm,0.4s,baz=318,slow=3.0,SNR=4.2
comp=Z,2.0nm,0.4s
H08S2 Diego Garcia H 38.22 269 T T 08 25 00.2
baz=95,slow=75,SNR=19
H08S3 Diego Garcia H 38.23 269 T T 08 25 01.3
baz=95,slow=75,SNR=5.0
H08S1 Diego Carcia H 38.24 269 T T 08 24 57.0
baz=95,slow=75,SNR=5.6
SONM Songino Array 56.54 356 P P 07 46 21.9 -4.5
comp=Z,0.6nm,0.5s,baz=179,slow=11,SNR=4.4
comp=Z,0.6nm,0.5s
MK31 Makanchi Array 61.01 338 P P 07 46 53.3 -4.0
MK31 IAmb IAmb 07 46 54.5
comp=Z,0.8nm,0.6s
MKAR Makanchi Array 61.01 338 P P 07 46 53.2 -4.2
comp=Z,1.3nm,0.5s,baz=148,slow=7.4,SNR=16
comp=Z,1.3nm,0.5s
MKAR Makanchi Array 61.01 338 P P 07 46 52.8 -4.6
ABKAR Akbulak array 73.06 328 P P 07 48 09.7 -4.0
VNDA Vanda 73.48 170 P **P** **07 48 16.6 +0.8**
comp=Z,1.8nm,0.9s,baz=303,slow=4.7,SNR=10
comp=Z,1.8nm,0.9s
VNDA Vanda 73.48 170 P **P** **07 48 16.0 +0.2**
VNDA IAmb IAmb 07 48 17.4
comp=Z,2.1nm,0.9s
SBA Scott Base 74.54 170 P **P** **07 48 23.1 +1.1**
SBA IAmb IAmb 07 48 52.4
comp=Z,4.1nm,1.3s
AKTO Aktyubinsk 74.76 328 P **P** **07 48 20.3 -3.4**
comp=Z,1.2nm,0.5s,baz=84,slow=9.2,SNR=5.1
comp=Z,1.2nm,0.5s

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*IGIL **25** 07:45:17.8, 39.˚28N × 12.˚72W, h30km, ML2.3*
*MDD **25** 07:45:18.5 ± 1.0, 39.˚34N × 12.˚30W, h0km, Mb4.1/7, M_mb3.5/7, Error ellipse: s-maj=8.7km s-min=4.4km az=77.0*
*INMG **25** 07:45:21.0 ± 1.4, 39.˚28N × 12.˚71W, h30km, ML2.1, Error ellipse: s-maj=7.0km s-min=3.5km az=85.0*

ISC 25 07:45:14.4 ± 2.7, 39.˚31N ± 0.˚05 × 12.˚5W ± 0.˚1, h10km, n30, σ 2s 18/53, 8C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMAFR	**Mafra**	**2.53**	**97**	*eP*		**Pb**	**07 45 58.8**	**-1.1**
PMAFR				S		**Sn**	**07 46 26.9**	**+0.5**
PMAFR				A		A	07 46 30.5	
	11nm,0.4s							
PSBE	**So Bento**	**2.88**	**85**	S		**Sn**	**07 46 35.8**	**+0.8**
PCAS	**Casmilo, Conde**	**3.18**	**75**	*eP*		**Pb**	**07 46 08.3**	**-2.6**
PCAS				S		**Sn**	**07 46 42.2**	**-0.1**
PCAS				A		A	07 46 45.1	
	5.2nm,0.5s							
PNCL	**Nicolau / Gran**	**3.33**	**110**	*eP*		**Pn**	**07 46 08.6**	**+2.1**
PNCL				S		**Sn**	**07 46 45.0**	**-1.1**
PNCL				A		A	07 46 49.8	
	2.6nm,0.7s							
PMTG	**Montargil**	**3.33**	**93**	*eP*		**Pn**	**07 46 09.7**	**+3.2**
PMTG				S		**Sn**	**07 46 46.0**	**-0.2**
PMTG				A		A	07 46 48.2	
	2.6nm,0.6s							
PFVI	**Vila Bisbo**	**3.62**	**126**	⇑*eP*		**Pn**	**07 46 11.9**	**+1.4**
PFVI				S		**Sn**	**07 46 52.3**	**-1.0**
MORF	**Marmelete**	**3.63**	**122**	*eP*		**Pn**	**07 46 12.3**	**+1.6**
MORF	**Marmelete**	**3.63**	**122**	*eP*		**Pn**	**07 46 12.3**	**+1.6**
MORF				S		**Sn**	**07 46 51.2**	**-2.4**
MORF				A		A	07 46 54.7	
	4.4nm,0.9s							
MESJ	**Messejana**	**3.66**	**112**	*eP*		**Pn**	**07 46 13.2**	**+2.1**
MESJ				*eS*		**Sn**	**07 46 53.5**	**-0.9**
MESJ				IAML			07 46 55.0	
	comp=N,6.5nm,0.5s							
MESJ	**Messejana**	**3.66**	**112**	*eP*		**Pn**	**07 46 13.3**	**+2.2**
MESJ				S		**Sn**	**07 46 52.7**	**-1.6**
MESJ				A		A	07 46 59.9	
	comp=N,3.1nm,0.7s							
PVIS	**Viseu**	**3.81**	**67**	S		**Sn**	**07 46 57.4**	**-0.5**
PVIS				A		A	07 47 00.6	
	comp=N,3.1nm,0.1s							
PESTR	**Estremoz**	**3.85**	**95**	*eP*		**Pn**	**07 46 16.7**	**+3.0**
PESTR				S		**Sn**	**07 46 58.2**	**-0.7**
PESTR				A		A	07 47 02.1	
	comp=N,1.8nm,0.6s							
PCVE	**Castro Verde**	**3.88**	**114**	*eP*		**Pn**	**07 46 16.5**	**+2.4**
PCVE				S		**Sn**	**07 46 58.0**	**-1.8**
PCVE				A		A	07 47 03.1	
	comp=N,1.5nm,0.2s							
PCBR	**Castelo Branco**	**3.92**	**81**	S		**Sn**	**07 47 00.1**	**-0.5**
PCBR				A		A	07 47 02.1	
	comp=N,3.1nm,0.4s							
PMRV	**Marv??o**	**3.96**	**87**	*eP*		**Pn**	**07 46 17.8**	**+2.6**
PMRV				S		**Sn**	**07 47 00.7**	**-1.1**
PMRV				A		A	07 47 05.3	
	comp=N,1.7nm,0.4s							
POLO	**Lamas de Olo**	**4.14**	**59**	*eP*		**Pn**	**07 46 21.2**	**+3.4**
POLO				S		**Sn**	**07 47 05.1**	**-1.3**
POLO				A		A	07 47 05.7	
	comp=N,1.1nm,0.6s							
PCAB	**Cabril**	**4.17**	**54**	S		**Sn**	**07 47 05.2**	**-1.6**
PCAB				A		A	07 47 08.9	
	comp=N,4.3nm,0.5s							
PGAV	**Gavieira, Arco**	**4.17**	**49**	*eP*		**Pn**	**07 46 21.4**	**+3.3**
PGAV				S		**Sn**	**07 47 05.0**	**-2.0**
PGAV				A		A	07 47 10.0	
	comp=N,3.0nm,0.7s							
PVAQ	**Vaqueiros**	**4.22**	**115**	*eP*		**Pn**	**07 46 21.6**	**+2.9**
PVAQ				S		**Sn**	**07 47 06.4**	**-1.6**
PVAQ				A		A	07 47 17.1	
	comp=N,2.3nm,0.7s							
ELOB	**Lobios**	**4.24**	**52**	P		**Pn**	**07 46 21.7**	**+2.6**
ELOB				⇑*iVmb_V*			07 46 29.5	
	comp=N,195nm,SNR=1.7							
ELOB				S		**Sn**	**07 47 06.0**	**-2.6**
EBAD	**Badajoz**	**4.31**	**96**	P		**Pn**	**07 46 22.4**	**+2.4**
EBAD				⇑*iVmb_V*			07 46 23.2	
	comp=N,123nm,SNR=1.0							
EBAD				S		**Sn**	**07 47 08.9**	**-1.4**
EGRO	**El Granado**	**4.32**	**113**	P		**Pn**	**07 46 22.7**	**+2.6**
EGRO				⇑*iVmb_V*			07 46 28.0	
	comp=N,276nm,SNR=1.4							
EGRO				S		**Sn**	**07 47 09.8**	**-0.8**
PBAR	**Barrancos**	**4.42**	**103**	*eP*		**Pn**	**07 46 24.4**	**+2.9**
PBAR				S		**Sn**	**07 47 12.0**	**-1.0**
PBAR				A		A	07 47 23.0	
	comp=N,1.0nm,0.2s							
EMAZ	**Mazaricos**	**4.50**	**35**	P		**Pn**	**07 46 25.2**	**+2.5**
EMAZ				⇑*iVmb_V*			07 46 30.9	
	comp=N,248nm,SNR=1.4							
EMAZ				S		**Sn**	**07 47 12.2**	**-2.9**
MVO	**Moncorvo**	**4.58**	**64**	*eP*		**Pn**	**07 46 27.7**	**+4.0**
MVO				S		**Sn**	**07 47 15.9**	**-1.1**
MVO				A		A	07 47 20.2	
	comp=N,3.1nm,1.0s							
EAGO	**Agolada(Pontev**	**4.82**	**42**	P		**Pn**	**07 46 30.0**	**+2.9**
EAGO				⇑*iVmb_V*			07 46 30.4	
	comp=N,273nm,SNR=1.8							
EAGO				S		**Sn**	**07 47 19.9**	**-3.1**
EMIN	**Mina Concepcio**	**4.82**	**107**	P		**Pn**	**07 46 29.7**	**+2.6**
EMIN				⇑*iVmb_V*			07 46 29.9	
	comp=N,189nm,SNR=1.9							
EMIN				S		**Sn**	**07 47 20.3**	**-2.6**
PBRG	**Braganca**	**5.04**	**59**	S		**Sn**	**07 47 26.1**	**-2.4**
PBRG				A		A	07 47 28.8	
	comp=N,1.6nm,0.5s							
ECAL	**Calabor**	**5.11**	**57**	S		**Sn**	**07 47 28.9**	**-1.2**
ECAB	**El Cabril**	**5.68**	**100**	P		**Pn**	**07 46 41.2**	**+2.4**
ECAB				⇑*iVmb_V*			07 46 43.1	
	comp=N,66nm,SNR=1.0							
ECAB				S		**Sn**	**07 47 42.0**	**-2.1**

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*IDC **25** 07:59:32.4 ± 0.9, 67.˚81N × 20.˚80E, h0km, mbtmp3.2/5, ML2.5/5, Error ellipse: s-maj=14.4km s-min=6.3km az=117.0*
*HEL **25** 07:59:32.4, 67.˚86N × 20.˚23E, h1km, ML2.6, Confirmed Induced event*
*BER **25** 07:59:34.3 ± 2.5, 67.˚87N × 20.˚37E, h0km ± 11km, ML2.3, ML2.3(UPP), Confirmed Induced event*

ISC 25 07:59:31.0 ± 0.7, 67.˚82N ± 0.˚02 × 20.˚29E ± 0.˚02, h0km, n37, σ 0s 91/57, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**8**	*iP*		**Pg**	**07 59 33.8**	**+0.3**
KUA				*iS*		**Sg**	**07 59 35.4**	**+0.1**
RATU	**Laukkuluspa**	**0.26**	**271**	*iP*		**Pg**	**07 59 36.0**	**+0.1**
KOVU	**Salmi**	**0.41**	**353**	*iP*		**Pg**	**07 59 38.5**	**-0.2**
LANU	**Lannavaara**	**0.68**	**70**	*eP*		**Pg**	**07 59 44.5**	**+0.5**
LANU				*eS*		**Sg**	**07 59 53.7**	**+0.9**
DUNU	**Dundret**	**0.71**	**171**	*iP*		**Pg**	**07 59 45.1**	**+0.6**
MASU	**Masugnsbyn**	**0.75**	**118**	*iP*		**Pg**	**07 59 46.2**	**+0.9**
SALU	**Saltoluokta**	**0.81**	**238**	*iP*		**Pg**	**07 59 46.4**	**-0.1**
KIF	**Kilpisjarvi**	**1.20**	**9**	*eP*		**Pg**	**07 59 54.3**	**+0.3**
KIF				*eS*		**Sg**	**08 00 09.9**	**+0.3**
KIF	**Kilpisjarvi**	**1.20**	**9**	*eP*		**Pg**	**07 59 54.1**	**+0.1**
KIF				*eS*		**Sg**	**08 00 09.5**	**-0.1**
PAJU	**Pajala**	**1.35**	**125**	*eP*		**Pg**	**07 59 56.7**	**-0.2**
PAJU				*eS*		**Sb**	**08 00 15.3**	**+0.3**
HEF	**Hetta**	**1.40**	**63**	*eP*		**Pg**	**07 59 57.5**	**-0.2**
HEF				*eS*		**Sg**	**08 00 15.8**	**+0.1**
HEF	**Hetta**	**1.40**	**63**	*eP*		**Pg**	**07 59 57.2**	**-0.4**
HEF				*eS*		**Sg**	**08 00 15.4**	**-0.3**
ERTU	**Ertsjaerv**	**1.47**	**149**	*eP*		**Pn**	**07 59 58.8**	**+0.1**
KLF	**Kolari**	**1.53**	**111**	*eP*		**Pb**	**08 00 00.5**	**+0.3**
KLF				*eS*		**Sn**	**08 00 20.7**	**+0.7**
KTK1	**Kautokeino**	**1.62**	**41**	*eP*		**Pn**	**08 00 01.1**	**+0.4**
KTK1				*eS*		**Sb**	**08 00 22.9**	**+0.3**
KTK1				IAML			08 00 25.3	
	comp=Z,53nm,0.2s							
KTK1	**Kautokeino**	**1.62**	**41**	*eP*		**Pn**	**08 00 01.1**	**+0.4**
KTK1				*eS*		**Sn**	**08 00 21.8**	**-0.5**
JETT	**Jettan, Norway**	**1.74**	**1**	*eP*		**Pn**	**08 00 02.7**	**+0.3**
JETT				*eS*		**Sn**	**08 00 24.6**	**-0.8**
JETT				IAML			08 00 28.7	
	comp=Z,132nm,0.2s							
TRO	**Tromso**	**1.89**	**345**	*eP*		**Pn**	**08 00 04.8**	**+0.5**
TRO				*eS*		**Sn**	**08 00 29.8**	**+1.0**
TRO				IAML			08 00 32.4	
	comp=Z,42nm,0.4s							
STEI	**Steigen**	**1.91**	**276**	*eP*		**Pn**	**08 00 06.0**	**+1.3**
STEI				*eS*		**Sb**	**08 00 31.4**	**+0.4**
STEI				IAML			08 00 37.9	
	comp=Z,78nm,0.6s							
FAUS	**Fauske**	**1.96**	**259**	*eP*		**Pn**	**08 00 06.6**	**+1.2**
FAUS				*eS*		**Sb**	**08 00 32.4**	**-0.1**
FAUS				IAML			08 00 37.0	
	comp=Z,44nm,0.6s							
TOF	**Tornio**	**2.36**	**136**	*eP*		**Pb**	**08 00 13.1**	**-1.2**
TOF				*eSB*		**Sb**	**08 00 44.5**	**+0.6**
SGF	**Sodankyl**	**2.42**	**96**	*eP*		**Pn**	**08 00 13.1**	**+1.4**
SGF				*eS*		**Sb**	**08 00 44.2**	**-1.3**
RNF	**Rovaniemi**	**2.54**	**116**	*eP*		**Pb**	**08 00 16.1**	**-1.3**
RNF				*eSB*		**Sb**	**08 00 49.2**	**+0.1**
RNF				MSG			08 00 51.2	
	comp=Z,48nm,0.3s							
LOF	**Lofoten**	**2.56**	**280**	*eP*		**Pn**	**08 00 14.2**	**+0.6**
LOF				*e*			08 00 50.6	
LOF				IAML			08 00 56.0	
	comp=Z,23nm,0.5s							
ARA0	**ARCESS Array S**	**2.57**	**46**	*eP*		**Pn**	**08 00 15.0**	**+1.2**
ARA0				IAML			08 00 51.9	
	comp=Z,22nm,0.3s							
ARA0	**ARCESS Array S**	**2.57**	**46**	*eP*		**Pn**	**08 00 15.5**	**+1.8**
ARA0				*eSB*		**Sb**	**08 00 48.5**	**-1.4**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn		**Pn**	**08 00 14.7**	**+0.9**
	comp=Z,2.1nm,0.3s,baz=228,slow=15,SNR=95							
ARCES				Lg		Lg	08 00 48.4	
	comp=Z,6.9nm,0.3s,baz=227,slow=28,SNR=24							
	comp=Z,4.9nm,0.3s							
HAMF	**Hammerfest**	**3.08**	**22**	*eP*		**Pn**	**08 00 22.6**	**+1.8**
HAMF				*e*			08 00 59.1	
HAMF				IAML			08 01 00.4	
	comp=Z,36nm,0.4s							
KONS	**Konsvik**	**3.10**	**248**	*eP*		**Pn**	**08 00 23.1**	**+2.2**
KEV	**Kevo**	**3.12**	**48**	*eP*		**Pn**	**08 00 22.9**	**+1.6**
KEV				*e*			08 01 00.7	
KEV	**Kevo**	**3.12**	**48**	*eP*		**Pn**	**08 00 21.9**	**+0.6**
KEV				*eS*		**Sn**	**08 01 00.3**	**+1.1**
KEV				MSG			08 01 06.8	
	comp=Z,20nm,0.3s							
VRF	**Varrio**	**3.54**	**87**	MSG			08 01 28.0	
	comp=Z,15nm,0.3s							
OBF0	**Syvatti, Pyha**	**3.70**	**152**	MSG			08 01 32.4	
	comp=Z,9.6nm,0.4s							
FINES	**FINESS Array B**	**6.87**	**156**	Pn		**Pn**	**08 01 13.7**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=3.4							
FINES				Sn		**Sn**	**08 02 30.0**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=349,slow=20,SNR=4.7							
FINES				Lg		Lg	08 03 04.3	
	comp=Z,0.9nm,0.3s,baz=344,slow=30,SNR=11							
	comp=Z,0.8nm,0.5s							
NOA	**NORSAR Array B**	**7.85**	**214**	Pn		**Pn**	**08 01 26.9**	**+0.7**
	baz=24,slow=12,SNR=3.3							
NOA				Sn		**Sn**	**08 02 53.8**	**-1.9**
	baz=26,slow=21,SNR=4.2							
	comp=Z,0.1nm,0.4s							
HFS	**Hagfors**	**8.24**	**204**	Pn		**Pn**	**08 01 31.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=24,slow=13,SNR=2.0							
HFS				Sn		**Sn**	**08 03 04.1**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=20,slow=23,SNR=2.5							
HFS				Lg		Lg	08 03 48.9	
	comp=Z,0.3nm,0.3s,baz=29,slow=30,SNR=3.5							
	comp=Z,0.9nm,0.6s							
SPITS	**Spitsbergen Ar**	**10.47**	**356**	Pn		**Pn**	**08 02 02.0**	**-0.1**
	baz=158,slow=12							
	comp=Z,3.7nm,0.7s							

IDC 25 08:01:17.1 ± 3.0, 53.˚43N × 87.˚27E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=30.2km s-min=15.9km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.54**	**291**	*i*			08 10 47.6	
	baz=108,slow=314,SNR=6.4							
ZALV	**Zalesovo Beam**	**1.54**	**291**	Pg		Pn	08 01 44.7	-1.1
	1.1nm,0.3s,baz=108,slow=16,SNR=6.0							
ZALV				Lg		Lg	08 02 05.9	
	1.2nm,0.3s,baz=111,slow=29,SNR=5.0							
KURBB	**Kurchatov Arra**	**6.08**	**246**	Pn		Pn	08 02 49.0	+0.9
	0.1nm,0.3s,baz=61,slow=14,SNR=5.8							
	0.9nm,0.3s							
MKAR	**Makanchi Array**	**7.37**	**208**	Pn		Pn	08 03 07.0	+1.1
	0.1nm,0.3s,baz=27,slow=14,SNR=6.8							
	0.2nm,0.3s							

ROM 25 08:21:32.1 ± 0.1, 42.˚653N × 0.˚005 × 13.˚287E ± 0.˚007, h7km, ML2.7/19, 5C-3D, Error ellipse: s-maj=0.5km s-min=0.5km az=211.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAMP	**Campotosto**	**0.15**	**143**	P		Pg	08 21 35.8	+0.6
CAMP				S		Sg	08 21 38.4	+1.1
CAMP				AML		AML		
	comp=E,1390μm,0.3s							
CAMP				AML		AML		
	comp=N,2140μm,0.2s							
RM33	**Pellescritta (**	**0.15**	**200**	P		Pg	08 21 35.8	+0.5
RM33				S		Sg	08 21 39.1	+1.6
RM33				AML		AML		
	comp=E,2360μm,0.6s							
RM33				AML		AML		
	comp=N,2905μm,1.1s							
RM33				AML		AML		
	comp=E,2380μm,0.6s							
RM33				AML		AML		
	comp=E,2615μm,1.4s							
RM33				AML		AML		
	comp=N,2870μm,1.2s							
RM33				AML		AML		
	comp=E,2615μm,1.4s							
RM33				AML		AML		
	comp=N,2900μm,1.1s							
RM33				AML		AML		
	comp=E,2450μm,1.4s							
RM33				AML		AML		
	comp=E,2154μm,0.6s							
RM33				AML		AML		
	comp=E,1725μm,0.2s							
RM33				AML		AML		
	comp=N,2599μm,0.2s							
RM33				AML		AML		
	comp=E,1638μm,0.2s							
LNSS	**Leonessa**	**0.19**	**255**	P		Pg	08 21 36.8	+0.8
LNSS				AML		AML		
	comp=E,1965μm,0.5s							
LNSS				AML		AML		
	comp=N,1810μm,0.5s							
LNSS				AML		AML		
	comp=N,1809μm,0.5s							
LNSS				AML		AML		
	comp=E,1967μm,0.5s							
LNSS				AML		AML		
	comp=N,4475μm,0.2s							
LNSS				AML		AML		
	comp=E,4500μm,0.2s							
NRCA	**Norcia**	**0.22**	**325**	P		Pg	08 21 37.5	+0.9
NRCA				S		Sg	08 21 41.1	+1.6
TERO	**Teramo**	**0.24**	**97**	P		Pg	08 21 37.2	+0.5
TERO				S		Sg	08 21 40.9	+1.0
TERO				AML		AML		
	comp=E,2525μm,0.8s							
TERO				AML		AML		
	comp=N,2475μm,0.2s							
TERO				AML		AML		
	comp=E,2885μm,0.8s							
TERO				AML		AML		
	comp=N,2810μm,0.1s							
TERO				AML		AML		
	comp=E,3430μm,0.2s							
TERO				AML		AML		
	comp=N,3580μm,0.6s							
TERO				AML		AML		
	comp=N,3710μm,0.6s							
TERO				AML		AML		
	comp=E,2498μm,0.1s							
TERO				AML		AML		
	comp=N,2808μm,0.1s							
TERO				AML		AML		
	comp=N,2477μm,0.2s							
TERO				AML		AML		
	comp=E,3715μm,0.2s							
TERO				AML		AML		
	comp=E,3425μm,0.2s							
TERO				AML		AML		
	comp=E,2193μm,0.1s							
GIGS	**Gran Sasso**	**0.29**	**134**	P		Pg	08 21 38.4	+0.6
GIGS				S		Sg	08 21 43.1	+1.4
GIGS				AML		AML		
	comp=E,206μm,0.1s							
GIGS				AML		AML		
	comp=N,307μm,0.2s							
GIGS				AML		AML		
	comp=E,344μm,0.5s							
GIGS				AML		AML		
	comp=N,388μm,1.1s							
GIGS				AML		AML		
	comp=N,307μm,0.2s							
GIGS				AML		AML		
	comp=E,206μm,0.1s							
ARRO	**Arrone**	**0.39**	**259**	P		Pg	08 21 40.2	+0.5
ARRO				AML		AML		
	comp=E,705μm,1.4s							
ARRO				AML		AML		
	comp=E,704μm,1.4s							
ARRO				AML		AML		
	comp=N,810μm,0.2s							
ARRO				AML		AML		
	comp=N,337μm,0.2s							
ARRO				AML		AML		
	comp=E,316μm,0.2s							
FIAM	**Fiamignano**	**0.41**	**198**	⇑P		Pg	08 21 40.3	+0.3
FIAM				AML		AML		
	comp=N,708μm,0.6s							
FIAM				AML		AML		
	comp=E,1105μm,0.4s							
FIAM				AML		AML		
	comp=N,708μm,0.6s							
FIAM				AML		AML		
	comp=N,368μm,0.6s							
FIAM				AML		AML		
	comp=E,272μm,0.8s							
OFFI	**Offida**	**0.41**	**46**	P		Pb	08 21 41.4	-0.3
OFFI				S		Sb	08 21 49.1	+1.1
FDMO	**Fiordimonte**	**0.41**	**339**	P		Pg	08 21 40.8	+0.7
FDMO				S		Sb	08 21 47.5	-0.8
GUMA	**Gualdo di Mace**	**0.41**	**5**	P		Pb	08 21 41.4	-0.4
GUMA				S		Sb	08 21 47.8	-0.5
GUMA				AML		AML		
	comp=E,9700μm,0.7s							
GUMA				AML		AML		
	comp=N,9670μm,0.5s							
GUMA				AML		AML		
	comp=E,12125μm,0.3s							
GUMA				AML		AML		
	comp=E,9710μm,0.7s							
GUMA				AML		AML		
	comp=N,9690μm,0.5s							
GUMA				AML		AML		
	comp=N,9135μm,0.5s							
GUMA				AML		AML		
	comp=N,1520μm,0.3s							
GUMA				AML		AML		
	comp=N,1262μm,0.4s							
GUMA				AML		AML		
	comp=E,1251μm,0.4s							
GUMA				AML		AML		
	comp=E,1821μm,0.6s							
CSP1	**Cessapalombo**	**0.44**	**352**	P		Pg	08 21 41.3	+0.6
CSP1				S		Sb	08 21 48.7	-0.6
CSP1				AML		AML		
	comp=E,3100μm,0.6s							
CSP1				AML		AML		
	comp=N,3325μm,0.3s							
CSP1				AML		AML		
	comp=E,3105μm,0.6s							
CSP1				AML		AML		
	comp=N,3315μm,0.3s							
CSP1				AML		AML		
	comp=N,3320μm,0.3s							
CSP1				AML		AML		
	comp=E,252μm,0.2s							
CSP1				AML		AML		
	comp=N,460μm,0.4s							
FAGN	**Fagnano**	**0.45**	**150**	P		Pb	08 21 41.8	-0.5
CESI	**CESI - Serrava**	**0.45**	**321**	P		Pg	08 21 41.3	+0.5
CESI				S		Sb	08 21 48.6	-0.9
CESI				AML		AML		
	comp=E,3670μm,0.4s							
CESI				AML		AML		
	comp=N,5760μm,0.5s							
CESI				AML		AML		
	comp=N,666μm,0.3s							
CESI				AML		AML		
	comp=E,448μm,0.2s							
VCEL	**Villa Celiera**	**0.48**	**122**	P		Pg	08 21 42.2	+0.7
VCEL				S		Sb	08 21 50.2	-0.2
TRTR	**Tortoreto Alta**	**0.49**	**71**	S		Sg	08 21 44.0	-3.9
CESX	**Cesi**	**0.52**	**266**	P		Pg	08 21 42.4	+0.2
CESX				S		Sb	08 21 51.3	-0.2
CESX				AML		AML		
	comp=N,690μm,0.4s							
CESX				AML		AML		
	comp=E,726μm,1.2s							
CESX				AML		AML		
	comp=N,222μm,0.3s							
CESX				AML		AML		
	comp=E,207μm,0.2s							
T0110	**Collepietro**	**0.56**	**139**	⇑P		Pg	08 21 43.2	+0.3
T0110				S		Sb	08 21 52.3	-0.3
T0110				AML		AML		
	comp=N,808μm,0.4s							
T0110				AML		AML		

	comp=E,842µm,1.3s							
T0110				AML	AML			
	comp=N,808µm,0.4s							
T0110				AML	AML			
	comp=E,419µm,0.4s							
T0110				AML	AML			
	comp=N,501µm,0.5s							
SNTG	**Esanatoglia**	**0.65**	**337**	⇓P	Pb	08 21 45.4	-0.5	
SNTG				AML	AML			
	comp=N,684µm,0.5s							
SNTG				AML	AML			
	comp=N,684µm,0.5s							
SNTG				AML	AML			
	comp=E,580µm,0.8s							
SNTG				AML	AML			
	comp=E,110µm,0.2s							
SNTG				AML	AML			
	comp=N,97µm,0.2s							
SNTG				AML	AML			
	comp=E,579µm,0.8s							
EL6	**Elcito**	**0.69**	**349**	⇑P	Pg	08 21 45.7	+0.4	
EL6				S	Sn	08 21 58.0	-1.5	
EL6				AML	AML			
	comp=N,235µm,0.1s							
EL6				AML	AML			
	comp=E,294µm,0.1s							
CING	**Cingoli**	**0.72**	**355**	⇑P	Pg	08 21 46.3	+0.3	
CING				S	Sn	08 21 59.0	-1.3	
CING				AML	AML			
	comp=N,498µm,0.5s							
CING				AML	AML			
	comp=E,556µm,1.0s							
CING				AML	AML			
	comp=E,309µm,0.2s							
CING				AML	AML			
	comp=N,234µm,0.3s							
INTR	**Introdacqua**	**0.79**	**144**	⇓P	Pg	08 21 46.0	-1.2	
INTR				AML	AML			
	comp=E,258µm,0.8s							
INTR				AML	AML			
	comp=E,259µm,0.8s							
INTR				AML	AML			
	comp=N,794µm,0.6s							
ARVD	**Arcevia**	**0.88**	**343**	S	Sn	08 22 04.0	-0.1	
MGAB	**Montegabbione**	**0.90**	**287**	⇓P	Pn	08 21 52.0	+0.8	
MGAB				AML	AML			
	comp=E,747µm,0.9s							
MGAB				AML	AML			
	comp=N,983µm,0.6s							
MGAB				AML	AML			
	comp=E,887µm,0.4s							
MGAB				AML	AML			
	comp=N,970µm,0.7s							
MGAB				AML	AML			
	comp=E,746µm,0.9s							
MGAB				AML	AML			
	comp=N,982µm,0.6s							
MGAB				AML	AML			
	comp=N,971µm,0.7s							
TOLF	**Tolfa**	**1.12**	**239**	⇑P	Pb	08 21 53.8	-0.1	
TOLF				AML	AML			
	comp=E,154µm,1.1s							
TOLF				AML	AML			
	comp=N,124µm,0.5s							
TOLF				AML	AML			
	comp=E,154µm,1.1s							
TOLF				AML	AML			
	comp=N,124µm,0.5s							
TOLF				AML	AML			
	comp=E,154µm,1.1s							
TOLF				AML	AML			
	comp=E,154µm,1.1s							
TOLF				AML	AML			
	comp=N,124µm,0.5s							

ROM 25 08:21:52.3±0.1, 42°35.835N±0.003×13°55.255E±0.005, h8km, ML2.8/14, 11C-8D, Error ellipse: s-maj=0.3km s-min=0.3km az=276.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**269**	P	Pg	08 21 55.2	+0.4
NRCA				S	Sg	08 21 57.3	+0.7
NRCA				AML	AML		
	comp=E,19000µm,1.0s						
NRCA				AML	AML		
	comp=N,25800µm,0.7s						
NRCA				AML	AML		
	comp=N,25800µm,0.7s						
NRCA				AML	AML		
	comp=N,27500µm,0.7s						
NRCA				AML	AML		
	comp=E,21000µm,1.0s						
NRCA				AML	AML		
	comp=E,19000µm,0.9s						
FEMA	**Monte Fema**	**0.20**	**310**	P	Pg	08 21 57.0	+0.6
FEMA				S	Sg	08 22 00.6	+1.3
FEMA				AML	AML		
	comp=E,4094µm,0.1s						
FEMA				AML	AML		
	comp=N,4273µm,0.3s						
GUMA	**Gualdo di Mace**	**0.23**	**15**	⇑P	Pg	08 21 57.9	+0.8
GUMA				S	Sg	08 22 02.1	+1.8
GUMA				AML	AML		
	comp=E,9700µm,0.7s						
GUMA				AML	AML		
	comp=N,9670µm,0.5s						
GUMA				AML	AML		
	comp=N,9135µm,0.5s						
GUMA				AML	AML		
	comp=N,9690µm,0.6s						
GUMA				AML	AML		
	comp=E,12125µm,0.3s						
FDMO	**Fiordimonte**	**0.24**	**329**	⇓P	Pg	08 21 57.6	+0.5
FDMO				S	Sg	08 22 01.7	+1.4
FDMO				AML	AML		
	comp=E,2395µm,0.5s						
FDMO				AML	AML		
	comp=N,4745µm,0.2s						
CSP1	**Cessapalombo**	**0.26**	**352**	⇑P	Pg	08 21 57.9	+0.4
CSP1				S	Sg	08 22 02.3	+1.2
CSP1				AML	AML		
	comp=E,3100µm,0.6s						
CSP1				AML	AML		
	comp=N,3325µm,0.3s						
CSP1				AML	AML		
	comp=E,3105µm,0.6s						
CSP1				AML	AML		
	comp=N,3320µm,0.3s						
CSP1				AML	AML		
	comp=N,3315µm,0.3s						
LNSS	**Leonessa**	**0.28**	**214**	⇑P	Pg	08 21 58.7	+0.8
LNSS				S	Sb	08 22 03.9	-0.7
LNSS				AML	AML		
	comp=E,4500µm,0.2s						
LNSS				AML	AML		
	comp=N,4475µm,0.2s						
CESI	**CESI - Serrava**	**0.31**	**304**	⇑P	Pg	08 21 59.0	+0.5
CESI				S	Sb	08 22 04.4	-1.0
CESI				AML	AML		
	comp=N,5760µm,0.5s						
CESI				AML	AML		
	comp=E,3670µm,0.4s						
CAMP	**Campotosto**	**0.32**	**159**	⇑P	Pg	08 21 59.2	+0.5
CAMP				S	Sb	08 22 04.7	-1.0
CAMP				AML	AML		
	comp=E,1382µm,0.6s						
CAMP				AML	AML		
	comp=N,1830µm,0.4s						
RM33	**Pellescritta (**	**0.33**	**185**	⇑P	Pg	08 21 59.5	+0.7
RM33				S	Sb	08 22 05.6	-0.3
RM33				AML	AML		
	comp=N,1946µm,0.3s						
RM33				AML	AML		
	comp=N,2040µm,0.3s						
RM33				AML	AML		
	comp=E,2311µm,0.3s						
RM33				AML	AML		
	comp=E,2459µm,0.3s						
OFFI	**Offida**	**0.33**	**72**	⇑P	Pb	08 22 00.5	0.0
OFFI				AML	AML		
	comp=E,4015µm,0.5s						
OFFI				AML	AML		
	comp=N,5540µm,0.8s						

TERO	**Teramo**	**0.33**	**129**	⇑P	Pg	08 21 59.4	+0.5	
TERO				S	Sb	08 22 05.1	-0.9	
TERO				AML	AML			
	comp=N,3580µm,0.6s							
TERO				AML	AML			
	comp=N,3710µm,0.6s							
TERO				AML	AML			
	comp=E,3430µm,0.2s							
TERO				AML	AML			
	comp=E,3718µm,0.2s							
ARRO	**Arrone**	**0.44**	**235**	⇓P	Pg	08 22 01.6	+0.6	
ARRO				AML	AML			
	comp=E,705µm,1.4s							
ARRO				AML	AML			
	comp=E,704µm,1.4s							
ARRO				AML	AML			
	comp=N,810µm,0.2s							
GIGS	**Gran Sasso**	**0.45**	**149**	P	Pg	08 22 01.6	+0.5	
GIGS				S	Sb	08 22 09.0	-0.4	
SNTG	**Esanatoglia**	**0.48**	**331**	⇑P	Pg	08 22 02.0	+0.4	
SNTG				S	Sb	08 22 10.0	-0.2	
SNTG				AML	AML			
	comp=N,684µm,0.5s							
SNTG				AML	AML			
	comp=E,579µm,0.8s							
SNTG				AML	AML			
	comp=E,580µm,0.8s							
SNTG				AML	AML			
	comp=N,684µm,0.5s							
ASSB	**Assisi San Ben**	**0.48**	**296**	⇑P	Pg	08 22 02.0	+0.3	
ASSB				S	Sb	08 22 09.9	-0.5	
ASSB				AML	AML			
	comp=N,1875µm,0.4s							
ASSB				AML	AML			
	comp=E,2080µm,0.2s							
CESX	**Cesi**	**0.55**	**246**	⇓P	Pg	08 22 03.2	+0.4	
CESX				AML	AML			
	comp=E,726µm,1.2s							
CESX				AML	AML			
	comp=N,690µm,0.4s							
ATCC	**AVT- Casa Cast**	**0.57**	**308**	⇓P	Pg	08 22 03.8	+0.4	
ATCC				AML	AML			
	comp=N,1105µm,0.8s							
ATCC				AML	AML			
	comp=E,1955µm,0.7s							
FIAM	**Fiamignano**	**0.58**	**190**	⇑P	Pg	08 22 03.8	+0.3	
FIAM				AML	AML			
	comp=N,708µm,0.6s							
FIAM				AML	AML			
	comp=E,1105µm,0.4s							
FIAM				AML	AML			
	comp=N,708µm,0.6s							
FOSV	**Fossato di Vic**	**0.58**	**322**	⇓P	Pg	08 22 03.9	+0.3	
FOSV				AML	AML			
	comp=E,812µm,0.3s							
FOSV				AML	AML			
	comp=N,3255µm,0.3s							
FOSV				AML	AML			
	comp=E,812µm,0.3s							
PP3	**Marolino**	**0.60**	**25**	P	Pb	08 22 06.0	+1.0	
ATSC	**Scheggia e Pas**	**0.72**	**325**	P	Pb	08 22 07.1	-0.1	
FRON	**Frontone**	**0.78**	**331**	⇓P	Pg	08 22 05.2	-2.3	
ATVO	**AVT- Monte Val**	**0.83**	**312**	⇓P	Pg	08 22 08.2	-0.1	
ATVO				AML	AML			
	comp=N,271µm,0.5s							
ATVO				AML	AML			
	comp=E,352µm,0.4s							
ATVO				AML	AML			
	comp=E,352µm,0.4s							
ATVO				AML	AML			
	comp=N,252µm,0.5s							
NARO	**Abbazia di Nar**	**0.92**	**328**	⇓P	Pg	08 22 09.8	-0.1	
NARO				AML	AML			
	comp=N,160µm,1.4s							
NARO				AML	AML			
	comp=E,200µm,0.4s							
TOLF	**Tolfa**	**1.21**	**231**	AML	AML			
	comp=E,154µm,1.1s							
TOLF				AML	AML			
	comp=N,124µm,0.5s							

ROM 25 08:22:24.8±0.1, 42°46.786N±0.004×13°12.243E±0.007, h8km, Md1.5/3, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.4km az=79.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**297**	P	Pg	08 22 27.9	+0.5
NRCA				S	Sg	08 22 29.6	+0.3
NRCA				AML	AML		
	comp=E,4865µm,0.4s						
NRCA				AML	AML		
	comp=N,4590µm,0.1s						
NRCA				AML	AML		
	comp=E,4860µm,0.4s						
NRCA				AML	AML		
	comp=N,4585µm,0.1s						
NRCA				AML	AML		
	comp=N,4176µm,0.1s						
NRCA				AML	AML		
	comp=N,4588µm,0.1s						
NRCA				AML	AML		
	comp=E,4816µm,0.1s						
NRCA				AML	AML		
	comp=E,4278µm,0.1s						
FEMA	**Monte Fema**	**0.23**	**321**	P	Pg	08 22 30.3	+0.8
FEMA				S	Sg	08 22 34.1	+1.5
LNSS	**Leonessa**	**0.24**	**219**	P	Pg	08 22 30.5	+0.9
LNSS				S	Sg	08 22 34.3	+1.5
FDMO	**Fiordimonte**	**0.28**	**336**	P	Pg	08 22 31.1	+0.8
FDMO				S	Sb	08 22 35.9	-1.0
FDMO				AML	AML		
	comp=E,254µm,0.2s						
FDMO				AML	AML		
	comp=N,489µm,0.2s						
FDMO				END			
RM33	**Pellescritta (**	**0.28**	**184**	P	Pb	08 22 31.4	-0.7
RM33				S	Sb	08 22 35.9	-1.0
CAMP	**Campotosto**	**0.28**	**154**	P	Pg	08 22 31.0	+0.6
CAMP				S	Sb	08 22 36.2	-0.8
GUMA	**Gualdo di Mace**	**0.28**	**14**	P	Pg	08 22 30.6	0.0
CSP1	**Cessapalombo**	**0.31**	**355**	P	Pb	08 22 31.9	-0.7
CSP1				S	Sb	08 22 37.6	-0.2
CSP1				AML	AML		
	comp=E,512µm,0.2s						
CSP1				AML	AML		
	comp=N,633µm,0.3s						
CSP1				END			
TERO	**Teramo**	**0.31**	**121**	P	Pb	08 22 32.0	-0.7
TERO				S	Sb	08 22 37.2	-0.7
TERO				AML	AML		
	comp=N,1102µm,0.1s						
TERO				AML	AML		
	comp=N,1296µm,0.1s						
TERO				AML	AML		
	comp=E,810µm,0.1s						
TERO				AML	AML		
	comp=E,675µm,0.1s						
TERO				END			
CESI	**CESI - Serrava**	**0.33**	**311**	P	Pg	08 22 32.1	+0.6
CESI				S	Sb	08 22 37.4	-1.2
CESI				AML	AML		
	comp=N,1598µm,0.2s						
CESI				AML	AML		
	comp=E,883µm,0.5s						
SEF1	**Sefro**	**0.42**	**329**	P	Pg	08 22 33.5	+0.4
FIU1	**Fiuminata**	**0.46**	**331**	P	Pg	08 22 34.5	+0.7
GAG1	**Gagliole**	**0.47**	**344**	P	Pb	08 22 34.9	-0.5
SNTG	**Esanatoglia**	**0.52**	**335**	P	Pb	08 22 35.6	-0.6
SNTG				S	Sb	08 22 44.0	+0.1
EL6	**Elcito**	**0.55**	**349**	P	Pg	08 22 36.1	+0.5
SSFR	**Montelago di S**	**0.73**	**333**	S	Sn	08 22 55.0	+2.1
SGG	**Gregorio Mates**	**1.63**	**148**	S	Sg	08 23 21.0	+3.6
ZCCA	**Zocca**	**2.27**	**314**	S	Sg	08 23 41.0	+3.2
GROG	**Isola di Gorgo**	**2.54**	**286**	S	Sg	08 23 48.0	+1.7
SCHR	**S. Chirico Rap**	**3.35**	**140**	P	Pb	08 23 22.2	-2.3
SCHR				AML	AML		
	comp=E,436µm,0.1s						
SCHR				AML	AML		
	comp=N,347µm,0.1s						
EUCT	**Pavia**	**3.82**	**311**	S	Sb	08 24 19.0	+0.1
SPS2	**Spezzano della**	**4.20**	**145**	⇓P	Pn	08 23 32.1	+2.9
RISI	**Rein**	**4.24**	**349**	⇑P	Pb	08 23 36.1	-3.7
RISI				S	Sn	08 24 23.0	+3.3

BURY	**Giardini Botan**	**4.27**	**285**	P	Pn	08 23 34.8	+4.8	

THE 25 08:24:37.3, 40°36.36N×21°44.84E, h15km±1km, ML1.9/3, Error ellipse: s-maj=2.0km s-min=1.0km az=2.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.07**	**222**	P	Pg	08 24 39.6	-0.8
KZN				S	Sg	08 24 42.7	+0.2
	2µm,0.8s						
KTI	**Kastanea**	**0.22**	**82**	P	Pg	08 24 41.7	-0.6
LIT	**Litokhoron**	**0.56**	**117**	P	Pg	08 24 48.4	0.0
LIT				S	Sb	08 24 57.0	+0.2
	85nm,0.5s						
NEST	**Nestorio**	**0.60**	**275**	P	Pg	08 24 49.3	+0.1
THL	**Klokotos Trika**	**0.81**	**170**	P	Pg	08 24 52.7	-0.3
THL				S	Sb	08 25 04.2	+0.4
	58nm,0.6s						

STR ***25*** *08:25:03.5±1.1, 43°N±8°×°±°, h5km, MLv0.5/4, Error ellipse: s-maj=0.0km s-min=0.0km az=16.0, preliminary*
MDD ***25*** *08:25:05.6±0.7, 43°04N×0°51W, h0km, mb_Lg1.2/2, Error ellipse: s-maj=7.9km s-min=3.6km az=22.0*
LDG 25 08:25:03.8±0.2, 43°06N×0°42W, h2km, Md1.1/2, Error ellipse: s-maj=3.8km s-min=1.9km az=19.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETSF	**Etsaut**	**0.19**	**212**	*e*Pg	Pg	08 25 07.7	+0.2
ETSF				*e*Sg	Sg	08 25 10.3	+0.3
	2.5nm,0.2s						
ATE	**Arette**	**0.21**	**277**	Pg	Pg	08 25 07.7	-0.1
ATE				Sg	Sg	08 25 11.2	+0.7
CANF	**Canfranc**	**0.31**	**194**	Pg	Pg	08 25 09.8	+0.1
CANF				Sg	Sg	08 25 14.9	+1.2
VIEF	**Viey**	**0.37**	**118**	Pg	Pg	08 25 10.5	-0.4
VIEF				Sg	Sg	08 25 16.3	+0.6
EPF	**Esparros**	**0.56**	**93**	*e*Pg	Pg	08 25 15.2	+0.7
EPF				*e*Sg	Sg	08 25 22.5	+0.8
	1.4nm,0.2s						
SJPF	**Ste Jean**	**0.59**	**275**	*e*Pg	Pg	08 25 15.2	0.0
SJPF				*e*Sg	Sg	08 25 22.6	-0.2
ECHI	**Chisagues Biel**	**0.60**	**131**	Pg	Pg	08 25 14.9	-0.5
ECHI				Sg	Sg	08 25 23.2	+0.1
ECHI				*i* Vmb_Lg		08 25 29.4	
ECHI	**Chisagues Biel**	**0.60**	**131**	Pg	Pg	08 25 14.8	-0.5
ECHI				Sg	Sg	08 25 23.6	+0.5

THE ***25*** *08:25:09.8, 40°77N×22°94E, h15km±1km, ML2.1/5, Error ellipse: s-maj=1.2km s-min=0.5km az=164.0*
SKO ***25*** *08:25:10.6, 40°79N×22°93E, h1km*
BEO ***25*** *08:25:12.8±1.1, 40°88N×22°96E, h6km±6km, ML2.0/7*
ATH 25 08:25:10.0, 40°78N×22°93E, h11km±2km, mbLg2.2/4, 3C, Error ellipse: s-maj=2.6km s-min=0.8km az=234.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.15**	**170**	P	Pg	08 25 13.4	-0.1
THE				S	Sg	08 25 16.0	+0.1
	3µm,0.1s						
THE	**Thessaloniki**	**0.15**	**170**	⇑*i*Pg	Pg	08 25 13.4	-0.1
THE				*i* Sg	Sg	08 25 15.9	0.0
THE	**Thessaloniki**	**0.15**	**170**	P	Pg	08 25 13.4	-0.1
THE				S	Sg	08 25 15.8	-0.1
THE				AML	AML	08 25 16.0	
	comp=E,5989µm,0.1s						
THE				AML	AML	08 25 16.3	
	comp=N,3804µm,0.2s						
HORT	**Hortiatis**	**0.22**	**145**	P	Pg	08 25 14.7	-0.1
HORT				S	Sg	08 25 18.3	+0.3
	comp=N,1µm,0.1s						
HORT	**Hortiatis**	**0.22**	**145**	P	Pg	08 25 14.8	0.0
HORT				S	Sg	08 25 18.0	0.0
HORT				AML	AML	08 25 18.7	
	comp=N,1842µm,0.2s						
HORT				AML	AML	08 25 19.5	
	comp=E,2029µm,0.1s						
SOH	**Sokhos**	**0.32**	**83**	P	Pg	08 25 16.7	+0.2
SOH				S	Sg	08 25 21.4	+0.5
	comp=E,482nm,0.2s						
SOH	**Sokhos**	**0.32**	**83**	⇑*i*Pg	Pg	08 25 16.7	+0.2
SOH				*i* Sg	Sg	08 25 21.0	+0.1
SOH	**Sokhos**	**0.32**	**83**	P	Pg	08 25 16.8	+0.1
SOH				S	Sg	08 25 21.2	+0.3
KNT	**Kendrikon**	**0.38**	**356**	P	Pg	08 25 17.5	-0.1
KNT	**Kendrikon**	**0.38**	**356**	⇑*i*Pg	Pg	08 25 17.5	-0.1
KNT				*i* Sg	Sg	08 25 22.8	+0.1
KNT	**Kendrikon**	**0.38**	**356**	P	Pg	08 25 17.5	-0.1
KNT				S	Sg	08 25 22.8	+0.1
SRS	**Serrai**	**0.60**	**56**	P	Pg	08 25 21.4	-0.3
SRS				S	Sg	08 25 29.9	+0.2
	comp=E,168nm,0.1s						
SRS	**Serrai**	**0.60**	**56**	*e*Pg	Pg	08 25 22.0	+0.3
SRS				*e*Sg	Sg	08 25 29.6	-0.1
SRS	**Serrai**	**0.60**	**56**	*i* Pg	Pg	08 25 21.2	-0.6
SRS				*i* Sg	Sg	08 25 29.6	-0.1
SRS	**Serrai**	**0.60**	**56**	P	Pg	08 25 21.0	-0.8
SRS				S	Sg	08 25 29.5	-0.2
SRS				AML	AML	08 25 31.4	
	comp=E,369µm,0.1s						
SRS				AML	AML	08 25 36.5	
	comp=N,374µm,0.3s						
VAY	**Valandovo**	**0.60**	**333**	*i* Sg	Sg	08 25 29.8	+0.1
VAY				*i* Pg	Pg	08 25 21.6	-0.2
VAY				*e*Lg	Lg	08 25 29.9	
	comp=N,95nm,0.3s						
KTI	**Kastanea**	**0.73**	**238**	P	Pg	08 25 23.4	-0.8
LIT	**Litokhoron**	**0.76**	**207**	P	Pg	08 25 24.1	-0.6
KOKK	**Kokkinochori,**	**0.81**	**87**	P	Pg	08 25 25.2	-0.5
KOKK				S	Sg	08 25 36.4	+0.1
	comp=N,65nm,0.4s						
KOKK	**Kokkinochori,**	**0.81**	**87**	P	Pg	08 25 25.2	-0.5
NVR	**Nevrokopi**	**0.90**	**51**	P	Pg	08 25 26.9	-0.5
NVR	**Nevrokopi**	**0.90**	**51**	P	Pg	08 25 26.9	-0.5
NVR				S	Sg	08 25 38.5	-0.8
NVR				AML	AML	08 25 41.8	
	comp=E,227µm,0.2s						
NVR				AML	AML	08 25 42.6	
	comp=N,197µm,0.2s						
OUR	**Ouranopolis**	**0.92**	**119**	P	Pg	08 25 27.5	-0.2
PAIG	**Paliouri**	**1.03**	**146**	P	Pb	08 25 28.7	-1.1
STIP	**Stip**	**1.07**	**329**	*i* Pg	Pb	08 25 29.5	-1.0
STIP				*i* Sg	Sb	08 25 43.5	-1.2
KVLA	**Kavala**	**1.11**	**82**	P	Pb	08 25 30.6	-0.7
KAVA	**Kavala**	**1.22**	**79**	P	Pn	08 25 32.5	-0.4
THAS	**Thassos island**	**1.37**	**97**	P	Pn	08 25 35.0	0.0
BOSS	**Bosilegrad**	**1.75**	**349**	*e*Pn	Pb	08 25 41.4	-0.6
BOSS				*e*Sg	Sg	08 26 05.1	-1.1
PRVS	**Prvonek**	**1.84**	**340**	*e*Pn	Pb	08 25 43.4	-0.2
PRVS				*e*Sg	Sg	08 26 08.6	-0.6
VTS	**Vitosha**	**1.85**	**7**	*e*Pg	Pb	08 25 44.2	+0.3
VTS				*e*Sg	Sb	08 26 06.3	-0.7
PLD	**Plovdiv**	**1.88**	**45**	*e*Pg	Pg	08 25 46.7	+0.7
PLD				*e*Sg	Sg	08 26 10.4	+0.1
BARS	**Barje**	**2.20**	**338**	*e*Pn	Pn	08 25 46.9	+0.5
BARS				*e*Sg	Sg	08 26 21.5	+0.9
ZAPS	**Zavoj**	**2.50**	**355**	*e*Pn	Pb	08 25 54.1	-0.8
ZAPS				*e*Sg	Sg	08 26 28.8	-1.5

ATH 25 08:25:14.4, 38°62N×23°44E, h15km±3km, ML1.8/1, Error ellipse: s-maj=3.5km s-min=1.4km az=322.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.33**	**283**	P	Pg	08 25 20.5	-0.8
ATAL				S	Sg	08 25 25.6	-0.4
VIL2	**Platees**	**0.43**	**198**	P	Pg	08 25 23.0	-0.1
VIL2				S	Sb	08 25 30.2	+0.1
VIL2				AML	AML	08 25 31.2	
	comp=E,351µm,0.3s						
VIL2				AML	AML	08 25 31.2	
	comp=N,291µm,0.3s						
KYMI	**Kymi, Euboea I**	**0.52**	**88**	P	Pg	08 25 24.4	-0.3
KYMI				S	Sb	08 25 32.3	-0.4
DION	**Dionisos Attik**	**0.67**	**144**	P	Pg	08 25 26.8	-0.7
DION				S	Sg	08 25 35.8	-0.6
LTK	**Loutraki**	**0.70**	**212**	P	Pg	08 25 27.3	-0.8
LTK				S	Sb	08 25 37.7	-0.2

VLY	**Voula,Athens**	**0.82**	**160**	P	Pg	08 25 29.8	-0.5
VLY				S	Sg	08 25 40.4	-0.7
KLV	**Kalavryta, Ach**	**1.16**	**241**	P	Pg	08 25 36.8	-0.1

ROM 25 08:27:06.5±0.1,42°.739N±0°.004×13°.220E±0°.009, h10km,ML2.6/23,9C-6D,Error ellipse: s-maj=0.6km s-min=0.3km az=255.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**321**	P	Pg	08 27 09.9	+0.4
NRCA				S	Sg	08 27 12.2	+0.5
LNSS	**Leonessa**	**0.19**	**224**	P	Pg	08 27 11.3	+0.7
LNSS				S	Sg	08 27 14.5	+1.1
RM33	**Pellescritta (**	**0.23**	**181**	⇓P	Pg	08 27 12.0	+0.7
RM33				S	Sg	08 27 16.0	+1.5
RM33				AML	AML		
	comp=E,3990μm,0.7s						
RM33				AML	AML		
	comp=E,3895μm,0.7s						
RM33				AML	AML		
	comp=N,2100μm,0.9s						
RM33				AML	AML		
	comp=N,2110μm,0.9s						
RM33				AML	AML		
	comp=E,3890μm,0.7s						
FEMA	**Monte Fema**	**0.26**	**331**	P	Pg	08 27 12.1	+0.4
FEMA				S	Sg	08 27 16.3	+1.0
FEMA				AML	AML		
	comp=E,4528μm,0.2s						
FEMA				AML	AML		
	comp=N,4202μm,0.2s						
TERO	**Teramo**	**0.31**	**112**	P	Pg	08 27 12.8	+0.2
TERO				S	Sg	08 27 17.7	+0.9
TERO				AML	AML		
	comp=E,1595μm,0.4s						
TERO				AML	AML		
	comp=E,764μm,0.3s						
TERO				AML	AML		
	comp=N,1814μm,0.3s						
TERO				AML	AML		
	comp=E,1598μm,0.4s						
TERO				AML	AML		
	comp=N,2095μm,0.3s						
FDMO	**Fiordimonte**	**0.31**	**342**	P	Pg	08 27 13.0	+0.2
FDMO				S	Sg	08 27 17.9	+0.9
FDMO				AML	AML		
	comp=N,3910μm,0.2s						
FDMO				AML	AML		
	comp=E,2435μm,0.8s						
GUMA	**Gualdo di Mace**	**0.33**	**15**	P	Pg	08 27 13.7	+0.5
GUMA				S	Sb	08 27 19.4	-0.6
GUMA				AML	AML		
	comp=N,13400μm,1.5s						
GUMA				AML	AML		
	comp=N,11000μm,0.6s						
GUMA				AML	AML		
	comp=E,14900μm,0.3s						
GUMA				AML	AML		
	comp=N,13400μm,0.5s						
GUMA				AML	AML		
	comp=E,18450μm,0.3s						
CESI	**CESI - Serrava**	**0.35**	**319**	P	Pg	08 27 13.7	+0.2
CESI				S	Sb	08 27 19.4	-1.1
CESI				AML	AML		
	comp=E,1595μm,1.1s						
CESI				AML	AML		
	comp=N,3315μm,0.3s						
CSP1	**Cessapalombo**	**0.35**	**358**	P	Pg	08 27 13.7	+0.2
CSP1				S	Sg	08 27 19.2	+0.9
CSP1				AML	AML		
	comp=E,2995μm,1.3s						
CSP1				AML	AML		
	comp=N,3855μm,0.3s						
CSP1				AML	AML		
	comp=E,3005μm,1.3s						
CSP1				AML	AML		
	comp=N,3850μm,0.3s						
CSP1				AML	AML		
	comp=E,3005μm,0.7s						
GIGS	**Gran Sasso**	**0.39**	**138**	P	Pg	08 27 14.1	0.0
GIGS				S	Sg	08 27 20.1	+0.9
GIGS				AML	AML		
	comp=E,271μm,0.5s						
GIGS				AML	AML		
	comp=N,222μm,0.3s						
GIGS				AML	AML		
	comp=E,271μm,1.5s						
GIGS				AML	AML		
	comp=N,222μm,1.7s						
OFFI	**Offida**	**0.40**	**60**	P	Pb	08 27 15.3	-0.2
OFFI				AML	AML		
	comp=E,2410μm,0.4s						
OFFI				AML	AML		
	comp=N,6560μm,0.5s						
SEF1	**Sefro**	**0.45**	**334**	P	Pg	08 27 15.5	+0.1
FIAM	**Fiamignano**	**0.48**	**189**	P	Pg	08 27 16.0	+0.2
FIAM				S	Sb	08 27 23.4	-0.7
FIAM				AML	AML		
	comp=N,762μm,0.7s						
FIAM				AML	AML		
	comp=E,913μm,0.6s						
FIAM				AML	AML		
	comp=N,762μm,1.3s						
CESX	**Cesi**	**0.49**	**255**	S	Sb	08 27 24.0	-0.4
SNTG	**Esanatoglia**	**0.56**	**338**	P	Pg	08 27 17.3	0.0
SNTG				S	Sb	08 27 26.0	-0.3
VCEL	**Villa Celiera**	**0.57**	**127**	P	Pg	08 27 18.1	+0.5
VCEL				AML	AML		
	comp=N,602μm,0.9s						
VCEL				AML	AML		
	comp=E,468μm,1.1s						
EL6	**Elcito**	**0.60**	**352**	⇑P	Pg	08 27 15.6	-2.5
ATCC	**AVT- Casa Cast**	**0.62**	**317**	P	Pg	08 27 18.6	+0.1
ATCC				AML	AML		
	comp=E,582μm,1.2s						
ATCC				AML	AML		
	comp=N,368μm,1.4s						
ATCC				AML	AML		
	comp=N,368μm,0.6s						
ATCC				AML	AML		
	comp=E,582μm,0.8s						
T0110	**Collepietro**	**0.66**	**141**	P	Pg	08 27 18.9	-0.3
T0110				AML	AML		
	comp=E,682μm,0.4s						
T0110				AML	AML		
	comp=N,451μm,0.5s						
PP3	**Marolino**	**0.70**	**24**	P	Pb	08 27 20.9	+0.2
PP3				AML	AML		
	comp=E,2595μm,0.4s						
PP3				AML	AML		
	comp=N,1191μm,1.1s						
PP3				AML	AML		
	comp=N,1350μm,0.3s						
PP3				AML	AML		
	comp=N,1345μm,0.3s						
PP3				AML	AML		
	comp=N,1192μm,1.1s						
PP3				AML	AML		
	comp=E,2650μm,0.4s						
PP3				AML	AML		
	comp=E,2600μm,0.4s						
PP3				AML	AML		
	comp=N,1192μm,0.9s						
PP3				AML	AML		
	comp=N,1345μm,1.7s						
SRES	**S.Oreste - Sor**	**0.73**	**227**	P	Pb	08 27 20.9	-0.3
SRES				AML	AML		
	comp=N,124μm,0.6s						
SRES				AML	AML		
	comp=E,93μm,0.5s						
MURB	**Monte Urbino**	**0.73**	**316**	P	Pg	08 27 20.6	0.0
ATTE	**AVT- Monte Tez**	**0.78**	**306**	AML	AML		
	comp=N,158μm,1.0s						
ATTE				AML	AML		
	comp=E,170μm,0.5s						
ATTE				AML	AML		
	comp=N,158μm,1.0s						
ARVD	**Arcevia**	**0.79**	**345**	P	Pg	08 27 21.4	-0.2
ARVD				S	Sb	08 27 33.4	+0.5
ARVD				AML	AML		
	comp=E,315μm,0.4s						
ARVD				AML	AML		
	comp=N,260μm,0.5s						
ARVD				AML	AML		
	comp=N,260μm,1.5s						
MTCE	**Montecelio**	**0.80**	**206**	⇑P	Pg	08 27 21.1	-0.8
MTCE				AML	AML		
	comp=N,108μm,0.4s						
MTCE				AML	AML		
	comp=E,199μm,1.6s						
MTCE				AML	AML		
	comp=E,199μm,0.4s						
CERT	**Cerreto**	**0.81**	**193**	⇑P	Pg	08 27 21.7	-0.4
CERT				AML	AML		
	comp=E,296μm,0.5s						
CERT				AML	AML		
	comp=N,236μm,0.5s						
CERT				AML	AML		
	comp=N,236μm,1.5s						
MGAB	**Montegabbione**	**0.83**	**282**	⇑P	Pn	08 27 24.9	+0.6
MGAB				AML	AML		
	comp=E,522μm,0.6s						
MGAB				AML	AML		
	comp=E,566μm,1.5s						
MGAB				AML	AML		
	comp=E,522μm,0.6s						
MGAB				AML	AML		
	comp=N,991μm,0.3s						
MGAB				AML	AML		
	comp=N,920μm,0.4s						
AOI	**Ancona**	**0.86**	**19**	P	Pg	08 27 23.0	0.0
AOI				AML	AML		
	comp=N,334μm,1.3s						
AOI				AML	AML		
	comp=E,328μm,0.2s						
AOI				AML	AML		
	comp=N,334μm,0.7s						
FRON	**Frontone**	**0.86**	**335**	P	Pg	08 27 22.4	-0.6
ATVO	**AVT- Monte Val**	**0.88**	**317**	P	Pb	08 27 23.9	+0.1
ATVO				AML	AML		
	comp=E,146μm,0.9s						
ATVO				AML	AML		
	comp=N,176μm,0.4s						
ATVO				AML	AML		
	comp=N,176μm,0.4s						
INTR	**Introdacqua**	**0.89**	**145**	⇓P	Pg	08 27 22.8	-0.7
INTR				AML	AML		
	comp=E,126μm,1.5s						
INTR				AML	AML		
	comp=N,325μm,0.6s						
INTR				AML	AML		
	comp=E,126μm,0.5s						
INTR				AML	AML		
	comp=N,325μm,1.4s						
PIEI	**Pieia**	**0.94**	**328**	⇓P	Pg	08 27 24.5	-0.1
PIEI				AML	AML		
	comp=E,196μm,0.4s						
PIEI				AML	AML		
	comp=N,192μm,1.4s						
PIEI				AML	AML		
	comp=N,192μm,0.6s						
PIEI				AML	AML		
	comp=E,196μm,1.6s						
MPAG	**Monte Paganucc**	**0.95**	**339**	⇑P	Pg	08 27 24.6	-0.2
MPAG				AML	AML		
	comp=E,262μm,0.3s						
MPAG				AML	AML		
	comp=N,236μm,0.5s						
MPAG				AML	AML		
	comp=E,261μm,0.3s						
MPAG				AML	AML		
	comp=E,261μm,1.7s						
NARO	**Abbazia di Nar**	**0.99**	**332**	P	Pg	08 27 25.0	-0.5
NARO				AML	AML		
	comp=E,144μm,0.3s						
NARO				AML	AML		
	comp=N,143μm,0.3s						
LPEL	**Lama dei Pelig**	**0.99**	**134**	P	Pg	08 27 24.9	-0.7
LPEL				S	Sn	08 27 40.0	-0.6
FSSB	**Fossombrone**	**1.01**	**341**	⇑P	Pg	08 27 25.5	-0.3
FSSB				AML	AML		
	comp=N,921μm,0.3s						
FSSB				AML	AML		
	comp=E,1025μm,0.3s						
FSSB				AML	AML		
	comp=E,1025μm,1.7s						
PE3	**Peglio**	**1.09**	**331**	S	Sn	08 27 46.0	+3.0
LRP	**Arpino**	**1.12**	**166**	S	Sn	08 27 44.0	+0.3
VBKN	**Vesuvio Bunker**	**2.11**	**154**	S	Sg	08 28 15.0	+0.7
CARD	**Cardoso**	**2.37**	**304**	P	Pb	08 27 47.4	-1.9
GSCL	**Gusciola**	**2.50**	**311**	P	Pn	08 27 48.2	+1.0
STON	**Ston**	**3.30**	**86**	⇓P	Pn	08 27 56.3	-1.8
SCHR	**S. Chirico Rap**	**3.32**	**139**	P	Pg	08 28 09.7	-0.5
CIMO	**Cimolais**	**3.61**	**351**	S	Sb	08 28 53.0	-1.3
EUCT	**Pavia**	**3.84**	**311**	S	Sb	08 28 59.0	-1.8
BOSI	**Bolzano**	**3.99**	**341**	S	Sn	08 28 55.0	+0.5
SPS2	**Spezzano della**	**4.17**	**145**	⇑P	Pb	08 28 17.3	-2.6
RISI	**Rein**	**4.29**	**349**	⇓P	Pb	08 28 22.3	+0.3
RISI				S	Sn	08 29 05.0	+3.0
STV	**Sant Anna di V**	**4.54**	**291**	⇓P	Pn	08 28 18.0	+2.7
DIVS	**Divibare**	**5.12**	**72**	⇑P	Pg	08 28 46.0	+1.6
VLO	**Vlora**	**5.22**	**114**	⇑P	Pn	08 28 28.0	+3.5
CLTA	**Licata**	**5.60**	**174**	P	Pb	08 28 43.7	-0.6

*INET **25** 08:29:20.0±2.1,9°.10N×85°.61W,h6km,MW3.5*
*UCR **25** 08:29:22.3±1.4,9°.29N×85°.51W,h20km±3km,MW4.3*
ISC 25 08:29:22.1±1.9,9°30N±0°.07×85°49W±0°.06,h14km±10km, n53,σ0s74/60,29C-1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INDI	**Punta indio, G**	**0.56**	**359**	⇑*i*P	**Pg**	**08 29 33.5**	**+0.2**
INDI				*e*S	**Sg**	**08 29 42.4**	**+1.7**
GRZA	**Playa Garza**	**0.63**	**347**	⇑*i*P	**Pg**	**08 29 34.4**	**0.0**
LAFE	**Finca La Fe, P**	**0.77**	**49**	⇑*i*P	**Pg**	**08 29 36.4**	**-0.6**
LAFE				*e*S	**Sg**	**08 29 47.6**	**+0.5**
SAJU	**San Juanillo,**	**0.79**	**344**	⇑*e*P	**Pg**	**08 29 36.6**	**-0.9**
SAJU				*e*S	**Sg**	**08 29 48.0**	**0.0**
NICO	**Nicoya**	**0.83**	**3**	⇑*i*P	**Pb**	**08 29 37.7**	**-0.6**
NICO				*e*S	**Sg**	**08 29 50.1**	**+0.9**
JACO	**JACO, Garabito**	**0.90**	**66**	⇑*i*P	**Pb**	**08 29 39.0**	**-0.5**
JACO				*e*S	**Sb**	**08 29 51.8**	**+0.5**
ORTG	**Ortega, Santa**	**1.06**	**2**	⇑*i*P	**Pb**	**08 29 40.9**	**-1.3**
JTS	**Las Juntas de**	**1.12**	**28**	⇑*i*P	**Pn**	**08 29 42.2**	**-1.2**
SRA1	**San Ramn**	**1.27**	**52**	⇑*e*P	**Pn**	**08 29 44.6**	**-0.9**
CASO	**Castillo**	**1.35**	**34**	⇑*e*P	**Pn**	**08 29 46.1**	**-0.5**
COLC	**Colonia**	**1.39**	**12**	⇑*i*P	**Pn**	**08 29 46.4**	**-0.7**
ACAL	**Aguas Claras**	**1.40**	**19**	⇑*i*P	**Pn**	**08 29 46.7**	**-0.6**
HZTE	**Horizontes, Gu**	**1.41**	**356**	⇑*i*P	**Pn**	**08 29 46.4**	**-1.0**
CEDE	**Laguna Cedeo**	**1.41**	**33**	⇑*i*P	**Pn**	**08 29 47.5**	**0.0**
FORC	**Fortuna**	**1.42**	**35**	⇑*e*P	**Pn**	**08 29 47.2**	**-0.2**
GUAB	**Guayabo de Bag**	**1.42**	**11**	*e*P	**Pn**	**08 29 46.6**	**-1.0**
HORNC	**Hornillas**	**1.44**	**12**	⇑*i*P	**Pn**	**08 29 47.1**	**-0.7**
GPS2	**Hotel Rincn d**	**1.45**	**6**	⇑*i*P	**Pn**	**08 29 47.1**	**-0.8**
VRLE	**La Escondida,**	**1.48**	**5**	⇑*i*P	**Pn**	**08 29 47.6**	**-0.8**
BUEV	**Buena Vista**	**1.49**	**3**	⇑*i*P	**Pn**	**08 29 47.7**	**-0.9**
PTEN	**Parque Tenorio**	**1.49**	**20**	⇑*i*P	**Pn**	**08 29 48.2**	**-0.3**
GB1A	**Borinquen Arri**	**1.51**	**4**	⇑*i*P	**Pn**	**08 29 48.2**	**-0.7**
HDC	**Heredia**	**1.53**	**63**	*e*P	**Pn**	**08 29 48.5**	**-0.6**
HDC3	**Heredia 3**	**1.53**	**63**	*e*P	**Pn**	**08 29 49.2**	**0.0**
LCR2	**La Lucha 2**	**1.53**	**73**	⇑*i*P	**Pn**	**08 29 48.1**	**-1.1**
VMAR	**Armenia, Volca**	**1.55**	**14**	⇑*e*P	**Pn**	**08 29 48.8**	**-0.5**
SJS	**Escuela Geolog**	**1.56**	**66**	*e*P	**Pn**	**08 29 48.1**	**-1.4**
BUAI	**Buenos Aires**	**1.57**	**6**	*e*P	**Pn**	**08 29 49.2**	**-0.4**
OCM	**Ochomogo**	**1.62**	**69**	*e*P	**Pn**	**08 29 49.8**	**-0.7**
VERA	**Finca Concepci**	**1.66**	**22**	*e*P	**Pn**	**08 29 50.6**	**-0.2**
RIMA	**Rio Macho**	**1.67**	**74**	⇑*i*P	**Pn**	**08 29 50.1**	**-1.0**
RIMA				*e*S	**Sn**	**08 30 12.2**	**-0.3**
CDM	**Cerro de Muert**	**1.73**	**81**	⇑*i*P	**Pn**	**08 29 51.3**	**-0.8**
COVE	**Coope Vega, Sa**	**1.77**	**37**	⇑*i*P	**Pn**	**08 29 52.3**	**0.0**
RAFA	**San Farael, Vo**	**1.78**	**68**	⇑*e*P	**Pn**	**08 29 52.5**	**-0.3**
PEZE	**Perez Zeledon,**	**1.79**	**87**	*e*P	**Pn**	**08 29 51.9**	**-0.8**
RIFO	**Rio Frio, Sara**	**1.85**	**57**	⇑*e*P	**Pn**	**08 29 53.9**	**+0.5**
CVTR	**Volcan Turrial**	**1.85**	**67**	*e*P	**Pn**	**08 29 53.6**	**-0.2**
VTCV	**VTCV, Calle Va**	**1.87**	**69**	*e*P	**Pn**	**08 29 53.9**	**0.0**
EDPN	**Palmar Norte**	**2.04**	**99**	*e*P	**Pn**	**08 29 56.1**	**+0.1**
MRVA	**Moravia de Chi**	**2.09**	**75**	*e*P	**Pn**	**08 29 56.3**	**-0.5**
SRBA	**San Rafael, Bu**	**2.11**	**92**	*e*P	**Pn**	**08 29 56.6**	**-0.5**
DRKO	**Durika**	**2.22**	**91**	⇑*e*P	**Pn**	**08 29 59.2**	**+0.6**
BATAN	**Batan**	**2.23**	**69**	*e*P	**Pn**	**08 29 59.3**	**+0.6**
POTG	**Potrero Grande**	**2.36**	**96**	*e*P	**Pn**	**08 30 00.3**	**-0.1**
EDSV	**San Vito**	**2.54**	**101**	*e*P	**Pn**	**08 30 03.5**	**+0.5**
ACON	**Acoyapa**	**2.67**	**7**	*e*P	**Pn**	**08 30 04.2**	**-0.5**
ACON	**Acoyapa**	**2.67**	**7**	*i* P	**Pn**	**08 30 04.5**	**-0.2**
CDITO	**Canoas**	**2.69**	**105**	⇓*i*P	**Pn**	**08 30 05.4**	**+0.4**
BRU2	**Volcan**	**2.81**	**100**	*e*P	**Pn**	**08 30 07.0**	**+0.2**
HUEN		**3.09**	**348**	*e*P	**Pn**	**08 30 11.0**	**+0.5**
ESPN	**Las Esperanzas**	**3.11**	**22**	*e*P	**Pn**	**08 30 10.6**	**-0.1**
ESPN	**Las Esperanzas**	**3.11**	**22**	*e*P	**Pn**	**08 30 10.7**	**0.0**
ESPN				*e*S	**Sn**	**08 30 49.6**	**+2.0**
CNGN	**Cerro Negro**	**3.39**	**340**	*e*P	**Pn**	**08 30 15.6**	**+0.9**

*PGC **25** 08:54:44.8±1.1,66°.55N×140°.60W,h5km,ML2.6/5,282km Nnw of Dawson, Yt Northern Yukon Territory, Canada*
*NEIC **25** 08:54:45.1±1.3,66°.56N±0°.04×140°.60W±0°.07,h15km±7km, Error ellipse: s-maj=7.1km s-min=2.4km az=147.0*
ISC 25 08:54:44.4±1.2,66°56N±0°.04×140°55W±0°.04,h10km,n37, σ0s94/42,Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I29M	**Ogilvie Camp,**	**1.52**	**142**		**Pn**	**08 55 11.5**	**-0.1**
I29M				IAML		08 55 32.8	
	comp=N,53nm,0.5s						
I29M				IAML		08 55 35.2	
	comp=E,50nm,0.7s						
I29M	**Ogilvie Camp,**	**1.52**	**142**	Pn	**Pn**	**08 55 11.5**	**-0.1**
I29M				Sn	**Sb**	**08 55 32.0**	**+0.1**
EPYK	**Eagle Plains**	**1.55**	**95**		**Pn**	**08 55 12.6**	**+0.5**
EPYK				IAML		08 55 37.7	
EPYK	comp=E,47nm,0.5s			IAML		08 55 38.6	
	comp=N,44nm,0.3s						
EPYK	**Eagle Plains**	**1.55**	**95**	Pn	**Pn**	**08 55 12.3**	**+0.2**
EPYK				Sn	**Sb**	**08 55 33.5**	**+0.6**
I26K	**Coal Creek Min**	**1.65**	**221**		**Pn**	**08 55 13.7**	**+0.2**
I26K				IAML		08 55 40.5	
	comp=N,45nm,0.5s						
I26K				IAML		08 55 42.5	
	comp=E,36nm,0.6s						
BMAR	**Burnt Mountain**	**1.81**	**301**		**Pn**	**08 55 16.0**	**+0.3**
EGAK	**Eagle**	**1.81**	**188**		**Pn**	**08 55 15.8**	**+0.2**
EGAK				IAML		08 55 41.0	
	comp=E,51nm,0.6s						
EGAK				IAML		08 55 45.6	
	comp=E,34nm,0.7s						
FYU	**Fort Yukon**	**1.87**	**272**		**Pn**	**08 55 15.8**	**-0.7**
FYU				IAML		08 55 46.9	
	comp=E,39nm,0.9s						
FYU				IAML		08 56 26.2	
	comp=N,34nm,0.1s						
J29M	**Klondike Camp**	**2.33**	**154**	Sn	**Sn**	**08 55 51.8**	**+0.2**
J26L	**Joseph Creek**	**2.42**	**213**		**Pn**	**08 55 24.9**	**+0.8**
DAWY	**Dawson**	**2.55**	**169**		**Pn**	**08 55 25.7**	**-0.2**
DAWY				IAML		08 56 05.4	
	comp=N,14nm,0.4s						
DAWY	**Dawson**	**2.55**	**169**	Pn	**Pn**	**08 55 26.0**	**+0.1**
DAWY				Sn	**Sn**	**08 55 56.5**	**-0.5**
K27K	**Chicken**	**2.62**	**195**		**Pn**	**08 55 27.1**	**+0.3**
K27K				IAML		08 56 09.3	
	comp=E,14nm,0.8s						
J25K	**Salcha River,**	**2.80**	**228**		**Pn**	**08 55 28.6**	**-0.7**
SCRK	**Sand Creek**	**2.97**	**211**		**Pn**	**08 55 31.6**	**-0.1**
SCRK				IAML		08 56 22.3	
	comp=E,11nm,2.3s						
H24K	**Noodor Dome**	**3.06**	**260**		**Pn**	**08 55 32.6**	**-0.2**
IL31		**3.18**	**239**		**Pn**	**08 55 34.0**	**-0.5**
ILAR	**Eielson Array**	**3.18**	**239**		**Pn**	**08 55 33.2**	**-1.2**
POKR	**Poker Plat Res**	**3.18**	**246**	Pn	**Pn**	**08 55 34.8**	**+0.3**
POKR				IAML		08 56 33.2	
	comp=E,13nm,3.3s						
POKR				IAML		08 56 47.5	
	comp=N,8.6nm,2.3s						
INK	**Inuvik**	**3.23**	**54**	Pn	**Pn**	**08 55 36.2**	**+1.1**
INK				IAML		08 56 19.8	
	comp=E,11nm,4.7s						
INK	**Inuvik**	**3.23**	**54**	Pn	**Pn**	**08 55 35.7**	**+0.7**
INK				Sn	**Sn**	**08 56 11.6**	**-1.8**
DOT	**Dot Lake**	**3.28**	**209**	Pn	**Pn**	**08 55 37.3**	**+1.4**
DOT				Sg	**Sb**	**08 56 25.6**	**+2.9**
RIDG	**Independent Ri**	**3.36**	**215**		**Pn**	**08 55 37.5**	**+0.5**
RIDG				IAML		08 56 32.1	
	comp=N,14nm,3.0s						
BCAR	**Beaver Creek A**	**3.55**	**189**		**Pn**	**08 55 39.4**	**-0.2**
MDM	**Murphy Dome**	**3.55**	**247**	Pn	**Pn**	**08 55 39.0**	**-0.7**
MDM				IAML		08 56 28.5	
	comp=E,6.5nm,4.7s						
CCB	**Clear Creek Bu**	**3.57**	**241**	Pn	**Pn**	**08 55 39.4**	**-0.5**
H23K	**Yukon River**	**3.72**	**263**	Pn	**Pn**	**08 55 42.4**	**+0.5**
H23K				IAML		08 57 25.6	
	comp=E,5.7nm,3.1s						
H23K				IAML		08 58 05.8	
	comp=N,6.1nm,3.6s						
WRH	**Wood River Hil**	**3.78**	**240**	Pn	**Pn**	**08 55 41.7**	**-0.9**
NEA2	**Nenana**	**4.05**	**245**	Pn	**Pn**	**08 55 45.5**	**-0.9**
NEA2				IAML		08 57 17.0	
	comp=E,7.7nm,4.9s						
NEA2				IAML		08 57 21.0	
	comp=N,7.5nm,5.0s						
M30M	**Minto, Yukon**	**4.32**	**156**	Sn	**Sn**	**08 56 37.5**	**-2.9**
MLY	**Manley**	**4.47**	**255**	Pn	**Pn**	**08 55 51.3**	**-0.9**
MLY				IAML		08 56 39.0	
	comp=E,5.2nm,4.7s						
MLY				IAML		08 58 22.9	
	comp=N,6.6nm,0.8s						
DHY	**Denali Highway**	**4.55**	**223**	Pn	**Pn**	**08 55 54.0**	**+0.5**
RND	**Reindeer**	**4.74**	**232**	Pn	**Pn**	**08 55 56.0**	**+0.1**
YUK2	**White River**	**4.80**	**182**	Sn	**Sn**	**08 56 51.9**	**-0.5**
I21K	**Tanana**	**4.89**	**259**	Pn	**Pn**	**08 55 58.8**	**+0.9**
YUK4	**Talbot Arm**	**5.30**	**170**	Pn	**Pn**	**08 56 03.2**	**-0.6**
IMAR	**Indian Mountai**	**5.36**	**270**	Pn	**Pn**	**08 56 04.0**	**-0.4**

*ROM **25** 08:59:37.4±0.1,42°.614N±0°.004×13°.303E±0°.006, h7km,ML3.2/64,Error ellipse: s-maj=0.5km s-min=0.4km az=70.0*
*LDG **25** 08:59:37.1±0.1,42°.62N×13°.29E,h5km,Md2.9/2,Ml2.8/9, Error ellipse: s-maj=2.9km s-min=2.2km az=57.0*
*PRU **25** 08:59:41.2±0.0,42°.73N×13°.86E,h0km*
ISC 25 08:59:37.8±0.8,42°61N±0°.02×13°29E±0°.02,h12km±5km, n130,σ1s86/168,21C-35D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**206**	⇑P	**Pg**	**08 59 41.0**	**0.0**
RM33				S	**Sg**	**08 59 43.5**	**+0.2**
RM33				AML	AML		
	comp=E,41500μm,0.9s						
RM33				AML	AML		
	comp=N,68500μm,0.5s						
RM33				AML	AML		
	comp=N,68550μm,0.5s						
RM33				AML	AML		
	comp=E,40500μm,0.4s						
RM33				AML	AML		
	comp=N,68500μm,0.5s						
RM33				AML	AML		
	comp=E,41500μm,0.9s						
RM33				AML	AML		
	comp=N,68550μm,0.5s						
CAMP	**Campotosto**	**0.12**	**130**	⇓P	**Pg**	**08 59 40.5**	**-0.6**
CAMP				S	**Sg**	**08 59 42.5**	**-0.9**
CAMP				AML	AML		
	comp=N,15450μm,0.6s						
CAMP				AML	AML		
	comp=E,10750μm,0.6s						
LNSS	**Leonessa**	**0.18**	**267**	P	**Pg**	**08 59 42.2**	**+0.2**
LNSS				S	**Sg**	**08 59 45.7**	**+0.8**
LNSS				AML	AML		
	comp=E,27500μm,0.9s						
LNSS				AML	AML		
	comp=N,20400μm,0.9s						
TERO	**Teramo**	**0.24**	**88**	P	**Pg**	**08 59 42.3**	**-0.5**
TERO				S	**Sg**	**08 59 45.8**	**-0.4**
TERO				AML	AML		
	comp=E,40500μm,0.3s						
TERO				AML	AML		
	comp=N,39750μm,0.3s						
TERO				AML	AML		
	comp=E,40450μm,0.3s						
TERO				AML	AML		
	comp=E,43650μm,0.3s						
TERO				AML	AML		
	comp=N,37900μm,0.3s						
NRCA	**Norcia**	**0.25**	**330**	P	**Pg**	**08 59 43.2**	**0.0**
NRCA				S	**Sg**	**08 59 47.6**	**+0.8**
NRCA				AML	AML		
	comp=E,32450μm,0.2s						
NRCA

comp=N,33850µm,1.1s
GIGS Gran Sasso 0.27 128 P Pg 08 59 42.8 -0.6
GIGS S **Sg** **08 59 46.9 -0.3**
GIGS AML AML
comp=E,2600µm,0.4s
GIGS AML AML
comp=N,2185µm,0.5s
AQU L'Aquila 0.27 162 ⇓P Pg 08 59 43.4 -0.1
AQU S **Sg** **08 59 48.0 +0.7**
AQU AML AML
comp=E,7160µm,0.5s
AQU AML AML
comp=N,7015µm,0.9s
AQU AML AML
comp=E,6955µm,0.5s
AQU AML AML
comp=E,7165µm,0.5s
AQU AML AML
comp=N,6870µm,0.9s
FIAM Fiamignano 0.37 200 P Pg 08 59 45.1 -0.1
FIAM S **Sg** **08 59 51.1 +1.0**
FIAM AML AML
comp=E,3690µm,0.4s
FIAM AML AML
comp=N,3265µm,1.4s
ARRO Arrone 0.39 265 P Pg 08 59 46.0 +0.5
ARRO AML AML
comp=N,3675µm,0.2s
ARRO AML AML
comp=E,4380µm,0.7s
FEMA Monte Fema 0.39 334 P Pg 08 59 45.7 0.0
FEMA S **Sb** **08 59 52.1 -0.6**
FEMA AML AML
comp=N,10420µm,0.3s
FEMA AML AML
comp=E,11500µm,1.2s
FEMA AML AML
comp=N,10415µm,0.2s
FAGN Fagnano 0.41 147 P Pg 08 59 46.2 +0.2
FAGN S **Sb** **08 59 53.3 +0.1**
FAGN AML AML
comp=N,7500µm,0.4s
FAGN AML AML
comp=E,9345µm,0.3s
OFFI Offida 0.44 42 ⇑P Pb 08 59 46.9 -0.5
OFFI S **Sb** **08 59 55.0 +1.1**
OFFI AML AML
comp=E,10200µm,0.4s
OFFI AML AML
comp=N,11225µm,0.6s
FDMO Fiordimonte 0.45 341 ⇑P Pg 08 59 46.5 -0.1
FDMO S **Sb** **08 59 53.8 -0.4**
FDMO AML AML
comp=N,5535µm,0.2s
FDMO AML AML
comp=E,4985µm,0.2s
GUMA Gualdo di Mace 0.45 5 ⇑P Pg 08 59 46.8 +0.1
GUMA S **Sb** **08 59 54.2 -0.1**
GUMA AML AML
comp=E,16350µm,0.4s
GUMA AML AML
comp=E,14950µm,0.3s
GUMA AML AML
comp=N,12100µm,0.4s
GUMA AML AML
comp=N,12650µm,0.6s
VCEL Villa Celiera 0.47 118 P Pg 08 59 47.2 +0.2
VCEL S **Sb** **08 59 54.8 -0.1**
VCEL AML AML
comp=E,9030µm,0.9s
VCEL AML AML
comp=N,9640µm,0.6s
CESI CESI - Serrava 0.48 325 ⇓P Pg 08 59 47.2 -0.1
CESI S **Sb** **08 59 55.0 -0.2**
CESI AML AML
comp=N,5775µm,0.4s
CESI AML AML
comp=E,3740µm,0.7s
CSP1 Cessapalombo 0.48 353 ⇑P Pg 08 59 47.1 -0.2
CSP1 S **Sb** **08 59 54.9 -0.5**
CSP1 AML AML
comp=E,4505µm,1.5s
CSP1 AML AML
comp=N,8035µm,0.3s
CSP1 AML AML
comp=E,4510µm,1.5s
CSP1 AML AML
comp=N,8030µm,0.3s
TRTR Tortoreto Alta 0.50 67 P Pb 08 59 48.4 -0.1
TRTR S **Sb** **08 59 57.9 +2.1**
TRTR AML AML
comp=N,10145µm,0.4s
TRTR AML AML
comp=E,9390µm,0.3s
CESX Cesi 0.52 270 P Pg 08 59 48.3 +0.3
CESX S **Sb** **08 59 56.6 +0.3**
CESX AML AML
comp=N,3025µm,0.2s
CESX AML AML
comp=E,2550µm,0.4s
T0110 Collepietro 0.53 136 ⇓P Pg 08 59 48.0 -0.3
T0110 S **Sb** **08 59 56.3 -0.4**
T0110 AML AML
comp=E,5800µm,1.6s
T0110 AML AML
comp=N,5175µm,0.4s
SEF1 Sefro 0.59 335 P Pg 08 59 49.1 -0.2
SEF1 S **Sb** **08 59 58.8 +0.5**
PTQR Pietraquaria 0.60 172 ⇑P Pg 08 59 49.0 -0.4
PTQR AML AML
comp=N,708µm,1.3s
PTQR AML AML
comp=E,734µm,0.4s
ASSB Assisi San Ben 0.63 313 P Pg 08 59 49.7 -0.3
ASSB S **Sb** **09 00 00.6 +1.1**
ASSB AML AML
comp=E,2605µm,0.6s
ASSB AML AML
comp=N,2680µm,0.9s
GAG1 Gagliole 0.64 346 P Pg 08 59 50.2 -0.2
GAG1 S **Sb** **09 00 00.5 +0.6**
GAG1 AML AML
comp=E,6800µm,1.6s
GAG1 AML AML
comp=N,7205µm,0.3s
GAG1 AML AML
comp=E,6805µm,1.6s
GAG1 AML AML
comp=N,7205µm,0.3s
SRES S.Oreste - Sor 0.69 237 ⇑P Pg 08 59 51.5 +0.4
SRES S **Sn** **09 00 03.0 -0.9**
SRES AML AML
comp=N,934µm,0.3s
SRES AML AML
comp=E,900µm,0.8s
SNTG Esanatoglia 0.69 339 ⇑P Pg 08 59 50.8 -0.4
SNTG S **Sb** **09 00 01.8 +0.5**
SNTG AML AML
comp=N,1845µm,0.2s
SNTG AML AML
comp=E,1730µm,0.2s
CERT Cerreto 0.70 199 ⇓P Pg 08 59 51.2 -0.2
CERT AML AML
comp=E,1715µm,0.4s
CERT AML AML
comp=N,1575µm,0.4s
MTCE Montecelio 0.71 214 ⇑P Pg 08 59 51.6 -0.1
MTCE S **Sn** **09 00 06.0 +1.5**
MTCE AML AML
comp=E,1565µm,1.0s
MTCE AML AML
comp=N,928µm,0.7s
EL6 Elcito 0.73 349 ⇑P Pg 08 59 51.5 -0.5
EL6 AML AML
comp=E,4160µm,0.2s
EL6 AML AML
comp=N,4420µm,0.3s
ATCC AVT- Casa Cast 0.74 321 P Pg 08 59 51.7 -0.5
ATCC S **Sb** **09 00 04.2 +1.4**
ATCC AML AML
comp=E,2100µm,0.5s
ATCC AML AML
comp=N,2185µm,0.9s
INTR Introdacqua 0.76 142 ⇓P Pg 08 59 51.4 -1.0
INTR AML AML
comp=E,928µm,0.6s
INTR AML AML
comp=N,2615µm,0.7s
CING Cingoli 0.76 355 ⇓P Pg 08 59 52.2 -0.4
CING AML AML
comp=N,2230µm,1.2s
CING AML AML
comp=E,3960µm,0.3s
FOSV Fossato di Vic 0.78 331 ⇑P Pg 08 59 52.6 -0.4
FOSV AML AML
comp=N,1455µm,1.3s
FOSV AML AML
comp=E,1145µm,1.1s
VVLD Villa Vallelon 0.78 161 ⇓P Pn 08 59 54.1 -0.6
VVLD AML AML
comp=N,990µm,0.5s
VVLD AML AML
comp=E,798µm,0.6s
PP3 Marolino 0.80 17 ⇓P Pb 08 59 53.8 +0.2
PP3 AML AML
comp=E,4070µm,0.5s
PP3 AML AML
comp=N,3230µm,0.5s
PP3 AML AML
comp=N,3400µm,0.6s
PP3 AML AML
comp=E,3945µm,0.5s
GUAR Guarcino 0.82 179 ⇑P Pn 08 59 54.8 -0.3
GUAR AML AML
comp=E,1220µm,0.9s
GUAR AML AML
comp=N,1620µm,0.5s
MURB Monte Urbino 0.86 320 P Pg 08 59 54.4 0.0
LPEL Lama dei Pelig 0.87 130 P Pb 08 59 55.0 +0.1
LPEL AML AML
comp=N,820µm,0.6s
LPEL AML AML
comp=E,1012µm,0.6s
ATTE AVT- Monte Tez 0.90 311 ⇑P Pg 08 59 54.9 -0.2
ATTE AML AML
comp=E,895µm,0.6s
ATTE AML AML
comp=N,910µm,0.8s
SSFR Montelago di S 0.90 336 ⇓P Pg 08 59 55.1 -0.1
SSFR S **Sn** **09 00 09.0 -0.3**
SSFR AML AML
comp=N,2920µm,0.7s
SSFR AML AML
comp=N,2835µm,0.7s
SSFR AML AML
comp=E,3395µm,0.2s
SSFR AML AML
comp=E,3400µm,0.2s
MGAB Montegabbione 0.91 289 ⇓P Pg 08 59 55.7 +0.3
MGAB AML AML
comp=E,1720µm,0.7s
MGAB AML AML
comp=E,1755µm,0.5s
MGAB AML AML
comp=N,1880µm,0.6s
MGAB AML AML
comp=E,1725µm,0.7s
MGAB AML AML
comp=N,1975µm,0.7s
ATFO Monte Foce - G 0.92 325 ⇑P Pg 08 59 55.2 -0.3
ATFO AML AML
comp=E,1280µm,1.6s
ATFO AML AML
comp=N,1065µm,0.4s
ARVD Arcevia 0.92 344 ⇓P Pg 08 59 55.0 -0.6
ARVD S **Sn** **09 00 10.0 +0.3**
ARVD AML AML
comp=E,1015µm,0.3s
ARVD AML AML
comp=N,724µm,0.8s
AOI Ancona 0.96 14 P Pb 08 59 56.8 +0.3
AOI AML AML
comp=E,1415µm,0.6s
AOI AML AML
comp=N,1460µm,1.2s
FRON Frontone 0.99 336 ⇓P Pb 08 59 56.2 -0.7
FRON AML AML
comp=N,1490µm,0.5s
FRON AML AML
comp=E,1136µm,0.7s
ATVO AVT- Monte Val 1.00 320 P Pb 08 59 56.5 -0.6
ATVO AML AML
comp=E,770µm,0.5s
ATVO AML AML
comp=N,660µm,1.0s
ATMI Monte Miggiano 1.04 314 ⇓P Pn 08 59 58.2 +0.1
ATMI AML AML
comp=E,2185µm,0.4s
ATMI AML AML
comp=N,2090µm,0.4s
COR1 Corinaldo 1.04 349 ⇓P Pn 08 59 58.1 0.0
COR1 AML AML
comp=N,2165µm,0.3s
COR1 AML AML
comp=E,1340µm,1.0s
SACS San Casciano d 1.04 284 P Pb 08 59 57.9 +0.2
SACS AML AML
comp=N,910µm,0.6s
SACS AML AML
comp=E,630µm,0.5s
GIUL Giuliano Di Ro 1.05 181 ⇑P Pn 09 00 00.2 +1.8
GIUL AML AML
comp=E,420µm,0.7s
GIUL AML AML
comp=N,501µm,0.8s
ATPI Pietralunga - 1.06 323 P Pb 08 59 57.5 -0.5
ATPI AML AML
comp=N,782µm,0.4s
ATPI AML AML
comp=E,1095µm,0.5s
PIEI Pieia 1.07 329 ⇓P Pb 08 59 57.9 -0.4
PIEI AML AML
comp=N,609µm,0.6s
PIEI AML AML
comp=E,823µm,0.4s
MPAG Monte Paganucc 1.09 339 ⇓P Pb 08 59 58.2 -0.4
MPAG AML AML
comp=N,1042µm,0.9s
MPAG AML AML
comp=E,806µm,0.7s
TOLF Tolfa 1.10 240 ⇑P Pb 08 59 58.8 +0.1
TOLF AML AML
comp=N,744µm,0.9s
TOLF AML AML
comp=E,646µm,0.7s
NARO Abbazia di Nar 1.12 333 ⇓P Pb 08 59 58.4 -0.7
NARO AML AML
comp=E,705µm,1.6s
NARO AML AML
comp=N,592µm,0.8s
FSSB Fossombrone 1.14 341 ⇓P Pb 08 59 59.3 -0.1
FSSB S **Sn** **09 00 18.0 +2.9**
FSSB AML AML
comp=E,2365µm,0.3s
FSSB AML AML
comp=N,3070µm,0.3s
LATB Latina 1.14 192 ⇑P Pg 09 00 00.7 +0.9
LATB AML AML
comp=N,177µm,0.8s
LATB AML AML
comp=E,188µm,0.7s
BADI Badiali 1.18 320 ⇓P Pg 09 00 00.5 +0.1
CAFI Castiglion Fio 1.20 307 ⇓P Pn 09 00 00.6 +0.2
CAFI AML AML
comp=E,526µm,0.5s
CAFI AML AML
comp=N,455µm,0.7s
SF04 Casetta 1.22 281 P Pg 09 00 01.6 +0.4
PE3 Peglio 1.23 332 P Pg 09 00 01.5 +0.1
PE3 AML AML
comp=E,8µm,1.1s
PE3 AML AML
comp=N,6µm,0.4s
SSP9 Sansepolcro 1.28 319 ⇓P Pg 09 00 03.6 +1.2
ARCI Arcidosso 1.35 281 P Pg 09 00 04.2 +0.4
ARCI AML AML
comp=E,111µm,0.6s
ARCI AML AML
comp=N,148µm,1.0s
VAGA Valle Agricola 1.39 149 ⇓P Pg 09 00 06.0 +1.4
CRE Caprese Michel 1.40 316 ⇓P Pg 09 00 04.7 -0.1
CRE AML AML
comp=N,358µm,0.7s
CRE AML AML
comp=E,284µm,0.4s
RUFI Rufina 1.79 314 ⇑P Pb 09 00 09.6 -0.8
CASP Castiglione de 1.79 276 ⇑P Pn 09 00 09.4 +0.9
DUGI Dugi Otok 1.89 43 ePn Pn 09 00 10.2 +0.3
VIRC Vir 2.12 37 ePn Pn 09 00 13.5 +0.6
MORI Morici 2.17 54 ePn Pn 09 00 14.3 +0.7
NVLJ Novalja 2.26 30 ePn Pn 09 00 15.6 +0.6
BRJN Brijuni 2.32 8 ePn Pn 09 00 15.8 +0.1
POPM Popiglio 2.33 309 ⇓P Pn 09 00 16.7 +0.7
POPM AML AML
comp=E,192µm,0.1s
POPM AML AML
comp=N,126µm,0.8s
RABC Rab 2.40 26 ePn Pn 09 00 17.5 +0.7
SMRN Sveta Marina 2.50 14 ePn Pn 09 00 18.5 +0.3
UDBI Udbina 2.63 42 ePn Pn 09 00 21.6 +1.6
LSTV Lastovo 2.66 85 ePn Pn 09 00 20.9 +0.5
KIJV Kijevo 2.67 58 ePn Pn 09 00 22.3 +1.7
A250A Rusevo Krmpots 2.73 25 ePn Pn 09 00 22.6 +1.1
EQUI Equi 2.76 305 ⇓P Pn 09 00 21.3 -0.5
EQUI AML AML
comp=E,47µm,1.6s
EQUI AML AML
comp=N,52µm,0.7s
MAKA Makarska 2.82 75 ePn Pn 09 00 23.7 +1.0
RIY Rijeka 2.84 17 ePn Pn 09 00 23.9 +0.9
NDIM Novi di Modena 2.86 324 S Sg 09 01 09.0 -0.5
RICI Ricice 2.96 71 ePn Pn 09 00 26.1 +1.6
TRI Trieste 3.11 6 P Pn 09 00 26.0 -0.6
TRI AML AML
comp=N,56µm,1.5s
TRI AML AML
comp=E,77µm,0.7s
PGF Pioggiola 3.17 270 eP Pn 09 00 28.8 +1.3
PGF *e*Sn **Sn** **09 01 02.1 -3.1**
comp=E,3.0nm,0.4s
STON Ston 3.26 84 ePn Pn 09 00 28.5 -0.2
CRAC Craco 3.26 132 S Sb 09 01 15.0 -0.3
OZLJ Ozalj 3.39 27 ePn Pn 09 00 31.6 +1.3
ROVR Rover Verones 3.42 333 ⇓P Pn 09 00 33.4 +2.3
ROVR S **Sn** **09 01 15.0 +3.4**
CGRP Cima Grappa 3.44 342 ⇓P Pn 09 00 33.0 +1.7
LJU Ljubljana 3.54 14 ⇓P Pn 09 00 34.9 +2.3
DOSS Dosso del Somm 3.60 336 ⇓P Pn 09 00 35.6 +2.1
VINO Villanova 3.64 360 S Sn 09 01 18.0 +1.2
STAL STALIGIAL 3.67 354 ⇑P Pn 09 00 37.2 +2.9
CET2 Cetraro 3.68 146 S Sb 09 01 27.0 -0.4
MAGA Magasa 3.69 330 P Pb 09 00 40.4 -2.6
MAGA S **Sn** **09 01 23.0 +4.8**
LUSI Trento, Gardas 3.74 334 ⇓P Pn 09 00 37.3 +2.0
LUSI AML AML
comp=N,97µm,1.4s
LUSI AML AML
comp=E,59µm,0.9s
CIMO Cimolais 3.75 351 ⇓P Pn 09 00 36.6 +1.2
CIMO AML AML
comp=E,24µm,1.6s
CIMO AML AML
comp=N,25µm,1.5s
PTJ Puntijarka 3.81 29 ePn Pn 09 00 37.9 +1.6
GAGG Gaggia 3.85 335 ⇓P Pn 09 00 39.7 +2.8
MOSL Moslavina 3.90 39 ePn Pn 09 00 37.5 0.0
EUCT Pavia 3.96 312 S Sn 09 01 25.0 +0.4
OBKA Obir 4.00 13 *i* Pn Pn 09 00 40.9 +2.0
comp=N,0.9nm,0.1s
MYKA Terra Mystica 4.02 4 ePn Pn 09 00 43.1 +3.8
comp=N,1.7nm,0.2s
KOSI Kohlern 4.08 341 ⇓P Pn 09 00 42.2 +2.0
ABTA Abfaltersbach 4.17 353 ePn Pn 09 00 43.2 +2.0
comp=N,2.1nm,0.2s
VSL Villasalto 4.29 225 ⇓P Pn 09 00 45.9 +3.0
SBF Sospel 4.45 288 eP Pn 09 00 47.1 +2.0
SBF *e*Sn **Sn** **09 01 32.5 -4.4**
comp=N,4.2nm,0.2s
KBA Koelnbreinsper 4.46 1 *i* Pn Pn 09 00 48.7 +3.3
comp=N,4.5nm,0.3s
ROSI Rosskopf 4.51 343 ⇑P Pn 09 00 48.8 +2.7
FETA Feichten 4.77 338 ePn Pn 09 00 53.3 +3.7
comp=N,3.0nm,0.4s
WTTA Wattenberg 4.79 346 ePn Pn 09 00 53.7 +3.8
comp=N,3.9nm,0.3s
CRJA Costa Raja 4.81 183 P Pn 09 00 54.6 +4.5
WATA Walderalm 4.88 346 ePn Pn 09 00 55.8 +4.8
comp=N,4.9nm,0.3s
ARSA Arzberg 4.90 18 ePn Pb 09 01 00.9 -2.6
comp=N,0.7nm,0.2s
LMR La Mourre 5.02 281 eP Pn 09 00 54.4 +1.5
LMR *e*Sn **Sn** **09 01 46.3 -4.5**
comp=N,0.9nm,0.3s
MBDF Montbardon 5.17 296 eP Pn 09 00 57.3 +2.2
MBDF *e*Sn **Sn** **09 01 50.0 -4.8**
comp=N,3.1nm,0.5s
MOA Molln 5.28 7 *i* Pn Pn 09 01 00.2 +3.7
comp=N,2.2nm,0.3s
RONA Rosalia, Austr 5.51 22 ePn Pn 09 01 03.4 +3.8
comp=N,1.0nm,0.2s
CONA Conrad Observa 5.62 18 ePn Pn 09 01 04.4 +3.3
comp=N,1.6nm,0.2s
SMRF Simiane la Rot 5.79 286 eP Pn 09 01 06.2 +2.7
SMRF *e*Sn **Sn** **09 02 04.6 -5.2**
comp=N,0.9nm,0.3s
ORIF Oris-en-Rattie 5.84 296 eP Pn 09 01 06.6 +2.5
CKRC Cesky Krumlov 6.25 6 eSN Sn 09 02 20.1 -0.9
CABF La Chapelle 6.51 310 eP Pn 09 01 16.0 +2.6
CABF *e*Sn **Sn** **09 02 21.1 -6.4**
comp=N,3.7nm,0.5s
KHC Kasperske Hory 6.52 2 eSN Sn 09 02 26.9 -0.9
HINF Hinteralfeld 6.91 321 eP Pn 09 01 21.9 +3.1
HINF *e*Sn **Sn** **09 02 31.2 -6.0**
comp=N,7.2nm,0.5s
LASF Ste Croix 7.03 285 eP Pn 09 01 23.5 +3.1
CDF Champ du Feu 7.17 326 eP Pn 09 01 23.7 +1.3
CDF *e*Sn **Sn** **09 02 37.6 -6.2**
comp=N,9.0nm,0.7s
HAU Haudompre 7.28 320 eP Pn 09 01 26.8 +3.0

ROM 25 09:00:37.2±0.1, 42°661N±0'006×13°263E±0'006, h14$^{km}_{\pm 1}$km, ML2.3/5, 5C-1D, Error ellipse: s-maj=0.6km s-min=0.4km az=34.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
RM33	**Pellescritta (**	**0.16**	**193**	P	Pb	09 00 41.7	-0.3
RM33				S	Sb	09 00 44.8	-0.3
RM33				AML	AML		
	comp=N,1370µm,0.3s						
RM33				AML	AML		
	comp=E,1745µm,0.3s						
CAMP	**Campotosto**	**0.17**	**139**	P	Pg	09 00 41.7	+0.3
CAMP				S	Sg	09 00 44.7	+0.5
CAMP				AML	AML		
	comp=N,754µm,0.4s						
CAMP				AML	AML		
	comp=E,1405µm,0.3s						
LNSS	**Leonessa**	**0.17**	**251**	P	Pb	09 00 41.9	-0.4
LNSS				S	Sb	09 00 45.2	-0.5
LNSS				AML	AML		
	comp=E,6975µm,0.2s						
LNSS				AML	AML		
	comp=E,6980µm,0.2s						
LNSS				AML	AML		
	comp=N,4455µm,0.3s						
NRCA	**Norcia**	**0.20**	**328**	P	Pg	09 00 41.9	-0.1
NRCA				S	Sg	09 00 45.1	-0.1
NRCA				AML	AML		
	comp=E,17650µm,0.1s						
NRCA				AML	AML		
	comp=N,10900µm,0.7s						
NRCA				AML	AML		
	comp=E,17600µm,0.1s						
TERO	**Teramo**	**0.25**	**99**	P	Pg	09 00 42.8	+0.1
TERO				S	Sg	09 00 47.0	+0.5
TERO				AML	AML		
	comp=E,2065µm,0.8s						
TERO				AML	AML		
	comp=N,1780µm,0.4s						
TERO				AML	AML		
	comp=E,2110µm,0.1s						
TERO				AML	AML		
	comp=N,2445µm,0.1s						
GIGS	**Gran Sasso**	**0.31**	**133**	P	Pg	09 00 43.9	+0.2
GIGS				S	Sg	09 00 48.7	+0.6

GIGS					AML	AML		
	comp=N,220μm,0.4s							
GIGS					AML	AML		
	comp=E,340μm,0.2s							
ARRO	**Arrone**	**0.38**	**258**	⇑P	Pg		09 00 45.2	+0.3
ARRO				S	Sb		09 00 50.9	-0.5
ARRO				AML	AML			
	comp=N,884μm,1.6s							
ARRO				AML	AML			
	comp=E,790μm,0.2s							
FDMO	**Fiordimonte**	**0.40**	**341**	⇑P	Pg		09 00 45.5	+0.2
GUMA	**Gualdo di Mace**	**0.41**	**7**	⇑P	Pb		09 00 45.9	-0.3
OFFI	**Offida**	**0.41**	**49**	⇑P	Pb		09 00 46.5	+0.2
CESI	**CESI - Serrava**	**0.43**	**323**	⇑P	Pg		09 00 45.9	0.0
CESI				S	Sb		09 00 52.6	-0.5
CSP1	**Cessapalombo**	**0.43**	**354**	⇓P	Pg		09 00 46.0	0.0
SNTG	**Esanatoglia**	**0.64**	**338**	P	Pb		09 00 50.0	-0.2
LAV9	**Lanuvio**	**1.07**	**203**	P	Pg		09 00 59.9	+2.0
PTRJ	**Pietraroja**	**1.60**	**144**	S	Sn		09 01 25.0	-0.7

*IDC **25** 09:15:41.1±3.2,53.73N×90.81E,h0km,mbtmp3.4/3, ML2.9/3,Error ellipse: s-maj=28.5km s-min=23.2km az=44.0*

NNC 25 09:15:43.6±2.2,53.67N×90.51E,h0km,mb3.6,mpv3.3, 11C-3D,Error ellipse: s-maj=16.5km s-min=12.6km az=57.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.39**	**277**	*i*		09 37 51.9	
	0.1nm,1.1s,baz=92,slow=320,SNR=6.1						
ZAA0	**Zalesovo Array**	**3.39**	**277**	⇑Pg	Pb	09 16 44.1	-0.3
	2.3nm,0.8s						
ZAA0				⇑Lg	Lg	09 17 31.1	
	18nm,1.1s						
ZALV	**Zalesovo Beam**	**3.39**	**277**	Pn	Pn	09 16 39.1	+1.5
	2.0nm,0.3s,baz=90,slow=15,SNR=17						
ZALV				Lg	Lg	09 17 33.4	
	1.8nm,0.3s,baz=91,slow=26,SNR=12						
	3.2nm,0.3s						
KURK	**Kurchatov**	**7.88**	**253**	⇑Pn	Pn	09 17 40.8	+1.4
	5.7nm,1.0s						
KURK				⇑Sn	Sn	09 19 11.6	+2.4
	11nm,0.9s						
KURK				⇑Lg	Lg	09 19 56.1	
	40nm,1.0s						
KURBB	**Kurchatov Arra**	**7.97**	**252**	Pn	Pn	09 17 40.5	-0.1
	0.2nm,0.3s,baz=64,slow=14,SNR=20						
KURBB				Sn	Sn	09 19 11.7	+0.2
	baz=67,slow=25,SNR=7.1						
KURBB				Lg	Lg	09 19 59.7	
	baz=64,slow=33,SNR=4.9						
	3.5nm,0.7s						
KURBB	**Kurchatov Arra**	**7.97**	**252**	⇓Pn	Pn	09 17 40.8	+0.2
	4.2nm,0.7s						
KURBB				⇑Sn	Sn	09 19 12.6	+1.2
	44nm,0.8s						
KURBB				⇑Lg	Lg	09 19 58.4	
	28nm,0.7s						
MK31	**Makanchi Array**	**8.66**	**221**	⇑Pn	Pn	09 17 50.5	+0.4
	0.2nm,0.3s,baz=264,slow=12,SNR=3.9						
MK31				⇓Sn	Sn	09 19 30.7	+2.2
	3.2nm,0.8s,baz=39,slow=23,SNR=3.0						
MK31				⇑Lg	Lg	09 20 18.3	
	20nm,1.0s,baz=34,slow=31,SNR=5.6						
MKAR	**Makanchi Array**	**8.66**	**221**	Pn	Pn	09 17 50.2	+0.1
	0.2nm,0.3s,baz=40,slow=12,SNR=11						
MKAR				Sn	Sn	09 19 30.0	+1.6
	0.2nm,0.3s,baz=37,slow=20,SNR=2.5						
MKAR				Lg	Lg	09 20 15.1	
	baz=34,slow=23,SNR=1.6						
	0.9nm,0.6s						
MAKZ	**Makanchi**	**8.77**	**222**	⇑Pn	Pn	09 17 51.8	+0.2
	0.8nm,0.7s						
MAKZ				⇑Sn	Sn	09 19 30.6	-0.6
	3.9nm,0.8s						
MAKZ				⇓Lg	Lg	09 20 20.6	
	12nm,0.9s						
SONM	**Songino Array**	**11.62**	**114**	Lg	Lg	09 21 36.2	
	baz=292,slow=25,SNR=12						

*KNET **25** 09:27:28.1±0.2,42.96N×74.79E,h21km±1km,ml1.6,Error ellipse: s-maj=2.0km s-min=1.0km az=63.0*
*NNC **25** 09:27:30.6±0.7,42.97N×74.89E,h0km,mb2.8,mpv2.8, Error ellipse: s-maj=9.4km s-min=3.2km az=1.0*

ISC 25 09:27:29.1±0.9,42.94N±0.03×74.79E±0.02,h18km±4km, n22,σ0s79/36,14C-6D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHMS	**Chumysh**	**0.06**	**335**	⇑P	**Pg**	**09 27 32.4**	**-0.2**
	68nm,0.1s,SNR=372						
CHMS				⇓S	**Sg**	**09 27 35.0**	**+0.1**
	290nm,0.1s						
CHMS	**Chumysh**	**0.06**	**335**	⇑P	**Pg**	**09 27 32.2**	**-0.4**
	40nm,0.4s						
CHMS				⇑S	**Sg**	**09 27 34.9**	**+0.1**
	211nm,0.5s						
KBK	**Karagaybulak**	**0.31**	**157**	⇓P	**Pg**	**09 27 36.0**	**+0.1**
	14nm,0.1s,SNR=18						
KBK				⇑S	**Sg**	**09 27 41.3**	**+0.8**
	222nm,0.1s						
AAK	**Ala-Archa**	**0.37**	**215**	⇓P	**Pg**	**09 27 36.8**	**-0.2**
	8.9nm,0.1s,SNR=9.1						
AAK				⇑S	**Sg**	**09 27 42.4**	**+0.1**
	82nm,0.3s						
USP	**Ospenovka**	**0.39**	**327**	P	**Pg**	**09 27 36.8**	**-0.5**
	28nm,0.1s,SNR=71						
USP				⇑S	**Sg**	**09 27 42.3**	**-0.4**
	43nm,0.1s						
TKM2	**Tokmak 2**	**0.59**	**92**	⇑P	**Pg**	**09 27 40.1**	**-0.9**
	12nm,0.1s,SNR=8.9						
TKM2				⇑S	**Sb**	**09 27 48.7**	**-0.6**
	69nm,0.1s						
TKM2	**Tokmak 2**	**0.59**	**92**	⇑P	**Pg**	**09 27 40.0**	**-1.0**
	0.8nm,0.2s						
TKM2				⇑S	**Sg**	**09 27 48.3**	**-0.8**
	9.6nm,0.3s						
UCH	**Uchtor**	**0.74**	**196**	⇓P	**Pg**	**09 27 43.3**	**-0.5**
	3.6nm,0.1s,SNR=8.9						
EKS2	**Erkin-Say**	**0.79**	**250**	⇑P	**Pg**	**09 27 44.0**	**-0.7**
	2.6nm,0.1s,SNR=21						
EKS2				⇓S	**Sg**	**09 27 55.3**	**+0.1**
	6.0nm,0.1s						
AML	**Almayashu**	**1.14**	**225**	⇑P	**Pb**	**09 27 49.9**	**-0.8**
	3.0nm,0.2s,SNR=5.3						
AML				⇑S	**Sg**	**09 28 05.7**	**-0.7**
	11nm,0.3s						
MTBS	**Maitube**	**1.22**	**81**	P	**Pg**	**09 27 52.3**	**-0.4**
	2.0nm,0.1s						
MTBS				S	**Sn**	**09 28 07.7**	**+0.2**
	10nm,0.4s						
KUU	**Kurty**	**1.48**	**49**	P	**Pb**	**09 27 56.3**	**+0.2**
	1.4nm,0.2s						
KUU				S	**Sg**	**09 28 15.0**	**-1.9**
	11nm,0.2s						
KTBS	**Karatobe**	**1.58**	**60**	P	**Pg**	**09 27 59.9**	**+0.3**
	1.2nm,0.1s						
KTBS				S	**Sg**	**09 28 19.9**	**-0.4**
	15nm,0.2s						
TNSS	**Tian-Shan**	**1.59**	**86**	P	**Pg**	**09 27 59.5**	**-0.2**
	3.0nm,0.2s						
TNSS				S	**Sg**	**09 28 20.0**	**-0.5**
	11nm,0.2s						
MDOK	**Medeo**	**1.67**	**82**	Pg	**Pg**	**09 28 00.3**	**-1.1**
	1.8nm,0.2s						
MDOK				Lg	Lg	09 28 21.3	
	9.1nm,0.4s						
CHKK	**Chushkaly**	**1.84**	**60**	P	**Pb**	**09 28 02.7**	**+0.3**
	1.2nm,0.1s						
CHKK				S	**Sb**	**09 28 25.9**	**+0.8**
	17nm,0.3s						
ARXS	**Arharly**	**2.55**	**59**	Pg	**Pb**	**09 28 15.5**	**+1.1**
	1.9nm,0.5s						
ARXS				Lg	Lg	09 28 47.8	
	7.0nm,0.4s						
SATY	**Saty**	**2.66**	**86**	Pg	**Pb**	**09 28 16.6**	**+0.3**
	1.3nm,0.1s						
SATY				Lg	Lg	09 28 49.4	
	3.6nm,0.1s						
KPKS	**Kokpek**	**2.90**	**78**	Pg	**Pb**	**09 28 21.6**	**+1.2**
	1.9nm,0.2s						
KPKS				Lg	Lg	09 28 58.3	
	4.5nm,0.3s						
BLB	**Baldybastay**	**2.92**	**65**	Pg	**Pb**	**09 28 21.5**	**+0.7**
	3.0nm,0.4s						
BLB				Lg	Lg	09 28 58.2	
	2.8nm,0.3s						
UZB	**Uzynbulak**	**3.11**	**85**	Pg	**Pb**	**09 28 25.8**	**+1.8**
	0.5nm,0.0s						
UZB				Lg	Lg	09 29 05.1	
	3.0nm,0.3s						
KK31	**Karatay Array**	**3.14**	**274**	⇓Pg	**Pb**	**09 28 25.5**	**+1.1**
	0.3nm,0.5s,baz=84,slow=14,SNR=3.8						
KK31				⇑Lg	Lg	09 29 05.1	
	1.3nm,0.4s,baz=90,slow=29,SNR=5.7						

MRB 25 09:38:33.9±0.3,41.84N×2.65E,h8km±6km,ML0.3/4,1C, Error ellipse: s-maj=2.0km s-min=1.3km az=322.0, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFON	**Fontmartina**	**0.18**	**246**	P	Pg	09 38 37.7	+0.1
CFON				S	Sg	09 38 40.5	+0.3
	13nm,0.2s						
CCAS	**Cassa de la Se**	**0.20**	**75**	⇑P	Pg	09 38 37.8	-0.1
CCAS				S	Sg	09 38 40.7	+0.2
CBEU	**Beuda**	**0.42**	**2**	P	Pg	09 38 42.0	-0.1
CBEU				S	Sg	09 38 48.0	+0.3
	1.4nm,0.3s						
CORI	**Orista**	**0.47**	**287**	P	Pg	09 38 42.8	-0.2
CORI				S	Sg	09 38 49.4	+0.2
	2.8nm,0.2s						
CPAL	**Palau Saverder**	**0.61**	**38**	P	Pg	09 38 45.3	-0.4
CPAL				S	Sg	09 38 53.7	0.0
	1.4nm,0.0s						

*THE **25** 09:40:44.5,38.51N×20.54E,h14km±1km,ML2.8/11,Error ellipse: s-maj=1.3km s-min=0.3km az=286.0*
*ATH **25** 09:40:44.4,38.52N×20.54E,h14km±1km,ML2.5/11,Error ellipse: s-maj=2.1km s-min=0.7km az=286.0*

ISC 25 09:40:44.0±0.8,38.52N±0.02×20.54E±0.03,h16km±5km, n38,σ0s35/58,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.06**	**162**	P	**Pg**	**09 40 47.3**	**+0.3**
FSK				S	**Sg**	**09 40 48.6**	**-0.4**
	19μm,0.1s						
FSK	**Fiskardo**	**0.06**	**162**	P	**Pg**	**09 40 47.3**	**+0.3**
FSK				S	**Sg**	**09 40 48.6**	**-0.4**
FSK				AML	AML	09 40 48.8	
	comp=N,41115μm,0.2s						
FSK				AML	AML	09 40 48.9	
	comp=E,34526μm,0.1s						
EVGI	**Lefkada island**	**0.14**	**41**	P	**Pg**	**09 40 48.0**	**+0.1**
EVGI				S	**Sg**	**09 40 50.6**	**+0.1**
	comp=E,7μm,0.1s						
EVGI	**Lefkada island**	**0.14**	**41**	P	**Pg**	**09 40 47.8**	**-0.1**
EVGI				S	**Sg**	**09 40 50.7**	**+0.1**
DRAG	**Dragano-Lefkad**	**0.17**	**10**	P	**Pg**	**09 40 48.4**	**+0.1**
DRAG				S	**Sg**	**09 40 51.6**	**+0.4**
	comp=E,34μm,0.2s						
NYDR	**Nydri-Lefkada**	**0.23**	**32**	P	**Pg**	**09 40 49.4**	**+0.1**
NYDR				S	**Sb**	**09 40 53.5**	**-0.3**
	comp=E,3μm,0.3s						
KEF4	**Livadi, Kephal**	**0.27**	**199**	P	**Pg**	**09 40 50.1**	**+0.2**
KEF4				S	**Sb**	**09 40 54.8**	**-0.1**
	comp=E,19μm,0.3s						
KEF4	**Livadi, Kephal**	**0.27**	**199**	P	**Pg**	**09 40 50.1**	**+0.2**
KEF4				S	**Sg**	**09 40 54.2**	**+0.3**
LKD2	**Lefkada island**	**0.29**	**19**	P	**Pg**	**09 40 50.4**	**+0.2**
LKD2				S	**Sg**	**09 40 54.5**	**0.0**
	comp=E,1μm,0.3s						
LKD2	**Lefkada island**	**0.29**	**19**	P	**Pg**	**09 40 50.4**	**+0.2**
LKD2				S	**Sg**	**09 40 54.4**	**0.0**
LKD2				AML	AML	09 40 56.0	
	comp=N,2656μm,0.4s						
LKD2				AML	AML	09 40 59.0	
	comp=E,2139μm,0.2s						
DMLN	**Damoulianata-K**	**0.31**	**205**	P	**Pg**	**09 40 50.7**	**+0.2**
DMLN				S	**Sb**	**09 40 55.9**	**0.0**
	comp=E,3μm,0.4s						
TSLK	**Tsoukalades, L**	**0.32**	**17**	P	**Pg**	**09 40 51.2**	**+0.4**
TSLK				S	**Sb**	**09 40 56.7**	**+0.3**
	comp=E,1μm,0.4s						
TSLK	**Tsoukalades, L**	**0.32**	**17**	P	**Pg**	**09 40 51.1**	**+0.4**
TSLK				S	**Sg**	**09 40 55.4**	**0.0**
TSLK				AML	AML	09 41 00.7	
	comp=N,2877μm,0.4s						
TSLK				AML	AML	09 41 01.6	
	comp=E,2202μm,0.4s						
VLS	**Valsamata**	**0.34**	**173**	P	**Pg**	**09 40 51.2**	**+0.1**
VLS				S	**Sb**	**09 40 56.7**	**-0.2**
	comp=E,4μm,0.2s						
VLS	**Valsamata**	**0.34**	**173**	P	**Pg**	**09 40 51.2**	**+0.1**
VLS				S	**Sg**	**09 40 56.5**	**+0.6**
VLS				AML	AML	09 40 56.9	
	comp=E,8831μm,0.2s						
VLS				AML	AML	09 40 57.1	
	comp=N,8502μm,0.2s						
ARGA	**Argostoli. Kep**	**0.34**	**188**	P	**Pb**	**09 40 52.0**	**+0.4**
ARGA				S	**Sg**	**09 40 56.2**	**+0.3**
KEF3	**Kipouria, Keph**	**0.35**	**206**	P	**Pg**	**09 40 50.9**	**-0.3**
KEF3				S	**Sg**	**09 40 56.2**	**+0.1**
	comp=N,5μm,0.1s						
KEF3	**Kipouria, Keph**	**0.35**	**206**	P	**Pg**	**09 40 50.8**	**-0.3**
KEF3				S	**Sg**	**09 40 56.2**	**+0.1**
PSDA	**Pessada-Kefalo**	**0.40**	**175**	P	**Pg**	**09 40 52.3**	**+0.1**
PSDA				S	**Sb**	**09 40 58.6**	**0.0**
	comp=N,432nm,0.2s						
PSDA	**Pessada-Kefalo**	**0.40**	**175**	P	**Pg**	**09 40 52.2**	**+0.1**
PSDA				S	**Sb**	**09 40 58.6**	**0.0**
PVO	**Paravola**	**0.78**	**82**	P	**Pb**	**09 40 59.8**	**+0.6**
RLS	**Riolos of Patr**	**0.86**	**122**	P	**Pg**	**09 41 01.1**	**+0.3**
EVR	**Evrytania**	**1.07**	**68**	P	**Pb**	**09 41 04.1**	**-0.1**
EFP	**Efpalio**	**1.08**	**94**	P	**Pb**	**09 41 03.7**	**-0.5**
EFP				AML	AML	09 41 27.9	
	comp=N,218μm,0.3s						
EFP				AML	AML	09 41 28.5	
	comp=E,247μm,0.6s						
DRO	**Drossia**	**1.08**	**121**	P	**Pb**	**09 41 04.1**	**-0.2**
DRO	**Drossia**	**1.08**	**121**	P	**Pb**	**09 41 04.0**	**-0.4**
DRO				AML	AML	09 41 26.3	
	comp=N,243μm,0.1s						
DRO				AML	AML	09 41 34.6	
	comp=E,544μm,0.4s						
ANX	**Ano Chora**	**1.09**	**85**	P	**Pb**	**09 41 04.6**	**+0.1**
ANX				AML	AML	09 41 31.6	
	comp=E,276μm,0.5s						
ANX				AML	AML	09 41 31.8	
	comp=N,325μm,0.4s						
LAKA	**Lakka**	**1.17**	**103**	P	**Pn**	**09 41 05.3**	**-0.3**
SERG	**Sergoula**	**1.20**	**94**	P	**Pn**	**09 41 06.2**	**+0.1**
SERG				AML	AML	09 41 31.0	
	comp=N,275μm,0.4s						
SERG				AML	AML	09 41 32.7	
	comp=E,238μm,0.3s						
KEK	**Kerkira**	**1.33**	**335**	P	**Pb**	**09 41 08.9**	**+0.4**
KEK				AML	AML	09 41 34.5	
	comp=E,126μm,0.3s						
KEK				AML	AML	09 41 35.2	
	comp=N,133μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.34**	**68**	P	**Pb**	**09 41 09.1**	**+0.3**
MAKR				AML	AML	09 41 37.9	
	comp=E,511μm,0.4s						
MAKR				AML	AML	09 41 40.6	
	comp=N,489μm,0.7s						
KLV	**Kalavryta, Ach**	**1.35**	**110**	P	**Pn**	**09 41 08.3**	**0.0**
THL	**Klokotos Trika**	**1.56**	**47**	P	**Pb**	**09 41 11.9**	**-0.5**
THL				AML	AML	09 41 42.6	
	comp=E,171μm,0.6s						
THL				AML	AML	09 41 44.6	
	comp=N,123μm,0.6s						
STON	**Ston**	**4.86**	**335**	*e*Pn	**Pn**	**09 41 55.3**	**-1.1**
LSTV	**Lastovo**	**5.07**	**328**	*e*Pn	**Pn**	**09 41 59.0**	**-0.3**
KIJV	**Kijevo**	**6.30**	**332**	*e*Pn	**Pn**	**09 42 17.2**	**+0.9**
MORI	**Morici**	**6.47**	**327**	*e*Pn	**Pn**	**09 42 17.7**	**-0.8**
DUGI	**Dugi Otok**	**6.85**	**325**	*e*Pn	**Pn**	**09 42 23.4**	**-0.4**

ROM 25 09:42:26.1±0.1,42.864N±0.004×13.153E±0.009, h10km,ML1.6/7,3C-2D,Error ellipse: s-maj=0.7km s-min=0.4km az=253.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**223**	⇓P	Pg	09 42 28.6	+0.4
NRCA				S	Sg	09 42 30.1	+0.3
NRCA				AML	AML		
	comp=E,9550μm,0.2s						
NRCA				AML	AML		
	comp=N,5700μm,0.7s						
NRCA				AML	AML		
	comp=E,10460μm,0.1s						
NRCA				AML	AML		
	comp=E,9600μm,0.1s						
NRCA				AML	AML		
	comp=N,5700μm,0.7s						
NRCA				AML	AML		
	comp=E,9585μm,0.2s						
NRCA				AML	AML		
	comp=N,5820μm,0.7s						
FEMA	**Monte Fema**	**0.12**	**322**	⇑P	Pg	09 42 29.9	+0.6
FEMA				S	Sg	09 42 32.2	+0.7
FEMA				AML	AML		
	comp=E,937μm,0.0s						
FEMA				AML	AML		
	comp=N,1771μm,0.1s						
FDMO	**Fiordimonte**	**0.18**	**344**	P	Pg	09 42 30.6	+0.5
FDMO				S	Sg	09 42 33.7	+0.9
FDMO				AML	AML		
	comp=E,239μm,0.2s						
FDMO				AML	AML		
	comp=N,293μm,0.7s						
FDMO				AML	AML		
	comp=E,240μm,0.2s						
CESI	**CESI - Serrava**	**0.23**	**308**	⇑P	Pg	09 42 31.6	+0.6
CESI				S	Sg	09 42 35.6	+1.3
CESI				AML	AML		
	comp=E,688μm,0.2s						
CESI				AML	AML		
	comp=N,1120μm,0.2s						
CESI				AML	AML		
	comp=E,688μm,0.2s						
CSP1	**Cessapalombo**	**0.23**	**9**	⇑P	Pg	09 42 31.5	+0.5
CSP1				S	Sg	09 42 35.4	+1.1
CSP1				AML	AML		
	comp=E,297μm,0.2s						
CSP1				AML	AML		
	comp=N,376μm,0.4s						
LNSS	**Leonessa**	**0.27**	**198**	⇓P	Pg	09 42 32.3	+0.6
LNSS				S	Sb	09 42 37.0	-0.9
LNSS				AML	AML		
	comp=N,500μm,0.4s						
LNSS				AML	AML		
	comp=N,500μm,0.4s						
LNSS				AML	AML		
	comp=E,456μm,0.2s						
ASSB	**Assisi San Ben**	**0.40**	**296**	P	Pg	09 42 33.6	-0.5
ASSB				S	Sb	09 42 40.8	-0.9
ASSB				AML	AML		
	comp=N,101μm,0.3s						
ASSB				AML	AML		
	comp=E,158μm,0.7s						
ASSB				AML	AML		
	comp=E,158μm,1.3s						
TERO	**Teramo**	**0.41**	**126**	P	Pg	09 42 34.7	+0.5
TERO				S	Sb	09 42 40.8	-1.0
TERO				AML	AML		
	comp=E,105μm,1.0s						
TERO				AML	AML		
	comp=N,105μm,1.2s						
TERO				AML	AML		
	comp=N,105μm,1.2s						
TERO				AML	AML		
	comp=E,105μm,1.0s						
TERO				AML	AML		
	comp=E,105μm,1.0s						
TERO				AML	AML		
	comp=N,65μm,0.1s						
TERO				AML	AML		
	comp=E,57μm,0.1s						
SNTG	**Esanatoglia**	**0.42**	**338**	P	Pg	09 42 35.0	+0.6
SNTG				S	Sb	09 42 41.4	-0.7
SNTG				AML	AML		
	comp=N,48μm,1.2s						
SNTG				AML	AML		
	comp=E,48μm,0.8s						
SNTG				AML	AML		
	comp=E,48μm,1.2s						
EL6	**Elcito**	**0.47**	**355**	P	Pg	09 42 35.6	+0.3
EL6				S	Sb	09 42 43.2	-0.3
CING	**Cingoli**	**0.51**	**3**	AML	AML		
	comp=N,64μm,0.4s						
CING				AML	AML		
	comp=N,64μm,1.6s						
CING				AML	AML		
	comp=E,63μm,0.5s						

ROM 25 09:44:10.2±0.1,42.601N±0.004×13.300E±0.005, h10km,ML1.9/8,Error ellipse: s-maj=0.5km s-min=0.3km az=191.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.10**	**129**	P	Pg	09 44 13.4	+0.5
CAMP				S	Sg	09 44 15.5	+0.6
CAMP				AML	AML		
	comp=N,789μm,0.2s						
CAMP				AML	AML		
	comp=E,848μm,0.8s						
RM33	**Pellescritta (**	**0.11**	**215**	P	Pg	09 44 13.5	+0.5
RM33				S	Sg	09 44 15.7	+0.7
RM33				AML	AML		
	comp=N,1540μm,0.4s						
RM33				AML	AML		
	comp=E,1665μm,0.2s						
RM33				AML	AML		
	comp=E,1660μm,0.2s						
RM33				AML	AML		
	comp=N,1520μm,0.4s						
RM33				AML	AML		
	comp=N,1540μm,0.4s						
RM33				AML	AML		
	comp=E,1695μm,0.2s						
LNSS	**Leonessa**	**0.19**	**271**	P	Pg	09 44 14.8	+0.5
LNSS				S	Sg	09 44 18.3	+1.2
LNSS				AML	AML		
	comp=E,802μm,0.5s						
LNSS				AML	AML		
	comp=N,714μm,0.1s						
LNSS				AML	AML		
	comp=E,803μm,0.5s						
LNSS				AML	AML		
	comp=N,714μm,1.9s						
TERO	**Teramo**	**0.23**	**84**	P	Pg	09 44 15.3	+0.5
TERO				S	Sg	09 44 19.2	+1.1
TERO				AML	AML		
	comp=E,1023μm,0.1s						
TERO				AML	AML		
	comp=N,1090μm,0.7s						
TERO				AML	AML		
	comp=E,1024μm,0.1s						
TERO				AML	AML		
	comp=E,841μm,0.1s						
TERO				AML	AML		
	comp=N,731μm,0.1s						
GIGS	**Gran Sasso**	**0.25**	**127**	P	Pg	09 44 15.8	+0.5
GIGS				S	Sg	09 44 19.9	+1.1
GIGS				AML	AML		
	comp=E,87μm,0.7s						
GIGS				AML	AML		
	comp=E,87μm,0.7s						
GIGS				AML	AML		
	comp=N,88μm,1.5s						
GIGS				AML	AML		
	comp=N,88μm,0.5s						
FIAM	**Fiamignano**	**0.36**	**202**	P	Pg	09 44 17.7	+0.3
FIAM				AML	AML		
	comp=E,84μm,1.5s						
FIAM				AML	AML		
	comp=N,86μm,1.1s						
FIAM				AML	AML		
	comp=E,84μm,0.5s						
FIAM				AML	AML		
	comp=N,86μm,0.9s						
ARRO	**Arrone**	**0.40**	**267**	P	Pg	09 44 18.6	+0.6
ARRO				S	Sb	09 44 24.6	-0.8
ARRO				AML	AML		

	comp=E,102μm,0.1s							
ARRO					AML	AML		
	comp=N,181μm,1.4s							
FAGN	**Fagnano**	**0.40**	**148**	P		Pg	09 44 18.1	+0.1
OFFI	**Offida**	**0.44**	**40**	P		Pb	09 44 20.0	-0.1
VCEL	**Villa Celiera**	**0.45**	**117**	P		Pb	09 44 20.0	-0.3
VCEL					AML	AML		
	comp=N,290μm,0.8s							
VCEL					AML	AML		
	comp=E,259μm,0.8s							
VCEL					AML	AML		
	comp=N,290μm,0.8s							
FDMO	**Fiordimonte**	**0.46**	**340**	P		Pg	09 44 19.6	+0.3
FDMO					AML	AML		
	comp=N,132μm,0.2s							
FDMO					AML	AML		
	comp=E,108μm,0.2s							
CSP1	**Cessapalombo**	**0.50**	**352**	P		Pg	09 44 20.2	+0.3
CESI	**CESI - Serrava**	**0.50**	**324**	P		Pg	09 44 20.1	+0.2
CESI					AML	AML		
	comp=E,74μm,0.7s							
CESI					AML	AML		
	comp=N,111μm,0.3s							
CESI					AML	AML		
	comp=E,182μm,0.2s							
CESI					AML	AML		
	comp=N,342μm,0.1s							
T0110	**Collepietro**	**0.52**	**136**	P		Pg	09 44 20.7	+0.5
T0110					AML	AML		
	comp=N,104μm,1.4s							
T0110					AML	AML		
	comp=E,106μm,0.4s							
T0110					AML	AML		
	comp=N,104μm,1.4s							
T0110					AML	AML		
	comp=E,106μm,1.6s							
T0110					AML	AML		
	comp=N,104μm,0.6s							
SNTG	**Esanatoglia**	**0.70**	**338**	P		Pg	09 44 23.5	-0.4
INTR	**Introdacqua**	**0.74**	**142**	P		Pg	09 44 24.5	0.0
EL6	**Elcito**	**0.74**	**349**	P		Pg	09 44 24.5	-0.1

*KRNET **25** 09:58:08.3±0.1, 40.00N×74.86E, h23km, mb3.4*
*SOME **25** 09:58:08.3, 41.00N×74.80E, h10km*
ISC 25 09:58:06.5±1.8, 40.80N±0.08×74.66E±0.04, h5km±13km, n32, σ0992/57, 4C-12D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=16	**1.51**	**332**	P	**Pg**	**09 58 36.6**	**+1.1**
AAK	**Ala-Archa** SNR=12	**1.84**	**356**	P	**Pb**	**09 58 41.1**	**+0.4**
AAK	**Ala-Archa** baz=51	**1.84**	**356**	⇓*i*P	**Pb**	**09 58 40.5**	**-0.2**
AAK	baz=51			⇓*i*S	**Sb**	**09 59 04.1**	**0.0**
KBK	**Karagaybulak** SNR=9.2	**1.87**	**7**	P	**Pb**	**09 58 41.1**	**-0.1**
KBK	**Karagaybulak** baz=2.0	**1.87**	**7**	⇓*i*P	**Pb**	**09 58 40.5**	**-0.7**
KBK	baz=2.0			⇓*i*S	**Sb**	**09 59 04.1**	**-0.8**
ULHL	**Ulahol** baz=38	**1.87**	**39**	⇓*i*P	**Pn**	**09 58 39.7**	**+0.3**
ULHL	baz=38			⇓*i*S	**Sn**	**09 59 02.8**	**-0.7**
BOOM	**Boomskoye usch** baz=27	**1.94**	**29**	⇓*i*P	**Pn**	**09 58 40.8**	**+0.5**
BOOM	baz=27			⇓*i*S	**Sn**	**09 59 04.9**	**-0.3**
EKS2	**Erkin-Say** SNR=10	**1.97**	**341**	P	**Pg**	**09 58 44.3**	**0.0**
EKS2	**Erkin-Say** baz=35	**1.97**	**341**	⇓*i*P	**Pg**	**09 58 43.8**	**-0.5**
EKS2	baz=35			⇓*i*S	**Sg**	**09 59 09.7**	**-0.2**
CHMS	**Chumysh** SNR=12	**2.20**	**2**	P	**Pb**	**09 58 47.2**	**+0.4**
CHMS	**Chumysh** baz=58	**2.20**	**2**	⇑*i*P	**Pb**	**09 58 46.4**	**-0.3**
CHMS	baz=58			⇑*i*S	**Sb**	**09 59 13.9**	**-0.4**
TKM2	**Tokmak 2** SNR=18	**2.23**	**18**	P	**Pb**	**09 58 47.1**	**-0.3**
TKM2	**Tokmak 2** baz=15	**2.23**	**18**	⇑*i*P	**Pb**	**09 58 46.4**	**-1.0**
TKM2	baz=15			⇑*i*S	**Sb**	**09 59 14.4**	**-1.1**
KST	**Kastek** 4.4nm,0.3s	**2.45**	**23**	*e*P	**Pb**	**09 58 50.7**	**-0.3**
KST	50nm,0.4s			*e*S	**Sb**	**09 59 21.6**	**+0.1**
USP	**Ospenovka** SNR=21	**2.47**	**357**	P	**Pb**	**09 58 52.2**	**+0.8**
USP	**Ospenovka** baz=54	**2.47**	**357**	⇓*i*P	**Pb**	**09 58 50.3**	**-1.0**
USP	baz=54			⇓*i*S	**Sb**	**09 59 20.5**	**-1.6**
DGS	**Degeres** 18nm,0.3s	**2.58**	**18**	*e*P	**Pb**	**09 58 52.6**	**-0.6**
DGS	28nm,0.3s			*e*S	**Sb**	**09 59 24.7**	**-0.6**
MTBS	**Maitube** 5.7nm,0.3s	**2.68**	**29**	*e*P	**Pb**	**09 58 54.4**	**-0.5**
MTBS	35nm,0.5s			*e*S	**Sb**	**09 59 27.8**	**-0.3**
MDOK	**Medeo** 6.1nm,0.4s	**2.96**	**36**	*e*P	**Pb**	**09 58 59.7**	**-0.1**
MDOK	21nm,0.8s			*e*S	**Sb**	**09 59 36.9**	**+0.6**
KRBS	**Karabastau** 6.5nm,0.5s	**2.99**	**14**	*e*P	**Pb**	**09 59 00.3**	**0.0**
KRBS	54nm,0.6s			*e*S	**Sb**	**09 59 37.8**	**+0.7**
KOTS	**Kotyrbulak** 9.1nm,0.5s	**3.04**	**36**	*e*P	**Pb**	**09 59 01.0**	**-0.3**
KOTS	84nm,0.8s			*e*S	**Sb**	**09 59 38.9**	**+0.2**
KTBS	**Karatobe** 4.6nm,0.5s	**3.28**	**27**	*e*P	**Pb**	**09 59 04.6**	**-0.5**
KTBS	49nm,0.5s			*e*S	**Sb**	**09 59 45.2**	**-0.1**
KUU	**Kurty** 3.3nm,0.3s	**3.33**	**21**	*e*P	**Pb**	**09 59 05.8**	**-0.2**
KUU	33nm,0.3s			*e*S	**Sb**	**09 59 47.3**	**+0.4**
CHKK	**Chushkaly** 3.5nm,0.4s	**3.51**	**29**	*e*P	**Pb**	**09 59 09.5**	**+0.4**
CHKK	17nm,0.4s			*e*S	**Sb**	**09 59 53.6**	**+1.6**
SATY	**Saty** 4.5nm,0.2s	**3.60**	**50**	*e*P	**Pb**	**09 59 08.4**	**-2.2**
SATY	9.0nm,0.1s			*e*S	**Sb**	**09 59 51.5**	**-3.1**
ZHN	**Zhinishke** 4.2nm,0.2s	**3.68**	**49**	*e*P	**Pb**	**09 59 12.3**	**+0.3**
ZHN	17nm,0.3s			*e*S	**Sb**	**09 59 58.1**	**+1.1**
IUG	**Iuzhnay** 323nm,0.3s	**3.73**	**293**	*e*P	**Pg**	**09 59 17.2**	**-0.7**
IUG	80nm,0.8s			*e*S	**Sg**	**10 00 06.8**	**+0.6**
KPKS	**Kokpek** 2.8nm,0.2s	**4.01**	**47**	*e*P	**Pb**	**09 59 18.1**	**+0.4**
KPKS	16nm,0.4s			*e*S	**Sb**	**10 00 08.3**	**+1.8**
UZB	**Uzynbulak** 2.4nm,0.2s	**4.01**	**53**	*e*P	**Pb**	**09 59 18.0**	**+0.2**
UZB	7.5nm,0.4s			*e*S	**Sb**	**10 00 07.8**	**+1.2**
ARXS	**Arharly** 4.3nm,0.6s	**4.14**	**33**	*e*P	**Pb**	**09 59 19.9**	**+0.1**
ARXS	8.1nm,0.5s			*e*S	**Sb**	**10 00 11.5**	**+1.3**
SHLS	**Shalkode** 1.7nm,0.2s	**4.29**	**55**	*e*P	**Pg**	**09 59 27.7**	**-0.9**
SHLS	6.2nm,0.5s			*e*S	**Sg**	**10 00 24.5**	**+0.3**
BLB	**Baldybastay** 4.8nm,0.4s	**4.34**	**39**	*e*P	**Pb**	**09 59 23.9**	**+0.5**
BLB	9.1nm,0.7s			*e*S	**Sb**	**10 00 18.2**	**+2.2**

*IDC **25** 10:00:01.0±1.0, 54.82S×31.15W, h0km, mb4.2/5, mbtmp4.3/5, MS3.2/1, Error ellipse: s-maj=45.4km s-min=21.9km az=77.0*
*NEIC **25** 10:00:03.7±0.7, 55.0S±0.1×31.6W±0.1, h10km±2km, mb4.4/8, Error ellipse: s-maj=17.8km s-min=11.0km az=341.0*
ISC 25 10:00:02.6±0.8, 54.9S±0.1×31.4W±0.1, h10km, n29, σ0965/23, mb4.3/5, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.00**	**280**		**Pn**	**10 00 49.5**	**-0.6**
ORCD	**Orcadas**	**9.19**	**225**	Pn	**Pn**	**10 02 14.0**	**-1.0**
VNA1	**Neumayer--Stat**	**18.81**	**156**	P	**Pn**	**10 04 22.5**	**+0.2**
VNA3	**Neumayer Olymp**	**18.93**	**158**	P	**Pn**	**10 04 23.7**	**-0.2**
VNA2	**Neumayer--Watz** baz=316,slow=11	**19.21**	**156**	P	**P**	**10 04 26.5**	**+0.2**
SNAA	**Sanae**	**20.80**	**155**	P	**P**	**10 04 43.0**	**-0.7**
SNAA	**Sanae** 12nm,0.8s,baz=306,slow=10.0,SNR=56	**20.80**	**155**	P	**P**	**10 04 43.4**	**-0.2**
SNAA	**Sanae**	**20.80**	**155**	P	**P**	**10 04 43.5**	**-0.2**
SNAA	comp=Z,11nm,0.8s			IAmb	IAmb	10 04 44.7	
TROLL	**Troll, Antarti**	**22.37**	**153**	P	**P**	**10 05 00.4**	**-0.2**
BELA	**Belgrano 2**	**23.11**	**182**	P	**P**	**10 05 08.7**	**+0.5**
MG05	**Puerto Natales**	**24.51**	**260**	P	**P**	**10 05 21.6**	**-0.2**
GO09	**Cerro Castillo**	**24.58**	**261**	P	**P**	**10 05 22.1**	**-0.4**
TRQA	**Tornquist**	**26.64**	**297**	P	**P**	**10 05 42.6**	**+1.4**
QSPA	**South Pole Qui** comp=Z,2.9nm,0.6s,baz=194,slow=3.4,SNR=18	**35.36**	**180**	P	**P**	**10 06 58.6**	**+0.7**
SBA	**Scott Base**	**47.04**	**185**	P	**P**	**10 08 34.2**	**+0.7**
SBA	comp=Z,6.8nm,1.5s			IAmb	IAmb	10 08 56.8	
VNDA	**Vanda** comp=Z,1.8nm,0.7s,baz=179,slow=7.3,SNR=20	**47.59**	**184**	P	**P**	**10 08 38.3**	**+0.5**
VNDA	**Vanda**	**47.59**	**184**	P	**P**	**10 08 38.0**	**+0.2**
VNDA	comp=Z,2.1nm,0.8s			IAmb	IAmb	10 08 38.6	
H10S2	**ASCENSION HYDR** baz=193,slow=74,SNR=6.1	**47.72**	**23**	T	T	10 59 56.0	
H10S3	**ASCENSION HYDR** baz=27,slow=74,SNR=13	**47.73**	**23**	T	T	10 59 56.1	
LPAZ	**La Paz** comp=Z,1.0nm,0.5s,baz=154,slow=5.8,SNR=6.9	**47.75**	**309**	P	**P**	**10 08 41.1**	**+0.7**
LPAZ	**La Paz**	**47.75**	**309**	P	**P**	**10 08 40.7**	**+0.3**
LPAZ	comp=Z,2.6nm,0.8s			IAmb	IAmb	10 09 00.6	
H10N1	**ASCENSION HYDR** baz=192,slow=75,SNR=8.8	**48.84**	**23**	T	T	11 01 20.0	
H10N3	**ASCENSION HYDR** baz=192,slow=75,SNR=12	**48.84**	**23**	T	T	11 01 19.6	
H10N2	**ASCENSION HYDR** baz=192,slow=75,SNR=12	**48.85**	**23**	T	T	11 01 20.3	
LBTB	**Lobatse** comp=Z,26nm,18.9s,baz=141,slow=31	**51.06**	**78**	LR	LR	10 26 33.0	
TORD	**Torodi Ar. Bea** comp=Z,2.4nm,0.4s,baz=198,slow=7.0,SNR=1.8	**73.33**	**34**	P	**P**	**10 11 33.9**	**-0.4**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.4s,baz=200,slow=7.2,SNR=2.9	**144.04**	**65**	PKP	**PKPdf**	**10 19 37.1**	**+0.1**
ILAR	**Eielson Array** comp=Z,0.6nm,0.7s,baz=130,slow=1.8,SNR=8.2	**147.55**	**314**	PKPbc	**PKPbc**	**10 19 44.6**	**-0.9**
SONM	**Songino Array** comp=Z,0.5nm,0.5s,baz=270,slow=1.4,SNR=2.2	**153.08**	**88**	PKPbc	**PKPbc**	**10 19 58.5**	**-1.1**

HEL 25 10:20:31.7±0.1, 64.66N×26.72E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUL	**Oulu**	**0.55**	**321**	PG	Pg	10 20 41.4	-0.9
OUL				SG	Sg	10 20 48.9	-0.5
OBF4	**Vikkela, Lumij**	**0.71**	**283**	PG	Pg	10 20 44.3	-0.9
OUF	**Merijarvi**	**0.91**	**252**	PG	Pg	10 20 48.0	-1.1
OUF	comp=Z,1.4nm,0.2s			MSG		10 20 59.7	
OUF				SG	Sg	10 20 59.8	-1.0
OBF0	**Syolatti, Pyha**	**1.08**	**262**	PG	Pg	10 20 51.2	-1.2
OBF0				SB	Sg	10 21 06.1	-0.3
OBF8	**Ulkokalla**	**1.45**	**258**	PG	Pn	10 20 57.9	-1.3
RMF	**Romuvaara**	**1.46**	**106**	PN	Pn	10 20 58.7	-0.6
RMF				SN	Sn	10 21 20.1	+0.9
MSF	**Maaselka**	**1.59**	**37**	PN	Pn	10 21 00.7	-0.4
TOF	**Tornio** baz=139	**1.74**	**326**	PG	Pn	10 21 02.9	-0.3
TOF	comp=Z,0.9nm,0.2s			MSG		10 21 23.5	
TOF				SN	Sn	10 21 25.8	-0.2
KU6	**Riekki** baz=227	**1.91**	**43**	PG	Pn	10 21 06.3	+0.8
KU6	comp=Z,3.3nm,0.2s			MSG		10 21 28.5	
KU6				SG	Sb	10 21 32.0	+0.2
RNF	**Rovaniemi**	**1.98**	**352**	PG	Pn	10 21 06.8	+0.4
RNF				SG	Sn	10 21 32.6	+0.7
OLKF	**Oulanka, Finla**	**2.01**	**33**	PG	Pb	10 21 08.1	-1.0
OLKF				SG	Sb	10 21 34.5	-0.1
VAF	**Ylistaro** baz=42	**2.42**	**230**	PG	Pn	10 21 13.4	+1.0
VAF	comp=Z,0.8nm,0.2s			MSG		10 21 43.2	
VAF				SG	Sb	10 21 45.5	-0.8
KEF	**Keuruu** comp=Z,1.3nm,0.2s	**2.64**	**199**	MSG		10 21 49.4	
KLF	**Kolari**	**2.82**	**338**	PN	Pn	10 21 18.0	0.0
FIA0	**FINESS Array S**	**3.24**	**185**	PN	Pn	10 21 24.6	+0.9
HEF	**Hetta**	**3.96**	**343**	PN	Pn	10 21 33.3	-0.3

HEL 25 10:20:32.4±0.8, 60.91N×29.22E, h0km, ML1.4, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUFX	**Ruokolahti**	**0.54**	**346**	PG	Pg	10 20 42.3	-0.5
RUFX				SG	Sg	10 20 48.8	-1.0
VJF	**Virojoki**	**0.90**	**247**	PB	Pg	10 20 49.2	-0.4
FIA0	**FINESS Array S** baz=109	**1.61**	**291**	PG	Pn	10 21 01.0	-1.1
PVF	**Pernaja**	**1.69**	**259**	PG	Pn	10 21 02.8	-0.3
PVF	comp=Z,2.6nm,0.2s			MSG		10 21 22.9	
PVF				SN	Sg	10 21 27.6	+1.1
KAF	**Kangasniemi**	**1.85**	**312**	PG	Pb	10 21 06.5	-0.5
KAF	comp=Z,1.5nm,0.2s			MSG		10 21 27.4	
JOF	**Joensuu** baz=203	**2.25**	**25**	PG	Pb	10 21 12.5	-1.4
JOF				SG	Sb	10 21 41.1	-1.1
KEF	**Keuruu**	**2.44**	**303**	PG	Pb	10 21 15.8	-1.2
KEF	comp=Z,1.3nm,0.2s			MSG		10 21 44.4	
MEF	**Metsahovi**	**2.48**	**256**	PG	Pb	10 21 16.7	-1.1
MEF	comp=Z,1.2nm,0.2s			MSG		10 21 45.5	
OBF8	**Ulkokalla**	**4.35**	**325**	SG	Sb	10 22 46.4	+3.8

*JMA **25** 10:27:14.6±0.1, 23.7N±0.5×121.2E±*, h19km±2km, MV3.3/13, TAIWAN REGION*
*TAP **25** 10:27:15.9, 23.79N×121.59E, h31km, ML3.6, C*
ISC 25 10:27:16.1±0.8, 23.79N±0.02×121.60E±0.02, h30km±4km, n117, σ0985/200, 10C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag** baz=16	**0.08**	**357**	⇑*i*P	**Pb**	**10 27 21.6**	**+0.3**
TEYL	baz=16			S	**Sb**	**10 27 26.5**	**+1.5**
TEGC	**Jichi Village** baz=193	**0.10**	**216**	P	**Pb**	**10 27 21.4**	**0.0**
TEGC	baz=193			S	**Sb**	**10 27 26.6**	**+1.6**
ESL	**Shilin** baz=277	**0.16**	**280**	⇓*i*P	**Pb**	**10 27 21.6**	**-0.3**
ESL	baz=277			*i* S	**Sb**	**10 27 25.4**	**-0.5**
HWA	**Hwalien** baz=14	**0.19**	**1**	⇑*i*P	**Pb**	**10 27 22.2**	**0.0**
HWA				S	**Sn**	**10 27 28.2**	**+1.1**
EGFH	**Guangfu** baz=236	**0.20**	**234**	P	**Pb**	**10 27 22.0**	**-0.3**
EGFH	baz=236			S	**Sb**	**10 27 26.1**	**-0.4**
ETM	**Tongmen** baz=326	**0.20**	**330**	P	**Pb**	**10 27 22.2**	**-0.2**
ETM	baz=326			*e*S	**Sb**	**10 27 26.2**	**-0.5**
TWD	**Chiawan** baz=354	**0.29**	**359**	⇑*i*P	**Pb**	**10 27 23.2**	**-0.3**
TWD	baz=354			*i* S	**Sb**	**10 27 28.9**	**+0.4**
HGSD	**Ruisui** baz=218	**0.34**	**209**	⇑*i*P	**Pn**	**10 27 24.4**	**-0.5**
HGSD	baz=218			*i* S	**Sn**	**10 27 30.9**	**+0.2**
ETL	**Fush Village** baz=357	**0.37**	**3**	P	**Pb**	**10 27 24.2**	**-0.4**
ETL	baz=357			*e*S	**Sb**	**10 27 30.9**	**+0.5**
EHY	**Hungye** baz=220	**0.38**	**223**	⇓*i*P	**Pb**	**10 27 23.9**	**-0.8**
EHY	baz=220			S	**Sb**	**10 27 28.4**	**-2.1**
NACB	**Ninganchiao** baz=353	**0.38**	**359**	⇑*i*P	**Pb**	**10 27 24.4**	**-0.4**
NACB	baz=353			S	**Sb**	**10 27 30.5**	**-0.2**
VWDT	**VWDT** baz=265	**0.42**	**265**	⇓*i*P	**Pb**	**10 27 25.4**	**+0.1**
VWDT	baz=265			S	**Sb**	**10 27 31.6**	**0.0**
OWD	**Renai** baz=299	**0.42**	**293**	⇓*i*P	**Pb**	**10 27 25.2**	**-0.3**
OWD	baz=299			*i* S	**Sb**	**10 27 31.2**	**-0.7**
ETLH	**Xiulin Townshi** baz=339	**0.43**	**345**	⇓*i*P	**Pb**	**10 27 25.1**	**-0.5**
ETLH	baz=339			S	**Sb**	**10 27 30.8**	**-1.1**
WHF	**Hehuan Shan** baz=319	**0.47**	**319**	⇓*i*P	**Pb**	**10 27 25.7**	**-0.6**
WHF	baz=319			S	**Sb**	**10 27 32.4**	**-1.0**
CHGB	**Renai** baz=310	**0.48**	**305**	⇓*i*P	**Pb**	**10 27 26.1**	**-0.2**
CHGB	baz=310			S	**Sb**	**10 27 32.9**	**-0.4**
YULB	**Yu-li** baz=223	**0.48**	**216**	⇓*i*P	**Pb**	**10 27 25.4**	**-0.9**
YULB	baz=223			S	**Sb**	**10 27 32.2**	**-1.0**
WUSB	**Renai** baz=295	**0.49**	**295**	⇓*i*P	**Pb**	**10 27 26.3**	**-0.1**
WUSB	baz=295			S	**Sb**	**10 27 33.1**	**-0.5**
ECBN	**Changbin** baz=206	**0.49**	**197**	*e*S	**Sn**	**10 27 34.8**	**+0.3**
EYUL	**Yuli** baz=219	**0.51**	**211**	*e*P	**Pb**	**10 27 26.0**	**-0.7**
TWF1	**Yuli** baz=221	**0.52**	**213**	⇓*i*P	**Pb**	**10 27 25.9**	**-0.9**
FUSS	**Fushou** baz=324	**0.56**	**324**	⇓*i*P	**Pb**	**10 27 27.5**	**-0.2**
FUSS	baz=324			S	**Sb**	**10 27 35.4**	**-0.3**
SSLB	**Suanglung** baz=275	**0.59**	**270**	P	**Pb**	**10 27 27.4**	**-0.6**
SSLB	baz=275			*e*S	**Sb**	**10 27 34.9**	**-1.4**
TWT	**Tachien** baz=314	**0.61**	**320**	P	**Pb**	**10 27 28.4**	**0.0**
TWT	baz=314			S	**Sb**	**10 27 36.1**	**-0.7**
TDCB	**Techi** baz=314	**0.62**	**319**	⇓*i*P	**Pb**	**10 27 28.4**	**-0.1**
TDCB	baz=314			S	**Sb**	**10 27 36.1**	**-1.0**
WPL	**Puli Township** baz=295	**0.63**	**291**	*e*P	**Pb**	**10 27 28.3**	**-0.4**
WPL	baz=295			*e*S	**Sb**	**10 27 36.5**	**-0.8**
ENA	**Nanau** baz=359	**0.65**	**11**	P	**Pb**	**10 27 28.5**	**-0.5**
ENA	baz=359			*e*S	**Sn**	**10 27 38.2**	**-0.2**
SMLT	**Sun Moon Lake** baz=281	**0.65**	**279**	⇓*i*P	**Pb**	**10 27 28.8**	**-0.3**
SMLT	baz=281			S	**Sb**	**10 27 37.5**	**-0.4**
FULB	**Fuli** baz=216	**0.65**	**206**	P	**Pb**	**10 27 28.6**	**-0.4**
FULB	baz=216			*e*S	**Sn**	**10 27 38.3**	**-0.2**
NNSB	**Datong** baz=343	**0.67**	**343**	P	**Pb**	**10 27 28.8**	**-0.6**
NNSB	baz=343			S	**Sb**	**10 27 37.3**	**-1.1**
NNSH	**Datong** baz=349	**0.67**	**343**	P	**Pb**	**10 27 28.9**	**-0.5**
NNSH	baz=349			S	**Sb**	**10 27 37.4**	**-1.1**
EWUT	**Wuta** baz=1.0	**0.67**	**14**	*e*P	**Pb**	**10 27 28.2**	**-1.2**
EWUT	baz=1.0			*e*S	**Sb**	**10 27 37.6**	**-0.8**
NNS	**Nan Shan** baz=351	**0.68**	**342**	⇑*i*P	**Pb**	**10 27 28.1**	**-1.5**
NNS	baz=351			*i* S	**Sb**	**10 27 37.0**	**-1.8**
WCS	**Beigang Elemen** baz=293	**0.69**	**293**	P	**Pb**	**10 27 28.3**	**-1.2**
WCS	baz=293			S	**Sb**	**10 27 37.3**	**-1.5**
WHYT	**Xinyi Township** baz=260	**0.69**	**263**	*e*P	**Pb**	**10 27 28.8**	**-0.9**
WHYT	baz=260			*e*S	**Sb**	**10 27 38.7**	**-0.4**
LATG	**Datong** baz=354	**0.75**	**355**	⇓P	**Pb**	**10 27 29.8**	**-0.8**
LATG	baz=354			*e*S	**Sb**	**10 27 39.3**	**-1.3**
WHP	**Taichung City** baz=307	**0.77**	**309**	*e*P	**Pn**	**10 27 30.7**	**-0.3**
WHP	baz=307			*e*S	**Sb**	**10 27 41.1**	**-0.2**
ALS	**Alishan** baz=249	**0.78**	**249**	P	**Pb**	**10 27 31.4**	**0.0**
ALS	baz=249			S	**Sb**	**10 27 41.5**	**-0.3**
WJS	**Zhushan** baz=272	**0.80**	**273**	P	**Pb**	**10 27 32.3**	**+0.8**
WJS	baz=272			S	**Sn**	**10 27 43.5**	**+1.3**
ELDTW	**Lidau** baz=213	**0.80**	**222**	⇑*i*P	**Pn**	**10 27 30.2**	**-1.3**
NDT	**Datong Townshi** baz=353	**0.81**	**354**	*e*P	**Pn**	**10 27 31.4**	**-0.1**
NDT	baz=353			*e*S	**Sb**	**10 27 41.0**	**-1.5**
WNT	**Mingjian** baz=276	**0.85**	**276**	*e*P	**Pb**	**10 27 32.7**	**+0.4**
WNT	baz=276			*e*S	**Sb**	**10 27 44.5**	**+1.2**
NDS	**Dongshan** baz=354	**0.85**	**7**	*e*P	**Pn**	**10 27 30.8**	**-1.1**
NDS	baz=354			*e*S	**Sn**	**10 27 42.9**	**-0.4**
TWC	**Suao** baz=1.0	**0.85**	**15**	*e*P	**Pn**	**10 27 31.9**	**0.0**
TWC	baz=1.0			*e*S	**Sb**	**10 27 44.0**	**+0.6**
ENTT	**Nioudou** baz=357	**0.85**	**358**	*e*P	**Pn**	**10 27 30.4**	**-1.5**
ENTT	baz=357			*e*S	**Sn**	**10 27 41.7**	**-1.7**
EDH	**Donghe** baz=212	**0.86**	**199**	*e*P	**Pn**	**10 27 31.1**	**-1.0**
EDH	baz=212			*e*S	**Sb**	**10 27 43.8**	**+0.2**
CHN5	**Tsauling** baz=257	**0.87**	**258**	P	**Pn**	**10 27 32.0**	**-0.3**
CHN5	baz=257			*e*S	**Sn**	**10 27 43.5**	**-0.5**
YHNB	**Yeheng** baz=355	**0.90**	**347**	⇓P	**Pn**	**10 27 32.7**	**-0.1**
YHNB	baz=355			*e*S	**Sn**	**10 27 43.9**	**-0.9**

NSK	**Sanguang** baz=354	**0.91**	**346**	⇓*i*P	**Pn**	**10 27 31.7**	**-1.2**
NSK	baz=354			S	**Sn**	**10 27 43.1**	**-1.9**
TCU	**Taichung** baz=293	**0.92**	**293**	P	**Pb**	**10 27 34.8**	**+1.3**
TCU	baz=293			*e*S	**Sb**	**10 27 47.1**	**+1.7**
TWE	**Neicheng** baz=355	**0.93**	**4**	*e*P	**Pn**	**10 27 33.1**	**0.0**
TWE	baz=355			*e*S	**Sn**	**10 27 44.6**	**-0.8**
NFF	**Wufeng Townshi** baz=337	**0.95**	**332**	*e*P	**Pn**	**10 27 32.6**	**-0.8**
NFF	baz=337			*e*S	**Sn**	**10 27 44.1**	**-1.9**
FUSB	**Fushanzhiwuyua** baz=349	**0.97**	**359**	*e*P	**Pn**	**10 27 33.6**	**-0.1**
FUSB	baz=349			*e*S	**Sn**	**10 27 45.9**	**-0.5**
STYH	**Taoyuan** baz=227	**0.98**	**231**	*e*P	**Pn**	**10 27 32.6**	**-1.1**
STYH	baz=227			*e*S	**Sn**	**10 27 44.8**	**-1.7**
LONT	**Longtian** baz=192	**0.98**	**206**	*e*P	**Pn**	**10 27 32.5**	**-1.3**
WCKO	**Fanlu** baz=250	**0.98**	**249**	*e*P	**Pn**	**10 27 33.9**	**+0.2**
WCKO	baz=250			*e*S	**Sn**	**10 27 46.5**	**-0.1**
WDLH	**Douliu** baz=264	**0.98**	**264**	*e*P	**Pb**	**10 27 34.8**	**+0.3**
WDLH	baz=264			*e*S	**Sb**	**10 27 48.4**	**+1.3**
NSY	**Sanyi** baz=308	**0.99**	**309**	⇓P	**Pb**	**10 27 35.4**	**+0.7**
NSY	baz=308			S	**Sb**	**10 27 48.4**	**+0.9**
WCHH	**Zhanghua** baz=286	**1.00**	**287**	*e*P	**Pb**	**10 27 35.8**	**+0.9**
WCHH	baz=286			*e*S	**Sb**	**10 27 48.7**	**+1.1**
NSTT	**Nanjuang** baz=326	**1.00**	**327**	⇓P	**Pb**	**10 27 34.9**	**0.0**
NSTT	baz=326			S	**Sn**	**10 27 47.5**	**+0.3**
LIOB	**Emei** baz=327	**1.01**	**328**	*e*P	**Pb**	**10 27 35.2**	**+0.2**
LIOB	baz=327			*e*S	**Sb**	**10 27 48.3**	**+0.4**
TPUB	**Ta-pu** baz=242	**1.02**	**242**	⇑P	**Pb**	**10 27 35.0**	**-0.1**
TPUB	baz=242			S	**Sb**	**10 27 48.4**	**+0.2**
CHN4	**Tsaushan** baz=245	**1.02**	**245**	⇑*i*P	**Pn**	**10 27 34.3**	**0.0**
CHN4	baz=245			*i* S	**Sb**	**10 27 48.4**	**0.0**
WDJ	**Dajia District** baz=302	**1.04**	**303**	*e*P	**Pb**	**10 27 36.2**	**+0.6**
WDJ	baz=302			*e*S	**Sb**	**10 27 50.6**	**+1.8**
NMLH	**Miaoli** baz=314	**1.05**	**315**	P	**Pb**	**10 27 36.2**	**+0.5**
NMLH	baz=314			S	**Sb**	**10 27 49.7**	**+0.5**
WTP	**Ta-pu** baz=240	**1.06**	**239**	⇑*i*P	**Pb**	**10 27 35.7**	**-0.1**
WTP	baz=240			*i* S	**Sb**	**10 27 50.0**	**+0.7**
CHN2	**Minshiung** baz=257	**1.06**	**256**	*e*P	**Pb**	**10 27 36.8**	**+0.9**
CHN2	baz=257			*e*S	**Sb**	**10 27 52.0**	**+2.5**
TWGBT	**Beinan** baz=193	**1.08**	**207**	*e*P	**Pn**	**10 27 33.4**	**-1.7**
NTC	**Toucheng** baz=359	**1.08**	**11**	*e*P	**Pb**	**10 27 36.6**	**+0.4**
EGS	baz=6.0	**1.09**	**16**	*e*P	**Pb**	**10 27 37.1**	**+0.7**
LDUT	**Ludao** baz=175	**1.12**	**186**	*e*P	**Pn**	**10 27 34.2**	**-1.4**
WTK	**Tuku** baz=265	**1.12**	**265**	*e*P	**Pb**	**10 27 37.0**	**+0.2**
WTK	baz=265			*e*S	**Sb**	**10 27 52.2**	**+1.2**
CHY	**Chiayi** baz=255	**1.12**	**255**	*e*P	**Pb**	**10 27 36.7**	**-0.1**
CHY	baz=255			*e*S	**Sb**	**10 27 51.6**	**+0.6**
WRL	**Guolierlin Hig** baz=276	**1.13**	**276**	*e*P	**Pn**	**10 27 36.0**	**+0.2**
WRL	baz=276			*e*S	**Sb**	**10 27 51.0**	**-0.3**
SBCB	**Hsinchu** baz=330	**1.15**	**331**	*e*P	**Pb**	**10 27 37.8**	**+0.4**
CHN1	**Nanshi** baz=240	**1.16**	**239**	P	**Pb**	**10 27 37.3**	**-0.2**
CHN1	baz=240			S	**Sb**	**10 27 52.8**	**+0.7**
SNST	**Tainan City** baz=242	**1.16**	**241**	*e*P	**Pb**	**10 27 37.0**	**-0.5**
SNST	baz=242			*e*S	**Sb**	**10 27 53.2**	**+1.0**
HSN	**Hsinchu** baz=317	**1.16**	**330**	*e*S	**Sb**	**10 27 54.7**	**+2.3**
SGST	**Jiashian** baz=225	**1.17**	**233**	*e*P	**Pn**	**10 27 36.4**	**0.0**
SGST	baz=225			*e*S	**Sb**	**10 27 52.9**	**+0.3**
NHDH	**Xindian Distri** baz=3.0	**1.17**	**357**	*e*P	**Pn**	**10 27 36.6**	**+0.2**
TWA	**Mucha** baz=8.0	**1.19**	**359**	*e*P	**Pn**	**10 27 36.8**	**+0.2**
TIPB	**Shuangxi**	**1.20**	**10**	*e*P	**Pb**	**10 27 37.8**	**-0.4**
TWB1	**Santiao Chiao** baz=3.0	**1.27**	**16**	*e*P	**Pb**	**10 27 39.3**	**0.0**
ICHU	**Yijhu** baz=251	**1.29**	**251**	*e*P	**Pb**	**10 27 38.9**	**-0.8**
NWF	**Wu-fen Shan** baz=7.0	**1.29**	**7**	*e*P	**Pb**	**10 27 39.7**	**-0.1**
WSL	**Shuilin Townsh** baz=259	**1.29**	**258**	*e*P	**Pb**	**10 27 39.6**	**-0.1**
WSL	baz=259			*e*S	**Sb**	**10 27 56.3**	**+0.4**
TWS1	**Kuangyinshan** baz=360	**1.32**	**353**	*e*P	**Pb**	**10 27 40.4**	**+0.2**
TWS1	baz=360			*e*S	**Sb**	**10 27 56.8**	**+0.1**
SXI1	**Grass Mountain** baz=358	**1.32**	**11**	*e*P	**Pb**	**10 27 40.0**	**-0.4**
ECL	**Taimali** baz=196	**1.33**	**207**	*e*P	**Pn**	**10 27 38.1**	**-0.4**
YM01	**YM01** baz=358	**1.35**	**359**	*e*P	**Pb**	**10 27 40.0**	**-0.8**
SCST	**Cishan** baz=231	**1.36**	**229**	*e*P	**Pb**	**10 27 40.9**	**+0.1**
SCST	baz=231			*e*S	**Sb**	**10 27 59.6**	**+1.8**
SSD	**Sandimen** baz=221	**1.37**	**221**	*e*P	**Pn**	**10 27 39.8**	**+0.7**
TSMG	**Majia** baz=219	**1.39**	**219**	*e*P	**Pb**	**10 27 41.2**	**-0.2**
JYNG	**Yonagunijimaku**	**1.39**	**61**	P	**Pn**	**10 27 40.0**	**+0.6**
JYNG				S	**Sb**	**10 27 57.7**	**-1.2**
TWM1	**Shoushan** baz=229	**1.45**	**229**	*e*P	**Pb**	**10 27 43.3**	**+0.9**
YOJ	**Yonaguni jima** baz=60	**1.45**	**62**	*e*P	**Pn**	**10 27 40.8**	**+0.6**
YOJ	baz=60			*e*S	**Sn**	**10 27 58.9**	**+0.6**
YOJ	**Yonaguni jima**	**1.45**	**62**	P	**Pn**	**10 27 40.8**	**+0.6**
YOJ				S	**Sn**	**10 27 58.9**	**+0.6**
MASBT	**Mashibuluo** baz=217	**1.47**	**218**	*e*P	**Pn**	**10 27 40.5**	**0.0**
TSCK	**Chigu Township** baz=245	**1.53**	**246**	*e*P	**Pn**	**10 27 41.5**	**+0.2**
TAWH	**Dawu Township** baz=195	**1.58**	**205**	*e*P	**Pn**	**10 27 41.9**	**-0.1**
SSPT	**Xinbi** baz=203	**1.61**	**216**	*e*P	**Pb**	**10 27 44.0**	**-1.2**
SCZT	**Fangliau** baz=214	**1.68**	**213**	*e*P	**Pb**	**10 27 44.7**	**-1.6**
SLIU	**Shizi** baz=196	**1.73**	**205**	*e*P	**Pb**	**10 27 45.9**	**-1.3**
WDGT	**Dungji** baz=254	**1.86**	**254**	P	**Pn**	**10 27 46.1**	**+0.3**
WDGT				*e*S	**Sn**	**10 28 07.9**	**-0.4**
	baz=254						
PHUB	**P'eng-hu** baz=248	**1.88**	**262**	*e*P	**Pn**	**10 27 46.8**	**+0.6**
PHUB	baz=248			*e*S	**Sn**	**10 28 09.4**	**+0.5**
PNG	**Penghu** baz=264	**1.89**	**264**	*e*P	**Pn**	**10 27 46.8**	**+0.5**
PNG	baz=264			*e*S	**Sn**	**10 28 10.5**	**+1.4**
TWK1	**Hengchun** baz=192	**1.98**	**202**	*e*P	**Pn**	**10 27 48.2**	**+0.7**
TWKBT	**Hengchun** baz=192	**1.98**	**202**	*e*P	**Pn**	**10 27 47.1**	**-0.4**
IRIF	**Iriomote-Funau**	**2.02**	**74**	P	**Pn**	**10 27 48.7**	**+0.7**
IRIF				S	**Sn**	**10 28 13.1**	**+0.8**
HATJ	**Hateruma jima**	**2.03**	**82**	S	**Sn**	**10 28 13.4**	**+0.8**
JKRS	**Kuro-shima**	**2.25**	**78**	P	**Pn**	**10 27 51.9**	**+0.8**
JKRS				S	**Sn**	**10 28 18.9**	**+1.1**
VWUC	**VWUC** baz=301	**2.30**	**302**	*e*P	**Pn**	**10 27 52.0**	**+0.1**
JIJ	**Ishigaki jima**	**2.39**	**76**	P	**Pn**	**10 27 53.4**	**+0.2**
JIJ				S	**Sn**	**10 28 20.7**	**-0.8**
JTJ	**Tarama**	**2.95**	**73**	*e*P	**Pn**	**10 28 01.4**	**+0.6**
JTJ				*e*S	**Sn**	**10 28 35.2**	**-0.1**
JIRB	**Irabujima**	**3.42**	**72**	*e*P	**Pn**	**10 28 07.9**	**+0.6**
JIKM	**Ikemajima**	**3.51**	**70**	*e*P	**Pn**	**10 28 09.3**	**+0.8**
JIKM				*e*S	**Sn**	**10 28 49.6**	**+0.5**
JMJ2	**Miyako jima3**	**3.53**	**74**	P	**Pn**	**10 28 10.1**	**+1.3**
JMJ2				S	**Sn**	**10 28 50.0**	**+0.5**

*INET **25** 10:31:05.3±0.7, 12°.67N×88°.96W, h18km±8km, MW3.6*
*SNET **25** 10:31:06.0±1.0, 12°.79N×88°.97W, h14km±999km, ML3.0*
ISC 25 10:31:03.1±1.7, 12°.77N±0°.08×88°.92W±0°.05, h4km±12km, n26, σ0°77/39, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEB	**Comit de Eme**	**0.82**	**27**	*e*P	**Pn**	**10 31 20.9**	**-0.6**
COEB				*e*S	**Sn**	**10 31 32.8**	**-1.2**
COEG	**Centro de Oper**	**0.85**	**2**	*e*S	**Sn**	**10 31 33.2**	**-1.5**
LFRS	**El Faro**	**0.86**	**351**	*e*P	**Pn**	**10 31 21.9**	**-0.2**
LFRS				IAML		10 31 36.0	
	comp=Z,1μm,0.3s						
PACA	**Pacayal**	**0.90**	**40**	*e*P	**Pn**	**10 31 23.5**	**+0.8**
PACA				*e*S	**Sn**	**10 31 36.6**	**+0.3**
PACA	**Pacayal**	**0.90**	**40**	*e*P	**Pn**	**10 31 23.5**	**+0.8**
PQSS	**Presa 15 de Se**	**0.92**	**22**	*e*P	**Pn**	**10 31 23.1**	**+0.3**
PQSS				*e*S	**Sn**	**10 31 35.6**	**-0.8**
PQSS				IAML		10 31 39.0	
	comp=Z,341nm,0.2s						
PAVA	**Las Pavas**	**0.94**	**359**	*e*P	**Pb**	**10 31 22.5**	**+0.5**
PAVA				*e*S	**Sn**	**10 31 36.2**	**-0.9**
PAVA				IAML		10 31 40.1	
	comp=Z,458nm,0.4s						
SCLA	**Alcaldia de Sa**	**0.94**	**11**	*e*P	**Pn**	**10 31 23.6**	**+0.4**
SCLA				*e*S	**Sn**	**10 31 37.2**	**+0.1**
SCLA				IAML		10 31 38.4	
	comp=Z,152nm,0.2s						
LFU	**La Fuente**	**0.99**	**349**	*e*P	**Pn**	**10 31 24.1**	**+0.2**
UEES	**Universidad Ev**	**0.99**	**342**	*e*P	**Pn**	**10 31 24.1**	**+0.2**
UEES				*e*S	**Sn**	**10 31 37.2**	**-1.2**
UEES				IAML		10 31 41.1	
	comp=Z,420nm,0.3s						
JAYA	**Jayaque - finc**	**1.02**	**330**	*e*P	**Pb**	**10 31 24.0**	**+0.5**
JAYA				*e*S	**Sb**	**10 31 36.4**	**-0.8**
JAYA				IAML		10 31 39.0	
	comp=Z,859nm,0.2s						
BOQS	**Boqueron**	**1.02**	**340**	⇑*e*P	**Pn**	**10 31 24.7**	**+0.2**
BOQS				IAML		10 31 40.4	
	comp=Z,310nm,0.3s						
CEDA	**San Andres**	**1.13**	**336**	*e*P	**Pb**	**10 31 25.7**	**+0.5**
CEDA				*e*S	**Sn**	**10 31 40.8**	**-0.9**
CNCH	**Conchagua**	**1.17**	**64**	⇑*e*P	**Pn**	**10 31 27.1**	**+0.7**
CNCH				*e*S	**Sn**	**10 31 44.5**	**+1.7**
CAHU	**Cacacuatique**	**1.21**	**35**	*e*P	**Pn**	**10 31 28.1**	**+1.2**
P5NO	**Presa 5 de nov**	**1.22**	**7**	*e*P	**Pn**	**10 31 27.7**	**+0.7**
CEVE	**Cerro Verde**	**1.26**	**327**	*e*P	**Pg**	**10 31 27.7**	**+0.4**
CEVE				*e*S	**Sn**	**10 31 45.4**	**+0.2**
CEVE				IAML		10 31 52.6	
	comp=Z,778nm,0.2s						
SBLS	**San Blas**	**1.27**	**327**	*e*P	**Pg**	**10 31 27.9**	**+0.4**
RTR	**El Retiro**	**1.33**	**328**	*e*P	**Pg**	**10 31 28.8**	**+0.2**
CSGN	**Cosiguina Volc**	**1.34**	**81**	*e*P	**Pg**	**10 31 28.1**	**-0.8**
NUBE	**Las Nubes**	**1.40**	**323**	*e*P	**Pn**	**10 31 29.4**	**-0.2**
NUBE				*e*S	**Sg**	**10 31 47.5**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.51**	**326**	*e*P	**Pn**	**10 31 31.7**	**+0.8**
SLOZ				*e*S	**Sn**	**10 31 51.5**	**+0.5**
MTO3	**Montecristo**	**1.68**	**345**	*e*P	**Pn**	**10 31 34.3**	**+0.8**
CRIN	**San Cristobal**	**1.82**	**92**	*e*P	**Pn**	**10 31 35.5**	**+0.2**
CRIN				*e*S	**Sn**	**10 31 58.8**	**0.0**
MOMN	**Momotombo**	**2.35**	**99**	*e*P	**Pn**	**10 31 41.8**	**-0.8**
RCON	**San Juan de Ri**	**2.78**	**75**	*e*P	**Pn**	**10 31 49.3**	**+0.8**

*IDC **25** 10:32:03.4±9.6, 12°.35N×93°.68E, h118km±83km, mb3.4/5, mbtmp3.7/6, ML4.2/1, Error ellipse: s-maj=78.2km s-min=19.1km az=59.0*
ISC 25 10:32:03.2±1.2, 12°.2N±0°.1×93°.9E±0°.1, h100km, n15, σ1°64/17, mb3.8/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.90**	**37**	P	**Pn**	**10 33 56.8**	**+1.5**
	0.8nm,0.3s,baz=234,slow=14,SNR=31						
CMAR				S	**Sn**	**10 35 22.5**	**-0.7**
	0.6nm,0.3s,baz=236,slow=24,SNR=1.8 4.1nm,0.6s						
TAPN	**Taplejung** 12nm,0.3s	**16.16**	**340**	*e*P	**Pn**	**10 35 44.7**	**0.0**
RAMN	**Ramite** 32nm,0.4s	**16.20**	**336**	*e*P	**P**	**10 35 46.0**	**-0.6**
JIRN	**Jiri** 12nm,0.2s	**17.00**	**336**	*e*P	**P**	**10 35 56.6**	**+1.1**
PKI	**Pulchoki** 25nm,0.4s	**17.25**	**334**	*e*P	**Pn**	**10 35 59.4**	**+1.3**
PKIN	**Phulchoki** 35nm,0.4s	**17.26**	**334**	*e*P	**Pn**	**10 35 59.4**	**+1.2**
GUN	**Gumba** 6.1nm,0.2s	**17.35**	**336**	*e*P	**Pn**	**10 36 00.3**	**+0.9**
DMN	**Daman** 19nm,0.3s	**17.41**	**333**	*e*P	**Pn**	**10 36 02.0**	**+1.9**
GKN	**Gorkha** 43nm,0.4s	**17.96**	**332**	*e*P	**Pn**	**10 36 08.5**	**+1.9**
DANN	**Dangsing** 12nm,0.4s	**18.66**	**331**	*e*P	**Pn**	**10 36 17.8**	**+2.7**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=139,slow=9.5,SNR=2.1	**35.86**	**346**	P	**P**	**10 38 50.7**	**-2.6**
MKAR				pP	**pwP**	**10 39 18.0**	**-0.1**
	0.2nm,0.4s,baz=153,slow=8.4,SNR=2.2 0.2nm,0.3s						
ZALV	**Zalesovo Beam** 1.0nm,0.4s,baz=172,slow=15,SNR=3.5 1.0nm,0.4s	**42.27**	**352**	P	**P**	**10 39 43.7**	**-2.8**
FITZ	**Fitzroy Crossi** 1.0nm,0.3s,baz=333,slow=8.5,SNR=13 1.0nm,0.3s	**43.44**	**133**	P	**P**	**10 39 57.0**	**+0.6**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=309,slow=8.4,SNR=8.2 0.3nm,0.6s	**51.03**	**128**	P	**P**	**10 40 55.1**	**-0.3**
ASAR	**Alice Springs** 0.5nm,0.5s,baz=307,slow=6.6,SNR=10 0.5nm,0.5s	**52.92**	**132**	P	**P**	**10 41 09.8**	**+0.4**

*KRNET **25** 10:55:29.6±0.1, 41°.28N×69°.96E, h11km, mb2.7*
ISC 25 10:55:30.3±1.0, 41°.16N±0°.04×69°.94E±0°.04, h10km, n6, σ1°68/12, 4C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent** baz=76	**0.52**	**289**	⇓*i*P	**Pg**	**10 55 39.1**	**-1.3**
TAS	baz=76			⇓*i*S	**Sg**	**10 55 46.3**	**-0.9**
TRKS	**Terek-Say** baz=78	**0.97**	**67**	⇑*i*P	**Pg**	**10 55 47.3**	**-1.8**
TRKS	baz=78			⇑*i*S	**Sg**	**10 56 00.1**	**-1.6**
BTK	**Batken** baz=52	**1.29**	**149**	⇓*i*P	**Pg**	**10 55 55.6**	**+0.6**
BTK	baz=52			⇓*i*S	**Sn**	**10 56 14.4**	**+2.6**
ARK	**Arkit** baz=70	**1.65**	**67**	⇓*i*P	**Pn**	**10 55 59.6**	**+0.2**
ARK	baz=70			⇓*i*S	**Sb**	**10 56 20.7**	**-0.9**
KK31	**Karatay Array** 3.0nm,0.3s,baz=202,slow=16,SNR=39	**1.99**	**12**	P	**Pg**	**10 56 08.9**	**+0.5**
KK31	6.4nm,0.6s,baz=193,slow=30,SNR=9.9			S	**Sg**	**10 56 37.0**	**+2.8**
DRK	**Karamyk** baz=41	**2.20**	**139**	⇑*i*P	**Pb**	**10 56 10.1**	**-0.2**
DRK	baz=41			⇑*i*S	**Sg**	**10 56 40.0**	**-1.0**

*IDC **25** 11:02:15.9±2.2, 55°.27S×30°.93W, h0km, mb4.2/2, mbtmp4.2/2, MS3.2/2, Error ellipse: s-maj=90.8km s-min=39.8km az=19.0*
*NEIC **25** 11:02:18.5±2.2, 55°.09S±0°.10×31°.4W±0°.2, h10km±2km, mb4.4/8, Error ellipse: s-maj=24.2km s-min=9.5km az=53.0*
ISC 25 11:02:18.4±0.8, 55°.1S±0°.1×31°.4W±0°.1, h10km, n25, σ1°30/20, mb4.4/6, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.05**	**284**	P	**Pn**	**11 03 06.7**	**0.0**
ORCD	**Orcadas**	**9.03**	**226**	Pn	**Pn**	**11 04 26.7**	**-2.0**
VNA1	**Neumayer--Stat**	**18.60**	**156**	P	**Pn**	**11 06 36.8**	**+1.2**
VNA3	**Neumayer Olymp**	**18.71**	**158**	P	**P**	**11 06 37.5**	**+0.8**
VNA2	**Neumayer--Watz** baz=322,slow=10	**19.00**	**156**	P	**Pn**	**11 06 41.0**	**+0.5**
SNAA	**Sanae**	**20.59**	**154**	P	**P**	**11 06 57.1**	**-0.2**
SNAA	**Sanae**	**20.59**	**154**	P	**P**	**11 06 56.9**	**-0.3**
TROLL	**Troll, Antarti**	**22.16**	**153**	P	**P**	**11 07 16.4**	**+2.2**
BELA	**Belgrano 2**	**22.88**	**182**	P	**P**	**11 07 22.9**	**+1.3**
CPUP	**Villa Florida** 1.4nm,0.5s,baz=142,slow=6.7,SNR=3.2	**34.43**	**316**	P	**P**	**11 09 08.1**	**+2.2**
CPUP				LR	LR	11 25 09.0	
	comp=Z,11nm,18.1s,baz=212,slow=40 1.4nm,0.5s						
VA06	**Catapilco**	**35.83**	**292**	P	**P**	**11 09 18.3**	**+0.3**
VA06				IAmb	IAmb	11 09 43.9	
	comp=Z,11nm,1.0s						
PB09	**IPOC Station P**	**43.62**	**304**	P	**P**	**11 10 22.3**	**-0.8**
PB01	**IPOC Station P**	**44.38**	**305**	P	**P**	**11 10 30.7**	**+1.6**
PB01				IAmb	IAmb	11 10 42.9	
	comp=Z,7.8nm,1.3s						
LPAZ	**La Paz**	**47.90**	**309**	P	**P**	**11 10 58.3**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=142,slow=5.8,SNR=11 comp=Z,2.0nm,0.5s						
LPAZ	**La Paz**	**47.90**	**309**	P	**P**	**11 10 56.9**	**-0.5**
LPAZ				IAmb	IAmb	11 10 59.6	
	comp=Z,2.4nm,0.6s						
H10S3	**ASCENSION HYDR** SNR=6.0	**47.94**	**23**	T	T	12 02 39.1	
H10N1	**ASCENSION HYDR** baz=192,slow=75,SNR=7.7	**49.05**	**22**	T	T	12 04 00.6	
H10N3	**ASCENSION HYDR** baz=192,slow=75,SNR=11	**49.05**	**22**	T	T	12 04 04.1	
H10N2	**ASCENSION HYDR** baz=192,slow=75,SNR=11	**49.07**	**22**	T	T	12 04 03.0	
SAML	**Samuel**	**52.48**	**319**	P	**P**	**11 11 30.2**	**-1.2**
SAML				IAmb	IAmb	11 11 33.3	
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.53**	**34**	P	**P**	**11 13 50.1**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=201,slow=6.8,SNR=2.0						
BIM	**Bigot**	**73.77**	**330**	P	**P**	**11 13 51.5**	**-1.2**
MDT	**Midelt**	**90.57**	**22**	LR	LR	11 49 59.0	
	comp=Z,31nm,19.4s,baz=258,slow=32						
ILAR	**Eielson Array** comp=Z,0.9nm,0.7s,baz=103,slow=1.5,SNR=11	**147.72**	**314**	PKPbc	**PKPbc**	**11 22 01.1**	**-0.7**
SONM	**Songino Array** comp=Z,0.5nm,0.6s,baz=201,slow=4.5,SNR=2.4	**153.09**	**88**	PKPbc	**PKPbc**	**11 22 14.0**	**-1.4**

*BER **25** 11:30:02.4±1.8, 67°.92N×25°.65E, h0km, ML1.3, Suspected explosion*
HEL 25 11:30:00.1±0.1, 67°.94N×25°.89E, h0km, ML1.7, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGF	**Sodankyl**	**0.55**	**154**	PG	Pg	11 30 10.5	-0.1
SGF				SG	Sg	11 30 17.1	-0.6
HEF	**Hetta**	**0.96**	**301**	*e*P	Pg	11 30 17.2	-1.3
HEF				*e*S	Sg	11 30 30.1	-0.8
HEF	**Hetta**	**0.96**	**301**	PG	Pg	11 30 16.9	-1.6
HEF				MSG		11 30 29.4	
	comp=Z,5.4nm,0.2s						
HEF				SG	Sg	11 30 30.0	-0.9
KLF	**Kolari** baz=43	**1.02**	**227**	PG	Pg	11 30 17.8	-1.8
KLF				SG	Sg	11 30 31.3	-1.6
RNF	**Rovaniemi**	**1.33**	**178**	PG	Pg	11 30 24.0	-1.6
RNF				SB	Sg	11 30 42.0	-0.9
VRF	**Varrio**	**1.42**	**96**	PN	Pn	11 30 26.4	-0.8
VRF				MSG		11 30 42.9	
	comp=Z,4.4nm,0.2s						
VRF				SN	Sg	11 30 44.6	-1.1
KTK1	**Kautokeino**	**1.46**	**319**	*e*P	Pn	11 30 26.5	-1.1
KTK1				*e*S	Sg	11 30 46.0	-0.9
KTK1				IAML		11 30 49.6	
	comp=Z,4.6nm,0.2s						
KTK1	**Kautokeino**	**1.46**	**319**	PG	Pn	11 30 26.3	-1.4
KTK1				SG	Sg	11 30 45.7	-1.2
ARA0	**ARCESS Array S**	**1.61**	**355**	*e*P	Pn	11 30 29.5	-0.3
ARA0				*e*S	Sn	11 30 50.1	-1.2
ARA0				IAML		11 30 54.5	
	comp=Z,4.5nm,0.1s						
ARA0	**ARCESS Array S** baz=176	**1.61**	**355**	PG	Pn	11 30 29.3	-0.5
ARA0				SN	Sn	11 30 49.9	-1.4
KEV	**Kevo**	**1.87**	**12**	*e*P	Pn	11 30 33.8	+0.5
KEV				*e*S	Sb	11 30 58.7	-0.3
KEV	**Kevo**	**1.87**	**12**	PG	Pn	11 30 33.7	+0.4
KEV				MSG		11 30 55.8	
	comp=Z,7.9nm,0.2s						
KEV				SG	Sn	11 30 57.5	-0.1
TOF	**Tornio**	**1.96**	**199**	PG	Pn	11 30 35.4	+0.8
TOF				MSG		11 30 58.4	
	comp=Z,6.2nm,0.2s						
OLKF	**Oulanka, Finla**	**2.12**	**138**	PG	Pn	11 30 38.1	+1.3
OLKF				SG	Sb	11 31 06.1	-0.2
KIF	**Kilpisjarvi**	**2.16**	**302**	*e*P	Pn	11 30 38.4	+1.1
KIF	**Kilpisjarvi**	**2.16**	**302**	PB	Pn	11 30 38.3	+1.0
KIF				MSG		11 31 04.6	
	comp=Z,4.9nm,0.2s						
KIF				SB	Sb	11 31 06.3	-1.1
MSF	**Maaselka** baz=327	**2.38**	**147**	PG	Pb	11 30 42.3	-1.5
MSF				SG	Sb	11 31 13.5	-0.2
KU6	**Riekki** baz=320	**2.48**	**139**	PG	Pb	11 30 44.1	-1.3
KU6				MSG		11 31 13.4	
	comp=Z,3.2nm,0.2s						
KU6				SG	Sb	11 31 16.3	-0.2
JETT	**Jettan, Norway**	**2.58**	**312**	*e*P	Pn	11 30 43.1	+0.1
JETT				IAML		11 31 19.7	
	comp=Z,6.7nm,0.2s						
LVZ	**Lovozero**	**3.31**	**87**	SN	Sn	11 31 33.3	+0.2

HEL 25 11:30:18.6±0.3, 63°.91N×28°.15E, h0km, ML1.5, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.84**	**68**	PB	Pg	11 30 34.7	0.0
RMF				SB	Sg	11 30 45.5	-0.2
OUL	**Oulu**	**1.53**	**321**	PN	Pn	11 30 46.1	-1.0
OUL	**Oulu** baz=132	**1.53**	**321**	PG	Pn	11 30 46.1	-1.0
OUL				SN	Sn	11 31 09.1	+1.5
OUF	**Merijarvi**	**1.56**	**289**	PG	Pn	11 30 46.6	-1.0
OUF				MSG		11 31 05.5	
	comp=Z,4.7nm,0.2s						
OUF				SG	Sn	11 31 07.4	-1.2
OBF4	**Vikkela, Lumij** baz=117	**1.60**	**306**	PG	Pn	11 30 47.5	-0.7
OBF0	**Syolatti, Pyha**	**1.81**	**291**	PG	Pn	11 30 51.1	+0.2
OBF8	**Ulkokalla**	**2.10**	**284**	PG	Pb	11 30 56.8	-0.8
VAF	**Ylistaro**	**2.61**	**253**	PG	Pb	11 31 05.1	-1.1
VAF				MSG		11 31 35.6	
	comp=Z,1.9nm,0.2s						
VAF				SG	Sb	11 31 38.2	-0.4
TOF	**Tornio**

TOF MSG 11 31 38.4
comp=Z,1.1nm,0.2s

IDC 25 11:33:19.0±14.0, 40.99N×90.52E, h0km, mb3.7/3, mbtmp3.7/3, MS3.1/2, Error ellipse: s-maj=462.3km s-min=93.4km az=96.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.59**	**160**	P	P	11 38 32.4	+1.0
	0.5nm,0.3s,baz=334,slow=14,SNR=4.3						
	0.5nm,0.3s						
NRIK	**Noril'sk**	**28.46**	**358**	LR	LR	11 51 16.2	
	comp=Z,38nm,20.8s,baz=192,slow=38						
BRTR	**Keskin Array B**	**42.70**	**288**	LR	LR	12 01 12.2	
	comp=Z,26nm,19.1s,baz=184,slow=39						
WRA	**Warramunga Arr**	**73.00**	**137**	P	P	11 44 49.6	-1.0
	0.5nm,0.8s,baz=331,slow=7.6,SNR=8.3						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**75.89**	**140**	P	P	11 45 07.9	+0.5
	0.7nm,0.6s,baz=325,slow=6.7,SNR=17						
	0.7nm,0.6s						

MAN 25 11:38:04, 19.95N×120.71E, h68km, Ms3.1
IDC 25 11:38:04.4±1.9, 19.13N×119.34E, h0km, mb3.6/5, mbtmp3.6/5, MS3.0/2, Error ellipse: s-maj=228.2km s-min=20.7km az=62.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.33**	**271**	LR	LR	11 50 00.4	
	comp=Z,12nm,20.4s,baz=195,slow=37						
MKAR	**Makanchi Array**	**40.96**	**321**	P	P	11 45 49.2	+0.4
	0.4nm,0.5s,baz=114,slow=8.8,SNR=5.1						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**41.52**	**158**	P	P	11 45 53.0	-0.7
	0.6nm,0.8s,baz=337,slow=10,SNR=6.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**44.85**	**161**	P	P	11 46 21.0	+0.4
	0.7nm,0.7s,baz=345,slow=7.2,SNR=11						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**45.02**	**324**	P	P	11 46 20.8	-0.8
	0.6nm,0.7s,baz=129,slow=6.7,SNR=6.2						
	0.6nm,0.7s						
GEYT	**Alibeck**	**55.99**	**303**	LR	LR	12 15 12.3	
	comp=Z,40nm,18.1s,baz=305,slow=40						
NOA	**NORSAR Array B**	**81.87**	**332**	P	P	11 50 25.7	+0.2
	0.2nm,0.3s,baz=77,slow=5.9,SNR=2.1						
	0.2nm,0.3s						

IDC 25 11:43:56.3±3.4, 26.60N×142.29E, h0km, mb4.0/4, mbtmp4.0/4, MS2.9/2, Error ellipse: s-maj=247.9km s-min=13.0km az=85.0
NEIC 25 11:44:01.4±1.0, 26.66N±0.09×142.1E±0.2, h34km±9km, mb4.4/6, Error ellipse: s-maj=29.7km s-min=10.0km az=106.0
ISC 25 11:44:01.8±1.1, 26.7N±0.1×142.0E±0.2, h40km, n23, σ1.9 32/16, mb4.2/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**0.46**	**21**	Pn	**Pn**	**11 44 10.9**	**-1.1**
	97nm,0.3s,baz=302,slow=20,SNR=35						
JCJ				Sn	**Sn**	**11 44 19.3**	**+0.2**
	217nm,0.3s,baz=292,slow=22,SNR=13						
JCJ	**Chichijima**	**0.46**	**21**	Pn	**Pn**	**11 44 11.2**	**-0.8**
MAJO	**Matsushiro**	**10.36**	**343**	Pn	**Pn**	**11 46 27.7**	**-0.2**
JMM	**Marumori**	**11.21**	**355**	Pn	**Pn**	**11 46 37.9**	**-1.6**
JNU	**Nakatsue**	**11.60**	**306**	Pn	**Pn**	**11 46 43.9**	**-0.8**
KSRS	**Korea Array**	**16.05**	**316**	LR	LR	11 53 46.5	
	comp=Z,32nm,18.3s,baz=230,slow=36						
H11N2	**WAKE ISLAND Hy**	**23.87**	**102**	T	T	12 13 22.5	
	baz=292,slow=75,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**23.88**	**102**	T	T	12 13 22.6	
	baz=292,slow=75,SNR=11						
KLR	**Kul'dur**	**23.89**	**343**	P	**P**	**11 49 14.8**	**+3.3**
	3.3nm,0.8s,baz=162,slow=7.8,SNR=7.7						
	3.3nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**23.89**	**102**	T	T	12 13 24.0	
	baz=292,slow=75,SNR=10						
H11S3	**WAKE ISLAND Hy**	**24.17**	**105**	T	T	12 13 46.3	
	baz=294,slow=75,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**24.17**	**104**	T	T	12 13 43.8	
	baz=294,slow=75,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**24.18**	**105**	T	T	12 13 44.1	
	baz=294,slow=75,SNR=9.2						
WB0	**Warramunga Arr**	**46.74**	**190**	P	**P**	**11 52 26.8**	**-0.4**
WR0	**Warramunga Arr**	**46.91**	**190**	P	**P**	**11 52 28.4**	**-0.1**
WR0				IAmb	IAmb	11 53 09.8	
	comp=Z,5.0nm,1.3s						
WRAB	**Tennant Creek**	**46.91**	**190**	P	**P**	**11 52 28.0**	**-0.5**
WB2	**Warramunga Arr**	**46.92**	**190**	P	**P**	**11 52 27.9**	**-0.7**
WRA	**Warramunga Arr**	**46.93**	**190**	P	**P**	**11 52 28.3**	**-0.3**
	comp=Z,4.3nm,0.5s,baz=12,slow=8.7,SNR=68						
	comp=Z,4.3nm,0.5s						
WRA	**Warramunga Arr**	**46.93**	**190**	P	**P**	**11 52 27.0**	**-1.6**
FITZ	**Fitzroy Crossi**	**47.25**	**201**	P	**P**	**11 52 31.1**	**0.0**
FITZ				IAmb	IAmb	11 52 44.2	
	comp=Z,6.4nm,1.2s						
MKAR	**Makanchi Array**	**50.62**	**310**	LR	LR	12 13 36.3	
	comp=Z,16nm,19.4s,baz=161,slow=35						
ASAR	**Alice Springs**	**50.65**	**190**	P	**P**	**11 52 56.6**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=17,slow=12,SNR=6.2						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**78.26**	**334**	P	**P**	**11 55 58.9**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=69,slow=7.6,SNR=4.4						
	comp=Z,0.8nm,0.5s						

IDC 25 11:46:32.4±5.9, 6.48N×73.00W, h193km±145km, mb2.8/3, mbtmp3.4/4, Error ellipse: s-maj=237.5km s-min=78.0km az=175.0
RSNC 25 11:46:32.4±0.9, 6.81N×73.12W, h147km±4km, ML3.4, Mw3.6
ISC 25 11:46:31.1±0.9, 6.83N±0.04×73.12W±0.04, h153km±6km, n20, σ0.967/37, mb2.9/3, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**195**	*i* P	**Pn**	**11 46 52.3**	**+0.1**
BARC				*e*S	**Sn**	**11 47 07.5**	**-0.7**
BARC				*i*		11 47 08.8	
	comp=Z,931nm,0.2s						
BRRC	**Barranca, Sant**	**0.65**	**295**	⇑*i*P	**Pn**	**11 46 54.1**	**+0.5**
BRRC				*e*S	**Sn**	**11 47 10.8**	**+0.1**
BRRC				*i*		11 47 14.4	
	comp=Z,336nm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**40**	⇑*e*P	**Pn**	**11 46 55.0**	**+0.8**
PAMC				*e*S	**Sn**	**11 47 12.4**	**+0.6**
PAMC				*i*		11 47 14.5	
	comp=Z,259nm,0.5s						
RUSC	**La Rusia**	**0.94**	**178**	*e*P	**Pn**	**11 46 56.2**	**0.0**
RUSC				*e*S	**Sn**	**11 47 14.6**	**-0.8**
RUSC				*i*		11 47 16.0	
	comp=Z,225nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*e*P	**Pn**	**11 46 59.4**	**-0.1**
PTBC				*e*S	**Sn**	**11 47 20.7**	**-0.5**
PTBC				*i*		11 47 22.0	
	comp=Z,203nm,0.2s						
TAMC	**Tame, Arauca**	**1.38**	**107**	*i* P	**Pn**	**11 47 00.5**	**+0.9**
TAMC				*e*S	**Sn**	**11 47 21.6**	**+0.1**
OCAC	**Ocana**	**1.41**	**352**	*e*P	**Pn**	**11 47 00.3**	**+0.2**
OCAC				*e*S	**Sn**	**11 47 22.7**	**+0.2**
OCAC				*i*		11 47 25.7	
	comp=Z,466nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**219**	*e*P	**Pn**	**11 47 01.2**	**+0.1**
SPBC				*e*S	**Sn**	**11 47 23.4**	**-0.7**
SPBC				*i*		11 47 27.9	
	comp=Z,495nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**11 47 05.0**	**+0.3**
ZARC				*e*S	**Sn**	**11 47 30.1**	**-0.3**
ZARC				*i*		11 47 35.5	
	comp=Z,316nm,0.4s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**11 47 08.2**	**-0.1**
NORC				*e*S	**Sn**	**11 47 36.4**	**-0.5**
NORC				*i*		11 47 46.0	
	comp=Z,136nm,0.1s						
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**11 47 10.3**	**+0.3**
CHIC				*e*S	**Sn**	**11 47 39.5**	**-0.6**
CHIC				*i*		11 47 43.1	
	comp=Z,97nm,0.5s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**11 47 12.1**	**+1.6**
	comp=Z,77nm,0.3s,baz=96,slow=17,SNR=51						
ROSC				S	**Sn**	**11 47 42.7**	**+1.8**
	comp=Z,218nm,0.3s,baz=38,slow=19,SNR=13						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**11 47 13.5**	**+1.0**
HELC				*e*S	**Sn**	**11 47 43.8**	**-0.5**
HELC				*i*		11 47 50.3	
	comp=Z,130nm,0.3s						
SOCV	**Socops**	**2.67**	**57**	*e*P	**Pn**	**11 47 14.9**	**+0.5**
SOCV				*e*S	**Sn**	**11 47 47.4**	**-0.5**
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**11 47 16.2**	**+0.3**
GUY2C				*e*S	**Sn**	**11 47 51.5**	**+1.1**
GUY2C				*i*		11 48 04.2	
	comp=Z,113nm,0.6s						
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**11 47 15.7**	**-0.1**
VILC				*e*S	**Sn**	**11 47 50.1**	**-0.2**
VILC				*i*		11 47 59.7	
	comp=Z,178nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*e*P	**Pn**	**11 47 19.8**	**+0.6**
CBOC				*e*S	**Sn**	**11 47 56.8**	**+0.4**
CBOC				*i*		11 48 10.0	
	comp=Z,32nm,0.6s						
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**11 53 21.7**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=122,slow=8.6,SNR=2.6						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**51.48**	**315**	P	**P**	**11 55 21.1**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=111,slow=10,SNR=1.7						
	comp=Z,0.1nm,0.5s						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**11 56 42.4**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=129,slow=6.7,SNR=4.1						
	comp=Z,0.8nm,0.8s						

SEA 25 12:17:54.4±2.1, 48.01N±0.02×121.84W±0.03, h15km±5km, ML2.2/51, ML2.0/16(NEIC), Error ellipse: s-maj=3.0km s-min=2.8km az=225.0
NEIC 25 12:17:53.9±2.0, 48.01N±0.02×121.91W±0.04, h20km±9km, Error ellipse: s-maj=3.5km s-min=2.8km az=120.0, Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBPA	**Monroe Substat**	**0.11**	**174**		Pb	12 17 57.6	-0.4
MBPA					Sb	12 18 00.3	-0.6
EVCC	**Everett Colleg**	**0.20**	**269**		Pb	12 17 59.7	+0.6
EVCC					Sb	12 18 04.4	+1.8
HTW	**Haystack Looko**	**0.23**	**156**		Pb	12 17 59.1	-0.4
BEVT	**Boeing Everett**	**0.26**	**250**		Pb	12 18 00.6	+0.6
LEOT	**Leota Junior H**	**0.28**	**210**		Sb	12 18 06.0	+1.4
EARN	**East Ridge Ele**	**0.29**	**199**		Sb	12 18 06.1	+1.4
LYNC	**Lynnwood City**	**0.32**	**235**		Pb	12 18 01.5	+0.6
LYNC					Sb	12 18 07.3	+1.7
SWID	**South Whidbey**	**0.34**	**270**		Pb	12 18 01.7	+0.4
C05A	**Tolt Reservoir**	**0.35**	**155**		Pb	12 18 01.0	-0.4
C05A					Sb	12 18 05.7	-0.8
CMW	**Cultus Mountai**	**0.44**	**341**		Pb	12 18 03.0	0.0
RPW	**Rockport**	**0.51**	**31**		Pb	12 18 04.0	-0.2
GPW	**Glacier Peak**	**0.53**	**78**		Pb	12 18 04.3	-0.3
SVOH	**Skagit Valley**	**0.56**	**300**		Pb	12 18 05.3	+0.3
RATT	**Rattlesnake La**	**0.59**	**173**		Pb	12 18 05.0	-0.6
B013	**Quilcene**	**0.70**	**254**		Pb	12 18 06.8	-0.7
WRW	**Wenatchee Ridg**	**0.70**	**102**		Pb	12 18 07.0	-0.5
GMW	**Gold Mountain**	**0.75**	**232**		Pb	12 18 07.6	-0.7
GNW	**Green Mountain**	**0.76**	**235**		Pb	12 18 07.7	-0.8
MBW	**Mount Baker**	**0.77**	**0**		Pb	12 18 08.7	-0.1
C04A	**Brinnon**	**0.78**	**248**		Pb	12 18 07.8	-0.9
D05A	**Enumclaw**	**0.82**	**184**		Pn	12 18 11.0	+0.6
HDW	**Hoodsport**	**0.85**	**245**		Pb	12 18 09.2	-0.9
SHUK	**Shuksan-Mt. Ba**	**0.86**	**10**		Pb	12 18 09.9	-0.3
SLFW	**Sugar Loaf**	**0.96**	**105**		Pb	12 18 11.5	-0.5
VDB	**Vedder Mountai**	**1.02**	**353**		Pn	12 18 13.1	0.0
VGZ	**Gonzales**	**1.03**	**294**		Pb	12 18 12.1	-0.9
B04A	**Port Angeles**	**1.07**	**273**		Pb	12 18 12.6	-1.2
B04A				IAML		12 18 29.9	
	comp=N,30nm,0.5s						
B04A				IAML		12 18 31.3	
	comp=E,30nm,0.3s						
TWW	**Teanaway**	**1.12**	**141**		Pb	12 18 15.0	+0.4
LTY	**Liberty**	**1.12**	**132**		Pn	12 18 14.1	-0.5
LTY				IAML		12 18 28.6	
	comp=N,43nm,0.5s						
LTY				IAML		12 18 31.5	
	comp=E,34nm,0.4s						
B011	**North Saanich**	**1.21**	**302**		Pn	12 18 15.2	-0.5
PGC	**Sidney**	**1.21**	**302**		Pn	12 18 15.3	-0.4
TBM	**Table Mountain**	**1.22**	**133**		Pb	12 18 17.3	+0.9
CBSW	**Chelan Butte S**	**1.27**	**99**		Pb	12 18 17.2	0.0
EBG	**Ellensburg**	**1.43**	**140**		Pb	12 18 20.2	+0.4
NLWA	**Neilton Lookou**	**1.46**	**246**	Pn	Pb	12 18 20.2	-0.3
WISH	**Wishkah**	**1.55**	**235**	Pn	Pb	12 18 21.6	-0.3
CLRS	**Cowichan Lake**	**1.69**	**299**	Pn	Pn	12 18 22.9	+0.6
CLRS					Sn	12 18 43.6	+0.3
CLRS				IAML		12 18 47.0	
	comp=N,17nm,0.5s						
CLRS				IAML		12 18 47.7	
	comp=E,15nm,0.5s						
ERK	**Elk Rock**	**1.73**	**190**		Pn	12 18 23.9	+1.0
JRO	**Jston Ridge Ob**	**1.75**	**187**		Pb	12 18 24.6	-0.8
E03A	**Lebam**	**1.85**	**218**	Pn	Pb	12 18 26.0	-1.0
SHB	**Sechelt**	**2.05**	**321**		Pn	12 18 28.2	+0.9
OT3	**Othello 3**	**2.26**	**125**		Pn	12 18 28.8	-1.3
HAWA	**Hanford**	**2.29**	**134**	Pn	Pb	12 18 33.5	-1.0
HAWA				IAML		12 19 08.2	
	comp=E,10nm,0.6s						
HAWA				IAML		12 19 08.9	
	comp=E,9.8nm,0.9s						

MOS 25 12:24:20.9±1.7, 50.72N×102.79E, h8km, mb4.1/4, Error ellipse: s-maj=9.0km s-min=7.3km az=108.9
MOS Felt (III) at Zakamensk.
IDC 25 12:24:22.6±0.8, 50.52N×102.72E, h0km, mb3.8/9, mbtmp3.7/13, ML2.9/3, MS3.1/10, Error ellipse: s-maj=29.6km s-min=11.3km az=39.0
BYKL 25 12:24:22.4±0.2, 50.86N×102.76E, FELT I=III MSK at Zakamensk
ISC 25 12:24:22.2±0.9, 50.82N±0.02×102.76E±0.02, h0km±7km, n81, σ2.939/126, mb3.9/9, MS3.1/5, 9C-10D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAK	**Zakamensk**	**0.55**	**143**	⇓*i*Pg	**Pg**	**12 24 32.6**	**-0.2**
	4μm,0.5s						
ZAK				⇑*i*Pg	**Pg**	**12 24 32.6**	**-0.2**
	2μm,0.5s						
ZAK				⇑*i*Pg	**Pg**	**12 24 32.6**	**-0.2**
	4μm,0.5s						
ZAK				Pmax		12 24 32.8	
	2μm,0.3s						
ZAK				*e*Sg	**Sg**	**12 24 40.2**	**+0.3**
ZAK				Smax		12 24 40.9	
	10μm,0.2s						
ZAK	**Zakamensk**	**0.55**	**143**	⇑*i*PG	**Pg**	**12 24 32.6**	**-0.2**
ZAK				*e*		12 24 40.2	
ZAK				pmax	pmax		
	comp=Z,2μm,0.3s						
ZAK				smax	smax		
	comp=N,7μm,0.3s						
TLY	**Talaya**	**1.02**	**33**	⇓*i*Pg	**Pg**	**12 24 40.6**	**-1.2**
TLY				Pmax		12 24 41.0	
	comp=N,615nm,0.5s						
TLY				*e*Sg	**Sg**	**12 24 53.8**	**-1.3**
TLY				Smax		12 24 54.1	
	comp=N,2μm,0.5s						
TLY	**Talaya**	**1.02**	**33**	⇓*i*PG	**Pg**	**12 24 40.2**	**-1.6**
TLY				*e*		12 24 53.7	
TLY				pmax	pmax		
	comp=Z,593nm,0.5s						
TLY				smax	smax		
	comp=N,2μm,0.5s						
ARS	**Arshan**	**1.12**	**349**	*e*Pg	**Pg**	**12 24 42.2**	**-1.5**
ARS				*e*Pb	**Pb**	**12 24 44.5**	**0.0**
ARS				max		12 24 45.3	
	comp=N,960nm,0.3s						
ARS				*e*Sg	**Sg**	**12 24 55.9**	**-2.3**
ARS				*e*		12 25 00.9	
ARS				max		12 25 04.1	
	comp=N,9μm,1.0s						
MOY	**Mondy**	**1.40**	**308**	⇑*i*Pg	**Pn**	**12 24 47.3**	**-1.7**
	comp=N,665nm,0.9s						
MOY				⇓*i*Pg	**Pn**	**12 24 47.3**	**-1.7**
	comp=N,834nm,0.9s						
MOY				⇑*i*Pg	**Pn**	**12 24 47.3**	**-1.7**
	comp=N,1μm,0.9s						
MOY				Pmax		12 24 48.5	
	comp=N,2μm,0.8s						
MOY				*e*		12 24 55.1	
MOY				*e*Sg	**Sg**	**12 25 05.6**	**-1.4**
MOY				Smax		12 25 11.9	
	comp=N,5μm,0.8s						
MOY	**Mondy**	**1.40**	**308**	*e*PG	**Pn**	**12 24 47.3**	**-1.7**
MOY				*e*		12 25 06.6	
MOY				pmax	pmax		
	comp=Z,1μm,0.2s						
MOY				smax	smax		
	comp=E,5μm,0.6s						
IVK	**Ivanovka**	**1.43**	**46**	*e*Pg	**Pn**	**12 24 48.3**	**-1.0**
IVK				*e*		12 24 54.0	
IVK				max		12 24 54.8	
	comp=E,749nm,0.4s						
IVK				*e*Sg	**Sg**	**12 25 06.5**	**-1.5**
IVK				Smax		12 25 14.8	
	comp=E,1μm,0.7s						
IVK	**Ivanovka**	**1.43**	**46**	*e*PG	**Pn**	**12 24 48.1**	**-1.2**
IVK				*e*		12 25 05.8	
IVK				pmax	pmax		
	comp=Z,601nm,0.5s						
IVK				smax	smax		
	comp=N,1μm,0.4s						
LSTR	**Listvyanka**	**1.67**	**50**	*e*Pg	**Pn**	**12 24 52.1**	**-0.6**
LSTR				*e*		12 24 57.5	
LSTR				max		12 24 58.2	
	comp=N,411nm,0.6s						
LSTR				*e*Sg	**Sn**	**12 25 13.5**	**-1.2**
LSTR				*e*		12 25 19.3	
LSTR				max		12 25 20.4	
	comp=N,2μm,1.0s						
LSTR	**Listvyanka**	**1.67**	**50**	*e*PN	**Pn**	**12 24 51.7**	**-0.9**
LSTR				*e*		12 25 13.3	
LSTR				pmax	pmax		
	comp=Z,399nm,0.5s						
LSTR				smax	smax		
	comp=N,2μm,0.7s						
IRK	**Irkutsk**	**1.71**	**33**	*e*Pg	**Pn**	**12 24 52.6**	**-0.6**
IRK				*e*		12 24 57.2	
IRK				max		12 24 59.1	
	comp=N,2μm,0.5s						
IRK				*e*Sg	**Sn**	**12 25 14.6**	**-1.1**
IRK				Smax		12 25 22.1	
	comp=N,4μm,1.2s						
IRK	**Irkutsk**	**1.71**	**33**	*e*PN	**Pn**	**12 24 51.8**	**-1.4**
IRK				*e*		12 25 14.2	
IRK				pmax	pmax		
	comp=Z,2μm,0.5s						
IRK				smax	smax		
	comp=E,4μm,1.2s						
BGT	**Bolshoye Golou**	**2.06**	**52**	*e*Pn	**Pn**	**12 24 57.3**	**-0.7**
BGT				*e*Pg	**Pb**	**12 24 59.3**	**-1.1**
BGT				*e*		12 25 04.0	
BGT				max		12 25 04.5	
	comp=E,450nm,0.4s						
BGT				*e*Sn	**Sn**	**12 25 22.8**	**-1.6**
BGT				*e*Sg	**Sb**	**12 25 25.1**	**-1.5**
BGT				Smax		12 25 30.1	
	comp=E,2μm,0.9s						
ORL	**Orlik**	**2.52**	**314**	*e*Pg	**Pb**	**12 25 06.9**	**-1.3**
ORL				Pmax		12 25 07.5	
	comp=E,573nm,0.8s						
ORL				*e*PgPg	**PbPb**	**12 25 11.4**	**0.0**
ORL				*e*Sn	**Sn**	**12 25 34.2**	**-1.6**
ORL				*e*Sg	**Sb**	**12 25 39.8**	**0.0**
ORL				Smax		12 25 46.7	
	comp=E,2μm,0.7s						
ORL	**Orlik**	**2.52**	**314**	*e*PN	**Pb**	**12 25 07.0**	**-1.3**
ORL				*e*		12 25 39.9	
ORL				pmax	pmax		
	comp=Z,583nm,0.6s						
ORL				smax	smax		
	comp=E,2μm,1.1s						
STDB	**Stepnoy Dvoret**	**2.63**	**58**	*e*Pn	**Pn**	**12 25 04.9**	**-0.9**
STDB				*e*Pg	**Pb**	**12 25 10.1**	**0.0**
STDB				*e*PgPg	**PbPb**	**12 25 14.0**	**+0.8**
STDB				*e*Sg	**Sb**	**12 25 43.6**	**+0.7**
KAB	**Kabansk**	**2.73**	**62**	*e*Pn	**Pn**	**12 25 07.2**	**0.0**
KAB				*e*Pg	**Pb**	**12 25 11.0**	**-0.8**
KAB				Pmax		12 25 16.5	
	comp=E,274nm,0.5s						
KAB				*e*Sn	**Sn**	**12 25 38.5**	**-2.4**
KAB				*e*Sg	**Sb**	**12 25 45.8**	**0.0**
KAB				Smax		12 25 48.3	
	comp=E,3μm,0.8s						
FFNB	**Fofonovo**	**2.79**	**62**	*e*Pn	**Pn**	**12 25 07.6**	**-0.5**
FFNB				*e*Pg	**Pb**	**12 25 12.0**	**-0.9**
FFNB				*e*Sn	**Sn**	**12 25 38.9**	**-3.5**
FFNB				*e*Sg	**Sb**	**12 25 47.3**	**-0.3**
TRG	**Tyrgan**	**2.96**	**48**	*e*Pn	**Pn**	**12 25 09.0**	**-1.3**
TRG				*e*Pg	**Pb**	**12 25 14.7**	**-1.1**
TRG				*e*PgPg	**PbPb**	**12 25 18.7**	**-0.1**
TRG				max		12 25 21.3	
	comp=E,139nm,0.3s						
TRG				*e*Sn	**Sn**	**12 25 44.5**	**-2.0**
TRG				*e*Sg	**Sb**	**12 25 51.8**	**-0.5**
TRG				Smax		12 25 55.8	
	comp=E,3μm,1.1s						
ZRHB	**Zarechye**	**3.24**	**56**	*e*Pn	**Pn**	**12 25 14.2**	**0.0**
ZRHB				*e*Pg	**Pb**	**12 25 20.3**	**-0.2**
ZRHB				Pmax		12 25 39.4	
	comp=E,423nm,0.8s						
ZRHB				*e*Sn	**Sn**	**12 25 51.2**	**-2.2**
ZRHB				*e*Sg	**Sb**	**12 26 02.8**	**+2.4**
ZRHB				Smax		12 26 09.2	
	comp=E,3μm,1.4s						
KNGR	**Kungurtug, Tuv**	**3.34**	**268**	*e*Pn	**Pn**	**12 25 15.9**	**+0.2**
KNGR				*e*Pg	**Pb**	**12 25 22.6**	**+0.3**
KNGR				*e*Sg	**Sb**	**12 26 06.3**	**+2.8**
KNGR	**Kungurtug, Tuv**	**3.34**	**268**	⇑*e*PN	**Pn**	**12 25 16.1**	**+0.4**
SONM	**Songino Array**	**3.82**	**140**	Pn	**Pn**	**12 25 21.4**	**-0.9**
	comp=E,2.4nm,0.3s,baz=317,slow=14,SNR=19						
SONM				Pg	**Pb**	**12 25 30.0**	**-0.5**
	comp=E,61nm,0.3s,baz=319,slow=18,SNR=228						
SONM				Lg	Lg	12 26 20.2	
	comp=E,145nm,0.3s,baz=336,slow=27,SNR=32						
SONM				LR	LR	12 27 02.6	
	comp=E,338nm,18.4s,baz=325,slow=44						
	comp=E,3.3nm,0.3s						
KELR	**Kotokel**	**3.83**	**58**	*e*Pn	**Pn**	**12 25 22.3**	**0.0**
KELR				*e*Pg	**Pb**	**12 25 30.9**	**+0.3**
KELR				*e*Sn	**Sn**	**12 26 04.1**	**-3.9**
KELR				*e*Sg	**Sb**	**12 26 20.7**	**+3.2**
I34MN	**SONGINO INFRAS**	**3.85**	**140**	Lg	Lg	12 26 20.0	
	baz=324,slow=29						
ULN	**Ulaanbaatar**	**4.08**	**135**	*e*Pg	**Pb**	**12 25 35.6**	**+0.7**
ULN				*e*Sg	**Sg**	**12 26 29.6**	**-3.6**
ULN	**Ulaanbaatar**	**4.08**	**135**	*ce*PN	**Pn**	**12 25 23.8**	**-2.1**
OGRR	**Ongureny

KPC					*e*Sn	**Sn**	**12 27 02.7**	**-5.5**		
KPC					*e*Sg	**Sg**	**12 27 37.3**	**-6.1**		
KPC					Smax		12 27 45.3			
	comp=E,567nm,1.4s									
KPC	**Khapcheranga**	**6.27**	**97**	*e*PN	**Pn**		**12 25 53.0**	**-2.9**		
KPC				*e*			12 26 13.2			
KPC				*e*			12 27 35.8			
KPC				pmax	pmax					
	comp=Z,57nm,1.1s									
KPC				smax	smax					
	comp=E,568nm,1.4s									
NIZ	**Nizh Angarsk**	**6.41**	**37**	*e*	Pn		12 26 01.5	+3.7		
NIZ				*e*Pg	**Pb**		**12 26 17.7**	**+3.2**		
NIZ				Pmax			12 26 21.7			
	comp=E,40nm,1.2s									
NIZ				*e*Sn	**Sn**		**12 27 08.1**	**-3.5**		
NIZ				*e*Sg	**Sg**		**12 27 40.4**	**-7.6**		
NIZ				Smax			12 27 55.8			
	comp=E,490nm,1.1s									
YLYR	**Ulyunkhan**	**6.51**	**48**	*e*Pn	**Pn**		**12 25 59.6**	**+0.5**		
YLYR				*e*Pg	**Pb**		**12 26 19.4**	**+3.2**		
YLYR				Pmax			12 26 27.5			
	comp=E,16nm,0.6s									
YLYR				*e*Sg	**Sb**		**12 27 42.4**	**+7.9**		
YLYR				Smax			12 27 51.1			
	comp=E,305nm,1.4s									
YLYR	**Ulyunkhan**	**6.51**	**48**	*e*PG	Pb		12 26 21.1	+4.9		
YLYR				*e*S	**Sb**		**12 27 41.7**	**+7.2**		
YLYR				smax	smax					
	comp=N,306nm,1.5s									
KMO	**Kumora**	**7.16**	**42**	*e*	Pn		12 26 11.8	+3.8		
KMO				*e*Pg	**Pb**		**12 26 30.4**	**+3.2**		
KMO				Pmax			12 26 38.7			
	comp=N,26nm,0.5s									
KMO				*e*Sn	**Sn**		**12 27 25.7**	**-4.2**		
KMO				*e*Sg	Sg		12 28 02.7	-9.1		
KMO				Smax			12 28 21.3			
	comp=N,675nm,1.4s									
YOA	**Uoyan**	**7.54**	**42**	*e*Sg	Sg		12 28 14.7	-9.4		
YOA				Smax			12 28 51.2			
	comp=N,1μm,0.6s									
UKT	**Uakit**	**8.03**	**50**	*e*Pn	**Pn**		**12 26 21.0**	**+1.0**		
UKT				*e*Pg	Pb		12 26 46.4	+4.3		
UKT				*e*			12 26 52.1			
UKT				max			12 27 08.0			
	comp=N,18nm,1.4s									
UKT				*e*Sg	Sg		12 28 30.6	-9.2		
UKT				Smax			12 28 46.3			
	comp=N,228nm,2.3s									
SVKR	**Severomuysk**	**8.34**	**46**	*e*Sg	Sg		12 28 40.5	-9.3		
SVKR				Smax			12 29 02.4			
	comp=N,302nm,1.3s									
NLYR	**Nelyaty**	**9.55**	**49**	*e*	Pg		12 27 17.7			
NLYR				max			12 27 33.1			
	comp=N,17nm,1.0s									
NLYR				*e*Sg	Sg		12 29 16.0			
NLYR				Smax			12 30 13.4			
	comp=N,203nm,1.1s									
BOD	**Bodaibo**	**9.60**	**39**	*e*Pn	**Pn**		**12 26 42.6**	**+1.2**		
BOD				max			12 27 18.8			
	comp=N,11nm,0.9s									
BOD				*e*Sg	Sg		12 29 18.6			
BOD				Smax			12 29 31.5			
	comp=N,126nm,1.6s									
DGZ	**Jazzator, Alta**	**9.88**	**269**‖	*e*P	**Pn**		**12 26 43.4**	**-2.1**		
CRS	**Chara**	**10.98**	**50**	*e*Pg	Pg		12 27 40.8			
CRS				Pmax			12 27 41.7			
	comp=N,2.0nm,0.1s									
CRS				*e*Sg	Sg		12 30 01.5			
CRS				Smax			12 30 34.3			
	comp=N,162nm,1.4s									
HIA	**Hailar**	**11.03**	**92**‖	*e*P	**Pn**		**12 27 02.4**	**+1.3**		
TUP	**Tupik**	**11.05**	**64**	*e*Pn	**Pn**		**12 27 02.7**	**+1.3**		
TUP				*e*Pg			12 27 42.3			
TUP				Pmax			12 27 55.5			
	comp=N,2.0nm,0.4s									
TUP				*e*Sg	Sg		12 30 03.4			
TUP				Smax			12 30 18.9			
	comp=N,277nm,1.7s									
ZALV	**Zalesovo Beam**	**11.40**	**293**	Pn	**Pn**		**12 27 08.0**	**+1.9**		
	comp=N,0.2nm,0.3s,baz=79,slow=9.0,SNR=1.8									
ZALV				Lg	Lg		12 30 20.7			
	comp=N,0.4nm,0.3s,baz=101,slow=22,SNR=10.0									
ZALV				LR	LR		12 31 36.8			
	comp=N,83nm,19.3s,baz=76,slow=38									
	comp=N,0.3nm,0.4s									
ZALV	**Zalesovo Beam**	**11.40**	**293**	P	**Pn**		**12 27 08.0**	**+1.9**		
GTA	**Gaotai**	**11.60**	**191**	*e*P	**Pn**		**12 27 09.8**	**+0.8**		
GTA				sP			12 27 20.8			
GTA				pmax	pmax					
	comp=Z,3.0nm,0.7s									
GTA				pmax	pmax					
	comp=Z,51nm,5.1s									
GTA				LR	LR					
	comp=N,160nm,13.8s									
GTA				LR	LR					
	comp=E,160nm,13.5s									
GTA				LR	LR					
	comp=Z,200nm,15.6s									
YKLR	**Yuktali**	**12.58**	**55**	*e*Sg			12 30 50.5			
MK31	**Makanchi Array**	**14.07**	**261**‖	*e*P	**Pn**		**12 27 41.0**	**-1.6**		
MKAR	**Makanchi Array**	**14.07**	**261**	Pn	**Pn**		**12 27 43.4**	**+0.8**		
	comp=Z,0.4nm,0.7s,baz=65,slow=8.7,SNR=3.7									
MKAR				Lg	Lg		12 31 41.5			
	baz=81,slow=24,SNR=4.6									
MKAR				LR	LR		12 32 46.9			
	comp=Z,27nm,20.0s,baz=100,slow=36									
MKAR	**Makanchi Array**	**14.07**	**261**	*i* P	**Pn**		**12 27 45.7**	**+3.1**		
MKAR				pmax	pmax					
	comp=Z,1.0nm,0.8s									
LZH	**Lanzhou**	**14.75**	**177**	*e*P	**P**		**12 27 58.8**	**+0.4**		
LZH				pP	Pn		12 28 06.3	+14		
LZH				pmax	pmax					
	comp=Z,17nm,1.5s									
LZH				LR	LR					
	comp=N,240nm,17.5s									
LZH				LR	LR					
	comp=E,140nm,18.3s									
LZH				LR	LR					
	comp=Z,240nm,17.5s									
KURK	**Kurchatov**	**15.26**	**279**	*ce*P	**Pn**		**12 27 59.2**	**+0.5**		
KURK				pmax	pmax					
	comp=Z,6.0nm,1.7s									
KURBB	**Kurchatov Arra**	**15.33**	**279**	Pn	**Pn**		**12 27 59.9**	**+0.2**		
	baz=82,slow=12,SNR=5.0									
KURBB				Lg	Lg		12 32 25.9			
	comp=Z,0.1nm,0.3s,baz=75,slow=33,SNR=6.8									
	comp=Z,0.3nm,0.4s									
KLR	**Kul'dur**	**18.64**	**84**	LR	LR		12 36 20.9			
	comp=Z,46nm,20.4s,baz=292,slow=38									
KLR	**Kul'dur**	**18.64**	**84**‖	*e*P	**P**		**12 28 39.4**	**-1.8**		
NRIK	**Noril'sk**	**19.95**	**344**	P	**Pn**		**12 28 58.3**	**+1.4**		
	comp=Z,4.7nm,0.6s,baz=137,slow=14,SNR=5.0									
	comp=Z,4.7nm,0.6s									
NRIK	**Noril'sk**	**19.95**	**344**‖	*e*P	**P**		**12 28 54.4**	**-0.9**		
NRIK				pmax	pmax					
	comp=Z,4.0nm,0.6s									
BVAR	**Borovoye Array**	**20.00**	**289**	P	**P**		**12 28 56.0**	**0.0**		
	comp=Z,0.9nm,0.7s,baz=77,slow=15,SNR=5.3									
BVAR				LR	LR		12 36 53.1			
	comp=Z,44nm,20.3s,baz=103,slow=37									
	comp=Z,0.9nm,0.7s									
BVAR	**Borovoye Array**	**20.00**	**289**	P	**P**		**12 28 56.0**	**0.0**		
BRVK	**Borovoye**	**20.05**	**289**‖	*e*P	**P**		**12 28 55.3**	**-1.3**		
BRVK				pmax	pmax					
	comp=Z,8.0nm,3.1s									
KSRS	**Korea Array**	**22.33**	**117**	P	**P**		**12 29 20.6**	**-0.6**		
	comp=Z,0.6nm,0.7s,baz=318,slow=9.0,SNR=2.7									
KSRS				LR	LR		12 38 53.4			
	comp=Z,35nm,19.2s,baz=235,slow=39									
	comp=Z,0.6nm,0.7s									
ARU	**Arti**	**26.43**	**300**	P	**P**		**12 30 00.3**	**0.0**		
	comp=Z,1.7nm,0.3s,baz=258,slow=2.7,SNR=4.0									
	comp=Z,1.7nm,0.3s									
ARU	**Arti**	**26.43**	**300**	*d i* P	**P**		**12 30 01.3**	**+1.0**		
ARU							12 30 37.9			
ARU				S	**S**		**12 34 37.4**	**+2.9**		
ARU				SS	**SnSn**		**12 35 37.3**	**+2.9**		
ARU				pmax	pmax					
	comp=Z,8.0nm,1.4s									
MJAR	**Matsushiro Arr**	**29.02**	**106**	LR	LR		12 42 09.4			
	comp=Z,35nm,18.9s,baz=2.0,slow=37									
JHJ	**Hachijo jima 2**	**32.28**	**109**	LR	LR		12 45 32.7			
	comp=Z,41nm,18.0s,baz=276,slow=39									
CMAR	**Chiang Mai Arr**	**32.43**	**187**	LR	LR		12 45 15.3			
	comp=Z,46nm,20.9s,baz=180,slow=39									

BILL	**Bilibino**	**34.64**	**36**	*e*P	P		12 31 16.3	+3.7		
BILL				pmax	pmax					
	comp=Z,5.0nm,1.0s									
ARCES	**ARCESS Array B**	**39.38**	**327**	P	**P**		**12 31 55.5**	**+2.5**		
	comp=Z,2.4nm,0.9s,baz=51,slow=9.6,SNR=3.8									
	comp=Z,2.4nm,0.9s									
FINES	**FINESS Array B**	**41.56**	**315**	P	**P**		**12 32 14.3**	**+3.3**		
	comp=Z,2.2nm,0.6s,baz=77,slow=7.8,SNR=13									
	comp=Z,2.2nm,0.6s									
ANN	**Anapa**	**42.99**	**288**	*e*P	P		12 32 16.0	-6.9		
ANN				*e*PP			12 32 18.2			
ANN				*e*S	S		12 38 38.7	-10		
ANN				pmax	pmax					
	comp=Z,29nm,0.9s									
NOA	**NORSAR Array B**	**48.16**	**319**	P	**P**		**12 33 07.0**	**+3.4**		
	comp=Z,0.7nm,0.7s,baz=59,slow=7.7,SNR=3.5									
	comp=Z,0.7nm,0.7s									
SFJD	**Kangerlussuaq**	**60.79**	**348**	LR	LR		13 01 22.1			
	comp=Z,65nm,18.0s,baz=86,slow=36									
WRA	**Warramunga Arr**	**75.75**	**149**	P	**P**		**12 36 07.3**	**-2.2**		
	comp=Z,0.6nm,0.7s,baz=342,slow=6.4,SNR=5.3									
	comp=Z,0.6nm,0.7s									
WRA	**Warramunga Arr**	**75.75**	**149**	*i* P	**P**		**12 36 08.6**	**-0.9**		
ASAR	**Alice Springs**	**79.10**	**151**	P	**P**		**12 36 25.9**	**-2.2**		
	comp=Z,0.8nm,0.8s,baz=350,slow=6.1,SNR=12									
	comp=Z,0.8nm,0.8s									
ASAR	**Alice Springs**	**79.10**	**151**	P	**P**		**12 36 26.0**	**-2.2**		

INET ***25*** *12:34:26.5±0.9, 12°.16N×87°.40W, h27km±5km, MW3.5*
SNET ***25*** *12:34:27.3±0.9, 12°.26N×87°.52W, h18km±10km, ML3.5*
ISC 25 12:34:20.6±2.1, 11°.88N±0°.10×87°.57W±0°.05, h24km±15km, **n22,** σ1**s09**/33**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.96**	**32**	*e*P		**Pb**	**12 34 39.4**	**+0.8**
CRIN				*e*S		**Sb**	**12 34 50.1**	**-0.8**
TEL3	**Telica 3**	**0.98**	**46**	*e*P		**Pb**	**12 34 39.6**	**+0.6**
COPN	**Copaltepe**	**1.00**	**73**	*e*P		**Pb**	**12 34 41.4**	**+2.1**
TELN	**Telica**	**1.02**	**45**	*e*P		**Pn**	**12 34 39.8**	**+0.3**
CSGN	**Cosiguina Volc**	**1.09**	**0**	*e*P		**Pb**	**12 34 41.8**	**+0.9**
CSGN				*e*S		**Sb**	**12 34 53.1**	**-1.6**
MOMN	**Momotombo**	**1.13**	**62**	*i* P		**Pb**	**12 34 42.0**	**+0.4**
MOMN				*e*S		**Sn**	**12 34 54.2**	**-1.6**
APYN	**Apoyeque**	**1.24**	**73**	*e*P		**Pn**	**12 34 43.1**	**+0.7**
APYN				*e*S		**Sn**	**12 34 56.9**	**-1.6**
CNCH	**Conchagua**	**1.41**	**349**	*e*P		**Pb**	**12 34 46.5**	**+0.1**
CNCH				*e*P		**Pb**	**12 34 46.5**	**+0.1**
CNCH				*e*S		**Sn**	**12 35 01.5**	**-1.3**
HUEN		**1.44**	**71**	*e*P		**Pb**	**12 34 46.6**	**-0.1**
HUEN				*e*S		**Sn**	**12 35 02.3**	**-0.9**
VSM	**San Miguel**	**1.69**	**336**	*e*P		**Pb**	**12 34 52.5**	**+1.4**
RANC	**El Ranchito**	**1.70**	**336**	*e*P		**Pb**	**12 34 51.9**	**+0.6**
RANC				*e*S		**Sn**	**12 35 11.2**	**+1.3**
RANC				IAML			12 35 16.1	
	comp=Z,822nm,0.1s							
PACA	**Pacayal**	**1.74**	**335**	*e*P		**Pb**	**12 34 52.4**	**+0.4**
PACA				*e*S		**Sn**	**12 35 12.3**	**+1.3**
PACA	**Pacayal**	**1.74**	**335**	*e*P		**Pb**	**12 34 52.7**	**+0.7**
PACA				*e*S		**Sn**	**12 35 11.9**	**+0.9**
MATN	**Matagalpa**	**1.91**	**57**	*e*P		**Pn**	**12 34 51.7**	**0.0**
BOAB	**BOACO BROADBAN**	**1.94**	**73**	*e*P		**Pn**	**12 34 53.0**	**+0.9**
RCON	**San Juan de Ri**	**2.10**	**41**	*e*P		**Pn**	**12 34 54.3**	**-0.2**
SCLA	**Alcaldia de Sa**	**2.14**	**328**	*e*P		**Pb**	**12 34 58.9**	**+0.2**
SCLA				*e*S		**Sn**	**12 35 22.9**	**+2.3**
COEG	**Centro de Oper**	**2.15**	**324**	*e*P		**Pb**	**12 34 58.0**	**-1.0**
COEG				IAML			12 35 27.8	
	comp=Z,377nm,0.4s							
TGUH	**Tegucigalpa,Un**	**2.18**	**7**	*e*P		**Pn**	**12 34 55.9**	**+0.3**
LFRS	**El Faro**	**2.27**	**320**	*e*P		**Pb**	**12 35 01.1**	**+0.2**
JAYA	**Jayaque - finc**	**2.55**	**314**	*e*P		**Pb**	**12 35 05.2**	**-0.5**
JAYA				IAML			12 35 34.6	
	comp=Z,278nm,0.2s							
CEVE	**Cerro Verde**	**2.79**	**314**	*e*P		**Pb**	**12 35 08.4**	**-1.5**

BGR ***25*** *12:35:58.9±0.8, 41°.91N×13°.61E, h5km, ML4.8/11, Error ellipse: s-maj=27.8km s-min=20.0km az=28.0*
MED_RC ***25*** *12:36:05.0±1.0, 42°.48N×13°.27E, h10km, MW4.6/8, Moment Tensor Solution.Mantle waves: s8,c12; Duration: 1!0 Moment tensor: Scale 10**16**Nm; Mrr-0.69±.02; Mθθ0.17±.02; Mϕϕ0.53±.02; Mrθ-0.58±.09; Mθϕ-0.49±.02; Mϕr-0.17±.13; Best double couple: M0.99000×10**16** NP1:ϕs115.00000°, δ61.00000°, λ-127.00000°. NP2: ϕs352.00000°, δ46.00000°, λ-43.00000°. Principal axes: T 0.9000, Plg8.0000°, Azm231.0000°; N 0.1700, Plg32.0000°, Azm135.0000°; P -1.0700, Plg57.0000°, Azm334.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*
LDG ***25*** *12:36:05.5±0.1, 42°.57N×13°.21E, h5km, Md4.4/2, Ml3.9/33 Error ellipse: s-maj=4.5km s-min=2.8km az=42.0*
ROM ***25*** *12:36:05.2±0.0, 42°.600N±0°.002×13°.282E±0°.004, h8km, ML4.3/128, Mw4.4, Error ellipse: s-maj=0.3km s-min=0.1km az=67.0, Moment Tensor Solution. Moment tensor: Scale 10**15**Nm; Mrr-4.44; Mθθ0.89; Mϕϕ3.55; Mrθ-1.92; Mθϕ-2.80; Mϕr0.09; Fault plane solution: M05.29089×10**15** NP1:ϕs347.00000°, δ42.00000°, λ-60.00000°. NP2:ϕs129.00000°, δ55.00000°, λ-115.00000°.*
GCMT ***25*** *12:36:05.2±0.4, 42°.40N±0°.03×13°.12E±0°.04, h18km±1km, MW4.7/74, Moment Tensor Solution. s13,c14; s74,c94; Duration: 0 Moment tensor: Scale 10**16**Nm; Mrr-1.18±.12; Mθθ0.21±.07; Mϕϕ0.96±.08; Mrθ-0.74±.20; Mθϕ-0.72±.05; Mϕr0.09±.17; Best double couple: M1.50300×10**16** NP1:ϕs126.00000°, δ59.00000°, λ-117.00000°. NP2: ϕs351.00000°, δ40.00000°, λ-52.00000°. Principal axes: T 1.4850, Plg11.0000°, Azm235.0000°; N 0.0350, Plg23.0000°, Azm141.0000°; P -1.5200, Plg64.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***25*** *12:36:06.1±0.6, 42°.74N×13°.34E, h0km, mb4.1/21, mbtmp4.0/35, ML3.9/14, MS3.8/68 Error ellipse: s-maj=11.4km s-min=9.4km az=100.0*
PRU ***25*** *12:36:06.2±0.0, 42°.70N×13°.27E, h0km, M4.3*
PDG ***25*** *12:36:06.0±0.7, 42°.62N×13°.30E, h8km, ML4.4/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
MOS ***25*** *12:36:06.2±1.2, 42°.69N×13°.25E, h13km, mb4.5/20, Error ellipse: s-maj=7.9km s-min=3.6km az=77.3*
NEIC ***25*** *12:36:07.3, 42°.66N×13°.14E, h5km, Moment Tensor Solution. Moment tensor: Scale 10**15**Nm; Mrr-4.31; Mθθ0.16; Mϕϕ4.15; Mrθ2.84; Mθϕ-2.17; Mϕr-0.42; Fault plane solution: M05.55000×10**15** NP1:ϕs179.70000°, δ41.37000°, λ-50.23000°. NP2:ϕs311.74000°, δ59.47000°, λ-119.40000°. Principal axes: T 5.3687, Plg10.0000°, Azm62.0000°; N 0.3541, Plg25.0000°, Azm328.0000°; P -5.7228, Plg63.0000°, Azm172.0000°;*
NEIC ***25*** *12:36:07.2±1.7, 42°.67N±0°.06×13°.17E±0°.06, h10km±2km, mb4.2/16, Mwr4.4/43, ML4.3(ROM), Mwr4.4(VIE) Error ellipse: s-maj=10.1km s-min=6.9km az=211.0*
STR ***25*** *12:36:08.2±1.5, 43°.N±7°×1°.3E±1°.2, h10km, mb4.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=105.5, preliminary*
BEO ***25*** *12:36:10.5±0.8, 42°.91N×13°.59E, h0km, ML4.4/2*
ISC 25 12:36:06.7±0.6, 42°.60N±0°.01×13°.26E±0°.01, h5km±3km**, n668,** σ1**s78**/725**, mb4.3**/38**, MS3.9**/60**, 63C-73D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.06**	**354**	⇑P		**Pg**	**12 36 07.8**	**-0.5**
T1201				S		**Sg**	**12 36 09.2**	**-0.2**
T1204	**Amatrice, Fraz**	**0.09**	**29**	⇑P		**Pg**	**12 36 07.8**	**-0.9**
T1204				S		**Sg**	**12 36 09.4**	**-0.7**
RM33	**Pellescritta (**	**0.10**	**200**	⇑P		**Pg**	**12 36 08.5**	**-0.3**
RM33				S		**Sg**	**12 36 10.3**	**+0.1**
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
RM33				AML	AML			
T1202	**Accumoli, Fraz**	**0.11**	**347**	‖P		**Pg**	**12 36 08.7**	**-0.3**
CAMP	**Campotosto**	**0.13**	**120**	⇑P		**Pg**	**12 36 08.4**	**-1.0**
CAMP				S		**Sg**	**12 36 10.4**	**-0.8**
CAMP				AML	AML			
CAMP				AML	AML			
T1213	**Norcia, Frazio**	**0.16**	**322**	‖P		**Pg**	**12 36 09.4**	**-0.5**
T1213				S		**Sg**	**12 36 11.7**	**-0.4**
LNSS	**Leonessa**	**0.16**	**271**	⇑P		**Pg**	**12 36 09.8**	**-0.2**
LNSS				S		**Sg**	**12 36 12.8**	**+0.7**
LNSS				AML	AML			
LNSS				AML	AML			
T1214	**Arquata del Tr**	**0.16**	**347**	‖P		**Pg**	**12 36 09.5**	**-0.5**
T1214				S		**Sg**	**12 36 12.4**	**+0.1**
T1243	**Rocca Santa Ma**	**0.17**	**55**	⇑P		**Pg**	**12 36 08.9**	**-1.2**
T1243				S		**Sg**	**12 36 11.8**	**-0.6**
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1212	**Cascia, Frazio**	**0.22**	**314**	‖P		**Pg**	**12 36 10.5**	**-0.5**
T1212				S		**Sg**	**12 36 14.5**	**+0.6**
T1242	**Castelluccio d**	**0.23**	**350**	‖P		**Pg**	**12 36 10.7**	**-0.6**
T1242				S		**Sg**	**12 36 14.8**	**+0.3**
TERO	**Teramo**	**0.26**	**85**	⇑P		**Pg**	**12 36 10.3**	**-1.4**
TERO				S		**Sg**	**12 36 14.1**	**-1.0**
TERO				AML	AML			
TERO				AML	AML			
TERO				AML	AML			
TERO				AML	AML			
NRCA	**Norcia**	**0.26**	**336**	Pg		**Pg**	**12 36 11.1**	**-0.7**
NRCA	**Norcia**	**0.26**	**336**	‖P		**Pg**	**12 36 11.0**	**-0.7**
NRCA				S		**Sg**	**12 36 15.4**	**+0.3**
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
AQU	**L'Aquila**	**0.27**	**157**	Pg		**Pg**	**12 36 11.3**	**-0.6**
AQU	**L'Aquila**	**0.27**	**157**	P		**Pg**	**12 36 11.3**	**-0.6**
AQU	**L'Aquila**	**0.27**	**157**	⇑P		**Pg**	**12 36 11.1**	**-0.8**
AQU				S		**Sg**	**12 36 15.4**	**0.0**
AQU				AML	AML			
	comp=E,99400μm,0.7s							
AQU				AML	AML			
	comp=N,99650μm,0.6s							
AQU				AML	AML			
	comp=N,97700μm,0.6s							
AQU				AML	AML			
	comp=E,96350μm,0.7s							
GIGS	**Gran Sasso**	**0.27**	**123**	⇑P		**Pg**	**12 36 10.7**	**-1.4**
GIGS				S		**Sg**	**12 36 14.8**	**-0.9**
MMO1	**Montemonaco**	**0.30**	**10**	⇑P		**Pg**	**12 36 11.7**	**-0.9**
MMO1				S		**Sg**	**12 36 16.4**	**-0.3**
MMO1				AML	AML			
	comp=N,29050μm,1.0s							
MMO1				AML	AML			
	comp=E,21750μm,0.4s							
MMO1				AML	AML			
	comp=E,21800μm,0.4s							
MMO1				AML	AML			
MMO1				AML	AML			
	comp=N,29100μm,1.0s							
MMO1				AML	AML			
T1211	**Morro Reatino**	**0.30**	**258**	⇑P		**Pg**	**12 36 12.2**	**-0.5**
T1211				S		**Sg**	**12 36 17.7**	**+1.0**
MC2	**Monte Cornacci**	**0.32**	**351**	‖P		**Pg**	**12 36 12.1**	**-0.8**
FIAM	**Fiamignano**	**0.35**	**198**	⇑P		**Pg**	**12 36 12.6**	**-0.8**
FIAM				AML	AML			
	comp=E,81750μm,0.8s							
FIAM				AML	AML			
	comp=N,59750μm,0.8s							
T1215	**Vallo di Nera,**	**0.35**	**305**	‖P		**Pg**	**12 36 12.8**	**-0.7**
T1215				S		**Sg**	**12 36 18.6**	**+0.4**
ARRO	**Arrone**	**0.36**	**267**	⇑P		**Pg**	**12 36 13.2**	**-0.5**
ARRO				S		**Sg**	**12 36 19.4**	**+0.9**
ARRO				AML	AML			
	comp=E,43250μm,0.9s							
ARRO				AML	AML			
	comp=N,52850μm,0.9s							
FEMA	**Monte Fema**	**0.39**	**337**	P		**Pg**	**12 36 13.5**	**-0.8**
FEMA				S		**Sg**	**12 36 20.0**	**+0.5**
FEMA				AML	AML			
FEMA				AML	AML			
FEMA				AML	AML			
FEMA				AML	AML			
FAGN	**Fagnano**	**0.41**	**144**	P		**Pg**	**12 36 13.4**	**-1.2**
FAGN				AML	AML			
FAGN				AML	AML			
FDMO	**Fiordimonte**	**0.45**	**344**	‖P		**Pg**	**12 36 14.4**	**-1.0**
FDMO				S		**Sg**	**12 36 21.4**	**0.0**
FDMO				AML	AML			
	comp=E,51050μm,1.1s							
FDMO				AML	AML			
	comp=N,54950μm,0.8s							
OFFI	**Offida**	**0.46**	**43**	⇑P		**Pg**	**12 36 15.0**	**-0.5**
OFFI				S		**Sg**	**12 36 22.2**	**+0.6**
OFFI				AML	AML			
OFFI				AML	AML			
GUMA	**Gualdo di Mace**	**0.47**	**7**	⇑P		**Pg**	**12 36 14.9**	**-0.8**
GUMA				S		**Sg**	**12 36 22.3**	**+0.5**
GUMA				AML	AML			
GUMA				AML	AML			
GUMA				AML	AML			
GUMA				AML	AML			
VCEL	**Villa Celiera**	**0.48**	**115**	P		**Pg**	**12 36 14.8**	**-1.1**
VCEL				S		**Sg**	**12 36 22.8**	**+0.7**
VCEL				AML	AML			
VCEL				AML	AML			
CESI	**CESI - Serrava**	**0.48**	**327**	‖P		**Pg**	**12 36 15.0**	**-0.9**
CESI				S		**Sg**	**12 36 22.9**	**+0.6**
CESI				AML	AML			
CESI				AML	AML			
	comp=E,57250μm,1.1s							
CSP1	**Cessapalombo**	**0.49**	**355**	‖P		**Pg**	**12 36 15.1**	**-1.1**
CSP1				S		**Sg**	**12 36 23.1**	**+0.5**
CSP1				AML	AML			
	comp=E,98100μm,1.6s							
CSP1				AML	AML			
CSP1				AML	AML			
	comp=E,98000μm,1.6s							
CSP1				AML	AML			
CSP1				AML	AML			
CSP1				AML	AML			
	comp=E,97900μm,1.6s							
CESX	**Cesi**	**0.50**	**271**	⇑P		**Pg**	**12 36 15.4**	**-0.9**

ASSB AML AML
comp=E,42600µm,0.3s
comp=N,39400µm,1.3s
SSM1 San Severino M 0.63 355 P **Pg** 12 36 17.7 -1.1
FIU1 Fiuminata 0.64 338 P **Pg** 12 36 17.6 -1.3
GAG1 Gagliole 0.65 348 P **Pg** 12 36 18.2 -1.0
GAG1 S **Sg** 12 36 28.4 +0.7
GAG1 AML AML
comp=E,86800µm,0.4s
GAG1 AML AML
comp=N,77650µm,0.5s
GAG1 AML AML
comp=N,77250µm,0.5s
SRES S.Oreste - Sor 0.66 237 ⇑P **Pg** 12 36 18.1 -1.3
SRES AML AML
comp=N,14900µm,1.3s
SRES AML AML
comp=E,12300µm,0.8s
CERT Cerreto 0.68 198 P **Pg** 12 36 18.2 -1.6
CERT AML AML
comp=E,40000µm,0.5s
CERT AML AML
comp=N,27450µm,0.5s
MTL1 Matelica 0.68 345 P **Pg** 12 36 18.7 -1.0
MTCE Montecelio 0.69 214 ⇑P **Pg** 12 36 18.4 -1.5
MTCE AML AML
comp=N,23350µm,0.7s
MTCE AML AML
comp=E,28800µm,0.5s
SNTG Esanatoglia 0.69 340 ⇓P **Pg** 12 36 18.6 -1.5
SNTG AML AML
comp=E,2210µm,1.4s
SNTG AML AML
comp=N,2585µm,1.5s
SNTG AML AML
comp=E,16900µm,1.4s
SNTG AML AML
comp=N,21150µm,1.1s
SNTG AML AML
comp=N,2580µm,1.5s
SNTG AML AML
comp=E,2205µm,1.4s
CADA Capodarco di F 0.70 32 P **Pg** 12 36 19.9 -0.2
CADA AML AML
CADA AML AML
CADA AML AML
TRE1 Treia 0.71 3 P **Pg** 12 36 19.7 -0.7
TRE1 AML AML
TRE1 AML AML
TRE1 AML AML
EL6 Elcito 0.74 351 ⇓P **Pg** 12 36 19.4 -1.5
EL6 S **Sg** 12 36 31.3 +0.8
EL6 AML AML
comp=N,51050µm,1.5s
EL6 AML AML
comp=E,49200µm,0.4s
ATCC AVT- Casa Cast 0.74 322 ⇓P **Pg** 12 36 19.6 -1.3
ATCC AML AML
comp=N,44950µm,1.3s
ATCC AML AML
comp=E,40000µm,1.2s
INTR Introdacqua 0.76 141 ⇑P **Pg** 12 36 19.2 -2.0
INTR AML AML
comp=E,15µm,0.7s
INTR AML AML
comp=E,14950µm,0.7s
INTR AML AML
comp=N,27500µm,0.7s
INTR AML AML
comp=N,18µm,0.7s
CIMA Civitanova Mar 0.77 23 P **Pg** 12 36 21.0 -0.4
CING Cingoli 0.78 357 P **Pg** 12 36 20.1 -1.5
CING S **Sg** 12 36 32.4 +0.7
CING AML AML
comp=E,38700µm,0.4s
CING AML AML
comp=N,40000µm,0.6s
VVLD Villa Vallelon 0.78 160 P **Pg** 12 36 20.1 -1.5
VVLD AML AML
comp=N,14450µm,0.7s
VVLD AML AML
comp=E,11125µm,0.6s
FOSV Fossato di Vic 0.79 332 ⇓P **Pg** 12 36 20.2 -1.5
FOSV S **Sg** 12 36 32.2 +0.3
FOSV AML AML
comp=E,26850µm,0.7s
FOSV AML AML
comp=N,24500µm,1.3s
RCAV Rocca di Cave 0.79 197 P **Pg** 12 36 20.0 -1.8
GUAR Guarcino 0.81 177 ⇑P **Pg** 12 36 21.4 -0.7
GUAR AML AML
comp=E,16100µm,1.2s
GUAR AML AML
comp=N,16500µm,0.5s
PP3 Marolino 0.82 18 ⇑P **Pg** 12 36 21.5 -0.9
PP3 AML AML
comp=N,77650µm,0.9s
PP3 AML AML
PP3 AML AML
PP3 AML AML
comp=N,81600µm,0.6s
MURB Monte Urbino 0.85 321 **Pg** 12 36 21.8 -1.3
MURB Monte Urbino 0.85 321 ⇓P **Pg** 12 36 21.7 -1.3
MURB AML AML
comp=E,62250µm,0.3s
MURB AML AML
comp=N,81400µm,1.1s
MURB AML AML
comp=E,70200µm,0.3s
MURB AML AML
comp=N,85950µm,1.1s
MMUR Monte Murano 0.86 347 P **Pg** 12 36 22.0 -1.3
MMUR AML AML
comp=N,41250µm,0.4s
MMUR AML AML
comp=E,50600µm,1.6s
LPEL Lama dei Pelig 0.88 129 P **Pg** 12 36 21.6 -1.9
LPEL AML AML
comp=E,12935µm,1.4s
LPEL AML AML
comp=N,12550µm,0.7s
RMP Rome, Mte Porz 0.89 208 P **Pg** 12 36 22.9 -0.8
RMP AML AML
comp=E,30250µm,1.2s
RMP AML AML
comp=N,36650µm,1.2s
ATTE AVT- Monte Tez 0.89 312 ⇓P **Pg** 12 36 22.4 -1.5
ATTE AML AML
comp=E,16600µm,0.7s
ATTE AML AML
comp=N,15250µm,1.4s
MGAB Montegabbione 0.90 291 ⇑P **Pg** 12 36 23.2 -0.8
MGAB AML AML
comp=N,31900µm,1.2s
MGAB AML AML
comp=E,35450µm,1.3s
MGAB AML AML
comp=E,36600µm,1.3s
MGAB AML AML
comp=N,31950µm,1.2s
MGAB AML AML
comp=N,31850µm,1.2s
SSFR Montelago di S 0.91 337 P **Pg** 12 36 22.6 -1.4
ATFO Monte Foce - G 0.92 327 ⇓P **Pg** 12 36 22.7 -1.6
ATFO AML AML
comp=E,21850µm,1.5s
ATFO AML AML
comp=N,21350µm,1.6s
VIVA Pratoni del Vi 0.92 203 P **Pg** 12 36 23.5 -0.9
VIVA AML AML
comp=E,46800µm,0.7s
VIVA AML AML
comp=N,55900µm,0.4s
ATSC Scheggia e Pas 0.93 333 P **Pg** 12 36 23.0 -1.5
ARVD Arcevia 0.93 346 ⇓P **Pg** 12 36 22.7 -1.8
ARVD AML AML
comp=E,18500µm,1.1s
ARVD AML AML
comp=N,14150µm,1.0s
RDP Rocca di Papa 0.93 206 P **Pg** 12 36 23.3 -1.2
RDP AML AML
comp=N,50450µm,0.6s
RDP AML AML
comp=E,39450µm,0.5s
MA9 Marino 0.94 208 P **Pg** 12 36 23.7 -1.0
MA9 AML AML
comp=E,34450µm,0.6s
MA9 AML AML
comp=N,34750µm,0.6s
POFI Posta Fibreno 0.94 159 P **Pg** 12 36 22.8 -2.0
ATLO AVT- Montelove 0.95 319 ⇓P **Pg** 12 36 23.2 -1.7
SAMA S.Maria delle 0.96 211 P **Pg** 12 36 23.8 -1.2
AOI Ancona 0.98 15 P **Pg** 12 36 24.2 -1.3
AOI AML AML
comp=E,23250µm,1.6s
AOI AML AML
comp=N,20850µm,0.7s
ATVA AVT- Monte Val 0.98 314 ⇓P **Pg** 12 36 23.9 -1.7
TB01 Gubbio 0.99 323 ⇓P **Pg** 12 36 23.9 -1.7
FRON Frontone 1.00 337 ⇓P **Pg** 12 36 23.9 -2.0
FRON AML AML
comp=E,23750µm,1.5s
FRON AML AML
comp=N,28250µm,0.4s
ATVO AVT- Monte Val 1.00 322 ⇓P **Pg** 12 36 24.1 -1.8
ATVO AML AML
comp=E,22150µm,1.3s
ATVO AML AML
comp=N,19000µm,1.1s
LAV9 Lanuvio 1.01 204 P **Pg** 12 36 25.1 -0.9
LAV9 AML AML
comp=E,34050µm,1.4s
LAV9 AML AML
comp=N,33100µm,0.9s
LAV9 AML AML
comp=N,31600µm,0.9s
LAV9 AML AML
comp=E,34950µm,1.4s
ATBU Serra di Buran 1.02 330 ⇓P **Pg** 12 36 24.6 -1.6
SACS San Casciano d 1.02 285 ⇑P **Pg** 12 36 25.2 -1.1
SACS AML AML
comp=E,12250µm,1.3s
SACS AML AML
comp=N,18300µm,0.8s
SACS AML AML
comp=E,12200µm,1.3s
SACS AML AML
comp=N,17700µm,0.8s
ATMI Monte Miggiano 1.03 316 P **Pg** 12 36 25.4 -1.0
ATMI AML AML
comp=N,32950µm,1.0s
ATMI AML AML
comp=E,34750µm,0.5s
GIUL Giuliano Di Ro 1.04 180 ⇑P **Pg** 12 36 25.1 -1.5
GIUL AML AML
comp=E,9240µm,0.9s
GIUL AML AML
comp=N,10375µm,0.7s
COR1 Corinaldo 1.05 350 P **Pg** 12 36 25.7 -1.0
COR1 AML AML
comp=N,52650µm,1.3s
COR1 AML AML
comp=N,51200µm,1.3s
COR1 AML AML
comp=E,68100µm,1.3s
COR1 AML AML
comp=E,38500µm,1.3s
ATPI Pietralunga - 1.06 324 ⇓P **Pg** 12 36 25.1 -1.8
ATPI AML AML
comp=E,22250µm,0.6s
ATPI AML AML
comp=N,15550µm,0.7s
ATPC Poggio Castell 1.06 327 ⇓P **Pg** 12 36 25.2 -1.8
LATE Laterza 1.07 271 Pg **Pg** 12 36 25.9 -1.3
LATE Laterza 1.07 271 P **Pg** 12 36 26.1 -1.2
PIEI Pieia 1.08 331 ⇓P **Pg** 12 36 25.2 -2.1
PIEI AML AML
comp=E,11905µm,1.6s
PIEI AML AML
comp=N,15050µm,0.5s
TOLF Tolfa 1.08 241 ⇑P **Pg** 12 36 25.6 -1.7
TOLF AML AML
comp=N,11300µm,0.7s
TOLF AML AML
comp=E,12550µm,0.6s
MPAG Monte Paganucc 1.09 341 ⇓P **Pg** 12 36 25.7 -1.9
MPAG AML AML
comp=N,18050µm,1.5s
MPAG AML AML
comp=E,15650µm,1.5s
MPAG AML AML
comp=E,14750µm,1.6s
MPAG AML AML
comp=N,17800µm,1.5s
SENI Senigallia 1.10 359 P **Pg** 12 36 27.0 -0.9
SENI AML AML
comp=N,23750µm,1.6s
SENI AML AML
comp=N,79800µm,0.4s
SENI AML AML
comp=E,24050µm,1.0s
SENI AML AML
comp=E,73850µm,1.5s
SENI AML AML
comp=N,23900µm,1.6s
RNI2 Rionero Sannit 1.12 143 P **Pg** 12 36 26.4 -1.7
RNI2 AML AML
comp=E,14600µm,1.3s
RNI2 AML AML
comp=N,12400µm,1.5s
RNI2 AML AML
comp=N,12750µm,1.5s
RNI2 AML AML
comp=E,15100µm,1.3s
LIK San Giovanni I 1.12 168 AML AML
comp=E,14150µm,1.2s
LIK AML AML
comp=N,15380µm,0.8s
NARO Abbazia di Nar 1.13 334 ⇓P **Pg** 12 36 26.1 -2.2
LATB Latina 1.13 191 P **Pg** 12 36 26.6 -1.6
LATB AML AML
comp=N,2690µm,0.9s
LATB AML AML
comp=E,4370µm,1.0s
APEC Apecchio 1.14 328 P **Pg** 12 36 27.4 -1.1
APEC AML AML
comp=E,4380µm,0.6s
APEC AML AML
comp=N,22100µm,1.4s
APEC AML AML
comp=E,24100µm,0.7s
APEC AML AML
comp=N,4545µm,1.5s
FSSB Fossombrone 1.15 342 ⇓P **Pg** 12 36 26.7 -1.9
FSSB AML AML
comp=E,35050µm,0.5s
FSSB AML AML
comp=N,50200µm,0.4s
CERA Filignano 1.15 150 P **Pg** 12 36 26.7 -2.0
CERA AML AML
comp=N,10800µm,0.7s
CERA AML AML
comp=E,11500µm,0.9s
CERA AML AML
comp=N,10300µm,0.7s
CERA AML AML
comp=E,11150µm,0.9s
ATMC Monte Cedrone 1.15 318 P **Pg** 12 36 26.9 -1.9
BADI Badiali 1.18 321 P **Pg** 12 36 27.4 -1.8
SF03 Valle Cupa 1.18 280 P **Pg** 12 36 28.2 -1.0
MCIV Monte Civitell 1.18 279 P **Pg** 12 36 28.3 -1.0
MCIV AML AML
comp=E,5330µm,1.6s
MCIV AML AML
comp=N,7975µm,0.9s
SF11 Podere del Sol 1.19 284 P **Pg** 12 36 28.6 -0.9
CAFI Castiglion Fio 1.20 308 P **Pg** 12 36 27.9 -1.7
CAFI AML AML
comp=N,8605µm,0.8s
CAFI AML AML
comp=E,8625µm,1.6s
CAFI AML AML
comp=E,8300µm,1.6s
CAFI AML AML
comp=N,9000µm,0.8s
SF04 Casetta 1.20 282 P **Pg** 12 36 28.7 -1.0
SF04 AML AML
comp=E,5800µm,0.9s
SF04 AML AML
comp=N,6090µm,0.8s
FRES Fresagrandinar 1.22 120 P **Pg** 12 36 27.8 -2.2
SF14 Selvena 1.22 278 P **Pg** 12 36 28.4 -1.7
SF13 Bagnolo 1.23 281 ⇓P **Pg** 12 36 29.2 -1.0
PE3 Peglio 1.23 333 ⇑P **Pg** 12 36 28.7 -1.5
PE3 AML AML
comp=N,100µm,0.4s
PE3 AML AML
comp=E,86µm,0.5s
SF01 Poggio Pratacc 1.27 280 P **Pg** 12 36 29.9 -1.0
SF01 AML AML
comp=E,11535µm,0.9s
SF01 AML AML
comp=N,11950µm,1.2s
TRIV Trivento 1.27 130 P **Pg** 12 36 29.2 -1.8
TRIV AML AML
comp=N,7055µm,1.0s
TRIV AML AML
comp=E,6350µm,1.0s
TRIV AML AML
comp=N,7430µm,0.8s
TRIV AML AML
comp=E,6630µm,1.0s
SSP9 Sansepolcro 1.28 320 P **Pn** 12 36 30.0 -1.1
SSP9 AML AML
comp=N,19700µm,1.4s
SSP9 AML AML
comp=E,18550µm,1.6s
PARC Parchiule 1.29 325 P **Pn** 12 36 29.5 -1.8
ARCI Arcidosso 1.34 281 P **Pn** 12 36 31.1 -1.0
ARCI AML AML
comp=N,3485µm,1.1s
ARCI AML AML
comp=E,3135µm,0.9s
PESA Pesaro 1.38 347 AML AML
comp=N,21750µm,1.1s
PESA AML AML
comp=E,28450µm,1.5s
CPGN Carpegna, Ital 1.38 331 AML AML
CPGN AML AML
VAGA Valle Agricola 1.39 148 P **Pn** 12 36 31.3 -1.4
VAGA AML AML
comp=N,5270µm,0.6s
VAGA AML AML
comp=E,3605µm,0.8s
VAGA AML AML
comp=N,5505µm,0.6s
VAGA AML AML
comp=E,3475µm,0.8s
CRE Caprese Michel 1.40 317 P **Pn** 12 36 31.2 -1.7
CRE AML AML
comp=N,7820µm,1.5s
CRE AML AML
comp=E,8325µm,1.3s
BSSO Busso 1.45 136 AML AML
comp=N,5470µm,1.2s
BSSO AML AML
comp=E,3805µm,0.7s
BSSO AML AML
comp=E,1730µm,0.7s
BSSO AML AML
comp=N,2225µm,1.2s
RSM Repubblica di 1.46 336 P **Pn** 12 36 33.1 -0.5
SGG Gregorio Mates 1.47 145 AML AML
comp=N,12nm,0.7s
SGG AML AML
comp=E,16nm,0.7s
SGG AML AML
comp=E,19800µm,0.6s
SGG AML AML
comp=N,13µm,0.7s
MODR Mondragone 1.52 162 P **Pn** 12 36 33.8 -0.8
MODR AML AML
comp=E,1975µm,1.6s
MODR AML AML
comp=N,3795µm,0.8s
PTRJ Pietraroja 1.56 142 AML AML
comp=E,7165µm,0.8s
PTRJ AML AML
comp=E,6280µm,0.7s
PTRJ AML AML
comp=N,5105µm,0.7s
PTRJ AML AML
comp=N,5690µm,0.7s
ASQU Asqua 1.61 319 P **Pn** 12 36 34.3 -1.4
SACR S. Croce Del S 1.61 138 P **Pn** 12 36 35.2 -0.6
MELA Melanico ??? S 1.65 122 AML AML
comp=E,6225µm,0.5s
MELA AML AML
comp=N,7350µm,0.5s
MELA AML AML
comp=E,6515µm,0.5s
MELA AML AML
comp=N,7680µm,0.5s
FROS Frosini 1.66 292 P **Pn** 12 36 35.1 -1.3
SFI Santa Sofia 1.66 322 P **Pn** 12 36 35.0 -1.4
CSNT Castellina Chi 1.69 302 ⇓P **Pn** 12 36 35.5 -1.3
OSSC Osservatorio P 1.74 303 **Pn** 12 36 36.6 -0.9
OSSC Osservatorio P 1.74 303 ⇓P **Pn** 12 36 36.5 -1.0
OSSC AML AML
comp=E,3340µm,1.6s
OSSC AML AML
comp=N,3280µm,1.6s
OSSC AML AML
comp=N,3445µm,1.3s
OSSC AML AML
comp=E,3435µm,1.4s
VITU Vitulano (BN) 1.75 144 AML AML
comp=N,3335µm,0.8s
VITU AML AML
comp=N,3195µm,0.8s
VITU AML AML
comp=E,2940µm,0.6s
VITU AML AML
comp=E,1002µm,0.7s
CASP Castiglione de 1.77 277 Pn **Pn** 12 36 36.7 -1.3
CASP Castiglione de 1.77 277 ⇓P **Pn** 12 36 36.7 -1.3
CASP AML AML
comp=E,1285µm,1.6s
CASP AML AML
comp=N,1134µm,1.3s
RUFI Rufina 1.78 315 P **Pn** 12 36 36.7 -1.3
RUFI AML AML
comp=E,4275µm,1.5s
RUFI AML AML
comp=N,5095µm,1.4s
PSB1 Pescosannita 1.80 139 AML AML
comp=E,2385µm,1.3s
PSB1 AML AML
comp=N,2605µm,1.0s
PSB1 AML AML
comp=E,2175µm,1.3s
PSB1 AML AML
comp=N,2650µm,1.5s
TRIF Trifonti 1.81 287 ⇓P **Pn** 12 36 37.5 -1.0
TRIF AML AML
comp=N,2510µm,1.2s
TRIF AML AML
comp=E,2085µm,1.0s
PAOL Paolisi 1.85 148 Pn **Pb** 12 36 40.1 -0.8
APRC Apricena 1.90 116 P **Pn** 12 36 39.1 -0.6
DUGI Dugi Otok 1.91 43 *e*Pn **Pn** 12 36 38.3 -1.6
SEI Scarperia 2.01 317 P **Pn** 12 36 40.7 -0.6
SEI AML AML
comp=E,4760µm,1.6s
SEI AML AML
comp=N,6470µm,1.3s
SGRT San Giovanni R 2.03 114 **Pn** 12 36 42.0 +0.4
SGRT San Giovanni R 2.03 114 AML AML
comp=N,2695µm,0.6s
SGRT AML AML
comp=E,3135µm,0.7s
VIRC Vir 2.14 37 *e*Pn **Pn** 12 36 41.5 -1.5
MSAG Monte S. Angel 2.16 113 AML AML
comp=N,7565µm,0.6s
MSAG AML AML
comp=E,3625µm,1.3s
MSAG AML AML
comp=N,7795µm,0.6s
MSAG AML AML
comp=E,3425µm,1.3s
MORI Morici 2.19 54 *e*Pn **Pn** 12 36 42.3 -1.4
CELB S.Piero in Cam 2.25 275 P **Pn** 12 36 43.6 -1.0
CELB AML AML
comp=E,624µm,1.6s
CELB AML AML
comp=N,1102µm,1.6s
NVLJ Novalja 2.29 30 *e*Pn **Pn** 12 36 43.5 -1.5
PII Pisa 2.29 300 AML AML
comp=E,1545µm,0.7s

PII AML AML
comp=N,1515µm,0.4s
POPM Popiglio 2.33 309 P **Pn 12 36 44.7 -0.9**
BRJN Brijuni 2.33 9 *e*Pn **Pn 12 36 44.2 -1.4**
BRJN Brijuni 2.33 9 P **Pn 12 36 44.2 -1.4**
CAPA Cerignola FG 2.39 126 AML AML
comp=E,3230µm,1.1s
CAPA AML AML
comp=N,3830µm,1.1s
VULT Monte Vulture 2.41 132 AML AML
comp=E,1900µm,1.1s
VULT AML AML
comp=N,2425µm,0.9s
VULT AML AML
comp=N,2370µm,0.9s
VULT AML AML
comp=E,1880µm,1.1s
MAIM Mastiano 2.41 304 AML AML
comp=E,1360µm,1.0s
MAIM AML AML
comp=N,1315µm,0.5s
ZCCA Zocca 2.41 317 Pn 12 36 48.0 +1.2
RABC Rab 2.42 27 *e*Pn **Pn 12 36 45.6 -1.1**
BDI Bagni Di Lucca 2.43 308 P **Pn 12 36 46.0 -1.1**
BDI AML AML
comp=E,2070µm,1.6s
BDI AML AML
comp=E,772µm,0.4s
BDI AML AML
comp=N,1585µm,0.5s
BDI AML AML
comp=N,733µm,1.6s
CARD Cardoso 2.48 306 P **Pn 12 36 47.0 -0.7**
CARD AML AML
comp=N,1475µm,1.4s
CARD AML AML
comp=E,1590µm,0.5s
SMRN Sveta Marina 2.52 15 *e*Pn **Pn 12 36 46.8 -1.4**
VLC Villacollemand 2.61 308 Pn **Pn 12 36 48.1 -1.4**
VLC Villacollemand 2.61 308 P **Pn 12 36 48.4 -1.1**
VLC AML AML
comp=N,1440µm,1.3s
VLC AML AML
comp=E,1295µm,1.1s
VLC AML AML
comp=E,1285µm,1.1s
VLC AML AML
comp=N,1445µm,1.3s
PALZ Palazzo San Ge 2.61 128 AML AML
comp=N,3285µm,0.9s
PALZ AML AML
comp=E,3390µm,1.4s
UDBI Udbina 2.65 43 *e*Pn **Pn 12 36 49.8 -0.3**
MRVN Minervino Murg 2.68 124 AML AML
comp=E,588µm,0.7s
MRVN AML AML
comp=N,820µm,0.7s
LSTV Lastovo 2.68 85 *e*Pn **Pn 12 36 48.8 -1.6**
KIJV Kijevo 2.69 57 *e*Pn **Pn 12 36 50.0 -0.6**
ACER Acerenza 2.71 131 AML AML
comp=N,1260µm,1.2s
ACER AML AML
comp=E,1550µm,0.7s
ACER AML AML
comp=E,1465µm,0.7s
ACER AML AML
comp=N,1375µm,1.2s
EQUI Equi 2.75 306 P **Pn 12 36 50.5 -0.9**
EQUI AML AML
comp=N,1100µm,0.6s
EQUI AML AML
comp=E,801µm,1.6s
A250A Rusevo Krmpots 2.76 25 *e*Pn **Pn 12 36 50.5 -1.0**
SERM Sermide 2.80 330 AML AML
comp=E,2955µm,0.7s
SERM AML AML
comp=N,2750µm,1.2s
MAKA Makarska 2.85 75 *e*Pn **Pn 12 36 51.7 -1.0**
PLIT Plitvice 2.85 36 *e*Pn **Pn 12 36 51.4 -1.4**
RIY Rijeka 2.86 18 *e*Pn **Pn 12 36 51.7 -1.2**
RIY Rijeka 2.86 18 *e*Pn **Pn 12 36 52.2 -0.7**
RIY *e*Sg **Sn 12 37 28.2 +0.5**
PLMA Palmaria, Port 2.88 301 P **Pn 12 36 52.9 -0.2**
PLMA AML AML
comp=E,688µm,0.4s
PLMA AML AML
comp=N,706µm,1.1s
RICI Ricice 2.98 71 *e*Pn **Pn 12 36 54.2 -0.3**
SMPL Sampolo 2.99 262 P **Pn 12 36 53.8 -0.9**
SMPL Sampolo 2.99 262 P **Pn 12 36 53.6 -1.1**
SMPL Sampolo 2.99 262 AML AML
comp=N,142µm,0.9s
SMPL AML AML
comp=E,124µm,0.9s
TEOL Teolo 2.99 338 Pn **Pn 12 36 53.9 -0.7**
GRAM Graiana 2.99 310 P **Pn 12 36 54.9 +0.1**
GRAM AML AML
comp=E,2030µm,1.0s
GRAM AML AML
comp=N,2010µm,0.9s
SKDS Skadanscina 3.00 10 *e*Pn **Pn 12 36 51.9 -2.9**
SKDS Skadanscina 3.00 10 *e*Pn **Pn 12 36 53.4 -1.4**
SKDS Skadanscina 3.00 10 *i* Pn **Pn 12 36 53.2 -1.6**
SKDS *e*Sn **Sn 12 37 29.4 -1.6**
SKDS IAML 12 37 50.7
comp=Z,640nm,0.6s
AMUR Altamura 3.02 123 AML AML
comp=N,1014µm,0.7s
AMUR AML AML
comp=E,1480µm,0.6s
A050A Klekovaca 3.03 51 *e*Pn **Pn 12 36 55.3 0.0**
OPPE Oppeano 3.10 332 AML AML
comp=E,3980µm,1.4s
OPPE AML AML
comp=N,4185µm,1.1s
TRI Trieste 3.13 7 Pn 12 36 55.1 -1.5
TRI Trieste 3.13 7 P **Pn 12 36 55.1 -1.5**
PGF Pioggiola 3.15 271 *e*P **Pn 12 36 56.7 -0.2**
PGF *e*Sn **Sn 12 37 28.5 -6.4**
comp=N,84nm,0.5s
PGF Pioggiola 3.15 271 P **Pn 12 36 56.8 -0.1**
PGF Pioggiola 3.15 271 S **Sn 12 37 34.0 -0.8**
SRKY Kupres RS 3.21 61 *e*Pn **Pn 12 36 58.1 +0.4**
MSSA Maissana 3.22 303 Pn **Pn 12 36 57.7 -0.2**
MSSA Maissana 3.22 303 P **Pn 12 36 57.5 -0.4**
MSSA AML AML
comp=E,666µm,1.1s
MSSA AML AML
comp=N,796µm,1.5s
MATE Matera 3.24 126 ⇑P **Pn 12 36 58.2 +0.2**
CUC Castrocucco 3.24 143 Pn **Pn 12 37 00.7 +2.5**
BOJS Bojanci 3.24 26 *e*Pn **Pn 12 36 57.4 -0.7**
BOJS Bojanci 3.24 26 *e*Pn **Pn 12 36 57.6 -0.5**
BOJS Bojanci 3.24 26 P **Pn 12 36 57.7 -0.5**
CEY Cerknica 3.25 15 *e*Pn **Pn 12 36 57.1 -1.2**
CEY Cerknica 3.25 15 *e*Pn **Pn 12 36 57.5 -0.8**
STON Ston 3.28 84 *e*Pn **Pn 12 36 56.7 -2.0**
STON Ston 3.28 84 *e*Pn **Pn 12 36 56.4 -2.3**
STON Ston 3.28 84 *e*Pn **Pn 12 36 56.9 -1.8**
STON *e*Sn **Sn 12 37 36.7 -1.3**
MGRS Mrkonjic Grad 3.32 56 *e*Pn **Pn 12 37 00.1 +0.8**
LTRZ Laterza 3.33 126 P **Pn 12 36 59.0 -0.4**
LTRZ AML AML
comp=N,1200µm,1.6s
LTRZ AML AML
comp=E,653µm,0.8s
NOCI Noci 3.38 121 P **Pn 12 36 59.8 -0.2**
NOCI AML AML
comp=E,781µm,1.0s
NOCI AML AML
comp=N,981µm,0.8s
SABO M.te Sabotino 3.39 4 Pn 12 36 58.9 -1.3
SABO M.te Sabotino 3.39 4 P **Pn 12 36 58.7 -1.5**
SABO AML AML
comp=N,12100µm,0.6s
SABO AML AML
comp=N,3060µm,0.6s
SABO AML AML
comp=E,11500µm,0.6s
SABO AML AML
comp=E,2785µm,1.6s
AJAC Base Areonaval 3.40 260 P **Pn 12 37 00.4 0.0**
AJAC S **Sn 12 37 41.3 +0.3**
AJAC Base Areonaval 3.40 260 P **Pn 12 37 00.2 -0.1**
AJAC AML AML
comp=E,675µm,1.1s
AJAC AML AML
comp=N,424µm,0.7s
OZLJ Ozalj 3.41 27 *e*Pn **Pn 12 36 59.2 -1.2**
ROVR Rover Verones 3.43 333 ⇓P **Pn 12 37 00.0 -0.8**
ROVR AML AML
comp=E,620µm,1.1s
ROVR AML AML
comp=N,649µm,0.3s
CGRP Cima Grappa 3.44 343 P **Pn 12 37 00.2 -0.8**
CGRP AML AML
comp=N,2715µm,0.5s
CGRP AML AML
comp=E,2675µm,1.6s
CGRP AML AML
comp=N,2705µm,0.5s
CGRP AML AML
comp=E,2710µm,1.6s
VARN Col Varnada, M 3.49 347 P **Pn 12 37 00.6 -1.1**
VARN AML AML
comp=N,2595µm,0.8s
VARN AML AML
comp=N,2585µm,0.8s
VARN AML AML
comp=E,3365µm,0.9s
VARN AML AML
comp=E,3350µm,0.9s
LJU Ljubljana 3.56 14 *e*Pn **Pn 12 37 02.8 +0.2**
LJU Ljubljana 3.56 14 *i* Pn **Pn 12 37 02.7 +0.2**
LJU *e*Sn **Sn 12 37 44.1 -0.9**
LJU IAML 12 38 16.3
comp=Z,2µm,1.7s
LJU Ljubljana 3.56 14 P **Pn 12 37 02.2 -0.3**
LJU AML AML
comp=E,11650µm,0.7s
LJU AML AML
comp=N,11255µm,0.7s
BLY Banja Luka 3.57 52 *e*Pn **Pn 12 37 02.5 -0.1**
BLY Banja Luka 3.57 52 *e*Pn **Pn 12 37 02.9 +0.3**
DGI Dorgali Grotta 3.57 232 P **Pn 12 37 02.3 -0.3**
A051A Mrakovica 3.58 46 *e*Pn **Pn 12 37 02.2 -0.6**
CRES Cresnjev 3.59 25 *e*Pn **Pn 12 37 03.0 0.0**
DOSS Dosso del Somm 3.60 336 P **Pn 12 37 02.5 -0.7**
DOSS AML AML
comp=E,1920µm,1.6s
DOSS AML AML
comp=N,1690µm,1.4s
DOSS AML AML
comp=E,1745µm,1.4s
DOSS AML AML
comp=N,1905µm,1.5s
SALO Salr 3.60 328 Pn 12 37 03.2 0.0
SALO Salr 3.60 328 P **Pn 12 37 03.1 0.0**
SALO AML AML
comp=E,2045µm,0.6s
SALO AML AML
comp=E,2005µm,0.5s
SALO AML AML
comp=N,2150µm,1.3s
SALO AML AML
comp=N,2205µm,1.3s
DBRK Dubrovnik 3.61 87 *e*Pn **Pn 12 37 01.4 -1.8**
MPRI Monte Prat 3.65 357 P **Pn 12 37 02.7 -1.1**
MPRI AML AML
comp=N,2335µm,1.6s
MPRI AML AML
comp=N,1810µm,1.5s
MPRI AML AML
comp=E,2370µm,1.5s
MPRI AML AML
comp=N,2945µm,0.7s
STAL STALIGIAL 3.68 354 Pn 12 37 03.3 -0.9
STAL STALIGIAL 3.68 354 P **Pn 12 37 03.1 -1.1**
STAL AML AML
comp=N,1505µm,0.9s
STAL AML AML
comp=N,1500µm,0.9s
STAL AML AML
comp=E,1740µm,1.3s
STAL AML AML
comp=E,2190µm,1.3s
MAGA Magasa 3.69 330 P **Pn 12 37 03.9 -0.6**
MAGA AML AML
comp=N,2810µm,0.4s
MAGA AML AML
comp=E,3835µm,0.6s
LUSI Trento, Gardas 3.75 334 ⇓P **Pn 12 37 04.4 -0.7**
LUSI AML AML
comp=N,1335µm,0.5s
LUSI AML AML
comp=E,1425µm,0.9s
CIMO Cimolais 3.76 351 Pn 12 37 04.2 -1.1
CIMO Cimolais 3.76 351 ⇓P **Pn 12 37 03.8 -1.4**
CIMO AML AML
comp=N,482µm,1.6s
CIMO AML AML
comp=N,491µm,1.6s
CIMO AML AML
comp=E,753µm,1.6s
CIMO AML AML
comp=E,740µm,1.6s
AGOR Agordo 3.78 347 P **Pn 12 37 04.5 -1.1**
AGOR AML AML
comp=E,1160µm,1.5s
AGOR AML AML
comp=E,901µm,1.3s
AGOR AML AML
comp=N,1036µm,1.4s
AGOR AML AML
comp=N,796µm,1.4s
PTCC Patocco-Chiusa 3.81 1 ⇓P **Pn 12 37 04.4 -1.5**
PTCC AML AML
comp=N,689µm,1.6s
PTCC AML AML
comp=E,847µm,0.6s
PRED Cave del Predi 3.85 3 Pn **Pn 12 37 05.4 -1.1**
GAGG Gaggia 3.85 335 P **Pn 12 37 06.2 -0.5**
GAGG AML AML
comp=N,2205µm,1.2s
GAGG AML AML
comp=E,2280µm,1.2s
GAGG AML AML
comp=N,1470µm,1.0s
GAGG AML AML
comp=E,1475µm,1.0s
CLUD Cludinico 3.87 356 Pn **Pn 12 37 05.5 -1.3**
CLUD Cludinico 3.87 356 ⇓P **Pn 12 37 05.4 -1.3**
CLUD AML AML
comp=E,1347µm,1.1s
CLUD AML AML
comp=N,1230µm,1.2s
CLUD AML AML
comp=E,1345µm,1.1s
CLUD AML AML
comp=N,1175µm,1.2s
HCY Herceg Novi 3.87 90 *e*Pn **Pn 12 37 06.3 -0.5**
HCY Herceg Novi 3.87 90 ⇑*i*Pn **Pn 12 37 05.9 -0.9**
HCY *i* Sn **Sn 12 37 53.1 +0.5**
ZONE Zone 3.89 326 P **Pn 12 37 06.7 -0.3**
ZONE AML AML
comp=E,826µm,0.6s
ZONE AML AML
comp=N,1245µm,0.3s
ZONE AML AML
comp=E,253µm,1.6s
ZONE AML AML
comp=N,335µm,0.5s
BRY Bratogost 3.90 84 *e*Pn **Pn 12 37 06.9 -0.4**
BRY Bratogost 3.90 84 ⇓*i*Pn **Pn 12 37 07.2 -0.1**
BRY *i* Sn **Sn 12 37 53.9 +0.4**
PCP Piancastagn 3.94 301 P **Pn 12 37 07.4 -0.4**
PCP AML AML
comp=E,238µm,1.4s
PCP AML AML
comp=N,257µm,1.6s
ACOM Acomizza, Ital 3.95 3 P **Pn 12 37 07.2 -0.8**
ZOU Zoufplan 3.96 357 P **Pn 12 37 06.8 -1.4**
ZOU AML AML
comp=N,1855µm,1.3s
ZOU AML AML
comp=E,1685µm,1.6s
ZOU AML AML
comp=E,1695µm,1.6s
ZOU AML AML
comp=N,1850µm,1.3s
MABI Malga Bissina 3.98 331 P **Pn 12 37 08.0 -0.4**
MABI AML AML
comp=E,469µm,1.5s
MABI AML AML
comp=N,476µm,0.6s
OBKA Obir 4.02 13 *e*Pn **Pn 12 37 08.5 -0.4**
OBKA Obir 4.02 13 *i* Pn **Pn 12 37 08.6 -0.2**
comp=N,62nm,0.7s,SNR=18
OBKA *e*Sn **Sg 12 38 13.5 -2.2**
comp=N,513nm,0.7s
OBKA Obir 4.02 13 *e*Pn **Pn 12 37 08.3 -0.5**
MYKA Terra Mystica 4.04 4 *i* Pn **Pn 12 37 08.6 -0.5**
comp=N,96nm,0.6s,SNR=42
MYKA *e*Sn **Sn 12 37 56.1 -0.7**
comp=N,159nm,0.5s
LOBO Lobor 4.09 29 *e*Pn **Pn 12 37 08.1 -1.6**
KOSI Kohlern 4.09 341 ⇓P **Pn 12 37 09.7 -0.2**
APPI Appiano 4.14 340 ⇓P **Pn 12 37 10.3 -0.3**
APPI AML AML
comp=E,822µm,0.6s
APPI AML AML
comp=N,1185µm,0.4s
CEME Cevo 4.18 89 ⇓*i*Pn **Pn 12 37 10.9 -0.2**
CEME *i* Sn **Sn 12 38 00.7 +0.4**
ABTA Abfaltersbach 4.18 353 *i* Pn **Pn 12 37 11.1 -0.1**
comp=N,251nm,0.6s,SNR=163
ABTA *e*Sn **Sn 12 37 59.1 -1.2**
comp=N,375nm,0.6s
BUM Brajici-Budva 4.18 92 ⇑*i*Pn **Pn 12 37 10.9 -0.2**
BUM *i* Sn **Sn 12 38 00.7 +0.4**
UPM Unac-Piva 4.19 80 *e*Pn **Pn 12 37 12.6 +1.2**
UPM Unac-Piva 4.19 80 ⇑*i*Pn **Pn 12 37 11.3 -0.1**
UPM *i* Sn **Sn 12 38 01.1 +0.3**
NKME Niksic 4.20 86 ⇓*i*Pn **Pn 12 37 11.5 +0.1**
NKME *i* Sn **Sn 12 38 01.4 +0.6**
KALN Kalnik 4.21 32 *e*Pn **Pn 12 37 09.5 -2.0**
VSL Villasalto 4.27 225 P **Pn 12 37 11.8 -0.5**
VSL AML AML
VSL AML AML
SOKA Soboth 4.27 17 *i* Pn **Pn 12 37 12.3 -0.1**
comp=N,18nm,0.3s,SNR=26
SOKA *e*Sn **Sn 12 38 02.4 -0.1**
comp=N,100nm,0.7s
DRME Dracevica, Mon 4.41 93 *e*Pn **Pn 12 37 13.8 -0.4**
DRME Dracevica, Mon 4.41 93 ⇑*i*Pn **Pn 12 37 14.0 -0.2**
DRME *i* Sn **Sn 12 38 06.0 +0.2**
PDG Podgorica 4.44 90 ⇑P **Pn 12 37 14.4 -0.1**
PDG ⇑S **Sn 12 38 05.3 -1.1**
PDG Podgorica 4.44 90 Pn **Pn 12 37 14.4 -0.1**
PDG Podgorica 4.44 90 *e*Pn **Pn 12 37 15.1 +0.6**
TTG Podgorica 4.44 90 ⇓*i*Pn **Pn 12 37 14.5 -0.1**
TTG *i* Sn **Sn 12 38 06.9 +0.4**
SBF Sospel 4.44 289 *e*P **Pn 12 37 13.9 -0.7**
SBF *e*Sn **Sn 12 38 00.1 -6.6**
comp=N,122nm,0.5s
ESCA l'Escarene 4.47 288 P **Pn 12 37 15.4 +0.3**
KBA Koelnbreinsper 4.48 1 *i* Pn **Pn 12 37 15.0 -0.3**
comp=N,68nm,0.4s,SNR=70
KBA *e*Sn **Sn 12 38 07.9 +0.1**
comp=N,168nm,0.5s
KBA Koelnbreinsper 4.48 1 *e*Pn **Pn 12 37 14.8 -0.5**
ULC Ulcinj 4.49 96 ⇓*i*Pn **Pn 12 37 15.3 0.0**
ULC *i* Sn **Sn 12 38 07.5 -0.3**
TURF col de Turini 4.50 290 P **Pn 12 37 15.5 -0.1**
TURF S **Sb 12 38 16.5 -4.2**
ROSI Rosskopf 4.52 344 AML AML
comp=N,1640µm,1.3s
ROSI AML AML
comp=E,1640µm,0.5s
PLE Pljevlja 4.56 79 ⇑*i*Pn **Pn 12 37 17.0 +0.7**
PLE *i* Sn **Sn 12 38 09.9 +0.2**
RUDO Rudo 4.59 75 *e*Pn **Pn 12 37 16.6 -0.1**
RUDO Rudo 4.59 75 *e*Pn **Pn 12 37 16.6 -0.1**
VARE Varese 4.59 317 P **Pn 12 37 16.5 -0.2**
VARE AML AML
comp=N,510µm,0.9s
VARE AML AML
comp=E,590µm,1.3s
KOME Kolasin 4.62 85 ⇑*i*Pn **Pn 12 37 17.4 +0.3**
KOME *i* Sn **Sn 12 38 10.6 -0.5**
SPIF crte de Spivo 4.63 290 P **Pn 12 37 19.2 +1.9**
MVIF Mont Vial 4.64 288 P **Pn 12 37 17.7 +0.1**
BBLS Lazići 4.67 72 *e*Pn **Pn 12 37 18.1 +0.3**
FETA Feichten 4.77 339 *i* Pn **Pn 12 37 19.9 +0.5**
comp=E,21nm,0.7s,SNR=28
FETA *e*Sn **Sn 12 38 16.5 +1.5**
comp=E,34nm,0.5s
CALF Calern 4.78 286 P **Pn 12 37 19.6 +0.3**
CEL Celeste 4.78 154 Pn 12 37 21.4 +2.1
WTTA Wattenberg 4.80 347 *e*Pn **Pn 12 37 20.6 +0.9**
comp=E,12nm,0.2s,SNR=29
WTTA *e*Sn **Sn 12 38 16.2 +0.4**
comp=E,219nm,0.5s
WTTA Wattenberg 4.80 347 *e*Pn **Pn 12 37 19.7 0.0**
DAVOX Davos/Dischmat 4.82 331 Pn **Pn 12 37 20.0 -0.1**
comp=E,24nm,0.3s,baz=143,slow=15,SNR=92
DAVOX Sn **Sn 12 38 18.9 +2.6**
comp=E,24nm,0.3s,baz=267,slow=24,SNR=6.4
comp=E,66nm,0.4s
DAVOX Davos/Dischmat 4.82 331 P **Pn 12 37 20.0 -0.1**
SQTA Sankt Quirin 4.84 343 Pn 12 37 21.0 +0.7
SQTA **Sn 12 38 16.8 0.0**
SQTA Sankt Quirin 4.84 343 P **Pn 12 37 21.0 +0.7**
SQTA 12 38 16.8
SQTA Sankt Quirin 4.84 343 *i* Pn **Pn 12 37 21.0 +0.7**
comp=E,58nm,0.3s,SNR=53
SQTA *e*Sn **Sn 12 38 16.8 0.0**
comp=E,144nm,0.4s
WATA Walderalm 4.88 346 Pn 12 37 22.1 +1.3
WATA **Sn 12 38 18.8 +1.0**
WATA Walderalm 4.88 346 P **Pn 12 37 22.1 +1.3**
WATA 12 38 18.8
WATA Walderalm 4.88 346 *i* Pn **Pn 12 37 22.1 +1.3**
comp=E,64nm,0.3s,SNR=38
WATA *e*Sn **Sn 12 38 18.8 +1.0**
comp=E,171nm,0.4s
IVA Berane 4.89 85 ⇓*i*Pn **Pn 12 37 21.1 +0.2**
IVA *i* Sn **Sn 12 38 17.8 -0.2**
ARSA Arzberg 4.92 18 *e*Pn **Pn 12 37 20.2 -1.0**
ARSA Arzberg 4.92 18 *i* Pn **Pn 12 37 20.4 -0.8**
comp=E,26nm,0.4s,SNR=23
ARSA *e*Sn **Sn 12 38 16.4 -2.1**
comp=E,51nm,0.3s
ARSA Arzberg 4.92 18 P **Pn 12 37 20.3 -0.8**
ARSA Arzberg 4.92 18 *e*Pn **Pn 12 37 20.5 -0.8**
KOVH Kovagotottos 4.92 43 P **Pn 12 37 19.6 -1.6**
TRAV Traversella 4.92 308 P **Pn 12 37 20.3 -1.0**
TRAV AML AML
comp=E,232µm,1.4s
TRAV AML AML
comp=N,228µm,1.6s
PVY Plav 4.95 88 ⇑*i*Pn **Pn 12 37 21.8 +0.1**
PVY *i* Sn **Sn 12 38 19.1 -0.2**
TEKS Tekeris 4.96 65 *e*Pn **Pn 12 37 20.4 -1.3**
SJES Sjenica 4.97 80 *e*Pn **Pn 12 37 23.2 +1.2**
MOTA Moosalm 4.99 343 Pn 12 37 23.2 +0.9
MOTA Moosalm 4.99 343 P **Pn 12 37 23.2 +0.9**
MOTA Moosalm 4.99 343 *i* Pn **Pn 12 37 23.2 +0.9**
comp=N,44nm,0.4s,SNR=44
LMR La Mourre 5.01 281 *e*P **Pn 12 37 21.7 -0.7**
LMR *e*Sn **Sn 12 38 13.2 -7.4**
comp=N,32nm,0.6s
CLTB Caltabellotta 5.01 180 Pn **Pn 12 37 23.9 +1.3**
SURF Saint Ours 5.05 294 P **Pn 12 37 23.7 +0.6**
FUSIO Fusio 5.06 321 P **Pn 12 37 23.0 -0.3**
ZUGS Zugspitze, Sch 5.08 342 *e*Pn **Pn 12 37 24.4 +0.8**
TIR Tirane 5.08 102 ⇓P **Pn 12 37 22.9 -0.5**
TIR ⇓S **Sn 12 38 22.6 +0.2**
TIR Tirane 5.08 102 Pn 12 37 23.0 -0.4
TIR Tirane 5.08 102 P **Pn 12 37 23.0 -0.4**
TIR Tirane 5.08 102 *e*Pn **Pn 12 37 23.1 -0.4**
BIOA Bad Ischl, Aus 5.10 3 Pn 12 37 23.4 -0.3
BIOA **Sn 12 38 24.4 +1.5**
BIOA Bad Ischl, Aus 5.10 3 *i* Pn **Pn 12 37 23.4 -0.3**
comp=N,47nm,0.3s,SNR=43
BIOA *e*Sn **Sn 12 38 24.4 +1.5**
comp=N,129nm,0.4s
PART Garmisch-Parte 5.13 343 *e*Pn **Pn 12 37 24.7 +0.6**
DIVS Divibare 5.13 71 Pn **Pn 12 37 23.7 -0.6**
DIVS Divibare 5.13 71 *e*Pn **Pn 12 37 23.1 -1.1**
DIVS Divibare 5.13 71 *e*Pn **Pn 12 37 23.6 -0.6**
IVAS Ivanjica 5.14 77 *e*Pn **Pn 12 37 23.8 -0.5**
RJOB Jochberg 5.15 357 *e*Pn **Pn 12 37 24.2 -0.2**
MBDF Montbardon 5.16 297 *e*P **Pn 12 37 24.9 +0.2**

MBDF eSn Sn 12 38 17.4 -7.3
comp=N,108nm,0.9s
VAE Valguarnera 5.19 170 Pn Pn 12 37 30.7 +5.7
comp=N,1.6nm,0.3s,baz=154,slow=7.2,SNR=5.0
FLAF Flassans-sur-l 5.20 281 P Pn 12 37 25.0 0.0
RETA Reutte 5.20 341 *i* Pn Pn 12 37 26.2 +1.2
comp=N,16nm,0.4s,SNR=44
RETA eSn Sn 12 38 26.9 +1.5
comp=N,72nm,0.5s
OGAG Argentiere 5.22 293 P Pn 12 37 29.3 +3.8
PLONS Plons/SG 5.23 330 ePn Pn 12 37 26.1 +0.6
PLONS eSn Sn 12 38 27.6 +1.3
OBER Oberstdorf 5.25 337 ePn Pn 12 37 26.7 +0.9
DAVA Damuels 5.26 334 *i* Pn Pn 12 37 27.5 +1.4
comp=N,39nm,0.4s,SNR=46
DAVA eSn Sn 12 38 29.6 +2.4
comp=N,175nm,0.5s
DAVA Damuels 5.26 334 ePn Pn 12 37 26.9 +0.9
MORH Mrgy, Hungar 5.29 45 ⇓P Pn 12 37 24.4 -1.8
MORH Mrgy, Hungar 5.29 45 P Pn 12 37 25.6 -0.6
MOA Mollin 5.30 7 ePn Pn 12 37 26.8 +0.4
MOA Mollin 5.30 7 *i* Pn Pn 12 37 26.9 +0.4
comp=N,46nm,0.6s,SNR=37
MOA eSn Sn 12 38 28.5 +0.8
comp=N,84nm,0.5s
MOA Mollin 5.30 7 ePn Pn 12 37 25.7 -0.7
EMBD Embd, Matterta 5.31 315 P Pn 12 37 26.7 +0.1
FRGS Fruska Gora 5.38 59 ⇑P Pn 12 37 26.5 -1.0
FRGS Fruska Gora 5.38 59 ePn Pn 12 37 26.4 -1.1
FRGS Fruska Gora 5.38 59 ePn Pn 12 37 26.6 -1.0
OGMO Fort Saint-Gob 5.42 301 P Pn 12 37 29.5 +1.4
BLAF les Blancs 5.44 287 P Pn 12 37 28.9 +0.6
TRUS Trudelj 5.45 70 ePn Pn 12 37 27.8 -0.7
MPLH Magyarpolny 5.49 32 P Pn 12 37 30.0 +1.0
MPLH S Sn 12 38 27.3 -5.1
LPG La Plagne 5.51 304 eP Pn 12 37 30.3 +0.7
LPG eSn Sn 12 38 25.9 -7.5
comp=N,43nm,0.6s
LPL La Plagne 5.53 304 eP Pn 12 37 30.5 +0.7
LPL eSn Sn 12 38 25.9 -8.0
comp=N,46nm,0.5s
RONA Rosalia, Austr 5.53 22 Pn 12 37 29.0 -0.7
RONA Sn 12 38 32.4 -1.2
RONA Rosalia, Austr 5.53 22 *i* Pn Pn 12 37 29.0 -0.7
comp=N,31nm,0.4s,SNR=28
RONA eSn Sn 12 38 32.4 -1.2
comp=N,29nm,0.5s
ARTF Artigues 5.55 283 P Pn 12 37 30.1 +0.3
UBR Ueberruh 5.55 337 ePn Pn 12 37 29.1 -0.8
UBR eSn Sn 12 38 42.1 +8.1
SOP Sopron 5.59 24 P Pn 12 37 28.7 -1.7
GRUS Gruza 5.60 74 ePn Pn 12 37 30.2 -0.3
CONA Conrad Observa 5.64 18 *i* Pn Pn 12 37 30.3 -0.8
comp=N,31nm,0.4s,SNR=36
CONA eSn Sn 12 38 33.5 -2.7
comp=N,51nm,0.4s
MLYF Mely 5.64 287 P Pn 12 37 34.9 +3.8
RSL Roselend 5.68 305 P Pn 12 37 33.3 +1.5
BSTF la Bastide-des 5.71 286 P Pn 12 37 32.9 +0.9
WILA Wila 5.72 329 ePn Pn 12 37 32.1 -0.1
FUR Furstenfeldbru 5.74 347 ePn Pb 12 37 40.1 -7.1
SMRF Simiane la Rot 5.77 286 eP Pn 12 37 33.8 +0.8
SMRF eSn Sn 12 38 31.8 -7.8
comp=N,35nm,0.7s
SELS Selova 5.81 81 ePn Pn 12 37 33.4 0.0
ZUR Degenried 5.81 327 P Pn 12 37 33.7 +0.3
OGSI Sixt 5.81 309 P Pn 12 37 34.0 +0.6
OHR Ohrid 5.82 102 *i* Pn Pn 12 37 34.3 +0.6
ORIF Oris-en-Rattie 5.82 296 eP Pn 12 37 35.6 +1.9
ORIF eSn Sn 12 38 33.0 -7.9
comp=N,43nm,0.6s
ORIF Oris-en-Rattie 5.82 296 P Pn 12 37 36.1 +2.4
RUSF Rustrel 5.83 286 P Pn 12 37 34.1 +0.4
SAUF chteau de Sau 6.10 285 P Pn 12 37 38.1 +0.8
SULZ Cheisacher 6.13 325 S Sn 12 38 46.6 -1.6
SULZ Cheisacher 6.13 325 P Pn 12 37 37.3 -0.5
SULZ Cheisacher 6.13 325 ePn Pn 12 37 37.3 -0.5
TORNY Torny/Romont 6.13 315 P Pn 12 37 38.7 +0.8
BALST Balsthal 6.16 322 S Sn 12 38 48.4 -0.7
BALST Balsthal 6.16 322 P Pn 12 37 37.4 -0.9
BALST Balsthal 6.16 322 ePn Pn 12 37 37.6 -0.7
BALST eSn Sn 12 38 48.3 -0.9
SLE Schleitheim 6.17 329 S Sn 12 38 48.3 -0.9
SLE Schleitheim 6.17 329 P Pn 12 37 37.5 -0.8
SLE Schleitheim 6.17 329 ePn Pn 12 37 37.4 -0.9
GUT Gutenstein 6.20 333 P Pn 12 37 38.8 0.0
ZST Bratislava 6.22 24 eP Pn 12 37 38.5 -0.5
ZST *e* 12 38 45.2
ZST MLR MLR
comp=Z,2µm,3.3s
ZST Bratislava 6.22 24 ePN Pn 12 37 38.5 -0.5
ZST eSN Sn 12 38 45.2 -5.1
ZST eLG Lg 12 40 14.0
OGSM Saint Maurice 6.22 302 P Pn 12 37 40.7 +1.7
GEC2 GERESS Array S 6.25 3 ePn Pn 12 37 38.0 -1.5
GEC2 eSn Sn 12 38 49.3 -2.1
GERES GERESS Array B 6.25 3 Pn Pn 12 37 38.1 -1.5
comp=Z,2.5nm,0.3s,baz=172,slow=13,SNR=23
GERES Sn Sn 12 38 49.6 -1.8
comp=Z,13nm,0.3s,baz=182,slow=28,SNR=9.9
GERES LR LR 12 40 45.0
comp=Z,508nm,21.1s,baz=176,slow=46
comp=Z,6.9nm,0.5s
CKRC Cesky Krumlov 6.26 6 ePN Pn 12 37 38.8 -0.9
CKRC eSN Sn 12 38 47.8 -3.8
BARS Barje 6.31 85 ePn Pn 12 37 40.3 0.0
GIMEL St. Georges / 6.36 311 P Pn 12 37 41.5 +0.5
NORI Noerdlinger Ri 6.39 344 ePn Pn 12 37 40.6 -0.9
BOURR Bourrignon 6.42 320 P Pn 12 37 41.9 +0.1
MODS Modra-Piesok 6.43 25 eP Pn 12 37 39.7 -2.2
MODS *e* 12 38 52.9
MODS MLR MLR
comp=Z,900nm,3.0s
MODS Modra-Piesok 6.43 25 ePN Pn 12 37 39.7 -2.2
MODS eSN Sn 12 38 52.9 -2.7
MODS eLG Lg 12 40 30.5
FELD Feldberg im Sc 6.45 327 P Pn 12 37 41.1 -1.2
OG35 Corcelles 6.50 305 P Pn 12 37 42.7 -0.2
CABF La Chapelle 6.50 311 eP Pn 12 37 43.2 +0.2
CABF eSn Sn 12 38 49.1 -8.4
comp=Z,22nm,0.6s
MDVR Moldovita 6.50 68 ⇑P Pn 12 37 41.8 -1.2
MDVR Moldovita 6.50 68 ePn Pn 12 37 42.5 -0.5
PRVS Prvonek 6.51 88 ePn Pn 12 37 42.9 -0.2
KHC Kasperske Hory 6.54 2 Pn 12 37 42.3 -1.2
KHC Kasperske Hory 6.54 2 eP Pn 12 37 42.2 -1.2
KHC *e* 12 38 53.5
KHC MLR MLR
comp=Z,900nm,13.6s
KHC Kasperske Hory 6.54 2 ePN Pn 12 37 42.2 -1.2
KHC eSN Sn 12 38 53.5 -4.8
KHC AMS AMS 12 40 20.0
comp=Z,900nm,13.6s
KIZ Kirchzarten 6.55 327 P Pn 12 37 42.1 -1.4
WET Wettzell 6.55 358 ePn Pn 12 37 41.8 -1.8
SMOL Smolenice 6.60 25 eP Pn 12 37 45.7 +1.5
SMOL *e* 12 39 02.7
SMOL MLR MLR
comp=Z,200nm,2.6s
VIVF Saint-Julien-l 6.62 293 eP Pn 12 37 45.7 +1.2
VIVF eSn Sn 12 38 51.9 -8.4
comp=Z,22nm,0.8s
ZAGS Zajecar 6.67 76 ePn Pn 12 37 44.7 -0.5
RIVEL MONT RIVEL 6.68 311 P Pn 12 37 44.7 -0.7
RIVEL S Sn 12 38 59.9 -1.9
BFO Black Forest 6.70 331 Pn Pn 12 37 44.6 -1.0
BFO Black Forest 6.70 331 P Pn 12 37 44.6 -1.0
BFO Black Forest 6.70 331 P Pn 12 37 45.4 -0.1
BFO Black Forest 6.70 331 P Pn 12 37 44.8 -0.8
BFO Black Forest 6.70 331 ePn Pn 12 37 44.6 -1.0
BFO eSn Sn 12 39 02.5 +0.3
STIP Stip 6.70 95 *i* Pn Pn 12 37 47.1 +1.5
BZS Buzias 6.73 61 ⇑P Pn 12 37 45.1 -0.9
BZS Buzias 6.73 61 ePn Pn 12 37 44.9 -1.1
VOGT Vogtsburg - To 6.75 326 P Pn 12 37 45.4 -0.9
STU Stuttgart 6.80 337 ePn Pn 12 37 46.9 0.0
BOSS Bosilegrad 6.81 88 ePn Pn 12 37 46.7 -0.5
KRUC Moravsky 6.82 18 ePN Pn 12 37 45.4 -1.9
KRUC eSN Sn 12 39 01.5 -3.8
SSB Saint Sauveur 6.84 296 P Pn 12 37 48.1 +0.5
TREC Trest 6.87 12 eP Pn 12 37 48.1 +0.1
TREC *e* 12 39 02.3
TREC MLR MLR
comp=Z,1µm,13.0s
TREC Trest 6.87 12 ePN Pn 12 37 48.1 +0.1
TREC eSN Sn 12 39 02.3 -4.3
TREC AMS AMS 12 40 30.0
comp=Z,1µm,13.0s
OPP Oppenau 6.89 331 P Pn 12 37 47.4 -0.8
HINF Hinteralfeld 6.90 321 eP Pn 12 37 47.5 -1.0
HINF eSn Sn 12 38 58.7 -8.6
comp=Z,129nm,0.7s
ZAPS Zavoj 6.91 81 ePn Pn 12 37 48.7 +0.1
RONF Ronchamp 6.92 320 P Pn 12 37 48.1 -0.6
BLKB Belogradchik 6.97 78 ⇑P Pn 12 37 48.9 -0.4
BLKB ⇑S Sn 12 39 06.6 -2.4
BLKB Belogradchik 6.97 78 ePn Pn 12 37 49.2 -0.1
JAVC Velka Javorina 6.98 25 ePN Pn 12 37 48.7 -0.8
LASF Ste Croix 7.01 285 eP Pn 12 37 49.7 -0.2
LASF eSn Sn 12 39 01.0 -9.0
comp=Z,4.9nm,0.5s
HERR Herculane 7.01 68 ⇓P Pn 12 37 49.3 -0.7
DJES Djerdap 7.03 70 ⇑P Pn 12 37 47.1 -3.1
VAY Valandovo 7.06 97 *i* Pn Pn 12 37 50.5 0.0
ECH Echery 7.07 325 P Pn 12 37 49.9 -0.8
VYHS Vyhne 7.08 32 eP Pn 12 37 47.8 -3.0
VYHS *e* 12 39 05.3
VYHS MLR MLR
comp=Z,100nm,1.8s
VYHS Vyhne 7.08 32 ePN Pn 12 37 47.8 -3.0
VYHS eSN Sn 12 39 05.3 -6.2
VYHS eLG Lg 12 40 19.8
PSZ Piszkesteto 7.08 39 P Pn 12 37 51.3 +0.3
PSZ S Sn 12 39 08.1 -3.7
VRAC Vranov 7.10 18 ⇑P Pn 12 37 50.2 -0.9
VRAC Vranov 7.10 18 Pn Pn 12 37 48.4 -2.8
comp=Z,1.6nm,0.3s,baz=210,slow=12,SNR=9.0
VRAC Sn Sn 12 39 06.8 -5.3
comp=Z,1.3nm,0.3s,baz=255,slow=13,SNR=2.2
VRAC LR LR 12 40 48.0
comp=Z,676nm,18.8s,baz=206,slow=41
comp=Z,8.1nm,0.6s
VRAC Vranov 7.10 18 ePN Pn 12 37 49.4 -1.7
VRAC eSN Sn 12 39 06.4 -5.7
WLS Welschbruch 7.14 327 P Pn 12 37 50.7 -1.0
CDF Champ du Feu 7.17 326 eP Pn 12 37 51.0 -1.2
CDF eSn Sn 12 39 05.1 -8.9
comp=Z,88nm,0.6s
GRF Grafenberg Arr 7.23 349 ePn Pn 12 37 52.3 -0.6
HAU Haudompre 7.28 320 eP Pn 12 37 52.6 -0.9
HAU eSn Sn 12 39 07.9 -8.6
comp=Z,168nm,0.5s
KKB Krupnik 7.33 92 eP Pn 12 37 54.6 +0.3
VTS Vitosha 7.36 86 ⇑P Pn 12 37 54.6 -0.3
VTS Vitosha 7.36 86 ePn Pn 12 37 54.7 -0.2
VTS Vitosha 7.36 86 eP Pn 12 37 55.4 +0.5
GZR Gura Zlata 7.41 65 ⇑P Pn 12 37 54.9 -0.6
GZR Gura Zlata 7.41 65 ePn Pn 12 37 55.5 +0.1
PRU Pruhonice 7.44 6 eP Pn 12 37 54.2 -1.6
PRU *e* 12 39 15.2
PRU MLR MLR
comp=Z,1µm,13.3s
PRU Pruhonice 7.44 6 ePN Pn 12 37 54.2 -1.6
PRU eSN Sn 12 39 15.2 -5.4
PRU AMS AMS 12 41 00.0
comp=Z,1µm,13.3s
KEST Kesra 7.50 205 Pn Pn 12 38 00.7 +4.0
comp=Z,6.1nm,0.3s,baz=277,slow=4.1,SNR=22
KEST LR LR 12 41 05.7
comp=Z,1µm,18.5s,baz=3.0,slow=39
comp=Z,24nm,0.5s
SJAF Saint Jean de 7.67 273 P Pn 12 37 57.1 -1.8
MORC Moravsky Berou 7.77 21 ⇑P Pn 12 37 59.0 -1.3
MORC Moravsky Berou 7.77 21 ePN Pn 12 37 59.7 -0.6
SMF Signal de Mont 7.84 304 eP Pn 12 38 01.1 -0.2
SMF eSn Sn 12 39 21.3 -9.1
comp=Z,35nm,0.5s
MMB Musomiste 7.85 94 eP Pn 12 38 00.9 -0.6
SRS Serrai 7.86 97 ePn Pn 12 38 01.9 +0.4
KRLC Kraliky 7.86 17 eP Pn 12 38 01.5 -0.1
KRLC *e* 12 39 26.0
KRLC MLR MLR
comp=Z,900nm,16.5s
KRLC Kraliky 7.86 17 ePN Pn 12 38 01.5 -0.1
KRLC eSN Sn 12 39 26.0 -5.0
KRLC AMS AMS 12 41 10.0
comp=Z,900nm,16.5s
PAGF Fort de Pagny 7.96 321 eP Pn 12 38 02.5 -0.4
PAGF eSn Sn 12 39 24.7 -8.5
comp=Z,55nm,0.6s
PVCC Panska Ves 7.98 6 AMS AMS 12 41 10.0
comp=Z,700nm,13.2s
OKC Ostrava-Krasne 7.99 23 AMS AMS 12 41 40.0
comp=Z,900nm,14.2s
DPC Dobruska-Polom 8.04 14 eP Pn 12 38 03.7 -0.3
DPC MLR MLR
comp=Z,1µm,8.6s
DPC Dobruska-Polom 8.04 14 ePN Pn 12 38 03.7 -0.3
DPC AMS AMS 12 41 20.0
comp=Z,1µm,8.6s
SFTF Sexfontaines 8.05 317 eP Pn 12 38 03.6 -0.6
SFTF eSn Sn 12 39 25.9 -10
comp=Z,28nm,0.5s
LOT Lotru 8.09 66 ⇑P Pn 12 38 02.7 -2.1
MOX Moxa 8.13 353 ePn Pn 12 38 03.6 -1.6
MTLF Montolieu 8.13 279 eP Pn 12 38 05.1 -0.2
MTLF eSn Sn 12 39 27.9 -10
comp=Z,6.1nm,0.6s
MTLF Montolieu 8.13 279 P Pn 12 38 04.9 -0.4
UPC Upice 8.13 13 eP Pn 12 38 05.2 -0.1
UPC MLR MLR
comp=Z,1µm,9.6s
UPC Upice 8.13 13 ePN Pn 12 38 05.2 -0.1
UPC AMS AMS 12 41 10.0
comp=Z,1µm,9.6s
LOR Lormes 8.14 308 eP Pn 12 38 04.8 -0.6
baz=124
LOR eSn Sn 12 39 28.3 -9.4
comp=Z,26nm,0.4s
LOR Lormes 8.14 308 P Pn 12 38 04.6 -0.8
AVF Avril sur Loir 8.21 304 eP Pn 12 38 06.0 -0.3
AVF eSn Sn 12 39 29.8 -9.5
comp=Z,19nm,0.7s
OSTC Ostas 8.21 13 ePN Pn 12 38 05.8 -0.6
OSTC AMS AMS 12 41 20.0
comp=Z,1µm,14.5s
SSF Saint Saulge 8.24 306 eP Pn 12 38 07.4 +0.6
SSF eSn Sn 12 39 30.5 -10
comp=Z,23nm,0.5s
MEZF Maizieres J'vi 8.24 319 eP Pn 12 38 07.9 +1.1
MEZF eSn Sn 12 39 30.6 -10
comp=Z,48nm,0.7s
SAVF Savonnieres en 8.29 319 eP Pn 12 38 06.9 -0.5
SAVF eSn Sn 12 39 31.5 -10
comp=Z,31nm,0.6s
ABH Alteburg 8.29 333 P Pn 12 38 08.0 +0.6
BRG Berggiesshubel 8.29 3 eP Pn 12 38 07.4 0.0
BRG Amp 12 38 16.1
comp=Z,7.2nm,0.6s
BRG *ex* x 12 39 32.4
BRG *ex* x 12 40 38.4
BRG Amp 12 40 54.8
comp=Z,120nm,1.4s
BRG Amp 12 41 34.0
comp=E,1.1nm,14.9s
BRG Amp 12 41 45.0
comp=Z,0.8nm,10.1s
BRG Amp 12 41 48.0
comp=N,0.4nm,13.4s
BRG Berggiesshubel 8.29 3 eP Pn 12 38 07.4 0.0
BRG *e* 12 39 32.3
BRG pmax pmax
comp=Z,7.0nm,0.6s
BRG pmax pmax
comp=Z,120nm,1.4s
BRG MLR MLR
comp=E,1µm,14.9s
BRG MLR MLR
comp=Z,815nm,10.1s
BRG MLR MLR
comp=N,362nm,13.4s
TNS Taunus Mts 8.32 338 ePn Pn 12 38 08.2 +0.4
BGF Bois d'Agland 8.42 302 eP Pn 12 38 09.4 +0.2
BGF eSn Sn 12 39 35.2 -9.4
comp=N,24nm,0.6s
CAF Calviac 8.43 290 eP Pn 12 38 10.3 +0.9
CAF eSn Sn 12 39 35.2 -10
comp=N,4.1nm,0.5s
RZN Rozhen 8.56 92 eP Pn 12 38 11.6 +0.2
WLF Walferdange 8.61 328 dPP Pn 12 38 21.5 +10
CLL Collm 8.71 359 eP Pn 12 38 11.0 -2.2
CLL Collm 8.71 359 ePn Pn 12 38 11.0 -2.2
CLL *ex* x 12 38 28.0
CLL eSn Sn 12 39 41.0 -11
CLL *ex* x 12 39 56.0
CLL *ex* x 12 40 10.0
CLL *ex* x 12 40 36.0
CLL eSg Sg 12 40 42.0 -4.2
comp=Z,232nm,1.7s
CLL Lm MLR 12 41 00.0
comp=N,400nm,21.8s
CLL Lm MLR 12 41 00.0
comp=E,2µm,20.4s
CLL eLmax 12 41 22.0
TCF Toulx Ste Croi 8.72 299 eP Pn 12 38 14.5 +1.1
TCF eSn Sn 12 39 42.1 -10
comp=E,7.6nm,0.6s
UZH Uzhgorod 8.74 43 eP Pn 12 38 14.2 +0.6
UZH eS Sn 12 39 52.2 -0.2
UZH MLR MLR
comp=Z,100nm,12.0s
HYF Humbligny 8.86 305 eP Pn 12 38 16.7 +1.5
RJF Les Rejaudoux 8.89 292 eP Pn 12 38 16.8 +1.1
RJF eSn Sn 12 39 46.2 -10
comp=Z,1.5nm,0.3s
VOIR 8.96 68 ⇓P Pn 12 38 15.8 -0.9
BHOU Houvegnez 9.22 330 dP Pn 12 38 19.1 -1.2
BHOU dS Sn 12 40 03.8 -0.5
LFF La Frestale 9.36 289 eP Pn 12 38 23.4 +1.4
LFF eSn Sn 12 39 57.0 -11
comp=Z,6.8nm,0.5s
BTNL Ternell 9.37 331 dP Pn 12 38 24.4 +2.1
RCHB Rochefort 9.37 327 dP Pn 12 38 22.3 +0.1
MEM Membach 9.43 331 dP Pn 12 38 23.8 +0.7
MEM dS Sn 12 40 09.6 +0.2
GIVF Givet 9.50 325 eP Pn 12 38 25.2 +1.2
GIVF eSn Sn 12 40 00.6 -10
comp=Z,18nm,0.6s
EPF Esparros 9.51 277 eP Pn 12 38 25.7 +1.5
BCLA Clavier 9.55 328 dP Pn 12 38 25.9 +1.2
BCLA dS Sn 12 40 07.3 -4.9
MLR Muntele Rosu 9.58 68 ⇓P Pn 12 38 24.3 -0.9
MLR Muntele Rosu 9.58 68 Pn Pn 12 38 24.8 -0.5
comp=Z,0.4nm,0.3s,baz=202,slow=5.6,SNR=2.9
MLR LR LR 12 43 37.9
comp=Z,1µm,18.3s,baz=252,slow=48
comp=Z,3.1nm,0.6s
BMRD Maredsous 9.67 326 dP Pn 12 38 27.3 +0.9
BMRD dS Sn 12 40 12.8 -2.5
ETSF Etsaut 10.17 276 eP Pn 12 38 35.2 +1.9
ETSF eSn Sn 12 40 16.8 -11
comp=Z,2.1nm,0.5s
VRI Vrincioaia 10.20 67 ⇑P Pn 12 38 32.1 -1.6
MFF Saint Martin d 10.36 297 eP Pn 12 38 37.3 +1.5
LVV L'vov 10.38 42 eP Pn 12 38 36.0 0.0
LVV eS Sn 12 40 32.9 +0.3
LVV pmax pmax
comp=Z,70nm,1.7s
LVV MLR MLR
comp=E,1µm,9.0s
LVV MLR MLR
comp=N,500nm,8.0s
LVV MLR MLR
comp=Z,800nm,9.0s
SJPF Ste Jean 10.65 278 eP Pn 12 38 41.3 +1.5
FLN La Foliniere 11.41 307 eP Pn 12 38 51.6 +1.5
GRR Gorron 11.47 305 eP Pn 12 38 52.4 +1.5
IDI Anoyia 11.62 125 Pn Pn 12 38 54.3 +1.1
comp=Z,0.7nm,0.3s,baz=289,slow=12,SNR=2.3
IDI LR LR 12 44 54.8
comp=Z,139nm,19.6s,baz=281,slow=45
comp=Z,8.1nm,0.7s
MILM Milestii Mici 11.87 63 eP Pn 12 38 58.0 +1.6
comp=Z,200nm,2.8s
MILM eL L 12 42 09.6
MILM LRM MLR 12 44 29.0
comp=Z,2µm,12.0s
MILM Milestii Mici 11.87 63 *i* P Pn 12 38 58.0 +1.6
MILM pmax pmax
comp=Z,200nm,2.8s
MILM MLR MLR
comp=E,1µm,12.0s
MILM MLR MLR
comp=Z,2µm,12.0s
SGMF Saint Gilles 12.46 302 eP Pn 12 39 05.8 +1.3
QUIF Quistinic 12.73 300 eP Pn 12 39 09.3 +1.2
ESDC Sonseca Array 13.31 263 Pn Pn 12 39 15.5 -0.6
comp=Z,0.1nm,0.3s,baz=65,slow=13,SNR=12
ESDC LR LR 12 44 26.8
comp=Z,411nm,18.2s,baz=75,slow=37
comp=Z,1.2nm,0.7s
AKASG Malin Array Be 13.62 48 Pn Pn 12 39 18.8 -1.5
comp=Z,0.4nm,0.3s,baz=242,slow=12,SNR=4.3
AKASG LR LR 12 45 06.7
comp=Z,484nm,21.2s,baz=242,slow=40
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 13.62 48 *ce*P Pn 12 39 22.3 +2.1
AKBB Malin Array Si 13.62 48 ⇓eP Pn 12 39 24.1 +3.9
AKBB pmax pmax
comp=Z,5.0nm,0.8s
ELL Elmali 14.09 109 P 12 39 35.3 +0.5
ELL Elmali 14.09 109 P P 12 39 35.3 +0.5
NACGM Naroch 15.17 31 ⇑eP Pn 12 39 39.3 -2.0
baz=221
MNK Minsk 15.31 34 *i* P Pn 12 39 42.2 -1.0
MNK *i* S Sn 12 42 32.4 -0.6
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=Z,16nm,0.8s
MNK MLR MLR
comp=E,66nm,15.0s
MNK MLR MLR
comp=Z,781nm,15.0s
MNK Minsk 15.31 34 *i* P Pn 12 39 42.2 -1.0
comp=E,1.0nm,0.8s
MNK *i* P Pn 12 39 42.2 -1.0
MNK *i* P Pn 12 39 42.2 -1.0
comp=Z,16nm,0.8s,baz=225
MNK *i* PP sP 12 39 50.8 -0.1
MNK *i* PPP PPP 12 39 58.3
MNK *i* S Sn 12 42 32.5 -0.6
MNK *i* SS S 12 42 54.6 +4.8
MNK *i* LQ LQ 12 44 26.7
MNK *i* LR LR 12 45 04.8
MNK *i* LRM MLR 12 46 18.2
comp=E,66nm,15.2s
MNK *i* LRM MLR 12 46 18.2
MNK *i* LRM MLR 12 46 35.6
comp=Z,781nm,15.2s
BR131 Keskin Array S 15.61 94 Pn Pn 12 39 46.7 -0.8
BR131 Keskin Array S 15.61 94 ⇓eP P 12 39 49.7 -2.1
BRTR Keskin Array B 15.61 94 Pn Pn 12 39 46.8 -0.7
comp=Z,0.1nm,0.3s,baz=310,slow=16,SNR=1.9
BRTR LR LR 12 46 53.1
comp=Z,841nm,18.1s,baz=296,slow=42
comp=Z,0.4nm,0.5s
BRTR Keskin Array B 15.61 94 Pn Pn 12 39 46.9 -0.5
BRTR Keskin Array B 15.61 94 P Pn 12 39 46.9 -0.5
EKA Eskdalemuir Ar 16.63 326 Pn Pn 12 39 59.9 -0.4
baz=134,slow=14
comp=Z,1.4nm,0.5s
MDT Midelt 17.15 241 P P 12 40 10.3 +1.5
comp=Z,0.1nm,0.3s,baz=72,slow=9.8,SNR=4.1
MDT LR LR 12 45 58.3
comp=Z,95nm,18.4s,baz=51,slow=34
comp=Z,1.7nm,0.9s
HFS Hagfors 17.56 1 P Pn 12 40 10.3 -1.6
comp=Z,0.3nm,0.3s,baz=182,slow=10,SNR=7.0
HFS LR LR 12 47 54.5
comp=Z,254nm,18.1s,baz=183,slow=41
comp=Z,2.3nm,0.6s
ANN Anapa 17.61 75 eP Pn 12 40 10.8 -1.7
ANN eS Sn 12 43 25.9 -2.9
ANN pmax pmax
comp=Z,25nm,0.9s
VSU Vasula 17.98 23 *de*P Pn 12 40 17.3 +0.2
VSU pmax pmax
comp=Z,47nm,0.8s
NC602 NORSAR Array S 18.19 357 IAmb IAmb 12 40 41.3
comp=Z,32nm,1.3s

NAO01	**NORSAR Array S**	**18.33**	**356**		IAmb		IAmb	12 41 00.2	
	comp=Z,33nm,1.4s								
NB2	**NORSAR Subarra**	**18.51**	**357**		P		**P**	**12 40 22.8**	**-0.7**
	comp=Z,7.7nm,1.0s,baz=175,slow=11								
NOA	**NORSAR Array B**	**18.51**	**357**		P		**P**	**12 40 22.8**	**-0.7**
	baz=176,slow=11,SNR=13								
NOA					LR		LR	12 47 40.2	
	comp=Z,200nm,21.5s,baz=175,slow=38								
	comp=Z,2.7nm,0.7s								
NC405	**NORSAR Array S**	**18.57**	**358**		IAmb		IAmb	12 40 39.0	
	comp=Z,14nm,0.7s								
NC303	**NORSAR Array S**	**18.69**	**357**		P		**P**	**12 40 24.9**	**-0.6**
NC303					IAmb		IAmb	12 40 45.9	
	comp=Z,19nm,1.4s								
NC204	**NORSAR Array S**	**18.77**	**356**		P		**P**	**12 40 25.2**	**-1.2**
OBN	**Obninsk**	**19.68**	**42**	*eP*			**Pn**	**12 40 37.4**	**-0.3**
OBN					pmax		pmax		
	comp=Z,12nm,0.5s								
OBN					MLR		MLR		
	comp=Z,465nm,19.0s								
VORR	**Voronezh**	**19.76**	**54**	*eP*			**P**	**12 40 37.9**	**+0.7**
VORR					pmax		pmax		
	comp=Z,70nm,0.5s								
MMAI	**Mount Meron Ar**	**19.89**	**111**		P		**Pn**	**12 40 40.9**	**+0.4**
	comp=Z,3.3nm,0.3s,baz=308,slow=7.1,SNR=1.4								
MMAI					LR		LR	12 50 33.1	
	comp=Z,144nm,18.9s,baz=134,slow=44								
	comp=Z,0.8nm,0.3s								
FINES	**FINESS Array B**	**20.38**	**18**		P		**P**	**12 40 42.4**	**-1.5**
	comp=Z,7.2nm,0.6s,baz=199,slow=9.9,SNR=19								
	comp=Z,7.2nm,0.6s								
FINES	**FINESS Array B**	**20.38**	**18**		P		**P**	**12 40 43.4**	**-0.5**
FINES	**FINESS Array B**	**20.38**	**18**		P		**P**	**12 40 43.4**	**-0.5**
FIA1	**FINESS Array S**	**20.38**	**18**		P		**P**	**12 40 43.3**	**-0.6**
FIA1					IAmb		IAmb	12 40 47.8	
	comp=Z,9.8nm,0.7s								
MOS	**Moscow**	**20.52**	**42**	*eP*			**P**	**12 40 45.1**	**-0.3**
MOS					pmax		pmax		
	comp=Z,37nm,1.1s								
TAM	**Tamanrasset**	**20.78**	**200**		P		**P**	**12 40 47.9**	**-0.8**
TAM	**Tamanrasset**	**20.78**	**200**		P		**P**	**12 40 47.9**	**-0.8**
TAM					pmax		pmax		
	comp=Z,7.0nm,1.0s								
ASF	**Jabal al Asfar**	**21.41**	**111**		P		**P**	**12 40 57.4**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=354,slow=12,SNR=2.0								
	comp=Z,0.7nm,0.3s								
KIV	**Kislovodsk**	**21.42**	**76**	*eP*			**P**	**12 40 58.0**	**+2.6**
KIV				*eS*			Sn	12 44 57.4	-3.7
KIV					pmax		pmax		
	comp=Z,15nm,1.0s								
KIV					MLR		MLR		
	comp=Z,126nm,14.0s								
VALR	**Valaam**	**21.56**	**23**	*eP*			**P**	**12 40 57.3**	**+0.7**
VALR					pmax		pmax		
	comp=Z,33nm,0.9s								
KBZ	**Khabaz**	**21.60**	**77**	*eP*			**P**	**12 40 57.9**	**+0.7**
	comp=Z,4.7nm,0.8s,baz=291,slow=12,SNR=8.5								
	comp=Z,4.7nm,0.8s								
KBZ	**Khabaz**	**21.60**	**77**	*eP*			**P**	**12 40 58.6**	**+1.4**
KBZ					pmax		pmax		
	comp=Z,13nm,0.9s								
EIL	**Elat**	**21.68**	**119**		LR		LR	12 52 33.4	
	comp=Z,70nm,20.3s,baz=265,slow=46								
ZEI	**Tsey**	**22.47**	**79**	*eP*			**P**	**12 41 11.2**	**+4.4**
ZEI					pmax		pmax		
	comp=Z,5.0nm,0.5s								
GNI	**Garni**	**23.68**	**85**		LR		LR	12 53 35.2	
	comp=Z,96nm,20.8s,baz=306,slow=44								
GNI	**Garni**	**23.68**	**85**	*eP*			**P**	**12 41 19.2**	**-0.1**
GNI					pmax		pmax		
	comp=Z,6.0nm,0.9s								
KLMR	**Klimovskoe**	**24.19**	**32**	*eP*			**P**	**12 41 23.5**	**-0.1**
KLMR				*e*				12 45 05.8	
KLMR				*eS*			**S**	**12 45 42.9**	**+1.0**
KLMR					pmax		pmax		
	comp=Z,29nm,1.5s								
KLMR	**Klimovskoe**	**24.19**	**32**	*eP*			**P**	**12 41 23.5**	**-0.1**
KLMR					AMP			12 41 31.5	
	comp=Z,29nm,1.5s								
KLMR				*e*	PcP		**PcP**	**12 45 05.8**	**+1.9**
KLMR				*eS*			**S**	**12 45 42.9**	**+1.0**
KLMR				*eS*			**S**	**12 45 42.9**	**+1.0**
KLMR					LQ		LQ	12 48 32.2	
KLMR					LQ		LQ	12 48 32.2	
KLMR					LR		LR	12 50 27.3	
BELG	**Belogornoye**	**24.98**	**55**		P		**P**	**12 41 31.5**	**+0.6**
	comp=Z,7.8nm,0.4s,baz=106,slow=11,SNR=4.6								
BELG					LR		LR	12 52 32.2	
	comp=Z,436nm,18.3s,baz=314,slow=40								
	comp=Z,7.8nm,0.4s								
BELG	**Belogornoye**	**24.98**	**55**	*ceP*			**P**	**12 41 31.8**	**+0.9**
BELG					pmax		pmax		
	comp=Z,4.0nm,0.9s								
PRGR	**Permogore**	**27.08**	**34**		P		**P**	**12 41 48.8**	**-1.0**
KIRV	**Kirov**	**27.53**	**42**		LR		LR	12 53 35.6	
	comp=Z,419nm,20.6s,baz=250,slow=38								
ARCES	**ARCESS Array B**	**27.74**	**9**		P		**P**	**12 41 56.0**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=192,slow=13,SNR=1.7								
ARCES					LR		LR	12 54 01.3	
	comp=Z,143nm,18.3s,baz=187,slow=39								
	comp=Z,0.9nm,0.6s								
ARCES	**ARCESS Array B**	**27.74**	**9**		P		**P**	**12 41 56.0**	**+0.3**
BORG	**Borgarnes**	**29.55**	**330**		LR		LR	12 54 44.3	
	comp=Z,111nm,18.2s,baz=93,slow=38								
TORD	**Torodi Ar. Bea**	**31.01**	**202**		P		**P**	**12 42 25.7**	**+0.5**
	comp=Z,6.5nm,0.7s,baz=17,slow=8.2,SNR=16								
	comp=Z,6.5nm,0.7s								
AKTO	**Aktyubinsk**	**31.38**	**60**		P		**P**	**12 42 26.7**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=251,slow=8.5,SNR=6.3								
AKTO					LR		LR	12 56 56.1	
	comp=Z,198nm,19.0s,baz=282,slow=40								
	comp=Z,1.5nm,0.6s								
KOWA	**Kowa**	**31.72**	**213**		LR		LR	12 56 39.3	
	comp=Z,169nm,18.7s,baz=50,slow=39								
ARU	**Arti**	**31.87**	**48**		P		**P**	**12 42 30.8**	**-1.5**
	comp=Z,15nm,0.7s,baz=240,slow=6.2,SNR=12								
ARU					LR		LR	12 57 01.1	
	comp=Z,238nm,21.8s,baz=259,slow=40								
	comp=Z,15nm,0.7s								
ARU	**Arti**	**31.87**	**48**		P		**P**	**12 42 30.3**	**-2.0**
ARU	**Arti**	**31.87**	**48**	*c iP*			**P**	**12 42 31.4**	**-0.9**
ARU								12 43 37.8	
ARU								12 45 26.0	
ARU					S		**S**	**12 47 41.7**	**-1.5**
ARU					SS		**SnSn**	**12 49 28.7**	**-1.8**
ARU					pmax		pmax		
	comp=Z,14nm,0.7s								
ARU					MLR		MLR		
	comp=Z,297nm,15.0s								
ABKAR	**Akbulak array**	**32.72**	**62**		P		**P**	**12 42 39.5**	**-0.4**
GEYT	**Alibeck**	**34.24**	**82**		LR		LR	13 00 26.2	
	comp=Z,100nm,19.9s,baz=322,slow=43								
SPITS	**Spitsbergen Ar**	**35.71**	**1**		LR		LR	12 57 43.4	
	comp=Z,112nm,21.2s,baz=154,slow=36								
BBTS	**Babate**	**37.83**	**232**		LR		LR	12 58 34.8	
	comp=Z,221nm,21.1s,baz=44,slow=36								
BRVK	**Borovoye**	**38.72**	**54**		P		**P**	**12 43 32.5**	**+1.2**
BRVK	**Borovoye**	**38.72**	**54**	*ceP*			**P**	**12 43 33.7**	**+2.4**
BRVK					pmax		pmax		
	comp=Z,7.0nm,0.9s								
BVAR	**Borovoye Array**	**38.78**	**54**		P		**P**	**12 43 32.4**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=298,slow=6.1,SNR=5.0								
BVAR					LR		LR	13 00 47.7	
	comp=Z,307nm,19.8s,baz=279,slow=38								
	comp=Z,1.2nm,0.5s								
DBIC	**Dimbokro**	**39.20**	**209**		LR		LR	13 00 12.2	
	comp=Z,165nm,20.8s,baz=18,slow=37								
KK31	**Karatay Array**	**41.26**	**69**		P		**P**	**12 43 52.8**	**+0.2**
KK31					IAmb		IAmb	12 44 03.1	
	comp=Z,5.1nm,1.1s								
KK31	**Karatay Array**	**41.26**	**69**		P		**P**	**12 43 52.8**	**+0.2**
KK31					pmax		pmax		
	comp=Z,5.0nm,1.2s								
KKAR	**Karatay Array**	**41.26**	**69**		P		**P**	**12 43 53.5**	**+0.9**
KKAR					IAmb		IAmb	12 44 03.1	
	comp=Z,5.1nm,1.1s								
KKAR	**Karatay Array**	**41.26**	**69**		P		**P**	**12 43 53.5**	**+0.9**
KKAR					pmax		pmax		
	comp=Z,5.0nm,1.2s								
WSAR	**Wadi Sarin**	**42.12**	**103**		LR		LR	13 05 29.5	
	comp=Z,100nm,20.6s,baz=338,slow=42								
AAK	**Ala-Archa**	**44.16**	**68**	*↑iP*			**P**	**12 44 20.3**	**+3.9**
AAK					pmax		pmax		
	comp=Z,8.0nm,1.9s								
KURBB	**Kurchatov Arra**	**44.22**	**56**		P		**P**	**12 44 16.7**	**+0.2**
	comp=Z,0.3nm,0.2s,baz=288,slow=9.0,SNR=5.4								
KURBB					LR		LR	13 04 11.0	
	comp=Z,252nm,19.5s,baz=266,slow=38								
	comp=Z,0.3nm,0.2s								
KURK	**Kurchatov**	**44.25**	**56**	*↑eP*			**P**	**12 44 20.9**	**+4.2**
KURK					pmax		pmax		
	comp=Z,6.0nm,1.8s								
NRIK	**Noril'sk**	**45.46**	**29**		LR		LR	13 06 25.6	
	comp=Z,243nm,18.3s,baz=307,slow=40								
NRIK	**Noril'sk**	**45.46**	**29**	*↑eP*			**P**	**12 44 26.4**	**+0.3**
NRIK					pmax		pmax		
	comp=Z,11nm,1.5s								
ZALV	**Zalesovo Beam**	**47.00**	**50**		P		**P**	**12 44 37.6**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=298,slow=8.2,SNR=4.7								
ZALV					LR		LR	13 06 02.8	
	comp=Z,175nm,20.0s,baz=260,slow=38								
	comp=Z,1.4nm,0.6s								
ZALV	**Zalesovo Beam**	**47.00**	**50**	*i*	P		**P**	**12 44 38.7**	**+0.3**
ZALV					pmax		pmax		
	comp=Z,2.0nm,0.6s								
MK31	**Makanchi Array**	**47.81**	**60**		P		**P**	**12 44 43.2**	**-1.8**
MK31					IAmb		IAmb	12 45 02.0	
	comp=Z,2.3nm,0.9s								
MK31	**Makanchi Array**	**47.81**	**60**	*↑eP*			**P**	**12 44 48.5**	**+3.6**
MKAR	**Makanchi Array**	**47.81**	**60**		P		**P**	**12 44 44.4**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=282,slow=6.8,SNR=8.4								
MKAR					LR		LR	13 09 04.8	
	comp=Z,172nm,19.0s,baz=281,slow=42								
	comp=Z,0.7nm,0.6s								
MKAR	**Makanchi Array**	**47.81**	**60**		P		**P**	**12 44 44.1**	**-0.8**
MKAR	**Makanchi Array**	**47.81**	**60**		P		**P**	**12 44 44.1**	**-0.8**
KMBO	**Kilima Mbogo**	**48.60**	**147**		LR		LR	13 06 11.8	
	comp=Z,53nm,18.2s,baz=90,slow=37								
FRB	**Frobisher Bay**	**49.40**	**325**		LR		LR	13 06 53.3	
	comp=Z,116nm,18.2s,baz=12,slow=38								
DGZ	**Jazzator, Alta**	**49.94**	**55**	*↑eP*			**P**	**12 45 02.0**	**+0.7**
DGZ					pmax		pmax		
	comp=Z,2.0nm,0.6s								
SCHQ	**Schefferville**	**51.42**	**313**		P		**P**	**12 45 14.0**	**+1.7**
	comp=Z,3.7nm,0.7s,baz=110,slow=4.7,SNR=5.0								
	comp=Z,3.7nm,0.7s								
WMQ	**Urumqi**	**52.50**	**62**	*eP*			**P**	**12 45 21.5**	**+0.9**
WMQ					LR		LR		
	comp=N,180nm,14.5s								
WMQ					LR		LR		
	comp=E,250nm,17.3s								
WMQ					LR		LR		
	comp=Z,140nm,18.5s								
RES	**Resolute Bay**	**53.91**	**342**		LR		LR	13 08 58.4	
	comp=Z,38nm,20.0s,baz=314,slow=37								
KNGR	**Kungurtug, Tuv**	**55.47**	**50**	*↑eP*			**P**	**12 45 46.2**	**+4.0**
KNGR					pmax		pmax		
	comp=Z,11nm,1.4s								
LSZ	**Lusaka**	**59.20**	**163**		LR		LR	13 12 33.1	
	comp=Z,70nm,18.2s,baz=158,slow=37								
TSUM	**Tsumeb**	**61.62**	**175**		LR		LR	13 14 04.5	
	comp=Z,90nm,18.3s,baz=304,slow=37								
SONM	**Songino Array**	**61.89**	**50**		P		**P**	**12 46 26.7**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=276,slow=8.5,SNR=8.5								
SONM					LR		LR	13 15 15.7	
	comp=Z,242nm,19.1s,baz=310,slow=38								
	comp=Z,1.6nm,0.8s								
ULN	**Ulaanbaatar**	**62.24**	**49**	*↑eP*			**P**	**12 46 31.6**	**+2.2**
ULN					pmax		pmax		
	comp=Z,3.0nm,1.4s								
YAK	**Yakutsk**	**63.91**	**28**		LR		LR	13 17 37.2	
	comp=Z,75nm,18.4s,baz=269,slow=39								
RCBR	**Riachuelo**	**65.65**	**236**		LR		LR	13 12 09.6	
	comp=Z,70nm,20.7s,baz=150,slow=33								
INK	**Inuvik**	**66.65**	**347**		P		**P**	**12 46 57.2**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=343,slow=5.2,SNR=4.2								
INK					LR		LR	13 18 05.8	
	comp=Z,27nm,19.6s,baz=1.5,slow=38								
	comp=Z,1.3nm,0.8s								
YKA	**Yellowknife Ar**	**67.24**	**337**		P		**P**	**12 47 01.2**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=36,slow=5.5,SNR=9.6								
YKA					LR		LR	13 17 17.7	
	comp=Z,68nm,18.5s,baz=344,slow=37								
	comp=Z,1.2nm,0.7s								
BILL	**Bilibino**	**67.83**	**11**	*eP*			**P**	**12 47 06.0**	**+0.9**
BILL				*e*				12 47 32.6	
BILL				*e*				12 49 37.6	
BILL				*ePPP*			PPP	12 51 12.4	
BILL					pmax		pmax		
	comp=Z,4.0nm,1.1s								
BILL					MLR		MLR		
	comp=Z,93nm,18.0s								
PALK	**Pallekele**	**68.54**	**100**		LR		LR	13 19 27.1	
	comp=Z,39nm,20.6s,baz=31,slow=38								
MDP	**Montagnes des**	**68.91**	**257**		LR		LR	13 14 48.7	
	comp=Z,36nm,18.0s,baz=130,slow=34								
SJG	**San Juan**	**70.28**	**277**		LR		LR	13 13 03.2	
	comp=Z,44nm,21.8s,baz=100,slow=32								
TKL	**Tuckaleechee C**	**71.47**	**302**		LR		LR	13 18 11.1	
	comp=Z,30nm,18.6s,baz=22,slow=35								
PZH	**PanZhiHua**	**71.53**	**71**		P		**P**	**12 47 29.5**	**+0.7**
PZH					pmax		pmax		
	comp=Z,10.0nm,0.8s								
PZH					pmax		pmax		
	comp=Z,100nm,5.0s								
XAN	**Xi'an**	**71.62**	**61**		P		**P**	**12 47 31.3**	**+2.1**
XAN					pP		sP	12 47 35.5	+3.3
XAN					pmax		pmax		
	comp=Z,7.0nm,1.4s								
BOSA	**Boshof**	**71.72**	**169**		LR		LR	13 21 39.6	
	comp=Z,62nm,18.9s,baz=3.5,slow=38								
ILAR	**Eielson Array**	**71.84**	**351**		P		**P**	**12 47 31.0**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=9.2,slow=5.0,SNR=5.2								
ILAR					LR		LR	13 19 38.1	
	comp=Z,22nm,20.5s,baz=282,slow=36								
	comp=Z,0.5nm,0.8s								
MA2	**Magadan**	**72.34**	**21**		LR		LR	13 23 22.0	
	comp=Z,114nm,18.8s,baz=309,slow=39								
KLR	**Kul'dur**	**73.84**	**37**		LR		LR	13 23 48.3	
	comp=Z,198nm,18.6s,baz=298,slow=39								
CMAR	**Chiang Mai Arr**	**74.64**	**79**		P		**P**	**12 47 46.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=303,slow=7.7,SNR=7.3								
CMAR					LR		LR	13 28 23.1	
	comp=Z,37nm,18.3s,baz=305,slow=42								
	comp=Z,0.5nm,0.3s								
CMAR	**Chiang Mai Arr**	**74.64**	**79**	*i*	P		**P**	**12 47 50.0**	**+2.9**
CMAR					pmax		pmax		
	comp=Z,1.0nm,0.7s								
SUR	**Sutherland**	**74.94**	**173**		LR		LR	13 23 40.8	
	comp=Z,94nm,18.4s,baz=349,slow=38								
USRK	**Ussuriysk Ar.**	**77.69**	**40**		LR		LR	13 25 59.5	
	comp=Z,91nm,19.0s,baz=71,slow=39								
BBB	**Bella Bella**	**79.85**	**337**		LR		LR	13 24 46.3	
	comp=Z,46nm,18.7s,baz=62,slow=37								
PETK	**Petropavlovsk-**	**79.87**	**21**		LR		LR	13 28 14.7	
	comp=Z,98nm,19.0s,baz=330,slow=39								
YSS	**Yuzh-Sakhalins**	**80.23**	**32**	*eP*			**P**	**12 48 18.4**	**+0.4**
YSS					pmax		pmax		
	comp=Z,20nm,0.9s								
YSS					MLR		MLR		
	comp=Z,400nm,16.0s								
KSRS	**Korea Array**	**80.61**	**47**		LR		LR	13 28 28.4	
	comp=Z,37nm,19.8s,baz=315,slow=39								
PDAR	**Pinedale Array**	**80.70**	**321**		P		**P**	**12 48 20.9**	**0.0**
	comp=Z,0.2nm,0.4s,baz=57,slow=5.5,SNR=3.8								
	comp=Z,0.2nm,0.4s								
BDFB	**Brasilia**	**80.72**	**239**		P		**P**	**12 48 21.0**	**-0.1**
	comp=Z,3.6nm,0.5s,baz=55,slow=9.6,SNR=4.0								
	comp=Z,3.6nm,0.5s								
SHEM	**Shemya Is, Ala**	**83.62**	**12**		LR		LR	13 29 55.2	
	comp=Z,37nm,18.3s,baz=251,slow=39								
PSI	**Prapat**	**84.92**	**91**		LR		LR	13 31 10.3	
	comp=Z,89nm,18.1s,baz=273,slow=39								
ROSC	**El Rosal**	**84.97**	**272**		LR		LR	13 22 33.0	
	comp=Z,88nm,21.6s,baz=296,slow=33								
ANMO	**Albuquerque**	**85.19**	**314**		LR		LR	13 25 59.4	
	comp=Z,87nm,19.1s,baz=60,slow=35								
MJAR	**Matsushiro Arr**	**86.61**	**41**		LR		LR	13 31 22.0	
	comp=Z,176nm,18.8s,baz=332,slow=38								
TXAR	**Lajitas Array**	**87.89**	**309**		P		**P**	**12 48 57.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=59,slow=4.2,SNR=3.9								
	comp=Z,0.2nm,0.5s								
SIV	**San Ignacio**	**89.59**	**248**		LR		LR	13 23 43.0	
	comp=Z,32nm,21.8s,baz=102,slow=32								
JHJ	**Hachijo jima 2**	**90.12**	**42**		LR		LR	13 32 54.4	
	comp=Z,98nm,19.4s,baz=301,slow=38								
PFO	**Pinyon Flats O**	**91.27**	**320**		LR		LR	13 30 04.8	
	comp=Z,50nm,20.3s,baz=54,slow=36								
CPUP	**Villa Florida**	**94.43**	**238**		LR		LR	13 30 42.0	
	comp=Z,29nm,18.1s,baz=41,slow=35								
LPIG	**La Paz**	**95.69**	**310**		LR		LR	13 31 27.2	
	comp=Z,43nm,18.1s,baz=68,slow=35								
ATAH	**Atahualpa**	**95.99**	**266**		LR		LR	13 31 50.5	
	comp=Z,30nm,20.5s,baz=19,slow=35								
JCJ	**Chichijima**	**96.20**	**44**		LR		LR	13 36 48.0	
	comp=Z,42nm,19.9s,baz=74,slow=38								
NNA	**Nana**	**98.07**	**261**		LR		LR	13 32 37.8	
	comp=Z,16nm,18.8s,baz=2.5,slow=35								
WRA	**Warramunga Arr**	**125.96**	**85**		PKP		**PKPdf**	**12 55 07.8**	**-2.2**
	comp=Z,0.4nm,1.0s,baz=220,slow=1.9,SNR=1.8								
ASAR	**Alice Springs**	**127.90**	**89**		PKP		**PKPdf**	**12 55 11.6**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=316,slow=1.7,SNR=7.3								

ATH 25 12:37:07.3,37°98N×20°29E,h15km±7km,ML1.7/1,Error ellipse: s-maj=8.0km s-min=1.4km az=54.0,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.22**	**11**			P	Pg	12 37 12.4	0.0
KEF3						S	Sb	12 37 16.4	-0.6
PSDA	**Pessada-Kefalo**	**0.27**	**60**			P	Pg	12 37 12.6	-0.4
PSDA						S	Sg	12 37 16.2	-0.8
KEF4	**Livadi, Kephal**	**0.29**	**21**			P	Pg	12 37 13.1	-0.5
KEF4						S	Sg	12 37 17.8	+0.1
VLS	**Valsamata**	**0.30**	**50**			P	Pg	12 37 13.2	-0.6
VLS						S	Sg	12 37 17.9	-0.2
VLS						AML	AML	12 37 18.1	
	comp=N,358μm,0.2s								
VLS						AML	AML	12 37 18.4	
	comp=E,391μm,0.1s								
LTHK	**Lithakia**	**0.51**	**122**			P	Pg	12 37 17.3	-0.2
LTHK						S	Sg	12 37 24.6	+0.3
FSK	**Fiskardo**	**0.52**	**24**			P	Pg	12 37 17.6	-0.1
FSK						S	Sg	12 37 24.8	+0.1

ROM 25 12:39:19.9±0.1,42°769N±0°003×13°126E±0°005, h11km,ML2.7/8,7C-3D,Error ellipse: s-maj=0.3km s-min=0.1km az=256.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**352**			⇓P	Pg	12 39 22.5	+0.3
NRCA						S	Sg	12 39 24.2	+0.2
NRCA						AML	AML		
	comp=E,14400μm,0.4s								
NRCA						AML	AML		
	comp=N,15950μm,0.4s								
NRCA						AML	AML		
	comp=N,17500μm,0.4s								
NRCA						AML	AML		
	comp=N,15900μm,0.4s								
NRCA						AML	AML		
	comp=E,15200μm,0.4s								
NRCA						AML	AML		
	comp=N,15920μm,0.4s								
NRCA						AML	AML		
	comp=E,14450μm,0.4s								
MC2	**Monte Cornacci**	**0.15**	**18**			P	Pg	12 39 23.9	+0.4
LNSS	**Leonessa**	**0.18**	**201**			⇑P	Pg	12 39 24.4	+0.5
LNSS						S	Sg	12 39 27.8	+1.3
LNSS						AML	AML		
	comp=E,17750μm,0.1s								
LNSS						AML	AML		
	comp=N,14300μm,0.7s								
T1243	**Rocca Santa Ma**	**0.25**	**107**			P	Pg	12 39 25.7	+0.7
T1243						S	Sg	12 39 29.4	+0.9
T1243						AML	AML		
	comp=E,10200μm,0.8s								
T1243						AML	AML		
	comp=N,11150μm,0.2s								
T1243						AML	AML		
	comp=E,10235μm,0.8s								
T1243						AML	AML		
	comp=N,11100μm,0.2s								
T1243						AML	AML		
	comp=N,11150μm,0.2s								
T1243						AML	AML		
	comp=E,9990μm,0.8s								
RM33	**Pellescritta (**	**0.27**	**166**			P	Pg	12 39 25.9	+0.5
RM33						S	Sb	12 39 30.5	-0.9
RM33						AML	AML		
	comp=E,2920μm,0.3s								
RM33						AML	AML		
	comp=E,2875μm,0.3s								
RM33						AML	AML		
	comp=N,2940μm,0.6s								
RM33						AML	AML		
	comp=E,2870μm,0.3s								
RM33						AML	AML		
	comp=N,2915μm,0.6s								
FDMO	**Fiordimonte**	**0.27**	**354**			P	Pg	12 39 25.7	+0.3
FDMO						S	Sg	12 39 30.0	+0.9
FDMO						AML	AML		
	comp=E,982μm,0.2s								
FDMO						AML	AML		
	comp=N,938μm,0.4s								
CESI	**CESI - Serrava**	**0.29**	**325**			P	Pg	12 39 26.0	+0.2
CESI						S	Sg	12 39 30.7	+1.0
CESI						AML	AML		
	comp=E,2105μm,1.0s								
CESI						AML	AML		
	comp=N,3145μm,0.4s								
CAMP	**Campotosto**	**0.31**	**138**			P	Pg	12 39 26.5	+0.3
CAMP						S	Sb	12 39 31.7	-1.1
CAMP						AML	AML		
	comp=N,894μm,0.6s								
CAMP						AML	AML		
	comp=E,1275μm,0.6s								
ARRO	**Arrone**	**0.33**	**235**			⇑P	Pg	12 39 26.7	+0.3
ARRO						S	Sb	12 39 32.0	-1.0
ARRO						AML	AML		
	comp=N,1785μm,1.1s								
ARRO						AML	AML		
	comp=E,1755μm,0.2s								
CS

s-min=0.3km az=171.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**298**	P	Pg	12 39 46.4	+0.3
NRCA				S	Sg	12 39 47.8	+0.2
NRCA				AML	AML		
	comp=N,10171μm,0.1s						
NRCA				END			
MC2	**Monte Cornacci**	**0.10**	**21**	P	Pg	12 39 47.3	+0.4
MC2				S	Sg	12 39 49.4	+0.4
MC2				END			
MMO1	**Montemonaco**	**0.15**	**60**	P	Pg	12 39 48.0	+0.5
MMO1				S	Sg	12 39 50.7	+0.6
MMO1				END			
FEMA	**Monte Fema**	**0.16**	**334**	P	Pg	12 39 48.1	+0.5
FEMA				S	Sg	12 39 50.9	+0.6
FEMA				AML	AML		
	comp=E,3389μm,0.3s						
FEMA				END			
FDMO	**Fiordimonte**	**0.22**	**349**	P	Pg	12 39 49.0	+0.4
FDMO				S	Sg	12 39 52.6	+0.8
FDMO				AML	AML		
	comp=N,867μm,0.0s						
FDMO				END			
LNSS	**Leonessa**	**0.23**	**199**	AML	AML		
	comp=N,1487μm,0.2s						
CESI	**CESI - Serrava**	**0.25**	**316**	P	Pg	12 39 49.8	+0.5
CESI				S	Sb	12 39 53.9	-1.1
CESI				AML	AML		
	comp=E,2105μm,1.0s						
CESI				AML	AML		
	comp=N,3145μm,0.4s						
CESI				AML	AML		
	comp=E,1751μm,0.2s						
CESI				END			
CSP1	**Cessapalombo**	**0.27**	**9**	P	Pg	12 39 50.1	+0.5
CSP1				S	Sb	12 39 54.6	-1.0
CSP1				AML	AML		
	comp=N,1495μm,0.3s						
RM33	**Pellescritta (**	**0.32**	**170**	AML	AML		
	comp=N,1223μm,0.0s						
TERO	**Teramo**	**0.39**	**120**	⇓P	Pg	12 39 52.1	+0.3
ARVD	**Arcevia**	**0.69**	**348**	S	Sn	12 40 09.0	-1.4

ROM 25 12:42:00.1±0.1, 42°34.734N±0.004×13°16.162E±0.006, h9km, ML2.2/19, Error ellipse: s-maj=0.5km s-min=0.2km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**340**	P	Pg	12 42 03.3	+0.6
NRCA				S	Sg	12 42 05.3	+0.8
NRCA				AML	AML		
	comp=E,5160μm,0.1s						
NRCA				AML	AML		
	comp=E,5600μm,0.1s						
NRCA				AML	AML		
	comp=N,8400μm,0.1s						
NRCA				AML	AML		
	comp=N,7600μm,0.1s						
NRCA				AML	AML		
	comp=E,8855μm,0.2s						
NRCA				AML	AML		
	comp=E,7950μm,0.2s						
NRCA				AML	AML		
	comp=E,5475μm,0.1s						
NRCA				AML	AML		
	comp=E,5163μm,0.1s						
LNSS	**Leonessa**	**0.16**	**214**	P	Pg	12 42 04.3	+0.8
LNSS				S	Sg	12 42 07.5	+1.6
LNSS				AML	AML		
	comp=E,3605μm,1.0s						
LNSS				AML	AML		
	comp=N,4015μm,0.2s						
LNSS				AML	AML		
	comp=E,3610μm,1.0s						
MC2	**Monte Cornacci**	**0.18**	**7**	P	Pg	12 42 04.5	+0.6
MC2				S	Sg	12 42 07.7	+1.1
MC2				AML	AML		
	comp=N,1911μm,0.2s						
MC2				AML	AML		
	comp=E,1925μm,0.2s						
MMO1	**Montemonaco**	**0.20**	**36**	P	Pg	12 42 04.8	+0.5
MMO1				S	Sg	12 42 08.3	+1.1
T1243	**Rocca Santa Ma**	**0.21**	**100**	P	Pg	12 42 05.0	+0.6
T1243				S	Sg	12 42 08.6	+1.1
T1243				AML	AML		
	comp=N,2525μm,0.2s						
T1243				AML	AML		
	comp=N,2535μm,0.2s						
T1243				AML	AML		
	comp=E,2960μm,1.0s						
T1243				AML	AML		
	comp=E,2920μm,1.0s						
T1243				AML	AML		
	comp=E,2236μm,0.0s						
T1243				AML	AML		
	comp=E,2187μm,0.0s						
T1243				AML	AML		
	comp=N,1588μm,0.0s						
T1243				AML	AML		
	comp=N,1598μm,0.2s						
RM33	**Pellescritta (**	**0.23**	**170**	P	Pg	12 42 05.4	+0.7
RM33				S	Sg	12 42 09.4	+1.5
RM33				AML	AML		
	comp=E,909μm,1.3s						
RM33				AML	AML		
	comp=N,926μm,1.0s						
RM33				AML	AML		
	comp=E,972μm,1.3s						
RM33				AML	AML		
	comp=N,895μm,1.0s						
RM33				AML	AML		
	comp=E,1155μm,1.5s						
RM33				AML	AML		
	comp=N,940μm,0.1s						
RM33				AML	AML		
	comp=E,1169μm,1.5s						
RM33				AML	AML		
	comp=N,958μm,0.9s						
RM33				AML	AML		
	comp=N,895μm,0.2s						
RM33				AML	AML		
	comp=N,874μm,0.1s						
RM33				AML	AML		
	comp=E,878μm,0.1s						
RM33				AML	AML		
	comp=E,878μm,0.1s						
CAMP	**Campotosto**	**0.27**	**137**	P	Pg	12 42 06.0	+0.6
CAMP				S	Sg	12 42 10.4	+1.2
CAMP				AML	AML		
	comp=E,232μm,0.3s						
CAMP				AML	AML		
	comp=N,217μm,1.2s						
FDMO	**Fiordimonte**	**0.31**	**350**	P	Pg	12 42 06.5	+0.3
FDMO				S	Sg	12 42 11.3	+1.0
FDMO				AML	AML		
	comp=N,346μm,0.9s						
FDMO				AML	AML		
	comp=E,232μm,0.3s						
CESI	**CESI - Serrava**	**0.33**	**325**	P	Pg	12 42 07.0	+0.4
CESI				S	Sg	12 42 12.3	+1.3
CESI				AML	AML		
	comp=E,230μm,1.2s						
CESI				AML	AML		
	comp=N,294μm,1.3s						
CESI				AML	AML		
	comp=N,293μm,1.3s						
CESI				AML	AML		
	comp=E,246μm,0.3s						
ARRO	**Arrone**	**0.33**	**242**	P	Pg	12 42 07.1	+0.5
ARRO				S	Sb	12 42 12.3	-1.3
ARRO				AML	AML		
	comp=E,293μm,1.5s						
ARRO				AML	AML		
	comp=N,394μm,0.1s						
TERO	**Teramo**	**0.34**	**109**	P	Pg	12 42 07.3	+0.4
TERO				S	Sg	12 42 12.6	+1.2
TERO				AML	AML		
	comp=E,330μm,0.8s						
TERO				AML	AML		
	comp=N,454μm,0.1s						
TERO				AML	AML		
	comp=N,794μm,0.1s						
TERO				AML	AML		
	comp=E,756μm,0.7s						
TERO				AML	AML		
	comp=N,919μm,0.1s						
TERO				AML	AML		
	comp=N,918μm,0.1s						
TERO				AML	AML		
	comp=E,662μm,0.7s						
TERO				AML	AML		
	comp=E,756μm,0.7s						
TERO				AML	AML		
	comp=E,271μm,0.1s						
TERO				AML	AML		
	comp=N,452μm,0.1s						
TERO				AML	AML		
	comp=N,391μm,0.1s						
TERO				AML	AML		
	comp=E,185μm,0.1s						
CSP1	**Cessapalombo**	**0.36**	**5**	P	Pg	12 42 07.5	+0.3
CSP1				S	Sb	12 42 13.3	-1.2
CSP1				AML	AML		
	comp=N,471μm,0.5s						
CSP1				AML	AML		
	comp=E,441μm,0.4s						
GIGS	**Gran Sasso**	**0.41**	**133**	P	Pg	12 42 08.4	+0.2
GIGS				S	Sg	12 42 14.6	+1.0
GIGS				AML	AML		
	comp=E,40μm,0.0s						
OFFI	**Offida**	**0.43**	**62**	P	Pb	12 42 09.6	-0.3
OFFI				S	Sb	12 42 17.8	+1.2
OFFI				AML	AML		
	comp=E,902μm,0.5s						
OFFI				AML	AML		
	comp=N,900μm,0.4s						
CESX	**Cesi**	**0.45**	**254**	P	Pb	12 42 09.5	-0.6
CESX				AML	AML		
	comp=E,358μm,0.8s						
CESX				AML	AML		
	comp=N,224μm,1.2s						
FIAM	**Fiamignano**	**0.47**	**184**	P	Pg	12 42 09.4	+0.3
FIAM				S	Sb	12 42 16.6	-1.0
FIAM				AML	AML		
	comp=N,253μm,1.5s						
FIAM				AML	AML		
	comp=E,254μm,0.2s						
ASSB	**Assisi San Ben**	**0.48**	**310**	P	Pg	12 42 09.8	+0.4
ASSB				S	Sb	12 42 17.4	-0.7
ASSB				AML	AML		
	comp=N,180μm,0.9s						
ASSB				AML	AML		
	comp=E,157μm,1.1s						
SNTG	**Esanatoglia**	**0.55**	**343**	P	Pg	12 42 10.9	+0.2
SNTG				S	Sb	12 42 19.0	-0.8
FAGN	**Fagnano**	**0.56**	**146**	P	Pg	12 42 11.3	+0.4
FAGN				S	Sb	12 42 21.0	+0.7
FAGN				AML	AML		
	comp=E,196μm,0.5s						
FAGN				AML	AML		
	comp=N,224μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.59**	**320**	P	Pg	12 42 12.0	+0.5
ATCC				S	Sb	12 42 21.2	0.0
ATCC				AML	AML		
	comp=E,160μm,1.3s						
ATCC				AML	AML		
	comp=N,118μm,1.4s						
EL6	**Elcito**	**0.60**	**356**	P	Pg	12 42 11.7	+0.1
EL6				S	Sb	12 42 21.0	-0.4
VCEL	**Villa Celiera**	**0.60**	**124**	P	Pg	12 42 12.2	+0.4
VCEL				S	Sb	12 42 22.1	+0.6
CING	**Cingoli**	**0.64**	**2**	P	Pb	12 42 13.1	-0.4
CING				S	Sb	12 42 22.8	+0.2
CING				AML	AML		
	comp=E,93μm,0.2s						
T0110	**Collepietro**	**0.68**	**138**	P	Pg	12 42 13.5	+0.3
T0110				S	Sb	12 42 24.7	+0.9
ARVD	**Arcevia**	**0.78**	**348**	P	Pg	12 42 15.4	+0.3
ARVD				S	Sb	12 42 26.9	+0.3
MGAB	**Montegabbione**	**0.79**	**283**	P	Pb	12 42 15.7	-0.3
MGAB				AML	AML		
	comp=N,105μm,0.4s						
MGAB				AML	AML		
	comp=E,110μm,0.9s						
MGAB				AML	AML		
	comp=N,87μm,0.4s						
MGAB				AML	AML		
	comp=E,106μm,0.0s						
MELA	**Melanico ??? S**	**1.79**	**124**	P	Pg	12 42 33.8	-0.5

*IDC **25** 12:49:26.8±7.8, 34°68S×179°37E, h206km±80km, mb2.9/2, mbtmp3.6/3, Error ellipse: s-maj=98.2km s-min=39.8km az=5.0*

*WEL **25** 12:49:27.3±0.9, 35°S±12°×18°0E±1°3, h262km±14km, M4.3/20, mB4.2/2, ML4.6/25, MLv4.3/20, Mw(mB)3.2/2, Error ellipse: s-maj=0.0km s-min=0.0km az=119.7*

ISC 25 12:49:29.2±1.6, 35°11S±0°10×179°7E±0°1, h250km, n41, σ1s08/56, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.67**	**204**	P	**Pn**	**12 50 18.2**	**+0.1**
MXZ				S	**S**	**12 50 56.0**	**-0.9**
WMGZ	**Waiomatatini S**	**2.88**	**200**	P	**Pn**	**12 50 19.9**	**-0.3**
WMGZ				S	**S**	**12 51 03.0**	**+2.2**
HAZ	**Te Kaha**	**3.04**	**209**	P	**Pn**	**12 50 21.5**	**-0.4**
HAZ				S	**S**	**12 51 04.7**	**+0.9**
PKGZ	**Pakihiroa**	**3.05**	**204**	P	**Pn**	**12 50 21.2**	**-0.9**
PKGZ				S	**S**	**12 51 04.8**	**+0.6**
PUZ	**Puketiti**	**3.16**	**200**	P	**Pn**	**12 50 22.4**	**-1.0**
PUZ				S	**S**	**12 51 06.6**	**+0.3**
RUGZ	**Raukumara Rang**	**3.26**	**209**	P	**Pn**	**12 50 24.3**	**-0.2**
RUGZ				S	**S**	**12 51 09.1**	**+0.6**
TWGZ	**Tauwhareparae**	**3.34**	**203**	P	**Pn**	**12 50 25.0**	**-0.3**
TWGZ				S	**S**	**12 51 11.9**	**+1.9**
CNGZ	**Carnagh Statio**	**3.56**	**199**	P	**Pn**	**12 50 27.6**	**-0.1**
GRZ	**Great Barrier**	**3.60**	**250**	P	**Pn**	**12 50 29.5**	**+1.2**
TKGZ	**Te Karaka**	**3.62**	**203**	P	**Pn**	**12 50 27.7**	**-0.7**
TKGZ				S	**S**	**12 51 17.5**	**+1.9**
MWZ	**Matawai**	**3.64**	**207**	P	**Pn**	**12 50 27.9**	**-0.9**
MWZ				S	**S**	**12 51 16.5**	**+0.4**
OPRZ	**Ohinepanea**	**3.70**	**222**	P	**Pn**	**12 50 27.9**	**-1.5**
OPRZ				S	**S**	**12 51 18.6**	**+1.5**
URZ	**Urewera**	**3.75**	**212**	P	**Pn**	**12 50 29.2**	**-0.7**
	12nm,0.3s,baz=274,slow=3.9,SNR=53						
URZ				S	**S**	**12 51 18.0**	**-0.2**
	55nm,0.3s,baz=314,slow=23,SNR=21						
URZ	**Urewera**	**3.75**	**212**	P	**Pn**	**12 50 28.7**	**-1.2**
URZ				S	**S**	**12 51 17.8**	**-0.4**
RAGZ	**Rawiri**	**3.82**	**207**	P	**Pn**	**12 50 31.4**	**+0.5**
RAGZ				S	**S**	**12 51 20.9**	**+0.9**
RIGZ	**Rimuhau**	**3.89**	**202**	P	**Pn**	**12 50 30.8**	**-0.8**
PRGZ	**Paritu Road**	**4.06**	**200**	P	**Pn**	**12 50 34.1**	**+0.5**
MUGZ	**Murupara**	**4.08**	**214**	P	**Pn**	**12 50 33.0**	**-0.8**
MUGZ				S	**S**	**12 51 25.9**	**+0.7**
SNGZ	**Shannon Statio**	**4.10**	**206**	P	**Pn**	**12 50 33.4**	**-0.7**
SNGZ				S	**S**	**12 51 27.9**	**+2.1**
MKAZ	**Moumakai**	**4.14**	**240**	P	**Pn**	**12 50 32.6**	**-2.0**
KNZ	**Kokohu**	**4.21**	**202**	P	**Pn**	**12 50 34.1**	**-1.2**
MHGZ	**Mahia Peninsul**	**4.27**	**199**	P	**Pn**	**12 50 35.7**	**-0.4**
RAHZ	**Arahi**	**4.32**	**208**	P	**Pn**	**12 50 35.5**	**-1.2**
MTHZ	**Maungataniwha**	**4.36**	**210**	P	**Pn**	**12 50 36.3**	**-0.9**
WHHZ	**Waihua**	**4.40**	**205**	P	**Pn**	**12 50 37.0**	**-0.7**
NMHZ	**Naumai**	**4.58**	**209**	P	**Pn**	**12 50 39.1**	**-0.7**
ARHZ	**Aropaoanui**	**4.65**	**206**	P	**Pn**	**12 50 39.8**	**-0.9**
BKZ	**Black Stump Fm**	**4.77**	**211**	P	**Pn**	**12 50 41.0**	**-1.1**
KWHZ	**Kaweka Forest**	**5.01**	**210**	P	**Pn**	**12 50 44.0**	**-1.1**
NTVZ	**North Tongarir**	**5.09**	**217**	P	**Pn**	**12 50 46.9**	**+0.8**
KAHZ	**Kahuranaki**	**5.17**	**204**	P	**Pn**	**12 50 46.2**	**-0.8**
SNVZ	**South Ngauruho**	**5.18**	**217**	P	**Pn**	**12 50 47.2**	**0.0**
KRHZ	**Kereru**	**5.22**	**209**	P	**Pn**	**12 50 45.6**	**-2.0**
FWVZ	**Far West T-bar**	**5.27**	**217**	P	**Pn**	**12 50 48.1**	**-0.4**
PXZ	**Pawanui**	**5.38**	**203**	P	**Pn**	**12 50 48.0**	**-1.5**
PNHZ	**Pukenui**	**5.52**	**209**	P	**Pn**	**12 50 49.6**	**-1.7**
PRHZ	**Porangahau**	**5.67**	**204**	P	**Pn**	**12 50 51.7**	**-1.5**
ASAR	**Alice Springs**	**41.14**	**273**	P	**P**	**12 56 49.2**	**-0.2**
	0.5nm,0.5s,baz=115,slow=7.8,SNR=6.8 0.5nm,0.7s						
WRA	**Warramunga Arr**	**42.57**	**279**	P	**P**	**12 56 60.0**	**-0.9**
	0.2nm,0.3s,baz=119,slow=7.7,SNR=15 0.2nm,0.3s						
FINES	**FINESS Array B**	**148.76**	**336**	PKPbc	**PKiKP**	**13 08 47.1**	**-0.2**
	0.8nm,0.5s,baz=56,slow=4.8,SNR=4.4						
NOA	**NORSAR Array B**	**153.02**	**348**	PKPbc	**PKiKP**	**13 08 57.6**	**+1.4**
	0.3nm,0.5s,baz=13,slow=3.7,SNR=2.3						

*IDC **25** 12:56:50.8±13.0, 36°19N×70°65E, h158km±128km, mb3.2/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=70.0km s-min=27.8km az=18.0*

*NNC **25** 12:57:02.2±2.7, 37°05N×70°94E, h235km±33km, mb3.0, mpv4.2, Error ellipse: s-maj=28.0km s-min=16.3km az=11.0*

ISC 25 12:56:55.4±1.1, 36°6N±0°1×70°8E±0°1, h200km, n16, σ1s73/17, mb3.4/4, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.95**	**21**	P	**Pn**	**12 58 24.1**	**+1.8**
	SNR=65						
EKS2	**Erkin-Say**	**6.47**	**20**	P	**Pn**	**12 58 31.4**	**+2.6**
	SNR=7.2						
KK31	**Karatay Array**	**6.50**	**358**	P	**Pn**	**12 58 30.5**	**+1.4**
	9.5nm,0.5s,baz=175,slow=12,SNR=83						
KK31				⇑S	**Sn**	**12 59 41.8**	**-1.6**
	14nm,0.5s,baz=185,slow=21,SNR=17						
AAK	**Ala-Archa**	**6.66**	**24**	P	**Pn**	**12 58 33.3**	**+2.0**
	SNR=11						
CHMS	**Chumysh**	**7.07**	**24**	P	**Pn**	**12 58 38.5**	**+2.0**
	SNR=6.8						
TKM2	**Tokmak 2**	**7.30**	**29**	P	**Pn**	**12 58 41.6**	**+2.0**
	SNR=26						
TKM2	**Tokmak 2**	**7.30**	**29**	⇑P	**Pn**	**12 58 41.3**	**+1.6**
	11nm,0.5s						
TKM2				⇑S	**Sn**	**13 00 00.4**	**-2.1**
	9.7nm,0.8s						
KUDL	**Kundal**	**9.69**	**149**	*e*S	Sn	13 00 47.0	-12
MKAR	**Makanchi Array**	**13.29**	**36**	P	**P**	**12 59 59.0**	**-0.3**
	0.2nm,0.3s,baz=226,slow=14,SNR=11 1.2nm,0.6s						
AB31	**Akbulak array**	**14.93**	**331**	⇓P	**P**	**13 00 16.6**	**-0.7**
	0.9nm,0.5s,baz=145,slow=12,SNR=15						
AKTO	**Aktyubinsk**	**16.63**	**330**	⇓P	**Pn**	**13 00 37.6**	**+0.5**
	7.1nm,0.9s						
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**Pn**	**13 01 13.9**	**-1.5**
	3.4nm,0.5s,baz=226,slow=11,SNR=17 3.4nm,0.5s						
FINES	**FINESS Array B**	**37.33**	**326**	P	**P**	**13 03 49.8**	**+1.7**
	1.1nm,0.6s,baz=83,slow=11,SNR=2.2 1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.59**	**268**	P	**P**	**13 07 16.8**	**-1.3**
	0.6nm,0.5s,baz=50,slow=6.0,SNR=4.1						
WRA	**Warramunga Arr**	**82.16**	**122**	P	**P**	**13 08 54.1**	**0.0**
	0.4nm,1.0s,baz=331,slow=4.8,SNR=1.5 0.4nm,1.0s						
ASAR	**Alice Springs**	**84.42**	**125**	P	**P**	**13 09 05.0**	**-0.5**
	0.1nm,0.5s,baz=324,slow=4.6,SNR=1.1 0.1nm,0.5s						

*MDD **25** 13:03:07.4±0.5, 36°58N×11°41W, h38km±16km, Mb4.4/27, M_mb3.8/27, Error ellipse: s-maj=5.3km s-min=3.2km az=75.0*

*CNRM **25** 13:03:08.3, 36°56N×11°18W, h23km, ml3.1*

*LDG **25** 13:03:08.9±0.2, 36°61N×11°34W, h38km, Ml3.4/9, Error ellipse: s-maj=3.2km s-min=2.7km az=56.0*

*INMG **25** 13:03:09.8±1.3, 36°54N×11°26W, h36km, ML2.8, Error ellipse: s-maj=3.9km s-min=2.4km az=100.0*

*IGIL **25** 13:03:10.3, 36°52N×11°25W, h31km, ML2.8*

ISC 25 13:03:05.5±1.1, 36°56N±0°04×11°33W±0°06, h35km, n93, σ2s32/156, 35C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.08**	**73**	P	**Pn**	**13 03 40.0**	**+2.1**
PFVI	**Vila Bisbo**	**2.08**	**73**	P	**Pn**	**13 03 40.6**	**+2.6**
PFVI				S	Sn	13 04 12.6	+10
PFVI	**Vila Bisbo**	**2.08**	**73**	⇑*i*P	**Pn**	**13 03 40.4**	**+2.4**
PFVI				S	**Sn**	**13 04 02.5**	**-0.2**
PFVI				A	A	13 04 05.0	
	85nm,0.3s						
MORF	**Marmelete**	**2.27**	**70**	*e*P	**Pn**	**13 03 43.0**	**+2.5**
MORF				*e*S	**Sn**	**13 04 07.2**	**-0.2**
MORF				IAML		13 04 08.6	
	comp=N,76nm,0.3s						
MORF	**Marmelete**	**2.27**	**70**	⇑*i*P	**Pn**	**13 03 43.1**	**+2.5**
MORF				S	**Sn**	**13 04 07.8**	**+0.5**
MORF				A	A	13 04 12.3	
	comp=N,69nm,0.1s						
PTEO	**Sao Teotonio**	**2.30**	**64**	*e*P	**Pn**	**13 03 43.6**	**+2.7**
PTEO				S	**Sn**	**13 04 08.9**	**+0.8**
PTEO				A	A	13 04 09.5	
	comp=N,31nm,0.3s						
PNCL	**Nicolau / Gran**	**2.71**	**54**	⇑*e*P	**Pn**	**13 03 49.3**	**+2.7**
PNCL				S	**Sn**	**13 04 19.1**	**+0.9**
PNCL				A	A	13 04 20.1	
	comp=N,27nm,0.3s						
PMST	**Lisbon--Monsan**	**2.76**	**37**	*e*P	**Pn**	**13 03 50.0**	**+2.8**
PMST				S	**Sn**	**13 04 19.8**	**+0.4**
PMST				A	A	13 04 24.4	
	comp=N,27nm,0.2s						
MESJ	**Messejana**	**2.79**	**62**	*e*P	**Pn**	**13 03 50.1**	**+2.5**
MESJ				*e*S	**Sn**	**13 04 19.6**	**-0.4**
MESJ				IAML		13 04 21.0	
	comp=E,25nm,0.2s						
MESJ	**Messejana**	**2.79**	**62**	*e*P	**Pn**	**13 03 50.1**	**+2.5**
MESJ				S	**Sn**	**13 04 20.3**	**+0.2**
MESJ				A	A	13 04 24.6	
	comp=E,18nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.81**	**75**	*e*P	**Pn**	**13 03 50.8**	**+2.9**
PBDV				S	**Sn**	**13 04 20.9**	**+0.4**
PBDV				A	A	13 04 30.6	
	comp=E,18nm,0.3s						
PCVE	**Castro Verde**	**2.84**	**67**	⇑*i*P	**Pn**	**13 03 51.0**	**+2.7**
PCVE				S	**Sn**	**13 04 21.2**	**-0.1**
PCVE				A	A	13 04 22.3	
	comp=E,24nm,0.2s						
PMAFR	**Mafra**	**2.89**	**33**	⇑*i*P	**Pn**	**13 03 51.5**	**+2.5**
PMAFR				S	**Sn**	**13 04 22.9**	**+0.3**
PMAFR				A	A	13 04 27.5	
	comp=E,53nm,0.1s						
PVAQ	**Vaqueiros**	**3.01**	**73**	P	**Pn**	**13 03 53.2**	**+2.6**
PVAQ	**Vaqueiros**	**3.01**	**73**	P	**Pn**	**13 03 53.6**	**+2.9**
PVAQ				S	**Sn**	**13 04 32.4**	**+6.9**
PVAQ	**Vaqueiros**	**3.01**	**73**	⇑*e*P	**Pn**	**13 03 53.5**	**+2.9**
PVAQ				S	**Sn**	**13 04 25.0**	**-0.5**
PVAQ				A	A	13 04 33.7	
	comp=E,26nm,1.6s						
PBEJ	**Beja**	**3.12**	**61**	⇑*e*P	**Pn**	**13 03 54.6**	**+2.4**
PBEJ				S	**Sn**	**13 04 28.3**	**0.0**
PBEJ				A	A	13 04 29.3	
	comp=E,16nm,0.2s						
EGRO	**El Granado**	**3.23**	**71**	Pn	**Pn**	**13 03 56.5**	**+2.9**
EGRO				⇑*i*Vmb_V		13 03 58.2	
	comp=E,396nm,SNR=2.3						
EGRO				Sn	**Sn**	**13 04 31.2**	**+0.4**
EVO	**Evora**	**3.29**	**52**	P	**Pn**	**13 03 57.1**	**+2.6**
EVO				S	**Sn**	**13 04 32.5**	**+0.1**
EVO	**Evora**	**3.29**	**52**	*e*P	**Pn**	**13 03 56.9**	**+2.4**
EVO				S	**Sn**	**13 04 32.1**	**-0.3**
EVO				A	A	13 04 35.3	
	comp=E,32nm,0.1s						
PMTG	**Montargil**	**3.51**	**43**	⇑*i*P	**Pn**	**13 03 59.6**	**+2.1**
PMTG				S	**Sn**	**13 04 38.0**	**+0.2**
PMTG				A	A	13 04 43.4	
	comp=E,12nm,0.1s						
PSBE	**So Bento**	**3.56**	**33**	*e*P	**Pn**	**13 04 01.0**	**+2.7**
PSBE				S	**Sn**	**13 04 39.3**	**+0.1**
PSBE				A	A	13 04 43.9	
	comp=E,13nm,0.4s						
PESTR	**Estremoz**	**3.75**	**51**	P	**Pn**	**13 04 03.4**	**+2.5**
PESTR	**Estremoz**	**3.75**	**51**	P	**Pn**	**13 04 03.4**	**+2.5**
PESTR				S	**Sn**	**13 04 51.5**	**+7.6**
PESTR	**Estremoz**	**3.75**	**51**	*e*P	**Pn**	**13 04 03.4**	**+2.5**
PESTR				S	**Sn**	**13 04 43.9**	**0.0**
PESTR				A	A	13 04 48.0	
	comp=E,7.9nm,0.3s						
PBAR	**Barrancos**	**3.78**	**63**	*e*P	**Pn**	**13 04 03.7**	**+2.5**
PBAR				S	**Sn**	**13 04 42.8**	**-1.6**
PBAR				A	A	13 04 48.1	
	comp=E,11nm,0.3s						
EMIN	**Mina Concepcio**	**3.91**	**71**	Pn	**Pn**	**13 04 04.8**	**+1.7**
EMIN				⇑*i*Vmb_V		13 04 06.3	
	comp=E,462nm,SNR=3.5						
EMIN				Sn	**Sn**	**13 04 46.7**	**-1.0**
EBAD	**Badajoz**	**4.06**	**56**	Pn	**Pn**	**13 04 07.1**	**+1.9**
EBAD				⇑*i*Vmb_V		13 04 08.6	
	comp=E,686nm,SNR=6.4						
EBAD				Sn	**Sn**	**13 04 50.8**	**-0.7**

PCAS	**Casmilo, Conde**	**4.14**	**32**	*e*P		**Pn**	**13 04 08.8**	**+2.6**
PCAS				S		**Sn**	**13 04 53.7**	**+0.4**
PCAS				A		A	13 04 59.2	
	comp=E,10nm,0.3s							
PMRV	**Marv??o**	**4.23**	**46**	⇑*i*P		**Pn**	**13 04 09.5**	**+2.1**
PMRV				S		**Sn**	**13 04 54.1**	**-1.5**
PMRV				A		A	13 04 57.3	
	comp=E,15nm,0.2s							
COI	**Coimbra**	**4.30**	**31**	S		**Sn**	**13 04 57.7**	**+0.3**
ESPR	**Espera**	**4.41**	**84**	Pn		**Pn**	**13 04 13.0**	**+3.1**
ESPR				⇑*i*Vmb_V			13 04 15.1	
	comp=E,449nm,SNR=4.4							
ESPR				Sn		**Sn**	**13 04 58.8**	**-1.2**
PCBR	**Castelo Branco**	**4.46**	**42**	*e*P		**Pn**	**13 04 13.1**	**+2.5**
PCBR				S		**Sn**	**13 05 00.4**	**-0.9**
PCBR				A		A	13 05 03.0	
	comp=E,6.6nm,0.4s							
MTE	**Manteigas**	**4.85**	**37**	*e*P		**Pn**	**13 04 18.4**	**+2.4**
MTE				S		**Sn**	**13 05 10.3**	**-0.7**
MTE				A		A	13 05 26.7	
	comp=E,6.6nm,0.7s							
ZHG	**ZHG**	**4.94**	**128**	P		**Pn**	**13 04 20.0**	**+2.7**
ZHG	**ZHG**	**4.94**	**128**	P		**Pn**	**13 04 19.9**	**+2.6**
ZHG				S		**Sn**	**13 05 13.7**	**+0.4**
PVIS	**Viseu**	**4.94**	**32**	*e*P		**Pn**	**13 04 19.9**	**+2.6**
PVIS				S		**Sn**	**13 05 12.6**	**-0.7**
PVIS				A		A	13 05 15.3	
	comp=E,13nm,0.3s							
ECAB	**El Cabril**	**4.95**	**70**	Pn		**Pn**	**13 04 18.9**	**+1.6**
ECAB				⇑*i*Vmb_V			13 04 22.0	
	comp=E,319nm,SNR=4.3							
ECAB				Sn		**Sn**	**13 05 11.1**	**-2.2**
SRHM	**Skhour des Reh**	**4.96**	**144**	P		**Pn**	**13 04 20.8**	**+3.2**
SRHM				S		**Sn**	**13 05 14.6**	**+0.8**
PTO	**Porto**	**5.04**	**24**	S		**Sn**	**13 05 15.8**	**+0.2**
EAH	**EAH**	**5.11**	**163**	P		**Pn**	**13 04 23.0**	**+3.5**
EMIJ	**Mijas**	**5.28**	**88**	Pn		**Pn**	**13 04 24.0**	**+2.2**
EMIJ				⇑*i*Vmb_V			13 04 27.3	
	comp=E,153nm,SNR=1.3							
EMIJ				Sn		**Sn**	**13 05 20.4**	**-1.1**
PMPST	**Porto Santo, M**	**5.39**	**231**	*e*P		**Pn**	**13 04 25.2**	**+1.8**
PMPST				S		Sn	13 05 17.9	-6.2
PMPST				A		A	13 05 20.7	
	comp=E,26nm,0.7s							
PMPS	**Porto Santo**	**5.40**	**231**	*e*P		**Pn**	**13 04 25.4**	**+1.9**
PMPS				S		Sn	13 05 19.3	-5.2
PMPS				A		A	13 05 24.8	
	comp=E,13nm,0.2s							
PVRL	**Vila Real**	**5.49**	**30**	*e*P		**Pn**	**13 04 27.9**	**+3.1**
PVRL				S		**Sn**	**13 05 25.6**	**-1.0**
PVRL				A		A	13 05 27.2	
	comp=E,13nm,0.1s							
POLO	**Lamas de Olo**	**5.54**	**29**	*e*P		**Pn**	**13 04 27.8**	**+2.3**
POLO				S		**Sn**	**13 05 26.2**	**-1.8**
POLO				A		A	13 05 28.6	
	comp=E,2.3nm,0.6s							
EADA	**Adamuz**	**5.61**	**71**	Pn		**Pn**	**13 04 28.4**	**+2.0**
EADA				⇑*i*Vmb_V			13 04 30.1	
	comp=E,215nm,SNR=3.2							
EADA				Sn		**Sn**	**13 05 28.1**	**-1.6**
MVO	**Moncorvo**	**5.69**	**35**	*e*P		**Pn**	**13 04 29.8**	**+2.2**
MVO				S		**Sn**	**13 05 30.3**	**-1.4**
MVO				A		A	13 05 32.5	
	comp=E,9.0nm,0.4s							
PCAB	**Cabril**	**5.75**	**25**	*e*P		**Pn**	**13 04 30.7**	**+2.4**
PCAB				S		**Sn**	**13 05 31.6**	**-1.5**
PCAB				A		A	13 05 39.7	
	comp=E,7.6nm,0.1s							
EGOR	**Sierra Gorda,**	**5.81**	**82**	Pn		**Pn**	**13 04 32.5**	**+3.2**
EGOR				⇑*i*Vmb_V			13 04 35.3	
	comp=E,61nm,SNR=0.9							
EGOR				Sn		**Sn**	**13 05 34.3**	**-0.6**
ELOB	**Lobios**	**5.88**	**25**	Pn		**Pn**	**13 04 32.0**	**+1.9**
ELOB				⇑*i*Vmb_V			13 04 33.9	
	comp=E,330nm,SNR=3.3							
ELOB				Sn		**Sn**	**13 05 32.5**	**-3.8**
PGAV	**Gavieira, Arco**	**5.90**	**23**	*e*P		**Pn**	**13 04 32.5**	**+2.1**
PGAV				S		**Sn**	**13 05 34.4**	**-2.4**
PGAV				A		A	13 05 39.1	
	comp=E,10nm,0.2s							
EZAM	**Zamans**	**5.94**	**19**	Pn		**Pn**	**13 04 31.0**	**0.0**
EZAM				⇑*i*Vmb_V			13 04 34.4	
	comp=E,358nm,SNR=2.2							
EZAM				Sn		**Sn**	**13 05 34.3**	**-3.6**
PMAR	**Madeira**	**5.99**	**232**	P		Pn	13 04 27.1	-4.7
PMAR				S		Sn	13 05 32.8	-6.4
PMAR	**Madeira**	**5.99**	**232**	S		**Sn**	**13 05 37.7**	**-1.5**
PMAR				A		A	13 05 42.2	
	comp=E,19nm,0.2s							
LCRM	**LCR**	**6.02**	**117**	P		**Pn**	**13 04 31.6**	**-0.7**
LCRM				S		**Sn**	**13 05 40.4**	**+0.3**
OUK	**Oukaimeden**	**6.06**	**151**	P		**Pn**	**13 04 36.0**	**+3.0**
PMOZ	**Porto Moniz, M**	**6.11**	**234**	P		Pn	13 04 29.6	-3.7
PMOZ				S		Sn	13 05 35.7	-6.3
ELGU	**Los Guajares,**	**6.19**	**85**	Pn		**Pn**	**13 04 37.4**	**+2.9**
ELGU				⇑*i*Vmb_V			13 04 42.9	
	comp=E,122nm,SNR=1.2							
ELGU				Sn		**Sn**	**13 05 43.8**	**-0.3**
CZD	**Col de Zad**	**6.25**	**122**	P		**Pn**	**13 04 36.4**	**-0.2**
CZD				S		**Sn**	**13 05 44.6**	**-1.3**
PAB	**San Pablo**	**6.26**	**59**	Pn		**Pn**	**13 04 37.2**	**+1.7**
PAB				⇑*i*Vmb_V			13 04 39.7	
	comp=E,107nm,SNR=1.5							
PAB				Sn		**Sn**	**13 05 43.5**	**-2.3**
PAB	**San Pablo**	**6.26**	**59**	P		**Pn**	**13 04 37.9**	**+2.4**
PBRG	**Braganca**	**6.33**	**33**	*e*P		Pn	13 04 31.0	-5.4
PBRG				S		**Sn**	**13 05 45.1**	**-2.4**
PBRG				A		A	13 05 48.0	
	comp=E,4.7nm,0.6s							
EQUE	**Quentar**	**6.35**	**82**	Pn		**Pn**	**13 04 39.1**	**+2.4**
EQUE				⇑*i*Vmb_V			13 04 42.6	
	comp=E,102nm,SNR=1.5							
EQUE				Sn		**Sn**	**13 05 46.9**	**-1.2**
ECAL	**Calabor**	**6.45**	**32**	Pn		**Pn**	**13 04 40.0**	**+2.0**
ECAL				⇑*i*Vmb_V			13 04 41.1	
	comp=E,164nm,SNR=1.4							
ECAL				Sn		**Sn**	**13 05 47.8**	**-2.5**
TTIG	**Tnine Tigouga,**	**6.46**	**157**	P		**Pn**	**13 04 37.4**	**-0.9**
TTIG				S		**Sn**	**13 05 46.0**	**-4.8**
MD31	**MD31**	**6.54**	**122**	P		**Pn**	**13 04 41.5**	**+2.2**
MD31				S		**Sn**	**13 05 51.3**	**-1.4**
ESDC	**Sonseca Array**	**6.58**	**60**	Pn		**Pn**	**13 04 41.5**	**+1.7**
ESDC				⇑*i*Vmb_V			13 04 43.1	
	comp=E,230nm,SNR=3.2							
ESDC				Sn		**Sn**	**13 05 50.5**	**-3.3**
EMAZ	**Mazaricos**	**6.63**	**15**	Pn		**Pn**	**13 04 41.8**	**+1.3**
EMAZ				⇑*i*Vmb_V			13 04 43.4	
	comp=E,145nm,SNR=0.8							
EMAZ				Sn		Sn	13 05 49.4	-5.5
MDT	**Midelt**	**6.68**	**122**	P		**Pn**	**13 04 43.5**	**+2.4**
MDT	**Midelt**	**6.68**	**122**	P		**Pn**	**13 04 43.5**	**+2.4**
MDT				S		**Sn**	**13 05 55.6**	**-0.5**
EQES	**Quesada**	**6.71**	**77**	Pn		**Pn**	**13 04 43.1**	**+1.5**
EQES				⇑*i*Vmb_V			13 04 44.6	
	comp=E,95nm,SNR=1.5							
EQES				Sn		**Sn**	**13 05 54.6**	**-2.2**
EAGO	**Agolada(Pontev**	**6.72**	**21**	Pn		**Pn**	**13 04 42.8**	**+1.2**
EAGO				⇑*i*Vmb_V			13 04 45.6	
	comp=E,235nm,SNR=1.7							
EAGO				Sn		**Sn**	**13 05 52.3**	**-4.6**
EBER	**Berja**	**6.78**	**85**	Pn		**Pn**	**13 04 44.9**	**+2.2**
EBER				⇑*i*Vmb_V			13 04 48.6	
	comp=E,153nm,SNR=0.8							
EBER				Sn		**Sn**	**13 05 57.1**	**-1.7**
GUD	**Guadarrama**	**6.94**	**52**	Pn		**Pn**	**13 04 46.7**	**+1.9**
GUD				⇑*i*Vmb_V			13 04 47.8	
	comp=E,98nm,SNR=1.7							
GUD				Sn		**Sn**	**13 06 00.2**	**-2.3**
EPON	**Pontenova**	**7.48**	**24**	Pn		**Pn**	**13 04 53.4**	**+1.2**
EPON				⇑*i*Vmb_V			13 04 54.7	
	comp=E,313nm,SNR=2.1							
EPON				Sn		**Sn**	**13 06 11.6**	**-4.1**
JBK	**JBK**	**7.48**	**105**	P		Pn	13 04 51.0	-1.3
JBK				S		**Sn**	**13 06 14.8**	**-1.3**
ETOB	**Tobarra**	**8.04**	**72**	Pn		**Pn**	**13 05 00.0**	**+0.3**
ETOB				⇑*i*Vmb_V			13 05 03.5	
	comp=E,90nm,SNR=1.2							
ETOB				Sn		**Sn**	**13 06 26.8**	**-2.6**
CFUE	**Fuerteventura**	**8.19**	**196**	⇑*i*Vmb_V			13 05 04.9	
	comp=E,167nm,SNR=1.1							
CFUE				Sn		**Sn**	**13 06 29.0**	**-4.1**
EARI	**Arriondas**	**8.21**	**33**	Pn		**Pn**	**13 05 03.6**	**+1.5**
EARI				⇑*i*Vmb_V			13 05 08.7	
	comp=E,38nm,SNR=0.2							
EARI				Sn		**Sn**	**13 06 28.7**	**-4.9**
ETOR	**Torete**	**8.40**	**57**	Pn		**Pn**	**13 05 06.7**	**+1.9**
ETOR				⇑*i*Vmb_V			13 05 08.9	
	comp=E,209nm,SNR=2.8							
ETOR				Sn		**Sn**	**13 06 35.0**	**-3.5**
EMOS	**Mosqueruela**	**9.32**	**63**	Pn		**Pn**	**13 05 19.3**	**+1.8**
EMOS				⇑*i*Vmb_V			13 05 21.3	
	comp=E,44nm,SNR=0.7							
EMOS				Sn		**Sn**	**13 06 57.6**	**-3.6**
FIGM	**Figuig**	**9.42**	**115**	P		**Pn**	**13 05 19.3**	**+0.5**
FIGM				S		**Sn**	**13 07 02.5**	**-1.0**
SJPF	**Ste Jean**	**10.15**	**47**	*e*Pn		**Pn**	**13 05 31.2**	**+2.5**
SJPF				*e*Sn		**Sn**	**13 07 16.1**	**-5.2**
	comp=E,1.2nm,0.4s							
ETSF	**Etsaut**	**10.43**	**49**	*e*Pn		**Pn**	**13 05 34.4**	**+1.9**
ETSF				*e*Sn		**Sn**	**13 07 23.2**	**-4.9**
	comp=E,0.8nm,0.3s							
EPF	**Esparros**	**11.05**	**51**	*e*Pn		**Pn**	**13 05 42.7**	**+1.6**
EPF				*e*Sn		Sn	13 07 37.8	-5.7
	comp=E,0.7nm,0.2s							
LFF	**La Frestale**	**12.39**	**44**	*e*Pn		**Pn**	**13 06 01.1**	**+1.8**
RJF	**Les Rejaudoux**	**13.05**	**44**	*e*Pn		**Pn**	**13 06 08.6**	**+0.3**
RJF				*e*Sn		Sn	13 08 25.2	-6.9
	comp=E,2.0nm,0.4s							
MFF	**Saint Martin d**	**13.05**	**36**	*e*Pn		**Pn**	**13 06 10.0**	**+1.7**
CAF	**Calviac**	**13.14**	**46**	*e*Pn		**Pn**	**13 06 09.3**	**-0.2**
CAF				*e*Sn		Sn	13 08 27.6	-6.7
	comp=E,1.1nm,0.3s							
ROSF	**Rostrenen**	**13.18**	**24**	*e*Pn		**Pn**	**13 06 10.9**	**+0.9**
ROSF				*e*Sn		Sn	13 08 27.7	-7.5
	comp=E,1.1nm,0.3s							
LASF	**Ste Croix**	**13.79**	**52**	*e*Pn		**Pn**	**13 06 20.1**	**+1.6**
LASF				*e*Sn		Sn	13 08 43.2	-7.1
	comp=E,0.5nm,0.3s							
TCF	**Toulx Ste Croi**	**14.04**	**42**	*e*Pn		**Pn**	**13 06 22.7**	**+0.9**

IDC 25 13:09:48.6±2.1,3°83N×126°36E,h0km,mb3.3/4,
mbtmp3.4/4,1D,Error ellipse: s-maj=123.3km
s-min=27.8km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.40**	**338**	‖*e*P	Pg	13 11 01.6	+7.7
FITZ	**Fitzroy Crossi**	**21.80**	**182**	P	P	13 14 43.8	+1.3
	2.3nm,1.1s,baz=27,slow=11,SNR=2.9						
	2.3nm,1.1s						
WRA	**Warramunga Arr**	**24.89**	**162**	P	P	13 15 13.7	+0.3
	0.3nm,0.5s,baz=339,slow=11,SNR=11						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**28.30**	**165**	P	P	13 15 42.9	-1.3
	0.2nm,0.6s,baz=343,slow=7.1,SNR=5.8						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**57.27**	**325**	P	P	13 19 38.2	+0.1
	0.3nm,0.6s,baz=126,slow=7.3,SNR=2.2						
	0.3nm,0.6s						

ROM 25 13:09:53.7±0.1,42°621N±0°004×13°288E±0°006,
h8km,ML2.7/27,5C-1D,Error ellipse: s-maj=0.5km
s-min=0.2km az=223.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**134**	P	Pg	13 09 57.2	+0.7
CAMP				S	Sg	13 09 59.4	+0.9
CAMP				AML	AML		
	comp=N,5355μm,0.4s						
CAMP				AML	AML		
	comp=E,6570μm,1.1s						
RM33	**Pellescritta (**	**0.12**	**206**	P	Pg	13 09 57.5	+1.0
RM33				S	Sg	13 09 59.9	+1.3
RM33				AML	AML		
	comp=E,5670μm,0.3s						
RM33				AML	AML		
	comp=N,5530μm,0.5s						
RM33				AML	AML		
	comp=N,5540μm,0.5s						
RM33				AML	AML		
	comp=E,5855μm,0.3s						
RM33				AML	AML		
	comp=E,5860μm,0.3s						
RM33				AML	AML		
	comp=N,5535μm,0.5s						
RM33				AML	AML		
	comp=N,5530μm,0.5s						
RM33				AML	AML		
	comp=E,5670μm,0.3s						
T1243	**Rocca Santa Ma**	**0.14**	**57**	P	Pg	13 09 57.4	+0.6
T1243				S	Sg	13 09 59.7	+0.7
T1243				AML	AML		
	comp=E,13350μm,1.1s						
T1243				AML	AML		
	comp=E,13250μm,1.1s						
T1243				AML	AML		
	comp=E,13400μm,1.1s						
T1243				AML	AML		
	comp=N,13250μm,1.5s						
T1243				AML	AML		
	comp=N,13250μm,1.5s						
LNSS	**Leonessa**	**0.18**	**264**	P	Pg	13 09 58.5	+0.9
LNSS				S	Sg	13 10 01.9	+1.7
LNSS				AML	AML		
	comp=E,4570μm,0.4s						
LNSS				AML	AML		
	comp=N,3985μm,0.8s						
TERO	**Teramo**	**0.23**	**89**	P	Pg	13 09 58.9	+0.4
TERO				S	Sg	13 10 02.6	+1.0
TERO				AML	AML		
	comp=E,3830μm,0.1s						
TERO				AML	AML		
	comp=N,4590μm,0.5s						
TERO				AML	AML		
	comp=N,4055μm,0.5s						
TERO				AML	AML		
	comp=E,4415μm,0.1s						
NRCA	**Norcia**	**0.25**	**329**	⇑P	Pg	13 09 59.5	+0.8
NRCA				S	Sg	13 10 03.6	+1.4
NRCA				AML	AML		
	comp=E,9165μm,0.2s						
NRCA				AML	AML		
	comp=E,9160μm,0.2s						
NRCA				AML	AML		
	comp=E,8450μm,0.2s						
NRCA				AML	AML		
	comp=N,5260μm,1.6s						
NRCA				AML	AML		
	comp=N,5875μm,1.6s						
NRCA				AML	AML		
	comp=N,5265μm,1.6s						
GIGS	**Gran Sasso**	**0.27**	**129**	⇑P	Pg	13 09 59.5	+0.4
GIGS				S	Sg	13 10 03.8	+1.0
GIGS				AML	AML		
	comp=N,945μm,0.6s						
GIGS				AML	AML		
	comp=E,758μm,1.4s						
GIGS				AML	AML		
	comp=N,944μm,0.6s						
AQU	**L'Aquila**	**0.28**	**162**	P	Pg	13 10 00.1	+0.7
AQU				S	Sb	13 10 04.6	-1.3
AQU				AML	AML		
	comp=E,1965μm,0.5s						
AQU				AML	AML		
	comp=N,2080μm,0.3s						
AQU				AML	AML		
	comp=E,1970μm,0.5s						
AQU				AML	AML		
	comp=N,2075μm,0.3s						
AQU				AML	AML		
	comp=E,1965μm,0.5s						
FIAM	**Fiamignano**	**0.38**	**200**	P	Pg	13 10 01.7	+0.6
FIAM				S	Sb	13 10 07.8	-0.9
FIAM				AML	AML		
	comp=N,451μm,0.4s						
FIAM				AML	AML		
	comp=E,452μm,1.0s						
FIAM				AML	AML		
	comp=E,452μm,1.0s						
ARRO	**Arrone**	**0.39**	**264**	P	Pg	13 10 01.9	+0.6
ARRO				S	Sb	13 10 08.3	-0.7
ARRO				AML	AML		
	comp=E,778μm,0.8s						
ARRO				AML	AML		
	comp=N,854μm,0.2s						
ARRO				AML	AML		
	comp=E,778μm,0.8s						

FAGN	**Fagnano**	**0.42**	**148**	P		Pg	13 10 02.1	+0.2
FAGN				S		Sb	13 10 10.0	+0.1
FAGN				AML		AML		
	comp=E,2810μm,0.4s							
FAGN				AML		AML		
	comp=N,3675μm,0.3s							
OFFI	**Offida**	**0.43**	**43**	P		Pb	13 10 03.5	0.0
OFFI				S		Sb	13 10 11.1	+0.9
OFFI				AML		AML		
	comp=N,4420μm,0.6s							
OFFI				AML		AML		
	comp=E,3065μm,0.6s							
FDMO	**Fiordimonte**	**0.44**	**340**	P		Pg	13 10 02.7	+0.4
FDMO				S		Sb	13 10 09.7	-0.9
FDMO				AML		AML		
	comp=E,876μm,0.3s							
FDMO				AML		AML		
	comp=N,1145μm,0.3s							
GUMA	**Gualdo di Mace**	**0.44**	**4**	AML		AML		
	comp=N,2190μm,0.4s							
GUMA				AML		AML		
	comp=E,1740μm,0.4s							
GUMA				AML		AML		
	comp=N,2405μm,0.5s							
GUMA				AML		AML		
	comp=E,2290μm,0.5s							
VCEL	**Villa Celiera**	**0.47**	**119**	P		Pg	13 10 03.5	+0.7
VCEL				S		Sb	13 10 11.2	-0.1
VCEL				AML		AML		
	comp=E,2115μm,0.3s							
VCEL				AML		AML		
	comp=N,2180μm,0.8s							
VCEL				AML		AML		
	comp=N,2185μm,0.8s							
CSP1	**Cessapalombo**	**0.47**	**353**	P		Pg	13 10 03.4	+0.4
CSP1				S		Sb	13 10 10.7	-0.9
CSP1				AML		AML		
	comp=E,952μm,0.7s							
CSP1				AML		AML		
	comp=N,1278μm,1.1s							
CESI	**CESI - Serrava**	**0.48**	**324**	P		Pg	13 10 03.5	+0.5
CESI				S		Sb	13 10 10.9	-0.7
CESI				AML		AML		
	comp=E,1170μm,0.4s							
CESI				AML		AML		
	comp=N,1220μm,1.1s							
TRTR	**Tortoreto Alta**	**0.50**	**68**	P		Pb	13 10 04.9	+0.2
TRTR				AML		AML		
	comp=E,2235μm,0.3s							
TRTR				AML		AML		
	comp=N,2105μm,0.4s							
CESX	**Cesi**	**0.52**	**269**	P		Pg	13 10 04.0	+0.2
CESX				S		Sb	13 10 12.1	-0.8
CESX				AML		AML		
	comp=E,712μm,0.4s							
CESX				AML		AML		
	comp=N,958μm,0.3s							
T0110	**Collepietro**	**0.54**	**137**	⇑P		Pg	13 10 04.5	+0.3
T0110				S		Sb	13 10 13.1	-0.2
T0110				AML		AML		
	comp=N,1740μm,0.4s							
T0110				AML		AML		
	comp=E,1450μm,0.3s							
PTQR	**Pietraquaria**	**0.60**	**172**	P		Pg	13 10 05.2	-0.2
PTQR				AML		AML		
	comp=E,188μm,0.3s							
PTQR				AML		AML		
	comp=N,149μm,0.5s							
ASSB	**Assisi San Ben**	**0.63**	**313**	AML		AML		
	comp=N,824μm,1.2s							
ASSB				AML		AML		
	comp=E,907μm,0.3s							
SNTG	**Esanatoglia**	**0.68**	**338**	P		Pg	13 10 07.0	+0.1
SNTG				AML		AML		
	comp=E,229μm,0.2s							
SNTG				AML		AML		
	comp=N,264μm,1.1s							
SNTG				AML		AML		
	comp=E,228μm,0.2s							
SRES	**S.Oreste - Sor**	**0.69**	**237**	P		Pb	13 10 07.8	-0.2
SRES				S		Sb	13 10 18.3	+0.5
SRES				AML		AML		
	comp=N,157μm,0.3s							
SRES				AML		AML		
	comp=E,185μm,0.3s							
CERT	**Cerreto**	**0.71**	**199**	AML		AML		
	comp=E,355μm,0.6s							
CERT				AML		AML		
	comp=N,346μm,0.5s							
ATCC	**AVT- Casa Cast**	**0.74**	**320**	⇓P		Pg	13 10 08.3	+0.3
ATCC				AML		AML		
	comp=E,772μm,0.4s							
ATCC				AML		AML		
	comp=N,677μm,0.6s							
ATCC				AML		AML		
	comp=N,676μm,0.6s							
CING	**Cingoli**	**0.76**	**355**	AML		AML		
	comp=N,352μm,0.4s							
CING				AML		AML		
	comp=E,382μm,0.4s							
INTR	**Introdacqua**	**0.76**	**143**	⇑P		Pg	13 10 08.1	-0.3
INTR				AML		AML		
	comp=E,225μm,0.7s							
INTR				AML		AML		
	comp=N,488μm,0.4s							
INTR				AML		AML		
	comp=N,487μm,0.4s							
FOSV	**Fossato di Vic**	**0.78**	**330**	AML		AML		
	comp=E,284μm,0.6s							
FOSV				AML		AML		
	comp=N,350μm,0.3s							
VVLD	**Villa Vallelon**	**0.79**	**162**	P		Pg	13 10 08.8	-0.1
VVLD				AML		AML		
	comp=E,224μm,1.4s							
VVLD				AML		AML		
	comp=N,217μm,0.5s							
VVLD				AML		AML		
	comp=E,224μm,1.4s							
CAFR	**Castel Frentan**	**0.88**	**116**	AML		AML		
	comp=N,203μm,0.3s							
CAFR				AML		AML		
	comp=E,1μm,1.2s							
LPEL	**Lama dei Pelig**	**0.88**	**131**	P		Pg	13 10 10.5	-0.1
LPEL				S		Sb	13 10 22.9	-0.2
LPEL				AML		AML		
	comp=E,450μm,0.2s							
LPEL				AML		AML		
	comp=N,350μm,1.2s							
ARVD	**Arcevia**	**0.91**	**344**	P		Pg	13 10 11.1	-0.2
ARVD				AML		AML		
	comp=E,234μm,0.5s							
ARVD				AML		AML		
	comp=N,148μm,0.6s							
ARVD				AML		AML		
	comp=E,234μm,0.5s							
MGAB	**Montegabbione**	**0.91**	**289**	AML		AML		
	comp=E,680μm,0.9s							
MGAB				AML		AML		
	comp=N,459μm,0.4s							
SACS	**San Casciano d**	**1.04**	**283**	AML		AML		
	comp=N,194μm,0.6s							
SACS				AML		AML		
	comp=E,139μm,1.0s							
PIEI	**Pieia**	**1.07**	**329**	AML		AML		
	comp=N,176μm,1.5s							
PIEI				AML		AML		
	comp=E,238μm,0.4s							
MPAG	**Monte Paganucc**	**1.08**	**339**	AML		AML		
	comp=E,185μm,0.7s							
MPAG				AML		AML		
	comp=N,176μm,1.1s							
TOLF	**Tolfa**	**1.10**	**240**	AML		AML		
	comp=E,116μm,0.8s							
TOLF				AML		AML		
	comp=N,118μm,0.9s							
LIK	**San Giovanni I**	**1.13**	**170**	⇑P		Pg	13 10 12.4	-3.1
FSSB	**Fossombrone**	**1.13**	**341**	AML		AML		
	comp=N,811μm,0.3s							
FSSB				AML		AML		
	comp=E,609μm,0.5s							
CERA	**Filignano**	**1.16**	**152**	AML		AML		
	comp=N,160μm,0.8s							
CERA				AML		AML		
	comp=E,174μm,0.5s							
CAFI	**Castiglion Fio**	**1.20**	**307**	AML		AML		
	comp=N,122μm,1.0s							
CAFI				AML		AML		

comp=E,139µm,0.5s
SF01 Poggio Pratacc 1.29 279 AML AML
comp=N,110µm,1.4s
SF01 AML AML
comp=E,143µm,1.0s

ROM 25 13:10:34.3±0.1, 42°.668N±0°.003×13°.253E±0°.005, h12km±1km, Md1.3/4, Error ellipse: s-maj=0.4km s-min=0.2km az=296.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1243	**Rocca Santa Ma**	**0.15**	**79**	P	Pg	13 10 38.4	+0.4
T1243				S	Sg	13 10 41.1	+0.5
T1243				AML	AML		
	comp=E,2650µm,0.3s						
T1243				AML	AML		
	comp=N,2955µm,0.3s						
T1243				AML	AML		
	comp=E,2655µm,0.3s						
T1243				AML	AML		
	comp=N,2940µm,0.3s						
T1243				AML	AML		
	comp=E,2560µm,0.3s						
T1243				END			
RM33	**Pellescritta (**	**0.16**	**190**	P	Pg	13 10 38.7	+0.5
RM33				S	Sg	13 10 41.6	+0.7
RM33				END			
LNSS	**Leonessa**	**0.17**	**248**	P	Pg	13 10 38.8	+0.5
LNSS				S	Sg	13 10 41.8	+0.6
LNSS				AML	AML		
	comp=E,1640µm,0.2s						
LNSS				AML	AML		
	comp=N,1645µm,0.2s						
LNSS				END			
NRCA	**Norcia**	**0.20**	**328**	P	Pg	13 10 39.1	+0.4
NRCA				S	Sg	13 10 42.3	+0.5
NRCA				AML	AML		
	comp=N,1980µm,0.1s						
NRCA				AML	AML		
	comp=E,2145µm,1.0s						
NRCA				AML	AML		
	comp=N,1975µm,0.1s						
NRCA				END			
MMO1	**Montemonaco**	**0.24**	**13**	P	Pg	13 10 39.9	+0.5
MMO1				S	Sg	13 10 44.0	+1.1
TERO	**Teramo**	**0.26**	**100**	P	Pg	13 10 40.2	+0.3
TERO				S	Sg	13 10 44.3	+0.8
FDMO	**Fiordimonte**	**0.39**	**342**	S	Sb	13 10 49.0	-0.1

IDC 25 13:27:57.6±4.4, 7°.13S×147°.07E, h99km±60km, mb3.7/2, mbtmp4.0/5, ML3.9/3, Error ellipse: s-maj=79.1km s-min=26.9km az=125.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**5.67**	**61**	P	Pn	13 29 19.1	-0.4
	6.3nm,0.3s,baz=298,slow=0.5,SNR=4.2						
	21nm,0.5s						
CTA	**Charters Tower**	**12.90**	**183**	P	Pn	13 30 59.2	+1.9
	0.5nm,0.3s,baz=358,slow=14,SNR=9.9						
	2.0nm,0.4s						
WRA	**Warramunga Arr**	**17.74**	**223**	P	P	13 31 57.5	-0.3
	0.4nm,0.3s,baz=49,slow=11,SNR=22						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**20.74**	**216**	P	P	13 32 29.9	-0.6
	2.3nm,0.3s,baz=52,slow=8.5,SNR=68						
	2.3nm,0.3s						
FITZ	**Fitzroy Crossi**	**23.55**	**240**	P	P	13 32 58.8	-0.5
	2.3nm,0.5s,baz=52,slow=6.5,SNR=25						
	2.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**145.42**	**283**	PKPbc	PKPbc	13 47 25.2	0.0
	0.3nm,0.6s,baz=66,slow=3.1,SNR=2.0						

GUC 25 13:30:16.8±0.7, 29°.81S×71°.43W, h62km±3km, ML3.8, 5C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.20**	**123**	⇓*i*P	Pn	13 30 27.0	+0.6
CO05				*i* S	Sn	13 30 34.8	+1.3
CO05				IAML		13 30 35.4	
	comp=E,11µm,0.2s						
GO04	**Tololo Observa**	**0.65**	**124**	*e*P	Pn	13 30 31.8	+0.9
GO04				*e*S	Sn	13 30 43.5	+2.4
CO06	**Fray Jorge**	**0.88**	**192**	⇑*i*P	Pn	13 30 33.9	+0.5
CO06				*i* S	Sn	13 30 47.5	+1.9
CO06				IAML		13 30 48.0	
	comp=E,3µm,0.2s						
LCO	**Las Campanas**	**1.02**	**39**	*e*P	Pn	13 30 33.4	-2.0
LCO				*e*S	Sn	13 30 47.2	-2.0
CO01	**Juntas del Tor**	**1.17**	**98**	⇑*i*P	Pn	13 30 39.2	+1.8
CO01				*e*S	Sn	13 30 55.8	+3.1
CO01				IAML		13 30 56.6	
	comp=N,5µm,0.1s						
CO03	**El Pedregal**	**1.21**	**148**	⇓*i*P	Pn	13 30 39.4	+1.6
CO03				*e*S	Sn	13 30 56.4	+3.1
AC05	**El Transito**	**1.40**	**46**	⇑*i*P	Pn	13 30 40.1	-0.2
AC05				*i* S	Sn	13 30 57.8	-0.1
AC05				IAML		13 30 58.5	
	comp=N,3µm,0.5s						
CO02	**Combarbal**	**1.44**	**165**	*i* P	Pn	13 30 42.5	+1.7
CO02				*e*S	Sn	13 31 01.8	+3.0
CO02				IAML		13 31 04.0	
	comp=E,3µm,0.2s						
AC04	**Llanos de Chal**	**1.63**	**11**	⇑*i*P	Pn	13 30 40.8	-2.5
AC04				*e*S	Sn	13 30 58.7	-4.6
AC04				IAML		13 31 02.1	
	comp=E,2µm,0.2s						
GO03	**Copiap**	**2.44**	**26**	*e*P	Pn	13 30 52.2	-2.3
GO03				*e*S	Sn	13 31 19.8	-3.4
GO03				IAML		13 31 22.2	
	comp=E,619nm,0.3s						
AC06	**Mina Casimiro**	**2.62**	**21**	⇑*i*P	Pn	13 30 54.6	-2.1
AC06				*e*S	Sn	13 31 24.3	-3.2
AC06				IAML		13 31 25.3	
	comp=N,604nm,0.1s						
VA06	**Catapilco**	**2.74**	**178**	*e*P	Pn	13 30 59.2	+0.8
VA06				IAML		13 31 49.4	
	comp=N,314nm,0.5s						
VA03	**San Esteban**	**3.04**	**166**	*e*P	Pn	13 31 05.2	+2.7
VA03				IAML		13 31 44.0	
	comp=E,247nm,0.4s						
ROCH	**El Roble**	**3.17**	**174**	*e*P	Pn	13 31 06.0	+1.6
PEL	**Peldehue**	**3.38**	**169**	*e*P	Pn	13 31 09.2	+2.0
MT02	**Curacav**	**3.45**	**176**	*e*P	Pn	13 31 08.6	+0.6
AC02	**Maricunga**	**3.59**	**35**	*i* P	Pn	13 31 09.4	-1.1
FCH	**Farellones**	**3.64**	**165**	*e*P	Pn	13 31 13.6	+2.7
AC01	**Pan de Azucar**	**3.72**	**12**	*i* P	Pn	13 31 07.8	-4.1
MT09	**Talagante**	**3.97**	**175**	*e*P	Pn	13 31 17.0	+1.6
MT01	**Popeta**	**4.04**	**178**	*e*P	Pn	13 31 16.8	+0.6
LMEL	**Las Melosas**	**4.16**	**166**	*e*P	Pn	13 31 20.8	+2.9
GO02	**Mina Guanaco**	**4.91**	**20**	*e*P	Pn	13 31 24.4	-3.9
PB14	**IPOC Station P**	**5.24**	**10**	*e*P	Pn	13 31 28.1	-4.9

*IDC **25** 13:31:00.5±1.8, 7°.47S×128°.29E, h143km±18km, mb3.8/13, mbtmp4.4/18, MS3.5/2, Error ellipse: s-maj=17.9km s-min=10.9km az=63.0*
*NEIC **25** 13:31:00.9±2.0, 7°.44S±0°.08×128°.07E±0°.08, h153km±8km, mb4.5/23, Error ellipse: s-maj=12.2km s-min=11.6km az=218.0*
*DJA **25** 13:31:02.8±0.2, 8°S±2°×12°.8E±°, h161km±3km, M4.5/19, mB5.0/7, mb4.5/19, MLv4.7/14, Mw(mB)4.3/7*

ISC 25 13:31:00.7±0.4, 7°.50S±0°.04×128°.15E±0°.05, h150km, n86, σ1°.70/88, mb4.3/30, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.16**	**99**	Pn	**Pn**	**13 31 52.4**	**+2.3**
SAUI	**Saumlaki**	**3.16**	**99**	P	**Pn**	**13 31 52.3**	**+2.2**
SAUI				S	**Sn**	**13 32 32.1**	**+3.7**
BNDI	**Bandanaira**	**3.43**	**31**	P	**Pn**	**13 31 56.8**	**+3.1**
AAI	**Ambon**	**3.79**	**1**	P	**Pn**	**13 32 02.1**	**+3.9**
MSAI	**Masohi**	**4.20**	**11**	P	**Pn**	**13 32 08.0**	**+4.4**
NLAI	**Namlea**	**4.36**	**346**	P	Pn	13 32 11.6	+5.9
BATI	**Baumata**	**5.18**	**238**	P	**Pn**	**13 32 18.9**	**+2.2**
	274nm,0.4s,baz=102,slow=3.5,SNR=57						
BATI				S	**Sn**	**13 33 16.2**	**+0.3**
	551nm,0.5s,baz=73,slow=14,SNR=23						
BATI				LR	LR	13 34 11.6	
	comp=Z,230nm,19.4s,baz=226,slow=36						
BATI	**Baumata**	**5.18**	**238**	P	**Pn**	**13 32 20.0**	**+3.3**
	2.5nm3µm256nm,0.7s						
MMRI	**Maumere**	**5.96**	**259**	Pn	**Pn**	**13 32 28.8**	**+1.9**
MMRI	**Maumere**	**5.96**	**259**	P	**Pn**	**13 32 29.5**	**+2.5**
	0.6nm2µm70nm,0.9s						
MTN	**Manton Dam**	**6.07**	**151**	Pn	**Pn**	**13 32 29.5**	**+1.1**
FAKI	**Fak Fak**	**6.11**	**42**	Pn	**Pn**	**13 32 29.7**	**+0.7**
FAKI	**Fak Fak**	**6.11**	**42**	P	**Pn**	**13 32 29.5**	**+0.5**
	0.6nm809nm62nm,0.8s						
EDFI	**Ende, Flores**	**6.51**	**259**	P	**Pn**	**13 32 36.9**	**+2.5**
	0.1nm347nm14nm,0.8s						
SIJI	**Sorong**	**7.28**	**25**	P	**Pn**	**13 32 43.4**	**-1.2**
	24nm,0.3s,baz=35,slow=23,SNR=52						
SIJI				S	**Sn**	**13 34 04.1**	**-2.0**
	28nm,0.5s,baz=63,slow=23,SNR=7.8						
SWI	**Sorong**	**7.28**	**25**	P	**Pn**	**13 32 46.6**	**+2.0**
	0.3nm88nm68nm,0.7s						
KNRA	**Kununurra**	**8.15**	**176**	Pn	**Pn**	**13 32 56.4**	**+0.2**
LUWI	**Luwuk**	**8.36**	**320**	Pn	Pn	13 32 51.1	-7.9
FITZ	**Fitzroy Crossi**	**10.82**	**193**	P	**Pn**	**13 33 30.4**	**-1.1**
	28nm,0.5s,baz=26,slow=9.8,SNR=55						
FITZ				S	Sn	13 35 23.4	-7.9
	55nm,0.5s,baz=94,slow=17,SNR=14						
WB0	**Warramunga Arr**	**13.62**	**154**	Pn	**Pn**	**13 34 06.2**	**-1.7**
WRAB	**Tennant Creek**	**13.75**	**155**	Pn	**Pn**	**13 34 07.4**	**-2.1**
WRA	**Warramunga Arr**	**13.75**	**155**	P	**Pn**	**13 34 07.2**	**-2.4**
	24nm,0.9s,baz=324,slow=14,SNR=89						
WRA				S	Sn	13 36 32.5	-9.4
	54nm,1.0s,baz=325,slow=24,SNR=8.8						
WRA	**Warramunga Arr**	**13.75**	**155**	Pn	**Pn**	**13 34 07.6**	**-2.0**
WB2	**Warramunga Arr**	**13.76**	**155**	Pn	**Pn**	**13 34 07.6**	**-2.1**
WR0	**Warramunga Arr**	**13.85**	**154**	Pn	**Pn**	**13 34 08.7**	**-2.2**
JAGI	**Jajag, Banyuwa**	**13.89**	**265**	Pn	**Pn**	**13 34 09.3**	**-2.1**
MBWA	**Marble Bar**	**15.83**	**210**	P	**Pn**	**13 34 35.5**	**0.0**
MBWA				IAmb	IAmb	13 34 39.9	
	comp=Z,14nm,0.5s						
COEN	**Coen**	**16.09**	**115**	P	**P**	**13 34 41.1**	**+1.9**
COEN				IAmb	IAmb	13 34 41.6	
	comp=Z,11nm,0.5s						
PSA00	**Pilbara Seismi**	**16.13**	**209**	P	**Pn**	**13 34 39.1**	**0.0**
PSA00				IAmb	IAmb	13 34 42.1	
	comp=Z,19nm,0.6s						
PSA00	**Pilbara Seismi**	**16.13**	**209**	P	**Pn**	**13 34 38.9**	**-0.2**
PSA00				IAmb	IAmb	13 34 42.4	
	comp=Z,7.1nm,0.7s						
AS31	**Alice Springs**	**17.00**	**162**	P	**Pn**	**13 34 50.7**	**+1.0**
AS31				IAmb	IAmb	13 34 52.5	
	comp=Z,26nm,0.6s						
ASAR	**Alice Springs**	**17.00**	**162**	P	**P**	**13 34 50.5**	**+1.4**
	comp=Z,55nm,0.5s,baz=341,slow=11,SNR=465						
ASAR				S	**S**	**13 37 54.0**	**-4.8**
	comp=Z,13nm,0.7s,baz=320,slow=21,SNR=10						
ASAR	**Alice Springs**	**17.00**	**162**	P	**P**	**13 34 50.2**	**+1.0**
GIRL	**Giralia**	**20.15**	**220**	P	**P**	**13 35 23.3**	**-0.1**
CTA	**Charters Tower**	**21.55**	**127**	P	**P**	**13 35 37.9**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=330,slow=16,SNR=2.1						
	comp=Z,2.7nm,0.7s						
CTAO	**Charters Tower**	**21.55**	**127**	P	**P**	**13 35 38.3**	**-0.2**
FORT	**Forrest**	**23.16**	**180**	P	**P**	**13 35 55.6**	**+1.7**
MORW	**Morawa**	**24.30**	**206**	P	**P**	**13 36 06.3**	**+1.9**
MASI	**Maura Aman, Be**	**26.15**	**278**	pP	pP	13 36 53.1	+1.1
	comp=Z,57nm,2.1s						
BBOO	**Buckleboo**	**26.24**	**165**	P	**P**	**13 36 23.3**	**+1.5**
BBOO				IAmb	IAmb	13 36 24.9	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**27.30**	**154**	P	**P**	**13 36 32.2**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=343,slow=8.8,SNR=6.6						
	comp=Z,3.4nm,0.6s						
STKA	**Stephens Creek**	**27.30**	**154**	P	**P**	**13 36 31.0**	**-0.4**
TPUB	**Ta-pu**	**31.48**	**347**	P	**P**	**13 37 06.8**	**-1.6**
TPUB				IAmb	IAmb	13 37 18.4	
	comp=Z,14nm,1.1s						
HNR	**Honiara**	**31.51**	**96**	P	**P**	**13 37 06.1**	**-2.7**
	comp=Z,44nm,0.5s,baz=208,slow=4.4,SNR=5.6						
CAN	**Canberra**	**33.66**	**148**	P	**P**	**13 37 28.1**	**+0.7**
CAN				IAmb	IAmb	13 37 31.0	
	comp=Z,15nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.67**	**312**	P	**P**	**13 38 11.1**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=142,slow=6.8,SNR=14						
	comp=Z,1.5nm,0.6s						
DZM	**Mont Dzumac**	**39.62**	**116**	P	**P**	**13 38 18.8**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=265,slow=8.6,SNR=6.3						
DZM				LR	LR	13 53 27.5	
	comp=Z,150nm,20.9s,baz=169,slow=34						
	comp=Z,3.0nm,0.8s						
DZM	**Mont Dzumac**	**39.62**	**116**	P	**P**	**13 38 17.6**	**-0.5**
DZM				IAmb	IAmb	13 38 36.5	
	comp=Z,4.7nm,0.9s						
NJ2	**Nanjing**	**40.31**	**348**	*e*P	**P**	**13 38 23.5**	**0.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PZH	**PanZhiHua**	**42.41**	**324**	P	**P**	**13 38 38.0**	**-2.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,90nm,4.0s						
JHS	**Saijyo**	**42.52**	**6**	P	**P**	**13 38 39.7**	**-1.8**
JHS				IAmb	IAmb	13 38 44.0	
	comp=Z,6.6nm,0.9s						
KSRS	**Korea Array**	**44.72**	**360**	P	**P**	**13 38 59.7**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=178,slow=9.3,SNR=19						
	comp=Z,2.3nm,0.6s						
KS19	**Wonju Array Si**	**44.76**	**360**	P	**P**	**13 38 58.1**	**-1.2**
KS19				IAmb	IAmb	13 39 15.0	
	comp=Z,6.4nm,1.1s						
XAN	**Xi'an**	**45.15**	**337**	P	**P**	**13 39 02.0**	**-0.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JMM	**Marumori**	**46.65**	**14**	P	**P**	**13 39 13.2**	**-0.9**
JMM				IAmb	IAmb	13 39 14.7	
	comp=Z,7.7nm,0.6s						
LZH	**Lanzhou**	**49.01**	**334**	*e*P	**P**	**13 39 33.0**	**+0.5**
LZH				pP	pP	13 40 02.5	-2.8
LZH				sP	sP	13 40 18.3	-3.1
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
BTO	**Baotou**	**50.70**	**342**	*e*P	**P**	**13 39 48.3**	**+3.2**
WHZ	**Wether Hill Ro**	**51.33**	**145**	P	**P**	**13 39 49.1**	**-0.6**
WHZ				IAmb	IAmb	13 39 57.0	
	comp=Z,15nm,1.2s						
USRK	**Ussuriysk Ar.**	**51.57**	**4**	P	**P**	**13 39 51.0**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=192,slow=7.8,SNR=8.0						
	comp=Z,1.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**51.57**	**4**	P	**P**	**13 39 50.1**	**-1.3**
RPZ	**Rata Peaks**	**51.98**	**141**	P	**P**	**13 39 53.1**	**-1.5**
RAMN	**Ramite**	**52.84**	**312**	*e*P	**P**	**13 40 02.3**	**+0.8**
	comp=Z,15nm,0.6s						
GTA	**Gaotai**	**53.55**	**333**	*e*P	**P**	**13 40 07.8**	**+1.6**
GTA				pP	pP	13 40 36.0	-3.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
JIRN	**Jiri**	**53.55**	**312**	*e*P	**P**	**13 40 07.7**	**+1.0**
	comp=Z,3.7nm,0.3s						
GOMU	**GeErMu**	**53.57**	**326**	P	**P**	**13 40 08.8**	**+2.1**
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GUN	**Gumba**	**53.91**	**313**	*e*P	**P**	**13 40 09.3**	**-0.1**
	comp=Z,8.3nm,0.4s						
PKI	**Pulchoki**	**54.07**	**312**	*e*P	**P**	**13 40 10.1**	**-0.4**
	comp=Z,5.3nm,0.5s						
PKIN	**Phulchoki**	**54.08**	**312**	*e*P	**P**	**13 40 10.2**	**-0.3**
	comp=Z,6.6nm,0.4s						
GKN	**Gorkha**	**54.88**	**312**	*e*P	**P**	**13 40 15.8**	**-0.3**
	comp=Z,9.8nm,0.4s						
SONM	**Songino Array**	**58.35**	**343**	P	**P**	**13 40 41.8**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=167,slow=8.1,SNR=13						
SONM				PcP	**sP**	**13 41 29.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=171,slow=3.3,SNR=3.5						
	comp=Z,1.9nm,0.6s						
WMQ	**Urumqi**	**62.83**	**328**	*e*P	**P**	**13 41 11.8**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
PETK	**Petropavlovsk-**	**65.38**	**19**	P	**P**	**13 41 26.9**	**0.0**
	comp=Z,3.5nm,0.9s,baz=170,slow=5.2,SNR=6.1						
	comp=Z,3.5nm,0.9s						
MK31	**Makanchi Array**	**67.65**	**328**	P	**P**	**13 41 41.8**	**+0.3**
MKAR	**Makanchi Array**	**67.65**	**328**	P	**P**	**13 41 42.1**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=119,slow=8.2,SNR=32						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	**67.65**	**328**	P	**P**	**13 41 41.9**	**+0.4**
YAK	**Yakutsk**	**69.33**	**1**	P	**P**	**13 41 51.0**	**-0.6**
ZALV	**Zalesovo Beam**	**71.23**	**335**	P	**P**	**13 42 03.1**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=110,slow=3.5,SNR=9.1						
	comp=Z,1.6nm,0.4s						
KURK	**Kurchatov**	**72.00**	**329**	P	**P**	**13 42 06.1**	**-1.9**
KURK				IAmb	IAmb	13 42 09.2	
	comp=Z,6.7nm,1.0s						
VNDA	**Vanda**	**72.19**	**173**	P	**P**	**13 42 09.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=318,slow=8.8,SNR=1.5						
	comp=Z,0.2nm,0.3s						
VNDA	**Vanda**	**72.19**	**173**	P	**P**	**13 42 09.2**	**+0.5**
NRIK	**Noril'sk**	**81.60**	**347**	P	**P**	**13 43 02.5**	**+1.1**
	comp=Z,3.1nm,0.4s,baz=110,slow=6.5,SNR=4.3						
	comp=Z,3.1nm,0.4s						
ILAR	**Eielson Array**	**94.58**	**25**	P	**P**	**13 44 03.1**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=269,slow=3.6,SNR=2.2						
	comp=Z,0.2nm,0.7s						
PDAR	**Pinedale Array**	**118.54**	**45**	PKP	**PKPdf**	**13 49 30.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=193,slow=0.4,SNR=5.2						
TXAR	**Lajitas Array**	**126.76**	**59**	PKP	**PKPdf**	**13 49 47.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=211,slow=4.6,SNR=5.6						
TORD	**Torodi Ar. Bea**	**127.10**	**281**	PKP	**PKPdf**	**13 49 47.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=52,slow=1.2,SNR=3.0						
LPAZ	**La Paz**	**151.40**	**146**	PKPbc	**PKiKP**	**13 50 39.7**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=52,slow=0.9,SNR=8.7						

*IDC **25** 13:33:52.9±15.0, 9°.62N×79°.81W, h0km, mb3.6/4, mbtmp3.6/4, MS3.0/5, Error ellipse: s-maj=360.0km s-min=101.5km az=178.0*
*NEIC **25** 13:34:03.9±1.4, 8°.97N±0°.05×83°.68W±0°.04, h31km±8km, mb4.1/3, Error ellipse: s-maj=6.9km s-min=4.9km az=199.0*
*UPA **25** 13:34:04.5±3.4, 9°.05N×83°.68W, h17km±10km, MW4.3*
*UCR **25** 13:34:04.7±1.4, 9°.03N×83°.66W, h37km±4km, MW4.6, mb4.1(NEIC)*
*INET **25** 13:34:07.9±1.2, 9°.38N×83°.52W, h10km±7km, ML5.0, MW4.5*

ISC 25 13:34:04.3±1.0, 9°.06N±0°.03×83°.64W±0°.03, h31km±9km, n126, σ1°39/151, mb3.5/4, MS3.0/4, 2C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPN	**Palmar Norte**	**0.20**	**119**	*e*P	**Pn**	**13 34 11.9**	**+0.6**
EDDO	**Dominical**	**0.29**	**310**	*e*P	**Pn**	**13 34 12.6**	**+0.1**
EDDO				*e*S	**Sn**	**13 34 19.1**	**+1.2**
PEZE	**Perez Zeledon,**	**0.32**	**353**	Pg	**Pn**	**13 34 13.2**	**+0.2**
PEZE				Sg	**Sn**	**13 34 20.0**	**+1.3**
PEZE	**Perez Zeledon,**	**0.32**	**353**	*e*P	**Pn**	**13 34 13.3**	**+0.3**
PEZE				*e*S	**Sn**	**13 34 20.2**	**+1.6**
SRBA	**San Rafael, Bu**	**0.32**	**58**	Pg	**Pn**	**13 34 12.8**	**-0.2**
SRBA				Sg	**Sn**	**13 34 19.5**	**+0.8**
SRBA	**San Rafael, Bu**	**0.32**	**58**	*e*P	**Pn**	**13 34 13.0**	**0.0**
SRBA				*e*S	**Sn**	**13 34 19.8**	**+1.1**
EDBA	**Buenos Aires**	**0.37**	**74**	*e*P	**Pn**	**13 34 13.3**	**-0.3**
EDBA				*e*S	**Sn**	**13 34 20.4**	**+0.6**
DRK0	**Durika**	**0.43**	**63**		**Pn**	**13 34 15.3**	**+0.7**
DRK0					**Sn**	**13 34 23.2**	**+1.6**
DRK0	**Durika**	**0.43**	**63**	*e*P	**Pn**	**13 34 15.5**	**+0.8**
DRK0	**Durika**	**0.43**	**63**	⇓*i*P	**Pn**	**13 34 15.4**	**+0.8**
DRK0				*e*S	**Sn**	**13 34 22.9**	**+1.3**
CDM	**Cerro de Muert**	**0.50**	**346**	*e*P	**Pn**	**13 34 15.7**	**-0.2**
CDM				*e*S	**Sn**	**13 34 24.7**	**+1.0**
CDM	**Cerro de Muert**	**0.50**	**346**	*e*P	**Pn**	**13 34 15.6**	**-0.2**
POTG	**Potrero Grande**	**0.51**	**91**	*e*P	**Pn**	**13 34 15.5**	**-0.1**
POTG				*e*S	**Sn**	**13 34 24.3**	**+1.0**
PTJ1	**Puerto Jimnez**	**0.62**	**148**	*e*P	**Pn**	**13 34 16.9**	**-0.1**
EDSV	**San Vito**	**0.70**	**110**	*e*P	**Pb**	**13 34 18.2**	**0.0**
RIMA	**Rio Macho**	**0.73**	**342**		**Pb**	**13 34 18.4**	**-0.4**
RIMA	**Rio Macho**	**0.73**	**342**	*e*P	**Pb**	**13 34 18.5**	**-0.2**
RIMA	**Rio Macho**	**0.73**	**342**	*e*P	**Pb**	**13 34 18.5**	**-0.4**
RIMA				*e*S	**Sb**	**13 34 27.2**	**-1.4**
LCR2	**La Lucha 2**	**0.77**	**332**	*e*P	**Pb**	**13 34 19.0**	**-0.3**
OCM	**Ochomogo**	**0.89**	**339**	*e*P	**Pb**	**13 34 20.8**	**-0.5**
CDITO	**Canoas**	**0.90**	**123**		**Pb**	**13 34 20.1**	**-1.3**
RAFA	**San Farael, Vo**	**0.91**	**349**	*e*P	**Pn**	**13 34 21.6**	**+0.3**
VTCV	**VTCV, Calle Va**	**0.92**	**354**	*e*P	**Pn**	**13 34 21.8**	**+0.5**
VTRT	**Volcan Turrial**	**0.95**	**351**	*e*P	**Pb**	**13 34 22.1**	**-0.3**
CVTR	**Volcan Turrial**	**0.96**	**353**		**Pb**	**13 34 22.1**	**-0.6**
CVTR	**Volcan Turrial**	**0.96**	**353**	*e*P	**Pn**	**13 34 22.4**	**+0.4**
VTUN	**Crater Central**	**0.96**	**353**	*e*P	**Pn**	**13 34 22.5**	**+0.4**
SJS	**Escuela Geolog**	**0.96**	**335**	*e*P	**Pn**	**13 34 22.1**	**+0.2**
VTUC	**Crater, Volcan**	**0.96**	**353**	*e*P	**Pn**	**13 34 22.4**	**+0.3**
BRU2	**Volcan**	**0.97**	**106**	Pn	**Pn**	**13 34 21.3**	**-0.6**
BRU2	**Volcan**	**0.97**	**106**	*e*P	**Pn**	**13 34 21.4**	**-0.6**
BRU2				*e*S	**Sb**	**13 34 34.8**	**-0.5**
BRU2	**Volcan**	**0.97**	**106**	*e*P	**Pn**	**13 34 21.5**	**-0.4**
BRU2	**Volcan**	**0.97**	**106**	⇑*i*P	**Pn**	**13 34 21.6**	**-0.4**
BRU2				*e*S	**Sb**	**13 34 35.1**	**-0.1**
HDC3	**Heredia 3**	**1.04**	**333**	*e*P	**Pb**	**13 34 23.5**	**-0.4**
HDC3	**Heredia 3**	**1.04**	**333**	*e*P	**Pn**	**13 34 23.2**	**+0.3**
HDC	**Heredia**	**1.04**	**333**		**Pn**	**13 34 23.3**	**+0.4**
HDC	**Heredia**	**1.04**	**333**	*e*P	**Pn**	**13 34 23.4**	**+0.4**
HDC	**Heredia**	**1.04**	**333**	⇑*e*P	**Pb**	**13 34 23.5**	**-0.5**
HDC				*e*S	**Sn**	**13 34 38.0**	**+1.4**
BATAN	**Batan**	**1.06**	**14**	Pn	**Pb**	**13 34 23.9**	**-0.2**
BATAN

COPN	Copaltepe	4.25	317	*e*P		Pn	13 35 09.3	+2.4
MOMN	Momotombo	4.38	320	*e*P		Pn	13 35 11.1	+2.3
MATN	Matagalpa	4.45	330	Pn		Pn	13 35 09.9	+0.1
MATN	Matagalpa	4.45	330	*e*P		Pn	13 35 11.2	+1.4
CNGN	Cerro Negro	4.55	319	Pn		Pn	13 35 12.1	+1.0
TEL3	Telica 3	4.70	318	*e*P		Pn	13 35 15.6	+2.4
TELN	Telica	4.71	319	*e*P		Pn	13 35 15.5	+2.0
PRVC	Isla de Provid	4.83	27	*e*P		Pn	13 35 15.1	+0.1
CRIN	San Cristobal	4.93	317	Pn		Pn	13 35 18.4	+2.0
CRIN	San Cristobal	4.93	317	*e*P		Pn	13 35 18.2	+1.8
RCON	San Juan de Ri	5.04	331	*e*P		Pn	13 35 20.0	+2.0
CSGN	Cosiguina Volc	5.47	316	*e*P		Pn	13 35 26.0	+2.1
TGUH	Tegucigalpa,Un	6.11	325	Pn		Pn	13 35 34.3	+1.7
TGUH	Tegucigalpa,Un	6.11	325	*e*P		Pn	13 35 35.3	+2.7
PACA	Pacaya	6.35	314	*e*P		Pn	13 35 38.4	+2.4
SOLC	Bahia Solano	6.79	114	*e*P		Pn	13 35 41.4	-0.4
MTO3	Montecristo	7.71	314	Pn		Pn	13 35 56.7	+1.9
SJCC	San Jacinto, C	8.38	84	*e*P		Pn	13 36 05.6	+1.7
YOTC	Yotoco, Valle	8.83	124	*e*P		Pn	13 36 13.0	+3.0
POPC	Popayan, Colom	9.48	133	*e*P		Pn	13 36 22.3	+3.2
MTDJ	Mount Denham	10.87	32	Pn		Pn	13 36 38.9	+1.0
URIC	Uribia, Colomb	11.75	76	*e*P		Pn	13 36 49.3	-0.6
BOSC	San Juan Bosco	13.17	157	Pn		Pn	13 37 09.7	+0.1
BAUV	El Baul	15.40	89	Pn		Pn	13 37 38.7	-0.9
BAUV				IAmb	IAmb	13 38 08.7		
	comp=Z,8.2nm,0.8s							
SDDR	Presa de Saban	15.51	49	P		P	13 37 44.7	-0.4
SDDR				IAmb	IAmb	13 37 48.8		
	comp=Z,18nm,0.9s							
ATAH	Atahualpa	16.92	162	LR		LR	13 43 35.5	
	comp=Z,33nm,20.4s,baz=343,slow=35							
BIRV	Birongo	17.17	84			Pn	13 38 01.1	-1.0
BIRV				IAmb	IAmb	13 38 40.2		
	comp=Z,24nm,1.5s							
TXAR	Lajitas Array	27.56	320	P		P	13 39 59.5	+11
	comp=Z,0.3nm,0.5s,baz=147,slow=12,SNR=1.9							
TXAR				LR		LR	13 52 43.0	
	comp=Z,22nm,21.6s,baz=136,slow=38							
	comp=Z,0.3nm,0.5s							
LPAZ	La Paz	29.50	149	LR		LR	13 52 18.6	
	comp=Z,32nm,19.4s,baz=285,slow=39							
NVAR	Mina Array Bea	42.70	319	P		P	13 42 11.2	+12
	comp=Z,0.5nm,0.7s,baz=134,slow=6.4,SNR=4.3							
	comp=Z,0.5nm,0.7s							
FRB	Frobisher Bay	55.65	8	LR		LR	14 08 27.1	
	comp=Z,17nm,18.9s,baz=48,slow=38							
YKA	Yellowknife Ar	57.87	344	P		P	13 43 51.0	-1.9
	comp=Z,0.6nm,0.6s,baz=136,slow=7.6,SNR=4.3							
	comp=Z,0.6nm,0.6s							
ILAR	Eielson Array	70.61	336	P		P	13 45 15.4	-1.1
	comp=Z,0.5nm,0.8s,baz=122,slow=5.1,SNR=5.6							
	comp=Z,0.5nm,0.8s							
VRAC	Vranov	89.80	40	LR		LR	14 20 46.1	
	comp=Z,17nm,19.9s,baz=293,slow=32							
PZH	PanZhiHua	144.26	352	PKP		PKPab	13 53 36.0	-0.1

IDC 25 13:48:24.6±2.1, 2°.25N×127°.88E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=152.9km s-min=24.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.94	164	P	P	13 53 31.1	+0.4
	0.4nm,0.5s,baz=344,slow=10,SNR=16						
	0.4nm,0.5s						
ASAR	Alice Springs	26.41	168	P	P	13 54 02.4	-0.8
	0.3nm,0.9s,baz=348,slow=7.6,SNR=6.2						
	0.3nm,0.9s						
MKAR	Makanchi Array	59.42	325	P	P	13 58 29.5	+0.3
	0.7nm,0.6s,baz=120,slow=8.3,SNR=7.7						
	0.7nm,0.6s						

IDC 25 13:49:04.5±0.8, 22°.87S×173°.18E, h0km, mb4.1/10, mbtmp4.0/12, ML4.3/2, MS3.5/33, Error ellipse: s-maj=29.0km s-min=19.3km az=162.0
NEIC 25 13:49:06.8±1.9, 23°.07S±0°.07×173°.33E±0°.09, h10km±1km, mb4.8/7, Error ellipse: s-maj=15.1km s-min=11.2km az=67.0

ISC 25 13:49:09.6±0.6, 22°.9S±0°.1×173°.22E±0°.07, h35km, n68, σ1§54/39, mb4.0/13, MS3.6/31, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.02	285	Pn	Pn	13 50 21.8	-0.6
PINNC	Pines Island,	5.34	272	Pn	Pn	13 50 27.8	+0.9
OUENC	Ouen Island, N	5.91	274	Pn	Pn	13 50 37.3	+2.6
LIFNC	LIFOU	5.95	290	Pn	Pn	13 50 36.0	+0.8
DZM	Mont Dzumac	6.32	276	Pn	Pn	13 50 40.3	-0.2
	0.8nm,0.3s,baz=118,slow=16,SNR=20						
DZM				Sn	Sn	13 51 53.3	+1.7
	6.1nm,0.3s,baz=151,slow=21,SNR=8.2						
	2.1nm,0.4s						
DZM	Mont Dzumac	6.32	276	*e*Pn	Pn	13 50 44.2	+3.7
	50nm,1.5s						
DZM				*e*Sn	Sn	13 51 47.5	-4.1
	64nm,0.9s						
DZM				*e*LR	LR	13 52 03.6	
	comp=Z,635nm,25.6s						
DZM	Mont Dzumac	6.32	276	Pn	Pn	13 50 43.3	+2.8
MSVF	Nonsavu	6.86	42	Pn	Pn	13 50 47.5	-0.3
	0.7nm,0.3s,baz=219,slow=22,SNR=4.2						
MSVF				LR	LR	13 52 53.5	
	comp=Z,209nm,18.0s,baz=178,slow=33						
	4.1nm,0.6s						
MSVF	Nonsavu	6.86	42	Pn	Pn	13 50 48.6	+0.7
KOUNC	Koumac, New Ca	8.63	284	Pn	Pn	13 51 16.6	+4.5
RAO	Raoul Island	10.16	130	LR	LR	13 54 28.1	
	comp=Z,693nm,21.1s,baz=339,slow=32						
URZ	Urewera	15.66	169	LR	LR	13 57 21.0	
	comp=Z,456nm,19.8s,baz=31,slow=32						
HNR	Honiara	18.48	314	LR	LR	13 59 07.6	
	comp=Z,135nm,18.1s,baz=190,slow=33						
HNR	Honiara	18.48	314	P	P	13 53 21.2	-1.4
HNR				IAmb	IAmb	13 53 48.1	
	comp=Z,86nm,1.1s						
RPZ	Rata Peaks	20.83	184	LR	LR	14 01 16.9	
	comp=Z,342nm,18.3s,baz=9,slow=35						
RAR	Rarotonga	25.07	91	LR	LR	14 03 56.1	
	comp=Z,48nm,18.0s,baz=312,slow=36						
CTA	Charters Tower	25.24	271	LR	LR	14 03 42.4	
	comp=Z,53nm,20.1s,baz=76,slow=35						
STKA	Stephens Creek	29.38	245	P	P	13 55 09.3	-0.3
	comp=Z,1.7nm,0.7s,baz=92,slow=10,SNR=3.7						
STKA				LR	LR	14 05 32.4	
	comp=Z,101nm,18.3s,baz=189,slow=34						
	comp=Z,1.7nm,0.7s						
PPT2	Papeete2	35.24	88	*e*LR	LR	14 05 49.0	
	comp=Z,60nm,22.8s						
PPT	Papeete	35.24	88	LR	LR	14 07 43.1	
	comp=Z,26nm,19.0s,baz=207,slow=32						
AS31	Alice Springs	36.05	261	P	P	13 56 08.2	+0.2
ASAR	Alice Springs	36.05	261	P	P	13 56 08.2	+0.3
	comp=Z,6.3nm,0.9s,baz=85,slow=8.4,SNR=50						
ASAR				LR	LR	14 09 21.9	
	comp=Z,68nm,20.4s,baz=158,slow=34						
	comp=Z,6.3nm,0.9s						
ASAR	Alice Springs	36.05	261	P	P	13 56 07.9	-0.1
WRA	Warramunga Arr	36.25	267	P	P	13 56 08.3	-1.4
	comp=Z,1.1nm,0.8s,baz=101,slow=8.4,SNR=6.4						
	comp=Z,1.1nm,0.8s						
H11S2	WAKE ISLAND Hy	41.64	351	T	T	14 41 27.4	
	baz=171,slow=76,SNR=7.5						
H11S3	WAKE ISLAND Hy	41.64	351	T	T	14 41 27.0	
	baz=171,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	41.65	351	T	T	14 41 27.0	
	baz=171,slow=76,SNR=6.7						
FITZ	Fitzroy Crossi	44.68	267	P	P	13 57 19.4	0.0
	comp=Z,5.8nm,0.9s,baz=107,slow=9.0,SNR=10						
	comp=Z,5.8nm,0.9s						
FITZ	Fitzroy Crossi	44.68	267	P	P	13 57 19.9	+0.5
FITZ				IAmb	IAmb	13 57 21.5	
	comp=Z,8.2nm,0.9s						
GUMO	Guam	45.68	320	LR	LR	14 14 20.0	
	comp=Z,109nm,22.0s,baz=155,slow=33						
SIJI	Sorong	46.26	292	LR	LR	14 16 52.9	
	comp=Z,110nm,19.6s,baz=112,slow=36						
TAOE	Nuku Hiva Isla	46.77	80	*e*LR	LR	14 11 09.0	
	comp=Z,56nm,23.0s						
BATI	Baumata	48.94	276	LR	LR	14 18 08.5	
	comp=Z,230nm,20.4s,baz=182,slow=36						
MBWA	Marble Bar	49.39	261	P	P	13 57 56.3	+0.1
MBWA				IAmb	IAmb	13 57 57.8	
	comp=Z,18nm,0.9s						
KAPI	Kappang	54.52	281	LR	LR	14 20 45.3	
	comp=Z,41nm,21.2s,baz=100,slow=35						
VNDA	Vanda	54.94	183	P	P	13 58 36.6	+0.1
	comp=Z,0.8nm,0.8s,baz=325,slow=8.2,SNR=5.6						
VNDA				LR	LR	14 17 55.4	
	comp=Z,98nm,21.5s,baz=7.5,slow=32						
	comp=Z,0.8nm,0.8s						
SBA	Scott Base	55.09	182	P	P	13 58 37.5	-0.1
SBA				IAmb	IAmb	13 58 40.9	
	comp=Z,9.6nm,0.9s						
DAV	Davao City (W)	55.30	297	LR	LR	14 21 58.2	
	comp=Z,31nm,19.2s,baz=124,slow=36						
JHJ	Hachijo jima 2	64.20	329	LR	LR	14 27 22.2	
	comp=Z,13nm,18.5s,baz=298,slow=36						
QSPA	South Pole Qui	67.16	180	LR	LR	14 27 38.1	
	comp=Z,71nm,18.1s,baz=330,slow=34						
QSPA	South Pole Qui	67.16	180	P	P	14 00 00.1	+0.3
MJAR	Matsushiro Arr	67.75	330	LR	LR	14 25 06.0	
	comp=Z,26nm,21.6s,baz=157,slow=32						
KSRS	Korea Array	73.64	324	LR	LR	14 29 15.3	
	comp=Z,16nm,21.5s,baz=220,slow=33						
MAW	Mawson	76.43	202	P	P	14 00 56.2	+1.0
	comp=Z,4.4nm,0.9s,baz=102,slow=8.0,SNR=4.0						
	comp=Z,4.4nm,0.9s						
PSI	Prapat	76.68	279	LR	LR	14 36 03.8	
	comp=Z,47nm,19.1s,baz=210,slow=37						
PETK	Petropavlovsk-	76.89	350	LR	LR	14 28 06.8	
	comp=Z,47nm,20.8s,baz=150,slow=30						
BELA	Belgrano 2	78.11	174	P	P	14 01 02.7	-1.9
BELA				IAmb	IAmb	14 01 05.1	
	comp=Z,5.7nm,1.1s						
PMSA	Palmer Station	82.18	159	LR	LR	14 30 54.3	
	comp=Z,30nm,21.2s,baz=180,slow=30						
CMAR	Chiang Mai Arr	83.38	293	P	P	14 01 33.8	+0.1
	comp=Z,0.5nm,0.4s,baz=139,slow=3.6,SNR=5.1						
CMAR				LR	LR	14 41 31.3	
	comp=Z,13nm,18.1s,baz=185,slow=38						
	comp=Z,0.5nm,0.4s						
MA2	Magadan	84.23	349	LR	LR	14 34 27.4	
	comp=Z,25nm,20.9s,baz=131,slow=32						
TROLL	Troll, Antarti	85.12	183	P	P	14 01 41.6	-0.2
SNAA	Sanae	85.63	181	P	P	14 01 43.8	-0.5
SNAA	Sanae	85.63	181	LR	LR	14 36 07.5	
	comp=Z,38nm,22.0s,baz=148,slow=33						
VNA3	Neumayer Olymp	86.08	179	P	P	14 01 45.8	-0.6
VNA2	Neumayer--Watz	86.42	180	P	P	14 01 47.8	-0.3
	baz=181,slow=3.8						
VNA1	Neumayer--Stat	86.69	180	P	P	14 01 49.1	-0.3
NVAR	Mina Array Bea	88.50	47	P	P	14 01 59.9	+1.0
	comp=Z,0.5nm,0.8s,baz=224,slow=6.2,SNR=4.4						
	comp=Z,0.5nm,0.8s						
BBB	Bella Bella	90.56	32	LR	LR	14 38 52.4	
	comp=Z,23nm,18.1s,baz=244,slow=33						
YAK	Yakutsk	91.50	341	LR	LR	14 36 45.1	
	comp=Z,26nm,22.0s,baz=274,slow=31						
SONM	Songino Array	92.38	322	P	P	14 02 15.2	-1.4
	comp=Z,0.2nm,0.3s,baz=123,slow=5.3,SNR=1.7						
SONM				LR	LR	14 41 22.6	
	comp=Z,14nm,21.9s,baz=144,slow=34						
	comp=Z,0.2nm,0.3s						
ILAR	Eielson Array	92.67	16	LR	LR	14 36 21.2	
	comp=Z,40nm,20.5s,baz=236,slow=31						
PLCA	Paso Flores	93.33	137	LR	LR	14 34 03.0	
	comp=Z,34nm,21.7s,baz=216,slow=29						
NEW	Newport	94.23	39	LR	LR	14 36 01.1	
	comp=Z,14nm,20.9s,baz=272,slow=30						
TXAR	Lajitas Array	95.28	61	P	P	14 02 31.3	+1.0
	comp=Z,0.2nm,0.7s,baz=241,slow=5.0,SNR=2.8						
	comp=Z,0.2nm,0.7s						
INK	Inuvik	98.87	18	LR	LR	14 42 05.5	
	comp=Z,22nm,19.2s,baz=224,slow=32						
CLL	Collm	147.77	337	*e*PKPbc	PKPbc	14 08 50.0	-0.5
	comp=Z,9.0nm,1.3s						
GERES	GERESS Array B	149.45	333	PKPbc	PKPbc	14 08 54.3	-0.8
	comp=Z,0.3nm,0.3s,baz=225,slow=0.2,SNR=6.1						
TORD	Torodi Ar. Bea	167.39	221	PKP	PKPdf	14 09 12.6	-0.2
	comp=Z,0.9nm,0.8s,baz=104,slow=1.4,SNR=4.6						
TORD				PKPab	PKPab	14 10 18.1	+0.2
	comp=Z,1.0nm,0.9s,baz=129,slow=5.7,SNR=3.9						

IDC 25 14:01:16.6±5.5, 55°.22S×30°.86W, h0km, mb4.2/1, mbtmp4.2/1, Error ellipse: s-maj=759.8km s-min=53.6km az=30.0
NEIC 25 14:01:16.1±1.2, 55°.2S±0°.1×31°.1W±0°.3, h10km±1km, mb4.1/5, Error ellipse: s-maj=25.6km s-min=19.0km az=65.0

ISC 25 14:01:16.6±1.1, 55°.3S±0°.1×31°.1W±0°.2, h10km, n13, σ1§14/10, mb4.0/3, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	3.28	285	Pn	Pn	14 02 08.2	+0.1
ORCD	Orcadas	9.07	227	Pn	Pn	14 03 27.5	+0.1
SNAA	Sanae	20.37	155	P	P	14 05 53.4	+0.4
QSPA	South Pole Qui	34.97	180	P	P	14 08 08.8	+0.1
QSPA				IAmb	IAmb	14 08 43.2	
	comp=Z,3.2nm,1.2s						
GO02	Mina Guanaco	41.19	301	P	P	14 09 01.1	-0.5
MAW	Mawson	42.06	145	P	P	14 09 07.2	-0.7
MAW				IAmb	IAmb	14 09 12.9	
	comp=Z,1.5nm,0.7s						
LPAZ	La Paz	48.15	309	P	P	14 09 59.4	+1.9
	comp=Z,1.6nm,0.5s,baz=169,slow=5.6,SNR=7.8						
	comp=Z,1.6nm,0.5s						
LPAZ	La Paz	48.15	309	P	P	14 09 55.8	-1.7
LPAZ				IAmb	IAmb	14 10 00.1	
	comp=Z,1.6nm,0.6s						
H10N1	ASCENSION HYDR	49.12	22	T	T	15 03 07.5	
	baz=192,slow=75,SNR=5.3						
H10N3	ASCENSION HYDR	49.12	22	T	T	15 03 06.9	
	baz=192,slow=75,SNR=7.4						
H10N2	ASCENSION HYDR	49.14	22	T	T	15 03 08.3	
	baz=192,slow=75,SNR=7.7						
ILAR	Eielson Array	147.97	313	PKPbc	PKiKP	14 21 01.9	-0.6
	comp=Z,0.5nm,0.8s,baz=114,slow=1.6,SNR=7.7						
SONM	Songino Array	152.90	88	PKPbc	PKiKP	14 21 14.5	+1.1
	comp=Z,0.3nm,0.5s,baz=230,slow=3.6,SNR=2.1						

KRNET 25 14:02:28.1±0.1, 39°.09N×77°.27E, mb3.7
SOME 25 14:02:30.9, 39°.77N×76°.45E, h10km
NNC 25 14:02:31.5±2.6, 39°.71N×76°.68E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=17.1km s-min=16.0km az=176.0

ISC 25 14:02:30.6±2.8, 39°.3N±0°.1×77°.12E±0°.09, h10km, n29, σ2§29/43, 2C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	3.02	347	⇓*i*P	Pn	14 03 19.6	+0.8
	baz=46						
ULHL				⇓*i*S	Sn	14 03 57.4	+2.2
	baz=46						
ARLS	Aral	3.33	321	⇑*i*P	Pn	14 03 24.1	+1.1
	baz=22						
ARLS				⇑*i*S	Sn	14 04 04.7	+1.9
	baz=22						
KBK	Karagaybulak	3.74	335	⇓*i*P	Pn	14 03 30.0	+1.4
	baz=34						
KBK				⇓*i*S	Sn	14 04 14.5	+1.7
	baz=34						
TKM2	Tokmak 2	3.80	343	⇓Pg	Pn	14 03 28.4	-1.1
	1.9nm,0.3s						
TKM2				⇓Lg	Lg	14 04 20.8	
	3.4nm,0.4s						
TKM2	Tokmak 2	3.80	343	⇓*i*P	Pn	14 03 30.8	+1.3
	baz=42						
TKM2				⇓*i*S	Sn	14 04 16.3	+1.9
	baz=42						
MDOK	Medeo	3.87	359	*e*P	Pn	14 03 34.4	+4.1
	3.7nm,0.5s						
MDOK				*e*S	Sn	14 04 19.3	+3.4
	21nm,0.8s						
MDOK	Medeo	3.87	359	Pg	Pn	14 03 32.9	+2.6
	3.4nm,0.7s						
MDOK				Pg	Pb	14 03 34.4	-4.6
	3.7nm,0.5s						
MDOK				Lg	Lg	14 04 19.3	
	21nm,0.8s						
MDOK				Lg	Lg	14 04 23.3	
	15nm,0.6s						
SATY	Saty	3.88	14	*e*P	Pb	14 03 37.7	-1.6
	2.6nm,0.3s						
SATY				*e*S	Sb	14 04 24.9	-1.5
	15nm,0.5s						
SATY	Saty	3.88	14	Pg	Pb	14 03 37.7	-1.6
	2.6nm,0.3s						
SATY				Lg	Lg	14 04 24.9	
	15nm,0.5s						
AAK	Ala-Archa	3.89	330	⇓*i*P	Pn	14 03 31.8	+1.2
	baz=30						
AAK				⇓*i*S	Sn	14 04 18.5	+2.1
	baz=30						
KOTS	Kotyrbulak	3.94	360	*e*P	Pb	14 03 37.8	-2.4
	4.5nm,0.4s						
KOTS				*e*S	Sn	14 04 24.9	+7.3
	45nm,0.6s						
KOTS	Kotyrbulak	3.94	360	Pg	Pb	14 03 37.8	-2.4
	4.5nm,0.4s						
KOTS				Lg	Lg	14 04 24.9	
	45nm,0.6s						
DGS	Degeres	4.07	346	*e*P	Pn	14 03 38.2	+5.0
	3.3nm,0.3s						
DGS				*e*S	Sn	14 04 25.4	+4.4
	16nm,0.7s						
DGS	Degeres	4.07	346	Pg	Pn	14 03 38.2	+5.0
	3.3nm,0.3s						
DGS				Lg	Lg	14 04 25.4	
UZB	Uzunbulak	4.11	20	*e*P	Pb	14 03 41.8	-1.3
UZB				*e*S	Sb	14 04 32.0	-0.9
UZB	Uzunbulak	4.11	20	Pg	Pb	14 03 41.8	-1.3
UZB				Lg	Lg	14 04 32.0	
CHMS	Chumysh	4.11	335	⇓Pg	Pn	14 03 35.9	+2.3
	1.8nm,0.4s						
CHMS				⇓Lg	Lg	14 04 27.2	
	7.9nm,0.8s						
SHLS	Shalkode	4.24	24	*e*P	Pg	14 03 49.4	-2.5
	5.6nm,0.4s						
SHLS				*e*S	Sg	14 04 45.0	-1.9
	10nm,0.2s						
SHLS	Shalkode	4.24	24	Pg	Pg	14 03 49.4	-2.5
	5.6nm,0.4s						
SHLS				Lg	Lg	14 04 45.0	
	10nm,0.2s						
KURS	Kuram	4.26	10	*e*P	Pb	14 03 44.1	-1.6
	2.2nm,0.3s						
KURS				*e*S	Sb	14 04 35.9	-1.4
	8.8nm,0.9s						
KURS	Kuram	4.26	10	Pg	Pb	14 03 44.1	-1.6
	2.2nm,0.3s						
KURS				Lg	Lg	14 04 35.9	
	8.8nm,0.9s						
CHKK	Chushkaly	4.56	359	*e*P	Pb	14 03 49.7	-1.0
	0.6nm,0.1s						
CHKK				*e*S	Sb	14 04 45.2	-0.5
	8.8nm,0.3s						
CHKK	Chushkaly	4.56	359	Pg	Pb	14 03 49.7	-1.0
	0.6nm,0.1s						
CHKK				Lg	Lg	14 04 45.2	
	8.8nm,0.3s						
BLB	Baldybastay	4.91	11	*e*P	Pb	14 03 55.1	-1.6
	2.5nm,0.4s						
BLB				*e*S	Sb	14 04 54.9	-0.9
	10.0nm,0.6s						
BLB	Baldybastay	4.91	11	Pg	Pb	14 03 55.1	-1.6
	2.5nm,0.4s						
BLB				Lg	Lg	14 04 54.9	
	10.0nm,0.6s						
ARXS	Arharly	4.94	6	*e*P	Pb	14 03 55.6	-1.8
	2.1nm,0.8s						
ARXS				*e*S	Sb	14 04 55.6	-1.2
	8.2nm,0.8s						
ARXS	Arharly	4.94	6	Pg	Pb	14 03 55.6	-1.8
	2.1nm,0.8s						
ARXS				Lg	Lg	14 04 55.6	
	8.2nm,0.8s						
DJR	Jarkent	5.41	21	*e*P	Pb	14 04 05.6	+0.3
	0.7nm,0.1s						
DJR				*e*S	Sb	14 05 12.7	+2.3
	9.0nm,0.5s						
DJR	Jarkent	5.41	21	Pg	Pb	14 04 05.6	+0.3
	0.7nm,0.1s						
DJR				Lg	Lg	14 05 12.7	
	9.0nm,0.5s						

MAN 25 14:16:04, 4°.02N×125°.96E, h147km, Ms3.3
DJA 25 14:16:05.5±0.8, 4°.N±7°×12°6E±°, h127km±6km, M4.0/8, mb4.3/7, mB4.8/3, MLv3.9/8, Mw(mB)4.1/3
IDC 25 14:16:14.4±2.1, 1°.29N×127°.14E, h0km, mb3.4/3, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=108.8km s-min=26.8km az=69.0

ISC 25 14:16:03.0±1.1, 3°.92N±0°.06×126°.0E±0°.1, h150km, n14, σ1§14/16, mb3.3/4, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.55	245	P	Pn	14 16 24.7	+0.1
SGSI				S	Sn	14 16 40.9	-0.1
GSPH	General Santos	2.40	334	⇓*i*P	Pn	14 16 42.6	-0.5
GSPH				*i* S	Sn	14 17 11.8	-2.2
KCP	Kidapawan	3.21	343	⇑*e*P	Pn	14 16 53.2	+0.1
KCP				*i* S	Sn	14 17 33.5	+1.6
GTOI	Gorontalo	4.44	223	P	Pn	14 17 09.7	+0.7
GTOI				S	Sn	14 17 59.0	-1.4
LBMI	Labuha	4.76	162	P	Pn	14 17 13.9	+0.6
MRSI	Marisa	5.32	230	P	Pn	14 17 22.2	+1.5
	0.1nm23nm,0.6s						
SANI	Sanana	5.93	180	P	Pn	14 17 26.3	-2.5
	0.4nm2µm61nm,0.7s						
TTSI	Tana Toraja	9.29	222	P	Pn	14 18 15.3	+1.6
	11nm,0.8s						
SPSI	Sidrap Palu	10.02	219	P	Pn	14 18 23.6	+0.3
	7.6nm,0.8s						
BATI	Baumata	14.23	189	P	Pn	14 19 18.3	+0.4
FITZ	Fitzroy Crossi	21.88	181	P	P	14 20 43.2	-1.0
	0.4nm,0.3s,baz=358,slow=9.6,SNR=17						
	1.4nm,0.3s						
WRA	Warramunga Arr	25.08	161	P	P	14 21 14.1	+0.2
	1.1nm,0.4s,baz=340,slow=10.0,SNR=53						
	1.1nm,0.4s						
ASAR	Alice Springs	28.48	165	P	P	14 21 44.5	+0.3
	0.4nm,0.6s,baz=341,slow=7.3,SNR=13						
	0.4nm,0.6s						
MKAR	Makanchi Array	57.00	326	P	P	14 26 21.7	+49
	0.2nm,0.6s,baz=128,slow=7.8,SNR=1.9						
	0.2nm,0.6s						

JMA 25 14:20:39.7±0.4, 22°N±2°×14°4E±°, h334km, MARIANA ISLANDS REGION
IDC 25 14:20:40.0±1.6, 21°.57N×143°.21E, h302km±15km, mb3.3/11, mbtmp4.1/14, Error ellipse: s-maj=20.7km s-min=9.9km az=93.0

**ISC 25

FITZ	**Fitzroy Crossi**	43.0	205	P		**P**	14 28 10.1	-0.9
	2.6nm,0.8s,baz=248,slow=0.1,SNR=9.0							
	2.6nm,0.8s							
ASAR	**Alice Springs**	45.8	192	P		**P**	14 28 32.2	-1.1
	0.4nm,0.4s,baz=17,slow=11,SNR=11							
	0.4nm,0.4s							
ILAR	**Eielson Array**	62.1	27	P		**P**	14 30 28.7	-1.0
	0.5nm,0.6s,baz=269,slow=5.4,SNR=7.9							
	0.5nm,0.6s							
YKA	**Yellowknife Ar**	76.5	28	P		**P**	14 31 56.4	-1.1
	0.9nm,0.5s,baz=292,slow=5.9,SNR=11							
	0.9nm,0.5s							
ARCES	**ARCESS Array B**	79.0	342	P		**P**	14 32 11.3	+0.1
	5.3nm,1.1s,baz=71,slow=8.2,SNR=7.2							
	5.3nm,1.1s							
NVAR	**Mina Array Bea**	83.1	8	51	P	**P**	14 32 34.3	+0.7
	0.9nm,0.8s,baz=268,slow=4.2,SNR=4.0							
	0.9nm,0.8s							
FINES	**FINESS Array B**	83.3	4	335	P	**P**	14 32 31.9	-1.7
	0.7nm,0.3s,baz=64,slow=5.7,SNR=11							
	0.7nm,0.3s							
PLCA	**Paso Flores**	145.6	1	132	PKPbc	**PKPdf**	14 39 44.1	+0.9
	3.3nm,0.8s,baz=246,slow=4.0,SNR=9.4							
LPAZ	**La Paz**	149.8	8	85	PKPbc	**PKPbc**	14 39 56.7	0.0
	1.9nm,0.6s,baz=316,slow=4.4,SNR=8.0							

*DJA **25** 14:21:25.9±0.8, 7°S±4°×10°E±°, h25km±7km, M4.0/8, MLv4.0/8*
*IDC **25** 14:21:29.7±5.7, 7.07°S×106.01°E, h82km±49km, mb3.3/3, mbtmp3.6/3, Error ellipse: s-maj=66.5km s-min=31.6km az=41.0*

ISC 25 14:21:23.4±1.2, 7°41S±0.09×105°94E±0.05, h32km, n19, σ1§20/17, mb3.7/3, Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.74**	**57**	P			**Pn**	**14 21 39.1**	**+1.5**
SKJI				S			**Sn**	**14 21 47.8**	**+0.1**
DBJI	**Dramaga**	**1.18**	**44**	P			**Pb**	**14 21 45.4**	**+0.2**
DBJI				S			**Sb**	**14 21 59.4**	**-0.7**
CNJI	**Cibinong**	**1.19**	**85**	P			**Pb**	**14 21 45.3**	**-0.1**
CNJI				S			**Sb**	**14 21 58.2**	**-2.3**
SBJI	**Serang**	**1.30**	**9**	P			**Pb**	**14 21 48.0**	**+0.8**
CBJI	**Citeko**	**1.34**	**43**	P			**Pn**	**14 21 46.0**	**+0.1**
TNG	**Tangerang**	**1.42**	**30**	P			**Pb**	**14 21 49.1**	**-0.2**
LEM	**Lembang**	**1.77**	**71**	P			**Pb**	**14 21 55.0**	**-0.3**
	247nm,0.6s,baz=258,slow=3.6,SNR=55								
LEM				S			**Sb**	**14 22 17.4**	**+0.3**
	735nm,0.5s,baz=322,slow=18,SNR=17								
LEM	**Lembang**	**1.77**	**71**	P			**Pb**	**14 21 53.3**	**-2.0**
BLSI	**Bandar Lampung**	**2.14**	**341**	P			**Pb**	**14 22 00.8**	**-0.8**
KASI	**Kota Agung**	**2.36**	**323**	P			**Pb**	**14 22 04.5**	**-0.7**
H01W3	**Cape Leeuwin H**	**28.36**	**166**	T			T	14 56 57.9	
	baz=340,slow=79,SNR=33								
H01W1	**Cape Leeuwin H**	**28.38**	**166**	T			T	14 56 58.7	
	baz=340,slow=79,SNR=21								
H01W2	**Cape Leeuwin H**	**28.38**	**166**	T			T	14 56 56.7	
	baz=340,slow=79,SNR=35								
WRA	**Warramunga Arr**	**30.22**	**117**	P			**P**	**14 27 32.9**	**+1.6**
	0.2nm,0.4s,baz=302,slow=9.8,SNR=3.8								
	0.2nm,0.4s								
H08S2	**Diego Garcia H**	**33.15**	**267**	T			T	15 03 16.7	
	baz=92,slow=76,SNR=36								
H08S3	**Diego Garcia H**	**33.16**	**267**	T			T	15 03 21.9	
	baz=92,slow=76,SNR=41								
H08S1	**Diego Carcia H**	**33.17**	**267**	T			T	15 03 18.3	
	baz=92,slow=76,SNR=31								
MKAR	**Makanchi Array**	**57.92**	**341**	P			**P**	**14 31 10.7**	**-1.8**
	0.3nm,0.4s,baz=157,slow=8.3,SNR=5.4								
	0.3nm,0.4s								
BRTR	**Keskin Array B**	**81.31**	**312**	P			**P**	**14 33 37.8**	**+0.8**
	0.7nm,0.6s,baz=116,slow=8.6,SNR=3.9								
	0.7nm,0.6s								

SKO 25 14:28:56.5, 41.71N×22.32E, h0km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.10**	**261**	*i* Pg			Pg	14 28 58.8	+0.4
STIP				*i* Sg			Sg	14 28 59.8	0.0
VAY	**Valandovo**	**0.43**	**154**	*i* Sg			Sg	14 29 10.3	0.0
VAY				*i* Pg			Pg	14 29 03.5	-1.2
VAY				*e*Lg			Lg	14 29 10.5	
	comp=N,24nm,0.4s								
KNT	**Kendrikon**	**0.70**	**141**	*i* Pg			Pg	14 29 09.7	-0.2
KNT				*i* Sg			Sg	14 29 18.8	-0.1

WEL 25 14:29:55.0, 44°S±1°×17°2E±°, h5km±1km, M2.9/11, ML3.1/12, MLv2.9/11, Error ellipse: s-maj=0.0km s-min=0.0km az=132.3, Southern Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.17**	**136**	P			Pg	14 30 00.1	+1.7
MQZ				S			Sg	14 30 02.5	+1.8
RACZ	**Rakaia**	**0.29**	**241**	P			Pb	14 30 03.2	+0.4
RACZ				S			Sb	14 30 07.8	-0.1
AKCZ	**Akaroa Harbour**	**0.42**	**134**	P			Pb	14 30 04.8	-0.1
OXZ	**Oxford**	**0.42**	**308**	P			Pb	14 30 05.3	+0.3
OXZ				S			Sb	14 30 12.0	+0.4
AMCZ	**Amberley**	**0.42**	**16**	P			Pb	14 30 06.2	+1.2
AMCZ				S			Sb	14 30 13.3	+1.6
OKCZ	**Okains Bay**	**0.43**	**109**	P			Pb	14 30 05.5	+0.2
OKCZ				S			Sb	14 30 11.6	-0.5
WACZ	**Wakanui South**	**0.59**	**233**	P			Pb	14 30 08.9	+1.0
WACZ				S			Sb	14 30 17.8	+1.2
MHCZ	**Mount Hutt**	**0.67**	**274**	P			Pn	14 30 11.0	-0.3
GVZ	**Greta Valley S**	**0.73**	**33**	P			Pn	14 30 11.6	-0.5
LTZ	**Lake Taylor**	**0.82**	**349**	P			Pn	14 30 13.3	0.0
ARCZ	**Arundel**	**1.02**	**249**	P			Pn	14 30 16.4	+0.3
RPZ	**Rata Peaks**	**1.05**	**262**	P			Pn	14 30 16.8	+0.3
INZ	**Inchbonnie**	**1.15**	**318**	P			Pn	14 30 19.3	+1.5
TMZ	**Timaru**	**1.38**	**233**	P			Pb	14 30 20.6	0.0
WVZ	**Waitaha Valley**	**1.38**	**291**	P			Pg	14 30 22.7	+1.2
KHZ	**Kahutara**	**1.40**	**34**	P			Pn	14 30 21.1	-0.1
GCSZ	**Gaunt Creek Bo**	**1.60**	**279**	P			Pg	14 30 26.5	+0.8
THZ	**Tophouse**	**1.85**	**10**	P			Pn	14 30 28.2	+0.8
LBZ	**Lake Benmore**	**1.85**	**244**	P			Pb	14 30 29.1	-0.3
DSZ	**Denniston Nort**	**1.91**	**344**	P			Pb	14 30 29.3	-1.0
FOZ	**Fox Glacier**	**1.95**	**271**	P			Pb	14 30 30.9	0.0
ODZ	**Otahua Downs**	**1.97**	**222**	P			Pn	14 30 29.2	+0.1
BSWZ	**Blackbirch Sta**	**2.13**	**29**	P			Pn	14 30 31.8	+0.5
MRNZ	**Matariki Terra**	**2.19**	**5**	P			Pb	14 30 33.9	-1.3
JCZ	**Jackson Bay**	**2.73**	**258**	P			Pn	14 30 41.6	+2.0
QRZ	**Quartz Range**	**2.76**	**1**	P			Pn	14 30 41.8	+1.9
EAZ	**Earnscleugh**	**2.81**	**233**	P			Pn	14 30 40.9	+0.2
CAW	**Cannon Point**	**3.13**	**38**	P			Pn	14 30 44.2	-0.8
SYZ	**Scrubby Hill**	**3.79**	**218**	P			Pn	14 30 54.8	+0.7

*IDC **25** 14:44:56.5±0.9, 29.30S×61.05E, h0km, mb3.9/7, mbtmp3.9/8, ML4.2/1, MS3.5/4, Error ellipse: s-maj=33.5km s-min=21.5km az=23.0*

ISC 25 14:44:58.9±0.9, 29.3S±0.2×61.0E±0.2, h14km, n19, σ0§93/9, mb4.0/8, MS3.5/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.52**	**307**	Pn			**Pn**	**14 48 50.4**	**0.0**
	0.1nm,0.3s,baz=127,slow=16,SNR=2.8								
OPO				Sn			Sn	14 51 42.3	-12
	0.1nm,0.3s,baz=85,slow=20,SNR=5.9								
	1.9nm,0.6s								
H08S1	**Diego Carcia H**	**24.11**	**29**	T			T	15 14 53.6	
	baz=204,slow=75,SNR=5.0								
H08S2	**Diego Garcia H**	**24.11**	**29**	T			T	15 14 54.8	
	baz=204,slow=75,SNR=5.9								
H08S3	**Diego Garcia H**	**24.13**	**29**	T			T	15 14 56.1	
	baz=204,slow=75,SNR=7.9								
LSZ	**Lusaka**	**33.28**	**288**	P			**P**	**14 51 35.7**	**-0.6**
	2.8nm,0.6s,baz=111,slow=8.8,SNR=4.9								
	2.8nm,0.6s								
KMBO	**Kilima Mbogo**	**36.01**	**317**	LR			LR	15 03 22.9	
	comp=Z,76nm,21.5s,baz=90,slow=31								
ATD	**Arta Tunnel**	**44.21**	**334**	LR			LR	15 08 17.4	
	comp=Z,48nm,21.6s,baz=26,slow=32								
H01W2	**Cape Leeuwin H**	**44.93**	**111**	T			T	15 40 50.7	
	baz=261,slow=75,SNR=8.3								
H01W3	**Cape Leeuwin H**	**44.93**	**111**	T			T	15 40 52.8	
	baz=261,slow=75,SNR=8.6								
H01W1	**Cape Leeuwin H**	**44.95**	**111**	T			T	15 40 53.0	
	baz=261,slow=75,SNR=9.7								
CMAR	**Chiang Mai Arr**	**59.97**	**42**	P			**P**	**14 55 06.3**	**+1.2**
	0.4nm,0.3s,baz=219,slow=6.9,SNR=1.5								
	0.4nm,0.3s								
QSPA	**South Pole Qui**	**60.85**	**180**	P			**P**	**14 55 11.2**	**+0.5**
	1.9nm,1.1s,baz=228,slow=2.4,SNR=3.1								
	1.9nm,1.1s								
VNDA	**Vanda**	**63.93**	**166**	LR			LR	15 22 03.3	
	comp=Z,51nm,18.1s,baz=230,slow=35								
ASAR	**Alice Springs**	**64.55**	**104**	P			**P**	**14 55 34.7**	**-1.3**
	0.5nm,0.7s,baz=239,slow=5.9,SNR=10								
	0.5nm,0.7s								
WRA	**Warramunga Arr**	**66.39**	**100**	P			**P**	**14 55 47.7**	**-0.1**
	0.5nm,0.8s,baz=246,slow=5.9,SNR=5.3								
	0.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**71.07**	**298**	P			**P**	**14 56 17.7**	**+0.7**
	1.1nm,0.7s,baz=114,slow=4.8,SNR=7.3								
KBZ	**Khabaz**	**74.55**	**346**	LR			LR	15 27 29.8	
	comp=Z,24nm,20.5s,baz=186,slow=34								
MKAR	**Makanchi Array**	**78.15**	**15**	P			**P**	**14 56 56.7**	**-0.8**
	0.5nm,0.8s,baz=224,slow=3.3,SNR=4.2								
	0.5nm,0.8s								
ZALV	**Zalesovo Beam**	**85.44**	**14**	P			**P**	**14 57 35.0**	**-0.6**
	0.7nm,0.6s,baz=254,slow=5.5,SNR=4.2								
	0.7nm,0.6s								

*NEIC **25** 14:56:32.6±1.7, 15.89N±0.02×93.39W±0.06, h113km±8km, Error ellipse: s-maj=7.7km s-min=3.2km az=85.0*
*IDC **25** 14:56:33.3±1.1, 15.85N×93.40W, h103km±7km, mb3.3/6, mbtmp3.6/7, MS2.7/1, Error ellipse: s-maj=47.4km s-min=12.4km az=42.0*
*MEX **25** 14:56:33.8±1.1, 15.80N×93.42W, h109km±9km, MD4.7*
*GCG **25** 14:56:50.2±1.7, 15.65N×92.00W, h17km, MD4.5*

ISC 25 14:56:32.5±0.5, 15.80N±0.04×93.48W±0.03, h112km±4km, n79, σ2§29/128, mb3.7/6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCIG		**0.27**	**111**				**Pn**	**14 56 47.5**	**-0.9**
PCIG							**Sn**	**14 56 58.4**	**-1.9**
PCIG		**0.27**	**111**	*e*P			**Pn**	**14 56 47.5**	**-0.9**
PCIG				*e*S			**Sn**	**14 56 58.4**	**-1.9**
CARR	**Arriaga**	**0.60**	**317**	*e*P			**Pn**	**14 56 50.8**	**+0.4**
CARR				*e*S			**Sn**	**14 57 03.9**	**+0.1**
TGIG		**1.03**	**20**				**Pn**	**14 56 53.7**	**-0.5**
TGIG							**Sn**	**14 57 08.4**	**-2.2**
TGIG		**1.03**	**20**	*i* P			**Pn**	**14 56 53.7**	**-0.5**
TGIG				*e*S			**Sn**	**14 57 08.4**	**-2.2**
TGBT	**Tuxtla Gutierr**	**1.04**	**21**				**Pn**	**14 56 53.6**	**-0.6**
TGBT							**Sn**	**14 57 08.9**	**-1.8**
TGBT	**Tuxtla Gutierr**	**1.04**	**21**	*e*P			**Pn**	**14 56 53.6**	**-0.6**
TGBT				*e*S			**Sn**	**14 57 08.9**	**-1.8**
NILT	**Santiago Nilte**	**1.33**	**305**	*e*P			**Pn**	**14 56 57.5**	**+0.1**
NILT				*e*S			**Sn**	**14 57 16.6**	**+0.2**
CCIG	**Comitan**	**1.38**	**70**				**Pn**	**14 56 56.8**	**-1.4**
CCIG	**Comitan**	**1.38**	**70**	*e*P			**Pn**	**14 56 58.0**	**-0.2**
CCIG				*e*S			**Sn**	**14 57 15.7**	**-2.0**
PATR	**El Naranjo**	**1.38**	**119**	*e*P			**Pn**	**14 56 57.3**	**-1.0**
PATR				*e*S			**Sn**	**14 57 16.0**	**-1.8**
PAVE	**Pavencul**	**1.40**	**116**	*e*P			**Pn**	**14 56 58.1**	**-0.4**
PAVE				*e*S			**Sn**	**14 57 17.0**	**-1.1**
THIG		**1.47**	**127**				**Pn**	**14 56 58.0**	**-1.1**
THIG							**Sn**	**14 57 19.3**	**-0.1**
THIG		**1.47**	**127**	*e*P			**Pn**	**14 56 58.0**	**-1.1**
THIG				*i* S			**Sn**	**14 57 19.3**	**-0.1**
CHUJ	**Union Juarez**	**1.50**	**118**	*e*P			**Pn**	**14 56 58.9**	**-0.8**
CHUJ				*e*S			**Sn**	**14 57 18.7**	**-1.6**
UXUV	**UXUV**	**1.64**	**337**	*i* P			**Pn**	**14 57 01.7**	**+0.6**
UXUV				*e*S			**Sn**	**14 57 22.5**	**-0.3**
CMIG	**Matias Romero**	**1.86**	**314**	P			**Pn**	**14 57 04.7**	**+0.9**
	144nm,0.3s,baz=148,slow=12,SNR=454								
CMIG				S			**Sn**	**14 57 28.0**	**+0.3**
	706nm,0.4s,baz=329,slow=23,SNR=6.8								
CMIG				LR			LR	14 57 46.8	
	comp=Z,153nm,19.0s,baz=277,slow=39								
CMIG	**Matias Romero**	**1.86**	**314**				**Pn**	**14 57 04.5**	**+0.7**
CMIG							**Sn**	**14 57 27.7**	**0.0**
CMIG	**Matias Romero**	**1.86**	**314**	*e*P			**Pn**	**14 57 04.5**	**+0.7**
CMIG				*e*S			**Sn**	**14 57 27.7**	**0.0**
HUEH	**Huehuetenango**	**1.97**	**104**				**Pn**	**14 57 05.1**	**-0.3**
HUEH						Sn	**Sn**	**14 57 28.2**	**-2.3**
STG3	**Santiaguito 3,**	**2.14**	**120**	*e*P			**Pn**	**14 57 08.3**	**+0.7**
STG3				*e*S			**Sn**	**14 57 30.9**	**-3.5**
RTAL	**Retalhuleu**	**2.14**	**126**	Pn			**Pn**	**14 57 07.8**	**+0.4**
RTAL						Sn	**Sn**	**14 57 34.6**	**+0.5**
VHSA	**Villahermosa**	**2.23**	**13**	*e*P			**Pn**	**14 57 09.2**	**+0.7**
VHSA				*e*S			**Sn**	**14 57 35.5**	**-0.5**
TUIG	**Tuzandepetl**	**2.39**	**338**	*e*P			**Pn**	**14 57 08.1**	**-2.5**
TUIG				*e*S			**Sn**	**14 57 37.9**	**-1.9**
HUIG	**Huatulco**	**2.53**	**270**				**Pn**	**14 57 11.8**	**-0.6**
HUIG							**Sn**	**14 57 39.4**	**-3.6**
HUIG	**Huatulco**	**2.53**	**270**	*i* P			**Pn**	**14 57 11.8**	**-0.6**
HUIG				*e*S			**Sn**	**14 57 39.4**	**-3.6**
NEUV	**Arroyo Zacate**	**2.92**	**311**	*e*P			**Pn**	**14 57 17.7**	**+0.1**
NEUV				*i* S			**Sn**	**14 57 45.3**	**-7.0**
PCG	**Pacaya**	**3.11**	**116**	*e*P			Pn	14 57 24.8	+4.5
PCG				*e*S			Sn	14 57 47.4	-10
NBG	**Las Nubes**	**3.26**	**111**	*e*P			**Pn**	**14 57 22.9**	**+0.7**
NBG				*e*S			Sn	14 57 50.3	-10
VHO	**Vista Hermosa**	**3.37**	**292**	*e*P			**Pn**	**14 57 25.6**	**+2.0**
VHO				*e*S			**Sn**	**14 58 02.2**	**-0.9**
PEIG	**Puerto Escondi**	**3.53**	**274**	*i* P			**Pn**	**14 57 25.4**	**-0.3**
PEIG				*e*S			**Sn**	**14 58 02.5**	**-4.3**
PETF	**Flores**	**3.64**	**72**				**Pn**	**14 57 25.2**	**-1.9**
MRL	**Marmol**	**3.73**	**101**	*e*P			**Pn**	**14 57 27.8**	**-0.8**
MRL				*e*S			Sn	14 57 57.6	-14
SCIG	**Sabancuy**	**3.83**	**35**	*e*P			**Pn**	**14 57 28.3**	**-1.3**
SCIG				*e*S			**Sn**	**14 58 08.8**	**-5.1**
YOIG	**Yosondua**	**4.04**	**286**	*e*P			**Pn**	**14 57 34.7**	**+2.0**
YOIG				*e*S			**Sn**	**14 58 16.9**	**-2.5**
TOIG	**Toxpalan**	**4.12**	**304**	*e*P			**Pn**	**14 57 37.2**	**+3.7**
TOIG				*e*S			**Sn**	**14 58 17.4**	**-3.5**
ESQI	**Esquipulas**	**4.18**	**107**				**Pn**	**14 57 33.4**	**-1.1**
MTO3	**Montecristo**	**4.22**	**109**				**Pn**	**14 57 33.4**	**-1.6**
TXIG	**Tlaxiaco**	**4.36**	**290**	*i* P			**Pn**	**14 57 39.2**	**+2.3**
TXIG				*i* S			**Sn**	**14 58 27.8**	**+0.8**
PNIG	**Pinotepa**	**4.50**	**278**	*e*P			**Pn**	**14 57 39.1**	**+0.4**
PNIG				*e*S			**Sn**	**14 58 25.7**	**-4.4**
HLIG	**Huajuapan de L**	**4.60**	**297**	*e*P			**Pn**	**14 57 42.6**	**+2.4**
HLIG				*e*S			**Sn**	**14 58 29.7**	**-3.1**
JAUV	**Jalcomulco**	**4.75**	**319**	*e*P			**Pn**	**14 57 41.2**	**-0.9**
JAUV				*e*S			**Sn**	**14 58 32.6**	**-3.5**
FTIG	**Fresnillo de T**	**4.92**	**296**	*e*P			**Pn**	**14 57 47.2**	**+2.8**
FTIG				*e*S			**Sn**	**14 58 37.5**	**-2.8**
MGIG	**Malinaltepec**	**5.14**	**287**	*e*P			**Pn**	**14 57 49.6**	**+2.1**
MGIG				*i* S			**Sn**	**14 58 42.9**	**-2.9**
TLIG	**Tlapa**	**5.18**	**290**	Pn			**Pn**	**14 57 50.2**	**+2.3**
TLIG	**Tlapa**	**5.18**	**290**	*e*P			**Pn**	**14 57 50.3**	**+2.4**
TLIG				*i* S			**Sn**	**14 58 45.7**	**-0.9**
CRIG	**Cruz Grande**	**5.51**	**280**	*e*P			**Pn**	**14 57 53.1**	**+0.9**
CRIG				*e*S			**Sn**	**14 58 48.8**	**-5.5**
CXUV	**Coxquihui**	**5.84**	**319**	*i* P			**Pn**	**14 57 57.5**	**+0.6**
CXUV				*e*S			**Sn**	**14 58 56.4**	**-6.1**
PPM	**Popocatepetl**	**5.89**	**304**	*e*P			**Pn**	**14 58 02.2**	**+4.4**
PPM				*e*S			**Sn**	**14 59 07.2**	**+3.0**
DAIG	**Los Arroyos**	**6.04**	**282**	*e*P			**Pn**	**14 58 00.7**	**+1.2**
DAIG				*e*S			**Sn**	**14 59 03.9**	**-3.5**
YAIG	**Yautepec**	**6.14**	**300**	*e*P			**Pn**	**14 58 04.3**	**+3.3**
YAIG				*e*S			**Sn**	**14 59 05.1**	**-4.8**
MEIG	**Mezcala**	**6.25**	**291**	*e*P			**Pn**	**14 58 05.1**	**+2.8**
MEIG				*e*S			**Sn**	**14 59 08.0**	**-4.3**
TGUH	**Tegucigalpa,Un**	**6.25**	**105**	Pn			**Pn**	**14 58 01.2**	**-1.2**
PLIG	**Platanillo**	**6.31**	**295**	*e*P			**Pn**	**14 58 06.1**	**+3.0**
PLIG				*e*S			**Sn**	**14 59 10.1**	**-3.8**
TEIG	**Tepich**	**6.62**	**48**	Pn			**Pn**	**14 58 04.8**	**-2.5**
CAIG	**El Cayaco**	**6.63**	**282**	*e*P			**Pn**	**14 58 08.6**	**+1.2**
CRIN	**San Cristobal**	**6.96**	**116**				**Pn**	**14 58 13.4**	**+1.5**
ARIG	**Puente Sto Nin**	**7.01**	**292**	*e*P			**Pn**	**14 58 16.0**	**+3.4**
ARIG				*e*S			**Sn**	**14 59 25.6**	**-5.3**
BOAB	**BOACO BROADBAN**	**8.28**	**113**	Pn			**Pn**	**14 58 29.4**	**-0.5**
HZTE	**Horizontes, Gu**	**9.19**	**122**	Pn			**Pn**	**14 58 42.5**	**+0.3**
ORTG	**Ortega, Santa**	**9.50**	**124**				**Pn**	**14 58 47.0**	**+0.5**
JTS	**Las Juntas de**	**9.95**	**122**	Pn			**Pn**	**14 58 52.0**	**-0.5**
CVTR	**Volcan Turrial**	**11.08**	**120**	Pn			**Pn**	**14 59 07.0**	**-1.2**
RIMA	**Rio Macho**	**11.13**	**121**				**Pn**	**14 59 08.7**	**+0.1**
SRBA	**San Rafael, Bu**	**11.84**	**122**				**Pn**	**14 59 17.3**	**-0.6**
DRK0	**Durika**	**11.92**	**122**				**Pn**	**14 59 19.4**	**+0.4**
SOR	**Soroa**	**12.08**	**53**				**Pn**	**14 59 18.2**	**-2.8**
LCCY	**Blossom Villag**	**13.33**	**71**	Pn			**Pn**	**14 59 36.2**	**-1.1**
833A	**Chaparral WMA,**	**13.61**	**337**	Pn			**P**	**14 59 43.6**	**-2.3**
TXAR	**Lajitas Array**	**16.41**	**327**	P			**P**	**15 00 19.2**	**+2.1**
	0.6nm,0.5s,baz=150,slow=13,SNR=10								
GOGA	**Godfrey**	**19.73**	**26**	P			**P**	**15 00 51.6**	**-1.8**
GOGA				IAmb		IAmb	IAmb	15 01 05.8	
	comp=Z,7.7nm,1.1s								
TKL	**Tuckaleechee C**	**21.59**	**22**	LR			LR	15 10 46.3	
	comp=Z,20nm,19.8s,baz=260,slow=40								
ANMO	**Albuquerque**	**22.34**	**331**	P			**P**	**15 01 24.2**	**+2.9**
	comp=Z,1.1nm,0.5s,baz=143,slow=11,SNR=3.8								
	comp=Z,1.1nm,0.5s								
PDAR	**Pinedale Array**	**30.20**	**336**	P			**P**	**15 02 35.4**	**+2.9**
	comp=Z,0.3nm,0.7s,baz=137,slow=16,SNR=2.5								
	comp=Z,0.3nm,0.7s								
NVAR	**Mina Array Bea**	**31.38**	**321**	P			**P**	**15 02 46.6**	**+3.6**
	comp=Z,1.1nm,0.8s,baz=127,slow=8.3,SNR=8.5								
NVAR				pP			**pP**	**15 03 09.1**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=132,slow=10,SNR=4.5								
NVAR				sP			**sP**	**15 03 21.9**	**+0.9**
	comp=Z,3.4nm,1.0s,baz=137,slow=9.2,SNR=7.6								
	comp=Z,1.1nm,0.8s								
LPAZ	**La Paz**	**40.53**	**141**	P			**P**	**15 04 02.2**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=315,slow=10.0,SNR=4.2								
	comp=Z,0.7nm,0.4s								
YKA	**Yellowknife Ar**	**48.95**	**347**	P			**P**	**15 05 06.7**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=134,slow=9.5,SNR=5.4								
YKA				pP			**pP**	**15 05 32.4**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=135,slow=9.1,SNR=2.9								
	comp=Z,0.8nm,0.7s								
ILAR	**Eielson Array**	**60.63**	**337**	P			**P**	**15 06 32.8**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=125,slow=6.4,SNR=8.1								
ILAR				pP			**pP**	**15 06 57.0**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=160,slow=5.3,SNR=4.2								
	comp=Z,0.5nm,0.8s								
WRA	**Warramunga Arr**	**134.42**	**257**	PKP			**PKiKP**	**15 15 39.3**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=86,slow=2.7,SNR=5.7								
WRA				pPKP			**pPKPdf**	**15 16 08.8**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=73,slow=1.5,SNR=3.5								

*IDC **25** 15:05:31.1±1.8, 20.49S×177.65W, h369km±24km, mb3.4/4, mbtmp4.3/8, Error ellipse: s-maj=29.3km s-min=21.7km az=23.0*
*NEIC **25** 15:05:32.0±1.8, 20.4S±0.2×177.55W±0.06, h384km±11km, mb4.1/20, Error ellipse: s-maj=22.4km s-min=6.4km az=191.0*
*NOU **25** 15:05:33.1, 20.40S×177.48W, h397km, MLv4.3/11, Fiji Islands Region*

ISC 25 15:05:32.4±0.6, 20.3S±0.1×177.53W±0.07, h400km, n42, σ1§15/43, mb3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.42**	**330**	P			**Pn**	**15 06 32.2**	**+0.9**
MSVF	**Nonsavu**	**4.92**	**301**	P			**Pn**	**15 06 52.1**	**-1.7**
	8.8nm,0.5s,baz=123,slow=23,SNR=9.4								
MSVF	**N

0.2nm,0.3s,baz=224,slow=6.3,SNR=1.7
CMAR LR LR 15 36 00.2
comp=Z,31nm,18.2s,baz=220,slow=33
0.2nm,0.3s
ASAR Alice Springs 56.70 102 P **P** **15 16 54.3 -2.4**
1.8nm,0.6s,baz=250,slow=6.3,SNR=29
1.8nm,0.6s
ASAR Alice Springs 56.70 102 P **P** **15 16 57.1 +0.3**
WRA Warramunga Arr 58.22 98 P **P** **15 17 06.6 -0.8**
1.4nm,0.7s,baz=253,slow=8.1,SNR=10
1.4nm,0.7s
WRA Warramunga Arr 58.22 98 P **P** **15 17 07.2 -0.2**
WRA IAmb IAmb 15 17 50.1
comp=Z,2.7nm,0.8s
WB2 Warramunga Arr 58.23 98 P **P** **15 17 08.4 +0.9**
WB0 Warramunga Arr 58.32 98 P **P** **15 17 08.2 0.0**
WB0 Warramunga Arr 58.39 98 P **P** **15 17 10.4 +1.8**
SNAA Sanae 60.34 200 P **P** **15 17 21.4 3.0**
QSPA South Pole Qui 64.02 180 P **P** **15 17 46.0 -0.2**
comp=Z,1.4nm,0.8s,baz=305,slow=2.4,SNR=6.3
comp=Z,1.4nm,0.8s
QSPA South Pole Qui 64.02 180 P **P** **15 17 46.8 +0.6**
QSPA IAmb IAmb 15 18 15.7
comp=Z,2.7nm,1.3s
VNDA Vanda 64.91 166 P **P** **15 17 50.3 -1.4**
comp=Z,1.4nm,0.7s,baz=274,slow=7.0,SNR=9.5
comp=Z,1.4nm,0.7s
VNDA Vanda 64.91 166 P **P** **15 17 53.0 +1.3**
VNDA IAmb IAmb 15 17 55.1
comp=Z,2.9nm,1.1s
MAKZ Makanchi 73.26 8 P **P** **15 18 42.8 -1.0**
MAKZ IAmb IAmb 15 19 19.1
comp=Z,3.9nm,1.4s
MKAR Makanchi Array 73.29 8 P **P** **15 18 44.2 +0.2**
comp=Z,1.1nm,0.7s,baz=193,slow=5.5,SNR=11
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 73.29 8 P **P** **15 18 43.5 -0.5**
ABKAR Akbulak array 75.66 353 P **P** **15 18 57.3 -0.4**
SONM Songino Array 80.23 23 P **P** **15 19 24.4 +1.1**
comp=Z,1.2nm,0.7s,baz=213,slow=5.1,SNR=5.0
comp=Z,1.2nm,0.7s
SONM Songino Array 80.23 23 P **P** **15 19 24.0 +0.7**
ZALV Zalesovo Beam 80.63 8 P **P** **15 19 24.7 -0.4**
comp=Z,1.4nm,0.7s,baz=169,slow=3.0,SNR=5.4
comp=Z,1.4nm,0.7s
ZALV Zalesovo Beam 80.63 8 P **P** **15 19 24.9 -0.2**
KSRS Korea Array 82.85 42 LR LR 15 54 34.3
comp=Z,16nm,19.0s,baz=205,slow=34

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*NOU **25** 15:10:47.9,23°.35S×179°.49E,h571km,mb4.9/54,South of Fiji Islands*
*IDC **25** 15:10:48.3±0.9,23°.23S×179°.17E,h551km±9km,mb4.0/20,mbtmp4.9/22,Error ellipse: s-maj=12.5km s-min=9.7km az=87.0*
*NEIC **25** 15:10:49.4±1.9,23°.31S±0°.09×179°.24E±0°.10,h562km±6km,mb4.7/191,Error ellipse: s-maj=13.1km s-min=12.4km az=59.0*
ISC 25 15:10:48.0±0.3,**23°.37S**±0°.04×**179°.25E**±0°.05,**h555**km,**n638**,σ1§**34**/695,**mb4.7**/133,**22C-41D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.42**	**20**	P	**P**	**15 12 23.9**	**+2.0**
MSVF	**Nonsavu**	**5.72**	**348**	P	**P**	**15 12 24.4**	**-0.2**
	20nm,0.3s,baz=265,slow=23,SNR=112						
MSVF	**Nonsavu**	**5.72**	**348**	P	**P**	**15 12 25.0**	**+0.4**
MSVF	**Nonsavu**	**5.72**	**348**	P	**P**	**15 12 25.6**	**+1.0**
RIZ	**Raoul Island**	**6.38**	**157**	P	**P**	**15 12 33.4**	**+3.2**
RIZ				S	**S**	**15 13 57.1**	**+3.2**
RAO	**Raoul Island**	**6.39**	**157**	P	**P**	**15 12 32.5**	**+2.2**
	458nm,0.2s,baz=240,slow=0.5,SNR=27						
RAO				S	**S**	**15 13 55.4**	**+1.3**
	477nm,0.5s,baz=266,slow=23,SNR=6.7						
GLKZ	**Green Lake**	**6.39**	**157**	P	**P**	**15 12 32.1**	**+1.7**
GLKZ				S	**S**	**15 13 54.1**	**-0.1**
TAVE	**Taveuni**	**6.68**	**7**	P	**P**	**15 12 35.3**	**+2.0**
DGTI	**Dogotuki**	**7.05**	**4**	P	**P**	**15 12 38.4**	**+1.6**
MARNC	**Mare, Loyalty**	**10.54**	**278**	P	**P**	**15 13 12.8**	**+1.1**
PINNC	**Pines Island,**	**10.90**	**272**	P	**P**	**15 13 16.7**	**+1.5**
NIUE	**Niue**	**10.96**	**69**	P	**P**	**15 13 16.1**	**+0.1**
LIFNC	**LIFOU**	**11.43**	**281**	P	**P**	**15 13 20.3**	**-0.4**
LIFNC	**LIFOU**	**11.43**	**281**	P	**P**	**15 13 20.1**	**-0.6**
OUENC	**Ouen Island, N**	**11.47**	**272**	P	**P**	**15 13 22.2**	**+1.0**
ONTNC	**Ouen Toro**	**11.84**	**273**	P	**P**	**15 13 25.1**	**+0.1**
DZM	**Mont Dzumac**	**11.89**	**274**	P	**P**	**15 13 26.1**	**+0.5**
	3.9nm,0.6s,baz=88,slow=16,SNR=14						
DZM	**Mont Dzumac**	**11.89**	**274**	*e*P	**P**	**15 13 26.7**	**+1.1**
	44nm,1.2s						
DZM				*e*S	**S**	**15 15 37.9**	**+2.7**
	86nm,1.6s						
DZM				*e*LR	LR	15 16 19.2	
	comp=Z,42nm,22.0s						
DZM	**Mont Dzumac**	**11.89**	**274**	P	**P**	**15 13 25.5**	**-0.1**
DZM	**Mont Dzumac**	**11.89**	**274**	P	**P**	**15 13 27.4**	**+1.8**
AFI	**Afiamalu**	**12.68**	**44**	P	**P**	**15 13 30.4**	**-3.4**
	203nm,0.7s,baz=56,slow=2.8,SNR=18						
AFI	**Afiamalu**	**12.68**	**44**	P	**P**	**15 13 30.9**	**-2.9**
OUZ	**Omahuta**	**12.79**	**201**	P	**P**	**15 13 36.5**	**+1.9**
OUZ	**Omahuta**	**12.79**	**201**	P	**P**	**15 13 37.2**	**+2.6**
WCZ	**Waipu Caves**	**13.23**	**198**	P	**P**	**15 13 41.1**	**+2.0**
KUZ	**Kuaotunu**	**13.67**	**192**	P	**P**	**15 13 44.5**	**+0.9**
RVAZ	**Riverhead Bore**	**13.95**	**196**	P	**P**	**15 13 48.4**	**+1.9**
KOUNC	**Koumac, New Ca**	**14.16**	**279**	P	**P**	**15 13 48.9**	**0.0**
HAZ	**Te Kaha**	**14.39**	**185**	P	**P**	**15 13 50.3**	**-0.8**
HAZ				S	**S**	**15 16 18.2**	**-3.5**
WMGZ	**Waiomatatini S**	**14.42**	**183**	P	**P**	**15 13 52.4**	**+1.1**
PKGZ	**Pakihiroa**	**14.51**	**184**	P	**P**	**15 13 52.1**	**-0.1**
TGRZ	**Tauranga**	**14.54**	**189**	P	**P**	**15 13 55.0**	**+2.4**
RUGZ	**Raukumara Rang**	**14.61**	**185**	P	**P**	**15 13 54.4**	**+1.1**
OPRZ	**Ohinepanea**	**14.61**	**188**	P	**P**	**15 13 54.6**	**+1.3**
TOZ	**Tahuroa Road**	**14.67**	**192**	P	**P**	**15 13 57.1**	**+3.2**
PUZ	**Puketiti**	**14.68**	**183**	P	**P**	**15 13 53.7**	**-0.3**
TWGZ	**Tauwhareparae**	**14.80**	**184**	P	**P**	**15 13 56.9**	**+1.6**
OMRZ	**Omania**	**14.89**	**189**	P	**P**	**15 13 55.9**	**-0.3**
URZ	**Urewera**	**14.95**	**187**	P	**P**	**15 13 55.0**	**-1.7**
	73nm,0.7s,baz=269,slow=2.2,SNR=23						
URZ				S	**S**	**15 16 31.3**	**-0.7**
	38nm,0.7s,baz=4.1,slow=23,SNR=12						
URZ	**Urewera**	**14.95**	**187**	P	**P**	**15 13 54.4**	**-2.3**
URZ	**Urewera**	**14.95**	**187**	P	**P**	**15 13 54.1**	**-2.6**
URZ				S	**S**	**15 16 26.0**	**-6.0**
URZ	**Urewera**	**14.95**	**187**	P	**P**	**15 13 54.5**	**-2.3**
MWZ	**Matawai**	**14.99**	**185**	P	**P**	**15 13 55.1**	**-2.1**
MWZ				S	**S**	**15 16 29.1**	**-3.6**
TKGZ	**Te Karaka**	**15.07**	**184**	P	**P**	**15 13 56.7**	**-1.2**
TKGZ				S	**S**	**15 16 29.8**	**-4.3**
CNGZ	**Carnagh Statio**	**15.09**	**183**	P	**P**	**15 13 55.8**	**-2.4**
CNGZ				S	**S**	**15 16 35.0**	**+0.5**
RRRZ	**Republican Roa**	**15.10**	**188**	P	**P**	**15 13 59.9**	**+1.6**
GRRZ	**Galatos Road**	**15.17**	**189**	P	**P**	**15 13 58.4**	**-0.6**
HRRZ	**Handcock Road**	**15.19**	**189**	P	**P**	**15 13 58.4**	**-0.8**
PRRZ	**Plateau Road**	**15.28**	**189**	P	**P**	**15 13 59.4**	**-0.7**
RIGZ	**Rimuhau**	**15.34**	**184**	P	**P**	**15 13 57.8**	**-2.9**
RIGZ				S	**S**	**15 16 32.3**	**-6.6**
SNGZ	**Shannon Statio**	**15.45**	**186**	P	**P**	**15 13 59.8**	**-2.1**
SNGZ				S	**S**	**15 16 36.8**	**-3.9**
PRGZ	**Paritu Road**	**15.55**	**184**	P	**P**	**15 14 04.5**	**+1.7**
HIZ	**Hauiti**	**15.55**	**193**	P	**P**	**15 14 06.1**	**+3.2**
MTHZ	**Maungataniwha**	**15.57**	**187**	P	**P**	**15 14 02.1**	**-0.9**
MTHZ				S	**S**	**15 16 37.4**	**-5.3**
RAHZ	**Arahi**	**15.61**	**186**	P	**P**	**15 14 02.3**	**-1.1**
RAHZ				S	**S**	**15 16 40.2**	**-3.1**
KNZ	**Kokohu**	**15.66**	**185**	P	**P**	**15 14 01.9**	**-1.9**
KNZ				S	**S**	**15 16 40.3**	**-3.8**
RATZ	**Rangitukua**	**15.73**	**190**	P	**P**	**15 14 04.4**	**-0.2**
WHHZ	**Waihua**	**15.75**	**186**	P	**P**	**15 14 03.7**	**-1.1**
WHHZ				S	**S**	**15 16 39.9**	**-5.8**
MHGZ	**Mahia Peninsul**	**15.78**	**184**	P	**P**	**15 14 04.2**	**-0.9**
MHGZ				S	**S**	**15 16 43.8**	**-2.3**
NMHZ	**Naumai**	**15.81**	**187**	P	**P**	**15 14 03.8**	**-1.7**
NMHZ				S	**S**	**15 16 44.8**	**-2.1**
BKZ	**Black Stump Fm**	**15.92**	**188**	P	**P**	**15 14 03.9**	**-2.6**
BKZ	**Black Stump Fm**	**15.92**	**188**	P	**P**	**15 14 04.9**	**-1.6**
BKZ				S	**S**	**15 16 42.8**	**-5.7**
ARHZ	**Aropaoanui**	**15.96**	**186**	P	**P**	**15 14 05.5**	**-1.3**
ARHZ				S	**S**	**15 16 44.3**	**-4.8**
NTVZ	**North Tongariro**	**15.97**	**190**	P	**P**	**15 14 07.2**	**+0.1**
TMVZ	**Te Maari**	**15.98**	**190**	P	**P**	**15 14 07.1**	**-0.1**
ETVZ	**East Tongariro**	**16.00**	**190**	P	**P**	**15 14 07.1**	**-0.3**
WTVZ	**West Tongariro**	**16.00**	**190**	P	**P**	**15 14 07.7**	**+0.4**
NNVZ	**North Ngauruho**	**16.01**	**190**	P	**P**	**15 14 08.1**	**+0.6**
OTVZ	**Oturere**	**16.04**	**190**	P	**P**	**15 14 07.6**	**-0.1**
FWVZ	**Far West T-bar**	**16.14**	**190**	P	**P**	**15 14 08.7**	**-0.2**
WHVZ	**Whangaehu Hut**	**16.16**	**190**	P	**P**	**15 14 07.9**	**-1.2**
KWHZ	**Kaweka Forest**	**16.18**	**188**	P	**P**	**15 14 07.0**	**-2.1**
KWHZ				S	**S**	**15 16 45.7**	**-7.2**
WNVZ	**Wahianoa**	**16.21**	**190**	P	**P**	**15 14 08.1**	**-1.3**
MOVZ	**Moawhango**	**16.26**	**190**	P	**P**	**15 14 09.2**	**-0.5**
BHHZ	**Black Hill Sta**	**16.30**	**189**	P	**P**	**15 14 08.0**	**-2.1**
BHHZ				S	**S**	**15 16 52.4**	**-2.4**
KRHZ	**Kereru**	**16.41**	**188**	P	**P**	**15 14 09.2**	**-1.8**
KRHZ				S	**S**	**15 16 51.4**	**-5.1**
KAHZ	**Kahuranaki**	**16.50**	**186**	P	**P**	**15 14 10.9**	**-0.9**
KAHZ				S	**S**	**15 16 51.9**	**-6.1**
WAZ	**Wanganui**	**16.73**	**191**	P	**P**	**15 14 14.3**	**+0.4**
BFZ	**Birch Farm**	**17.45**	**188**	P	**P**	**15 14 18.5**	**-1.9**
BFZ	**Birch Farm**	**17.45**	**188**	P	**P**	**15 14 18.9**	**-1.5**
SNZO	**South Karori**	**18.29**	**191**	P	**P**	**15 14 27.4**	**-0.7**
QRZ	**Quartz Range**	**18.30**	**196**	P	**P**	**15 14 29.2**	**+0.9**
QRZ	**Quartz Range**	**18.30**	**196**	P	**P**	**15 14 29.5**	**+1.3**
MSWZ	**Moikau Station**	**18.30**	**190**	P	**P**	**15 14 26.3**	**-2.0**
PLWZ	**Palliser**	**18.45**	**189**	P	**P**	**15 14 27.9**	**-1.7**
NNZ	**Nelson**	**18.46**	**194**	P	**P**	**15 14 29.4**	**-0.2**
TUWZ	**Tuamarina**	**18.55**	**193**	P	**P**	**15 14 29.6**	**-0.9**
CMWZ	**Cape Campbell**	**18.80**	**192**	P	**P**	**15 14 32.1**	**-0.7**
BSWZ	**Blackbirch Sta**	**18.84**	**193**	P	**P**	**15 14 32.6**	**-0.5**
THZ	**Tophouse**	**19.09**	**195**	P	**P**	**15 14 35.2**	**-0.3**
KHZ	**Kahutara**	**19.58**	**193**	P	**P**	**15 14 39.1**	**-0.7**
KHZ	**Kahutara**	**19.58**	**193**	P	**P**	**15 14 39.1**	**-0.7**
LTZ	**Lake Taylor**	**20.21**	**195**	P	**P**	**15 14 44.9**	**-0.7**
OXZ	**Oxford**	**20.78**	**195**	P	**P**	**15 14 49.8**	**-0.9**
MQZ	**McQueen's Vall**	**21.00**	**193**	P	**P**	**15 14 51.6**	**-1.1**
MQZ				IAmb	IAmb	15 15 09.2	
	comp=Z,33nm,0.8s						
RPZ	**Rata Peaks**	**21.39**	**196**	P	**P**	**15 14 56.9**	**+0.7**
	comp=Z,33nm,0.6s,baz=4.2,slow=1.4,SNR=29						
	comp=Z,33nm,0.6s						
RPZ	**Rata Peaks**	**21.39**	**196**	P	**P**	**15 14 55.4**	**-0.8**
RPZ	**Rata Peaks**	**21.39**	**196**	P	**P**	**15 14 55.5**	**-0.7**
FOZ	**Fox Glacier**	**21.56**	**199**	P	**P**	**15 14 57.3**	**-0.4**
LBZ	**Lake Benmore**	**22.24**	**197**	P	**P**	**15 15 02.4**	**-1.4**
ODZ	**Otahua Downs**	**22.73**	**196**	P	**P**	**15 15 07.1**	**-1.1**
ODZ				IAmb	IAmb	15 15 21.8	
	comp=Z,36nm,1.2s						
ODZ	**Otahua Downs**	**22.73**	**196**	P	**P**	**15 15 07.8**	**-0.4**
WKZ	**Wanaka**	**22.98**	**199**	P	**P**	**15 15 09.6**	**-0.9**
HNR	**Honiara**	**23.08**	**304**	P	**P**	**15 15 10.2**	**-1.5**
	comp=Z,42nm,0.3s,baz=231,slow=1.9,SNR=7.3						
	comp=Z,42nm,0.3s						
HNR	**Honiara**	**23.08**	**304**	P	**P**	**15 15 11.2**	**-0.5**
HNR	**Honiara**	**23.08**	**304**	P	**P**	**15 15 13.3**	**+1.6**
	comp=Z,114nm,0.9s						
MLZ	**Mavora Lakes**	**23.74**	**200**	P	**P**	**15 15 17.9**	**+0.7**
DCZ	**Deep Cove**	**24.14**	**201**	P	**P**	**15 15 21.2**	**+0.6**
WHZ	**Wether Hill Ro**	**24.27**	**199**	P	**P**	**15 15 22.4**	**+0.6**
PYZ	**Puysegur Point**	**24.91**	**201**	P	**P**	**15 15 27.3**	**-0.2**
PYZ				IAmb	IAmb	15 15 28.9	
	comp=Z,30nm,0.9s						
TARA	**Tarawa**	**25.34**	**345**	P	**P**	**15 15 32.0**	**+0.3**
ARMA	**Armidale**	**25.57**	**248**	P	**P**	**15 15 35.9**	**+2.2**
ARMA				IAmb	IAmb	15 15 36.3	
	comp=Z,16nm,0.5s						
EIDS	**Eidsvold**	**25.71**	**260**	P	**P**	**15 15 36.3**	**+1.4**
EIDS				IAmb	IAmb	15 15 37.2	
	comp=Z,14nm,1.1s						
RMQ	**Roma**	**27.79**	**257**	P	**P**	**15 15 54.7**	**+1.6**
CNB	**Canberra Magne**	**28.53**	**239**	P	**P**	**15 16 01.6**	**+2.1**
TBI	**Tubuai**	**28.70**	**96**	*e*LR	LR	15 24 06.2	
	comp=Z,40nm,35.5s						
CAN	**Canberra**	**28.82**	**239**	P	**P**	**15 16 03.8**	**+1.7**
CAN	**Canberra**	**28.82**	**239**	P	**P**	**15 16 03.7**	**+1.7**
CMSA	**Cobar Meteorol**	**30.77**	**247**	P	**P**	**15 16 20.2**	**+1.3**
CTA	**Charters Tower**	**30.78**	**270**	P	**P**	**15 16 19.1**	**0.0**
	comp=Z,67nm,0.4s,baz=94,slow=12,SNR=32						
	comp=Z,67nm,0.4s						
CTA	**Charters Tower**	**30.78**	**270**	P	**P**	**15 16 20.4**	**+1.3**
CTAO	**Charters Tower**	**30.78**	**270**	P	**P**	**15 16 20.2**	**+1.0**
CTAO	**Charters Tower**	**30.78**	**270**	P	**P**	**15 16 20.3**	**+1.2**
QLP	**Quilpie**	**31.84**	**257**	P	**P**	**15 16 29.3**	**+1.2**
TOO	**Toolangi**	**32.16**	**236**	P	**P**	**15 16 32.1**	**+1.4**
TOO				IAmb	IAmb	15 16 33.0	
	comp=Z,18nm,0.9s						
RABL	**Rabaul**	**32.37**	**302**	P	**P**	**15 16 31.7**	**-1.0**
RABL	**Rabaul**	**32.37**	**302**	P	**P**	**15 16 31.9**	**-0.8**
KRVT	**Keravat (AS076**	**32.40**	**302**	P	**P**	**15 16 31.5**	**-1.5**
	comp=Z,66nm,0.3s,baz=190,slow=2.4,SNR=25						
	comp=Z,66nm,0.3s						
TAU	**Tasmania Unive**	**32.80**	**226**	P	**P**	**15 16 37.3**	**+1.4**
TAU				IAmb	IAmb	15 16 40.0	
	comp=Z,58nm,1.4s						
MTSU	**Mount Surprise**	**33.02**	**272**	P	**P**	**15 16 39.2**	**+1.0**
BRAT	**Ballarat**	**33.35**	**237**	P	**P**	**15 16 42.5**	**+1.9**
STKA	**Stephens Creek**	**34.28**	**247**	P	**P**	**15 16 49.0**	**+0.4**
	comp=Z,5.5nm,0.4s,baz=89,slow=10,SNR=37						
STKA				PcP	**PcP**	**15 19 08.9**	**0.0**
	comp=Z,3.5nm,0.6s,baz=100,slow=7.9,SNR=3.8						
STKA				ScP	**ScP**	**15 22 03.4**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=360,slow=2.7,SNR=3.6						
	comp=Z,5.5nm,0.4s						
STKA	**Stephens Creek**	**34.28**	**247**	P	**P**	**15 16 49.8**	**+1.2**
STKA	**Stephens Creek**	**34.28**	**247**	P	**P**	**15 16 49.8**	**+1.2**
ARPS	**Mount Arapiles**	**34.80**	**239**	P	**P**	**15 16 53.8**	**+1.0**
INKA	**Innaminka**	**34.91**	**255**	P	**P**	**15 16 55.8**	**+1.9**
COEN	**Coen**	**35.35**	**279**	P	**P**	**15 16 58.3**	**+0.7**
COEN				IAmb	IAmb	15 16 59.8	
	comp=Z,26nm,0.9s						
COEN	**Coen**	**35.35**	**279**	P	**P**	**15 16 58.6**	**+0.9**
PATS	**Pohnpei**	**36.33**	**323**	P	**P**	**15 17 05.5**	**-0.3**
QIS	**Mount Isa**	**36.79**	**267**	P	**P**	**15 17 09.4**	**-0.2**
MANU	**Manus Island**	**37.46**	**300**	P	**P**	**15 17 14.7**	**-0.4**
MANU				IAmb	IAmb	15 17 16.9	
	comp=Z,16nm,0.8s						
BBOO	**Buckleboo**	**39.02**	**246**	P	**P**	**15 17 27.7**	**+0.2**
BBOO				IAmb	IAmb	15 17 28.0	
	comp=Z,12nm,0.5s						
OOD	**Oodnadatta**	**39.38**	**254**	P	**P**	**15 17 32.0**	**+1.5**
MMPI	**Merauke**	**40.05**	**285**	pP	pP	15 19 12.6	+0.3
	comp=Z,14nm,1.0s						
MULG	**Mulgathing**	**40.70**	**250**	P	**P**	**15 17 41.4**	**+0.4**
TAOE	**Nuku Hiva Isla**	**41.43**	**76**	P	**P**	**15 17 46.7**	**-0.3**
AS31	**Alice Springs**	**41.44**	**260**	P	**P**	**15 17 47.4**	**+0.4**
ASAR	**Alice Springs**	**41.44**	**260**	P	**P**	**15 17 47.4**	**+0.4**
	comp=Z,20nm,0.8s,baz=92,slow=8.1,SNR=135						
ASAR				PcP	**PcP**	**15 19 31.0**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=108,slow=3.5,SNR=10						
ASAR				ScP	**ScP**	**15 22 30.6**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=115,slow=4.0,SNR=6.9						
ASAR				S	**S**	**15 23 19.6**	**-3.1**
	comp=Z,2.6nm,0.9s,baz=95,slow=16,SNR=15						
	comp=Z,20nm,0.8s						
WR0	**Warramunga Arr**	**41.56**	**266**	P	**P**	**15 17 47.2**	**-0.8**
WR0				IAmb	IAmb	15 17 48.7	
	comp=Z,19nm,1.0s						
WB2	**Warramunga Arr**	**41.74**	**266**	P	**P**	**15 17 48.9**	**-0.5**
WB2				IAmb	IAmb	15 17 50.1	
	comp=Z,40nm,0.9s						
WB0	**Warramunga Arr**	**41.74**	**266**	P	**P**	**15 17 48.6**	**-0.8**
WRAB	**Tennant Creek**	**41.75**	**266**	P	**P**	**15 17 48.6**	**-0.8**
WRAB				IAmb	IAmb	15 17 50.1	
	comp=Z,29nm,0.8s						
WRAB	**Tennant Creek**	**41.75**	**266**	P	**P**	**15 17 49.1**	**-0.3**
WRA	**Warramunga Arr**	**41.75**	**266**	P	**P**	**15 17 49.3**	**-0.2**
	comp=Z,26nm,0.7s,baz=96,slow=8.1,SNR=882						
WRA				PcP	**PcP**	**15 19 32.6**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=96,slow=3.9,SNR=5.7						
WRA				ScP	**ScP**	**15 22 31.7**	**+1.3**
	comp=Z,2.4nm,0.9s,baz=93,slow=4.3,SNR=5.6						
WRA				S	**S**	**15 23 23.2**	**-4.0**
	comp=Z,2.4nm,0.7s,baz=102,slow=12,SNR=8.3						
	comp=Z,26nm,0.7s						
WRA	**Warramunga Arr**	**41.75**	**266**	P	**P**	**15 17 48.6**	**-0.9**
GENI	**Genyem**	**43.08**	**293**	P	**P**	**15 18 00.2**	**+0.3**
	comp=Z,96nm,0.9s						
GENI	**Genyem**	**43.08**	**293**	P	**P**	**15 18 00.2**	**+0.3**
	comp=Z,95nm,1.0s						
WAKE	**Wake Island**	**44.14**	**343**	P	**P**	**15 18 08.1**	**+0.3**
WAKE	**Wake Island**	**44.14**	**343**	P	**P**	**15 18 08.2**	**+0.3**
KDU	**Kakadu**	**45.55**	**275**	P	**P**	**15 18 18.4**	**-0.5**
FORT	**Forrest**	**45.85**	**249**	P	**P**	**15 18 20.9**	**-0.1**
FORT	**Forrest**	**45.85**	**249**	P	**P**	**15 18 21.1**	**+0.1**
WRKA	**Warakurna**	**46.28**	**257**	P	**P**	**15 18 24.4**	**0.0**
MTN	**Manton Dam**	**46.73**	**274**	P	**P**	**15 18 27.3**	**-0.5**
KNRA	**Kununurra**	**48.00**	**270**	P	**P**	**15 18 37.4**	**0.0**
KNRA	**Kununurra**	**48.00**	**270**	P	**P**	**15 18 37.4**	**0.0**
SAUI	**Saumlaki**	**48.39**	**280**	P	**P**	**15 18 39.6**	**-0.8**
HMH	**Humu'ula Sheep**	**49.32**	**32**	P	**P**	**15 18 47.9**	**+0.6**
FAKI	**Fak Fak**	**49.77**	**287**	P	**P**	**15 18 50.2**	**-0.3**
FAKI				IAmb	IAmb	15 18 51.0	
	comp=Z,30nm,1.1s						
GUMO	**Guam**	**49.81**	**314**	P	**P**	**15 18 50.7**	**0.0**
FITZ	**Fitzroy Crossi**	**50.18**	**265**	P	**P**	**15 18 53.4**	**0.0**
FITZ				IAmb	IAmb	15 18 55.0	
	comp=Z,22nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.18**	**265**	P	**P**	**15 18 54.0**	**+0.6**
BNDI	**Bandanaira**	**51.11**	**284**	P	**P**	**15 19 00.6**	**+0.3**
	comp=Z,1µmcomp=Z,142nm,1.0s						
BNDI	**Bandanaira**	**51.11**	**284**	P	**P**	**15 18 59.0**	**-1.3**
SWI	**Sorong**	**51.62**	**289**	P	**P**	**15 19 03.8**	**-0.1**
	comp=Z,1µmcomp=Z,152nm,1.0s						
MSAI	**Masohi**	**52.51**	**284**	P	**P**	**15 19 10.0**	**-0.3**
	comp=Z,438nmcomp=Z,49nm,0.6s						
AAI	**Ambon**	**53.01**	**284**	P	**P**	**15 19 13.9**	**0.0**
	comp=Z,78nm,1.0s						
NLAI	**Namlea**	**54.19**	**284**	P	**P**	**15 19 23.0**	**+0.8**
	comp=Z,46nm,1.2s						
PSA00	**Pilbara Seismi**	**54.58**	**259**	P	**P**	**15 19 24.7**	**-0.2**
PSA00	**Pilbara Seismi**	**54.58**	**259**	P	**P**	**15 19 23.7**	**-1.2**
PSA00				IAmb	IAmb	15 19 26.3	
	comp=Z,7.7nm,0.9s						
MBWA	**Marble Bar**	**54.78**	**260**	P	**P**	**15 19 25.2**	**-1.1**
MBWA				IAmb	IAmb	15 19 26.9	
	comp=Z,24nm,0.9s						
MBWA	**Marble Bar**	**54.78**	**260**	P	**P**	**15 19 25.9**	**-0.4**
NWAO	**Narrogin (SRO)**	**54.83**	**245**	P	**P**	**15 19 26.8**	**+0.3**
VNDA	**Vanda**	**54.85**	**185**	P	**P**	**15 19 27.6**	**+1.8**
	comp=Z,3.0nm,0.8s,baz=358,slow=8.1,SNR=12						
VNDA				ScP	**ScP**	**15 23 24.5**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=2.5,slow=6.0,SNR=6.7						
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**54.85**	**185**	P	**P**	**15 19 27.4**	**+1.6**
SBA	**Scott Base**	**54.86**	**183**	P	**P**	**15 19 28.4**	**+2.5**
SBA				IAmb	IAmb	15 19 30.0	
	comp=Z,26nm,0.9s						
LBMI	**Labuha**	**55.02**	**287**	P	**P**	**15 19 28.2**	**+0.1**
	comp=Z,615nmcomp=Z,55nm,0.9s						
SANI	**Sanana**	**55.71**	**284**	P	**P**	**15 19 32.2**	**-0.6**
	comp=Z,49nm,0.8s						
SANI	**Sanana**	**55.71**	**284**	P	**P**	**15 19 32.2**	**-0.6**
MMRI	**Maumere**	**56.38**	**275**	P	**P**	**15 19 37.4**	**-0.1**
MMRI				IAmb	IAmb	15 19 38.2	
	comp=Z,45nm,0.9s						
MORW	**Morawa**	**56.41**	**250**	P	**P**	**15 19 37.6**	**+0.1**
GIRL	**Giralia**	**59.36**	**257**	P	**P**	**15 19 58.5**	**+0.9**
CASY	**Casey**	**60.28**	**206**	P	**P**	**15 20 02.6**	**-0.3**
CASY				IAmb	IAmb	15 20 04.1	
	comp=Z,22nm,0.8s						
JCJ	**Chichijima**	**61.64**	**322**	P	**P**	**15 20 12.1**	**-0.3**
TOLI2	**Tolitoli**	**61.77**	**285**	P	**P**	**15 20 12.5**	**-1.1**
TOLI2				IAmb	IAmb	15 20 13.7	
	comp=Z,37nm,0.9s						
TOLI2	**Tolitoli**	**61.77**	**285**	P	**P**	**15 20 12.8**	**-0.8**
JAGI	**Jajag, Banyuwa**	**63.86**	**272**	P	**P**	**15 20 25.9**	**-1.2**
JAGI				IAmb	IAmb	15 20 26.4	
	comp=Z,60nm,1.1s						
MYLDM	**Lahad Datu**	**65.68**	**288**	P	**P**	**15 20 38.9**	**+0.5**
MYLDM				IAmb	IAmb	15 21 08.5	
	comp=Z,25nm,1.2s						
QSPA	**South Pole Qui**	**66.71**	**180**	P	**P**	**15 20 45.7**	**+1.6**

AKUT IAmb IAmb 15 21 50.1
comp=Z,26nm,1.0s
PEA0B Petropavlovsk- 78.43 347 P P 15 21 51.9 +0.5
PEA0B IAmb IAmb 15 21 52.8
comp=Z,31nm,0.9s
PETK Petropavlovsk- 78.43 347 P P 15 21 51.2 -0.2
comp=Z,27nm,0.9s,baz=124,slow=7.1,SNR=50
comp=Z,27nm,0.9s
PETK Petropavlovsk- 78.43 347 P P 15 21 51.4 0.0
FALS False Pass 79.32 10 P P 15 21 55.1 -0.9
NJ2 Nanjing 79.79 311 ⇓P P 15 22 00.0 +0.9
NJ2 pmax pmax
comp=Z,14nm,0.6s
USRK Ussuriysk Ar. 79.95 328 P P 15 22 00.7 +1.1
comp=Z,14nm,0.8s,baz=134,slow=4.1,SNR=15
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 79.95 328 P P 15 22 00.1 +0.5
CNBA Chernabura Isl 79.96 12 P P 15 21 59.6 +0.2
CNBA IAmb IAmb 15 22 27.8
comp=Z,22nm,1.2s
CHNA Chernabura Isl 79.97 12 P P 15 21 59.5 +0.1
baz=200
SDPT Sand Point 80.30 12 P P 15 22 01.1 -0.1
SDPT IAmb IAmb 15 22 09.6
comp=Z,22nm,1.0s
SDPT Sand Point 80.30 12 P P 15 22 00.9 -0.2
baz=199
IPM Ipoh 81.00 279 P P 15 22 05.0 -0.9
IPM IAmb IAmb 15 22 06.4
comp=Z,24nm,0.7s
S14K Fog Glacier 81.35 12 P P 15 22 07.1 +0.4
baz=200
MDJ Mudanjiang 81.44 327 P P 15 22 07.7 +0.4
MDJ IAmb IAmb 15 22 09.5
comp=Z,22nm,1.0s
SCI2 San Clemente I 81.58 49 P P 15 22 09.1 +0.7
baz=235
CHGN Chignik 81.59 12 P P 15 22 07.9 +0.2
CHGN IAmb IAmb 15 22 08.4
comp=Z,24nm,1.0s
CHGN Chignik 81.59 12 P P 15 22 07.9 +0.2
baz=201
KULM Kulim 81.67 279 P P 15 22 09.4 +0.1
KULM IAmb IAmb 15 22 10.5
comp=Z,24nm,1.0s
UBPT Khong Chiam 81.69 291 P P 15 22 09.8 +0.5
CHIR Chirikof Islan 81.73 14 P P 15 22 09.1 +0.6
CHIR Chirikof Islan 81.73 14 P P 15 22 10.0 +1.5
baz=203
PKM Mcpherson Peak 81.82 47 P P 15 22 08.8 -0.9
baz=234
WHN Wuhan 82.13 308 ⇓P P 15 22 12.0 +0.8
WHN pmax pmax
comp=Z,28nm,0.7s
RPSI Rantau Prapat 82.19 276 P P 15 22 11.1 -0.8
RPSI IAmb IAmb 15 22 12.0
comp=Z,14nm,0.8s
SII Sitkinak Islan 82.73 14 P P 15 22 14.7 +1.1
SII Sitkinak Islan 82.73 14 P P 15 22 13.9 +0.3
baz=204
GSI Gunungsitoli 82.87 275 P P 15 22 16.0 +0.7
GSI IAmb IAmb 15 22 17.1
comp=Z,25nm,0.7s
MONP2 Monument Peak 83.01 50 P P 15 22 16.2 +0.4
baz=236
CN2 Changchun 83.05 324 eP P 15 22 16.3 +0.8
CN2 pmax pmax
comp=Z,40nm,1.0s
IKP In-Ko-Pah, Jac 83.10 50 P P 15 22 16.7 +0.5
baz=237
ISA Isabella, Lake 83.16 47 P P 15 22 17.9 +1.5
ISA Isabella, Lake 83.16 47 P P 15 22 17.3 +0.9
baz=235
CCAC Calif City Air 83.17 47 P P 15 22 19.5 +3.1
CCAC IAmb IAmb 15 22 21.0
comp=Z,14nm,0.5s
R17K Ugashik Creek 83.24 13 P P 15 22 16.5 +0.3
baz=202,SNR=5.1
CMB Columbia Colle 83.30 44 P P 15 22 18.1 +1.2
BNX BinXian 83.34 326 ⇑P P 15 22 17.3 +0.4
BNX pmax pmax
comp=Z,28nm,1.0s
BNX pmax pmax
comp=Z,130nm,3.9s
SWSC Sam W. Stewart 83.48 50 P P 15 22 18.8 +0.9
baz=237
OHAK Old Harbor 83.54 15 P P 15 22 17.9 +0.3
OHAK IAmb IAmb 15 22 56.1
comp=Z,51nm,1.5s
OHAK Old Harbor 83.54 15 P P 15 22 18.5 +1.0
baz=205
LRMC Laurel Mtn Rad 83.58 47 P P 15 22 19.1 +0.6
baz=236
MDPB Devils Postpil 83.90 45 P P 15 22 20.6 +0.4
MPMC Manual Prospec 84.04 47 P P 15 22 21.6 +0.7
baz=236
Q16K King Salmon 84.15 12 P P 15 22 20.9 +0.4
baz=202
KDAK Kodiak Island 84.21 15 P P 15 22 21.4 +0.6
KDAK IAmb IAmb 15 22 26.8
comp=Z,50nm,1.4s
KDAK Kodiak Island 84.21 15 P P 15 22 21.5 +0.6
baz=206
GLA Glamis 84.22 50 P P 15 22 23.2 +1.6
baz=237
J01E Myrtle Point 84.31 38 P P 15 22 22.4 +0.6
baz=231
BEKR Beckworth 84.40 42 P P 15 22 22.7 +0.2
QSM Queen of Sheba 84.41 47 P P 15 22 22.9 +0.5
QSM IAmb IAmb 15 22 26.6
comp=Z,5.7nm,0.5s
HUMO Hull Mountain 84.52 39 P P 15 22 23.9 +1.1
YERR Yerington 84.58 43 P P 15 22 24.4 +0.9
IRM Iron Mountain 84.59 49 P P 15 22 24.0 +0.6
baz=237
LHV Little Huntoon 84.62 44 P P 15 22 23.3 -0.1
GRAC Grapevine Rang 84.65 46 P P 15 22 22.9 -0.8
GRAC Grapevine Rang 84.65 46 P P 15 22 24.6 +0.9
baz=236
L04D Klamath Falls 84.66 39 P P 15 22 24.9 +1.2
baz=232
P17K Kvichak River 84.68 12 P P 15 22 23.1 0.0
baz=202,SNR=5.8
O16K Kokwok River B 84.74 11 P P 15 22 22.8 -0.6
baz=201
TROLL Troll, Antarti 84.85 181 P P 15 22 24.4 +0.2
NVAR Mina Array Bea 84.86 44 P P 15 22 25.9 +1.0
comp=Z,1.7nm,0.8s,baz=225,slow=8.2,SNR=11
comp=Z,1.7nm,0.8s
GMN Gold Mountain 84.89 46 P P 15 22 25.5 +0.4
NV11 Mina Array Sit 84.95 44 P P 15 22 26.3 +1.1
I03D Drain, OR 84.98 38 P P 15 22 24.8 -0.2
baz=231
Q19K Cape Douglas, 85.01 14 P P 15 22 24.9 +0.1
Q19K IAmb IAmb 15 22 25.3
comp=Z,19nm,0.8s
Q19K Cape Douglas, 85.01 14 P P 15 22 24.7 -0.1
baz=205
O17K Koliganek Bris 85.09 12 P P 15 22 25.8 +0.6
baz=202
P18K Big Mountain, 85.10 13 P P 15 22 25.0 -0.3
P18K Big Mountain, 85.10 13 P P 15 22 24.9 -0.3
baz=203
SNAA Sanae 85.20 179 P P 15 22 25.7 -0.2
SNAA S S 15 32 08.5 -1.1
KVN Kaiserville 85.34 44 P P 15 22 28.2 +1.0
TPH Tonopah 85.35 45 P P 15 22 28.4 +1.1
TPH IAmb IAmb 15 22 29.3
comp=Z,16nm,0.9s
TPNV Topopah Spring 85.37 47 P P 15 22 27.8 +0.5
baz=236
VNA3 Neumayer Olymp 85.44 177 P P 15 22 26.1 -0.9
VNA3 S S 15 32 10.9 -0.8
N16K Nishlik Lake 85.44 11 P P 15 22 27.8 +0.9
baz=200
O18K Koktuh Hills 85.53 13 P P 15 22 26.9 -0.4
O18K IAmb IAmb 15 22 28.2
comp=Z,20nm,0.8s
O18K Koktuh Hills 85.53 13 P P 15 22 27.2 -0.1
baz=203
ENH Enshi 85.57 306 P P 15 22 28.4 +0.1
ENH IAmb IAmb 15 22 29.9
comp=Z,31nm,1.1s
HNS HongShan 85.64 314 ⇓P P 15 22 29.8 +1.5
HNS pmax pmax
comp=Z,19nm,1.2s
P19K Oil Pt 85.76 14 P P 15 22 28.6 +0.1
P19K Oil Pt 85.76 14 P P 15 22 28.2 -0.2
baz=205
VNA2 Neumayer--Watz 85.85 178 P P 15 22 29.0 +0.2
baz=182,slow=5.0
VNA2 S S 15 32 12.8 -2.7
J05D Fort Rock, OR 85.93 39 P P 15 22 31.4 +1.6
baz=232
O19K Port Alsworth 86.02 13 P P 15 22 29.5 0.0
O19K IAmb IAmb 15 22 30.3
comp=Z,29nm,1.0s
O19K Port Alsworth 86.02 13 P P 15 22 29.4 -0.2
baz=204,SNR=5.3
ILSW Iliamna Southw 86.08 14 P P 15 22 29.8 -0.3
ILSW IAmb IAmb 15 22 31.0
comp=Z,26nm,0.8s
VNA1 Neumayer--Stat 86.09 177 P P 15 22 30.2 +0.3
N18K Kilae Creek 86.16 12 P P 15 22 29.7 -0.6
baz=203
O20K Slope Mountain 86.28 14 P P 15 22 30.4 -0.5
baz=206
BRSE Bradley Lake S 86.40 15 P P 15 22 31.2 -0.2
baz=207
PINE Pine Mountain 86.41 39 P P 15 22 33.8 +1.7
PINE IAmb IAmb 15 22 34.9
comp=Z,13nm,1.2s
N19K Bonanza Creek 86.56 13 P P 15 22 31.5 -0.8
baz=204
TUC Tucson 86.75 53 P P 15 22 35.7 +1.8
baz=240
WVOR Wild Horse Val 86.96 41 P P 15 22 35.6 +0.9
X16A Lo Mia Camp, P 87.34 51 P P 15 22 38.1 +1.4
I07A Izee 87.42 39 P P 15 22 38.3 +1.5
M19K Big River Lodg 87.57 12 P P 15 22 36.8 -0.1
M19K Big River Lodg 87.57 12 P P 15 22 36.7 -0.1
baz=204
J08A Circle Bar Ran 87.60 40 P P 15 22 38.8 +1.2
J08A IAmb IAmb 15 22 39.9
comp=Z,13nm,1.3s
L19K White Mountain 87.74 12 P P 15 22 38.3 +0.6
L19K IAmb IAmb 15 22 39.2
comp=Z,17nm,0.9s
L19K White Mountain 87.74 12 P P 15 22 38.2 +0.5
baz=204,SNR=13
U15A North Rim 87.77 49 P P 15 22 40.6 +1.8
RC01 Rabbit Creek A 87.83 15 P P 15 22 38.3 +0.2
RC01 IAmb IAmb 15 22 39.1
comp=Z,17nm,1.0s
RC01 Rabbit Creek A 87.83 15 P P 15 22 38.1 0.0
baz=208
XAN Xi'an 87.87 309 ⇓P P 15 22 40.3 +1.3
XAN pmax pmax
comp=Z,23nm,1.0s
WUAZ Wupatki 87.94 50 P P 15 22 38.6 -0.9
baz=239
PWL Port Wells 87.95 15 P P 15 22 38.7 0.0
PWL IAmb IAmb 15 22 39.6
comp=Z,21nm,0.8s
PWL Port Wells 87.95 15 P P 15 22 38.5 -0.2
baz=210
ELK Elko 88.11 44 P P 15 22 41.5 +1.3
L20K Farewell, AK 88.20 12 P P 15 22 40.1 +0.2
baz=204
TTA Tatalina 88.22 11 P P 15 22 39.8 -0.2
TTA IAmb IAmb 15 22 41.3
comp=Z,10nm,1.1s
CRAI Chiangrai 88.23 293 P P 15 22 42.0 +1.0
CRAI IAmb IAmb 15 22 43.3
comp=Z,21nm,1.5s
GLI Glacier Island 88.27 16 P P 15 22 40.0 -0.2
baz=211
M22K Willow 88.33 14 P P 15 22 40.5 +0.1
M22K Willow 88.33 14 P P 15 22 40.8 +0.4
baz=208
EYAK Cordova Ski Ar 88.33 16 P P 15 22 40.2 -0.2
baz=212
KNK Knik Glacier 88.41 15 P P 15 22 41.3 +0.4
KNK IAmb IAmb 15 22 41.9
comp=Z,14nm,0.8s
KNK Knik Glacier 88.41 15 P P 15 22 40.6 -0.2
baz=209
XLT XiLinHaoTe 88.44 320 eP P 15 22 42.3 +0.8
XLT pmax pmax
comp=Z,10.0nm,1.0s
XLT pmax pmax
comp=Z,98nm,5.8s
G08A Pilot Rock 88.44 38 P P 15 22 42.6 +1.1
G08A IAmb IAmb 15 22 43.7
comp=Z,12nm,1.5s
GHO Glory Hole Cre 88.61 15 P P 15 22 41.7 -0.2
LTY Liberty 88.66 36 P P 15 22 43.2 +0.8
LTY IAmb IAmb 15 22 44.3
comp=Z,6.0nm,0.9s
MTPU Mount Pierson 88.68 47 P P 15 22 42.6 -0.5
MTPU IAmb IAmb 15 22 46.3
comp=Z,8.9nm,1.4s
CMAR Chiang Mai Arr 88.69 291 P P 15 22 44.5 +1.3
comp=Z,8.0nm,1.0s,baz=132,slow=3.2,SNR=43
comp=Z,8.0nm,1.0s
CMAR Chiang Mai Arr 88.69 291 P P 15 22 43.8 +0.6
SML Sawmill 88.78 15 P P 15 22 43.6 +1.1
baz=210
DIV Divide 88.82 16 P P 15 22 43.1 +0.2
DIV IAmb IAmb 15 22 44.9
comp=Z,25nm,1.2s
CHTO Chiang Mai 88.84 291 P P 15 22 44.4 +0.6
CHTO IAmb IAmb 15 22 46.2
comp=Z,22nm,1.2s
V35K Ketchikan 88.86 26 P P 15 22 44.0 +1.0
baz=224
CUT Chulitna 88.87 14 P P 15 22 42.2 -0.7
baz=208
MVU Marysvale 88.90 47 P P 15 22 42.0 -2.0
MVU IAmb IAmb 15 22 48.1
comp=Z,20nm,1.3s
PPLA Purkeypile 88.91 13 P P 15 22 42.8 -0.5
baz=206
K20K Telida 88.96 12 P P 15 22 42.9 -0.5
K20K IAmb IAmb 15 22 44.4
comp=Z,8.5nm,1.1s
K20K Telida 88.96 12 P P 15 22 43.2 -0.2
baz=204,SNR=6.9
BMRM Bremner River 88.99 17 P P 15 22 44.5 +1.0
baz=213
SCM Sheep Creek Mo 89.04 15 P P 15 22 44.2 +0.4
SCM Sheep Creek Mo 89.04 15 P P 15 22 42.9 -0.9
baz=210
MESA MESA 89.07 18 P P 15 22 43.8 -0.3
baz=215
121A Cookes Peak, D 89.07 54 P P 15 22 46.2 +1.4
baz=241
KLU Klutina 89.09 16 P P 15 22 44.7 +0.6
baz=212
BMO Blue Mountains 89.14 40 P P 15 22 44.6 -0.1
MFID Camas Ranch 89.22 41 P P 15 22 45.9 +0.7
WRAK Wrangell Islan 89.37 25 P P 15 22 46.3 +1.0
baz=223
CAST Castle Rocks 89.40 12 P P 15 22 44.1 -1.3
CAST IAmb IAmb 15 22 45.1
comp=Z,12nm,0.9s
CAST Castle Rocks 89.40 12 P P 15 22 43.8 -1.6
baz=206
PNL Peninsula 89.42 20 P P 15 22 46.8 +1.3
baz=217
D08A Wollman Farm, 89.50 37 P P 15 22 47.2 +1.0
D08A IAmb IAmb 15 22 48.0
comp=Z,5.6nm,1.0s
N25K Chitina, Valde 89.53 16 P P 15 22 46.4 +0.3
baz=213
WAT6 Susitna Watana 89.59 15 P P 15 22 46.6 +0.1
baz=210
WAT1 Susitna Watana 89.62 14 P P 15 22 46.7 +0.2
baz=209
J20K Nowinta River 89.70 11 P P 15 22 46.5 -0.2
J20K IAmb IAmb 15 22 47.9
comp=Z,7.5nm,1.2s
J20K Nowinta River 89.70 11 P P 15 22 46.3 -0.4
baz=204,SNR=6.1
KTH Kantishna Hill 89.76 13 P P 15 22 46.3 -0.8
KTH IAmb IAmb 15 22 47.5
comp=Z,7.6nm,0.9s
GCSA Galena City Sc 89.76 10 P P 15 22 46.7 -0.2
baz=202
MCARA McCarthy VSAT 89.76 17 P P 15 22 46.9 -0.1
baz=214
CHUM Lake Minchumin 89.77 12 P P 15 22 46.0 -1.1
baz=206
TRF Thorofare Moun 89.80 13 P P 15 22 46.9 -0.5
TRF IAmb IAmb 15 22 47.7
comp=Z,8.2nm,0.8s
TRF Thorofare Moun 89.80 13 P P 15 22 46.4 -1.0
baz=208
PZH PanZhiHua 89.82 299 P P 15 22 47.3 -1.1
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,70nm,4.1s
CTG Chitna Glacier 89.88 18 P P 15 22 47.9 +0.1
baz=216
P29M Windy Craggy 89.90 20 P P 15 22 48.8 +1.0
baz=219
TMUT Trail Mountain 89.98 47 P P 15 22 50.2 +1.2
TMUT IAmb IAmb 15 22 51.7
comp=Z,8.4nm,0.8s
B08A Colville Reser 90.04 36 P P 15 22 48.9 +0.2
O28M Mount Upton 90.06 19 P P 15 22 48.5 -0.3
baz=217
RND Reindeer 90.06 14 P P 15 22 48.5 0.0
RND IAmb IAmb 15 22 49.8
comp=Z,9.3nm,0.9s
DHY Denali Highway 90.11 15 P P 15 22 48.8 -0.1
baz=210
HLID Hailey 90.16 42 P P 15 22 50.0 +0.4
baz=237
PLBC Pleasant Camp 90.21 21 P P 15 22 50.9 +1.7
baz=220
HVU Hansel Valley 90.24 44 P P 15 22 48.5 -1.5
HVU IAmb IAmb 15 22 52.0
comp=Z,4.8nm,0.8s
MCK McKinley 90.33 14 P P 15 22 50.7 +1.0
baz=209
SRU San Rafael Swe 90.34 47 P P 15 22 50.6 +0.1
SRU IAmb IAmb 15 22 52.6
comp=Z,7.1nm,0.8s
BTO Baotou 90.43 315 eP P 15 22 55.5 +4.7
PAX Paxson 90.47 15 P P 15 22 50.4 0.0
baz=212
MNTX Cornudas Mount 90.48 56 P P 15 22 52.4 +1.3
MNTX Cornudas Mount 90.48 56 P P 15 22 51.3 +0.1
baz=243
P30M Million Dollar 90.53 20 P P 15 22 51.4 +0.6
baz=220
TX31 Lajitas Ar. Si 90.74 58 P P 15 22 53.2 +0.7
TX31 IAmb IAmb 15 22 54.8
comp=Z,8.3nm,1.1s
TX32 Lajitas Array 90.74 58 P P 15 22 53.5 +1.0
TXAR Lajitas Array 90.74 58 P P 15 22 53.2 +0.7
comp=Z,1.3nm,0.8s,baz=213,slow=6.6,SNR=13
comp=Z,1.3nm,0.8s
YUK3 Moose Creek 90.79 18 P P 15 22 52.1 0.0
baz=216
M27K Edge Creek, AK 90.87 17 P P 15 22 53.0 +0.6
M27K IAmb IAmb 15 22 54.0
comp=Z,5.8nm,0.8s
M27K Edge Creek, AK 90.87 17 P P 15 22 52.7 +0.3
baz=215
S34M Telegraph Cree 90.91 24 P P 15 22 53.6 +1.2
baz=224
HYT Haines Junctio 90.91 20 P P 15 22 53.7 +1.1
baz=219
YUK4 Talbot Arm 90.97 19 P P 15 22 54.2 +1.2
baz=218
I21K Tanana 91.01 12 P P 15 22 53.2 +0.5
baz=206
L26K Log Cabin Wild 91.04 16 P P 15 22 53.6 +0.6
baz=214
MLY Manley 91.11 12 P P 15 22 52.4 -0.9
baz=207
WRH Wood River Hil 91.16 14 P P 15 22 53.2 -0.3
WRH IAmb IAmb 15 22 53.8
comp=Z,11nm,1.4s
ANMO Albuquerque 91.18 52 P P 15 22 54.5 0.0
baz=242
RIDG Independent Ri 91.27 15 P P 15 22 54.1 0.0
baz=213
H21K Melozitna Rive 91.29 11 P P 15 22 54.8 +0.7
baz=206
HDA Harding Lake 91.36 14 P P 15 22 54.1 -0.3
baz=211
DOT Dot Lake 91.38 15 P P 15 22 53.9 -0.6
L27K Beaver Creek, 91.46 17 P P 15 22 54.0 -0.9
L27K Beaver Creek, 91.46 17 P P 15 22 55.0 0.0
baz=215
MDM Murphy Dome 91.56 13 P P 15 22 54.4 -0.9
MDM IAmb IAmb 15 22 55.4
comp=Z,5.0nm,1.0s
SCRK Sand Creek 91.68 15 P P 15 22 56.2 +0.2
SCRK Sand Creek 91.68 15 P P 15 22 55.7 -0.3
baz=213
IL31 91.68 14 P P 15 22 55.0 -0.8
ILAR Eielson Array 91.68 14 P P 15 22 55.0 -0.9
comp=Z,0.8nm,0.6s,baz=236,slow=5.2,SNR=21
comp=Z,0.8nm,0.6s
H22K Ishtalitna Cre 91.76 12 P P 15 22 56.1 -0.1
baz=207
J25K Salcha River, 91.89 14 P P 15 22 57.3 +0.4
baz=212
M29M Somme Creek 91.89 18 P P 15 22 57.4 +0.3
baz=218
G21K Allakaket 91.95 11 P P 15 22 58.1 +1.0
baz=205
R33M Jennings River 92.03 23 P P 15 22 58.4 +0.7
baz=225
K27K Chicken 92.19 16 P P 15 22 58.8 +0.6
baz=215
J26L Joseph Creek 92.22 15 P P 15 22 59.1 +0.7
J26L IAmb IAmb 15 22 60.0
comp=Z,5.9nm,0.9s
J26L Joseph Creek 92.22 15 P P 15 22 58.6 +0.1
baz=214
S22A 4UR Ranch, Cre 92.22 50 P P 15 22 59.9 +0.5
baz=242
O20A White River Ci 92.38 47 P P 15 23 00.2 +0.2
baz=241
M30M Minto, Yukon 92.48 19 P P 15 23 00.5 +0.8
M30M IAmb IAmb 15 23 01.0
comp=Z,4.9nm,0.8s
M30M Minto, Yukon 92.48 19 P P 15 23 00.0 +0.4
baz=220
LZH Lanzhou 92.50 308 eP P 15 23 02.0 +1.4
LZH pP pP 15 24 56.3 -4.7
LZH sP sP 15 25 59.0 +2.9
LZH pmax pmax
comp=Z,22nm,1.2s
PDAR Pinedale Array 92.79 44 P P 15 23 02.2 +0.4
comp=Z,0.5nm,0.7s,baz=199,slow=3.1,SNR=6.0
comp=Z,0.5nm,0.7s
DAWY Dawson 92.92 17 P P 15 23 02.0 +0.3
DAWY IAmb IAmb 15 23 02.8
comp=Z,3.4nm,0.8s
DAWY Dawson 92.92 17 P P 15 23 02.2 +0.6
baz=217
EGAK Eagle 93.04 16 P P 15 23 01.8 -0.3
EGAK IAmb IAmb 15 23 02.6
comp=Z,3.6nm,0.8s
EGAK Eagle 93.04 16 P P 15 23 02.0 0.0
baz=216
SDCO Great Sand Dun 93.15 50 P P 15 23 03.9 +0.2
baz=243
K29M Barlow Dome 93.26 18 P P 15 23 04.0 +0.7
baz=219
T25A Trinidad 93.65 51 P P 15 23 06.5 +0.6
baz=243
F24K Squaw Lake 93.86 12 P P 15 23 06.1 +0.3
baz=210
MMPY Sheldon Lake, 94.23 21 P P 15 23 08.3 +0.7
baz=224
I29M Ogilvie Camp, 94.23 16 P P 15 23 07.4 -0.2
baz=218
N23A Red Feather La 94.28 47 P P 15 23 08.8 +0.1
baz=243
F26K Sheenjek River 94.76 13 P P 15 23 10.0 +0.1
baz=213
C23K Itkillik River 95.42 10 P P 15 23 13.1 +0.3
baz=208
EPYK Eagle Plains 95.43 16 P P 15 23 13.1 +0.1
baz=220
ULN Ulaanbaatar 95.88 320 P P 15 23 15.5 -0.1
ULN IAmb IAmb 15 23 16.6
comp=Z,8.9nm,1.4s
SONM Songino Array 96.25 320 P P 15 23 16.6 -0.7
comp=Z,2.2nm,1.0s,baz=137,slow=4.4,SNR=8.5
SONM PP PP 15 27 18.4 -2.0

comp=Z,0.5nm,0.6s,baz=150,slow=6.3,SNR=4.2
comp=Z,2.2nm,1.0s
GTA Gaotai 96.83 310 *e*P **P 15 23 20.5 +0.5**
GTA pmax pmax
comp=Z,3.0nm,1.1s
A36M Sachs Harbour 102.30 15 P **Pdif 15 23 43.9 +0.5**
baz=231
ZALV Zalesovo Beam 111.11 321 PKiKP **PKiKP 15 28 17.2 -1.2**
comp=Z,0.5nm,0.3s,baz=122,slow=1.9,SNR=5.1
MKAR Makanchi Array 111.29 313 PKiKP **PKiKP 15 28 18.1 -1.0**
comp=Z,0.8nm,0.5s,baz=170,slow=1.5,SNR=8.6
KURBB Kurchatov Arra 114.39 317 PKP PKPdf 15 28 24.1 -0.8
comp=Z,2.3nm,0.8s,baz=100,slow=2.0,SNR=20
KURBB PP **PP 15 29 27.4 -4.4**
comp=Z,0.9nm,0.8s,baz=94,slow=6.0,SNR=5.6
L61B Northampton 118.44 53 P **PKPdf 15 28 32.5 -0.4**
baz=264
KBL Kabul 118.98 298 PKPdf 15 28 33.9 -0.6
KK31 Karatay Array 118.99 308 PKPdf 15 28 33.2 -0.8
KKAR Karatay Array 118.99 308 PKPdf 15 28 33.4 -0.6
KKAR Karatay Array 118.99 308 PKPdf 15 28 33.2 -0.8
BVAR Borovoye Array 119.59 319 PKP **PKPdf 15 28 34.1 -0.7**
comp=Z,2.2nm,0.3s,baz=112,slow=2.2,SNR=24
BVAR PP **PP 15 30 04.4 -3.0**
comp=Z,1.3nm,1.0s,baz=90,slow=7.4,SNR=4.5
BRVK Borovoye 119.65 319 PKPdf 15 28 34.4 -0.5
ARU Arti 126.05 324 PKPdf 15 28 46.6 -0.4
ABKAR Akbulak array 126.34 315 PKPdf 15 28 47.3 -0.5
ABKAR Akbulak array 126.34 315 PKPdf 15 28 47.5 -0.4
GEYT Alibeck 128.10 301 PKP **PKiKP 15 28 52.0 -0.3**
comp=Z,4.0nm,0.6s,baz=232,slow=3.6,SNR=7.8
GEYT Alibeck 128.10 301 PKiKP 15 28 52.1 -0.2
ARCES ARCESS Array B 131.23 348 PKP **PKPdf 15 28 56.1 -0.5**
comp=Z,8.8nm,0.9s,baz=33,slow=1.5,SNR=18
ARCES SKPbc **SKPbc 15 31 30.3 +0.3**
comp=Z,4.0nm,0.8s,baz=31,slow=5.0,SNR=4.6
KLMR Klimovskoe 133.41 334 *e*PKPdf **PKPdf 15 28 59.5 -1.3**
KLMR AMP 15 29 01.6
comp=Z,5.0nm,0.8s
KLMR *e*PP **PP 15 31 35.8 -1.0**
KMBO Kilima Mbogo 135.74 242 PKPpre 15 28 54.5
FINES FINESS Array B 137.72 341 PKhKP PKPpre 15 28 56.7
comp=Z,1.3nm,0.4s,baz=54,slow=1.7,SNR=7.6
FINES PKP **PKPdf 15 29 08.7 -0.1**
comp=Z,3.9nm,0.6s,baz=63,slow=1.0,SNR=10.0
FINES SKPbc **SKPbc 15 31 50.7 0.0**
comp=Z,5.4nm,0.6s,baz=50,slow=3.0,SNR=11
KBZ Khabaz 138.91 310 PP **PP 15 32 14.6 +3.0**
comp=Z,1.4nm,0.4s,baz=47,slow=3.0,SNR=3.6
NC303 NORSAR Array S 141.25 351 PKPpre 15 29 09.8
NC204 NORSAR Array S 141.29 351 PKPpre 15 29 09.4
NC405 NORSAR Array S 141.31 350 PKPpre 15 29 10.4
NB201 NORSAR Array S 141.43 351 PKPpre 15 29 10.5
NB2 NORSAR Subarra 141.45 351 PKP **PKPdf 15 29 10.4 -5.3**
comp=Z,1.2nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 141.45 351 PKhKP PKPpre 15 29 11.0
comp=Z,4.3nm,0.6s,baz=16,slow=4.7,SNR=30
NOA SKPbc **SKPbc 15 32 00.9 +0.2**
comp=Z,1.1nm,0.6s,baz=16,slow=4.2,SNR=5.4
NAO01 NORSAR Array S 141.69 351 PKPpre 15 29 11.5
NC602 NORSAR Array S 141.69 350 PKPpre 15 29 11.3
MARD Mardin 141.86 301 PKPdf 15 29 13.4 -3.9
NACGM Naroch 142.43 334 ↑ *e*PKP **PKPdf 15 29 14.0 -3.5**
baz=44
KONO Kongsberg 143.02 351 PKPab 15 29 15.8 -0.2
PABE Paberze 143.06 337 PKPpre 15 29 15.4
PABE Paberze 143.06 337 *e*P PKPbc 15 29 16.9 +0.1
PBUR Paburge 143.36 339 *e*P PKPbc 15 29 17.8 +0.2
AKASG Malin Array Be 144.15 327 PKP PKPbc 15 29 19.7 -0.6
comp=Z,10.0nm,0.5s,baz=43,slow=4.5,SNR=74
AKASG SKPbc **SKPbc 15 32 07.5 0.0**
comp=Z,2.3nm,0.6s,baz=48,slow=3.0,SNR=6.8
AKASG Malin Array Be 144.15 327 PKPbc 15 29 19.4 -0.9
AKBB Malin Array Si 144.15 327 PKPbc 15 29 19.2 -1.1
HOMB Homborsund 144.50 352 *i* P **PKPdf 15 29 20.9 -0.2**
SNART Snartemo 144.60 353 *e*P PKPbc 15 29 21.6 +0.1
BNN Bunyan 145.33 305 PKPdf **PKPdf 15 29 23.1 -0.2**
GOET G??ttrup 145.59 350 *i* P **PKPbc 15 29 24.6 +0.2**
SORM Soroca 146.17 324 ⇓P **PKPbc 15 29 25.4 -1.0**
BSD Bornholm Skovb 146.22 344 *e*P **PKPbc 15 29 26.3 0.0**
BSD Bornholm Skovb 146.22 344 *i* P **PKPbc 15 29 26.0 -0.2**
MILM Milestii Mici 146.62 322 ⇓P **PKPbc 15 29 27.3 -0.4**
BR131 Keskin Array S 146.71 307 PKPbc 15 29 27.1 -1.3
BRTR Keskin Array B 146.71 307 PKPbc **PKPbc 15 29 27.2 -1.1**
comp=Z,9.3nm,0.8s,baz=132,slow=3.8,SNR=31
BRTR Keskin Array B 146.71 307 PKPbc 15 29 27.4 -0.9
GHAJ Ghor Haditha 146.90 292 PKPbc 15 29 28.1 -0.7
BEL Belsk 147.10 335 *e*PKPbc **PKPbc 15 29 29.3 +0.6**
GKP Gorka Klasztor 147.17 340 *e*PKPbc **PKPbc 15 29 29.1 +0.2**
ANTO Ankara 147.27 309 ⇓P **PKPbc 15 29 29.9 +0.1**
ANTO Ankara 147.27 308 PKPbc 15 29 26.1 -0.4
TLCR 147.57 319 ⇑P **PKPbc 15 29 28.3 -1.8**
KWP Kalwaria Pacla 147.97 331 *e*PKPbc **PKPbc 15 29 31.5 +0.4**
CFR Carcaliu 147.98 320 ⇓P **PKPbc 15 29 31.3 +0.1**
TPGR Topolog 147.99 319 ⇓P **PKPbc 15 29 31.1 -0.2**
ESK Eskdalemuir 148.04 3 PKPbc 15 29 30.4 -0.7
TESR Tescani 148.07 323 ⇑P **PKPbc 15 29 31.3 -0.2**
BUR08 Bucovina Ar. S 148.13 326 PKiKP 15 29 32.5 -0.5
BURAR Bucovina Array 148.15 326 ⇓P **PKiKP 15 29 32.7 -0.3**
BURAR Bucovina Array 148.15 326 PKPdf **PKPdf 15 29 28.3 +0.7**
BURAR PKPbc **PKiKP 15 29 32.5 -0.5**
MDUB Mudurnu 148.19 310 PKPbc 15 29 31.2 -0.9
CSS Mathiatis 148.22 299 PKPbc 15 29 31.6 -0.7
VRI Vrincioaia 148.41 322 ⇑P **PKPbc 15 29 31.6 -0.8**
CVDA Cernavoda 148.50 319 ⇑P **PKPdf 15 29 21.6 -6.6**
KOLS Kolonicke sedl 148.67 330 *e*PKP **PKiKP 15 29 33.7 -0.2**
KOLS *e* 15 29 44.5
OJC Ojcow 148.76 334 *e*PKPbc **PKPbc 15 29 32.4 -0.6**
OJC Ojcow 148.76 334 PKPbc 15 29 31.4 -1.6
OZUR 148.80 323 ⇓P **PKiKP 15 29 34.0 -0.3**
BORA Eskisehir 148.95 309 PKPbc 15 29 34.1 +0.1
CRVS Cervenica-Dubn 149.06 331 *e*PKP **PKiKP 15 29 34.5 -0.2**
MLR Muntele Rosu 149.07 322 ⇓P **PKPbc 15 29 32.7 -1.4**
MLR Muntele Rosu 149.07 322 PKPbc 15 29 33.6 -0.5
DOPR Dopca 149.09 323 ⇓P **PKPbc 15 29 34.1 +0.1**
NIE Niedzica 149.18 333 *e*PKPbc **PKiKP 15 29 34.5 -0.4**
SECR 149.27 321 ⇓P **PKPbc 15 29 34.5 0.0**
KSP Ksiaz 149.54 338 *e*PKPbc **PKiKP 15 29 35.6 0.0**
KSP *e*PKPab **PKPab 15 29 43.1 +0.8**
VOIR 149.61 323 ⇓P **PKPbc 15 29 35.5 +0.1**
OKC Ostrava-Krasne 149.71 335 ⇑ *e*PKP **PKiKP 15 29 35.6 -0.4**
LANS Liptovska Anna 149.73 333 *e*PKP **PKiKP 15 29 37.1 +1.0**
LANS *e* 15 29 42.8
KECS Kecovo 149.81 331 *e*PKP **PKPbc 15 29 35.1 -0.5**
OSTC Ostas 149.81 338 ⇑ *e*PKP **PKiKP 15 29 36.2 0.0**
OSTC *e*PKPAB **PKPab 15 29 44.0 +0.6**
ARR Arges 149.88 323 ⇓P **PKiKP 15 29 37.1 +0.5**
UPC Upice 149.93 338 ⇑ *e*PKP **PKiKP 15 29 36.4 0.0**
DPC Dobruska-Polom 149.95 338 ⇑ *e*PKP **PKiKP 15 29 36.4 -0.1**
DPC *e*PKPAB **PKPab 15 29 45.2 +1.1**
DRGR 149.97 327 ⇑P **PKPbc 15 29 35.6 -0.5**
MORC Moravsky Berou 149.99 336 ⇓P **PKPbc 15 29 36.1 +0.1**
MORC Moravsky Berou 149.99 336 PKPbc 15 29 36.1 +0.1
MORC Moravsky Berou 149.99 336 *e*PKP **PKiKP 15 29 36.5 -0.1**
MORC *e* 15 29 44.8
KRLC Kraliky 150.02 337 ⇑ *e*PKP **PKPbc 15 29 36.3 +0.2**
KRLC *e*PKPAB **PKPab 15 29 44.6 +0.2**
CLL Collm 150.15 343 PKPbc 15 29 36.0 -0.3
CLL Collm 150.15 343 ⇓ *i*PKPbc **PKiKP 15 29 36.7 -0.1**
comp=Z,57nm,0.9s
CLL ⇑ *i*PKPab **PKPab 15 29 45.1 +0.4**
comp=Z,18nm,0.9s
BRG Berggiesshubel 150.26 341 *i* PKP **PKiKP 15 29 37.1 0.0**
BRG Amp 15 29 38.0
comp=Z,32nm,0.7s
BRG *ex* x 15 29 44.0
BRG Amp 15 29 47.1
comp=Z,22nm,1.1s
PVCC Panska Ves 150.38 340 ⇑ *e*PKP **PKiKP 15 29 37.6 +0.3**
PSZ Piszkesteto 150.49 331 ⇓P **PKiKP 15 29 37.9 +0.1**
PSZ Piszkesteto 150.49 331 PKPbc 15 29 37.4 0.0
VYHS Vyhne 150.50 333 *e*PKP **PKiKP 15 29 37.4 -0.3**
VYHS *e* 15 29 47.1
JAVC Velka Javorina 150.69 335 *e*PKP **PKiKP 15 29 39.1 +1.0**
JAVC *e* 15 29 48.9
VRAC Vranov 150.73 336 ⇓P **PKiKP 15 29 38.0 -0.1**
VRAC Vranov 150.73 336 *e*PKP **PKiKP 15 29 38.1 -0.1**
VRAC *e* 15 29 48.2
BSZH Besenyszg 150.78 330 ⇑P **PKiKP 15 29 42.5 +4.2**
AKAS Kas 150.83 303 PKPbc 15 29 37.3 -1.2
PRU Pruhonice 150.85 340 ⇑ *e*PKP **PKiKP 15 29 38.1 -0.2**
PRU *e*PKPAB **PKPab 15 29 48.3 +0.5**

SIRR Siria 150.86 327 ⇑P **PKPbc 15 29 38.2 +0.1**
GZR Gura Zlata 150.87 325 ⇑P **PKPbc 15 29 37.5 -0.7**
KRUC Moravsky 151.00 336 *e*PKP **PKPbc 15 29 38.4 +0.1**
KRUC *e* 15 29 49.2
TREC Trest 151.13 338 ⇑ *e*PKP **PKiKP 15 29 38.9 -0.1**
MODS Modra-Piesok 151.23 335 *e*PKP **PKiKP 15 29 39.2 0.0**
MODS *e* 15 29 50.4
BZS Buzias 151.33 326 ⇑P **PKPbc 15 29 39.1 -0.1**
HERR Herculane 151.40 324 ⇓P **PKPbc 15 29 39.3 -0.1**
ZST Bratislava 151.44 335 *e*PKP **PKiKP 15 29 39.5 -0.1**
ZST *e* 15 29 50.2
MDVR Moldovita 151.84 325 ⇓P **PKPbc 15 29 39.5 -0.9**
KHC Kasperske Hory 151.91 340 PKPbc 15 29 40.0 -0.4
KHC **PKPab 15 29 53.0 +0.7**
KHC Kasperske Hory 151.91 340 ⇑ *e*PKP **PKPbc 15 29 40.3 -0.1**
KHC *e*PKPAB **PKPab 15 29 52.9 +0.6**
CKRC Cesky Krumlov 151.94 339 ⇑ *e*PKP **PKPbc 15 29 40.4 -0.1**
CKRC *e*PKPAB **PKPab 15 29 52.8 +0.4**
BLKB Belogradchik 152.06 322 ⇓P **PKPbc 15 29 40.8 -0.2**
GEC2 GERESS Array S 152.12 339 PKPdf **PKPdf 15 29 33.2 -0.5**
GEC2 **PKiKP 15 29 41.3 +0.2**
GEC2 PKPab **PKPab 15 29 51.8 -1.5**
GERES GERESS Array B 152.12 339 PKP **PKPdf 15 29 32.3 -1.5**
comp=Z,0.4nm,0.4s,baz=209,slow=1.4,SNR=4.7
GERES PKPbc **PKPbc 15 29 41.0 0.0**
comp=Z,4.1nm,0.7s,baz=54,slow=2.3,SNR=26
GERES PKPab **PKPab 15 29 52.8 -0.5**
comp=Z,2.2nm,0.7s,baz=44,slow=4.1,SNR=10
GERES GERESS Array B 152.12 339 PKPdf **PKPdf 15 29 32.8 -1.0**
GERES **PKPbc 15 29 40.6 -0.3**
GERES PKPab **PKPab 15 29 52.4 -0.9**
CONA Conrad Observa 152.14 336 *e*P **PKPdf 15 29 33.7 -0.1**
comp=Z,1.9nm,0.8s
CONA *i* P **PKiKP 15 29 41.3 +0.1**
comp=Z,5.7nm,0.6s,SNR=4.3
CONA *i* P **PKPab 15 29 54.4 +1.0**
comp=Z,11nm,0.7s
RONA Rosalia, Austr 152.16 335 *i* P **PKiKP 15 29 41.3 +0.1**
comp=Z,7.6nm,0.5s,SNR=6.9
RONA *e*P **PKPab 15 29 55.0 +1.5**
comp=Z,15nm,1.1s
BEBN Eben Emael 152.17 351 *d*PKPab **PKPab 15 29 52.9 -0.3**
MEM Membach 152.30 351 *d*PKiKP **PKPbc 15 29 40.7 -0.5**
MEM *d*PKPab **PKPab 15 29 52.5 -1.3**
BTNL Ternell 152.31 351 *d*PKiKP **PKiKP 15 29 41.2 -0.2**
MORH Mrgy, Hungar 152.34 330 ⇓P **PKPdf 15 29 30.0 -4.0**
VTS Vitosha 152.35 320 ⇓P **PKiKP 15 29 42.0 +0.1**
VTS Vitosha 152.35 320 PKPbc 15 29 41.4 -0.4
BSTI Sart Tilman 152.39 351 *d*PKPab **PKPab 15 29 54.3 0.0**
BHOU Houvegnez 152.55 351 *d*PKPab **PKPab 15 29 55.4 +0.4**
FRGS Fruska Gora 152.56 327 ⇓P **PKiKP 15 29 42.1 0.0**
BCLA Clavier 152.59 352 *d*PKiKP **PKiKP 15 29 42.2 +0.3**
BCLA *d*PKPab **PKPab 15 29 54.8 -0.3**
BMRD Maredsous 152.77 352 *d*PKiKP **PKPbc 15 29 42.1 -0.1**
BMRD *d*PKPab **PKPab 15 29 55.0 -0.8**
ARSA Arzberg 152.83 335 *i* P **PKPbc 15 29 41.9 -0.6**
comp=Z,3.1nm,0.8s
ARSA *e*P **PKPab 15 29 56.9 +0.6**
comp=Z,5.4nm,0.7s
RCHB Rochefort 152.86 352 *d*PKPab **PKPab 15 29 55.6 -0.6**
DOU Dourbes 153.00 352 *d*PKiKP **PKiKP 15 29 42.7 -0.1**
DOU *d*PKPab **PKPab 15 29 56.8 0.0**
BIOA Bad Ischl, Aus 153.14 338 *e*P **PKPab 15 29 58.4 +0.8**
comp=Z,4.9nm,0.5s
WLF Walferdange 153.20 350 *d*PKiKP **PKiKP 15 29 44.2 +1.0**
WLF *d*PKPab **PKPab 15 29 57.8 +0.1**
DIVS Divibare 153.21 326 PKPdf **PKPdf 15 29 33.5 -1.9**
DIVS **PKPab 15 29 58.2 +0.1**
SOKA Soboth 153.49 335 *e*P **PKPbc 15 29 43.7 -0.3**
comp=Z,4.6nm,1.0s
SOKA P **PKPab 15 29 59.4 +0.2**
comp=Z,9.1nm,1.0s,SNR=4.4
KBA Koelnbreinsper 153.77 338 *e*P **PKPab 15 30 01.7 +1.2**
comp=Z,4.5nm,0.6s
MYKA Terra Mystica 154.05 337 *e*P **PKPbc 15 29 43.7 -1.5**
comp=Z,3.3nm,0.6s
MYKA *e*P **PKPab 15 30 01.5 -0.1**
comp=Z,6.8nm,0.6s
BFO Black Forest 154.06 346 PKPdf **PKPdf 15 29 35.7 -0.7**
BFO PKPab **PKPab 15 30 00.1 -1.4**
WATA Walderalm 154.12 341 *e*P **PKPab 15 30 02.5 +0.6**
comp=Z,6.2nm,0.7s
WTTA Wattenberg 154.17 340 *e*P **PKPab 15 30 03.0 +0.8**
comp=Z,9.5nm,0.6s
RETA Reutte 154.23 342 *e*P **PKPab 15 30 03.1 +0.8**
comp=Z,18nm,1.2s
PRED Cave del Predi 154.24 337 PKPab **PKPab 15 30 01.6 -0.8**
MOTA Moosalm 154.26 341 *e*P **PKPdf 15 29 36.6 -0.3**
comp=Z,5.6nm,0.9s
MOTA *e*P **PKiKP 15 29 45.5 -0.1**
comp=Z,5.3nm,0.9s
MOTA *e*P **PKPab 15 30 03.1 +0.6**
comp=Z,15nm,1.1s
SQTA Sankt Quirin 154.34 341 *e*P **PKPab 15 30 03.7 +0.8**
comp=Z,14nm,1.0s
ABTA Abfaltersbach 154.34 339 *e*P **PKPab 15 30 02.7 -0.1**
comp=Z,8.6nm,0.8s
ECH Echery 154.42 348 PKPab 15 30 02.5 -0.5
DAVA Damuels 154.66 343 *e*P **PKPab 15 30 04.9 +0.7**
comp=Z,7.4nm,0.5s
FETA Feichten 154.66 341 *e*P **PKPdf 15 29 37.1 -0.4**
comp=Z,5.0nm,1.0s
FETA *e*P **PKPab 15 30 05.5 +1.2**
comp=Z,9.4nm,1.1s
CLF Chambon-Foret 155.28 355 PKPab **PKPab 15 30 07.2 +0.5**
SENIN Lac Senin/Sane 156.15 346 PKPab **PKPab 15 30 11.1 +0.3**
ESDC Sonseca Array 163.52 9 PKPab **PKPab 15 30 43.1 +0.2**
comp=Z,4.0nm,1.1s,baz=348,slow=4.1,SNR=11
ESDC Sonseca Array 163.52 9 PKPab **PKPab 15 30 42.8 -0.2**
KEST Kesra 164.88 327 PKPab **PKPab 15 30 49.4 +0.2**
comp=Z,4.8nm,0.9s,baz=296,slow=4.6,SNR=3.6
TORD Torodi Ar. Bea 169.57 193 PKP **PKPdf 15 29 51.9 -1.0**
comp=Z,3.7nm,1.1s,baz=354,slow=0.8,SNR=10.0

IDC 25 15:18:29.1±18.0, 0°.44S×129°.77E, h0km, mb3.7/2, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=283.9km s-min=184.1km az=143.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.89**	**167**	P	P	15 23 02.0	-0.3
	0.1nm,0.3s,baz=347,slow=10,SNR=2.5						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**23.43**	**170**	P	P	15 23 40.8	+0.6
	1.1nm,0.7s,baz=349,slow=10,SNR=6.8						
	1.1nm,0.7s						
STKA	**Stephens Creek**	**33.20**	**161**	P	P	15 25 07.4	-0.5
	1.4nm,0.9s,baz=311,slow=11,SNR=1.7						
	1.4nm,0.9s						

ROM 25 15:21:47.5±0.4, 42°.51N±0°.02×13°.09E±0°.02, h8km±1km, ML1.5/3, Error ellipse: s-maj=2.6km s-min=1.1km az=195.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.10**	**340**	P	Pg	15 21 49.4	-0.5
LNSS				S	Sg	15 21 52.3	+0.6
LNSS				AML	AML		
	comp=E,306μm,1.3s						
LNSS				AML	AML		
	comp=N,332μm,0.3s						
LNSS				AML	AML		
	comp=E,7165μm,0.2s						
LNSS				AML	AML		
	comp=N,6800μm,0.3s						
LNSS				AML	AML		
	comp=N,6805μm,0.3s						
LNSS				AML	AML		
	comp=E,7170μm,0.2s						
LNSS				AML	AML		
	comp=E,270μm,0.2s						
LNSS				AML	AML		
	comp=N,290μm,0.1s						
LNSS				AML	AML		
	comp=N,272μm,0.1s						
RM33	**Pellescritta (**	**0.10**	**92**	P	Pg	15 21 49.7	-0.2
RM33				S	Sg	15 21 52.7	+1.0
RM33				AML	AML		
	comp=E,649μm,1.0s						
RM33				AML	AML		
	comp=N,590μm,0.3s						
RM33				AML	AML		
	comp=E,604μm,1.0s						
RM33				AML	AML		
	comp=N,616μm,1.1s						
RM33				AML	AML		
	comp=E,3285μm,1.5s						
RM33				AML	AML		
	comp=N,2085μm,1.2s						
RM33				AML	AML		
	comp=E,3240μm,1.5s						
RM33				AML	AML		
	comp=E,3280μm,1.5s						
RM33				AML	AML		
	comp=N,2080μm,1.2s						
RM33				AML	AML		
	comp=E,603μm,0.2s						
RM33				AML	AML		
	comp=E,288μm,0.2s						
RM33				AML	AML		
	comp=N,591μm,0.2s						
RM33				AML	AML		
	comp=N,590μm,0.2s						
RM33				AML	AML		
	comp=E,601μm,0.2s						
RM33				AML	AML		
	comp=N,2090μm,1.2s						
ARRO	**Arrone**	**0.24**	**286**	P	Pg	15 21 52.6	+0.3
ARRO				S	Sg	15 21 58.2	+2.5
ARRO				AML	AML		
	comp=E,41μm,1.5s						
ARRO				AML	AML		
	comp=N,48μm,0.2s						
ARRO				AML	AML		
	comp=E,724μm,0.5s						
ARRO				AML	AML		
	comp=E,724μm,0.5s						
ARRO				AML	AML		
	comp=N,779μm,0.5s						
ARRO				AML	AML		
	comp=E,34μm,0.2s						
TERO	**Teramo**	**0.40**	**74**	AML	AML		
	comp=E,2400μm,1.1s						
TERO				AML	AML		
	comp=E,390μm,0.3s						
TERO				AML	AML		
	comp=N,357μm,0.7s						
TERO				AML	AML		
	comp=E,2520μm,0.4s						
TERO				AML	AML		
	comp=N,2485μm,0.5s						
TERO				AML	AML		
	comp=E,2395μm,1.1s						
TERO				AML	AML		
	comp=N,2355μm,0.5s						
TERO				AML	AML		
	comp=N,248μm,0.1s						
TERO				AML	AML		
	comp=N,309μm,0.1s						
TERO				AML	AML		
	comp=E,334μm,0.1s						
TERO				AML	AML		
	comp=E,253μm,0.1s						
FDMO	**Fiordimonte**	**0.52**	**0**	P	Pb	15 21 59.0	+0.1
FDMO				S	Sb	15 22 05.9	-0.8
CSP1	**Cessapalombo**	**0.58**	**9**	P	Pg	15 21 59.4	+0.6
CSP1				S	Sb	15 22 07.7	-0.8
ASSB	**Assisi San Ben**	**0.61**	**329**	P	Pg	15 21 59.6	+0.3
EL6	**Elcito**	**0.82**	**1**	P	Pg	15 22 03.1	-0.1

ROM 25 15:22:30.0±0.1, 42°.843N±0°.004×13°.221E±0°.009, h8km, ML2.9/25, 16C-8D, Error ellipse: s-maj=0.6km s-min=0.4km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.07**	**342**	P	Pg	15 22 32.2	+0.1
MC2				S	Sg	15 22 34.0	+0.3
NRCA	**Norcia**	**0.08**	**263**	P	Pg	15 22 32.5	+0.5
NRCA				S	Sg	15 22 34.3	+0.7
NRCA				AML	AML		
NRCA				AML	AML		
	comp=E,68000μm,0.8s						
NRCA				AML	AML		
	comp=E,67900μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
FEMA	**Monte Fema**	**0.17**	**313**	P	Pg	15 22 34.2	+0.6
FEMA				S	Sg	15 22 37.4	+1.3
FEMA				AML	AML		
	comp=E,10080μm,0.8s						
FEMA				AML	AML		
	comp=N,5780μm,0.5s						
FEMA				AML	AML		
	comp=N,5780μm,0.5s						
FEMA				AML	AML		
	comp=E,10040μm,0.8s						
FDMO	**Fiordimonte**	**0.22**	**333**	P	Pg	15 22 34.7	+0.3
FDMO				S	Sg	15 22 38.7	+1.4
FDMO				AML	AML		
	comp=N,8205μm,0.5s						
FDMO				AML	AML		
	comp=E,5760μm,0.2s						
CSP1	**Cessapalombo**	**0.25**	**357**	P	Pg	15 22 35.4	+0.4
CSP1				S	Sg	15 22 39.6	+1.2
CSP1				AML	AML		
	comp=N,8340μm,0.9s						
CSP1				AML	AML		
	comp=E,7365μm,0.3s						
LNSS	**Leonessa**	**0.28**	**209**	P	Pg	15 22 36.2	+0.8
LNSS				S	Sb	15 22 41.5	-0.6
LNSS				AML	AML		
	comp=E,7165μm,0.2s						
LNSS				AML	AML		
	comp=N,6800μm,0.3s						
LNSS				AML	AML		
	comp=E,7170μm,0.2s						
CESI	**CESI - Serrava**	**0.28**	**305**	⇓P	Pg	15 22 36.2	+0.6
CESI				S	Sb	15 22 41.2	-1.1
CESI				AML	AML		
	comp=E,2990μm,0.4s						
CESI				AML	AML		
	comp=N,4005μm,0.5s						
RM33	**Pellescritta (**	**0.33**	**181**	P	Pg	15 22 37.4	+0.8
RM33				S	Sb	15 22 43.1	-0.7
RM33				AML	AML		
	comp=N,2080μm,1.2s						
RM33				AML	AML		
	comp=N,2080μm,1.2s						
RM33				AML	AML		
	comp=N,2085μm,1.2s						
RM33				AML	AML		
	comp=E,3285μm,1.5s						
RM33				AML	AML		
	comp=E,3240μm,1.5s						
RM33				AML	AML		
	comp=E,3280μm,1.5s						
RM33				AML	AML		
	comp=N,2085μm,1.2s						
RM33				AML	AML		
	comp=N,2090μm,1.2s						
CAMP	**Campotosto**	**0.34**	**156**	P	Pg	15 22 37.2	+0.6
CAMP				S	Sb	15 22 43.0	-0.9
CAMP				AML	AML		
	comp=N,2210μm,1.5s						
CAMP				AML	AML		
	comp=E,2370μm,0.5s						
MNTP	**Montappone**	**0.35**	**32**	P	Pb	15 22 37.9	-0.5
MNTP				S	Sb	15 22 44.5	+0.5
MNTP				AML	AML		
	comp=E,5790μm,0.5s						
MNTP				AML	AML		
	comp=N,4280μm,0.4s						
MNTP				AML	AML		
	comp=E,5785μm,0.5s						
OFFI	**Offida**	**0.35**	**75**	P	Pb	15 22 38.4	-0.1
OFFI				S	Sb	15 22 45.5	+1.2
OFFI				AML	AML		
	comp=E,6005μm,0.7s						
OFFI				AML	AML		
	comp=N,9000μm,0.5s						
TERO	**Teramo**	**0.36**	**128**	P	Pg	15 22 37.5	+0.5
TERO				S	Sb	15 22 43.8	-0.7
TERO				AML	AML		
	comp=E,2400μm,1.1s						

TERO					AML	AML				
	comp=E,2395µm,1.1s									
TERO					AML	AML				
	comp=E,2520µm,0.4s									
TERO					AML	AML				
	comp=N,2485µm,0.5s									
TERO					AML	AML				
	comp=N,2355µm,0.5s									
SEF1	**Sefro**	**0.36**	**327**	P	Pg	15 22 37.5	+0.4			
SEF1				S	Sb	15 22 44.0	-0.6			
SEF1				AML	AML					
	comp=E,4700µm,0.5s									
SEF1				AML	AML					
	comp=N,4405µm,0.9s									
SEF1				AML	AML					
	comp=N,4410µm,0.9s									
GAG1	**Gagliole**	**0.41**	**344**	P	Pg	15 22 38.5	+0.5			
GAG1				S	Sb	15 22 45.3	-0.6			
GAG1				AML	AML					
	comp=N,6540µm,0.6s									
GAG1				AML	AML					
	comp=E,5855µm,1.6s									
GAG1				AML	AML					
	comp=N,6540µm,0.6s									
ARRO	**Arrone**	**0.43**	**232**	P	Pg	15 22 38.8	+0.6			
ARRO				S	Sb	15 22 47.0	+0.7			
ARRO				AML	AML					
	comp=E,724µm,0.5s									
ARRO				AML	AML					
	comp=E,724µm,0.5s									
ARRO				AML	AML					
	comp=N,779µm,0.5s									
ASSB	**Assisi San Ben**	**0.46**	**296**	P	Pg	15 22 39.2	+0.3			
ASSB				S	Sb	15 22 46.6	-0.7			
ASSB				AML	AML					
	comp=E,1410µm,0.4s									
ASSB				AML	AML					
	comp=N,1600µm,0.6s									
GIGS	**Gran Sasso**	**0.47**	**147**	P	Pg	15 22 39.4	+0.4			
GIGS				S	Sb	15 22 46.6	-1.1			
GIGS				AML	AML					
	comp=E,356µm,0.5s									
GIGS				AML	AML					
	comp=N,308µm,1.0s									
GIGS				AML	AML					
	comp=E,356µm,0.5s									
GIGS				AML	AML					
	comp=N,308µm,1.0s									
EL6	**Elcito**	**0.49**	**350**	P	Pg	15 22 39.8	+0.3			
EL6				S	Sb	15 22 48.1	-0.3			
EL6				AML	AML					
	comp=N,2130µm,0.7s									
EL6				AML	AML					
	comp=N,2135µm,0.7s									
EL6				AML	AML					
	comp=E,2540µm,1.3s									
EL6				AML	AML					
	comp=E,2530µm,1.3s									
AQU	**L'Aquila**	**0.51**	**165**	S	Sb	15 22 49.0	+0.3			
TRTR	**Tortoreto Alta**	**0.51**	**94**	⇑P	Pb	15 22 41.7	+0.5			
TRTR				AML	AML					
	comp=E,5005µm,0.7s									
TRTR				AML	AML					
	comp=N,5950µm,0.7s									
CESX	**Cesi**	**0.53**	**244**	⇑P	Pg	15 22 40.5	+0.3			
CESX				AML	AML					
	comp=N,971µm,0.8s									
CESX				AML	AML					
	comp=E,922µm,0.7s									
CING	**Cingoli**	**0.53**	**358**	P	Pg	15 22 40.5	+0.2			
CING				S	Sb	15 22 49.2	-0.3			
CING				AML	AML					
	comp=E,1520µm,0.5s									
CING				AML	AML					
	comp=N,1520µm,0.6s									
FIAM	**Fiamignano**	**0.58**	**188**	⇑P	Pg	15 22 41.5	+0.4			
FIAM				S	Sb	15 22 51.0	+0.1			
FIAM				AML	AML					
	comp=N,712µm,0.6s									
FIAM				AML	AML					
	comp=E,1098µm,0.6s									
FAGN	**Fagnano**	**0.64**	**155**	⇑P	Pb	15 22 43.0	-0.3			
FAGN				S	Sb	15 22 54.0	+1.6			
FAGN				AML	AML					
	comp=N,1855µm,0.5s									
FAGN				AML	AML					
	comp=E,2570µm,0.4s									
VCEL	**Villa Celiera**	**0.64**	**134**	⇓P	Pg	15 22 42.8	+0.5			
VCEL				AML	AML					
	comp=E,1208µm,0.5s									
VCEL				AML	AML					
	comp=N,1118µm,0.6s									
VCEL				AML	AML					
	comp=N,1118µm,0.6s									
VCEL				AML	AML					
	comp=E,1206µm,0.5s									
ARVD	**Arcevia**	**0.69**	**343**	⇓P	Pg	15 22 43.2	+0.1			
ARVD				S	Sb	15 22 55.0	+1.1			
ARVD				AML	AML					
	comp=E,895µm,1.6s									
ARVD				AML	AML					
	comp=N,468µm,0.7s									
T0110	**Collepietro**	**0.74**	**146**	⇓P	Pg	15 22 44.2	0.0			
T0110				AML	AML					
	comp=E,1720µm,0.5s									
T0110				AML	AML					
	comp=N,1605µm,0.5s									
FRON	**Frontone**	**0.77**	**332**	⇑P	Pg	15 22 44.6	-0.1			
FRON				AML	AML					
	comp=N,830µm,0.6s									
FRON				AML	AML					
	comp=E,566µm,1.5s									
MGAB	**Montegabbione**	**0.82**	**275**	⇑P	Pb	15 22 47.1	+0.7			
MGAB				AML	AML					
	comp=E,635µm,0.6s									
MGAB				AML	AML					
	comp=N,1350µm,0.5s									
MGAB				AML	AML					
	comp=E,761µm,0.6s									
MGAB				AML	AML					
	comp=E,636µm,0.6s									
MGAB				AML	AML					
	comp=N,1345µm,0.5s									
MGAB				AML	AML					
	comp=N,1400µm,0.5s									
ATMI	**Monte Miggiano**	**0.85**	**305**	S	Sn	15 23 02.0	+0.9			
PIEI	**Pieia**	**0.85**	**324**	P	Pg	15 22 46.4	0.0			
PIEI				S	Sn	15 23 01.0	-0.1			
PIEI				AML	AML					
	comp=E,395µm,0.4s									
PIEI				AML	AML					
	comp=N,257µm,1.4s									
FSSB	**Fossombrone**	**0.91**	**339**	⇑P	Pg	15 22 47.6	+0.2			
FSSB				S	Sn	15 23 04.0	+1.6			
FSSB				AML	AML					
	comp=E,954µm,1.0s									
FSSB				AML	AML					
	comp=N,1295µm,0.3s									
CERT	**Cerreto**	**0.91**	**191**	⇑P	Pb	15 22 48.0	-0.1			
CERT				AML	AML					
	comp=N,424µm,0.9s									
CERT				AML	AML					
	comp=E,873µm,0.5s									
SACS	**San Casciano d**	**0.96**	**271**	⇑P	Pn	15 22 50.5	+0.6			
SACS				AML	AML					
	comp=N,304µm,0.9s									
SACS				AML	AML					
	comp=E,278µm,0.9s									
INTR	**Introdacqua**	**0.97**	**148**	⇓P	Pg	15 22 48.2	-0.5			
INTR				AML	AML					
	comp=E,324nm,0.9s									
INTR				AML	AML					
	comp=N,475nm,0.8s									
INTR				AML	AML					
	comp=E,349µm,1.0s									
INTR				AML	AML					
	comp=E,350µm,1.0s									
INTR				AML	AML					
	comp=N,646µm,0.8s									
BADI	**Badiali**	**0.98**	**313**	⇓P	Pg	15 22 48.7	0.0			
PE3	**Peglio**	**1.00**	**328**	⇓P	Pg	15 22 49.4	+0.1			
RCAV	**Rocca di Cave**	**1.02**	**192**	P	Pn	15 22 51.8	+1.2			
CAFI	**Castiglion Fio**	**1.04**	**298**	⇑P	Pg	15 22 49.9	0.0			
CAFI				AML	AML					
	comp=E,212µm,0.6s									
CAFI				AML	AML					
	comp=N,216µm,0.9s									
LPEL	**Lama dei Pelig**	**1.07**	**138**	P	Pb	15 22 50.7	0.0			
LPEL				AML	AML					
	comp=N,336µm,0.7s									
LPEL				AML	AML					
	comp=E,380µm,1.2s									
RMP	**Rome, Mte Porz**	**1.10**	**201**	P	Pg	15 22 49.5	-1.5			
RMP				AML	AML					
	comp=E,475µm,0.6s									
RMP				AML	AML					
	comp=N,510µm,0.5s									
RMP				AML	AML					
	comp=E,476µm,0.6s									
DUGI	**Dugi Otok**	**1.76**	**49**	*e*Pn	Pg	15 23 03.2	-0.6			
PTRJ	**Pietraroja**	**1.77**	**146**	P	Pn	15 23 01.3	+0.3			
VIRC	**Vir**	**1.97**	**42**	*e*Pn	Pn	15 23 04.2	+0.6			
VIRC				Sn	Sn	15 23 29.4	+1.0			
NVLJ	**Novalja**	**2.10**	**34**	*e*Pn	Pn	15 23 05.5	+0.2			
NVLJ				Sn	Sn	15 23 32.8	+1.2			
SGRT	**San Giovanni R**	**2.17**	**119**	P	Pn	15 23 07.9	+1.5			
SGRT				AML	AML					
	comp=E,122µm,1.6s									
SGRT				AML	AML					
	comp=N,126µm,0.7s									
CELB	**S.Piero in Cam**	**2.22**	**269**	S	Sg	15 23 42.0	+0.8			
GSCL	**Gusciola**	**2.44**	**309**	⇑P	Pg	15 23 17.6	+1.0			
GSCL				S	Sb	15 23 43.0	-1.2			
CAVE	**Cavezzo**	**2.58**	**322**	S	Sg	15 23 53.0	+0.1			
KIJV	**Kijevo**	**2.59**	**62**	*e*Pn	Pn	15 23 13.5	+1.3			
RICI	**Ricice**	**2.94**	**76**	*e*Pn	Pn	15 23 18.6	+1.6			
DOSS	**Dosso del Somm**	**3.37**	**335**	⇑P	Pn	15 23 26.1	+3.1			
LEOD	**Capriano del C**	**3.44**	**321**	S	Sg	15 24 18.0	-2.3			
LUSI	**Trento, Gardas**	**3.52**	**333**	⇓P	Pn	15 23 27.9	+2.9			
ZOU	**Zoufplan**	**3.72**	**357**	⇑P	Pn	15 23 28.9	+1.1			
ZOU				AML	AML					
	comp=N,39µm,1.0s									
ZOU				AML	AML					
	comp=E,30µm,1.0s									
EUCT	**Pavia**	**3.77**	**310**	S	Sb	15 24 21.0	-1.7			
MYKA	**Terra Mystica**	**3.80**	**4**	*e*Pn	Pn	15 23 30.6	+1.7			
	comp=E,0.6nm,0.2s									
QLNO	**Quiliano**	**3.84**	**294**	⇑P	Pb	15 23 37.2	-0.8			
ABTA	**Abfaltersbach**	**3.94**	**353**	*e*Pn	Pn	15 23 32.8	+2.0			
	comp=E,10nm,0.5s									
RISI	**Rein**	**4.18**	**349**	⇑P	Pg	15 23 48.2	-1.9			
KBA	**Koelnbreinsper**	**4.24**	**1**	*i* Pn	Pn	15 23 36.4	+1.5			
	comp=E,1.5nm,0.5s									
IST3	**Stromboli F**	**4.32**	**159**	S	Sn	15 24 23.0	-3.5			
FETA	**Feichten**	**4.54**	**338**	*e*Pn	Pn	15 23 43.5	+4.4			
	comp=E,1.4nm,0.4s									
MOTA	**Moosalm**	**4.74**	**342**	*e*Pn	Pn	15 23 47.1	+5.2			
VLO	**Vlora**	**5.26**	**115**	⇑P	Pn	15 23 53.6	+4.7			

*MAN **25** 15:26:34, 13.′99N×120.′41E, h79km, Ms2.9*
*IDC **25** 15:26:35.5±4.0, 14.′24N×120.′23E, h66km±45km, mb3.1/6, mbtmp3.4/6, MS2.8/1, Error ellipse: s-maj=102.1km s-min=19.8km az=65.0*
ISC 25 15:26:36.1±0.8**, 14.′06N**±0.′07×**120.′33E**±0.′08**, h82**km±7km**, n14**, σ2°02/21**, mb3.5/6, 2C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.34**	**193**	⇑*i*P	**Pn**	**15 26 49.4**	**+0.5**
LUBP				*i* S	**Sn**	**15 26 59.9**	**+1.7**
TGY	**Tagaytay City**	**0.59**	**86**	P	**Pn**	**15 26 51.0**	**0.0**
	baz=90,slow=0.3						
TGY				S	**Sn**	**15 27 02.5**	**+0.6**
	baz=90,slow=19						
TGY	**Tagaytay City**	**0.59**	**86**	⇓e P	**Pn**	**15 26 50.0**	**-0.9**
TGY				eS	**Sn**	**15 27 02.5**	**+0.6**
PGP	**Puerto Galera**	**0.82**	**132**	⇑e P	**Pn**	**15 26 50.9**	**-2.4**
PGP				*i* S	**Sn**	**15 27 03.2**	**-3.0**
LQP	**Lukban**	**1.18**	**87**	⇓*i* P	**Pn**	**15 26 56.3**	**-1.4**
LQP				*i* S	**Sn**	**15 27 19.2**	**+5.5**
PCPH	**Palayan**	**1.67**	**26**	⇓e P	**Pn**	**15 27 03.1**	**-0.6**
PCPH				eS	**Sn**	**15 27 24.6**	**0.0**
GQP	**Guinayangan**	**2.06**	**94**	⇓*i* P	**Pn**	**15 27 07.7**	**-1.2**
MJAR	**Matsushiro Arr**	**27.52**	**32**	LR	LR	15 44 54.1	
	comp=Z,17nm,18.1s,baz=246,slow=40						
SONM	**Songino Array**	**35.61**	**344**	P	**P**	**15 33 25.0**	**-1.0**
	0.7nm,0.6s,baz=170,slow=8.9,SNR=4.0						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**36.50**	**157**	P	**P**	**15 33 35.6**	**+1.9**
	0.3nm,0.9s,baz=334,slow=9.5,SNR=1.7						
WRA				pP	**pP**	**15 33 51.9**	**-0.8**
	0.4nm,0.7s,baz=339,slow=9.7,SNR=2.1						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**39.78**	**160**	P	**P**	**15 34 04.3**	**+3.1**
	0.2nm,0.9s,baz=335,slow=7.3,SNR=2.1						
ASAR				pP	**pP**	**15 34 19.9**	**-0.9**
	0.3nm,0.7s,baz=342,slow=6.9,SNR=6.3						
	0.2nm,0.9s						
MKAR	**Makanchi Array**	**45.53**	**324**	P	**P**	**15 34 47.0**	**-0.5**
	0.5nm,0.9s,baz=116,slow=8.8,SNR=2.3						
	0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**49.69**	**326**	P	**P**	**15 35 19.4**	**-0.2**
	0.2nm,0.4s,baz=121,slow=8.8,SNR=5.9						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**55.27**	**326**	P	**P**	**15 36 00.1**	**-0.8**
	0.4nm,0.4s,baz=108,slow=9.5,SNR=5.6						
	0.4nm,0.4s						

*ATH **25** 15:28:53.2, 37.′41N×20.′54E, h7km±3km, ML2.6/8, Error ellipse: s-maj=3.9km s-min=1.3km az=55.0*
*THE **25** 15:28:54.1, 37.′47N×20.′55E, h13km, ML2.7/7, Error ellipse: s-maj=1.2km s-min=0.6km az=27.0*
ISC 25 15:28:52.7±1.7**, 37.′41N**±0.′05×**20.′51E**±0.′06**, h9**km±10km**, n24, σ0°49/40, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.39**	**41**	P	**Pg**	**15 29 00.7**	**+0.3**
LTHK				S	**Sg**	**15 29 05.9**	**+0.3**
	1µm,0.3s						
LTHK	**Lithakia**	**0.39**	**41**	P	**Pg**	**15 29 00.8**	**+0.4**
LTHK				S	**Sg**	**15 29 05.4**	**-0.3**
LTHK				AML	AML	15 29 06.9	
	comp=E,2940µm,0.2s						
LTHK				AML	AML	15 29 07.0	
	comp=N,4521µm,0.4s						
PSDA	**Pessada-Kefalo**	**0.70**	**5**	P	**Pg**	**15 29 06.2**	**-0.1**
PSDA				S	**Sb**	**15 29 16.2**	**-0.6**
	comp=N,70nm,0.2s						
PSDA	**Pessada-Kefalo**	**0.70**	**5**	P	**Pg**	**15 29 06.2**	**-0.1**
PSDA				S	**Sb**	**15 29 16.6**	**-0.2**
VLS	**Valsamata**	**0.77**	**5**	P	**Pg**	**15 29 07.3**	**-0.2**
VLS				S	**Sg**	**15 29 17.9**	**+0.4**
	comp=N,358nm,0.2s						
VLS	**Valsamata**	**0.77**	**5**	P	**Pg**	**15 29 07.2**	**-0.2**
VLS				S	**Sb**	**15 29 18.1**	**-0.6**
VLS				AML	AML	15 29 18.6	
	comp=N,902µm,0.3s						
VLS				AML	AML	15 29 22.5	
	comp=E,504µm,0.2s						
KEF3	**Kipouria, Keph**	**0.80**	**351**	P	**Pg**	**15 29 08.4**	**+0.3**
KEF3				S	**Sg**	**15 29 19.0**	**+0.4**
	comp=E,2µm,0.5s						
KEF3	**Kipouria, Keph**	**0.80**	**351**	P	**Pg**	**15 29 08.2**	**+0.1**
KEF3				S	**Sb**	**15 29 20.9**	**+1.3**
DMLN	**Damoulianata-K**	**0.83**	**352**	P	**Pg**	**15 29 08.6**	**-0.1**
DMLN				S	**Sb**	**15 29 20.5**	**-0.1**
	comp=E,942nm,0.6s						
KEF4	**Livadi, Kephal**	**0.85**	**355**	P	**Pg**	**15 29 07.9**	**-1.1**
KEF4				S	**Sb**	**15 29 21.7**	**+0.7**
FSK	**Fiskardo**	**1.05**	**2**	P	**Pg**	**15 29 12.7**	**-0.1**
FSK				S	**Sg**	**15 29 26.5**	**+0.1**
	comp=E,368nm,0.6s						
FSK	**Fiskardo**	**1.05**	**2**	P	**Pg**	**15 29 12.9**	**+0.1**
FSK				S	**Sn**	**15 29 27.9**	**-0.2**
FSK				AML	AML	15 29 32.2	
	comp=N,843µm,0.7s						
FSK				AML	AML	15 29 36.0	
	comp=E,660µm,0.8s						
DRO	**Drossia**	**1.09**	**60**	P	**Pg**	**15 29 13.0**	**-0.7**
DRO				S	**Sb**	**15 29 28.3**	**+0.2**
	comp=E,418nm,0.6s						
DRO	**Drossia**	**1.09**	**60**	P	**Pg**	**15 29 13.5**	**-0.2**
DRO				S	**Sb**	**15 29 27.8**	**-0.3**
DRO				AML	AML	15 29 32.3	
	comp=E,1000µm,0.6s						
DRO				AML	AML	15 29 38.4	
	comp=N,722µm,0.4s						
PYL	**PYLOS**	**1.11**	**117**	P	**Pn**	**15 29 14.6**	**+0.3**
PYL	**PYLOS**	**1.11**	**117**	P	**Pb**	**15 29 13.1**	**-0.9**
PYL				S	**Sb**	**15 29 29.0**	**+0.5**
ITM	**Ithomi**	**1.15**	**101**	P	**Pn**	**15 29 15.7**	**+0.8**
ITM				AML	AML	15 29 35.4	
	comp=E,448µm,0.7s						
ITM				AML	AML	15 29 36.7	
	comp=N,395µm,0.8s						
EVGI	**Lefkada island**	**1.21**	**5**	P	**Pb**	**15 29 15.2**	**-0.6**
EVGI	**Lefkada island**	**1.21**	**5**	P	**Pb**	**15 29 15.1**	**-0.6**
EVGI				S	**Sn**	**15 29 32.8**	**+0.5**
LKD2	**Lefkada island**	**1.38**	**5**	P	**Pn**	**15 29 18.0**	**-0.1**
LKD2				AML	AML	15 29 44.5	
	comp=E,516µm,0.7s						
LKD2				AML	AML	15 29 45.6	
	comp=N,419µm,0.5s						
TSLK	**Tsoukalades, L**	**1.42**	**5**	P	**Pg**	**15 29 20.1**	**+0.3**
LAKA	**Lakka**	**1.43**	**54**	P	**Pb**	**15 29 19.3**	**-0.1**
LAKA				AML	AML	15 29 47.9	
	comp=E,905µm,1.0s						
LAKA				AML	AML	15 29 50.1	
	comp=N,777µm,0.7s						
KLV	**Kalavryta, Ach**	**1.44**	**64**	P	**Pn**	**15 29 19.3**	**+0.3**
KLV				AML	AML	15 29 48.0	
	comp=E,194µm,0.5s						
KLV				AML	AML	15 29 52.3	
	comp=N,170µm,0.7s						
PVO	**Paravola**	**1.45**	**33**	P	**Pn**	**15 29 19.2**	**+0.3**

*LDG **25** 15:30:35.5±0.3, 36.′94N×1.°67E, h47km, Ml3.5/25, Error ellipse: s-maj=7.1km s-min=3.6km az=154.0*
*CRAAG **25** 15:30:35.3, 36.′92N×1.°80E, Ml3.7*
*MDD **25** 15:30:35.6±0.3, 36.′94N×1.°68E, h47km±14km, Mb4.4/40, M_mb3.8/40, Error ellipse: s-maj=2.3km s-min=1.6km az=146.0*
*IGIL **25** 15:30:36.7, 36.′94N×1.°68E, h47km, ML2.9*
*INMG **25** 15:30:36.4±3.4, 37.′06N×1.°62E, h31km±12km, ML2.9, Error ellipse: s-maj=8.2km s-min=4.8km az=130.0*
*CNRM **25** 15:30:39.7, 37.′04N×1.°11E, h52km, ml3.4*
ISC 25 15:30:34.6±1.2**, 37.°08N**±0.′05×**1.°61E**±0.′05**, h35**km**, n100, σ2°34/178, 34C, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EBNR	**Beni Rached**	**0.79**	**184**	P	**Pn**	**15 30 50.5**	**+1.2**
ECHA	**Ech Chlef**	**0.94**	**192**	P	**Pn**	**15 30 50.0**	**-1.3**
ABA	**Alger-Bouzarea**	**1.18**	**103**	P	**Pn**	**15 30 54.2**	**-0.4**
EANR	**'Ain N'Sour**	**1.20**	**200**	P	**Pn**	**15 30 54.0**	**-0.9**
ADJB	**Djebel Djouab**	**1.74**	**121**	P	**Pn**	**15 31 04.0**	**+1.6**
EIBI	**Ibiza**	**1.96**	**354**	Pn	**Pn**	**15 31 07.3**	**+2.0**
EIBI				⇑*i*Vmb_V		15 31 07.9	
	10µm,SNR=72						
EIBI				Sn	**Sn**	**15 31 28.7**	**0.0**
AKET	**Djebel Ketaf**	**2.10**	**119**	P	**Pn**	**15 31 09.0**	**+1.6**
EBEN2	**Beniarda presa**	**2.14**	**319**	Pn	**Pn**	**15 31 08.9**	**+1.1**
EBEN2				⇑*i*Vmb_V		15 31 10.3	
	5µm,SNR=18						
EBEN2				Sn	**Sn**	**15 31 34.4**	**+1.3**
CART	**Cartagena**	**2.14**	**285**	P	**Pn**	**15 31 08.0**	**+0.2**
CART				S	**Sn**	**15 31 30.1**	**-3.0**
AFON	**Font Roja**	**2.32**	**314**	Pn	**Pn**	**15 31 11.7**	**+1.3**
AFON				⇑*i*Vmb_V		15 31 15.9	
	960nm,SNR=7.5						
AFON				Sn	**Sn**	**15 31 39.4**	**+1.5**
EMUR	**La Murta**	**2.39**	**290**	Pn	**Pn**	**15 31 13.7**	**+2.5**
EMUR				⇑*i*Vmb_V		15 31 16.5	
	152nm,SNR=1.3						
EMUR				Sn	**Sn**	**15 31 39.7**	**+0.4**
TLOR	**Lorca, Murcia**	**2.69**	**283**	Pn	**Pn**	**15 31 16.4**	**+1.0**
TLOR				Sn	**Sn**	**15 31 45.1**	**-1.6**
EZAR	**Zarzadilla de**	**2.74**	**288**	Pn	**Pn**	**15 31 16.7**	**+0.5**
EZAR				Sn	**Sn**	**15 31 46.9**	**-1.3**
ETOS	**Mallorca**	**2.85**	**19**	Pn	**Pn**	**15 31 18.4**	**+0.8**
ETOS				⇑*i*Vmb_V		15 31 19.3	
	2µm,SNR=14						
ETOS				Sn	**Sn**	**15 31 50.2**	**-0.5**
ECOL	**Islas Columbre**	**2.91**	**346**	Pn	**Pn**	**15 31 19.7**	**+1.3**
ECOL				Sn	**Sn**	**15 31 52.3**	**+0.2**
ETOB	**Tobarra**	**2.94**	**303**	Pn	**Pn**	**15 31 21.4**	**+2.4**
ETOB				⇑*i*Vmb_V		15 31 22.0	
	1µm,SNR=16						
ETOB				Sn	**Sn**	**15 31 54.9**	**+1.8**
ENIJ	**Nijar**	**3.05**	**269**	Pn	**Pn**	**15 31 19.8**	**-0.6**
ENIJ				⇑*i*Vmb_V		15 31 21.1	
	430nm,SNR=1.8						
ENIJ				Sn	**Sn**	**15 31 52.3**	**-3.3**
ECHE	**Chera**	**3.22**	**322**	Pn	**Pn**	**15 31 24.9**	**+2.1**
ECHE				⇑*i*Vmb_V		15 31 27.0	
	941nm,SNR=9.3						
ECHE				Sn	**Sn**	**15 32 01.4**	**+1.4**
EBER	**Berja**	**3.60**	**269**	Pn	**Pn**	**15 31 28.1**	**0.0**
EBER				⇑*i*Vmb_V		15 31 31.0	
	380nm,SNR=2.0						
EBER				Sn	**Sn**	**15 32 07.1**	**-2.4**
EMOS	**Mosqueruela**	**3.66**	**334**	Pn	**Pn**	**15 31 30.8**	**+1.9**
EMOS				⇑*i*Vmb_V		15 31 32.3	
	2µm,SNR=37						
EMOS				Sn	**Sn**	**15 32 10.2**	**-0.8**
EQES	**Quesada**	**3.79**	**282**	Pn	**Pn**	**15 31 33.5**	**+2.9**
EQES				⇑*i*Vmb_V		15 31 37.1	
	402nm,SNR=5.3						
EQES				Sn	**Sn**	**15 32 14.8**	**+0.8**
TAF	**Taforalt**	**3.97**	**236**	P	**Pn**	**15 31 32.7**	**-0.3**
TAF				S	**Sn**	**15 32 15.2**	**-3.1**
ERTA	**Horta de San J**	**4.00**	**346**	Pn	**Pn**	**15 31 35.6**	**+2.2**
ERTA				⇑*i*Vmb_V		15 31 36.8	
	386nm,SNR=5.8						
ERTA				Sn	**Sn**	**15 32 18.7**	**-0.4**
EQUE	**Quentar**	**4.03**	**273**	Pn	**Pn**	**15 31 35.3**	**+1.3**
EQUE				⇑*i*Vmb_V		15 31 38.4	
	146nm,SNR=2.5						
EQUE				Sn	**Sn**	**15 32 20.0**	**0.0**
GOG	**Mont Gurugu**	**4.16**	**245**	P	**Pn**	**15 31 35.7**	**+0.1**
GOG				S	**Sn**	**15 32 20.2**	**-2.9**
ELGU	**Los Guajares,**	**4.19**	**269**	Pn	**Pn**	**15 31 36.6**	**+0.5**
ELGU				⇑*i*Vmb_V		15 31 39.7	
	572nm,SNR=5.2						
ELGU				Sn	**Sn**	**15 32 22.5**	**-1.5**
EPOB	**Poblet**	**4.29**	**355**	Pn	**Pn**	**15 31 39.6**	**+2.2**
EPOB				⇑*i*Vmb_V		15 31 40.8	
	399nm,SNR=7.8						
EPOB				Sn	**Sn**	**15 32 25.7**	**-0.6**
JBK	**JBK**	**4.36**	**232**	P	**Pn**	**15 31 39.1**	**+0.6**
JBK				S	**Sn**	**15 32 26.9**	**-1.3**
EGOR	**Sierra Gorda,**	**4.57**	**272**	Pn	**Pn**	**15 31 44.1**	**+2.7**
EGOR				⇑*i*Vmb_V		15 31 46.6	
	151nm,SNR=1.9						
EGOR				Sn	**Sn**	**15 32 31.3**	**-1.9**
ETOR	**Torete**	**4.70**	**324**	Pn	**Pn**	**15 31 47.1**	**+4.0**
ETOR				Sn	**Sn**	**15 32 37.8**	**+1.4**

ECHI ⇑*i*Vmb_V 15 32 02.2
57nm,SNR=1.4
ECHI Sn **Sn** **15 32 59.5 -1.3**
GUD **Guadarrama** **5.73 310** Pn **Pn** **15 31 59.7 +2.4**
GUD ⇑*i*Vmb_V 15 32 01.3
175nm,SNR=2.8
GUD Sn **Sn** **15 33 01.8 -0.1**
EPF **Esparros** **6.03 351** *e*Pn **Pn** **15 32 04.9 +3.6**
EPF *e*Sn **Sn** **15 33 08.2 -0.8**
5.4nm,0.2s
ETSF **Etsaut** **6.05 345** *e*Pn **Pn** **15 32 04.7 +3.1**
ETSF *e*Sn **Sn** **15 33 08.7 -0.9**
14nm,0.4s
EORO **Oroz-Betelu** **6.22 340** Pn **Pn** **15 32 07.5 +3.5**
EORO ⇑*i*Vmb_V 15 32 09.4
70nm,SNR=0.8
EORO Sn **Sn** **15 33 12.8 -1.1**
MTLF **Montolieu** **6.28 4** *e*Pn **Pn** **15 32 07.4 +2.8**
MTLF *e*Sn **Sn** **15 33 13.2 -1.9**
7.6nm,0.3s
SJPF **Ste Jean** **6.41 341** *e*Pn **Pn** **15 32 09.8 +3.3**
SJPF *e*Sn **Sn** **15 33 17.1 -1.2**
4.7nm,0.3s
EALK **Alkurruntz** **6.58 340** Pn **Pn** **15 32 11.8 +2.8**
EALK ⇑*i*Vmb_V 15 32 14.0
120nm,SNR=1.7
EALK Sn **Sn** **15 33 20.8 -2.0**
EMIN **Mina Concepcio** **6.62 278** Pn **Pn** **15 32 10.5 +1.0**
EMIN ⇑*i*Vmb_V 15 32 12.5
148nm,SNR=1.5
EMIN Sn **Sn** **15 33 21.4 -2.3**
MDT **Midelt** **6.64 232** P **Pn** **15 32 11.2 +1.4**
MDT S **Sn** **15 33 22.3 -1.9**
MD31 **MD31** **6.70 233** P **Pn** **15 32 11.8 +1.2**
MD31 S **Sn** **15 33 23.6 -2.1**
PBAR **Barrancos** **6.95 282** *e*P **Pn** **15 32 15.6 +1.7**
PBAR S **Sn** **15 33 29.2 -2.4**
PBAR A A 15 33 57.9
3.0nm,0.6s
EBAD **Badajoz** **7.02 286** Pn **Pn** **15 32 15.8 +0.9**
EBAD ⇑*i*Vmb_V 15 32 18.6
68nm,SNR=0.7
EBAD Sn **Sn** **15 33 30.3 -3.1**
LASF **Ste Croix** **7.20 13** *e*Pn **Pn** **15 32 18.9 +1.6**
LASF *e*Sn **Sn** **15 33 35.0 -2.8**
3.2nm,0.3s
EGRO **El Granado** **7.26 276** Pn **Pn** **15 32 18.7 +0.6**
EGRO ⇑*i*Vmb_V 15 32 21.3
102nm,SNR=0.4
EGRO Sn **Sn** **15 33 34.3 -4.9**
LMR **La Mourre** **7.29 29** *e*Pn **Pn** **15 32 20.3 +1.8**
LMR *e*Sn **Sn** **15 33 37.1 -2.9**
12nm,0.3s
PVAQ **Vaqueiros** **7.44 275** P **Pn** **15 32 21.5 +0.8**
PVAQ S **Sn** **15 33 40.7 -3.2**
PVAQ **Vaqueiros** **7.44 275** *e*P **Pn** **15 32 21.4 +0.7**
PVAQ S **Sn** **15 33 40.6 -3.2**
PVAQ A A 15 33 44.2
8.2nm,0.3s
PMRV **Marv??o** **7.46 291** S **Sn** **15 33 41.9 -2.3**
PMRV A A 15 34 27.4
3.8nm,0.5s
PESTR **Estremoz** **7.48 287** P **Pn** **15 32 20.2 -1.0**
PESTR S Sn 15 33 39.0 -5.8
PESTR **Estremoz** **7.48 287** *e*P **Pn** **15 32 23.1 +1.9**
PESTR S **Sn** **15 33 42.4 -2.4**
PESTR A A 15 34 24.2
3.4nm,0.6s
SMRF **Simiane la Rot** **7.53 22** *e*Pn **Pn** **15 32 25.1 +3.3**
SMRF *e*Sn **Sn** **15 33 43.6 -2.3**
1.3nm,0.3s
PBEJ **Beja** **7.58 280** S **Sn** **15 33 44.7 -2.6**
PBEJ A A 15 33 47.4
4.3nm,0.4s
PBDV **Barranco-do-Ve** **7.62 274** *e*P **Pn** **15 32 24.8 +1.7**
PBDV S **Sn** **15 33 45.8 -2.4**
PBDV A A 15 33 56.1
4.4nm,0.6s
PCVE **Castro Verde** **7.70 277** *e*P **Pn** **15 32 25.7 +1.5**
PCVE S **Sn** **15 33 48.1 -2.1**
PCVE A A 15 33 49.1
3.2nm,0.6s
EVO **Evora** **7.75 284** S **Sn** **15 33 49.5 -1.9**
CAF **Calviac** **7.85 2** *e*Pn **Pn** **15 32 29.6 +3.3**
CAF *e*Sn **Sn** **15 33 51.6 -2.2**
1.8nm,0.2s
MESJ **Messejana** **7.85 279** *e*P **Pn** **15 32 26.2 0.0**
MESJ *e*Sg **Sn** **15 33 51.0 -2.8**
MESJ IAML 15 33 54.2
comp=E,7.2nm,0.4s
MESJ **Messejana** **7.85 279** *e*P **Pn** **15 32 27.0 +0.7**
MESJ S **Sn** **15 33 51.3 -2.6**
MVO **Moncorvo** **7.85 304** *e*P **Pn** **15 32 28.5 +2.1**
MVO S **Sn** **15 33 51.6 -2.4**
MVO A A 15 33 56.0
comp=E,4.7nm,0.5s
LFF **La Frestale** **7.88 356** *e*Pn **Pn** **15 32 29.1 +2.4**
LFF *e*Sn **Sn** **15 33 52.5 -2.1**
comp=E,6.4nm,0.3s
PGF **Pioggiola** **7.89 44** *e*Pn **Pn** **15 32 27.9 +1.0**
PGF *e*Sn **Sn** **15 33 50.6 -4.3**
comp=E,5.7nm,0.2s
PBRG **Braganca** **8.00 309** *e*P **Pn** **15 32 30.7 +2.4**
PBRG S **Sn** **15 33 55.1 -2.4**
PBRG A A 15 34 39.3
comp=E,2.5nm,0.4s
PMTG **Montargil** **8.01 287** *e*P **Pn** **15 32 29.8 +1.4**
PMTG S **Sn** **15 33 54.3 -3.3**
PMTG A A 15 33 58.0
comp=E,4.0nm,0.5s
ECAL **Calabor** **8.07 310** Pn **Pn** **15 32 31.4 +2.1**
ECAL ⇑*i*Vmb_V 15 32 32.6
comp=E,468nm,SNR=4.6
ECAL Sn **Sn** **15 33 57.7 -1.7**
SBF **Sospel** **8.10 31** *e*Pn **Pn** **15 32 31.2 +1.4**
SBF *e*Sn **Sn** **15 33 56.0 -4.1**
comp=E,4.7nm,0.2s
VIVF **Saint-Julien-l** **8.11 16** *e*Pn **Pn** **15 32 32.1 +2.3**
VIVF *e*Sn **Sn** **15 33 57.3 -3.0**
comp=E,1.6nm,0.3s
EARI **Arriondas** **8.11 322** Pn **Pn** **15 32 33.4 +3.5**
EARI ⇑*i*Vmb_V 15 32 34.7
comp=E,201nm,SNR=1.0
EARI Sn **Sn** **15 33 56.6 -3.7**
MORF **Marmelete** **8.19 275** S **Sn** **15 33 59.6 -2.7**
MORF A A 15 34 03.3
comp=E,4.2nm,0.2s
RJF **Les Rejaudoux** **8.22 360** *e*Pn **Pn** **15 32 34.2 +2.9**
RJF *e*Sn **Sn** **15 34 00.4 -2.5**
comp=E,3.0nm,0.4s
PVIS **Viseu** **8.25 299** S **Sn** **15 34 01.1 -2.6**
PCAS **Casmilo, Conde** **8.45 294** *e*P **Pn** **15 32 37.0 +2.5**
POLO **Lamas de Olo** **8.46 303** *e*P **Pn** **15 32 37.2 +2.5**
POLO S **Sn** **15 34 06.6 -2.4**
POLO A A 15 34 11.6
comp=E,2.0nm,0.7s
ORIF **Oris-en-Rattie** **8.47 21** *e*Pn **Pn** **15 32 38.7 +3.8**
ORIF *e*Sn **Sn** **15 34 06.6 -2.7**
comp=E,2.7nm,0.5s
MBDF **Montbardon** **8.58 25** *e*Pn **Pn** **15 32 40.5 +4.1**
MBDF *e*Sn **Sn** **15 34 08.9 -3.1**
comp=E,0.7nm,0.3s
ELOB **Lobios** **8.87 306** Pn **Pn** **15 32 42.2 +1.8**
ELOB ⇑*i*Vmb_V 15 32 45.0
comp=E,118nm,SNR=1.0
ELOB Sn **Sn** **15 34 14.7 -4.4**
PGAV **Gavieira, Arco** **9.06 306** *e*P **Pn** **15 32 44.8 +1.9**
PGAV S **Sn** **15 34 20.5 -3.1**
PGAV A A 15 34 23.2
comp=E,5.2nm,0.5s
TCF **Toulx Ste Croi** **9.21 3** *e*Pn **Pn** **15 32 47.4 +2.4**
TCF *e*Sn **Sn** **15 34 24.2 -3.2**
comp=E,1.3nm,0.3s
LPG **La Plagne** **9.26 23** *e*Pn Pn 15 32 50.8 +5.0
LPL **La Plagne** **9.27 23** *e*Pn **Pn** **15 32 50.4 +4.5**
EAGO **Agolada(Pontev** **9.38 311** Pn **Pn** **15 32 49.4 +2.1**
EAGO ⇑*i*Vmb_V 15 32 50.2
comp=E,136nm,SNR=1.1
EAGO Sn **Sn** **15 34 28.7 -2.8**
MFF **Saint Martin d** **9.61 353** *e*Pn **Pn** **15 32 51.8 +1.5**
MFF *e*Sn **Sn** **15 34 33.7 -3.2**
comp=E,3.1nm,0.3s
SMF **Signal de Mont** **9.71 9** *e*Pn **Pn** **15 32 53.7 +2.0**
SMF *e*Sn **Sn** **15 34 36.0 -3.4**
comp=E,1.1nm,0.3s
AVF **Avril sur Loir** **9.79 7** *e*Pn **Pn** **15 32 54.7 +1.9**
CABF **La Chapelle** **10.09 18** *e*Pn **Pn** **15 33 00.3 +3.2**
QUIF **Quistinic** **11.39 344** *e*Pn **Pn** **15 33 16.3 +1.7**
QUIF *e*Sn **Sn** **15 35 16.4 -4.1**
comp=E,0.9nm,0.2s
HINF **Hinteralfeld** **11.41 18** *e*Pn **Pn** **15 33 16.7 +1.7**
GRR **Gorron** **11.45 352** *e*Pn **Pn** **15 33 17.4 +1.9**
GRR *e*Sn **Sn** **15 35 17.9 -4.1**
comp=E,0.9nm,0.2s
LDF **La Druitiere** **11.58 354** *e*Sn **Sn** **15 35 21.1 -4.2**
comp=E,1.8nm,0.4s
SGMF **Saint Gilles** **11.58 346** *e*Pn **Pn** **15 33 19.0 +1.7**
FLN **La Foliniere** **11.78 353** *e*Pn **Pn** **15 33 22.4 +2.4**
baz=173
FLN *e*Sn **Sn** **15 35 25.7 -4.4**
comp=E,1.4nm,0.3s
ROSF **Rostrenen** **11.81 344** *e*Pn **Pn** **15 33 23.3 +2.9**

ROM 25 15:32:53.0±0.1, 42°.686N±0°.003×13°.210E±0°.005, h10km, ML2.5/29, 16C-8D, Error ellipse: s-maj=0.3km s-min=0.2km az=235.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.15**	**236**	⇑P	Pg	15 32 57.1	+0.6
LNSS				S	Sg	15 32 59.9	+1.0
LNSS				AML	AML		
	comp=E,21100μm,0.2s						
LNSS				AML	AML		
	comp=N,17500μm,0.2s						
LNSS				AML	AML		
	comp=N,17492μm,0.2s						
LNSS				AML	AML		
	comp=E,21088μm,0.2s						
NRCA	**Norcia**	**0.16**	**335**	P	Pg	15 32 57.2	+0.5
NRCA				S	Sg	15 32 59.9	+0.7
NRCA				AML	AML		
	comp=E,23850μm,0.2s						
NRCA				AML	AML		
	comp=E,23800μm,0.2s						
NRCA				AML	AML		
	comp=N,10945μm,0.1s						
NRCA				AML	AML		
	comp=N,12100μm,0.1s						
NRCA				AML	AML		
	comp=E,26300μm,0.2s						
NRCA				AML	AML		
	comp=E,23800μm,0.1s						
NRCA				AML	AML		
	comp=N,10900μm,0.1s						
NRCA				AML	AML		
	comp=N,10940μm,0.1s						
RM33	**Pellescritta (**	**0.18**	**179**	⇑P	Pg	15 32 57.6	+0.7
RM33				S	Sg	15 33 00.8	+1.2
RM33				AML	AML		
	comp=E,7355μm,0.3s						
RM33				AML	AML		
	comp=N,9155μm,0.9s						
RM33				AML	AML		
	comp=E,7335μm,1.0s						
RM33				AML	AML		
	comp=N,9295μm,0.9s						
RM33				AML	AML		
	comp=E,20300μm,0.3s						
RM33				AML	AML		
	comp=N,10070μm,0.3s						
RM33				AML	AML		
	comp=E,19950μm,0.3s						
RM33				AML	AML		
	comp=N,9715μm,0.3s						
RM33				AML	AML		
	comp=E,7319μm,0.1s						
RM33				AML	AML		
	comp=E,7295μm,0.2s						
RM33				AML	AML		
	comp=N,6246μm,0.1s						
RM33				AML	AML		
	comp=N,6271μm,0.1s						
CAMP	**Campotosto**	**0.21**	**136**	⇑P	Pg	15 32 58.1	+0.6
CAMP				S	Sg	15 33 01.9	+1.3
CAMP				AML	AML		
	comp=E,3245μm,0.8s						
CAMP				AML	AML		
	comp=E,3285μm,1.3s						
CAMP				AML	AML		
	comp=N,8545μm,0.4s						
CAMP				AML	AML		
	comp=E,640μm,0.3s						
CAMP				AML	AML		
	comp=N,845μm,0.6s						
MC2	**Monte Cornacci**	**0.23**	**356**	P	Pg	15 32 58.4	+0.5
MC2				S	Sg	15 33 02.8	+1.6
TERO	**Teramo**	**0.30**	**102**	⇑P	Pg	15 32 59.4	+0.4
TERO				S	Sg	15 33 04.1	+1.0
TERO				AML	AML		
	comp=E,2600μm,0.3s						
TERO				AML	AML		
	comp=N,3085μm,0.6s						
TERO				AML	AML		
	comp=E,2860μm,0.3s						
TERO				AML	AML		
	comp=N,3435μm,0.6s						
TERO				AML	AML		
	comp=N,3535μm,1.6s						
TERO				AML	AML		
	comp=N,3820μm,1.6s						
TERO				AML	AML		
	comp=E,3870μm,0.3s						
TERO				AML	AML		
	comp=E,4275μm,0.3s						
TERO				AML	AML		
	comp=N,3206μm,0.2s						
TERO				AML	AML		
	comp=N,2881μm,0.2s						
TERO				AML	AML		
	comp=E,2390μm,0.1s						
TERO				AML	AML		
	comp=E,2697μm,0.1s						
ARRO	**Arrone**	**0.34**	**252**	⇑P	Pg	15 33 00.1	+0.2
ARRO				S	Sb	15 33 05.9	-0.9
ARRO				AML	AML		
	comp=E,1105μm,0.3s						
ARRO				AML	AML		
	comp=N,922μm,0.9s						
ARRO				AML	AML		
	comp=N,919μm,0.9s						
ARRO				AML	AML		
	comp=N,743μm,0.2s						
ARRO				AML	AML		
	comp=E,1104μm,0.3s						
GIGS	**Gran Sasso**	**0.35**	**132**	P	Pg	15 33 00.6	+0.4
GIGS				S	Sg	15 33 05.9	+1.1
GIGS				AML	AML		
	comp=E,645μm,0.2s						
GIGS				AML	AML		
	comp=N,418μm,0.2s						
GIGS				AML	AML		
	comp=N,513μm,0.5s						
GIGS				AML	AML		
	comp=N,255μm,0.1s						
GIGS				AML	AML		
	comp=E,255μm,0.1s						
AQU	**L'Aquila**	**0.36**	**157**	⇓P	Pb	15 33 01.1	-0.5
AQU				S	Sb	15 33 06.6	-0.7
AQU				AML	AML		
	comp=E,660μm,0.8s						
AQU				AML	AML		
	comp=N,1215μm,0.3s						
AQU				AML	AML		
	comp=E,794μm,0.3s						
AQU				AML	AML		
	comp=N,1150μm,0.3s						
AQU				AML	AML		
	comp=N,1210μm,0.3s						
AQU				AML	AML		
	comp=E,1220μm,0.4s						
AQU				AML	AML		
	comp=E,1200μm,0.4s						
AQU				AML	AML		
	comp=N,523μm,0.2s						
AQU				AML	AML		
	comp=N,567μm,0.2s						
AQU				AML	AML		
	comp=E,550μm,0.2s						
AQU				AML	AML		
	comp=E,536μm,0.1s						
FDMO	**Fiordimonte**	**0.36**	**346**	⇑P	Pg	15 33 00.5	+0.2
FDMO				S	Sb	15 33 06.2	-1.1
FDMO				AML	AML		
	comp=E,639μm,0.6s						
FDMO				AML	AML		
	comp=N,636μm,0.6s						
FDMO				AML	AML		
	comp=N,588μm,0.2s						
FDMO				AML	AML		
	comp=E,568μm,0.2s						
CESI	**CESI - Serrava**	**0.39**	**325**	⇓P	Pg	15 33 01.0	+0.2
CESI				S	Sb	15 33 07.1	-1.0
CESI				AML	AML		
	comp=E,644μm,0.4s						
CESI				AML	AML		
	comp=E,643μm,0.4s						
CESI				AML	AML		
	comp=N,1295μm,0.4s						
CESI				AML	AML		
	comp=N,1295μm,0.4s						
CESI				AML	AML		
	comp=E,464μm,0.3s						
CSP1	**Cessapalombo**	**0.41**	**360**	⇑P	Pg	15 33 01.3	+0.3
CSP1				S	Sb	15 33 07.8	-0.9
CSP1				AML	AML		
	comp=E,978μm,0.2s						
CSP1				AML	AML		
	comp=N,975μm,0.2s						
FIAM	**Fiamignano**	**0.42**	**189**	P	Pg	15 33 01.6	+0.2
FIAM				S	Sb	15 33 08.2	-0.9
FIAM				AML	AML		
	comp=E,1210μm,0.6s						
FIAM				AML	AML		
	comp=N,866μm,0.5s						
FIAM				AML	AML		
	comp=E,841μm,0.2s						
FIAM				AML	AML		
	comp=N,663μm,0.5s						
OFFI	**Offida**	**0.43**	**54**	⇑P	Pb	15 33 02.7	0.0
OFFI				S	Sb	15 33 11.1	+1.8
OFFI				AML	AML		
	comp=E,1295μm,0.6s						
OFFI				AML	AML		
	comp=E,1720μm,0.6s						
OFFI				AML	AML		
	comp=N,1365μm,0.5s						
OFFI				AML	AML		
	comp=N,1367μm,0.5s						
OFFI				AML	AML		
	comp=E,1218μm,0.5s						
CESX	**Cesi**	**0.47**	**261**	⇑P	Pg	15 33 02.2	0.0
CESX				S	Sb	15 33 09.5	-0.9
CESX				AML	AML		
	comp=E,507μm,0.4s						
CESX				AML	AML		
	comp=N,608μm,0.3s						
CESX				AML	AML		
	comp=E,507μm,0.4s						
FAGN	**Fagnano**	**0.50**	**146**	⇓P	Pg	15 33 03.2	+0.4
FAGN				S	Sb	15 33 10.7	-0.7
FAGN				AML	AML		
	comp=E,818μm,0.4s						
FAGN				AML	AML		
	comp=N,666μm,1.4s						
FAGN				AML	AML		
	comp=E,1680μm,0.3s						
FAGN				AML	AML		
	comp=N,1240μm,0.6s						
FAGN				AML	AML		
	comp=N,613μm,0.2s						
FAGN				AML	AML		
	comp=E,818μm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**77**	⇑P	Pb	15 33 04.8	+0.4
TRTR				S	Sn	15 33 16.1	+0.4
TRTR				AML	AML		
	comp=E,1345μm,0.5s						
TRTR				AML	AML		
	comp=N,1205μm,0.3s						
TRTR				AML	AML		
	comp=E,1349μm,0.5s						
ASSB	**Assisi San Ben**	**0.54**	**312**	⇓P	Pg	15 33 03.8	+0.2
ASSB				S	Sb	15 33 12.1	-0.4
ASSB				AML	AML		
	comp=E,476μm,0.2s						
ASSB				AML	AML		
	comp=N,412μm,0.3s						
ASSB				AML	AML		
	comp=E,475μm,0.2s						
ASSB				AML	AML		
	comp=N,312μm,0.3s						
T0110	**Collepietro**	**0.62**	**137**	⇑P	Pg	15 33 05.2	0.0
T0110				S	Sb	15 33 15.3	+0.4
T0110				AML	AML		
	comp=E,447μm,0.4s						
T0110				AML	AML		
	comp=N,520μm,0.4s						
T0110				AML	AML		
	comp=E,621μm,0.8s						
T0110				AML	AML		
	comp=N,630μm,1.1s						
T0110				AML	AML		
	comp=N,520μm,0.4s						
T0110				AML	AML		
	comp=E,447μm,0.4s						
EL6	**Elcito**	**0.65**	**353**	⇑P	Pg	15 33 05.5	-0.1
EL6				S	Sb	15 33 17.0	+1.4
EL6				AML	AML		
	comp=E,474μm,0.8s						
EL6				AML	AML		
	comp=N,430μm,0.4s						
EL6				AML	AML		
	comp=E,404μm,0.2s						
EL6				AML	AML		
	comp=N,374μm,0.2s						
PTQR	**Pietraquaria**	**0.68**	**168**	P	Pg	15 33 05.7	-0.5
PTQR				S	Sb	15 33 17.0	+0.5
PTQR				AML	AML		
	comp=N,134μm,0.3s						
PTQR				AML	AML		
	comp=E,124μm,1.0s						
PTQR				AML	AML		
	comp=E,113μm,0.4s						
PTQR				AML	AML		
	comp=N,133μm,0.3s						
SRES	**S.Oreste - Sor**	**0.69**	**229**	⇑P	Pb	15 33 06.7	-0.4
SRES				AML	AML		
	comp=E,160μm,0.7s						
SRES				AML	AML		
	comp=N,144μm,1.1s						
SRES				AML	AML		
	comp=N,176μm,0.3s						
SRES				AML	AML		
	comp=N,139μm,0.3s						
SRES				AML	AML		
	comp=E,140μm,0.3s						
CING	**Cingoli**	**0.69**	**359**	⇓P	Pg	15 33 06.4	0.0
CING				AML	AML		
	comp=E,268μm,0.2s						
CING				AML	AML		
	comp=N,232μm,0.9s						
CING				AML	AML		
	comp=N,202μm,0.1s						
CING				AML	AML		
	comp=E,268μm,0.2s						
FOSV	**Fossato di Vic**	**0.69**	**332**	⇓P	Pg	15 33 06.7	+0.2
FOSV				AML	AML		
	comp=E,194μm,1.4s						
FOSV				AML	AML		
	comp=N,216μm,0.4s						
FOSV				AML	AML		
	comp=N,217μm,0.4s						
FOSV				AML	AML		
	comp=E,185μm,0.6s						
MTCE	**Montecelio**	**0.75**	**208**	P	Pg	15 33 06.8	-0.6
MTCE				AML	AML		
	comp=N,166μm,0.5s						
MTCE				AML	AML		
	comp=E,259μm,0.4s						
MTCE				AML	AML		
	comp=N,166μm,0.5s						
MTCE				AML	AML		
	comp=E,259μm,0.4s						
CERT	**Cerreto**	**0.76**	**193**	⇓P	Pg	15 33 07.2	-0.4
CERT				AML	AML		
	comp=N,298μm,0.4s						
CERT				AML	AML		

	comp=N,298μm,0.4s							
CERT					AML	AML		
	comp=E,748μm,0.3s							
CERT					AML	AML		
	comp=N,298μm,0.4s							
CERT					AML	AML		
	comp=E,748μm,0.3s							
ARVD	**Arcevia**	**0.83**	**346**	S		Sn	15 33 23.0	-0.2
MGAB	**Montegabbione**	**0.84**	**286**	⇑P		Pg	15 33 09.3	+0.1
MGAB					AML	AML		
	comp=E,426μm,0.4s							
MGAB					AML	AML		
	comp=N,458μm,0.4s							
MGAB					AML	AML		
	comp=N,429μm,0.4s							
MGAB					AML	AML		
	comp=E,425μm,0.4s							
MGAB					AML	AML		
	comp=E,388μm,0.4s							
GUAR	**Guarcino**	**0.89**	**175**	P		Pn	15 33 12.1	+0.4
GUAR					AML	AML		
	comp=E,191μm,0.4s							
GUAR					AML	AML		
	comp=N,307μm,0.4s							
GUAR					AML	AML		
	comp=N,307μm,0.4s							
GUAR					AML	AML		
	comp=E,191μm,0.4s							
LPEL	**Lama dei Pelig**	**0.96**	**131**	P		Pg	15 33 10.3	-1.3
LPEL					AML	AML		
	comp=E,166μm,0.7s							
LPEL					AML	AML		
	comp=N,138μm,0.8s							
LPEL					AML	AML		
	comp=E,216μm,0.2s							
LPEL					AML	AML		
	comp=N,196μm,0.2s							
LPEL					AML	AML		
	comp=N,120μm,0.5s							
LPEL					AML	AML		
	comp=E,135μm,0.4s							
SACS	**San Casciano d**	**0.97**	**280**	⇓P		Pg	15 33 11.6	-0.1
SACS					AML	AML		
	comp=E,106μm,0.3s							
SACS					AML	AML		
	comp=N,119μm,0.3s							
SACS					AML	AML		
	comp=N,115μm,0.3s							
SACS					AML	AML		
	comp=N,119μm,0.3s							
SACS					AML	AML		
	comp=E,106μm,0.3s							
FSSB	**Fossombrone**	**1.05**	**343**		AML	AML		
	comp=N,90μm,1.6s							
FSSB					AML	AML		
	comp=E,111μm,0.3s							
CAFI	**Castiglion Fio**	**1.12**	**306**	⇑P		Pn	15 33 15.9	+1.1
CAFI					AML	AML		
	comp=E,96μm,0.5s							
CAFI					AML	AML		
	comp=N,76μm,0.6s							
CAFI					AML	AML		
	comp=E,96μm,0.5s							
CAFI					AML	AML		
	comp=E,90μm,0.5s							
CAFI					AML	AML		
	comp=N,76μm,0.6s							
CAFI					AML	AML		
	comp=N,82μm,0.6s							
DUGI	**Dugi Otok**	**1.88**	**45**	*e*Pn		Pn	15 33 25.1	0.0
IMOL	**Imola, Italy**	**1.98**	**328**	⇑P		Pn	15 33 27.8	+1.2
VIRC	**Vir**	**2.09**	**39**	*e*Pn		Pn	15 33 28.4	+0.3
MORI	**Morici**	**2.17**	**56**	*e*Pn		Pn	15 33 29.4	+0.3
NVLJ	**Novalja**	**2.23**	**32**	*e*Pn		Pn	15 33 29.9	0.0
BRJN	**Brijuni**	**2.25**	**10**	*e*Pn		Pb	15 33 32.1	-1.7
FIU	**Minerbio Fiu**	**2.32**	**328**	S		Sg	15 34 08.0	+0.5
UDBI	**Udbina**	**2.61**	**44**	*e*Pn		Pn	15 33 36.7	+1.4
KIJV	**Kijevo**	**2.68**	**59**	*e*Pn		Pn	15 33 36.8	+0.6
LSTV	**Lastovo**	**2.71**	**87**	*e*Pn		Pn	15 33 37.1	+0.4

IDC ***25*** *15:37:59.7±2.0,2˚.50N×127˚.08E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=121.0km s-min=24.5km az=69.0*
DJA ***25*** *15:38:08.0±2.0,3˚N±4˚×12˚7E±˚, h24km±22km, M3.4/7, MLv3.4/7*

ISC 25 15:38:07.1±1.4,2˚.6N±0˚.1×127˚.0E±0˚.2, h53km, n7, σ1§74/8, mb3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGSI	**Sangihe**	**1.83**	**307**	P		**Pn**	**15 38 36.8**	**+0.6**
SGSI				S		**Sn**	**15 38 59.0**	**+0.8**
LBMI	**Labuha**	**3.24**	**171**	P		**Pn**	**15 38 57.6**	**+2.1**
GTOI	**Gorontalo**	**4.43**	**244**	P		**Pn**	**15 39 12.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**20.59**	**184**	P		**P**	**15 42 41.1**	**-0.7**
	0.8nm,0.8s,baz=4.3,slow=9.1,SNR=1.4 0.8nm,0.8s							
WRA	**Warramunga Arr**	**23.52**	**162**	P		**P**	**15 43 10.2**	**-2.4**
	0.4nm,0.4s,baz=340,slow=11,SNR=19 0.4nm,0.4s							
ASAR	**Alice Springs**	**26.94**	**166**	P		**P**	**15 43 42.0**	**-1.7**
	0.1nm,0.3s,baz=345,slow=11,SNR=1.7 0.1nm,0.3s							
MKAR	**Makanchi Array**	**58.65**	**326**	P		**P**	**15 47 59.5**	**+0.5**
	0.2nm,0.4s,baz=120,slow=7.5,SNR=6.1 0.2nm,0.4s							

PRE ***25*** *15:44:23.3±2.8,26˚.39S×27˚.49E, h2km, ML3.0*
IDC ***25*** *15:44:23.4±1.4,26˚.40S×27˚.38E, h0km, mb4.0/3, mbtmp4.0/8, ML3.6/3, Error ellipse: s-maj=19.1km s-min=13.5km az=103.0*
BUL ***25*** *15:44:24.6±1.1,26˚.48S×27˚.38E, h13km±12km, MD4.4*
EAF ***25*** *15:44:24.4±1.2,26˚.48S×27˚.39E, h12km±14km, MD4.1*
NEIC ***25*** *15:44:25.6±2.0,26˚.46S±0˚.04×27˚.36E±0˚.06, h5km±1km, mb4.5/2, Error ellipse: s-maj=9.1km s-min=6.3km az=88.0*

ISC 25 15:44:23.9±0.8,26˚.35S±0˚.02×27˚.44E±0˚.03, h9km±5km, n65, σ1§75/117, mb4.3/5, 2C-4D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WDLM	**Western Deep L**	**0.07**	**190**	*e*P		**Pg**	**15 44 25.9**	**-0.3**
WDLM				*e*S		**Sg**	**15 44 27.1**	**-0.9**
WDLM				IAML			15 44 27.9	
	comp=Z,8μm,0.3s							
HRAO	**HartRAO**	**0.51**	**26**	⇓*i*P		**Pg**	**15 44 33.9**	**+0.1**
HRAO				*e*S		**Sg**	**15 44 40.3**	**-0.3**
PRYS	**Parys**	**0.58**	**187**	*e*P		**Pg**	**15 44 35.4**	**+0.2**
PRYS				*e*S		**Sg**	**15 44 42.4**	**-0.4**
PRYS				IAML			15 44 46.8	
	comp=Z,869nm,0.6s							
KSR	**Koster**	**0.69**	**316**	⇓*i*P		**Pb**	**15 44 38.1**	**-0.1**
KSR				*e*S		**Sg**	**15 44 47.1**	**+0.6**
KSR				IAML			15 44 47.4	
	comp=Z,1μm,0.4s							
SLR	**Silverton**	**0.98**	**51**	*e*P		**Pg**	**15 44 42.1**	**-0.6**
SLR				*e*S		**Sg**	**15 44 55.5**	**+0.1**
SLR				IAML			15 45 00.2	
	comp=Z,231nm,0.2s							
SNKL	**Senekal, Frees**	**1.94**	**171**	*e*P		**Pb**	**15 44 59.0**	**-0.5**
SNKL				*e*S		**Sb**	**15 45 23.4**	**-0.6**
SNKL				IAML			15 45 25.5	
	comp=Z,268nm,1.0s							
SWZ	**Schweizer**	**2.06**	**246**	*e*P		**Pn**	**15 44 59.9**	**+1.1**
SWZ				*e*S		**Sb**	**15 45 27.3**	**+0.1**
SWZ				IAML			15 45 28.9	
	comp=Z,191nm,0.5s							
LBTB	**Lobatse**	**2.13**	**308**	Pg		**Pb**	**15 45 02.2**	**-0.5**
	comp=Z,25nm,0.3s,baz=149,slow=8.9,SNR=378							
LBTB				Lg		Lg	15 45 30.6	
	comp=Z,205nm,0.3s,baz=125,slow=18,SNR=65							
LBTB				Rg		Rg	15 45 40.1	
	comp=Z,656nm,1.0s,baz=217,slow=2.8,SNR=28							
LBTB	**Lobatse**	**2.13**	**308**			**Pb**	**15 45 02.1**	**-0.6**
LBTB				Sn		**Sb**	**15 45 29.6**	**+0.4**
LBTB	**Lobatse**	**2.13**	**308**	*e*P		**Pb**	**15 45 02.1**	**-0.5**
LBTB				*e*S		**Sg**	**15 45 31.1**	**-1.2**
LBTB				IAML			15 45 32.8	
	comp=Z,430nm,0.4s							
LBTB	**Lobatse**	**2.13**	**308**	*i* Pg		**Pg**	**15 45 03.7**	**-1.0**
LBTB				*i* Sg		**Sg**	**15 45 32.1**	**-0.2**
LBTB	**Lobatse**	**2.13**	**308**	*i* Pg		**Pg**	**15 45 03.7**	**-1.0**
LBTB				*i* Sg		**Sg**	**15 45 32.1**	**-0.2**
CRLN	**Carolina, Mapu**	**2.35**	**82**	*e*P		**Pn**	**15 45 03.0**	**+0.2**
CRLN				*e*S		**Sn**	**15 45 31.2**	**-0.7**
CRLN				IAML			15 45 33.4	
	comp=Z,41nm,0.2s							
LEPH	**Lephalale, Lim**	**2.50**	**8**	⇓*i*P		**Pb**	**15 45 07.1**	**-2.0**
LEPH				*e*S		**Sb**	**15 45 38.7**	**-1.3**
LEPH				IAML			15 45 42.6	
	comp=Z,102nm,0.4s							
NWCL	**Newcastle**	**2.59**	**123**	*e*P		**Pn**	**15 45 06.9**	**+0.8**
NWCL				*e*S		**Sn**	**15 45 38.6**	**+0.9**
NWCL				IAML			15 45 44.8	
	comp=Z,135nm,0.5s							
BOSA	**Boshof**	**2.97**	**220**	Pn		**Pn**	**15 45 11.8**	**+0.5**
	comp=Z,5.4nm,0.3s,baz=38,slow=13,SNR=187							
BOSA				Pg		**Pb**	**15 45 16.9**	**-0.1**
	comp=Z,6.4nm,0.3s,baz=40,slow=15,SNR=22							
BOSA				Lg		Lg	15 45 54.2	
	comp=Z,37nm,0.3s,baz=328,slow=20,SNR=21							
	comp=Z,18nm,0.3s							
BOSA	**Boshof**	**2.97**	**220**			**Pn**	**15 45 11.9**	**+0.6**
BOSA	**Boshof**	**2.97**	**220**	*e*P		**Pn**	**15 45 11.9**	**+0.6**
BOSA				*e*S		**Sn**	**15 45 47.9**	**+0.8**
BOSA				IAML			15 45 56.9	
	comp=Z,73nm,0.2s							
BOSA	**Boshof**	**2.97**	**220**	*i* Sg		**Sb**	**15 45 52.9**	**-0.7**
BOSA	**Boshof**	**2.97**	**220**	*i* Sg		**Sb**	**15 45 52.9**	**-0.7**
POGA	**Pongola**	**3.94**	**106**			**Pn**	**15 45 27.9**	**+3.4**
POGA					Sn	**Sn**	**15 46 10.3**	**-0.6**
POGA	**Pongola**	**3.94**	**106**	*e*P		**Pn**	**15 45 25.1**	**+0.5**
POGA				*e*S		**Sn**	**15 46 09.3**	**-1.7**
POGA				IAML			15 46 26.0	
	comp=Z,64nm,0.4s							
KSTD	**Kokstad**	**4.56**	**159**	*e*P		**Pn**	**15 45 35.3**	**+2.1**
KSTD				*e*S		**Sn**	**15 46 24.1**	**-2.3**
KSTD				IAML			15 46 43.4	
	comp=Z,18nm,0.3s							
HVD	**Gariep Dam**	**4.57**	**201**	*e*P		**Pn**	**15 45 33.4**	**0.0**
HVD				*e*S		**Sn**	**15 46 24.4**	**-2.2**
HVD				IAML			15 46 58.6	
	comp=Z,23nm,0.4s							
MOPA	**Mopani**	**4.57**	**53**	⇑*i*P		**Pn**	**15 45 33.3**	**+0.1**
MOPA				*e*S		**Sn**	**15 46 25.4**	**-1.1**
MOPA				IAML			15 46 47.9	
	comp=Z,26nm,0.4s							
MOPA	**Mopani**	**4.57**	**53**	*e*P		**Pn**	**15 45 33.4**	**+0.1**
MOPA				*i* S		**Sn**	**15 46 26.2**	**-0.3**
MOPA	**Mopani**	**4.57**	**53**	*e*P		**Pn**	**15 45 33.4**	**+0.1**
MOPA				*i* S		**Sn**	**15 46 26.2**	**-0.3**
MUSN	**Musina, Limpop**	**4.61**	**29**	*e*P		**Pn**	**15 45 35.9**	**+2.0**
MUSN				*e*S		**Sn**	**15 46 27.6**	**+0.1**
MUSN				IAML			15 46 54.3	
	comp=Z,35nm,0.7s							
MUSN	**Musina, Limpop**	**4.61**	**29**	*i* P		**Pn**	**15 45 35.4**	**+1.6**
MUSN				*i* S		**Sn**	**15 46 27.0**	**-0.5**
MUSN	**Musina, Limpop**	**4.61**	**29**	*i* P		**Pn**	**15 45 35.4**	**+1.6**
MUSN				*i* S		**Sn**	**15 46 27.0**	**-0.5**
PKA	**Prieska**	**5.29**	**230**	⇑*i*P		**Pn**	**15 45 42.6**	**-0.7**
PKA				*e*S		**Sn**	**15 46 43.9**	**-0.5**
PKA				IAML			15 47 13.2	
	comp=Z,56nm,0.6s							
UPI	**Upington**	**5.85**	**249**	*e*P		**Pn**	**15 45 53.2**	**+2.3**
UPI				*e*S		**Sn**	**15 46 56.6**	**-1.6**
UPI				IAML			15 47 29.3	
	comp=Z,10nm,0.5s							
MATP	**Matopo**	**5.98**	**10**	Pn		**Pn**	**15 45 54.0**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=191,slow=13,SNR=32							
MATP					Sn	**Sn**	**15 47 00.5**	**-0.9**
	comp=Z,2.5nm,0.3s,baz=294,slow=21,SNR=8.2							
MATP					Lg	Lg	15 47 30.2	
	comp=Z,8.7nm,0.3s,baz=255,slow=4.8,SNR=13							
	comp=Z,7.9nm,0.4s							
MATP	**Matopo**	**5.98**	**10**	⇓*i*P		**Pn**	**15 45 54.0**	**+1.3**
MATP				*e*S		**Sn**	**15 47 01.2**	**-0.1**
MATP				IAML			15 47 32.3	
	comp=Z,52nm,0.5s							
MATP	**Matopo**	**5.98**	**10**	*i* P		**Pn**	**15 45 54.0**	**+1.3**
MATP				*i* S		**Sn**	**15 46 58.6**	**-2.7**
MATP	**Matopo**	**5.98**	**10**	*i* P		**Pn**	**15 45 54.0**	**+1.3**
MATP				*i* S		**Sn**	**15 46 58.6**	**-2.7**
KEIM	**Keimoes**	**6.20**	**246**	*e*P		**Pn**	**15 45 56.6**	**+0.9**
KEIM				*e*S		**Sn**	**15 47 03.6**	**-3.2**
KEIM				IAML			15 47 40.5	
	comp=Z,25nm,0.9s							
BLWY	**Bulawayo**	**6.28**	**10**	*e*P		**Pn**	**15 45 55.9**	**-0.9**
BLWY				*e*S		**Sn**	**15 47 08.1**	**-0.6**
BLWY				IAML			15 47 40.6	
	comp=Z,55nm,0.7s							
BLWY	**Bulawayo**	**6.28**	**10**	*i* P		**Pn**	**15 45 58.7**	**+1.9**
BLWY				*i* S		**Sn**	**15 47 06.2**	**-2.5**
BLWY	**Bulawayo**	**6.28**	**10**	*i* P		**Pn**	**15 45 58.7**	**+1.9**
BLWY				*i* S		**Sn**	**15 47 06.2**	**-2.5**
BFON	**Badsfontein, M**	**6.34**	**210**	*e*P		**Pn**	**15 45 58.0**	**+0.3**
BFON				*e*S		**Sn**	**15 47 07.7**	**-2.6**
BFON				IAML			15 47 42.9	
	comp=Z,25nm,0.6s							
GRAF	**Camdeboo Natio**	**6.44**	**203**	*e*P		**Pn**	**15 46 00.1**	**+1.1**
GRAF				*e*S		**Sn**	**15 47 10.7**	**-2.0**
GRAF				IAML			15 47 49.7	
	comp=Z,19nm,0.6s							
SOE	**Somerset East**	**6.55**	**194**	Pn		**Pn**	**15 46 00.7**	**+0.3**
SOE					Sn	**Sn**	**15 47 10.7**	**-4.6**
SOE	**Somerset East**	**6.55**	**194**	*e*P		**Pn**	**15 46 01.1**	**+0.7**
SOE				*e*S		**Sn**	**15 47 11.3**	**-3.9**
SOE				IAML			15 47 55.8	
	comp=Z,12nm,0.7s							
BRAK	**Brakfontein**	**6.71**	**215**	*e*P		**Pn**	**15 46 02.9**	**+0.2**
BRAK				*e*S		**Sn**	**15 47 16.8**	**-2.6**
BRAK				IAML			15 47 55.3	
	comp=Z,21nm,0.7s							
ROOI	**Rooidraai Farm**	**7.00**	**208**	*e*P		**Pn**	**15 46 06.2**	**-0.4**
ROOI				*e*S		**Sn**	**15 47 24.2**	**-2.1**
ROOI				IAML			15 48 15.5	
	comp=Z,18nm,0.7s							
ARMS	**Ukamas**	**7.06**	**254**	*e*P		**Pn**	**15 46 10.7**	**+3.2**
ARMS				*e*S		**Sn**	**15 47 28.8**	**+1.0**
ARMS				IAML			15 48 17.8	
	comp=Z,28nm,0.4s							
GRAN	**Grantham**	**7.50**	**217**	*e*P		**Pn**	**15 46 14.0**	**+0.4**
GRAN				*e*S		**Sn**	**15 47 44.5**	**+5.7**
GRAN				IAML			15 48 44.0	
	comp=Z,13nm,0.6s							
FRAZ	**Fraserburg**	**7.66**	**222**	*e*P		**Pn**	**15 46 16.3**	**+0.6**
FRAZ				*e*S		**Sn**	**15 47 39.6**	**-3.1**
FRAZ				IAML			15 48 25.0	
	comp=Z,11nm,0.6s							
MERW	**Merweville**	**8.14**	**218**	*e*P		**Pn**	**15 46 24.2**	**+1.9**
MERW				*e*S		**Sn**	**15 47 50.7**	**-3.8**
MERW				IAML			15 48 37.5	
	comp=Z,12nm,0.6s							
SUR	**Sutherland**	**8.34**	**222**	Pn		**Pn**	**15 46 25.0**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=55,slow=9.3,SNR=14							
SUR					Sn	**Sn**	**15 47 57.8**	**-1.7**
	comp=Z,1.8nm,0.3s,baz=350,slow=19,SNR=6.4							
SUR					Lg	Lg	15 48 41.0	
	comp=Z,2.7nm,0.3s,baz=318,slow=23,SNR=7.0							
	comp=Z,5.1nm,0.5s							
SUR	**Sutherland**	**8.34**	**222**	Pn		**Pn**	**15 46 25.2**	**+0.1**
CVNA	**Calvinia**	**8.45**	**231**	*e*P		**Pn**	**15 46 26.6**	**+0.1**
CVNA				*e*S		**Sn**	**15 47 58.6**	**-3.4**
CVNA				IAML			15 48 55.2	
	comp=Z,29nm,0.7s							
MATJ	**Matjiesfontein**	**9.10**	**219**	*e*P		**Pn**	**15 46 36.0**	**+0.4**
MATJ				*e*S		**Sn**	**15 48 14.9**	**-3.4**
MATJ				IAML			15 49 14.7	
	comp=Z,16nm,0.8s							
AUSN	**Aus**	**10.02**	**266**	*e*P		**Pn**	**15 46 48.1**	**-0.1**
AUSN				*e*S		**Sn**	**15 48 37.1**	**-3.7**
AUSN				IAML			15 49 42.7	
	comp=Z,5.4nm,0.7s							
ELIM	**Elim**	**10.56**	**217**	*e*P		**Pn**	**15 46 55.0**	**-0.4**
ELIM				*e*S		**Sn**	**15 48 48.5**	**-5.3**
ELIM				IAML			15 50 07.2	
	comp=Z,5.0nm,0.7s							
LSZ	**Lusaka**	**11.04**	**4**	Pn		**Pn**	**15 47 04.4**	**+2.2**
	comp=Z,1.8nm,0.4s,baz=187,slow=14,SNR=5.1							
LSZ					Sn	**Sn**	**15 49 03.5**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=92,slow=8.1,SNR=4.0							
LSZ					Lg	Lg	15 50 12.2	
	comp=Z,0.3nm,0.3s,baz=62,slow=20,SNR=4.0							
LSZ	**Lusaka**	**11.04**	**4**	Pn		**Pn**	**15 47 04.5**	**+2.3**
TSUM	**Tsumeb**	**11.54**	**306**	Pn		**Pn**	**15 47 09.3**	**+0.3**
	comp=Z,3.6nm,0.4s,baz=130,slow=12,SNR=11							
TSUM	**Tsumeb**	**11.54**	**306**			**Pn**	**15 47 09.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**46.56**	**324**	P		**P**	**15 52 53.0**	**+0.7**
	comp=Z,4.4nm,0.3s,baz=148,slow=6.3,SNR=4.8							
	comp=Z,4.4nm,0.3s							
SNAA	**Sanae**	**48.40**	**192**	P		**P**	**15 53 07.4**	**+1.5**
SNAA				IAmb		IAmb	15 53 09.0	
	comp=Z,2.8nm,1.0s							
QSPA	**South Pole Qui**	**63.84**	**180**	P		**P**	**15 54 56.9**	**+0.4**
QSPA				IAmb		IAmb	15 55 16.0	
	comp=Z,8.0nm,1.5s							
ESDC	**Sonseca Array**	**71.92**	**335**	P		**P**	**15 55 48.5**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=154,slow=4.0,SNR=2.6 comp=Z,0.4nm,0.7s							
MKAR	**Makanchi Array**	**88.05**	**34**	P		**P**	**15 57 15.5**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=211,slow=2.3,SNR=3.9 comp=Z,0.4nm,0.7s							

ROM 25 15:49:07.7±0.1,42˚.816N±0˚.004×13˚.239E±0˚.006, h9km, ML2.1/2,1C, Error ellipse: s-maj=0.5km s-min=0.3km az=54.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NRCA	**Norcia**	**0.09**	**281**	⇑P		Pg	15 49 10.4	+0.2
NRCA				S		Sg	15 49 12.2	+0.2
NRCA				AML		AML		
	comp=E,2665μm,0.2s							
NRCA				AML		AML		
	comp=N,2540μm,1.2s							
NRCA				AML		AML		
	comp=E,805μm,0.1s							
NRCA				AML		AML		
	comp=N,714μm,0.1s							
MC2	**Monte Cornacci**	**0.10**	**340**	P		Pg	15 49 10.8	+0.3
MC2				S		Sg	15 49 13.1	+0.6
MC2				AML		AML		
	comp=E,273μm,0.1s							
MC2				AML		AML		
	comp=N,273μm,0.1s							
T1243	**Rocca Santa Ma**	**0.20**	**128**	P		Pg	15 49 12.6	+0.8
T1243				S		Sg	15 49 15.7	+1.1
T1243				AML		AML		
	comp=E,407μm,0.2s							
T1243				AML		AML		
	comp=N,430μm,0.3s							
T1243				AML		AML		
	comp=E,406μm,0.2s							
T1243				AML		AML		
	comp=N,423μm,0.2s							
FDMO	**Fiordimonte**	**0.25**	**333**	S		Sg	15 49 14.0	-2.1
LNSS	**Leonessa**	**0.26**	**215**	P		Pb	15 49 13.8	-0.8
LNSS				S		Sb	15 49 18.3	-0.8
CSP1	**Cessapalombo**	**0.28**	**355**	P		Pg	15 49 13.9	+0.6
CSP1				S		Sb	15 49 18.6	-1.1
RM33	**Pellescritta (**	**0.31**	**183**	P		Pb	15 49 14.7	-0.7
RM33				AML		AML		
	comp=N,299μm,0.5s							
RM33				AML		AML		
	comp=E,322μm,0.9s							
TERO	**Teramo**	**0.33**	**126**	P		Pg	15 49 14.8	+0.5
TERO				AML		AML		
	comp=E,277μm,0.1s							
TERO				AML		AML		
	comp=N,258μm,0.1s							
TERO				AML		AML		
	comp=N,178μm,0.1s							
TERO				AML		AML		
	comp=E,95μm,0.1s							
GIGS	**Gran Sasso**	**0.44**	**146**	P		Pg	15 49 16.8	+0.5
GIGS				AML		AML		
	comp=E,11μm,0.1s							
GIGS				AML		AML		
	comp=E,24μm,0.3s							

KRNET ***25*** *16:11:37.9±0.1,39˚.25N×73˚.79E, mb3.0*
ISU ***25*** *16:11:38,41˚.90N×72˚.89E, h5km*
SOME ***25*** *16:11:41.9,39˚.77N×73˚.32E, h5km*
NNC ***25*** *16:11:43.9±2.4,39˚.78N×73˚.31E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=19.6km s-min=8.9km az=167.0*

ISC 25 16:11:43.6±1.5,39˚.55N±0˚.07×73˚.64E±0˚.04, h10km, n34, σ2§77/55, 13C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OHH	**Osh**	**1.18**	**326**	⇓*i*P		**Pn**	**16 12 06.2**	**0.0**
	baz=29							
OHH				⇓*i*S		**Sn**	**16 12 26.8**	**+4.4**
	baz=29							
ANR	**Andizhan**	**1.55**	**321**	S		**Sg**	**16 12 34.9**	**+1.3**
FRG	**Fergana**	**1.65**	**301**	P		**Pn**	**16 12 11.1**	**-1.6**
FRG				S		**Sb**	**16 12 35.3**	**+0.3**
BTK	**Batken**	**2.23**	**284**	⇑*i*P		**Pn**	**16 12 21.2**	**+0.4**
	baz=90							
BTK				⇑*i*S		**Sb**	**16 12 52.8**	**+0.9**
	baz=90							
MINT	**Mingtut**	**2.24**	**295**	P		**Pn**	**16 12 17.0**	**-3.9**
MINT				S		**Sn**	**16 12 45.3**	**-3.3**
ARLS	**Aral**	**2.37**	**12**	⇑*i*P		**Pn**	**16 12 23.8**	**+1.1**
	baz=9.0							
ARLS				⇑*i*S		**Sg**	**16 12 57.5**	**-2.2**
	baz=9.0							
ARK	**Arkit**	**2.58**	**331**	⇓*i*P		**Pb**	**16 12 27.8**	**-2.3**
	baz=32							
ARK				⇓*i*S		**Sg**	**16 13 03.9**	**-2.8**
	baz=32							
GAR	**Garm**	**2.64**	**259**	⇑*i*P		**Pn**	**16 12 25.1**	**-1.3**
	baz=66							
GAR				⇑*i*S		**Sn**	**16 12 59.4**	**+0.9**
	baz=66							
TRKS	**Terek-Say**	**2.75**	**317**	⇑*i*P		**Pn**	**16 12 28.4**	**+0.5**
	baz=19							
TRKS				⇑*i*S		**Sb**	**16 13 06.0**	**-0.8**
	baz=19							
UCH	**Uchtor**	**2.76**	**14**	⇑*i*P		**Pn**	**16 12 29.3**	**+1.0**
	baz=10.0							
UCH				⇑*i*S		**Sb**	**16 13 07.5**	**+0.2**
	baz=10.0							
TKM2	**Tokmak 2**	**3.68**	**23**	⇑Pg		**Pb**	**16 12 49.9**	**+1.1**
	1.7nm,0.3s							
TKM2				⇑Lg		Lg	16 13 39.3	
	4.2nm,0.6s							
IUG	**Iuzhnay**	**3.77**	**315**	*e*P		**Pn**	**16 12 44.9**	**+3.0**
	100nm,0.3s							
IUG				*e*S		**Sn**	**16 13 30.1**	**+3.7**
	19nm,0.6s							
IUG	**Iuzhnay**	**3.77**	**315**	Pg		**Pn**	**16 12 44.9**	**+3.0**
	100nm,0.3s							
IUG				Lg		Lg	16 13 30.1	
	19nm,0.6s							
KST	**Kastek**	**3.91**	**26**	*e*P		**Pb**	**16 12 52.8**	**+0.1**

KOTS	**Kotyrbulak**	**4.51**	**34**	Pg	**Pb**	**16 13 05.4**	**+2.4**
	2.5nm,0.6s						
KOTS				Lg	Lg	16 14 05.7	
	15nm,0.9s						
KTBS	**Karatobe**	**4.74**	**28**	*eP*	**Pb**	**16 13 08.2**	**+1.3**
	3.5nm,0.7s						
KTBS				*eS*	**Sg**	**16 14 10.2**	**-5.7**
	6.5nm,0.6s						
KTBS	**Karatobe**	**4.74**	**28**	Pg	**Pb**	**16 13 08.2**	**+1.3**
	3.5nm,0.7s						
KTBS				Lg	Lg	16 14 10.2	
	6.5nm,0.6s						
KUU	**Kurty**	**4.79**	**24**	*eP*	**Pb**	**16 13 10.0**	**+2.4**
	0.5nm,0.1s						
KUU				*eS*	**Sg**	**16 14 13.4**	**-3.9**
	3.4nm,0.2s						
KUU	**Kurty**	**4.79**	**24**	Pg	**Pb**	**16 13 10.0**	**+2.4**
	0.5nm,0.1s						
KUU				Lg	Lg	16 14 13.4	
	3.4nm,0.2s						
CHKK	**Chushkaly**	**4.98**	**29**	*eP*	**Pb**	**16 13 13.2**	**+2.3**
	0.8nm,0.1s						
CHKK				*eS*	**Sg**	**16 14 18.8**	**-4.6**
	3.5nm,0.2s						
CHKK	**Chushkaly**	**4.98**	**29**	Pg	**Pb**	**16 13 13.2**	**+2.3**
	0.8nm,0.1s						
CHKK				Lg	Lg	16 14 18.8	
	3.5nm,0.2s						
ARXS	**Arharly**	**5.61**	**32**	*eP*	**Pb**	**16 13 25.1**	**+3.5**
	2.8nm,0.6s						
ARXS				*eS*	**Sg**	**16 14 39.8**	**-3.9**
	3.8nm,0.5s						
ARXS	**Arharly**	**5.61**	**32**	Pg	**Pb**	**16 13 25.1**	**+3.5**
	2.8nm,0.6s						
ARXS				Lg	Lg	16 14 39.8	
	3.8nm,0.5s						
BLB	**Baldybastay**	**5.80**	**37**	*eP*	**Pb**	**16 13 28.2**	**+3.2**
	2.4nm,0.5s						
BLB				*eS*	**Sg**	**16 14 44.7**	**-5.3**
	3.2nm,0.8s						
BLB	**Baldybastay**	**5.80**	**37**	Pg	**Pb**	**16 13 28.2**	**+3.2**
	2.4nm,0.5s						
BLB				Lg	Lg	16 14 44.7	
	3.2nm,0.8s						

IDC 25 16:16:32.1±1.8, 22°.85N×96°.01E, h0km, mb3.4/2, mbtmp3.4/3, ML3.9/1, Error ellipse: s-maj=45.6km s-min=19.6km az=61.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.16**	**147**	Pn	Pn	16 17 49.6	-1.1
	1.1nm,0.3s,baz=322,slow=13,SNR=18						
CMAR				Pg	Pg	16 18 07.7	-3.5
	3.9nm,0.3s,baz=321,slow=18,SNR=24						
CMAR				Lg	Lg	16 19 15.3	
	2.7nm,0.3s,baz=324,slow=16,SNR=4.3						
	2.1nm,0.4s						
MKAR	**Makanchi Array**	**26.33**	**338**	P	P	16 22 09.6	-0.2
	0.4nm,0.5s,baz=146,slow=11,SNR=5.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**56.64**	**136**	P	P	16 26 17.7	+0.3
	0.3nm,0.8s,baz=333,slow=9.2,SNR=1.3						
	0.3nm,0.8s						

ROM 25 16:23:44.8±0.1, 42°.809N±0°.004×13°.249E±0°.005, h9km, ML2.7/4, Error ellipse: s-maj=0.5km s-min=0.1km az=236.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**284**	P	Pg	16 23 47.8	+0.4
NRCA				S	Sg	16 23 49.7	+0.5
MC2	**Monte Cornacci**	**0.11**	**337**	P	Pg	16 23 48.1	+0.4
MC2				S	Sg	16 23 50.4	+0.7
T1243	**Rocca Santa Ma**	**0.18**	**127**	P	Pg	16 23 49.6	+0.8
T1243				S	Sg	16 23 52.8	+1.3
T1243				AML	AML		
	comp=N,8115μm,0.2s						
T1243				AML	AML		
	comp=E,8925μm,0.2s						
T1243				AML	AML		
	comp=E,8875μm,0.2s						
T1243				AML	AML		
	comp=E,8930μm,0.2s						
T1243				AML	AML		
	comp=N,8120μm,0.2s						
T1243				AML	AML		
	comp=N,8060μm,0.2s						
T1243				AML	AML		
	comp=E,8880μm,0.2s						
T1243				AML	AML		
	comp=N,8055μm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**332**	P	Pg	16 23 50.6	+0.6
FDMO				S	Sg	16 23 54.8	+1.3
LNSS	**Leonessa**	**0.26**	**217**	P	Pg	16 23 50.9	+0.8
LNSS				S	Sb	16 23 55.1	-1.2
LNSS				AML	AML		
	comp=E,1665μm,0.4s						
LNSS				AML	AML		
	comp=N,1685μm,0.4s						
LNSS				AML	AML		
	comp=N,2945μm,0.3s						
LNSS				AML	AML		
	comp=E,3605μm,0.4s						
LNSS				AML	AML		
	comp=N,2950μm,0.3s						
LNSS				AML	AML		
	comp=N,1538μm,0.0s						
LNSS				AML	AML		
	comp=E,1667μm,0.4s						
CSP1	**Cessapalombo**	**0.28**	**353**	P	Pg	16 23 51.3	+0.7
CSP1				S	Sb	16 23 55.9	-1.3
CAMP	**Campotosto**	**0.30**	**157**	P	Pg	16 23 51.4	+0.6
CAMP				S	Sb	16 23 56.3	-1.2
RM33	**Pellescritta (**	**0.30**	**185**	P	Pb	16 23 51.7	-0.8
RM33				S	Sb	16 23 56.9	-0.6
RM33				AML	AML		
	comp=E,393μm,1.5s						
RM33				AML	AML		
	comp=N,342μm,0.4s						
RM33				AML	AML		
	comp=E,398μm,0.2s						
RM33				AML	AML		
	comp=N,346μm,0.4s						
RM33				AML	AML		
	comp=E,1625μm,1.4s						
RM33				AML	AML		
	comp=N,1105μm,0.5s						
RM33				AML	AML		
	comp=N,1085μm,0.5s						
RM33				AML	AML		
	comp=E,1660μm,1.4s						
RM33				AML	AML		
	comp=N,1100μm,0.5s						
RM33				AML	AML		
	comp=N,346μm,0.4s						
RM33				AML	AML		
	comp=E,1625μm,1.4s						
CESI	**CESI - Serrava**	**0.32**	**308**	P	Pg	16 23 51.8	+0.5
CESI				S	Sb	16 23 57.0	-1.1
TERO	**Teramo**	**0.32**	**125**	P	Pg	16 23 51.8	+0.6
TERO				S	Sb	16 23 57.1	-1.0
TERO				AML	AML		
	comp=E,708μm,1.5s						
TERO				AML	AML		
	comp=N,1360μm,0.2s						
TERO				AML	AML		
	comp=E,706μm,1.5s						
TERO				AML	AML		
	comp=E,706μm,1.5s						
TERO				AML	AML		
	comp=N,1456μm,0.2s						
TERO				AML	AML		
	comp=N,1356μm,0.2s						
OFFI	**Offida**	**0.34**	**68**	S	Sg	16 23 54.0	-2.2
ARRO	**Arrone**	**0.42**	**237**	P	Pb	16 23 53.9	-0.6
ARRO				S	Sb	16 24 00.5	-0.5
GIGS	**Gran Sasso**	**0.43**	**147**	P	Pg	16 23 53.9	+0.6
GIGS				S	Sb	16 24 00.7	-0.5
ASSB	**Assisi San Ben**	**0.49**	**299**	P	Pg	16 23 54.5	+0.1
ASSB				S	Sb	16 24 02.4	-0.7
SNTG	**Esanatoglia**	**0.50**	**333**	P	Pg	16 23 54.9	+0.3
SNTG				S	Sb	16 24 02.9	-0.4
EL6	**Elcito**	**0.53**	**348**	P	Pg	16 23 55.5	+0.4
EL6				S	Sb	16 24 05.0	+0.8
CING	**Cingoli**	**0.57**	**356**	P	Pb	16 23 56.5	-0.5
CING				S	Sb	16 24 05.9	+0.7
ATCC	**AVT- Casa Cast**	**0.58**	**310**	P	Pg	16 23 56.2	0.0
ATCC				S	Sb	16 24 05.8	+0.1
FOSV	**Fossato di Vic**	**0.60**	**324**	P	Pg	16 23 56.8	+0.2
FOSV				S	Sb	16 24 06.4	+0.1

ROM 25 16:24:23.7±0.1, 42°.676N±0°.006×13°.22E±0°.01, h10km±1km, ML0.9, Error ellipse: s-maj=1.2km s-min=0.5km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.15**	**241**	P	Pg	16 24 27.6	+0.4
LNSS				S	Sg	16 24 30.2	+0.7
RM33	**Pellescritta (**	**0.17**	**182**	P	Pg	16 24 28.0	+0.6
RM33				S	Sg	16 24 31.0	+1.1
RM33				AML	AML		
	comp=E,1625μm,1.4s						
RM33				AML	AML		
	comp=E,1660μm,1.4s						
RM33				AML	AML		
	comp=N,1100μm,0.5s						
RM33				AML	AML		
	comp=N,1085μm,0.5s						
T1243	**Rocca Santa Ma**	**0.17**	**83**	AML	AML		
	comp=N,1755μm,0.1s						
T1243				AML	AML		
	comp=N,1825μm,0.1s						
T1243				AML	AML		
	comp=E,1410μm,0.5s						
T1243				AML	AML		
	comp=E,1425μm,0.5s						
NRCA	**Norcia**	**0.18**	**333**	P	Pg	16 24 28.4	+0.8
NRCA				S	Sg	16 24 30.9	+0.7
MC2	**Monte Cornacci**	**0.24**	**354**	P	Pg	16 24 29.6	+0.9
MC2				S	Sg	16 24 33.6	+1.6
TERO	**Teramo**	**0.29**	**101**	P	Pg	16 24 30.0	+0.5
TERO				S	Sg	16 24 34.6	+1.2
GIGS	**Gran Sasso**	**0.34**	**131**	P	Pb	16 24 31.9	-0.1
GIGS				S	Sb	16 24 36.3	-1.2
FDMO	**Fiordimonte**	**0.37**	**345**	S	Sg	16 24 32.0	-4.1
CESI	**CESI - Serrava**	**0.40**	**325**	P	Pg	16 24 31.9	+0.3
CESI				S	Sb	16 24 38.1	-1.1
CSP1	**Cessapalombo**	**0.42**	**358**	S	Sg	16 24 33.0	-4.4

*IDC **25** 16:29:12.5±10.0, 56°.16S×27°.45W, h110km±95km, mb4.0/6, mbtmp4.3/6, MS2.6/1, Error ellipse: s-maj=30.4km s-min=23.2km az=86.0*
*NEIC **25** 16:29:13.2±2.0, 56°.2S±0°.1×27°.7W±0°.2, h113km±10km, mb4.5/24, Error ellipse: s-maj=18.1km s-min=13.4km az=198.0*

ISC 25 16:29:11.4±0.6, 56°.11S±0°.08×27°.72W±0°.08, h100km, n41, σ1§15/40, mb4.5/15, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.34**	**286**	Pn	**Pn**	**16 30 31.8**	**+3.1**
HOPE				Sn	**Sn**	**16 31 27.7**	**-1.2**
ORCD	**Orcadas**	**10.05**	**236**		**Pn**	**16 31 33.5**	**+1.0**
VNA1	**Neumayer--Stat**	**16.86**	**157**	P	**P**	**16 33 02.3**	**+1.1**
VNA3	**Neumayer Olymp**	**17.04**	**160**	P	**Pn**	**16 33 03.9**	**+0.8**
VNA2	**Neumayer--Watz**	**17.25**	**157**	P	**Pn**	**16 33 06.4**	**+0.7**
	baz=316,slow=12						
SNAA	**Sanae**	**18.81**	**156**	P	**P**	**16 33 23.3**	**+0.5**
SNAA	**Sanae**	**18.81**	**156**	P	**P**	**16 33 22.9**	**+0.1**
PMSA	**Palmer Station**	**19.64**	**229**	P	**Pn**	**16 33 34.7**	**+0.6**
TROLL	**Troll, Antarti**	**20.33**	**153**	P	**P**	**16 33 39.6**	**+0.3**
BELA	**Belgrano 2**	**22.00**	**184**	P	**P**	**16 33 56.2**	**-0.8**
MG02	**Cerro Sombrero**	**24.10**	**260**	P	**P**	**16 34 13.5**	**-3.8**
PLTB	**Pedras Altas**	**30.32**	**313**	P	**P**	**16 35 13.7**	**+0.5**
PLTB				IAmb	IAmb	16 35 19.5	
	comp=Z,8.3nm,1.3s						
PLCA	**Paso Flores**	**31.72**	**281**	LR	LR	16 47 40.9	
	comp=Z,9.7nm,18.4s,baz=182,slow=35						
QSPA	**South Pole Qui**	**34.14**	**180**	P	**P**	**16 35 47.4**	**+0.9**
MT02	**Curacav**	**37.52**	**289**	P	**P**	**16 36 13.5**	**-2.0**
MT02				IAmb	IAmb	16 36 52.6	
	comp=Z,11nm,1.5s						
CO02	**Combarbal**	**39.06**	**291**	P	**P**	**16 36 27.8**	**-0.7**
CO02				IAmb	IAmb	16 37 07.7	
	comp=Z,13nm,1.2s						
GO04	**Tololo Observa**	**39.77**	**292**	P	**P**	**16 36 33.4**	**-1.2**
GO04				IAmb	IAmb	16 37 12.9	
	comp=Z,7.5nm,1.1s						
AC05	**El Transito**	**40.58**	**294**	P	**P**	**16 36 41.3**	**+0.2**
AC05				IAmb	IAmb	16 36 45.4	
	comp=Z,8.6nm,1.1s						
AC02	**Maricunga**	**41.64**	**297**	P	**P**	**16 36 51.3**	**+1.1**
GO02	**Mina Guanaco**	**43.26**	**298**	P	**P**	**16 37 03.0**	**-0.1**
GO02				IAmb	IAmb	16 37 04.1	
	comp=Z,5.7nm,0.8s						
LVC	**Limon Verde**	**45.07**	**301**	P	**P**	**16 37 18.7**	**+1.0**
	comp=Z,5.1nm,0.5s,baz=130,slow=3.8,SNR=6.0						
	comp=Z,5.1nm,0.5s						
LVC	**Limon Verde**	**45.07**	**301**	P	**P**	**16 37 18.7**	**+1.0**
LVC				IAmb	IAmb	16 37 21.0	
	comp=Z,4.8nm,0.8s						
PB04	**IPOC Station P**	**45.91**	**300**	P	**P**	**16 37 24.4**	**+0.3**
PB09	**IPOC Station P**	**45.92**	**301**	P	**P**	**16 37 25.4**	**+1.2**
PB09				IAmb	IAmb	16 37 43.0	
	comp=Z,13nm,1.4s						
PB07	**IPOC Station P**	**46.29**	**300**	P	**P**	**16 37 27.4**	**+0.3**
VNDA	**Vanda**	**46.50**	**183**	P	**P**	**16 37 27.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=207,slow=6.7,SNR=5.6						
	comp=Z,0.5nm,0.7s						
PB02	**IPOC Station P**	**46.65**	**301**	P	**P**	**16 37 30.4**	**+0.6**
PB01	**IPOC Station P**	**46.68**	**301**	P	**P**	**16 37 30.7**	**+0.7**
GO01	**Chusmiza**	**47.72**	**302**	P	**P**	**16 37 39.3**	**+0.7**
GO01				IAmb	IAmb	16 37 40.2	
	comp=Z,6.7nm,0.8s						
PB16	**IPOC Station P**	**49.02**	**303**	P	**P**	**16 37 49.6**	**+0.9**
LBTB	**Lobatse**	**49.31**	**74**	P	**P**	**16 37 49.9**	**-0.4**
LBTB				IAmb	IAmb	16 38 27.3	
	comp=Z,6.5nm,1.2s						
LPAZ	**La Paz**	**50.17**	**306**	P	**P**	**16 37 58.5**	**+1.0**
	comp=Z,2.5nm,0.4s,baz=114,slow=5.7,SNR=20						
	comp=Z,2.5nm,0.4s						
LPAZ	**La Paz**	**50.17**	**306**	P	**P**	**16 37 58.0**	**+0.5**
LPAZ				IAmb	IAmb	16 37 59.5	
	comp=Z,3.0nm,0.5s						
DBIC	**Dimbokro**	**65.34**	**25**	P	**P**	**16 39 42.5**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=172,slow=2.7,SNR=3.2						
	comp=Z,2.6nm,0.6s						
DBIC	**Dimbokro**	**65.34**	**25**	P	**P**	**16 39 42.2**	**-0.6**
TOA0	**Torodi Ar. Sit**	**73.25**	**30**	P	**P**	**16 40 32.0**	**+0.5**
TOA0				IAmb	IAmb	16 40 32.5	
	comp=Z,5.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.25**	**30**	P	**P**	**16 40 31.7**	**+0.1**
	comp=Z,5.0nm,0.3s,baz=198,slow=6.1,SNR=20						
	comp=Z,5.0nm,0.3s						
ASAR	**Alice Springs**	**99.02**	**163**	P	Pdif	16 42 39.8	-1.2
	comp=Z,0.2nm,0.6s,baz=178,slow=3.6,SNR=4.5						
	comp=Z,0.2nm,0.6s						
FINES	**FINESS Array B**	**124.57**	**28**	PKP	**PKPdf**	**16 47 56.3**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=194,slow=0.6,SNR=4.0						
ILAR	**Eielson Array**	**149.93**	**312**	PKPbc	**PKPbc**	**16 48 48.7**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=126,slow=2.7,SNR=8.2						
SONM	**Songino Array**	**151.03**	**87**	PKPbc	**PKPbc**	**16 48 51.1**	**-0.7**
	comp=Z,1.7nm,0.4s,baz=220,slow=4.0,SNR=12						

*CNRM **25** 16:32:39.8, 35°.36N×4°.74W, h111km, ml2.4*
*SFS **25** 16:32:41.0, 35°.45N×4°.78W, ML2.6, ALBORAN OESTE*
*IGIL **25** 16:32:41.0, 35°.46N×4°.78W, h18km, ML2.7*
*MDD **25** 16:32:42.0±0.4, 35°.46N×4°.80W, h93km±5km, Mb2.7/14, Error ellipse: s-maj=3.2km s-min=2.4km az=156.0*
*INMG **25** 16:32:43.1±1.6, 35°.56N×4°.81W, h90km, ML2.5, Error ellipse: s-maj=5.0km s-min=3.4km az=153.0*

ISC 25 16:32:39.2±1.3, 35°.44N±0°.04×4°.76W±0°.03, h115km±8km, n64, σ2§07/120, 13C-10D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVLZ	**Peæn de**	**0.46**	**125**	P	**Pn**	**16 32 56.1**	**-0.2**
PVLZ				S	**Sn**	**16 33 07.2**	**-2.0**
CHEFC	**Chefchaouen**	**0.58**	**235**	P	**Pn**	**16 32 56.9**	**-0.4**
CHEFC				S	**Sn**	**16 33 11.9**	**+1.1**
CEU	**Ceuta**	**0.68**	**313**	P	**Pn**	**16 32 58.4**	**+0.5**
CEU				S	**Sn**	**16 33 10.5**	**-1.4**
ECEU	**Ceuta**	**0.68**	**312**	P	**Pn**	**16 32 59.9**	**+2.0**
ECEU				⇑*i*Vmb_V		16 33 00.1	
	3μm,SNR=6.3						
ECEU				S	**Sn**	**16 33 11.2**	**-0.8**
EMIJ	**Mijas**	**1.12**	**359**	⇓P	**Pn**	**16 33 01.6**	**-0.5**
EMIJ				⇑*i*Vmb_V		16 33 03.7	
	602nm,SNR=5.5						
EMIJ				S	**Sn**	**16 33 16.4**	**-3.1**
EJIF	**Jimena Fronter**	**1.16**	**330**	⇓P	**Pn**	**16 33 04.5**	**+2.0**
EJIF				S	**Sn**	**16 33 24.6**	**+4.4**
EMAL	**Malaga-Limoner**	**1.34**	**11**	P	**Pn**	**16 33 04.5**	**0.0**
EMAL				S	**Sn**	**16 33 21.5**	**-2.2**
GOG	**Mont Gurugu**	**1.46**	**98**	P	**Pn**	**16 33 06.4**	**+0.5**
GOG				S	**Sn**	**16 33 25.2**	**-0.9**
EMEL	**Melilla**	**1.48**	**95**	S	**Sn**	**16 33 25.8**	**-0.6**
ESPR	**Espera**	**1.68**	**328**	⇓P	**Pn**	**16 33 10.0**	**+1.6**
ESPR				⇑*i*Vmb_V		16 33 10.2	
	477nm,SNR=3.2						
ESPR				S	**Sn**	**16 33 31.8**	**+1.1**
ELGU	**Los Guajares,**	**1.69**	**32**	P	**Pn**	**16 33 09.1**	**+0.3**
ELGU				S	**Sn**	**16 33 29.3**	**-1.8**
EGOR	**Sierra Gorda,**	**1.75**	**17**	P	**Pn**	**16 33 11.1**	**+1.7**
EGOR				S	**Sn**	**16 33 33.7**	**+1.3**
IFR	**Ifrane**	**1.94**	**189**	P	Pn	16 33 25.4	+14
IFR				S	**Sn**	**16 33 34.5**	**-2.3**
TAF	**Taforalt**	**2.02**	**107**	P	**Pn**	**16 33 13.6**	**+0.8**
TAF				S	**Sn**	**16 33 37.2**	**-1.2**
EQUE	**Quentar**	**2.06**	**31**	P	**Pn**	**16 33 15.9**	**+2.7**
EQUE				S	**Sn**	**16 33 39.3**	**0.0**
EBER	**Berja**	**2.10**	**46**	P	**Pn**	**16 33 16.2**	**+2.3**
EBER				S	**Sn**	**16 33 39.7**	**-0.6**
JBK	**JBK**	**2.11**	**121**	P	**Pn**	**16 33 14.6**	**+0.6**
JBK				S	**Sn**	**16 33 38.2**	**-2.4**
ZHG	**ZHG**	**2.53**	**219**	P	**Pn**	**16 33 20.1**	**+0.9**
ZHG				S	**Sn**	**16 33 52.9**	**+3.0**
MD31	**MD31**	**2.57**	**180**	P	**Pn**	**16 33 20.5**	**+0.6**
MD31				S	**Sn**	**16 33 49.2**	**-1.8**
MDT	**Midelt**	**2.62**	**177**	P	**Pn**	**16 33 21.8**	**+1.3**
MDT				S	**Sn**	**16 33 51.2**	**-1.0**
ECAB	**El Cabril**	**2.68**	**349**	⇓P	**Pn**	**16 33 22.2**	**+1.0**
ECAB				⇑*i*Vmb_V		16 33 22.4	
	387nm,SNR=4.7						
ECAB				S	**Sn**	**16 33 51.3**	**-2.2**
EQES	**Quesada**	**2.72**	**29**	P	**Pn**	**16 33 24.1**	**+2.3**
EQES				⇑*i*Vmb_V		16 33 26.8	
	124nm,SNR=1.9						
EQES				S	**Sn**	**16 33 54.9**	**+0.4**
EADA	**Adamuz**	**2.73**	**3**	⇓P	**Pn**	**16 33 23.3**	**+1.5**
EADA				⇑*i*Vmb_V		16 33 23.7	
	1μm,SNR=18						
EADA				S	**Sn**	**16 33 53.0**	**-1.5**
EMIN	**Mina Concepcio**	**2.79**	**327**	⇓P	**Pn**	**16 33 23.5**	**+1.0**
EMIN				⇑*i*Vmb_V		16 33 23.6	
	456nm,SNR=3.9						
EMIN				S	**Sn**	**16 33 53.5**	**-2.4**
EGRO	**El Granado**	**3.03**	**314**	⇓P	**Pn**	**16 33 26.7**	**+1.0**
EGRO				⇑*i*Vmb_V		16 33 26.9	
	1μm,SNR=4.8						
EGRO				S	**Sn**	**16 33 59.6**	**-2.0**
PVAQ	**Vaqueiros**	**3.09**	**310**	P	**Pn**	**16 33 27.3**	**+0.8**
PVAQ				S	**Sn**	**16 34 05.2**	**+2.3**
PVAQ	**Vaqueiros**	**3.09**	**310**	*eP*	**Pn**	**16 33 27.4**	**+0.9**
PVAQ				S	**Sn**	**16 34 01.3**	**-1.6**
PVAQ				A	A	16 34 02.1	
	24nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.13**	**306**	*eP*	**Pn**	**16 33 28.0**	**+0.9**
PBDV				S	**Sn**	**16 34 02.3**	**-1.7**
PBDV				A	A	16 34 03.7	
	11nm,0.7s						
PBAR	**Barrancos**	**3.29**	**327**	*eP*	**Pn**	**16 33 30.2**	**+1.1**
PBAR				S	**Sn**	**16 34 05.8**	**-1.8**
PBAR				A	A	16 34 09.3	
	9.3nm,0.2s						
PCVE	**Castro Verde**	**3.43**	**311**	⇓*i*P	**Pn**	**16 33 31.9**	**+0.9**
PCVE				S	**Sn**	**16 34 08.9**	**-2.1**
PCVE				A	A	16 34 10.6	
	8.4nm,0.5s						
PBEJ	**Beja**	**3.59**	**317**	*eP*	**Pn**	**16 33 34.2**	**+1.0**
PBEJ				S	**Sn**	**16 34 12.7**	**-2.2**
PBEJ				A	A	16 34 14.0	
	6.5nm,0.1s						
MORF	**Marmelete**	**3.65**	**302**	*eP*	**Pn**	**16 33 34.8**	**+0.8**
MORF				*eS*	**Sn**	**16 34 14.1**	**-2.4**
MORF				IAML		16 34 14.8	
	comp=E,22nm,0.2s						
MORF	**Marmelete**	**3.65**	**302**	⇓*eP*	**Pn**	**16 33 34.9**	**+0.9**
MORF				S	**Sn**	**16 34 14.1**	**-2.3**
MORF				A	A	16 34 14.9	
	comp=E,12nm,0.1s						
MESJ	**Messejana**	**3.67**	**312**	*eP*	**Pn**	**16 33 35.1**	**+0.9**
MESJ				*eS*	**Sn**	**16 34 14.5**	**-2.3**
MESJ				IAML		16 34 17.2	
	comp=N,14nm,0.2s						
MESJ	**Messejana**	**3.67**	**312**	*eP*	**Pn**	**16 33 35.3**	**+1.1**
MESJ				S	**Sn**	**16 34 14.8**	**-2.0**
MESJ				A	A	16 34 15.7	
	comp=N,12nm,0.5s						
PFVI	**Vila Bisbo**	**3.69**	**298**	P	**Pn**	**16 33 34.8**	**+0.3**
PFVI				S	**Sn**	**16 34 19.6**	**+2.2**
PFVI	**Vila Bisbo**	**3.69**	**298**	*eP*	**Pn**	**16 33 35.4**	**+0.9**
PFVI				S	**Sn**	**16 34 15.0**	**-2.4**
PFVI				A	A	16 34 18.1	
	comp=N,8.2nm,0.8s						
EBAD	**Badajoz**	**3.77**	**332**	⇓P	**Pn**	**16 33 36.9**	**+1.4**
EBAD				S	**Sn**	**16 34 17.0**	**-2.1**
PNCL	**Nicolau / Gran**	**4.03**	**312**	*eP*	**Pn**	**16 33 40.1**	**+1.1**
PNCL				S	**Sn**	**16 34 23.0**	**-2.4**
PNCL				A	A	16 34 25.0	
	comp=N,7.1nm,0.7s						
EVO	**Evora**	**4.04**	**321**	P	**Pn**	**16 33 40.5**	**+1.4**
EVO				S	**Sn**	**16 34 23.3**	**-2.3**
PESTR	**Estremoz**	**4.10**	**327**	P	**Pn**	**16 33 41.3**	**+1.3**
PESTR				S	**Sn**	**16 34 30.9**	**+3.8**
PESTR	**Estremoz**	**4.10**	**327**	*eP*	**Pn**	**16 33 41.5**	**+1.5**
PESTR				S	**Sn**	**16 34 24.6**	**-2.5**
PESTR				A	A	16 34 28.5	
	comp=N,5.0nm,0.3s						
ETOB	**Tobarra**	**4.10**	**38**	P	**Pn**	**16 33 42.4**	**+2.3**
ETOB				⇑*i*Vmb_V		16 33 49.8	
	comp=N,120nm,SNR=1.2						
ETOB				S	**Sn**	**16 34 28.4**	**+1.1**
PAB	**San Pablo**	**4.11**	**4**	P	**Pn**	**16 33 41.5**	**+1.3**
PAB				⇑*i*Vmb_V		16 33 42.0	
	comp=N,73nm,SNR=1.3						
PAB				S	**Sn**	**16 34 24.7**	**-2.8**
ESDC	**Sonseca Array**	**4.27**	**8**	S	**Sn**	**16 34 28.5**	**-2.8**
PMRV	**Marv??o**	**4.50**	**333**	*eP*	**Pn**	**16 33 47.0**	**+1.7**
PMRV				S	**Sn**	**16 34 34.0**	**-2.7**
PMRV				A	A	16 34 50.4	
	comp=N,4.6nm,0.3s						
PMTG	**Montargil**	**4.56**	**324**	*eP*	**Pn**	**16 33 47.5**	**+1.4**
PMTG				S	**Sn**	**16 34 35.6**	**-2.4**
PMTG				A	A	16 34 52.9	
	comp=N,2.7nm,0.2s						
PCBR	**Castelo Branco**	**4.89**	**335**	*eP*	**Pn**	**16 33 52.6**	**+2.0**
PCBR				S	**Sn**	**16 34 43.1**	**-3.0**

comp=N,86nm,SNR=0.8

ECAL				S	Sn	16 35 27.2	-2.1
PCAB	Cabrl	6.76	339	*e*P	Pn	16 34 18.4	+2.5
ELOB	Lobios	6.92	339	P	Pn	16 34 20.1	+2.1
ELOB				S	Sn	16 35 33.1	-2.1
PGAV	Gavieira, Arco	7.07	338	*e*P	Pn	16 34 22.7	+2.6
PGAV				S	Sn	16 35 36.2	-2.7
PGAV				A	A	16 35 38.8	

comp=N,3.9nm,0.7s

EAGO	Agolada(Pontev	7.79	342	P	Pn	16 34 32.7	+2.9
EARI	Arriondas	7.86	358	P	Pn	16 34 34.1	+3.4
EARI				S	Sn	16 35 54.2	-3.8
EORO	Oroz-Betelu	7.91	19	S	Sn	16 35 55.9	-3.3
EALK	Alkurruntz	8.17	17	P	Pn	16 34 37.2	+2.3
EALK				S	Sn	16 36 02.3	-3.2

JMA ***25*** *17:04:41.5±0.3,31˚N±1˚×13˚8E±˚, h498km±3km, MD6.1/39, MW5.9/39, NEAR TORISHIMA IS .*

JMA Felt II J1 at NEAR TORISHIMA IS .

NIED ***25*** *17:04:41.5,30.58N×138.22E, h498km, MW5.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^17Nm; Mrr=2.10; Mθθ=4.23; Mrθ=2.15; Mθφ=3.26; Mφr=1.35; Fault plane solution: M0=5.47000×10^17 NP1:θ=27.00000°, δ=56.00000°, λ=-160.00000°. NP2:θ=285.00000°, δ=73.00000°, λ=-36.00000°.*

MOS ***25*** *17:04:42.5±0.8,30.59N×137.80E, h466km, mb5.5/45, MS4.8/13 Error ellipse: s-maj=5.9km s-min=3.4km az=110.0*

BJI ***25*** *17:04:42.3±0.0,30.56N×137.86E, h466km, mb5.9/88, mB5.7/49*

NEIC ***25*** *17:04:43.3±1.5,30.61N±0.07×137.85E±0.06, h456km±1km, mb5.5/613, Mwb5.9/64, Mww5.9, Error ellipse: s-maj=14.0km s-min=3.2km az=144.0*

IDC ***25*** *17:04:43.5±0.3,30.64N×137.89E, h464km±2km, mb4.9/49, mbtmp5.7/54, Error ellipse: s-maj=7.3km s-min=5.3km az=79.0*

NEIC ***25*** *17:04:44.4,30.62N×137.90E, h461km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=2.82; Mθθ=5.42; Mφφ=2.60; Mrθ=4.13; Mθφ=2.82; Mφr=3.64; Fault plane solution: M0=7.76000×10^17 NP1:θ=290.83000°, δ=74.93000°, λ=-48.60000°. NP2:θ=37.27000°, δ=43.59000°, λ=-157.84000°. Principal axes: T 7.3072, Plg19.0000°, Azm351.0000°; N 0.8403, Plg40.0000°, Azm98.0000°; P -8.1475, Plg44.0000°, Azm241.0000°;*

NEIC ***25*** *17:04:45,30.63N×137.90E, h480km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^17Nm; Mrr=2.41; Mθθ=6.85; Mφφ=-4.44; Mrθ=4.26; Mθφ=3.77; Mφr=-3.36; Fault plane solution: M0=8.94000×10^17 NP1:θ=33.00000°, δ=51.00000°, λ=-164.00000°. NP2:θ=293.00000°, δ=78.00000°, λ=-40.00000°. Principal axes: T 8.9548, Plg17.0000°, Azm349.0000°; N -0.0326, Plg48.0000°, Azm99.0000°; P -8.9222, Plg37.0000°, Azm245.0000°;*

GCMT ***25*** *17:04:45.3±0.1,30.69N±0.01×137.78E±0.01, h473km, MW5.9/161, Moment Tensor Solution. s161,c325; s105,c119; Duration: 2s2 Moment tensor: Scale 10^18Nm; Mrr=0.28±.01; Mθθ=0.66±.01; Mφφ=0.37±.01; Mrθ=0.46±.01; Mθφ=0.41±.01; Mφr=0.38±.01; Best double couple: M0=0.91800×10^18 NP1:θ=290.00000°, δ=76.00000°, λ=-43.00000°. NP2:θ=33.00000°, δ=49.00000°, λ=-161.00000°. Principal axes: T 0.8930, Plg17.0000°, Azm347.0000°; N 0.0490, Plg45.0000°, Azm96.0000°; P -0.9420, Plg40.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

KEA ***25*** *17:04:46.1,30.95N×137.14E, h247km, MS5.5/4*

ISC 25 17:04:43.7±0.2, 30°62N±0.02×137°84E±0.02, h470km±1km, h471km:pP-P, n2463, σ1§47/2890, mb5.5/595, 117C-106D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.46**	**41**	A		A	17 05 48.5	
	comp=E,153nm,2.3s,comp=E,112nm,1.2s							
JAOM	**Aogashimamukai**	**2.46**	**41**	⇓P		**P**	**17 05 49.3**	**+0.6**
JHCJ	**Hachijojimakas**	**2.96**	**34**	⇓P		**P**	**17 05 52.0**	**+0.1**
JHCJ				⇓S		**S**	**17 06 44.7**	**-2.8**
JHCJ	**Hachijojimakas**	**2.96**	**34**	A		A	17 05 52.0	
	comp=E,132nm,2.1s,comp=E,70nm,2.7s							
JHJ	**Hachijo jima 2**	**2.99**	**33**	P		**P**	**17 05 52.2**	**+0.1**
	5μm,0.3s,baz=52,slow=3.8,SNR=380							
JHJ				S		**S**	**17 06 44.2**	**-3.7**
	6μm,0.4s,baz=40,slow=12,SNR=14							
JHJ2	**Mitsune**	**3.00**	**34**			**P**	**17 05 52.2**	**0.0**
JHJ2	**Mitsune**	**3.00**	**34**	P		**P**	**17 05 52.1**	**-0.1**
JHJ2	**Mitsune**	**3.00**	**34**	⇓P		**P**	**17 05 52.2**	**0.0**
JHJ2				⇓*e*S		**S**	**17 06 46.0**	**-2.0**
JHJ2	**Mitsune**	**3.00**	**34**	A		A	17 05 52.2	
	comp=E,95nm,1.7s,comp=E,82nm,2.5s							
TTO1	**TONANKAI O.B.S**	**3.12**	**344**	⇓*i*P		**P**	**17 05 55.7**	**+2.9**
TTO1	**TONANKAI O.B.S**	**3.12**	**344**	A		A	17 05 55.7	
	comp=E,385nm,3.0s,comp=E,252nm,4.4s							
TTO2	**TONANKAI O.B.S**	**3.18**	**348**	A		A	17 05 55.0	
	comp=E,312nm,3.1s,comp=E,209nm,5.5s							
TTO2	**TONANKAI O.B.S**	**3.18**	**348**	⇓P		**P**	**17 05 56.2**	**+3.0**
TTO3	**TONANKAI O.B.S**	**3.25**	**354**	A		A	17 05 55.5	
	comp=E,316nm,2.6s,comp=E,307nm,4.1s							
TK02	**Tokai 2**	**3.31**	**359**	⇓P		**P**	**17 05 56.5**	**+2.3**
JWKM	**Wakayamakushim**	**3.33**	**328**	A		A	17 05 56.9	
	comp=E,130nm,2.6s,comp=E,158nm,2.3s							
TTO4	**TONANKAI O.B.S**	**3.39**	**356**	A		A	17 05 56.4	
	comp=E,256nm,3.1s,comp=E,269nm,2.9s							
JMMH	**Miemihama**	**3.54**	**335**	A		A	17 05 58.4	
	comp=E,64nm,3.4s,comp=E,89nm,3.0s							
JMKN	**Mikurajimanish**	**3.58**	**24**	A		A	17 05 56.5	
	comp=E,68nm,1.7s,comp=E,49nm,2.6s							
JMKN	**Mikurajimanish**	**3.58**	**24**	⇓P		**P**	**17 05 56.0**	**-0.7**
TTO5	**TONANKAI O.B.S**	**3.62**	**358**	A		A	17 05 58.0	
	comp=E,346nm,3.0s,comp=E,174nm,3.0s							
JTNC	**Tanabenakahech**	**3.71**	**330**	P		**P**	**17 05 59.7**	**+2.0**
JTNC				S		**S**	**17 07 00.3**	**+2.4**
JTNC	**Tanabenakahech**	**3.71**	**330**	A		A	17 05 59.7	
	comp=E,61nm,3.4s,comp=E,74nm,3.7s							
JKO	**Kozu shima**	**3.72**	**17**	A		A	17 05 58.0	
	comp=E,175nm,3.4s,comp=E,78nm,2.8s							
TK04	**Tokai 4**	**3.75**	**0**	⇓P		**P**	**17 05 60.0**	**+2.1**
JKN2	**Miekihoku**	**3.84**	**340**	A		A	17 06 00.6	
	comp=E,73nm,3.0s,comp=E,58nm,1.0s							
JKN2	**Miekihoku**	**3.84**	**340**	P		**P**	**17 06 00.8**	**+2.1**
JWM	**Minabe**	**3.84**	**327**	A		A	17 06 01.1	
	comp=E,87nm,2.3s,comp=E,115nm,2.5s							
JWM	**Minabe**	**3.84**	**327**	P		**P**	**17 06 01.1**	**+2.3**
JIE	**Ise**	**3.88**	**346**	P		**P**	**17 06 01.1**	**+2.0**
JIE				S		**S**	**17 07 02.6**	**+2.2**
JIE	**Ise**	**3.88**	**346**	A		A	17 06 01.1	
	comp=E,69nm,4.0s,comp=E,92nm,3.9s							
JSKK	**Shikinejimakit**	**3.88**	**17**	A		A	17 05 59.1	
	comp=E,70nm,5.1s,comp=E,63nm,4.1s							
JNIO	**Nijimaoohara**	**3.92**	**18**	A		A	17 05 59.5	
	comp=E,185nm,3.0s,comp=E,102nm,2.5s							
JNTK	**Naratenkawa**	**4.00**	**336**	A		A	17 06 01.9	
	comp=E,54nm,2.9s,comp=E,69nm,3.2s							
JAA	**Atsumi**	**4.04**	**352**	A		A	17 06 01.6	
	comp=E,89nm,2.9s,comp=E,80nm,3.7s							
JSG	**Sagara**	**4.05**	**4**	A		A	17 06 01.2	
	comp=E,245nm,2.5s,comp=E,116nm,4.5s							
JWY	**Kouya**	**4.06**	**333**	A		A	17 06 02.6	
	comp=E,83nm,2.6s,comp=E,89nm,2.7s							
JWY	**Kouya**	**4.06**	**333**	P		**P**	**17 06 03.0**	**+2.3**
JTHY	**Toshimahigashi**	**4.08**	**17**	A		A	17 06 00.7	
	comp=E,130nm,2.9s,comp=E,111nm,5.5s							
JKKS	**Kakegawashinom**	**4.12**	**2**	A		A	17 06 01.9	
	comp=E,225nm,2.9s,comp=E,88nm,3.4s							
JIZS	**Izushimoda**	**4.18**	**12**	A		A	17 06 01.9	
	comp=E,91nm,2.7s,comp=E,46nm,5.3s							
JIZS	**Izushimoda**	**4.18**	**12**	⇓P		**P**	**17 06 01.8**	**+0.3**
MRT2	**Murotomisaki 2**	**4.18**	**312**	A		A	17 06 04.3	
	comp=E,57nm,3.8s,comp=E,33nm,3.5s							
HMMJ	**Hamamatsu 2**	**4.22**	**359**	A		A	17 06 03.0	
	comp=E,113nm,2.9s,comp=E,38nm,6.0s							
TSUJ	**Tsu 2**	**4.25**	**344**	A		A	17 06 03.7	
	comp=E,63nm,5.1s,comp=E,91nm,3.7s							
TSUJ	**Tsu 2**	**4.25**	**344**	P		**P**	**17 06 04.3**	**+2.2**
JAI	**Aioi**	**4.27**	**319**	A		A	17 06 05.0	
	comp=E,46nm,3.2s,comp=E,42nm,3.0s							
JAI	**Aioi**	**4.27**	**319**	P		**P**	**17 06 05.0**	**+2.6**
JSSY	**Shinshiroyabe**	**4.29**	**356**	A		A	17 06 03.5	
	comp=E,95nm,2.7s,comp=E,52nm,5.0s							
JIM2	**Oshima 3**	**4.30**	**18**	A		A	17 06 02.6	
	comp=E,125nm,2.4s,comp=E,100nm,2.4s							
JIM2	**Oshima 3**	**4.30**	**18**	⇓P		**P**	**17 06 01.7**	**-0.9**
JHE	**Heguri**	**4.41**	**336**	A		A	17 06 05.5	
	comp=E,44nm,3.6s,comp=E,67nm,4.5s							
JHE	**Heguri**	**4.41**	**336**	P		**P**	**17 06 05.8**	**+2.1**
JHTM	**Izuhatsuma**	**4.43**	**13**	A		A	17 06 04.0	
	comp=E,187nm,2.8s,comp=E,109nm,2.0s							
SHZ3	**Shizuoka 3**	**4.44**	**4**	A		A	17 06 04.5	
	comp=E,102nm,2.7s,comp=E,76nm,2.4s							
SHZ3	**Shizuoka 3**	**4.44**	**4**	P		**P**	**17 06 05.1**	**+1.2**
JMN	**Monobe**	**4.57**	**314**			**P**	**17 06 07.2**	**+2.1**
JMN	**Monobe**	**4.57**	**314**	A		A	17 06 07.7	
	comp=E,37nm,3.1s,comp=E,54nm,3.1s							
JMN	**Monobe**	**4.57**	**314**	P		**P**	**17 06 07.3**	**+2.2**
JAWN	**Awajishima-nag**	**4.58**	**328**	A		A	17 06 07.3	
	comp=E,56nm,4.3s,comp=E,55nm,5.0s							
JAWN	**Awajishima-nag**	**4.58**	**328**	P		**P**	**17 06 07.2**	**+2.0**
JFNN	**Fujinakano**	**4.61**	**9**	A		A	17 06 05.7	
	comp=E,70nm,3.5s,comp=E,54nm,3.0s							
JFNN	**Fujinakano**	**4.61**	**9**	⇓P		**P**	**17 06 05.4**	**0.0**
JMAF	**Mimaanabuki**	**4.62**	**318**	A		A	17 06 08.1	
	comp=E,45nm,4.4s,comp=E,30nm,3.8s							
JAO	**Obara**	**4.66**	**354**	A		A	17 06 06.8	
	comp=E,112nm,2.8s,comp=E,79nm,2.4s							
JEG	**Eigenji**	**4.66**	**345**	A		A	17 06 07.3	
	comp=E,62nm,3.5s,comp=E,47nm,3.9s							
JKHR	**Kochiharuno**	**4.68**	**309**	A		A	17 06 08.8	
	comp=E,40nm,3.6s,comp=E,37nm,5.0s							
JNY	**Yasuok**	**4.72**	**0**	A		A	17 06 07.1	
	comp=E,113nm,3.0s,comp=E,52nm,2.0s							
BSO3	**Boso 3**	**4.74**	**28**	P		**P**	**17 06 04.5**	**-1.8**
JICN	**Ichinomiyachia**	**4.74**	**350**	A		A	17 06 07.8	
	comp=E,140nm,2.6s,comp=E,104nm,4.3s							
JOD2	**Odawara 2**	**4.75**	**12**	*i* P		**P**	**17 06 06.1**	**-0.6**
JOD2				S		**S**	**17 07 12.2**	**-2.2**
JOD2	**Odawara 2**	**4.75**	**12**	A		A	17 06 06.1	
	comp=E,39nm,4.9s,comp=E,32nm,2.3s							
INU	**Inuyama**	**4.76**	**352**			**P**	**17 06 08.3**	**+1.5**
INU	**Inuyama**	**4.76**	**352**	P		**P**	**17 06 09.2**	**+2.4**
JMIK	**Miki**	**4.79**	**331**	A		A	17 06 09.1	
	comp=E,60nm,2.0s,comp=E,69nm,2.4s							
BSO1	**Boso 1**	**4.81**	**33**	⇓*i*P		**P**	**17 06 05.2**	**-1.4**
JTO	**Tosashimizu**	**4.84**	**299**	*i* P		**P**	**17 06 10.4**	**+2.9**
JTO				S		**S**	**17 07 18.9**	**+3.0**
JTO	**Tosashimizu**	**4.84**	**299**	A		A	17 06 10.4	
	comp=E,19nm,3.1s,comp=E,29nm,3.4s							
JYO	**Yokosk**	**4.84**	**18**	A		A	17 06 07.2	
	comp=E,67nm,1.8s,comp=E,67nm,3.4s							
JKU	**Kubokawa**	**4.86**	**305**	A		A	17 06 10.6	
	comp=E,30nm,3.8s,comp=E,28nm,4.9s							
JKU	**Kubokawa**	**4.86**	**305**	P		**P**	**17 06 10.7**	**+2.9**
JYN	**Shimob**	**4.90**	**7**	A		A	17 06 08.4	
	comp=E,42nm,5.0s,comp=E,24nm,3.3s							
JYN	**Shimob**	**4.90**	**7**	⇓P		**P**	**17 06 08.5**	**+0.4**
JKUC	**kamogawauchiur**	**4.94**	**23**	A		A	17 06 08.0	
	comp=E,97nm,4.8s,comp=E,100nm,2.1s							
JGF	**Kuroka**	**4.98**	**355**			**P**	**17 06 10.0**	**+1.2**
JGF	**Kuroka**	**4.98**	**355**	A		A	17 06 09.7	
	comp=E,82nm,3.2s,comp=E,52nm,4.8s							
JJS	**Sakaide**	**4.99**	**320**	A		A	17 06 11.4	
	comp=E,56nm,4.0s,comp=E,38nm,5.0s							
JJS	**Sakaide**	**4.99**	**320**	P		**P**	**17 06 11.3**	**+2.4**
JKS	**Kasai**	**5.03**	**331**	A		A	17 06 11.3	
	comp=E,20nm,4.0s,comp=E,40nm,3.9s							
JKS	**Kasai**	**5.03**	**331**	P		**P**	**17 06 11.1**	**+1.9**
JYTA	**Yamagatataniai**	**5.04**	**350**	A		A	17 06 10.6	
	comp=E,69nm,3.0s,comp=E,49nm,3.2s							
JYTA	**Yamagatataniai**	**5.04**	**350**	P		**P**	**17 06 10.8**	**+1.4**
JWT	**Wachi**	**5.08**	**337**	A		A	17 06 11.6	
	comp=E,28nm,2.7s,comp=E,38nm,4.5s							
JWT	**Wachi**	**5.08**	**337**	P		**P**	**17 06 11.5**	**+1.8**
JSGW	**Sagamiharawaka**	**5.10**	**13**	A		A	17 06 09.8	
	comp=E,29nm,2.2s,comp=E,25nm,4.9s							
UWA2	**Uwa jima 2**	**5.13**	**302**	A		A	17 06 13.2	
	comp=E,27nm,3.5s,comp=E,48nm,2.9s							
UWA2	**Uwa jima 2**	**5.13**	**302**	P		**P**	**17 06 13.2**	**+2.8**
JFM	**Mihama**	**5.13**	**343**	A		A	17 06 11.8	
	comp=E,51nm,3.1s,comp=E,53nm,3.5s							
JET	**Tanbara**	**5.14**	**309**	A		A	17 06 13.1	
	comp=E,31nm,4.8s,comp=E,33nm,4.3s							
JET	**Tanbara**	**5.14**	**309**	P		**P**	**17 06 13.3**	**+3.0**
JCN	**Nagara**	**5.18**	**22**	A		A	17 06 10.1	
	comp=E,172nm,3.8s,comp=E,119nm,2.3s							
CBIJ	**Chichi jima**	**5.18**	**132**	*i* P		**P**	**17 06 07.6**	**-3.3**
CBIJ				*e*S		**S**	**17 07 15.1**	**-6.9**
CBIJ	**Chichi jima**	**5.18**	**132**	A		A	17 06 07.6	
	comp=E,50nm,2.1s,comp=E,77nm,4.3s							
JCJ	**Chichijima**	**5.18**	**132**	P		**P**	**17 06 07.9**	**-3.0**
	841nm,0.5s,baz=133,slow=4.6,SNR=74							
JCJ				S		**S**	**17 07 13.9**	**-8.1**
	9μm,0.6s,baz=280,slow=22,SNR=28							
JCJ	**Chichijima**	**5.18**	**132**	P		**P**	**17 06 07.3**	**-3.6**
JCJ	**Chichijima**	**5.18**	**132**	P		**P**	**17 06 08.3**	**-2.6**
JNT	**Takato**	**5.24**	**3**	A		A	17 06 11.8	
	comp=E,57nm,3.6s,comp=E,19nm,3.8s							
TOK	**Tokyo**	**5.30**	**17**	A		A	17 06 11.6	
	comp=E,95nm,0.6s,comp=E,107nm,1.8s							
JAD	**Aida**	**5.30**	**325**	A		A	17 06 14.1	
	comp=E,59nm,3.2s,comp=E,65nm,3.7s							
JAD	**Aida**	**5.30**	**325**	P		**P**	**17 06 14.2**	**+2.4**
JHU	**Hanno**	**5.35**	**13**	A		A	17 06 12.2	
	comp=E,28nm,3.5s,comp=E,26nm,3.0s							
JNA	**Nagahama**	**5.41**	**304**	A		A	17 06 15.8	
	comp=E,23nm,5.2s,comp=E,36nm,4.2s							
JNA	**Nagahama**	**5.41**	**304**	P		**P**	**17 06 16.1**	**+3.2**
JRY	**Ryogami san**	**5.45**	**9**	⇓*i*P		**P**	**17 06 13.1**	**-0.3**
JRY				⇓*e*S		**S**	**17 07 24.9**	**-1.7**
JRY	**Ryogami san**	**5.45**	**9**	A		A	17 06 13.1	
	comp=E,38nm,2.5s,comp=E,28nm,3.5s							
JSMT	**Sammumatsuo**	**5.46**	**23**	A		A	17 06 12.7	
	comp=E,113nm,3.3s,comp=E,91nm,3.2s							
JKY	**Yasaka**	**5.49**	**336**	A		A	17 06 15.6	
	comp=E,23nm,3.9s,comp=E,47nm,3.9s							
JKY	**Yasaka**	**5.49**	**336**	P		**P**	**17 06 15.3**	**+1.5**
JHH2	**Haha-jima-NKT2**	**5.51**	**135**	A		A	17 06 11.4	
	comp=E,44nm,0.6s,comp=E,84nm,2.9s							
JHH2	**Haha-jima-NKT2**	**5.51**	**135**	P		**P**	**17 06 10.9**	**-3.1**
JSKE	**Saikikamae**	**5.51**	**295**	A		A	17 06 16.9	
	comp=E,47nm,2.0s,comp=E,59nm,2.9s							
JHHC	**Hyugahichiya**	**5.60**	**291**	A		A	17 06 17.9	
	comp=E,26nm,3.1s,comp=E,45nm,3.9s							
JGN	**Niukaw**	**5.60**	**356**	A		A	17 06 15.6	
	comp=E,28nm,4.9s,comp=E,32nm,5.7s							
JKSM	**Kasumi**	**5.62**	**333**	A		A	17 06 16.9	
	comp=E,23nm,3.9s,comp=E,43nm,4.7s							
JKSM	**Kasumi**	**5.62**	**333**	P		**P**	**17 06 16.5**	**+1.6**
JJG	**Jouge**	**5.63**	**317**	A		A	17 06 17.6	
	comp=E,35nm,5.0s,comp=E,46nm,3.8s							
JNKG	**Nichinankitago**	**5.64**	**282**	A		A	17 06 18.4	
	comp=E,50nm,2.6s,comp=E,42nm,3.8s							
JTSN	**Tsuno**	**5.65**	**288**	A		A	17 06 18.4	
	comp=E,36nm,3.3s,comp=E,51nm,4.2s							
CHOJ	**Chosi**	**5.66**	**26**	A		A	17 06 14.6	
	comp=E,107nm,5.1s,comp=E,85nm,4.1s							
JHM	**Kurahashi**	**5.70**	**309**	A		A	17 06 18.6	
	comp=E,24nm,7.4s,comp=E,35nm,3.3s							
JHM	**Kurahashi**	**5.70**	**309**	P		**P**	**17 06 18.5**	**+2.7**
JNAR	**Kushima--Naru**	**5.71**	**281**	A		A	17 06 19.1	
	comp=E,35nm,3.1s,comp=E,36nm,4.1s							
JUS	**Usuki**	**5.72**	**297**	A		A	17 06 19.1	
	comp=E,46nm,2.0s,comp=E,56nm,3.1s							
JNG	**Nsakai**	**5.77**	**2**	A		A	17 06 16.9	
	comp=E,54nm,3.0s,comp=E,32nm,2.6s							
JKG	**Kaga**	**5.78**	**348**	A		A	17 06 17.7	
	comp=E,91nm,3.0s,comp=E,55nm,4.9s							
JKG	**Kaga**	**5.78**	**348**	P		**P**	**17 06 17.5**	**+1.1**
JIHU	**Itakohorinouch**	**5.78**	**22**	A		A	17 06 15.8	
	comp=E,161nm,7.2s,comp=E,195nm,4.8s							
JKIT	**Kitakata**	**5.80**	**292**	A		A	17 06 19.9	
	comp=E,36nm,2.4s,comp=E,34nm,3.9s							
JKR	**Kurayoshi**	**5.82**	**326**	A		A	17 06 19.1	
	comp=E,64nm,3.1s,comp=E,107nm,4.3s							
JHS	**Saijyo**	**5.90**	**319**	P		**P**	**17 06 20.0**	**+2.3**
JHS	**Saijyo**	**5.90**	**319**	*i* P		**P**	**17 06 20.0**	**+2.3**
JHS				S		**S**	**17 07 37.1**	**+2.4**
JHS	**Saijyo**	**5.90**	**319**	A		A	17 06 20.0	
	comp=E,62nm,4.3s,comp=E,52nm,4.1s							
JTN	**Tanegashima 3**	**5.91**	**272**	A		A	17 06 21.1	
	comp=E,9.0nm,5.0s,comp=E,16nm,4.8s							
MJAR	**Matsushiro Arr**	**5.91**	**3**	P		**P**	**17 06 15.2**	**-2.6**
	204nm,0.5s,baz=150,slow=11,SNR=163							
MJAR				S		**S**	**17 07 30.7**	**-4.1**
	266nm,0.8s,baz=226,slow=28,SNR=7.0							
MAJO	**Matsushiro**	**5.91**	**3**			**P**	**17 06 17.3**	**-0.5**
MAJO	**Matsushiro**	**5.91**	**3**	*d i*P		**P**	**17 06 17.5**	**-0.3**
MAJO	**Matsushiro**	**5.91**	**3**			**P**	**17 06 18.0**	**+0.2**
MAT	**Matsushiro**	**5.91**	**3**	P		**P**	**17 06 17.4**	**-0.4**
JTZ	**Takazaki**	**5.92**	**284**	A		A	17 06 21.1	
	comp=E,40nm,2.8s,comp=E,43nm,4.2s							
JTZ	**Takazaki**	**5.92**	**284**	⇓P		**P**	**17 06 21.6**	**+3.6**
JYT	**Yasato**	**5.93**	**19**			**P**	**17 06 15.2**	**-2.7**
JYT	**Yasato**	**5.93**	**19**	A		A	17 06 17.4	
	comp=E,50nm,0.4s,comp=E,32nm,0.4s							
JAG	**Ashikaga**	**5.94**	**13**	A		A	17 06 17.9	
	comp=E,29nm,3.5s,comp=E,20nm,4.9s							
JAG	**Ashikaga**	**5.94**	**13**	⇓P		**P**	**17 06 16.2**	**-1.8**
JGK	**Kuni**	**5.96**	**6**	A		A	17 06 18.4	
	comp=E,30nm,3.0s,comp=E,32nm,3.1s							
JTSR	**Tashiro 2**	**5.97**	**277**	A		A	17 06 21.6	
	comp=E,15nm,3.2s,comp=E,37nm,3.7s							
JTT	**Ttatey**	**5.98**	**356**	A		A	17 06 19.2	
	comp=E,142nm,3.1s,comp=E,59nm,3.8s							
JTT	**Ttatey**	**5.98**	**356**	P		**P**	**17 06 19.4**	**+0.9**
JMTN	**Minamitane**	**5.99**	**270**	A		A	17 06 21.9	
	comp=E,16nm,6.8s,comp=E,20nm,3.0s							
JHT	**Toyohira**	**6.09**	**313**	A		A	17 06 22.2	
	comp=E,31nm,6.2s,comp=E,28nm,3.7s							
JHT	**Toyohira**	**6.09**	**313**	P		**P**	**17 06 21.7**	**+2.0**
JBEP	**Beppuamama**	**6.10**	**298**	A		A	17 06 22.7	
	comp=E,29nm,3.0s,comp=E,58nm,4.3s							
JKD	**Kudamatsu**	**6.10**	**306**	A		A	17 06 22.6	
	comp=E,27nm,5.0s,comp=E,62nm,2.9s							
JKI	**Kunimi**	**6.11**	**301**	A		A	17 06 22.7	
	comp=E,34nm,4.2s,comp=E,65nm,2.8s							
JHYU	**Hitachinakayam**	**6.15**	**21**	A		A	17 06 19.4	
	comp=E,73nm,2.6s,comp=E,53nm,4.5s							
JKT	**Katashina**	**6.24**	**10**	A		A	17 06 20.9	
	comp=E,33nm,4.4s,comp=E,21nm,2.4s							
JKT	**Katashina**	**6.24**	**10**	⇓P		**P**	**17 06 19.5**	**-1.7**
JIU3	**Izumi3**	**6.30**	**290**	A		A	17 06 24.9	
	comp=E,19nm,5.6s,comp=E,43nm,3.8s							
JIU3	**Izumi3**	**6.30**	**290**	P		**P**	**17 06 25.1**	**+3.4**
JGT2	**ShimaneMisato**	**6.30**	**316**	A		A	17 06 24.2	
	comp=E,52nm,2.9s,comp=E,51nm,5.6s							
JGT2	**ShimaneMisato**	**6.30**	**316**	P		**P**	**17 06 23.9**	**+2.1**
JNM	**Ikuma**	**6.32**	**322**	A		A	17 06 24.2	
	comp=E,42nm,5.3s,comp=E,60nm,6.1s							
JHIK	**Hikimi**	**6.33**	**310**	A		A	17 06 24.7	
	comp=E,23nm,3.7s,comp=E,31nm,5.2s							
JYAK	**Yakushimahirau**	**6.34**	**268**	A		A	17 06 25.4	
	comp=E,12nm,4.6s,comp=E,15nm,2.4s							
JYAK	**Yakushimahirau**	**6.34**	**268**	⇓P		**P**	**17 06 24.9**	**+2.7**
JJH	**Hakui**	**6.35**	**352**	A		A	17 06 23.1	
	comp=E,95nm,2.9s,comp=E,31nm,10.2s							
JZO	**Okuchi**	**6.37**	**286**	A		A	17 06 25.6	
	comp=E,21nm,4.0s,comp=E,33nm,3.9s							
JHO	**Hitachi**	**6.39**	**20**	A		A	17 06 21.9	
	comp=E,56nm,3.9s,comp=E,47nm,3.4s							
JSU	**Suzuyama**	**6.40**	**280**	P		**P**	**17 06 24.9**	**+2.1**
JSU	**Suzuyama**	**6.40**	**280**	A		A	17 06 25.9	
	comp=E,10.0nm,3.6s,comp=E,26nm,3.6s							
JISK	**Izumosakaura**	**6.42**	**321**	A		A	17 06 25.2	
	comp=E,45nm,5.5s,comp=E,56nm,6.1s							
JISK	**Izumosakaura**	**6.42**	**321**	P		**P**	**17 06 24.9**	**+1.9**
JNU	**Nakatsue**	**6.42**	**295**	A		A	17 06 26.1	
	comp=E,23nm,3.0s,comp=E,30nm,3.2s							
JJN	**Nakama**	**6.47**	**2**	A		A	17 06 23.7	
	comp=E,32nm,4.1s,comp=E,22nm,2.7s							
JSB	**Shiboa**	**6.56**	**15**	A		A	17 06 23.9	
	comp=E,65nm,3.1s,comp=E,107nm,3.1s							
JKC	**Kuchinoerabu**	**6.60**	**271**	A		A	17 06 27.9	
	comp=E,15nm,5.0s,comp=E,14nm,6.2s							
JTA	**Tamana**	**6.64**	**292**	A		A	17 06 28.4	
	comp=E,23nm,2.9s,comp=E,33nm

comp=E,53nm,5.0s,comp=E,42nm,3.2s
JYA Atsumi 8.10 10 P **P 17 06 39.8 -0.5**
JTU Tsushima 8.12 301 P **P 17 06 42.5 +2.0**
JTU Tsushima 8.12 301 *i* P **P 17 06 42.9 +2.4**
JTU S **S 17 08 18.9 +2.3**
JTU Tsushima 8.12 301 A **A** 17 06 42.9
comp=E,15nm,3.7s,comp=E,44nm,3.2s
JIKH Ishinomakikobu 8.23 20 A A 17 06 40.7
comp=E,25nm,4.8s,comp=E,17nm,5.7s
JTK Tokunoshima 8.27 252 A A 17 06 45.0
comp=E,44nm,3.3s,comp=E,25nm,3.8s
JTK Tokunoshima 8.27 252 P **P 17 06 45.3 +3.0**
JIO Ouri 8.33 19 A A 17 06 42.0
comp=E,27nm,4.1s,comp=E,24nm,4.2s
JIO Ouri 8.33 19 ⇓P **P 17 06 42.5 -0.3**
JOFO Osakifurukawao 8.35 17 A A 17 06 42.2
comp=E,207nm,3.1s,comp=E,194nm,4.2s
JYK Kaneyama 8.53 13 A A 17 06 44.4
comp=E,25nm,4.6s,comp=E,27nm,6.3s
JYK Kaneyama 8.53 13 P **P 17 06 44.8 -0.1**
JYYZ Yamagatayuza 8.55 11 A A 17 06 44.7
comp=E,67nm,3.7s,comp=E,73nm,2.9s
KSBUS Busan 8.66 304 P **P 17 06 48.1 +1.8**
JTB Tobi-shima 8.67 9 A A 17 06 46.1
comp=E,31nm,3.6s,comp=E,18nm,6.0s
JKMT Kesennumamotoy 8.70 19 A A 17 06 45.7
comp=E,42nm,4.3s,comp=E,23nm,1.3s
JOKE Okinoerabujima 8.74 250 A A 17 06 50.0
comp=E,24nm,5.2s,comp=E,13nm,8.5s
JOKE Okinoerabujima 8.74 250 P **P 17 06 50.2 +2.8**
JMK Ichinoseki 8.76 18 *i* P **P 17 06 47.7 +0.3**
JMK S **S 17 08 23.6 -5.5**
JMK Ichinoseki 8.76 18 A A 17 06 47.7
comp=E,35nm,8.5s,comp=E,24nm,1.4s
JYRO Yoronjima 8.98 249 A A 17 06 52.5
comp=E,24nm,3.7s,comp=E,22nm,3.2s
JYRO Yoronjima 8.98 249 P **P 17 06 52.8 +2.9**
OFUJ Ofunato 9.00 19 A A 17 06 49.0
comp=E,53nm,2.5s,comp=E,31nm,3.9s
JRG Rokugo 9.05 14 A A 17 06 49.9
comp=E,26nm,3.2s,comp=E,22nm,4.8s
JRG Rokugo 9.05 14 P **P 17 06 50.8 +0.4**
JYW Yuwa 9.11 12 A A 17 06 50.6
comp=E,36nm,5.1s,comp=E,45nm,3.3s
JOW Kunigami 9.21 248 P **P 17 06 54.6 +2.3**
JOW Kunigami 9.21 248 P **P 17 06 55.3 +2.9**
JOW Kunigami 9.21 248 P **P 17 06 55.0 +2.7**
JOW S **S 17 08 41.5 +3.3**
JOW Kunigami 9.21 248 A A 17 06 55.0
comp=E,20nm,5.4s,comp=E,14nm,3.9s
JOM Ohasama 9.27 17 A A 17 06 52.0
comp=E,51nm,3.0s,comp=E,16nm,5.5s
JOM Ohasama 9.27 17 P **P 17 06 53.2 +0.4**
JOG3 Oga3 9.33 6 A A 17 06 54.0
comp=E,31nm,5.6s,comp=E,30nm,1.9s
JIH Iheya 9.37 250 A A 17 06 56.7
comp=E,10.0nm,4.0s,comp=E,15nm,5.1s
JIH Iheya 9.37 250 P **P 17 06 56.4 +2.3**
JSZI Iwateshizukuis 9.45 15 A A 17 06 54.0
comp=E,106nm,3.1s,comp=E,105nm,2.6s
MIYJ Miyakonagasawa 9.51 19 A A 17 06 54.4
comp=E,56nm,4.5s,comp=E,33nm,2.0s
JNTH Nagotoyohara 9.55 247 A A 17 06 58.5
comp=E,15nm,3.4s,comp=E,14nm,3.3s
JKZ Kuzumaki 9.77 16 A A 17 06 57.4
comp=E,61nm,3.7s,comp=E,25nm,3.6s
JNTW Noshirotokiwa 9.81 10 A A 17 06 58.1
comp=E,68nm,4.4s,comp=E,95nm,3.5s
JAH Hinai 9.81 13 A A 17 06 58.0
comp=E,48nm,5.4s,comp=E,47nm,4.9s
JAH Hinai 9.81 13 P **P 17 06 59.6 +0.9**
JTH Tanohata 9.84 4 A A 17 06 58.2
comp=E,83nm,4.2s,comp=E,31nm,2.1s
JJT3 Tamagusuku3 9.91 246 A A 17 07 02.4
comp=E,34nm,4.0s,comp=E,39nm,4.4s
NAWB Namwon 9.99 301 P **P 17 07 02.3 +1.8**
JKEN Kujiedanarisaw 10.07 17 A A 17 07 00.6
comp=E,83nm,2.7s,comp=E,41nm,1.5s
JIW Iwasaki 10.10 9 A A 17 07 01.4
comp=E,28nm,8.7s,comp=E,33nm,4.6s
JIW Iwasaki 10.10 9 P **P 17 07 02.7 +0.9**
JAGN Aguni-jima 10.14 249 A A 17 07 04.9
comp=E,11nm,5.0s,comp=E,16nm,3.3s
JAGN Aguni-jima 10.14 249 P **P 17 07 04.2 +1.8**
JANG Nango 10.18 16 A A 17 07 01.7
comp=E,66nm,3.0s,comp=E,66nm,2.0s
JANG Nango 10.18 16 P **P 17 07 02.9 +0.3**
JHHS Hirosakihyakuz 10.21 11 A A 17 07 02.4
comp=E,80nm,8.1s,comp=E,105nm,3.0s
KSCHJ Chungju 10.31 310 P **P 17 07 04.9 +0.9**
TJN Taejon 10.46 306 P **P 17 07 06.9 +1.3**
TJN Taejon 10.46 306*c i* P **P 17 07 07.0 +1.3**
TJN Taejon 10.46 306 P **P 17 07 07.5 +1.9**
JTM Tenmabayashi 10.47 14 P **P 17 07 06.5 +0.7**
JTM Tenmabayashi 10.47 14 A A 17 07 05.2
comp=E,42nm,4.5s,comp=E,38nm,3.6s
JTM Tenmabayashi 10.47 14 P **P 17 07 06.5 +0.7**
JSI2 Shiura 2 10.62 11 A A 17 07 06.8
comp=E,26nm,3.9s,comp=E,28nm,3.7s
JKE Kume jima 2 10.62 249 *i* P **P 17 07 09.0 +1.4**
JKE *e*S **S 17 09 07.4 +1.2**
JKE Kume jima 2 10.62 249 A A 17 07 09.0
comp=E,10.0nm,3.8s,comp=E,8.0nm,2.6s
KSRS Korea Array 10.68 312 P **P 17 07 08.5 +0.5**
1μm,1.0s,baz=128,slow=11,SNR=844
KSRS S **S 17 09 09.2 +2.3**
378nm,1.2s,baz=121,slow=22,SNR=12
KSRS ScP **ScP 17 15 12.6 +0.8**
29nm,0.8s,baz=130,slow=0.6,SNR=43
KSAR Wonju Array Be 10.70 312 P **P 17 07 09.6 +1.4**
KSAR Wonju Array Be 10.70 312 P **P 17 07 09.6 +1.4**
KS19 Wonju Array Si 10.74 312 P **P 17 07 09.5 +0.8**
JARK Aomorirokkasho 10.75 14 A A 17 07 07.9
comp=E,55nm,2.3s,comp=E,48nm,2.8s
SEHB SEOHWA 10.99 317 P **P 17 07 12.8 +1.4**
JAHD Aomorihigashid 10.99 14 A A 17 07 10.6
comp=E,62nm,2.3s,comp=E,37nm,1.2s
JOMM Oshimamatsumae 11.02 9 A A 17 07 11.2
comp=E,20nm,3.4s,comp=E,33nm,3.4s
JOMM Oshimamatsumae 11.02 9 P **P 17 07 12.5 +0.9**
JOT Ohata 11.05 13 *i* P **P 17 07 12.6 +0.7**
JOT *e*S **S 17 09 11.2 -2.9**
JOT Ohata 11.05 13 A A 17 07 12.6
comp=E,31nm,3.7s,comp=E,23nm,5.5s
JSR Shiriuchi 11.08 10 A A 17 07 11.7
comp=E,30nm,3.9s,comp=E,43nm,2.6s
JSR Shiriuchi 11.08 10 P **P 17 07 13.2 +0.9**
JOSM Okushiri--Mats 11.51 6 *i* P **P 17 07 17.7 +0.8**
JOSM *e*S **S 17 09 21.1 -2.1**
JOSM Okushiri--Mats 11.51 6 A A 17 07 17.7
comp=E,40nm,3.7s,comp=E,30nm,2.5s
JKB Kayabe 11.53 12 A A 17 07 16.4
comp=E,36nm,2.8s,comp=E,32nm,2.1s
JKB Kayabe 11.53 12 P **P 17 07 17.6 +0.5**
INCN Inchon 11.54 309 P **P 17 07 17.7 +0.4**
INCN Inchon 11.54 309 P **P 17 07 17.7 +0.4**
INCN Inchon 11.54 309 P **P 17 07 18.3 +1.0**
INCN Inchon 11.54 309 P **P 17 07 18.6 +1.3**
JYM2 Yakumo 2 11.65 9 A A 17 07 17.9
comp=E,50nm,2.4s,comp=E,42nm,2.2s
JYM2 Yakumo 2 11.65 9 P **P 17 07 19.2 +0.8**
JHST Hiyamasetana 11.89 7 A A 17 07 20.4
comp=E,60nm,3.0s,comp=E,56nm,4.5s
JHST Hiyamasetana 11.89 7 P **P 17 07 22.1 +1.2**
JNB Noboribetsu 12.10 11 A A 17 07 22.4
comp=E,30nm,3.2s,comp=E,17nm,2.6s
JNB Noboribetsu 12.10 11 P **P 17 07 23.7 +0.5**
JSH Shimam 12.13 8 A A 17 07 22.9
comp=E,21nm,4.7s,comp=E,21nm,4.6s
JSH Shimam 12.13 8 P **P 17 07 24.3 +0.8**
ERM Erimo 12.15 19 P **P 17 07 24.5 +0.7**
ERM Erimo 12.15 19*c i* P **P 17 07 24.6 +0.9**
ERM pmax pmax
comp=Z,2μm,1.7s
ERM Erimo 12.15 19 P **P 17 07 25.2 +1.5**
JEM Erimo 12.15 19 A A 17 07 22.6
comp=Z,37nm,3.3s,comp=Z,29nm,2.9s
JEM Erimo 12.15 19 P **P 17 07 24.6 +0.9**
JNBK Urakawa-nobuka 12.28 17 A A 17 07 24.1
comp=Z,92nm,3.4s,comp=Z,37nm,2.4s
JNBK Urakawa-nobuka 12.28 17 P **P 17 07 26.1 +0.8**
JSHD Hidakashinhida 12.34 16 A A 17 07 24.6
comp=Z,152nm,2.0s,comp=Z,67nm,2.1s
JIAM Iburiatsuma 12.41 14 A A 17 07 25.6
comp=Z,78nm,2.6s,comp=Z,75nm,1.5s

JIAM Iburiatsuma 12.41 14 P **P 17 07 27.7 +1.1**
JTHR Tokachihiroo 12.44 19 A A 17 07 25.6
comp=Z,54nm,4.2s,comp=Z,16nm,4.5s
HJU Haeju 12.44 310 P **P 17 07 27.8 +0.8**
HJU pP 17 08 10.4
HJU S **S 17 09 40.3 -1.4**
HJU AMS AMS
comp=N,7μm,6.2s
HJU AMS AMS
comp=E,5μm,4.6s
HJU AMS AMS
comp=Z,3μm,2.3s
JOGS Gusukube 12.46 245 P **P 17 07 29.4 +2.0**
JOGS Gusukube 12.46 245 A A 17 07 29.4
comp=Z,27nm,4.2s,comp=Z,15nm,5.2s
JIKM Ikemajima 12.51 246 A A 17 07 29.9
comp=Z,17nm,5.8s,comp=Z,13nm,6.5s
JMJ Miyako jima 2 12.53 246 P **P 17 07 30.9 +2.8**
HHU Hamhung 12.53 321 P **P 17 07 28.4 +0.5**
HHU sP 17 08 20.9
HHU S **S 17 09 42.4 -1.0**
HHU AMS AMS
comp=N,4μm,7.4s
HHU AMS AMS
comp=E,2μm,3.4s
HHU AMS AMS
comp=Z,1μm,2.3s
JEW Eniwo 12.53 12 P **P 17 07 28.7 +0.8**
JEW Eniwo 12.53 12 A A 17 07 26.9
comp=Z,66nm,4.5s,comp=Z,41nm,3.6s
JEW Eniwo 12.53 12 P **P 17 07 28.7 +0.8**
JMJ2 Miyako jima3 12.54 245 A A 17 07 30.1
comp=Z,16nm,3.5s,comp=Z,12nm,6.1s
JIRB Irabujima 12.61 246 A A 17 07 30.9
comp=Z,111nm,4.0s,comp=Z,10.0nm,2.6s
JBT2 Biratori 2 12.66 15 A A 17 07 28.1
comp=Z,38nm,7.8s,comp=Z,28nm,3.2s
JCH Churui 12.76 19 P **P 17 07 30.8 +0.5**
JCH *e*S **S 17 09 47.2 -0.6**
JCH Churui 12.76 19 A A 17 07 30.8
comp=Z,35nm,5.0s,comp=Z,20nm,4.9s
JSK Shakotan 12.88 9 A A 17 07 30.7
comp=Z,31nm,3.0s,comp=Z,18nm,4.2s
JSK Shakotan 12.88 9 P **P 17 07 32.5 +1.0**
JISS Ishikarishitsu 12.95 12 A A 17 07 31.2
comp=Z,59nm,4.6s,comp=Z,38nm,4.0s
PYAG Pyongyang 13.00 314 P **P 17 07 34.5 +1.6**
PYAG pP 17 08 30.9
PYAG S **S 17 09 53.2 +0.6**
PYAG AMS AMS
comp=N,13μm,5.2s
PYAG AMS AMS
comp=E,7μm,2.9s
PYAG AMS AMS
comp=Z,3μm,1.3s
JTJ Tarama 13.08 246 A A 17 07 35.7
comp=Z,13nm,4.1s,comp=Z,9.0nm,4.6s
JFR Furan 13.08 16 A A 17 07 32.4
comp=Z,26nm,3.5s,comp=Z,18nm,8.2s
JFR Furan 13.08 16 P **P 17 07 34.5 +0.7**
MSHR Mys Shultsa 13.08 338*c i* P **P 17 07 34.4 +0.7**
JOB Onbets 13.16 20 A A 17 07 32.9
comp=Z,28nm,3.5s,comp=Z,16nm,2.7s
JOB Onbets 13.16 20 P **P 17 07 36.1 +1.5**
JAB Ashibetsu 13.32 14 A A 17 07 35.0
comp=Z,46nm,4.3s,comp=Z,41nm,3.6s
JAB Ashibetsu 13.32 14 P **P 17 07 37.6 +1.2**
VLA Vladivostok 13.35 341*c i* P **P 17 07 34.7 -1.9**
JISG Ishigakijimahi 13.41 247 A A 17 07 39.2
comp=Z,5.0nm,3.2s,comp=Z,4.0nm,2.5s
JHR Hokuryu 13.46 12 P **P 17 07 39.2 +1.4**
JHR *e*S **S 17 10 01.4 0.0**
JHR Hokuryu 13.46 12 A A 17 07 39.2
comp=Z,49nm,3.5s,comp=Z,27nm,5.1s
JAR Ashorobuto 13.50 19 A A 17 07 36.5
comp=Z,29nm,2.9s,comp=Z,21nm,3.3s
JAR Ashorobuto 13.50 19 P **P 17 07 39.3 +1.0**
JAK Akkeshi 13.51 22 A A 17 07 36.4
comp=Z,32nm,3.5s,comp=Z,32nm,4.4s
JAK Akkeshi 13.51 22 P **P 17 07 39.4 +1.1**
JKHN Kushirohamanak 13.74 23 A A 17 07 38.7
comp=Z,51nm,3.4s,comp=Z,22nm,2.7s
JKK2 Kamakawa 2 13.79 15 A A 17 07 39.7
comp=Z,11nm,2.7s,comp=Z,16nm,4.0s
JKK2 Kamakawa 2 13.79 15 P **P 17 07 42.5 +1.1**
JKRS Kuro-shima 13.82 246 A A 17 07 43.4
comp=Z,17nm,3.9s,comp=Z,18nm,3.5s
ASAJ Asahikawa 13.99 14 A A 17 07 41.9
comp=Z,111nm,5.5s,comp=Z,17nm,4.3s
ASAJ Asahikawa 13.99 14 P **P 17 07 44.5 +1.0**
IRIF Iriomote-Funau 14.00 247 A A 17 07 45.1
comp=Z,7.0nm,2.1s,comp=Z,11nm,2.3s
JNK Nakash 14.05 21 A A 17 07 42.0
comp=Z,14nm,4.4s,comp=Z,11nm,1.6s
JNK Nakash 14.05 21 P **P 17 07 44.9 +0.8**
JMP Maruseppu 14.06 17 A A 17 07 42.4
comp=Z,15nm,3.8s,comp=Z,15nm,4.5s
JMP Maruseppu 14.06 17 P **P 17 07 46.0 +1.7**
JYG Yagishiri 14.07 11 A A 17 07 42.9
comp=Z,19nm,5.8s,comp=Z,17nm,2.7s
JYG Yagishiri 14.07 11 P **P 17 07 45.1 +0.9**
HATJ Hateruma jima 14.08 246 A A 17 07 45.9
comp=Z,12nm,5.8s,comp=Z,17nm,3.3s
JSS Shosan 14.11 12 A A 17 07 43.2
comp=Z,35nm,5.4s,comp=Z,24nm,3.3s
JSS Shosan 14.11 12 P **P 17 07 46.5 +1.8**
JTKR Abashiri--Toko 14.16 18 *i* P **P 17 07 46.7 +1.4**
JTKR *e*S **S 17 10 17.6 +2.3**
JTKR Abashiri--Toko 14.16 18 A A 17 07 46.7
comp=Z,14nm,4.9s,comp=Z,10.0nm,3.0s
NMR Nemuro--Hokkai 14.19 24⇑ *i* P **P 17 07 46.3 +0.7**
NMR *e*S **S 17 10 10.9 -4.8**
NEM2 Nemuro 2 14.19 24 *i* P **P 17 07 46.4 +0.8**
NEM2 *e*S **S 17 10 14.8 -0.9**
NEM2 Nemuro 2 14.19 24 A A 17 07 46.4
comp=Z,8.0nm,4.9s,comp=Z,9.0nm,4.7s
JNSB Nemuroshibetsu 14.31 21 A A 17 07 44.6
comp=Z,81nm,4.8s,comp=Z,36nm,3.3s
SSE Sheshan 14.31 276 P **P 17 07 46.3 -0.8**
SSE S **S 17 10 17.0 -1.6**
SSE pmax pmax
comp=Z,99nm,1.1s
SSE pmax pmax
comp=Z,1μm,5.2s
USA0B Ussuriysk Arra 14.32 343 P **P 17 07 47.9 +0.9**
USA0B Ussuriysk Arra 14.32 343 P **P 17 07 47.9 +0.9**
USRK Ussuriysk Ar. 14.32 343 P **P 17 07 48.0 +1.0**
comp=Z,1μm,0.5s,baz=146,slow=9.2,SNR=4285
USRK Ussuriysk Ar. 14.32 343 P **P 17 07 47.6 +0.6**
SUJ Sinuiju 14.41 315 P **P 17 07 48.9 +1.0**
SUJ pP 17 08 31.7
SUJ S **S 17 10 19.6 -0.5**
SUJ AMS AMS
comp=N,6μm,2.6s
SUJ AMS AMS
comp=E,14μm,6.2s
SUJ AMS AMS
comp=Z,5μm,2.1s
TEY Ternei 14.42 356⇑ *i* P **P 17 07 48.7 +0.7**
TEY *e*S **S 17 10 16.5 -3.7**
TEY pmax pmax
comp=Z,530nm,1.5s
TEY pmax pmax
comp=N,4μm,3.3s
TEY pmax pmax
comp=Z,5μm,3.5s
TEY pmax pmax
comp=E,250nm,1.6s
TEY pmax pmax
comp=N,410nm,1.0s
TEY smax smax
comp=E,4μm,10.5s
TEY MLR MLR
comp=N,2μm,11.0s
TEY MLR MLR
comp=Z,3μm,16.0s
JRA Rausu 14.49 21 A A 17 07 46.5
comp=Z,18nm,3.2s,comp=Z,16nm,4.6s
JRA Rausu 14.49 21 P **P 17 07 50.2 +1.5**
YOJ Yonaguni jima 14.51 249 P **P 17 07 48.9 -0.4**
YOJ Yonaguni jima 14.51 249 P **P 17 07 48.9 -0.4**
YOJ Yonaguni jima 14.51 249 P **P 17 07 49.9 +0.6**
YOJ Yonaguni jima 14.51 249 P **P 17 07 49.1 -0.2**
JYNG Yonagunijimaku 14.57 249 A A 17 07 50.9
comp=Z,5.0nm,3.0s,comp=Z,7.0nm,4.4s

JYNG Yonagunijimaku 14.57 249 P **P 17 07 49.6 -0.3**
JRR Rishiri 14.75 10 A A 17 07 49.7
comp=Z,46nm,3.2s,comp=Z,67nm,3.2s
JSE Soyaes 14.79 13 A A 17 07 50.0
comp=Z,16nm,3.4s,comp=Z,14nm,3.5s
JSE Soyaes 14.79 13 P **P 17 07 53.0 +1.1**
YUK Yuzh-Kuril'sk 14.82 23⇑ *i* P **P 17 07 53.4 +1.1**
YUK *e*S **S 17 10 23.3 -4.6**
YUK pmax pmax
comp=Z,682nm,0.6s
YUK pmax pmax
comp=N,396nm,0.4s
YUK pmax pmax
comp=Z,326nm,0.4s
YUK pmax pmax
comp=Z,3μm,1.1s
YUK smax smax
comp=E,9μm,1.1s
YUK smax smax
comp=N,14μm,1.6s
JRBN Rebuntou 14.99 9 A A 17 07 52.2
comp=N,11nm,3.9s,comp=N,11nm,5.6s
JRBN Rebuntou 14.99 9 P **P 17 07 55.1 +1.0**
JWK2 Keihoku 15.01 11 A A 17 07 52.4
comp=N,25nm,3.6s,comp=N,26nm,3.1s
JWK2 Keihoku 15.01 11 P **P 17 07 56.1 +1.8**
MDJ Mudanjiang 15.41 337 P **P 17 07 59.1 +0.6**
MDJ Mudanjiang 15.41 337 P **P 17 07 59.7 +1.2**
TATO Taipei 15.52 253 P **P 17 08 00.2 +0.2**
TATO P **P 17 08 00.2 +0.2**
DL2 Dalian 15.66 306 P **P 17 08 01.8 +0.5**
DL2 S **S 17 10 43.5 -0.9**
DL2 pmax pmax
comp=N,400nm,0.7s
DL2 pmax pmax
comp=N,1μm,4.2s
YHNB Yeheng 15.74 252 P **P 17 08 00.9 -1.5**
YHNB Yeheng 15.74 252 P **P 17 08 01.8 -0.6**
NACB Ninganchiao 15.79 250 P **P 17 08 00.5 -2.3**
SNY Shenyang 16.02 318⇑P **P 17 08 06.0 +1.0**
SNY S **S 17 10 51.3 0.0**
SNY pmax pmax
comp=N,3μm,1.4s
NJ2 Nanjing 16.29 280⇓ *i* P **P 17 08 07.8 -0.2**
NJ2 S **S 17 10 55.8 -0.8**
NJ2 ScP **ScP 17 15 22.0 +0.8**
NJ2 ScS **ScS 17 19 00.3 -0.4**
NJ2 pmax pmax
comp=N,940nm,0.9s
YULB Yu-li 16.40 248 P **P 17 08 07.9 -1.4**
CN2 Changchun 16.42 327⇑ *i* P **P 17 08 09.5 +0.3**
CN2 sP sP 17 09 57.0 -10
CN2 S **S 17 10 56.0 -2.8**
CN2 ScP **ScP 17 15 20.5 -0.8**
CN2 ScS **ScS 17 18 58.8 -1.9**
CN2 pmax pmax
comp=N,600nm,0.9s
CN2 pmax pmax
comp=N,7μm,4.0s
SSLB Suanglung 16.48 250 P **P 17 08 09.3 -0.9**
SSLB Suanglung 16.48 250 P **P 17 08 09.9 -0.3**
KUR Kuril'sk 16.57 26*c i* P **P 17 08 11.0 +0.2**
KUR *i* S **S 17 11 03.1 +1.5**
KUR pmax pmax
comp=Z,6μm,4.4s
KUR pmax pmax
comp=Z,481nm,1.1s
KUR smax smax
comp=N,25μm,7.3s
KUR smax smax
comp=E,21μm,8.0s
YSS Yuzh-Sakhalins 16.75 12 P **P 17 08 13.0 +0.4**
YSS Yuzh-Sakhalins 16.75 12*c i* P **P 17 08 13.1 +0.5**
YSS pmax pmax
comp=Z,1μm,1.0s
YSS Yuzh-Sakhalins 16.75 12 P **P 17 08 13.4 +0.8**
TWG Pinlang 16.86 247 P **P 17 08 12.8 -1.3**
TPUB Ta-pu 16.98 249 P **P 17 08 14.8 -0.6**
TPUB Ta-pu 16.98 249 P **P 17 08 15.3 -0.1**
BNX BinXian 17.15 335⇑P **P 17 08 17.0 +0.2**
BNX S **S 17 11 11.8 -0.4**
BNX ScS **ScS 17 19 03.0 +0.2**
BNX pmax pmax
comp=Z,1μm,1.3s
BNX pmax pmax
comp=Z,11μm,5.7s
QZH Quanzhou 17.94 256⇓ *i* P **P 17 08 23.5 -1.5**
QZH sP sP 17 10 16.5 -8.0
QZH S **S 17 11 25.5 -0.6**
QZH pmax pmax
comp=Z,520nm,1.1s
QZH pmax pmax
comp=Z,5μm,6.6s
GUMO Guam 18.15 158 P **P 17 08 26.9 -0.2**
comp=Z,5μm,1.1s,baz=324,slow=3.3,SNR=120
GUMO S **S 17 11 31.1 +1.3**
comp=Z,254nm,0.8s,baz=358,slow=17,SNR=4.5
GUMO Guam 18.15 158 P **P 17 08 26.7 -0.4**
GUMO Guam 18.15 158 P **P 17 08 27.3 +0.2**
TIA Tai'an 18.16 293 P **P 17 08 26.8 -0.2**
TIA PP 17 09 10.5
TIA S **S 17 11 28.5 -1.1**
TIA pmax pmax
comp=Z,210nm,1.0s
TIA pmax pmax
comp=Z,1μm,3.7s
KNMB Chin-men Tao 18.30 255 P **P 17 08 27.7 -0.7**
UGL Uglegorsk 18.71 9*c i* P **P 17 08 33.2 +1.3**
UGL *e*S **S 17 11 40.2 +2.1**
UGL pmax pmax
comp=Z,12μm,2.2s
UGL pmax pmax
comp=Z,2μm,1.6s
UGL smax smax
comp=E,11μm,10.1s
UGL smax smax
comp=N,9μm,10.4s
KLR Kul'dur 19.15 348 P **P 17 08 36.5 +0.6**
comp=N,588nm,0.7s,baz=161,slow=8.3,SNR=587
KLR ScP **ScP 17 15 26.4 -0.6**
comp=N,27nm,0.9s,baz=270,slow=1.6,SNR=8.7
KLR Kul'dur 19.15 348*c i* P **P 17 08 36.5 +0.6**
KLR pmax pmax
comp=Z,2μm,1.5s
BJT Baijiatuau 19.97 304 P **P 17 08 43.4 -0.1**
BJT Baijiatuau 19.97 304 P **P 17 08 43.4 -0.1**
BJI Beijing 19.98 304 P **P 17 08 43.5 -0.1**
BJI S **S 17 11 56.8 -2.1**
BJI ScP **ScP 17 15 28.5 -0.6**
BJI ScS **ScS 17 19 11.0 -1.1**
BJI pmax pmax
comp=Z,270nm,1.2s
GRNR Gornyy 20.15 357⇑ *i* P **P 17 08 46.5 +1.4**
GRNR *e*S **S 17 12 03.4 +1.9**
GRNR pmax pmax
comp=E,190nm,0.9s
GRNR pmax pmax
comp=N,570nm,1.1s
GRNR pmax pmax
comp=Z,930nm,0.9s
GRNR smax smax
comp=E,30nm,1.1s
GRNR MLR MLR
comp=E,1μm,14.0s
GRNR MLR MLR
comp=N,1μm,12.0s
GRNR MLR MLR
comp=Z,2μm,14.0s
WHN Wuhan 20.22 276⇓ *i* P **P 17 08 47.0 +1.1**
WHN sP **sP 17 10 45.5 -4.2**
WHN S **S 17 12 03.8 +0.7**
WHN ScP **ScP 17 15 30.8 +0.9**
WHN ScS **ScS 17 19 12.8 -0.5**
WHN pmax pmax
comp=Z,2μm,1.4s
WHN pmax pmax
comp=Z,12μm,2.8s
HNS HongShan 20.31 296 ⇓P **P 17 08 47.0 +0.4**
HNS S **S 17 12 03.5 -0.8**
HNS ScP **ScP 17 15 31.0 +1.0**
HNS ScS **ScS 17 19 11.8 -1.6**
HNS pmax pmax
comp=Z,260nm,1.3s
HNS pmax pmax

	comp=Z,1μm,3.6s							
TYV	**Tymovskoe**	**20.54**	**9**	*e*P		**P**	**17 08 50.1**	**+1.6**
TYV				*e*S		**S**	**17 12 08.2**	**+0.6**
TYV					pmax	pmax		
	comp=Z,799nm,0.8s							
TYV					pmax	pmax		
	comp=Z,4μm,4.8s							
TYV					smax	smax		
	comp=E,34nm,1.0s							
TYV					smax	smax		
	comp=N,2μm,5.4s							
TYV					smax	smax		
	comp=E,3μm,5.4s							
PCPH	**Palayan**	**21.45**	**229**⇓	*e*P		**P**	**17 08 57.1**	**-0.2**
LYN	**LuoYang**	**21.71**	**287**⇓	*i*P		**P**	**17 08 59.0**	**-0.5**
LYN				S		**S**	**17 12 22.0**	**-4.8**
LYN				ScP		**ScP**	**17 15 31.3**	**-2.3**
LYN				PcS		**PcS**	**17 16 21.8**	**+1.6**
LYN				ScS		**ScS**	**17 19 15.0**	**-3.6**
LYN				pmax	pmax			
	comp=E,170nm,1.3s							
LYN				pmax	pmax			
	comp=E,2μm,2.6s							
XLT	**XiLinHaoTe**	**21.73**	**314**⇑	*i*P		**P**	**17 08 59.5**	**0.0**
XLT				S		**S**	**17 12 27.0**	**+0.1**
XLT				ScS		**ScS**	**17 19 15.5**	**-3.1**
XLT				pmax	pmax			
	comp=E,120nm,1.6s							
XLT				pmax	pmax			
	comp=E,1μm,4.3s							
CNSH	**ChangSha**	**21.83**	**270**	⇓P		**P**	**17 09 01.5**	**+1.0**
CNSH				S		**S**	**17 12 27.5**	**-1.2**
CNSH				pmax	pmax			
	comp=E,420nm,1.5s							
GQP	**Guinayangan**	**21.86**	**224**⇓	*e*P		**P**	**17 09 00.9**	**-0.1**
TIY	**Taiyuan**	**22.14**	**295**	⇓P		**P**	**17 09 04.5**	**+1.2**
TIY				sP		**sP**	**17 11 15.0**	**+4.4**
TIY				S		**S**	**17 12 33.0**	**-0.6**
TIY				pmax	pmax			
	comp=E,95nm,1.2s							
TIY				pmax	pmax			
	comp=E,960nm,5.3s							
LQP	**Lukban**	**22.25**	**226**⇓	*e*P		**P**	**17 09 04.4**	**-0.3**
TGY	**Tagaytay City**	**22.64**	**227**⇑	*e*P		**P**	**17 09 07.6**	**-0.4**
PGP	**Puerto Galera**	**23.08**	**226**⇓	*e*P		**P**	**17 09 11.5**	**-0.5**
HIA	**Hailar**	**23.12**	**329**	P		**P**	**17 09 12.5**	**+0.6**
HIA	**Hailar**	**23.12**	**329**	P		**P**	**17 09 12.5**	**+0.6**
MCO	**Taipa Grande**	**23.31**	**255**	P		**P**	**17 09 14.0**	**+0.1**
RCP	**Roxas**	**23.57**	**220**⇓	*e*P		**P**	**17 09 16.5**	**+0.1**
SKR	**Severo-Kuril's**	**24.25**	**29**	*e*P		**P**	**17 09 22.3**	**+0.4**
SKR				*e*S		**S**	**17 13 04.2**	**-2.1**
SKR				pmax	pmax			
	comp=Z,200nm,2.1s							
SKR				pmax	pmax			
	comp=Z,334μm,1.2s							
SKR				MLR	MLR			
	comp=Z,1μm,13.0s							
ZEA	**Zeya**	**24.34**	**345**	*ce*P		**P**	**17 09 24.0**	**+1.3**
ZEA				*e**SP		**sP**	**17 11 37.6**	**+1.5**
ZEA				*e*S		**S**	**17 13 07.6**	**-0.1**
ZEA				pmax	pmax			
	comp=E,70nm,0.8s							
ZEA				pmax	pmax			
	comp=N,260nm,0.7s							
ZEA				pmax	pmax			
	comp=Z,490nm,0.6s							
ZEA				pmax	pmax			
	comp=E,500nm,2.5s							
ZEA				pmax	pmax			
	comp=N,1μm,2.3s							
ZEA				pmax	pmax			
	comp=Z,1μm,1.8s							
ZEA				smax	smax			
	comp=N,2μm,10.2s							
ZEA				MLR	MLR			
	comp=E,1μm,19.0s							
ZEA				MLR	MLR			
	comp=N,2μm,18.0s							
ZEA				MLR	MLR			
	comp=Z,2μm,16.0s							
ENH	**Enshi**	**24.42**	**276**	P		**P**	**17 09 24.2**	**+0.4**
BTO	**Baotou**	**24.62**	**301**	*e*P		**P**	**17 09 28.0**	**+2.4**
BTO				S		**S**	**17 13 16.5**	**+3.7**
XAN	**Xi'an**	**24.64**	**286**	⇓P		**P**	**17 09 26.5**	**+0.8**
XAN				sP		sP	17 11 37.3	-1.0
XAN				S		**S**	**17 13 12.3**	**-0.7**
XAN				ScS		**ScS**	**17 19 28.5**	**-1.8**
XAN				pmax	pmax			
	comp=Z,770nm,1.2s							
XAN				pmax	pmax			
	comp=Z,3μm,6.2s							
GULI	**GuiLin**	**24.81**	**264**	⇓P		**P**	**17 09 28.3**	**+1.0**
GULI				S		**S**	**17 13 17.0**	**+1.1**
DAV	**Davao City (W)**	**26.10**	**209**	P		**P**	**17 09 38.7**	**-0.1**
	comp=Z,320nm,0.6s,baz=112,slow=2.5,SNR=12							
DAV				S		**S**	**17 13 34.1**	**-2.1**
	comp=Z,102nm,0.3s,baz=309,slow=23,SNR=1.1							
	comp=Z,320nm,0.6s							
PEA0B	**Petropavlovsk-**	**26.73**	**27**	P		**P**	**17 09 44.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**26.73**	**27**	*c*P		**P**	**17 09 44.4**	**+0.6**
PETK	**Petropavlovsk-**	**26.73**	**27**	P		**P**	**17 09 43.3**	**-0.6**
	comp=Z,104nm,0.9s,baz=114,slow=1.4,SNR=150							
PETK				ScP		**ScP**	**17 15 45.9**	**-1.3**
	comp=Z,16nm,0.8s,baz=193,slow=4.4,SNR=8.3							
	comp=Z,104nm,0.9s							
PETK	**Petropavlovsk-**	**26.73**	**27**	P		**P**	**17 09 44.0**	**+0.2**
PETK	**Petropavlovsk-**	**26.73**	**27**	P		**P**	**17 09 44.0**	**+0.2**
PET	**Petropavlovsk**	**27.04**	**28**	P		**P**	**17 09 47.1**	**+0.5**
PET	**Petropavlovsk**	**27.04**	**28**	*i*P		**P**	**17 09 46.9**	**+0.3**
PET				*e**SP		**sP**	**17 11 58.0**	**-3.5**
PET				*e*S		**S**	**17 13 50.0**	**-0.1**
PET				pmax	pmax			
	comp=Z,335nm,1.1s							
PET				pmax	pmax			
	comp=Z,1μm,16.8s							
PET				MLR	MLR			
	comp=Z,2μm,12.0s							
PET				MLR	MLR			
	comp=Z,2μm,14.0s							
PET	**Petropavlovsk**	**27.04**	**28**	P		**P**	**17 09 47.5**	**+0.9**
PPR	**Puerto Princes**	**27.33**	**225**	⇓*i*P		**P**	**17 09 50.7**	**+1.1**
GYA	**Guiyang**	**27.65**	**269**	⇓P		**P**	**17 09 53.0**	**+0.4**
GYA				sP		sP	17 12 05.8	-0.9
GYA				PcP		**PcP**	**17 12 56.0**	**+0.9**
GYA				S		**S**	**17 14 00.0**	**-0.7**
GYA				pmax	pmax			
	comp=Z,1μm,1.1s							
GYA				pmax	pmax			
	comp=Z,3μm,3.5s							
QIZ	**Qiongzhong**	**27.83**	**252**	P		**P**	**17 09 55.8**	**+1.7**
QIZ	**Qiongzhong**	**27.83**	**252**	⇓*i*P		**P**	**17 09 55.0**	**+1.0**
QIZ				pP		**pP**	**17 11 12.8**	**-0.8**
QIZ				sP		**sP**	**17 12 04.8**	**-3.2**
QIZ				PcP		**PcP**	**17 12 57.3**	**+1.8**
QIZ				S		**S**	**17 14 06.0**	**+2.7**
QIZ				ScP		**ScP**	**17 15 52.5**	**+1.3**
QIZ				PcS		**PcS**	**17 16 40.0**	**+1.7**
QIZ				pmax	pmax			
	comp=Z,320nm,1.2s							
QIZ				pmax	pmax			
	comp=Z,2μm,3.3s							
QIZ	**Qiongzhong**	**27.83**	**252**	P		**P**	**17 09 56.0**	**+2.0**
CIT	**Chita**	**27.87**	**327**	*e*P		**P**	**17 09 55.5**	**+1.5**
CIT				*e*S		**S**	**17 13 59.6**	**-3.6**
CIT				*e*			17 19 38.8	
CIT				pmax	pmax			
	comp=Z,1μm,1.7s							
H11N2	**WAKE ISLAND Hy**	**28.36**	**106**	P		**P**	**17 09 59.4**	**+1.0**
	baz=270,slow=9.4,SNR=11							
H11N1	**WAKE ISLAND Hy**	**28.37**	**106**	P		**P**	**17 09 59.4**	**+0.9**
	baz=270,slow=9.4,SNR=11							
WAKE	**Wake Island**	**28.38**	**107**	P		**P**	**17 09 59.5**	**+0.7**
H11N3	**WAKE ISLAND Hy**	**28.38**	**106**	P		**P**	**17 09 59.4**	**+0.7**
	baz=270,slow=9.4,SNR=7.9							
LZH	**Lanzhou**	**28.82**	**290**	⇓P		**P**	**17 10 03.5**	**+0.8**
LZH				sP		sP	17 12 16.3	-2.0
LZH				S		**S**	**17 14 17.0**	**-1.7**
LZH				ScP		**ScP**	**17 15 54.5**	**+0.2**
LZH				ScS		**ScS**	**17 19 48.3**	**-0.9**
LZH				pmax	pmax			
	comp=Z,350nm,1.4s							
LZH				pmax	pmax			
	comp=Z,1μm,5.9s							
ULN	**Ulaanbaatar**	**29.15**	**315**	P		**P**	**17 10 06.4**	**+1.0**
ULN	**Ulaanbaatar**	**29.15**	**315**	P		**P**	**17 10 06.9**	**+1.5**
ULN	**Ulaanbaatar**	**29.15**	**315**	⇑P		**P**	**17 10 06.6**	**+1.2**
ULN				pP		**pP**	**17 11 25.7**	**-1.4**
ULN				sP		**sP**	**17 12 18.8**	**-3.5**
ULN				ScP		**ScP**	**17 15 55.0**	**-0.1**
SGSI	**Sangihe**	**29.21**	**206**	P		**P**	**17 10 05.8**	**-0.3**
	comp=Z,7μmcomp=Z,563nm,0.9s							
CD2	**Chengdu**	**29.22**	**279**	P		**P**	**17 10 06.5**	**+0.3**
CD2				pP		pwP	17 11 30.5	+0.4
CD2				S		**S**	**17 14 22.5**	**-2.4**
CD2				pmax	pmax			
	comp=Z,950nm,0.6s							
CD2				pmax	pmax			
	comp=Z,1μm,5.9s							
SONM	**Songino Array**	**29.54**	**315**	P		**P**	**17 10 09.7**	**+0.9**
	comp=Z,27nm,0.5s,baz=121,slow=8.1,SNR=204							
SONM				pP		**pP**	**17 11 29.6**	**-0.8**
	comp=Z,38nm,1.1s,baz=122,slow=9.0,SNR=2.7							
SONM				PcP		**PcP**	**17 13 00.6**	**+1.1**
	comp=Z,13nm,0.6s,baz=140,slow=2.4,SNR=12							
SONM				ScP		**ScP**	**17 15 56.3**	**-0.1**
	comp=Z,39nm,0.9s,baz=143,slow=3.3,SNR=13							
SONM				P3KPbc			17 42 04.0	
	comp=Z,0.7nm,0.8s,baz=280,slow=4.7,SNR=4.5							
	comp=Z,27nm,0.5s							
SONM	**Songino Array**	**29.54**	**315**	P		**P**	**17 10 09.5**	**+0.7**
MA2	**Magadan**	**30.24**	**13**	P		**P**	**17 10 15.3**	**+0.8**
	comp=Z,628nm,0.8s,baz=208,slow=4.5,SNR=113							
MA2				ScP		**ScP**	**17 15 58.0**	**-0.2**
	comp=Z,19nm,0.8s,baz=224,slow=7.2,SNR=4.5							
	comp=Z,628nm,0.8s							
MA2	**Magadan**	**30.24**	**13**	P		**P**	**17 10 15.2**	**+0.7**
MA2	**Magadan**	**30.24**	**13**	P		**P**	**17 10 15.5**	**+1.0**
MA2	**Magadan**	**30.24**	**13**	⇑P		**P**	**17 10 15.4**	**+0.8**
MA2				ScP		**ScP**	**17 15 57.4**	**-0.8**
PATS	**Pohnpei**	**30.47**	**137**	P		**P**	**17 10 17.1**	**0.0**
MYLDM	**Lahad Datu**	**31.18**	**220**	P		**P**	**17 10 25.3**	**+2.1**
KMI	**Kunming**	**31.42**	**269**	⇓P		**P**	**17 10 26.5**	**+1.0**
KMI				PP		**PP**	**17 11 53.5**	**-2.3**
KMI				PcP		**PcP**	**17 13 03.8**	**-1.3**
KMI				S		**S**	**17 14 59.0**	**-0.4**
KMI				ScP		**ScP**	**17 16 04.0**	**+0.8**
KMI				ScS		**ScS**	**17 19 59.0**	**-3.4**
KMI				pmax	pmax			
	comp=Z,280nm,1.1s							
KMI				pmax	pmax			
	comp=Z,2μm,4.1s							
KMI	**Kunming**	**31.42**	**269**	P		**P**	**17 10 26.3**	**+0.8**
KMI				ScP		**ScP**	**17 16 04.1**	**+1.0**
BAKI	**Biak**	**31.68**	**183**	P		**P**	**17 10 28.8**	**+1.3**
	comp=Z,2μmcomp=Z,216nm,1.1s							
BOD	**Bodaibo**	**31.77**	**336**	*e*P		**P**	**17 10 27.5**	**-0.2**
BOD				pmax	pmax			
	comp=Z,473nm,1.3s							
KKM	**Kota Kinabalu**	**31.79**	**224**	P		**P**	**17 10 29.5**	**+0.9**
KKM	**Kota Kinabalu**	**31.79**	**224**	P		**P**	**17 10 30.1**	**+1.5**
YAK	**Yakutsk**	**31.87**	**353**	P		**P**	**17 10 28.4**	**0.0**
	comp=Z,142nm,0.4s,baz=158,slow=3.7,SNR=275							
YAK				S		**S**	**17 15 02.5**	**-2.2**
	comp=Z,30nm,0.8s,baz=302,slow=24,SNR=9.1							
YAK				ScP		**ScP**	**17 16 02.9**	**-0.7**
	comp=Z,43nm,0.9s,baz=81,slow=3.3,SNR=4.9							
	comp=Z,142nm,0.4s							
YAK	**Yakutsk**	**31.87**	**353**	P		**P**	**17 10 28.3**	**-0.2**
YAK	**Yakutsk**	**31.87**	**353**	*c*P		**P**	**17 10 28.5**	**0.0**
YAK				*e*			17 11 59.4	
YAK				*e*			17 12 44.9	
YAK				*e*S		**S**	**17 15 02.3**	**-2.4**
YAK				*e**SS		sS	17 17 44.3	+9.0
YAK				*e*			17 19 59.2	
YAK				pmax	pmax			
	comp=Z,778nm,0.9s							
YAK				pmax	pmax			
	comp=E,28nm,0.8s							
YAK				pmax	pmax			
	comp=N,334nm,1.2s							
YAK				pmax	pmax			
	comp=Z,790nm,1.7s							
YAK				pmax	pmax			
	comp=N,759nm,1.8s							
YAK				pmax	pmax			
	comp=E,106nm,1.2s							
YAK				smax	smax			
	comp=E,524nm,1.7s							
YAK				smax	smax			
	comp=N,876nm,2.2s							
YAK	**Yakutsk**	**31.87**	**353**	P		**P**	**17 10 28.5**	**0.0**
YAK				PP		**PP**	**17 11 59.9**	**+0.4**
YAK				ScP		**ScP**	**17 16 02.7**	**-0.9**
PZH	**PanZhiHua**	**31.88**	**272**	⇓P		**P**	**17 10 29.5**	**+0.2**
PZH				pP		**pP**	**17 11 52.8**	**+2.3**
PZH				PP		**PP**	**17 11 59.0**	**-1.4**
PZH				sP		**sP**	**17 12 44.5**	**-0.1**
PZH				S		**S**	**17 15 04.5**	**-1.7**
PZH				SS		**SS**	**17 17 52.3**	**-7.1**
PZH				ScS		**ScS**	**17 20 01.3**	**-3.2**
PZH				pmax	pmax			
	comp=N,810nm,1.4s							
PZH				pmax	pmax			
	comp=N,1μm,5.2s							
SWI	**Sorong**	**31.93**	**193**	P		**P**	**17 10 29.9**	**+0.3**
	comp=N,5μmcomp=N,526nm,1.0s							
SIJI	**Sorong**	**31.94**	**192**	S		**S**	**17 15 04.5**	**-2.4**
	comp=N,21nm,1.0s,baz=274,slow=21,SNR=16							
SIJI				ScP		**ScP**	**17 16 04.0**	**-0.7**
	comp=N,27nm,0.8s,baz=8.9,slow=7.0,SNR=5.3							
GTA	**Gaotai**	**32.16**	**296**	⇓P		**P**	**17 10 32.0**	**+0.5**
GTA				PP		**PP**	**17 12 01.0**	**-2.0**
GTA				sP		sP	17 12 50.0	+1.7
GTA				PcP		**PcP**	**17 13 08.0**	**+1.2**
GTA				S		**S**	**17 15 08.0**	**-2.2**
GTA				ScP		**ScP**	**17 16 04.5**	**-0.8**
GTA				SS		**SS**	**17 17 56.0**	**-8.5**
GTA				pmax	pmax			
	comp=N,120nm,1.2s							
SRPI	**Serui, Papua**	**32.35**	**183**	P		**P**	**17 10 33.6**	**+0.4**
	comp=N,1μmcomp=N,60nm,0.8s							
SMPI	**Sarmi**	**32.44**	**178**	P		**P**	**17 10 34.5**	**+0.5**
	comp=N,1μmcomp=N,105nm,1.2s							
ZAK	**Zakamensk**	**32.45**	**317**	*e*P		**P**	**17 10 34.2**	**+0.4**
ZAK				*e*			17 12 02.6	
ZAK				*e*			17 15 13.4	
ZAK				pmax	pmax			
	comp=Z,241nm,1.3s							
ZAK				pmax	pmax			
	comp=Z,85nm,1.5s							
LBMI	**Labuha**	**32.61**	**199**	P		**P**	**17 10 35.5**	**+0.1**
	comp=Z,2μmcomp=Z,5μmcomp=Z,478nm,1.0s							
KMSI	**Cibinong**	**32.65**	**206**	P		**P**	**17 10 36.3**	**+0.5**
	comp=Z,526nmcomp=Z,16μmcomp=Z,2μm,0.9s							
SPMM	**Sapulut**	**32.71**	**222**	P		**P**	**17 10 37.0**	**+0.6**
IRK	**Irkutsk**	**32.72**	**321**	*e*P		**P**	**17 10 36.0**	**+0.1**
IRK				*e*			17 12 06.4	
IRK				*e*			17 15 20.5	
IRK				pmax	pmax			
	comp=Z,395nm,2.5s							
DLV	**T Lat**	**32.91**	**242**	P		**P**	**17 10 40.3**	**+2.0**
GTOI	**Gorontalo**	**32.98**	**208**	P		**P**	**17 10 38.3**	**-0.3**
	comp=Z,6μmcomp=Z,690nm,1.0s							
GENI	**Genyem**	**33.10**	**176**	P		**P**	**17 10 40.7**	**+1.0**
	comp=Z,2μmcomp=Z,218nm,0.9s							
UBPT	**Khong Chiam**	**33.34**	**250**	P		**P**	**17 10 43.0**	**+1.3**
TOLI2	**Tolitoli**	**33.52**	**212**	P		**P**	**17 10 42.8**	**-0.4**
TOLI2	**Tolitoli**	**33.52**	**212**	P		**P**	**17 10 43.3**	**+0.1**
MRSI	**Marisa**	**33.57**	**210**	P		**P**	**17 10 44.1**	**+0.5**
	comp=Z,5μmcomp=Z,22μmcomp=Z,2μm,1.1s							
SEY	**Seymchan**	**33.65**	**12**	P		**P**	**17 10 44.6**	**+0.9**
	comp=Z,91nm,0.8s,baz=210,slow=6.9,SNR=106							
SEY				ScP		**ScP**	**17 16 09.2**	**-0.6**
	comp=Z,19nm,0.9s,baz=171,slow=1.1,SNR=4.5							
	comp=Z,91nm,0.8s							
MANU	**Manus Island**	**33.73**	**163**	P		**P**	**17 10 45.0**	**0.0**
FAKI	**Fak Fak**	**33.78**	**190**	P		**P**	**17 10 43.8**	**-1.6**
FAKI				IAmb		IAmb	17 10 47.6	
	comp=Z,246nm,0.9s							
FAKI	**Fak Fak**	**33.78**	**190**	P		**P**	**17 10 45.0**	**-0.4**
	comp=Z,5μmcomp=Z,346nm,1.4s							
FAKI	**Fak Fak**	**33.78**	**190**	P		**P**	**17 10 45.8**	**+0.4**
MOY	**Mondy**	**34.29**	**318**	*e*P		**P**	**17 10 49.8**	**+0.4**
MOY				*e*			17 15 44.7	
MOY				pmax	pmax			
	comp=Z,51nm,1.5s							
SANI	**Sanana**	**34.40**	**201**	P		**P**	**17 10 49.6**	**-1.0**
	comp=Z,3μmcomp=Z,16μmcomp=Z,2μm,0.9s							
SANI	**Sanana**	**34.40**	**201**	P		**P**	**17 10 49.9**	**-0.7**
LUWI	**Luwuk**	**34.60**	**207**	P		**P**	**17 10 50.5**	**-1.8**
LUWI	**Luwuk**	**34.60**	**207**	P		**P**	**17 10 50.6**	**-1.7**
	comp=Z,7μmcomp=Z,542nm,0.7s							
LUWI	**Luwuk**	**34.60**	**207**	P		**P**	**17 10 51.4**	**-0.9**
MPSI	**Mapaga**	**34.61**	**213**	P		**P**	**17 10 52.6**	**+0.2**
	comp=Z,3μmcomp=Z,6μmcomp=Z,436nm,0.9s							
MSAI	**Masohi**	**34.83**	**196**	P		**P**	**17 10 56.0**	**+1.7**
	comp=Z,985nmcomp=Z,95nm,1.2s							
APSI	**Ampana**	**34.94**	**209**	P		**P**	**17 10 55.2**	**0.0**
	comp=Z,17μmcomp=Z,2μm,1.1s							
NLAI	**Namlea**	**35.20**	**199**	P		**P**	**17 10 58.3**	**+1.0**
	comp=Z,4μmcomp=Z,352nm,1.3s							
CRAI	**Chiangrai**	**35.24**	**262**	P		**P**	**17 10 59.1**	**+1.4**
AAI	**Ambon**	**35.34**	**197**	P		**P**	**17 10 59.3**	**+0.8**
	comp=Z,12μmcomp=Z,1μm,0.7s							
BNDI	**Bandanaira**	**35.76**	**194**	P		**P**	**17 11 02.0**	**0.0**
	comp=Z,3μmcomp=Z,15μmcomp=Z,2μm,1.1s							
BNDI	**Bandanaira**	**35.76**	**194**	P		**P**	**17 11 02.9**	**+0.9**
KNGR	**Kungurtug, Tuv**	**35.96**	**315***c*	*i*P		**P**	**17 11 04.4**	**+1.0**
KNGR				pmax	pmax			
	comp=Z,224nm,2.1s							
GOMU	**GeErMu**	**36.12**	**291**	P		**P**	**17 11 06.5**	**+1.2**
GOMU				PcP		**PcP**	**17 13 20.5**	**+1.8**
GOMU				S		**S**	**17 16 11.0**	**+0.2**
GOMU				pmax	pmax			
	comp=Z,180nm,0.9s							
GOMU				pmax	pmax			
	comp=Z,190nm,4.2s							
SMKI	**Samarinda**	**36.60**	**216**	P		**P**	**17 11 11.4**	**+2.4**
	comp=Z,5μmcomp=Z,16μmcomp=Z,1μm,1.2s							
LKP	**Lekhapani**	**36.73**	**276**	*e*P		**P**	**17 11 11.7**	**+1.7**
AMKA	**Amchitka**	**36.89**	**44**	P		**P**	**17 11 11.9**	**+1.0**
SBUM	**Sibu**	**37.05**	**226**	P		**P**	**17 11 12.8**	**+0.1**
SBUM	**Sibu**	**37.05**	**226**	P		**P**	**17 11 14.0**	**+1.2**
CHTO	**Chiang Mai**	**37.06**	**261**	P		**P**	**17 11 13.6**	**+0.8**
CHTO	**Chiang Mai**	**37.06**	**261**	P		**P**	**17 11 13.6**	**+0.8**
CHTO				pmax	pmax			
	comp=Z,888nm,1.0s							
CHTO	**Chiang Mai**	**37.06**	**261**	P		**P**	**17 11 14.2**	**+1.4**
CHTO				P		**P**	**17 11 14.2**	**+1.4**
CHTO	**Chiang Mai**	**37.06**	**261**	P		**P**	**17 11 14.0**	**+1.1**
CHTO	**Chiang Mai**	**37.06**	**261**	P		**P**	**17 11 13.9**	**+1.1**
CHTO				PP		**PP**	**17 12 53.5**	**+2.4**
CHTO				ScP		**S**	**17 16 24.0**	**-0.5**
CM31	**Chiang Mai Arr**	**37.22**	**260**	P		**P**	**17 11 15.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**37.22**	**260**	P		**P**	**17 11 15.2**	**+1.0**
	comp=Z,162nm,0.8s,baz=46,slow=8.3,SNR=695							
CMAR				ScP		**ScP**	**17 16 24.3**	**+0.5**
	comp=Z,21nm,0.9s,baz=37,slow=3.4,SNR=12							
	comp=Z,162nm,0.8s							
CMAR	**Chiang Mai Arr**	**37.22**	**260**	P		**P**	**17 11 15.1**	**+0.9**
RABL	**Rabaul**	**37.23**	**156**	P		**P**	**17 11 14.3**	**+0.1**
RABL				IAmb		IAmb	17 11 17.4	
	comp=Z,204nm,1.1s							
KRVT	**Keravat (AS076**	**37.29**	**156**	P		**P**	**17 11 14.9**	**+0.2**
	comp=Z,134nm,1.0s,baz=214,slow=3.9,SNR=10.0							
KRVT				pP		**pP**	**17 12 39.9**	**+1.4**
	comp=Z,70nm,1.1s,baz=171,slow=5.5,SNR=1.7							
	comp=Z,134nm,1.0s							
BKB	**Balikpapan**	**37.46**	**216**	P		**P**	**17 11 16.7**	**+0.7**
BKB	**Balikpapan**	**37.46**	**216**	P		**P**	**17 11 17.2**	**+1.1**
	comp=Z,6μmcomp=Z,18μmcomp=Z,2μm,1.2s							
TTSI	**Tana Toraja**	**37.64**	**210**	P		**P**	**17 11 16.9**	**-0.7**
	comp=Z,5μmcomp=Z,3μmcomp=Z,246nm,1.0s							
MOKO	**MOKOCHONG**	**38.15**	**275**	*e*P		**P**	**17 11 22.6**	**+0.8**
MTKI	**Muara Teweh, K**	**38.24**	**219**	P		**P**	**17 11 23.3**	**+0.8**
	comp=Z,3μmcomp=Z,5μmcomp=Z,331nm,1.1s							
ZIRO	**ZIRO**	**38.39**	**277**	*e*P		**P**	**17 11 25.1**	**+1.3**
SPSI	**Sidrap Palu**	**38.48**	**210**	P		**P**	**17 11 23.6**	**-0.9**
	comp=Z,6μmcomp=Z,521nm,1.2s							
ITAN	**ITANAGAR**	**38.60**	**276**	*e*P		**P**	**17 11 27.1**	**+1.7**
BBSI	**Bau Bau**	**38.77**	**205**	P		**P**	**17 11 28.3**	**+1.5**
	comp=Z,624nmcomp=Z,59nm,1.1s							
SAUI	**Saumlaki**	**38.89**	**190**	P		**P**	**17 11 28.2**	**+0.4**
SAUI	**Saumlaki**	**38.89**	**190**	P		**P**	**17 11 28.6**	**+0.8**
	comp=Z,8μmcomp=Z,575nm,1.3s							
SAUI				pP		**pP**	**17 12 54.1**	**+2.1**
	comp=Z,8μmcomp=Z,575nm,1.3s							
SAUI	**Saumlaki**	**38.89**	**190**	P		**P**	**17 11 30.2**	**+2.4**
KIWB	**Kanaga Island**	**39.14**	**44**	P		**P**	**17 11 29.7**	**+0.3**
STKI	**Sintang**	**39.38**	**224**	P		**P**	**17 11 33.0**	**+1.2**
	comp=Z,6μmcomp=Z,451nm,1.1s							
ADK	**Adak**	**39.43**	**44**	P		**P**	**17 11 31.7**	**0.0**
ADK	**Adak**	**39.43**	**44**	P		**P**	**17 11 31.7**	**0.0**
ADK				pmax	pmax			
	comp=Z,733nm,1.9s							
ADK	**Adak**	**39.43**	**44**	P		**P**	**17 11 32.0**	**+0.3**
ADK	**Adak**	**39.43**	**44**	P		**P**	**17 11 31.9**	**+0.2**
KAPI	**Kappang**	**39.44**	**209**	ScP		**ScP**	**17 16 33.5**	**+1.2**
	comp=Z,121nm,1.0s,baz=43,slow=1.7,SNR=17							
KAPI				S		**S**	**17 16 59.9**	**+0.4**
	comp=Z,60nm,1.1s,baz=195,slow=24,SNR=27							
KAPI	**Kappang**	**39.44**	**209**	P		**P**	**17 11 32.7**	**+0.5**
KAPI	**Kappang**	**39.44**	**209***d*	*i*P		**P**	**17 11 32.9**	**+0.7**
KAPI				pmax	pmax			
	comp=Z,2μm,1.3s							
KAPI	**Kappang**	**39.44**	**209**	P		**P**	**17 11 33.7**	**+1.5**
KAPI	**Kappang**

comp=Z,18μmcomp=Z,758nm,0.4s
AGT Agartala 41.73 272 ⇓*i*P **P 17 11 52.3 +1.8**
MMRI Maumere 41.81 204 P **P 17 11 51.1 -0.1**
MMRI Maumere 41.81 204 P **P 17 11 51.2 0.0**
comp=Z,9μmcomp=Z,800nm,1.2s
MMRI Maumere 41.81 204 P **P 17 11 51.3 0.0**
SRIT Nakonsritamara 41.85 247 P **P 17 11 53.3 +1.6**
TURI Tura 41.98 275 *e*P **P 17 11 51.5 -1.1**
DGZ Jazzator, Alta 42.08 312*c i*P **P 17 11 54.3 +1.1**
DGZ pmax pmax
comp=Z,261nm,1.0s
EDFI Ende, Flores 42.10 204 P **P 17 11 52.9 -0.8**
comp=Z,2μmcomp=Z,4μmcomp=Z,344nm,1.3s
BATI Baumata 42.82 201 S **S 17 17 43.0 -5.6**
comp=Z,116nm,0.8s,baz=183,slow=17,SNR=19
BATI Baumata 42.82 201 P **P 17 11 58.8 -0.4**
comp=Z,7μmcomp=Z,926nm,1.0s
GTK Tadong 42.93 278 *e*P **P 17 12 01.1 +0.8**
KULM Kulim 43.09 242 P **P 17 12 02.3 +0.9**
KULM Kulim 43.09 242 P **P 17 12 03.0 +1.6**
MYKOM Kota Tinggi 43.10 235 P **P 17 12 02.2 +0.7**
MYKOM Kota Tinggi 43.10 235 P **P 17 12 03.0 +1.5**
IPM Ipoh 43.33 241 P **P 17 12 03.7 +0.4**
IPM Ipoh 43.33 241 P **P 17 12 04.0 +0.7**
IPM Ipoh 43.33 241 P **P 17 12 03.7 +0.4**
KDU Kakadu 43.37 188 P **P 17 12 03.5 0.0**
BWJI Bawean 43.55 218 P **P 17 12 05.2 +0.2**
comp=Z,3μmcomp=Z,7μmcomp=Z,656nm,1.2s
ZSN Zaisan 43.57 308*c i*P **P 17 12 06.0 +1.3**
ZSN *e*S **S 17 17 59.2 +0.4**
ZSN Zaisan 43.57 308⇑ *i*P **P 17 12 06.0 +1.3**
baz=308
ZSN *e*S **S 17 17 59.2 +0.4**
baz=308
MTN Manton Dam 43.69 189 P **P 17 12 05.5 -0.5**
MTN Manton Dam 43.69 189 P **P 17 12 05.8 -0.2**
CLES Cleveland East 43.70 44 P **P 17 12 05.8 +0.2**
CLES IAmb IAmb 17 12 06.7
comp=Z,1μm,0.8s
PLAI Plampang 43.70 209 P **P 17 12 04.9 -1.2**
comp=Z,2μmcomp=Z,7μmcomp=Z,738nm,1.2s
PLAI Plampang 43.70 209 P **P 17 12 05.2 -0.9**
WBSI Waikabubak, Su 43.78 207 P **P 17 12 04.4 -2.4**
comp=Z,3μmcomp=Z,397nm,0.9s
BASI Baing, Sumba 43.86 205 P **P 17 12 06.1 -1.3**
comp=Z,3μmcomp=Z,298nm,1.0s
KMMI Kalianget 43.90 215 P **P 17 12 07.1 -0.5**
comp=Z,4μmcomp=Z,9μmcomp=Z,1μm,1.0s
TPI Tanjungpandan 43.94 226 P **P 17 12 09.1 +1.1**
comp=Z,6μmcomp=Z,553nm,1.2s
TWSI Taliwang, Sumb 44.00 211 P **P 17 12 07.7 -0.8**
comp=Z,1μmcomp=Z,5μmcomp=Z,528nm,1.0s
SRBI Singaraja 44.19 213 P **P 17 12 10.4 +0.5**
comp=Z,6μmcomp=Z,11μmcomp=Z,780nm,1.1s
DSRI Dabo 44.23 235 P **P 17 12 11.8 +1.5**
comp=Z,3μmcomp=Z,4μmcomp=Z,274nm,1.4s
ZAA0 Zalesovo Array 44.33 317 P **P 17 12 10.1 -0.5**
ZALV Zalesovo Beam 44.33 317 P **P 17 12 10.4 -0.1**
comp=Z,17nm,0.4s,baz=100,slow=6.2,SNR=152
ZALV PcP **PcP 17 13 44.9 +0.2**
comp=Z,17nm,0.5s,baz=133,slow=3.8,SNR=9.6
ZALV ScP **ScP 17 16 50.4 -1.0**
comp=Z,42nm,0.8s,baz=102,slow=4.1,SNR=11
ZALV S **S 17 18 06.7 -2.7**
comp=Z,11nm,0.9s,baz=90,slow=12,SNR=5.0
comp=Z,17nm,0.4s
ZALV Zalesovo Beam 44.33 317 P **P 17 12 09.9 -0.6**
NIKH Nikolski High 44.34 44 P **P 17 12 10.0 -0.6**
NIKH Nikolski High 44.34 44 P **P 17 12 10.1 -0.6**
baz=261
NIKH S **S 17 18 06.9 -2.6**
baz=261
SPIA Saint Paul Isl 44.38 38 P **P 17 12 11.7 +0.8**
SPIA Saint Paul Isl 44.38 38 P **P 17 12 11.7 +0.8**
baz=256
ABJI Asem Bagus 44.41 215 P **P 17 12 12.1 +0.5**
comp=Z,6μmcomp=Z,10μmcomp=Z,871nm,1.2s
PPBI Pangkal Pinang 44.45 229 P **P 17 12 13.3 +1.3**
comp=Z,8μmcomp=Z,608nm,0.9s
COEN Coen 44.62 173 P **P 17 12 13.9 +0.6**
COEN IAmb IAmb 17 12 15.2
comp=Z,125nm,0.9s
COEN Coen 44.62 173 P **P 17 12 13.8 +0.6**
BLJI Banyuglugur 44.68 215 P **P 17 12 13.4 -0.3**
comp=Z,3μmcomp=Z,3μmcomp=Z,139nm,1.7s
DNP Denpasar 44.71 213 P **P 17 12 14.3 +0.4**
comp=Z,16μmcomp=Z,2μm,1.1s
RAMN Ramite 44.75 279 *e*P **P 17 12 15.4 +0.9**
comp=Z,1μm,1.0s
TBJI Tambak Boyo 44.79 218 P **P 17 12 15.1 +0.5**
comp=Z,3μmcomp=Z,7μmcomp=Z,617nm,1.3s
DGPR DIGLIPUR 44.81 257 ⇓*i*P **P 17 12 15.5 +0.7**
DGPR IAmb IAmb 17 12 18.0
comp=Z,656nm,0.8s
JIRN Jiri 44.89 280 *e*P **P 17 12 17.1 +1.4**
comp=Z,613nm,0.3s
JAGI Jajag, Banyuwa 45.03 214 P **P 17 12 15.2 -1.2**
JAGI Jajag, Banyuwa 45.03 214 P **P 17 12 14.8 -1.7**
comp=Z,3μmcomp=Z,4μmcomp=Z,543nm,1.0s
JAGI Jajag, Banyuwa 45.03 214 P **P 17 12 15.6 -0.9**
GUN Gumba 45.08 280 *e*P **P 17 12 18.5 +1.3**
comp=Z,839nm,0.7s
HNR Honiara 45.13 148 P **P 17 12 18.3 +1.1**
comp=Z,49nm,0.5s,baz=174,slow=9.0,SNR=4.8
comp=Z,49nm,0.5s
HNR Honiara 45.13 148 P **P 17 12 17.7 +0.5**
HNR IAmb IAmb 17 12 26.4
comp=Z,207nm,1.3s
GMJI Gumukmas 45.21 215 P **P 17 12 14.0 -3.8**
comp=Z,3μmcomp=Z,185nm,1.0s
MK31 Makanchi Array 45.31 307 P **P 17 12 18.9 +0.6**
MK31 Makanchi Array 45.31 307 *i*P **P 17 12 19.0 +0.7**
MKAR Makanchi Array 45.31 307 P **P 17 12 19.0 +0.7**
comp=Z,31nm,0.6s,baz=87,slow=11,SNR=464
MKAR PcP **PcP 17 13 48.2 -0.2**
comp=Z,7.5nm,0.3s,baz=76,slow=4.6,SNR=12
MKAR ScP **ScP 17 16 54.8 -0.9**
comp=Z,87nm,0.8s,baz=84,slow=4.4,SNR=29
MKAR S **S 17 18 23.1 -0.4**
comp=Z,12nm,0.9s,baz=85,slow=16,SNR=3.9
MKAR ScS **ScS 17 21 18.8 -3.7**
comp=Z,7.5nm,0.9s,baz=93,slow=10,SNR=7.3
comp=Z,31nm,0.6s
MKAR Makanchi Array 45.31 307 P **P 17 12 19.0 +0.7**
MKAR Makanchi Array 45.31 307 P **P 17 12 19.0 +0.7**
NGJI Ngawi 45.46 218 P **P 17 12 21.2 +1.5**
comp=Z,6μmcomp=Z,436nm,1.0s
MAKZ Makanchi 45.52 307 P **P 17 12 20.6 +0.7**
MAKZ IAmb IAmb 17 12 22.5
comp=Z,185nm,1.5s
MAKZ Makanchi 45.52 307 P **P 17 12 20.6 +0.7**
MAKZ pmax pmax
comp=Z,185nm,1.5s
MAKZ Makanchi 45.52 307 P **P 17 12 20.8 +0.9**
MAKZ pP **pP 17 13 48.6 -0.1**
MAKZ sP **sP 17 14 41.5 +0.5**
MAKZ ScP **ScP 17 16 55.4 -1.2**
PKI Pulchoki 45.58 280 *e*P **P 17 12 21.6 +0.6**
comp=Z,524nm,1.1s
PKIN Phulchoki 45.59 280 *e*P **P 17 12 21.6 +0.6**
comp=Z,150nm,0.7s
JMBI JAMBI 45.70 232 P **P 17 12 24.4 +2.7**
comp=Z,9μmcomp=Z,889nm,1.1s
GAMB Gambell 45.74 29 P **P 17 12 22.3 +1.1**
GAMB Gambell 45.74 29 P **P 17 12 22.4 +1.2**
baz=248,SNR=7.5
GAMB S **S 17 18 30.8 +1.9**
baz=248
PBA Port Blair 45.74 256 P **P 17 12 21.4 -0.6**
PBA Port Blair 45.74 256 P **P 17 12 22.0 0.0**
SNR=6.3
PBA Port Blair 45.74 256 *e*P **P 17 12 20.3 -1.7**
PBA IAmb IAmb 17 12 23.4
comp=Z,278nm,1.0s
SMRI Semarang 45.75 220 P **P 17 12 22.8 +0.8**
SMRI Semarang 45.75 220 P **P 17 12 22.6 +0.6**
comp=Z,12μmcomp=Z,1μm,1.2s
DMN Daman 45.83 280 *e*P **P 17 12 23.7 +0.9**
comp=Z,188nm,0.5s
TSI Tuntungan 45.83 242 P **P 17 12 23.1 +0.5**
comp=Z,9μmcomp=Z,570nm,0.9s
PWJI Pagerwojo 45.83 217 P **P 17 12 21.5 -1.1**
comp=Z,9μmcomp=Z,1μm,0.8s
UNV Unalaska Valle 45.86 43 P **P 17 12 21.6 -0.7**
UNV Unalaska Valle 45.86 43 P **P 17 12 22.2 0.0**
baz=263
UNV S **S 17 18 32.7 +1.9**
baz=263
PMBI Palembang 45.91 229 P **P 17 12 24.9 +1.6**
PMBI Palembang 45.91 229 P **P 17 12 25.1 +1.8**
comp=Z,5μmcomp=Z,23μmcomp=Z,3μm,1.1s
LHMI Lhok Sumawe 45.98 245 P **P 17 12 24.3 +0.5**
LHMI Lhok Sumawe 45.98 245 P **P 17 12 26.3 +2.5**
comp=Z,7μmcomp=Z,10μmcomp=Z,1μm,1.0s
GKN Gorkha 46.11 281 *e*P **P 17 12 25.8 +0.9**
comp=Z,173nm,0.4s
BKNI Bangkinang 46.12 236 P **P 17 12 26.0 +1.1**
BKNI Bangkinang 46.12 236 P **P 17 12 26.0 +1.1**
comp=Z,4μmcomp=Z,14μmcomp=Z,1μm,1.0s
PCJI Pacitan 46.30 218 P **P 17 12 24.9 -1.3**
comp=Z,6μmcomp=Z,433nm,1.1s
AKUT Akutan 46.32 43 P **P 17 12 24.4 -1.4**
AKUT **PcP 17 13 51.6 0.0**
BOK Bokaro 46.37 275 ⇓*i*P **P 17 12 27.7 +0.9**
KCSI Kotacane, Aceh 46.42 242 P **P 17 12 26.2 -1.0**
comp=Z,3μmcomp=Z,207nm,1.4s
UGM Wanagama 46.42 219 P **P 17 12 26.8 -0.4**
UGM Wanagama 46.42 219 P **P 17 12 26.3 -0.8**
comp=Z,30μmcomp=Z,3μm,1.1s
UGM Wanagama 46.42 219 P **P 17 12 27.2 +0.1**
YOGI Yogyakarta 46.46 219 P **P 17 12 26.7 -0.7**
comp=Z,19μmcomp=Z,2μm,1.0s
DANN Dangsing 46.75 281 *e*P **P 17 12 31.3 +1.4**
comp=Z,423nm,0.6s
SEM Semipalatinsk 46.75 312*c i*P **P 17 12 29.4 -0.1**
SEM pmax pmax
comp=Z,129nm,1.3s
SEM Semipalatinsk 46.75 312⇑ *i*P **P 17 12 29.4 -0.1**
comp=Z,129nm,1.3s,baz=312
SEM *e*S **S 17 18 41.2 -2.9**
baz=312
KNRA Kununurra 46.85 192 P **P 17 12 30.3 0.0**
KNRA Kununurra 46.85 192 P **P 17 12 30.9 +0.6**
KLI Kotabumi 47.32 228 P **P 17 12 34.1 +0.1**
comp=Z,27μmcomp=Z,3μm,1.0s
SHLS Shalkode 47.45 302 *e*P **P 17 12 33.1 -1.7**
SHLS *i*S **S 17 18 49.8 -4.0**
SHLS Shalkode 47.45 302 *e*P **P 17 12 33.1 -1.7**
baz=302
SHLS *i*S **S 17 18 49.8 -4.0**
baz=302
BLSI Bandar Lampung 47.47 227 P **P 17 12 34.9 -0.2**
comp=Z,11μmcomp=Z,1μm,0.9s
DBJI Dramaga 47.47 224 P **P 17 12 34.9 -0.2**
comp=Z,12μmcomp=Z,794nm,1.3s
SBJI Serang 47.50 225 P **P 17 12 34.9 -0.4**
comp=Z,9μmcomp=Z,662nm,1.3s
KRJI Kerinci 47.53 233 P **P 17 12 36.5 +0.8**
comp=Z,7μmcomp=Z,18μmcomp=Z,1μm,1.4s
MASI Maura Aman, Be 47.76 232 P **P 17 12 38.0 +0.7**
comp=Z,25μmcomp=Z,3μm,1.0s
FALS False Pass 47.77 42 P **P 17 12 37.1 +0.3**
UZB Uzynbulak 47.77 302 *e*P **P 17 12 38.0 +0.8**
UZB *e*S **S 17 18 57.7 -0.6**
UZB Uzynbulak 47.77 302 *e*P **P 17 12 38.1 +0.8**
baz=302
UZB *e*S **S 17 18 57.7 -0.6**
baz=302
KURK Kurchatov 47.80 313 P **P 17 12 37.2 +0.1**
KURK IAmb IAmb 17 12 39.2
comp=Z,264nm,1.1s
KURK Kurchatov 47.80 313*c i*P **P 17 12 37.3 +0.1**
KURK pmax pmax
comp=Z,337nm,1.3s
KURK Kurchatov 47.80 313 P **P 17 12 37.8 +0.7**
KURK p **P 17 12 37.8 +0.7**
KURK Kurchatov 47.80 313⇑ P **P 17 12 37.5 +0.4**
KURK pP **pP 17 14 09.8 +2.5**
KURK sP **sP 17 14 58.7 -0.6**
CNJI Cibinong 47.84 223 P **P 17 12 34.9 -3.0**
comp=Z,3μmcomp=Z,416nm,1.0s
KURBB Kurchatov Arra 47.86 312 P **P 17 12 37.9 +0.3**
comp=Z,123nm,0.9s,baz=93,slow=7.2,SNR=504
KURBB pP **pP 17 14 08.1 +0.3**
comp=Z,22nm,0.9s,baz=94,slow=8.1,SNR=2.2
KURBB ScP **ScP 17 17 04.5 -1.7**
comp=Z,11nm,0.9s,baz=108,slow=3.0,SNR=6.7
KURBB S **S 17 18 56.5 -2.4**
comp=Z,9.5nm,0.7s,baz=88,slow=14,SNR=14
comp=Z,123nm,0.9s
KSJI Kapahiang 47.89 231 P **P 17 12 38.2 -0.2**
comp=Z,7μmcomp=Z,479nm,1.1s
TNA Tin City 47.89 27 P **P 17 12 38.5 +1.0**
TNA IAmb IAmb 17 12 40.1
comp=Z,340nm,1.1s
TNA Tin City 47.89 27 P **P 17 12 38.9 +1.4**
baz=250,SNR=16
TNA S **S 17 19 01.6 +2.7**
baz=250
SKJI Sukabumi 47.94 224 P **P 17 12 37.6 -1.0**
comp=Z,4μmcomp=Z,119nm,0.5s
LWLI Liwa 47.95 228 P **P 17 12 38.0 -0.9**
comp=Z,2μmcomp=Z,4μmcomp=Z,555nm,1.0s
NRIK Noril'sk 47.98 338 P **P 17 12 38.7 +0.5**
comp=Z,309nm,0.9s,baz=114,slow=8.6,SNR=374
NRIK ScP **ScP 17 17 06.4 0.0**
comp=Z,157nm,0.7s,baz=114,slow=3.8,SNR=33
NRIK S **S 17 18 58.1 -1.9**
comp=Z,16nm,0.9s,baz=14,slow=23,SNR=22
comp=Z,309nm,0.9s
NRIK Noril'sk 47.98 338 P **P 17 12 38.6 +0.4**
NRIK Noril'sk 47.98 338*c i*P **P 17 12 38.5 +0.4**
NRIK pmax pmax
comp=Z,689nm,1.3s
KPKS Kokpek 47.99 303 *i*P **P 17 12 39.8 +1.0**
KPKS *i*S **S 17 19 00.6 -0.6**
KPKS Kokpek 47.99 303 *i*P **P 17 12 39.8 +1.0**
baz=303
KPKS *i*S **S 17 19 00.7 -0.6**
baz=303
GSI Gunungsitoli 48.00 240 P **P 17 12 39.1 0.0**
GSI Gunungsitoli 48.00 240 P **P 17 12 39.4 +0.2**
comp=Z,28μmcomp=Z,3μm,1.1s
GSI Gunungsitoli 48.00 240 P **P 17 12 39.9 +0.7**
KASI Kota Agung 48.06 227 P **P 17 12 37.7 -1.8**
comp=Z,7μmcomp=Z,616nm,1.5s
TDK Taldyqorghan 48.07 305 *e*P **P 17 12 40.3 +1.0**
TDK *e*S **S 17 19 01.9 -0.2**
TDK Taldyqorghan 48.07 305 *e*P **P 17 12 40.3 +1.0**
baz=305
TDK *e*S **S 17 19 02.0 -0.2**
baz=305
MNAI Manna 48.18 230 P **P 17 12 40.0 -0.5**
MNAI Manna 48.18 230 P **P 17 12 40.9 +0.5**
comp=Z,851nm,1.3s
MNAI Manna 48.18 230 P **P 17 12 41.1 +0.7**
ZHN Zhinishke 48.20 302 *e*P **P 17 12 41.1 +0.7**
ZHN *i*S **S 17 19 03.9 -0.2**
ZHN Zhinishke 48.20 302 *e*P **P 17 12 41.2 +0.7**
baz=302
ZHN *i*S **S 17 19 04.0 -0.2**
baz=302
SATY Saty 48.23 302 *e*P **P 17 12 41.1 +0.4**
SATY *e* 17 13 59.0
SATY *i*S **S 17 19 04.7 +0.1**
SATY Saty 48.23 302 *e*P **P 17 12 41.1 +0.4**
baz=302
SATY *e*PcP **PcP 17 13 59.0 0.0**
baz=302
SATY *i*S **S 17 19 04.7 +0.1**
baz=302
ARXS Arharly 48.55 304 *e*P **P 17 12 43.6 +0.7**
ANM Nome 48.62 29 P **P 17 12 44.2 +1.3**
ANM Nome 48.62 29 P **P 17 12 44.3 +1.3**
ANM pmax pmax
comp=Z,867nm,1.8s
ANM Nome 48.62 29 P **P 17 12 44.4 +1.4**
baz=254,SNR=48
ANM S **S 17 19 11.7 +2.7**
baz=254
SISI Saibi 48.67 236 P **P 17 12 44.2 +0.1**
comp=Z,243nm,1.0s
MTSU Mount Surprise 48.87 172 P **P 17 12 46.3 +0.8**
PPSI Pulau Pagai 49.02 234 P **P 17 12 47.6 +0.9**
comp=Z,984nm,1.0s
CHKK Chushkaly 49.18 303 *e*P **P 17 12 48.2 +0.6**
CHKK Chushkaly 49.18 303 *e*P **P 17 12 48.2 +0.6**
baz=303
MDOK Medeo 49.21 302 *e*P **P 17 12 48.8 +0.8**
MDOK *e* 17 14 02.7
MDOK *e*S **S 17 19 18.1 0.0**
MDOK Medeo 49.21 302 *e*P **P 17 12 48.8 +0.8**
baz=302
MDOK *e*PcP **PcP 17 14 02.7 +0.1**
baz=302
MDOK *e*S **S 17 19 18.2 0.0**
baz=302
AAA Alma-Ata 49.30 303 *e*P **P 17 12 49.4 +0.8**
AAA *e*S **S 17 19 19.4 +0.2**
AAA pmax pmax
comp=Z,102nm,0.8s
AAA Alma-Ata 49.30 303 *e*P **P 17 12 49.4 +0.8**
comp=Z,102nm,0.8s,baz=303
AAA *e*S **S 17 19 19.5 +0.2**
baz=303
SDPT Sand Point 49.49 41 P **P 17 12 48.7 -0.9**
SDPT IAmb IAmb 17 12 49.8
comp=Z,116nm,0.8s
SDPT Sand Point 49.49 41 P **P 17 12 48.6 -1.0**
baz=266,SNR=11
KUU Kurty 49.64 304 *e*P **P 17 12 51.8 +0.8**
KUU *e*S **S 17 19 23.1 -0.6**
KUU pmax pmax
comp=Z,117nm,0.8s
KUU Kurty 49.64 304 *e*P **P 17 12 51.8 +0.8**
comp=Z,117nm,0.8s,baz=304
KUU *e*S **S 17 19 23.1 -0.6**
baz=304
FITZ Fitzroy Crossi 49.84 195 S **S 17 19 25.3 -1.5**
comp=Z,17nm,1.1s,baz=265,slow=22,SNR=8.5
FITZ Fitzroy Crossi 49.84 195 P **P 17 12 52.9 +0.2**
FITZ IAmb IAmb 17 12 54.7
comp=Z,246nm,1.0s
FITZ Fitzroy Crossi 49.84 195 P **P 17 12 53.1 +0.4**
ULHL Ulahol 49.91 301 P **P 17 12 54.8 +1.5**
SNR=19
ULHL Ulahol 49.91 301 P **ScP 17 17 15.8 +0.3**
SNR=5.7
CHNA Chernabura Isl 49.97 42 P **P 17 12 53.0 -0.2**
baz=268,SNR=30
CHNA S **S 17 19 26.1 -1.6**
baz=268
CNBA Chernabura Isl 49.97 42 P **P 17 12 52.8 -0.4**
CNBA IAmb IAmb 17 12 54.2
comp=Z,351nm,1.2s
S14K Fog Glacier 50.07 40 P **P 17 12 53.6 -0.4**
baz=266,SNR=5.4
NRN Naryn 50.20 300 P **P 17 12 56.2 +0.6**
NRN Naryn 50.20 300 P **P 17 12 56.2 +0.6**
WB0 Warramunga Arr 50.21 184 P **P 17 12 54.9 -0.5**
TKM2 Tokmak 2 50.30 302 P **P 17 12 57.3 +1.2**
SNR=66
TKM2 Tokmak 2 50.30 302 P **ScP 17 17 16.4 -0.7**
SNR=7.1
TKM2 Tokmak 2 50.30 302 *i*P **P 17 12 57.3 +1.2**
TKM2 pmax pmax
comp=Z,37nm,0.7s
WRAB Tennant Creek 50.38 184 P **P 17 12 56.3 -0.3**
WRAB IAmb IAmb 17 12 57.8
comp=Z,301nm,0.9s
WRAB Tennant Creek 50.38 184*d i*P **P 17 12 56.1 -0.5**
WRAB pmax pmax
comp=Z,475nm,1.3s
WRAB Tennant Creek 50.38 184 P **P 17 12 56.4 -0.2**
WRAB Tennant Creek 50.38 184 P **P 17 12 56.6 0.0**
WRAB pP **pP 17 14 26.7 -0.2**
WRAB sP **sP 17 15 16.5 -1.5**
WB2 Warramunga Arr 50.38 184 P **P 17 12 56.2 -0.5**
WB2 IAmb IAmb 17 12 57.9
comp=Z,324nm,0.9s
WRA Warramunga Arr 50.39 184 P **P 17 12 56.5 -0.2**
comp=Z,233nm,0.8s,baz=0.5,slow=7.8,SNR=438
WRA PcP **PcP 17 14 08.0 +1.0**
comp=Z,53nm,0.8s,baz=359,slow=3.7,SNR=8.9
WRA pP **pP 17 14 26.7 -0.2**
comp=Z,100nm,0.9s,baz=4.2,slow=8.5,SNR=9.0
WRA S **S 17 19 31.1 -3.1**
comp=Z,16nm,0.9s,baz=8.3,slow=15,SNR=8.7
WRA P4KPbc 17 50 22.2
comp=Z,0.3nm,0.6s,baz=356,slow=4.6,SNR=4.8
comp=Z,233nm,0.8s
WRA Warramunga Arr 50.39 184 P **P 17 12 56.2 -0.5**
WR0 Warramunga Arr 50.39 184 P **P 17 12 56.4 -0.3**
KSH Kashi 50.53 298 P **P 17 13 01.8 +4.0**
KSH ScP **ScP 17 17 20.5 +2.4**
KSH S **S 17 19 42.0 +5.8**
KSH ScS **ScS 17 21 58.8 +0.5**
KSH SS **SS 17 23 25.8 +8.2**
KSH pmax pmax
comp=Z,550nm,6.7s
RDOG Red Dog Mine 50.55 25 P **P 17 12 58.0 +0.7**
baz=254
CHGN Chignik 50.70 40 P **P 17 12 57.9 -0.6**
CHGN Chignik 50.70 40 P **P 17 12 57.4 -1.1**
baz=268,SNR=14
KBK Karagaybulak 50.80 302 P **P 17 13 01.1 +1.3**
SNR=33
KBK Karagaybulak 50.80 302 P **ScP 17 17 19.4 0.0**
SNR=6.1
N16K Nishlik Lake 50.84 35 P **P 17 13 01.0 +1.5**
baz=264,SNR=169
N16K S **S 17 19 41.3 +2.0**
baz=264
CHMS Chumysh 50.90 303 P **P 17 13 01.6 +1.3**
SNR=16
CHMS Chumysh 50.90 303 P **ScP 17 17 18.8 -0.7**
SNR=13
CHMS Chumysh 50.90 303 *i*P **P 17 13 00.9 +0.6**
CHMS pmax pmax
comp=Z,65nm,1.5s
QIS Mount Isa 50.91 178 P **P 17 13 00.7 +0.2**
VIS Vishakhapatnam 50.92 269 ⇓*ix* **P 17 12 56.8 -4.0**
SGDS Sogindy 50.93 303 *e*P **P 17 13 01.2 +0.7**
SGDS *i*S **S 17 19 41.4 +0.2**
SGDS Sogindy 50.93 303 *e*P **P 17 13 01.2 +0.7**
baz=303
SGDS *i*S **S 17 19 41.5 +0.2**
baz=303
DDI Dehra Dun 50.97 286 ⇓*i*P **P 17 13 01.9 +0.9**
DDI IAmb IAmb 17 13 03.1
comp=Z,334nm,0.2s
USP Ospenovka 51.05 303 P **P 17 13 02.2 +0.9**
SNR=13
USP Ospenovka 51.05 303 P **ScP 17 17 19.5 -0.7**
SNR=11
CTA Charters Tower 51.06 170 S **S 17 19 41.6 -1.8**
comp=Z,11nm,1.1s,baz=192,slow=17,SNR=5.6
CTA Charters Tower 51.06 170 P **P 17 13 02.1 +0.5**
CTAO Charters Tower 51.06 170 P **P 17 13 01.6 0.0**
CTAO IAmb IAmb 17 14 41.8
comp=Z,179nm,1.2s
CTAO Charters Tower 51.06 170 P **P 17 13 01.6 0.0**
CTAO pmax pmax
comp=Z,179nm,1.3s
CTAO Charters Tower 51.06 170 P **P 17 13 02.1 +0.5**
CTAO Charters Tower 51.06 170 P **P 17 13 01.9 +0.3**
CTAO pP **pP 17 14 33.6 +1.5**
O16K Kokwok River B 51.09 36 P **P 17 13 02.3 +1.0**
baz=265,SNR=105
O16K S **S 17 19 43.4 +0.7**
baz=265
P16K Nushagak River 51.09 37 P **P 17 13 02.7 +1.4**
baz=266,SNR=29
P16K S **S 17 19 44.9 +2.1**
baz=266
AAK Ala-Archa 51.14 302 P **P 17 13 03.5 +1.2**
SNR=22
AAK Ala-Archa 51.14 302 P **P 17 13 03.2 +1.0**
AAK Ala-Archa 51.14 302*d i*P **P 17 13 02.8 +0.6**
AAK pmax pmax
comp=Z,66nm,1.7s
AAK Ala-Archa 51.14 302 P **P 17 13 03.6 +1.4**
AAK Ala-Archa 51.14 302 *i*P **P 17 13 03.0 +0.7**
SNR=22
AAK Ala-Archa 51.14 302 P **P 17 13 03.5 +1.2**
AAK pP **pwP 17 14 39.7 +3.0**
AAK ScP **ScP 17 17 20.3 -0.5**
BTLS Baital 51.15 305*c i*P **P 17 13 02.7 +0.7**
BTLS *e* 17 14 09.8
BTLS *i*S **S 17 19 42.5 -1.5**
BTLS Baital 51.15 305⇑ *i*P **P 17 13 02.8 +0.7**
baz=305
BTLS *e*PcP **PcP 17 14 09.8 +0.2**
baz=305
BTLS *i*S **S 17 19 42.5 -1.5**
baz=305
UCH Uchtor 51.19 302 P **P 17 13 06.0 +3.1**
SNR=6.8

UCH	Uchtor	51.19	302		P		ScP	17 17 21.4	+0.1	
	SNR=8.0									
R16K	Pilot Point	51.22	39		P		P	17 13 02.1	-0.2	
	baz=267,SNR=5.4									
XMIS	Christmas Isla	51.25	222		P		P	17 13 02.0	-1.2	
SMLA	Simla	51.48	287	‖	*i*P		P	17 13 05.0	+0.4	
SMLA					IAmb		IAmb	17 13 06.6		
	comp=Z,165nm,0.7s									
O17K	Koliganek Bris	51.61	36		P		P	17 13 06.3	+1.2	
	baz=266,SNR=113									
O17K					S		S	17 19 50.8	+1.1	
	baz=266									
BRZS	Berezniki	51.62	312	*c*	*i*P		P	17 13 05.8	+0.4	
BRZS					*i* S		S	17 19 49.0	-1.3	
BRZS	Berezniki	51.62	312	‖	*i*P		P	17 13 05.8	+0.4	
	baz=312									
BRZS					*i* S		S	17 19 49.1	-1.3	
	baz=312									
EKS2	Erkin-Say	51.66	302		P		P	17 13 07.2	+1.2	
	SNR=6.4									
EKS2	Erkin-Say	51.66	302		P		ScP	17 17 22.5	-0.4	
	SNR=9.0									
Q16K	King Salmon	51.76	37		P		P	17 13 06.9	+0.7	
	baz=267,SNR=9.2									
AML	Almayashu	51.80	302		P		P	17 13 08.9	+1.6	
	SNR=54									
R17K	Ugashik Creek	51.86	39		P		P	17 13 06.4	-0.6	
	baz=268,SNR=13									
R17K					S		S	17 19 54.1	+0.8	
	baz=268									
P17K	Kvichak River	51.90	37		P		P	17 13 08.3	+1.1	
	baz=267,SNR=74									
P17K					S		S	17 19 56.0	+2.3	
	baz=267									
GCSA	Galena City Sc	52.23	30		P		P	17 13 10.0	+0.5	
	baz=262,SNR=20									
GCSA					S		S	17 19 57.9	0.0	
	baz=262									
CHIR	Chirikof Islan	52.26	41		P		P	17 13 10.6	+0.8	
CHIR					IAmb		IAmb	17 13 11.2		
	comp=Z,267nm,0.7s									
CHIR	Chirikof Islan	52.26	41		P		P	17 13 10.5	+0.7	
	baz=270,SNR=14									
CHIR					S		S	17 19 59.1	+0.6	
	baz=270									
N18K	Kilae Creek	52.27	35		P		P	17 13 11.3	+1.4	
N18K					IAmb		IAmb	17 13 12.8		
	comp=Z,476nm,1.3s									
N18K	Kilae Creek	52.27	35		P		P	17 13 11.5	+1.6	
	baz=266,SNR=129									
N18K					S		S	17 20 01.2	+2.5	
	baz=266									
TTA	Tatalina	52.40	32		P		P	17 13 11.7	+0.8	
TTA	Tatalina	52.40	32		P		P	17 13 11.7	+0.8	
TTA					pmax		pmax			
	comp=Z,114nm,1.0s									
TTA	Tatalina	52.40	32		P		P	17 13 11.9	+1.0	
	baz=264,SNR=17									
SVW2	Sparrevohn	52.45	34		P		P	17 13 12.3	+1.1	
SVW2					IAmb		IAmb	17 13 13.9		
	comp=Z,477nm,1.4s									
P18K	Big Mountain,	52.53	36		P		P	17 13 12.3	+0.5	
P18K	Big Mountain,	52.53	36		P		P	17 13 12.8	+1.0	
	baz=268,SNR=224									
P18K					S		S	17 20 02.8	+0.5	
	baz=268									
O18K	Koktuh Hills	52.56	36		P		P	17 13 13.1	+1.1	
O18K	Koktuh Hills	52.56	36		P		P	17 13 13.5	+1.5	
	baz=267									
O18K					S		S	17 20 05.1	+2.5	
	baz=267									
L19K	White Mountain	52.87	33		P		P	17 13 15.3	+1.1	
L19K					IAmb		IAmb	17 13 16.9		
	comp=Z,316nm,1.3s									
L19K	White Mountain	52.87	33		P		P	17 13 15.5	+1.3	
	baz=266,SNR=130									
L19K					S		S	17 20 08.3	+1.6	
	baz=266									
BVA0	Borovoye Array	52.87	316	*i*	P		P	17 13 14.8	+0.5	
BVAR	Borovoye Array	52.87	316		P		P	17 13 14.8	+0.5	
	comp=Z,19nm,0.3s,baz=92,slow=8.0,SNR=247									
BVAR					PcP		PcP	17 14 16.8	+0.7	
	comp=Z,7.9nm,0.3s,baz=120,slow=2.8,SNR=7.9									
BVAR					ScP		ScP	17 17 26.7	-1.2	
	comp=Z,15nm,0.7s,baz=91,slow=5.2,SNR=6.3									
BVAR					S		S	17 20 05.5	-1.4	
	comp=Z,12nm,0.8s,baz=90,slow=13,SNR=10									
BVAR					ScS		ScS	17 22 12.3	-1.6	
	comp=Z,4.2nm,0.7s,baz=105,slow=11,SNR=4.6									
BVAR					PKPPKP		P'P'df	17 43 20.4	-14	
	comp=Z,0.6nm,1.0s,baz=199,slow=3.1,SNR=3.8									
BVAR					P4KPbc			17 50 33.9		
	comp=Z,0.5nm,0.6s,baz=116,slow=6.6,SNR=5.2									
	comp=Z,19nm,0.3s									
BRVK	Borovoye	52.93	316		P		P	17 13 15.2	+0.4	
BRVK					IAmb		IAmb	17 13 16.6		
	comp=Z,160nm,1.1s									
BRVK	Borovoye	52.93	316		P		P	17 13 15.2	+0.4	
BRVK					pmax		pmax			
	comp=Z,160nm,1.1s									
BRVK	Borovoye	52.93	316		P		P	17 13 15.6	+0.9	
BRVK	Borovoye	52.93	316		P		P	17 13 15.4	+0.6	
BRVK					ScP		ScP	17 17 26.9	-1.2	
N19K	Bonanza Creek	52.97	35		P		P	17 13 16.2	+1.2	
N19K					IAmb		IAmb	17 13 17.1		
	comp=Z,138nm,0.8s									
N19K	Bonanza Creek	52.97	35		P		P	17 13 16.4	+1.4	
	baz=267,SNR=76									
N19K					S		S	17 20 10.1	+2.0	
	baz=267									
O19K	Port Alsworth	53.02	35		P		P	17 13 16.3	+1.0	
O19K	Port Alsworth	53.02	35		P		P	17 13 16.5	+1.3	
	baz=268,SNR=94									
O19K					S		S	17 20 11.6	+3.0	
	baz=268									
SII	Sitkinak Islan	53.05	40		P		P	17 13 15.7	0.0	
SII	Sitkinak Islan	53.05	40		P		P	17 13 16.0	+0.3	
	baz=271,SNR=14									
SII					S		S	17 20 09.0	-0.2	
	baz=271									
SII	Sitkinak Islan	53.05	40		P		P	17 13 16.1	+0.5	
M19K	Big River Lodg	53.07	33		P		P	17 13 17.1	+1.4	
M19K					IAmb		IAmb	17 13 18.4		
	comp=Z,251nm,1.4s									
M19K	Big River Lodg	53.07	33		P		P	17 13 17.1	+1.5	
	baz=267,SNR=94									
M19K					S		S	17 20 11.4	+2.1	
	baz=267									
K20K	Telida	53.31	31		P		P	17 13 18.9	+1.6	
K20K	Telida	53.31	31		P		P	17 13 19.1	+1.7	
	baz=266,SNR=389									
K20K					S		S	17 20 15.1	+2.6	
	baz=266									
Q19K	Cape Douglas,	53.34	37		P		P	17 13 17.0	-0.6	
Q19K	Cape Douglas,	53.34	37		P		P	17 13 17.4	-0.2	
	baz=270,SNR=41									
L20K	Farewell, AK	53.34	33		P		P	17 13 19.1	+1.5	
	baz=267,SNR=108									
L20K					S		S	17 20 14.7	+1.8	
	baz=267									
J20K	Nowinta River	53.34	30		P		P	17 13 18.8	+1.2	
J20K					IAmb		IAmb	17 13 20.3		
	comp=Z,310nm,0.9s									
J20K	Nowinta River	53.34	30		P		P	17 13 19.1	+1.6	
	baz=265,SNR=300									
J20K					S		S	17 20 15.0	+2.2	
	baz=265									
DZA	Taraz	53.40	303		*e*P		P	17 13 18.6	+0.3	
DZA					*e*S		S	17 20 14.6	+0.3	
DZA	Taraz	53.40	303		*e*P		P	17 13 18.6	+0.3	
	baz=303									
DZA					*e*S		S	17 20 14.6	+0.3	
	baz=303									
A21K	Barrow	53.50	21		P		P	17 13 19.9	+1.4	
A21K	Barrow	53.50	21		P		P	17 13 19.9	+1.4	
	baz=257,SNR=7.0									
A21K					S		S	17 20 17.3	+2.7	
	baz=257									
OHAK	Old Harbor	53.54	39		P		P	17 13 18.9	0.0	
OHAK					IAmb		IAmb	17 13 20.5		
	comp=Z,523nm,1.8s									
OHAK	Old Harbor	53.54	39		P		P	17 13 19.1	+0.1	
	baz=271,SNR=17									
OHAK					S		S	17 20 14.4	-1.1	
	baz=271									
P19K	Oil Pt	53.56	36		P		P	17 13 19.7	+0.5	
P19K	Oil Pt	53.56	36		P		P	17 13 19.8	+0.6	
	baz=269,SNR=79									
P19K					S		S	17 20 14.5	-1.3	
	baz=269									
ILSW	Iliamna Southw	53.61	36		P		P	17 13 19.2	-0.4	
ILSW					IAmb		IAmb	17 13 21.9		
	comp=Z,413nm,1.6s									
M20K	Styx River	53.66	33		P		P	17 13 21.3	+1.3	
M20K	Styx River	53.66	33		P		P	17 13 21.5	+1.5	
	baz=268									
M20K					S		S	17 20 20.2	+2.9	
	baz=268									
IMAR	Indian Mountai	53.68	28		P		P	17 13 20.6	+0.7	
RSO	Redoubt South	53.81	35		P		P	17 13 21.6	+0.5	
BHPL	Bhopal	53.82	278	‖	*i*P		P	17 13 20.2	-1.5	
BHPL					IAmb		IAmb	17 13 23.3		
	comp=Z,124nm,0.6s									
BHPL					*i* x		x	17 15 25.3		
G21K	Allakaket	53.84	28		P		P	17 13 22.3	+1.3	
	baz=264,SNR=166									
G21K					S		S	17 20 21.0	+1.7	
	baz=264									
O20K	Slope Mountain	53.87	36		P		P	17 13 21.8	+0.3	
	baz=270,SNR=60									
O20K					S		S	17 20 21.2	+1.2	
	baz=270									
KDAK	Kodiak Island	53.91	38		P		P	17 13 22.0	+0.4	
KDAK							pP	17 14 53.2	-1.4	
KDAK	Kodiak Island	53.91	38		P		P	17 13 22.0	+0.4	
	baz=271									
KDAK					S		S	17 20 18.9	-1.4	
	baz=271									
KDAK	Kodiak Island	53.91	38		P		P	17 13 22.0	+0.4	
KDAK					pP		pP	17 14 53.0	-1.6	
F21K	Alatna River	53.92	27		P		P	17 13 22.5	+0.8	
	baz=264,SNR=90									
F21K					S		S	17 20 21.6	+1.2	
	baz=264									
KK31	Karatay Array	53.95	303		P		P	17 13 22.9	+0.6	
KK31	Karatay Array	53.95	303	*i*	P		P	17 13 23.0	+0.7	
KKAR	Karatay Array	53.95	303		P		P	17 13 22.9	+0.6	
KKAR	Karatay Array	53.95	303		P		P	17 13 22.6	+0.3	
KKAR	Karatay Array	53.95	303		P		P	17 13 22.9	+0.6	
KKAR					pmax		pmax			
	comp=Z,83nm,0.9s									
NIL	Nilore	53.98	291		P		P	17 13 23.9	+1.3	
Q20K	Shuyak Island	53.99	37		P		P	17 13 22.4	+0.2	
	baz=271,SNR=51									
Q20K					S		S	17 20 20.4	-1.1	
	baz=271									
H21K	Melozitna Rive	54.04	29		P		P	17 13 23.7	+1.2	
H21K	Melozitna Rive	54.04	29		P		P	17 13 24.0	+1.5	
	baz=265,SNR=304									
H21K					S		S	17 20 23.8	+1.8	
	baz=265									
SPCR	Spurr Chakacha	54.09	34		P		P	17 13 24.2	+1.2	
	baz=269,SNR=48									
SPCR					S		S	17 20 24.1	+1.3	
	baz=269									
AS31	Alice Springs	54.11	184		P		P	17 13 23.2	-0.3	
ASAR	Alice Springs	54.11	184		P		P	17 13 23.6	0.0	
	comp=Z,95nm,0.8s,baz=12,slow=8.8,SNR=670									
ASAR					PcP		PcP	17 14 21.1	0.0	
	comp=Z,25nm,0.9s,baz=6.6,slow=3.3,SNR=7.5									
ASAR					ScP		ScP	17 17 34.1	+0.5	
	comp=Z,9.0nm,0.7s,baz=4.4,slow=5.0,SNR=5.3									
ASAR					S		S	17 20 22.8	-1.2	
	comp=Z,21nm,1.1s,baz=10,slow=16,SNR=13									
ASAR					P4KPbc			17 50 39.0		
	comp=Z,0.4nm,0.8s,baz=5.6,slow=3.9,SNR=4.7									
	comp=Z,95nm,0.8s									
ASAR	Alice Springs	54.11	184		P		P	17 13 23.2	-0.3	
CHUM	Lake Minchumin	54.13	31		P		P	17 13 24.8	+1.7	
	baz=267,SNR=74									
CHUM					S		S	17 20 25.6	+2.4	
	baz=267									
PPLA	Purkeypile	54.14	32		P		P	17 13 24.7	+1.3	
PPLA	Purkeypile	54.14	32		P		P	17 13 24.9	+1.5	
	baz=268,SNR=138									
PPLA					S		S	17 20 25.7	+2.0	
	baz=268									
SPU	Mount Spurr	54.16	34		P		P	17 13 24.0	+0.5	
CAST	Castle Rocks	54.21	31		P		P	17 13 25.0	+1.3	
CAST					IAmb		IAmb	17 13 26.4		
	comp=Z,321nm,1.0s									
CAST	Castle Rocks	54.21	31		P		P	17 13 25.2	+1.5	
	baz=268,SNR=306									
CAST					S		S	17 20 26.1	+1.8	
	baz=268									
BTK	Batken	54.33	300		P		P	17 13 24.8	-0.2	
BTK	Batken	54.33	300		P		P	17 13 24.8	-0.2	
MBWA	Marble Bar	54.35	201		P		P	17 13 25.0	-0.1	
MBWA					IAmb		IAmb	17 13 26.7		
	comp=Z,238nm,0.8s									
MBWA	Marble Bar	54.35	201		P		P	17 13 25.4	+0.3	
MBWA	Marble Bar	54.35	201		P		P	17 13 25.3	+0.1	
MBWA	Marble Bar	54.35	201		P		P	17 13 25.3	+0.1	
MBWA					ScP		ScP	17 17 35.2	+0.6	
I21K	Tanana	54.35	29		P		P	17 13 25.9	+1.3	
I21K					IAmb		IAmb	17 13 27.6		
	comp=Z,473nm,1.4s									
I21K	Tanana	54.35	29		P		P	17 13 26.2	+1.6	
	baz=266,SNR=202									
I21K					S		S	17 20 27.7	+1.7	
	baz=266									
HOM	Homer	54.36	36		P		P	17 13 24.5	-0.3	
HOM	Homer	54.36	36		P		P	17 13 24.6	-0.3	
	baz=271,SNR=10									
HOM					S		S	17 20 26.1	-0.3	
	baz=271									
F22K	John River	54.45	26		P		P	17 13 26.9	+1.6	
	baz=264,SNR=362									
F22K					S		S	17 20 28.4	+1.0	
	baz=264									
IUG	luzhnay	54.48	302		*e*P		P	17 13 27.1	+1.0	
IUG					*i* S		S	17 20 29.2	+0.4	
IUG	luzhnay	54.48	302		*e*P		P	17 13 27.1	+1.0	
	baz=302									
IUG					*i* S		S	17 20 29.2	+0.4	
	baz=302									
CNPM	China Poot	54.57	36		P		P	17 13 25.8	-0.6	
CNPM					IAmb		IAmb	17 13 29.4		
	comp=Z,216nm,0.7s									
CAPN	Captain Cook N	54.60	35		P		P	17 13 26.7	+0.2	
CAPN					IAmb		IAmb	17 13 29.2		
	comp=Z,257nm,1.0s									
CAPN	Captain Cook N	54.60	35		P		P	17 13 28.1	+1.7	
	baz=270									
H22K	Ishtalitna Cre	54.64	28		P		P	17 13 28.6	+1.8	
	baz=266,SNR=331									
H22K					S		S	17 20 32.6	+2.6	
	baz=266									
E22K	Anaktuvuk Pass	54.65	26		P		P	17 13 28.3	+1.5	
	baz=264,SNR=146									
E22K					S		S	17 20 31.0	+0.9	
	baz=264									
G22K	Bettles	54.66	27		P		P	17 13 27.6	+0.7	
	baz=266									
G22K					S		S	17 20 33.0	+2.9	
	baz=266									
PSA00	Pilbara Seismi	54.70	201		P		P	17 13 27.7	0.0	
PSA00					IAmb		IAmb	17 13 29.1		
	comp=Z,249nm,0.9s									
PSA00	Pilbara Seismi	54.70	201		P		P	17 13 27.2	-0.4	
PSA00					IAmb		IAmb	17 13 29.1		
	comp=Z,144nm,0.9s									
PSA00	Pilbara Seismi	54.70	201		P		P	17 13 28.0	+0.3	
BPAW	Bear Paw Mtn.	54.72	31		P		P	17 13 28.1	+0.8	
BPAW					IAmb		IAmb	17 13 29.8		
	comp=Z,459nm,1.6s									
BPAW	Bear Paw Mtn.	54.72	31		P		P	17 13 28.5	+1.2	
	baz=268,SNR=108									
BPAW					S		S	17 20 32.8	+1.7	
	baz=268									
KTH	Kantishna Hill	54.74	31		P		P	17 13 28.1	+0.6	
KTH					IAmb		IAmb	17 13 29.9		
	comp=Z,305nm,1.4s									
BRLK	Bradley Lake	54.75	36		P		P	17 13 26.9	-0.7	
BRSE	Bradley Lake S	54.82	36		P		P	17 13 28.4	+0.4	
	baz=271,SNR=64									
MLY	Manley	54.87	29		P		P	17 13 29.4	+1.0	
MLY					IAmb		IAmb	17 13 30.9		
	comp=Z,215nm,1.1s									
MLY	Manley	54.87	29		P		P	17 13 29.7	+1.3	
	baz=268,SNR=138									
MLY					S		S	17 20 35.5	+2.5	
	baz=268									
GAR	Garm	54.94	298		P		P	17 13 30.0	+0.6	
GAR					IAmb		IAmb	17 13 31.6		
	comp=Z,433nm,1.4s									
TRF	Thorofare Moun	55.02	31		P		P	17 13 29.9	+0.3	
TRF					IAmb		IAmb	17 13 31.6		
	comp=Z,242nm,1.4s									
TRF	Thorofare Moun	55.02	31		P		P	17 13 30.1	+0.5	
	baz=269,SNR=29									
TRF					S		S	17 20 37.4	+2.1	
	baz=269									
CUT	Chulitna	55.02	33		P		P	17 13 29.2	-0.1	
CUT	Chulitna	55.02	33		P		P	17 13 29.5	+0.1	
	baz=270,SNR=13									
CUT					S		S	17 20 34.6	-0.3	
	baz=270									
FIS	Fire Island	55.05	34		P		P	17 13 30.6	+0.9	
RK1H	Rockhampton Ha	55.06	166		P		P	17 13 30.4	+0.3	
M22K	Willow	55.09	33		P		P	17 13 29.9	0.0	
M22K	Willow	55.09	33		P		P	17 13 30.0	+0.2	
	baz=270,SNR=43									
M22K					S		S	17 20 34.8	-1.0	
	baz=270									
D23K	Nanushuk River	55.14	25		P		P	17 13 31.9	+1.8	
	baz=265,SNR=120									
D23K					S		S	17 20 38.6	+2.2	
	baz=265									
HYBB	Hyderabad (bro	55.17	271		*e*P		P	17 13 31.6	+0.3	
HYBB					*e*PcP		PcP	17 14 24.9	-0.6	
HYBB					*e*pP		pP	17 15 03.1	-0.5	
HYBB					*e*sP		sP	17 15 53.7	-0.6	
HYBB					*e*ScP		ScP	17 17 39.3	+0.7	
HYBB					*e*PcS		PcS	17 18 26.6	+0.1	
HYBB					*e*S		S	17 20 39.4	+1.1	
TAS	Tashkent	55.19	301		P		P	17 13 32.3	+1.3	
TAS	Tashkent	55.19	301		P		P	17 13 32.3	+1.3	
TAS					pmax		pmax			
	comp=Z,134nm,1.1s									
G23K	Bananza Creek	55.24	27		P		P	17 13 32.4	+1.5	
	baz=267,SNR=322									
G23K					S		S	17 20 39.8	+2.0	
	baz=267									
C23K	Itkillik River	55.25	24		P		P	17 13 32.4	+1.5	
	baz=264,SNR=130									
C23K					S		S	17 20 39.6	+1.9	
	baz=264									
RC01	Rabbit Creek A	55.29	34		P		P	17 13 31.1	-0.2	
RC01					IAmb		IAmb	17 13 32.7		
	comp=Z,296nm,1.1s									
RC01	Rabbit Creek A	55.29	34		P		P	17 13 31.3	0.0	
	baz=271,SNR=60									
RC01					S		S	17 20 36.7	-1.7	
	baz=271									
O22K	Cooper Landing	55.31	35		P		P	17 13 31.1	-0.3	
O22K					IAmb		IAmb	17 13 41.0		
	comp=Z,228nm,0.8s									
O22K	Cooper Landing	55.31	35		P		P	17 13 31.6	+0.2	
	baz=272,SNR=22									
O22K					S		S	17 20 38.8	+0.1	
	baz=272									
BWN	Browne	55.39	31		P		P	17 13 33.0	+1.1	
BWN					IAmb		IAmb	17 13 34.8		
	comp=Z,548nm,1.4s									
H23K	Yukon River	55.39	29		P		P	17 13 33.4	+1.4	
H23K					IAmb		IAmb	17 13 35.1		
	comp=Z,282nm,1.1s									
H23K	Yukon River	55.39	29		P		P	17 13 33.7	+1.7	
	baz=268,SNR=224									
H23K					S		S	17 20 42.8	+3.0	
	baz=268									
SEW	Seward	55.46	35		P		P	17 13 32.4	-0.1	
SEW					IAmb		IAmb	17 13 33.8		
	comp=Z,285nm,0.9s									
SEW							pP	17 15 04.2	-2.0	
SEW	Seward	55.46	35		P		P	17 13 32.7	+0.3	
	baz=272,SNR=50									
SEW					S		S	17 20 39.6	-1.0	
	baz=272									
TOLK	Toolik Lake Re	55.52	25		P		P	17 13 33.9	+1.0	
TOLK					IAmb		IAmb	17 13 35.5		
	comp=Z,309nm,1.2s									
TOLK	Toolik Lake Re	55.52	25		P		P	17 13 34.3	+1.4	
	baz=266,SNR=97									
TOLK					S		S	17 20 42.9	+1.5	
	baz=266									
PMR	Palmer	55.57	34		P		P	17 13 33.0	-0.2	
PMR					IAmb		IAmb	17 13 34.6		
	comp=Z,458nm,1.2s									
PMR	Palmer	55.57	34		P		P	17 13 33.0	-0.2	
PMR					pmax		pmax			
	comp=Z,458nm,1.2s									
PMR	Palmer	55.57	34		P		P	17 13 33.4	+0.2	
	baz=272,SNR=40									
PMR					S		S	17 20 41.2	-0.8	
	baz=272									
NEA2	Nenana	55.57	30		P		P	17 13 33.8	+0.5	
NEA2					IAmb		IAmb	17 13 35.5		
	comp=Z,418nm,1.2s									
NEA2	Nenana	55.57	30		P		P	17 13 34.1	+0.9	
	baz=270,SNR=231									
NEA2					S		S	17 20 43.7	+1.7	
	baz=270									
MCK	McKinley	55.62	31		P		P	17 13 33.7	+0.1	
MCK	McKinley	55.62	31		P		P	17 13 33.7	+0.1	
MCK					pmax		pmax			
	comp=Z,437nm,1.1s									
MCK	McKinley	55.62	31		P		P	17 13 34.1	+0.4	
	baz=270,SNR=122									
MCK					S		S	17 20 44.1	+1.3	
	baz=270									
GHO	Glory Hole Cre	55.66	33		P		P	17 13 34.1	+0.1	
RND	Reindeer	55.66	31		P		P	17 13 33.9	-0.1	
RND					IAmb		IAmb	17 13 35.4		
	comp=Z,494nm,1.3s									
RND	Reindeer	55.66	31		P		P	17 13 33.9	-0.1	
RND					pmax		pmax			
	comp=Z,494nm,1.3s									
WAT1	Susitna Watana	55.81	32		P		P	17 13 35.0	0.0	
	baz=271									
WAT1					S		S	17 20 44.6	-0.8	
	baz=271									
D24K	Happy Valley	55.82	24		P		P	17 13 36.5	+1.6	
	baz=267									
D24K					S		S	17 20 46.2	+1.0	
	baz=267									
E24K	Your Creek	55.89	26		P		P	17 13 37.1	+1.6	
	baz=268,SNR=111									
E24K					S		S	17 20 48.5	+2.2	
	baz=268									
KNK	Knik Glacier	55.89	34		P		P	17 13 35.7	+0.2	
KNK	Knik Glacier	55.89	34		P		P	17 13 36.1	+0.6	
	baz=272,SNR=82									
KNK					S		S	17 20 46.3	-0.2

baz=270
COLA College 56.09 30 P P 17 13 37.3 +0.4
COLA College 56.09 30 P P 17 13 37.3 +0.4
COLA pmax pmax
comp=Z,104nm,1.0s
COLA College 56.09 30 P P 17 13 37.2 +0.4
baz=270
COLA S S 17 20 50.1 +1.4
baz=270
COLA College 56.09 30 P P 17 13 37.3 +0.4
WRKA Warakurna 56.09 190 P P 17 13 37.6 +0.2
F24K Squaw Lake 56.10 26 P P 17 13 38.5 +1.5
baz=269,SNR=287
F24K S S 17 20 52.2 +3.2
baz=269
CCB Clear Creek Bu 56.11 30 P P 17 13 36.7 -0.2
WAT6 Susitna Watana 56.19 32 P P 17 13 38.2 +0.4
baz=272,SNR=154
WAT6 S S 17 20 50.8 +0.3
baz=272
M23K Glacier View 56.23 33 P P 17 13 38.3 +0.4
baz=273,SNR=71
M23K S S 17 20 51.4 +0.6
baz=273
G24K Hadweenzic Riv 56.25 27 P P 17 13 39.8 +1.8
baz=270,SNR=152
G24K S S 17 20 51.0 +0.1
baz=270
POKR Poker Plat Res 56.27 29 P P 17 13 38.5 +0.4
POKR IAmb IAmb 17 13 40.6
comp=Z,218nm,0.9s
POKR Poker Plat Res 56.27 29 P P 17 13 38.8 +0.7
baz=271,SNR=44
POKR S S 17 20 53.1 +1.9
baz=271
DHY Denali Highway 56.34 32 P P 17 13 38.6 -0.2
DHY Denali Highway 56.34 32 P P 17 13 39.0 +0.2
baz=272,SNR=48
DHY S S 17 20 52.8 +0.4
baz=272
SCM Sheep Creek Mo 56.41 33 P P 17 13 39.9 +0.7
SCM Sheep Creek Mo 56.41 33 P P 17 13 39.9 +0.7
SCM pmax pmax
comp=Z,650nm,1.0s
SCM Sheep Creek Mo 56.41 33 P P 17 13 40.1 +0.8
baz=273,SNR=129
SCM S S 17 20 54.6 +1.4
baz=273
HDA Harding Lake 56.49 30 P P 17 13 39.1 -0.6
HDA IAmb IAmb 17 13 40.6
comp=Z,213nm,1.0s
HDA Harding Lake 56.49 30 P P 17 13 39.5 -0.1
baz=272,SNR=103
HDA S S 17 20 54.2 +0.2
baz=272
HDA S S 17 20 54.2 +0.2
baz=272
P23K Montague Islan 56.49 36 P P 17 13 40.7 +1.0
baz=274,SNR=26
P23K S S 17 20 56.1 +2.0
baz=274
IL31 56.51 30 P P 17 13 39.2 -0.5
IL31 IAmb IAmb 17 13 40.9
comp=Z,504nm,1.9s
ILAR Eielson Array 56.51 30 P P 17 13 39.7 0.0
comp=Z,29nm,0.3s,baz=269,slow=7.4,SNR=5.8
ILAR PKPPKP P'P'df 17 43 10.9 -18
comp=Z,0.4nm,0.6s,baz=340,slow=3.1,SNR=4.1
comp=Z,29nm,0.3s
ILAR Eielson Array 56.51 30 P P 17 13 38.5 -1.3
GLI Glacier Island 56.58 34 P P 17 13 40.8 +0.5
GLI Glacier Island 56.58 34 P P 17 13 40.9 +0.6
baz=274,SNR=34
GLI S S 17 20 56.7 +1.4
baz=274
D25K Kavik River 56.70 24 P P 17 13 42.4 +1.4
baz=269,SNR=217
D25K S S 17 20 58.2 +1.4
baz=269
KOUNC Koumac, New Ca 56.88 150 P P 17 13 44.3 +1.5
FID Port Fidalgo 56.89 35 P P 17 13 42.7 +0.2
HIN Hinchinbrook I 56.91 35 P P 17 13 43.3 +0.7
H25K Birch Creek 56.92 28 P P 17 13 44.3 +1.8
baz=271,SNR=88
M24K Tolsona, Glenn 56.94 33 P P 17 13 43.7 +0.8
M24K IAmb IAmb 17 13 45.3
comp=Z,262nm,1.0s
M24K Tolsona, Glenn 56.94 33 P P 17 13 44.2 +1.4
baz=274,SNR=41
M24K S S 17 20 59.8 -0.3
baz=274
F25K Christian River 56.96 26 P P 17 13 45.0 +2.0
baz=271,SNR=270
F25K S S 17 21 02.0 +1.8
baz=271
E25K Arctic Village 56.99 26 P P 17 13 44.9 +1.9
baz=270,SNR=177
E25K S S 17 21 03.7 +3.3
baz=270
K24K Donnelly Dome 57.02 31 P P 17 13 43.5 +0.1
baz=273,SNR=44
K24K S S 17 21 01.1 +0.1
baz=273
PRP Porcupine Dome 57.06 29 P P 17 13 43.1 -0.6
PRP Porcupine Dome 57.06 29 P P 17 13 43.4 -0.4
baz=272,SNR=65
PRP S S 17 21 01.3 -0.3
baz=272
Q23K Middleton Isla 57.07 36 P P 17 13 44.5 +0.9
baz=275
KBL Kabul 57.08 294 P P 17 13 44.8 +0.3
KBL Kabul 57.08 294 P P 17 13 44.8 +0.3
KBL pmax pmax
comp=Z,87nm,1.2s
KBL Kabul 57.08 294 P P 17 13 45.2 +0.7
SNR=41
EIDS Eidsvold 57.10 166 P P 17 13 44.6 +0.3
EIDS Eidsvold 57.10 166 P P 17 13 44.8 +0.5
KLU Klutina 57.10 34 P P 17 13 44.5 +0.5
KLU IAmb IAmb 17 13 46.1
comp=Z,267nm,1.0s
KLU Klutina 57.10 34 P P 17 13 45.0 +1.0
baz=274,SNR=100
KLU S S 17 21 03.9 +1.7
baz=274
FYU Fort Yukon 57.15 28 P P 17 13 45.4 +1.4
J25K Salcha River, 57.16 30 P P 17 13 43.3 -1.0
J25K Salcha River, 57.16 30 P P 17 13 43.4 -1.0
baz=273,SNR=57
J25K S S 17 21 01.9 -1.0
baz=273
DIV Divide 57.21 34 P P 17 13 45.5 +0.8
PAX Paxson 57.21 32 P P 17 13 45.2 +0.4
PAX IAmb IAmb 17 13 46.7
comp=Z,126nm,0.8s
PAX Paxson 57.21 32 P P 17 13 45.2 +0.4
PAX pmax pmax
comp=Z,125nm,0.8s
PAX Paxson 57.21 32 P P 17 13 45.4 +0.6
baz=274,SNR=149
PAX S S 17 21 03.3 -0.2
baz=274
C26K Camden Bay 57.22 24 P P 17 13 46.6 +2.1
baz=270,SNR=15
C26K S S 17 21 05.5 +2.2
baz=270
EYAK Cordova Ski Ar 57.27 35 P P 17 13 45.9 +0.9
EYAK IAmb IAmb 17 13 47.2
comp=Z,470nm,1.6s
EYAK Cordova Ski Ar 57.27 35 P P 17 13 46.0 +1.0
baz=275,SNR=12
EYAK S S 17 21 06.3 +2.2
baz=275
BMAR Burnt Mountain 57.38 27 P P 17 13 47.4 +1.7
HARP HAARP 57.40 33 P P 17 13 47.2 +1.3
baz=274,SNR=49
HARP S S 17 21 07.6 +1.8
baz=274
RIDG Independent Ri 57.44 31 P P 17 13 45.6 -0.6
RIDG IAmb IAmb 17 13 48.6
comp=Z,150nm,0.7s
RIDG Independent Ri 57.44 31 P P 17 13 46.4 +0.2
baz=274,SNR=122
RIDG S S 17 21 07.1 +0.7
baz=274
F26K Sheenjek River 57.53 26 P P 17 13 49.0 +2.2
baz=272,SNR=236
F26K S S 17 21 11.9 +4.5
baz=272
GIRL Giralia 57.61 206 P P 17 13 49.3 +1.5
GIRL Giralia 57.61 206 P P 17 13 49.5 +1.7
C27K Jago River 57.64 24 P P 17 13 49.3 +1.8
baz=271,SNR=181
C27K S S 17 21 10.8 +2.1
baz=271
G26K Porcupine Rive 57.70 27 P P 17 13 49.8 +1.9
baz=273,SNR=108
G26K S S 17 21 12.9 +3.4
baz=273
N25K Chitina, Valde 57.73 34 P P 17 13 49.1 +0.8
N25K IAmb IAmb 17 13 50.1
comp=Z,96nm,0.8s
N25K Chitina, Valde 57.73 34 P P 17 13 49.4 +1.1
baz=275,SNR=41
N25K S S 17 21 11.9 +1.7
baz=275
RMQ Roma 57.74 168 P P 17 13 49.2 +0.5
BMRM Bremner River 57.79 34 P P 17 13 49.6 +1.0
BMRM Bremner River 57.79 34 P P 17 13 49.8 +1.1
baz=276,SNR=126
BMRM S S 17 21 12.8 +2.0
baz=276
DOT Dot Lake 57.80 31 P P 17 13 48.9 +0.2
SCRK Sand Creek 57.80 31 P P 17 13 48.9 +0.1
SCRK IAmb IAmb 17 13 50.3
comp=Z,215nm,0.7s
SCRK Sand Creek 57.80 31 P P 17 13 49.2 +0.4
baz=274,SNR=328
SCRK S S 17 21 11.1 -0.1
baz=274
RAGM Ragged Mountai 57.81 35 P P 17 13 49.9 +1.1
RAGM IAmb IAmb 17 13 51.3
comp=Z,233nm,1.0s
J26L Joseph Creek 57.95 30 P P 17 13 49.8 0.0
J26L IAmb IAmb 17 13 50.9
comp=Z,222nm,0.8s
J26L Joseph Creek 57.95 30 P P 17 13 49.8 0.0
baz=274,SNR=318
J26L S S 17 21 13.0 +0.1
baz=274
KAIM Kayak Island 57.99 35 P P 17 13 51.6 +1.6
KAIM Kayak Island 57.99 35 P P 17 13 51.3 +1.3
baz=277,SNR=6.3
COCO West Island 58.01 229 P P 17 13 50.5 -0.2
COCO West Island 58.01 229 P P 17 13 50.5 -0.2
COCO pmax pmax
comp=Z,1μm,1.5s
MENT Mentasta 58.01 32 P P 17 13 51.2 +1.0
MENT IAmb IAmb 17 13 52.6
comp=Z,309nm,1.0s
HMT Hamilton 58.02 35 P P 17 13 51.0 +0.7
HMT IAmb IAmb 17 13 52.6
comp=Z,278nm,1.3s
I26K Coal Creek Min 58.06 29 P P 17 13 49.6 -0.8
I26K Coal Creek Min 58.06 29 P P 17 13 50.0 -0.4
baz=274
INKA Innaminka 58.10 177 P P 17 13 51.3 +0.2
GLB Gilahina Butte 58.12 34 P P 17 13 51.6 +0.7
GLB IAmb IAmb 17 13 53.2
comp=Z,374nm,1.2s
OOD Oodnadatta 58.13 182 P P 17 13 51.2 -0.1
PALK Pallekele 58.14 259 P P 17 13 52.8 +0.9
comp=Z,126nm,0.9s,baz=165,slow=6.9,SNR=31
comp=Z,126nm,0.9s
PALK Pallekele 58.14 259 P P 17 13 52.0 +0.2
PALK IAmb IAmb 17 13 54.2
comp=Z,231nm,1.0s
PALK Pallekele 58.14 259 P P 17 13 53.2 +1.4
PALK P P 17 13 53.2 +1.4
PALK Pallekele 58.14 259 P P 17 13 52.8 +0.9
L26K Log Cabin Wild 58.17 32 P P 17 13 52.7 +1.5
L26K IAmb IAmb 17 13 53.6
comp=Z,266nm,0.9s
L26K Log Cabin Wild 58.17 32 P P 17 13 52.6 +1.4
baz=276,SNR=177
L26K S S 17 21 17.7 +2.0
baz=276
BERG Berg Lake 58.29 35 P P 17 13 52.5 +0.5
SUCK Suckling Hills 58.29 35 P P 17 13 52.9 +0.9
SUCK IAmb IAmb 17 13 54.7
comp=Z,441nm,1.5s
M26K Nabesna, AK 58.40 32 P P 17 13 53.7 +0.9
M26K Nabesna, AK 58.40 32 P P 17 13 54.0 +1.1
baz=276,SNR=154
M26K S S 17 21 20.6 +1.9
baz=276
E27K Coleen River 58.47 26 P P 17 13 54.9 +1.7
baz=274,SNR=219
E27K S S 17 21 23.1 +3.8
baz=274
MCARA McCarthy VSAT 58.50 34 P P 17 13 54.5 +1.1
MCARA McCarthy VSAT 58.50 34 P P 17 13 54.7 +1.2
baz=277,SNR=51
MCARA S S 17 21 21.5 +1.6
baz=277
BGLC Bering Glacier 58.53 35 P P 17 13 55.0 +1.4
baz=277
G27K Doyon Strip 58.55 27 P P 17 13 55.2 +1.5
baz=275,SNR=87
G27K S S 17 21 24.3 +3.8
baz=275
K27K Chicken 58.64 31 P P 17 13 55.4 +1.1
baz=276
H27K Steamboat Moun 58.65 28 P P 17 13 56.2 +1.8
baz=275,SNR=142
H27K S S 17 21 23.8 +2.0
baz=275
TGL Tana Glacier 58.67 34 P P 17 13 55.3 +0.5
I27K Kandik River 58.68 29 P P 17 13 55.6 +0.9
baz=276,SNR=150
I27K S S 17 21 23.4 +1.3
baz=276
WAX Waxell Ridge 58.70 35 P P 17 13 55.7 +0.8
SNH Sunshine Point 58.75 35 P P 17 13 56.3 +1.1
SNH IAmb IAmb 17 13 57.7
comp=Z,242nm,1.0s
POO Poona 58.75 274 ⇓iP P 17 13 56.2 +0.3
POO IAmb IAmb 17 13 58.1
comp=Z,127nm,0.8s
L27K Beaver Creek, 58.86 32 P P 17 13 56.8 +0.9
L27K IAmb IAmb 17 13 58.2
comp=Z,154nm,0.8s
L27K Beaver Creek, 58.86 32 P P 17 13 57.1 +1.2
baz=277,SNR=235
L27K S S 17 21 26.7 +2.2
baz=277
BCAR Beaver Creek A 58.88 32 P P 17 13 56.9 +0.9
M27K Edge Creek, AK 58.92 32 P P 17 13 57.2 +0.8
M27K IAmb IAmb 17 13 58.7
comp=Z,236nm,0.8s
M27K Edge Creek, AK 58.92 32 P P 17 13 57.5 +1.0
baz=277,SNR=147
M27K S S 17 21 27.7 +2.2
baz=277
ISLE Juniper Island 58.93 35 P P 17 13 57.1 +0.6
EGAK Eagle 58.95 30 P P 17 13 56.5 0.0
EGAK Eagle 58.95 30 P P 17 13 56.7 +0.2
baz=276,SNR=52
NOUC Port Laguerre 59.12 149 P P 17 13 59.2 +1.1
NOUC Port Laguerre 59.12 149 P P 17 13 59.2 +1.1
NOUC pP pwP 17 15 38.2 +1.2
DZM Mont Dzumac 59.16 149 P P 17 13 59.6 +1.1
baz=339,slow=8.6
DZM Mont Dzumac 59.16 149 eP P 17 13 58.9 +0.4
comp=Z,187nm,0.9s
DZM eS S 17 21 30.0 +0.7
comp=Z,969nm,26.4s
DZM eLR LR 17 32 07.6
comp=Z,433nm,23.6s
DZM Mont Dzumac 59.16 149 P P 17 13 59.6 +1.1
DZM Mont Dzumac 59.16 149 P P 17 13 59.8 +1.3
DZM Mont Dzumac 59.16 149 P P 17 14 00.1 +1.6
MESA MESA 59.19 35 P P 17 13 59.5 +1.2
MESA IAmb IAmb 17 14 00.7
comp=Z,416nm,1.6s
MESA MESA 59.19 35 P P 17 13 59.3 +1.0
baz=278,SNR=14
YAH Yahtse 59.26 35 P P 17 13 59.6 +0.8
YAH IAmb IAmb 17 14 00.5
comp=Z,97nm,0.8s
ARU Arti 59.30 321 P P 17 13 59.1 +0.2
comp=Z,161nm,0.8s,baz=86,slow=3.9,SNR=199
ARU S S 17 21 29.0 -1.2
comp=Z,6.3nm,0.8s,baz=208,slow=22,SNR=12
comp=Z,161nm,0.8s
ARU Arti 59.30 321 P P 17 13 58.9 0.0
ARU IAmb IAmb 17 14 00.2
comp=Z,258nm,1.1s
ARU Arti 59.30 321 c iP P 17 13 59.0 +0.2
ARU 17 14 40.0
ARU *PP pwP 17 15 36.5 -0.6
ARU 17 16 16.4
ARU S S 17 21 31.1 +1.0
ARU 17 22 55.5
ARU SSS SSS 17 28 26.0
ARU pmax pmax
comp=Z,284nm,1.1s
ARU Arti 59.30 321 ⇑P P 17 13 59.1 +0.2
ARU pP pwP 17 15 37.3 +0.2
YATNC Mamie plateau, 59.35 148 P P 17 14 01.6 +1.9
CTG Chitna Glacier 59.37 34 P P 17 14 00.4 +0.9
baz=278,SNR=26
ONTNC Ouen Toro 59.37 149 P P 17 14 00.5 +0.7
CTGM Chitina Glacie 59.37 34 P P 17 14 00.3 +0.8
CTGM IAmb IAmb 17 14 01.1
comp=Z,98nm,0.7s
MARNC Mare, Loyalty 59.37 147 P P 17 13 59.6 -0.2
BVCY Beaver Creek 59.38 32 P P 17 14 00.5 +1.0
baz=278,SNR=27
BVCY S S 17 21 34.0 +2.9
baz=278
TABL Table Mountain 59.54 35 P P 17 14 01.4 +0.6
TABL IAmb IAmb 17 14 02.7
comp=Z,502nm,1.7s
LOGN Logan Glacier 59.55 34 P P 17 14 01.3 +0.6
OUENC Ouen Island, N 59.64 149 P P 17 14 03.1 +1.5
OUENC Ouen Island, N 59.64 149 P P 17 14 03.1 +1.5
YUK3 Moose Creek 59.66 33 P P 17 14 02.5 +1.0
baz=279,SNR=73
YUK3 S S 17 21 36.8 +1.7
baz=279
DAWY Dawson 59.81 30 P P 17 14 03.0 +0.8
DAWY IAmb IAmb 17 14 04.4
comp=Z,230nm,1.5s
DAWY Dawson 59.81 30 P P 17 14 03.1 +0.8
baz=278,SNR=82
DAWY S S 17 21 39.4 +3.0
baz=278
MEEK Meekatharra 59.83 200 P P 17 14 02.6 -0.3
AB31 Akbulak array 59.91 312 eP P 17 14 03.5 +0.4
ABKAR Akbulak array 59.91 312 P P 17 14 03.3 +0.2
ABKAR IAmb IAmb 17 14 05.2
comp=Z,117nm,0.8s
O28M Mount Upton 59.95 34 P P 17 14 04.6 +1.1
baz=280,SNR=76
O28M S S 17 21 40.9 +2.1
baz=280
PCA Pinnacle 60.03 35 P P 17 14 04.4 +0.5
PCA IAmb IAmb 17 14 06.0
comp=Z,276nm,1.0s
PINM Pinnacle 60.04 35 P P 17 14 04.9 +1.0
baz=280,SNR=34
PINM S S 17 21 40.9 +1.5
baz=280
I29M Ogilvie Camp, 60.08 29 P P 17 14 04.7 +0.7
I29M IAmb IAmb 17 14 06.4
comp=Z,309nm,1.1s
I29M Ogilvie Camp, 60.08 29 P P 17 14 05.1 +1.2
baz=278,SNR=212
I29M S S 17 21 41.6 +1.9
baz=278
GOA Goa 60.09 271 ⇓iP P 17 14 05.2 +0.4
GOA IAmb IAmb 17 14 07.1
comp=Z,316nm,1.1s
PCHI Peechi 60.22 265 ⇓eP P 17 14 06.5 +0.7
PCHI eS S 17 21 43.4 +0.4
J29M Klondike Camp 60.25 30 P P 17 14 06.6 +1.4
J29M IAmb IAmb 17 14 07.8
comp=Z,212nm,0.8s
J29M Klondike Camp 60.25 30 P P 17 14 06.7 +1.4
baz=279,SNR=10
J29M S S 17 21 45.0 +3.0
baz=279
M29M Somme Creek 60.48 32 P P 17 14 08.6 +1.8
baz=280,SNR=266
M29M S S 17 21 48.6 +3.5
baz=280
PNL Peninsula 60.54 35 P P 17 14 08.4 +1.2
baz=281,SNR=32
PNL S S 17 21 47.6 +2.0
baz=281
EPYK Eagle Plains 60.56 27 P P 17 14 08.1 +0.9
EPYK Eagle Plains 60.56 27 P P 17 14 08.6 +1.3
baz=279,SNR=504
EPYK S S 17 21 48.2 +2.4
baz=279
YUK4 Talbot Arm 60.59 33 P P 17 14 09.3 +1.6
baz=281,SNR=41
YUK4 S S 17 21 49.5 +2.9
baz=281
K29M Barlow Dome 60.66 30 P P 17 14 09.4 +1.4
baz=280,SNR=305
MULG Mulgathing 60.67 184 P P 17 14 08.5 +0.2
TRD Trivandrum 60.70 262 eP P 17 14 09.0 +0.1
TRD IAmb IAmb 17 14 11.8
comp=Z,208nm,0.9s
LCRK Leigh Creek 60.73 180 P P 17 14 09.5 +0.8
YUK6 Outpost Mounta 60.80 34 P P 17 14 10.9 +1.7
baz=281,SNR=21
YUK6 S S 17 21 53.5 +4.2
baz=281
O29M Mount Kennedy 60.82 35 P P 17 14 11.1 +1.9
baz=281,SNR=109
O29M S S 17 21 53.6 +4.3
baz=281
AKTO Aktyubinsk 60.85 314 P P 17 14 09.6 +0.2
comp=Z,54nm,0.7s,baz=89,slow=7.8,SNR=82
AKTO S S 17 21 48.4 -1.4
comp=Z,30nm,0.9s,baz=198,slow=22,SNR=12
comp=Z,54nm,0.7s
M30M Minto, Yukon 61.22 32 P P 17 14 13.0 +1.3
M30M IAmb IAmb 17 14 13.8
comp=Z,114nm,0.8s
M30M Minto, Yukon 61.22 32 P P 17 14 13.2 +1.6
baz=281,SNR=134
M30M S S 17 21 57.0 +2.9
baz=281
HYT Haines Junctio 61.24 34 P P 17 14 13.2 +1.3
HYT Haines Junctio 61.24 34 P P 17 14 13.5 +1.6
baz=282,SNR=146
HYT S S 17 21 57.7 +3.2
baz=282
N30M Aishikik Lake 61.31 33 P P 17 14 13.8 +1.5
baz=282,SNR=70
N30M S S 17 21 58.3 +3.1
baz=282
P29M Windy Craggy 61.37 35 P P 17 14 14.2 +1.6
P29M Windy Craggy 61.37 35 P P 17 14 14.5 +1.8
baz=282,SNR=85
P29M S S 17 22 00.4 +4.4
baz=282
MAYO Mayo, Yukon 61.42 31 P P 17 14 14.4 +1.5
MAYO Mayo, Yukon 61.42 31 P P 17 14 14.3 +1.5
baz=282
INK Inuvik 61.44 25 P P 17 14 13.5 +0.7
comp=Z,166nm,0.5s,baz=290,slow=6.0,SNR=257
INK PKPPKP P'P'df 17 43 21.1 -0.5
comp=Z,4.1nm,0.9s,baz=80,slow=4.8,SNR=7.7
comp=Z,166nm,0.5s
INK Inuvik 61.44 25 P P 17 14 13.3 +0.5
INK Inuvik 61.44 25 P P 17 14 13.6 +0.7
baz=281,SNR=103
INK S S 17 21 57.3 +0.9
baz=281
P30M Million Dollar 61.65 35 P P 17 14 16.2 +1.7
baz=283
P30M S S 17 22 02.6 +3.1
baz=283
MSVF Nonsavu 61.71 136 P P 17 14 18.2 +2.7
FORT Forrest 61.77 190 P P 17 14 15.5 0.0
FORT Forrest 61.77 190 P P 17 14 15.9 +0.4
N31M Braeburn, Yuko 61.91 33 P P 17 14 17.7 +1.5
N31M Braeburn, Yuko 61.91 33 P P 17 14 17.9 +1.7
baz=283,SNR=146
N31M S S 17 22 05.7 +3.0
baz=283
O30N Mendenhall 61.93 34 P P 17 14 17.6 +1.3
baz=283,SNR=70
O30N S S 17 22 05.5 +2.6

baz=283
PLBC Pleasant Camp 62.09 35 P **P** **17 14 18.8 +1.5**
baz=283,SNR=228
PLBC S **S** **17 22 07.8 +2.9**
baz=283
ARMA Armidale 62.10 167 P **P** **17 14 19.0 +1.1**
ARMA Armidale 62.10 167 P **P** **17 14 18.7 +0.8**
STKA Stephens Creek 62.26 176 P **P** **17 14 19.2 +0.4**
comp=Z,64nm,0.7s,baz=342,slow=7.6,SNR=143
STKA pP **pP** **17 15 54.6 +0.4**
comp=Z,11nm,0.7s,baz=329,slow=5.6,SNR=2.3
STKA S **S** **17 22 08.9 +1.4**
comp=Z,5.9nm,0.9s,baz=106,slow=20,SNR=5.8
comp=Z,64nm,0.7s
STKA Stephens Creek 62.26 176 P **P** **17 14 18.8 +0.1**
STKA Stephens Creek 62.26 176 *d* *i*P **P** **17 14 19.0 +0.3**
STKA Stephens Creek 62.26 176 P **P** **17 14 19.0 +0.3**
CMSA Cobar Meteorol 62.27 172 P **P** **17 14 19.6 +0.8**
M31M Drury Creek, Y 62.39 32 P **P** **17 14 20.1 +0.8**
M31M IAmb IAmb 17 14 21.5
comp=Z,211nm,0.9s
M31M Drury Creek, Y 62.39 32 P **P** **17 14 20.6 +1.3**
baz=284,SNR=203
M31M S **S** **17 22 10.0 +1.5**
baz=284
HRA Herat 62.47 295 P **P** **17 14 21.2 +0.7**
HRA IAmb IAmb 17 14 23.0
comp=Z,147nm,1.4s
WHY Whitehorse 62.53 34 P **P** **17 14 21.6 +1.2**
WHY IAmb IAmb 17 14 22.9
comp=Z,178nm,0.8s
WHY Whitehorse 62.53 34 P **P** **17 14 21.8 +1.5**
baz=284,SNR=111
WHY S **S** **17 22 13.9 +3.4**
baz=284
SKAG Skagway 62.61 35 P **P** **17 14 21.9 +1.2**
SKAG Skagway 62.61 35 P **P** **17 14 22.2 +1.6**
baz=284,SNR=50
SKAG S **S** **17 22 14.4 +3.3**
baz=284
FARO Faro, Yukon 62.86 32 P **P** **17 14 23.1 +0.8**
FARO Faro, Yukon 62.86 32 P **P** **17 14 23.6 +1.2**
baz=284,SNR=249
FARO S **S** **17 22 16.6 +2.3**
baz=284
MORW Morawa 62.89 201 P **P** **17 14 22.3 -0.6**
MORW Morawa 62.89 201 P **P** **17 14 23.0 +0.1**
BESE Bessie Mountai 63.07 36 P **P** **17 14 24.6 +0.8**
BESE IAmb IAmb 17 14 26.2
comp=Z,176nm,0.9s
BBOO Buckleboo 63.11 182 P **P** **17 14 24.1 -0.2**
BBOO IAmb IAmb 17 14 25.9
comp=Z,143nm,1.1s
BBOO Buckleboo 63.11 182 P **P** **17 14 24.5 +0.3**
SIT Sitka 63.22 38 P **P** **17 14 25.2 +0.5**
SIT IAmb IAmb 17 14 27.4
comp=Z,340nm,1.7s
SIT Sitka 63.22 38 P **P** **17 14 25.2 +0.5**
SIT pmax pmax
comp=Z,340nm,1.7s
SIT Sitka 63.22 38 P **P** **17 14 26.0 +1.4**
baz=285,SNR=9.6
N32M Quiet Lake 63.26 33 P **P** **17 14 25.9 +1.0**
baz=285
A36M Sachs Harbour 63.29 20 P **P** **17 14 25.7 +0.8**
A36M Sachs Harbour 63.29 20 P **P** **17 14 26.1 +1.2**
baz=287,SNR=71
A36M S **S** **17 22 21.2 +2.1**
baz=287
P32M Atlin 63.37 35 P **P** **17 14 26.9 +1.2**
baz=285,SNR=35
P32M S **S** **17 22 23.7 +3.2**
baz=285
JIS Juneau Island 63.39 36 P **P** **17 14 26.9 +1.2**
KIRV Kirov 63.63 324 P **P** **17 14 27.7 +0.4**
comp=Z,140nm,0.9s,baz=75,slow=2.4,SNR=86
comp=Z,140nm,0.9s
P33M Teslin, Yukon 63.64 34 P **P** **17 14 28.4 +1.0**
P33M IAmb IAmb 17 14 29.9
comp=Z,197nm,1.1s
P33M Teslin, Yukon 63.64 34 P **P** **17 14 28.6 +1.2**
baz=286,SNR=123
P33M S **S** **17 22 26.1 +2.2**
baz=286
MMPY Sheldon Lake, 63.69 31 P **P** **17 14 29.2 +1.5**
baz=286,SNR=109
HTT Hallett 63.72 179 P **P** **17 14 29.0 +0.8**
BLDU Ballidu 64.13 200 P **P** **17 14 30.9 +0.1**
MNCI Minicoy 64.15 264 P **P** **17 14 32.3 +0.9**
MNCY Minicoy 64.18 264 *eP* **P** **17 14 32.2 +0.7**
GEYT Alibeck 64.41 300 P **P** **17 14 33.0 +0.2**
comp=Z,24nm,1.0s,baz=90,slow=1.5,SNR=36
comp=Z,24nm,1.0s
GEYT Alibeck 64.41 300 P **P** **17 14 33.3 +0.5**
GYA0B ALIBECK ARRAY 64.41 300 P **P** **17 14 33.4 +0.7**
C36M Paulatuk 64.48 23 P **P** **17 14 32.8 +0.2**
C36M Paulatuk 64.48 23 P **P** **17 14 33.2 +0.7**
baz=289,SNR=129
C36M S **S** **17 22 34.7 +1.2**
baz=289
T33K Petersburg 64.54 38 P **P** **17 14 34.6 +1.5**
baz=287
PRGR Permogore 64.57 328 *eP* **P** **17 14 33.7 +0.5**
PRGR *e* 17 14 58.2
PRGR *e**PP **pP** **17 16 09.6 -0.2**
PRGR *eS* **S** **17 22 31.5 -3.4**
PRGR *e* 17 23 33.3
KLBR Kellerberrin 64.74 199 P **P** **17 14 35.0 +0.3**
R33M Jennings River 64.77 34 P **P** **17 14 36.4 +1.6**
baz=288,SNR=92
R33M S **S** **17 22 41.3 +3.6**
baz=288
CRAG Craig 64.86 39 P **P** **17 14 36.2 +1.0**
CRAG IAmb IAmb 17 14 37.9
comp=Z,338nm,1.7s
CRAG Craig 64.86 39 P **P** **17 14 36.5 +1.3**
baz=288,SNR=5.9
CRAG S **S** **17 22 41.9 +3.3**
baz=288
WRAK Wrangell Islan 64.98 38 P **P** **17 14 36.8 +0.9**
WRAK IAmb IAmb 17 14 38.6
comp=Z,309nm,1.7s
WRAK Wrangell Islan 64.98 38 P **P** **17 14 37.1 +1.2**
baz=288,SNR=15
WRAK S **S** **17 22 42.6 +2.7**
baz=288
S34M Telegraph Cree 65.14 36 P **P** **17 14 38.7 +1.7**
baz=288,SNR=64
S34M S **S** **17 22 45.2 +3.2**
baz=288
TWOA Tennyson Woods 65.31 179 P **P** **17 14 39.5 +1.3**
TGTN Hyland Airport 65.36 32 P **P** **17 14 40.0 +1.6**
baz=289,SNR=219
TGTN S **S** **17 22 47.1 +2.5**
baz=289
DLBC Dease Lake 65.53 35 P **P** **17 14 40.9 +1.4**
DLBC Dease Lake 65.53 35 P **P** **17 14 41.1 +1.6**
baz=289,SNR=107
DLBC S **S** **17 22 50.6 +3.8**
baz=289
HOPEN Hopen 65.53 346 *eP* **P** **17 14 40.1 +1.0**
HOPEN IAmb IAmb 17 14 41.0
comp=Z,703nm,1.4s
MUN Mundaring 65.55 200 P **P** **17 14 40.3 +0.5**
MTKN Mount Kenneth 65.64 201 P **P** **17 14 42.4 +2.1**
V35K Ketchikan 65.72 39 P **P** **17 14 41.2 +0.6**
baz=289
V35K S **S** **17 22 51.2 +2.3**
baz=289
T35M Bob Quinn 65.90 37 P **P** **17 14 43.5 +1.7**
baz=289,SNR=55
T35M S **S** **17 22 54.9 +3.9**
baz=289
DIB Dawson Inlet, 65.94 41 P **P** **17 14 42.4 +0.4**
DIB IAmb IAmb 17 14 43.5
comp=Z,122nm,0.7s
NWAO Narrogin (SRO) 66.15 199 P **P** **17 14 43.7 +0.2**
NWAO Narrogin (SRO) 66.15 199 P **P** **17 14 43.7 +0.2**
NWAO pmax pmax
comp=Z,303nm,1.0s
NWAO Narrogin (SRO) 66.15 199 P **P** **17 14 44.1 +0.6**
NWAO Narrogin (SRO) 66.15 199 P **P** **17 14 44.0 +0.5**
NWAO Narrogin (SRO) 66.15 199 P **P** **17 14 43.7 +0.2**
SPB2 Spitsbergen Ar 66.22 349 P **P** **17 14 44.1 +0.7**
SPB2 IAmb IAmb 17 14 44.9
comp=Z,114nm,0.8s

SPITS Spitsbergen Ar 66.22 349 P **P** **17 14 44.3 +0.8**
comp=Z,32nm,0.5s,baz=92,slow=6.7,SNR=102
comp=Z,32nm,0.5s
CAN Canberra 66.43 170 P **P** **17 14 46.6 +1.3**
CAN IAmb IAmb 17 14 47.7
comp=Z,124nm,1.2s
CAN Canberra 66.43 170 P **P** **17 14 46.6 +1.3**
CAN pmax pmax
comp=Z,124nm,1.2s
CAN Canberra 66.43 170 P **P** **17 14 46.7 +1.4**
CAN Canberra 66.43 170 P **P** **17 14 46.4 +1.1**
KBS Kingsbay 66.45 350 P **P** **17 14 46.0 +1.2**
KBS Kingsbay 66.45 350 P **P** **17 14 46.0 +1.2**
KBS pmax pmax
comp=Z,176nm,0.8s
KBS Kingsbay 66.45 350 ⇑ *i*P **P** **17 14 45.8 +1.0**
KBS Kingsbay 66.45 350 *eP* **P** **17 14 46.0 +1.2**
KBS IAmb IAmb 17 14 46.9
comp=Z,179nm,0.8s
KBS Kingsbay 66.45 350 P **P** **17 14 46.1 +1.3**
CNB Canberra Magne 66.48 170 P **P** **17 14 46.9 +1.3**
BELG Belogornoye 66.51 318 P **P** **17 14 46.0 +0.3**
comp=Z,286nm,1.0s,baz=98,slow=0.6,SNR=106
BELG S **S** **17 22 56.4 -1.9**
comp=Z,10.0nm,0.9s,baz=190,slow=23,SNR=23
comp=Z,286nm,1.0s
BELG Belogornoye 66.51 318 *c* *i*P **P** **17 14 45.8 +0.2**
BELG pmax pmax
comp=Z,65nm,1.0s
ALE Alert 66.66 3 ⇑ P **P** **17 14 47.5 +1.4**
LVZ Lovozero 66.75 336 P **P** **17 14 46.5 -0.4**
LVZ IAmb IAmb 17 14 48.2
comp=Z,130nm,1.1s
LVZ Lovozero 66.75 336 *c* *i*P **P** **17 14 46.8 -0.2**
LVZ pmax pmax
comp=Z,144nm,1.1s
LVZ Lovozero 66.75 336 P **P** **17 14 46.7 -0.2**
RUBB Prince Rupert 66.80 40 P **P** **17 14 47.9 +0.6**
WRGLY Wrigley 66.87 29 P **P** **17 14 48.7 +1.0**
baz=292,SNR=24
WRGLY S **S** **17 23 04.0 +1.7**
baz=292
EUNU Eureka 66.94 8 P **P** **17 14 48.3 +0.4**
EUNU IAmb IAmb 17 14 49.3
comp=Z,120nm,0.8s
HG4B Hotspring 66.98 42 P **P** **17 14 48.8 +0.2**
HG4B IAmb IAmb 17 14 49.6
comp=Z,86nm,0.8s
HSPB Hornsund (broa 67.08 348 *e* **P** **17 14 49.9 +1.1**
HSPB *eS* **S** **17 23 05.3 +0.9**
HSPB *eScS* **SKiKP** **17 23 57.6 +0.4**
HSPB *eL* L 17 44 22.4
comp=Z,756nm,22.1s
GRNB Grenville Isla 67.13 40 P **P** **17 14 50.3 +0.8**
GRNB IAmb IAmb 17 14 51.5
comp=Z,96nm,0.6s
ARPS Mount Arapiles 67.14 177 P **P** **17 14 50.5 +0.9**
NOR Nord 67.24 356 ⇑ *i*P **P** **17 14 50.2 +0.6**
NOR IAmb IAmb 17 14 51.3
comp=Z,78nm,0.9s
APA Apatity 67.32 336 ⇑ *i*P **P** **17 14 49.9 -0.5**
APA *i* 17 17 17.0
APA *i* PPP PPP 17 19 06.0
APA *i* S **S** **17 23 06.0 -1.4**
APA *i* 17 23 57.0
APA pmax pmax
comp=Z,167nm,0.8s
APA MLR MLR
comp=Z,800nm,14.0s
KLMR Klimovskoe 67.61 328 *eP* **P** **17 14 50.5 -1.8**
KLMR *e**PP **pP** **17 16 30.0 +0.2**
KLMR *e* 17 17 25.1
KLMR *eS* **S** **17 23 09.6 -1.4**
KLMR pmax pmax
comp=Z,189nm,1.1s
KLMR Klimovskoe 67.61 328 *eP* **P** **17 14 50.5 -1.8**
KLMR AMP 17 14 53.5
comp=Z,189nm,1.1s
KLMR *epP* **pP** **17 16 30.0 +0.2**
KLMR *ePP* **PP** **17 17 25.1 -3.5**
KLMR *eS* **S** **17 23 09.6 -1.4**
KLMR *eS* **S** **17 23 09.6 -1.4**
RKGY Rocky Gully 67.80 198 P **P** **17 14 54.8 +1.1**
BJO1 Bjornoya 67.89 345 *eP* **P** **17 14 54.5 +0.8**
FLDN Fort Liard 68.02 32 P **P** **17 14 56.1 +1.4**
baz=293
FLDN S **S** **17 23 17.3 +1.4**
baz=293
BRAT Ballarat 68.06 175 P **P** **17 14 56.7 +1.5**
TOO Toolangi 68.22 173 P **P** **17 14 57.6 +1.4**
TOO IAmb IAmb 17 14 58.6
comp=Z,78nm,0.9s
TOO Toolangi 68.22 173 P **P** **17 14 57.6 +1.4**
TOO pmax pmax
comp=Z,78nm,1.0s
TOO Toolangi 68.22 173 P **P** **17 14 57.4 +1.2**
KAAM Kaadhehdhoo 68.24 257 P **P** **17 14 58.8 +1.9**
KAAM Kaadhehdhoo 68.24 257 P **P** **17 14 58.6 +1.7**
KEV Kevo 68.38 340 P **P** **17 14 57.3 +0.5**
KEV Kevo 68.38 340 P **P** **17 14 57.3 +0.5**
KEV pmax pmax
comp=Z,205nm,1.0s
KEV Kevo 68.38 340 P **P** **17 14 57.5 +0.8**
BBB Bella Bella 68.78 41 P **P** **17 14 60.0 +0.4**
BBB IAmb IAmb 17 15 00.8
comp=Z,78nm,0.8s
HAMF Hammerfest 68.89 341 *eP* **P** **17 15 00.5 +0.6**
HAMF IAmb IAmb 17 15 00.6
comp=Z,151nm,0.9s
ARCES ARCESS Array B 68.95 340 P **P** **17 15 01.0 +0.7**
comp=Z,128nm,0.7s,baz=63,slow=8.7,SNR=669
ARCES S **S** **17 23 27.1 +0.8**
comp=Z,4.9nm,0.9s,baz=55,slow=18,SNR=4.9
comp=Z,128nm,0.7s
ARCES ARCESS Array B 68.95 340 P **P** **17 15 00.7 +0.5**
ARCES ARCESS Array B 68.95 340 P **P** **17 15 01.0 +0.7**
JASK Jask - Hormozg 69.20 288 P **P** **17 15 04.5 +2.0**
SNR=12
HOLB Holberg 69.37 43 P **P** **17 15 04.1 +0.8**
RES Resolute Bay 69.52 13 P **P** **17 15 04.3 +0.7**
RES Resolute Bay 69.52 13 P **P** **17 15 04.3 +0.7**
RES pmax pmax
comp=Z,390nm,1.6s
WBK Wadi Bani Khal 69.67 285 P **P** **17 15 06.7 +1.2**
SNR=14
WBK P **P** **17 15 06.7 +1.2**
SNR=14
WSAR Wadi Sarin 69.68 286 P **P** **17 15 06.3 +0.8**
comp=Z,46nm,1.0s,baz=78,slow=7.3,SNR=19
comp=Z,46nm,1.0s
KTK1 Kautokeino 69.91 340 *eP* **P** **17 15 06.8 +0.7**
KTK1 IAmb IAmb 17 15 07.5
comp=Z,229nm,1.3s
BIDO Bidbid 69.97 286 P **P** **17 15 08.8 +1.5**
SNR=24
MAK Makhachkala 70.09 309 *eP* **P** **17 15 06.0 -1.6**
MAK *e**PP **pP** **17 16 44.0 -1.9**
MAK *e**SP **sP** **17 17 31.7 -3.4**
MAK *e* 17 17 50.9
MAK *ePPP PPP 17 19 35.1
MAK *i* S **S** **17 23 38.9 -1.5**
MAK *eSSS SSS 17 31 43.7
MAK pmax pmax
comp=Z,417nm,1.4s
MAK MLR MLR
comp=Z,733nm,12.0s
TLCB Telegraph Cove 70.17 42 P **P** **17 15 08.4 +0.5**
TLCB IAmb IAmb 17 15 09.9
comp=Z,133nm,1.3s
SMDO Samad 70.24 286 P **P** **17 15 10.0 +1.0**
SNR=16
VRH Novokhopyorsk 70.36 318 *eP* **P** **17 15 08.3 -0.7**
VRH *e**PP **pP** **17 16 48.4 +1.1**
VRH *eS* **S** **17 23 36.3 -6.8**
VRH pmax pmax
comp=Z,170nm,1.2s
VRH smax smax
comp=N,2μm,9.1s
JETT Jettan, Norway 70.43 341 *eP* **P** **17 15 10.1 +0.9**
JETT IAmb IAmb 17 15 10.3
comp=Z,191nm,0.9s
JMDO Jabal Madar 70.49 285 P **P** **17 15 11.1 +0.7**
SNR=12
SHME Shamm 70.53 289 P **P** **17 15 11.8 +1.2**
SNR=45

SHME Shamm 70.53 289 *i* P **P** **17 15 11.5 +0.9**
SNR=67
HOQ Hoqain 70.62 286 P **P** **17 15 12.0 +0.8**
SNR=28
MOS Moscow 70.64 324 *eP* **P** **17 15 08.3 -2.3**
MOS *e* 17 15 26.4
MOS *e**PP **pP** **17 16 51.0 +2.0**
MOS *e**SP **sP** **17 17 38.4 +0.2**
MOS *e* 17 17 52.2
MOS *ePPP PPP 17 19 38.6
MOS *eS* **S** **17 23 42.9 -3.2**
MOS *i* 17 24 23.5
MOS pmax pmax
comp=Z,300nm,1.5s
MOS pmax pmax
comp=Z,199nm,1.3s
MOS smax smax
comp=N,4μm,3.8s
TRO Tromso 70.80 341 *eP* **P** **17 15 11.8 +0.5**
TRO IAmb IAmb 17 15 12.6
comp=Z,166nm,0.9s
MASF Masafi 70.80 289 P **P** **17 15 13.5 +1.3**
SNR=16
MSFE Esma-Masafi 70.81 289 *i* P **P** **17 15 12.8 +0.5**
SNR=22
YKA Yellowknife Ar 70.84 28 P **P** **17 15 12.1 +0.4**
comp=Z,77nm,0.7s,baz=296,slow=6.1,SNR=183
YKA pP **pP** **17 16 50.0 -1.4**
comp=Z,13nm,0.9s,baz=294,slow=6.2,SNR=3.1
YKA PKPPKP 17 42 58.3
comp=Z,7.2nm,1.2s,baz=104,slow=4.7,SNR=5.7
comp=Z,77nm,0.7s
YKA Yellowknife Ar 70.84 28 P **P** **17 15 11.7 0.0**
UOSS Minazif 70.95 288 P **P** **17 15 13.7 +0.6**
UOSS IAmb IAmb 17 15 14.8
comp=Z,135nm,1.2s
UOSS Minazif 70.95 288 P **P** **17 15 13.8 +0.8**
UOSS Minazif 70.95 288 *i* P **P** **17 15 13.0 -0.1**
SNR=16
UOSS Minazif 70.95 288 P **P** **17 15 13.0 -0.1**
HATD Hatta, Dubai 71.06 288 P **P** **17 15 15.0 +1.2**
SNR=33
HATD Hatta, Dubai 71.06 288 *i* P **P** **17 15 14.3 +0.5**
SNR=53
BSY Bisya 71.08 286 P **P** **17 15 15.0 +1.1**
SNR=22
GROC Groznyy 71.14 309 *eP* **P** **17 15 14.2 +0.4**
GROC *e* 17 15 30.8
GROC *e**PP **pP** **17 16 55.1 +2.6**
GROC *eS* **S** **17 23 50.1 -2.2**
GROC pmax pmax
comp=Z,93nm,0.6s
UMQ Umm Al-Quwin 71.14 289 *i* P **P** **17 15 15.4 +1.2**
SNR=6.5
VALR Valaam 71.16 331 *c* *i*P **P** **17 15 13.8 +0.3**
VALR pmax pmax
comp=Z,332nm,1.1s
ASHO Ashiyiah 71.18 288 P **P** **17 15 15.6 +1.1**
SNR=29
ASHO Ashiyiah 71.18 288 *i* P **P** **17 15 15.2 +0.7**
SNR=41
CBB Campbell River 71.24 43 P **P** **17 15 15.3 +1.0**
LPSR Galich'ya Gora 71.33 321 *eP* **P** **17 15 14.4 -0.3**
LPSR *e**PP **pP** **17 16 52.0 -1.4**
LPSR pmax pmax
comp=Z,150nm,1.1s
NAZ Nazwa, Dubai 71.37 288 P **P** **17 15 16.9 +1.3**
SNR=18
NAZ Nazwa, Dubai 71.37 288 *i* P **P** **17 15 16.0 +0.5**
SNR=16
ARQ Araqi 71.38 287 P **P** **17 15 17.0 +1.3**
SNR=25
OBN Obninsk 71.46 324 P **P** **17 15 15.7 +0.2**
comp=Z,25nm,0.9s,baz=47,slow=2.5,SNR=38
comp=Z,25nm,0.9s
OBN Obninsk 71.46 324 P **P** **17 15 15.4 -0.1**
OBN IAmb IAmb 17 15 16.8
comp=Z,154nm,1.1s
OBN Obninsk 71.46 324 *c* *i*P **P** **17 15 15.5 +0.1**
OBN *e* 17 15 34.3
OBN *e* 17 17 59.3
OBN *ePPP PPP 17 19 49.2
OBN *eS* **S** **17 23 52.0 -3.4**
OBN *eSS* **SS** **17 28 41.9 +0.7**
OBN pmax pmax
comp=Z,181nm,1.2s
OBN MLR MLR
comp=Z,953nm,16.0s
FAQ Al Faqa, Dubai 71.54 288 P **P** **17 15 17.4 +0.9**
SNR=13
FAQ Al Faqa, Dubai 71.54 288 *i* P **P** **17 15 16.6 +0.1**
SNR=22
VORR Voronezh 71.58 320 *eP* **P** **17 15 16.0 -0.2**
VORR *eS* **S** **17 23 55.1 -1.8**
VORR pmax pmax
comp=Z,90nm,0.6s
VORR smax smax
comp=E,580nm,1.1s
OZB Mount Ozzard 71.63 44 P **P** **17 15 17.7 +1.0**
OZB IAmb IAmb 17 15 19.0
comp=Z,128nm,0.8s
ALNE Al Ain 71.70 288 P **P** **17 15 18.3 +0.8**
SNR=32
ALNE Al Ain 71.70 288 *i* P **P** **17 15 17.9 +0.3**
SNR=20
ASUD Al Ashush, Dub 71.80 288 P **P** **17 15 19.5 +1.5**
SNR=9.4
ASUD Al Ashush, Dub 71.80 288 *i* P **P** **17 15 18.8 +0.7**
SNR=18
VSR Storozhevoye 71.80 319 *eP* **P** **17 15 17.7 +0.1**
VSR *e**PP **pP** **17 16 56.3 -0.1**
VSR *eS* **S** **17 23 51.5 -8.0**
VSR pmax pmax
comp=Z,260nm,1.3s
VSR smax smax
comp=N,1μm,6.9s
GLAD Gladstone 71.87 172 P **P** **17 15 19.0 +1.1**
DAG Danmarks Havn 71.87 354 ⇑ *i*P **P** **17 15 18.0 +0.5**
DAG IAmb IAmb 17 15 19.2
comp=Z,228nm,1.0s
DQM DQM 72.04 283 P **P** **17 15 20.2 +0.7**
SNR=5.1
AJN Ajban 72.11 288 P **P** **17 15 20.6 +0.8**
SNR=10
AJN Ajban 72.11 288 *i* P **P** **17 15 19.9 +0.1**
SNR=12
GOF Gofitskoye 72.15 312 ⇑ *eP* P 17 15 08.7 -11
GOF *eS* **S** **17 24 01.7 -2.0**
GOF pmax pmax
comp=Z,130nm,1.0s
GOF smax smax
comp=N,138nm,1.1s
GOF smax smax
comp=E,161nm,1.2s
PUL Pulkovo 72.19 330 ⇓ *i*P **P** **17 15 20.4 +0.8**
PUL pmax pmax
comp=Z,142nm,0.9s
NCK Nalchik 72.47 310 ⇑ *i*P **P** **17 15 22.8 +1.1**
NCK pmax pmax
comp=Z,23nm,0.5s
CLRS Cowichan Lake 72.50 43 P **P** **17 15 22.5 +0.8**
CLRS IAmb IAmb 17 15 24.1
comp=Z,85nm,0.7s
ZEI Tsey 72.58 310 *eP* **P** **17 15 22.3 -0.2**
ZEI pmax pmax
comp=Z,20nm,0.6s
C03A Quillayute Air 72.62 44 P **P** **17 15 23.5 +1.1**
KBZ Khabaz 72.83 311 P **P** **17 15 24.8 +1.1**
comp=Z,43nm,0.8s,baz=86,slow=5.0,SNR=55
KBZ S **S** **17 24 10.6 -0.6**
comp=Z,7.7nm,1.1s,baz=296,slow=21,SNR=20
comp=Z,43nm,0.8s
KBZ Khabaz 72.83 311 *d* *i*P **P** **17 15 24.3 +0.7**
KBZ pmax pmax
comp=Z,68nm,0.9s
KVAR Kislovodsk Arr 72.86 311 P **P** **17 15 25.5 +1.5**
comp=Z,19nm,1.0s,baz=86,slow=24,SNR=5.5
comp=Z,19nm,1.0s
KIV Kislovodsk 72.86 311 ⇓ P **P** **17 15 25.2 +1.2**
KIV Kislovodsk 72.86 311 P **P** **17 15 25.0 +1.0**
KIV Kislovodsk 72.86 311 *eP* **P** **17 15 25.1 +1.0**
KIV *e**PP **pwP** **17 17 06.4 -2.7**
KIV *e**SP **sP** **17 17 53.8 +1.6**
KIV *eS* **S** **17 24 11.2 -0.6**
KIV *eSS* **SS** **17 29 05.7 +2.3**
KIV *eSSS SSS 17 32 25.8

KIV pmax pmax
comp=Z,63nm,1.1s
KIV MLR MLR
comp=Z,236nm,18.0s
KIV Kislovodsk 72.86 311 P **P 17 15 26.6 +2.5**
KIV Kislovodsk 72.86 311 *i* P **P 17 15 25.0 +1.0**
SNR=17
STEI Steigen 72.92 341 *eP* **P 17 15 24.1 +0.4**
STEI IAmb IAmb 17 15 24.6
comp=Z,164nm,0.8s
PGC Sidney 72.97 43 P **P 17 15 25.2 +0.9**
PGC IAmb IAmb 17 15 26.8
comp=Z,136nm,0.8s
LLLB Lillooet 72.98 41 P **P 17 15 25.2 +0.7**
LLLB IAmb IAmb 17 15 26.7
comp=Z,119nm,1.0s
DGAR Diego Garcia 73.08 250 P **P 17 15 27.2 +1.7**
FIA1 FINESS Array S 73.08 332 P **P 17 15 24.6 -0.2**
FIA1 IAmb IAmb 17 15 26.1
comp=Z,201nm,1.1s
FIA0 FINESS Array S 73.09 332 P **P 17 15 24.0 -0.8**
FIA0 FINESS Array S 73.09 332 P **P 17 15 24.0 -0.8**
FINES FINESS Array B 73.09 332 P **P 17 15 24.9 +0.1**
comp=Z,44nm,0.3s,baz=68,slow=5.2,SNR=530
FINES pP **pP 17 17 04.1 0.0**
comp=Z,8.3nm,0.6s,baz=74,slow=6.4,SNR=2.6
FINES S **S 17 24 12.3 -1.1**
comp=Z,7.5nm,0.8s,baz=55,slow=17,SNR=8.7
comp=Z,44nm,0.3s
NEY Neytrino 73.15 310‖ *eP* **P 17 15 27.3 +1.5**
GNI Garni 73.15 307 P **P 17 15 27.5 +1.6**
GNI IAmb IAmb 17 15 28.9
comp=Z,109nm,1.4s
GNI Garni 73.15 307 *d iP* **P 17 15 27.1 +1.2**
GNI pmax pmax
comp=Z,115nm,1.7s
GNI Garni 73.15 307 P **P 17 15 27.7 +1.9**
GNI Garni 73.15 307 P **P 17 15 26.9 +1.1**
B04A Port Angeles 73.21 44 P **P 17 15 27.2 +1.4**
B04A IAmb IAmb 17 15 28.6
comp=Z,122nm,1.0s
MOO Moorlands 73.21 173 P **P 17 15 27.1 +1.4**
FAUS Fauske 73.26 340 *eP* **P 17 15 26.0 +0.3**
FAUS IAmb IAmb 17 15 27.0
comp=Z,173nm,1.0s
LOF Lofoten 73.27 341 *eP* **P 17 15 25.8 +0.1**
LOF IAmb IAmb 17 15 27.4
comp=Z,62nm,1.0s
NLWA Neilton Lookou 73.30 45 P **P 17 15 27.9 +1.6**
NLWA IAmb IAmb 17 15 28.8
comp=Z,100nm,0.8s
WISH Wishkah 73.48 45 P **P 17 15 29.1 +1.8**
WISH IAmb IAmb 17 15 30.6
comp=Z,176nm,0.9s
JRN Qarnain Island 73.69 290 P **P 17 15 29.1 +0.1**
SNR=5.9
TAU Tasmania Unive 73.69 173 P **P 17 15 28.7 +0.3**
TAU IAmb IAmb 17 15 30.8
comp=Z,116nm,1.0s
TAU Tasmania Unive 73.69 173 P **P 17 15 28.7 +0.3**
TAU pmax pmax
comp=Z,117nm,1.0s
TAU Tasmania Unive 73.69 173 P **P 17 15 29.7 +1.3**
RADR Rader Ridge 73.78 45 P **P 17 15 30.7 +1.6**
RADR IAmb IAmb 17 15 32.1
comp=Z,157nm,0.8s
E03A Lebam 73.87 45 P **P 17 15 30.9 +1.4**
E03A IAmb IAmb 17 15 32.2
comp=Z,187nm,0.9s
MZR Muzera 74.04 287 P **P 17 15 31.4 +0.4**
SNR=22
MZR Muzera 74.04 287 *i* P **P 17 15 31.0 0.0**
SNR=37
KARS Kars 74.08 308 P **P 17 15 32.1 +1.0**
KARS Kars 74.08 308 P **P 17 15 32.1 +1.0**
KARS pmax pmax
comp=Z,373nm,1.7s
MOR8 Moi Rana 74.31 339 *eP* **P 17 15 30.0 -1.8**
MOR8 IAmb IAmb 17 15 31.8
comp=Z,183nm,0.8s
DBG Daneborg 74.33 354⇑ *iP* **P 17 15 32.0 +0.3**
DBG IAmb IAmb 17 15 32.6
comp=Z,70nm,0.8s
F04D Rainier, OR 74.42 46 P **P 17 15 34.1 +1.3**
baz=298,SNR=5.3
F04D S **S 17 24 31.6 +2.9**
baz=298
VSU Vasula 74.45 329 *c iP* **P 17 15 33.1 +0.5**
VSU pmax pmax
comp=Z,492nm,1.2s
VSU Vasula 74.45 329 *eP* **P 17 15 32.9 +0.3**
MEF Metsahovi 74.46 332 *eP* **P 17 15 32.5 -0.1**
KONS Konsvik 74.49 340 *eP* **P 17 15 32.8 +0.1**
KONS IAmb IAmb 17 15 34.8
comp=Z,29nm,0.9s
SHAO Shalim 74.52 282 P **P 17 15 35.3 +1.5**
SHAO Shalim 74.52 282 P **P 17 15 34.0 +0.2**
D05A Enumclaw 74.52 44 P **P 17 15 34.8 +1.5**
G03D McMinnville, O 74.68 46 P **P 17 15 35.5 +1.3**
G03D IAmb IAmb 17 15 36.9
comp=Z,160nm,1.0s
G03D McMinnville, O 74.68 46 P **P 17 15 35.8 +1.6**
baz=298,SNR=12
G03D S **S 17 24 34.5 +3.0**
baz=298
SHMA Al-Shehemyia 74.80 291 P **P 17 15 35.7 +0.5**
I02E Swisshome, OR 74.83 48 P **P 17 15 35.4 +0.3**
I02E IAmb IAmb 17 15 37.9
comp=Z,107nm,0.9s
I02E Swisshome, OR 74.83 48 P **P 17 15 36.8 +1.8**
baz=298,SNR=7.7
I02E S **S 17 24 34.8 +1.7**
baz=298
F04A Amboy 74.86 45 P **P 17 15 36.3 +1.1**
COR Corvallis 74.95 47 P **P 17 15 37.5 +1.8**
COR Corvallis 74.95 47 P **P 17 15 37.5 +1.8**
COR pmax pmax
comp=Z,255nm,1.0s
SOC Sochi 74.95 312 *eP* **P 17 15 35.0 -0.8**
SOC *e**PP **pwP 17 17 20.0 -1.6**
SOC *e* 17 18 29.3
SOC *e*PPP PPP 17 20 18.2
SOC *e*S **S 17 24 34.7 +0.2**
SOC *e*SS **SS 17 29 36.6 +2.0**
SOC pmax pmax
comp=Z,38nm,0.6s
RAF Rauma 75.04 333 *eP* **P 17 15 36.0 +0.1**
SAKB Bahrain 75.09 291 P **P 17 15 37.3 +0.5**
KEBM Edson Butte 75.09 49 P **P 17 15 37.8 +1.2**
GEVA Gevas 75.14 306 P **P 17 15 38.4 +1.2**
J01E Myrtle Point 75.22 49 P **P 17 15 38.5 +1.3**
J01E IAmb IAmb 17 15 40.0
comp=Z,143nm,0.9s
J01E Myrtle Point 75.22 49 P **P 17 15 38.9 +1.7**
baz=298,SNR=11
J01E S **S 17 24 38.5 +1.1**
baz=298
DMTO DMTO 75.23 282 P **P 17 15 38.5 +0.7**
LTY Liberty 75.28 44 P **P 17 15 38.2 +0.6**
LTY IAmb IAmb 17 15 39.0
comp=Z,72nm,0.7s
BUCK Buck Mountain 75.33 47 P **P 17 15 39.6 +1.6**
H04D Lebanon 75.33 47 P **P 17 15 39.3 +1.4**
H04D IAmb IAmb 17 15 40.2
comp=Z,79nm,0.8s
H04D Lebanon 75.33 47 P **P 17 15 39.5 +1.6**
baz=298,SNR=9.8
H04D S **S 17 24 40.9 +2.2**
baz=298
I03D Drain, OR 75.34 48 P **P 17 15 39.7 +1.8**
baz=298,SNR=74
I03D S **S 17 24 40.3 +1.6**
baz=298
SMRA Abu-Samra 75.42 290 P **P 17 15 39.3 +0.6**
KBO Bosley Butte 75.47 49 P **P 17 15 40.0 +1.1**
KBO IAmb IAmb 17 15 41.6
comp=Z,106nm,1.1s
B08A Colville Reser 75.52 42 P **P 17 15 39.8 +0.8**
B08A IAmb IAmb 17 15 41.0
comp=Z,159nm,0.9s
MTSE Matsula 75.57 331 *eP* **P 17 15 39.1 +0.2**
H04A Detroit Lake 75.60 46 P **P 17 15 40.1 +0.7**
H04A IAmb IAmb 17 15 41.6
comp=Z,137nm,0.8s
K02D Willamette Mer 75.61 49 P **P 17 15 40.8 +1.2**
baz=298,SNR=34
K02D S **S 17 24 44.5 +2.6**
baz=298
HOOD Mount Hood Mea 75.62 46 P **P 17 15 40.8 +1.1**
DBO Dodson Butte 75.68 48 P **P 17 15 41.3 +1.3**
DBO IAmb IAmb 17 15 42.5
comp=Z,92nm,0.8s
GURO Guroymak-BITLI 75.75 306 P **P 17 15 41.1 +0.5**
ANN Anapa 75.81 314 *eP* **P 17 15 38.8 -1.8**
ANN *e**PP **pP 17 17 20.3 -0.5**
ANN *eS* **S 17 24 42.0 -1.8**
ANN pmax pmax
comp=Z,105nm,0.9s
G05D Wamic, OR 75.87 46 P **P 17 15 42.4 +1.4**
baz=299,SNR=23
G05D S **S 17 24 46.3 +1.7**
baz=299
KSXB Camp Six Broad 75.88 50 P **P 17 15 42.0 +0.8**
KSXB IAmb IAmb 17 15 43.9
comp=Z,119nm,1.1s
I04A Tendick Farm, 75.89 47 P **P 17 15 42.2 +1.1**
baz=299,SNR=105
I04A S **S 17 24 47.0 +2.2**
baz=299
JMIC Jan Mayen 75.90 349 *eP* **P 17 15 42.4 +1.9**
MKAZ Moumakai 75.90 150 P **P 17 15 42.9 +1.9**
L02F Cave Junction 75.94 49 P **P 17 15 42.7 +1.4**
baz=299,SNR=16
L02F S **S 17 24 47.3 +1.9**
baz=299
RBK Rabkut 75.95 282 P **P 17 15 42.2 +0.3**
SNR=5.5
KRPM Rodgers 76.10 50 P **P 17 15 43.6 +1.3**
KRPM IAmb IAmb 17 15 45.2
comp=Z,80nm,1.1s
MNK Minsk 76.11 326 *i* P **P 17 15 41.9 -0.1**
MNK *i* *PP **pP 17 17 24.8 +2.5**
MNK *i* 17 18 40.9
MNK *i* PPP PPP 17 20 31.0
MNK *i* S **S 17 24 46.0 -0.6**
MNK *i* SS **SS 17 29 52.8 +1.5**
MNK *i* SSS SSS 17 33 21.0
MNK pmax pmax
comp=Z,163nm,1.0s
MNK pmax pmax
comp=E,15nm,1.0s
MNK MLR MLR
comp=Z,2μm,17.0s
MNK MLR MLR
comp=E,188nm,17.0s
MNK Minsk 76.11 326 *i* P **P 17 15 41.9 -0.1**
comp=E,15nm,1.0s
MNK *i* P **P 17 15 41.9 -0.1**
MNK *i* P **P 17 15 41.9 -0.1**
comp=Z,163nm,1.0s,baz=57
MNK *i* pP **pP 17 17 24.8 +2.5**
MNK *i* PP **PP 17 18 41.0 +0.6**
MNK *i* PPP PPP 17 20 31.1
MNK *i* S **S 17 24 46.1 -0.6**
MNK *i* sS **sS 17 27 49.3 +3.4**
MNK *i* SS **SS 17 29 52.9 +1.5**
MNK *i* SSS SSS 17 33 21.1
MNK *i* LRM MLR 17 52 39.0
comp=Z,2μm,17.4s
MNK *i* LRM MLR 17 52 43.0
comp=E,188nm,17.1s
HUMO Hull Mountain 76.11 49 P **P 17 15 43.4 +1.1**
KOPT Kop Dagi 76.11 308 P **P 17 15 44.6 +1.9**
WHFO Wadi Hawf 76.12 283 P **P 17 15 42.4 -0.4**
NSS Namsos 76.20 339 *eP* **P 17 15 42.3 0.0**
NSS IAmb IAmb 17 15 43.0
comp=Z,84nm,0.8s
EDM Edmonton 76.24 36 P **P 17 15 43.3 +0.4**
EDM Edmonton 76.24 36 P **P 17 15 43.3 +0.4**
EDM pmax pmax
comp=Z,347nm,1.1s
JCC Jacoby Creek, 76.26 51 P **P 17 15 44.6 +1.5**
JCC IAmb IAmb 17 15 46.0
comp=Z,109nm,1.1s
I05D Terrebonne, OR 76.30 47 P **P 17 15 44.6 +1.2**
baz=299,SNR=23
I05D S **S 17 24 51.9 +2.7**
baz=299
J04D Umpqua Nationa 76.35 48 P **P 17 15 45.1 +1.3**
J04D Umpqua Nationa 76.35 48 P **P 17 15 45.2 +1.3**
baz=299,SNR=27
J04D S **S 17 24 51.0 +0.9**
baz=299
ISAL Salakas 76.35 327 *eP* **P 17 15 44.2 +0.9**
HAWA Hanford 76.39 44 P **P 17 15 44.7 +0.9**
HAWA IAmb IAmb 17 15 45.5
comp=Z,61nm,0.8s
KMPM Mount Pierce 76.39 51 P **P 17 15 44.2 +0.2**
KMPM IAmb IAmb 17 15 46.8
comp=Z,116nm,1.1s
F07A Phinny Hill Vi 76.40 45 P **P 17 15 45.1 +1.3**
F07A IAmb IAmb 17 15 46.2
comp=Z,105nm,0.7s
D08A Wollman Farm, 76.42 43 P **P 17 15 44.8 +0.9**
D08A IAmb IAmb 17 15 45.9
comp=Z,134nm,0.7s
NACGM Naroch 76.42 326 *i* P **P 17 15 44.3 +0.6**
baz=56
C09A Chrisman Ranch 76.42 42 P **P 17 15 44.5 +0.6**
C09A IAmb IAmb 17 15 46.0
comp=Z,134nm,0.9s
KHMM Horse Mountain 76.43 51 P **P 17 15 45.0 +0.7**
KHMM IAmb IAmb 17 15 47.1
comp=Z,110nm,1.2s
TOZ Tahuroa Road 76.57 150 P **P 17 15 46.5 +1.8**
E08A Dider Farm, El 76.62 44 P **P 17 15 45.9 +0.9**
E08A IAmb IAmb 17 15 47.1
comp=Z,91nm,0.6s
YBH Yreka Blue Hor 76.69 49 P **P 17 15 46.6 +1.0**
YBH Yreka Blue Hor 76.69 49 P **P 17 15 46.6 +1.0**
YBH pmax pmax
comp=Z,58nm,0.9s
L04D Klamath Falls 76.72 49 P **P 17 15 46.6 +0.8**
L04D IAmb IAmb 17 15 48.1
comp=Z,123nm,0.7s
L04D Klamath Falls 76.72 49 P **P 17 15 46.9 +1.1**
baz=299,SNR=50
L04D S **S 17 24 55.1 +1.1**
baz=299
KRP Karapiro 76.75 150 P **P 17 15 43.6 -2.0**
KRP pmax pmax
comp=Z,80nm,1.1s
KMRM Mail Ridge 76.76 51 P **P 17 15 47.0 +1.0**
ABTO Aybut 76.79 282 P **P 17 15 47.0 +0.5**
SNR=7.0
PINE Pine Mountain 76.82 47 P **P 17 15 47.6 +1.1**
NEW Newport 76.84 42 P **P 17 15 46.8 +0.5**
NEW IAmb IAmb 17 15 48.4
comp=Z,119nm,0.9s
NEW Newport 76.84 42 P **P 17 15 46.8 +0.5**
NEW pmax pmax
comp=Z,119nm,1.0s
NEW Newport 76.84 42 P **P 17 15 47.2 +1.0**
baz=301,SNR=88
NEW S **S 17 24 55.7 +0.9**
baz=301
SLIT Slitere, Latvi 76.86 330 *eP* **P 17 15 46.2 +0.1**
K04D Chiloquin, OR 76.88 48 P **P 17 15 48.0 +1.3**
baz=300,SNR=34
K04D S **S 17 24 57.6 +2.0**
baz=300
J05D Fort Rock, OR 76.88 47 P **P 17 15 48.3 +1.5**
baz=300,SNR=166
J05D S **S 17 24 57.8 +2.1**
baz=300
HIZ Hauiti 76.96 151 P **P 17 15 48.8 +2.0**
HIZ Hauiti 76.96 151 P **P 17 15 48.7 +2.0**
SUMG Summit 77.05 359 P **P 17 15 48.2 +0.8**
SUMG pP **pP 17 17 27.0 -1.1**
SUMG Summit 77.05 359 P **P 17 15 48.2 +0.8**
SUMG *PP **pP 17 17 27.0 -1.1**
SUMG pmax pmax
comp=Z,207nm,0.9s
SUMG Summit 77.05 359⇑ *iP* **P 17 15 48.9 +1.5**
SUMG IAmb IAmb 17 15 49.3
comp=Z,201nm,0.9s
KCPM Cahto Peak 77.11 52 P **P 17 15 48.7 +0.7**
KCPM IAmb IAmb 17 15 50.5
comp=Z,132nm,1.2s
KCPM **pP 17 17 27.1 -2.7**
E09A Wood Farm, Sta 77.15 43 P **P 17 15 49.0 +1.1**
E09A **pP 17 17 27.7 -1.9**
MARD Mardin 77.21 306 P **P 17 15 48.7 +0.1**
MARD IAmb IAmb 17 15 50.8
comp=Z,194nm,1.6s
OMRZ Omania 77.26 150 P P 17 15 43.0 -5.5
G08A Pilot Rock 77.29 45 P **P 17 15 49.6 +0.7**
G08A IAmb IAmb 17 15 51.3
comp=Z,149nm,1.7s
K05A Summer Lake 77.38 48 P **P 17 15 50.9 +1.4**
K05A IAmb IAmb 17 15 52.1
comp=Z,158nm,0.8s
PABE Paberze 77.39 328 P **P 17 15 49.2 +0.2**
PABE Paberze 77.39 328 *eP* **P 17 15 49.4 +0.4**
AKASG Malin Array Be 77.52 322 P **P 17 15 49.4 -0.4**
comp=Z,30nm,0.5s,baz=51,slow=5.6,SNR=195
AKASG PP **PP 17 18 52.5 +0.4**
comp=Z,8.6nm,0.8s,baz=50,slow=7.9,SNR=4.1
AKASG S **S 17 24 59.5 -2.3**
comp=Z,4.0nm,0.7s,baz=52,slow=10,SNR=16
comp=Z,30nm,0.5s
AKASG Malin Array Be 77.52 322 P **P 17 15 49.5 -0.3**
AKASG IAmb IAmb 17 15 50.8
comp=Z,114nm,1.2s
AKASG Malin Array Be 77.52 322 *i* P **P 17 15 49.7 -0.1**
AKASG pmax pmax
comp=Z,33nm,0.5s
AKBB Malin Array Si 77.52 322 P **P 17 15 49.5 -0.3**
AKBB IAmb IAmb 17 15 50.7
comp=Z,197nm,1.4s
AKBB Malin Array Si 77.52 322 *c iP* **P 17 15 49.8 0.0**
AKBB pmax pmax
comp=Z,45nm,0.6s
I07A Izee 77.57 46 P **P 17 15 51.4 +1.0**
HAZ Te Kaha 77.60 149 P **P 17 15 50.2 -0.1**
TBLU Trondheim 77.64 338 *eP* **P 17 15 48.7 -1.5**
TBLU IAmb IAmb 17 15 49.4
comp=Z,304nm,1.6s
URZ Urewera 77.71 149 P **P 17 15 50.5 -0.4**
URZ Urewera 77.71 149 P **P 17 15 51.6 +0.7**
comp=Z,207nm,1.9s
SIM Simferopol' 77.78 315 *eP* **P 17 15 51.0 -0.4**
SIM *e* 17 15 59.6
SIM *eS* **S 17 25 04.0 -0.8**
SIM pmax pmax
comp=Z,34nm,0.9s
SIM pmax pmax
comp=Z,77nm,1.5s
SIM smax smax
comp=N,160nm,1.3s
HOPS Hopland Field 77.79 52 P **P 17 15 52.5 +0.9**
SNVZ South Ngauruho 77.85 151 P **P 17 15 48.0 -3.9**
FWVZ Far West T-bar 77.88 151 P **P 17 15 52.8 +0.8**
PBUR Paburge 78.00 329 *eP* **P 17 15 52.6 +0.3**
QRZ Quartz Range 78.00 154 P **P 17 15 53.2 +0.8**
TWGZ Tauwhareparae 78.03 149 P **P 17 15 52.9 +0.2**
WAZ Wanganui 78.06 152 P **P 17 15 54.1 +1.3**
GDXM Geysers 78.07 52 P **P 17 15 54.1 +0.9**
PUZ Puketiti 78.07 148 P **P 17 15 52.8 -0.1**
MTHZ Maungataniwha 78.09 150 P **P 17 15 53.7 +0.7**
SCO Scoresbysund 78.14 353 P **P 17 15 54.0 +1.2**
SCO IAmb IAmb 17 15 55.5
comp=Z,165nm,0.9s
SCO Scoresbysund 78.14 353 P **P 17 15 54.0 +1.2**
SCO pmax pmax
comp=Z,165nm,0.9s
SCO Scoresbysund 78.14 353⇑ *iP* **P 17 15 54.2 +1.4**
SCO IAmb IAmb 17 15 55.2
comp=Z,182nm,1.0s
MOD Modoc Plateau 78.17 48 P **P 17 15 54.2 +0.5**
MOD IAmb IAmb 17 15 55.8
comp=Z,74nm,0.8s
BKZ Black Stump Fm 78.20 150 P **P 17 15 52.3 -1.3**
BKZ Black Stump Fm 78.20 150 P **P 17 15 53.8 +0.2**
WALA Waterton Lakes 78.22 40 P **P 17 15 54.8 +1.0**
WALA IAmb IAmb 17 15 56.1
comp=Z,120nm,0.8s
RAHZ Arahi 78.25 150 P **P 17 15 54.7 +0.9**
BHHZ Black Hill Sta 78.29 151 P **P 17 15 54.4 +0.3**
MCCM Marconi Confer 78.34 53 P **P 17 15 54.6 +0.1**
MCCM IAmb IAmb 17 15 56.3
comp=Z,122nm,0.9s
BMO Blue Mountains 78.52 45 P **P 17 15 56.1 +0.6**
BMO Blue Mountains 78.52 45 P **P 17 15 56.1 +0.6**
BMO pmax pmax
comp=Z,47nm,0.8s
ORV Oroville 78.57 51 P **P 17 15 55.8 +0.1**
ORV IAmb IAmb 17 15 57.2
comp=Z,110nm,1.4s
ORV **pP 17 17 34.8 -3.2**
J08A Circle Bar Ran 78.58 46 P **P 17 15 57.0 +1.1**
J08A IAmb IAmb 17 15 58.3
comp=Z,120nm,0.8s
TOKA Tokat 78.65 310 P **P 17 15 57.3 +1.1**
HFS Hagfors 78.66 335 S **S 17 25 10.3 -3.2**
comp=Z,6.6nm,0.9s,baz=70,slow=13,SNR=7.4
HFS PKKPbc PKKPbc 17 34 44.5 -2.9
comp=Z,0.4nm,0.3s,baz=191,slow=5.3,SNR=6.2
NNZ Nelson 78.67 153 P **P 17 15 56.1 +0.1**
NNZ IAmb IAmb 17 15 56.7
comp=Z,69nm,0.8s
NC405 NORSAR Array S 78.68 336 P **P 17 15 55.8 -0.2**
NC303 NORSAR Array S 78.72 337 P **P 17 15 55.7 -0.4**
NC303 IAmb IAmb 17 15 57.4
comp=Z,150nm,1.0s
NC303 NORSAR Array S 78.72 337 *eP* **P 17 15 56.4 +0.2**
NC303 IAmb IAmb 17 15 57.1
comp=Z,150nm,1.0s
JTMT Jette 78.73 41 P **P 17 15 57.3 +0.6**
JTMT IAmb IAmb 17 15 59.0
comp=Z,145nm,1.1s
NB201 NORSAR Array S 78.87 337 P **P 17 15 56.7 -0.3**
NC204 NORSAR Array S 78.89 337 P **P 17 15 57.0 -0.1**
DOMB Dombas 78.89 338 *eP* **P 17 15 57.2 +0.1**
DOMB IAmb IAmb 17 15 58.1
comp=Z,115nm,0.9s
NB2 NORSAR Subarra 78.90 337 P **P 17 15 56.8 -0.4**
comp=Z,128nm,0.8s,baz=45,slow=5.3
NB2 NORSAR Subarra 78.90 337 P **P 17 15 56.8 -0.4**
baz=45,slow=5.3
NOA NORSAR Array B 78.90 337 P **P 17 15 57.0 -0.2**
comp=Z,101nm,0.9s,baz=45,slow=5.2,SNR=281
NOA pP **pP 17 17 39.6 +1.2**
comp=Z,3.0nm,0.8s,baz=47,slow=5.5,SNR=1.7
NOA PP **PP 17 19 03.4 +0.2**
comp=Z,25nm,1.0s,baz=45,slow=8.1,SNR=13
NOA S **S 17 25 16.7 +0.6**
comp=Z,0.7nm,0.8s,baz=214,slow=2.2,SNR=4.0
comp=Z,101nm,0.9s
WVOR Wild Horse Val 78.96 47 P **P 17 15 58.8 +0.8**
WVOR IAmb IAmb 17 16 00.1
comp=Z,58nm,0.8s
WVOR Wild Horse Val 78.96 47 P **P 17 15 58.8 +0.8**
WVOR pmax pmax
comp=Z,58nm,0.8s
MOL Molde 78.99 339 *eP* **P 17 15 57.2 -0.2**
MOL IAmb IAmb 17 15 57.9
comp=Z,147nm,1.3s
NC602 NORSAR Array S 79.01 336 P **P 17 15 56.8 -0.8**
NC602 IAmb IAmb 17 15 58.5
comp=Z,164nm,1.2s
NBO00 NORSAR Array S 79.06 337 P **P 17 15 57.7 -0.3**
NBO00 IAmb IAmb 17 15 59.1
comp=Z,174nm,1.0s
TUWZ Tuamarina 79.07 153 P **P 17 15 57.4 -0.8**
NAO01 NORSAR Array S 79.16 337 P **P 17 15 57.9 -0.6**
NAO01 IAmb IAmb 17 15 58.8
comp=Z,135nm,0.9s
BEKR Beckworth 79.17 50 P **P 17 15 59.6 +0.4**
BEKR IAmb IAmb 17 16 00.9
comp=Z,88nm,0.8s
PLID Pearl Lake 79.18 44 P **P 17 15 59.1 -0.1**
SNZO South Karori 79.27 153 P **P 17 16 00.8 +1.7**
comp=Z,112nm,1.3s
BSWZ Blackbirch Sta 79.29 153 P **P 17 15 57.8 -1.5**
PLTX Planet X, Gerl 79.32 49 P **P 17 16 01.0 +1.1**
PLTX IAmb IAmb 17 16 02.0
comp=Z,103nm,0.8s
FOZ Fox Glacier 79.40 157 P **P 17 16 00.1 +0.3**
FOZ IAmb IAmb 17 17 18.5
comp=Z,166nm,1.6s
BZK Bozkurt 79.41 313⇑ P **P 17 15 59.9 -0.2**
SORM Soroca 79.42 320⇑ P **S 17 25 19.3 -2.4**
MSO Missoula 79.43 42 P **P 17 16 00.3 0.0**
MSO IAmb IAmb 17 16 02.1

comp=Z,143nm,1.6s
MSO Missoula 79.43 42 P P 17 16 00.7 +0.4
baz=304,SNR=20
MSO S S 17 25 21.6 -0.7
baz=304
AKN Aaknes 79.45 339 *e*P **P 17 16 00.5 +0.5**
AKN IAmb IAmb 17 16 01.4
comp=Z,126nm,1.0s
MSWZ Moikau Station 79.57 152 P P 17 16 00.5 -0.4
KLNR Kaliningrad 79.65 328 *ce*P **P 17 16 01.0 -0.2**
KLNR pmax pmax
comp=Z,102nm,1.4s
MPK Martis Peak 79.68 50 P P 17 16 02.6 +0.5
MPK IAmb IAmb 17 16 04.2
comp=Z,181nm,1.4s
PLWZ Palliser 79.70 152 P P 17 16 01.2 -0.4
KHZ Kahutara 79.76 154 P P 17 16 00.8 -1.0
KHZ Kahutara 79.76 154 P P 17 16 01.0 -0.7
EMB Emerald Bay 79.80 51 P P 17 16 03.2 +0.6
EMB IAmb IAmb 17 16 04.5
comp=Z,174nm,1.4s
BNN Bunyan 79.82 309 P P 17 16 02.6 0.0
BNN IAmb IAmb 17 16 04.1
comp=Z,242nm,1.6s
MILM Milestii Mici 79.84 319 ⇑*e*P **P 17 16 02.6 +0.2**
MILM Milestii Mici 79.84 319 ⇑*i*P **P 17 16 01.8 -0.5**
MILM *e*pP **pP 17 17 43.0 -1.0**
MILM *e*sP **sP 17 18 32.0 -0.3**
MILM Milestii Mici 79.84 319 *e*PP PP 17 19 11.0 -0.3
MILM *e*S **S 17 25 22.0 -4.2**
comp=Z,900nm,8.0s
MILM LR LR 17 52 05.0
comp=Z,500nm,15.5s
MILM Milestii Mici 79.84 319 *e*P **P 17 16 02.0 -0.3**
MILM *e**PP **pP 17 17 43.0 -1.0**
MILM *e**SP **sP 17 18 32.0 -0.3**
MILM *i*S **S 17 25 22.0 -4.2**
MILM smax smax
comp=E,900nm,8.0s
MILM smax smax
comp=N,2μm,14.0s
MILM MLR MLR
comp=Z,500nm,15.5s
OSL Oslo 79.86 336 *e*P **P 17 16 02.5 +0.3**
OSL IAmb IAmb 17 16 03.0
comp=Z,146nm,0.9s
PAHR Pah Rah Range 79.89 50 P P 17 16 03.3 +0.3
VCNR Virginia City 79.93 50 P P 17 16 04.1 +0.8
RPZ Rata Peaks 79.98 156 P P 17 16 02.9 0.0
RPZ Rata Peaks 79.98 156 P P 17 16 03.0 0.0
OXZ Oxford 79.99 155 P P 17 16 02.7 -0.3
SAO San Andreas Ge 80.02 53 P P 17 16 03.1 -0.4
SAO San Andreas Ge 80.02 53 P P 17 16 03.1 -0.4
SAO pmax pmax
comp=Z,60nm,1.1s
ILGA Ilgaz 80.07 312 P P 17 16 04.2 +0.2
ILGA IAmb IAmb 17 17 58.5
comp=Z,99nm,1.0s
PNTR Pine Nut 80.07 50 P P 17 16 03.8 -0.2
CMB Columbia Colle 80.09 52 P P 17 16 04.3 +0.4
CMB IAmb IAmb 17 16 05.8
comp=Z,144nm,1.4s
CMB pP **pP 17 17 44.2 -2.4**
MFID Camas Ranch 80.19 45 P P 17 16 05.3 +0.8
MFID IAmb IAmb 17 16 06.9
comp=Z,258nm,1.8s
ILULI Ilulissat 80.24 3 P P 17 16 04.0 0.0
ILULI Ilulissat 80.24 3 P P 17 16 04.0 0.0
ILULI pmax pmax
comp=Z,68nm,1.0s
RAYN Ar Rayn 80.28 291 P P 17 16 05.4 +0.2
RAYN IAmb IAmb 17 16 07.2
comp=Z,152nm,1.1s
RAYN Ar Rayn 80.28 291 P P 17 16 05.4 +0.2
RAYN pmax pmax
comp=Z,152nm,1.2s
RAYN Ar Rayn 80.28 291 P P 17 16 05.9 +0.7
RAYN Ar Rayn 80.28 291 *i*P **P 17 16 05.9 +0.7**
SNR=56
DCZ Deep Cove 80.28 160 P P 17 16 04.2 -0.2
LBZ Lake Benmore 80.28 157 P P 17 16 04.8 +0.3
LBZ IAmb IAmb 17 16 05.8
comp=Z,259nm,1.7s
YERR Yerington 80.37 50 P P 17 16 06.2 +0.6
BBGB Big Mountain B 80.39 53 P P 17 16 06.5 +0.9
BBGB IAmb IAmb 17 16 07.9
comp=Z,110nm,1.0s
KONO Kongsberg 80.46 336 P P 17 16 05.0 -0.4
KONO Kongsberg 80.46 336 P P 17 16 05.0 -0.4
KONO pmax pmax
comp=Z,52nm,1.1s
KONO Kongsberg 80.46 336 *e*P **P 17 16 05.3 -0.1**
KONO IAmb IAmb 17 16 05.6
comp=Z,32nm,0.8s
HYA Hoyanger 80.47 338 *e*P **P 17 16 05.5 +0.2**
HYA IAmb IAmb 17 16 06.5
comp=Z,158nm,1.1s
MLZ Mavora Lakes 80.48 159 P P 17 16 05.5 0.0
FOO Floro 80.50 339 *e*P **P 17 16 06.1 +0.6**
FOO IAmb IAmb 17 16 06.6
comp=Z,137nm,1.3s
ICESG Greenland Ices 80.57 359 ⇑*i*P **P 17 16 06.9 +0.7**
ICESG IAmb IAmb 17 16 08.0
comp=Z,202nm,0.9s
VASR Vaslui 80.58 319 ⇑P **P 17 16 06.7 +0.5**
HRY Holter Researc 80.69 41 P P 17 16 07.8 +0.8
PMPB Monarch Peak 80.74 53 P P 17 16 07.2 -0.2
LVV L'vov 80.75 323 ⇓*i*P **P 17 16 07.1 0.0**
LVV *i*S **S 17 25 33.1 -2.3**
LVV pmax pmax
comp=Z,200nm,1.4s
LVV smax smax
comp=E,1μm,2.7s
LVV smax smax
comp=N,1μm,2.8s
LVV MLR MLR
comp=E,600nm,16.0s
LVV MLR MLR
comp=N,400nm,17.0s
LVV MLR MLR
comp=Z,900nm,18.0s
PYZ Puysegur Point 80.77 160 P P 17 16 07.5 +0.5
PYZ IAmb IAmb 17 16 08.8
comp=Z,94nm,0.9s
TLCR 80.81 317 ⇑P **P 17 16 08.1 +0.6**
BR131 Keskin Array S 80.82 311 P P 17 16 08.7 +0.8
BR131 IAmb IAmb 17 16 09.9
comp=Z,87nm,1.1s
BR131 Keskin Array S 80.82 311 *d*/*i*P **P 17 16 07.8 0.0**
BRTR Keskin Array B 80.82 311 P P 17 16 08.1 +0.2
comp=Z,22nm,0.9s,baz=98,slow=3.7,SNR=93
BRTR pP **pP 17 17 51.9 +2.2**
comp=Z,4.5nm,0.9s,baz=104,slow=4.3,SNR=2.1
BRTR PKKPbc **PKKPbc 17 34 42.5 +0.4**
comp=Z,1.1nm,0.7s,baz=198,slow=3.0,SNR=6.3
comp=Z,22nm,0.9s
BRTR Keskin Array B 80.82 311 P P 17 16 08.5 +0.7
LRM Limekiln Ridge 80.85 42 P P 17 16 08.8 +0.7
VLDR Vladesti 80.87 318 ⇓P **P 17 16 08.8 +1.0**
BMN Battle Mountai 80.92 48 P P 17 16 09.1 +0.7
BMN Battle Mountai 80.92 48 P P 17 16 09.1 +0.7
BMN pmax pmax
comp=Z,50nm,0.9s
HLID Hailey 80.96 45 P P 17 16 09.6 +1.1
HLID Hailey 80.96 45 P P 17 16 09.8 +1.2
baz=304,SNR=56
HLID S S 17 25 39.2 +1.0
baz=304
SUE Sulen 81.00 339 *e*P **P 17 16 08.7 +0.6**
ODZ Otahua Downs 81.01 157 P P 17 16 08.9 +0.6
comp=Z,22nm,0.9s
RYN Ryan 81.03 50 P P 17 16 09.8 +0.8
FCC Fort Churchill 81.05 25 P P 17 16 08.2 -0.2
FCC IAmb IAmb 17 16 09.7
comp=Z,211nm,1.6s
FCC Fort Churchill 81.05 25 P P 17 16 08.2 -0.2
FCC pmax pmax
comp=Z,211nm,1.7s
EGMT Eagleton 81.08 39 P P 17 16 09.4 +0.4
EGMT Eagleton 81.08 39 P P 17 16 09.8 +0.9
baz=306,SNR=86
EGMT S S 17 25 39.4 +0.4
baz=306
KVN Kaiserville 81.09 50 P P 17 16 09.7 +0.4
KVN IAmb IAmb 17 16 11.2
comp=Z,64nm,0.7s
KVN Kaiserville 81.09 50 P P 17 16 09.7 +0.4
KVN pmax pmax
comp=Z,64nm,0.7s
GHRR 81.13 319 ⇑P **P 17 16 09.3 +0.2**
BEL Belsk 81.13 326 *e*P **P 17 16 09.8 +0.8**
BEL *e*pP **pP 17 17 50.8 -0.1**
BEL *e*S **S 17 25 38.4 -0.8**
BEL *e*SS **SS 17 31 06.5 +0.6**
BEL *e*L L 17 55 02.6
comp=Z,873nm,18.0s
MDPB Devils Postpil 81.18 51 P P 17 16 10.6 +0.7
MCMT McKenzie Canyo 81.19 43 P P 17 16 10.1 +0.3
CFR Carcaliu 81.21 318 ⇑P **P 17 16 09.8 +0.3**
TPGR Topolog 81.23 317 ⇑P **P 17 16 10.5 +0.8**
LHV Little Huntoon 81.24 51 P P 17 16 11.0 +1.2
LHV IAmb IAmb 17 16 12.5
comp=Z,179nm,1.5s
OMMB Old Mammoth Mi 81.25 51 P P 17 16 10.9 +0.6
ODD1 Odda 81.28 337 *e*P **P 17 16 10.2 +0.5**
ODD1 IAmb IAmb 17 16 10.7
comp=Z,118nm,1.2s
NVAR Mina Array Bea 81.28 50 P P 17 16 10.7 +0.3
comp=Z,29nm,0.7s,baz=299,slow=4.9,SNR=152
NVAR pP **pP 17 17 54.3 +0.9**
comp=Z,24nm,1.1s,baz=270,slow=5.0,SNR=4.5
NVAR PKKPbc **PKKPbc 17 34 42.6 +1.4**
comp=Z,0.8nm,0.6s,baz=152,slow=2.8,SNR=8.0
comp=Z,29nm,0.7s
NVAR Mina Array Bea 81.28 50 P P 17 16 11.0 +0.6
ANTO Ankara 81.29 311 ⇑P **P 17 16 10.4 +0.2**
ANTO Ankara 81.29 311 P P 17 16 11.2 +1.1
ANTO Ankara 81.29 311 P P 17 16 11.3 +1.1
ANTO pmax pmax
comp=Z,87nm,1.3s
ANTO Ankara 81.29 311 P P 17 16 11.7 +1.5
TESR Tescani 81.30 319 ⇑P **P 17 16 10.5 +0.5**
ASK Askoy 81.31 338 *e*P **P 17 16 10.3 +0.6**
ASK IAmb IAmb 17 16 10.9
comp=Z,206nm,1.1s
BR231 Keskin MP Arra 81.32 311 P P 17 16 11.4 +1.0
BER Bergen 81.34 338 *e*P **P 17 16 10.3 +0.5**
BER IAmb IAmb 17 16 10.6
comp=Z,48nm,0.7s
MLAC Mammoth, Mammo 81.35 51 P P 17 16 11.8 +1.1
baz=302
BIZ Bicaz 81.35 320 ⇑P **P 17 16 11.3 +1.0**
BIZ Bicaz 81.35 320 ⇑P **S 17 25 45.1 +3.5**
PAGB Antelope Grade 81.38 54 P P 17 16 11.6 +0.9
NV11 Mina Array Sit 81.38 50 P P 17 16 11.2 +0.4
NV11 IAmb IAmb 17 16 13.0
comp=Z,130nm,1.7s
BUR08 Bucovina Ar. S 81.43 321 P P 17 16 11.5 +0.7
BURAR Bucovina Array 81.44 321 ⇓P **P 17 16 11.4 +0.6**
BURAR Bucovina Array 81.44 321 ⇓P **S 17 25 34.9 -7.8**
BURAR Bucovina Array 81.44 321 P P 17 16 11.3 +0.5
BOZ Bozeman (W) 81.45 42 P P 17 16 11.7 +0.7
BOZ IAmb IAmb 17 16 13.1
comp=Z,58nm,0.8s
BOZ Bozeman (W) 81.45 42 P P 17 16 11.7 +0.7
BOZ pmax pmax
comp=Z,58nm,0.8s
BOZ Bozeman (W) 81.45 42 P P 17 16 11.9 +0.9
baz=305,SNR=96
BOZ S S 17 25 42.4 -0.6
baz=305
TIRR Tirgusor 81.46 317 P P 17 16 11.1 +0.3
TIRR IAmb IAmb 17 16 13.1
comp=Z,129nm,1.2s
TIRR Tirgusor 81.46 317 P P 17 16 11.1 +0.3
TIRR pmax pmax
comp=Z,129nm,1.2s
HARR Harsova 81.61 317 ⇑P **P 17 16 12.3 +0.7**
BSD Bornholm Skovb 81.62 331 *e*P **P 17 16 10.8 -0.7**
BSD Bornholm Skovb 81.62 331 ⇑*i*P **P 17 16 10.9 -0.5**
BSD IAmb IAmb 17 16 11.9
comp=Z,89nm,1.0s
VRI Vrincioaia 81.63 319 ⇓P **P 17 16 13.0 +1.2**
VRI Vrincioaia 81.63 319 ⇑P **S 17 25 44.5 0.0**
TLBR Topalu 81.63 317 ⇑P **P 17 16 12.7 +1.0**
VOG Valley Oaks Go 81.67 53 P P 17 16 12.4 +0.3
baz=302
VOG S S 17 25 45.3 +0.1
baz=302
PLOR Plostina 81.68 319 ⇓P **P 17 16 13.1 +1.1**
PLOR Plostina 81.68 319 ⇓P **S 17 25 42.2 -2.9**
BLS5 Blasjo 81.71 337 *e*P **P 17 16 12.3 +0.4**
BLS5 IAmb IAmb 17 16 13.1
comp=Z,113nm,1.1s
SMMC Simmler 81.77 54 P P 17 16 14.0 +1.3
baz=302
SMMC S S 17 25 46.7 +0.3
baz=302
Q09A Carvers 81.81 50 P P 17 16 13.7 +0.7
Q09A IAmb IAmb 17 16 14.9
comp=Z,77nm,0.8s
GKP Gorka Klasztor 81.86 329 *e*P **P 17 16 12.8 +0.1**
GKP *e*S **S 17 25 44.6 -1.8**
GKP *e*SS **SS 17 31 21.7 +5.3**
GKP Gorka Klasztor 81.86 329 *e*P **P 17 16 12.8 +0.1**
HOMB Homborsund 81.86 336 *e*P **P 17 16 12.3 -0.2**
HOMB IAmb IAmb 17 16 13.1
comp=Z,84nm,1.2s
COVR Voineasa-Covas 81.94 319 ⇑P **P 17 16 14.2 +0.9**
MDUB Mudurnu 81.99 312 P P 17 16 13.8 0.0
QLMT Earthquake Lak 82.01 42 P P 17 16 15.0 +1.0
ELK Elko 82.02 47 P P 17 16 15.0 +0.9
ELK Elko 82.02 47 P P 17 16 15.0 +0.9
ELK pmax pmax
comp=Z,44nm,0.8s
ICOR Ion Corvin 82.02 317 ⇓P **P 17 16 14.5 +0.8**
OZUR 82.02 319 ⇑P **P 17 16 15.1 +1.3**
PSN Preselentsi 82.04 316 P P 17 16 15.2 +1.4
TIN Tinemaha, Big 82.06 52 P P 17 16 15.3 +1.1
baz=302,SNR=6.8
TIN S S 17 25 49.1 -0.4
baz=302
PKM Mcpherson Peak 82.12 54 P P 17 16 15.8 +1.1
baz=302,SNR=22
PKM S S 17 25 50.1 -0.1
baz=302
VES Vestal, Richgr 82.12 53 P P 17 16 14.5 +0.1
baz=302,SNR=6.9
VES S S 17 25 48.7 -1.1
baz=302
YHL Hebgen Lake 82.14 42 P P 17 16 16.0 +1.2
YHL IAmb IAmb 17 16 17.4
comp=Z,103nm,0.9s
ISR Istrita 82.17 318 ⇑P **P 17 16 15.3 +0.8**
TPH Tonopah 82.19 50 P P 17 16 15.6 +0.6
TPH Tonopah 82.19 50 P P 17 16 15.6 +0.6
TPH pmax pmax
comp=Z,565nm,1.0s
KOLS Kolonicke sedl 82.20 323 *e*P **P 17 16 15.0 +0.4**
KOLS pmax pmax
comp=Z,33nm,1.0s
KOLS Kolonicke sedl 82.20 323 *e*P **P 17 16 15.0 +0.4**
ARCR ARCALIA 82.22 321 ⇓P **P 17 16 14.9 +0.2**
COP Copenhagen 82.25 332 *e*P **P 17 16 14.5 -0.1**
COP IAmb IAmb 17 16 15.0
comp=Z,141nm,0.7s
KMY Karmoy 82.27 338 *e*P **P 17 16 15.0 +0.4**
KMY IAmb IAmb 17 16 15.3
comp=Z,38nm,0.9s
SNART Snartemo 82.27 336 *e*P **P 17 16 14.6 -0.1**
SNART IAmb IAmb 17 16 15.6
comp=Z,214nm,1.1s
MZP Montezuma Peak 82.28 51 P P 17 16 16.1 +0.5
MLR Muntele Rosu 82.29 319 ⇓P **P 17 16 15.6 +0.4**
MLR Muntele Rosu 82.29 319 ⇑P **S 17 25 51.9 +0.4**
MLR Muntele Rosu 82.29 319 S S 17 25 49.0 -2.4
comp=Z,8.2nm,0.8s,baz=44,slow=19,SNR=15
MLR Muntele Rosu 82.29 319 P P 17 16 15.4 +0.1
MLR Muntele Rosu 82.29 319 P P 17 16 15.4 +0.1
MLR pmax pmax
comp=Z,27nm,0.6s
DOPR Dopca 82.32 319 ⇑P **P 17 16 16.0 +0.8**
DOPR Dopca 82.32 319 ⇑P **S 17 25 47.1 -4.4**
BMR Baia Mare 82.33 322 ⇓P **P 17 16 15.5 +0.3**
LCH Last Change Ra 82.36 51 P P 17 16 16.4 +0.5
LCH IAmb IAmb 17 16 17.7
comp=Z,72nm,0.8s
LCH pP **pP 17 17 57.5 -1.7**
YMR Madison River 82.37 42 P P 17 16 17.6 +1.7
YMR IAmb IAmb 17 16 18.7
comp=Z,122nm,0.9s
BCW Bitter Crk WRg 82.37 54 P P 17 16 16.7 +0.8
BCW IAmb IAmb 17 16 18.3
comp=Z,149nm,1.1s
UZH Uzhgorod 82.38 323 *e*P **P 17 16 15.6 +0.1**
UZH *e*S **S 17 25 51.6 -0.2**
UZH *e*SS **SS 17 31 26.8 +2.4**
UZH MLR MLR
comp=Z,90nm,19.0s
SBC Santa Barbara 82.43 55 P P 17 16 17.2 +1.2
baz=302
GCMT Greycliff 82.45 41 P P 17 16 17.0 +0.9
SFJD Kangerlussuaq 82.48 3 P P 17 16 15.9 +0.3
comp=Z,92nm,0.7s,baz=360,slow=4.6,SNR=26
comp=Z,92nm,0.7s
SFJD Kangerlussuaq 82.48 3 P P 17 16 15.7 +0.1
SFJD IAmb IAmb 17 16 16.9
comp=Z,105nm,0.8s
SFJD Kangerlussuaq 82.48 3 ⇑*i*P **P 17 16 15.8 +0.1**
SFJD IAmb IAmb 17 16 16.3
comp=Z,110nm,0.8s
SECR 82.49 318 ⇑P **P 17 16 16.2 +0.1**
CWC Cottonwood Cre 82.49 52 P P 17 16 16.9 +0.4
baz=303
CWC S S 17 25 50.9 -3.0
baz=303
YNR Norris Junctio 82.51 42 P P 17 16 18.4 +1.8
YNR IAmb IAmb 17 16 20.0
comp=Z,132nm,1.2s
GOET G??ttrup 82.51 334 ⇑*i*P **P 17 16 15.9 0.0**
GOET IAmb IAmb 17 16 17.1
comp=Z,164nm,1.0s
GMN Gold Mountain 82.58 51 P P 17 16 17.8 +0.7
GMN IAmb IAmb 17 16 19.0
comp=Z,78nm,0.8s
SULR 82.59 318 ⇑P **P 17 16 17.6 +1.0**
YUF Upper Falls 82.61 42 P P 17 16 17.4 +0.3
YUF IAmb IAmb 17 16 20.1
comp=Z,149nm,1.5s
CRVS Cervenica-Dubn 82.64 323 *e*P **P 17 16 17.6 +0.8**
CRVS pmax pmax
comp=Z,125nm,1.4s
CRVS Cervenica-Dubn 82.64 323 *e*P **P 17 16 17.6 +0.8**
CRVS *e*PP **PP 17 19 34.9 +0.9**
ISA Isabella, Lake 82.64 53 P P 17 16 16.9 -0.2
ISA **pP 17 17 57.2 -3.5**
ISA Isabella, Lake 82.64 53 P P 17 16 16.9 -0.2
ISA *PP **pP 17 17 57.2 -3.5**
ISA pmax pmax
comp=Z,42nm,0.9s
ISA Isabella, Lake 82.64 53 P P 17 16 17.0 -0.2
baz=302,SNR=35
OJC Ojcow 82.64 325 *e*P **P 17 16 16.1 -0.7**
OJC *e*pP **pP 17 17 59.4 +0.2**
OJC *e*S **S 17 25 49.2 -5.3**
OJC *e*SS **SS 17 31 26.5 -1.7**
OJC *e*L L 17 56 23.8
comp=Z,1μm,17.3s
OJC Ojcow 82.64 325 P P 17 16 16.0 -0.7
OJC Ojcow 82.64 325 P P 17 16 16.0 -0.7
OJC pmax pmax
comp=Z,89nm,1.4s
GRAC Grapevine Rang 82.68 51 P P 17 16 18.1 +0.8
GRAC IAmb IAmb 17 16 19.4
comp=Z,115nm,0.9s
GRAC Grapevine Rang 82.68 51 P P 17 16 18.3 +1.0
baz=303,SNR=24
GRAC S S 17 25 52.5 -2.9
baz=303
ARVC Arvin 82.68 54 P P 17 16 17.8 +0.5
baz=302
YPP Pitchstone Pla 82.70 42 P P 17 16 19.6 +2.0
YPP IAmb IAmb 17 16 21.3
comp=Z,181nm,1.8s
SCZ2 Santa Cruz Isl 82.72 55 P P 17 16 18.3 +0.7
baz=302
H17A Grant Village 82.76 42 P P 17 16 20.6 +2.8
H17A Grant Village 82.76 42 P P 17 16 21.0 +3.1
baz=306,SNR=41
LKWY Lake 82.76 42 P P 17 16 20.6 +2.8
LKWY IAmb IAmb 17 16 22.0
comp=Z,160nm,0.9s
LKWY Lake 82.76 42 P P 17 16 20.7 +2.8
LKWY pmax pmax
comp=Z,160nm,1.0s
PRD Provadia 82.79 316 P P 17 16 19.4 +1.8
BORA Eskisehir 82.79 312 P P 17 16 18.1 +0.2
VOIR 82.83 319 ⇓P **P 17 16 19.0 +1.1**
VOIR 82.83 319 ⇑P **S 17 25 54.5 -2.2**
IMW Indian Meadow 82.84 43 P P 17 16 19.6 +1.3
CJR Cluj-Napoca 82.86 321 ⇓P **P 17 16 18.8 +0.7**
FLWY Flagg Ranch 82.87 43 P P 17 16 20.1 +1.7
FLWY IAmb IAmb 17 16 21.8
comp=Z,139nm,1.1s
NIE Niedzica 82.90 324 *e*P **P 17 16 18.9 +0.8**
NIE *e*pP **pP 17 18 02.1 +1.4**
NIE *e*S **S 17 25 53.8 -3.4**
FXWY Fox Creek 82.94 43 P P 17 16 19.9 +1.1
FXWY IAmb IAmb 17 16 21.7
comp=Z,83nm,1.3s
HVU Hansel Valley 82.97 45 P P 17 16 20.0 +1.2
HVU IAmb IAmb 17 16 21.3
comp=Z,82nm,0.7s
HVU Hansel Valley 82.97 45 P P 17 16 20.0 +1.2
HVU pmax pmax
comp=Z,82nm,0.7s
OSI Osito Audit: C 83.03 54 P P 17 16 19.9 +0.8
baz=302,SNR=5.7
OSI S S 17 25 59.3 +0.3
baz=302
MOOW Moose Ponds 83.04 43 P P 17 16 20.4 +1.2
TPAW Teton Pass 83.07 43 P P 17 16 19.7 +0.2
TPAW IAmb IAmb 17 16 21.3
comp=Z,149nm,1.7s
RLMT Red Lodge 83.08 41 P P 17 16 20.6 +1.2
RLMT IAmb IAmb 17 16 22.0
comp=Z,95nm,1.1s
RLMT Red Lodge 83.08 41 P P 17 16 20.8 +1.4
baz=307,SNR=54
ECR Eagle Creek 83.08 44 P P 17 16 20.7 +1.3
MPMC Manual Prospec 83.10 52 P P 17 16 20.3 +0.7
baz=303,SNR=74
MPMC S S 17 25 58.6 -1.4
baz=303
ARR Arges 83.11 319 ⇓P **P 17 16 20.6 +1.3**
R11A Troy Canyon, C 83.12 49 P P 17 16 20.2 +0.5
R11A IAmb IAmb 17 16 21.6
comp=Z,66nm,0.9s
R11A Troy Canyon, C 83.12 49 P P 17 16 20.6 +0.9
baz=304,SNR=159
R11A S S 17 25 58.6 -1.4
baz=304
DY2G Dye2 83.16 2 ⇑*i*P **P 17 16 19.8 +0.4**
DY2G IAmb IAmb 17 16 20.3
comp=Z,127nm,0.7s
SNCC San Nicolas Is 83.19 55 P P 17 16 19.9 -0.1
SNCC IAmb IAmb 17 16 21.8
comp=Z,118nm,0.8s
SNCC San Nicolas Is 83.19 55 P P 17 16 20.7 +0.8
baz=302
LOHW Long Hollow 83.20 43 P P 17 16 21.1 +1.0
SNOW Snow King Moun 83.20 43 P P 17 16 21.1 +1.0
SNOW IAmb IAmb 17 16 22.9
comp=Z,106nm,1.6s
REDW Red Top Meadow 83.21 43 P P 17 16 21.1 +1.0
REDW IAmb IAmb 17 16 22.8
comp=Z,97nm,1.4s
CCAC Calif City Air 83.23 53 P P 17 16 20.8 +0.6
CCAC IAmb IAmb 17 16 22.1
comp=Z,134nm,0.8s
LRMC Laurel Mtn Rad 83.28 53 P P 17 16 21.1 +0.6
baz=303,SNR=37
LRMC S S 17 26 00.9 -0.8
baz=303
WCT Wildcat Mounta 83.28 51 P P 17 16 20.8 +0.3
DRGR 83.30 321 ⇓P **P 17 16 21.4 +1.1**
BGU Big Grassy Mou 83.30 46 P P 17 16 21.7 +1.2
BGU IAmb IAmb 17 16 22.7
comp=Z,40nm,0.7s
FURC Furnace Creek, 83.30 52 P P 17 16 21.4 +1.1
baz=303,SNR=28
FURC S S 17 26 01.2 -0.3
baz=303
EDW2 Edwards Air Fo 83.39 53 P P 17 16 21.8 +0.9

baz=303,SNR=66
EDW2 S **S** **17 26 01.8 -0.8**

baz=303
S11A **Rachel** **83.40 50** P **P** **17 16 21.8 +0.7**
S11A IAmb IAmb 17 16 23.1

comp=Z,100nm,0.9s
AHID **Auburn Hatcher** **83.41 44** P **P** **17 16 21.8 +0.7**
AHID IAmb IAmb 17 16 23.3

comp=Z,152nm,1.9s
TPNV **Topopah Spring** **83.45 51** P **P** **17 16 21.7 +0.3**
TPNV **Topopah Spring** **83.45 51** P **P** **17 16 21.7 +0.3**
TPNV pmax pmax

comp=Z,136nm,0.8s
TPNV **Topopah Spring** **83.45 51** P **P** **17 16 22.1 +0.7**
baz=304,SNR=153
TPNV S **S** **17 26 01.5 -1.8**

baz=304
DECC **Green Verdugo** **83.49 54** P **P** **17 16 22.1 +0.6**
baz=303,SNR=5.2
DECC S **S** **17 26 02.5 -1.0**

baz=303
LANS **Liptovska Anna** **83.49 324** *e*P **P** **17 16 22.1 +1.0**
LANS pmax pmax

comp=Z,17nm,1.4s
LANS **Liptovska Anna** **83.49 324** *e*P **P** **17 16 22.1 +1.0**
LANS *e*PP **PP** **17 19 39.1 -1.8**
LRW **Lerwick** **83.50 341**⇑ *e*P **P** **17 16 21.0 +0.1**
LRW IAmb IAmb 17 16 22.2

comp=Z,195nm,1.3s
LOT **Lotru** **83.54 320** ⇓P S 17 25 27.5 -36
BORG **Borgarnes** **83.56 351** P **P** **17 16 22.8 +1.7**
BORG IAmb IAmb 17 16 24.3

comp=Z,112nm,1.4s
BORG **Borgarnes** **83.56 351** P **P** **17 16 22.8 +1.7**
BORG pmax pmax

comp=Z,112nm,1.4s
SPR3 **Spring Creek 3** **83.57 48** P **P** **17 16 22.8 +0.7**
SPR3 IAmb IAmb 17 16 25.7

comp=Z,27nm,0.8s
QSM **Queen of Sheba** **83.57 52** P **P** **17 16 22.3 +0.5**
CSS **Mathiatis** **83.58 307** P **P** **17 16 21.7 -0.2**
GWY **Greenwater Val** **83.59 52** P **P** **17 16 22.5 +0.4**
GWY IAmb IAmb 17 16 23.8

comp=Z,131nm,0.9s
SZH **Strazhica** **83.61 317** P **P** **17 16 21.9 +0.1**
PASC **Pasadena Art C** **83.64 54** P **P** **17 16 22.0 -0.1**
PASC IAmb IAmb 17 16 23.6

comp=Z,72nm,1.0s
FRB **Frobisher Bay** **83.65 11** P **P** **17 16 21.4 -0.1**
comp=Z,64nm,0.6s,baz=342,slow=5.6,SNR=40
FRB pP **pP** **17 18 05.0 +0.5**

comp=Z,36nm,1.0s,baz=353,slow=8.2,SNR=4.3
comp=Z,64nm,0.6s
OKC **Ostrava-Krasne** **83.70 326** *e*P **P** **17 16 21.8 -0.3**
OKC *e* 17 25 54.7
OKC **Ostrava-Krasne** **83.70 326** *e*P **P** **17 16 21.8 -0.3**
OKC *ex* x 17 18 11.4
OKC *e*SKS **SKSac** **17 25 54.7 -4.7**
JMB **Yambol** **83.70 316** P **P** **17 16 20.9 -1.4**
DGMT **Dagmar** **83.72 36** P **P** **17 16 22.5 +0.2**
DGMT IAmb IAmb 17 16 24.0

comp=Z,133nm,1.1s
DGMT **Dagmar** **83.72 36** P **P** **17 16 22.8 +0.5**
baz=310
DGMT **Dagmar** **83.72 36** P **P** **17 16 22.8 +0.5**
baz=310,SNR=22
DGMT S **S** **17 26 04.8 -0.5**

baz=310
LAO **LASA Array** **83.80 39** P **P** **17 16 23.5 +0.8**
LAO IAmb IAmb 17 16 25.0

comp=Z,167nm,1.1s
LAO **LASA Array** **83.80 39** P **P** **17 16 23.8 +1.0**
baz=309
LAO **LASA Array** **83.80 39** P **P** **17 16 23.7 +1.0**
baz=309,SNR=48
LAO S **S** **17 26 06.3 +0.1**

baz=309
HWUT **Hardware Ranch** **83.81 45** P **P** **17 16 24.0 +0.9**
HWUT IAmb IAmb 17 16 25.5

comp=Z,86nm,0.8s
FMP **Fort Macarthur** **83.81 54** P **P** **17 16 23.5 +0.5**
baz=303
DUG **Dugway, Tooele** **83.85 47** P **P** **17 16 24.1 +0.8**
DUG IAmb IAmb 17 16 25.5

comp=Z,82nm,0.8s
DUG **Dugway, Tooele** **83.85 47** P **P** **17 16 24.1 +0.8**
DUG pmax pmax

comp=Z,83nm,0.8s
DUG **Dugway, Tooele** **83.85 47** P **P** **17 16 24.4 +1.2**
baz=305,SNR=70
CIS **Catalina Islan** **83.89 55** P **P** **17 16 23.7 +0.3**
baz=303,SNR=8.2
KSP **Ksiaz** **83.91 327** *e*P **P** **17 16 23.3 +0.2**
KSP *e*pP **pP** **17 18 05.5 -0.4**
KSP *e*S **S** **17 25 59.1 -7.9**
KSP *e*SS **SS** **17 31 44.5 -2.2**
GHAJ **Ghor Haditha** **83.96 303** P **P** **17 16 24.1 +0.4**
BFSC **Mount Baldy Ra** **83.97 54** P **P** **17 16 24.1 +0.2**
baz=303,SNR=23
GSC **Goldstone, Bar** **83.98 52** P **P** **17 16 24.3 +0.4**
GSC IAmb IAmb 17 16 25.7

comp=Z,108nm,0.9s
GSC **Goldstone, Bar** **83.98 52** P **P** **17 16 24.3 +0.4**
GSC pmax pmax

comp=Z,108nm,1.0s
GSC **Goldstone, Bar** **83.98 52** P **P** **17 16 24.7 +0.8**
baz=303,SNR=72
PRN **Pahroc Range** **83.99 50** P **P** **17 16 24.8 +0.8**
PRN IAmb IAmb 17 16 26.1

comp=Z,75nm,1.0s
PVL **Pavlikeni** **84.00 317** P **P** **17 16 24.3 +0.6**
SHOC **Shoshone, Teco** **84.01 52** P **P** **17 16 24.7 +0.7**
baz=304,SNR=13
SCI2 **San Clemente I** **84.03 55** P **P** **17 16 24.7 +0.6**
baz=303
MORC **Moravsky Berou** **84.03 326** ⇓P **P** **17 16 23.2 -0.6**
MORC **Moravsky Berou** **84.03 326** P **P** **17 16 23.5 -0.3**
MORC **Moravsky Berou** **84.03 326** P **P** **17 16 23.5 -0.3**
MORC pmax pmax

comp=Z,64nm,1.4s
MORC **Moravsky Berou** **84.03 326** *e*P **P** **17 16 23.6 -0.2**
MORC *e*pP **pP** **17 18 07.1 +0.4**
MORC *e*SKS **SKSac** **17 25 59.5 -2.1**
PSZ **Piszkesteto** **84.07 323** P **P** **17 16 24.5 +0.4**
PSZ IAmb IAmb 17 18 18.5

comp=Z,130nm,1.5s
PSZ **Piszkesteto** **84.07 323** P **P** **17 16 24.5 +0.4**
PSZ pmax pmax

comp=Z,130nm,1.5s
PSZ **Piszkesteto** **84.07 323** P **P** **17 16 24.9 +0.8**
RRX **Edison Barstow** **84.08 53** P **P** **17 16 25.2 +0.9**
baz=303
GZR **Gura Zlata** **84.13 320** ⇑P **P** **17 16 25.5 +1.1**
PSUT **Pine Spring** **84.14 48** P **P** **17 16 24.8 0.0**
PSUT IAmb IAmb 17 16 26.6

comp=Z,56nm,0.8s
OSTC **Ostas** **84.14 327** *e*P **P** **17 16 24.9 +0.6**
OSTC *ex* x 17 18 15.3
OSTC *e*SKS **S** **17 26 04.3 -5.0**
TCUT **Toone Canyon** **84.19 45** P **P** **17 16 25.9 +0.8**
TCUT IAmb IAmb 17 16 27.1

comp=Z,58nm,0.7s
TCUT **pP** **17 18 07.0 -1.9**
SIRR **Siria** **84.19 321** ⇑P **P** **17 16 24.2 -0.5**
KRLC **Kraliky** **84.20 326** *e*P **P** **17 16 24.5 -0.1**
KRLC *e* 17 25 54.2
KRLC **Kraliky** **84.20 326** *e*P **P** **17 16 24.5 -0.1**
KRLC *ex* x 17 18 15.2
KRLC *ex* x 17 25 54.2
CTU **Camp Tracy** **84.23 46** P **P** **17 16 25.9 +0.8**
DPC **Dobruska-Polom** **84.23 327** *e*P **P** **17 16 24.9 +0.1**
DPC *e* 17 18 10.6
DPC *e* 17 26 01.3
DPC **Dobruska-Polom** **84.23 327** *e*P **P** **17 16 24.9 +0.1**
DPC *ex* x 17 18 10.6
DPC *e*SKS **S** **17 26 01.3 -8.9**
VYHS **Vyhne** **84.24 324** *e*P **P** **17 16 25.2 +0.4**
VYHS pmax pmax

comp=Z,46nm,1.3s
VYHS **Vyhne** **84.24 324** *e*P **P** **17 16 25.2 +0.4**
UPC **Upice** **84.27 327** *e*P **P** **17 16 25.1 +0.2**
UPC *e* 17 18 10.0
UPC *e* 17 25 57.5
UPC **Upice** **84.27 327** *e*P **P** **17 16 25.1 +0.2**

UPC *ex* x 17 18 16.3
UPC *e*SKS S 17 25 57.5 -13
BW06 **Boulder Array** **84.32 43** P **P** **17 16 25.9 +0.2**
BW06 **Boulder Array** **84.32 43** P **P** **17 16 26.0 +0.3**
baz=307,SNR=44
BW06 S **S** **17 26 10.9 -0.9**

baz=307
PD31 **Pinedale Array** **84.32 43** P **P** **17 16 25.7 +0.1**
PDAR **Pinedale Array** **84.32 43** P **P** **17 16 25.9 +0.3**
comp=Z,19nm,1.0s,baz=294,slow=1.5,SNR=100
PDAR pP **pP** **17 18 09.3 -0.2**
comp=Z,5.1nm,1.0s,baz=290,slow=2.6,SNR=2.5
PDAR PKKPbc **PKKPbc** **17 34 33.7 -0.8**
comp=Z,0.3nm,0.4s,baz=121,slow=4.4,SNR=5.0
comp=Z,19nm,1.0s
PDAR **Pinedale Array** **84.32 43** P **P** **17 16 25.1 -0.5**
SRE **Strehaia** **84.34 319** ⇓P **P** **17 16 26.6 +1.2**
ELS **Elsinore Mount** **84.45 54** P **P** **17 16 26.4 +0.1**
NLU **North Lily Min** **84.45 46** P **P** **17 16 27.1 +0.7**
JLU **Jordanelle** **84.47 46** P **P** **17 16 27.2 +0.8**
JLU **pP** **17 18 08.6 -1.7**
BBRC **Big Bear Solar** **84.47 53** P **P** **17 16 26.8 +0.3**
baz=303
TUQ **Turquoise Moun** **84.51 52** P **P** **17 16 27.4 +0.8**
baz=304,SNR=48
TUQ S **S** **17 26 13.9 +0.2**

baz=304
HEC **Hector,Ludlow** **84.56 53** P **P** **17 16 27.5 +0.8**
baz=304,SNR=47
HEC S **S** **17 26 14.0 -0.1**

baz=304
JAVC **Velka Javorina** **84.58 325** *e*P **P** **17 16 27.5 +0.9**
JAVC *e*pP **pP** **17 18 10.4 +0.8**
JAVC *e*SKS **S** **17 26 04.7 -9.0**
PPT2 **Papeete2** **84.61 114** *e*P **P** **17 16 27.8 +0.6**
PPT2 *e*pP **pP** **17 18 11.0 +0.1**

comp=Z,27nm,20.5s
PPT2 *e*S **S** **17 26 14.4 -0.5**

comp=Z,216nm,26.8s
PPT2 *e*LR LR 17 43 55.7

comp=Z,432nm,24.8s
BZS **Buzias** **84.62 321** ⇓P **P** **17 16 26.4 -0.4**
MURC **Murrieta** **84.64 54** P **P** **17 16 27.5 +0.3**
baz=303,SNR=12
MURC S **S** **17 26 14.6 -0.2**

baz=303
HERR **Herculane** **84.64 320** ⇓P **P** **17 16 26.7 -0.2**
HERR **Herculane** **84.64 320** ⇑P **S** **17 26 06.2 -8.1**
MPU **Maple Canyon** **84.69 46** P **P** **17 16 28.2 +0.7**
WTNK **Soaring Height** **84.70 51** P **P** **17 16 28.4 +1.0**
WTNK IAmb IAmb 17 16 29.3

comp=Z,22nm,0.8s
VRAC **Vranov** **84.81 326** ⇑P **P** **17 16 28.3 +0.7**
VRAC **Vranov** **84.81 326** *e*P **P** **17 16 27.6 0.0**
VRAC *e*pP **pP** **17 18 10.8 +0.1**
VRAC *e*SKS **SKSac** **17 26 05.2 -1.3**
MPEP **Malo Peshtene** **84.84 318** P **P** **17 16 28.2 +0.3**
KDZ **Kurdzhali** **84.89 316** P **P** **17 16 24.8 -3.3**
ELL **Elmali** **84.91 310** P **P** **17 16 28.4 -0.1**
ELL **Elmali** **84.91 310** P **P** **17 16 28.4 -0.1**
PVCC **Panska Ves** **84.93 328** *e*P **P** **17 16 28.3 +0.1**
PVCC **Panska Ves** **84.93 328** *e*P **P** **17 16 28.3 +0.1**
PVCC *ex* x 17 18 19.9
PVCC *e*SKS **SKSac** **17 25 56.6 -11**
BRG **Berggiesshubel** **84.98 328** *i* P **P** **17 16 28.2 -0.2**
BRG Amp 17 16 30.0

comp=Z,42nm,1.2s
BRG pP **pP** **17 18 11.8 +0.3**
BRG Amp 17 18 14.7

comp=Z,40nm,1.7s
BRG *ex* x 17 18 20.0
BRG Amp 17 18 22.0

comp=Z,51nm,1.6s
BRG *ex* x 17 18 43.6
BRG Amp 17 18 44.6

comp=Z,22nm,1.4s
BRG **Berggiesshubel** **84.98 328** sP **sP** **17 19 01.0 +1.5**
BRG PP **PP** **17 19 49.6 -3.1**
BRG Amp 17 19 56.1

comp=Z,28nm,1.3s
BRG **Berggiesshubel** **84.98 328** SP **SPn** **17 27 14.0 -1.3**
BRG **Berggiesshubel** **84.98 328** sS sS 17 29 22.0 -1.4
BRG **Berggiesshubel** **84.98 328** SS SS 17 31 57.0 -5.2
BRG Amp 17 59 14.0

comp=N,0.4nm,13.7s
BRG Amp 17 59 15.0

comp=E,0.5nm,17.1s
BRG Amp 17 59 17.0

comp=Z,0.9nm,13.3s
BRG **Berggiesshubel** **84.98 328** *i* P **P** **17 16 28.2 -0.2**
BRG 17 18 11.7
BRG SP 17 19 01.0
BRG 17 19 49.5
BRG S **SKSac** **17 26 06.0 -1.4**
BRG SP **SPn** **17 27 14.0 -1.3**
BRG pmax pmax

comp=Z,42nm,1.3s
BRG pmax pmax

comp=Z,40nm,1.7s
BRG pmax pmax

comp=Z,51nm,1.6s
BRG pmax pmax

comp=Z,22nm,1.4s
BRG pmax pmax

comp=Z,28nm,1.3s
BRG pmax pmax

comp=N,423nm,13.7s
BRG MLR MLR

comp=E,474nm,17.1s
BRG MLR MLR

comp=Z,856nm,13.3s
TCRU **Three Creeks R** **85.00 48** P **P** **17 16 30.3 +1.2**
CCUT **Cedar City** **85.02 49** P **P** **17 16 29.8 +0.7**
GMRC **Granite Mounta** **85.05 52** P **P** **17 16 29.9 +0.7**
baz=304,SNR=48
GMRC S **S** **17 26 18.9 -0.1**

baz=304
KRUC **Moravsky** **85.07 326** *e*P **P** **17 16 28.8 -0.1**
KRUC *e*pP **pP** **17 18 12.1 0.0**
KRUC *e*SKS **SKSac** **17 26 06.8 -1.3**
V12A **Nelson** **85.07 51** P **P** **17 16 29.9 +0.7**
V12A IAmb IAmb 17 16 31.3

comp=Z,55nm,1.0s
109C **Camp Elliot, M** **85.09 55** P **P** **17 16 29.9 +0.6**
109C IAmb IAmb 17 16 31.0

comp=Z,113nm,1.4s
109C **Camp Elliot, M** **85.09 55** P **P** **17 16 29.7 +0.4**
baz=303
109C S **S** **17 26 18.4 -0.7**

baz=303
MDVR **Moldovita** **85.10 320** ⇑P **P** **17 16 28.6 -0.5**
MODS **Modra-Piesok** **85.10 325** *e*P **P** **17 16 30.3 +1.3**
MODS pmax pmax

comp=Z,90nm,1.4s
MODS **Modra-Piesok** **85.10 325** *e*P **P** **17 16 30.3 +1.3**
MODS *e*PP **PP** **17 19 51.9 -1.8**
CLL **Collm** **85.10 329** P **P** **17 16 28.2 -0.8**
CLL pP **pP** **17 18 10.7 -1.4**
CLL **Collm** **85.10 329**⇑ *i*P **P** **17 16 28.5 -0.4**
CLL *i* *PP **pP** **17 18 11.6 -0.5**
CLL *e* 17 26 05.0
CLL *i* S **SKKSac** **17 26 15.1 -0.9**
CLL pmax pmax

comp=Z,49nm,1.2s
CLL **Collm** **85.10 329**⇑ *i*P **P** **17 16 28.5 -0.4**
comp=Z,49nm,1.2s
CLL *e*PcP **PcP** **17 16 32.0 +0.8**
CLL *i* pP **pP** **17 18 11.6 -0.5**

comp=Z,112nm,2.0s
CLL *i* pPmax 17 18 19.5

comp=Z,102nm,1.4s
CLL *i* x x 17 18 25.6

comp=Z,62nm,1.3s
CLL *ex* x 17 19 47.0
CLL *e*PP **PP** **17 19 54.0 +0.4**
CLL *e*sP **PP** **17 19 58.0 +4.4**
CLL *e*PKiKP **PKiKP** **17 21 35.0 -1.7**
CLL *e*PPP PPP 17 21 51.0
CLL *e*sPP 17 22 09.0
CLL *e*PPPP 17 23 24.0
CLL *e*SKSac **SKSac** **17 26 05.0 -3.1**
CLL *i* S **SKKSac** **17 26 15.1 -0.9**
CLL *ex* x 17 26 38.0
CLL *e*SP **SP** **17 27 18.0 -0.8**

CLL *e*(PS) 17 28 26.0
CLL *e*sS **sS** **17 29 25.0 +0.4**
CLL *e*sPS 17 30 15.0
CLL *e*SS **SS** **17 32 01.0 -2.9**
CLL *e*sSS 17 34 45.0
CLL *e*SSS SSS 17 35 42.0
CLL *e*SSSS 17 38 53.0
RDO **Rodhopi** **85.11 315** P **P** **17 16 29.9 +0.7**
PFO **Pinyon Flats O** **85.15 54** P **P** **17 16 29.8 +0.1**
PFO IAmb IAmb 17 16 31.4

comp=Z,95nm,0.9s
PFO pP **pP** **17 18 12.3 -1.7**
PFO **Pinyon Flats O** **85.15 54** P **P** **17 16 29.8 +0.1**
PFO *PP **pP** **17 18 12.3 -1.7**
PFO pmax pmax

comp=Z,95nm,1.0s
PFO **Pinyon Flats O** **85.15 54** P **P** **17 16 30.2 +0.5**
baz=304,SNR=43
PFO S **S** **17 26 19.9 0.0**

baz=304
TPFO **Pinon Flats** **85.15 54** P **P** **17 16 30.3 +0.5**
baz=304,SNR=44
TPFO S **S** **17 26 19.6 -0.4**

baz=304
SZCU **Shurtz Canyon** **85.17 49** P **P** **17 16 30.3 +0.4**
PMD **Palm Desert** **85.18 54** P **P** **17 16 30.1 +0.3**
PMD IAmb IAmb 17 16 31.3

comp=Z,84nm,0.9s
PMD **pP** **17 18 11.5 -2.5**
MVU **Marysvale** **85.21 48** P **P** **17 16 31.1 +0.9**
NUUK **Nuuk** **85.22 4** *i* P **P** **17 16 30.2 +1.0**
NUUK IAmb IAmb 17 16 30.5

comp=Z,115nm,0.9s
MSU **Marysvale** **85.23 48** P **P** **17 16 31.3 +1.1**
MSU **Marysvale** **85.23 48** P **P** **17 16 31.3 +1.1**
BELC **Belle Mtn. Jos** **85.25 53** P **P** **17 16 30.5 +0.2**
baz=304,SNR=35
BELC S **S** **17 26 19.5 -1.4**

baz=304
CSKK **Cskako** **85.27 324** P **P** **17 16 29.9 0.0**
BLKB **Belogradchik** **85.28 319** ⇑P **P** **17 16 30.0 -0.1**
PRU **Pruhonice** **85.32 327** *e*P **P** **17 16 29.9 -0.1**
PRU *e* 17 18 15.7
PRU *e* 17 26 05.4
PRU **Pruhonice** **85.32 327** *e*P **P** **17 16 29.9 -0.1**
PRU *e*pP **pP** **17 18 15.7 +2.4**
PRU *e*SKS **SKSac** **17 26 05.4 -4.2**
TREC **Trest** **85.35 326** *e*SKS **SKSac** **17 26 09.7 -0.1**
TMUT **Trail Mountain** **85.38 47** P **P** **17 16 31.2 +0.2**
LCMT **Little Creek M** **85.41 49** P **P** **17 16 31.6 +0.6**
MTPU **Mount Pierson** **85.50 48** P **P** **17 16 32.6 +0.9**
BAR **Barrett** **85.51 55** P **P** **17 16 31.6 +0.1**
BAR **pP** **17 18 12.5 -3.1**
P17A **Butcher Ranch,** **85.57 46** P **P** **17 16 32.5 +0.8**
P17A IAmb IAmb 17 16 33.9

comp=Z,46nm,0.8s
MONP2 **Monument Peak** **85.57 54** P **P** **17 16 32.4 +0.5**
baz=304,SNR=18
MONP2 S **S** **17 26 23.7 -0.5**

baz=304
VTS **Vitosha** **85.58 318** ⇑P **P** **17 16 32.7 +1.0**
VTS **Vitosha** **85.58 318** P **P** **17 16 32.4 +0.7**
VTS **Vitosha** **85.58 318** P **P** **17 16 32.4 +0.7**
VTS pmax pmax

comp=Z,40nm,1.2s
VTS **Vitosha** **85.58 318** P **P** **17 16 32.0 +0.3**
TKX **Tecate** **85.62 55** P **P** **17 16 31.9 0.0**
Q16A **Castle Valley** **85.63 47** P **P** **17 16 32.8 +0.7**
RDMU **Red Mountain** **85.64 45** P **P** **17 16 32.8 +0.7**
RDMU IAmb IAmb 17 16 35.2

comp=Z,48nm,0.8s
BIGH **Upper Bighouse** **85.65 341** *e*P **P** **17 16 31.5 +0.1**
BIGH IAmb IAmb 17 16 32.7

comp=Z,152nm,1.3s
KNB **Kanab** **85.68 49** P **P** **17 16 33.2 +0.9**
KNB IAmb IAmb 17 16 34.7

comp=Z,69nm,0.9s
KNB **Kanab** **85.68 49** P **P** **17 16 33.2 +0.9**
KNB pmax pmax

comp=Z,69nm,0.9s
CBX **Cerro Bola** **85.72 55** P **P** **17 16 33.2 +0.7**
IRM **Iron Mountain** **85.75 53** P **P** **17 16 33.1 +0.5**
baz=304,SNR=26
IRM S **S** **17 26 24.9 -0.6**

baz=304
PKCU **Pink Cliffs** **85.76 49** P **P** **17 16 34.4 +1.5**
NEE2 **Needles Airpor** **85.77 52** P **P** **17 16 32.9 +0.3**
baz=305
NEE2 S **S** **17 26 25.2 -0.4**

baz=305
MPLH **Magyarpolny** **85.77 324** P **P** **17 16 32.3 0.0**
P18A **Preston Nutter** **85.78 46** P **P** **17 16 33.4 +0.5**
P18A IAmb IAmb 17 16 36.4

comp=Z,41nm,0.7s
MSEY **Mahe Island** **85.80 262** P **P** **17 16 33.7 +0.7**
MSEY **Mahe Island** **85.80 262** P **P** **17 16 33.7 +0.7**
MSEY pmax pmax

comp=Z,218nm,1.4s
MSEY **Mahe Island** **85.80 262** P **P** **17 16 33.4 +0.3**
MSEY **Mahe Island** **85.80 262** *i* P **P** **17 16 33.8 +0.7**
SNR=7.8
BC3 **Big Chuckawall** **85.82 53** P **P** **17 16 33.6 +0.6**
baz=304,SNR=24
BC3 S **S** **17 26 26.3 0.0**

baz=304
MORH **Mrgy, Hungar** **85.83 323** ⇑P **P** **17 16 32.0 -0.6**
MORH **Mrgy, Hungar** **85.83 323** P **P** **17 16 32.1 -0.5**
FRGS **Fruska Gora** **85.90 321** ⇓P **P** **17 16 33.0 0.0**
FRGS **Fruska Gora** **85.90 321** *e*P **P** **17 16 32.7 -0.3**
SRU **San Rafael Swe** **85.92 46** P **P** **17 16 33.8 +0.3**
SRU **San Rafael Swe** **85.92 46** P **P** **17 16 33.8 +0.3**
SRU pmax pmax

comp=Z,30nm,0.9s
IKP **In-Ko-Pah, Jac** **85.92 54** P **P** **17 16 34.1 +0.7**
baz=304,SNR=13
IKP S **S** **17 26 26.7 -0.6**

baz=304
RMX **La Rumorosa** **85.97 54** P **P** **17 16 34.3 +0.6**
RMX **pP** **17 18 16.7 -1.4**
SWSC **Sam W. Stewart** **85.98 54** P **P** **17 16 33.9 +0.3**
baz=304,SNR=6.6
SWSC S **S** **17 26 26.9 -0.7**

baz=304
RONA **Rosalia, Austr** **86.04 325** *i* P **P** **17 16 33.8 +0.2**
comp=Z,20nm,1.3s,SNR=11
RONA **Rosalia, Austr** **86.04 325** *e*P **S** **17 26 20.0 -7.7**
comp=Z,12nm,1.2s
YUH **Yuha Desert** **86.06 54** P **P** **17 16 34.0 +0.1**
YUH **pP** **17 18 14.6 -3.7**
W13A **Hualapai Mount** **86.07 51** P **P** **17 16 34.8 +0.5**
W13A **pP** **17 18 18.5 -0.2**
CONA **Conrad Observa** **86.10 325** *i* P **P** **17 16 34.2 +0.2**
comp=Z,26nm,1.4s,SNR=12
CONA **Conrad Observa** **86.10 325** *i* P S 17 26 13.9 -14
comp=Z,21nm,1.4s,SNR=7.7
K22A **Casper** **86.16 42** P **P** **17 16 34.3 -0.2**
K22A pP **pP** **17 18 17.8 -1.1**
K22A **Casper** **86.16 42** P **P** **17 16 35.2 +0.7**
baz=309
K22A **Casper** **86.16 42** P **P** **17 16 35.0 +0.5**
baz=309,SNR=24
K22A S **S** **17 26 28.6 -0.7**

baz=309
KOVH **Kovagototos** **86.20 323** P **P** **17 16 34.0 -0.4**
MCD **Coleburn Disti** **86.23 340** *e*P **P** **17 16 33.8 -0.5**
CKRC **Cesky Krumlov** **86.24 326** *e*P **P** **17 16 33.7 -0.8**
CKRC *ex* x 17 18 20.5
CKRC *e*SKS **SKSac** **17 26 09.2 -6.1**
LINV **Loch Inver, As** **86.31 341** *e*P **P** **17 16 34.4 -0.2**
LINV IAmb IAmb 17 16 35.7

comp=Z,123nm,1.2s
PDMCI **Parker Dam,Lak** **86.35 52** P **P** **17 16 36.0 +0.7**
baz=305,SNR=9.6
PDMCI S **S** **17 26 31.2 0.0**

baz=305
RWWY **Rawlins** **86.36 43** P **P** **17 16 35.0 -0.6**
RWWY IAmb IAmb 17 16 37.5

comp=Z,53nm,0.9s
KHC **Kasperske Hory** **86.36 327** P **P** **17 16 34.8 -0.3**
KHC **pP** **17 18 17.4 -1.3**
KHC **Kasperske Hory** **86.36 327** *e*P **P** **17 16 33.8 -1.4**
KHC *e* 17 18 20.2
KHC *e* 17 26 14.2
KHC **Kasperske Hory** **86.36 327** *e*P **P** **17 16 33.8 -1.4**

KHC ex x 17 16 46.5
KHC epP **pP** **17 18 20.2 +1.5**
KHC eSKS **SKSac** **17 26 14.2 -1.9**
U15A North Rim 86.37 49 P **P** **17 16 35.7 0.0**
BLYC Blythe 86.41 53 P **P** **17 16 36.2 +0.5**
MDND Maddock 86.44 35 P **P** **17 16 36.1 +0.6**
MDND Maddock 86.44 35 P **P** **17 16 36.3 +0.8**
baz=313
MDND Maddock 86.44 35 P **P** **17 16 36.3 +0.8**
baz=313,SNR=7.6
MDND S **S** **17 26 30.6 -0.9**
baz=313
DIVS Divibare 86.48 320 P **P** **17 16 34.5 -1.4**
DIVS Divibare 86.48 320 eP **P** **17 16 35.2 -0.7**
ULM Lac du Bonnet 86.50 31 P **P** **17 16 35.7 0.0**
comp=Z,47nm,1.2s,baz=317,slow=6.3,SNR=25
ULM PKKPbc **PKKPbc** **17 34 27.8 -1.6**
comp=Z,2.8nm,0.7s,baz=296,slow=8.6,SNR=3.2
comp=Z,47nm,1.2s
ULM Lac du Bonnet 86.50 31 P **P** **17 16 35.4 -0.3**
GEC2 GERESS Array S 86.51 327 P **P** **17 16 35.0 -0.9**
GEC2 **pP** **17 18 18.3 -1.2**
GERES GERESS Array B 86.51 327 P **P** **17 16 35.3 -0.6**
comp=Z,3.4nm,0.5s,baz=45,slow=2.6,SNR=32
GERES pP **pP** **17 18 19.5 0.0**
comp=Z,1.2nm,0.7s,baz=39,slow=8.6,SNR=3.0
GERES PP **PP** **17 20 01.9 -3.2**
comp=Z,2.6nm,0.9s,baz=35,slow=4.9,SNR=3.5
GERES PKKPbc **PKKPbc** **17 34 28.7 -0.8**
comp=Z,1.3nm,0.8s,baz=180,slow=2.7,SNR=8.9
GERES SKKPbc SKKPbc 17 37 22.1 +3.5
comp=Z,0.1nm,0.2s,baz=242,slow=2.9,SNR=4.0
comp=Z,3.4nm,0.5s
GERES GERESS Array B 86.51 327 P **P** **17 16 34.3 -1.6**
GERES pP **pP** **17 18 18.3 -1.2**
GLA Glamis 86.59 53 P **P** **17 16 37.0 +0.4**
GLA **pP** **17 18 17.7 -3.4**
GLA IAmb IAmb 17 18 24.0
comp=Z,69nm,1.1s
GLA Glamis 86.59 53 P **P** **17 16 37.0 +0.4**
GLA *PP **pP** **17 18 17.7 -3.4**
GLA pmax pmax
comp=Z,69nm,1.1s
GLA Glamis 86.59 53 P **P** **17 16 37.3 +0.8**
baz=305,SNR=10
GLA S **S** **17 26 34.1 +0.5**
baz=305
RSSD Black Hills 86.62 40 P **P** **17 16 36.0 -0.7**
RSSD IAmb IAmb 17 16 38.7
comp=Z,308nm,1.9s
RSSD **pP** **17 18 19.0 -2.3**
RSSD Black Hills 86.62 40 P **P** **17 16 36.0 -0.7**
RSSD *PP **pP** **17 18 19.0 -2.3**
RSSD pmax pmax
comp=Z,308nm,2.0s
RSSD Black Hills 86.62 40 P **P** **17 16 37.3 +0.6**
baz=310
RSSD Black Hills 86.62 40 P **P** **17 16 37.1 +0.4**
baz=310
RSSD S **S** **17 26 31.7 -2.1**
baz=310
O20A White River Ci 86.70 45 P **P** **17 16 37.3 +0.1**
O20A White River Ci 86.70 45 P **P** **17 16 37.7 +0.5**
baz=308
O20A S **S** **17 26 34.8 +0.1**
baz=308
ARSA Arzberg 86.73 325 eP **P** **17 16 36.8 -0.1**
comp=Z,17nm,1.3s
ARSA Arzberg 86.73 325 eP **SKSac** **17 26 21.3 +2.9**
comp=Z,17nm,1.2s
LEWI Lewis, Hebride 86.76 342⇑ eP **P** **17 16 35.9 -0.9**
LEWI IAmb IAmb 17 16 36.9
comp=Z,126nm,1.1s
E28A Huff 86.76 36 P **P** **17 16 37.1 +0.1**
E28A Huff 86.76 36 P **P** **17 16 37.9 +0.8**
baz=313
A252A Venje 86.76 322 i P **P** **17 16 36.0 -1.0**
KAC Achnashellach 86.89 341⇑ eP **P** **17 16 37.7 +0.3**
MOA Molln 86.93 326 i P **P** **17 16 38.2 +0.4**
comp=Z,10nm,0.6s,SNR=11
MOA Molln 86.93 326 eP **SKSac** **17 26 21.6 +2.0**
comp=Z,34nm,1.6s
GRA1 Grafenberg Arr 87.05 329 P **P** **17 16 38.1 -0.3**
GRA1 **pP** **17 18 20.2 -1.9**
GRA1 IAmb IAmb 17 18 32.6
comp=Z,146nm,1.5s
GRFO Grafenberg 87.05 329 P **P** **17 16 38.1 -0.3**
GRFO pP **pP** **17 18 20.6 -1.5**
GRFO IAmb IAmb 17 18 32.6
comp=Z,143nm,1.5s
KPL Plockton 87.12 341⇑ eP **P** **17 16 38.8 +0.3**
KPL IAmb IAmb 17 16 39.6
comp=Z,146nm,0.9s
PV21 Cone Mtn., Par 87.22 46 P **P** **17 16 40.0 +0.3**
PV23 Carpenter Ridg 87.26 46 P **P** **17 16 39.7 -0.2**
PV23 IAmb IAmb 17 18 40.1
comp=Z,91nm,1.3s
PV10 Paradox Valley 87.29 46 P **P** **17 16 41.0 +1.0**
PV10 IAmb IAmb 17 18 40.4
comp=Z,119nm,1.3s
Y14A Wickenburg 87.33 52 P **P** **17 16 40.8 +0.7**
BIOA Bad Ischl, Aus 87.34 326 i P **P** **17 16 39.7 -0.1**
comp=Z,18nm,1.0s,SNR=8.7
BIOA Bad Ischl, Aus 87.34 326 eP **SKSac** **17 26 24.2 +2.1**
comp=Z,18nm,1.3s
PV22 Blue Mesa, Par 87.35 46 P **P** **17 16 39.2 -1.0**
PERS Pernice 87.35 325 i P **P** **17 16 39.4 -0.5**
PERS i 17 16 40.7
comp=Z,20nm,1.0s
PERS i pP **pP** **17 18 23.8 0.0**
PERS esP **sP** **17 19 11.9 +0.3**
PERS e 17 22 35.1
PERS i SKSac **SKSac** **17 26 18.1 -4.1**
PERS i SP **SPn** **17 27 41.8 -2.0**
PERS e 17 39 36.7
PV20 West Nyswonger 87.35 46 P **P** **17 16 40.2 -0.1**
PV20 IAmb IAmb 17 18 40.4
comp=Z,94nm,1.4s
SOKA Soboth 87.36 325 i P **P** **17 16 39.6 -0.4**
comp=Z,31nm,1.0s,SNR=17
SOKA Soboth 87.36 325 eP **SKSac** **17 26 19.1 -3.3**
comp=Z,10nm,1.9s
ESY Stoneypath 87.44 339⇑ eP **P** **17 16 39.8 -0.3**
PV11 David Mesa, Pa 87.44 46 P **P** **17 16 41.5 +0.8**
PV11 pP **pP** **17 18 21.3 -4.3**
PV11 IAmb IAmb 17 18 40.9
comp=Z,120nm,1.4s
INVG Invergeldie, C 87.44 340⇑ eP **P** **17 16 39.8 -0.2**
INVG IAmb IAmb 17 16 42.1
comp=Z,19nm,0.8s
113A Mohawk Valley, 87.49 53 P **P** **17 16 40.8 +0.1**
113A **pP** **17 18 24.6 -0.9**
PV07 Paradox Valley 87.50 46 P **P** **17 16 39.9 -1.1**
PV07 IAmb IAmb 17 18 41.2
comp=Z,100nm,1.8s
WUAZ Wupatki 87.50 50 P **P** **17 16 41.1 +0.1**
WUAZ Wupatki 87.50 50 P **P** **17 16 41.7 +0.7**
baz=306,SNR=12
WUAZ S **S** **17 26 43.4 +1.1**
baz=306
A051A Mrakovica 87.54 322 eP **P** **17 16 40.0 -0.8**
PV13 Radium Mtn., P 87.56 46 P **P** **17 16 41.4 +0.1**
PV13 IAmb IAmb 17 18 41.4
comp=Z,67nm,1.2s
BLY Banja Luka 87.57 322 eP **P** **17 16 40.7 -0.2**
LIT Litokhoron 87.59 316 P **P** **17 16 39.7 -1.4**
LIT pP **pP** **17 18 23.2 -1.8**
N23A Red Feather La 87.60 43 P **P** **17 16 42.5 +1.0**
N23A IAmb IAmb 17 16 44.2
comp=Z,97nm,1.1s
N23A Red Feather La 87.60 43 P **P** **17 16 43.0 +1.5**
baz=309,SNR=37
N23A S **S** **17 26 44.7 +1.4**
baz=309
PHWY Pilot Hill 87.63 42 P **P** **17 16 41.9 +0.3**
PHWY IAmb IAmb 17 16 43.7
comp=Z,51nm,1.1s
PHWY **pP** **17 18 24.1 -2.2**
PV15 Paradox Valley 87.66 46 P **P** **17 16 40.9 -0.8**
EBL Broad Law 87.69 339 eP **P** **17 16 40.8 -0.4**
OBKA Obir 87.72 325 eP **P** **17 16 40.2 -1.5**
OBKA Obir 87.72 325 eP **P** **17 16 40.6 -1.1**
comp=Z,8.8nm,1.0s
EAB Aberfoyle 87.73 340 eP **P** **17 16 41.0 -0.4**
CRES Cresnjev 87.74 324 eP **P** **17 16 40.8 -0.9**

CRES Cresnjev 87.74 324 i P **P** **17 16 41.0 -0.7**
CRES i SKSac **SKSac** **17 26 21.0 -3.4**
MGRS Mrkonjic Grad 87.84 322 eP **P** **17 16 42.5 +0.3**
AGMN Agassiz Nation 87.91 33 P **P** **17 16 42.0 -0.3**
AGMN IAmb IAmb 17 16 43.6
comp=Z,62nm,1.1s
AGMN Agassiz Nation 87.91 33 P **P** **17 16 42.6 +0.2**
baz=316
AGMN Agassiz Nation 87.91 33 P **P** **17 16 42.4 0.0**
baz=316,SNR=13
KBA Koelnbreinsper 87.92 326 eP **P** **17 16 42.0 -0.7**
comp=Z,12nm,1.2s
KBA Koelnbreinsper 87.92 326 i P **SKSac** **17 26 25.4 -0.4**
comp=Z,37nm,1.5s,SNR=9.7
TBI Tubuai 87.94 119 eP **P** **17 16 43.8 +0.9**
comp=Z,42nm,25.8s
TBI epP **pP** **17 18 28.0 +0.5**
comp=Z,72nm,26.2s
TBI eS **S** **17 26 44.9 -1.3**
comp=Z,214nm,30.5s
TBI eLR LR 17 45 27.5
comp=Z,318nm,24.5s
PDG Podgorica 87.97 319 P **P** **17 16 41.5 -1.3**
LAWE Loch Awe, Argy 87.98 340⇑ eP **P** **17 16 42.2 -0.3**
LAWE IAmb IAmb 17 16 43.4
comp=Z,66nm,1.1s
LJU Ljubljana 88.06 324 i P **P** **17 16 42.4 -0.7**
LJU i 17 16 44.6
comp=Z,14nm,0.8s
LJU eSKSac **SKSac** **17 26 22.6 -3.7**
LJU e 17 26 42.3
LJU i SP **SP** **17 27 50.5 -1.5**
BOJS Bojanci 88.06 324 eP **P** **17 16 42.7 -0.5**
SMCO Snowmass 88.07 45 P **P** **17 16 42.1 -1.7**
SMCO IAmb IAmb 17 18 44.8
comp=Z,103nm,1.7s
MYKA Terra Mystica 88.09 325 eP **P** **17 16 42.5 -0.9**
comp=Z,6.0nm,0.6s
MYKA Terra Mystica 88.09 325 eP **SKSac** **17 26 20.9 -5.7**
comp=Z,8.0nm,1.1s
A050A Klekovaca 88.09 322 eP **P** **17 16 43.0 -0.4**
PGBU Glenifferbraes 88.10 340 eP **P** **17 16 43.2 +0.1**
PGBU IAmb IAmb 17 16 44.2
comp=Z,111nm,1.1s
X16A Lo Mia Camp, P 88.11 51 P **P** **17 16 43.9 +0.1**
X16A pP **pP** **17 18 26.9 -2.0**
ESK Eskdalemuir 88.13 339 eP **P** **17 16 42.2 -1.0**
ESK IAmb IAmb 17 16 44.0
comp=Z,21nm,1.0s
ESK Eskdalemuir 88.13 339 P **P** **17 16 43.1 -0.1**
ESK IAmb IAmb 17 18 35.5
comp=Z,70nm,1.4s
ESK Eskdalemuir 88.13 339 P **P** **17 16 43.1 -0.1**
ESK pmax pmax
comp=Z,70nm,1.4s
EDMD Edmundbyers 88.14 338 eP **P** **17 16 42.3 -1.0**
EDMD IAmb IAmb 17 16 43.8
comp=Z,47nm,1.4s
DRME Dracevica, Mon 88.17 319 eP **P** **17 16 42.6 -1.2**
D32A Dogwood Acres, 88.19 34 P **P** **17 16 43.4 -0.3**
D32A IAmb IAmb 17 16 45.0
comp=Z,83nm,0.8s
D32B Dogwood Acres, 88.19 34 P **P** **17 16 44.1 +0.4**
baz=315
PRED Cave del Predi 88.26 325 P **P** **17 16 42.6 -1.6**
CEY Cerknica 88.32 324 eP **P** **17 16 44.0 -0.4**
MVCO Mesa Verde 88.34 47 P **P** **17 16 44.4 -0.6**
MVCO Mesa Verde 88.34 47 P **P** **17 16 45.4 +0.5**
baz=308
MVCO S **S** **17 26 49.8 -0.4**
baz=308
IVI Ivigtut 88.37 3 P **P** **17 16 43.3 -0.9**
IVI IAmb IAmb 17 16 44.8
comp=Z,55nm,1.0s
IVI Ivigtut 88.37 3 eP **P** **17 16 43.7 -0.5**
IVI IAmb IAmb 17 16 45.1
comp=Z,62nm,1.1s
RICI Ricice 88.44 321 i P **P** **17 16 44.1 -0.9**
UDBI Udbina 88.47 323 i P **P** **17 16 44.5 -0.7**
KIJV Kijevo 88.48 322 i P **P** **17 16 44.4 -0.8**
ISCO Idaho Springs 88.49 44 P **P** **17 16 46.6 +0.9**
ISCO pP **pP** **17 18 29.2 -1.4**
ISCO Idaho Springs 88.49 44 P **P** **17 16 46.9 +1.2**
baz=310,SNR=14
ISCO Idaho Springs 88.49 44 P **P** **17 16 46.8 +1.1**
baz=310,SNR=14
ISCO S **S** **17 26 52.7 +1.1**
baz=310
STON Ston 88.55 321 eP P 17 16 39.2 -6.2
ABTA Abfaltersbach 88.56 326 i P **P** **17 16 44.5 -1.1**
comp=Z,38nm,1.2s,SNR=14
BTNL Ternell 88.57 332 dP **P** **17 16 44.9 -0.5**
comp=Z,5.5nm,1.0s
CLUD Cludinico 88.58 325 P **P** **17 16 44.1 -1.5**
CLUD IAmb IAmb 17 16 46.0
comp=Z,46nm,1.0s
WATA Walderalm 88.58 327 i P **P** **17 16 45.0 -0.7**
comp=Z,16nm,1.1s,SNR=5.7
WATA Walderalm 88.58 327 eP **SKSac** **17 26 27.9 -1.7**
comp=Z,14nm,1.6s
WTTA Wattenberg 88.61 327 i P **P** **17 16 45.3 -0.6**
comp=Z,17nm,0.7s,SNR=8.9
WTTA Wattenberg 88.61 327 eP **SKSac** **17 26 28.5 -1.4**
comp=Z,25nm,1.7s
MEM Membach 88.61 332 dP **P** **17 16 45.1 -0.5**
comp=Z,7.2nm,0.9s
NEWG New Galloway 88.61 339 eP **P** **17 16 44.8 -0.7**
NEWG IAmb IAmb 17 16 46.1
comp=Z,35nm,1.1s
214A Organ Pipe Nat 88.61 53 P **P** **17 16 46.3 +0.2**
214A Organ Pipe Nat 88.61 53 P **P** **17 16 46.9 +0.8**
baz=306,SNR=8.7
214A S **S** **17 26 52.1 -0.4**
baz=306
STU Stuttgart 88.63 329 P **P** **17 16 45.2 -0.5**
STU Stuttgart 88.63 329 P **P** **17 16 45.2 -0.5**
STU pmax pmax
comp=Z,34nm,1.0s
SKDS Skadanscina 88.66 324 eP **P** **17 16 44.8 -1.2**
HPK Haverah Park 88.76 337 eP **P** **17 16 46.3 +0.1**
HPK IAmb IAmb 17 16 47.2
comp=Z,82nm,1.2s
MOTA Moosalm 88.80 327 i P **P** **17 16 46.1 -0.7**
comp=Z,19nm,1.2s,SNR=7.8
MOTA Moosalm 88.80 327 i P **SKSac** **17 26 28.2 -2.8**
comp=Z,29nm,1.7s,SNR=6.8
BHOU Houvegnez 88.80 331 dP **P** **17 16 46.5 0.0**
STAL STALIGIAL 88.81 325 P **P** **17 16 44.9 -1.8**
BSTI Sart Tilman 88.81 332 dP **P** **17 16 46.6 +0.1**
W18A Petrified Fore 88.81 49 P **P** **17 16 45.1 -2.0**
W18A Petrified Fore 88.81 49 P **P** **17 16 48.1 +0.9**
baz=307,SNR=5.9
W18A S **S** **17 26 55.2 +0.7**
baz=307
B35A Bob, Littlefor 88.84 32 P **P** **17 16 46.6 -0.1**
B35A IAmb IAmb 17 16 48.5
comp=Z,150nm,1.4s
B35A Bob, Littlefor 88.84 32 P **P** **17 16 47.1 +0.4**
baz=318,SNR=20
SQTA Sankt Quirin 88.84 327 i P **P** **17 16 46.3 -0.6**
comp=Z,18nm,1.2s,SNR=8.7
SQTA Sankt Quirin 88.84 327 i P **SKSac** **17 26 29.9 -1.2**
comp=Z,28nm,1.5s,SNR=5.3
RETA Reutte 88.86 327 i P **P** **17 16 46.5 -0.4**
comp=Z,28nm,1.1s,SNR=15
RETA Reutte 88.86 327 eP **SKSac** **17 26 31.0 -0.1**
comp=Z,14nm,1.7s
CIMO Cimolais 88.90 326 P **P** **17 16 45.1 -2.0**
CIMO IAmb IAmb 17 16 47.0
comp=Z,23nm,1.1s
MORI Morici 88.95 322 i P **P** **17 16 45.6 -1.7**
VIRC Vir 89.00 323 i P **P** **17 16 46.3 -1.2**
X18A Snowflake 89.03 50 P **P** **17 16 48.5 +0.3**
BCLA Clavier 89.04 332 dP **P** **17 16 47.0 -0.6**
comp=Z,6.6nm,0.0s
S22A 4UR Ranch, Cre 89.05 46 P **P** **17 16 49.2 +0.9**
S22A 4UR Ranch, Cre 89.05 46 P **P** **17 16 49.7 +1.3**
baz=309,SNR=20
S22A S **S** **17 26 57.0 +0.1**
baz=309
SUSD Miller 89.11 37 P **P** **17 16 48.4 +0.2**
SUSD Miller 89.11 37 P **P** **17 16 48.5 +0.4**
baz=314,SNR=7.1
SUSD Miller 89.11 37 P **P** **17 16 48.6 +0.5**
baz=314,SNR=7.1

SUSD S **S** **17 26 55.2 -1.4**
baz=314
FETA Feichten 89.21 327 i P **P** **17 16 48.1 -0.6**
comp=Z,27nm,1.0s,SNR=15
FETA Feichten 89.21 327 i P **SKSac** **17 26 26.5 -6.8**
comp=Z,37nm,1.6s,SNR=8.0
LBWR Ladybower, Pea 89.25 337⇑ eP **P** **17 16 48.5 0.0**
LBWR IAmb IAmb 17 16 49.3
comp=Z,125nm,1.0s
WLF Walferdange 89.27 331 P **P** **17 16 47.5 -1.2**
WLF Walferdange 89.27 331 P **P** **17 16 47.5 -1.2**
WLF pmax pmax
comp=Z,27nm,1.1s
WLF Walferdange 89.27 331 dP **P** **17 16 48.4 -0.3**
comp=Z,11nm,1.2s
RCHB Rochefort 89.27 332 dP **P** **17 16 48.0 -0.7**
comp=Z,7.6nm,0.0s
Q24A Divide 89.30 44 P **P** **17 16 47.9 -1.6**
Q24A **pP** **17 18 31.6 -3.0**
Q24A Divide 89.30 44 P **P** **17 16 50.2 +0.8**
baz=310,SNR=8.2
Q24A S **S** **17 26 59.7 +0.6**
baz=310
BFO Black Forest 89.34 329 P **P** **17 16 48.1 -1.0**
BFO IAmb IAmb 17 16 50.3
comp=Z,54nm,1.3s
BFO pP **pP** **17 18 31.6 -1.8**
BFO Black Forest 89.34 329 P **P** **17 16 48.1 -1.0**
BFO *PP **pP** **17 18 31.6 -1.8**
BFO pmax pmax
comp=Z,54nm,1.3s
BMRD Maredsous 89.35 332 kP **P** **17 16 48.6 -0.4**
comp=Z,11nm,1.1s
DAVA Damuels 89.41 328 i P **P** **17 16 49.4 -0.3**
comp=Z,41nm,0.9s,SNR=19
DAVA Damuels 89.41 328 eP **SKSac** **17 26 27.3 -7.2**
comp=Z,7.8nm,1.4s
IOMK Kirk Michael 89.44 339 eP **P** **17 16 49.1 -0.3**
IOMK IAmb IAmb 17 16 50.0
comp=Z,136nm,1.1s
F33A 5 Mile Ranch, 89.47 35 P **P** **17 16 50.0 +0.3**
F33A pP **pP** **17 18 34.4 -0.4**
F33A 5 Mile Ranch, 89.47 35 P **P** **17 16 50.5 +0.8**
baz=316,SNR=40
WIM Isle of Man 89.57 339⇑ eP **P** **17 16 49.7 -0.4**
DOU Dourbes 89.58 332 dP **P** **17 16 49.5 -0.6**
comp=Z,6.3nm,1.2s
CWF Charnwood Fore 89.66 337 eP **P** **17 16 48.8 -1.6**
FUORN Ofenpass-Fuorn 89.72 327 P **P** **17 16 50.5 -0.7**
TUC Tucson 89.80 52 P **P** **17 16 51.5 0.0**
TUC pP **pP** **17 18 34.6 -2.4**
TUC Tucson 89.80 52 P **P** **17 16 51.6 0.0**
TUC *PP **pP** **17 18 34.6 -2.4**
TUC pmax pmax
comp=Z,18nm,1.2s
TUC Tucson 89.80 52 P **P** **17 16 52.6 +1.0**
baz=307
TUC S **S** **17 27 03.2 -0.2**
baz=307
OGNE Ogallala 89.82 41 P **P** **17 16 50.3 -1.3**
OGNE IAmb IAmb 17 16 53.2
comp=Z,90nm,0.9s
OGNE pP **pP** **17 18 36.1 -0.7**
OGNE Ogallala 89.82 41 P **P** **17 16 52.3 +0.7**
baz=312,SNR=9.4
OGNE Ogallala 89.82 41 P **P** **17 16 52.1 +0.5**
baz=312,SNR=9.4
OGNE S **S** **17 27 02.0 -1.2**
baz=312
SDCO Great Sand Dun 89.86 45 P **P** **17 16 52.8 +0.7**
SDCO pP **pP** **17 18 36.3 -1.0**
SDCO Great Sand Dun 89.86 45 P **P** **17 16 53.1 +1.1**
baz=310
SDCO Great Sand Dun 89.86 45 P **P** **17 16 53.2 +1.1**
baz=310,SNR=28
SDCO S **S** **17 27 03.9 -0.3**
baz=310
GMM Mts of Mourne 89.88 340⇑ eP **P** **17 16 51.0 -0.4**
ECH Echery 89.94 330 P **P** **17 16 51.1 -0.8**
ECH pP **pP** **17 18 33.0 -3.3**
TEOL Teolo 89.96 325 P **P** **17 16 51.4 -0.6**
WME Myndd Eilian 90.10 338⇑ eP **P** **17 16 52.2 -0.2**
EYMN Ely 90.14 31 P **P** **17 16 51.3 -1.5**
EYMN IAmb IAmb 17 16 54.6
comp=Z,105nm,1.3s
EYMN Ely 90.14 31 P **P** **17 16 53.4 +0.6**
baz=319,SNR=13
EYMN Ely 90.14 31 P **P** **17 16 53.3 +0.5**
baz=319,SNR=13
EYMN S **S** **17 27 03.9 -1.8**
baz=319
WPS Cemaes, Angles 90.16 339 eP **P** **17 16 51.5 -1.1**
WPS IAmb IAmb 17 16 53.2
comp=Z,49nm,1.3s
FOEL Foel Wylfa 90.17 338⇑ eP **P** **17 16 51.8 -1.0**
FOEL IAmb IAmb 17 16 52.6
comp=Z,132nm,1.2s
ILTH Belurgan, Co L 90.18 340 eP **P** **17 16 51.9 -0.8**
WLF1 Llynfaes 90.22 338⇑ eP **P** **17 16 52.5 -0.5**
WLF1 IAmb IAmb 17 16 53.7
comp=Z,156nm,1.0s
LLW Llanuwychllyn 90.36 338 eP **P** **17 16 52.8 -0.9**
LLW IAmb IAmb 17 16 54.4
comp=Z,28nm,1.0s
HLM1 Long Mynd 90.38 337⇑ eP **P** **17 16 53.4 -0.3**
HLM1 IAmb IAmb 17 16 54.2
comp=Z,43nm,1.3s
K31A O'Neill 90.48 38 P **P** **17 16 54.9 +0.4**
K31A O'Neill 90.48 38 P **P** **17 16 55.2 +0.7**
baz=314,SNR=5.7
KSCO Kaye Shedlock' 90.76 43 P **P** **17 16 56.5 +0.4**
KSCO IAmb IAmb 17 16 57.9
comp=Z,91nm,1.4s
KSCO Kaye Shedlock' 90.76 43 P **P** **17 16 56.5 +0.4**
baz=312
F36A Milaca 90.78 33 P **P** **17 16 55.4 -0.4**
F36A IAmb IAmb 17 16 57.1
comp=Z,61nm,1.5s
F36A Milaca 90.78 33 P **P** **17 16 55.9 +0.1**
baz=318,SNR=12
ECSD EROS Data Cent 90.81 36 P **P** **17 16 55.8 -0.2**
ECSD IAmb IAmb 17 16 57.5
comp=Z,47nm,1.1s
ECSD EROS Data Cent 90.81 36 P **P** **17 16 56.4 +0.3**
baz=316,SNR=32
ECSD EROS Data Cent 90.81 36 P **P** **17 16 56.3 +0.3**
baz=316,SNR=32
MCH1 Michaelchurch 90.85 337 eP **P** **17 16 55.5 -0.4**
MCH1 IAmb IAmb 17 16 56.5
comp=Z,169nm,1.4s
T25A Trinidad 90.92 45 P **P** **17 16 54.0 -3.0**
T25A Trinidad 90.92 45 P **P** **17 16 57.8 +0.8**
baz=310,SNR=16
T25A S **S** **17 27 14.1 +0.5**
baz=310
MONM Monmouth 90.92 337 eP **P** **17 16 55.8 -0.5**
MONM IAmb IAmb 17 16 56.8
comp=Z,66nm,0.8s
NRCA Norcia 91.03 323 P **P** **17 16 56.6 -0.5**
ANMO Albuquerque 91.04 48 P **P** **17 16 58.2 +0.8**
ANMO IAmb IAmb 17 17 00.2
comp=Z,30nm,0.8s
ANMO Albuquerque 91.04 48 c iP **P** **17 16 58.4 +0.9**
ANMO pmax pmax
comp=Z,38nm,0.9s
ANMO Albuquerque 91.04 48 P **P** **17 16 58.6 +1.1**
baz=309,SNR=47
ANMO Albuquerque 91.04 48 P **P** **17 16 58.4 +0.9**
baz=309
E38A The Farm, Brul 91.13 32 P **P** **17 16 57.5 +0.1**
E38A IAmb IAmb 17 16 58.6
comp=Z,49nm,0.8s
E38A pP **pP** **17 18 42.2 -0.5**
E38A The Farm, Brul 91.13 32 P **P** **17 16 57.8 +0.4**
baz=319,SNR=10.0
SENIN Lac Senin/Sane 91.28 328 P **P** **17 16 57.6 -0.8**
Y22A Socorro 91.34 49 P **P** **17 16 59.7 +0.9**
baz=309,SNR=9.9
319A Douglas 91.38 52 P **P** **17 16 60.0 +1.0**
319A IAmb IAmb 17 17 01.2
comp=Z,52nm,0.9s
BNM Barren Site 91.43 48 P **P** **17 16 59.9 +0.6**
RSBS Rosebush, Pemb 91.47 338 eP **P** **17 16 58.0 -0.8**
RSBS IAmb IAmb 17 16 59.3
comp=Z,34nm,1.0s

CRNM Carthage 91.48 49 P P 17 17 00.2 +0.7
SPMN Marine on St. 91.59 33 P P 17 16 59.3 -0.3
SPMN IAmb IAmb 17 17 01.0
comp=Z,34nm,0.8s
SPMN Marine on St. 91.59 33 P P 17 16 59.8 +0.3
baz=318
HSIG 91.64 55 P P 17 17 00.5 +0.4
HSIG IAmb IAmb 17 17 02.2
comp=Z,44nm,1.0s
BGNE Belgrade 91.65 39 P P 17 16 59.5 -0.4
BGNE Belgrade 91.65 39 P P 17 17 00.1 +0.2
baz=314,SNR=6.1
BGNE Belgrade 91.65 39 P P 17 16 59.9 0.0
baz=314,SNR=6.1
BGNE S S 17 27 18.0 -1.4
baz=314
121A Cookes Peak, D 91.68 50 P P 17 17 01.5 +1.1
121A Cookes Peak, D 91.68 50 P P 17 17 01.7 +1.3
baz=308,SNR=24
121A Cookes Peak, D 91.68 50 P P 17 17 01.6 +1.1
baz=308,SNR=24
121A S S 17 27 19.3 -1.1
baz=308
IWEX Carrickbyrne, 91.75 339 eP P 17 16 59.4 -0.7
D41A Chassel 92.09 30 P P 17 17 02.1 +0.4
D41A IAmb IAmb 17 18 50.2
comp=Z,106nm,1.4s
CLF Chambon-Foret 92.16 332 P P 17 17 01.8 -0.3
CLF IAmb IAmb 17 17 03.1
comp=Z,106nm,1.4s
L34A Svendsen Farm, 92.19 37 P P 17 17 02.5 +0.1
L34A Svendsen Farm, 92.19 37 P P 17 17 02.6 +0.2
baz=316,SNR=13
I37A Lemond, Waseca 92.20 34 P P 17 17 02.8 +0.4
I37A pP 17 18 46.0 -1.7
I37B Waseca 92.20 34 P P 17 17 03.1 +0.7
baz=318,SNR=15
SCHQ Schefferville 92.28 14 P P 17 17 02.6 +0.1
comp=Z,23nm,0.8s,baz=355,slow=5.1,SNR=21
SCHQ PKKPbc PKKPbc 17 34 13.3 -2.4
comp=Z,5.9nm,0.8s,baz=228,slow=4.7,SNR=5.3
comp=Z,23nm,0.8s
SCHQ Schefferville 92.28 14 P P 17 17 02.5 -0.1
SCHQ IAmb IAmb 17 17 03.7
comp=Z,27nm,0.8s
N33A J Bar K, Exete 92.49 39 P P 17 17 03.3 -0.5
N33A IAmb IAmb 17 17 04.5
comp=Z,45nm,0.8s
BNI Bardonecchia 92.56 328 P P 17 17 02.8 -1.4
BNI Bardonecchia 92.56 328 P P 17 17 02.8 -1.4
BNI pmax pmax
comp=Z,29nm,1.3s
CBKS Cedar Bluff 92.56 41 P P 17 17 03.8 -0.4
CBKS IAmb IAmb 17 17 05.2
comp=Z,39nm,0.9s
CBKS Cedar Bluff 92.56 41 P P 17 17 03.8 -0.4
CBKS pmax pmax
comp=Z,39nm,0.9s
CBKS Cedar Bluff 92.56 41 P P 17 17 04.4 +0.2
baz=313
CBKS Cedar Bluff 92.56 41 P P 17 17 03.9 -0.3
baz=313
COWI Conover 92.59 31 P P 17 17 04.0 -0.1
COWI IAmb IAmb 17 18 52.1
comp=Z,40nm,1.3s
COWI Conover 92.59 31 P P 17 17 04.7 +0.6
baz=321
CEL Celeste 92.67 318 P P 17 17 04.1 -0.6
CEL IAmb IAmb 17 17 06.7
comp=Z,35nm,1.0s
G40A Rib Lake 92.76 32 P P 17 17 05.1 +0.1
G40A IAmb IAmb 17 17 06.4
comp=Z,28nm,0.8s
G40A Rib Lake 92.76 32 P P 17 17 05.3 +0.3
baz=320,SNR=9.1
JSA Saint Aubin 92.91 335 eP P 17 17 04.6 -0.8
JSA IAmb IAmb 17 17 05.9
comp=Z,39nm,0.9s
E43A Lone Tree Farm 93.30 29 P P 17 17 07.3 -0.1
E43A IAmb IAmb 17 17 08.7
comp=Z,39nm,0.8s
E43A Lone Tree Farm 93.30 29 P P 17 17 07.7 +0.3
baz=323
SSB Saint Sauveur 93.35 329 P P 17 17 07.0 -0.7
SSB Saint Sauveur 93.35 329 P P 17 17 07.0 -0.7
SSB pmax pmax
comp=Z,34nm,1.4s
N35A Tabor 93.37 38 P P 17 17 07.2 -0.6
N35A IAmb IAmb 17 17 09.3
comp=Z,50nm,0.9s
N35A Tabor 93.37 38 P P 17 17 08.7 +0.8
baz=316,SNR=6.9
K38A Parkersburg 93.52 35 P P 17 17 08.6 +0.1
K38A IAmb IAmb 17 17 10.0
comp=Z,135nm,1.9s
K38A Parkersburg 93.52 35 P P 17 17 08.7 +0.2
baz=318
I40A Norwalk 93.62 33 P P 17 17 08.0 -0.9
I40A IAmb IAmb 17 17 10.1
comp=Z,24nm,0.9s
I40A Norwalk 93.62 33 P P 17 17 09.0 +0.1
baz=320
MNTX Cornudas Mount 93.79 50 P P 17 17 10.3 +0.4
MNTX Cornudas Mount 93.79 50 P P 17 17 10.6 +0.6
baz=310,SNR=14
MNTX Cornudas Mount 93.79 50 P P 17 17 10.6 +0.6
baz=310,SNR=14
SCIA State Center 93.85 36 P P 17 17 10.4 +0.4
SCIA IAmb IAmb 17 17 11.9
comp=Z,54nm,0.9s
SCIA State Center 93.85 36 P P 17 17 11.0 +1.0
baz=318
SCIA State Center 93.85 36 P P 17 17 10.6 +0.6
baz=318
MSTX Muleshoe 94.00 47 P P 17 17 10.9 -0.1
baz=311
AMTX Amarillo 94.07 45 P P 17 17 11.8 +0.5
AMTX IAmb IAmb 17 19 03.0
comp=Z,47nm,1.2s
AMTX Amarillo 94.07 45 P P 17 17 12.2 +1.0
baz=312,SNR=7.2
AMTX Amarillo 94.07 45 P P 17 17 11.9 +0.6
baz=312
KSU1 Kansas State U 94.11 39 P P 17 17 11.2 +0.1
KSU1 Kansas State U 94.11 39 P P 17 17 11.6 +0.4
baz=315,SNR=17
KSU1 Kansas State U 94.11 39 P P 17 17 11.3 +0.1
baz=315,SNR=17
GDL2 Guadalupe Moun 94.13 49 P P 17 17 11.1 -0.5
CLN7 Carlsbad 7 94.35 48 P P 17 17 12.5 -0.1
I42A Draeger Farm, 94.41 32 P P 17 17 12.1 -0.4
I42A IAmb IAmb 17 17 13.8
comp=Z,32nm,1.0s
I42A Draeger Farm, 94.41 32 P P 17 17 12.7 +0.3
baz=321
E46A Sault Ste Mari 94.41 28 P P 17 17 12.2 -0.2
E46A IAmb IAmb 17 17 13.8
comp=Z,49nm,1.0s
E46A Sault Ste Mari 94.41 28 P P 17 17 12.8 +0.4
baz=325
JFWS Jewell Farm 94.54 33 P P 17 17 13.2 +0.1
JFWS IAmb IAmb 17 17 13.9
comp=Z,23nm,0.8s
JFWS Jewell Farm 94.54 33 P P 17 17 13.2 +0.1
JFWS pmax pmax
comp=Z,23nm,0.9s
JFWS Jewell Farm 94.54 33 P P 17 17 13.0 -0.1
baz=320
KAN16 Harper SW Stat 94.61 42 P 17 17 14.0 +0.4
KAN16 IAmb IAmb 17 19 02.1
comp=Z,28nm,1.1s
ELIS Ellis County 94.63 43 P P 17 17 14.6 +0.9
ELIS IAmb IAmb 17 19 02.9
comp=Z,62nm,1.2s
KAN10 Anthony SW Sta 94.67 42 P 17 17 13.8 0.0
KAN10 IAmb IAmb 17 19 02.4
comp=Z,26nm,1.1s
L40A Anamosa 94.72 34 P P 17 17 13.5 -0.4
L40A IAmb IAmb 17 17 15.0
comp=Z,39nm,0.9s
L40A Anamosa 94.72 34 P P 17 17 13.2 -0.8
baz=319
KAN05 Bluff City Nor 94.80 42 P P 17 17 14.6 +0.2
KAN05 IAmb IAmb 17 19 03.1
comp=Z,38nm,1.1s
OK032 Salt Plains WL 94.82 42 P P 17 17 14.8 +0.3
OK032 IAmb IAmb 17 19 03.3
comp=Z,46nm,1.1s
KAN01 Argonia South 94.84 41 P 17 17 13.8 -0.8
KAN01 IAmb IAmb 17 19 03.3
comp=Z,33nm,1.1s
KAN14 Manchester OK 94.86 42 P 17 17 14.7 0.0
KS20 Mayfield South 94.90 41 P P 17 17 12.9 -2.0
KS20 IAmb IAmb 17 17 17.6
comp=Z,20nm,0.8s
KAN17 Caldwell West 94.91 42 P 17 17 14.6 -0.3
KAN17 IAmb IAmb 17 19 03.6
comp=Z,30nm,1.1s
KAN13 South Haven SW 95.10 41 P 17 17 15.7 0.0
KAN13 pP 17 18 58.4 -2.9
KAN13 IAmb IAmb 17 19 04.3
comp=Z,23nm,1.0s
CROK Carrier 95.16 42 P 17 17 14.5 -1.6
CROK IAmb IAmb 17 19 04.8
comp=Z,43nm,1.3s
P38A Dawn 95.38 37 P P 17 17 16.9 -0.1
P38A IAmb IAmb 17 17 18.2
comp=Z,30nm,0.8s
P38A Dawn 95.38 37 P P 17 17 17.0 +0.1
baz=318
BLOK Blackwell 95.42 41 P 17 17 17.6 +0.4
BLOK IAmb IAmb 17 19 05.9
comp=Z,25nm,1.0s
VLDQ Val d'Or 95.47 23 P P 17 17 16.2 -0.9
T35A Sooner Cattle 95.71 41 P P 17 17 18.9 +0.4
T35A IAmb IAmb 17 19 07.3
comp=Z,22nm,1.1s
WMOK Wichita Mounta 95.92 44 P P 17 17 19.6 +0.1
WMOK pP 17 19 03.5 -1.6
WMOK IAmb IAmb 17 19 08.2
comp=Z,28nm,1.2s
WMOK Wichita Mounta 95.92 44 P P 17 17 19.6 +0.1
WMOK *PP pP 17 19 03.5 -1.6
WMOK pmax pmax
comp=Z,28nm,1.3s
WMOK Wichita Mounta 95.92 44 P P 17 17 19.6 +0.1
baz=314
N41A Harden Midland 95.93 35 P P 17 17 19.2 -0.2
N41A IAmb IAmb 17 17 20.7
comp=Z,37nm,1.1s
N41A Harden Midland 95.93 35 P P 17 17 19.6 +0.2
baz=320
OK029 Liberty Lake 95.96 42 P P 17 17 18.8 -0.9
OK029 pP 17 19 05.2 0.0
OK029 IAmb IAmb 17 19 08.6
comp=Z,47nm,1.1s
P40A Paris 96.21 37 P P 17 17 20.5 -0.2
P40A IAmb IAmb 17 17 22.1
comp=Z,31nm,1.1s
P40A Paris 96.21 37 P P 17 17 20.9 +0.2
baz=319
TX31 Lajitas Ar. Si 96.43 51 P P 17 17 22.3 +0.3
TX31 Lajitas Ar. Si 96.43 51 P P 17 17 22.9 +0.8
baz=310
TX32 Lajitas Array 96.43 51 P P 17 17 22.2 +0.1
TX32 IAmb IAmb 17 19 11.4
comp=Z,35nm,1.1s
TXAR Lajitas Array 96.43 51 P P 17 17 22.7 +0.7
comp=Z,8.0nm,0.7s,baz=296,slow=2.9,SNR=72
TXAR pP pP 17 19 07.1 -0.9
comp=Z,20nm,0.8s,baz=298,slow=2.7,SNR=17
TXAR PKKPbc PKKPbc 17 34 05.7 +1.6
comp=Z,0.5nm,0.8s,baz=142,slow=6.3,SNR=4.6
comp=Z,8.0nm,0.7s
TXAR Lajitas Array 96.43 51 P P 17 17 22.1 0.0
DEOK Depew 96.48 42 P P 17 17 21.8 -0.2
DEOK IAmb IAmb 17 19 10.8
comp=Z,29nm,1.1s
HPIG 96.60 54 P P 17 17 22.9 0.0
HPIG IAmb IAmb 17 19 12.6
comp=Z,22nm,1.0s
HDIL Hopedale 96.81 34 P P 17 17 23.5 +0.1
HDIL IAmb IAmb 17 17 24.5
comp=Z,33nm,0.9s
HDIL Hopedale 96.81 34 P P 17 17 23.9 +0.6
baz=321
HDIL Hopedale 96.81 34 P P 17 17 23.4 +0.1
baz=321
HDIL S S 17 28 01.7 -2.3
baz=321
ABTX Abilene, Hawle 96.84 46 P P 17 17 23.3 -0.4
ABTX IAmb IAmb 17 19 16.3
comp=Z,65nm,1.4s
R40A Maddies Statio 97.02 37 P P 17 17 24.1 -0.2
R40A IAmb IAmb 17 17 25.3
comp=Z,15nm,0.8s
R40A Maddies Statio 97.02 37 P Pdif 17 17 24.4 +0.1
baz=318
U38A Gravette 97.24 40 P P 17 17 25.1 -0.3
HHAR Hobbs 97.60 40 P P 17 17 25.9 -1.2
CCM Cathedral Cave 97.73 37 P Pdif 17 17 27.2 -0.4
CCM IAmb IAmb 17 19 29.9
comp=Z,29nm,1.4s
CCM Cathedral Cave 97.73 37 P Pdif 17 17 27.2 -0.4
CCM pmax pmax
comp=Z,29nm,1.4s
CCM Cathedral Cave 97.73 37 P Pdif 17 17 27.3 -0.2
baz=319
CCM Cathedral Cave 97.73 37 Pdiff Pdif 17 17 27.2 -0.4
baz=319
CCM S S 17 28 09.9 -1.9
baz=319
SADO Sadowa 97.75 26 P Pdif 17 17 27.3 -0.1
comp=Z,4.1nm,0.7s,baz=290,slow=8.1,SNR=3.2
comp=Z,4.1nm,0.7s
Z35A Perchaven, San 97.81 44 P Pdif 17 17 27.2 -0.8
MGMO Mountain Grove 97.87 38 P Pdif 17 17 27.5 -0.7
MGMO IAmb IAmb 17 19 29.9
comp=Z,21nm,1.3s
SFIN Lafayette 98.00 33 Pdiff Pdif 17 17 28.2 -0.5
baz=322
TRQ Mont Tremblant 98.08 22 Pdif Pdif 17 17 28.3 -0.7
TRQ IAmb IAmb 17 19 18.5
comp=Z,20nm,1.1s
KEST Kesra 98.16 320 P P 17 17 29.6 0.0
comp=Z,3.9nm,0.8s,baz=259,slow=6.7,SNR=3.7
KEST PP PP 17 21 37.5 +1.9
comp=Z,2.0nm,0.7s,baz=313,slow=5.0,SNR=3.7
comp=Z,3.9nm,0.8s
JCT Junction City 98.19 47 Pdiff P 17 17 30.0 +0.1
baz=313
O48B Farmland 98.99 32 Pdiff Pdif 17 17 32.5 -0.6
baz=324
MIAR Mount Ida 99.07 41 Pdif Pdif 17 17 33.1 -0.5
MIAR IAmb IAmb 17 19 22.4
comp=Z,12nm,1.1s
MIAR Mount Ida 99.07 41 P Pdif 17 17 33.1 -0.5
MIAR Mount Ida 99.07 41 P Pdif 17 17 33.9 +0.3
baz=317
MIAR Mount Ida 99.07 41 Pdiff Pdif 17 17 34.0 +0.3
baz=317
KMBO Kilima Mbogo 99.69 274 P Pdif 17 17 37.1 +0.1
comp=Z,3.2nm,0.9s,baz=34,slow=11,SNR=4.0
KMBO PP PP 17 21 50.5 +2.0
comp=Z,5.7nm,1.0s,baz=55,slow=10,SNR=5.1
comp=Z,3.2nm,0.9s
KMBO Kilima Mbogo 99.69 274 P Pdif 17 17 36.6 -0.3
P49A Miami Univ. Ec 99.77 32 Pdiff Pdif 17 17 36.1 -0.5
baz=324
OPO Ambohidratompo 99.77 254 P Pdif 17 17 37.3 +0.2
comp=Z,6.1nm,0.9s,baz=14,slow=5.7,SNR=5.4
comp=Z,6.1nm,0.9s
ACSO Alum Creek Sta 99.98 31 Pdiff Pdif 17 17 36.9 -0.6
baz=325
PBRG Braganca 100.87 334 ePP PP 17 21 57.3 +1.8
WVT Waverly 100.96 36 Pdiff Pdif 17 17 42.2 +0.2
baz=321
PGAV Gavieira, Arco 101.30 335 ePP PP 17 22 01.2 +2.5
PGAV eSKSac SKSac 17 27 35.6 -1.2
PGAV Gavieira, Arco 101.30 335 eLR LR 17 57 04.2
comp=Z,260nm,18.0s
OXF Oxford 101.38 38 Pdiff Pdif 17 17 43.7 -0.1
baz=320
MVO Moncorvo 101.53 334 ePP PKiKP 17 22 03.7 -1.7
MVO eSKSac SKSac 17 27 36.0 -1.9
MVO Moncorvo 101.53 334 eLR LR 17 58 44.4
comp=Z,373nm,18.0s
ESDC Sonseca Array 101.57 331 P Pdif 17 17 43.9 -0.8
comp=Z,0.8nm,0.7s,baz=27,slow=4.6,SNR=4.7
ESDC PP PP 17 21 59.1 -1.7
comp=Z,4.5nm,0.9s,baz=24,slow=7.2,SNR=7.4
POLO Lamas de Olo 101.64 334 ePP PP 17 22 02.2 +0.9
L61B Northampton 102.05 23 Pdiff Pdif 17 17 46.7 0.0
baz=334
MTE Manteigas 102.39 334 ePP PP 17 22 09.1 +2.3
MTE eSKSac SKSac 17 27 46.1 +4.2
MTE Manteigas 102.39 334 eLR LR 18 03 51.3
comp=Z,355nm,18.0s
COI Coimbra 102.89 334 ePP PKiKP 17 22 16.1 +8.3
PAL Palisades 102.92 24 Pdiff Pdif 17 17 51.3 +0.8
baz=332
PCAS Casmilo, Conde 103.05 334 ePP PP 17 22 14.7 +3.1
PMRV Marv??o 103.17 333 ePP PP 17 22 15.7 +3.2
PMRV eSKSac SKSac 17 27 47.4 +1.9
PMRV Marv??o 103.17 333 eLR LR 18 04 22.5
comp=Z,419nm,18.0s
TKL Tuckaleechee C 103.34 34 Pdiff Pdif 17 17 52.5 0.0
comp=Z,1.2nm,0.4s,baz=245,slow=4.7,SNR=3.6
PSBE So Bento 103.64 334 ePP PP 17 22 18.8 +2.9
PESTR Estremoz 103.73 333 ePP PP 17 22 18.7 +2.0
PMTG Montargil 103.80 333 ePP PP 17 22 23.1 +6.0
PBAR Barrancos 104.11 332 ePP PP 17 22 21.7 +2.3
PMAFR Mafra 104.31 334 ePP PP 17 22 19.4 -1.4
PNCL Nicolau / Gran 104.75 333 ePP PP 17 22 29.5 +5.4
PCVE Castro Verde 104.98 333 ePP PP 17 22 29.0 +3.2
MBAR Mbarara 105.00 278 PP PP 17 22 27.6 -0.1
comp=Z,5.1nm,0.7s,baz=52,slow=10,SNR=6.7
PVAQ Vaqueiros 105.04 332 ePP PP 17 22 30.7 +4.4
PVAQ Vaqueiros 105.04 332 eLR LR 18 01 26.5
comp=Z,285nm,18.0s
PBDV Barranco-do-Ve 105.27 332 ePP PP 17 22 29.9 +2.0
PFVI Vila Bisbo 105.72 333 ePP PP 17 22 34.1 +2.9
MDT Midelt 107.59 327 PP PP 17 22 43.4 -1.6
comp=Z,2.0nm,0.8s,baz=79,slow=3.4,SNR=4.1
VNDA Vanda 108.87 175 PKiKP PKiKP 17 22 17.6 -0.1
comp=Z,1.5nm,0.8s,baz=306,slow=3.7,SNR=8.7
VNDA PP PP 17 22 54.1 -0.4
comp=Z,2.3nm,0.9s,baz=329,slow=7.2,SNR=7.1
VNDA PKKPbc PKKPbc 17 33 30.6 +1.5
comp=Z,0.3nm,0.7s,baz=222,slow=5.5,SNR=3.6
PMPST Porto Santo, M 112.09 337 ePP PP 17 23 19.9 +3.1
MAW Mawson 112.49 204 PKiKP PKiKP 17 22 24.9 +0.2
comp=Z,5.6nm,0.7s,baz=287,slow=1.4,SNR=7.7
MAW PP PP 17 23 20.5 +0.2
comp=Z,26nm,1.0s,baz=60,slow=9.8,SNR=12
PMOZ Porto Moniz, M 112.62 337 ePP PP 17 23 21.6 +1.0
PMOZ eSKSac SKSac 17 28 31.3 +5.2
LSZ Lusaka 114.36 266 PKP PKPdf 17 22 30.7 +0.7
comp=Z,4.7nm,0.5s,baz=30,slow=2.6,SNR=16
LSZ PP PP 17 23 34.3 -0.4
comp=Z,9.2nm,0.9s,baz=71,slow=8.2,SNR=12
LSZ SKP 17 25 20.7
comp=Z,14nm,0.8s,baz=52,slow=1.9,SNR=14
MATP Matopo 116.33 261 PKP PKPdf 17 22 33.5 -0.2
comp=Z,8.5nm,0.8s,baz=99,slow=2.0,SNR=18
MATP PP PP 17 23 51.3 +2.9
comp=Z,22nm,1.1s,baz=43,slow=7.4,SNR=10.0
MATP SKP 17 25 24.5
comp=Z,8.2nm,0.8s,baz=118,slow=2.8,SNR=6.8
MATP PKKPbc PKKPab 17 33 08.5 -0.6
comp=Z,1.9nm,0.8s,baz=318,slow=2.6,SNR=3.6
TOA0 Torodi Ar. Sit 119.41 309 PKPdf 17 22 38.7 -1.0
TORD Torodi Ar. Bea 119.41 309 PKP PKPdf 17 22 39.2 -0.5
comp=Z,7.7nm,0.8s,baz=7.3,slow=3.4,SNR=35
QSPA South Pole Qui 120.38 180 PKP PKPdf 17 22 39.9 -0.1
comp=Z,27nm,0.8s,baz=289,slow=0.6,SNR=79
QSPA PP PP 17 24 13.3 -1.5
comp=Z,19nm,1.1s,baz=308,slow=4.1,SNR=7.0
QSPA SKP 17 25 30.3
comp=Z,8.7nm,0.7s,baz=276,slow=1.1,SNR=6.8
QSPA PKKPbc PKKPab 17 32 48.4 -0.5
comp=Z,2.9nm,0.9s,baz=186,slow=1.2,SNR=7.1
QSPA South Pole Qui 120.38 180 PKPdf PKPdf 17 22 39.4 -0.7
LBTB Lobatse 120.61 257 PKP PKiKP 17 22 42.1 +0.2
comp=Z,24nm,0.7s,baz=110,slow=2.4,SNR=48
LBTB PP PP 17 24 19.3 +1.8
comp=Z,16nm,1.0s,baz=90,slow=11,SNR=3.6
LBTB Lobatse 120.61 257 PKPdf 17 22 41.3 -0.5
BOSA Boshof 122.18 254 PKP PKiKP 17 22 45.3 +0.3
comp=Z,15nm,0.8s,baz=78,slow=1.9,SNR=32
BOSA PP PP 17 24 30.4 +2.4
comp=Z,17nm,1.1s,baz=80,slow=10,SNR=5.2
TSUM Tsumeb 125.18 267 PKP PKPdf 17 22 50.8 +0.1
comp=Z,16nm,0.9s,baz=95,slow=2.6,SNR=25
TSUM SKP 17 25 42.3
comp=Z,10nm,0.8s,baz=39,slow=3.1,SNR=9.2
TSUM Tsumeb 125.18 267 PKiKP 17 22 51.5 +0.3
SJG San Juan 126.33 29 SKP 17 25 45.3
comp=Z,11nm,0.8s,baz=288,slow=3.6,SNR=3.1
DBIC Dimbokro 128.51 310 PKP PKPdf 17 22 57.2 +0.1
comp=Z,5.9nm,0.4s,baz=70,slow=3.1,SNR=20
DBIC SKPbc SKPbc 17 25 31.6
comp=Z,5.6nm,0.5s,baz=50,slow=3.2,SNR=8.6
DBIC Dimbokro 128.51 310 PKPdf 17 22 57.4 +0.2
DBIC Dimbokro 128.51 310 PKiKP PKPdf 17 22 57.4 +0.2
TIC Tomodi 128.64 310 ⇑*i*PKiKP PKiKP 17 22 57.9 -0.2
comp=Z,32nm,0.2s
TIC Toumodi 128.64 310 ⇓*i*P sPKPdf 17 25 31.6 -2.8
comp=Z,4.4nm,0.2s
KIC Kosan Boka 128.66 309 ⇑*i*PKiKP PKiKP 17 22 58.1 -0.1
comp=Z,11nm,0.4s
KIC Kosan Boka 128.66 309 ⇑*i*P sPKPdf 17 25 32.3 -2.1
comp=Z,10nm,0.4s
LIC Lamto 128.95 309 ⇑*i*PKiKP PKiKP 17 22 58.5 -0.3
comp=Z,19nm,0.2s
LIC Lamto 128.95 309 ⇑eP sPKPdf 17 25 33.5 -1.4
comp=Z,84nm,0.6s
UREC San Jos de Ur 130.20 46 eP SKPbc 17 25 36.8 -2.4
DABV Dabajuro 130.45 38 eP SKPbc 17 25 37.7 -2.3
CBOC Ciudad Bolivar 131.36 48 eP SKPbc 17 25 38.6 -4.9
HELC Santa Helena 131.41 47 eP SKPbc 17 25 41.4 -2.6
PTBC PUERTO BERRIO 131.81 45 eP SKPbc 17 25 42.3 -2.6
PLMC San Jos del P 131.91 49 eP SKPbc 17 25 45.1 -0.3
SDV Santo Domingo 132.15 39 PKP PKPdf 17 23 04.8 +0.5
comp=Z,4.7nm,0.3s,baz=168,slow=1.7,SNR=12
SDV pPKP pPKPdf 17 24 55.7 +0.3
comp=Z,5.0nm,0.5s,baz=252,slow=2.4,SNR=1.8
SDV SKPbc SKPbc 17 25 45.2 -1.1
comp=Z,52nm,1.0s,baz=314,slow=4.8,SNR=15
SDV Santo Domingo 132.15 39 PKPdf 17 23 04.7 +0.4
PAMC Pamplona, Colo 132.23 43 eP SKPbc 17 25 46.0 -0.9
TROLL Troll, Antarti 132.24 197 PKPdf PKiKP 17 23 03.3 -0.5
GUY2C Guyana, Caldas 132.26 47 eP SKPbc 17 25 46.0 -1.0
NORC Norcasia 132.31 47 eP SKPbc 17 25 46.0 -0.7
SOCV Socops 132.52 40 eP SKPbc 17 25 47.0 -0.4
BELA Belgrano 2 132.54 182 PKPdf PKPdf 17 23 02.4 -0.5
BARC Barichara 132.54 44 eP SKPbc 17 25 47.2 -0.5
YOTC Yotoco, Valle 132.56 50 eP SKPbc 17 25 47.0 -0.7
ANIL Santa Ana 132.79 48 eP SKPbc 17 25 47.9 -0.8
RUSC La Rusia 133.15 44 eP SKPbc 17 25 48.8 -1.3
ROSC El Rosal 133.21 47 PKP PKiKP 17 23 07.8 -0.1
comp=Z,9.1nm,0.3s,baz=25,slow=4.4,SNR=4.1
POPC Popayan, Colom 133.42 51 eP SKPbc 17 25 49.8 -0.9
BAUV El Baul 133.47 36 PKPdf PKPdf 17 23 05.4 -1.2
PRAC Prado 133.72 48 eP SKPbc 17 25 49.8 -1.6
SNAA Sanae 133.77 196 PKPdf PKPdf 17 23 05.6 +0.2
SNAA Sanae 133.77 196 PKhKP PKPpre 17 22 49.5
comp=Z,4.5nm,0.8s,baz=158,slow=3.6,SNR=23
SNAA PKP PKPdf 17 23 05.2 -0.3
comp=Z,15nm,1.0s,baz=144,slow=1.8,SNR=18
SNAA pPKP pPKPdf 17 24 56.4 -0.1
comp=Z,5.8nm,0.9s,baz=110,slow=7.7,SNR=3.4
SNAA SKPbc SKPbc 17 25 49.6 -0.1
comp=Z,74nm,1.1s,baz=105,slow=2.9,SNR=23
OTAV Otavalo 133.85 55 eP SKPbc 17 25 51.6 -0.7
GCUF Volcan Galeras 133.92 53 eP SKPbc 17 25 49.8 -2.9
VNA2 Neumayer--Watz 135.36 195 P PKPpre 17 22 55.3
baz=112,slow=2.7
VNA2 Neumayer--Watz 135.36 195 PKPdf PKPdf 17 23 09.0 +0.7
baz=108,slow=1.4
VNA2 Neumayer--Watz 135.36 195 Pdiff Pdif 17 20 15.2 +1.3
VNA3 Neumayer Olymp 135.63 194 P PKPpre 17 22 56.4
VNA3 Neumayer Olymp 135.63 194 PKPdf PKPdf 17 23 09.2 +0.3
VNA1 Neumayer--Stat 135.75 195 P PKPpre 17 22 56.5
VNA1 Neumayer--Stat 135.75 195 PKPdf PKPdf 17 23 09.7 +0.7
BOSC San Juan Bosco 136.14 59 PKPdf PKPdf 17 23 10.6 -1.1
ATAH Atahualpa 138.81 63 SKPbc SKPbc 17 26 07.5 +0.4
comp=Z,14nm,0.9s,baz=284,slow=4.9,SNR=11
SMAI San Martin Ant 139.71 166 PKPpre 17 23 09.6
BOAV Boa Vista 142.79 31 PKPpre 17 23 17.8
NNA Nana 142.96 68 PKP PKPdf 17 23 21.8 -2.1
comp=Z,13nm,0.4s,baz=204,slow=3.5,SNR=6.1
NNA SKPbc SKPbc 17 26 17.5 +0.3
comp=Z,10nm,0.6s,baz=337,slow=3.4,SNR=5.8
NNA Nana 142.96 68 PKPpre 17 23 18.5
MDP Montagnes des 143.09 18 PKP PKPbc 17 23 22.1 +0.2
comp=Z,12nm,0.8s,baz=342,slow=5.3,SNR=5.2

MDP				SKPbc	**SKPbc**	**17 26 17.4**	**-0.2**		
	comp=Z,18nm,1.0s,baz=6.6,slow=4.1,SNR=4.4								
PMSA	**Palmer Station**	**143.20**	**165**		PKPpre	17 23 20.5			
CZSB	**Cruzeiro do Su**	**143.46**	**58**	PKPdf	PKPab	17 23 22.7	-0.1		
CZSB	**Cruzeiro do Su**	**143.46**	**58**	*eP*	PKPbc	17 23 23.6	+0.6		
SHEL	**Horse Pasture**	**143.69**	**285**	PKPdf	PKPbc	17 23 24.3	+0.6		
SHEL	**Horse Pasture**	**143.69**	**285**	PKIKP	PKPbc	17 23 24.3	+0.6		
MACA	**Manacapuru-AM**	**147.56**	**36**		**PKPdf**	**17 23 32.2**	**+0.5**		
MACA	**Manacapuru-AM**	**147.56**	**36**	*eP*	**PKPdf**	**17 23 32.5**	**+0.8**		
MALB	**Monte Alegre**	**149.17**	**24**	*eP*	**PKPdf**	**17 23 34.4**	**+0.1**		
GO10	**Punta Arenas**	**149.22**	**145**		**PKiKP**	**17 23 38.8**	**-0.2**		
MG05	**Puerto Natales**	**149.30**	**142**		**PKPdf**	**17 23 34.2**	**+0.9**		
ETMB	**Extrema**	**149.50**	**52**	PKPdf	**PKPdf**	**17 23 34.6**	**-0.1**		
GO09	**Cerro Castillo**	**149.60**	**141**		**PKPdf**	**17 23 34.5**	**+0.7**		
ORCD	**Orcadas**	**149.83**	**177**	PKPdf	**PKPdf**	**17 23 32.0**	**-1.8**		
ORCD				PKPbc	**PKPbc**	**17 23 37.6**	**-1.6**		
SAML	**Samuel**	**150.85**	**47**		**PKPdf**	**17 23 37.1**	**+0.2**		
SAML	**Samuel**	**150.85**	**47**	PKIKP	**PKPdf**	**17 23 37.1**	**+0.2**		
ITTB	**Itaituba**	**150.91**	**29**	*eP*	**PKPdf**	**17 23 36.7**	**-0.4**		
PB12	**IPOC Station P**	**151.82**	**71**	PKPdf	**PKPdf**	**17 23 38.3**	**0.0**		
LPAZ	**La Paz**	**152.32**	**65**	PKP	**PKPdf**	**17 23 40.2**	**+0.5**		
	comp=Z,3.3nm,0.9s,baz=352,slow=2.3,SNR=11								
LPAZ				PKPbc	**PKiKP**	**17 23 47.8**	**+0.6**		
	comp=Z,7.7nm,0.5s,baz=350,slow=2.8,SNR=22								
LPAZ				pPKPbc	**pPKPbc**	**17 25 35.8**	**-2.6**		
	comp=Z,14nm,1.0s,baz=268,slow=6.5,SNR=3.5								
LPAZ	**La Paz**	**152.32**	**65**	PKPdf	**PKPdf**	**17 23 39.3**	**-0.4**		
LPAZ	**La Paz**	**152.32**	**65**	*eP*	**PKPdf**	**17 23 37.5**	**-2.3**		
COYC	**Coyhaique**	**152.32**	**131**	PKPdf	**PKPdf**	**17 23 37.8**	**-0.3**		
COYC					**PKiKP**	**17 23 46.2**	**+0.7**		
COYC					**PKPab**	**17 23 59.6**	**+2.0**		
PB16	**IPOC Station P**	**152.35**	**70**		**PKPdf**	**17 23 41.9**	**+2.2**		
ROSB	**Rosrio**	**152.36**	**4**	*eP*	**PKPdf**	**17 23 39.7**	**+0.5**		
GO01	**Chusmiza**	**153.28**	**72**	PKPdf	**PKPdf**	**17 23 40.7**	**-0.2**		
PB01	**IPOC Station P**	**153.68**	**75**		**PKPab**	**17 24 04.9**	**+0.7**		
PRPB	**Parauapebas**	**154.64**	**18**	*eP*	**PKPdf**	**17 23 43.1**	**+0.7**		
RCBR	**Riachuelo**	**154.64**	**345**		**PKPab**	**17 24 08.0**	**-0.3**		
RCBR	**Riachuelo**	**154.64**	**345**	PKP2	**PKPab**	**17 24 08.0**	**-0.3**		
RCBR	**Riachuelo**	**154.64**	**345**	*eP*	**PKPdf**	**17 23 42.9**	**+0.5**		
LVC	**Limon Verde**	**154.83**	**78**	PKPbc	**PKiKP**	**17 23 51.9**	**-0.1**		
	comp=Z,3.6nm,0.6s,baz=303,slow=5.7,SNR=3.9								
LVC				PKPab	**PKPab**	**17 24 10.6**	**+1.1**		
	comp=Z,7.7nm,0.8s,baz=255,slow=6.0,SNR=5.3								
LVC				pPKPbc	**pPKPbc**	**17 25 44.0**	**+0.5**		
	comp=Z,3.0nm,0.7s,baz=73,slow=0.8,SNR=2.2								
PLCA	**Paso Flores**	**154.92**	**122**	PKP	**PKPdf**	**17 23 42.6**	**+0.5**		
	comp=Z,3.3nm,1.0s,baz=302,slow=5.0,SNR=3.3								
PLCA				PKPbc	**PKPbc**	**17 23 52.1**	**+0.9**		
	comp=Z,5.0nm,0.7s,baz=229,slow=2.6,SNR=11								
PLCA				PKPab	**PKPab**	**17 24 09.9**	**+0.8**		
	comp=Z,8.0nm,0.8s,baz=284,slow=7.6,SNR=3.0								
CO02	**Combarbal**	**155.28**	**99**		**PKPdf**	**17 23 42.8**	**-0.1**		
AC05	**El Transito**	**155.54**	**93**		**PKPdf**	**17 23 43.4**	**+0.1**		
BO02	**Sierra Bellavi**	**155.60**	**107**		**PKPdf**	**17 23 43.0**	**-0.2**		
VILB	**Vilhena**	**155.78**	**47**	PKPdf	**PKPdf**	**17 23 43.2**	**-0.7**		
VILB				PKPab	**PKPab**	**17 24 13.2**	**0.0**		
AC02	**Maricunga**	**156.07**	**88**	PKPdf	**PKPdf**	**17 23 45.2**	**+0.7**		
CLDB	**Colider**	**156.62**	**36**	*eP*	**PKPdf**	**17 23 45.5**	**+0.5**		
NBRF	**Rio Formoso -**	**157.20**	**342**	*eP*	**PKPdf**	**17 23 45.9**	**+0.2**		
SIV	**San Ignacio**	**157.38**	**54**	PKP	**PKPdf**	**17 23 46.5**	**+0.6**		
	comp=Z,2.4nm,0.6s,baz=310,slow=1.4,SNR=13								
SIV				PKPab	**PKPab**	**17 24 19.5**	**-0.7**		
	comp=Z,11nm,0.9s,baz=332,slow=3.0,SNR=12								
SIV				pPKPab	**pPKPab**	**17 26 07.1**	**+0.2**		
	comp=Z,21nm,1.0s,baz=313,slow=3.0,SNR=9.5								
PTLB	**Pontes e Lacer**	**158.31**	**50**	PKPdf	**PKPdf**	**17 23 46.4**	**-0.6**		
PTLB				PKPab	**PKPab**	**17 24 23.7**	**-0.5**		
PTLB	**Pontes e Lacer**	**158.31**	**50**	*eP*	**PKPdf**	**17 23 46.8**	**-0.2**		
NBAN	**Anadia - AL**	**158.44**	**344**	*eP*	**PKPdf**	**17 23 47.6**	**+0.4**		
SNDB	**Serra Nova Dou**	**159.60**	**26**	*eP*	**PKPdf**	**17 23 48.6**	**0.0**		
BDFB	**Brasilia**	**164.15**	**21**	PKP	**PKPdf**	**17 23 53.4**	**+0.2**		
	comp=Z,1.8nm,0.4s,baz=45,slow=4.1,SNR=3.5								
BDFB				PKPab	**PKPab**	**17 24 49.6**	**-0.1**		
	comp=Z,25nm,1.0s,baz=336,slow=5.6,SNR=14								
BDFB	**Brasilia**	**164.15**	**21**	PKPab	**PKPab**	**17 24 50.0**	**+0.3**		
BDFB	**Brasilia**	**164.15**	**21**	*eP*	**PKPdf**	**17 23 53.1**	**-0.1**		
AQDB	**Aquidauana**	**164.16**	**54**		**PKPdf**	**17 23 52.4**	**-0.5**		
AQDB	**Aquidauana**	**164.16**	**54**	*eP*	**PKPdf**	**17 23 53.5**	**+0.6**		
JANB	**Januaria**	**164.38**	**8**	*eP*	**PKPdf**	**17 23 53.7**	**+0.4**		
CPUP	**Villa Florida**	**165.99**	**76**	PKP	**PKPdf**	**17 23 54.6**	**+0.3**		
	comp=Z,6.7nm,1.1s,baz=187,slow=1.0,SNR=5.2								
CPUP	**Villa Florida**	**165.99**	**76**		**PKPdf**	**17 23 55.2**	**+0.9**		
CPUP	**Villa Florida**	**165.99**	**76**	PKIKP	**PKPdf**	**17 23 55.2**	**+0.9**		
CPUP	**Villa Florida**	**165.99**	**76**	*eP*	**PKPdf**	**17 23 54.3**	**0.0**		
ITQB	**Itaqui**	**167.44**	**89**		**PKPdf**	**17 23 56.0**	**+0.7**		
TRCB	**Terra Rica**	**167.82**	**53**	*eP*	**PKPdf**	**17 23 56.4**	**+0.6**		
SJMB	**Sao Joao De Ma**	**168.10**	**356**	*eP*	**PKPdf**	**17 23 56.7**	**+0.6**		
CRSM	**Crissiumal (Br**	**169.15**	**76**	*eP*	**PKPdf**	**17 23 56.6**	**+0.1**		
PLTB	**Pedras Altas**	**170.13**	**100**		**PKPdf**	**17 23 56.6**	**-0.4**		
ALGR	**Alto Alegre (B**	**170.38**	**82**	*eP*	**PKPdf**	**17 23 57.5**	**+0.2**		

ROM 25 17:15:07.5±0.1, **42°.635N**±0°.005×**13°.204E**±0°.004, **h12**km±2km, **ML1.9/4, Error ellipse: s-maj=0.5km s-min=0.4km az=185.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.12**	**255**	P	Pg	17 15 11.1	+0.4
LNSS				S	Sg	17 15 13.6	+0.5
LNSS				AML	AML		
	comp=E,836μm,0.3s						
LNSS				AML	AML		
	comp=N,914μm,0.2s						
LNSS				AML	AML		
	comp=E,836μm,0.3s						
LNSS				AML	AML		
	comp=N,916μm,0.2s						
LNSS				AML	AML		
	comp=N,914μm,0.2s						
RM33	**Pellescritta (**	**0.13**	**177**	P	Pg	17 15 11.2	+0.4
RM33				S	Sg	17 15 13.8	+0.7
RM33				AML	AML		
	comp=N,776μm,0.2s						
RM33				AML	AML		
	comp=N,776μm,0.2s						
RM33				AML	AML		
	comp=E,502μm,0.2s						
RM33				AML	AML		
	comp=E,519μm,0.1s						
RM33				AML	AML		
	comp=N,699μm,0.2s						
T1243	**Rocca Santa Ma**	**0.19**	**71**	P	Pg	17 15 12.2	+0.5
T1243				S	Sg	17 15 15.4	+0.7
T1243				AML	AML		
	comp=E,1025μm,0.2s						
T1243				AML	AML		
	comp=N,654μm,0.2s						
T1243				AML	AML		
	comp=N,654μm,0.2s						
NRCA	**Norcia**	**0.21**	**342**	S	Sg	17 15 13.0	-2.2
MC2	**Monte Cornacci**	**0.28**	**358**	S	Sb	17 15 20.0	+0.7
TERO	**Teramo**	**0.29**	**92**	P	Pg	17 15 13.9	+0.4
TERO				S	Sb	17 15 18.7	-0.9
TERO				AML	AML		
	comp=E,256μm,0.8s						
TERO				AML	AML		
	comp=N,310μm,0.5s						
TERO				AML	AML		
	comp=N,217μm,0.1s						
ARRO	**Arrone**	**0.33**	**260**	P	Pg	17 15 14.4	+0.3
ARRO				S	Sb	17 15 19.6	-1.0
CSP1	**Cessapalombo**	**0.46**	**0**	P	Pg	17 15 23.9	-0.5
CSP1				S	Sb	17 15 23.9	-0.5

KRSC 25 17:16:44.7±0.9, **53°.17N**×**158°.10E, h185**km±7km, **ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRMR	**Karymshinskiy**	**0.34**	**176**	P	Pn	17 17 10.5	+0.9
KRMR				S	Sn	17 17 29.3	+0.7
KOK	**Koryaka**	**0.35**	**69**	P	Pn	17 17 11.1	+1.4
PET	**Petropavlovsk**	**0.37**	**113**	P	Pn	17 17 10.7	+1.1
PET				S	Sn	17 17 29.4	+0.7
KRX	**Arik**	**0.38**	**60**	P	Pn	17 17 11.0	+1.2
AVH	**Avacha**	**0.40**	**76**	P	Pn	17 17 11.3	+1.5
KRER	**Koryakskii**	**0.42**	**71**	P	Pn	17 17 11.3	+1.3
DALK	**Dalny**	**0.42**	**109**	P	Pn	17 17 10.7	+0.9
DALK				S	Sn	17 17 29.5	+0.5
SDLR	**Sedlovina**	**0.49**	**77**	P	Pn	17 17 11.4	+1.2
GNL	**Ganaly**	**0.54**	**350**	P	Pn	17 17 11.1	+0.8
GNL				S	Sn	17 17 30.2	-0.1
APC	**Apacha**	**0.62**	**247**	P	Pn	17 17 11.5	+0.9
APC				S	Sn	17 17 30.6	+0.1
GRL	**Gorelyy**	**0.62**	**181**	P	Pn	17 17 12.4	+1.6
MTVR	**Mutnovka**	**0.69**	**176**	P	Pn	17 17 12.8	+1.6
MTVR				S	Sn	17 17 33.2	+1.7
NLC	**Nalytchevo**	**0.75**	**89**	P	Pn	17 17 12.6	+1.3
NLC				S	Sn	17 17 32.8	+1.1
RUS	**Russkaya**	**0.78**	**161**	P	Pn	17 17 12.4	+0.9
RUS				S	Sn	17 17 32.8	+0.7
SPN	**Mys Shipunski**	**1.16**	**93**	P	Pn	17 17 15.0	+0.9
SPN				S	Sn	17 17 36.9	0.0
KDTR	**Khodutka, Kamc**	**1.36**	**180**	P	Pn	17 17 16.6	+0.8
KDTR				S	Sn	17 17 39.5	-0.4
TUMR	**Tumrok**	**2.44**	**29**	P	Pn	17 17 28.8	+1.8
MKZ	**Mys Kozlova**	**2.56**	**56**	P	Pn	17 17 29.4	+1.1
MKZ				S	Sn	17 18 01.2	-1.1
SKR	**Severo-Kuril's**	**2.77**	**207**	S	Sn	17 18 08.4	+1.6
BKI	**Bering**	**5.06**	**63**	S	Sn	17 18 55.3	-2.7

*IDC **25** 17:18:39.8±2.7, 23°.60N×94°.15E, h71km±29km, mb3.3/4, mbtmp3.6/5, Error ellipse: s-maj=23.8km s-min=19.2km az=45.0*

ISC 25 17:18:39.4±1.0, **23°.7N**±0°.1×**94°.08E**±0°.10, **h73**km, **n14, s148/15, mb3.5/4, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**2.46**	**246**	P	**Pn**	**17 19 16.9**	**-0.4**
	0.7nm,0.3s,baz=270,slow=24,SNR=5.6						
BRDH				S	**Sn**	**17 19 48.1**	**+1.7**
	0.6nm,0.3s,baz=90,slow=24,SNR=6.4						
CMAR	**Chiang Mai Arr**	**6.92**	**138**	P	**Pn**	**17 20 17.4**	**-0.8**
	2.0nm,0.4s,baz=310,slow=13,SNR=15						
RAMN	**Ramite**	**7.50**	**297**	*eP*	**Pn**	**17 20 25.6**	**-0.7**
	94nm,0.6s						
JIRN	**Jiri**	**8.13**	**301**	*eP*	**Pn**	**17 20 33.7**	**-1.4**
	20nm,0.2s						
GUN	**Gumba**	**8.49**	**301**	*eP*	**Pn**	**17 20 38.1**	**-1.9**
	24nm,0.5s						
PKI	**Pulchoki**	**8.72**	**298**	*eP*	**Pn**	**17 20 41.7**	**-1.4**
	34nm,0.6s						
PKIN	**Phulchoki**	**8.73**	**298**	*eP*	**Pn**	**17 20 42.2**	**-1.0**
	49nm,0.7s						
DMN	**Daman**	**8.98**	**298**	*eP*	**Pn**	**17 20 45.2**	**-1.4**
	8.1nm,0.3s						
GKN	**Gorkha**	**9.52**	**299**	*eP*	**Pn**	**17 20 51.4**	**-2.4**
	42nm,0.3s						
DANN	**Dangsing**	**10.37**	**299**	*eP*	Pn	17 21 02.2	-3.3
MKAR	**Makanchi Array**	**24.91**	**341**	P	**P**	**17 23 57.6**	**+2.1**
	0.4nm,0.5s,baz=157,slow=9.4,SNR=5.0						
	0.4nm,0.5s						
SONM	**Songino Array**	**26.01**	**19**	P	**P**	**17 24 06.5**	**+1.0**
	0.4nm,0.7s,baz=210,slow=8.3,SNR=1.8						
	0.4nm,0.7s						
WRA	**Warrannunga Arr**	**58.50**	**135**	P	**P**	**17 28 27.8**	**-0.6**
	0.4nm,0.5s,baz=323,slow=7.3,SNR=19						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**60.93**	**138**	P	**P**	**17 28 45.1**	**+0.2**
	0.9nm,0.6s,baz=320,slow=6.8,SNR=31						
ASAR				PcP	**PcP**	**17 29 27.2**	**-0.6**
	0.3nm,0.6s,baz=323,slow=4.4,SNR=4.4						
	0.9nm,0.6s						

ROM 25 17:22:42.5±0.1, **42°.661N**±0°.004×**13°.260E**±0°.006, **h10**km, **ML2.0/13, 5C-6D, Error ellipse: s-maj=0.5km s-min=0.3km az=225.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1243	**Rocca Santa Ma**	**0.14**	**76**	P	Pg	17 22 46.5	+0.6
T1243				AML	AML		
	comp=N,4695μm,0.6s						
T1243				AML	AML		
	comp=E,7330μm,0.6s						
T1243				AML	AML		
	comp=E,7445μm,0.6s						
T1243				AML	AML		
	comp=N,4725μm,0.6s						
RM33	**Pellescritta (**	**0.16**	**193**	⇑P	Pg	17 22 46.7	+0.7
RM33				S	Sg	17 22 49.5	+1.0
RM33				AML	AML		
	comp=N,1048μm,1.5s						
RM33				AML	AML		
	comp=N,1069μm,1.5s						
RM33				AML	AML		
	comp=E,1545μm,0.2s						
RM33				AML	AML		
	comp=N,1145μm,0.3s						
RM33				AML	AML		
	comp=N,1077μm,0.3s						
RM33				AML	AML		
	comp=E,1560μm,0.2s						
CAMP	**Campotosto**	**0.17**	**139**	⇓P	Pg	17 22 46.9	+0.7
CAMP				S	Sg	17 22 49.8	+1.1
CAMP				AML	AML		
	comp=E,271μm,0.4s						
CAMP				AML	AML		
	comp=N,366μm,0.4s						
LNSS	**Leonessa**	**0.17**	**250**	⇑P	Pg	17 22 46.8	+0.5
LNSS				S	Sg	17 22 49.8	+0.9
LNSS				AML	AML		
	comp=N,2525μm,1.2s						
LNSS				AML	AML		
	comp=E,3510μm,0.3s						
NRCA	**Norcia**	**0.20**	**328**	P	Pg	17 22 47.2	+0.4
NRCA				S	Sg	17 22 50.6	+0.8
TERO	**Teramo**	**0.26**	**98**	⇓P	Pg	17 22 48.3	+0.5
TERO				S	Sg	17 22 52.3	+1.0
TERO				AML	AML		
	comp=E,427μm,0.3s						
TERO				AML	AML		
	comp=N,829μm,0.1s						
TERO				AML	AML		
	comp=N,828μm,0.1s						
TERO				AML	AML		
	comp=E,874μm,0.1s						
MC2	**Monte Cornacci**	**0.26**	**348**	⇑P	Pg	17 22 48.4	+0.5
MC2				S	Sb	17 22 52.8	-1.2
GIGS	**Gran Sasso**	**0.31**	**133**	P	Pg	17 22 49.1	+0.3
GIGS				S	Sg	17 22 53.9	+1.0
GIGS				AML	AML		
	comp=E,55μm,0.7s						
GIGS				AML	AML		
	comp=N,63μm,0.3s						
GIGS				AML	AML		
	comp=E,156μm,0.1s						
GIGS				AML	AML		
	comp=N,71μm,0.1s						
ARRO	**Arrone**	**0.37**	**258**	S	Sb	17 22 56.0	-1.1
FDMO	**Fiordimonte**	**0.40**	**341**	⇑P	Pg	17 22 50.8	+0.4
FDMO				S	Sb	17 22 56.7	-1.1
FDMO				AML	AML		
	comp=N,386μm,0.2s						
FDMO				AML	AML		
	comp=E,342μm,1.5s						
FIAM	**Fiamignano**	**0.41**	**195**	P	Pg	17 22 50.8	+0.3
FIAM				S	Sb	17 22 57.0	-1.1
FIAM				AML	AML		
	comp=E,294μm,0.4s						
FIAM				AML	AML		
	comp=N,145μm,0.9s						
OFFI	**Offida**	**0.42**	**49**	⇓P	Pb	17 22 52.1	+0.1
OFFI				AML	AML		
	comp=N,1180μm,0.5s						
OFFI				AML	AML		
	comp=E,666μm,0.3s						
CESI	**CESI - Serrava**	**0.43**	**323**	⇓P	Pg	17 22 51.2	+0.2
CESI				S	Sb	17 22 58.0	-0.9
CESI				AML	AML		
	comp=N,326μm,1.0s						
CESI				AML	AML		
	comp=E,272μm,0.4s						
CESI				AML	AML		
	comp=N,326μm,1.0s						
CSP1	**Cessapalombo**	**0.43**	**355**	P	Pg	17 22 51.3	+0.2
CSP1				S	Sb	17 22 58.0	-0.9
CESX	**Cesi**	**0.51**	**264**	P	Pb	17 22 53.1	-0.3
CESX				S	Sg	17 22 59.9	+0.9
VCEL	**Villa Celiera**	**0.51**	**122**	P	Pb	17 22 53.1	-0.5
T0110	**Collepietro**	**0.58**	**138**	P	Pg	17 22 53.7	-0.1
T0110				AML	AML		
	comp=N,146μm,0.4s						
T0110				AML	AML		
	comp=E,156μm,0.4s						
ASSB	**Assisi San Ben**	**0.58**	**311**	P	Pg	17 22 54.0	+0.2
ASSB				S	Sb	17 23 03.0	-0.2
ASSB				AML	AML		
	comp=E,131μm,0.9s						
ASSB				AML	AML		
	comp=N,119μm,0.5s						
SNTG	**Esanatoglia**	**0.64**	**339**	⇓P	Pg	17 22 55.0	+0.1
SNTG				AML	AML		
	comp=N,77μm,0.2s						
SNTG				AML	AML		
	comp=E,72μm,0.4s						
EL6	**Elcito**	**0.68**	**350**	S	Sb	17 23 07.0	+1.0
CING	**Cingoli**	**0.72**	**356**	⇓P	Pg	17 22 56.4	0.0
CING				AML	AML		
	comp=E,100μm,1.0s						
CING				AML	AML		
	comp=N,130μm,0.6s						
ARVD	**Arcevia**	**0.87**	**345**	S	Sn	17 23 13.0	-0.6
MGAB	**Montegabbione**	**0.88**	**287**	⇑P	Pn	17 23 01.7	+0.7
ATVO	**AVT- Monte Val**	**0.95**	**319**	S	Sn	17 23 16.0	+0.3
APEC	**Apecchio**	**1.09**	**326**	S	Sg	17 23 17.0	-0.6
PIGN	**Pignataro Magg**	**1.61**	**155**	S	Sg	17 23 34.0	-0.4
SEI	**Scarperia**	**1.97**	**316**	S	Sg	17 23 47.0	+1.3
MRB1	**Monte Rocchett**	**2.00**	**140**	S	Sg	17 23 46.0	-0.7

*ATH **25** 17:23:52.4, 37°.98N×20°.28E, h16km±1km, ML3.0/9, Error ellipse: s-maj=2.7km s-min=1.0km az=64.0*
*THE **25** 17:23:52.7, 37°.97N×20°.30E, h12km±1km, ML3.2/8, Error ellipse: s-maj=2.1km s-min=0.7km az=58.0*

ISC 25 17:23:52.7±1.4, **37°.99N**±0°.04×**20°.31E**±0°.07, **h17**km±7km, **n33, s945/48, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.22**	**8**	P	**Pg**	**17 23 57.9**	**+0.1**
KEF3				S	**Sb**	**17 24 02.0**	**+0.1**
	27μm,0.3s						
KEF3	**Kipouria, Keph**	**0.22**	**8**	P	**Pg**	**17 23 57.8**	**+0.1**
KEF3				S	**Sg**	**17 24 01.7**	**+0.4**
ARGA	**Argostoli. Kep**	**0.23**	**35**	P	**Pb**	**17 23 58.9**	**+0.4**
ARGA				S	**Sb**	**17 24 02.5**	**+0.2**
ARGA				AML	AML	17 24 02.9	
	comp=E,23848μm,0.2s						
ARGA				AML	AML	17 24 03.1	
	comp=N,44423μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.25**	**60**	P	**Pg**	**17 23 58.1**	**-0.2**
PSDA				S	**Sg**	**17 24 02.2**	**0.0**
	comp=N,755nm,0.3s						
PSDA	**Pessada-Kefalo**	**0.25**	**60**	P	**Pg**	**17 23 58.1**	**-0.2**
PSDA				S	**Sg**	**17 24 02.4**	**+0.2**
DMLN	**Damoulianata-K**	**0.26**	**12**	P	**Pg**	**17 23 58.2**	**-0.2**
DMLN				S	**Sg**	**17 24 02.5**	**+0.1**
	comp=N,7μm,0.5s						
KEF4	**Livadi, Kephal**	**0.28**	**19**	P	**Pg**	**17 23 58.7**	**-0.2**
KEF4				S	**Sg**	**17 24 03.3**	**+0.1**
	comp=N,46μm,0.3s						
KEF4	**Livadi, Kephal**	**0.28**	**19**	P	**Pg**	**17 23 58.6**	**-0.3**
KEF4				S	**Sg**	**17 24 03.4**	**+0.3**
VLS	**Valsamata**	**0.29**	**49**	P	**Pg**	**17 23 58.7**	**-0.4**
VLS				S	**Sg**	**17 24 03.3**	**-0.1**
	comp=N,8μm,0.3s						
VLS	**Valsamata**	**0.29**	**49**	P	**Pg**	**17 23 58.6**	**-0.4**
VLS				S	**Sg**	**17 24 03.3**	**-0.1**
VLS				AML	AML	17 24 03.7	
	comp=N,22594μm,0.4s						
VLS				AML	AML	17 24 03.8	
	comp=E,10535μm,0.3s						
LTHK	**Lithakia**	**0.50**	**123**	P	**Pg**	**17 24 02.5**	**-0.2**
LTHK				S	**Sg**	**17 24 09.6**	**+0.1**
	comp=E,2μm,0.1s						
LTHK	**Lithakia**	**0.50**	**123**	P	**Pg**	**17 24 02.5**	**-0.2**
LTHK				S	**Sb**	**17 24 10.0**	**0.0**
LTHK				AML	AML	17 24 11.3	
	comp=N,4449μm,0.1s						
LTHK				AML	AML	17 24 12.4	
	comp=E,3960μm,0.2s						
FSK	**Fiskardo**	**0.51**	**23**	P	**Pg**	**17 24 03.0**	**+0.1**
FSK				S	**Sb**	**17 24 11.1**	**+0.8**
	comp=E,2μm,0.3s						
FSK	**Fiskardo**	**0.51**	**23**	P	**Pg**	**17 24 03.0**	**+0.1**
FSK				S	**Sb**	**17 24 10.7**	**+0.4**
FSK				AML	AML	17 24 11.7	
	comp=E,4306μm,0.2s						
FSK				AML	AML	17 24 15.4	
	comp=N,4740μm,0.4s						
EVGI	**Lefkada island**	**0.69**	**23**	P	**Pb**	**17 24 05.5**	**-0.7**
EVGI				S	**Sg**	**17 24 16.4**	**+1.0**
	comp=N,1μm,0.2s						
EVGI	**Lefkada island**	**0.69**	**23**	P	**Pb**	**17 24 05.3**	**-1.0**
DRAG	**Dragano-Lefkad**	**0.73**	**17**	P	**Pb**	**17 24 06.1**	**-0.8**
NYDR	**Nydri-Lefkada**	**0.79**	**23**	P	**Pb**	**17 24 07.1**	**-0.8**
LKD2	**Lefkada island**	**0.85**	**19**	P	**Pb**	**17 24 08.1**	**-0.8**
LKD2				AML	AML	17 24 27.4	
	comp=E,1176μm,0.5s						
LKD2				AML	AML	17 24 27.5	
	comp=N,1065μm,0.3s						
TSLK	**Tsoukalades, L**	**0.88**	**18**	P	**Pb**	**17 24 09.1**	**-0.4**
TSLK	**Tsoukalades, L**	**0.88**	**18**	P	**Pb**	**17 24 08.5**	**-1.0**
TSLK				AML	AML	17 24 28.3	
	comp=E,1727μm,0.6s						
TSLK				AML	AML	17 24 30.1	
	comp=N,2227μm,0.4s						
DRO	**Drossia**	**1.11**	**91**	P	**Pn**	**17 24 13.7**	**+0.3**
DRO	**Drossia**	**1.11**	**91**	P	**Pb**	**17 24 13.3**	**-0.1**
DRO				AML	AML	17 24 37.2	
	comp=E,1681μm,0.3s						
DRO				AML	AML	17 24 38.3	
	comp=N,1249μm,0.3s						
**PVO

RM33					AML	AML		
	comp=E,1545µm,1.2s							
RM33					AML	AML		
	comp=E,1500µm,1.2s							
RM33					AML	AML		
	comp=E,1015µm,0.2s							
RM33					AML	AML		
	comp=E,1014µm,0.2s							
LNSS	**Leonessa**	**0.19**	**263**	P	Pg	17 30 28.8	+0.6	
LNSS				S	Sg	17 30 32.5	+1.6	
LNSS				AML	AML			
	comp=E,1077µm,0.7s							
LNSS				AML	AML			
	comp=N,998µm,0.1s							
LNSS				AML	AML			
	comp=E,5160µm,0.5s							
LNSS				AML	AML			
	comp=E,5165µm,0.5s							
LNSS				AML	AML			
	comp=N,4915µm,1.3s							
LNSS				AML	AML			
	comp=E,1076µm,0.7s							
LNSS				AML	AML			
	comp=N,748µm,0.5s							
TERO	**Teramo**	**0.23**	**91**	P	Pg	17 30 29.2	+0.5	
TERO				S	Sg	17 30 33.1	+1.3	
TERO				AML	AML			
	comp=E,1013µm,0.3s							
TERO				AML	AML			
	comp=N,1805µm,0.1s							
TERO				AML	AML			
	comp=E,1200µm,0.3s							
TERO				AML	AML			
	comp=N,2090µm,0.1s							
TERO				AML	AML			
	comp=N,5025µm,0.5s							
TERO				AML	AML			
	comp=N,5655µm,0.5s							
TERO				AML	AML			
	comp=E,2905µm,0.1s							
TERO				AML	AML			
	comp=E,3265µm,0.1s							
TERO				AML	AML			
	comp=N,1806µm,0.1s							
TERO				AML	AML			
	comp=E,1200µm,0.3s							
TERO				AML	AML			
	comp=E,1013µm,0.3s							
TERO				AML	AML			
	comp=N,2092µm,0.1s							
NRCA	**Norcia**	**0.25**	**327**	P	Pg	17 30 29.9	+0.8	
NRCA				S	Sg	17 30 34.0	+1.4	
NRCA				AML	AML			
	comp=N,36300µm,0.1s							
NRCA				AML	AML			
	comp=E,32950µm,0.8s							
NRCA				AML	AML			
	comp=N,40000µm,0.1s							
NRCA				AML	AML			
	comp=N,36300µm,0.1s							
NRCA				AML	AML			
	comp=E,30050µm,0.2s							
NRCA				AML	AML			
	comp=N,1048µm,0.4s							
NRCA				AML	AML			
	comp=N,1036µm,0.1s							
NRCA				AML	AML			
	comp=E,1604µm,0.1s							
NRCA				AML	AML			
	comp=E,1799µm,0.1s							
GIGS	**Gran Sasso**	**0.27**	**131**	P	Pg	17 30 30.2	+0.7	
GIGS				S	Sg	17 30 34.0	+0.9	
GIGS				AML	AML			
	comp=E,85µm,0.3s							
GIGS				AML	AML			
	comp=N,84µm,0.4s							
GIGS				AML	AML			
	comp=E,376µm,0.1s							
GIGS				AML	AML			
	comp=N,274µm,0.6s							
GIGS				AML	AML			
	comp=E,76µm,1.0s							
GIGS				AML	AML			
	comp=N,84µm,0.4s							
MC2	**Monte Cornacci**	**0.30**	**344**	P	Pg	17 30 30.8	+0.6	
MC2				S	Sb	17 30 35.9	-1.2	
ARRO	**Arrone**	**0.40**	**263**	P	Pg	17 30 32.3	+0.3	
ARRO				S	Sg	17 30 38.2	+1.0	
ARRO				AML	AML			
	comp=E,176µm,0.2s							
ARRO				AML	AML			
	comp=N,208µm,1.4s							
ARRO				AML	AML			
	comp=E,594µm,0.5s							
ARRO				AML	AML			
	comp=N,693µm,0.9s							
ARRO				AML	AML			
	comp=N,692µm,0.9s							
ARRO				AML	AML			
	comp=N,139µm,0.4s							
ARRO				AML	AML			
	comp=E,151µm,1.1s							
OFFI	**Offida**	**0.42**	**42**	P	Pb	17 30 33.9	0.0	
OFFI				AML	AML			
	comp=E,2170µm,0.7s							
OFFI				AML	AML			
	comp=N,3740µm,0.4s							
FDMO	**Fiordimonte**	**0.44**	**339**	P	Pg	17 30 33.4	+0.6	
FDMO				S	Sb	17 30 40.4	-0.6	
FDMO				AML	AML			
	comp=E,140µm,1.1s							
FDMO				AML	AML			
	comp=N,138µm,0.8s							
FDMO				AML	AML			
	comp=E,3430µm,0.2s							
FDMO				AML	AML			
	comp=N,4135µm,0.2s							
FDMO				AML	AML			
	comp=E,87µm,0.5s							
FDMO				AML	AML			
	comp=N,138µm,0.8s							
VCEL	**Villa Celiera**	**0.46**	**120**	P	Pg	17 30 33.9	+0.7	
VCEL				S	Sb	17 30 41.6	-0.1	
VCEL				AML	AML			
	comp=E,401µm,0.9s							
VCEL				AML	AML			
	comp=N,328µm,0.9s							
VCEL				AML	AML			
	comp=N,1015µm,1.1s							
VCEL				AML	AML			
	comp=N,1016µm,1.1s							
VCEL				AML	AML			
	comp=E,708µm,0.9s							
VCEL				AML	AML			
	comp=N,181µm,0.2s							
VCEL				AML	AML			
	comp=E,194µm,0.4s							
CSP1	**Cessapalombo**	**0.47**	**352**	P	Pg	17 30 33.9	+0.5	
CSP1				S	Sb	17 30 41.5	-0.5	
CSP1				AML	AML			
	comp=E,2790µm,0.4s							
CSP1				AML	AML			
	comp=N,4485µm,0.4s							
CSP1				AML	AML			
	comp=E,2785µm,0.4s							
CSP1				AML	AML			
	comp=E,174µm,0.3s							
CSP1				AML	AML			
	comp=N,180µm,0.4s							
CESI	**CESI - Serrava**	**0.48**	**323**	P	Pg	17 30 33.9	+0.4	
CESI				S	Sb	17 30 41.3	-0.9	
CESI				AML	AML			
	comp=E,120µm,1.5s							
CESI				AML	AML			
	comp=N,185µm,0.2s							
CESI				AML	AML			
	comp=E,3760µm,0.6s							
CESI				AML	AML			
	comp=N,7345µm,0.3s							
CESI				AML	AML			
	comp=N,7350µm,0.3s							
CESI				AML	AML			
	comp=E,3765µm,0.6s							
CESI				AML	AML			
	comp=N,150µm,0.5s							
CESI				AML	AML			
	comp=E,53µm,0.9s							

T0110	**Collepietro**	**0.53**	**138**	AML	AML			
	comp=E,130µm,0.9s							
T0110				AML	AML			
	comp=N,124µm,0.4s							
ASSB	**Assisi San Ben**	**0.63**	**312**	P	Pb	17 30 37.0	-0.5	
ASSB				S	Sb	17 30 46.5	0.0	
ASSB				AML	AML			
	comp=E,1815µm,1.6s							
ASSB				AML	AML			
	comp=N,1620µm,0.7s							
ASSB				AML	AML			
	comp=N,40µm,0.2s							
ASSB				AML	AML			
	comp=E,65µm,0.4s							

ROM 25 17:31:10.2±0.1, 42°811N±0'003×13°249E±0'006, h7km, ML2.7/37, 25C-14D, Error ellipse: s-maj=0.5km s-min=0.1km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**283**	⇑P		Pg	17 31 13.2	+0.6
NRCA				S		Sg	17 31 14.9	+0.6
NRCA				AML		AML		
	comp=E,30100µm,0.2s							
NRCA				AML		AML		
	comp=N,36300µm,0.1s							
NRCA				AML		AML		
	comp=N,40000µm,0.1s							
NRCA				AML		AML		
	comp=E,30050µm,0.2s							
NRCA				AML		AML		
	comp=E,32950µm,0.8s							
NRCA				AML		AML		
	comp=N,36300µm,0.1s							
MC2	**Monte Cornacci**	**0.11**	**337**	P		Pg	17 31 13.4	+0.6
MC2				S		Sg	17 31 15.6	+0.9
MC2				AML		AML		
	comp=E,12140µm,0.3s							
MC2				AML		AML		
	comp=E,12155µm,0.3s							
MC2				AML		AML		
	comp=E,12145µm,0.3s							
MC2				AML		AML		
	comp=N,12365µm,0.3s							
MC2				AML		AML		
	comp=N,12350µm,0.3s							
T1243	**Rocca Santa Ma**	**0.19**	**128**	P		Pg	17 31 14.9	+0.9
T1243				S		Sg	17 31 18.3	+1.7
T1243				AML		AML		
	comp=N,27200µm,0.2s							
T1243				AML		AML		
	comp=E,24850µm,0.3s							
T1243				AML		AML		
	comp=E,24900µm,0.3s							
T1243				AML		AML		
	comp=N,27200µm,0.2s							
T1243				AML		AML		
	comp=N,27150µm,0.2s							
FEMA	**Monte Fema**	**0.21**	**316**	P		Pg	17 31 15.2	+0.7
FEMA				S		Sg	17 31 19.0	+1.6
FEMA				AML		AML		
	comp=E,7280µm,0.8s							
FEMA				AML		AML		
	comp=N,5220µm,1.3s							
FEMA				AML		AML		
	comp=E,7275µm,0.8s							
FEMA				AML		AML		
	comp=N,5215µm,1.3s							
FDMO	**Fiordimonte**	**0.26**	**332**	⇑P		Pg	17 31 15.8	+0.6
FDMO				S		Sg	17 31 20.1	+1.4
FDMO				AML		AML		
	comp=N,4135µm,0.2s							
FDMO				AML		AML		
	comp=E,3430µm,0.2s							
LNSS	**Leonessa**	**0.26**	**217**	⇑P		Pb	17 31 16.3	-0.9
LNSS				S		Sb	17 31 20.9	-1.0
LNSS				AML		AML		
	comp=E,5165µm,0.5s							
LNSS				AML		AML		
	comp=E,5160µm,0.5s							
LNSS				AML		AML		
	comp=N,4915µm,1.3s							
CSP1	**Cessapalombo**	**0.28**	**353**	⇑P		Pg	17 31 16.4	+0.6
CSP1				S		Sb	17 31 21.3	-1.4
CSP1				AML		AML		
	comp=N,4485µm,0.4s							
CSP1				AML		AML		
	comp=E,2790µm,0.4s							
CSP1				AML		AML		
	comp=E,2785µm,0.4s							
CAMP	**Campotosto**	**0.30**	**157**	⇑P		Pg	17 31 16.9	+0.8
CAMP				S		Sb	17 31 21.7	-1.4
CAMP				AML		AML		
	comp=E,1655µm,0.2s							
CAMP				AML		AML		
	comp=N,1465µm,0.8s							
RM33	**Pellescritta (**	**0.30**	**185**	⇓P		Pb	17 31 17.3	-0.7
RM33				S		Sb	17 31 22.3	-0.9
RM33				AML		AML		
	comp=E,1500µm,1.2s							
RM33				AML		AML		
	comp=N,1265µm,0.3s							
RM33				AML		AML		
	comp=E,1545µm,1.2s							
RM33				AML		AML		
	comp=N,1260µm,0.3s							
RM33				AML		AML		
	comp=E,1497µm,1.2s							
RM33				AML		AML		
	comp=E,1540µm,1.2s							
RM33				AML		AML		
	comp=N,1270µm,0.3s							
RM33				AML		AML		
	comp=N,1265µm,0.3s							
CESI	**CESI - Serrava**	**0.32**	**308**	⇑P		Pg	17 31 17.1	+0.6
CESI				S		Sg	17 31 22.1	+1.3
CESI				AML		AML		
	comp=E,3765µm,0.6s							
CESI				AML		AML		
	comp=N,7350µm,0.3s							
CESI				AML		AML		
	comp=E,3760µm,0.6s							
CESI				AML		AML		
	comp=N,7345µm,0.3s							
TERO	**Teramo**	**0.32**	**126**	⇑P		Pg	17 31 17.3	+0.7
TERO				S		Sb	17 31 22.6	-1.1
TERO				AML		AML		
	comp=E,3265µm,0.1s							
TERO				AML		AML		
	comp=E,2910µm,0.1s							
TERO				AML		AML		
	comp=N,5025µm,0.5s							
TERO				AML		AML		
	comp=E,2905µm,0.1s							
TERO				AML		AML		
	comp=N,5655µm,0.5s							
ARRO	**Arrone**	**0.42**	**237**	⇑P		Pg	17 31 19.1	+0.6
ARRO				S		Sb	17 31 26.0	-0.6
ARRO				AML		AML		
	comp=E,594µm,0.5s							
ARRO				AML		AML		
	comp=N,693µm,0.9s							
ARRO				AML		AML		
	comp=N,692µm,0.9s							
ARRO				AML		AML		
	comp=E,594µm,0.5s							
GIGS	**Gran Sasso**	**0.43**	**147**	P		Pg	17 31 19.3	+0.7
GIGS				S		Sb	17 31 25.9	-0.9
GIGS				AML		AML		
	comp=N,274µm,0.6s							
GIGS				AML		AML		
	comp=E,376µm,0.1s							
GIGS				AML		AML		
	comp=N,274µm,0.6s							
TRTR	**Tortoreto Alta**	**0.49**	**90**	⇑P		Pb	17 31 21.7	+0.6
TRTR				AML		AML		
	comp=E,3415µm,0.4s							
TRTR				AML		AML		
	comp=N,2305µm,1.6s							
ASSB	**Assisi San Ben**	**0.49**	**298**	⇑P		Pg	17 31 20.1	+0.4
ASSB				S		Sb	17 31 27.8	-0.8
ASSB				AML		AML		
	comp=N,1620µm,0.7s							
ASSB				AML		AML		
	comp=E,1815µm,1.6s							

SNTG	**Esanatoglia**	**0.50**	**333**	⇑P		Pg	17 31 20.2	+0.3
SNTG				S		Sb	17 31 28.2	-0.6
SNTG				AML		AML		
	comp=N,853µm,0.7s							
SNTG				AML		AML		
	comp=E,682µm,0.6s							
EL6	**Elcito**	**0.53**	**348**	⇑P		Pg	17 31 20.9	+0.4
EL6				S		Sb	17 31 30.2	+0.4
CESX	**Cesi**	**0.53**	**248**	⇑P		Pg	17 31 20.8	+0.3
CESX				S		Sb	17 31 29.1	-0.6
CESX				AML		AML		
	comp=N,606µm,0.6s							
CESX				AML		AML		
	comp=E,618µm,0.4s							
FIAM	**Fiamignano**	**0.55**	**190**	⇓P		Pg	17 31 21.3	+0.5
FIAM				S		Sb	17 31 29.8	-0.5
FIAM				AML		AML		
	comp=E,388µm,1.5s							
FIAM				AML		AML		
	comp=E,388µm,1.5s							
FIAM				AML		AML		
	comp=N,334µm,1.2s							
CING	**Cingoli**	**0.57**	**356**	⇓P		Pg	17 31 21.7	+0.5
CING				S		Sb	17 31 31.1	+0.4
CING				AML		AML		
	comp=E,634µm,0.6s							
CING				AML		AML		
	comp=N,541µm,0.2s							
ATCC	**AVT- Casa Cast**	**0.58**	**310**	P		Pg	17 31 21.8	+0.4
ATCC				S		Sb	17 31 31.4	+0.1
FAGN	**Fagnano**	**0.60**	**155**	⇑P		Pg	17 31 22.7	-0.3
FAGN				S		Sb	17 31 31.8	+0.2
FAGN				AML		AML		
	comp=E,874µm,0.5s							
FAGN				AML		AML		
	comp=N,948µm,0.3s							
FAGN				AML		AML		
	comp=E,874µm,0.5s							
FOSV	**Fossato di Vic**	**0.60**	**324**	⇑P		Pg	17 31 22.1	+0.3
FOSV				S		Sb	17 31 31.6	-0.1
FOSV				AML		AML		
	comp=E,997µm,0.2s							
FOSV				AML		AML		
	comp=N,2140µm,0.3s							
VCEL	**Villa Celiera**	**0.60**	**133**	⇑P		Pb	17 31 22.6	-0.5
VCEL				AML		AML		
	comp=N,1019µm,1.1s							
VCEL				AML		AML		
	comp=E,708µm,0.9s							
VCEL				AML		AML		
	comp=N,1015µm,1.1s							
VCEL				AML		AML		
	comp=N,1016µm,1.1s							
T0110	**Collepietro**	**0.70**	**146**	⇓P		Pg	17 31 24.0	+0.3
T0110				AML		AML		
	comp=E,814µm,0.5s							
T0110				AML		AML		
	comp=E,814µm,0.5s							
T0110				AML		AML		
	comp=N,1007µm,1.4s							
SSFR	**Montelago di S**	**0.71**	**331**	P		Pg	17 31 24.1	+0.2
SSFR				S		Sb	17 31 35.5	+0.5
SSFR				AML		AML		
	comp=E,1700µm,1.3s							
SSFR				AML		AML		
	comp=N,1715µm,0.2s							
SSFR				AML		AML		
	comp=N,1615µm,0.2s							
SSFR				AML		AML		
	comp=E,1670µm,0.9s							
ARVD	**Arcevia**	**0.72**	**342**	⇓P		Pg	17 31 24.4	+0.2
ARVD				S		Sn	17 31 37.0	-1.2
ARVD				AML		AML		
	comp=E,492µm,0.9s							
ARVD				AML		AML		
	comp=N,278µm,0.2s							
ATFO	**Monte Foce - G**	**0.74**	**318**	⇑P		Pg	17 31 24.7	+0.1
ATFO				S		Sb	17 31 36.9	+0.9
ATFO				AML		AML		
	comp=E,414µm,0.8s							
ATFO				AML		AML		
	comp=N,316µm,0.2s							
ATTE	**AVT- Monte Tez**	**0.76**	**301**	P		Pg	17 31 24.7	-0.2
ATTE				AML		AML		
	comp=N,198µm,0.5s							
ATTE				AML		AML		
	comp=E,288µm,0.5s							
SRES	**S.Oreste - Sor**	**0.79**	**224**	⇑P		Pg	17 31 25.3	-0.1
SRES				AML		AML		
	comp=E,185µm,0.8s							
SRES				AML		AML		
	comp=N,228µm,0.4s							
FRON	**Frontone**	**0.80**	**332**	⇑P		Pg	17 31 25.6	-0.1
FRON				AML		AML		
	comp=N,628µm,1.5s							
FRON				AML		AML		
	comp=E,286µm,0.3s							
ATVO	**AVT- Monte Val**	**0.84**	**313**	⇑P		Pg	17 31 26.3	-0.1
ATVO				S		Sn	17 31 41.0	-0.1
ATVO				AML		AML		
	comp=E,296µm,0.9s							
ATVO				AML		AML		
	comp=N,268µm,0.5s							
MGAB	**Montegabbione**	**0.84**	**277**	⇓P		Pg	17 31 26.7	+0.3
MGAB				AML		AML		
	comp=E,464µm,0.4s							
MGAB				AML		AML		
	comp=N,448µm,0.9s							
MGAB				AML		AML		
	comp=E,465µm,0.4s							
MGAB				AML		AML		
	comp=N,447µm,0.9s							
MGAB				AML		AML		
	comp=N,482µm,0.4s							
MGAB				AML		AML		
	comp=E,458µm,0.4s							
CERT	**Cerreto**	**0.88**	**193**	⇓P		Pn	17 31 30.0	+0.9
ATMI	**Monte Miggiano**	**0.89**	**306**	⇑P		Pb	17 31 27.9	-0.1
ATMI				AML		AML		
	comp=E,799µm,0.5s							
ATMI				AML		AML		
	comp=N,714µm,0.3s							
ATPI	**Pietralunga -**	**0.89**	**316**	⇓P		Pg	17 31 27.4	0.0
ATPI				S		Sn	17 31 42.0	-0.4
PIEI	**Pieia**	**0.89**	**324**	⇓P		Pg	17 31 27.2	-0.2
PIEI				S		Sn	17 31 42.0	-0.4
PIEI				AML		AML		
	comp=E,372µm,0.3s							
PIEI				AML		AML		
	comp=N,274µm,1.4s							
INTR	**Introdacqua**	**0.94**	**148**	⇓P		Pg	17 31 28.1	-0.1
INTR				AML		AML		
	comp=E,216µm,1.0s							
INTR				AML		AML		
	comp=N,383µm,0.7s							
NARO	**Abbazia di Nar**	**0.94**	**329**	⇓P		Pg	17 31 27.9	-0.3
NARO				S		Sn	17 31 44.0	+0.6
NARO				AML		AML		
	comp=E,173µm,0.6s							
NARO				AML		AML		
	comp=N,151µm,0.4s							
FSSB	**Fossombrone**	**0.95**	**339**	⇓P		Pb	17 31 28.7	-0.3
FSSB				AML		AML		
	comp=N,888µm,0.9s							
FSSB				AML		AML		
	comp=E,926µm,0.4s							
CAFI	**Castiglion Fio**	**1.07**	**299**	P		Pg	17 31 30.5	-0.3
CAFI				S		Sn	17 31 48.0	+1.2
CAFI				AML		AML		
	comp=N,142µm,1.4s							
CAFI				AML		AML		
	comp=E,150µm,0.3s							
SF01	**Poggio Pratacc**	**1.24**	**271**	⇑P		Pg	17 31 35.3	+1.3
CRE	**Caprese Michel**	**1.25**	**311**	⇑P		Pg	17 31 34.9	+0.8
CRE				AML		AML		
	comp=N,120µm,0.7s							
CRE				AML		AML		
	comp=E,88µm,1.4s							
GIUL	**Giuliano Di Ro**	**1.25**	**180**	⇓P		Pg	17 31 36.8	+2.6
PTRJ	**Pietraroja**	**1.73**	**146**	S		Sg	17 32 06.0	+0.2
SGRT	**San Giovanni R**	**2.13**	**119**	S		Sb	17 32 17.0	+1.2
GROG	**Isola di Gorgo**	**2.53**	**285**	S		Sg	17 32 33.0	+1.4
CDRU	**Civita di Ruta**	**2.78**	**146**	S		Sb	17 32 34.0	-0.6
AMUR	**Altamura**	**3.15**	**126**	P		Pn	17 32 02.1	+2.0
SCHR	**S. Chirico Rap**	**3.36**	**140**	S		Sb	17 32 51.0	-0.3

GORR	**Gorreto**	**3.38**	**303**	S	Sn	17 32 43.0	-0.8
RNCA	**Ronca, Sant'Ol**	**3.53**	**299**	P	Pb	17 32 15.2	+2.2
ZAG	**Zagreb**	**3.60**	**32**	P	Pn	17 32 08.5	+2.1
ZONE	**Zone**	**3.71**	**324**	⇑P	Pn	17 32 10.8	+2.9
EUCT	**Pavia**	**3.81**	**310**	S	Sb	17 32 60.0	-4.1
BRMO	**Bormio**	**4.20**	**332**	⇓P	Pn	17 32 17.0	+2.3
SPS2	**Spezzano della**	**4.22**	**145**	⇑P	Pg	17 32 29.4	-1.6

ROM 25 17:31:59.9±0.1,**42°.755N**±0°.002×**13°.168E**±0°.004,
h11km,**ML2.1/1,3C-3D,Error ellipse: s-maj=0.3km**
s-min=0.1km az=62.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**333**	⇑P	Pg	17 32 03.0	+0.4
NRCA				S	Sg	17 32 04.9	+0.4
NRCA				AML	AML		
	comp=E,11250μm,0.2s						
NRCA				AML	AML		
	comp=E,11265μm,0.2s						
NRCA				AML	AML		
	comp=N,10950μm,0.1s						
NRCA				AML	AML		
	comp=N,9875μm,0.1s						
NRCA				AML	AML		
	comp=E,12750μm,0.2s						
NRCA				AML	AML		
	comp=N,3095μm,0.1s						
NRCA				AML	AML		
	comp=N,3583μm,0.1s						
NRCA				AML	AML		
	comp=E,6941μm,0.1s						
NRCA				AML	AML		
	comp=E,7586μm,0.0s						
MC2	**Monte Cornacci**	**0.16**	**6**	⇑P	Pg	17 32 04.1	+0.5
MC2				S	Sg	17 32 07.3	+1.0
LNSS	**Leonessa**	**0.18**	**212**	⇓P	Pg	17 32 04.4	+0.6
LNSS				S	Sg	17 32 07.6	+1.0
LNSS				AML	AML		
	comp=E,909μm,0.2s						
LNSS				AML	AML		
	comp=N,740μm,0.2s						
LNSS				AML	AML		
	comp=N,802μm,0.6s						
LNSS				AML	AML		
	comp=E,1095μm,1.0s						
LNSS				AML	AML		
	comp=N,663μm,0.1s						
LNSS				AML	AML		
	comp=E,909μm,0.2s						
T1243	**Rocca Santa Ma**	**0.21**	**106**	P	Pb	17 32 05.2	-0.7
T1243				S	Sg	17 32 08.8	+1.2
T1243				AML	AML		
	comp=N,817μm,0.3s						
T1243				AML	AML		
	comp=E,907μm,0.6s						
T1243				AML	AML		
	comp=N,889μm,0.3s						
T1243				AML	AML		
	comp=E,845μm,0.6s						
RM33	**Pellescritta (**	**0.25**	**172**	P	Pg	17 32 05.7	+0.6
RM33				S	Sg	17 32 09.8	+1.3
RM33				AML	AML		
	comp=N,164μm,0.1s						
RM33				AML	AML		
	comp=E,167μm,0.1s						
RM33				AML	AML		
	comp=N,170μm,0.1s						
RM33				AML	AML		
	comp=E,171μm,0.0s						
FDMO	**Fiordimonte**	**0.29**	**348**	⇓P	Pg	17 32 06.1	+0.3
FDMO				S	Sg	17 32 10.7	+1.0
FDMO				AML	AML		
	comp=N,137μm,0.2s						
FDMO				AML	AML		
	comp=E,165μm,0.2s						
CESI	**CESI - Serrava**	**0.32**	**322**	P	Pg	17 32 06.5	+0.2
CESI				S	Sg	17 32 11.6	+1.1
CESI				AML	AML		
	comp=E,158μm,0.5s						
CESI				AML	AML		
	comp=N,221μm,0.4s						
CSP1	**Cessapalombo**	**0.34**	**5**	⇑P	Pg	17 32 07.0	+0.3
CSP1				S	Sb	17 32 12.5	-1.0
CSP1				AML	AML		
	comp=E,134μm,0.5s						
CSP1				AML	AML		
	comp=N,180μm,0.3s						
ARRO	**Arrone**	**0.34**	**240**	P	Pg	17 32 07.2	+0.4
ARRO				S	Sb	17 32 12.7	-0.8
ARRO				AML	AML		
	comp=N,170μm,0.2s						
ARRO				AML	AML		
	comp=E,155μm,0.2s						
TERO	**Teramo**	**0.35**	**112**	P	Pg	17 32 07.0	+0.2
TERO				S	Sg	17 32 12.5	+1.0
TERO				AML	AML		
	comp=E,181μm,0.2s						
TERO				AML	AML		
	comp=N,251μm,0.4s						
TERO				AML	AML		
	comp=E,221μm,0.3s						
TERO				AML	AML		
	comp=N,216μm,0.3s						
GIGS	**Gran Sasso**	**0.42**	**136**	P	Pg	17 32 08.5	+0.2
GIGS				S	Sg	17 32 14.8	+0.8
GIGS				AML	AML		
	comp=E,60μm,0.2s						
GIGS				AML	AML		
	comp=N,45μm,0.3s						
ASSB	**Assisi San Ben**	**0.47**	**308**	P	Pg	17 32 09.3	+0.1
ASSB				S	Sb	17 32 16.4	-0.8
ASSB				AML	AML		
	comp=N,134μm,0.6s						
ASSB				AML	AML		
	comp=E,116μm,0.3s						
T0110	**Collepietro**	**0.69**	**139**	S	Sb	17 32 25.0	+1.3
ARVD	**Arcevia**	**0.76**	**348**	S	Sb	17 32 26.0	+0.4
LRP	**Arpino**	**1.15**	**164**	P	Pb	17 32 18.3	-3.5
LIK	**San Giovanni I**	**1.28**	**167**	⇓P	Pb	17 32 24.0	0.0

ROM 25 17:32:25.1±0.1,**42°.834N**±0°.004×**13°.160E**±0°.006,
h10km,**ML2.2/1,1C-3D,Error ellipse: s-maj=0.5km**
s-min=0.3km az=252.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**270**	⇑P	Pg	17 32 27.3	+0.2
NRCA				S	Sg	17 32 28.4	-0.1
NRCA				AML	AML		
	comp=E,11250μm,0.2s						
NRCA				AML	AML		
	comp=N,9875μm,0.1s						
NRCA				AML	AML		
	comp=N,10950μm,0.1s						
NRCA				AML	AML		
	comp=E,11265μm,0.2s						
NRCA				AML	AML		
	comp=E,12750μm,0.2s						
NRCA				AML	AML		
	comp=N,9880μm,0.1s						
MC2	**Monte Cornacci**	**0.08**	**16**	⇓P	Pg	17 32 28.1	+0.3
MC2				S	Sg	17 32 30.1	+0.4
FDMO	**Fiordimonte**	**0.21**	**345**	⇓P	Pb	17 32 30.6	-0.5
FDMO				S	Sg	17 32 33.6	+1.0
FDMO				AML	AML		
	comp=N,75μm,0.1s						
FDMO				AML	AML		
	comp=E,83μm,0.1s						
LNSS	**Leonessa**	**0.25**	**201**	⇓P	Pg	17 32 30.9	+0.7
LNSS				S	Sg	17 32 35.1	+1.4
LNSS				AML	AML		
	comp=E,770μm,0.2s						
LNSS				AML	AML		
	comp=N,661μm,0.2s						
LNSS				AML	AML		
	comp=N,802μm,0.6s						
LNSS				AML	AML		
	comp=E,1095μm,1.0s						
LNSS				AML	AML		
	comp=N,661μm,0.2s						
LNSS				AML	AML		
	comp=E,770μm,0.2s						
T1243	**Rocca Santa Ma**	**0.25**	**123**	P	Pg	17 32 30.9	+0.5
T1243				S	Sg	17 32 34.9	+1.0
T1243				AML	AML		
	comp=N,456μm,0.3s						
T1243				AML	AML		
	comp=E,439μm,0.0s						
T1243				AML	AML		
	comp=N,403μm,0.0s						
CESI	**CESI - Serrava**	**0.25**	**312**	P	Pg	17 32 30.9	+0.6
CESI				S	Sb	17 32 35.1	-1.2
CESI				AML	AML		
	comp=E,145μm,0.6s						
CESI				AML	AML		
	comp=N,313μm,0.2s						
CSP1	**Cessapalombo**	**0.26**	**7**	P	Pb	17 32 31.2	-0.7
CSP1				S	Sb	17 32 35.5	-1.1
CSP1				AML	AML		
	comp=E,109μm,0.4s						
CSP1				AML	AML		
	comp=N,166μm,0.3s						
RM33	**Pellescritta (**	**0.33**	**173**	P	Pb	17 32 32.5	-0.6
RM33				S	Sb	17 32 37.7	-0.7
RM33				AML	AML		
	comp=E,813μm,0.6s						
RM33				AML	AML		
	comp=N,608μm,0.7s						
RM33				AML	AML		
	comp=N,54μm,0.0s						
RM33				AML	AML		
	comp=E,76μm,0.3s						
RM33				AML	AML		
	comp=N,154μm,0.6s						
RM33				AML	AML		
	comp=E,142μm,1.1s						
TERO	**Teramo**	**0.39**	**123**	P	Pg	17 32 33.2	+0.4
TERO				S	Sb	17 32 39.2	-1.0
TERO				AML	AML		
	comp=E,102μm,0.0s						
TERO				AML	AML		
	comp=N,143μm,0.4s						
TERO				AML	AML		
	comp=E,94μm,0.3s						
TERO				AML	AML		
	comp=N,85μm,0.1s						

IDC ***25*** *18:53:12.0±12.0, 10°.86N×83°.03W, h0km, mb3.4/2, mbtmp3.4/2, MS3.3/6, Error ellipse: s-maj=857.6km s-min=69.8km az=34.0*
UCR ***25*** *18:53:15.1±1.1, 9°.38N×85°.47W, h21km±2km, MW4.5*
INET ***25*** *18:53:19.3±2.4, 9°.53N×85°.21W, h11km±12km, ML3.6*
ISC 25 18:53:18.1±1.4,**9°.54N**±0°.07×**85°.33W**±0°.04,**h19**km±3km,
n51,σ1s06/51,MS3.3/4,11C,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INDI	**Punta indio, G**	**0.37**	**333**	*e*P	**Pg**	**18 53 25.0**	**-0.9**
INDI				*e*S	**Sb**	**18 53 32.2**	**+0.7**
LAFE	**Finca La Fe, P**	**0.50**	**57**	*e*P	**Pg**	**18 53 27.5**	**-0.7**
LAFE	**Finca La Fe, P**	**0.50**	**57**	*e*P	**Pg**	**18 53 27.5**	**-0.7**
SAJU	**San Juanillo,**	**0.65**	**325**	*e*P	**Pb**	**18 53 28.9**	**-1.8**
SAJU				*e*S	**Sb**	**18 53 38.5**	**-0.8**
JACO	**JACO, Garabito**	**0.68**	**79**	*e*P	**Pg**	**18 53 31.0**	**-0.5**
JACO				*e*S	**Sg**	**18 53 41.6**	**+1.0**
JACO	**JACO, Garabito**	**0.68**	**79**	*e*P	**Pg**	**18 53 30.9**	**-0.5**
JTS	**Las Juntas de**	**0.84**	**27**	*e*P	**Pb**	**18 53 33.4**	**-0.7**
SRA1	**San Ramn**	**1.00**	**57**	*e*P	**Pb**	**18 53 36.2**	**-0.7**
CASO	**Castillo**	**1.07**	**33**	⇑*i*P	**Pn**	**18 53 37.5**	**-0.6**
COLC	**Colonia**	**1.13**	**6**	⇑*i*P	**Pn**	**18 53 37.7**	**-1.2**
ACAL	**Aguas Claras**	**1.13**	**15**	⇑*i*P	**Pn**	**18 53 37.9**	**-1.1**
CEDE	**Laguna Cedeo**	**1.13**	**33**	⇑*i*P	**Pn**	**18 53 38.8**	**-0.2**
FORC	**Fortuna**	**1.13**	**35**	⇑*e*P	**Pn**	**18 53 38.2**	**-0.5**
LIM1	**Limonal**	**1.16**	**4**	⇑*i*P	**Pn**	**18 53 38.1**	**-1.2**
GUAB	**Guayabo de Bag**	**1.17**	**5**	*e*P	**Pn**	**18 53 38.2**	**-1.3**
HORNC	**Hornillas**	**1.18**	**7**	⇑*i*P	**Pn**	**18 53 38.4**	**-1.3**
HORNC				*e*S	**Sg**	**18 53 57.8**	**+1.2**
HZTE	**Horizontes, Gu**	**1.20**	**348**	*e*P	**Pn**	**18 53 38.4**	**-1.4**
GPS2	**Hotel Rincn d**	**1.21**	**359**	*e*P	**Pn**	**18 53 38.7**	**-1.3**
GPS3	**Bodega del ICE**	**1.21**	**359**	*e*P	**Pn**	**18 53 39.6**	**-0.4**
PTEN	**Parque Tenorio**	**1.22**	**16**	⇑*e*P	**Pn**	**18 53 39.3**	**-0.9**
LAPC	**Finca la Perla**	**1.23**	**355**	⇑*e*P	**Pn**	**18 53 38.6**	**-1.7**
GBS3	**Finca Las Img**	**1.24**	**355**	⇑*e*P	**Pn**	**18 53 38.8**	**-1.7**
BUEV	**Buena Vista**	**1.26**	**357**	⇑*e*P	**Pn**	**18 53 39.2**	**-1.5**
GB1A	**Borinquen Arri**	**1.28**	**357**	*e*P	**Pn**	**18 53 39.6**	**-1.4**
VMAR	**Armenia, Volca**	**1.29**	**9**	*e*P	**Pn**	**18 53 40.4**	**-0.7**
HDC	**Heredia**	**1.29**	**69**	*e*P	**Pn**	**18 53 40.5**	**-0.7**
HDC3	**Heredia 3**	**1.29**	**69**	*e*P	**Pn**	**18 53 40.6**	**-0.6**
LCR2	**La Lucha 2**	**1.33**	**81**	*e*P	**Pn**	**18 53 40.4**	**-1.4**
BUAI	**Buenos Aires**	**1.33**	**0**	*e*P	**Pn**	**18 53 40.7**	**-1.0**
VERA	**Finca Concepci**	**1.39**	**19**	*e*P	**Pn**	**18 53 42.5**	**+0.1**
RIMA	**Rio Macho**	**1.47**	**81**	*e*P	**Pn**	**18 53 42.4**	**-1.3**
RIMA	**Rio Macho**	**1.47**	**81**	*e*P	**Pn**	**18 53 42.4**	**-1.3**
RIMA				*e*S	**Sn**	**18 54 02.7**	**+0.3**
RIMA				IAML		18 54 15.4	
	comp=E,822nm,0.5s						
EDDO	**Dominical**	**1.48**	**101**	*e*P	**Pn**	**18 53 42.3**	**-1.3**
COVE	**Coope Vega, Sa**	**1.49**	**38**	*e*P	**Pn**	**18 53 43.7**	**-0.2**
CDM	**Cerro de Muert**	**1.55**	**89**	*e*P	**Pn**	**18 53 44.0**	**-1.0**
CDM	**Cerro de Muert**	**1.55**	**89**	*e*P	**Pn**	**18 53 44.0**	**-1.0**
CDM				*e*S	**Sb**	**18 54 05.5**	**-0.3**
CDM				IAML		18 54 06.3	
	comp=E,1μm,0.8s						
SRBA	**San Rafael, Bu**	**1.97**	**99**	*e*P	**Pn**	**18 53 49.7**	**-0.9**
DRK0	**Durika**	**2.08**	**97**	*e*P	**Pn**	**18 53 52.3**	**+0.2**
ACON	**Acoyapa**	**2.42**	**4**	*e*P	**Pn**	**18 53 55.8**	**-0.9**
ESPN	**Las Esperanzas**	**2.83**	**21**	*e*P	**Pn**	**18 54 02.0**	**-0.3**
MOMN	**Momotombo**	**3.09**	**338**	*e*P	**Pn**	**18 54 06.0**	**+0.1**
CSGN	**Cosiguina Volc**	**4.06**	**328**	*e*P	**Pn**	**18 54 20.8**	**+1.5**
ROSC	**El Rosal**	**11.88**	**112**	LR	LR	19 01 10.1	
	comp=E,168nm,19.4s,baz=37,slow=46						
CMIG	**Matias Romero**	**11.95**	**310**	LR	LR	19 01 27.4	
	comp=E,134nm,20.7s,baz=134,slow=38						
TXAR	**Lajitas Array**	**26.13**	**321**	P	**P**	**18 58 52.7**	**+1.5**
	comp=E,0.5nm,0.9s,baz=135,slow=10,SNR=4.0						
	comp=E,0.5nm,0.9s						
LPIG	**La Paz**	**27.88**	**304**	LR	LR	19 11 52.0	
	comp=E,43nm,18.1s,baz=60,slow=38						
SADO	**Sadowa**	**35.51**	**8**	LR	LR	19 15 38.9	
	comp=E,70nm,18.3s,baz=356,slow=40						
NVAR	**Mina Array Bea**	**41.25**	**320**	P	**P**	**19 01 03.4**	**+1.0**
	comp=E,0.2nm,0.3s,baz=129,slow=7.1,SNR=2.0						
	comp=E,0.2nm,0.3s						
RCBR	**Riachuelo**	**51.57**	**105**	LR	LR	19 26 19.6	
	comp=E,63nm,18.0s,baz=121,slow=40						
NOA	**NORSAR Array B**	**84.89**	**29**	LR	LR	19 42 13.4	
	comp=E,5.4nm,18.1s,baz=15,slow=36						
CMAR	**Chiang Mai Arr**	**151.87**	**351**	PKPbc	**PKPdf**	**19 13 07.2**	**+0.9**
	comp=E,0.2nm,0.4s,baz=332,slow=4.1,SNR=1.7						

MDD ***25*** *19:03:55.7±0.2, 42°.84N×7°.26W, h12km, mb_Lg2.9/20, Error ellipse: s-maj=2.2km s-min=1.3km az=146.0*
LDG ***25*** *19:03:55.6±0.1, 42°.86N×7°.25W, h12km, Md3.1/1, Ml2.9/21, Error ellipse: s-maj=2.6km s-min=1.6km az=120.0*
SFS ***25*** *19:03:55.0, 42°.83N×7°.26W, ML2.9, BARALLA (BARALLA)*
INMG ***25*** *19:03:56.1±1.6, 42°.85N×7°.21W, h17km±2km, ML2.7, Error ellipse: s-maj=1.9km s-min=1.8km az=92.0*
IGIL ***25*** *19:03:56.5, 42°.84N×7°.26W, h12km*
ISC 25 19:03:53.5±1.1,**42°.84N**±0°.02×**7°.18W**±0°.02,**h19**km±3km,
n82,σ1s98/155,1D,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPON	**Pontenova**	**0.49**	**3**	Pg	**Pn**	**19 04 04.9**	**-0.5**
EPON				Sg	**Sb**	**19 04 11.1**	**+0.9**
EPON				*i* Vmb_Lg		19 04 13.3	
EAGO	**Agolada(Pontev**	**0.67**	**267**	Pg	**Pn**	**19 04 07.9**	**0.0**
EAGO				Sg	**Sg**	**19 04 15.8**	**+0.1**
ECAL	**Calabor**	**0.96**	**160**	Pg	**Pn**	**19 04 13.1**	**+1.2**
ECAL				Sg	**Sn**	**19 04 26.0**	**+0.9**
ECAL				*i* Vmb_Lg		19 04 26.9	
PBRG	**Braganca**	**1.08**	**162**	*e*P	**Pg**	**19 04 15.9**	**+1.4**
PBRG				*e*S	**Sg**	**19 04 29.6**	**+0.8**
PBRG				A	A	19 04 31.4	
	69nm,0.3s						
ELOB	**Lobios**	**1.17**	**214**	Pg	**Pg**	**19 04 16.0**	**-0.2**
ELOB				Sg	**Sn**	**19 04 30.3**	**0.0**
ELOB				*i* Vmb_Lg		19 04 33.3	
PGAV	**Gavieira, Arco**	**1.19**	**223**	⇓*e*P	**Pg**	**19 04 16.4**	**-0.1**
PGAV				*e*S	**Sg**	**19 04 31.9**	**-0.3**
PGAV				A	A	19 04 34.1	
	220nm,0.1s						

PCAB	**Cabril**	**1.29**	**209**	*e*Pn	**Pg**	**19 04 17.8**	**-0.7**
PCAB	**Cabril**	**1.29**	**209**	*e*Pg	**Pg**	**19 04 19.3**	**+0.8**
PCAB				*e*Sn	**Sb**	**19 04 34.1**	**+0.7**
PCAB				*e*Sg	**Sg**	**19 04 35.9**	**+0.5**
PCAB				A	A	19 04 37.8	
	237nm,0.2s						
EZAM	**Zamans**	**1.32**	**239**	Pg	**Pg**	**19 04 18.1**	**-0.8**
EZAM				Sg	**Sb**	**19 04 34.2**	**+0.2**
EZAM				*i* Vmb_Lg		19 04 37.6	
EMAZ	**Mazaricos**	**1.32**	**275**	Pg	**Pb**	**19 04 18.2**	**+0.5**
EMAZ				Sg	**Sb**	**19 04 34.4**	**+0.1**
EMAZ				*i* Vmb_Lg		19 04 38.3	
EARI	**Arriondas**	**1.52**	**72**	Pg	**Pg**	**19 04 24.4**	**+1.7**
EARI				Sg	**Sg**	**19 04 43.8**	**+1.3**
EARI				*i* Vmb_Lg		19 04 46.1	
POLO	**Lamas de Olo**	**1.54**	**198**	*e*Pn	**Pb**	**19 04 21.2**	**-0.1**
POLO	**Lamas de Olo**	**1.54**	**198**	*e*Pg	**Pg**	**19 04 23.8**	**+0.7**
POLO				*e*Sn	**Sb**	**19 04 40.9**	**+0.5**
POLO				*e*Sg	**Sg**	**19 04 42.9**	**-0.2**
POLO				A	A	19 04 44.6	
	45nm,0.4s						
PVRL	**Vila Real**	**1.61**	**195**	*e*Pg	**Pg**	**19 04 25.1**	**+0.5**
PVRL				*e*Sg	**Sg**	**19 04 45.4**	**-0.2**
PVRL				A	A	19 04 46.2	
	149nm,0.3s						
MVO	**Moncorvo**	**1.68**	**176**	*e*Pn	**Pb**	**19 04 23.8**	**0.0**
MVO	**Moncorvo**	**1.68**	**176**	*e*Pg	**Pg**	**19 04 25.7**	**-0.1**
MVO				*e*Sg	**Sg**	**19 04 47.3**	**-0.4**
MVO				A	A	19 04 48.7	
	87nm,0.4s						
PTO	**Porto**	**2.00**	**212**	*e*Pg	**Pg**	**19 04 32.4**	**+0.4**
PTO				*e*Sg	**Sg**	**19 04 57.5**	**-0.5**
PTO				A	A	19 04 59.3	
	66nm,0.3s						
PVIS	**Viseu**	**2.19**	**194**	*e*Pn	**Pb**	**19 04 30.6**	**-1.9**
PVIS	**Viseu**	**2.19**	**194**	*e*Pg	**Pg**	**19 04 36.0**	**+0.5**
PVIS				*e*Sg	**Sg**	**19 05 02.5**	**-1.5**
PVIS				A	A	19 05 08.9	
	38nm,0.3s						
MTE	**Manteigas**	**2.46**	**187**	*e*Pg	**Pg**	**19 04 40.0**	**-0.6**
MTE				*e*Sg	**Sg**	**19 05 11.2**	**-1.2**
MTE				A	A	19 05 15.6	
	47nm,0.3s						
COI	**Coimbra**	**2.79**	**200**	*e*Sg	**Sg**	**19 05 22.1**	**-1.0**
PCAS	**Casmilo, Conde**	**2.96**	**200**	*e*Pn	**Pn**	**19 04 41.4**	**+2.1**
PCAS	**Casmilo, Conde**	**2.96**	**200**	*e*Pg	**Pg**	**19 04 50.4**	**+0.3**
PCAS				*e*Sn	**Sn**	**19 05 16.7**	**+2.4**
PCAS				*e*Sg	**Sg**	**19 05 27.5**	**-1.0**
PCAS				A	A	19 05 32.8	
	18nm,0.6s						
PCBR	**Castelo Branco**	**3.01**	**184**	*e*Pn	**Pn**	**19 04 42.1**	**+2.1**
PCBR				*e*Sn	**Sn**	**19 05 16.4**	**+0.9**
PCBR				*e*Sg	**Sg**	**19 05 29.4**	**-0.7**
PCBR				A	A	19 05 31.4	
	18nm,0.7s						
GUD	**Guadarrama**	**3.15**	**133**	Pn	**Pn**	**19 04 45.0**	**+2.8**
GUD				Sn	**Sn**	**19 05 20.0**	**+0.7**
GUD				Sg	**Sg**	**19 05 33.6**	**-1.3**
GUD				*i* Vmb_Lg		19 05 35.3	
PMRV	**Marv??o**	**3.41**	**183**	*e*Pn	**Pn**	**19 04 47.8**	**+2.2**
PMRV				*e*Sn	**Sn**	**19 05 26.1**	**+0.5**
PMRV				*e*Sg	**Sg**	**19 05 41.6**	**-1.5**
PMRV				A	A	19 05 44.3	
	14nm,0.6s						
PSBE	**So Bento**	**3.54**	**201**	*e*Pn	**Pn**	**19 04 49.6**	**+2.2**
PSBE				*e*Sn	**Sn**	**19 05 29.7**	**+1.0**
PSBE				*e*Sg	**Sg**	**19 05 48.4**	**+1.2**
PSBE				A	A	19 05 53.8	
	13nm,0.6s						
PMTG	**Montargil**	**3.85**	**192**	*e*Pn	**Pn**	**19 04 53.3**	**+1.7**
PMTG				*e*Sn	**Sn**	**19 05 36.7**	**+0.4**
PMTG				*e*Sg	**Sg**	**19 05 55.3**	**-1.8**
PMTG				A	A	19 06 00.5	
	7.0nm,0.7s						
UCM	**Universidad Co**	**3.89**	**129**	P	**Pg**	**19 05 08.2**	**+0.3**
UCM				S	**Sg**	**19 05 55.7**	**-2.6**
PAB	**San Pablo**	**3.92**	**146**	Pn	**Pn**	**19 04 55.4**	**+2.7**
PAB				Sn	**Sn**	**19 05 38.7**	**+0.5**
PAB				Sg	**Sg**	**19 05 57.2**	**-2.2**
PAB				*i* Vmb_Lg		19 05 59.4	
PESTR	**Estremoz**	**3.98**	**185**	*e*Pn	**Pn**	**19 04 55.7**	**+2.2**
PESTR				*e*Sn	**Sn**	**19 05 40.9**	**+1.3**
PESTR				*e*Sg	**Sg**	**19 05 58.5**	**-2.8**
PESTR				A	A	19 06 08.2	
	9.1nm,0.6s						
ESDC	**Sonseca Array**	**3.99**	**141**	Pn	**Pn**	**19 04 55.9**	**+2.4**
ESDC				Sn	**Sn**	**19 05 39.8**	**+0.1**
ESDC				Sg	**Sg**	**19 05 58.4**	**-3.0**
EBAD	**Badajoz**	**4.08**	**178**	Pn	**Pn**	**19 04 57.1**	**+2.3**
EBAD				Sn	**Sn**	**19 05 43.2**	**+1.2**
EBAD				Sg	**Sg**	**19 06 01.6**	**-3.0**
EBAD				*i* Vmb_Lg		19 06 05.5	
EALK	**Alkurruntz**	**4.18**	**83**	Pn	**Pn**	**19 04 58.9**	**+2.7**
EALK				Sn	**Sn**	**19 05 44.6**	**+0.2**
EALK				*i* Vmb_Lg		19 06 20.2	
PMAFR	**Mafra**	**4.20**	**203**	*e*Pn	**Pn**	**19 04 58.8**	**+2.4**
PMAFR				*e*Sg	**Sg**	**19 06 05.5**	**-2.7**
EORO	**Oroz-Betelu**	**4.32**	**87**	Pn	**Pn**	**19 05 02.0**	**+3.9**
EORO				Sn	**Sn**	**19 05 48.9**	**+1.0**
EORO				*i* Vmb_Lg		19 06 15.7	
ETOR	**Torete**	**4.33**	**116**	Pn	**Pn**	**19 05 01.0**	**+2.7**
ETOR				Sn	**Sn**	**19 05 49.8**	**+1.5**
ETOR				Sg	**Sg**	**19 06 10.9**	**-1.5**
ETOR				*i* Vmb_Lg		19 06 27.1	
EVO	**Evora**	**4.35**	**189**	*e*Pn	**Pn**	**19 05 00.7**	**+2.2**
EVO				*e*Sn	**Sn**	**19 05 49.4**	**+0.7**
EVO				*e*Sg	**Sg**	**19 06 12.3**	**-0.8**
EVO				A	A	19 06 16.5	
	8.0nm,0.5s						
SJPF	**Ste Jean**	**4.38**	**84**	*e*P	**Pn**	**19 05 03.2**	**+4.3**
SJPF	**Ste Jean**	**4.38**	**84**	*e*Pg	**Pg**	**19 05 16.9**	**-0.4**
SJPF				*e*Sn	**Sn**	**19 05 48.7**	**-0.6**
	1.4nm,0.2s						
SJPF				*e*Sg	**Sg**	**19 06 13.9**	**-0.1**
	2.6nm,0.3s						
PBAR	**Barrancos**	**4.66**	**179**	*e*Pn	**Pn**	**19 05 05.6**	**+2.8**
PBAR				*e*Sn	**Sn**	**19 05 56.6**	**+0.3**
PBAR				*e*Sg	**Sg**	**19 06 20.8**	**-2.3**
PBAR				A	A	19 06 23.4	
	6.7nm,0.4s						
PNCL	**Nicolau / Gran**	**4.83**	**193**	*e*Pn	**Pn**	**19 05 07.3**	**+2.2**
PNCL				*e*Sn	**Sn**	**19 06 00.3**	**-0.3**
PNCL				*e*Sg	**Sg**	**19 06 26.4**	**-2.2**
PNCL				A	A	19 06 34.1	
	3.7nm,0.7s						
ETSF	**Etsaut**	**4.87**	**87**	*e*P	**Pn**	**19 05 09.8**	**+4.2**
ETSF				*e*Sn	**Sn**	**19 06 00.7**	**-0.8**
	3.6nm,0.4s						
ECAB	**El Cabril**	**4.95**	**164**	Pn	**Pn**	**19 05 09.3**	**+2.5**
ECAB				Sn	**Sn**	**19 06 03.0**	**-0.4**
ECAB				Sg	**Sg**	**19 06 29.0**	**-3.3**
ECAB				*i* Vmb_Lg		19 06 37.4	
MESJ	**Messejana**	**5.06**	**189**	*e*P	**Pn**	**19 05 10.1**	**+1.9**
MESJ	**Messejana**	**5.06**	**189**	*e*Pn

MORF	**Marmelete**	**5.64**	**192**	*eP*	**Pn**	**19 05 17.6**	**+1.3**
QUIF	**Quistinic**	**5.81**	**28**	*ePn*	**Pn**	**19 05 19.9**	**+1.4**
QUIF	**Quistinic**	**5.81**	**28**	*eP*	Pn	19 05 24.1	+5.6
QUIF				*eSn*	**Sn**	**19 06 21.7**	**-2.8**
ETOB	**Tobarra**	**5.99**	**133**	Pn	**Pn**	**19 05 23.6**	**+2.6**
ETOB				Sn	**Sn**	**19 06 28.3**	**-0.8**
ETOB				Sg	**Sg**	**19 07 02.3**	**-3.3**
ETOB				*i* Vmb_Lg		19 07 16.2	
ROSF	**Rostrenen**	**6.14**	**25**	*ePn*	**Pn**	**19 05 24.0**	**+1.0**
ROSF	**Rostrenen**	**6.14**	**25**	*eP*	Pn	19 05 28.7	+5.7
ROSF				*eSn*	**Sn**	**19 06 29.8**	**-2.9**
	1.6nm,0.2s						
MFF	**Saint Martin d**	**6.26**	**51**	*ePn*	**Pn**	**19 05 26.6**	**+1.9**
MFF				*eSn*	**Sn**	**19 06 33.2**	**-2.5**
	3.1nm,0.3s						
SGMF	**Saint Gilles**	**6.31**	**29**	*ePn*	**Pn**	**19 05 25.4**	**0.0**
SGMF				*eSn*	**Sn**	**19 06 33.9**	**-3.0**
	1.0nm,0.2s						
RJF	**Les Rejaudoux**	**6.73**	**66**	*ePn*	**Pn**	**19 05 32.5**	**+1.3**
RJF	**Les Rejaudoux**	**6.73**	**66**	*eP*	Pn	19 05 37.0	+5.8
RJF				*eSn*	**Sn**	**19 06 44.6**	**-2.7**
	1.9nm,0.2s						
MTLF	**Montolieu**	**6.90**	**83**	*ePn*	**Pn**	**19 05 34.8**	**+1.3**
MTLF	**Montolieu**	**6.90**	**83**	*eP*	Pn	19 05 40.0	+6.5
MTLF				*eSn*	**Sn**	**19 06 48.7**	**-2.7**
	1.0nm,0.3s						
CAF	**Calviac**	**7.00**	**70**	*ePn*	**Pn**	**19 05 36.2**	**+1.3**
CAF				*eSn*	**Sn**	**19 06 51.2**	**-2.7**
	1.2nm,0.2s						
GRR	**Gorron**	**7.10**	**36**	*ePn*	**Pn**	**19 05 36.7**	**+0.5**
GRR				*eSn*	**Sn**	**19 06 52.9**	**-3.4**
	1.7nm,0.2s						
TCF	**Toulx Ste Croi**	**7.54**	**60**	*ePn*	**Pn**	**19 05 43.2**	**+0.9**
TCF	**Toulx Ste Croi**	**7.54**	**60**	*eP*	Pn	19 05 48.6	+6.3
TCF				*eSn*	**Sn**	**19 07 02.6**	**-4.6**
	2.6nm,0.3s						
FLN	**La Foliniere** baz=221	**7.54**	**36**	*ePn*	**Pn**	**19 05 43.0**	**+0.7**
FLN				*eSn*	**Sn**	**19 07 03.4**	**-3.9**
	1.0nm,0.2s						
LDF	**La Druitiere**	**7.58**	**38**	*ePn*	**Pn**	**19 05 43.5**	**+0.7**
LDF				*eSn*	**Sn**	**19 07 04.1**	**-4.0**
	1.8nm,0.3s						
BGF	**Bois d'Agland**	**8.05**	**59**	*ePn*	**Pn**	**19 05 50.4**	**+1.1**
BGF				*eSn*	**Sn**	**19 07 16.4**	**-3.3**
	3.4nm,0.4s						
LASF	**Ste Croix**	**8.12**	**78**	*ePn*	**Pn**	**19 05 51.5**	**+1.2**
LASF	**Ste Croix**	**8.12**	**78**	*eP*	Pn	19 05 56.9	+6.6
LASF				*eSn*	**Sn**	**19 07 18.2**	**-3.4**
	0.6nm,0.2s						
AVF	**Avril sur Loir**	**8.46**	**59**	*ePn*	**Pn**	**19 05 55.9**	**+1.0**
AVF				*eSn*	**Sn**	**19 07 26.5**	**-3.3**
	0.7nm,0.3s						
SSF	**Saint Saulge**	**8.67**	**57**	*ePn*	**Pn**	**19 05 59.0**	**+1.2**
SSF	**Saint Saulge**	**8.67**	**57**	*eP*	Pn	19 06 04.5	+6.7
SSF				*eSn*	**Sn**	**19 07 31.3**	**-3.7**
	0.7nm,0.3s						
VIVF	**Saint-Julien-l**	**8.80**	**73**	*eP*	Pn	19 06 06.2	+6.6
LOR	**Lormes**	**8.98**	**57**	*ePn*	**Pn**	**19 06 03.0**	**+1.0**
LOR	**Lormes**	**8.98**	**57**	*eP*	Pn	19 06 08.5	+6.5

*RSNC **25** 19:05:11.6±0.9,6.°81N×73.°16W,h151km±3km,ML3.5*
*IDC **25** 19:05:16.8±6.4,4.°87N×76.°45W,h124km±73km,mb3.0/1, mbtmp3.6/2,Error ellipse: s-maj=108.1km s-min=38.6km az=46.0*

ISC 25 19:05:10.7±0.9,**6.°83N**±0.°03×**73.°12W**±0.°04,**h154**km±6km, **n45**,σ1§**50**/72,**1C-2D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**196**	*eP*	**Pn**	**Pn**	**19 05 32.0**	**+0.1**
BARC				*eS*	**Sn**	**Sn**	**19 05 47.3**	**-0.8**
BARC				*i*			19 05 48.2	
	comp=Z,968nm,0.2s							
BRRC	**Barranca, Sant**	**0.65**	**295**	*eP*	**Pn**	**Pn**	**19 05 33.8**	**+0.4**
BRRC				*eS*	**Sn**	**Sn**	**19 05 50.8**	**+0.1**
BRRC				*i*			19 05 51.9	
	comp=Z,395nm,0.2s							
PAMC	**Pamplona, Colo**	**0.66**	**39**↓	*eP*	**Pn**	**Pn**	**19 05 34.8**	**+0.8**
PAMC				*eS*	**Sn**	**Sn**	**19 05 51.8**	**+0.1**
PAMC				*i*			19 05 54.1	
	comp=Z,1μm,0.5s							
RUSC	**La Rusia**	**0.93**	**178**	*eP*	**Pn**	**Pn**	**19 05 35.9**	**0.0**
RUSC				*eS*	**Sn**	**Sn**	**19 05 54.8**	**-0.3**
RUSC				*i*			19 05 55.9	
	comp=Z,531nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.36**	**258**↑	*eP*	**Pn**	**Pn**	**19 05 38.3**	**-0.9**
PTBC				*eS*	**Sn**	**Sn**	**19 05 59.6**	**-1.4**
PTBC				*i*			19 06 06.7	
	comp=Z,393nm,0.7s							
TAMC	**Tame, Arauca**	**1.37**	**106**↓	*iP*		**Pn**	**19 05 40.3**	**+1.0**
OCAC	**Ocana**	**1.42**	**352**	*eP*	**Pn**	**Pn**	**19 05 40.0**	**+0.1**
OCAC				*eS*	**Sn**	**Sn**	**19 06 01.9**	**-0.4**
OCAC				*i*			19 06 05.4	
	comp=Z,715nm,0.2s							
SPBC	**San Pablo de B**	**1.50**	**219**	*eP*	**Pn**	**Pn**	**19 05 40.9**	**+0.1**
SPBC				*eS*	**Sn**	**Sn**	**19 06 02.8**	**-1.0**
SPBC				*i*			19 06 09.2	
	comp=Z,481nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*eP*	**Pn**	**Pn**	**19 05 44.5**	**+0.1**
ZARC				*eS*	**Sn**	**Sn**	**19 06 09.9**	**-0.3**
ZARC				*i*			19 06 20.5	
	comp=Z,274nm,0.2s							
NORC	**Norcasia**	**2.15**	**234**	*eP*	**Pn**	**Pn**	**19 05 47.7**	**-0.2**
NORC				*eS*	**Sn**	**Sn**	**19 06 15.5**	**-1.0**
NORC				*i*			19 06 21.1	
	comp=Z,286nm,0.5s							
CHIC	**Chingaza**	**2.27**	**196**	*eP*	**Pn**	**Pn**	**19 05 49.8**	**+0.2**
CHIC				*eS*	**Sn**	**Sn**	**19 06 17.8**	**-1.9**
CHIC				*i*			19 06 22.8	
	comp=Z,232nm,0.4s							
ROSC	**El Rosal**	**2.31**	**211**	P		**Pn**	**19 05 51.6**	**+1.5**
	comp=Z,180nm,0.3s,baz=297,slow=12,SNR=114							
ROSC				S		**Sn**	**19 06 20.0**	**-0.5**
	comp=Z,292nm,0.3s,baz=207,slow=24,SNR=18							
ROSC	**El Rosal**	**2.31**	**211**	*eP*	**Pn**	**Pn**	**19 05 51.5**	**+1.4**
ROSC				*eS*	**Sn**	**Sn**	**19 06 23.0**	**+2.5**
ROSC				*i*			19 06 26.4	
	comp=Z,301nm,0.5s							
HELC	**Santa Helena**	**2.48**	**255**	*eP*	**Pn**	**Pn**	**19 05 53.6**	**+1.5**
HELC				*eS*	**Sn**	**Sn**	**19 06 22.8**	**-1.2**
HELC				*i*			19 06 30.1	
	comp=Z,210nm,0.3s							
UREC	**San Jos de Ur**	**2.57**	**291**	*eP*	**Pn**	**Pn**	**19 05 52.0**	**-0.9**
SOCV	**Socops**	**2.67**	**57**	*eP*	**Pn**	**Pn**	**19 05 55.0**	**+0.8**
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*eP*	**Pn**	**Pn**	**19 05 56.9**	**+2.0**
LL1C				*eS*	**Sn**	**Sn**	**19 06 32.0**	**+2.9**
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*eP*	**Pn**	**Pn**	**19 05 55.9**	**+0.3**
GUY2C				*eS*	**Sn**	**Sn**	**19 06 34.3**	**+4.2**
GUY2C				*i*			19 06 38.1	
	comp=Z,209nm,0.3s							
VILC	**Villavicencio,**	**2.76**	**192**	*eP*	**Pn**	**Pn**	**19 05 55.4**	**0.0**
VILC				*eS*	**Sn**	**Sn**	**19 06 29.6**	**-0.3**
VILC				*i*			19 06 32.7	
	comp=Z,283nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*eP*	**Pn**	**Pn**	**19 05 55.1**	**-0.5**
PTGC				*eS*	**Sn**	**Sn**	**19 06 27.6**	**-2.7**
PTGC				*i*			19 06 33.4	
	comp=Z,221nm,0.3s							
LL6C	**La Loma 6 Bece**	**2.89**	**357**	*eP*	**Pn**	**Pn**	**19 05 56.4**	**-0.5**
LL6C				*eS*	**Sn**	**Sn**	**19 06 31.3**	**-1.4**
LL6C				*i*			19 06 38.0	
	comp=Z,98nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*eP*	**Pn**	**Pn**	**19 06 00.4**	**+1.5**
CBOC				*i*			19 06 47.3	
	comp=Z,89nm,0.4s							
DBBC	**Dabeiba**	**3.08**	**274**	*eP*	**Pn**	**Pn**	**19 05 59.3**	**0.0**
DBBC				*eS*	**Sn**	**Sn**	**19 06 35.3**	**-1.6**
DBBC				*i*			19 06 39.7	
	comp=Z,97nm,0.6s							
ARGC	**Ariguani, Magd**	**3.21**	**340**	*eP*	**Pn**	**Pn**	**19 06 03.0**	**+2.1**
ARGC				*eS*	**Sn**	**Sn**	**19 06 40.7**	**+0.8**
ARGC				*i*			19 06 50.5	
	comp=Z,57nm,0.2s							
ANIL	**Santa Ana**	**3.25**	**225**	*eP*	**Pn**	**Pn**	**19 06 02.5**	**+0.8**
ANIL				*eS*	**Sn**	**Sn**	**19 06 42.0**	**+0.8**
ANIL				*i*			19 06 46.4	
	comp=Z,378nm,0.3s							
PRAC	**Prado**	**3.56**	**210**	*eP*	**Pn**	**Pn**	**19 06 05.0**	**-0.4**
PRAC				*eS*	**Sn**	**Sn**	**19 06 47.9**	**0.0**
PRAC				*i*			19 06 52.3	
	comp=Z,106nm,0.2s							
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*	**Pn**	**Pn**	**19 06 05.5**	**-1.3**
SJCC				*eS*	**Sn**	**Sn**	**19 06 47.0**	**-3.5**
SJCC				*i*			19 06 54.1	
	comp=Z,62nm,0.6s							
PLMC	**San Jos del P**	**3.68**	**239**	*eP*	**Pn**	**Pn**	**19 06 07.3**	**+0.3**
PLMC				*i*			19 07 01.4	
	comp=Z,66nm,0.3s							
LCBC	**Los crdobas,**	**3.80**	**302**	*eP*	**Pn**	**Pn**	**19 06 08.5**	**0.0**
LCBC				*eS*	**Sn**	**Sn**	**19 06 54.9**	**+1.5**
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*eP*	**Pn**	**Pn**	**19 06 12.2**	**-1.3**
CRJC				*eS*	**Sn**	**Sn**	**19 06 59.6**	**-2.7**
CRJC				*i*			19 07 07.1	
	comp=Z,92nm,0.4s							
YOTC	**Yotoco, Valle**	**4.28**	**229**	*eP*	**Pn**	**Pn**	**19 06 14.4**	**-0.4**
SMRC	**Santa Marta, M**	**4.45**	**346**	*eP*	**Pn**	**Pn**	**19 06 16.9**	**-0.1**
SMRC				*i*			19 07 08.4	
	comp=Z,62nm,0.2s							
CAPC	**Capurgana**	**4.56**	**293**	*eS*	**Sn**	**Sn**	**19 07 08.2**	**-3.1**
PTAC	**Punta Ardita,**	**4.67**	**274**	*eP*	**Pn**	**Pn**	**19 06 19.4**	**-0.5**
MACC	**Macarena, Meta**	**4.71**	**189**	*eP*	**Pn**	**Pn**	**19 06 18.9**	**-1.5**
MACC				*eS*	**Sn**	**Sn**	**19 07 11.1**	**-3.7**
MACC				*i*			19 07 14.4	
	comp=Z,34nm,0.5s							
BETC	**Betania**	**4.72**	**209**	*eP*	**Pn**	**Pn**	**19 06 20.3**	**-0.4**
DABV	**Dabajuro**	**4.75**	**31**	*eP*	**Pn**	**Pn**	**19 06 21.0**	**+0.1**
DABV				*eS*	**Sn**	**Sn**	**19 07 12.6**	**-3.1**
URIC	**Uribia, Colomb**	**4.97**	**13**	*eP*	**Pn**	**Pn**	**19 06 22.4**	**-1.4**
GARC	**Garzon, Huila**	**5.18**	**207**	*eP*	**Pn**	**Pn**	**19 06 25.9**	**-0.9**
GARC				*i*			19 07 24.1	
	comp=Z,52nm,0.4s							
POPC	**Popayan, Colom**	**5.54**	**220**	*eP*	**Pn**	**Pn**	**19 06 31.7**	**+0.1**
FLOC	**Florencia**	**5.79**	**206**	*eP*	**Pn**	**Pn**	**19 06 34.1**	**-0.7**
BBAC	**Balboa, Cauca**	**6.30**	**221**	*eP*	**Pn**	**Pn**	**19 06 42.4**	**+0.6**
BBAC				*i*			19 08 03.5	
	comp=Z,5.1nm,0.4s							
TXAR	**Lajitas Array**	**36.46**	**312**	P		**P**	**19 12 01.6**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=135,slow=12,SNR=3.7							
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc		**PKPdf**	**19 24 40.0**	**+2.6**
	comp=Z,0.4nm,0.8s,baz=109,slow=3.9,SNR=4.1							
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc		**PKPbc**	**19 24 43.4**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=107,slow=2.9,SNR=4.7							

ROM 25 19:07:14.0±0.1,**42.°803N**±0.°002×**13.°163E**±0.°004, **h10**km,**ML2.1**/25,**11C-8D**,**Error ellipse: s-maj=0.3km s-min=0.1km az=80.0**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**311**	P	Pg		19 07 16.3	+0.2
NRCA				S	Sg		19 07 17.4	-0.2
MC2	**Monte Cornacci**	**0.11**	**10**	P	Pg		19 07 17.5	+0.5
MC2				S	Sg		19 07 19.9	+0.7
MC2				AML	AML			
	comp=E,3294μm,0.3s							
MC2				AML	AML			
	comp=N,3264μm,0.3s							
MC2				AML	AML			
	comp=E,3291μm,0.3s							
MC2				AML	AML			
	comp=N,3264μm,0.3s							
LNSS	**Leonessa**	**0.22**	**204**	↑P	Pg		19 07 19.2	+0.6
LNSS				S	Sg		19 07 23.2	+1.5
LNSS				AML	AML			
	comp=N,1435μm,0.4s							
LNSS				AML	AML			
	comp=E,1905μm,0.2s							
LNSS				AML	AML			
	comp=N,1430μm,0.4s							
LNSS				AML	AML			
	comp=E,1910μm,0.2s							
FDMO	**Fiordimonte**	**0.24**	**347**	P	Pg		19 07 19.5	+0.6
FDMO				S	Sg		19 07 23.5	+1.2
FDMO				AML	AML			
	comp=N,740μm,1.1s							
FDMO				AML	AML			
	comp=E,774μm,0.5s							
FDMO				AML	AML			
	comp=N,740μm,0.9s							
CESI	**CESI - Serrava**	**0.28**	**317**	P	Pg		19 07 20.2	+0.6
CESI				S	Sb		19 07 24.7	-1.1
CESI				AML	AML			
	comp=E,996μm,0.4s							
CESI				AML	AML			
	comp=E,996μm,0.4s							
CESI				AML	AML			
	comp=E,996μm,1.6s							
CESI				AML	AML			
	comp=N,1610μm,0.3s							
CSP1	**Cessapalombo**	**0.29**	**6**	P	Pg		19 07 20.5	+0.6
CSP1				S	Sb		19 07 25.4	-0.9
CSP1				AML	AML			
	comp=E,1230μm,0.2s							
CSP1				AML	AML			
	comp=N,1285μm,0.3s							
RM33	**Pellescritta (**	**0.30**	**173**	↑P	Pg		19 07 20.5	+0.6
RM33				S	Sb		19 07 25.5	-0.9
RM33				AML	AML			
	comp=E,837μm,0.8s							
RM33				AML	AML			
	comp=N,724μm,0.4s							
RM33				AML	AML			
	comp=N,713μm,0.4s							
RM33				AML	AML			
	comp=E,842μm,0.8s							
RM33				AML	AML			
	comp=N,714μm,0.4s							
ARRO	**Arrone**	**0.37**	**233**	↑P	Pg		19 07 21.7	+0.5
ARRO				S	Sb		19 07 27.6	-0.8
ARRO				AML	AML			
	comp=N,369μm,0.9s							
ARRO				AML	AML			
	comp=E,486μm,1.2s							
ARRO				AML	AML			
	comp=E,486μm,0.8s							
ARRO				AML	AML			
	comp=N,369μm,1.1s							
TERO	**Teramo**	**0.37**	**119**	↓P	Pg		19 07 21.8	+0.4
TERO				S	Sb		19 07 27.8	-0.7
TERO				AML	AML			
	comp=E,318μm,1.6s							
TERO				AML	AML			
	comp=N,364μm,0.8s							
TERO				AML	AML			
	comp=E,318μm,0.4s							
OFFI	**Offida**	**0.41**	**71**	↓P	Pb		19 07 23.6	+0.4
OFFI				AML	AML			
	comp=E,586μm,0.8s							
OFFI				AML	AML			
	comp=N,1075μm,0.6s							
OFFI				AML	AML			
	comp=E,586μm,1.2s							
OFFI				AML	AML			
	comp=N,1075μm,1.4s							
ASSB	**Assisi San Ben**	**0.44**	**303**	P	Pg		19 07 22.9	+0.2
ASSB				S	Sb		19 07 29.7	-0.8
ASSB				AML	AML			
	comp=E,345μm,0.2s							
ASSB				AML	AML			
	comp=N,354μm,0.9s							
GIGS	**Gran Sasso**	**0.46**	**139**	↑P	Pg		19 07 23.2	+0.2
GIGS				S	Sg		19 07 30.1	+1.0
GIGS				AML	AML			
	comp=E,72μm,0.7s							
GIGS				AML	AML			
	comp=E,72μm,0.7s							
GIGS				AML	AML			
	comp=N,42μm,0.9s							
GIGS				AML	AML			
	comp=N,42μm,1.1s							
CESX	**Cesi**	**0.47**	**246**	↑P	Pg		19 07 23.4	+0.2
CESX				S	Sb		19 07 30.8	-0.6
CESX				AML	AML			
	comp=N,374μm,0.4s							
CESX				AML	AML			
	comp=E,240μm,0.8s							
EL6	**Elcito**	**0.53**	**355**	↑P	Pg		19 07 24.6	+0.3
EL6				S	Sb		19 07 34.0	+0.9
EL6				AML	AML			
	comp=N,646μm,0.2s							
EL6				AML	AML			
	comp=E,530μm,0.1s							
EL6				AML	AML			
	comp=N,644μm,0.2s							
FIAM	**Fiamignano**	**0.54**	**184**	↑P	Pg		19 07 24.5	+0.1
FIAM				S	Sb		19 07 32.6	-0.6
FIAM				AML	AML			
	comp=E,152μm,0.2s							
FIAM				AML	AML			
	comp=N,77μm,0.7s							
CING	**Cingoli**	**0.57**	**2**	P	Pg		19 07 25.5	+0.4
CING				AML	AML			
	comp=N,262μm,0.6s							
CING				AML	AML			
	comp=E,254μm,0.1s							
FAGN	**Fagnano**	**0.62**	**150**	↑P	Pg		19 07 26.1	+0.1
FAGN				S	Sb		19 07 36.2	+0.6
FAGN				AML	AML			
	comp=N,232μm,0.3s							
FAGN				AML	AML			
	comp=E,282μm,0.5s							
FAGN				AML	AML			
	comp=N,232μm,1.7s							
FAGN				AML	AML			
	comp=E,282μm,1.5s							
VCEL	**Villa Celiera**	**0.65**	**129**	↑P	Pb		19 07 27.2	-0.2
VCEL				AML	AML			
	comp=E,176μm,1.5s							
VCEL				AML	AML			
	comp=N,165μm,0.8s							
VCEL				AML	AML			
	comp=E,176μm,1.5s							
VCEL				AML	AML			
	comp=N,166μm,0.8s							
VCEL				AML	AML			
	comp=E,175μm,1.5s							
VCEL				AML	AML			
	comp=N,166μm,1.2s							
VCEL				AML	AML			
	comp=E,175μm,0.5s							
ARVD	**Arcevia**	**0.71**	**347**	↓P	Pg		19 07 28.1	+0.4
ARVD				AML	AML			
	comp=E,130μm,1.2s							
ARVD				AML	AML			
	comp=N,81μm,0.7s							
ARVD				AML	AML			
	comp=N,81μm,0.7s							
ARVD				AML	AML			
	comp=E,130μm,0.8s							
T0110	**Collepietro**	**0.73**	**141**	↓P	Pg		19 07 28.4	+0.3
T0110				AML	AML			
	comp=N,209μm,0.3s							
T0110				AML	AML			
	comp=E,138μm,0.5s							
T0110				AML	AML			
	comp=E,137μm,0.5s							
T0110				AML	AML			
	comp=N,208μm,0.3s							
SRES	**S.Oreste - Sor**	**0.74**	**221**	P	Pg		19 07 28.6	+0.3
SRES				S	Sb		19 07 39.0	-0.2
SRES				AML	AML			
	comp=E,52μm,0.6s							
SRES				AML	AML			
	comp=N,53μm,0.3s							
SRES				AML	AML			
	comp=N,53μm,1.7s							
MGAB	**Montegabbione**	**0.78**	**278**	↓P	Pb		19 07 29.9	+0.2
MGAB				AML	AML			
	comp=N,72μm,0.5s							
MGAB				AML	AML			
	comp=N,72μm,0.5s							
MGAB				AML	AML			
	comp=E,97μm,0.4s							
MGAB				AML	AML			
	comp=N,72μm,1.5s							
FRON	**Frontone**	**0.78**	**336**	↓P	Pg		19 07 29.3	+0.2
FRON				AML	AML			
	comp=N,205μm,0.3s							
FRON				AML	AML			
	comp=E,94μm,0.2s							
FRON				AML	AML			
	comp=N,205μm,1.7s							
ATPI	**Pietralunga -**	**0.85**	**320**	↓P	Pg		19 07 30.5	+0.1
PIEI	**Pieia**	**0.86**	**328**	P	Pg		19 07 30.7	+0.1
PIEI				AML	AML			
	comp=N,61μm,0.3s							
PIEI				AML	AML			
	comp=E,108μm,0.4s							
FSSB	**Fossombrone**	**0.93**	**343**	↓P	Pg		19 07 32.0	+0.1
FSSB				AML	AML			
	comp=E,280μm,1.4s							
FSSB				AML	AML			
	comp=N,510μm,1.1s							
FSSB				AML	AML			
	comp=E,280μm,0.6s							
FSSB				AML	AML			
	comp=N,510μm,1.1s							
PE3	**Peglio**	**1.02**	**332**	↑P	Pb		19 07 33.9	+0.2
CAFI	**Castiglion Fio**	**1.02**	**301**	↑P	Pb		19 07 34.0	+0.2
CAFI				AML	AML			
	comp=E,26μm,1.1s							
CAFI				AML	AML			
	comp=N,25μm,0.3s							
CAFI				AML	AML			
	comp=E,26μm,1.1s							
ZCCA	**Zocca**	**2.22**	**315**	P	Pn		19 07 50.6	-0.3
VENL	**Venezia Lido**	**2.67**	**348**	S	Sb		19 08 35.0	+0.3

*IDC **25** 19:09:22.2±0.6,30.°44N×140.°29E,h0km,mb3.9/13, mbtmp3.8/17,ML3.3/4,MS3.7/30,Error ellipse: s-maj=22.1km s-min=16.4km az=71.0*
*NEIC **25** 19:09:31.8±1.6,31.°0N±0.°1×140.°2E±0.°1,h46km±9km, mb4.5/45,Error ellipse: s-maj=19.3km s-min=12.7km az=147.0*

ISC 25 19:09:29.1±0.7,**30.°8N**±0.°1×**140.°22E**±0.°09,**h35**km,**n108**, σ1§**07**/75,**mb4.4**/35,**MS3.8**/26,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.38**	**352**	Pn	**Pn**	**Pn**	**19 10 02.9**	**-2.7**
JCJ	**Chichijima**	**4.03**	**154**	Pn	Pn	Pn	19 10 20.9	-7.5
	15nm,0.3s,baz=40,slow=9.4,SNR=4.9							
JCJ				Sn	Sn	Sn	19 11 04.8	-10
	14nm,0.3s,baz=288,slow=22,SNR=2.4							
JCJ				LR	LR	LR	19 11 48.7	
	comp=Z,768nm,18.1s,baz=356,slow=39							
	52nm,0.5s							
INU	**Inuyama**	**5.32**	**330**	Pn	**Pn**	**Pn**	**19 10 45.1**	**-0.9**
JGF	**Kuroka**	**5.40**	**334**	Pn	**Pn**	**Pn**	**19 10 47.9**	**+0.7**
JYT	**Yasato**	**5.46**	**360**	Pn	**Pn**	**Pn**	**19 10 46.6**	**-1.4**
MJAR	**Matsushiro Arr**	**6.01**	**344**	Pn	**Pn**	**Pn**	**19 10 57.4**	**+1.8**
	0.1nm,0.3s,baz=155,slow=11,SNR=12							
MJAR				LR	LR	LR	19 13 06.9	
	comp=Z,186nm,20.1s,baz=154,slow=36							
	3.8nm,0.8s							
MAJO	**Matsushiro**	**6.02**	**344**	Pn	**Pn**	**Pn**	**19 10 59.5**	**+3.9**
JMN	**Monobe**	**6.13**	**301**	Pn	**Pn**	**Pn**	**19 10 57.5**	**+0.2**
JMM	**Marumori**	**7.12**	**4**	Pn	**Pn**	**Pn**	**19 11 09.4**	**-1.2**
KSRS	**Korea Array**	**12.18**	**307**	Pn	**Pn**	**Pn**	**19 12 22.1**	**+2.0**
	0.1nm,0.3s,baz=113,slow=12,SNR=1.4							
KSRS				LR	LR	LR	19 16 55.5	
	comp=Z,357nm,19.1s,baz=115,slow=36							
	0.5nm,0.5s							
GUMO	**Guam**	**17.61**	**165**	LR	LR	LR	19 18 56.5	
	comp=Z,127nm,20.4s,baz=17,slow=33							
YULB	**Yu-li**	**18.36**	**251**

comp=Z,0.6nm,0.9s,baz=125,slow=9.4,SNR=3.6
SONM LR LR 19 28 30.2
comp=Z,102nm,18.2s,baz=104,slow=37
comp=Z,0.6nm,0.9s
CRAI Chiangrai 37.29 263 P **P** **19 16 38.2 +0.3**
CHTO Chiang Mai 39.11 262 P **P** **19 16 53.1 -0.2**
CMAR Chiang Mai Arr 39.26 262 P **P** **19 16 53.6 -1.0**
comp=Z,3.2nm,0.8s,baz=53,slow=7.8,SNR=19
CMAR LR LR 19 33 45.5
comp=Z,76nm,19.2s,baz=75,slow=37
comp=Z,3.2nm,0.8s
CMAR Chiang Mai Arr 39.26 262 P **P** **19 16 54.0 -0.6**
IPM Ipoh 45.19 243 P **P** **19 17 43.5 +0.6**
ZALV Zalesovo Beam 45.63 317 PcP **PcP** **19 19 23.4 -0.3**
comp=Z,2.1nm,0.8s,baz=116,slow=3.4,SNR=7.4
ZALV LR LR 19 37 29.1
comp=Z,114nm,18.9s,baz=91,slow=37
MKAR Makanchi Array 46.86 307 P **P** **19 17 54.3 -1.4**
comp=Z,0.5nm,0.7s,baz=92,slow=7.6,SNR=3.7
MKAR PcP **PcP** **19 19 27.3 -1.0**
comp=Z,0.7nm,0.8s,baz=67,slow=3.7,SNR=3.2
MKAR LR LR 19 38 36.1
comp=Z,142nm,18.1s,baz=68,slow=37
comp=Z,0.5nm,0.7s
ANM Nome 47.53 28 P **P** **19 18 00.8 +0.1**
NRIK Noril'sk 48.63 338 LR LR 19 39 08.6
comp=Z,93nm,20.6s,baz=110,slow=36
KURK Kurchatov 49.23 312 P **P** **19 18 12.2 -1.7**
WRA Warramunga Arr 50.72 187 P P 19 18 20.4 -5.1
comp=Z,0.6nm,0.5s,baz=3.0,slow=7.6,SNR=4.8
comp=Z,0.6nm,0.5s
K20K Telida 52.14 31 P **P** **19 18 36.3 +0.6**
K20K IAmb IAmb 19 18 38.7
comp=Z,3.7nm,0.8s
J20K Nowinta River 52.20 30 P **P** **19 18 36.7 +0.6**
J20K IAmb IAmb 19 18 39.0
comp=Z,4.6nm,1.0s
H21K Melozitna Rive 52.95 29 P **P** **19 18 42.2 +0.5**
MLY Manley 53.75 29 P **P** **19 18 48.9 +1.3**
MLY IAmb IAmb 19 18 50.4
comp=Z,5.5nm,1.2s
BVAR Borovoye Array 54.21 316 LR LR 19 42 57.0
comp=Z,128nm,19.2s,baz=82,slow=37
NEA2 Nenana 54.43 30 P **P** **19 18 53.0 +0.4**
ASAR Alice Springs 54.44 187 P P 19 18 48.0 -5.0
comp=Z,0.3nm,0.5s,baz=2.8,slow=5.2,SNR=11
comp=Z,0.3nm,0.5s
RND Reindeer 54.49 32 P **P** **19 18 53.1 +0.1**
RND IAmb IAmb 19 18 55.9
comp=Z,5.2nm,1.1s
MDM Murphy Dome 54.81 30 P **P** **19 18 55.3 0.0**
H24K Noodor Dome 54.99 29 P **P** **19 18 57.7 +1.1**
H24K IAmb IAmb 19 18 59.6
comp=Z,7.3nm,1.4s
HDA Harding Lake 55.35 30 P **P** **19 18 59.0 -0.1**
HDA IAmb IAmb 19 19 00.3
comp=Z,4.5nm,0.9s
IL31 55.38 30 P **P** **19 18 60.0 +0.7**
IL31 IAmb IAmb 19 19 01.2
comp=Z,7.9nm,1.2s
ILAR Eielson Array 55.38 30 P **P** **19 18 57.8 -1.6**
comp=Z,3.5nm,1.1s,baz=272,slow=6.3,SNR=16
comp=Z,3.5nm,1.1s
ILAR Eielson Array 55.38 30 P **P** **19 18 59.0 -0.4**
BMAR Burnt Mountain 56.34 27 P **P** **19 19 06.3 0.0**
SCRK Sand Creek 56.65 31 P **P** **19 19 08.1 -0.5**
SCRK IAmb IAmb 19 19 10.4
comp=Z,2.9nm,0.8s
GAR Garm 56.67 299 P **P** **19 19 07.9 -1.3**
GAR IAmb IAmb 19 19 40.9
comp=Z,10nm,1.4s
J26L Joseph Creek 56.81 30 P **P** **19 19 09.2 -0.5**
J26L IAmb IAmb 19 19 11.6
comp=Z,3.2nm,0.9s
L26K Log Cabin Wild 56.98 32 P **P** **19 19 12.1 +1.2**
L26K IAmb IAmb 19 19 13.7
comp=Z,6.3nm,0.9s
M26K Nabesna, AK 57.19 33 P **P** **19 19 12.9 +0.5**
M26K IAmb IAmb 19 19 14.7
comp=Z,6.2nm,1.1s
K27K Chicken 57.49 31 P **P** **19 19 14.9 +0.5**
K27K IAmb IAmb 19 19 17.0
comp=Z,4.1nm,0.9s
CHGR Chuyangaron 57.64 299 P **P** **19 19 15.0 -1.0**
L27K Beaver Creek, 57.67 32 P **P** **19 19 16.4 +0.6**
L27K IAmb IAmb 19 19 18.4
comp=Z,3.5nm,0.9s
BCAR Beaver Creek A 57.69 32 P **P** **19 19 16.4 +0.5**
DZM Mont Dzumac 58.24 151 LR LR 19 41 05.6
comp=Z,62nm,21.6s,baz=27,slow=33
DZM Mont Dzumac 58.24 151 *e*LR LR 19 36 52.0
comp=Z,121nm,23.7s
I29M Ogilvie Camp, 58.98 29 P **P** **19 19 25.9 +1.1**
I29M IAmb IAmb 19 19 26.3
comp=Z,4.4nm,1.2s
EPYK Eagle Plains 59.50 28 P **P** **19 19 28.6 +0.1**
PALK Pallekele 60.18 260 LR LR 19 44 58.4
comp=Z,307nm,21.5s,baz=81,slow=36
INK Inuvik 60.45 25 P **P** **19 19 35.4 +0.6**
ARU Arti 60.50 321 LR LR 19 47 24.9
comp=Z,53nm,21.0s,baz=114,slow=38
M31M Drury Creek, Y 61.20 32 P **P** **19 19 42.0 +2.0**
M31M IAmb IAmb 19 19 43.9
comp=Z,7.3nm,1.2s
AKTO Aktyubinsk 62.23 314 LR LR 19 47 55.1
comp=Z,114nm,20.1s,baz=74,slow=37
GEYT Alibeck 66.11 301 LR LR 19 52 00.4
comp=Z,77nm,18.6s,baz=14,slow=39
BELG Belogornoye 67.78 319 LR LR 19 51 24.7
comp=Z,50nm,19.2s,baz=167,slow=37
ARCES ARCESS Array B 69.53 340 LR LR 19 55 20.0
comp=Z,65nm,18.5s,baz=184,slow=40
WSAR Wadi Sarin 71.61 286 LR LR 19 55 12.6
comp=Z,61nm,18.2s,baz=154,slow=38
FINES FINESS Array B 73.92 333 P **P** **19 21 01.4 +1.1**
comp=Z,0.8nm,0.7s,baz=116,slow=4.4,SNR=4.5
FINES LR LR 19 56 14.4
comp=Z,38nm,18.3s,baz=72,slow=38
comp=Z,0.8nm,0.7s
KBZ Khabaz 74.28 312 P **P** **19 21 03.8 +1.0**
comp=Z,2.6nm,0.8s,baz=78,slow=1.2,SNR=4.9
comp=Z,2.6nm,0.8s
EDM Edmonton 74.93 37 P **P** **19 21 06.7 +0.3**
YBH Yreka Blue Hor 75.05 50 LR LR 19 46 53.3
comp=Z,32nm,21.5s,baz=298,slow=30
PINE Pine Mountain 75.23 48 P **P** **19 21 09.8 +1.2**
E09A Wood Farm, Sta 75.64 44 P **P** **19 21 11.6 +1.0**
E09A IAmb IAmb 19 21 12.4
comp=Z,2.7nm,0.5s
G08A Pilot Rock 75.75 46 P **P** **19 21 11.4 0.0**
SUMG Summit 76.95 360 P **P** **19 21 18.4 +0.3**
SUMG IAmb IAmb 19 21 28.8
comp=Z,8.1nm,1.2s
RAR Rarotonga 77.38 124 LR LR 19 52 16.9
comp=Z,45nm,18.7s,baz=292,slow=33
BEKR Beckworth 77.51 51 P **P** **19 21 22.1 +0.6**
CMB Columbia Colle 78.39 53 P **P** **19 21 25.6 -0.7**
CMB IAmb IAmb 19 21 28.9
comp=Z,4.8nm,1.2s
AKASG Malin Array Be 78.67 323 P **P** **19 21 25.8 -1.7**
comp=Z,0.7nm,0.5s,baz=49,slow=6.0,SNR=4.7
AKASG LR LR 19 58 21.1
comp=Z,78nm,18.8s,baz=16,slow=37
comp=Z,0.7nm,0.5s
BMN Battle Mountai 79.30 49 P **P** **19 21 31.5 +0.2**
LRM Limekiln Ridge 79.38 43 P **P** **19 21 30.9 -0.9**
HFS Hagfors 79.40 336 LR LR 20 00 43.9
comp=Z,35nm,20.1s,baz=22,slow=39
KVN Kaiserville 79.43 51 P **P** **19 21 32.3 +0.2**
KVN IAmb IAmb 19 21 34.3
comp=Z,2.1nm,0.5s
NB2 NORSAR Subarra 79.59 337 P **P** **19 21 31.7 -0.7**
comp=Z,1.5nm,0.9s,baz=43,slow=5.3
NOA NORSAR Array B 79.59 337 P **P** **19 21 31.8 -0.6**
comp=Z,1.0nm,0.9s,baz=43,slow=5.4,SNR=3.9
NOA LR LR 20 00 25.3
comp=Z,28nm,18.4s,baz=10.0,slow=38
comp=Z,1.0nm,0.9s
ELK Elko 80.42 48 LR LR 19 50 58.4
comp=Z,26nm,20.4s,baz=261,slow=31
BRTR Keskin Array B 82.28 312 P **P** **19 21 46.4 -0.9**
comp=Z,1.1nm,0.8s,baz=106,slow=2.7,SNR=4.8
comp=Z,1.1nm,0.8s
PPT2 Papeete2 82.81 115 *e*LR LR 19 47 30.4
comp=Z,76nm,24.2s
PDAR Pinedale Array 82.82 44 P **P** **19 21 50.4 +0.2**
comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=2.8
comp=Z,0.2nm,0.5s
TIAR Tiarei 82.97 115 *e*T T 20 52 49.6
comp=Z,1.3nm,0.2s
KNB Kanab 84.03 50 P **P** **19 21 57.4 +1.0**
KNB IAmb IAmb 19 21 59.6
comp=Z,7.1nm,1.1s
SRU San Rafael Swe 84.33 48 P **P** **19 21 58.9 +0.9**
SRU IAmb IAmb 19 22 00.8
comp=Z,2.5nm,0.8s
VRAC Vranov 85.83 327 LR LR 20 03 56.6
comp=Z,30nm,18.4s,baz=36,slow=38
ANMO Albuquerque 89.42 49 LR LR 19 55 20.3
comp=Z,36nm,20.6s,baz=316,slow=31
DAVOX Davos/Dischmat 90.77 328 LR LR 20 06 11.5
comp=Z,43nm,20.8s,baz=78,slow=37
LPIG La Paz 93.19 60 LR LR 20 06 40.4
comp=Z,26nm,18.3s,baz=233,slow=37
TXAR Lajitas Array 94.76 52 P **P** **19 22 46.9 -0.6**
comp=Z,1.1nm,0.8s,baz=297,slow=2.6,SNR=11
comp=Z,1.1nm,0.8s
TORD Torodi Ar. Bea 120.89 311 PKP **PKiKP** **19 28 19.6 +1.1**
comp=Z,0.3nm,0.8s,baz=90,slow=3.3,SNR=2.0
H03N2 Juan Fernandez 146.86 105 T T 22 12 57.1
baz=281,slow=75,SNR=53
H03N3 Juan Fernandez 146.87 105 T T 22 12 58.0
baz=281,slow=75,SNR=43
H03N1 Juan Fernandez 146.87 105 T T 22 12 58.2
baz=281,slow=75,SNR=38
LPAZ La Paz 150.40 67 PKPbc **PKPbc** **19 29 18.2 0.0**
comp=Z,1.6nm,0.3s,baz=301,slow=3.3,SNR=22
PLCA Paso Flores 153.23 120 PKPbc **PKPbc** **19 29 23.2 -0.1**
comp=Z,1.4nm,0.6s,baz=327,slow=4.5,SNR=3.8

*IGIL **25** 19:10:58.0,34˚.14N×4˚.81W, h5km, ML2.3*
*CNRM **25** 19:10:58.2,34˚.19N×4˚.62W, h8km, ml2.9*
*INMG **25** 19:10:59.7±1.8,34˚.23N×4˚.96W, h8km±10km, ML2.3, Error ellipse: s-maj=7.0km s-min=6.7km az=66.0*
*SFS **25** 19:11:00.0,34˚.14N×4˚.81W, ML3.2, FEZ (MARRUECOS)*
*MDD **25** 19:11:00.8±0.5,34˚.14N×4˚.81W, h66km, Mb3.3/15, Error ellipse: s-maj=4.4km s-min=3.3km az=133.0*

ISC 25 19:11:00.3±1.0,**34˚.24N**±0˚.02×**4˚.69W**±0˚.03,**h30**km±11km, **n50**,σ1|**86**/89,**14C**,**Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCRM	**LCR**	**0.57**	**194**	P		**Pb**		**19 11 10.0**	**-2.1**
LCRM	**LCR**	**0.57**	**194**	P		**Pb**		**19 11 10.0**	**-2.1**
LCRM				S		**Sb**		**19 11 20.3**	**+0.3**
IFR	**Ifrane**	**0.81**	**207**	P		**Pb**		**19 11 14.6**	**-1.4**
IFR				S		**Sb**		**19 11 26.8**	**+0.1**
CHEFC	**Chefchaouen**	**1.02**	**328**	P		**Pn**		**19 11 19.0**	**+0.4**
CHEFC	**Chefchaouen**	**1.02**	**328**	P		**Pb**		**19 11 19.2**	**-0.3**
CHEFC				S		**Sn**		**19 11 35.3**	**+3.3**
RSA	**Sarsar**	**1.13**	**305**	P		**Pb**		**19 11 23.0**	**+1.6**
RSA	**Sarsar**	**1.13**	**305**	P		**Pb**		**19 11 22.2**	**+0.8**
PALE	**Palemas**	**1.16**	**32**	P		**Pb**		**19 11 21.5**	**-0.2**
PALE				S		**Sb**		**19 11 38.1**	**+1.7**
CZD	**Col de Zad**	**1.24**	**194**	P		**Pn**		**19 11 22.1**	**+0.2**
CZD				S		**Sb**		**19 11 40.0**	**+0.9**
MD31	**MD31**	**1.37**	**182**	P		**Pn**		**19 11 23.5**	**0.0**
MD31				S		**Sn**		**19 11 42.0**	**+1.3**
MDT	**Midelt**	**1.43**	**177**	P		**Pn**		**19 11 24.1**	**-0.1**
MDT				S		**Sb**		**19 11 44.1**	**-0.1**
GOG	**Mont Gurugu**	**1.71**	**54**	P		**Pn**		**19 11 28.9**	**+0.8**
GOG				S		**Sn**		**19 11 49.6**	**+0.7**
CEU	**Ceuta**	**1.75**	**342**	P		**Pb**		**19 11 30.4**	**-1.4**
CEU				S		**Sb**		**19 11 55.2**	**+2.0**
JBK	**JBK**	**1.76**	**86**	P		**Pn**		**19 11 27.2**	**-1.7**
JBK				S		**Sn**		**19 11 48.5**	**-2.0**
ZHG	**ZHG**	**1.81**	**245**	P		**Pb**		**19 11 32.0**	**-0.8**
ZHG	**ZHG**	**1.81**	**245**	P		**Pb**		**19 11 31.9**	**-0.9**
ZHG				S		**Sb**		**19 11 57.0**	**+1.9**
TAF	**Taforalt**	**1.97**	**72**	P		**Pn**		**19 11 30.6**	**-1.0**
TAF				S		**Sn**		**19 11 56.7**	**+1.3**
EMIJ	**Mijas**	**2.32**	**358**	Pn		**Pn**		**19 11 36.3**	**-0.2**
EMIJ				⇑*i*Vmb_V				19 11 38.6	
	115nm,SNR=1.4								
EMIJ				Sn		**Sn**		**19 12 03.2**	**-0.8**
AVE	**Averroes**	**2.45**	**248**	P		**Pb**		**19 11 46.5**	**+2.8**
AVE				S		**Sb**		**19 12 18.4**	**+4.8**
ELGU	**Los Guajares,**	**2.76**	**18**	Pn		**Pn**		**19 11 42.0**	**-0.6**
ELGU				⇑*i*Vmb_V				19 11 45.8	
	157nm,SNR=1.6								
ELGU				Sn		**Sn**		**19 12 15.0**	**0.0**
EGOR	**Sierra Gorda,**	**2.90**	**9**	Pn		**Pn**		**19 11 44.9**	**+0.3**
EGOR				⇑*i*Vmb_V				19 11 48.1	
	76nm,SNR=1.1								
EGOR				Sn		**Sn**		**19 12 18.8**	**+0.2**
EBER	**Berja**	**3.03**	**28**	Pn		**Pn**		**19 11 47.5**	**+1.0**
EBER				⇑*i*Vmb_V				19 11 48.8	
	163nm,SNR=0.8								
EBER				Sn		**Sn**		**19 12 21.9**	**+0.1**
EQUE	**Quentar**	**3.13**	**19**	Pn		**Pn**		**19 11 47.7**	**0.0**
EQUE				⇑*i*Vmb_V				19 11 53.3	
	68nm,SNR=1.1								
EQUE				Sn		**Sn**		**19 12 25.6**	**+1.5**
EQES	**Quesada**	**3.79**	**20**	Pn		**Pn**		**19 11 59.3**	**+2.6**
EQES				⇑*i*Vmb_V				19 12 01.2	
	60nm,SNR=0.9								
EQES				Sn		**Sn**		**19 12 41.5**	**+1.0**
EMIN	**Mina Concepcio**	**3.87**	**336**	Pn		**Pn**		**19 11 57.8**	**0.0**
EMIN				⇑*i*Vmb_V				19 11 59.6	
	91nm,SNR=0.8								
EMIN				Sn		**Sn**		**19 12 39.0**	**-3.1**
ECAB	**El Cabril**	**3.87**	**351**	Pn		**Pn**		**19 11 58.1**	**+0.3**
ECAB				⇑*i*Vmb_V				19 12 00.2	
	65nm,SNR=0.6								
ECAB				Sn		**Sn**		**19 12 42.1**	**-0.2**
EADA	**Adamuz**	**3.92**	**1**	Pn		**Pn**		**19 11 59.8**	**+1.3**
EADA				⇑*i*Vmb_V				19 12 01.2	
	39nm,SNR=0.7								
EADA				Sn		**Sn**		**19 12 42.7**	**-0.8**
PBDV	**Barranco-do-Ve**	**3.99**	**320**	*e*Pn		**Pn**		**19 11 58.4**	**-1.1**
PBDV				*e*Sn		**Sn**		**19 12 42.5**	**-2.7**
PBDV				A		A		19 12 47.2	
	4.7nm,0.9s								
EGRO	**El Granado**	**3.99**	**326**	Pn		**Pn**		**19 11 58.0**	**-1.4**
EGRO				⇑*i*Vmb_V				19 11 59.7	
	192nm,SNR=0.8								
EGRO				Sn		**Sn**		**19 12 41.2**	**-4.0**
PVAQ	**Vaqueiros**	**4.00**	**323**	P		**Pn**		**19 11 58.2**	**-1.4**
PVAQ	**Vaqueiros**	**4.00**	**323**	*e*Pn		**Pn**		**19 11 58.4**	**-1.2**
PVAQ				*e*Sn		**Sn**		**19 12 42.8**	**-2.6**
PVAQ				A		A		19 12 48.9	
	6.2nm,0.3s								
OUK	**Oukaimeden**	**4.04**	**222**	P		**Pn**		**19 11 59.9**	**-0.5**
OUK				S		**Sn**		**19 12 50.8**	**+3.9**
PCVE	**Castro Verde**	**4.34**	**322**	*e*Pn		**Pn**		**19 12 03.8**	**-0.4**
PCVE				*e*Sn		**Sn**		**19 12 51.8**	**-2.0**
PCVE				A		A		19 13 01.0	
	2.5nm,0.4s								
PBAR	**Barrancos**	**4.36**	**335**	*e*Pn		**Pn**		**19 12 04.3**	**-0.2**
PBAR				*e*Sn		**Sn**		**19 12 50.8**	**-3.5**
PBAR				A		A		19 12 59.1	
	3.8nm,0.6s								
PFVI	**Vila Bisbo**	**4.43**	**312**	*e*Pn		**Pn**		**19 12 05.4**	**-0.1**
MESJ	**Messejana**	**4.59**	**323**	*e*P		**Pn**		**19 12 06.4**	**-1.3**
MESJ				*e*S		**Sn**		**19 12 56.3**	**-3.7**
MESJ				IAML				19 12 58.5	
	comp=E,4.8nm,0.3s								
MESJ	**Messejana**	**4.59**	**323**	*e*Pn		**Pn**		**19 12 07.2**	**-0.5**
MESJ				*e*Sn		**Sn**		**19 12 57.3**	**-2.7**
MESJ				A		A		19 13 06.9	
	comp=E,4.0nm,0.8s								
TTIG	**Tnine Tigouga,**	**4.86**	**222**	P		**Pn**		**19 12 09.5**	**-2.0**
TTIG				S		**Sn**		**19 13 11.0**	**+4.2**
EBAD	**Badajoz**	**4.88**	**338**	Pn		**Pn**		**19 12 10.8**	**-0.9**
EBAD				⇑*i*Vmb_V				19 12 12.2	
	comp=E,162nm,SNR=1.4								
EBAD				Sn		**Sn**		**19 13 03.2**	**-3.9**
PNCL	**Nicolau / Gran**	**4.96**	**322**	*e*Pn		**Pn**		**19 12 12.4**	**-0.3**
PNCL				*e*Sn		**Sn**		**19 13 06.7**	**-2.2**
EVO	**Evora**	**5.05**	**329**	*e*Pn		**Pn**		**19 12 13.7**	**-0.3**
EVO				*e*Sn		**Sn**		**19 13 09.0**	**-2.3**
EVO				A		A		19 13 13.8	
	comp=E,4.2nm,0.2s								
ETOB	**Tobarra**	**5.07**	**29**	Pn		**Pn**		**19 12 16.2**	**+1.8**
ETOB				⇑*i*Vmb_V				19 12 18.8	
	comp=E,108nm,SNR=1.6								
ETOB				Sn		**Sn**		**19 13 11.8**	**-0.2**
PESTR	**Estremoz**	**5.17**	**334**	*e*Pn		**Pn**		**19 12 15.7**	**0.0**
PESTR				*e*Sn		**Sn**		**19 13 11.7**	**-2.7**
PESTR				A		A		19 13 13.3	
	comp=E,1.8nm,0.5s								
PAB	**San Pablo**	**5.30**	**3**	Pn		**Pn**		**19 12 17.3**	**-0.2**
PAB				⇑*i*Vmb_V				19 12 22.6	
	comp=E,67nm,SNR=1.0								
PAB				Sn		**Sn**		**19 13 14.2**	**-3.4**
ESDC	**Sonseca Array**	**5.46**	**6**	⇑*i*Vmb_V				19 12 21.6	
	comp=E,81nm,SNR=0.9								
ESDC				Sn		**Sn**		**19 13 18.6**	**-2.8**
PMTG	**Montargil**	**5.59**	**331**	*e*Pn		**Pn**		**19 12 21.3**	**-0.1**
PMTG				*e*Sn		**Sn**		**19 13 21.8**	**-2.9**
PMRV	**Marv??o**	**5.61**	**338**	*e*Pn		**Pn**		**19 12 21.5**	**-0.2**
PMRV				*e*Sn		**Sn**		**19 13 22.6**	**-2.6**
PCBR	**Castelo Branco**	**6.02**	**339**	*e*Pn		**Pn**		**19 12 27.0**	**-0.3**
PSBE	**So Bento**	**6.21**	**329**	*e*Pn		**Pn**		**19 12 29.9**	**0.0**
MVO	**Moncorvo**	**7.16**	**346**	*e*Pn		**Pn**		**19 12 44.2**	**+1.2**

*IDC **25** 19:12:46.5±2.0,30˚.51N×140˚.13E, h0km, mb4.0/10, mbtmp3.9/13, ML3.3/3, Error ellipse: s-maj=25.1km s-min=17.9km az=72.0*
*NEIC **25** 19:12:54.2±2.0,30˚.55N±0˚.07×140˚.3E±0˚.1, h35km±2km, mb4.5/49, Error ellipse: s-maj=21.0km s-min=10.9km az=258.0*

ISC 25 19:12:52.7±0.5,**30˚.58N**±0˚.08×**140˚.24E**±0˚.10,**h35**km,**n82**, σ1|**49**/74,**mb4.5**/35,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.55**	**352**	Pn		**Pn**		**19 13 32.0**	**+0.6**
JCJ	**Chichijima**	**3.87**	**153**	Pn		**Pn**		**19 13 47.9**	**-1.8**
	13nm,0.3s,baz=287,slow=19,SNR=2.2								
	38nm,0.4s								
JCJ	**Chichijima**	**3.87**	**153**	Pn		**Pn**		**19 13 49.5**	**-0.2**
MJAR	**Matsushiro Arr**	**6.18**	**345**	Pn		**Pn**		**19 14 21.5**	**0.0**
	0.1nm,0.3s,baz=29,slow=20,SNR=2.7								
	2.5nm,0.9s								
MAJO	**Matsushiro**	**6.18**	**345**	Pn		**Pn**		**19 14 23.3**	**+1.9**
JMM	**Marumori**	**7.28**	**3**	Pn		**Pn**		**19 14 33.5**	**-3.0**
JSD	**Sado**	**7.61**	**348**	Pn		**Pn**		**19 14 43.3**	**+2.2**
KSRS	**Korea Array**	**12.30**	**307**	Pn		Pn		19 15 50.2	+5.0
	0.1nm,0.3s,baz=105,slow=15,SNR=5.7								
YULB	**Yu-li**	**18.33**	**252**	P		**Pn**		**19 17 06.6**	**+2.5**
SSLB	**Suanglung**	**18.43**	**253**	P		**Pn**		**19 17 06.6**	**+1.1**
TPUB	**Ta-pu**	**18.92**	**252**	P		**Pn**		**19 17 13.9**	**+2.6**
KLR	**Kul'dur**	**19.71**	**343**	P		**P**		**19 17 17.4**	**-1.5**
	0.1nm,0.3s,baz=142,slow=12,SNR=1.4								
	0.5nm,0.4s								
H11N2	**WAKE ISLAND Hy**	**26.37**	**108**	T		T		19 45 46.5	
	baz=300,slow=75,SNR=253								
H11N1	**WAKE ISLAND Hy**	**26.37**	**108**	T		T		19 45 46.8	
	baz=300,slow=75,SNR=158								
H11N3	**WAKE ISLAND Hy**	**26.39**	**108**	T		T		19 45 47.8	
	baz=300,slow=75,SNR=205								
H11S3	**WAKE ISLAND Hy**	**26.82**	**111**	T		T		19 46 20.0	
	baz=302,slow=75,SNR=69								
H11S1	**WAKE ISLAND Hy**	**26.83**	**110**	T		T		19 46 20.5	
	baz=302,slow=75,SNR=68								
H11S2	**WAKE ISLAND Hy**	**26.84**	**111**	T		T		19 46 21.5	
	baz=302,slow=75,SNR=90								
SONM	**Songino Array**	**31.06**	**313**	P		**P**		**19 19 07.0**	**-0.4**
	0.4nm,0.8s,baz=120,slow=8.3,SNR=3.6								
	0.4nm,0.8s								
CRAI	**Chiangrai**	**37.29**	**264**	P		**P**		**19 20 02.7**	**+1.2**
CRAI				IAmb	IAmb			19 20 06.0	
	comp=Z,10nm,1.0s								
CHTO	**Chiang Mai**	**39.11**	**262**	P		**P**		**19 20 17.1**	**+0.3**
CHTO				IAmb	IAmb			19 20 20.4	
	comp=Z,8.8nm,0.8s								
CM31	**Chiang Mai Arr**	**39.26**	**262**	P		**P**		**19 20 18.7**	**+0.6**
CM31				IAmb	IAmb			19 20 56.3	
	comp=Z,3.6nm,0.6s								
CMAR	**Chiang Mai Arr**	**39.26**	**262**	P		**P**		**19 20 16.9**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=40,slow=8.5,SNR=12								
	comp=Z,1.4nm,0.8s								
CMAR	**Chiang Mai Arr**	**39.26**	**262**	P		**P**		**19 20 18.7**	**+0.6**
ZALV	**Zalesovo Beam**	**45.76**	**317**	PcP		**PcP**		**19 22 47.0**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=92,slow=4.5,SNR=6.4								
ZALV				ScP		**ScP**		**19 26 40.3**	**+2.3**
	comp=Z,1.6nm,0.8s,baz=113,slow=3.3,SNR=6.1								
MKAR	**Makanchi Array**	**46.98**	**307**	P		**P**		**19 21 18.5**	**-1.7**
	comp=Z,1.0nm,0.9s,baz=105,slow=8.9,SNR=4.4								
	comp=Z,1.0nm,0.9s								
MKAR	**Makanchi Array**	**46.98**	**307**	P		**P**		**19 21 18.8**	**-1.5**
NRIK	**Noril'sk**	**48.79**	**338**	P		**P**		**19 21 33.4**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=81,slow=4.5,SNR=3.9								
	comp=Z,2.7nm,0.7s								
NRIK	**Noril'sk**	**48.79**	**338**	P		**P**		**19 21 33.0**	**-0.8**
KURK	**Kurchatov**	**49.36**	**313**	P		**P**		**19 21 36.3**	**-2.1**
WR0	**Warramunga Arr**	**50.55**	**187**	P		**P**		**19 21 47.2**	**-0.6**
WR0				IAmb	IAmb			19 22 06.7	
	comp=Z,8.6nm,1.4s								
WB2	**Warramunga Arr**	**50.55**	**187**	P		**P**		**19 21 46.7**	**-1.1**
WB2				IAmb	IAmb			19 22 05.5	
	comp=Z,5.5nm,1.1s								
WRA	**Warramunga Arr**	**50.55**	**187**	P		**P**		**19 21 45.1**	**-2.7**
	comp=Z,1.3nm,0.8s,baz=360,slow=7.6,SNR=12								
WRA				PcP		**PcP**		**19 23 04.5**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=0.7,slow=4.0,SNR=5.4								
	comp=Z,1.3nm,0.8s								
WRA	**Warramunga Arr**	**50.55**	**187**	P		**P**		**19 21 46.6**	**-1.2**
K20K	**Telida**	**52.27**	**31**	P		**P**		**19 22 01.7**	**+1.5**
K20K				IAmb	IAmb			19 22 03.9	
	comp=Z,7.9nm,1.1s								
J20K	**Nowinta River**	**52.33**	**30**	P		**P**		**19 22 01.9**	**+1.2**
J20K				IAmb	IAmb			19 22 04.8	
	comp=Z,6.8nm,1.1s								
H21K	**Melozitna Rive**	**53.08**	**28**	P		**P**		**19 22 07.8**	**+1.6**
H21K				IAmb	IAmb			19 22 10.3	
	comp=Z,7.9nm,1.2s								
I21K	**Tanana**	**53.37**	**29**	P		**P**		**19 22 09.5**	**+1.2**
I21K				IAmb	IAmb			19 22 12.7	
	comp=Z,9.4nm,1.3s								
MLY	**Manley**	**53.88**	**29**	P		**P**		**19 22 14.6**	**+2.5**
MLY				IAmb	IAmb			19 22 16.2	
	comp=Z,7.4nm,1.3s								
NEA2	**Nenana**	**54.57**	**30**	P		**P**		**19 22 17.1**	**0.0**
MCK	**McKinley**	**54.59**	**31**	P		**P**		**19 22 18.9**	**+1.7**
RND	**Reindeer**	**54.62**	**31**	P		**P**		**19 22 17.5**	**0.0**
RND				IAmb	IAmb			19 22 20.4	
	comp=Z,8.2nm,1.2s								
TOLK	**Toolik Lake Re**	**54.68**	**25**	P		**P**		**19 22 19.0**	**+1.1**
TO

B08A					IAmb	IAmb	19 24 28.4			
	comp=Z,4.9nm,1.2s									
C09A	**Chrisman Ranch**	**75.04**	**43**	P	**P**		**19 24 32.8**	**+2.1**		
C09A					IAmb	IAmb	19 25 14.7			
	comp=Z,5.0nm,1.1s									
PINE	**Pine Mountain**	**75.32**	**48**	P	**P**		**19 24 34.2**	**+1.6**		
BMO	**Blue Mountains**	**77.08**	**45**	P	**P**		**19 24 45.1**	**+2.7**		
J08A	**Circle Bar Ran**	**77.10**	**47**	P	**P**		**19 24 43.2**	**+0.6**		
J08A					IAmb	IAmb	19 24 46.9			
	comp=Z,2.9nm,0.7s									
BEKR	**Beckworth**	**77.59**	**51**	P	**P**		**19 24 46.6**	**+1.1**		
AKASG	**Malin Array Be**	**78.81**	**323**	P	**P**		**19 24 50.9**	**-0.9**		
	comp=Z,0.3nm,0.4s,baz=49,slow=5.6,SNR=4.7									
	comp=Z,0.3nm,0.4s									
BMN	**Battle Mountai**	**79.39**	**49**	P	**P**		**19 24 56.0**	**+0.6**		
ELK	**Elko**	**80.51**	**48**	P	**P**		**19 25 02.4**	**+0.9**		
BRTR	**Keskin Array B**	**82.40**	**312**	P	**P**		**19 25 09.4**	**-2.1**		
	comp=Z,0.8nm,0.7s,baz=73,slow=4.1,SNR=4.4									
	comp=Z,0.8nm,0.7s									
SRU	**San Rafael Swe**	**84.43**	**48**	P	**P**		**19 25 22.8**	**+0.8**		
SRU					IAmb	IAmb	19 25 24.8			
	comp=Z,3.2nm,1.0s									
TX31	**Lajitas Ar. Si**	**94.84**	**52**	P	**P**		**19 26 12.9**	**+1.5**		
TX32	**Lajitas Array**	**94.84**	**52**	P	**P**		**19 26 13.2**	**+1.8**		
TX32					IAmb	IAmb	19 26 15.0			
	comp=Z,2.4nm,1.1s									
TXAR	**Lajitas Array**	**94.84**	**52**	P	**P**		**19 26 12.9**	**+1.5**		
	comp=Z,2.0nm,0.9s,baz=297,slow=3.1,SNR=15									
	comp=Z,2.0nm,0.9s									
H03N2	**Juan Fernandez**	**146.79**	**105**	T	T		22 16 19.9			
	baz=281,slow=75,SNR=39									
H03N3	**Juan Fernandez**	**146.80**	**105**	T	T		22 16 22.0			
	baz=281,slow=75,SNR=36									
H03N1	**Juan Fernandez**	**146.81**	**105**	T	T		22 16 21.2			
	baz=281,slow=75,SNR=42									
LPAZ	**La Paz**	**150.44**	**68**	PKPbc	**PKiKP**		**19 32 41.8**	**-0.8**		
	comp=Z,1.2nm,0.8s,baz=22,slow=8.8,SNR=5.6									
PLCA	**Paso Flores**	**153.13**	**121**	PKPbc	**PKiKP**		**19 32 46.6**	**-0.3**		
	comp=Z,1.0nm,0.6s,baz=232,slow=3.0,SNR=3.6									

IDC ***25*** *19:15:26.5±4.4, 19°.01S×169°.12E, h98km±45km, mb3.8/5, mbtmp4.1/6, MS2.6/1, Error ellipse: s-maj=79.7km s-min=30.9km az=137.0*
NOU ***25*** *19:15:28.6, 18°.88S×168°.91E, h94km, MLv4.8/16, Vanuatu Islands*
NEIC ***25*** *19:15:30.3±1.6, 19°.0S±0°.1×168°.71E±0°.10, h99km±10km, mb4.6/7, Error ellipse: s-maj=16.9km s-min=12.7km az=199.0*

ISC 25 19:15:28.1±0.7, 18°.90S±0°.05×168°.9E±0°.1, h100km, n38, σ1§12/40, mb4.2/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.17**	**339**	P	**Pn**	**19 15 50.7**	**+0.2**
DVP	**Devils Point**	**1.33**	**331**	P	**Pn**	**19 15 52.7**	**+0.4**
LIFNC	**LIFOU**	**2.42**	**219**		**Pn**	**19 16 04.6**	**-1.5**
LIFNC				Sn	**Sn**	**19 16 31.7**	**-3.5**
MARNC	**Mare, Loyalty**	**2.69**	**197**		**Pn**	**19 16 09.3**	**-0.3**
MARNC	**Mare, Loyalty**	**2.69**	**197**	P	**Pn**	**19 16 09.4**	**-0.3**
YATNC	**Mamie plateau,**	**3.65**	**210**	P	**Pn**	**19 16 22.0**	**-0.6**
DZM	**Mont Dzumac**	**3.89**	**215**	P	**Pn**	**19 16 26.7**	**+0.8**
	46nm,0.5s,baz=85,slow=7.4,SNR=586						
DZM				S	**Sn**	**19 17 09.8**	**-0.9**
	254nm,0.6s,baz=121,slow=20,SNR=16						
DZM				LR	LR	19 17 35.7	
	comp=Z,72nm,18.2s,baz=50,slow=33						
DZM	**Mont Dzumac**	**3.89**	**215**		**Pn**	**19 16 26.5**	**+0.6**
DZM	**Mont Dzumac**	**3.89**	**215**	P	**Pn**	**19 16 26.7**	**+0.8**
PINNC	**Pines Island,**	**3.93**	**199**		**Pn**	**19 16 26.7**	**+0.4**
PINNC	**Pines Island,**	**3.93**	**199**	P	**Pn**	**19 16 27.5**	**+1.2**
OUENC	**Ouen Island, N**	**3.98**	**208**		**Pn**	**19 16 28.3**	**+1.2**
OUENC	**Ouen Island, N**	**3.98**	**208**	P	**Pn**	**19 16 28.6**	**+1.5**
NOUC	**Port Laguerre**	**3.99**	**217**	P	**Pn**	**19 16 28.7**	**+1.5**
ONTNC	**Ouen Toro**	**4.08**	**213**	Pn	**Pn**	**19 16 29.3**	**+1.0**
ONTNC	**Ouen Toro**	**4.08**	**213**	P	**Pn**	**19 16 30.0**	**+1.7**
KOUNC	**Koumac, New Ca**	**4.62**	**248**		**Pn**	**19 16 36.6**	**+1.1**
KOUNC	**Koumac, New Ca**	**4.62**	**248**	P	**Pn**	**19 16 37.0**	**+1.4**
URZ	**Urewera**	**20.59**	**161**	P	Pn	19 20 01.0	-1.2
URZ				IAmb	IAmb	19 20 06.7	
	comp=Z,92nm,1.3s						
BFZ	**Birch Farm**	**22.62**	**165**	P	**P**	**19 20 21.1**	**+0.6**
BFZ				IAmb	IAmb	19 20 24.2	
	comp=Z,81nm,1.3s						
SNZO	**South Karori**	**22.89**	**169**	P	**P**	**19 20 24.2**	**+1.0**
THZ	**Tophouse**	**23.05**	**172**	P	**P**	**19 20 25.9**	**+1.1**
THZ				IAmb	IAmb	19 20 37.0	
	comp=Z,22nm,1.2s						
MSWZ	**Moikau Station**	**23.10**	**168**	P	**P**	**19 20 26.4**	**+1.1**
STKA	**Stephens Creek**	**27.73**	**237**	P	**P**	**19 21 08.1**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=65,slow=8.3,SNR=5.8						
	comp=Z,1.1nm,0.5s						
AS31	**Alice Springs**	**32.87**	**255**	P	**P**	**19 21 52.5**	**-0.2**
ASAR	**Alice Springs**	**32.87**	**255**	P	**P**	**19 21 52.9**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=84,slow=8.6,SNR=48						
ASAR				pP	**pP**	**19 22 14.8**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=82,slow=8.6,SNR=11						
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**32.87**	**255**	P	**P**	**19 21 52.6**	**-0.1**
KNRA	**Kununurra**	**38.37**	**268**	P	**P**	**19 22 39.7**	**0.0**
KNRA				IAmb	IAmb	19 23 04.6	
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**71.16**	**180**	P	**P**	**19 26 36.7**	**+0.9**
QSPA				IAmb	IAmb	19 26 50.8	
	comp=Z,8.2nm,1.5s						
PETK	**Petropavlovsk-**	**72.35**	**353**	P	**P**	**19 26 42.7**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=152,slow=6.5,SNR=1.8						
	comp=Z,2.3nm,0.9s						
SONM	**Songino Array**	**86.73**	**323**	P	**P**	**19 28 00.4**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=150,slow=6.5,SNR=5.7						
	comp=Z,0.9nm,0.6s						
TROLL	**Troll, Antarti**	**88.85**	**184**	P	**P**	**19 28 11.3**	**+0.5**
SNAA	**Sanae**	**89.49**	**183**	P	**P**	**19 28 13.4**	**-0.3**
ILAR	**Eielson Array**	**90.01**	**17**	P	**P**	**19 28 14.1**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=242,slow=4.6,SNR=8.6						
	comp=Z,0.5nm,0.6s						
VNA3	**Neumayer Olymp**	**90.09**	**180**	P	**P**	**19 28 16.4**	**-0.1**
VNA2	**Neumayer--Watz**	**90.38**	**181**	P	**P**	**19 28 19.2**	**+1.4**
	baz=179,slow=2.4						
ARCES	**ARCESS Array B**	**124.65**	**345**	PKP	**PKPdf**	**19 34 14.1**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=72,slow=2.4,SNR=7.9						
GERES	**GERESS Array B**	**144.02**	**332**	PKP	**PKPab**	**19 34 50.7**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=29,slow=3.0,SNR=5.2						

IDC 25 19:16:42.0±1.0, 30°.43N×140°.33E, h0km, mb3.9/7, mbtmp3.8/8, ML1.9/1, Error ellipse: s-maj=30.4km s-min=22.5km az=100.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**6.35**	**344**	Pn	Pn	19 18 17.1	+0.3
	baz=154,slow=12,SNR=2.8						
	1.6nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**26.25**	**108**	T	T	19 49 41.5	
	baz=300,slow=75,SNR=61						
H11N1	**WAKE ISLAND Hy**	**26.26**	**108**	T	T	19 49 42.1	
	baz=300,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hy**	**26.27**	**108**	T	T	19 49 42.0	
	baz=300,slow=75,SNR=65						
H11S3	**WAKE ISLAND Hy**	**26.70**	**110**	T	T	19 50 14.9	
	baz=302,slow=75,SNR=91						
H11S1	**WAKE ISLAND Hy**	**26.71**	**110**	T	T	19 50 15.6	
	baz=302,slow=75,SNR=67						
H11S2	**WAKE ISLAND Hy**	**26.72**	**110**	T	T	19 50 16.8	
	baz=302,slow=75,SNR=51						
CMAR	**Chiang Mai Arr**	**39.31**	**262**	P	P	19 24 13.4	+0.4
	2.0nm,0.8s,baz=56,slow=6.8,SNR=20						
	2.0nm,0.8s						
MKAR	**Makanchi Array**	**47.13**	**307**	P	P	19 25 15.1	-0.9
	0.7nm,0.8s,baz=97,slow=4.9,SNR=4.3						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**50.41**	**187**	P	P	19 25 40.8	-0.5
	2.1nm,1.1s,baz=5.6,slow=8.0,SNR=5.2						
	2.1nm,1.1s						
ASAR	**Alice Springs**	**54.14**	**187**	P	P	19 26 08.9	-0.1
	0.4nm,0.8s,baz=3.9,slow=5.2,SNR=6.3						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**55.61**	**30**	P	P	19 26 18.9	-0.3
	1.5nm,1.1s,baz=268,slow=6.0,SNR=6.7						
	1.5nm,1.1s						
BRTR	**Keskin Array B**	**82.56**	**312**	P	P	19 29 07.1	-0.1
	0.6nm,0.8s,baz=51,slow=7.6,SNR=3.0						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**94.88**	**52**	P	P	19 30 06.9	+0.4
	1.0nm,0.9s,baz=304,slow=2.5,SNR=7.5						
	1.0nm,0.9s						

IDC 25 19:28:59.6±2.5, 5°.55S×151°.01E, h63km±40km, mb3.5/3, mbtmp3.8/3, Error ellipse: s-maj=101.5km s-min=23.5km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.59**	**39**	P	Pn	19 29 23.9	-1.8
	353nm,0.3s,baz=280,slow=1.3,SNR=120						
KRVT				S	Sn	19 29 45.6	+0.2
	1µm,0.3s,baz=111,slow=19,SNR=29						
WRA	**Warramunga Arr**	**21.62**	**227**	P	P	19 33 45.0	+0.3
	1.6nm,0.5s,baz=53,slow=10,SNR=22						
	1.6nm,0.5s						
ASAR	**Alice Springs**	**24.41**	**221**	P	P	19 34 12.8	+0.4
	1.4nm,0.8s,baz=57,slow=8.6,SNR=18						
	1.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**27.74**	**241**	P	P	19 34 42.5	0.0
	1.0nm,0.4s,baz=73,slow=7.2,SNR=12						
	1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**148.83**	**286**	PKPbc	PKPbc	19 48 40.1	-1.1
	0.7nm,0.6s,baz=66,slow=3.3,SNR=3.9						

PRU ***25*** *19:40:44.7±0.0, 42°.62N×13°.41E, h0km*
ROM ***25*** *19:40:45.0±0.1, 42°.591N±0°.004×13°.288E±0°.006, h10km, ML3.3/72, Mw3.4, Error ellipse: s-maj=0.6km s-min=0.3km az=226.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.13; Mθθ-0.03; Mϕϕ1.17; Mrθ-0.69; Mθϕ-1.13; Mϕr-0.11; Fault plane solution: M₀1.74715×10¹⁴ NP1:ϕs360.00000°, δ50.00000°, λ-41.00000°. NP2:ϕs119.00000°, δ59.00000°, λ-132.00000°.*
LDG ***25*** *19:40:44.2±0.1, 42°.60N×13°.30E, h10km, Md3.1/2, Ml2.9/22 Error ellipse: s-maj=2.3km s-min=1.3km az=47.0*
BEO ***25*** *19:40:46.6±0.7, 42°.72N×13°.27E, h0km, ML3.4/7*
IDC ***25*** *19:40:47.7±2.6, 42°.82N×13°.62E, h0km, mb3.5/1, mbtmp3.5/4, ML3.1/3, MS2.8/4, Error ellipse: s-maj=52.2km s-min=21.8km az=99.0*

ISC 25 19:40:45.1±0.8, 42°.58N±0°.01×13°.26E±0°.02, h16km±4km, n167, σ2§58/224, 29C-34D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.07**	**205**	⇑P	**Pg**	**19 40 48.2**	**-0.3**
RM33				S	**Sg**	**19 40 50.5**	**-0.2**
RM33				AML	AML		
	comp=E,72800µm,0.9s						
RM33				AML	AML		
	comp=E,72800µm,1.1s						
RM33				AML	AML		
	comp=N,43300µm,0.4s						
CAMP	**Campotosto**	**0.12**	**110**	P	**Pg**	**19 40 48.1**	**-0.9**
CAMP				S	**Sg**	**19 40 50.3**	**-1.2**
CAMP				AML	AML		
	comp=N,32950µm,0.4s						
CAMP				AML	AML		
	comp=E,48000µm,1.0s						
LNSS	**Leonessa**	**0.16**	**279**	P	**Pg**	**19 40 49.4**	**-0.1**
LNSS				S	**Sg**	**19 40 53.0**	**+0.6**
AQU	**L'Aquila**	**0.25**	**154**	⇑P	**Pb**	**19 40 50.9**	**-0.3**
AQU				S	**Sb**	**19 40 55.3**	**0.0**
AQU				AML	AML		
	comp=E,10425µm,1.2s						
AQU				AML	AML		
	comp=N,9375µm,1.0s						
AQU				AML	AML		
	comp=E,10050µm,1.2s						
AQU				AML	AML		
	comp=N,9395µm,1.0s						
AQU				AML	AML		
	comp=E,10420µm,1.2s						
GIGS	**Gran Sasso**	**0.26**	**119**	⇑P	**Pg**	**19 40 50.5**	**-0.5**
GIGS				S	**Sg**	**19 40 54.5**	**-0.5**
GIGS				AML	AML		
	comp=E,3585µm,1.0s						
GIGS				AML	AML		
	comp=N,2730µm,0.5s						
GIGS				AML	AML		
	comp=E,3590µm,1.0s						
GIGS				AML	AML		
	comp=N,2730µm,1.5s						
NRCA	**Norcia**	**0.28**	**338**	P	**Pg**	**19 40 50.7**	**-0.6**
NRCA				S	**Sg**	**19 40 55.4**	**0.0**
NRCA				AML	AML		
	comp=E,19250µm,0.1s						
NRCA				AML	AML		
	comp=N,11750µm,0.7s						
NRCA				AML	AML		
	comp=N,11800µm,0.7s						
NRCA				AML	AML		
	comp=N,12600µm,0.7s						
NRCA				AML	AML		
	comp=E,21750µm,0.5s						
NRCA				AML	AML		
	comp=N,12600µm,1.3s						
NRCA				AML	AML		
	comp=N,11750µm,1.3s						
NRCA				AML	AML		
	comp=E,21750µm,1.5s						
NRCA				AML	AML		
	comp=E,19250µm,1.9s						
FIAM	**Fiamignano**	**0.33**	**199**	⇑P	**Pg**	**19 40 52.4**	**+0.3**
FIAM				AML	AML		
	comp=E,4365µm,0.5s						
FIAM				AML	AML		
	comp=N,4385µm,0.6s						
FIAM				AML	AML		
	comp=N,4385µm,1.4s						
FIAM				AML	AML		
	comp=E,4365µm,1.5s						
MC2	**Monte Cornacci**	**0.34**	**352**	P	**Pg**	**19 40 51.9**	**-0.4**
MC2				S	**Sb**	**19 40 57.5**	**-0.7**
MC2				AML	AML		
	comp=E,8255µm,0.8s						
MC2				AML	AML		
	comp=N,8310µm,0.8s						
FAGN	**Fagnano**	**0.39**	**142**	⇓P	**Pg**	**19 40 53.1**	**-0.1**
FAGN				S	**Sb**	**19 41 01.0**	**+1.4**
FAGN				AML	AML		
	comp=N,9485µm,0.8s						
FAGN				AML	AML		
	comp=E,10525µm,0.5s						
FAGN				AML	AML		
	comp=N,9480µm,0.8s						
FAGN				AML	AML		
	comp=N,9480µm,1.2s						
VCEL	**Villa Celiera**	**0.47**	**113**	P	**Pb**	**19 40 54.6**	**-0.5**
VCEL				S	**Sb**	**19 41 02.5**	**+0.7**
VCEL				AML	AML		
	comp=N,15050µm,0.9s						
VCEL				AML	AML		
	comp=E,13700µm,0.8s						
VCEL				AML	AML		
	comp=E,13650µm,0.8s						
FDMO	**Fiordimonte**	**0.48**	**345**	⇓P	**Pg**	**19 40 54.3**	**-0.4**
FDMO				S	**Sb**	**19 41 01.4**	**-0.6**
FDMO				AML	AML		
	comp=E,3250µm,0.8s						
FDMO				AML	AML		
	comp=N,4705µm,0.3s						
OFFI	**Offida**	**0.48**	**41**	⇑P	**Pb**	**19 40 54.7**	**-0.5**
OFFI				S	**Sb**	**19 41 03.0**	**+1.1**
OFFI				AML	AML		
	comp=E,18150µm,0.6s						
OFFI				AML	AML		
	comp=N,28600µm,0.7s						
OFFI				AML	AML		
	comp=E,18150µm,1.4s						
OFFI				AML	AML		
	comp=N,28600µm,1.3s						
CESI	**CESI - Serrava**	**0.50**	**329**	⇓P	**Pg**	**19 40 54.8**	**-0.4**
CESI				S	**Sb**	**19 41 02.7**	**0.0**
CESI				AML	AML		
	comp=N,4840µm,0.4s						
CESI				AML	AML		
	comp=N,4845µm,0.4s						
CESI				AML	AML		
	comp=E,6625µm,0.6s						
CESX	**Cesi**	**0.50**	**274**	⇑P	**Pg**	**19 40 55.2**	**+0.1**
CESX				S	**Sb**	**19 41 03.2**	**+0.6**
CESX				AML	AML		
	comp=E,3185µm,0.7s						
CESX				AML	AML		
	comp=N,4325µm,0.6s						
CESX				AML	AML		
	comp=E,3185µm,1.3s						
CESX				AML	AML		
	comp=N,4325µm,1.4s						
CSP1	**Cessapalombo**	**0.52**	**356**	⇓P	**Pg**	**19 40 54.8**	**-0.7**
CSP1				S	**Sb**	**19 41 03.0**	**-0.1**
CSP1				AML	AML		
	comp=N,9840µm,1.2s						
CSP1				AML	AML		
	comp=N,9880µm,1.2s						
CSP1				AML	AML		
	comp=N,9885µm,1.2s						
CSP1				AML	AML		
	comp=E,7275µm,0.7s						
CSP1				AML	AML		
	comp=E,7275µm,1.3s						
T0110	**Collepietro**	**0.52**	**132**	P	**Pg**	**19 40 55.4**	**-0.2**
T0110				S	**Sb**	**19 41 04.0**	**+0.8**
T0110				AML	AML		
	comp=E,5765µm,1.5s						
T0110				AML	AML		
	comp=E,5770µm,1.5s						
T0110				AML	AML		
	comp=N,8010µm,0.4s						
T0110				AML	AML		
	comp=E,5770µm,0.5s						
T0110				AML	AML		
	comp=N,8010µm,1.6s						
TRTR	**Tortoreto Alta**	**0.54**	**64**	⇑P	**Pb**	**19 40 56.1**	**0.0**
TRTR				S	**Sn**	**19 41 05.8**	**-0.9**
TRTR				AML	AML		
	comp=N,8700µm,1.1s						
TRTR				AML	AML		
	comp=E,8005µm,1.6s						
TRTR				AML	AML		
	comp=N,8700µm,0.9s						
MNTP	**Montappone**	**0.58**	**16**	⇑P	**Pb**	**19 40 56.7**	**-0.3**
MNTP				S	**Sb**	**19 41 06.6**	**+1.7**
MNTP				AML	AML		
	comp=E,27350µm,0.3s						
MNTP				AML	AML		
	comp=N,9850µm,1.0s						
MNTP				AML	AML		
	comp=N,9845µm,1.0s						
MNTP				AML	AML		
	comp=E,27350µm,0.3s						
MNTP				AML	AML		
	comp=N,9845µm,1.0s						
ASSB	**Assisi San Ben**	**0.64**	**317**	⇓P	**Pg**	**19 40 57.3**	**-0.4**
ASSB				S	**Sb**	**19 41 07.3**	**+0.7**
ASSB				AML	AML		
	comp=E,2850µm,0.4s						
ASSB				AML	AML		
	comp=N,2695µm,0.8s						
ASSB				AML	AML		
	comp=N,2695µm,1.2s						
SRES	**S.Oreste - Sor**	**0.65**	**239**	⇑P	**Pg**	**19 40 58.0**	**+0.1**
SRES				AML	AML		
	comp=E,1520µm,0.9s						
SRES				AML	AML		
	comp=N,953µm,0.9s						
SRES				AML	AML		
	comp=E,1520µm,1.1s						
CERT	**Cerreto**	**0.66**	**198**	⇓P	**Pb**	**19 40 58.9**	**+0.6**
CERT				AML	AML		
	comp=E,2035µm,0.9s						
CERT				AML	AML		
	comp=N,1455µm,0.9s						
CERT				AML	AML		
	comp=E,2035µm,1.1s						
MTCE	**Montecelio**	**0.67**	**215**	P	**Pg**	**19 40 58.3**	**-0.1**
MTCE				S	**Sn**	**19 41 12.6**	**+2.5**
MTCE				AML	AML		
	comp=N,1675µm,1.6s						
MTCE				AML	AML		
	comp=E,1490µm,0.5s						
MTCE				AML	AML		
	comp=N,1675µm,0.4s						
GAG1	**Gagliole**	**0.68**	**348**	⇓P	**Pg**	**19 40 58.2**	**-0.2**
GAG1				AML	AML		
	comp=E,7070µm,0.4s						
GAG1				AML	AML		
	comp=N,8235µm,0.5s						
GAG1				AML	AML		
	comp=N,8260µm,0.6s						
GAG1				AML	AML		
	comp=E,7070µm,0.4s						
GAG1				AML	AML		
	comp=N,8260µm,1.4s						
MTL1	**Matelica**	**0.70**	**345**	P	**Pg**	**19 40 57.1**	**-1.8**
MTL1				AML	AML		
	comp=E,7045µm,1.3s						
MTL1				AML	AML		
	comp=N,7475µm,0.5s						
MTL1				AML	AML		
	comp=E,7045µm,0.7s						
SNTG	**Esanatoglia**	**0.72**	**341**	⇓P	**Pg**	**19 40 58.4**	**-0.8**
SNTG				AML	AML		
	comp=E,1610µm,1.4s						
SNTG				AML	AML		
	comp=N,1485µm,1.6s						
SNTG				AML	AML		
	comp=N,248µm,0.5s						
SNTG				AML	AML		
	comp=E,218µm,1.3s						
SNTG				AML	AML		
	comp=N,1485µm,0.4s						
INTR	**Introdacqua**	**0.74**	**139**	⇑P	**Pg**	**19 40 59.0**	**-0.7**
INTR				S	**Sb**	**19 41 10.6**	**+1.0**
INTR				AML	AML		
	comp=E,1µm,1.0s						
INTR				AML	AML		
	comp=N,2µm,1.0s						
INTR				AML	AML		
	comp=E,1215µm,1.0s						
INTR				AML	AML		
	comp=E,1µm,1.0s						
INTR				AML	AML		
	comp=N,2µm,1.0s						
INTR				AML	AML		
	comp=N,2335µm,1.0s						
INTR				AML	AML		
	comp=E,1215µm,1.0s						
INTR				AML	AML		
	comp=E,1µm,1.0s						
VVLD	**Villa Vallelon**	**0.76**	**159**	⇓P	**Pg**	**19 40 57.5**	**-2.4**
EL6	**Elcito**	**0.76**	**351**	⇓P	**Pg**	**19 40 59.1**	**-0.9**
EL6				S	**Sn**	**19 41 13.0**	**+0.6**
EL6				AML	AML		
	comp=N,4400µm,1.2s						
EL6				AML	AML		
	comp=E,3795µm,0.5s						
EL6				AML	AML		
	comp=N,4405µm,1.2s						
EL6				AML	AML		
	comp=N,4405µm,0.8s						
EL6				AML	AML		
	comp=E,3795µm,1.5s						
RCAV	**Rocca di Cave**	**0.76**	**198**	⇑P	**Pg**	**19 40 58.0**	**-2.1**
CING	**Cingoli**	**0.80**	**357**	⇓P	**Pg**	**19 40 59.8**	**-0.9**
CING				AML	AML		
	comp=E,3360µm,0.7s						
CING				AML	AML		
	comp=N,3220µm,0.4s						
FOSV	**Fossato di Vic**	**0.81**	**333**	P	**Pg**	**19 41 00.2**	**-0.7**
FOSV				AML	AML		
	comp=E,1990µm,0.8s						
FOSV				AML	AML		
	comp=N,2110µm,0.6s						
FOSV				AML	AML		
	comp=E,1995µm,0.8s						
FOSV				AML	AML		
	comp=E,1995µm,1.2s						
FOSV				AML	AML		
	comp=N,2110µm,1.4s						
PP3	**Marolino**	**0.84**	**18**	⇑P	**Pb**	**19 41 01.6**	**+0.2**
PP3				S	**Sn**	**19 41 15.0**	**+0.7**
PP3				AML	AML		
	comp=E,13050µm,0.7s						
PP3				AML	AML		
	comp=N,6255µm,0.8s						
PP3				AML	AML		
	comp=E,12700µm,0.7s						
PP3				AML	AML		
	comp=N,6660µm,1.5s						

PP3 AML AML
comp=N,6255µm,1.2s
PP3 AML AML
comp=E,13050µm,1.3s
PP3 AML AML
comp=N,6660µm,0.5s
PP3 AML AML
comp=E,12700µm,1.3s
LPEL Lama dei Pelig 0.87 127 ⇓P **Pg 19 41 01.1 -0.9**
LPEL S **Sn 19 41 15.0 0.0**
LPEL AML AML
comp=E,1970µm,0.3s
LPEL AML AML
comp=N,1344µm,0.5s
VIVA Pratoni del Vi 0.90 204 P **Pb 19 41 03.5 +1.1**
VIVA AML AML
comp=N,3370µm,1.0s
VIVA AML AML
comp=E,3430µm,1.1s
VIVA AML AML
comp=E,3430µm,0.9s
MGAB Montegabbione 0.91 292 P **Pb 19 41 03.0 +0.5**
MGAB AML AML
comp=N,3780µm,1.1s
MGAB AML AML
comp=E,5295µm,0.5s
MGAB AML AML
comp=E,4540µm,0.6s
MGAB AML AML
comp=N,3910µm,1.1s
MGAB AML AML
comp=N,3780µm,0.9s
MGAB AML AML
comp=E,5295µm,1.5s
MGAB AML AML
comp=E,4540µm,1.4s
MGAB AML AML
comp=N,3910µm,0.9s
ATTE AVT- Monte Tez 0.91 313 ⇓P **Pn 19 41 04.6 +1.3**
ATTE AML AML
comp=E,1585µm,0.6s
ATTE AML AML
comp=N,1225µm,0.7s
POFI Posta Fibreno 0.92 158 ⇑P **Pb 19 41 03.4 +0.7**
POFI AML AML
comp=N,658µm,0.9s
POFI AML AML
comp=E,628µm,1.6s
ATFO Monte Foce - G 0.94 328 ⇑P **Pg 19 41 03.1 -0.2**
ATFO AML AML
comp=E,1555µm,1.4s
ATFO AML AML
comp=E,1555µm,0.6s
ATFO AML AML
comp=N,1810µm,0.8s
ARVD Arcevia 0.95 346 ⇓P **Pg 19 41 02.5 -1.0**
ARVD S **Sn 19 41 19.0 +2.0**
ARVD AML AML
comp=E,1835µm,0.6s
ARVD AML AML
comp=N,1044µm,1.2s
ARVD AML AML
comp=E,1835µm,1.4s
ARVD AML AML
comp=N,1044µm,0.8s
LRP Arpino 0.96 165 ⇑P **Pn 19 41 05.4 +1.5**
LRP AML AML
comp=N,682µm,0.8s
LRP AML AML
comp=E,498µm,0.8s
AOI Ancona 1.01 14 ⇑P **Pb 19 41 04.5 +0.3**
AOI AML AML
comp=E,1645µm,0.4s
AOI AML AML
comp=N,1735µm,1.4s
AOI AML AML
comp=E,1645µm,1.6s
GIUL Giuliano Di Ro 1.02 180 ⇑P **Pn 19 41 06.6 +1.9**
GIUL AML AML
comp=N,626µm,0.7s
GIUL AML AML
comp=E,538µm,0.9s
GIUL AML AML
comp=N,626µm,1.3s
GIUL AML AML
comp=E,538µm,1.1s
FRON Frontone 1.02 338 ⇓P **Pg 19 41 03.7 -1.1**
FRON AML AML
comp=E,1755µm,1.5s
FRON AML AML
comp=N,1815µm,0.8s
FRON AML AML
comp=E,1755µm,0.5s
ATVO AVT- Monte Val 1.02 323 ⇑P **Pg 19 41 04.2 -0.7**
ATVO AML AML
comp=N,1269µm,0.9s
ATVO AML AML
comp=E,1440µm,0.6s
ATVO AML AML
comp=E,1440µm,1.4s
SACS San Casciano d 1.03 286 ⇓P **Pn 19 41 05.7 +0.8**
SACS AML AML
comp=E,1060µm,0.8s
SACS AML AML
comp=N,2050µm,0.7s
SACS AML AML
comp=N,2040µm,0.7s
SACS AML AML
comp=E,1123µm,0.8s
ATMI Monte Miggiano 1.05 317 ⇓P **Pn 19 41 05.8 +0.7**
ATMI AML AML
comp=N,3325µm,0.8s
ATMI AML AML
comp=E,3285µm,0.7s
ATMI AML AML
comp=E,3285µm,1.3s
ATMI AML AML
comp=N,3325µm,1.2s
TOLF Tolfa 1.06 242 ⇓P **Pb 19 41 05.7 +0.6**
TOLF AML AML
comp=E,1088µm,0.8s
TOLF AML AML
comp=N,1505µm,0.7s
COR1 Corinaldo 1.07 350 ⇓P **Pb 19 41 05.6 +0.3**
COR1 AML AML
comp=N,3700µm,1.0s
COR1 AML AML
comp=E,4255µm,0.4s
COR1 AML AML
comp=N,3700µm,1.0s
ATPI Pietralunga - 1.07 325 ⇓P **Pg 19 41 05.1 -0.9**
ATPI AML AML
comp=N,1265µm,1.6s
ATPI AML AML
comp=E,1615µm,0.7s
ATPI AML AML
comp=E,1615µm,1.3s
ATPI AML AML
comp=N,1265µm,0.4s
PIEI Pieia 1.09 331 P **Pb 19 41 05.4 -0.3**
PIEI AML AML
comp=E,966µm,0.8s
PIEI AML AML
comp=N,841µm,1.1s
PIEI AML AML
comp=E,966µm,1.2s
LATB Latina 1.10 192 ⇓P **Pg 19 41 06.5 +0.1**
LATB AML AML
comp=E,344µm,1.1s
LATB AML AML
comp=N,185µm,0.9s
LATB AML AML
comp=E,344µm,0.9s
CERA Filignano 1.13 150 P **Pb 19 41 05.9 -0.3**
CERA AML AML
comp=E,858µm,0.7s
CERA AML AML
comp=N,922µm,0.8s
CERA AML AML
comp=E,858µm,1.3s
CERA AML AML
comp=N,922µm,1.2s
NARO Abbazia di Nar 1.15 335 ⇑P **Pb 19 41 06.2 -0.3**
NARO AML AML
comp=E,758µm,1.3s
NARO AML AML
comp=N,988µm,0.9s
NARO AML AML
comp=N,988µm,1.1s
APEC Apecchio 1.16 328 P **Pb 19 41 05.3 -1.4**
FSSB Fossombrone 1.17 343 ⇑P **Pb 19 41 06.8 -0.1**
FSSB AML AML
comp=N,4850µm,0.4s
FSSB AML AML
comp=E,3240µm,0.4s
SF04 Casetta 1.21 283 ⇓P **Pg 19 41 09.1 +0.7**
CAFI Castiglion Fio 1.21 309 P **Pg 19 41 08.4 -0.1**
CAFI AML AML
comp=N,832µm,0.9s
CAFI AML AML
comp=N,832µm,1.1s
CAFI AML AML
comp=E,886µm,0.6s
PARC Parchiule 1.30 326 ⇑P **Pb 19 41 09.5 +0.3**
PARC AML AML
comp=N,1006µm,1.3s
PARC AML AML
comp=E,1100µm,0.7s
VAGA Valle Agricola 1.37 148 ⇓P **Pb 19 41 10.7 +0.3**
VAGA AML AML
comp=N,468µm,0.7s
VAGA AML AML
comp=N,468µm,1.3s
VAGA AML AML
comp=E,268µm,1.4s
PESA Pesaro 1.40 348 ⇑P **Pg 19 41 11.5 -0.6**
PESA AML AML
comp=N,1765µm,0.4s
PESA AML AML
comp=N,1765µm,1.6s
PESA AML AML
comp=E,1715µm,0.4s
SGG Gregorio Mates 1.45 144 P **Pg 19 41 12.7 -0.4**
SGG AML AML
comp=E,3245µm,0.5s
SGG AML AML
comp=E,1.0nm,0.9s
SGG AML AML
comp=N,3µm,1.0s
SGG AML AML
comp=N,1.0nm,1.0s
SGG AML AML
comp=N,3µm,1.0s
MELA Melanico ??? S 1.64 121 ⇓P **Pg 19 41 16.0 -0.7**
MELA AML AML
comp=N,764µm,1.0s
MELA AML AML
comp=N,730µm,0.7s
MELA AML AML
comp=E,650µm,0.8s
MELA AML AML
comp=E,645µm,1.0s
MELA AML AML
comp=E,650µm,1.2s
MELA AML AML
comp=N,764µm,1.0s
CASP Castiglione de 1.78 278 ⇓P **Pb 19 41 17.0 -0.3**
CASP AML AML
comp=E,101µm,0.7s
CASP AML AML
comp=N,88µm,1.1s
CASP AML AML
comp=E,101µm,1.3s
VENT Ventotene 1.79 176 P **Pn 19 41 16.4 +1.1**
VENT AML AML
comp=E,303µm,1.1s
VENT AML AML
comp=N,257µm,1.6s
VENT AML AML
comp=E,303µm,0.9s
VENT AML AML
comp=N,257µm,0.4s
DUGI Dugi Otok 1.93 42 *e*Pn **Pn 19 41 18.4 +1.1**
SGRT San Giovanni R 2.02 113 ⇓P **Pb 19 41 21.9 +0.4**
SGRT S **Sg 19 41 49.0 -1.2**
SGRT AML AML
comp=E,272µm,0.8s
SGRT AML AML
comp=N,234µm,0.8s
SGRT AML AML
comp=E,272µm,1.2s
IMOL Imola, Italy 2.10 329 P **Pg 19 41 25.1 -0.2**
VIRC Vir 2.16 37 *e*Pn **Pn 19 41 21.0 +0.7**
MORI Morici 2.21 53 *e*Pn **Pn 19 41 22.3 +1.3**
NVLJ Novalja 2.31 30 *e*Pn **Pn 19 41 23.3 +0.9**
BRJN Brijuni 2.36 9 *e*Pn **Pn 19 41 24.1 +1.1**
SMRN Sveta Marina 2.54 15 *e*Pn **Pn 19 41 26.1 +0.5**
UDBI Udbina 2.67 42 *e*Pn **Pn 19 41 29.7 +2.2**
LSTV Lastovo 2.69 85 *e*Pn **Pn 19 41 28.7 +1.1**
KIJV Kijevo 2.71 57 *e*Pn **Pn 19 41 29.9 +2.0**
A250A Rusevo Krmpots 2.78 25 *e*Pn **Pn 19 41 30.1 +1.2**
MAKA Makarska 2.85 74 *e*Pn **Pn 19 41 31.3 +1.4**
PLIT Plitvice 2.87 36 *e*Pn **Pn 19 41 32.1 +1.9**
RICI Ricice 2.99 71 *e*Pn **Pn 19 41 33.8 +2.1**
PGF Pioggiola 3.15 271 *e*P **Pn 19 41 36.5 +2.5**
PGF Pioggiola 3.15 271 *e*Sn **Sn 19 42 08.1 -3.2**
comp=E,1.7nm,0.4s
BOJS Bojanci 3.26 25 ⇓P **Pn 19 41 36.4 +0.8**
BOJS AML AML
comp=N,177µm,0.8s
BOJS AML AML
comp=E,297µm,0.8s
BOJS AML AML
comp=N,177µm,1.2s
BOJS AML AML
comp=E,297µm,1.2s
STON Ston 3.29 83 *e*Pn **Pn 19 41 36.0 +0.1**
STON Ston 3.29 83 *e*Pn **Pn 19 41 36.4 +0.5**
STON *e*Sn **Sn 19 42 16.4 +1.8**
OZLJ Ozalj 3.43 27 *e*Pn **Pn 19 41 39.6 +1.8**
ROVR Rover Verones 3.45 334 P **Pn 19 41 40.9 +2.6**
ROVR AML AML
comp=N,56µm,0.7s
ROVR AML AML
comp=E,45µm,0.6s
ROVR AML AML
comp=N,56µm,1.3s
CGRP Cima Grappa 3.46 343 ⇓P **Pn 19 41 40.8 +2.3**
CGRP S **Sn 19 42 22.0 +2.7**
CGRP AML AML
comp=E,187µm,1.1s
CGRP AML AML
comp=N,180µm,0.5s
CGRP AML AML
comp=E,187µm,0.9s
BLY Banja Luka 3.58 51 *e*Pn **Pb 19 41 44.5 -3.5**
LJU Ljubljana 3.58 14 P **Pb 19 41 44.6 -3.5**
DBRK Dubrovnik 3.61 87 *e*Pn **Pn 19 41 41.8 +1.5**
SALO Salr 3.62 328 ⇑P **Pn 19 41 43.7 +3.2**
SALO AML AML
comp=E,130µm,0.7s
SALO AML AML
comp=N,158µm,0.7s
SALO AML AML
comp=E,130µm,1.3s
DOSS Dosso del Somm 3.62 336 ⇑P **Pn 19 41 43.1 +2.4**
DOSS AML AML
comp=E,172µm,0.7s
DOSS AML AML
comp=E,102µm,0.7s
DOSS AML AML
comp=N,148µm,0.7s
DOSS AML AML
comp=N,150µm,0.8s
DOSS AML AML
comp=E,102µm,1.3s
DOSS AML AML
comp=N,150µm,1.2s
MPRI Monte Prat 3.67 357 ⇓P **Pn 19 41 42.6 +1.4**
MPRI AML AML
comp=E,198µm,0.9s
MPRI AML AML
comp=N,194µm,1.1s
MPRI AML AML
comp=E,198µm,1.1s
MAGA Magasa 3.71 330 ⇑P **Pn 19 41 44.0 +2.1**
MAGA AML AML
comp=N,183µm,0.4s
MAGA AML AML
comp=E,290µm,0.7s
MAGA AML AML
comp=E,290µm,1.3s
LUSI Trento, Gardas 3.77 335 ⇑P **Pn 19 41 45.0 +2.4**
LUSI AML AML
comp=N,106µm,1.0s
LUSI AML AML
comp=E,87µm,0.6s
GAGG Gaggia 3.87 336 ⇓P **Pn 19 41 46.6 +2.5**
GAGG AML AML
comp=N,138µm,1.0s
GAGG AML AML
comp=E,195µm,0.9s
GAGG AML AML
comp=N,138µm,1.0s
SARZ Sarezzano 3.90 307 P **Pb 19 41 51.9 -1.5**
SARZ S **Sn 19 42 32.0 +2.4**
SARZ Sarezzano 3.90 307 P **Pb 19 41 54.8 +1.4**
MOSL Moslavina 3.94 38 *e*Pn **Pn 19 41 45.8 +0.9**
ACOM Acomizza, Ital 3.98 3 ⇑P **Pn 19 41 47.4 +1.9**
ACOM AML AML
comp=E,168µm,0.9s
ACOM AML AML
comp=N,113µm,0.9s
ACOM AML AML
comp=E,168µm,1.1s
ACOM AML AML
comp=N,113µm,1.1s
ZOU Zoufplan 3.98 357 ⇓P **Pn 19 41 46.8 +1.1**
OBKA Obir 4.04 13 *e*Pn **Pn 19 41 49.0 +2.6**
comp=N,2.1nm,0.2s
OBKA *e*Sn **Sg 19 42 59.3 +4.5**
comp=N,53nm,0.8s
MYKA Terra Mystica 4.06 4 *e*Pn **Pn 19 41 49.1 +2.5**
comp=N,2.4nm,0.3s
KOSI Kohlern 4.11 342 ⇓P **Pn 19 41 49.7 +2.3**
KOSI AML AML
comp=E,147µm,0.9s
KOSI AML AML
comp=N,124µm,1.6s
KOSI AML AML
comp=E,147µm,1.1s
KOSI AML AML
comp=N,124µm,0.4s
ABTA Abfaltersbach 4.20 353 *i* Pn **Pn 19 41 50.6 +2.1**
comp=N,32nm,0.5s,SNR=53
ABTA *e*Sn **Sn 19 42 39.7 +2.3**
comp=N,26nm,0.7s
VSL Villasalto 4.25 225 ⇓P **Pn 19 41 51.7 +2.5**
SOKA Soboth 4.29 17 *e*Pn **Pn 19 41 52.2 +2.4**
comp=N,1.6nm,0.2s
SOKA *e*Sn **Sn 19 42 43.4 +3.9**
comp=N,6.2nm,0.6s
PDG Podgorica 4.44 90 *e*Pn **Pn 19 41 54.0 +2.3**
PDG *e*Sn **Sn 19 42 46.0 +3.1**
SBF Sospel 4.45 289 *e*P **Pn 19 41 54.6 +2.7**
SBF *e*Sn **Sn 19 42 38.9 -4.3**
comp=N,9.2nm,0.5s
RISI Rein 4.45 350 ⇑P **Pn 19 41 54.6 +2.6**
RISI AML AML
comp=E,162µm,0.7s
RISI AML AML
comp=N,248µm,0.5s
RISI AML AML
comp=E,162µm,1.3s
KBA Koelnbreinsper 4.50 1 *i* Pn **Pn 19 41 54.6 +1.9**
comp=E,2.7nm,0.3s,SNR=11
KBA *e*Sn **Sn 19 42 49.3 +4.5**
comp=E,14nm,0.6s
ROSI Rosskopf 4.54 344 P **Pn 19 41 55.8 +2.5**
BBLS Lazići 4.67 72 *e*Pn **Pn 19 41 58.1 +3.1**
BBLS *e*Sn **Sn 19 42 49.1 +0.2**
FETA Feichten 4.79 339 *i* Pn **Pn 19 42 00.0 +3.3**
SNR=8.4
FETA *e*Sn **Sn 19 42 59.4 +7.4**
comp=E,10nm,0.7s
WTTA Wattenberg 4.83 347 *i* Pn **Pn 19 42 00.5 +3.3**
comp=E,1.6nm,0.2s,SNR=6.4
DAVOX Davos/Dischmat 4.84 331 Pn **Pn 19 42 00.6 +3.1**
comp=E,1.1nm,0.3s,baz=149,slow=18,SNR=18
DAVOX Sn **Sn 19 42 58.0 +4.8**
comp=E,1.3nm,0.3s,baz=241,slow=22,SNR=5.3
DAVOX LR LR 19 44 04.6
comp=E,33nm,19.8s,baz=248,slow=41
comp=E,12nm,0.7s
SQTA Sankt Quirin 4.87 343 *i* Pn **Pn 19 42 00.8 +3.1**
comp=E,1.9nm,0.2s,SNR=6.8
WATA Walderalm 4.91 347 *e*Pn **Pn 19 42 01.9 +3.7**
comp=E,3.9nm,0.3s
ARSA Arzberg 4.94 18 *e*Sn **Sn 19 42 55.8 +0.3**
comp=E,3.9nm,0.4s
SJES Sjenica 4.98 80 *e*Pn **Pn 19 42 02.4 +3.1**
SJES *e*Sn **Sn 19 42 59.1 +2.6**
CLTB Caltabellotta 4.99 180 ⇓P **Pg 19 42 17.2 -3.5**
MOTA Moosalm 5.01 343 *e*Pn **Pn 19 42 03.3 +3.7**
comp=E,8.3nm,0.7s
LMR La Mourre 5.01 281 *e*P **Pn 19 42 01.5 +2.0**
LMR *e*Sn **Sn 19 42 52.4 -4.7**
comp=E,0.8nm,0.4s
BIOA Bad Ischl, Aus 5.12 3 Pn **Pn 19 42 03.8 +2.7**
comp=E,5.7nm,0.5s
BIOA *e*Sn **Sn 19 43 04.5 +4.7**
comp=E,22nm,0.6s
DIVS Divibare 5.14 71 *e*Pn **Pn 19 42 02.8 +1.3**
DIVS *e*Sn **Sn 19 43 00.6 +0.1**
IVAS Ivanjica 5.15 76 *e*Pn **Pn 19 42 03.5 +2.0**
IVAS *e*Sn **Sn 19 43 00.6 0.0**
MBDF Montbardon 5.17 297 *e*P **Pn 19 42 04.2 +2.3**
MBDF *e*Sn **Sn 19 42 56.3 -5.0**
comp=E,7.4nm,0.8s
RETA Reutte 5.22 341 *i* Pn **Pn 19 42 06.2 +3.7**
comp=E,2.8nm,0.4s,SNR=5.4
DAVA Damuels 5.28 334 *e*Pn **Pn 19 42 07.2 +3.7**
comp=E,5.3nm,0.6s,SNR=5.5
MOA Molln 5.32 7 *i* Pn **Pn 19 42 06.7 +2.8**
comp=E,3.7nm,0.5s,SNR=9.3
TRUS Trudelj 5.46 70 *e*Pn **Pn 19 42 07.6 +1.8**
LPG La Plagne 5.52 304 *e*P **Pn 19 42 10.0 +3.1**
LPG *e*Sn **Sn 19 43 04.8 -5.3**
comp=E,5.1nm,0.6s
LPL La Plagne 5.54 304 *e*P **Pn 19 42 09.7 +2.6**
LPL *e*Sn **Sn 19 43 05.3 -5.3**
comp=E,2.1nm,0.4s
RONA Rosalia, Austr 5.56 22 *e*Pn **Pn 19 42 09.1 +2.0**
comp=E,1.5nm,0.2s
GRUS Gruza 5.61 74 *e*Pn **Pn 19 42 10.8 +3.1**
CONA Conrad Observa 5.66 18 *i* Pn **Pn 19 42 10.2 +1.7**
comp=E,1.4nm,0.2s,SNR=6.7
CONA *e*Sn **Sn 19 43 13.1 -0.1**
comp=E,3.7nm,0.4s
SMRF Simiane la Rot 5.78 287 *e*P **Pn 19 42 13.6 +3.4**
SMRF *e*Sn **Sn 19 43 10.8 -5.3**
comp=E,1.4nm,0.6s
SELS Selova 5.81 81 *e*Pn **Pn 19 42 12.5 +1.9**
ORIF Oris-en-Rattie 5.83 296 *e*P **Pn 19 42 13.6 +2.6**
ORIF *e*Sn **Sn 19 43 12.1 -5.4**
comp=E,4.4nm,0.6s
KBN Korca 5.97 107 ⇑P Pb 19 42 21.0 -7.8
GERES GERESS Array B 6.28 3 Pn **Pn 19 42 17.6 +0.5**
comp=E,0.3nm,0.3s,baz=180,slow=12,SNR=6.5
GERES Sn **Sn 19 43 28.5 +0.1**
comp=E,0.9nm,0.3s,baz=178,slow=26,SNR=6.1
comp=E,0.4nm,0.4s
CKRC Cesky Krumlov 6.29 6 *e*PN **Pn 19 42 18.1 +1.0**
CKRC *e*SN **Sn 19 43 27.1 -1.5**
BARS Barje 6.31 85 *e*Pn **Pn 19 42 19.9 +2.5**
BARS *e*Sn **Sn 19 43 30.6 +1.4**
CABF La Chapelle 6.51 311 *e*P **Pn 19 42 23.0 +2.7**
CABF *e*Sn **Sn 19 43 28.2 -6.1**
comp=E,3.1nm,0.6s
PRVS Prvonek 6.51 88 *e*Pn **Pn 19 42 22.5 +2.2**
PRVS *e*Sn **Sn 19 43 36.0 +1.8**
KHC Kasperske Hory 6.56 2 *e*PN **Pn 19 42 21.6 +0.7**
KHC *e*SN **Sn 19 43 33.6 -1.7**
ZAGS Zajecar 6.68 76 *e*Pn **Pn 19 42 24.9 +2.5**
BOSS Bosilegrad 6.81 88 *e*Pn **Pn 19 42 25.9 +1.5**
BOSS *e*Sn **Sn 19 43 43.1 +1.5**
ZAPS Zavoj 6.92 81 *e*Pn **Pn 19 42 28.2 +2.4**
ZAPS *e*Sn **Sn 19 43 44.0 -0.2**
HINF Hinteralfeld 6.92 321 *e*P **Pn 19 42 27.9 +2.1**
HINF *e*Sn **Sn 19 43 37.8 -6.4**
comp=E,7.0nm,0.6s
LASF Ste Croix 7.02 286 *e*P **Pn 19 42 30.2 +3.1**
LASF *e*Sn **Sn 19 43 40.9 -5.6**
comp=E,0.3nm,0.3s
VRAC Vranov 7.12 18 LR LR 19 45 39.1
comp=E,34nm,19.8s,baz=210,slow=43
CDF Champ du Feu 7.19 326 *e*P **Pn 19 42 31.3 +1.7**
CDF *e*Sn **Sn 19 43 44.2 -6.7**
comp=E,3.0nm,0.5s

HAU	**Haudompre**	**7.29**	**320**	*eP*	**Pn**	**19 42 32.5**	**+1.6**
HAU				*eSn*	**Sn**	**19 43 46.5**	**-6.8**
	comp=E,16nm,0.6s						
KEST	**Kesra**	**7.48**	**205**	Pn	Pn	19 42 43.5	+10
	comp=E,0.2nm,0.3s,baz=20,slow=12,SNR=2.4 comp=E,2.8nm,0.8s						
SMF	**Signal de Mont**	**7.85**	**304**	*eP*	**Pn**	**19 42 42.1**	**+3.5**
SMF				*eSn*	**Sn**	**19 44 00.2**	**-6.8**
	comp=E,1.0nm,0.3s						
PAGF	**Fort de Pagny**	**7.98**	**321**	*eSn*	**Sn**	**19 44 02.9**	**-7.2**
	comp=E,3.4nm,0.4s						
LOR	**Lormes**	**8.15**	**308**	*eP*	**Pn**	**19 42 45.8**	**+3.1**
	baz=122						
LOR				*eSn*	**Sn**	**19 44 07.4**	**-7.0**
	comp=E,2.1nm,0.4s						
SSF	**Saint Saulge**	**8.25**	**306**	*eP*	**Pn**	**19 42 46.4**	**+2.3**
SSF				*eSn*	**Sn**	**19 44 09.7**	**-7.2**
	comp=E,1.0nm,0.3s						
MEZF	**Maizieres J'vi**	**8.26**	**319**	*eP*	**Pn**	**19 42 46.7**	**+2.6**
SAVF	**Savonnieres en**	**8.30**	**319**	*eP*	**Pn**	**19 42 47.2**	**+2.5**
SAVF				*eSn*	**Sn**	**19 44 10.6**	**-7.5**
	comp=E,4.4nm,0.4s						
BRG	**Berggiesshubel**	**8.31**	**3**	*ex*	x	19 44 16.3	
BRG				Amp		19 44 18.7	
	comp=Z,2.5nm,0.8s						
BRG				*ex*	x	19 45 16.7	
BRG				*ex*	x	19 45 27.1	
BRG				Amp		19 45 43.1	
	comp=Z,6.2nm,1.1s						
CLL	**Collm**	**8.74**	**359**	*eP*n	Pn	19 42 41.0	-10
CLL				*eSn*	Sn	19 44 05.0	-24
CLL				*ex*	x	19 44 43.0	
CLL				*eSg*		19 45 20.0	
	comp=Z,12nm,1.5s						
LFF	**La Frestale**	**9.36**	**289**	*eP*	**Pn**	**19 43 00.5**	**+1.3**
LFF				*eSn*	**Sn**	**19 44 36.7**	**-7.4**
	comp=Z,1.6nm,0.3s						
ESDC	**Sonseca Array**	**13.30**	**263**	LR	LR	19 48 47.0	
	comp=Z,41nm,19.8s,baz=128,slow=35						
FINES	**FINESS Array B**	**20.41**	**18**	P	Pn	19 45 24.2	+1.0
	comp=Z,2.2nm,0.8s,baz=199,slow=6.9,SNR=3.5 comp=Z,2.2nm,0.8s						
KMBO	**Kilima Mbogo**	**48.59**	**147**	LR	LR	20 12 21.6	
	comp=Z,51nm,18.4s,baz=95,slow=39						

IDC 25 19:59:32.1±3.3, 3°98S×137°79E, h0km, mb4.0/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=126.6km s-min=26.8km az=93.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.21**	**192**	Pn	Pn	20 03 23.1	+1.6
	0.1nm,0.3s,baz=14,slow=13,SNR=10 0.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.39**	**219**	P	Pn	20 03 48.4	-0.4
	0.1nm,0.3s,baz=39,slow=18,SNR=6.9 1.7nm,0.9s						
ASAR	**Alice Springs**	**19.92**	**191**	P	P	20 04 05.1	-0.6
	0.1nm,0.3s,baz=8.4,slow=10,SNR=5.9 0.1nm,0.3s						
SONM	**Songino Array**	**58.48**	**336**	P	P	20 09 30.2	0.0
	1.2nm,0.6s,baz=140,slow=9.7,SNR=10 1.2nm,0.6s						

*IDC **25** 20:25:51.4±0.7, 27°.98N×139°.74E, h519km±15km, mb2.9/7, mbtmp3.8/11, Error ellipse: s-maj=49.2km s-min=10.4km az=76.0*
*JMA **25** 20:25:52.9±0.2, 28°.N±2°×14°.0E±°, h523km, MV3.9/29, W OFF OGASAWARA*
ISC 25 20:25:51.1±0.7, 27°.93N±0°.08×139°.4E±0°.1, h500km, n23, σ1°92/28, mb3.4/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.61**	**108**	*eP*	**P**	**20 27 01.0**	**+1.3**
CBIJ				*eS*	**S**	**20 27 55.3**	**0.0**
JCJ	**Chichijima**	**2.61**	**108**	P	**P**	**20 27 00.9**	**+1.3**
	70nm,0.5s,baz=283,slow=21,SNR=7.2						
JCJ				S	**S**	**20 27 56.0**	**+0.7**
	103nm,0.5s,baz=295,slow=22,SNR=8.9						
JHH2	**Haha-jima-NKT2**	**2.79**	**117**	*eP*	**P**	**20 27 03.7**	**+2.9**
JHH2				*eS*	**S**	**20 27 59.0**	**+1.7**
JHJ	**Hachijo jima 2**	**5.19**	**4**	P	**P**	**20 27 21.0**	**+1.4**
	84nm,0.7s,baz=245,slow=19,SNR=2.7						
JHJ				S	**S**	**20 28 33.4**	**+1.3**
	103nm,0.6s,baz=60,slow=20,SNR=3.0						
JTNC	**Tanabenakahech**	**6.71**	**332**	*eP*	**P**	**20 27 38.7**	**+4.4**
BSO1	**Boso 1**	**6.84**	**11**	*eP*	**P**	**20 27 37.5**	**+2.6**
JIE	**Ise**	**6.84**	**341**	*eP*	**P**	**20 27 39.6**	**+4.0**
JOD2	**Odawara 2**	**7.32**	**358**	*eP*	**P**	**20 27 42.6**	**+2.3**
JHU	**Hanno**	**7.90**	**359**	*eP*	**P**	**20 27 46.7**	**+0.4**
JRY	**Ryogami san**	**8.08**	**357**	*eP*	**P**	**20 27 49.2**	**+1.0**
JYT	**Yasato**	**8.31**	**4**	*eP*	**P**	**20 27 51.2**	**+0.8**
JYT				*eS*	**S**	**20 29 25.7**	**-2.8**
JAG	**Ashikaga**	**8.47**	**0**	*eP*	**P**	**20 27 52.4**	**+0.1**
MJAR	**Matsushiro Arr**	**8.65**	**354**	P	**P**	**20 27 52.6**	**-1.6**
	1.5nm,0.4s,baz=168,slow=11,SNR=9.5						
JMK	**Ichinoseki**	**11.10**	**7**	*eP*	**P**	**20 28 21.4**	**+1.4**
USRK	**Ussuriysk Ar.**	**17.30**	**342**	P	**P**	**20 29 25.2**	**+0.5**
	3.4nm,0.6s,baz=162,slow=8.9,SNR=6.1						
KLR	**Kul'dur**	**22.07**	**347**	P	**P**	**20 30 08.4**	**+0.2**
	0.6nm,0.4s,baz=169,slow=16,SNR=2.1 0.6nm,0.4s						
WRA	**Warramunga Arr**	**47.84**	**186**	P	**P**	**20 33 42.4**	**-0.6**
	0.7nm,0.5s,baz=1.4,slow=7.6,SNR=16 0.7nm,0.5s						
MKAR	**Makanchi Array**	**48.03**	**309**	P	**P**	**20 33 44.9**	**+0.7**
	0.2nm,0.4s,baz=88,slow=9.9,SNR=5.3 0.2nm,0.4s						
ASAR	**Alice Springs**	**51.56**	**186**	P	**P**	**20 34 09.8**	**-0.7**
	0.3nm,0.4s,baz=19,slow=12,SNR=11 0.3nm,0.4s						
STKA	**Stephens Creek**	**59.51**	**178**	P	**P**	**20 35 05.0**	**-0.5**
	2.0nm,1.0s,baz=350,slow=10,SNR=2.9 2.0nm,1.0s						
FINES	**FINESS Array B**	**76.10**	**333**	P	**P**	**20 36 45.9**	**-0.7**
	0.8nm,0.3s,baz=66,slow=5.3,SNR=18 0.8nm,0.3s						
NOA	**NORSAR Array B**	**81.91**	**337**	P	**P**	**20 37 14.9**	**-2.7**
	0.4nm,0.6s,baz=47,slow=4.7,SNR=2.2 0.4nm,0.6s						
PLCA	**Paso Flores**	**152.31**	**125**	PKPbc	**PKPbc**	**20 44 48.7**	**-1.4**
	1.1nm,0.9s,baz=291,slow=5.4,SNR=3.1						

*AEIC **25** 20:40:35.1±1.3, 54°.04N±0°.07×162°.07W±0°.06, h27km±8km, Error ellipse: s-maj=10.9km s-min=5.0km az=166.0*
NEIC 25 20:40:35.6±1.3, 54°.05N±0°.09×162°.04W±0°.07, h32km±16km, ML2.5/6, ML2.5/33(AEIC), Error ellipse: s-maj=13.3km s-min=5.1km az=165.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DT1	**Dutton Round H**	**1.07**	**352**		Pn	20 40 53.6	-0.8
FALS	**False Pass**	**1.15**	**316**		Pn	20 40 54.3	-1.1
FALS					Sn	20 41 08.8	-1.1
ISLZ	**Isanotski Laza**	**1.19**	**305**		Pn	20 40 55.1	-1.0
ISLZ					Sn	20 41 10.2	-1.1
HAG	**Hague Volcano**	**1.28**	**3**		Pn	20 40 57.6	+0.4
ISNN	**Isanotski Nort**	**1.29**	**308**		Pn	20 40 57.2	-0.1
ISNN					Sn	20 41 13.5	0.0
PS4A	**Pavlof South-4**	**1.31**	**5**		Pn	20 40 57.9	+0.2
SSLS	**Shishaldin Sou**	**1.33**	**301**		Pn	20 40 57.8	-0.2
SSLN	**Shishaldin Nor**	**1.38**	**305**		Pn	20 40 59.0	+0.4
SSLN					Sn	20 41 16.0	+0.2
SSLW	**Shishaldin Wes**	**1.42**	**302**		Pn	20 40 59.0	-0.2
SSBA	**Shishaldin**	**1.42**	**302**		Pn	20 40 58.9	-1.3
SSBA					Sn	20 41 17.3	+0.5
WESE	**West Dahl East**	**1.56**	**287**		Pn	20 41 01.1	0.0
SDPT	**Sand Point**	**1.59**	**34**		Pn	20 41 01.6	+0.2
SDPT					Sn	20 41 21.3	+0.4
SDPT	**Sand Point**	**1.59**	**34**	IAML		20 41 25.9	
	comp=N,72nm,0.6s						
WTUG	**Tugumak**	**1.59**	**301**		Pn	20 41 01.8	+0.2
CNBA	**Chernabura Isl**	**1.63**	**61**		Pn	20 41 01.1	-0.9
CNBA	**Chernabura Isl**	**1.63**	**61**	IAML		20 41 37.6	
	comp=N,26nm,2.4s						
WECS	**Westdahl Cape**	**1.68**	**288**		Pn	20 41 02.6	-0.1
AKSA	**Akutan Strait**	**2.16**	**274**		Pn	20 41 09.4	+0.1
AKSA	**Akutan Strait**	**2.16**	**274**		Pn	20 41 09.2	-0.1
AKSA					Sn	20 41 34.4	-0.5
AKUT	**Akutan**	**2.20**	**274**	Pn	Pn	20 41 09.1	-0.8
AKUT				IAML		20 42 01.9	
	comp=E,36nm,2.9s						
AKUT				IAML		20 42 18.2	
	comp=N,41nm,2.8s						
AKLV	**Akutan Long Va**	**2.31**	**274**		Pn	20 41 11.8	+0.3
UNV	**Unalaska Valle**	**2.65**	**267**		Pn	20 41 16.4	+0.4
MNAT	**Makushin Natee**	**2.75**	**268**		Pn	20 41 17.6	+0.1
MGOD	**Makushin Gods**	**2.87**	**267**		Pn	20 41 19.6	+0.4
MAPS	**Pakushin South**	**2.91**	**267**		Pn	20 41 20.2	+0.6
OHAK	**Old Harbor**	**5.89**	**54**	Pn	Pn	20 41 59.6	-0.9
KDAK	**Kodiak Island**	**6.50**	**51**	Pn	Pn	20 42 07.8	-1.1

*NEIC **25** 20:45:32.1±1.3, 21°.81S±0°.07×67°.4W±0°.1, h210km±14km, mb4.0/2, ML4.0(GUC), Error ellipse: s-maj=19.6km s-min=10.2km az=94.0*
*GUC **25** 20:45:33.5±0.7, 21°.80S×67°.36W, h199km±9km, ML4.0*
*SCB **25** 20:45:33.9±0.6, 21°.74S×67°.30W, h197km±5km, ML3.9/3, MW3.4, Error ellipse: s-maj=2.6km s-min=1.8km az=0.0*
ISC 25 20:45:31.0±0.9, 21°.79S±0°.05×67°.32W±0°.05, h206km±9km, n61, σ1°30/81, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.65**	**71**	P	**Pn**	**20 46 07.6**	**+0.5**
MOCB				S	**Sn**	**20 46 31.9**	**-3.2**
MOCB				IAML		20 46 34.7	
	375nm,0.5s						
LVC	**Limon Verde**	**1.69**	**241**	Pn	**Pn**	**20 46 08.6**	**+1.3**
LVC				Sn	**Sn**	**20 46 33.9**	**-1.7**
LVC	**Limon Verde**	**1.69**	**241**	*eP*	**Pn**	**20 46 08.4**	**+1.1**
LVC				*eS*	**Sn**	**20 46 34.9**	**-0.7**
LVC	**Limon Verde**	**1.69**	**241**	P	**Pn**	**20 46 08.4**	**+1.1**
YJA	**Yavi**	**1.72**	**103**	P	**Pn**	**20 46 08.4**	**+0.7**
PB09	**IPOC Station P**	**1.79**	**269**		**Pn**	**20 46 09.6**	**+1.5**
PB09				Sn	**Sn**	**20 46 37.5**	**+0.6**
PB09	**IPOC Station P**	**1.79**	**269**	⇑*iP*	**Pn**	**20 46 09.5**	**+1.4**
PB09				*eS*	**Sn**	**20 46 37.0**	**+0.1**
PB01	**IPOC Station P**	**2.15**	**290**		**Pn**	**20 46 12.6**	**+0.9**
PB01				Sn	**Sn**	**20 46 43.5**	**+0.1**
PB01	**IPOC Station P**	**2.15**	**290**	⇑*iP*	**Pn**	**20 46 12.5**	**+0.9**
PB01				*eS*	**Sn**	**20 46 42.7**	**-0.6**
PB01				IAML		20 46 43.9	
	comp=N,1μm,0.2s						
PB06	**IPOC Station P**	**2.28**	**246**		**Pn**	**20 46 13.9**	**+0.8**
PB06				Sn	**Sn**	**20 46 45.5**	**-0.3**
PB06	**IPOC Station P**	**2.28**	**246**	*eP*	**Pn**	**20 46 14.2**	**+1.1**
PB06				*eS*	**Sn**	**20 46 45.4**	**-0.5**
PB06				IAML		20 46 47.2	
	comp=E,252nm,0.4s						
PB06	**IPOC Station P**	**2.28**	**246**	P	**Pn**	**20 46 14.1**	**+1.1**
PB07	**IPOC Station P**	**2.39**	**271**		**Pn**	**20 46 14.8**	**+0.5**
PB07	**IPOC Station P**	**2.39**	**271**	*eP*	**Pn**	**20 46 15.3**	**+1.1**
PB07				*eS*	**Sn**	**20 46 46.9**	**-1.1**
PB07				IAML		20 46 47.6	
	comp=E,575nm,0.4s						
PB15	**IPOC Station P**	**2.44**	**234**		**Pn**	**20 46 16.0**	**+1.2**
PB15	**IPOC Station P**	**2.44**	**234**	*eP*	**Pn**	**20 46 16.3**	**+1.5**
PB15				*eS*	**Sn**	**20 46 49.3**	**+0.2**
PB15	**IPOC Station P**	**2.44**	**234**	P	**Pn**	**20 46 16.2**	**+1.4**
PB02	**IPOC Station P**	**2.45**	**281**		**Pn**	**20 46 15.7**	**+0.9**
PB02	**IPOC Station P**	**2.45**	**281**	*eP*	**Pn**	**20 46 15.7**	**+0.9**
PB02				*eS*	**Sn**	**20 46 47.6**	**-1.3**
PB02	**IPOC Station P**	**2.45**	**281**	P	**Pn**	**20 46 15.7**	**+0.9**
PB02				S	**Sn**	**20 46 46.1**	**-2.8**
PB02				IAML		20 46 48.4	
	comp=E,908nm,0.4s						
PB04	**IPOC Station P**	**2.68**	**258**	Pn	**Pn**	**20 46 18.3**	**+0.8**
PB04	**IPOC Station P**	**2.68**	**258**	*eP*	**Pn**	**20 46 18.6**	**+1.2**
PB04				*eS*	**Sn**	**20 46 52.5**	**-1.4**
PB04				IAML		20 46 53.6	
	comp=N,210nm,0.3s						
PB04	**IPOC Station P**	**2.68**	**258**	P	**Pn**	**20 46 18.7**	**+1.2**
PB04				S	**Sn**	**20 46 51.8**	**-2.0**
PB04				IAML		20 46 53.4	
	comp=N,156nm,0.2s						
GO01	**Chusmiza**	**2.75**	**320**	Pn	**Pn**	**20 46 20.1**	**+1.5**
GO01	**Chusmiza**	**2.75**	**320**	⇑*iP*	**Pn**	**20 46 20.0**	**+1.5**
GO01				*eS*	**Sn**	**20 46 57.3**	**+1.6**
GO01				IAML		20 47 02.8	
	comp=E,478nm,0.2s						
GO01	**Chusmiza**	**2.75**	**320**	P	**Pn**	**20 46 19.7**	**+1.1**
TA01	**Diego Aracena**	**2.94**	**294**	Pn	**Pn**	**20 46 20.8**	**+0.6**
TA01	**Diego Aracena**	**2.94**	**294**	*eP*	**Pn**	**20 46 20.8**	**+0.6**
TA01				*eS*	**Sn**	**20 46 56.7**	**-2.0**
TA01	**Diego Aracena**	**2.94**	**294**	P	**Pn**	**20 46 20.9**	**+0.6**
TA02	**Huaiquique**	**3.03**	**299**		**Pn**	**20 46 21.7**	**+0.3**
TA02	**Huaiquique**	**3.03**	**299**	*eP*	**Pn**	**20 46 21.7**	**+0.3**
TA02	**Huaiquique**	**3.03**	**299**	P	**Pn**	**20 46 21.8**	**+0.5**
PB10	**IPOC Station P**	**3.45**	**240**	Pn	**Pn**	**20 46 26.5**	**+0.3**
PB10	**IPOC Station P**	**3.45**	**240**	*i* P	**Pn**	**20 46 27.3**	**+1.1**
PB10				*eS*	**Sn**	**20 47 07.3**	**-2.4**
GO02	**Mina Guanaco**	**3.95**	**211**	Pn	**Pn**	**20 46 33.5**	**+0.8**
GO02	**Mina Guanaco**	**3.95**	**211**	*eP*	**Pn**	**20 46 34.2**	**+1.5**
GO02				*eS*	**Sn**	**20 47 20.7**	**-0.6**
GO02	**Mina Guanaco**	**3.95**	**211**	P	**Pn**	**20 46 34.3**	**+1.5**
PB14	**IPOC Station P**	**4.00**	**225**	Pn	**Pn**	**20 46 33.4**	**+0.1**
PB16	**IPOC Station P**	**4.01**	**329**		**Pn**	**20 46 35.8**	**+2.1**
PB12	**IPOC Station P**	**4.24**	**318**	Pn	**Pn**	**20 46 36.1**	**0.0**
PB12	**IPOC Station P**	**4.24**	**318**	*i* P	**Pn**	**20 46 35.7**	**-0.4**
PB12				*eS*	**Sn**	**20 47 24.3**	**-3.0**
AP01	**Chacalluta**	**4.43**	**320**	Pn	**Pn**	**20 46 37.4**	**-1.0**
PB18	**Visviri**	**4.65**	**334**	Pn	**Pn**	**20 46 41.5**	**-0.1**
BBOE	**La Paz, Chanca**	**4.99**	**353**	P	**Pn**	**20 46 46.7**	**+0.7**
BBOD	**La Paz, Gloria**	**5.26**	**346**	P	**Pn**	**20 46 50.3**	**+0.8**
AC01	**Pan de Azucar**	**5.28**	**214**	Pn	**Pn**	**20 46 49.7**	**+0.7**
AC02	**Maricunga**	**5.29**	**198**	Pn	**Pn**	**20 46 51.2**	**+1.5**
LPAZ	**La Paz**	**5.53**	**352**	Pn	**Pn**	**20 46 55.3**	**+2.4**
LPAZ	**La Paz**	**5.53**	**352**	P	**Pn**	**20 46 53.6**	**+0.7**
GO03	**Copiap**	**6.36**	**204**	Pn	**Pn**	**20 47 03.1**	**+0.1**
AC04	**Llanos de Chal**	**7.24**	**207**	Pn	**Pn**	**20 47 12.8**	**-1.6**
AC05	**El Transito**	**7.51**	**200**	Pn	**Pn**	**20 47 18.7**	**+0.8**
LCO	**Las Campanas**	**7.81**	**202**	Pn	**Pn**	**20 47 21.2**	**-0.8**
GO04	**Tololo Observa**	**8.92**	**200**	Pn	**Pn**	**20 47 34.3**	**-2.0**
CO02	**Combarbal**	**9.94**	**199**	Pn	**Pn**	**20 47 47.4**	**-2.0**
PTLB	**Pontes e Lacer**	**9.99**	**52**	Pn	**Pn**	**20 47 50.5**	**+0.4**
MT02	**Curacav**	**11.92**	**196**		**Pn**	**20 48 17.4**	**+2.8**
MT09	**Talagante**	**12.38**	**194**	Pn	**Pn**	**20 48 21.4**	**+0.9**
BO02	**Sierra Bellavi**	**13.31**	**192**	Pn	**Pn**	**20 48 32.4**	**+0.3**
TRQA	**Tornquist**	**16.85**	**165**	P	**P**	**20 49 13.6**	**-0.2**
TRQA				IAmb	IAmb	20 49 19.2	
	comp=Z,2.8nm,0.8s						
PLCA	**Paso Flores**	**19.08**	**188**	P	**P**	**20 49 38.3**	**+0.2**
PLCA				IAmb	IAmb	20 49 50.9	
	comp=Z,15nm,1.4s						

*IDC **25** 20:46:38.8±2.5, 37°.83N×142°.24E, h0km, mb3.5/2, mbtmp3.6/4, ML2.8/2, Error ellipse: s-maj=44.5km s-min=35.4km az=57.0*
*JMA **25** 20:46:47.5±0.1, 37°.7N±0°.2×141°.7E±0°.5, h47km±1km, MV3.7/40, E OFF FUKUSHIMA PREF*
ISC 25 20:46:45.4±1.6, 37°.64N±0°.04×141°.85E±0°.07, h30km±11km, n16, σ0°90/30, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.74**	**336**	*i* P	**Pn**	**20 47 00.8**	**+1.1**
JIKH				S	**Sn**	**20 47 10.1**	**+0.2**
JMST	**Minamisoumatoc**	**0.77**	**277**	⇓*i*P	**Pn**	**20 47 00.7**	**+0.6**
JMST				⇓S	**Sb**	**20 47 10.2**	**-0.2**
JFK	**Kawauchi**	**0.82**	**251**	⇓*i*P	**Pb**	**20 47 01.7**	**+0.5**
JFK				⇓S	**Sb**	**20 47 11.8**	**-0.2**
JMM	**Marumori**	**0.87**	**285**	⇓*e*P	**Pn**	**20 47 01.7**	**+0.2**
JMM				⇓S	**Sb**	**20 47 12.4**	**-0.8**
JIO	**Ouri**	**0.91**	**334**	*i* P	**Pb**	**20 47 03.0**	**+0.5**
JIO				S	**Sb**	**20 47 14.0**	**-0.3**
JOU	**Okura**	**1.19**	**308**	*i* P	**Pn**	**20 47 06.8**	**+0.9**
JOU				*eS*	**Sn**	**20 47 21.0**	**0.0**
JKMT	**Kesennumamotoy**	**1.21**	**346**	*i* P	**Pb**	**20 47 07.4**	**-0.2**
JKMT				S	**Sn**	**20 47 21.5**	**0.0**
JFT	**Otama**	**1.21**	**265**	⇓*i*P	**Pb**	**20 47 07.5**	**-0.2**
JFT				⇓S	**Sn**	**20 47 22.3**	**+0.7**
JMK	**Ichinoseki**	**1.40**	**339**	⇓*i*P	**Pb**	**20 47 10.3**	**-0.6**
JMK				⇓S	**Sn**	**20 47 26.7**	**+0.4**
JYS	**Shirataka**	**1.53**	**293**	*i* P	**Pn**	**20 47 11.6**	**+1.0**
JYS				S	**Sn**	**20 47 30.0**	**+0.6**
JFY	**Yanaizu**	**1.72**	**263**	P	**Pn**	**20 47 14.3**	**+1.1**
JFY				S	**Sn**	**20 47 34.9**	**+0.6**
JYK	**Kaneyama**	**1.73**	**318**	*i* P	**Pn**	**20 47 14.6**	**+1.2**
JYK				S	**Sn**	**20 47 34.8**	**+0.3**

MJAR	**Matsushiro Arr**	**3.11**	**250**	Pn	**Pn**	**20 47 34.1**	**+1.7**
	0.3nm,0.3s,baz=89,slow=17,SNR=11						
MJAR				Sn	**Sb**	**20 48 15.3**	**-2.2**
	0.2nm,0.3s,baz=84,slow=30,SNR=1.2 2.3nm,0.5s						
JHJ	**Hachijo jima 2**	**4.81**	**201**	Pn	**Pn**	**20 47 57.4**	**+1.6**
	2.9nm,0.3s,baz=60,slow=20,SNR=3.7						
JHJ				Sn	**Sn**	**20 48 49.6**	**-0.9**
	10nm,0.3s,baz=49,slow=18,SNR=4.2 131nm,1.0s						
MKAR	**Makanchi Array**	**44.10**	**302**	P	**P**	**20 54 50.0**	**-0.7**
	0.3nm,0.7s,baz=81,slow=8.8,SNR=1.8 0.3nm,0.7s						
WRA	**Warramunga Arr**	**57.71**	**188**	P	**P**	**20 56 32.7**	**-0.5**
	0.4nm,0.5s,baz=5.9,slow=7.1,SNR=11 0.4nm,0.5s						

IDC 25 20:46:46.7±1.9, 1°.93N×126°.25E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=175.2km s-min=24.4km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**160**	P	P	20 51 54.9	+0.2
	1.3nm,0.4s,baz=338,slow=10,SNR=57 1.3nm,0.4s						
ASAR	**Alice Springs**	**26.50**	**164**	P	P	20 52 26.9	+0.8
	0.2nm,0.4s,baz=343,slow=11,SNR=1.9 0.2nm,0.4s						
STKA	**Stephens Creek**	**36.63**	**158**	P	P	20 53 53.9	-1.2
	0.7nm,0.4s,baz=344,slow=7.4,SNR=3.7 0.7nm,0.4s						
MKAR	**Makanchi Array**	**58.77**	**326**	P	P	20 56 46.8	+0.1
	0.4nm,0.5s,baz=119,slow=7.3,SNR=5.9 0.4nm,0.5s						

*KRNET **25** 20:47:29.8±0.1, 39°.47N×73°.58E, mb2.7*
*SOME **25** 20:47:29.3, 39°.68N×73°.15E, h5km*
*NNC **25** 20:47:32.4±1.1, 39°.58N×73°.55E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=8.4km s-min=4.3km az=171.0*
ISC 25 20:47:30.5±1.3, 39°.62N±0°.06×73°.50E±0°.04, h10km, n29, σ2°06/48, 16C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.06**	**329**	⇑*iP*	**Pn**	**20 47 52.8**	**+1.3**
	baz=30						
OHH				⇑*iS*	**Sn**	**20 48 09.4**	**+3.1**
	baz=30						
DRK	**Karamyk**	**1.32**	**265**	⇑*iP*	**Pn**	**20 47 55.6**	**+0.3**
	baz=71						
DRK				⇑*iS*	**Sg**	**20 48 14.6**	**+1.6**
	baz=71						
BTK	**Batken**	**2.11**	**283**	⇑*iP*	**Pb**	**20 48 09.4**	**+0.5**
	baz=86						
BTK				⇑*iS*	**Sg**	**20 48 38.3**	**0.0**
	baz=86						
ARK	**Arkit**	**2.47**	**332**	⇑*iP*	**Pb**	**20 48 15.1**	**+0.1**
	baz=33						
ARK				⇑*iS*	**Sb**	**20 48 48.5**	**+2.9**
	baz=33						
GAR	**Garm**	**2.54**	**257**	⇓*iP*	**Pn**	**20 48 14.4**	**+2.5**
	baz=61						
GAR				⇓*iS*	**Sb**	**20 48 46.9**	**-0.8**
	baz=61						
TRKS	**Terek-Say**	**2.62**	**318**	⇑*iP*	**Pb**	**20 48 16.2**	**-1.5**
	baz=18						
TRKS				⇑*iS*	**Sb**	**20 48 50.2**	**+0.2**
	baz=18						
UCH	**Uchtor**	**2.72**	**16**	⇑*iP*	**Pb**	**20 48 18.2**	**-1.3**
	baz=14						
UCH				⇑*iS*	**Sb**	**20 48 53.3**	**+0.3**
	baz=14						
IUG	**Iuzhnay**	**3.65**	**315**	*eP*	**Pb**	**20 48 31.9**	**-3.2**
	47nm,0.4s						
IUG				*eS*	**Sb**	**20 49 17.7**	**-1.7**
	13nm,0.5s						
IUG	**Iuzhnay**	**3.65**	**315**	Pg	**Pb**	**20 48 32.3**	**-2.7**
	47nm,0.4s						
IUG				Lg	Lg	20 49 17.7	
	13nm,0.5s						
TKM2	**Tokmak 2**	**3.66**	**25**	⇑Pg	**Pg**	**20 48 39.4**	**-1.1**
	1.8nm,0.6s						
TKM2				⇑Lg	Lg	20 49 29.2	
	3.3nm,0.6s						
KST	**Kastek**	**3.89**	**28**	*eP*	**Pg**	**20 48 43.6**	**-1.5**
	1.8nm,0.3s						
KST				*eS*	**Sg**	**20 49 37.1**	**+1.6**
	9.5nm,0.6s						
KST	**Kastek**	**3.89**	**28**	Pg	**Pg**	**20 48 43.6**	**-1.5**
	1.8nm,0.3s						
KST				Lg	Lg	20 49 37.1	
	9.5nm,0.6s						
DGS	**Degeres**	**4.00**	**25**	*eP*	**Pg**	**20 48 46.1**	**-1.1**
	2.8nm,0.7s						
DGS				*eS*	**Sg**	**20 49 41.1**	**+2.1**
	11nm,0.8s						
DGS	**Degeres**	**4.00**	**25**

h10km, ML2.5/9, 2C-2D, Error ellipse: s-maj=0.6km s-min=0.1km az=274.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
NRCA	**Norcia**	**0.12**	**332**	P		Pg	21 05 21.0	+0.5
NRCA				S		Sg	21 05 23.1	+0.5
NRCA					AML	AML		
	comp=E,1680μm,0.4s							
NRCA					AML	AML		
	comp=N,2005μm,1.0s							
NRCA					AML	AML		
	comp=E,3250μm,0.1s							
NRCA					AML	AML		
	comp=N,2655μm,1.1s							
LNSS	**Leonessa**	**0.17**	**223**	⇑P		Pg	21 05 21.8	+0.6
LNSS				S		Sg	21 05 24.7	+1.0
LNSS					AML	AML		
	comp=E,1325μm,0.9s							
LNSS					AML	AML		
	comp=N,971μm,0.1s							
LNSS					AML	AML		
	comp=E,5010μm,0.4s							
LNSS					AML	AML		
	comp=N,3175μm,0.5s							
LNSS					AML	AML		
	comp=E,5015μm,0.4s							
MC2	**Monte Cornacci**	**0.19**	**360**	P		Pg	21 05 22.1	+0.5
MC2				S		Sg	21 05 25.5	+1.1
T1243	**Rocca Santa Ma**	**0.19**	**99**	⇓P		Pb	21 05 22.3	-0.7
T1243					AML	AML		
	comp=E,17750μm,0.3s							
T1243					AML	AML		
	comp=N,14100μm,0.3s							
RM33	**Pellescritta (**	**0.22**	**176**	⇓P		Pg	21 05 22.6	+0.6
RM33				S		Sg	21 05 26.3	+1.2
RM33					AML	AML		
	comp=E,304μm,0.3s							
RM33					AML	AML		
	comp=N,374μm,0.2s							
RM33					AML	AML		
	comp=E,7980μm,0.6s							
RM33					AML	AML		
	comp=N,9035μm,0.2s							
RM33					AML	AML		
	comp=E,7965μm,0.6s							
RM33					AML	AML		
	comp=N,9155μm,0.2s							
RM33					AML	AML		
	comp=N,9040μm,0.2s							
RM33					AML	AML		
	comp=N,9140μm,0.2s							
RM33					AML	AML		
	comp=N,366μm,0.2s							
TERO	**Teramo**	**0.32**	**108**	P		Pg	21 05 24.5	+0.6
TERO					AML	AML		
	comp=E,7010μm,1.1s							
TERO					AML	AML		
	comp=E,7905μm,0.9s							
TERO					AML	AML		
	comp=N,6465μm,0.4s							
TERO					AML	AML		
	comp=N,7435μm,0.4s							
FDMO	**Fiordimonte**	**0.32**	**346**	P		Pg	21 05 24.3	+0.4
FDMO				S		Sg	21 05 29.3	+1.2
FDMO					AML	AML		
	comp=E,50μm,0.2s							
FDMO					AML	AML		
	comp=N,56μm,0.3s							
FDMO					AML	AML		
	comp=E,561μm,0.5s							
FDMO					AML	AML		
	comp=N,644μm,1.0s							
ARRO	**Arrone**	**0.35**	**245**	P		Pg	21 05 24.5	+0.2
ARRO				S		Sb	21 05 30.4	-0.7
ARRO					AML	AML		
	comp=E,513μm,1.1s							
ARRO					AML	AML		
	comp=N,604μm,0.8s							
ARRO					AML	AML		
	comp=N,604μm,0.8s							
ARRO					AML	AML		
	comp=E,513μm,0.9s							
CESI	**CESI - Serrava**	**0.35**	**323**	P		Pg	21 05 24.8	+0.4
CESI				S		Sg	21 05 30.2	+1.1
CESI					AML	AML		
	comp=E,64μm,1.3s							
CESI					AML	AML		
	comp=N,78μm,1.1s							
CESI					AML	AML		
	comp=E,777μm,0.4s							
CESI					AML	AML		
	comp=N,1105μm,0.5s							
CESI					AML	AML		
	comp=E,778μm,0.4s							
CSP1	**Cessapalombo**	**0.37**	**1**	P		Pg	21 05 25.3	+0.5
CSP1				S		Sb	21 05 31.0	-0.9
OFFI	**Offida**	**0.42**	**60**	AML	AML			
	comp=N,2835μm,0.5s							
OFFI					AML	AML		
	comp=E,3960μm,0.7s							
FIAM	**Fiamignano**	**0.46**	**187**	P		Pg	21 05 26.7	+0.3
FIAM				S		Sb	21 05 33.8	-0.7
FIAM					AML	AML		
	comp=E,48μm,0.2s							
FIAM					AML	AML		
	comp=N,38μm,0.8s							
FIAM					AML	AML		
	comp=E,829μm,0.9s							
FIAM					AML	AML		
	comp=N,772μm,0.4s							
ASSB	**Assisi San Ben**	**0.50**	**309**	P		Pb	21 05 28.2	-0.2
ASSB				S		Sb	21 05 35.0	-0.8
ASSB					AML	AML		
	comp=E,444μm,0.3s							
ASSB					AML	AML		
	comp=N,56μm,0.3s							
ASSB					AML	AML		
	comp=N,370μm,0.6s							
EL6	**Elcito**	**0.61**	**354**	⇑P		Pg	21 05 28.0	-1.2
ATCC	**AVT- Casa Cast**	**0.61**	**319**	P		Pg	21 05 29.4	+0.1
ATCC					AML	AML		
	comp=E,449μm,0.5s							
ATCC					AML	AML		
	comp=N,414μm,0.5s							

ROM 25 21:06:06.5±0.1, 42°.641N±0°.007×13°.291E±0°.006, h8km, ML2.7/29, 11C-13D, Error ellipse: s-maj=0.8km s-min=0.2km az=181.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
T1243	**Rocca Santa Ma**	**0.13**	**64**	P		Pg	21 06 09.8	+0.4
T1243				S		Sg	21 06 12.3	+0.9
T1243					AML	AML		
	comp=N,14000μm,0.3s							
T1243					AML	AML		
	comp=N,14100μm,0.3s							
T1243					AML	AML		
	comp=E,17750μm,0.3s							
T1243					AML	AML		
	comp=E,18050μm,0.3s							
CAMP	**Campotosto**	**0.14**	**140**	⇓P		Pg	21 06 10.1	+0.6
CAMP				S		Sg	21 06 12.5	+0.9
CAMP					AML	AML		
	comp=N,8530μm,0.3s							
CAMP					AML	AML		
	comp=E,12190μm,0.2s							
RM33	**Pellescritta (**	**0.14**	**203**	P		Pg	21 06 10.2	+0.6
RM33				S		Sg	21 06 13.1	+1.3
RM33					AML	AML		
	comp=N,9010μm,0.2s							
RM33					AML	AML		
	comp=N,9150μm,0.2s							
RM33					AML	AML		
	comp=E,7980μm,0.6s							
RM33					AML	AML		
	comp=N,9025μm,0.2s							
RM33					AML	AML		
	comp=E,7960μm,0.6s							
RM33					AML	AML		
	comp=N,9035μm,0.2s							
RM33					AML	AML		
	comp=N,9155μm,0.2s							
RM33					AML	AML		
	comp=N,9040μm,0.2s							
RM33					AML	AML		
	comp=E,7965μm,0.6s							
RM33					AML	AML		
	comp=N,9140μm,0.2s							
RM33					AML	AML		
	comp=E,7980μm,0.6s							
LNSS	**Leonessa**	**0.19**	**259**	⇑P		Pg	21 06 11.0	+0.6
LNSS				S		Sg	21 06 14.7	+1.6
LNSS					AML	AML		
	comp=N,3170μm,0.5s							
LNSS					AML	AML		
	comp=E,5015μm,0.4s							
LNSS					AML	AML		
	comp=N,3175μm,0.5s							
LNSS					AML	AML		
	comp=E,5010μm,0.4s							
TERO	**Teramo**	**0.23**	**94**	⇑P		Pg	21 06 11.6	+0.5
TERO				S		Sg	21 06 15.4	+1.2
TERO					AML	AML		
	comp=E,7015μm,1.1s							
TERO					AML	AML		
	comp=E,7010μm,1.1s							
TERO					AML	AML		
	comp=N,6465μm,0.4s							
TERO					AML	AML		
	comp=E,7905μm,0.9s							
TERO					AML	AML		
	comp=N,7435μm,0.4s							
TERO					AML	AML		
	comp=E,7905μm,1.1s							
TERO					AML	AML		
	comp=E,7010μm,0.9s							
TERO					AML	AML		
	comp=N,7435μm,1.6s							
TERO					AML	AML		
	comp=N,6465μm,1.6s							
NRCA	**Norcia**	**0.23**	**326**	⇑P		Pg	21 06 11.9	+0.7
NRCA					AML	AML		
	comp=N,2655μm,1.1s							
NRCA					AML	AML		
	comp=E,3250μm,0.1s							
NRCA					AML	AML		
	comp=N,2655μm,0.9s							
GIGS	**Gran Sasso**	**0.28**	**133**	P		Pg	21 06 12.6	+0.5
GIGS				S		Sg	21 06 17.1	+1.3
GIGS					AML	AML		
	comp=N,994μm,0.3s							
GIGS					AML	AML		
	comp=N,994μm,0.3s							
GIGS					AML	AML		
	comp=E,972μm,1.2s							
GIGS					AML	AML		
	comp=E,972μm,0.8s							
MC2	**Monte Cornacci**	**0.28**	**345**	⇑P		Pg	21 06 09.8	-2.4
AQU	**L'Aquila**	**0.30**	**164**	P		Pg	21 06 13.1	+0.7
AQU					AML	AML		
	comp=E,2460μm,0.3s							
AQU					AML	AML		
	comp=N,1935μm,0.5s							
AQU					AML	AML		
	comp=N,1930μm,0.5s							
AQU					AML	AML		
	comp=N,1970μm,0.4s							
AQU					AML	AML		
	comp=E,2455μm,0.3s							
AQU					AML	AML		
	comp=E,2565μm,0.3s							
FEMA	**Monte Fema**	**0.37**	**331**	P		Pg	21 06 14.4	+0.6
ARRO	**Arrone**	**0.39**	**261**	P		Pg	21 06 14.5	+0.4
ARRO					AML	AML		
	comp=N,604μm,0.8s							
ARRO					AML	AML		
	comp=N,604μm,0.8s							
ARRO					AML	AML		
	comp=E,513μm,1.1s							
ARRO					AML	AML		
	comp=E,513μm,0.9s							
FIAM	**Fiamignano**	**0.39**	**199**	⇑P		Pg	21 06 14.5	+0.3
FIAM				S		Sb	21 06 20.8	-1.1
FIAM					AML	AML		
	comp=E,829μm,0.9s							
FIAM					AML	AML		
	comp=N,772μm,0.4s							
OFFI	**Offida**	**0.41**	**45**	⇑P		Pb	21 06 15.8	-0.2
OFFI					AML	AML		
	comp=N,2835μm,0.5s							
OFFI					AML	AML		
	comp=E,3960μm,0.7s							
FDMO	**Fiordimonte**	**0.42**	**339**	P		Pg	21 06 15.4	+0.6
FDMO					AML	AML		
	comp=E,561μm,0.5s							
FDMO					AML	AML		
	comp=E,561μm,1.5s							
FDMO					AML	AML		
	comp=N,644μm,1.0s							
FAGN	**Fagnano**	**0.43**	**150**	⇑P		Pg	21 06 15.2	+0.3
FAGN					AML	AML		
	comp=E,3050μm,0.7s							
FAGN					AML	AML		
	comp=N,3240μm,0.2s							
FAGN					AML	AML		
	comp=E,3050μm,1.3s							
CSP1	**Cessapalombo**	**0.46**	**352**	⇑P		Pg	21 06 15.7	+0.3
CESI	**CESI - Serrava**	**0.46**	**322**	⇓P		Pg	21 06 15.9	+0.4
CESI					AML	AML		
	comp=E,777μm,0.4s							
CESI					AML	AML		
	comp=N,1105μm,0.5s							
CESI					AML	AML		
	comp=E,778μm,0.4s							
VCEL	**Villa Celiera**	**0.47**	**121**	⇓P		Pb	21 06 16.5	-0.6
VCEL				S		Sb	21 06 24.4	+0.1
VCEL					AML	AML		
	comp=E,3275μm,0.8s							
VCEL					AML	AML		
	comp=N,3320μm,0.7s							
VCEL					AML	AML		
	comp=N,3315μm,0.7s							
TRTR	**Tortoreto Alta**	**0.49**	**70**	⇑P		Pb	21 06 17.6	+0.3
TRTR					AML	AML		
	comp=N,3160μm,0.5s							
TRTR					AML	AML		
	comp=E,3525μm,0.6s							
CESX	**Cesi**	**0.53**	**267**	P		Pg	21 06 16.5	-0.2
CESX				S		Sb	21 06 25.2	-0.4
CESX					AML	AML		
	comp=N,469μm,0.4s							
CESX					AML	AML		
	comp=E,582μm,0.4s							
T0110	**Collepietro**	**0.55**	**139**	P		Pg	21 06 17.4	+0.3
T0110				S		Sb	21 06 26.2	-0.2
T0110					AML	AML		
	comp=E,1830μm,1.3s							
T0110					AML	AML		
	comp=N,2070μm,0.4s							
T0110					AML	AML		
	comp=E,1830μm,0.7s							
ASSB	**Assisi San Ben**	**0.61**	**311**	⇓P		Pg	21 06 18.6	+0.3
ASSB					AML	AML		
	comp=N,370μm,0.6s							
ASSB					AML	AML		
	comp=E,444μm,0.3s							
SNTG	**Esanatoglia**	**0.67**	**337**	⇓P		Pg	21 06 19.4	+0.1
SNTG					AML	AML		
	comp=E,177μm,0.6s							
SNTG					AML	AML		
	comp=N,209μm,1.2s							
SNTG					AML	AML		
	comp=E,177μm,1.4s							
EL6	**Elcito**	**0.70**	**349**	P		Pg	21 06 20.1	+0.1
EL6				S		Sb	21 06 32.0	+1.2
SRES	**S.Oreste - Sor**	**0.70**	**235**	⇓P		Pg	21 06 20.3	+0.2
SRES					AML	AML		
	comp=E,183μm,0.5s							
SRES					AML	AML		
	comp=N,184μm,0.4s							
ATCC	**AVT- Casa Cast**	**0.72**	**319**	⇓P		Pg	21 06 20.5	+0.1
CERT	**Cerreto**	**0.73**	**198**	⇑P		Pg	21 06 20.4	0.0
CERT					AML	AML		
	comp=N,452μm,0.3s							
CERT					AML	AML		
	comp=E,752μm,0.5s							
CERT					AML	AML		
	comp=E,752μm,1.5s							
CING	**Cingoli**	**0.74**	**355**	⇓P		Pg	21 06 20.8	+0.2
CING					AML	AML		
	comp=E,387μm,0.4s							
CING					AML	AML		
	comp=N,378μm,0.6s							
INTR	**Introdacqua**	**0.78**	**144**	⇓P		Pg	21 06 20.9	-0.5
INTR				S		Sg	21 06 32.0	+0.5
INTR					AML	AML		
	comp=E,332μm,0.9s							
INTR					AML	AML		
	comp=N,720μm,0.5s							
INTR					AML	AML		
	comp=N,720μm,1.5s							
VVLD	**Villa Vallelon**	**0.81**	**162**	P		Pg	21 06 19.0	-3.0
LPEL	**Lama dei Pelig**	**0.89**	**132**	⇓P		Pg	21 06 21.5	-2.0
LPEL				S		Sb	21 06 36.0	-0.1
ARVD	**Arcevia**	**0.89**	**343**	⇓P		Pg	21 06 23.8	+0.2
ARVD					AML	AML		
	comp=E,188μm,0.5s							
ARVD					AML	AML		
	comp=E,188μm,0.5s							
ARVD					AML	AML		
	comp=N,163μm,0.7s							
MGAB	**Montegabbione**	**0.91**	**288**	P		Pg	21 06 24.1	+0.2
MGAB					AML	AML		
	comp=E,500μm,0.6s							
MGAB					AML	AML		
	comp=N,484μm,0.4s							
MGAB					AML	AML		
	comp=E,501μm,0.6s							
MGAB					AML	AML		
	comp=N,472μm,0.4s							
MGAB					AML	AML		
	comp=E,559μm,0.6s							
RMP	**Rome, Mte Porz**	**0.94**	**208**	⇑P		Pn	21 06 26.4	+0.5
RMP					AML	AML		
	comp=E,578μm,0.8s							
RMP					AML	AML		
	comp=N,540μm,0.5s							
COR1	**Corinaldo**	**1.01**	**348**	P		Pn	21 06 26.6	-0.3
LAV9	**Lanuvio**	**1.06**	**205**	⇓P		Pn	21 06 28.2	+0.7
LAV9					AML	AML		
	comp=N,760μm,1.3s							
LAV9					AML	AML		
	comp=N,772μm,1.3s							
LAV9					AML	AML		
	comp=E,992μm,0.5s							
LAV9					AML	AML		
	comp=E,1024μm,0.5s							
LAV9					AML	AML		
	comp=N,772μm,0.7s							
LAV9					AML	AML		
	comp=N,760μm,0.7s							
GIUL	**Giuliano Di Ro**	**1.08**	**181**	⇓P		Pn	21 06 28.2	+0.3
GIUL					AML	AML		
	comp=N,172μm,0.6s							
GIUL					AML	AML		
	comp=E,148μm,0.6s							
DUGI	**Dugi Otok**	**1.87**	**43**	*e*Pn		Pn	21 06 39.2	+0.6
VIRC	**Vir**	**2.09**	**37**	*e*Pn		Pn	21 06 42.4	+0.7
MORI	**Morici**	**2.15**	**54**	*e*Pn		Pn	21 06 43.4	+0.9
NVLJ	**Novalja**	**2.24**	**30**	*e*Pn		Pn	21 06 44.2	+0.4
BRJN	**Brijuni**	**2.29**	**8**	*e*Pn		Pn	21 06 45.7	+1.3
RABC	**Rab**	**2.37**	**27**	*e*Pn		Pn	21 06 46.3	+0.7
SMRN	**Sveta Marina**	**2.48**	**14**	*e*Pn		Pn	21 06 47.3	+0.3
KIJV	**Kijevo**	**2.65**	**58**	*e*Pn		Pn	21 06 51.1	+1.7
KIJV					*e*Sn	Sn	21 07 24.6	-2.2
LSTV	**Lastovo**	**2.66**	**86**	*e*Pn		Pn	21 06 50.2	+0.7
RICI	**Ricice**	**2.94**	**72**	*e*Pn		Pn	21 06 54.5	+1.1
STON	**Ston**	**3.25**	**84**	*e*Pn		Pn	21 06 57.5	-0.2
DBRK	**Dubrovnik**	**3.58**	**88**	*e*Pn		Pn	21 07 03.5	+1.2
ABTA	**Abfaltersbach**	**4.14**	**353**	*e*Pn		Pn	21 07 12.8	+2.7
	comp=E,2.4nm,0.5s							
ABTA					*e*Sn	Sn	21 08 02.7	+4.1
	comp=E,1.4nm,0.4s							
WATA	**Walderalm**	**4.85**	**346**	*e*Pn		Pn	21 07 24.5	+4.7
	comp=E,0.9nm,0.3s							

*IDC **25** 21:11:30.3±1.1, 34°.80N×138°.13E, h0km, mb3.4/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=32.2km s-min=11.7km az=87.0*
*JMA **25** 21:11:31.3±0.2, 35°.6N±0°.5×140°.1E±0°.8, h66km±1km, MV3.1/36, CENTRAL CHIBA PREF*
ISC 25 21:11:31.9±1.0, 35°.55N±0°.05×140°.12E±0°.05, h69km±8km, n17, σ0°74/25, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
JCN	**Nagara**	**0.15**	**154**	P		**Pn**	**21 11 42.0**	**-0.1**
JCN				S		**Sn**	**21 11 50.4**	**+0.9**
JSMT	**Sammumatsuo**	**0.28**	**72**	P		**Pn**	**21 11 42.2**	**-0.5**
BSO3	**Boso 3**	**0.82**	**157**	P		**Pn**	**21 11 47.5**	**-0.3**
BSO3				X			21 12 01.1	
JOD2	**Odawara 2**	**0.89**	**251**	P		**Pn**	**21 11 48.6**	**-0.3**
JOD2				S		**Sn**	**21 12 01.1**	**-0.5**
JIM2	**Oshima 3**	**1.01**	**214**	*e*P		**Pn**	**21 11 49.5**	**-0.9**
JIM2				S		**Sn**	**21 12 03.4**	**-0.7**
JAG	**Ashikaga**	**1.02**	**328**	P		**Pn**	**21 11 49.9**	**-0.7**
JRY	**Ryogami san**	**1.09**	**295**	P		**Pn**	**21 11 51.7**	**+0.2**
BSO1	**Boso 1**	**1.14**	**142**	*e*P		**Pn**	**21 11 50.5**	**-1.0**
BSO1				*e*S		**Sn**	**21 12 06.5**	**+0.2**
JFNN	**Fujinakano**	**1.23**	**253**	P		**Pn**	**21 11 53.2**	**+0.1**
JFNN				*e*S		**Sn**	**21 12 09.5**	**+0.4**
JYN	**Shimob**	**1.29**	**268**	P		**Pn**	**21 11 54.0**	**0.0**
JIZS	**Izushimoda**	**1.32**	**231**	P		**Pn**	**21 11 54.0**	**-0.3**
JIZS				*e*S		**Sn**	**21 12 10.6**	**-0.6**
JKT	**Katashina**	**1.40**	**330**	*e*P		**Pn**	**21 11 55.0**	**-0.5**
MJAR	**Matsushiro Arr**	**1.83**	**303**	Pn		**Pn**	**21 11 59.5**	**-1.7**
	2.7nm,0.3s,baz=170,slow=7.5,SNR=64							
MJAR				Pg		**Pn**	**21 12 01.2**	**-0.1**
	2.7nm,0.3s,baz=146,slow=14,SNR=54							
MJAR				Lg		Lg	21 12 26.8	
	2.5nm,0.3s,baz=156,slow=19,SNR=3.9							
JHJ	**Hachijo jima 2**	**2.44**	**187**	Pn		**Pn**	**21 12 09.8**	**+0.3**
	14nm,0.3s,baz=328,slow=24,SNR=9.5							
JHJ					Sn	**Sn**	**21 12 37.8**	**-0.5**
	27nm,0.3s,baz=88,slow=23,SNR=6.3 88nm,0.6s							
MKAR	**Makanchi Array**	**44.03**	**303**	P		**P**	**21 19 33.2**	**+0.5**
	0.3nm,0.5s,baz=87,slow=9.4,SNR=4.9 0.3nm,0.5s							
WRA	**Warramunga Arr**	**55.46**	**187**	P		**P**	**21 20 58.6**	**-0.9**
	0.4nm,0.4s,baz=0.9,slow=7.6,SNR=7.2 0.4nm,0.4s							
ASAR	**Alice Springs**	**59.19**	**187**	P		**P**	**21 21 27.1**	**+1.4**
	0.2nm,0.8s,baz=8.3,slow=13,SNR=4.5 0.2nm,0.8s							

*IDC **25** 21:26:32.9±1.0, 40°.50N×105°.42E, h0km, mb3.5/6, mbtmp3.6/9, ML3.3/3, MS2.7/1, Error ellipse: s-maj=27.7km s-min=17.2km az=72.0*
ISC 25 21:26:37.7±0.9, 40°.60N±0°.09×105°.3E±0°.1, h35km, n9, σ1§35/10, mb3.6/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
SONM	**Songino Array**	**7.28**	**6**	Pn		**Pn**	**21 28 22.0**	**+0.5**
	1.9nm,0.3s,baz=184,slow=14,SNR=40							
SONM					Sn	**Sn**	**21 29 41.3**	**-1.7**
	2.5nm,0.3s,baz=191,slow=26,SNR=6.1							
SONM					Lg	Lg	21 30 24.7	
	2.3nm,0.3s,baz=197,slow=29,SNR=4.1							
SONM					LR	LR	21 31 29.5	
	comp=Z,59nm,19.3s,baz=189,slow=40 3.5nm,0.3s							
MKAR	**Makanchi Array**	**17.73**	**298**	Pn		**P**	**21 30 41.9**	**-0.3**
	0.1nm,0.3s,baz=97,slow=16,SNR=4.4 0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**19.18**	**321**	P		**Pn**	**21 30 58.3**	**-0.9**
	0.1nm,0.3s,baz=122,slow=12,SNR=2.2 0.5nm,0.5s							
KLR	**Kul'dur**	**20.53**	**56**	P		**P**	**21 31 14.1**	**+1.3**
	1.0nm,0.5s,baz=272,slow=10,SNR=4.5 1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**21.14**	**307**	P		**P**	**21 31 20.6**	**+1.3**
	1.2nm,0.5s,baz=111,slow=10,SNR=15 1.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**22.74**	**196**	P		**P**	**21 31 36.2**	**-0.4**
	0.3nm,0.3s,baz=359,slow=9.1,SNR=4.3 0.3nm,0.3s							
BVAR	**Borovoye Array**	**26.65**	**310**	P		**P**	**21 32 14.8**	**+1.9**
	0.4nm,0.7s,baz=95,slow=11,SNR=4.7 0.4nm,0.7s							
FITZ	**Fitzroy Crossi**	**61.38**	**158**	P		**P**	**21 36 50.5**	**+0.5**
	1.7nm,0.9s,baz=348,slow=12,SNR=3.1							

	1.7nm,0.9s								
ASAR	**Alice Springs**	**69.25**	**152**	P		**P**		**21 37 39.8**	**-1.3**
	0.5nm,0.5s,baz=342,slow=6.4,SNR=6.1								
	0.5nm,0.5s								

ROM 25 21:26:37.3±0.1, 42°826N±0°003×13°157E±0°005, h8km, ML2.4/13, 8C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=88.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**284**	P	Pg	21 26 39.6	+0.5
NRCA				S	Sg	21 26 40.7	+0.4
NRCA				AML	AML		
	comp=E,6340μm,0.5s						
NRCA				AML	AML		
	comp=N,3380μm,0.8s						
NRCA				AML	AML		
	comp=E,8545μm,0.1s						
NRCA				AML	AML		
	comp=N,5690μm,0.1s						
NRCA				AML	AML		
	comp=N,6510μm,0.1s						
NRCA				AML	AML		
	comp=E,9400μm,0.1s						
NRCA				AML	AML		
	comp=E,8540μm,0.1s						
MMO1	**Montemonaco**	**0.14**	**59**	P	Pg	21 26 41.0	+0.5
MMO1				S	Sg	21 26 43.6	+0.9
MMO1				AML	AML		
	comp=E,401μm,1.5s						
MMO1				AML	AML		
	comp=N,390μm,0.9s						
MMO1				AML	AML		
	comp=E,2110μm,0.9s						
MMO1				AML	AML		
	comp=N,2580μm,0.3s						
MMO1				AML	AML		
	comp=N,2575μm,0.3s						
MMO1				AML	AML		
	comp=E,2110μm,1.1s						
FDMO	**Fiordimonte**	**0.22**	**346**	P	Pg	21 26 42.2	+0.4
FDMO				S	Sg	21 26 45.8	+1.0
FDMO				AML	AML		
	comp=E,859μm,0.2s						
FDMO				AML	AML		
	comp=N,968μm,1.0s						
LNSS	**Leonessa**	**0.24**	**201**	⇑P	Pg	21 26 42.9	+0.8
LNSS				S	Sg	21 26 47.1	+1.7
LNSS				AML	AML		
	comp=E,730μm,0.2s						
LNSS				AML	AML		
	comp=N,834μm,0.2s						
LNSS				AML	AML		
	comp=E,8295μm,0.3s						
LNSS				AML	AML		
	comp=N,7190μm,0.5s						
LNSS				AML	AML		
	comp=N,834μm,0.2s						
T1243	**Rocca Santa Ma**	**0.25**	**121**	P	Pg	21 26 42.9	+0.6
T1243				S	Sg	21 26 47.0	+1.2
T1243				AML	AML		
	comp=E,460μm,0.2s						
T1243				AML	AML		
	comp=N,590μm,0.3s						
T1243				AML	AML		
	comp=E,476μm,0.2s						
T1243				AML	AML		
	comp=N,570μm,0.3s						
T1243				AML	AML		
	comp=E,19650μm,0.7s						
T1243				AML	AML		
	comp=N,18000μm,1.4s						
T1243				AML	AML		
	comp=E,19500μm,0.7s						
T1243				AML	AML		
	comp=N,17850μm,1.4s						
T1243				AML	AML		
	comp=N,18050μm,1.4s						
T1243				AML	AML		
	comp=N,18050μm,0.6s						
T1243				AML	AML		
	comp=N,17850μm,0.6s						
CESI	**CESI - Serrava**	**0.26**	**314**	⇑P	Pg	21 26 43.3	+0.8
CESI				S	Sb	21 26 47.5	-1.4
CESI				AML	AML		
	comp=E,440μm,0.3s						
CESI				AML	AML		
	comp=N,805μm,1.1s						
CSP1	**Cessapalombo**	**0.27**	**8**	⇑P	Pg	21 26 43.4	+0.7
CSP1				S	Sb	21 26 47.9	-1.3
GUMA	**Gualdo di Mace**	**0.27**	**29**	⇑P	Pb	21 26 43.7	-0.7
GUMA				S	Sb	21 26 48.3	-0.9
GUMA				AML	AML		
	comp=N,2560μm,0.4s						
GUMA				AML	AML		
	comp=E,2790μm,0.3s						
GUMA				AML	AML		
	comp=E,4465μm,0.3s						
GUMA				AML	AML		
	comp=N,3185μm,0.3s						
RM33	**Pellescritta (**	**0.32**	**172**	⇓P	Pg	21 26 44.3	+0.6
RM33				AML	AML		
	comp=E,20300μm,0.2s						
RM33				AML	AML		
	comp=N,17700μm,0.1s						
RM33				AML	AML		
	comp=E,20000μm,0.2s						
RM33				AML	AML		
	comp=N,17950μm,0.1s						
RM33				AML	AML		
	comp=E,19950μm,0.2s						
RM33				AML	AML		
	comp=N,17900μm,0.1s						
ARRO	**Arrone**	**0.38**	**230**	⇓P	Pg	21 26 45.4	+0.6
ARRO				AML	AML		
	comp=N,1480μm,0.2s						
ARRO				AML	AML		
	comp=E,1405μm,0.2s						
TERO	**Teramo**	**0.39**	**121**	⇑P	Pg	21 26 45.3	+0.4
TERO				AML	AML		
	comp=E,87μm,0.3s						
TERO				AML	AML		
	comp=N,90μm,0.1s						
TERO				AML	AML		
	comp=E,3620μm,0.2s						
TERO				AML	AML		
	comp=N,4000μm,0.7s						
TERO				AML	AML		
	comp=N,4520μm,0.7s						
TERO				AML	AML		
	comp=E,3985μm,0.2s						
OFFI	**Offida**	**0.40**	**74**	⇑P	Pb	21 26 46.6	0.0
OFFI				AML	AML		
	comp=N,1525μm,0.5s						
OFFI				AML	AML		
	comp=E,2120μm,0.2s						
ASSB	**Assisi San Ben**	**0.42**	**301**	⇑P	Pg	21 26 46.1	+0.4
ASSB				S	Sb	21 26 52.7	-1.0
ASSB				AML	AML		
	comp=E,442μm,0.7s						
ASSB				AML	AML		
	comp=N,558μm,0.7s						
ASSB				AML	AML		
	comp=E,442μm,1.3s						
SNTG	**Esanatoglia**	**0.46**	**340**	P	Pg	21 26 46.8	+0.5
SNTG				S	Sb	21 26 53.8	-0.8
SNTG				AML	AML		
	comp=E,224μm,1.1s						
SNTG				AML	AML		
	comp=N,275μm,0.4s						
GIGS	**Gran Sasso**	**0.48**	**141**	⇓P	Pg	21 26 47.4	+0.7
GIGS				AML	AML		
	comp=E,579μm,0.4s						
GIGS				AML	AML		
	comp=N,638μm,0.2s						
GIGS				AML	AML		
	comp=E,578μm,0.4s						
EL6	**Elcito**	**0.51**	**355**	⇓P	Pg	21 26 47.6	+0.4
EL6				S	Sb	21 26 55.7	-0.3
ATCC	**AVT- Casa Cast**	**0.52**	**314**	⇑P	Pg	21 26 48.0	+0.5
ATCC				S	Sb	21 26 56.2	-0.3
ATCC				AML	AML		
	comp=N,270μm,0.5s						
ATCC				AML	AML		
	comp=E,335μm,0.7s						
ATCC				AML	AML		
	comp=E,49μm,0.2s						
FOSV	**Fossato di Vic**	**0.55**	**328**	AML	AML		
	comp=E,155μm,0.6s						
FOSV				AML	AML		
	comp=E,155μm,1.4s						
FOSV				AML	AML		
	comp=N,241μm,1.2s						
FOSV				AML	AML		
	comp=N,241μm,0.8s						

ROM 25 21:27:19.4±0.1, 42°604N±0°005×13°251E±0°005, h11km, ML2.5/26, 7C-9D, Error ellipse: s-maj=0.5km s-min=0.4km az=194.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**196**	⇑P	Pg	21 27 22.8	+0.6
RM33				S	Sg	21 27 24.9	+0.7
RM33				AML	AML		
	comp=N,17700μm,0.1s						
RM33				AML	AML		
	comp=N,17950μm,0.1s						
RM33				AML	AML		
	comp=E,20000μm,0.2s						
RM33				AML	AML		
	comp=N,17650μm,0.1s						
RM33				AML	AML		
	comp=N,17900μm,0.1s						
RM33				AML	AML		
	comp=E,20350μm,0.3s						
RM33				AML	AML		
	comp=E,19950μm,0.2s						
CAMP	**Campotosto**	**0.14**	**120**	P	Pg	21 27 23.2	+0.6
CAMP				S	Sg	21 27 25.7	+0.7
CAMP				AML	AML		
	comp=N,2175μm,0.5s						
CAMP				AML	AML		
	comp=E,1975μm,1.3s						
CAMP				AML	AML		
	comp=E,1975μm,0.7s						
LNSS	**Leonessa**	**0.15**	**270**	P	Pg	21 27 23.4	+0.5
LNSS				S	Sg	21 27 26.3	+0.9
LNSS				AML	AML		
	comp=N,7190μm,0.5s						
LNSS				AML	AML		
	comp=E,8295μm,0.3s						
T1243	**Rocca Santa Ma**	**0.17**	**57**	P	Pg	21 27 23.7	+0.4
T1243				S	Sg	21 27 26.6	+0.6
T1243				AML	AML		
	comp=E,19650μm,0.7s						
T1243				AML	AML		
	comp=N,18000μm,1.4s						
T1243				AML	AML		
	comp=E,19500μm,0.7s						
T1243				AML	AML		
	comp=N,18050μm,1.4s						
T1243				AML	AML		
	comp=N,17850μm,1.4s						
T1243				AML	AML		
	comp=N,18050μm,0.6s						
T1243				AML	AML		
	comp=N,17850μm,0.6s						
NRCA	**Norcia**	**0.25**	**336**	P	Pg	21 27 24.9	+0.3
NRCA				S	Sg	21 27 28.9	+0.7
NRCA				AML	AML		
	comp=N,6510μm,0.1s						
NRCA				AML	AML		
	comp=E,9400μm,0.1s						
TERO	**Teramo**	**0.26**	**86**	P	Pg	21 27 25.0	+0.3
TERO				S	Sg	21 27 29.1	+0.7
TERO				AML	AML		
	comp=E,3620μm,0.2s						
TERO				AML	AML		
	comp=E,3985μm,0.2s						
TERO				AML	AML		
	comp=N,4520μm,0.7s						
TERO				AML	AML		
	comp=N,4000μm,0.7s						
AQU	**L'Aquila**	**0.27**	**156**	⇓P	Pg	21 27 25.6	+0.6
AQU				AML	AML		
	comp=E,990μm,0.4s						
AQU				AML	AML		
	comp=N,1505μm,0.7s						
AQU				AML	AML		
	comp=E,1045μm,0.6s						
AQU				AML	AML		
	comp=E,991μm,0.4s						
AQU				AML	AML		
	comp=N,1500μm,0.7s						
AQU				AML	AML		
	comp=N,1425μm,0.7s						
AQU				AML	AML		
	comp=E,994μm,0.4s						
AQU				AML	AML		
	comp=N,1500μm,1.3s						
AQU				AML	AML		
	comp=N,1425μm,1.3s						
AQU				AML	AML		
	comp=E,1045μm,1.4s						
GIGS	**Gran Sasso**	**0.28**	**123**	P	Pg	21 27 25.5	+0.3
GIGS				S	Sg	21 27 29.8	+0.9
GIGS				AML	AML		
	comp=N,638μm,0.2s						
GIGS				AML	AML		
	comp=E,579μm,0.4s						
GIGS				AML	AML		
	comp=E,578μm,0.4s						
GIGS				AML	AML		
	comp=E,578μm,1.6s						
MMO1	**Montemonaco**	**0.30**	**11**	P	Pg	21 27 25.8	+0.2
MMO1				S	Sg	21 27 30.5	+0.9
MC2	**Monte Cornacci**	**0.31**	**352**	P	Pg	21 27 26.0	+0.2
MC2				S	Sb	21 27 31.7	-0.6
FIAM	**Fiamignano**	**0.35**	**196**	P	Pg	21 27 25.5	-0.9
FIAM				AML	AML		
	comp=E,1065μm,0.4s						
FIAM				AML	AML		
	comp=N,643μm,0.5s						
FIAM	**Fiamignano**	**0.35**	**196**	AML	AML		
	comp=N,643μm,0.5s						
FIAM				AML	AML		
	comp=E,19μm,0.5s						
FIAM				AML	AML		
	comp=N,21μm,1.0s						
FIAM				AML	AML		
	comp=E,1065μm,0.4s						
ARRO	**Arrone**	**0.36**	**266**	P	Pg	21 27 26.7	+0.2
ARRO				S	Sg	21 27 32.4	+1.1
ARRO				AML	AML		
	comp=E,1400μm,0.2s						
ARRO				AML	AML		
	comp=N,1485μm,0.2s						
ARRO				AML	AML		
	comp=N,1480μm,0.2s						
ARRO				AML	AML		
	comp=E,1405μm,0.2s						
FAGN	**Fagnano**	**0.42**	**144**	⇑P	Pg	21 27 28.0	+0.3
FAGN				AML	AML		
	comp=N,994μm,0.3s						
FAGN				AML	AML		
	comp=E,1535μm,0.9s						
FAGN				AML	AML		
	comp=E,1535μm,1.1s						
FDMO	**Fiordimonte**	**0.45**	**345**	P	Pg	21 27 28.2	0.0
FDMO				S	Sb	21 27 35.5	-0.6
OFFI	**Offida**	**0.46**	**44**	P	Pb	21 27 29.4	-0.1
GUMA	**Gualdo di Mace**	**0.46**	**8**	P	Pg	21 27 28.9	+0.4
GUMA				S	Sb	21 27 36.5	0.0
CESI	**CESI - Serrava**	**0.47**	**328**	P	Pg	21 27 28.8	+0.1
VCEL	**Villa Celiera**	**0.48**	**115**	P	Pg	21 27 29.4	+0.5
VCEL				S	Sb	21 27 36.7	-0.5
VCEL				AML	AML		
	comp=E,1850μm,1.5s						
VCEL				AML	AML		
	comp=E,1855μm,1.5s						
VCEL				AML	AML		
	comp=N,1710μm,0.2s						
VCEL				AML	AML		
	comp=N,1705μm,0.2s						
VCEL				AML	AML		
	comp=E,1850μm,0.5s						
CSP1	**Cessapalombo**	**0.49**	**356**	P	Pg	21 27 29.0	0.0
CSP1				S	Sb	21 27 36.6	-0.7
CESX	**Cesi**	**0.49**	**271**	P	Pg	21 27 29.0	0.0
CESX				S	Sb	21 27 37.0	-0.4
CESX				AML	AML		
	comp=N,928μm,0.2s						
CESX				AML	AML		
	comp=E,839μm,0.2s						
TRTR	**Tortoreto Alta**	**0.53**	**67**	P	Pb	21 27 30.9	+0.2
T0110	**Collepietro**	**0.54**	**134**	⇑P	Pg	21 27 28.9	-1.1
T0110				AML	AML		
	comp=E,882μm,0.6s						
T0110				AML	AML		
	comp=N,860μm,0.6s						
T0110				AML	AML		
	comp=E,882μm,1.4s						
PTQR	**Pietraquaria**	**0.59**	**169**	⇓P	Pg	21 27 30.7	-0.2
PTQR				AML	AML		
	comp=N,129μm,0.4s						
PTQR				AML	AML		
	comp=E,108μm,1.4s						
ASSB	**Assisi San Ben**	**0.62**	**315**	P	Pg	21 27 31.6	+0.1
ASSB				AML	AML		
	comp=N,558μm,0.7s						
ASSB				AML	AML		
	comp=E,442μm,0.7s						
ASSB				AML	AML		
	comp=E,442μm,1.3s						
SRES	**S.Oreste - Sor**	**0.66**	**236**	⇓P	Pg	21 27 32.2	0.0
SRES				S	Sn	21 27 44.0	-1.1
SRES				AML	AML		
	comp=N,214μm,0.4s						
SRES				AML	AML		
	comp=E,228μm,1.0s						
SRES				AML	AML		
	comp=N,214μm,1.6s						
CERT	**Cerreto**	**0.68**	**197**	⇑P	Pg	21 27 32.2	-0.4
CERT				AML	AML		
	comp=E,295μm,0.6s						
CERT				AML	AML		
	comp=N,303μm,0.3s						
SNTG	**Esanatoglia**	**0.69**	**341**	S	Sg	21 27 33.0	-8.8
MTCE	**Montecelio**	**0.69**	**213**	⇑P	Pg	21 27 32.3	-0.5
MTCE				AML	AML		
	comp=E,334μm,0.5s						
MTCE				AML	AML		
	comp=N,238μm,0.4s						
EL6	**Elcito**	**0.73**	**351**	S	Sg	21 27 34.0	-9.2
ATCC	**AVT- Casa Cast**	**0.73**	**323**	P	Pg	21 27 33.5	-0.1
INTR	**Introdacqua**	**0.77**	**140**	⇓P	Pg	21 27 33.6	-0.5
INTR				AML	AML		
	comp=N,244μm,1.0s						
INTR				AML	AML		
	comp=E,118μm,0.7s						
CING	**Cingoli**	**0.77**	**357**	S	Sg	21 27 35.0	-9.4
VVLD	**Villa Vallelon**	**0.78**	**159**	⇓P	Pg	21 27 33.0	-1.5
VVLD				AML	AML		
	comp=E,136μm,0.6s						
VVLD				AML	AML		
	comp=N,115μm,0.6s						
VVLD				AML	AML		
	comp=N,114μm,0.6s						
VVLD				AML	AML		
	comp=E,136μm,0.6s						
PP3	**Marolino**	**0.82**	**19**	S	Sg	21 27 36.0	-10
LPEL	**Lama dei Pelig**	**0.89**	**129**	S	Sn	21 27 50.0	-0.8
RMP	**Rome, Mte Porz**	**0.89**	**207**	⇑P	Pg	21 27 36.2	-0.4
RMP				AML	AML		
	comp=E,330μm,0.3s						
RMP				AML	AML		
	comp=N,382μm,1.0s						
MGAB	**Montegabbione**	**0.89**	**291**	⇓P	Pg	21 27 36.5	-0.1
MGAB				AML	AML		
	comp=N,460μm,0.5s						
MGAB				AML	AML		
	comp=E,448μm,0.7s						
MGAB				AML	AML		
	comp=E,412μm,0.6s						
MGAB				AML	AML		
	comp=N,480μm,0.5s						
VIVA	**Pratoni del Vi**	**0.93**	**203**	⇑P	Pg	21 27 37.2	0.0
VIVA				AML	AML		
	comp=N,532μm,0.3s						
VIVA				AML	AML		
	comp=E,418μm,0.6s						
GIUL	**Giuliano Di Ro**	**1.04**	**180**	⇓P	Pn	21 27 41.4	+1.4
GIUL				AML	AML		
	comp=N,128μm,0.7s						
GIUL				AML	AML		
	comp=E,95μm,0.4s						
TOLF	**Tolfa**	**1.07**	**240**	⇓P	Pb	21 27 39.5	-0.5
TOLF				AML	AML		
	comp=N,116μm,1.2s						
TOLF				AML	AML		
	comp=E,90μm,0.7s						
TOLF				AML	AML		
	comp=N,116μm,0.8s						
SF01	**Poggio Pratacc**	**1.26**	**280**	⇓P	Pg	21 27 44.1	+0.5
DUGI	**Dugi Otok**	**1.92**	**43**	*e*Pn	Pn	21 27 52.3	+0.3
VIRC	**Vir**	**2.14**	**37**	*e*Pn	Pn	21 27 55.4	+0.4
VIRC				Sn	Sn	21 28 22.2	+0.6
MORI	**Morici**	**2.19**	**54**	*e*Pn	Pn	21 27 56.5	+0.7
BRJN	**Brijuni**	**2.33**	**9**	*e*Pn	Pn	21 27 57.9	+0.3
SMRN	**Sveta Marina**	**2.52**	**15**	*e*Pn	Pn	21 28 00.4	+0.2
UDBI	**Udbina**	**2.65**	**43**	*e*Pn	Pn	21 28 03.8	+1.6
LSTV	**Lastovo**	**2.69**	**85**	*e*Pn	Pn	21 28 03.3	+0.7
KIJV	**Kijevo**	**2.69**	**58**	*e*Pn	Pn	21 28 04.3	+1.6
KIJV				Sn	Sn	21 28 37.7	+2.4
MAKA	**Makarska**	**2.85**	**75**	*e*Pn	Pn	21 28 05.9	+1.1
PLIT	**Plitvice**	**2.85**	**36**	*e*Pn	Pn	21 28 05.2	+0.3
STON	**Ston**	**3.29**	**84**	*e*Pn	Pn	21 28 10.7	-0.1
ABTA	**Abfaltersbach**	**4.18**	**353**	*i* Pn	Pn	21 28 25.2	+2.1
	comp=N,2.2nm,0.4s						
ABTA				*e*Sn	Sn	21 29 14.0	+2.0
	comp=N,1.1nm,0.2s						
KBA	**Koelnbreinsper**	**4.47**	**1**	*e*Sn	Sn	21 29 19.4	-0.1
	comp=N,1.1nm,0.3s						
SQTA	**Sankt Quirin**	**4.84**	**343**	*i* Pn	Pn	21 28 36.5	+4.2
	comp=N,0.6nm,0.2s						
SQTA				*e*Sn	Sn	21 29 32.0	+3.6
	comp=N,2.2nm,0.4s						

IDC 25 21:31:58.9±3.0, 3°87N×122°87E, h611km±46km, mb3.0/5, mbtmp4.1/5, Error ellipse: s-maj=197.3km s-min=12.3km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.21**	**155**	P	P	21 36 47.1	-0.3
	1.6nm,0.5s,baz=337,slow=9.5,SNR=57						
	1.6nm,0.5s						
ASAR	**Alice Springs**	**29.41**	**159**	P	P	21 37 14.8	-0.3
	1.0nm,0.5s,baz=334,slow=7.1,SNR=22						
ASAR				PcP	PcP	21 40 00.8	-0.1
	0.3nm,0.5s,baz=347,slow=3.3,SNR=4.1						
ASAR				S	S	21 41 27.7	-0.1
	0.4nm,0.7s,baz=344,slow=19,SNR=4.2						
	1.0nm,0.5s						
STKA	**Stephens Creek**	**39.77**	**155**	P	P	21 38 42.2	+1.4
	0.6nm,0.3s,baz=338,slow=9.2,SNR=3.7						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**55.29**	**327**	P	P	21 40 35.9	-0.3
	0.4nm,0.3s,baz=126,slow=8.0,SNR=12						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**59.59**	**329**	P	P	21 41 05.4	+0.3
	1.5nm,0.2s,baz=123,slow=7.0,SNR=5.1						
	1.5nm,0.2s						

NNC 25 21:44:31.5±2.6, 38°13N×71°87E, h0km, mb4.1, mpv3.8, 3C-5D, Error ellipse: s-maj=20.5km s-min=12.5km az=167.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.25**	**341**	Pg	Pb	21 45 48.6	+1.4
	420nm,0.6s						
IUG				Lg	Lg	21 46 48.9	
	137nm,1.0s						
KK31	**Karatay Array**	**5.07**	**349**	Pn	Pn	21 45 49.9	+1.1
	1.9nm,0.4s,baz=171,slow=13,SNR=42						
KK31				⇓Sn	Sn	21 46 48.0	0.0
	2.2nm,0.3s,baz=171,slow=21,SNR=6.8						
KK31				⇓Lg	Lg	21 47 09.7	
	18nm,0.7s,baz=172,slow=32,SNR=4.9						
TKM2	**Tokmak 2**	**5.56**	**30**	⇓Pn	Pn	21 45 57.6	+1.9
	2.5nm,0.7s						
TKM2				⇓Pg	Pb	21 46 13.1	+3.5
	6.7nm,0.9s						

TKM2				⇑Sn		Sn		21 47 04.2	+3.7
	7.6nm,1.0s								
TKM2				⇑Lg		Lg		21 47 26.7	
	6.4nm,0.7s								
KST	**Kastek**	**5.81**	**31**	Pg		Pb		21 46 16.7	+3.0
	3.6nm,0.2s								
KST				Lg		Lg		21 47 37.7	
	12nm,0.8s								
DGS	**Degeres**	**5.90**	**29**	Pg		Pb		21 46 18.1	+2.8
	5.1nm,0.6s								
DGS				Lg		Lg		21 47 39.3	
	8.1nm,0.8s								
KRBS	**Karabastau**	**6.26**	**26**	Pg		Pb		21 46 24.5	+3.1
	4.1nm,0.6s								
KRBS				Lg		Lg		21 47 50.9	
	4.9nm,0.7s								
MDOK	**Medeo**	**6.38**	**36**	Pg		Pb		21 46 27.2	+3.7
	2.9nm,0.3s								
MDOK				Lg		Lg		21 47 55.0	
	7.3nm,1.2s								
KOTS	**Kotyrbulak**	**6.47**	**36**	Pg		Pb		21 46 26.9	+1.9
KOTS				Lg		Lg		21 47 54.6	
KTBS	**Karatobe**	**6.66**	**32**	Pg		Pb		21 46 29.8	+1.6
	1.6nm,0.5s								
KTBS				Lg		Lg		21 47 59.9	
	8.9nm,0.7s								
KUU	**Kurty**	**6.67**	**29**	Pg		Pb		21 46 31.4	+3.1
	2.4nm,0.7s								
KUU				Lg		Lg		21 48 02.5	
	6.8nm,0.9s								
ARXS	**Arharly**	**7.55**	**35**	Pg		Pb		21 46 47.2	+3.8
	1.8nm,0.6s								
ARXS				Lg		Lg		21 48 30.1	
	4.4nm,0.8s								
AB31	**Akbulak array**	**14.05**	**326**	⇓P		Pn		21 47 50.1	-1.6
	0.5nm,0.5s,baz=147,slow=13,SNR=4.1								
AKTO	**Aktyubinsk**	**15.76**	**326**	⇑P		Pn		21 48 16.7	+2.0
	5.6nm,0.7s								

NEIC ***25*** *21:54:00.8±1.9,25°.1S±0°.1×179°.90W±0°.08, h497km±8km, mb4.5/46, Error ellipse: s-maj=17.2km s-min=6.2km az=145.0*
IDC ***25*** *21:54:01.2±1.7,25°.10S×179°.85E, h491km±15km, mb3.5/6, mbtmp4.4/7, Error ellipse: s-maj=25.4km s-min=15.0km az=170.0*

ISC 25 21:54:01.3±0.5, 25°.07S±0°.07×180°.00E±0°.08, h501km, n80, σ1♀21/83, mb4.5/29, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**7.52**	**346**	P		**P**	**21 55 52.6**	**-0.4**
NIUE	**Niue**	**11.08**	**59**	P		**P**	**21 56 29.6**	**-0.7**
OUZ	**Omahuta**	**11.53**	**207**	P		**P**	**21 56 34.6**	**-0.1**
MARNC	**Mare, Loyalty**	**11.56**	**286**	P		**P**	**21 56 36.4**	**+1.1**
PINNC	**Pines Island,**	**11.74**	**279**			**P**	**21 56 38.9**	**+1.7**
OUENC	**Ouen Island, N**	**12.33**	**280**	P		**P**	**21 56 45.0**	**+1.5**
DZM	**Mont Dzumac**	**12.78**	**281**	P		**P**	**21 56 48.4**	**+0.1**
	15nm,0.9s,baz=97,slow=16,SNR=8.5							
DZM	**Mont Dzumac**	**12.78**	**281**	P		**P**	**21 56 49.9**	**+1.5**
URZ	**Urewera**	**13.38**	**190**	S		**S**	**21 59 18.8**	**+1.9**
	20nm,0.7s,baz=196,slow=22,SNR=7.8							
URZ	**Urewera**	**13.38**	**190**	P		**P**	**21 56 56.3**	**+2.1**
MSWZ	**Moikau Station**	**16.78**	**192**	P		**P**	**21 57 29.0**	**-0.8**
SNZO	**South Karori**	**16.79**	**194**	P		**P**	**21 57 28.9**	**-1.0**
QRZ	**Quartz Range**	**16.91**	**200**	P		**P**	**21 57 31.0**	**-0.2**
PLWZ	**Palliser**	**16.92**	**192**	P		**P**	**21 57 29.7**	**-1.6**
NNZ	**Nelson**	**17.02**	**197**	P		**P**	**21 57 30.8**	**-1.5**
TUWZ	**Tuamarina**	**17.08**	**196**	P		**P**	**21 57 30.4**	**-2.4**
BSWZ	**Blackbirch Sta**	**17.36**	**196**	P		**P**	**21 57 34.1**	**-1.4**
THZ	**Tophouse**	**17.66**	**198**	P		**P**	**21 57 37.2**	**-1.2**
KHZ	**Kahutara**	**18.11**	**196**	P		**P**	**21 57 42.9**	**+0.5**
KHZ				IAmb		IAmb	21 57 47.8	
	comp=Z,35nm,1.1s							
LTZ	**Lake Taylor**	**18.78**	**198**	P		**P**	**21 57 47.0**	**-1.6**
OXZ	**Oxford**	**19.35**	**198**	P		**P**	**21 57 52.6**	**-1.1**
MQZ	**McQueen's Vall**	**19.54**	**196**	P		**P**	**21 57 54.5**	**-0.9**
RPZ	**Rata Peaks**	**19.99**	**199**	P		**P**	**21 57 59.1**	**-0.5**
FOZ	**Fox Glacier**	**20.22**	**202**	P		**P**	**21 58 01.0**	**-0.7**
WKZ	**Wanaka**	**21.63**	**202**	P		**P**	**21 58 15.5**	**+1.0**
WKZ				IAmb		IAmb	21 58 52.4	
	comp=Z,48nm,1.4s							
MLZ	**Mavora Lakes**	**22.41**	**202**	P		**P**	**21 58 20.9**	**-0.6**
MLZ				IAmb		IAmb	21 58 24.1	
	comp=Z,27nm,1.3s							
DCZ	**Deep Cove**	**22.84**	**204**	P		**P**	**21 58 24.3**	**-1.0**
DCZ				IAmb		IAmb	21 59 01.8	
	comp=Z,20nm,1.4s							
WHZ	**Wether Hill Ro**	**22.93**	**202**	P		**P**	**21 58 24.8**	**-1.4**
WHZ				IAmb		IAmb	21 58 52.5	
	comp=Z,22nm,1.2s							
ARMA	**Armidale**	**25.63**	**252**	P		**P**	**21 58 55.4**	**+4.9**
ARMA				IAmb		IAmb	21 58 57.0	
	comp=Z,17nm,0.7s							
EIDS	**Eidsvold**	**26.14**	**263**	P		**P**	**21 58 55.8**	**+0.9**
EIDS				IAmb		IAmb	21 58 59.1	
	comp=Z,10.0nm,1.1s							
CAN	**Canberra**	**28.57**	**242**	P		**P**	**21 59 16.7**	**+0.5**
CAN				IAmb		IAmb	21 59 29.0	
	comp=Z,33nm,1.4s							
CTAO	**Charters Tower**	**31.50**	**272**	P		**P**	**21 59 42.2**	**+0.5**
CTAO				IAmb		IAmb	21 59 43.5	
	comp=Z,11nm,0.6s							
TOO	**Toolangi**	**31.83**	**239**	P		**P**	**21 59 43.6**	**-0.7**
TOO				IAmb		IAmb	22 00 11.8	
	comp=Z,25nm,1.4s							
STKA	**Stephens Creek**	**34.30**	**250**	P		**P**	**22 00 05.5**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=101,slow=11,SNR=15							
	comp=Z,2.7nm,0.5s							
STKA	**Stephens Creek**	**34.30**	**250**	P		**P**	**22 00 05.7**	**+0.3**
COEN	**Coen**	**36.31**	**281**	P		**P**	**22 00 23.1**	**+0.8**
COEN				IAmb		IAmb	22 01 01.6	
	comp=Z,18nm,1.4s							
BBOO	**Buckleboo**	**39.00**	**248**	P		**P**	**22 00 43.1**	**-1.0**
BBOO				IAmb		IAmb	22 00 43.6	
	comp=Z,6.6nm,0.8s							
AS31	**Alice Springs**	**41.85**	**262**	P		**P**	**22 01 06.9**	**-0.3**
ASAR	**Alice Springs**	**41.85**	**262**	P		**P**	**22 01 06.8**	**-0.4**
	comp=Z,5.8nm,0.8s,baz=94,slow=6.9,SNR=42							
ASAR				ScP		**ScP**	**22 05 55.8**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=111,slow=3.4,SNR=4.4							
ASAR				S		**S**	**22 06 46.6**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=99,slow=14,SNR=7.6							
	comp=Z,5.8nm,0.8s							
ASAR	**Alice Springs**	**41.85**	**262**	P		**P**	**22 01 06.5**	**-0.7**
WR0	**Warramunga Arr**	**42.15**	**267**	P		**P**	**22 01 08.6**	**-0.9**
WR0				IAmb		IAmb	22 01 09.0	
	comp=Z,5.3nm,0.6s							
WB2	**Warramunga Arr**	**42.33**	**267**	P		**P**	**22 01 10.3**	**-0.6**
WB2				IAmb		IAmb	22 01 10.5	
	comp=Z,9.9nm,0.5s							
WB0	**Warramunga Arr**	**42.34**	**268**	P		**P**	**22 01 10.2**	**-0.8**
WB0				IAmb		IAmb	22 01 10.9	
	comp=Z,10nm,0.7s							
WRA	**Warramunga Arr**	**42.34**	**267**	P		**P**	**22 01 10.2**	**-0.8**
	comp=Z,8.6nm,0.6s,baz=100,slow=7.0,SNR=141							
WRA				ScP		**ScP**	**22 05 58.6**	**+2.7**
	comp=Z,1.8nm,0.9s,baz=105,slow=4.8,SNR=5.8							
	comp=Z,8.6nm,0.6s							
WRA	**Warramunga Arr**	**42.34**	**267**	P		**P**	**22 01 10.3**	**-0.7**
FORT	**Forrest**	**45.91**	**251**	P		**P**	**22 01 37.3**	**-1.2**
FORT				IAmb		IAmb	22 02 17.7	
	comp=Z,45nm,1.4s							
KNRA	**Kununurra**	**48.69**	**271**	P		**P**	**22 01 59.5**	**-0.1**
KNRA				IAmb		IAmb	22 01 59.9	
	comp=Z,14nm,0.5s							
FITZ	**Fitzroy Crossi**	**50.74**	**267**	P		**P**	**22 02 15.1**	**+0.3**
PSA00	**Pilbara Seismi**	**54.96**	**260**	P		**P**	**22 02 43.1**	**-1.8**
MBWA	**Marble Bar**	**55.18**	**261**	P		**P**	**22 02 45.3**	**-1.1**
MBWA				IAmb		IAmb	22 03 03.2	
	comp=Z,16nm,1.3s							
MORW	**Morawa**	**56.48**	**251**	P		**P**	**22 02 54.8**	**-0.7**
MORW				IAmb		IAmb	22 03 08.8	
	comp=Z,23nm,1.4s							
CASY	**Casey**	**59.07**	**206**	P		**P**	**22 03 12.0**	**-0.3**
GIRL	**Giralia**	**59.65**	**257**	P		**P**	**22 03 17.6**	**+0.6**
QSPA	**South Pole Qui**	**65.02**	**180**	P		**P**	**22 03 51.9**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=43,slow=1.1,SNR=9.3							
	comp=Z,1.8nm,0.8s							
QSPA	**South Pole Qui**	**65.02**	**180**	P		**P**	**22 03 52.2**	**+0.9**
BELA	**Belgrano 2**	**75.28**	**173**	P		**P**	**22 04 52.1**	**+0.1**
ADK	**Adak**	**76.67**	**2**	P		**P**	**22 05 00.3**	**+0.5**
ADK				IAmb		IAmb	22 05 27.9	
	comp=Z,42nm,1.1s							
NIKH	**Nikolski High**	**78.31**	**7**	P		**P**	**22 05 09.1**	**+0.3**
NIKH				IAmb		IAmb	22 05 45.2	
	comp=Z,41nm,1.5s							
PETK	**Petropavlovsk-**	**80.23**	**347**	P		**P**	**22 05 18.9**	**-0.1**
MG02	**Cerro Sombrero**	**82.00**	**145**	P		**P**	**22 05 28.5**	**+0.2**
GDXM	**Geysers**	**83.06**	**41**	P		**P**	**22 05 34.3**	**+0.4**
TROLL	**Troll, Antarti**	**83.17**	**181**	P		**P**	**22 05 34.4**	**+0.3**
SNAA	**Sanae**	**83.50**	**179**	P		**P**	**22 05 35.4**	**-0.3**
SNAA	**Sanae**	**83.50**	**179**	P		**P**	**22 05 35.3**	**-0.4**
VNA3	**Neumayer Olymp**	**83.72**	**177**	P		**P**	**22 05 36.5**	**-0.1**
VNA2	**Neumayer--Watz**	**84.13**	**178**	P		**P**	**22 05 38.9**	**+0.2**
	baz=172,slow=2.9							
VNA1	**Neumayer--Stat**	**84.37**	**177**	P		**P**	**22 05 40.8**	**+0.9**
NVAR	**Mina Array Bea**	**85.59**	**44**	P		**P**	**22 05 48.2**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=228,slow=8.3,SNR=4.6							
	comp=Z,0.9nm,0.7s							
I07A	**Izee**	**88.30**	**39**	P		**P**	**22 05 58.4**	**-0.6**
I07A				IAmb		IAmb	22 06 01.9	
	comp=Z,3.7nm,0.9s							
HVU	**Hansel Valley**	**90.98**	**44**	P		**P**	**22 06 11.7**	**+0.1**
HVU				IAmb		IAmb	22 06 14.0	
	comp=Z,2.6nm,0.8s							
TX31	**Lajitas Ar. Si**	**91.05**	**58**	P		**P**	**22 06 11.4**	**-0.7**
TX31				IAmb		IAmb	22 06 14.8	
	comp=Z,4.7nm,0.8s							
TX32	**Lajitas Array**	**91.05**	**58**	P		**P**	**22 06 10.5**	**-1.7**
TXAR	**Lajitas Array**	**91.05**	**58**	P		**P**	**22 06 14.1**	**+1.9**
	comp=Z,1.2nm,0.8s,baz=216,slow=6.7,SNR=16							
	comp=Z,1.2nm,0.8s							
ARCES	**ARCESS Array B**	**133.02**	**348**	PKP		**PKPdf**	**22 12 18.5**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=66,slow=2.2,SNR=5.0							
ARCES				SKPbc		**SKPbc**	**22 15 00.8**	**+1.4**
	comp=Z,5.3nm,0.9s,baz=14,slow=5.6,SNR=4.1							
FINES	**FINESS Array B**	**139.54**	**341**	PKP		**PKPdf**	**22 12 29.5**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=40,slow=3.2,SNR=3.7							
FINES				SKPbc		**SKPbc**	**22 15 20.4**	**+1.4**
	comp=Z,3.4nm,0.9s,baz=85,slow=1.5,SNR=5.4							
NB2	**NORSAR Subarra**	**143.23**	**351**	PKP		PKPab	22 12 35.2	-0.1
	comp=Z,0.7nm,0.7s,baz=16,slow=3.2							
NOA	**NORSAR Array B**	**143.23**	**351**	PKP		PKPab	22 12 35.5	+0.2
	comp=Z,2.2nm,0.9s,baz=16,slow=4.9,SNR=10							
AKASG	**Malin Array Be**	**145.34**	**326**	PKPbc		**PKPbc**	**22 12 44.2**	**0.0**
	comp=Z,2.2nm,0.7s,baz=45,slow=4.3,SNR=5.4							
BRTR	**Keskin Array B**	**148.26**	**306**	PKPbc		**PKPbc**	**22 12 49.4**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=45,slow=6.3,SNR=2.7							
TORD	**Torodi Ar. Bea**	**168.03**	**188**	PKPab		**PKPab**	**22 14 20.3**	**-1.2**
	comp=Z,0.8nm,1.0s,baz=191,slow=2.6,SNR=3.2							

DJA ***25*** *22:09:44.3±0.5,6°.5S±5°.1×147°.7E±°, h56km±5km, M4.8/11, mB4.9/3, mb4.5/11, MLv5.1/1, Mw(mB)4.2/3*
IDC ***25*** *22:09:45.8±2.8,5°.90S×147°.01E, h114km±28km, mb3.6/9, mbtmp4.1/12, MS3.3/3, Error ellipse: s-maj=26.3km s-min=14.3km az=113.0*
NEIC ***25*** *22:09:46.5±2.2,5°.98S±0°.06×147°.01E±0°.10, h108km±7km, mb4.5/38, Error ellipse: s-maj=13.8km s-min=8.2km az=96.0*

ISC 25 22:09:45.3±0.5, 5°.99S±0°.06×146°.98E±0°.08, h100km, n79, σ1♀28/73, mb4.4/28, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MANU	**Manus Island**	**3.94**	**6**	Pn		**Pn**	**22 10 43.8**	**+0.1**
KRVT	**Keravat (AS076**	**5.29**	**72**	P		**Pn**	**22 11 02.6**	**+0.6**
	49nm,0.5s,baz=29,slow=2.6,SNR=6.3							
RABL	**Rabaul**	**5.46**	**71**	Pn		**Pn**	**22 11 03.5**	**-0.8**
RABL	**Rabaul**	**5.46**	**71**	P		Pn	22 11 09.7	+5.4
	148nm,0.5s							
COEN	**Coen**	**8.76**	**205**	Pn		**Pn**	**22 11 48.8**	**-0.4**
COEN						**Sn**	**22 13 23.5**	**-2.8**
COEN	**Coen**	**8.76**	**205**	P		**Pn**	**22 11 48.6**	**-0.6**
CTA	**Charters Tower**	**14.04**	**183**	P		**Pn**	**22 13 01.6**	**+1.9**
	6.2nm,0.3s,baz=358,slow=14,SNR=23							
CTAO	**Charters Tower**	**14.04**	**183**	Pn		**Pn**	**22 13 02.3**	**+2.6**
KDU	**Kakadu**	**15.78**	**244**	P		**Pn**	**22 13 21.5**	**-0.5**
QIS	**Mount Isa**	**16.16**	**206**	P		**Pn**	**22 13 27.2**	**+0.6**
MTN	**Manton Dam**	**17.05**	**245**	P		**Pn**	**22 13 37.2**	**-0.4**
WB0	**Warramunga Arr**	**18.37**	**221**	P		**P**	**22 13 52.6**	**+0.3**
WR0	**Warramunga Arr**	**18.42**	**220**	P		**P**	**22 13 53.1**	**+0.2**
WRAB	**Tennant Creek**	**18.52**	**220**	P		**P**	**22 13 55.0**	**+1.0**
WRAB				IAmb		IAmb	22 13 56.0	
	comp=Z,12nm,0.8s							
WRAB	**Tennant Creek**	**18.52**	**220**	P		**P**	**22 13 54.8**	**+0.8**
WB2	**Warramunga Arr**	**18.52**	**220**	P		**P**	**22 13 54.2**	**+0.2**
WRA	**Warramunga Arr**	**18.53**	**220**	P		**P**	**22 13 53.3**	**-0.8**
	comp=Z,8.3nm,0.6s,baz=43,slow=12,SNR=44							
WRA				PcP		**PcP**	**22 18 19.6**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=31,slow=2.0,SNR=5.9							
WRA				LR		LR	22 21 19.0	
	comp=Z,92nm,18.8s,baz=100,slow=37							
WRA	**Warramunga Arr**	**18.53**	**220**	P		**P**	**22 13 54.0**	**-0.2**
EIDS	**Eidsvold**	**19.67**	**169**	P		**P**	**22 14 07.5**	**+1.0**
EIDS				IAmb		IAmb	22 14 08.3	
	comp=Z,12nm,0.7s							
EIDS	**Eidsvold**	**19.67**	**169**	P		**P**	**22 14 08.1**	**+1.6**
KNRA	**Kununurra**	**20.30**	**240**	P		**P**	**22 14 12.7**	**-0.7**
KNRA				IAmb		IAmb	22 14 17.6	
	comp=Z,14nm,0.5s							
RMQ	**Roma**	**20.46**	**175**	P		**P**	**22 14 15.7**	**+0.7**
QLP	**Quilpie**	**20.65**	**187**	P		**P**	**22 14 17.3**	**+0.3**
AS31	**Alice Springs**	**21.62**	**214**	P		**P**	**22 14 27.9**	**+0.4**
AS31				IAmb		IAmb	22 14 29.5	
	comp=Z,5.3nm,0.2s							
ASAR	**Alice Springs**	**21.62**	**214**	P		**P**	**22 14 27.1**	**-0.5**
	comp=Z,2.3nm,0.4s,baz=55,slow=8.3,SNR=17							
	comp=Z,2.3nm,0.4s							
INKA	**Innaminka**	**22.43**	**195**	P		**P**	**22 14 35.9**	**-0.1**
BATI	**Baumata**	**23.46**	**258**	pP		P	22 14 57.4	+11
	comp=Z,15nm,1.6s							
FITZ	**Fitzroy Crossi**	**24.06**	**238**	P		**P**	**22 14 51.4**	**0.0**
	comp=Z,38nm,0.7s,baz=77,slow=8.1,SNR=70							
FITZ	**Fitzroy Crossi**	**24.06**	**238**	P		**P**	**22 14 51.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**24.06**	**238**	P		**P**	**22 14 52.0**	**+0.6**
ARMA	**Armidale**	**24.70**	**170**	P		**P**	**22 14 58.1**	**+0.8**
ARMA				IAmb		IAmb	22 15 28.5	
	comp=Z,31nm,1.5s							
LCRK	**Leigh Creek**	**25.69**	**198**	P		**P**	**22 15 06.5**	**+0.4**
STKA	**Stephens Creek**	**26.25**	**190**	P		**P**	**22 15 11.0**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=13,slow=7.5,SNR=17							
	comp=Z,4.2nm,0.5s							
STKA	**Stephens Creek**	**26.25**	**190**	P		**P**	**22 15 11.2**	**+0.1**
BBOO	**Buckleboo**	**28.56**	**199**	P		**P**	**22 15 31.6**	**-0.2**
BBOO				IAmb		IAmb	22 15 39.8	
	comp=Z,7.6nm,1.1s							
CAN	**Canberra**	**29.25**	**177**	P		**P**	**22 15 38.4**	**+0.4**
CAN				IAmb		IAmb	22 15 51.0	
	comp=Z,23nm,1.3s							
FORT	**Forrest**	**30.40**	**213**	P		**P**	**22 15 48.2**	**+0.1**
FORT				IAmb		IAmb	22 16 18.0	
	comp=Z,16nm,0.9s							
MBWA	**Marble Bar**	**30.40**	**238**	P		**P**	**22 15 48.1**	**-0.1**
MBWA				IAmb		IAmb	22 16 21.1	
	comp=Z,21nm,1.4s							
PSA00	**Pilbara Seismi**	**30.49**	**237**	P		**P**	**22 15 48.9**	**-0.1**
H11S3	**WAKE ISLAND Hy**	**31.14**	**38**	T		T	22 48 10.5	
	baz=220,slow=76,SNR=5.5							
H11S2	**WAKE ISLAND Hy**	**31.14**	**38**	T		T	22 48 10.3	
	baz=220,slow=76,SNR=3.4							
H11S1	**WAKE ISLAND Hy**	**31.15**	**38**	T		T	22 48 11.4	
	baz=220,slow=76,SNR=5.2							
H11N1	**WAKE ISLAND Hy**	**32.19**	**37**	T		T	22 50 18.3	
	baz=219,slow=76,SNR=4.5							
H11N3	**WAKE ISLAND Hy**	**32.20**	**37**	T		T	22 50 19.2	
	baz=219,slow=76,SNR=6.8							
H11N2	**WAKE ISLAND Hy**	**32.21**	**37**	T		T	22 50 20.3	
	baz=219,slow=76,SNR=6.3							
GIRL	**Giralia**	**35.66**	**239**	P		**P**	**22 16 31.3**	**-2.8**
SBUM	**Sibu**	**35.71**	**283**	P		**P**	**22 16 38.4**	**+3.8**
MORW	**Morawa**	**37.17**	**228**	P		**P**	**22 16 47.1**	**+0.3**
MORW				IAmb		IAmb	22 17 11.8	
	comp=Z,17nm,1.4s							
LEM	**Lembang**	**39.12**	**267**	LR		LR	22 35 50.5	
	comp=Z,82nm,18.2s,baz=148,slow=40							
YHNB	**Yeheng**	**39.37**	**322**	P		**P**	**22 17 05.2**	**-0.2**
YHNB				IAmb		IAmb	22 17 29.9	
	comp=Z,19nm,1.2s							
TATO	**Taipei**	**39.53**	**322**	P		**P**	**22 17 07.1**	**+0.6**
USA0B	**Ussuriysk Arra**	**51.75**	**346**	P		**P**	**22 18 43.5**	**+1.0**
USA0B				IAmb		IAmb	22 19 05.9	
	comp=Z,8.7nm,1.2s							
USRK	**Ussuriysk Ar.**	**51.75**	**346**	P		**P**	**22 18 42.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=179,slow=11,SNR=2.4							
	comp=Z,0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**53.23**	**298**	P		**P**	**22 18 54.3**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=122,slow=6.2,SNR=2.0							
CMAR				pP		**pP**	**22 19 22.9**	**+4.9**
	comp=Z,0.7nm,0.6s,baz=125,slow=6.2,SNR=5.9							
	comp=Z,0.3nm,0.5s							
RAR	**Raratonga**	**53.66**	**112**	P		**P**	**22 18 57.3**	**+0.2**
PETK	**Petropavlovsk-**	**59.57**	**7**	P		**P**	**22 19 36.2**	**-2.1**
	comp=Z,3.4nm,0.8s,baz=188,slow=8.7,SNR=3.8							
PETK				LR		LR	22 41 45.6	
	comp=Z,12nm,21.3s,baz=123,slow=32							
	comp=Z,3.4nm,0.8s							
VNDA	**Vanda**	**71.93**	**177**	P		**P**	**22 20 57.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=328,slow=7.7,SNR=5.5							
	comp=Z,0.5nm,0.7s							
PAF	**Port-aux-Franc**	**76.86**	**221**	P		**P**	**22 21 26.9**	**+0.5**
MKAR	**Makanchi Array**	**77.47**	**320**	P		**P**	**22 21 28.3**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=99,slow=6.4,SNR=5.1							
	comp=Z,0.3nm,0.5s							
MKAR	**Makanchi Array**	**77.47**	**320**	P		**P**	**22 21 28.9**	**-1.0**
ZALV	**Zalesovo Beam**	**78.99**	**328**	P		**P**	**22 21 35.0**	**-3.0**
	comp=Z,0.4nm,0.4s,baz=105,slow=5.1,SNR=2.5							
	comp=Z,0.4nm,0.4s							
P19K	**Oil Pt**	**80.51**	**26**	P		**P**	**22 21 45.2**	**-1.0**
L19K	**White Mountain**	**81.10**	**24**	P		**P**	**22 21 49.7**	**+0.4**
CNPM	**China Poot**	**81.34**	**27**	P		**P**	**22 21 50.3**	**-0.3**
RDOG	**Red Dog Mine**	**81.73**	**17**	P		**P**	**22 21 52.9**	**+0.4**
RDOG				IAmb		IAmb	22 22 35.5	
	comp=Z,12nm,1.0s							
IMAR	**Indian Mountai**	**83.48**	**21**	P		**P**	**22 22 01.5**	**-0.1**
SML	**Sawmill**	**83.64**	**26**	P		**P**	**22 22 01.7**	**-0.9**
SML				IAmb		IAmb	22 22 23.8	
	comp=Z,10.0nm,1.2s							
I21K	**Tanana**	**83.72**	**22**	P		**P**	**22 22 03.1**	**+0.3**
I21K				IAmb		IAmb	22 22 33.0	
	comp=Z,6.8nm,1.4s							
QSPA	**South Pole Qui**	**83.98**	**180**	P		**P**	**22 22 03.6**	**-0.8**
QSPA				IAmb		IAmb	22 22 30.4	
	comp=Z,7.3nm,1.4s							
SCM	**Sheep Creek Mo**	**84.08**	**26**	P		**P**	**22 22 04.0**	**-0.8**
MLY	**Manley**	**84.11**	**22**	P		**P**	**22 22 04.5**	**-0.4**
MLY				IAmb		IAmb	22 22 04.7	
	comp=Z,2.5nm,0.6s							
RND	**Reindeer**	**84.11**	**24**	P		**P**	**22 22 03.7**	**-1.3**
RND				IAmb		IAmb	22 22 04.2	
	comp=Z,3.3nm,0.7s							
DHY	**Denali Highway**	**84.58**	**25**	P		**P**	**22 22 07.0**	**-0.4**
DHY				IAmb		IAmb	22 22 09.0	
	comp=Z,3.8nm,0.9s							
WRH	**Wood River Hil**	**84.88**	**23**	P		**P**	**22 22 07.2**	**-1.5**
WRH				IAmb		IAmb	22 22 40.1	
	comp=Z,7.5nm,1.4s							
H23K	**Yukon River**	**84.92**	**22**	P		**P**	**22 22 08.1**	**-0.8**
ILAR	**Eielson Array**	**85.48**	**23**	P		**P**	**22 22 08.9**	**-2.8**
	comp=Z,2.4nm,0.6s,baz=251,slow=5.1,SNR=26							
	comp=Z,2.4nm,0.6s							
PDAR	**Pinedale Array**	**103.92**	**48**	Pdiff		**Pdif**	**22 23 35.8**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=287,slow=6.0,SNR=3.7							
LPAZ	**La Paz**	**138.81**	**123**	PKP		**PKPdf**	**22 29 01.8**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=269,slow=4.8,SNR=5.2							
TORD	**Torodi Ar. Bea**	**145.07**	**284**	PKPbc		**PKPbc**	**22 29 10.2**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=59,slow=4.1,SNR=4.7							

ASRS ***25*** *22:11:56.9,53°.N±3°×9°.1E±°, h12km±6km, MLh3.5/8, confirmed*
NNC ***25*** *22:12:03.5±4.2,53°.17N×90°.63E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=30.3km s-min=21.3km az=63.0, Suspected Mining explosion.

KNT				*i* Sg	Sb	22 16 09.2	-0.3	
KNT	**Kendrikon**	**0.70**	**191**	P	Pg	22 15 59.4	-0.2	
KNT				S	Sg	22 16 09.1	+0.4	
NVR	**Nevrokopi**	**0.78**	**130**	P	Pg	22 16 00.6	-0.5	
NVR				S	Sg	22 16 11.3	+0.1	
NVR				AML	AML	22 16 12.0		
	comp=E,86μm,0.1s							
NVR				AML	AML	22 16 12.7		
	comp=N,68μm,0.1s							
VTS	**Vitosha**	**0.78**	**9**	*i* Sg	Sg	22 16 08.4	-3.0	
VTS	**Vitosha**	**0.78**	**9**	⇑*i* Pg	Pg	22 15 58.7	-2.5	
BOSS	**Bosilegrad**	**0.78**	**326**	*e*Pg	Pg	22 15 58.8	-2.4	
BOSS				*e*Sg	Sg	22 16 09.7	-1.8	
SRS	**Serrai**	**0.83**	**152**	*e*Pg	Pg	22 16 01.7	-0.4	
SRS				*e*Sg	Sb	22 16 13.8	+0.4	
SRS	**Serrai**	**0.83**	**152**	*i* Pg	Pg	22 16 01.7	-0.4	
SRS				*i* Sg	Sb	22 16 13.9	+0.5	
SRS	**Serrai**	**0.83**	**152**	P	Pg	22 16 01.8	-0.3	
SRS				S	Sg	22 16 13.1	+0.1	
PRVS	**Prvonek**	**0.99**	**312**	*e*Pg	Pb	22 16 03.2	-1.9	
PRVS				*e*Sg	Sb	22 16 16.7	-1.4	
SOH	**Sokhos**	**1.05**	**168**	*i* Pg	Pb	22 16 05.9	-0.1	
SOH				*i* Sg	Sn	22 16 21.6	+0.6	
SOH	**Sokhos**	**1.05**	**168**	P	Pb	22 16 05.7	-0.4	
THE	**Thessaloniki**	**1.22**	**184**	P	Pn	22 16 07.3	-1.4	
KOKK	**Kokkinochori,**	**1.25**	**145**	P	Pn	22 16 09.2	+0.1	
HORT	**Hortiatis**	**1.25**	**179**	P	Pn	22 16 08.1	-1.2	
BARS	**Barje**	**1.34**	**317**	*e*Pg	Pn	22 16 09.6	-0.9	
BARS				*e*Sg	Sb	22 16 27.0	-1.2	
BARS	**Barje**	**1.34**	**317**	*i* Pg	Pn	22 16 09.6	-0.9	
KAVA	**Kavala**	**1.38**	**128**	P	Pn	22 16 11.3	+0.3	
ZAPS	**Zavoj**	**1.46**	**347**	*e*Pg	Pn	22 16 11.9	-0.3	
ZAPS				*e*Sg	Sn	22 16 31.4	+0.2	
SELS	**Selova**	**1.99**	**314**	*e*Pn	Pb	22 16 21.2	-0.9	
SELS				*e*Sg	Sb	22 16 47.6	+0.8	

NEIC ***25*** *22:41:07.9±1.9, 13.°64N±0.°08×90.°79W±0.°07, h37km±41km, ML3.6/10, Md4.5(SNET), Error ellipse: s-maj=14.4km s-min=6.1km az=219.0*

GCG ***25*** *22:41:11.5±0.7, 14.°02N×90.°83W, h64km±12km, MD3.9*

ISC 25 22:41:05.2±1.3, **13.°58N**±0.°07×**90.°82W**±0.°05, **h29**km, **n38**, σ1ᵎ**62**/43, **4C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.83**	**14**⇑	*e*P	**Pn**	**22 41 23.7**	**+2.5**
FUG	**Fuego 3**	**0.86**	**359**‖	*e*P	**Pn**	**22 41 23.8**	**+2.3**
NBG	**Las Nubes**	**1.10**	**25**⇑	*i*P	**Pb**	**22 41 28.0**	**+2.2**
RTR	**El Retiro**	**1.18**	**75**	*e*P	**Pb**	**22 41 27.8**	**+0.6**
RTR	**El Retiro**	**1.18**	**75**	*e*P	**Pb**	**22 41 27.8**	**+0.6**
SBLS	**San Blas**	**1.19**	**78**	*e*P	**Pb**	**22 41 27.6**	**+0.3**
SBLS	**San Blas**	**1.19**	**78**	*e*P	**Pb**	**22 41 27.6**	**+0.3**
SNJE	**San Jose**	**1.21**	**76**	*e*P	**Pb**	**22 41 27.9**	**+0.2**
SNJE	**San Jose**	**1.21**	**76**	*e*P	**Pb**	**22 41 27.9**	**+0.2**
RTAL	**Retalhuleu**	**1.26**	**318**	Pn	**Pb**	**22 41 27.7**	**-0.7**
RTAL				Sn	**Sb**	**22 41 44.2**	**-0.1**
RTAL				IAML		22 41 45.8	
	comp=N,2μm,0.4s						
RTAL				IAML		22 41 45.9	
	comp=E,2μm,0.5s						
STG3	**Santiaguito 3,**	**1.34**	**327**	*e*P	**Pb**	**22 41 30.3**	**+0.5**
BOQS	**Boqueron**	**1.50**	**84**	*e*P	**Pb**	**22 41 32.0**	**-0.6**
BOQS	**Boqueron**	**1.50**	**84**	*e*P	**Pb**	**22 41 32.0**	**-0.6**
SNET	**Serv Nac Est T**	**1.55**	**86**	Pn	**Pb**	**22 41 32.5**	**-0.8**
SNET	**Serv Nac Est T**	**1.55**	**86**	*e*P	**Pb**	**22 41 32.8**	**-0.4**
SNET				*e*S	**Sb**	**22 41 51.8**	**-0.7**
SNET	**Serv Nac Est T**	**1.55**	**86**	*e*P	**Pb**	**22 41 32.8**	**-0.4**
SNET				*e*S	**Sb**	**22 41 51.8**	**-0.7**
MTO3	**Montecristo**	**1.63**	**60**	Pn	**Pb**	**22 41 33.0**	**-1.8**
MTO3				IAML		22 41 56.5	
	comp=N,467nm,0.3s						
MTO3				IAML		22 41 56.9	
	comp=E,735nm,0.4s						
MTO3	**Montecristo**	**1.63**	**60**	*e*P	**Pb**	**22 41 33.1**	**-1.7**
MTO3			⇑	*e*S	**Sb**	**22 41 54.1**	**-1.0**
MTO3	**Montecristo**	**1.63**	**60**	*e*P	**Pb**	**22 41 33.1**	**-1.7**
MTO3			⇑	*e*S	**Sb**	**22 41 54.1**	**-1.0**
LFU	**La Fuente**	**1.67**	**84**	*e*P	**Pb**	**22 41 35.4**	**+0.1**
LFU	**La Fuente**	**1.67**	**84**	*e*P	**Pb**	**22 41 35.4**	**+0.1**
LFRS	**El Faro**	**1.71**	**88**	*e*P	**Pb**	**22 41 35.0**	**-1.0**
LFRS	**El Faro**	**1.71**	**88**	*e*P	**Pb**	**22 41 35.0**	**-1.0**
ESQI	**Esquipulas**	**1.73**	**56**	Pn	**Pb**	**22 41 34.6**	**-1.8**
ESQI				IAML		22 42 01.3	
	comp=E,598nm,0.5s						
ESQI				IAML		22 42 02.9	
	comp=N,529nm,0.6s						
ESQI	**Esquipulas**	**1.73**	**56**	*e*P	**Pb**	**22 41 34.7**	**-1.8**
ESQI				*e*S	**Sb**	**22 41 55.8**	**-2.0**
MRL	**Marmol**	**1.85**	**36**‖	*e*P	**Pb**	**22 41 37.5**	**-1.1**
SNVI	**San Vicente**	**1.93**	**89**	*e*P	**Pb**	**22 41 39.6**	**-0.2**
SNVI	**San Vicente**	**1.93**	**89**	*e*P	**Pb**	**22 41 39.6**	**-0.2**
P5NO	**Presa 5 de nov**	**2.04**	**78**	*e*P	**Pb**	**22 41 38.5**	**-3.2**
PACA	**Pacayal**	**2.43**	**92**	*e*P	**Pb**	**22 41 46.1**	**-2.2**
PACA	**Pacayal**	**2.43**	**92**	*e*P	**Pb**	**22 41 46.1**	**-2.2**
CNCH	**Conchagua**	**2.92**	**96**	*e*P	**Pn**	**22 41 51.8**	**+1.9**
CNCH	**Conchagua**	**2.92**	**96**	*e*P	**Pn**	**22 41 51.8**	**+1.9**
CCIG	**Comitan**	**2.97**	**335**	Pn	**Pb**	**22 41 53.0**	**-4.5**
CRIN	**San Cristobal**	**3.77**	**103**	Pn	**Pn**	**22 42 03.7**	**+2.1**
ORTG	**Ortega, Santa**	**6.14**	**121**	Pn	**Pn**	**22 42 36.8**	**+2.6**
JTS	**Las Juntas de**	**6.61**	**119**	Pn	**Pn**	**22 42 40.4**	**-0.1**
SOR	**Soroa**	**11.78**	**38**	Pn	Pn	22 43 54.2	+2.8

MRB 25 22:44:49.5±0.3, **41.°82N**×**2.°66E, ML-0.1**/6, **1C, Error ellipse: s-maj=1.9km s-min=1.2km az=156.0, Spain**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFON	**Fontmartina**	**0.17**	**252**	P	Pg	22 44 53.2	+0.3
CFON				S	Sg	22 44 55.9	+0.8
	3.8nm,0.2s						
CCAS	**Cassa de la Se**	**0.20**	**70**	⇑P	Pg	22 44 53.4	+0.1
CCAS				S	Sg	22 44 56.3	+0.5
CBEU	**Beuda**	**0.44**	**2**	S	Sg	22 45 04.4	+0.7
CORI	**Orista**	**0.48**	**289**	P	Pg	22 44 58.5	-0.1
CORI				S	Sg	22 45 05.3	+0.4
	1.0nm,0.2s						
CBRU	**Bruguera**	**0.59**	**323**	S	Sg	22 45 08.9	+0.5
CPAL	**Palau Saverder**	**0.62**	**37**	P	Pg	22 45 01.3	-0.1
CPAL				S	Sg	22 45 09.8	+0.3
	0.3nm,0.1s						
SJAF	**Saint Jean de**	**0.69**	**14**	S	Sg	22 45 11.9	+0.3
	0.6nm,0.2s						
FILF	**Fillols**	**0.75**	**355**	S	Sg	22 45 14.5	+1.0
	0.4nm,0.2s						
CLLI	**Llivia**	**0.83**	**323**	P	Pg	22 45 05.3	-0.2
CLLI				S	Sg	22 45 16.8	+0.5
	0.3nm,0.2s						
ARBS	**La Rabassa**	**1.04**	**308**	S	Sg	22 45 23.0	+0.2
CORG	**Organya**	**1.08**	**293**	S	Sg	22 45 23.9	-0.3

IDC ***25*** *22:45:06.4±4.3, 40.°31N×144.°54E, h0km, mb3.8/4, mbtmp3.7/6, ML2.5/2, MS2.9/2, Error ellipse: s-maj=78.9km s-min=44.8km az=126.0*

JMA ***25*** *22:45:12.8±0.3, 40.°5N±0.°4×143.°5E±0.°9, h11km±2km, MV3.6/31, FAR E OFF SANRIKU*

NIED ***25*** *22:45:12.8, 40.°45N×143.°51E, h11km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.80; Mθθ0.37; Mϕϕ-2.18; Mrθ1.48; Mθϕ-0.43; Mϕr1.48; Fault plane solution: M₀2.93000×10¹⁴ NP1: ϕs165.00000°, δ30.00000°, λ45.00000°. NP2:ϕs34.00000°, δ69.00000°, λ112.00000°*

ISC 25 22:45:11.7±3.9, **40.°47N**±0.°06×**143.°58E**±0.°09, **h5**km±25km, **n26**, σ1ᵎ**33**/24, **mb3.7**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.42**	**249**	*e*P	**Pn**	**22 45 37.7**	**-0.5**
JKEN	**Kujiedanarisaw**	**1.46**	**260**	P	**Pn**	**22 45 38.1**	**-0.5**
JEM	**Erimo**	**1.57**	**348**	*e*P	**Pn**	**22 45 40.9**	**+0.6**
JEM				*e*S	**Sn**	**22 46 01.7**	**+0.7**
JANG	**Nango**	**1.58**	**267**	*e*P	**Pn**	**22 45 40.1**	**-0.2**
JANG				*e*S	**Sn**	**22 45 59.7**	**-1.5**
MIYJ	**Miyakonagasawa**	**1.62**	**237**	*e*P	**Pn**	**22 45 40.7**	**-0.3**
JNBK	**Urakawa-nobuka**	**1.91**	**341**	*e*P	**Pn**	**22 45 46.3**	**+1.4**
JNBK				*e*S	**Sn**	**22 46 10.5**	**+1.2**
JTM	**Tenmabayashi**	**1.94**	**280**	*e*P	**Pb**	**22 45 46.3**	**-1.2**
JOM	**Ohasama**	**2.02**	**241**	P	**Pn**	**22 45 47.2**	**+0.8**
JOT	**Ohata**	**2.12**	**296**	*e*P	**Pn**	**22 45 48.6**	**+0.8**
JOT				*e*S	**Sn**	**22 46 14.1**	**-0.5**
JMK	**Ichinoseki**	**2.37**	**231**	P	**Pn**	**22 45 51.8**	**+0.6**
JMK				*e*S	**Sn**	**22 46 20.1**	**-0.6**
JAK	**Akkeshi**	**2.66**	**18**	*e*S	**Sn**	**22 46 25.6**	**-2.1**
JAR	**Ashorobuto**	**2.83**	**3**	*e*P	**Pn**	**22 45 57.5**	**0.0**
JAR				*e*S	**Sn**	**22 46 29.7**	**-2.1**
JYK	**Kaneyama**	**2.93**	**239**	*e*P	**Pn**	**22 45 60.0**	**+1.0**
MJAR	**Matsushiro Arr**	**5.76**	**229**	Pn	**Pn**	**22 46 39.8**	**+2.0**
	0.2nm,0.3s,baz=48,slow=11,SNR=7.6 2.5nm,0.5s						
USRK	**Ussurisk Ar.**	**9.36**	**297**	Pn	Pn	22 47 32.4	+5.2
	0.3nm,0.3s,baz=96,slow=14,SNR=4.9 1.8nm,0.6s						
KSRS	**Korea Array**	**12.56**	**261**	LR	LR	22 52 41.1	
	comp=Z,33nm,18.3s,baz=110,slow=34						
SONM	**Songino Array**	**27.47**	**298**	P	**P**	**22 51 00.9**	**+2.2**
	0.4nm,0.5s,baz=100,slow=8.2,SNR=3.6						
SONM				LR	LR	23 02 42.6	
	comp=Z,26nm,19.0s,baz=161,slow=38 0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.73**	**129**	T	T	23 21 12.2	
	baz=321,slow=74,SNR=13						
H11N1	**WAKE ISLAND Hy**	**28.73**	**129**	T	T	23 21 11.8	
	baz=321,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**28.74**	**129**	T	T	23 21 14.1	
	baz=321,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.57**	**131**	T	T	23 22 19.3	
	baz=323,slow=76,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**29.57**	**131**	T	T	23 22 16.9	
	baz=323,slow=76,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	**29.58**	**131**	T	T	23 22 14.8	
	baz=323,slow=76,SNR=7.7						
ZALV	**Zalesovo Beam**	**40.95**	**310**	P	**P**	**22 52 56.6**	**+1.7**
	1.0nm,0.5s,baz=97,slow=12,SNR=2.5 1.0nm,0.5s						
MKAR	**Makanchi Array**	**43.82**	**299**	P	**P**	**22 53 18.8**	**+0.4**
	1.0nm,0.8s,baz=80,slow=8.9,SNR=5.6 1.0nm,0.8s						
NOA	**NORSAR Array B**	**71.66**	**338**	P	**P**	**22 56 32.2**	**-1.8**
	0.9nm,1.0s,baz=36,slow=6.0,SNR=3.5 0.9nm,1.0s						

ROM ***25*** *22:46:23.8±0.1, 42.°812N±0.°004×13.°215E±0.°005, h9km, ML2.8/18, Error ellipse: s-maj=0.4km s-min=0.3km az=37.0*

PRU ***25*** *22:46:26.5±0.0, 42.°87N×13.°39E, h0km*

ISC 25 22:46:24.2±0.7, **42.°82N**±0.°02×**13.°20E**±0.°02, **h12**km±4km, **n88**, σ1ᵎ**29**/126, **5C-7D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.07**	**284**	P	**Pg**	**22 46 26.4**	**-0.3**
NRCA				S	**Sg**	**22 46 27.9**	**-0.7**
NRCA	**Norcia**	**0.07**	**284**	P	**Pg**	**22 46 26.5**	**-0.3**
NRCA				S	**Sg**	**22 46 27.9**	**-0.7**
MC2	**Monte Cornacci**	**0.10**	**354**	P	**Pg**	**22 46 27.1**	**-0.1**
MC2				S	**Sg**	**22 46 29.1**	**-0.3**
MC2				AML	AML		
	comp=E,18400μm,0.3s						
MC2				AML	AML		
	comp=N,18550μm,0.3s						
MC2				AML	AML		
	comp=E,18395μm,0.3s						
MC2	**Monte Cornacci**	**0.10**	**354**	P	**Pg**	**22 46 27.1**	**-0.1**
MC2				S	**Sg**	**22 46 29.3**	**-0.1**
FEMA	**Monte Fema**	**0.18**	**322**	P	**Pg**	**22 46 28.6**	**+0.2**
FEMA				S	**Sg**	**22 46 31.6**	**+0.3**
FEMA	**Monte Fema**	**0.18**	**322**	P	**Pg**	**22 46 28.6**	**+0.2**
FEMA				S	**Sg**	**22 46 31.8**	**+0.5**
FEMA				AML	AML		
	comp=E,21250μm,0.3s						
FEMA				AML	AML		
	comp=N,29250μm,0.1s						
T1243	**Rocca Santa Ma**	**0.22**	**124**	P	**Pg**	**22 46 29.0**	**+0.1**
T1243				S	**Sg**	**22 46 32.4**	**+0.3**
T1243				AML	AML		
	comp=E,17750μm,0.2s						
T1243				AML	AML		
	comp=N,20100μm,0.3s						
T1243				AML	AML		
	comp=N,20200μm,0.3s						
T1243				AML	AML		
	comp=E,17800μm,0.2s						
T1243				AML	AML		
	comp=E,17800μm,0.2s						
T1243				AML	AML		
	comp=E,17800μm,0.2s						
T1243	**Rocca Santa Ma**	**0.22**	**124**	AML	AML		
	comp=E,17800μm,0.2s						
T1243				AML	AML		
	comp=E,17750μm,0.2s						
T1243				AML	AML		
	comp=N,20200μm,0.3s						
T1243				AML	AML		
	comp=N,20100μm,0.3s						
T1243				AML	AML		
	comp=E,17800μm,0.2s						
T1243				AML	AML		
	comp=E,17800μm,0.2s						
T1243				AML	AML		
	comp=N,20250μm,0.3s						
FDMO	**Fiordimonte**	**0.24**	**339**	P	**Pg**	**22 46 29.4**	**+0.2**
FDMO				S	**Sb**	**22 46 33.4**	**+0.9**
FDMO				AML	AML		
	comp=E,4445μm,0.3s						
FDMO				AML	AML		
	comp=N,6045μm,0.2s						
FDMO	**Fiordimonte**	**0.24**	**339**	P	**Pg**	**22 46 29.4**	**+0.2**
FDMO				S	**Sb**	**22 46 33.4**	**+0.9**
LNSS	**Leonessa**	**0.24**	**209**	P	**Pg**	**22 46 29.5**	**+0.1**
LNSS				S	**Sg**	**22 46 33.9**	**+1.0**
LNSS				AML	AML		
	comp=N,30450μm,0.2s						
LNSS				AML	AML		
	comp=E,38250μm,0.3s						
LNSS	**Leonessa**	**0.24**	**209**	P	**Pg**	**22 46 29.5**	**+0.1**
LNSS				S	**Sg**	**22 46 33.7**	**+0.9**
CSP1	**Cessapalombo**	**0.28**	**0**	P	**Pb**	**22 46 30.2**	**-1.0**
CSP1				S	**Sb**	**22 46 34.8**	**-1.1**
CESI	**CESI - Serrava**	**0.29**	**311**	P	**Pg**	**22 46 30.4**	**+0.2**
CESI				S	**Sb**	**22 46 35.2**	**-1.1**
CESI	**CESI - Serrava**	**0.29**	**311**	P	**Pg**	**22 46 30.4**	**+0.2**
CESI				S	**Sb**	**22 46 35.2**	**-1.1**
RM33	**Pellescritta (**	**0.31**	**179**	P	**Pg**	**22 46 30.7**	**+0.2**
RM33				S	**Sg**	**22 46 35.5**	**+0.8**
RM33				AML	AML		
	comp=E,3405μm,0.5s						
RM33				AML	AML		
	comp=N,3010μm,0.8s						
RM33				AML	AML		
	comp=N,2910μm,0.8s						
RM33				AML	AML		
	comp=E,3405μm,0.5s						
RM33				AML	AML		
	comp=N,3005μm,0.8s						
RM33				AML	AML		
	comp=E,3335μm,0.8s						
RM33				AML	AML		
	comp=N,2905μm,0.8s						
RM33				AML	AML		
	comp=E,3340μm,0.8s						
RM33	**Pellescritta (**	**0.31**	**179**	⇓P	**Pg**	**22 46 30.8**	**+0.3**
RM33				AML	AML		
	comp=N,2910μm,0.8s						
RM33				AML	AML		
	comp=E,3405μm,0.5s						
RM33				AML	AML		
	comp=N,3005μm,0.8s						
RM33				AML	AML		
	comp=E,3335μm,0.8s						
RM33				AML	AML		
	comp=N,2905μm,0.8s						
RM33				AML	AML		
	comp=E,3340μm,0.8s						
RM33				AML	AML		
	comp=E,3405μm,0.5s						
RM33				AML	AML		
	comp=N,3010μm,0.8s						
CAMP	**Campotosto**	**0.32**	**152**	P	**Pg**	**22 46 30.7**	**0.0**
CAMP				S	**Sg**	**22 46 35.6**	**+0.5**
CAMP	**Campotosto**	**0.32**	**152**	P	**Pg**	**22 46 30.6**	**-0.1**
CAMP				S	**Sg**	**22 46 35.5**	**+0.5**
TERO	**Teramo**	**0.35**	**123**	P	**Pg**	**22 46 31.1**	**-0.2**
TERO				S	**Sg**	**22 46 36.6**	**+0.6**
TERO				AML	AML		
	comp=E,4090μm,0.3s						
TERO				AML	AML		
	comp=E,3740μm,0.3s						
TERO				AML	AML		
	comp=N,5425μm,0.4s						
TERO				AML	AML		
	comp=E,3745μm,0.3s						
TERO				AML	AML		
	comp=N,5795μm,0.4s						
TERO	**Teramo**	**0.35**	**123**	⇓P	**Pg**	**22 46 31.2**	**0.0**
TERO				S	**Sg**	**22 46 36.7**	**+0.7**
TERO				AML	AML		
	comp=E,3745μm,0.3s						
TERO				AML	AML		
	comp=E,3740μm,0.3s						
TERO				AML	AML		
	comp=N,5425μm,0.4s						
TERO				AML	AML		
	comp=N,5795μm,0.4s						
TERO				AML	AML		
	comp=E,4090μm,0.3s						
OFFI	**Offida**	**0.37**	**71**	⇑P	**Pb**	**22 46 32.6**	**-0.1**
OFFI				AML	AML		
	comp=N,3895μm,0.4s						
OFFI				AML	AML		
	comp=E,2110μm,1.0s						
MDAR	**Monte D'Aria**	**0.38**	**353**	P	**Pg**	**22 46 32.0**	**+0.2**
MDAR				S	**Sb**	**22 46 38.6**	**-0.2**
SEF1	**Sefro**	**0.38**	**330**	P	**Pg**	**22 46 32.0**	**+0.2**
SEF1				S	**Sb**	**22 46 38.1**	**-0.7**
ARRO	**Arrone**	**0.40**	**234**	P	**Pg**	**22 46 32.2**	**+0.1**
ARRO				S	**Sg**	**22 46 38.9**	**+1.5**
ARRO	**Arrone**	**0.40**	**234**	P	**Pg**	**22 46 32.2**	**+0.1**
ARRO				S	**Sg**	**22 46 39.0**	**+1.5**
GAG1	**Gagliole**	**0.43**	**347**	P	**Pb**	**22 46 33.0**	**-0.8**
GAG1				S	**Sb**	**22 46 40.3**	**0.0**
GIGS	**Gran Sasso**	**0.46**	**144**	P	**Pg**	**22 46 32.9**	**-0.3**
GIGS				S	**Sg**	**22 46 39.9**	**+0.7**
GIGS				AML	AML		
	comp=E,438μm,0.4s						
GIGS				AML	AML		
	comp=N,396μm,0.7s						
GIGS				AML	AML		
	comp=N,396μm,0.7s						
GIGS				AML	AML		
	comp=E,438μm,0.4s						
ASSB	**Assisi San Ben**	**0.46**	**300**	P	**Pg**	**22 46 33.2**	**0.0**
ASSB				S	**Sb**	**22 46 40.5**	**-0.6**
ASSB	**Assisi San Ben**	**0.46**	**300**	P	**Pg**	**22 46 33.3**	**0.0**
ASSB				S	**Sb**	**22 46 40.5**	**-0.6**
SNTG	**Esanatoglia**	**0.48**	**336**	P	**Pg**	**22 46 33.5**	**-0.1**
SNTG				S	**Sb**	**22 46 41.7**	**0.0**
AQU	**L'Aquila**	**0.48**	**162**	P	**Pg**	**22 46 33.5**	**-0.2**
AQU				S	**Sg**	**22 46 41.0**	**+0.8**
AQU				AML	AML		
	comp=E,766μm,0.8s						
AQU				AML	AML		
	comp=N,1265μm,0.8s						
AQU				AML	AML		
	comp=E,765μm,0.8s						
AQU				AML	AML		
	comp=N,1186μm,0.8s						
AQU				AML	AML		
	comp=E,786μm,0.3s						
CESX	**Cesi**	**0.50**	**246**	⇑P	**Pg**	**22 46 33.8**	**-0.2**
CESX				S	**Sb**	**22 46 42.5**	**+0.1**
CESX				AML	AML		
	comp=N,1140μm,0.7s						
CESX				AML	AML		
	comp=E,1064μm,0.6s						
EL6	**Elcito**	**0.52**	**352**	P	**Pg**	**22 46 34.4**	**0.0**
EL6				S	**Sb**	**22 46 43.1**	**+0.3**
EL6	**Elcito**	**0.52**	**352**	S	**Sb**	**22 46 43.0**	**+0.1**
TRTR	**Tortoreto Alta**	**0.52**	**91**	AML	AML		
	comp=N,3185μm,0.4s						
TRTR				AML	AML		
	comp=E,3340μm,0.5s						
FIAM	**Fiamignano**	**0.55**	**187**	⇑P	**Pg**	**22 46 34.7**	**-0.3**
FIAM				S	**Sg**	**22 46 43.1**	**+0.8**
FIAM				AML	AML		
	comp=E,1049μm,0.6s						
FIAM				AML	AML		
	comp=N,760μm,1.1s						
ATCC	**AVT- Casa Cast**	**0.55**	**312**	P	**Pg**	**22 46 35.0**	**0.0**
ATCC				S	**Sb**	**22 46 44.1**	**+0.3**
CING	**Cingoli**	**0.56**	**359**	P	**Pg**	**22 46 35.1**	**0.0**
CING				S	**Sb**	**22 46 44.4**	**+0.4**
FOSV	**Fossato di Vic**	**0.58**	**326**	P	**Pg**	**22 46 35.5**	**0.0**
FOSV				S	**Sb**	**22 46 44.7**	**+0.2**
FAGN	**Fagnano**	**0.62**	**153**	⇓P	**Pg**	**22 46 35.5**	**-0.7**
FAGN				S	**Sb**	**22 46 45.7**	**+0.1**
FAGN				AML	AML		
	comp=E,1610μm,1.2s						
FAGN				AML	AML		
	comp=N,1670μm,1.6s						
VCEL	**Villa Celiera**	**0.63**	**132**	⇓P	**Pg**	**22 46 36.4**	**-0.1**
VCEL				AML	AML		
	comp=N,1525μm,0.4s						
VCEL				AML	AML		
	comp=N,1520μm,0.4s						
VCEL				AML	AML		
	comp=E,1905μm,0.3s						
PP3	**Marolino**	**0.64**	**28**	AML	AML		
	comp=E,5170μm,0.3s						
PP3				AML	AML		
	comp=N,4295μm,0.3s						
PP3				AML	AML		
	comp=E,4905μm,0.3s						
PP3				AML	AML		
	comp=N,4530μm,0.3s						
ARVD	**Arcevia**	**0.71**	**344**	P	**Pb**	**22 46 37.9**	**-0.6**
ARVD				S	**Sn**	**22 46 49.7**	**-1.3**
T0110	**Collepietro**	**0.73**	**144**	P	**Pg**	**22 46 37.5**	**-0.7**
T0110				AML	AML		
	comp=N,1038μm,0.5s						
T0110				AML	AML		
	comp=E,786μm,0.5s						
SRES	**S.Oreste - Sor**	**0.77**	**222**	P	**Pg**	**22 46 39.0**	**-0.2**
SRES				AML	AML		
	comp=E,304μm,1.4s						
SRES				AML	AML		
	comp=N,274μm,1.3s						
FRON	**Frontone**	**0.78**	**334**	P	**Pg**	**22 46 39.2**	**-0.1**
FRON				S	**Sn**	**22 46 51.6**	**-1.2**
AOI	**Ancona**	**0.79**	**22**	S	**Sn**	**22 46 54.0**	**+1.0**
MGAB	**Montegabbione**	**0.81**	**277**	P	**Pg**	**22 46 39.6**	**-0.2**
MGAB				S	**Sn**	**22 46 53.4**	**-0.1**
ATVO	**AVT- Monte Val**	**0.81**	**314**	P	**Pg**	**22 46 39.5**	**-0.4**
ATVO				S	**Sn**	**22 46 52.2**	**-1.4**
ATPI	**Pietralunga -**	**0.86**	**317**	P	**Pg**	**22 46 40.7**	**-0.2**
ATPI				S	**Sn**	**22 46 54.1**	**-0.8**
MTCE	**Montecelio**	**0.86**	**203**	P	**Pg**	**22 46 40.2**	**-0.7**
MTCE				AML	AML		
	comp=E,379μm,0.5s						
MTCE				AML	AML		
	comp=N,226μm,0.7s						
PIEI	**Pieia**	**0.87**	**326**	P

comp=E,194μm,0.9s
MELA AML AML

comp=N,212μm,0.7s
VIRC Vir 2.00 42 *e*Pn **Pn 22 46 58.4 +0.7**
VIRC Sn **Sb 22 47 24.2 -1.1**
MORI Morici 2.11 59 *e*Pn **Pb 22 47 01.0 -1.3**
NVLJ Novalja 2.12 34 *e*Pn **Pn 22 47 00.3 +0.8**
RABC Rab 2.25 30 *e*Pn **Pn 22 47 02.0 +0.9**
MCRV Calabrutti - M 2.51 143 S **Sn 22 47 35.0 -0.5**
UDBI Udbina 2.52 46 *e*Pn **Pb 22 47 06.9 -2.6**
KLJV Kijevo 2.62 62 *e*Pn **Pb 22 47 08.6 -2.5**
LSTV Lastovo 2.71 90 *e*Pn **Pn 22 47 08.8 +1.2**
RICI Ricice 2.95 75 *e*Pn **Pn 22 47 13.1 +2.2**
ROVR Rover Verones 3.22 332 P **Pn 22 47 17.6 +2.9**
STON Ston 3.31 88 *e*Pn **Pn 22 47 16.2 +0.5**
MAGA Magasa 3.49 329 ⇓P **Pn 22 47 20.8 +2.4**
SALB San Lorenzo Be 3.77 140 ⇓P **Pn 22 47 18.4 -3.9**
EUCT Pavia 3.78 310 ⇑P **Pg 22 47 39.1 +2.5**
OBKA Obir 3.81 14 *e*Pn **Pb 22 47 31.5 0.0**
comp=N,1.2nm,0.2s
MILN Milano 3.91 314 S **Sb 22 48 18.0 -2.2**
ABTA Abfaltersbach 3.96 353 *e*Pn **Pn 22 47 27.2 +2.3**
comp=N,4.0nm,0.3s
SPS2 Spezzano della 4.24 145 S **Sn 22 48 18.0 -0.2**
KBA Koelnbreinsper 4.26 1 *e*Pn **Pn 22 47 32.5 +3.4**
comp=N,1.4nm,0.2s
FETA Feichten 4.56 338 *e*Pn **Pb 22 47 39.6 -4.6**
comp=N,0.4nm,0.2s
WTTA Wattenberg 4.58 347 *e*Pn **Pn 22 47 37.7 +4.2**
SQTA Sankt Quirin 4.62 343 *e*Pn Pb 22 47 39.5 -5.8
comp=N,0.9nm,0.2s
WATA Walderalm 4.66 346 *e*Pn **Pn 22 47 39.0 +4.4**
comp=N,1.6nm,0.2s
MOTA Moosalm 4.77 343 *e*Pn **Pb 22 47 43.0 -4.8**
comp=N,1.2nm,0.3s
RETA Reutte 4.98 341 *e*Pn Pb 22 47 44.9 -6.4
comp=N,0.5nm,0.3s
DAVA Damuels 5.05 333 *e*Pn Pb 22 47 47.2 -5.4
comp=N,1.3nm,0.3s
KHC Kasperske Hory 6.32 2 *e*PN **Pn 22 47 58.6 +1.4**
KHC *e*SN **Sn 22 49 09.7 +0.3**

ROM 25 22:47:17.4±0.1, 42°.813N±0°.004×13°.184E±0°.007, h8km, ML2.3/7, 10C-12D, Error ellipse: s-maj=0.6km s-min=0.1km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**292**	⇓P		Pg	22 47 19.9	+0.7
NRCA				S		Sg	22 47 21.3	+0.7
NRCA				AML		AML		
	comp=E,31550μm,0.2s							
NRCA				AML		AML		
	comp=E,35800μm,0.5s							
NRCA				AML		AML		
	comp=N,30950μm,0.1s							
NRCA				AML		AML		
	comp=N,28400μm,0.1s							
T1243	**Rocca Santa Ma**	**0.23**	**121**	P		Pg	22 47 22.8	+0.9
T1243				S		Sg	22 47 26.6	+1.5
FDMO	**Fiordimonte**	**0.23**	**342**	⇑P		Pg	22 47 22.7	+0.6
FDMO				S		Sg	22 47 26.7	+1.4
FDMO				AML		AML		
	comp=N,645μm,0.1s							
FDMO				AML		AML		
	comp=N,644μm,0.1s							
FDMO				AML		AML		
	comp=E,780μm,0.2s							
LNSS	**Leonessa**	**0.24**	**207**	⇑P		Pg	22 47 23.0	+0.9
LNSS				S		Sg	22 47 27.0	+1.7
LNSS				AML		AML		
	comp=N,860μm,0.3s							
LNSS				AML		AML		
	comp=E,939μm,0.1s							
LNSS				AML		AML		
	comp=N,859μm,0.3s							
LNSS				AML		AML		
	comp=E,1116μm,0.4s							
LNSS				AML		AML		
	comp=N,1435μm,0.3s							
CSP1	**Cessapalombo**	**0.28**	**3**	⇓P		Pg	22 47 23.6	+0.6
CSP1				S		Sg	22 47 28.1	+1.4
CESI	**CESI - Serrava**	**0.28**	**313**	⇑P		Pg	22 47 23.6	+0.6
CESI				S		Sg	22 47 28.1	+1.4
CESI				AML		AML		
	comp=E,1066μm,0.2s							
CESI				AML		AML		
	comp=N,1600μm,0.3s							
RM33	**Pellescritta (**	**0.30**	**176**	⇓P		Pg	22 47 24.2	+0.8
RM33				S		Sb	22 47 29.1	-1.2
RM33				AML		AML		
	comp=N,463μm,1.2s							
RM33				AML		AML		
	comp=N,464μm,1.2s							
RM33				AML		AML		
	comp=E,706μm,0.6s							
CAMP	**Campotosto**	**0.32**	**149**	⇑P		Pg	22 47 24.3	+0.5
CAMP				S		Sb	22 47 29.6	-1.3
TERO	**Teramo**	**0.36**	**121**	⇑P		Pg	22 47 24.9	+0.4
TERO				S		Sb	22 47 30.8	-1.2
ARRO	**Arrone**	**0.39**	**233**	⇓P		Pg	22 47 25.5	+0.6
ARRO				S		Sb	22 47 31.6	-1.0
OFFI	**Offida**	**0.39**	**72**	⇓P		Pb	22 47 26.5	0.0
ASSB	**Assisi San Ben**	**0.45**	**301**	⇑P		Pg	22 47 26.3	+0.2
ASSB				S		Sb	22 47 33.5	-1.0
ASSB				AML		AML		
	comp=E,360μm,1.0s							
ASSB				AML		AML		
	comp=N,322μm,1.4s							
GIGS	**Gran Sasso**	**0.46**	**142**	⇓P		Pg	22 47 26.4	+0.1
GIGS				S		Sb	22 47 33.9	-0.9
SNTG	**Esanatoglia**	**0.48**	**338**	⇓P		Pg	22 47 26.9	+0.3
SNTG				S		Sb	22 47 34.4	-0.8
CESX	**Cesi**	**0.49**	**246**	⇑P		Pg	22 47 27.5	+0.6
CESX				S		Sb	22 47 35.5	0.0
EL6	**Elcito**	**0.52**	**353**	⇑P		Pg	22 47 27.9	+0.5
EL6				S		Sb	22 47 36.2	-0.3
ATCC	**AVT- Casa Cast**	**0.55**	**313**	⇓P		Pg	22 47 28.2	+0.3
FIAM	**Fiamignano**	**0.55**	**185**	P		Pb	22 47 29.1	-0.1
FIAM				S		Sb	22 47 37.0	-0.3
CING	**Cingoli**	**0.56**	**1**	⇑P		Pg	22 47 28.7	+0.5
CING				S		Sb	22 47 37.5	-0.2
FOSV	**Fossato di Vic**	**0.57**	**327**	⇓P		Pg	22 47 28.6	+0.2
FOSV				S		Sb	22 47 37.6	-0.4
FOSV				AML		AML		
	comp=E,173μm,0.3s							
FOSV				AML		AML		
	comp=N,286μm,0.3s							
FOSV				AML		AML		
	comp=N,286μm,0.3s							
FOSV				AML		AML		
	comp=E,173μm,0.3s							
VCEL	**Villa Celiera**	**0.64**	**131**	⇓P		Pg	22 47 30.2	+0.5
VCEL				S		Sb	22 47 40.2	+0.2
ARVD	**Arcevia**	**0.71**	**346**	⇓P		Pg	22 47 31.1	+0.1
ARVD				S		Sb	22 47 42.0	+0.1
ARVD				AML		AML		
	comp=E,71μm,1.0s							
ARVD				AML		AML		
	comp=N,43μm,0.6s							
T0110	**Collepietro**	**0.73**	**143**	⇑P		Pg	22 47 31.7	+0.2
T0110				S		Sb	22 47 44.0	+1.4
FRON	**Frontone**	**0.78**	**335**	⇓P		Pg	22 47 32.2	-0.2
FRON				S		Sb	22 47 44.5	+0.6
FSSB	**Fossombrone**	**0.93**	**341**	S		Sn	22 47 51.0	+0.7
MRB1	**Monte Rocchett**	**2.15**	**141**	S		Sn	22 48 19.0	-1.4

ROM 25 22:48:16.2±0.0, 42°.77N×13°.158E±0°.003, h11km, ML2.0/16, 2C-5D, Error ellipse: s-maj=0.5km s-min=0.2km az=1.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**333**	⇓P		Pg	22 48 19.1	+0.4
NRCA				S		Sg	22 48 20.8	+0.3
NRCA				AML		AML		
	comp=E,6215μm,0.1s							
NRCA				AML		AML		
	comp=N,8160μm,0.8s							
NRCA				AML		AML		
	comp=N,9060μm,0.8s							
NRCA				AML		AML		
	comp=E,6210μm,0.1s							
NRCA				AML		AML		
	comp=N,8165μm,0.8s							
NRCA				AML		AML		
	comp=E,7005μm,0.1s							
MC2	**Monte Cornacci**	**0.14**	**10**	⇓P		Pg	22 48 20.2	+0.5
MC2				S		Sg	22 48 23.1	+0.9
MC2				AML		AML		
	comp=N,2720μm,0.3s							
MC2				AML		AML		
	comp=E,2770μm,0.3s							
MC2				AML		AML		
	comp=N,2718μm,0.3s							
LNSS	**Leonessa**	**0.19**	**207**	P		Pg	22 48 20.8	+0.5
LNSS				S		Sg	22 48 24.2	+1.0
LNSS				AML		AML		
	comp=E,1116μm,0.4s							
LNSS				AML		AML		
	comp=E,1118μm,0.4s							
LNSS				AML		AML		
	comp=N,1430μm,0.3s							
LNSS				AML		AML		
	comp=E,1116μm,0.4s							
LNSS				AML		AML		
	comp=N,1435μm,0.3s							
FEMA	**Monte Fema**	**0.21**	**337**	P		Pg	22 48 21.1	+0.5
FEMA				S		Sg	22 48 24.5	+0.8
FEMA				AML		AML		
	comp=E,1380μm,0.5s							
FEMA				AML		AML		
	comp=N,2232μm,1.6s							
FEMA				AML		AML		
	comp=N,2363μm,1.6s							
FEMA				AML		AML		
	comp=E,1380μm,0.5s							
T1243	**Rocca Santa Ma**	**0.23**	**109**	P		Pg	22 48 21.4	+0.4
T1243				S		Sg	22 48 25.0	+0.8
T1243				AML		AML		
	comp=E,2170μm,0.7s							
T1243				AML		AML		
	comp=N,1760μm,0.2s							
T1243				AML		AML		
	comp=N,1800μm,0.2s							
T1243				AML		AML		
	comp=E,2165μm,0.7s							
T1243				AML		AML		
	comp=E,2250μm,0.7s							
FDMO	**Fiordimonte**	**0.27**	**349**	⇓P		Pg	22 48 22.1	+0.4
FDMO				S		Sg	22 48 26.4	+1.0
FDMO				AML		AML		
	comp=N,374μm,0.2s							
FDMO				AML		AML		
	comp=E,480μm,0.2s							
CESI	**CESI - Serrava**	**0.30**	**321**	⇓P		Pg	22 48 22.7	+0.4
CESI				S		Sg	22 48 27.4	+1.1
CESI				AML		AML		
	comp=E,798μm,1.0s							
CESI				AML		AML		
	comp=N,1086μm,0.4s							
CESI				AML		AML		
	comp=E,798μm,1.0s							
CESI				AML		AML		
	comp=N,1086μm,0.4s							
CAMP	**Campotosto**	**0.30**	**142**	P		Pg	22 48 22.6	+0.3
CAMP				S		Sg	22 48 27.4	+1.0
CAMP				AML		AML		
	comp=E,123μm,0.9s							
CAMP				AML		AML		
	comp=N,136μm,0.5s							
CAMP				AML		AML		
	comp=E,123μm,0.9s							
CSP1	**Cessapalombo**	**0.32**	**6**	P		Pg	22 48 23.2	+0.4
CSP1				S		Sb	22 48 28.4	-0.9
ARRO	**Arrone**	**0.35**	**236**	P		Pg	22 48 23.4	+0.3
ARRO				AML		AML		
	comp=N,208μm,0.3s							
ARRO				AML		AML		
	comp=E,240μm,0.2s							
TERO	**Teramo**	**0.36**	**114**	P		Pg	22 48 23.7	+0.3
TERO				S		Sb	22 48 29.5	-0.8
TERO				AML		AML		
	comp=N,480μm,0.3s							
TERO				AML		AML		
	comp=E,399μm,0.3s							
MNTP	**Montappone**	**0.43**	**32**	P		Pg	22 48 24.1	-0.6
MNTP				AML		AML		
	comp=E,696μm,0.7s							
MNTP				AML		AML		
	comp=N,952μm,1.1s							
MNTP				AML		AML		
	comp=N,947μm,1.1s							
GIGS	**Gran Sasso**	**0.44**	**137**	P		Pg	22 48 25.0	+0.1
ASSB	**Assisi San Ben**	**0.46**	**307**	P		Pg	22 48 25.3	+0.1
ASSB				S		Sb	22 48 32.4	-0.7
ASSB				AML		AML		
	comp=N,322μm,1.4s							
ASSB				AML		AML		
	comp=E,360μm,1.0s							
CESX	**Cesi**	**0.46**	**249**	P		Pg	22 48 25.2	0.0
CESX				AML		AML		
	comp=N,142μm,0.5s							
CESX				AML		AML		
	comp=E,125μm,0.3s							
FIAM	**Fiamignano**	**0.51**	**183**	P		Pg	22 48 26.1	0.0
SNTG	**Esanatoglia**	**0.51**	**342**	P		Pg	22 48 26.2	+0.1
SNTG				AML		AML		
	comp=E,102μm,0.3s							
SNTG				AML		AML		
	comp=N,102μm,1.3s							
TRTR	**Tortoreto Alta**	**0.56**	**86**	S		Sg	22 48 29.0	-5.4
EL6	**Elcito**	**0.56**	**356**	⇓P		Pg	22 48 27.3	+0.2
ATCC	**AVT- Casa Cast**	**0.56**	**318**	P		Pg	22 48 27.3	+0.1
ATCC				AML		AML		
	comp=E,224μm,1.1s							
ATCC				AML		AML		
	comp=E,224μm,1.1s							
ATCC				AML		AML		
	comp=N,230μm,0.3s							
CING	**Cingoli**	**0.60**	**3**	⇑P		Pb	22 48 28.4	-0.3
CING				AML		AML		
	comp=E,98μm,1.2s							
CING				AML		AML		
	comp=N,85μm,1.4s							
VCEL	**Villa Celiera**	**0.63**	**127**	P		Pb	22 48 28.8	-0.4
T0110	**Collepietro**	**0.71**	**140**	S		Sg	22 48 30.0	-9.3
ARVD	**Arcevia**	**0.74**	**348**	P		Pg	22 48 30.7	+0.2
ARVD				AML		AML		
	comp=E,42μm,1.6s							
ARVD				AML		AML		
	comp=N,36μm,1.0s							
ARVD				AML		AML		
	comp=E,42μm,1.6s							
MGAB	**Montegabbione**	**0.78**	**281**	⇑P		Pb	22 48 31.7	-0.1
MGAB				AML		AML		
	comp=E,115μm,1.6s							
MGAB				AML		AML		
	comp=N,114μm,0.3s							
MGAB				AML		AML		
	comp=E,115μm,1.6s							
COR1	**Corinaldo**	**0.87**	**352**	P		Pn	22 48 34.6	+0.3
COR1				AML		AML		
	comp=E,1254μm,1.1s							
COR1				AML		AML		
COR1				AML		AML		
	comp=E,92μm,1.5s							
COR1				AML		AML		
	comp=N,157μm,1.2s							

TEH ***25*** *22:50:59.3, 38°.11N×48°.05E, h6km, ML3.3*
AZER ***25*** *22:51:00.9±0.5, 38°.16N×48°.10E, h9km±2km, Error ellipse: s-maj=8.2km s-min=2.0km az=346.0*
ISC 25 22:50:59.9±0.7, 38°.10N±0°.02×48°.05E±0°.02, h10km, n69, σ1889/100, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ISRB	**Sarab**	**0.41**	**228**	*e*Pg		**Pg**	**22 51 07.3**	**-0.7**
LRK	**Lerik**	**0.59**	**23**	P		**Pb**	**22 51 11.7**	**-0.8**
	SNR=429							
LRK				S		**Sb**	**22 51 20.6**	**-0.4**
ASTR	**Astara**	**0.75**	**52**	P		**Pb**	**22 51 14.9**	**-0.1**
	SNR=104							
ASTR				S		**Sn**	**22 51 26.2**	**-1.7**
IHRS	**Heris**	**0.82**	**286**	*e*Pg		**Pg**	**22 51 14.9**	**-0.9**
IHRS				*e*Sg		**Sb**	**22 51 26.5**	**-1.2**
IHRS				*e*			22 51 28.7	
	comp=E,21μm,0.1s							
YRD	**Yardimli**	**0.83**	**11**	P		**Pb**	**22 51 16.4**	**-0.3**
	SNR=51							
YRD				S		**Sn**	**22 51 28.4**	**-1.9**
LKRN	**Lenkeran, Azer**	**0.84**	**43**	P		**Pn**	**22 51 17.0**	**-0.8**
	SNR=8.6							
LKRN				S		**Sn**	**22 51 28.8**	**-1.4**
CSN1	**Caspian**	**0.99**	**122**	*e*Pg		**Pg**	**22 51 18.4**	**-0.5**
CSN1				*e*			22 51 20.2	
	comp=E,19μm,0.3s							
IBST	**Bostanabad**	**0.99**	**247**	*e*Pg		**Pg**	**22 51 17.9**	**-1.2**
IBST				*e*			22 51 18.3	
	comp=E,16μm,0.2s							
IHSH	**Hashtrud**	**1.00**	**218**	*e*Pg		**Pg**	**22 51 18.1**	**-1.2**
IHSH				*e*			22 51 32.6	
	comp=E,22μm,0.1s							
TVRZ	**Varzaqan**	**1.16**	**291**	*e*Pg		**Pb**	**22 51 21.2**	**-1.0**
TVRZ				*e*Sg		**Sn**	**22 51 37.8**	**-0.6**
TVRZ				*e*			22 51 41.0	
	comp=E,15μm,0.3s							
GLBA	**Clilabad**	**1.18**	**13**	P		**Pg**	**22 51 23.3**	**+0.8**
	SNR=85							
GLBA				S		**Sn**	**22 51 41.3**	**+2.8**
TAB1	**Tabriz**	**1.35**	**268**	*e*Pg		**Pb**	**22 51 25.0**	**-0.5**
TAB1				*e*Sg		**Sg**	**22 51 44.6**	**+1.1**
TAB1				*e*			22 51 48.2	
	comp=E,12μm,0.3s							
QRD	**Qoradiz**	**1.48**	**338**	Pn		**Pg**	**22 51 28.0**	**-0.3**
	SNR=27							
QRD				Sn		**Sg**	**22 51 54.2**	**+6.8**
ITBZ	**Tabriz**	**1.50**	**276**	*e*Pg		**Pb**	**22 51 27.3**	**-0.7**
ITBZ				*e*Sg		**Sg**	**22 51 47.5**	**-0.8**
ITBZ				*e*			22 51 49.1	
	comp=E,6μm,0.3s							
ZNJK	**Zanjan**	**1.51**	**160**	*e*Pn		**Pb**	**22 51 27.9**	**-0.4**
BLQ	**Beylaqan**	**1.67**	**347**	Pn		**Pg**	**22 51 31.2**	**-0.7**
	SNR=15							
BLQ				Sn		**Sg**	**22 51 55.0**	**+1.4**
IAZR	**Azarshahr**	**1.69**	**256**	*e*Pn		**Pb**	**22 51 30.6**	**-0.6**
SAAT	**Saatly**	**1.79**	**9**	Sn		**Sg**	**22 51 59.2**	**+1.8**
ORD	**Ordubad**	**1.81**	**298**	Pn		**Pb**	**22 51 32.8**	**-0.4**
	SNR=49							
ORD				Sn		**Sg**	**22 51 57.9**	**-0.3**
LHJ2	**Lahijan - Gila**	**1.85**	**120**	*e*Pn		**Pb**	**22 51 32.5**	**-1.4**
LHJ2				*e*			22 51 41.8	
	comp=Z,4μm,0.2s							
GIDE	**GILAN DEYLAMAN**	**1.89**	**128**	*e*Pn		**Pb**	**22 51 33.8**	**-0.9**
ISHB	**Shabestar**	**1.92**	**276**	*e*Pn		**Pb**	**22 51 34.6**	**-0.6**
ISHB				*e*			22 51 37.7	
	comp=Z,4μm,0.5s							
IMRD	**Marand**	**1.94**	**289**	*e*Pn		**Pb**	**22 51 34.9**	**-0.6**
IMRD				*e*			22 52 09.6	
	comp=Z,4μm,0.4s							
JIR1	**Jirandeh**	**1.97**	**134**	*e*Pn		**Pb**	**22 51 35.6**	**-0.4**
JIR1				*e*			22 52 08.9	
	comp=Z,3μm,0.2s							
AGDM	**Agdam**	**2.14**	**340**	Pn		**Pg**	**22 51 39.1**	**-1.8**
	SNR=32							
AGDM				Sn		**Sg**	**22 52 08.8**	**+0.1**
ZRD	**Zardab**	**2.20**	**353**	Pn		**Pg**	**22 51 40.5**	**-1.6**
	SNR=13							
ZRD				Sn		**Sg**	**22 52 11.7**	**+1.1**
BRDA	**Brd**	**2.27**	**343**	Pn		**Pg**	**22 51 42.0**	**-1.4**
BRDA				Sn		**Sg**	**22 52 13.1**	**+0.3**
NAX	**Nakhchivan**	**2.27**	**299**	Pn		**Pg**	**22 51 42.7**	**-0.7**
	SNR=12							
NAX				Sn		**Sg**	**22 52 11.9**	**-1.0**
KDMR	**Kurdemir**	**2.28**	**3**	Pn		**Pb**	**22 51 41.2**	**0.0**
	SNR=5.0							
KDMR				Sn		**Sg**	**22 52 12.6**	**-0.6**
MAHB	**Mahabad**	**2.29**	**235**	*e*Pn		**Pb**	**22 51 40.0**	**-1.4**
SBZ	**Shahbuz**	**2.34**	**304**	Pn		**Pg**	**22 51 43.0**	**-1.8**
	SNR=36							
SBZ				Sn		**Sg**	**22 52 14.2**	**-1.0**
IGZV	**Ghazvin**	**2.43**	**134**	*e*Pn		**Pb**	**22 51 42.3**	**-1.7**
IGZV				*e*			22 51 47.3	
	comp=Z,2μm,0.4s							
GBS	**Qobustan**	**2.53**	**16**	Pn		**Pg**	**22 51 47.3**	**-1.2**
GBS				Sn		**Sb**	**22 52 18.0**	**+1.2**
QALM	**Alamut, Qazvin**	**2.66**	**128**	*e*Pn		**Pn**	**22 51 44.6**	**+1.5**
QALM				*e*			22 51 48.7	
	comp=Z,2μm,0.6s							
QABG	**Abgarm-Qazvin**	**2.68**	**152**	*e*		**Pg**	**22 51 49.8**	**-1.6**
	comp=Z,591nm,0.3s							
PQL	**Pirkuli**	**2.72**	**9**	Pn		**Pb**	**22 51 48.0**	**-0.8**
	SNR=6.4							
PQL				Sn		**Sg**	**22 52 24.0**	**-3.3**
ATGJ	**Altiaghaj**	**2.84**	**14**	Pn		**Pb**	**22 51 51.7**	**+0.8**
ATGJ				Sn		**Sb**	**22 52 26.1**	**+0.3**
QBL	**Gabala**	**2.85**	**357**	Pn		**Pb**	**22 51 49.7**	**-1.3**
	SNR=7.4							
QBL				Sn		**Sb**	**22 52 26.0**	**+0.1**
GANJ	**Ganja**	**2.87**	**333**	Pn		**Pb**	**22 51 50.2**	**-1.1**
	SNR=7.2							
GANJ				Sn		**Sb**	**22 52 26.0**	**-0.6**
MAKU	**Maku**	**2.91**	**297**	*e*Pn		**Pn**	**22 51 48.6**	**+2.1**
HYR	**Heyderabad**	**2.97**	**304**	Pn		**Pb**	**22 51 53.6**	**+0.6**
	SNR=13							
HYR				Sn		**Sb**	**22 52 31.5**	**+2.1**
SIZA	**Siyzn**	**3.05**	**12**	Pn		**Pb**	**22 51 53.1**	**-1.2**
SIZA				Sn		**Sb**	**22 52 31.5**	**-0.1**
SNGE	**Sanandaj**	**3.05**	**191**	*e*Pn		**Pb**	**22 51 51.1**	**-3.4**
XNQ	**Khinaliq**	**3.07**	**1**	Pn		**Pb**	**22 51 52.8**	**-2.0**
	SNR=9.1							
XNQ				Sn		**Sb**	**22 52 33.3**	**+0.9**
IRAZ	**Razeghan**	**3.08**	**150**	*e*Pn		**Pn**	**22 51 51.2**	**+2.3**
IRAZ				*e*			22 52 03.0	
	comp=Z,734nm,0.4s							
GDB	**GEDABAY**	**3.17**	**327**	Pn		**Pb**	**22 51 55.7**	**-0.7**
	SNR=7.0							
GDB				Sn		**Sb**	**22 52 35.8**	**+0.7**
SEKA	**Sheki**	**3.18**	**348**	Pn		**Pb**	**22 51 53.2**	**-3.3**
	SNR=12							
SEKA				Sn		**Sb**	**22 52 32.6**	**-2.7**
IMHD	**Mahdasht**	**3.20**	**138**	*e*Pn		**Pn**	**22 51 52.2**	**+1.9**
QUBA	**Quba, Azerbaij**	**3.27**	**6**	Pn		**Pb**	**22 51 56.3**	**-1.9**
HAGD	**Aghdareh**	**3.39**	**165**	*e*Pn		**Pn**	**22 51 55.7**	**+2.6**
QSAR	**Qusar**	**3.42**	**3**	Pn		**Pn**	**22 51 55.6**	**+2.2**
QSAR				Sn		**Sb**	**22 52 37.3**	**-4.9**
QZX	**Qazax, Azerbai**	**3.61**	**326**	Pn		**Pb**	**22 52 01.8**	**-2.0**
QZX				Sn		**Sb**	**22 52 47.8**	**+0.2**
IDHR	**Dehrash**	**3.65**	**202**	*e*Pn		**Pn**	**22 51 58.5**	**+1.9**
ZKTA	**Zakatala**	**3.70**	**343**	Pn		**Pb**	**22 52 00.8**	**-4.7**
	SNR=7.4							
ZKTA				Sn		**Sn**	**22 52 44.6**	**+3.7**
ASAO	**Ashtian**	**3.89**	**155**	*e*Pn		**Pn**	**22 52 02.2**	**+2.2**
IPRN	**Peran**	**3.90**	**117**	*e*Pn		**Pn**	**22 52 01.9**	**+1.9**
IKOM	**Komasi**	**3.94**	**186**	*e*Pn		**Pn**	**22 52 03.4**	**+2.8**
IKOM				*e*			22 53 21.2	
	comp=Z,288nm,1.1s							
DAMV	**Damavand**	**4.00**	**127**	*e*Pn		**Pn**	**22 52 03.3**	**+1.8**
IQOM	**Qom**	**4.06**	**142**	*e*			22 52 17.3	
	comp=Z,305nm,0.5s							
IQOM				*e*Pn		**Pn**	**22 52 04.6**	**+2.2**
ISHM	**Shahmirzad**	**4.78**	**117**	*e*Pn		**Pn**	**22 52 15.0**	**+2.7**
IGLO	**Ghaloghah**	**4.88**	**107**	*e*Pn		**Pn**	**22 52 15.2**	**+1.6**
IGLO				*e*			22 53 20.1	
	comp=Z,477nm,0.5s							
ISFB	**Sefidab**	**5.05**	**137**	*e*Pn		**Pn**	**22 52 18.8**	**+3.0**
QAMS	**Qamsar**	**5.13**	**147**	*e*Pn		**Pn**	**22 52 20.5**	**+3.4**
KRSH	**Karshahi**	**5.29**	**140**	*e*Pn		**Pn**	**22 52 21.5**	**+2.3**
IKLH	**Kolahrood**	**5.57**	**148**	*e*Pn		**Pn**	**22 52 25.1**	**+2.0**
MRVT	**Maraveh tapeh**	**6.38**	**91**	*e*Pn		**Pn**	**22 52 36.3**	**+2.3**
SHRO	**Shahrood**	**6.71**	**106**	*e*Pn		**Pn**	**22 52 40.7**	**+2.1**
BJRD	**Bojnurd**	**7.41**	**90**	*e*Pn		**Pn**	**22 52 50.2**	**+1.9**
SBZV	**Sabzevar**	**7.82**	**100**	*e*Pn		**Pn**	**22 52 55.9**	**+1.9**

ROM 25 23:04:28.4±0.1, 42°.846N±0°.004×13°.04E±0°.01, h8km, ML1.7/3, Error ellipse: s-maj=0.8km s-min=0.3km az=89.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRCA	**Norc

comp=N,1722µm,0.1s
NRCA AML AML
comp=N,1830µm,0.2s
FEMA Monte Fema 0.12 5 P Pg 23 04 31.4 +0.3
FEMA S Sg 23 04 33.7 +0.7
MC2 Monte Cornacci 0.13 59 P Pg 23 04 31.8 +0.4
CESI CESI - Serrava 0.19 329 P Pg 23 04 33.0 +0.8
CESI S Sg 23 04 36.1 +1.3
CESI AML AML
comp=E,48µm,0.8s
CESI AML AML
comp=N,89µm,1.3s
FDMO Fiordimonte 0.19 11 P Pg 23 04 33.4 +1.0
FDMO S Sg 23 04 36.1 +1.0
LNSS Leonessa 0.24 179 P Pg 23 04 33.9 +0.7
LNSS S Sg 23 04 38.5 +2.0
LNSS AML AML
comp=N,99µm,0.5s
LNSS AML AML
comp=E,124µm,1.4s
CSP1 Cessapalombo 0.28 27 P Pb 23 04 34.9 -0.8
CSP1 S Sb 23 04 39.5 -1.1
ARRO Arrone 0.33 217 P Pb 23 04 36.2 -0.4
T1243 Rocca Santa Ma 0.34 116 AML AML
comp=N,180µm,0.2s
T1243 AML AML
comp=E,116µm,0.2s
T1243 AML AML
comp=E,123µm,0.1s
T1243 AML AML
comp=N,181µm,0.2s
T1243 AML AML
comp=E,116µm,0.2s
ASSB Assisi San Ben 0.34 305 P Pg 23 04 35.5 +0.4
ASSB S Sb 23 04 41.2 -1.2
ASSB AML AML
comp=E,30µm,1.2s
ASSB AML AML
comp=N,40µm,1.5s
CESX Cesi 0.41 235 P Pg 23 04 37.0 +0.6
CESX S Sb 23 04 43.8 -0.5
SNTG Esanatoglia 0.41 350 P Pg 23 04 37.2 +0.7
SNTG S Sb 23 04 44.2 -0.4

*IDC **25** 23:13:22.6±0.6,52°.20N×177°.42E,h0km,mb4.3/21, mbtmp4.3/23,ML3.3/2,MS3.7/56,Error ellipse: s-maj=19.9km s-min=12.0km az=172.0*
*BJI **25** 23:13:24.1±0.0,52°.24N×177°.34E,h28km,mb4.8/44, mB5.0/24,Ms4.5/17,Ms7 4.1/16*
*MOS **25** 23:13:25.9±1.0,52°.11N×177°.35E,h37km,mb4.7/28,Error ellipse: s-maj=8.7km s-min=6.5km az=99.4*
*AEIC **25** 23:13:25±1.8, 51°.94N±0°.08×177°.41E±0°.09,h6km±4km, Error ellipse: s-maj=12.5km s-min=7.2km az=160.0*
*NEIC **25** 23:13:27.4±1.4,52°.1N±0°.1×177°.27E±0°.09,h35km±1km, mb4.6/235,ML4.0(AEIC),Error ellipse: s-maj=19.5km s-min=8.9km az=178.0*
ISC 25 23:13:27.6±0.4,52°.11N±0°.08×177°.36E±0°.04,h35km,n612, σ0§94/552,mb4.6/156,MS3.7/62,26C-17D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**1.41**	**121**		**Pn**	**23 13 48.6**	**-2.2**
SHEM	**Shemya Is, Ala**	**2.09**	**288**	Pn	**Pn**	**23 13 57.1**	**-3.0**
	64nm,0.3s,baz=13,slow=1.1,SNR=29						
SHEM				Sn	**Sn**	**23 14 28.3**	**+3.4**
	127nm,0.3s,baz=271,slow=21,SNR=13						
	589nm,0.6s						
SMY	**Shemya**	**2.09**	**288**	Pn	**Pn**	**23 13 58.1**	**-2.0**
SMY	**Shemya**	**2.09**	**288**	P	**Pn**	**23 13 58.1**	**-2.0**
KIWB	**Kanaga Island**	**3.40**	**92**		**Pn**	**23 14 17.1**	**-1.0**
ADK	**Adak**	**3.69**	**91**	Pn	**Pn**	**23 14 22.0**	**0.0**
ADK	**Adak**	**3.69**	**91**	P	**Pn**	**23 14 22.0**	**0.0**
GSTR	**Great Sitkin T**	**4.06**	**88**		**Pn**	**23 14 26.8**	**-0.4**
CLES	**Cleveland East**	**7.82**	**80**	Pn	**Pn**	**23 15 17.7**	**-1.0**
NIKH	**Nikolski High**	**8.45**	**79**	Pn	**Pn**	**23 15 28.2**	**+0.8**
NIKH	**Nikolski High**	**8.45**	**79**	P	**Pn**	**23 15 25.4**	**-2.0**
	baz=269						
UNV	**Unalaska Valle**	**9.88**	**74**	Pn	**Pn**	**23 15 47.8**	**+0.8**
UNV	**Unalaska Valle**	**9.88**	**74**	P	**Pn**	**23 15 45.3**	**-1.7**
	baz=266						
AKUT	**Akutan**	**10.34**	**72**	Pn	**Pn**	**23 15 53.4**	**+0.2**
FALS	**False Pass**	**11.77**	**69**	Pn	**Pn**	**23 16 13.5**	**+0.7**
FALS	**False Pass**	**11.77**	**69**	P	**Pn**	**23 16 11.2**	**-1.6**
	baz=264						
PEA0B	**Petropavlovsk-**	**11.99**	**283**	ǁ *e*	**P**	**23 16 15.7**	**-0.2**
PETK	**Petropavlovsk-**	**11.99**	**283**	Pn	**Pn**	**23 16 13.4**	**-2.5**
	0.1nm,0.3s,baz=92,slow=15,SNR=4.3						
PETK				LR	LR	23 20 28.2	
	comp=Z,256nm,21.3s,baz=100,slow=35						
	6.4nm,0.9s						
SDPT	**Sand Point**	**13.50**	**67**	P	**Pn**	**23 16 35.2**	**-1.1**
	baz=265						
CHNA	**Chernabura Isl**	**13.98**	**70**	P	**Pn**	**23 16 41.7**	**-1.2**
	baz=268						
S14K	**Fog Glacier**	**14.12**	**64**	P	**Pn**	**23 16 43.7**	**-1.2**
	baz=262						
CHGN	**Chignik**	**14.75**	**64**	P	**Pn**	**23 16 52.6**	**-0.7**
	baz=263						
ANM	**Nome**	**15.35**	**29**	P	**Pn**	**23 16 59.7**	**-1.6**
	baz=224						
P16K	**Nushagak River**	**15.50**	**54**	P	**Pn**	**23 17 02.3**	**-1.0**
	baz=254						
N16K	**Nishlik Lake**	**15.59**	**48**	P	**Pn**	**23 17 02.6**	**-1.9**
	baz=248						
O16K	**Kokwok River B**	**15.61**	**52**	P	**Pn**	**23 17 03.7**	**-1.0**
	baz=252						
R17K	**Ugashik Creek**	**16.03**	**59**	P	**Pn**	**23 17 09.3**	**-0.8**
	baz=261						
O17K	**Koliganek Bris**	**16.15**	**52**	P	**Pn**	**23 17 10.7**	**-0.9**
	baz=253						
P17K	**Kvichak River**	**16.31**	**54**	P	**Pn**	**23 17 12.6**	**-1.1**
	baz=255,SNR=6.3						
MA2	**Magadan**	**16.61**	**307**	LR	LR	23 23 15.0	
	comp=Z,225nm,18.1s,baz=128,slow=36						
BILL	**Bilibino**	**16.86**	**346**		**Pn**	**23 17 20.6**	**+0.1**
BILL				IAmb	IAmb	23 17 27.1	
	comp=Z,40nm,1.1s						
BILL	**Bilibino**	**16.86**	**346**	*e* P	**Pn**	**23 17 20.0**	**-0.5**
BILL				pmax	pmax		
	comp=Z,22nm,1.0s						
BILL				MLR	MLR		
	comp=Z,186nm,17.0s						
P18K	**Big Mountain,**	**16.96**	**54**	P	**Pn**	**23 17 22.6**	**+0.7**
P18K	**Big Mountain,**	**16.96**	**54**	P	**Pn**	**23 17 21.6**	**-0.3**
	baz=256,SNR=10						
N18K	**Kilae Creek**	**17.00**	**49**		**Pn**	**23 17 22.3**	**-0.1**
N18K	**Kilae Creek**	**17.00**	**49**	P	**Pn**	**23 17 21.4**	**-0.9**
	baz=251						
O18K	**Koktuh Hills**	**17.09**	**52**	Pn	**Pn**	**23 17 23.0**	**-0.5**
O18K				IAmb	IAmb	23 17 32.9	
	comp=Z,40nm,0.9s						
O18K	**Koktuh Hills**	**17.09**	**52**	P	**Pn**	**23 17 21.6**	**-1.9**
	baz=255,SNR=7.0						
SII	**Sitkinak Islan**	**17.11**	**64**	Pn	**Pn**	**23 17 20.7**	**-3.1**
SII				IAmb	IAmb	23 17 27.5	
	comp=Z,86nm,1.5s						
SII	**Sitkinak Islan**	**17.11**	**64**	P	**Pn**	**23 17 22.0**	**-1.8**
	baz=267						
SEY	**Seymchan**	**17.11**	**319**	ǁ *e* P	**Pn**	**23 17 24.5**	**+0.8**
SEY				pmax	pmax		
	comp=Z,34nm,1.6s						
SVW2	**Sparrevohn**	**17.28**	**48**		**Pn**	**23 17 26.4**	**+0.6**
O19K	**Port Alsworth**	**17.61**	**52**	P	**P**	**23 17 31.8**	**+1.2**
O19K				IAmb	IAmb	23 17 39.4	
	comp=Z,42nm,0.8s						
O19K	**Port Alsworth**	**17.61**	**52**	P	**Pn**	**23 17 29.1**	**-0.8**
	baz=255						
OHAK	**Old Harbor**	**17.64**	**62**	P	**Pn**	**23 17 30.1**	**-0.2**
OHAK	**Old Harbor**	**17.64**	**62**	P	**Pn**	**23 17 28.4**	**-1.9**
	baz=265						
Q19K	**Cape Douglas,**	**17.67**	**56**	P	**Pn**	**23 17 30.1**	**-0.6**
Q19K	**Cape Douglas,**	**17.67**	**56**	P	**Pn**	**23 17 28.4**	**-2.3**
	baz=260						
N19K	**Bonanza Creek**	**17.70**	**50**		**Pn**	**23 17 31.0**	**-0.1**
N19K				IAmb	IAmb	23 17 41.4	
	comp=Z,49nm,1.0s						
N19K	**Bonanza Creek**	**17.70**	**50**	P	**Pn**	**23 17 29.5**	**-1.6**
	baz=253,SNR=8.2						
TTA	**Tatalina**	**17.78**	**42**		**Pn**	**23 17 31.2**	**-0.8**
TTA	**Tatalina**	**17.78**	**42**	P	**Pn**	**23 17 31.3**	**-0.8**
TTA				pmax	pmax		
	comp=Z,21nm,1.4s						
TTA	**Tatalina**	**17.78**	**42**	P	**Pn**	**23 17 30.3**	**-1.8**
	baz=244						
L19K	**White Mountain**	**17.98**	**45**	P	**Pn**	**23 17 33.8**	**-0.7**
L19K	**White Mountain**	**17.98**	**45**	P	**Pn**	**23 17 33.0**	**-1.4**
	baz=248,SNR=15						
P19K	**Oil Pt**	**18.02**	**54**	P	**P**	**23 17 35.3**	**+0.2**
P19K				IAmb	IAmb	23 17 42.3	
	comp=Z,36nm,0.7s						
P19K	**Oil Pt**	**18.02**	**54**	P	**Pn**	**23 17 33.1**	**-1.9**
	baz=258						
KDAK	**Kodiak Island**	**18.07**	**60**		**Pn**	**23 17 35.2**	**-0.4**
KDAK	**Kodiak Island**	**18.07**	**60**	P	**Pn**	**23 17 35.2**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,25nm,1.0s						
KDAK	**Kodiak Island**	**18.07**	**60**	P	**Pn**	**23 17 34.1**	**-1.5**
	baz=264						
M19K	**Big River Lodg**	**18.09**	**46**	P	**P**	**23 17 36.5**	**+0.6**
M19K	**Big River Lodg**	**18.09**	**46**	P	**Pn**	**23 17 34.3**	**-1.5**
	baz=250						
ILSW	**Iliamna Southw**	**18.13**	**53**	P	**P**	**23 17 37.0**	**+0.5**
ILSW				IAmb	IAmb	23 17 43.4	
	comp=Z,37nm,1.0s						
Q20K	**Shuyak Island**	**18.26**	**57**	P	**P**	**23 17 36.5**	**-1.3**
	baz=262						
O20K	**Slope Mountain**	**18.41**	**53**	P	**P**	**23 17 38.0**	**-1.4**
	baz=257						
RSO	**Redoubt South**	**18.43**	**51**	P	**Pn**	**23 17 40.8**	**+0.7**
L20K	**Farewell, AK**	**18.51**	**45**	P	**P**	**23 17 39.7**	**-0.9**
	baz=249,SNR=7.3						
M20K	**Styx River**	**18.64**	**47**	P	**Pn**	**23 17 42.6**	**0.0**
M20K	**Styx River**	**18.64**	**47**	P	**P**	**23 17 41.3**	**-0.8**
	baz=252						
K20K	**Telida**	**18.76**	**42**	P	**P**	**23 17 43.9**	**+0.5**
K20K	**Telida**	**18.76**	**42**	P	**P**	**23 17 43.5**	**+0.2**
	baz=246,SNR=8.8						
HOM	**Homer**	**18.81**	**54**	P	**Pn**	**23 17 45.0**	**+0.4**
HOM	**Homer**	**18.81**	**54**	P	**P**	**23 17 42.9**	**-0.9**
	baz=260						
SPCR	**Spurr Chakacha**	**18.87**	**49**	P	**P**	**23 17 44.4**	**-0.2**
	baz=255						
SPU	**Mount Spurr**	**18.94**	**49**	P	**Pn**	**23 17 46.6**	**+0.4**
CNPM	**China Poot**	**18.99**	**55**		**P**	**23 17 46.3**	**+0.4**
CNPM				IAmb	IAmb	23 17 51.0	
	comp=Z,45nm,0.9s						
J20K	**Nowinta River**	**19.08**	**40**	P	**Pn**	**23 17 47.8**	**0.0**
J20K	**Nowinta River**	**19.08**	**40**	P	**P**	**23 17 46.9**	**+0.2**
	baz=244,SNR=12						
BRLK	**Bradley Lake**	**19.20**	**54**	P	**P**	**23 17 48.8**	**+0.6**
BRLK				IAmb	IAmb	23 17 51.2	
	comp=Z,46nm,0.8s						
BRSE	**Bradley Lake S**	**19.27**	**54**	P	**P**	**23 17 48.6**	**-0.4**
	baz=260,SNR=7.1						
PPLA	**Purkeypile**	**19.39**	**44**	P	**Pn**	**23 17 51.4**	**-0.2**
PPLA				IAmb	IAmb	23 18 16.8	
	comp=Z,38nm,1.0s						
PPLA	**Purkeypile**	**19.39**	**44**	P	**P**	**23 17 48.3**	**-2.0**
	baz=250						
SKT	**Skwentna**	**19.39**	**47**	P	**Pn**	**23 17 51.6**	**0.0**
SKT				IAmb	IAmb	23 18 10.1	
	comp=Z,28nm,0.8s						
SKT	**Skwentna**	**19.39**	**47**	P	**P**	**23 17 50.0**	**-0.2**
	baz=253						
CAST	**Castle Rocks**	**19.61**	**43**	P	**Pn**	**23 17 54.2**	**0.0**
CAST				IAmb	IAmb	23 18 09.9	
	comp=Z,16nm,0.7s						
O22K	**Cooper Landing**	**19.90**	**52**	P	**Pn**	**23 17 57.8**	**+0.2**
O22K	**Cooper Landing**	**19.90**	**52**	P	**P**	**23 17 55.2**	**-0.6**
	baz=260						
M22K	**Willow**	**19.98**	**48**	P	Pn	23 17 58.0	-0.5
M22K				IAmb	IAmb	23 18 12.1	
	comp=Z,67nm,1.1s						
RC01	**Rabbit Creek A**	**20.01**	**50**	P	Pn	23 17 58.3	-0.5
RC01	**Rabbit Creek A**	**20.01**	**50**	P	**P**	**23 17 56.5**	**-0.5**
	baz=258						
IMAR	**Indian Mountai**	**20.07**	**35**	P	Pn	23 18 00.3	+0.7
CUT	**Chulitna**	**20.08**	**47**	P	**P**	**23 17 58.4**	**+0.7**
KTH	**Kantishna Hill**	**20.15**	**43**	P	**P**	**23 17 59.7**	**+1.1**
KTH				IAmb	IAmb	23 18 03.2	
	comp=Z,25nm,1.2s						
H21K	**Melozitna Rive**	**20.26**	**37**	P	**P**	**23 17 59.9**	**+0.2**
H21K	**Melozitna Rive**	**20.26**	**37**	P	**P**	**23 18 00.2**	**+0.6**
	baz=242,SNR=8.3						
BPAW	**Bear Paw Mtn.**	**20.32**	**42**	P	**P**	**23 18 00.8**	**+0.5**
BPAW	**Bear Paw Mtn.**	**20.32**	**42**	P	**P**	**23 18 00.3**	**0.0**
	baz=248,SNR=8.4						
I21K	**Tanana**	**20.35**	**38**	P	Pn	23 18 02.1	-0.7
I21K	**Tanana**	**20.35**	**38**	P	**P**	**23 18 00.7**	**+0.1**
	baz=244,SNR=8.3						
TRF	**Thorofare Moun**	**20.39**	**44**	P	**P**	**23 18 01.4**	**+0.2**
TRF				IAmb	IAmb	23 18 16.1	
	comp=Z,29nm,1.0s						
G21K	**Allakaket**	**20.43**	**34**	P	**P**	**23 18 01.5**	**+0.1**
	baz=239,SNR=6.4						
GHO	**Glory Hole Cre**	**20.54**	**49**	P	**P**	**23 18 01.9**	**-0.8**
GHO				IAmb	IAmb	23 18 19.5	
	comp=Z,32nm,1.4s						
PWL	**Port Wells**	**20.64**	**51**	P	**P**	**23 18 04.3**	**+0.5**
PWL				IAmb	IAmb	23 18 18.2	
	comp=Z,38nm,1.0s						
PWL	**Port Wells**	**20.64**	**51**	P	**P**	**23 18 03.5**	**-0.3**
	baz=260						
KNK	**Knik Glacier**	**20.68**	**50**	P	Pn	23 18 05.9	-0.9
KNK				IAmb	IAmb	23 18 10.0	
	comp=Z,21nm,0.9s						
KNK	**Knik Glacier**	**20.68**	**50**	P	**P**	**23 18 04.8**	**+0.5**
	baz=258						
MLY	**Manley**	**20.77**	**39**	P	**P**	**23 18 05.7**	**+0.5**
MLY	**Manley**	**20.77**	**39**	P	**P**	**23 18 04.7**	**-0.5**
	baz=246,SNR=12						
F21K	**Alatna River**	**20.80**	**32**	P	**P**	**23 18 05.8**	**+0.3**
	baz=238,SNR=14						
SML	**Sawmill**	**20.82**	**49**	P	**P**	**23 18 06.5**	**+0.7**
SML				IAmb	IAmb	23 18 12.5	
	comp=Z,40nm,1.0s						
SML	**Sawmill**	**20.82**	**49**	P	**P**	**23 18 05.4**	**-0.4**
	baz=258						
H22K	**Ishtalitna Cre**	**20.89**	**37**	P	**P**	**23 18 06.4**	**-0.1**
	baz=244						
WAT1	**Susitna Watana**	**20.96**	**46**	P	**P**	**23 18 07.1**	**-0.2**
	baz=255						
BWN	**Browne**	**20.97**	**42**	P	**P**	**23 18 08.0**	**+0.7**
P23K	**Montague Islan**	**20.98**	**54**	P	**P**	**23 18 06.9**	**-0.5**
	baz=263						
RND	**Reindeer**	**20.99**	**44**	P	**P**	**23 18 07.6**	**0.0**
RND	**Reindeer**	**20.99**	**44**	P	**P**	**23 18 07.6**	**0.0**
RND				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MCK	**McKinley**	**21.05**	**43**	P	**P**	**23 18 07.9**	**-0.3**
MCK				IAmb	IAmb	23 18 31.9	
	comp=Z,18nm,1.0s						
MCK	**McKinley**	**21.05**	**43**	P	**P**	**23 18 07.9**	**-0.3**
MCK				pmax	pmax		
	comp=Z,17nm,1.0s						
MCK	**McKinley**	**21.05**	**43**	P	**P**	**23 18 08.1**	**-0.1**
	baz=252						
M23K	**Glacier View**	**21.10**	**49**	P	**P**	**23 18 08.6**	**-0.2**
	baz=258						
GLI	**Glacier Island**	**21.24**	**52**	P	**P**	**23 18 10.5**	**+0.2**
GLI	**Glacier Island**	**21.24**	**52**	P	**P**	**23 18 10.1**	**-0.2**
	baz=261						
WAT6	**Susitna Watana**	**21.26**	**47**	P	**P**	**23 18 10.5**	**-0.2**
	baz=256,SNR=6.0						
NEA2	**Nenana**	**21.27**	**41**	P	**P**	**23 18 10.7**	**+0.1**
NEA2				IAmb	IAmb	23 18 19.6	
	comp=Z,32nm,1.1s						
NEA2	**Nenana**	**21.27**	**41**	P	**P**	**23 18 10.6**	**0.0**
	baz=250,SNR=14						
SCM	**Sheep Creek Mo**	**21.29**	**49**	P	**P**	**23 18 10.5**	**-0.4**
SCM				IAmb	IAmb	23 18 34.4	
	comp=Z,41nm,1.1s						
SCM	**Sheep Creek Mo**	**21.29**	**49**	P	**P**	**23 18 10.5**	**-0.4**
SCM				pmax	pmax		
	comp=Z,41nm,1.1s						
SCM	**Sheep Creek Mo**	**21.29**	**49**	P	**P**	**23 18 09.9**	**-1.0**
	baz=259						
G22K	**Bettles**	**21.32**	**34**	P	**P**	**23 18 11.3**	**+0.3**
	baz=244						
F22K	**John River**	**21.39**	**32**	P	**P**	**23 18 12.1**	**+0.3**
	baz=239						
FID	**Port Fidalgo**	**21.52**	**52**	P	**P**	**23 18 12.4**	**-0.8**
FID				IAmb	IAmb	23 18 30.8	
	comp=Z,44nm,1.0s						
DHY	**Denali Highway**	**21.54**	**46**	P	**P**	**23 18 13.2**	**-0.4**
DHY	**Denali Highway**	**21.54**	**46**	P	**P**	**23 18 12.7**	**-1.0**
	baz=256,SNR=9.3						
H23K	**Yukon River**	**21.55**	**38**	P	**P**	**23 18 13.5**	**-0.1**
H23K	**Yukon River**	**21.55**	**38**	P	**P**	**23 18 13.4**	**-0.1**
	baz=246						
WRH	**Wood River Hil**	**21.63**	**42**	P	**P**	**23 18 13.9**	**-0.4**
WRH				IAmb	IAmb	23 18 31.3	
	comp=Z,26nm,1.2s						
MDM	**Murphy Dome**	**21.73**	**40**	P	**P**	**23 18 15.5**	**0.0**
MDM				IAmb	IAmb	23 18 24.2	
	comp=Z,19nm,1.0s						
G23K	**Bananza Creek**	**21.74**	**35**	P	**P**	**23 18 15.8**	**+0.2**
	baz=244						
CCB	**Clear Creek Bu**	**21.80**	**41**	P	**P**	**23 18 16.6**	**+0.4**
CCB				IAmb	IAmb	23 18 33.9	
	comp=Z,27nm,1.1s						
E22K	**Anaktuvuk Pass**	**21.83**	**31**	P	**P**	**23 18 16.1**	**-0.5**
	baz=238						
TCOL	**CIGO, UAF Yank**	**21.85**	**41**	P	**P**	**23 18 17.1**	**+0.3**
TCOL				IAmb	IAmb	23 18 17.8	
	comp=Z,15nm,0.6s						
EYAK	**Cordova Ski Ar**	**21.86**	**53**	P	**P**	**23 18 17.8**	**+1.0**
EYAK				IAmb	IAmb	23 18 22.1	
	comp=Z,25nm,0.9s						
EYAK	**Cordova Ski Ar**	**21.86**	**53**	P	**P**	**23 18 17.7**	**+0.9**
	baz=264						
COLA	**College**	**21.86**	**41**	P	**P**	**23 18 16.6**	**-0.1**
COLA				IAmb	IAmb	23 18 17.8	
	comp=Z,15nm,0.6s						
COLA	**College**	**21.86**	**41**	ǁ *i* P	**P**	**23 18 16.8**	**0.0**
COLA				pmax	pmax		
	comp=Z,11nm,0.8s						
M24K	**Tolsona, Glenn**	**21.88**	**49**	P	**P**	**23 18 18.5**	**+1.3**
M24K	**Tolsona, Glenn**	**21.88**	**49**	P	**P**	**23 18 17.3**	**+0.1**
	baz=259						
KLU	**Klutina**	**21.89**	**50**	P	**P**	**23 18 17.6**	**+0.3**
KLU				IAmb	IAmb	23 18 27.6	
	comp=Z,16nm,1.0s						
KLU	**Klutina**	**21.89**	**50**	P	**P**	**23 18 17.5**	**+0.2**
	baz=261						
DIV	**Divide**	**21.91**	**51**	P	**P**	**23 18 18.1**	**+0.6**
DIV				IAmb	IAmb	23 18 33.9	
	comp=Z,29nm,1.2s						
HDA	**Harding Lake**	**22.08**	**42**	P	**P**	**23 18 19.1**	**-0.1**
HDA	**Harding Lake**	**22.08**	**42**	P	**P**	**23 18 19.1**	**-0.1**
	baz=253						
POKR	**Poker Plat Res**	**22.11**	**40**	P	**P**	**23 18 19.6**	**+0.1**
POKR	**Poker Plat Res**	**22.11**	**40**	P	**P**	**23 18 18.6**	**-0.9**
	baz=251						
H24K	**Noodor Dome**	**22.18**	**38**	P	**P**	**23 18 20.8**	**+0.4**
H24K				IAmb	IAmb	23 18 26.5	
	comp=Z,17nm,0.9s						
H24K	**Noodor Dome**	**22.18**	**38**	P	**P**	**23 18 20.1**	**-0.3**
	baz=248,SNR=20						
ILAR	**Eielson Array**	**22.22**	**41**	P	**P**	**23 18 18.4**	**-2.3**
	comp=Z,6.8nm,0.9s,baz=257,slow=10,SNR=50						
ILAR				LR	LR	23 27 27.4	
	comp=Z,319nm,19.8s,baz=237,slow=38						
	comp=Z,6.8nm,0.9s						
PAX	**Paxson**	**22.37**	**47**	P	**P**	**23 18 21.9**	**-0.5**
PAX				IAmb	IAmb	23 18 25.1	
	comp=Z,13nm,0.8s						
PAX	**Paxson**	**22.37**	**47**	P	**P**	**23 18 21.9**	**-0.5**
PAX				pmax	pmax		
	comp=Z,13nm,0.8s						
PAX	**Paxson**	**22.37**	**47**	P	**P**	**23 18 21.8**	**-0.6**
	baz=258,SNR=9.6						
RAGM	**Ragged Mountai**	**22.37**	**53**	P	**P**	**23 18 22.5**	**+0.1**
HARP	**HAARP**	**22.40**	**48**	P	**P**	**23 18 22.6**	**-0.1**
	baz=260						
K24K	**Donnelly Dome**	**22.42**	**44**	P	**P**	**23 18 21.7**	**-1.1**
	baz=256						
BMRM	**Bremner River**	**22.46**	**52**	P	**P**	**23 18 23.0**	**-0.4**
BMRM				IAmb	IAmb	23 18 48.6	
	comp=Z,32nm,1.1s						
BMRM	**Bremner River**	**22.46**	**52**	P	**P**	**23 18 21.5**	**-1.9**
	baz=264						
N25K	**Chitina, Valde**	**22.54**	**50**	P	**P**	**23 18 24.8**	**+0.5**
N25K				IAmb	IAmb	23 18 27.8	
	comp=Z,13nm,0.9s						
N25K	**Chitina, Valde**	**22.54**	**50**	P	**P**	**23 18 22.1**	**-2.2**
	baz=262						
D23K	**Nanushuk River**	**22.63**	**30**	P	**P**	**23 18 23.8**	**-1.3**
	baz=238						
G24K	**Hadweenzic Riv**	**22.66**	**36**	P	**P**	**23 18 24.6**	**-0.9**
	baz=247,SNR=16						
J25K	**Salcha River,**	**22.80**	**42**	P	**P**	**23 18 25.7**	**-1.3**
	baz=254						
RIDG	**Independent Ri**	**22.80**	**45**	P	**P**	**23 18 27.0**	**0.0**
RIDG				IAmb	IAmb	23 19 04.0	
	comp=Z,11nm,0.8s						
RIDG	**Independent Ri**	**22.80**	**45**	P	**P**	**23 18 24.9**	**-2.1**
	baz=257						
TOLK	**Toolik Lake Re**	**22.81**	**31**	P	**P**	**23 18 26.6**	**-0.3**
TOLK				IAmb	IAmb	23 18 32.3	
	comp=Z,16nm,0.8s						
TOLK	**Toolik Lake Re**	**22.81**	**31**	P	**P**	**23 18 26.2**	**-0.8**
	baz=240,SNR=10						
F24K	**Squaw Lake**	**22.85**	**34**	P	**P**	**23 18 27.3**	**-0.1**
	baz=245,SNR=6.6						
E24K	**Your Creek**	**22.89**	**33**	P	**P**	**23 18 27.7**	**-0.2**
	baz=243						
GLB	**Gilahina Butte**	**22.89**	**51**	P	**P**	**23 18 27.8**	**-0.1**
GLB				IAmb	IAmb	23 18 41.4	
	comp=Z,20nm,1.1s						
PRP	**Porcupine Dome**	**22.99**	**40**	P	**P**	**23 18 27.8**	**-1.2**
	baz=252,SNR=9.6						
C23K	**Itkillik River**	**23.12**	**28**	P	**P**	**23 18 29.9**	**-0.2**
	baz=236,SNR=6.7						
H25K	**Birch Creek**	**23.12**	**38**	P	**P**	**23 18 29.2**	**-0.9**
	baz=250,SNR=10						
DOT	**Dot Lake**	**23.13**	**45**	P	**P**	**23 18 28.5**	**-1.7**
MENT	**Mentasta**	**23.15**	**47**	P	**P**	**23 18 31.0**	**+0.6**
MENT				IAmb	IAmb	23 18 42.5	
	comp=Z,18nm,0.9s						
SCRK	**Sand Creek**	**23.23**	**44**	P	**P**	**23 18 29.5**	**-1.9**
SCRK	**Sand Creek**	**23.23**	**44**	P	**P**	**23 18 29.4**	**-2.0**
	baz=257,SNR=9.0						
MCARA	**McCarthy VSAT**	**23.26**	**51**	P	**P**	**23 18 29.7**	**-2.0**
MCARA				IAmb	IAmb	23 18 35.6	
	comp=Z,25nm,0.8s						
MCARA	**McCarthy VSAT**	**23.26**	**51**	P	**P**	**23 18 29.0**	**-2.7**
	baz=264						
WAX	**Waxell Ridge**	**23.28**	**53**	P	**P**	**23 18 32.5**	**+0.6**
WAX				IAmb	IAmb	23 18 47.2	
	comp=Z,33nm,1.0s						
D24K	**Happy Valley**	**23.30**	**30**	P	**P**	**23 18 31.6**	**-0.3**
	baz=240						
TGL	**Tana Glacier**	**23.31**	**53**	P	**P**	**23 18 32.0**	**-0.1**
TGL				IAmb	IAmb	23 18 51.2	
	comp=Z,18nm,1.0s						
L26K	**Log Cabin Wild**	**23.33**	**47**	P	**P**	**23 18 32.5**	**+0.2**
L26K				IAmb	IAmb	23 18 42.1	
	comp=Z,16nm,0.9s						
L26K	**Log C

CTG	**Chitna Glacier**	**24.05**	**52**	P		**P**		**23 18 39.3**	**+0.1**		
	baz=267,SNR=9.4										
CTGM	**Chitina Glacie**	**24.05**	**52**	P		**P**		**23 18 39.4**	**+0.1**		
CTGM				IAmb		IAmb		23 18 41.9			
	comp=Z,32nm,1.0s										
K27K	**Chicken**	**24.06**	**45**	P		**P**		**23 18 39.1**	**-0.1**		
K27K				IAmb		IAmb		23 18 44.5			
	comp=Z,14nm,1.0s										
K27K	**Chicken**	**24.06**	**45**	P		**P**		**23 18 39.7**	**+0.4**		
	baz=259										
G26K	**Porcupine Rive**	**24.11**	**37**	P		**P**		**23 18 39.2**	**-0.4**		
	baz=251,SNR=14										
TABL	**Table Mountain**	**24.12**	**53**	P		**P**		**23 18 39.9**	**-0.1**		
TABL				IAmb		IAmb		23 18 44.3			
	comp=Z,39nm,1.1s										
D25K	**Kavik River**	**24.15**	**31**	P		**P**		**23 18 39.5**	**-0.5**		
	baz=243,SNR=7.3										
LOGN	**Logan Glacier**	**24.20**	**53**	P		**P**		**23 18 41.1**	**+0.4**		
LOGN				IAmb		IAmb		23 18 45.0			
	comp=Z,35nm,1.0s										
F26K	**Sheenjek River**	**24.24**	**35**	P		**P**		**23 18 40.9**	**0.0**		
	baz=249,SNR=9.5										
BVCY	**Beaver Creek**	**24.38**	**49**	P		**P**		**23 18 42.2**	**0.0**		
	baz=264										
YUK3	**Moose Creek**	**24.52**	**50**	P		**P**		**23 18 43.3**	**-0.4**		
	baz=266,SNR=16										
PCA	**Pinnacle**	**24.56**	**54**	P		**P**		**23 18 44.8**	**+0.9**		
PINM	**Pinnacle**	**24.56**	**54**	P		**P**		**23 18 43.1**	**-0.8**		
	baz=270,SNR=6.3										
I27K	**Kandik River**	**24.58**	**41**	P		**P**		**23 18 43.5**	**-0.5**		
	baz=256										
EGAK	**Eagle**	**24.60**	**43**	IAmb		IAmb		23 18 59.0			
	comp=Z,19nm,1.0s										
EGAK	**Eagle**	**24.60**	**43**	P		**P**		**23 18 43.4**	**-0.6**		
	baz=259,SNR=24										
O28M	**Mount Upton**	**24.60**	**53**	P		**P**		**23 18 44.1**	**-0.4**		
	baz=268,SNR=21										
H27K	**Steamboat Moun**	**24.77**	**39**	P		**P**		**23 18 46.1**	**+0.4**		
	baz=255										
C26K	**Camden Bay**	**24.87**	**30**	P		**P**		**23 18 47.3**	**+0.8**		
	baz=244										
BCPM	**Bancas Point**	**24.87**	**55**	P		**P**		**23 18 47.5**	**+0.9**		
G27K	**Doyon Strip**	**24.88**	**38**	P		**P**		**23 18 46.9**	**+0.3**		
	baz=254,SNR=15										
PNL	**Peninsula**	**25.00**	**55**	P		**P**		**23 18 47.6**	**-0.2**		
	baz=272										
C27K	**Jago River**	**25.12**	**31**	P		**P**		**23 18 49.2**	**+0.4**		
	baz=246										
DAWY	**Dawson**	**25.24**	**45**	P		**P**		**23 18 50.5**	**+0.5**		
DAWY				IAmb		IAmb		23 18 53.7			
	comp=Z,19nm,0.8s										
DAWY	**Dawson**	**25.24**	**45**	P		**P**		**23 18 50.2**	**+0.3**		
	baz=262,SNR=13										
E27K	**Coleen River**	**25.31**	**35**	P		**P**		**23 18 51.0**	**+0.5**		
	baz=251,SNR=6.8										
YUK4	**Talbot Arm**	**25.37**	**51**	P		**P**		**23 18 50.9**	**-0.4**		
	baz=268										
O29M	**Mount Kennedy**	**25.40**	**54**	P		**P**		**23 18 51.8**	**+0.3**		
	baz=271										
M29M	**Somme Creek**	**25.50**	**49**	P		**P**		**23 18 52.5**	**+0.1**		
	baz=266,SNR=9.6										
YUK6	**Outpost Mounta**	**25.50**	**52**	P		**P**		**23 18 52.9**	**+0.4**		
	baz=270										
P29M	**Windy Craggy**	**25.84**	**55**	P		**P**		**23 18 56.0**	**+0.6**		
P29M				IAmb		IAmb		23 19 00.5			
	comp=Z,18nm,0.9s										
P29M	**Windy Craggy**	**25.84**	**55**	P		**P**		**23 18 55.8**	**+0.4**		
	baz=273,SNR=5.9										
I29M	**Ogilvie Camp,**	**25.89**	**42**	IAmb		IAmb		23 19 01.1			
	comp=Z,20nm,1.1s										
I29M	**Ogilvie Camp,**	**25.89**	**42**	P		**P**		**23 18 56.4**	**+0.6**		
	baz=260,SNR=21										
HYT	**Haines Junctio**	**25.92**	**53**	P		**P**		**23 18 56.7**	**+0.5**		
HYT				IAmb		IAmb		23 19 05.1			
	comp=Z,24nm,0.9s										
HYT	**Haines Junctio**	**25.92**	**53**	P		**P**		**23 18 58.0**	**+1.7**		
	baz=271,SNR=16										
K29M	**Barlow Dome**	**26.03**	**46**	P		**P**		**23 18 57.2**	**0.0**		
	baz=264,SNR=6.2										
N30M	**Aishikik Lake**	**26.12**	**51**	P		**P**		**23 18 58.2**	**+0.2**		
	baz=270,SNR=8.1										
P30M	**Million Dollar**	**26.21**	**54**	P		**P**		**23 18 58.4**	**-0.4**		
	baz=272										
M30M	**Minto, Yukon**	**26.28**	**49**	P		**P**		**23 19 00.1**	**+0.8**		
M30M	**Minto, Yukon**	**26.28**	**49**	P		**P**		**23 18 59.3**	**-0.1**		
	baz=268										
PLBC	**Pleasant Camp**	**26.55**	**56**	P		**P**		**23 19 02.1**	**+0.3**		
	baz=274										
O30N	**Mendenhall**	**26.61**	**53**	P		**P**		**23 19 02.3**	**-0.1**		
	baz=272										
EPYK	**Eagle Plains**	**26.70**	**40**	P		**P**		**23 19 03.0**	**-0.2**		
	baz=260										
N31M	**Braeburn, Yuko**	**26.75**	**51**	P		**P**		**23 19 03.8**	**+0.2**		
N31M				IAmb		IAmb		23 19 27.8			
	comp=Z,16nm,1.1s										
SKAG	**Skagway**	**27.08**	**56**	P		**P**		**23 19 07.6**	**+1.0**		
SKAG				IAmb		IAmb		23 19 43.3			
	comp=Z,8.3nm,0.7s										
YAK	**Yakutsk**	**27.13**	**310**	LR		LR		23 29 39.0			
	comp=Z,124nm,18.6s,baz=92,slow=36										
YAK	**Yakutsk**	**27.13**	**310**	P		**P**		**23 19 05.7**	**-1.2**		
YAK	**Yakutsk**	**27.13**	**310**	*de*P		**P**		**23 19 06.4**	**-0.5**		
YAK				pmax		pmax					
	comp=Z,22nm,1.0s										
M31M	**Drury Creek, Y**	**27.39**	**49**	P		**P**		**23 19 10.2**	**+0.9**		
M31M	**Drury Creek, Y**	**27.39**	**49**	P		**P**		**23 19 10.3**	**+0.9**		
	baz=271										
BESE	**Bessie Mountai**	**27.42**	**57**	P		**P**		**23 19 09.8**	**+0.1**		
BESE				IAmb		IAmb		23 19 27.8			
	comp=Z,11nm,1.2s										
JIS	**Juneau Island**	**27.71**	**58**	P		**P**		**23 19 13.0**	**+0.9**		
JIS				IAmb		IAmb		23 19 16.3			
	comp=Z,18nm,1.4s										
FARO	**Faro, Yukon**	**27.88**	**49**	P		**P**		**23 19 14.8**	**+1.0**		
FARO				IAmb		IAmb		23 19 53.2			
	comp=Z,11nm,1.4s										
FARO	**Faro, Yukon**	**27.88**	**49**	P		**P**		**23 19 14.5**	**+0.8**		
	baz=271										
P32M	**Atlin**	**27.89**	**55**	P		**P**		**23 19 13.0**	**-0.9**		
	baz=276										
INK	**Inuvik**	**28.25**	**36**	LR		LR		23 30 59.1			
	comp=Z,248nm,20.0s,baz=225,slow=38										
INK	**Inuvik**	**28.25**	**36**	P		**P**		**23 19 18.0**	**+1.1**		
INK	**Inuvik**	**28.25**	**36**	P		**P**		**23 19 18.0**	**+1.1**		
INK				pmax		pmax					
	comp=Z,5.0nm,0.9s										
INK	**Inuvik**	**28.25**	**36**	P		**P**		**23 19 18.0**	**+1.1**		
	baz=260										
P33M	**Teslin, Yukon**	**28.27**	**54**	P		**P**		**23 19 16.7**	**-0.6**		
P33M				IAmb		IAmb		23 19 22.9			
	comp=Z,9.6nm,1.0s										
P33M	**Teslin, Yukon**	**28.27**	**54**	P		**P**		**23 19 18.8**	**+1.5**		
	baz=276,SNR=8.9										
KLR	**Kul'dur**	**28.69**	**283**	P		**P**		**23 19 21.1**	**+0.1**		
	comp=Z,3.8nm,0.8s,baz=47,slow=10,SNR=8.1										
KLR				LR		LR		23 31 00.2			
	comp=Z,165nm,19.0s,baz=1.0,slow=37										
	comp=Z,3.8nm,0.8s										
KLR	**Kul'dur**	**28.69**	**283**⇑	*e*P		**P**		**23 19 20.7**	**-0.3**		
KLR				pmax		pmax					
	comp=Z,8.0nm,1.1s										
MMPY	**Sheldon Lake,**	**28.84**	**48**	P		**P**		**23 19 23.1**	**+0.9**		
	baz=272,SNR=7.2										
R33M	**Jennings River**	**29.30**	**55**	P		**P**		**23 19 27.6**	**+1.1**		
	baz=278,SNR=6.9										
S34M	**Telegraph Cree**	**29.47**	**58**	P		**P**		**23 19 29.2**	**+1.3**		
	baz=281										
DLBC	**Dease Lake**	**29.95**	**57**	P		**P**		**23 19 34.2**	**+2.1**		
	comp=Z,3.6nm,1.0s,baz=292,slow=8.0,SNR=4.0										
DLBC				LR		LR		23 31 45.2			
	comp=Z,330nm,19.5s,baz=279,slow=37										
DLBC	**Dease Lake**	**29.95**	**57**	P		**P**		**23 19 32.2**	**+0.1**		
DLBC				IAmb		IAmb		23 19 41.4			
	comp=Z,12nm,1.4s										
DLBC	**Dease Lake**	**29.95**	**57**	P		**P**		**23 19 32.5**	**+0.3**		
	baz=281										
TGTN	**Hyland Airport**	**30.33**	**50**	P		**P**		**23 19 35.6**	**+0.1**		
	baz=277										
USRK	**Ussuriysk Ar.**	**30.85**	**273**	P		**P**		**23 19 39.9**	**-0.3**		
	comp=Z,3.1nm,0.8s,baz=56,slow=13,SNR=3.5										
	comp=Z,3.1nm,0.8s										
USRK	**Ussuriysk Ar.**	**30.85**	**273**	P		**P**		**23 19 38.9**	**-1.3**		
USRK	**Ussuriysk Ar.**	**30.85**	**273**	P		**P**		**23 19 38.9**	**-1.3**		
MJAR	**Matsushiro Arr**	**31.59**	**256**	LR		LR		23 30 38.7			
	comp=Z,79nm,21.7s,baz=42,slow=33										
MAJO	**Matsushiro**	**31.59**	**256**⇓	*e*P		**P**		**23 19 46.0**	**-0.8**		
MAJO				pmax		pmax					
	comp=Z,14nm,1.9s										
C36M	**Paulatuk**	**31.78**	**35**	P		**P**		**23 19 48.7**	**+0.6**		
	baz=268										
BBB	**Bella Bella**	**32.79**	**68**	LR		LR		23 31 38.5			
	comp=Z,106nm,20.1s,baz=313,slow=34										
BNX	**BinXian**	**32.88**	**279**	⇑P		**P**		**23 19 57.0**	**-1.0**		
BNX				pmax		pmax					
	comp=Z,19nm,0.9s										
BNX				pmax		pmax					
	comp=Z,120nm,4.3s										
JHJ	**Hachijo jima 2**	**33.05**	**250**	LR		LR		23 30 57.2			
	comp=Z,67nm,21.4s,baz=92,slow=32										
H11N2	**WAKE ISLAND Hy**	**33.34**	**198**	T		T		23 55 14.4			
	baz=11,slow=76,SNR=732										
H11N3	**WAKE ISLAND Hy**	**33.35**	**198**	T		T		23 55 15.3			
	baz=11,slow=76,SNR=670										
H11N1	**WAKE ISLAND Hy**	**33.36**	**198**	T		T		23 55 15.8			
	baz=11,slow=76,SNR=622										
H11S1	**WAKE ISLAND Hy**	**34.57**	**198**	T		T		23 56 46.8			
	baz=11,slow=76,SNR=98										
H11S3	**WAKE ISLAND Hy**	**34.58**	**198**	T		T		23 56 47.5			
	baz=11,slow=76,SNR=51										
H11S2	**WAKE ISLAND Hy**	**34.59**	**198**	T		T		23 56 48.4			
	baz=11,slow=76,SNR=46										
BOD	**Bodaibo**	**35.61**	**305**	*e*P		**P**		**23 20 19.9**	**-1.6**		
BOD				pmax		pmax					
	comp=Z,20nm,1.4s										
JCJ	**Chichijima**	**36.29**	**240**	LR		LR		23 32 03.5			
	comp=Z,94nm,20.2s,baz=41,slow=31										
YKA	**Yellowknife Ar**	**36.45**	**46**	P		**P**		**23 20 26.7**	**-1.9**		
	comp=Z,1.9nm,0.7s,baz=284,slow=8.0,SNR=4.0										
YKA				LR		LR		23 36 56.6			
	comp=Z,254nm,19.1s,baz=298,slow=39										
	comp=Z,1.9nm,0.7s										
YKA	**Yellowknife Ar**	**36.45**	**46**	P		**P**		**23 20 28.6**	**0.0**		
KSRS	**Korea Array**	**37.27**	**267**	LR		LR		23 35 54.1			
	comp=Z,50nm,19.2s,baz=80,slow=36										
RES	**Resolute Bay**	**40.06**	**24**	LR		LR		23 38 12.4			
	comp=Z,42nm,21.5s,baz=232,slow=37										
NEW	**Newport**	**40.85**	**68**	LR		LR		23 35 24.3			
	comp=Z,59nm,21.2s,baz=293,slow=32										
J05D	**Fort Rock, OR**	**41.12**	**77**	P		**P**		**23 21 08.4**	**+0.3**		
	baz=304										
YBH	**Yreka Blue Hor**	**41.12**	**80**	LR		LR		23 34 46.4			
	comp=Z,91nm,21.1s,baz=303,slow=31										
I07A	**Izee**	**41.70**	**75**	P		**P**		**23 21 13.1**	**+0.3**		
KCPM	**Cahto Peak**	**41.81**	**83**	P		**P**		**23 21 14.0**	**+0.3**		
KCPM				IAmb		IAmb		23 21 23.2			
	comp=Z,32nm,1.4s										
WALA	**Waterton Lakes**	**42.26**	**66**	P		**P**		**23 21 17.8**	**+0.4**		
NRIK	**Noril'sk**	**42.55**	**328**	P		**P**		**23 21 20.5**	**+1.2**		
	comp=Z,1.9nm,0.6s,baz=43,slow=9.2,SNR=4.0										
NRIK				LR		LR		23 40 15.7			
	comp=Z,33nm,19.1s,baz=344,slow=38										
	comp=Z,1.9nm,0.6s										
NRIK	**Noril'sk**	**42.55**	**328**	P		**P**		**23 21 19.1**	**-0.2**		
NRIK	**Noril'sk**	**42.55**	**328**⇓	*e*P		**P**		**23 21 19.9**	**+0.6**		
NRIK				pmax		pmax					
	comp=Z,7.0nm,1.1s										
WVOR	**Wild Horse Val**	**43.17**	**77**	P		**P**		**23 21 24.8**	**0.0**		
WVOR	**Wild Horse Val**	**43.17**	**77**	P		**P**		**23 21 24.8**	**0.0**		
WVOR				pmax		pmax					
	comp=Z,2.0nm,0.9s										
ULN	**Ulaanbaatar**	**43.79**	**294**	P		**P**		**23 21 29.4**	**-0.4**		
ULN				IAmb		IAmb		23 21 30.8			
	comp=Z,10.0nm,1.2s										
ULN	**Ulaanbaatar**	**43.79**	**294**⇓	*e*P		**P**		**23 21 29.1**	**-0.7**		
ULN				pmax		pmax					
	comp=Z,21nm,2.5s										
SONM	**Songino Array**	**44.17**	**294**	P		**P**		**23 21 33.1**	**+0.2**		
	comp=Z,2.9nm,0.8s,baz=58,slow=9.0,SNR=15										
SONM				PcP		**PcP**		**23 23 17.8**	**+0.7**		
	comp=Z,0.7nm,0.6s,baz=91,slow=2.2,SNR=3.7										
SONM				LR		LR		23 39 41.0			
	comp=Z,72nm,21.6s,baz=57,slow=36										
	comp=Z,2.9nm,0.8s										
SONM	**Songino Array**	**44.17**	**294**	P		**P**		**23 21 32.3**	**-0.6**		
SONM	**Songino Array**	**44.17**	**294**	P		**P**		**23 21 32.3**	**-0.6**		
SONM				pmax		pmax					
	comp=Z,3.0nm,0.9s										
PAHR	**Pah Rah Range**	**44.35**	**80**	P		**P**		**23 21 34.1**	**-0.3**		
ZAK	**Zakamensk**	**44.52**	**299**	*e*P		**P**		23 21 30.1	-5.4		
ZAK				pmax		pmax					
	comp=Z,6.0nm,1.5s										
CMB	**Columbia Colle**	**44.79**	**83**	P		**P**		**23 21 38.6**	**+0.9**		
CMB	**Columbia Colle**	**44.79**	**83**	P		**P**		**23 21 38.6**	**+0.9**		
CMB				pmax		pmax					
	comp=Z,2.0nm,0.9s										
HLID	**Hailey**	**45.02**	**73**	P		**P**		**23 21 39.9**	**+0.2**		
HLID	**Hailey**	**45.02**	**73**	P		**P**		**23 21 38.7**	**-0.9**		
	baz=306										
BMN	**Battle Mountai**	**45.22**	**78**	P		**P**		**23 21 40.9**	**-0.4**		
BMN	**Battle Mountai**	**45.22**	**78**	P		**P**		**23 21 40.9**	**-0.4**		
BMN				pmax		pmax					
	comp=Z,2.0nm,0.7s										
BBGB	**Big Mountain B**	**45.31**	**85**	P		**P**		**23 21 41.2**	**-0.9**		
HNS	**HongShan**	**45.44**	**277**	⇑P		**P**		**23 21 44.3**	**+1.5**		
HNS				pmax		pmax					
	comp=Z,16nm,1.1s										
BOZ	**Bozeman (W)**	**45.45**	**69**	P		**P**		**23 21 41.9**	**-1.2**		
	baz=305										
KVN	**Kaiserville**	**45.54**	**80**	P		**P**		**23 21 43.0**	**-0.9**		
KVN	**Kaiserville**	**45.54**	**80**	P		**P**		**23 21 43.0**	**-0.9**		
KVN				pmax		pmax					
	comp=Z,1.0nm,0.9s										
NVAR	**Mina Array Bea**	**45.81**	**81**	P		**P**		**23 21 46.3**	**+0.2**		
	comp=Z,1.8nm,0.7s,baz=299,slow=7.7,SNR=16										
NVAR				LR		LR		23 38 41.2			
	comp=Z,60nm,20.3s,baz=279,slow=33										
	comp=Z,1.8nm,0.7s										
NVAR	**Mina Array Bea**	**45.81**	**81**	P		**P**		**23 21 45.9**	**-0.1**		
MDPB	**Devils Postpil**	**45.84**	**82**	P		**P**		**23 21 45.6**	**-0.8**		
YHL	**Hebgen Lake**	**46.14**	**69**	IAmb		IAmb		23 21 59.2			
	comp=Z,6.2nm,1.2s										
ELK	**Elko**	**46.22**	**76**	LR		LR		23 39 10.2			
	comp=Z,91nm,19.0s,baz=306,slow=34										
ELK	**Elko**	**46.22**	**76**	P		**P**		**23 21 48.8**	**-0.5**		
ELK	**Elko**	**46.22**	**76**	P		**P**		**23 21 48.8**	**-0.5**		
ELK				pmax		pmax					
	comp=Z,2.0nm,0.9s										
GUMO	**Guam**	**46.41**	**226**	LR		LR		23 39 33.4			
	comp=Z,76nm,20.6s,baz=78,slow=34										
NJ2	**Nanjing**	**46.43**	**268**	*e*P		**P**		**23 21 50.0**	**-0.7**		
NJ2				pmax		pmax					
	comp=Z,16nm,0.7s										
DSP	**Deep Springs**	**46.69**	**82**	P		**P**		**23 21 53.2**	**+0.6**		
TPH	**Tonopah**	**46.69**	**80**	P		**P**		**23 21 52.2**	**-0.8**		
TPH	**Tonopah**	**46.69**	**80**	P		**P**		**23 21 52.2**	**-0.8**		
TPH				pmax		pmax					
	comp=Z,16nm,0.8s										
MZP	**Montezuma Peak**	**46.83**	**81**	P		**P**		**23 21 53.7**	**-0.5**		
HVU	**Hansel Valley**	**47.05**	**74**	P		**P**		**23 21 55.8**	**+0.1**		
HVU	**Hansel Valley**	**47.05**	**74**	P		**P**		**23 21 55.8**	**+0.1**		
HVU				pmax		pmax					
	comp=Z,3.0nm,0.9s										
GMN	**Gold Mountain**	**47.16**	**81**	P		**P**		**23 21 56.6**	**-0.2**		
CWC	**Cottonwood Cre**	**47.22**	**83**	P		**P**		**23 21 56.3**	**-0.7**		
	baz=311										
KNGR	**Kungurtug, Tuv**	**47.47**	**302**⇑	*e*P		**P**		**23 21 58.5**	**-0.3**		
KNGR				pmax		pmax					
	comp=Z,2.0nm,0.6s										
R11A	**Troy Canyon, C**	**47.51**	**79**	P		**P**		**23 21 59.0**	**-0.3**		
	baz=310,SNR=7.2										
MPMC	**Manual Prospec**	**47.83**	**83**	P		**P**		**23 22 01.1**	**-0.8**		
	baz=311										
SPR3	**Spring Creek 3**	**47.85**	**78**	P		**P**		**23 22 02.4**	**+0.2**		
SPR3				IAmb		IAmb		23 22 03.4			
	comp=Z,1.7nm,0.7s										
TPNV	**Topopah Spring**	**48.01**	**81**	P		**P**		**23 22 03.1**	**-0.1**		
TPNV				IAmb		IAmb		23 22 04.1			
	comp=Z,4.5nm,0.8s										
TPNV	**Topopah Spring**	**48.01**	**81**	P		**P**		**23 22 03.1**	**-0.1**		
TPNV				pmax		pmax					
	comp=Z,5.0nm,0.9s										
TPNV	**Topopah Spring**	**48.01**	**81**	P		**P**		**23 22 02.4**	**-0.8**		
	baz=310,SNR=5.3										
DUG	**Dugway, Tooele**	**48.01**	**75**	P		**P**		**23 22 03.4**	**+0.3**		
DUG				IAmb		IAmb		23 22 06.0			
	comp=Z,5.3nm,1.2s										
DUG	**Dugway, Tooele**	**48.01**	**75**	P		**P**		**23 22 03.4**	**+0.3**		
DUG				pmax		pmax					
	comp=Z,5.0nm,1.2s										
DUG	**Dugway, Tooele**	**48.01**	**75**	P		**P**		**23 22 02.4**	**-0.8**		
	baz=309										
GWY	**Greenwater Val**	**48.25**	**82**	P		**P**		**23 22 04.8**	**-0.2**		
GWY				IAmb		IAmb		23 22 08.0			
	comp=Z,3.1nm,0.8s										
PDAR	**Pinedale Array**	**48.34**	**71**	P		**P**		**23 22 04.8**	**-1.0**		
	comp=Z,1.6nm,0.8s,baz=305,slow=5.2,SNR=12										
PDAR				LR		LR		23 40 00.9			
	comp=Z,43nm,21.3s,baz=318,slow=33										
	comp=Z,1.6nm,0.8s										
PSUT	**Pine Spring**	**48.44**	**78**	P		**P**		**23 22 06.3**	**-0.2**		
PSUT				IAmb		IAmb		23 22 07.4			
	comp=Z,3.2nm,0.8s										
PRN	**Pahroc Range**	**48.44**	**80**	P		**P**		**23 22 06.4**	**0.0**		
PRN				IAmb		IAmb		23 22 11.6			
	comp=Z,4.7nm,0.9s										
LYN	**LuoYang**	**48.67**	**276**	⇑P		**P**		**23 22 08.5**	**+0.4**		
LYN				pmax		pmax					
	comp=Z,10.0nm,0.6s										
GSC	**Goldstone, Bar**	**48.75**	**83**	IAmb		IAmb		23 22 09.7			
	comp=Z,4.8nm,0.8s										
GSC	**Goldstone, Bar**	**48.75**	**83**	P		**P**		**23 22 07.4**	**-1.4**		
	baz=312,SNR=5.2										
CCUT	**Cedar City**	**49.37**	**78**	IAmb		IAmb		23 22 16.2			
	comp=Z,3.4nm,0.9s										
TMUT	**Trail Mountain**	**49.54**	**75**	IAmb		IAmb		23 22 16.7			
	comp=Z,4.1nm,0.9s										
RDMU	**Red Mountain**	**49.70**	**73**	P		**P**		**23 22 15.7**	**-0.5**		
RDMU				IAmb		IAmb		23 22 17.2			
	comp=Z,4.9nm,1.1s										
GMRC	**Granite Mounta**	**49.79**	**83**	P		**P**		**23 22 16.0**	**-0.8**		
	baz=312										
LCMT	**Little Creek M**	**49.79**	**79**	P		**P**		**23 22 16.2**	**-0.7**		
SRU	**San Rafael Swe**	**50.06**	**75**	P		**P**		**23 22 18.8**	**-0.1**		
SRU				IAmb		IAmb		23 22 24.1			
	comp=Z,3.5nm,1.0s										
SRU	**San Rafael Swe**	**50.06**	**75**	P		**P**		**23 22 18.8**	**-0.1**		
SRU				pmax		pmax					
	comp=Z,4.0nm,1.0s										
PFO	**Pinyon Flats O**	**50.09**	**84**	LR		LR		23 41 46.3			
	comp=Z,53nm,18.1s,baz=8.5,slow=34										
U15A	**North Rim**	**50.75**	**79**	P		**P**		**23 22 24.1**	**-0.2**		
XAN	**Xi'an**	**51.19**	**278**	⇑P		**P**		**23 22 27.5**	**+0.2**		
XAN				pP		pP		23 22 38.8	+1.3		
XAN				sP		sP		23 22 42.5	+0.9		
XAN				pmax		pmax					
	comp=Z,7.0nm,1.0s										
ULM	**Lac du Bonnet**	**51.25**	**55**	LR		LR		23 45 22.9			
	comp=Z,204nm,18.6s,baz=275,slow=38										
PV13	**Radium Mtn., P**	**51.70**	**75**	P		**P**		**23 22 31.1**	**-0.1**		
PV13				IAmb		IAmb		23 22 31.9			
	comp=Z,6.5nm,0.8s										
ZAA0	**Zalesovo Array**	**51.77**	**311**	P		**P**		**23 22 30.2**	**-1.1**		
ZALV	**Zalesovo Beam**	**51.77**	**311**	LR		LR		23 45 07.2			
	comp=Z,55nm,18.9s,baz=34,slow=37										
ZALV	**Zalesovo Beam**	**51.77**	**311**	P		**P**		**23 22 30.5**	**-0.8**		
ZALV	**Zalesovo Beam**	**51.77**	**311**	P		**P**		**23 22 30.5**	**-0.8**		
MVCO	**Mesa Verde**	**52.51**	**75**	P		**P**		**23 22 37.2**	**-0.2**		
	baz=312										
LZH	**Lanzhou**	**52.89**	**283**	*e*P		**P**		**23 22 38.0**	**-2.1**		
LZH				pmax		pmax					
	comp=Z,17nm,1.5s										
LZH				LR		LR					
	comp=Z,280nm,

ARU Arti 60.69 326 LR LR 23 52 14.8
comp=Z,90nm,19.3s,baz=39,slow=38
ARU Arti 60.69 326 P **P** **23 23 35.6 +0.7**
ARU Arti 60.69 326 *c i* P **P** **23 23 35.5 +0.6**
ARU 23 24 18.3
ARU 23 25 46.0
ARU S **S** **23 31 52.0 +3.3**
ARU pmax pmax
comp=Z,20nm,1.3s
SCHQ Schefferville 60.87 37 P **P** **23 23 36.6 +0.4**
comp=Z,13nm,1.0s,baz=350,slow=8.3,SNR=7.8
SCHQ LR LR 23 50 58.7
comp=Z,117nm,20.5s,baz=274,slow=37
comp=Z,13nm,1.0s
SCHQ Schefferville 60.87 37 P **P** **23 23 36.5 +0.4**
TX31 Lajitas Ar. Si 60.87 79 P **P** **23 23 36.2 -0.4**
TX31 IAmb IAmb 23 23 37.3
comp=Z,6.6nm,0.9s
TX32 Lajitas Array 60.88 79 P **P** **23 23 36.4 -0.3**
TXAR Lajitas Array 60.88 79 P **P** **23 23 36.2 -0.5**
comp=Z,1.9nm,0.8s,baz=301,slow=5.2,SNR=21
comp=Z,1.9nm,0.8s
PZH PanZhiHua 60.88 276 P **P** **23 23 37.0 +0.2**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,70nm,5.1s
HDIL Hopedale 61.15 60 P **P** **23 23 37.0 -1.2**
HDIL Hopedale 61.15 60 P **P** **23 23 37.3 -1.0**
baz=315
M44A Midewin, Midew 61.23 59 P **P** **23 23 37.2 -1.5**
U38A Gravette 61.27 67 P **P** **23 23 37.6 -1.5**
U38A IAmb IAmb 23 23 38.4
comp=Z,5.9nm,1.2s
VLDQ Val d'Or 61.57 47 P **P** **23 23 39.1 -1.8**
VLDQ IAmb IAmb 23 23 40.4
comp=Z,7.1nm,0.8s
DAV Davao City (W) 61.65 242 LR LR 23 47 33.0
comp=Z,21nm,19.9s,baz=328,slow=33
KIRV Kirov 61.84 332 *ce*P **P** **23 23 44.2 +1.7**
KLMR Klimovskoe 62.44 338 *e*P **P** **23 23 46.3 -0.3**
KLMR *e* 23 24 23.4
KLMR *e* 23 26 05.4
KLMR pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 62.44 338 *e*P **P** **23 23 46.3 -0.3**
KLMR AMP 23 23 49.2
comp=Z,21nm,1.2s
KLMR *e*PcP **PcP** **23 24 23.4 -2.3**
KLMR *e*PP **PP** **23 26 05.4 +1.9**
SFIN Lafayette 62.45 59 P **P** **23 23 46.9 -0.1**
SFIN Lafayette 62.45 59 P **P** **23 23 45.3 -1.7**
baz=316
FCAR Ozark Folk Cen 62.94 66 P **P** **23 23 48.7 -1.6**
FCAR IAmb IAmb 23 23 49.6
comp=Z,6.6nm,0.7s
MIAR Mount Ida 63.08 68 P **P** **23 23 50.5 -0.8**
MIAR IAmb IAmb 23 23 51.7
comp=Z,3.4nm,0.8s
MIAR Mount Ida 63.08 68 P **P** **23 23 50.5 -0.8**
MIAR pmax pmax
comp=Z,3.0nm,0.9s
MIAR Mount Ida 63.08 68 P **P** **23 23 50.4 -0.8**
baz=316
OLIL Olney 63.10 61 P **P** **23 23 50.4 -1.0**
HNR Honiara 63.10 199 LR LR 23 47 54.5
comp=Z,50nm,19.0s,baz=21,slow=33
SADO Sadowa 63.26 51 LR LR 23 51 39.2
comp=Z,160nm,20.9s,baz=356,slow=36
O48B Farmland 63.56 58 P **P** **23 23 53.0 -1.3**
baz=317
P48A Milroy 64.00 59 P **P** **23 23 56.6 -0.6**
833A Chaparral WMA, 64.18 77 P **P** **23 23 58.3 -0.3**
LATQ La Tuque 64.20 45 P **P** **23 23 57.8 -0.7**
LATQ IAmb IAmb 23 24 01.4
comp=Z,10nm,1.0s
TRQ Mont Tremblant 64.30 47 IAmb IAmb 23 24 00.1
comp=Z,13nm,1.3s
FINES FINESS Array B 64.50 345 P **P** **23 23 59.9 -0.3**
comp=Z,4.3nm,0.9s,baz=100,slow=5.8,SNR=6.6
FINES LR LR 23 57 27.4
comp=Z,30nm,18.8s,baz=30,slow=41
comp=Z,4.3nm,0.9s
FINES FINESS Array B 64.50 345 P **P** **23 23 59.5 -0.6**
FINES FINESS Array B 64.50 345 *i* P **P** **23 24 01.7 +1.5**
FINES pmax pmax
comp=Z,3.0nm,0.9s
AAK Ala-Archa 64.54 307 P **P** **23 24 00.4 -0.5**
AAK IAmb IAmb 23 24 02.4
comp=Z,5.6nm,0.9s
AAK Ala-Archa 64.54 307 *c i* P **P** **23 24 01.7 +0.7**
AAK pmax pmax
comp=Z,6.0nm,0.9s
ACSO Alum Creek Sta 64.70 57 P **P** **23 24 01.8 0.0**
baz=318
ERPA Erie 64.81 53 P **P** **23 24 02.5 -0.1**
baz=318
PECO Prince Edward 64.90 50 P **P** **23 24 02.4 -0.7**
PECO IAmb IAmb 23 24 05.0
comp=Z,7.6nm,0.8s
T47A Sharon Grove 64.91 62 P **P** **23 24 02.4 -0.8**
LSA Lhasa 64.94 287 P **P** **23 24 04.4 +0.2**
LSA IAmb IAmb 23 24 06.4
comp=Z,8.7nm,0.8s
LSA Lhasa 64.94 287 P **P** **23 24 04.4 +0.2**
LSA pmax pmax
comp=Z,9.0nm,0.8s
M53A WI Miller and 64.98 54 P **P** **23 24 03.4 -0.2**
M53A WI Miller and 64.98 54 P **P** **23 24 03.2 -0.4**
baz=318
J55A Hilton 65.01 51 P **P** **23 24 02.7 -1.1**
ALLY Alegheny Colle 65.09 54 P **P** **23 24 03.6 -0.8**
WVT Waverly 65.15 63 P **P** **23 24 03.4 -1.4**
baz=317
WVNY West Valley, N 65.28 52 P **P** **23 24 05.7 +0.1**
MMNY Mt. Morris Dam 65.37 52 P **P** **23 24 05.4 -0.7**
O52A Adamsville 65.38 56 P **P** **23 24 05.6 -0.6**
Q51A Peebles 65.41 58 P **P** **23 24 06.4 -0.1**
R50A Paris 65.45 59 P **P** **23 24 06.9 +0.2**
R50A IAmb IAmb 23 24 08.9
comp=Z,14nm,1.5s
J56A Wolcott 65.46 51 P **P** **23 24 06.0 -0.7**
LONY Lake Ozonia 65.51 48 P **P** **23 24 05.6 -1.4**
baz=320
P52A Corning 65.59 56 P **P** **23 24 07.2 -0.4**
baz=318
AKTO Aktyubinsk 65.67 322 LR LR 23 55 22.7
comp=Z,121nm,18.3s,baz=36,slow=38
ABKAR Akbulak array 65.88 320 P **P** **23 24 09.7 +0.3**
ABKAR IAmb IAmb 23 24 11.6
comp=Z,11nm,1.4s
M55A Ridgway 65.91 53 P **P** **23 24 09.4 -0.2**
U49A Red Boiling Sp 65.98 61 P **P** **23 24 09.5 -0.7**
U49A IAmb IAmb 23 24 17.9
comp=Z,10nm,1.4s
L56A Greenwood 65.99 52 P **P** **23 24 10.2 0.0**
CLTN Cedars of Leba 65.99 62 P **P** **23 24 10.1 -0.1**
CLTN IAmb IAmb 23 24 11.3
comp=Z,8.0nm,0.8s
Q52A Bidwell 66.02 57 P **P** **23 24 09.2 -1.2**
KK31 Karatay Array 66.11 310 P **P** **23 24 11.0 +0.1**
KK31 IAmb IAmb 23 24 12.0
comp=Z,6.4nm,0.9s
KK31 Karatay Array 66.11 310 P **P** **23 24 11.0 +0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 66.11 310 P **P** **23 24 10.9 0.0**
KKAR Karatay Array 66.11 310 P **P** **23 24 10.6 -0.3**
KKAR IAmb IAmb 23 24 12.0
comp=Z,6.4nm,0.9s
KKAR Karatay Array 66.11 310 P **P** **23 24 10.9 0.0**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
T50A Nancy 66.11 60 P **P** **23 24 10.3 -0.7**
T50A IAmb IAmb 23 24 11.5
comp=Z,4.4nm,0.8s
KSH Kashi 66.13 304 P **P** **23 24 15.0 +3.7**
KSH pP pP 23 24 21.5 +0.2
KSH pmax pmax
comp=Z,10.0nm,0.9s
CRAI Chiangrai 66.36 273 P **P** **23 24 12.8 0.0**
CRAI IAmb IAmb 23 24 14.4
comp=Z,4.6nm,0.8s
NC204 NORSAR Array S 66.45 353 P **P** **23 24 13.5 +0.6**
NC303 NORSAR Array S 66.46 353 P **P** **23 24 13.8 +1.0**
NC303 IAmb IAmb 23 24 15.9
comp=Z,11nm,1.1s
NB201 NORSAR Array S 66.64 353 P **P** **23 24 14.3 +0.2**
NB2 NORSAR Subarra 66.65 353 P **P** **23 24 13.9 -0.2**
comp=Z,1.1nm,0.7s,baz=8.4,slow=6.5
NOA NORSAR Array B 66.65 353 P **P** **23 24 14.0 -0.1**
comp=Z,2.4nm,0.8s,baz=9.5,slow=6.4,SNR=14
NOA LR LR 23 52 42.7
comp=Z,23nm,20.6s,baz=350,slow=35
comp=Z,2.4nm,0.8s
R53A Hurricane 66.65 57 P **P** **23 24 13.8 -0.7**
BINY Binghamton 66.70 51 P **P** **23 24 14.0 -0.8**
baz=320
M57A Sunshine Farm, 66.81 52 P **P** **23 24 15.2 -0.2**
SSPA Standing Stone 66.97 53 P **P** **23 24 16.2 -0.2**
SSPA Standing Stone 66.97 53 P **P** **23 24 16.2 -0.2**
baz=320
LBNH Lisbon 67.01 47 P **P** **23 24 16.5 -0.1**
baz=321
TZTN Tazewell 67.15 60 P **P** **23 24 17.6 -0.1**
baz=319
N58A Sunbury 67.39 52 P **P** **23 24 18.6 -0.5**
SHL Shillong 67.56 283 P **P** **23 24 19.9 -0.7**
SHL Shillong 67.56 283 P **P** **23 24 19.9 -0.7**
SHL pmax pmax
comp=Z,13nm,1.0s
BELG Belogornoye 67.64 329 LR LR 23 56 49.6
comp=Z,52nm,18.9s,baz=335,slow=39
BELG Belogornoye 67.64 329 *c i* P **P** **23 24 21.4 +1.0**
BELG pmax pmax
comp=Z,5.0nm,1.1s
TKL Tuckaleechee C 67.70 60 LR LR 23 55 39.4
comp=Z,151nm,18.3s,baz=328,slow=38
LUPA Lehigh Univers 68.23 52 P **P** **23 24 24.1 -0.3**
OBN Obninsk 68.30 337 *e*P **P** **23 24 24.5 0.0**
OBN *e* 23 26 55.3
OBN *e*PPP PPP 23 28 33.6
OBN pmax pmax
comp=Z,9.0nm,0.6s
OBN MLR MLR
comp=Z,74nm,19.0s
CHTO Chiang Mai 68.31 273 P **P** **23 24 24.0 -1.2**
CHTO IAmb IAmb 23 24 26.8
comp=Z,4.1nm,0.7s
CHTO Chiang Mai 68.31 273 P **P** **23 24 24.0 -1.2**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 68.58 273 P **P** **23 24 27.4 +0.6**
comp=Z,3.7nm,0.7s,baz=27,slow=6.9,SNR=17
CMAR LR LR 23 55 20.6
comp=Z,25nm,20.2s,baz=225,slow=37
comp=Z,3.7nm,0.7s
CMAR Chiang Mai Arr 68.58 273 P **P** **23 24 27.2 +0.3**
CMAR Chiang Mai Arr 68.58 273 P **P** **23 24 27.2 +0.3**
T57A Hurt 69.06 57 P **P** **23 24 29.0 -0.6**
T57A IAmb IAmb 23 24 30.6
comp=Z,5.7nm,0.8s
GAR Garm 69.36 307 P **P** **23 24 31.7 +0.1**
GUN Gumba 69.36 289 *e*P **P** **23 24 32.9 +0.8**
comp=Z,51nm,0.8s
JIRN Jiri 69.37 289 *e*P **P** **23 24 33.0 +0.9**
comp=Z,46nm,0.8s
KMSC Kings Mountain 69.39 59 P **P** **23 24 30.8 -0.9**
KMSC Kings Mountain 69.39 59 P **P** **23 24 30.4 -1.2**
baz=320
MSVF Nonsavu 69.55 179 LR LR 23 50 41.6
comp=Z,27nm,19.8s,baz=45,slow=32
GOGA Godfrey 69.56 62 P **P** **23 24 32.4 -0.3**
baz=320
HODGE Hodges 69.59 60 P **P** **23 24 32.1 -0.8**
HODGE IAmb IAmb 23 24 33.4
comp=Z,6.4nm,0.9s
RAMN Ramite 69.66 288 *e*P **P** **23 24 34.3 +0.5**
comp=Z,57nm,0.8s
PKI Pulchoki 69.89 289 *e*P **P** **23 24 35.6 +0.3**
comp=Z,54nm,1.2s
PKIN Phulchoki 69.90 289 *e*P **P** **23 24 35.7 +0.4**
comp=Z,22nm,0.8s
GKN Gorkha 70.02 290 *e*P **P** **23 24 36.1 +0.2**
comp=Z,34nm,0.9s
DMN Daman 70.04 289 *e*P **P** **23 24 36.9 +0.8**
comp=Z,9.4nm,0.5s
JSC Jenkinsville 70.08 60 P **P** **23 24 34.9 -1.0**
JSC IAmb IAmb 23 24 36.4
comp=Z,7.2nm,0.9s
JSC Jenkinsville 70.08 60 P **P** **23 24 34.9 -1.0**
JSC pmax pmax
comp=Z,7.0nm,0.9s
W57A Gilead 70.09 58 P **P** **23 24 35.4 -0.6**
W57A IAmb IAmb 23 24 36.5
comp=Z,10.0nm,1.1s
CHGR Chuyangaron 70.19 308 P **P** **23 24 36.5 -0.2**
CHGR Chuyangaron 70.19 308 P **P** **23 24 36.5 -0.2**
CHGR pmax pmax
comp=Z,24nm,1.0s
DANN Dangsing 70.26 291 *e*P **P** **23 24 38.1 +0.6**
comp=Z,39nm,0.9s
TAOE Nuku Hiva Isla 70.79 135 *e*LR LR 23 46 13.9
comp=Z,139nm,25.6s
NIL Nilore 72.02 302 P **P** **23 24 47.5 -0.2**
NIL IAmb IAmb 23 24 49.4
comp=Z,11nm,0.8s
NIL Nilore 72.02 302 P **P** **23 24 47.5 -0.2**
NIL pmax pmax
comp=Z,11nm,0.9s
ESK Eskdalemuir 72.94 0 P **P** **23 24 52.9 +0.1**
ESK Eskdalemuir 72.94 0 P **P** **23 24 52.9 +0.1**
ESK pmax pmax
comp=Z,20nm,1.4s
KBL Kabul 73.48 305 P **P** **23 24 55.3 -1.4**
KBL IAmb IAmb 23 24 57.4
comp=Z,11nm,0.9s
KBL Kabul 73.48 305 P **P** **23 24 55.3 -1.4**
KBL pmax pmax
comp=Z,11nm,1.0s
AKASG Malin Array Be 74.07 340 P **P** **23 24 59.7 +0.2**
comp=Z,3.1nm,0.8s,baz=27,slow=6.5,SNR=16
comp=Z,3.1nm,0.8s
AKASG Malin Array Be 74.07 340 *i* P **P** **23 25 00.0 +0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 74.07 340 P **P** **23 24 58.7 -0.8**
AKBB IAmb IAmb 23 25 01.2
comp=Z,13nm,1.3s
AKBB Malin Array Si 74.07 340 ⇑ *i* P **P** **23 24 59.8 +0.3**
AKBB pmax pmax
comp=Z,11nm,1.3s
DZM Mont Dzumac 74.48 191 LR LR 23 50 29.3
comp=Z,74nm,20.7s,baz=34,slow=30
DZM Mont Dzumac 74.48 191 *e*LR LR 23 47 54.6
comp=Z,153nm,28.3s
KAPI Kappang 74.89 241 LR LR 23 54 41.0
comp=Z,34nm,20.7s,baz=72,slow=33
PPT Papeete 75.12 147 LR LR 23 53 24.1
comp=Z,40nm,21.0s,baz=348,slow=32
PPT2 Papeete2 75.14 147 *e*SS SS 23 39 32.0 -0.3
comp=Z,25nm,22.2s
PPT2 *e*LR LR 23 48 15.1
comp=Z,55nm,23.8s
GEYT Alibeck 75.90 315 P **P** **23 25 11.3 +0.9**
comp=Z,4.2nm,1.0s,baz=298,slow=4.4,SNR=7.2
GEYT LR LR 00 01 52.3
comp=Z,104nm,18.1s,baz=51,slow=38
comp=Z,4.2nm,1.0s
GEYT Alibeck 75.90 315 P **P** **23 25 10.3 0.0**
GEYT IAmb IAmb 23 25 15.8
comp=Z,9.4nm,1.4s
GYA0B ALIBECK ARRAY 75.90 315 P **P** **23 25 10.5 +0.1**
GYA0B IAmb IAmb 23 25 15.8
comp=Z,13nm,1.4s
CLL Collm 76.11 350 *i* P P 23 25 19.3 +8.0
SORM Soroca 76.68 339 ⇑ P **P** **23 25 14.9 +0.4**
SORM Soroca 76.68 339 ⇑ P **P** **23 25 14.9 +0.4**
NCK Nalchik 76.73 327 ⇑ *e*P **P** **23 25 15.9 +0.9**
NCK pmax pmax
comp=Z,8.0nm,0.9s
KBZ Khabaz 76.75 328 ⇑ *e*P **P** **23 25 15.1 +0.1**
KBZ pmax pmax
comp=Z,4.0nm,1.1s
CTA Charters Tower 76.85 210 LR LR 23 55 00.6
comp=Z,45nm,21.7s,baz=80,slow=32
HRA Herat 76.93 310 P **P** **23 25 15.6 -0.9**
HRA IAmb IAmb 23 25 18.5
comp=Z,7.8nm,1.0s
KOLS Kolonicke sedl 77.12 343 *e*P **P** **23 25 18.8 +1.7**
KOLS pmax pmax
comp=Z,8.0nm,1.3s
KOLS Kolonicke sedl 77.12 343 *e*P **P** **23 25 18.8 +1.7**
CRVS Cervenica-Dubn 77.29 344 *e*P **P** **23 25 18.1 +0.1**
CRVS pmax pmax
comp=Z,14nm,1.5s
CRVS Cervenica-Dubn 77.29 344 *e*P **P** **23 25 18.1 +0.1**
GUDG Gudauri 77.35 326 P **P** **23 25 19.0 +0.3**
GUDG IAmb IAmb 23 25 22.8
comp=Z,10nm,1.0s
GUDG Gudauri 77.35 326 P **P** **23 25 19.0 +0.3**
GUDG pmax pmax
comp=Z,10.0nm,1.0s
LANS Liptovska Anna 77.37 345 *e*P **P** **23 25 20.2 +1.7**
LANS pmax pmax
comp=Z,3.0nm,0.7s
LANS Liptovska Anna 77.37 345 *e*P **P** **23 25 20.2 +1.7**
BUR08 Bucovina Ar. S 77.81 341 P **P** **23 25 21.5 +0.5**
BUR08 IAmb IAmb 23 25 24.2
comp=Z,7.7nm,1.0s
BURAR Bucovina Array 77.83 341 ⇓ P **P** **23 25 21.3 +0.1**
BURAR Bucovina Array 77.83 341 IAmb IAmb 23 25 24.6
comp=Z,8.4nm,0.8s
BURAR Bucovina Array 77.83 341 ⇓ P **P** **23 25 21.3 +0.1**
VYHS Vyhne 78.11 346 *e*P **P** **23 25 23.7 +1.1**
VYHS pmax pmax
comp=Z,3.0nm,1.3s
VYHS Vyhne 78.11 346 *e*P **P** **23 25 23.7 +1.1**
BIZ Bicaz 78.30 340 ⇑ P **P** **23 25 25.1 +1.4**
DRGR 79.10 343 ⇓ P **P** **23 25 29.1 +0.9**
DRGR 79.10 343 ⇓ P **P** **23 25 29.1 +0.9**
GNI Garni 79.31 325 LR LR 00 05 27.9
comp=Z,91nm,19.1s,baz=21,slow=39
COVR Voineasa-Covas 79.32 340 ⇑ P **P** **23 25 31.4 +2.0**
MLR Muntele Rosu 79.71 340 ⇓ P **P** **23 25 33.9 +2.3**
MLR Muntele Rosu 79.71 340 P **P** **23 25 32.2 +0.7**
MLR IAmb IAmb 23 25 34.4
comp=Z,7.5nm,1.2s
MLR Muntele Rosu 79.71 340 ⇓ P **P** **23 25 33.9 +2.3**
SIRR Siria 79.80 343 ⇑ P **P** **23 25 32.1 +0.2**
VOIR 79.95 341 ⇓ P **P** **23 25 34.9 +2.1**
VOIR 79.95 341 ⇓ P **P** **23 25 34.9 +2.1**
CLF Chambon-Foret 80.15 357 P **P** **23 25 34.0 +0.3**
BZS Buzias 80.44 343 ⇑ P **P** **23 25 36.4 +1.1**
BZS Buzias 80.44 343 ⇑ P **P** **23 25 36.4 +1.1**
GZR Gura Zlata 80.44 342 ⇑ P **P** **23 25 36.6 +1.2**
GZR Gura Zlata 80.44 342 ⇑ P **P** **23 25 36.6 +1.2**
TBI Tubuai 80.55 149 *e*LR LR 23 50 45.0
comp=Z,70nm,25.2s
WRA Warramunga Arr 80.96 221 P **P** **23 25 38.5 +0.3**
comp=Z,2.0nm,0.6s,baz=35,slow=6.3,SNR=16
WRA LR LR 00 00 30.1
comp=Z,20nm,18.6s,baz=221,slow=35
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 80.96 221 *i* P **P** **23 25 39.2 +0.9**
WRA pmax pmax
comp=Z,2.0nm,0.6s
TEOL Teolo 82.13 350 P **P** **23 25 45.0 +0.7**
BNI Bardonecchia 82.88 353 P **P** **23 25 48.8 +0.4**
BNI IAmb IAmb 23 25 51.8
comp=Z,6.6nm,1.1s
BNI Bardonecchia 82.88 353 P **P** **23 25 48.8 +0.4**
BNI pmax pmax
comp=Z,7.0nm,1.1s
BRTR Keskin Array B 83.24 333 P **P** **23 25 50.5 +0.2**
comp=Z,1.4nm,0.9s,baz=41,slow=3.9,SNR=4.6
comp=Z,1.4nm,0.9s
OSSC Osservatorio P 83.99 350 P **P** **23 25 54.4 +0.4**
ASAR Alice Springs 84.48 219 P **P** **23 25 57.6 +1.0**
comp=Z,1.1nm,0.7s,baz=18,slow=5.2,SNR=10
ASAR LR LR 00 02 47.0
comp=Z,27nm,18.1s,baz=356,slow=35
comp=Z,1.1nm,0.7s
ASAR Alice Springs 84.48 219 P **P** **23 25 56.3 -0.2**
ASAR Alice Springs 84.48 219 P **P** **23 25 56.3 -0.2**
ESDC Sonseca Array 88.58 1 P **P** **23 26 16.8 +0.1**
comp=Z,1.0nm,0.9s,baz=352,slow=4.3,SNR=4.4
comp=Z,1.0nm,0.8s
STKA Stephens Creek 89.31 210 P **P** **23 26 21.7 +1.9**
comp=Z,2.7nm,0.7s,baz=1.4,slow=8.3,SNR=5.7
comp=Z,2.7nm,0.7s
IDI Anoyia 89.69 338 LR LR 00 12 31.5
comp=Z,23nm,18.2s,baz=293,slow=40
SJG San Juan 91.05 58 LR LR 00 07 17.8
comp=Z,49nm,21.9s,baz=256,slow=36
EIL Elat 92.15 328 LR LR 00 13 54.3
comp=Z,36nm,18.4s,baz=80,slow=39
RPZ Rata Peaks 95.61 185 LR LR 00 05 47.5
comp=Z,51nm,19.1s,baz=210,slow=33
BOSA Boshof 148.68 308 PKPbc **PKiKP** **23 33 11.8 -0.5**
comp=Z,4.6nm,1.1s,baz=9.2,slow=6.1,SNR=5.6
VNA3 Neumayer Olymp 160.54 173 PKPab **PKPab** **23 34 07.8 +4.1**
VNA3 Neumayer Olymp 160.54 173 PKPdf **PKPdf** **23 33 23.9 +1.9**
VNA2 Neumayer--Watz 161.00 175 PKPab **PKPab** **23 34 06.6 +1.0**
baz=184,slow=3.8

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*BGR **25** 23:49:51.5±4.4, 42°.29N×13°.64E, h5km, ML3.8/12, Error ellipse: s-maj=81.2km s-min=16.7km az=166.0*
*BEO **25** 23:49:51.4±2.2, 42°.67N×12°.17E, h80km±5km, ML3.8/9*
*PRU **25** 23:49:54.3±0.0, 42°.81N×13°.17E, h0km*
*IDC **25** 23:49:55.6±1.2, 42°.89N×13°.11E, h0km, mb3.9/6, mbtmp3.8/9, ML3.6/3, MS2.9/8, Error ellipse: s-maj=22.7km s-min=14.0km az=86.0*
*ROM **25** 23:49:55.6±0.0, 42°.805N±0°.002×13°.234E±0°.004, h9km, ML3.7/79, Error ellipse: s-maj=0.3km s-min=0.1km az=253.0*
*PDG **25** 23:49:56.2±0.6, 42°.82N×13°.24E, h11km, ML3.7/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*LDG **25** 23:49:56.2±0.1, 42°.74N×13°.14E, h8km, Md3.4/2, Ml3.4/26, Error ellipse: s-maj=5.2km s-min=3.0km az=45.0*
*STR **25** 23:50:00.4±1.3, 43°N±6°×1°3E±1°1, h10km, mb3.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=94.1, preliminary*

ISC 25 23:49:56.1±0.7, **42°.80N**±0°.01×**13°.21E**±0°.02, **h10**km±3km, **n415**, σ2s**08**/452, **mb4.0**/4, **33C-57D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
T1242	**Castelluccio d**	**0.03**	**357**	⇑P		**Pg**	**23 49 57.1**	**-0.9**
T1242				S		**Sg**	**23 49 58.7**	**-0.8**
T1214	**Arquata del Tr**	**0.04**	**178**	⇑P		**Pg**	**23 49 57.5**	**-0.6**
T1214				S		**Sg**	**23 49 58.7**	**-0.9**
NRCA	**Norcia**	**0.08**	**296**	⇑P		**Pg**	**23 49 58.2**	**-0.2**
NRCA				S		**Sg**	**23 49 59.9**	**-0.2**
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
NRCA					AML	AML		
T1213	**Norcia, Frazio**	**0.10**	**218**	⇑P		**Pg**	**23 49 58.6**	**0.0**
T1202	**Accumoli, Fraz**	**0.10**	**172**	⇑P		**Pg**	**23 49 58.6**	**-0.1**
T1202				S		**Sg**	**23 50 01.1**	**+0.5**
MC2	**Monte Cornacci**	**0.11**	**354**	⇑P		**Pg**	**23 49 58.6**	**-0.4**
MC2				S		**Sg**	**23 50 00.9**	**-0.2**
T1212	**Cascia, Frazio**	**0.13**	**248**	⇑P		**Pg**	**23 49 59.4**	**+0.3**
T1212				S		**Sg**	**23 50 02.5**	**+1.3**
MMO1	**Montemonaco**	**0.13**	**42**	⇑P		**Pg**	**23 49 58.6**	**-0.6**
MMO1				S		**Sg**	**23 50 00.7**	**-0.7**
MMO1					AML	AML		
	comp=E,9695μm,1.6s							
MMO1					AML	AML		
	comp=N,18500μm,1.0s							
MMO1					AML	AML		
	comp=N,14650μm,0.3s							
MMO1					AML	AML		
MMO1					AML	AML		
MMO1					AML	AML		
	comp=N,18550μm,1.0s							
MMO1					AML	AML		
MMO1					AML	AML		
	comp=E,9700μm,1.6s							
T1218	**Civita (PG)**	**0.15**	**207**	⇑P		**Pg**	**23 49 59.6**	**+0.2**
T1218				S		**Sg**	**23 50 03.0**	**+1.3**
T1201	**Domo (RI)**	**0.15**	**167**	⇓P		**Pg**	**23 49 59.7**	**+0.3**
T1201				S		**Sg**	**23 50 02.8**	**+1.1**
T1204	**Amatrice, Fraz**	**0.15**	**147**	⇓P		**Pg**	**23 49 59.4**	**-0.1**
T1204				S		**Sg**	**23 50 02.3**	**+0.5**
T1241	**Roccafluvione,**	**0.17**	**71**	⇑P		**Pg**	**23 49 59.5**	**-0.3**
T1241				S		**Sg**	**23 50 02.5**	**0.0**
FEMA	**Monte Fema**	**0.20**	**325**	⇓P		**Pg**	**23 50 00.5**	**+0.2**
FEMA				S		**Sg**	**23 50 04.0**	**+0.8**
FEMA					AML	AML		
	comp=E,54200μm,0.4s							

FEMA AML AML
comp=N,45150µm,1.5s
FEMA AML AML
comp=E,54200µm,0.4s
T1243 Rocca Santa Ma 0.21 120 ⇓P Pg 23 50 00.1 -0.3
T1243 S Sg 23 50 03.5 +0.2
T1243 AML AML
T1243 AML AML
LNSS Leonessa 0.23 212 ⇑P Pg 23 50 01.2 +0.3
LNSS S Sg 23 50 05.6 +1.5
LNSS AML AML
comp=N,50500µm,0.4s
LNSS AML AML
comp=E,58500µm,0.7s
T1215 Vallo di Nera, 0.25 271 ⇑P Pg 23 50 01.5 +0.4
T1215 S Sg 23 50 06.1 +1.5
FDMO Fiordimonte 0.25 340 ⇑P Pg 23 50 01.1 -0.1
FDMO S Sg 23 50 05.5 +0.8
FDMO AML AML
comp=N,21550µm,0.8s
FDMO AML AML
comp=E,20050µm,0.3s
GUMA Gualdo di Mace 0.28 20 ⇑P Pg 23 50 01.9 +0.1
GUMA S Sg 23 50 06.8 +1.3
GUMA AML AML
GUMA AML AML
GUMA AML AML
GUMA AML AML
comp=E,92400µm,0.4s
GUMA AML AML
CSP1 Cessapalombo 0.29 360 ⇑P Pg 23 50 01.8 -0.2
CSP1 S Sg 23 50 06.7 +0.8
RM33 Pellescritta (0.29 179 ⇓P Pg 23 50 02.1 +0.1
RM33 S Sg 23 50 07.3 +1.4
RM33 AML AML
comp=E,29700µm,1.0s
RM33 AML AML
comp=N,28700µm,1.6s
RM33 AML AML
comp=E,29500µm,0.3s
RM33 AML AML
comp=N,28750µm,1.6s
RM33 AML AML
comp=E,29700µm,1.0s
RM33 AML AML
comp=N,28700µm,1.6s
RM33 AML AML
comp=N,28650µm,1.6s
RM33 AML AML
comp=E,29550µm,0.3s
CESI CESI - Serrava 0.30 313 ⇓P Pg 23 50 02.3 +0.1
CESI S Sg 23 50 07.5 +1.3
CESI AML AML
comp=E,22600µm,1.3s
CESI AML AML
comp=N,37500µm,0.4s
CAMP Campotosto 0.30 150 ⇓P Pg 23 50 01.9 -0.3
CAMP S Sg 23 50 06.8 +0.6
CAMP AML AML
comp=E,13700µm,0.4s
CAMP AML AML
comp=N,17300µm,0.7s
TERO Teramo 0.34 121 ⇓P Pg 23 50 02.5 -0.4
TERO S Sg 23 50 07.8 +0.4
TERO AML AML
comp=E,32550µm,0.2s
TERO AML AML
comp=E,35250µm,0.2s
TERO AML AML
comp=E,32600µm,0.2s
TERO AML AML
comp=N,39400µm,0.5s
TERO AML AML
comp=N,42900µm,0.5s
T1211 Morro Reatino 0.37 224 ⇑P Pg 23 50 03.6 +0.1
T1211 S Sb 23 50 10.4 -0.3
OFFI Offida 0.38 69 ⇑P Pg 23 50 04.0 +0.5
OFFI AML AML
comp=N,39450µm,0.7s
OFFI AML AML
comp=E,43650µm,0.9s
MNTP Montappone 0.39 30 ⇑P Pg 23 50 04.0 +0.3
MNTP AML AML
comp=N,26800µm,1.3s
MNTP AML AML
comp=E,28350µm,0.3s
ARRO Arrone 0.39 236 ⇑P Pg 23 50 04.0 +0.2
ARRO AML AML
comp=E,9005µm,0.2s
ARRO AML AML
comp=N,9645µm,0.5s
ARRO AML AML
comp=E,9010µm,0.2s
MDAR Monte D'Aria 0.40 353 P Pg 23 50 03.7 -0.1
MDAR S Sg 23 50 10.1 +1.0
MDAR AML AML
comp=E,19700µm,1.5s
MDAR AML AML
comp=N,30750µm,1.3s
MDAR AML AML
comp=E,19700µm,1.5s
SEF1 Sefro 0.40 331 P Pg 23 50 03.7 -0.1
SEF1 S Sb 23 50 10.6 -0.7
SEF1 AML AML
comp=E,23100µm,0.3s
SEF1 AML AML
comp=N,24950µm,0.3s
SEF1 AML AML
comp=N,24950µm,0.2s
SEF1 AML AML
comp=E,23100µm,0.3s
PIO1 Pioraco 0.41 337 P Pg 23 50 04.1 -0.1
PIO1 S Sg 23 50 10.9 +1.3
PIO1 AML AML
comp=E,9935µm,0.6s
PIO1 AML AML
comp=E,9950µm,0.6s
PIO1 AML AML
comp=N,18100µm,0.8s
SSM1 San Severino M 0.43 357 P Pg 23 50 04.3 -0.1
SSM1 S Sb 23 50 11.6 -0.7
FIU1 Fiuminata 0.44 333 P Pg 23 50 04.7 +0.1
FIU1 S Sb 23 50 11.9 -0.6
FIU1 AML AML
comp=E,7060µm,0.5s
FIU1 AML AML
comp=N,9275µm,0.3s
FIU1 AML AML
comp=E,7055µm,0.5s
FIU1 AML AML
comp=N,9250µm,0.3s
GIGS Gran Sasso 0.44 142 ⇓P Pg 23 50 04.0 -0.7
GIGS S Sg 23 50 10.9 +0.4
GIGS AML AML
comp=E,3510µm,1.0s
GIGS AML AML
comp=N,2595µm,1.1s
GAG1 Gagliole 0.45 347 P Pg 23 50 04.8 0.0
GAG1 AML AML
comp=N,29150µm,0.4s
GAG1 AML AML
comp=N,29100µm,0.5s
GAG1 AML AML
comp=E,39650µm,0.3s
AQU L'Aquila 0.47 162 ⇓P Pg 23 50 04.9 -0.3
AQU AML AML
comp=E,10200µm,1.3s
AQU AML AML
comp=N,10345µm,1.6s
AQU AML AML
comp=E,9485µm,1.3s
AQU AML AML
comp=N,10340µm,1.6s
ASSB Assisi San Ben 0.47 301 ⇓P Pg 23 50 05.2 0.0
ASSB AML AML
comp=E,7625µm,0.5s
ASSB AML AML
comp=N,9340µm,0.7s
MTL1 Matelica 0.48 343 P Pg 23 50 05.4 0.0
MTL1 AML AML
comp=E,23650µm,0.5s
MTL1 AML AML
comp=N,25850µm,0.9s
MTL1 AML AML
comp=E,23600µm,0.5s
SNTG Esanatoglia 0.49 337 ⇓P Pg 23 50 05.5 -0.2
SNTG AML AML
comp=E,906µm,1.0s
SNTG AML AML
comp=N,951µm,0.7s
SNTG AML AML
comp=E,7615µm,1.0s
SNTG AML AML
comp=N,7525µm,0.7s
SNTG AML AML
comp=E,906µm,1.0s
CESX Cesi 0.50 248 ⇑P Pg 23 50 05.7 -0.1
CESX AML AML
comp=N,7215µm,1.2s
CESX AML AML
comp=E,7895µm,0.6s
TRE1 Treia 0.52 9 P Pg 23 50 06.4 +0.2
TRTR Tortoreto Alta 0.52 89 P Pb 23 50 07.0 -0.3
TRTR AML AML
comp=E,53750µm,0.5s
TRTR AML AML
comp=N,47900µm,0.8s
EL6 Elcito 0.53 352 ⇑P Pg 23 50 06.2 -0.3
EL6 AML AML
comp=E,14900µm,0.3s
EL6 AML AML
comp=N,13250µm,1.1s
EL6 AML AML
comp=E,14950µm,0.3s
EL6 AML AML
comp=N,13265µm,1.1s
FIAM Fiamignano 0.54 187 ⇓P Pg 23 50 06.3 -0.2
FIAM AML AML
comp=E,12100µm,0.3s
FIAM AML AML
comp=N,9055µm,1.0s
ATCC AVT- Casa Cast 0.57 313 ⇓P Pg 23 50 07.0 0.0
ATCC AML AML
comp=E,12400µm,1.4s
ATCC AML AML
comp=N,10145µm,0.5s
CADA Capodarco di F 0.57 46 P Pb 23 50 08.1 0.0
CING Cingoli 0.57 359 ⇑P Pg 23 50 06.9 -0.4
CING AML AML
comp=N,6750µm,0.2s
CING AML AML
comp=E,10280µm,1.1s
FOSV Fossato di Vic 0.59 327 ⇓P Pg 23 50 07.3 -0.2
FOSV AML AML
comp=E,16950µm,0.4s
FOSV AML AML
comp=N,17300µm,0.3s
FAGN Fagnano 0.60 152 P Pg 23 50 07.2 -0.5
FAGN AML AML
comp=E,11205µm,0.5s
FAGN AML AML
comp=N,13050µm,0.5s
CIMA Civitanova Mar 0.61 34 P Pg 23 50 08.4 +0.5
VCEL Villa Celiera 0.62 131 ⇓P Pg 23 50 07.7 -0.3
VCEL AML AML
comp=E,9325µm,0.5s
VCEL AML AML
comp=N,9045µm,1.6s
VCEL AML AML
comp=E,9330µm,0.5s
PP3 Marolino 0.65 27 P Pg 23 50 08.3 -0.3
PP3 AML AML
comp=E,34500µm,0.5s
PP3 AML AML
comp=N,37400µm,1.4s
PP3 AML AML
comp=N,38650µm,1.4s
PP3 AML AML
comp=E,34600µm,0.5s
MMUR Monte Murano 0.66 347 P Pg 23 50 08.7 -0.1
MURB Monte Urbino 0.68 313 ⇓P Pg 23 50 09.1 -0.2
MURB AML AML
comp=E,16000µm,0.3s
MURB AML AML
comp=E,16900µm,0.3s
MURB AML AML
comp=N,15000µm,1.3s
MURB AML AML
comp=N,13250µm,1.3s
SSFR Montelago di S 0.71 334 P Pg 23 50 09.3 -0.4
SSFR AML AML
comp=N,12500µm,0.3s
SSFR AML AML
comp=N,10450µm,0.3s
SSFR AML AML
comp=N,12500µm,0.3s
SSFR AML AML
comp=E,14200µm,0.7s
SSFR AML AML
comp=E,14450µm,1.3s
T0110 Collepietro 0.71 143 ⇓P Pg 23 50 09.0 -0.9
T0110 AML AML
comp=N,9765µm,1.6s
T0110 AML AML
comp=E,11500µm,0.6s
ARVD Arcevia 0.72 345 P Pg 23 50 09.5 -0.5
ARVD AML AML
comp=E,4030µm,0.4s
ARVD AML AML
comp=N,2850µm,0.5s
ATSC Scheggia e Pas 0.73 329 ⇓P Pg 23 50 09.7 -0.5
ATFO Monte Foce - G 0.73 321 ⇓P Pg 23 50 09.9 -0.3
ATFO AML AML
comp=N,3895µm,1.0s
ATFO AML AML
comp=E,4010µm,0.7s
ATTE AVT- Monte Tez 0.74 303 P Pg 23 50 09.9 -0.4
ATTE AML AML
comp=E,2370µm,1.3s
ATTE AML AML
comp=N,2125µm,1.0s
SRES S.Oreste - Sor 0.76 223 ⇑P Pg 23 50 10.2 -0.5
SRES AML AML
comp=E,3860µm,0.9s
SRES AML AML
comp=N,2750µm,1.2s
ATLO AVT- Montelove 0.78 312 ⇓P Pg 23 50 10.7 -0.4
PTQR Pietraquaria 0.79 169 P Pg 23 50 10.2 -1.1
PTQR AML AML
comp=E,2560µm,0.9s
PTQR AML AML
comp=N,1840µm,0.9s
FRON Frontone 0.80 334 ⇓P Pg 23 50 10.8 -0.6
FRON AML AML
comp=N,6805µm,1.6s
FRON AML AML
comp=E,3285µm,0.6s
AOI Ancona 0.80 21 P Pg 23 50 11.2 -0.4
AOI AML AML
comp=N,4230µm,0.9s
AOI AML AML
comp=E,5190µm,1.5s
MGAB Montegabbione 0.81 278 P Pg 23 50 11.7 0.0
MGAB AML AML
comp=E,5950µm,1.0s
MGAB AML AML
comp=E,6945µm,1.0s
MGAB AML AML
comp=N,5045µm,0.5s
MGAB AML AML
comp=N,4980µm,0.5s
TB02 Pietralunga 0.82 315 ⇓P Pg 23 50 11.3 -0.5
ATVO AVT- Monte Val 0.83 315 ⇓P Pg 23 50 11.4 -0.5
ATVO AML AML
comp=E,2820µm,1.0s
ATVO AML AML
comp=N,2505µm,0.3s
ATVA AVT- Monte Val 0.83 306 P Pg 23 50 11.5 -0.5
ATBU Serra di Buran 0.83 325 ⇓P Pg 23 50 11.7 -0.3
TB03 Pietralunga 0.84 316 ⇓P Pg 23 50 11.6 -0.6
COR1 Corinaldo 0.84 350 P Pg 23 50 12.6 +0.3
COR1 AML AML
comp=E,9260µm,0.5s
COR1 AML AML
comp=N,9070µm,1.0s
COR1 AML AML
comp=E,4685µm,0.5s
COR1 AML AML
comp=N,8655µm,1.0s
COR1 AML AML
comp=E,9265µm,0.5s
COR1 AML AML
comp=N,8650µm,1.0s
COR1 AML AML
comp=E,4685µm,0.5s
COR1 AML AML
comp=N,9060µm,1.0s
MTCE Montecelio 0.85 204 ⇑P Pg 23 50 11.2 -1.2
MTCE AML AML
comp=N,4445µm,0.7s
MTCE AML AML
comp=E,6325µm,0.5s
CERT Cerreto 0.87 191 P Pg 23 50 11.8 -0.9
CERT AML AML
comp=E,7175µm,0.4s
CERT AML AML
comp=N,4730µm,0.6s
ATMI Monte Miggiano 0.87 308 P Pg 23 50 12.6 -0.2
ATMI AML AML
comp=E,6025µm,1.5s
ATMI AML AML
comp=E,6020µm,1.5s
ATMI AML AML
comp=N,6510µm,0.7s
ATPC Poggio Castell 0.87 321 ⇓P Pg 23 50 12.4 -0.5
ATPI Pietralunga - 0.88 318 ⇓P Pg 23 50 12.4 -0.6
ATPI AML AML
comp=E,2405µm,0.5s
ATPI AML AML
comp=N,2420µm,0.5s
PIEI Pieia 0.88 326 P Pg 23 50 12.3 -0.8
PIEI AML AML
comp=N,2685µm,1.6s
PIEI AML AML
comp=E,2635µm,0.3s
MPAG Monte Paganucc 0.89 339 ⇓P Pg 23 50 12.6 -0.6
MPAG AML AML
comp=E,4920µm,0.4s
MPAG AML AML
comp=N,3370µm,0.6s
MPAG AML AML
comp=E,4970µm,0.4s
MPAG AML AML
comp=N,2955µm,0.6s
MPAG AML AML
comp=E,4920µm,0.3s
SENI Senigallia 0.91 1 P Pg 23 50 12.2 -1.2
SENI AML AML
comp=N,17450µm,0.3s
SENI AML AML
comp=E,14800µm,0.7s
NARO Abbazia di Nar 0.93 331 ⇓P Pg 23 50 13.1 -0.9
NARO AML AML
comp=E,1735µm,0.3s
NARO AML AML
comp=N,1885µm,0.5s
INTR Introdacqua 0.94 146 ⇓P Pg 23 50 12.6 -1.6
INTR AML AML
comp=E,2µm,1.0s
INTR AML AML
comp=N,4µm,0.8s
INTR AML AML
comp=E,2335µm,1.0s
INTR AML AML
comp=N,5380µm,0.8s
INTR AML AML
comp=N,4µm,0.8s
INTR AML AML
comp=E,2µm,1.0s
FSSB Fossombrone 0.94 341 P Pg 23 50 13.6 -0.6
FSSB AML AML
comp=E,13100µm,0.3s
FSSB AML AML
comp=N,8325µm,1.1s
APEC Apecchio 0.95 323 P Pg 23 50 13.9 -0.5
APEC AML AML
comp=E,686µm,1.5s
APEC AML AML
comp=N,823µm,1.5s
APEC AML AML
comp=E,3250µm,1.6s
APEC AML AML
comp=N,3565µm,1.5s
APEC AML AML
comp=N,3570µm,1.5s
SACS San Casciano d 0.95 273 P Pg 23 50 14.4 0.0
SACS AML AML
comp=E,3660µm,1.6s
SACS AML AML
comp=N,2600µm,1.0s
SACS AML AML
comp=N,2770µm,1.1s
SACS AML AML
comp=E,3565µm,1.0s
RCAV Rocca di Cave 0.97 192 P Pg 23 50 14.8 +0.1
RCAV AML AML
comp=E,5370µm,0.4s
RCAV AML AML
comp=N,8705µm,0.5s
VVLD Villa Vallelon 0.98 162 P Pg 23 50 13.8 -1.1
VVLD AML AML
comp=N,2690µm,0.6s
VVLD AML AML
comp=E,2520µm,1.0s
ATMC Monte Cedrone 0.98 311 P Pg 23 50 14.7 -0.3
BADI Badiali 1.00 316 P Pg 23 50 14.8 -0.5
GUAR Guarcino 1.01 175 P Pg 23 50 14.7 -0.7
GUAR AML AML
comp=E,4895µm,0.5s
GUAR AML AML
comp=N,4335µm,0.4s
GUAR AML AML
comp=N,4340µm,0.4s
CAFR Castel Frentan 1.02 124 P Pg 23 50 15.0 -0.6
CAFR AML AML
comp=N,2495µm,0.3s
CAFR AML AML
comp=E,15µm,0.6s
LPEL Lama dei Pelig 1.04 136 P Pg 23 50 14.2 -2.0
LPEL AML AML
comp=E,2895µm,1.1s
LPEL AML AML
comp=N,1990µm,0.5s
LATE Laterza 1.05 260 P Pg 23 50 16.2 -0.1
CAFI Castiglion Fio 1.05 301 P Pg 23 50 15.8 -0.5
CAFI AML AML
comp=N,1320µm,1.5s
CAFI AML AML
comp=N,1325µm,1.5s
CAFI AML AML
comp=E,2290µm,1.6s
CAFI AML AML
comp=E,2360µm,1.6s
CAFI AML AML
comp=N,1380µm,1.5s
RMP Rome, Mte Porz 1.06 201 P Pg 23 50 15.7 -0.6
RMP AML AML
comp=E,6325µm,0.7s
RMP AML AML
comp=N,7245µm,0.5s
VIVA Pratoni del Vi 1.10 197 P Pg 23 50 16.9 -0.3
RDP Rocca di Papa 1.10 199 P Pg 23 50 16.8 -0.5
RDP AML AML
comp=E,7020µm,0.6s
RDP AML AML
comp=N,9295µm,1.0s
SSP9 Sansepolcro 1.10 315 P Pg 23 50 16.7 -0.5
SSP9 AML AML
comp=E,2390µm,1.6s
SSP9 AML AML
comp=N,2160µm,1.4s
PARC Parchiule 1.10 320 P Pg 23 50 16.5 -0.7
PARC AML AML
comp=N,3000µm,0.7s
PARC AML AML
comp=E,2275µm,0.5s
MA9 Marino 1.11 202 P Pg 23 50 17.0 -0.3
SAMA S.Maria delle 1.12 204 P Pg 23 50 16.6 -0.9
SF03 Valle Cupa 1.12 271 P Pb 23 50 17.9 +0.4
MCIV Monte Civitell 1.13 269 P Pg 23 50 17.5 -0.2
MCIV AML AML
comp=E,1195µm,0.6s
MCIV AML AML
comp=N,1010µm,0.7s
SF11 Podere del Sol 1.13 274 P Pb 23 50 18.0 +0.4
SF04 Casetta 1.14 272 P Pb 23 50 18.3 +0.4
SF04 AML AML
comp=N,954µm,0.9s
SF04 AML AML
comp=E,1288µm,0.4s

POFI	**Posta Fibreno**	**1.15**	**161**	P		**Pg**	**23 50 16.6**	**-1.4**
POFI				AML		AML			
	comp=N,1200µm,0.7s								
POFI				AML		AML			
	comp=E,2640µm,0.7s								
TOLF	**Tolfa**	**1.16**	**231**	P		**Pg**	**23 50 17.7**	**-0.6**
TOLF				AML		AML			
	comp=N,1565µm,0.8s								
TOLF				AML		AML			
	comp=E,2015µm,0.6s								
SF13	**Bagnolo**	**1.17**	**271**	P		**Pg**	**23 50 18.3**	**-0.2**
PESA	**Pesaro**	**1.17**	**347**	P		**Pb**	**23 50 18.4**	**0.0**
PESA				AML		AML			
	comp=E,4945µm,1.6s								
PESA				AML		AML			
	comp=N,3515µm,1.0s								
SF14	**Selvena**	**1.17**	**268**	P		**Pg**	**23 50 18.6**	**0.0**
LAV9	**Lanuvio**	**1.18**	**199**	P		**Pb**	**23 50 18.6**	**0.0**
LRP	**Arpino**	**1.19**	**166**	P		**Pb**	**23 50 17.5**	**-1.2**
LRP				AML		AML			
	comp=E,1500µm,0.7s								
LRP				AML		AML			
	comp=N,1990µm,0.5s								
CPGN	**Carpegna, Ital**	**1.19**	**327**	P		**Pg**	**23 50 19.1**	**+0.1**
CPGN				AML		AML			
CPGN				AML		AML			
SF01	**Poggio Pratacc**	**1.21**	**271**	P		**Pn**	**23 50 19.6**	**+0.4**
CRE	**Caprese Michel**	**1.23**	**312**	P		**Pb**	**23 50 19.1**	**-0.3**
CRE				AML		AML			
	comp=E,1129µm,1.0s								
CRE				AML		AML			
	comp=N,1550µm,0.6s								
GIUL	**Giuliano Di Ro**	**1.24**	**178**	P		**Pn**	**23 50 19.3**	**-0.3**
GIUL				AML		AML			
	comp=E,1340µm,1.1s								
GIUL				AML		AML			
	comp=N,2175µm,1.0s								
ARCI	**Arcidosso**	**1.27**	**273**	P		**Pg**	**23 50 20.7**	**+0.2**
ARCI				AML		AML			
	comp=N,511µm,1.1s								
ARCI				AML		AML			
	comp=E,523µm,1.1s								
RNI2	**Rionero Sannit**	**1.30**	**147**	P		**Pn**	**23 50 20.3**	**-0.1**
LATB	**Latina**	**1.32**	**188**	P		**Pn**	**23 50 19.2**	**-1.3**
LATB				AML		AML			
	comp=N,464µm,1.5s								
LATB				AML		AML			
	comp=E,776µm,0.9s								
LIK	**San Giovanni I**	**1.32**	**168**	P		**Pb**	**23 50 21.3**	**+0.4**
LIK	**San Giovanni I**	**1.32**	**168**	AML		AML			
	comp=E,2630µm,0.7s								
LIK				AML		AML			
	comp=N,3335µm,0.8s								
CERA	**Filignano**	**1.34**	**153**	P		**Pn**	**23 50 20.0**	**-1.0**
CERA				AML		AML			
	comp=N,2445µm,0.9s								
CERA				AML		AML			
	comp=E,1980µm,0.9s								
CERA				AML		AML			
	comp=E,2050µm,0.8s								
CERA				AML		AML			
	comp=N,2335µm,0.9s								
FRES	**Fresagrandinar**	**1.36**	**127**	P		**Pg**	**23 50 22.2**	**0.0**
ASQU	**Asqua**	**1.44**	**314**	P		**Pn**	**23 50 22.4**	**+0.2**
ASQU				AML		AML			
	comp=N,950µm,1.5s								
ASQU				AML		AML			
	comp=E,1018µm,0.6s								
TRIV	**Trivento**	**1.44**	**136**	AML		AML			
	comp=E,1685µm,1.2s								
TRIV				AML		AML			
	comp=N,2165µm,1.0s								
TRIV				AML		AML			
	comp=N,2190µm,1.0s								
TRIV				AML		AML			
	comp=E,1935µm,1.2s								
SFI	**Santa Sofia**	**1.48**	**319**	AML		AML			
	comp=E,792µm,0.8s								
SFI				AML		AML			
	comp=N,990µm,1.1s								
CSNT	**Castellina Chi**	**1.56**	**296**	AML		AML			
	comp=N,386µm,1.1s								
CSNT				AML		AML			
	comp=E,377µm,1.6s								
VAGA	**Valle Agricola**	**1.58**	**151**	AML		AML			
	comp=E,628µm,0.9s								
VAGA				AML		AML			
	comp=N,836µm,0.7s								
OSSC	**Osservatorio P**	**1.61**	**297**	AML		AML			
	comp=E,763µm,1.3s								
OSSC				AML		AML			
	comp=N,544µm,0.9s								
OSSC				AML		AML			
	comp=N,610µm,1.4s								
OSSC				AML		AML			
	comp=E,563µm,1.5s								
BSSO	**Busso**	**1.62**	**140**	AML		AML			
	comp=E,772µm,1.6s								
BSSO				AML		AML			
	comp=E,304µm,1.2s								
BSSO				AML		AML			
	comp=N,348µm,0.8s								
BSSO				AML		AML			
	comp=N,891µm,0.7s								
SGG	**Gregorio Mates**	**1.66**	**148**	AML		AML			
	comp=N,2.5nm,0.7s								
SGG				AML		AML			
	comp=E,1.0nm,0.7s								
SGG				AML		AML			
	comp=N,1.0nm,0.5s								
SGG				AML		AML			
	comp=E,2.5nm,0.7s								
CIGN	**Sant'Elia a Pi**	**1.70**	**132**	AML		AML			
	comp=N,561µm,0.7s								
CIGN				AML		AML			
	comp=E,520µm,0.6s								
TRIF	**Trifonti**	**1.72**	**281**	AML		AML			
	comp=E,366µm,0.4s								
TRIF				AML		AML			
	comp=N,392µm,0.8s								
CASP	**Castiglione de**	**1.72**	**270**	AML		AML			
	comp=N,206µm,1.0s								
CASP				AML		AML			
	comp=E,182µm,0.8s								
MODR	**Mondragone**	**1.73**	**163**	AML		AML			
	comp=N,460µm,1.0s								
MODR				AML		AML			
	comp=E,496µm,1.6s								
SACR	**S. Croce Del S**	**1.79**	**141**	AML		AML			
	comp=E,461µm,1.2s								
SACR				AML		AML			
	comp=N,537µm,1.6s								
MELA	**Melanico ??? S**	**1.80**	**127**	AML		AML			
	comp=N,2025µm,0.5s								
MELA				AML		AML			
	comp=E,1640µm,0.8s								
MELA				AML		AML			
	comp=E,1675µm,0.8s								
MELA				AML		AML			
	comp=N,2160µm,0.5s								
DUGI	**Dugi Otok**	**1.80**	**48**	*e*Pn		**Pn**	**23 50 27.4**	**+0.2**
TREM	**Isole Tremiti**	**1.83**	**111**	AML		AML			
	comp=N,2035µm,0.5s								
TREM				AML		AML			
	comp=E,1490µm,0.6s								
VITU	**Vitulano (BN)**	**1.93**	**146**	AML		AML			
	comp=N,514µm,0.8s								
VITU				AML		AML			
	comp=E,570µm,0.6s								
VIRC	**Vir**	**2.01**	**41**	*e*Pn		**Pn**	**23 50 30.1**	**+0.1**
MOCO	**Biccari - m.te**	**2.04**	**134**	AML		AML			
	comp=N,296µm,0.9s								
MOCO				AML		AML			
	comp=E,378µm,0.9s								
MORI	**Morici**	**2.11**	**59**	*e*Pn		**Pn**	**23 50 31.7**	**+0.2**
NVLJ	**Novalja**	**2.14**	**34**	*e*Pn		**Pn**	**23 50 32.1**	**+0.3**
BRJN	**Brijuni**	**2.14**	**10**	*e*Pn		**Pn**	**23 50 31.5**	**-0.4**
SGRT	**San Giovanni R**	**2.15**	**118**	AML		AML			
	comp=N,793µm,0.7s								
SGRT				AML		AML			
	comp=E,846µm,0.8s								
PII	**Pisa**	**2.17**	**296**	AML		AML			
	comp=N,262µm,1.6s								
PII				AML		AML			
	comp=E,329µm,1.5s								
POPM	**Popiglio**	**2.17**	**306**	AML		AML			
	comp=E,266µm,1.6s								
POPM				AML		AML			
	comp=N,302µm,1.6s								
RABC	**Rab**	**2.26**	**30**	*e*Pn		**Pn**	**23 50 33.9**	**+0.4**
MAIM	**Mastiano**	**2.27**	**300**	AML		AML			
	comp=E,228µm,0.5s								
MAIM				AML		AML			
	comp=N,228µm,0.9s								
BDI	**Bagni Di Lucca**	**2.28**	**304**	AML		AML			
	comp=E,114µm,0.9s								
BDI				AML		AML			
	comp=N,101µm,1.1s								
MSAG	**Monte S. Angel**	**2.28**	**118**	AML		AML			
	comp=E,960µm,0.9s								
MSAG				AML		AML			
	comp=N,1680µm,0.5s								
MSAG				AML		AML			
	comp=E,937µm,0.9s								
MSAG				AML		AML			
	comp=N,1745µm,0.5s								
CARD	**Cardoso**	**2.33**	**303**	AML		AML			
	comp=N,252µm,0.5s								
CARD				AML		AML			
	comp=E,236µm,1.4s								
SMRN	**Sveta Marina**	**2.34**	**17**	*e*Pn		**Pn**	**23 50 34.5**	**-0.1**
SNAL	**S. Angelo Dei**	**2.40**	**141**	AML		AML			
	comp=E,659µm,1.4s								
SNAL				AML		AML			
	comp=E,657µm,1.4s								
SNAL				AML		AML			
	comp=N,581µm,1.3s								
SNAL				AML		AML			
	comp=N,600µm,1.3s								
GSCL	**Gusciola**	**2.45**	**310**	AML		AML			
	comp=E,335µm,1.0s								
GSCL				AML		AML			
	comp=N,273µm,1.2s								
UDBI	**Udbina**	**2.54**	**46**	*i* Pn		**Pn**	**23 50 38.9**	**+1.6**
CAPA	**Cerignola FG**	**2.54**	**129**	AML		AML			
	comp=N,970µm,1.3s								
CAPA				AML		AML			
	comp=E,823µm,1.6s								
KIJV	**Kijevo**	**2.62**	**62**	*e*Pn		**Pn**	**23 50 39.8**	**+1.3**
RIY	**Rijeka**	**2.69**	**20**	*e*Pn		**Pn**	**23 50 39.8**	**+0.5**
LSTV	**Lastovo**	**2.71**	**89**	*e*Pn		**Pn**	**23 50 40.1**	**+0.4**
PLIT	**Plitvice**	**2.71**	**39**	*e*Pn		**Pn**	**23 50 40.8**	**+1.0**
PALZ	**Palazzo San Ge**	**2.77**	**131**	AML		AML			
	comp=E,640µm,1.0s								
PALZ				AML		AML			
	comp=N,603µm,1.6s								
SKDS	**Skadanscina**	**2.81**	**12**	*e*Pn		**Pn**	**23 50 40.8**	**-0.2**
SKDS	**Skadanscina**	**2.81**	**12**	*i* Pn		**Pn**	**23 50 40.9**	**-0.1**
SKDS				*e*Sn		**Sn**	**23 51 15.5**	**+0.6**
SKDS				IAML			23 51 16.3		
	comp=Z,79nm,0.3s								
MAKA	**Makarska**	**2.84**	**79**	*e*Pn		**Pn**	**23 50 42.2**	**+0.8**
GRAM	**Graiana**	**2.84**	**308**	AML		AML			
	comp=E,391µm,0.9s								
GRAM				AML		AML			
	comp=N,300µm,1.2s								
A050A	**Klekovaca**	**2.94**	**54**	*e*Pn		**Pn**	**23 50 44.6**	**+1.7**
RICI	**Ricice**	**2.96**	**75**	*e*Pn		**Pn**	**23 50 44.6**	**+1.5**
CEY	**Cerknica**	**3.07**	**16**	*e*Pn		**Pn**	**23 50 44.8**	**+0.2**
BOJS	**Bojanci**	**3.08**	**28**	*e*Pn		**Pn**	**23 50 45.3**	**+0.6**
BOJS	**Bojanci**	**3.08**	**28**	AML		AML			
	comp=E,924µm,1.5s								
BOJS				AML		AML			
	comp=N,594µm,1.0s								
PGF	**Pioggiola**	**3.11**	**267**	*e*P		**Pn**	**23 50 46.2**	**+0.9**
PGF				*e*Sn		**Sn**	**23 51 17.8**	**-4.8**
	comp=N,15nm,0.3s								
SRKY	**Kupres RS**	**3.15**	**65**	*e*Pn		**Pn**	**23 50 47.9**	**+2.1**
AMUR	**Altamura**	**3.17**	**126**	AML		AML			
	comp=E,274µm,0.6s								
AMUR				AML		AML			
	comp=N,234µm,0.4s								
SABO	**M.te Sabotino**	**3.19**	**5**	AML		AML			
	comp=N,2050µm,1.6s								
SABO				AML		AML			
	comp=N,498µm,0.7s								
SABO				AML		AML			
	comp=E,1855µm,1.6s								
SABO				AML		AML			
	comp=E,464µm,0.5s								
A251A	**Rujevac**	**3.21**	**42**	*i* Pn		**Pn**	**23 50 47.9**	**+1.4**
CGRP	**Cima Grappa**	**3.24**	**342**	AML		AML			
	comp=E,422µm,0.8s								
CGRP				AML		AML			
	comp=N,544µm,0.4s								
MGRS	**Mrkonjic Grad**	**3.25**	**59**	*e*Pn		**Pn**	**23 50 48.9**	**+1.8**
OZLJ	**Ozalj**	**3.25**	**29**	*e*Pn		**Pn**	**23 50 48.0**	**+0.9**
STON	**Ston**	**3.31**	**87**	*e*Pn		**Pn**	**23 50 47.2**	**-0.6**
STON	**Ston**	**3.31**	**87**	*e*Pn		**Pn**	**23 50 47.4**	**-0.5**
STON	**Ston**	**3.31**	**87**	*e*Pn		**Pn**	**23 50 47.7**	**-0.1**
STON				*e*Sn		**Sn**	**23 51 27.6**	**+0.4**
STON	**Ston**	**3.31**	**87**	AML		AML			
	comp=N,138µm,0.7s								
STON				AML		AML			
	comp=E,119µm,0.6s								
PRIJ	**Prijedor**	**3.34**	**48**	*e*Pn		**Pb**	**23 50 56.7**	**+1.3**
LJU	**Ljubljana**	**3.38**	**16**	AML		AML			
	comp=N,2020µm,0.7s								
LJU				AML		AML			
	comp=E,1420µm,1.1s								
MATE	**Matera**	**3.39**	**128**	⇑P		**Pn**	**23 50 50.4**	**+1.4**
MATE				⇑S		**Sn**	**23 51 31.9**	**+2.7**
DOSS	**Dosso del Somm**	**3.40**	**336**	AML		AML			
	comp=E,198µm,0.5s								
DOSS				AML		AML			
	comp=E,356µm,0.6s								
DOSS				AML		AML			
	comp=N,208µm,0.5s								
DOSS				AML		AML			
	comp=N,338µm,0.6s								
SALO	**Salr**	**3.41**	**327**	AML		AML			
	comp=N,352µm,0.7s								
SALO				AML		AML			
	comp=E,230µm,0.6s								
CRES	**Cresnjev**	**3.43**	**27**	*e*Pn		**Pn**	**23 50 50.2**	**+0.6**
MPRI	**Monte Prat**	**3.44**	**357**	AML		AML			
	comp=E,436µm,0.6s								
MPRI				AML		AML			
	comp=N,468µm,0.5s								
A051A	**Mrakovica**	**3.47**	**49**	*e*Pn		**Pn**	**23 50 51.3**	**+1.1**
BLY	**Banja Luka**	**3.48**	**55**	*e*Pn		**Pn**	**23 50 53.1**	**+2.9**
BLY	**Banja Luka**	**3.48**	**55**	*e*Pn		**Pn**	**23 50 52.4**	**+2.2**
STAL	**STALIGIAL**	**3.48**	**354**	AML		AML			
	comp=N,268µm,1.0s								
STAL				AML		AML			
	comp=E,365µm,0.8s								
MAGA	**Magasa**	**3.50**	**329**	AML		AML			
	comp=E,616µm,0.5s								
MAGA				AML		AML			
	comp=N,385µm,0.4s								
NOCI	**Noci**	**3.52**	**124**	AML		AML			
	comp=E,208µm,0.9s								
NOCI				AML		AML			
	comp=N,180µm,0.8s								
LUSI	**Trento, Gardas**	**3.55**	**334**	AML		AML			
	comp=E,194µm,0.7s								
LUSI				AML		AML			
	comp=N,220µm,0.6s								
AGOR	**Agordo**	**3.58**	**347**	AML		AML			
	comp=E,150µm,0.7s								
AGOR				AML		AML			
	comp=N,122µm,1.6s								
PTCC	**Patocco-Chiusa**	**3.61**	**2**	AML		AML			
	comp=E,137µm,0.9s								
PTCC				AML		AML			
	comp=N,200µm,0.5s								
DBRK	**Dubrovnik**	**3.64**	**90**	*e*Pn		**Pn**	**23 50 52.1**	**-0.4**
GAGG	**Gaggia**	**3.66**	**335**	AML		AML			
	comp=E,348µm,1.0s								
GAGG				AML		AML			
	comp=N,207µm,1.6s								
CLUD	**Cludinico**	**3.66**	**356**	AML		AML			
	comp=N,182µm,1.2s								
CLUD				AML		AML			
	comp=E,247µm,1.2s								
PTJ	**Puntijarka**	**3.68**	**32**	*e*Pn		**Pn**	**23 50 54.0**	**+0.9**
ACOM	**Acomizza, Ital**	**3.75**	**3**	AML		AML			
	comp=N,394µm,0.6s								
ACOM				AML		AML			
	comp=E,366µm,1.1s								
ACOM				AML		AML			
	comp=N,359µm,0.6s								
ACOM				AML		AML			
	comp=E,334µm,1.1s								
ZOU	**Zoufplan**	**3.76**	**358**	AML		AML			
	comp=E,258µm,1.1s								
ZOU				AML		AML			
	comp=N,338µm,1.2s								
ZOU				AML		AML			
	comp=E,252µm,1.2s								
ZOU				AML		AML			
	comp=N,361µm,1.2s								
MABI	**Malga Bissina**	**3.78**	**330**	AML		AML			
	comp=E,60µm,0.6s								
MABI				AML		AML			
	comp=N,73µm,1.0s								
MOSL	**Moslavina**	**3.80**	**41**	*e*Pn		**Pn**	**23 50 54.5**	**-0.2**
TAR1	**Taranto**	**3.81**	**125**	AML		AML			
	comp=N,189µm,0.9s								
TAR1				AML		AML			
	comp=E,144µm,0.8s								
OBKA	**Obir**	**3.83**	**14**	*e*Pn		**Pn**	**23 50 56.1**	**+1.0**
OBKA	**Obir**	**3.83**	**14**	*e*Pn		**Pn**	**23 50 56.2**	**+1.0**
MYKA	**Terra Mystica**	**3.84**	**4**	*e*Pn		**Pn**	**23 50 56.1**	**+0.8**
	comp=E,4.5nm,0.2s								
MYKA				*e*Sn		**Sn**	**23 51 41.6**	**+1.0**
	comp=E,18nm,0.3s								
KOSI	**Kohlern**	**3.89**	**341**	AML		AML			
	comp=N,276µm,1.2s								
KOSI				AML		AML			
	comp=E,290µm,0.8s								
HCY	**Herceg Novi**	**3.92**	**93**	*e*Pn		**Pn**	**23 50 57.2**	**+0.9**
HCY	**Herceg Novi**	**3.92**	**93**	⇓*i*Pn		**Pn**	**23 50 57.1**	**+0.8**
HCY				*i* Sn		**Sn**	**23 51 43.4**	**+1.1**
BRY	**Bratogost**	**3.92**	**87**	*e*Pn		**Pn**	**23 50 57.7**	**+1.2**
BRY	**Bratogost**	**3.92**	**87**	⇑*i*Pn		**Pn**	**23 50 57.6**	**+1.1**
BRY				*i* Sn		**Sn**	**23 51 43.6**	**+1.0**
LOBO	**Lobor**	**3.93**	**30**	*e*Pn		**Pn**	**23 50 56.5**	**0.0**
APPI	**Appiano**	**3.94**	**340**	AML		AML			
	comp=N,182µm,0.4s								
APPI				AML		AML			
	comp=E,169µm,1.2s								
ABTA	**Abfaltersbach**	**3.98**	**353**	*i* Pn		**Pn**	**23 50 58.4**	**+1.2**
	comp=E,51nm,0.5s,SNR=51								
BRES	**Bressanone**	**4.04**	**345**	AML		AML			
	comp=E,228µm,1.6s								
BRES				AML		AML			
	comp=N,193µm,0.3s								
KALN	**Kalnik**	**4.06**	**34**	*e*Pn		**Pn**	**23 50 58.2**	**-0.1**
SOKA	**Soboth**	**4.09**	**18**	*e*Pn		**Pn**	**23 50 59.7**	**+1.0**
	comp=N,2.4nm,0.2s								
SOKA				*e*Sn		**Sn**	**23 51 48.2**	**+1.5**
	comp=N,13nm,0.5s								
UPM	**Unac-Piva**	**4.20**	**83**	*e*Pn		**Pn**	**23 51 02.8**	**+2.4**
UPM	**Unac-Piva**	**4.20**	**83**	⇑*i*Pn		**Pn**	**23 51 02.7**	**+2.4**
UPM				*i* Sn		**Sn**	**23 51 50.8**	**+1.3**
CEME	**Cevo**	**4.22**	**92**	⇓*i*Pn		**Pn**	**23 51 01.7**	**+1.2**
CEME				*i* Sn		**Sn**	**23 51 51.1**	**+1.2**
RISI	**Rein**	**4.22**	**349**	AML		AML			
	comp=N,472µm,0.4s								
RISI				AML		AML			
	comp=E,351µm,0.7s								
NKME	**Niksic**	**4.23**	**89**	⇓*i*Pn		**Pn**	**23 51 01.7**	**+1.1**
NKME				*i* Sn		**Sn**	**23 51 51.6**	**+1.5**
BUM	**Brajici-Budva**	**4.23**	**95**	⇓*i*Pn		**Pn**	**23 51 02.0**	**+1.3**
BUM				*i* Sn		**Sn**	**23 51 51.5**	**+1.3**
KOGS	**Kog**	**4.25**	**30**	AML		AML			
	comp=E,1430µm,1.5s								
KOGS				AML		AML			
	comp=N,991µm,0.6s								
A252A	**Venje**	**4.25**	**50**	*e*Pn		**Pn**	**23 51 01.1**	**+0.1**
KBA	**Koelnbreinsper**	**4.28**	**1**	*i* Pn		**Pn**	**23 51 02.6**	**+1.2**
	comp=N,4.9nm,0.2s,SNR=15								
KBA	**Koelnbreinsper**	**4.28**	**1**	*e*Pn		**Pn**	**23 51 02.5**	**+1.0**
KBA				*e*Sn		**Sn**	**23 51 51.8**	**+0.3**
MUGIO	**Muggio**	**4.32**	**318**	AML		AML			
	comp=E,59µm,0.4s								
MUGIO				AML		AML			
	comp=N,65µm,0.6s								
ROSI	**Rosskopf**	**4.32**	**343**	AML		AML			
	comp=N,246µm,0.5s								
ROSI				AML		AML			
	comp=E,230µm,1.3s								
SBF	**Sospel**	**4.34**	**286**	*e*P		**Pn**	**23 51 03.1**	**+0.9**
SBF				*e*Sn		**Sn**	**23 51 48.0**	**-4.9**
	comp=E,23nm,0.5s								
ESCA	**l'Escarene**	**4.38**	**286**	P		**Pn**	**23 51 05.0**	**+2.3**
VSL	**Villasalto**	**4.39**	**222**	AML		AML			
VSL				AML		AML			
TURF	**col de Turini**	**4.40**	**287**	P		**Pn**	**23 51 04.4**	**+1.4**
DRME	**Dracevica, Mon**	**4.46**	**96**	*e*Pn		**Pn**	**23 51 05.5**	**+1.7**
DRME	**Dracevica, Mon**	**4.46**	**96**	⇓*i*Pn		**Pn**	**23 51 05.1**	**+1.3**
DRME				*i* Sn		**Sn**	**23 51 57.2**	**+1.4**
PDG	**Podgorica**	**4.48**	**93**	⇓P		**Pn**	**23 51 05.2**	**+1.1**
PDG				⇓S		**Sn**	**23 51 55.5**	**-0.7**
PDG	**Podgorica**	**4.48**	**93**	*e*Pn		**Pn**	**23 51 05.7**	**+1.7**
PDG				*e*Sn		**Sn**	**23 51 57.8**	**+1.7**
TTG	**Podgorica**	**4.48**	**93**	⇓*i*Pn		**Pn**	**23 51 05.1**	**+1.1**
TTG				*i* Sn		**Sn**	**23 51 57.3**	**+1.2**
SPIF	**crte de Spivo**	**4.53**	**288**	P		**Pn**	**23 51 07.8**	**+3.0**
CGL	**Cagliari Serpe**	**4.53**	**222**	AML		AML			
	comp=E,96µm,0.5s								
CGL				AML		AML			
	comp=N,93µm,0.9s								
MVIF	**Mont Vial**	**4.55**	**286**	P		**Pn**	**23 51 08.2**	**+3.1**
ULC	**Ulcinj**	**4.55**	**99**	⇓*i*Pn		**Pn**	**23 51 06.2**	**+1.2**
ULC				*i* Sn		**Sn**	**23 51 58.3**	**+0.3**
PLE	**Pljevlja**	**4.56**	**81**	⇓*i*Pn		**Pn**	**23 51 06.2**	**+1.0**
PLE				*i* Sn		**Sn**	**23 51 59.3**	**+0.9**
FETA	**Feichten**	**4.57**	**338**	*i* Pn		**Pn**	**23 51 08.4**	**+2.9**
	comp=N,4.0nm,0.4s,SNR=6.5								
RUDO	**Rudo**	**4.58**	**78**	*e*Pn		**Pn**	**23 51 06.3**	**+0.9**
WTTA	**Wattenberg**	**4.60**	**347**	*i* Pn		**Pn**	**23 51 08.3**	**+2.4**
	comp=N,3.9nm,0.2s,SNR=11								
WTTA	**Wattenberg**	**4.60**	**347**	*e*Pn		**Pn**	**23 51 08.4**	**+2.6**
DAVOX	**Davos/Dischmat**	**4.63**	**330**	Pn		**Pn**	**23 51 09.2**	**+2.9**
	comp=N,4.0nm,0.3s,baz=151,slow=13,SNR=31								
DAVOX				Sn		**Sn**	**23 52 03.8**	**+3.6**
	comp=N,3.8nm,0.3s,baz=290,slow=18,SNR=4.4								
DAVOX				LR		LR	23 53 28.8		
	comp=N,81nm,20.0s,baz=105,slow=47								
KOME	**Kolasin**	**4.64**	**87**	⇓*i*Pn		**Pn**	**23 51 07.5**	**+1.2**
KOME				*i* Sn		**Sn**	**23 52 01.2**	**+0.9**
SQTA	**Sankt Quirin**	**4.64**	**343**	*i* Pn		**Pn**	**23 51 08.6**	**+2.3**
	comp=N,9.5nm,0.3s,SNR=13								
SQTA				*e*Sn		**Sn**	**23 52 05.4**	**+5.1**
	comp=N,12nm,0.3s								
BBLS	**Lazići**	**4.65**	**75**	*e*Pn		**Pn**	**23 51 08.8**	**+2.4**
BBLS				*e*Sn		**Sn**	**23 52 02.0**	**+1.6**
WATA	**Walderalm**	**4.68**	**346**	*i* Pn		**Pn**	**23 51 09.6**	**+2.7**
	comp=N,3.9nm,0.2s,SNR=18								
CALF	**Calern**	**4.69**	**284**	P		**Pn**	**23 51 08.1**	**+1.1**
ISO	**Isola**	**4.69**	**289**	P		**Pn**	**23 51 09.8**	**+2.9**
ARSA	**Arzberg**	**4.74**	**19**	*e*Pn		**Pn**	**23 51 07.8**	**+0.1**
	comp=N,2.0nm,0.3s								
ARSA	**Arzberg**	**4.74**	**19**	*e*Pn		**Pn**	**23 51 08.2**	**+0.5**
ARSA				*e*Sn		**Sn**	**23 52 01.4**	**-1.3**
MOTA	**Moosalm**	**4.78**	**343**	*i* Pn		**Pn**	**23 51 10.6**	**+2.3**
	comp=N,6.0nm,0.4s,SNR=11								
KOVH	**Kovagotottos**	**4.80**	**45**	P		**Pn**	**23 51 08.9**	**+0.5**
KOVH				S		**Sn**	**23 52 01.8**	**-2.4**
ZUGS	**Zugspitze, Sch**	**4.88**	**342**	*e*Pn		**Pn**	**23 51 12.2**	**+2.5**
BIOA	**Bad Ischl, Aus**	**4.90**	**3**	*i* Pn		**Pn**	**23 51 10.7**	**+0.9**
	comp=N,5.2nm,0.2s,SNR=18								
IVA	**Berane**	**4.92**	**87**

comp=N,1.3nm,0.1s
MOA Molln 5.10 8 *e*Pn **Pn** 23 51 13.4 +0.8
DIVS Divibare 5.11 73 *e*Pn **Pn** 23 51 14.9 +2.2
DIVS Divibare 5.11 73 *e*Pn **Pn** 23 51 14.8 +2.1
DIVS *e*Sn **Sn** 23 52 13.9 +2.1
OGAG Argentiere 5.11 291 P Pn 23 51 18.4 +5.6
FLAF Flassans-sur-l 5.12 279 P **Pn** 23 51 13.9 +1.0
IVAS Ivanjica 5.14 79 *e*Pn **Pn** 23 51 14.2 +1.1
IVAS *e*Sn **Sn** 23 52 12.9 +0.4
EMBD Embd, Matterta 5.14 313 P Pn 23 51 18.3 +5.1
TIR Tirane 5.16 104 ⇓P **Pn** 23 51 14.7 +1.3
TIR ⇓S **Sn** 23 52 13.6 +0.6
TIR Tirane 5.16 104 *e*Pn **Pn** 23 51 14.7 +1.3
TIR *e*Sn **Sn** 23 52 13.0 -0.1
MORH Mrgy, Hungar 5.17 47 ⇓P **Pn** 23 51 13.1 -0.4
MORH Mrgy, Hungar 5.17 47 P Pb 23 51 20.8 -5.8
OGDI Digne 5.20 287 P **Pn** 23 51 17.2 +3.3
DIX Grande Dixence 5.29 310 P **Pn** 23 51 18.6 +3.2
FRGS Fruska Gora 5.32 61 ⇓P **Pn** 23 51 15.1 -0.4
FRGS Fruska Gora 5.32 61 *e*Pn **Pn** 23 51 15.8 +0.3
FRGS Fruska Gora 5.32 61 *e*Pn **Pn** 23 51 15.8 +0.3
BLAF les Blancs 5.34 285 P **Pn** 23 51 18.6 +2.7
UBR Ueberruh 5.35 337 *e*Pn **Pn** 23 51 18.0 +2.0
RONA Rosalia, Austr 5.36 23 *i* Pn **Pn** 23 51 16.8 +0.7
comp=N,1.3nm,0.2s
LPG La Plagne 5.37 302 *e*P **Pn** 23 51 18.6 +2.1
LPG *e*Sn **Sn** 23 52 12.7 -5.8
comp=N,17nm,0.6s
LPL La Plagne 5.39 302 *e*P **Pn** 23 51 18.8 +2.1
LPL *e*Sn **Sn** 23 52 13.3 -5.7
comp=N,21nm,0.8s
SOP Sopron 5.43 25 P **Pn** 23 51 18.1 +1.1
TRUS Trudelj 5.43 72 *e*Pn **Pn** 23 51 18.5 +1.5
CONA Conrad Observa 5.46 19 *i* Pn **Pn** 23 51 18.3 +0.8
comp=N,4.0nm,0.3s,SNR=9.9
ARTF Artigues 5.47 281 P **Pn** 23 51 19.9 +2.3
WILA Wila 5.53 328 *e*Pn **Pn** 23 51 20.6 +2.2
RSL Roselend 5.54 304 P **Pn** 23 51 21.6 +2.9
GRUS Gruza 5.58 76 *e*Pn **Pn** 23 51 21.0 +1.8
GRUS *e*Sn **Sn** 23 52 23.1 -0.3
BSTF la Bastide-des 5.62 284 P **Pn** 23 51 21.3 +1.7
OGSI Sixt 5.66 307 P **Pn** 23 51 23.2 +2.9
SMRF Simiane la Rot 5.68 285 *e*P **Pn** 23 51 22.7 +2.1
SMRF *e*Sn **Sn** 23 52 20.2 -5.7
comp=N,4.6nm,0.6s
AIGLE Aigle 5.70 311 S **Sn** 23 52 31.4 +5.1
AIGLE Aigle 5.70 311 P **Pn** 23 51 23.5 +2.7
ORIF Oris-en-Rattie 5.70 294 *e*P **Pn** 23 51 23.4 +2.5
ORIF *e*Sn **Sn** 23 52 20.6 -5.9
comp=N,9.3nm,0.6s
RUSF Rustrel 5.74 284 P **Pn** 23 51 23.6 +2.2
ARBF Arbois 5.80 280 P **Pn** 23 51 24.4 +2.2
SELS Selova 5.82 83 *e*Pn **Pn** 23 51 24.0 +1.6
SELS *e*Sn **Sn** 23 52 29.5 +0.3
OHR Ohrid 5.91 104 *i* Pn **Pn** 23 51 25.7 +2.0
SULZ Cheisacher 5.94 324 S **Sn** 23 52 32.1 -0.2
SULZ Cheisacher 5.94 324 P **Pn** 23 51 25.9 +1.8
SULZ Cheisacher 5.94 324 *e*Pn **Pn** 23 51 25.6 +1.5
TORNY Torny/Romont 5.96 314 P **Pn** 23 51 26.1 +1.7
TORNY Torny/Romont 5.96 314 S **Sn** 23 52 35.2 +2.4
SLE Schleitheim 5.97 328 P **Pn** 23 51 25.7 +1.2
BALST Balsthal 5.98 321 P **Pn** 23 51 26.3 +1.6
BALST Balsthal 5.98 321 *e*Pn **Pn** 23 51 26.2 +1.5
GUT Gutenstein 6.00 333 P **Pn** 23 51 27.2 +2.3
GEC2 GERESS Array S 6.06 3 *e*Pn **Pn** 23 51 25.7 0.0
GEC2 *e*Sn **Sn** 23 52 33.4 -1.7
GERES GERESS Array B 6.06 3 Pn **Pn** 23 51 25.6 -0.1
comp=N,1.1nm,0.3s,baz=175,slow=13,SNR=32
GERES Sn **Sn** 23 52 33.7 -1.4
comp=N,4.2nm,0.3s,baz=187,slow=25,SNR=12
comp=N,1.3nm,0.3s
CKRC Cesky Krumlov 6.07 7 *e*PN **Pn** 23 51 25.5 -0.4
CKRC *e*SN **Sn** 23 52 32.4 -3.0
GIMEL St. Georges / 6.20 309 P **Pn** 23 51 29.8 +2.1
BOURR Bourrignon 6.24 319 S **Sn** 23 52 40.0 +0.3
BOURR Bourrignon 6.24 319 P **Pn** 23 51 28.4 +0.1
FELD Feldberg im Sc 6.26 326 P **Pn** 23 51 29.6 +1.0
MODS Modra-Piesok 6.26 26 *e*PN Pn 23 51 21.7 -6.8
MODS *e*SN Sn 23 52 29.8 -10
MODS *e*LG Lg 23 53 40.4
BOVS Bovan 6.27 79 ⇓P **Pn** 23 51 28.9 +0.4
BOVS ⇑S **Sn** 23 52 37.9 -2.3
BOVS Bovan 6.27 79 *e*Pn **Pn** 23 51 29.2 +0.7
BOVS *e*Sn **Sn** 23 52 40.0 -0.2
BRANT Les Verrieres 6.32 313 P **Pn** 23 51 31.6 +2.1
BARS Barje 6.33 87 *e*Pn **Pn** 23 51 30.8 +1.3
KHC Kasperske Hory 6.34 2 *e*PN **Pn** 23 51 29.3 -0.2
KHC *e*SN **Sn** 23 52 39.5 -2.5
CABF La Chapelle 6.34 309 *e*P **Pn** 23 51 31.8 +2.1
CABF *e*Sn **Sn** 23 52 35.8 -6.4
comp=N,6.4nm,0.6s
WET Wettzell 6.35 358 *e*Pn **Pn** 23 51 29.3 -0.4
OG35 Corcelles 6.36 303 P **Pn** 23 51 31.7 +1.9
KIZ Kirchzarten 6.36 326 S **Sn** 23 52 42.6 +0.2
KIZ Kirchzarten 6.36 326 P **Pn** 23 51 30.4 +0.6
CHMF Charmoille 6.43 316 P **Pn** 23 51 32.3 +1.4
CHMF S **Sn** 23 52 42.8 -1.5
MDVR Moldovita 6.47 69 ⇓P **Pn** 23 51 30.9 -0.4
BFO Black Forest 6.50 330 *e*Pn **Pn** 23 51 32.1 +0.3
VIVF Saint-Julien-l 6.50 291 *e*P **Pn** 23 51 34.3 +2.4
VIVF *e*Sn **Sn** 23 52 39.7 -6.4
comp=N,2.1nm,0.5s
PRVS Prvonek 6.55 90 *e*Pn **Pn** 23 51 34.0 +1.6
PRVS *e*Sn **Sn** 23 52 47.4 +0.2
VOGT Vogtsburg - To 6.56 326 P **Pn** 23 51 33.9 +1.3
MOF Molkenrain 6.62 322 P **Pn** 23 51 34.5 +1.0
BOUC Bouclans 6.63 314 P **Pn** 23 51 35.1 +1.5
KRUC Moravsky 6.64 18 *e*PN **Pn** 23 51 33.3 -0.4
KRUC *e*SN **Sn** 23 52 46.6 -2.9
ZAGS Zajecar 6.66 78 *e*Pn **Pn** 23 51 34.6 +0.6
BZS Buzias 6.67 62 ⇑P **Pn** 23 51 33.2 -0.8
BZS Buzias 6.67 62 *e*Pn **Pn** 23 51 34.4 +0.4
OPP Oppenau 6.69 330 P **Pn** 23 51 35.8 +1.4
HINF Hinteralfeld 6.72 320 *e*P **Pn** 23 51 35.6 +0.7
HINF *e*Sn **Sn** 23 52 44.8 -6.7
comp=N,41nm,1.0s
RONF Ronchamp 6.75 319 P **Pn** 23 51 35.9 +0.7
RONF S **Sn** 23 52 51.8 -0.2
STIP Stip 6.75 96 *i* Pn **Pn** 23 51 38.5 +3.2
JAVC Velka Javorina 6.81 26 *e*PN **Pn** 23 51 36.6 +0.5
BOSS Bosilegrad 6.84 89 *e*Pn **Pn** 23 51 38.0 +1.5
BOSS *e*Sn **Sn** 23 52 53.6 -0.9
ECH Echery 6.88 324 P **Pn** 23 51 38.1 +1.1
ECH S **Sn** 23 52 55.7 +0.3
VRAC Vranov 6.92 19 LR LR 23 55 12.1
comp=N,40nm,19.3s,baz=186,slow=46
VRAC Vranov 6.92 19 *e*PN **Pn** 23 51 37.2 -0.3
VRAC *e*SN **Sn** 23 52 53.2 -3.1
LASF Ste Croix 6.92 284 *e*P **Pn** 23 51 39.1 +1.5
LASF *e*Sn **Sn** 23 52 49.7 -6.7
comp=N,0.6nm,0.4s
ZAPS Zavoj 6.92 83 *e*Pn **Pn** 23 51 39.9 +2.3
ZAPS *e*Sn **Sn** 23 52 55.9 -0.6
VYHS Vyhne 6.93 33 *e*PN **Pn** 23 51 38.6 +1.0
VYHS *e*SN **Sn** 23 52 53.2 -3.2
VYHS *e*LG Lg 23 54 10.1
WLS Welschbruch 6.95 326 P **Pn** 23 51 39.0 +1.0
BLKB Belogradchik 6.97 80 ⇓P **Pn** 23 51 37.5 -0.7
BLKB ⇓S **Sn** 23 52 55.7 -1.8
HERR Herculane 6.98 70 ⇓P **Pn** 23 51 37.5 -0.8
CDF Champ du Feu 6.98 326 *e*P **Pn** 23 51 39.2 +0.7
CDF *e*Sn **Sn** 23 52 50.9 -7.1
comp=N,23nm,0.9s
HAU Haudompre 7.10 320 *e*P **Pn** 23 51 41.2 +1.2
HAU *e*Sn **Sn** 23 52 53.7 -7.0
comp=N,28nm,0.4s
VAY Valandovo 7.12 99 *i* Pn **Pn** 23 51 41.8 +1.5
PRU Pruhonice 7.25 7 *e*SN **Sn** 23 53 01.4 -2.9
GZR Gura Zlata 7.36 66 ⇓P **Pn** 23 51 42.6 -1.0
VTS Vitosha 7.39 88 ⇓P **Pn** 23 51 44.5 +0.4
VTS ⇓S **Sn** 23 53 07.1 -1.0
VTS Vitosha 7.39 88 *e*Pn **Pn** 23 51 45.6 +1.5
VTS *e*Sn **Sn** 23 53 06.2 -1.9
MORC Moravsky Berou 7.60 22 ⇑P **Pn** 23 51 46.9 +0.1
KEST Kesra 7.67 204 LR LR 23 54 50.7
comp=N,110nm,18.8s,baz=38,slow=38
SMF Signal de Mont 7.70 303 *e*P **Pn** 23 53 50.2 +2.0
SMF *e*Sn **Sn** 23 53 08.1 -7.3
comp=N,11nm,0.7s
PAGF Fort de Pagny 7.78 320 *e*P **Pn** 23 51 51.3 +2.0
PAGF *e*Sn **Sn** 23 53 10.0 -7.4
comp=N,24nm,0.8s
DPC Dobruska-Polom 7.85 15 *e*PN **Pn** 23 51 50.4 +0.1
SFTF Sexfontaines 7.88 316 *e*P **Pn** 23 51 53.1 +2.4
SFTF *e*Sn **Sn** 23 53 12.4 -7.5
comp=N,39nm,1.1s
SRS Serrai 7.92 99 *e*Pn **Pn** 23 51 52.3 +1.0
SRS *e*Sn **Sn** 23 53 18.2 -2.8
LOR Lormes 7.99 307 *e*P **Pn** 23 51 53.9 +1.8
baz=124
LOR *e*Sn **Sn** 23 53 15.1 -7.4
comp=N,7.3nm,0.6s
LOR Lormes 7.99 307 P **Pn** 23 51 53.6 +1.4
OSTC Ostas 8.03 14 *e*PN **Pn** 23 51 52.6 -0.1
LOT Lotru 8.05 67 ⇑P **Pn** 23 51 52.4 -0.7
AVF Avril sur Loir 8.06 303 *e*P **Pn** 23 51 55.0 +1.8
AVF *e*Sn **Sn** 23 53 16.8 -7.6
comp=N,3.5nm,0.7s
MTLF Montolieu 8.06 278 *e*P **Pn** 23 51 55.8 +2.6
MEZF Maizieres J'vi 8.07 318 *e*P **Pn** 23 51 55.5 +2.3
MEZF *e*Sn **Sn** 23 53 17.0 -7.5
comp=N,24nm,1.0s
BRG Berggiesshubel 8.09 3 *e*P Pn 23 52 05.1 +12
BRG Amp 23 52 09.9
comp=Z,2.1nm,0.5s
BRG *ex* x 23 53 24.0
BRG *ex* x 23 54 22.4
BRG Amp 23 54 50.8
comp=Z,29nm,1.6s
BRG *ex* x 00 06 10.0
BRG Amp 00 06 16.2
comp=Z,1.6nm,0.7s
BRG *ex* x 00 07 41.2
BRG Amp 00 07 57.5
comp=Z,5.8nm,1.1s
BRG *ex* x 00 08 30.3
BRG Amp 00 08 52.5
comp=Z,19nm,1.3s
SSF Saint Saulge 8.09 305 *e*P **Pn** 23 51 54.7 +1.1
SSF *e*Sn **Sn** 23 53 17.9 -7.2
comp=Z,2.8nm,0.5s
SAVF Savonnieres en 8.11 319 *e*P **Pn** 23 51 56.0 +2.2
SAVF *e*Sn **Sn** 23 53 17.7 -7.8
comp=Z,9.3nm,0.5s
BGF Bois d'Agland 8.28 301 *e*P **Pn** 23 51 57.7 +1.5
BGF *e*Sn **Sn** 23 53 22.0 -7.8
comp=Z,4.9nm,0.4s
CAF Calviac 8.33 289 *e*P **Pn** 23 51 59.6 +2.7
CAF *e*Sn **Sn** 23 53 23.3 -7.7
comp=Z,2.2nm,0.6s
CLL Collm 8.51 359 *e*Pn **Pn** 23 51 58.0 -1.3
CLL *ex* x 23 52 00.0
CLL *e*Pg **Pg** 23 52 36.0 -2.9
CLL *e*Sn Sn 23 53 16.0 -19
CLL *ex* x 23 53 32.0
CLL *ex* x 23 53 41.0
CLL *ex* x 23 54 03.0
CLL *ex* x 23 54 09.0
CLL *e*Sg Sg 23 54 15.0 -14
comp=Z,18nm,1.3s
CLL Lm MLR 23 55 00.0
comp=Z,100nm,20.0s
TCF Toulx Ste Croi 8.59 298 *e*P **Pn** 23 52 03.3 +2.8
RJF Les Rejaudoux 8.78 291 *e*P **Pn** 23 52 05.9 +2.8
VOIR 8.92 69 ⇓P **Pn** 23 52 04.6 -0.3
MLR Muntele Rosu 9.54 69 ⇓P **Pn** 23 52 12.8 -0.8
MLR Muntele Rosu 9.54 69 Pn **Pn** 23 52 16.0 +2.4
comp=Z,0.2nm,0.3s,baz=170,slow=12,SNR=3.4
MLR LR LR 23 57 09.5
comp=Z,108nm,20.3s,baz=240,slow=45
comp=Z,2.4nm,0.7s
MFF Saint Martin d 10.24 296 *e*P **Pn** 23 52 26.1 +3.1
SGMF Saint Gilles 12.32 302 *e*P **Pn** 23 52 54.3 +2.9
ESDC Sonseca Array 13.29 262 Pn **Pn** 23 53 05.2 +0.3
baz=69,slow=14,SNR=3.6
ESDC LR LR 23 58 08.6
comp=Z,46nm,18.9s,baz=120,slow=37
comp=Z,0.6nm,0.8s
BRTR Keskin Array B 15.67 94 LR LR 00 01 01.6
comp=Z,51nm,19.5s,baz=334,slow=42
NOA NORSAR Array B 18.31 357 LR LR 00 01 33.5
comp=Z,18nm,18.8s,baz=350,slow=38
MMAI Mount Meron Ar 20.00 112 P Pn 23 54 31.1 +0.5
comp=Z,2.5nm,0.7s,baz=324,slow=9.4,SNR=5.6
comp=Z,2.5nm,0.7s
FINES FINESS Array B 20.20 18 P **P** 23 54 31.4 +0.7
comp=Z,3.1nm,0.9s,baz=205,slow=8.4,SNR=7.1
comp=Z,3.1nm,0.9s
TORD Torodi Ar. Bea 31.18 202 P **P** 23 56 16.9 +1.6
comp=Z,2.6nm,0.3s,baz=18,slow=8.6,SNR=5.1
comp=Z,2.6nm,0.3s
ARU Arti 31.76 49 LR LR 00 10 18.5
comp=Z,35nm,19.1s,baz=186,slow=38
MKAR Makanchi Array 47.75 60 P **P** 23 58 34.3 +1.2
comp=Z,0.6nm,0.7s,baz=284,slow=7.4,SNR=3.9
comp=Z,0.6nm,0.7s
SONM Songino Array 61.79 50 P **P** 00 00 16.8 +1.8
comp=Z,0.8nm,0.7s,baz=284,slow=6.0,SNR=5.8
comp=Z,0.8nm,0.7s
CMAR Chiang Mai Arr 74.63 79 P **P** 00 01 36.3 +0.5
comp=Z,0.6nm,0.3s,baz=304,slow=5.3,SNR=4.5
comp=Z,0.6nm,0.3s

*IDC **25** 23:50:08.6±0.8, 55.°09S×30.°58W, h0km, mb4.3/6, mbtmp4.4/6, MS3.5/8, Error ellipse: s-maj=38.4km s-min=18.7km az=71.0*
*NEIC **25** 23:50:11.8±1.5, 55.°36S±0.°10×31.°2W±0.°1, h10km±1km, mb4.7/28, Error ellipse: s-maj=18.2km s-min=12.1km az=29.0*
ISC 25 23:50:10.9±0.6, 55.°28S±0.°08×31.°1W±0.°1, h10km, n54, σ1s 03/43, mb4.7/16, MS3.9/7, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.30**	**285**	Pn	**Pn**	**23 51 03.2**	**+0.7**
ORCD	**Orcadas**	**9.09**	**227**	Pn	**Pn**	**23 52 20.7**	**-1.2**
VNA1	**Neumayer--Stat**	**18.37**	**156**	P	**P**	**23 54 26.2**	**+0.9**
VNA3	**Neumayer Olymp**	**18.49**	**158**	P	**Pn**	**23 54 26.9**	**+0.1**
VNA2	**Neumayer--Watz**	**18.77**	**156**	P	**Pn**	**23 54 30.2**	**0.0**
baz=314,slow=14							
PMSA	**Palmer Station**	**18.80**	**226**	LR	LR	00 01 23.6	
comp=Z,68nm,18.4s,baz=82,slow=35							
SNAA	**Sanae**	**20.36**	**155**	P	**P**	**23 54 46.8**	**-0.4**
SNAA	**Sanae**	**20.36**	**155**	P	**P**	**23 54 47.9**	**+0.7**
6.5nm,0.9s,baz=311,slow=11,SNR=11							
6.5nm,0.9s							
SNAA	**Sanae**	**20.36**	**155**	P	Pn	23 54 48.5	-0.7
TROLL	**Troll, Antarti**	**21.93**	**153**	P	**P**	**23 55 05.1**	**+1.0**
MG02	**Cerro Sombrero**	**22.38**	**260**	P	**P**	**23 55 08.1**	**-0.8**
BELA	**Belgrano 2**	**22.73**	**182**	P	**P**	**23 55 13.2**	**+0.6**
GO10	**Punta Arenas**	**23.27**	**259**	P	**P**	**23 55 16.0**	**-2.3**
GO10				IAmb	IAmb	23 55 21.1	
comp=Z,25nm,0.8s							
MG04	**Isla Riesco**	**23.67**	**259**	P	**P**	**23 55 22.7**	**+0.5**
MG05	**Puerto Natales**	**24.66**	**261**	P	**P**	**23 55 31.1**	**-0.4**
MG05				IAmb	IAmb	23 55 32.4	
comp=Z,15nm,0.8s							
CPUP	**Villa Florida**	**34.69**	**316**	P	**P**	**23 57 00.2**	**-0.4**
comp=Z,3.1nm,0.8s,baz=145,slow=8.5,SNR=8.2							
comp=Z,3.1nm,0.8s							
CPUP	**Villa Florida**	**34.69**	**316**	P	**P**	**23 57 00.1**	**-0.6**
QSPA	**South Pole Qui**	**34.98**	**180**	P	**P**	**23 57 03.0**	**+0.9**
comp=Z,5.7nm,0.8s,baz=213,slow=3.2,SNR=18							
QSPA				LR	LR	00 11 20.6	
comp=Z,66nm,18.3s,baz=260,slow=36							
comp=Z,5.7nm,0.8s							
QSPA	**South Pole Qui**	**34.98**	**180**	P	**P**	**23 57 03.7**	**+0.7**
QSPA				IAmb	IAmb	23 57 07.4	
comp=Z,6.2nm,0.8s							
PEL	**Peldehue**	**35.32**	**292**	P	**P**	**23 57 06.0**	**-0.1**
PEL				IAmb	IAmb	23 57 08.1	
comp=Z,13nm,0.8s							
VA06	**Catapilco**	**36.09**	**292**	P	**P**	**23 57 12.7**	**+0.1**
TRCB	**Terra Rica**	**36.20**	**325**	P	**P**	**23 57 15.8**	**+2.1**
CO02	**Combarbal**	**37.00**	**294**	P	**P**	**23 57 21.7**	**+1.2**
CO02				IAmb	IAmb	23 57 24.6	
comp=Z,20nm,1.1s							
CO01	**Juntas del Tor**	**37.51**	**296**	P	**P**	**23 57 25.8**	**+0.8**
GO02	**Mina Guanaco**	**41.20**	**301**	P	**P**	**23 57 56.6**	**+0.6**
GO02				IAmb	IAmb	23 57 58.2	
comp=Z,9.8nm,0.7s							
AF01	**San Pedro de A**	**42.40**	**304**	P	**P**	**23 58 06.4**	**+0.7**
AF01				IAmb	IAmb	23 58 08.3	
comp=Z,17nm,0.9s							
LVC Limon Verde 43.03 304 LR LR 00 17 51.3
comp=Z,28nm,18.6s,baz=193,slow=38
PTLB Pontes e Lacer 45.26 320 P **P** 23 58 27.9 -0.5
PTLB IAmb IAmb 23 58 28.5
comp=Z,3.8nm,0.8s
TA02 Huaiquique 45.62 304 P **P** 23 58 31.7 +0.5
GO01 Chusmiza 45.70 306 P **P** 23 58 32.8 +0.3
GO01 IAmb IAmb 23 58 34.0
comp=Z,6.3nm,0.8s
SBA Scott Base 46.68 185 P **P** 23 58 39.0 +0.1
SBA IAmb IAmb 23 59 14.3
comp=Z,8.5nm,1.4s
VNDA Vanda 47.22 184 P **P** 23 58 43.9 +0.7
comp=Z,3.0nm,0.8s,baz=189,slow=6.4,SNR=18
comp=Z,3.0nm,0.8s
VNDA Vanda 47.22 184 P **P** 23 58 44.5 +1.2
VNDA IAmb IAmb 23 58 46.6
comp=Z,3.8nm,0.8s
LPAZ La Paz 48.16 309 P **P** 23 58 52.3 +0.4
comp=Z,4.4nm,0.7s,baz=167,slow=6.7,SNR=20
comp=Z,4.4nm,0.7s
LPAZ La Paz 48.16 309 P **P** 23 58 52.3 +0.4
LPAZ IAmb IAmb 23 59 00.2
comp=Z,6.1nm,0.8s
H10N1 ASCENSION HYDR 49.11 22 T T 00 51 59.8
baz=192,slow=75,SNR=5.7
H10N3 ASCENSION HYDR 49.11 22 T T 00 51 59.8
baz=192,slow=75,SNR=6.4
H10N2 ASCENSION HYDR 49.13 22 T T 00 52 01.4
baz=192,slow=75,SNR=7.9
ETMB Extrema 53.13 315 P **P** 23 59 28.3 -0.4
ETMB IAmb IAmb 23 59 40.7
comp=Z,5.3nm,1.4s
NNA Nana 55.97 302 LR LR 00 27 13.6
comp=Z,17nm,18.0s,baz=143,slow=40
BAUV El Baul 71.04 321 P **P** 00 01 28.8 -0.1
BAUV IAmb IAmb 00 01 41.0
comp=Z,7.0nm,1.0s
TORD Torodi Ar. Bea 73.53 33 P **P** 00 01 41.8 -1.9
comp=Z,1.9nm,0.3s,baz=200,slow=6.2,SNR=6.3
comp=Z,1.9nm,0.3s
MBAR Mbarara 73.80 67 LR LR 00 31 18.9
comp=Z,65nm,18.1s,baz=118,slow=34
MBAR Mbarara 73.80 67 P **P** 00 01 46.5 +0.8
MBAR IAmb IAmb 00 01 49.1
comp=Z,5.7nm,1.1s
BSWZ Blackbirch Sta 81.07 199 P **P** 00 02 26.1 +0.2
SC01 Santiago de lo 81.69 322 P **P** 00 02 30.6 +1.3
MATN Matagalpa 82.03 306 P **P** 00 02 30.9 -0.3
MATN IAmb IAmb 00 02 48.9
comp=Z,7.5nm,1.2s
TEIG Tepich 89.48 308 P **P** 00 03 08.1 +0.2
MDT Midelt 90.62 22 LR LR 00 37 07.1
comp=Z,44nm,20.8s,baz=198,slow=31
STKA Stephens Creek 92.97 174 LR LR 00 41 53.7
comp=Z,51nm,19.9s,baz=203,slow=33
ESDC Sonseca Array 97.37 21 LR LR 00 43 02.3
comp=Z,38nm,19.7s,baz=162,slow=33
YKA Yellowknife Ar 134.15 320 PKP **PKPdf** 00 09 24.5 -2.6
comp=Z,0.9nm,0.8s,baz=127,slow=1.6,SNR=3.7
ILAR Eielson Array 147.98 313 PKPbc **PKPbc** 00 09 53.8 -1.1
comp=Z,3.0nm,0.7s,baz=124,slow=1.7,SNR=34
SONM Songino Array 152.88 88 PKPbc **PKPbc** 00 10 05.2 -2.1
comp=Z,0.6nm,0.4s,baz=232,slow=2.4,SNR=3.9

ROM 26 00:03:09.7±0.1, 42.°789N±0.°004×13.°240E±0.°006, h7km, Md1.8/10, 9C-5D, Error ellipse: s-maj=0.4km s-min=0.3km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**296**	⇓P	Pg	00 03 12.6	+0.5
NRCA				S	Sg	00 03 14.5	+0.8
NRCA				AML	AML		
comp=E,10235μm,0.7s							
NRCA				AML	AML		
comp=N,8720μm,0.4s							
NRCA				AML	AML		
comp=E,11300μm,0.7s							
NRCA				AML	AML		
comp=N,9165μm,0.5s							
NRCA				AML	AML		
comp=E,10200μm,0.7s							
NRCA				AML	AML		
comp=E,76200μm,0.2s							
NRCA				AML	AML		
comp=N,52200μm,1.0s							
NRCA				AML	AML		
comp=E,83500μm,0.2s							
NRCA				AML	AML		
comp=N,56950μm,1.0s							
NRCA				AML	AML		
comp=N,3498μm,0.1s							
NRCA				END			
MMO1	**Montemonaco**	**0.13**	**30**	P	Pg	00 03 12.7	+0.2
MMO1				S	Sg	00 03 15.1	+0.7
MMO1				END			
MC2	**Monte Cornacci**	**0.13**	**344**	⇑P	Pg	00 03 12.9	+0.4
MC2				S	Sg	00 03 15.2	+0.7
MC2				AML	AML		
comp=E,1840μm,0.1s							
MC2				AML	AML		
comp=N,1840μm,0.1s							
MC2				AML	AML		
comp=E,29250μm,0.6s							
MC2				AML	AML		
comp=N,29450μm,0.6s							
MC2				AML	AML		
comp=N,841μm,0.2s							
MC2				END			
T1243	**Rocca Santa Ma**	**0.18**	**121**	AML	AML		
comp=N,3435μm,0.3s							
T1243				AML	AML		
comp=E,4235μm,1.5s							
T1243				AML	AML		
comp=E,4190μm,1.5s							
T1243				AML	AML		
comp=N,3435μm,0.3s							
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
LNSS	**Leonessa**	**0.24**	**218**	⇑P	Pg	00 03 15.3	+0.9
LNSS				S	Sg	00 03 19.7	+2.1
LNSS				AML	AML		
comp=E,4870μm,0.4s							
LNSS				AML	AML		
comp=N,2865μm,0.6s							
LNSS				AML	AML		
comp=E,4865μm,0.4s							
LNSS				AML	AML		
comp=N,2860μm,0.6s							
LNSS				AML	AML		
comp=E,55600μm,0.8s							
LNSS				AML	AML		
comp=N,79700μm,0.4s							
LNSS				END			
FDMO	**Fiordimonte**	**0.27**	**336**	P	Pg	00 03 15.5	+0.4
FDMO				S	Sg	00 03 20.3	+1.6
FDMO				AML	AML		
comp=E,548μm,0.1s							
FDMO				AML	AML		
comp=N,711μm,0.2s							
FDMO				AML	AML		
comp=E,13250μm,0.9s							
FDMO				AML	AML		
comp=N,14350μm,1.6s							
FDMO				AML	AML		
comp=N,244μm,0.2s							
FDMO				END			
RM33	**Pellescritta (**	**0.28**	**184**	⇓P	Pg	00 03 16.2	+0.9
RM33				S	Sb	00 03 21.1	-1.1
RM33				AML	AML		
comp=E,1745μm,0.3s							
RM33				AML	AML		
comp=N,1525μm,1.5s							
RM33				AML	AML		
comp=E,1695μm,0.2s							
RM33				AML	AML		
comp=E,1745μm,0.2s							
RM33				AML	AML		
comp=N,1530μm,1.6s							
RM33				AML	AML		
comp=N,1530μm,0.9s							
RM33				AML	AML		
comp=E,75850μm,0.6s							

RM33 AML AML
comp=N,83350μm,0.4s
RM33 AML AML
comp=E,71600μm,0.6s
RM33 AML AML
comp=N,85900μm,0.4s
RM33 END
CSP1 Cessapalombo 0.30 355 ⇑P Pg 00 03 16.1 +0.4
CSP1 S Sg 00 03 21.2 +1.4
CSP1 AML AML
comp=E,659μm,0.2s
CSP1 AML AML
comp=N,710μm,0.4s
CSP1 AML AML
comp=E,15650μm,1.3s
CSP1 AML AML
comp=N,19500μm,0.6s
CSP1 AML AML
comp=N,662μm,0.2s
CSP1 END
TERO Teramo 0.32 122 P Pg 00 03 16.1 +0.2
TERO S Sg 00 03 21.6 +1.5
TERO END
CESI CESI - Serrava 0.33 311 ⇑P Pg 00 03 16.7 +0.6
CESI S Sb 00 03 22.3 -1.2
CESI AML AML
comp=E,600μm,1.5s
CESI AML AML
comp=E,601μm,1.5s
CESI AML AML
comp=N,958μm,0.3s
CESI AML AML
comp=E,22500μm,0.4s
CESI AML AML
comp=N,35450μm,1.2s
CESI AML AML
comp=E,180μm,0.5s
CESI END
OFFI Offida 0.36 66 P Pb 00 03 18.2 -0.3
OFFI S Sb 00 03 25.5 +1.2
ARRO Arrone 0.41 239 ⇓P Pg 00 03 18.1 +0.5
ARRO S Sb 00 03 25.5 -0.2
ARRO AML AML
comp=E,450μm,1.2s
ARRO AML AML
comp=N,482μm,1.0s
ARRO AML AML
comp=E,9670μm,0.7s
ARRO AML AML
comp=N,9365μm,0.8s
ASSB Assisi San Ben 0.50 301 AML AML
comp=E,308μm,0.3s
ASSB AML AML
comp=N,276μm,0.1s
ASSB AML AML
comp=E,7540μm,0.6s
ASSB AML AML
comp=N,7935μm,0.5s
SNTG Esanatoglia 0.52 335 ⇑P Pg 00 03 19.9 +0.2
SNTG S Sb 00 03 28.4 -0.5
SNTG AML AML
comp=E,178μm,0.5s
SNTG AML AML
comp=N,184μm,0.8s
SNTG AML AML
comp=E,324μm,0.8s
SNTG AML AML
comp=N,344μm,0.8s
SNTG AML AML
comp=E,2085μm,0.8s
SNTG AML AML
comp=N,2460μm,0.8s
FIAM Fiamignano 0.53 190 ⇑P Pg 00 03 20.3 +0.4
FIAM S Sb 00 03 29.0 -0.3
FIAM AML AML
comp=E,202μm,0.6s
FIAM AML AML
comp=N,148μm,0.8s
FIAM AML AML
comp=E,14550μm,1.1s
FIAM AML AML
comp=N,18600μm,0.5s
EL6 Elcito 0.55 349 ⇓P Pg 00 03 20.6 +0.3
EL6 S Sb 00 03 30.0 0.0
EL6 AML AML
comp=E,3332μm,0.6s
EL6 AML AML
comp=N,3045μm,0.8s
CING Cingoli 0.59 357 ⇑P Pg 00 03 21.3 +0.2
CING S Sb 00 03 31.0 0.0
CING AML AML
comp=E,176μm,1.6s
CING AML AML
comp=N,180μm,0.1s
CING AML AML
comp=E,996μm,0.4s
CING AML AML
comp=N,1540μm,0.4s
CING AML AML
comp=N,53μm,0.1s
ATCC AVT- Casa Cast 0.59 312 AML AML
comp=N,222μm,1.1s
ATCC AML AML
comp=E,377μm,0.2s
ATCC AML AML
comp=E,5730μm,0.4s
ATCC AML AML
comp=N,5280μm,0.5s
FOSV Fossato di Vic 0.62 325 ⇑P Pg 00 03 21.8 +0.2
FOSV S Sb 00 03 32.0 +0.2
FOSV AML AML
comp=E,138μm,0.3s
FOSV AML AML
comp=N,168μm,0.3s
FOSV AML AML
comp=E,2515μm,0.6s
FOSV AML AML
comp=N,3485μm,1.5s
FOSV AML AML
comp=E,138μm,0.3s
SSFR Montelago di S 0.73 333 ⇑P Pg 00 03 24.2 +0.5
SSFR AML AML
comp=E,2160μm,0.2s
SSFR AML AML
comp=N,2850μm,0.2s
SSFR AML AML
comp=E,2215μm,0.2s
SSFR AML AML
comp=N,2760μm,0.3s
ARVD Arcevia 0.74 343 P Pg 00 03 23.8 -0.2
FRON Frontone 0.82 333 P Pg 00 03 25.3 -0.2
FRON S Sb 00 03 38.0 +0.4
FRON AML AML
comp=E,72μm,0.1s
FRON AML AML
comp=N,106μm,1.3s
FRON AML AML
comp=E,754μm,0.8s
FRON AML AML
comp=N,1245μm,0.6s
ATVO AVT- Monte Val 0.85 314 AML AML
comp=E,1062μm,0.6s
ATVO AML AML
comp=E,70μm,0.2s
ATVO AML AML
comp=N,65μm,0.3s
ATVO AML AML
comp=N,782μm,0.4s
NARO Abbazia di Nar 0.95 330 ⇓P Pg 00 03 27.7 -0.3
NARO AML AML
comp=E,41μm,0.9s
NARO AML AML
comp=N,32μm,1.3s
NARO AML AML
comp=E,582μm,0.4s
NARO AML AML
comp=N,551μm,0.8s
FSSB Fossombrone 0.96 340 P Pg 00 03 28.4 +0.2
FSSB AML AML
comp=E,226μm,1.5s
FSSB AML AML
comp=N,234μm,0.4s
FSSB AML AML
comp=E,1920μm,0.4s
FSSB AML AML
comp=N,3100μm,0.4s

LDG ***26*** *00:04:09.5±0.1,42°.66N×13°.17E,h2km,Md3.5/2,Ml3.5/30, Error ellipse: s-maj=4.2km s-min=2.4km az=40.0*
IDC ***26*** *00:04:09.4±1.2,42°.83N×13°.01E,h0km,mb3.9/8, mbtmp3.8/13,ML3.6/4,MS2.9/15,Error ellipse: s-maj=19.0km s-min=11.9km az=86.0*
PDG ***26*** *00:04:09.9±0.5,42°.67N×13°.27E,h11km,ML3.9/14,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
PRU ***26*** *00:04:10.7±0.0,42°.67N×13°.44E,h6km*
BEO ***26*** *00:04:11.7±0.5,42°.75N×13°.35E,h0km,ML3.8/16*
STR ***26*** *00:04:12.1±1.5,43°.N±7°×1°.3E±1°.2,h10km,MLv3.9/21, Error ellipse: s-maj=0.0km s-min=0.0km az=115.2, preliminary*

ISC 26 00:04:10.1±0.6,42°.66N±0°.01×13°.25E±0°.02,h10km±3km, n379,σ2§17/471,mb3.9/7,MS3.0/6,51C-30D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.00**	**135**	⇓*e*P		**Pg**	**00 04 11.0**		**-1.1**
T1201				S		**Sg**	**00 04 12.2**		**-1.2**
T1202	**Accumoli, Fraz**	**0.05**	**340**	P		**Pg**	**00 04 11.6**		**-0.7**
T1202				S		**Sg**	**00 04 13.2**		**-0.6**
T1204	**Amatrice, Fraz**	**0.05**	**73**	P		**Pg**	**00 04 10.9**		**-1.5**
T1204				S		**Sg**	**00 04 11.9**		**-2.2**
T1218	**Civita (PG)**	**0.10**	**276**	⇑*i*P		**Pg**	**00 04 12.7**		**-0.2**
T1218				S		**Sg**	**00 04 15.1**		**+0.3**
T1214	**Arquata del Tr**	**0.10**	**344**	P		**Pg**	**00 04 12.5**		**-0.4**
T1214				S		**Sg**	**00 04 14.6**		**-0.4**
T1213	**Norcia, Frazio**	**0.11**	**306**	P		**Pg**	**00 04 12.8**		**-0.1**
T1213				S		**Sg**	**00 04 15.3**		**+0.3**
RM33	**Pellescritta (**	**0.15**	**189**	⇑*i*P		**Pg**	**00 04 13.5**		**-0.1**
RM33				S		**Sg**	**00 04 16.7**		**+0.7**
RM33				AML	AML				
	comp=N,83450μm,0.4s								
RM33				AML	AML				
	comp=E,71600μm,0.6s								
RM33				AML	AML				
	comp=E,75850μm,0.6s								
RM33				AML	AML				
	comp=N,83350μm,0.4s								
RM33				AML	AML				
	comp=E,71650μm,0.6s								
RM33				AML	AML				
	comp=N,85850μm,0.4s								
RM33				AML	AML				
	comp=N,83350μm,0.4s								
RM33				AML	AML				
	comp=N,85900μm,0.4s								
RM33				AML	AML				
	comp=E,75800μm,0.6s								
RM33				AML	AML				
	comp=N,83600μm,0.4s								
T1243	**Rocca Santa Ma**	**0.15**	**76**	⇑P		**Pg**	**00 04 12.4**		**-1.2**
T1243				S		**Sg**	**00 04 14.6**		**-1.5**
T1243				AML	AML				
T1243				AML	AML				
T1243				AML	AML				
T1243				AML	AML				
T1243				AML	AML				
T1243				AML	AML				
LNSS	**Leonessa**	**0.16**	**249**	⇑*i*P		**Pg**	**00 04 13.9**		**+0.1**
LNSS				S		**Sg**	**00 04 17.2**		**+0.9**
LNSS				AML	AML				
	comp=E,55600μm,0.8s								
LNSS				AML	AML				
	comp=N,79700μm,0.4s								
T1242	**Castelluccio d**	**0.17**	**350**	P		**Pg**	**00 04 13.6**		**-0.4**
T1242				S		**Sg**	**00 04 16.7**		**+0.1**
CAMP	**Campotosto**	**0.17**	**136**	⇑*i*P		**Pg**	**00 04 13.2**		**-0.7**
CAMP				S		**Sg**	**00 04 15.8**		**-0.8**
CAMP				AML	AML				
	comp=E,71950μm,0.2s								
CAMP				AML	AML				
	comp=N,81300μm,0.2s								
T1212	**Cascia, Frazio**	**0.17**	**302**	⇑*i*P		**Pg**	**00 04 14.0**		**+0.1**
T1212				S		**Sg**	**00 04 17.3**		**+0.7**
NRCA	**Norcia**	**0.20**	**331**	⇓P		**Pg**	**00 04 14.1**		**-0.2**
NRCA				S		**Sg**	**00 04 17.5**		**+0.2**
NRCA				AML	AML				
	comp=N,52250μm,1.0s								
NRCA				AML	AML				
	comp=E,76200μm,0.2s								
NRCA				AML	AML				
	comp=N,52200μm,1.0s								
NRCA				AML	AML				
	comp=E,83500μm,0.2s								
NRCA				AML	AML				
	comp=E,76250μm,0.2s								
NRCA				AML	AML				
	comp=N,56950μm,1.0s								
T1241	**Roccafluvione,**	**0.24**	**35**	⇑*i*P		**Pg**	**00 04 14.2**		**-0.9**
T1241				S		**Sg**	**00 04 17.4**		**-1.0**
MMO1	**Montemonaco**	**0.25**	**14**	⇑P		**Pg**	**00 04 14.6**		**-0.6**
MMO1				S		**Sg**	**00 04 18.5**		**-0.1**
MMO1				AML	AML				
	comp=E,6790μm,0.8s								
MMO1				AML	AML				
	comp=N,13700μm,0.4s								
MMO1				AML	AML				
	comp=E,6785μm,0.8s								
MC2	**Monte Cornacci**	**0.26**	**351**	P		**Pg**	**00 04 15.1**		**-0.3**
MC2				AML	AML				
	comp=E,31350μm,0.3s								
MC2				AML	AML				
	comp=N,31600μm,0.3s								
MC2				AML	AML				
	comp=E,31400μm,0.3s								
MC2				AML	AML				
	comp=N,31550μm,0.3s								
TERO	**Teramo**	**0.27**	**98**	⇑P		**Pg**	**00 04 14.5**		**-1.0**
TERO				S		**Sg**	**00 04 18.3**		**-0.9**
TERO				AML	AML				
	comp=E,58550μm,0.3s								
TERO				AML	AML				
	comp=E,58600μm,0.3s								
TERO				AML	AML				
	comp=N,50850μm,0.5s								
TERO				AML	AML				
	comp=N,53150μm,0.2s								
TERO				AML	AML				
	comp=E,63850μm,0.3s								
T1215	**Vallo di Nera,**	**0.31**	**297**	⇑P		**Pg**	**00 04 16.2**		**-0.2**
T1215				S		**Sg**	**00 04 21.7**		**+1.1**
T1211	**Morro Reatino**	**0.32**	**246**	⇑*i*P		**Pg**	**00 04 16.4**		**0.0**
GIGS	**Gran Sasso**	**0.32**	**131**	⇑P		**Pg**	**00 04 15.4**		**-1.1**
GIGS				S		**Sg**	**00 04 20.1**		**-0.6**
GIGS				AML	AML				
	comp=N,7500μm,0.7s								
GIGS				AML	AML				
	comp=E,6860μm,0.7s								
AQU	**L'Aquila**	**0.33**	**159**	⇓P		**Pg**	**00 04 16.1**		**-0.5**
AQU				S		**Sg**	**00 04 21.4**		**+0.4**
AQU				AML	AML				
	comp=E,22600μm,1.2s								
AQU				AML	AML				
	comp=N,23650μm,0.7s								
AQU				AML	AML				
	comp=N,23600μm,0.7s								
AQU				AML	AML				
	comp=E,21250μm,1.2s								
AQU				AML	AML				
	comp=N,23700μm,0.7s								
FEMA	**Monte Fema**	**0.34**	**334**	P		**Pg**	**00 04 16.6**		**-0.3**
FEMA				S		**Sg**	**00 04 22.0**		**+0.7**
FEMA				AML	AML				
	comp=E,25250μm,1.0s								
FEMA				AML	AML				
	comp=N,30350μm,1.1s								
FEMA				AML	AML				
	comp=E,25300μm,1.0s								
FEMA				AML	AML				
	comp=N,30400μm,1.1s								
ARRO	**Arrone**	**0.36**	**257**	⇑P		**Pg**	**00 04 17.3**		**0.0**
ARRO				S		**Sb**	**00 04 24.1**		**-0.2**
ARRO				AML	AML				
	comp=E,9700μm,0.7s								
ARRO				AML	AML				
	comp=N,9370μm,0.8s								
ARRO				AML	AML				
	comp=E,9670μm,0.7s								
ARRO				AML	AML				
	comp=N,9365μm,0.8s								
ARRO				AML	AML				
	comp=N,9375μm,0.8s								
ARRO				AML	AML				
	comp=E,9705μm,0.7s								
FDMO	**Fiordimonte**	**0.39**	**343**	⇓P		**Pg**	**00 04 17.4**		**-0.5**
FDMO				S		**Sg**	**00 04 23.7**		**+0.6**
FDMO				AML	AML				
	comp=E,13250μm,0.9s								
FDMO				AML	AML				
	comp=N,14350μm,1.6s								
FIAM	**Fiamignano**	**0.40**	**194**	⇑P		**Pg**	**00 04 17.8**		**-0.3**
FIAM				AML	AML				
	comp=N,18600μm,0.5s								
FIAM				AML	AML				
	comp=E,18150μm,0.8s								
OFFI	**Offida**	**0.42**	**50**	⇑P		**Pg**	**00 04 18.3**		**-0.1**
OFFI				S		**Sb**	**00 04 25.9**		**-0.2**
OFFI				AML	AML				
	comp=N,71800μm,0.5s								
OFFI				AML	AML				
	comp=E,63650μm,0.7s								
CESI	**CESI - Serrava**	**0.43**	**324**	⇓P		**Pg**	**00 04 18.2**		**-0.3**
CESI				S		**Sg**	**00 04 25.1**		**+0.9**
CESI				AML	AML				
	comp=E,22500μm,0.4s								
CESI				AML	AML				
	comp=N,35450μm,1.2s								
CSP1	**Cessapalombo**	**0.43**	**356**	⇑P		**Pg**	**00 04 18.1**		**-0.6**
CSP1				S		**Sg**	**00 04 24.9**		**+0.5**
CSP1				AML	AML				
	comp=E,20100μm,0.6s								
CSP1				AML	AML				
	comp=N,29000μm,0.4s								
CSP1				AML	AML				
	comp=N,28950μm,0.4s								
FAGN	**Fagnano**	**0.47**	**148**	P		**Pg**	**00 04 18.6**		**-0.7**
FAGN				AML	AML				
	comp=E,30550μm,0.5s								
FAGN				AML	AML				
	comp=N,40350μm,0.4s								
CESX	**Cesi**	**0.49**	**264**	⇑P		**Pg**	**00 04 19.3**		**-0.4**
CESX				AML	AML				
	comp=N,10300μm,0.4s								
CESX				AML	AML				
	comp=E,9845μm,0.5s								
MNTP	**Montappone**	**0.50**	**19**	P		**Pg**	**00 04 19.7**		**-0.2**
MNTP				S		**Sb**	**00 04 28.1**		**-0.3**
MNTP				AML	AML				
	comp=E,39050μm,0.3s								
MNTP				AML	AML				
	comp=N,23050μm,0.3s								
MNTP				AML	AML				
	comp=E,39000μm,0.3s								
TRTR	**Tortoreto Alta**	**0.51**	**73**	⇑P		**Pg**	**00 04 20.2**		**+0.2**
TRTR				AML	AML				
	comp=E,36050μm,0.5s								
TRTR				AML	AML				
	comp=N,35500μm,0.7s								
VCEL	**Villa Celiera**	**0.51**	**121**	P		**Pg**	**00 04 19.4**		**-0.7**
VCEL				S		**Sg**	**00 04 27.6**		**+0.7**
VCEL				AML	AML				
	comp=E,31250μm,0.3s								
VCEL				AML	AML				
	comp=E,31300μm,0.3s								
VCEL				AML	AML				
	comp=N,30700μm,1.0s								
SEF1	**Sefro**	**0.53**	**336**	P		**Pg**	**00 04 19.9**		**-0.6**
SSM1	**San Severino M**	**0.57**	**355**	P		**Pg**	**00 04 20.4**		**-0.8**
ASSB	**Assisi San Ben**	**0.58**	**312**	⇓P		**Pg**	**00 04 20.8**		**-0.5**
ASSB				AML	AML				
	comp=N,9385μm,0.5s								
ASSB				AML	AML				
	comp=E,7540μm,0.6s								
T0110	**Collepietro**	**0.59**	**138**	⇓P		**Pg**	**00 04 20.4**		**-1.1**
T0110				S		**Sg**	**00 04 29.5**		**+0.3**
T0110				AML	AML				
	comp=E,18150μm,0.3s								
T0110				AML	AML				
	comp=N,19350μm,0.3s								
GAG1	**Gagliole**	**0.59**	**347**	AML	AML				
	comp=E,21150μm,0.4s								
GAG1				AML	AML				
	comp=E,21100μm,0.4s								
GAG1				AML	AML				
	comp=N,32850μm,0.7s								
SNTG	**Esanatoglia**	**0.64**	**339**	⇓P		**Pg**	**00 04 21.6**		**-0.8**
SNTG				AML	AML				
	comp=E,628μm,0.7s								
SNTG				AML	AML				
	comp=N,821μm,0.4s								
SNTG				AML	AML				
	comp=E,4875μm,0.7s								
SNTG				AML	AML				
	comp=N,822μm,0.4s								
SNTG				AML	AML				
	comp=N,6630μm,0.4s								
PTQR	**Pietraquaria**	**0.65**	**170**	⇓P		**Pg**	**00 04 21.4**		**-1.2**
PTQR				AML	AML				
	comp=N,2675μm,1.6s								
PTQR				AML	AML				
	comp=E,2425μm,0.4s								
CADA	**Capodarco di F**	**0.65**	**35**	P		**Pg**	**00 04 23.1**		**+0.4**
EL6	**Elcito**	**0.68**	**351**	⇑P		**Pg**	**00 04 22.4**		**-0.8**
EL6				AML	AML				
	comp=E,12285μm,0.3s								
EL6				AML	AML				
	comp=N,12180μm,0.7s								
EL6				AML	AML				
	comp=E,12280μm,0.3s								
EL6				AML	AML				
	comp=N,12165μm,0.7s								
ATCC	**AVT- Casa Cast**	**0.69**	**320**	⇓P		**Pg**	**00 04 22.8**		**-0.6**
ATCC				AML	AML				
	comp=N,7525μm,0.7s								
ATCC				AML	AML				
	comp=E,8465μm,0.6s								
SRES	**S.Oreste - Sor**	**0.69**	**232**	⇑P		**Pg**	**00 04 22.7**		**-0.7**
SRES				AML	AML				
	comp=E,4070μm,0.8s								
SRES				AML	AML				
	comp=N,2630μm,1.6s								
CING	**Cingoli**	**0.72**	**357**	⇑P		**Pg**	**00 04 23.0**		**-0.9**
CING				AML	AML				
	comp=E,10950μm,1.1s								
CING				AML	AML				
	comp=N,8430μm,0.7s								
FOSV	**Fossato di Vic**	**0.73**	**331**	⇓P		**Pg**	**00 04 23.3**		**-0.8**
FOSV				AML	AML				
	comp=E,5720μm,1.0s								
FOSV				AML	AML				
	comp=N,7955μm,0.4s								
CERT	**Cerreto**	**0.74**	**196**	⇑P		**Pg**	**00 04 23.2**		**-1.1**
CERT				AML	AML				
	comp=E,11280μm,0.5s								
CERT				AML	AML				
	comp=N,7260μm,0.5s								
MTCE	**Montecelio**	**0.74**	**211**	⇑P		**Pg**	**00 04 23.3**		**-1.0**
MTCE				AML	AML				
	comp=E,7485μm,0.6s								
MTCE				AML	AML				
	comp=N,4015μm,0.6s								
PP3	**Marolino**	**0.77**	**20**	P		**Pg**	**00 04 24.6**		**-0.2**
PP3				AML	AML				
	comp=N,12150μm,0.4s								
PP3				AML	AML				
	comp=E,17050μm,1.1s								
PP3				AML	AML				
	comp=N,12650μm,0.4s								
PP3				AML	AML				
	comp=E,18400μm,1.1s								
MURB	**Monte Urbino**	**0.80**	**319**	P		**Pg**	**00 04 25.1**		**-0.5**
MURB				AML	AML				
	comp=E,22800μm,0.4s								
MURB				AML	AML				
	comp=E,24200μm,0.4s								
MURB				AML	AML				
	comp=N,14550μm,1.1s								
MURB				AML	AML				
	comp=N,13750μm,1.1s								
INTR	**Introdacqua**	**0.81**	**143**	⇓P		**Pg**	**00 04 23.9**		**-1.8**
INTR				AML	AML				
	comp=E,5μm,0.6s								
INTR				AML	AML				
	comp=N,5μm,1.2s								
INTR				AML	AML				
	comp=E,5μm,0.6s								
INTR				AML	AML				
	comp=E,4510μm,0.6s								

INTR				AML	AML				
	comp=E,4515µm,0.6s								
INTR				AML	AML				
	comp=N,5µm,1.2s								
INTR				AML	AML				
	comp=E,5µm,0.7s								
INTR				AML	AML				
	comp=N,7670µm,1.2s								
VVLD	**Villa Vallelon**	**0.84**	**160**	P	**Pg**	**00**	**04**	**24.8**	**-1.4**
VVLD				AML	AML				
	comp=E,3730µm,0.6s								
VVLD				AML	AML				
	comp=N,4020µm,1.1s								
RCAV	**Rocca di Cave**	**0.84**	**195**	P	**Pg**	**00**	**04**	**26.2**	**-0.1**
RCAV				AML	AML				
	comp=N,9800µm,0.4s								
RCAV				AML	AML				
	comp=E,8220µm,0.5s								
SSFR	**Montelago di S**	**0.85**	**336**	P	**Pg**	**00**	**04**	**25.5**	**-0.9**
SSFR				AML	AML				
	comp=N,7345µm,0.2s								
SSFR				AML	AML				
	comp=E,9320µm,0.9s								
SSFR				AML	AML				
	comp=N,7750µm,0.8s								
SSFR				AML	AML				
	comp=E,8170µm,0.3s								
ATTE	**AVT- Monte Tez**	**0.85**	**310**	P	**Pg**	**00**	**04**	**25.7**	**-0.8**
ATTE				AML	AML				
	comp=E,3370µm,0.5s								
ATTE				AML	AML				
	comp=N,3975µm,0.5s								
ATFO	**Monte Foce - G**	**0.86**	**325**	P	**Pg**	**00**	**04**	**25.8**	**-0.9**
ATFO				AML	AML				
	comp=N,4205µm,0.7s								
ATFO				AML	AML				
	comp=E,4505µm,0.7s								
ARVD	**Arcevia**	**0.87**	**345**	P	**Pg**	**00**	**04**	**25.8**	**-1.0**
ARVD				AML	AML				
	comp=N,4420µm,0.7s								
ARVD				AML	AML				
	comp=E,2865µm,1.6s								
GUAR	**Guarcino**	**0.87**	**177**	P	**Pg**	**00**	**04**	**25.9**	**-0.9**
GUAR				AML	AML				
	comp=N,6245µm,0.4s								
GUAR				AML	AML				
	comp=E,4290µm,0.4s								
MGAB	**Montegabbione**	**0.87**	**287**	P	**Pg**	**00**	**04**	**26.6**	**-0.3**
MGAB				AML	AML				
	comp=E,14050µm,1.6s								
MGAB				AML	AML				
	comp=N,11400µm,0.5s								
MGAB				AML	AML				
	comp=E,14750µm,1.6s								
MGAB				AML	AML				
	comp=N,11950µm,0.5s								
CAFR	**Castel Frentan**	**0.92**	**118**	AML	AML				
	comp=N,2955µm,0.9s								
CAFR				AML	AML				
	comp=E,17µm,0.6s								
LPEL	**Lama dei Pelig**	**0.93**	**131**	P	**Pg**	**00**	**04**	**25.9**	**-2.0**
LPEL				AML	AML				
	comp=E,4845µm,1.0s								
LPEL				AML	AML				
	comp=N,3800µm,1.2s								
AOI	**Ancona**	**0.93**	**16**	P	**Pg**	**00**	**04**	**26.6**	**-1.3**
AOI				AML	AML				
	comp=E,5655µm,0.4s								
AOI				AML	AML				
	comp=N,6405µm,0.9s								
FRON	**Frontone**	**0.94**	**336**	P	**Pg**	**00**	**04**	**26.9**	**-1.3**
FRON				AML	AML				
	comp=N,4205µm,0.9s								
FRON				AML	AML				
	comp=E,4000µm,0.5s								
RMP	**Rome, Mte Porz**	**0.94**	**206**	P	**Pg**	**00**	**04**	**26.9**	**-1.2**
RMP				AML	AML				
	comp=N,8835µm,0.7s								
RMP				AML	AML				
	comp=E,8740µm,0.7s								
ATVO	**AVT- Monte Val**	**0.95**	**320**	P	**Pg**	**00**	**04**	**27.1**	**-1.3**
ATVO				AML	AML				
	comp=E,4235µm,0.5s								
ATVO				AML	AML				
	comp=N,2525µm,0.7s								
VIVA	**Pratoni del Vi**	**0.98**	**201**	P	**Pg**	**00**	**04**	**27.7**	**-1.2**
VIVA				AML	AML				
	comp=N,13550µm,0.5s								
VIVA				AML	AML				
	comp=E,11600µm,1.2s								
ATMI	**Monte Miggiano**	**0.98**	**314**	P	**Pg**	**00**	**04**	**28.7**	**-0.3**
ATMI				AML	AML				
	comp=E,9945µm,0.6s								
ATMI				AML	AML				
	comp=N,9115µm,1.5s								
RDP	**Rocca di Papa**	**0.98**	**204**	P	**Pg**	**00**	**04**	**28.0**	**-1.0**
RDP				AML	AML				
	comp=E,11000µm,0.5s								
RDP				AML	AML				
	comp=N,15000µm,0.6s								
COR1	**Corinaldo**	**0.99**	**350**	P	**Pg**	**00**	**04**	**28.8**	**-0.3**
COR1				AML	AML				
	comp=N,11550µm,1.0s								
COR1				AML	AML				
	comp=E,10355µm,0.9s								
MA9	**Marino**	**0.99**	**206**	P	**Pg**	**00**	**04**	**28.6**	**-0.5**
MA9				AML	AML				
	comp=N,13150µm,0.6s								
MA9				AML	AML				
	comp=E,12550µm,0.6s								
ATPI	**Pietralunga -**	**1.00**	**322**	P	**Pg**	**00**	**04**	**28.4**	**-1.0**
ATPI				AML	AML				
	comp=N,2625µm,0.8s								
ATPI				AML	AML				
	comp=E,4140µm,0.5s								
POFI	**Posta Fibreno**	**1.00**	**160**	P	**Pg**	**00**	**04**	**27.8**	**-1.6**
POFI				AML	AML				
	comp=E,3275µm,1.5s								
POFI				AML	AML				
	comp=E,3125µm,1.5s								
POFI				AML	AML				
	comp=N,1905µm,0.9s								
POFI				AML	AML				
	comp=N,2000µm,0.7s								
PIEI	**Pieia**	**1.02**	**329**	P	**Pg**	**00**	**04**	**28.5**	**-1.2**
PIEI				AML	AML				
	comp=E,2600µm,0.3s								
PIEI				AML	AML				
	comp=N,1975µm,0.3s								
MPAG	**Monte Paganucc**	**1.03**	**340**	P	**Pg**	**00**	**04**	**28.7**	**-1.2**
MPAG				AML	AML				
	comp=N,3535µm,0.8s								
MPAG				AML	AML				
	comp=E,5585µm,0.6s								
MPAG				AML	AML				
	comp=E,5590µm,0.5s								
MPAG				AML	AML				
	comp=N,3515µm,0.8s								
LRP	**Arpino**	**1.04**	**166**	AML	AML				
	comp=N,2660µm,0.4s								
LRP				AML	AML				
	comp=E,1770µm,0.7s								
SENI	**Senigallia**	**1.04**	**359**	AML	AML				
	comp=E,23300µm,0.8s								
SENI				AML	AML				
	comp=E,6520µm,1.0s								
SENI				AML	AML				
	comp=N,4550µm,0.5s								
SENI				AML	AML				
	comp=N,18900µm,0.4s								
LAV9	**Lanuvio**	**1.06**	**203**	P	**Pg**	**00**	**04**	**30.3**	**-0.2**
LAV9				AML	AML				
	comp=E,11550µm,0.4s								
LAV9				AML	AML				
	comp=N,8590µm,1.3s								
LAV9				AML	AML				
	comp=N,8295µm,1.3s								
LAV9				AML	AML				
	comp=E,11050µm,0.4s								
LATE	**Laterza**	**1.07**	**268**	⇑P	**Pg**	**00**	**04**	**29.7**	**-0.8**
NARO	**Abbazia di Nar**	**1.07**	**333**	P	**Pg**	**00**	**04**	**29.1**	**-1.5**
NARO				AML	AML				
	comp=N,2655µm,0.7s								
NARO				AML	AML				
	comp=E,2210µm,0.6s								
APEC	**Apecchio**	**1.08**	**326**	AML	AML				
	comp=N,1010µm,1.1s								
APEC				AML	AML				
	comp=E,1042µm,0.9s								
APEC				AML	AML				
	comp=E,4285µm,0.9s								
APEC				AML	AML				
	comp=N,4365µm,1.4s								
FSSB	**Fossombrone**	**1.09**	**342**	P	**Pg**	**00**	**04**	**29.7**	**-1.2**
FSSB				AML	AML				
	comp=E,11050µm,0.4s								
FSSB				AML	AML				
	comp=N,8940µm,0.4s								
TOLF	**Tolfa**	**1.10**	**238**	⇑P	**Pg**	**00**	**04**	**30.0**	**-1.2**
TOLF				AML	AML				
	comp=N,2325µm,0.6s								
TOLF				AML	AML				
	comp=E,2055µm,0.6s								
GIUL	**Giuliano Di Ro**	**1.10**	**180**	P	**Pg**	**00**	**04**	**30.3**	**-1.0**
GIUL				AML	AML				
	comp=E,2255µm,1.4s								
GIUL				AML	AML				
	comp=N,2195µm,0.7s								
BADI	**Badiali**	**1.12**	**319**	P	**Pg**	**00**	**04**	**30.3**	**-1.3**
CAFI	**Castiglion Fio**	**1.15**	**306**	P	**Pg**	**00**	**04**	**31.8**	**-0.5**
CAFI				AML	AML				
	comp=N,2115µm,0.6s								
CAFI				AML	AML				
	comp=N,2230µm,0.6s								
CAFI				AML	AML				
	comp=E,2060µm,0.6s								
CAFI				AML	AML				
	comp=E,1970µm,0.5s								
MCIV	**Monte Civitell**	**1.16**	**276**	P	**Pg**	**00**	**04**	**31.6**	**-0.8**
MCIV				AML	AML				
	comp=N,1550µm,1.1s								
MCIV				AML	AML				
	comp=E,1655µm,0.6s								
RNI2	**Rionero Sannit**	**1.17**	**145**	P	**Pg**	**00**	**04**	**31.1**	**-1.5**
PE3	**Peglio**	**1.17**	**332**	AML	AML				
	comp=N,14µm,0.2s								
PE3				AML	AML				
	comp=E,14µm,0.7s								
LIK	**San Giovanni I**	**1.18**	**169**	P	**Pb**	**00**	**04**	**32.4**	**-0.1**
LIK				AML	AML				
	comp=E,3025µm,1.6s								
LIK				AML	AML				
	comp=N,4165µm,1.4s								
SF04	**Casetta**	**1.18**	**279**	P	**Pg**	**00**	**04**	**32.1**	**-0.7**
SF04				AML	AML				
	comp=E,2180µm,0.5s								
SF04				AML	AML				
	comp=N,1298µm,0.7s								
LATB	**Latina**	**1.19**	**190**	P	**Pb**	**00**	**04**	**31.4**	**-1.2**
LATB				AML	AML				
	comp=E,924µm,0.9s								
LATB				AML	AML				
	comp=N,848µm,0.6s								
CERA	**Filignano**	**1.21**	**151**	P	**Pb**	**00**	**04**	**31.1**	**-1.9**
CERA				AML	AML				
	comp=E,2995µm,0.6s								
CERA				AML	AML				
	comp=N,3215µm,0.6s								
CERA				AML	AML				
	comp=E,2880µm,0.6s								
CERA				AML	AML				
	comp=N,3095µm,0.6s								
SSP9	**Sansepolcro**	**1.23**	**319**	P	**Pb**	**00**	**04**	**33.2**	**-0.1**
SSP9				AML	AML				
	comp=E,2390µm,1.0s								
SSP9				AML	AML				
	comp=N,2180µm,1.3s								
PARC	**Parchiule**	**1.23**	**324**	P	**Pb**	**00**	**04**	**32.2**	**-1.3**
PARC				AML	AML				
	comp=E,2765µm,0.5s								
PARC				AML	AML				
	comp=N,3280µm,1.0s								
SF01	**Poggio Pratacc**	**1.25**	**278**	⇑P	**Pn**	**00**	**04**	**33.8**	**+0.2**
SF01				AML	AML				
	comp=E,2520µm,0.6s								
SF01				AML	AML				
	comp=N,2551µm,0.7s								
PESA	**Pesaro**	**1.31**	**347**	P	**Pn**	**00**	**04**	**34.6**	**+0.2**
PESA				AML	AML				
	comp=E,4920µm,0.4s								
PESA				AML	AML				
	comp=N,4570µm,1.1s								
TRIV	**Trivento**	**1.32**	**132**	P	**Pn**	**00**	**04**	**34.0**	**-0.5**
TRIV				AML	AML				
	comp=E,2105µm,1.0s								
TRIV				AML	AML				
	comp=N,1900µm,0.9s								
TRIV				AML	AML				
	comp=E,2265µm,1.0s								
TRIV				AML	AML				
	comp=N,1795µm,0.9s								
ARCI	**Arcidosso**	**1.32**	**279**	P	**Pn**	**00**	**04**	**34.8**	**+0.2**
ARCI				AML	AML				
	comp=E,598µm,1.4s								
ARCI				AML	AML				
	comp=N,697µm,1.0s								
CRE	**Caprese Michel**	**1.35**	**316**	P	**Pn**	**00**	**04**	**34.3**	**-0.7**
CRE				AML	AML				
	comp=E,1355µm,0.8s								
CRE				AML	AML				
	comp=N,1525µm,1.1s								
VAGA	**Valle Agricola**	**1.45**	**149**	AML	AML				
	comp=E,894µm,1.4s								
VAGA				AML	AML				
	comp=E,926µm,1.4s								
VAGA				AML	AML				
	comp=N,1280µm,0.7s								
VAGA				AML	AML				
	comp=N,1330µm,0.7s								
BSSO	**Busso**	**1.50**	**138**	P	**Pn**	**00**	**04**	**37.1**	**+0.1**
BSSO				AML	AML				
	comp=E,1090µm,0.8s								
BSSO				AML	AML				
	comp=N,1345µm,1.4s								
BSSO				AML	AML				
	comp=E,422µm,0.8s								
BSSO				AML	AML				
	comp=N,550µm,1.4s								
ASQU	**Asqua**	**1.56**	**317**	P	**Pn**	**00**	**04**	**37.1**	**-0.8**
MODR	**Mondragone**	**1.58**	**162**	P	**Pn**	**00**	**04**	**38.4**	**+0.2**
MODR				AML	AML				
	comp=N,684µm,1.0s								
MODR				AML	AML				
	comp=E,661µm,0.8s								
CIGN	**Sant'Elia a Pi**	**1.59**	**129**	P	**Pn**	**00**	**04**	**39.3**	**+1.0**
CIGN				AML	AML				
	comp=N,861µm,1.6s								
CIGN				AML	AML				
	comp=E,936µm,1.2s								
SFI	**Santa Sofia**	**1.61**	**321**	P	**Pn**	**00**	**04**	**38.3**	**-0.2**
PIGN	**Pignataro Magg**	**1.62**	**154**	P	**Pn**	**00**	**04**	**38.0**	**-0.6**
FROS	**Frosini**	**1.63**	**290**	⇑P	**Pn**	**00**	**04**	**39.3**	**+0.5**
CSNT	**Castellina Chi**	**1.65**	**300**	P	**Pn**	**00**	**04**	**39.0**	**-0.1**
CSNT				AML	AML				
	comp=E,581µm,0.7s								
CSNT				AML	AML				
	comp=N,584µm,0.8s								
MELA	**Melanico ??? S**	**1.69**	**124**	P	**Pn**	**00**	**04**	**40.2**	**+0.6**
MELA				AML	AML				
	comp=N,2440µm,0.5s								
MELA				AML	AML				
	comp=E,2520µm,0.9s								
MELA				AML	AML				
	comp=N,2555µm,0.5s								
MELA				AML	AML				
	comp=E,2465µm,0.9s								
RUFI	**Rufina**	**1.73**	**313**	P	**Pn**	**00**	**04**	**39.9**	**-0.3**
CASP	**Castiglione de**	**1.76**	**275**	P	**Pn**	**00**	**04**	**40.5**	**0.0**
CASP				AML	AML				
	comp=N,320µm,0.6s								
CASP				AML	AML				
	comp=E,308µm,1.5s								
TREM	**Isole Tremiti**	**1.76**	**107**	P	**Pn**	**00**	**04**	**41.7**	**+1.1**
TREM				AML	AML				
	comp=N,2620µm,0.6s								
TREM				AML	AML				
	comp=E,2800µm,0.6s								
TRIF	**Trifonti**	**1.78**	**286**	⇑P	**Pn**	**00**	**04**	**41.3**	**+0.3**
TRIF				AML	AML				
	comp=N,549µm,0.6s								
TRIF				AML	AML				
	comp=E,655µm,0.7s								
LMD	**Lutirano**	**1.81**	**322**	P	**Pn**	**00**	**04**	**41.6**	**+0.3**
LMD				AML	AML				
	comp=N,899µm,1.4s								
LMD				AML	AML				
	comp=E,1007µm,0.9s								
PSB1	**Pescosannita**	**1.85**	**140**	P	**Pb**	**00**	**04**	**44.2**	**+0.2**
DUGI	**Dugi Otok**	**1.88**	**44**	*i* Pn	**Pn**	**00**	**04**	**42.2**	**0.0**
BRIS	**BRISIGHELLA**	**1.95**	**320**	P	**Pb**	**00**	**04**	**45.1**	**-0.6**
SGRT	**San Giovanni R**	**2.06**	**115**	P	**Pn**	**00**	**04**	**45.5**	**+0.7**
SGRT				AML	AML				
	comp=N,1174µm,0.6s								
SGRT				AML	AML				
	comp=E,936µm,0.7s								
VIRC	**Vir**	**2.10**	**38**	*e*Pn	**Pn**	**00**	**04**	**45.0**	**-0.2**
MTRZ	**Monterenzio**	**2.15**	**324**	P	**Pb**	**00**	**04**	**48.5**	**-0.5**
FNVD	**Fontana Vidola**	**2.16**	**315**	P	**Pn**	**00**	**04**	**46.4**	**+0.3**
MORI	**Morici**	**2.16**	**55**	*e*Pn	**Pn**	**00**	**04**	**46.4**	**+0.2**
MSAG	**Monte S. Angel**	**2.19**	**115**	P	**Pn**	**00**	**04**	**47.6**	**+1.0**
MSAG				AML	AML				
	comp=N,2685µm,0.4s								
MSAG				AML	AML				
	comp=E,1235µm,0.4s								
MSAG				AML	AML				
	comp=E,1159µm,0.7s								
MSAG				AML	AML				
	comp=N,2735µm,0.3s								
SGTA	**Sant Agata di**	**2.20**	**133**	P	**Pn**	**00**	**04**	**48.2**	**+1.6**
CAFE	**Carife**	**2.21**	**137**	P	**Pb**	**00**	**04**	**49.0**	**-1.1**
NVLJ	**Novalja**	**2.24**	**31**	*e*Pn	**Pn**	**00**	**04**	**46.8**	**-0.3**
BRJN	**Brijuni**	**2.27**	**9**	*e*Pn	**Pn**	**00**	**04**	**47.4**	**-0.3**
POPM	**Popiglio**	**2.28**	**308**	P	**Pn**	**00**	**04**	**47.9**	**+0.1**
POPM				AML	AML				
	comp=N,302µm,1.5s								
POPM				AML	AML				
	comp=E,406µm,1.1s								
ZCCA	**Zocca**	**2.36**	**316**	P	**Pb**	**00**	**04**	**52.6**	**-0.1**
RABC	**Rab**	**2.37**	**28**	*e*Pn	**Pn**	**00**	**04**	**48.8**	**-0.1**
SMRN	**Sveta Marina**	**2.46**	**15**	*e*Pn	**Pn**	**00**	**04**	**49.6**	**-0.6**
UDBI	**Udbina**	**2.61**	**44**	*e*Pn	**Pn**	**00**	**04**	**53.5**	**+1.1**
PALZ	**Palazzo San Ge**	**2.66**	**129**	AML	AML				
	comp=E,730µm,0.9s								
PALZ				AML	AML				
	comp=N,752µm,1.2s								
KIJV	**Kijevo**	**2.67**	**59**	*e*Pn	**Pn**	**00**	**04**	**53.9**	**+0.8**
LSTV	**Lastovo**	**2.69**	**86**	*e*Pn	**Pn**	**00**	**04**	**53.3**	**0.0**
PLIT	**Plitvice**	**2.81**	**37**	*e*Pn	**Pn**	**00**	**04**	**55.9**	**+0.9**
RIY	**Rijeka**	**2.81**	**18**	*e*Pn	**Pn**	**00**	**04**	**55.0**	**0.0**
MAKA	**Makarska**	**2.84**	**76**	*e*Pn	**Pn**	**00**	**04**	**55.4**	**0.0**
SKDS	**Skadanscina**	**2.94**	**11**	*e*Pn	**Pn**	**00**	**04**	**55.6**	**-1.2**
SKDS	**Skadanscina**	**2.94**	**11**	*e*Pn	**Pn**	**00**	**04**	**56.2**	**-0.6**
SKDS				*i* Sn	**Sn**	**00**	**05**	**32.8**	**+0.6**
SKDS				IAML		00	05	59.4	
	comp=Z,267nm,1.1s								
GRAM	**Graiana**	**2.95**	**309**	P	**Pn**	**00**	**04**	**57.9**	**+0.9**
GRAM				AML	AML				
	comp=N,406µm,0.7s								
GRAM				AML	AML				
	comp=E,457µm,1.2s								
RICI	**Ricice**	**2.97**	**72**	*e*Pn	**Pn**	**00**	**04**	**57.8**	**+0.6**
SMPL	**Sampolo**	**2.99**	**260**	P	**Pn**	**00**	**04**	**57.6**	**+0.1**
A050A	**Klekovaca**	**3.00**	**52**	*e*Pn	**Pn**	**00**	**04**	**58.7**	**+1.0**
AMUR	**Altamura**	**3.06**	**124**	P	**Pn**	**00**	**04**	**59.1**	**+0.6**
AMUR				AML	AML				
	comp=E,414µm,0.6s								
AMUR				AML	AML				
	comp=N,286µm,1.1s								
PGF	**Pioggiola**	**3.14**	**269**	*e*P	**Pn**	**00**	**05**	**00.5**	**+0.9**
PGF				*e*Sn	**Sn**	**00**	**05**	**33.0**	**-4.1**
	comp=N,39nm,0.8s								
PGF	**Pioggiola**	**3.14**	**269**	P	**Pn**	**00**	**05**	**00.4**	**+0.8**
SRKY	**Kupres RS**	**3.19**	**62**	*e*Pn	**Pn**	**00**	**05**	**02.1**	**+1.8**
BOJS	**Bojanci**	**3.19**	**26**	*e*Pn	**Pn**	**00**	**05**	**01.5**	**+1.3**
BOJS	**Bojanci**	**3.19**	**26**	P	**Pn**	**00**	**05**	**01.1**	**+0.9**
BOJS				AML	AML				
	comp=E,899µm,1.3s								
BOJS				AML	AML				
	comp=N,862µm,1.4s								
CEY	**Cerknica**	**3.19**	**15**	*e*Pn	**Pn**	**00**	**05**	**00.0**	**-0.3**
MATE	**Matera**	**3.28**	**127**	⇑P	**Pn**	**00**	**05**	**02.8**	**+1.3**
MATE				⇑S	**Sn**	**00**	**05**	**41.2**	**+0.8**
STON	**Ston**	**3.29**	**85**	*e*Pn	**Pn**	**00**	**05**	**00.0**	**-1.5**
STON	**Ston**	**3.29**	**85**	*e*Pn	**Pn**	**00**	**05**	**00.5**	**-1.0**
STON	**Ston**	**3.29**	**85**	*e*Pn	**Pn**	**00**	**05**	**00.8**	**-0.7**
STON				*e*Sn	**Sn**	**00**	**05**	**39.0**	**-1.6**
STON	**Ston**	**3.29**	**85**	AML	AML				
	comp=E,188µm,0.4s								
STON				AML	AML				
	comp=N,182µm,0.6s								
A251A	**Rujevac**	**3.29**	**40**	*e*Pn	**Pn**	**00**	**05**	**02.4**	**+0.8**
MGRS	**Mrkonjic Grad**	**3.30**	**57**	*e*Pn	**Pn**	**00**	**05**	**03.6**	**+1.9**
OZLJ	**Ozalj**	**3.36**	**28**	*e*Pn	**Pn**	**00**	**05**	**02.9**	**+0.4**
LTRZ	**Laterza**	**3.38**	**126**	AML	AML				
	comp=E,178µm,0.7s								
LTRZ				AML	AML				
	comp=N,1690µm,1.6s								
AJAC	**Base Areonaval**	**3.41**	**259**	P	**Pn**	**00**	**05**	**04.5**	**+1.4**
AJAC				S	**Sn**	**00**	**05**	**46.7**	**+3.1**
AJAC	**Base Areonaval**	**3.41**	**259**	P	**Pn**	**00**	**05**	**04.4**	**+1.3**
NOCI	**Noci**	**3.42**	**122**	P	**Pn**	**00**	**05**	**04.3**	**+1.0**
NOCI				AML	AML				
	comp=E,268µm,0.6s								
NOCI				AML	AML				
	comp=N,288µm,1.0s								
LJU	**Ljubljana**	**3.50**	**15**	P	**Pn**	**00**	**05**	**05.4**	**+0.8**
LJU				AML	AML				
	comp=E,2265µm,0.8s								
LJU				AML	AML				
	comp=N,2620µm,1.0s								
BLY	**Banja Luka**	**3.54**	**52**	*e*Pn	**Pn**	**00**	**05**	**07.0**	**+2.1**
BLY	**Banja Luka**	**3.54**	**52**	*e*Pn	**Pn**	**00**	**05**	**07.1**	**+2.1**
A051A	**Mrakovica**	**3.54**	**47**	*e*Pn	**Pn**	**00**	**05**	**05.8**	**+0.7**
CRES	**Cresnjev**	**3.54**	**26**	*e*Pn	**Pn**	**00**	**05**	**07.3**	**+2.2**
DOSS	**Dosso del Somm**	**3.54**	**336**	P	**Pn**	**00**	**05**	**06.0**	**+0.8**
DOSS				AML	AML				
	comp=N,311µm,0.8s								
DOSS				AML	AML				
	comp=N,342µm,0.8s								
DOSS				AML	AML				
	comp=E,380µm,0.9s								
DOSS				AML	AML				
	comp=E,296µm,0.5s								
SALO	**Salr**	**3.55**	**327**	AML	AML				
	comp=E,386µm,0.9s								
SALO				AML	AML				
	comp=N,426µm,1.0s								
STAL	**STALIGIAL**	**3.62**	**354**	P	**Pn**	**00**	**05**	**05.9**	**-0.3**
STAL				AML	AML				
	comp=E,443µm,0.9s								
STAL				AML	AML				
	comp=N,304µm,0.7s								
MAGA	**Magasa**	**3.64**	**330**	P	**Pn**	**00**	**05**	**07.3**	**+0.8**
MAGA				AML	AML				
	comp=E,884µm,0.7s								
MAGA				AML	AML				
	comp=N,636µm,0.4s								
LUSI	**Trento, Gardas**	**3.69**	**334**	P	**Pn**	**00**	**05**	**07.7**	**+0.6**
LUSI				AML	AML				
	comp=E,267µm,0.9s								
LUSI				AML	AML				
	comp=N,328µm,0.9s								
TAR1	**Taranto**	**3.70**	**124**	AML	AML				
	comp=N,220µm,0.8s								
TAR1				AML	AML				
	comp=E,228µm,0.6s								
PTCC	**Patocco-Chiusa**	**3.75**	**1**	P	**Pn**	**00**	**05**	**07.2**	**-0.7**
PTJ	**Puntijarka**	**3.79**	**30**	*e*Pn	**Pn**	**00**	**05**	**10.3**	**+1.8**
GAGG	**Gaggia**	**3.79**	**335**	P	**Pn**	**00**	**05**	**09.5**	**+0.8**
GAGG				AML	AML				
	comp=N,494µm,1.0s								
GAGG				AML	AML				
	comp=E,434µm,1.2s								
GAGG				AML	AML				
	comp=N,250µm,0.9s								
GAGG				AML	AML				
	comp=E,287µm,1.0s								
ZONE	**Zone**	**3.83**	**325**	P	**Pn**	**00**	**05**	**09.9**	**+0.8**
ZONE				AML	AML				
	comp=N,310µm,0.3s								
ZONE				AML	AML				
	comp=E,189µm,0.4s								
HCY	**Herceg Novi**	**3.88**	**91**	*e*Pn	**Pn**	**00**	**05**	**10.3**	**+0.5**
HCY	**Herceg Novi**	**3.88**	**91**	⇑*i*Pn	**Pn**	**00**	**05**	**10.4**	**+0.6**
HCY				*i* Sn	**Sn**	**00**	**05**	**56.9**	**+1.5**
MOSL	**Moslavina**	**3.88**	**39**	*e*Pn	**Pn**	**00**	**05**	**09.6**	**-0.2**
BRY	**Bratogost**	**3.90**	**85**	*e*Pn	**Pn**	**00**	**05**	**10.9**	**+0.7**
BRY	**Bratogost**	**3.90**	**85**	⇓*i*Pn	**Pn**	**00**	**05**	**10.8**	**+0.6**

BRY				*i* Sn		**Sn**	**00 05 57.0 +0.9**
OBKA	**Obir**	**3.96**	**13**	*e*Pn		**Pn**	**00 05 10.8 -0.1**
OBKA	**Obir**	**3.96**	**13**	*e*Pn		**Pn**	**00 05 11.0 +0.1**
	comp=E,13nm,0.5s,SNR=6.5						
MYKA	**Terra Mystica**	**3.98**	**4**	*e*Pn		**Pn**	**00 05 11.4 +0.2**
	comp=E,6.4nm,0.3s,SNR=7.4						
KOSI	**Kohlern**	**4.03**	**341**	P		**Pn**	**00 05 12.8 +0.9**
KOSI				AML	AML		
	comp=E,336µm,0.9s						
KOSI				AML	AML		
	comp=N,276µm,1.3s						
LOBO	**Lobor**	**4.04**	**29**	*e*Pn		**Pn**	**00 05 11.2 -0.6**
APPI	**Appiano**	**4.08**	**340**	P		**Pn**	**00 05 13.4 +0.9**
APPI				AML	AML		
	comp=N,274µm,0.4s						
APPI				AML	AML		
	comp=E,184µm,0.6s						
ABTA	**Abfaltersbach**	**4.12**	**353**	*i* Pn		**Pn**	**00 05 13.8 +0.7**
	comp=E,41nm,0.4s,SNR=56						
KALN	**Kalnik**	**4.16**	**32**	*e*Pn		**Pn**	**00 05 13.0 -0.6**
CEME	**Cevo**	**4.19**	**90**	⇑*i*Pn		**Pn**	**00 05 14.6 +0.6**
CEME				*i* Sn		**Sn**	**00 06 03.8 +0.8**
UPM	**Unac-Piva**	**4.19**	**81**	*e*Pn		**Pn**	**00 05 15.9 +1.7**
UPM	**Unac-Piva**	**4.19**	**81**	⇓*i*Pn		**Pn**	**00 05 14.5 +0.3**
UPM				*i* Sn		**Sn**	**00 06 04.4 +1.2**
BUM	**Brajici-Budva**	**4.19**	**93**	⇓*i*Pn		**Pn**	**00 05 14.9 +0.8**
BUM				*i* Sn		**Sn**	**00 06 04.0 +0.9**
NKME	**Niksic**	**4.21**	**87**	⇑*i*Pn		**Pn**	**00 05 15.0 +0.8**
NKME				*i* Sn		**Sn**	**00 06 04.7 +1.3**
SOKA	**Soboth**	**4.21**	**17**	*i* Pn		**Pn**	**00 05 16.0 +1.6**
	comp=E,3.1nm,0.3s						
SOKA				*e*Sn		**Sn**	**00 06 04.0 +0.3**
	comp=E,15nm,0.4s						
NKY	**Niksic**	**4.24**	**86**	⇓*i*Pn		**Pn**	**00 05 15.5 +0.8**
NKY				*i* Sn		**Sn**	**00 06 04.8 +0.6**
VSL	**Villasalto**	**4.31**	**224**	P		**Pn**	**00 05 16.6 +1.0**
A252A	**Venje**	**4.32**	**49**	*e*Pn		**Pn**	**00 05 15.6 -0.3**
RISI	**Rein**	**4.37**	**349**	⇓P		**Pn**	**00 05 17.6 +1.0**
RISI				AML	AML		
	comp=E,327µm,0.6s						
RISI				AML	AML		
	comp=N,536µm,0.4s						
SBF	**Sospel**	**4.41**	**288**	*e*P		**Pn**	**00 05 17.7 +0.6**
SBF				*e*Sn		**Sn**	**00 06 03.3 -5.2**
	comp=N,25nm,0.4s						
KBA	**Koelnbreinsper**	**4.42**	**1**	*i* Pn		**Pn**	**00 05 18.3 +1.0**
	comp=N,17nm,0.5s,SNR=21						
DRME	**Dracevica, Mon**	**4.42**	**94**	*e*Pn		**Pn**	**00 05 17.9 +0.7**
DRME	**Dracevica, Mon**	**4.42**	**94**	⇓*i*Pn		**Pn**	**00 05 18.3 +1.1**
DRME				*i* Sn		**Sn**	**00 06 09.9 +1.3**
MUGIO	**Muggio**	**4.44**	**319**	AML	AML		
	comp=E,66µm,0.4s						
MUGIO				AML	AML		
	comp=N,79µm,0.6s						
PDG	**Podgorica**	**4.45**	**91**	⇓P		**Pn**	**00 05 18.6 +1.1**
PDG				⇓S		**Sn**	**00 06 09.1 -0.2**
PDG	**Podgorica**	**4.45**	**91**	*e*Pn		**Pn**	**00 05 19.0 +1.5**
PDG				*e*Sn		**Sn**	**00 06 09.3 +0.1**
PDG	**Podgorica**	**4.45**	**91**	AML	AML		
	comp=N,284µm,0.4s						
PDG				AML	AML		
	comp=E,145µm,0.5s						
PDG				AML	AML		
	comp=N,360µm,0.4s						
PDG				AML	AML		
	comp=E,204µm,0.4s						
TTG	**Podgorica**	**4.45**	**91**	⇑*i*Pn		**Pn**	**00 05 18.2 +0.7**
TTG				*i* Sn		**Sn**	**00 06 10.0 +0.8**
ESCA	**l'Escarene**	**4.45**	**287**	P		**Pn**	**00 05 18.5 +0.9**
ROSI	**Rosskopf**	**4.46**	**344**	AML	AML		
	comp=E,308µm,1.5s						
ROSI				AML	AML		
	comp=N,372µm,0.5s						
TURF	**col de Turini**	**4.47**	**289**	P		**Pn**	**00 05 19.2 +1.2**
ULC	**Ulcinj**	**4.50**	**97**	⇓*i*Pn		**Pn**	**00 05 19.1 +0.8**
ULC				*i* Sn		**Sn**	**00 06 11.3 +0.6**
PLE	**Pljevlja**	**4.55**	**79**	⇓*i*Pn		**Pn**	**00 05 19.8 +0.7**
PLE				*i* Sn		**Sn**	**00 06 13.1 +1.0**
RUDO	**Rudo**	**4.58**	**76**	*e*Pn		**Pn**	**00 05 20.7 +1.3**
KOME	**Kolasin**	**4.62**	**86**	⇓*i*Pn		**Pn**	**00 05 21.8 +1.8**
KOME				*i* Sn		**Sn**	**00 06 14.7 +1.0**
BBLS	**Lazići**	**4.66**	**73**	*e*Pn		**Pn**	**00 05 22.0 +1.5**
FETA	**Feichten**	**4.71**	**339**	*e*Pn		**Pn**	**00 05 23.1 +1.8**
	comp=N,8.1nm,0.4s,SNR=14						
WTTA	**Wattenberg**	**4.74**	**347**	*e*Pn		**Pn**	**00 05 23.1 +1.4**
	comp=N,8.3nm,0.3s,SNR=14						
CALF	**Calern**	**4.75**	**285**	P		**Pn**	**00 05 22.8 +1.1**
ISO	**Isola**	**4.76**	**291**	P		**Pn**	**00 05 24.8 +2.9**
DAVOX	**Davos/Dischmat**	**4.77**	**331**	Pn		**Pn**	**00 05 24.2 +2.1**
	comp=N,6.4nm,0.3s,baz=153,slow=17,SNR=50						
DAVOX				Sn		**Sn**	**00 06 19.6 +2.2**
	comp=N,2.9nm,0.3s,baz=21,slow=19,SNR=5.4						
DAVOX				LR		LR	00 07 32.2
	comp=N,41nm,21.2s,baz=211,slow=45						
SQTA	**Sankt Quirin**	**4.78**	**343**	*i* Pn		**Pn**	**00 05 23.9 +1.7**
	comp=N,17nm,0.4s,SNR=12						
WATA	**Walderalm**	**4.82**	**346**	*e*Pn		**Pn**	**00 05 25.0 +2.2**
	comp=N,6.4nm,0.2s,SNR=13						
ARSA	**Arzberg**	**4.87**	**19**	*i* Pn		**Pn**	**00 05 23.0 -0.3**
	comp=N,5.6nm,0.4s,SNR=7.1						
ARSA				*e*Sn		**Sn**	**00 06 18.1 -1.6**
	comp=N,11nm,0.5s						
KOVH	**Kovagotottos**	**4.88**	**44**	P		**Pn**	**00 05 23.1 -0.4**
IVA	**Berane**	**4.90**	**85**	⇓*i*Pn		**Pn**	**00 05 24.9 +1.1**
IVA				*i* Sn		**Sn**	**00 06 21.1 +0.6**
MOTA	**Moosalm**	**4.92**	**343**	*e*Pn		**Pn**	**00 05 26.0 +1.8**
	comp=N,13nm,0.5s,SNR=14						
PVY	**Plav**	**4.95**	**88**	⇓*i*Pn		**Pn**	**00 05 26.8 +2.2**
PVY				*i* Sn		**Sn**	**00 06 22.7 +0.8**
SJES	**Sjenica**	**4.97**	**81**	*e*Pn		**Pn**	**00 05 26.5 +1.7**
SJES				*e*Sn		**Sn**	**00 06 22.9 +0.5**
LMR	**La Mourre**	**4.99**	**280**	*e*P		**Pn**	**00 05 25.2 +0.3**
LMR				*e*Sn		**Sn**	**00 06 17.1 -5.5**
	comp=N,7.8nm,0.6s						
SURF	**Saint Ours**	**5.02**	**293**	P		**Pn**	**00 05 27.3 +1.8**
BIOA	**Bad Ischl, Aus**	**5.04**	**3**	*i* Pn		**Pn**	**00 05 26.5 +0.8**
	comp=N,16nm,0.7s,SNR=14						
TIR	**Tirane**	**5.10**	**103**	⇑P		**Pn**	**00 05 27.7 +1.2**
TIR				⇓S		**Sn**	**00 06 25.2 -0.2**
TIR	**Tirane**	**5.10**	**103**	*e*Pn		**Pn**	**00 05 27.3 +0.8**
TIR				*e*Sn		**Sn**	**00 06 25.4 -0.1**
DIVS	**Divibare**	**5.12**	**71**	*e*Pn		**Pn**	**00 05 28.1 +1.2**
DIVS	**Divibare**	**5.12**	**71**	*e*Pn		**Pn**	**00 05 28.7 +1.8**
DIVS				*e*Sn		**Sn**	**00 06 23.4 -2.6**
MBDF	**Montbardon**	**5.13**	**296**	*e*P		**Pn**	**00 05 28.5 +1.5**
MBDF				*e*Sn		**Sn**	**00 06 20.5 -5.8**
	comp=N,26nm,0.7s						
IVAS	**Ivanjica**	**5.14**	**77**	*e*Pn		**Pn**	**00 05 27.7 +0.6**
IVAS				*e*Sn		**Sn**	**00 06 25.8 -0.6**
RETA	**Reutte**	**5.14**	**341**	*i* Pn		**Pn**	**00 05 29.3 +2.3**
	comp=N,6.3nm,0.3s,SNR=11						
FLAF	**Flassans-sur-l**	**5.18**	**280**	P		**Pn**	**00 05 28.5 +1.0**
OGAG	**Argentiere**	**5.19**	**292**	P		Pn	00 05 33.6 +5.7
DAVA	**Damuels**	**5.21**	**334**	*e*Pn		**Pn**	**00 05 30.3 +2.2**
	comp=N,8.7nm,0.5s,SNR=10						
DAVA				*e*Sn		**Sn**	**00 06 33.8 +5.6**
	comp=N,34nm,0.5s						
MOA	**Molln**	**5.24**	**8**	*e*Pn		**Pn**	**00 05 28.8 +0.4**
MOA				*e*Sn		**Sn**	**00 06 29.2 +0.4**
MOA	**Molln**	**5.24**	**8**	*i* Pn		**Pn**	**00 05 28.9 +0.5**
	comp=N,3.5nm,0.2s,SNR=9.6						
MOA				*e*Sn		**Sn**	**00 06 28.0 -0.8**
	comp=N,14nm,0.4s						
MORH	**Mrgy, Hungar**	**5.25**	**46**	⇑P		**Pn**	**00 05 29.3 +0.8**
MORH	**Mrgy, Hungar**	**5.25**	**46**	P		Pn	00 05 33.5 +5.0
MORH				S		**Sn**	**00 06 35.6 +6.6**
OGDI	**Digne**	**5.27**	**288**	P		**Pn**	**00 05 32.2 +3.4**
FRGS	**Fruska Gora**	**5.36**	**60**	⇑P		**Pn**	**00 05 30.4 +0.4**
FRGS	**Fruska Gora**	**5.36**	**60**	*e*Pn		**Pn**	**00 05 29.7 -0.3**
FRGS	**Fruska Gora**	**5.36**	**60**	*e*Pn		**Pn**	**00 05 30.3 +0.3**
FRGS				*e*Sn		**Sn**	**00 06 28.7 -3.1**
DIX	**Grande Dixence**	**5.40**	**311**	P		**Pn**	**00 05 32.3 +1.4**
BLAF	**les Blancs**	**5.41**	**286**	P		**Pn**	**00 05 32.8 +2.0**
MPLH	**Magyarpolny**	**5.44**	**33**	P		**Pn**	**00 05 34.7 +3.5**
TRUS	**Trudelj**	**5.44**	**71**	*e*Pn		**Pn**	**00 05 32.0 +0.8**
TRUS				*e*Sn		**Sn**	**00 06 30.9 -2.9**
LPG	**La Plagne**	**5.47**	**303**	*e*P		**Pn**	**00 05 34.0 +2.2**
LPG	**La Plagne**	**5.47**	**303**	*e*Pg		**Pg**	**00 05 51.2 -3.6**
LPG				*e*Sn		**Sn**	**00 06 29.3 -5.6**
	comp=N,28nm,0.7s						
RONA	**Rosalia, Austr**	**5.48**	**22**	*e*Pn		**Pn**	**00 05 32.0 +0.3**
	comp=N,12nm,0.7s,SNR=11						
LPL	**La Plagne**	**5.49**	**304**	*e*P		**Pn**	**00 05 33.6 +1.5**
LPL				*e*Sn		**Sn**	**00 06 29.1 -6.2**
	comp=N,19nm,0.8s						
ARTF	**Artigues**	**5.53**	**282**	P		**Pn**	**00 05 33.9 +1.6**
SOP	**Sopron**	**5.54**	**24**	P		**Pn**	**00 05 34.0 +1.4**
CONA	**Conrad Observa**	**5.58**	**18**	*e*Pn		**Pn**	**00 05 33.2 0.0**
	comp=N,3.9nm,0.2s,SNR=17						
CONA				*e*Sn		**Sn**	**00 06 34.9 -2.5**
	comp=N,18nm,0.5s						
GRUS	**Gruza**	**5.59**	**75**	*e*Pn		**Pn**	**00 05 33.9 +0.7**
GRUS				*e*Sn		**Sn**	**00 06 37.2 -0.2**
BSTF	**la Bastide-des**	**5.68**	**285**	P		**Pn**	**00 05 36.0 +1.5**
SMRF	**Simiane la Rot**	**5.75**	**286**	*e*P		**Pn**	**00 05 37.3 +1.9**
SMRF				*e*Sn		**Sn**	**00 06 35.2 -6.2**
	comp=N,14nm,0.9s						
OGSI	**Sixt**	**5.77**	**308**	P		**Pn**	**00 05 38.4 +2.8**
ORIF	**Oris-en-Rattie**	**5.79**	**295**	*e*P		**Pn**	**00 05 38.1 +2.1**
ORIF				*e*Sn		**Sn**	**00 06 36.3 -6.2**
	comp=N,13nm,0.6s						
SELS	**Selova**	**5.81**	**82**	*e*Pn		**Pn**	**00 05 37.0 +0.8**
SELS				*e*Sn		**Sn**	**00 06 42.9 +0.1**
RUSF	**Rustrel**	**5.81**	**285**	P		**Pn**	**00 05 38.1 +1.9**
AIGLE	**Aigle**	**5.81**	**311**	P		**Pn**	**00 05 38.5 +2.2**
OHR	**Ohrid**	**5.85**	**103**	*i* Pn		**Pn**	**00 05 38.7 +1.9**
ARBF	**Arbois**	**5.86**	**281**	P		**Pn**	**00 05 38.2 +1.3**
SULZ	**Cheisacher**	**6.07**	**325**	S		**Sn**	**00 06 49.5 +0.1**
SULZ	**Cheisacher**	**6.07**	**325**	P		**Pn**	**00 05 41.5 +1.6**
SLE	**Schleitheim**	**6.11**	**328**	P		**Pn**	**00 05 41.0 +0.7**
BALST	**Balsthal**	**6.11**	**322**	P		**Pn**	**00 05 41.3 +0.8**
ZST	**Bratislava**	**6.16**	**25**	*e*PN		**Pn**	**00 05 42.7 +1.6**
ZST				*e*SN		**Sn**	**00 06 51.2 -0.4**
GERES	**GERESS Array B**	**6.19**	**3**	Pn		**Pn**	**00 05 40.7 -0.9**
	comp=N,0.7nm,0.3s,baz=183,slow=12,SNR=34						
GERES				Sn		**Sn**	**00 06 50.2 -2.2**
	comp=N,3.2nm,0.3s,baz=186,slow=25,SNR=9.7						
	comp=N,1.9nm,0.4s						
CKRC	**Cesky Krumlov**	**6.21**	**7**	*e*PN		**Pn**	**00 05 41.1 -0.6**
CKRC				*e*SN		**Sn**	**00 06 49.0 -3.6**
BOVS	**Bovan**	**6.26**	**78**	⇑P		**Pn**	**00 05 43.1 +0.7**
BOVS				⇓S		**Sn**	**00 06 52.5 -1.5**
BOVS	**Bovan**	**6.26**	**78**	*e*Pn		**Pn**	**00 05 42.9 +0.4**
BOVS				*e*Sn		**Sn**	**00 06 50.9 -3.1**
GIMEL	**St. Georges /**	**6.31**	**310**	P		**Pn**	**00 05 44.9 +1.7**
BARS	**Barje**	**6.31**	**86**	*e*Pn		**Pn**	**00 05 43.7 +0.6**
BOURR	**Bourrignon**	**6.37**	**320**	P		**Pn**	**00 05 45.2 +1.3**
MODS	**Modra-Piesok**	**6.38**	**25**	*e*PN		**Pn**	**00 05 45.5 +1.5**
FELD	**Feldberg im Sc**	**6.39**	**326**	P		**Pn**	**00 05 44.5 +0.1**
BRANT	**Les Verrieres**	**6.44**	**314**	P		**Pn**	**00 05 46.7 +1.7**
CABF	**La Chapelle**	**6.46**	**310**	*e*P		**Pn**	**00 05 46.7 +1.5**
CABF				*e*Sn		**Sn**	**00 06 51.9 -7.0**
	comp=N,28nm,0.9s						
OG35	**Corcelles**	**6.46**	**304**	P		**Pn**	**00 05 46.3 +1.1**
KHC	**Kasperske Hory**	**6.48**	**2**	*e*PN		**Pn**	**00 05 44.6 -0.8**
KHC				*e*SN		**Sn**	**00 06 56.5 -2.8**
KIZ	**Kirchzarten**	**6.49**	**326**	P		**Pn**	**00 05 46.2 +0.6**
KIZ	**Kirchzarten**	**6.49**	**326**	S		**Sn**	**00 06 58.6 -1.1**
PRVS	**Prvonek**	**6.52**	**88**	*e*Pn		**Pn**	**00 05 46.7 +0.7**
PRVS				*e*Sn		**Sn**	**00 06 59.0 -1.4**
CHMF	**Charmoille**	**6.55**	**317**	P		**Pn**	**00 05 47.3 +0.9**
CHMF				S		**Sn**	**00 06 59.4 -1.8**
VIVF	**Saint-Julien-l**	**6.58**	**292**	*e*P		**Pn**	**00 05 49.0 +2.1**
VIVF				*e*Sn		**Sn**	**00 06 55.5 -6.5**
	comp=N,7.3nm,0.8s						
RIVEL	**MONT RIVEL**	**6.63**	**311**	P		**Pn**	**00 05 48.6 +1.0**
ZAGS	**Zajecar**	**6.66**	**77**	*e*Pn		**Pn**	**00 05 48.7 +0.8**
ZAGS				*e*Sn		**Sn**	**00 07 03.2 -0.7**
VOGT	**Vogtsburg - To**	**6.69**	**326**	P		**Pn**	**00 05 49.1 +0.7**
BZS	**Buzias**	**6.71**	**61**	⇑P		**Pn**	**00 05 48.7 +0.2**
BZS	**Buzias**	**6.71**	**61**	*e*Pn		**Pn**	**00 05 48.9 +0.4**
BZS				*e*Sn		**Sn**	**00 07 01.5 -3.5**
STIP	**Stip**	**6.71**	**95**	*i* Pn		**Pn**	**00 05 51.5 +2.9**
MOF	**Molkenrain**	**6.75**	**322**	P		**Pn**	**00 05 49.7 +0.5**
MOF				S		**Sn**	**00 07 07.1 +1.1**
BOUC	**Bouclans**	**6.75**	**315**	P		**Pn**	**00 05 50.2 +1.1**
BOUC				S		**Sn**	**00 07 04.5 -1.6**
KRUC	**Moravsky**	**6.77**	**18**	*e*PN		**Pn**	**00 05 49.2 -0.2**
KRUC				*e*SN		**Sn**	**00 07 04.3 -2.1**
SSB	**Saint Sauveur**	**6.80**	**296**	P		**Pn**	**00 05 52.7 +2.8**
BOSS	**Bosilegrad**	**6.82**	**88**	*e*Pn		**Pn**	**00 05 50.5 +0.4**
BOSS				*e*Sn		**Sn**	**00 07 04.6 -3.1**
OPP	**Oppenau**	**6.83**	**330**	P		**Pn**	**00 05 51.5 +1.3**
HINF	**Hinteralfeld**	**6.85**	**321**	*e*P		**Pn**	**00 05 50.7 +0.2**
HINF				*e*Sn		**Sn**	**00 07 01.7 -6.8**
	comp=N,27nm,0.5s						
RONF	**Ronchamp**	**6.87**	**320**	P		**Pn**	**00 05 51.6 +0.8**
ZAPS	**Zavoj**	**6.91**	**82**	*e*Pn		**Pn**	**00 05 53.0 +1.6**
ZAPS				*e*Sn		**Sn**	**00 07 09.5 -0.6**
JAVC	**Velka Javorina**	**6.93**	**25**	*e*PN		**Pn**	**00 05 52.3 +0.7**
BLKB	**Belogradchik**	**6.96**	**79**	⇑P		**Pn**	**00 05 53.1 +0.9**
BLKB				⇑S		**Sn**	**00 07 09.8 -1.5**
LASF	**Ste Croix**	**6.99**	**285**	*e*P		**Pn**	**00 05 53.9 +1.5**
LASF				*e*Sn		**Sn**	**00 07 04.8 -7.1**
	comp=N,8.2nm,0.9s						
HERR	**Herculane**	**7.00**	**68**	⇑P		**Pn**	**00 05 53.3 +0.8**
ECH	**Echery**	**7.01**	**324**	P		**Pn**	**00 05 52.8 +0.1**
SIRR	**Siria**	**7.02**	**56**	⇑P		**Pn**	**00 05 54.1 +1.3**
VYHS	**Vyhne**	**7.03**	**32**	*e*PN		**Pn**	**00 05 54.3 +1.4**
VRAC	**Vranov**	**7.04**	**18**	⇑P		**Pn**	**00 05 54.4 +1.2**
VRAC	**Vranov**	**7.04**	**18**	Pn		**Pn**	**00 05 52.9 -0.3**
	comp=N,0.6nm,0.3s,baz=205,slow=13,SNR=7.4						
VRAC				Sn		**Sn**	**00 07 10.6 -2.7**
	comp=N,0.8nm,0.3s,baz=1.4,slow=4.1,SNR=4.1						
VRAC				LR		LR	00 09 02.5
	comp=N,65nm,19.3s,baz=201,slow=42						
	comp=N,2.6nm,0.5s						
VRAC	**Vranov**	**7.04**	**18**	*e*PN		**Pn**	**00 05 52.8 -0.3**
VRAC				*e*SN		**Sn**	**00 07 10.4 -2.9**
WLS	**Welschbruch**	**7.08**	**326**	P		**Pn**	**00 05 54.1 +0.4**
CDF	**Champ du Feu**	**7.12**	**326**	*e*P		**Pn**	**00 05 54.6 +0.4**
CDF				*e*Sn		**Sn**	**00 07 08.3 -6.8**
	comp=N,27nm,0.7s						
HAU	**Haudompre**	**7.22**	**320**	*e*P		**Pn**	**00 05 56.2 +0.6**
HAU				*e*Sn		**Sn**	**00 07 10.6 -7.1**
	comp=N,26nm,0.5s						
VTS	**Vitosha**	**7.37**	**87**	⇑P		**Pn**	**00 05 59.0 +1.3**
VTS				⇓S		**Sn**	**00 07 19.9 -1.5**
VTS	**Vitosha**	**7.37**	**87**	*e*Pn		**Pn**	**00 05 58.8 +1.1**
VTS				*e*Sn		**Sn**	**00 07 20.1 -1.3**
PRU	**Pruhonice**	**7.38**	**7**	*e*PN		**Pn**	**00 05 58.0 +0.2**
PRU				*e*SN		**Sn**	**00 07 16.9 -4.7**
GZR	**Gura Zlata**	**7.39**	**65**	⇑P		**Pn**	**00 05 59.3 +1.3**
KEST	**Kesra**	**7.55**	**205**	Pn		**Pn**	**00 06 05.0 +4.7**
	comp=N,0.6nm,0.3s,baz=334,slow=8.1,SNR=13						
KEST				LR		LR	00 09 10.2
	comp=N,87nm,18.2s,baz=6.0,slow=39						
MORC	**Moravsky Berou**	**7.71**	**21**	⇑P		**Pn**	**00 06 03.6 +1.2**
MORC	**Moravsky Berou**	**7.71**	**21**	*e*PN		**Pn**	**00 06 02.7 +0.3**
SMF	**Signal de Mont**	**7.80**	**304**	*e*P		**Pn**	**00 06 05.2 +1.7**
SMF				*e*Sn		**Sn**	**00 07 24.0 -7.8**
	comp=N,13nm,0.7s						
KRLC	**Kraliky**	**7.81**	**17**	*e*PN		**Pn**	**00 06 03.4 -0.3**
SRS	**Serrai**	**7.87**	**98**	*e*Pn		**Pn**	**00 06 04.9 +0.3**
SRS				*e*Sn		**Sn**	**00 07 30.6 -3.1**
FILF	**Fillols**	**7.88**	**273**	P		**Pn**	**00 06 06.4 +1.7**
DRGR		**7.90**	**55**	⇓P		**Pn**	**00 06 05.4 +0.4**
DRGR		**7.90**	**55**	*e*Pn		**Pn**	**00 06 06.5 +1.5**
PAGF	**Fort de Pagny**	**7.91**	**321**	*e*P		**Pn**	**00 06 07.7 +2.7**
PAGF				*e*Sn		**Sn**	**00 07 27.0 -7.4**
	comp=N,24nm,0.8s						
DPC	**Dobruska-Polom**	**7.98**	**14**	*e*PN		**Pn**	**00 06 06.0 0.0**
SFTF	**Sexfontaines**	**8.00**	**317**	*e*P		**Pn**	**00 06 08.8 +2.5**
	baz=134						
SFTF				*e*Sn		**Sn**	**00 07 28.6 -8.2**
	comp=N,7.1nm,0.4s						
LOT	**Lotru**	**8.07**	**66**	⇑P		**Pn**	**00 06 08.0 +0.6**
LOR	**Lormes**	**8.09**	**308**	*e*P		**Pn**	**00 06 10.1 +2.5**
	baz=124						
LOR				*e*Sn		**Sn**	**00 07 31.2 -7.9**
	comp=N,4.8nm,0.4s						
MTLF	**Montolieu**	**8.11**	**279**	*e*P		**Pn**	**00 06 10.2 +2.3**
MTLF				*e*Sn		**Sn**	**00 07 31.7 -7.9**
	comp=N,46nm,1.8s						
OSTC	**Ostas**	**8.16**	**13**	*e*PN		**Pn**	**00 06 08.3 -0.2**
AVF	**Avril sur Loir**	**8.16**	**304**	*e*P		**Pn**	**00 06 09.7 +1.2**
AVF				*e*Sn		**Sn**	**00 07 32.8 -8.0**
	comp=N,13nm,1.1s						
MEZF	**Maizieres J'vi**	**8.19**	**318**	*e*P		**Pn**	**00 06 10.7 +1.8**
MEZF				*e*Sn		**Sn**	**00 07 33.2 -8.2**
	comp=N,25nm,0.9s						
SSF	**Saint Saulge**	**8.20**	**306**	*e*P		**Pn**	**00 06 11.5 +2.5**
SSF				*e*Sn		**Sn**	**00 07 33.6 -8.0**
	comp=N,11nm,0.9s						
MESR	**Meseseni**	**8.22**	**54**	⇑P		**Pn**	**00 06 09.5 +0.2**
SAVF	**Savonnieres en**	**8.23**	**319**	*e*P		**Pn**	**00 06 11.7 +2.2**
SAVF				*e*Sn		**Sn**	**00 07 34.3 -8.2**
	comp=N,18nm,0.9s						
BGF	**Bois d'Agland**	**8.38**	**301**	*e*P		**Pn**	**00 06 13.2 +1.7**
BGF				*e*Sn		**Sn**	**00 07 37.9 -8.2**
	comp=N,5.7nm,0.5s						
CAF	**Calviac**	**8.40**	**289**	*e*P		**Pn**	**00 06 13.8 +2.0**
CAF				*e*Sn		**Sn**	**00 07 38.6 -8.1**
	comp=N,0.6nm,0.4s						
PLD	**Plovdiv**	**8.50**	**90**	*e*Pn		**Pn**	**00 06 14.6 +1.5**
ARR	**Arges**	**8.64**	**68**	⇑P		**Pn**	**00 06 16.2 +1.1**
CLL	**Collm**	**8.65**	**359**	*e*Pn		**Pn**	**00 06 16.0 +0.8**
CLL				*e*Sn		Sn	00 07 29.0 -24
CLL				*ex*		x	00 07 51.0
CLL				*ex*		x	00 08 08.0
CLL				*e*Sg		**Sg**	**00 08 43.0 -4.6**
	comp=Z,18nm,1.2s						
TCF	**Toulx Ste Croi**	**8.68**	**298**	*e*P		**Pn**	**00 06 18.3 +2.6**
TCF				*e*Sn		**Sn**	**00 07 45.3 -8.3**
	comp=Z,2.2nm,0.5s						
RJF	**Les Rejaudoux**	**8.86**	**291**	*e*P		**Pn**	**00 06 20.9 +2.8**
VOIR		**8.94**	**68**	⇑P		**Pn**	**00 06 20.4 +1.1**
LFF	**La Frestale**	**9.33**	**288**	*e*P		**Pn**	**00 06 27.2 +2.7**
MLR	**Muntele Rosu**	**9.57**	**68**	⇓P		**Pn**	**00 06 27.9 0.0**
MLR	**Muntele Rosu**	**9.57**	**68**	Pn		**Pn**	**00 06 32.4 +4.5**
	comp=Z,0.3nm,0.3s,baz=125,slow=18,SNR=6.7						
MLR				LR		LR	00 11 01.2
	comp=Z,174nm,20.7s,baz=264,slow=43						
	comp=Z,4.6nm,0.8s						
ETSF	**Etsaut**	**10.16**	**276**	*e*P		**Pn**	**00 06 38.8 +2.9**
ETSF				*e*Sn		Sn	00 08 20.7 -9.1
	comp=Z,1.5nm,0.6s						
ESDC	**Sonseca Array**	**13.31**	**263**	Pn		**Pn**	**00 07 19.5 +0.5**
	baz=64,slow=14,SNR=2.3						
ESDC				LR		LR	00 12 11.1
	comp=Z,62nm,20.0s,baz=55,slow=37						
	comp=Z,0.4nm,0.8s						
AKASG	**Malin Array Be**	**13.58**	**48**	LR		LR	00 13 27.6
	comp=Z,46nm,19.2s,baz=195,slow=41						
BRTR	**Keskin Array B**	**15.63**	**94**	Pn		**P**	**00 07 53.6 -1.0**
	comp=Z,0.9nm,1.0s,baz=292,slow=15,SNR=2.8						
MDT	**Midelt**	**17.18**	**241**	LR		LR	00 13 42.2
	comp=Z,42nm,19.6s,baz=100,slow=34						
HFS	**Hagfors**	**17.50**	**1**	LR		LR	00 15 16.9
	comp=Z,28nm,21.6s,baz=177,slow=38						
NB2	**NORSAR Subarra**	**18.45**	**357**	P		**Pn**	**00 08 26.9 +1.3**
	comp=Z,1.6nm,0.7s,baz=175,slow=12						
NOA	**NORSAR Array B**	**18.45**	**357**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.47**	**264**	⇓P	**Pn**	**01 00 45.6**	**+0.2**
JHO				⇓S	**Sb**	**01 00 52.0**	**-0.2**
JHYU	**Hitachinakayam**	**0.55**	**235**	⇓P	**Pb**	**01 00 46.7**	**+0.2**
JHYU				⇓S	**Sn**	**01 00 53.8**	**-0.7**
JFFD	**Fukushimafurud**	**0.64**	**313**	⇓P	**Pb**	**01 00 48.4**	**+0.5**
JFFD				⇓S	**Sb**	**01 00 56.4**	**-0.2**
JFK	**Kawauchi**	**0.74**	**343**	⇓P	**Pb**	**01 00 50.0**	**+0.5**
JFK				⇓S	**Sb**	**01 00 59.6**	**+0.2**
JYT	**Yasato**	**0.88**	**241**	P	**Pn**	**01 00 50.7**	**-0.4**
JFT	**Otama**	**1.07**	**323**	⇓eP	**Pb**	**01 00 55.4**	**+0.2**
JFT				⇓eS	**Sb**	**01 01 08.8**	**-0.1**
JMM	**Marumori**	**1.24**	**347**	P	**Pb**	**01 00 57.2**	**-0.6**
JMM				eS	**Sb**	**01 01 12.8**	**-0.6**
JFY	**Yanaizu**	**1.38**	**303**	eP	**Pn**	**01 00 58.7**	**+0.8**
JAG	**Ashikaga**	**1.39**	**261**	eP	**Pn**	**01 00 57.8**	**-0.2**
JKT	**Katashina**	**1.53**	**275**	P	**Pn**	**01 01 00.6**	**+0.5**
MJAR	**Matsushiro Arr** 1.6nm,0.3s,baz=94,slow=14,SNR=24	**2.37**	**268**	P	**Pn**	**01 01 11.0**	**-0.5**
MJAR	12nm,0.4s,baz=99,slow=29,SNR=5.7 7.4nm,0.3s			S	**Sn**	**01 01 40.2**	**+0.7**
JHJ	**Hachijo jima 2** 10nm,0.3s,baz=338,slow=22,SNR=10	**3.71**	**198**	P	**Pn**	**01 01 31.1**	**+1.1**
JHJ	77nm,0.4s,baz=77,slow=22,SNR=5.9 43nm,0.2s			S	**Sn**	**01 02 12.2**	**-0.3**
H11N2	**WAKE ISLAND Hy 28.14** baz=312,slow=75,SNR=26		**120**	T	T	01 36 28.6	
H11N1	**WAKE ISLAND Hy 28.15** baz=312,slow=75,SNR=27		**120**	T	T	01 36 26.4	
H11N3	**WAKE ISLAND Hy 28.16** baz=312,slow=75,SNR=21		**120**	T	T	01 36 28.0	
H11S1	**WAKE ISLAND Hy 28.84** baz=314,slow=75,SNR=58		**122**	T	T	01 37 15.1	
H11S3	**WAKE ISLAND Hy 28.84** baz=314,slow=75,SNR=40		**122**	T	T	01 37 08.2	
H11S2	**WAKE ISLAND Hy 28.86** baz=314,slow=75,SNR=36		**122**	T	T	01 37 06.0	
ZALV	**Zalesovo Beam** 1.2nm,0.5s,baz=87,slow=7.1,SNR=6.0 1.2nm,0.5s	**42.01**	**313**	P	**P**	**01 08 22.6**	**-0.2**
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=89,slow=10,SNR=3.4 0.5nm,0.8s	**44.14**	**302**	P	**P**	**01 08 40.7**	**+0.4**
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=4.0,slow=7.4,SNR=7.2 0.2nm,0.4s	**56.66**	**188**	P	**P**	**01 10 14.6**	**-0.4**
H03N2	**Juan Fernandez** baz=291,slow=76,SNR=4.3	**147.19**	**96**	T	T	04 05 06.4	
H03N3	**Juan Fernandez** baz=291,slow=76,SNR=6.6	**147.21**	**96**	T	T	04 05 08.4	
H03N1	**Juan Fernandez** baz=291,slow=76,SNR=5.4	**147.21**	**96**	T	T	04 05 07.9	

ROM 26 01:09:60.0±0.1, 42°59′N±0′.003×13°.193E±0′.005, h10km, ML1.7/15, 4C-7D, Error ellipse: s-maj=0.4km s-min=0.1km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**322**	P	Pg	01 10 02.9	+0.3
NRCA				S	Sg	01 10 04.6	+0.2
NRCA				AML	AML		
	comp=E,4550μm,0.1s						
NRCA				AML	AML		
	comp=N,3065μm,0.7s						
NRCA				AML	AML		
	comp=N,3410μm,0.7s						
NRCA				AML	AML		
	comp=N,3070μm,0.7s						
NRCA				AML	AML		
	comp=E,5115μm,0.1s						
NRCA	**Norcia**	**0.09**	**322**	S	Sg	01 10 04.6	+0.2
NRCA				AML	AML		
	comp=E,4550μm,0.1s						
NRCA				AML	AML		
	comp=N,3065μm,0.7s						
NRCA				AML	AML		
	comp=E,5115μm,0.1s						
NRCA				AML	AML		
	comp=N,3410μm,0.7s						
NRCA				AML	AML		
	comp=E,4550μm,0.1s						
NRCA				AML	AML		
	comp=N,3065μm,0.7s						
NRCA				AML	AML		
	comp=E,5115μm,0.1s						
NRCA				AML	AML		
	comp=N,3410μm,0.7s						
NRCA				AML	AML		
	comp=E,4555μm,0.1s						
NRCA				AML	AML		
	comp=N,3070μm,0.7s						
NRCA				AML	AML		
	comp=E,5115μm,0.1s						
NRCA				AML	AML		
	comp=N,3410μm,0.7s						
NRCA				AML	AML		
	comp=N,3070μm,0.7s						
NRCA				AML	AML		
	comp=N,3410μm,0.7s						
NRCA				AML	AML		
	comp=E,4555μm,0.1s						
NRCA				AML	AML		
	comp=E,5115μm,0.1s						
MC2	**Monte Cornacci**	**0.15**	**359**	P	Pg	01 10 04.1	+0.6
MC2				S	Sg	01 10 07.0	+1.0
MC2				AML	AML		
	comp=E,710μm,0.3s						
MC2				AML	AML		
	comp=N,850μm,1.6s						
MC2				AML	AML		
	comp=N,850μm,1.6s						
MC2				AML	AML		
	comp=E,710μm,0.3s						
MMO1	**Montemonaco**	**0.17**	**35**	P	Pg	01 10 04.2	+0.5
MMO1				S	Sg	01 10 07.3	+1.0
MMO1				AML	AML		
	comp=E,1126μm,0.1s						
MMO1				AML	AML		
	comp=N,770μm,0.5s						
MMO1				AML	AML		
	comp=N,769μm,0.5s						
MMO1				AML	AML		
	comp=E,1123μm,0.1s						
MMO1	**Montemonaco**	**0.17**	**35**	⇑P	Pg	01 10 04.2	+0.5
MMO1				S	Sg	01 10 07.3	+1.0
MMO1				AML	AML		
	comp=E,1126μm,0.1s						
MMO1				AML	AML		
	comp=N,770μm,0.5s						
MMO1				AML	AML		
	comp=E,1122μm,0.1s						
MMO1				AML	AML		
	comp=N,769μm,0.5s						
MMO1				AML	AML		
	comp=E,1123μm,0.1s						
MMO1				AML	AML		
	comp=N,769μm,0.5s						
MMO1				AML	AML		
	comp=E,1123μm,0.1s						
MMO1				AML	AML		
	comp=N,769μm,0.5s						
LNSS	**Leonessa**	**0.19**	**216**	P	Pg	01 10 04.7	+0.7
LNSS				S	Sg	01 10 08.2	+1.3
LNSS				AML	AML		
	comp=N,901μm,1.0s						
LNSS				AML	AML		
	comp=E,1060μm,0.8s						
LNSS				AML	AML		
	comp=N,898μm,1.0s						
LNSS	**Leonessa**	**0.19**	**216**	⇓P	Pg	01 10 04.8	+0.7
LNSS				S	Sg	01 10 08.3	+1.4
LNSS				AML	AML		
	comp=E,1060μm,0.8s						
LNSS				AML	AML		
	comp=N,901μm,1.0s						
LNSS				AML	AML		
	comp=E,1060μm,0.8s						
LNSS				AML	AML		
	comp=N,900μm,1.0s						
LNSS				AML	AML		
	comp=E,1060μm,0.8s						
LNSS				AML	AML		
	comp=N,898μm,1.0s						
LNSS				AML	AML		
	comp=E,1060μm,0.8s						
LNSS				AML	AML		
	comp=N,898μm,1.0s						
T1243	**Rocca Santa Ma**	**0.20**	**108**	P	Pg	01 10 04.8	+0.7
T1243				S	Sg	01 10 08.0	+0.9
T1243				AML	AML		
	comp=E,958μm,0.2s						
T1243				AML	AML		
	comp=N,876μm,1.5s						
T1243				AML	AML		
	comp=E,926μm,0.2s						
T1243				AML	AML		
	comp=N,808μm,1.6s						
T1243				AML	AML		
	comp=E,962μm,0.2s						
T1243				AML	AML		
	comp=N,872μm,1.5s						
T1243				AML	AML		
	comp=E,927μm,0.2s						
T1243				AML	AML		
	comp=N,808μm,1.6s						
T1243				AML	AML		
	comp=E,962μm,0.2s						
T1243				AML	AML		
	comp=N,873μm,1.6s						
T1243				AML	AML		
	comp=E,927μm,0.2s						
T1243				AML	AML		
	comp=N,808μm,1.6s						
T1243				AML	AML		
	comp=E,962μm,0.2s						
T1243				AML	AML		
	comp=N,873μm,1.6s						
T1243				AML	AML		
	comp=N,808μm,1.6s						
RM33	**Pellescritta (**	**0.25**	**176**	⇑P	Pg	01 10 05.8	+0.7
RM33				S	Sb	01 10 10.0	-1.2
RM33				AML	AML		
	comp=E,193μm,0.9s						
RM33				AML	AML		
	comp=N,172μm,0.1s						
RM33				AML	AML		
	comp=E,193μm,0.9s						
RM33				AML	AML		
	comp=N,172μm,0.1s						
RM33				AML	AML		
	comp=E,193μm,0.9s						
RM33				AML	AML		
	comp=N,172μm,0.1s						
RM33				AML	AML		
	comp=N,172μm,0.1s						
RM33				AML	AML		
	comp=E,193μm,0.9s						
FDMO	**Fiordimonte**	**0.29**	**344**	⇓P	Pg	01 09 57.1	-8.7
FDMO				AML	AML		
FDMO				AML	AML		
	comp=E,168μm,0.8s						
FDMO				AML	AML		
	comp=N,178μm,0.2s						
FDMO	**Fiordimonte**	**0.29**	**344**	⇑P	Pg	01 10 06.3	+0.5
FDMO				S	Sb	01 10 11.0	-1.2
FDMO				AML	AML		
	comp=E,168μm,0.8s						
FDMO				AML	AML		
	comp=N,178μm,0.2s						
FDMO				AML	AML		
	comp=E,168μm,0.8s						
FDMO				AML	AML		
	comp=N,178μm,0.2s						
FDMO				AML	AML		
	comp=E,168μm,0.8s						
FDMO				AML	AML		
	comp=N,178μm,0.2s						
GUMA	**Gualdo di Mace**	**0.32**	**19**	P	Pb	01 10 07.2	-0.7
GUMA				S	Sb	01 10 12.9	-0.2
GUMA				AML	AML		
	comp=E,1080μm,0.2s						
GUMA				AML	AML		
	comp=N,706μm,0.7s						
GUMA				AML	AML		
	comp=N,728μm,0.7s						
GUMA				AML	AML		
	comp=E,754μm,0.2s						
CESI	**CESI - Serrava**	**0.33**	**319**	P	Pg	01 10 06.9	+0.4
CESI				S	Sb	01 10 12.1	-1.2
TERO	**Teramo**	**0.33**	**114**	P	Pg	01 10 06.8	+0.2
TERO				S	Sg	01 10 12.2	+1.2
TERO				AML	AML		
	comp=N,245μm,0.8s						
TERO				AML	AML		
	comp=E,236μm,1.6s						
TERO				AML	AML		
	comp=E,236μm,0.4s						
TERO	**Teramo**	**0.33**	**114**	P	Pg	01 10 06.8	+0.2
TERO				S	Sg	01 10 12.2	+1.1
TERO				AML	AML		
	comp=E,236μm,1.6s						
TERO				AML	AML		
	comp=N,245μm,0.8s						
TERO				AML	AML		
	comp=E,236μm,1.6s						
TERO				AML	AML		
	comp=N,245μm,0.8s						
TERO				AML	AML		
	comp=E,236μm,1.6s						
TERO				AML	AML		
	comp=N,245μm,0.8s						
TERO				AML	AML		
	comp=E,236μm,1.6s						
TERO				AML	AML		
	comp=N,245μm,0.8s						
CSP1	**Cessapalombo**	**0.33**	**1**	P	Pg	01 10 07.2	+0.5
CSP1				S	Sb	01 10 12.8	-0.8
CSP1				AML	AML		
	comp=N,208μm,1.2s						
CSP1				AML	AML		
	comp=E,137μm,0.6s						
CSP1	**Cessapalombo**	**0.33**	**1**	P	Pg	01 10 07.2	+0.6
CSP1				AML	AML		
CSP1				AML	AML		
	comp=E,152μm,1.4s						
CSP1				AML	AML		
	comp=N,201μm,1.2s						
ARRO	**Arrone**	**0.36**	**240**	⇓P	Pg	01 09 58.0	-9.1
ARRO				AML	AML		
	comp=N,97μm,0.2s						
ARRO				AML	AML		
	comp=N,97μm,0.2s						
ARRO				AML	AML		
	comp=E,119μm,0.2s						
ARRO				AML	AML		
	comp=N,97μm,1.8s						
ARRO	**Arrone**	**0.36**	**240**	⇓P	Pb	01 10 07.9	-0.7
ARRO				AML	AML		
	comp=E,119μm,0.2s						
ARRO				AML	AML		
	comp=N,97μm,0.2s						
ARRO				AML	AML		
	comp=E,119μm,0.2s						
ARRO				AML	AML		
	comp=N,97μm,0.2s						
ARRO				AML	AML		
	comp=E,119μm,0.2s						
ARRO				AML	AML		
	comp=N,97μm,0.2s						
OFFI	**Offida**	**0.40**	**64**	⇑P	Pb	01 10 09.2	-0.1
CESX	**Cesi**	**0.48**	**252**	P	Pg	01 10 09.7	+0.4
CESX				AML	AML		
	comp=E,61μm,0.5s						
CESX				AML	AML		
	comp=N,72μm,1.5s						
CESX				AML	AML		
	comp=E,61μm,0.5s						
CESX				AML	AML		
	comp=N,72μm,1.5s						
CESX				AML	AML		
	comp=E,61μm,0.5s						
CESX				AML	AML		
	comp=N,72μm,1.5s						
ASSB	**Assisi San Ben**	**0.48**	**306**	P	Pg	01 10 09.6	+0.1
ASSB				AML	AML		
	comp=E,135μm,0.3s						
ASSB				AML	AML		
	comp=N,118μm,1.3s						
ASSB				AML	AML		
	comp=E,135μm,0.3s						
ASSB				AML	AML		
	comp=N,118μm,1.3s						
ASSB				AML	AML		
	comp=N,118μm,1.3s						
ASSB				AML	AML		
	comp=E,135μm,0.3s						
SNTG	**Esanatoglia**	**0.53**	**340**	P	Pg	01 10 10.4	+0.1
SNTG				AML	AML		
	comp=E,52μm,0.8s						
SNTG				AML	AML		
	comp=N,62μm,0.8s						
SNTG				AML	AML		
	comp=E,52μm,0.8s						
SNTG				AML	AML		
	comp=N,62μm,0.8s						
SNTG				AML	AML		
	comp=N,62μm,0.8s						
SNTG				AML	AML		
	comp=E,52μm,0.8s						
FAGN	**Fagnano**	**0.57**	**149**	⇓P	Pg	01 10 11.6	+0.5
FAGN				AML	AML		
	comp=E,87μm,1.2s						
FAGN				AML	AML		
	comp=N,88μm,1.5s						
FAGN				AML	AML		
	comp=E,87μm,1.2s						
FAGN				AML	AML		
	comp=N,88μm,1.5s						
FAGN				AML	AML		
	comp=E,87μm,1.2s						
FAGN				AML	AML		
	comp=N,88μm,1.5s						
EL6	**Elcito**	**0.57**	**353**	P	Pg	01 10 11.4	+0.2
EL6				S	Sb	01 10 21.0	+0.5
EL6				AML	AML		
	comp=E,115μm,1.4s						
EL6				AML	AML		
	comp=N,130μm,1.4s						
EL6				AML	AML		
	comp=E,115μm,1.4s						
EL6				AML	AML		
	comp=N,130μm,1.4s						
ATCC	**AVT- Casa Cast**	**0.59**	**317**	⇓P	Pg	01 10 11.6	+0.2
VCEL	**Villa Celiera**	**0.60**	**127**	P	Pb	01 10 12.2	-0.5
CING	**Cingoli**	**0.62**	**0**	⇓P	Pg	01 10 12.1	+0.2
CING				AML	AML		
	comp=E,57μm,0.1s						
CING				AML	AML		
	comp=N,50μm,1.3s						
CING				AML	AML		
	comp=E,57μm,0.1s						
CING				AML	AML		
	comp=N,50μm,1.3s						
CING				AML	AML		
	comp=E,57μm,0.1s						
CING				AML	AML		
	comp=N,50μm,1.3s						
T0110	**Collepietro**	**0.69**	**141**	AML	AML		
	comp=N,78μm,0.9s						
T0110				AML	AML		
	comp=E,66μm,0.6s						
T0110				AML	AML		
	comp=N,78μm,0.9s						
T0110				AML	AML		
	comp=E,66μm,0.6s						
T0110				AML	AML		
	comp=E,66μm,0.6s						
T0110				AML	AML		
	comp=N,78μm,0.9s						
ARVD	**Arcevia**	**0.76**	**346**	AML	AML		
	comp=E,26μm,0.8s						
ARVD				AML	AML		
	comp=E,26μm,0.8s						
ARVD				AML	AML		
	comp=N,26μm,1.5s						
ARVD				AML	AML		
	comp=E,26μm,0.8s						
ARVD				AML	AML		
	comp=N,26μm,1.5s						
ARVD				AML	AML		
	comp=N,26μm,1.5s						

*IDC **26** 01:39:32.2±1.2, 6°.42N×117°.34E, h0km, mb3.6/6, mbtmp3.6/6, MS2.8/2, Error ellipse: s-maj=83.3km s-min=21.7km az=58.0*
*DJA **26** 01:39:35.8±0.7, 6°.N±8°×11°.7E±°, h10km, M4.3/7, mB5.2/1, mb4.5/7, MLv4.2/6, Mw(mB)4.6/1*
ISC 26 01:39:38.0±0.8, 6°.2N±0°.1×116°.9E±0°.2, h35km, n11, σ1§45/10, mb3.6/6, 1C, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPR	**Puerto Princes**	**3.96**	**27**	⇑iP	**Pn**	**01 40 37.5**	**+1.3**
MPSI	**Mapaga** 0.0nm7.7nm,1.1s	**6.56**	**153**	P	**Pn**	**01 41 12.4**	**+0.4**
GTOI	**Gorontalo** 12nm,0.7s	**8.23**	**132**	P	**Pn**	**01 41 35.5**	**+0.6**
DAV	**Davao City (W)** comp=Z,69nm,20.3s,baz=264,slow=45	**8.64**	**84**	LR	LR	01 45 38.0	
TTSI	**Tana Toraja**	**9.65**	**163**	P	**Pn**	**01 41 56.1**	**+1.6**
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,baz=132,slow=9.6,SNR=11	**21.34**	**306**	P	**P**	**01 44 23.9**	**+1.7**
CMAR	comp=Z,24nm,22.0s,baz=165,slow=35 1.2nm,0.3s			LR	LR	01 51 58.4	
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=323,slow=9.5,SNR=2.8 0.5nm,0.7s	**31.14**	**147**	P	**P**	**01 45 51.4**	**-2.2**
ASAR	**Alice Springs** 0.3nm,0.5s,baz=331,slow=8.5,SNR=1.7 0.3nm,0.5s	**34.02**	**151**	P	**P**	**01 46 19.0**	**+0.1**
SONM	**Songino Array** 0.3nm,0.5s,baz=147,slow=6.2,SNR=2.2 0.3nm,0.5s	**42.43**	**349**	P	**P**	**01 47 28.7**	**-0.8**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=139,slow=8.1,SNR=3.7 0.4nm,0.5s	**50.19**	**329**	P	**P**	**01 48 29.6**	**-0.8**
FINES	**FINESS Array B** 1.0nm,0.7s,baz=96,slow=5.7,SNR=5.3 1.0nm,0.7s	**84.99**	**331**	P	**P**	**01 52 08.7**	**-0.9**

*DJA **26** 02:20:50.4±0.5, 3°.N±5°×12°.8E±°, h226km±4km, M4.5/13, mb4.5/11, mB4.9/6, MLv4.6/13, Mw(mB)4.2/6*
*IDC **26** 02:20:51.0±2.9, 2°.44N×128°.34E, h233km±28km, mb3.6/6, mbtmp4.1/7, Error ellipse: s-maj=50.0km s-min=20.2km az=71.0*
*NEIC **26** 02:20:54±0.6, 2°.1N±0°.2×128°.3E±0°.1, h232km±20km, mb4.3/12, Error ellipse: s-maj=33.2km s-min=8.0km az=203.0*
ISC 26 02:20:51.4±1.6, 2°.4N±0°.2×128°.5E±0°.1, h232km, n32, σ0§83/30, mb4.3/8, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**3.19**	**293**	P	**Pn**	**02 21 43.4**	**-1.5**
SIJI	**Sorong** 18nm,0.4s,baz=335,slow=19,SNR=6.4	**4.30**	**139**	P	**Pn**	**02 21 59.2**	**+1.0**
KMSI	**Cibinong**	**4.84**	**248**	P	**Pn**	**02 22 04.6**	**-0.1**
SANI	**Sanana** 1.7nm7μm291nm,0.5s	**5.08**	**209**	P	**Pn**	**02 22 07.2**	**-0.5**
KCP	**Kidapawan**	**5.66**	**324**	⇑iP	Pn	02 22 12.8	-2.2
GTOI	**Gorontalo** 0.2nm493nm37nm,0.5s	**5.73**	**252**	P	**Pn**	**02 22 16.8**	**+1.0**
LUWI	**Luwuk**	**6.65**	**239**		**Pn**	**02 22 26.1**	**-1.4**
LUWI	**Luwuk** 0.6nm5μm134nm,0.7s	**6.65**	**239**	P	**Pn**	**02 22 27.5**	**+0.1**
MRSI	**Marisa** 0.2nm62nm,0.6s	**6.80**	**254**	P	**Pn**	**02 22 28.9**	**-0.5**
APSI	**Ampana** 0.2nm695nm52nm,0.4s	**7.57**	**244**	P	**Pn**	**02 22 38.9**	**-0.3**
TOLI2	**Tolitoli**	**7.79**	**261**		**Pn**	**02 22 41.4**	**-0.6**
MPSI	**Mapaga** 2μm8.6nm,0.9s	**8.81**	**257**	P	**Pn**	**02 22 54.3**	**-0.7**
TTSI	**Tana Toraja** 2μm42nm,0.5s	**10.20**	**238**	P	**Pn**	**02 23 13.1**	**+0.3**
SPSI	**Sidrap Palu** 1μm30nm,0.4s	**10.76**	**234**	P	**Pn**	**02 23 19.7**	**-0.2**
MTN	**Manton Dam**	**15.39**	**170**	P	**P**	**02 24 16.0**	**-0.8**
SBUM	**Sibu**	**16.23**	**270**	P	**P**	**02 24 27.3**	**+1.4**

SBUM				IAmb	IAmb	02 24 30.4		
	comp=Z,16nm,0.8s							
KNRA	**Kununurra**	**17.98**	**179**	P	**P**	**02 24 44.0**	**-1.0**	
FITZ	**Fitzroy Crossi**	**20.58**	**188**	P	**P**	**02 25 12.7**	**-0.2**	
	comp=Z,2.3nm,0.5s,baz=24,slow=10,SNR=11							
	comp=Z,2.3nm,0.5s							
FITZ	**Fitzroy Crossi**	**20.58**	**188**	P	**P**	**02 25 12.7**	**-0.2**	
FITZ				IAmb	IAmb	02 25 17.4		
	comp=Z,12nm,1.5s							
WB0	**Warramunga Arr**	**22.80**	**165**	P	**P**	**02 25 34.2**	**-0.2**	
WRAB	**Tennant Creek**	**22.95**	**166**	P	**P**	**02 25 33.6**	**-2.1**	
WRA	**Warramunga Arr**	**22.96**	**166**	P	**P**	**02 25 35.3**	**-0.4**	
	comp=Z,3.3nm,0.4s,baz=345,slow=10.0,SNR=42							
	comp=Z,3.3nm,0.4s							
WRA	**Warramunga Arr**	**22.96**	**166**	P	**P**	**02 25 35.1**	**-0.7**	
WB2	**Warramunga Arr**	**22.96**	**166**	P	**P**	**02 25 34.5**	**-1.3**	
WB2				IAmb	IAmb	02 25 37.9		
	comp=Z,15nm,1.1s							
AS31	**Alice Springs**	**26.46**	**169**	P	**P**	**02 26 06.8**	**-0.6**	
AS31				IAmb	IAmb	02 26 08.1		
	comp=Z,2.4nm,0.6s							
ASAR	**Alice Springs**	**26.46**	**169**	P	**P**	**02 26 07.3**	**-0.1**	
	comp=Z,3.8nm,0.5s,baz=355,slow=7.9,SNR=81							
	comp=Z,3.8nm,0.5s							
BBOO	**Buckleboo**	**35.77**	**169**	P	**P**	**02 27 28.1**	**-0.3**	
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**02 27 33.3**	**+0.2**	
	comp=Z,4.1nm,0.4s,baz=345,slow=8.2,SNR=18							
	comp=Z,4.1nm,0.4s							
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**02 27 33.4**	**+0.2**	
ARMA	**Armidale**	**39.44**	**148**	P	**P**	**02 27 59.7**	**+0.3**	
ARMA				IAmb	IAmb	02 28 03.1		
	comp=Z,13nm,1.1s							
MKAR	**Makanchi Array**	**59.61**	**325**	P	P	02 30 29.9	-1.1	
	comp=Z,0.3nm,0.5s,baz=122,slow=8.0,SNR=4.6							
	comp=Z,0.3nm,0.5s							
VNDA	**Vanda**	**81.92**	**173**	P	**P**	**02 32 44.6**	**+0.1**	
	comp=Z,0.9nm,0.7s,baz=310,slow=6.7,SNR=6.7							
	comp=Z,0.9nm,0.7s							

ROM 26 02:34:27.6±0.1, 42°769N±0°006×13°189E±0°005, h11km, ML1.4/3, Error ellipse: s-maj=0.7km s-min=0.4km az=349.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.09**	**320**	P	Pg	02 34 30.7	+0.4
NRCA				S	Sg	02 34 32.5	+0.3
MC2	**Monte Cornacci**	**0.14**	**0**	P	Pg	02 34 31.6	+0.4
MC2				S	Sg	02 34 34.4	+0.7
MMO1	**Montemonaco**	**0.17**	**38**	P	Pg	02 34 31.9	+0.6
MMO1				S	Sg	02 34 34.9	+0.9
LNSS	**Leonessa**	**0.20**	**214**	AML	AML		
	comp=E,150μm,0.1s						
LNSS				AML	AML		
	comp=N,148μm,0.3s						
LNSS				AML	AML		
	comp=E,2220μm,0.1s						
LNSS				AML	AML		
	comp=N,2390μm,0.5s						
FDMO	**Fiordimonte**	**0.28**	**344**	P	Pg	02 34 33.6	+0.3
CESI	**CESI - Serrava**	**0.32**	**319**	P	Pg	02 34 34.4	+0.4
CESI				S	Sb	02 34 39.5	-1.0
CSP1	**Cessapalombo**	**0.32**	**2**	P	Pg	02 34 34.6	+0.4
CSP1				S	Sb	02 34 39.7	-1.1

ROM 26 02:35:25.8±0.1, 42°806N±0°003×13°157E±0°005, h9km, ML2.7/52, 17C-23D, Error ellipse: s-maj=0.5km s-min=0.1km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**311**	P	Pg	02 35 28.0	+0.3
NRCA				S	Sg	02 35 29.1	+0.1
NRCA				AML	AML		
	comp=E,72900μm,0.8s						
NRCA				AML	AML		
	comp=E,72850μm,0.8s						
NRCA				AML	AML		
	comp=N,81000μm,1.3s						
NRCA				AML	AML		
	comp=E,82100μm,0.3s						
NRCA				AML	AML		
	comp=N,90100μm,1.3s						
MC2	**Monte Cornacci**	**0.11**	**13**	P	Pg	02 35 29.2	+0.6
MC2				S	Sg	02 35 31.4	+0.8
MC2				AML	AML		
	comp=E,19150μm,1.2s						
MC2				AML	AML		
	comp=N,19450μm,1.2s						
MC2				AML	AML		
	comp=E,19200μm,1.2s						
MMO1	**Montemonaco**	**0.16**	**53**	P	Pg	02 35 29.9	+0.6
MMO1				S	Sg	02 35 32.7	+1.1
MMO1				AML	AML		
	comp=E,1306μm,1.4s						
MMO1				AML	AML		
	comp=N,2065μm,0.4s						
MMO1				AML	AML		
	comp=N,14150μm,0.4s						
MMO1				AML	AML		
	comp=E,11300μm,1.3s						
MMO1				AML	AML		
	comp=N,14200μm,0.4s						
FEMA	**Monte Fema**	**0.17**	**333**	⇓P	Pg	02 35 30.2	+0.6
FEMA				S	Sg	02 35 33.1	+0.9
FEMA				AML	AML		
	comp=E,9000μm,1.3s						
FEMA				AML	AML		
	comp=E,9025μm,1.3s						
FEMA				AML	AML		
	comp=N,7565μm,1.3s						
FEMA				AML	AML		
	comp=N,7560μm,1.3s						
FEMA				AML	AML		
	comp=E,8990μm,1.3s						
FEMA				AML	AML		
	comp=N,7560μm,0.7s						
FEMA				AML	AML		
	comp=E,8990μm,0.7s						
LNSS	**Leonessa**	**0.22**	**203**	P	Pg	02 35 31.2	+0.8
LNSS				S	Sg	02 35 35.1	+1.7
LNSS				AML	AML		
	comp=N,19200μm,0.2s						
LNSS				AML	AML		
	comp=E,16850μm,0.7s						
FDMO	**Fiordimonte**	**0.24**	**348**	P	Pg	02 35 31.1	+0.5
FDMO				S	Sg	02 35 35.0	+1.1
FDMO				AML	AML		
	comp=E,2605μm,0.2s						
FDMO				AML	AML		
	comp=N,3235μm,0.2s						
FDMO				AML	AML		
	comp=E,2605μm,1.8s						
T1243	**Rocca Santa Ma**	**0.24**	**117**	P	Pg	02 35 31.6	+0.9
T1243				S	Sg	02 35 35.5	+1.5
T1243				AML	AML		
	comp=N,15050μm,0.3s						
T1243				AML	AML		
	comp=E,11750μm,0.3s						
T1243				AML	AML		
	comp=E,11750μm,0.3s						
T1243				AML	AML		
	comp=N,15050μm,0.3s						
T1243				AML	AML		
	comp=E,11750μm,1.7s						
T1243				AML	AML		
	comp=E,11750μm,1.7s						
CESI	**CESI - Serrava**	**0.27**	**317**	P	Pg	02 35 31.9	+0.6
CESI				S	Sb	02 35 36.4	-1.3
CESI				AML	AML		
	comp=N,5050μm,0.9s						
CESI				AML	AML		
	comp=E,5165μm,0.4s						
CESI				AML	AML		
	comp=N,5050μm,1.1s						
CSP1	**Cessapalombo**	**0.29**	**7**	P	Pg	02 35 32.2	+0.6
CSP1				S	Sb	02 35 36.9	-1.3
CSP1				AML	AML		
	comp=N,5035μm,0.4s						
CSP1				AML	AML		
	comp=E,4220μm,0.2s						
CSP1				AML	AML		
	comp=N,5030μm,0.4s						
CSP1				AML	AML		
	comp=N,5030μm,1.6s						

GUMA	**Gualdo di Mace**	**0.29**	**27**	P	Pb	02 35 32.5	-0.7	
GUMA				S	Sb	02 35 38.0	-0.2	
GUMA				AML	AML			
	comp=N,7890μm,0.3s							
GUMA				AML	AML			
	comp=N,9505μm,0.6s							
GUMA				AML	AML			
	comp=E,8530μm,0.6s							
GUMA				AML	AML			
	comp=N,7890μm,0.3s							
GUMA				AML	AML			
	comp=E,8480μm,0.5s							
GUMA				AML	AML			
	comp=E,8530μm,0.6s							
GUMA				AML	AML			
	comp=N,7885μm,0.3s							
RM33	**Pellescritta (**	**0.30**	**172**	P	Pg	02 35 32.4	+0.6	
RM33				S	Sb	02 35 38.0	-0.5	
RM33				AML	AML			
	comp=E,1770μm,1.0s							
RM33				AML	AML			
	comp=N,1940μm,1.0s							
RM33				AML	AML			
	comp=N,2020μm,1.0s							
RM33				AML	AML			
	comp=N,1935μm,1.0s							
RM33				AML	AML			
	comp=E,1775μm,1.0s							
RM33				AML	AML			
	comp=E,1745μm,1.0s							
RM33				AML	AML			
	comp=E,1745μm,1.0s							
RM33				AML	AML			
	comp=E,1775μm,1.0s							
CAMP	**Campotosto**	**0.33**	**145**	P	Pg	02 35 32.9	+0.5	
CAMP				S	Sb	02 35 38.4	-1.0	
CAMP				AML	AML			
	comp=N,899μm,0.6s							
CAMP				AML	AML			
	comp=E,2195μm,0.3s							
CAMP	**Campotosto**	**0.33**	**145**	AML	AML			
	comp=E,128μm,1.4s							
CAMP				AML	AML			
	comp=N,95μm,0.5s							
ARRO	**Arrone**	**0.37**	**232**	⇑P	Pg	02 35 33.4	+0.4	
ARRO				S	Sb	02 35 40.4	+0.1	
ARRO				AML	AML			
	comp=N,1450μm,0.8s							
ARRO				AML	AML			
	comp=E,1355μm,0.5s							
ARRO				AML	AML			
	comp=N,1445μm,0.8s							
ARRO				AML	AML			
	comp=E,1350μm,0.5s							
SEF1	**Sefro**	**0.37**	**336**	⇑P	Pg	02 35 33.7	+0.5	
SEF1				S	Sb	02 35 39.8	-0.9	
TERO	**Teramo**	**0.38**	**119**	P	Pg	02 35 33.7	+0.5	
TERO				S	Sb	02 35 40.1	-0.6	
TERO				AML	AML			
	comp=E,1545μm,0.4s							
TERO				AML	AML			
	comp=N,1980μm,0.5s							
MDAR	**Monte D'Aria**	**0.39**	**358**	⇓P	Pg	02 35 34.1	+0.7	
MDAR				S	Sb	02 35 40.5	-0.6	
MDAR				AML	AML			
	comp=E,1276μm,0.2s							
MDAR				AML	AML			
	comp=N,1444μm,0.7s							
MDAR				AML	AML			
	comp=N,1446μm,0.7s							
MDAR				AML	AML			
	comp=E,1274μm,0.2s							
OFFI	**Offida**	**0.41**	**72**	⇑P	Pb	02 35 35.3	0.0	
OFFI				AML	AML			
	comp=N,2540μm,0.5s							
OFFI				AML	AML			
	comp=E,2725μm,0.6s							
FIU1	**Fiuminata**	**0.42**	**337**	P	Pg	02 35 34.6	+0.6	
FIU1				S	Sb	02 35 41.1	-0.7	
ASSB	**Assisi San Ben**	**0.43**	**303**	⇓P	Pg	02 35 34.2	-0.2	
ASSB				AML	AML			
	comp=E,1710μm,1.3s							
ASSB				AML	AML			
	comp=N,1495μm,1.0s							
ASSB				AML	AML			
	comp=N,1495μm,1.0s							
ASSB				AML	AML			
	comp=E,1710μm,0.7s							
GAG1	**Gagliole**	**0.44**	**351**	⇓P	Pg	02 35 35.0	+0.6	
GAG1				S	Sb	02 35 42.0	-0.4	
GAG1				AML	AML			
	comp=N,3005μm,0.6s							
GAG1				AML	AML			
	comp=E,3055μm,0.7s							
GAG1				AML	AML			
	comp=E,3055μm,1.3s							
CESX	**Cesi**	**0.47**	**245**	⇑P	Pg	02 35 35.1	+0.2	
CESX				S	Sb	02 35 44.0	+0.7	
CESX				AML	AML			
	comp=E,1052μm,0.4s							
CESX				AML	AML			
	comp=N,1080μm,0.3s							
GIGS	**Gran Sasso**	**0.47**	**139**	P	Pg	02 35 35.2	+0.3	
GIGS				S	Sb	02 35 42.3	-1.1	
GIGS				AML	AML			
	comp=N,235μm,0.6s							
GIGS				AML	AML			
	comp=N,236μm,0.6s							
GIGS				AML	AML			
	comp=E,294μm,0.4s							
SNTG	**Esanatoglia**	**0.48**	**341**	P	Pg	02 35 35.2	+0.1	
SNTG				S	Sb	02 35 42.8	-0.8	
SNTG				AML	AML			
	comp=N,738μm,0.7s							
SNTG				AML	AML			
	comp=N,738μm,1.3s							
SNTG				AML	AML			
	comp=E,814μm,0.1s							
AQU	**L'Aquila**	**0.49**	**158**	⇑P	Pg	02 35 35.6	+0.3	
AQU				AML	AML			
	comp=E,696μm,1.6s							
AQU				AML	AML			
	comp=N,636μm,0.3s							
AQU				AML	AML			
	comp=N,606μm,1.0s							
AQU				AML	AML			
	comp=N,636μm,0.3s							
AQU				AML	AML			
	comp=E,671μm,1.6s							
AQU				AML	AML			
	comp=N,606μm,1.0s							
AQU				AML	AML			
	comp=E,696μm,0.4s							
AQU				AML	AML			
	comp=E,671μm,0.4s							
EL6	**Elcito**	**0.52**	**356**	⇓P	Pg	02 35 35.9	-0.2	
EL6				S	Sb	02 35 45.1	0.0	
EL6				AML	AML			
	comp=E,1403μm,0.9s							
EL6				AML	AML			
	comp=N,1194μm,1.5s							
EL6				AML	AML			
	comp=E,1405μm,0.9s							
EL6				AML	AML			
	comp=N,1195μm,0.2s							
ATCC	**AVT- Casa Cast**	**0.54**	**315**	⇓P	Pg	02 35 36.1	-0.1	
ATCC				S	Sb	02 35 46.0	+0.7	
ATCC				AML	AML			
	comp=N,1188μm,0.5s							
ATCC				AML	AML			
	comp=E,1630μm,1.4s							
ATCC				AML	AML			
	comp=N,1192μm,0.5s							
FIAM	**Fiamignano**	**0.54**	**183**	⇓P	Pg	02 35 36.0	-0.3	
FIAM				S	Sb	02 35 45.0	-0.4	
FIAM				AML	AML			
	comp=E,633μm,0.7s							
FIAM				AML	AML			
	comp=N,534μm,0.3s							
FIAM				AML	AML			
	comp=E,632μm,0.7s							
FIAM				AML	AML			
	comp=N,534μm,0.3s							
TRTR	**Tortoreto Alta**	**0.56**	**90**	⇑P	Pb	02 35 38.3	+0.5	
TRTR				AML	AML			
	comp=N,2105μm,0.4s							

TRTR				AML	AML			
	comp=E,2270μm,0.4s							
TRTR				AML	AML			
	comp=N,2100μm,0.4s							
FOSV	**Fossato di Vic**	**0.57**	**329**	⇓P	Pg	02 35 36.7	-0.2	
FOSV				S	Sb	02 35 46.1	-0.1	
CING	**Cingoli**	**0.57**	**3**	P	Pg	02 35 36.7	-0.2	
CING				AML	AML			
	comp=E,760μm,0.3s							
CING				AML	AML			
	comp=N,714μm,0.7s							
CING				AML	AML			
	comp=E,760μm,1.7s							
FAGN	**Fagnano**	**0.63**	**150**	⇑P	Pg	02 35 37.8	-0.1	
FAGN				AML	AML			
	comp=E,1160μm,1.0s							
FAGN				AML	AML			
	comp=N,924μm,0.4s							
FAGN				AML	AML			
	comp=E,1160μm,1.0s							
MURB	**Monte Urbino**	**0.65**	**315**	⇓P	Pg	02 35 38.7	+0.3	
MURB				AML	AML			
	comp=N,1830μm,0.9s							
MURB				AML	AML			
	comp=E,1590μm,1.6s							
MURB				AML	AML			
	comp=E,1590μm,0.4s							
MURB				AML	AML			
	comp=N,1830μm,1.1s							
VCEL	**Villa Celiera**	**0.65**	**129**	⇓P	Pb	02 35 39.0	-0.5	
VCEL				AML	AML			
	comp=E,822μm,0.5s							
VCEL				AML	AML			
	comp=N,719μm,0.8s							
VCEL				AML	AML			
	comp=E,822μm,0.5s							
VCEL				AML	AML			
	comp=N,720μm,0.8s							
VCEL				AML	AML			
	comp=N,720μm,1.2s							
VCEL				AML	AML			
	comp=E,822μm,1.5s							
PP3	**Marolino**	**0.66**	**30**	⇑P	Pb	02 35 39.8	+0.2	
PP3				AML	AML			
	comp=N,1670μm,0.2s							
PP3				AML	AML			
	comp=E,2650μm,0.4s							
PP3				AML	AML			
	comp=E,2685μm,0.4s							
PP3				AML	AML			
	comp=N,1675μm,0.2s							
PP3				AML	AML			
	comp=E,2655μm,0.4s							
PP3				AML	AML			
	comp=N,1690μm,0.2s							
PP3				AML	AML			
	comp=E,2655μm,1.6s							
PP3				AML	AML			
	comp=E,2685μm,1.6s							
SSFR	**Montelago di S**	**0.69**	**337**	⇑P	Pg	02 35 39.1	0.0	
SSFR				AML	AML			
	comp=E,1100μm,0.2s							
SSFR				AML	AML			
	comp=N,1300μm,0.3s							
SSFR				AML	AML			
	comp=N,1110μm,1.6s							
SSFR				AML	AML			
	comp=E,1108μm,0.2s							
SSFR				AML	AML			
	comp=N,1110μm,0.4s							
SSFR				AML	AML			
	comp=E,1100μm,1.8s							
ATFO	**Monte Foce - G**	**0.70**	**323**	⇓P	Pg	02 35 39.8	+0.4	
ATFO				AML	AML			
	comp=N,411μm,1.0s							
ATFO				AML	AML			
	comp=E,388μm,1.3s							
ATFO				AML	AML			
	comp=E,388μm,0.7s							
ATFO				AML	AML			
	comp=N,411μm,1.0s							
ATTE	**AVT- Monte Tez**	**0.71**	**304**	⇓P	Pb	02 35 40.1	-0.3	
ATTE				AML	AML			
	comp=E,276μm,1.6s							
ATTE				AML	AML			
	comp=N,284μm,0.3s							
ATTE				AML	AML			
	comp=E,276μm,0.4s							
ARVD	**Arcevia**	**0.71**	**347**	⇓P	Pg	02 35 39.3	-0.2	
ARVD				S	Sn	02 35 52.0	-1.2	
ARVD				AML	AML			
	comp=N,230μm,0.6s							
ARVD				AML	AML			
	comp=E,408μm,0.5s							
T0110	**Collepietro**	**0.74**	**141**	⇑P	Pg	02 35 40.1	+0.1	
T0110				S	Sn	02 35 53.0	-1.0	
T0110				AML	AML			
	comp=N,754μm,0.4s							
T0110				AML	AML			
	comp=E,525μm,0.5s							
T0110				AML	AML			
	comp=N,754μm,0.4s							
SRES	**S.Oreste - Sor**	**0.74**	**220**	⇓P	Pg	02 35 40.5	+0.4	
SRES				S	Sn	02 35 54.0	0.0	
SRES				AML	AML			
	comp=E,358μm,1.1s							
SRES				AML	AML			
	comp=N,240μm,0.4s							
SRES				AML	AML			
	comp=N,240μm,1.6s							
SRES				AML	AML			
	comp=E,358μm,0.9s							
MGAB	**Montegabbione**	**0.78**	**278**	P	Pb	02 35 41.2	-0.3	
MGAB				AML	AML			
	comp=N,614μm,1.4s							
MGAB				AML	AML			
	comp=E,759μm,1.2s							
MGAB				AML	AML			
	comp=E,735μm,1.2s							
MGAB				AML	AML			
	comp=E,735μm,0.8s							
MGAB				AML	AML			
	comp=N,632μm,1.3s							
MGAB				AML	AML			
	comp=E,759μm,0.8s							
MGAB				AML	AML			
	comp=N,614μm,0.6s							
FRON	**Frontone**	**0.78**	**336**	⇓P	Pg	02 35 40.4	-0.4	
FRON				AML	AML			
	comp=N,482μm,0.6s							
FRON				AML	AML			
	comp=E,290μm,1.1s							
ATVO	**AVT- Monte Val**	**0.80**	**317**	P	Pg	02 35 40.7	-0.5	
AOI	**Ancona**	**0.81**	**24**	P	Pb	02 35 42.2	+0.1	
AOI				AML	AML			
	comp=E,307μm,0.6s							
AOI				AML	AML			
	comp=N,250μm,0.4s							
AOI				AML	AML			
	comp=E,307μm,1.4s							
AOI				AML	AML			
	comp=N,250μm,1.6s							
COR1	**Corinaldo**	**0.83**	**352**	⇓P	Pb	02 35 42.7	+0.2	
COR1				AML	AML			
	comp=N,516μm,0.8s							
COR1				AML	AML			
	comp=E,376μm,1.0s							
COR1				AML	AML			
	comp=E,376μm,1.0s							
COR1				AML	AML			
	comp=N,516μm,1.2s							
ATMI	**Monte Miggiano**	**0.84**	**309**	⇓P	Pb	02 35 42.3	-0.3	
ATMI				AML	AML			
	comp=N,831μm,0.8s							
ATMI				AML	AML			
	comp=E,726μm,0.7s							
MTCE	**Montecelio**	**0.84**	**202**	⇓P	Pg	02 35 41.5	-0.5	
MTCE				AML	AML			
	comp=E,358μm,0.4s							
MTCE				AML	AML			
	comp=N,300μm,0.6s							
ATPI	**Pietralunga -**	**0.85**	**320**	⇑P	Pg	02 35 42.2	0.0	
ATPI				AML	AML			
	comp=E,228μm,0.9s							
ATPI				AML	AML			
	comp=N,224μm,0.9s							
ATPI				AML	AML			

	comp=E,229μm,0.9s								
ATPI					AML	AML			
	comp=N,224μm,1.1s								
PIEI	**Pieia**	**0.86**	**328**	⇓	P	Pg	02 35 42.0	-0.3	
PIEI					AML	AML			
	comp=E,308μm,0.9s								
PIEI					AML	AML			
	comp=N,199μm,1.0s								
CERT	**Cerreto**	**0.87**	**189**	⇑	P	Pg	02 35 42.4	-0.1	
CERT					AML	AML			
	comp=E,793μm,0.5s								
CERT					AML	AML			
	comp=N,404μm,1.2s								
NARO	**Abbazia di Nar**	**0.91**	**333**		P	Pg	02 35 42.6	-0.7	
NARO					AML	AML			
	comp=N,169μm,0.9s								
NARO					AML	AML			
	comp=N,170μm,0.9s								
NARO					AML	AML			
	comp=E,182μm,0.5s								
NARO					AML	AML			
	comp=N,170μm,1.1s								
SACS	**San Casciano d**	**0.92**	**273**	⇑	P	Pn	02 35 45.5	+0.5	
APEC	**Apecchio**	**0.93**	**325**	⇑	P	Pg	02 35 43.7	+0.1	
APEC					S	Sn	02 35 59.0	+0.5	
APEC					AML	AML			
	comp=E,270μm,0.7s								
APEC					AML	AML			
	comp=N,328μm,1.0s								
FSSB	**Fossombrone**	**0.93**	**343**	⇓	P	Pg	02 35 43.6	-0.1	
FSSB					AML	AML			
	comp=E,600μm,0.6s								
FSSB					AML	AML			
	comp=E,601μm,0.6s								
FSSB					AML	AML			
	comp=N,1425μm,0.5s								
FSSB					AML	AML			
	comp=N,1425μm,1.5s								
INTR	**Introdacqua**	**0.97**	**145**	⇓	P	Pg	02 35 43.9	-0.6	
INTR					AML	AML			
	comp=N,441μm,0.6s								
INTR					AML	AML			
	comp=E,262μm,0.7s								
INTR					AML	AML			
	comp=E,262μm,1.3s								
BADI	**Badiali**	**0.97**	**317**	⇑	P	Pg	02 35 44.5	+0.1	
CAFI	**Castiglion Fio**	**1.02**	**301**	⇑	P	Pg	02 35 45.4	+0.1	
CAFI					AML	AML			
	comp=E,174μm,1.0s								
CAFI					AML	AML			
	comp=N,178μm,1.1s								
CAFI					AML	AML			
	comp=N,178μm,0.9s								
CAFI					AML	AML			
	comp=E,174μm,1.0s								
LPEL	**Lama dei Pelig**	**1.07**	**135**		AML	AML			
	comp=E,176μm,0.6s								
LPEL					AML	AML			
	comp=N,184μm,1.6s								
PARC	**Parchiule**	**1.08**	**322**	⇓	P	Pb	02 35 46.6	-0.1	
PARC					AML	AML			
	comp=N,200μm,1.0s								
PARC					AML	AML			
	comp=E,219μm,0.7s								
SF04	**Casetta**	**1.10**	**272**		P	Pn	02 35 49.7	+2.2	
PESA	**Pesaro**	**1.16**	**349**	⇑	P	Pn	02 35 48.6	+0.4	
PESA					AML	AML			
	comp=N,478μm,1.4s								
PESA					AML	AML			
	comp=E,398μm,0.6s								
GIUL	**Giuliano Di Ro**	**1.25**	**177**	⇓	P	Pg	02 35 51.1	+1.3	
SFI	**Santa Sofia**	**1.46**	**319**		P	Pg	02 35 55.1	+1.4	
TRIV	**Trivento**	**1.47**	**135**		P	Pg	02 35 54.9	+1.0	
DUGI	**Dugi Otok**	**1.82**	**49**	*e*	Pn	Pn	02 35 58.3	+0.9	
VIRC	**Vir**	**2.03**	**42**	*e*	Pn	Pn	02 36 00.6	+0.4	
MORI	**Morici**	**2.14**	**59**	*e*	Pn	Pn	02 36 02.7	+1.0	
BRJN	**Brijuni**	**2.14**	**11**	*e*	Pn	Pn	02 36 02.2	+0.4	
NVLJ	**Novalja**	**2.15**	**35**	*e*	Pn	Pn	02 36 02.1	+0.2	
RABC	**Rab**	**2.27**	**31**	*e*	Pn	Pn	02 36 03.9	+0.4	
SMRN	**Sveta Marina**	**2.34**	**18**	*e*	Pn	Pn	02 36 04.3	-0.2	
UDBI	**Udbina**	**2.56**	**47**	*e*	Pn	Pn	02 36 09.3	+1.7	
KIJV	**Kijevo**	**2.65**	**62**	*e*	Pn	Pn	02 36 10.9	+2.1	
PLIT	**Plitvice**	**2.73**	**40**	*e*	Pn	Pn	02 36 10.9	+1.0	
LSTV	**Lastovo**	**2.75**	**90**	*e*	Pn	Pn	02 36 12.9	-2.3	
ABTA	**Abfaltersbach**	**3.97**	**354**	*i*	Pn	Pn	02 36 28.8	+1.8	
	comp=E,2.2nm,0.4s								
WTTA	**Wattenberg**	**4.59**	**347**	*i*	Pn	Pn	02 36 39.5	+4.0	
	comp=E,0.3nm,0.2s								

*INET **26** 03:06:08.8±0.5, 13°.82N×91°.16W, h23km±11km, MW4.1*
*SNET **26** 03:06:09.1±1.1, 13°.95N×91°.07W, h27km±4km, ML4.5*
*GCG **26** 03:06:09.1±2.6, 13°.89N×91°.23W, h52km, MD4.1*
*UCR **26** 03:06:09.2±1.1, 13°.96N×91°.06W, h26km±5km, ML4.4*

ISC 26 03:06:07.6±3.2, 13°.89N±0°.07×91°.08W±0°.05, h13km±24km, n53, σ0s64/73, 3C-10D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.60**	**23**	⇑ *e*P	**Pn**	**03 06 23.1**		**+1.1**
FUG				*e*S	Sn	03 06 44.7		+13
PCG	**Pacaya**	**0.68**	**43**	*e*P	**Pn**	**03 06 24.6**		**+1.5**
RTAL	**Retalhuleu**	**0.87**	**317**	*e*P	**Pb**	**03 06 24.6**		**+0.1**
RTAL				*e*S	**Sb**	**03 06 36.1**		**+0.2**
NBG	**Las Nubes**	**1.00**	**46**	⇓ *e*P	**Pn**	**03 06 29.2**		**+1.7**
NUBE	**Las Nubes**	**1.27**	**89**	*i* P	**Pn**	**03 06 31.1**		**+0.1**
NUBE				*e*S	**Sb**	**03 06 48.4**		**+0.7**
NUBE	**Las Nubes**	**1.27**	**89**	*i* P	**Pn**	**03 06 31.1**		**+0.1**
NUBE				*e*S	**Sb**	**03 06 48.4**		**+0.7**
RTR	**El Retiro**	**1.40**	**89**	*e*P	**Pb**	**03 06 33.6**		**0.0**
RTR	**El Retiro**	**1.40**	**89**	*e*P	**Pb**	**03 06 33.6**		**0.0**
CEVE	**Cerro Verde**	**1.42**	**92**	⇓ *i*P	**Pn**	**03 06 33.7**		**+0.4**
CEVE				*e*S	**Sb**	**03 06 53.3**		**+1.2**
CEVE				IAML		03 06 56.0		
	comp=Z,9μm,0.4s							
CEVE	**Cerro Verde**	**1.42**	**92**	⇓ *i*P	**Pn**	**03 06 33.7**		**+0.4**
CEVE				*e*S	**Sb**	**03 06 53.3**		**+1.2**
CEVE				IAML		03 06 56.0		
	comp=Z,9μm,0.4s							
SNJE	**San Jose**	**1.44**	**91**	*e*P	**Pn**	**03 06 33.9**		**+0.4**
SNJE	**San Jose**	**1.44**	**91**	*e*P	**Pn**	**03 06 33.9**		**+0.4**
HUEH	**Huehuetenango**	**1.48**	**344**	*e*P	**Pn**	**03 06 34.0**		**0.0**
HUEH				*e*S	**Sn**	**03 06 53.5**		**+0.1**
HUEH	**Huehuetenango**	**1.48**	**344**	*e*P	**Pn**	**03 06 34.0**		**0.0**
HUEH				*e*S	**Sn**	**03 06 53.5**		**+0.1**
HUEH	**Huehuetenango**	**1.48**	**344**	⇓ *e*P	**Pn**	**03 06 34.1**		**0.0**
JAYA	**Jayaque - finc**	**1.61**	**98**	*e*P	**Pn**	**03 06 35.6**		**-0.1**
JAYA				*e*S	**Sn**	**03 06 55.6**		**-0.8**
JAYA				IAML		03 06 58.3		
	comp=Z,6μm,0.2s							
JAYA	**Jayaque - finc**	**1.61**	**98**	*e*P	**Pn**	**03 06 35.6**		**-0.1**
JAYA				*e*S	**Sn**	**03 06 55.6**		**-0.8**
JAYA				IAML		03 06 58.3		
	comp=Z,6μm,0.2s							
CEDA	**San Andres**	**1.64**	**93**	*e*P	**Pn**	**03 06 36.6**		**+0.4**
CEDA				*e*S	**Sn**	**03 06 56.9**		**-0.3**
CEDA				IAML		03 07 06.1		
	comp=Z,4μm,0.7s							
CEDA	**San Andres**	**1.64**	**93**	*e*P	**Pn**	**03 06 36.6**		**+0.4**
CEDA				*e*S	**Sn**	**03 06 56.9**		**-0.3**
CEDA				IAML		03 07 06.1		
	comp=Z,4μm,0.7s							
MTO3	**Montecristo**	**1.75**	**73**	*e*P	**Pn**	**03 06 37.2**		**-0.5**
MTO3				*e*S	**Sn**	**03 06 59.5**		**-0.5**
MTO3				*e*S	**Sb**	**03 06 59.7**		**-1.8**
MTO3	**Montecristo**	**1.75**	**73**	*e*P	**Pn**	**03 06 37.2**		**-0.5**
MTO3				*e*S	**Sn**	**03 06 59.5**		**-0.5**
MTO3				*e*S	**Sb**	**03 06 59.7**		**-1.8**
MTO3	**Montecristo**	**1.75**	**73**	⇓ *e*P	**Pn**	**03 06 37.2**		**-0.5**
UEES	**Universidad Ev**	**1.80**	**95**	*e*P	**Pn**	**03 06 38.6**		**+0.2**
UEES	**Universidad Ev**	**1.80**	**95**	*e*P	**Pn**	**03 06 38.6**		**+0.2**
MRL	**Marmol**	**1.80**	**49**	*e*P	**Pn**	**03 06 38.9**		**+0.4**
SNET	**Serv Nac Est T**	**1.81**	**96**	*e*P	**Pn**	**03 06 38.6**		**+0.1**
SNET	**Serv Nac Est T**	**1.81**	**96**	*e*P	**Pn**	**03 06 38.6**		**+0.1**
SNET	**Serv Nac Est T**	**1.81**	**96**	*e*P	**Pn**	**03 06 38.6**		**+0.1**
ESQI	**Esquipulas**	**1.82**	**68**	*e*P	**Pn**	**03 06 38.8**		**+0.1**
ESQI				*e*S	**Sn**	**03 07 01.8**		**+0.3**
LFRS	**El Faro**	**1.98**	**97**	*e*P	**Pn**	**03 06 41.2**		**+0.3**
LFRS	**El Faro**	**1.98**	**97**	*e*P	**Pn**	**03 06 41.2**		**+0.3**
LBRS	**Las Brisas**	**1.99**	**94**	*e*P	**Pn**	**03 06 41.1**		**+0.1**
LBRS	**Las Brisas**	**1.99**	**94**	*e*P	**Pn**	**03 06 41.1**		**+0.1**
PAVA	**Las Pavas**	**2.09**	**94**	*e*P	**Pn**	**03 06 42.4**		**-0.1**
PAVA	**Las Pavas**	**2.09**	**94**	*e*P	**Pn**	**03 06 42.4**		**-0.1**

P5NO	**Presa 5 de nov**	**2.26**	**87**	*e*P		**Pn**	**03 06 44.0**	**-0.7**	
SCLA	**Alcaldia de Sa**	**2.30**	**94**	*e*P		**Pn**	**03 06 45.1**	**0.0**	
SCLA				*e*S		**Sn**	**03 07 13.8**	**+0.4**	
SCLA	**Alcaldia de Sa**	**2.30**	**94**	*e*P		**Pn**	**03 06 45.1**	**0.0**	
SCLA				*e*S		**Sn**	**03 07 13.8**	**+0.4**	
COEB	**Comit de Eme**	**2.51**	**99**	*e*P		**Pn**	**03 06 48.5**	**+0.3**	
COEB				*e*S		**Sn**	**03 07 19.7**	**+1.0**	
COEB	**Comit de Eme**	**2.51**	**99**	*e*P		**Pn**	**03 06 48.5**	**+0.3**	
COEB				*e*S		**Sn**	**03 07 19.7**	**+1.0**	
PACA	**Pacayal**	**2.71**	**98**	⇓ *e*P		**Pn**	**03 06 51.6**	**+0.6**	
PETF	**Flores**	**3.23**	**21**	*e*P		**Pn**	**03 06 56.9**	**-1.0**	
PETF	**Flores**	**3.23**	**21**	*e*P		**Pn**	**03 06 56.9**	**-1.0**	
CSGN	**Cosiguina Volc**	**3.55**	**104**	⇓ *e*P		**Pn**	**03 07 02.2**	**-0.2**	
CRIN	**San Cristobal**	**4.10**	**106**	⇓ *e*P		**Pn**	**03 07 10.3**	**+0.3**	
TELN	**Telica**	**4.33**	**107**	⇓ *e*P		**Pn**	**03 07 12.9**	**-0.3**	
CNGN	**Cerro Negro**	**4.49**	**107**	*e*P		**Pn**	**03 07 14.8**	**-0.5**	
MOMN	**Momotombo**	**4.66**	**108**	⇓ *e*P		**Pn**	**03 07 17.3**	**-0.5**	
RCON	**San Juan de Ri**	**4.81**	**94**	*e*P		**Pn**	**03 07 19.8**	**+0.1**	
APYN	**Apoyeque**	**4.90**	**109**	*e*P		**Pn**	**03 07 20.3**	**-0.6**	
MATN	**Matagalpa**	**5.11**	**100**	⇓ *e*P		**Pn**	**03 07 23.7**	**-0.2**	
BOAB	**BOACO BROADBAN**	**5.47**	**105**	⇓ *e*P		**Pn**	**03 07 28.2**	**-0.5**	
ACON	**Acoyapa**	**6.07**	**108**	*e*P		**Pn**	**03 07 36.7**	**-0.4**	

*NEIC **26** 03:12:00.3±1.3, 4°.8S±0°.1×148°.90E±0°.08, h10km±2km, mb4.3/8, Error ellipse: s-maj=24.6km s-min=8.7km az=207.0*
*IDC **26** 03:12:00.5±1.8, 5°.04S×148°.92E, h0km, mb4.3/3, mbtmp4.3/4, ML3.6/1, MS3.4/7, Error ellipse: s-maj=64.8km s-min=23.0km az=153.0*

ISC 26 03:12:00.0±0.8, 4°.8S±0°.1×148°.81E±0°.07, h10km, n24, σ0s82/19, mb4.2/4, MS3.4/5, Bismarck Sea

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.10**	**332**		P*n*	P*n*	**03 12 50.0**	**+0.9**
KRVT	**Keravat (AS076**	**3.24**	**81**		P*n*	P*n*	**03 12 52.2**	**+1.1**
	6.4nm,0.3s,baz=259,slow=5.2,SNR=1.3							
KRVT					S*n*	**Sn**	**03 13 31.0**	**+1.2**
	5.8nm,0.3s,baz=88,slow=23,SNR=1.4							
	28nm,0.4s							
RABL	**Rabaul**	**3.40**	**80**			**Pn**	**03 12 52.8**	**-0.4**
HNR	**Honiara**	**11.96**	**113**		LR	LR	03 18 48.7	
	comp=Z,130nm,21.8s,baz=346,slow=35							
GUMO	**Guam**	**18.70**	**348**		LR	LR	03 23 57.9	
	comp=Z,34nm,18.0s,baz=167,slow=38							
WB0	**Warramunga Arr**	**20.45**	**222**		P	**P**	**03 16 37.0**	**-1.0**
WB0					IAmb	IAmb	03 16 46.8	
	comp=Z,18nm,1.2s							
WB2	**Warramunga Arr**	**20.60**	**222**		P	**P**	**03 16 39.9**	**+0.3**
WB2					IAmb	IAmb	03 16 41.4	
	comp=Z,20nm,0.9s							
WRA	**Warramunga Arr**	**20.61**	**222**		P	**P**	**03 16 40.6**	**+1.0**
	comp=Z,12nm,0.8s,baz=49,slow=11,SNR=49							
	comp=Z,12nm,0.8s							
WRA	**Warramunga Arr**	**20.61**	**222**		P	**P**	**03 16 39.2**	**-0.4**
AS31	**Alice Springs**	**23.62**	**216**		P	**P**	**03 17 11.7**	**+0.1**
ASAR	**Alice Springs**	**23.62**	**216**		P	**P**	**03 17 12.8**	**+1.2**
	comp=Z,3.6nm,0.7s,baz=53,slow=8.6,SNR=38							
ASAR					LR	LR	03 27 35.1	
	comp=Z,108nm,19.4s,baz=94,slow=40							
	comp=Z,3.6nm,0.7s							
ASAR	**Alice Springs**	**23.62**	**216**		P	**P**	**03 17 12.2**	**+0.6**
DZM	**Mont Dzumac**	**24.21**	**137**		LR	LR	03 25 30.9	
	comp=Z,104nm,19.3s,baz=282,slow=34							
BATI	**Baumata**	**25.49**	**256**		LR	LR	03 31 07.6	
	comp=Z,162nm,18.5s,baz=112,slow=45							
FITZ	**Fitzroy Crossi**	**26.22**	**238**		P	**P**	**03 17 35.5**	**+0.1**
	comp=Z,7.0nm,0.8s,baz=52,slow=11,SNR=7.1							
	comp=Z,7.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**26.22**	**238**		P	**P**	**03 17 35.5**	**+0.1**
JHJ	**Hachijo jima 2**	**38.68**	**348**		LR	LR	03 32 45.5	
	comp=Z,50nm,18.9s,baz=133,slow=32							
MK31	**Makanchi Array**	**77.75**	**320**		P	**P**	**03 23 57.0**	**-0.4**
MK31					IAmb	IAmb	03 24 01.0	
	comp=Z,1.9nm,1.1s							
MKAR	**Makanchi Array**	**77.75**	**320**		P	**P**	**03 23 57.5**	**+0.1**
IL31		**83.69**	**23**		P	**P**	**03 24 27.9**	**-0.9**
IL31					IAmb	IAmb	03 24 54.5	
	comp=Z,1.6nm,0.8s							
ILAR	**Eielson Array**	**83.69**	**23**		P	**P**	**03 24 27.9**	**-0.9**
ISA	**Isabella, Lake**	**94.98**	**55**		P	**P**	**03 25 22.3**	**-1.1**
PFO	**Pinyon Flats O**	**96.57**	**57**		LR	LR	04 02 19.3	
	comp=Z,24nm,18.5s,baz=198,slow=31							
TORD	**Torodi Ar. Bea**	**146.51**	**287**		PKPbc	**PKiKP**	**03 31 45.8**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=69,slow=3.8,SNR=1.6							

*AEIC **26** 03:15:17.5±2.0, 51°.8N±0°.1×177°.04E±0°.05, h7km±5km, Error ellipse: s-maj=15.7km s-min=3.9km az=184.0*
*IDC **26** 03:15:20.0±1.0, 52°.16N×177°.40E, h0km, mb3.5/7, mbtmp3.5/8, ML4.0/1, MS3.2/10, Error ellipse: s-maj=35.5km s-min=17.7km az=173.0*
*NEIC **26** 03:15:21.6±2.2, 52°.10N±0°.08×177°.35E±0°.06, h14km±7km, mb3.9/11, ML3.5/18(AEIC), Error ellipse: s-maj=12.9km s-min=2.3km az=201.0*

ISC 26 03:15:21.2±0.8, 52°.1N±0°.1×177°.30E±0°.05, h10km, n54, σ1s13/42, mb3.7/11, MS3.4/8, Rat Islands

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.76**	**98**			**Pg**	**03 15 35.5**	**-0.5**
LSSA	**Little Sitkin**	**0.77**	**100**			**Pg**	**03 15 35.7**	**-0.3**
LSPA	**Little Sitkin**	**0.80**	**99**			**Pg**	**03 15 36.3**	**-0.3**
LSPA						**Sb**	**03 15 48.8**	**+0.7**
LSSE	**Little Sitkin**	**0.80**	**101**			**Pg**	**03 15 36.4**	**-0.3**
CESW	**Semis' Southwe**	**1.42**	**97**			**Pn**	**03 15 45.9**	**-1.1**
AMKA	**Amchitka**	**1.44**	**119**			**Pn**	**03 15 46.7**	**-0.5**
AMKA						**Sn**	**03 16 05.6**	**-0.6**
CEPE	**Semis' Perret**	**1.46**	**94**			**Pn**	**03 15 46.6**	**-1.0**
CERAA	**Semis' Rag'd T**	**1.49**	**96**			**Pn**	**03 15 47.2**	**-0.8**
SHEM	**Shemya Is, Ala**	**2.06**	**289**		Pn	**Pn**	**03 15 55.9**	**0.0**
	44nm,0.3s,baz=127,slow=2.7,SNR=46							
SHEM					LR	LR	03 16 18.3	
	comp=Z,79nm,18.8s,baz=44,slow=28							
SHEM					Sn	**Sb**	**03 16 24.5**	**+0.2**
	61nm,0.3s,baz=262,slow=24,SNR=11							
	161nm,0.5s							
SMY	**Shemya**	**2.06**	**289**			**Pn**	**03 15 54.1**	**-1.7**
SMY						**Sn**	**03 16 21.6**	**+0.1**
TASE	**Tanaga Southea**	**2.90**	**93**			**Pn**	**03 16 08.4**	**+1.0**
TAPA	**Tanaga Point A**	**3.04**	**93**			**Pn**	**03 16 10.0**	**+0.6**
KIMD	**Kanaga Island**	**3.40**	**93**			**Pn**	**03 16 14.1**	**-0.2**
KIKV	**Kanaga Island**	**3.43**	**91**			**Pn**	**03 16 16.3**	**+1.6**
KIWB	**Kanaga Island**	**3.44**	**92**			**Pn**	**03 16 15.2**	**+0.3**
ADK	**Adak**	**3.73**	**91**			**Pn**	**03 16 20.5**	**+1.8**
GSCK	**Great Sitkin C**	**4.04**	**89**			**Pn**	**03 16 25.3**	**+2.3**
GSTR	**Great Sitkin T**	**4.10**	**87**		Pn	**Pn**	**03 16 24.4**	**+0.5**
NIKH	**Nikolski High**	**8.49**	**79**		Pn	**Pn**	**03 17 24.9**	**+0.7**
PETK	**Petropavlovsk-**	**11.96**	**283**		LR	LR	03 22 46.0	
	comp=Z,37nm,20.8s,baz=102,slow=37							
P18K	**Big Mountain,**	**17.01**	**54**		Pn	**Pn**	**03 19 18.2**	**-0.8**
O18K	**Koktuh Hills**	**17.14**	**52**		Pn	**Pn**	**03 19 20.0**	**-0.5**
O18K					IAmb	IAmb	03 19 29.8	
	comp=Z,9.8nm,0.9s							
N19K	**Bonanza Creek**	**17.75**	**50**		Pn	**Pn**	**03 19 25.5**	**-2.7**
N19K					IAmb	IAmb	03 19 37.9	
	comp=Z,5.6nm,0.8s							
TTA	**Tatalina**	**17.83**	**42**		Pn	**Pn**	**03 19 26.3**	**-2.9**
M20K	**Styx River**	**18.69**	**47**		P	**Pn**	**03 19 40.2**	**+0.5**
M20K					IAmb	IAmb	03 19 45.0	
	comp=Z,8.9nm,1.1s							
SPU	**Mount Spurr**	**18.99**	**49**		P	**Pn**	**03 19 44.7**	**+1.4**
IMAR	**Indian Mountai**	**20.12**	**35**		P	**P**	**03 19 55.7**	**+0.9**
NEA2	**Nenana**	**21.32**	**41**		IAmb	IAmb	03 20 17.1	
	comp=Z,7.1nm,1.1s							
MDM	**Murphy Dome**	**21.78**	**40**		P	**P**	**03 20 13.1**	**+0.2**
MDM					IAmb	IAmb	03 20 17.9	
	comp=Z,6.5nm,1.2s							
CCB	**Clear Creek Bu**	**21.85**	**41**		IAmb	IAmb	03 20 31.0	
	comp=Z,8.8nm,1.3s							
H24K	**Noodor Dome**	**22.23**	**38**		P	**P**	**03 20 18.7**	**+1.0**
ILAR	**Eielson Array**	**22.27**	**41**		P	**P**	**03 20 17.7**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=258,slow=10,SNR=13							
ILAR					LR	LR	03 29 12.8	
	comp=Z,43nm,19.8s,baz=241,slow=38							
	comp=Z,1.0nm,0.7s							
J26L	**Joseph Creek**	**23.57**	**43**		P	**P**	**03 20 30.5**	**-1.2**
J26L					IAmb	IAmb	03 20 31.0	
	comp=Z,2.5nm,0.8s							
BCAR	**Beaver Creek A**	**24.09**	**47**		P	**P**	**03 20 37.9**	**+1.4**
EGAK	**Eagle**	**24.64**	**43**		P	**P**	**03 20 41.5**	**0.0**
INK	**Inuvik**	**28.30**	**36**		LR	LR	03 32 55.9	

	comp=Z,46nm,18.6s,baz=106,slow=37								
DLBC	**Dease Lake**	**30.00**	**57**		LR	LR	03 33 40.9		
	comp=Z,92nm,18.0s,baz=254,slow=37								
BBB	**Bella Bella**	**32.84**	**68**		LR	LR	03 35 37.7		
	comp=Z,20nm,18.1s,baz=216,slow=37								
H11N2	**WAKE ISLAND Hy**	**33.30**	**198**		T	T	03 57 11.4		
	baz=11,slow=76,SNR=116								
H11N3	**WAKE ISLAND Hy**	**33.31**	**198**		T	T	03 57 12.3		
	baz=11,slow=76,SNR=112								
H11N1	**WAKE ISLAND Hy**	**33.32**	**198**		T	T	03 57 12.9		
	baz=11,slow=76,SNR=218								
H11S1	**WAKE ISLAND Hy**	**34.53**	**198**		T	T	03 58 44.0		
	baz=11,slow=76,SNR=60								
H11S3	**WAKE ISLAND Hy**	**34.55**	**198**		T	T	03 58 42.2		
	baz=11,slow=76,SNR=40								
H11S2	**WAKE ISLAND Hy**	**34.55**	**198**		T	T	03 58 42.8		
	baz=11,slow=76,SNR=22								
SONM	**Songino Array**	**44.15**	**294**		P	**P**	**03 23 30.2**		**+0.4**
	comp=Z,0.3nm,0.5s,baz=50,slow=13,SNR=2.3								
	comp=Z,0.3nm,0.5s								
NVAR	**Mina Array Bea**	**45.85**	**81**		P	**P**	**03 23 42.9**		**-0.7**
	comp=Z,0.3nm,0.6s,baz=297,slow=8.6,SNR=3.7								
	comp=Z,0.3nm,0.6s								
PDAR	**Pinedale Array**	**48.38**	**71**		P	**P**	**03 24 02.7**		**-0.6**
	comp=Z,0.4nm,0.7s,baz=290,slow=4.3,SNR=3.9								
	comp=Z,0.4nm,0.7s								
FRB	**Frobisher Bay**	**53.66**	**30**		LR	LR	03 49 57.6		
	comp=Z,34nm,19.3s,baz=137,slow=39								
BVAR	**Borovoye Array**	**58.75**	**317**		LR	LR	03 52 47.5		
	comp=Z,29nm,18.2s,baz=67,slow=38								
TXAR	**Lajitas Array**	**60.92**	**79**		P	**P**	**03 25 34.0**		**-0.3**
	comp=Z,0.3nm,0.8s,baz=300,slow=3.3,SNR=4.0								
	comp=Z,0.3nm,0.8s								
SADO	**Sadowa**	**63.30**	**51**		LR	LR	03 53 57.0		
	comp=Z,36nm,18.2s,baz=2.5,slow=37								
AKTO	**Aktyubinsk**	**65.67**	**322**		LR	LR	03 57 01.1		
	comp=Z,28nm,18.1s,baz=78,slow=38								
WRA	**Warramunga Arr**	**80.91**	**220**		P	**P**	**03 27 35.9**		**+0.4**
	comp=Z,0.5nm,0.6s,baz=32,slow=6.4,SNR=5.0								
	comp=Z,0.5nm,0.6s								
ASAR	**Alice Springs**	**84.43**	**219**		P	**P**	**03 27 55.8**		**+2.0**
	comp=Z,0.3nm,0.6s,baz=20,slow=5.8,SNR=4.7								
	comp=Z,0.3nm,0.6s								

*IDC **26** 03:24:57.0±0.8, 27°.20N×142°.98E, h0km, mb3.9/9, mbtmp3.8/9, MS3.1/3, Error ellipse: s-maj=21.8km s-min=14.7km az=160.0*
*NEIC **26** 03:24:59.3±1.9, 27°.2N±0°.1×143°.02E±0°.06, h15km±5km, mb4.4/17, Error ellipse: s-maj=16.9km s-min=7.9km az=174.0*

ISC 26 03:24:58.2±0.7, 27°.2N±0°.1×143°.06E±0°.08, h10km, n36, σ0s87/35, mb4.2/18, MS3.1/3, Bonin Islands region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.79**	**263**		P*n*	**Pb**	**03 25 14.2**	**+0.2**
	445nm,0.3s,baz=341,slow=7.6,SNR=84							
JCJ					S*n*	**Sn**	**03 25 26.7**	**-0.5**
	322nm,0.3s,baz=279,slow=23,SNR=8.0							
JCJ	**Chichijima**	**0.79**	**263**			**Pg**	**03 25 13.7**	**+0.3**
JHJ2	**Mitsune**	**6.53**	**335**		P*n*	**Pn**	**03 26 34.7**	**+0.4**
ERM	**Erimo**	**14.78**	**0**		P*n*	**Pn**	**03 28 26.8**	**-0.5**
HIA	**Hailar**	**28.44**	**327**		P	**P**	**03 30 51.9**	**-1.3**
SONM	**Songino Array**	**35.18**	**316**		P	**P**	**03 31 54.3**	**+1.8**
	0.3nm,0.3s,baz=108,slow=7.7,SNR=2.9							
	0.3nm,0.3s							
CRAI	**Chiangrai**	**39.55**	**269**		P	**P**	**03 32 29.3**	**-0.4**
WRA	**Warramunga Arr**	**47.62**	**191**		P

BTKR	**Batakoyurt**	**1.22**	**275**	*e*Pg	**Pn**	**03 35 49.9**	**+1.0**
BTKR				*e*Sg	**Sn**	**03 36 06.7**	**+1.2**
ARNR	**Ardon**	**1.41**	**267**	*e*Pg	**Pg**	**03 35 54.7**	**+1.9**
ARNR				*e*Sg	**Sg**	**03 36 12.5**	**+1.5**
LACR	**Lac**	**1.47**	**253**	*e*Pg	**Pb**	**03 35 52.3**	**-1.0**
LACR				*e*Sg	**Sb**	**03 36 11.2**	**-0.9**
STDR	**Stavd-Durt**	**1.56**	**274**	*e*Pg	**Pg**	**03 35 56.5**	**+0.7**
STDR				*e*Sg	**Sg**	**03 36 16.9**	**+0.8**
KORR	**Kora**	**1.57**	**264**	*e*Pg	**Pg**	**03 35 55.3**	**-0.7**
KORR				*e*Sg	**Sg**	**03 36 16.2**	**-0.2**
LSNR	**Lesken**	**1.74**	**271**	*e*Pg	**Pg**	**03 35 57.5**	**-1.6**
LSNR				*e*Sg	**Sg**	**03 36 20.6**	**-1.0**
DIGR	**Digorskoe uzhe**	**1.96**	**260**	*e*Pg	**Pb**	**03 36 01.0**	**-0.7**
DIGR				*e*Sg	**Sb**	**03 36 25.7**	**-0.6**

*MOS **26** 03:36:01.9±0.0, 43°.33N×46°.14E, h7km, MPVA3.2*
*NORS **26** 03:36:01.6±0.0, 43°.34N×46°.14E, h6km, MPVA3.3*
*DRS **26** 03:36:02.8±0.0, 43°.53N×46°.04E, h18km*
ISC 26 03:36:02.8±1.4, **43°.32N**±0°.06×**46°.15E**±0°.03, **h8**km±12km, **n18**, σ1§15/36, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.28**	**246**	*e*Pg	**Pb**	**03 36 09.3**	**-0.9**
GROC				*e*Sg	**Sb**	**03 36 14.2**	**-0.9**
DVE	**Vedeno**	**0.36**	**183**	*e*Pg	**Pb**	**03 36 11.3**	**-0.2**
DVE				*e*Sg	**Sb**	**03 36 17.7**	**+0.3**
DLMR	**Dylym**	**0.43**	**125**	*e*Pg	**Pn**	**03 36 13.6**	**-1.8**
DLMR				*e*Sg	**Sb**	**03 36 21.6**	**+2.3**
DBC	**Dubki**	**0.58**	**121**	*e*Pg	**Pb**	**03 36 15.5**	**+0.3**
DBC				*e*Sg	**Sn**	**03 36 25.7**	**-1.5**
KRNR	**Karanay**	**0.74**	**131**	*e*Pg	**Pn**	**03 36 18.6**	**-1.1**
KRNR				*e*Sg	**Sn**	**03 36 30.6**	**-0.6**
UNCR	**Uncukul**	**0.77**	**142**	*e*Pg	**Pn**	**03 36 19.4**	**-0.6**
UNCR				*e*Sg	**Sn**	**03 36 31.7**	**0.0**
BUJR	**Buynaksk**	**0.86**	**125**	*e*Pg	**Pn**	**03 36 20.7**	**-0.5**
BUJR				*e*Sg	**Sn**	**03 36 34.1**	**+0.2**
XNZR	**Khunzakh**	**0.88**	**152**	*e*Pg	**Pn**	**03 36 21.2**	**-0.4**
XNZR				*e*Sg	**Sn**	**03 36 35.1**	**+0.4**
ARKR	**Arakani**	**0.94**	**139**	*e*Pg	**Pn**	**03 36 22.4**	**-0.1**
ARKR				*e*Sg	**Sn**	**03 36 37.3**	**+1.1**
KANR	**Karaman**	**0.98**	**97**	*e*Pg	**Pb**	**03 36 21.5**	**-0.6**
KANR				*e*Sg	**Sb**	**03 36 35.6**	**+0.4**
GNBR	**Gunib**	**1.10**	**147**	*e*Pg	**Pn**	**03 36 25.1**	**+0.4**
GNBR				*e*Sg	**Sn**	**03 36 41.8**	**+1.7**
BTKR	**Batakoyurt**	**1.18**	**273**	*e*Pg	**Pn**	**03 36 25.9**	**+0.3**
BTKR				*e*Sg	**Sn**	**03 36 43.8**	**+1.9**
ARNR	**Ardon**	**1.37**	**265**	*e*Pg	**Pg**	**03 36 28.4**	**-0.7**
ARNR				*e*Sg	**Sg**	**03 36 49.2**	**+2.3**
LACR	**Lac**	**1.45**	**251**	*e*Pg	**Pg**	**03 36 29.6**	**-0.9**
LACR				*e*Sg	**Sg**	**03 36 49.1**	**-0.2**
STDR	**Stavd-Durt**	**1.52**	**273**	*e*Pg	**Pg**	**03 36 31.4**	**-0.7**
STDR				*e*Sg	**Sg**	**03 36 54.2**	**+2.3**
KORR	**Kora**	**1.54**	**262**	*e*Pg	**Pg**	**03 36 31.3**	**-1.1**
KORR				*e*Sg	**Sg**	**03 36 53.8**	**+1.4**
LSNR	**Lesken**	**1.70**	**269**	*e*Pg	**Pg**	**03 36 35.3**	**-0.1**
LSNR				*e*Sg	**Sg**	**03 36 58.6**	**+1.2**
DIGR	**Digorskoe uzhe**	**1.93**	**258**	*e*Pg	**Pb**	**03 36 37.1**	**-1.3**
DIGR				*e*Sg	**Sb**	**03 37 02.3**	**-0.4**

DJA 26 03:45:45.8±0.4, **0°S**±4°×**12°3E**±°, **h138**km±5km, **M4.0**/13, **mb4.2**/2, **mB5.1**/2, **MLv3.9**/13, **Mw(mB)4.5**/2, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.83**	**5**	P	Pn	03 46 09.1	+1.1
GTOI				S	Sn	03 46 27.2	+2.2
LUWI	**Luwuk**	**0.85**	**191**	P	Pn	03 46 09.0	+0.8
LUWI				S	Sn	03 46 26.3	+1.1
MRSI	**Marisa**	**1.21**	**304**	P	Pn	03 46 10.8	-0.6
KMSI	**Cibinong**	**1.29**	**54**	P	Pn	03 46 12.9	+0.6
APSI	**Ampana**	**1.47**	**241**	P	Pn	03 46 14.9	+0.8
MPSI	**Mapaga**	**3.09**	**280**	P	Pn	03 46 34.4	+0.6
SANI	**Sanana**	**3.56**	**121**	P	Pn	03 46 39.5	-0.5
TTSI	**Tana Toraja**	**4.21**	**228**	P	Pn	03 46 48.3	-0.2
LBMI	**Labuha**	**4.58**	**95**	P	Pn	03 46 53.4	-0.1
NLAI	**Namlea**	**5.14**	**126**	P	Pn	03 47 01.0	+0.1
	0.2nm3µm19nm,0.5s						

*NOU **26** 04:05:59.2, 22°.69S×179°.57E, h545km, mb4.6/13, South of Fiji Islands*
*IDC **26** 04:06:00.8±1.4, 22°.52S×179°.24E, h578km±17km, mb3.1/7, mbtmp4.1/9, Error ellipse: s-maj=22.8km s-min=13.4km az=162.0*
ISC 26 04:06:00.9±0.6, **22°.6S**±0°.1×**179°.4E**±0°.1, **h591**km, **n47**, σ1§50/47, **mb3.6**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.95**	**345**	P	**P**	**04 07 30.6**	**-2.5**
	7.9nm,0.5s,baz=204,slow=10.0,SNR=18						
MSVF	**Nonsavu**	**4.95**	**345**	P	**P**	**04 07 30.8**	**-2.3**
MARNC	**Mare, Loyalty**	**10.57**	**274**	P	**P**	**04 08 24.6**	**-0.7**
	1.5nm,0.8s						
NIUE	**Niue**	**10.59**	**73**	P	**P**	**04 08 22.9**	**-2.6**
HAZ	**Te Kaha**	**15.22**	**185**	P	**P**	**04 09 07.7**	**-3.6**
URZ	**Urewera**	**15.78**	**187**	P	**P**	**04 09 12.8**	**-3.7**
	8.5nm,0.3s,baz=280,slow=2.6,SNR=16						
URZ	**Urewera**	**15.78**	**187**	P	**P**	**04 09 14.9**	**-1.6**
BKZ	**Black Stump Fm**	**16.75**	**188**	P	**P**	**04 09 24.7**	**-0.7**
WAZ	**Wanganui**	**17.56**	**191**	P	**P**	**04 09 31.8**	**-1.0**
TSZ	**Takapari Road**	**17.70**	**189**	P	**P**	**04 09 32.3**	**-1.7**
BFZ	**Birch Farm**	**18.27**	**188**	P	**P**	**04 09 37.4**	**-1.9**
BFZ	**Birch Farm**	**18.27**	**188**	P	**P**	**04 09 38.2**	**-1.0**
MRZ	**Mangatainoka R**	**18.34**	**189**	P	**P**	**04 09 37.2**	**-2.6**
OGWZ	**Otaki Gorge**	**18.56**	**190**	P	**P**	**04 09 40.3**	**-1.5**
KIW	**Kapiti Island**	**18.64**	**191**	P	**P**	**04 09 41.4**	**-1.2**
DUWZ	**D'Urville Isla**	**18.77**	**193**	P	**P**	**04 09 42.9**	**-0.9**
PAWZ	**Paruwai Farm**	**19.07**	**189**	P	**P**	**04 09 46.0**	**-0.5**
TCW	**Tory Channel**	**19.10**	**192**	P	**P**	**04 09 46.1**	**-0.6**
SNZO	**South Karori**	**19.12**	**191**	P	**P**	**04 09 46.2**	**-0.6**
QRZ	**Quartz Range**	**19.12**	**196**	P	**P**	**04 09 47.4**	**+0.5**
QRZ	**Quartz Range**	**19.12**	**196**	P	**P**	**04 09 47.3**	**+0.4**
MSWZ	**Moikau Station**	**19.13**	**189**	P	**P**	**04 09 46.1**	**-0.9**
TKNZ	**Takaka Hill**	**19.21**	**195**	P	**P**	**04 09 47.9**	**+0.2**
PLWZ	**Palliser**	**19.28**	**189**	P	**P**	**04 09 47.5**	**-0.9**
NNZ	**Nelson**	**19.29**	**194**	P	**P**	**04 09 47.2**	**-1.3**
TUWZ	**Tuamarina**	**19.37**	**192**	P	**P**	**04 09 49.9**	**+0.7**
TUWZ				S	S	04 12 01.3	-53
RAR	**Rarotonga**	**19.40**	**90**	P	**P**	**04 09 52.0**	**+2.3**
	11nm,0.4s,baz=318,slow=12,SNR=10						
THZ	**Tophouse**	**19.91**	**194**	P	**P**	**04 09 53.9**	**-0.2**
DSZ	**Denniston Nort**	**20.17**	**197**	P	**P**	**04 09 55.4**	**-1.1**
KHZ	**Kahutara**	**20.41**	**192**	P	**P**	**04 09 56.4**	**-2.0**
KHZ	**Kahutara**	**20.41**	**192**	P	**P**	**04 09 57.7**	**-0.8**
RPZ	**Rata Peaks**	**22.21**	**196**	P	**P**	**04 10 13.8**	**-0.9**
	18nm,1.0s,baz=39,slow=6.5,SNR=5.7 18nm,1.0s						
RPZ	**Rata Peaks**	**22.21**	**196**	P	**P**	**04 10 14.6**	**-0.1**
STKA	**Stephens Creek**	**34.71**	**246**	P	**P**	**04 12 03.9**	**+0.9**
	0.8nm,0.3s,baz=90,slow=7.1,SNR=4.9 0.8nm,0.3s						
ASAR	**Alice Springs**	**41.70**	**259**	P	**P**	**04 12 59.6**	**0.0**
	0.9nm,0.4s,baz=93,slow=8.0,SNR=14						
ASAR				PcP	**PcP**	**04 14 42.8**	**+0.8**
	1.0nm,0.8s,baz=115,slow=5.2,SNR=5.5 0.9nm,0.4s						
WRA	**Warramunga Arr**	**41.94**	**265**	P	**P**	**04 13 00.8**	**-0.7**
	0.6nm,0.3s,baz=96,slow=8.4,SNR=82 0.6nm,0.3s						
NVAR	**Mina Array Bea**	**84.19**	**44**	P	**P**	**04 17 33.2**	**+1.9**
	0.1nm,0.4s,baz=221,slow=7.9,SNR=2.3 0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**88.51**	**291**	P	**P**	**04 17 53.9**	**+2.0**
	1.0nm,0.3s,baz=115,slow=2.6,SNR=6.1 1.0nm,0.3s						
TXAR	**Lajitas Array**	**90.21**	**58**	P	**P**	**04 18 01.7**	**+2.0**
	0.4nm,0.8s,baz=223,slow=5.1,SNR=4.3 0.4nm,0.8s						
ARCES	**ARCESS Array B**	**130.45**	**348**	PKP	**PKiKP**	**04 24 05.3**	**-0.1**
	6.6nm,1.1s,baz=352,slow=7.3,SNR=3.9						
FINES	**FINESS Array B**	**136.99**	**342**	PKP	**PKPdf**	**04 24 17.0**	**+0.2**
	0.6nm,0.7s,baz=40,slow=2.4,SNR=4.6						
AKASG	**Malin Array Be**	**143.52**	**328**	PKP	PKPab	04 24 27.4	-0.3
	1.2nm,0.3s,baz=43,slow=4.6,SNR=12						
BRTR	**Keskin Array B**	**146.29**	**309**	PKPbc	**PKPbc**	**04 24 35.6**	**-1.0**
	0.7nm,0.6s,baz=158,slow=4.0,SNR=4.0						
EKA	**Eskdalemuir Ar**	**147.20**	**3**	PKPbc	**PKPbc**	**04 24 38.3**	**0.0**
	0.6nm,0.4s,baz=351,slow=2.4,SNR=8.1						
CLL	**Collm**	**149.40**	**343**	*i* PKPbc	**PKiKP**	**04 24 44.6**	**0.0**
	comp=Z,9.0nm,0.9s						
GERES	**GERESS Array B**	**151.39**	**340**	PKPbc	**PKiKP**	**04 24 49.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=29,slow=3.0,SNR=6.4						
TORD	**Torodi Ar. Bea**	**170.40**	**194**	PKPab	**PKPab**	**04 26 23.9**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=195,slow=4.8,SNR=2.0						

IDC 26 04:12:51.2±27.0, **22°.02S**×**172°.05W**, **h0**km, **mb4.0**/4, **mbtmp4.0**/4, **Error ellipse: s-maj=503.3km s-min=152.5km az=77.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.88**	**265**	P	P	04 20 19.4	+0.7
	3.2nm,0.4s,baz=100,slow=8.3,SNR=6.9 3.2nm,0.4s						
STKA	**Stephens Creek**	**42.21**	**246**	P	P	04 20 44.9	-1.2
	0.9nm,0.4s,baz=100,slow=12,SNR=6.3 0.9nm,0.4s						
ASAR	**Alice Springs**	**49.59**	**257**	P	P	04 21 43.5	-1.1
	0.4nm,0.4s,baz=99,slow=7.1,SNR=5.1 0.4nm,0.4s						
WRA	**Warramunga Arr**	**49.89**	**262**	P	P	04 21 47.6	+0.7
	1.2nm,0.4s,baz=98,slow=8.2,SNR=35 1.2nm,0.4s						

*WEL **26** 04:23:05.3±0.3, 40°.5S×172°.5E±°, h10km±6km, M3.4/24, ML3.7/25, MLv3.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=70.3*
*NOU **26** 04:23:07.8, 40°.19S×174°.80E, h66km, MLv3.9/8, Cook Strait, New Zealand*
ISC 26 04:23:03.7±1.3, **40°.18S**±0°.02×**174°.70E**±0°.02, **h17**km±12km, **n116**, σ1§40/119, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHWZ	**Ohakea**	**0.47**	**93**	P	**Pn**	**04 23 14.4**	**-1.3**
OHWZ				S	**Sb**	**04 23 20.9**	**+0.7**
WAZ	**Wanganui**	**0.48**	**27**	P	**Pn**	**04 23 14.8**	**-1.1**
KIW	**Kapiti Island**	**0.70**	**167**	P	**Pn**	**04 23 18.5**	**-0.4**
KIW				S	**Sb**	**04 23 26.9**	**+0.1**
OGWZ	**Otaki Gorge**	**0.73**	**151**	P	**Pn**	**04 23 19.3**	**0.0**
LREZ	**Lake Rotokare**	**0.76**	**342**	P	**Pn**	**04 23 21.0**	**+1.4**
LREZ				S	**Sn**	**04 23 32.8**	**+2.1**
MRZ	**Mangatainoka R**	**0.82**	**126**	P	**Pn**	**04 23 20.8**	**+0.2**
POWZ	**Post Office Ro**	**0.84**	**105**	P	**Pn**	**04 23 20.9**	**0.0**
DUWZ	**D'Urville Isla**	**0.86**	**224**	P	**Pn**	**04 23 21.8**	**+0.7**
PREZ	**Palmer Road**	**0.94**	**333**	P	**Pn**	**04 23 24.3**	**+2.1**
HOWZ	**Holdsworth Sta**	**0.95**	**139**	P	**Pn**	**04 23 23.2**	**+0.9**
HOWZ				S	**Sn**	**04 23 35.2**	**-0.3**
CAW	**Cannon Point**	**0.96**	**163**	P	**Pn**	**04 23 23.6**	**+1.0**
TSZ	**Takapari Road**	**0.97**	**83**	P	**Pn**	**04 23 22.9**	**+0.2**
TSZ				S	**Sb**	**04 23 34.5**	**-0.2**
MTVZ	**Mangateitei**	**0.99**	**37**	P	**Pn**	**04 23 23.0**	**0.0**
NMRZ	**Namu Road**	**1.00**	**320**	P	**Pn**	**04 23 23.2**	**+2.3**
PKOZ	**Pokaka**	**1.02**	**29**	P	**Pg**	**04 23 23.5**	**0.0**
NEZ	**North Egmont**	**1.02**	**333**	P	**Pn**	**04 23 25.6**	**+2.2**
KHEZ	**Kahui Hut**	**1.03**	**329**	P	**Pn**	**04 23 25.9**	**+2.3**
PRWZ	**Pori Road**	**1.04**	**111**	P	**Pg**	**04 23 25.0**	**+1.2**
VRZ	**Vera Road**	**1.06**	**2**	P	**Pg**	**04 23 25.2**	**+1.0**
DREZ	**Durham Road**	**1.06**	**339**	P	**Pg**	**04 23 26.3**	**+2.0**
TCW	**Tory Channel**	**1.08**	**197**	P	**Pg**	**04 23 24.9**	**+0.3**
TIWZ	**Tintock**	**1.08**	**124**	P	**Pg**	**04 23 25.8**	**+1.2**
TRVZ	**Turoa**	**1.10**	**37**	P	**Pg**	**04 23 24.6**	**-0.4**
WNVZ	**Wahianoa**	**1.10**	**39**	P	**Pg**	**04 23 24.6**	**-0.4**
WEL	**Wellington**	**1.10**	**177**	P	**Pg**	**04 23 26.3**	**+1.2**
NBEZ	**Newall Road No**	**1.12**	**325**	P	**Pg**	**04 23 27.0**	**+1.7**
MOVZ	**Moawhango**	**1.12**	**47**	P	**Pg**	**04 23 24.7**	**-0.7**
DRZ	**Dome Shelter**	**1.12**	**37**	P	**Pg**	**04 23 25.2**	**-0.3**
SNZO	**South Karori**	**1.13**	**180**	P	**Pg**	**04 23 26.6**	**+1.1**
DVHZ	**Dannevirke**	**1.13**	**96**	P	**Pg**	**04 23 26.3**	**+0.8**
WHVZ	**Whangaehu Hut**	**1.13**	**38**	P	**Pg**	**04 23 25.0**	**-0.6**
PKEZ	**Pukeiti**	**1.13**	**331**	P	**Pg**	**04 23 27.6**	**+2.0**
FWVZ	**Far West T-bar**	**1.14**	**36**	P	**Pg**	**04 23 25.2**	**-0.6**
MTW	**Mount Morrison**	**1.15**	**148**	P	**Pg**	**04 23 27.2**	**+1.2**
TUVZ	**Tukino**	**1.17**	**39**	P	**Pg**	**04 23 26.1**	**-0.3**
NGZ	**Ngauruhoe**	**1.22**	**35**	P	**Pg**	**04 23 26.7**	**-0.7**
SNVZ	**South Ngauruho**	**1.23**	**36**	P	**Pg**	**04 23 27.0**	**-0.5**
TWVZ	**Taurewa**	**1.25**	**27**	P	**Pg**	**04 23 26.9**	**-0.9**
BHHZ	**Black Hill Sta**	**1.26**	**57**	P	**Pb**	**04 23 26.9**	**-0.1**
OTVZ	**Oturere**	**1.26**	**36**	P	**Pg**	**04 23 27.6**	**-0.5**
NNVZ	**North Ngauruho**	**1.26**	**34**	P	**Pg**	**04 23 27.4**	**-0.7**
WTVZ	**West Tongariro**	**1.27**	**33**	P	**Pg**	**04 23 27.4**	**-0.8**
BFZ	**Birch Farm**	**1.28**	**113**	P	**Pg**	**04 23 29.1**	**+0.6**
BFZ	**Birch Farm**	**1.28**	**113**	P	**Pg**	**04 23 29.6**	**+1.2**
TMWZ	**Te Maipa**	**1.29**	**136**	P	**Pg**	**04 23 29.4**	**+0.7**
MSWZ	**Moikau Station**	**1.30**	**162**	P	**Pg**	**04 23 29.9**	**+1.1**
ETVZ	**East Tongariro**	**1.30**	**37**	P	**Pg**	**04 23 28.2**	**-0.7**
KRVZ	**Karewarewa**	**1.31**	**34**	P	**Pg**	**04 23 28.0**	**-1.0**
TMVZ	**Te Maari**	**1.32**	**36**	P	**Pg**	**04 23 28.3**	**-0.8**
NTVZ	**North Tongarir**	**1.32**	**35**	P	**Pg**	**04 23 28.3**	**-0.9**
PAWZ	**Paruwai Farm**	**1.32**	**156**	P	**Pg**	**04 23 30.1**	**+0.9**
WPHZ	**Waipukurau**	**1.34**	**86**	P	**Pg**	**04 23 30.1**	**+0.5**
CPWZ	**Castlepoint**	**1.35**	**123**	P	**Pg**	**04 23 30.9**	**+1.1**
TUWZ	**Tuamarina**	**1.37**	**205**	P	**Pg**	**04 23 30.0**	**-0.1**
ANWZ	**Angora Road**	**1.38**	**102**	P	**Pg**	**04 23 30.5**	**+0.1**
KRHZ	**Kereru**	**1.39**	**68**	P	**Pg**	**04 23 29.9**	**-0.7**
TRWZ	**Traveller**	**1.43**	**149**	P	**Pg**	**04 23 31.7**	**+0.5**
KATZ	**Kakaramea**	**1.43**	**33**	P	**Pg**	**04 23 30.1**	**-1.2**
NNZ	**Nelson**	**1.44**	**224**	P	**Pg**	**04 23 31.9**	**+0.4**
PLWZ	**Palliser**	**1.45**	**163**	P	**Pg**	**04 23 32.3**	**+0.7**
PRHZ	**Porangahau**	**1.48**	**94**	P	**Pg**	**04 23 32.0**	**-0.3**
RITZ	**Rihia Road**	**1.50**	**37**	P	**Pg**	**04 23 31.8**	**-0.8**
KWHZ	**Kaweka Forest**	**1.53**	**61**	P	**Pg**	**04 23 32.0**	**-1.2**
RATZ	**Rangitukua**	**1.55**	**33**	P	**Pg**	**04 23 32.6**	**-1.0**
TKNZ	**Takaka Hill**	**1.57**	**237**	P	**Pg**	**04 23 34.5**	**+0.4**
CMWZ	**Cape Campbell**	**1.61**	**193**	P	**Pg**	**04 23 35.9**	**+1.2**
BSWZ	**Blackbirch Sta**	**1.65**	**202**	P	**Pg**	**04 23 34.9**	**-0.7**
PXZ	**Paxanui**	**1.66**	**85**	P	**Pb**	**04 23 34.0**	**0.0**
HIZ	**Hauiti**	**1.67**	**4**	P	**Pg**	**04 23 34.6**	**-1.2**
HIZ	**Hauiti**	**1.67**	**4**	P	**Pg**	**04 23 34.8**	**-1.1**
WATZ	**Wairara**	**1.68**	**29**	P	**Pg**	**04 23 34.6**	**-1.3**
HATZ	**Hinemaiaia**	**1.68**	**40**	P	**Pg**	**04 23 34.5**	**-1.5**
BKZ	**Black Stump Fm**	**1.71**	**54**	P	**Pb**	**04 23 34.9**	**+0.1**
BKZ	**Black Stump Fm**	**1.71**	**54**	P	**Pb**	**04 23 34.8**	**0.0**
KAHZ	**Kahuranaki**	**1.72**	**78**	P	**Pb**	**04 23 35.1**	**+0.3**
QRZ	**Quartz Range**	**1.78**	**248**	P	**Pg**	**04 23 36.7**	**-1.1**
QRZ	**Quartz Range**	**1.78**	**248**	P	**Pg**	**04 23 37.9**	**0.0**
MRHZ	**Matea Rd**	**1.89**	**45**	P	**Pb**	**04 23 38.0**	**+0.2**
CKHZ	**Cape Kidnapper**	**1.90**	**75**	P	**Pg**	**04 23 41.8**	**+1.5**
KUTZ	**Kaahu Road**	**1.90**	**28**	P	**Pg**	**04 23 39.0**	**-1.3**
MRNZ	**Matariki Terra**	**1.91**	**230**	P	**Pg**	**04 23 39.3**	**-1.1**
NMHZ	**Naumai**	**1.95**	**57**	P	**Pg**	**04 23 39.7**	**-1.6**
TLZ	**Tolley Road**	**1.96**	**20**	P	**Pg**	**04 23 39.5**	**-1.9**
ARHZ	**Arapoaonui**	**1.99**	**63**	P	**Pg**	**04 23 41.5**	**-0.5**
ALRZ	**Allen Road**	**2.06**	**39**	P	**Pg**	**04 23 41.3**	**-1.9**
THZ	**Tophouse**	**2.08**	**220**	P	**Pg**	**04 23 41.3**	**-2.4**
MTHZ	**Maungataniwha**	**2.12**	**52**	P	**Pb**	**04 23 40.2**	**-1.5**
PRRZ	**Plateau Road**	**2.13**	**39**	P	**Pb**	**04 23 42.3**	**+0.3**
HSRZ	**Hossack Road**	**2.22**	**33**	P	**Pg**	**04 23 45.9**	**-0.5**
RAHZ	**Arahi**	**2.24**	**56**	P	**Pn**	**04 23 40.7**	**+0.7**
WHHZ	**Waihua**	**2.25**	**61**	P	**Pg**	**04 23 47.1**	**+0.2**
RRRZ	**Republican Roa**	**2.32**	**38**	P	**Pg**	**04 23 46.5**	**-1.7**
MUGZ	**Murupara**	**2.34**	**44**	P	**Pb**	**04 23 44.3**	**-1.1**
NGRZ	**Ngongotaha**	**2.38**	**30**	P	**Pg**	**04 23 47.9**	**-1.5**
KHZ	**Kahutara**	**2.40**	**201**	P	**Pb**	**04 23 45.3**	**-1.1**
KHZ	**Kahutara**	**2.40**	**201**	P	**Pb**	**04 23 45.3**	**-1.1**
TARZ	**Mount Tarawera**	**2.40**	**36**	P	**Pg**	**04 23 48.8**	**-0.9**
SNGZ	**Shannon Statio**	**2.48**	**56**	P	**Pg**	**04 23 49.5**	**-1.7**
TOZ	**Tahuroa Road**	**2.53**	**15**	P	**Pn**	**04 23 45.4**	**+1.4**
MHGZ	**Mahia Peninsul**	**2.68**	**68**	P	**Pn**	**04 23 47.5**	**+1.4**
URZ	**Urewera**	**2.68**	**45**	P	**Pn**	**04 23 47.3**	**+1.2**
URZ	**Urewera**	**2.68**	**45**	P	**Pn**	**04 23 47.3**	**+1.2**
DSZ	**Denniston Nort**	**2.69**	**234**	P	**Pb**	**04 23 49.9**	**-1.6**
MWZ	**Matawai**	**2.87**	**51**	P	**Pn**	**04 23 50.6**	**+1.9**
GVZ	**Greta Valley S**	**3.05**	**204**	P	**Pb**	**04 23 53.6**	**-4.0**
MKAZ	**Moumakai**	**3.09**	**7**	P	**Pn**	**04 23 53.7**	**+1.9**
AWAZ	**Awhitu Peninsu**	**3.11**	**359**	P	**Pb**	**04 23 54.7**	**-3.9**
LTZ	**Lake Taylor**	**3.17**	**214**	P	**Pb**	**04 23 56.1**	**-3.6**
INZ	**Inchbonnie**	**3.53**	**223**	P	**Pb**	**04 24 02.2**	**-3.5**
OXZ	**Oxford**	**3.72**	**212**	P	**Pb**	**04 24 06.7**	**-2.3**
RPZ	**Rata Peaks**	**4.46**	**216**	P	**Pb**	**04 24 20.0**	**-1.5**
RPZ	**Rata Peaks**	**4.46**	**216**	P	**Pn**	**04 24 13.2**	**+2.7**
GCSZ	**Gaunt Creek Bo**	**4.53**	**225**	P	**Pb**	**04 24 19.5**	**-3.3**
FOZ	**Fox Glacier**	**4.95**	**226**	P	Pn	04 24 21.3	+4.0
TMZ	**Timaru**	**5.01**	**212**	P	**Pn**	**04 24 21.5**	**+3.3**
JCZ	**Jackson Bay**	**5.87**	**227**	P	Pn	04 24 34.3	+4.2

*IGQ **26** 04:25:27.5±0.1, 1°.5S×1°.4×8°1W±°, h12km*
*NEIC **26** 04:25:28.0±1.5, 0°.94S×0°.05×80°.35W±0°.06, h10km±1km, mb4.8/155, Error ellipse: s-maj=9.5km s-min=8.6km az=104.0*
*IDC **26** 04:25:28.7±0.6, 0°.78S×80°.34W, h23km±3km, mb4.1/17, mbtmp4.3/20, ML4.1/3, MS3.9/29, Error ellipse: s-maj=27.0km s-min=11.4km az=58.0*
*VAO **26** 04:25:28.8±0.4, 0°.91S×80°.25W, h16km, mb4.9*
*GCMT **26** 04:25:30.0±0.4, 0°.92S±0°.03×80°.68W±0°.03, h31km±1km, MW4.8/62, Moment Tensor Solution. s22,c23; s62,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.64±.13; $M_{\theta\theta}$-0.15±.08; $M_{\phi\phi}$-1.50±.09; $M_{r\theta}$-0.05±.08; $M_{r\phi}$-0.18±.06; $M_{\theta\phi}$-1.68±.11; Best double couple: $M_0$2.30700×10^{16} NP1:φs183.00000°, δ68.00000°, λ87.00000°. NP2: φs11.00000°, δ22.00000°, λ97.00000°. Principal axes: T 2.3700, Plg66.0000°, Azm88.0000°; N -0.1350, Plg3.0000°, Azm184.0000°; P -2.2450, Plg23.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 04:25:27.4±0.4, **0°.95S**±0°.02×**80°.50W**±0°.03, **h17**km±2km, **n466**, σ1§51/334, **mb4.7**/89, **MS4.0**/29, **2C-2D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIMJ	**BASE NAVAL BIM**	**0.08**	**281**	P	**Pg**	**04 25 31.0**	**+0.3**
VMON	**MONTECRISTI 3**	**0.20**	**239**	P	**Pg**	**04 25 32.0**	**-0.1**
LAPI	**LA PILA**	**0.20**	**206**	P	**Pg**	**04 25 32.0**	**-0.2**
EC19	**TOALLA CHICA**	**0.21**	**236**	P	**Pg**	**04 25 32.0**	**-0.3**
AMNT	**Manta-Manabi**	**0.24**	**273**	P	**Pg**	**04 25 32.0**	**-0.8**
AMNT				S	**Sg**	**04 25 36.0**	**-0.5**
CHIS	**Cerro-Chispas-**	**0.25**	**247**	P	**Pg**	**04 25 32.0**	**-1.0**
EC09	**EL TABLON**	**0.27**	**91**	P	**Pb**	**04 25 35.0**	**+1.1**
EC20	**SOUTH OF MONTE**	**0.33**	**169**	P	**Pb**	**04 25 35.0**	**+0.2**
JOSE	**SAN JOSE**	**0.40**	**225**	P	**Pg**	**04 25 35.0**	**-0.6**
CAYO	**PUERTO CAYO 2**	**0.46**	**212**	P	**Pg**	**04 25 36.0**	**-0.7**
CABP	**Cabo Pas

ROSC **El Rosal** 8.44 47 Pn **Pn** 04 27 32.6 +3.3
CDITO **Canoas** 9.76 346 **Pn** 04 27 48.8 +1.7
PAYG **Puerto Ayora** 9.79 272 Pn 04 27 52.7 +5.0
BRU2 **Volcan** 9.93 347 Pn 04 27 55.4 +5.8
CZSB **Cruzeiro do Su** 10.28 131 **Pn** 04 27 54.6 +0.4
CZSB **Cruzeiro do Su** 10.28 131 *e*P **Pn** 04 27 54.6 +0.4
DRK0 **Durika** 10.51 345 **Pn** 04 28 00.0 +2.4
PEZE **Perez Zeledon,** 10.74 343 **Pn** 04 28 03.5 +2.8
RIMA **Rio Macho** 11.16 343 **Pn** 04 28 08.7 +2.1
NNA **Nana** 11.55 162 Pn **Pn** 04 28 13.4 +1.7
1.8nm,0.3s,baz=343,slow=12,SNR=5.5
NNA Sn **Sn** 04 30 20.5 +0.1
4.0nm,0.3s,baz=236,slow=21,SNR=11
NNA LR LR 04 33 26.4
comp=Z,237nm,18.5s,baz=338,slow=41
17nm,0.6s
NNA **Nana** 11.55 162 **Pn** 04 28 12.2 +0.5
ESPN **Las Esperanzas** 13.60 344 **Pn** 04 28 42.5 +2.8
ACON **Acoyapa** 13.65 340 **Pn** 04 28 41.2 +0.8
SDV **Santo Domingo** 13.86 45 LR LR 04 35 23.0
comp=Z,808nm,18.2s,baz=222,slow=44
SDV **Santo Domingo** 13.86 45 **Pn** 04 28 42.7 -0.7
SDV **Santo Domingo** 13.86 45 *e*P **Pn** 04 28 42.1 -1.3
BOAB **BOACO BROADBAN** 14.27 339 Pn **Pn** 04 28 48.4 -0.4
MATN **Matagalpa** 14.81 339 Pn **Pn** 04 28 55.0 -1.3
BAUV **El Baul** 15.83 51 Pn **Pn** 04 29 08.9 -0.8
TGUH **Tegucigalpa,Un** 16.36 336 Pn **Pn** 04 29 16.7 +0.2
ETMB **Extrema** 16.71 122 Pn **Pn** 04 29 18.4 -2.6
ETMB IAmb IAmb 04 29 23.3
comp=Z,25nm,0.7s
MTO3 **Montecristo** 17.60 330 Pn **P** 04 29 32.9 -0.4
BIRV **Birongo** 18.14 51 Pn **Pn** 04 29 35.1 -3.7
LPAZ **La Paz** 19.51 142 P **Pn** 04 29 56.4 +0.4
comp=Z,0.4nm,0.3s,baz=315,slow=7.5,SNR=36
LPAZ LR LR 04 38 57.5
comp=Z,602nm,21.9s,baz=306,slow=41
comp=Z,8.4nm,0.8s
LPAZ **La Paz** 19.51 142 P **P** 04 29 54.4 -0.3
MACA **Manacapuru-AM** 19.92 97 P **P** 04 29 57.9 -0.7
MACA IAmb IAmb 04 30 03.0
comp=Z,50nm,0.7s
MACA **Manacapuru-AM** 19.92 97 *e*P **P** 04 29 57.2 -1.4
PETF **Flores** 20.02 333 P Pn 04 30 02.6 +1.3
BOAV **Boa Vista** 20.24 81 P **P** 04 30 01.5 -0.6
BOAV IAmb IAmb 04 30 14.5
comp=Z,18nm,1.3s
BOAV **Boa Vista** 20.24 81 *e*P **P** 04 30 00.7 -1.5
PB16 **IPOC Station P** 20.37 149 **P** 04 30 05.0 +1.0
PB16 IAmb IAmb 04 30 13.6
comp=Z,49nm,1.2s
CMIG **Matias Romero** 22.86 322 LR LR 04 37 41.6
comp=Z,246nm,20.9s,baz=174,slow=32
TOSP **Speyside** 23.28 58 P **P** 04 30 33.3 -1.2
VILB **Vilhena** 23.38 122 P **P** 04 30 35.2 -0.3
VILB IAmb IAmb 04 30 57.5
comp=Z,51nm,0.9s
VILB **Vilhena** 23.38 122 *e*P **P** 04 30 35.2 -0.3
AOPR **Arecibo Observ** 23.46 35 P **P** 04 30 35.1 -1.2
SJG **San Juan** 23.63 36 P **P** 04 30 38.8 +0.9
comp=Z,30nm,0.8s,baz=208,slow=2.6,SNR=8.2
SJG LR LR 04 42 11.6
comp=Z,121nm,18.2s,baz=247,slow=43
SJG **San Juan** 23.63 36 P **P** 04 30 38.1 +0.2
GCPR **Guaynabo City** 23.82 36 P **P** 04 30 38.5 -1.2
GCPR IAmb IAmb 04 30 42.0
comp=Z,32nm,0.8s
CBYP **Canovanas** 23.92 36 IAmb IAmb 04 30 43.1
comp=Z,32nm,0.8s
PB06 **IPOC Station P** 24.09 155 P **P** 04 30 42.9 +0.4
PB06 IAmb IAmb 04 31 12.1
comp=Z,13nm,0.8s
SIV **San Ignacio** 24.29 129 P **P** 04 30 44.7 +0.5
comp=Z,5.4nm,0.7s,baz=298,slow=8.6,SNR=17
SIV LR LR 04 41 19.7
comp=Z,2µm,18.5s,baz=312,slow=39
comp=Z,5.4nm,0.7s
LVC **Limon Verde** 24.30 153 P **P** 04 30 46.2 +1.6
comp=Z,6.9nm,0.9s,baz=298,slow=5.4,SNR=4.5
LVC LR LR 04 40 54.9
comp=Z,156nm,21.4s,baz=328,slow=38
comp=Z,6.9nm,0.9s
LVC **Limon Verde** 24.30 153 P **P** 04 30 45.3 +0.7
LVC IAmb IAmb 04 31 12.9
comp=Z,20nm,0.8s
AF01 **San Pedro de A** 24.93 152 P **P** 04 30 50.2 -0.1
ITTB **Itaituba** 24.96 98 *e*P **P** 04 30 49.4 -1.0
PTLB **Pontes e Lacer** 25.53 125 IAmb IAmb 04 31 13.0
comp=Z,13nm,0.9s
PTLB **Pontes e Lacer** 25.53 125 *e*P **P** 04 30 54.6 -0.9
NPGB **Novo Progresso** 25.78 104 *e*P **P** 04 30 56.6 -1.2
PDRB **Porto dos Gac** 25.86 115 *e*P **P** 04 30 57.5 -1.0
MALB **Monte Alegre** 26.24 92 *e*P **P** 04 31 00.7 -1.3
CLDB **Colider** 26.44 113 *e*P **P** 04 31 02.7 -1.1
MDP **Montagnes des** 28.46 78 LR LR 04 42 43.2
comp=Z,1µm,19.4s,baz=265,slow=37
SNDB **Serra Nova Dou** 30.97 112 *e*P **P** 04 31 42.9 -1.2
AQDB **Aquidauana** 31.04 130 IAmb IAmb 04 31 53.5
comp=Z,12nm,1.0s
AQDB **Aquidauana** 31.04 130 *e*P **P** 04 31 43.5 -1.2
PRPB **Parauapebas** 31.05 100 *e*P **P** 04 31 44.1 -0.7
H03N2 **Juan Fernandez** 32.35 178 T T 05 06 34.8
baz=354,slow=76,SNR=11
H03N1 **Juan Fernandez** 32.35 178 T T 05 06 35.7
baz=354,slow=76,SNR=14
H03N3 **Juan Fernandez** 32.37 178 T T 05 06 34.6
baz=354,slow=76,SNR=14
250A **Grady** 33.20 351 P **P** 04 32 04.0 +0.5
CPUP **Villa Florida** 33.67 140 LR LR 04 48 51.2
comp=Z,720nm,18.2s,baz=330,slow=42
SMTB **Santa Maria do** 33.69 105 *e*P **P** 04 32 07.3 -0.7
833A **Chaparral WMA,** 34.29 330 P P 04 32 18.6 +5.5
baz=145
LRAL **Lakeview Retre** 34.36 350 P **P** 04 32 14.2 +0.7
LRAL IAmb IAmb 04 32 26.4
comp=Z,6.8nm,0.8s
LRAL **Lakeview Retre** 34.36 350 P P 04 32 18.9 +5.4
baz=168
JSC **Jenkinsville** 35.06 359 IAmb IAmb 04 32 22.6
comp=Z,13nm,1.1s
BDFB **Brasilia** 35.21 116 pP **pP** 04 32 25.1 -1.4
comp=Z,7.6nm,1.0s,baz=261,slow=8.6,SNR=6.2
BDFB LR LR 04 47 40.9
comp=Z,718nm,18.1s,baz=303,slow=38
BDFB **Brasilia** 35.21 116 P **P** 04 32 23.9 +2.7
BDFB IAmb IAmb 04 32 26.2
comp=Z,9.1nm,0.9s
BDFB **Brasilia** 35.21 116 *e*P **P** 04 32 22.6 +1.3
435B **Jarrell** 35.50 334 P P 04 32 28.9 +5.4
baz=150
FPAL **Fort Paine** 35.63 353 IAmb IAmb 04 32 31.5
comp=Z,7.6nm,0.9s
ML02 **Panimavida** 35.65 167 P **P** 04 32 24.9 +0.3
Y45A **Yeager Farm, C** 35.66 347 P **P** 04 32 26.0 +1.2
BG3 **Lake Jocassee** 35.83 357 IAmb IAmb 04 32 33.9
comp=Z,11nm,1.1s
PTGB **Pitanga** 36.24 133 *e*P **P** 04 32 30.7 +0.7
JCT **Junction City** 36.26 331 P P 04 32 36.6 +6.6
baz=146,SNR=7.7
ROSB **Rosrio** 36.40 94 *e*P **P** 04 32 31.6 +0.2
CPCT **Cooper Cave** 36.41 354 IAmb IAmb 04 32 38.6
comp=Z,13nm,0.9s
WHTX **Lake Whitney,** 36.49 335 P P 04 32 38.0 +6.1
baz=150
ITQB **Itaqui** 36.50 144 IAmb IAmb 04 32 44.2
comp=Z,18nm,1.0s
ITQB **Itaqui** 36.50 144 *e*P **P** 04 32 32.8 +0.8
TKL **Tuckaleechee C** 36.55 356 LR LR 04 47 05.9
comp=Z,206nm,20.8s,baz=172,slow=36
HPIG 36.83 321 P **P** 04 32 37.4 +2.3
SDBA **SAO DESIDERIO** 37.08 109 *e*P **P** 04 32 37.4 +0.2
MIAR **Mount Ida** 37.38 342 P P 04 32 45.2 +5.8
baz=158
TXAR **Lajitas Array** 37.38 326 pP **pP** 04 32 46.0 +1.2
comp=Z,1.2nm,0.8s,baz=146,slow=11,SNR=9.4
TXAR PcP **PcP** 04 34 58.2 -0.4
comp=Z,1.0nm,0.8s,baz=148,slow=7.4,SNR=7.1
TXAR LR LR 04 46 52.0
comp=Z,68nm,20.1s,baz=141,slow=34
TXAR **Lajitas Array** 37.38 326 P **P** 04 32 41.5 +1.8
TZTN **Tazewell** 37.41 356 P P 04 32 45.3 +5.6
baz=175
ITAB **Concordia** 37.73 136 IAmb IAmb 04 32 50.5
comp=Z,33nm,1.2s
ITAB **Concordia** 37.73 136 *e*P **P** 04 32 42.2 -0.3
ABTX **Abilene, Hawle** 37.98 333 P P 04 32 50.5 +5.9
baz=148
RPN **Rapa Nui** 37.99 224 LR LR 04 44 04.9
comp=Z,292nm,18.8s,baz=62,slow=29
LPIG **La Paz** 38.18 313 LR LR 04 44 59.4
comp=Z,48nm,18.9s,baz=135,slow=31
MC01 **Montes Claros** 39.25 116 *e*P **P** 04 32 55.0 -0.5
TUL1 **Leonard** 39.35 340 P P 04 33 02.3 +6.3
baz=155
WMOK **Wichita Mounta** 39.42 336 P **P** 04 32 58.1 +1.5
WMOK **Wichita Mounta** 39.42 336 P **P** 04 32 59.4 +2.8
baz=150
MGMO **Mountain Grove** 39.46 345 P **P** 04 32 57.4 +0.5
CNLB **Canela** 39.92 138 *e*P **P** 04 33 01.5 +0.6
DIAM **Diamantina, MG** 40.04 118 *e*P **P** 04 33 02.4 +0.2
CCM **Cathedral Cave** 40.06 347 P P 04 33 06.8 +4.9
baz=163
OLIL **Olney** 40.11 351 IAmb IAmb 04 33 15.3
comp=Z,20nm,1.4s
MNTX **Cornudas Mount** 40.14 326 P **P** 04 33 04.8 +2.2
MNTX **Cornudas Mount** 40.14 326 P P 04 33 08.5 +5.9
baz=139,SNR=7.1
Q44A **Meyer Farm, Va** 40.43 350 IAmb IAmb 04 33 11.2
comp=Z,10nm,0.8s
T35A **Sooner Cattle** 40.51 340 IAmb IAmb 04 33 13.7
comp=Z,21nm,1.2s
MSTX **Muleshoe** 40.56 331 IAmb IAmb 04 33 14.2
comp=Z,20nm,0.9s
MSTX **Muleshoe** 40.56 331 P P 04 33 11.6 +5.4
baz=138,SNR=6.4
PLCA **Paso Flores** 40.61 168 P **P** 04 33 07.4 +0.9
comp=Z,6.7nm,0.9s,baz=344,slow=10,SNR=9.4
PLCA LR LR 04 46 43.0
comp=Z,83nm,20.2s,baz=351,slow=31
comp=Z,6.7nm,0.9s
PLCA **Paso Flores** 40.61 168 P **P** 04 33 07.3 +0.8
PLCA **Paso Flores** 40.61 168 *e*P **P** 04 33 06.9 +0.4
CROK **Carrier** 40.66 338 IAmb IAmb 04 33 15.1
comp=Z,16nm,0.9s
AMTX **Amarillo** 40.80 333 P P 04 33 13.5 +5.4
baz=146
ELIS **Ellis County** 40.83 336 IAmb IAmb 04 33 17.8
comp=Z,44nm,1.0s
U32A **Winter Ranch,** 40.94 337 P **P** 04 33 09.9 +0.7
OK032 **Salt Plains WL** 41.01 338 IAmb IAmb 04 33 17.6
comp=Z,35nm,1.3s
KAN09 **Caldwell North** 41.09 339 IAmb IAmb 04 33 18.4
comp=Z,27nm,1.2s
KS20 **Mayfield South** 41.15 339 IAmb IAmb 04 33 19.5
comp=Z,16nm,0.8s
HSIG 41.67 318 P **P** 04 33 17.4 +2.0
121A **Cookes Peak, D** 42.12 325 P P 04 33 24.3 +5.1
baz=137,SNR=6.2
GDU01 **Guandu, BA** 42.43 109 *e*P **P** 04 33 21.1 -0.6
KSU1 **Kansas State U** 42.52 341 IAmb IAmb 04 33 29.9
comp=Z,17nm,0.8s
BINY **Binghamton** 43.15 5 P **P** 04 33 27.6 +0.4
BINY IAmb IAmb 04 33 29.4
comp=Z,14nm,1.1s
BINY **Binghamton** 43.15 5 P **P** 04 33 25.7 -1.4
baz=186
ANMO **Albuquerque** 43.19 328 P **P** 04 33 28.8 +0.9
comp=Z,5.2nm,1.0s,baz=152,slow=9.3,SNR=14
ANMO LR LR 04 51 29.6
comp=Z,77nm,18.8s,baz=136,slow=36
comp=Z,5.2nm,1.0s
ANMO **Albuquerque** 43.19 328 P **P** 04 33 29.2 +1.4
ANMO IAmb IAmb 04 33 37.3
comp=Z,11nm,0.9s
ANMO **Albuquerque** 43.19 328 P **P** 04 33 29.8 +2.0
baz=140
RIB01 **Linhares ES** 43.30 118 *e*P **P** 04 33 27.5 -1.3
CBKS **Cedar Bluff** 43.35 338 IAmb IAmb 04 33 37.6
comp=Z,20nm,1.1s
NBLA **Lagarto - SE** 43.57 105 *e*P **P** 04 33 31.2 +0.3
K57A **Scipio Center** 43.63 4 IAmb IAmb 04 33 32.7
comp=Z,20nm,1.1s
TUC **Tucson** 43.76 322 P **P** 04 33 36.6 +4.3
baz=133
T25A **Trinidad** 43.91 332 IAmb IAmb 04 33 42.8
comp=Z,19nm,1.2s
T25A **Trinidad** 43.91 332 P P 04 33 40.2 +6.6
baz=144
J59A **Piesco** 44.55 6 IAmb IAmb 04 33 38.4
comp=Z,8.3nm,0.9s
KSCO **Kaye Shedlock'** 44.66 335 P P 04 33 46.7 +7.1
baz=148
RCBR **Riachuelo** 44.76 97 LR LR 04 53 28.1
comp=Z,2µm,18.2s,baz=78,slow=38
214A **Organ Pipe Nat** 44.80 320 P P 04 33 47.2 +6.6
baz=131
NBAN **Anadia - AL** 44.82 103 *e*P **P** 04 33 41.1 0.0
SDCO **Great Sand Dun** 44.91 332 IAmb IAmb 04 33 50.5
comp=Z,24nm,1.4s
W18A **Petrified Fore** 45.11 326 P P 04 33 48.7 +5.5
baz=136
DELO **Deloro Mine** 45.34 3 IAmb IAmb 04 33 43.9
comp=Z,8.5nm,1.0s
S22A **4UR Ranch, Cre** 45.55 330 IAmb IAmb 04 33 55.7
comp=Z,12nm,1.4s
S22A **4UR Ranch, Cre** 45.55 330 P **P** 04 33 50.7 +3.9
baz=142,SNR=6.5
LONY **Lake Ozonia** 45.68 6 P **P** 04 33 47.8 +0.4
LONY IAmb IAmb 04 33 51.5
comp=Z,8.6nm,1.1s
LONY **Lake Ozonia** 45.68 6 P **P** 04 33 46.3 -1.0
baz=188
Q24A **Divide** 45.73 333 IAmb IAmb 04 33 58.5
comp=Z,8.8nm,1.2s
Q24A **Divide** 45.73 333 P **P** 04 33 52.5 +4.3
baz=144
MVCO **Mesa Verde** 45.98 329 P **P** 04 33 51.5 +1.3
MVCO IAmb IAmb 04 34 00.6
comp=Z,9.5nm,1.1s
MVCO **Mesa Verde** 45.98 329 P **P** 04 33 53.5 +3.3
baz=139
WUAZ **Wupatki** 46.33 325 IAmb IAmb 04 34 01.8
comp=Z,12nm,0.9s
WUAZ **Wupatki** 46.33 325 P **P** 04 33 56.7 +3.8
baz=135,SNR=6.8
ISCO **Idaho Springs** 46.61 333 P **P** 04 33 57.8 +2.6
baz=144
SMCO **Snowmass** 46.74 332 P **P** 04 33 57.8 +1.5
SMCO IAmb IAmb 04 34 10.6
comp=Z,7.2nm,1.1s
ECSD **EROS Data Cent** 46.77 344 P **P** 04 34 00.7 +4.7
baz=158
GLA **Glamis** 46.81 319 P P 04 34 02.4 +5.9
baz=129
PV07 **Paradox Valley** 46.99 330 IAmb IAmb 04 34 06.7
comp=Z,19nm,1.4s
PDMCI **Parker Dam,Lak** 47.17 321 P P 04 34 04.8 +5.5
baz=131
TRQ **Mont Tremblant** 47.27 6 IAmb IAmb 04 33 59.3
comp=Z,6.4nm,0.8s
BC3 **Big Chuckawall** 47.59 320 P **P** 04 34 06.2 +3.5
baz=129
IRM **Iron Mountain** 47.71 320 P P 04 34 10.3 +6.8
baz=130
O20A **White River Ci** 48.10 331 P P 04 34 12.2 +5.5
baz=141
BELC **Belle Mtn. Jos** 48.16 320 P P 04 34 12.5 +5.3
baz=129
109C **Camp Elliot, M** 48.21 318 P P 04 34 12.2 +4.9
baz=127
PFO **Pinyon Flats O** 48.22 319 LR LR 04 54 16.1
comp=Z,107nm,18.5s,baz=128,slow=36
E62A **Clayton Lake** 48.35 10 P **P** 04 34 08.8 +0.6
GMRC **Granite Mounta** 48.44 321 P P 04 34 15.7 +6.4
baz=130
SRU **San Rafael Swe** 48.46 329 IAmb IAmb 04 34 21.8
comp=Z,8.5nm,1.1s
P17A **Butcher Ranch,** 48.84 329 IAmb IAmb 04 34 20.7
comp=Z,21nm,1.7s
RWWY **Rawlins** 48.85 333 IAmb IAmb 04 34 27.8
comp=Z,6.3nm,0.9s
HEC **Hector,Ludlow** 48.90 320 P P 04 34 19.0 +6.3
baz=129
TUQ **Turquoise Moun** 49.02 321 P P 04 34 19.5 +5.8
baz=130
RDMU **Red Mountain** 49.08 331 IAmb IAmb 04 34 28.6
comp=Z,9.7nm,1.1s
K22A **Casper** 49.33 335 P P 04 34 23.0 +7.0
baz=145
BFSC **Mount Baldy Ra** 49.39 319 P P 04 34 24.5 +7.9
baz=127
GSC **Goldstone, Bar** 49.49 320 P P 04 34 24.5 +7.2
baz=129
RSSD **Black Hills** 49.55 338 P **P** 04 34 18.6 +0.9
RSSD IAmb IAmb 04 34 21.7
comp=Z,6.4nm,0.8s
BATG **Bathurst New B** 49.67 13 P **P** 04 34 18.7 +0.4
BATG IAmb IAmb 04 34 19.4
comp=Z,16nm,0.9s
EDW2 **Edwards Air Fo** 50.00 319 P P 04 34 28.1 +6.9
baz=127
LRMC **Laurel Mtn Rad** 50.16 320 P P 04 34 30.1 +7.7
baz=128
TPNV **Topopah Spring** 50.20 322 P P 04 34 29.7 +6.9
baz=130
MPMC **Manual Prospec** 50.40 321 P P 04 34 30.4 +6.1
baz=129
DUG **Dugway, Tooele** 50.46 328 P **P** 04 34 26.4 +1.7
DUG IAmb IAmb 04 34 33.5
comp=Z,21nm,1.9s
DUG **Dugway, Tooele** 50.46 328 P P 04 34 29.5 +4.9
baz=136
R11A **Troy Canyon, C** 50.72 324 P P 04 34 33.2 +6.5
baz=132
BW06 **Boulder Array** 50.77 332 P P 04 34 32.7 +5.6
baz=141
PDAR **Pinedale Array** 50.77 332 P **P** 04 34 26.6 -0.4
comp=Z,0.5nm,0.8s,baz=134,slow=8.5,SNR=4.3
PDAR pP **sP** 04 34 33.3 -1.0
comp=Z,1.6nm,1.0s,baz=142,slow=7.5,SNR=5.9
comp=Z,0.5nm,0.8s
PDAR **Pinedale Array** 50.77 332 P **P** 04 34 27.8 +0.8
ISA **Isabella, Lake** 50.79 320 P P 04 34 33.0 +5.9
baz=127
HWUT **Hardware Ranch** 50.85 330 IAmb IAmb 04 34 40.9
comp=Z,10.0nm,1.2s
GRAC **Grapevine Rang** 50.91 322 P P 04 34 35.1 +7.1
baz=129
CWC **Cottonwood Cre** 51.01 321 P P 04 34 35.9 +7.0
baz=128
VES **Vestal, Richgr** 51.29 319 P P 04 34 38.3 +7.6
baz=127
MDND **Maddock** 51.38 344 P P 04 34 37.0 +5.8
baz=155
SMMC **Simmler** 51.58 318 P P 04 34 38.3 +5.3
baz=126
REDW **Red Top Meadow** 51.83 332 IAmb IAmb 04 34 58.3
comp=Z,19nm,1.4s
ELK **Elko** 52.16 327 P **P** 04 34 37.7 +0.2
comp=Z,1.0nm,0.9s,baz=130,slow=6.8,SNR=3.2
ELK pP **sP** 04 34 44.9 +0.2
comp=Z,2.5nm,0.9s,baz=135,slow=8.2,SNR=6.7
comp=Z,1.0nm,0.9s
ELK **Elko** 52.16 327 P **P** 04 34 39.3 +1.8
FLWY **Flagg Ranch** 52.32 333 IAmb IAmb 04 34 49.5
comp=Z,14nm,1.4s
NVAR **Mina Arroy Bea** 52.40 323 P **P** 04 34 40.1 +0.9
comp=Z,0.8nm,0.7s,baz=119,slow=7.2,SNR=7.7
NVAR pP **sP** 04 34 46.8 +0.2
comp=Z,2.5nm,0.7s,baz=133,slow=7.6,SNR=17
NVAR LR LR 04 55 44.0
comp=Z,77nm,20.1s,baz=94,slow=35
comp=Z,0.8nm,0.7s
ULM **Lac du Bonnet** 52.68 348 P **P** 04 34 39.5 -1.4
comp=Z,3.5nm,0.6s,baz=201,slow=5.4,SNR=5.2
comp=Z,3.5nm,0.6s
ULM **Lac du Bonnet** 52.68 348 IAmb IAmb 04 34 48.4
comp=Z,9.6nm,1.1s
BMN **Battle Mountai** 53.05 325 IAmb IAmb 04 34 52.5
comp=Z,11nm,1.2s
YHL **Hebgen Lake** 53.13 333 IAmb IAmb 04 34 54.7
comp=Z,26nm,1.4s
QLMT **Earthquake Lak** 53.23 333 P **P** 04 34 46.2 +0.9
HLID **Hailey** 53.72 330 P **P** 04 34 51.8 +2.9
baz=136
BOZ **Bozeman (W)** 53.91 333 IAmb IAmb 04 35 03.4
comp=Z,12nm,1.5s
MFID **Camas Ranch** 54.33 329 IAmb IAmb 04 35 05.8
comp=Z,9.3nm,1.1s
WVOR **Wild Horse Val** 55.18 326 IAmb IAmb 04 35 10.1
comp=Z,17nm,1.4s
MSO **Missoula** 55.89 333 P **P** 04 35 08.4 +3.9
baz=138
SCHQ **Schefferville** 56.73 9 P **P** 04 35 08.2 -1.9
comp=Z,8.5nm,1.0s,baz=215,slow=6.1,SNR=5.3
comp=Z,8.5nm,1.0s
SCHQ **Schefferville** 56.73 9 P **P** 04 35 09.3 -0.8
SCHQ IAmb IAmb 04 35 10.2
comp=Z,17nm,1.2s
YBH **Yreka Blue Hor** 57.09 323 LR LR 04 59 37.7
comp=Z,59nm,18.2s,baz=58,slow=36
L04D **Klamath Falls** 57.14 324 P P 04 35 19.7 +6.2
baz=128
J05D **Fort Rock, OR** 57.18 325 P P 04 35 20.2 +6.4
baz=129
G08A **Pilot Rock** 57.25 329 IAmb IAmb 04 35 23.5
comp=Z,9.6nm,1.1s
PINE **Pine Mountain** 57.34 326 IAmb IAmb 04 35 24.8
comp=Z,12nm,1.1s
WALA **Waterton Lakes** 57.55 335 IAmb IAmb 04 35 24.4
comp=Z,6.0nm,0.9s
I05D **Terrebonne, OR** 57.91 326 P P 04 35 24.6 +5.8
baz=129
K02D **Willamette Mer** 58.23 324 P P 04 35 27.2 +6.1
baz=126
NEW **Newport** 58.41 332 LR LR 05 01 37.7
comp=Z,82nm,18.0s,baz=67,slow=37
NEW **Newport** 58.41 332 P P 04 35 27.3 +5.1
baz=136
G05D **Wamic, OR** 58.48 327 P P 04 35 29.7 +7.0
baz=130
LTY **Liberty** 59.45 329 IAmb IAmb 04 35 38.9
comp=Z,14nm,1.4s
TAOE **Nuku Hiva Isla** 59.88 260 *e*LR LR 04 53 19.3
comp=Z,134nm,23.8s
ORCD **Orcadas** 65.61 162 P **P** 04 36 09.5 -0.7
ORCD IAmb IAmb 04 36 24.5
comp=Z,3.4nm,0.8s
SMAI **San Martin Ant** 67.68 175 P **P** 04 36 24.8 +1.5
YKA **Yellowknife Ar** 68.30 344 P **P** 04 36 26.1 -1.2
comp=Z,3.0nm,1.0s,baz=137,slow=6.4,SNR=7.3
YKA pP **sP** 04 36 34.1 -0.7
comp=Z,3.3nm,0.9s,baz=130,slow=7.3,SNR=5.3
comp=Z,3.0nm,1.0s
PPT **Papeete** 69.79 252 LR LR 04 59 06.5
comp=Z,135nm,19.1s,baz=89,slow=29
PPT2 **Papeete2** 69.79 252 *e*LR LR 04 57 54.7
comp=Z,229nm,24.8s
T35M **Bob Quinn** 70.13 334 P P 04 36 44.1 +5.2
baz=126
TBI **Tubuai** 70.35 246 *e*LR LR 04 58 10.0
comp=Z,188nm,27.2s
DLBC **Dease Lake** 70.90 335 P **P** 04 36 44.1 +0.6
comp=Z,5.2nm,1.1s,baz=41,slow=4.9,SNR=4.5
DLBC pP **sP** 04 36 51.7 +0.7
comp=Z,8.6nm,0.8s,baz=119,slow=3.6,SNR=10
comp=Z,5.2nm,1.1s
DLBC **Dease Lake** 70.90 335 P **P** 04 36 44.3 +0.8
DLBC **Dease Lake** 70.90 335 P P 04 36 48.7 +5.1
baz=126,SNR=5.1
S34M **Telegraph Cree** 71.06 334 P **P** 04 36 47.6 +3.1
baz=125
R33M **Jennings River** 71.86 335 P **P** 04 36 52.2 +2.7
baz=126
BESE **Bessie Mountai** 73.07 334 P **P** 04 36 57.8 +1.2
BESE IAmb IAmb 04 37 05.6
comp=Z,12nm,1.0s
P33M **Teslin, Yukon** 73.09 336 P P 04 37 01.8 +5.1
baz=124
P32M **Atlin** 73.12 335 P P 04 37 04.3 +7.4
baz=123
N32M **Quiet Lake** 73.73 336 P P 04 37 06.8 +6.4
baz=124
O30N **Mendenhall** 74.76 335 P P 04 37 12.7 +6.3
baz=121
P30M **Million Dollar** 74.80 334 P **P** 04 37 10.0 +3.4
baz=120
M31M **Drury Creek, Y** 74.83 337 P **P** 04 37 08.3 +1.5
M31M IAmb IAmb 04 37 15.7
comp=Z,18nm,1.6s
N30M **Aishikik Lake** 75.53 336 P P 04 37 16.9 +6.1
baz=120
LIC **Lamto** 75.66 83⇑ *i*P **P** 04 37 11.8 -0.7
comp=Z,29nm,0.5s
TIC **Toumodi** 75.69 83⇑ *i*P **P** 04 37 11.9 -0.8
comp=Z,3.5nm,0.2s
DBIC **Dimbokro** 75.85 83 P **P** 04 37 13.1 -0.5
comp=Z,14nm,0.9s,baz=273,slow=5.0,SNR=8.5
comp=Z,14nm,0.9s
DBIC **Dimbokro** 75.85 83 P **P** 04 37 13.4 -0.2
KIC **Kosan Boka** 75.95 83⇓ *i*P **P** 04 37 13.9 -0.3

comp=Z,26nm,0.5s
M30M Minto, Yukon 75.98 337 P P 04 37 18.9 +5.5
baz=121
M29M Somme Creek 76.58 336 P **P** **04 37 17.7 +0.8**
baz=119,SNR=5.3
K29M Barlow Dome 76.92 338 P **P** **04 37 21.6 +2.8**
baz=120
KOWA Kowa 77.16 75 LR LR 05 09 15.8
comp=Z,131nm,20.5s,baz=262,slow=34
KOWA Kowa 77.16 75 P **P** **04 37 20.7 -0.3**
EPYK Eagle Plains 77.94 340 P P 04 37 30.2 +5.9
baz=122
M27K Edge Creek, AK 77.95 335 P **P** **04 37 24.2 -0.4**
baz=116
I29M Ogilvie Camp, 77.98 339 P **P** **04 37 24.4 -0.2**
baz=120
INK Inuvik 77.98 342 P **P** **04 37 24.2 -0.2**
comp=Z,6.8nm,1.1s,baz=134,slow=5.5,SNR=5.8
comp=Z,6.8nm,1.1s
INK Inuvik 77.98 342 IAmb IAmb 04 37 25.4
comp=Z,11nm,1.2s
INK Inuvik 77.98 342 P **P** **04 37 23.3 -1.1**
baz=125,SNR=5.4
SUMG Summit 78.00 12 P **P** **04 37 24.6 -0.4**
SUMG IAmb IAmb 04 37 25.2
comp=Z,9.7nm,1.0s
BORG Borgarnes 78.18 22 LR LR 05 11 38.5
comp=Z,34nm,18.8s,baz=213,slow=36
L27K Beaver Creek, 78.24 336 P **P** **04 37 27.1 +1.0**
L27K Beaver Creek, 78.24 336 P P 04 37 31.1 +5.0
baz=116
M26K Nabesna, AK 78.44 335 P P 04 37 33.2 +6.0
baz=115
BMRM Bremner River 78.55 333 P **P** **04 37 31.7 +3.9**
baz=113
MDT Midelt 78.67 56 P **P** **04 37 29.1 -0.1**
comp=Z,2.2nm,0.9s,baz=276,slow=6.2,SNR=4.8
MDT LR LR 05 10 01.5
comp=Z,89nm,20.9s,baz=165,slow=34
comp=Z,2.2nm,0.9s
EGAK Eagle 78.76 338 IAmb IAmb 04 37 37.1
comp=Z,9.0nm,1.0s
EGAK Eagle 78.76 338 P **P** **04 37 29.0 +0.2**
baz=117
K27K Chicken 78.77 337 IAmb IAmb 04 37 38.1
comp=Z,22nm,1.4s
K27K Chicken 78.77 337 P **P** **04 37 31.7 +2.7**
baz=116
J26L Joseph Creek 79.56 337 IAmb IAmb 04 37 41.9
comp=Z,16nm,1.5s
J26L Joseph Creek 79.56 337 P **P** **04 37 33.7 +0.3**
baz=115
RAR Rarotonga 79.66 249 LR LR 05 06 08.5
comp=Z,79nm,19.2s,baz=210,slow=30
PAX Paxson 79.72 335 P **P** **04 37 36.4 +2.1**
baz=113
I26K Coal Creek Min 79.75 338 P **P** **04 37 37.6 +3.3**
baz=115
G27K Doyon Strip 79.87 339 P **P** **04 37 37.6 +2.7**
baz=117
SCM Sheep Creek Mo 80.09 334 P P 04 37 42.2 +5.9
baz=111
PWL Port Wells 80.20 333 P P 04 37 41.9 +5.1
baz=110
ESDC Sonseca Array 80.26 50 P **P** **04 37 36.9 -0.7**
comp=Z,1.6nm,1.0s,baz=266,slow=8.2,SNR=6.1
ESDC LR LR 05 11 21.6
comp=Z,62nm,19.4s,baz=184,slow=34
comp=Z,1.6nm,1.0s
J25K Salcha River, 80.32 337 P **P** **04 37 37.9 +0.5**
baz=113
BELA Belgrano 2 80.60 171 P **P** **04 37 38.8 +0.1**
RC01 Rabbit Creek A 80.92 333 P **P** **04 37 43.9 +3.2**
baz=109
ILAR Eielson Array 80.98 337 P **P** **04 37 39.8 -1.2**
comp=Z,0.9nm,0.9s,baz=116,slow=3.7,SNR=4.8
comp=Z,0.9nm,0.9s
ILAR Eielson Array 80.98 337 P **P** **04 37 40.9 0.0**
F26K Sheenjek River 81.13 340 P **P** **04 37 41.4 -0.3**
baz=115
H25K Birch Creek 81.15 338 P **P** **04 37 42.9 +1.2**
baz=113
RND Reindeer 81.30 335 IAmb IAmb 04 38 02.0
comp=Z,10nm,1.2s
F25K Christian Rive 81.61 339 P **P** **04 37 44.3 0.0**
baz=113
H24K Noodor Dome 81.77 337 P **P** **04 37 44.9 -0.2**
baz=111
NEA2 Nenana 81.80 336 P **P** **04 37 49.9 +4.7**
baz=110
G24K Hadweenzic Riv 81.93 338 P P 04 37 50.8 +4.9
baz=112
D25K Kavik River 82.55 341 P **P** **04 37 52.3 +3.2**
baz=113
TOA0 Torodi Ar. Sit 82.61 77 P **P** **04 37 48.7 -1.8**
TOA0 IAmb IAmb 04 37 50.7
comp=Z,15nm,1.3s
TORD Torodi Ar. Bea 82.61 77 P **P** **04 37 49.2 -1.3**
comp=Z,2.8nm,0.4s,baz=272,slow=4.2,SNR=3.7
TORD pP **sP** **04 37 58.3 +0.2**
comp=Z,1.8nm,0.3s,baz=268,slow=8.5,SNR=2.5
comp=Z,2.8nm,0.4s
TORD Torodi Ar. Bea 82.61 77 P **P** **04 37 49.0 -1.6**
TORD IAmb IAmb 04 37 50.7
comp=Z,14nm,1.4s
MLY Manley 82.62 336 IAmb IAmb 04 38 06.3
comp=Z,4.4nm,1.0s
VNA3 Neumayer Olymp 83.00 162 P **P** **04 37 51.4 -0.1**
VNA1 Neumayer--Stat 83.27 161 P **P** **04 37 53.0 +0.2**
C24K Franklin Bluff 83.46 341 P **P** **04 37 54.3 +0.5**
baz=111
K20K Telida 83.53 334 P **P** **04 37 58.5 +4.2**
baz=105
L19K White Mountain 83.58 333 P **P** **04 37 57.7 +3.1**
baz=104
VNA2 Neumayer--Watz 83.62 162 P **P** **04 37 54.3 -0.3**
baz=277,slow=3.9
SNAA Sanae 85.22 162 P **P** **04 38 02.5 -0.3**
TROLL Troll, Antarti 86.94 162 P **P** **04 38 11.4 0.0**
QSPA South Pole Qui 89.11 180 P **P** **04 38 22.4 +0.6**
QSPA IAmb IAmb 04 38 22.8
comp=Z,6.1nm,0.9s
KEST Kesra 90.42 54 LR LR 05 17 50.0
comp=Z,56nm,18.6s,baz=310,slow=35
NOA NORSAR Array B 91.66 29 LR LR 05 19 41.5
comp=Z,14nm,18.8s,baz=25,slow=36
TSUM Tsumeb 97.32 109 P **P** **04 39 00.2 -0.5**
H11S2 WAKE ISLAND Hyl 11.89 289 T T 06 45 08.0
baz=85,slow=74,SNR=31
H11S1 WAKE ISLAND Hyl 11.90 289 T T 06 45 07.8
baz=85,slow=74,SNR=22
H11S3 WAKE ISLAND Hyl 11.91 289 T T 06 45 06.3
baz=85,slow=74,SNR=22
ZALV Zalesovo Beam 125.81 11 PKP **PKPdf** **04 44 27.0 -1.3**
comp=Z,2.8nm,0.8s,baz=270,slow=1.5,SNR=7.9
ZALV pPKP **pPKPdf** **04 44 34.5 +0.4**
comp=Z,1.8nm,0.7s,baz=291,slow=4.1,SNR=2.2
MKAR Makanchi Array 131.93 16 PKP **PKPdf** **04 44 39.0 -1.3**
comp=Z,2.3nm,1.0s,baz=336,slow=2.7,SNR=8.9
WMQ Urumqi 136.04 12 *eP* **PKiKP** **04 44 50.5 +0.7**
ASAR Alice Springs 138.58 232 PKP **PKPdf** **04 44 52.0 -1.4**
comp=Z,0.7nm,0.7s,baz=108,slow=3.0,SNR=3.5
HHC Hu-ho-hao-te 138.81 346 *eP* **PKPdf** **04 44 51.5 -1.9**
WRA Warramunga Arr 140.04 237 PKP **PKPdf** **04 44 54.7 -1.4**
comp=Z,1.2nm,0.9s,baz=102,slow=3.0,SNR=5.4
WRA pPKP **pPKPdf** **04 45 02.2 +0.4**
comp=Z,2.1nm,0.9s,baz=113,slow=1.8,SNR=7.3
WRA Warramunga Arr 140.04 237 PKPdf **PKPdf** **04 44 55.0 -1.0**
NJ2 Nanjing 144.08 331 *eP* **PKPdf** **04 45 04.3 +1.4**
LZH Lanzhou 144.81 354 ⇓PKP **PKPab** **04 45 03.0 -0.2**
LZH pSPKP sPKPdf 04 45 13.0 +1.0
LZH sPKP 04 45 17.0
MTN Manton Dam 145.76 245 PKPbc **PKPdf** **04 45 05.9 -0.3**
XAN Xi'an 145.92 346 P **PKPdf** **04 45 05.0 -1.1**
XAN pP pPKPbc 04 45 12.5 +0.1
FITZ Fitzroy Crossi 148.07 232 **PKiKP** **04 45 15.1 +0.1**
PYUN Piuthan 148.72 29 *eP* **PKPbc** **04 45 14.2 -0.7**
DANN Dangsing 148.87 28 *eP* **PKPbc** **04 45 14.7 -0.7**
comp=Z,56nm,0.9s
KOLN Koldanda 149.29 28 *eP* **PKPbc** **04 45 15.0 -1.4**
ENH Enshi 149.34 343 PKPbc **PKPbc** **04 45 15.4 -0.8**
GKN Gorkha 149.57 27 *eP* **PKPbc** **04 45 16.0 -1.0**
KKN Kakani 150.03 26 *eP* **PKPbc** **04 45 17.3 -0.9**
DMN Daman 150.12 26 *eP* **PKPbc** **04 45 17.4 -1.1**
comp=Z,40nm,1.0s
GUN Gumba 150.19 25 *eP* **PKPbc** **04 45 18.1 -0.7**
PKIN Phulchoki 150.27 26 *eP* **PKPbc** **04 45 17.5 -1.4**
comp=Z,31nm,1.0s
PKI Pulchoki 150.28 26 *eP* **PKPbc** **04 45 17.6 -1.4**
comp=Z,34nm,1.0s
JIRN Jiri 150.53 25 *eP* **PKPbc** **04 45 18.2 -1.4**
RAMN Ramite 151.33 25 *eP* **PKPbc** **04 45 20.3 -1.1**
TAPN Taplejung 151.42 22 *eP* **PKPbc** **04 45 20.4 -1.2**
ODAN Odare 151.73 23 *eP* **PKPbc** **04 45 21.0 -1.3**
HYBB Hyderabad (bro 153.69 50 *eP*KiKP **PKiKP** **04 45 27.1 +0.4**
PZH PanZhiHua 154.50 355 PKPbc **PKPdf** **04 45 21.3 +1.4**
CMAR Chiang Mai Arr 162.59 2 PKP **PKPdf** **04 45 29.0 -0.5**
comp=Z,0.7nm,0.4s,baz=309,slow=2.0,SNR=5.1

*TIR **26** 04:28:24.3,42.˚64N×13.˚48E,h10km±5km, Ml4.8*
*MOS **26** 04:28:25.2±1.1,42.˚65N×13.˚28E,h5km,mb4.9/39, MS4.2/22,Error ellipse: s-maj=6.1km s-min=3.1km az=74.5*
*MED_RC **26** 04:28:25.0±0.4,42.˚59N×13.˚30E,h10km,MW4.9/14, Moment Tensor Solution.Mantle waves: s14,c28; Duration: 1s1 Moment tensor: Scale 10¹⁶Nm; Mrr-2.76±.07; Mθθ0.90±.06; Mϕϕ1.85±.05; Mrθ-1.06±.25; Mθϕ-1.69±.05; Mϕr0.34±.24; Best double couple: M₀3.16000×10¹⁶ NP1:ϕs130.00000°,δ55.00000°, λ-106.00000°. NP2:ϕs336.00000°,δ38.00000°, λ-69.00000°. Principal axes: T 3.2700, Plg9.0000°, Azm231.0000°; N -0.2300, Plg13.0000°, Azm139.0000°; P -3.0500, Plg74.0000°, Azm354.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*
*ROM **26** 04:28:25.9±0.0,42.˚605N±0.˚002×13.˚292E±0.˚004, h9km,ML4.7/163,Mw4.8 Error ellipse: s-maj=0.3km s-min=0.1km az=64.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-1.55; Mθθ0.60; Mϕϕ0.95; Mrθ-0.49; Mθϕ-0.92; Mϕr0.05; Fault plane solution: M₀1.71058×10¹⁶ NP1:ϕs333.00000°,δ40.00000°, λ-70.00000°. NP2:ϕs128.00000°,δ53.00000°, λ-106.00000°.*
*BJI **26** 04:28:25.4±0.0,42.˚50N×12.˚82E,h23km,mb4.7/35, mB5.1/19,Ms4.9/18,Ms7 4.7/18*
*LDG **26** 04:28:25.3±0.1,42.˚59N×13.˚32E,h11km,Md4.6/2, Ml4.5/42,Error ellipse: s-maj=2.0km s-min=1.2km az=47.0*
*BEO **26** 04:28:26.2±0.5,42.˚59N×13.˚19E,h0km, ML4.8/18*
*PRU **26** 04:28:26.8±0.0,42.˚68N×13.˚54E,h0km, Ml4.7*
*NEIC **26** 04:28:26.7±1.7,42.˚62N±0.˚05×13.˚25E±0.˚06,h10km±1km, Error ellipse: s-maj=8.9km s-min=6.5km az=213.0*
*PDG **26** 04:28:26.3±0.6,42.˚60N×13.˚28E,h12km,MD4.8/3, ML4.8/14,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*IDC **26** 04:28:26.4±0.5,42.˚74N×13.˚10E,h0km,mb4.4/25, mbtmp4.4/37,ML4.0/11,MS4.2/84,Error ellipse: s-maj=10.4km s-min=9.1km az=108.0*
*NEIC **26** 04:28:27.5,42.˚65N×13.˚22E,h5km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-1.75; Mθθ0.41; Mϕϕ1.33; Mrθ0.87; Mθϕ-0.79; Mϕr-0.34; Fault plane solution: M₀2.00000×10¹⁶ NP1:ϕs165.06000°, δ35.72000°,λ-64.00000°. NP2:ϕs314.07000°,δ58.35000°, λ-107.49000°. Principal axes: T 1.9433, Plg12.0000°, Azm57.0000°; N 0.1096, Plg15.0000°, Azm323.0000°; P -2.0529, Plg71.0000°, Azm183.0000°;*
*GCMT **26** 04:28:27.9±0.2,42.˚52N±0.˚01×13.˚24E±0.˚02,h12km, MW4.9/125,Moment Tensor Solution. s47,c53; s125,c202; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.94±.05; Mθθ1.09±.06; Mϕϕ1.85±.05; Mrθ-0.20±.20; Mθϕ-1.66±.04; Mϕr-0.57±.18; Best double couple: M₀3.12000×10¹⁶ NP1:ϕs332.00000°,δ49.00000°, λ-76.00000°. NP2:ϕs131.00000°,δ43.00000°, λ-105.00000°. Principal axes: T 3.1900, Plg3.0000°, Azm52.0000°; N -0.1390, Plg10.0000°, Azm142.0000°; P -3.0510, Plg79.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*STR **26** 04:28:28.6±0.6,43˚N±.5˚×1˚3E±˚,h10km,mb4.5/36 Error ellipse: s-maj=0.0km s-min=0.0km az=6.9,preliminary*
ISC 26 04:28:27.1±0.5,42.˚60N±0.˚01×13.˚28E±0.˚01,h8km±3km, n975,σ1$71/1017,mb4.7/102,MS4.3/82,87C-45D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1201	**Domo (RI)**	**0.06**	**337**	P	**Pg**	**04 28 28.4**	**-0.7**
T1201				S	**Sg**	**04 28 30.2**	**-0.3**
T1204	**Amatrice, Fraz**	**0.08**	**19**	⇑P	**Pg**	**04 28 28.4**	**-1.0**
T1204				S	**Sg**	**04 28 30.0**	**-1.0**
RM33	**Pellescritta (**	**0.11**	**208**	⇑P	**Pg**	**04 28 29.4**	**-0.4**
RM33				S	**Sg**	**04 28 31.6**	**+0.1**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
T1202	**Accumoli, Fraz**	**0.11**	**337**	P	**Pg**	**04 28 29.3**	**-0.5**
T1202				S	**Sg**	**04 28 31.7**	**0.0**
CAMP	**Campotosto**	**0.12**	**126**	P	**Pg**	**04 28 29.2**	**-0.6**
CAMP				S	**Sg**	**04 28 31.1**	**-0.7**
T1218	**Civita (PG)**	**0.14**	**298**	⇑P	**Pg**	**04 28 29.7**	**-0.6**
T1218				S	**Sg**	**04 28 32.1**	**-0.3**
T1243	**Rocca Santa Ma**	**0.15**	**53**	⇑P	**Pg**	**04 28 29.5**	**-1.0**
T1243				S	**Sg**	**04 28 32.2**	**-0.6**
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1214	**Arquata del Tr**	**0.17**	**341**	P	**Pg**	**04 28 30.3**	**-0.4**
T1214				S	**Sg**	**04 28 33.2**	**0.0**
T1213	**Norcia, Frazio**	**0.17**	**316**	P	**Pg**	**04 28 30.2**	**-0.5**
T1213				S	**Sg**	**04 28 33.2**	**+0.1**
LNSS	**Leonessa**	**0.18**	**270**	⇑P	**Pg**	**04 28 30.5**	**-0.4**
LNSS				S	**Sg**	**04 28 33.1**	**-0.4**
LNSS				AML	AML		
LNSS				AML	AML		
T1212	**Cascia, Frazio**	**0.23**	**310**	P	**Pg**	**04 28 31.2**	**-0.6**
T1212				S	**Sg**	**04 28 34.9**	**-0.1**
T1242	**Castelluccio d**	**0.23**	**346**	P	**Pg**	**04 28 31.2**	**-0.7**
T1242				S	**Sg**	**04 28 35.3**	**+0.2**
TERO	**Teramo**	**0.24**	**85**	⇑P	**Pg**	**04 28 30.9**	**-1.0**
TERO				S	**Sg**	**04 28 34.9**	**-0.3**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
NRCA	**Norcia**	**0.26**	**332**		**Pg**	**04 28 31.7**	**-0.7**
NRCA	**Norcia**	**0.26**	**332**	P	**Pg**	**04 28 31.6**	**-0.7**
NRCA				S	**Sg**	**04 28 35.9**	**0.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
GIGS	**Gran Sasso**	**0.26**	**126**	P	**Pg**	**04 28 31.5**	**-0.9**
GIGS				S	**Sg**	**04 28 36.0**	**+0.1**
GIGS				AML	AML		
	comp=N,81350μm,0.8s						
GIGS				AML	AML		
AQU	**L'Aquila**	**0.27**	**160**		**Pg**	**04 28 31.9**	**-0.5**
AQU	**L'Aquila**	**0.27**	**160**	P	**Pg**	**04 28 31.9**	**-0.5**
AQU	**L'Aquila**	**0.27**	**160**	⇑P	**Pg**	**04 28 31.9**	**-0.5**
AQU				S	**Sg**	**04 28 36.5**	**+0.5**
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
AQU				AML	AML		
T1241	**Roccafluvione,**	**0.28**	**23**	⇑P	**Pg**	**04 28 31.7**	**-1.0**
T1241				S	**Sg**	**04 28 36.3**	**-0.1**
MMO1	**Montemonaco**	**0.30**	**6**	⇑P	**Pg**	**04 28 32.2**	**-0.9**
MMO1				S	**Sg**	**04 28 37.1**	**0.0**
MMO1				AML	AML		
	comp=N,71450μm,1.0s						
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
	comp=E,38950μm,0.9s						
MMO1				AML	AML		
	comp=N,71450μm,1.0s						
MMO1				AML	AML		
	comp=E,38900μm,0.9s						
MC2	**Monte Cornacci**	**0.32**	**348**	P	**Pg**	**04 28 32.8**	**-0.7**
MC2				S	**Sg**	**04 28 37.8**	**+0.1**
T1211	**Morro Reatino**	**0.32**	**258**	⇑P	**Pg**	**04 28 32.9**	**-0.6**
T1211				S	**Sg**	**04 28 38.3**	**+0.5**
FIAM	**Fiamignano**	**0.36**	**200**	⇑P	**Pg**	**04 28 33.5**	**-0.7**
FIAM				S	**Sg**	**04 28 39.4**	**+0.5**
FIAM				AML	AML		
FIAM				AML	AML		
T1215	**Vallo di Nera,**	**0.36**	**303**	P	**Pg**	**04 28 33.4**	**-0.9**
T1215				S	**Sg**	**04 28 39.8**	**+0.7**
ARRO	**Arrone**	**0.38**	**267**	⇑P	**Pg**	**04 28 33.9**	**-0.7**
FEMA	**Monte Fema**	**0.40**	**335**	P	**Pg**	**04 28 34.1**	**-0.9**
FEMA				S	**Sg**	**04 28 40.4**	**+0.2**
FAGN	**Fagnano**	**0.41**	**146**	P	**Pg**	**04 28 34.3**	**-0.7**
FAGN				AML	AML		
FAGN				AML	AML		
OFFI	**Offida**	**0.45**	**42**	⇑P	**Pg**	**04 28 35.6**	**-0.2**
OFFI				AML	AML		
OFFI				AML	AML		
FDMO	**Fiordimonte**	**0.46**	**342**	P	**Pg**	**04 28 35.0**	**-1.0**
FDMO				S	**Sg**	**04 28 42.3**	**+0.3**
FDMO				AML	AML		
FDMO				AML	AML		
GUMA	**Gualdo di Mace**	**0.46**	**5**	⇑P	**Pg**	**04 28 35.4**	**-0.7**
GUMA				S	**Sg**	**04 28 42.9**	**+0.7**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
VCEL	**Villa Celiera**	**0.46**	**117**	P	**Pg**	**04 28 35.0**	**-1.1**
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
CESI	**CESI - Serrava**	**0.49**	**325**	⇓P	**Pg**	**04 28 35.6**	**-1.0**
CESI				S	**Sg**	**04 28 43.5**	**+0.5**
CESI				AML	AML		
CESI				AML	AML		
CSP1	**Cessapalombo**	**0.49**	**353**	P	**Pg**	**04 28 35.7**	**-1.0**
CSP1				S	**Sg**	**04 28 43.3**	**+0.1**
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
TRTR	**Tortoreto Alta**	**0.51**	**66**	⇑P	**Pg**	**04 28 37.0**	**+0.1**
TRTR				AML	AML		
TRTR				AML	AML		
CESX	**Cesi**	**0.52**	**271**	⇑P	**Pg**	**04 28 36.0**	**-1.1**
CESX				AML	AML		
	comp=E,82650μm,0.5s						
CESX				AML	AML		
	comp=N,83350μm,0.5s						
T0110	**Collepietro**	**0.53**	**136**	P	**Pg**	**04 28 36.4**	**-0.9**
T0110				AML	AML		
T0110				AML	AML		
MNTP	**Montappone**	**0.55**	**14**	P	**Pg**	**04 28 37.3**	**-0.5**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
PTQR	**Pietraquaria**	**0.59**	**171**	P	**Pg**	**04 28 37.2**	**-1.3**
PTQR				AML	AML		
	comp=E,44150μm,1.1s						
PTQR				AML	AML		
	comp=N,31000μm,1.3s						
SEF1	**Sefro**	**0.60**	**336**	P	**Pg**	**04 28 37.5**	**-1.2**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
MDAR	**Monte D'Aria**	**0.60**	**350**	P	**Pg**	**04 28 37.5**	**-1.2**
MDAR				S	**Sg**	**04 28 47.0**	**+0.4**
MDAR				AML	AML		
MDAR				AML	AML		
	comp=E,93000μm,1.2s						
MDAR				AML	AML		
PIO1	**Pioraco**	**0.61**	**339**	P	**Pg**	**04 28 37.9**	**-1.1**
PIO1				AML	AML		
	comp=E,64400μm,0.8s						
PIO1				AML	AML		
	comp=E,64350μm,0.8s						
PIO1				AML	AML		
PIO1				AML	AML		
SSM1	**San Severino M**	**0.63**	**353**	P	**Pg**	**04 28 38.2**	**-1.1**
ASSB	**Assisi San Ben**	**0.64**	**314**	P	**Pg**	**04 28 38.2**	**-1.2**
ASSB				AML	AML		
	comp=E,74000μm,0.6s						
ASSB				AML	AML		
	comp=N,70200μm,1.0s						
FIU1	**Fiuminata**	**0.64**	**336**	P	**Pg**	**04 28 38.2**	**-1.2**
FIU1				AML	AML		
	comp=E,53650μm,0.6s						
FIU1				AML	AML		
	comp=N,59900μm,1.3s						
FIU1				AML	AML		
	comp=N,59950μm,1.3s						
FIU1				AML	AML		
	comp=E,53650μm,0.6s						
GAG1	**Gagliole**	**0.65**	**346**	P	**Pg**	**04 28 38.6**	**-1.2**
GAG1				AML	AML		
GAG1				AML	AML		
SRES	**S.Oreste - Sor**	**0.68**	**238**	⇑P	**Pg**	**04 28 38.9**	**-1.3**
SRES				AML	AML		
	comp=E,36000μm,0.8s						
SRES				AML	AML		
	comp=N,28300μm,1.6s						
MTL1	**Matelica**	**0.68**	**343**	P	**Pg**	**04 28 39.5**	**-0.9**
CADA	**Capodarco di F**	**0.69**	**31**	P	**Pg**	**04 28 40.5**	**+0.1**
CERT	**Cerreto**	**0.69**	**199**	P	**Pg**	**04 28 39.1**	**-1.4**
CERT				AML	AML		
	comp=E,81950μm,0.8s						
CERT				AML	AML		
	comp=N,52250μm,1.2s						
SNTG	**Esanatoglia**	**0.70**	**339**	P	**Pg**	**04 28 39.2**	**-1.4**
SNTG				AML	AML		
	comp=N,6360μm,1.1s						
SNTG				AML	AML		
	comp=N,6360μm,1.0s						
SNTG				AML	AML		
	comp=E,34300μm,0.9s						
SNTG				AML	AML		
	comp=N,52600μm,1.0s						
SNTG				AML	AML		
	comp=E,4330μm,0.9s						
SNTG				AML	AML		
	comp=N,6355μm,1.0s						
MTCE	**Montecelio**	**0.70**	**215**	P	**Pg**	**04 28 39.2**	**-1.5**
MTCE				AML	AML		
	comp=N,42450μm,1.3s						
MTCE				AML	AML		
	comp=E,60900μm,1.1s						
MTCE				AML	AML		
	comp=N,42500μm,1.3s						
TRE1	**Treia**	**0.71**	**2**	P	**Pg**	**04 28 40.1**	**-0.6**
TRE1				AML	AML		
TRE1				AML	AML		
TRE1				AML	AML		
EL6	**Elcito**	**0.74**	**350**	P	**Pg**	**04 28 39.9**	**-1.4**
EL6				AML	AML		
	comp=E,79800μm,0.9s						
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
	comp=E,79950μm,0.9s						
ATCC	**AVT- Casa Cast**	**0.75**	**321**	P	**Pg**	**04 28 40.3**	**-1.2**
INTR	**Introdacqua**	**0.75**	**142**	⇑P	**Pg**	**04 28 40.1**	**-1.5**
INTR				AML	AML		
	comp=E,43μm,1.0s						
INTR				AML	AML		
	comp=N,58μm,1.3s						
INTR				AML	AML		
	comp=E,43050μm,1.0s						
INTR				AML	AML		
	comp=E,43μm,1.0s						
INTR				AML	AML		
	comp=N,86350μm,1.3s						
CING	**Cingoli**	**0.77**	**355**	P	**Pg**	**04 28 40.8**	**-1.2**
CING				S	**Sg**	**04 28 52.6**	**+0.5**
CING				AML	AML		
	comp=E,72300μm,1.2s						
CING				AML	AML		
	comp=N,59850μm,1.3s						

VVLD Villa Vallelon 0.77 161 P **Pg** 04 28 41.0 -1.0
VVLD AML AML
comp=N,37300µm,1.5s
VVLD AML AML
comp=N,37250µm,1.5s
VVLD AML AML
comp=E,40250µm,0.6s
FOSV Fossato di Vic 0.79 331 P **Pg** 04 28 40.9 -1.5
FOSV AML AML
comp=E,66150µm,0.8s
FOSV AML AML
comp=N,59500µm,0.7s
RCAV Rocca di Cave 0.80 198 P **Pg** 04 28 41.1 -1.4
GUAR Guarcino 0.81 178 P **Pg** 04 28 41.3 -1.3
GUAR AML AML
comp=N,48500µm,1.1s
GUAR AML AML
comp=E,35250µm,1.0s
PP3 Marolino 0.81 17 ⇑P **Pg** 04 28 42.2 -0.5
PP3 AML AML
PP3 AML AML
PP3 AML AML
PP3 AML AML
MURB Monte Urbino 0.86 320 **Pg** 04 28 42.2 -1.5
MURB Monte Urbino 0.86 320 P **Pg** 04 28 42.4 -1.4
MURB AML AML
MURB AML AML
MURB AML AML
MURB AML AML
MMUR Monte Murano 0.86 346 P **Pg** 04 28 42.8 -1.0
MMUR AML AML
comp=N,64400µm,0.5s
MMUR AML AML
comp=N,64350µm,0.5s
MMUR AML AML
LPEL Lama dei Pelig 0.87 129 P **Pg** 04 28 42.0 -1.8
LPEL AML AML
comp=E,41350µm,0.8s
LPEL AML AML
comp=N,33900µm,0.6s
RMP Rome, Mte Porz 0.90 209 P **Pg** 04 28 42.7 -1.7
RMP AML AML
comp=E,55350µm,0.9s
RMP AML AML
comp=N,87400µm,0.8s
ATTE AVT- Monte Tez 0.91 311 P **Pg** 04 28 43.3 -1.2
ATTE AML AML
comp=E,42450µm,0.8s
ATTE AML AML
comp=N,28000µm,0.5s
SSFR Montelago di S 0.91 336 P **Pg** 04 28 43.1 -1.5
SSFR AML AML
comp=E,50500µm,0.2s
SSFR AML AML
comp=N,44400µm,0.2s
SSFR AML AML
comp=N,48200µm,0.2s
SSFR AML AML
comp=E,51500µm,1.2s
MGAB Montegabbione 0.92 290 P **Pg** 04 28 43.4 -1.3
MGAB AML AML
comp=N,89850µm,1.1s
MGAB AML AML
MGAB AML AML
comp=N,85500µm,1.2s
MGAB AML AML
ATFO Monte Foce - G 0.92 326 P **Pg** 04 28 43.5 -1.4
ATFO AML AML
comp=E,61000µm,1.4s
ATFO AML AML
comp=N,43700µm,0.7s
ARVD Arcevia 0.93 345 P **Pg** 04 28 43.3 -1.6
ARVD AML AML
comp=E,47500µm,0.7s
ARVD AML AML
comp=N,38950µm,0.7s
ATSC Scheggia e Pas 0.93 332 P **Pg** 04 28 43.5 -1.5
VIVA Pratoni del Vi 0.93 204 P **Pg** 04 28 44.7 -0.3
POFI Posta Fibreno 0.94 160 P **Pg** 04 28 44.6 -0.6
POFI AML AML
comp=E,22800µm,0.5s
POFI AML AML
comp=N,23150µm,1.6s
POFI AML AML
comp=N,22200µm,1.6s
POFI AML AML
comp=E,24200µm,1.1s
RDP Rocca di Papa 0.94 207 P **Pg** 04 28 43.4 -1.8
RDP AML AML
comp=E,96250µm,0.6s
RDP AML AML
MA9 Marino 0.95 209 P **Pg** 04 28 43.4 -2.0
MA9 AML AML
comp=E,93750µm,0.6s
MA9 AML AML
comp=N,56150µm,0.9s
ATLO AVT- Montelove 0.96 318 P **Pg** 04 28 43.8 -1.7
SAMA S.Maria delle 0.97 212 P **Pg** 04 28 44.4 -1.3
AOI Ancona 0.97 14 P **Pg** 04 28 44.4 -1.5
AOI AML AML
comp=N,39200µm,0.5s
AOI AML AML
comp=E,50950µm,0.8s
LRP Arpino 0.98 167 P **Pg** 04 28 45.3 -0.6
LRP AML AML
comp=E,24500µm,1.2s
LRP AML AML
comp=N,26350µm,1.6s
TB01 Gubbio 0.99 322 P **Pg** 04 28 44.5 -1.8
ATVA AVT- Monte Val 1.00 313 P **Pg** 04 28 45.1 -1.2
TB02 Pietralunga 1.00 320 P **Pg** 04 28 44.7 -1.6
FRON Frontone 1.00 336 P **Pg** 04 28 44.5 -1.9
FRON AML AML
comp=N,43400µm,0.6s
FRON AML AML
comp=E,52450µm,1.1s
ATVO AVT- Monte Val 1.01 321 P **Pg** 04 28 44.8 -1.7
ATVO AML AML
comp=E,38700µm,0.6s
ATVO AML AML
comp=N,47600µm,0.7s
LAV9 Lanuvio 1.02 205 P **Pg** 04 28 46.0 -0.7
LAV9 AML AML
comp=E,74350µm,0.6s
LAV9 AML AML
comp=N,80250µm,1.6s
LAV9 AML AML
comp=E,76100µm,0.6s
LAV9 AML AML
comp=N,85700µm,1.5s
TB03 Pietralunga 1.02 322 P **Pg** 04 28 45.2 -1.6
ATBU Serra di Buran 1.02 329 P **Pg** 04 28 45.4 -1.4
SACS San Casciano d 1.04 284 P **Pg** 04 28 46.5 -0.6
SACS AML AML
comp=N,40050µm,1.3s
SACS AML AML
comp=N,40700µm,1.3s
SACS AML AML
comp=E,36050µm,1.2s
SACS AML AML
comp=E,32850µm,1.2s
ATMI Monte Miggiano 1.04 315 P **Pg** 04 28 46.2 -1.0
ATMI AML AML
comp=E,85900µm,0.6s
ATMI AML AML
comp=N,90550µm,0.9s
COR1 Corinaldo 1.05 349 P **Pg** 04 28 46.8 -0.5
COR1 AML AML
COR1 AML AML
comp=E,56600µm,1.3s
ATPC Poggio Castell 1.06 326 P **Pg** 04 28 45.9 -1.7
ATPI Pietralunga - 1.06 323 P **Pg** 04 28 45.8 -1.8
ATPI AML AML
comp=E,51550µm,0.6s
ATPI AML AML
comp=N,37500µm,1.4s
PIEI Pieia 1.08 330 P **Pg** 04 28 46.1 -1.8
PIEI AML AML
comp=E,19550µm,1.1s
PIEI AML AML
comp=N,28100µm,0.9s
LATE Laterza 1.09 271 Pn **Pg** 04 28 46.5 -1.5
LATE Laterza 1.09 271 ⇑P **Pg** 04 28 46.6 -1.5
TOLF Tolfa 1.09 241 ⇑P **Pg** 04 28 46.4 -1.7
TOLF AML AML
comp=N,20450µm,0.7s
TOLF AML AML
comp=E,27450µm,1.6s
MPAG Monte Paganucc 1.09 340 P **Pg** 04 28 46.5 -1.7
MPAG AML AML
comp=E,27450µm,0.8s
MPAG AML AML
comp=N,37250µm,1.4s
MPAG AML AML
comp=N,37600µm,1.4s
MPAG AML AML
comp=E,26100µm,0.6s
SENI Senigallia 1.10 358 P **Pg** 04 28 48.0 -0.2
SENI AML AML
SENI AML AML
comp=E,54900µm,0.9s
SENI AML AML
comp=N,49650µm,1.0s
SENI AML AML
RNI2 Rionero Sannit 1.11 144 P **Pg** 04 28 46.9 -1.5
RNI2 AML AML
comp=E,48650µm,1.6s
RNI2 AML AML
comp=N,41300µm,1.0s
RNI2 AML AML
comp=E,50400µm,1.6s
RNI2 AML AML
comp=N,43300µm,1.0s
LIK San Giovanni I 1.12 169 P **Pg** 04 28 47.8 -0.7
LATB Latina 1.13 192 P **Pg** 04 28 46.3 -2.6
LATB AML AML
comp=N,8210µm,1.2s
LATB AML AML
comp=E,10150µm,1.0s
APEC Apecchio 1.15 327 P **Pg** 04 28 47.9 -1.2
APEC AML AML
comp=E,8325µm,0.6s
APEC AML AML
comp=E,49550µm,0.7s
APEC AML AML
comp=N,40300µm,0.9s
APEC AML AML
comp=N,9305µm,0.9s
CERA Filignano 1.15 151 P **Pg** 04 28 47.0 -2.1
CERA AML AML
comp=E,29350µm,0.9s
CERA AML AML
comp=N,30650µm,1.4s
CERA AML AML
comp=N,32050µm,1.4s
CERA AML AML
comp=E,30650µm,0.9s
FSSB Fossombrone 1.15 341 P **Pg** 04 28 47.3 -1.9
FSSB AML AML
comp=E,80300µm,0.5s
FSSB AML AML
CDCA Citt' di Caste 1.15 318 P **Pn** 04 28 50.6 +1.1
ATMC Monte Cedrone 1.16 317 P **Pg** 04 28 48.4 -1.0
BADI Badiali 1.18 320 P **Pb** 04 28 49.0 -0.8
BADI AML AML
comp=E,2825µm,1.0s
BADI AML AML
comp=N,31550µm,1.0s
SF03 Valle Cupa 1.19 280 P **Pb** 04 28 49.1 -0.9
MCIV Monte Civitell 1.20 279 P **Pb** 04 28 48.3 -1.7
MCIV AML AML
comp=E,12250µm,0.7s
MCIV AML AML
comp=N,12825µm,1.2s
FRES Fresagrandinar 1.21 121 P **Pb** 04 28 47.7 -2.5
FRES AML AML
comp=N,7555µm,0.7s
FRES AML AML
comp=E,13900µm,0.5s
CAFI Castiglion Fio 1.21 307 P **Pb** 04 28 49.2 -1.0
CAFI AML AML
comp=E,28050µm,0.7s
CAFI AML AML
comp=N,21500µm,1.0s
CAFI AML AML
comp=E,28450µm,0.7s
CAFI AML AML
comp=N,21850µm,1.0s
SF11 Podere del Sol 1.21 283 P **Pb** 04 28 49.6 -0.7
SF04 Casetta 1.22 282 P **Pb** 04 28 49.3 -1.1
SF04 AML AML
comp=N,13500µm,1.3s
SF04 AML AML
comp=E,13650µm,1.2s
PE3 Peglio 1.23 332 P **Pn** 04 28 49.5 -1.2
SF14 Selvena 1.24 278 P **Pn** 04 28 49.6 -1.1
SF13 Bagnolo 1.24 281 P **Pn** 04 28 49.4 -1.4
TRIV Trivento 1.26 131 P **Pn** 04 28 49.5 -1.5
TRIV AML AML
comp=E,15230µm,1.0s
TRIV AML AML
comp=N,18700µm,0.8s
TRIV AML AML
comp=E,16550µm,0.9s
TRIV AML AML
comp=N,19700µm,0.8s
SF01 Poggio Pratacc 1.28 280 P **Pn** 04 28 50.8 -0.6
SF01 AML AML
comp=E,25200µm,0.6s
SF01 AML AML
comp=N,27950µm,1.1s
SSP9 Sansepolcro 1.28 319 P **Pn** 04 28 50.6 -0.8
SSP9 AML AML
comp=N,46600µm,1.1s
SSP9 AML AML
comp=E,31150µm,1.2s
PARC Parchiule 1.29 324 P **Pn** 04 28 50.0 -1.5
PARC AML AML
comp=N,35400µm,0.9s
PARC AML AML
comp=E,31850µm,1.1s
ARCI Arcidosso 1.35 281 P **Pn** 04 28 51.6 -0.8
ARCI AML AML
comp=E,7575µm,0.9s
ARCI AML AML
comp=N,6335µm,1.6s
PESA Pesaro 1.38 347 P **Pn** 04 28 52.0 -0.6
PESA AML AML
comp=E,53750µm,1.2s
PESA AML AML
comp=N,68200µm,1.1s
VAGA Valle Agricola 1.38 149 P **Pn** 04 28 51.9 -0.8
VAGA AML AML
comp=N,12950µm,0.9s
VAGA AML AML
comp=E,12605µm,1.0s
VAGA AML AML
comp=N,13400µm,1.0s
VAGA AML AML
comp=E,13055µm,1.0s
CPGN Carpegna, Ital 1.39 330 P **Pn** 04 28 53.0 +0.1
CPGN AML AML
CPGN AML AML
CRE Caprese Michel 1.41 317 P **Pn** 04 28 51.5 -1.6
CRE AML AML
comp=E,14150µm,1.5s
CRE AML AML
comp=N,15000µm,1.3s
BSSO Busso 1.44 137 P **Pn** 04 28 52.3 -1.2
BSSO AML AML
comp=E,5325µm,1.6s
BSSO AML AML
comp=N,8060µm,1.6s
BSSO AML AML
comp=E,12450µm,1.5s
BSSO AML AML
comp=N,19650µm,1.5s
RSM Repubblica di 1.46 336 P **Pn** 04 28 54.0 +0.2
MODR Mondragone 1.52 163 P **Pn** 04 28 54.1 -0.5
MODR AML AML
comp=E,7995µm,1.6s
MODR AML AML
comp=N,8870µm,1.5s
CIGN Sant'Elia a Pi 1.54 128 P **Pn** 04 28 53.8 -1.0
CIGN AML AML
comp=E,8680µm,1.6s
CIGN AML AML
comp=N,9960µm,0.9s
PTRJ Pietraroja 1.55 143 P **Pn** 04 28 54.3 -0.7
PTRJ AML AML
comp=E,15150µm,0.9s
PTRJ AML AML
comp=N,11000µm,1.1s
PTRJ AML AML
comp=N,10155µm,1.1s
PTRJ AML AML
comp=E,17400µm,0.9s
PIGN Pignataro Magg 1.55 154 P **Pn** 04 28 55.1 +0.1
PIGN AML AML
comp=N,9370µm,1.6s
PIGN AML AML
comp=N,9785µm,1.6s
PIGN AML AML
comp=E,8410µm,1.6s
PIGN AML AML
comp=E,8150µm,1.6s
ASQU Asqua 1.62 318 P **Pn** 04 28 54.9 -1.1
ASQU AML AML
comp=N,14600µm,1.1s
ASQU AML AML
comp=E,12150µm,0.7s
GATE Gambatesa 1.63 131 P **Pb** 04 28 57.0 -0.4
GATE AML AML
comp=N,6450µm,0.9s
GATE AML AML
comp=E,4995µm,1.5s
GATE AML AML
comp=N,6455µm,0.9s
GATE AML AML
comp=E,8120µm,0.9s
MELA Melanico ??? S 1.64 123 P **Pn** 04 28 55.4 -0.7
MELA AML AML
comp=N,20700µm,0.7s
MELA AML AML
comp=N,21550µm,0.7s
MELA AML AML
comp=E,20750µm,1.6s
MELA AML AML
comp=E,21600µm,1.6s
BLLA Bellaria 1.65 339 P **Pn** 04 28 56.1 -0.2
BLLA AML AML
comp=E,46550µm,1.6s
BLLA AML AML
comp=N,40150µm,1.3s
SFI Santa Sofia 1.67 322 P **Pn** 04 28 55.5 -1.2
SFI AML AML
comp=E,12750µm,0.9s
SFI AML AML
comp=E,12650µm,0.9s
SFI AML AML
comp=N,14450µm,1.0s
SFI AML AML
comp=N,14750µm,1.0s
FROS Frosini 1.68 292 P **Pn** 04 28 56.0 -0.7
CSNT Castellina Chi 1.70 301 P **Pn** 04 28 56.3 -0.8
CSNT AML AML
comp=N,8005µm,0.8s
CSNT AML AML
comp=E,6965µm,1.0s
TREM Isole Tremiti 1.72 105 P **Pn** 04 28 56.8 -0.4
TREM AML AML
comp=N,31000µm,0.6s
TREM AML AML
comp=E,35950µm,0.6s
A309A Martorano (FC) 1.74 335 P **Pn** 04 28 57.2 -0.4
VITU Vitulano (BN) 1.74 144 P **Pn** 04 28 58.2 +0.5
VITU AML AML
comp=N,7120µm,1.6s
VITU AML AML
comp=N,7370µm,1.6s
VITU AML AML
comp=E,6675µm,1.6s
VITU AML AML
comp=E,3845µm,1.6s
OSSC Osservatorio P 1.75 302 **Pn** 04 28 57.4 -0.4
OSSC Osservatorio P 1.75 302 P **Pn** 04 28 57.2 -0.6
OSSC AML AML
comp=E,7460µm,1.2s
OSSC AML AML
comp=N,7465µm,1.2s
OSSC AML AML
comp=E,6485µm,0.7s
OSSC AML AML
comp=N,6425µm,0.7s
RUFI Rufina 1.79 314 P **Pn** 04 28 57.4 -0.9
RUFI AML AML
comp=N,12575µm,0.9s
RUFI AML AML
comp=E,10375µm,0.7s
CASP Castiglione de 1.79 277 **Pn** 04 28 57.0 -1.3
CASP Castiglione de 1.79 277 P **Pn** 04 28 57.6 -0.7
CASP AML AML
comp=N,2150µm,1.1s
CASP AML AML
comp=E,2440µm,1.6s
TRIF Trifonti 1.82 287 P **Pn** 04 28 58.2 -0.6
TRIF AML AML
comp=E,4355µm,0.9s
TRIF AML AML
comp=N,4785µm,0.8s
PAOL Paolisi 1.84 148 Pn **Pn** 04 28 59.2 +0.2
MOCO Biccari - m.te 1.86 131 P **Pg** 04 29 02.4 -0.5
MOCO AML AML
comp=E,6755µm,0.8s
MOCO AML AML
comp=N,3545µm,0.8s
MOCO AML AML
comp=E,6900µm,0.8s
MOCO AML AML
comp=N,3745µm,0.8s
LMD Lutirano 1.87 323 P **Pn** 04 28 59.8 +0.4
LMD AML AML
comp=E,11025µm,0.8s
LMD AML AML
comp=N,8790µm,0.8s
APRC Apricena 1.88 116 P **Pn** 04 28 59.3 -0.3
APRC AML AML
comp=N,12150µm,0.4s
APRC AML AML
comp=E,8205µm,0.5s
DUGI Dugi Otok 1.90 42 *e*Pn **Pn** 04 28 58.8 -1.0
BRIS BRISIGHELLA 2.01 321 P **Pn** 04 29 01.7 +0.4
BRIS AML AML
comp=N,13175µm,0.9s
BRIS AML AML
comp=E,9700µm,1.1s
BRIS AML AML
comp=E,168µm,1.4s
BRIS AML AML
comp=N,232µm,1.1s
SGRT San Giovanni R 2.02 114 **Pn** 04 29 01.2 -0.2
SGRT San Giovanni R 2.02 114 P **Pn** 04 29 01.0 -0.5
baz=116
SGRT S **Sn** 04 29 25.7 -1.2
baz=116
SGRT AMP
comp=N,28nm,0.7s,baz=116
SGRT San Giovanni R 2.02 114 P **Pn** 04 29 01.3 -0.2
SGRT AML AML
comp=E,7265µm,0.7s
SGRT AML AML
comp=N,8765µm,0.8s
SEI Scarperia 2.02 317 P **Pn** 04 29 01.2 -0.3
SEI AML AML
comp=E,8725µm,0.4s
SEI AML AML
comp=N,19050µm,0.9s
A318A Donoratico (LI 2.06 285 P **Pn** 04 29 01.3 -0.6
CRMI Carmignano 2.06 306 P **Pn** 04 29 02.2 +0.1
CRMI AML AML
comp=N,407µm,1.1s
CRMI AML AML
comp=E,3870µm,1.2s
CRMI AML AML
comp=N,2995µm,1.1s
CRMI AML AML
comp=E,514µm,1.2s
IMOL Imola, Italy 2.08 328 P **Pb** 04 29 05.5 +0.4
MPPT Montemurlo 2.10 311 P **Pn** 04 29 02.2 -0.3
MPPT AML AML
comp=N,5495µm,1.5s
MPPT AML AML
comp=E,6150µm,0.9s
VIRC Vir 2.12 37 *e*Pn **Pn** 04 29 02.1 -0.7
SGTA Sant Agata di 2.14 133 P **Pn** 04 29 03.1 0.0
SGTA AML AML
comp=E,6700µm,0.8s
SGTA AML AML

SGTA AML AML
comp=E,6940µm,0.8s
SGTA AML AML
comp=N,4770µm,1.6s
MSAG Monte S. Angel 2.15 114 P **Pn 04 29 02.5 -0.7**
MSAG AML AML
comp=N,19500µm,0.5s
MSAG AML AML
comp=N,19750µm,0.5s
MSAG AML AML
comp=E,11900µm,0.6s
MSAG AML AML
comp=E,10720µm,0.6s
CAFE Carife 2.15 136 AML AML
comp=N,4600µm,1.6s
CAFE AML AML
comp=E,6315µm,1.4s
CAFE AML AML
comp=N,4750µm,1.6s
CAFE AML AML
comp=E,6475µm,1.4s
A319A Santa Luce (PI 2.17 295 P **Pn 04 29 03.0 -0.5**
MORI Morici 2.18 54 *i* Pn **Pn 04 29 03.1 -0.4**
MTCR Monte La Croce 2.19 311 P **Pn 04 29 03.5 -0.4**
MTRZ Monterenzio 2.21 324 P **Pn 04 29 05.4 +1.3**
SNAL S. Angelo Dei 2.21 139 P **Pn 04 29 05.0 +0.8**
SNAL AML AML
comp=N,9440µm,1.6s
SNAL AML AML
comp=E,7270µm,1.4s
SNAL AML AML
comp=N,9695µm,1.6s
SNAL AML AML
comp=E,6785µm,1.3s
FNVD Fontana Vidola 2.22 316 P **Pn 04 29 04.4 +0.1**
FNVD AML AML
comp=N,8975µm,0.8s
FNVD AML AML
comp=E,13200µm,1.0s
CELB S.Piero in Cam 2.27 275 P **Pn 04 29 03.9 -1.1**
CELB AML AML
comp=E,1212µm,1.6s
CELB AML AML
comp=N,2305µm,1.3s
NVLJ Novalja 2.27 30 *e*Pn **Pn 04 29 04.0 -0.9**
PII Pisa 2.31 300 P **Pn 04 29 05.6 +0.3**
PII AML AML
comp=N,3540µm,0.7s
PII AML AML
comp=E,3605µm,0.5s
BRJN Brijuni 2.33 8 *i* Pn **Pn 04 29 04.5 -1.1**
BRJN Brijuni 2.33 8 P **Pn 04 29 04.5 -1.1**
POPM Popiglio 2.34 309 P **Pn 04 29 05.0 -0.9**
POPM AML AML
comp=E,3140µm,0.9s
POPM AML AML
comp=N,2835µm,1.0s
CAPA Cerignola FG 2.38 126 AML AML
comp=N,10280µm,1.5s
CAPA AML AML
comp=E,10550µm,1.6s
VULT Monte Vulture 2.40 133 P **Pn 04 29 07.3 +0.6**
VULT AML AML
comp=N,7020µm,0.7s
VULT AML AML
comp=E,5470µm,1.0s
VULT AML AML
comp=E,5145µm,1.0s
VULT AML AML
comp=N,7325µm,0.7s
RABC Rab 2.41 26 *e*Pn **Pn 04 29 06.0 -0.7**
ZCCA Zocca 2.42 317 **Pn 04 29 07.9 +0.9**
ZCCA Zocca 2.42 317 P **Pb 04 29 09.2 -1.8**
ZCCA AML AML
comp=E,5115µm,1.1s
ZCCA AML AML
comp=N,6885µm,1.2s
ZCCA AML AML
comp=E,5570µm,1.2s
ZCCA AML AML
comp=N,6450µm,1.2s
MAIM Mastiano 2.42 304 P **Pn 04 29 06.4 -0.6**
BDI Bagni Di Lucca 2.44 308 P **Pn 04 29 07.3 0.0**
MRLC Muro Lucano 2.48 137 AML AML
comp=N,2480µm,1.6s
MRLC AML AML
comp=E,2350µm,1.6s
MRLC AML AML
comp=E,2420µm,1.6s
MRLC AML AML
comp=N,2396µm,1.6s
CARD Cardoso 2.49 306 P **Pn 04 29 07.3 -0.6**
CARD AML AML
comp=E,2975µm,0.5s
CARD AML AML
comp=N,3300µm,1.1s
SMRN Sveta Marina 2.51 14 *e*Pn **Pn 04 29 07.1 -1.1**
PALZ Palazzo San Ge 2.60 129 P **Pn 04 29 09.7 +0.3**
PALZ AML AML
comp=N,8315µm,1.6s
PALZ AML AML
comp=E,7190µm,1.2s
VLC Villacollemand 2.62 307 **Pn 04 29 08.6 -1.2**
VLC Villacollemand 2.62 307 P **Pn 04 29 08.8 -0.9**
VLC AML AML
comp=N,3745µm,1.0s
VLC AML AML
comp=E,2015µm,1.3s
VLC AML AML
comp=N,3760µm,0.9s
VLC AML AML
comp=E,1985µm,1.3s
GSCL Gusciola 2.63 313 P **Pn 04 29 09.8 0.0**
GSCL AML AML
comp=E,5500µm,1.1s
GSCL AML AML
comp=N,3465µm,0.7s
UDBI Udbina 2.64 42 *e*Pn **Pn 04 29 10.4 +0.4**
LSTV Lastovo 2.67 85 *e*Pn **Pn 04 29 09.6 -0.7**
MRVN Minervino Murg 2.67 124 P **Pn 04 29 10.6 +0.2**
MRVN AML AML
comp=E,2050µm,0.9s
MRVN AML AML
comp=N,1810µm,1.6s
KIJV Kijevo 2.67 57 *e*Pn **Pn 04 29 10.7 +0.2**
ACER Acerenza 2.69 131 P **Pn 04 29 12.4 +1.7**
ACER AML AML
comp=N,3340µm,0.7s
ACER AML AML
comp=E,4460µm,0.9s
ACER AML AML
comp=N,3535µm,0.7s
ACER AML AML
comp=E,4195µm,0.9s
CMPR Campora 2.74 146 P **Pn 04 29 12.9 +1.4**
CMPR AML AML
comp=N,1052µm,0.9s
CMPR AML AML
comp=E,1300µm,1.6s
A250A Rusevo Krmpots 2.75 25 *e*Pn **Pn 04 29 11.0 -0.4**
EQUI Equi 2.77 305 P **Pn 04 29 11.0 -0.7**
EQUI AML AML
comp=E,1815µm,1.0s
EQUI AML AML
comp=N,2880µm,0.7s
CAVE Cavezzo 2.80 325 AML AML
comp=N,8165µm,0.9s
CAVE AML AML
comp=E,9120µm,1.0s
SERM Sermide 2.80 330 AML AML
comp=E,4445µm,1.0s
SERM AML AML
comp=N,4155µm,1.2s
SERM AML AML
comp=N,7290µm,1.3s
SERM AML AML
comp=E,8105µm,0.8s
MAKA Makarska 2.83 75 *e*Pn **Pn 04 29 11.9 -0.6**
PLIT Plitvice 2.84 36 *e*Pn **Pn 04 29 12.4 -0.3**
RIY Rijeka 2.85 17 *e*Pn **Pn 04 29 12.4 -0.5**
PLMA Palmaria, Port 2.89 301 P **Pn 04 29 12.9 -0.4**
PLMA AML AML
comp=E,1465µm,0.6s
PLMA AML AML
comp=N,1220µm,0.7s

RICI Ricice 2.96 71 *e*Pn **Pn 04 29 14.7 +0.3**
MTSN Montesano sull 2.98 141 AML AML
comp=N,1340µm,1.5s
MTSN AML AML
comp=E,1645µm,1.6s
SKDS Skadanscina 2.99 10 *e*Pn **Pn 04 29 13.1 -1.7**
SKDS Skadanscina 2.99 10 *i* Pn **Pn 04 29 13.6 -1.2**
TEOL Teolo 2.99 338 Pn **Pn 04 29 14.8 0.0**
TEOL Teolo 2.99 338 P **Pn 04 29 14.7 -0.1**
TEOL AML AML
comp=E,15700µm,0.9s
TEOL AML AML
comp=N,17200µm,1.1s
MGR Morigerati 3.00 144 P **Pn 04 29 16.4 +1.5**
MGR AML AML
comp=N,729µm,1.6s
MGR AML AML
comp=N,736µm,1.4s
MGR AML AML
comp=E,1160µm,1.6s
MGR AML AML
comp=E,1145µm,1.6s
GRAM Graiana 3.00 310 AML AML
comp=E,3930µm,1.0s
GRAM AML AML
comp=N,4275µm,0.8s
SMPL Sampolo 3.01 262 P **Pn 04 29 13.9 -1.1**
SMPL Sampolo 3.01 262 P **Pn 04 29 13.9 -1.1**
SMPL AML AML
comp=N,295µm,1.6s
SMPL AML AML
comp=E,329µm,1.5s
AMUR Altamura 3.01 123 P **Pn 04 29 15.4 +0.4**
AMUR AML AML
comp=E,2630µm,0.5s
AMUR AML AML
comp=N,2740µm,1.2s
A050A Klekovaca 3.02 50⇑ *i* Pn **Pn 04 29 15.8 +0.6**
PRMA PARMA 3.05 316 **Pn 04 29 16.8 +1.2**
OPPE Oppeano 3.10 331 AML AML
comp=E,7690µm,0.8s
OPPE AML AML
comp=N,10385µm,1.1s
SIRI Monte Sirino - 3.10 140 P **Pn 04 29 18.5 +2.0**
SIRI AML AML
comp=N,1555µm,1.0s
SIRI AML AML
comp=E,1605µm,1.6s
SIRI AML AML
comp=E,1575µm,1.6s
SIRI AML AML
comp=N,1605µm,1.0s
TRI Trieste 3.12 6 **Pn 04 29 15.4 -1.2**
TRI Trieste 3.12 6 P **Pn 04 29 15.4 -1.2**
PGF Pioggiola 3.16 270 *e*P **Pn 04 29 17.1 -0.1**
PGF *e*Sn **Sn 04 29 49.5 -5.7**
comp=N,323nm,0.7s
PGF Pioggiola 3.16 270 P **Pn 04 29 17.2 -0.1**
SRKY Kupres RS 3.19 61 *e*Pn **Pn 04 29 18.5 +0.9**
MATE Matera 3.22 126⇑P **Pn 04 29 19.1 +1.2**
MATE Matera 3.22 126 AML AML
comp=N,2250µm,0.7s
MATE AML AML
comp=E,2290µm,0.7s
BOJS Bojanci 3.23 25⇑ *i* Pn **Pn 04 29 17.7 -0.3**
BOJS Bojanci 3.23 25 P **Pn 04 29 18.1 +0.1**
BOJS AML AML
comp=N,6425µm,0.7s
BOJS AML AML
comp=E,7405µm,0.8s
CUC Castrocucco 3.23 143 **Pn 04 29 16.6 -1.6**
MSSA Maissana 3.23 303 **Pn 04 29 18.0 -0.1**
MSSA Maissana 3.23 303 P **Pn 04 29 18.1 -0.1**
MSSA AML AML
comp=E,1500µm,0.9s
MSSA AML AML
comp=N,1820µm,0.7s
CEY Cerknica 3.24 14 *e*Pn **Pn 04 29 17.4 -0.8**
CRAC Craco 3.26 132 P **Pn 04 29 19.8 +1.3**
CRAC AML AML
comp=E,3975µm,1.6s
CRAC AML AML
comp=N,4180µm,1.6s
STON Ston 3.27 84 *e*Pn **Pn 04 29 17.0 -1.5**
STON Ston 3.27 84 *e*Pn **Pn 04 29 16.9 -1.5**
STON Ston 3.27 84 *e*Pn **Pn 04 29 17.2 -1.3**
STON *e*Sn **Sn 04 29 57.2 -0.3**
STON Ston 3.27 84 AML AML
comp=N,1880µm,0.5s
STON AML AML
comp=E,1755µm,1.0s
MGRS Mrkonjic Grad 3.31 55 *e*Pn **Pn 04 29 20.3 +1.2**
A251A Rujevac 3.32 40 *e*Pn **Pn 04 29 19.3 0.0**
LTRZ Laterza 3.32 126 P **Pn 04 29 20.2 +0.9**
NOCI Noci 3.36 121 P **Pn 04 29 20.7 +0.8**
baz=123
NOCI S **Sn 04 30 01.6 +1.6**
baz=123
NOCI Noci 3.36 121 P **Pn 04 29 20.4 +0.5**
NOCI AML AML
comp=E,1825µm,1.4s
NOCI AML AML
comp=N,2195µm,0.7s
SABO M.te Sabotino 3.38 4 **Pn 04 29 19.5 -0.7**
SABO M.te Sabotino 3.38 4 P **Pn 04 29 19.2 -1.0**
SABO AML AML
comp=E,5140µm,0.7s
SABO AML AML
comp=E,21500µm,0.7s
SABO AML AML
comp=N,7200µm,0.9s
SABO AML AML
comp=N,28400µm,0.9s
OZLJ Ozalj 3.40 27 *e*Pn **Pn 04 29 20.1 -0.2**
AJAC Base Areonaval 3.42 260 P **Pn 04 29 20.7 0.0**
AJAC S **Sn 04 30 03.0 +1.6**
AJAC Base Areonaval 3.42 260⇑P **Pn 04 29 20.6 0.0**
AJAC AML AML
comp=E,992µm,1.2s
AJAC AML AML
comp=N,792µm,0.6s
ROVR Rover Verones 3.43 333 P **Pn 04 29 20.6 -0.4**
ROVR AML AML
comp=N,1445µm,1.1s
ROVR AML AML
comp=N,3680µm,1.1s
ROVR AML AML
comp=E,1505µm,1.0s
ROVR AML AML
comp=E,3820µm,1.0s
PRIJ Prijedor 3.44 45 *e*Pn **Pg 04 29 32.5 -0.4**
CGRP Cima Grappa 3.44 342 P **Pn 04 29 20.7 -0.5**
CGRP AML AML
comp=N,6025µm,0.8s
CGRP AML AML
comp=E,6310µm,1.0s
CGRP AML AML
comp=N,6080µm,0.8s
CGRP AML AML
comp=E,6340µm,1.0s
VARN Col Varnada, M 3.49 346 P **Pn 04 29 20.9 -0.8**
VARN AML AML
comp=E,8990µm,1.1s
VARN AML AML
comp=N,5345µm,1.2s
VARN AML AML
comp=E,8905µm,1.1s
VARN AML AML
comp=N,5340µm,1.2s
GORR Gorreto 3.52 306 AML AML
comp=E,1630µm,0.8s
GORR AML AML
comp=N,1320µm,1.1s
BLY Banja Luka 3.55 52⇑ *i* Pn **Pn 04 29 23.5 +1.0**
BLY Banja Luka 3.55 52 *e*Pn **Pn 04 29 23.4 +1.0**
BLY Banja Luka 3.55 52 P **Pn 04 29 23.2 +0.7**
BLY AML AML
comp=E,4880µm,0.7s
BLY AML AML
comp=N,3280µm,0.6s
BLY AML AML
comp=N,3100µm,0.6s
BLY AML AML
comp=E,4840µm,0.7s
LJU Ljubljana 3.55 14 P **Pn 04 29 22.5 0.0**
LJU AML AML
comp=E,21950µm,1.2s
LJU AML AML
comp=N,24450µm,1.3s
A051A Mrakovica 3.56 46⇑ *i* Pn **Pn 04 29 22.7 0.0**
SALB San Lorenzo Be 3.57 139 P **Pn 04 29 25.5 +2.6**
SALB AML AML
comp=E,630µm,1.0s
SALB AML AML
comp=N,576µm,0.8s
SALB AML AML
comp=E,654µm,1.1s
SALB AML AML
comp=N,590µm,0.8s
CRES Cresnjev 3.58 25⇑ *i* Pn **Pn 04 29 22.6 -0.3**
DGI Dorgali Grotta 3.58 232⇑P **Pn 04 29 22.2 -0.8**
DBRK Dubrovnik 3.59 87 *e*Pn **Pn 04 29 22.2 -0.8**
DOSS Dosso del Somm 3.60 336⇓P **Pn 04 29 23.1 -0.3**
DOSS AML AML
comp=E,4065µm,1.1s
DOSS AML AML
comp=N,3445µm,1.0s
DOSS AML AML
comp=E,3590µm,1.0s
DOSS AML AML
comp=N,4145µm,1.1s
SALO Salr 3.61 328 **Pn 04 29 23.1 -0.2**
SALO Salr 3.61 328 P **Pn 04 29 23.5 +0.2**
SALO AML AML
comp=E,4380µm,1.2s
SALO AML AML
comp=E,4035µm,1.4s
SALO AML AML
comp=N,4945µm,1.5s
SALO AML AML
comp=N,5180µm,1.4s
MPRI Monte Prat 3.64 357⇓P **Pn 04 29 23.2 -0.6**
MPRI AML AML
comp=E,6445µm,1.2s
MPRI AML AML
comp=N,6915µm,1.0s
MPRI AML AML
comp=N,5290µm,1.0s
MPRI AML AML
comp=E,4890µm,1.2s
TAR1 Taranto 3.65 123 AML AML
comp=E,1805µm,0.8s
TAR1 AML AML
comp=N,1885µm,0.7s
CET2 Cetraro 3.68 146 P **Pn 04 29 25.5 +1.3**
CET2 AML AML
comp=E,1084µm,1.4s
CET2 AML AML
comp=N,1460µm,0.9s
STAL STALIGIAL 3.68 354 **Pn 04 29 23.5 -0.8**
STAL STALIGIAL 3.68 354 P **Pn 04 29 23.4 -0.9**
STAL AML AML
comp=N,3430µm,0.8s
STAL AML AML
comp=E,3575µm,1.1s
STAL AML AML
comp=E,4830µm,1.1s
STAL AML AML
comp=N,3540µm,0.8s
MAGA Magasa 3.70 330 P **Pn 04 29 24.3 -0.3**
MAGA AML AML
comp=N,5025µm,0.8s
MAGA AML AML
comp=E,7780µm,0.7s
LUSI Trento, Gardas 3.75 334 P **Pn 04 29 25.0 -0.3**
LUSI AML AML
comp=N,3050µm,1.2s
LUSI AML AML
comp=E,3740µm,1.1s
CIMO Cimolais 3.75 351 **Pn 04 29 23.2 -2.1**
CIMO Cimolais 3.75 351 P **Pn 04 29 24.4 -0.9**
CIMO AML AML
comp=E,1345µm,1.0s
CIMO AML AML
comp=N,1330µm,1.1s
CIMO AML AML
comp=N,1295µm,1.1s
CIMO AML AML
comp=E,1345µm,1.0s
AGOR Agordo 3.78 347 P **Pn 04 29 25.2 -0.5**
AGOR AML AML
comp=N,1605µm,1.2s
AGOR AML AML
comp=N,2075µm,1.2s
AGOR AML AML
comp=E,1850µm,0.8s
AGOR AML AML
comp=E,2380µm,0.7s
PTCC Patocco-Chiusa 3.80 1 P **Pn 04 29 24.7 -1.3**
PTCC AML AML
comp=E,2270µm,1.1s
PTCC AML AML
comp=N,2065µm,1.2s
PTJ Puntijarka 3.83 29 *e*Pn **Pn 04 29 26.0 -0.3**
PRED Cave del Predi 3.84 3 Pn **Pn 04 29 25.9 -0.7**
HCY Herceg Novi 3.85 91⇑ *i* Pn **Pn 04 29 26.6 -0.1**
HCY Herceg Novi 3.85 91⇑ *i* Pn **Pn 04 29 26.6 -0.1**
HCY *i* Sn **Sn 04 30 12.3 +0.2**
GAGG Gaggia 3.86 335 P **Pn 04 29 26.7 -0.1**
GAGG AML AML
comp=N,6030µm,1.2s
GAGG AML AML
comp=E,4470µm,1.0s
GAGG AML AML
comp=N,4490µm,1.0s
GAGG AML AML
comp=E,6230µm,1.2s
CLUD Cludinico 3.86 356 Pn **Pn 04 29 25.9 -0.9**
CLUD Cludinico 3.86 356 P **Pn 04 29 25.9 -0.9**
CLUD AML AML
comp=E,3170µm,0.8s
CLUD AML AML
comp=N,3000µm,1.0s
CLUD AML AML
comp=N,3090µm,1.0s
CLUD AML AML
comp=E,3135µm,0.8s
BRY Bratogost 3.88 84 *e*Pn **Pn 04 29 27.0 -0.1**
BRY Bratogost 3.88 84⇑ *i* Pn **Pn 04 29 27.1 -0.1**
BRY *i* Sn **Sn 04 30 13.7 +0.7**
ZONE Zone 3.89 325 P **Pn 04 29 27.4 +0.1**
ZONE AML AML
comp=E,406µm,1.2s
ZONE AML AML
comp=E,1705µm,0.9s
ZONE AML AML
comp=N,598µm,1.2s
ZONE AML AML
comp=N,2375µm,1.2s
MOSL Moslavina 3.91 39 *e*Pn **Pn 04 29 26.3 -1.1**
ACOM Acomizza, Ital 3.95 2 P **Pn 04 29 27.7 -0.4**
ACOM AML AML
comp=E,5755µm,1.1s
ACOM AML AML
comp=E,5595µm,1.1s
ACOM AML AML
comp=N,3965µm,1.3s
ACOM AML AML
comp=N,4220µm,1.3s
A052A Srbac 3.95 49 *e*Pn **Pn 04 29 27.2 -0.7**
ZOU Zoufplan 3.96 357 P **Pn 04 29 27.4 -0.9**
ZOU AML AML
comp=E,3460µm,0.9s
ZOU AML AML
comp=N,3185µm,1.2s
ZOU AML AML
comp=N,3235µm,1.2s
ZOU AML AML
comp=E,3410µm,0.9s
MABI Malga Bissina 3.98 331 P **Pn 04 29 28.5 -0.1**
MABI AML AML
comp=E,818µm,0.5s
MABI AML AML
comp=N,786µm,0.3s
QLNO Quiliano 3.98 297 P **Pn 04 29 28.1 -0.4**
OBKA Obir 4.01 13 *e*Pn **Pn 04 29 26.0 -2.9**
OBKA Obir 4.01 13 *e*Pn **Pn 04 29 28.5 -0.4**
comp=N,25nm,0.1s,SNR=38
MYKA Terra Mystica 4.03 4 *e*Pn **Pn 04 29 28.8 -0.3**
comp=N,140nm,0.5s,SNR=80
LOBO Lobor 4.07 28 *e*Pn **Pn 04 29 28.7 -0.9**
DOB Doboj 4.09 57 *e*Pn **Pn 04 29 30.0 +0.1**

KOSI	Kohlern	4.09	341		P		Pn	04 29 30.3	+0.3
KOSI					AML	AML			
	comp=E,4610µm,1.0s								
KOSI					AML	AML			
	comp=N,3725µm,1.4s								
APPI	Appiano	4.14	340		P		Pn	04 29 30.9	+0.1
APPI					AML	AML			
	comp=E,1880µm,0.5s								
APPI					AML	AML			
	comp=N,2100µm,0.5s								
CEME	Cevo	4.16		89⇑	*i* Pn		Pn	04 29 31.2	+0.3
CEME					*i* Sn		Sn	04 30 20.4	+0.6
BUM	Brajici-Budva	4.16		92⇑	*i* Pn		Pn	04 29 31.3	+0.3
BUM					*i* Sn		Sn	04 30 20.2	+0.4
UPM	Unac-Piva	4.17		80	*e* Pn		Pn	04 29 31.9	+0.7
UPM	Unac-Piva	4.17		80⇑	*i* Pn		Pn	04 29 31.6	+0.4
UPM					*i* Sn		Sn	04 30 20.7	+0.5
ABTA	Abfaltersbach	4.18	353		*e* Pn		Pn	04 29 31.0	-0.2
	comp=N,802nm,0.5s,SNR=449								
NKME	Niksic	4.18		86⇑	*i* Pn		Pn	04 29 31.3	+0.1
NKME					*i* Sn		Sn	04 30 20.3	0.0
KALN	Kalnik	4.20		32	*e* Pn		Pn	04 29 30.1	-1.3
NKY	Niksic	4.21		85⇓	*i* Pn		Pn	04 29 32.1	+0.4
NKY					*i* Sn		Sn	04 30 21.5	+0.4
SOKA	Soboth	4.26		16	*e* Pn		Pn	04 29 33.1	+0.8
	comp=N,14nm,0.2s,SNR=32								
SOKA					*e* Sn		Sn	04 30 19.8	-2.4
	comp=N,96nm,0.6s								
VSL	Villasalto	4.28	225		P		Pn	04 29 32.1	-0.5
VSL					AML	AML			
VSL					AML	AML			
A252A	Venje	4.34		48	*e* Pn		Pn	04 29 32.4	-0.9
DRME	Dracevica, Mon	4.39		93⇑	*i* Pn		Pn	04 29 34.6	+0.6
DRME	Dracevica, Mon	4.39		93⇓	*i* Pn		Pn	04 29 34.4	+0.4
DRME					*i* Sn		Sn	04 30 25.9	+0.6
KOGS	Kog	4.39		28	AML	AML			
	comp=E,14200µm,1.5s								
KOGS					AML	AML			
	comp=N,12300µm,0.8s								
BRMO	Bormio	4.39	333		P		Pn	04 29 34.6	+0.4
PDG	Podgorica	4.42		90	⇑P		Pn	04 29 35.0	+0.6
PDG					⇓S		Sn	04 30 26.2	+0.3
PDG	Podgorica	4.42		90	Pn		Pn	04 29 34.5	+0.1
PDG	Podgorica	4.42		90	*e* Pn		Pn	04 29 35.4	+1.0
PDG					*e* Sn		Sn	04 30 28.3	+2.3
PDG	Podgorica	4.42		90	P		Pn	04 29 34.9	+0.5
PDG					AML	AML			
	comp=E,1795µm,0.5s								
PDG					AML	AML			
	comp=E,2265µm,0.5s								
PDG					AML	AML			
	comp=N,2225µm,1.5s								
PDG					AML	AML			
	comp=N,2855µm,1.5s								
TTG	Podgorica	4.42		90⇑	*i* Pn		Pn	04 29 34.8	+0.5
TTG					*i* Sn		Sn	04 30 26.1	+0.1
CGL	Cagliari Serpe	4.42	224		P		Pn	04 29 34.3	-0.3
CGL					AML	AML			
	comp=E,804µm,0.4s								
CGL					AML	AML			
	comp=N,528µm,0.6s								
RISI	Rein	4.43	349		P		Pn	04 29 35.1	+0.4
RISI					AML	AML			
	comp=N,3765µm,0.4s								
RISI					AML	AML			
	comp=E,3435µm,1.3s								
SBF	Sospel	4.45	288		*e* P		Pn	04 29 35.3	+0.4
SBF					*e* Sn		Sn	04 30 20.3	-6.7
	comp=E,430nm,0.8s								
MOSI	Grossmontoni	4.46	335		P		Pn	04 29 36.1	+1.0
BERNI	Berninapass	4.47	330		P		Pn	04 29 35.6	+0.3
BERNI					AML	AML			
	comp=N,856µm,0.9s								
BERNI					AML	AML			
	comp=E,841µm,0.8s								
ULC	Ulcinj	4.47		96⇑	*i* Pn		Pn	04 29 35.4	+0.3
ULC					*i* Sn		Sn	04 30 27.5	+0.2
KBA	Koelnbreinsper	4.47		1	*e* Pn		Pn	04 29 35.3	0.0
	comp=E,118nm,0.5s,SNR=129								
ESCA	l'Escarene	4.49	288		P		Pn	04 29 35.5	+0.1
TURF	col de Turini	4.51	290		P		Pn	04 29 36.0	+0.2
TURF					S		Sn	04 30 29.5	+0.9
ROSI	Rosskopf	4.53	344		AML	AML			
	comp=N,4200µm,1.2s								
ROSI					AML	AML			
	comp=E,3275µm,1.0s								
PLE	Pljevlja	4.54		79⇑	*i* Pn		Pn	04 29 36.2	0.0
PLE					*i* Sn		Sn	04 30 29.0	-0.2
FUORN	Ofenpass-Fuorn	4.56	333		Pn		Pn	04 29 36.3	-0.2
RUDO	Rudo	4.57		75	*e* Pn		Pn	04 29 36.9	+0.4
KOME	Kolasin	4.60		85⇓	*i* Pn		Pn	04 29 37.4	+0.4
KOME					*i* Sn		Sn	04 30 30.9	+0.3
VARE	Varese	4.60	317		AML	AML			
	comp=N,1215µm,1.0s								
VARE					AML	AML			
	comp=E,1280µm,0.8s								
EILF	Villa Eilenroc	4.60	284		P		Pn	04 29 36.6	-0.4
SPIF	crte de Spivo	4.64	290		P		Pn	04 29 38.2	+0.6
BBLS	Lazići	4.65		72	*e* Pn		Pn	04 29 38.1	+0.5
BBLS					*e* Sn		Sn	04 30 32.4	+0.6
SCTE	Santa Cesarea	4.65	121		Pn		Pn	04 29 36.6	-1.0
SCTE	Santa Cesarea	4.65	121		P		Pn	04 29 38.6	+1.0
	baz=122								
SCTE					S		Sn	04 30 34.0	+2.3
	baz=122								
SCTE					AMP				
	comp=N,1.6nm,0.9s,baz=122								
MVIF	Mont Vial	4.66	288		P		Pn	04 29 38.3	+0.5
CEL	Celeste	4.78	154				Pn	04 29 39.9	+0.5
FETA	Feichten	4.78	339		*i* Pn		Pn	04 29 40.0	+0.5
	comp=N,172nm,0.6s,SNR=217								
CALF	Calern	4.79	286		P		Pn	04 29 39.7	+0.1
WTTA	Wattenberg	4.80	346		*e* Pn		Pn	04 29 40.9	+1.0
	comp=N,138nm,0.6s,SNR=79								
ISO	Isola	4.81	291		P		Pn	04 29 41.7	+1.8
DAVOX	Davos/Dischmat	4.83	331		Pn		Pn	04 29 41.1	+0.9
	comp=N,29nm,0.3s,baz=150,slow=16,SNR=229								
DAVOX					Sn		Sn	04 30 38.8	+2.4
	comp=N,16nm,0.3s,baz=102,slow=24,SNR=3.2								
SQTA	Sankt Quirin	4.85	343				Pn	04 29 41.4	+1.0
SQTA	Sankt Quirin	4.85	343		P		Pn	04 29 41.4	+1.0
SQTA	Sankt Quirin	4.85	343		*i* Pn		Pn	04 29 41.4	+1.0
	comp=N,42nm,0.2s,SNR=102								
BLJ	Bijeljina	4.86		61	*e* Pn		Pn	04 29 37.6	-2.8
PZZ	Stroppo	4.87	295		AML	AML			
	comp=N,443µm,1.1s								
PZZ					AML	AML			
	comp=E,390µm,0.8s								
IVA	Berane	4.88		85⇓	*i* Pn		Pn	04 29 42.3	+1.5
IVA					*i* Sn		Sn	04 30 37.4	0.0
WATA	Walderalm	4.88	346				Pn	04 29 42.3	+1.4
WATA							Sn	04 30 41.5	+3.9
WATA	Walderalm	4.88	346		*i* Pn		Pn	04 29 42.3	+1.4
	comp=E,54nm,0.2s,SNR=96								
WATA					*e* Sn		Sn	04 30 41.5	+3.9
	comp=E,165nm,0.3s								
KOVH	Kovagotottos	4.91		43	P		Pn	04 29 41.5	+0.4
ARSA	Arzberg	4.91		18	*e* Pn		Pn	04 29 40.4	-0.8
	comp=E,52nm,0.4s,SNR=48								
PVY	Plav	4.93		88⇑	*i* Pn		Pn	04 29 43.3	+1.8
PVY					*i* Sn		Sn	04 30 38.8	+0.1
TEKS	Tekeris	4.94		65	*e* Pn		Pn	04 29 41.9	+0.4
SJES	Sjenica	4.96		80	*e* Pn		Pn	04 29 43.0	+1.1
SJES					*e* Sn		Sn	04 30 41.4	+2.0
MOTA	Moosalm	4.99	343				Pn	04 29 43.2	+0.9
MOTA	Moosalm	4.99	343		P		Pn	04 29 43.2	+0.9
MOTA	Moosalm	4.99	343		*i* Pn		Pn	04 29 43.2	+0.9
	comp=E,74nm,0.4s,SNR=114								
CLTB	Caltabellotta	5.02	181				Pn	04 29 41.4	-1.4
BCI	Bajram Curri	5.02		90	P		Pn	04 29 43.6	+0.9
	baz=91								
BCI					S		Sn	04 30 42.6	+1.7
	baz=91								
BCI					AMP				
	comp=E,7.3nm,0.9s,baz=91								
LMR	La Mourre	5.02	281		*e* P		Pn	04 29 42.3	-0.4
LMR					*e* Sn		Sn	04 30 33.9	-7.0
	comp=E,220nm,1.1s								
SURF	Saint Ours	5.06	294		P		Pn	04 29 44.2	+0.7
TIR	Tirane	5.07	102		⇓P		Pn	04 29 43.9	+0.6
TIR					⇑S		Sn	04 30 43.1	+1.1
TIR	Tirane	5.07	102		P		Pn	04 29 43.1	-0.2
TIR	Tirane	5.07	102		Pn		Pn	04 29 42.6	-0.7
TIR	Tirane	5.07	102		P		Pn	04 29 42.6	-0.7
TIR	Tirane	5.07	102		*e* Pn		Pn	04 29 43.8	+0.5
TIR					*e* Sn		Sn	04 30 43.2	+1.3
TIR	Tirane	5.07	102		P		Pn	04 29 43.6	+0.3
	baz=103								
TIR					S		Sn	04 30 43.6	+1.7
	baz=103								
TIR					AMP				
	comp=N,2.2nm,0.6s,baz=103								
BIOA	Bad Ischl, Aus	5.09		3			Pn	04 29 43.9	+0.1
BIOA							Sn	04 30 43.8	+1.1
BIOA	Bad Ischl, Aus	5.09		3	*e* Pn		Pn	04 29 43.8	+0.1
	comp=N,48nm,0.3s,SNR=101								
BIOA					*e* Sn		Sn	04 30 43.8	+1.1
	comp=N,463nm,0.9s								
DIVS	Divibare	5.12		71	Pn		Pn	04 29 43.5	-0.5
DIVS	Divibare	5.12		71⇑	*i* Pn		Pn	04 29 43.8	-0.3
DIVS	Divibare	5.12		71	*e* Pn		Pn	04 29 44.7	+0.6
DIVS					*e* Sn		Sn	04 30 41.5	-1.8
IVAS	Ivanjica	5.12		77	*e* Pn		Pn	04 29 44.1	-0.1
IVAS					*e* Sn		Sn	04 30 42.6	-0.9
VLO	Vlora	5.13	112		P		Pn	04 29 44.9	+0.8
VLO	Vlora	5.13	112		P		Pn	04 29 45.0	+0.8
	baz=113								
MBDF	Montbardon	5.18	296		*e* P		Pn	04 29 45.5	+0.5
MBDF					*e* Sn		Sn	04 30 37.8	-7.1
	comp=N,232nm,0.8s								
RETA	Reutte	5.20	341		*i* Pn		Pn	04 29 46.3	+1.1
	comp=N,73nm,0.4s,SNR=94								
FLAF	Flassans-sur-I	5.21	281		P		Pn	04 29 45.6	+0.3
OGAG	Argentiere	5.24	293		P		Pn	04 29 48.6	+2.8
DAVA	Damuels	5.27	334		*e* Pn		Pn	04 29 47.6	+1.4
	comp=N,88nm,0.5s,SNR=116								
MORH	Mrgy, Hungar	5.27		45	⇑P		Pn	04 29 47.9	+1.8
MORH	Mrgy, Hungar	5.27		45	P		Pn	04 29 47.5	+1.4
MOA	Molln	5.29		7	*e* Pn		Pn	04 29 46.6	+0.2
MOA	Molln	5.29		7	*e* Pn		Pn	04 29 46.0	-0.4
	comp=N,52nm,0.5s,SNR=92								
MOA					*e* Sn		Sn	04 30 47.7	+0.1
	comp=N,253nm,0.5s								
OGDI	Digne	5.31	289		P		Pn	04 29 48.3	+1.7
FRGS	Fruska Gora	5.36		59	⇑P		Pn	04 29 47.5	+0.1
FRGS	Fruska Gora	5.36		59	*e* Pn		Pn	04 29 46.7	-0.7
FRGS	Fruska Gora	5.36		59	*e* Pn		Pn	04 29 46.7	-0.7
BNI	Bardonecchia	5.37	299		Pn		Pn	04 29 47.9	+0.3
BNI	Bardonecchia	5.37	299		P		Pn	04 29 47.9	+0.3
PHP	Peshkopia	5.40	97		P		Pn	04 29 49.5	+1.6
PHP	Peshkopia	5.40	97		P		Pn	04 29 49.2	+1.3
	baz=98								
PHP					S		Sn	04 30 52.1	+1.8
	baz=98								
PHP					AMP				
	comp=N,7.9nm,0.7s,baz=98								
TIH	Tihany	5.41		36	P		Pn	04 29 50.8	+2.9
OGMO	Fort Saint-Gob	5.43	301		P		Pn	04 29 49.0	+0.6
TRUS	Trudelj	5.44		70	*e* Pn		Pn	04 29 49.2	+0.8
BLAF	les Blancs	5.45	287		P		Pn	04 29 49.4	+0.7
DIX	Grande Dixence	5.46	312		P		Pn	04 29 50.4	+1.5
MPLH	Magyarpolny	5.48	32		P		Pn	04 29 50.6	+1.7
RONA	Rosalia, Austr	5.52	22				Pn	04 29 49.4	-0.2
RONA	Rosalia, Austr	5.52	22		*i* Pn		Pn	04 29 49.4	-0.2
	comp=N,25nm,0.2s,SNR=58								
LPG	La Plagne	5.52	304		*e* P		Pn	04 29 50.7	+0.8
LPG					*e* Sn		Sn	04 30 46.2	-7.5
	comp=N,351nm,0.9s								
LPL	La Plagne	5.54	304		*e* P		Pn	04 29 50.9	+0.8
LPL					*e* Sn		Sn	04 30 46.7	-7.4
	comp=N,209nm,0.8s								
ARTF	Artigues	5.56	283		P		Pn	04 29 50.8	+0.7
GRUS	Gruza	5.58		74	*e* Pn		Pn	04 29 50.2	-0.1
GRUS					*e* Sn		Sn	04 30 55.9	+1.3
SOP	Sopron	5.58	23		P		Pn	04 29 53.1	+2.7
EGYH	Egyhazaskeszo	5.60	29		P		Pn	04 29 53.6	+2.9
CONA	Conrad Observa	5.63		18	*i* Pn		Pn	04 29 50.7	-0.4
	comp=N,26nm,0.3s,SNR=99								
CONA					*e* Sn		Sn	04 30 54.4	-1.5
	comp=N,103nm,0.5s								
MLYF	Mely	5.66	287		P		Pn	04 29 53.2	+1.7
RSL	Roselend	5.70	305		P		Pn	04 29 53.0	+0.9
KEK	Kerkira	5.70	118		P		Pn	04 29 53.1	+1.1
BSTF	la Bastide-des	5.72	285		P		Pn	04 29 53.0	+0.7
SRN	Sarande	5.75	116		P		Pn	04 29 53.6	+1.0
SRN	Sarande	5.75	116		P		Pn	04 29 53.3	+0.7
	baz=117								
SRN					AMP				
	comp=E,0.8nm,0.8s,baz=117								
SELS	Selova	5.79		81	*e* Pn		Pn	04 29 54.4	+1.2
SELS					*e* Sn		Sn	04 31 00.8	+1.0
SMRF	Simiane la Rot	5.79	286		*e* P		Pn	04 29 54.2	+0.9
SMRF					*e* Sn		Sn	04 30 52.1	-7.8
	comp=E,208nm,1.1s								
GDM	Grand'Maison	5.79	299		P		Pn	04 29 56.1	+2.7
OHR	Ohrid	5.81	102		*i* Pn		Pn	04 29 54.9	+1.3
ZUR	Degenried	5.81	327		P		Pn	04 29 54.1	+0.5
OGSI	Sixt	5.82	309		P		Pn	04 29 54.5	+0.8
ORIF	Oris-en-Rattie	5.84	296		*e* P		Pn	04 29 55.0	+1.0
ORIF					*e* Sn		Sn	04 30 53.4	-7.7
	comp=E,154nm,0.7s								
ORIF	Oris-en-Rattie	5.84	296		P		Pn	04 29 56.4	+2.4
RUSF	Rustrel	5.85	286		P		Pn	04 29 55.3	+1.3
AIGLE	Aigle	5.87	312		P		Pn	04 29 55.0	+0.7
ARBF	Arbois	5.89	281		P		Pn	04 29 55.7	+1.0
CSKK	Cskako	5.92		35	P		Pn	04 30 00.3	+5.2
KBN	Korca	5.96	107		P		Pn	04 29 57.0	+1.3
LSK	Leskovik	6.03	112		P		Pn	04 29 58.5	+1.9
LSK	Leskovik	6.03	112		P		Pn	04 29 57.9	+1.3
	baz=112								
SKO	Skopje	6.08		93	*i* Pn		Pn	04 29 58.1	+0.8
SAUF	chteau de Sau	6.12	285		P		Pn	04 29 58.9	+1.2
SULZ	Cheisacher	6.13	325		P		Pn	04 29 58.2	+0.2
TORNY	Torny/Romont	6.14	315		P		Pn	04 29 58.5	+0.4
BALST	Balsthal	6.17	322		P		Pn	04 29 58.5	0.0
SLE	Schleitheim	6.17	328		P		Pn	04 29 58.0	-0.5
GUT	Gutenstein	6.21	333		P		Pn	04 29 59.2	+0.3
ZST	Bratislava	6.21		24	*e* P		Pn	04 29 59.5	+0.6
ZST					*e*			04 31 11.0	
ZST	Bratislava	6.21		24	*e* Pn		Pn	04 29 59.5	+0.6
ZST					*e* Sn		Sn	04 31 11.0	+1.0
NEST	Nestorio	6.23	108		P		Pn	04 30 01.1	+1.8
OGSM	Saint Maurice	6.23	301		P		Pn	04 30 00.4	+1.0
GEC2	GERESS Array S	6.25		3	Pn		Pn	04 29 58.6	-1.0
GERES	GERESS Array B	6.25		3	Pn		Pn	04 29 58.2	-1.4
	comp=E,4.3nm,0.3s,baz=167,slow=12,SNR=80								
GERES					Sn		Sn	04 31 10.6	-0.7
	comp=E,25nm,0.3s,baz=165,slow=23,SNR=15								
GERES					LR		LR	04 33 06.4	
	comp=E,2µm,19.6s,baz=184,slow=46								
	comp=E,22nm,0.7s								
BOVS	Bovan	6.25		78	⇓P		Pn	04 29 59.2	-0.3
BOVS					⇑S		Sn	04 31 11.2	+0.1
BOVS	Bovan	6.25		78	*e* Pn		Pn	04 29 58.8	-0.7
BOVS					*e* Sn		Sn	04 31 09.2	-1.9
CKRC	Cesky Krumlov	6.26		6	*e* PN		Pn	04 29 58.3	-1.4
CKRC					*e* SN		Sn	04 31 08.5	-2.8
BARS	Barje	6.29		85	*e* Pn		Pn	04 30 00.5	+0.4
BUD	Budapest	6.35		38	P		Pn	04 30 03.1	+2.2
KUBS	Kucevo	6.37		71	*e* Pn		Pn	04 30 01.1	0.0
GIMEL	St. Georges /	6.37	311		P		Pn	04 30 01.2	-0.1
PENT	Pentalofos	6.38	110		P		Pn	04 30 03.1	+1.7
MODS	Modra-Piesok	6.42		25	*e* P		Pn	04 30 01.9	+0.1
MODS	Modra-Piesok	6.42		25	*e* PN		Pn	04 30 01.9	+0.1
JAN	Janina	6.43	115		P		Pn	04 30 02.6	+0.6
BOURR	Bourrignon	6.43	320		P		Pn	04 30 02.1	0.0
FELD	Feldberg im Sc	6.46	327		P		Pn	04 30 01.8	-0.7
MDVR	Moldovita	6.49		68	⇑P		Pn	04 30 03.8	+1.0
PRVS	Prvonek	6.50		88	*e* Pn		Pn	04 30 03.1	+0.1
PRVS					*e* Sn		Sn	04 31 14.2	-3.0
BRANT	Les Verrieres	6.50	314		P		Pn	04 30 02.9	-0.2
CABF	La Chapelle	6.51	310		*e* P		Pn	04 30 03.3	+0.1
CABF					*e* Sn		Sn	04 31 09.8	-7.9
	comp=E,205nm,0.9s								
OG35	Corcelles	6.51	305		P		Pn	04 30 03.0	-0.2
KHC	Kasperske Hory	6.53		2	*e* P		Pn	04 30 02.5	-0.9
KHC					*e*			04 31 15.3	
KHC					MLR	MLR			
	comp=Z,3µm,13.7s								
KHC	Kasperske Hory	6.53		2	*e* PN		Pn	04 30 02.5	-0.9
KHC					*e* SN		Sn	04 31 15.3	-2.8
KHC					AMS	AMS		04 32 40.0	
	comp=Z,3µm,13.7s								
KIZ	Kirchzarten	6.55	327		P		Pn	04 30 03.0	-0.7
SMOL	Smolenice	6.59	25		*e* P		Pn	04 30 04.7	+0.5
SMOL					*e*			04 31 18.3	
CHMF	Charmoille	6.61	317		P		Pn	04 30 04.2	-0.4
VIVF	Saint-Julien-l	6.63	293		*e* P		Pn	04 30 06.1	+1.3
VIVF					*e* Sn		Sn	04 31 12.2	-8.3
	comp=Z,181nm,1.4s								
ZAGS	Zajecar	6.65		77	*e* Pn		Pn	04 30 04.9	-0.1
ZAGS					*e* Sn		Sn	04 31 20.9	-0.1
STIP	Stip	6.68		95	*i* Pn		Pn	04 30 07.8	+2.3
RIVEL	MONT RIVEL	6.69	311		P		Pn	04 30 05.3	-0.3
BFO	Black Forest	6.70	330		Pn		Pn	04 30 05.1	-0.7
BFO	Black Forest	6.70	330		P		Pn	04 30 05.1	-0.7
BZS	Buzias	6.71		61	⇑P		Pn	04 30 06.6	+0.7
BZS	Buzias	6.71		61	*e* Pn		Pn	04 30 05.6	-0.3
BZS					*e* Sn		Sn	04 31 22.5	0.0
TSLK	Tsoukalades, L	6.75	122		P		Pn	04 30 08.1	+1.6
VOGT	Vogtsburg - To	6.75	326		P		Pn	04 30 06.0	+0.5
KZN	Kozani	6.78	107		P		Pn	04 30 08.9	+2.0
DRAG	Dragano-Lefkad	6.79	123		P		Pn	04 30 08.4	+1.4
BOSS	Bosilegrad	6.79	88		*e* Pn		Pn	04 30 07.2	+0.2
BOSS					*e* Sn		Sn	04 31 23.2	-1.3
MOF	Molkenrain	6.81	323		P		Pn	04 30 06.9	-0.4
BOUC	Bouclans	6.81	315		P		Pn	04 30 06.9	-0.4
KRUC	Moravsky	6.81		18	*e* PN		Pn	04 30 06.3	-1.0
KRUC					*e* SN		Sn	04 31 21.8	-3.2
NYDR	Nydri-Lefkada	6.85	122		P		Pn	04 30 09.2	+1.5
SSB	Saint Sauveur	6.85	296		P		Pn	04 30 08.6	+0.7
TREC	Trest	6.87		12	*e* P		Pn	04 30 07.9	-0.1
TREC					MLR	MLR			
	comp=Z,4µm,11.9s								
TREC	Trest	6.87		12	*e* PN		Pn	04 30 07.9	-0.1
TREC					AMS	AMS		04 33 00.0	
	comp=Z,4µm,11.9s								
OPP	Oppenau	6.89	331		P		Pn	04 30 07.8	-0.6
ZAPS	Zavoj	6.90		81	*e* Pn		Pn	04 30 08.9	+0.4
ZAPS					*e* Sn		Sn	04 31 25.9	-1.2
HINF	Hinteralfeld	6.91	321		*e* P		Pn	04 30 08.3	-0.4
HINF					*e* Sn		Sn	04 31 19.3	-8.1
	comp=Z,471nm,0.9s								
RONF	Ronchamp	6.93	320		P		Pn	04 30 08.4	-0.5
BLKB	Belogradchik	6.95		78	⇑P		Pn	04 30 09.7	+0.5
BLKB					⇑S		Sn	04 31 28.6	+0.2
JAVC	Velka Javorina	6.97		25	*e* PN		Pn	04 30 09.3	-0.1
HERR	Herculane	7.00		68	⇑P		Pn	04 30 10.9	+1.1
DJES	Djerdap	7.01		70	⇓P		Pn	04 30 10.6	+0.5
SIRR	Siria	7.03		56	⇓P		Pn	04 30 11.3	+1.1
LASF	Ste Croix	7.03	285		*e* P		Pn	04 30 10.1	-0.2
LASF					*e* Sn		Sn	04 31 21.8	-8.5
	comp=Z,60nm,0.9s								
VAY	Valandovo	7.04		97	*i* Pn		Pn	04 30 11.0	+0.6
VYHS	Vyhne	7.06		32	*e* P		Pn	04 30 12.4	+1.7
VYHS	Vyhne	7.06		32	*e* PN		Pn	04 30 12.4	+1.7
PSZ	Piszkesteto	7.07		39	⇑P		Pn	04 30 11.5	+0.7
PSZ	Piszkesteto	7.07		39			Pn	04 30 11.9	+1.0
PSZ	Piszkesteto	7.07		39	P		Pn	04 30 11.9	+1.0
PSZ	Piszkesteto	7.07		39	P		Pn	04 30 11.2	+0.4
ECH	Echery	7.07	325		P		Pn	04 30 10.1	-0.8
VRAC	Vranov	7.09		18	Pn		Pn	04 30 11.0	-0.1
	comp=Z,3.1nm,0.3s,baz=209,slow=13,SNR=26								
VRAC					LR	LR		04 33 09.6	
	comp=Z,2µm,19.8s,baz=208,slow=40								
	comp=Z,28nm,0.7s								
VRAC	Vranov	7.09		18	*e* PN		Pn	04 30 09.9	-1.2
VRAC					*e* SN		Sn	04 31 23.6	-8.2
WLS	Welschbruch	7.15	326		P		Pn	04 30 10.8	-1.1
PSDA	Pessada-Kefalo	7.15	126		P		Pn	04 30 13.3	+1.4
CDF	Champ du Feu	7.18	326		*e* P		Pn	04 30 11.7	-0.7
CDF					*e* Sn		Sn	04 31 25.4	-8.7
	comp=Z,431nm,1.0s								
GRFO	Grafenberg	7.23	349				Pn

comp=Z,360nm,1.1s
SSF Saint Saulge 8.25 306 *e*P **Pn 04 30 26.8 -0.2**
SSF *e*Sn Sn 04 31 51.3 -9.1
comp=Z,65nm,0.7s
BRG Berggiesshubel 8.29 3 *i* P **Pn 04 30 27.4 0.0**
BRG Amp 04 30 28.9
comp=Z,7.3nm,0.6s
BRG *ex* x 04 30 36.5
BRG Amp 04 30 37.8
comp=Z,16nm,0.7s
BRG *ex* x 04 31 58.6
BRG *ex* x 04 33 00.1
BRG Amp 04 33 24.4
comp=Z,231nm,1.4s
BRG Amp 04 34 02.0
comp=E,1.9nm,10.4s
BRG Amp 04 34 03.0
comp=N,1.6nm,15.9s
BRG Amp 04 34 06.0
comp=Z,2.5nm,10.3s
BRG Berggiesshubel 8.29 3 *i* P **Pn 04 30 27.4 0.0**
BRG *e* 04 31 58.6
BRG pmax pmax
comp=Z,7.0nm,0.6s
BRG pmax pmax
comp=Z,16nm,0.7s
BRG pmax pmax
comp=Z,231nm,1.4s
BRG MLR MLR
comp=E,2μm,10.4s
BRG MLR MLR
comp=N,2μm,15.9s
BRG MLR MLR
comp=Z,2μm,10.3s
ABH Alteburg 8.29 333 P **Pn 04 30 27.8 +0.2**
SAVF Savonnieres en 8.29 319 *e*P **Pn 04 30 28.1 +0.5**
SAVF *e*Sn **Sn 04 31 52.8 -8.6**
comp=Z,135nm,0.8s
ATAL Atalanti 8.37 115 P **Pn 04 30 29.7 +1.0**
NIE Niedzica 8.38 33 *e*P **Pn 04 30 30.8 +2.0**
NIE *e*S Sb 04 32 19.1 -13
CJR Cluj-Napoca 8.42 57 ⇑P **Pn 04 30 30.3 +0.9**
BGF Bois d'Agland 8.43 302 *e*P **Pn 04 30 30.6 +1.1**
BGF *e*Sn Sn 04 31 55.1 -10
comp=Z,141nm,1.1s
CAF Calviac 8.45 290 *e*P **Pn 04 30 30.6 +0.9**
CAF *e*Sn Sn 04 31 55.7 -9.5
comp=Z,13nm,0.6s
PLD Plovdiv 8.47 90 *e*Pn **Pn 04 30 31.0 +0.9**
PLD Plovdiv 8.47 90 P **Pn 04 30 34.2 +4.1**
KSP Ksiaz 8.50 13 *e*P **Pn 04 30 30.6 +0.2**
CRVS Cervenica-Dubn 8.50 39 *e*P **Pn 04 30 32.6 +2.1**
CRVS Cervenica-Dubn 8.50 39 *e*PN **Pn 04 30 32.6 +2.1**
RZN Rozhen 8.54 92 P **Pn 04 30 33.4 +2.2**
WLF Walferdange 8.62 327 P **Pn 04 30 32.6 +0.5**
WLF Walferdange 8.62 327 *d*P **Pn 04 30 32.5 +0.5**
WLF *d*S **Sn 04 32 09.9 +0.5**
ARR Arges 8.64 67 ⇓P **Pn 04 30 33.6 +1.3**
PAND Andorre 8.66 273 P **Pn 04 30 32.9 0.0**
CLL Collm 8.71 359 *e*P **Pn 04 30 33.0 -0.3**
CLL Collm 8.71 359 *e*Pn **Pn 04 30 33.0 -0.3**
CLL *ex* x 04 30 43.0
CLL *e*Sn Sn 04 31 53.0 -19
CLL *ex* x 04 32 05.0
CLL *ex* x 04 32 51.0
CLL Lm MLR 04 33 00.0
comp=N,2μm,18.7s
CLL Lm MLR 04 33 00.0
comp=E,5μm,20.7s
CLL Lm MLR 04 33 00.0
comp=Z,2μm,18.6s
CLL *e*Sg **Sg 04 33 05.0 -1.5**
comp=Z,173nm,1.2s
CLL Lmax 04 34 00.0
UZH Uzhgorod 8.73 43 *e*P Pn 04 30 39.4 +5.9
UZH *e*S **Sn 04 32 19.4 +7.5**
UZH MLR MLR
comp=Z,240nm,13.0s
TCF Toulx Ste Croi 8.73 299 *e*P **Pn 04 30 34.0 +0.3**
TCF *e*Sn Sn 04 32 02.5 -10
comp=Z,57nm,0.9s
VILL Villia 8.84 117 P **Pn 04 30 34.9 -0.3**
OJC Ojcow 8.84 28 *e*P **Pn 04 30 36.8 +1.7**
PVL Pavlikeni 8.87 82 P **Pn 04 30 35.9 +0.5**
HYF Humbligny 8.87 305 *e*P **Pn 04 30 37.1 +1.6**
HYF *e*Sn Sn 04 32 05.9 -10
RJF Les Rejaudoux 8.91 292 *e*P **Pn 04 30 37.7 +1.7**
RJF *e*Sn Sn 04 32 06.5 -10
comp=Z,44nm,1.1s
KOLS Kolonicke sedl 8.91 42 *e*P **Pn 04 30 39.0 +2.9**
KOLS Kolonicke sedl 8.91 42 *e*PN **Pn 04 30 39.0 +2.9**
VOIR 8.94 68 ⇑P **Pn 04 30 38.4 +1.9**
MONQ Montcuq 8.96 285 P **Pn 04 30 37.4 +0.6**
ARCR ARCALIA 9.05 57 ⇓P **Pn 04 30 39.4 +1.4**
KDZ Kurdzhali 9.07 92 P **Pn 04 30 38.8 +0.6**
BHOU Houvegnez 9.23 330 *d*P **Pn 04 30 41.4 +0.9**
SZH Strazhica 9.31 82 P **Pn 04 30 44.2 +2.7**
DOPR Dopca 9.31 65 ⇑P **Pn 04 30 42.7 +1.1**
VLY Voula,Athens 9.33 117 P **Pn 04 30 43.4 +1.5**
LFF La Frestale 9.37 289 *e*P **Pn 04 30 44.2 +1.9**
LFF *e*Sn Sn 04 32 17.6 -10
comp=Z,58nm,1.1s
BTNL Ternell 9.38 331 *d*P **Pn 04 30 42.8 +0.4**
BTNL *d*S **Sn 04 32 25.1 -2.8**
RCHB Rochefort 9.38 326 *d*P **Pn 04 30 43.3 +0.9**
RCHB *d*S **Sn 04 32 21.4 -6.5**
MEM Membach 9.44 331 *d*P **Pn 04 30 43.5 +0.2**
GIVF Givet 9.51 325 *e*P **Pn 04 30 45.7 +1.5**
GIVF *e*Sn Sn 04 32 21.1 -10
comp=Z,151nm,0.9s
EPF Esparros 9.52 277 *e*P **Pn 04 30 46.3 +1.8**
EPF *e*Sn Sn 04 32 21.5 -10
comp=Z,22nm,1.2s
BCLA Clavier 9.55 328 *d*P **Pn 04 30 45.8 +0.9**
BCLA *d*S **Sn 04 32 30.0 -2.3**
MLR Muntele Rosu 9.56 68 ⇓P **Pn 04 30 46.8 +1.7**
MLR Muntele Rosu 9.56 68 Pn **Pn 04 30 48.7 +3.6**
comp=Z,0.5nm,0.3s,baz=230,slow=6.6,SNR=10
MLR LR LR 04 35 42.0
comp=Z,4μm,21.7s,baz=254,slow=45
comp=Z,22nm,0.8s
MLR Muntele Rosu 9.56 68 Pn **Pn 04 30 41.6 -3.5**
BSTI Sart Tilman 9.58 329 *d*P **Pn 04 30 45.8 +0.6**
DOU Dourbes 9.60 324 *d*P **Pn 04 30 43.6 -1.9**
DOU *d*S **Sn 04 32 31.7 -1.7**
OZUR 9.61 64 ⇓P **Pn 04 30 46.1 +0.4**
BMRD Maredsous 9.68 326 *d*P **Pn 04 30 47.8 +1.3**
BMRD *d*S **Sn 04 32 34.4 -1.0**
BURAR Bucovina Array 9.81 55 ⇑P **Pn 04 30 49.9 +1.5**
BURAR Bucovina Array 9.81 55 **Pn 04 30 47.4 -1.0**
BUR08 Bucovina Ar. S 9.81 55 **Pn 04 30 48.5 0.0**
JMB Yambol 9.82 86 P **Pn 04 30 47.3 -1.2**
COVR Voineasa-Covas 9.83 66 ⇑P **Pn 04 30 49.4 +0.8**
ISR Istrita 9.90 71 ⇓P **Pn 04 30 51.1 +1.4**
BIZ Bicaz 10.09 60 ⇓P **Pn 04 30 54.1 +1.8**
PLOR Plostina 10.13 67 ⇑P **Pn 04 30 53.6 +0.8**
VRI Vrincioaia 10.19 67 ⇑P **Pn 04 30 54.7 +1.2**
ETSF Etsaut 10.19 276 *e*P **Pn 04 30 55.9 +2.3**
ETSF *e*Sn Sn 04 32 37.4 -11
comp=Z,14nm,1.0s
LVV L'vov 10.36 42 *e*P **Pn 04 30 57.3 +1.4**
LVV *e*S **Sn 04 32 56.2 +4.0**
LVV pmax pmax
comp=Z,110nm,1.6s
LVV MLR MLR
comp=N,2μm,9.0s
LVV MLR MLR
comp=E,2μm,9.0s
LVV MLR MLR
comp=Z,2μm,9.0s
MFF Saint Martin d 10.38 297 *e*P **Pn 04 30 57.8 +1.7**
MFF *e*Sn Sn 04 32 41.8 -11
comp=Z,29nm,1.0s
SJPF Ste Jean 10.67 278 *e*P **Pn 04 31 02.1 +2.0**
APE Apeiranthos 10.92 116 ⇑*e*P **Pn 04 31 06.2 +2.6**
LDF La Druitiere 11.13 307 *e*P **Pn 04 31 08.4 +2.0**
LDF *e*Sn Sn 04 32 59.6 -11
comp=Z,62nm,1.1s
TPGR Topolog 11.19 73 ⇓P **Pn 04 31 07.7 +0.5**
FLN La Foliniere 11.42 307 *e*P **Pn 04 31 11.4 +1.0**
FLN *e*Sn Sn 04 33 06.6 -11
comp=Z,34nm,0.9s
GRR Gorron 11.48 305 *e*P **Pn 04 31 11.8 +0.6**
GRR *e*Sn Sn 04 33 08.2 -11
comp=Z,24nm,0.9s
IDI Anoyia 11.61 125 Pn **Pn 04 31 15.1 +2.0**
comp=Z,1.0nm,0.3s,baz=326,slow=14,SNR=3.5
IDI LR LR 04 37 15.8
comp=Z,465nm,20.2s,baz=310,slow=45
comp=Z,10nm,0.6s
MILM Milestii Mici 11.85 63 *e*P **Pn 04 31 19.2 +2.9**
MILM *e*L L 04 34 25.5
MILM LQM 04 36 24.4
comp=Z,2μm,11.0s
MILM LRM MLR 04 36 47.5
comp=Z,3μm,12.0s
MILM Milestii Mici 11.85 63 *e*P **Pn 04 31 19.0 +2.7**
MILM MLR MLR
comp=E,3μm,12.0s
KIS Kishinev 11.88 63 *e*P **Pn 04 31 21.0 +4.4**
KIS *e*L L 04 34 31.0
KIS LRM MLR 04 36 53.0
comp=E,2μm,12.0s
KIS Kishinev 11.88 63 *e*P **Pn 04 31 21.0 +4.4**
KIS MLR MLR
comp=Z,4μm,11.5s
KIS MLR MLR
comp=E,2μm,12.0s
MANT Manisa 12.32 104 Pn **Pn 04 31 21.5 -1.5**
SGMF Saint Gilles 12.47 302 *e*P **Pn 04 31 26.2 +1.5**
SGMF *e*Sn Sn 04 33 32.0 -12
comp=E,21nm,0.9s
QUIF Quistinic 12.74 300 *e*P **Pn 04 31 29.4 +1.0**
QUIF *e*Sn Sn 04 33 38.2 -12
comp=E,39nm,1.3s
ROSF Rostrenen 12.95 302 *e*P **Pn 04 31 32.9 +1.6**
ROSF *e*Sn Sn 04 33 43.2 -12
comp=E,26nm,1.1s
ESDC Sonseca Array 13.32 263 Pn **Pn 04 31 35.2 -1.3**
comp=E,0.1nm,0.3s,baz=69,slow=14,SNR=21
ESDC LR LR 04 36 47.5
comp=E,1μm,18.5s,baz=74,slow=38
comp=E,2.5nm,0.7s
ESDC Sonseca Array 13.32 263 Pn **Pn 04 31 33.5 -3.0**
AKASG Malin Array Be 13.60 48 Pn **Pn 04 31 41.0 +0.9**
comp=E,1.1nm,0.3s,baz=242,slow=13,SNR=11
AKASG LR LR 04 37 36.7
comp=E,2μm,18.1s,baz=236,slow=40
comp=E,4.4nm,0.9s
AKASG Malin Array Be 13.60 48 *i* P **Pn 04 31 41.9 +1.8**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 13.60 48 **Pn 04 31 39.5 -0.6**
AKBB Malin Array Si 13.60 48⇓*e*P **Pn 04 31 42.0 +1.9**
ELL Elmali 14.07 109 Pn **Pn 04 31 45.8 -1.0**
ELL Elmali 14.07 109 P **Pn 04 31 45.8 -1.0**
PABE Paberze 14.66 25 **Pn 04 31 53.0 -1.6**
PABE Paberze 14.66 25 *e*P **Pn 04 31 55.3 +0.7**
PBRG Braganca 14.86 274 *e*pP **P 04 32 07.3 +3.9**
PBRG A A 04 32 10.2
comp=Z,31nm,1.7s
NACGM Naroch 15.15 31 *e*P **Pn 04 32 01.6 +0.3**
MVO Moncorvo 15.20 271 *e*S **S 04 35 11.8 +4.2**
SIM Simferopol' 15.23 74 *e*P **P 04 32 08.2 +0.9**
SIM pmax pmax
comp=Z,12nm,0.8s
SIM pmax pmax
comp=Z,31nm,1.2s
SIM MLR MLR
comp=Z,1μm,20.0s
IIGN Ignalina 15.29 29 *e*P **Pn 04 32 05.3 +2.3**
IIGN IAmb IAmb 04 32 15.5
comp=Z,20nm,0.8s
MNK Minsk 15.30 34 *i* P **Pn 04 32 01.8 -1.3**
MNK *i* S **Sn 04 34 51.8 -0.7**
MNK pmax pmax
comp=E,4.0nm,0.9s
MNK pmax pmax
comp=N,9.0nm,1.0s
MNK pmax pmax
comp=Z,21nm,1.0s
MNK MLR MLR
comp=N,11nm,15.0s
MNK MLR MLR
comp=Z,2μm,20.0s
MNK MLR MLR
comp=E,161nm,19.0s
MNK Minsk 15.30 34 *i* P **Pn 04 32 01.8 -1.3**
comp=E,4.0nm,0.9s
MNK *i* P **Pn 04 32 01.8 -1.3**
comp=N,9.0nm,1.0s
MNK *i* P **Pn 04 32 01.8 -1.3**
comp=Z,21nm,1.0s,baz=223
MNK *i* PP **pP 04 32 09.9 -0.7**
MNK *i* PPP PPP 04 32 17.6
MNK *i* S **Sn 04 34 51.9 -0.7**
MNK *i* SS **SnSn 04 35 05.9 +0.7**
MNK *i* SSS SSS 04 35 18.5
MNK *i* LQ LQ 04 36 31.0
MNK *i* LR LR 04 37 40.7
MNK *i* LRM MLR 04 38 37.8
comp=N,11nm,14.6s
MNK *i* LRM MLR 04 38 51.9
comp=Z,2μm,19.8s
MNK *i* LRM MLR 04 38 52.3
comp=E,161nm,18.9s
ISAL Salakas 15.43 28 *e*P **P 04 32 07.3 -2.2**
ISAL IAmb IAmb 04 32 19.0
comp=Z,18nm,1.3s
BR131 Keskin Array S 15.60 94 Pn **Pn 04 32 04.7 -2.7**
BR131 Keskin Array S 15.60 94⇓*e*P **P 04 32 12.3 +0.7**
BRTR Keskin Array B 15.60 94 Pn **P 04 32 11.9 +0.3**
comp=Z,0.3nm,0.3s,baz=281,slow=11,SNR=18
BRTR LR LR 04 39 14.0
comp=Z,2μm,18.6s,baz=296,slow=41
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 15.60 94 Pn **Pn 04 32 03.5 -3.8**
PVRL Vila Real 15.68 272 *e*pP **pP 04 32 16.8 +1.7**
PVRL A A 04 32 19.3
comp=Z,40nm,1.9s
POLO Lamas de Olo 15.72 273 *e*pP **pP 04 32 16.6 +1.0**
POLO A A 04 32 18.9
comp=Z,19nm,2.0s
PMRV Marv??o 15.92 265 *e*S **S 04 35 28.4 +6.1**
PGAV Gavieira, Arco 15.96 275 *e*S S 04 35 38.9 +16
PBAR Barrancos 16.09 261 *e*pP **pP 04 32 20.6 +0.9**
PBAR A A 04 32 22.9
comp=Z,42nm,1.7s
EKA Eskdalemuir Ar 16.64 326 Pn **Pn 04 32 18.9 -1.6**
baz=137,slow=14
EKA LR LR 04 40 06.3
comp=Z,744nm,18.0s,baz=140,slow=42
comp=Z,2.8nm,0.6s
MDT Midelt 17.17 241 P **P 04 32 28.3 -0.7**
comp=Z,1.0nm,0.8s,baz=67,slow=15,SNR=1.8
MDT LR LR 04 38 09.6
comp=Z,578nm,21.6s,baz=44,slow=34
KONO Kongsberg 17.22 354 Pn **Pn 04 32 24.8 -2.9**
KONO Kongsberg 17.22 354⇓*e*P **Pn 04 32 27.5 -0.2**
KONO Kongsberg 17.22 354 *e*P **Pn 04 32 27.1 -0.6**
BLS5 Blasjo 17.36 348 *e*P **P 04 32 30.4 -0.5**
MTSE Matsula 17.42 19 *e*P **Pn 04 32 29.6 -0.6**
BNN Bunyan 17.50 95 **Pn 04 32 29.5 -2.0**
BNN IAmb IAmb 04 32 39.4
comp=Z,56nm,1.1s
TOKA Tokat 17.53 90 Pn **Pn 04 32 27.7 -4.0**
HFS Hagfors 17.56 1 P **Pn 04 32 30.6 -1.3**
comp=Z,0.8nm,0.3s,baz=178,slow=12,SNR=16
HFS LR LR 04 39 56.7
comp=Z,966nm,19.4s,baz=182,slow=40
comp=Z,11nm,0.8s
ANN Anapa 17.59 75 *e*P **Pn 04 32 29.7 -2.7**
ANN *e*S **Sn 04 35 43.9 -4.4**
ANN pmax pmax
comp=Z,22nm,1.1s
ANN MLR MLR
comp=Z,969nm,14.0s
VSU Vasula 17.97 23*c**e*P **P 04 32 37.5 -0.1**
VSU Vasula 17.97 23 *e*P **Pn 04 32 36.6 -0.5**
NC602 NORSAR Array S 18.19 357 *e*P **Pn 04 32 39.8 +0.1**
NAO01 NORSAR Array S 18.33 356 **Pn 04 32 38.9 -2.5**
NAO01 IAmb IAmb 04 32 46.6
comp=Z,56nm,0.9s
NAO01 NORSAR Array S 18.33 356 *e*P **Pn 04 32 41.2 -0.2**
NOA NORSAR Array B 18.51 357 P **P 04 32 42.5 -1.0**
comp=Z,0.1nm,0.3s,baz=176,slow=11,SNR=27
NOA LR LR 04 41 03.7
comp=Z,613nm,19.3s,baz=175,slow=41
comp=Z,5.0nm,0.7s
NC204 NORSAR Array S 18.76 356 P **P 04 32 45.2 -1.1**
MEF Metsahovi 18.90 17 *e*P **P 04 32 47.1 -0.7**
HYA Hyanger 19.08 349 *e*P **Pn 04 32 50.3 -0.1**
RAF Rauma 19.15 13 *e*P **P 04 32 50.3 -0.2**
SOC Sochi 19.31 78 *e*P **P 04 32 51.9 -0.5**
SOC *e* 04 36 27.8
SOC MLR MLR
comp=Z,395nm,19.0s
VSR Storozhevoye 19.59 55 *e*P **Pn 04 32 56.2 -0.5**
VSR *e*S **S 04 36 30.1 -6.4**
VSR pmax pmax
comp=Z,30nm,1.1s
VSR smax smax
comp=N,150nm,7.2s
VSR MLR MLR
comp=Z,1μm,13.0s
DOMB Dombas 19.63 354 *e*P **Pn 04 32 57.6 +0.4**
FOO Floro 19.66 348 *e*P **Pn 04 32 56.8 -0.6**
OBN Obninsk 19.67 42 P **P 04 32 56.9 +0.7**
comp=Z,0.6nm,0.3s,baz=25,slow=8.9,SNR=6.6
OBN LR LR 04 41 22.1
comp=Z,370nm,20.1s,baz=217,slow=40
comp=Z,3.4nm,0.5s
OBN Obninsk 19.67 42 P **P 04 32 55.5 -0.7**
OBN IAmb IAmb 04 33 05.5
comp=Z,49nm,1.2s
OBN Obninsk 19.67 42*c**e*P **Pn 04 32 57.0 -0.6**
OBN *i* S S 04 36 24.9 -13
OBN pmax pmax
comp=Z,27nm,0.8s
OBN MLR MLR
comp=Z,2μm,20.0s
VORR Voronezh 19.74 54 *e*P **Pn 04 32 59.9 +1.4**
VORR pmax pmax
comp=Z,48nm,1.6s
LPSR Galich'ya Gora 19.88 51 *e*P **P 04 32 59.2 +0.7**
LPSR *e*S S 04 36 31.0 -11
LPSR pmax pmax
comp=Z,30nm,0.9s
LPSR smax smax
comp=N,390nm,12.3s
LPSR MLR MLR
comp=Z,1μm,13.0s
MMAI Mount Meron Ar 19.88 111 P **Pn 04 33 01.4 +1.0**
comp=Z,1.7nm,0.4s,baz=313,slow=9.8,SNR=6.3
MMAI LR LR 04 42 34.6
comp=Z,435nm,19.7s,baz=136,slow=42
comp=Z,1.7nm,0.4s
AKN Aaknes 19.96 351 *e*P **P 04 32 59.5 +0.2**
AKN *e*S **S 04 36 44.2 +0.4**
PUL Pulkovo 20.13 26⇓*e*P Pn 04 33 03.3 +0.3
PUL pmax pmax
comp=Z,53nm,0.9s
FINES FINESS Array B 20.37 18 P **P 04 33 02.9 -1.0**
comp=Z,21nm,0.8s,baz=205,slow=8.4,SNR=23
FINES LR LR 04 41 38.8
comp=Z,1μm,18.8s,baz=206,slow=39
comp=Z,21nm,0.8s
FINES FINESS Array B 20.37 18 P **P 04 33 03.0 -0.8**
FINES FINESS Array B 20.37 18 P **P 04 33 03.0 -0.8**
FIA1 FINESS Array S 20.37 18 P **P 04 33 02.7 -1.1**
FIA1 IAmb IAmb 04 33 07.4
comp=Z,35nm,1.0s
MOS Moscow 20.50 42 *e*P **P 04 33 03.8 -1.5**
MOS *e* 04 33 35.7
MOS *e*S **S 04 36 52.6 -2.0**
MOS pmax pmax
comp=Z,100nm,0.7s
MOS pmax pmax
comp=Z,66nm,0.7s
TBLU Trondheim 20.76 356 *e*P Pn 04 33 09.3 -1.1
TAM Tamanrasset 20.79 201 P **P 04 33 08.1 -0.7**
TAM IAmb IAmb 04 33 11.9
comp=Z,39nm,1.3s
TAM Tamanrasset 20.79 201 P **P 04 33 08.1 -0.7**
TAM pmax pmax
comp=Z,39nm,1.3s
GHAJ Ghor Haditha 21.02 115 P **P 04 33 11.4 +0.4**
VRH Novokhopyorsk 21.14 56 *e*P **P 04 33 13.6 +1.4**
VRH *e*S **S 04 37 04.3 -3.1**
VRH pmax pmax
comp=Z,50nm,0.8s
VRH smax smax
comp=N,290nm,11.1s
VRH MLR MLR
comp=Z,1μm,14.0s
ASF Jabal al Asfar 21.39 111 P **P 04 33 19.8 +4.5**
comp=Z,4.4nm,0.7s,baz=304,slow=7.8,SNR=6.0
ASF LR LR 04 43 51.9
comp=Z,533nm,19.3s,baz=330,slow=43
KIV Kislovodsk 21.40 76 P **P 04 33 15.2 0.0**
KIV IAmb IAmb 04 33 25.4
comp=Z,41nm,1.0s
KIV Kislovodsk 21.40 76 *e*P **P 04 33 16.8 +1.5**
KIV *e*S **S 04 37 15.4 +2.5**
KIV pmax pmax
comp=Z,47nm,1.1s
KIV MLR MLR
comp=Z,353nm,14.0s
KIV Kislovodsk 21.40 76 *i* P **P 04 33 17.1 +1.9**
SNR=6.1
KVAR Kislovodsk Arr 21.41 76 LR LR 04 42 28.3
comp=Z,492nm,18.5s,baz=270,slow=39
VALR Valaam 21.55 23⇓*e*P **P 04 33 16.9 +0.4**
VALR pmax pmax
comp=Z,73nm,1.1s
KBZ Khabaz 21.58 77 P **P 04 33 18.9 +1.9**
comp=Z,33nm,0.8s,baz=290,slow=8.3,SNR=26
KBZ LR LR 04 44 31.4
comp=Z,455nm,18.7s,baz=296,slow=44
comp=Z,33nm,0.8s
KBZ Khabaz 21.58 77*c* *i*P **P 04 33 18.7 +1.7**
KBZ pmax pmax
comp=Z,41nm,0.9s
EIL Elat 21.67 120 P **P 04 33 21.9 +3.8**
comp=Z,8.3nm,0.9s,baz=340,slow=10,SNR=3.4
EIL LR LR 04 44 42.2
comp=Z,234nm,21.2s,baz=302,slow=45
comp=Z,8.3nm,0.9s
MARD Mardin 21.68 95 P **P 04 33 18.7 +0.3**
MARD IAmb IAmb 04 33 24.5
comp=Z,22nm,0.8s
NSS Namsos 21.98 358 *e*P **P 04 33 21.0 -0.1**
KARS Kars 22.31 85 P **P 04 33 24.7 -0.4**
KARS Kars 22.31 85 P **P 04 33 24.7 -0.4**
KARS pmax pmax
comp=Z,109nm,1.4s
ZEI Tsey 22.45 79 *e*P **P 04 33 29.5 +2.9**
ZEI pmax pmax
comp=Z,14nm,0.9s
GUDG Gudauri 22.93 80 P **P 04 33 29.9 -1.8**
GUDG Gudauri 22.93 80 P **P 04 33 29.9 -1.8**
GUDG pmax pmax
comp=Z,60nm,1.3s
MOR8 Moi Rana 23.63 1 *e*P **P 04 33 39.5 +1.2**
GNI Garni 23.67 85 P **P 04 33 42.2 +3.0**
comp=Z,10nm,0.7s,baz=202,slow=3.6,SNR=4.1
GNI LR LR 04 45 55.3
comp=Z,313nm,20.1s,baz=306,slow=44
comp=Z,10nm,0.7s
GNI Garni 23.67 85 P **P 04 33 39.7 +0.6**
GNI IAmb IAmb 04 33 52.5
comp=Z,26nm,1.1s
GNI Garni 23.67 85*c* *i*P **P 04 33 42.1 +3.0**
GNI pmax pmax
comp=Z,11nm,0.8s
GROC Groznyy 23.75 77 *e*P **P 04 33 37.9 -1.8**
GROC *e* 04 34 06.9
GROC *e* 04 37 21.8
GROC *e*S **S 04 37 54.5 -0.5**
GROC pmax pmax
comp=Z,53nm,0.7s
GROC MLR MLR
comp=Z,239nm,11.0s
KLMR Klimovskoe 24.17 32 *e*P **P 04 33 41.8 -1.7**
KLMR *e*S **S 04 38 01.9 +0.5**
KLMR pmax pmax
comp=Z,54nm,1.4s
KLMR MLR MLR
comp=Z,931nm,13.0s
KLMR Klimovskoe 24.17 32 *e*P **P 04 33 41.9 -1.6**
KLMR AMP 04 33 58.4
comp=Z,54nm,1.4s
KLMR *e*S **S 04 38 01.9 +0.5**
KLMR *e*S **S 04 38 01.9 +0.5**
KLMR LQ LQ 04 41 20.6

KLMR LQ LQ 04 41 20.6
KLMR LR LR 04 42 41.2
KLMR AMP 04 44 08.5
comp=Z,931nm,13.2s
FAUS Fauske 24.86 2 *e*P **P 04 33 48.6 -1.0**
BELG Belogornoye 24.97 55 P **P 04 33 50.8 +0.1**
comp=Z,42nm,1.0s,baz=250,slow=2.0,SNR=12
BELG LR LR 04 44 53.7
comp=Z,1µm,18.4s,baz=272,slow=40
comp=Z,42nm,1.0s
BELG Belogornoye 24.97 55*c i*P **P 04 33 50.6 -0.2**
BELG pmax pmax
comp=Z,12nm,1.2s
MAK Makhachkala 25.02 77 *e*P **P 04 33 47.1 -4.3**
MAK *e*S **S 04 38 10.2 -5.3**
MAK pmax pmax
comp=Z,210nm,1.2s
MAK MLR MLR
comp=Z,867nm,13.0s
STEI Steigen 25.41 2 *e*P **P 04 33 54.2 -0.4**
PRGR Permogore 27.07 34 *e*P **P 04 34 07.8 -1.9**
PRGR pmax pmax
comp=Z,39nm,1.4s
KIRV Kirov 27.52 42 P **P 04 34 13.0 -0.8**
comp=Z,11nm,0.4s,baz=260,slow=2.6,SNR=5.7
KIRV LR LR 04 46 06.6
comp=Z,1µm,19.9s,baz=252,slow=39
comp=Z,11nm,0.4s
KIRV Kirov 27.52 42*c e*P **P 04 34 14.8 +1.1**
ARCES ARCESS Array B 27.73 9 P **P 04 34 14.1 -1.5**
comp=Z,0.9nm,0.5s,baz=185,slow=9.6,SNR=6.5
ARCES LR LR 04 45 29.1
comp=Z,273nm,20.5s,baz=200,slow=37
comp=Z,0.9nm,0.5s
BORG Borgarnes 29.55 330 LR LR 04 47 05.0
comp=Z,192nm,18.5s,baz=111,slow=38
JMIC Jan Mayen 30.47 346 LR LR 04 47 15.6
comp=Z,219nm,19.7s,baz=129,slow=37
TOA0 Torodi Ar. Sit 31.02 202 P **P 04 34 45.9 +0.7**
TOA0 IAmb IAmb 04 34 54.3
comp=Z,8.4nm,0.8s
TORD Torodi Ar. Bea 31.02 202 P **P 04 34 45.5 +0.3**
comp=Z,2.8nm,0.3s,baz=14,slow=8.8,SNR=2.8
TORD PcP **PcP 04 37 40.6 -0.5**
comp=Z,1.5nm,0.4s,baz=332,slow=3.2,SNR=1.6
TORD LR LR 04 48 34.7
comp=Z,1µm,18.5s,baz=22,slow=39
comp=Z,2.8nm,0.3s
TORD Torodi Ar. Bea 31.02 202 P **P 04 34 43.1 -2.1**
AKTO Aktyubinsk 31.36 60 LR LR 04 49 07.8
comp=Z,644nm,20.3s,baz=278,slow=40
KOWA Kowa 31.73 213 LR LR 04 48 59.4
comp=Z,572nm,18.4s,baz=44,slow=39
ARU Arti 31.85 48 LR LR 04 49 22.3
comp=Z,847nm,21.2s,baz=256,slow=39
ARU Arti 31.85 48 P **P 04 34 51.9 -0.4**
ARU Arti 31.85 48*c i*P **P 04 34 51.8 -0.4**
ARU 04 35 54.1
ARU 04 37 44.1
ARU S **S 04 40 01.7 -1.0**
ARU pmax pmax
comp=Z,48nm,0.9s
ARU MLR MLR
comp=Z,1µm,15.0s
ABKAR Akbulak array 32.70 62 P **P 04 34 58.7 -1.0**
RAYN Ar Rayn 32.76 115 P **P 04 35 00.6 +0.1**
RAYN Ar Rayn 32.76 115 P **P 04 35 00.6 +0.1**
RAYN pmax pmax
comp=Z,4.0nm,1.2s
GEYT Alibeck 34.22 82 P **P 04 35 16.0 +2.8**
comp=Z,6.4nm,0.8s,baz=292,slow=7.8,SNR=6.5
GEYT LR LR 04 52 46.9
comp=Z,295nm,20.2s,baz=317,slow=42
comp=Z,6.4nm,0.8s
GEYT Alibeck 34.22 82 P **P 04 35 13.6 +0.4**
SPITS Spitsbergen Ar 35.71 1 LR LR 04 49 53.7
comp=Z,434nm,21.5s,baz=154,slow=36
DAG Danmarks Havn 36.81 348 *i*P **P 04 35 37.0 +2.1**
DAG IAmb IAmb 04 35 39.9
comp=Z,6.0nm,0.9s
BBTS Babate 37.85 232 LR LR 04 50 55.6
comp=Z,639nm,21.5s,baz=22,slow=36
ICESG Greenland Ices 37.88 332 *i*P **P 04 35 44.8 +0.3**
ICESG IAmb IAmb 04 35 50.5
comp=Z,5.1nm,0.7s
SHME Shamm 38.61 101 P **P 04 35 50.3 -0.4**
SUMG Summit 38.66 338 P **P 04 35 49.5 -1.5**
SUMG Summit 38.66 338 P **P 04 35 49.5 -1.5**
SUMG pmax pmax
comp=Z,13nm,1.1s
SUMG Summit 38.66 338 *i*P **P 04 35 51.6 +0.6**
SUMG IAmb IAmb 04 35 56.8
comp=Z,4.7nm,0.9s
BRVK Borovoye 38.70 54 P **P 04 35 50.6 -0.5**
BRVK IAmb IAmb 04 35 55.2
comp=Z,22nm,0.9s
BRVK Borovoye 38.70 54⇑ *e*P **P 04 35 51.8 +0.7**
BRVK pmax pmax
comp=Z,21nm,0.9s
HRA Herat 38.73 86 P **P 04 35 50.1 -1.8**
BVAR Borovoye Array 38.77 54 LR LR 04 52 58.6
comp=Z,937nm,21.2s,baz=276,slow=38
ASUD Al Ashush, Dub 38.88 104 *i*P **P 04 35 53.5 +0.5**
SNR=5.8
NAZ Nazwa, Dubai 38.90 103 *i*P **P 04 35 54.0 +0.8**
SNR=11
FAQ Al Faqa, Dubai 38.99 103 P **P 04 35 52.8 -1.1**
MSFE Esma-Masafi 39.03 102 P **P 04 35 54.3 0.0**
DBIC Dimbokro 39.22 209 P **P 04 35 58.3 +2.5**
comp=Z,4.9nm,0.8s,baz=21,slow=11,SNR=6.2
DBIC LR LR 04 52 33.0
comp=Z,555nm,21.6s,baz=14,slow=37
comp=Z,4.9nm,0.8s
UOSS Minazif 39.31 103 P **P 04 35 55.2 -1.4**
UOSS IAmb IAmb 04 36 00.5
comp=Z,19nm,0.8s
UOSS Minazif 39.31 103 *i*P **P 04 35 56.2 -0.4**
SNR=8.2
HATD Hatta, Dubai 39.34 103 *i*P **P 04 35 56.5 -0.3**
SNR=11
ASHO Ashiyiah 39.37 103 *i*P **P 04 35 56.6 -0.5**
SNR=10
ALNE Al Ain 39.53 104 *i*P **P 04 35 59.0 +0.6**
SNR=9.5
DY2G Dye2 39.83 327 *i*P **P 04 36 01.4 +0.7**
DY2G IAmb IAmb 04 36 17.0
comp=Z,5.2nm,0.8s
SOHO SOHO 40.05 103 P **P 04 36 02.3 -0.4**
KK31 Karatay Array 41.24 69 P **P 04 36 10.4 -2.1**
KK31 Karatay Array 41.24 69 P **P 04 36 10.4 -2.1**
KK31 pmax pmax
comp=Z,7.0nm,0.9s
KKAR Karatay Array 41.24 69 P **P 04 36 11.2 -1.3**
KKAR Karatay Array 41.24 69 P **P 04 36 11.2 -1.3**
SFJD Kangerlussuaq 41.60 328 P **P 04 36 13.9 -1.1**
SFJD Kangerlussuaq 41.60 328 P **P 04 36 13.9 -1.1**
SFJD pmax pmax
comp=Z,98nm,2.0s
WSAR Wadi Sarin 42.11 103 LR LR 04 58 22.4
comp=Z,213nm,18.6s,baz=332,slow=42
GAR Garm 42.63 75 P **P 04 36 22.8 -1.2**
GAR IAmb IAmb 04 36 31.4
comp=Z,16nm,1.2s
NEEM North Greenlan 43.28 343 *i*P **P 04 36 28.5 -0.4**
NEEM IAmb IAmb 04 36 34.2
comp=Z,16nm,0.9s
AAK Ala-Archa 44.15 68 P **P 04 36 35.3 -0.9**
AAK Ala-Archa 44.15 68⇑ *e*P **P 04 36 37.6 +1.4**
AAK pmax pmax
comp=Z,7.0nm,1.3s
KURBB Kurchatov Arra 44.21 56 LR LR 04 56 32.4
comp=Z,785nm,19.2s,baz=260,slow=38
KURK Kurchatov 44.24 56 P **P 04 36 35.2 -1.3**
KURK Kurchatov 44.24 56*c i*P **P 04 36 38.5 +1.9**
KURK pmax pmax
comp=Z,16nm,2.6s
NRIK Noril'sk 45.45 29 LR LR 04 58 46.6
comp=Z,778nm,18.2s,baz=274,slow=40
KSH Kashi 46.41 72 P **P 04 36 55.0 +0.8**
KSH pmax pmax
comp=Z,10.0nm,0.8s
KSH LR LR
comp=Z,360nm,17.9s
KSH LR LR
comp=Z,410nm,17.5s
KSH LR LR
comp=Z,290nm,19.2s
ZAA0 Zalesovo Array 46.98 50 P **P 04 36 57.4 -0.8**
ZAA0 IAmb IAmb 04 37 01.1
comp=Z,6.2nm,0.8s
ZALV Zalesovo Beam 46.98 50 P **P 04 36 58.2 -0.1**
comp=Z,7.2nm,0.9s,baz=295,slow=8.0,SNR=14
ZALV PP **PP 04 38 49.3 +0.9**
comp=Z,3.1nm,0.8s,baz=286,slow=10,SNR=3.6
ZALV LR LR 04 58 23.8
comp=Z,585nm,19.7s,baz=276,slow=38
comp=Z,7.2nm,0.9s
ZALV Zalesovo Beam 46.98 50 P **P 04 36 57.5 -0.8**
NIL Nilore 47.14 80 P **P 04 36 59.4 -0.5**
NIL Nilore 47.14 80 P **P 04 36 59.4 -0.5**
NIL pmax pmax
comp=Z,15nm,1.1s
MK31 Makanchi Array 47.80 60 P **P 04 37 03.6 -1.2**
MK31 Makanchi Array 47.80 60⇑ *e*P **P 04 37 05.9 +1.1**
MKAR Makanchi Array 47.80 60 P **P 04 37 04.6 -0.2**
comp=Z,4.2nm,0.7s,baz=284,slow=7.0,SNR=25
MKAR LR LR 05 01 35.4
comp=Z,491nm,18.6s,baz=293,slow=42
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 47.80 60 P **P 04 37 03.6 -1.2**
MKAR Makanchi Array 47.80 60*ce*P **P 04 37 04.9 +0.1**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 48.60 147 LR LR 04 59 26.7
comp=Z,135nm,18.7s,baz=286,slow=38
DGZ Jazzator, Alta 49.92 55⇑ *e*P **P 04 37 21.8 +0.6**
DGZ pmax pmax
comp=Z,5.0nm,0.7s
SCHQ Schefferville 51.43 313 P **P 04 37 31.0 -1.3**
comp=Z,4.1nm,0.8s,baz=82,slow=11,SNR=4.0
comp=Z,4.1nm,0.8s
WMQ Urumqi 52.48 62 *e*P **P 04 37 43.3 +2.9**
WMQ pP sP 04 37 47.5 +2.9
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ LR LR
comp=Z,690nm,18.5s
WMQ LR LR
comp=Z,280nm,17.7s
WMQ LR LR
comp=Z,390nm,21.3s
RES Resolute Bay 53.92 342 LR LR 05 01 29.4
comp=Z,98nm,20.4s,baz=92,slow=37
KNGR Kungurtug, Tuv 55.45 50⇑ *e*P **P 04 38 03.3 +1.2**
KNGR pmax pmax
comp=Z,2.0nm,0.3s
MOY Mondy 56.90 48 *e*P **P 04 38 14.3 +1.9**
PYUN Piuthan 57.16 80 *e*P **P 04 38 14.3 -0.4**
TIXI Tiksi 57.40 20 LR LR 05 06 53.8
comp=Z,461nm,18.4s,baz=357,slow=40
DANN Dangsing 57.58 80 *e*P **P 04 38 17.0 -0.8**
comp=Z,25nm,0.6s
GKN Gorkha 58.42 80 *e*P **P 04 38 23.9 +0.4**
DMN Daman 58.98 80 *e*P **P 04 38 28.2 +0.7**
comp=Z,48nm,1.1s
LSZ Lusaka 59.20 163 LR LR 05 07 02.9
comp=Z,114nm,19.1s,baz=350,slow=39
PKIN Phulchoki 59.21 80 *e*P **P 04 38 29.4 +0.3**
PKI Pulchoki 59.22 80 *e*P **P 04 38 30.3 +1.0**
GUN Gumba 59.37 79 *e*P **P 04 38 30.4 +0.1**
JIRN Jiri 59.74 79 *e*P **P 04 38 34.7 +1.8**
RAMN Ramite 60.45 79 *e*P **P 04 38 38.8 +1.2**
GOMU GeErMu 61.02 66 P **P 04 38 37.5 -4.0**
GOMU pP pP 04 38 41.3 -3.3
GOMU sP sP 04 38 42.8 -3.0
GOMU S **S 04 47 06.8 +6.2**
GOMU sS sS 04 47 16.0 +10
TAPN Taplejung 61.02 78 *e*P **P 04 38 43.3 +1.7**
TSUM Tsumeb 61.62 175 LR LR 05 07 07.4
comp=Z,276nm,19.1s,baz=8.5,slow=38
SONM Songino Array 61.88 50 P **P 04 38 47.7 +0.9**
comp=Z,7.0nm,1.0s,baz=284,slow=8.2,SNR=16
SONM LR LR 05 07 36.9
comp=Z,728nm,19.0s,baz=326,slow=38
comp=Z,7.0nm,1.0s
SONM Songino Array 61.88 50 P **P 04 38 46.4 -0.5**
SONM IAmb IAmb 04 38 54.1
comp=Z,8.4nm,1.0s
LSA Lhasa 62.13 74 P **P 04 38 47.8 -1.4**
LSA IAmb IAmb 04 38 52.4
comp=Z,8.2nm,0.9s
LSA Lhasa 62.13 74 P **P 04 38 47.8 -1.4**
LSA pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 62.23 49 P **P 04 38 47.7 -1.6**
ULN Ulaanbaatar 62.23 49⇑ *e*P **P 04 38 50.0 +0.7**
ULN pmax pmax
comp=Z,23nm,3.1s
GTA Gaotai 62.54 61 *e*P P 04 38 57.8 +6.3
GTA pP sP 04 39 01.3 +5.6
GTA sP pP 04 39 04.3 +10
GTA pmax pmax
comp=Z,3.0nm,0.9s
SADO Sadowa 63.18 307 LR LR 05 04 44.7
comp=Z,114nm,20.1s,baz=55,slow=35
YAK Yakutsk 63.89 28 LR LR 05 10 27.7
comp=Z,223nm,18.1s,baz=266,slow=40
YAK Yakutsk 63.89 28⇑ *e*P **P 04 39 00.9 +1.1**
YAK pmax pmax
comp=Z,115nm,3.3s
SHL Shillong 65.08 77 P **P 04 39 05.8 -2.6**
SHL Shillong 65.08 77 P **P 04 39 05.8 -2.6**
SHL pmax pmax
comp=Z,14nm,1.1s
INK Inuvik 66.65 347 LR LR 05 10 27.2
comp=Z,89nm,20.5s,baz=60,slow=38
LZH Lanzhou 67.07 62 *e*P **P 04 39 23.0 +2.0**
LZH sP sP 04 39 30.3 +5.0
LZH pmax pmax
comp=Z,15nm,1.3s
LZH LR LR
comp=Z,490nm,15.8s
LZH LR LR
comp=Z,440nm,15.5s
LZH LR LR
comp=Z,500nm,19.2s
YKA Yellowknife Ar 67.24 337 P **P 04 39 21.7 +0.2**
comp=Z,6.4nm,1.0s,baz=43,slow=5.9,SNR=12
comp=Z,6.4nm,1.0s
BILL Bilibino 67.82 11⇑ *e*P **P 04 39 26.4 +1.3**
BILL *e* 04 39 57.9
BILL pmax pmax
comp=Z,4.0nm,0.4s
LBTB Lobatse 68.23 168 LR LR 05 09 21.5
comp=Z,117nm,20.4s,baz=353,slow=36
BBGH Gun Hill 68.62 268 P **P 04 39 29.0 -1.9**
ULM Lac du Bonnet 68.80 319 P **P 04 39 31.2 -0.3**
comp=Z,2.1nm,0.5s,baz=108,slow=3.2,SNR=4.6
comp=Z,2.1nm,0.5s
MDP Montagnes des 68.92 257 LR LR 05 06 09.7
comp=Z,122nm,20.5s,baz=50,slow=33
HHC Hu-ho-hao-te 68.97 54 *e*P **P 04 39 33.5 +0.6**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,230nm,5.8s
HHC LR LR
comp=Z,980nm,15.9s
HHC LR LR
comp=Z,1µm,15.1s
HHC LR LR
comp=Z,2µm,18.0s
BMAR Burnt Mountain 69.01 351 P **P 04 39 32.9 +0.3**
XLT XiLinHaoTe 69.65 49⇓ *i*P **P 04 39 37.0 0.0**
XLT sP sP 04 39 46.0 +4.7
XLT pmax pmax
comp=Z,11nm,0.7s
XLT pmax pmax
comp=Z,130nm,4.2s
XLT LR LR
comp=Z,350nm,18.9s
XLT LR LR
comp=Z,530nm,14.9s
SEY Seymchan 69.85 19⇑ *e*P **P 04 39 39.2 +1.4**
SEY pmax pmax
comp=Z,72nm,3.3s
FYU Fort Yukon 69.92 351 P **P 04 39 37.2 -0.9**
SJG San Juan 70.30 277 LR LR 05 05 44.6
comp=Z,128nm,21.9s,baz=80,slow=32
H23K Yukon River 71.09 353 IAmb IAmb 04 39 50.4
comp=Z,8.8nm,1.2s
TKL Tuckaleechee C 71.48 302 LR LR 05 11 57.0
comp=Z,89nm,18.1s,baz=60,slow=37
DAWY Dawson 71.50 348 IAmb IAmb 04 39 52.3
comp=Z,6.5nm,1.1s
PZH PanZhiHua 71.51 71 P **P 04 39 49.5 +0.8**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,120nm,5.0s
XAN Xi'an 71.61 61 P **P 04 39 50.5 +1.5**
XAN pP sP 04 39 55.3 +2.0
XAN pmax pmax
comp=Z,6.0nm,0.8s
J26L Joseph Creek 71.69 350 IAmb IAmb 04 39 54.5
comp=Z,7.0nm,1.0s
BOSA Boshof 71.72 169 P **P 04 39 50.8 +1.2**
comp=Z,4.1nm,0.7s,baz=345,slow=6.7,SNR=6.9
comp=Z,4.1nm,0.7s
ILAR Eielson Array 71.84 351 P **P 04 39 50.6 +0.8**
comp=Z,3.1nm,1.0s,baz=10,slow=5.2,SNR=13
ILAR LR LR 05 14 28.9
comp=Z,102nm,19.4s,baz=32,slow=38
comp=Z,3.1nm,1.0s
COLA College 71.84 352⇓ *e*P **P 04 39 50.4 +0.6**
COLA pmax pmax
comp=Z,6.0nm,1.2s
I21K Tanana 71.94 354 IAmb IAmb 04 39 56.0
comp=Z,6.7nm,0.9s
HDA Harding Lake 72.20 351 IAmb IAmb 04 39 55.0
comp=Z,8.2nm,1.1s
BJT Baijiatuan 72.21 52 P **P 04 39 52.2 -0.3**
BJT IAmb IAmb 04 40 04.2
comp=Z,6.7nm,1.1s
BJT Baijiatuan 72.21 52 P **P 04 39 52.2 -0.3**
BJT pmax pmax
comp=Z,7.0nm,1.1s
MA2 Magadan 72.33 21⇓ *e*P **P 04 39 53.8 +1.0**
MA2 pmax pmax
comp=Z,202nm,1.6s
J20K Nowinta River 73.10 354 IAmb IAmb 04 40 02.1
comp=Z,5.4nm,0.9s
RND Reindeer 73.38 352 P **P 04 39 58.8 -0.3**
RND IAmb IAmb 04 40 02.4
comp=Z,5.7nm,1.0s
RND Reindeer 73.38 352 P **P 04 39 58.8 -0.3**
RND pmax pmax
comp=Z,6.0nm,1.0s
WVT Waverly 73.70 304 P **P 04 40 00.8 -0.6**
WVT Waverly 73.70 304 P **P 04 40 00.8 -0.6**
WVT pmax pmax
comp=Z,4.0nm,0.9s
KLR Kul'dur 73.82 37 LR LR 05 16 09.6
comp=Z,675nm,18.5s,baz=321,slow=39
KLR Kul'dur 73.82 37⇑ *e*P **P 04 40 03.5 +1.6**
KLR pmax pmax
comp=Z,20nm,2.3s
K20K Telida 73.91 354 IAmb IAmb 04 40 07.5
comp=Z,6.7nm,1.0s
P40A Paris 73.94 309 IAmb IAmb 04 40 06.3
comp=Z,6.5nm,1.0s
X48A Hartselle 74.31 302 IAmb IAmb 04 40 06.7
comp=Z,6.1nm,0.8s
BNX BinXian 74.33 42 ⇑P **P 04 40 07.0 +2.1**
BNX pmax pmax
comp=Z,10.0nm,0.8s
BNX pmax pmax
comp=Z,220nm,4.2s
ENH Enshi 74.38 63 P **P 04 40 05.2 -0.3**
ENH IAmb IAmb 04 40 12.4
comp=Z,8.7nm,0.9s
CHTO Chiang Mai 74.39 79 P **P 04 40 05.8 +0.2**
CHTO Chiang Mai 74.39 79 P **P 04 40 05.9 +0.2**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CCM Cathedral Cave 74.47 308 P **P 04 40 04.2 -1.6**
CCM IAmb IAmb 04 40 09.3
comp=Z,6.9nm,1.0s
CCM Cathedral Cave 74.47 308 P **P 04 40 04.2 -1.6**
CCM pmax pmax
comp=Z,7.0nm,1.0s
PLAL Pickwick Lake 74.60 303 IAmb IAmb 04 40 09.4
comp=Z,6.1nm,0.9s
CMAR Chiang Mai Arr 74.62 79 P **P 04 40 06.8 -0.2**
comp=Z,1.5nm,0.3s,baz=306,slow=7.0,SNR=13
CMAR LR LR 05 20 44.4
comp=Z,93nm,19.6s,baz=325,slow=42
comp=Z,1.5nm,0.3s
CMAR Chiang Mai Arr 74.62 79 P **P 04 40 04.9 -2.1**
CMAR Chiang Mai Arr 74.62 79*ce*P **P 04 40 08.8 +1.8**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CN2 Changchun 74.72 44 *e*P **P 04 40 08.8 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,600nm,17.0s
CN2 LR LR
comp=Z,700nm,19.0s
P38A Dawn 74.72 310 IAmb IAmb 04 40 11.4
comp=Z,8.3nm,0.9s
DLBC Dease Lake 74.80 341 LR LR 05 15 48.5
comp=Z,178nm,18.8s,baz=94,slow=38
SML Sawmill 74.88 351 IAmb IAmb 04 40 15.9
comp=Z,10nm,0.9s
R40A Maddies Statio 74.90 308 IAmb IAmb 04 40 12.9
comp=Z,5.9nm,0.9s
SUR Sutherland 74.94 173 LR LR 05 15 51.5
comp=Z,260nm,18.2s,baz=349,slow=38
L19K White Mountain 75.13 354 P **P 04 40 08.0 -1.3**
L19K IAmb IAmb 04 40 17.7
comp=Z,7.5nm,1.1s
P29M Windy Craggy 75.36 345 IAmb IAmb 04 40 14.3
comp=Z,8.4nm,0.8s
HHAR Hobbs 77.25 308 P **P 04 40 22.0 +0.2**
U38A Gravette 77.40 308 P **P 04 40 22.2 -0.4**
U38A IAmb IAmb 04 40 26.9
comp=Z,6.2nm,0.9s
USRK Ussuriysk Ar. 77.67 40 P **P 04 40 24.0 0.0**
comp=Z,5.8nm,1.0s,baz=341,slow=3.1,SNR=5.1
USRK LR LR 05 18 20.6
comp=Z,282nm,19.3s,baz=58,slow=39
comp=Z,5.8nm,1.0s
USRK Ussuriysk Ar. 77.67 40 P **P 04 40 24.6 +0.6**
USRK Ussuriysk Ar. 77.67 40 P **P 04 40 24.6 +0.6**
T35A Sooner Cattle 78.29 310 P **P 04 40 25.6 -1.9**
VLA Vladivostok 78.43 41⇓ *e*P **P 04 40 29.0 +0.8**
VLA pmax pmax
comp=Z,44nm,0.9s
HRY Holter Researc 78.63 325 P **P 04 40 28.5 -0.9**
NJ2 Nanjing 79.17 56 *e*P **P 04 40 31.8 -0.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
BOZ Bozeman (W) 79.42 324 IAmb IAmb 04 40 42.6
comp=Z,7.8nm,0.9s
SDV Santo Domingo 79.58 272 LR LR 05 11 43.3
comp=Z,91nm,21.3s,baz=68,slow=33
SDV Santo Domingo 79.58 272 P **P 04 40 34.1 -1.1**
SDV IAmb IAmb 04 40 39.3
comp=Z,11nm,0.9s
SDV Santo Domingo 79.58 272 *e*P **P 04 40 37.4 +2.2**
YHL Hebgen Lake 79.81 323 P **P 04 40 35.2 -1.0**
BBB Bella Bella 79.85 337 LR LR 05 17 08.3
comp=Z,109nm,18.7s,baz=37,slow=37
PETK Petropavlovsk- 79.86 21 LR LR 05 20 36.2
comp=Z,306nm,19.0s,baz=329,slow=39
YSS Yuzh-Sakhalins 80.22 32 *e*P **P 04 40 39.5 +1.6**
YSS pmax pmax
comp=Z,40nm,1.2s
YSS MLR MLR
comp=Z,700nm,18.0s
KSRS Korea Array 80.59 47 P **P 04 40 40.5 +0.4**
comp=Z,4.1nm,0.9s,baz=330,slow=4.9,SNR=5.7
KSRS LR LR 05 20 50.2
comp=Z,109nm,18.8s,baz=325,slow=39
comp=Z,4.1nm,0.9s
PDAR Pinedale Array 80.71 321 P **P 04 40 40.6 -0.3**
comp=Z,0.4nm,0.6s,baz=91,slow=4.5,SNR=3.1
PDAR LR LR 05 18 19.1
comp=Z,117nm,18.7s,baz=44,slow=37
comp=Z,0.4nm,0.6s
BDFB Brasilia 80.74 239 P **P 04 40 41.8 +0.6**
comp=Z,9.5nm,0.9s,baz=60,slow=4.9,SNR=9.7
BDFB LR LR 05 16 27.1
comp=Z,127nm,18.1s,baz=19,slow=36
comp=Z,9.5nm,0.9s
BDFB Brasilia 80.74 239 P **P 04 40 41.0 -0.2**

BDFB				IAmb	IAmb	04 40 46.0
	comp=Z,9.5nm,0.8s					
BDFB	**Brasilia**	**80.74**	**239**	*e*P	**P**	**04 40 41.7 +0.5**
E09A	**Wood Farm, Sta**	**81.35**	**328**	IAmb	IAmb	04 40 51.5
	comp=Z,7.8nm,1.0s					
O20A	**White River Ci**	**82.12**	**319**	IAmb	IAmb	04 40 56.0
	comp=Z,5.9nm,0.9s					
RDMU	**Red Mountain**	**82.42**	**320**	P	**P**	**04 40 48.8 -1.2**
RDMU				IAmb	IAmb	04 40 58.2
	comp=Z,9.4nm,0.9s					
IPMB	**Ipameri, GO**	**82.62**	**237**	*e*P	**P**	**04 40 51.9 +0.9**
MFID	**Camas Ranch**	**82.96**	**325**	P	**P**	**04 40 52.0 -0.7**
MFID				IAmb	IAmb	04 41 00.6
	comp=Z,6.0nm,1.1s					
VAS01	**Vassouras-RJ**	**83.05**	**231**	*e*P	**P**	**04 40 56.2 +3.1**
PDRB	**Porto dos Gac**	**83.55**	**248**	*e*P	**P**	**04 40 57.2 +1.3**
SHEM	**Shemya Is, Ala**	**83.61**	**12**	LR	LR	05 22 38.6
	comp=Z,51nm,19.9s,baz=338,slow=39					
MAN01	**Angra dos Reis**	**83.81**	**231**	*e*P	**P**	**04 40 59.0 +1.9**
DUG	**Dugway, Tooele**	**84.24**	**322**	P	**P**	**04 40 59.9 +0.6**
DUG				IAmb	IAmb	04 41 16.8
	comp=Z,6.1nm,1.5s					
DUG	**Dugway, Tooele**	**84.24**	**322**	P	**P**	**04 40 59.9 +0.6**
DUG				pmax	pmax	
	comp=Z,6.0nm,1.5s					
ELK	**Elko**	**84.89**	**323**	LR	LR	05 17 37.1
	comp=Z,94nm,20.6s,baz=41,slow=35					
PSI	**Prapat**	**84.91**	**91**	LR	LR	05 22 59.6
	comp=Z,134nm,20.1s,baz=276,slow=38					
ROSC	**El Rosal**	**84.99**	**272**	LR	LR	05 14 53.1
	comp=Z,250nm,21.9s,baz=48,slow=33					
BB19B	**Bebedouro**	**85.14**	**236**	*e*P	**P**	**04 41 06.2 +2.4**
ANMO	**Albuquerque**	**85.20**	**314**	LR	LR	05 17 10.5
	comp=Z,188nm,20.8s,baz=44,slow=34					
ANMO	**Albuquerque**	**85.20**	**314**	⇓*e*P	**P**	**04 41 05.6 +1.3**
ANMO				pmax	pmax	
	comp=Z,3.0nm,1.2s					
ITRB	**Iturama**	**85.25**	**238**	*e*P	**P**	**04 41 06.4 +2.1**
MOD	**Modoc Plateau**	**86.06**	**327**	P	**P**	**04 41 07.7 -0.7**
MJAR	**Matsushiro Arr**	**86.59**	**41**	LR	LR	05 23 42.9
	comp=Z,578nm,18.6s,baz=334,slow=38					
VILB	**Vilhena**	**86.88**	**249**	*e*P	**P**	**04 41 15.8 +3.3**
YBH	**Yreka Blue Hor**	**87.15**	**329**	LR	LR	05 20 02.2
	comp=Z,86nm,19.3s,baz=24,slow=36					
PCMB	**Pacaembu**	**87.23**	**237**	*e*P	**P**	**04 41 15.6 +1.6**
TXAR	**Lajitas Array**	**87.91**	**309**	P	**P**	**04 41 18.7 +1.1**
	comp=Z,0.6nm,0.8s,baz=55,slow=3.4,SNR=7.8					
TXAR				LR	LR	05 21 10.3
	comp=Z,88nm,18.1s,baz=48,slow=36					
	comp=Z,0.6nm,0.8s					
PTLB	**Pontes e Lacer**	**87.91**	**247**	*e*P	**P**	**04 41 20.6 +3.2**
NVAR	**Mina Array Bea**	**88.13**	**324**	LR	LR	05 21 00.7
	comp=Z,66nm,20.6s,baz=74,slow=36					
TIJ01	**Guaruva-PR**	**88.63**	**233**	*e*P	**P**	**04 41 23.5 +2.7**
ETMB	**Extrema**	**88.94**	**256**	*e*P	**P**	**04 41 24.4 +2.0**
SIV	**San Ignacio**	**89.61**	**248**	LR	LR	05 18 28.1
	comp=Z,66nm,21.1s,baz=111,slow=34					
PTGB	**Pitanga**	**90.02**	**236**	*e*P	**P**	**04 41 29.7 +2.4**
JHJ	**Hachijo jima 2**	**90.10**	**42**	LR	LR	05 26 15.6
	comp=Z,280nm,18.0s,baz=68,slow=38					
PFO	**Pinyon Flats O**	**91.28**	**320**	LR	LR	05 24 37.1
	comp=Z,98nm,18.7s,baz=25,slow=37					
CMIG	**Matias Romero**	**91.33**	**295**	LR	LR	05 23 02.3
	comp=Z,41nm,19.1s,baz=38,slow=36					
CPUP	**Villa Florida**	**94.45**	**238**	LR	LR	05 22 10.9
	comp=Z,82nm,21.6s,baz=45,slow=34					
LPAZ	**La Paz**	**94.71**	**252**	LR	LR	05 24 00.1
	comp=Z,32nm,18.5s,baz=64,slow=35					
LPIG	**La Paz**	**95.70**	**310**	LR	LR	05 25 15.5
	comp=Z,62nm,18.6s,baz=19,slow=36					
ATAH	**Atahualpa**	**96.01**	**266**	LR	LR	05 23 50.5
	comp=Z,120nm,18.2s,baz=36,slow=35					
JCJ	**Chichijima**	**96.19**	**44**	LR	LR	05 29 39.2
	comp=Z,134nm,19.0s,baz=334,slow=38					
NNA	**Nana**	**98.09**	**261**	LR	LR	05 21 29.6
	comp=Z,83nm,21.9s,baz=22,slow=32					
LVC	**Limon Verde**	**99.50**	**248**	LR	LR	05 24 41.0
	comp=Z,42nm,19.6s,baz=34,slow=34					
ASAR	**Alice Springs**	**127.88**	**89**	PKP	**PKPdf**	**04 47 33.0 -0.4**
	comp=Z,0.4nm,0.5s,baz=316,slow=1.6,SNR=5.5					

*INET **26** 04:35:06.6±0.7, 9°.98N×84°.05W, h76km±4km, MW3.5*
*UCR **26** 04:35:06.8±1.2, 9°.97N×84°.12W, h77km±2km, MW3.7*
ISC 26 04:35:07.2±1.5, 9°.97N±0°.05×84°.13W±0°.04, h76km±8km, n61, σ0°44/69, 13C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC3	**Heredia 3**	**0.03**	**27**	*e*P	**Pn**	**04 35 18.1**	**-0.2**
HDC3				*e*S	**Sn**	**04 35 26.7**	**+0.4**
HDC3	**Heredia 3**	**0.03**	**27**	⇓*e*P	**Pn**	**04 35 18.7**	**-0.2**
HDC3				*e*S	**Sn**	**04 35 26.7**	**+0.4**
SJS	**Escuela Geolog**	**0.08**	**116**	*e*P	**Pn**	**04 35 18.0**	**-0.3**
SJS				*e*S	**Sn**	**04 35 26.8**	**+0.4**
OCM	**Ochomogo**	**0.18**	**116**	*e*P	**Pn**	**04 35 18.2**	**-0.4**
CRPO	**Crater poas**	**0.24**	**336**	*e*P	**Pn**	**04 35 18.7**	**-0.4**
LCR2	**La Lucha 2**	**0.26**	**153**	*e*P	**Pn**	**04 35 18.5**	**-0.6**
RIMA	**Rio Macho**	**0.33**	**128**	*e*P	**Pn**	**04 35 18.9**	**-0.6**
RIMA	**Rio Macho**	**0.33**	**128**	⇓*e*P	**Pn**	**04 35 18.9**	**-0.6**
VTRT	**Volcan Turrial**	**0.33**	**85**	*e*P	**Pn**	**04 35 19.5**	**-0.1**
VTUN	**Crater Central**	**0.36**	**82**	*e*P	**Pn**	**04 35 19.7**	**-0.2**
VTUC	**Crater, Volcan**	**0.36**	**82**	*e*P	**Pn**	**04 35 19.6**	**-0.3**
CVTR	**Volcan Turrial**	**0.36**	**83**	*e*P	**Pn**	**04 35 19.7**	**-0.3**
SRA1	**San Ramn**	**0.37**	**288**	*e*P	**Pn**	**04 35 19.1**	**-0.5**
VTCV	**VTCV, Calle Va**	**0.39**	**89**	*e*P	**Pn**	**04 35 19.8**	**-0.1**
RIFO	**Rio Frio, Sara**	**0.40**	**30**	*e*P	**Pn**	**04 35 19.2**	**-0.5**
CDM	**Cerro de Muert**	**0.55**	**139**	*e*P	**Pn**	**04 35 20.9**	**-0.6**
CDM	**Cerro de Muert**	**0.55**	**139**	⇓*e*P	**Pn**	**04 35 20.9**	**-0.6**
CDM				*e*S	**Sn**	**04 35 31.5**	**-0.5**
JACO	**JACO, Garabito**	**0.61**	**240**	*e*P	**Pn**	**04 35 21.3**	**-0.3**
JACO	**JACO, Garabito**	**0.61**	**240**	⇑*e*P	**Pn**	**04 35 21.3**	**-0.3**
MRVA	**Moravia de Chi**	**0.69**	**102**	*e*P	**Pn**	**04 35 22.4**	**-0.1**
FORC	**Fortuna**	**0.73**	**313**	*e*P	**Pn**	**04 35 22.8**	**-0.1**
PEZE	**Perez Zeledon,**	**0.73**	**143**	⇓*e*P	**Pn**	**04 35 22.6**	**-0.5**
BATAN	**Batan**	**0.75**	**80**	*e*P	**Pn**	**04 35 23.2**	**+0.1**
CASO	**Castillo**	**0.75**	**307**	⇑*i*P	**Pn**	**04 35 23.1**	**-0.1**
CASO				*e*S	**Sn**	**04 35 35.9**	**+0.9**
EDDO	**Dominical**	**0.76**	**160**	*e*P	**Pn**	**04 35 23.4**	**+0.2**
CEDE	**Laguna Cedeo**	**0.76**	**312**	⇑*i*P	**Pn**	**04 35 23.2**	**-0.1**
CEDE				*e*P	**Pn**	**04 35 23.2**	**-0.1**
CEDE				*e*S	**Sn**	**04 35 36.0**	**+0.8**
COVE	**Coope Vega, Sa**	**0.79**	**340**	*e*P	**Pn**	**04 35 22.8**	**-0.7**
LAFE	**Finca La Fe, P**	**0.79**	**258**	*e*P	**Pn**	**04 35 23.9**	**+0.3**
LAFE	**Finca La Fe, P**	**0.79**	**258**	⇑*e*P	**Pn**	**04 35 23.9**	**+0.3**
JTS	**Las Juntas de**	**0.87**	**291**	⇑*e*P	**Pn**	**04 35 24.3**	**-0.2**
SRBA	**San Rafael, Bu**	**1.05**	**134**	*e*P	**Pn**	**04 35 26.2**	**-0.6**
ACAL	**Aguas Claras**	**1.11**	**306**	⇑*e*P	**Pn**	**04 35 27.3**	**-0.2**
DRKO	**Durika**	**1.12**	**129**	*e*P	**Pn**	**04 35 28.1**	**+0.5**
PTEN	**Parque Tenorio**	**1.12**	**311**	⇑*e*P	**Pn**	**04 35 27.2**	**-0.4**
PTEN				*e*S	**Sn**	**04 35 43.3**	**+0.5**
CUI	**Cuipilapa**	**1.23**	**304**	*e*P	**Pn**	**04 35 28.8**	**-0.1**
COLC	**Colonia**	**1.26**	**303**	*e*P	**Pn**	**04 35 29.2**	**-0.1**
HORNC	**Hornillas**	**1.27**	**305**	⇑*i*P	**Pn**	**04 35 29.1**	**-0.3**
VMAR	**Armenia, Volca**	**1.28**	**311**	*e*P	**Pn**	**04 35 29.4**	**-0.3**
GUAB	**Guayabo de Bag**	**1.31**	**304**	*e*P	**Pn**	**04 35 29.6**	**-0.3**
LIM1	**Limonal**	**1.32**	**303**	⇑*i*P	**Pn**	**04 35 29.8**	**-0.3**
POTG	**Potrero Grande**	**1.35**	**133**	*e*P	**Pn**	**04 35 30.2**	**-0.3**
INDI	**Punta indio, G**	**1.36**	**266**	*e*P	**Pn**	**04 35 29.6**	**-1.0**
ORTG	**Ortega, Santa**	**1.37**	**287**	*e*P	**Pn**	**04 35 30.9**	**+0.2**
ORTG	**Ortega, Santa**	**1.37**	**287**	⇑*i*Pg	**Pn**	**04 35 30.9**	**+0.2**
GPS2	**Hotel Rincn d**	**1.43**	**303**	*e*P	**Pn**	**04 35 31.3**	**-0.2**
GPS3	**Bodega del ICE**	**1.45**	**303**	*e*P	**Pn**	**04 35 31.9**	**+0.2**
VRLE	**La Escondida,**	**1.46**	**304**	*e*P	**Pn**	**04 35 31.9**	**-0.1**
BUAI	**Buenos Aires**	**1.49**	**307**	*e*P	**Pn**	**04 35 31.8**	**-0.4**
GRZA	**Playa Garza**	**1.49**	**268**	*e*P	**Pn**	**04 35 31.2**	**-1.0**
BUEV	**Buena Vista**	**1.50**	**303**	*e*P	**Pn**	**04 35 32.2**	**-0.3**
GB1A	**Borinquen Arri**	**1.51**	**304**	*e*P	**Pn**	**04 35 32.3**	**-0.2**
LAPC	**Finca la Perla**	**1.51**	**302**	⇑*e*P	**Pn**	**04 35 32.0**	**-0.5**
GBS3	**Finca Las Img**	**1.53**	**302**	⇑*e*P	**Pn**	**04 35 32.4**	**-0.5**
SAJU	**San Juanillo,**	**1.56**	**274**	*e*P	**Pn**	**04 35 32.2**	**-0.9**
EDSV	**San Vito**	**1.62**	**135**	*e*P	**Pn**	**04 35 34.5**	**+0.4**
HZTE	**Horizontes, Gu**	**1.62**	**297**	*e*P	**Pn**	**04 35 33.9**	**-0.1**
HZTE	**Horizontes, Gu**	**1.62**	**297**	⇑*e*P	**Pn**	**04 35 33.9**	**-0.1**
BRU2	**Volcan**	**1.84**	**129**	*e*P	**Pn**	**04 35 37.0**	**0.0**
ESPN	**Las Esperanzas**	**2.21**	**356**	⇓*e*P	**Pn**	**04 35 41.4**	**-0.5**
ACON	**Acoyapa**	**2.23**	**333**	*e*P	**Pn**	**04 35 41.6**	**-0.5**
ACON	**Acoyapa**	**2.23**	**333**	*e*P	**Pn**	**04 35 41.6**	**-0.5**

ROM 26 04:40:34.3±0.1, 42°.614N±0°.004×13°.304E±0°.005, h8km, Md1.7/15, 8C-5D, Error ellipse: s-maj=0.4km

s-min=0.2km az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**212**	⇑P	Pg	04 40 37.8	+0.7
RM33				S	Sg	04 40 40.1	+1.0
RM33				AML	AML		
	comp=E,2040μm,0.5s						
RM33				AML	AML		
	comp=N,2130μm,0.8s						
RM33				AML	AML		
	comp=E,2050μm,0.9s						
RM33				AML	AML		
	comp=N,2180μm,1.2s						
RM33				AML	AML		
	comp=E,14100μm,0.3s						
RM33				AML	AML		
	comp=N,14550μm,0.5s						
RM33				AML	AML		
	comp=E,13950μm,0.3s						
RM33				AML	AML		
	comp=N,14500μm,0.5s						
RM33				AML	AML		
	comp=N,2104μm,0.3s						
RM33				AML	AML		
	comp=N,2108μm,0.3s						
RM33				AML	AML		
	comp=E,2031μm,0.2s						
RM33				AML	AML		
	comp=E,1890μm,0.2s						
RM33				END			
TERO	**Teramo**	**0.22**	**88**	⇓P	Pg	04 40 39.5	+0.7
TERO				S	Sg	04 40 43.1	+1.3
TERO				AML	AML		
	comp=E,4810μm,0.7s						
TERO				AML	AML		
	comp=N,3915μm,0.4s						
TERO				AML	AML		
	comp=E,5345μm,0.7s						
TERO				AML	AML		
	comp=N,4280μm,0.5s						
TERO				AML	AML		
	comp=N,988μm,0.1s						
TERO				AML	AML		
	comp=E,866μm,0.1s						
TERO				AML	AML		
	comp=N,1133μm,0.1s						
TERO				AML	AML		
	comp=E,787μm,0.1s						
TERO				END			
GIGS	**Gran Sasso**	**0.26**	**130**	P	Pg	04 40 40.1	+0.7
GIGS				S	Sg	04 40 44.1	+1.3
GIGS				AML	AML		
	comp=E,116μm,0.8s						
GIGS				AML	AML		
	comp=N,97μm,0.5s						
GIGS				AML	AML		
	comp=E,1190μm,1.3s						
GIGS				AML	AML		
	comp=N,905μm,0.4s						
GIGS				AML	AML		
	comp=N,76μm,0.3s						
GIGS				AML	AML		
	comp=E,100μm,0.3s						
GIGS				END			
NRCA	**Norcia**	**0.26**	**328**	⇑P	Pg	04 40 40.4	+0.8
NRCA				S	Sg	04 40 44.5	+1.5
NRCA				END			
AQU	**L'Aquila**	**0.27**	**164**	⇑P	Pg	04 40 40.5	+0.8
AQU				S	Sg	04 40 44.7	+1.4
AQU				AML	AML		
	comp=E,421μm,0.3s						
AQU				AML	AML		
	comp=N,455μm,1.0s						
AQU				AML	AML		
	comp=E,392μm,0.3s						
AQU				AML	AML		
	comp=N,454μm,1.6s						
AQU				AML	AML		
	comp=E,2580μm,1.4s						
AQU				AML	AML		
	comp=N,2570μm,1.0s						
AQU				AML	AML		
	comp=E,2395μm,1.4s						
AQU				AML	AML		
	comp=N,2550μm,0.5s						
AQU				AML	AML		
	comp=E,421μm,0.3s						
AQU				AML	AML		
	comp=N,396μm,0.2s						
AQU				AML	AML		
	comp=E,392μm,0.3s						
AQU				AML	AML		
	comp=N,418μm,0.2s						
AQU				END			
ARRO	**Arrone**	**0.40**	**265**	P	Pg	04 40 42.8	+0.7
ARRO				S	Sb	04 40 48.7	-1.3
ARRO				AML	AML		
	comp=E,200μm,1.4s						
ARRO				AML	AML		
	comp=N,246μm,1.0s						
ARRO				AML	AML		
	comp=E,1590μm,0.2s						
ARRO				AML	AML		
	comp=N,2235μm,0.8s						
ARRO				AML	AML		
	comp=E,197μm,0.2s						
ARRO				AML	AML		
	comp=N,208μm,0.2s						
ARRO				END			
FDMO	**Fiordimonte**	**0.45**	**339**	⇑P	Pb	04 40 43.9	-0.7
FDMO				S	Sb	04 40 50.6	-0.9
FDMO				AML	AML		
	comp=E,1350μm,0.2s						
FDMO				AML	AML		
	comp=N,2400μm,0.2s						
FDMO				AML	AML		
	comp=N,254μm,0.2s						
FDMO				AML	AML		
	comp=E,190μm,0.2s						
FDMO				END			
VCEL	**Villa Celiera**	**0.45**	**119**	⇓P	Pb	04 40 44.2	-0.5
VCEL				S	Sb	04 40 51.5	-0.1
VCEL				AML	AML		
	comp=E,362μm,1.6s						
VCEL				AML	AML		
	comp=N,400μm,0.7s						
VCEL				AML	AML		
	comp=E,3320μm,0.5s						
VCEL				AML	AML		
	comp=N,3015μm,0.7s						
VCEL				AML	AML		
	comp=E,347μm,0.4s						
VCEL				AML	AML		
	comp=N,336μm,0.3s						
VCEL				END			
CSP1	**Cessapalombo**	**0.48**	**351**	⇓P	Pg	04 40 44.4	+0.7
CSP1				S	Sb	04 40 52.2	-0.3
CSP1				AML	AML		
	comp=E,1500μm,0.3s						
CSP1				AML	AML		
	comp=N,1805μm,0.3s						
CSP1				AML	AML		
	comp=E,234μm,0.3s						
CSP1				AML	AML		
	comp=N,243μm,0.2s						
CSP1				END			
CESI	**CESI - Serrava**	**0.49**	**323**	⇑P	Pg	04 40 44.3	+0.5
CESI				S	Sb	04 40 51.8	-0.8
CESI				AML	AML		
	comp=E,166μm,0.2s						
CESI				AML	AML		
	comp=N,182μm,0.3s						
CESI				AML	AML		
	comp=E,1545μm,0.4s						
CESI				AML	AML		
	comp=N,1855μm,0.6s						
CESI				AML	AML		
	comp=E,166μm,0.2s						
CESI				AML	AML		
	comp=N,182μm,0.3s						
CESI				END			
T0110	**Collepietro**	**0.52**	**138**	⇓P	Pg	04 40 45.0	+0.5
T0110				AML	AML		
	comp=E,174μm,0.7s						
T0110				AML	AML		
	comp=N,142μm,1.5s						
T0110				AML	AML		
	comp=E,1950μm,0.6s						
T0110				AML	AML		
	comp=N,2545μm,0.4s						
T0110				AML	AML		
	comp=N,132μm,0.5s						
T0110				AML	AML		
	comp=E,173μm,0.7s						
T0110				END			
CESX	**Cesi**	**0.53**	**270**	P	Pb	04 40 45.5	-0.4
CESX				S	Sb	04 40 53.0	-0.9
CESX				END			
ASSB	**Assisi San Ben**	**0.64**	**312**	⇑P	Pb	04 40 47.4	-0.4
ASSB				AML	AML		
	comp=E,1275μm,1.2s						
ASSB				AML	AML		
	comp=N,1202μm,1.2s						
ASSB				AML	AML		
	comp=N,135μm,0.2s						
ASSB				AML	AML		
	comp=E,93μm,0.2s						
ASSB				END			
SRES	**S.Oreste - Sor**	**0.70**	**238**	⇑P	Pg	04 40 48.2	+0.4
SRES				AML	AML		
	comp=E,368μm,0.6s						
SRES				AML	AML		
	comp=N,348μm,1.5s						
SRES				AML	AML		
	comp=E,40μm,0.2s						
SRES				AML	AML		
	comp=N,45μm,0.4s						
SRES				END			
EL6	**Elcito**	**0.73**	**348**	⇑P	Pg	04 40 48.8	+0.4
EL6				S	Sn	04 41 01.1	-1.4
EL6				AML	AML		
	comp=N,178μm,0.2s						
EL6				AML	AML		
	comp=E,173μm,0.2s						
EL6				END			
INTR	**Introdacqua**	**0.75**	**143**	⇓P	Pg	04 40 48.8	+0.1
INTR				AML	AML		
	comp=E,302μm,0.2s						
INTR				AML	AML		
	comp=N,844μm,0.4s						
INTR				AML	AML		
	comp=E,33μm,0.6s						
INTR				AML	AML		
	comp=N,65μm,0.8s						
INTR				AML	AML		
	comp=N,127nm,0.8s						
INTR				AML	AML		
	comp=E,80nm,0.6s						
LPEL	**Lama dei Pelig**	**0.86**	**131**	P	Pg	04 40 50.9	0.0
LPEL				S	Sn	04 41 05.0	-0.7
LPEL				AML	AML		
	comp=E,676μm,0.3s						
LPEL				AML	AML		
	comp=N,456μm,1.0s						
CAFE	**Carife**	**2.15**	**137**	P	Pn	04 41 09.8	-0.7

ROM 26 04:41:21.4±0.1, 42°.623N±0°.004×13°.298E±0°.005, h11km, ML2.8/35, 22C-9D, Error ellipse: s-maj=0.5km
s-min=0.4km az=44.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.12**	**137**	⇑P	Pg	04 41 25.0	+0.5
CAMP				S	Sg	04 41 26.9	+0.2
CAMP				AML	AML		
	comp=E,9685μm,0.8s						
CAMP				AML	AML		
	comp=N,10595μm,0.3s						
RM33	**Pellescritta (**	**0.13**	**209**	⇑P	Pg	04 41 25.2	+0.6
RM33				S	Sg	04 41 27.3	+0.4
RM33				AML	AML		
	comp=E,14100μm,0.3s						
RM33				AML	AML		
	comp=N,14500μm,0.5s						
RM33				AML	AML		
	comp=E,13950μm,0.3s						
RM33				AML	AML		
	comp=N,14500μm,0.5s						
RM33				AML	AML		
	comp=N,14550μm,0.5s						
RM33				AML	AML		
	comp=E,14100μm,0.3s						
T1243	**Rocca Santa Ma**	**0.13**	**56**	⇑P	Pg	04 41 25.3	+0.6
T1243				S	Sg	04 41 27.8	+0.8
T1243				AML	AML		
	comp=N,27950μm,0.3s						
T1243				AML	AML		
	comp=E,28650μm,0.7s						
T1243				AML	AML		
	comp=E,28800μm,0.7s						
T1243				AML	AML		
	comp=N,28200μm,0.3s						
LNSS	**Leonessa**	**0.19**	**264**	⇑P	Pg	04 41 26.3	+0.7
LNSS				AML	AML		
	comp=E,9920μm,0.3s						
LNSS				AML	AML		
	comp=N,9745μm,1.1s						
LNSS				AML	AML		
	comp=E,9915μm,0.3s						
LNSS				AML	AML		
	comp=N,9740μm,1.1s						
LNSS				AML	AML		
	comp=E,9920μm,1.7s						
TERO	**Teramo**	**0.23**	**90**	⇑P	Pg	04 41 26.8	+0.6
TERO				S	Sg	04 41 30.4	+1.1
TERO				AML	AML		
	comp=E,4815μm,0.7s						
TERO				AML	AML		
	comp=N,3915μm,0.4s						
TERO				AML	AML		
	comp=N,4280μm,0.5s						
TERO				AML	AML		
	comp=E,4810μm,0.7s						
TERO				AML	AML		
	comp=E,5345μm,0.7s						
TERO				AML	AML		
	comp=N,4290μm,0.6s						
TERO				AML	AML		
	comp=N,4105μm,0.8s						
TERO				AML	AML		
	comp=N,4290μm,1.4s						
NRCA	**Norcia**	**0.25**	**327**	⇓P	Pg	04 41 27.1	+0.4
GIGS	**Gran Sasso**	**0.26**	**131**	⇑P	Pg	04 41 27.2	+0.3
GIGS				AML	AML		
	comp=N,905μm,0.4s						
GIGS				AML	AML		
	comp=E,1190μm,1.3s						
GIGS				AML	AML		
	comp=N,906μm,0.4s						
GIGS				AML	AML		
	comp=E,1190μm,0.7s						
GIGS				AML	AML		
	comp=N,906μm,1.6s						
MMO1	**Montemonaco**	**0.28**	**4**	P	Pb	04 41 27.9	-0.6
AQU	**L'Aquila**	**0.28**	**164**	⇑P	Pg	04 41 27.7	+0.6
AQU				AML	AML		
	comp=E,2580μm,1.4s						
AQU				AML	AML		
	comp=N,2570μm,1.0s						
AQU				AML	AML		
	comp=N,2550μm,0.5s						
AQU				AML	AML		
	comp=E,2395μm,1.4s						
AQU				AML	AML		
	comp=N,2570μm,1.0s						
AQU				AML	AML		
	comp=E,2395μm,0.6s						
AQU				AML	AML		
	comp=E,2580μm,0.6s						
MC2	**Monte Cornacci**	**0.30**	**345**	P	Pg	04 41 27.6	0.0
MC2				AML	AML		
	comp=E,2440μm,0.4s						
MC2				AML	AML		
	comp=N,2470μm,0.4s						
FIAM	**Fiamignano**	**0.38**	**201**	⇑P	Pg	04 41 29.4	+0.5
FIAM				AML	AML		
	comp=N,852μm,0.5s						
FIAM				AML	AML		
	comp=N,853μm,0.5s						
FIAM				AML	AML		
	comp=E,880μm,0.7s						
FEMA	**Monte Fema**	**0.39**	**332**	P	Pg	04 41 28.9	-0.2

FEMA					AML	AML		
	comp=E,4590µm,0.7s							
FEMA					AML	AML		
	comp=N,3230µm,0.2s							
ARRO	**Arrone**	**0.40**	**264**	⇑P	Pg	04 41 29.7	+0.5	
ARRO				S	Sb	04 41 35.6	-0.9	
ARRO				AML	AML			
	comp=E,1590µm,0.2s							
ARRO				AML	AML			
	comp=N,2235µm,0.8s							
ARRO				AML	AML			
	comp=E,1595µm,0.2s							
ARRO				AML	AML			
	comp=N,2240µm,0.8s							
FAGN	**Fagnano**	**0.41**	**149**	P	Pb	04 41 30.5	-0.3	
FAGN				S	Sb	04 41 36.3	-0.8	
FAGN				AML	AML			
	comp=N,4615µm,0.7s							
FAGN				AML	AML			
	comp=E,5025µm,0.8s							
FAGN				AML	AML			
	comp=E,5025µm,1.2s							
OFFI	**Offida**	**0.42**	**42**	AML	AML			
	comp=N,5330µm,0.6s							
OFFI				AML	AML			
	comp=E,3190µm,0.9s							
GUMA	**Gualdo di Mace**	**0.44**	**4**	⇓P	Pb	04 41 31.0	-0.3	
GUMA				AML	AML			
	comp=E,3745µm,0.5s							
GUMA				AML	AML			
	comp=E,3745µm,0.5s							
GUMA				AML	AML			
	comp=N,4005µm,0.2s							
GUMA				AML	AML			
	comp=E,4280µm,0.3s							
GUMA				AML	AML			
	comp=N,3965µm,0.6s							
GUMA				AML	AML			
	comp=N,4005µm,0.2s							
GUMA				AML	AML			
	comp=N,3965µm,1.4s							
FDMO	**Fiordimonte**	**0.44**	**339**	⇑P	Pg	04 41 29.1	-1.1	
FDMO				AML	AML			
	comp=E,1350µm,0.2s							
FDMO				AML	AML			
	comp=N,2400µm,0.2s							
VCEL	**Villa Celiera**	**0.46**	**119**	⇓P	Pb	04 41 31.2	-0.4	
VCEL				AML	AML			
	comp=E,3320µm,0.5s							
VCEL				AML	AML			
	comp=N,3015µm,0.7s							
VCEL				AML	AML			
	comp=E,3325µm,0.5s							
VCEL				AML	AML			
	comp=N,3015µm,1.3s							
VCEL				AML	AML			
	comp=E,3325µm,1.5s							
CSP1	**Cessapalombo**	**0.47**	**352**	⇑P	Pg	04 41 29.3	-1.5	
CSP1				AML	AML			
	comp=E,1500µm,0.3s							
CSP1				AML	AML			
	comp=N,1805µm,0.3s							
CESI	**CESI - Serrava**	**0.48**	**323**	⇓P	Pg	04 41 30.9	+0.1	
CESI				AML	AML			
	comp=N,1855µm,0.6s							
CESI				AML	AML			
	comp=E,1545µm,0.4s							
TRTR	**Tortoreto Alta**	**0.49**	**68**	⇓P	Pb	04 41 32.2	+0.2	
TRTR				AML	AML			
	comp=N,2795µm,0.4s							
TRTR				AML	AML			
	comp=E,2380µm,0.5s							
TRTR				AML	AML			
	comp=E,2380µm,1.5s							
CESX	**Cesi**	**0.53**	**269**	⇓P	Pg	04 41 32.1	+0.3	
CESX				S	Sb	04 41 41.0	+0.5	
CESX				AML	AML			
	comp=N,1440µm,0.8s							
CESX				AML	AML			
	comp=E,1400µm,0.2s							
T0110	**Collepietro**	**0.53**	**138**	⇑P	Pg	04 41 32.2	+0.3	
T0110				AML	AML			
	comp=N,2545µm,0.4s							
T0110				AML	AML			
	comp=E,1950µm,0.6s							
T0110				AML	AML			
	comp=E,1950µm,1.4s							
T0110				AML	AML			
	comp=N,2545µm,1.6s							
ASSB	**Assisi San Ben**	**0.63**	**312**	⇓P	Pg	04 41 33.8	+0.1	
ASSB				AML	AML			
	comp=E,1275µm,1.2s							
ASSB				AML	AML			
	comp=N,1202µm,1.2s							
ASSB				AML	AML			
	comp=E,1275µm,0.8s							
ASSB				AML	AML			
	comp=N,1202µm,0.8s							
SNTG	**Esanatoglia**	**0.68**	**338**	⇑P	Pg	04 41 34.2	-0.5	
SNTG				AML	AML			
	comp=E,322µm,0.2s							
SNTG				AML	AML			
	comp=N,518µm,0.3s							
SRES	**S.Oreste - Sor**	**0.70**	**237**	⇑P	Pg	04 41 35.2	+0.2	
SRES				AML	AML			
	comp=N,348µm,1.5s							
SRES				AML	AML			
	comp=E,368µm,0.6s							
SRES				AML	AML			
	comp=N,348µm,0.5s							
CERT	**Cerreto**	**0.71**	**199**	⇓P	Pb	04 41 35.7	-0.2	
CERT				AML	AML			
	comp=E,634µm,0.4s							
CERT				AML	AML			
	comp=N,385µm,0.4s							
CERT				AML	AML			
	comp=E,634µm,1.6s							
EL6	**Elcito**	**0.72**	**349**	⇑P	Pg	04 41 35.0	-0.4	
EL6				AML	AML			
	comp=N,1074µm,0.2s							
EL6				AML	AML			
	comp=E,882µm,1.4s							
MTCE	**Montecelio**	**0.73**	**215**	⇑P	Pg	04 41 35.5	0.0	
MTCE				AML	AML			
	comp=N,254µm,1.1s							
MTCE				AML	AML			
	comp=E,456µm,0.4s							
MTCE				AML	AML			
	comp=N,254µm,0.9s							
ATCC	**AVT- Casa Cast**	**0.74**	**319**	P	Pg	04 41 35.6	-0.2	
ATCC				AML	AML			
	comp=E,1056µm,0.3s							
ATCC				AML	AML			
	comp=N,868µm,0.8s							
ATCC				AML	AML			
	comp=E,1057µm,0.3s							
ATCC				AML	AML			
	comp=N,868µm,1.2s							
CING	**Cingoli**	**0.76**	**354**	AML	AML			
	comp=N,638µm,0.2s							
CING				AML	AML			
	comp=E,726µm,1.0s							
INTR	**Introdacqua**	**0.76**	**143**	⇑P	Pg	04 41 35.8	-0.3	
INTR				AML	AML			
	comp=E,302µm,0.2s							
INTR				AML	AML			
	comp=N,845µm,0.4s							
INTR				AML	AML			
	comp=N,844µm,0.4s							
FOSV	**Fossato di Vic**	**0.78**	**330**	⇑P	Pg	04 41 36.2	-0.3	
FOSV				AML	AML			
	comp=N,437µm,1.4s							
FOSV				AML	AML			
	comp=N,438µm,1.4s							
FOSV				AML	AML			
	comp=E,396µm,0.9s							
FOSV				AML	AML			
	comp=N,437µm,0.6s							
PP3	**Marolino**	**0.79**	**17**	⇑P	Pn	04 41 38.6	+0.1	
PP3				AML	AML			
	comp=N,730µm,0.5s							
PP3				AML	AML			
	comp=E,1150µm,0.6s							
PP3				AML	AML			
	comp=E,1150µm,0.6s							
PP3				AML	AML			
	comp=N,826µm,0.6s							
PP3				AML	AML			
	comp=E,1104µm,0.6s							
PP3				AML	AML			
	comp=N,824µm,0.5s							
PP3				AML	AML			
	comp=E,1104µm,1.4s							
PP3				AML	AML			
	comp=E,1150µm,1.4s							
PP3				AML	AML			
	comp=N,824µm,1.5s							
VVLD	**Villa Vallelon**	**0.79**	**162**	⇑P	Pg	04 41 37.0	+0.3	
VVLD				AML	AML			
	comp=E,290µm,0.8s							
VVLD				AML	AML			
	comp=N,368µm,0.9s							
VVLD				AML	AML			
	comp=N,368µm,0.9s							
VVLD				AML	AML			
	comp=N,368µm,1.1s							
GUAR	**Guarcino**	**0.83**	**179**	⇑P	Pn	04 41 38.9	-0.3	
GUAR				AML	AML			
	comp=E,354µm,0.4s							
GUAR				AML	AML			
	comp=N,388µm,1.1s							
GUAR				AML	AML			
	comp=N,388µm,0.9s							
GUAR				AML	AML			
	comp=E,354µm,1.6s							
LPEL	**Lama dei Pelig**	**0.87**	**131**	⇑P	Pg	04 41 37.9	-0.4	
LPEL				AML	AML			
	comp=N,456µm,1.0s							
LPEL				AML	AML			
	comp=E,676µm,0.3s							
LPEL				AML	AML			
	comp=N,456µm,1.0s							
SSFR	**Montelago di S**	**0.90**	**335**	AML	AML			
	comp=N,728µm,1.0s							
SSFR				AML	AML			
	comp=E,1195µm,0.2s							
SSFR				AML	AML			
	comp=E,1095µm,0.2s							
SSFR				AML	AML			
	comp=N,703µm,0.3s							
ATTE	**AVT- Monte Tez**	**0.90**	**310**	AML	AML			
	comp=N,330µm,0.5s							
ATTE				AML	AML			
	comp=E,328µm,0.4s							
ARVD	**Arcevia**	**0.91**	**343**	P	Pg	04 41 36.8	-2.2	
ARVD				AML	AML			
	comp=E,342µm,0.6s							
ARVD				AML	AML			
	comp=N,286µm,0.7s							
ATFO	**Monte Foce - G**	**0.92**	**325**	P	Pg	04 41 38.6	-0.5	
ATFO				AML	AML			
	comp=E,390µm,0.8s							
ATFO				AML	AML			
	comp=E,390µm,0.8s							
ATFO				AML	AML			
	comp=N,348µm,0.4s							
ATFO				AML	AML			
	comp=E,390µm,1.2s							
MGAB	**Montegabbione**	**0.92**	**289**	AML	AML			
	comp=E,932µm,0.6s							
MGAB				AML	AML			
	comp=N,875µm,0.4s							
MGAB				AML	AML			
	comp=E,1042µm,0.7s							
MGAB				AML	AML			
	comp=N,916µm,1.3s							
ATVO	**AVT- Monte Val**	**1.00**	**320**	⇓P	Pg	04 41 40.4	-0.4	
ATVO				AML	AML			
	comp=N,225µm,0.3s							
ATVO				AML	AML			
	comp=E,228µm,1.1s							
ATVO				AML	AML			
	comp=N,224µm,0.3s							
ATVO				AML	AML			
	comp=E,229µm,1.1s							
ATVO				AML	AML			
	comp=E,229µm,0.9s							
COR1	**Corinaldo**	**1.03**	**348**	AML	AML			
	comp=N,496µm,1.1s							
COR1				AML	AML			
	comp=E,350µm,0.9s							
SACS	**San Casciano d**	**1.05**	**283**	AML	AML			
	comp=N,252µm,0.5s							
SACS				AML	AML			
	comp=E,201µm,0.5s							
PIEI	**Pieia**	**1.07**	**329**	P	Pb	04 41 39.3	-2.7	
PIEI				AML	AML			
	comp=E,288µm,1.0s							
PIEI				AML	AML			
	comp=N,260µm,1.3s							
PIEI				AML	AML			
	comp=E,288µm,1.0s							
MPAG	**Monte Paganucc**	**1.08**	**339**	AML	AML			
	comp=N,234µm,1.2s							
MPAG				AML	AML			
	comp=E,236µm,1.1s							
TOLF	**Tolfa**	**1.11**	**240**	AML	AML			
	comp=N,179µm,1.0s							
TOLF				AML	AML			
	comp=E,184µm,0.5s							
CAFI	**Castiglion Fio**	**1.21**	**306**	AML	AML			
	comp=E,196µm,0.6s							
CAFI				AML	AML			
	comp=N,169µm,0.7s							
SGRT	**San Giovanni R**	**2.01**	**115**	AML	AML			
	comp=E,114µm,0.6s							
SGRT				AML	AML			
	comp=N,102µm,1.6s							
CGRP	**Cima Grappa**	**3.43**	**342**	AML	AML			
	comp=E,50µm,1.3s							
CGRP				AML	AML			
	comp=N,64µm,0.7s							

ROM 26 04:42:02.5±0.1, 42°619N±0°005×13°303E±0°006, h10km, ML2.7/12, 7C-3D, Error ellipse: s-maj=0.6km s-min=0.5km az=177.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.11**	**137**	⇓P	Pg	04 42 05.9	+0.5
CAMP				S	Sg	04 42 08.0	+0.5
CAMP				AML	AML		
	comp=N,1585µm,1.5s						
CAMP				AML	AML		
	comp=E,2820µm,0.7s						
CAMP				AML	AML		
	comp=E,2820µm,1.3s						
CAMP				AML	AML		
	comp=N,1585µm,0.5s						
RM33	**Pellescritta (**	**0.13**	**211**	⇑P	Pg	04 42 06.2	+0.6
RM33				S	Sg	04 42 08.7	+0.9
RM33				AML	AML		
	comp=E,5015µm,1.1s						
RM33				AML	AML		
	comp=E,5075µm,1.1s						
RM33				AML	AML		
	comp=N,3425µm,0.3s						
RM33				AML	AML		
	comp=E,5080µm,1.1s						
RM33				AML	AML		
	comp=N,3355µm,0.3s						
RM33				AML	AML		
	comp=N,3420µm,0.3s						
RM33				AML	AML		
	comp=E,5015µm,0.9s						
RM33				AML	AML		
	comp=E,5080µm,0.9s						
T1243	**Rocca Santa Ma**	**0.13**	**54**	⇑P	Pg	04 42 06.1	+0.4
T1243				AML	AML		
	comp=E,5275µm,0.5s						
T1243				AML	AML		
	comp=N,6525µm,0.3s						
T1243				AML	AML		
	comp=N,6475µm,0.3s						
T1243				AML	AML		
	comp=N,6520µm,0.3s						
T1243				AML	AML		
	comp=E,5250µm,0.5s						
T1243				AML	AML		
	comp=E,5270µm,0.5s						
LNSS	**Leonessa**	**0.20**	**265**	⇑P	Pg	04 42 07.2	+0.5
LNSS				S	Sg	04 42 10.6	+1.1
LNSS				AML	AML		
	comp=E,5310µm,0.4s						
LNSS				AML	AML		
	comp=N,2655µm,0.4s						
LNSS				AML	AML		
	comp=N,2650µm,0.4s						
LNSS				AML	AML		
	comp=E,5315µm,0.4s						
LNSS				AML	AML		
	comp=N,2650µm,1.6s						
TERO	**Teramo**	**0.22**	**89**	P	Pg	04 42 07.7	+0.6
TERO				S	Sg	04 42 11.3	+1.0
TERO				AML	AML		
	comp=E,1985µm,0.7s						
TERO				AML	AML		
	comp=N,4290µm,0.6s						
TERO				AML	AML		
	comp=E,1775µm,0.7s						
TERO				AML	AML		
	comp=E,1985µm,1.3s						
TERO				AML	AML		
	comp=N,4290µm,1.4s						
TERO				AML	AML		
	comp=N,4105µm,0.8s						
TERO				AML	AML		
	comp=E,1775µm,1.3s						
GIGS	**Gran Sasso**	**0.26**	**131**	P	Pg	04 42 08.5	+0.6
GIGS				S	Sg	04 42 12.4	+1.1
GIGS				AML	AML		
	comp=E,396µm,1.0s						
GIGS				AML	AML		
	comp=N,303µm,0.9s						
GIGS				AML	AML		
	comp=N,303µm,1.1s						
GIGS				AML	AML		
	comp=E,396µm,1.0s						
AQU	**L'Aquila**	**0.28**	**165**	P	Pb	04 42 09.8	+0.2
MMO1	**Montemonaco**	**0.28**	**4**	⇑P	Pg	04 42 08.7	+0.5
MMO1				S	Sg	04 42 13.1	+1.0
MMO1				AML	AML		
	comp=E,3460µm,0.8s						
MMO1				AML	AML		
	comp=E,3455µm,0.8s						
MMO1				AML	AML		
	comp=N,2530µm,0.3s						
MC2	**Monte Cornacci**	**0.30**	**344**	⇑P	Pg	04 42 09.2	+0.4
MC2				S	Sg	04 42 14.0	+1.1
ARRO	**Arrone**	**0.40**	**264**	P	Pg	04 42 10.7	+0.3
ARRO				S	Sg	04 42 16.8	+1.1
ARRO				AML	AML		
	comp=E,640µm,0.3s						
ARRO				AML	AML		
	comp=N,854µm,0.2s						
ARRO				AML	AML		
	comp=E,640µm,0.3s						
OFFI	**Offida**	**0.42**	**42**	P	Pb	04 42 12.2	0.0
OFFI				AML	AML		
	comp=N,2315µm,0.5s						
OFFI				AML	AML		
	comp=E,2180µm,0.4s						
GUMA	**Gualdo di Mace**	**0.44**	**3**	P	Pb	04 42 11.9	-0.6
GUMA				S	Sb	04 42 19.3	+0.1
GUMA				AML	AML		
	comp=E,3745µm,0.5s						
GUMA				AML	AML		
	comp=E,3155µm,0.5s						
GUMA				AML	AML		
	comp=N,3965µm,0.6s						
GUMA				AML	AML		
	comp=N,3280µm,0.3s						
GUMA				AML	AML		
	comp=N,3965µm,1.4s						
GUMA				AML	AML		
	comp=E,3745µm,0.5s						
GUMA				AML	AML		
	comp=E,4395µm,0.3s						
FDMO	**Fiordimonte**	**0.45**	**339**	P	Pg	04 42 11.7	+0.4
FDMO				S	Sb	04 42 18.5	-0.8
FDMO				AML	AML		
	comp=E,776µm,1.1s						
FDMO				AML	AML		
	comp=N,897µm,1.4s						
FDMO				AML	AML		
	comp=E,776µm,0.9s						
FDMO				AML	AML		
	comp=N,897µm,0.6s						
VCEL	**Villa Celiera**	**0.46**	**119**	S	Sb	04 42 21.0	+1.4
CSP1	**Cessapalombo**	**0.48**	**351**	P	Pg	04 42 12.3	+0.4
CSP1				S	Sb	04 42 19.8	-0.5
CESI	**CESI - Serrava**	**0.48**	**323**	P	Pg	04 42 12.3	+0.3
T0110	**Collepietro**	**0.53**	**138**	⇓P	Pb	04 42 13.4	-0.5
T0110				S	Sb	04 42 23.0	+1.3
CESX	**Cesi**	**0.53**	**269**	S	Sb	04 42 21.0	-0.8
ASSB	**Assisi San Ben**	**0.64**	**312**	S	Sb	04 42 26.0	+1.2
SNTG	**Esanatoglia**	**0.69**	**337**	⇑P	Pg	04 42 15.8	-0.1
SNTG				S	Sb	04 42 27.0	+0.7
SRES	**S.Oreste - Sor**	**0.70**	**237**	S	Sb	04 42 28.0	+1.4
EL6	**Elcito**	**0.72**	**348**	S	Sn	04 42 29.0	-1.2
CING	**Cingoli**	**0.76**	**354**	⇑P	Pg	04 42 17.3	+0.1
CING				AML	AML		
	comp=N,638µm,0.2s						
CING				AML	AML		
	comp=E,726µm,1.0s						
LPEL	**Lama dei Pelig**	**0.87**	**131**	S	Sb	04 42 32.0	+0.6
ARVD	**Arcevia**	**0.92**	**343**	S	Sn	04 42 35.0	+0.1
ATFO	**Monte Foce - G**	**0.92**	**325**	S	Sn	04 42 35.0	0.0
MGAB	**Montegabbione**	**0.93**	**289**	⇓P	Pn	04 42 22.6	+0.9
FRON	**Frontone**	**0.99**	**335**	S	Sn	04 42 38.0	+1.3
ATVO	**AVT- Monte Val**	**1.01**	**320**	S	Sn	04 42 38.0	+0.9
MPAG	**Monte Paganucc**	**1.08**	**339**	S	Sn	04 42 41.0	+1.9

ROM 26 04:42:58.3±0.1, 42°706N±0°004×13°233E±0°005, h10km, ML2.1/13, 8C-6D, Error ellipse: s-maj=0.4km s-min=0.4km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1243	**Rocca Santa Ma**	**0.16**	**93**	⇑P	Pg	04 43 02.5	+0.6
T1243				S	Sg	04 43 05.3	+0.9
T1243				AML	AML		
	comp=E,2400µm,1.3s						
T1243				AML	AML		
	comp=N,2110µm,1.3s						
T1243				AML	AML		
	comp=N,2080µm,1.3s						
T1243				AML	AML		
	comp=E,2300µm,1.3s						
T1243				AML	AML		
	comp=N,2105µm,1.3s						
T1243				AML	AML		
	comp=E,2400µm,0.7s						
T1243				AML	AML		
	comp=E,2300µm,0.7s						
T1243				AML	AML		
	comp=N,2080µm,0.7s						
T1243				AML	AML		
	comp=N,2105µm,0.7s						
LNSS	**Leonessa**	**0.18**	**234**	⇑P	Pg	04 43 02.8	+0.6
LNSS				S	Sg	04 43 06.0	+1.3
LNSS				AML	AML		
	comp=E,2070µm,0.7s						
LNSS				AML	AML		
	comp=N,2490µm,0.3s						
MMO1	**Montemonaco**	**0.20**	**20**	P	Pg	04 43 03.0	+0.4
MMO1				S	Sg	04 43 07.0	+1.4
MMO1				AML	AML		
	comp=E,2025µm,0.2s						
MMO1				AML	AML		
	comp=N,1680µm,0.5s						
CAMP	**Campotosto**	**0.21**	**143**	⇑P	Pg	04 43 03.4	+0.6
CAMP				S	Sg	04 43 07.2	+1.4
CAMP				AML	AML		
	comp=N,426µm,0.6s						
CAMP				AML	AML		
	comp=E,456µm,0.2s						
TERO	**Teramo**	**0.29**	**107**	⇑P	Pg	04 43 04.5	+0.4
TERO				S	Sb	04 43 09.4	-1.1
TERO				AML	AML		
	comp=E,533µm,1.0s						
TERO				AML	AML		
	comp=N,716µm,0.6s						
TERO				AML	AML		
	comp=E,536µm,1.0s						
TERO				AML	AML		
	comp=N,792µm,0.6s						
TERO				AML	AML		
	comp=N,792µm,1.4s						

TERO				AML	AML		
	comp=N,716µm,1.4s						
FDMO	**Fiordimonte**	**0.35**	**342**	P	Pg	04 43 05.6	+0.4
FDMO				S	Sb	04 43 11.3	-1.0
GIGS	**Gran Sasso**	**0.36**	**136**	⇑P	Pg	04 43 05.6	+0.2
GIGS				AML	AML		
	comp=E,114µm,0.5s						
GIGS				AML	AML		
	comp=N,68µm,0.5s						
GIGS				AML	AML		
	comp=E,114µm,0.5s						
GUMA	**Gualdo di Mace**	**0.36**	**12**	P	Pb	04 43 06.3	-0.6
GUMA				S	Sb	04 43 12.7	0.0
ARRO	**Arrone**	**0.37**	**250**	⇑P	Pg	04 43 05.9	+0.3
ARRO				AML	AML		
	comp=N,208µm,1.0s						
ARRO				AML	AML		
	comp=E,292µm,1.1s						
ARRO				AML	AML		
	comp=N,208µm,1.0s						
ARRO				AML	AML		
	comp=E,292µm,0.9s						
CESI	**CESI - Serrava**	**0.38**	**321**	P	Pg	04 43 06.4	+0.5
CESI				S	Sg	04 43 12.1	+1.0
CSP1	**Cessapalombo**	**0.39**	**357**	P	Pg	04 43 06.2	+0.2
CSP1				S	Sb	04 43 12.4	-1.1
OFFI	**Offida**	**0.40**	**55**	⇑P	Pb	04 43 07.6	0.0
FIAM	**Fiamignano**	**0.45**	**191**	⇓P	Pg	04 43 07.5	+0.4
FIAM				AML	AML		
	comp=N,210µm,0.5s						
FIAM				AML	AML		
	comp=E,282µm,0.6s						
CESX	**Cesi**	**0.49**	**259**	⇓P	Pg	04 43 08.1	+0.2
CESX				S	Sb	04 43 15.9	-0.5
CESX				AML	AML		
	comp=N,254µm,0.3s						
CESX				AML	AML		
	comp=E,210µm,0.3s						
ASSB	**Assisi San Ben**	**0.54**	**309**	P	Pg	04 43 09.2	+0.4
ASSB				AML	AML		
	comp=E,300µm,1.4s						
ASSB				AML	AML		
	comp=E,300µm,0.6s						
ASSB				AML	AML		
	comp=N,278µm,0.2s						
VCEL	**Villa Celiera**	**0.55**	**125**	⇑P	Pb	04 43 09.7	-0.3
SNTG	**Esanatoglia**	**0.59**	**339**	P	Pg	04 43 10.0	+0.2
SNTG				AML	AML		
	comp=N,147µm,0.2s						
SNTG				AML	AML		
	comp=E,108µm,1.0s						
T0110	**Collepietro**	**0.63**	**140**	⇓P	Pg	04 43 10.7	+0.2
ATCC	**AVT- Casa Cast**	**0.65**	**318**	P	Pg	04 43 11.0	+0.1
CING	**Cingoli**	**0.67**	**358**	⇓P	Pg	04 43 11.5	+0.2
CING				AML	AML		
	comp=E,200µm,1.2s						
CING				AML	AML		
	comp=N,164µm,0.4s						
CING				AML	AML		
	comp=E,200µm,0.8s						
ARVD	**Arcevia**	**0.82**	**345**	P	Pb	04 43 14.4	-0.3
MGAB	**Montegabbione**	**0.85**	**284**	⇓P	Pn	04 43 16.5	0.0
MGAB				AML	AML		
	comp=E,174µm,0.5s						
MGAB				AML	AML		
	comp=N,177µm,0.4s						
MGAB				AML	AML		
	comp=E,174µm,1.5s						
SSP9	**Sansepolcro**	**1.18**	**317**	S	Sb	04 43 34.0	-2.3
OSSC	**Osservatorio P**	**1.67**	**300**	S	Sg	04 43 52.0	0.0
CAFE	**Carife**	**2.25**	**138**	⇓P	Pb	04 43 39.0	-0.1

ROM 26 04:45:02.4±0.1, 42°610N±0°004×13°279E±0°006, h5km, ML2.5/27, 19C-7D, Error ellipse: s-maj=0.5km s-min=0.1km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.11**	**206**	⇑P		Pg		04 45 05.9	+1.2
RM33					AML	AML			
	comp=E,8000µm,0.8s								
RM33					AML	AML			
	comp=E,7795µm,0.8s								
RM33					AML	AML			
	comp=N,6935µm,1.3s								
RM33					AML	AML			
	comp=N,6760µm,1.3s								
RM33					AML	AML			
	comp=E,7790µm,0.8s								
RM33					AML	AML			
	comp=E,8005µm,0.8s								
RM33					AML	AML			
	comp=N,6760µm,0.7s								
RM33					AML	AML			
	comp=N,6935µm,0.7s								
RM33					AML	AML			
	comp=E,7790µm,1.2s								
RM33					AML	AML			
	comp=E,8005µm,1.2s								
T1243	**Rocca Santa Ma**	**0.15**	**55**	⇑P		Pg		04 45 06.1	+0.6
T1243				S		Sg		04 45 08.4	+0.9
T1243					AML	AML			
	comp=N,11165µm,0.2s								
T1243					AML	AML			
	comp=E,14300µm,0.3s								
T1243					AML	AML			
	comp=N,11075µm,0.3s								
T1243					AML	AML			
	comp=N,11190µm,0.2s								
T1243					AML	AML			
	comp=E,14550µm,0.3s								
T1243					AML	AML			
	comp=N,11180µm,0.2s								
LNSS	**Leonessa**	**0.18**	**268**	⇑P		Pg		04 45 07.1	+1.2
LNSS					AML	AML			
	comp=E,3690µm,0.3s								
LNSS					AML	AML			
	comp=N,3180µm,0.2s								
LNSS					AML	AML			
	comp=E,3685µm,0.3s								
LNSS					AML	AML			
	comp=N,3185µm,0.2s								
LNSS					AML	AML			
	comp=E,3685µm,1.7s								
GIGS	**Gran Sasso**	**0.27**	**127**	⇓P		Pg		04 45 08.1	+0.5
GIGS				S		Sg		04 45 12.0	+0.9
GIGS					AML	AML			
	comp=N,378µm,0.4s								
GIGS					AML	AML			
	comp=E,360µm,1.1s								
GIGS					AML	AML			
	comp=E,360µm,1.1s								
GIGS					AML	AML			
	comp=N,378µm,0.4s								
AQU	**L'Aquila**	**0.27**	**160**	⇓P		Pg		04 45 08.5	+0.9
AQU				S		Sb		04 45 13.2	-1.4
AQU					AML	AML			
	comp=E,1175µm,0.9s								
AQU					AML	AML			
	comp=N,1250µm,0.6s								
AQU					AML	AML			
	comp=E,1135µm,0.9s								
AQU					AML	AML			
	comp=N,1260µm,0.6s								
AQU					AML	AML			
	comp=E,1175µm,1.1s								
AQU					AML	AML			
	comp=E,1135µm,1.1s								
MMO1	**Montemonaco**	**0.29**	**7**	⇑P		Pg		04 45 08.8	+0.7
MMO1				S		Sg		04 45 13.5	+1.5
MMO1					AML	AML			
	comp=E,2495µm,0.3s								
MMO1					AML	AML			
	comp=N,2250µm,0.9s								
MMO1					AML	AML			
	comp=N,2245µm,0.9s								
MMO1					AML	AML			
	comp=E,2490µm,0.3s								
MMO1					AML	AML			
	comp=N,2245µm,1.1s								
MC2	**Monte Cornacci**	**0.31**	**348**	⇑P		Pg		04 45 09.3	+0.8
MC2				S		Sb		04 45 15.2	-0.8
MC2					AML	AML			
	comp=E,1072µm,0.8s								
MC2					AML	AML			
	comp=N,1072µm,0.8s								
MC2					AML	AML			
	comp=E,1073µm,0.8s								
MC2					AML	AML			
	comp=N,1070µm,0.8s								
MC2					AML	AML			
	comp=E,1066µm,0.8s								
MC2					AML	AML			
	comp=N,1070µm,0.8s								
FIAM	**Fiamignano**	**0.36**	**199**	⇑P		Pg		04 45 10.0	+0.6
FIAM				S		Sb		04 45 16.2	-1.0
FIAM					AML	AML			
	comp=E,604µm,0.6s								
FIAM					AML	AML			
	comp=N,394µm,0.4s								
FIAM					AML	AML			
	comp=E,604µm,0.6s								
ARRO	**Arrone**	**0.38**	**266**	⇑P		Pg		04 45 10.5	+0.8
ARRO				S		Sb		04 45 17.0	-0.7
ARRO					AML	AML			
	comp=E,706µm,0.9s								
ARRO					AML	AML			
	comp=N,792µm,0.8s								
FAGN	**Fagnano**	**0.41**	**147**	⇓P		Pb		04 45 11.4	-0.7
FAGN				S		Sb		04 45 18.6	0.0
FAGN					AML	AML			
	comp=N,1155µm,0.8s								
FAGN					AML	AML			
	comp=N,1155µm,1.2s								
FAGN					AML	AML			
	comp=E,1525µm,0.4s								
OFFI	**Offida**	**0.44**	**42**	⇑P		Pb		04 45 12.1	-0.5
OFFI					AML	AML			
	comp=E,2475µm,0.4s								
OFFI					AML	AML			
	comp=N,2330µm,0.7s								
OFFI					AML	AML			
	comp=E,2475µm,1.6s								
FDMO	**Fiordimonte**	**0.45**	**342**	⇑P		Pg		04 45 11.7	+0.6
FDMO				S		Sb		04 45 18.9	-0.9
FDMO					AML	AML			
	comp=E,642µm,0.2s								
FDMO					AML	AML			
	comp=N,858µm,0.2s								
FDMO					AML	AML			
	comp=E,642µm,0.2s								
GUMA	**Gualdo di Mace**	**0.46**	**5**	⇓P		Pb		04 45 12.0	-0.8
GUMA				S		Sb		04 45 19.8	-0.2
GUMA					AML	AML			
	comp=E,2475µm,0.6s								
GUMA					AML	AML			
	comp=N,2115µm,0.3s								
GUMA					AML	AML			
	comp=E,2230µm,0.9s								
GUMA					AML	AML			
	comp=N,2705µm,0.4s								
GUMA					AML	AML			
	comp=N,2120µm,0.3s								
GUMA					AML	AML			
	comp=E,2475µm,0.5s								
GUMA					AML	AML			
	comp=E,2230µm,1.1s								
VCEL	**Villa Celiera**	**0.47**	**117**	⇑P		Pg		04 45 12.2	+0.8
VCEL				S		Sb		04 45 19.9	-0.4
VCEL					AML	AML			
	comp=N,1990µm,0.8s								
VCEL					AML	AML			
	comp=E,2110µm,0.3s								
VCEL					AML	AML			
	comp=N,1995µm,0.8s								
VCEL					AML	AML			
	comp=N,1990µm,1.2s								
CESI	**CESI - Serrava**	**0.48**	**325**	P		Pg		04 45 12.4	+0.8
CESI				S		Sb		04 45 20.0	-0.7
CESI					AML	AML			
	comp=E,566µm,0.2s								
CESI					AML	AML			
	comp=N,694µm,1.2s								
CSP1	**Cessapalombo**	**0.48**	**354**	⇑P		Pg		04 45 12.2	+0.5
CSP1				S		Sb		04 45 20.2	-0.7
TRTR	**Tortoreto Alta**	**0.51**	**67**	⇑P		Pb		04 45 13.6	-0.1
TRTR				S		Sb		04 45 23.0	+1.6
TRTR					AML	AML			
	comp=N,1322µm,0.9s								
TRTR					AML	AML			
	comp=E,1465µm,0.3s								
TRTR					AML	AML			
	comp=N,1322µm,1.1s								
CESX	**Cesi**	**0.52**	**270**	⇑P		Pg		04 45 12.7	+0.4
CESX				S		Sb		04 45 21.0	-0.6
CESX					AML	AML			
	comp=N,476µm,0.4s								
CESX					AML	AML			
	comp=E,389µm,0.2s								
CESX					AML	AML			
	comp=N,476µm,1.6s								
T0110	**Collepietro**	**0.53**	**136**	⇑P		Pg		04 45 13.0	+0.4
T0110				S		Sb		04 45 21.8	-0.3
T0110					AML	AML			
	comp=N,681µm,0.4s								
T0110					AML	AML			
	comp=N,681µm,1.6s								
T0110					AML	AML			
	comp=E,794µm,0.4s								
ASSB	**Assisi San Ben**	**0.63**	**314**	⇑P		Pg		04 45 15.0	+0.5
ASSB				S		Sb		04 45 24.8	-0.2
ASSB					AML	AML			
	comp=E,409µm,1.5s								
ASSB					AML	AML			
	comp=N,389µm,0.3s								
ASSB					AML	AML			
	comp=E,409µm,0.5s								
SRES	**S.Oreste - Sor**	**0.68**	**237**	⇓P		Pg		04 45 15.8	+0.4
SRES					AML	AML			
	comp=E,145µm,0.4s								
SRES					AML	AML			
	comp=N,181µm,0.3s								
SNTG	**Esanatoglia**	**0.69**	**339**	P		Pg		04 45 16.0	+0.4
SNTG					AML	AML			
	comp=E,182µm,0.2s								
SNTG					AML	AML			
	comp=N,264µm,1.4s								
SNTG					AML	AML			
	comp=E,182µm,1.8s								
SNTG					AML	AML			
	comp=N,264µm,0.6s								
MTCE	**Montecelio**	**0.71**	**214**	⇓P		Pg		04 45 16.2	+0.3
MTCE					AML	AML			
	comp=E,406µm,0.4s								
MTCE					AML	AML			
	comp=N,148µm,1.3s								
MTCE					AML	AML			
	comp=N,148µm,0.7s								
EL6	**Elcito**	**0.73**	**350**	⇑P		Pg		04 45 16.7	+0.3
ATCC	**AVT- Casa Cast**	**0.74**	**321**	⇑P		Pg		04 45 17.1	+0.4
ATCC				S		Sb		04 45 29.0	+0.8
ATCC					AML	AML			
	comp=E,412µm,0.5s								
ATCC					AML	AML			
	comp=N,312µm,0.6s								
ATCC					AML	AML			
	comp=N,312µm,1.4s								
INTR	**Introdacqua**	**0.76**	**142**	⇑P		Pg		04 45 16.5	-0.3
INTR					AML	AML			
	comp=E,124µm,0.4s								
INTR					AML	AML			
	comp=E,124µm,0.4s								
INTR					AML	AML			
	comp=N,298µm,0.7s								
INTR					AML	AML			
	comp=N,298µm,0.7s								
INTR					AML	AML			
	comp=N,298µm,1.3s								
CING	**Cingoli**	**0.77**	**355**	AML	AML				
	comp=E,414µm,0.8s								
CING					AML	AML			
	comp=N,540µm,0.1s								
PP3	**Marolino**	**0.81**	**17**	⇓P		Pb		04 45 19.0	+0.2
PP3					AML	AML			
	comp=E,953µm,0.6s								
PP3					AML	AML			
	comp=E,936µm,0.7s								
PP3					AML	AML			
	comp=E,955µm,0.6s								
PP3					AML	AML			
	comp=N,730µm,0.4s								
PP3					AML	AML			
	comp=E,936µm,0.7s								
PP3					AML	AML			
	comp=N,784µm,0.4s								
PP3					AML	AML			
	comp=N,785µm,0.4s								
LPEL	**Lama dei Pelig**	**0.88**	**130**	P		Pg		04 45 18.9	-0.3
LPEL					AML	AML			
	comp=E,222µm,0.3s								
LPEL					AML	AML			
	comp=N,196µm,0.2s								
SSFR	**Montelago di S**	**0.90**	**336**	AML	AML				
	comp=N,472µm,0.2s								
SSFR					AML	AML			
	comp=E,356µm,0.2s								
SSFR					AML	AML			
	comp=N,446µm,0.2s								
SSFR					AML	AML			
	comp=E,368µm,0.2s								
MGAB	**Montegabbione**	**0.91**	**290**	AML	AML				
	comp=N,380µm,1.0s								
MGAB					AML	AML			
	comp=E,374µm,0.3s								
MGAB					AML	AML			
	comp=E,468µm,0.3s								
MGAB					AML	AML			
	comp=N,400µm,0.5s								
ARVD	**Arcevia**	**0.92**	**345**	⇑P		Pg		04 45 20.1	+0.1
ARVD					AML	AML			
	comp=E,147µm,0.7s								
ARVD					AML	AML			
	comp=N,120µm,0.6s								
AOI	**Ancona**	**0.97**	**14**	AML	AML				
	comp=E,232µm,1.0s								
AOI					AML	AML			
	comp=N,277µm,1.1s								
MPAG	**Monte Paganucc**	**1.09**	**340**	AML	AML				
	comp=N,140µm,0.6s								
MPAG					AML	AML			
	comp=E,124µm,1.4s								

ROM 26 04:45:48.2±0.1, 42°614N±0°004×13°310E±0°006, h10km, ML2.3/5, 7C-6D, Error ellipse: s-maj=0.5km s-min=0.4km az=129.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.13**	**214**	⇑P		Pg		04 45 51.8	+0.5
RM33					S	Sg		04 45 54.2	+0.8
RM33					AML	AML			
	comp=E,1555µm,0.7s								
RM33					AML	AML			
	comp=N,1860µm,0.3s								
RM33					AML	AML			
	comp=N,1865µm,0.3s								
RM33					AML	AML			
	comp=N,1840µm,0.3s								
RM33					AML	AML			
	comp=E,1580µm,0.7s								
RM33					AML	AML			
	comp=E,1345µm,0.1s								
RM33					AML	AML			
	comp=E,1377µm,0.1s								
RM33					AML	AML			
	comp=N,1363µm,0.2s								
RM33					AML	AML			
	comp=N,1420µm,0.1s								
T1243	**Rocca Santa Ma**	**0.13**	**51**	⇓P		Pg		04 45 51.8	+0.4
T1243					S	Sg		04 45 54.6	+1.0
T1243					AML	AML			
	comp=E,2760µm,0.9s								
T1243					AML	AML			
	comp=N,3640µm,1.3s								
T1243					AML	AML			
	comp=E,2715µm,1.5s								
T1243					AML	AML			
	comp=N,3635µm,1.3s								
T1243					AML	AML			
	comp=N,3615µm,1.3s								
T1243					AML	AML			
	comp=N,3440µm,0.2s								
T1243					AML	AML			
	comp=E,2512µm,0.2s								
T1243					AML	AML			
	comp=N,3408µm,0.2s								
T1243					AML	AML			
	comp=E,2512µm,0.3s								
LNSS	**Leonessa**	**0.20**	**267**	⇑P		Pg		04 45 52.9	+0.4
LNSS					AML	AML			
	comp=E,940µm,0.7s								
LNSS					AML	AML			
	comp=N,1059µm,0.4s								
LNSS					AML	AML			
	comp=N,1545µm,0.3s								
LNSS					AML	AML			
	comp=E,1204µm,0.2s								
LNSS					AML	AML			
	comp=E,724µm,0.3s								
LNSS					AML	AML			
	comp=N,810µm,0.2s								
TERO	**Teramo**	**0.22**	**88**	⇑P		Pg		04 45 53.2	+0.5
TERO					S	Sg		04 45 56.8	+1.0
TERO					AML	AML			
	comp=E,1255µm,0.9s								
TERO					AML	AML			
	comp=N,1995µm,0.7s								
TERO					AML	AML			
	comp=N,1720µm,0.7s								
TERO					AML	AML			
	comp=E,1250µm,0.9s								
TERO					AML	AML			
	comp=E,1485µm,0.9s								
TERO					AML	AML			
	comp=E,1400µm,0.1s								
TERO					AML	AML			
	comp=E,1170µm,0.1s								
TERO					AML	AML			
	comp=N,1209µm,0.2s								
TERO					AML	AML			
	comp=N,1415µm,0.2s								
GIGS	**Gran Sasso**	**0.25**	**131**	P		Pg		04 45 54.0	+0.7
GIGS					S	Sb		04 45 58.5	-0.8
GIGS					AML	AML			
	comp=E,100µm,0.1s								
GIGS					AML	AML			
	comp=N,87µm,0.4s								
MMO1	**Montemonaco**	**0.28**	**2**	⇑P		Pg		04 45 54.4	+0.4
MMO1					S	Sg		04 45 58.8	+0.9
MMO1					AML	AML			
	comp=E,576µm,0.3s								
MMO1					AML	AML			
	comp=N,442µm,0.4s								
MMO1					AML	AML			
	comp=N,388µm,0.2s								
MMO1					AML	AML			
	comp=E,576µm,0.3s								
FIAM	**Fiamignano**	**0.37**	**202**	P		Pb		04 45 56.5	-0.5
FIAM					S	Sb		04 46 01.7	-1.1
FIAM					AML	AML			
	comp=E,153µm,0.3s								
FIAM					AML	AML			
	comp=N,110µm,0.3s								
ARRO	**Arrone**	**0.40**	**265**	P		Pg		04 45 56.4	+0.2
ARRO					AML	AML			
	comp=E,171µm,0.1s								
ARRO					AML	AML			
	comp=N,203µm,0.2s								
OFFI	**Offida**	**0.42**	**41**	⇓P		Pb		04 45 57.9	+0.2
OFFI					AML	AML			
	comp=E,334µm,0.6s								
OFFI					AML	AML			
	comp=N,429µm,0.5s								
GUMA	**Gualdo di Mace**	**0.45**	**2**	P		Pb		04 45 58.0	-0.2
GUMA					S	Sb		04 46 04.7	-0.2
GUMA					AML	AML			
	comp=E,709µm,0.3s								
GUMA					AML	AML			
	comp=N,491µm,0.3s								
GUMA					AML	AML			
	comp=N,553µm,0.2s								
GUMA					AML	AML			
	comp=E,590µm,0.4s								
VCEL	**Villa Celiera**	**0.45**	**119**	⇓P		Pb		04 45 58.1	-0.2
VCEL					AML	AML			
	comp=E,417µm,0.4s								
VCEL					AML	AML			
	comp=N,457µm,0.2s								

FDMO	**Fiordimonte**	**0.45**	**339**	⇑P	Pg	04 45 57.4	+0.3	
FDMO				S	Sb	04 46 04.2	-0.9	
FDMO				AML	AML			
	comp=N,178μm,0.2s							
FDMO				AML	AML			
	comp=E,119μm,0.1s							
CSP1	**Cessapalombo**	**0.48**	**351**	⇓P	Pg	04 45 57.9	+0.3	
CSP1				AML	AML			
	comp=E,152μm,0.2s							
CSP1				AML	AML			
	comp=N,181μm,0.3s							
CESI	**CESI - Serrava**	**0.49**	**323**	⇓P	Pg	04 45 58.1	+0.3	
CESI				AML	AML			
	comp=N,148μm,0.2s							
CESI				AML	AML			
	comp=E,117μm,0.1s							
T0110	**Collepietro**	**0.52**	**138**	P	Pb	04 45 59.0	-0.4	
T0110				S	Sn	04 46 09.0	-1.7	
T0110				AML	AML			
	comp=N,180μm,0.5s							
T0110				AML	AML			
	comp=E,194μm,0.4s							
CESX	**Cesi**	**0.54**	**270**	⇑P	Pg	04 45 58.8	+0.1	
CESX				AML	AML			
	comp=N,180μm,0.2s							
CESX				AML	AML			
	comp=E,172μm,0.2s							
ASSB	**Assisi San Ben**	**0.64**	**312**	⇓P	Pb	04 46 01.4	-0.1	
ASSB				S	Sb	04 46 12.0	+1.4	
ASSB				AML	AML			
	comp=N,134μm,0.2s							
ASSB				AML	AML			
	comp=E,97μm,0.3s							
SNTG	**Esanatoglia**	**0.69**	**337**	P	Pg	04 46 01.7	+0.1	
SNTG				AML	AML			
	comp=E,44μm,0.1s							
SNTG				AML	AML			
	comp=N,51μm,0.2s							
EL6	**Elcito**	**0.73**	**348**	S	Sn	04 46 15.0	-0.9	
CING	**Cingoli**	**0.77**	**354**	⇑P	Pg	04 46 03.0	0.0	
CING				AML	AML			
	comp=N,91μm,0.1s							
CING				AML	AML			
	comp=E,106μm,0.3s							
LPEL	**Lama dei Pelig**	**0.86**	**131**	S	Sn	04 46 19.0	0.0	

ROM 26 04:46:37.5±0.1, 42°681N±0°005×13°182E±0°010, h10km, ML2.0/5, 7C-6D, Error ellipse: s-maj=0.7km s-min=0.3km az=281.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**233**	P	Pg	04 46 41.2	+0.6
LNSS				S	Sg	04 46 43.9	+1.1
LNSS				AML	AML		
	comp=E,1202μm,0.2s						
LNSS				AML	AML		
	comp=N,1550μm,0.3s						
LNSS				AML	AML		
	comp=N,1545μm,0.3s						
LNSS				AML	AML		
	comp=E,1204μm,0.2s						
LNSS				AML	AML		
	comp=E,922μm,0.2s						
LNSS				AML	AML		
	comp=N,1549μm,0.3s						
NRCA	**Norcia**	**0.16**	**342**	⇑P	Pg	04 46 41.6	+0.4
NRCA				S	Sg	04 46 44.4	+0.7
NRCA				AML	AML		
	comp=E,1245μm,0.1s						
NRCA				AML	AML		
	comp=N,1500μm,0.1s						
NRCA				AML	AML		
	comp=N,1650μm,0.1s						
NRCA				AML	AML		
	comp=E,1244μm,0.1s						
NRCA				AML	AML		
	comp=N,1655μm,0.1s						
NRCA				AML	AML		
	comp=N,1502μm,0.1s						
NRCA				AML	AML		
	comp=E,1440μm,0.1s						
NRCA				AML	AML		
	comp=E,1437μm,0.1s						
NRCA				AML	AML		
	comp=N,1501μm,0.1s						
NRCA				AML	AML		
	comp=N,1653μm,0.1s						
NRCA				AML	AML		
	comp=E,1244μm,0.1s						
RM33	**Pellescritta (**	**0.17**	**172**	S	Sg	04 46 46.0	+2.0
T1243	**Rocca Santa Ma**	**0.20**	**85**	⇑P	Pg	04 46 42.1	+0.3
T1243				AML	AML		
	comp=E,574μm,1.3s						
T1243				AML	AML		
	comp=N,658μm,0.3s						
T1243				AML	AML		
	comp=N,658μm,0.3s						
T1243				AML	AML		
	comp=E,574μm,1.3s						
T1243				AML	AML		
	comp=N,576μm,0.2s						
T1243				AML	AML		
	comp=E,473μm,0.1s						
T1243				AML	AML		
	comp=N,574μm,0.2s						
T1243				AML	AML		
	comp=E,496μm,0.2s						
MC2	**Monte Cornacci**	**0.23**	**1**	⇓P	Pg	04 46 43.0	+0.6
MC2				S	Sg	04 46 47.2	+1.5
MC2				AML	AML		
	comp=E,201μm,0.2s						
MC2				AML	AML		
	comp=N,194μm,0.2s						
MMO1	**Montemonaco**	**0.24**	**26**	⇓P	Pg	04 46 42.9	+0.4
MMO1				S	Sg	04 46 47.0	+1.0
MMO1				AML	AML		
	comp=E,185μm,0.3s						
MMO1				AML	AML		
	comp=N,150μm,0.8s						
TERO	**Teramo**	**0.32**	**100**	⇓P	Pg	04 46 43.9	0.0
TERO				AML	AML		
	comp=N,204μm,0.7s						
TERO				AML	AML		
	comp=E,139μm,0.9s						
TERO				AML	AML		
	comp=N,164μm,0.1s						
TERO				AML	AML		
	comp=E,109μm,0.1s						
TERO				AML	AML		
	comp=E,115μm,0.3s						
TERO				AML	AML		
	comp=N,201μm,0.1s						
ARRO	**Arrone**	**0.32**	**252**	⇑P	Pg	04 46 44.4	+0.3
ARRO				S	Sb	04 46 49.7	-1.0
ARRO				AML	AML		
	comp=E,63μm,0.5s						
ARRO				AML	AML		
	comp=N,81μm,1.6s						
ARRO				AML	AML		
	comp=E,59μm,0.2s						
ARRO				AML	AML		
	comp=N,74μm,0.2s						
FDMO	**Fiordimonte**	**0.36**	**349**	⇓P	Pg	04 46 45.0	+0.3
FDMO				S	Sb	04 46 51.4	-0.5
FDMO				AML	AML		
	comp=N,48μm,0.2s						
FDMO				AML	AML		
	comp=E,44μm,0.2s						
CESI	**CESI - Serrava**	**0.38**	**328**	⇑P	Pg	04 46 45.5	+0.4
CESI				S	Sg	04 46 51.2	+0.9
CESI				AML	AML		
	comp=N,76μm,0.5s						
CESI				AML	AML		
	comp=E,37μm,0.2s						
CSP1	**Cessapalombo**	**0.41**	**2**	⇓P	Pg	04 46 45.8	+0.1
CSP1				S	Sb	04 46 52.9	-0.5
CSP1				AML	AML		
	comp=E,58μm,0.1s						
CSP1				AML	AML		
	comp=N,82μm,0.3s						
FIAM	**Fiamignano**	**0.41**	**187**	⇑P	Pg	04 46 45.8	+0.1
FIAM				S	Sg	04 46 52.2	+1.0
FIAM				AML	AML		
	comp=N,29μm,0.3s						
FIAM				AML	AML		
	comp=E,39μm,0.3s						
OFFI	**Offida**	**0.45**	**55**	⇑P	Pb	04 46 47.3	-0.3
OFFI				S	Sb	04 46 55.7	+1.3
OFFI				AML	AML		
	comp=N,155μm,0.4s						
ASSB	**Assisi San Ben**	**0.53**	**313**	⇓P	Pb	04 46 48.6	-0.4
ASSB				S	Sb	04 46 56.6	-0.1
ASSB				AML	AML		
	comp=N,45μm,0.3s						
ASSB				AML	AML		
	comp=E,46μm,0.3s						
VCEL	**Villa Celiera**	**0.56**	**120**	⇑P	Pg	04 46 49.0	+0.4
VCEL				S	Sb	04 46 58.7	+1.0
VCEL				AML	AML		
	comp=N,57μm,0.5s						
POFI	**Posta Fibreno**	**1.04**	**158**	S	Sb	04 47 12.0	+0.6
LAV9	**Lanuvio**	**1.06**	**200**	S	Sb	04 47 12.0	-0.1

IDC ***26*** *04:55:14.9±0.6, 6°.79N×73°.00W, h160km±5km, mb3.9/15, mbtmp4.4/19, Error ellipse: s-maj=11.3km s-min=7.7km az=117.0*
VAO ***26*** *04:55:14.5±0.4, 6°.81N×73°.13W, h159km, mb4.1*
RSNC ***26*** *04:55:15.4±0.9, 6°.81N×73°.14W, h152km±3km, ML4.4, Mw4.5, Fault plane solution: NP1:φ8.6.00000°, δ40.00000°, λ-42.00000°.*
NEIC ***26*** *04:55:15.5±1.9, 6°.72N±0°.08×72°.93W±0°.08, h171km±8km, mb4.6/278, Mwr4.5(RSNC), Error ellipse: s-maj=12.4km s-min=10.5km az=136.0*
ISC 26 04:55:14.4±0.5, 6°81N±0°.03×73°11W±0°.03, h159km±4km, n527, σ1§52/469, mb4.6/142, 17C-11D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**197**	⇓*i*P	Pn	**04 55 36.0**	**-0.2**
BARC				*e*S	Sn	**04 55 51.3**	**-1.4**
BARC				*i*		04 55 52.4	
	comp=Z,11μm,0.6s						
BRRC	**Barranca, Sant**	**0.66**	**296**	⇑*i*P	Pn	**04 55 37.8**	**+0.2**
BRRC				*e*S	Sn	**04 55 54.8**	**-0.6**
BRRC				*i*		04 55 58.3	
	comp=Z,4μm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**38**	⇑*i*P	Pn	**04 55 38.8**	**+0.5**
PAMC				*e*S	Sn	**04 55 55.9**	**-0.6**
PAMC				*i*		04 55 59.4	
	comp=Z,4μm,0.5s						
RUSC	**La Rusia**	**0.92**	**178**	⇓*i*P	Pn	**04 55 39.8**	**-0.2**
RUSC				*e*S	Sn	**04 55 58.4**	**-1.1**
RUSC				*i*		04 55 59.9	
	comp=Z,4μm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.36**	**259**	*e*P	Pn	**04 55 42.4**	**-0.9**
PTBC				*e*S	Sn	**04 56 03.7**	**-1.8**
PTBC				*i*		04 56 11.3	
	comp=Z,3μm,0.3s						
TAMC	**Tame, Arauca**	**1.37**	**106**	⇑*i*P	Pn	**04 55 44.4**	**+1.0**
TAMC				*e*S	Sn	**04 56 05.4**	**-0.1**
TAMC				*i*		04 56 05.4	
	comp=Z,2μm,0.4s						
OCAC	**Ocana**	**1.43**	**352**	⇑*i*P	Pn	**04 55 44.1**	**-0.1**
OCAC				*e*S	Sn	**04 56 06.4**	**-0.7**
OCAC				*i*		04 56 13.1	
	comp=Z,6μm,0.4s						
SPBC	**San Pablo de B**	**1.50**	**220**	⇓*i*P	Pn	**04 55 44.7**	**-0.1**
SPBC				*e*S	Sn	**04 56 07.3**	**-0.7**
SPBC				*i*		04 56 15.2	
	comp=Z,5μm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	Pn	**04 55 48.0**	**-0.5**
ZARC				*e*S	Sn	**04 56 13.5**	**-1.2**
ZARC				*i*		04 56 19.3	
	comp=Z,5μm,0.4s						
NORC	**Norcasia**	**2.14**	**235**	⇑*e*P	Pn	**04 55 52.0**	**+0.2**
NORC				*e*S	Sn	**04 56 19.8**	**-0.9**
NORC				*i*		04 56 29.6	
	comp=Z,2μm,0.1s						
CHIC	**Chingaza**	**2.25**	**196**	⇓*i*P	Pn	**04 55 53.8**	**+0.2**
CHIC				*e*S	Sn	**04 56 22.9**	**-0.8**
CHIC				*i*		04 56 27.4	
	comp=Z,3μm,0.5s						
ROSC	**El Rosal**	**2.30**	**212**	P	Pn	**04 55 55.8**	**+1.7**
	comp=Z,2μm,0.5s,baz=127,slow=22,SNR=1308						
ROSC				S	Sn	**04 56 26.1**	**+1.6**
	comp=Z,6μm,0.5s,baz=62,slow=18,SNR=9.2						
ROSC	**El Rosal**	**2.30**	**212**		Pn	**04 55 55.5**	**+1.5**
ROSC	**El Rosal**	**2.30**	**212**	⇓*i*P	Pn	**04 55 55.7**	**+1.7**
ROSC				*e*S	Sn	**04 56 23.9**	**-0.6**
HELC	**Santa Helena**	**2.48**	**256**	*e*P	Pn	**04 55 55.5**	**-0.7**
HELC				*e*S	Sn	**04 56 28.0**	**-0.2**
HELC				*i*		04 56 34.2	
	comp=Z,2μm,0.4s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	Pn	**04 55 55.7**	**-1.3**
UREC				*e*S	Sn	**04 56 26.5**	**-3.3**
UREC				*i*		04 56 39.8	
	comp=Z,1μm,0.4s						
SOCV	**Socops**	**2.67**	**57**	⇑*i*P	Pn	**04 55 58.9**	**+0.7**
SOCV				*e*S	Sn	**04 56 31.7**	**-0.3**
GUY2C	**Guyana, Caldas**	**2.74**	**235**	⇑*i*P	Pn	**04 55 59.6**	**+0.2**
GUY2C				*e*S	Sn	**04 56 34.6**	**+0.5**
GUY2C				*i*		04 56 42.5	
	comp=Z,3μm,0.5s						
VILC	**Villavicencio,**	**2.74**	**192**	⇓*i*P	Pn	**04 55 59.2**	**+0.1**
VILC				*e*S	Sn	**04 56 33.1**	**-0.7**
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	Pn	**04 56 00.5**	**+1.5**
LL1C				*e*S	Sn	**04 56 35.0**	**+1.4**
PTGC	**Puerto Gaitan,**	**2.77**	**159**	⇓*i*P	Pn	**04 55 59.1**	**-0.3**
PTGC				*e*S	Sn	**04 56 32.3**	**-1.9**
PTGC				*i*		04 56 35.5	
	comp=Z,1μm,0.4s						
LL6C	**La Loma 6 Bece**	**2.91**	**357**	⇑*i*P	Pn	**04 56 00.5**	**-0.5**
LL6C				*e*S	Sn	**04 56 36.6**	**-0.6**
LL6C				*i*		04 56 43.0	
	comp=Z,638nm,0.4s						
LL5C	**La Loma 5 El P**	**2.98**	**348**	*e*P	Pn	**04 56 02.5**	**+0.6**
LL5C				*e*S	Sn	**04 56 38.2**	**-0.6**
LL5C				*i*		04 56 49.2	
	comp=Z,1μm,0.4s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	⇑*i*P	Pn	**04 56 03.1**	**+0.3**
CBOC				*e*S	Sn	**04 56 39.5**	**-0.6**
CBOC				*i*		04 56 46.0	
	comp=Z,813nm,0.5s						
DBBC	**Dabeiba**	**3.08**	**274**	⇑*i*P	Pn	**04 56 03.5**	**+0.2**
DBBC				*e*S	Sn	**04 56 40.0**	**-1.1**
DBBC				*i*		04 56 43.6	
	comp=Z,1μm,0.5s						
SDV	**Santo Domingo**	**3.21**	**50**	P	Pn	**04 56 05.4**	**+0.5**
	comp=Z,851nm,0.6s,baz=235,slow=9.3,SNR=477						
SDV				S	Sn	**04 56 42.4**	**-1.7**
	comp=Z,486nm,0.5s,baz=15,slow=8.9,SNR=4.1						
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	Pn	**04 56 05.6**	**+0.6**
ARGC	**Ariguani, Magd**	**3.23**	**340**	⇓*i*P	Pn	**04 56 05.8**	**+0.8**
ARGC				*e*S	Sn	**04 56 45.1**	**+0.7**
ARGC				*i*		04 56 55.2	
	comp=Z,380nm,0.5s						
ANIL	**Santa Ana**	**3.24**	**225**	*e*P	Pn	**04 56 06.2**	**+0.7**
ANIL				*e*S	Sn	**04 56 46.4**	**+1.3**
PRAC	**Prado**	**3.55**	**210**	*e*P	Pn	**04 56 08.8**	**-0.4**
PRAC				*e*S	Sn	**04 56 51.3**	**-0.5**
PLMC	**San Jos del P**	**3.68**	**239**	⇑*i*P	Pn	**04 56 11.4**	**+0.5**
PLMC				*e*S	Sn	**04 56 53.7**	**-1.1**
PLMC				*i*		04 56 59.7	
	comp=Z,419nm,0.6s						
SJCC	**San Jacinto, C**	**3.68**	**326**	⇓*i*P	Pn	**04 56 09.6**	**-1.4**
SJCC				*e*S	Sn	**04 56 50.8**	**-4.1**
SJCC				*i*		04 57 06.0	
	comp=Z,762nm,0.5s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*P	Pn	**04 56 11.0**	**-1.5**
LCBC				*e*S	Sn	**04 56 56.4**	**-1.3**
LCBC				*i*		04 57 04.1	
	comp=Z,568nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	⇑*i*P	Pn	**04 56 16.1**	**-1.4**
CRJC				*e*S	Sn	**04 57 01.5**	**-5.1**
CRJC				*i*		04 57 09.0	
	comp=Z,548nm,0.4s						
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	Pn	**04 56 17.7**	**-0.8**
GUVC				*e*S	Sn	**04 57 07.7**	**-0.7**
GUVC				*i*		04 57 14.9	
	comp=Z,402nm,0.2s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	⇑*i*P	Pn	**04 56 18.2**	**-0.4**
YOTC				*e*S	Sn	**04 57 06.6**	**-2.1**
SOLC	**Bahia Solano**	**4.31**	**262**	*e*P	Pn	**04 56 19.4**	**+0.5**
SOLC				*e*S	Sn	**04 57 10.4**	**+1.2**
SMRC	**Santa Marta, M**	**4.46**	**346**	*e*P	Pn	**04 56 20.8**	**-0.2**
SMRC				*e*S	Sn	**04 57 09.0**	**-3.9**
SMRC				*i*		04 57 11.8	
	comp=Z,344nm,0.6s						
CAPC	**Capurgana**	**4.57**	**294**	*e*P	Pn	**04 56 20.1**	**-2.4**
CAPC				*e*S	Sn	**04 57 06.9**	**-8.6**
CAPC				*i*		04 57 14.0	
	comp=Z,268nm,0.4s						
PIZC	**Pizarro, Choco**	**4.61**	**247**	*e*P	Pn	**04 56 24.1**	**+1.2**
PIZC				*e*S	Sn	**04 57 15.0**	**-1.2**
PTAC	**Punta Ardita,**	**4.67**	**274**	*e*P	Pn	**04 56 22.8**	**-0.9**
PTAC				*e*S	Sn	**04 57 13.3**	**-4.5**
PTAC				*i*		04 57 18.4	
	comp=Z,172nm,0.6s						
MACC	**Macarena, Meta**	**4.69**	**189**	⇓*i*P	Pn	**04 56 22.9**	**-1.2**
MACC				*e*S	Sn	**04 57 13.7**	**-4.7**
MACC				*i*		04 57 20.7	
	comp=Z,490nm,0.6s						
BETC	**Betania**	**4.71**	**210**	*e*P	Pn	**04 56 24.0**	**-0.4**
BETC				*e*S	Sn	**04 57 12.3**	**-6.6**
BETC				*i*		04 57 28.4	
	comp=Z,425nm,0.6s						
DABV	**Dabajuro**	**4.76**	**31**	⇑*i*P	Pn	**04 56 24.9**	**0.0**
DABV				*e*S	Sn	**04 57 16.0**	**-4.0**
URIC	**Uribia, Colomb**	**4.98**	**13**	⇑*e*P	Pn	**04 56 26.2**	**-1.6**
URIC				*e*S	Sn	**04 57 20.3**	**-4.9**
URIC				*i*		04 57 29.1	
	comp=Z,156nm,0.6s						
MALC	**Bahia Malaga**	**5.04**	**237**	⇓*e*P	Pn	**04 56 30.0**	**+1.4**
MALC				*e*S	Sn	**04 57 27.7**	**+1.2**
MALC				*i*		04 57 41.5	
	comp=Z,102nm,0.5s						
UPD2	**Meteti**	**5.16**	**290**	*e*P	Pn	**04 56 29.0**	**-1.1**
UPD2				*e*S	Sn	**04 57 28.9**	**-0.2**
UPD2				*i*		04 57 32.4	
	comp=Z,553nm,0.5s						
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P	Pn	**04 56 29.9**	**-0.6**
GARC				*e*S	Sn	**04 57 27.5**	**-2.5**
GARC				*i*		04 57 32.6	
	comp=Z,486nm,0.5s						
BAUV	**El Baul**	**5.45**	**67**	Pn	Pn	**04 56 31.9**	**-2.1**
POPC	**Popayan, Colom**	**5.53**	**220**	⇑*i*P	Pn	**04 56 35.3**	**0.0**
POPC				*e*S	Sn	**04 57 34.3**	**-4.2**
POPC				*i*		04 57 44.8	
	comp=Z,82nm,0.4s						
FLOC	**Florencia**	**5.78**	**206**	⇑*e*P	Pn	**04 56 38.2**	**-0.2**
FLOC				*e*S	Sn	**04 57 45.1**	**+1.0**
FLOC				*i*		04 57 48.8	
	comp=Z,124nm,0.6s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	*e*P	Pn	**04 56 44.7**	**-0.8**
BBAC				*e*S	Sn	**04 57 55.5**	**-1.2**
BBAC				*i*		04 57 58.4	
	comp=Z,54nm,0.4s						
CRUC	**La Cruz**	**6.46**	**216**	*e*P	Pn	**04 56 49.9**	**+2.1**
UPA	**Univ. de Panam**	**6.71**	**289**	*e*P	Pn	**04 56 48.9**	**-1.9**
UPA				*e*S	Sn	**04 58 01.3**	**-5.1**
HATO	**Hato, Curacao**	**6.73**	**37**	Pn	Pn	04 56 45.1	-5.8
PTLC	**Puerto Leguiza**	**6.81**	**194**	*e*P	Pn	**04 56 54.4**	**+2.4**
PTLC				*e*S	Sn	04 58 28.6	+20
PTLC				*i*		04 58 55.8	
	comp=Z,168nm,0.5s						
GCUF	**Volcan Galeras**	**6.97**	**217**	*e*P	Pn	**04 56 55.8**	**+1.1**
GCUF				*e*S	Sn	**04 58 07.5**	**-5.9**
BCIP	**Isla Barro Col**	**7.06**	**290**	Pn	Pn	**04 56 54.1**	**-1.2**
BCIP	**Isla Barro Col**	**7.06**	**290**	*e*P	Pn	**04 56 53.2**	**-2.1**
BCIP				*e*S	Sn	**04 58 10.1**	**-4.5**
BCIP				*i*		04 58 27.9	
	comp=Z,51nm,0.7s						
AZU	**Azuero**	**7.17**	**278**	*e*P	Pn	**04 56 55.9**	**-0.9**
AZU				*e*S	Sn	**04 58 11.9**	**-5.4**
AZU				*i*		04 58 15.3	
	comp=Z,63nm,0.5s						
BIRV	**Birongo**	**7.68**	**61**	Pn	Pn	**04 56 59.8**	**-3.9**
IMBA	**Imbabura, San**	**8.24**	**218**		Pn	**04 57 11.5**	**0.0**
CUSE	**Cuicocha Este**	**8.34**	**219**	*e*P	Pn	**04 57 14.5**	**+1.7**
OTAV	**Otavalo**	**8.43**	**219**	Pn	Pn	**04 57 13.9**	**-0.1**
OTAV	**Otavalo**	**8.43**	**219**	*e*P	Pn	**04 57 13.2**	**-0.8**
OTAV	**Otavalo**	**8.43**	**219**	*e*P	Pn	**04 57 13.5**	**-0.4**
OTAV	**Otavalo**	**8.43**	**219**	*e*P	Pn	**04 57 13.6**	**-0.4**
PULU	**Pululahua**	**8.63**	**219**		Pn	**04 57 17.3**	**+0.7**
SLOR	**San Lorenzo -**	**9.22**	**216**		Pn	**04 57 24.9**	**+0.4**
PORT	**Chimborazo Vol**	**9.97**	**215**		Pn	**04 57 34.7**	**+0.1**
CHSH	**Refugio Sur-Vo**	**10.05**	**215**		Pn	**04 57 34.5**	**-1.2**
DRK0	**Durika**	**10.32**	**284**		Pn	**04 57 38.8**	**-0.1**
PRVC	**Isla de Provid**	**10.41**	**309**	*e*P	Pn	**04 57 37.3**	**-2.6**
PRVC				*e*S	Sn	**04 59 28.5**	**-6.8**
PRVC				*i*		04 59 35.9	
	comp=Z,40nm,0.4s						
SRBA	**San Rafael, Bu**	**10.43**	**284**		Pn	**04 57 41.9**	**+1.8**
COHC	**Cochancay**	**11.07**	**214**		Pn	**04 57 48.2**	**-0.3**
BOSC	**San Juan Bosco**	**11.26**	**209**	Pn	Pn	**04 57 51.5**	**+0.3**
HOJ	**Hope**	**11.68**	**343**	*i* P	P	**04 58 00.3**	**-2.9**
GWJ	**Greenwich**	**11.73**	**343**	*i* P	Pn	**04 57 59.3**	**+2.1**
STH	**Stony Hill**	**11.76**	**342**	*i* P	Pn	**04 57 58.6**	**+1.2**
STH				*i* S	Sn	04 59 57.4	-10
COVE	**Coope Vega, Sa**	**11.81**	**290**	Pn	Pn	**04 58 00.5**	**+2.3**
MTDJ	**Mount Denham**	**12.13**	**340**	Pn	Pn	**04 58 03.5**	**+1.1**
MTDJ	**Mount Denham**	**12.13**	**340**	*e*P	Pn	**04 58 04.2**	**+1.9**
MTDJ				*e*S	Sn	05 00 05.0	-12
MTDJ				*e*		05 00 05.0	
SDDR	**Presa de Saban**	**12.23**	**8**	Pn	Pn	**04 58 04.6**	**+1.0**
ESPN	**Las Esperanzas**	**12.26**	**297**		Pn	**04 58 04.3**	**+0.4**
ARNL	**Arenillas**	**12.41**	**214**	Pn	Pn	**04 58 05.7**	**-0.2**
CELP	**Cerrillos**	**12.88**	**29**	Pn	Pn	**04 58 09.8**	**-2.1**
AOPR	**Arecibo Observ**	**13.03**	**28**	Pn	Pn	**04 58 12.8**	**-1.0**
SJG	**San Juan**	**13.12**	**31**	P	Pn	**04 58 14.2**	**-0.7**
	comp=Z,11nm,0.5s,baz=200,slow=16,SNR=6.5						
BOAV	**Boa Vista**	**13.29**	**109**	*e*P	Pn	**04 58 16.6**	**-0.6**
SVB	**Belmont**	**13.32**	**60**		Pn	**04 58 14.7**	**-2.9**
CZSB	**Cruzeiro do Su**	**14.45**	**178**		Pn	**04 58 31.9**	**+0.1**
CZSB	**Cruzeiro do Su**	**14.45**	**178**	*e*P	Pn	**04 58 32.2**	**+0.4**
CZSB	**Cruzeiro do Su**	**14.45**	**178**	*e*P	Pn	**04 58 32.0**	**+0.2**
ATAH	**Atahualpa**	**14.82**	**201**	P	Pn	**04 58 37.7**	**+0.9**
	comp=Z,7.3nm,0.8s,baz=15,slow=9.7,SNR=7.2						
GDSD	**La Dsirade Is**	**15.11**	**50**	Pn	Pn	**04 58 37.5**	**-2.4**
GDSD				lAmb	lAmb	04 58 41.0	
	comp=Z,32nm,0.8s						
TGUH	**Tegucigalpa,Un**	**15.67**	**298**	Pn	P	**04 58 47.8**	**0.0**
TGUH				lAmb	lAmb	04 58 50.8	
	comp=Z,26nm,0.9s						
MACA	**Manacapuru-AM**	**15.88**	**128**		Pn	**04 58 46.8**	**-2.6**
MACA				lAmb	lAmb	04 59 06.2	
	comp=Z,15nm,0.6s						
MACA	**Manacapuru-AM**	**15.88**	**128**	*e*P	Pn	**04 58 49.3**	**-0.1**
ESQI	**Esquipulas**	**17.70**	**297**	lAmb	lAmb	04 59 15.2	
	comp=Z,32nm,0.8s						
ETMB	**Extrema**	**17.89**	**157**	P	P	**04 59 11.4**	**-0.7**
ETMB				lAmb	lAmb	04 59 16.3	
	comp=Z,16nm,0.8s						
ETMB	**Extrema**	**17.89**	**157**	*e*P	P	**04 59 12.2**	**+0.1**
ETMB	**Extrema**	**17.89**	**157**	*e*P	P	**04 59 12.4**	**+0.4**
PETF	**Flores**	**19.21**	**303**	lAmb	lAmb	04 59 33.6	
	comp=Z,56nm,1.5s						
ITTB	**Itaituba**	**20.60**	**122**	*e*P	P	**04 59 42.5**	**+1.1**
ITTB	**Itaituba**	**20.60**	**122**	*e*P	P	**04 59 42.4**	**+1.1**
MALB	**Monte Alegre**	**20.69**	**114**	*e*P	P	**04 59 42.6**	**+0.3**
CCIG	**Comitan**	**20.86**	**298**	P	P	**04 59 45.7**	**+1.4**
CCIG				lAmb	lAmb	04 59 48.8	
	comp=Z,12nm,0.7s						
NPGB	**Novo Progresso**	**22.43**	**128**	*e*P	P	**04 59 59.9**	**-0.5**
DWPF	**

PTLB **Pontes e Lacer** 26.09 148 *e*P P **05 00 34.0 +0.3**
TIGA **Tifton** 26.39 340 P P **05 00 38.1 +2.0**
baz=156
PRPB **Parauapebas** 26.59 119 *e*P P 05 01 13.5 +35
NHSC **New Hope** 26.97 347 P P **05 00 43.5 +2.2**
baz=164
GOGA **Godfrey** 28.16 341 P P **05 00 53.3 +1.5**
GOGA IAmb IAmb 05 00 54.5
comp=Z,7.0nm,0.7s
GOGA **Godfrey** 28.16 341 P P **05 00 53.8 +2.0**
baz=156
JSC **Jenkinsville** 28.35 346 P P **05 00 55.1 +1.5**
JSC IAmb IAmb 05 00 56.0
comp=Z,10nm,0.8s
SALV **Santo Antonio** 28.41 143 *e*P P **05 00 54.6 +0.4**
HODGE **Hodges** 28.57 344 P P **05 00 57.0 +1.6**
HODGE IAmb IAmb 05 00 58.3
comp=Z,9.1nm,0.6s
SNDB **Serra Nova Dou** 28.62 131 *e*P P **05 00 57.2 +1.0**
LRAL **Lakeview Retre** 29.11 336 P P **05 01 01.8 +1.4**
LRAL IAmb IAmb 05 01 03.4
comp=Z,9.8nm,0.9s
LRAL **Lakeview Retre** 29.11 336 P P **05 01 02.4 +2.1**
baz=150,SNR=8.6
KMSC **Kings Mountain** 29.19 346 P P **05 01 02.8 +1.7**
baz=163
BG3 **Lake Jocassee** 29.47 343 IAmb IAmb 05 01 06.9
comp=Z,26nm,1.4s
LVC **Limon Verde** 29.53 172 *e*P P **05 01 03.6 -1.0**
SMTB **Santa Maria do** 29.83 121 *e*P P **05 01 07.0 +0.1**
FPAL **Fort Paine** 29.91 339 IAmb IAmb 05 01 10.3
comp=Z,14nm,1.0s
VBMS **Vicksburg** 30.04 330 P P **05 01 10.6 +2.1**
baz=144
CPCT **Cooper Cave** 30.37 341 P P **05 01 12.6 +1.2**
CPCT IAmb IAmb 05 01 14.6
comp=Z,12nm,0.8s
W50A **Signal Mountai** 30.40 340 IAmb IAmb 05 01 14.9
comp=Z,11nm,0.8s
V52A **Sevierville** 30.45 343 IAmb IAmb 05 01 15.1
comp=Z,21nm,1.4s
ROSB **Rosrio** 30.50 108 *e*P P **05 01 13.4 +0.5**
T57A **Hurt** 30.56 350 IAmb IAmb 05 01 15.5
comp=Z,10.0nm,0.9s
U54A **Nelsons Funny** 30.62 346 P P **05 01 14.8 +1.1**
SWET **Sewanee** 30.63 339 IAmb IAmb 05 01 16.6
comp=Z,6.4nm,0.9s
BLA **Blacksburg** 30.98 349 P P **05 01 18.6 +1.8**
baz=166
TZTN **Tazewell** 31.09 344 P P **05 01 19.8 +2.0**
baz=159
PLAL **Pickwick Lake** 31.24 336 P P **05 01 19.7 +0.7**
S57A **Dark Hollow, R** 31.26 351 IAmb IAmb 05 01 21.8
comp=Z,7.8nm,0.8s
OXF **Oxford** 31.40 334 IAmb IAmb 05 01 22.7
comp=Z,17nm,1.0s
OXF **Oxford** 31.40 334 P P **05 01 21.7 +1.2**
baz=148
CBN **Corbin Frederi** 31.49 354 P P **05 01 22.6 +1.4**
baz=172
CLTN **Cedars of Leba** 31.56 339 IAmb IAmb 05 01 24.8
comp=Z,20nm,1.2s
U49A **Red Boiling Sp** 31.75 340 IAmb IAmb 05 01 26.3
comp=Z,21nm,1.4s
T50A **Nancy** 31.91 342 IAmb IAmb 05 01 28.1
comp=Z,10nm,1.0s
NATX **Nacogdoches** 31.95 324 P P **05 01 26.7 +1.4**
NATX **Nacogdoches** 31.95 324 P P **05 01 26.8 +1.4**
baz=136
AQDB **Aquidauana** 32.07 148 P P **05 01 25.4 -1.1**
AQDB **Aquidauana** 32.07 148 *e*P P **05 01 26.6 +0.1**
S51A **Beattyville** 32.13 344 IAmb IAmb 05 01 29.8
comp=Z,11nm,0.8s
WVT **Waverly** 32.14 337 P P **05 01 27.6 +0.6**
WVT **Waverly** 32.14 337 P P **05 01 28.4 +1.4**
baz=152
WLAR **White Oak Lake** 32.53 328 IAmb IAmb 05 01 32.8
comp=Z,30nm,1.4s
Q54A **Coxs Mills** 32.78 349 IAmb IAmb 05 01 35.6
comp=Z,8.7nm,0.8s
833A **Chaparral WMA,** 32.80 314 IAmb IAmb 05 01 33.9
comp=Z,6.3nm,0.7s
833A **Chaparral WMA,** 32.80 314 P P **05 01 32.9 +0.1**
baz=126
HBAR **Harrisburg** 32.83 333 P P **05 01 34.0 +1.0**
R50A **Paris** 32.94 344 IAmb IAmb 05 01 37.2
comp=Z,18nm,0.8s
Q52A **Bidwell** 33.06 347 IAmb IAmb 05 01 37.9
comp=Z,16nm,0.8s
435B **Jarrell** 33.09 319 IAmb IAmb 05 01 37.4
comp=Z,16nm,0.8s
435B **Jarrell** 33.09 319 P P **05 01 36.1 +0.8**
baz=131
MCWV **Mont Chateau** 33.26 351 P P **05 01 38.5 +1.9**
baz=167
P53A **Whipple** 33.37 348 IAmb IAmb 05 01 40.9
comp=Z,20nm,1.2s
Q51A **Peebles** 33.37 345 IAmb IAmb 05 01 40.8
comp=Z,13nm,0.7s
WHAR **Wooly Hollow** 33.38 331 IAmb IAmb 05 01 39.7
comp=Z,11nm,0.7s
BDFB **Brasilia** 33.40 132 P P **05 01 39.0 +0.7**
comp=Z,1.3nm,0.5s,baz=306,slow=14,SNR=4.2
comp=Z,1.3nm,0.5s
MIAR **Mount Ida** 33.44 328 IAmb IAmb 05 01 39.7
comp=Z,6.5nm,0.8s
MIAR **Mount Ida** 33.44 328 P P **05 01 38.8 +0.6**
baz=141,SNR=5.0
WCI **Wyandotte Cave** 33.48 341 P P **05 01 40.2 +1.6**
WCI **Wyandotte Cave** 33.48 341 P P **05 01 40.2 +1.6**
baz=156
LCAR **Lake Charles** 33.48 333 IAmb IAmb 05 01 40.8
comp=Z,13nm,0.8s
P52A **Corning** 33.67 347 P P **05 01 42.0 +1.8**
baz=163,SNR=8.7
FCAR **Ozark Folk Cen** 33.78 332 IAmb IAmb 05 01 42.9
comp=Z,20nm,1.0s
WHTX **Lake Whitney,** 33.81 321 P P **05 01 42.3 +0.8**
baz=133
CGM3 **Cape Girardeau** 33.88 336 IAmb IAmb 05 01 43.9
comp=Z,20nm,0.6s
SDBA **SAO DESIDERIO** 33.93 124 *e*P P **05 01 42.5 -0.4**
SSPA **Standing Stone** 33.95 353 P P **05 01 44.0 +1.4**
SSPA IAmb IAmb 05 01 46.0
comp=Z,17nm,1.2s
SSPA **Standing Stone** 33.95 353 P P **05 01 44.6 +2.0**
baz=171
N58A **Sunbury** 34.03 355 IAmb IAmb 05 01 46.3
comp=Z,7.5nm,0.9s
PAL **Palisades** 34.05 359 P P **05 01 45.1 +1.6**
baz=178
O52A **Adamsville** 34.07 348 IAmb IAmb 05 01 46.7
comp=Z,16nm,0.8s
O53A **New Philadelph** 34.08 349 IAmb IAmb 05 01 46.3
comp=Z,11nm,0.7s
O53A **New Philadelph** 34.08 349 P P **05 01 45.6 +1.9**
baz=165
P49A **Miami Univ. Ec** 34.21 344 P P **05 01 46.5 +1.6**
baz=159
X37A **Clayton** 34.43 326 IAmb IAmb 05 01 48.7
comp=Z,7.5nm,1.0s
ACSO **Alum Creek Sta** 34.43 347 P P **05 01 48.3 +1.5**
ACSO IAmb IAmb 05 01 50.3
comp=Z,24nm,1.4s
ACSO **Alum Creek Sta** 34.43 347 P P **05 01 48.8 +2.0**
baz=162
M57A **Sunshine Farm,** 34.56 355 IAmb IAmb 05 01 51.3
comp=Z,14nm,1.1s
KSPA **Keystone Colle** 34.68 356 IAmb IAmb 05 01 51.8
comp=Z,19nm,1.1s
MGMO **Mountain Grove** 34.88 333 IAmb IAmb 05 01 52.7
comp=Z,11nm,0.8s
HHAR **Hobbs** 34.98 330 IAmb IAmb 05 01 52.8
comp=Z,8.9nm,0.8s
O48B **Farmland** 35.01 344 P P **05 01 53.1 +1.4**
baz=159
CCM **Cathedral Cave** 35.18 335 P P **05 01 53.4 +0.2**
CCM **Cathedral Cave** 35.18 335 P P **05 01 54.2 +1.0**
baz=147
U38A **Gravette** 35.32 330 IAmb IAmb 05 01 55.6
comp=Z,9.2nm,0.9s
BINY **Binghamton** 35.33 356 IAmb IAmb 05 01 57.0
comp=Z,8.1nm,0.8s
BINY **Binghamton** 35.33 356 P P **05 01 56.2 +1.7**
baz=175
N49A **Columbus Grove** 35.37 345 IAmb IAmb 05 01 57.4
comp=Z,17nm,1.2s

L56A **Greenwood** 35.40 354 IAmb IAmb 05 01 57.9
comp=Z,22nm,1.1s
RLO **Rose Lookout** 35.44 329 IAmb IAmb 05 01 56.6
comp=Z,15nm,0.7s
L61B **Northampton** 35.49 1 P P **05 01 57.8 +2.0**
baz=180
ABTX **Abilene, Hawle** 35.61 320 IAmb IAmb 05 01 59.0
comp=Z,17nm,0.9s
ABTX **Abilene, Hawle** 35.61 320 P P **05 01 58.0 +0.9**
baz=130,SNR=5.6
TUL1 **Leonard** 35.65 328 IAmb IAmb 05 01 58.5
comp=Z,11nm,0.8s
TUL1 **Leonard** 35.65 328 P P **05 01 57.6 +0.3**
baz=139
SFIN **Lafayette** 35.69 342 P P **05 01 58.8 +1.3**
baz=156,SNR=12
S39A **Bolivar** 35.80 332 IAmb IAmb 05 02 00.3
comp=Z,30nm,1.4s
R40A **Maddies Statio** 35.82 334 P P **05 01 58.5 -0.1**
JANB **Januaria** 35.88 127 *e*P P **05 01 58.7 -0.9**
K57A **Scipio Center** 35.90 356 IAmb IAmb 05 02 01.9
comp=Z,11nm,0.8s
DEOK **Depew** 35.98 327 IAmb IAmb 05 02 01.5
comp=Z,36nm,0.9s
QUOK **Quay** 36.33 327 IAmb IAmb 05 02 04.4
comp=Z,23nm,0.7s
PMNB **Patos De Minas** 36.42 134 *e*P P **05 02 04.2 0.0**
J56A **Wolcott** 36.47 355 IAmb IAmb 05 02 06.7
comp=Z,12nm,1.0s
OK029 **Liberty Lake** 36.47 326 IAmb IAmb 05 02 05.4
comp=Z,11nm,0.8s
TXAR **Lajitas Array** 36.47 312 P P **05 02 05.6 +1.1**
comp=Z,4.4nm,0.7s,baz=127,slow=9.1,SNR=72
TXAR PcP PcP **05 04 27.1 +2.0**
comp=Z,1.3nm,0.8s,baz=132,slow=5.5,SNR=5.9
comp=Z,4.4nm,0.7s
TXAR **Las Array** 36.47 312 P P **05 02 05.4 +0.9**
TX31 **Lajitas Ar. Si** 36.47 312 IAmb IAmb 05 02 06.5
comp=Z,14nm,0.7s
WMOK **Wichita Mounta** 36.49 323 IAmb IAmb 05 02 05.4
comp=Z,7.6nm,0.7s
WMOK **Wichita Mounta** 36.49 323 P P **05 02 04.4 -0.1**
baz=134,SNR=8.2
J57A **Williamstown** 36.54 356 IAmb IAmb 05 02 07.2
comp=Z,20nm,1.1s
AAM **Ann Arbor** 36.56 347 P P **05 02 07.0 +2.2**
baz=162
HDIL **Hopedale** 36.59 339 P P **05 02 05.5 +0.3**
baz=152,SNR=6.4
T35A **Sooner Cattle** 36.78 328 IAmb IAmb 05 02 08.2
comp=Z,14nm,1.0s
HPIG 36.84 307 P P **05 02 08.1 +0.4**
BLOK **Blackwell** 37.05 327 IAmb IAmb 05 02 10.6
comp=Z,24nm,1.1s
MC01 **Montes Claros** 37.13 129 *e*P P **05 02 10.5 +0.4**
N41A **Harden Midland** 37.29 338 P P **05 02 11.3 +0.2**
LBNH **Lisbon** 37.30 1 P P **05 02 11.5 +0.4**
baz=182
KAN17 **Caldwell West** 37.55 327 IAmb IAmb 05 02 14.6
comp=Z,13nm,0.8s
L44A **Lake County Fo** 37.58 342 P P **05 02 14.0 +0.4**
baz=155
LONY **Lake Ozonia** 37.68 358 P P **05 02 14.7 +0.3**
baz=177
J47A **Sunmer** 37.72 346 IAmb IAmb 05 02 16.8
comp=Z,22nm,1.0s
U32A **Winter Ranch,** 37.76 325 IAmb IAmb 05 02 16.4
comp=Z,22nm,1.0s
ELIS **Ellis County** 37.78 324 IAmb IAmb 05 02 17.7
comp=Z,30nm,1.1s
L42A **Oliver, Polo** 38.00 340 IAmb IAmb 05 02 17.9
comp=Z,16nm,1.1s
K43A **Burlington** 38.19 342 IAmb IAmb 05 02 19.8
comp=Z,13nm,0.7s
DIAM **Diamantina, MG** 38.29 131 *e*P P **05 02 19.5 -0.5**
N38A **Joes South For** 38.31 335 P P **05 02 19.9 +0.2**
AMTX **Amarillo** 38.36 321 IAmb IAmb 05 02 22.4
comp=Z,23nm,1.0s
AMTX **Amarillo** 38.36 321 P P **05 02 21.0 +0.6**
baz=130
MSTX **Muleshoe** 38.49 319 IAmb IAmb 05 02 23.1
comp=Z,20nm,1.2s
MSTX **Muleshoe** 38.49 319 P P **05 02 22.0 +0.5**
baz=128,SNR=9.7
KSU1 **Kansas State U** 38.50 330 P P **05 02 21.1 -0.1**
baz=140,SNR=6.6
MNTQ **Montreal, Queb** 38.54 359 IAmb IAmb 05 02 24.7
comp=Z,12nm,0.9s
L40A **Anamosa** 38.60 338 IAmb IAmb 05 02 23.0
comp=Z,12nm,0.7s
MNTX **Cornudas Mount** 38.98 314 P P **05 02 26.0 +0.6**
MNTX IAmb IAmb 05 02 27.9
comp=Z,30nm,1.4s
MNTX **Cornudas Mount** 38.98 314 P P **05 02 26.6 +1.2**
baz=123,SNR=25
JFWS **Jewell Farm** 39.00 340 P P **05 02 25.9 +0.5**
baz=152,SNR=14
SCIA **State Center** 39.24 336 P P **05 02 28.0 +0.6**
baz=147
ITAB **Concordia** 39.47 150 P P **05 02 26.9 -2.6**
ITAB IAmb IAmb 05 02 28.1
comp=Z,17nm,1.3s
CBKS **Cedar Bluff** 39.91 327 P P **05 02 33.2 +0.1**
baz=136
I40A **Norwalk** 39.99 340 IAmb IAmb 05 02 34.9
comp=Z,13nm,0.8s
LATQ **La Tuque** 40.42 0 P P **05 02 38.0 +1.0**
LATQ IAmb IAmb 05 02 40.2
comp=Z,11nm,0.6s
E46A **Sault Ste Mari** 40.57 348 IAmb IAmb 05 02 40.5
comp=Z,18nm,0.7s
BATG **Bathurst New B** 40.77 7 P P **05 02 40.4 +0.5**
BGNE **Belgrade** 41.02 331 P P **05 02 42.7 +0.6**
baz=140
G40A **Rib Lake** 41.09 342 IAmb IAmb 05 02 44.9
comp=Z,12nm,0.9s
121A **Cookes Peak, D** 41.15 313 IAmb IAmb 05 02 46.8
comp=Z,10nm,1.1s
121A **Cookes Peak, D** 41.15 313 P P **05 02 45.5 +1.9**
baz=121
T25A **Trinidad** 41.50 321 P P **05 02 48.3 +2.0**
baz=129,SNR=6.2
ANMO **Albuquerque** 41.52 317 P P **05 02 47.9 +1.4**
ANMO **Albuquerque** 41.52 317 P P **05 02 47.9 +1.4**
baz=125
KSCO **Kaye Shedlock'** 41.66 325 IAmb IAmb 05 02 49.4
comp=Z,10nm,0.8s
KSCO **Kaye Shedlock'** 41.66 325 P P **05 02 48.4 +0.9**
baz=132
319A **Douglas** 41.69 311 IAmb IAmb 05 02 50.8
comp=Z,11nm,0.9s
SPMN **Marine on St.** 41.92 339 P P **05 02 49.5 +0.2**
baz=150
ECSD **EROS Data Cent** 42.16 334 P P **05 02 51.1 -0.3**
ECSD IAmb IAmb 05 02 52.1
comp=Z,15nm,1.1s
ECSD **EROS Data Cent** 42.16 334 P P **05 02 51.0 -0.3**
baz=144,SNR=16
SDCO **Great Sand Dun** 42.56 321 P P **05 02 55.7 +0.7**
SDCO **Great Sand Dun** 42.56 321 P P **05 02 56.8 +1.8**
baz=128,SNR=17
Q24A **Divide** 43.11 323 P P **05 03 00.6 +1.2**
baz=130
TUC **Tucson** 43.26 311 P P **05 03 01.2 +0.7**
TUC **Tucson** 43.26 311 P P **05 03 01.9 +1.4**
baz=118
S22A **4UR Ranch, Cre** 43.40 320 IAmb IAmb 05 03 05.3
comp=Z,15nm,1.3s
S22A **4UR Ranch, Cre** 43.40 320 P P **05 03 03.6 +1.9**
baz=127,SNR=9.6
F33A **5 Mile Ranch,** 43.74 337 IAmb IAmb 05 03 04.8
comp=Z,17nm,1.1s
SUSD **Miller** 43.75 333 P P **05 03 04.2 +0.1**
baz=141,SNR=8.6
W18A **Petrified Fore** 43.88 315 IAmb IAmb 05 03 08.5
comp=Z,16nm,0.9s
W18A **Petrified Fore** 43.88 315 P P **05 03 07.3 +1.8**
baz=121,SNR=5.8
EYMN **Ely** 43.88 342 P P **05 03 05.5 +0.4**
baz=153,SNR=7.2
ISCO **Idaho Springs** 43.92 323 P P **05 03 07.1 +1.2**
ISCO IAmb IAmb 05 03 08.6
comp=Z,11nm,1.0s
ISCO **Idaho Springs** 43.92 323 P P **05 03 07.5 +1.6**
baz=130,SNR=16
MVCO **Mesa Verde** 44.17 318 P P **05 03 09.0 +1.2**
MVCO IAmb IAmb 05 03 10.3
comp=Z,14nm,1.3s
MVCO **Mesa Verde** 44.17 318 P P **05 03 09.3 +1.4**
baz=124,SNR=7.4
214A **Organ Pipe Nat** 44.64 309 P P **05 03 13.0 +1.6**
baz=116
PV15 **Paradox Valley** 44.80 320 IAmb IAmb 05 03 15.9
comp=Z,26nm,0.9s
N23A **Red Feather La** 44.81 324 IAmb IAmb 05 03 16.3
comp=Z,11nm,0.9s
N23A **Red Feather La** 44.81 324 P P **05 03 14.7 +1.8**
baz=130,SNR=8.2
B35A **Bob, Littlefor** 44.95 341 IAmb IAmb 05 03 14.8
comp=Z,13nm,0.7s
PV07 **Paradox Valley** 44.96 320 P P **05 03 15.0 +0.9**
PV07 IAmb IAmb 05 03 16.9
comp=Z,14nm,1.2s
WUAZ **Wupatki** 45.23 315 IAmb IAmb 05 03 19.6
comp=Z,18nm,0.9s
WUAZ **Wupatki** 45.23 315 P P **05 03 18.0 +1.8**
baz=120,SNR=18
AGMN **Agassiz Nation** 45.63 339 IAmb IAmb 05 03 20.2
comp=Z,12nm,0.6s
AGMN **Agassiz Nation** 45.63 339 P P **05 03 19.5 +0.5**
baz=147,SNR=9.2
O20A **White River Ci** 45.71 322 P P **05 03 21.5 +1.6**
baz=127,SNR=5.6
RSSD **Black Hills** 45.95 329 P P **05 03 22.6 +0.9**
baz=135
RWWY **Rawlins** 46.05 324 IAmb IAmb 05 03 25.3
comp=Z,8.7nm,0.8s
K22A **Casper** 46.28 326 P P **05 03 25.4 +1.1**
baz=131
U15A **North Rim** 46.33 315 IAmb IAmb 05 03 28.0
comp=Z,12nm,1.0s
SRU **San Rafael Swe** 46.55 319 IAmb IAmb 05 03 28.9
comp=Z,9.1nm,0.9s
GLA **Glamis** 46.64 310 P P **05 03 28.6 +1.4**
baz=115
P18A **Preston Nutter** 46.66 320 P P **05 03 28.5 +1.0**
MDND **Maddock** 46.70 336 P P **05 03 28.2 +0.8**
baz=142,SNR=16
P17A **Butcher Ranch,** 46.89 320 IAmb IAmb 05 03 31.6
comp=Z,13nm,0.9s
KNB **Kanab** 46.99 316 IAmb IAmb 05 03 33.0
comp=Z,12nm,0.9s
LCMT **Little Creek M** 47.28 315 IAmb IAmb 05 03 35.6
comp=Z,11nm,0.9s
ULM **Lac du Bonnet** 47.30 340 P P **05 03 31.9 0.0**
comp=Z,16nm,0.5s,baz=148,slow=8.0,SNR=24
comp=Z,16nm,0.5s
ULM **Lac du Bonnet** 47.30 340 P P **05 03 31.9 0.0**
ULM IAmb IAmb 05 03 32.9
comp=Z,16nm,0.7s
MPU **Maple Canyon** 47.77 320 IAmb IAmb 05 03 38.2
comp=Z,9.3nm,0.9s
V12A **Nelson** 47.82 313 IAmb IAmb 05 03 38.7
comp=Z,8.8nm,0.8s
GMRC **Granite Mounta** 48.00 312 P P **05 03 38.8 +1.1**
baz=115
BW06 **Boulder Array** 48.09 324 P P **05 03 39.1 +0.7**
baz=128,SNR=10
PDAR **Pinedale Array** 48.09 324 P P **05 03 39.0 +0.7**
comp=Z,2.6nm,0.6s,baz=127,slow=8.7,SNR=33
comp=Z,2.6nm,0.6s
SCHQ **Schefferville** 48.15 5 P P **05 03 39.5 +1.1**
comp=Z,8.3nm,0.6s,baz=194,slow=7.4,SNR=18
comp=Z,8.3nm,0.6s
SCHQ **Schefferville** 48.15 5 P P **05 03 38.6 +0.3**
SCHQ IAmb IAmb 05 03 40.1
comp=Z,9.4nm,0.6s
TUQ **Turquoise Moun** 48.48 312 P P **05 03 42.7 +1.3**
baz=116
HEC **Hector,Ludlow** 48.52 311 P P **05 03 43.4 +1.7**
baz=115
DUG **Dugway, Tooele** 48.62 319 P P **05 03 43.8 +1.3**
baz=122,SNR=8.6
MURC **Murrieta** 48.68 309 P P **05 03 44.0 +1.1**
baz=113
LAO **LASA Array** 48.85 330 P P **05 03 44.7 +0.8**
baz=134
SHOC **Shoshone, Teco** 48.94 313 P P **05 03 46.9 +2.1**
baz=116
SPR3 **Spring Creek 3** 49.01 317 IAmb IAmb 05 03 47.9
comp=Z,7.3nm,1.1s
GSC **Goldstone, Bar** 49.07 312 P P **05 03 47.4 +1.5**
baz=115,SNR=5.8
BGU **Big Grassy Mou** 49.16 320 IAmb IAmb 05 03 48.5
comp=Z,12nm,0.7s
DGMT **Dagmar** 49.16 333 P P **05 03 47.0 +0.8**
DGMT **Dagmar** 49.16 333 P P **05 03 47.4 +1.2**
baz=127,SNR=20
REDW **Red Top Meadow** 49.20 324 IAmb IAmb 05 03 49.0
comp=Z,13nm,0.8s
SNOW **Snow King Moun** 49.21 324 IAmb IAmb 05 03 50.2
comp=Z,7.9nm,0.7s
LOHW **Long Hollow** 49.21 324 IAmb IAmb 05 03 49.0
comp=Z,6.9nm,0.7s
TPAW **Teton Pass** 49.34 324 IAmb IAmb 05 03 49.4
comp=Z,6.8nm,0.7s
TPNV **Topopah Spring** 49.38 314 P P **05 03 50.0 +1.8**
baz=116,SNR=8.3
RLMT **Red Lodge** 49.39 327 P P **05 03 49.3 +1.0**
baz=129
R11A **Troy Canyon, C** 49.55 316 P P **05 03 51.1 +1.5**
baz=118,SNR=9.9
IMW **Indian Meadow** 49.58 324 IAmb IAmb 05 03 51.6
comp=Z,6.4nm,0.7s
FURC **Furnace Creek,** 49.61 313 P P **05 03 51.4 +1.6**
baz=116
EDW2 **Edwards Air Fo** 49.79 311 P P **05 03 52.6 +1.3**
baz=113
MPMC **Manual Prospec** 49.90 312 P P **05 03 53.0 +0.8**
baz=115
YMR **Madison River** 50.05 325 P P **05 03 54.5 +1.2**
YMR IAmb IAmb 05 03 55.9
comp=Z,6.2nm,0.6s
GRAC **Grapevine Rang** 50.20 313 P P **05 03 55.7 +1.4**
baz=116
YHL **Hebgen Lake** 50.29 325 IAmb IAmb 05 03 58.3
comp=Z,19nm,1.3s
SNCC **San Nicolas Is** 50.35 308 P P **05 03 56.4 +0.9**
baz=111
ISA **Isabella, Lake** 50.46 311 P P **05 03 57.6 +1.3**
baz=114
CWC **Cottonwood Cre** 50.49 312 P P **05 03 58.1 +1.5**
baz=114
TPH **Tonopah** 50.57 315 IAmb IAmb 05 03 59.7
comp=Z,23nm,1.1s
SCZ2 **Santa Cruz Isl** 50.71 309 P P **05 03 59.7 +1.6**
baz=111
DSP **Deep Springs** 50.80 314 IAmb IAmb 05 04 01.6
comp=Z,7.8nm,1.0s
VES **Vestal, Richgr** 50.99 311 P P **05 04 01.9 +1.7**
baz=113
BOZ **Bozeman (W)** 50.99 326 P P **05 04 01.6 +1.4**
baz=127,SNR=12
PKM **Mcpherson Peak** 51.17 310 P P **05 04 03.2 +1.4**
baz=112
HLID **Hailey** 51.45 322 P P **05 04 05.0 +1.3**
baz=123,SNR=13
NVAR **Mina Array Bea** 51.49 315 P P **05 04 05.2 +1.0**
comp=Z,2.2nm,0.7s,baz=125,slow=7.4,SNR=25
NVAR PcP PcP **05 05 17.4 +1.1**
comp=Z,0.7nm,0.6s,baz=138,slow=5.2,SNR=4.4
comp=Z,2.2nm,0.7s
EGMT **Eagleton** 51.52 329 IAmb IAmb 05 04 08.2
comp=Z,18nm,1.5s
EGMT **Eagleton** 51.52 329 P P **05 04 05.3 +1.3**
baz=131
KVN **Kaiserville** 51.62 315 P P **05 04 05.8 +0.7**
MFID **Camas Ranch** 52.24 321 IAmb IAmb 05 04 12.4
comp=Z,8.0nm,0.7s
YERR **Yerington** 52.40 315 IAmb IAmb 05 04 14.4
comp=Z,7.7nm,0.9s
PNTR **Pine Nut** 52.69 315 IAmb IAmb 05 04 15.6
comp=Z,6.6nm,0.8s
VCNR **Virginia City** 52.81 315 IAmb IAmb 05 04 16.6
comp=Z,8.4nm,1.1s
MSO **Missoula** 53.02 326 P P **05 04 15.9 +0.8**
baz=126
PLID **Pearl Lake** 53.23 323 IAmb IAmb 05 04 18.2
comp=Z,5.8nm,0.8s
WVOR **Wild Horse Val** 53.54 319 IAmb IAmb 05 04 22.5
comp=Z,11nm,1.1s
I07A **Izee** 54.88 320 IAmb IAmb 05 04 30.8
comp=Z,5.9nm,0.9s
G08A **Pilot Rock** 55.13 322 P P **05 04 31.6 +1.2**
G08A IAmb IAmb 05 04 32.4

comp=Z,1.1nm,0.8s
E09A Wood Farm, Sta 55.26 324 IAmb IAmb 05 04 32.9
comp=Z,5.7nm,0.9s
NEW Newport 55.60 326 IAmb IAmb 05 04 35.0
comp=Z,7.0nm,1.3s
NEW Newport 55.60 326 P **P** **05 04 33.9 +0.1**
baz=123
J05D Fort Rock, OR 55.63 319 P **P** **05 04 35.2 +1.1**
baz=116,SNR=5.9
C09A Chrisman Ranch 56.01 325 IAmb IAmb 05 04 38.4
comp=Z,11nm,0.8s
I05D Terrebonne, OR 56.17 320 P **P** **05 04 40.0 +2.2**
baz=117
J04D Umpqua Nationa 56.18 318 P **P** **05 04 39.2 +1.1**
baz=116
G05D Wamic, OR 56.56 321 P **P** **05 04 42.7 +2.1**
baz=117
I04A Tendick Farm, 56.62 319 P **P** **05 04 42.2 +1.2**
baz=116
H04A Detroit Lake 56.86 320 IAmb IAmb 05 04 47.1
comp=Z,9.5nm,0.8s
B08A Colville Reser 56.90 325 IAmb IAmb 05 04 44.5
comp=Z,8.4nm,0.9s
LTY Liberty 57.13 323 IAmb IAmb 05 04 46.6
comp=Z,6.5nm,0.8s
H04D Lebanon 57.15 320 P **P** **05 04 46.5 +1.9**
baz=116
I03D Drain, OR 57.19 318 P **P** **05 04 46.3 +1.3**
baz=115
LLLB Lillooet 59.48 326 IAmb IAmb 05 05 02.5
comp=Z,14nm,1.2s
CBB Campbell River 61.18 324 P **P** **05 05 13.1 +0.9**
YKA Yellowknife Ar 63.27 340 P **P** **05 05 26.4 +0.4**
comp=Z,8.7nm,0.6s,baz=132,slow=6.6,SNR=36
YKA pP **pP** **05 06 04.7 +1.1**
comp=Z,1.5nm,0.8s,baz=128,slow=7.1,SNR=1.9
comp=Z,8.7nm,0.6s
YKA Yellowknife Ar 63.27 340 P **P** **05 05 26.5 +0.6**
ICESG Greenland Ices 65.96 13 *i* P **P** **05 05 43.0 -0.6**
ICESG IAmb IAmb 05 06 36.7
comp=Z,652nm,4.0s
T35M Bob Quinn 66.82 330 P **P** **05 05 50.8 +1.8**
baz=115
V35K Ketchikan 66.85 328 P **P** **05 05 50.4 +1.3**
baz=113
WRGLY Wrigley 66.92 338 P **P** **05 05 50.0 +0.6**
baz=124
DLBC Dease Lake 67.33 331 IAmb IAmb 05 05 55.3
comp=Z,8.5nm,1.1s
DLBC Dease Lake 67.33 331 P **P** **05 05 53.6 +1.4**
baz=116
S34M Telegraph Cree 67.64 331 P **P** **05 05 55.6 +1.5**
baz=114
DBIC Dimbokro 67.73 86 P **P** **05 05 54.4 -1.0**
comp=Z,3.5nm,1.0s,baz=273,slow=11,SNR=2.1
comp=Z,3.5nm,1.0s
TGTN Hyland Airport 67.96 335 P **P** **05 05 57.4 +1.3**
baz=118
R33M Jennings River 68.19 332 P **P** **05 05 59.1 +1.5**
baz=115,SNR=5.4
SUMG Summit 69.00 11 P **P** **05 06 02.6 -0.1**
SUMG IAmb IAmb 05 06 04.2
comp=Z,11nm,0.8s
SUMG Summit 69.00 11 *i* P **P** **05 06 03.2 +0.5**
SUMG IAmb IAmb 05 06 03.8
comp=Z,9.8nm,0.7s
P33M Teslin, Yukon 69.38 333 IAmb IAmb 05 06 07.5
comp=Z,6.8nm,1.1s
P33M Teslin, Yukon 69.38 333 P **P** **05 06 06.0 +1.0**
baz=114
SIT Sitka 69.41 329 P **P** **05 06 06.5 +1.5**
baz=110
P32M Atlin 69.55 332 P **P** **05 06 07.1 +1.2**
baz=112
MMPY Sheldon Lake, 69.71 335 P **P** **05 06 08.1 +1.2**
baz=116
N32M Quiet Lake 69.87 333 P **P** **05 06 09.0 +1.1**
baz=114
FARO Faro, Yukon 70.43 334 P **P** **05 06 12.6 +1.4**
baz=114
M31M Drury Creek, Y 70.86 334 IAmb IAmb 05 06 16.5
comp=Z,6.9nm,1.1s
M31M Drury Creek, Y 70.86 334 P **P** **05 06 15.1 +1.2**
baz=113
O30N Mendenhall 71.09 332 P **P** **05 06 16.7 +1.4**
baz=111,SNR=7.3
N31M Braeburn, Yuko 71.20 333 IAmb IAmb 05 06 19.1
comp=Z,12nm,0.9s
N31M Braeburn, Yuko 71.20 333 P **P** **05 06 16.8 +0.8**
baz=111,SNR=5.6
P30M Million Dollar 71.27 332 P **P** **05 06 18.0 +1.6**
baz=110
P29M Windy Craggy 71.47 331 P **P** **05 06 19.1 +1.5**
baz=109
NEEM North Greenlan 71.56 5 *i* P **P** **05 06 18.6 +0.5**
NEEM IAmb IAmb 05 06 19.4
comp=Z,19nm,1.1s
HYT Haines Junctio 71.76 332 P **P** **05 06 20.7 +1.4**
baz=109
N30M Aishikik Lake 71.78 333 P **P** **05 06 21.2 +1.8**
baz=110,SNR=6.0
MAYO Mayo, Yukon 72.03 335 P **P** **05 06 22.3 +1.5**
baz=112,SNR=7.6
M30M Minto, Yukon 72.04 334 IAmb IAmb 05 06 23.1
comp=Z,8.4nm,0.8s
M30M Minto, Yukon 72.04 334 P **P** **05 06 22.3 +1.3**
baz=110,SNR=12
A36M Sachs Harbour 72.44 345 P **P** **05 06 23.4 +0.3**
baz=124
M29M Somme Creek 72.73 334 P **P** **05 06 26.2 +1.1**
baz=109
K29M Barlow Dome 72.80 335 P **P** **05 06 26.8 +1.3**
baz=110,SNR=6.2
INK Inuvik 73.04 340 P **P** **05 06 27.7 +1.1**
comp=Z,3.4nm,0.6s,baz=98,slow=5.8,SNR=8.3
comp=Z,3.4nm,0.6s
INK Inuvik 73.04 340 P **P** **05 06 27.7 +1.1**
INK Inuvik 73.04 340 P **P** **05 06 27.4 +0.8**
baz=115
EPYK Eagle Plains 73.39 338 P **P** **05 06 29.7 +0.9**
baz=112
CTG Chitna Glacier 73.59 332 P **P** **05 06 31.7 +1.5**
baz=106
DAWY Dawson 73.65 335 P **P** **05 06 31.1 +0.7**
baz=108
TORD Torodi Ar. Bea 73.73 78 P **P** **05 06 30.4 -1.3**
comp=Z,2.1nm,0.3s,baz=294,slow=5.4,SNR=1.4
comp=Z,2.1nm,0.3s
TORD Torodi Ar. Bea 73.73 78 P **P** **05 06 28.0 -3.7**
M27K Edge Creek, AK 74.22 333 P **P** **05 06 35.2 +1.3**
baz=106,SNR=6.7
L27K Beaver Creek, 74.39 334 P **P** **05 06 36.1 +1.4**
baz=106,SNR=6.7
EGAK Eagle 74.60 336 P **P** **05 06 37.1 +1.3**
baz=107
M26K Nabesna, AK 74.73 333 P **P** **05 06 37.9 +1.2**
baz=105
K27K Chicken 74.77 335 P **P** **05 06 38.3 +1.5**
baz=106
I27K Kandik River 75.03 336 P **P** **05 06 39.5 +1.2**
baz=107,SNR=6.8
L26K Log Cabin Wild 75.05 334 P **P** **05 06 40.2 +1.7**
baz=105,SNR=9.3
BMRM Bremner River 75.13 331 P **P** **05 06 40.1 +1.1**
baz=103
H27K Steamboat Moun 75.18 337 P **P** **05 06 39.7 +0.6**
baz=107
N25K Chitina, Valde 75.27 332 P **P** **05 06 41.1 +1.3**
baz=103
G27K Doyon Strip 75.40 338 P **P** **05 06 41.1 +0.7**
baz=107
I26K Coal Creek Min 75.56 336 P **P** **05 06 42.0 +0.7**
baz=105
EYAK Cordova Ski Ar 75.59 331 P **P** **05 06 42.1 +0.6**
baz=102
E27K Coleen River 75.79 339 P **P** **05 06 43.5 +0.8**
baz=108
RIDG Independent Ri 75.88 334 P **P** **05 06 44.9 +1.6**
baz=103
PAX Paxson 75.98 333 P **P** **05 06 44.8 +1.0**
baz=103
K24K Donnelly Dome 76.30 334 P **P** **05 06 47.0 +1.4**
baz=102
J25K Salcha River, 76.30 335 P **P** **05 06 46.5 +0.9**
baz=103
PRP Porcupine Dome 76.58 336 P **P** **05 06 48.0 +0.7**
baz=103,SNR=5.2
F26K Sheenjek River 76.58 338 P **P** **05 06 48.0 +0.9**
baz=105
SCM Sheep Creek Mo 76.59 332 P **P** **05 06 48.3 +1.0**
baz=101
M23K Glacier View 76.77 332 P **P** **05 06 49.0 +0.7**
baz=100
H25K Birch Creek 76.87 337 P **P** **05 06 49.6 +1.0**
baz=103
PWL Port Wells 76.89 331 P **P** **05 06 49.7 +0.7**
baz=100
WAT6 Susitna Watana 76.92 333 P **P** **05 06 50.0 +0.7**
baz=100
HDA Harding Lake 76.93 335 P **P** **05 06 49.8 +0.7**
baz=102
C27K Jago River 76.94 340 P **P** **05 06 50.1 +1.0**
baz=106
ILAR Eielson Array 76.97 335 P **P** **05 06 49.8 +0.5**
comp=Z,1.6nm,0.8s,baz=100,slow=4.1,SNR=10
comp=Z,1.6nm,0.8s
ILAR Eielson Array 76.97 335 P **P** **05 06 49.5 +0.2**
KNK Knik Glacier 77.05 331 P **P** **05 06 51.4 +1.6**
baz=100
SML Sawmill 77.05 332 P **P** **05 06 51.2 +1.3**
baz=100
F25K Christian Rive 77.11 338 P **P** **05 06 51.7 +1.6**
baz=104
E25K Arctic Village 77.21 339 P **P** **05 06 51.6 +1.0**
baz=104
WAT1 Susitna Watana 77.33 333 P **P** **05 06 52.0 +0.6**
baz=100
PMR Palmer 77.39 332 P **P** **05 06 52.0 +0.4**
baz=99
H24K Noodor Dome 77.60 336 P **P** **05 06 54.1 +1.2**
baz=101
RC01 Rabbit Creek A 77.61 331 P **P** **05 06 53.8 +1.0**
baz=98
G24K Hadweenzic Riv 77.61 337 P **P** **05 06 54.1 +1.3**
baz=102
D25K Kavik River 77.78 340 P **P** **05 06 54.5 +0.8**
baz=103,SNR=5.4
NEA2 Nenana 77.86 335 P **P** **05 06 54.9 +0.6**
baz=100,SNR=6.2
BRSE Bradley Lake S 77.92 330 P **P** **05 06 55.9 +1.2**
baz=97
F24K Squaw Lake 77.93 338 P **P** **05 06 56.1 +1.5**
baz=101
SUA Susitna One 78.14 331 P **P** **05 06 57.0 +1.0**
baz=98
TRF Thorofare Moun 78.21 333 P **P** **05 06 57.4 +1.0**
baz=98
E24K Your Creek 78.27 338 P **P** **05 06 57.4 +1.0**
baz=101
H23K Yukon River 78.27 336 P **P** **05 06 57.4 +0.9**
baz=100
G23K Bananza Creek 78.61 337 P **P** **05 06 59.7 +1.4**
baz=99,SNR=6.6
BPAW Bear Paw Mtn. 78.61 334 P **P** **05 06 59.0 +0.6**
baz=98
MLY Manley 78.64 335 P **P** **05 06 59.3 +0.8**
baz=98,SNR=5.3
C24K Franklin Bluff 78.66 340 P **P** **05 06 59.5 +1.0**
baz=101
PPLA Purkeypile 78.99 333 P **P** **05 07 01.5 +0.8**
baz=96
CAST Castle Rocks 79.01 333 P **P** **05 07 01.1 +0.6**
baz=97
H22K Ishtalitna Cre 79.02 336 P **P** **05 07 01.3 +0.7**
baz=98
CHUM Lake Minchumin 79.16 334 P **P** **05 07 01.8 +0.5**
baz=97
I21K Tanana 79.18 335 P **P** **05 07 01.9 +0.5**
baz=97
D23K Nanushuk River 79.22 339 P **P** **05 07 03.1 +1.5**
baz=99
G22K Bettles 79.22 337 P **P** **05 07 03.0 +1.4**
baz=98
M20K Styx River 79.32 332 P **P** **05 07 02.8 +0.5**
baz=96
C23K Itkillik River 79.33 340 P **P** **05 07 03.3 +1.2**
baz=99
E22K Anaktuvuk Pass 79.50 338 P **P** **05 07 04.7 +1.5**
baz=98
F22K Jon River 79.56 337 P **P** **05 07 04.6 +1.1**
baz=97
H21K Melozitna Rive 79.58 336 P **P** **05 07 04.4 +0.8**
baz=96
L20K Farewell, AK 79.72 332 P **P** **05 07 05.0 +0.5**
baz=95
N19K Bonanza Creek 79.88 331 P **P** **05 07 05.5 +0.1**
baz=94
K20K Telida 79.89 333 P **P** **05 07 05.9 +0.6**
baz=95
M19K Big River Lodg 79.92 332 P **P** **05 07 06.2 +0.7**
baz=94
G21K Allakaket 79.96 336 P **P** **05 07 06.5 +0.9**
baz=96
J20K Nowinta River 80.00 334 P **P** **05 07 06.2 +0.4**
baz=95,SNR=7.5
F21K Alatna River 80.03 337 P **P** **05 07 07.0 +1.0**
baz=96
L19K Wiseman Mountain 80.16 332 P **P** **05 07 07.1 +0.3**
baz=94
P18K Big Mountain, 80.16 329 P **P** **05 07 06.7 -0.1**
baz=93
O18K Koktuh Hills 80.17 330 P **P** **05 07 07.2 +0.3**
baz=93
N18K Kilae Creek 80.56 330 P **P** **05 07 08.9 -0.1**
baz=93
R17K Ugashik Creek 80.68 327 P **P** **05 07 10.1 +0.4**
baz=92
P17K Kvichak River 80.77 329 P **P** **05 07 10.3 +0.3**
baz=92
Q16K King Salmon 80.86 328 P **P** **05 07 10.3 -0.3**
baz=92
O17K Koliganek Bris 81.12 329 P **P** **05 07 12.2 +0.2**
baz=92
NB2 NORSAR Subarra 81.33 29 P **P** **05 07 13.7 +0.6**
comp=Z,0.5nm,0.5s,baz=266,slow=5.3
NOA NORSAR Array B 81.33 29 P **P** **05 07 13.9 +0.8**
comp=Z,0.4nm,0.5s,baz=267,slow=5.3,SNR=4.8
comp=Z,0.4nm,0.5s
GEC2 GERESS Array S 82.82 42 P **P** **05 07 19.1 -2.1**
UNV Unalaska Valle 86.55 324 P **P** **05 07 40.5 +0.9**
baz=83
ARCES ARCESS Array B 86.68 20 P **P** **05 07 40.4 +0.4**
comp=Z,2.4nm,0.8s,baz=48,slow=1.8,SNR=4.6
comp=Z,2.4nm,0.8s
NIKH Nikiski High 88.06 323 P **P** **05 07 47.4 +0.5**
baz=81
VNA3 Neumayer Olymp 88.16 163 P **P** **05 07 46.2 -0.7**
VNA1 Neumayer--Stat 88.31 162 P **P** **05 07 47.4 -0.1**
VNA2 Neumayer--Watz 88.69 163 P **P** **05 07 48.6 -0.7**
baz=303,slow=1.4
TROLL Troll, Antarti 92.03 162 P **P** **05 08 04.7 -0.4**
ZALV Zalesovo Beam 116.67 14 PKP **PKiKP** **05 13 39.8 0.0**
comp=Z,0.8nm,0.4s,baz=286,slow=1.0,SNR=2.7
MKAR Makanchi Array 122.33 20 PKP **PKPdf** **05 13 50.7 -0.3**
comp=Z,0.4nm,0.4s,baz=291,slow=3.1,SNR=9.1
PZH PanZhiHua 146.51 8 PKPbc **PKPdf** **05 14 34.5 -1.9**
ASAR Alice Springs 149.11 234 PKPbc **PKPbc** **05 14 44.5 -0.4**
comp=Z,1.6nm,0.6s,baz=116,slow=2.9,SNR=12
WRA Warramunga Arr 150.34 241 PKPbc **PKPbc** **05 14 47.7 -0.3**
comp=Z,1.7nm,0.5s,baz=107,slow=2.9,SNR=42

ROM 26 05:08:30.6±0.1, 42°.778N±0°.004×13°.159E±0°.006, h10km, ML3.2/42, 22C-15D, Error ellipse: s-maj=0.4km s-min=0.2km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.07**	**330**	⇓P	Pg	05 08 33.1	+0.2
NRCA				S	Sg	05 08 34.3	-0.2
NRCA				AML	AML		
	comp=E,70350μm,1.4s						
NRCA				AML	AML		
	comp=N,80850μm,1.0s						
NRCA				AML	AML		
	comp=N,80900μm,1.1s						
NRCA				AML	AML		
	comp=E,75250μm,1.4s						
NRCA				AML	AML		
	comp=N,90000μm,1.1s						
NRCA				AML	AML		
	comp=N,80900μm,1.0s						
NRCA				AML	AML		
	comp=E,70400μm,1.4s						
NRCA				AML	AML		
	comp=E,69651μm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**10**	⇓P	Pg	05 08 34.4	+0.5
MC2				S	Sg	05 08 37.4	+1.1
MC2				AML	AML		
	comp=E,6130μm,1.1s						
MC2				AML	AML		
	comp=N,6060μm,1.1s						
MC2				AML	AML		
	comp=E,6110μm,1.1s						
MC2				AML	AML		
	comp=E,6125μm,1.1s						
MC2				AML	AML		
	comp=N,6070μm,1.1s						
MC2				AML	AML		
	comp=E,6115μm,1.1s						
MC2				AML	AML		
	comp=N,6080μm,1.1s						
MC2				AML	AML		
	comp=N,5614μm,0.4s						
MC2				AML	AML		
	comp=E,5624μm,0.2s						
MMO1	**Montemonaco**	**0.17**	**45**	⇑P	Pg	05 08 34.9	+0.5
MMO1				S	Sg	05 08 38.0	+1.0
MMO1				AML	AML		
	comp=E,9260μm,0.2s						
MMO1				AML	AML		
	comp=E,10650μm,0.8s						
MMO1				AML	AML		
	comp=N,8175μm,1.0s						
MMO1				AML	AML		
	comp=E,9235μm,0.2s						
MMO1				AML	AML		
	comp=N,7833μm,0.2s						
MMO1				AML	AML		
	comp=N,1139μm,0.2s						
LNSS	**Leonessa**	**0.20**	**207**	⇑P	Pg	05 08 35.6	+0.8
LNSS				S	Sg	05 08 39.1	+1.5
LNSS				AML	AML		
	comp=E,17800μm,0.5s						
LNSS				AML	AML		
	comp=N,12750μm,0.3s						
LNSS				AML	AML		
	comp=N,9519μm,0.1s						
LNSS				AML	AML		
	comp=E,10399μm,0.3s						
T1243	**Rocca Santa Ma**	**0.23**	**111**	⇑P	Pg	05 08 35.9	+0.5
T1243				S	Sg	05 08 39.7	+1.2
T1243				AML	AML		
	comp=E,56750μm,1.6s						
T1243				AML	AML		
	comp=N,79500μm,0.3s						
T1243				AML	AML		
	comp=N,79400μm,0.3s						
T1243				AML	AML		
	comp=E,56200μm,1.6s						
T1243				AML	AML		
	comp=E,56700μm,1.6s						
T1243				AML	AML		
	comp=N,79450μm,0.3s						
T1243				AML	AML		
	comp=N,8842μm,0.2s						
T1243				AML	AML		
	comp=E,6945μm,0.2s						
T1243				AML	AML		
	comp=N,8800μm,0.2s						
T1243				AML	AML		
	comp=E,6874μm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**349**	⇑P	Pg	05 08 36.5	+0.5
FDMO				S	Sg	05 08 40.7	+1.1
FDMO				AML	AML		
	comp=E,1185μm,1.4s						
FDMO				AML	AML		
	comp=N,1495μm,1.6s						
FDMO				AML	AML		
	comp=E,1710μm,1.4s						
FDMO				AML	AML		
	comp=N,2140μm,1.2s						
FDMO				AML	AML		
	comp=N,1332μm,0.3s						
FDMO				AML	AML		
	comp=E,1172μm,0.2s						
RM33	**Pellescritta (**	**0.27**	**171**	⇓P	Pg	05 08 36.9	+0.7
RM33				S	Sb	05 08 41.6	-0.8
RM33				AML	AML		
	comp=N,47400μm,1.2s						
RM33				AML	AML		
	comp=N,46050μm,1.2s						
RM33				AML	AML		
	comp=E,45900μm,0.4s						
RM33				AML	AML		
	comp=N,47350μm,1.2s						
RM33				AML	AML		
	comp=E,46150μm,0.4s						
RM33				AML	AML		
	comp=N,2182μm,0.2s						
RM33				AML	AML		
	comp=N,2199μm,0.2s						
RM33				AML	AML		
	comp=E,2226μm,0.2s						
RM33				AML	AML		
	comp=E,2247μm,0.2s						
CESI	**CESI - Serrava**	**0.29**	**321**	⇑P	Pg	05 08 37.2	+0.6
CESI				S	Sb	05 08 41.8	-1.2
CESI				AML	AML		
	comp=N,3495μm,0.3s						
CESI				AML	AML		
	comp=E,2830μm,0.5s						
CESI				AML	AML		
	comp=N,2464μm,0.3s						
CESI				AML	AML		
	comp=E,957μm,0.3s						
CAMP	**Campotosto**	**0.30**	**143**	P	Pg	05 08 37.1	+0.4
CAMP				S	Sb	05 08 42.3	-1.0
CAMP				AML	AML		
	comp=E,24400μm,0.8s						
CAMP				AML	AML		
	comp=N,17450μm,0.4s						
CAMP				AML	AML		
	comp=N,893μm,0.4s						
CAMP				AML	AML		
	comp=E,796μm,0.2s						
GUMA	**Gualdo di Mace**	**0.31**	**24**	P	Pb	05 08 37.8	-0.6
GUMA				S	Sb	05 08 43.3	-0.3
GUMA				AML	AML		
	comp=E,12650μm,0.5s						
GUMA				AML	AML		
	comp=N,15950μm,0.5s						
GUMA				AML	AML		
	comp=E,14300μm,0.5s						
GUMA				AML	AML		
	comp=N,17250μm,0.5s						
GUMA				AML	AML		
	comp=N,3809μm,0.3s						
GUMA				AML	AML		
	comp=E,4958μm,0.3s						
GUMA				AML	AML		
	comp=N,3531μm,0.2s						
GUMA				AML	AML		
	comp=E,3521μm,0.3s						
CSP1	**Cessapalombo**	**0.32**	**6**	⇑P	Pg	05 08 37.4	+0.4
CSP1				S	Sg	05 08 42.2	+1.0
ARRO	**Arrone**	**0.35**	**236**	⇑P	Pg	05 08 38.2	+0.7
ARRO				AML	AML		
	comp=E,2520μm,0.3s						
ARRO				AML	AML		
	comp=N,1825μm,0.3s						
ARRO				AML	AML		
	comp=E,3035μm,0.7s						
ARRO				AML	AML		
	comp=N,3910μm,1.1s						
ARRO				AML	AML		
	comp=E,3040μm,0.7s						
TERO	**Teramo**	**0.36**	**115**	⇑P	Pg	05 08 38.1	+0.4
TERO				S	Sb	05 08 44.0	-1.0
TERO				AML	AML		
	comp=E,16600μm,0.3s						
TERO				AML	AML		
	comp=N,19950μm,0.5s						
TERO				AML	AML		
	comp=N,18900μm,0.5s						
TERO				AML	AML		
	comp=E,18050μm,0.3s						
TERO				AML	AML		
	comp=N,18850μm,0.5s						
TERO				AML	AML		
	comp=E,864μm,0.1s						
TERO				AML	AML		
	comp=N,911μm,0.2s						

TERO					AML	AML			
	comp=E,755µm,0.1s								
TERO					AML	AML			
	comp=N,1131µm,0.1s								
SEF1	**Sefro**	**0.40**	**337**	⇓P	Pg	05 08 39.1	+0.6		
SEF1					AML	AML			
	comp=N,3340µm,0.2s								
SEF1					AML	AML			
	comp=N,3335µm,0.2s								
SEF1					AML	AML			
	comp=E,3580µm,0.6s								
OFFI	**Offida**	**0.42**	**68**	⇑P	Pb	05 08 40.2	0.0		
OFFI					AML	AML			
	comp=E,17250µm,0.7s								
OFFI					AML	AML			
	comp=N,20400µm,0.6s								
GIGS	**Gran Sasso**	**0.45**	**137**	⇓P	Pg	05 08 39.6	+0.2		
GIGS					AML	AML			
	comp=E,3555µm,1.1s								
GIGS					AML	AML			
	comp=N,2230µm,1.0s								
ASSB	**Assisi San Ben**	**0.45**	**306**	⇑P	Pg	05 08 39.8	+0.3		
ASSB				S	Sb	05 08 47.1	-0.5		
ASSB					AML	AML			
	comp=N,2250µm,0.3s								
ASSB					AML	AML			
	comp=E,2700µm,1.6s								
ASSB					AML	AML			
	comp=N,683µm,0.2s								
ASSB					AML	AML			
	comp=E,817µm,0.2s								
CESX	**Cesi**	**0.46**	**249**	⇑P	Pg	05 08 39.9	+0.3		
CESX					AML	AML			
	comp=E,3650µm,0.3s								
CESX					AML	AML			
	comp=N,3405µm,0.3s								
GAG1	**Gagliole**	**0.47**	**352**	⇑P	Pb	05 08 40.5	-0.4		
GAG1					AML	AML			
	comp=N,4390µm,0.7s								
GAG1					AML	AML			
	comp=E,4110µm,0.5s								
GAG1					AML	AML			
	comp=N,4385µm,0.7s								
SNTG	**Esanatoglia**	**0.50**	**342**	⇓P	Pg	05 08 40.8	+0.4		
SNTG					AML	AML			
	comp=E,625µm,0.6s								
SNTG					AML	AML			
	comp=N,1015µm,0.4s								
FIAM	**Fiamignano**	**0.51**	**183**	⇑P	Pg	05 08 40.9	+0.4		
FIAM				S	Sb	05 08 50.0	+0.7		
FIAM					AML	AML			
	comp=E,4440µm,0.4s								
FIAM					AML	AML			
	comp=N,2605µm,0.7s								
EL6	**Elcito**	**0.55**	**356**	⇑P	Pg	05 08 41.6	+0.3		
EL6				S	Sb	05 08 51.0	+0.5		
EL6					AML	AML			
	comp=E,2435µm,0.4s								
EL6					AML	AML			
	comp=N,2275µm,0.3s								
EL6					AML	AML			
	comp=E,2425µm,0.4s								
EL6					AML	AML			
	comp=N,2270µm,0.3s								
EL6					AML	AML			
	comp=E,649µm,0.3s								
EL6					AML	AML			
	comp=N,895µm,0.2s								
ATCC	**AVT- Casa Cast**	**0.56**	**317**	⇑P	Pg	05 08 41.8	+0.4		
ATCC					AML	AML			
	comp=N,1750µm,0.6s								
ATCC					AML	AML			
	comp=E,3230µm,0.3s								
ATCC					AML	AML			
	comp=N,458µm,0.3s								
ATCC					AML	AML			
	comp=E,534µm,0.2s								
TRTR	**Tortoreto Alta**	**0.56**	**87**	⇑P	Pb	05 08 43.0	+0.6		
TRTR					AML	AML			
	comp=N,9300µm,0.5s								
TRTR					AML	AML			
	comp=E,10500µm,0.5s								
FOSV	**Fossato di Vic**	**0.59**	**331**	⇑P	Pb	05 08 42.9	-0.2		
FOSV					AML	AML			
	comp=E,1062µm,0.8s								
FOSV					AML	AML			
	comp=N,1098µm,1.6s								
FOSV					AML	AML			
	comp=E,1061µm,0.8s								
CING	**Cingoli**	**0.60**	**3**	⇓P	Pg	05 08 42.5	+0.3		
CING					AML	AML			
	comp=E,1735µm,1.1s								
CING					AML	AML			
	comp=N,1490µm,0.4s								
CING					AML	AML			
	comp=N,365µm,0.2s								
CING					AML	AML			
	comp=E,487µm,0.1s								
FAGN	**Fagnano**	**0.60**	**148**	⇑P	Pg	05 08 42.4	+0.2		
FAGN					AML	AML			
	comp=E,9680µm,0.4s								
FAGN					AML	AML			
	comp=N,14850µm,0.4s								
VCEL	**Villa Celiera**	**0.63**	**127**	P	Pb	05 08 43.5	-0.3		
VCEL					AML	AML			
	comp=N,13475µm,1.5s								
VCEL					AML	AML			
	comp=E,15950µm,0.3s								
VCEL					AML	AML			
	comp=N,13455µm,1.5s								
MURB	**Monte Urbino**	**0.67**	**316**	⇓P	Pg	05 08 44.0	+0.4		
MURB					AML	AML			
	comp=E,3670µm,1.2s								
MURB					AML	AML			
	comp=N,2995µm,0.4s								
MURB					AML	AML			
	comp=E,3805µm,1.2s								
MURB					AML	AML			
	comp=N,2990µm,0.4s								
MURB					AML	AML			
	comp=N,3145µm,1.0s								
MURB					AML	AML			
	comp=E,941µm,0.2s								
MURB					AML	AML			
	comp=E,998µm,0.3s								
PP3	**Marolino**	**0.69**	**29**	⇓P	Pb	05 08 45.0	+0.3		
PP3					AML	AML			
	comp=N,2595µm,0.3s								
PP3					AML	AML			
	comp=N,2620µm,0.3s								
PP3					AML	AML			
	comp=N,2590µm,0.3s								
PP3					AML	AML			
	comp=E,5025µm,0.7s								
PP3					AML	AML			
	comp=E,5005µm,0.7s								
PP3					AML	AML			
	comp=N,1233µm,0.4s								
PP3					AML	AML			
	comp=E,1766µm,0.4s								
PP3					AML	AML			
	comp=E,1675µm,0.4s								
PP3					AML	AML			
	comp=N,1237µm,0.4s								
SSFR	**Montelago di S**	**0.71**	**337**	⇑P	Pg	05 08 44.8	+0.4		
SSFR					AML	AML			
	comp=E,1405µm,0.2s								
SSFR					AML	AML			
	comp=N,1245µm,0.2s								
SSFR					AML	AML			
	comp=N,1295µm,1.0s								
SSFR					AML	AML			
	comp=E,1430µm,0.2s								
SSFR					AML	AML			
	comp=E,576µm,0.2s								
SSFR					AML	AML			
	comp=E,636µm,0.1s								
T0110	**Collepietro**	**0.72**	**140**	⇓P	Pg	05 08 44.4	0.0		
T0110					AML	AML			
	comp=E,7975µm,0.4s								
T0110					AML	AML			
	comp=N,7005µm,0.4s								
T0110					AML	AML			
	comp=N,7010µm,0.4s								
SRES	**S.Oreste - Sor**	**0.72**	**222**	⇑P	Pb	05 08 45.0	-0.3		
SRES					AML	AML			
	comp=E,1400µm,0.3s								
SRES					AML	AML			
	comp=N,1250µm,0.9s								
ATFO	**Monte Foce - G**	**0.73**	**324**	P	Pg	05 08 45.0	+0.3		
ATFO					AML	AML			
	comp=E,728µm,0.8s								
ATFO					AML	AML			
	comp=N,808µm,0.4s								
ATFO					AML	AML			
	comp=N,824µm,1.0s								
ATFO					AML	AML			
	comp=E,837µm,0.8s								
ARVD	**Arcevia**	**0.74**	**348**	⇓P	Pg	05 08 45.0	+0.1		
ARVD				S	Sb	05 08 57.0	+1.2		
ARVD					AML	AML			
	comp=N,912µm,1.1s								
ARVD					AML	AML			
	comp=E,911µm,0.9s								
MGAB	**Montegabbione**	**0.78**	**280**	P	Pb	05 08 46.0	-0.3		
MGAB					AML	AML			
	comp=E,2665µm,1.0s								
MGAB					AML	AML			
	comp=E,3115µm,1.0s								
MGAB					AML	AML			
	comp=N,2205µm,0.5s								
MGAB					AML	AML			
	comp=N,2425µm,1.4s								
MGAB					AML	AML			
	comp=E,2670µm,1.0s								
FRON	**Frontone**	**0.81**	**337**	⇓P	Pg	05 08 46.2	+0.1		
FRON					AML	AML			
	comp=E,708µm,1.2s								
FRON					AML	AML			
	comp=N,1125µm,0.8s								
ATPI	**Pietralunga -**	**0.87**	**321**	P	Pg	05 08 47.5	+0.1		
ATPI					AML	AML			
	comp=E,837µm,0.6s								
ATPI					AML	AML			
	comp=N,598µm,0.4s								
ATPI					AML	AML			
	comp=N,680µm,0.5s								
PIEI	**Pieia**	**0.89**	**329**	P	Pg	05 08 47.7	+0.1		
PIEI					AML	AML			
	comp=E,923µm,0.4s								
PIEI					AML	AML			
	comp=N,878µm,1.4s								
MPAG	**Monte Paganucc**	**0.90**	**341**	⇑P	Pb	05 08 48.4	0.0		
MPAG					AML	AML			
	comp=N,824µm,0.6s								
MPAG					AML	AML			
	comp=E,734µm,1.3s								
SACS	**San Casciano d**	**0.92**	**275**	⇓P	Pn	05 08 50.5	+0.8		
INTR	**Introdacqua**	**0.94**	**144**	⇓P	Pg	05 08 48.3	-0.4		
INTR					AML	AML			
	comp=E,1µm,0.6s								
INTR					AML	AML			
	comp=N,2µm,0.9s								
INTR					AML	AML			
	comp=N,2395µm,0.9s								
INTR					AML	AML			
	comp=E,1370µm,0.6s								
FSSB	**Fossombrone**	**0.96**	**343**	⇑P	Pg	05 08 49.0	0.0		
FSSB					AML	AML			
	comp=E,2430µm,0.5s								
FSSB					AML	AML			
	comp=N,2600µm,0.5s								
CAFI	**Castiglion Fio**	**1.03**	**303**	⇓P	Pn	05 08 50.9	-0.3		
CAFI					AML	AML			
	comp=N,556µm,0.9s								
CAFI					AML	AML			
	comp=E,526µm,0.6s								
LPEL	**Lama dei Pelig**	**1.05**	**134**	S	Sn	05 09 08.0	+1.7		
MSAG	**Monte S. Angel**	**2.30**	**117**	P	Pb	05 09 11.4	-0.9		

*ROM **26** 05:08:54.8±0.1, 42°.619N±0°.004×13°.299E±0°.005, h8km, ML3.3/48, Error ellipse: s-maj=0.4km s-min=0.2km az=233.0*
*BEO **26** 05:08:55.6±0.7, 42°.59N×13°.28E, h0km, ML3.4/7*
*PRU **26** 05:08:58.6±0.0, 42°.81N×13°.48E, h0km*

ISC 26 05:08:55.4±0.8, **42°.62N**±0°.02×**13°.30E**±0°.02, **h10**km±5km, **n100, σ1§13/128, 33C-17D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CAMP	**Campotosto**	**0.12**	**138**	⇑P	**Pg**	**05 08 58.0**	**-0.3**
CAMP				S	**Sg**	**05 09 00.3**	**-0.1**
CAMP				AML	AML		
	comp=E,24400µm,0.8s						
CAMP				AML	AML		
	comp=N,17450µm,0.4s						
RM33	**Pellescritta (**	**0.13**	**210**	P	**Pg**	**05 08 58.3**	**-0.2**
RM33				S	**Sg**	**05 09 00.8**	**+0.2**
RM33				AML	AML		
	comp=N,47400µm,1.2s						
RM33				AML	AML		
	comp=N,46050µm,1.2s						
RM33				AML	AML		
	comp=E,45900µm,0.4s						
RM33				AML	AML		
	comp=E,46150µm,0.4s						
RM33				AML	AML		
	comp=N,47350µm,1.2s						
RM33				AML	AML		
	comp=E,46150µm,1.6s						
RM33				AML	AML		
	comp=E,45900µm,1.6s						
T1243	**Rocca Santa Ma**	**0.13**	**55**	⇑P	**Pg**	**05 08 58.2**	**-0.2**
T1243				S	**Sg**	**05 09 00.6**	**-0.1**
T1243				AML	AML		
	comp=N,79500µm,0.3s						
T1243				AML	AML		
	comp=E,56700µm,1.6s						
T1243				AML	AML		
	comp=N,79400µm,0.3s						
T1243				AML	AML		
	comp=N,79450µm,0.3s						
T1243				AML	AML		
	comp=E,56200µm,1.6s						
T1243				AML	AML		
	comp=E,56750µm,1.6s						
T1243				AML	AML		
	comp=E,56750µm,0.4s						
T1243				AML	AML		
	comp=N,79400µm,1.7s						
T1243				AML	AML		
	comp=N,79450µm,1.7s						
T1243				AML	AML		
	comp=E,56200µm,0.4s						
LNSS	**Leonessa**	**0.19**	**264**	⇑P	**Pg**	**05 08 59.4**	**-0.1**
LNSS				S	**Sg**	**05 09 03.1**	**+0.7**
TERO	**Teramo**	**0.22**	**90**	⇑P	**Pg**	**05 08 59.7**	**-0.3**
TERO				S	**Sg**	**05 09 03.4**	**+0.3**
TERO				AML	AML		
	comp=N,18900µm,0.5s						
TERO				AML	AML		
	comp=N,19950µm,0.5s						
TERO				AML	AML		
	comp=E,18050µm,0.3s						
TERO				AML	AML		
	comp=N,18850µm,0.5s						
TERO				AML	AML		
	comp=E,16600µm,0.3s						
NRCA	**Norcia**	**0.25**	**327**	⇑P	**Pg**	**05 09 00.6**	**0.0**
NRCA				S	**Sg**	**05 09 04.8**	**+0.7**
NRCA				AML	AML		
	comp=N,12200µm,0.1s						
NRCA				AML	AML		
	comp=E,19500µm,0.1s						
NRCA				AML	AML		
	comp=E,21200µm,0.2s						
NRCA				AML	AML		
	comp=N,13450µm,0.1s						
NRCA				AML	AML		
	comp=N,12150µm,0.1s						
NRCA				AML	AML		
	comp=E,19500µm,0.2s						
GIGS	**Gran Sasso**	**0.26**	**131**	⇑P	**Pg**	**05 09 00.2**	**-0.5**
GIGS				S	**Sg**	**05 09 04.7**	**+0.4**
GIGS				AML	AML		
	comp=N,2230µm,1.0s						
GIGS				AML	AML		
	comp=E,3555µm,1.1s						
GIGS				AML	AML		
	comp=E,3555µm,0.9s						
MMO1	**Montemonaco**	**0.28**	**4**	⇑P	**Pg**	**05 09 01.0**	**-0.1**
MMO1				S	**Sg**	**05 09 05.5**	**+0.7**
MMO1				AML	AML		
	comp=N,7170µm,0.3s						
MMO1				AML	AML		
	comp=E,10650µm,0.8s						
MMO1				AML	AML		
	comp=E,10650µm,1.2s						
MC2	**Monte Cornacci**	**0.30**	**344**	⇓P	**Pg**	**05 09 01.6**	**0.0**
MC2				S	**Sb**	**05 09 07.2**	**-1.0**
MC2				AML	AML		
	comp=E,4820µm,0.3s						
MC2				AML	AML		
	comp=N,4850µm,0.3s						
FIAM	**Fiamignano**	**0.38**	**201**	⇑P	**Pg**	**05 09 02.5**	**-0.4**
FIAM				S	**Sg**	**05 09 08.3**	**+0.4**
FIAM				AML	AML		
	comp=E,4440µm,0.4s						
FIAM				AML	AML		
	comp=N,2605µm,0.7s						
ARRO	**Arrone**	**0.40**	**264**	P	**Pg**	**05 09 02.9**	**-0.3**
ARRO				AML	AML		
	comp=E,3035µm,0.7s						
ARRO				AML	AML		
	comp=E,3040µm,0.7s						
ARRO				AML	AML		
	comp=N,3910µm,1.1s						
ARRO				AML	AML		
	comp=N,3910µm,0.9s						
FAGN	**Fagnano**	**0.41**	**150**	⇑P	**Pg**	**05 09 03.8**	**+0.4**
FAGN				S	**Sb**	**05 09 11.0**	**-0.2**
FAGN				AML	AML		
	comp=E,9680µm,0.4s						
FAGN				AML	AML		
	comp=N,14850µm,0.4s						
OFFI	**Offida**	**0.42**	**42**	⇑P	**Pg**	**05 09 04.3**	**+0.6**
OFFI				AML	AML		
	comp=E,17250µm,0.7s						
OFFI				AML	AML		
	comp=N,20400µm,0.6s						
OFFI				AML	AML		
	comp=E,17250µm,1.3s						
GUMA	**Gualdo di Mace**	**0.44**	**3**	⇓P	**Pg**	**05 09 04.3**	**+0.3**
GUMA				S	**Sb**	**05 09 11.8**	**-0.2**
GUMA				AML	AML		
	comp=E,14300µm,0.5s						
GUMA				AML	AML		
	comp=N,17250µm,0.5s						
GUMA				AML	AML		
	comp=E,12650µm,0.5s						
GUMA				AML	AML		
	comp=N,15950µm,0.5s						
FDMO	**Fiordimonte**	**0.44**	**339**	⇑P	**Pg**	**05 09 04.1**	**+0.1**
FDMO				S	**Sb**	**05 09 11.2**	**-0.9**
FDMO				AML	AML		
	comp=E,1710µm,1.4s						
FDMO				AML	AML		
	comp=N,2140µm,1.2s						
FDMO				AML	AML		
	comp=N,2140µm,0.8s						
FDMO				AML	AML		
	comp=E,1710µm,0.6s						
VCEL	**Villa Celiera**	**0.46**	**120**	⇑P	**Pg**	**05 09 04.4**	**+0.1**
VCEL				S	**Sb**	**05 09 11.8**	**-0.7**
VCEL				AML	AML		
	comp=E,15950µm,0.3s						
VCEL				AML	AML		
	comp=N,13475µm,1.5s						
VCEL				AML	AML		
	comp=N,13455µm,1.5s						
VCEL				AML	AML		
	comp=N,13455µm,0.5s						
VCEL				AML	AML		
	comp=E,15950µm,1.7s						
CSP1	**Cessapalombo**	**0.47**	**351**	⇑P	**Pg**	**05 09 04.4**	**-0.2**
CESI	**CESI - Serrava**	**0.48**	**323**	⇓P	**Pg**	**05 09 04.6**	**-0.2**
CESI				AML	AML		
	comp=N,3495µm,0.3s						
CESI				AML	AML		
	comp=E,2830µm,0.5s						
TRTR	**Tortoreto Alta**	**0.49**	**67**	⇑P	**Pb**	**05 09 05.8**	**-0.3**
TRTR				AML	AML		
	comp=E,10500µm,0.5s						
TRTR				AML	AML		
	comp=N,9300µm,0.5s						
MNTP	**Montappone**	**0.53**	**13**	P	**Pg**	**05 09 06.0**	**+0.3**
MNTP				AML	AML		
	comp=N,10090µm,0.2s						
MNTP				AML	AML		
	comp=N,10085µm,0.2s						
MNTP				AML	AML		
	comp=E,18000µm,0.6s						
T0110	**Collepietro**	**0.53**	**138**	⇑P	**Pg**	**05 09 05.3**	**-0.4**
T0110				S	**Sb**	**05 09 13.9**	**-0.7**
T0110				AML	AML		
	comp=E,7975µm,0.4s						
T0110				AML	AML		
	comp=N,7005µm,0.4s						
T0110				AML	AML		
	comp=N,7010µm,0.4s						
CESX	**Cesi**	**0.53**	**269**	⇑P	**Pg**	**05 09 05.1**	**-0.7**
CESX				S	**Sg**	**05 09 13.2**	**+0.4**
CESX				AML	AML		
	comp=N,3405µm,0.3s						
CESX				AML	AML		
	comp=E,3650µm,0.3s						
ASSB	**Assisi San Ben**	**0.63**	**312**	⇓P	**Pg**	**05 09 07.2**	**-0.4**
ASSB				AML	AML		
	comp=E,2700µm,1.6s						
ASSB				AML	AML		
	comp=N,2250µm,0.3s						
ASSB				AML	AML		
	comp=E,2700µm,0.4s						
SNTG	**Esanatoglia**	**0.69**	**337**	⇓P	**Pg**	**05 09 08.4**	**-0.2**
SNTG				AML	AML		
	comp=E,625µm,0.6s						
SNTG				AML	AML		
	comp=N,1015µm,0.4s						
SRES	**S.Oreste - Sor**	**0.70**	**237**	⇓P	**Pg**	**05 09 08.4**	**-0.6**
SRES				AML	AML		
	comp=N,1250µm,0.9s						
SRES				AML	AML		
	comp=E,1400µm,0.3s						
SRES				AML	AML		
	comp=N,1250µm,1.1s						
SRES				AML	AML		
	comp=E,1400µm,1.7s						
EL6	**Elcito**	**0.72**	**348**	⇓P	**Pb**	**05 09 09.9**	**-0.2**
EL6				AML	AML		
	comp=E,2435µm,0.4s						
EL6				AML	AML		
	comp=N,2275µm,0.3s						
EL6				AML	AML		
	comp=N,2270µm,0.3s						
EL6				AML	AML		
	comp=E,2425µm,0.4s						
MTCE	**Montecelio**	**0.73**	**215**	⇓P	**Pb**	**05 09 10.7**	**+0.5**
MTCE				AML	AML		
	comp=E,3970µm,0.4s						
MTCE				AML	AML		
	comp=N,1300µm,1.1s						
MTCE				AML	AML		
	comp=N,1300µm,0.9s						
ATCC	**AVT- Casa Cast**	**0.74**	**319**	⇓P	**Pg**	**05 09 09.4**	**-0.3**
ATCC				AML	AML		
	comp=E,3230µm,0.3s						
ATCC				AML	AML		
	comp=N,1750µm,0.6s						
INTR	**Introdacqua**	**0.76**	**144**	⇑P	**Pg**	**05 09 08.8**	**-1.1**
INTR				AML	AML		
	comp=E,1µm,0.6s						
INTR				AML	AML		
	comp=N,2µm,0.9s						
INTR				AML	AML		
	comp=E,1µm,0.6s						
INTR				AML	AML		
	comp=E,1370µm,0.6s						
INTR				AML	AML		
	comp=N,2395µm,0.9s						
INTR				AML	AML		
	comp=N,2µm,0.9s						
CING	**Cingoli**	**0.76**	**354**	P	**Pg**	**05 09 09.7**	**-0.3**
CING				AML	AML		
	comp=N,1490µm,0.4s						
CING				AML	AML		
	comp=N,1490µm,1.6s						
CING				AML	AML		
	comp=E,1735µm,1.1s						
FOSV	**Fossato di Vic**	**0.78**	**330**	⇑P	**Pg**	**05 09 10.0**	**-0.5**

FOSV					AML	AML			
	comp=E,1062µm,0.8s								
FOSV					AML	AML			
	comp=N,1098µm,1.6s								
FOSV					AML	AML			
	comp=E,1061µm,0.8s								
FOSV					AML	AML			
	comp=N,1098µm,0.4s								
PP3	**Marolino**	**0.79**	**17**	⇑P		**Pg**	**05 09 10.9**	**+0.3**	
PP3				AML	AML				
	comp=E,5005µm,0.7s								
PP3				AML	AML				
	comp=N,2595µm,0.3s								
PP3				AML	AML				
	comp=E,5025µm,0.7s								
PP3				AML	AML				
	comp=N,2620µm,0.3s								
PP3				AML	AML				
	comp=N,2590µm,0.3s								
GUAR	**Guarcino**	**0.83**	**179**	⇑P		**Pn**	**05 09 14.1**	**+0.9**	
GUAR				AML	AML				
	comp=N,1060µm,1.5s								
GUAR				AML	AML				
	comp=E,954µm,0.4s								
LPEL	**Lama dei Pelig**	**0.87**	**131**	S		**Sb**	**05 09 24.0**	**-0.4**	
ARVD	**Arcevia**	**0.92**	**343**	S		**Sn**	**05 09 27.0**	**-0.6**	
MGAB	**Montegabbione**	**0.92**	**289**	⇓P		**Pg**	**05 09 12.6**	**-0.5**	
MGAB				AML	AML				
	comp=E,3115µm,1.0s								
MGAB				AML	AML				
	comp=E,2670µm,1.0s								
MGAB				AML	AML				
	comp=N,2205µm,0.5s								
MGAB				AML	AML				
	comp=N,2425µm,1.4s								
AOI	**Ancona**	**0.95**	**13**	⇑P		**Pg**	**05 09 13.9**	**+0.1**	
AOI				AML	AML				
	comp=N,1155µm,0.4s								
AOI				AML	AML				
	comp=E,1090µm,0.3s								
POFI	**Posta Fibreno**	**0.95**	**161**	⇑P		**Pn**	**05 09 16.4**	**+1.5**	
POFI				AML	AML				
	comp=E,777µm,0.6s								
POFI				AML	AML				
	comp=N,471µm,0.9s								
POFI				AML	AML				
	comp=N,471µm,1.1s								
POFI				AML	AML				
	comp=E,777µm,1.4s								
LRP	**Arpino**	**1.00**	**168**	⇓P		**Pn**	**05 09 17.0**	**+1.5**	
LRP				AML	AML				
	comp=N,676µm,1.1s								
LRP				AML	AML				
	comp=E,496µm,0.9s								
ATMI	**Monte Miggiano**	**1.04**	**314**	S		**Sn**	**05 09 32.0**	**+1.2**	
SACS	**San Casciano d**	**1.05**	**283**	⇑P		**Pg**	**05 09 15.0**	**-0.6**	
SACS				AML	AML				
	comp=E,747µm,0.5s								
SACS				AML	AML				
	comp=N,1051µm,0.9s								
SACS				AML	AML				
	comp=N,1016µm,0.9s								
SACS				AML	AML				
	comp=E,742µm,0.5s								
GIUL	**Giuliano Di Ro**	**1.06**	**182**	⇓P		**Pn**	**05 09 17.3**	**+0.9**	
GIUL				AML	AML				
	comp=N,576µm,0.6s								
GIUL				AML	AML				
	comp=E,440µm,0.6s								
GIUL				AML	AML				
	comp=N,576µm,1.4s								
TOLF	**Tolfa**	**1.11**	**240**	⇑P		**Pg**	**05 09 15.7**	**-1.1**	
TOLF				AML	AML				
	comp=E,788µm,0.7s								
TOLF				AML	AML				
	comp=N,796µm,1.0s								
TOLF				AML	AML				
	comp=N,796µm,1.0s								
CERA	**Filignano**	**1.15**	**152**	⇑P		**Pn**	**05 09 19.7**	**+2.1**	
CERA				AML	AML				
	comp=N,743µm,1.0s								
CERA				AML	AML				
	comp=N,702µm,1.0s								
CERA				AML	AML				
	comp=E,974µm,0.7s								
CERA				AML	AML				
	comp=N,743µm,1.0s								
CERA				AML	AML				
	comp=E,956µm,0.7s								
MCIV	**Monte Civitell**	**1.21**	**278**	⇑P		**Pb**	**05 09 17.9**	**-0.5**	
MCIV				AML	AML				
	comp=E,398µm,0.8s								
MCIV				AML	AML				
	comp=N,230µm,0.7s								
MCIV				AML	AML				
	comp=E,398µm,1.2s								
SF01	**Poggio Pratacc**	**1.29**	**279**	⇑P		**Pg**	**05 09 20.1**	**-0.1**	
DUGI	**Dugi Otok**	**1.88**	**43**	*e*Pn		**Pn**	**05 09 27.8**	**+0.3**	
SGRT	**San Giovanni R**	**2.01**	**115**	⇑P		**Pn**	**05 09 30.6**	**+1.1**	
SGRT				AML	AML				
	comp=E,306µm,0.9s								
SGRT				AML	AML				
	comp=N,260µm,0.6s								
VIRC	**Vir**	**2.10**	**37**	*e*Pn		**Pn**	**05 09 30.6**	**0.0**	
MSAG	**Monte S. Angel**	**2.14**	**114**	⇑P		**Pb**	**05 09 34.5**	**+0.2**	
MSAG				AML	AML				
	comp=E,377µm,1.3s								
MSAG				AML	AML				
	comp=N,758µm,0.5s								
MSAG				AML	AML				
	comp=E,416µm,1.3s								
MSAG				AML	AML				
	comp=N,777µm,0.5s								
MORI	**Morici**	**2.15**	**54**	*e*Pn		**Pn**	**05 09 31.6**	**+0.2**	
NVLJ	**Novalja**	**2.25**	**30**	*e*Pn		**Pn**	**05 09 32.6**	**-0.1**	
BRJN	**Brijuni**	**2.31**	**8**	*e*Pn		**Pn**	**05 09 33.8**	**+0.4**	
RABC	**Rab**	**2.38**	**26**	*e*Pn		**Pn**	**05 09 34.6**	**+0.1**	
SMRN	**Sveta Marina**	**2.49**	**14**	*e*Pn		**Pn**	**05 09 35.9**	**-0.1**	
UDBI	**Udbina**	**2.61**	**42**	*e*Pn		**Pn**	**05 09 38.8**	**+1.1**	
LSTV	**Lastovo**	**2.65**	**86**	*e*Pn		**Pn**	**05 09 38.2**	**0.0**	
KIJV	**Kijevo**	**2.65**	**58**	*e*Pn		**Pn**	**05 09 39.4**	**+1.2**	
MAKA	**Makarska**	**2.81**	**75**	*e*Pn		**Pn**	**05 09 41.4**	**+1.0**	
RICI	**Ricice**	**2.94**	**71**	*e*Pn		**Pn**	**05 09 43.2**	**+1.0**	
MNTV	**Mantova**	**3.11**	**325**	P		**Pg**	**05 09 53.7**	**-1.2**	
SCHR	**S. Chirico Rap**	**3.19**	**138**	⇓P		**Pn**	**05 09 44.4**	**-1.4**	
BOJS	**Bojanci**	**3.21**	**25**	P		**Pn**	**05 09 47.8**	**+1.9**	
BOJS				S		**Sn**	**05 10 25.0**	**+0.9**	
BOJS				AML	AML				
	comp=N,120µm,0.6s								
BOJS				AML	AML				
	comp=E,200µm,0.4s								
STON	**Ston**	**3.25**	**84**	*e*Pn		**Pn**	**05 09 45.5**	**-0.9**	
STON	**Ston**	**3.25**	**84**	*e*Pn		**Pn**	**05 09 46.0**	**-0.4**	
STON				*e*Sn		**Sn**	**05 10 24.2**	**-0.9**	
STON	**Ston**	**3.25**	**84**	S		**Sn**	**05 10 25.0**	**-0.1**	
SABO	**M.te Sabotino**	**3.36**	**4**	⇓P		**Pn**	**05 09 49.9**	**+1.8**	
SABO				AML	AML				
	comp=N,122µm,0.5s								
SABO				AML	AML				
	comp=E,108µm,1.5s								
SABO				AML	AML				
	comp=E,462µm,1.4s								
SABO				AML	AML				
	comp=N,473µm,0.7s								
SABO				AML	AML				
	comp=E,108µm,0.5s								
SABO				AML	AML				
	comp=E,462µm,0.6s								
SABO				AML	AML				
	comp=N,473µm,1.3s								
CGRP	**Cima Grappa**	**3.43**	**342**	⇑P		**Pn**	**05 09 50.5**	**+1.4**	
CGRP				AML	AML				
	comp=N,112µm,0.5s								
CGRP				AML	AML				
	comp=E,114µm,0.4s								
CGRP				AML	AML				
	comp=N,112µm,1.5s								
BLY	**Banja Luka**	**3.53**	**52**	*e*Pn		**Pn**	**05 09 52.5**	**+2.3**	
LJU	**Ljubljana**	**3.53**	**14**	P		**Pn**	**05 09 52.7**	**+2.3**	
LJU				AML	AML				
	comp=N,580µm,0.6s								
LJU				AML	AML				
	comp=E,380µm,0.4s								
MAGA	**Magasa**	**3.69**	**330**	⇓P		**Pn**	**05 09 53.8**	**+1.2**	
MAGA				AML	AML				
	comp=E,210µm,1.5s								
MAGA				AML	AML				
	comp=N,122µm,0.6s								
MAGA				AML	AML				
	comp=E,210µm,0.5s								
ZAG	**Zagreb**	**3.74**	**30**	P		**Pb**	**05 09 58.4**	**-3.1**	
LUSI	**Trento, Gardas**	**3.74**	**334**	⇑P		**Pn**	**05 09 54.6**	**+1.4**	
LUSI				AML	AML				
	comp=E,53µm,1.2s								
LUSI				AML	AML				
	comp=N,95µm,0.5s								
LUSI				AML	AML				
	comp=E,53µm,0.8s								
SARZ	**Sarezzano**	**3.89**	**307**	⇓P		**Pn**	**05 09 53.5**	**-1.8**	
OBKA	**Obir**	**3.99**	**12**	*e*Pn		**Pn**	**05 09 58.7**	**+2.0**	
	comp=E,1.9nm,0.2s								
MYKA	**Terra Mystica**	**4.01**	**3**	*e*Pn		**Pn**	**05 09 59.5**	**+2.5**	
	comp=E,3.0nm,0.3s								
KOSI	**Kohlern**	**4.08**	**341**	⇑P		**Pn**	**05 09 59.5**	**+1.5**	
KOSI				AML	AML				
	comp=E,68µm,0.9s								
KOSI				AML	AML				
	comp=N,60µm,1.2s								
KOSI				AML	AML				
	comp=N,60µm,0.8s								
ABTA	**Abfaltersbach**	**4.16**	**352**	*e*Pn		**Pn**	**05 09 59.8**	**+0.8**	
	comp=N,14nm,0.5s								
VSL	**Villasalto**	**4.31**	**225**	⇑P		**Pn**	**05 10 02.1**	**+1.1**	
VSL				S		**Sn**	**05 10 51.0**	**-0.3**	
PDG	**Podgorica**	**4.40**	**90**	*e*Pn		**Pn**	**05 10 03.8**	**+1.5**	
PDG				*e*Sn		**Sn**	**05 10 54.5**	**+0.9**	
KBA	**Koelnbreinsper**	**4.46**	**0**	*e*Pn		**Pn**	**05 10 04.4**	**+1.2**	
	comp=N,2.2nm,0.5s								
BBLS	**Lazići**	**4.63**	**72**	*e*Pn		**Pn**	**05 10 06.8**	**+1.4**	
BBLS				*e*Sn		**Sn**	**05 10 58.5**	**-0.8**	
FETA	**Feichten**	**4.76**	**338**	*e*Pn		**Pn**	**05 10 09.8**	**+2.4**	
	comp=N,1.6nm,0.3s								
WTTA	**Wattenberg**	**4.79**	**346**	*e*Pn		**Pn**	**05 10 10.3**	**+2.5**	
	comp=N,1.4nm,0.2s								
SJES	**Sjenica**	**4.94**	**80**	*e*Pn		**Pn**	**05 10 11.8**	**+2.0**	
SJES				*e*Sn		**Sn**	**05 11 09.1**	**+2.1**	
CLTB	**Caltabellotta**	**5.04**	**181**	⇓P		**Pb**	**05 10 23.0**	**-0.7**	
IVAS	**Ivanjica**	**5.11**	**77**	*e*Pn		**Pn**	**05 10 12.9**	**+0.9**	
IVAS				*e*Sn		**Sn**	**05 11 10.9**	**-0.1**	
MOA	**Molln**	**5.27**	**7**	*e*Pn		**Pn**	**05 10 15.9**	**+1.7**	
MOA				*e*Sn		**Sn**	**05 11 15.3**	**+0.2**	
MOA	**Molln**	**5.27**	**7**	*e*Pn		**Pn**	**05 10 15.1**	**+0.9**	
	comp=N,0.5nm,0.1s								
TRUS	**Trudelj**	**5.42**	**70**	*e*Pn		**Pn**	**05 10 16.9**	**+0.7**	
TRUS				*e*Sn		**Sn**	**05 11 18.8**	**+0.2**	
MRGE	**Morge**	**5.48**	**307**	P		Pn	05 10 22.4	+5.2	
RONA	**Rosalia, Austr**	**5.50**	**22**	*e*Pn		**Pn**	**05 10 18.7**	**+1.3**	
	comp=N,1.1nm,0.2s								
GRUS	**Gruza**	**5.56**	**74**	*e*Pn		**Pn**	**05 10 18.4**	**+0.2**	
GRUS				*e*Sn		**Sn**	**05 11 23.7**	**+1.6**	
CONA	**Conrad Observa**	**5.61**	**18**	*e*Pn		**Pn**	**05 10 21.8**	**+3.0**	
	comp=N,0.8nm,0.2s								
SELS	**Selova**	**5.77**	**81**	*e*Pn		**Pn**	**05 10 21.3**	**+0.2**	
BARS	**Barje**	**6.27**	**85**	*e*Pn		**Pn**	**05 10 29.2**	**+1.2**	
BARS				*e*Sn		**Sn**	**05 11 40.4**	**+0.6**	
PRVS	**Prvonek**	**6.48**	**88**	*e*Pn		**Pn**	**05 10 31.8**	**+0.9**	
PRVS				*e*Sn		**Sn**	**05 11 45.0**	**+0.1**	
KHC	**Kasperske Hory**	**6.51**	**2**	*e*SN		**Sn**	**05 11 41.6**	**-4.0**	
ZAGS	**Zajecar**	**6.63**	**77**	*e*Pn		**Pn**	**05 10 33.7**	**+0.8**	
ZAPS	**Zavoj**	**6.88**	**81**	*e*Pn		**Pn**	**05 10 37.8**	**+1.5**	
ZAPS				*e*Sn		**Sn**	**05 11 52.9**	**-1.8**	

PRU ***26*** *05:17:04.6±0.0, 42°.58N×13°.84E, h10km*
BEO ***26*** *05:17:04.2±0.7, 42°.98N×13°.99E, h0km, ML3.4/7*
ROM ***26*** *05:17:05.3±0.1, 42°.753N±0°.003×13°.213E±0°.005, h10km, ML3.4/59, Mw3.2, Error ellipse: s-maj=0.3km s-min=0.2km az=74.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}5.28; $M_{\theta\theta}$-4.43; $M_{\phi\phi}$-0.85; $M_{r\theta}$4.55; $M_{\theta\phi}$1.94; $M_{\phi r}$-3.69; Fault plane solution: M_o7.88364×10^{13} NP1:ϕ_s283.00000°, δ22.00000°, λ70.00000°. NP2:ϕ_s125.00000°, δ69.00000°, λ98.00000°.*

ISC 26 05:17:06.0±0.8, **42°.74N**±0°.01×**13°.21E**±0°.02, **h11**km±5km, **n153**,σ1°**02**/193, **27C-55D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**323**	⇓P		**Pg**	**05 17 08.5**	**-0.4**
NRCA				S		**Sg**	**05 17 10.6**	**-0.5**
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
MC2	**Monte Cornacci**	**0.17**	**356**	⇓P		**Pg**	**05 17 09.5**	**-0.4**
MC2				S		**Sg**	**05 17 12.7**	**+0.1**
MMO1	**Montemonaco**	**0.18**	**29**	⇓P		**Pg**	**05 17 09.6**	**-0.4**
MMO1				S		**Sg**	**05 17 12.5**	**-0.2**
MMO1				AML	AML			
	comp=N,11360µm,1.0s							
MMO1				AML	AML			
	comp=E,49700µm,0.3s							
MMO1				AML	AML			
	comp=N,77550µm,1.0s							
MMO1				AML	AML			
	comp=E,3320µm,0.3s							
MMO1				AML	AML			
	comp=N,11355µm,0.9s							
MMO1				AML	AML			
	comp=N,11360µm,0.9s							
MMO1				AML	AML			
	comp=E,49750µm,0.3s							
MMO1				AML	AML			
	comp=N,77600µm,1.0s							
MMO1				AML	AML			
	comp=E,3325µm,0.3s							
MMO1				AML	AML			
	comp=E,49731µm,0.3s							
MMO1				AML	AML			
	comp=N,75130µm,0.3s							
MMO1				AML	AML			
	comp=E,3324µm,0.3s							
MMO1				AML	AML			
	comp=N,11229µm,0.3s							
T1243	**Rocca Santa Ma**	**0.18**	**104**	⇑P		**Pg**	**05 17 09.9**	**0.0**
T1243				S		**Sg**	**05 17 12.8**	**0.0**
T1243				AML	AML			
	comp=N,28450µm,0.3s							
T1243				AML	AML			
	comp=E,31150µm,0.2s							
T1243				AML	AML			
	comp=N,28300µm,0.3s							
T1243				AML	AML			
	comp=E,30950µm,0.2s							
T1243				AML	AML			
	comp=N,26346µm,0.3s							
T1243				AML	AML			
	comp=N,26418µm,0.3s							
LNSS	**Leonessa**	**0.18**	**222**	P		**Pg**	**05 17 10.2**	**+0.2**
LNSS				S		**Sg**	**05 17 13.8**	**+1.0**
LNSS				AML	AML			
	comp=E,53800µm,0.3s							
LNSS				AML	AML			
	comp=N,47500µm,0.3s							
LNSS				AML	AML			
	comp=N,47500µm,0.3s							
LNSS				AML	AML			
	comp=E,53813µm,0.3s							
RM33	**Pellescritta (**	**0.23**	**179**	AML	AML			
	comp=N,9950µm,0.9s							
RM33				AML	AML			
	comp=E,9675µm,0.5s							
RM33				AML	AML			
	comp=N,10055µm,0.9s							
RM33				AML	AML			
	comp=E,9825µm,0.5s							
RM33				AML	AML			
	comp=N,9975µm,0.9s							
RM33				AML	AML			
	comp=E,9695µm,0.5s							
RM33				AML	AML			
	comp=N,10070µm,0.9s							
RM33				AML	AML			
	comp=E,9835µm,0.5s							
FEMA	**Monte Fema**	**0.25**	**332**	⇓P		**Pg**	**05 17 10.9**	**-0.3**
FEMA				S		**Sg**	**05 17 14.7**	**0.0**
FEMA				AML	AML			
	comp=N,35050µm,1.6s							
FEMA				AML	AML			
	comp=E,47100µm,0.3s							
FEMA				AML	AML			
	comp=N,35050µm,1.6s							
FEMA				AML	AML			
	comp=E,47050µm,0.4s							
FEMA				AML	AML			
	comp=N,33191µm,0.2s							
FEMA				AML	AML			
	comp=E,47092µm,0.3s							
CAMP	**Campotosto**	**0.25**	**144**	AML	AML			
	comp=E,7105µm,0.6s							
CAMP				AML	AML			
	comp=N,7255µm,0.5s							
FDMO	**Fiordimonte**	**0.31**	**343**	⇓P		**Pg**	**05 17 11.8**	**-0.4**
FDMO				S		**Sg**	**05 17 16.5**	**+0.1**
FDMO				AML	AML			
	comp=N,16950µm,1.3s							
FDMO				AML	AML			
	comp=E,12650µm,1.0s							
FDMO				AML	AML			
	comp=N,16314µm,0.2s							
FDMO				AML	AML			
	comp=E,11621µm,0.2s							
TERO	**Teramo**	**0.32**	**112**	⇑P		**Pg**	**05 17 12.2**	**-0.1**
TERO				S		**Sg**	**05 17 17.3**	**+0.7**
TERO				AML	AML			
	comp=E,5650µm,0.3s							
TERO				AML	AML			
	comp=N,7320µm,0.4s							
TERO				AML	AML			
	comp=E,5645µm,0.3s							
TERO				AML	AML			
	comp=E,5995µm,0.3s							
TERO				AML	AML			
	comp=N,8095µm,0.6s							
TERO				AML	AML			
	comp=N,7325µm,0.4s							
TERO				AML	AML			
	comp=N,7244µm,0.4s							
TERO				AML	AML			
	comp=N,6783µm,0.4s							
TERO				AML	AML			
	comp=E,5996µm,0.3s							
TERO				AML	AML			
	comp=E,5650µm,0.3s							
CESI	**CESI - Serrava**	**0.34**	**320**	⇓P		**Pg**	**05 17 12.6**	**-0.3**
CESI				S		**Sg**	**05 17 18.1**	**+0.5**
CESI				AML	AML			
	comp=E,28700µm,0.2s							
CESI				AML	AML			
	comp=N,55250µm,0.3s							
CESI				AML	AML			
	comp=N,55257µm,0.3s							
CESI				AML	AML			
	comp=E,28676µm,0.2s							
CSP1	**Cessapalombo**	**0.35**	**360**	⇓P		**Pg**	**05 17 12.6**	**-0.4**
CSP1				S		**Sg**	**05 17 18.2**	**+0.4**
CSP1				AML	AML			
	comp=N,38650µm,0.5s							
CSP1				AML	AML			
	comp=E,41600µm,0.2s							
CSP1				AML	AML			
	comp=N,37269µm,0.2s							
CSP1				AML	AML			
	comp=E,41585µm,0.2s							
ARRO	**Arrone**	**0.36**	**244**	⇓P		**Pg**	**05 17 13.2**	**0.0**
ARRO				S		**Sb**	**05 17 19.4**	**-0.9**
GIGS	**Gran Sasso**	**0.40**	**137**	AML	AML			
	comp=E,1750µm,0.3s							
GIGS				AML	AML			
	comp=N,1545µm,0.5s							
OFFI	**Offida**	**0.40**	**61**	P		**Pb**	**05 17 14.5**	**-0.6**
OFFI				AML	AML			
	comp=E,14350µm,0.6s							
OFFI				AML	AML			
	comp=N,12300µm,0.5s							
OFFI				AML	AML			
	comp=N,12291µm,0.5s							
OFFI				AML	AML			
	comp=E,14380µm,0.6s							
SEF1	**Sefro**	**0.45**	**335**	⇓P		**Pg**	**05 17 14.4**	**-0.4**
SEF1				S		**Sg**	**05 17 21.4**	**+0.6**
SEF1				AML	AML			
	comp=E,21900µm,0.3s							
SEF1				AML	AML			
	comp=N,15900µm,0.2s							
SEF1				AML	AML			
	comp=N,15910µm,0.2s							
SEF1				AML	AML			
	comp=E,21922µm,0.3s							
MDAR	**Monte D'Aria**	**0.45**	**354**	⇑P		**Pg**	**05 17 14.6**	**-0.3**
MDAR				AML	AML			
	comp=N,9990µm,1.4s							
MDAR				AML	AML			
	comp=E,10210µm,0.3s							
MDAR				AML	AML			
	comp=N,8079µm,0.2s							
MDAR				AML	AML			
	comp=E,10027µm,0.2s							
FIAM	**Fiamignano**	**0.48**	**188**	⇓P		**Pg**	**05 17 15.2**	**-0.1**
FIAM				S		**Sg**	**05 17 22.3**	**+0.7**
FIAM				AML	AML			
	comp=N,3560µm,1.3s							
FIAM				AML	AML			
	comp=E,2725µm,1.0s							
FIAM				AML	AML			
	comp=N,3143µm,0.8s							
FIAM				AML	AML			
	comp=E,2531µm,0.4s							
CESX	**Cesi**	**0.48**	**254**	⇓P		**Pg**	**05 17 15.1**	**-0.3**
CESX				S		**Sb**	**05 17 22.9**	**-0.7**
CESX				AML	AML			
	comp=E,4065µm,0.4s							
CESX				AML	AML			
	comp=N,3230µm,0.4s							
CESX				AML	AML			
	comp=E,4061µm,0.4s							
CESX				AML	AML			
	comp=N,3233µm,0.4s							
SSM1	**San Severino M**	**0.49**	**357**	⇑P		**Pg**	**05 17 13.7**	**-1.8**
SSM1				S		**Sb**	**05 17 23.0**	**-0.8**
FIU1	**Fiuminata**	**0.49**	**336**	⇓P		**Pg**	**05 17 15.2**	**-0.3**
FIU1				AML	AML			
	comp=E,6735µm,1.2s							
FIU1				AML	AML			
	comp=N,6845µm,1.6s							
FIU1				AML	AML			
	comp=E,6566µm,0.2s							
FIU1				AML	AML			
	comp=N,5753µm,0.4s							
ASSB	**Assisi San Ben**	**0.50**	**307**	⇑P		**Pg**	**05 17 15.3**	**-0.5**
ASSB				S		**Sg**	**05 17 22.8**	**+0.3**
ASSB				AML	AML			
	comp=E,4570µm,0.6s							
ASSB				AML	AML			
	comp=N,6115µm,0.3s							
ASSB				AML	AML			
	comp=N,6114µm,0.3s							
ASSB				AML	AML			
	comp=E,4030µm,0.2s							
GAG1	**Gagliole**	**0.51**	**348**	⇑P		**Pg**	**05 17 15.7**	**-0.2**
GAG1				AML	AML			
	comp=N,15900µm,1.6s							
GAG1				AML	AML			
	comp=E,14750µm,0.6s							
GAG1				AML	AML			
	comp=N,15579µm,0.2s							
GAG1				AML	AML			
	comp=E,14780µm,0.6s							
TRTR	**Tortoreto Alta**	**0.52**	**82**	⇑P		**Pb**	**05 17 17.1**	**-0.1**
TRTR				AML	AML			
	comp=E,7440µm,0.7s							
TRTR				AML	AML			
	comp=N,8400µm,0.3s							
TRTR				AML	AML			
	comp=E,7442µm,0.7s							
TRTR				AML	AML			
	comp=N,8400µm,0.3s							
FAGN	**Fagnano**	**0.55**	**150**	⇓P		**Pg**	**05 17 16.5**	**-0.2**
FAGN				S		**Sb**	**05 17 25.1**	**-0.6**
FAGN				AML	AML			
	comp=N,8560µm,0.4s							
FAGN				AML	AML			
	comp=E,7875µm,0.3s							
FAGN				AML	AML			
	comp=N,8557µm,0.4s							

FAGN AML AML
comp=E,7872µm,0.3s
SNTG Esanatoglia 0.55 339 ⇑P Pg 05 17 16.1 -0.7
SNTG S **Sb 05 17 25.0 -0.7**
SNTG AML AML
comp=N,452µm,0.8s
SNTG AML AML
comp=N,3060µm,0.4s
SNTG AML AML
comp=E,422µm,0.3s
SNTG AML AML
comp=E,3635µm,0.3s
SNTG AML AML
comp=E,3140µm,0.2s
SNTG AML AML
comp=N,321µm,0.3s
SNTG AML AML
comp=E,412µm,0.2s
SNTG AML AML
comp=N,2762µm,0.2s
TRE1 Treia 0.57 8 ⇑P Pb 05 17 17.6 -0.6
TRE1 AML AML
comp=E,23900µm,0.5s
TRE1 AML AML
comp=N,20300µm,0.3s
TRE1 AML AML
comp=N,20295µm,0.3s
TRE1 AML AML
comp=E,23925µm,0.5s
VCEL Villa Celiera 0.58 126 ⇑P Pg 05 17 17.4 +0.1
VCEL AML AML
comp=E,4355µm,0.4s
VCEL AML AML
comp=N,4015µm,1.2s
VCEL AML AML
comp=E,4350µm,0.4s
VCEL AML AML
comp=E,4353µm,0.4s
VCEL AML AML
comp=N,3983µm,0.3s
EL6 Elcito 0.59 352 ⇑P Pg 05 17 16.9 -0.6
EL6 AML AML
comp=E,9125µm,0.4s
EL6 AML AML
comp=N,10500µm,0.3s
EL6 AML AML
comp=E,8737µm,0.2s
EL6 AML AML
comp=N,10523µm,0.3s
ATCC AVT- Casa Cast 0.61 317 P Pg 05 17 17.2 -0.6
ATCC S **Sb 05 17 28.0 +0.7**
ATCC AML AML
comp=E,5185µm,0.3s
ATCC AML AML
comp=N,4615µm,0.3s
ATCC AML AML
comp=E,4559µm,0.2s
ATCC AML AML
comp=N,4619µm,0.3s
CING Cingoli 0.63 359 ⇓P Pg 05 17 17.5 -0.8
CING AML AML
comp=E,5695µm,0.2s
CING AML AML
comp=N,4675µm,0.2s
CING AML AML
comp=N,4679µm,0.2s
CING AML AML
comp=E,5694µm,0.2s
FOSV Fossato di Vic 0.64 330 ⇑P Pg 05 17 17.8 -0.7
FOSV S **Sb 05 17 28.0 -0.3**
FOSV AML AML
comp=E,6760µm,0.3s
FOSV AML AML
comp=N,9210µm,0.3s
FOSV AML AML
comp=E,6760µm,0.3s
FOSV AML AML
comp=N,9205µm,0.3s
T0110 Collepietro 0.67 140 ⇓P Pg 05 17 18.4 -0.5
T0110 AML AML
comp=E,5355µm,0.6s
T0110 AML AML
comp=N,6260µm,0.4s
T0110 AML AML
comp=N,6263µm,0.4s
T0110 AML AML
comp=E,5356µm,0.6s
PP3 Marolino 0.70 25 ⇓P Pb 05 17 20.1 -0.1
PP3 AML AML
comp=N,23850µm,0.4s
PP3 AML AML
comp=E,20500µm,0.5s
PP3 AML AML
comp=N,24950µm,0.4s
PP3 AML AML
comp=E,20600µm,0.5s
PP3 AML AML
comp=E,20600µm,0.5s
PP3 AML AML
comp=N,24933µm,0.4s
PP3 AML AML
comp=E,20497µm,0.5s
PP3 AML AML
comp=N,23852µm,0.4s
SRES S.Oreste - Sor 0.72 226 ⇓P Pg 05 17 19.7 -0.2
SRES AML AML
comp=E,840µm,0.8s
SRES AML AML
comp=N,826µm,1.4s
SRES AML AML
comp=N,716µm,0.6s
SRES AML AML
comp=E,724µm,0.4s
MURB Monte Urbino 0.72 316 ⇑P Pg 05 17 19.4 -0.6
MURB S **Sn 05 17 32.0 -1.4**
MURB AML AML
comp=E,7125µm,0.2s
MURB AML AML
comp=N,9505µm,0.3s
MURB AML AML
comp=E,6745µm,0.2s
MURB AML AML
comp=N,9265µm,0.3s
MURB AML AML
comp=N,9264µm,0.3s
MURB AML AML
comp=E,6745µm,0.2s
MURB AML AML
comp=E,7127µm,0.2s
MURB AML AML
comp=N,9509µm,0.3s
PTQR Pietraquaria 0.73 169 ⇓P Pg 05 17 19.3 -0.8
PTQR AML AML
comp=N,562µm,0.4s
PTQR AML AML
comp=N,562µm,0.4s
PTQR AML AML
comp=E,665µm,0.8s
SSFR Montelago di S 0.76 336 ⇑P Pg 05 17 20.3 -0.4
SSFR S **Sn 05 17 33.0 -1.4**
SSFR AML AML
comp=E,9645µm,0.2s
SSFR AML AML
comp=N,7870µm,0.2s
SSFR AML AML
comp=E,10025µm,0.7s
SSFR AML AML
comp=N,8735µm,0.2s
SSFR AML AML
comp=N,8735µm,0.2s
SSFR AML AML
comp=E,9561µm,0.2s
SSFR AML AML
comp=N,7870µm,0.2s
SSFR AML AML
comp=E,9645µm,0.2s
ATTE AVT- Monte Tez 0.78 306 ⇑P Pg 05 17 20.5 -0.5
ATTE AML AML
comp=E,1016µm,0.4s
ATTE AML AML
comp=N,1165µm,0.4s
ATTE AML AML
comp=N,1165µm,0.4s
ATTE AML AML
comp=E,1018µm,0.4s
ATFO Monte Foce - G 0.78 323 ⇓P Pg 05 17 20.4 -0.7
ATFO S **Sn 05 17 34.0 -0.8**
ATFO AML AML
comp=E,2300µm,0.7s
ATFO AML AML
comp=N,2525µm,0.2s
ATFO AML AML
comp=N,2525µm,0.2s
ATFO AML AML
comp=E,2102µm,0.3s
ARVD Arcevia 0.78 346 ⇑P Pg 05 17 20.2 -0.9
ARVD S **Sb 05 17 33.0 +0.7**
ARVD AML AML
comp=N,1505µm,1.1s
ARVD AML AML
comp=E,2040µm,0.7s
ARVD AML AML
comp=N,1502µm,0.3s
ARVD AML AML
comp=E,2010µm,0.2s
MTCE Montecelio 0.80 206 P Pg 05 17 20.4 -0.9
MTCE AML AML
comp=E,884µm,0.5s
MTCE AML AML
comp=N,747µm,0.8s
MTCE AML AML
comp=N,624µm,1.1s
MTCE AML AML
comp=E,885µm,0.5s
CERT Cerreto 0.81 192 ⇓P Pg 05 17 20.6 -1.0
CERT AML AML
comp=E,1565µm,0.5s
CERT AML AML
comp=N,1014µm,0.5s
CERT AML AML
comp=E,1565µm,1.5s
CERT AML AML
comp=N,1014µm,0.5s
MGAB Montegabbione 0.82 282 ⇓P Pg 05 17 21.6 -0.2
MGAB AML AML
comp=E,2255µm,1.2s
MGAB AML AML
comp=N,3155µm,0.4s
MGAB AML AML
comp=E,2755µm,0.5s
MGAB AML AML
comp=N,3125µm,0.4s
MGAB AML AML
comp=E,2070µm,0.6s
MGAB AML AML
comp=N,3151µm,0.4s
MGAB AML AML
comp=N,3124µm,0.4s
MGAB AML AML
comp=E,2752µm,0.5s
FRON Frontone 0.85 336 ⇓P Pg 05 17 21.4 -1.0
FRON S **Sb 05 17 35.0 +0.6**
FRON AML AML
comp=E,3325µm,0.2s
FRON AML AML
comp=N,3505µm,0.2s
FRON AML AML
comp=N,3502µm,0.2s
FRON AML AML
comp=E,3325µm,0.2s
AOI Ancona 0.86 19 ⇓P Pg 05 17 22.2 -0.4
AOI S **Sn 05 17 37.0 +0.3**
AOI AML AML
comp=N,2865µm,0.3s
AOI AML AML
comp=E,2745µm,1.3s
AOI AML AML
comp=E,2666µm,0.4s
AOI AML AML
comp=N,2383µm,0.3s
ATVO AVT- Monte Val 0.87 318 ⇑P Pg 05 17 21.8 -1.0
ATVO S **Sn 05 17 36.0 -1.0**
ATVO AML AML
comp=E,1210µm,1.4s
ATVO AML AML
comp=N,1225µm,0.6s
ATVO AML AML
comp=E,1090µm,0.3s
ATVO AML AML
comp=N,1145µm,0.3s
INTR Introdacqua 0.89 144 ⇓P Pg 05 17 22.1 -1.1
INTR AML AML
comp=E,1µm,1.1s
INTR AML AML
comp=N,1µm,1.1s
INTR AML AML
comp=E,1345µm,1.1s
INTR AML AML
comp=N,1840µm,1.1s
INTR AML AML
comp=E,1327µm,0.8s
INTR AML AML
comp=E,1µm,0.8s
INTR AML AML
comp=N,1746µm,0.6s
INTR AML AML
comp=N,1µm,0.6s
COR1 Corinaldo 0.90 350 ⇓P Pb 05 17 23.4 -0.3
COR1 AML AML
comp=N,3975µm,1.2s
COR1 AML AML
comp=N,3790µm,0.3s
COR1 AML AML
comp=E,4290µm,0.3s
COR1 AML AML
comp=E,2252µm,0.7s
COR1 AML AML
comp=E,4290µm,0.3s
COR1 AML AML
comp=N,3789µm,0.3s
COR1 AML AML
comp=E,2124µm,0.3s
COR1 AML AML
comp=N,3735µm,0.3s
ATMI Monte Miggiano 0.91 311 ⇓P Pg 05 17 23.4 -0.1
ATMI S **Sn 05 17 39.0 +1.0**
ATMI AML AML
comp=E,3035µm,0.4s
ATMI AML AML
comp=N,3575µm,0.3s
ATMI AML AML
comp=E,3038µm,0.4s
VVLD Villa Vallelon 0.92 160 ⇓P Pn 05 17 25.9 +0.9
ATPI Pietralunga - 0.92 321 P Pg 05 17 22.8 -1.0
ATPI AML AML
comp=N,1088µm,1.2s
ATPI AML AML
comp=E,1185µm,0.3s
ATPI AML AML
comp=N,1027µm,0.5s
ATPI AML AML
comp=E,1184µm,0.3s
PIEI Pieia 0.94 328 ⇓P Pg 05 17 22.8 -1.2
PIEI AML AML
comp=N,1175µm,1.0s
PIEI AML AML
comp=E,1785µm,0.2s
PIEI AML AML
comp=N,1165µm,0.2s
PIEI AML AML
comp=E,1782µm,0.2s
SACS San Casciano d 0.96 277 P Pn 05 17 25.7 +0.2
SACS AML AML
comp=N,974µm,0.5s
SACS AML AML
comp=E,894µm,0.5s
SACS AML AML
comp=N,974µm,0.5s
SACS AML AML
comp=N,1025µm,0.5s
SACS AML AML
comp=E,870µm,0.5s
SACS AML AML
comp=N,973µm,0.5s
SACS AML AML
comp=E,895µm,0.5s
SACS AML AML
comp=N,1024µm,0.5s
SACS AML AML
comp=E,869µm,0.5s
SENI Senigallia 0.96 1 ⇓P Pb 05 17 24.6 -0.2
SENI AML AML
comp=N,1459µm,0.8s
SENI AML AML
comp=E,1801µm,0.6s
NARO Abbazia di Nar 0.98 332 ⇓P Pg 05 17 23.7 -1.2
NARO AML AML
comp=E,936µm,0.2s
NARO AML AML
comp=N,782µm,0.7s
NARO AML AML
comp=N,729µm,0.5s
NARO AML AML
comp=E,935µm,0.2s
APEC Apecchio 1.00 325 ⇑P Pg 05 17 24.6 -0.6
APEC S **Sn 05 17 41.0 +0.8**
APEC AML AML
comp=N,1720µm,0.7s
APEC AML AML
comp=E,1425µm,0.4s
APEC AML AML
comp=N,1671µm,0.7s
APEC AML AML
comp=E,1422µm,0.4s
APEC AML AML
comp=E,319µm,0.5s
APEC AML AML
comp=N,502µm,0.3s
FSSB Fossombrone 1.00 342 P Pg 05 17 24.2 -1.0
FSSB S **Sn 05 17 41.0 +0.8**
FSSB AML AML
comp=E,7010µm,0.3s
FSSB AML AML
comp=N,10155µm,0.3s
FSSB AML AML
comp=N,10164µm,0.3s
FSSB AML AML
comp=E,7009µm,0.3s
LPEL Lama dei Pelig 1.00 134 ⇓P Pg 05 17 24.3 -1.0
LPEL S **Sn 05 17 40.0 -0.2**
LPEL AML AML
comp=N,826µm,0.4s
LPEL AML AML
comp=E,1165µm,0.8s
LPEL AML AML
comp=E,1067µm,0.5s
LPEL AML AML
comp=N,825µm,0.4s
BADI Badiali 1.04 318 ⇓P Pg 05 17 25.2 -0.8
CAFI Castiglion Fio 1.08 303 ⇓P Pb 05 17 26.1 -0.6
CAFI AML AML
comp=E,483µm,0.6s
CAFI AML AML
comp=N,499µm,0.7s
CAFI AML AML
comp=E,494µm,0.3s
CAFI AML AML
comp=N,538µm,0.7s
CAFI AML AML
comp=N,499µm,0.7s
CAFI AML AML
comp=N,538µm,0.7s
CAFI AML AML
comp=E,479µm,0.3s
CAFI AML AML
comp=E,495µm,0.3s
POFI Posta Fibreno 1.09 160 ⇓P Pn 05 17 27.7 +0.4
POFI AML AML
comp=E,536µm,0.7s
POFI AML AML
comp=N,448µm,1.5s
POFI AML AML
comp=N,478µm,1.5s
POFI AML AML
comp=E,544µm,0.6s
POFI AML AML
comp=E,543µm,0.6s
POFI AML AML
comp=N,383µm,0.6s
POFI AML AML
comp=N,406µm,0.6s
POFI AML AML
comp=E,536µm,0.7s
TOLF Tolfa 1.12 233 P Pb 05 17 26.5 -0.9
TOLF AML AML
comp=N,603µm,0.4s
TOLF AML AML
comp=E,440µm,0.6s
TOLF AML AML
comp=E,439µm,0.6s
TOLF AML AML
comp=N,603µm,0.4s
MCIV Monte Civitell 1.13 272 ⇑P Pn 05 17 28.0 +0.2
MCIV AML AML
comp=N,346µm,0.6s
MCIV AML AML
comp=E,450µm,1.0s
MCIV AML AML
comp=E,401µm,0.6s
MCIV AML AML
comp=N,346µm,0.6s
PARC Parchiule 1.15 322 ⇑P Pb 05 17 27.2 -0.7
PARC AML AML
comp=N,690µm,0.3s
PARC AML AML
comp=E,884µm,0.8s
PARC AML AML
comp=N,691µm,0.3s
PARC AML AML
comp=E,884µm,0.8s
SF01 Poggio Pratacc 1.21 274 ⇓P Pg 05 17 29.3 +0.1
SF01 AML AML
comp=E,820µm,0.5s
SF01 AML AML
comp=N,556µm,0.8s
PESA Pesaro 1.23 348 P Pg 05 17 29.4 -0.2
PESA AML AML
comp=E,2670µm,0.4s
PESA AML AML
comp=N,2620µm,0.6s
PESA AML AML
comp=N,2621µm,0.6s
PESA AML AML
comp=E,2671µm,0.4s
CPGN Carpegna, Ital 1.24 329 ⇓P Pg 05 17 31.4 +1.6
LIK San Giovanni I 1.26 168 P Pg 05 17 31.9 +1.7
ASQU Asqua 1.48 316 ⇑P Pg 05 17 34.9 +0.5
RUFI Rufina 1.66 312 ⇓P Pn 05 17 35.3 +0.2
CASP Castiglione de 1.73 272 P Pn 05 17 36.0 0.0
CASP AML AML
comp=E,59µm,0.6s
CASP AML AML
comp=N,52µm,0.4s
DUGI Dugi Otok 1.84 47 *i* Pn Pn 05 17 37.4 -0.1
APRC Apricena 1.99 119 ⇓P Pb 05 17 41.2 -1.1
MOCO Biccari - m.te 2.00 133 P Pn 05 17 38.7 -1.1
MOCO S **Sb 05 18 06.0 -1.3**
MOCO AML AML
comp=N,86µm,1.3s
MOCO AML AML
comp=E,154µm,0.5s
MOCO AML AML
comp=N,86µm,0.7s
VIRC Vir 2.05 40 *e*Pn Pn 05 17 40.4 -0.1
SGRT San Giovanni R 2.12 117 ⇓P Pb 05 17 43.0 -1.6
MORI Morici 2.14 58 *e*Pn Pn 05 17 42.0 +0.3
NVLJ Novalja 2.19 33 *e*Pn Pn 05 17 42.0 -0.3
BRJN Brijuni 2.20 10 *e*Pn Pn 05 17 41.9 -0.6
BRJN Brijuni 2.20 10 ⇓P Pn 05 17 42.4 -0.1
RABC Rab 2.31 29 *e*Pn Pn 05 17 43.9 -0.1
SMRN Sveta Marina 2.39 16 *e*Pn Pn 05 17 44.5 -0.7
VLC Villacollemand 2.50 306 P Pn 05 17 47.0 +0.3
VLC AML AML
comp=N,49µm,1.2s
VLC AML AML
comp=E,43µm,0.7s
VULT Monte Vulture 2.53 134 S Sn 05 18 20.0 +1.9
UDBI Udbina 2.58 45 *e*Pn Pn 05 17 48.8 +1.0
KIJV Kijevo 2.65 60 *e*Pn Pn 05 17 49.7 +1.0
LSTV Lastovo 2.71 88 *e*Pn Pn 05 17 49.7 +0.2
NDIM Novi di Modena 2.72 323 S Sb 05 18 28.0 0.0
CDRU Civita di Ruta 2.74 144 S Sn 05 18 24.0 +0.7
PLIT Plitvice 2.76 38 *e*Pn Pn 05 17 50.8 +0.5
MAKA Makarska 2.85 78 *e*Pn Pn 05 17 52.4 +1.0
RICI Ricice 2.97 74 *e*Pn Pn 05 17 54.4 +1.3
BOJS Bojanci 3.13 27 ⇓P Pn 05 17 56.0 +0.7
BOJS S **Sn 05 18 34.0 +1.3**
BOJS AML AML
comp=E,250µm,1.0s
BOJS AML AML

comp=N,192μm,1.1s
SABO M.te Sabotino 3.25 5 ⇓P Pn 05 17 56.9 -0.1
SABO AML AML
comp=E,880μm,1.0s
SABO AML AML
comp=N,980μm,1.6s
SABO AML AML
comp=N,222μm,0.5s
SABO AML AML
comp=E,237μm,1.6s
ROVR Rover Verones 3.29 333 ⇓P Pn 05 17 59.1 +1.5
CGRP Cima Grappa 3.30 343 ⇓P Pn 05 17 58.4 +0.6
CGRP AML AML
comp=N,148μm,0.7s
CGRP AML AML
comp=E,154μm,0.4s
STON Ston 3.31 86 ePn Pn 05 17 57.3 -0.4
STON Ston 3.31 86 ePn Pn 05 17 57.6 -0.1
STON eSn **Sn 05 18 38.3 +1.3**
STON Ston 3.31 86 ⇑P Pn 05 17 57.7 -0.1
STON AML AML
comp=E,52μm,1.4s
STON AML AML
comp=N,50μm,1.5s
STON AML AML
comp=N,50μm,0.5s
SCHR S. Chirico Rap 3.33 139 S Sg 05 18 50.0 -2.9
LJU Ljubljana 3.44 16 ⇓P Pn 05 18 01.2 +1.7
SALO Salr 3.46 327 ⇓P Pn 05 18 01.9 +1.9
STAL STALIGIAL 3.54 354 ⇓P Pn 05 18 01.3 +0.4
STAL AML AML
comp=E,159μm,0.2s
STAL AML AML
comp=N,118μm,0.8s
MAGA Magasa 3.56 329 ⇓P Pn 05 18 02.2 +0.9
LUSI Trento, Gardas 3.60 334 ⇓P Pn 05 18 03.1 +1.2
CIMO Cimolais 3.61 352 ⇓P Pn 05 18 02.2 +0.3
CIMO AML AML
comp=N,37μm,1.3s
CIMO AML AML
comp=E,45μm,0.6s
DBRK Dubrovnik 3.64 89 ePn Pn 05 18 02.9 +0.6
PTCC Patocco-Chiusa 3.67 2 ⇓P Pn 05 18 02.5 -0.2
PTCC AML AML
comp=E,61μm,0.4s
PTCC AML AML
comp=N,61μm,1.0s
GAGG Gaggia 3.71 335 ⇓P Pn 05 18 04.9 +1.5
CLUD Cludinico 3.72 357 ⇑P Pn 05 18 03.5 0.0
CLUD AML AML
comp=E,85μm,1.1s
CLUD AML AML
comp=N,73μm,1.0s
ZONE Zone 3.75 325 P Pn 05 18 05.2 +1.4
ACOM Acomizza, Ital 3.81 3 ⇓P Pn 05 18 05.8 +0.9
ZOU Zoufplan 3.82 358 ⇑P Pn 05 18 04.8 -0.1
ZOU AML AML
comp=E,75μm,1.2s
ZOU AML AML
comp=N,98μm,1.2s
EUCT Pavia 3.83 311 S Sg 05 19 08.0 -1.0
MOSL Moslavina 3.84 40 ePn Pn 05 18 04.6 -0.5
OBKA Obir 3.89 14 ePn Pn 05 18 05.8 0.0
comp=N,0.8nm,0.2s
MYKA Terra Mystica 3.90 4 ePn Pn 05 18 06.6 +0.7
comp=N,1.7nm,0.2s
KOSI Kohlern 3.94 341 ⇑P Pn 05 18 07.8 +1.1
APPI Appiano 4.00 340 ⇓P Pn 05 18 08.7 +1.4
ABTA Abfaltersbach 4.04 353 ePn Pn 05 18 08.9 +1.1
comp=N,12nm,0.3s,SNR=16
SPS2 Spezzano della 4.18 144 ⇑P Pn 05 18 07.8 -2.0
KBA Koelnbreinsper 4.34 1 ePn Pn 05 18 12.9 +0.8
comp=N,1.7nm,0.2s,SNR=8.7
VSL Villasalto 4.34 223 ⇓P Pn 05 18 13.3 +1.3
MUGIO Muggio 4.36 318 P Pn 05 18 11.3 -1.0
MUGIO AML AML
comp=N,29μm,0.6s
MUGIO AML AML
comp=E,28μm,0.4s
ROSI Rosskopf 4.38 344 ⇑P Pn 05 18 14.1 +1.5
PDG Podgorica 4.48 92 ePn Pn 05 18 15.5 +1.7
PDG eSn **Sn 05 19 06.4 +0.6**
FETA Feichten 4.63 338 ePn Pn 05 18 18.1 +2.1
comp=E,2.3nm,0.4s,SNR=9.5
WTTA Wattenberg 4.66 347 ePn Pn 05 18 18.0 +1.6
comp=E,1.8nm,0.2s
BBLS Lazići 4.66 74 ePn Pn 05 18 18.4 +2.0
BBLS eSn **Sn 05 19 11.9 +1.4**
SQTA Sankt Quirin 4.70 343 ePn Pn 05 18 18.9 +1.9
comp=E,9.6nm,0.3s,SNR=5.6
WATA Walderalm 4.74 346 ePn Pn 05 18 19.6 +2.1
comp=E,5.7nm,0.3s
MSRU Castanea 4.80 158 P Pn 05 18 20.6 +2.3
MOTA Moosalm 4.84 343 ePn Pn 05 18 21.6 +2.7
comp=E,3.1nm,0.4s
BIOA Bad Ischl, Aus 4.96 3 ePn Pn 05 18 20.0 -0.5
comp=E,3.8nm,0.3s
SJES Sjenica 4.99 82 ePn Pn 05 18 22.9 +2.0
SJES eSn **Sn 05 19 19.9 +1.2**
RETA Reutte 5.05 341 i Pn Pn 05 18 24.4 +2.7
comp=E,5.4nm,0.3s,SNR=5.1
DAVA Damuels 5.12 334 ePn Pn 05 18 25.1 +2.3
comp=E,3.6nm,0.3s,SNR=4.9
IVAS Ivanjica 5.15 78 ePn Pn 05 18 24.0 +0.9
IVAS eSn **Sn 05 19 22.7 +0.2**
TIR Tirane 5.15 103 ePn Pn 05 18 24.3 +1.3
MOA Molln 5.16 8 ePn Pn 05 18 16.6 -6.6
FRGS Fruska Gora 5.34 61 ePn Pn 05 18 26.2 +0.5
RONA Rosalia, Austr 5.42 23 i Pn Pn 05 18 27.3 +0.6
comp=E,0.7nm,0.1s
TRUS Trudelj 5.44 72 ePn Pn 05 18 28.5 +1.4
CONA Conrad Observa 5.51 19 i Pn Pn 05 18 28.6 +0.5
comp=E,1.3nm,0.2s,SNR=4.4
HLNI Lentini 5.54 166 P Pn 05 18 30.7 +2.3
GRUS Gruza 5.60 76 ePn Pn 05 18 30.5 +1.3
GRUS eSn **Sn 05 19 34.8 +1.3**
SELS Selova 5.82 83 ePn Pn 05 18 32.3 0.0
SELS eSn **Sn 05 19 39.1 0.0**
BARS Barje 6.33 86 ePn Pn 05 18 38.9 -0.4
BARS eSn **Sn 05 19 53.4 +1.7**
KHC Kasperske Hory 6.40 2 ePN Pn 05 18 40.7 +0.5
KHC eSN **Sn 05 19 51.7 -1.5**
PRVS Prvonek 6.55 89 ePn Pn 05 18 43.6 +1.3
PRVS eSn **Sn 05 19 57.7 +0.8**
ZAGS Zajecar 6.67 78 ePn Pn 05 18 42.6 -1.4
ZAPS Zavoj 6.93 82 ePn Pn 05 18 49.7 +2.2
ZAPS eSn **Sn 05 20 04.7 -1.7**

ROM 26 05:26:26.8±0.1, 42°622N±0°004×13°303E±0°006, h7km, ML2.6/11, 1D, Error ellipse: s-maj=0.5km s-min=0.3km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**138**	P	Pg	05 26 30.0	+0.6
CAMP				S	Sg	05 26 31.9	+0.8
CAMP				AML	AML		
	comp=E,3720μm,0.7s						
CAMP				AML	AML		
	comp=N,2035μm,0.4s						
CAMP				AML	AML		
	comp=N,2034μm,0.4s						
CAMP				AML	AML		
	comp=E,2568μm,0.3s						
RM33	**Pellescritta (**	**0.13**	**210**	P	Pg	05 26 30.0	+0.3
RM33				S	Sg	05 26 32.6	+1.1
RM33				AML	AML		
	comp=E,5700μm,0.8s						
RM33				AML	AML		
	comp=N,3140μm,0.5s						
RM33				AML	AML		
	comp=E,5670μm,0.8s						
RM33				AML	AML		
	comp=N,3165μm,0.5s						
RM33				AML	AML		
	comp=E,5695μm,0.8s						
RM33				AML	AML		
	comp=E,5453μm,0.3s						
RM33				AML	AML		
	comp=E,5380μm,0.3s						
RM33				AML	AML		
	comp=N,2719μm,0.5s						
RM33				AML	AML		
	comp=N,2658μm,0.6s						
T1243	**Rocca Santa Ma**	**0.13**	**55**	P	Pg	05 26 30.5	+0.8
T1243				S	Sg	05 26 32.6	+1.0
T1243				AML	AML		
	comp=E,13355μm,0.4s						
T1243				AML	AML		
	comp=N,15800μm,0.3s						
T1243				AML	AML		
	comp=E,13240μm,0.4s						
T1243				AML	AML		
	comp=N,15950μm,0.3s						
T1243				AML	AML		
	comp=E,13370μm,0.4s						
T1243				AML	AML		
	comp=E,13365μm,0.3s						
T1243				AML	AML		
	comp=N,15934μm,0.3s						
T1243				AML	AML		
	comp=E,13241μm,0.4s						
T1243				AML	AML		
	comp=N,15805μm,0.3s						
T1243				AML	AML		
	comp=E,13353μm,0.3s						
LNSS	**Leonessa**	**0.20**	**265**	P	Pg	05 26 31.2	+0.4
LNSS				S	Sg	05 26 35.0	+1.5
LNSS				AML	AML		
	comp=N,1875μm,1.2s						
LNSS				AML	AML		
	comp=E,2695μm,0.6s						
LNSS				AML	AML		
	comp=N,2200μm,1.1s						
LNSS				AML	AML		
	comp=N,1561μm,0.2s						
LNSS				AML	AML		
	comp=E,2317μm,0.4s						
TERO	**Teramo**	**0.22**	**90**	P	Pg	05 26 31.7	+0.5
TERO				S	Sg	05 26 35.5	+1.2
NRCA	**Norcia**	**0.25**	**327**	P	Pg	05 26 32.0	+0.2
NRCA				S	Sg	05 26 36.7	+1.5
NRCA				AML	AML		
	comp=E,8955μm,0.1s						
NRCA				AML	AML		
	comp=N,5870μm,0.1s						
NRCA				AML	AML		
	comp=E,9795μm,0.1s						
NRCA				AML	AML		
	comp=N,6385μm,0.1s						
NRCA				AML	AML		
	comp=N,21050μm,0.2s						
NRCA				AML	AML		
	comp=E,27250μm,0.2s						
NRCA				AML	AML		
	comp=N,24150μm,0.2s						
NRCA				AML	AML		
	comp=E,25950μm,0.2s						
NRCA				AML	AML		
	comp=E,9778μm,0.1s						
NRCA				AML	AML		
	comp=N,5869μm,0.1s						
GIGS	**Gran Sasso**	**0.26**	**131**	P	Pg	05 26 32.7	+0.7
GIGS				S	Sg	05 26 36.5	+1.0
MMO1	**Montemonaco**	**0.28**	**4**	P	Pg	05 26 32.9	+0.5
MMO1				S	Sb	05 26 37.7	-1.5
MMO1				AML	AML		
	comp=E,2740μm,0.3s						
MMO1				AML	AML		
	comp=N,2075μm,0.3s						
MMO1				AML	AML		
	comp=E,2742μm,0.3s						
MMO1				AML	AML		
	comp=N,2075μm,0.3s						
MC2	**Monte Cornacci**	**0.30**	**344**	P	Pg	05 26 33.7	+0.9
MC2				S	Sb	05 26 39.2	-0.9
MC2				AML	AML		
	comp=E,988μm,0.4s						
MC2				AML	AML		
	comp=N,985μm,0.2s						
MC2				AML	AML		
	comp=N,771μm,0.2s						
MC2				AML	AML		
	comp=E,780μm,0.2s						
OFFI	**Offida**	**0.42**	**42**	P	Pb	05 26 36.6	0.0
FDMO	**Fiordimonte**	**0.44**	**339**	P	Pb	05 26 37.9	+0.9
FDMO				S	Sb	05 26 43.2	-0.7
FDMO				AML	AML		
	comp=N,872μm,0.2s						
FDMO				AML	AML		
	comp=E,686μm,0.2s						
FDMO				AML	AML		
	comp=N,872μm,0.2s						
FDMO				AML	AML		
	comp=E,686μm,0.2s						
CSP1	**Cessapalombo**	**0.47**	**351**	P	Pg	05 26 36.8	+0.7
CSP1				S	Sb	05 26 44.2	-0.7
CSP1				AML	AML		
	comp=E,808μm,0.3s						
CSP1				AML	AML		
	comp=N,1062μm,0.5s						
CSP1				AML	AML		
	comp=N,902μm,0.2s						
CSP1				AML	AML		
	comp=E,677μm,0.3s						
CESI	**CESI - Serrava**	**0.48**	**323**	AML	AML		
	comp=E,720μm,1.1s						
CESI				AML	AML		
	comp=N,1160μm,0.3s						
CESI				AML	AML		
	comp=N,810μm,0.4s						
CESI				AML	AML		
	comp=E,701μm,0.3s						
CESX	**Cesi**	**0.53**	**269**	AML	AML		
	comp=N,580μm,0.8s						
CESX				AML	AML		
	comp=E,488μm,0.3s						
ASSB	**Assisi San Ben**	**0.63**	**312**	P	Pg	05 26 39.6	+0.6
ASSB				S	Sb	05 26 49.0	-0.4
EL6	**Elcito**	**0.72**	**348**	⇓P	Pg	05 26 31.2	-9.5
EL6				S	Sg	05 26 41.0	-9.2

ROM 26 05:26:59.7±0.1, 42°808N±0°003×13°147E±0°006, h10km, ML2.8/9, 1C-4D, Error ellipse: s-maj=0.5km s-min=0.3km az=114.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**316**	P	Pg	05 27 01.8	+0.1
NRCA				S	Sg	05 27 02.9	-0.1
NRCA				AML	AML		
	comp=E,25900μm,0.2s						
NRCA				AML	AML		
	comp=N,21000μm,0.2s						
NRCA				AML	AML		
	comp=N,24150μm,0.2s						
NRCA				AML	AML		
	comp=N,21000μm,0.2s						
NRCA				AML	AML		
	comp=E,27250μm,0.2s						
NRCA				AML	AML		
	comp=E,25950μm,0.2s						
NRCA				AML	AML		
	comp=N,21020μm,0.2s						
NRCA				AML	AML		
	comp=E,25935μm,0.2s						
MC2	**Monte Cornacci**	**0.11**	**17**	P	Pg	05 27 03.0	+0.4
MC2				S	Sg	05 27 05.3	+0.7
MC2				AML	AML		
	comp=E,1475μm,1.1s						
MC2				AML	AML		
	comp=N,1508μm,1.1s						
MC2				AML	AML		
	comp=E,1191μm,0.2s						
MC2				AML	AML		
	comp=N,1410μm,0.3s						
MMO1	**Montemonaco**	**0.16**	**55**	P	Pg	05 27 03.7	+0.5
MMO1				S	Sg	05 27 06.5	+0.8
MMO1				AML	AML		
	comp=E,2400μm,0.3s						
MMO1				AML	AML		
	comp=N,1955μm,0.6s						
MMO1				AML	AML		
	comp=N,1739μm,0.2s						
MMO1				AML	AML		
	comp=E,2398μm,0.3s						
LNSS	**Leonessa**	**0.22**	**201**	P	Pg	05 27 05.0	+0.7
LNSS				S	Sg	05 27 08.9	+1.5
LNSS				AML	AML		
	comp=N,2200μm,1.1s						
LNSS				AML	AML		
	comp=E,2395μm,0.3s						
LNSS				AML	AML		
	comp=N,1126μm,0.1s						
FDMO	**Fiordimonte**	**0.23**	**349**	P	Pg	05 27 05.1	+0.6
FDMO				S	Sg	05 27 09.3	+1.6
FDMO				AML	AML		
	comp=E,447μm,0.2s						
FDMO				AML	AML		
	comp=N,618μm,0.2s						
T1243	**Rocca Santa Ma**	**0.25**	**117**	⇓P	Pg	05 27 05.1	+0.4
T1243				AML	AML		
	comp=N,6070μm,0.2s						
T1243				AML	AML		
	comp=E,7210μm,0.2s						
T1243				AML	AML		
	comp=E,7355μm,0.2s						
T1243				AML	AML		
	comp=N,6055μm,0.2s						
T1243				AML	AML		
	comp=N,1527μm,0.2s						
CESI	**CESI - Serrava**	**0.27**	**318**	⇑P	Pg	05 27 05.7	+0.6
CESI				S	Sb	05 27 10.1	-1.2
CESI				AML	AML		
	comp=N,1161μm,0.3s						
CESI				AML	AML		
	comp=E,529μm,0.2s						
CSP1	**Cessapalombo**	**0.29**	**8**	P	Pg	05 27 06.2	+0.7
CSP1				S	Sb	05 27 10.9	-1.0
CSP1				AML	AML		
	comp=N,732μm,0.4s						
CSP1				AML	AML		
	comp=E,622μm,0.2s						
RM33	**Pellescritta (**	**0.30**	**171**	AML	AML		
	comp=E,3845μm,0.8s						
RM33				AML	AML		
	comp=E,3870μm,0.8s						
RM33				AML	AML		
	comp=N,3170μm,0.5s						
RM33				AML	AML		
	comp=E,3875μm,0.8s						
RM33				AML	AML		
	comp=N,3140μm,0.5s						
RM33				AML	AML		
	comp=N,3165μm,0.5s						
RM33				AML	AML		
	comp=N,3140μm,1.5s						
RM33				AML	AML		
	comp=N,3165μm,1.5s						
CAMP	**Campotosto**	**0.33**	**145**	AML	AML		
	comp=E,2295μm,0.7s						
CAMP				AML	AML		
	comp=N,1145μm,0.3s						
CAMP				AML	AML		
	comp=E,410μm,0.3s						
ARRO	**Arrone**	**0.36**	**231**	P	Pb	05 27 09.5	+1.3
TERO	**Teramo**	**0.38**	**119**	⇓P	Pg	05 27 07.4	+0.1
TERO				S	Sb	05 27 16.0	+1.3
TERO				AML	AML		
	comp=E,2075μm,0.9s						
TERO				AML	AML		
	comp=N,2030μm,0.4s						
ASSB	**Assisi San Ben**	**0.43**	**303**	⇓P	Pg	05 27 08.4	+0.3
ASSB				S	Sb	05 27 15.2	-0.7
ASSB				AML	AML		
	comp=E,391μm,0.2s						
ASSB				AML	AML		
	comp=N,405μm,0.2s						
GIGS	**Gran Sasso**	**0.47**	**139**	⇓P	Pg	05 27 08.8	-0.1
GIGS				S	Sb	05 27 17.0	-0.3
GIGS				AML	AML		
	comp=E,220μm,0.4s						
GIGS				AML	AML		
	comp=N,174μm,0.4s						
GIGS				AML	AML		
	comp=E,220μm,0.4s						
GIGS				AML	AML		
	comp=N,170μm,0.4s						
FAGN	**Fagnano**	**0.63**	**149**	S	Sg	05 27 20.0	-0.2
VCEL	**Villa Celiera**	**0.66**	**129**	S	Sg	05 27 21.0	-0.1
SRES	**S.Oreste - Sor**	**0.74**	**220**	S	Sb	05 27 25.0	+0.1
T0110	**Collepietro**	**0.75**	**141**	S	Sg	05 27 22.0	-1.8
NARO	**Abbazia di Nar**	**0.90**	**333**	S	Sn	05 27 32.0	+0.4
SGG	**Gregorio Mates**	**1.69**	**147**	S	Sb	05 27 52.0	-0.3
MPPT	**Montemurlo**	**1.89**	**308**	P	Pn	05 27 30.6	-1.5

*ROM **26** 05:32:52.3±0.0, 42°772N±0°002×13°149E±0°004, h8km, ML3.5/91, Mw3.3, Error ellipse: s-maj=0.3km s-min=0.2km az=80.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.60; $M_{\theta\theta}$=0.23; $M_{\phi\phi}$=0.83; $M_{r\theta}$=0.41; $M_{\theta\phi}$=0.24; $M_{\phi r}$=-0.67; Fault plane solution: M_0=1.10332×10^{14} NP1:ϕ_s=222.00000°, δ=34.00000°, λ=-35.00000°. NP2:ϕ_s=342.00000°, δ=71.00000°, λ=-119.00000°.*
*LDG **26** 05:32:52.6±0.1, 42°73N×13°08E, h8km, Md3.5/2, Ml3.3/20 Error ellipse: s-maj=5.3km s-min=3.2km az=38.0*
*BEO **26** 05:32:53.0±0.7, 42°69N×13°08E, h0km, ML3.6/6*
*PDG **26** 05:32:53.0±0.5, 42°78N×13°16E, h9km, ML3.5/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*PRU **26** 05:32:54.0±0.0, 42°74N×13°51E, h10km*
ISC 26 05:32:52.2±0.7, 42°77N±0°01×13°13E±0°01, h11km±3km, n262, σ2$06/352, 69C-18D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1213	**Norcia, Frazio**	**0.04**	**184**	⇑P	**Pg**	**05 32 54.5**	**0.0**
T1213				S	**Sg**	**05 32 55.6**	**-0.4**
T1214	**Arquata del Tr**	**0.06**	**97**	⇓P	**Pg**	**05 32 54.4**	**-0.3**
T1214				S	**Sg**	**05 32 55.5**	**-1.0**
T1212	**Cascia, Frazio**	**0.06**	**256**	⇑P	**Pg**	**05 32 55.1**	**+0.4**
T1212				S	**Sg**	**05 32 56.9**	**+0.4**
NRCA	**Norcia**	**0.07**	**351**	⇓P	**Pg**	**05 32 54.6**	**-0.1**
NRCA				S	**Sg**	**05 32 55.8**	**-0.8**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1242	**Castelluccio d**	**0.08**	**42**	P	**Pg**	**05 32 54.8**	**-0.2**
T1242				S	**Sg**	**05 32 56.0**	**-0.9**
T1202	**Accumoli, Fraz**	**0.10**	**132**	P	**Pg**	**05 32 55.2**	**+0.1**
T1202				S	**Sg**	**05 32 57.2**	**+0.1**
T1218	**Civita (PG)**	**0.10**	**186**	⇑P	**Pg**	**05 32 55.5**	**+0.4**
T1218				S	**Sg**	**05 32 57.6**	**+0.5**
T1201	**Domo (RI)**	**0.14**	**141**	⇑P	**Pg**	**05 32 56.2**	**+0.5**
T1201				S	**Sg**	**05 32 59.2**	**+1.1**
MC2	**Monte Cornacci**	**0.15**	**17**	⇑P	**Pg**	**05 32 56.0**	**0.0**
MC2				S	**Sg**	**05 32 58.9**	**+0.3**
T1204	**Amatrice, Fraz**	**0.17**	**123**	⇑P	**Pg**	**05 32 56.4**	**+0.3**
T1204				S	**Sg**	**05 32 59.4**	**+0.6**
LNSS	**Leonessa**	**0.18**	**202**	⇑P	**Pg**	**05 32 56.9**	**+0.7**
LNSS				S	**Sg**	**05 33 00.4**	**+1.4**
LNSS				AML	AML		
LNSS				AML	AML		
	comp=E,96850μm,0.2s						
T1215	**Vallo di Nera,**	**0.20**	**280**	⇑P	**Pg**	**05 32 57.2**	**+0.7**
T1215				S	**Sg**	**05 33 00.8**	**+1.4**
MMO1	**Montemonaco**	**0.20**	**48**	⇑P	**Pg**	**05 32 56.6**	**0.0**
MMO1				S	**Sg**	**05 32 59.7**	**+0.2**
MMO1				AML	AML		
	comp=E,88550μm,1.0s						
MMO1				AML	AML		
	comp=N,75350μm,1.2s						
FEMA	**Monte Fema**	**0.20**	**343**	⇓P	**Pg**	**05 32 57.1**	**+0.4**
FEMA				S	**Sg**	**05 33 00.4**	**+0.6**
FEMA				AML	AML		
	comp=N,55950μm,0.3s						
FEMA				AML	AML		
	comp=E,75750μm,0.5s						
FEMA				AML	AML		
	comp=N,55950μm,0.4s						
T1241	**Roccafluvione,**	**0.24**	**68**	⇑P	**Pg**	**05 32 57.3**	**+0.1**
T1241				S	**Sg**	**05 33 00.9**	**+0.2**
T1243	**Rocca Santa Ma**	**0.24**	**107**	⇑P	**Pg**	**05 32 57.4**	**0.0**
T1243				S	**Sg**	**05 33 01.6**	**+0.7**
T1243				AML	AML		
	comp=E,40850μm,0.2s						
T1243				AML	AML		
	comp=N,52400μm,0.3s						
T1243				AML	AML		
	comp=N,51850μm,0.3s						
T1243				AML	AML		

T1243 AML AML
comp=N,52400µm,0.2s
T1243 AML AML
comp=E,40200µm,0.2s
T1243 AML AML
comp=E,40250µm,0.2s
T1243 AML AML
comp=E,40800µm,0.2s
RM33 Pellescritta (0.27 166 ⇑P **Pg 05 32 58.2 +0.5**
RM33 S **Sg 05 33 02.7 +1.3**
RM33 AML AML
comp=E,22950µm,0.4s
RM33 AML AML
comp=N,17550µm,0.3s
RM33 AML AML
comp=N,16950µm,0.3s
RM33 AML AML
comp=N,17500µm,0.3s
RM33 AML AML
comp=E,22900µm,0.4s
RM33 AML AML
comp=E,22900µm,0.4s
FDMO Fiordimonte 0.27 353 ⇑P **Pg 05 32 58.1 +0.3**
FDMO S **Sg 05 33 02.5 +0.9**
FDMO AML AML
comp=N,19450µm,0.1s
FDMO AML AML
comp=E,18600µm,0.2s
CESI CESI - Serrava 0.29 325 ⇑P **Pg 05 32 58.7 +0.5**
CESI S **Sb 05 33 03.5 -0.8**
CESI AML AML
comp=N,45150µm,1.1s
CESI AML AML
comp=E,25900µm,0.5s
T1211 Morro Reatino 0.31 221 ⇑P **Pg 05 32 59.2 +0.7**
T1211 S **Sb 05 33 04.7 -0.2**
CAMP Campotosto 0.31 138 ⇑P **Pg 05 32 58.8 +0.2**
CAMP S **Sg 05 33 03.8 +1.0**
CAMP AML AML
comp=E,6630µm,0.6s
CAMP AML AML
comp=N,9240µm,0.5s
ARRO Arrone 0.33 235 ⇑P **Pg 05 32 59.6 +0.8**
ARRO S **Sb 05 33 05.4 +0.1**
ARRO AML AML
comp=N,7790µm,0.3s
ARRO AML AML
comp=E,9175µm,0.2s
CSP1 Cessapalombo 0.33 10 ⇑P **Pg 05 32 59.1 +0.2**
CSP1 S **Sg 05 33 04.4 +1.0**
CSP1 AML AML
comp=N,44000µm,0.2s
CSP1 AML AML
comp=N,43950µm,0.2s
CSP1 AML AML
comp=E,35150µm,1.5s
TERO Teramo 0.38 112 ⇑P **Pg 05 32 59.7 -0.1**
TERO S **Sg 05 33 05.5 +0.7**
TERO AML AML
comp=N,9185µm,0.9s
TERO AML AML
comp=N,9730µm,0.9s
TERO AML AML
comp=E,9020µm,0.4s
TERO AML AML
comp=E,9685µm,0.4s
TERO AML AML
comp=N,9145µm,0.9s
SEF1 Sefro 0.40 341 ⇑P **Pg 05 33 00.6 +0.3**
SEF1 S **Sb 05 33 07.0 -0.5**
SEF1 AML AML
comp=E,28750µm,0.3s
SEF1 AML AML
comp=N,19050µm,0.2s
SEF1 AML AML
comp=N,19050µm,0.2s
SEF1 AML AML
comp=E,28700µm,0.3s
PIO1 Pioraco 0.42 345 ⇑P **Pg 05 33 00.9 +0.3**
PIO1 S **Sb 05 33 07.6 -0.6**
PIO1 AML AML
comp=E,6415µm,1.5s
PIO1 AML AML
comp=N,11190µm,1.2s
PIO1 AML AML
comp=E,6420µm,1.5s
PIO1 AML AML
comp=N,11190µm,1.2s
MDAR Monte D'Aria 0.43 1 P **Pg 05 33 00.9 +0.2**
MDAR S **Sg 05 33 07.5 +1.1**
MDAR AML AML
comp=E,7125µm,0.3s
MDAR AML AML
comp=N,13050µm,0.5s
CESX Cesi 0.43 249 ⇑P **Pg 05 33 01.3 +0.5**
CESX S **Sb 05 33 08.8 +0.4**
CESX AML AML
comp=E,8085µm,0.5s
CESX AML AML
comp=N,7355µm,0.2s
ASSB Assisi San Ben 0.44 309 ⇑P **Pg 05 33 01.4 +0.4**
ASSB S **Sb 05 33 08.3 -0.4**
ASSB AML AML
comp=N,12600µm,0.2s
ASSB AML AML
comp=E,10655µm,0.2s
OFFI Offida 0.44 67 ⇑P **Pb 05 33 01.8 -0.3**
OFFI S **Sb 05 33 09.9 +1.3**
OFFI AML AML
comp=N,26350µm,0.7s
OFFI AML AML
comp=E,17800µm,0.6s
FIU1 Fiuminata 0.45 341 P **Pg 05 33 01.3 +0.2**
FIU1 S **Sb 05 33 08.5 -0.3**
FIU1 AML AML
comp=E,8615µm,0.8s
FIU1 AML AML
comp=N,9490µm,0.7s
FIU1 AML AML
comp=E,8610µm,0.8s
FIU1 AML AML
comp=N,9500µm,0.7s
MNTP Montappone 0.45 34 P **Pb 05 33 01.9 -0.2**
MNTP S **Sb 05 33 09.7 +0.9**
MNTP AML AML
comp=E,19400µm,0.3s
MNTP AML AML
comp=E,19400µm,0.3s
MNTP AML AML
comp=N,12700µm,0.3s
GIGS Gran Sasso 0.45 134 ⇑P **Pg 05 33 01.0 -0.2**
GIGS S **Sg 05 33 07.9 +0.7**
GIGS AML AML
comp=E,2285µm,0.2s
GIGS AML AML
comp=N,1720µm,0.6s
SSM1 San Severino M 0.46 4 P **Pg 05 33 01.6 +0.2**
SSM1 S **Sb 05 33 08.9 -0.4**
GAG1 Gagliole 0.47 355 P **Pg 05 33 01.9 +0.3**
GAG1 S **Sb 05 33 09.5 -0.1**
GAG1 AML AML
comp=E,19100µm,0.5s
GAG1 AML AML
comp=N,14500µm,0.3s
GAG1 AML AML
comp=E,19150µm,0.5s
MTL1 Matelica 0.50 350 P **Pg 05 33 02.4 +0.4**
MTL1 S **Sb 05 33 10.2 0.0**
MTL1 AML AML
comp=E,13200µm,0.4s
MTL1 AML AML
comp=N,19600µm,0.9s
MTL1 AML AML
comp=N,19600µm,0.9s
FIAM Fiamignano 0.50 181 ⇓P **Pg 05 33 02.4 +0.4**
FIAM S **Sb 05 33 10.0 -0.3**
FIAM AML AML
comp=N,4910µm,1.1s
FIAM AML AML
comp=E,6455µm,0.3s
SNTG Esanatoglia 0.51 344 ⇑P **Pg 05 33 02.3 +0.1**
SNTG S **Sb 05 33 10.4 -0.1**
SNTG AML AML
comp=E,700µm,1.5s
SNTG AML AML
comp=N,804µm,1.1s
SNTG AML AML
comp=E,5965µm,0.5s
SNTG AML AML
comp=N,6850µm,1.1s
SNTG AML AML
comp=N,805µm,1.1s
SNTG AML AML
comp=E,701µm,1.5s
ATCC AVT- Casa Cast 0.55 319 ⇑P **Pg 05 33 03.4 +0.4**
ATCC S **Sb 05 33 12.3 +0.4**
ATCC AML AML
comp=E,10750µm,0.7s
ATCC AML AML
comp=N,8105µm,0.3s
ATCC AML AML
comp=N,8115µm,0.3s
TRE1 Treia 0.56 14 P **Pg 05 33 03.7 +0.5**
EL6 Elcito 0.56 358 ⇑P **Pg 05 33 03.2 0.0**
EL6 S **Sb 05 33 12.3 +0.1**
EL6 AML AML
comp=E,8520µm,0.2s
EL6 AML AML
comp=N,9425µm,0.4s
EL6 AML AML
comp=E,8530µm,0.2s
EL6 AML AML
comp=N,9415µm,0.4s
TRTR Tortoreto Alta 0.58 86 P **Pb 05 33 04.5 +0.2**
TRTR AML AML
comp=E,14700µm,0.5s
TRTR AML AML
comp=N,12000µm,0.4s
FOSV Fossato di Vic 0.59 333 ⇑P **Pg 05 33 04.0 +0.2**
FOSV S **Sb 05 33 13.2 +0.1**
FOSV AML AML
comp=N,4015µm,1.5s
FOSV AML AML
comp=E,4225µm,0.3s
FAGN Fagnano 0.60 146 ⇑P **Pg 05 33 03.8 -0.2**
FAGN AML AML
comp=N,10920µm,0.5s
FAGN AML AML
comp=E,15850µm,0.5s
CING Cingoli 0.61 5 ⇑P **Pg 05 33 04.1 -0.1**
CING S **Sb 05 33 13.8 +0.3**
CING AML AML
comp=E,5335µm,0.3s
CING AML AML
comp=N,6215µm,0.1s
CADA Capodarco di F 0.63 47 P **Pb 05 33 06.0 +0.7**
VCEL Villa Celiera 0.64 125 ⇑P **Pg 05 33 04.6 -0.2**
VCEL AML AML
comp=E,6805µm,0.5s
VCEL AML AML
comp=N,8465µm,0.6s
MURB Monte Urbino 0.67 318 P **Pg 05 33 05.5 +0.3**
MURB AML AML
comp=E,11485µm,1.0s
MURB AML AML
comp=N,15000µm,0.3s
MURB AML AML
comp=E,13050µm,0.2s
MURB AML AML
comp=E,11445µm,1.0s
MURB AML AML
comp=N,14950µm,0.3s
MURB AML AML
comp=N,16850µm,0.9s
MMUR Monte Murano 0.68 352 P **Pg 05 33 05.4 -0.1**
SRES S.Oreste - Sor 0.70 221 P **Pg 05 33 06.1 +0.3**
SRES AML AML
comp=E,2130µm,0.8s
SRES AML AML
comp=N,1640µm,0.4s
PP3 Marolino 0.70 30 P **Pb 05 33 06.8 +0.3**
PP3 AML AML
comp=E,17550µm,0.5s
PP3 AML AML
comp=N,12025µm,0.3s
PP3 AML AML
comp=E,16400µm,0.5s
PP3 AML AML
comp=N,12700µm,0.3s
PP3 AML AML
comp=N,12050µm,0.3s
ATTE AVT- Monte Tez 0.71 307 ⇑P **Pg 05 33 06.2 +0.1**
ATTE AML AML
comp=N,2415µm,1.4s
ATTE AML AML
comp=E,2960µm,0.6s
SSFR Montelago di S 0.72 339 P **Pg 05 33 06.1 0.0**
SSFR S **Sb 05 33 17.5 +0.9**
SSFR AML AML
comp=E,10130µm,0.3s
SSFR AML AML
comp=E,10125µm,0.3s
SSFR AML AML
comp=E,9950µm,0.2s
SSFR AML AML
comp=N,7035µm,0.9s
SSFR AML AML
comp=N,8280µm,0.2s
T0110 Collepietro 0.72 138 ⇑P **Pg 05 33 05.7 -0.5**
T0110 AML AML
comp=E,7900µm,0.5s
T0110 AML AML
comp=N,7175µm,0.3s
ATFO Monte Foce - G 0.72 326 ⇑P **Pg 05 33 06.4 0.0**
ATFO AML AML
comp=E,3440µm,0.4s
ATFO AML AML
comp=N,3955µm,0.4s
ATSC Scheggia e Pas 0.73 334 ⇑P **Pg 05 33 06.3 -0.2**
ARVD Arcevia 0.74 349 ⇑P **Pg 05 33 06.5 -0.1**
ARVD S **Sb 05 33 17.9 +0.6**
ARVD AML AML
comp=N,1790µm,1.4s
ARVD AML AML
comp=E,3115µm,0.1s
ATLO AVT- Montelove 0.76 316 ⇑P **Pg 05 33 06.9 -0.1**
MGAB Montegabbione 0.76 281 ⇑P **Pg 05 33 07.4 +0.4**
MGAB AML AML
comp=E,6430µm,1.1s
MGAB AML AML
comp=N,9145µm,0.4s
MGAB AML AML
comp=N,9775µm,0.4s
MGAB AML AML
comp=E,6275µm,1.1s
MGAB AML AML
comp=E,6435µm,1.1s
PTQR Pietraquaria 0.77 165 P **Pg 05 33 06.7 -0.5**
PTQR AML AML
comp=E,1355µm,0.4s
PTQR AML AML
comp=N,1700µm,0.9s
MTCE Montecelio 0.80 201 ⇓P **Pg 05 33 07.2 -0.4**
MTCE AML AML
comp=N,1395µm,0.9s
MTCE AML AML
comp=E,2655µm,0.5s
TB01 Gubbio 0.80 321 ⇑P **Pg 05 33 07.6 -0.1**
TB02 Pietralunga 0.80 319 ⇑P **Pg 05 33 07.7 -0.1**
ATVA AVT- Monte Val 0.80 310 ⇑P **Pg 05 33 07.7 0.0**
FRON Frontone 0.81 339 ⇑P **Pg 05 33 07.5 -0.3**
ATVO AVT- Monte Val 0.81 320 ⇑P **Pg 05 33 07.8 -0.1**
ATVO AML AML
comp=N,1950µm,0.7s
ATVO AML AML
comp=E,2865µm,1.1s
CERT Cerreto 0.82 188 P **Pg 05 33 07.6 -0.6**
CERT AML AML
comp=E,2920µm,0.7s
CERT AML AML
comp=N,2190µm,0.8s
ATBU Serra di Buran 0.83 329 ⇑P **Pg 05 33 08.2 0.0**
ATMI Monte Miggiano 0.85 312 AML AML
comp=N,5840µm,0.9s
ATMI AML AML
comp=E,5495µm,0.8s
AOI Ancona 0.86 24 P **Pg 05 33 08.7 0.0**
AOI AML AML
comp=E,2220µm,0.4s
AOI AML AML
comp=N,2195µm,0.4s
ATPI Pietralunga - 0.87 322 ⇑P **Pg 05 33 08.8 -0.1**
ATPI AML AML
comp=E,1765µm,1.0s
ATPI AML AML
comp=N,1675µm,0.5s
ATPI AML AML
comp=E,1770µm,1.0s
ATPC Poggio Castell 0.87 326 ⇑P **Pg 05 33 08.8 -0.1**
COR1 Corinaldo 0.87 354 P **Pb 05 33 09.6 +0.3**
COR1 AML AML
comp=E,5490µm,0.8s
COR1 AML AML
comp=N,4525µm,0.6s
COR1 AML AML
comp=N,4530µm,0.6s
COR1 AML AML
comp=E,5490µm,0.8s
PIEI Pieia 0.88 331 ⇑P **Pg 05 33 08.9 -0.4**
PIEI AML AML
comp=N,1585µm,0.2s
PIEI AML AML
comp=E,2245µm,0.9s
SACS San Casciano d 0.90 276 P **Pg 05 33 10.0 +0.4**
SACS AML AML
comp=N,2065µm,1.3s
SACS AML AML
comp=E,2075µm,1.2s
SACS AML AML
comp=E,2085µm,1.2s
SACS AML AML
comp=N,1955µm,1.4s
MPAG Monte Paganucc 0.90 343 ⇑P **Pg 05 33 09.4 -0.3**
MPAG AML AML
comp=E,2475µm,0.3s
MPAG AML AML
comp=N,2380µm,0.6s
NARO Abbazia di Nar 0.93 335 ⇑P **Pg 05 33 09.7 -0.5**
NARO AML AML
comp=N,1450µm,0.8s
NARO AML AML
comp=E,1296µm,0.3s
APEC Apecchio 0.95 327 P **Pg 05 33 10.3 -0.2**
APEC AML AML
comp=N,3130µm,0.5s
APEC AML AML
comp=E,3940µm,0.5s
INTR Introdacqua 0.95 142 ⇑P **Pg 05 33 09.5 -1.1**
INTR AML AML
comp=E,3µm,0.7s
INTR AML AML
comp=E,3325µm,0.7s
INTR AML AML
comp=N,5200µm,0.6s
INTR AML AML
comp=E,3µm,0.7s
INTR AML AML
comp=N,4µm,0.7s
FSSB Fossombrone 0.96 345 ⇑P **Pg 05 33 10.4 -0.3**
FSSB AML AML
comp=E,5740µm,0.4s
FSSB AML AML
comp=N,7770µm,0.3s
VVLD Villa Vallelon 0.97 158 P **Pg 05 33 10.4 -0.5**
VVLD AML AML
comp=N,1435µm,1.0s
VVLD AML AML
comp=E,1630µm,0.8s
GUAR Guarcino 0.98 172 P **Pb 05 33 11.8 +0.5**
BADI Badiali 0.98 319 P **Pg 05 33 11.0 -0.2**
LATE Laterza 0.99 262 P **Pb 05 33 11.9 +0.5**
RMP Rome, Mte Porz 1.01 198 P **Pg 05 33 11.8 +0.1**
CAFI Castiglion Fio 1.02 304 ⇑P **Pg 05 33 11.8 -0.1**
CAFI AML AML
comp=E,995µm,0.5s
CAFI AML AML
comp=N,1415µm,0.5s
CAFI AML AML
comp=E,955µm,0.5s
CAFI AML AML
comp=N,1355µm,0.5s
PE3 Peglio 1.04 334 P **Pg 05 33 12.2 0.0**
PE3 AML AML
comp=E,16µm,0.4s
PE3 AML AML
comp=N,14µm,0.4s
RDP Rocca di Papa 1.05 197 P **Pg 05 33 12.5 0.0**
LPEL Lama dei Pelig 1.06 132 P **Pg 05 33 11.2 -1.4**
LPEL AML AML
comp=E,2505µm,0.3s
LPEL AML AML
comp=N,2380µm,0.6s
SF03 Valle Cupa 1.06 272 P **Pb 05 33 13.1 +0.4**
MCIV Monte Civitell 1.07 271 AML AML
comp=N,950µm,1.4s
MCIV AML AML
comp=E,1065µm,0.9s
SSP9 Sansepolcro 1.09 318 P **Pb 05 33 13.4 +0.4**
TOLF Tolfa 1.09 230 P **Pg 05 33 12.4 -0.8**
TOLF AML AML
comp=E,1105µm,0.4s
TOLF AML AML
comp=N,1260µm,0.3s
PARC Parchiule 1.10 324 ⇑P **Pg 05 33 13.0 -0.3**
PARC AML AML
comp=E,1785µm,0.8s
PARC AML AML
comp=N,1168µm,0.8s
SF13 Bagnolo 1.11 273 P **Pn 05 33 14.0 +0.2**
POFI Posta Fibreno 1.14 157 P **Pb 05 33 13.2 -0.6**
POFI AML AML
comp=E,1065µm,0.8s
POFI AML AML
comp=N,735µm,0.6s
SF01 Poggio Pratacc 1.15 273 P **Pg 05 33 14.6 +0.2**
SF01 AML AML
comp=N,1554µm,0.7s
SF01 AML AML
comp=E,1785µm,0.4s
CPGN Carpegna, Ital 1.19 331 AML AML
comp=E,61700µm,0.8s
CPGN AML AML
comp=N,55300µm,0.9s
PESA Pesaro 1.19 350 P **Pg 05 33 15.4 +0.2**
PESA AML AML
comp=E,2725µm,0.4s
PESA AML AML
comp=N,2770µm,0.9s
GIUL Giuliano Di Ro 1.21 176 P **Pg 05 33 16.0 +0.5**
GIUL AML AML
comp=E,619µm,1.0s
GIUL AML AML
comp=N,864µm,1.3s
CRE Caprese Michel 1.21 315 P **Pb 05 33 15.2 0.0**
CRE AML AML
comp=N,828µm,0.7s
CRE AML AML
comp=E,732µm,1.3s
ARCI Arcidosso 1.22 275 P **Pg 05 33 15.9 +0.2**
ARCI AML AML
comp=E,442µm,0.6s
ARCI AML AML
comp=N,294µm,1.4s
LATB Latina 1.28 186 P **Pn 05 33 15.8 -0.2**
LATB AML AML
comp=N,228µm,1.0s
LATB AML AML
comp=E,220µm,0.9s
RNI2 Rionero Sannit 1.31 144 P **Pn 05 33 16.4 0.0**
CERA Filignano 1.34 150 P **Pn 05 33 15.9 -1.1**
CERA AML AML
comp=E,1174µm,0.6s
CERA AML AML
comp=N,1115µm,0.7s
CERA AML AML
comp=E,1115µm,0.6s
CERA AML AML
comp=N,1155µm,0.7s
FRES Fresagrandinar 1.39 124 P **Pg 05 33 19.2 +0.3**
FRES AML AML
comp=N,598µm,0.8s
FRES AML AML
comp=E,908µm,0.6s
ASQU Asqua 1.42 317 P **Pb 05 33 18.9 +0.1**
ASQU AML AML
comp=E,554µm,1.2s
ASQU AML AML

	comp=N,613µm,1.0s								
TRIV	**Trivento**	**1.45**	**133**		P	**Pg**	**05 33 20.4**	**+0.2**	
TRIV					AML	AML			
	comp=N,997µm,1.6s								
TRIV					AML	AML			
	comp=E,1170µm,1.6s								
TRIV					AML	AML			
	comp=E,1225µm,1.6s								
TRIV					AML	AML			
	comp=N,1085µm,0.8s								
SFI	**Santa Sofia**	**1.47**	**321**		P	**Pn**	**05 33 19.5**	**+0.8**	
FROS	**Frosini**	**1.51**	**288**		P	**Pn**	**05 33 20.1**	**+0.8**	
CSNT	**Castellina Chi**	**1.52**	**298**		P	**Pb**	**05 33 20.4**	**-0.1**	
OSSC	**Osservatorio P**	**1.57**	**299**		P	**Pb**	**05 33 21.3**	**0.0**	
OSSC					AML	AML			
	comp=N,296µm,0.8s								
OSSC					AML	AML			
	comp=E,289µm,0.8s								
VAGA	**Valle Agricola**	**1.58**	**148**		P	**Pb**	**05 33 21.3**	**-0.2**	
RUFI	**Rufina**	**1.60**	**313**		P	**Pn**	**05 33 21.4**	**+1.0**	
BSSO	**Busso**	**1.64**	**138**		P	**Pb**	**05 33 22.4**	**0.0**	
CASP	**Castiglione de**	**1.67**	**272**		AML	AML			
	comp=N,126µm,0.5s								
CASP					AML	AML			
	comp=E,154µm,1.0s								
LMD	**Lutirano**	**1.67**	**322**		AML	AML			
	comp=N,468µm,1.1s								
LMD					AML	AML			
	comp=E,470µm,0.8s								
TRIF	**Trifonti**	**1.67**	**283**		P	**Pn**	**05 33 22.4**	**+1.0**	
TRIF					AML	AML			
	comp=E,337µm,1.6s								
TRIF					AML	AML			
	comp=N,322µm,0.5s								
MODR	**Mondragone**	**1.71**	**161**		AML	AML			
	comp=N,338µm,0.8s								
MODR					AML	AML			
	comp=E,220µm,1.5s								
PTRJ	**Pietraroja**	**1.75**	**143**		P	**Pb**	**05 33 25.1**	**+0.8**	
SACR	**S. Croce Del S**	**1.80**	**139**		P	**Pb**	**05 33 25.4**	**+0.1**	
MELA	**Melanico ??? S**	**1.82**	**125**		P	**Pb**	**05 33 25.5**	**0.0**	
MELA					AML	AML			
	comp=N,1217µm,0.9s								
MELA					AML	AML			
	comp=N,1244µm,0.9s								
MELA					AML	AML			
	comp=E,1147µm,0.4s								
MELA					AML	AML			
	comp=E,1193µm,0.9s								
DUGI	**Dugi Otok**	**1.86**	**48**	*e*Pn		**Pn**	**05 33 24.5**	**+0.5**	
VITU	**Vitulano (BN)**	**1.94**	**144**		P	**Pg**	**05 33 29.1**	**-0.3**	
MTRZ	**Monterenzio**	**2.01**	**324**		P	**Pb**	**05 33 29.8**	**+0.9**	
FNVD	**Fontana Vidola**	**2.02**	**314**		P	**Pn**	**05 33 27.7**	**+1.4**	
APRC	**Apricena**	**2.06**	**119**		P	**Pn**	**05 33 28.4**	**+1.6**	
APRC					AML	AML			
	comp=N,990µm,0.4s								
APRC					AML	AML			
	comp=E,506µm,1.1s								
VIRC	**Vir**	**2.07**	**42**	*e*Pn		**Pn**	**05 33 27.6**	**+0.7**	
MORI	**Morici**	**2.18**	**59**	*e*Pn		**Pn**	**05 33 29.3**	**+0.9**	
BRJN	**Brijuni**	**2.19**	**12**	*e*Pn		**Pn**	**05 33 29.0**	**+0.6**	
BRJN	**Brijuni**	**2.19**	**12**	P		**Pn**	**05 33 29.3**	**+0.9**	
SGRT	**San Giovanni R**	**2.19**	**117**		P	**Pn**	**05 33 30.2**	**+1.6**	
SGRT					AML	AML			
	comp=N,600µm,0.5s								
SGRT					AML	AML			
	comp=E,680µm,0.6s								
NVLJ	**Novalja**	**2.20**	**35**	*e*Pn		**Pn**	**05 33 29.1**	**+0.6**	
BDI	**Bagni Di Lucca**	**2.25**	**306**		P	**Pn**	**05 33 30.0**	**+0.6**	
RABC	**Rab**	**2.32**	**31**	*e*Pn		**Pn**	**05 33 30.8**	**+0.6**	
MSAG	**Monte S. Angel**	**2.32**	**116**		P	**Pn**	**05 33 32.3**	**+1.9**	
MSAG					AML	AML			
	comp=N,930µm,0.4s								
MSAG					AML	AML			
	comp=E,517µm,0.4s								
MSAG					AML	AML			
	comp=E,548µm,0.4s								
MSAG					AML	AML			
	comp=N,963µm,0.4s								
SGTA	**Sant Agata di**	**2.33**	**134**		P	**Pb**	**05 33 33.6**	**-0.7**	
SMRN	**Sveta Marina**	**2.39**	**18**	*e*Pn		**Pn**	**05 33 31.1**	**-0.1**	
UDBI	**Udbina**	**2.60**	**46**	*e*Pn		**Pn**	**05 33 36.0**	**+1.8**	
KIJV	**Kijevo**	**2.69**	**61**	*e*Pn		**Pn**	**05 33 36.8**	**+1.3**	
RIY	**Rijeka**	**2.74**	**20**	*e*Pn		**Pn**	**05 33 36.8**	**+0.8**	
LSTV	**Lastovo**	**2.77**	**89**	*e*Pn		**Pn**	**05 33 37.4**	**+0.9**	
PLIT	**Plitvice**	**2.78**	**40**	*e*Pn		**Pn**	**05 33 38.1**	**+1.5**	
MAKA	**Makarska**	**2.90**	**78**	*e*Pn		**Pn**	**05 33 39.5**	**+1.2**	
PZUN	**Potenza**	**2.92**	**136**		AML	AML			
	comp=E,150µm,0.6s								
PZUN					AML	AML			
	comp=N,204µm,0.1s								
CMPR	**Campora**	**2.94**	**146**		P	**Pb**	**05 33 42.4**	**-2.2**	
RICI	**Ricice**	**3.02**	**75**	*e*Pn		**Pn**	**05 33 41.5**	**+1.6**	
MSSA	**Maissana**	**3.05**	**302**		P	**Pn**	**05 33 41.6**	**+1.2**	
MSSA					AML	AML			
	comp=E,78µm,0.6s								
MSSA					AML	AML			
	comp=N,83µm,0.7s								
PGF	**Pioggiola**	**3.05**	**267**	*e*P		**Pn**	**05 33 42.1**	**+1.6**	
PGF				*e*Sn		**Sn**	**05 34 13.9**	**-3.2**	
	comp=N,7.6nm,0.3s								
BOJS	**Bojanci**	**3.13**	**28**	P		**Pn**	**05 33 43.2**	**+1.7**	
BOJS					AML	AML			
	comp=N,430µm,0.3s								
BOJS					AML	AML			
	comp=E,453µm,0.4s								
AMUR	**Altamura**	**3.19**	**124**		P	**Pn**	**05 33 44.1**	**+1.8**	
AMUR					AML	AML			
	comp=E,171µm,0.5s								
AMUR					AML	AML			
	comp=N,161µm,1.2s								
SABO	**M.te Sabotino**	**3.23**	**6**	P		**Pn**	**05 33 43.2**	**+0.3**	
SABO					AML	AML			
	comp=N,1520µm,1.1s								
SABO					AML	AML			
	comp=N,332µm,0.6s								
SABO					AML	AML			
	comp=E,251µm,0.7s								
SABO					AML	AML			
	comp=E,1240µm,1.0s								
ROVR	**Rover Verones**	**3.24**	**334**		P	**Pn**	**05 33 45.2**	**+2.1**	
CGRP	**Cima Grappa**	**3.25**	**343**		P	**Pn**	**05 33 44.6**	**+1.3**	
CGRP					AML	AML			
	comp=N,266µm,0.7s								
CGRP					AML	AML			
	comp=E,278µm,0.6s								
OZLJ	**Ozalj**	**3.31**	**30**	*e*Pn		**Pn**	**05 33 45.2**	**+1.3**	
BOB	**Bobbio (Coli)**	**3.33**	**308**	P		**Pn**	**05 33 47.9**	**+3.6**	
STON	**Ston**	**3.36**	**87**	*e*Pn		**Pn**	**05 33 44.7**	**0.0**	
STON	**Ston**	**3.36**	**87**	*e*Pn		**Pn**	**05 33 45.0**	**+0.4**	
STON				*e*Sn		**Sn**	**05 34 25.3**	**+0.8**	
STON	**Ston**	**3.36**	**87**	P		**Pn**	**05 33 44.8**	**+0.2**	
STON					AML	AML			
	comp=E,78µm,0.5s								
STON					AML	AML			
	comp=N,76µm,0.3s								
DOSS	**Dosso del Somm**	**3.41**	**337**	P		**Pn**	**05 33 47.8**	**+2.4**	
SALO	**Salr**	**3.41**	**328**	P		**Pn**	**05 33 47.6**	**+2.3**	
SALO					AML	AML			
	comp=N,237µm,1.6s								
SALO					AML	AML			
	comp=E,154µm,1.0s								
SALO					AML	AML			
	comp=N,216µm,1.6s								
SALO					AML	AML			
	comp=E,163µm,0.6s								
LJU	**Ljubljana**	**3.43**	**17**		AML	AML			
	comp=N,966µm,1.1s								
LJU					AML	AML			
	comp=E,779µm,0.6s								
MAGA	**Magasa**	**3.50**	**330**		P	**Pn**	**05 33 48.5**	**+1.8**	
MAGA					AML	AML			
	comp=N,402µm,0.3s								
MAGA					AML	AML			
	comp=E,503µm,0.5s								
STAL	**STALIGIAL**	**3.50**	**355**		P	**Pn**	**05 33 47.9**	**+1.2**	
STAL					AML	AML			
	comp=N,224µm,0.4s								
STAL					AML	AML			
	comp=E,314µm,0.3s								
LTRZ	**Laterza**	**3.51**	**127**		P	**Pn**	**05 33 48.6**	**+1.9**	
BLY	**Banja Luka**	**3.54**	**55**	*e*Pn		**Pb**	**05 33 51.8**	**-3.1**	
LUSI	**Trento, Gardas**	**3.56**	**335**		P	**Pn**	**05 33 49.7**	**+2.4**	
LUSI					AML	AML			
	comp=E,180µm,0.4s								
LUSI					AML	AML			
	comp=N,240µm,0.3s								
CIMO	**Cimolais**	**3.58**	**352**		P	**Pn**	**05 33 48.6**	**+1.0**	
CIMO					AML	AML			
	comp=N,59µm,0.7s								
CIMO					AML	AML			
	comp=E,52µm,0.7s								
PTCC	**Patocco-Chiusa**	**3.64**	**2**		P	**Pn**	**05 33 49.3**	**+0.7**	
PTCC					AML	AML			
	comp=E,82µm,0.9s								
PTCC					AML	AML			
	comp=N,72µm,1.5s								
DBRK	**Dubrovnik**	**3.70**	**90**	*e*Pn		**Pn**	**05 33 49.2**	**-0.1**	
PCP	**Piancastagn**	**3.77**	**300**	P		**Pn**	**05 33 51.1**	**+0.8**	
ZOU	**Zoufplan**	**3.79**	**358**	P		**Pn**	**05 33 51.8**	**+1.1**	
ZOU					AML	AML			
	comp=N,106µm,1.1s								
ZOU					AML	AML			
	comp=E,150µm,1.6s								
TAR1	**Taranto**	**3.83**	**124**		AML	AML			
	comp=E,125µm,1.0s								
TAR1					AML	AML			
	comp=N,92µm,1.6s								
OBKA	**Obir**	**3.88**	**15**	*e*Pn		**Pn**	**05 33 53.0**	**+1.2**	
	comp=N,1.1nm,0.2s								
MYKA	**Terra Mystica**	**3.88**	**5**	*e*Pn		**Pn**	**05 33 52.9**	**+1.1**	
	comp=N,5.6nm,0.3s								
KOSI	**Kohlern**	**3.90**	**342**	P		**Pn**	**05 33 54.4**	**+2.2**	
KOSI					AML	AML			
	comp=N,120µm,0.7s								
KOSI					AML	AML			
	comp=E,167µm,0.7s								
APPI	**Appiano**	**3.95**	**341**	P		**Pn**	**05 33 55.0**	**+2.1**	
HCY	**Herceg Novi**	**3.97**	**93**	⇓*i*Pn		**Pn**	**05 33 54.8**	**+1.8**	
HCY				*i* Sn		**Sn**	**05 34 42.2**	**+2.6**	
HCY	**Herceg Novi**	**3.97**	**93**	⇑*i*Pn		**Pn**	**05 33 54.9**	**+1.9**	
HCY				*e*Sn		**Sn**	**05 34 41.3**	**+1.7**	
BRY	**Bratogost**	**3.98**	**86**	⇓*i*Pn		**Pn**	**05 33 55.0**	**+1.7**	
BRY				*i* Sn		**Sn**	**05 34 42.4**	**+2.4**	
BRY	**Bratogost**	**3.98**	**86**	⇑*i*Pn		**Pn**	**05 33 55.8**	**+2.5**	
BRY				*e*Sn		**Sn**	**05 34 41.8**	**+1.8**	
ABTA	**Abfaltersbach**	**4.00**	**354**	*e*Pn		**Pn**	**05 33 55.7**	**+2.2**	
	comp=E,8.7nm,0.3s,SNR=19								
SOKA	**Soboth**	**4.14**	**18**	*e*Pn		**Pn**	**05 33 57.1**	**+1.7**	
	comp=E,1.2nm,0.2s								
UPM	**Unac-Piva**	**4.26**	**82**	⇑*i*Pn		**Pn**	**05 33 59.0**	**+1.8**	
UPM				*i* Sn		**Sn**	**05 34 49.6**	**+2.7**	
UPM	**Unac-Piva**	**4.26**	**82**	⇓*i*Pn		**Pn**	**05 34 00.0**	**+2.8**	
UPM				*e*Sn		**Sn**	**05 34 49.9**	**+3.0**	
CEME	**Cevo**	**4.28**	**91**	⇓*i*Pn		**Pn**	**05 33 59.3**	**+2.0**	
CEME				*i* Sn		**Sn**	**05 34 49.7**	**+2.6**	
CEME	**Cevo**	**4.28**	**91**	⇓*i*Pn		**Pn**	**05 33 59.3**	**+2.0**	
CEME				*e*Sn		**Sn**	**05 34 48.8**	**+1.7**	
BUM	**Brajici-Budva**	**4.29**	**94**	⇓*i*Pn		**Pn**	**05 33 59.5**	**+2.2**	
BUM				*i* Sn		**Sn**	**05 34 50.1**	**+2.7**	
BUM	**Brajici-Budva**	**4.29**	**94**	⇑*i*Pn		**Pn**	**05 33 59.6**	**+2.2**	
BUM				*e*Sn		**Sn**	**05 34 48.7**	**+1.3**	
NKME	**Niksic**	**4.29**	**88**	⇓*i*Pn		**Pn**	**05 33 59.5**	**+2.1**	
NKME				*i* Sn		**Sn**	**05 34 50.2**	**+2.8**	
NKME	**Niksic**	**4.29**	**88**	⇓*i*Pn		**Pn**	**05 33 59.5**	**+2.1**	
NKME				*e*Sn		**Sn**	**05 34 49.3**	**+1.9**	
SBF	**Sospel**	**4.30**	**287**	*e*P		**Pn**	**05 33 59.2**	**+1.6**	
SBF				*e*Sn		**Sn**	**05 34 43.5**	**-4.2**	
	comp=E,20nm,0.5s								
KBA	**Koelnbreinsper**	**4.31**	**2**	Pn		**Pn**	**05 33 59.8**	**+1.9**	
	comp=E,7.1nm,0.3s,SNR=18								
NKY	**Niksic**	**4.32**	**87**	⇓*i*Pn		**Pn**	**05 34 00.1**	**+2.2**	
NKY				*i* Sn		**Sn**	**05 34 50.9**	**+2.7**	
NKY	**Niksic**	**4.32**	**87**	⇑*i*Pn		**Pn**	**05 34 00.9**	**+3.0**	
NKY				*e*Sn		**Sn**	**05 34 49.9**	**+1.7**	
VSL	**Villasalto**	**4.32**	**222**	P		**Pn**	**05 33 60.0**	**+2.1**	
ROSI	**Rosskopf**	**4.34**	**344**	P		**Pn**	**05 34 00.6**	**+2.4**	
DRME	**Dracevica, Mon**	**4.52**	**95**	⇑*i*Pn		**Pn**	**05 34 02.6**	**+2.1**	
DRME				*i* Sn		**Sn**	**05 34 55.5**	**+2.5**	
DRME	**Dracevica, Mon**	**4.52**	**95**	⇓*i*Pn		**Pn**	**05 34 02.8**	**+2.3**	
DRME				*e*Sn		**Sn**	**05 34 54.4**	**+1.4**	
PDG	**Podgorica**	**4.54**	**92**	*e*Pn		**Pn**	**05 34 02.9**	**+2.2**	
PDG				*e*Sn		**Sn**	**05 34 56.2**	**+2.8**	
TTG	**Podgorica**	**4.54**	**92**	⇑*i*Pn		**Pn**	**05 34 03.1**	**+2.4**	
TTG				*i* Sn		**Sn**	**05 34 56.1**	**+2.7**	
TTG	**Podgorica**	**4.54**	**92**	⇓*i*Pn		**Pn**	**05 34 03.4**	**+2.7**	
TTG				*e*Sn		**Sn**	**05 34 54.8**	**+1.4**	
FETA	**Feichten**	**4.58**	**339**	*e*Pn		**Pn**	**05 34 04.8**	**+3.2**	
	comp=E,4.2nm,0.5s,SNR=7.1								
ULC	**Ulcinj**	**4.60**	**98**	⇓*i*Pn		**Pn**	**05 34 03.6**	**+1.9**	
ULC				*i* Sn		**Sn**	**05 34 57.4**	**+2.3**	
ULC	**Ulcinj**	**4.60**	**98**	⇑*i*Pn		**Pn**	**05 34 04.1**	**+2.4**	
ULC				*e*Sn		**Sn**	**05 34 56.2**	**+1.1**	
WTTA	**Wattenberg**	**4.62**	**347**	*i* Pn		**Pn**	**05 34 05.6**	**+3.5**	
	comp=E,2.8nm,0.2s,SNR=5.5								
PLE	**Pljevlja**	**4.62**	**81**	⇑*i*Pn		**Pn**	**05 34 03.7**	**+1.6**	
PLE	**Pljevlja**	**4.62**	**81**	⇑*i*Pn		**Pn**	**05 34 05.5**	**+3.4**	
SQTA	**Sankt Quirin**	**4.66**	**344**	*e*Pn		**Pn**	**05 34 06.2**	**+3.6**	
	comp=E,12nm,0.5s								
KOME	**Kolasin**	**4.70**	**87**	⇑*i*Pn		**Pn**	**05 34 05.7**	**+2.6**	
KOME				*i* Sn		**Sn**	**05 35 00.0**	**+2.4**	
KOME	**Kolasin**	**4.70**	**87**	⇓*i*Pn		**Pn**	**05 34 06.1**	**+3.0**	
KOME				*e*Sn		**Sn**	**05 34 59.2**	**+1.6**	
WATA	**Walderalm**	**4.70**	**347**	*e*Pn		**Pn**	**05 34 06.3**	**+3.2**	
	comp=E,3.2nm,0.2s								
BBLS	**Lazići**	**4.71**	**74**	*e*Pn		**Pn**	**05 34 05.9**	**+2.7**	
BBLS				*e*Sn		**Sn**	**05 35 01.5**	**+3.7**	
MOTA	**Moosalm**	**4.80**	**343**	*e*Pn		**Pn**	**05 34 07.7**	**+3.2**	
	comp=E,3.9nm,0.4s								
LMR	**La Mourre**	**4.88**	**279**	*e*P		**Pn**	**05 34 07.0**	**+1.4**	
LMR				*e*Sn		**Sn**	**05 34 57.4**	**-4.6**	
	comp=E,5.1nm,0.6s								
BIOA	**Bad Ischl, Aus**	**4.94**	**4**	*e*Pn		**Pn**	**05 34 08.9**	**+2.6**	
	comp=E,6.1nm,0.3s								
IVA	**Berane**	**4.98**	**87**	⇑*i*Pn		**Pn**	**05 34 09.3**	**+2.4**	
IVA				*i* Sn		**Sn**	**05 35 06.7**	**+2.2**	
IVA	**Berane**	**4.98**	**87**	⇑*i*Pn		**Pn**	**05 34 09.8**	**+2.9**	
IVA				*e*Sn		**Sn**	**05 35 05.8**	**+1.4**	
MBDF	**Montbardon**	**5.00**	**295**	*e*P		**Pn**	**05 34 09.9**	**+2.5**	
MBDF				*e*Sn		**Sn**	**05 35 00.5**	**-4.7**	
	comp=E,9.7nm,0.6s								
PVY	**Plav**	**5.04**	**90**	⇑*i*Pn		**Pn**	**05 34 09.8**	**+2.0**	
PVY				*i* Sn		**Sn**	**05 35 08.3**	**+2.3**	
PVY	**Plav**	**5.04**	**90**	⇑*i*Pn		**Pn**	**05 34 10.4**	**+2.6**	
PVY				*e*Sn		**Sn**	**05 35 07.3**	**+1.3**	
SJES	**Sjenica**	**5.04**	**82**	*e*Pn		**Pn**	**05 34 10.6**	**+2.8**	
SJES				*e*Sn		**Sn**	**05 35 08.7**	**+2.6**	
MOA	**Molln**	**5.14**	**9**	*e*Pn		**Pn**	**05 34 11.5**	**+2.3**	
MOA				*e*Sn		**Sn**	**05 35 10.5**	**+2.0**	
MOA	**Molln**	**5.14**	**9**	*e*Pn		**Pn**	**05 34 11.3**	**+2.1**	
	comp=E,1.0nm,0.1s								
DIVS	**Divibare**	**5.17**	**73**	*e*Pn		**Pn**	**05 34 13.0**	**+3.4**	
IVAS	**Ivanjica**	**5.20**	**79**	*e*Pn		**Pn**	**05 34 11.7**	**+1.7**	
IVAS				*e*Sn		**Sn**	**05 35 09.7**	**-0.2**	
TIR	**Tirane**	**5.21**	**104**	*e*Pn		**Pn**	**05 34 12.0**	**+1.9**	
LPG	**La Plagne**	**5.34**	**303**	*e*P		**Pn**	**05 34 14.7**	**+2.6**	
LPG				*e*Sn		**Sn**	**05 35 08.6**	**-5.1**	
	comp=E,10nm,0.5s								
LPL	**La Plagne**	**5.36**	**303**	*e*P		**Pn**	**05 34 14.9**	**+2.6**	
LPL				*e*Sn		**Sn**	**05 35 09.0**	**-5.1**	
	comp=E,4.5nm,0.3s								
RONA	**Rosalia, Austr**	**5.42**	**23**	*e*Pn		**Pn**	**05 34 14.8**	**+1.9**	
	comp=E,3.1nm,0.2s								
TRUS	**Trudelj**	**5.49**	**72**	*e*Pn		**Pn**	**05 34 15.6**	**+1.7**	
CONA	**Conrad Observa**	**5.51**	**20**	*e*Pn		**Pn**	**05 34 15.7**	**+1.5**	
	comp=E,2.0nm,0.3s,SNR=8.0								
SMRF	**Simiane la Rot**	**5.64**	**285**	*e*P		**Pn**	**05 34 19.0**	**+3.0**	
GRUS	**Gruza**	**5.65**	**76**	*e*Pn		**Pn**	**05 34 17.8**	**+1.8**	
GRUS				*e*Sn		**Sn**	**05 35 23.7**	**+2.9**	
ORIF	**Oris-en-Rattie**	**5.67**	**295**	*e*P		**Pn**	**05 34 18.9**	**+2.5**	
SELS	**Selova**	**5.88**	**83**	*e*Pn		**Pn**	**05 34 20.7**	**+1.5**	
CKRC	**Cesky Krumlov**	**6.11**	**7**	*e*SN		**Sn**	**05 35 31.3**	**-0.9**	
CABF	**La Chapelle**	**6.32**	**310**	*e*P		**Pn**	**05 34 28.0**	**+2.6**	
CABF				*e*Sn		**Sn**	**05 35 31.7**	**-5.9**	
	comp=E,5.3nm,0.4s								
BOVS	**Bovan**	**6.33**	**79**	*e*Pn		**Pn**	**05 34 27.1**	**+1.7**	
KHC	**Kasperske Hory**	**6.37**	**3**	*e*PN		**Pn**	**05 34 27.1**	**+1.1**	
KHC				*e*SN		**Sn**	**05 35 37.7**	**-1.1**	
BARS	**Barje**	**6.39**	**87**	*e*Pn		**Pn**	**05 34 28.2**	**+1.9**	
BARS				*e*Sn		**Sn**	**05 35 40.5**	**+1.3**	
VIVF	**Saint-Julien-l**	**6.46**	**292**	*e*P		**Pn**	**05 34 30.3**	**+3.0**	
VIVF				*e*Sn		**Sn**	**05 35 35.2**	**-5.8**	
	comp=E,2.1nm,0.4s								
PRVS	**Prvonek**	**6.60**	**89**	*e*Pn		**Pn**	**05 34 31.3**	**+2.1**	
PRVS				*e*Sn		**Sn**	**05 35 44.5**	**0.0**	
HINF	**Hinteralfeld**	**6.71**	**321**	*e*P		**Pn**	**05 34 33.2**	**+2.5**	
HINF				*e*Sn		**Sn**	**05 35 41.0**	**-6.1**	
	comp=E,10nm,0.4s								
LASF	**Ste Croix**	**6.88**	**284**	*e*P		**Pn**	**05 34 35.6**	**+2.6**	
BOSS	**Bosilegrad**	**6.90**	**89**	*e*Pn		**Pn**	**05 34 35.3**	**+2.0**	
CDF	**Champ du Feu**	**6.98**	**326**	*e*P		**Pn**	**05 34 36.2**	**+1.8**	
CDF				*e*Sn		**Sn**	**05 35 47.4**	**-6.3**	
	comp=E,16nm,0.7s								
ZAPS	**Zavoj**	**6.99**	**83**	*e*Pn		**Pn**	**05 34 36.7**	**+2.3**	
ZAPS				*e*Sn		**Sn**	**05 35 52.9**	**-0.9**	
HAU	**Haudompre**	**7.09**	**320**	*e*P		**Pn**	**05 34 37.6**	**+1.8**	
HAU				*e*Sn		**Sn**	**05 35 50.0**	**-6.3**	
	comp=E,14nm,0.4s								
VTS	**Vitosha**	**7.45**	**88**	*e*Sn		**Sn**	**05 36 04.6**	**-0.8**	
SMF	**Signal de Mont**	**7.67**	**304**	*e*P		**Pn**	**05 34 46.8**	**+3.0**	
SMF				*e*Sn		**Sn**	**05 36 04.0**	**-6.6**	
	comp=E,3.3nm,0.4s								
LOR	**Lormes**	**7.96**	**308**	*e*P		**Pn**	**05 34 51.2**	**+3.4**	
	baz=123								
LOR				*e*Sn		**Sn**	**05 36 10.8**	**-7.0**	
	comp=E,5.5nm,0.5s								
MTLF	**Montolieu**	**8.01**	**278**	*e*P		**Pn**	**05 34 51.8**	**+3.3**	
AVF	**Avril sur Loir**	**8.03**	**303**	*e*P		**Pn**	**05 34 52.1**	**+3.3**	
AVF				*e*Sn		**Sn**	**05 36 12.5**	**-7.0**	
	comp=E,1.8nm,0.4s								
SSF	**Saint Saulge**	**8.07**	**305**	*e*P		**Pn**	**05 34 52.4**	**+3.2**	
SSF				*e*Sn		**Sn**	**05 36 13.4**	**-6.9**	
	comp=E,3.8nm,0.5s								
BRG	**Berggiesshubel**	**8.13**	**4**	*ex* Amp		**Sn**	**05 36 18.4**	**-3.5**	
BRG							05 36 24.9		
	comp=Z,3.5nm,0.6s								
BRG				*ex* Amp		**Sg**	**05 37 18.4**	**+5.5**	
BRG							05 37 46.1		
	comp=Z,9.6nm,1.4s								
BGF	**Bois d'Agland**	**8.25**	**301**	*e*P		**Pn**	**05 34 54.8**	**+3.0**	
BGF				*e*Sn		**Sn**	**05 36 17.8**	**-7.1**	
	comp=Z,5.3nm,0.4s								
CAF	**Calviac**	**8.28**	**289**	*e*P		**Pn**	**05 34 55.5**	**+3.2**	
CLL	**Collm**	**8.54**	**359**	*e*Sg		**Sg**	**05 37 25.0**	**-1.2**	
TCF	**Toulx Ste Croi**	**8.56**	**298**	*e*P		**Pn**	**05 34 59.6**	**+3.6**	
TCF				*e*Sn		**Sn**	**05 36 25.2**	**-7.3**	
	comp=Z,4.3nm,0.7s								
RJF	**Les Rejaudoux**	**8.74**	**291**	*e*P		**Pn**	**05 35 02.7**	**+4.2**	
EPF	**Esparros**	**9.39**	**276**	*e*P		**Pn**	**05 35 11.2**	**+3.7**	

*KRNET **26** 05:45:42.6±0.1, 39°.48N×73°.67E, mb3.8*
*SOME **26** 05:45:51.6, 39°.80N×73°.68E, h5km*
*NNC **26** 05:45:57.2±3.4, 40°.24N×73°.63E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=32.2km s-min=14.9km az=169.0
ISC 26 05:45:47.9±1.4, **39°.64N**±0°.07×**73°.66E**±0°.03, **h10**km, **n39**, σ**2s73**/59, **17C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
					Op	ISC	
OHH	**Osh**	**1.10**	**323**	⇑*e*P		**Pg**	**05 46 06.4**	**-2.7**
	baz=27							
OHH				⇑*e*S		**Sg**	**05 46 23.8**	**+0.3**
	baz=27							
BTK	**Batken**	**2.23**	**282**	⇑*e*P		Pn	05 46 23.7	-1.2
	baz=86							
BTK				⇑*e*S		**Sn**	**05 46 53.4**	**+0.9**
	baz=86							
GAR	**Garm**	**2.67**	**257**	⇓*e*P		Pn	05 46 28.7	-2.4
	baz=61							
GAR				⇓*e*S		**Sn**	**05 47 02.5**	**-1.1**
	baz=61							
TRKS	**Terek-Say**	**2.69**	**315**	⇑*e*P		**Pn**	**05 46 30.0**	**-1.4**
	baz=17							
TRKS				⇑*e*S		**Sn**	**05 47 04.9**	**+0.8**
	baz=17							
EKS2	**Erkin-Say**	**3.02**	**2**	⇑*e*P		**Pn**	**05 46 36.0**	**+0.2**
	baz=1.0							
EKS2				⇑*e*S		**Sn**	**05 47 14.7**	**+2.6**
	baz=1.0							
AAK	**Ala-Archa**	**3.06**	**12**	⇑*e*P

	4.1nm,0.1s							
KUU				*e*S		**Sg**	**05 48 15.0**	**-3.6**
	12nm,0.2s							
KUU	**Kurty**	**4.69**	**24**	Pg		**Pb**	**05 47 12.4**	**+2.1**
	1.6nm,0.6s							
KUU				Lg		Lg	05 48 15.0	
	8.6nm,0.6s							
SATY	**Saty**	**4.94**	**45**	*e*P		**Pg**	**05 47 20.3**	**-2.2**
	1.6nm,0.1s							
SATY				*e*S		**Sg**	**05 48 24.8**	**-1.7**
	9.1nm,0.3s							
SATY	**Saty**	**4.94**	**45**	Pg		**Pb**	**05 47 18.1**	**+3.6**
	2.6nm,0.3s							
KURS	**Kuram**	**5.12**	**40**	*e*P		Pb	05 47 22.9	+5.4
	2.7nm,0.1s							
KURS				*e*S		**Sg**	**05 48 28.7**	**-3.5**
	5.9nm,0.1s							
KPKS	**Kokpek**	**5.37**	**43**	*e*P		**Pg**	**05 47 28.2**	**-2.4**
	5.4nm,0.7s							
KPKS				*e*S		**Sg**	**05 48 38.3**	**-1.8**
	5.4nm,0.1s							
KPKS	**Kokpek**	**5.37**	**43**	Pg		**Pb**	**05 47 25.9**	**+4.2**
	1.9nm,0.3s							
ARXS	**Arharly**	**5.52**	**33**	*e*P		**Pg**	**05 47 30.5**	**-3.1**
	3.1nm,0.3s							
ARXS				*e*S		**Sg**	**05 48 41.8**	**-3.3**
	10nm,0.1s							
ARXS	**Arharly**	**5.52**	**33**	Pg		**Pb**	**05 47 27.6**	**+3.2**
	3.6nm,0.9s							
ARXS				Lg		Lg	05 48 41.8	
	10.0nm,0.8s							
BLB	**Baldybastay**	**5.72**	**37**	*e*P		**Pg**	**05 47 34.9**	**-2.5**
	4.0nm,0.1s							
BLB				*e*S		**Sg**	**05 48 49.5**	**-2.0**
	5.1nm,0.4s							
BLB	**Baldybastay**	**5.72**	**37**	Pg		**Pb**	**05 47 30.0**	**+2.2**
	4.5nm,0.6s							
BLB				Lg		Lg	05 48 45.9	
	6.6nm,1.1s							

ROM 26 05:50:34.2±0.1, 42°30′N±0′.004×13°29′E±0′.006, h7km, ML3.1/19, 5C, Error ellipse: s-maj=0.5km s-min=0.3km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**139**	P	Pg	05 50 37.5	+0.6
CAMP				S	Sg	05 50 39.4	+0.6
CAMP				AML	AML		
	comp=N,10080μm,0.4s						
CAMP				AML	AML		
	comp=E,11350μm,1.3s						
CAMP				AML	AML		
	comp=E,1975μm,0.6s						
CAMP				AML	AML		
	comp=N,1614μm,0.7s						
T1243	**Rocca Santa Ma**	**0.13**	**59**	⇑P	Pg	05 50 37.8	+0.8
T1243				AML	AML		
	comp=E,5805μm,0.3s						
T1243				AML	AML		
T1243				AML	AML		
	comp=E,5750μm,0.3s						
T1243				AML	AML		
	comp=N,5440μm,0.2s						
T1243				AML	AML		
	comp=E,66250μm,0.2s						
T1243				AML	AML		
	comp=N,22850μm,0.9s						
T1243				AML	AML		
T1243				AML	AML		
	comp=E,66050μm,0.2s						
T1243				AML	AML		
	comp=N,5441μm,0.2s						
T1243				AML	AML		
	comp=E,5753μm,0.3s						
T1243				AML	AML		
	comp=N,5469μm,0.2s						
T1243				AML	AML		
	comp=E,5805μm,0.3s						
RM33	**Pellescritta (**	**0.14**	**207**	⇑P	Pg	05 50 37.6	+0.6
RM33				S	Sg	05 50 40.2	+1.2
RM33				AML	AML		
	comp=E,4900μm,0.6s						
RM33				AML	AML		
	comp=N,4035μm,0.5s						
RM33				AML	AML		
	comp=E,4880μm,0.6s						
RM33				AML	AML		
	comp=N,4055μm,0.5s						
RM33				AML	AML		
	comp=E,49300μm,0.3s						
RM33				AML	AML		
	comp=N,43500μm,0.3s						
RM33				AML	AML		
	comp=N,44850μm,0.3s						
RM33				AML	AML		
	comp=E,47950μm,0.3s						
RM33				AML	AML		
	comp=N,4056μm,0.5s						
RM33				AML	AML		
	comp=N,4037μm,0.5s						
RM33				AML	AML		
	comp=E,4324μm,0.6s						
RM33				AML	AML		
	comp=E,4218μm,0.6s						
LNSS	**Leonessa**	**0.19**	**262**	⇑P	Pg	05 50 38.8	+0.7
LNSS				S	Sg	05 50 42.4	+1.7
LNSS				AML	AML		
	comp=E,2780μm,0.6s						
LNSS				AML	AML		
	comp=N,2235μm,0.2s						
LNSS				AML	AML		
	comp=E,26550μm,0.4s						
LNSS				AML	AML		
	comp=N,29600μm,0.4s						
LNSS				AML	AML		
	comp=N,2234μm,0.2s						
LNSS				AML	AML		
	comp=E,2661μm,0.3s						
TERO	**Teramo**	**0.23**	**92**	P	Pg	05 50 39.2	+0.5
TERO				S	Sg	05 50 43.0	+1.3
TERO				AML	AML		
	comp=E,9375μm,0.2s						
TERO				AML	AML		
	comp=E,8615μm,0.2s						
TERO				AML	AML		
	comp=N,9545μm,1.0s						
TERO				AML	AML		
	comp=N,9100μm,1.0s						
TERO				AML	AML		
	comp=N,2023μm,0.4s						
TERO				AML	AML		
	comp=N,2105μm,0.4s						
TERO				AML	AML		
	comp=E,1252μm,0.2s						
TERO				AML	AML		
	comp=E,1309μm,0.3s						
NRCA	**Norcia**	**0.24**	**327**	AML	AML		
	comp=E,4250μm,0.1s						
NRCA				AML	AML		
	comp=N,2840μm,0.1s						
NRCA				AML	AML		
	comp=E,4715μm,0.1s						
NRCA				AML	AML		
	comp=N,3150μm,0.1s						
NRCA				AML	AML		
	comp=E,7835μm,0.1s						
NRCA				AML	AML		
	comp=E,8550μm,0.1s						
NRCA				AML	AML		
	comp=N,10300μm,0.2s						
NRCA				AML	AML		
	comp=N,9575μm,0.2s						
NRCA				AML	AML		
	comp=N,2835μm,0.1s						
NRCA				AML	AML		
	comp=E,4715μm,0.1s						
NRCA				AML	AML		
	comp=N,3148μm,0.1s						
NRCA				AML	AML		
	comp=E,4250μm,0.1s						
GIGS	**Gran Sasso**	**0.27**	**132**	P	Pg	05 50 40.0	+0.5
GIGS				AML	AML		
	comp=E,240μm,0.5s						
GIGS				AML	AML		
	comp=N,168μm,0.4s						
GIGS				AML	AML		
	comp=E,2970μm,0.2s						
GIGS				AML	AML		
	comp=N,2005μm,0.2s						
GIGS				AML	AML		
	comp=N,168μm,0.4s						
GIGS				AML	AML		
	comp=E,209μm,0.4s						
MMO1	**Montemonaco**	**0.27**	**5**	P	Pg	05 50 39.6	0.0
MMO1				S	Sb	05 50 45.0	-1.3
MMO1				AML	AML		
	comp=E,1915μm,0.3s						
MMO1				AML	AML		
	comp=N,1780μm,0.9s						
MMO1				AML	AML		
	comp=E,7395μm,0.4s						
MMO1				AML	AML		
	comp=N,8885μm,0.3s						
MMO1				AML	AML		
	comp=E,1916μm,0.3s						
MMO1				AML	AML		
	comp=N,1683μm,0.3s						
MMO1				AML	AML		
	comp=N,215μm,0.3s						
MC2	**Monte Cornacci**	**0.29**	**345**	AML	AML		
	comp=E,601μm,0.2s						
MC2				AML	AML		
	comp=E,3265μm,0.5s						
MC2				AML	AML		
	comp=N,3247μm,0.5s						
MC2				AML	AML		
	comp=N,608μm,0.2s						
FIAM	**Fiamignano**	**0.39**	**200**	⇑P	Pg	05 50 41.8	+0.1
FIAM				AML	AML		
	comp=E,488μm,1.5s						
FIAM				AML	AML		
	comp=N,330μm,0.5s						
FIAM				AML	AML		
	comp=E,1980μm,0.5s						
FIAM				AML	AML		
	comp=N,2015μm,0.8s						
FIAM				AML	AML		
	comp=N,330μm,0.5s						
FIAM				AML	AML		
	comp=E,453μm,0.5s						
ARRO	**Arrone**	**0.40**	**263**	P	Pg	05 50 42.4	+0.5
ARRO				AML	AML		
	comp=E,3355μm,1.4s						
ARRO				AML	AML		
	comp=N,2930μm,0.2s						
ARRO				AML	AML		
	comp=E,369μm,0.2s						
ARRO				AML	AML		
	comp=N,481μm,0.2s						
OFFI	**Offida**	**0.42**	**43**	P	Pb	05 50 43.7	-0.2
FAGN	**Fagnano**	**0.42**	**150**	P	Pg	05 50 43.1	+0.8
FAGN				S	Sb	05 50 51.0	+0.4
FAGN				AML	AML		
	comp=N,4760μm,0.7s						
FAGN				AML	AML		
	comp=E,5360μm,0.7s						
FAGN				AML	AML		
	comp=N,657μm,0.5s						
FAGN				AML	AML		
	comp=E,982μm,0.5s						
GUMA	**Gualdo di Mace**	**0.43**	**4**	P	Pb	05 50 43.8	-0.5
GUMA				S	Sb	05 50 51.3	+0.3
FDMO	**Fiordimonte**	**0.43**	**339**	P	Pg	05 50 43.0	+0.4
FDMO				S	Sb	05 50 50.6	-0.4
VCEL	**Villa Celiera**	**0.47**	**120**	P	Pg	05 50 44.0	+0.8
VCEL				S	Sb	05 50 51.6	-0.3
VCEL				AML	AML		
	comp=E,5215μm,0.4s						
VCEL				AML	AML		
	comp=N,8505μm,1.0s						
VCEL				AML	AML		
	comp=N,692μm,0.5s						
VCEL				AML	AML		
	comp=E,798μm,0.4s						
CSP1	**Cessapalombo**	**0.47**	**352**	P	Pg	05 50 44.0	+0.7
CESI	**CESI - Serrava**	**0.47**	**323**	P	Pg	05 50 44.1	+0.8
CESI				S	Sb	05 50 51.6	-0.5
CESI				AML	AML		
	comp=N,1135μm,0.4s						
CESI				AML	AML		
	comp=E,969μm,0.3s						
CESI				AML	AML		
	comp=E,427μm,0.2s						
CESI				AML	AML		
	comp=N,639μm,0.2s						
CESX	**Cesi**	**0.53**	**268**	P	Pg	05 50 44.8	+0.4
CESX				AML	AML		
	comp=N,1685μm,0.8s						
CESX				AML	AML		
	comp=E,1380μm,0.4s						
CESX				AML	AML		
	comp=E,330μm,0.3s						
CESX				AML	AML		
	comp=N,427μm,0.3s						
T0110	**Collepietro**	**0.54**	**138**	P	Pg	05 50 44.9	+0.3
T0110				AML	AML		
	comp=E,2535μm,1.4s						
T0110				AML	AML		
	comp=N,2775μm,1.5s						
T0110				AML	AML		
	comp=E,522μm,0.5s						
T0110				AML	AML		
	comp=N,468μm,0.4s						
MTL1	**Matelica**	**0.66**	**342**	S	Sg	05 50 48.0	-7.5
SRES	**S.Oreste - Sor**	**0.70**	**236**	P	Pg	05 50 48.1	+0.5
SRES				S	Sb	05 50 58.0	-0.7
SRES				AML	AML		
	comp=E,690μm,0.4s						
SRES				AML	AML		
	comp=N,752μm,0.9s						
SRES				AML	AML		
	comp=N,115μm,0.3s						
SRES				AML	AML		
	comp=E,136μm,0.4s						
CING	**Cingoli**	**0.75**	**354**	S	Sg	05 50 50.0	-8.4
INTR	**Introdacqua**	**0.77**	**144**	⇑P	Pg	05 50 48.5	-0.3
INTR				AML	AML		
	comp=E,501μm,1.0s						
INTR				AML	AML		
	comp=N,978nm,0.4s						
INTR				AML	AML		
	comp=N,1455μm,0.4s						
INTR				AML	AML		
	comp=E,468nm,1.0s						
INTR				AML	AML		
	comp=N,213nm,0.8s						
INTR				AML	AML		
	comp=E,94μm,0.5s						
INTR				AML	AML		
	comp=N,274μm,0.8s						
INTR				AML	AML		
	comp=E,116nm,0.5s						
LPEL	**Lama dei Pelig**	**0.88**	**131**	P	Pg	05 50 51.2	+0.2
LPEL				AML	AML		
	comp=E,908μm,0.2s						
LPEL				AML	AML		
	comp=N,545μm,0.5s						
LPEL				AML	AML		
	comp=E,104μm,0.5s						
LPEL				AML	AML		
	comp=N,93μm,0.3s						
MGAB	**Montegabbione**	**0.92**	**288**	P	Pg	05 50 52.0	+0.2
LATB	**Latina**	**1.16**	**192**	S	Sn	05 51 15.0	+2.0

*ROM **26** 05:51:17.6±0.1, 42°56′7N±0′.004×13°17′.289E±0′.006, h10km, ML3.0/22, Error ellipse: s-maj=0.4km s-min=0.3km az=27.0*
*PRU **26** 05:51:18.6±0.0, 42°57′N×13°13′.78E, h0km*
ISC 26 05:51:18.1±0.8, 42°57′N±0′.02×13°31′E±0′.02, h12km±5km, n69, σ1s08/71, 16C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.09**	**227**	P	**Pg**	**05 51 20.6**	**-0.3**
RM33				S	**Sg**	**05 51 22.5**	**-0.4**
RM33				AML	AML		
	comp=E,49350μm,0.3s						
RM33				AML	AML		
	comp=E,49300μm,0.3s						
RM33				AML	AML		
	comp=N,43550μm,0.3s						
RM33				AML	AML		
	comp=E,47950μm,0.3s						
RM33				AML	AML		
	comp=N,44800μm,0.3s						
RM33				AML	AML		
	comp=N,43500μm,0.3s						
RM33				AML	AML		
	comp=N,44850μm,0.3s						
RM33				AML	AML		
	comp=E,49300μm,0.3s						
RM33				AML	AML		
	comp=E,41258μm,0.2s						
RM33				AML	AML		
	comp=N,44813μm,0.3s						
RM33				AML	AML		
	comp=N,43525μm,0.3s						
RM33				AML	AML		
	comp=E,42581μm,0.2s						
T1243	**Rocca Santa Ma**	**0.16**	**40**	P	**Pg**	**05 51 21.8**	**-0.1**
T1243				S	**Sg**	**05 51 24.8**	**+0.1**
LNSS	**Leonessa**	**0.20**	**279**	⇑P	**Pg**	**05 51 22.3**	**-0.2**
LNSS				S	**Sg**	**05 51 25.6**	**+0.1**
LNSS				AML	AML		
	comp=E,26550μm,0.4s						
LNSS				AML	AML		
	comp=N,29600μm,0.4s						
LNSS				AML	AML		
	comp=E,22228μm,0.3s						
LNSS				AML	AML		
	comp=N,26810μm,0.1s						
TERO	**Teramo**	**0.23**	**77**	P	**Pg**	**05 51 22.9**	**-0.1**
TERO				S	**Sg**	**05 51 26.7**	**+0.4**
TERO				AML	AML		
	comp=E,8620μm,0.2s						
TERO				AML	AML		
	comp=N,9085μm,1.0s						
TERO				AML	AML		
	comp=E,8615μm,0.2s						
TERO				AML	AML		
	comp=E,9375μm,0.2s						
TERO				AML	AML		
	comp=N,9545μm,1.0s						
TERO				AML	AML		
	comp=N,9100μm,1.0s						
TERO				AML	AML		
	comp=N,9023μm,0.2s						
TERO				AML	AML		
	comp=E,9393μm,0.2s						
TERO				AML	AML		
	comp=E,8619μm,0.2s						
TERO				AML	AML		
	comp=N,8551μm,0.2s						
GIGS	**Gran Sasso**	**0.23**	**122**	⇑P	**Pg**	**05 51 22.9**	**-0.1**
GIGS				S	**Sg**	**05 51 26.7**	**+0.4**
GIGS				AML	AML		
	comp=N,2005μm,0.2s						
GIGS				AML	AML		
	comp=E,2970μm,0.2s						
GIGS				AML	AML		
	comp=N,2006μm,0.2s						
GIGS				AML	AML		
	comp=E,2971μm,0.2s						
NRCA	**Norcia**	**0.30**	**332**	P	**Pg**	**05 51 23.8**	**-0.5**
NRCA				S	**Sg**	**05 51 28.6**	**+0.3**
NRCA				AML	AML		
	comp=E,7830μm,0.1s						
NRCA				AML	AML		
	comp=N,9595μm,0.2s						
NRCA				AML	AML		
	comp=N,9600μm,0.2s						
NRCA				AML	AML		
	comp=N,9575μm,0.2s						
NRCA				AML	AML		
	comp=N,10300μm,0.2s						
NRCA				AML	AML		
	comp=E,7835μm,0.1s						
NRCA				AML	AML		
	comp=E,8550μm,0.1s						
NRCA				AML	AML		
	comp=N,9594μm,0.2s						
NRCA				AML	AML		
	comp=E,7833μm,0.1s						
NRCA				AML	AML		
	comp=E,8548μm,0.1s						
NRCA				AML	AML		
	comp=N,10316μm,0.2s						
MMO1	**Montemonaco**	**0.33**	**3**	P	**Pg**	**05 51 24.6**	**-0.3**
MMO1				S	**Sg**	**05 51 29.8**	**+0.5**
MMO1				AML	AML		
	comp=E,7395μm,0.4s						
MMO1				AML	AML		
	comp=N,8880μm,0.3s						
MMO1				AML	AML		
	comp=N,8885μm,0.3s						
MMO1				AML	AML		
	comp=E,7392μm,0.4s						
MMO1				AML	AML		
	comp=N,8883μm,0.3s						
MMO1				AML	AML		
	comp=N,1271μm,0.3s						
FIAM	**Fiamignano**	**0.33**	**205**	⇑P	**Pg**	**05 51 24.6**	**-0.3**
FIAM				S	**Sg**	**05 51 29.7**	**+0.3**
FIAM				AML	AML		
	comp=E,1980μm,0.5s						
FIAM				AML	AML		
	comp=N,2015μm,0.8s						
FIAM				AML	AML		
	comp=E,1979μm,0.5s						
FIAM				AML	AML		
	comp=N,1720μm,0.6s						
MC2	**Monte Cornacci**	**0.35**	**346**	S	**Sb**	**05 51 32.0**	**-0.2**
FAGN	**Fagnano**	**0.37**	**146**	⇓P	**Pg**	**05 51 25.9**	**+0.4**
FAGN				S	**Sg**	**05 51 31.5**	**+1.0**
FAGN				AML	AML		
	comp=E,5360μm,0.7s						
FAGN				AML	AML		
	comp=N,4760μm,0.7s						
FAGN				AML	AML		
	comp=E,4942μm,0.5s						
FAGN				AML	AML		
	comp=N,4529μm,0.3s						
ARRO	**Arrone**	**0.40**	**271**	⇑P	**Pg**	**05 51 25.5**	**-0.5**
ARRO				S	**Sg**	**05 51 31.5**	**+0.2**
ARRO				AML	AML		
	comp=E,3350μm,1.4s						
ARRO				AML	AML		
	comp=N,2935μm,0.2s						
ARRO				AML	AML		
	comp=E,3355μm,1.4s						
ARRO				AML	AML		
	comp=N,2930μm,0.2s						
ARRO				AML	AML		
	comp=N,2932μm,0.2s						
ARRO				AML	AML		
	comp=E,3247μm,0.2s						
VCEL	**Villa Celiera**	**0.43**	**114**	⇑P	**Pg**	**05 51 27.1**	**+0.4**
VCEL				S	**Sb**	**05 51 33.9**	**-0.4**
VCEL				AML	AML		
	comp=E,5210μm,0.4s						
VCEL				AML	AML		
	comp=N,8505μm,1.0s						
VCEL				AML	AML		
	comp=E,5215μm,0.4s						
VCEL				AML	AML		
	comp=N,7064μm,0.4s						
VCEL				AML	AML		
	comp=E,5213μm,0.4s						
OFFI	**Offida**	**0.46**	**37**	⇑P	**Pb**	**05 51 27.8**	**-0.4**
OFFI				S	**Sb**	**05 51 36.6**	**+1.6**
OFFI				AML	AML		
	comp=N,8035μm,0.4s						
OFFI				AML	AML		
	comp=E,5020μm,1.0s						
OFFI				AML	AML		
	comp=N,8038μm,0.4s						
OFFI				AML	AML		
	comp=E,4963μm,0.2s						
T0110	**Collepietro**	**0.49**	**134**	P	**Pg**	**05 51 27.9**	**+0.2**
T0110				S	**Sb**	**05 51 35.5**	**-0.5**
T0110				AML	AML		
	comp=E,2535μm,1.4s						
T0110				AML	AML		
	comp=N,2775μm,1.5s						
T0110				AML	AML		
	comp=N,2740μm,0.3s						
T0110				AML	AML		
	comp=E,2501μm,0.6s						

GUMA	**Gualdo di Mace**	**0.49**	**3**	⇑P	**Pg**	**05 51 27.8**	**0.0**
GUMA				S	**Sb**	**05 51 35.9**	**-0.2**
GUMA				AML	AML		
	comp=E,6775µm,0.3s						
GUMA				AML	AML		
	comp=N,8160µm,0.6s						
GUMA				AML	AML		
	comp=E,9690µm,0.3s						
GUMA				AML	AML		
	comp=N,7860µm,0.4s						
GUMA				AML	AML		
	comp=E,6775µm,0.3s						
GUMA				AML	AML		
	comp=N,8160µm,0.5s						
GUMA				AML	AML		
	comp=E,9690µm,0.3s						
GUMA				AML	AML		
	comp=N,8160µm,0.6s						
GUMA				AML	AML		
	comp=N,7859µm,0.4s						
GUMA				AML	AML		
	comp=E,6775µm,0.3s						
TRTR	**Tortoreto Alta**	**0.51**	**62**	P	**Pb**	**05 51 29.2**	**+0.2**
TRTR				S	**Sn**	**05 51 39.1**	**-0.8**
TRTR				AML	AML		
	comp=E,3580µm,1.5s						
TRTR				AML	AML		
	comp=N,2935µm,0.3s						
TRTR				AML	AML		
	comp=E,3502µm,0.5s						
TRTR				AML	AML		
	comp=N,2934µm,0.3s						
CESI	**CESI - Serrava**	**0.53 326**		⇓P	**Pg**	**05 51 27.9**	**-0.5**
CESI				S	**Sb**	**05 51 36.1**	**-0.9**
CESI				AML	AML		
	comp=N,1140µm,0.4s						
CESI				AML	AML		
	comp=E,969µm,0.3s						
CESI				AML	AML		
	comp=N,1135µm,0.4s						
CESI				AML	AML		
	comp=N,1139µm,0.4s						
CESI				AML	AML		
	comp=E,967µm,0.3s						
CSP1	**Cessapalombo**	**0.53 352**		AML	AML		
	comp=E,1074µm,0.5s						
CSP1				AML	AML		
	comp=N,1480µm,0.7s						
CESX	**Cesi**	**0.54 274**		⇑P	**Pg**	**05 51 27.7**	**-0.9**
CESX				S	**Sg**	**05 51 35.7**	**0.0**
CESX				AML	AML		
	comp=E,1380µm,0.4s						
CESX				AML	AML		
	comp=N,1685µm,0.8s						
CESX				AML	AML		
	comp=N,1606µm,0.2s						
CESX				AML	AML		
	comp=E,1381µm,0.4s						
PTQR	**Pietraquaria**	**0.55 173**		⇑P	**Pg**	**05 51 28.2**	**-0.7**
PTQR				S	**Sg**	**05 51 36.7**	**+0.5**
PTQR				AML	AML		
	comp=N,462µm,1.0s						
PTQR				AML	AML		
	comp=E,586µm,0.3s						
PTQR				AML	AML		
	comp=N,424µm,0.3s						
PTQR				AML	AML		
	comp=E,586µm,0.3s						
CERT	**Cerreto**	**0.67 201**		⇑P	**Pg**	**05 51 30.1**	**-1.0**
CERT				AML	AML		
	comp=N,742µm,0.5s						
CERT				AML	AML		
	comp=E,1245µm,0.4s						
CERT				AML	AML		
	comp=E,1243µm,0.4s						
CERT				AML	AML		
	comp=N,742µm,0.5s						
ASSB	**Assisi San Ben**	**0.67 315**		⇓P	**Pg**	**05 51 30.5**	**-0.7**
ASSB				S	**Sb**	**05 51 40.8**	**-0.3**
ASSB				AML	AML		
	comp=E,1202µm,1.4s						
ASSB				AML	AML		
	comp=N,1076µm,1.2s						
ASSB				AML	AML		
	comp=E,1140µm,0.4s						
ASSB				AML	AML		
	comp=N,1072µm,0.2s						
SRES	**S.Oreste - Sor**	**0.68 241**		⇓P	**Pg**	**05 51 30.7**	**-0.6**
SRES				AML	AML		
	comp=N,752µm,0.9s						
SRES				AML	AML		
	comp=E,690µm,0.4s						
SRES				AML	AML		
	comp=E,690µm,0.4s						
SRES				AML	AML		
	comp=N,751µm,0.5s						
MTCE	**Montecelio**	**0.69 218**		⇓P	**Pg**	**05 51 30.4**	**-1.0**
MTCE				AML	AML		
	comp=N,792µm,0.6s						
MTCE				AML	AML		
	comp=N,792µm,0.6s						
MTCE				AML	AML		
	comp=E,1152µm,0.4s						
MTCE				AML	AML		
	comp=E,1152µm,0.4s						
MTCE				AML	AML		
	comp=N,792µm,0.6s						
INTR	**Introdacqua**	**0.71 141**		⇑P	**Pg**	**05 51 31.2**	**-0.8**
INTR				AML	AML		
	comp=E,466nm,1.0s						
INTR				AML	AML		
	comp=N,980nm,0.4s						
INTR				AML	AML		
	comp=E,501µm,1.0s						
INTR				AML	AML		
	comp=N,1455µm,0.4s						
INTR				AML	AML		
	comp=N,978nm,0.4s						
INTR				AML	AML		
	comp=N,1455µm,0.4s						
INTR				AML	AML		
	comp=E,440µm,0.7s						
INTR				AML	AML		
	comp=E,454nm,0.7s						
SNTG	**Esanatoglia**	**0.73 339**		⇑P	**Pb**	**05 51 32.6**	**-0.3**
SNTG				AML	AML		
	comp=E,446µm,1.3s						
SNTG				AML	AML		
	comp=N,431µm,1.1s						
SNTG				AML	AML		
	comp=E,382µm,0.2s						
SNTG				AML	AML		
	comp=N,409µm,0.2s						
EL6	**Elcito**	**0.77 349**		⇑P	**Pg**	**05 51 32.6**	**-0.5**
EL6				AML	AML		
	comp=E,1073µm,0.2s						
EL6				AML	AML		
	comp=N,1324µm,0.6s						
EL6				AML	AML		
	comp=E,1076µm,0.2s						
EL6				AML	AML		
	comp=N,1328µm,0.6s						
EL6				AML	AML		
	comp=E,1075µm,0.2s						
EL6				AML	AML		
	comp=N,1252µm,0.5s						
GUAR	**Guarcino**	**0.78 180**		AML	AML		
	comp=N,533µm,0.4s						
GUAR				AML	AML		
	comp=E,493µm,1.5s						
GUAR				AML	AML		
	comp=N,554µm,1.3s						
GUAR				AML	AML		
	comp=E,488µm,0.5s						
ATCC	**AVT- Casa Cast**	**0.79 322**		AML	AML		
	comp=E,877µm,0.6s						
ATCC				AML	AML		
	comp=N,622µm,0.6s						
ATCC				AML	AML		
	comp=N,622µm,0.6s						
CING	**Cingoli**	**0.81 354**		AML	AML		
	comp=N,789µm,0.5s						
CING				AML	AML		
	comp=E,791µm,0.3s						
LPEL	**Lama dei Pelig**	**0.84 129**		AML	AML		
	comp=E,908µm,0.2s						
LPEL				AML	AML		
	comp=N,545µm,0.5s						
LPEL				AML	AML		
	comp=E,907µm,0.2s						
LPEL				AML	AML		
	comp=N,530µm,0.2s						
POFI	**Posta Fibreno**	**0.91 160**		AML	AML		
	comp=N,224µm,0.6s						
POFI				AML	AML		
	comp=E,320µm,1.2s						
POFI				AML	AML		
	comp=N,224µm,0.6s						
POFI				AML	AML		
	comp=E,278µm,0.5s						
POFI				AML	AML		
	comp=N,232µm,0.6s						
POFI				AML	AML		
	comp=E,294µm,0.5s						
MGAB	**Montegabbione**	**0.94 292**		AML	AML		
	comp=E,1080µm,0.4s						
MGAB				AML	AML		
	comp=E,1033µm,0.4s						
MGAB				AML	AML		
	comp=N,1265µm,0.3s						
MGAB				AML	AML		
	comp=N,1365µm,0.3s						
MGAB				AML	AML		
	comp=E,1034µm,0.4s						
MGAB				AML	AML		
	comp=N,1365µm,0.3s						
MGAB				AML	AML		
	comp=N,1267µm,0.3s						
MGAB				AML	AML		
	comp=E,1083µm,0.4s						
MGAB				AML	AML		
	comp=E,1032µm,0.4s						
SSFR	**Montelago di S**	**0.95 336**		AML	AML		
	comp=N,1965µm,0.3s						
SSFR				AML	AML		
	comp=N,1980µm,0.3s						
SSFR				AML	AML		
	comp=E,1665µm,0.3s						
SSFR				AML	AML		
	comp=E,1620µm,0.3s						
ARVD	**Arcevia**	**0.96 344**		AML	AML		
	comp=E,604µm,0.4s						
ARVD				AML	AML		
	comp=N,492µm,1.1s						
AOI	**Ancona**	**1.00 12**		AML	AML		
	comp=N,552µm,0.3s						
AOI				AML	AML		
	comp=E,474µm,1.1s						
GIUL	**Giuliano Di Ro**	**1.01 182**		AML	AML		
	comp=N,241µm,0.6s						
GIUL				AML	AML		
	comp=N,308µm,0.9s						
GIUL				AML	AML		
	comp=E,304µm,0.6s						
GIUL				AML	AML		
	comp=E,304µm,0.6s						
FRON	**Frontone**	**1.04 336**		AML	AML		
	comp=E,374µm,1.0s						
FRON				AML	AML		
	comp=N,484µm,0.6s						
SACS	**San Casciano d**	**1.07 286**		AML	AML		
	comp=E,352µm,0.5s						
SACS				AML	AML		
	comp=N,384µm,0.7s						
SACS				AML	AML		
	comp=E,316µm,0.8s						
SACS				AML	AML		
	comp=E,300µm,0.5s						
SACS				AML	AML		
	comp=N,337µm,0.7s						
SACS				AML	AML		
	comp=N,384µm,0.7s						
TOLF	**Tolfa**	**1.09 243**		AML	AML		
	comp=N,502µm,1.0s						
TOLF				AML	AML		
	comp=E,390µm,0.8s						
PIEI	**Pieia**	**1.12 330**		AML	AML		
	comp=E,471µm,0.3s						
PIEI				AML	AML		
	comp=N,312µm,0.5s						
APEC	**Apecchio**	**1.18 327**		AML	AML		
	comp=E,301µm,0.7s						
APEC				AML	AML		
	comp=N,378µm,0.4s						
FSSB	**Fossombrone**	**1.19 341**		AML	AML		
	comp=N,1645µm,0.4s						
FSSB				AML	AML		
	comp=E,1205µm,0.4s						
TRIV	**Trivento**	**1.23 131**		AML	AML		
	comp=E,282µm,0.7s						
TRIV				AML	AML		
	comp=N,249µm,1.1s						
CAFI	**Castiglion Fio**	**1.24 308**		AML	AML		
	comp=E,153µm,0.3s						
CAFI				AML	AML		
	comp=E,174µm,0.8s						
CAFI				AML	AML		
	comp=N,173µm,0.6s						
CAFI				AML	AML		
	comp=N,183µm,0.7s						
CAFI				AML	AML		
	comp=E,166µm,0.7s						
CAFI				AML	AML		
	comp=N,173µm,0.6s						
SF01	**Poggio Prataccio**	**1.31 281**		⇓P	**Pg**	**05 51 42.9**	**-0.4**
SF01				AML	AML		
	comp=E,254µm,0.8s						
SF01				AML	AML		
	comp=N,195µm,0.9s						
VAGA	**Valle Agricola**	**1.35 149**		AML	AML		
	comp=E,124µm,0.9s						
VAGA				AML	AML		
	comp=N,182µm,0.4s						
ARCI	**Arcidosso**	**1.38 282**		⇓P	**Pb**	**05 51 44.0**	**0.0**
ARCI				AML	AML		
	comp=E,67µm,1.6s						
ARCI				AML	AML		
	comp=N,68µm,0.8s						
ARCI				AML	AML		
	comp=E,64µm,0.4s						
ARCI				AML	AML		
	comp=N,62µm,0.7s						
RUFI	**Rufina**	**1.83 315**		⇓P	**Pb**	**05 51 50.8**	**-0.7**
SGRT	**San Giovanni R**	**1.99 113**		⇓P	**Pb**	**05 51 54.0**	**-0.3**
SGRT				AML	AML		
	comp=N,124µm,0.3s						
SGRT				AML	AML		
	comp=E,138µm,1.0s						
SNAL	**S. Angelo Dei**	**2.17 138**		⇓P	**Pn**	**05 51 55.1**	**+0.8**
BDI	**Bagni Di Lucca**	**2.48 308**		S	**Sg**	**05 52 41.0**	**+3.3**
GSCL	**Gusciola**	**2.66 313**		S	**Sb**	**05 52 39.0**	**+0.6**
BOJS	**Bojanci**	**3.25 25**		P	**Pn**	**05 52 10.1**	**+1.1**
BOJS				S	**Sn**	**05 52 50.0**	**+2.4**
BOJS				AML	AML		
	comp=E,81µm,1.4s						
BOJS				AML	AML		
	comp=N,81µm,1.2s						
STON	**Ston**	**3.25 83**		P	**Pn**	**05 52 08.4**	**-0.6**
STON				AML	AML		
	comp=E,41µm,0.4s						
STON				AML	AML		
	comp=N,31µm,0.8s						
CGRP	**Cima Grappa**	**3.48 342**		⇓P	**Pn**	**05 52 14.0**	**+1.7**
CGRP				AML	AML		
	comp=E,73µm,0.5s						
CGRP				AML	AML		
	comp=N,77µm,0.5s						
CGRP				AML	AML		
	comp=N,77µm,0.5s						
CGRP				AML	AML		
	comp=E,73µm,0.5s						
MAGA	**Magasa**	**3.74 330**		⇓P	**Pn**	**05 52 16.6**	**+0.8**
MAGA				AML	AML		
	comp=N,71µm,1.6s						
MAGA				AML	AML		
	comp=E,89µm,0.5s						
MAGA				AML	AML		
	comp=E,89µm,0.5s						
MAGA				AML	AML		
	comp=N,65µm,0.4s						
LUSI	**Trento, Gardas**	**3.79 334**		⇓P	**Pn**	**05 52 17.5**	**+1.0**
LUSI				AML	AML		
	comp=E,41µm,0.8s						
LUSI				AML	AML		
	comp=N,62µm,1.2s						
LUSI				AML	AML		
	comp=N,54µm,0.3s						
LUSI				AML	AML		
	comp=E,36µm,0.4s						
ACOM	**Acomizza, Ital**	**3.98**	**2**	⇑P	**Pn**	**05 52 20.3**	**+1.1**
ACOM				AML	AML		
	comp=E,38µm,1.5s						
ACOM				AML	AML		
	comp=N,37µm,0.5s						
EUCT	**Pavia**	**4.00 313**		⇑P	**Pn**	**05 52 18.3**	**-0.9**
KOSI	**Kohlern**	**4.13 341**		⇓P	**Pn**	**05 52 22.7**	**+1.5**
KOSI				AML	AML		
	comp=E,34µm,0.3s						
KOSI				AML	AML		
	comp=N,42µm,0.8s						
KOSI				AML	AML		
	comp=N,34µm,0.4s						
ABTA	**Abfaltersbach**	**4.21 353**		*e*Pn	**Pn**	**05 52 23.2**	**+0.9**
	comp=N,5.9nm,0.6s						
VSL	**Villasalto**	**4.27 225**		⇑P	**Pn**	**05 52 24.2**	**+1.1**
KOGS	**Kog**	**4.41 28**		P	**Pn**	**05 52 22.5**	**-2.4**
KOGS				P	**Pg**	**05 52 39.4**	**-3.2**
KBA	**Koelnbreinsper**	**4.51 0**		*e*Pn	**Pn**	**05 52 27.3**	**+0.9**
	comp=N,0.7nm,0.2s						
KBA				*e*Sn	**Sn**	**05 53 18.8**	**0.0**
	comp=N,5.4nm,0.6s						
FETA	**Feichten**	**4.81 338**		*e*Pn	**Pn**	**05 52 33.9**	**+3.3**
	comp=N,0.8nm,0.3s						
VLO	**Vlora**	**5.10 112**		P	**Pn**	**05 52 32.6**	**-1.7**
SRN	**Sarande**	**5.72 116**		P	**Pb**	**05 52 58.4**	**+0.5**
KHC	**Kasperske Hory**	**6.56**	**2**	*e*SN	**Sn**	**05 54 08.0**	**-1.3**

*IDC **26** 05:54:53.6±1.6,3°.68S×139°.09E,h0km,mb3.9/5, mbtmp4.0/7,ML4.2/2,Error ellipse: s-maj=62.1km s-min=23.5km az=98.0*

ISC 26 05:55:00.8±1.7,41°.1S±0°.1×138°.4E±0°.3,h35km,n7,σ3s54/9, mb4.0/4,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.25**	**194**	P	**Pn**	**Pn**	**05 58 49.4**	**+2.8**
	1.0nm,0.3s,baz=17,slow=13,SNR=34							
WRA				Sn		**Sn**	**06 01 40.7**	**-5.3**
	0.4nm,0.3s,baz=10,slow=22,SNR=4.6							
	1.2nm,0.3s							
FITZ	**Fitzroy Crossi**	**18.72**	**221**	P	**Pn**	**Pn**	**05 59 21.9**	**+4.7**
	0.5nm,0.3s,baz=33,slow=9.2,SNR=13							
FITZ				S		**Sn**	**06 02 43.5**	**-2.2**
	6.8nm,0.6s,baz=201,slow=18,SNR=7.4							
	3.2nm,0.6s							
ASAR	**Alice Springs**	**19.95**	**192**	P	**Pn**	**Pn**	**05 59 34.1**	**+2.2**
	1.4nm,0.4s,baz=22,slow=9.2,SNR=25							
ASAR				S		**S**	**06 03 11.4**	**-1.3**
	1.6nm,0.6s,baz=16,slow=27,SNR=4.7							
	1.4nm,0.4s							
MKAR	**Makanchi Array**	**70.71**	**323**	P		**P**	**06 06 12.4**	**-0.9**
	0.9nm,0.7s,baz=117,slow=7.4,SNR=6.8							
	0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**74.69**	**325**	P		**P**	**06 06 35.2**	**-1.7**
	0.6nm,0.2s,baz=103,slow=4.0,SNR=4.5							
	0.6nm,0.2s							
BVAR	**Borovoye Array**	**80.28**	**325**	P		**P**	**06 07 06.6**	**-1.4**
	0.9nm,0.5s,baz=97,slow=7.4,SNR=4.4							
	0.9nm,0.5s							
ILAR	**Eielson Array**	**87.20**	**24**	P		P	06 07 38.2	-5.1
	0.2nm,0.5s,baz=261,slow=4.4,SNR=4.3							
	0.2nm,0.5s							

*IDC **26** 06:04:24.6±0.9,55°.10S×30°.45W,h0km,mb4.4/5, mbtmp4.4/6,ML3.7/1,MS3.4/3,Error ellipse: s-maj=35.2km s-min=19.8km az=75.0*
*NEIC **26** 06:04:28.1±1.4,55°.3S±0°.1×31°.3W±0°.2,h10km±2km, mb4.5/27,Error ellipse: s-maj=21.0km s-min=15.9km az=58.0*

ISC 26 06:04:26.4±0.8,55°.20S±0°.08×31°.0W±0°.1,h10km,n47, σ1s03/41,mb4.5/14,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.32**	**284**			**Pn**	**06 05 16.9**	**-1.5**
ORCD	**Orcadas**	**9.17**	**227**			**Pn**	**06 06 36.2**	**-2.3**
VNA1	**Neumayer--Stat**	**18.43**	**156**	P		**P**	**06 08 40.0**	**-1.5**
VNA3	**Neumayer Olymp**	**18.55**	**158**	P		**Pn**	**06 08 43.3**	**+0.2**
VNA2	**Neumayer--Watz**	**18.82**	**156**	P		**P**	**06 08 45.3**	**-0.6**
	baz=313,slow=14							
PMSA	**Palmer Station**	**18.88**	**226**	P		**Pn**	**06 08 49.2**	**+2.1**
	0.2nm,0.3s,baz=16,slow=15,SNR=5.2							
PMSA				LR		LR	06 15 30.2	
	comp=Z,82nm,19.6s,baz=85,slow=35							
	6.3nm,0.7s							
PMSA	**Palmer Station**	**18.88**	**226**	P		**P**	**06 08 46.2**	**-0.4**
PMSA				IAmb		IAmb	06 09 13.3	
	comp=Z,18nm,0.9s							
SNAA	**Sanae**	**20.42**	**155**	P		Pn	06 09 07.3	+1.9
SNAA	**Sanae**	**20.42**	**155**	P		**P**	**06 09 02.3**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=285,slow=14,SNR=2.0							
SNAA	**Sanae**	**20.42**	**155**	P		**P**	**06 09 04.3**	**+0.9**
SMAI	**San Martin Ant**	**21.07**	**218**	P		**P**	**06 09 09.9**	**-0.4**
SMAI				IAmb		IAmb	06 09 48.0	
	comp=Z,11nm,0.7s							
TROLL	**Troll, Antarti**	**21.98**	**153**	P		**P**	**06 09 21.1**	**+0.8**
MG02	**Cerro Sombrero**	**22.43**	**260**	P		**P**	**06 09 23.7**	**-1.3**
BELA	**Belgrano 2**	**22.82**	**182**	P		**P**	**06 09 28.9**	**0.0**
GO10	**Punta Arenas**	**23.32**	**258**	P		**P**	**06 09 33.2**	**-1.2**
MG04	**Isla Riesco**	**23.72**	**259**	P		**P**	**06 09 38.9**	**+0.6**
MG05	**Puerto Natales**	**24.71**	**261**	P		**P**	**06 09 47.1**	**-0.3**
MG05				IAmb		IAmb	06 10 00.6	
	comp=Z,26nm,1.1s							
GO09	**Cerro Castillo**	**24.79**	**262**	P		**P**	**06 09 47.9**	**-0.4**
GO09				IAmb		IAmb	06 10 20.4	
	comp=Z,33nm,1.5s							
TRQA	**Tornquist**	**27.01**	**296**	P		**P**	**06 10 09.0**	**+0.6**
GO06	**Curarrehue**	**31.02**	**283**	P		**P**	**06 10 44.5**	**+0.4**
GO06				IAmb		IAmb	06 11 04.1	
	comp=Z,15nm,1.2s							
ITQB	**Itaqui**	**31.42**	**314**	P		**P**	**06 10 48.2**	**+0.6**
CPUP	**Villa Florida**	**34.66**	**316**	P		**P**	**06 11 16.6**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=160,slow=11,SNR=5.0							
	comp=Z,2.1nm,0.7s							
CPUP	**Villa Florida**	**34.66**	**316**	P		**P**	**06 11 15.9**	**+0.1**
CPUP				IAmb		IAmb	06 11 28.9	
	comp=Z,5.5nm,1.1s							
QSPA	**South Pole Qui**	**35.06**	**180**	P		**P**	**06 11 20.0**	**+0.9**
	comp=Z,6.0nm,0.9s,baz=196,slow=3.9,SNR=15							
QSPA				LR		LR	06 25 08.0	
	comp=Z,41nm,20.2s,baz=280,slow=35							
	comp=Z,6.0nm,0.9s							
QSPA	**South Pole Qui**	**35.06**	**180**	P		**P**	**06 11 19.6**	**+0.4**
QSPA				IAmb		IAmb	06 11 23.3	
	comp=Z,4.5nm,0.8s							
VA03	**San Esteban**	**35.54**	**293**	P		**P**	**06 11 24.0**	**+0.4**
VA03				IAmb		IAmb	06 11 43.0	
	comp=Z,13nm,1.1s							
VA06	**Catapilco**	**36.09**	**292**	P		**P**	**06 11 28.9**	**+0.7**
CO03	**El Pedregal**	**37.12**	**294**	P		**P**	**06 11 38.2**	**+1.1**
CO03				IAmb		IAmb	06 11 45.5	
	comp=Z,6.7nm,0.9s							
CO01	**Juntas del Tor**	**37.50**	**296**	P		**P**	**06 11 40.1**	**-0.5**
CO01				IAmb		IAmb	06 12 06.3	
	comp=Z,9.7nm,1.4s							
GO02	**Mina Guanaco**	**41.20**	**301**	P		**P**	**06 12 12.6**	**+1.2**
GO02				IAmb		IAmb	06 12 13.8	
	comp=Z,8.5nm,0.8s							
PB14	**IPOC Station P**	**42.05**	**300**	P		**P**	**06 12 20.0**	**+1.6**
PB14	**IPOC Station P**	**42.05**	**300**	*e*P		**P**	**06 12 19.7**	**+1.2**
PTLB	**Pontes e Lacer**	**45.22**	**320**	P		**P**	**06 12 43.7**	**+0.1**
PTLB				IAmb		IAmb	06 12 44.6	
	comp=Z,2.2nm,0.7s							
SBA	**Scott Base**	**46.76**	**185**	P		**P**	**06 12 56.8**	**+1.7**
SBA				IAmb		IAmb	06 13 10.0	
	comp=Z,5.5nm,1.2s							
VNDA	**Vanda**	**47.31**	**184**	P		**P**	**06 12 60.0**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=191,slow=6.3,SNR=13							
	comp=Z,1.8nm,0.7s							
VNDA	**Vanda**	**47.31**	**184**	P		**P**	**06 12 60.0**	**+0.6**
VNDA				IAmb		IAmb	06 13 02.1	
	comp=Z,3.8nm,1.0s							
H10S3	**ASCENSION HYDR**	**47.91**	**22**	T		T	07 04 48.9	
	SNR=6.3							
LPAZ	**La Paz**	**48.14**	**309**	P		**P**	**06 13 08.6**	**+1.4**
	comp=Z,4.6nm,0.7s,baz=187,slow=6.6,SNR=7.0							
	comp=Z,4.6nm,0.7s							
LPAZ	**La Paz**	**48.14**	**309**	P		**P**	**06 13 08.0**	**+0.7**
LPAZ				IAmb		IAmb	06 13 21.1	

comp=Z,5.1nm,0.7s
H10N1 ASCENSION HYDR 49.02 22 T T 07 06 15.5
baz=192,slow=75,SNR=8.0
H10N3 ASCENSION HYDR 49.02 22 T T 07 06 14.1
baz=192,slow=75,SNR=9.4
H10N2 ASCENSION HYDR 49.04 22 T T 07 06 09.9
baz=192,slow=75,SNR=7.7
ETMB Extrema 53.10 315 P **P** **06 13 44.5 +0.4**
ETMB IAmb IAmb 06 13 46.7
comp=Z,4.5nm,1.5s
SDV Santo Domingo 71.91 318 LR LR 06 50 43.4
comp=Z,58nm,18.1s,baz=88,slow=39
TORD Torodi Ar. Bea 73.44 33 P **P** **06 15 57.5 -1.3**
comp=Z,2.9nm,0.3s,baz=214,slow=6.1,SNR=2.6
comp=Z,2.9nm,0.3s
ILAR Eielson Array 147.95 313 PKPbc **PKPbc** **06 24 09.8 -0.5**
comp=Z,3.4nm,0.8s,baz=121,slow=1.7,SNR=32
SONM Songino Array 152.84 88 PKPbc **PKPbc** **06 24 21.6 -1.2**
comp=Z,0.8nm,0.5s,baz=228,slow=2.9,SNR=4.8

IDC 26 06:04:38.6±3.4, 54.35N×86.70E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=28.8km s-min=17.4km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**251**	*i*		06 12 40.0	
	baz=70,slow=320,SNR=5.1						
ZALV	**Zalesovo Beam**	**1.18**	**251**	Pg	Pg	06 04 59.6	-1.5
	0.4nm,0.3s,baz=66,slow=17,SNR=6.7						
ZALV				Lg	Lg	06 05 17.5	
	1.4nm,0.3s,baz=72,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**6.23**	**236**	Pn	Pn	06 06 12.5	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=8.6						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**8.07**	**202**	Pn	Pn	06 06 38.4	+1.3
	0.1nm,0.3s,baz=25,slow=14,SNR=2.6						
	0.2nm,0.6s						

*IDC **26** 06:07:27.1±1.7, 23.44S×172.59E, h0km, mb4.3/5, mbtmp4.2/6, ML3.4/1, MS3.4/6, Error ellipse: s-maj=44.8km s-min=34.7km az=176.0*
*NEIC **26** 06:07:28.4±0.7, 23.05S±0.1×172.70E±0.09, h10km±1km, mb4.9/18, Error ellipse: s-maj=19.2km s-min=14.0km az=340.0*
ISC 26 06:07:28.3±0.5, 23.05S±0.09×172.64E±0.07, h10km, n46, σ1933/42, mb4.9/15, MS3.5/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.55**	**289**	Pn	**Pn**	**06 08 37.3**	**+0.1**
PINNC	**Pines Island,**	**4.81**	**274**		**Pn**	**06 08 42.2**	**+1.3**
OUENC	**Ouen Island, N**	**5.39**	**276**	Pn	**Pn**	**06 08 49.4**	**+0.6**
LIFNC	**LIFOU**	**5.50**	**293**	Pn	**Pn**	**06 08 50.3**	**-0.1**
ONTNC	**Ouen Toro**	**5.76**	**276**	Pn	**Pn**	**06 08 53.3**	**-0.6**
DZM	**Mont Dzumac**	**5.81**	**278**	Pn	**Pn**	**06 08 54.8**	**+0.1**
	1.1nm,0.3s,baz=112,slow=14,SNR=22						
DZM				Sn	**Sn**	**06 10 00.2**	**-1.3**
	1.2nm,0.3s,baz=255,slow=21,SNR=1.7						
	5.8nm,0.5s						
DZM	**Mont Dzumac**	**5.81**	**278**	Pn	**Pn**	**06 08 54.4**	**-0.3**
MSVF	**Nonsavu**	**7.33**	**45**	LR	LR	06 12 02.5	
	comp=Z,162nm,19.2s,baz=307,slow=36						
RAO	**Raoul Island**	**10.49**	**128**	LR	LR	06 12 16.5	
	comp=Z,44nm,18.9s,baz=239,slow=28						
URZ	**Urewera**	**15.64**	**167**	LR	LR	06 15 47.8	
	comp=Z,186nm,21.4s,baz=31,slow=33						
FUNA	**Funafuti**	**15.75**	**25**	Pn	**Pn**	**06 11 08.8**	**-1.7**
NIUE	**Niue**	**16.74**	**80**	P	**Pn**	**06 11 23.1**	**0.0**
HNR	**Honiara**	**18.20**	**316**	P	**Pn**	**06 11 40.4**	**-0.8**
HNR				IAmb	IAmb	06 11 47.8	
	comp=Z,61nm,1.0s						
LTZ	**Lake Taylor**	**19.68**	**181**		**P**	**06 11 59.2**	**+1.6**
LTZ				IAmb	IAmb	06 12 07.3	
	comp=Z,117nm,1.6s						
EIDS	**Eidsvold**	**19.80**	**259**	P	**P**	**06 11 59.0**	**-0.1**
RPZ	**Rata Peaks**	**20.65**	**183**	LR	LR	06 19 38.3	
	comp=Z,175nm,18.7s,baz=322,slow=36						
CTA	**Charters Tower**	**24.70**	**272**	P	**P**	**06 12 51.1**	**+1.2**
	comp=Z,4.9nm,0.7s,baz=88,slow=11,SNR=4.1						
	comp=Z,4.9nm,0.7s						
CTAO	**Charters Tower**	**24.70**	**272**	P	**P**	**06 12 49.6**	**-0.3**
CTAO				IAmb	IAmb	06 12 57.8	
	comp=Z,24nm,1.6s						
BBOO	**Buckleboo**	**33.61**	**245**	P	**P**	**06 14 08.0**	**-1.0**
BBOO				IAmb	IAmb	06 14 12.1	
	comp=Z,21nm,1.2s						
AS31	**Alice Springs**	**35.49**	**261**	P	**P**	**06 14 25.3**	**-0.2**
ASAR	**Alice Springs**	**35.49**	**261**	P	**P**	**06 14 25.0**	**-0.5**
	comp=Z,5.1nm,0.8s,baz=88,slow=9.0,SNR=31						
ASAR				PcP	**PcP**	**06 16 54.2**	**-0.7**
	comp=Z,1.6nm,1.2s,baz=101,slow=3.9,SNR=4.2						
	comp=Z,5.1nm,0.8s						
ASAR	**Alice Springs**	**35.49**	**261**	P	**P**	**06 14 25.2**	**-0.3**
WRAB	**Tennant Creek**	**35.70**	**268**	P	**P**	**06 14 26.8**	**-0.5**
WRAB				IAmb	IAmb	06 14 28.5	
	comp=Z,9.9nm,1.1s						
WRA	**Warramunga Arr**	**35.71**	**268**	P	**P**	**06 14 26.0**	**-1.3**
	comp=Z,2.4nm,0.8s,baz=97,slow=8.6,SNR=9.4						
	comp=Z,2.4nm,0.8s						
WRA	**Warramunga Arr**	**35.71**	**268**	P	**P**	**06 14 25.8**	**-1.5**
PPTF	**Pamatai, Papee**	**35.79**	**88**	P	**P**	**06 14 27.0**	**-1.1**
FORT	**Forrest**	**40.28**	**249**	P	**P**	**06 15 05.8**	**0.0**
FORT				IAmb	IAmb	06 15 08.4	
	comp=Z,29nm,0.7s						
FITZ	**Fitzroy Crossi**	**44.14**	**267**	P	**P**	**06 15 37.5**	**+0.1**
GUMO	**Guam**	**45.45**	**321**	LR	LR	06 32 04.3	
	comp=Z,37nm,19.5s,baz=144,slow=32						
MORW	**Morawa**	**50.80**	**251**	P	**P**	**06 16 28.7**	**-0.4**
MORW				IAmb	IAmb	06 17 19.1	
	comp=Z,66nm,1.9s						
VNDA	**Vanda**	**54.77**	**183**	LR	LR	06 35 27.5	
	comp=Z,88nm,21.9s,baz=276,slow=31						
SBA	**Scott Base**	**54.93**	**182**	P	**P**	**06 16 59.5**	**+0.6**
SBA				IAmb	IAmb	06 18 58.7	
	comp=Z,24nm,1.9s						
MYLDM	**Lahad Datu**	**59.84**	**291**	P	**P**	**06 17 33.0**	**-1.4**
MYLDM				IAmb	IAmb	06 17 58.2	
	comp=Z,30nm,1.4s						
SBUM	**Sibu**	**64.04**	**285**	P	**P**	**06 18 02.0**	**-0.7**
QSPA	**South Pole Qui**	**67.03**	**180**	P	**P**	**06 18 21.2**	**-0.2**
PETK	**Petropavlovsk-**	**76.94**	**351**	P	**P**	**06 19 23.6**	**+2.9**
	comp=Z,5.6nm,0.8s,baz=145,slow=5.3,SNR=4.4						
	comp=Z,5.6nm,0.8s						
BELA	**Belgrano 2**	**78.03**	**174**	P	**P**	**06 19 27.0**	**+0.3**
BELA				IAmb	IAmb	06 19 39.5	
	comp=Z,9.5nm,1.6s						
PZH	**PanZhiHua**	**84.42**	**302**	P	**P**	**06 20 03.3**	**+1.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,4.3s						
TROLL	**Troll, Antarti**	**84.95**	**183**	P	**P**	**06 20 02.6**	**-1.0**
HHC	**Hu-ho-hao-te**	**85.17**	**318**	*e*P	**P**	**06 20 07.3**	**+2.3**
HHC				pmax	pmax		
	comp=Z,41nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.5s						
SNAA	**Sanae**	**85.48**	**181**	P	**P**	**06 20 03.3**	**-2.8**
SNAA	**Sanae**	**85.48**	**181**	P	**P**	**06 20 04.4**	**-1.7**
	comp=Z,0.8nm,0.9s,baz=186,slow=10,SNR=2.8						
	comp=Z,0.8nm,0.9s						
VNA3	**Neumayer Olymp**	**85.95**	**179**	P	**P**	**06 20 06.9**	**-1.5**
VNA2	**Neumayer-Watz**	**86.28**	**180**	P	**P**	**06 20 08.8**	**-1.2**
	baz=174,slow=3.2						
LZH	**Lanzhou**	**87.62**	**311**	*e*P	**P**	**06 20 20.8**	**+3.6**
LZH				sP	pwP	06 20 27.0	+1.2
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
BMAR	**Burnt Mountain**	**95.63**	**15**	P	**P**	**06 20 52.3**	**-1.2**

GUC 26 06:11:20.2±0.7, 20.74S×68.86W, h113km±4km, ML3.5, 6C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.66**	**243**	⇑*i*	P	06 11 37.7	-1.0
PB01				*e*S	Sn	06 11 51.5	-1.1
PB01				IAML		06 11 52.9	
	comp=N,3μm,0.3s						
GO01	**Chusmiza**	**1.11**	**343**	⇑*i*	P	06 11 42.9	-0.5
GO01				*e*S	Sn	06 12 00.5	-0.2
GO01				IAML		06 12 02.9	
	comp=E,2μm,0.1s						
PB09	**IPOC Station P**	**1.11**	**199**	⇑*e*P	Pn	06 11 43.1	0.0
PB09				*e*S	Sn	06 12 00.3	+0.1
PB09				IAML		06 12 02.9	
	comp=N,344nm,0.4s						
PB02	**IPOC Station P**	**1.13**	**239**	⇑*i*P	Pn	06 11 42.5	-0.6
PB02				*e*S	Sn	06 11 59.9	-0.6
PB02				IAML		06 12 02.0	
	comp=E,1μm,0.3s						
TA01	**Diego Aracena**	**1.25**	**278**	⇑*i*P	Pn	06 11 43.6	-0.7
TA01				*e*S	Sn	06 12 01.6	-1.0
TA01				IAML		06 12 02.6	
	comp=E,508nm,0.3s						
TA02	**Huaiquique**	**1.28**	**291**	⇑*e*P	Pn	06 11 44.1	-0.5
TA02				*e*S	Sn	06 12 01.9	-1.3
TA02				IAML		06 12 04.1	
	comp=N,3μm,0.1s						
PB07	**IPOC Station P**	**1.37**	**224**	⇓*e*P	Pn	06 11 45.3	-0.6
PB07				*e*S	Sn	06 12 04.9	-0.5
PB07				IAML		06 12 06.3	
	comp=E,1μm,0.3s						
LVC	**Limon Verde**	**1.86**	**181**	*e*P	Pn	06 11 52.1	+0.1
LVC				*e*S	Sn	06 12 16.5	+0.3
PB04	**IPOC Station P**	**1.99**	**217**	*e*P	Pn	06 11 52.9	-0.5
PB04				*e*S	Sn	06 12 17.6	-1.1
PB04				IAML		06 12 22.3	
	comp=N,142nm,0.3s						
PB06	**IPOC Station P**	**2.07**	**199**	⇓*e*P	Pn	06 11 53.8	-0.6
PB06				*e*S	Sn	06 12 19.6	-0.9
PB06				IAML		06 12 25.3	
	comp=E,244nm,0.4s						
AF01	**San Pedro de A**	**2.29**	**164**	*e*P	Pn	06 11 57.8	+0.4
PB16	**IPOC Station P**	**2.47**	**346**	*e*P	Pn	06 12 00.2	+0.3
PB16				*e*S	Sn	06 12 30.9	+0.7
PB15	**IPOC Station P**	**2.52**	**193**	*e*P	Pn	06 12 00.0	-0.2
PB15				*i* S	Sn	06 12 30.0	-1.0
PB12	**IPOC Station P**	**2.53**	**327**	*e*P	Pn	06 11 58.7	-1.5
PB12				*e*S	Sn	06 12 29.5	-1.4
PB12				IAML		06 12 36.4	
	comp=E,230nm,0.3s						

*IDC **26** 06:20:16.9±2.8, 53.91N×86.54E, h0km, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=23.8km s-min=14.1km az=56.0*
NNC 26 06:20:16.4±0.8, 54.09N×86.54E, h0km, mb2.6, mpv2.5, 5C-3D, Error ellipse: s-maj=11.3km s-min=3.8km az=1.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**263**	*i*		06 27 11.5	
	baz=90,slow=319,SNR=1.4						
ZAA0	**Zalesovo Array**	**1.03**	**263**	⇑P	Pg	06 20 36.0	0.0
	0.1nm,0.4s						
ZAA0				⇑S	Sb	06 20 50.3	-0.7
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**1.03**	**263**	Pg	Pg	06 20 35.3	-0.8
	0.6nm,0.3s,baz=94,slow=17,SNR=3.5						
ZALV				Lg	Lg	06 20 50.7	
	2.1nm,0.3s,baz=96,slow=29,SNR=11						
ZALV				Rg	Rg	06 20 56.1	
	1.7nm,0.3s,baz=100,slow=25,SNR=14						
KURK	**Kurchatov**	**5.91**	**238**	⇑Lg	Lg	06 23 21.9	
	3.4nm,1.1s						
KURBB	**Kurchatov Arra**	**6.01**	**238**	Pn	Pn	06 21 47.0	+0.5
	0.1nm,0.3s,baz=55,slow=13,SNR=7.9						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**6.01**	**238**	⇓Pn	Pn	06 21 46.6	+0.1
	2.3nm,0.8s						
KURBB				⇑Lg	Lg	06 23 27.6	
	3.4nm,0.8s						
MK31	**Makanchi Array**	**7.79**	**202**	⇑Pn	Pn	06 22 10.6	-0.4
	0.9nm,0.8s,baz=25,slow=13,SNR=9.1						
MK31				⇓Lg	Lg	06 24 25.6	
	1.3nm,0.7s,baz=182,slow=24,SNR=5.0						
MKAR	**Makanchi Array**	**7.79**	**202**	Pn	Pn	06 22 10.1	-0.9
	0.1nm,0.3s,baz=24,slow=14,SNR=5.6						
	0.1nm,0.3s						
MAKZ	**Makanchi**	**7.85**	**204**	⇓Lg	Lg	06 24 27.5	
	3.8nm,1.1s						

ROM 26 06:31:24.8±0.1, 42.621N±0.006×13.301E±0.007, h7km, ML2.4/15, 1C-4D, Error ellipse: s-maj=0.5km s-min=0.4km az=158.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**137**	P	Pg	06 31 27.9	+0.5
CAMP				S	Sg	06 31 29.9	+0.7
CAMP				AML	AML		
	comp=E,1370μm,0.7s						
CAMP				AML	AML		
	comp=N,912μm,0.4s						
CAMP				AML	AML		
	comp=E,1282μm,0.3s						
CAMP				AML	AML		
	comp=N,912μm,0.4s						
RM33	**Pellescritta (**	**0.13**	**210**	P	Pg	06 31 28.2	+0.6
RM33				S	Sg	06 31 30.7	+1.2
RM33				AML	AML		
	comp=N,3375μm,0.3s						
RM33				AML	AML		
	comp=N,3260μm,0.3s						
RM33				AML	AML		
	comp=E,2315μm,0.4s						
RM33				AML	AML		
	comp=E,2290μm,0.4s						
RM33				AML	AML		
	comp=E,2288μm,0.4s						
RM33				AML	AML		
	comp=N,3260μm,0.3s						
RM33				AML	AML		
	comp=E,2318μm,0.4s						
RM33				AML	AML		
	comp=N,3374μm,0.3s						
T1243	**Rocca Santa Ma**	**0.13**	**55**	P	Pg	06 31 28.2	+0.6
T1243				S	Sg	06 31 30.5	+0.9
T1243				AML	AML		
	comp=N,4775μm,0.2s						
T1243				AML	AML		
	comp=N,4785μm,0.2s						
T1243				AML	AML		
	comp=E,5775μm,0.3s						
T1243				AML	AML		
	comp=E,5695μm,0.3s						
T1243				AML	AML		
	comp=N,4775μm,0.2s						
T1243				AML	AML		
	comp=E,5774μm,0.3s						
T1243				AML	AML		
	comp=N,4783μm,0.2s						
T1243				AML	AML		
	comp=E,5695μm,0.3s						
LNSS	**Leonessa**	**0.19**	**265**	P	Pg	06 31 29.3	+0.6
LNSS				S	Sg	06 31 33.0	+1.6
LNSS				AML	AML		
	comp=E,1021μm,0.8s						
LNSS				AML	AML		
	comp=N,1300μm,0.4s						
LNSS				AML	AML		
	comp=N,1240μm,0.1s						
LNSS				AML	AML		
	comp=E,958μm,0.5s						
TERO	**Teramo**	**0.22**	**90**	P	Pg	06 31 29.7	+0.5
TERO				S	Sg	06 31 33.4	+1.2
TERO				AML	AML		
	comp=E,1185μm,0.1s						
TERO				AML	AML		
	comp=N,1260μm,0.8s						
TERO				AML	AML		
	comp=N,1037μm,0.1s						
TERO				AML	AML		
	comp=E,1184μm,0.1s						
TERO				AML	AML		
	comp=N,1193μm,0.8s						
TERO				AML	AML		
	comp=E,1035μm,0.1s						
NRCA	**Norcia**	**0.25**	**327**	⇓P	Pg	06 31 30.6	+0.8
NRCA				S	Sb	06 31 43.0	+6.7
NRCA				AML	AML		
	comp=E,1350μm,0.1s						
NRCA				AML	AML		
	comp=N,1170μm,0.7s						
NRCA				AML	AML		
	comp=E,1460μm,0.1s						
NRCA				AML	AML		
	comp=N,1295μm,0.7s						
NRCA				AML	AML		
	comp=E,1350μm,0.1s						
NRCA				AML	AML		
	comp=N,1170μm,0.7s						
NRCA				AML	AML		
	comp=E,1460μm,0.1s						
NRCA				AML	AML		
	comp=N,1295μm,0.7s						
NRCA				AML	AML		
	comp=E,1350μm,0.1s						
NRCA				AML	AML		
	comp=N,1168μm,0.7s						
NRCA				AML	AML		
	comp=E,1460μm,0.1s						
NRCA				AML	AML		
	comp=N,1295μm,0.7s						
GIGS	**Gran Sasso**	**0.26**	**131**	P	Pg	06 31 30.1	+0.2
GIGS				S	Sg	06 31 34.8	+1.3
GIGS				AML	AML		
	comp=E,256μm,1.5s						
GIGS				AML	AML		
	comp=N,179μm,1.1s						
GIGS				AML	AML		
	comp=N,169μm,0.1s						
GIGS				AML	AML		
	comp=E,240μm,0.2s						
MMO1	**Montemonaco**	**0.28**	**4**	P	Pg	06 31 30.9	+0.6
MMO1				S	Sb	06 31 35.6	-1.5
MMO1				AML	AML		
	comp=N,334μm,0.3s						
MMO1				AML	AML		
	comp=E,498μm,0.8s						
MMO1				AML	AML		
	comp=N,326μm,0.4s						
MMO1				AML	AML		
	comp=E,459μm,0.3s						
MMO1				AML	AML		
	comp=E,864μm,1.7s						
MMO1				AML	AML		
	comp=N,88μm,0.5s						
MMO1	**Montemonaco**	**0.28**	**4**	⇑P	Pg	06 31 30.9	+0.7
MMO1				AML	AML		
	comp=E,498μm,0.8s						
MMO1				AML	AML		
	comp=N,335μm,0.3s						
MMO1				AML	AML		
	comp=E,498μm,0.8s						
MMO1				AML	AML		
	comp=N,334μm,0.3s						
MMO1				AML	AML		
	comp=E,498μm,0.8s						
MMO1				AML	AML		
	comp=N,334μm,0.3s						
FIAM	**Fiamignano**	**0.38**	**201**	P	Pb	06 31 33.4	-0.5
FIAM				S	Sb	06 31 38.7	-1.2
ARRO	**Arrone**	**0.40**	**264**	P	Pg	06 31 32.7	+0.3
ARRO				S	Sb	06 31 39.1	-1.3
ARRO				AML	AML		
	comp=N,232μm,0.2s						
ARRO				AML	AML		
	comp=E,204μm,0.9s						
ARRO				AML	AML		
	comp=E,199μm,0.2s						
ARRO				AML	AML		
	comp=N,232μm,0.2s						
ARRO	**Arrone**	**0.40**	**264**	⇓P	Pg	06 31 32.8	+0.4
ARRO				AML	AML		
	comp=E,204μm,0.9s						
ARRO				AML	AML		
	comp=N,232μm,0.2s						
ARRO				AML	AML		
	comp=E,204μm,0.9s						
ARRO				AML	AML		
	comp=N,232μm,0.2s						
FAGN	**Fagnano**	**0.41**	**149**	P	Pb	06 31 33.9	-0.5
FAGN				S	Sb	06 31 41.1	+0.3
FAGN				AML	AML		
	comp=E,586μm,0.3s						
FAGN				AML	AML		
	comp=N,723μm,0.3s						
FAGN				AML	AML		
	comp=N,723μm,0.3s						
FAGN				AML	AML		
	comp=E,586μm,0.3s						
OFFI	**Offida**	**0.42**	**42**	P	Pb	06 31 34.4	-0.2
OFFI				S	Sb	06 31 42.5	+1.3
FDMO	**Fiordimonte**	**0.44**	**339**	P	Pb	06 31 34.5	-0.4
FDMO				AML	AML		
	comp=E,134μm,0.2s						
FDMO				AML	AML		
	comp=N,152μm,0.2s						
FDMO				AML	AML		
	comp=E,134μm,0.2s						
FDMO				AML	AML		
	comp=N,152μm,0.2s						
VCEL	**Villa Celiera**	**0.46**	**119**	P	Pg	06 31 34.3	+0.7
VCEL				S	Sb	06 31 42.0	-0.2
VCEL				AML	AML		
	comp=N,836μm,1.4s						
VCEL				AML	AML		
	comp=E,670μm,1.0s						
VCEL				AML	AML		
	comp=E,665μm,0.4s						
VCEL				AML	AML		
	comp=N,808μm,0.2s						
CSP1	**Cessapalombo**	**0.47**	**352**	⇓P	Pg	06 31 34.5	+0.6
CSP1				AML	AML		
	comp=E,145μm,1.3s						
CSP1				AML	AML		
	comp=N,210μm,0.3s						
T0110	**Collepietro**	**0.53**	**138**	P	Pg	06 31 35.2	+0.2
T0110				S	Sb	06 31 43.8	-0.5
T0110				AML	AML		
	comp=N,370μm,0.4s						
T0110				AML	AML		
	comp=E,454μm,0.3s						
T0110				AML	AML		
	comp=E,454μm,0.3s						
T0110				AML	AML		
	comp=N,371μm,0.4s						
CESX	**Cesi**	**0.53**	**269**	⇓P	Pg	06 31 35.1	+0.1
CESX				AML	AML		
	comp=E,192μm,1.1s						
CESX				AML	AML		
	comp=N,192μm,1.3s						
CESX				AML	AML		
	comp=E,192μm,1.1s						
CESX				AML	AML		
	comp=N,192μm,1.3s						
CERT	**Cerreto**	**0.71**	**199**	P	Pb	06 31 40.0	+0.5
EL6	**Elcito**	**0.72**	**348**	S	Sn	06 31 52.0	-0.8
INTR	**Introdacqua**	**0.76**	**143**	P	Pg	06 31 38.7	-0.6
INTR				S	Sb	06 31 50.4	-0.4
COR1	**Corinaldo**	**1.03**	**348**	S	Sn	06 32 07.0	+6.6
LATB	**Latina**	**1.15**	**193**	S	Sn	06 32 03.0	-0.3

*GEN **26** 06:32:29.5, 43.61N×11.02E, h10km±2km, Ml1.6*
ROM 26 06:32:29.7±0.1, 43.607N±0.004×11.006E±0.007, h11km, Md2.1/9, Error ellipse: s-maj=0.5km s-min=0.4km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRMI	**Carmignano**	**0.18**	**352**	P	Pg	06 32 34.2	+0.5
CRMI				S	Sg	06 32 37.2	+0.7
CRMI	**Carmignano**	**0.18**	**352**	P	Pg	06 32 34.2	+0.5
CRMI				S	Sg	06 32 37.3	+0.8
CRMI				END			
CRMI				END			
OSSC	**Osservatorio P**	**0.19**	**115**	P	Pg	06 32 34.4	+0.6
OSSC				S	Sg	06 32 37.5	+0.9
OSSC	**Osservatorio P**	**0.19**	**115**	P	Pg	06 32 34.4	+0.6
OSSC				S	Sg	06 32 37.8	+1.1
CSNT	**Castellina Chi**	**0.25**	**123**	P	Pg	06 32 35.2	+0.4
CSNT				S	Sg	06 32 39.1	+0.9
CSNT	**Castellina Chi**	**0.25**	**123**	P	Pg	06 32 35.1	+0.4
CSNT				S	Sg	06 32 39.0	+0.8
CSNT				END			
A319A	**Santa Luce (PI**	**0.34**	**247**	P	Pb	06 32 37.2	-0.5
A319A				S	Sg	06 32 41.8	+0.9
MPPT	**Montemurlo**	**0.36**	**10**	P	Pg	06 32 37.2	+0.4

MPPT				S	Sg	06 32 42.4	+0.8	
MPPT				END				
MPPT				END				
PII	**Pisa**	**0.37**	**288**	P	Pg	06 32 37.5	+0.6	
PII				S	Sg	06 32 42.4	+0.5	
PII	**Pisa**	**0.37**	**288**	P	Pg	06 32 37.5	+0.6	
PII				S	Sg	06 32 42.4	+0.5	
PII				END				
PII				END				
FROS	**Frosini**	**0.41**	**165**	P	Pg	06 32 38.4	+0.6	
FROS				S	Sb	06 32 44.3	-1.0	
FROS	**Frosini**	**0.41**	**165**	P	Pb	06 32 38.5	-0.5	
FROS				S	Sg	06 32 44.0	+0.8	
MTCR	**Monte La Croce**	**0.42**	**359**	P	Pg	06 32 38.4	+0.4	
MTCR				S	Sb	06 32 44.7	-1.0	
RUFI	**Rufina**	**0.43**	**57**	P	Pg	06 32 38.6	+0.4	
RUFI				S	Sb	06 32 45.0	-0.9	
RUFI	**Rufina**	**0.43**	**57**	P	Pg	06 32 38.6	+0.4	
RUFI				S	Sg	06 32 44.8	+0.9	
POPM	**Popiglio**	**0.47**	**338**	P	Pb	06 32 39.6	-0.5	
POPM				S	Sb	06 32 46.7	-0.4	
POPM	**Popiglio**	**0.47**	**338**	P	Pb	06 32 39.5	-0.6	
POPM				S	Sg	06 32 46.1	+0.9	
POPM				END				
POPM				END				
MAIM	**Mastiano**	**0.48**	**310**	P	Pg	06 32 39.5	+0.4	
MAIM				S	Sg	06 32 45.9	+0.3	
MAIM	**Mastiano**	**0.48**	**310**	P	Pg	06 32 39.5	+0.4	
MAIM				S	Sg	06 32 45.8	+0.3	
MAIM				END				
MAIM				END				
TRIF	**Trifonti**	**0.50**	**189**	P	Pb	06 32 40.2	-0.3	
TRIF				S	Sg	06 32 46.8	+0.8	
SEI	**Scarperia**	**0.51**	**29**	P	Pb	06 32 40.3	-0.5	
SEI				S	Sb	06 32 48.2	-0.1	
SEI	**Scarperia**	**0.51**	**29**	P	Pb	06 32 40.4	-0.4	
SEI				S	Sb	06 32 47.9	-0.5	
SEI				END				
SEI				END				
BDI	**Bagni Di Lucca**	**0.54**	**327**	P	Pg	06 32 40.7	+0.4	
BDI				END				
BDI				END				
CARD	**Cardoso**	**0.56**	**318**	P	Pg	06 32 41.0	+0.3	
CARD				S	Sg	06 32 48.9	+0.8	
CARD	**Cardoso**	**0.56**	**318**	P	Pg	06 32 41.0	+0.3	
FNVD	**Fontana Vidola**	**0.57**	**9**	P	Pg	06 32 41.2	+0.4	
FNVD				S	Sb	06 32 49.9	0.0	
FNVD	**Fontana Vidola**	**0.57**	**9**	P	Pb	06 32 41.6	-0.1	
LMD	**Lutirano**	**0.69**	**47**	P	Pb	06 32 43.6	-0.2	
LMD				S	Sb	06 32 54.1	+0.7	
VLC	**Villacollemand**	**0.71**	**321**	P	Pg	06 32 43.7	+0.3	
VLC	**Villacollemand**	**0.71**	**321**	P	Pg	06 32 43.7	+0.2	
SARO	**Sassorosso**	**0.72**	**323**	P	Pg	06 32 43.9	+0.2	
EQUI	**Equi**	**0.83**	**312**	P	Pg	06 32 45.9	+0.1	
EQUI				S	Sb	06 32 57.1	-0.3	
EQUI	**Equi**	**0.83**	**312**	P	Pg	06 32 45.8	+0.1	
EQUI				END				
NDIM	**Novi di Modena**	**1.28**	**357**	S	Sb	06 33 07.0	-3.4	

DJA ***26*** *06:42:57.8±1.4, 1°S±11°×13°8E±°, h22km±9km, M4.2/7, mb4.3/1, MLv4.2/7*
IDC ***26*** *06:42:59.1±3.6, 1°99S×138°81E, h0km, mb3.6/3, mbtmp3.8/4, ML4.1/1, MS3.4/1, Error ellipse: s-maj=119.3km s-min=29.4km az=89.0*

ISC 26 06:42:58.7±2.3, 1°4S±0°2×138°4E±0°1, h35km, n13, σ1°s37/9, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.64**	**155**	P	**Pn**	**06 43 11.2**	**-0.1**
SMPI				S	**Sn**	**06 43 18.8**	**-1.5**
GENI	**Genyem**	**2.09**	**124**	P	**Pn**	**06 43 31.4**	**+0.1**
SRPI	**Serui, Papua**	**2.25**	**258**	P	**Pn**	**06 43 33.6**	**+0.2**
BAKI	**Biak**	**2.34**	**275**	P	**Pn**	**06 43 33.6**	**-1.1**
FAKI	**Fak Fak**	**6.37**	**256**	P	**Pn**	**06 44 29.9**	**-0.2**
BATI	**Baumata** comp=Z,134nm,19.0s,baz=288,slow=45	**17.09**	**239**	LR	LR	06 55 47.8	
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=14,slow=11,SNR=41 1.5nm,0.4s	**18.86**	**192**	P	**P**	**06 47 15.4**	**-0.6**
FITZ	**Fitzroy Crossi** 3.0nm,0.9s,baz=51,slow=11,SNR=2.1 3.0nm,0.9s	**20.81**	**216**	P	**P**	**06 47 39.9**	**+2.7**
ASAR	**Alice Springs** 2.2nm,0.5s,baz=21,slow=11,SNR=40 2.2nm,0.5s	**22.56**	**191**	P	**P**	**06 47 55.6**	**-0.5**
H11S3	**WAKE ISLAND Hy** baz=236,slow=75,SNR=8.0	**34.10**	**53**	T	T	07 25 41.7	
H11S2	**WAKE ISLAND Hy** baz=236,slow=75,SNR=10	**34.11**	**53**	T	T	07 25 42.5	
H11S1	**WAKE ISLAND Hy** baz=236,slow=75,SNR=7.2	**34.12**	**53**	T	T	07 25 41.5	
MKAR	**Makanchi Array** 0.5nm,0.9s,baz=101,slow=7.5,SNR=3.1 0.5nm,0.9s	**68.60**	**322**	P	P	06 54 08.3	+10

KRSC 26 06:44:25.8±2.1, 50°80N×157°34E, h119km±20km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.79**	**262**	eP	Pn	06 44 46.6	+0.9
SKR				eS	Sn	06 45 01.2	+0.5
KDTR	**Khodutka, Kamc**	**1.11**	**24**	eP	Pn	06 44 51.2	+2.4
KDTR				eS	Sn	06 45 08.6	+2.3
MTVR	**Mutnovka**	**1.77**	**17**	eP	Pn	06 44 58.8	+2.4
MTVR				eS	Sn	06 45 21.8	+2.0
RUS	**Russkaya**	**1.79**	**24**	eP	Pn	06 44 58.5	+1.9
RUS				eS	Sn	06 45 21.6	+1.5
GRL	**Gorelyy**	**1.81**	**14**	eP	Pn	06 44 59.3	+2.3
DALK	**Dalny**	**2.40**	**21**	eP	Pn	06 45 06.3	+2.1
KOK	**Koryaka**	**2.62**	**17**	eP	Pn	06 45 10.0	+2.8
NLC	**Nalytchevo**	**2.68**	**27**	eS	Sn	06 45 39.1	-1.0
KRX	**Arik**	**2.69**	**17**	eP	Pn	06 45 10.5	+2.4
SPN	**Mys Shipunski**	**2.84**	**35**	eS	Sn	06 45 44.1	+0.3
GNL	**Ganaly**	**2.92**	**7**	eP	Pn	06 45 12.4	+1.3
MKZ	**Mys Kozlova**	**4.61**	**34**	eP	Pn	06 45 34.5	+1.1
TUMR	**Tumrok**	**4.80**	**20**	eP	Pn	06 45 40.0	+3.9
KBTR	**Krutoberegovo**	**6.33**	**29**	eP	Pn	06 45 57.7	+1.2

IDC 26 06:46:16.7±2.4, 6°31S×129°63E, h0km, mb3.4/1, mbtmp3.6/4, ML3.3/3, Error ellipse: s-maj=97.2km s-min=30.4km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=28,slow=11,SNR=2.9	**12.35**	**198**	Pn	Pn	06 49 15.4	+1.5
FITZ	0.3nm,0.3s,baz=140,slow=20,SNR=6.9 3.4nm,1.0s			Sn	Sn	06 51 19.6	-13
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=342,slow=13,SNR=2.8	**14.30**	**162**	Pn	Pn	06 49 38.6	-2.1
WRA	0.3nm,0.3s,baz=338,slow=22,SNR=3.6 0.6nm,0.7s			Sn	Sn	06 52 05.1	-15
ASAR	**Alice Springs** 0.2nm,0.3s,baz=349,slow=12,SNR=9.8 1.3nm,0.6s	**17.74**	**167**	P	Pn	06 50 25.6	+0.2
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=124,slow=8.3,SNR=2.2 0.2nm,0.4s	**67.45**	**327**	P	P	06 57 14.3	0.0

KRSC ***26*** *06:50:40.7±1.0, 52°85N×159°59E, h104km±9km, ML4.1*
IDC ***26*** *06:50:43.5±1.5, 52°91N×158°97E, h120km±9km, mb3.1/4, mbtmp3.5/4, Error ellipse: s-maj=49.2km s-min=26.5km az=5.0*

ISC 26 06:50:42.2±0.9, 52°89N±0°06×159°52E±0°05, h107km±6km, n34, σ1°s07/46, mb3.4/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.30**	**339**	eP	**Pn**	**06 50 57.7**	**+0.2**
NLC				eS	**Sn**	**06 51 08.6**	**-0.5**
SPN	**Mys Shipunski**	**0.37**	**56**	eP	**Pn**	**06 50 57.9**	**0.0**
SPN				eS	**Sn**	**06 51 09.1**	**-0.6**
DALK	**Dalny**	**0.48**	**287**	eP	**Pn**	**06 50 58.5**	**-0.1**
DALK				eS	**Sn**	**06 51 10.1**	**-0.8**
UGLR	**Uglovaya**	**0.53**	**307**	eP	**Pn**	**06 50 59.4**	**+0.4**
UGLR				eS	**Sn**	**06 51 11.9**	**+0.2**
PET	**Petropavlovsk**	**0.54**	**284**	eP	**Pn**	**06 50 59.1**	**+0.2**
PET				eS	**Sn**	**06 51 11.0**	**-0.6**
SDLR	**Sedlovina**	**0.54**	**315**	eP	**Pn**	**06 50 59.4**	**+0.2**
SMAR	**Somma**	**0.57**	**311**	eP	**Pn**	**06 50 59.6**	**+0.1**
AVH	**Avacha**	**0.60**	**309**	eP	**Pn**	**06 51 00.2**	**+0.7**
AVH				eS	**Sn**	**06 51 13.3**	**+0.7**
KRER	**Koryakskii**	**0.62**	**312**	eP	**Pn**	**06 51 00.4**	**+0.6**
KRER				eS	**Sn**	**06 51 13.0**	**-0.1**
KOK	**Koryaka**	**0.67**	**307**	eP	**Pn**	**06 51 00.6**	**+0.5**
KOK				eS	**Sn**	**06 51 13.5**	**0.0**
KRX	**Arik**	**0.70**	**312**	eP	**Pn**	**06 51 00.6**	**+0.2**
KRX				eS	**Sn**	**06 51 13.6**	**-0.6**
RUS	**Russkaya**	**0.77**	**234**	eP	**Pn**	**06 51 00.7**	**-0.1**
RUS				eS	**Sn**	**06 51 14.1**	**-0.7**
KRMR	**Karymshinskiy**	**0.84**	**266**	eP	**Pn**	**06 51 01.2**	**-0.3**
KRMR				eS	**Sn**	**06 51 15.5**	**-0.6**
MTVR	**Mutnovka**	**0.91**	**244**	eP	**Pn**	**06 51 02.7**	**+0.3**
MTVR				eS	**Sn**	**06 51 17.9**	**+0.3**
GRL	**Gorelyy**	**0.94**	**249**	eP	**Pn**	**06 51 03.2**	**+0.5**
PETK	**Petropavlovsk-** 22nm,0.4s,baz=100,slow=16,SNR=639	**1.12**	**282**	P	**Pn**	**06 51 03.1**	**-1.3**
PETK	35nm,0.4s,baz=255,slow=32,SNR=14			S	**Sn**	**06 51 19.8**	**-1.5**
KII	**Karymskiy**	**1.15**	**358**	eP	**Pn**	**06 51 05.0**	**+0.2**
GNL	**Ganaly**	**1.24**	**311**	eP	**Pn**	**06 51 05.6**	**-0.3**
KDTR	**Khodutka, Kamc**	**1.40**	**220**	eP	**Pn**	**06 51 07.4**	**-0.2**
KDTR				eS	**Sn**	**06 51 25.6**	**-1.2**
APC	**Apacha**	**1.43**	**272**	eP	**Pn**	**06 51 08.2**	**+0.3**
APC				eS	**Sn**	**06 51 27.1**	**-0.4**
MKZ	**Mys Kozlova**	**2.12**	**37**	eP	**Pn**	**06 51 16.7**	**+0.2**
MKZ				eS	**Sn**	**06 51 41.4**	**-1.4**
PAU	**Pauzhetka**	**2.20**	**231**	eP	**Pn**	**06 51 18.2**	**+0.7**
TUMR	**Tumrok**	**2.42**	**8**	eP	**Pn**	**06 51 22.0**	**+1.4**
KBTR	**Krutoberegovo**	**3.84**	**29**	eP	**Pn**	**06 51 39.8**	**+0.6**
BKI	**Bering**	**4.45**	**56**	eP	**Pn**	**06 51 47.7**	**+0.3**
BKI				eS	**Sn**	**06 52 34.0**	**-4.1**
H11N2	**WAKE ISLAND Hy** baz=352,slow=76,SNR=26	**33.59**	**167**	T	T	07 33 15.7	
H11N3	**WAKE ISLAND Hy** baz=352,slow=76,SNR=16	**33.60**	**167**	T	T	07 33 09.8	
H11N1	**WAKE ISLAND Hy** baz=352,slow=76,SNR=15	**33.61**	**167**	T	T	07 33 11.0	
H11S1	**WAKE ISLAND Hy** baz=354,slow=74,SNR=5.8	**34.77**	**168**	T	T	07 34 38.4	
H11S3	**WAKE ISLAND Hy** baz=92,slow=74,SNR=14	**34.78**	**168**	T	T	07 34 39.8	
MKAR	**Makanchi Array** 0.5nm,0.4s,baz=56,slow=6.1,SNR=8.3 0.5nm,0.4s	**47.93**	**295**	P	**P**	**06 59 07.0**	**-2.4**
PDAR	**Pinedale Array** 0.2nm,0.6s,baz=325,slow=7.7,SNR=2.5 0.2nm,0.6s	**57.92**	**60**	P	**P**	**07 00 25.4**	**+2.3**
NOA	**NORSAR Array B** 0.4nm,0.8s,baz=24,slow=6.3,SNR=2.1 0.4nm,0.8s	**63.64**	**343**	P	**P**	**07 01 00.4**	**-0.8**
TXAR	**Lajitas Array** 0.4nm,0.7s,baz=302,slow=5.7,SNR=6.4 0.4nm,0.7s	**71.03**	**66**	P	**P**	**07 01 50.4**	**+1.9**

SOME ***26*** *07:10:25.2, 49°58N×81°58E, h0km*
NNC 26 07:10:29.5±6.9, 49°57N×81°54E, h0km, mb3.0, mpv2.6, 5C-1D, Error ellipse: s-maj=127.5km s-min=19.2km az=54.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEM	**Semipalatinsk** 5.4nm,0.1s	**1.19**	**316**	eP	Pg	07 10 49.2	-3.0
SEM	16nm,0.1s			eS	Sg	07 11 04.8	-2.8
KURK	**Kurchatov** 8.0nm,1.0s	**2.20**	**303**	⇑Pn	Pn	07 11 06.4	-1.0
KURK	7.3nm,0.4s			⇓Sn	Sb	07 11 36.8	-1.2
MAKZ	**Makanchi** 2.8nm,1.1s	**2.77**	**174**	⇑Pn	Pn	07 11 12.5	-2.8
MAKZ	1.7nm,0.5s			⇑Lg	Lg	07 11 57.1	
MK31	**Makanchi Array** 0.5nm,0.3s,baz=349,slow=12,SNR=26	**2.82**	**169**	⇑Pn	Pb	07 11 19.2	-1.5
MK31	1.5nm,0.3s,baz=349,slow=27,SNR=5.8			⇑Lg	Lg	07 11 59.1	

IDC 26 07:17:04.5±26.0, 21°80S×172°91W, h0km, mb4.4/4, mbtmp4.4/4, Error ellipse: s-maj=485.8km s-min=160.3km az=75.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 5.7nm,0.4s,baz=89,slow=11,SNR=12 5.7nm,0.4s	**38.10**	**265**	P	P	07 24 25.9	+0.5
STKA	**Stephens Creek** 0.7nm,0.3s,baz=102,slow=9.3,SNR=3.3 0.7nm,0.3s	**41.56**	**246**	P	P	07 24 53.0	-1.1
ASAR	**Alice Springs** 2.9nm,0.7s,baz=98,slow=7.2,SNR=28 2.9nm,0.7s	**48.86**	**257**	P	P	07 25 52.0	-0.3
WRA	**Warramunga Arr** 3.6nm,0.4s,baz=96,slow=8.3,SNR=193 3.6nm,0.4s	**49.13**	**262**	P	P	07 25 54.4	+0.1

NEIC ***26*** *07:19:10.3±2.1, 51°27N±0°07×130°8W±0°1, h10km±2km, Error ellipse: s-maj=15.9km s-min=8.9km az=238.0*
IDC ***26*** *07:19:11.5±1.7, 51°38N×130°65W, h0km, mb3.1/1, mbtmp3.4/5, ML3.2/4, MS3.2/17, Error ellipse: s-maj=20.7km s-min=16.6km az=63.0*
PGC ***26*** *07:19:11.1±1.2, 51°22N×130°78W, h10km, MLSn3.5/45, Mw4.4, 210km Wsw of Bella Bella, Bc Haida Gwaii Region*
NEIC ***26*** *07:19:11.1, 51°22N×130°78W, h10km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.30; Mθθ-0.01; Mφφ0.53; Mrθ-0.16; Mθφ-0.09; Mφr-0.17; Fault plane solution: M₀5.00000×10¹⁵ NP1:φ₁14.00000°, δ59.00000°, λ-61.00000°. NP2:φ₂147.00000°, δ41.00000°, λ-129.00000°. Principal axes: T 0.4934, Plg10.0000°, Azm84.0000°; N -0.0106, Plg24.0000°, Azm178.0000°; P -0.4829, Plg64.0000°, Azm334.0000°;*

ISC 26 07:19:10.3±1.6, 51°28N±0°05×130°76W±0°06, h8km±12km, n150, σ1°s23/142, mb3.6/3, MS3.2/10, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG4B	**Hotspring** comp=E,1μm,0.7s	**1.05**	**345**	Pn	**Pg**	**07 19 30.1**	**-0.5**
HG4B				IAML		07 19 53.2	
HG4B	**Hotspring**	**1.05**	**345**	P	**Pg**	**07 19 30.0**	**-0.5**
HG4B				S	**Sg**	**07 19 44.0**	**-0.3**
BNB	**Barry Inlet**	**1.44**	**335**	P	**Pn**	**07 19 35.7**	**-1.1**
HOLB	**Holberg**	**1.78**	**110**		**Pn**	**07 19 40.6**	**-0.8**
HOLB	**Holberg**	**1.78**	**110**	Pn	**Pn**	**07 19 40.2**	**-1.2**
HOLB				Sn	**Sn**	**07 20 00.8**	**-3.5**
HG1B	**Mitchell Dam**	**1.86**	**334**	Pn	**Pn**	**07 19 41.7**	**-0.8**
BBB	**Bella Bella** comp=E,5.2nm,0.3s,baz=248,slow=9.2,SNR=161	**1.88**	**60**	Pn	**Pn**	**07 19 42.1**	**-0.7**
BBB	comp=E,63nm,0.3s,baz=74,slow=22,SNR=5.3			Sn	**Sn**	**07 20 05.2**	**-1.4**
BBB	**Bella Bella** comp=E,576nm,0.6s	**1.88**	**60**		**Pn**	**07 19 42.4**	**-0.4**
BBB				IAML		07 20 22.1	
BBB	**Bella Bella** comp=N,259nm,0.8s	**1.88**	**60**	Pn	**Pn**	**07 19 41.9**	**-0.9**
BBB				Sn	**Sn**	**07 20 04.1**	**-2.5**
BNKB	**Banks Island**	**2.13**	**14**	Pn	**Pn**	**07 19 45.0**	**-1.2**
PHC	**Port Hardy**	**2.18**	**104**	Pn	**Pn**	**07 19 45.0**	**-1.9**
DIB	**Dawson Inlet,**	**2.20**	**332**		**Pn**	**07 19 46.8**	**-0.4**
DIB				IAML		07 20 25.8	
DIB	**Dawson Inlet,**	**2.20**	**332**	Pn	**Pn**	**07 19 46.2**	**-0.9**
DIB				Sn	**Sn**	**07 20 12.6**	**-1.9**
H02S1	**DAWSON INLET T**	**2.20**	**332**	Pn	**Pn**	**07 19 46.5**	**-0.7**
H02S1				Sn	**Sn**	**07 20 11.4**	**-3.1**
BPBC	**Brooks Peninsu**	**2.21**	**119**	Pn	**Pn**	**07 19 45.7**	**-1.6**
BNAB	**Bonilla**	**2.22**	**2**	Pn	**Pn**	**07 19 47.1**	**-0.3**
BNAB				Sn	**Sn**	**07 20 13.9**	**-1.2**
PACB	**Port Alice, BC**	**2.23**	**111**	Pn	**Pn**	**07 19 46.5**	**-1.2**
BUTB	**Butedale**	**2.28**	**37**	Pn	**Pn**	**07 19 48.0**	**-0.4**
MAYB	**Maynard**	**2.44**	**110**	Pn	**Pn**	**07 19 49.2**	**-1.3**
HWKB	**Hawksbury Isla**	**2.53**	**22**	Pn	**Pn**	**07 19 51.1**	**-0.6**
TLCB	**Telegraph Cove**	**2.59**	**105**		**Pn**	**07 19 51.9**	**-0.6**
TLCB	comp=N,235nm,1.3s			IAML		07 20 56.6	
TLCB	**Telegraph Cove**	**2.59**	**105**	Pn	**Pn**	**07 19 51.2**	**-1.3**
GRNB	**Grenville Isla**	**2.62**	**10**		**Pn**	**07 19 52.9**	**-0.1**
GRNB	**Grenville Isla**	**2.62**	**10**	Pn	**Pn**	**07 19 52.4**	**-0.6**
EDB	**Eliza Dome**	**2.71**	**120**	Pn	**Pn**	**07 19 53.2**	**-1.0**
WOSB	**Woss**	**2.89**	**111**	Pn	**Pn**	**07 19 56.1**	**-0.6**
MBLB	**Minette Bay Lo**	**3.06**	**24**	Sn	**Sn**	**07 20 34.7**	**-1.0**
RUBB	**Prince Rupert**	**3.07**	**6**		**Pn**	**07 19 58.2**	**-0.9**
RUBB	comp=E,173nm,0.9s			IAML		07 21 00.7	
RUBB	comp=N,156nm,1.0s			IAML		07 21 04.4	
RUBB	**Prince Rupert**	**3.07**	**6**	Pn	**Pn**	**07 19 59.1**	**0.0**
KITB	**Kitimat**	**3.09**	**24**	Pn	**Pn**	**07 19 59.1**	**-0.3**
KITB				Sn	**Sn**	**07 20 34.6**	**-1.9**
NCRB	**Newcastle Ridg**	**3.11**	**104**	Pn	**Pn**	**07 19 59.2**	**-0.5**
LIB	**Langara Island**	**3.30**	**336**	Pn	**Pn**	**07 20 02.1**	**-0.1**
ETB	**Estevan Point**	**3.31**	**123**	Pn	**Pn**	**07 20 01.7**	**-0.6**
GDR	**Gold River**	**3.37**	**115**	Pn	**Pn**	**07 20 02.7**	**-0.5**
SPLB	**Strathcona Par**	**3.54**	**111**	Pn	**Pn**	**07 20 05.6**	**0.0**
CBB	**Campbell River**	**3.65**	**108**		**Pn**	**07 20 06.6**	**-0.6**
CBB	comp=E,104nm,0.9s			IAML		07 21 20.1	
CBB	comp=N,81nm,0.9s			IAML		07 21 21.9	
CBB	**Campbell River**	**3.65**	**108**	Pn	**Pn**	**07 20 06.5**	**-0.6**
TOFB	**Tofino**	**3.77**	**122**	Pn	**Pn**	**07 20 08.1**	**-0.6**
MWAB	**Mount Washingt**	**3.81**	**112**	Pn	**Pn**	**07 20 08.8**	**-0.5**
BTB	**Buttle Lake**	**3.81**	**116**	Pn	**Pn**	**07 20 09.1**	**-0.4**
B012	**Uculelet**	**4.10**	**123**	Pn	**Pn**	**07 20 12.6**	**-0.7**
OZB	**Mount Ozzard**	**4.11**	**122**	Pn	**Pn**	**07 20 13.4**	**0.0**
OZB	comp=N,55nm,1.9s			IAML		07 22 06.4	
OZB	**Mount Ozzard**	**4.11**	**122**	Pn	**Pn**	**07 20 13.7**	**+0.3**
B927	**Port Alberni**	**4.34**	**116**	Pn	**Pn**	**07 20 15.9**	**-0.5**
TXB	**Texada**	**4.34**	**109**	Pn	**Pn**	**07 20 16.6**	**+0.1**
BFSB	**Bamfield**	**4.37**	**122**	Pn	**Pn**	**07 20 17.2**	**+0.3**
B928	**Bamfield**	**4.37**	**122**	Pn	**Pn**	**07 20 17.2**	**+0.3**
UBRB	**Upper Baezaeko**	**4.42**	**66**	Pn	**Pn**	**07 20 19.0**	**+1.2**
CRAG	**Craig**	**4.43**	**342**	Pn	**Pn**	**07 20 17.3**	**-0.6**
CRAG	comp=E,58nm,1.1s			IAML		07 21 38.2	
CRAG	comp=N,46nm,2.3s			IAML		07 21 49.9	
MGB	**Mount Grey**	**4.52**	**118**	Pn	**Pn**	**07 20 18.7**	**-0.5**
GHNB	**Nanoose**	**4.62**	**113**	Pn	**Pn**	**07 20 20.8**	**+0.4**
SHB	**Sechelt**	**4.71**	**108**	Pn	**Pn**	**07 20 23.4**	**+1.6**
NLLB	**Nanaimo Lost L**	**4.80**	**113**	Pn	**Pn**	**07 20 23.9**	**+1.0**
PFB	**Port Renfrew**	**4.90**	**121**	Pn	**Pn**	**07 20 24.6**	**+0.3**
B926	**Mesachie Lake**	**4.93**	**117**	Pn	**Pn**	**07 20 24.6**	**0.0**
CLRS	**Cowichan Lake**	**4.93**	**117**	Pn	**Pn**	**07 20 25.7**	**+1.0**
CLRS	comp=E,42nm,1.5s			IAML		07 22 02.4	
CLRS	**Cowichan Lake**	**4.93**	**117**	Pn	**Pn**	**07 20 25.7**	**+1.0**
FSB	**Fort Saint Jam**	**5.04**	**48**	Pn	**Pn**	**07 20 27.3**	**+1.0**
FSJB	**Fort St James**	**5.05**	**48**	Pn	**Pn**	**07 20 27.0**	**+0.6**
FSJB				Sn	**Sn**	**07 21 21.6**	**-3.3**
WPB	**Watts Point**	**5.09**	**106**	Pn	**Pn**	**07 20 28.2**	**+1.4**
BIB	**Bowen Island**	**5.13**	**109**	Pn	**Pn**	**07 20 27.1**	**-0.3**
GOBB	**Galiano Island**	**5.21**	**114**	Pn	**Pn**	**07 20 28.7**	**+0.2**
C03A	**Quillayute Air**	**5.22**	**127**	Pn	**Pn**	**07 20 30.6**	**+1.9**
WRAK	**Wrangell Islan**	**5.24**	**350**		**Pn**	**07 20 30.6**	**+1.8**
WRAK	comp=E,40nm,2.0s			IAML		07 22 14.7	
WRAK	comp=E,44nm,1.0s			IAML		07 22 26.3	
B010	**North Saanich**	**5.40**	**116**	Pn	**Pn**	**07 20 32.3**	**+1.2**
B009	**North Saanich**	**5.40**	**116**	Pn	**Pn**	**07 20 31.3**	**+0.2**
PGC	**Sidney**	**5.40**	**116**		**Pn**	**07 20 31.3**	**+0.2**
PGC	**Sidney**	**5.40**	**116**	Pn	**Pn**	**07 20 30.4**	**-0.7**
B011	**North Saanich**	**5.40**	**116**	Pn	**Pn**	**07 20 30.9**	**-0.2**
SNB	**Saturna Island**	**5.49**	**114**	Pn	**Pn**	**07 20 33.5**	**+1.1**
STW	**Striped Peak**	**5.56**	**121**	Pn	**Pn**	**07 20 31.7**	**-1.6**
VGZ	**Gonzales**	**5.60**	**118**	Pn	**Pn**	**07 20 33.5**	**-0.4**
LLLB	**Lillooet**	**5.65**	**93**	Pn	**Pn**	**07 20 36.7**	**+2.0**
LLLB	**Lillooet**	**5.65**	**93**	Pn	**Pn**	**07 20 34.5**	**-0.2**
MCW	**Mount Constitu**	**5.74**	**114**	Pn	**Pn**	**07 20 35.2**	**-0.6**
NLWA	**Neilton Lookou**	**5.95**	**128**	Pn	**Pn**	**07 20 40.7**	**+2.0**
A05A	**Maple Falls**	**6.02**	**109**	Pn	**Pn**	**07 20 38.0**	**-1.7**
GNW	**Green Mountain**	**6.37**	**123**	Pn	**Pn**	**07 20 45.2**	**+0.7**
RPW	**Rockport**	**6.61**	**112**	Pn	**Pn**	**07 20 48.6**	**+0.7**
RADR	**Rader Ridge**	**6.68**	**134**	Pn	**Pn**	**07 20 49.7**	**+0.9**
DLBC	**Dease Lake** comp=E,0.1nm,0.3s,baz=193,slow=10,SNR=3.1	**7.19**	**3**	Pn	**Pn**	**07 20 58.2**	**+2.4**
DLBC	comp=E,255nm,19.0s,baz=194,slow=38 comp=E,1.5nm,0.5s			LR	LR	07 23 40.2	
DLBC	**Dease Lake**	**7.19**	**3**		**Pn**	**07 20 56.7**	**+0.9**
NBC4	**NorthernBC 4**	**7.47**	**50**	Pn	**Pn**	**07 21 00.3**	**+0.8**
LTY	**Liberty**	**7.73**	**117**		**Pn**	**07 21 05.3**	**+2.1**
NBC5	**NorthernBC 5**	**7.83**	**34**	Pn	**Pn**	**07 21 06.5**	**+2.0**
BDMTA	**Bald Mountain**	**7.97**	**59**	Pn	**Pn**	**07 21 08.1**	**+1.7**
WTMTA	**White Mountain**	**8.17**	**53**	Pn	**Pn**	**07 21 10.8**	**+1.6**
FNBB	**Fort Nelson**	**8.82**	**27**	Pn	**Pn**	**07 21 17.4**	**-0.7**
SWHSA	**Sweathouse Loo**	**9.18**	**61**	Pn	**Pn**	**07 21 24.1**	**+1.1**
NEW	**Newport** comp=E,69nm,19.7s,baz=282,slow=40	**9.32**	**104**	LR	LR	07 25 27.4	
WHY	**Whitehorse**	**9.68**	**348**	Pn	**Pn**	**07 21 31.4**	**+1.4**
STPRA	**Salt Prairie L**	**9.92**	**58**	Pn	**Pn**	**07 21 32.8**	**-0.3**
PRDA	**Priddis**	**10.38**	**86**	Pn	**Pn**	**07 21 38.5**	**-0.9**
YBH	**Yreka Blue H

K20K				IAmb	IAmb	07 23 25.3
	comp=Z,6.8nm,1.1s					
TPNV	**Topopah Spring**	**17.66**	**139**	P	**P**	**07 23 18.1 +0.3**
TPNV				IAmb	IAmb	07 23 33.3
	comp=Z,5.3nm,1.1s					
J20K	**Nowinta River**	**17.82**	**325**	P	**P**	**07 23 20.7 +1.5**
J20K				IAmb	IAmb	07 23 40.8
	comp=Z,4.7nm,1.1s					
K22A	**Casper**	**18.59**	**108**	P	**Pn**	**07 23 29.5 +1.4**
K22A				IAmb	IAmb	07 23 31.1
	comp=Z,6.1nm,0.9s					
IMAR	**Indian Mountai**	**18.81**	**330**	P	**Pn**	**07 23 32.0 +1.6**
O20A	**White River Ci**	**19.19**	**117**	P	**P**	**07 23 34.6 0.0**
O20A				IAmb	IAmb	07 23 55.5
	comp=Z,8.7nm,1.3s					
U15A	**North Rim**	**19.86**	**131**	P	**P**	**07 23 41.6 -0.4**
U15A				IAmb	IAmb	07 24 10.2
	comp=Z,6.9nm,1.4s					
PHWY	**Pilot Hill**	**20.04**	**110**	P	**P**	**07 23 44.5 +0.6**
PHWY				IAmb	IAmb	07 23 47.0
	comp=Z,5.6nm,1.1s					
PV13	**Radium Mtn., P**	**20.27**	**122**	P	**P**	**07 23 47.7 +1.2**
PFO	**Pinyon Flats O**	**20.50**	**144**	LR	LR	07 31 28.2
	comp=Z,33nm,20.5s,baz=313,slow=36					
ISCO	**Idaho Springs**	**20.91**	**113**		**P**	**07 23 53.1 -0.3**
ISCO				IAmb	IAmb	07 24 09.0
	comp=Z,4.0nm,1.1s					
WUAZ	**Wupatki**	**21.03**	**131**	P	**P**	**07 23 53.8 -0.8**
WUAZ				IAmb	IAmb	07 24 10.0
	comp=Z,4.7nm,1.0s					
S22A	**4UR Ranch, Cre**	**21.65**	**119**	P	**P**	**07 24 00.6 -0.8**
S22A				IAmb	IAmb	07 24 05.6
	comp=Z,2.3nm,0.9s					
ULM	**Lac du Bonnet**	**21.97**	**79**	LR	LR	07 32 53.2
	comp=Z,129nm,18.5s,slow=38					
ANMO	**Albuquerque**	**23.94**	**124**	LR	LR	07 33 11.4
	comp=Z,74nm,18.7s,baz=310,slow=35					
RES	**Resolute Bay**	**27.70**	**20**	LR	LR	07 34 55.5
	comp=Z,28nm,18.4s,baz=28,slow=34					
TXAR	**Lajitas Array**	**29.83**	**127**	P	**P**	**07 25 21.6 +3.7**
	comp=Z,0.1nm,0.7s,baz=318,slow=5.3,SNR=2.1					
TXAR				LR	LR	07 37 59.6
	comp=Z,53nm,18.7s,baz=318,slow=38 comp=Z,0.1nm,0.7s					
LPIG	**La Paz**	**31.37**	**142**	LR	LR	07 38 23.2
	comp=Z,27nm,21.6s,baz=10.0,slow=37					
SHEM	**Shemya Is, Ala**	**33.28**	**295**	LR	LR	07 37 35.0
	comp=Z,23nm,18.1s,baz=126,slow=33					
SADO	**Sadowa**	**34.52**	**80**	LR	LR	07 39 52.3
	comp=Z,71nm,19.5s,baz=316,slow=36					
SFJD	**Kangerlussuaq**	**40.73**	**36**	LR	LR	07 43 00.2
	comp=Z,35nm,18.2s,baz=286,slow=35					
PETK	**Petropavlovsk-**	**42.21**	**302**	LR	LR	07 42 21.0
	comp=Z,30nm,20.4s,baz=105,slow=33					
H11N2	**WAKE ISLAND Hy**	**57.60**	**261**	T	T	08 31 46.8
	baz=40,slow=76,SNR=115					
H11N3	**WAKE ISLAND Hy**	**57.60**	**261**	T	T	08 31 46.8
	baz=40,slow=76,SNR=100					
H11N1	**WAKE ISLAND Hy**	**57.62**	**261**	T	T	08 31 47.9
	baz=40,slow=76,SNR=126					
H11S1	**WAKE ISLAND Hy**	**58.64**	**260**	T	T	08 33 16.7
	baz=46,slow=74,SNR=11					
H11S2	**WAKE ISLAND Hy**	**58.65**	**260**	T	T	08 33 10.2
	baz=284,slow=74,SNR=8.5					

*NNC **26** 07:25:52.8±0.8, 50.00N×78.72E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=13.7km s-min=4.0km az=79.0, Suspected Mining explosion.*
*ASRS **26** 07:25:58.6±0.5, 50.7°N×3.7°×9E±°, h0km, MLh3.5/7, Error ellipse: s-maj=6.9km s-min=3.6km az=24.9, confirmed*
ISC 26 07:25:54.0±0.9, 50.03N±0.04×78.72E±0.04, h0km, n17, σ1s60/38, 6C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.60**	**349**	⇓P	**Pg**	**07 26 05.3**	**-0.3**
	36nm,0.3s						
KURBB				⇑S	**Sg**	**07 26 13.8**	**+0.5**
	92nm,0.5s						
KURK	**Kurchatov**	**0.69**	**355**	⇓P	**Pg**	**07 26 06.6**	**-0.5**
	15nm,0.4s						
KURK				⇑S	**Sb**	**07 26 17.3**	**-1.5**
	22nm,0.9s						
KURK	**Kurchatov**	**0.69**	**355**	Pg	**Pg**	**07 26 06.3**	**-0.9**
KURK				Sg	**Sg**	**07 26 16.6**	**+0.5**
MAKZ	**Makanchi**	**3.89**	**145**	⇑Pg	**Pb**	**07 27 01.6**	**-1.8**
	2.7nm,0.5s						
MAKZ				⇓Lg	Lg	07 27 53.6	
	6.0nm,0.5s						
MAKZ	**Makanchi**	**3.89**	**145**	Pn	**Pn**	**07 26 52.5**	**-2.6**
MAKZ				Pg	**Pb**	**07 27 06.1**	**+2.6**
MAKZ				Sg	**Sb**	**07 27 52.6**	**+1.5**
UKR	**Ust'-Kan**	**3.97**	**75**	Pn	**Pn**	**07 26 57.6**	**+1.4**
UKR				Pg	**Pg**	**07 27 08.7**	**-1.5**
UKR				Sg	**Sg**	**07 27 59.2**	**-2.4**
MK31	**Makanchi Array**	**4.02**	**142**	⇑Pn	**Pn**	**07 26 57.3**	**+0.4**
	baz=319,slow=10,SNR=22						
MK31				⇑Pg	**Pb**	**07 27 04.5**	**-1.3**
	1.8nm,0.4s,baz=330,slow=13,SNR=23						
MK31				⇑Lg	Lg	07 27 59.7	
	6.2nm,0.5s,baz=329,slow=33,SNR=15						
MKAR	**Makanchi Array**	**4.02**	**142**	Pn	**Pn**	**07 26 57.4**	**+0.5**
MKAR				Pg	**Pb**	**07 27 06.7**	**+1.0**
MKAR				Sg	**Sg**	**07 28 03.1**	**-0.1**
OTUK	**Ortayu**	**4.55**	**249**	⇓Pn	**Pn**	**07 27 04.5**	**+0.3**
	2.0nm,0.3s						
OTUK				⇓Pg	**Pb**	**07 27 14.9**	**+0.1**
	1.2nm,0.5s						
OTUK				⇓Lg	Lg	07 28 18.0	
	4.3nm,0.5s						
BSTK	**Bystrovka, Nov**	**5.14**	**26**	Sg	**Sg**	**07 28 37.3**	**-1.8**
DGZ	**Jazzator, Alta**	**5.65**	**90**	Pn	**Pn**	**07 27 20.6**	**+1.3**
DGZ				Pg	**Pg**	**07 27 39.9**	**-2.2**
DGZ				S	**Sn**	**07 28 25.3**	**+0.4**
DGZ				Sg	**Sg**	**07 28 58.6**	**+3.3**
CHBI	**Chibit, Altay**	**5.65**	**84**	Pn	**Pn**	**07 27 21.8**	**+2.5**
CHBI				S	**Sn**	**07 28 25.7**	**+0.8**
CHBI				Sg	**Sg**	**07 28 57.8**	**+2.2**
ELT	**Eltsovka**	**5.69**	**53**	Sg	**Sg**	**07 28 58.0**	**+1.4**
ARTR	**Artybash**	**5.70**	**69**	Pn	**Pn**	**07 27 20.9**	**+1.1**
ARTR				Sg	**Sg**	**07 28 55.7**	**-1.2**
AKAR	**Aktash**	**5.73**	**84**	Pn	**Pn**	**07 27 20.6**	**+0.2**
AKAR				Pg	**Pg**	**07 27 42.5**	**-1.2**
AKAR				Sg	**Sg**	**07 28 56.3**	**-1.7**
ULGR	**Ulagan, Altay**	**5.95**	**81**	Pn	**Pn**	**07 27 25.8**	**+2.4**
ULGR				Sg	**Sg**	**07 29 03.2**	**-1.8**
CUR	**Chagan-Uzun**	**6.20**	**86**	Pn	**Pn**	**07 27 28.5**	**+1.5**
CUR				Sg	**Sg**	**07 29 14.0**	**+0.8**

NNC 26 07:34:17.7±2.8, 53.51N×87.69E, h0km, mb3.7, mpv3.3, 9C-5D, Error ellipse: s-maj=19.7km s-min=11.1km az=76.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.76**	**286**	⇑P	Pn	07 34 49.4	0.0
	1.5nm,0.3s,baz=104,slow=14						
ZAA0				⇑S	Sb	07 35 13.3	-0.1
	3.7nm,0.6s,baz=99,slow=29						
KURK	**Kurchatov**	**6.25**	**247**	⇑Pn	Pn	07 35 52.4	+1.4
	1.4nm,0.4s						
KURK				⇓Sn	Sn	07 37 01.6	-1.5
	1.6nm,0.7s						
KURK				⇑Lg	Lg	07 37 34.6	
	5.2nm,0.8s						
KURBB	**Kurchatov Arra**	**6.34**	**247**	⇑Pn	Pn	07 35 53.9	+1.6
	7.7nm,0.3s						
KURBB				⇓Sn	Sn	07 37 04.7	-0.7
	6.9nm,0.6s						
KURBB				⇓Lg	Lg	07 37 38.8	
	9.0nm,0.5s						
MK31	**Makanchi Array**	**7.56**	**209**	⇓Pn	Pn	07 36 11.1	+2.0
	0.3nm,0.3s						
MK31				⇑Sn	Sn	07 37 37.6	+2.1
	0.5nm,0.5s						
MK31				⇑Lg	Lg	07 38 18.6	
	2.1nm,0.7s						
MAKZ	**Makanchi**	**7.64**	**211**	⇑Pn	Pn	07 36 10.1	-0.1
	1.9nm,0.7s						
MAKZ				⇓Sn	Sn	07 37 34.2	-3.3
	1.5nm,1.1s						
MAKZ				⇑Lg	Lg	07 38 17.5	
	2.3nm,0.8s						

PGC 26 07:42:37.4±1.7, 51.21N×130.89W, h10km, MLSn3.1/31, Mw3.7/31, 218km Wsw of Bella Bella, Bc Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG4B	**Hotspring**	**1.10**	**350**	P	Pb	07 42 56.7	-1.8
HG4B				S	Sg	07 43 09.8	-3.0
BNB	**Barry Inlet**	**1.47**	**339**	P	Pn	07 43 02.5	-1.5
BNB				S	Sn	07 43 19.4	-3.9
HOLB	**Holberg**	**1.84**	**107**	Pn	Pn	07 43 07.1	-1.9
HOLB				Sn	Sn	07 43 29.1	-3.2
HG1B	**Mitchell Dam**	**1.89**	**337**	Pn	Pn	07 43 08.2	-1.4
HG1B				Sn	Sn	07 43 29.8	-3.7
BBB	**Bella Bella**	**1.98**	**60**	Pn	Pn	07 43 09.1	-1.8
BNKB	**Banks Island**	**2.21**	**16**	Pn	Pn	07 43 11.7	-2.4
BNKB				Sn	Sn	07 43 36.6	-4.9
DIB	**Dawson Inlet,**	**2.22**	**335**	Pn	Pn	07 43 12.8	-1.4
DIB				Sn	Sn	07 43 38.8	-2.9
PHC	**Port Hardy**	**2.25**	**102**	Pn	Pn	07 43 11.9	-2.6
BPBC	**Brooks Peninsu**	**2.25**	**117**	Pn	Pn	07 43 12.5	-2.2
BNAB	**Bonilla**	**2.29**	**4**	Pn	Pn	07 43 13.1	-2.1
BNAB				Sn	Sn	07 43 38.6	-4.8
PACB	**Port Alice, BC**	**2.29**	**109**	Pn	Pn	07 43 13.4	-1.8
PACB				Sn	Sn	07 43 39.9	-3.5
BUTB	**Butedale**	**2.38**	**38**	Pn	Pn	07 43 14.4	-2.2
BUTB				Sn	Sn	07 43 41.1	-4.8
MAYB	**Maynard**	**2.50**	**108**	Pn	Pn	07 43 16.4	-1.7
HWKB	**Hawksbury Isla**	**2.62**	**23**	Pn	Pn	07 43 17.9	-1.9
HWKB				Sn	Sn	07 43 47.8	-3.8
TLCB	**Telegraph Cove**	**2.66**	**103**	Pn	Pn	07 43 18.6	-1.6
GRNB	**Grenville Isla**	**2.70**	**12**	Pn	Pn	07 43 19.2	-1.7
GRNB				Sn	Sn	07 43 49.0	-4.5
EDB	**Eliza Dome**	**2.75**	**118**	Pn	Pn	07 43 20.1	-1.5
WOSB	**Woss**	**2.94**	**109**	Pn	Pn	07 43 23.2	-1.1
RUBB	**Prince Rupert**	**3.14**	**7**	Pn	Pn	07 43 25.7	-1.2
NCRB	**Newcastle Ridg**	**3.17**	**103**	Pn	Pn	07 43 26.4	-1.1
KITB	**Kitimat**	**3.18**	**25**	Pn	Pn	07 43 25.9	-1.6
KITB				Sn	Sn	07 44 01.4	-4.0
GDR	**Gold River**	**3.42**	**113**	Pn	Pn	07 43 29.4	-1.3
SPLB	**Strathcona Par**	**3.59**	**110**	Pn	Pn	07 43 32.1	-1.0
CBB	**Campbell River**	**3.71**	**106**	Pn	Pn	07 43 34.0	-0.7
TOFB	**Tofino**	**3.81**	**121**	Pn	Pn	07 43 35.3	-0.7
BTB	**Buttle Lake**	**3.86**	**115**	Pn	Pn	07 43 35.7	-1.2
MWAB	**Mount Washingt**	**3.86**	**110**	Pn	Pn	07 43 36.3	-0.6
B012	**Ucluelet**	**4.14**	**122**	Pn	Pn	07 43 40.0	-0.6
OZB	**Mount Ozzard**	**4.14**	**121**	Pn	Pn	07 43 39.8	-0.9
TXB	**Texada**	**4.39**	**108**	Pn	Pn	07 43 42.9	-1.3
UBRB	**Upper Baezaeko**	**4.53**	**66**	Pn	Pn	07 43 45.3	-0.7
MGB	**Mount Grey**	**4.56**	**117**	Pn	Pn	07 43 46.2	-0.4
SHB	**Sechelt**	**4.77**	**107**	Pn	Pn	07 43 49.3	-0.1
NLLB	**Nanaimo Lost L**	**4.86**	**111**	Pn	Pn	07 43 50.4	0.0
FSB	**Fort Saint Jam**	**5.15**	**48**	Pn	Pn	07 43 53.8	-0.7
FSJB	**Fort St James**	**5.15**	**48**	Pn	Pn	07 43 53.8	-0.8
BIB	**Bowen Island**	**5.19**	**107**	Pn	Pn	07 43 53.7	-1.2
B010	**North Saanich**	**5.45**	**115**	Pn	Pn	07 43 57.5	-1.0
D05A	**Enumclaw**	**7.09**	**121**	Pn	Pn	07 44 21.6	+0.5
DLBC	**Dease Lake**	**7.26**	**4**	Pn	Pn	07 44 23.4	0.0
NBC5	**NorthernBC 5**	**7.93**	**34**	Pn	Pn	07 44 33.3	+0.5

*DDA **26** 07:47:20.4±0.0, 38.55N×24.21E, h6km±5km, MW3.8*
*ISK **26** 07:47:22.9, 38.62N×24.56E, h11km, ML3.4/15*
*ATH **26** 07:47:24.4, 38.60N×24.48E, h21km±5km, ML3.6/12, Error ellipse: s-maj=5.1km s-min=0.9km az=342.0*
*THE **26** 07:47:24.7, 38.56N×24.48E, h16km±1km, ML3.5/13, Error ellipse: s-maj=1.1km s-min=0.6km az=285.0*
*BEO **26** 07:47:27.1±1.0, 38.85N×24.63E, h0km, ML3.1/6*
ISC 26 07:47:24.2±1.0, 38.59N±0.02×24.51E±0.02, h18km±4km, n100, σ0s88/140, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKY	**Skiros Island**	**0.29**	**6**	P	**Pg**	**07 47 30.7**	**0.0**
SKY	**Skiros Island**	**0.29**	**6**	P	**Pg**	**07 47 30.6**	**0.0**
SKY				S	**Sg**	**07 47 35.3**	**+0.2**
SKY				AML	AML	07 47 36.5	
	comp=E,54961μm,0.3s						
SKY				AML	AML	07 47 40.6	
	comp=N,53337μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.33**	**279**	P	**Pg**	**07 47 31.0**	**-0.2**
KYMI				S	**Sb**	**07 47 36.5**	**+0.1**
	comp=N,9μm,0.3s						
KYMI	**Kymi, Euboea I**	**0.33**	**279**	P	**Pg**	**07 47 31.0**	**-0.2**
KYMI				S	**Sg**	**07 47 36.0**	**0.0**
KYMI				AML	AML	07 47 36.9	
	comp=N,18392μm,0.4s						
KYMI				AML	AML	07 47 37.6	
	comp=E,16313μm,0.3s						
DION	**Dionisos Attik**	**0.68**	**222**	P	**Pb**	**07 47 37.0**	**-0.5**
DION				S	**Sb**	**07 47 46.7**	**+0.1**
	comp=E,62μm,0.5s						
DION	**Dionisos Attik**	**0.68**	**222**	P	**Pb**	**07 47 37.0**	**-0.5**
DION				S	**Sg**	**07 47 46.4**	**-0.3**
DION				AML	AML	07 47 49.9	
	comp=E,85798μm,0.5s						
DION				AML	AML	07 47 49.9	
	comp=N,74651μm,0.5s						
PTL	**Penteli**	**0.74**	**224**	P	**Pb**	**07 47 37.0**	**-1.5**
ALNA	**Alonissos**	**0.75**	**318**	P	**Pb**	**07 47 38.7**	**-0.1**
ALNA				S	**Sb**	**07 47 48.3**	**-0.5**
ALNA				AML	AML	07 47 55.0	
	comp=E,17585μm,0.5s						
ALNA				AML	AML	07 47 55.7	
	comp=N,13332μm,0.6s						
PSRA	**Psara**	**0.83**	**93**	P	**Pn**	**07 47 41.3**	**+0.3**
PSRA				S	**Sg**	**07 47 52.0**	**+0.7**
PSRA				AML	AML	07 47 56.2	
	comp=E,5980μm,0.3s						
PSRA				AML	AML	07 47 57.8	
	comp=N,5115μm,0.3s						
ATHU	**Athens Univers**	**0.84**	**223**	P	**Pb**	**07 47 39.6**	**-0.7**
ATHU				S	**Sb**	**07 47 51.0**	**-0.2**
	comp=N,3μm,0.5s						
ATHU	**Athens Univers**	**0.84**	**223**	P	**Pb**	**07 47 39.6**	**-0.7**
ATHU				S	**Sb**	**07 47 50.7**	**-0.6**
ATH	**Athens Observa**	**0.87**	**226**	P	**Pb**	**07 47 40.5**	**-0.4**
ATH				S	**Sb**	**07 47 52.3**	**+0.1**
	comp=N,7μm,0.3s						
ATH	**Athens Observa**	**0.87**	**226**	P	**Pb**	**07 47 40.4**	**-0.4**
ATH				S	**Sb**	**07 47 52.3**	**+0.1**
ATH				AML	AML	07 47 55.8	
	comp=N,17830μm,0.2s						
ATH				AML	AML	07 47 56.0	
	comp=E,11202μm,0.3s						
VLY	**Voula,Athens**	**0.92**	**218**	P	**Pb**	**07 47 41.2**	**-0.5**
VLY				S	**Sb**	**07 47 53.7**	**+0.1**
	comp=E,11μm,0.4s						
VLY	**Voula,Athens**	**0.92**	**218**	P	**Pb**	**07 47 41.4**	**-0.3**
VLY				S	**Sb**	**07 47 53.1**	**-0.5**
VLY				AML	AML	07 47 55.6	
	comp=N,17138μm,0.4s						
VLY				AML	AML	07 47 56.9	
	comp=E,25173μm,0.4s						
EFSA	**Agios Efstrati**	**1.02**	**21**	P	**Pn**	**07 47 43.7**	**0.0**
VILL	**Villia**	**1.03**	**246**	P	**Pb**	**07 47 43.2**	**-0.4**
VILL				S	**Sn**	**07 47 58.1**	**+0.3**
	comp=E,5μm,0.5s						
VIL2	**Platees**	**1.04**	**249**	P	**Pb**	**07 47 43.5**	**-0.3**
VIL2				AML	AML	07 47 59.3	
	comp=E,10787μm,0.6s						
VIL2				AML	AML	07 48 02.4	
	comp=N,8172μm,0.6s						
LKR	**Lokris**	**1.19**	**274**	P	**Pn**	**07 47 45.2**	**-0.7**
LKR				S	**Sb**	**07 48 01.1**	**-0.1**
	comp=N,950nm,0.3s						
SIGR	**SIGRI**	**1.22**	**59**	P	**Pn**	**07 47 46.4**	**0.0**
SIGR				S	**Sg**	**07 48 04.5**	**+0.7**
	comp=N,1μm,0.5s						
SIGR	**SIGRI**	**1.22**	**59**	PN	**Pn**	**07 47 46.5**	**0.0**
SIGR				SN	**Sb**	**07 48 02.4**	**+0.2**
SIGR	**SIGRI**	**1.22**	**59**	P	**Pn**	**07 47 46.4**	**0.0**
SIGR				AML	AML	07 48 08.8	
	comp=N,3445μm,0.5s						
SIGR				AML	AML	07 48 08.8	
	comp=E,2231μm,0.5s						
CHOS	**Chios island**	**1.23**	**99**	P	**Pb**	**07 47 46.9**	**0.0**
CHOS				S	**Sn**	**07 48 02.8**	**+0.1**
	comp=E,2μm,0.4s						
CHOS	**Chios island**	**1.23**	**99**	PN	**Pn**	**07 47 46.4**	**-0.2**
CHOS				SN	**Sn**	**07 48 03.0**	**+0.3**
CHOS	**Chios island**	**1.23**	**99**	P	**Pn**	**07 47 46.8**	**+0.2**
NEO	**Neokhori**	**1.23**	**306**	P	**Pb**	**07 47 47.0**	**0.0**
NEO				S	**Sb**	**07 48 02.5**	**-0.1**
	comp=E,2μm,0.4s						
NEO	**Neokhori**	**1.23**	**306**	P	**Pn**	**07 47 46.7**	**+0.1**
NEO				S	**Sb**	**07 48 01.6**	**-1.1**
NEO				AML	AML	07 48 08.2	
	comp=N,3948μm,0.3s						
NEO				AML	AML	07 48 10.5	
	comp=E,2701μm,0.3s						
XOR	**Xorichti**	**1.29**	**308**	P	**Pn**	**07 47 47.6**	**+0.2**
XOR				S	**Sn**	**07 48 04.9**	**+0.7**
	comp=E,1μm,0.5s						
XOR	**Xorichti**	**1.29**	**308**	P	**Pn**	**07 47 47.2**	**-0.1**
XOR				S	**Sb**	**07 48 03.4**	**-0.8**
XOR				AML	AML	07 48 10.6	
	comp=E,2262μm,0.4s						
XOR				AML	AML	07 48 11.7	
	comp=N,2322μm,0.4s						
LOUT	**Loutraki**	**1.35**	**244**	P	**Pn**	**07 47 48.4**	**+0.3**
LOUT				S	**Sn**	**07 48 05.6**	**0.0**
	comp=N,3μm,0.5s						
LOUT	**Loutraki**	**1.35**	**244**	P	**Pn**	**07 47 48.5**	**+0.3**
LIA	**Limnos Island**	**1.41**	**22**	P	**Pn**	**07 47 49.0**	**0.0**
LIA	**Limnos Island**	**1.41**	**22**	P	**Pn**	**07 47 48.9**	**-0.1**
LIA				AML	AML	07 48 13.2	
	comp=E,1987μm,0.3s						
LIA				AML	AML	07 48 14.3	
	comp=N,2235μm,0.2s						
AXAR	**Agios Charalam**	**1.46**	**278**	P	**Pn**	**07 47 49.8**	**+0.1**
EPID	**Epidavros**	**1.46**	**229**	P	**Pn**	**07 47 49.8**	**+0.1**
PAIG	**Paliouri**	**1.49**	**335**	P	**Pn**	**07 47 50.5**	**+0.4**
PRK	**Paraskevi**	**1.52**	**64**	P	**Pb**	**07 47 51.9**	**0.0**
PRK				S	**Sb**	**07 48 10.9**	**0.0**
	comp=N,1μm,0.9s						
KOCA	**Canakkale, Ayv**	**1.56**	**54**	P	**Pn**	**07 47 50.7**	**-0.4**
KOCA				S	**Sg**	**07 48 14.1**	**-0.7**
KOCA				*i* AML	AML	07 48 22.0	
	comp=N,357nm,0.5s						
KOCA				*i* AML	AML	07 48 24.0	
	comp=N,385nm,0.6s						
ZEYE	**Izmir, Urla-Ze**	**1.60**	**102**	P	**Pn**	**07 47 52.5**	**+0.9**
ZEYE				*i* AML	AML	07 48 21.0	
	comp=N,196nm,0.5s						
ZEYE				*i* AML	AML	07 48 25.0	
	comp=N,176nm,0.5s						
KRND	**KRANIDI**	**1.61**	**222**	P	**Pn**	**07 47 52.0**	**+0.3**
URLA	**Izmir**	**1.65**	**97**	PN	**Pn**	**07 47 52.2**	**-0.1**
URLA				SN	**Sn**	**07 48 13.5**	**+0.4**
URLA	**Izmir**	**1.65**	**97**	P	**Pn**	**07 47 50.8**	**-1.5**
URLA				S	**Sg**	**07 48 16.6**	**-1.0**
URLA				*i* AML	AML	07 48 23.0	
	comp=N,355nm,0.5s						
URLA				*i* AML	AML	07 48 26.0	
	comp=N,248nm,0.8s						
APE	**Apeiranthos**	**1.72**	**152**	P	**Pn**	**07 47 53.3**	**+0.1**
APE	**Apeiranthos**	**1.72**	**152**	PN	**Pn**	**07 47 53.7**	**+0.5**
APE				SN	**Sb**	**07 48 16.1**	**-0.4**
BOZC	**Bozcaada**	**1.73**	**43**	PN	**Pn**	**07 47 53.1**	**-0.4**
BOZC				SN	**Sn**	**07 48 15.1**	**0.0**
BOZC	**Bozcaada**	**1.73**	**43**	P	**Pn**	**07 47 53.2**	**-0.2**
BOZC				*i* AML	AML	07 48 23.0	
	comp=N,209nm,0.3s						
BOZC				*i* AML	AML	07 48 27.0	
	comp=N,240nm,0.5s						
OUR	**Ouranopolis**	**1.79**	**347**	P	**Pn**	**07 47 54.7**	**+0.4**
OUR	**Ouranopolis**	**1.79**	**347**	P	**Pn**	**07 47 54.6**	**+0.3**
AYVA	**Ayvalik**	**1.85**	**66**	P	**Pb**	**07 47 58.4**	**+1.0**
AYVA				S	**Sg**	**07 48 22.2**	**-1.6**
AYVA				*i* AML	AML	07 48 29.0	
	comp=N,200nm,0.7s						
AYVA				*i* AML	AML	07 48 39.0	
	comp=N,217nm,0.6s						
EZN	**Ezine**	**1.88**	**48**	PN	**Pn**	**07 47 55.2**	**-0.2**
EZN				SN	**Sn**	**07 48 18.7**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.91**	**284**	P	**Pb**	**07 47 57.6**	**-0.9**
GADA	**Gvkgeada**	**1.93**	**33**	PN	**Pn**	**07 47 56.0**	**-0.1**
GADA				SN	**Sn**	**07 48 20.1**	**+0.2**
DKL	**Dikili**	**1.93**	**75**	PN	**Pn**	**07 47 56.2**	**+0.1**
GOKA	**anakkale-Gk**	**1.94**	**34**	P	**Pn**	**07 47 56.5**	**+0.3**
GOKA				S	**Sg**	**07 48 26.7**	**+0.1**
DGB	**zmir**	**1.94**	**105**	P	**Pn**	**07 47 56.0**	**-0.3**
DGB				S	**Sg**	**07 48 27.6**	**+0.9**
BAYC	**CANAKKALE_Bayr**	**1.96**	**53**	P	**Pn**	**07 47 56.6**	**0.0**
BLCB	**Balcova**	**2.00**	**95**	PN	**Pn**	**07 47 57.4**	**+0.4**
THAS	**Thassos island**	**2.02**	**5**	P	**Pn**	**07 47 57.1**	**-0.3**
ZEDA	**zmir-Bergama**	**2.04**	**78**	S	**Sg**	**07 48 28.8**	**-1.2**
LIT	**Litokhoron**	**2.18**	**315**	P	**Pn**	**07 48 00.1**	**+0.5**
BUHA	**Balikesir, Bur**	**2.20**	**65**	P	**Pb**	**07 48 01.7**	**-1.7**
BUHA				*i* AML	AML	07 48 46.0	
	comp=N,119nm,1.3s						
BUHA				*i* AML	AML	07 48 49.0	
	comp=N,140nm,0.7s						
KOKK	**Kokkinochori,**	**2.27**	**350**	P	**Pn**	**07 48 01.1**	**+0.4**
HORT	**Hortiatis**	**2.29**	**332**	P	**Pn**	**07 48 02.0**	**+0.9**
HORT				S	**Sn**	**07 48 29.0**	**+0.1**
HORT	**Hortiatis**	**2.29**	**332**	PN	**Pn**	**07 48 01.6**	**+0.5**
GCAM	**G?zelcaml?**	**2.32**	**112**	P	**Pn**	**07 48 02.0**	**+0.5**
GCAM				S	**Sb**	**07 48 33.3**	**-0.6**
GCAM				*i* AML	AML	07 48 43.0	
	comp=N,72nm,0.7s						
GCAM				*i* AML	AML	07 48 52.0	
	comp=N,89nm,1.3s						
GELI	**Tayfur-Gelibol**	**2.36**	**39**	PN	**Pn**	**

NNA				S		Sn	07 54 44.0	-2.9
	596nm,0.5s,baz=231,slow=21,SNR=13							
NNA	**Nana**	**2.79**	**308**	*eP*		**Pn**	**07 54 11.9**	**-1.9**
CZSB	**Cruzeiro do Su**	**6.26**	**18**	Pn		**Pn**	**07 54 57.8**	**-2.9**
PB12	**IPOC Station P**	**6.35**	**140**	Pn		**Pn**	**07 55 01.6**	**-0.4**
PB16	**IPOC Station P**	**6.70**	**134**	Pn		**Pn**	**07 55 06.7**	**-0.4**
LPAZ	**La Paz**	**6.75**	**113**	P		**Pn**	**07 55 08.7**	**+0.9**
	6.4nm,0.3s,baz=306,slow=8.7,SNR=86							
LPAZ	**La Paz**	**6.75**	**113**	Pn		**Pn**	**07 55 06.9**	**-0.9**
LPAZ	**La Paz**	**6.75**	**113**	*eP*		**Pn**	**07 55 08.6**	**+0.9**
ATAH	**Atahualpa**	**7.55**	**330**	P		**Pn**	**07 55 19.9**	**+1.4**
	9.4nm,0.3s,baz=166,slow=3.5,SNR=34							
TA02	**Huaiquique**	**7.78**	**147**	Pn		**Pn**	**07 55 19.2**	**-2.0**
GO01	**Chusmiza**	**7.85**	**139**			**Pn**	**07 55 19.3**	**-3.4**
TA01	**Diego Aracena**	**8.00**	**149**	Pn		**Pn**	**07 55 22.2**	**-2.0**
PB01	**IPOC Station P**	**8.75**	**147**	Pn		**Pn**	**07 55 32.6**	**-1.9**
ETMB	**Extrema**	**9.10**	**66**	Pn		**Pn**	**07 55 36.7**	**-2.5**
PB09	**IPOC Station P**	**9.50**	**148**	Pn		**Pn**	**07 55 45.0**	**+0.1**
PB04	**IPOC Station P**	**9.54**	**154**	Pn		**Pn**	**07 55 43.3**	**-2.1**
BOSC	**San Juan Bosco**	**11.20**	**340**	Pn		**Pn**	**07 56 03.9**	**-4.1**
ARNL	**Arenillas**	**11.47**	**331**	Pn		**Pn**	**07 56 10.2**	**-1.3**
PB14	**IPOC Station P**	**11.53**	**161**	Pn		**Pn**	**07 56 11.3**	**-1.2**
PORT	**Chimborazo Vol**	**12.88**	**341**			**Pn**	**07 56 30.7**	**+0.1**
CHSH	**Refugio Sur-Vo**	**12.88**	**341**	Pn		**Pn**	**07 56 31.1**	**+0.4**
SIV	**San Ignacio**	**13.28**	**101**	P		**Pn**	**07 56 34.3**	**-1.1**
	1.3nm,0.4s,baz=279,slow=12,SNR=6.1							
SLOR	**San Lorenzo -**	**13.49**	**343**			**Pn**	**07 56 38.3**	**-0.3**
VILB	**Vilhena**	**14.04**	**88**	Pn		**Pn**	**07 56 43.0**	**-2.4**
PAC1	**Pacto, Paraso**	**14.52**	**343**	*eP*		**P**	**07 56 56.9**	**+1.4**
PTLB	**Pontes e Lacer**	**15.07**	**98**	Pn		**Pn**	**07 56 57.3**	**-1.1**
PTLB				IAmb		IAmb	07 57 00.9	
	comp=Z,1.4nm,0.9s							
LCO	**Las Campanas**	**15.62**	**167**			**P**	**07 57 08.2**	**+0.5**
LCO				IAmb		IAmb	07 57 09.9	
	comp=Z,14nm,1.1s							
MACA	**Manacapuru-AM**	**17.31**	**54**			**P**	**07 57 24.0**	**-2.1**
MACA				IAmb		IAmb	07 57 37.8	
	comp=Z,13nm,0.6s							
PRAC	**Prado**	**17.34**	**359**	*eP*		**Pn**	**07 57 31.8**	**+5.1**
YOTC	**Yotoco, Valle**	**17.69**	**354**	*eP*		**Pn**	**07 57 37.3**	**+6.3**
ZON	**Zonda**	**18.54**	**164**	P		**Pn**	**07 57 40.3**	**-0.7**
GUY2C	**Guyana, Caldas**	**18.86**	**358**	*eP*		**Pn**	**07 57 45.6**	**+0.3**
VA06	**Catapilco**	**18.98**	**171**	P		**Pn**	**07 57 46.8**	**+0.8**
VA06				IAmb		IAmb	07 57 51.3	
	comp=Z,13nm,0.8s							
RUSC	**La Rusia**	**19.56**	**5**	*eP*		**P**	**07 57 50.9**	**-0.4**
H03N1	**Juan Fernandez**	**20.00**	**191**	T		T	08 17 15.9	
	baz=12,slow=74,SNR=145							
H03N2	**Juan Fernandez**	**20.00**	**191**	T		T	08 17 16.9	
	baz=12,slow=74,SNR=142							
H03N3	**Juan Fernandez**	**20.02**	**191**	T		T	08 17 15.5	
	baz=12,slow=74,SNR=169							
PTBC	**PUERTO BERRIO,**	**20.15**	**0**	*eP*		**P**	**07 57 55.7**	**-1.5**
LMEL	**Las Melosas**	**20.41**	**169**	P		Pn	07 58 02.2	-0.8
LMEL				IAmb		IAmb	07 58 06.1	
	comp=Z,9.4nm,0.8s							
PAMC	**Pamplona, Colo**	**21.03**	**5**	*eP*		**P**	**07 58 08.4**	**+1.3**
ZARC	**Zaragoza, Cauc**	**21.10**	**359**	*eP*		**P**	**07 58 05.8**	**-1.6**
BO02	**Sierra Bellavi**	**21.24**	**171**	P		**P**	**07 58 11.0**	**+2.2**
BO02				IAmb		IAmb	07 58 32.6	
	comp=Z,18nm,1.4s							
UREC	**San Jos de Ur**	**21.37**	**357**	*eP*		**P**	**07 58 14.9**	**+4.6**
OCAC	**Ocana**	**21.87**	**3**	*eP*		**P**	**07 58 16.4**	**+0.6**
SOCV	**Socops**	**22.20**	**10**	*eP*		**P**	**07 58 20.4**	**+1.3**
BAUV	**El Baul**	**23.46**	**16**	P		**P**	**07 58 29.6**	**-1.9**
BAUV				IAmb		IAmb	07 58 32.1	
	comp=Z,8.0nm,0.8s							
SJCC	**San Jacinto, C**	**23.49**	**359**	*eP*		**P**	**07 58 35.8**	**+4.0**
PLCA	**Paso Flores**	**27.12**	**173**	P		**P**	**07 59 03.3**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=320,slow=7.9,SNR=4.6							
	comp=Z,1.6nm,0.8s							
PLCA	**Paso Flores**	**27.12**	**173**	P		**P**	**07 59 05.1**	**+0.7**
TX31	**Lajitas Ar. Si**	**51.20**	**327**	P		**P**	**08 02 24.8**	**+0.7**
TXAR	**Lajitas Array**	**51.20**	**327**	P		**P**	**08 02 24.1**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=147,slow=9.5,SNR=6.0							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**51.20**	**327**	P		**P**	**08 02 24.4**	**+0.3**
VNA3	**Neumayer Olymp**	**69.11**	**162**	P		**P**	**08 04 26.7**	**+1.0**
VNA1	**Neumayer--Stat**	**69.36**	**161**	P		**P**	**08 04 27.7**	**+0.4**
VNA1	**Neumayer--Stat**	**69.36**	**161**	pP		pP	08 04 47.4	-6.5
VNA2	**Neumayer--Watz**	**69.72**	**161**	P		**P**	**08 04 30.2**	**+0.7**
	baz=323,slow=0.6							
SNAA	**Sanae**	**71.33**	**162**	P		**P**	**08 04 39.4**	**0.0**
SNAA	**Sanae**	**71.33**	**162**	P		**P**	**08 04 40.0**	**+0.6**
TROLL	**Troll, Antarti**	**73.05**	**162**	P		**P**	**08 04 50.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**80.17**	**74**	P		**P**	**08 05 33.4**	**+2.8**
	comp=Z,1.6nm,0.4s,baz=231,slow=6.1,SNR=1.0							
	comp=Z,1.6nm,0.4s							
ASAR	**Alice Springs**	**133.53**	**217**	PKP		**PKPdf**	**08 12 36.3**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=103,slow=2.3,SNR=4.7							
WRA	**Warramunga Arr**	**136.05**	**221**	PKP		**PKPdf**	**08 12 41.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=129,slow=2.1,SNR=13							

NEIC ***26*** *08:13:31.3±3.0, 18°.71N±0°.07×67°.59W±0°.05, h22km±12km, Error ellipse: s-maj=10.5km s-min=5.0km az=210.0*
RSPR ***26*** *08:13:32.4, 18°.70N×67°.67W, h31km±5km, MD3.5/3*
OSPL ***26*** *08:13:37.9±2.6, 18°.91N×67°.46W, h31km±214km, ML3.6*
IDC ***26*** *08:13:40.0±10.0, 19°.08N×68°.69W, h0km, mb3.4/3, mbtmp3.6/4, ML2.9/1, Error ellipse: s-maj=242.1km s-min=51.8km az=86.0*

ISC 26 08:13:32.7±0.8, 18°.70N±0°.07×67°.60W±0°.04, h27km, n54, σ1.8s82/54, mb3.4/3, 2C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.34**	**159**	*eP*	**Pb**	**08 13 40.0**	**-0.4**
PRSN	**Puerto Rico Se**	**0.65**	**138**	*eP*	**Pb**	**08 13 44.0**	**-1.5**
PRSN	**Puerto Rico Se**	**0.65**	**138**		**Pb**	**08 13 44.0**	**-1.5**
LSP	**Las Mesas**	**0.72**	**137**	*eP*	**Pb**	**08 13 45.1**	**-1.5**
LSP	**Las Mesas**	**0.72**	**137**	*eS*	**Sb**	**08 13 54.6**	**-1.5**
CRPR	**Cabo Rojo, PR**	**0.83**	**146**	*eP*	**Pn**	**08 13 46.9**	**-1.7**
CRPR	**Cabo Rojo, PR**	**0.83**	**146**	*eS*	**Sb**	**08 13 57.9**	**-1.6**
CRPR	**Cabo Rojo, PR**	**0.83**	**146**		**Pn**	**08 13 46.9**	**-1.7**
CRPR					**Sb**	**08 13 57.9**	**-1.6**
GBPR	**Guanica, Bosqu**	**1.00**	**136**	*eP*	**Pn**	**08 13 49.4**	**-1.5**
GBPR	**Guanica, Bosqu**	**1.00**	**136**	*eS*	**Sn**	**08 14 02.3**	**-1.7**
SJG	**San Juan**	**1.50**	**113**		**Pn**	**08 13 55.8**	**-2.0**
PDPR	**Patillas Dam,**	**1.65**	**114**	*eP*	**Pn**	**08 13 58.4**	**-1.4**
PDPR	**Patillas Dam,**	**1.65**	**114**	*eS*	**Sn**	**08 14 18.9**	**-1.2**
PDPR	**Patillas Dam,**	**1.65**	**114**		**Pn**	**08 13 58.4**	**-1.4**
PDPR					**Sn**	**08 14 18.9**	**-1.2**
PDPR	**Patillas Dam,**	**1.65**	**114**	IAML		08 14 20.9	
	comp=E,809nm,0.1s						
DR12	**Loma Pena Alta**	**1.69**	**273**	Pn	**Pn**	**08 13 58.4**	**-2.1**
SDD	**Santo Domingo**	**2.21**	**264**		**Pn**	**08 14 05.8**	**-1.7**
SDD	**Santo Domingo**	**2.21**	**264**	*i* P	**Pb**	**08 14 13.1**	**+1.2**
BANI	**BANI**	**2.63**	**264**		**Pn**	**08 14 11.4**	**-2.1**
BANI	**BANI**	**2.63**	**264**	*eS*	**Sb**	**08 14 49.2**	**-2.1**
BANI				IAML		08 14 58.5	
	comp=Z,192nm,0.5s						
SC01	**Santiago de Io**	**3.04**	**284**		**Pn**	**08 14 18.2**	**-0.9**
SC01				IAML		08 15 20.3	
	comp=N,460nm,0.8s						
SC01				IAML		08 15 25.7	
	comp=E,424nm,0.6s						
SC01	**Santiago de Io**	**3.04**	**284**	*i* P	**Pb**	**08 14 25.2**	**-1.0**
SC01				IAML		08 15 20.7	
	comp=Z,196nm,0.5s						
SDDR	**Presa de Saban**	**3.50**	**275**		**Pn**	**08 14 22.9**	**-2.5**
SDDR				IAML		08 15 30.1	
	comp=Z,172nm,1.1s						
SDDR				IAML		08 15 36.7	
	comp=Z,171nm,0.6s						
SDDR	**Presa de Saban**	**3.50**	**275**	*eP*	**Pb**	**08 14 30.8**	**-3.2**
SDDR	**Presa de Saban**	**3.50**	**275**	*i* P	**Pb**	**08 14 31.1**	**-3.0**
SDDR				IAML		08 15 31.3	
	comp=Z,102nm,0.4s						
LOPE2	**Hotel El Peder**	**3.99**	**261**	*i* P	**Pb**	**08 14 38.9**	**-3.5**
LOPE2				IAML		08 15 39.7	
	comp=Z,43nm,4.8s						
GRTK	**Grand Turk**	**4.34**	**311**	Pn	**Pn**	**08 14 35.9**	**-1.0**
GRTK				IAML		08 15 30.9	
	comp=Z,125nm,0.4s						
GRTK				IAML		08 15 52.4	
	comp=Z,123nm,1.7s						
GRTK	**Grand Turk**	**4.34**	**311**	*i* P	**Pn**	**08 14 38.0**	**+1.1**
GRTK				*eS*	**Sn**	**08 15 26.6**	**0.0**
GRTK				IAML		08 15 34.7	
	comp=Z,130nm,1.6s						
SMRT	**St. Maarten**	**4.35**	**98**	Pn	**Pn**	**08 14 36.5**	**-0.5**
SMRT				IAML		08 15 33.8	
	comp=E,129nm,0.3s						
PAPH	**Port-au-Prince**	**4.46**	**268**	*i* P	Pn	08 14 43.9	+5.3
PAPH				IAML		08 15 57.1	
	comp=Z,24nm,0.6s						
ABD	**La Joyeuse, An**	**6.24**	**110**	Pn	**Pn**	**08 15 03.1**	**+0.2**
CBE	**Ff, Capester**	**6.29**	**114**	Pn	**Pn**	**08 15 04.7**	**+0.9**
FDF	**Fort de France**	**7.33**	**122**	Pn	**Pn**	**08 15 17.9**	**-0.2**
BIM	**Bigot**	**7.52**	**123**	Pn	**Pn**	**08 15 20.3**	**-0.3**
DABV	**Dabajuro**	**8.27**	**201**	*eP*	**Pn**	**08 15 33.4**	**+2.5**
BIRV	**Birongo**	**8.28**	**171**		**Pn**	**08 15 32.2**	**+1.2**
GRGR	**Grenville**	**8.69**	**138**	Pn	**Pn**	**08 15 37.0**	**+0.3**
BAUV	**El Baul**	**9.71**	**183**		**Pn**	**08 15 51.8**	**+1.1**
SOCV	**Socops**	**10.83**	**197**	*eP*	**Pn**	**08 16 09.3**	**+3.2**
BRRC	**Barranca, Sant**	**12.97**	**208**	*eP*	**Pn**	**08 16 35.2**	**-0.1**
BARC	**Barichara**	**13.21**	**205**	*eP*	**Pn**	**08 16 40.4**	**+1.6**
UREC	**San Jos de Ur**	**13.34**	**216**	*eP*	**Pn**	**08 16 41.7**	**+1.4**
RUSC	**La Rusia**	**13.81**	**203**	*eP*	**Pn**	**08 16 47.2**	**0.0**
PTBC	**PUERTO BERRIO,**	**13.81**	**210**	*eP*	**Pn**	**08 16 47.3**	**+0.5**
060A	**Indiantown**	**14.38**	**308**	Pn	**Pn**	**08 16 52.7**	**-1.8**
SPBC	**San Pablo de B**	**14.43**	**207**	*eP*	**Pn**	**08 16 55.9**	**+0.6**
CBOC	**Ciudad Bolivar**	**15.17**	**214**	*eP*	**Pn**	**08 17 03.0**	**-2.4**
ROSC	**El Rosal**	**15.26**	**206**	Pn	**P**	**08 17 16.2**	**+4.8**
	comp=Z,1.1nm,0.3s,baz=310,slow=23,SNR=4.5						
	comp=Z,5.7nm,0.5s						
GUY2C	**Guyana, Caldas**	**15.39**	**210**	*eP*	**Pn**	**08 17 09.7**	**+1.1**
PRAC	**Prado**	**16.51**	**206**	*eP*	**P**	**08 17 26.1**	**+1.1**
FLOC	**Florencia**	**18.76**	**206**	*eP*	**Pn**	**08 17 52.3**	**+1.9**
TXAR	**Lajitas Array**	**34.48**	**295**	P	**P**	**08 20 20.5**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=114,slow=9.0,SNR=5.4						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**42.72**	**313**	P	P	08 21 31.3	+3.5
	comp=Z,0.2nm,0.5s,baz=131,slow=9.7,SNR=2.2						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**48.03**	**305**	P	**P**	**08 22 12.6**	**+2.7**
	comp=Z,0.5nm,0.6s,baz=104,slow=7.5,SNR=6.6						
	comp=Z,0.5nm,0.6s						

HEL 26 08:15:12.5±0.1, 62°.52N×25°.56E, h0km, ML1.4, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF	**Keuruu**	**0.48**	**222**	PG	Pg	08 15 21.4	-0.3
KEF				SG	Sg	08 15 27.5	-0.3
KAF	**Kangasniemi**	**0.54**	**139**	PG	Pg	08 15 22.1	-0.7
KAF				SG	Sg	08 15 29.4	-0.4
FIA0	**FINESS Array S**	**1.11**	**167**	PG	Pg	08 15 32.8	-0.9
FIA0				SB	Sg	08 15 47.2	-0.9
VAF	**Ylistaro**	**1.43**	**293**	PG	Pn	08 15 38.2	-1.4
	baz=113						
VAF				MSG		08 15 55.5	
	comp=Z,1.6nm,0.2s						
VAF				SN	Sg	08 15 57.5	-0.7
OUF	**Merijarvi**	**1.89**	**349**	PG	Pn	08 15 46.8	+0.9
OUF				MSG		08 16 08.7	
	comp=Z,1.7nm,0.2s						
OUF				SG	Sn	08 16 10.4	0.0
PVF	**Pernaja**	**1.99**	**176**	MSG		08 16 11.6	
	comp=Z,2.8nm,0.2s						
PVF				SG	Sb	08 16 15.0	+0.2
OBF8	**Ulkokalla**	**2.05**	**333**	PG	Pn	08 15 48.9	+0.8
OBF8				SG	Sb	08 16 15.9	-0.6
OBF0	**Syolatti, Pyha**	**2.07**	**344**	PG	Pb	08 15 50.0	-0.9
OBF0				SG	Sb	08 16 16.4	-0.7
VJF	**Virojoki**	**2.21**	**153**	MSG		08 16 17.8	
	comp=Z,1.9nm,0.2s						
VJF				SG	Sb	08 16 20.9	-0.2
OBF4	**Vikkela, Lumij**	**2.31**	**355**	SG	Sb	08 16 23.1	-0.9
RAF	**Rauma**	**2.35**	**232**	MSG		08 16 21.9	
	comp=Z,1.6nm,0.2s						
RAF				SG	Sb	08 16 24.7	-0.4
MEF	**Metsahovi**	**2.38**	**194**	MSG		08 16 22.7	
	comp=Z,1.6nm,0.2s						
MEF				SG	Sb	08 16 25.2	-0.8
OUL	**Oulu**	**2.58**	**3**	SB	Sb	08 16 29.8	-1.9
RMF	**Romuvaara**	**2.60**	**47**	PB	Pn	08 15 57.1	+1.4
JOF	**Joensuu**	**2.68**	**79**	PB	Pn	08 15 58.3	+1.4
JOF				SB	Sb	08 16 33.0	-1.7
HUSU	**Husum**	**3.01**	**289**	SG	Sb	08 16 43.9	-0.3
ARBE	**Arbavere**	**3.10**	**176**	SG	Sb	08 16 46.8	0.0
VSU	**Vasula**	**4.12**	**171**	PN	Pn	08 16 16.2	-0.4
PAJU	**Pajala**	**4.64**	**348**	PN	Pn	08 16 24.8	+1.0

HEL 26 08:15:54.6±0.3, 67°.17N×20°.70E, h0km, ML1.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAJU	**Pajala**	**0.96**	**98**	PG	Pg	08 16 11.9	-1.0
LANU	**Lannavaara**	**1.01**	**29**	SN	Sn	08 16 31.6	+0.6
KLF	**Kolari**	**1.27**	**86**	PG	Pg	08 16 17.0	-1.9
	baz=266						
KLF				SB	Sg	08 16 34.5	-0.9
HEF	**Hetta**	**1.68**	**41**	PG	Pn	08 16 24.2	-0.9
HEF				MSG		08 16 44.6	
	comp=Z,2.0nm,0.2s						
HEF				SN	Sn	08 16 46.1	-1.2
TOF	**Tornio**	**1.81**	**126**	SN	Sn	08 16 51.0	+0.3
TOF	**Tornio**	**1.81**	**126**	PG	Pn	08 16 27.0	0.0
TOF				MSG		08 16 48.8	
	comp=Z,2.0nm,0.2s						
TOF				SG	Sn	08 16 51.0	+0.3
KIF	**Kilpisjarvi**	**1.84**	**1**	PG	Pb	08 16 28.4	-0.7
KIF				MSG		08 16 50.6	
	comp=Z,2.3nm,0.2s						
KIF				SG	Sg	08 16 53.3	-0.4
KTK1	**Kautokeino**	**2.08**	**26**	PG	Pn	08 16 31.5	+0.8
KTK1				SG	Sb	08 16 58.8	-0.6
RNF	**Rovaniemi**	**2.17**	**103**	SN	Sb	08 17 01.2	-0.9
RNF	**Rovaniemi**	**2.17**	**103**	PG	Pn	08 16 33.0	+1.1
RNF				SG	Sb	08 17 01.2	-0.9
SGF	**Sodankyl**	**2.28**	**80**	SG	Sb	08 17 04.6	-0.5
BURU	**Burvik**	**2.62**	**174**	PN	Pn	08 16 38.3	+0.3
ARA0	**ARCESS Array S**	**2.97**	**35**	PG	Pb	08 16 48.0	-0.3
	baz=217						
ARA0				SB	Sb	08 17 23.2	-1.8
OBF8	**Ulkokalla**	**3.07**	**157**	PN	Pn	08 16 43.5	-0.8
OBF8				SB	Sb	08 17 26.3	-1.6

SKO 26 08:17:12.3, 41°.71N×22°.32E, h16km, M0.8, ML1.2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STIP	**Stip**	**0.10**	**261**	*i* Pg	Pg	08 17 15.8	0.0
STIP				*i* Sg	Sg	08 17 18.1	0.0
VAY	**Valandovo**	**0.43**	**154**	*i* Pg	Pg	08 17 21.2	+0.2
VAY				*i* Sg	Sg	08 17 27.1	+0.2
VAY				*e*Lg	Lg	08 17 27.2	
	comp=E,22nm,0.4s						
VAY				*e*Lg	Lg	08 17 27.9	
	comp=N,21nm,0.4s						
KNT	**Kendrikon**	**0.70**	**141**	*i* Pg	Pb	08 17 26.2	+0.1
KNT				*i* Sg	Sg	08 17 35.1	-0.1
VTS	**Vitosha**	**1.13**	**37**	*i* Sg	Sn	08 17 49.0	+0.1
VTS				*e*Pg	Pg	08 17 34.3	+0.1

ROM 26 08:18:52.6±0.1, 42°.806N±0°.004×13°.246E±0°.007, h6km, ML2.4/27, 21C-12D, Error ellipse: s-maj=0.5km s-min=0.3km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**286**	P	Pg	08 18 55.4	+0.5
NRCA				AML	AML		
	comp=E,8380μm,0.8s						
NRCA				AML	AML		
	comp=E,8970μm,0.8s						
NRCA				AML	AML		
	comp=N,12250μm,0.1s						
NRCA				AML	AML		
	comp=N,13800μm,0.1s						
NRCA				AML	AML		
	comp=E,8380μm,0.8s						
MMO1	**Montemonaco**	**0.11**	**32**	P	Pg	08 18 55.5	+0.5
MMO1				S	Sg	08 18 57.5	+0.8
MMO1				AML	AML		
	comp=E,9500μm,0.7s						
MMO1				AML	AML		
	comp=N,5630μm,0.5s						
MMO1				AML	AML		
	comp=E,9505μm,0.7s						
MMO1				AML	AML		
	comp=E,9500μm,1.3s						
MC2	**Monte Cornacci**	**0.11**	**339**	P	Pg	08 18 55.6	+0.4
MC2				S	Sg	08 18 58.0	+1.0
MC2				AML	AML		
	comp=N,3675μm,0.3s						
MC2				AML	AML		
	comp=E,3675μm,0.3s						
MC2				AML	AML		
	comp=N,3670μm,0.3s						
T1243	**Rocca Santa Ma**	**0.18**	**126**	P	Pg	08 18 57.3	+1.0
T1243				S	Sg	08 19 00.7	+1.9
T1243				AML	AML		
	comp=E,5115μm,0.3s						
T1243				AML	AML		
	comp=N,4330μm,0.2s						
T1243				AML	AML		
	comp=N,2540μm,0.2s						
T1243				AML	AML		
	comp=E,3430μm,0.3s						
LNSS	**Leonessa**	**0.25**	**217**	P	Pg	08 18 58.5	+0.9
LNSS				S	Sb	08 19 03.3	-1.0
FDMO	**Fiordimonte**	**0.26**	**333**	P	Pg	08 18 58.0	+0.4
FDMO				S	Sg	08 19 02.5	+1.4
FDMO				AML	AML		
	comp=E,894μm,0.2s						
FDMO				AML	AML		
	comp=N,886μm,0.7s						
GUMA	**Gualdo di Mace**	**0.26**	**14**	P	Pg	08 18 58.7	+0.9
GUMA				S	Sb	08 19 03.3	-1.3
GUMA				AML	AML		
	comp=E,2670μm,0.2s						
GUMA				AML	AML		
	comp=N,2015μm,0.5s						
GUMA				AML	AML		
	comp=N,1815μm,0.3s						
GUMA				AML	AML		
	comp=N,2015μm,1.5s						
GUMA				AML	AML		
	comp=E,2520μm,0.3s						
CSP1	**Cessapalombo**	**0.29**	**354**	P	Pg	08 18 58.6	+0.3
CSP1				S	Sg	08 19 03.5	+1.4
CSP1				AML	AML		
	comp=N,1056μm,0.4s						
CSP1				AML	AML		
	comp=E,922μm,0.2s						
CSP1				AML	AML		
	comp=N,1055μm,0.4s						
CSP1				AML	AML		
	comp=E,920μm,0.2s						
CAMP	**Campotosto**	**0.30**	**156**	P	Pg	08 18 59.3	+0.9
CAMP				S	Sb	08 19 04.1	-1.4
CAMP				AML	AML		
	comp=E,318μm,1.0s						
CAMP				AML	AML		
	comp=N,320μm,0.6s						
CAMP				AML	AML		
	comp=N,320μm,0.6s						
RM33	**Pellescritta (**	**0.30**	**185**	P	Pg	08 18 59.3	+0.9
RM33				S	Sb	08 19 04.6	-1.0
RM33				AML	AML		
	comp=E,572μm,0.3s						
RM33				AML	AML		
	comp=N,532μm,0.4s						
RM33				AML	AML		
	comp=E,572μm,0.3s						
RM33	**Pellescritta (**	**0.30**	**185**	P	Pb	08 18 59.5	-0.9
RM33				S	Sb	08 19 04.7	-0.9
RM33				AML	AML		
	comp=E,572μm,0.3s						
RM33				AML	AML		
	comp=N,532μm,0.4s						
RM33				AML	AML		
	comp=E,572μm,0.3s						
RM33				AML	AML		
	comp=N,532μm,0.4s						
RM33				AML	AML		
	comp=E,572μm,0.3s						
RM33				AML	AML		
	comp=N,532μm,0.4s						
CESI	**CESI - Serrava**	**0.32**	**308**	P	Pg	08 18 59.3	+0.4
CESI				S	Sg	08 19 04.3	+1.2
CESI				AML	AML		
	comp=E,1770μm,0.6s						
CESI				AML	AML		
	comp=N,3465μm,0.5s						
CESI				AML	AML		
	comp=E,1770μm,1.4s						
TERO	**Teramo**	**0.32**	**125**	P	Pg	08 18 59.4	+0.5
TERO				S	Sb	08 19 04.8	-1.4
TERO				AML	AML		
	comp=E,734μm,0.2s						
TERO				AML	AML		
	comp=N,1220μm,0.6s						
TERO	**Teramo**	**0.32**	**125**	P	Pg	08 18 59.6	+0.7
TERO				S	Sb	08 19 05.0	-1.2
TERO				AML	AML		
	comp=E,734μm,0.2s						
TERO				AML	AML		
	comp=N,1220μm,0.6s						
TERO				AML	AML		
	comp=E,734μm,0.2s						
TERO				AML	AML		
	comp=N,1220μm,0.6s						
TERO				AML	AML		
	comp=N,1220μm,0.6s						
TERO				AML	AML		
	comp=E,734μm,0.2s						
OFFI	**Offida**	**0.35**	**68**	P	Pb	08 19 01.0	-0.2
OFFI				S	Sb	08 19 08.3	+1.3
OFFI				AML	AML		
	comp=E,654μm,0.8s						
OFFI				AML	AML		
	comp=N,1031μm,0.5s						
OFFI				AML	AML		
	comp=E,654μm,0.8s						
OFFI				AML	AML		

SNTG				AML	AML		
	comp=N,184μm,1.0s						
SNTG	**Esanatoglia**	**0.50**	**334**	P	Pg	08 19 02.4	+0.1
SNTG				S	Sb	08 19 10.4	-1.0
CESX	**Cesi**	**0.53**	**248**	⇓P	Pg	08 19 03.1	+0.4
CESX				S	Sb	08 19 11.9	-0.3
CESX				AML	AML		
	comp=E,219μm,0.5s						
CESX				AML	AML		
	comp=N,258μm,0.2s						
CESX				AML	AML		
	comp=E,219μm,0.5s						
CESX				AML	AML		
	comp=N,258μm,0.2s						
CESX				AML	AML		
	comp=N,258μm,0.2s						
CESX				AML	AML		
	comp=E,219μm,0.5s						
FIAM	**Fiamignano**	**0.55**	**190**	⇑P	Pg	08 19 03.6	+0.5
FIAM				S	Sb	08 19 12.2	-0.5
FIAM				AML	AML		
	comp=E,148μm,0.9s						
FIAM				AML	AML		
	comp=N,116μm,0.4s						
FIAM				AML	AML		
	comp=E,148μm,0.9s						
FIAM				AML	AML		
	comp=N,116μm,0.4s						
CING	**Cingoli**	**0.57**	**356**	⇓P	Pg	08 19 04.0	+0.4
CING				S	Sb	08 19 13.3	-0.1
CING				AML	AML		
	comp=N,192μm,1.3s						
CING				AML	AML		
	comp=E,194μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.58**	**311**	⇑P	Pg	08 19 04.0	+0.2
ATCC				S	Sb	08 19 13.5	-0.2
ATCC				AML	AML		
	comp=N,440μm,0.8s						
ATCC				AML	AML		
	comp=E,430μm,1.5s						
ATCC				AML	AML		
	comp=N,440μm,1.2s						
ATCC				AML	AML		
	comp=E,430μm,0.5s						
VCEL	**Villa Celiera**	**0.60**	**133**	P	Pg	08 19 03.2	-0.9
VCEL				S	Sb	08 19 15.0	+0.7
VCEL				AML	AML		
	comp=E,229μm,0.3s						
VCEL				AML	AML		
	comp=N,273μm,1.2s						
VCEL				AML	AML		
	comp=E,228μm,0.3s						
VCEL				AML	AML		
	comp=N,274μm,1.2s						
VCEL				AML	AML		
	comp=E,228μm,0.3s						
VCEL				AML	AML		
	comp=N,274μm,1.2s						
FOSV	**Fossato di Vic**	**0.60**	**324**	⇑P	Pg	08 19 04.4	+0.2
FOSV				S	Sb	08 19 14.0	-0.4
FOSV				AML	AML		
	comp=N,513μm,0.3s						
FOSV				AML	AML		
	comp=N,512μm,0.3s						
FOSV				AML	AML		
	comp=E,226μm,0.3s						
PP3	**Marolino**	**0.63**	**25**	⇑P	Pg	08 19 04.7	0.0
MURB	**Monte Urbino**	**0.70**	**311**	P	Pg	08 19 06.2	+0.1
MURB				S	Sb	08 19 17.8	+0.7
MURB				AML	AML		
	comp=N,548μm,0.2s						
MURB				AML	AML		
	comp=E,1155μm,0.2s						
MURB				AML	AML		
	comp=N,548μm,1.8s						
MURB	**Monte Urbino**	**0.70**	**311**	AML	AML		
	comp=N,548μm,0.2s						
MURB				AML	AML		
	comp=E,1155μm,0.2s						
SSFR	**Montelago di S**	**0.72**	**332**	⇓P	Pg	08 19 06.7	+0.4
SSFR				S	Sb	08 19 18.0	+0.4
SSFR				AML	AML		
	comp=N,412μm,0.2s						
SSFR				AML	AML		
	comp=E,363μm,0.3s						
ARVD	**Arcevia**	**0.73**	**342**	⇑P	Pg	08 19 06.8	+0.3
ARVD				S	Sb	08 19 18.6	+0.8
ARVD				AML	AML		
	comp=N,69μm,0.6s						
ARVD				AML	AML		
	comp=E,96μm,0.3s						
ARVD				AML	AML		
	comp=N,68μm,0.6s						
ARVD	**Arcevia**	**0.73**	**342**	P	Pg	08 19 06.8	+0.2
ARVD				S	Sb	08 19 18.2	+0.4
ATFO	**Monte Foce - G**	**0.75**	**319**	P	Pg	08 19 06.9	-0.1
ATFO				S	Sb	08 19 19.0	+0.5
ATFO				AML	AML		
	comp=N,84μm,0.3s						
ATFO				AML	AML		
	comp=E,112μm,1.5s						
ATFO				AML	AML		
	comp=N,84μm,0.3s						
ATFO				AML	AML		
	comp=E,112μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.76**	**301**	⇓P	Pg	08 19 07.2	0.0
ATTE				AML	AML		
	comp=N,80μm,1.4s						
ATTE				AML	AML		
	comp=N,80μm,1.4s						
ATTE				AML	AML		
	comp=E,88μm,0.9s						
ATTE				AML	AML		
	comp=N,80μm,0.6s						
FRON	**Frontone**	**0.81**	**332**	⇑P	Pg	08 19 08.0	-0.1
FRON				S	Sb	08 19 20.4	+0.3
FRON				AML	AML		
	comp=E,100μm,0.5s						
FRON				AML	AML		
	comp=N,150μm,1.5s						
FRON				AML	AML		
	comp=N,150μm,0.5s						
MGAB	**Montegabbione**	**0.84**	**278**	⇑P	Pg	08 19 08.9	+0.2
MGAB				AML	AML		
	comp=N,160μm,0.6s						
MGAB				AML	AML		
	comp=E,129μm,0.6s						
MGAB				AML	AML		
	comp=N,160μm,1.4s						
ATVO	**AVT- Monte Val**	**0.84**	**313**	⇓P	Pg	08 19 08.5	-0.2
ATPI	**Pietralunga -**	**0.89**	**316**	⇓P	Pg	08 19 09.5	-0.2
ATPI				S	Sb	08 19 23.4	+0.8
ATPI				AML	AML		
	comp=E,89μm,1.0s						
ATPI				AML	AML		
	comp=N,68μm,0.7s						
MPAG	**Monte Paganucc**	**0.90**	**337**	P	Pg	08 19 10.1	+0.3
PIEI	**Pieia**	**0.90**	**325**	P	Pg	08 19 09.5	-0.3
PIEI				S	Sb	08 19 23.9	+1.1
PIEI				AML	AML		
	comp=N,91μm,0.4s						
PIEI				AML	AML		
	comp=E,94μm,0.3s						
INTR	**Introdacqua**	**0.93**	**148**	⇑P	Pg	08 19 10.4	-0.1
INTR				AML	AML		
	comp=E,58μm,0.5s						
INTR				AML	AML		
	comp=N,130μm,1.1s						
INTR				AML	AML		
	comp=E,58μm,0.5s						
INTR				AML	AML		
	comp=N,130μm,1.1s						
FSSB	**Fossombrone**	**0.95**	**339**	⇑P	Pg	08 19 10.9	+0.1
FSSB				AML	AML		
	comp=E,272μm,1.3s						
FSSB				AML	AML		
	comp=N,325μm,0.4s						
FSSB				AML	AML		
	comp=E,272μm,0.7s						
LMD	**Lutirano**	**1.69**	**319**	⇓P	Pn	08 19 23.2	+0.5
FIU	**Minerbio Fiu**	**2.23**	**326**	S	Sn	08 19 58.0	+0.1
EUCT	**Pavia**	**3.81**	**310**	⇑P	Pg	08 20 04.7	-0.9
MGRO	**Montegrosso**	**4.15**	**289**	P	Pb	08 20 02.6	-3.4
RISI	**Rein**	**4.22**	**349**	⇑P	Pn	08 19 56.8	-0.9
RISI				⇓P	Pb	08 20 10.4	+3.0
VLO	**Vlora**	**5.23**	**114**	P	Pn	08 20 10.8	-0.5

DJA 26 08:45:28.4±0.8, 1°N×4°×12°1E±°, h28km±11km, M3.8/12, mb3.8/3, mB4.7/2, MLv3.9/12, Mw(mB)3.9/2, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.70**	**92**	P	Pn	08 45 42.6	+0.1
MPSI	**Mapaga**	**1.35**	**263**	P	Pn	08 45 51.2	-0.2
GTOI	**Gorontalo**	**1.78**	**86**	P	Pn	08 45 56.3	-1.0
KMSI	**Cibinong**	**2.74**	**88**	P	Pn	08 46 10.3	-0.3
TTSI	**Tana Toraja**	**3.80**	**202**	P	Pn	08 46 25.1	0.0
SPSI	**Sidrap Palu**	**4.67**	**198**	P	Pn	08 46 37.3	+0.2
SGSI	**Sangihe**	**5.33**	**53**	P	Pn	08 46 46.5	+0.4
SANI	**Sanana**	**5.38**	**118**	P	Pn	08 46 46.8	-0.1
	0.1nm17nm,1.0s						
BKSI	**Bulukumba**	**5.89**	**191**	P	Pn	08 46 53.9	0.0

*INET **26** 09:00:31.9±0.5, 12°.56N×87°.78W, h60km±8km, MW3.2*
*SNET **26** 09:00:31.7±1.0, 12°.54N×87°.85W, h26km±5km, ML3.4*

ISC 26 09:00:31.8±1.9, 12°.52N±0°.10×87°.79W±0°.06, h32km±18km, n21, σ0s45/26, 4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.74**	**76**	*e*P	**Pb**	**09 00 46.9**	**+0.5**
CNCH	**Conchagua**	**0.76**	**357**	*e*P	**Pn**	**09 00 46.2**	**-0.2**
CNCH				*e*S	**Sn**	**09 00 57.4**	**+0.5**
TEL3	**Telica 3**	**0.92**	**86**	⇓*e*P	**Pn**	**09 00 48.7**	**+0.1**
TELN	**Telica**	**0.94**	**85**	*e*P	**Pb**	**09 00 49.4**	**-0.3**
CNRM	**Centro Naciona**	**1.02**	**339**	*e*P	**Pn**	**09 00 49.3**	**-0.7**
RANC	**El Ranchito**	**1.03**	**332**	*e*P	**Pn**	**09 00 49.7**	**-0.5**
RANC				*e*S	**Sn**	**09 01 04.0**	**+0.2**
RANC				IAML		09 01 04.9	
	comp=Z,730nm,0.2s						
CNGN	**Cerro Negro**	**1.06**	**91**	*e*P	**Pn**	**09 00 50.4**	**-0.2**
PACA	**Pacayal**	**1.08**	**331**	*e*P	**Pn**	**09 00 50.7**	**-0.2**
PACA				*e*S	**Sn**	**09 01 05.0**	**+0.2**
PACA				IAML		09 01 06.6	
	comp=Z,4μm,0.3s						
PACA	**Pacayal**	**1.08**	**331**	*e*P	**Pn**	**09 00 50.7**	**-0.2**
MOMN	**Momotombo**	**1.23**	**95**	⇓*e*P	**Pn**	**09 00 52.6**	**-0.1**
PQSS	**Presa 15 de Se**	**1.33**	**326**	*e*P	**Pn**	**09 00 54.0**	**-0.2**
PQSS				*e*S	**Sn**	**09 01 11.4**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.49**	**322**	*e*P	**Pn**	**09 00 56.5**	**0.0**
SCLA				*e*S	**Sn**	**09 01 15.7**	**+0.8**
HUEN		**1.59**	**96**	*e*P	**Pn**	**09 00 57.5**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.61**	**18**	*e*P	**Pn**	**09 00 57.7**	**-0.5**
P5NO	**Presa 5 de nov**	**1.74**	**327**	*e*P	**Pn**	**09 00 59.3**	**-0.5**
RCON	**San Juan de Ri**	**1.86**	**59**	⇓*e*P	**Pn**	**09 01 01.3**	**-0.3**
MATN	**Matagalpa**	**1.86**	**77**	⇓*e*P	**Pn**	**09 01 00.9**	**-0.7**
PMON	**Piamonte**	**1.90**	**309**	*e*S	**Sn**	**09 01 25.4**	**+0.3**
JAYA	**Jayaque - finc**	**1.97**	**305**	*e*P	**Pn**	**09 01 03.0**	**-0.2**
JAYA				*e*S	**Sn**	**09 01 26.3**	**-0.6**
JAYA				IAML		09 01 26.8	
	comp=Z,126nm,0.2s						
CEVE	**Cerro Verde**	**2.21**	**306**	IAML		09 01 38.4	
	comp=Z,120nm,0.3s						
NUBE	**Las Nubes**	**2.38**	**306**	*e*S	**Sn**	**09 01 37.3**	**+0.4**

*JMA **26** 09:28:21.4±0.2, 35°.6N±0°.5×140°.1E±0°.8, h67km±1km, MV3.4/39, CENTRAL CHIBA PREF*
JMA Felt I J1 at CENTRAL CHIBA PREF .
*IDC **26** 09:28:22.9±4.0, 35°.40N×139°.75E, h74km±30km, mb3.4/4, mbtmp3.7/4, Error ellipse: s-maj=67.8km s-min=23.3km az=75.0*

ISC 26 09:28:21.6±0.9, 35°.56N±0°.05×140°.09E±0°.05, h72km±6km, n18, σ0s69/29, mb3.7/4, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.17**	**146**	P	**Pn**	**09 28 32.4**	**0.0**
JCN				S	**Sn**	**09 28 40.5**	**+0.3**
TOK	**Tokyo**	**0.30**	**296**	P	**Pn**	**09 28 32.9**	**0.0**
TOK				S	**Sn**	**09 28 40.6**	**-0.7**
JSMT	**Sammumatsuo**	**0.31**	**74**	P	**Pn**	**09 28 32.7**	**-0.4**
JSMT				*e*S	**Sn**	**09 28 42.0**	**+0.5**
BSO3	**Boso 3**	**0.83**	**155**	P	**Pn**	**09 28 37.7**	**-0.3**
JOD2	**Odawara 2**	**0.87**	**250**	⇓P	**Pn**	**09 28 38.4**	**-0.3**
JOD2				⇓S	**Sn**	**09 28 50.5**	**-0.8**
JIM2	**Oshima 3**	**1.00**	**213**	P	**Pn**	**09 28 39.5**	**-0.7**
JIM2				S	**Sn**	**09 28 53.2**	**-0.9**
JAG	**Ashikaga**	**1.01**	**329**	⇓P	**Pn**	**09 28 39.5**	**-0.9**
JRY	**Ryogami san**	**1.07**	**296**	⇓P	**Pn**	**09 28 41.2**	**+0.1**
JRY				⇓S	**Sn**	**09 28 57.5**	**+1.8**
BSO1	**Boso 1**	**1.16**	**141**	P	**Pn**	**09 28 41.2**	**-0.6**
BSO1				*e*S	**Sn**	**09 28 57.1**	**+0.2**
JFNN	**Fujinakano**	**1.20**	**253**	⇓P	**Pn**	**09 28 42.9**	**+0.1**
JFNN				⇓S	**Sn**	**09 28 58.8**	**+0.1**
JYN	**Shimob**	**1.26**	**268**	⇓P	**Pn**	**09 28 43.6**	**0.0**
JYN				⇓S	**Sn**	**09 28 59.8**	**-0.2**
JIZS	**Izushimoda**	**1.30**	**230**	⇓P	**Pn**	**09 28 43.9**	**-0.1**
JIZS				⇓S	**Sn**	**09 29 00.4**	**-0.4**
JKT	**Katashina**	**1.38**	**331**	P	**Pn**	**09 28 44.3**	**-0.9**
JKT				*e*S	**Sn**	**09 29 02.1**	**-0.9**
MJAR	**Matsushiro Arr**	**1.81**	**303**	P	**Pn**	**09 28 49.9**	**-1.0**
	23nm,0.3s,baz=135,slow=15,SNR=94						
MJAR				LR	LR	09 29 08.3	
	comp=Z,31nm,18.5s,baz=122,slow=27						
MKAR	**Makanchi Array**	**44.01**	**303**	P	**P**	**09 36 22.7**	**+0.8**
	0.8nm,0.7s,baz=97,slow=7.2,SNR=6.2						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**55.47**	**187**	P	**P**	**09 37 48.9**	**0.0**
	0.5nm,0.5s,baz=0.4,slow=7.4,SNR=15						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**59.19**	**187**	P	**P**	**09 38 14.5**	**-0.7**
	0.1nm,0.4s,baz=15,slow=14,SNR=1.3						
	0.1nm,0.4s						
FINES	**FINESS Array B**	**69.61**	**332**	P	**P**	**09 39 23.3**	**+0.5**
	1.3nm,0.7s,baz=81,slow=8.7,SNR=5.4						
	1.3nm,0.7s						

*NEIC **26** 09:31:52.3±1.2, 22°.9S±0°.1×172°.64E±0°.08, h10km±2km, mb4.6/17, Error ellipse: s-maj=22.6km s-min=12.9km az=177.0*
*IDC **26** 09:31:55.5±3.5, 22°.85S×172°.60E, h40km±32km, mb4.1/5, mbtmp4.2/7, ML4.6/2, MS3.4/22, Error ellipse: s-maj=34.8km s-min=18.4km az=166.0*

ISC 26 09:31:54.7±0.7, 22°.9S±0°.1×172°.64E±0°.08, h34km, n61, σ0s75/37, mb4.5/11, MS3.5/19, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.51**	**288**	Pn	**Pn**	**09 33 01.1**	**+0.4**
PINNC	**Pines Island,**	**4.81**	**273**		**Pn**	**09 33 05.2**	**+0.5**
OUENC	**Ouen Island, N**	**5.38**	**274**		**Pn**	**09 33 12.8**	**+0.2**
LIFNC	**LIFOU**	**5.46**	**292**	Pn	**Pn**	**09 33 13.1**	**-0.6**
ONTNC	**Ouen Toro**	**5.75**	**275**		**Pn**	**09 33 18.0**	**+0.3**
DZM	**Mont Dzumac**	**5.80**	**277**	P	**Pn**	**09 33 18.4**	**0.0**
	2.3nm,0.3s,baz=128,slow=13,SNR=68						
DZM				S	**Sn**	**09 34 23.0**	**-0.8**
	7.4nm,0.3s,baz=136,slow=18,SNR=1.3						
	9.4nm,0.3s						
MSVF	**Nonsavu**	**7.25**	**45**	P	**Pn**	**09 33 38.6**	**+0.2**
	1.1nm,0.3s,baz=259,slow=18,SNR=5.5						
	9.4nm,0.8s						
MSVF	**Nonsavu**	**7.25**	**45**		**Pn**	**09 33 38.4**	**0.0**
RAO	**Raoul Island**	**10.55**	**129**	LR	LR	09 37 37.9	
	comp=Z,144nm,21.2s,baz=278,slow=32						
URZ	**Urewera**	**15.74**	**167**	LR	LR	09 40 32.5	
	comp=Z,231nm,18.8s,baz=31,slow=33						
HNR	**Honiara**	**18.12**	**316**	LR	LR	09 41 57.5	
	comp=Z,133nm,20.8s,baz=136,slow=33						
LTZ	**Lake Taylor**	**19.79**	**181**	P	**P**	**09 36 21.6**	**-0.4**
LTZ				IAmb	IAmb	09 36 50.0	
	comp=Z,69nm,1.4s						
EIDS	**Eidsvold**	**19.82**	**259**	P	**P**	**09 36 22.7**	**+0.2**
EIDS				IAmb	IAmb	09 36 30.1	
	comp=Z,20nm,0.9s						
RPZ	**Rata Peaks**	**20.76**	**183**	LR	LR	09 43 31.7	
	comp=Z,311nm,20.7s,baz=340,slow=33						
CTA	**Charters Tower**	**24.70**	**272**	LR	LR	09 45 00.5	
	comp=Z,36nm,21.1s,baz=100,slow=32						
CTAO	**Charters Tower**	**24.70**	**272**	P	**P**	**09 37 13.9**	**+1.0**
CTAO				IAmb	IAmb	09 37 56.1	
	comp=Z,16nm,1.2s						
RAR	**Rarotonga**	**25.61**	**91**	LR	LR	09 47 55.9	
	comp=Z,27nm,18.1s,baz=194,slow=37						

STKA	**Stephens Creek**	**28.88**	**245**	P	**P**	**09 37 52.1**	**+1.7**
	comp=Z,2.0nm,0.6s,baz=65,slow=9.1,SNR=4.7						
STKA				LR	LR	09 48 10.4	
	comp=Z,56nm,21.4s,baz=154,slow=34						
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**28.88**	**245**	P	**P**	**09 37 50.1**	**-0.3**
BBOO	**Buckleboo**	**33.66**	**245**	P	**P**	**09 38 32.3**	**-0.1**
BBOO				IAmb	IAmb	09 38 40.1	
	comp=Z,15nm,1.2s						
AS31	**Alice Springs**	**35.51**	**261**	P	**P**	**09 38 48.8**	**+0.2**
ASAR	**Alice Springs**	**35.51**	**261**	P	**P**	**09 38 49.2**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=89,slow=8.6,SNR=30						
	comp=Z,5.4nm,0.8s						
ASAR	**Alice Springs**	**35.51**	**261**	P	**P**	**09 38 48.6**	**0.0**
WR0	**Warramunga Arr**	**35.52**	**267**	P	**P**	**09 38 48.5**	**-0.2**
WB0	**Warramunga Arr**	**35.70**	**268**	P	**P**	**09 38 50.1**	**-0.1**
WB0				IAmb	IAmb	09 38 54.4	
	comp=Z,5.2nm,0.8s						
WB2	**Warramunga Arr**	**35.70**	**267**	P	**P**	**09 38 49.7**	**-0.5**
WB2				IAmb	IAmb	09 38 50.3	
	comp=Z,9.8nm,1.1s						
WRAB	**Tennant Creek**	**35.70**	**267**	P	**P**	**09 38 50.0**	**-0.2**
WRAB				IAmb	IAmb	09 38 51.5	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**35.71**	**267**	P	**P**	**09 38 49.3**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=98,slow=8.5,SNR=20						
WRA				LR	LR	09 52 54.3	
	comp=Z,62nm,18.2s,baz=142,slow=35						
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**35.71**	**267**	P	**P**	**09 38 48.9**	**-1.5**
FORT	**Forrest**	**40.32**	**249**	P	**P**	**09 39 30.3**	**+1.3**
H11S2	**WAKE ISLAND Hy**	**41.59**	**351**	T	T	10 23 54.4	
	baz=171,slow=76,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**41.59**	**351**	T	T	10 24 02.6	
	baz=171,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**41.60**	**351**	T	T	10 23 57.5	
	baz=171,slow=76,SNR=5.4						
KNRA	**Kununurra**	**41.92**	**272**	P	**P**	**09 39 40.7**	**-1.6**
KNRA				IAmb	IAmb	09 39 55.8	
	comp=Z,22nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**42.77**	**352**	T	T	10 25 23.2	
	baz=174,SNR=3.6						
H11N3	**WAKE ISLAND Hy**	**42.77**	**352**	T	T	10 25 37.1	
	baz=174						
H11N2	**WAKE ISLAND Hy**	**42.78**	**352**	T	T	10 25 33.9	
	baz=174						
FITZ	**Fitzroy Crossi**	**44.14**	**267**	P	**P**	**09 40 00.3**	**0.0**
GUMO	**Guam**	**45.37**	**320**	LR	LR	09 56 04.2	
	comp=Z,50nm,20.3s,baz=148,slow=32						
MBWA	**Marble Bar**	**48.85**	**261**	P	**P**	**09 40 37.4**	**+0.1**
MORW	**Morawa**	**50.84**	**251**	P	**P**	**09 40 52.5**	**+0.2**
VNDA	**Vanda**	**54.88**	**183**	LR	LR	10 01 02.3	
	comp=Z,133nm,20.0s,baz=312,slow=32						
JHJ	**Hachijo jima 2**	**63.96**	**330**	LR	LR	10 09 01.0	
	comp=Z,11nm,19.4s,baz=92,slow=35						
QSPA	**South Pole Qui**	**67.13**	**180**	P	**P**	**09 42 44.7**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=4.9,slow=7.4,SNR=13						
	comp=Z,2.3nm,0.9s						
QSPA	**South Pole Qui**	**67.13**	**180**	P	**P**	**09 42 45.6**	**+0.7**
QSPA				IAmb	IAmb	09 43 08.2	
	comp=Z,8.3nm,1.2s						
KSRS	**Korea Array**	**73.35**	**324**	LR	LR	10 14 22.3	
	comp=Z,3.9nm,18.1s,baz=85,slow=35						
PETK	**Petropavlovsk-**	**76.84**	**351**	LR	LR	10 13 12.3	
	comp=Z,23nm,19.1s,baz=119,slow=32						
KLR	**Kul'dur**	**80.56**	**334**	LR	LR	10 16 21.0	
	comp=Z,24nm,18.4s,baz=176,slow=33						
TROLL	**Troll, Antarti**	**85.06**	**183**	P	**P**	**09 44 26.2**	**-0.5**
SNAA	**Sanae**	**85.59**	**181**	P	**P**	**09 44 28.1**	**-1.2**
VNA3	**Neumayer Olymp**	**86.06**	**179**	P	**P**	**09 44 30.5**	**-1.0**
VNA2	**Neumayer--Watz**	**86.39**	**180**	P	**P**	**09 44 32.4**	**-0.7**
	baz=179,slow=4.6						
YBH	**Yreka Blue Hor**	**87.80**	**43**	LR	LR	10 15 36.1	
	comp=Z,26nm,20.2s,baz=277,slow=30						
NVAR	**Mina Array Bea**	**88.92**	**47**	P	**P**	**09 44 46.6**	**+0.6**
	comp=Z,2.2nm,1.3s,baz=225,slow=8.5,SNR=4.5						
NVAR				LR	LR	10 19 16.1	
	comp=Z,19nm,18.7s,baz=222,slow=32						
	comp=Z,2.2nm,1.3s						
BBB	**Bella Bella**	**90.87**	**32**	LR	LR	10 17 42.1	
	comp=Z,16nm,20.6s,baz=150,slow=30						
ELK	**Elko**	**92.12**	**46**	LR	LR	10 18 02.3	
	comp=Z,31nm,21.4s,baz=216,slow=30						
ILAR	**Eielson Array**	**92.85**	**16**	LR	LR	10 20 50.3	
	comp=Z,38nm,20.4s,baz=194,slow=32						
NEW	**Newport**	**94.59**	**39**	LR	LR	10 23 46.4	
	comp=Z,21nm,18.5s,baz=182,slow=33						
PDAR	**Pinedale Array**	**96.82**	**46**	LR	LR	10 23 55.8	
	comp=Z,30nm,18.0s,baz=250,slow=32						
INK	**Inuvik**	**99.06**	**18**	LR	LR	10 23 14.6	
	comp=Z,22nm,20.1s,baz=146,slow=31						
GERES	**GERESS Array B**	**149.24**	**332**	PKPbc	**PKPbc**	**09 51 38.8**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=345,slow=3.0,SNR=2.8						

*SOME **26** 09:46:38.4, 41°.57N×73°.33E, h10km*
*KRNET **26** 09:46:39.8±0.1, 41°.58N×73°.34E, h28km, mb3.2*
*ISU **26** 09:46:40, 41°.50N×73°.31E, h5km*
*KNET **26** 09:46:41.5±0.3, 41°.65N×73°.42E, h16km±1km, ml2.2, Error ellipse: s-maj=3.7km s-min=1.8km az=102.0*
*NNC **26** 09:46:43.5±3.5, 41°.69N×73°.46E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=37.9km s-min=11.1km az=171.0*

ISC 26 09:46:39.6±1.2, 41°.59N±0°.03×73°.34E±0°.03, h4km±10km, n35, σ1s10/66, 24C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.60**	**26**	⇑P	**Pg**	**09 46 52.2**	**+0.9**
	38nm,0.1s,SNR=22						
AML				⇑S	**Sg**	**09 47 00.6**	**+1.5**
	86nm,0.1s						
ARK	**Arkit**	**1.05**	**282**	P	**Pg**	**09 46 59.9**	**+0.1**
ARK				S	**Sn**	**09 47 15.3**	**-1.2**
UCH	**Uchtor**	**1.08**	**54**	⇓P	**Pg**	**09 47 00.7**	**+0.3**
	13nm,0.2s,SNR=13						
ANR	**Andizhan**	**1.11**	**222**	S	**Sn**	**09 47 18.8**	**+0.9**
EKS2	**Erkin-Say**	**1.12**	**17**	⇓P	**Pb**	**09 47 01.1**	**-0.5**
	7.5nm,0.1s,SNR=24						
EKS2	**Erkin-Say**	**1.12**	**17**	⇑*i*P	**Pb**	**09 47 00.7**	**-1.0**
	baz=17						
EKS2				⇑*i*S	**Sg**	**09 47 15.6**	**-0.1**
	baz=17						
OHH	**Osh**	**1.14**	**202**	⇑*i*P	**Pb**	**09 47 00.8**	**-1.2**
	baz=2.0						
OHH				⇑*i*S	**Sg**	**09 47 16.1**	**-0.3**
	baz=2.0						
AAK	**Ala-Archa**	**1.35**	**39**	⇑P	**Pn**	**09 47 05.4**	**0.0**
	25nm,0.2s,SNR=11						
AAK				⇑S	**Sn**	**09 47 23.4**	**-0.6**
	21nm,0.2s						
AAK	**Ala-Archa**	**1.35**	**39**	⇑*i*P	**Pn**	**09 47 04.6**	**-0.9**
	baz=39						
AAK				⇑*i*S	**Sb**	**09 47 22.8**	**-0.6**
	baz=39						
KBK	**Karagaybulak**	**1.60**	**48**	⇓P	**Pb**	**09 47 10.1**	**+0.2**
	12nm

SGDS	**Sogindy**	**2.09**	**27**	*eP*	**Pb**	**09 47 17.8**	**-0.4**
	5.2nm,0.3s							
SGDS				*eS*	**Sg**	**09 47 46.4**	**-0.4**
	17nm,0.1s							
TKM2	**Tokmak 2**	**2.14**	**51**	⇑P	**Pb**	**09 47 18.6**	**-0.5**
	17nm,0.2s,SNR=15							
TKM2				⇑S	**Sb**	**09 47 47.2**	**+1.1**
	12nm,0.1s							
TKM2	**Tokmak 2**	**2.14**	**51**	⇓Pn	**Pb**	**09 47 18.6**	**-0.5**
	12nm,0.4s							
TKM2				⇑Sn	**Sb**	**09 47 46.9**	**+0.9**
	11nm,0.6s							
TKM2	**Tokmak 2**	**2.14**	**51**	⇑*i*P	**Pn**	**09 47 16.6**	**+0.3**
	baz=51							
TKM2				⇑*e*S	**Sn**	**09 47 43.2**	**-0.2**
	baz=51							
KST	**Kastek**	**2.43**	**52**	*eP*	**Pb**	**09 47 24.4**	**+0.5**
	10nm,0.1s							
KST				*eS*	**Sg**	**09 47 57.6**	**0.0**
	38nm,0.1s							
DGS	**Degeres**	**2.44**	**47**	*eP*	**Pb**	**09 47 23.7**	**-0.5**
	8.2nm,0.6s							
DGS				*eS*	**Sb**	**09 47 56.2**	**+1.5**
	15nm,0.8s							
IUG	**luzhnay**	**2.53**	**284**	*eP*	**Pb**	**09 47 24.8**	**-0.9**
	96nm,0.1s							
IUG				*eS*	**Sb**	**09 47 57.9**	**+0.6**
	26nm,0.2s							
KK31	**Karatay Array**	**2.59**	**307**	Pn	**Pb**	**09 47 27.0**	**+0.4**
	1.4nm,0.2s,baz=124,slow=17,SNR=20							
KK31				Sn	**Sb**	**09 48 00.7**	**+1.9**
	4.6nm,0.3s,baz=135,slow=27,SNR=16							
KKAR	**Karatay Array**	**2.59**	**307**	⇓*e*P	**Pn**	**09 47 22.4**	**+0.1**
	baz=7.0							
KKAR				⇓*i*S	**Sn**	**09 47 53.6**	**-0.6**
	baz=7.0							
KRBS	**Karabastau**	**2.72**	**38**	*eP*	**Pb**	**09 47 28.9**	**0.0**
	2.0nm,0.0s							
KRBS				*eS*	**Sg**	**09 48 05.1**	**-1.9**
	6.9nm,0.1s							
MTBS	**Maitube**	**2.76**	**55**	*eP*	**Pb**	**09 47 29.4**	**-0.1**
	2.7nm,0.2s							
MTBS				*eS*	**Sb**	**09 48 06.1**	**+2.3**
	13nm,0.1s							
MDOK	**Medeo**	**3.17**	**59**	*eP*	**Pb**	**09 47 37.0**	**+0.5**
	3.7nm,0.4s							
MDOK				*eS*	**Sg**	**09 48 19.2**	**-2.1**
	4.7nm,0.1s							
KUU	**Kurty**	**3.19**	**43**	*eP*	**Pb**	**09 47 37.5**	**+0.7**
	1.1nm,0.3s							
KUU				*eS*	**Sg**	**09 48 19.6**	**-2.5**
	11nm,0.2s							
KTBS	**Karatobe**	**3.25**	**48**	*eP*	**Pb**	**09 47 38.4**	**+0.5**
	2.4nm,0.1s							
KTBS				*eS*	**Sg**	**09 48 21.5**	**-2.5**
	22nm,0.1s							
BTLS	**Baital**	**3.49**	**8**	*eP*	**Pb**	**09 47 43.2**	**+1.3**
	1.2nm,0.1s							
BTLS				*eS*	**Sg**	**09 48 29.4**	**-2.3**
	6.9nm,0.1s							
CHKK	**Chushkaly**	**3.51**	**49**	*eP*	**Pb**	**09 47 43.1**	**+0.7**
	1.1nm,0.1s							
CHKK				*eS*	**Sg**	**09 48 29.6**	**-2.8**
	6.5nm,0.1s							
ARXS	**Arharly**	**4.21**	**50**	*eP*	**Pb**	**09 47 56.6**	**+2.3**
	1.8nm,0.9s							
ARXS				*eS*	**Sg**	**09 48 53.1**	**-1.7**
	5.8nm,1.1s							

HEL 26 09:48:23.5±0.3, 67°.63N×20°.95E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.58**	**42**	PG	Pg	09 48 33.7	-0.9
LANU				SG	Sg	09 48 41.7	-0.4
PAJU	**Pajala**	**1.03**	**125**	PG	Pg	09 48 42.1	-1.2
	baz=307						
PAJU				SG	Sg	09 48 56.3	-0.3
ERTU	**Ertsjaerv**	**1.18**	**155**	PG	Pg	09 48 45.0	-1.0
	baz=339						
ERTU				SG	Sg	09 49 01.5	+0.2
KLF	**Kolari**	**1.23**	**107**	PG	Pg	09 48 45.8	-1.2
KLF				SG	Sg	09 49 02.8	0.0
HEF	**Hetta**	**1.29**	**51**	*eP*	Pg	09 48 46.6	-1.6
HEF	**Hetta**	**1.29**	**51**	PG	Pg	09 48 46.6	-1.6
	baz=235						
HEF				MSG		09 49 02.4	
	comp=Z,2.3nm,0.2s						
HEF				SG	Sg	09 49 03.2	-1.6
KIF	**Kilpisjarvi**	**1.39**	**358**	*eP*	Pg	09 48 49.1	-1.0
KIF	**Kilpisjarvi**	**1.39**	**358**	PG	Pg	09 48 49.3	-0.7
KIF				MSG		09 49 06.3	
	comp=Z,14nm,0.2s						
KIF				SG	Sg	09 49 08.1	+0.1
KTK1	**Kautokeino**	**1.63**	**30**	PN	Pn	09 48 53.7	+0.2
KTK1				SN	Sb	09 49 15.6	+0.1
TOF	**Tornio**	**2.05**	**138**	PG	Pb	09 49 00.3	-1.2
TOF				MSG		09 49 24.4	
	comp=Z,3.3nm,0.2s						
TOF				SG	Sb	09 49 26.9	-0.5
SGF	**Sodankyl**	**2.15**	**92**	PG	Pn	09 49 01.2	+0.7
SGF				SG	Sb	09 49 29.8	-0.6
RNF	**Rovaniemi**	**2.23**	**115**	PG	Pn	09 49 02.5	+1.0
RNF				SG	Sb	09 49 32.1	-0.5
ARA0	**ARCESS Array S**	**2.54**	**39**	PG	Pb	09 49 09.1	-0.9
	baz=219						
ARA0				SB	Sn	09 49 38.9	+1.3
BURU	**Burvik**	**3.06**	**177**	PB	Pn	09 49 14.8	+1.8
KEV	**Kevo**	**3.08**	**43**	MSG		09 49 53.9	
	comp=Z,1.1nm,0.2s						
KEV				SG	Sb	09 49 56.0	-1.0
MSF	**Maaselka**	**3.64**	**114**	PN	Pn	09 49 19.3	-1.7

HEL 26 09:49:16.5±0.1, 62°.56N×24°.06E, h0km, ML1.5, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF	**Keuruu**	**0.54**	**135**	PG	Pg	09 49 25.8	-1.1
KEF				SG	Sg	09 49 33.3	-0.6
VAF	**Ylistaro**	**0.80**	**308**	PG	Pg	09 49 30.8	-1.1
VAF				SG	Sg	09 49 41.3	-0.9
KAF	**Kangasniemi**	**1.14**	**112**	PG	Pg	09 49 36.8	-1.5
KAF				MSG		09 49 51.2	
	comp=Z,2.8nm,0.2s						
KAF				SB	Sg	09 49 52.3	-0.8
FIA0	**FINESS Array S**	**1.47**	**139**	PG	Pn	09 49 42.8	-1.4
FIA0				SN	Sn	09 50 05.3	+1.3
OBF8	**Ulkokalla**	**1.80**	**352**	PG	Pn	09 49 48.9	+0.1
OBF8				SN	Sn	09 50 12.9	+0.5
OUF	**Merijarvi**	**1.84**	**9**	SG	Sn	09 50 13.7	+0.4
OUF	**Merijarvi**	**1.84**	**9**	PG	Pn	09 49 49.4	0.0
OUF				MSG		09 50 11.4	
	comp=Z,1.9nm,0.2s						
OUF				SG	Sn	09 50 13.7	+0.4
RAF	**Rauma**	**1.89**	**216**	PG	Pn	09 49 50.1	+0.2
	baz=37						
RAF				MSG		09 50 12.5	
	comp=Z,2.8nm,0.2s						
RAF				SG	Sb	09 50 15.4	-0.4
OBF0	**Syolatti, Pyha**	**1.95**	**2**	PG	Pn	09 49 51.2	+0.4
OBF0				SG	Sb	09 50 16.9	-0.8
PVF	**Pernaja**	**2.19**	**156**	MSG		09 50 21.6	
	comp=Z,2.1nm,0.2s						
PVF				SG	Sb	09 50 24.5	-0.1
OBF4	**Vikkela, Lumij**	**2.31**	**11**	PG	Pn	09 49 56.8	+1.0
OBF4				SG	Sb	09 50 28.6	+0.4
HUSU	**Husum**	**2.35**	**292**	SB	Sb	09 50 29.0	-0.1
HUSU	**Husum**	**2.35**	**292**	SG	Sb	09 50 29.0	-0.1
MEF	**Metsahovi**	**2.35**	**176**	MSG		09 50 25.9	
	comp=Z,2.0nm,0.2s						
MEF				SG	Sb	09 50 29.3	+0.1
BURU	**Burvik**	**2.36**	**331**	SG	Sn	09 50 27.6	+1.5
RUFX	**Ruokolahti**	**2.57**	**114**	PG	Pb	09 50 01.7	-1.7
	baz=303						
RUFX				SG	Sb	09 50 35.2	-0.3
HEMU	**Hemsoen**	**2.79**	**275**	PB	Pn	09 50 03.1	+0.9
HEMU				SB	Sb	09 50 39.5	-2.2
KLF	**Kolari**	**4.70**	**360**	SG	Sb	09 51 40.2	+3.5

NNC 26 10:03:41.0±2.9, 44°.13N×70°.20E, h0km, mb3.8, mpv3.5,

5C-6D, Error ellipse: s-maj=26.7km s-min=12.4km az=70.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**4.10**	**105**	⇓Pn	Pn	10 04 45.8	+0.6
	3.3nm,0.6s						
TKM2				⇓Lg	Lg	10 05 51.6	
	5.9nm,0.6s						
OTUK	**Ortayu**	**4.37**	**19**	⇑Pn	Pn	10 04 48.3	-0.4
	1.1nm,0.2s						
OTUK				⇑Sn	Sn	10 05 41.5	+1.2
	1.6nm,0.5s						
OTUK				⇓Lg	Lg	10 06 00.1	
	3.4nm,0.7s						
KURBB	**Kurchatov Arra**	**8.60**	**38**	⇑Lg	Lg	10 08 14.2	
	6.4nm,0.7s						
MAKZ	**Makanchi**	**8.70**	**68**	⇑Pn	Pn	10 05 47.5	-0.5
	1.3nm,0.5s						
MAKZ				⇓Lg	Lg	10 08 19.6	
	3.2nm,1.4s						
KURK	**Kurchatov**	**8.71**	**38**	⇑Lg	Lg	10 08 19.4	
	1.2nm,0.5s						
MK31	**Makanchi Array**	**8.90**	**68**	Pn	Pn	10 05 50.9	+0.1
	1.4nm,0.3s,baz=250,slow=17,SNR=26						
MK31				⇓Sn	Sn	10 07 32.2	+0.4
	0.9nm,0.6s						
MK31				⇓Lg	Lg	10 08 25.0	
	1.3nm,0.8s						

SJA ***26*** *10:08:33.9±0.8, 25°.06S×70°.73W, h71km±3km, ML4.2, MW4.0*

NEIC ***26*** *10:08:35.8±2.5, 25°.09S±0°.03×70°.7W±0°.1, h58km±10km, mb4.2/2, ML4.1(GUC), Error ellipse: s-maj=18.1km s-min=4.2km az=99.0*

GUC ***26*** *10:08:36.1±0.8, 25°.10S×70°.40W, h60km±5km, ML4.1*

IDC ***26*** *10:08:38.6±1.3, 25°.19S×69°.89W, h56km±7km, mb4.1/3, mbtmp4.2/6, MS2.8/2, Error ellipse: s-maj=48.3km s-min=32.1km az=116.0*

ISC 26 10:08:36.2±0.7, 25°.11S±0°.03×70°.53W±0°.05, h57km±6km**, n104, σ1s61**/120**, mb4.3**/5**, 17C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.49**	**13**		**Pn**	**10 08 49.4**	**+1.2**
PB14				Sn	**Sn**	**10 08 57.7**	**+0.9**
PB14	**IPOC Station P**	**0.49**	**13**	⇑*i*P	**Pn**	**10 08 49.1**	**+0.9**
PB14				*i* S	**Sn**	**10 08 57.8**	**+0.9**
PB14				IAML		10 08 58.8	
	comp=E,19μm,0.4s						
PB14	**IPOC Station P**	**0.49**	**13**	*i* P	**Pn**	**10 08 49.2**	**+1.1**
PB14				*i* S	**Sn**	**10 08 57.7**	**+0.9**
PB14				IAML		10 08 58.1	
	comp=N,10μm,0.4s						
PB14	**IPOC Station P**	**0.49**	**13**	*e*P	**Pn**	**10 08 49.0**	**+0.8**
PB14				*e*S	**Sn**	**10 08 58.3**	**+1.5**
PB14				IAML		10 08 58.9	
	comp=Z,12μm,0.2s						
GO02	**Mina Guanaco**	**0.85**	**94**		**Pn**	**10 08 52.3**	**-0.2**
GO02	**Mina Guanaco**	**0.85**	**94**	⇑*i*P	**Pn**	**10 08 52.1**	**-0.3**
GO02				*i* S	**Sn**	**10 09 03.3**	**-1.1**
GO02				IAML		10 09 05.6	
	comp=E,11μm,0.1s						
GO02	**Mina Guanaco**	**0.85**	**94**	⇑*i*P	**Pn**	**10 08 52.5**	**0.0**
GO02				*i* S	**Sn**	**10 09 03.4**	**-1.0**
GO02				IAML		10 09 05.7	
	comp=E,10μm,0.1s						
GO02	**Mina Guanaco**	**0.85**	**94**	*e*P	**Pn**	**10 08 52.3**	**-0.2**
GO02				*e*S	**Sn**	**10 09 03.8**	**-0.6**
AC01	**Pan de Azucar**	**1.04**	**183**	Pn	**Pn**	**10 08 55.5**	**+0.9**
AC01				Sn	**Sn**	**10 09 09.4**	**+1.1**
AC01	**Pan de Azucar**	**1.04**	**183**	⇑*i*P	**Pn**	**10 08 55.5**	**+0.9**
AC01				*i* S	**Sn**	**10 09 09.7**	**+1.4**
AC01				IAML		10 09 09.9	
	comp=E,4μm,0.3s						
AC01	**Pan de Azucar**	**1.04**	**183**	⇑*i*P	**Pn**	**10 08 55.5**	**+0.9**
AC01				*i* S	**Sn**	**10 09 09.7**	**+1.4**
AC01				IAML		10 09 10.1	
	comp=E,7μm,0.2s						
AC01	**Pan de Azucar**	**1.04**	**183**	*e*P	**Pn**	**10 08 55.2**	**+0.6**
AC01				*e*S	**Sn**	**10 09 10.1**	**+1.8**
PB15	**IPOC Station P**	**2.12**	**27**		**Pn**	**10 09 10.7**	**+1.2**
PB15	**IPOC Station P**	**2.12**	**27**	*e*P	**Pn**	**10 09 10.1**	**+0.6**
PB15	**IPOC Station P**	**2.12**	**27**	*e*	**Pn**	**10 09 11.0**	**+1.4**
PB15	**IPOC Station P**	**2.12**	**27**	*e*P	**Pn**	**10 09 10.9**	**+1.4**
PB15				*e*S	**Sn**	**10 09 37.6**	**+2.8**
PB15				IAML		10 09 41.5	
	comp=Z,6μm,0.2s						
AC02	**Maricunga**	**2.13**	**144**		**Pn**	**10 09 11.8**	**+1.9**
AC02	**Maricunga**	**2.13**	**144**	⇑*i*P	**Pn**	**10 09 11.8**	**+1.9**
AC02				*i* S	**Sn**	**10 09 37.0**	**+1.6**
AC02				IAML		10 09 38.5	
	comp=N,2μm,0.2s						
AC02	**Maricunga**	**2.13**	**144**	⇑*i*P	**Pn**	**10 09 12.0**	**+2.1**
AC02				*i* S	**Sn**	**10 09 37.0**	**+1.6**
AC02	**Maricunga**	**2.13**	**144**	*e*P	**Pn**	**10 09 11.8**	**+1.9**
AC02				*e*S	**Sn**	**10 09 28.5**	**-7.0**
AC02				IAML		10 09 37.8	
	comp=Z,801nm,0.8s						
AC06	**Mina Casimiro**	**2.25**	**176**		**Pn**	**10 09 11.8**	**+0.8**
AC06	**Mina Casimiro**	**2.25**	**176**	⇑*i*P	**Pn**	**10 09 11.7**	**+0.8**
AC06				*i* S	**Sn**	**10 09 37.6**	**+0.1**
AC06				IAML		10 09 56.2	
	comp=E,1μm,0.3s						
AC06	**Mina Casimiro**	**2.25**	**176**	*i* P	**Pn**	**10 09 11.9**	**+0.9**
AC06				*i* S	**Sn**	**10 09 38.6**	**+1.1**
AC06				IAML		10 09 56.4	
	comp=E,1μm,0.4s						
GO03	**Copiap**	**2.49**	**174**		**Pn**	**10 09 15.0**	**+0.7**
GO03	**Copiap**	**2.49**	**174**	⇑*i*P	**Pn**	**10 09 15.0**	**+0.7**
GO03				IAML		10 10 02.5	
	comp=E,754nm,0.2s						
GO03	**Copiap**	**2.49**	**174**	⇓*i*P	**Pn**	**10 09 15.0**	**+0.7**
GO03				*i* P		10 09 15.1	
GO03	**Copiap**	**2.49**	**174**	*e*P	**Pn**	**10 09 15.0**	**+0.7**
GO03				*e*S	**Sn**	**10 09 45.2**	**+1.7**
PB06	**IPOC Station P**	**2.55**	**20**		**Pn**	**10 09 15.7**	**+0.5**
PB06	**IPOC Station P**	**2.55**	**20**	⇑*i*P	**Pn**	**10 09 15.7**	**+0.5**
PB06				*i* S	**Sn**	**10 09 45.5**	**+0.3**
PB06				IAML		10 10 11.4	
	comp=N,881nm,0.4s						
PB06	**IPOC Station P**	**2.55**	**20**	⇑*i*P	**Pn**	**10 09 15.7**	**+0.5**
PB06	**IPOC Station P**	**2.55**	**20**	*e*P	**Pn**	**10 09 15.7**	**+0.5**
PB06				*e*S	**Sn**	**10 09 46.0**	**+0.9**
PB06				IAML		10 10 06.7	
	comp=Z,979nm,0.3s						
PB04	**IPOC Station P**	**2.78**	**7**	Pn	**Pn**	**10 09 18.4**	**-0.1**
PB04	**IPOC Station P**	**2.78**	**7**	⇑*i*P	**Pn**	**10 09 18.4**	**-0.1**
PB04				IAML		10 10 05.1	
	comp=E,1μm,0.3s						
PB04	**IPOC Station P**	**2.78**	**7**	⇑*i*P	**Pn**	**10 09 18.4**	**-0.1**
PB04	**IPOC Station P**	**2.78**	**7**	*e*P	**Pn**	**10 09 18.3**	**-0.2**
PB04				*e*S	**Sn**	**10 09 50.8**	**-0.2**
PB04				IAML		10 09 53.0	
	comp=Z,611nm,0.3s						
LVC	**Limon Verde**	**2.90**	**31**	P	**Pn**	**10 09 21.3**	**+1.2**
	comp=Z,46nm,0.2s,baz=186,slow=6.7,SNR=118						
LVC				S	**Sn**	**10 09 55.7**	**+1.7**
	comp=Z,301nm,0.6s,baz=314,slow=11,SNR=3.6						
LVC	**Limon Verde**	**2.90**	**31**	*i* P	**Pn**	**10 09 21.3**	**+1.2**
LVC				*i* S	Sn	10 09 39.5	-15
LVC				*e*		10 09 55.4	
LVC	**Limon Verde**	**2.90**	**31**	*e*P	**Pn**	**10 09 15.7**	**-4.4**
LVC				*e*P		10 09 21.3	
LVC				*e*S	Sn	10 10 06.7	+13
LVC				IAML		10 10 15.5	
	comp=Z,524nm,0.3s						
AF01	**San Pedro de A**	**3.04**	**46**		**Pn**	**10 09 20.4**	**-1.7**
AF01	**San Pedro de A**	**3.04**	**46**	*i* P	**Pn**	**10 09 24.7**	**+2.7**
AC04	**Llanos de Chal**	**3.12**	**189**	Pn	**Pn**	**10 09 21.9**	**-1.0**
AC04	**Llanos de Chal**	**3.12**	**189**	IAML		10 10 25.6	
	comp=N,256nm,0.5s						
AC04	**Llanos de Chal**	**3.12**	**189**	*e*P	**Pn**	**10 09 21.9**	**-1.0**
AC04				*e*S	**Sn**	**10 09 59.5**	**+0.5**
PB07	**IPOC Station P**	**3.42**	**10**		**Pn**	**10 09 27.1**	**0.0**
PB07	**IPOC Station P**	**3.42**	**10**	⇑*i*P	**Pn**	**10 09 26.9**	**-0.3**
PB07				IAML		10 10 23.2	
	comp=E,657nm,0.5s						
PB07	**IPOC Station P**	**3.42**	**10**	*e*P	**Pn**	**10 09 27.0**	**-0.2**
PB07				*e*S	**Sn**	**10 10 05.9**	**-0.7**
PB07				IAML		10 10 31.1	
	comp=Z,446nm,0.5s						
PB09	**IPOC Station P**	**3.50**	**20**		**Pn**	**10 09 29.3**	**+1.0**
PB09	**IPOC Station P**	**3.50**	**20**	*i* P	**Pn**	**10 09 29.2**	**+0.8**
PB09	**IPOC Station P**	**3.50**	**20**	⇓*i*P	**Pn**	**10 09 29.5**	**+1.2**
PB09	**IPOC Station P**	**3.50**	**20**	*e*P	**Pn**	**10 09 29.3**	**+1.0**
PB09				*e*S	**Sn**	**10 10 10.9**	**+2.3**
PB09				IAML		10 10 24.0	
	comp=Z,483nm,0.7s						
AC05	**El Transito**	**3.72**	**177**	Pn	**Pn**	**10 09 32.1**	**+0.8**
AC05	**El Transito**	**3.72**	**177**	⇑*i*P	**Pn**	**10 09 32.1**	**+0.8**
AC05	**El Transito**	**3.72**	**177**	*e*P	**Pn**	**10 09 32.0**	**+0.8**
AC05				*e*S	**Sn**	**10 10 18.7**	**+4.8**
AC05				IAML		10 10 40.0	
	comp=Z,334nm,1.4s						
PB02	**IPOC Station P**	**3.82**	**9**		**Pn**	**10 09 31.9**	**-0.6**
PB02	**IPOC Station P**	**3.82**	**9**	⇑*i*P	**Pn**	**10 09 32.1**	**-0.4**
PB02				*i* S	**Sn**	**10 10 14.8**	**-1.4**
PB02				IAML		10 10 16.2	
	comp=E,525nm,0.2s						
LCO	**Las Campanas**	**3.89**	**182**		**Pn**	**10 09 33.1**	**-0.6**
LCO	**Las Campanas**	**3.89**	**182**	*e*P	**Pn**	**10 09 33.0**	**-0.7**
PB01	**IPOC Station P**	**4.16**	**14**	Pn	**Pn**	**10 09 37.1**	**-0.2**
PB01	**IPOC Station P**	**4.16**	**14**	⇑*i*P	**Pn**	**10 09 37.0**	**-0.2**
PB01				IAML		10 10 45.4	
VCA	**Vinchina**	**4.17**	**151**	*i* P	**Pn**	**10 09 41.1**	**+3.7**
VCA	**Vinchina**	**4.17**	**151**	*e*P	**Pn**	**10 09 41.0**	**+3.7**
FSA	**Cafayete**	**4.23**	**105**	*e*P	**Pn**	**10 09 40.7**	**+2.4**
FSA				*e*S	Sn	10 10 35.0	+8.6
TA01	**Diego Aracena**	**4.53**	**4**	Pn	**Pn**	**10 09 40.9**	**-1.5**
TA01	**Diego Aracena**	**4.53**	**4**	*e*P	**Pn**	**10 09 40.8**	**-1.5**
TA01				IAML		10 11 01.4	
	comp=Z,141nm,0.7s						
CO01	**Juntas del Tor**	**4.87**	**176**		**Pn**	**10 09 47.0**	**-0.1**
CO01	**Juntas del Tor**	**4.87**	**176**	*e*P	**Pn**	**10 09 47.5**	**+0.5**
CO01				*e*S	Sn	10 10 58.2	+16
GO04	**Tololo Observa**	**5.05**	**183**		**Pn**	**10 09 49.2**	**-0.3**
GO04	**Tololo Observa**	**5.05**	**183**	*e*P	**Pn**	**10 09 49.3**	**-0.3**
CO06	**Fray Jorge**	**5.63**	**190**	Pn	**Pn**	**10 09 55.2**	**-2.1**
CO02	**El Pedregal**	**5.71**	**181**	Pn	**Pn**	**10 09 58.0**	**-0.4**
CO02	**Combarbal**	**6.09**	**184**	Pn	**Pn**	**10 10 02.2**	**-1.5**
PB16	**IPOC Station P**	**6.81**	**8**	Pn	**Pn**	**10 10 14.0**	**0.0**
VA06	**Catapilco**	**7.46**	**185**	Pn	**Pn**	**10 10 20.8**	**-1.5**
VA03	**San Esteban**	**7.63**	**180**		**Pn**	**10 10 23.3**	**-1.5**
ROC1	**El Roble**	**7.85**	**183**	Pn	**Pn**	**10 10 25.8**	**-2.1**
MT02	**Curacav**	**8.14**	**184**	Pn	**Pn**	**10 10 29.2**	**-2.5**
MT09	**Talagante**	**8.65**	**183**	Pn	**Pn**	**10 10 36.6**	**-2.1**
LMEL	**Las Melosas**	**8.71**	**178**	Pn	**Pn**	**10 10 39.1**	**-0.5**
MT01	**Popeta**	**8.75**	**184**	Pn	**Pn**	**10 10 36.8**	**-3.2**
LPAZ	**La Paz**	**9.06**	**15**	P	**Pn**	**10 10 45.8**	**+1.0**
	comp=Z,2.2nm,0.4s,baz=195,slow=4.4,SNR=28						
LPAZ				LR	LR	10 14 32.0	
	comp=Z,64nm,18.1s,baz=190,slow=39						
LPAZ	**La Paz**	**9.06**	**15**	Pn	**Pn**	**10 10 46.1**	**+1.2**
BO02	**Sierra Bellavi**	**9.65**	**181**	Pn	**Pn**	**10 10 51.5**	**-0.9**
H03N1	**Juan Fernandez**	**11.06**	**219**	T	T	10 22 50.4	
	baz=44,slow=72,SNR=210						
H03N2	**Juan Fernandez**	**11.07**	**220**	T	T	10 22 50.5	
	baz=44,slow=72,SNR=602						
H03N3	**Juan Fernandez**	**11.08**	**219**	T	T	10 22 50.0	
	baz=44,slow=72,SNR=231						
H03S3	**Juan Fernandez**	**11.34**	**218**	T	T	10 23 10.0	
	baz=18						
H03S1	**Juan Fernandez**	**11.35**	**218**	T	T	10 23 07.3	
	baz=18,SNR=4.9						
H03S2	**Juan Fernandez**	**11.36**	**218**	T	T	10 23 08.7	
	baz=18,SNR=3.3						
SIV	**San Ignacio**	**12.67**	**46**	P	**Pn**	**10 11 29.8**	**-3.9**
	comp=Z,1.1nm,0.4s,baz=238,slow=9.3,SNR=8.5						
SIV				LR	LR	10 16 35.4	
	comp=Z,30nm,19.9s,baz=232,slow=39						
TRQA	**Tornquist**	**14.81**	**153**	Pn	**Pn**	**10 12 01.3**	**-0.9**
BDFB	**Brasilia**	**23.08**	**70**	P	**P**	**10 13 34.6**	**-2.6**
	comp=Z,2.2nm,0.4s,baz=185,slow=7.9,SNR=3.4						
	comp=Z,2.2nm,0.4s						
SNAA	**Sanae**	**59.39**	**160**	P	**P**	**10 18 32.0**	**-0.3**
SNAA				IAmb	IAmb	10 19 01.0	
	comp=Z,3.2nm,1.3s						
QSPA	**South Pole Qui**	**65.10**	**180**	P	**P**	**10 19 12.7**	**+2.0**
QSPA				IAmb	IAmb	10 19 19.2	
	comp=Z,2.8nm,1.1s						
DBIC	**Dimbokro**	**71.20**	**73**	P	**P**	**10 19 49.1**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=242,slow=7.6,SNR=3.5						
	comp=Z,3.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**79.97**	**70**	P	**P**	**10 20 39.6**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=261,slow=5.3,SNR=2.4						
	comp=Z,2.0nm,0.4s						
H11S2	**WAKE ISLAND Hyl**	**26.78**	**275**	T	T	12 47 21.7	
	baz=108,slow=75,SNR=181						
H11S1	**WAKE ISLAND Hyl**	**26.78**	**275**	T	T	12 47 20.6	
	baz=108,slow=75,SNR=219						
H11S3	**WAKE ISLAND Hyl**	**26.79**	**275**	T	T	12 47 20.9	
	baz=108,slow=75,SNR=190						
H11N3	**WAKE ISLAND Hyl**	**26.96**	**276**	T	T	12 47 33.5	
	baz=107,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hyl**	**26.97**	**276**	T	T	12 47 34.1	
	baz=107,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hyl**	**26.97**	**276**	T	T	12 47 34.4	
	baz=107,slow=75,SNR=24						
KURBB	**Kurchatov Arra**	**145.15**	**35**	PKP	**PKPdf**	**10 28 08.2**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=304

JASK S Sn 10 21 28.7 +3.8
IDAH Dahanechah 4.68 336 *e*Pn Pn 10 20 33.2 -1.4
IDAH *e* 10 22 01.5
comp=Z,2µm,0.8s
IKOO Kooshah 4.77 327 *e*Pn Pn 10 20 34.8 -1.0
IKOO *e* 10 22 09.9
comp=Z,2µm,1.2s
NGRK Negar Kerman 4.85 285 Pn Pn 10 20 36.8 -0.3
NGRK Negar Kerman 4.85 285 *e*Pn Pn 10 20 37.3 +0.2
NGRK *e* 10 20 56.3
comp=Z,3µm,0.8s
KRBR Kerman 4.91 289 *e*Pn Pn 10 20 37.5 -0.3
TVBK TV Kerman 4.91 289 *e*Pn Pn 10 20 37.9 0.0
TVBK *e* 10 20 56.5
comp=Z,3µm,0.6s
KHGB Koh Gabri 5.27 293 *e*Pn Pn 10 20 42.2 -0.5
KHGB *e* 10 22 28.4
comp=Z,2µm,1.0s
ITEG Tejag 5.28 328 *e*Pn Pn 10 20 41.8 -1.0
ITEG *e* 10 21 12.0
comp=Z,1µm,0.8s
GENO Geno 5.36 260 *e*Pn Pn 10 20 44.0 +0.2
GENO *e* 10 21 12.3
comp=Z,1µm,0.8s
SHRT Shahrakht 5.40 344 *e*Pn Pn 10 20 42.5 -1.8
AFRZ Afriz 5.62 333 *e*Pn Pn 10 20 46.1 -1.2
SHME Shamm 5.83 247 *e*Pn Pn 10 20 51.5 +1.4
SHME Shamm 5.83 247 P Pn 10 20 51.7 +1.6
SHME S Sn 10 21 59.7 +3.9
SHME Shamm 5.83 247 *i* Pn Pn 10 20 50.5 +0.4
SNR=21
HRA Herat 5.91 1 Pn Pn 10 20 51.0 -0.4
MDH Madha 6.07 240 *e*Pn Pn 10 20 52.8 -0.7
MDH Madha 6.07 240 P Pn 10 20 52.8 -0.7
MDH Madha 6.07 240 Pn Pn 10 20 52.7 -0.7
WSAR Wadi Sarin 6.07 212 Pn Pn 10 20 52.5 -0.9
comp=Z,2.3nm,0.3s,baz=89,slow=8.4,SNR=24
WSAR Sn Sn 10 21 58.6 -3.1
comp=Z,0.6nm,0.3s,baz=148,slow=18,SNR=2.2
WSAR LR LR 10 23 50.0
comp=Z,111nm,20.6s,baz=81,slow=44
comp=Z,15nm,0.7s
BIDO Bidbid 6.08 217 *e*Pn Pn 10 20 55.0 +1.3
BIDO Bidbid 6.08 217 P Pn 10 20 52.8 -0.8
BIDO S Sn 10 22 03.5 +1.5
MASF Masafi 6.14 241 P Pn 10 20 57.3 +2.9
SNR=13
MASF S Sn 10 22 05.8 +2.4
MSFE Esma-Masafi 6.14 241 *e*Pn Pn 10 20 54.8 +0.3
MSFE Esma-Masafi 6.14 241 *i* Pn Pn 10 20 55.5 +1.0
SNR=12
UOSS Minazif 6.33 238 Pn Pn 10 20 56.2 -0.9
UOSS Minazif 6.33 238 *e*Pn Pn 10 20 56.6 -0.5
UOSS Minazif 6.33 238 P Pn 10 20 56.8 -0.3
UOSS Minazif 6.33 238 *i* Pn Pn 10 20 56.2 -0.9
SNR=12
UMQ Umm Al-Quwin 6.45 245 *e*Pn Pn 10 20 58.6 -0.1
UMQ Umm Al-Quwin 6.45 245 P Pn 10 21 01.6 +2.9
UMQ S Sn 10 22 18.5 +7.4
HATD Hatta, Dubai 6.46 237 *e*Pn Pn 10 20 58.3 -0.5
HATD Hatta, Dubai 6.46 237 P Pn 10 20 59.2 +0.4
SNR=5.3
HATD Hatta, Dubai 6.46 237 *i* Pn Pn 10 20 60.0 +1.2
SNR=11
HATD Sn Sn 10 22 04.8 -6.4
IBAF Bafgh 6.47 300 *e*Pn Pn 10 20 58.8 -0.3
WBK Wadi Bani Khal 6.48 207 P Pn 10 20 57.7 -1.4
WBK S Sn 10 22 10.2 -1.6
HOQ Hoqain 6.50 223 P Pn 10 20 58.5 -0.8
SMDO Samad 6.50 215 P Pn 10 20 60.0 +0.4
SMDO S Sn 10 22 11.3 -1.3
ASHO Ashiyiah 6.59 237 *e*Pn Pn 10 21 01.5 +0.8
ASHO Ashiyiah 6.59 237 P Pn 10 21 03.1 +2.4
ASHO Ashiyiah 6.59 237 *i* Pn Pn 10 20 59.6 -1.1
SNR=56
SOHO SOHO 6.60 231 *e*Pn Pn 10 20 59.5 -1.3
SOHO SOHO 6.60 231 P Pn 10 20 59.6 -1.1
SOHO SOHO 6.60 231 *i* Pn Pn 10 20 59.0 -1.8
SNR=21
TKDS Koohdasht(Taba 6.68 321 *e*Pn Pn 10 21 00.9 -1.1
TABS Tabas 6.71 322 *e*Pn Pn 10 21 00.2 -2.1
NAZ Nazwa, Dubai 6.72 241 *e*Pn Pn 10 21 03.2 +0.8
NAZ Nazwa, Dubai 6.72 241 P Pn 10 21 04.5 +2.1
SNR=8.6
NAZ S Sn 10 22 23.3 +5.5
NAZ Nazwa, Dubai 6.72 241 *i* Pn Pn 10 21 04.1 +1.7
SNR=22
FAQ Al Faqa, Dubai 6.91 239 *e*Pn Pn 10 21 06.4 +1.5
FAQ Al Faqa, Dubai 6.91 239 P Pn 10 21 06.5 +1.6
SNR=8.9
FAQ S Sn 10 22 26.6 +4.3
FAQ Al Faqa, Dubai 6.91 239 *i* Pn Pn 10 21 05.9 +1.0
SNR=36
TBJM Torbat-e-JAM 6.95 348 *e*Pn Pn 10 21 04.4 -1.3
JMDO Jabal Madar 7.06 212 P Pn 10 21 07.7 +0.6
SNR=8.3
IMEH Mehriz 7.13 296 *e*Pn Pn 10 21 08.8 +0.6
ARQ Araqi 7.16 226 P Pn 10 21 10.6 +2.0
SNR=6.1
ASUD Al Ashush, Dub 7.17 239 *e*Pn Pn 10 21 10.4 +1.9
ASUD Al Ashush, Dub 7.17 239 P Pn 10 21 10.5 +1.9
SNR=8.0
ASUD P Pn 10 21 10.5 +1.9
SNR=8.0
ASUD S Sn 10 22 31.8 +3.0
ASUD S Sn 10 22 31.8 +3.0
ASUD Al Ashush, Dub 7.17 239 *i* Pn Pn 10 21 09.3 +0.7
SNR=22
ALNE Al Ain 7.20 234 *e*Pn Pn 10 21 10.1 +1.1
ALNE Al Ain 7.20 234 P Pn 10 21 10.3 +1.4
ALNE P Pn 10 21 10.3 +1.4
ALNE S Sn 10 22 32.0 +2.5
ALNE S Sn 10 22 32.0 +2.5
ALNE Al Ain 7.20 234 *i* Pn Pn 10 21 09.6 +0.7
SNR=35
BSY Bisya 7.21 219 P Pn 10 21 11.9 +2.7
SNR=7.6
BSY P Pn 10 21 11.9 +2.7
SNR=7.6
BSY S Sn 10 22 32.1 +2.2
BSY S Sn 10 22 32.1 +2.2
TNSJ Nastanj 7.23 321 *e*Pn Pn 10 21 08.7 -0.7
AJN Ajban 7.47 240 *e*Pn Pn 10 21 13.8 +1.1
AJN Ajban 7.47 240 P Pn 10 21 13.7 +1.1
YZKH Yazd 7.58 303 *e*Pn Pn 10 21 13.6 -0.6
ESRB Sir Abu 7.74 247 *e*Pn Pn 10 21 17.0 +0.7
IMYA Miami 8.04 348 *e*Pn Pn 10 21 19.4 -1.2
IPAY Payeh 8.39 343 *e*Pn Pn 10 21 24.0 -1.5
KBL Kabul 8.47 43 Pn Pn 10 21 25.9 -0.6
KBL Kabul 8.47 43 P Pn 10 21 26.0 -0.6
UMZA Um Al Zommool 8.49 229 *e*Pn Pn 10 21 26.4 -0.3
IKRD Kardeh 8.57 346 *e*Pn Pn 10 21 26.3 -1.7
IAKL Akhelmad 8.60 342 *e*Pn Pn 10 21 27.6 -0.8
MZWR Madinat Zayed 8.75 240 *e*Pn Pn 10 21 30.8 +0.6
SBZV Sabzevar 8.77 335 *e*Pn Pn 10 21 29.4 -1.3
JRN Qarnain Island 8.99 249 *e*Pn Pn 10 21 33.8 +0.3
NASN Na'in 9.10 301 *e*Pn Pn 10 21 35.5 +0.1
SHRO Shahrood 9.11 327 *e*Pn Pn 10 21 34.4 -0.8
THW Thamme Wali 9.36 60 P Pn 10 21 38.4 -0.2
GHWR Ruwais 9.42 244 *e*Pn Pn 10 21 39.7 +0.3
KLNJ Kolanjah 9.49 288 *e*Pn Pn 10 21 40.8 +0.1
MZR Muzera 9.49 237 *e*Pn Pn 10 21 40.2 -0.2
MZR Muzera 9.49 237 P Pn 10 21 40.3 0.0
MZR P Pn 10 21 40.3 0.0
MZR Muzera 9.49 237 Pn Pn 10 21 39.4 -1.0
IZEF Zefreh 9.51 300 *e*Pn Pn 10 21 40.9 0.0
IGAR Gharneh 9.53 297 *e*Pn Pn 10 21 41.6 +0.4
CEP Cherat 9.95 55 P Pn 10 21 43.7 -3.1
GEYT Alibeck 10.02 342 Pn Pn 10 21 47.5 -0.1
comp=Z,0.1nm,0.3s,baz=188,slow=20,SNR=2.0
comp=Z,1.3nm,0.5s
GEYT Alibeck 10.02 342 Pn Pn 10 21 46.4 -1.2
GYA0B ALIBECK ARRAY 10.02 342 Pn Pn 10 21 46.4 -1.2
BJRD Bojnurd 10.02 338 *e*Pn Pn 10 21 45.3 -2.4
KRSH Karshahi 10.15 305 *e*Pn Pn 10 21 50.1 +0.6
ISFB Sefidab 10.27 307 *e*Pn Pn 10 21 53.9 +2.8
MRVT Maraveh tapeh 10.47 333 *e*Pn Pn 10 21 52.3 -1.5
SAKB Bahrain 10.59 259 *e*Pn Pn 10 21 55.1 -0.4
SAKB Bahrain 10.59 259 P Pn 10 21 54.9 -0.5
IGLO Ghaloghah 10.63 321 *e*Pn Pn 10 21 56.0 -0.2
NIL Nilore 10.86 59 Pn Pn 10 21 58.3 -0.9
NIL Nilore 10.86 59 P Pn 10 21 58.3 -0.9
IVRN Varamin 10.97 309 *e*Pn Pn 10 22 00.8 0.0

GHVR GHOM 11.01 306 *e*Pn Pn 10 22 02.5 +1.3
DAMV Damavand 11.18 312 *e*Pn Pn 10 22 01.8 -1.9
AJM Ajmer 11.31 97 *e*P Pn 10 22 03.6 -1.8
AMIS Naft Sefid 11.56 289 *e*Pn Pn 10 22 09.1 +0.4
CHGR Chuyangaron 11.74 28 Pn Pn 10 22 11.0 -0.2
CHGR Chuyangaron 11.74 28 P Pn 10 22 11.0 -0.2
CHTH Charan 11.89 311 *e*Pn Pn 10 22 12.3 -1.2
ASAO Ashtian 11.96 304 *e*Pn Pn 10 22 14.4 0.0
THN Thein Dam 12.39 68 *e*P Pn 10 22 24.2 +4.1
THN *e*S Sn 10 24 39.2 +2.3
GAR Garm 12.53 31 Pn Pn 10 22 19.9 -2.1
DMTO DMTO 12.56 213 P Pn 10 22 24.3 +1.9
KUDL Kundal 12.68 88 *e*P Pn 10 22 24.0 0.0
KUDL *e*S Sn 10 24 37.8 -6.1
QABG Abgarm-Qazvin 12.84 307 *e*Pn Pn 10 22 25.6 -0.8
WHFO Wadi Hawf 12.99 218 P Pn 10 22 28.5 +0.2
IDOB Doab 13.06 297 *e*Pn Pn 10 22 29.9 +0.5
RBK Rabkut 13.11 215 P Pn 10 22 30.8 +0.9
IKFM Kafar-mosalman 13.23 296 *e*Pn Pn 10 22 32.3 +0.8
SMLA Simla 13.35 75 *e*P Pn 10 22 33.0 -0.1
SMLA *e*S Sn 10 24 57.2 -3.0
SMLA IAML 10 25 03.4
comp=N,50nm,0.3s
SMLA IAML 10 25 04.3
comp=E,62nm,1.4s
IBZA Bozab 13.55 300 *e*Pn Pn 10 22 36.7 +0.6
ABTO Aybut 13.71 218 P Pn 10 22 38.3 +0.1
IKOM Komasi 13.71 298 *e*Pn Pn 10 22 39.0 +0.7
SNGE Sanandaj 14.18 301 *e*Pn Pn 10 22 46.0 +1.3
ILIN Lien 14.40 300 *e*Pn Pn 10 22 48.3 +0.5
IGHG Ghaleghazi 14.50 298 *e*Pn Pn 10 22 50.0 +1.0
BHPL Bhopal 14.73 107 *e*P Pn 10 22 50.3 -1.8
BHPL IAmb IAmb 10 22 53.0
comp=Z,7.9nm,0.7s
RAYN Ar Rayn 15.71 256 Pn Pn 10 23 00.8 -4.2
RAYN Ar Rayn 15.71 256 P Pn 10 23 00.8 -4.2
RAYN pmax pmax
comp=Z,10.0nm,0.9s
RAYN Ar Rayn 15.71 256 Pn Pn 10 23 00.5 -4.5
IBST Bostanabad 15.72 310 *e*Pn Pn 10 23 06.4 +1.3
KSH Kashi 15.91 43 P Pn 10 23 03.0 -4.5
KSH pP P 10 23 06.5 -4.3
KSH pmax pmax
comp=Z,15nm,1.2s
KSH LR LR
comp=Z,680nm,14.8s
IHRS Heris 15.95 312 *e*Pn P 10 23 09.9 -1.5
KKAR Karatay Array 16.11 23 Pn Pn 10 23 08.7 -1.2
KKAR Karatay Array 16.11 23 P Pn 10 23 08.7 -1.2
AAK Ala-Archa 17.34 32 Pn Pn 10 23 23.4 -2.1
AAK Ala-Archa 17.34 32 *ce*P Pn 10 23 26.1 +0.5
AAK pmax pmax
comp=Z,8.0nm,1.3s
SEKA Sheki 17.62 320 P P 10 23 29.5 -0.1
GNI Garni 18.45 314 Pn Pn 10 23 43.1 +3.9
comp=Z,0.3nm,0.3s,baz=200,slow=4.5,SNR=4.4
GNI LR LR 10 31 23.1
comp=Z,125nm,19.9s,baz=100,slow=39
GNI Garni 18.45 314 P P 10 23 37.1 -1.8
GNI IAmb IAmb 10 24 03.8
comp=Z,55nm,1.5s
GNI Garni 18.45 314 *i* P Pn 10 23 39.7 +0.5
GNI pmax pmax
comp=Z,13nm,0.9s
MAK Makhachkala 18.66 325 *e*P P 10 23 36.0 -5.0
MAK *e*S Sn 10 27 02.2 -7.0
MAK pmax pmax
comp=Z,108nm,1.1s
MAK MLR MLR
comp=Z,84nm,14.0s
HYBB Hyderabad (bro 18.69 122 *e*P P 10 23 41.4 -0.1
DANN Dangsing 19.05 85 *e*P Pn 10 23 46.7 0.0
comp=Z,87nm,0.9s
GURO Guroymak-BITLI 19.50 306 P P 10 23 49.1 -1.3
GURO IAmb IAmb 10 23 55.5
comp=Z,21nm,0.8s
GROC Groznyy 19.73 323 *e*P P 10 23 51.5 -1.2
GROC *e*S S 10 27 32.8 -0.4
GROC pmax pmax
comp=Z,28nm,0.6s
GKN Gorkha 19.86 86 *e*P Pn 10 23 56.2 0.0
MARD Mardin 19.94 302 P P 10 23 52.8 -2.4
MARD IAmb IAmb 10 24 00.8
comp=Z,13nm,0.6s
DMN Daman 20.32 87 *e*P Pn 10 24 01.9 +0.2
comp=Z,28nm,0.6s
PKIN Phulchoki 20.58 87 *e*P Pn 10 24 04.9 +0.1
comp=Z,70nm,1.0s
PKI Pulchoki 20.59 87 *e*P Pn 10 24 04.9 -0.1
comp=Z,43nm,0.9s
ABKAR Akbulak array 20.83 356 P P 10 24 04.5 -0.1
GUN Gumba 20.96 86 *e*P Pn 10 24 08.8 -0.5
NCK Nalchik 21.13 320 *i* P P 10 24 09.5 +1.5
NCK pmax pmax
comp=Z,28nm,1.2s
KOPT Kop Dagi 21.20 309 P P 10 24 07.7 -1.4
JIRN Jiri 21.26 86 *e*P P 10 24 12.8 +2.9
comp=Z,54nm,0.7s
KBZ Khabaz 21.67 320 P P 10 24 14.1 +0.4
comp=Z,3.2nm,0.8s,baz=6.2,slow=3.0,SNR=2.6
comp=Z,3.2nm,0.8s
KBZ Khabaz 21.67 320 *i* P P 10 24 14.5 +0.8
KBZ pmax pmax
comp=Z,14nm,1.0s
RAMN Ramite 21.73 88 *e*P P 10 24 17.7 +2.9
comp=Z,78nm,1.0s
SHA1 Shidzhatmaz 21.82 319 *d* P P 10 24 16.8 +1.3
KIV Kislovodsk 21.93 320 P P 10 24 15.8 -0.8
KIV IAmb IAmb 10 24 31.0
comp=Z,28nm,1.0s
KIV Kislovodsk 21.93 320 *e*P P 10 24 16.9 +0.3
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,23nm,14.0s
ASF Jabal al Asfar 22.06 286 P P 10 24 17.3 -0.8
comp=Z,3.4nm,0.8s,baz=89,slow=6.8,SNR=8.7
comp=Z,3.4nm,0.8s
AKTO Aktyubinsk 22.16 353 P P 10 24 18.4 -0.5
comp=Z,4.9nm,0.8s,baz=162,slow=9.6,SNR=13
AKTO LR LR 10 34 18.2
comp=Z,72nm,21.0s,baz=159,slow=40
comp=Z,4.9nm,0.8s
TAPN Taplejung 22.64 87 *e*P P 10 24 26.9 +2.3
GHAJ Ghor Haditha 23.17 284 P P 10 24 26.0 -3.7
GHAJ IAmb IAmb 10 25 02.5
comp=Z,13nm,1.1s
MMAI Mount Meron Ar 23.37 288 LR LR 10 35 17.0
comp=Z,172nm,19.8s,baz=262,slow=41
EIL Elat 23.75 280 LR LR 10 35 32.4
comp=Z,230nm,19.4s,baz=88,slow=41
MAKZ Makanchi 24.03 35 P P 10 24 34.6 -3.2
MAKZ Makanchi 24.03 35 P P 10 24 34.6 -3.2
MAKZ pmax pmax
comp=Z,4.0nm,1.1s
MK31 Makanchi Array 24.18 35 P P 10 24 37.9 -1.3
MK31 Makanchi Array 24.18 35 *i* P P 10 24 40.0 +0.8
MKAR Makanchi Array 24.18 35 P P 10 24 39.1 -0.1
comp=Z,1.1nm,0.4s,baz=217,slow=9.0,SNR=18
MKAR LR LR 10 35 11.9
comp=Z,93nm,19.3s,baz=239,slow=39
comp=Z,1.1nm,0.4s
MKAR Makanchi Array 24.18 35 P P 10 24 37.5 -1.7
MKAR Makanchi Array 24.18 35 *ce*P P 10 24 40.0 +0.8
MKAR pmax pmax
comp=Z,1.0nm,0.4s
ATD Arta Tunnel 24.66 231 LR LR 10 36 33.7
comp=Z,75nm,19.4s,baz=9.5,slow=42
BVAR Borovoye Array 25.29 12 P P 10 24 48.8 -0.4
comp=Z,2.3nm,0.5s,baz=188,slow=9.9,SNR=22
BVAR ScP ScP 10 32 01.4 +3.3
comp=Z,0.6nm,0.7s,baz=264,slow=1.4,SNR=3.4
BVAR LR LR 10 36 27.2
comp=Z,91nm,20.4s,baz=204,slow=41
comp=Z,2.3nm,0.5s
BRVK Borovoye 25.31 12 P P 10 24 46.7 -2.6
BRVK IAmb IAmb 10 25 17.7
comp=Z,12nm,1.1s
BRVK Borovoye 25.31 12 *ce*P P 10 24 48.5 -0.8
BRVK pmax pmax
comp=Z,9.0nm,1.7s
KURBB Kurchatov Arra 25.39 25 P P 10 24 49.4 -0.7
comp=Z,5.2nm,0.7s,baz=219,slow=9.3,SNR=20
comp=Z,5.2nm,0.7s
KURK Kurchatov 25.50 25 P P 10 24 50.4 -0.7

KURK IAmb IAmb 10 24 56.3
comp=Z,7.7nm,0.9s
KURK Kurchatov 25.50 25 *ce*P P 10 24 50.9 -0.1
KURK pmax pmax
comp=Z,6.0nm,0.7s
WMQ Urumqi 25.59 46 *e*P P 10 24 54.0 +1.9
WMQ sP pP 10 25 00.3 -1.9
WMQ pmax pmax
comp=Z,31nm,0.7s
WMQ LR LR
comp=Z,300nm,19.1s
WMQ LR LR
comp=Z,270nm,19.3s
WMQ LR LR
comp=Z,120nm,21.7s
BR131 Keskin Array S 26.01 303 P P 10 24 54.8 -1.2
BR131 IAmb IAmb 10 25 24.5
comp=Z,7.0nm,1.1s
BR131 Keskin Array S 26.01 303 P P 10 24 54.8 -1.2
BR131 pmax pmax
comp=Z,7.0nm,1.1s
BRTR Keskin Array B 26.01 303 P P 10 24 55.4 -0.6
comp=Z,2.6nm,1.0s,baz=123,slow=9.0,SNR=8.4
BRTR LR LR 10 36 29.1
comp=Z,101nm,18.1s,baz=122,slow=40
comp=Z,2.6nm,1.0s
BRTR Keskin Array B 26.01 303 P P 10 24 55.7 -0.3
BRTR Keskin Array B 26.01 303 *ce*P P 10 24 57.2 +1.2
BRTR pmax pmax
comp=Z,3.0nm,1.0s
BELG Belogornoye 26.23 340 P P 10 24 56.4 -1.2
comp=Z,10nm,0.5s,baz=333,slow=4.3,SNR=5.7
comp=Z,10nm,0.5s
BELG Belogornoye 26.23 340 *i* P P 10 24 58.8 +1.2
BELG pmax pmax
comp=Z,2.0nm,0.6s
PALK Pallekele 27.44 137 LR LR 10 37 45.4
comp=Z,162nm,19.0s,baz=64,slow=40
ARU Arti 28.07 356 LR LR 10 37 37.5
comp=Z,59nm,19.2s,baz=230,slow=39
ARU Arti 28.07 356 *c* P P 10 25 16.1 +2.0
ARU 10 26 02.5
ARU S S 10 30 03.9 +7.6
ARU SS SnSn 10 31 15.8 +2.7
ARU pmax pmax
comp=Z,7.0nm,1.4s
ARU MLR MLR
comp=Z,122nm,14.0s
GOMU GeErMu 28.59 66 P P 10 25 19.8 +0.3
GOMU pP pP 10 25 22.8 -7.0
GOMU S S 10 30 15.8 +10
GOMU sS sS 10 30 21.0 -1.8
GOMU pmax pmax
comp=Z,2.0nm,0.8s
GOMU pmax pmax
comp=Z,59nm,3.9s
GOMU LR LR
comp=Z,71nm,10.3s
GOMU LR LR
comp=Z,110nm,14.3s
GOMU LR LR
comp=Z,120nm,15.7s
ZAA0 Zalesovo Array 30.40 27 P P 10 25 33.8 -1.1
ZALV Zalesovo Beam 30.40 27 P P 10 25 34.5 -0.4
comp=Z,0.9nm,0.4s,baz=227,slow=9.4,SNR=3.9
ZALV LR LR 10 38 18.9
comp=Z,77nm,18.0s,baz=228,slow=37
comp=Z,0.9nm,0.4s
ZALV Zalesovo Beam 30.40 27 P P 10 25 33.2 -1.7
ZALV Zalesovo Beam 30.40 27 *i* P P 10 25 37.5 +2.6
ZALV pmax pmax
comp=Z,1.0nm,0.4s
KIRV Kirov 31.38 347 LR LR 10 40 08.3
comp=Z,69nm,19.4s,baz=153,slow=40
OBN Obninsk 32.38 332 *i* *e*P P 10 25 56.2 +3.9
OBN *e* 10 27 02.2
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,43nm,16.0s
GTA Gaotai 32.92 61 *e*P P 10 25 58.8 +1.4
GTA sP pP 10 26 06.0 -1.7
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,33nm,6.2s
GTA LR LR
comp=Z,120nm,17.1s
GTA LR LR
comp=Z,77nm,15.3s
GTA LR LR
comp=Z,120nm,15.3s
AKASG Malin Array Be 33.27 321 P P 10 25 59.5 -0.5
comp=Z,1.0nm,0.4s,baz=117,slow=8.4,SNR=6.8
AKASG LR LR 10 42 21.0
comp=Z,62nm,18.3s,baz=66,slow=42
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 33.27 321 *ce*P P 10 25 59.9 -0.2
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 33.27 321 P P 10 25 59.2 -0.8
AKBB IAmb IAmb 10 26 05.6
comp=Z,5.5nm,0.8s
AKBB Malin Array Si 33.27 321 *ce*P P 10 25 59.8 -0.3
BURAR Bucovina Array 34.36 314 P P 10 26 08.9 -0.8
BUR08 Bucovina Ar. S 34.38 314 P P 10 26 09.0 -0.9
BUR08 IAmb IAmb 10 26 35.6
comp=Z,4.3nm,1.2s
CMAR Chiang Mai Arr 35.11 98 LR LR 10 43 19.3
comp=Z,50nm,20.3s,baz=285,slow=41
PZH PanZhiHua 35.11 84 P P 10 26 18.3 +1.8
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,70nm,5.0s
KLMR Klimovskoe 35.77 341 *e*P P 10 26 19.0 -2.5
KLMR pmax pmax
comp=Z,8.0nm,0.6s
KLMR Klimovskoe 35.77 341 *e*P P 10 26 19.1 -2.5
KLMR AMP 10 26 22.9
comp=Z,8.0nm,0.6s
MNK Minsk 35.93 326 *i* P P 10 26 19.7 -3.3
MNK *i* 10 27 40.5
MNK *i* 10 28 45.8
MNK *i* S S 10 31 59.4 +0.6
MNK *i* SS SnSn 10 34 25.0 +0.9
MNK *i* SSS SSS 10 34 44.7
MNK *i* 10 36 37.7
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,11nm,0.7s
MNK pmax pmax
comp=E,3.0nm,0.7s
MNK MLR MLR
comp=Z,46nm,20.0s
MNK MLR MLR
comp=E,36nm,20.0s
MNK MLR MLR
comp=N,13nm,15.0s
MNK Minsk 35.93 326 *i* P P 10 26 19.7 -3.3
comp=E,3.0nm,0.7s
MNK *i* P P 10 26 19.7 -3.3
comp=N,8.0nm,0.9s
MNK *i* P P 10 26 19.7 -3.3
comp=Z,11nm,0.7s,baz=122
MNK *i* PP PnPn 10 27 40.6 -3.5
MNK *i* PPP PPP 10 27 54.4
MNK *i* S S 10 31 59.4 +0.6
MNK *i* SS SnSn 10 34 25.0 +0.9
MNK *i* SSS SSS 10 34 44.7
MNK *i* LR LR 10 40 47.7
MNK *i* LRM MLR 10 42 29.5
comp=E,36nm,20.3s
MNK *i* LRM MLR 10 42 29.5
comp=Z,46nm,19.7s
MNK *i* LRM MLR 10 42 42.5
comp=N,13nm,15.1s
KMBO Kilima Mbogo 37.86 223 LR LR 10 41 23.7
comp=N,46nm,18.3s,baz=82,slow=35
KMBO Kilima Mbogo 37.86 223 *ce*P P 10 26 39.2 -1.0
KMBO pmax pmax
comp=Z,1.0nm,0.3s
SONM Songino Array 39.20 48 P P 10 26 51.5 +0.6
comp=Z,1.6nm,0.6s,baz=251,slow=9.0,SNR=7.5
SONM LR LR 10 44 28.2

comp=Z,118nm,18.1s,baz=260,slow=38
comp=Z,1.6nm,0.6s
SONM Songino Array 39.20 48 P **P** **10 26 49.6 -1.4**
GYA Guiyang 39.42 82 ⇓P **P** **10 26 56.0 +2.9**
GYA pmax pmax
comp=Z,23nm,1.0s
CUC Castrocucco 39.57 299 P **P** **10 26 53.4 -0.7**
ULN Ulaanbaatar 39.63 48 *ceP* **P** **10 26 55.5 +0.9**
ULN pmax pmax
comp=Z,11nm,2.5s
XAN Xi'an 40.14 70 P **P** **10 27 00.0 +1.2**
XAN pP pP 10 27 05.5 -3.8
XAN pmax pmax
comp=Z,10.0nm,1.0s
FIA1 FINESS Array S 40.72 334 P **P** **10 27 02.5 -0.6**
FIA1 IAmb IAmb 10 27 24.6
comp=Z,14nm,1.2s
FINES FINESS Array B 40.72 334 P **P** **10 27 01.8 -1.4**
comp=Z,1.7nm,0.7s,baz=129,slow=8.6,SNR=6.8
FINES LR LR 10 45 39.7
comp=Z,62nm,18.7s,baz=95,slow=39
comp=Z,1.7nm,0.7s
FINES FINESS Array B 40.72 334 P **P** **10 27 02.1 -1.1**
FINES FINESS Array B 40.72 334 *ceP* **P** **10 27 02.9 -0.3**
FINES pmax pmax
comp=Z,2.0nm,0.7s
MOA Molln 41.54 311 *eP* **P** **10 27 13.3 +3.0**
comp=Z,2.0nm,0.6s
MBAR Mbarara 41.69 232 LR LR 10 46 38.8
comp=Z,160nm,20.4s,baz=121,slow=39
HHC Hu-ho-hao-te 42.01 59 *eP* **P** **10 27 15.0 +0.8**
HHC pmax pmax
comp=Z,36nm,0.8s
HHC pmax pmax
comp=Z,190nm,4.5s
KBA Koelnbreinsper 42.03 310 *eP* **P** **10 27 16.8 +2.4**
comp=Z,4.7nm,1.3s
GEC2 GERESS Array S 42.09 313 P **P** **10 27 13.4 -1.5**
GERES GERESS Array B 42.09 313 P **P** **10 27 13.8 -1.0**
comp=Z,0.9nm,0.7s,baz=110,slow=6.4,SNR=7.1
comp=Z,0.9nm,0.7s
GERES GERESS Array B 42.09 313 P **P** **10 27 13.4 -1.5**
ABTA Abfaltersbach 42.55 309 *eP* **P** **10 27 20.4 +1.8**
comp=Z,2.4nm,0.6s
LYN LuoYang 43.01 69 ⇑P **P** **10 27 24.3 +2.0**
LYN pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 43.04 316 *eP* **P** **10 27 22.0 -0.3**
CLL Collm 43.04 316 *eP* **P** **10 27 22.0 -0.3**
WTTA Wattenberg 43.21 310 *eP* **P** **10 27 23.2 -0.8**
comp=Z,5.7nm,1.0s
WATA Walderalm 43.26 310 *eP* **P** **10 27 24.0 -0.3**
comp=Z,7.5nm,0.8s
PSI Prapat 43.36 119 LR LR 10 45 56.9
comp=Z,58nm,20.0s,baz=296,slow=37
SQTA Sankt Quirin 43.50 310 *eP* **P** **10 27 26.0 -0.2**
comp=Z,5.0nm,0.9s
NRIK Noril'sk 43.50 13 *ceP* **P** **10 27 24.0 -1.8**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
MOTA Moosalm 43.58 310 *eP* **P** **10 27 27.7 +0.8**
comp=Z,4.4nm,0.8s
FETA Feichten 43.80 309 *eP* **P** **10 27 28.4 -0.4**
comp=Z,4.3nm,0.7s
RETA Reutte 43.83 310 *eP* **P** **10 27 28.5 -0.4**
comp=Z,7.5nm,0.9s
DAVA Damuels 44.40 310 *eP* **P** **10 27 33.3 -0.3**
comp=Z,12nm,0.8s
KEST Kesra 44.84 293 P **P** **10 27 36.7 -0.4**
comp=Z,5.0nm,0.8s,baz=0.9,slow=2.4,SNR=6.2
comp=Z,5.0nm,0.8s
KEST Kesra 44.84 293 P **P** **10 27 35.4 -1.7**
KEST IAmb IAmb 10 27 41.5
comp=Z,5.7nm,0.8s
HFS Hagfors 45.34 328 P **P** **10 27 41.1 +0.5**
comp=Z,2.4nm,0.6s,baz=113,slow=10.0,SNR=5.4
comp=Z,2.4nm,0.6s
SENIN Lac Senin/Sane 46.10 308 P **P** **10 27 45.6 -1.5**
SENIN IAmb IAmb 10 27 50.7
comp=Z,5.2nm,0.6s
ARCES ARCESS Array B 46.18 343 P **P** **10 27 47.2 0.0**
comp=Z,1.9nm,0.8s,baz=158,slow=7.7,SNR=7.0
ARCES LR LR 10 49 51.5
comp=Z,56nm,18.6s,baz=142,slow=40
comp=Z,1.9nm,0.8s
ARCES ARCESS Array B 46.18 343 P **P** **10 27 47.1 0.0**
ARCES ARCESS Array B 46.18 343 P **P** **10 27 47.1 0.0**
ARCES pmax pmax
comp=Z,31nm,1.5s
ECH Echery 46.32 311 P **P** **10 27 48.0 -0.5**
ECH IAmb IAmb 10 27 50.1
comp=Z,4.2nm,0.8s
ECH Echery 46.32 311 P **P** **10 27 48.0 -0.5**
ECH pmax pmax
comp=Z,4.0nm,0.8s
BNI Bardonecchia 46.48 306 P **P** **10 27 49.9 -0.2**
BNI Bardonecchia 46.48 306 P **P** **10 27 49.9 -0.2**
BNI pmax pmax
comp=Z,15nm,1.4s
NC602 NORSAR Array S 46.55 328 P **P** **10 27 49.7 -0.5**
NB2 NORSAR Subarra 46.81 329 P **P** **10 27 52.2 0.0**
comp=Z,1.7nm,0.7s,baz=110,slow=7.9
NOA NORSAR Array B 46.81 329 P **P** **10 27 52.4 +0.2**
comp=Z,1.2nm,0.7s,baz=110,slow=7.7,SNR=7.1
NOA LR LR 10 49 37.7
comp=Z,46nm,18.4s,baz=105,slow=39
comp=Z,1.2nm,0.7s
SSB Saint Sauveur 48.00 307 P **P** **10 28 00.3 -1.4**
SSB IAmb IAmb 10 28 09.7
comp=Z,10nm,1.2s
SSB Saint Sauveur 48.00 307 P **P** **10 28 00.3 -1.4**
SSB pmax pmax
comp=Z,10.0nm,1.2s
NJ2 Nanjing 48.67 71 *eP* **P** **10 28 04.5 -2.5**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
ESDC Sonseca Array 54.75 300 P **P** **10 28 50.2 -2.2**
comp=Z,2.1nm,1.1s,baz=68,slow=7.3,SNR=6.6
comp=Z,2.1nm,1.1s
YAK Yakutsk 54.80 32 LR LR 10 54 11.1
comp=Z,93nm,20.8s,baz=269,slow=38
KSRS Korea Array 54.96 62 P **P** **10 28 53.7 -0.1**
comp=Z,3.4nm,0.8s,baz=272,slow=7.0,SNR=9.3
KSRS LR LR 10 55 11.8
comp=Z,65nm,19.2s,baz=290,slow=39
comp=Z,3.4nm,0.8s
TIXI Tiksi 55.96 21 *i* P **P** **10 29 02.9 +2.4**
TIXI pmax pmax
comp=Z,12nm,1.1s
KLR Kul'dur 56.03 48 LR LR 10 54 59.0
comp=Z,66nm,21.0s,baz=264,slow=38
KLR Kul'dur 56.03 48 *ceP* **P** **10 29 04.2 +2.9**
KLR pmax pmax
comp=Z,20nm,2.5s
USRK Ussuriysk Ar. 56.83 54 P **P** **10 29 06.5 -0.5**
comp=Z,0.8nm,0.6s,baz=282,slow=5.1,SNR=4.2
comp=Z,0.8nm,0.6s
JMIC Jan Mayen 57.06 338 LR LR 10 55 39.8
comp=Z,31nm,18.1s,baz=116,slow=38
TOA0 Torodi Ar. Sit 57.95 268 P **P** **10 29 13.5 -1.9**
TOA0 IAmb IAmb 10 29 16.9
comp=Z,5.4nm,0.8s
TORD Torodi Ar. Bea 57.95 268 P **P** **10 29 13.6 -1.9**
comp=Z,5.7nm,0.7s,baz=54,slow=7.5,SNR=3.6
comp=Z,5.7nm,0.7s
MJAR Matsushiro Arr 63.17 61 LR LR 10 58 51.7
comp=Z,47nm,19.6s,baz=306,slow=38
DAV Davao City (W) 63.37 97 LR LR 11 01 03.9
comp=Z,55nm,18.6s,baz=174,slow=40
JTM Tenmabayashi 64.12 56 P **P** **10 29 56.5 -0.5**
KAPI Kappang 64.64 111 LR LR 10 59 45.0
comp=Z,33nm,20.1s,baz=276,slow=38
JHJ Hachijo jima 2 65.45 64 LR LR 11 01 07.1
comp=Z,42nm,19.3s,baz=278,slow=38
DBIC Dimbokro 66.61 265 P **P** **10 30 12.9 -0.6**
comp=Z,5.5nm,0.8s,baz=106,slow=7.5,SNR=5.3
comp=Z,5.5nm,0.8s
BOSA Boshof 66.82 215 P **P** **10 30 15.2 +0.7**
comp=Z,4.8nm,0.7s,baz=28,slow=6.6,SNR=6.3
comp=Z,4.8nm,0.7s
BOSA Boshof 66.82 215 P **P** **10 30 14.6 0.0**
BILL Bilibino 69.01 23 *i* P **P** **10 30 27.9 +0.2**
BILL *e* 10 30 57.7
BILL *e* 10 33 00.5
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,48nm,16.0s
PETK Petropavlovsk- 70.94 39 LR LR 11 03 47.7
comp=Z,38nm,18.2s,baz=302,slow=38
RES Resolute Bay 76.02 354 LR LR 11 08 25.5
comp=Z,32nm,18.1s,baz=28,slow=39
GUMO Guam 77.38 81 LR LR 11 08 44.8
comp=Z,24nm,19.8s,baz=172,slow=38
SHEM Shemya Is, Ala 79.87 35 LR LR 11 08 07.9
comp=Z,30nm,18.3s,baz=250,slow=37
BMAR Burnt Mountain 82.32 10 P **P** **10 31 42.2 -1.8**
H21K Melozitna Rive 82.41 14 P **P** **10 31 43.6 -0.8**
H21K IAmb IAmb 10 31 45.9
comp=Z,2.5nm,0.9s
MDM Murphy Dome 83.94 12 P **P** **10 31 52.0 -0.3**
MDM IAmb IAmb 10 32 07.0
comp=Z,4.0nm,1.1s
ILAR Eielson Array 84.36 12 LR LR 11 13 31.6
comp=Z,34nm,20.4s,baz=230,slow=38
WRA Warramunga Arr 84.72 116 P **P** **10 31 57.9 +1.0**
comp=Z,4.2nm,0.8s,baz=318,slow=4.0,SNR=27
comp=Z,4.2nm,0.8s
WRA Warramunga Arr 84.72 116 *i* P **P** **10 31 58.7 +1.7**
WRA pmax pmax
comp=Z,5.0nm,0.8s
WRAB Tennant Creek 84.72 116 *ceP* **P** **10 31 58.3 +1.3**
WRAB pmax pmax
comp=Z,6.0nm,1.3s
ASAR Alice Springs 86.39 119 P **P** **10 32 06.8 +1.5**
comp=Z,3.1nm,0.8s,baz=308,slow=4.9,SNR=31
comp=Z,3.1nm,0.8s
YKA Yellowknife Ar 89.33 358 P **P** **10 32 17.4 -1.2**
comp=Z,1.3nm,0.8s,baz=353,slow=4.7,SNR=5.1
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 89.33 358 *i* P **P** **10 32 19.7 +1.1**
YKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 96.46 123 P **P** **10 32 51.0 -0.9**
comp=Z,3.1nm,1.1s,baz=303,slow=14,SNR=3.6
comp=Z,3.1nm,1.1s
TROLL Troll, Antarti 108.18 196 PKiKP **PKiKP** **10 37 49.8 +0.1**
VNA2 Neumayer--Watz 110.27 199 PKiKP **PKiKP** **10 37 56.8 +3.3**
VNA3 Neumayer Olymp 111.07 199 PKiKP **PKiKP** **10 37 56.1 +1.1**
QSPA South Pole Qui 118.29 180 PKP **PKiKP** **10 38 09.6 +0.6**
comp=Z,1.4nm,0.8s,baz=243,slow=1.8,SNR=9.3

*HEL **26** 10:28:47.0±0.6,67.93N×34.25E, h0km, ML2.2, Explosion*
*KOLA **26** 10:28:47.1,67.57N×34.30E, h0km, ML2.4*
*IDC **26** 10:28:51.1±2.4,67.69N×33.75E, h0km, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=23.5km s-min=10.5km az=82.0*
*BER **26** 10:28:59.1±2.1,67.85N×32.64E, h0km, ML1.9, Suspected explosion*

ISC 26 10:28:47.8±1.0, **67.66N**±0.04×**34.15E**±0.04, **h0**km, **n29**, σ1s**81**/43, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
APA	**Apatity**	**0.30**	**252**	S		**Sg**	**10 28 56.6**	**-0.7**
LVZ	**Lovozero**	**0.30**	**39**	P		**Pg**	**10 28 53.2**	**-0.4**
LVZ				S		**Sg**	**10 28 57.4**	**-0.2**
APA0	**Apatity Array**	**0.45**	**263**	P		**Pg**	**10 28 55.9**	**-0.5**
TERR	**Teriberka**	**1.59**	**13**	P		**Pn**	**10 29 17.4**	**+0.3**
TERR				S		**Sn**	**10 29 38.1**	**-0.1**
VRF	**Varrio**	**1.73**	**275**	PG		**Pn**	**10 29 18.7**	**-0.4**
	baz=84							
VRF				MSG			10 29 39.9	
	comp=Z,25nm,0.2s							
VRF				SG		**Sn**	**10 29 41.1**	**-0.8**
OLKF	**Oulanka, Finla**	**2.30**	**236**	PN		**Pb**	**10 29 28.9**	**-1.2**
OLKF				SB		**Sg**	**10 30 01.2**	**-0.4**
KU6	**Riekki**	**2.35**	**228**	PN		**Pn**	**10 29 28.4**	**+0.7**
KU6				MSG			10 30 02.7	
	comp=Z,7.3nm,0.2s							
KU6				SB		**Sg**	**10 30 03.5**	**+0.2**
MSF	**Maaselka**	**2.68**	**231**	PB		**Pb**	**10 29 35.6**	**-1.0**
MSF				SB		**Sg**	**10 30 13.4**	**-0.4**
SGF	**Sodankyl**	**2.93**	**269**	PN		**Pn**	**10 29 35.3**	**-0.3**
SGF				SG		**Sg**	**10 30 20.4**	**-1.5**
KEV	**Kevo**	**3.35**	**312**	*eP*		**Pn**	**10 29 42.4**	**+1.2**
KEV	**Kevo**	**3.35**	**312**	PB		**Pn**	**10 29 42.4**	**+1.2**
KEV				MSG			10 30 21.1	
	comp=Z,7.3nm,0.2s							
KEV				SG		**Sn**	**10 30 24.2**	**+2.5**
RNF	**Rovaniemi**	**3.35**	**255**	PN		**Pn**	**10 29 41.0**	**-0.3**
RNF				SN		**Sn**	**10 30 24.6**	**+2.9**
ARA0	**ARCESS Array S**	**3.68**	**305**	*eP*		**Pn**	**10 29 46.2**	**+0.3**
ARA0				*e*			10 30 31.2	
ARA0				IAML			10 30 45.6	
	comp=Z,8.5nm,0.2s							
ARA0	**ARCESS Array S**	**3.68**	**305**	PN		**Pn**	**10 29 45.6**	**-0.3**
ARA0				SB		**Sn**	**10 30 31.3**	**+1.3**
ARCES	**ARCESS Array B**	**3.68**	**305**	Pn		**Pn**	**10 29 46.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=120,slow=14,SNR=13							
ARCES				Sn		**Sn**	**10 30 29.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=120,slow=27,SNR=7.3							
ARCES				Lg		Lg	10 30 42.6	
	comp=Z,1.9nm,0.3s,baz=114,slow=30,SNR=12							
	comp=Z,0.6nm,0.2s							
ARCES	**ARCESS Array B**	**3.68**	**305**	P		**Pn**	**10 29 45.8**	**-0.1**
ARCES				S		**Sn**	**10 30 31.1**	**+1.2**
RMF	**Romuvaara**	**3.87**	**208**	PN		**Pn**	**10 29 51.1**	**+2.7**
HEF	**Hetta**	**4.01**	**286**	*eP*		**Pn**	**10 29 50.5**	**+0.1**
HEF				*e*			10 30 38.0	
HETT	**Hetta**	**4.01**	**286**	PN		**Pn**	**10 29 50.5**	**+0.1**
TOF	**Tornio**	**4.19**	**252**	PG		**Pb**	**10 30 04.7**	**+2.4**
TOF				SN		**Sn**	**10 30 44.4**	**+2.1**
OUL	**Oulu**	**4.21**	**236**	PB		**Pb**	**10 30 03.4**	**+0.8**
KTK1	**Kautokeino**	**4.26**	**294**	*eP*		**Pn**	**10 29 55.4**	**+1.5**
KTK1				*e*			10 30 46.8	
KTK1				IAML			10 31 04.8	
	comp=Z,6.2nm,0.2s							
PAJU	**Pajala**	**4.32**	**267**	PN		**Pn**	**10 29 57.0**	**+2.4**
LANU	**Lannavaara**	**4.62**	**280**	PN		**Pn**	**10 29 57.6**	**-1.2**
HAMF	**Hammerfest**	**4.78**	**313**	*eP*		**Pn**	**10 30 04.2**	**+3.2**
HAMF				*eS*		**Sn**	**10 30 50.4**	**-6.7**
HAMF				IAML			10 31 22.8	
	comp=Z,6.2nm,0.3s							
KIF	**Kilpisjarvi**	**5.12**	**291**	*eP*		**Pn**	**10 30 08.4**	**+2.7**
KIF				*e*			10 31 02.9	
JETT	**Jettan, Norway**	**5.37**	**297**	*eP*		**Pn**	**10 30 10.3**	**+1.2**
I37NO	**I37NO**	**5.92**	**291**	*i*			11 04 20.0	
	baz=97,slow=329,SNR=3.4							
FINES	**FINESS Array B**	**7.14**	**213**	Pn		**Pn**	**10 30 35.0**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=40,slow=13,SNR=1.2							
FINES				Sn		**Sn**	**10 31 52.1**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=27,slow=20,SNR=1.5							
FINES				Lg		Lg	10 32 29.1	
	comp=Z,0.2nm,0.3s,baz=42,slow=25,SNR=2.1							
	comp=Z,0.8nm,0.8s							

*IDC **26** 10:35:36.2±0.6,54.97S×30.99W, h0km, mb4.4/10, mbtmp4.4/11, ML3.6/1, MS4.2/30, Error ellipse: s-maj=23.3km s-min=16.0km az=64.0*
*NEIC **26** 10:35:37.8±2.3,55.34S±0.06×31.8W±0.2, h10km±1km, mb4.7/31, Error ellipse: s-maj=19.4km s-min=7.7km az=64.0*
*GCMT **26** 10:35:42.8±0.2,54.95S±0.02×31.02W±0.04, h14km±1km, MW5.0/75, Moment Tensor Solution. s29,c31; s75,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.15±.16; $M_{\theta\theta}$-1.25±.11; $M_{\phi\phi}$-0.89±.10; $M_{r\theta}$-2.17±.30; $M_{\phi\theta}$1.56±.07; $M_{r\phi}$0.73±.22; Best double couple: M_o3.33500×10^{16} NP1:$\phi_2$95.00000°, δ68.00000°, λ74.00000°. NP2: $\phi_2$151.00000°, δ27.00000°, λ123.00000°. Principal axes: T 3.2070, Plg64.0000°, Azm179.0000°; N 0.2590, Plg15.0000°, Azm301.0000°; P -3.4630, Plg21.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 10:35:37.1±0.5, **55.15S**±0.07×**31.52W**±0.08, **h10**km, **n91**, σ1s**37**/59, **mb4.7**/20, **MS4.3**/34, **South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.01**	**285**			**Pn**	**10 36 24.0**	**-0.8**
ORCD	**Orcadas**	**8.98**	**226**	Pn		**Pn**	**10 37 43.2**	**-3.4**
VNA1	**Neumayer--Stat**	**18.60**	**156**	P		**Pn**	**10 39 56.3**	**+2.0**
PMSA	**Palmer Station**	**18.70**	**226**	P		**Pn**	**10 39 59.3**	**+3.8**
	0.2nm,0.3s,baz=80,slow=11,SNR=6.0							
PMSA						LR	LR	10 46 32.2
	comp=Z,606nm,18.1s,baz=68,slow=34							
	4.5nm,0.8s							
PMSA	**Palmer Station**	**18.70**	**226**	P		**P**		**10 39 55.1 0.0**
VNA3	**Neumayer Olymp**	**18.71**	**158**	P		**Pn**		**10 39 56.6 +0.9**
VNA2	**Neumayer--Watz**	**19.00**	**156**	P		**Pn**		**10 40 00.2 +1.0**
	baz=315,slow=12							
SNAA	**Sanae**	**20.59**	**154**	P		**P**		**10 40 16.8 +0.9**
SNAA	**Sanae**	**20.59**	**154**	P		**P**		**10 40 17.0 +1.1**
	11nm,0.8s,baz=310,slow=11,SNR=40							
SNAA						LR	LR	10 46 14.3
	comp=Z,238nm,21.9s,baz=216,slow=31							
	11nm,0.8s							
SNAA	**Sanae**	**20.59**	**154**			**P**		**10 40 15.3 -0.6**
SNAA						IAmb	IAmb	10 40 34.0
	comp=Z,35nm,1.2s							
SMAI	**San Martin Ant**	**20.92**	**218**	P		**P**		**10 40 17.7 -1.7**
TROLL	**Troll, Antarti**	**22.17**	**153**	P		**P**		**10 40 34.0 +1.1**
BELA	**Belgrano 2**	**22.86**	**182**	P		**P**		**10 40 37.4 -2.6**
GO10	**Punta Arenas**	**23.03**	**259**	P		**P**		**10 40 39.3 -2.7**
GO10						IAmb	IAmb	10 41 22.3
	comp=Z,42nm,1.1s							
MG05	**Puerto Natales**	**24.42**	**261**	P		**P**		**10 40 55.2 -0.3**
MG05						IAmb	IAmb	10 41 13.3
	comp=Z,24nm,1.0s							
TRQA	**Tornquist**	**26.71**	**297**	P		**P**		**10 41 15.9 -0.5**
PLCA	**Paso Flores**	**29.41**	**283**	LR		LR		10 53 39.7
	comp=Z,231nm,20.1s,baz=130,slow=36							
CPUP	**Villa Florida**	**34.41**	**316**	P		**P**		**10 42 24.9 +0.5**
	comp=Z,3.5nm,0.6s,baz=162,slow=8.0,SNR=8.6							
CPUP						LR	LR	10 58 31.0
	comp=Z,253nm,18.0s,baz=167,slow=40							
	comp=Z,3.5nm,0.6s							
CPUP	**Villa Florida**	**34.41**	**316**	P		**P**		**10 42 22.9 -1.5**
CPUP						IAmb	IAmb	10 42 35.7
	comp=Z,7.5nm,1.0s							
MT09	**Talagante**	**34.69**	**292**	P		**P**		**10 42 26.0 -0.9**
MT01	**Popeta**	**34.77**	**291**	P		**P**		**10 42 27.1 -0.3**
QSPA	**South Pole Qui**	**35.11**	**180**	P		**P**		**10 42 32.2 +1.9**
	comp=Z,4.5nm,1.0s,baz=225,slow=3.7,SNR=8.4							
QSPA						LR	LR	10 56 05.6
	comp=Z,340nm,18.7s,baz=187,slow=35							
	comp=Z,4.5nm,1.0s							
QSPA	**South Pole Qui**	**35.11**	**180**	P		**P**		**10 42 29.1 -1.2**
QSPA						IAmb	IAmb	10 42 56.2
	comp=Z,17nm,1.1s							
MT02	**Curacav**	**35.17**	**292**	P		**P**		**10 42 31.1 +0.1**
MT02						IAmb	IAmb	10 42 33.4
	comp=Z,23nm,1.1s							
VA06	**Catapilco**	**35.79**	**293**	P		**P**		**10 42 36.2 -0.1**
CO02	**Combarbal**	**36.70**	**294**	P		**P**		**10 42 44.6 +0.4**
CO01	**Juntas del Tor**	**37.21**	**297**	P		**P**		**10 42 46.9 -1.8**
CO01						IAmb	IAmb	10 43 02.8
	comp=Z,11nm,1.1s							
AC05	**El Transito**	**38.22**	**297**	P		**P**		**10 42 57.4 +0.3**
AC05						IAmb	IAmb	10 43 19.4
	comp=Z,23nm,1.4s							
GO02	**Mina Guanaco**	**40.91**	**301**	P		**P**		**10 43 19.4 -0.3**
GO02						IAmb	IAmb	10 43 25.1
	comp=Z,18nm,1.1s							
BDFB	**Brasilia**	**41.44**	**336**	LR		LR		11 00 11.4
	comp=Z,92nm,18.7s,baz=238,slow=36							
MAW	**Mawson**	**42.31**	**145**	P		**P**		**10 43 30.8 +0.5**
	comp=Z,3.1nm,0.7s,baz=178,slow=5.3,SNR=8.0							
	comp=Z,3.1nm,0.7s							
MAW	**Mawson**	**42.31**	**145**	P		**P**		**10 43 30.6 +0.2**
LVC	**Limon Verde**	**42.74**	**304**	P		**P**		**10 43 36.9 +2.1**
	comp=Z,5.2nm,0.6s,baz=100,slow=5.9,SNR=5.9							
	comp=Z,5.2nm,0.6s							
LVC	**Limon Verde**	**42.74**	**304**	P		**P**		**10 43 36.5 +1.7**
LVC						IAmb	IAmb	10 43 45.0
	comp=Z,16nm,1.1s							
SUR	**Sutherland**	**42.84**	**80**	LR		LR		10 59 32.8
	comp=Z,377nm,18.1s,baz=166,slow=34							
PB01	**IPOC Station P**	**44.35**	**305**	P		**P**		**10 43 48.9 +1.4**
PB01						IAmb	IAmb	10 43 55.0
	comp=Z,24nm,1.4s							
PTLB	**Pontes e Lacer**	**44.99**	**321**	P		**P**		**10 43 53.0 +0.6**
PTLB						IAmb	IAmb	10 43 57.4
	comp=Z,6.4nm,0.8s							
GO01	**Chusmiza**	**45.40**	**306**	P		**P**		**10 43 58.3 +2.0**
GO01						IAmb	IAmb	10 44 17.1
	comp=Z,8.4nm,0.8s							
VNDA	**Vanda**	**47.33**	**184**	P		**P**		**10 44 12.3 +2.0**
	comp=Z,1.6nm,0.9s,baz=170,slow=4.9,SNR=7.6							
VNDA						LR	LR	11 01 03.0
	comp=Z,126nm,21.9s,baz=222,slow=32							
	comp=Z,1.6nm,0.9s							
VNDA	**Vanda**	**47.33**	**184**	P		**P**		**10 44 10.3 +0.1**
VNDA						IAmb	IAmb	10 44 18.1
	comp=Z,8.1nm,1.5s							
LPAZ	**La Paz**	**47.87**	**309**	P		**P**		**10 44 17.8 +1.9**
	comp=Z,11nm,0.5s,baz=115,slow=6.5,SNR=72							
	comp=Z,11nm,0.5s							
LPAZ	**La Paz**	**47.87**	**309**	P		**P**		**10 44 17.3 +1.4**
H10S2	**ASCENSION HYDR**	**47.98**	**23**	T		T		11 35 42.4
	baz=194							
H10S3	**ASCENSION HYDR**	**47.98**	**23**	T		T		11 35 42.0
	baz=26,SNR=8.7							
BOSA	**Boshof**	**48.19**	**81**	LR		LR		11 02 31.8
	comp=Z,273nm,18.1s,baz=198,slow=34							
H10N1	**ASCENSION HYDR**	**49.09**	**23**	T		T		11 37 05.0
	baz=192,slow=76,SNR=10							
H10N3	**ASCENSION HYDR**	**49.09**	**23**	T		T		11 37 04.7
	baz=192,slow=76,SNR=11							
H10N2	**ASCENSION HYDR**	**49.11**	**23**	T		T		11 37 06.0
	baz=192,slow=76,SNR=10.0							
RCBR	**Riachuelo**	**49.30**	**354**	LR		LR		11 03 05.6
	comp=Z,167nm,18.3s,baz=318,slow=34							
LBTB	**Lobatse**	**51.16**	**78**	P		**P**		**10 44 38.5 -1.8**
	comp=Z,3.9nm,0.8s,baz=272,slow=5.9,SNR=3.8							
LBTB						LR	LR	11 03 11.3
	comp=Z,119nm,18.2s,baz=179,slow=33							
	comp=Z,3.9nm,0.8s							
TSUM	**Tsumeb**	**51.47**	**66**	LR		LR		11 03 08.6
	comp=Z,177nm,18.2s,baz=144,slow=32							
ETMB	**Extrema**	**52.85**	**315**	P		**P**		**10 44 53.8 +1.0**
ETMB						IAmb	IAmb	10 45 07.6
	comp=Z,4.2nm,1.0s							
CASY	**Casey**	**55.55**	**162**	P		**P**		**10 45 13.0 +1.2**
CASY						IAmb	IAmb	10 45 15.4
	comp=Z,14nm,1.4s							
MACA	**Manacapuru-AM**	**56.95**	**325**	P		**P**		**10 45 22.1 -0.4**
MACA						IAmb	IAmb	10 45 24.6
	comp=Z,13nm,0.5s							
LSZ	**Lusaka**	**60.41**	**73**	LR		LR		11 09 55.2
	comp=Z,396nm,18.2s,baz=168,slow=34							
DBIC	**Dimbokro**	**65.47**	**29**	P		**P**		**10 46 18.9 -1.2**
	comp=Z,2.9nm,0.7s,baz=200,slow=6.7,SNR=3.1							
DBIC						LR	LR	11 09 18.6
	comp=Z,170nm,18.4s,baz=158,slow=31							
	comp=Z,2.9nm,0.7s							
OTAV	**Otavalo**	**67.13**	**308**	P		**P**		**10 46 32.5 +1.0**
ROSC	**El Rosal**	**69.45**	**314**	LR		LR		11 21 14.1
	comp=Z,177nm,18.1s,baz=220,slow=39							
SDV	**Santo Domingo**	**71.67**	**319**	LR		LR		11 22 13.6
	comp=Z,278nm,18.1s,baz=121,slow=38							
KOWA	**Kowa**	**73.17**	**28**	LR		LR		11 15 05.4
	comp=Z,136nm,18.4s,baz=218,slow=32							
TOA0	**Torodi Ar. Sit**	**73.57**	**34**	P		**P**		**10 47 09.5 -0.7**
TOA0						IAmb	IAmb	10 47 21.5
	comp=Z,7.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**73.57**	**34**	P		**P**		**10 47 08.6 -1.6**
	comp=Z,1.8nm,0.4s,baz=200,slow=5.9,SNR=1.9							
	comp=Z,1.8nm,0.4s							
TORD	**Torodi Ar. Bea**	**73.57**	**34**	P		**P**		**10 47 10.3 +0.1**
MBAR	**Mbarara**	**73.99**	**67**	LR		LR		11 17 20.3
	comp=Z,389nm,18.1s,baz=124,slow=34							
KMBO	**Kilima Mbogo**	**77.07**	**73**	LR		LR		11 19 27.5
	comp=Z,311nm,18.2s,baz=260,slow=34							
SJG	**San Juan**	**78.68**	**327**	LR		LR		11 23 45.5

comp=Z,39nm,18.9s,baz=212,slow=31
STKA Stephens Creek 93.13 174 LR LR 11 28 18.8
comp=Z,234nm,19.5s,baz=203,slow=34
TAOE Nuku Hiva Isla 93.21 250 *e*LR LR 11 18 49.5
comp=Z,113nm,27.0s
KEST Kesra 97.06 32 LR LR 11 29 35.9
comp=Z,279nm,18.0s,baz=194,slow=34
ESDC Sonseca Array 97.35 21 LR LR 11 29 25.9
comp=Z,139nm,18.7s,baz=180,slow=33
VAE Valguarnera 100.28 36 LR LR 11 30 20.4
comp=Z,102nm,18.5s,baz=156,slow=33
ASAR Alice Springs 100.52 166 P **Pdif 10 49 23.9 -0.9**
comp=Z,0.4nm,0.8s,baz=188,slow=4.8,SNR=4.3
DZM Mont Dzumac 101.57 197 *e*LR LR 11 22 40.3
comp=Z,221nm,24.2s
FINES FINESS Array B 124.77 30 PKP **PKPdf 10 54 35.6 +0.2**
comp=Z,2.5nm,1.0s,baz=129,slow=1.2,SNR=5.0
CMAR Chiang Mai Arr 127.68 114 PKP **PKiKP 10 54 43.7 +0.7**
comp=Z,1.1nm,0.8s,baz=238,slow=3.6,SNR=6.3
YKA Yellowknife Ar 133.88 320 PKP **PKiKP 10 54 54.8 +0.7**
comp=Z,0.9nm,0.7s,baz=127,slow=2.3,SNR=7.1
PZH PanZhiHua 135.72 111 PKP **PKiKP 10 54 59.0 -0.2**
MKAR Makanchi Array 138.95 73 PKP **PKiKP 10 55 04.4 -0.6**
comp=Z,0.4nm,0.7s,baz=240,slow=4.3,SNR=3.6
ZALV Zalesovo Beam 144.19 65 PKP **PKPab 10 55 10.0 +0.3**
comp=Z,1.6nm,0.5s,baz=270,slow=2.6,SNR=6.6
GTA Gaotai 144.24 95 *e*PKPbc **PKiKP 10 55 17.0 +0.8**
GTA sPKP 10 55 32.5
GTA LR LR
comp=N,83nm,17.5s
GTA LR LR
comp=E,97nm,16.4s
GTA LR LR
comp=Z,77nm,17.5s
ILAR Eielson Array 147.69 314 PKPbc **PKPbc 10 55 20.7 +0.3**
comp=Z,3.3nm,0.8s,baz=126,slow=1.6,SNR=29
LYN LuoYang 147.73 115 *e*PKPbc **PKPdf 10 55 17.0 -1.6**
LYN pPKP sPKPab 10 55 29.0 +2.5
SONM Songino Array 153.14 88 PKPbc **PKPbc 10 55 33.9 -0.2**
comp=Z,1.0nm,0.5s,baz=212,slow=4.0,SNR=5.0

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*JMA **26** 10:46:19.7±0.1,23.9N±0.3×121.6E±0.4,h39km,MV3.8/15, TAIWAN REGION*
*TAP **26** 10:46:19.9,23.94N×121.63E,h43km,ML4.1,C*
ISC 26 10:46:20.3±0.9,23.92N±0.01×121.64E±0.02,h33km±1km, n137,σ0.91/243,21C-16D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.06**	**215**	*i* P	**Pb**	**10 46 27.2**	**+1.4**
	baz=217						
TEYL				S	**Sb**	**10 46 32.5**	**+2.9**
	baz=217						
HWA	**Hwalien**	**0.07**	**334**	⇑P	**Pb**	**10 46 27.2**	**+1.3**
	baz=337						
HWA				S	**Sb**	**10 46 32.3**	**+2.6**
	baz=337						
ETM	**Tongmen**	**0.14**	**290**	P	**Pb**	**10 46 26.8**	**+0.5**
	baz=282						
ETM				*e*S	**Sb**	**10 46 31.1**	**+0.7**
	baz=282						
TWD	**Chiawan**	**0.17**	**347**	⇑*i*P	**Pb**	**10 46 27.1**	**+0.6**
	baz=339						
TWD				S	**Sb**	**10 46 32.2**	**+1.4**
	baz=339						
ESL	**Shilin**	**0.21**	**241**	⇓*i*P	**Pn**	**10 46 27.2**	**+0.2**
	baz=239						
ESL				*e*S	**Sb**	**10 46 31.9**	**+0.4**
	baz=239						
TEGC	**Jichi Village**	**0.23**	**203**	*i* P	**Pb**	**10 46 28.2**	**+1.1**
	baz=200						
TEGC				*e*S	**Sb**	**10 46 34.2**	**+2.4**
	baz=200						
ETL	**Fush Village**	**0.24**	**357**	⇑*i*P	**Pn**	**10 46 27.5**	**0.0**
	baz=348						
ETL				*e*S	**Sb**	**10 46 33.5**	**+1.3**
	baz=348						
NACB	**Ninganchiao**	**0.26**	**352**	⇑*i*P	**Pn**	**10 46 27.5**	**-0.2**
	baz=342						
NACB				S	**Sb**	**10 46 32.9**	**+0.4**
	baz=342						
EGFH	**Guangfu**	**0.31**	**218**	⇓*i*P	**Pb**	**10 46 28.1**	**-0.1**
	baz=223						
EGFH				*e*S	**Sn**	**10 46 34.2**	**+0.4**
	baz=223						
ETLH	**Xiulin Townshi**	**0.32**	**334**	⇑*i*P	**Pb**	**10 46 28.3**	**-0.1**
	baz=332						
ETLH				*e*S	**Sn**	**10 46 34.2**	**0.0**
	baz=332						
EHP	**Heping Village**	**0.40**	**14**	*e*P	**Pb**	**10 46 29.5**	**+0.1**
	baz=24						
WHF	**Hehuan Shan**	**0.41**	**304**	⇑*i*P	**Pb**	**10 46 29.7**	**-0.2**
	baz=298						
WHF				*e*S	**Sn**	**10 46 36.3**	**-0.6**
	baz=298						
OWD	**Renai**	**0.42**	**275**	⇓*i*P	**Pb**	**10 46 30.0**	**+0.1**
	baz=275						
OWD				*e*S	**Sb**	**10 46 36.6**	**+0.2**
	baz=275						
CHGB	**Renai**	**0.45**	**289**	⇓*i*P	**Pb**	**10 46 30.4**	**+0.2**
	baz=283						
CHGB				*e*S	**Sb**	**10 46 36.6**	**-0.4**
	baz=283						
HGSD	**Ruisui**	**0.47**	**205**	⇓*i*P	**Pb**	**10 46 30.6**	**+0.2**
	baz=214						
HGSD				*e*S	**Sn**	**10 46 38.8**	**+1.0**
	baz=214						
WUSB	**Renai**	**0.48**	**279**	⇓*i*P	**Pb**	**10 46 30.9**	**+0.2**
	baz=276						
WUSB				*e*S	**Sb**	**10 46 37.5**	**-0.3**
	baz=276						
VWDT	**VWDT**	**0.48**	**250**	⇓*i*P	**Pb**	**10 46 30.7**	**+0.2**
	baz=244						
VWDT				*e*S	**Sb**	**10 46 38.0**	**+0.4**
	baz=244						
FUSS	**Fushou**	**0.49**	**313**	⇑*i*P	**Pb**	**10 46 30.9**	**0.0**
	baz=313						
FUSS				*e*S	**Sb**	**10 46 38.4**	**+0.3**
	baz=313						
EHY	**Hungye**	**0.50**	**215**	⇓*i*P	**Pn**	**10 46 29.9**	**-1.3**
	baz=218						
ENA	**Nanau**	**0.52**	**11**	⇑*i*P	**Pn**	**10 46 30.6**	**-0.7**
	baz=5.0						
ENA				*e*S	**Sb**	**10 46 38.3**	**-0.3**
	baz=5.0						
TWT	**Tachien**	**0.54**	**309**	*e*P	**Pn**	**10 46 31.7**	**-0.1**
	baz=309						
TWT				S	**Sn**	**10 46 39.5**	**-0.3**
	baz=309						
EWUT	**Wuta**	**0.54**	**14**	⇑*i*P	**Pn**	**10 46 30.1**	**-1.6**
	baz=7.0						
EWUT				*e*S	**Sn**	**10 46 38.7**	**-1.0**
	baz=7.0						
TDCB	**Techi**	**0.55**	**307**	P	**Pn**	**10 46 31.6**	**-0.4**
	baz=309						
TDCB				*e*S	**Sn**	**10 46 39.3**	**-0.8**
	baz=309						
NNSB	**Datong**	**0.56**	**336**	⇑*i*P	**Pn**	**10 46 31.4**	**-0.7**
	baz=338						
NNSB				*e*S	**Sn**	**10 46 39.4**	**-0.9**
	baz=338						
NNSH	**Datong**	**0.56**	**336**	P	**Pn**	**10 46 31.4**	**-0.7**
	baz=337						
NNSH				*e*S	**Sn**	**10 46 39.3**	**-1.0**
	baz=337						
NNS	**Nan Shan**	**0.57**	**335**	⇑*i*P	**Pn**	**10 46 30.6**	**-1.7**
	baz=338						
NNS				S	**Sn**	**10 46 38.8**	**-1.8**
	baz=338						
YULB	**Yu-li**	**0.61**	**211**	*e*P	**Pn**	**10 46 31.2**	**-1.5**
	baz=211						
YULB				*e*S	**Sn**	**10 46 39.2**	**-2.1**
	baz=211						
ECBN	**Changbin**	**0.62**	**196**	*e*P	**Pn**	**10 46 32.6**	**-0.2**
	baz=206						
ECBN				*e*S	**Sb**	**10 46 42.5**	**+1.0**
	baz=206						
LATG	**Datong**	**0.62**	**351**	*i* P	**Pn**	**10 46 32.0**	**-0.9**
	baz=350						
LATG				*e*S	**Sn**	**10 46 40.7**	**-1.2**
	baz=350						
EYUL	**Yuli**	**0.64**	**207**	*e*P	**Pn**	**10 46 32.0**	**-1.1**
	baz=215						
EYUL				*e*S	**Sn**	**10 46 40.3**	**-1.8**
	baz=215						
SSLB	**Suanglung**	**0.64**	**258**	⇓*i*P	**Pn**	**10 46 32.6**	**-0.4**
	baz=259						
SSLB				*e*S	**Sn**	**10 46 40.4**	**-1.7**
	baz=259						
SMLT	**Sun Moon Lake**	**0.68**	**267**	⇓*i*P	**Pn**	**10 46 33.3**	**-0.3**
	baz=265						
SMLT				*e*S	**Sn**	**10 46 43.5**	**+0.4**
	baz=265						
WCS	**Beigang Elemen**	**0.68**	**282**	⇓*i*P	**Pn**	**10 46 32.5**	**-1.1**
	baz=277						
WCS				*e*S	**Sn**	**10 46 42.8**	**-0.2**
	baz=277						
NDT	**Datong Townshi**	**0.69**	**351**	⇑*i*P	**Pn**	**10 46 33.4**	**-0.4**
	baz=343						
NDT				*e*S	**Sn**	**10 46 41.5**	**-1.9**
	baz=343						
TYC	**Yuchr**	**0.71**	**269**	⇓*i*P	**Pn**	**10 46 33.7**	**-0.4**
	baz=267						
TYC				*e*S	**Sn**	**10 46 43.2**	**-0.6**
	baz=267						
TWC	**Suao**	**0.71**	**16**	*e*P	**Pn**	**10 46 33.7**	**-0.4**
	baz=6.0						
TWC				*e*S	**Sb**	**10 46 45.4**	**+1.4**
	baz=6.0						
NDS	**Dongshan**	**0.72**	**6**	⇑P	**Pn**	**10 46 32.2**	**-2.0**
	baz=355						
NDS				*e*S	**Sb**	**10 46 44.8**	**+0.7**
	baz=355						
ENTT	**Nioudou**	**0.72**	**355**	⇑*i*P	**Pn**	**10 46 32.5**	**-1.8**
	baz=354						
ENTT				*e*S	**Sn**	**10 46 41.7**	**-2.5**
	baz=354						
WHP	**Taichung City**	**0.73**	**300**	P	**Pn**	**10 46 34.6**	**+0.3**
	baz=300						
WHP				*e*S	**Sn**	**10 46 44.2**	**-0.2**
	baz=300						
WHYT	**Xinyi Township**	**0.75**	**253**	⇑*i*P	**Pn**	**10 46 34.8**	**+0.2**
	baz=252						
WHYT				S	**Sn**	**10 46 44.7**	**-0.2**
	baz=252						
FULB	**Fuli**	**0.78**	**204**	*e*P	**Pn**	**10 46 34.5**	**-0.5**
	baz=213						
FULB				*e*S	**Sn**	**10 46 45.8**	**+0.2**
	baz=213						
YHNB	**Yeheng**	**0.79**	**342**	⇑*i*P	**Pn**	**10 46 34.7**	**-0.5**
	baz=348						
YHNB				*e*S	**Sn**	**10 46 44.7**	**-1.1**
	baz=348						
NSK	**Sanguang**	**0.80**	**341**	⇑*i*P	**Pn**	**10 46 33.9**	**-1.5**
	baz=347						
NSK				*e*S	**Sn**	**10 46 44.1**	**-2.0**
	baz=347						
TWE	**Neicheng**	**0.80**	**2**	⇑*i*P	**Pn**	**10 46 34.6**	**-0.7**
	baz=357						
TWE				*e*S	**Sn**	**10 46 45.3**	**-0.8**
	baz=357						
WJS	**Zhushan**	**0.84**	**264**	*e*P	**Pn**	**10 46 36.4**	**+0.6**
	baz=262						
WJS				*e*S	**Sb**	**10 46 48.1**	**+0.7**
	baz=262						
FUSB	**Fushanzhiwuyua**	**0.84**	**357**	⇑*i*P	**Pn**	**10 46 35.2**	**-0.7**
	baz=355						
FUSB				*e*S	**Sn**	**10 46 46.4**	**-0.8**
	baz=355						
ILA	**Ilan**	**0.85**	**7**	*e*P	**Pn**	**10 46 35.5**	**-0.5**
	baz=358						
ILA				*e*S	**Sn**	**10 46 47.3**	**0.0**
	baz=358						
NFF	**Wufeng Townshi**	**0.85**	**326**	*e*P	**Pn**	**10 46 35.3**	**-0.8**
	baz=330						
NFF				*e*S	**Sn**	**10 46 46.4**	**-1.1**
	baz=330						
ALS	**Alishan**	**0.86**	**242**	⇓*i*P	**Pn**	**10 46 36.4**	**0.0**
	baz=235						
ALS				S	**Sn**	**10 46 48.1**	**0.0**
	baz=235						
WNT	**Mingjian**	**0.87**	**268**	*e*P	**Pn**	**10 46 37.0**	**+0.8**
	baz=266						
WNT				*e*S	**Sb**	**10 46 49.3**	**+0.9**
	baz=266						
TWQ1	**Liyutan**	**0.90**	**299**	⇓*i*P	**Pn**	**10 46 37.3**	**+0.7**
	baz=297						
TWQ1				*e*S	**Sn**	**10 46 49.4**	**+0.9**
	baz=297						
TCU	**Taichung**	**0.91**	**285**	*e*P	**Pb**	**10 46 37.9**	**+0.3**
	baz=283						
TCU				*e*S	**Sn**	**10 46 49.7**	**+1.0**
	baz=283						
NSTT	**Nanjuang**	**0.92**	**321**	⇑*i*P	**Pn**	**10 46 37.6**	**+0.7**
	baz=307						
NSTT				*e*S	**Sn**	**10 46 49.8**	**+0.8**
	baz=307						
LIOB	**Emei**	**0.92**	**322**	⇑*i*P	**Pn**	**10 46 37.9**	**+0.9**
	baz=308						
LIOB				*e*S	**Sb**	**10 46 50.2**	**+0.4**
	baz=308						
ELDTW	**Lidau**	**0.92**	**218**	*e*P	**Pn**	**10 46 36.2**	**-0.9**
	baz=212						
ELDTW				*e*S	**Sn**	**10 46 47.0**	**-2.2**
	baz=212						
CHN5	**Tsauling**	**0.93**	**250**	*e*P	**Pn**	**10 46 36.7**	**-0.5**
	baz=241						
CHN5				S	**Sn**	**10 46 49.9**	**+0.4**
	baz=241						
NSY	**Sanyi**	**0.94**	**302**	⇓*i*P	**Pn**	**10 46 37.9**	**+0.7**
	baz=300						
NSY				*e*S	**Sb**	**10 46 51.0**	**+0.6**
	baz=300						
NTC	**Toucheng**	**0.95**	**11**	*e*P	**Pn**	**10 46 37.0**	**-0.4**
	baz=359						
NTC				*e*S	**Sb**	**10 46 51.8**	**+1.2**
	baz=359						
EGS		**0.96**	**16**	*e*P	**Pn**	**10 46 37.4**	**-0.1**
	baz=23						
EGS				*e*S	**Sn**	**10 46 50.0**	**-0.1**
	baz=23						
NMLH	**Miaoli**	**0.99**	**309**	*e*P	**Pn**	**10 46 38.2**	**+0.3**
	baz=307						
NMLH				*e*S	**Sb**	**10 46 53.0**	**+1.3**
	baz=307						
EDH	**Donghe**	**0.99**	**198**	*e*P	**Pn**	**10 46 36.9**	**-0.9**
	baz=210						
EDH				*e*S	**Sn**	**10 46 50.5**	**-0.2**
	baz=210						
WCHH	**Zhanghua**	**1.00**	**279**	P	**Pn**	**10 46 38.9**	**+0.8**
	baz=289						
WCHH				*e*S	**Sb**	**10 46 52.7**	**+0.7**
	baz=289						
WDJ	**Dajia District**	**1.01**	**295**	*e*P	**Pn**	**10 46 38.5**	**+0.4**
	baz=294						
WDJ				*e*S	**Sn**	**10 46 52.1**	**+0.9**
	baz=294						
WDLH	**Douliu**	**1.03**	**257**	⇓P	**Pn**	**10 46 39.4**	**+1.0**
	baz=247						
WDLH				*e*S	**Sb**	**10 46 53.3**	**+0.4**
	baz=247						
NHDH	**Xindian Distri**	**1.05**	**354**	*e*P	**Pn**	**10 46 38.5**	**-0.2**
	baz=352						
NHDH				*e*S	**Sn**	**10 46 52.0**	**-0.2**
	baz=352						
SBCB	**Hsinchu**	**1.05**	**326**	*e*P	**Pn**	**10 46 39.5**	**+0.7**
	baz=324						
SBCB				*e*S	**Sb**	**10 46 54.2**	**+0.6**
	baz=324						
TWA	**Mucha**	**1.06**	**357**	*e*P	**Pn**	**10 46 38.8**	**-0.1**
	baz=1.0						
TWA				*e*S	**Sn**	**10 46 51.1**	**-1.4**
	baz=1.0						
WCKO	**Fanlu**	**1.06**	**243**	*e*P	**Pn**	**10 46 38.5**	**-0.4**
	baz=242						
WCKO				*e*S	**Sn**	**10 46 53.6**	**+1.1**
	baz=242						
TIPB	**Shuangxi**	**1.06**	**9**	*e*P	**Pn**	**10 46 38.7**	**-0.3**
	baz=356						
HSN	**Hsinchu**	**1.07**	**326**	*e*P	**Pn**	**10 46 39.3**	**+0.3**
	baz=326						
HSN				*e*S	**Sb**	**10 46 54.7**	**+0.7**
	baz=326						
STYH	**Taoyuan**	**1.08**	**227**	*e*P	**Pn**	**10 46 38.6**	**-0.6**
	baz=228						
STYH				*e*S	**Sn**	**10 46 52.9**	**-0.2**
	baz=228						
LONT	**Longtian**	**1.11**	**205**	*e*P	**Pn**	**10 46 37.9**	**-1.7**
	baz=197						
LONT				*e*S	**Sn**	**10 46 51.7**	**-2.0**
	baz=197						
TPUB	**Ta-pu**	**1.11**	**237**	*e*P	**Pn**	**10 46 40.3**	**+0.8**
	baz=237						
TPUB				*e*S	**Sn**	**10 46 55.1**	**+1.4**
	baz=237						
CHN4	**Tsaushan**	**1.11**	**240**	*e*P	**Pn**	**10 46 39.8**	**+0.3**
	baz=238						
NCUH	**Zhongli**	**1.12**	**339**	*e*P	**Pn**	**10 46 40.2**	**+0.5**
	baz=336						
NCUH				*e*S	**Sb**	**10 46 55.4**	**-0.1**
	baz=336						
NCU	**National Centr**	**1.12**	**339**	*e*P	**Pn**	**10 46 40.1**	**+0.3**
	baz=337						
NCU				*e*S	**Sn**	**10 46 54.8**	**+0.7**
	baz=337						
CHN2	**Minshiung**	**1.13**	**250**	*e*P	**Pb**	**10 46 41.3**	**-0.1**
	baz=249						
CHN2				*e*S	**Sb**	**10 46 57.4**	**+1.6**
	baz=249						
TWB1	**Santiao Chiao**	**1.13**	**16**	*e*P	**Pn**	**10 46 40.2**	**+0.3**
	baz=26						
TWB1				*e*S	**Sn**	**10 46 54.5**	**+0.3**
	baz=26						
WRL	**Guolierlin Hig**	**1.15**	**269**	*e*P	**Pn**	**10 46 39.9**	**-0.2**
	baz=278						
WRL				*e*S	**Sb**	**10 46 56.4**	**0.0**
	baz=278						
WTP	**Ta-pu**	**1.15**	**235**	*e*P	**Pn**	**10 46 41.2**	**+1.0**
	baz=235						
WTP				*e*S	**Sn**	**10 46 56.3**	**+1.5**
	baz=235						
NWF	**Wu-fen Shan**	**1.16**	**7**	*e*P	**Pn**	**10 46 40.1**	**-0.1**
	baz=356						
WTK	**Tuku**	**1.17**	**259**	*e*P	**Pn**	**10 46 41.0**	**+0.7**
	baz=257						
WTK				*e*S	**Sb**	**10 46 57.8**	**+1.1**
	baz=257						
CHY	**Chiayi**	**1.19**	**250**	*e*P	**Pn**	**10 46 41.5**	**+0.9**
	baz=248						
CHY				*e*S	**Sb**	**10 46 57.9**	**+0.6**
	baz=248						
SXI1	**Grass Mountain**	**1.19**	**10**	*e*P	**Pn**	**10 46 40.9**	**+0.1**
	baz=354						
SXI1				*e*S	**Sn**	**10 46 57.0**	**+1.1**
	baz=354						
TWS1	**Kuangyinshan**	**1.20**	**350**	*e*P	**Pn**	**10 46 40.7**	**0.0**
	baz=1.0						
TWS1				*e*S	**Sn**	**10 46 55.7**	**-0.1**
	baz=1.0						
TWGBT	**Beinan**	**1.21**	**205**	*e*P	**Pn**	**10 46 39.1**	**-1.9**
	baz=196						
NHW	**Xinwu Township**	**1.21**	**334**	P	**Pn**	**10 46 41.5**	**+0.6**
	baz=332						
NHW				*e*S	**Sn**	**10 46 56.8**	**+0.6**
	baz=332						
YM01	**YM01**	**1.23**	**357**	*e*P	**Pn**	**10 46 40.4**	**-0.8**
	baz=356						
TTN	**Taitung**	**1.24**	**201**	*e*P	**Pn**	**10 46 40.8**	**-0.5**
	baz=204						
TTN				*e*S	**Sn**	**10 46 56.5**	**-0.5**
	baz=204						
LDUT	**Ludao**	**1.25**	**187**	*e*P	**Pn**	**10 46 39.8**	**-1.6**
	baz=184						
LDUT				*e*S	**Sn**	**10 46 55.8**	**-1.3**
	baz=184						
CHN1	**Nanshi**	**1.25**	**235**	*e*P	**Pn**	**10 46 42.6**	**+1.1**
	baz=234						
CHN1				*e*S	**Sb**	**10 46 59.0**	**-0.2**
	baz=234						
NTST	**Danshui**	**1.25**	**352**	*e*P	**Pn**	**10 46 41.3**	**-0.3**
	baz=349						
NTST				*e*S	**Sn**	**10 46 57.3**	**0.0**
	baz=349						
SNST	**Tainan City**	**1.25**	**237**	*e*P	**Pn**	**10 46 42.7**	**+1.1**
	baz=236						
SNST				*e*S	**Sn**	**10 46 58.8**	**+1.4**
	baz=236						
ANP	**Anpu**	**1.27**	**355**	*e*P	**Pn**	**10 46 40.4**	**-1.5**
	baz=354						
SGST	**Jiashian**	**1.27**	**230**	P	**Pn**	**10 46 42.0**	**+0.2**
	baz=222						
SGST				*e*S	**Sb**	**10 46 59.6**	**-0.3**
	baz=222						
JYNG	**Yonaguni jima**	**1.31**	**66**	P	**Pn**	**10 46 42.3**	**+0.1**
JYNG				S	**Sn**	**10 46 58.8**	**+0.2**
WSF	**Szhu**	**1.32**	**258**	*e*P	**Pn**	**10 46 43.4**	**+0.9**
	baz=256						
WSF				*e*S	**Sb**	**10 47 01.7**	**+0.5**
	baz=256						
WSL	**Shuilin Townsh**	**1.35**	**253**	*e*P	**Pn**	**10 46 42.4**	**-0.4**
	baz=252						
WSL				*e*S	**Sn**	**10 47 01.0**	**+1.4**
	baz=252						
TWY	**Chenhua**	**1.35**	**359**	*e*P	**Pn**	**10 46 42.6**	**-0.3**
	baz=357						
ICHU	**Yijhu**	**1.36**	**246**	*e*P	**Pn**	**10 46 44.1**	**+1.1**
	baz=246						
ICHU				*e*S	**Sb**	**10 47 02.2**	**-0.1**
	baz=246						
YOJ	**Yonaguni jima**	**1.37**	**66**	*e*P	**Pn**	**10 46 42.8**	**-0.2**
	baz=66						
YOJ				*e*S	**Sn**	**10 47 00.1**	**0.0**
	baz=66						
YOJ	**Yonaguni jima**	**1.37**	**66**	P	**Pn**	**10 46 43.1**	**0.0**
YOJ				*e*S	**Sn**	**10 47 00.1**	**0.0**
CHN3	**Shinhua**	**1.44**	**235**	*e*P	**Pn**	**10 46 44.9**	**+0.9**
	baz=246						
ECL	**Taimali**	**1.46**	**206**	*e*P	**Pn**	**10 46 43.8**	**-0.5**
	baz=198						
SSHA	**Shanhua**	**1.46**	**238**	*e*S	**Sb**	**10 47 05.3**	**+0.2**
	baz=238						
SCST	**Cishan**	**1.47**	**226**	*e*P	**Pn**	**10 46 46.0**	**+1.5**
	baz=228						
SCST				*e*S	**Sb**	**10 47 06.1**	**+0.8**
	baz=228						
SHHT	**Tainan City**	**1.48**	**233**	*e*P	**Pn**	**10 46 44.8**	**+0.1**
	baz=244						
SSD	**Sandimen**	**1.49**	**219**	*e*P	**Pn**	**10 46 45.2**	**+0.4**
	baz=219						
TSMG	**Majia**	**1.51**	**217**	*e*P	**Pn**	**10 46 45.9**	**+0.8**
	baz=220						
TSMG				*e*S	**Sn**	**10 47 04.6**	**+0.9**
	baz=220						
TWM1	**Shoushan**	**1.56**	**226**	*e*P	**Pb**	**10 46 47.9**	**-0.6**
	baz=236						
SGLT	**Jiouru**	**1.59**	**222**	*e*P	**Pn**	**10 46 47.5**	**+1.4**
	baz=221						
MASBT	**Mashibuluo**	**1.59**	**216**	*e*P	**Pn**	**10 46 46.4**	**+0.2**
	baz=216						
TSCK	**Chigu Township**	**1.62**	**242**	*e*P	**Pn**	**10 46 46.2**	**-0.3**
	baz=240						
EAST	**Anshuo**	**1.69**	**206**	*e*P	**Pn**	**10 46 46.4**	**-1.2**
	baz=200						
TAWH	**Dawu Township**	**1.71**	**204**	*e*P	**Pn**	**10 46 48.0**	**+0.1**
	baz=197						
SSPT	**Xinbi**	**1.73**	**215**	*e*P	**Pn**	**10 46 49.3**	**+1.2**
	baz=204						
PCYT	**Pengchaiyu**	**1.75**	**13**	*e*P	**Pn**	**10 46 48.3**	**0.0**
	baz=360						
WSSB	**Gushan**	**1.79**	**225**	*e*P	**Pn**	**10 46 49.2**	**+0.2**
	baz=224						
SCZT	**Fangliau**	**1.80**	**211**	*e*P	**Pn**	**10 46 49.2**	**+0.1**
	baz=201						
LAY	**Lan-yu**	**1.87**	**182**	*e*P	**Pn**	**10 46 48.6**	**-1.5**
	baz=176						
LYUB	**Lan-yu**	**1.91**	**181**	*e*P	**Pn**	**10 46 47.9**	**-2.6**
	baz=176						
WDGT	**Dungji**	**1.93**	**251**	*e*P	**Pn**	**10 46 50.9**	**+0.1**
	baz=248						
PHUB	**P'eng-hu**	**1.93**	**258**	*e*P	**Pn**	**10 46 50.4**	**-0.4**
	baz=256						
PNG	**Penghu**	**1.94**	**260**	*e*P	**Pn**	**10 46 50.2**	**-0.7**
	baz=258						
PNG				*e*S	**Sn**	**10 47 14.1**	**0.0**
	baz=258						
IRIF	**Iriomote-Funau**	**1.96**	**77**	P	**Pn**	**10 46 51.3**	**+0.1**
IRIF				*e*S	**Sn**	**10 47 14.9**	**+0.3**
HATJ	**Hateruma jima**	**1.99**	**86**	P	**Pn**	**10 46 51.6**	**0.0**
HATJ				S	**Sn**	**10 47 15.8**	**+0.4**
TWK1	**Hengchun**	**2.11**	**201**	*e*P	**Pn**	**10 46 53.1**	**-0.2**
	baz=194						
TWKBT	**Hengchun**	**2.11**	**201**	*e*P	**Pn**	**10 46 52.2**	**-1.1**
	baz=194						
VCHM	**Qimei**	**2.14**	**251**	*e*P	**Pn**	**10 46 53.1**	**-0.7**
	baz=239						
JKRS	**Kuro-shima**	**2.19**	**81**	P	**Pn**	**10 46 55.1**	**+0.7**
JKRS				S	**Sn**	**10 47 21.3**	**+0.9**
JIJ	**Ishigaki jima**	**2.33**	**79**	P	**Pn**	**10 46 56.4**	**0.0**
JIJ				*e*S	**Sn**	**10 47 22.9**	**-1.0**
JISG	**Ishigakijimahi**	**2.53**	**74**	P	**Pn**	**10 46 59.2**	**+0.1**
JISG				S	**Sn**	**10 47 28.2**	**-0.6**
JTJ	**Tarama**	**2.89**	**75**	P	**Pn**	**10 47 04.4**	**+0.4**
JTJ				*e*S	**Sn**	**10 47 37.7**	**+0.1**

JIRB	**Irabujima**	**3.35**	**74**	P	**Pn**	10 47 10.7	**+0.3**
JIRB				S	**Sn**	**10 47 49.5**	**+0.5**
JIKM	**Ikemajima**	**3.44**	**72**	P	**Pn**	**10 47 12.2**	**+0.6**
JIKM				S	**Sn**	**10 47 51.8**	**+0.5**
JMJ2	**Miyako jima3**	**3.47**	**76**	P	**Pn**	**10 47 12.5**	**+0.6**
JMJ2				*e*S	**Sn**	**10 47 52.8**	**+0.9**
JOGS	**Gusukube**	**3.54**	**76**	P	**Pn**	**10 47 13.7**	**+0.8**
JOGS				S	**Sn**	**10 47 55.1**	**+1.4**

ROM 26 10:49:21.4±0.1, 42°.633N±0°.004×13°.307E±0°.006, h8km, ML2.1/4, 1C, Error ellipse: s-maj=0.5km s-min=0.3km az=66.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1243	**Rocca Santa Ma**	**0.12**	**59**	S	Sg	10 49 25.0	-1.1
CAMP	**Campotosto**	**0.12**	**142**	P	Pg	10 49 24.9	+0.7
CAMP				S	Sg	10 49 27.0	+0.9
RM33	**Pellescritta (**	**0.14**	**209**	P	Pg	10 49 25.1	+0.7
RM33				S	Sg	10 49 27.5	+0.9
LNSS	**Leonessa**	**0.20**	**261**	P	Pg	10 49 26.1	+0.6
TERO	**Teramo**	**0.22**	**93**	P	Pg	10 49 26.4	+0.6
TERO				S	Sg	10 49 30.1	+1.3
NRCA	**Norcia**	**0.24**	**325**	P	Pg	10 49 27.0	+0.7
NRCA				S	Sg	10 49 31.0	+1.4
GIGS	**Gran Sasso**	**0.27**	**133**	P	Pg	10 49 27.1	+0.4
GIGS				S	Sg	10 49 31.4	+1.1
MMO1	**Montemonaco**	**0.27**	**3**	P	Pg	10 49 27.6	+0.9
MMO1				S	Sb	10 49 32.0	-1.3
MC2	**Monte Cornacci**	**0.29**	**343**	P	Pg	10 49 28.1	+0.8
MC2				S	Sb	10 49 32.8	-1.4
OFFI	**Offida**	**0.41**	**43**	P	Pb	10 49 31.0	0.0
FAGN	**Fagnano**	**0.42**	**151**	⇑P	Pg	10 49 20.9	-8.6
FAGN				AML	AML		
	comp=E,737μm,0.3s						
FAGN				AML	AML		
	comp=N,986μm,0.3s						
GUMA	**Gualdo di Mace**	**0.43**	**3**	P	Pb	10 49 30.6	-0.7
FDMO	**Fiordimonte**	**0.43**	**338**	P	Pg	10 49 30.6	+0.7
FDMO				S	Sb	10 49 37.3	-0.8
FDMO				AML	AML		
	comp=E,218μm,0.3s						
FDMO				AML	AML		
	comp=N,281μm,0.2s						
FDMO				AML	AML		
	comp=N,194μm,0.2s						

ROM 26 10:49:48.0±0.1, 42°.57N±0°.02×13°.40E±0°.01, h9km±1km, ML2.6/6, 1C-4D, Error ellipse: s-maj=1.8km s-min=0.8km az=156.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.04**	**171**	⇓P	Pg	10 49 49.8	-0.2
CAMP				S	Sg	10 49 51.6	+0.2
CAMP				AML	AML		
	comp=E,2238μm,0.7s						
CAMP				AML	AML		
	comp=N,743μm,0.6s						
T1243	**Rocca Santa Ma**	**0.13**	**15**	⇑P	Pg	10 49 50.5	-0.6
T1243				S	Sg	10 49 54.0	+0.7
T1243				AML	AML		
	comp=E,7590μm,0.3s						
T1243				AML	AML		
	comp=E,7525μm,0.3s						
T1243				AML	AML		
	comp=N,6600μm,0.3s						
T1243				AML	AML		
	comp=N,6570μm,0.3s						
RM33	**Pellescritta (**	**0.15**	**246**	P	Pg	10 49 52.0	+0.6
RM33				S	Sg	10 49 55.2	+1.4
RM33				AML	AML		
	comp=N,3000μm,1.2s						
RM33				AML	AML		
	comp=N,3005μm,1.2s						
RM33				AML	AML		
	comp=E,3065μm,0.9s						
RM33				AML	AML		
	comp=N,2985μm,1.2s						
RM33				AML	AML		
	comp=E,3060μm,0.9s						
RM33				AML	AML		
	comp=E,3065μm,1.1s						
RM33				AML	AML		
	comp=E,3060μm,1.1s						
RM33				AML	AML		
	comp=N,3005μm,0.8s						
TERO	**Teramo**	**0.16**	**71**	P	Pg	10 49 51.9	+0.4
TERO				S	Sg	10 49 54.6	+0.7
TERO				AML	AML		
	comp=E,941μm,0.1s						
TERO				AML	AML		
	comp=N,1108μm,0.6s						
GIGS	**Gran Sasso**	**0.17**	**134**	P	Pg	10 49 52.4	+0.6
LNSS	**Leonessa**	**0.27**	**277**	P	Pg	10 49 53.8	+0.3
MMO1	**Montemonaco**	**0.33**	**351**	P	Pb	10 49 55.6	-0.5
MMO1				S	Sg	10 50 00.3	+1.1
MMO1				AML	AML		
	comp=E,918μm,0.4s						
MMO1				AML	AML		
	comp=N,604μm,0.9s						
NRCA	**Norcia**	**0.34**	**321**	P	Pg	10 49 55.2	+0.4
NRCA				S	Sg	10 49 59.4	+0.1
NRCA				AML	AML		
	comp=E,2550μm,0.2s						
NRCA				AML	AML		
	comp=N,1945μm,0.1s						
MC2	**Monte Cornacci**	**0.38**	**336**	P	Pb	10 49 56.3	-0.7
OFFI	**Offida**	**0.42**	**30**	P	Pg	10 49 56.9	+0.6
T0110	**Collepietro**	**0.44**	**141**	⇓P	Pn	10 50 00.1	-0.5
ARRO	**Arrone**	**0.47**	**271**	P	Pg	10 49 57.5	+0.3
GUMA	**Gualdo di Mace**	**0.49**	**354**	P	Pb	10 49 59.0	+0.1
GUMA				S	Sb	10 50 06.4	+0.2
GUMA				AML	AML		
	comp=E,793μm,1.2s						
GUMA				AML	AML		
	comp=N,977μm,0.4s						
FDMO	**Fiordimonte**	**0.52**	**334**	⇓P	Pb	10 49 59.0	-0.4
FDMO				S	Sg	10 50 05.8	+0.8
FDMO				AML	AML		
	comp=N,281μm,0.2s						
CSP1	**Cessapalombo**	**0.54**	**345**	P	Pb	10 49 59.3	-0.4
CSP1				S	Sb	10 50 06.7	-0.9
CESI	**CESI - Serrava**	**0.57**	**320**	P	Pg	10 49 59.3	+0.2
CESX	**Cesi**	**0.61**	**274**	P	Pg	10 49 60.0	+0.2
CESX				AML	AML		
	comp=E,216μm,0.6s						
CESX				AML	AML		
	comp=N,240μm,0.4s						
ASSB	**Assisi San Ben**	**0.72**	**311**	⇓P	Pb	10 50 02.6	-0.2
EL6	**Elcito**	**0.79**	**344**	S	Sb	10 50 16.0	+1.2
CING	**Cingoli**	**0.82**	**349**	P	Pb	10 50 04.4	0.0
ARVD	**Arcevia**	**0.99**	**340**	S	Sn	10 50 22.0	-0.1

*UCR **26** 10:50:49.4±1.7, 10°.81N×86°.75W, h15km±6km, MW3.8*
*INET **26** 10:50:49.0±0.8, 10°.90N×86°.83W, h15km±999km, MW3.1*
ISC 26 10:50:46.2±3.3, 10°.81N±0°.08×86°.87W±0°.10, h15km±18km, n31, σ1§17/36, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**1.25**	**94**	*e*P	**Pn**	**10 51 10.3**	**+0.9**
HZTE				*e*S	**Sg**	**10 51 26.3**	**-0.4**
HZTE	**Horizontes, Gu**	**1.25**	**94**	*e*P	**Pn**	**10 51 10.2**	**+0.9**
SAJU	**San Juanillo,**	**1.36**	**123**	*e*P	**Pn**	**10 51 11.3**	**+0.6**
SAJU				*e*S	**Sb**	**10 51 27.4**	**-1.2**
GBS3	**Finca Las Img**	**1.39**	**91**	*e*P	**Pn**	**10 51 11.8**	**+0.7**
LAPC	**Finca la Perla**	**1.41**	**92**	*e*P	**Pn**	**10 51 12.0**	**+0.5**
LAPC				*e*S	**Sb**	**10 51 28.8**	**-1.3**
BUEV	**Buena Vista**	**1.43**	**90**	*e*P	**Pn**	**10 51 12.6**	**+0.8**
BUEV				*e*S	**Sn**	**10 51 29.9**	**-0.6**
GB1A	**Borinquen Arri**	**1.44**	**90**	*e*P	**Pn**	**10 51 12.9**	**+0.9**
ORTG	**Ortega, Santa**	**1.45**	**108**	*e*P	**Pn**	**10 51 13.0**	**+0.9**
ORTG	**Ortega, Santa**	**1.45**	**108**	*e*P	**Pn**	**10 51 13.0**	**+0.9**
VRLE	**La Escondida,**	**1.48**	**91**	*e*P	**Pn**	**10 51 13.1**	**+0.7**
GPS2	**Hotel Rincn d**	**1.49**	**92**	*e*P	**Pn**	**10 51 13.4**	**+0.7**
WILN	**Americas 2**	**1.50**	**26**	*e*P	**Pn**	**10 51 14.4**	**+1.8**
GRZA	**Playa Garza**	**1.50**	**126**	*e*P	**Pn**	**10 51 13.4**	**+0.7**
BUAI	**Buenos Aires**	**1.51**	**87**	*e*P	**Pn**	**10 51 14.4**	**+1.5**
NICO	**Nicoya**	**1.55**	**116**	*e*P	**Pn**	**10 51 14.2**	**+0.8**
LIM1	**Limonal**	**1.59**	**94**	*e*P	**Pn**	**10 51 15.0**	**+1.0**
GUAB	**Guayabo de Bag**	**1.61**	**94**	*e*P	**Pn**	**10 51 15.2**	**+0.9**
COLC	**Colonia**	**1.64**	**95**	*e*P	**Pn**	**10 51 16.5**	**+1.8**
COLC				*e*S	**Sn**	**10 51 35.1**	**-0.5**
HORNC	**Hornillas**	**1.66**	**93**	*e*P	**Pn**	**10 51 16.0**	**+1.0**
CUI	**Cuipilapa**	**1.68**	**95**	*e*P	**Pn**	**10 51 16.4**	**+1.2**
CNGN	**Cerro Negro**	**1.68**	**6**	*e*P	**Pn**	**10 51 15.2**	**-0.1**
VMAR	**Armenia, Volca**	**1.71**	**90**	*e*P	**Pn**	**10 51 17.3**	**+1.6**
ACAL	**Aguas Claras**	**1.81**	**95**	*e*P	**Pn**	**10 51 18.5**	**+1.4**
PTEN	**Parque Tenorio**	**1.85**	**93**	*e*P	**Pn**	**10 51 19.0**	**+1.5**
CRIN	**San Cristobal**	**1.88**	**355**	*e*P	**Pn**	**10 51 18.9**	**+0.8**
CRIN	**San Cristobal**	**1.88**	**355**	*i*P	**Pn**	**10 51 18.4**	**+0.4**
JTS	**Las Juntas de**	**1.95**	**105**	*e*P	**Pn**	**10 51 20.5**	**+1.6**
JTS	**Las Juntas de**	**1.95**	**105**	*e*P	**Pn**	**10 51 20.3**	**+1.4**
VERA	**Finca Concepci**	**1.96**	**89**	*e*P	**Pn**	**10 51 20.2**	**+1.1**
BOAB	**BOACO BROADBAN**	**2.01**	**36**	*e*P	Pn	10 51 19.2	-0.5
CEDE	**Laguna Cedeo**	**2.15**	**98**	*e*P	**Pn**	**10 51 23.4**	**+1.7**
CEDE				*e*P	**Pn**	**10 51 23.5**	**+1.7**

ROM 26 10:52:25.2±0.1, 42°.622N±0°.006×13°.281E±0°.009, h10km, ML2.6/12, 4C-2D, Error ellipse: s-maj=0.7km s-min=0.5km az=217.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.12**	**203**	P	Pb	10 52 29.0	-0.6
RM33				S	Sg	10 52 31.3	+0.9
RM33				AML	AML		
	comp=E,794μm,0.2s						
RM33				AML	AML		
	comp=N,581μm,0.2s						
RM33				AML	AML		
	comp=N,2390μm,0.2s						
RM33				AML	AML		
	comp=E,2890μm,0.3s						
RM33				AML	AML		
	comp=E,2880μm,0.3s						
RM33				AML	AML		
	comp=N,2320μm,0.2s						
RM33				AML	AML		
	comp=E,461μm,0.5s						
RM33				AML	AML		
	comp=N,581μm,0.2s						
RM33				AML	AML		
	comp=N,601μm,0.2s						
CAMP	**Campotosto**	**0.13**	**132**	⇑P	Pg	10 52 28.9	+0.6
CAMP				S	Sg	10 52 31.3	+0.7
CAMP				AML	AML		
	comp=E,1462μm,0.2s						
CAMP				AML	AML		
	comp=N,1260μm,0.2s						
CAMP				AML	AML		
	comp=N,147μm,0.3s						
CAMP				AML	AML		
	comp=E,447μm,0.2s						
T1243	**Rocca Santa Ma**	**0.14**	**59**	⇑P	Pg	10 52 28.9	+0.3
T1243				AML	AML		
	comp=E,3530μm,0.3s						
T1243				AML	AML		
	comp=N,5610μm,0.8s						
T1243				AML	AML		
	comp=E,3400μm,0.3s						
T1243				AML	AML		
	comp=N,5495μm,0.8s						
T1243				AML	AML		
	comp=E,6970μm,0.2s						
T1243				AML	AML		
	comp=N,5615μm,0.8s						
T1243				AML	AML		
	comp=N,5500μm,0.8s						
T1243				AML	AML		
	comp=E,6840μm,0.2s						
LNSS	**Leonessa**	**0.18**	**264**	⇑P	Pg	10 52 29.3	+0.2
LNSS				S	Sg	10 52 32.0	+0.2
LNSS				AML	AML		
	comp=E,15600μm,0.8s						
LNSS				AML	AML		
	comp=E,15650μm,0.8s						
LNSS				AML	AML		
	comp=N,12800μm,0.2s						
LNSS				AML	AML		
	comp=E,228μm,0.6s						
LNSS				AML	AML		
	comp=N,248μm,0.1s						
TERO	**Teramo**	**0.24**	**90**	⇑P	Pg	10 52 30.5	+0.4
TERO				S	Sg	10 52 34.1	+0.6
TERO				AML	AML		
	comp=E,456μm,0.4s						
TERO				AML	AML		
	comp=N,346μm,0.3s						
TERO				AML	AML		
	comp=E,1540μm,0.1s						
TERO				AML	AML		
	comp=N,3390μm,0.1s						
TERO				AML	AML		
	comp=E,1545μm,0.1s						
TERO				AML	AML		
	comp=N,242μm,0.1s						
TERO				AML	AML		
	comp=N,283μm,0.1s						
TERO				AML	AML		
	comp=E,340μm,0.1s						
NRCA	**Norcia**	**0.24**	**330**	⇓P	Pb	10 52 31.1	-0.6
NRCA				S	Sg	10 52 35.1	+1.5
NRCA				AML	AML		
	comp=E,34400μm,0.7s						
NRCA				AML	AML		
	comp=N,21450μm,1.0s						
NRCA				AML	AML		
	comp=E,34400μm,0.7s						
NRCA				AML	AML		
	comp=N,20050μm,1.0s						
NRCA				AML	AML		
	comp=E,34450μm,0.7s						
NRCA				AML	AML		
	comp=E,38150μm,0.7s						
NRCA				AML	AML		
	comp=N,21400μm,1.0s						
GIGS	**Gran Sasso**	**0.27**	**129**	P	Pg	10 52 31.4	+0.6
GIGS				S	Sb	10 52 36.0	-0.9
GIGS				AML	AML		
	comp=E,48μm,0.1s						
GIGS				AML	AML		
	comp=N,44μm,1.1s						
GIGS				AML	AML		
	comp=E,412μm,0.2s						
GIGS				AML	AML		
	comp=N,222μm,0.9s						
MMO1	**Montemonaco**	**0.28**	**7**	P	Pg	10 52 31.4	+0.5
MMO1				S	Sg	10 52 35.9	+1.1
MC2	**Monte Cornacci**	**0.30**	**347**	S	Sg	10 52 36.0	+0.6
FIAM	**Fiamignano**	**0.37**	**199**	P	Pg	10 52 33.0	+0.4
FIAM				S	Sb	10 52 38.9	-0.9
FIAM				AML	AML		
	comp=E,439μm,1.1s						
FIAM				AML	AML		
	comp=N,580μm,1.2s						
FIAM				AML	AML		
	comp=N,37μm,0.9s						
FIAM				AML	AML		
	comp=E,49μm,0.3s						
ARRO	**Arrone**	**0.38**	**264**	⇓P	Pg	10 52 32.7	-0.1
ARRO				AML	AML		
	comp=E,985μm,1.0s						
ARRO				AML	AML		
	comp=N,841μm,0.4s						
ARRO				AML	AML		
	comp=E,1042μm,1.1s						
ARRO				AML	AML		
	comp=N,892μm,1.1s						
ARRO				AML	AML		
	comp=N,892μm,1.1s						
ARRO				AML	AML		
	comp=E,1045μm,1.1s						
ARRO				AML	AML		
	comp=N,55μm,0.2s						
FDMO	**Fiordimonte**	**0.44**	**341**	P	Pg	10 52 34.4	+0.5
FDMO				S	Sb	10 52 41.3	-0.4
FDMO				AML	AML		
	comp=E,1098μm,0.3s						
FDMO				AML	AML		
	comp=N,1720μm,0.3s						
FDMO				AML	AML		
	comp=N,53μm,0.9s						
FDMO				AML	AML		
	comp=E,35μm,0.2s						
CESI	**CESI - Serrava**	**0.47**	**324**	P	Pb	10 52 35.1	-0.5
CESI				AML	AML		
	comp=N,1620μm,0.3s						
CESI				AML	AML		
	comp=E,1360μm,0.2s						
CESI				AML	AML		
	comp=N,53μm,0.2s						
CESI				AML	AML		
	comp=E,37μm,1.2s						
EL6	**Elcito**	**0.72**	**350**	S	Sb	10 52 51.0	+1.2
SSFR	**Montelago di S**	**0.89**	**336**	S	Sg	10 52 53.0	-1.1
ARVD	**Arcevia**	**0.91**	**344**	P	Pn	10 52 44.0	0.0
ARVD				AML	AML		
	comp=E,162μm,0.4s						
ARVD				AML	AML		
	comp=N,132μm,0.6s						
ARVD				AML	AML		
	comp=E,162μm,0.4s						
ARVD				AML	AML		
	comp=N,132μm,0.6s						

ROM 26 10:52:48.4±0.1, 42°.746N±0°.003×13°.208E±0°.006, h9km, ML2.6/29, 14C-14D, Error ellipse: s-maj=0.5km s-min=0.1km az=245.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**322**	⇓P	Pg	10 52 51.4	+0.3
NRCA				S	Sg	10 52 53.3	+0.3
NRCA				AML	AML		
	comp=E,34400μm,0.7s						
NRCA				AML	AML		
	comp=N,21450μm,1.0s						
NRCA				AML	AML		
	comp=N,21400μm,1.0s						
NRCA				AML	AML		
	comp=E,34450μm,0.7s						
NRCA				AML	AML		
	comp=E,38150μm,0.7s						
NRCA				AML	AML		
	comp=N,20050μm,1.0s						
NRCA				AML	AML		
	comp=E,34400μm,0.7s						
MC2	**Monte Cornacci**	**0.17**	**356**	⇓P	Pg	10 52 52.5	+0.5
MC2				S	Sg	10 52 55.7	+1.1
T1243	**Rocca Santa Ma**	**0.18**	**106**	⇑P	Pg	10 52 52.9	+0.6
T1243				S	Sg	10 52 56.2	+1.3
T1243				AML	AML		
	comp=N,5615μm,0.8s						
T1243				AML	AML		
	comp=N,5495μm,0.8s						
T1243				AML	AML		
	comp=E,6970μm,0.2s						
T1243				AML	AML		
	comp=N,5500μm,0.8s						
T1243				AML	AML		
	comp=N,5615μm,0.8s						
T1243				AML	AML		
	comp=E,6840μm,0.2s						
LNSS	**Leonessa**	**0.19**	**221**	⇑P	Pg	10 52 53.2	+0.8
LNSS				S	Sg	10 52 56.8	+1.7
LNSS				AML	AML		
	comp=E,15600μm,0.8s						
LNSS				AML	AML		
	comp=N,12800μm,0.2s						
LNSS				AML	AML		
	comp=E,15650μm,0.8s						
LNSS				AML	AML		
	comp=E,15650μm,1.2s						
RM33	**Pellescritta (**	**0.24**	**179**	⇓P	Pg	10 52 54.0	+0.8
RM33				S	Sg	10 52 58.3	+1.8
RM33				AML	AML		
	comp=E,2890μm,0.3s						
RM33				AML	AML		
	comp=N,2390μm,0.2s						
RM33				AML	AML		
	comp=E,2880μm,0.3s						
RM33				AML	AML		
	comp=N,2320μm,0.2s						
RM33				AML	AML		
	comp=E,2890μm,0.3s						
FEMA	**Monte Fema**	**0.24**	**332**	P	Pg	10 52 53.8	+0.4
FEMA				S	Sg	10 52 57.9	+1.2
CAMP	**Campotosto**	**0.26**	**145**	⇓P	Pg	10 52 54.3	+0.7
CAMP				S	Sb	10 52 58.7	-1.2
CAMP				AML	AML		
	comp=E,1462μm,0.2s						
CAMP				AML	AML		
	comp=N,1260μm,0.2s						
FDMO	**Fiordimonte**	**0.30**	**343**	⇓P	Pg	10 52 54.7	+0.3
FDMO				S	Sg	10 52 59.6	+1.1
FDMO				AML	AML		
	comp=E,1098μm,0.3s						
FDMO				AML	AML		
	comp=N,1720μm,0.3s						
TERO	**Teramo**	**0.32**	**113**	⇑P	Pg	10 52 55.1	+0.5
TERO				S	Sb	10 53 00.5	-1.0
TERO				AML	AML		
	comp=N,3390μm,0.1s						
TERO				AML	AML		
	comp=E,1545μm,0.1s						
TERO				AML	AML		
	comp=E,1540μm,0.1s						
GUMA	**Gualdo di Mace**	**0.33**	**16**	⇑P	Pg	10 52 55.7	+0.8
GUMA				S	Sb	10 53 01.7	-0.3
GUMA				AML	AML		
	comp=E,6690μm,0.5s						
GUMA				AML	AML		
	comp=N,8585μm,0.6s						
GUMA				AML	AML		
	comp=E,6440μm,1.1s						
GUMA				AML	AML		
	comp=N,7860μm,0.4s						
GUMA				AML	AML		
	comp=N,8600μm,0.6s						
GUMA				AML	AML		
	comp=N,8585μm,1.4s						
GUMA				AML	AML		
	comp=N,7860μm,1.6s						
GUMA				AML	AML		
	comp=E,6440μm,0.9s						
CESI	**CESI - Serrava**	**0.34**	**319**	⇓P	Pg	10 52 55.6	+0.4
CESI				S	Sb	10 53 01.0	-1.3
CESI				AML	AML		
	comp=N,1620μm,0.3s						
CESI				AML	AML		
	comp=E,1360μm,0.2s						
CSP1	**Cessapalombo**	**0.34**	**360**	⇓P	Pg	10 52 55.6	+0.3
CSP1				S	Sb	10 53 01.4	-1.0
CSP1				AML	AML		
	comp=N,3375μm,0.4s						
CSP1				AML	AML		
	comp=E,3195μm,0.2s						
CSP1				AML	AML		
	comp=N,3370μm,0.4s						
CSP1				AML	AML		
	comp=N,3370μm,1.6s						
ARRO	**Arrone**	**0.37**	**243**	⇑P	Pg	10 52 56.1	+0.5
ARRO				S	Sb	10 53 02.2	-0.8
ARRO				AML	AML		
	comp=N,892μm,1.1s						
ARRO				AML	AML		
	comp=E,1042μm,1.1s						
ARRO				AML	AML		
	comp=N,892μm,1.1s						
ARRO				AML	AML		
	comp=E,1045μm,1.1s						
ARRO				AML	AML		
	comp=N,892μm,0.9s						
ARRO				AML	AML		
	comp=E,1042μm,0.9s						
GIGS	**Gran Sasso**	**0.40**	**138**	⇑P	Pg	10 52 56.5	+0.3
GIGS				S	Sb	10 53 02.8	-1.1
GIGS				AML	AML		
	comp=E,412μm,0.2s						
GIGS				AML	AML		
	comp=N,222μm,0.9s						
OFFI	**Offida**	**0.40**	**62**	⇑P	Pb	10 52 57.5	-0.1
OFFI				AML	AML		
	comp=E,1284μm,0.8s						
OFFI				AML	AML		
	comp=N,1190μm,1.0s						
OFFI				AML	AML		
	comp=E,1284μm,1.2s						
MNTP	**Montappone**	**0.43**	**26**	⇓P	Pb	10 52 58.3	0.0

MNTP				AML	AML				
	comp=N,1500μm,0.3s								
MNTP				AML	AML				
	comp=E,2155μm,0.9s								
MNTP				AML	AML				
	comp=N,1505μm,0.3s								
CESX	**Cesi**	**0.48**	**254**	P	Pg	10 52 58.0	+0.2		
CESX				AML	AML				
	comp=E,608μm,0.4s								
CESX				AML	AML				
	comp=N,569μm,0.2s								
FIAM	**Fiamignano**	**0.48**	**188**	⇓P	Pg	10 52 58.1	+0.3		
FIAM				S	Sb	10 53 05.9	-0.5		
FIAM				AML	AML				
	comp=E,439μm,1.1s								
FIAM				AML	AML				
	comp=N,580μm,1.2s								
FIAM				AML	AML				
	comp=E,439μm,0.9s								
ASSB	**Assisi San Ben**	**0.50**	**306**	⇓P	Pg	10 52 58.2	+0.1		
ASSB				S	Sb	10 53 06.7	-0.2		
ASSB				AML	AML				
	comp=N,460μm,0.2s								
ASSB				AML	AML				
	comp=E,462μm,0.3s								
TRTR	**Tortoreto Alta**	**0.52**	**83**	⇑P	Pb	10 53 00.1	+0.4		
TRTR				AML	AML				
	comp=N,1250μm,1.1s								
TRTR				AML	AML				
	comp=E,1021μm,0.4s								
TRTR				AML	AML				
	comp=N,1250μm,0.9s								
SNTG	**Esanatoglia**	**0.55**	**339**	⇑P	Pg	10 52 59.1	+0.1		
SNTG				S	Sb	10 53 07.6	-0.6		
SNTG				AML	AML				
	comp=E,334μm,1.1s								
SNTG				AML	AML				
	comp=E,334μm,0.9s								
SNTG				AML	AML				
	comp=N,479μm,0.2s								
FAGN	**Fagnano**	**0.56**	**150**	⇑P	Pb	10 52 59.9	-0.5		
FAGN				AML	AML				
	comp=E,986μm,0.4s								
FAGN				AML	AML				
	comp=N,961μm,0.3s								
FAGN				AML	AML				
	comp=E,986μm,1.6s								
FAGN				AML	AML				
	comp=N,961μm,1.7s								
VCEL	**Villa Celiera**	**0.58**	**127**	⇓P	Pb	10 53 00.4	-0.5		
VCEL				AML	AML				
	comp=N,614μm,0.2s								
VCEL				AML	AML				
	comp=E,718μm,0.4s								
VCEL				AML	AML				
	comp=N,614μm,0.2s								
EL6	**Elcito**	**0.59**	**352**	⇓P	Pg	10 52 59.9	+0.1		
EL6				S	Sb	10 53 09.6	+0.2		
ATCC	**AVT- Casa Cast**	**0.60**	**317**	⇑P	Pg	10 53 00.3	+0.2		
ATCC				S	Sb	10 53 10.2	+0.3		
ATCC				AML	AML				
	comp=E,400μm,0.3s								
ATCC				AML	AML				
	comp=E,400μm,0.3s								
ATCC				AML	AML				
	comp=E,400μm,1.7s								
ATCC				AML	AML				
	comp=N,318μm,0.8s								
CING	**Cingoli**	**0.63**	**359**	AML	AML				
	comp=E,540μm,0.7s								
CING				AML	AML				
	comp=N,478μm,1.1s								
CING				AML	AML				
	comp=E,540μm,1.3s								
CING				AML	AML				
	comp=N,478μm,0.9s								
FOSV	**Fossato di Vic**	**0.64**	**329**	P	Pg	10 53 00.8	+0.1		
FOSV				S	Sb	10 53 10.7	-0.1		
FOSV				AML	AML				
	comp=E,381μm,0.3s								
FOSV				AML	AML				
	comp=N,650μm,0.2s								
T0110	**Collepietro**	**0.67**	**141**	⇑P	Pg	10 53 01.4	+0.1		
T0110				AML	AML				
	comp=E,756μm,0.6s								
T0110				AML	AML				
	comp=N,797μm,0.3s								
ARVD	**Arcevia**	**0.78**	**346**	⇓P	Pg	10 53 03.2	-0.1		
ARVD				S	Sb	10 53 15.3	+0.5		
ARVD				AML	AML				
	comp=E,162μm,0.4s								
ARVD				AML	AML				
	comp=N,132μm,0.6s								
ARVD				AML	AML				
	comp=N,132μm,1.4s								
ATFO	**Monte Foce - G**	**0.78**	**323**	⇑P	Pg	10 53 03.7	+0.4		
ATFO				AML	AML				
	comp=N,151μm,0.3s								
ATFO				AML	AML				
	comp=E,130μm,0.6s								
ATFO				AML	AML				
	comp=N,152μm,0.3s								
ATFO				AML	AML				
	comp=E,130μm,0.6s								
CERT	**Cerreto**	**0.81**	**192**	⇑P	Pg	10 53 03.9	-0.2		
CERT				AML	AML				
	comp=E,183μm,0.5s								
CERT				AML	AML				
	comp=N,150μm,0.5s								
CERT				AML	AML				
	comp=E,183μm,1.5s								
FRON	**Frontone**	**0.85**	**336**	AML	AML				
	comp=N,292μm,0.8s								
FRON				AML	AML				
	comp=N,292μm,1.2s								
FRON				AML	AML				
	comp=E,248μm,0.2s								
ATVO	**AVT- Monte Val**	**0.86**	**318**	P	Pg	10 53 05.1	+0.1		
ATVO				AML	AML				
	comp=N,93μm,0.5s								
ATVO				AML	AML				
	comp=E,96μm,0.8s								
ATVO				AML	AML				
	comp=N,93μm,0.5s								
ATVO				AML	AML				
	comp=N,93μm,1.5s								
INTR	**Introdacqua**	**0.90**	**145**	⇓P	Pg	10 53 05.3	-0.3		
INTR				AML	AML				
	comp=N,249μm,0.5s								
INTR				AML	AML				
	comp=E,138μm,0.6s								
INTR				AML	AML				
	comp=N,249μm,1.5s								
VVLD	**Villa Vallelon**	**0.93**	**161**	AML	AML				
	comp=E,106μm,0.5s								
VVLD				AML	AML				
	comp=N,121μm,0.5s								
FSSB	**Fossombrone**	**1.00**	**342**	AML	AML				
	comp=E,412μm,0.3s								
FSSB				AML	AML				
	comp=N,837μm,0.4s								
LPEL	**Lama dei Pelig**	**1.00**	**134**	AML	AML				
	comp=E,180μm,1.2s								
LPEL				AML	AML				
	comp=E,180μm,0.8s								
LPEL				AML	AML				
	comp=N,124μm,0.4s								
LPEL				AML	AML				
	comp=N,124μm,1.6s								

*ARE **26** 11:01:07.±2.6, 10°.78S.±0°.06×73°.70W.±0°.08, h138km.±4km, Error ellipse: s-maj=11.2km s-min=8.9km az=91.0*
*NEIC **26** 11:01:09.6±2.0, 10°.72S.±0°.06×73°.64W.±0°.08, h122km.±5km, mb4.8/205, ML5.2(ARE), Error ellipse: s-maj=11.4km s-min=8.9km az=87.0*
*IDC **26** 11:01:10.2±0.5, 10°.73S×73°.66W, h124km.±4km, mb4.0/16, mbtmp4.4/22, MS3.6/7, Error ellipse: s-maj=10.2km s-min=9.3km az=33.0*
*VAO **26** 11:01:10.0±0.3, 10°.69S×73°.65W, h124km, mb4.6*
*GCMT **26** 11:01:12.6±0.3, 10°.69S.±0°.02×73°.57W.±0°.02, h144km.±3km, MW4.8/95, Moment Tensor Solution. s20,c22; s95,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.79±.09; $M_{\theta\theta}$0.76±.11; $M_{\phi\phi}$0.03±.12; $M_{r\theta}$1.85±.07; $M_{\theta\phi}$-0.94±.11;*

$M_{\phi\phi}$-0.38±.07; Best double couple: M_o2.22500×10^{16} NP1:$\phi_1$282.00000°,δ77.00000°,λ-108.00000°. NP2: $\phi_2$158.00000°,δ22.00000°,λ-36.00000°. Principal axes: T 2.4070, Plg30.0000°, Azm26.0000°; N -0.3640, Plg18.0000°, Azm286.0000°; P -2.0430, Plg54.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 11:01:09.4±0.3, 10.74S±0°.04×73°.68W±0°.05, h124km±3km, h124km:pP-P,n402,σ1°08/436, mb4.8/119, 2C-1D, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**3.14**	**18**	Pn			**Pn**	**11 01 58.8**	**+1.0**
CZSB	**Cruzeiro do Su**	**3.14**	**18**	*eP*			**Pn**	**11 02 00.1**	**+2.3**
NNA	**Nana**	**3.34**	**248**	P			**Pn**	**11 02 01.2**	**+0.8**
	686nm,0.3s,baz=80,slow=9.0,SNR=134								
NNA				S			**Sn**	**11 02 40.9**	**+1.1**
	3μm,0.3s,baz=198,slow=23,SNR=13								
NNA	**Nana**	**3.34**	**248**				**Pn**	**11 02 01.0**	**+0.6**
NNA	**Nana**	**3.34**	**248**	*eP*			**Pn**	**11 02 01.0**	**+0.6**
ATAH	**Atahualpa**	**5.88**	**307**	P			**Pn**	**11 02 35.9**	**+1.1**
	33nm,0.5s,baz=115,slow=1.2,SNR=36								
ATAH				S			**Sn**	**11 03 44.0**	**+2.9**
	137nm,0.6s,baz=321,slow=14,SNR=2.0								
ETMB	**Extrema**	**7.40**	**84**	Pn			**Pn**	**11 02 55.6**	**+0.7**
ETMB	**Extrema**	**7.40**	**84**	*eP*			**Pn**	**11 02 55.0**	**+0.1**
TBTG	**Tabatinga, AM**	**7.51**	**90**	Pn			**Pn**	**11 02 57.3**	**+1.0**
LPAZ	**La Paz**	**7.71**	**136**	P			**Pn**	**11 03 00.8**	**+1.3**
	2.8nm,0.4s,baz=328,slow=5.1,SNR=14								
LPAZ				LR			LR	11 06 49.6	
	comp=Z,144nm,19.1s,baz=324,slow=44								
LPAZ	**La Paz**	**7.71**	**136**	Pn			**Pn**	**11 03 00.2**	**+0.6**
LPAZ	**La Paz**	**7.71**	**136**	*eP*			**Pn**	**11 03 00.7**	**+1.1**
PB12	**IPOC Station P**	**8.47**	**158**	Pn			**Pn**	**11 03 08.8**	**-0.5**
PB16	**IPOC Station P**	**8.56**	**152**	Pn			**Pn**	**11 03 11.7**	**+0.7**
BOSC	**San Juan Bosco**	**8.93**	**327**				**Pn**	**11 03 13.3**	**-2.4**
ARNL	**Arenillas**	**9.55**	**318**	Pn			**Pn**	**11 03 24.4**	**+0.5**
GO01	**Chusmiza**	**9.87**	**155**	Pn			**Pn**	**11 03 29.2**	**+0.6**
TA01	**Diego Aracena**	**10.33**	**161**	Pn			**Pn**	**11 03 33.6**	**-0.7**
PORT	**Chimborazo Vol**	**10.52**	**331**				**Pn**	**11 03 37.8**	**+0.4**
CHSH	**Refugio Sur-Vo**	**10.54**	**330**				**Pn**	**11 03 37.7**	**0.0**
PTLC	**Puerto Leguiza**	**10.90**	**354**	*eP*			Pn	11 03 36.7	-5.4
PB01	**IPOC Station P**	**11.00**	**159**				**Pn**	**11 03 41.9**	**-1.6**
SLOR	**San Lorenzo -**	**11.04**	**334**				**Pn**	**11 03 44.3**	**0.0**
PB02	**IPOC Station P**	**11.12**	**161**	Pn			**Pn**	**11 03 44.5**	**-0.6**
PB07	**IPOC Station P**	**11.51**	**162**				**Pn**	**11 03 48.5**	**-1.8**
PPLP	**Puerto Lpez**	**11.54**	**322**	*eP*			**Pn**	**11 03 47.4**	**-3.2**
PB09	**IPOC Station P**	**11.78**	**159**				**Pn**	**11 03 54.5**	**+0.7**
OTAV	**Otavalo**	**11.90**	**336**	Pn			**Pn**	**11 03 53.5**	**-2.1**
OTAV	**Otavalo**	**11.90**	**336**	*eP*			**Pn**	**11 03 55.5**	**-0.1**
PB06	**IPOC Station P**	**12.53**	**162**				**Pn**	**11 04 02.2**	**-1.4**
LVC	**Limon Verde**	**12.65**	**159**	P			**Pn**	**11 04 05.9**	**+0.6**
	9.7nm,0.9s,baz=326,slow=9.9,SNR=9.2								
LVC				S			**Sn**	**11 06 22.9**	**-2.0**
	2.3nm,0.4s,baz=150,slow=19,SNR=3.1								
LVC				LR			LR	11 08 42.4	
	comp=Z,192nm,21.4s,baz=324,slow=36								
LVC	**Limon Verde**	**12.65**	**159**	Pn			**Pn**	**11 04 03.8**	**-1.5**
LVC	**Limon Verde**	**12.65**	**159**	*eP*			**Pn**	**11 04 06.2**	**+0.8**
CRUC	**La Cruz**	**12.66**	**345**	*eP*			**Pn**	**11 04 06.7**	**+1.2**
MACC	**Macarena, Meta**	**12.80**	**359**	*eP*			**Pn**	**11 04 07.9**	**+0.8**
GARC	**Garzon, Huila**	**12.97**	**352**	*eP*			**Pn**	**11 04 11.9**	**+2.4**
PB15	**IPOC Station P**	**13.03**	**163**				**Pn**	**11 04 09.8**	**-0.4**
BBAC	**Balboa, Cauca**	**13.17**	**344**	*eP*			**P**	**11 04 14.8**	**-2.7**
SIV	**San Ignacio**	**13.32**	**114**	P			**Pn**	**11 04 14.8**	**+0.9**
	6.3nm,0.3s,baz=283,slow=12,SNR=24								
VILB	**Vilhena**	**13.37**	**101**	Pn			**Pn**	**11 04 13.7**	**-0.8**
VILB	**Vilhena**	**13.37**	**101**	*eP*			**Pn**	**11 04 14.7**	**+0.3**
BETC	**Betania**	**13.45**	**352**	*eP*			**P**	**11 04 19.6**	**-0.8**
POPC	**Popayan, Colom**	**13.53**	**347**	*eP*			**Pn**	**11 04 18.6**	**+1.9**
PB14	**IPOC Station P**	**14.15**	**168**				**Pn**	**11 04 24.7**	**0.0**
PRAC	**Prado**	**14.41**	**355**	*eP*			**P**	**11 04 33.3**	**+2.2**
VILC	**Villavicencio,**	**14.76**	**360**	*eP*			**P**	**11 04 36.2**	**+1.2**
GO02	**Mina Guanaco**	**14.86**	**165**				**Pn**	**11 04 32.8**	**-0.8**
YOTC	**Yotoco, Valle**	**14.87**	**350**	*eP*			**P**	**11 04 37.2**	**+0.9**
PTLB	**Pontes e Lacer**	**14.91**	**110**				**Pn**	**11 04 32.5**	**-1.5**
PTLB	**Pontes e Lacer**	**14.91**	**110**	*eP*			**Pn**	**11 04 34.5**	**+0.4**
MACA	**Manacapuru-AM**	**14.93**	**61**				**Pn**	**11 04 32.9**	**-1.4**
MACA	**Manacapuru-AM**	**14.93**	**61**	*eP*			**Pn**	**11 04 33.8**	**-0.5**
ANIL	**Santa Ana**	**15.23**	**353**	*eP*			**P**	**11 04 41.8**	**+1.3**
CHIC	**Chingaza**	**15.27**	**360**	*eP*			**P**	**11 04 43.0**	**+2.0**
ROSC	**El Rosal**	**15.49**	**358**	P			**P**	**11 04 44.9**	**+1.5**
	18nm,0.4s,baz=156,slow=7.6,SNR=8.1								
ROSC	**El Rosal**	**15.49**	**358**	Pn			**Pn**	**11 04 39.0**	**-2.7**
ROSC	**El Rosal**	**15.49**	**358**	*eP*			**P**	**11 04 46.9**	**+3.5**
AC01	**Pan de Azucar**	**15.60**	**170**	Pn			**Pn**	**11 04 41.3**	**-1.2**
PLMC	**San Jos del P**	**15.76**	**350**	*eP*			**P**	**11 04 46.9**	**+0.9**
GUY2C	**Guyana, Caldas**	**15.95**	**354**	*eP*			**P**	**11 04 49.8**	**+1.2**
NORC	**Norcasia**	**16.24**	**356**	*eP*			**P**	**11 04 51.8**	**+0.4**
SPBC	**San Pablo de B**	**16.29**	**359**	*eP*			**P**	**11 04 51.8**	**-0.2**
RUSC	**La Rusia**	**16.54**	**2**	*eP*			**P**	**11 04 56.7**	**+1.6**
AC02	**Maricunga**	**16.57**	**166**				**Pn**	**11 04 55.1**	**+0.1**
PDRB	**Porto dos Gac**	**16.65**	**95**	*eP*			**P**	**11 04 56.0**	**+0.1**
CBOC	**Ciudad Bolivar**	**16.66**	**352**	*eP*			**P**	**11 04 57.6**	**+1.5**
AC06	**Mina Casimiro**	**16.82**	**170**	Pn			**Pn**	**11 04 55.0**	**-2.6**
HELC	**Santa Helena**	**16.92**	**354**	*eP*			**Pn**	**11 04 59.6**	**+0.3**
GO03	**Copiap**	**17.07**	**170**	P			**P**	**11 04 59.9**	**-0.5**
PTBC	**PUERTO BERRIO,**	**17.19**	**357**	*eP*			**Pn**	**11 05 02.5**	**+0.4**
BARC	**Barichara**	**17.23**	**2**	*eP*			**Pn**	**11 05 04.8**	**+1.9**
AC04	**Llanos de Chal**	**17.54**	**172**	P			**P**	**11 05 05.0**	**-0.6**
CLDB	**Colider**	**17.57**	**92**	*eP*			**Pn**	**11 05 06.4**	**-0.3**
BRRC	**Barranca, Sant**	**17.73**	**360**	*eP*			**Pn**	**11 05 08.4**	**-0.3**
DBBC	**Dabeiba**	**17.82**	**352**	*eP*			**P**	**11 05 08.4**	**-0.4**
PAMC	**Pamplona, Colo**	**17.99**	**3**	*eP*			**Pn**	**11 05 12.3**	**+0.1**
ZARC	**Zaragoza, Cauc**	**18.15**	**356**	*eP*			**Pn**	**11 05 13.3**	**-0.4**
SALV	**Santo Antonio**	**18.23**	**108**	*eP*			**P**	**11 05 13.8**	**+0.6**
AC05	**El Transito**	**18.28**	**170**	P			**Pn**	**11 05 14.6**	**-0.7**
LCO	**Las Campanas**	**18.39**	**172**	P			**P**	**11 05 14.8**	**-0.3**
NPGB	**Novo Progresso**	**18.46**	**80**	*eP*			**P**	**11 05 16.0**	**+0.1**
UREC	**San Jos de Ur**	**18.47**	**354**	*eP*			**P**	**11 05 15.2**	**-0.6**
BOAV	**Boa Vista**	**18.49**	**46**				**P**	**11 05 15.9**	**-0.1**
BOAV	**Boa Vista**	**18.49**	**46**	*eP*			**P**	**11 05 15.7**	**-0.3**
VCA	**Vinchina**	**18.62**	**165**	*i P*			**Pn**	**11 05 21.1**	**+1.9**
OCAC	**Ocana**	**18.86**	**1**	*eP*			**P**	**11 05 19.1**	**-1.1**
ITTB	**Itaituba**	**18.87**	**72**	*eP*			**P**	**11 05 20.2**	**-0.1**
SOCV	**Socops**	**19.11**	**9**	*eP*			**P**	**11 05 23.0**	**+0.2**
CO01	**Juntas del Tor**	**19.43**	**171**	P			**P**	**11 05 25.4**	**-1.0**
GO04	**Tololo Observa**	**19.52**	**173**	P			**P**	**11 05 27.7**	**+0.3**
CAPC	**Capurgana**	**19.60**	**349**	*eP*			**Pn**	**11 05 29.9**	**-0.8**
LCBC	**Los crdobas,**	**19.66**	**352**	*eP*			**Pn**	**11 05 35.4**	**+4.1**
SDV	**Santo Domingo**	**19.73**	**9**	P			**P**	**11 05 30.3**	**+0.6**
	16nm,0.3s,baz=330,slow=3.4,SNR=12								
SDV	**Santo Domingo**	**19.73**	**9**	P			**P**	**11 05 28.2**	**-1.5**
SDV	**Santo Domingo**	**19.73**	**9**	*eP*			**P**	**11 05 29.2**	**-0.6**
ACDV	**Cuesta del Vie**	**19.79**	**168**	*i P*			**Pn**	**11 05 32.7**	**-0.3**
AQDB	**Aquidauana**	**19.82**	**121**	P			**P**	**11 05 30.1**	**-0.3**
AQDB	**Aquidauana**	**19.82**	**121**	*eP*			**P**	**11 05 31.2**	**+0.8**
CO06	**Fray Jorge**	**19.92**	**175**	P			**P**	**11 05 31.6**	**+0.1**
LL1C	**La Loma 1 Cana**	**20.15**	**0**	*eP*			Pn	11 05 35.7	-1.4
CO03	**El Pedregal**	**20.19**	**173**	P			**P**	**11 05 34.3**	**-0.1**
ACCO	**Cerro Coronel**	**20.21**	**168**	*i P*			Pn	11 05 36.9	-1.1
BAUV	**El Baul**	**20.34**	**16**	P			**P**	**11 05 33.9**	**-2.3**
LL6C	**La Loma 6 Bece**	**20.35**	**1**	*eP*			**P**	**11 05 33.8**	**-2.4**
ARGC	**Ariguani, Magd**	**20.47**	**358**	*eP*			**P**	**11 05 38.4**	**+0.8**
CO02	**Combarbal**	**20.51**	**173**	P			**P**	**11 05 36.4**	**-1.5**
SJCC	**San Jacinto, C**	**20.56**	**356**	*eP*			**P**	**11 05 39.6**	**+1.1**
APLL	**PUNTA DE LOS L**	**20.65**	**162**	*i P*			**P**	**11 05 40.8**	**+1.4**
BCIP	**Isla Barro Col**	**20.71**	**343**	P			**P**	**11 05 39.4**	**-0.6**
MALB	**Monte Alegre**	**21.20**	**67**	*eP*			**P**	**11 05 45.5**	**+0.1**
ZON	**Zonda**	**21.21**	**168**	P			**P**	**11 05 45.5**	**+0.1**
RTLS	**Leoncito**	**21.34**	**170**	*i P*			**P**	**11 05 48.5**	**+1.4**
BRU2	**Volcan**	**21.38**	**335**	P			**P**	**11 05 45.9**	**-1.5**
CRJC	**Cerrejon, Guaj**	**21.64**	**2**	*eP*			**P**	**11 05 48.2**	**-1.9**
C2SB	**Chapadao do Su**	**21.66**	**114**	*eP*			**P**	**11 05 51.0**	**+0.7**
DABV	**Dabajuro**	**21.73**	**8**	*eP*			**P**	**11 05 49.9**	**-1.1**
SMRC	**Santa Marta, M**	**21.77**	**359**	*eP*			**P**	**11 05 50.3**	**-1.1**
CPUP	**Villa Florida**	**21.88**	**137**	P			**P**	**11 05 53.1**	**+0.6**
	16nm,0.9s,baz=322,slow=9.6,SNR=17								
	16nm,0.9s								
CPUP	**Villa Florida**	**21.88**	**137**	P			**P**	**11 05 52.6**	**+0.1**
CPUP	**Villa Florida**	**21.88**	**137**	*eP*			**P**	**11 05 53.4**	**+0.9**
SNDB	**Serra Nova Dou**	**21.98**	**95**	*eP*			**P**	**11 05 53.9**	**+0.3**
VA03	**San Esteban**	**22.10**	**173**	P			**P**	**11 05 53.9**	**-1.0**
TCA	**Tanti**	**22.15**	**159**	*i P*			**P**	**11 05 55.5**	**+0.1**
ROC1	**El Roble**	**22.26**	**174**	P			**P**	**11 05 55.4**	**-1.2**
BIRV	**Birongo**	**22.33**	**19**	P			**P**	**11 05 55.8**	**-1.4**
URIC	**Uribia, Colomb**	**22.36**	**4**	*eP*			**P**	**11 05 54.2**	**-3.2**
PEL	**Peldehue**	**22.46**	**173**	P			**P**	**11 05 58.8**	**+0.4**

MT02	**Curacav**	**22.53**	**174**	P			**P**	**11 06 00.4**	**+1.4**
AAGR	**Agrelo**	**22.68**	**169**	*i P*			**P**	**11 06 03.0**	**+2.4**
MT05	**Renca**	**22.70**	**174**	P			**P**	**11 06 01.6**	**+0.8**
MRA	**San Martin**	**22.79**	**162**	*i P*			**P**	**11 06 02.0**	**+0.4**
CVTR	**Volcan Turrial**	**22.94**	**334**	P			**P**	**11 06 01.6**	**-2.0**
MT09	**Talagante**	**23.06**	**174**	P			**P**	**11 06 02.9**	**-1.4**
MT01	**Popeta**	**23.12**	**175**	P			**P**	**11 06 03.2**	**-1.4**
LMEL	**Las Melosas**	**23.22**	**173**	P			**P**	**11 06 04.8**	**-0.9**
TRCB	**Terra Rica**	**23.40**	**123**	*eP*			**P**	**11 06 08.0**	**+0.5**
COVE	**Coope Vega, Sa**	**23.84**	**333**	P			**P**	**11 06 09.6**	**-1.8**
PRPB	**Parauapebas**	**24.03**	**81**	*eP*			**P**	**11 06 13.4**	**+0.3**
PCMB	**Pacaembu**	**24.05**	**119**	*eP*			**P**	**11 06 13.9**	**+0.6**
BO02	**Sierra Bellavi**	**24.08**	**174**	P			**P**	**11 06 13.2**	**-0.3**
ITRB	**Iturama**	**24.17**	**114**	*eP*			**P**	**11 06 15.0**	**+0.6**
RFA	**San Rafael**	**24.39**	**170**	*i P*			**P**	**11 06 17.9**	**+1.7**
ITQB	**Itaqui**	**24.65**	**142**	P			**P**	**11 06 18.3**	**-0.3**
ITQB	**Itaqui**	**24.65**	**142**	*eP*			**P**	**11 06 19.6**	**+1.0**
PTGB	**Pitanga**	**24.78**	**127**	*eP*			**P**	**11 06 20.9**	**+0.9**
ML02	**Panimavida**	**24.99**	**176**	P			**P**	**11 06 22.9**	**+1.2**
ACON	**Acoyapa**	**25.29**	**333**	P			**P**	**11 06 22.7**	**-1.8**
ACON					IAmb	IAmb		11 06 31.0	
	comp=Z,50nm,1.8s								
BDFB	**Brasilia**	**25.44**	**104**	P			**P**	**11 06 27.6**	**+1.5**
	comp=Z,4.7nm,0.6s,baz=283,slow=8.0,SNR=5.4								
	comp=Z,4.7nm,0.6s								
BDFB	**Brasilia**	**25.44**	**104**	P			**P**	**11 06 24.2**	**-1.9**
BDFB	**Brasilia**	**25.44**	**104**	*eP*			**P**	**11 06 26.4**	**+0.3**
IPMB	**Ipameri, GO**	**25.68**	**109**	*eP*			**P**	**11 06 28.6**	**+0.5**
SMTB	**Santa Maria do**	**25.77**	**88**	*eP*			**P**	**11 06 29.2**	**+0.2**
ITAB	**Concordia**	**26.08**	**132**	P			**P**	**11 06 31.3**	**-0.4**
ITAB					IAmb	IAmb		11 06 34.1	
	comp=Z,21nm,0.7s								
ITAB	**Concordia**	**26.08**	**132**	*eP*			**P**	**11 06 32.3**	**+0.7**
BB19B	**Bebedouro**	**26.23**	**116**	*eP*			**P**	**11 06 33.6**	**+0.5**
TMAB	**Tom-Au,PA,Br**	**26.72**	**74**	*eP*			**P**	**11 06 37.6**	**+0.1**
CPSB	**Cacapava Do Su**	**27.14**	**139**	*eP*			**P**	**11 06 42.1**	**+1.0**
PMNB	**Patos De Minas**	**27.44**	**110**	*eP*			**P**	**11 06 44.5**	**+0.5**
TIJ01	**Guaruva-PR**	**27.51**	**125**	*eP*			**P**	**11 06 45.1**	**+0.6**
RCLB	**Rio Claro- Sao**	**27.56**	**118**	*eP*			**P**	**11 06 45.5**	**+0.5**
PLTB	**Pedras Altas**	**27.96**	**141**	P			**P**	**11 06 48.9**	**+0.5**
PLTB					IAmb	IAmb		11 06 55.0	
	comp=Z,24nm,1.1s								
PLTB	**Pedras Altas**	**27.96**	**141**	*eP*			**P**	**11 06 49.4**	**+0.9**
SDBA	**SAO DESIDERIO**	**28.23**	**96**	*eP*			**P**	**11 06 51.4**	**+0.3**
VAO	**Valinhos**	**28.26**	**119**	*eP*			**P**	**11 06 51.3**	**+0.1**
PET01	**Itanhaem-SP**	**28.48**	**122**	*eP*			**P**	**11 06 53.9**	**+0.8**
GO06	**Curarrehue**	**28.79**	**176**	P			**P**	**11 06 55.7**	**-0.1**
GO06					IAmb	IAmb		11 06 58.0	
	comp=Z,29nm,1.1s								
JANB	**Januaria**	**28.93**	**102**	*eP*			**P**	**11 06 57.6**	**+0.4**
TER01	**Tubaro-SC**	**29.01**	**131**	*eP*			**P**	**11 06 58.5**	**+0.8**
OBIP	**Obispado Ponce**	**29.44**	**14**	P			**P**	**11 07 00.0**	**-1.6**
OBIP					IAmb	IAmb		11 07 00.6	
	comp=Z,23nm,0.8s								
MC01	**Montes Claros**	**29.46**	**105**	*eP*			**P**	**11 07 02.2**	**+0.3**
PARB	**Paraibuna**	**29.53**	**119**	*eP*			**P**	**11 07 03.0**	**+0.5**
DIAM	**Diamantina, MG**	**29.97**	**108**	*eP*			**P**	**11 07 06.8**	**+0.3**
PLCA	**Paso Flores**	**30.00**	**175**	P			**P**	**11 07 07.5**	**+1.1**
	comp=Z,13nm,1.0s,baz=349,slow=11,SNR=15								
	comp=Z,13nm,1.0s								
PLCA	**Paso Flores**	**30.00**	**175**	P			**P**	**11 07 07.5**	**+1.1**
PLCA					IAmb	IAmb		11 07 08.6	
	comp=Z,24nm,1.1s								
PLCA	**Paso Flores**	**30.00**	**175**

Z38A				pP	**pP**	**11 10 07.5**	**+0.9**	
Z38A				lAmb	lAmb	11 10 10.9		
	comp=Z,16nm,0.9s							
JSRW	**J. Sargeant Re**	**48.34**	**356**	pP	pP	11 10 07.4	+0.1	
U49A	**Red Boiling Sp**	**48.37**	**347**	P	**P**	**11 09 38.0**	**-0.6**	
WVT	**Waverly**	**48.49**	**345**	P	**P**	**11 09 38.5**	**-1.2**	
S57A	**Dark Hollow, R**	**48.50**	**354**	P	**P**	**11 09 39.3**	**-0.4**	
S57A					**pP**	**11 10 08.0**	**-0.6**	
S57A				lAmb	lAmb	11 10 12.5		
	comp=Z,12nm,0.6s							
UALR	**University of**	**48.61**	**339**	P	**P**	**11 09 40.2**	**-0.4**	
UALR				lAmb	lAmb	11 10 11.0		
	comp=Z,22nm,1.4s							
R58B	**Mineral**	**48.61**	**356**	P	**P**	**11 09 39.8**	**-0.7**	
R58B					**pP**	**11 10 09.1**	**-0.3**	
T50A	**Nancy**	**48.65**	**348**	P	**P**	**11 09 40.1**	**-0.8**	
T50A				lAmb	lAmb	11 09 47.0		
	comp=Z,22nm,1.8s							
T50A				pP	**pP**	**11 10 10.7**	**+0.9**	
S54A	**Dingess, Beckl**	**48.81**	**352**	P	**P**	**11 09 41.3**	**-0.8**	
S54A				pP	**pP**	**11 10 08.7**	**-2.3**	
S51A	**Beattyville**	**49.02**	**350**	P	**P**	**11 09 43.3**	**-0.4**	
S51A				lAmb	lAmb	11 09 44.5		
	comp=Z,9.2nm,0.8s							
WHAR	**Wooly Hollow**	**49.05**	**340**	P	**P**	**11 09 43.8**	**-0.1**	
WHAR				lAmb	lAmb	11 09 44.9		
	comp=Z,16nm,1.3s							
R55A	**Marlinton**	**49.14**	**353**	P	**P**	**11 09 43.3**	**-1.4**	
R55A				pP	**pP**	**11 10 10.2**	**-3.3**	
TXAR	**Lajitas Array**	**49.24**	**325**	P	**P**	**11 09 46.8**	**+1.2**	
	comp=Z,1.6nm,0.6s,baz=150,slow=7.8,SNR=7.2							
TXAR				pP	**pP**	**11 10 15.0**	**+0.4**	
	comp=Z,2.6nm,0.6s,baz=166,slow=8.2,SNR=6.6							
	comp=Z,1.6nm,0.6s							
TXAR	**Lajitas Array**	**49.24**	**325**	P	**P**	**11 09 45.0**	**-0.6**	
TXAR				pP	**pP**	**11 10 13.4**	**-1.1**	
TX31	**Lajitas Ar. Si**	**49.24**	**325**	P	**P**	**11 09 46.0**	**+0.4**	
TX31				lAmb	lAmb	11 10 14.8		
	comp=Z,12nm,0.8s							
TX32	**Lajitas Array**	**49.24**	**325**	P	**P**	**11 09 44.9**	**-0.7**	
TX32					**pP**	**11 10 14.4**	**-0.2**	
Z35A	**Perchaven, San**	**49.25**	**334**	P	**P**	**11 09 44.3**	**-1.2**	
Z35A					**pP**	**11 10 13.2**	**-1.2**	
LCAR	**Lake Charles**	**49.40**	**341**	P	**P**	**11 09 46.4**	**-0.1**	
LCAR				pP	**pP**	**11 10 13.6**	**-1.9**	
LCAR				lAmb	lAmb	11 10 16.6		
	comp=Z,19nm,1.8s							
R53A	**Hurricane**	**49.43**	**351**	P	**P**	**11 09 46.8**	**+0.1**	
R53A				lAmb	lAmb	11 09 48.0		
	comp=Z,11nm,0.8s							
R53A				pP	**pP**	**11 10 15.7**	**0.0**	
FCAR	**Ozark Folk Cen**	**49.54**	**340**	P	**P**	**11 09 47.8**	**+0.1**	
X37A	**Clayton**	**49.56**	**336**	P	**P**	**11 09 46.9**	**-0.9**	
X37A					**pP**	**11 10 15.7**	**-1.1**	
X37A				lAmb	lAmb	11 10 20.2		
	comp=Z,23nm,1.4s							
ABTX	**Abilene, Hawle**	**49.75**	**331**	P	**P**	**11 09 48.1**	**-1.3**	
ABTX				pP	**pP**	**11 10 19.7**	**+1.4**	
ABTX				lAmb	lAmb	11 10 23.2		
	comp=Z,20nm,1.3s							
R50A	**Paris**	**49.77**	**349**	P	**P**	**11 09 48.5**	**-0.9**	
R50A				lAmb	lAmb	11 09 50.3		
	comp=Z,14nm,1.0s							
R50A				pP	**pP**	**11 10 17.8**	**-0.6**	
Q54A	**Coxs Mills**	**49.92**	**353**	P	**P**	**11 09 49.7**	**-0.7**	
Q54A				lAmb	lAmb	11 09 51.4		
	comp=Z,11nm,0.8s							
Q54A				pP	**pP**	**11 10 17.9**	**-1.5**	
R49A	**Shelbyville**	**49.95**	**348**	P	**P**	**11 09 50.3**	**-0.4**	
R49A				pP	**pP**	**11 10 17.9**	**-1.8**	
R49A				lAmb	lAmb	11 10 20.9		
	comp=Z,37nm,1.7s							
Q52A	**Bidwell**	**50.09**	**351**	P	**P**	**11 09 50.7**	**-1.0**	
Q52A				lAmb	lAmb	11 09 52.6		
	comp=Z,10nm,0.9s							
WCI	**Wyandotte Cave**	**50.12**	**347**	P	**P**	**11 09 51.3**	**-0.7**	
WCI				lAmb	lAmb	11 09 57.7		
	comp=Z,9.2nm,0.8s							
WCI				pP	**pP**	**11 10 19.6**	**-1.4**	
S44A	**Carbondale**	**50.35**	**344**	P	**P**	**11 09 52.7**	**-1.0**	
S44A				lAmb	lAmb	11 09 54.1		
	comp=Z,7.5nm,0.8s							
S44A				pP	**pP**	**11 10 21.6**	**-1.2**	
SIUC	**Southern Illin**	**50.36**	**344**	P	**P**	**11 09 53.4**	**-0.4**	
SIUC				lAmb	lAmb	11 09 54.2		
	comp=Z,8.4nm,0.8s							
P53A	**Whipple**	**50.48**	**352**	P	**P**	**11 09 54.8**	**+0.1**	
P53A				lAmb	lAmb	11 09 56.2		
	comp=Z,16nm,0.8s							
HHAR	**Hobbs**	**50.52**	**339**	P	**P**	**11 09 55.0**	**-0.1**	
HHAR				lAmb	lAmb	11 09 56.9		
	comp=Z,21nm,1.5s							
MGMO	**Mountain Grove**	**50.74**	**341**	P	**P**	**11 09 56.4**	**-0.4**	
MGMO				lAmb	lAmb	11 09 57.6		
	comp=Z,15nm,1.1s							
TUL1	**Leonard**	**50.88**	**337**	P	**P**	**11 09 58.1**	**+0.3**	
FVM	**French Village**	**50.95**	**343**	P	**P**	**11 09 57.1**	**-1.2**	
FVM				lAmb	lAmb	11 10 05.8		
	comp=Z,13nm,0.6s							
FVM				pP	**pP**	**11 10 25.7**	**-1.6**	
OLIL	**Olney**	**51.03**	**345**	P	**P**	**11 09 57.7**	**-1.1**	
OLIL				lAmb	lAmb	11 09 59.9		
	comp=Z,12nm,0.8s							
P48A	**Milroy**	**51.13**	**348**	lAmb	lAmb	11 09 59.6		
	comp=Z,19nm,1.1s							
CCM	**Cathedral Cave**	**51.25**	**342**	P	**P**	**11 09 60.0**	**-0.5**	
CCM	**Cathedral Cave**	**51.25**	**342**	P	**P**	**11 10 00.2**	**-0.3**	
CCM				pP	**pP**	**11 10 29.6**	**0.0**	
SSPA	**Standing Stone**	**51.27**	**356**	P	**P**	**11 10 01.8**	**+1.3**	
SSPA				pP	**pP**	**11 10 29.2**	**-0.5**	
SSPA				sP	**sP**	**11 10 46.4**	**+2.9**	
Q44A	**Meyer Farm, Va**	**51.42**	**345**	P	**P**	**11 10 00.2**	**-1.5**	
Q44A				pP	**pP**	**11 10 31.2**	**+0.3**	
ACSO	**Alum Creek Sta**	**51.45**	**351**	P	**P**	**11 10 00.8**	**-1.1**	
ACSO				lAmb	lAmb	11 10 02.3		
	comp=Z,12nm,0.8s							
ACSO				pP	**pP**	**11 10 31.3**	**+0.2**	
OK029	**Liberty Lake**	**51.45**	**335**	P	**P**	**11 10 00.7**	**-1.3**	
OK029					**pP**	**11 10 31.0**	**-0.2**	
O49A	**Covington**	**51.63**	**350**	lAmb	lAmb	11 10 03.7		
	comp=Z,14nm,0.9s							
R40A	**Maddies Statio**	**51.78**	**341**	P	**P**	**11 10 03.5**	**-1.0**	
R40A				lAmb	lAmb	11 10 11.7		
	comp=Z,6.7nm,0.7s							
R40A				pP	**pP**	**11 10 32.1**	**-1.5**	
MNTX	**Cornudas Mount**	**51.99**	**325**	P	**P**	**11 10 04.8**	**-1.3**	
MNTX				pP	**pP**	**11 10 34.6**	**-0.8**	
N51A	**Ashland**	**52.03**	**352**	P	**P**	**11 10 05.5**	**-0.7**	
N51A				lAmb	lAmb	11 11 30.3		
	comp=Z,9.7nm,0.8s							
M55A	**Ridgway**	**52.16**	**355**	lAmb	lAmb	11 10 40.3		
	comp=Z,9.4nm,0.8s							
SFIN	**Lafayette**	**52.36**	**347**	P	**P**	**11 10 07.2**	**-1.5**	
SFIN					**pP**	**11 10 36.6**	**-1.3**	
N47A	**Urbana**	**52.55**	**349**	P	**P**	**11 10 09.0**	**-1.1**	
N47A				lAmb	lAmb	11 10 10.2		
	comp=Z,15nm,0.8s							
N47A				pP	**pP**	**11 10 37.0**	**-2.4**	
U32A	**Winter Ranch,**	**52.59**	**334**	P	**P**	**11 10 09.7**	**-0.8**	
BINY	**Binghamton**	**52.72**	**358**	P	**P**	**11 10 11.2**	**-0.1**	
L56A	**Greenwood**	**52.74**	**356**	P	**P**	**11 10 11.1**	**-0.4**	
P38A	**Dawn**	**53.40**	**341**	lAmb	lAmb	11 10 24.1		
	comp=Z,8.0nm,0.7s							
KSU1	**Kansas State U**	**53.99**	**338**	lAmb	lAmb	11 10 30.2		
	comp=Z,11nm,0.7s							
ORCD	**Orcadas**	**54.28**	**163**	lAmb	lAmb	11 10 22.8		
	comp=Z,13nm,1.2s							
PMSA	**Palmer Station**	**54.37**	**175**	P	**P**	**11 10 23.2**	**+0.2**	
PMSA				lAmb	lAmb	11 10 26.5		
	comp=Z,20nm,1.2s							
PMSA	**Palmer Station**	**54.37**	**175**	*e*P	**P**	**11 10 23.7**	**+0.7**	
NCB	**Newcomb**	**54.45**	**360**	P	**P**	**11 10 24.9**	**+0.9**	
NCB				lAmb	lAmb	11 10 58.5		
	comp=Z,30nm,1.6s							
PECO	**Prince Edward**	**54.50**	**357**	P	**P**	**11 10 24.2**	**+0.1**	
PECO				lAmb	lAmb	11 10 26.0		
	comp=Z,17nm,0.9s							
ANMO	**Albuquerque**	**55.03**	**327**	P	**P**	**11 10 28.5**	**0.0**	
ANMO				lAmb	lAmb	11 11 02.1		
	comp=Z,14nm,1.8s							
ANMO	**Albuquerque**	**55.03**	**327**	P	**P**	**11 10 29.7**	**+1.2**	
ANMO				pP	**pP**	**11 10 59.9**	**+1.9**	
DELO	**Deloro Mine**	**55.12**	**357**	P	**P**	**11 10 27.3**	**-1.3**	
DELO				lAmb	lAmb	11 10 30.3		
	comp=Z,16nm,0.9s							
G62A	**West of Eustis**	**55.77**	**3**	P	**P**	**11 10 32.9**	**-0.5**	
SDCO	**Great Sand Dun**	**56.70**	**330**	P	**P**	**11 10 38.9**	**-1.5**	
SDCO				pP	**pP**	**11 11 10.0**	**-0.1**	
E62A	**Clayton Lake**	**57.22**	**3**	P	**P**	**11 10 43.9**	**+0.3**	
E62A				lAmb	lAmb	11 10 46.0		
	comp=Z,24nm,1.4s							
S22A	**4UR Ranch, Cre**	**57.37**	**329**	P	**P**	**11 10 44.5**	**-0.7**	
S22A				lAmb	lAmb	11 11 19.0		
	comp=Z,25nm,1.9s							
X16A	**Lo Mia Camp, P**	**57.45**	**323**	lAmb	lAmb	11 11 19.3		
	comp=Z,17nm,1.9s							
SMAI	**San Martin Ant**	**57.49**	**177**	lAmb	lAmb	11 10 48.9		
	comp=Z,22nm,1.2s							
D62A	**Allapoint, All**	**57.71**	**4**	lAmb	lAmb	11 10 49.0		
	comp=Z,16nm,1.1s							
MVCO	**Mesa Verde**	**57.82**	**327**	P	**P**	**11 10 47.2**	**-1.1**	
MVCO				lAmb	lAmb	11 11 22.1		
	comp=Z,9.8nm,1.2s							
K31A	**O'Neill**	**57.86**	**338**	P	**P**	**11 10 48.5**	**+0.3**	
LATQ	**La Tuque**	**57.87**	**1**	P	**P**	**11 10 48.6**	**+0.5**	
LATQ				lAmb	lAmb	11 10 49.3		
	comp=Z,12nm,0.7s							
WUAZ	**Wupatki**	**58.18**	**324**	lAmb	lAmb	11 11 25.0		
	comp=Z,8.9nm,1.1s							
SPMN	**Marine on St.**	**58.32**	**344**	lAmb	lAmb	11 10 51.8		
	comp=Z,8.7nm,0.8s							
ISCO	**Idaho Springs**	**58.37**	**331**	P	**P**	**11 10 51.2**	**-1.0**	
ISCO				lAmb	lAmb	11 11 25.9		
	comp=Z,13nm,1.5s							
SMCO	**Snowmass**	**58.54**	**330**	lAmb	lAmb	11 11 29.2		
	comp=Z,6.4nm,1.0s							
VLDQ	**Val d'Or**	**58.69**	**357**	P	**P**	**11 10 54.5**	**+0.8**	
VLDQ				lAmb	lAmb	11 10 55.2		
	comp=Z,9.4nm,0.9s							
PV13	**Radium Mtn., P**	**58.70**	**328**	P	**P**	**11 10 54.4**	**0.0**	
U15A	**North Rim**	**59.35**	**324**	P	**P**	**11 10 57.5**	**-1.5**	
PHWY	**Pilot Hill**	**59.49**	**333**	P	**P**	**11 10 59.4**	**-0.5**	
O20A	**White River Ci**	**59.90**	**330**	P	**P**	**11 11 02.3**	**-0.3**	
PFO	**Pinyon Flats O**	**60.01**	**319**	P	**P**	**11 11 02.8**	**-0.6**	
KNB	**Kanab**	**60.07**	**324**	P	**P**	**11 11 04.1**	**+0.4**	
KNB				lAmb	lAmb	11 11 39.3		
	comp=Z,27nm,1.7s							
SZCU	**Shurtz Canyon**	**60.62**	**325**	P	**P**	**11 11 06.8**	**-0.8**	
P17A	**Butcher Ranch,**	**60.68**	**328**	P	**P**	**11 11 08.0**	**+0.2**	
P17A					**pP**	**11 11 38.6**	**+0.7**	
P17A				lAmb	lAmb	11 11 42.3		
	comp=Z,8.0nm,1.0s							
CCUT	**Cedar City**	**60.75**	**324**	P	**P**	**11 11 06.8**	**-1.6**	
MVU	**Marysvale**	**60.77**	**326**	P	**P**	**11 11 07.6**	**-1.0**	
TMUT	**Trail Mountain**	**60.80**	**327**	P	**P**	**11 11 09.2**	**+0.4**	
TMUT					**pP**	**11 11 38.3**	**-0.6**	
TMUT				lAmb	lAmb	11 11 42.8		
	comp=Z,4.3nm,0.6s							
RDMU	**Red Mountain**	**60.89**	**329**	P	**P**	**11 11 09.7**	**+0.4**	
RDMU				lAmb	lAmb	11 11 43.0		
	comp=Z,6.8nm,0.7s							
RSSD	**Black Hills**	**61.17**	**335**	P	**P**	**11 11 10.9**	**-0.2**	
RSSD				lAmb	lAmb	11 11 45.6		
	comp=Z,7.7nm,0.9s							
RSSD	**Black Hills**	**61.17**	**335**	P	**P**	**11 11 12.6**	**+1.5**	
RSSD				pP	**pP**	**11 11 41.2**	**0.0**	
PSUT	**Pine Spring**	**61.71**	**325**	P	**P**	**11 11 13.7**	**-1.1**	
E28A	**Huff**	**61.98**	**339**	P	**P**	**11 11 16.2**	**-0.1**	
AGMN	**Agassiz Nation**	**61.98**	**343**	P	**P**	**11 11 16.2**	**0.0**	
AGMN				lAmb	lAmb	11 11 16.8		
	comp=Z,5.1nm,0.8s							
WCT	**Wildcat Mounta**	**62.16**	**322**	P	**P**	**11 11 19.1**	**+1.3**	
SPR3	**Spring Creek 3**	**62.30**	**325**	P	**P**	**11 11 18.9**	**0.0**	
SPR3				lAmb	lAmb	11 11 21.2		
	comp=Z,9.4nm,1.6s							
DUG	**Dugway, Tooele**	**62.30**	**327**	P	**P**	**11 11 17.8**	**-0.9**	
BW06	**Boulder Array**	**62.55**	**331**	lAmb	lAmb	11 11 53.7		
	comp=Z,14nm,1.5s							
PD31	**Pinedale Array**	**62.55**	**331**	lAmb	lAmb	11 11 53.7		
	comp=Z,13nm,1.5s							
PDAR	**Pinedale Array**	**62.55**	**331**	P	**P**	**11 11 20.4**	**0.0**	
	comp=Z,0.7nm,0.6s,baz=132,slow=6.4,SNR=8.6							
PDAR				pP	**pP**			
	comp=Z,1.8nm,0.6s,baz=125,slow=8.4,SNR=9.3					**11 11 51.9**	**+1.3**	
	comp=Z,0.7nm,0.6s							
PDAR	**Pinedale Array**	**62.55**	**331**	P	**P**	**11 11 20.4**	**0.0**	
PDAR				pP	**pP**	**11 11 50.3**	**-0.3**	
R11A	**Troy Canyon, C**	**62.58**	**324**	P	**P**	**11 11 19.1**	**-1.5**	
R11A					**pP**	**11 11 50.6**	**-0.2**	
HWUT	**Hardware Ranch**	**62.67**	**329**	P	**P**	**11 11 20.3**	**-0.9**	
HWUT				lAmb	lAmb	11 11 55.4		
	comp=Z,7.5nm,0.8s							
MDND	**Maddock**	**62.72**	**341**	P	**P**	**11 11 20.4**	**-0.7**	
GMN	**Gold Mountain**	**62.88**	**322**	lAmb	lAmb	11 11 56.7		
	comp=Z,15nm,1.9s							
BGU	**Big Grassy Mou**	**62.94**	**327**	P	**P**	**11 11 22.1**	**-0.8**	
DSP	**Deep Springs**	**63.36**	**322**	P	**P**	**11 11 26.5**	**+0.9**	
ULM	**Lac du Bonnet**	**63.76**	**344**	P	**P**	**11 11 28.0**	**+0.1**	
	comp=Z,3.4nm,0.4s,baz=156,slow=8.5,SNR=10.0							
	comp=Z,3.4nm,0.4s							
ULM	**Lac du Bonnet**	**63.76**	**344**	P	**P**	**11 11 28.0**	**+0.1**	
ULM				lAmb	lAmb	11 11 35.1		
	comp=Z,10.0nm,1.1s							
FXWY	**Fox Creek**	**63.91**	**331**	P	**P**	**11 11 29.0**	**-0.4**	
FXWY				lAmb	lAmb	11 12 02.5		
	comp=Z,20nm,2.0s							
IMW	**Indian Meadow**	**64.06**	**331**	P	**P**	**11 11 28.9**	**-1.6**	
IMW				lAmb	lAmb	11 12 04.5		
	comp=Z,18nm,1.5s							
FLWY	**Flagg Ranch**	**64.09**	**331**	lAmb	lAmb	11 12 04.8		
	comp=Z,8.4nm,0.9s							
OMMB	**Old Mammoth Mi**	**64.14**	**321**	P	**P**	**11 11 30.1**	**-1.0**	
OMMB				lAmb	lAmb	11 11 34.5		
	comp=Z,17nm,1.6s							
MDPB	**Devils Postpil**	**64.20**	**321**	P	**P**	**11 11 31.4**	**-0.1**	
RLMT	**Red Lodge**	**64.22**	**333**	P	**P**	**11 11 30.3**	**-1.0**	
RLMT				lAmb	lAmb	11 12 05.4		
	comp=Z,23nm,1.6s							
NVAR	**Mina Array Bea**	**64.24**	**322**	P	**P**	**11 11 33.4**	**+1.8**	
	comp=Z,1.1nm,0.9s,baz=155,slow=7.9,SNR=7.9							
NVAR				pP	**pP**	**11 12 02.8**	**+0.8**	
	comp=Z,0.8nm,0.6s,baz=145,slow=8.1,SNR=5.2							
	comp=Z,1.1nm,0.9s							
LHV	**Little Huntoon**	**64.24**	**322**	P	**P**	**11 11 32.3**	**+1.0**	
DGMT	**Dagmar**	**64.84**	**338**	P	**P**	**11 11 34.1**	**-1.0**	
DGMT				lAmb	lAmb	11 11 37.6		
	comp=Z,23nm,1.2s							
DGMT				pP	**pP**	**11 12 04.8**	**-0.7**	
YHL	**Hebgen Lake**	**64.89**	**331**	P	**P**	**11 11 35.2**	**-0.6**	
GCMT	**Greycliff**	**64.91**	**333**	P	**P**	**11 11 35.5**	**-0.2**	
SCHQ	**Schefferville**	**65.58**	**4**	P	**P**	**11 11 40.1**	**+0.5**	
	comp=Z,2.4nm,0.5s,baz=262,slow=14,SNR=6.2							
SCHQ				pP	**pP**	**11 12 09.3**	**-0.9**	
	comp=Z,2.6nm,0.7s,baz=197,slow=14,SNR=1.9							
	comp=Z,2.4nm,0.5s							
VCNR	**Virginia City**	**65.60**	**322**	P	**P**	**11 11 40.4**	**0.0**	
BOZ	**Bozeman (W)**	**65.66**	**332**	P	**P**	**11 11 40.5**	**-0.1**	
BOZ				pP	**pP**	**11 12 09.5**	**-1.5**	
MFID	**Camas Ranch**	**66.17**	**328**	P	**P**	**11 11 43.5**	**-0.3**	
MFID				lAmb	lAmb	11 11 46.5		
	comp=Z,8.0nm,0.9s							
MFID				pP	**pP**	**11 12 14.1**	**-0.2**	
LRM	**Limekiln Ridge**	**66.21**	**331**	P	**P**	**11 11 45.2**	**+1.0**	
MSO	**Missoula**	**67.65**	**331**	lAmb	lAmb	11 12 27.8		
	comp=Z,27nm,1.6s							
I07A	**Izee**	**68.59**	**326**	lAmb	lAmb	11 12 34.1		
	comp=Z,21nm,1.6s							
PINE	**Pine Mountain**	**69.19**	**325**	P	**P**	**11 12 03.8**	**+0.8**	
BELA	**Belgrano 2**	**69.98**	**172**	P	**P**	**11 12 07.4**	**+0.4**	
BELA				lAmb	lAmb	11 12 09.9		
	comp=Z,12nm,1.0s							
LIC	**Lamto**	**70.38**	**79**	*i*P	**P**	**11 12 11.2**	**+0.6**	
	comp=Z,8.5nm,0.3s							
TIC	**Toumodi**	**70.49**	**79**	⇓*i*P	**P**	**11 12 11.6**	**+0.4**	
	comp=Z,2.2nm,0.2s							
DBIC	**Dimbokro**	**70.65**	**79**	P	**P**	**11 12 12.6**	**+0.4**	
	comp=Z,12nm,0.7s,baz=260,slow=5.9,SNR=14							
	comp=Z,12nm,0.7s							
DBIC	**Dimbokro**	**70.65**	**79**	P	**P**	**11 12 12.5**	**+0.4**	
KIC	**Kosan Boka**	**70.69**	**79**	*i*P	**P**	**11 12 13.1**	**+0.6**	
	comp=Z,11nm,0.4s							
VNA3	**Neumayer Olymp**	**71.67**	**162**	P	**P**	**11 12 18.7**	**+1.4**	
VNA1	**Neumayer--Stat**	**71.89**	**161**	P	**P**	**11 12 20.5**	**+1.9**	
EDM	**Edmonton**	**72.13**	**336**	lAmb	lAmb	11 12 54.0		
	comp=Z,36nm,1.3s							
VNA2	**Neumayer--Watz**	**72.25**	**162**	P	**P**	**11 12 22.0**	**+1.3**	
	baz=284,slow=6.1							
KOWA	**Kowa**	**73.45**	**71**	LR	LR	11 41 39.7		
	comp=Z,53nm,20.2s,baz=242,slow=33							
KOWA	**Kowa**	**73.45**	**71**	P	**P**	**11 12 26.9**	**-2.0**	
SNAA	**Sanae**	**73.87**	**162**	P	**P**	**11 12 31.7**	**+1.3**	
SNAA	**Sanae**	**73.87**	**162**	lAmb	lAmb	11 12 33.6		
	comp=Z,24nm,1.2s							
TROLL	**Troll, Antarti**	**75.59**	**162**	P	**P**	**11 12 42.0**	**+1.6**	
TORD	**Torodi Ar. Bea**	**78.47**	**74**	P	**P**	**11 12 57.2**	**-0.2**	
	comp=Z,3.2nm,0.4s,baz=254,slow=5.5,SNR=6.5							
	comp=Z,3.2nm,0.4s							
MDT	**Midelt**	**78.71**	**53**	P	**P**	**11 12 59.4**	**+0.9**	
	comp=Z,4.5nm,1.0s,baz=250,slow=5.2,SNR=7.5							
	comp=Z,4.5nm,1.0s							
YKA	**Yellowknife Ar**	**79.59**	**342**	P	**P**	**11 13 03.0**	**+0.6**	
	comp=Z,1.7nm,0.7s,baz=142,slow=5.8,SNR=10							
YKA				pP	**pP**	**11 13 35.0**	**+1.0**	
	comp=Z,3.8nm,1.0s,baz=136,slow=6.2,SNR=5.0							
YKA				LR	LR	11 51 54.3		
	comp=Z,39nm,18.6s,baz=70,slow=38							
	comp=Z,1.7nm,0.7s							
ESDC	**Sonseca Array**	**81.65**	**47**	P	**P**	**11 13 14.7**	**+0.7**	
	comp=Z,1.9nm,0.9s,baz=242,slow=8.2,SNR=7.1							
	comp=Z,1.9nm,0.9s							
DLBC	**Dease Lake**	**82.59**	**334**	LR	LR	11 56 47.2		
	comp=Z,52nm,18.2s,baz=62,slow=40							
SBA	**Scott Base**	**85.51**	**191**	P	**P**	**11 13 34.7**	**+1.7**	
SBA				lAmb	lAmb	11 13 36.6		
	comp=Z,11nm,1.3s							
SUMG	**Summit**	**86.26**	**10**	P	**P**	**11 13 36.8**	**-0.4**	
SUMG				pP	**pP**	**11 14 08.0**	**-1.1**	
VNDA	**Vanda**	**86.57**	**190**	P	**P**	**11 13 40.5**	**+2.3**	
	comp=Z,3.1nm,0.9s,baz=125,slow=5.0,SNR=14							
	comp=Z,3.1nm,0.9s							
VNDA	**Vanda**	**86.57**	**190**	P	**P**	**11 13 39.6**	**+1.3**	
INK	**Inuvik**	**89.34**	**341**	LR	LR	12 00 20.0		
	comp=Z,44nm,18.3s,baz=106,slow=40							
INK	**Inuvik**	**89.34**	**341**	P	**P**	**11 13 51.9**	**+0.6**	
INK				pP	**pP**	**11 14 24.0**	**+0.5**	
DAWY	**Dawson**	**89.35**	**336**	P	**P**	**11 13 52.4**	**+0.8**	
DAWY					**pP**	**11 14 23.9**	**+0.2**	
DAWY				lAmb	lAmb	11 14 26.4		
	comp=Z,9.6nm,1.4s							
I29M	**Ogilvie Camp,**	**89.52**	**338**	P	**P**	**11 13 53.1**	**+0.8**	
I29M					**pP**	**11 14 24.2**	**-0.2**	
I29M				lAmb	lAmb	11 14 27.8		
	comp=Z,10nm,1.2s							
J25K	**Salcha River,**	**91.95**	**336**	P	**P**	**11 14 04.4**	**+0.7**	
J25K					**pP**	**11 14 35.0**	**-0.9**	
ILAR	**Eielson Array**	**92.62**	**336**	P	**P**	**11 14 07.2**	**+0.6**	
	comp=Z,0.3nm,0.7s,baz=174,slow=3.9,SNR=6.2							
ILAR				pP	**pP**	**11 14 39.4**	**+0.5**	
	comp=Z,0.3nm,0.5s,baz=154,slow=5.6,SNR=3.2							
ILAR				LR	LR	12 00 31.4		
	comp=Z,17nm,18.1s,baz=70,slow=38							
	comp=Z,0.3nm,0.7s							
CLL	**Collm**	**96.23**	**39**	*e*pP	**pP**	**11 14 55.0**	**-0.7**	
CLL				*e*sP	sP	11 15 07.0	-1.8	
GERES	**GERESS Array B**	**96.28**	**42**	P	**P**	**11 14 23.9**	**0.0**	
	comp=Z,0.6nm,0.6s,baz=246,slow=7.1,SNR=3.4							
	comp=Z,0.6nm,0.6s							
STKA	**Stephens Creek**	**125.82**	**217**	PKP	**PKPdf**	**11 19 57.4**	**+0.2**	
	comp=Z,1.0nm,0.6s,baz=122,slow=2.7,SNR=4.3							
ZALV	**Zalesovo Beam**	**133.62**	**17**	PKP	**PKiKP**	**11 20 12.4**	**-0.1**	
	comp=Z,1.8nm,0.6s,baz=309,slow=1.5,SNR=6.4							
ZALV				pPKP	**pPKPdf**	**11 20 45.9**	**+1.1**	
	comp=Z,2.1nm,0.7s,baz=268,slow=3.1,SNR=3.8							
ASAR	**Alice Springs**	**136.44**	**218**	PKhKP	PKPpre	11 20 09.1		
	comp=Z,0.2nm,0.5s,baz=132,slow=1.6,SNR=4.1							
ASAR				PKP	**PKPdf**	**11 20 17.8**	**+0.2**	
	comp=Z,0.9nm,0.4s,baz=123,slow=1.9,SNR=19							
MKAR	**Makanchi Array**	**138.70**	**25**	PKhKP	PKPpre	11 20 14.2		
	comp=Z,0.2nm,0.5s,baz=294,slow=1.4,SNR=2.3

HORNC	Hornillas	3.22 314	*e*P	Pn	11 02 33.1	+0.8
LIM1	Limonal	3.27 313	*e*P	Pn	11 02 34.6	+1.8
SAJU	San Juanillo,	3.27 299	*e*P	Pn	11 02 33.8	+0.9
GPS2	Hotel Rincn d	3.37 312	*e*P	Pn	11 02 37.8	+3.4
LAPC	Finca la Perla	3.44 312	*e*P	Pn	11 02 38.4	+3.1
BUAI	Buenos Aires	3.44 314	*e*P	Pn	11 02 38.9	+3.6
BUEV	Buena Vista	3.44 312	*e*P	Pn	11 02 37.7	+2.4
GB1A	Borinquen Arri	3.45 313	*e*P	Pn	11 02 37.2	+1.7
GBS3	Finca Las Img	3.47 312	*e*P	Pn	11 02 38.8	+3.2
PAC1	Pacto, Paraso	9.09 154	*e*P	Pn	11 04 00.1	+7.1
FLF1	Flavio Alfaro-	9.26 161	*e*P	Pn	11 03 56.6	+1.4
BONI	La Bonita	9.55 146	*e*P	Pn	11 03 54.2	-5.3
FLOC	Florencia	9.88 133	*e*P	Pn	11 04 03.9	0.0
TAMC	Tame, Arauca	11.12 100	*e*P	Pn	11 04 27.4	+6.7

IDC ***26*** *11:16:15.3±7.2, 18°.87S×176°.61W, h0km, mb4.2/2, mbtmp4.2/2, Error ellipse: s-maj=283.4km s-min=116.7km az=152.0*
NEIC ***26*** *11:17:26.7±0.7, 20°.4S±0°.6×178°.4W±0°.3, h619km±41km, mb4.0/11, Error ellipse: s-maj=94.3km s-min=25.7km az=198.0*

ISC 26 11:17:26.0±1.6**, 20°.6S**±0°.2×**178°.6W**±0°.2**, h600**km**, n17,** σ1§**12/17, mb4.0/9, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.30	311	P	**P**	11 18 55.1	+1.3
BBOO	Buckleboo	42.03	244	P	**P**	11 24 26.7	+0.2
WR0	Warramunga Arr	43.88	262	P	**P**	11 24 41.3	+0.2
WR0	comp=Z,6.8nm,1.2s			IAmb	IAmb	11 24 45.4	
AS31	Alice Springs	43.98	257	P	**P**	11 24 42.1	+0.2
ASAR	Alice Springs	43.99	257	P	**P**	11 24 42.0	+0.2
	comp=Z,1.7nm,0.5s,baz=90,slow=7.7,SNR=48						
	comp=Z,1.7nm,0.5s						
ASAR	Alice Springs	43.99	257	P	**P**	11 24 41.8	-0.1
WB0	Warramunga Arr	44.05	263	P	**P**	11 24 42.2	-0.2
WB0	comp=Z,7.4nm,1.3s			IAmb	IAmb	11 24 47.8	
WB2	Warramunga Arr	44.06	262	P	**P**	11 24 41.8	-0.7
WB2	comp=Z,7.2nm,1.2s			IAmb	IAmb	11 25 07.4	
WRAB	Tennant Creek	44.06	262	P	**P**	11 24 42.0	-0.5
WRAB	comp=Z,7.9nm,1.2s			IAmb	IAmb	11 24 55.3	
WRA	Warramunga Arr	44.07	262	P	**P**	11 24 42.1	-0.5
	comp=Z,0.9nm,0.3s,baz=97,slow=7.7,SNR=69						
	comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	44.07	262	P	**P**	11 24 41.7	-0.8
KNRA	Kununurra	50.13	266	P	**P**	11 25 27.9	0.0
FITZ	Fitzroy Crossi	52.50	263	P	**P**	11 25 44.6	-0.3
FITZ	comp=Z,9.9nm,1.4s			IAmb	IAmb	11 26 01.9	
PSA00	Pilbara Seismi	57.13	257	P	**P**	11 26 16.2	-0.9
PSA00	comp=Z,16nm,1.2s			IAmb	IAmb	11 26 58.7	
QSPA	South Pole Qui	69.45	180	P	**P**	11 27 35.9	+0.8
QSPA	comp=Z,4.8nm,1.5s			IAmb	IAmb	11 28 03.8	
AKASG	Malin Array Be	142.86	331	PKP	**PKPdf**	11 35 48.7	-3.3
	comp=Z,0.6nm,0.4s,baz=47,slow=5.3,SNR=4.7						
CLL	Collm	148.05	346	*e*PKPbc	**PKPdf**	11 36 02.0	+1.2

IDC ***26*** *11:29:59.5±3.4, 67°.95N×25°.83E, h0km, Error ellipse: s-maj=31.9km s-min=13.2km az=112.0*
HEL ***26*** *11:29:59.1±0.1, 67°.95N×25°.87E, h0km, ML1.8, Explosion*
BER ***26*** *11:30:00.3±2.0, 67°.88N×25°.72E, h0km, ML1.2, ML1.8(HEL), Suspected explosion*

ISC 26 11:29:57.9±0.8**, 67°.93N**±0°.02×**25°.84E**±0°.03**, h0**km**, n25,** σ0§**67/41, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGF	Sodankyl	0.55	151	PG	**Pg**	11 30 08.8	+0.3
SGF				SG	**Sb**	11 30 17.4	-1.4
SGF	Sodankyl	0.55	151	PG	**Pg**	11 30 08.8	+0.3
SGF				SG	**Sb**	11 30 17.4	-1.4
HEF	Hetta	0.95	302	*e*P	**Pg**	11 30 16.5	+0.4
HEF				*e*S	**Sb**	11 30 29.2	-1.1
HEF	Hetta	0.95	302	PG	**Pg**	11 30 16.3	+0.3
HEF	baz=119			MSG		11 30 28.1	
HEF	comp=Z,6.2nm,0.2s			SG	**Sg**	11 30 28.9	+0.6
KLF	Kolari	1.00	227	PG	**Pg**	11 30 17.3	+0.3
KLF				SG	**Sg**	11 30 28.0	-2.0
RNF	Rovaniemi	1.32	177	PG	**Pn**	11 30 23.5	-0.1
RNF	baz=1.0			SG	**Sb**	11 30 40.9	-0.2
PAJU	Pajala	1.39	231	PG	**Pb**	11 30 24.5	-0.1
PAJU	baz=48			SG	**Sb**	11 30 43.0	+0.1
VRF	Varrio	1.44	95	PN	**Pb**	11 30 25.7	+0.1
VRF	comp=Z,5.9nm,0.2s			MSG		11 30 42.1	
VRF				SG	**Sg**	11 30 44.0	0.0
KTK1	Kautokeino	1.45	320	*e*P	**Pg**	11 30 25.6	-0.1
KTK1				*e*S	**Sg**	11 30 44.1	-0.4
KTK1	comp=Z,4.5nm,0.2s			IAML		11 30 48.9	
KTK1	Kautokeino	1.45	320	PG	**Pn**	11 30 25.4	0.0
KTK1				SN	**Sn**	11 30 45.3	+0.1
LANU	Lannavaara	1.46	277	PG	**Pn**	11 30 25.3	-0.2
LANU				SN	**Sn**	11 30 45.4	+0.2
ARA0	ARCESS Array S	1.62	356	*e*P	**Pg**	11 30 28.8	-0.1
ARA0				*e*S	**Sb**	11 30 49.4	-0.3
ARA0	comp=Z,4.1nm,0.3s			IAML		11 30 53.6	
ARCES	ARCESS Array B	1.62	356	Pg	**Pb**	11 30 28.5	-0.1
ARCES	comp=Z,1.0nm,0.3s,baz=173,slow=15,SNR=49			Lg	Lg	11 30 49.6	
	comp=Z,0.9nm,0.3s,baz=176,slow=22,SNR=15						
KEV	Kevo	1.89	12	*e*P	**Pb**	11 30 33.3	+0.2
KEV				*e*		11 30 57.9	
KEV	Kevo	1.89	12	PG	**Pb**	11 30 32.8	-0.4
KEV	comp=Z,7.5nm,0.2s			MSG		11 30 54.6	
KEV				SN	**Sg**	11 30 58.0	-0.4
TOF	Tornio	1.95	199	PG	**Pg**	11 30 34.8	-0.3
TOF	comp=Z,6.5nm,0.2s			MSG		11 30 57.7	
TOF				SG	**Sg**	11 31 00.0	-0.3
ERTU	Ertsjaerv	1.98	228	PG	**Pb**	11 30 34.5	-0.2
ERTU				SG	**Sg**	11 31 01.4	0.0
OLKF	Oulanka, Finla	2.13	138	PG	**Pb**	11 30 37.6	+0.3
OLKF				SG	**Sg**	11 31 05.6	-0.6
KIF	Kilpisjarvi	2.15	303	*e*P	**Pb**	11 30 37.7	+0.1
KIF				*e*		11 31 05.2	
KIF	Kilpisjarvi	2.15	303	PG	**Pb**	11 30 37.4	-0.2
KIF	comp=Z,5.0nm,0.2s			MSG		11 31 03.4	
KIF				SG	**Sb**	11 31 05.3	+0.5
MSF	Maaselka	2.38	147	PG	**Pb**	11 30 41.6	0.0
KU6	Riekki	2.48	138	PG	**Pb**	11 30 43.4	+0.1
KU6	baz=324			MSG		11 31 12.7	
I37NO	I37NO	2.90	297	*i*		11 48 10.0	
	comp=Z,0.6nm,1.0s,baz=110,slow=315,SNR=43						
OBF8	Ulkokalla	3.74	196	PN	**Pn**	11 30 59.0	+2.2
OBF8				SN	**Sn**	11 31 41.7	+0.3
I53US	FAIRBANKS INFR	47.41	356	*i*		16 26 46.4	
	baz=4.9,slow=323,SNR=1.1						

HEL 26 11:30:34.6±0.1**, 63°.98N**×**28°.10E, h0**km**, ML1.8, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMF	Romuvaara	0.84	72	PB	Pg	11 30 50.2	-0.4
	baz=257						
OUL	Oulu	1.47	320	SN	**Sn**	11 31 21.6	+2.1
OUL	Oulu	1.47	320	PN	Pn	11 31 01.6	-0.6
OUL				SN	Sg	11 31 21.6	0.0
OUF	Merijarvi	1.53	286	PG	**Pb**	11 31 02.3	+0.1
OUF	Merijarvi	1.53	286	PN	Pn	11 31 02.3	-0.8
OUF	comp=Z,6.3nm,0.2s			MSG		11 31 20.5	
OUF				SN	Sg	11 31 22.6	-0.9
OBF4	Vikkela, Lumij	1.55	304	PG	Pn	11 31 02.9	-0.5
OBF0	Syolatti, Pyha	1.77	289	PG	Pn	11 31 06.5	+0.1
OBF0				SG	Sb	11 31 30.4	-0.1
JOF	Joensuu	1.79	125	PG	Pn	11 31 06.8	+0.1
JOF	baz=305			SG	Sn	11 31 30.4	+0.2
MSF	Maaselka	1.98	11	PG	Pn	11 31 10.0	+0.6
MSF				SG	Sb	11 31 37.1	+0.3
MSF	Maaselka	1.98	11	SB	**Sb**	11 31 10.0	-1.4
KAF	Kangasniemi	2.04	204	PG	Pn	11 31 10.9	+0.7
KAF	baz=25			MSG		11 31 35.2	
KAF	comp=Z,5.6nm,0.2s			SG	Sb	11 31 38.3	-0.1
OBF8	Ulkokalla	2.07	282	PG	Pn	11 31 11.3	+0.8
KU6	Riekki	2.19	19	PG	Pb	11 31 13.7	-1.4
KU6				MSG		11 31 39.6	
KU6	comp=Z,3.3nm,0.2s	2.19	19	SB	**Sb**	11 31 13.7	-0.6
KEF	Riekki	2.34	220	PG	Pb	11 31 16.1	-1.4
KEF	Keuruu			MSG		11 31 43.8	
KEF	comp=Z,8.2nm,0.2s			SG	Sb	11 31 46.6	-0.2
RUFX	Ruokolahti	2.59	171	PG	Pb	11 31 19.9	-1.9
VAF	Ylistaro	2.61	251	PB	Pb	11 31 20.2	-1.9
VAF	comp=Z,4.8nm,0.2s			MSG		11 31 51.6	
VAF				SG	Sb	11 31 54.4	-0.3
TOF	Tornio	2.65	325	MSG		11 31 52.6	
TOF	comp=Z,2.1nm,0.2s			SG	Sb	11 31 56.2	+0.3
FIA0	FINESS Array S	2.71	201	PB	Pb	11 31 21.7	-2.2
FIA0				SB	Sb	11 31 56.4	-1.2
BURU	Burvik	3.00	285	PN	Pn	11 31 23.5	+0.3
BURU	baz=99			SB	Sn	11 32 00.7	+0.9
ERTU	Ertsjaerv	3.59	319	SN	Sn	11 32 15.2	+0.8
HEMU	Hemsoen	4.72	258	PN	Pn	11 31 47.7	+0.7
HEMU				SN	Sn	11 32 42.5	+0.3

IDC ***26*** *11:51:01.3±10.0, 13°.39S×167°.21E, h206km±69km, mb3.2/5, mbtmp3.8/6, Error ellipse: s-maj=94.9km s-min=26.8km az=32.0*

ISC 26 11:51:00.7±2.7**, 13°.4S**±0°.2×**167°.2E**±0°.3**, h200**km**, n6,** σ0§**47/7, mb3.7/5, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.70	185	P	**Pn**	11 53 03.5	+0.4
	4.3nm,0.8s,baz=285,slow=20,SNR=1.9						
DZM				S	**Sn**	11 54 40.5	-0.4
	4.0nm,0.8s,baz=192,slow=20,SNR=1.8						
CTA	Charters Tower	21.15	249	P	**P**	11 55 30.6	+0.1
	2.8nm,0.7s,baz=56,slow=7.3,SNR=2.2						
	2.8nm,0.7s						
STKA	Stephens Creek	29.86	228	P	**P**	11 56 50.0	+0.5
	1.1nm,0.6s,baz=44,slow=11,SNR=4.2						
	1.1nm,0.6s						
WRA	Warramunga Arr	32.13	254	P	**P**	11 57 09.5	-0.2
	0.3nm,0.6s,baz=84,slow=9.0,SNR=4.8						
	0.3nm,0.6s						
ASAR	Alice Springs	33.14	247	P	**P**	11 57 17.9	-0.5
	0.4nm,0.5s,baz=76,slow=9.4,SNR=18						
	0.4nm,0.5s						
QSPA	South Pole Qui	76.66	180	P	**P**	12 02 29.1	-0.2
	1.2nm,0.8s,baz=14,slow=4.2,SNR=6.7						
	1.2nm,0.8s						

TUL ***26*** *11:58:02.1±1.3, 36°.869N±0°.010×98°.02W±0°.01, h7km±5km, ML2.9, mb_Lg2.7/54(NEIC), Error ellipse: s-maj=1.8km s-min=1.3km az=116.0*
NEIC ***26*** *11:58:02.2±1.1, 36°.850N±0°.010×98°.005W±0°.008, h5km±2km, Error ellipse: s-maj=3.0km s-min=1.7km az=295.0*
ANF ***26*** *11:58:02.8±0.4, 36°.86N×97°.99W, h7km, ML3.5/8, Error ellipse: s-maj=5.1km s-min=3.7km az=21.0*

ISC 26 11:58:02.2±0.9**, 36°.86N**±0°.02×**98°.01W**±0°.02**, h7**km**±7**km**, n78,** σ0§**74/73, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.10	19	Pg	**Pg**	11 58 03.5	-1.1
KAN14				Sg	**Sg**	11 58 06.4	+0.2
GC02	Grant County #	0.12	93	Pg	**Pg**	11 58 05.1	+0.3
GC02				Sg	**Sg**	11 58 07.1	+0.7
OK032	Salt Plains WL	0.17	252		**Pg**	11 58 06.0	+0.3
OK032				Sg	**Sg**	11 58 08.5	+0.4
KAN17	Caldwell West	0.27	46	Pg	**Pg**	11 58 07.7	+0.2
KAN17				Sg	**Sg**	11 58 11.6	+0.6
KAN05	Bluff City Nor	0.27	23		**Pg**	11 58 07.9	+0.3
KAN05				Sg	**Sg**	11 58 11.8	+0.5
KAN10	Anthony SW Sta	0.28	345	Pg	**Pg**	11 58 07.8	+0.2
KAN10				Sg	**Sg**	11 58 12.0	+0.7
CROK	Carrier	0.35	177	Pg	**Pg**	11 58 09.4	+0.4
CROK				Sg	**Sg**	11 58 14.6	+0.9
KAN01	Argonia South	0.36	34	Pg	**Pg**	11 58 09.2	+0.1
KAN01				Sg	**Sg**	11 58 14.3	+0.4
KAN08	Anthony NE Sta	0.37	4		**Pg**	11 58 09.1	-0.3
KAN08				Sg	**Sg**	11 58 14.9	+0.6
KAN16	Harper SW Stat	0.37	353	Pg	**Pg**	11 58 09.7	+0.3
KAN16				Sg	**Sg**	11 58 15.0	+0.7
KAN06	Argonia West S	0.41	17		**Pg**	11 58 10.0	-0.1
KAN06				Sg	**Sg**	11 58 16.1	+0.6
KAN09	Caldwell North	0.42	48		**Pg**	11 58 10.5	+0.2
KAN09				Sg	**Sg**	11 58 16.1	+0.4
KAN12	Harper NE Stat	0.44	1	Pg	**Pg**	11 58 11.0	+0.3
KAN12				Sg	**Sg**	11 58 17.2	+0.7
KAN13	South Haven SW	0.45	70	Pg	**Pg**	11 58 11.2	+0.3
KAN13				Sg	**Sg**	11 58 17.2	+0.4
KS21	Milan North St	0.51	32	Pg	**Pg**	11 58 12.1	+0.1
KS20	Mayfield South	0.52	44		**Pg**	11 58 12.4	+0.2
OK035	E0210 Rd and N	0.58	255	Pg	**Pg**	11 58 13.5	0.0
BLOK	Blackwell	0.64	98	Pg	**Pg**	11 58 14.6	+0.1
OK038	West end E0370	0.70	238	Pg	**Pg**	11 58 14.7	-1.0
U32A	Winter Ranch,	0.93	240	Pg	**Pg**	11 58 19.8	-0.2
U32A	Winter Ranch,	0.93	240	P	**Pg**	11 58 19.9	-0.2
	baz=59,SNR=15						
OK029	Liberty Lake	1.15	157	Pg	**Pg**	11 58 23.8	-0.4
T35A	Sooner Cattle	1.20	87	Pg	**Pg**	11 58 24.8	-0.4
T35B	Sooner Cattle	1.20	87	P	**Pg**	11 58 24.7	-0.4
	baz=267,SNR=87						
T35B				S	**Sg**	11 58 40.5	-0.2
	baz=267						
BCOK	Bluff Creek, N	1.24	165	Pn	**Pb**	11 58 25.2	-0.7
QUOK	Quay	1.25	123	Pn	**Pn**	11 58 25.8	-0.3
OK031	S. Brethren Rd	1.30	133	Pn	**Pn**	11 58 26.5	-0.3
CSTR	Hydro, Custer	1.33	205	Pn	**Pn**	11 58 27.1	-0.1
OK030	Cody Creek RV	1.35	133	Pn	**Pn**	11 58 27.3	-0.2
OK025	Westminster Rd	1.38	157	Pn	**Pn**	11 58 27.7	-0.3
ELIS	Ellis County	1.39	236		**Pn**	11 58 27.4	-0.7
DEOK	Depew	1.58	129		**Pn**	11 58 31.0	+0.3
R32A	Long Quarter,	1.66	340	Pn	**Pn**	11 58 32.0	+0.2
R32A	Long Quarter,	1.66	340	P	**Pb**	11 58 32.6	-0.5
	baz=160,SNR=38						
R32A				S	**Sb**	11 58 54.7	+0.4
	baz=160						
FNO	Franklin	1.67	163		**Pn**	11 58 31.7	-0.2
TUL1	Leonard	2.02	117		**Pn**	11 58 36.2	-0.5
TUL1	Leonard	2.02	117	P	**Pb**	11 58 38.3	-1.0
	baz=298,SNR=14						
WMOK	Wichita Mounta	2.21	197	Pn	**Pn**	11 58 38.9	-0.4
WMOK	Wichita Mounta	2.21	197	P	**Pn**	11 58 40.2	+0.9
	baz=16,SNR=74						
X34A	Smith Ranch, M	2.25	176		**Pn**	11 58 39.5	-0.4
CBKS	Cedar Bluff	2.39	325	Pn	**Pn**	11 58 41.2	-0.6
CBKS	Cedar Bluff	2.39	325	P	**Pn**	11 58 43.0	+1.2
	baz=145,SNR=14						
KSU1	Kansas State U	2.50	26	Pn	**Pn**	11 58 43.4	+0.1
KSU1				lAmb_Lg		11 59 21.0	
	comp=Z,30nm,0.8s						
RLO	Rose Lookout	2.50	105		**Pn**	11 58 43.6	+0.3
LOOK	Love County	2.94	166	Pn	**Pn**	11 58 49.2	-0.1
U38A	Gravette	2.94	97	Pn	**Pn**	11 58 49.6	+0.2
U38A				lAmb_Lg		11 59 42.7	
	comp=Z,21nm,0.8s						
U38A	Gravette	2.94	97	P	**Pn**	11 58 50.8	+1.4
	baz=279,SNR=8.2						
X37A	Clayton	3.12	136	lAmb_Lg		11 59 47.3	
	comp=Z,32nm,1.0s						
X37A	Clayton	3.12	136	P	**Pn**	11 58 52.7	+1.0
	baz=317,SNR=13						
X37A				S	**Sn**	11 59 30.6	+1.4
HHAR	Hobbs	3.32	99	Pn	**Pn**	11 58 52.7	-1.9
HHAR	Hobbs	3.32	99	P	**Pn**	11 58 55.8	+1.1
	baz=281						
S39A	Bolivar	3.83	76	Pn	**Pn**	11 59 00.6	-1.0
N33A	J Bar K, Exete	3.90	6	Pn	**Pn**	11 59 00.1	-2.5
N33A				lAmb_Lg		12 00 12.1	
	comp=Z,16nm,1.0s						
KSCO	Kaye Shedlock'	4.24	302	lAmb_Lg		12 00 25.7	
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	4.28	121	Pn	**Pn**	11 59 06.3	-1.4
MIAR				lAmb_Lg		12 00 26.6	
	comp=Z,20nm,0.7s						
Z38A	Mt. Pleasant	4.36	145	lAmb_Lg		12 00 22.1	
	comp=Z,22nm,0.8s						
ABTX	Abilene, Hawle	4.43	198	lAmb_Lg		12 00 27.4	
	comp=Z,17nm,0.9s						
P38A	Dawn	4.48	51	lAmb_Lg		12 00 30.9	
	comp=Z,22nm,1.0s						
BGNE	Belgrade	4.55	359	lAmb_Lg		12 00 32.8	
	comp=Z,15nm,0.8s						
MGMO	Mount Grove	4.60	85		**Pn**	11 59 13.1	+0.9
MGMO				lAmb_Lg		12 00 31.6	
	comp=Z,17nm,0.8s						
R40A	Maddies Statio	4.78	71	Pn	**Pn**	11 59 14.9	+0.3
R40A				lAmb_Lg		12 00 44.8	
	comp=Z,12nm,1.2s						
FCAR	Ozark Folk Cen	4.84	100	lAmb_Lg		12 00 38.2	
	comp=Z,15nm,0.8s						
MSTX	Muleshoe	4.84	235	Pn	**Pn**	11 59 17.3	+1.7
WHAR	Wooly Hollow	4.89	107	lAmb_Lg		12 00 47.8	
	comp=Z,20nm,1.1s						
UALR	University of	5.05	113	lAmb_Lg		12 00 48.0	
	comp=Z,15nm,0.9s						
WLAR	White Oak Lake	5.10	127	lAmb_Lg		12 00 56.7	
	comp=Z,17nm,0.8s						
OGNE	Ogallala	5.15	324	lAmb_Lg		12 00 57.0	
	comp=Z,12nm,0.7s						
L34A	Svendsen Farm,	5.26	13	lAmb_Lg		12 00 51.5	
	comp=Z,18nm,0.7s						
P40A	Paris	5.40	59	lAmb_Lg		12 00 57.7	
	comp=Z,15nm,0.8s						
N38A	Joes South For	5.41	42	lAmb_Lg		12 01 06.7	
	comp=Z,13nm,0.8s						
LCAR	Lake Charles	5.58	96	lAmb_Lg		12 01 02.6	
	comp=Z,11nm,0.8s						
FVM	French Village	6.14	77	lAmb_Lg		12 01 24.4	
	comp=Z,10nm,0.9s						
JCT	Junction City	6.54	194	lAmb_Lg		12 01 37.3	
	comp=Z,13nm,1.1s						
CGM3	Cape Girardeau	6.69	84	lAmb_Lg		12 01 40.4	
	comp=Z,10nm,0.8s						
PHWY	Pilot Hill	7.30	310	lAmb_Lg		12 01 55.0	
	comp=Z,8.3nm,0.9s						
L40A	Anamosa	7.38	43	lAmb_Lg		12 02 05.6	
	comp=Z,11nm,0.8s						
N23A	Red Feather La	7.39	305	lAmb_Lg		12 02 10.9	
	comp=Z,9.9nm,0.8s						
JFWS	Jewell Farm	8.49	42	lAmb_Lg		12 02 42.8	
	comp=Z,7.2nm,0.7s						

IDC ***26*** *11:58:41.6±0.6, 55°.11S×30°.95W, h0km, mb4.4/8, mbtmp4.4/9, MS3.9/28, Error ellipse: s-maj=25.2km s-min=17.0km az=66.0*
NEIC ***26*** *11:58:43.6±1.8, 55°.36S±0°.09×31°.4W±0°.2, h10km±1km, mb4.9/33, Error ellipse: s-maj=17.4km s-min=14.9km az=49.0*
BJI ***26*** *11:58:44.0±0.0, 55°.40S×31°.40W, h10km, mB5.3/2, Ms5.2/3, Ms7 4.9/3*
GCMT ***26*** *11:58:45.6±0.3, 55°.27S±0°.03×30°.83W±0°.06, h22km±1km, MW4.9/81, Moment Tensor Solution. s22,c23; s81,c96; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.91±.19; Mθθ -2.18±.13; Mϕϕ -0.72±.10; Mrθ -0.24±.20; Mϕθ 0.96±.07; Mϕr 0.69±.17; Best double couple: M0 2.87000×10^16 NP1:ϕs 305.00000°, δ51.00000°, λ101.00000°. NP2: ϕs 108.00000°, δ40.00000°, λ77.00000°. Principal axes: T 3.0360, Plg80.0000°, Azm266.0000°; N -0.3260, Plg9.0000°, Azm118.0000°; P -2.7050, Plg5.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 11:58:42.9±0.4**, 55°.32S**±0°.06×**31°.36W**±0°.08**, h10**km**, n219,** σ0§**96/189, mb4.8/21, MS3.9/31, 1C-1D, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	3.15	287	Pn	**Pn**	11 59 33.5	+1.0
ORCD	Orcadas	8.93	227	Pn	**Pn**	12 00 52.1	+0.3
VNA1	Neumayer--Stat	18.40	156	P	**Pn**	12 03 00.5	+2.8
VNA1	Neumayer--Stat	18.40	156	PcP	**PcP**	12 07 28.3	+0.5
VNA3	Neumayer Olymp	18.52	158	P	**Pn**	12 03 00.3	+1.1
VNA3	Neumayer Olymp	18.52	158	PcP	**PcP**	12 07 28.2	+0.1
PMSA	Palmer Station	18.64	226	P	**Pn**	12 03 03.2	+2.5
	7.3nm,0.9s,baz=90,slow=9.7,SNR=1.4						
PMSA				LR	LR	12 09 28.5	
	comp=Z,264nm,19.0s,baz=70,slow=34						
PMSA	Palmer Station	18.64	226	*e*P	**Pn**	12 03 01.7	+1.0
VNA2	Neumayer--Watz	18.80	156	P	**Pn**	12 03 03.6	+0.9
	baz=313,slow=12						
VNA2	Neumayer--Watz	18.80	156	PcP	**PcP**	12 07 28.9	+0.3
SNAA	Sanae	20.40	154	P	**P**	12 03 20.2	+0.5
SNAA	Sanae	20.40	154	PcP	**PcP**	12 07 31.3	-0.2
SNAA	Sanae	20.40	154	P	**P**	12 03 20.8	+1.1
	9.9nm,0.9s,baz=310,slow=9.2,SNR=43						
	9.9nm,0.9s						
SNAA	Sanae	20.40	154	P	**P**	12 03 20.3	+0.6
SMAI	San Martin Ant	20.84	218	P	**P**	12 03 19.9	-4.4
TROLL	Troll, Antarti	21.97	152	P	**P**	12 03 37.3	+0.7
MG02	Cerro Sombrero	22.20	261	P	**P**	12 03 36.1	-2.9
BELA	Belgrano 2	22.69	182	P	**P**	12 03 41.1	-3.0
GO10	Punta Arenas	23.08	259	P	**P**	12 03 46.1	-2.4
MG05	Puerto Natales	24.48	261	P	**P**	12 04 00.2	-1.7
GO09	Cerro Castillo	24.57	262	P	**P**	12 04 02.2	-0.5
GO09				lAmb	lAmb	12 04 07.8	
	comp=Z,57nm,1.4s						
TRQA	Tornquist	26.88	297	P	**P**	12 04 22.3	-1.4
PLTB	Pedras Altas	28.30	317	*e*P	**P**	12 04 37.5	+1.1
CPSB	Cacapava Do Su	29.45	319	*e*P	**

GO02 IAmb IAmb 12 06 29.3
comp=Z,18nm,0.8s
BDFB Brasilia 41.63 335 LR LR 12 24 45.3
comp=Z,153nm,18.2s,baz=233,slow=38
MAW Mawson 42.12 145 P **P 12 06 34.6 -0.1**
comp=Z,3.2nm,0.8s,baz=251,slow=8.7,SNR=6.4
MAW LR LR 12 21 24.2
comp=Z,176nm,19.8s,baz=24,slow=32
comp=Z,3.2nm,0.8s
MAW Mawson 42.12 145 P **P 12 06 35.6 +1.0**
SUR Sutherland 42.78 80 LR LR 12 21 09.1
comp=Z,75nm,19.7s,baz=172,slow=32
LVC Limon Verde 42.91 304 LR LR 12 24 15.0
comp=Z,64nm,20.5s,baz=164,slow=36
LVC Limon Verde 42.91 304 *eP* **P 12 06 44.1 +2.0**
SALV Santo Antonio 43.57 325 *eP* **P 12 06 47.5 +0.5**
PB09 IPOC Station P 43.77 304 P **P 12 06 49.4 +0.7**
PB09 IAmb IAmb 12 08 02.7
comp=Z,43nm,1.5s
PB02 IPOC Station P 44.48 304 P **P 12 06 55.0 +0.6**
PB01 IPOC Station P 44.53 305 P **P 12 06 55.0 +0.2**
PB01 IAmb IAmb 12 06 57.2
comp=Z,20nm,0.9s
PTLB Pontes e Lacer 45.18 321 P **P 12 06 59.7 -0.1**
PTLB IAmb IAmb 12 07 00.8
comp=Z,11nm,0.9s
PTLB Pontes e Lacer 45.18 321 *eP* **P 12 07 00.1 +0.3**
SIV San Ignacio 45.40 318 LR LR 12 26 53.0
comp=Z,98nm,18.6s,baz=166,slow=37
GO01 Chusmiza 45.58 306 P **P 12 07 04.5 +1.0**
GO01 IAmb IAmb 12 07 06.1
comp=Z,14nm,0.8s
SBA Scott Base 46.62 185 P **P 12 07 10.7 +0.1**
SBA IAmb IAmb 12 07 29.7
comp=Z,8.1nm,1.2s
VNDA Vanda 47.17 184 P **P 12 07 17.4 +2.5**
comp=Z,2.9nm,0.8s,baz=199,slow=6.1,SNR=19
VNDA LR LR 12 25 57.3
comp=Z,84nm,18.2s,baz=236,slow=34
comp=Z,2.9nm,0.8s
VNDA Vanda 47.17 184 P **P 12 07 16.2 +1.3**
LPAZ La Paz 48.05 309 P **P 12 07 24.4 +1.3**
comp=Z,6.3nm,0.6s,baz=152,slow=6.8,SNR=29
LPAZ LR LR 12 30 18.5
comp=Z,56nm,19.0s,baz=230,slow=39
comp=Z,6.3nm,0.6s
LPAZ La Paz 48.05 309 P **P 12 07 23.9 +0.7**
LPAZ La Paz 48.05 309 *eP* **P 12 07 24.6 +1.5**
H10S2 ASCENSION HYDR 48.10 22 T T 12 59 06.9
baz=192,slow=74,SNR=5.1
H10S3 ASCENSION HYDR 48.10 22 T T 12 59 13.0
baz=28,slow=74,SNR=10
BOSA Boshof 48.13 80 P **P 12 07 23.0 -0.1**
comp=Z,1.3nm,0.5s,baz=246,slow=10.0,SNR=5.8
BOSA LR LR 12 25 16.9
comp=Z,67nm,18.4s,baz=196,slow=33
comp=Z,1.3nm,0.5s
CLDB Colider 48.32 327 *eP* **P 12 07 24.2 -0.3**
H10N1 ASCENSION HYDR 49.22 22 T T 13 00 29.6
baz=192,slow=75,SNR=11
H10N3 ASCENSION HYDR 49.22 22 T T 13 00 29.8
baz=192,slow=75,SNR=18
H10N2 ASCENSION HYDR 49.23 22 T T 13 00 33.3
baz=192,slow=75,SNR=20
RCBR Riachuelo 49.48 354 LR LR 12 26 17.0
comp=Z,116nm,18.3s,baz=318,slow=34
LBTB Lobatse 51.11 78 P **P 12 07 43.8 -2.0**
TSUM Tsumeb 51.46 66 LR LR 12 24 36.6
comp=Z,55nm,21.1s,baz=328,slow=30
SAML Samuel 52.65 319 P **P 12 07 56.6 -0.6**
SAML IAmb IAmb 12 07 58.0
comp=Z,9.3nm,1.0s
ETMB Extrema 53.04 315 P **P 12 08 00.1 0.0**
ETMB IAmb IAmb 12 08 05.8
comp=Z,7.1nm,1.2s
ETMB Extrema 53.04 315 *eP* **P 12 08 00.4 +0.4**
ROSB Rosrio 53.28 344 *eP* **P 12 08 02.7 +1.0**
ITTB Itaituba 54.46 330 *eP* **P 12 08 10.5 0.0**
MACA Manacapuru-AM 57.14 324 *eP* **P 12 08 29.9 +0.2**
CZSB Cruzeiro do Su 57.66 309 P **P 12 08 33.4 0.0**
CZSB IAmb IAmb 12 08 55.1
comp=Z,15nm,1.2s
CZSB Cruzeiro do Su 57.66 309 *eP* **P 12 08 33.7 +0.3**
LSZ Lusaka 60.37 73 LR LR 12 31 34.6
comp=Z,161nm,19.4s,baz=182,slow=33
BOAV Boa Vista 62.31 327 *eP* **P 12 09 04.6 -0.7**
MDP Montagnes des 62.74 336 LR LR 12 37 48.3
comp=Z,80nm,18.1s,baz=268,slow=38
DBIC Dimbokro 65.58 29 LR LR 12 32 16.0
comp=Z,79nm,19.4s,baz=176,slow=31
OTAV Otavalo 67.31 307 P **P 12 09 38.0 -0.4**
OTAV IAmb IAmb 12 10 00.8
comp=Z,7.0nm,1.1s
OTAV Otavalo 67.31 307 *eP* **P 12 09 38.6 +0.2**
ROSC El Rosal 69.63 314 LR LR 12 44 36.4
comp=Z,87nm,18.0s,baz=90,slow=40
SDV Santo Domingo 71.86 319 *eP* **P 12 10 06.7 +0.5**
KOWA Kowa 73.28 28 LR LR 12 39 05.8
comp=Z,170nm,18.2s,baz=194,slow=33
TOA0 Torodi Ar. Sit 73.67 34 P **P 12 10 17.4 +0.9**
TOA0 IAmb IAmb 12 11 38.2
comp=Z,23nm,1.9s
TORD Torodi Ar. Bea 73.67 34 P **P 12 10 14.9 -1.7**
comp=Z,2.3nm,0.4s,baz=188,slow=6.6,SNR=2.1
comp=Z,2.3nm,0.4s
TORD Torodi Ar. Bea 73.67 34 P **P 12 10 17.4 +0.9**
TORD IAmb IAmb 12 10 19.4
comp=Z,20nm,1.8s
KMBO Kilima Mbogo 77.03 73 LR LR 12 42 48.9
comp=Z,125nm,18.0s,baz=254,slow=34
SJG San Juan 78.88 326 LR LR 12 48 53.6
comp=Z,19nm,18.1s,baz=99,slow=38
URZ Urewera 83.66 202 LR LR 12 44 22.6
comp=Z,103nm,19.8s,baz=211,slow=33
TBI Tubuai 85.65 234 *e*LR LR 12 38 22.3
comp=Z,99nm,47.5s
ATD Arta Tunnel 90.60 71 LR LR 12 51 44.1
comp=Z,143nm,18.1s,baz=167,slow=35
PPT2 Papeete2 90.65 237 *e*LR LR 12 40 41.5
comp=Z,67nm,22.0s
PPT Papeete 90.67 237 LR LR 12 43 47.0
comp=Z,42nm,21.2s,baz=152,slow=30
MDT Midelt 90.73 22 LR LR 12 47 16.6
comp=Z,130nm,18.9s,baz=179,slow=32
STKA Stephens Creek 92.95 174 LR LR 12 52 43.2
comp=Z,100nm,19.3s,baz=205,slow=35
TAOE Nuku Hiva Isla 93.24 250 *e*LR LR 12 41 53.7
comp=Z,70nm,29.8s
KEST Kesra 97.15 32 LR LR 12 52 04.7
comp=Z,168nm,19.7s,baz=270,slow=33
ESDC Sonseca Array 97.47 21 LR LR 12 52 04.8
comp=Z,103nm,19.4s,baz=172,slow=33
DZM Mont Dzumac 101.44 197 *e*LR LR 12 45 42.8
comp=Z,122nm,25.4s
NVAR Mina Array Bea 118.95 296 PKP **PKiKP 12 17 31.9 +0.6**
comp=Z,0.6nm,0.8s,baz=123,slow=2.3,SNR=5.0
FINES FINESS Array B 124.87 30 PKP **PKPdf 12 17 39.2 -2.3**
comp=Z,1.5nm,0.7s,baz=103,slow=4.3,SNR=7.5
CMAR Chiang Mai Arr 127.53 114 PKP **PKPdf 12 17 47.8 -0.2**
comp=Z,1.8nm,0.9s,baz=233,slow=4.4,SNR=10
YKA Yellowknife Ar 134.07 320 PKP **PKPdf 12 17 58.5 -0.5**
comp=Z,1.0nm,0.7s,baz=115,slow=1.9,SNR=5.3
PZH PanZhiHua 135.57 111 PKP **PKPdf 12 18 04.0 +0.8**
BVAR Borovoye Array 136.40 59 PKP **PKiKP 12 18 05.0 -0.4**
comp=Z,0.6nm,0.6s,baz=223,slow=8.1,SNR=4.2
WMQ Urumqi 140.09 80 *e*PKP **PKiKP 12 18 13.0 -0.3**
GTA Gaotai 144.13 96 *e*PKP **PKPdf 12 18 18.0 -0.3**
GTA pPKP PKiKP 12 18 26.5 +4.7
ZALV Zalesovo Beam 144.18 65 PKP **PKPab 12 18 15.1 -0.4**
comp=Z,0.7nm,0.3s,baz=274,slow=5.7,SNR=1.4
BVCY Beaver Creek 144.59 311 P **PKPab 12 18 16.6 -0.2**
baz=112
M27K Edge Creek, AK 145.01 310 P **PKPbc 12 18 18.0 -0.5**
baz=111,SNR=9.8
MCARA McCarthy VSAT 145.16 308 P **PKPab 12 18 19.1 +0.2**
baz=112
L27K Beaver Creek, 145.24 312 P **PKPbc 12 18 18.7 -0.3**
baz=110,SNR=14
KAIM Kayak Island 145.25 306 P **PKPbc 12 18 18.4 -0.8**
baz=113
XAN Xi'an 145.31 111 ⇓*i*PKPbc **PKPbc 12 18 19.3 -0.9**
M26K Nabesna, AK 145.52 310 P **PKPdf 12 18 18.9 -0.9**
baz=110
EGAK Eagle 145.52 315 P **PKPdf 12 18 19.1 -0.6**
baz=108,SNR=5.9
K27K Chicken 145.66 313 P **PKPbc 12 18 20.6 +0.2**
baz=109
BMRM Bremner River 145.72 307 P **PKPdf 12 18 20.3 +0.1**
baz=111
L26K Log Cabin Wild 145.88 311 P **PKPdf 12 18 20.8 +0.4**
baz=109,SNR=8.3
N25K Chitina, Valde 145.95 308 P **PKPdf 12 18 21.2 +0.6**
baz=110
I27K Kandik River 145.96 316 P **PKPbc 12 18 21.2 -0.1**
baz=107,SNR=17
EYAK Cordova Ski Ar 146.10 306 P **PKPbc 12 18 21.8 0.0**
baz=111
H27K Steamboat Moun 146.10 317 P **PKPdf 12 18 21.4 +0.7**
baz=106,SNR=15
G27K Doyon Strip 146.30 318 P **PKPbc 12 18 22.2 -0.1**
baz=105,SNR=7.2
J26L Joseph Creek 146.43 314 P **PKPbc 12 18 22.4 -0.4**
baz=107
SCRK Sand Creek 146.45 313 P **PKPbc 12 18 22.8 -0.2**
baz=107
I26K Coal Creek Min 146.49 315 P **PKPbc 12 18 22.5 -0.3**
baz=106
KLU Klutina 146.51 308 P **PKPbc 12 18 22.7 -0.3**
baz=110,SNR=8.0
E27K Coleen River 146.61 320 P **PKPbc 12 18 23.4 +0.2**
baz=103
RIDG Independent Ri 146.74 312 P **PKPbc 12 18 23.7 +0.1**
baz=107
PAX Paxson 146.78 310 P **PKPbc 12 18 23.3 -0.5**
baz=108,SNR=12
M24K Tolsona, Glenn 146.82 309 P **PKPbc 12 18 23.9 -0.1**
baz=109
GLI Glacier Island 146.83 306 P **PKPbc 12 18 23.9 -0.1**
baz=110
G26K Porcupine Rive 147.15 318 P **PKPbc 12 18 24.2 -0.5**
baz=103,SNR=6.9
K24K Donnelly Dome 147.16 312 P **PKPbc 12 18 24.4 -0.4**
baz=106
J25K Salcha River, 147.21 313 P **PKPbc 12 18 24.5 -0.5**
baz=106
SCM Sheep Creek Mo 147.25 308 P **PKPbc 12 18 25.2 0.0**
baz=108,SNR=5.8
PWL Port Wells 147.40 306 P **PKPbc 12 18 24.8 -0.7**
baz=109
M23K Glacier View 147.42 308 P **PKPbc 12 18 25.4 -0.2**
baz=108
F26K Sheenjek River 147.45 319 P **PKPbc 12 18 25.7 +0.2**
baz=102,SNR=13
PRP Porcupine Dome 147.50 315 P **PKPbc 12 18 25.5 -0.3**
baz=104
LYN LuoYang 147.57 115 ⇑PKPbc **PKPdf 12 18 24.3 +0.2**
C27K Jago River 147.64 323 P **PKPbc 12 18 25.9 0.0**
baz=99,SNR=8.8
DHY Denali Highway 147.64 310 P **PKPbc 12 18 25.9 -0.5**
baz=106,SNR=7.4
WAT6 Susitna Watana 147.66 309 P **PKPbc 12 18 25.9 -0.5**
baz=107
SML Sawmill 147.70 308 P **PKPbc 12 18 25.6 -0.7**
baz=108,SNR=5.4
H25K Birch Creek 147.79 316 P **PKPbc 12 18 26.7 +0.3**
baz=103
HDA Harding Lake 147.82 313 P **PKPbc 12 18 26.0 -0.5**
baz=105
ILAR Eielson Array 147.88 313 PKPbc **PKPbc 12 18 26.9 +0.1**
comp=Z,8.3nm,0.8s,baz=127,slow=1.9,SNR=62
F25K Chistian Rive 147.99 319 P **PKPbc 12 18 26.5 -0.5**
baz=101,SNR=10
PMR Palmer 148.00 307 P **PKPbc 12 18 26.1 -0.9**
baz=108
E25K Arctic Village 148.06 320 P **PKPbc 12 18 26.9 -0.2**
baz=100,SNR=22
WAT1 Susitna Watana 148.09 309 P **PKPbc 12 18 26.8 -0.6**
baz=106
C26K Camden Bay 148.10 323 P **PKPbc 12 18 26.7 -0.5**
baz=98
RC01 Rabbit Creek A 148.12 306 P **PKPbc 12 18 26.7 -0.8**
baz=108
BRSE Bradley Lake S 148.16 303 P **PKPbc 12 18 27.6 0.0**
baz=109
COLA College 148.31 313 P **PKPbc 12 18 26.8 -1.0**
baz=103
TCOL CIGO, UAF Yank 148.31 313 P **PKPbc 12 18 26.8 -1.0**
baz=103,SNR=6.6
KDAK Kodiak Island 148.39 299 P **PKPbc 12 18 27.8 -0.4**
baz=111
MCK McKinley 148.49 311 P **PKPbc 12 18 28.0 -0.3**
baz=104,SNR=6.3
M22K Willow 148.49 307 P **PKPbc 12 18 28.0 -0.3**
baz=107,SNR=6.4
H24K Noodor Dome 148.52 315 P **PKPbc 12 18 28.4 -0.1**
baz=102
D25K Kavik River 148.53 322 P **PKPbc 12 18 28.1 -0.2**
baz=97,SNR=10
G24K Hadweenzic Riv 148.53 317 P **PKPbc 12 18 28.2 -0.2**
baz=101
OHAK Old Harbor 148.54 298 P **PKPbc 12 18 28.7 +0.1**
baz=112
HOM Homer 148.57 303 P **PKPbc 12 18 27.9 -0.7**
baz=109
Q20K Shuyak Island 148.59 301 P **PKPbc 12 18 27.7 -0.9**
baz=110
NEA2 Nenana 148.75 313 P **PKPbc 12 18 28.6 -0.4**
baz=103,SNR=7.5
F24K Squaw Lake 148.83 318 P **PKPbc 12 18 29.0 -0.1**
baz=99,SNR=10
TRF Thorofare Moun 149.01 310 P **PKPbc 12 18 29.3 -0.6**
baz=104
E24K Your Creek 149.13 319 P **PKPbc 12 18 29.6 -0.3**
baz=98,SNR=15
O20K Slope Mountain 149.17 303 P **PKPbc 12 18 30.2 0.0**
baz=108
H23K Yukon River 149.19 315 P **PKPbc 12 18 29.8 -0.3**
baz=100
D24K Happy Valley 149.38 321 P **PKPbc 12 18 30.1 -0.3**
baz=96
C24K Franklin Bluff 149.38 323 P **PKPbc 12 18 30.8 +0.4**
baz=95
BPAW Bear Paw Mtn. 149.46 311 P **PKPbc 12 18 30.4 -0.4**
baz=102
G23K Bananza Creek 149.53 317 P **PKPbc 12 18 31.2 +0.2**
baz=99,SNR=15
MLY Manley 149.54 313 P **PKPbc 12 18 30.0 -1.0**
baz=101,SNR=7.4
TOLK Toolik Lake Re 149.60 320 P **PKPbc 12 18 30.6 -0.5**
baz=96,SNR=14
PPLA Purkeypile 149.72 309 P **PKPbc 12 18 31.3 -0.4**
baz=103
CAST Castle Rocks 149.79 310 P **PKPbc 12 18 31.0 -0.6**
baz=102
M20K Styx River 149.91 307 P **PKPbc 12 18 31.2 -0.8**
baz=104
H22K Ishtalitna Cre 149.95 315 P **PKPbc 12 18 31.2 -0.7**
baz=99,SNR=11
CHUM Lake Minchumin 149.99 311 P **PKPbc 12 18 31.3 -0.7**
baz=102,SNR=9.7
O19K Port Alsworth 150.02 303 P **PKPbc 12 18 31.2 -1.0**
baz=106
D23K Nanushuk River 150.03 321 P **PKPbc 12 18 31.4 -0.6**
baz=94
C23K Itkillik River 150.05 323 P **PKPbc 12 18 31.6 -0.4**
baz=93
I21K Tanana 150.09 313 P **PKPbc 12 18 31.7 -0.6**
baz=100
P18K Big Mountain, 150.23 301 P **PKPbc 12 18 32.0 -0.8**
baz=107
R17K Ugashik Creek 150.25 297 P **PKPbc 12 18 32.4 -0.4**
baz=110
N19K Bonanza Creek 150.26 304 P **PKPbc 12 18 31.9 -1.0**
baz=105
O18K Koktuh Hills 150.35 302 P **PKPbc 12 18 32.6 -0.5**
baz=106
E22K Anaktuvuk Pass 150.38 319 P **PKPbc 12 18 32.7 -0.3**
baz=95
L20K Farewell, AK 150.39 308 P **PKPbc 12 18 32.1 -1.0**
baz=103
F22K John River 150.47 318 P **PKPbc 12 18 32.6 -0.5**
baz=95,SNR=14
H21K Melozitna Rive 150.50 314 P **PKPbc 12 18 33.1 -0.1**
baz=98,SNR=14
K20K Telida 150.66 309 P **PKPbc 12 18 33.0 -0.7**
baz=101,SNR=9.0
Q16K King Salmon 150.72 299 P **PKPbc 12 18 33.1 -0.7**
baz=108
P17K Kvichak River 150.76 300 P **PKPbc 12 18 33.2 -0.8**
baz=107
J20K Nowinta River 150.84 311 P **PKPbc 12 18 33.7 -0.3**
baz=100,SNR=6.1
N18K Kilae Creek 150.90 304 P **PKPbc 12 18 33.9 -0.4**
baz=105
CHNA Chernabura Isl 150.92 291 P **PKPbc 12 18 33.8 -0.7**
baz=113
F21K Alatna River 150.94 317 P **PKPbc 12 18 34.2 0.0**
baz=95,SNR=11
O17K Koliganek Bris 151.24 301 P **PKPbc 12 18 35.0 -0.1**
baz=106
TTA Tatalina 151.44 308 P **PKiKP 12 18 36.3 +0.2**
baz=100
SDPT Sand Point 151.58 291 P **PKPbc 12 18 35.8 -0.2**
baz=111
HHC Hu-ho-hao-te 151.71 105 *e*PKPbc **PKPdf 12 18 28.0 -2.7**
SONM Songino Array 153.05 88 PKPbc **PKPbc 12 18 37.7 -2.1**
comp=Z,2.0nm,0.8s,baz=208,slow=3.2,SNR=5.4

SKO ***26*** *12:07:58.1, 42.˚58N×24.˚15E, h0km*
BEO 26 12:07:57.5±1.1, 42.˚46N×24.˚17E, h0km, ML1.3/6, Mining explosion., Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.71**	**283**	*e*Pg	Pg	12 08 09.5	-1.5
VTS				*e*Sg	Sg	12 08 19.0	-1.2
VTS	**Vitosha**	**0.71**	**283**	*i* Pg	Pg	12 08 09.4	-1.7
BOSS	**Bosilegrad**	**1.25**	**272**	*e*Pg	Pg	12 08 19.9	-1.5
BOSS				*e*Sg	Sn	12 08 39.4	-0.4
ZAPS	**Zavoj**	**1.39**	**306**	*e*Pg	Pg	12 08 23.1	-1.0
ZAPS				*e*Sg	Sb	12 08 42.4	-0.3
SRS	**Serrai**	**1.41**	**198**	*e*Pn	Pb	12 08 26.6	+1.8
SRS				*i* Sg	Sn	12 08 46.4	+2.7
PRVS	**Prvonek**	**1.55**	**272**	*e*Pg	Pn	12 08 26.2	-0.2
PRVS				*e*Sg	Sb	12 08 47.8	+0.6
VAY	**Valandovo**	**1.65**	**227**	*i* Pn	Pg	12 08 29.6	+0.5
VAY				*i* Sg	Sg	12 08 53.0	+2.5
VAY				*e*Lg	Lg	12 08 53.2	
	comp=E,5.9nm,0.2s						
VAY				*e*Lg	Lg	12 08 53.5	
	comp=N,4.1nm,0.2s						
STIP	**Stip**	**1.66**	**243**	*i* Pg	Pn	12 08 25.0	-2.9
STIP				*i* Sg	Sn	12 08 46.1	-3.9
BARS	**Barje**	**1.77**	**282**	*e*Pg	Pn	12 08 29.2	-0.2
BARS				*e*Sg	Sn	12 08 53.0	+0.3
BARS	**Barje**	**1.77**	**282**	*i* Pn	Pn	12 08 29.5	0.0
BARS				*i* Sg	Sg	12 08 54.2	-0.2

BER ***26*** *12:08:01.7±3.4, 76.˚19N×23.˚25E, h15km, ML2.6, MW3.2, ML3.0(NAO), Confirmed Earthquake*
NAO ***26*** *12:08:01.1±0.9, 76.˚25N×23.˚20E, h16km±8km, ML3.0*
IEPN ***26*** *12:08:02.0, 76.˚39N×23.˚24E, h10km*
ISC 26 12:07:59.5±0.8, 76.˚18N±0.˚03×23.˚36E±0.˚04, h10km, n26, σ2s80/45, 3C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPEN	**Hopen**	**0.52**	**49**	Pg	**Pg**	**12 08 10.8**	**+1.3**
HOPEN				Lg	Lg	12 08 17.6	
HOPEN	**Hopen**	**0.52**	**49**	⇑*iP*	**Pg**	**12 08 10.8**	**+1.3**
HOPEN				*e*S	**Sg**	**12 08 17.6**	**+1.3**
HOPEN				IAML		12 08 18.9	
	comp=Z,1μm,0.3s						
HOPEN	**Hopen**	**0.52**	**49**	⇑*iP*	**Pg**	**12 08 10.8**	**+1.3**
HOPEN				*i* S	**Sg**	**12 08 17.4**	**+1.1**
HSPB	**Hornsund (broa**	**2.00**	**298**	Pn	**Pn**	**12 08 32.7**	**-0.6**
HSPB				Sn	**Sn**	**12 08 55.5**	**-2.9**
HSPB				Lg	Lg	12 09 02.6	
HSPB	**Hornsund (broa**	**2.00**	**298**	*eP*	**Pn**	**12 08 32.6**	**-0.6**
HSPB				*e*S	**Sn**	**12 08 56.4**	**-2.0**
HSPB				IAML		12 09 08.7	
	comp=Z,54nm,0.6s						
HSPB	**Hornsund (broa**	**2.00**	**298**	*eP*	**Pn**	**12 08 32.2**	**-1.1**
HSPB				*e*S	**Sn**	**12 08 56.1**	**-2.3**
BJO1	**Bjornoya**	**2.02**	**216**	Pg	**Pg**	**12 08 39.3**	**+1.3**
BJO1				Lg	Lg	12 09 04.2	
BJO1	**Bjornoya**	**2.02**	**216**	*e*	**Pg**	**12 08 39.5**	**+1.5**
BJO1				*e*		12 08 55.0	
BJO1				IAML		12 09 11.3	
	comp=Z,80nm,0.5s						
BJO1	**Bjornoya**	**2.02**	**216**	*eP*	**Pb**	**12 08 38.3**	**+2.2**
BJO1				*i* S	**Sg**	**12 09 04.6**	**+0.5**
SPA0	**Spitsbergen Ar**	**2.54**	**326**	Pn	**Pn**	**12 08 39.9**	**-0.9**
	baz=143,slow=18						
SPA0				Pg	**Pb**	**12 08 46.9**	**+1.7**
	baz=142,slow=22						
SPA0				Sn	**Sn**	**12 09 07.9**	**-3.9**
	baz=144,slow=22						
SPA0				Lg	Lg	12 09 18.8	
	baz=148,slow=37						
SPA0	**Spitsbergen Ar**	**2.54**	**326**	Pn	**Pn**	**12 08 39.9**	**-0.9**
	baz=143,slow=18						
SPA0				Pg	**Pb**	**12 08 46.9**	**+1.7**
	baz=142,slow=22						
SPA0				Sn	**Sn**	**12 09 07.9**	**-3.9**
	baz=144,slow=22						
SPA0				Sg	**Sb**	**12 09 18.8**	**+2.3**
	baz=148,slow=37						
SPA0	**Spitsbergen Ar**	**2.54**	**326**	⇑*iP*	**Pn**	**12 08 39.4**	**-1.4**
SPA0				*e*S	**Sn**	**12 09 07.4**	**-4.3**
BRBA	**Barentsburg A**	**2.79**	**317**	*eP*	Pg	12 09 01.0	+8.2
BRBA				*e*S	**Sg**	**12 09 30.9**	**+2.1**
BRBB	**Barentsburg B**	**2.81**	**318**	Pn	**Pn**	**12 08 43.3**	**-1.1**
BRBB				Sn	**Sn**	**12 09 14.1**	**-4.1**
BRBB				Lg	Lg	12 09 26.4	
BRBB	**Barentsburg B**	**2.81**	**318**	*eP*	**Pn**	**12 08 43.6**	**-0.7**
BRBB				*e*S	**Sn**	**12 09 15.0**	**-3.2**
BRBB				*e*		12 09 25.8	
KBS	**Kingsbay**	**3.70**	**324**	Pn	**Pn**	**12 08 55.4**	**-1.2**
KBS				Sn	**Sn**	**12 09 35.2**	**-5.0**
KBS				Lg	Lg	12 09 53.1	
KBS	**Kingsbay**	**3.70**	**324**	*eP*	**Pn**	**12 08 54.9**	**-1.7**
KBS				*e*S	**Sn**	**12 09 34.3**	**-5.9**
KBS				*e*		12 09 53.3	
KBS				IAML		12 10 02.0	
	comp=Z,64nm,0.3s						
KBS	**Kingsbay**	**3.70**	**324**	*eP*	**Pn**	**12 08 54.7**	**-1.9**
KBS				*e*S	**Sn**	**12 09 34.0**	**-6.1**
HAMF	**Hammerfest**	**5.56**	**179**	Pn	**Pn**	**12 09 23.6**	**+1.5**
HAMF				Sn	**Sn**	**12 10 19.9**	**-6.1**
HAMF	**Hammerfest**	**5.56**	**179**	*eP*	**Pn**	**12 09 23.1**	**+0.9**
HAMF				*e*S	**Sn**	**12 10 19.9**	**-6.1**
HAMF				IAML		12 10 21.9	
	comp=Z,9.2nm,0.3s						
KEV	**Kevo**	**6.54**	**169**	*eP*	**Pn**	**12 09 37.1**	**+1.6**
ZFI	**Zemlya Franca-**	**6.65**	**35**	*eP*	**Pn**	**12 09 35.8**	**-1.3**
ZFI				*e*S	Sn	12 10 43.9	-8.8
	comp=Z,50nm,2.4s						
ZFI2	**Zemlya Franca-**	**6.65**	**35**	*eP*	**Pn**	**12 09 35.8**	**-1.2**
ZFI2				*e*S	Sn	12 10 44.2	-8.5
	comp=Z,69nm,1.7s						
ARA0	**ARCESS Array S**	**6.71**	**174**	Pn	**Pn**	**12 09 39.9**	**+2.1**
	baz=360,slow=10						
ARA0				Sn	Sn	12 10 47.3	-6.9
	baz=4.3,slow=22						
ARA0	**ARCESS Array S**	**6.71**	**174**	Pn	**Pn**	**12 09 39.9**	**+2.1**
	baz=360,slow=10						
ARA0				Sn	Sn	12 10 47.3	-6.9
	baz=4.3,slow=22						
HEF	**Hetta**	**7.81**	**179**	*eP*	**Pn**	**12 09 53.2**	**+0.2**

ROM ***26*** *12:08:01.6±0.1, 42.˚792N±0.˚003×13.˚237E±0.˚006, h7km, ML2.8/43, Error ellipse: s-maj=0.5km s-min=0.2km az=67.0*
ISC 26 12:08:02.1±0.8, 42.˚79N±0.˚02×13.˚23E±0.˚02, h11km±5km, n73, σ0s95/116, 21C-17D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**297**	⇓P	**Pg**	**12 08 04.6**	**-0.3**
NRCA				S	**Sg**	**12 08 06.2**	**-0.6**
NRCA				AML	AML		
	comp=N,23850μm,0.4s						
NRCA				AML	AML		
	comp=E,21200μm,1.5s						
NRCA				AML	AML		
	comp=E,20000μm,0.1s						
NRCA				AML	AML		
	comp=N,23850μm,0.4s						
NRCA				AML	AML		
	comp=N,26500μm,0.4s						
MC2	**Monte Cornacci**	**0.13**	**346**	⇑P	**Pg**	**12 08 05.0**	**-0.4**
MC2				S	**Sg**	**12 08 07.4**	**-0.3**
MC2				AML	AML		
	comp=E,6190μm,0.1s						
MC2				AML	AML		

	comp=E,6185µm,0.1s								
MC2					AML	AML			
	comp=N,6255µm,0.1s								
T1243	**Rocca Santa Ma**	**0.19**	**120**	⇑	P	**Pg**	**12**	**08**	**06.2**	**0.0**
T1243					S	**Sg**	**12**	**08**	**09.5**	**+0.5**
T1243					AML	AML				
	comp=E,10750µm,0.2s									
T1243					AML	AML				
	comp=N,9335µm,0.2s									
T1243					AML	AML				
	comp=E,10625µm,0.2s									
T1243					AML	AML				
	comp=N,9340µm,0.2s									
T1243					AML	AML				
	comp=E,12750µm,1.2s									
T1243					AML	AML				
	comp=N,15400µm,0.6s									
T1243					AML	AML				
	comp=E,12700µm,1.2s									
T1243					AML	AML				
	comp=E,12550µm,1.2s									
T1243					AML	AML				
	comp=N,15250µm,0.2s									
FEMA	**Monte Fema**	**0.22**	**322**		P	**Pg**	**12**	**08**	**06.8**	**0.0**
FEMA					S	**Sg**	**12**	**08**	**10.6**	**+0.7**
LNSS	**Leonessa**	**0.23**	**217**	⇑	P	**Pg**	**12**	**08**	**07.3**	**+0.2**
LNSS					S	**Sg**	**12**	**08**	**11.6**	**+1.3**
LNSS					AML	AML				
	comp=N,3465µm,0.7s									
LNSS					AML	AML				
	comp=E,2625µm,0.3s									
LNSS					AML	AML				
	comp=E,8225µm,0.6s									
LNSS					AML	AML				
	comp=N,4810µm,0.6s									
FDMO	**Fiordimonte**	**0.27**	**337**	⇓	P	**Pg**	**12**	**08**	**07.5**	**-0.2**
FDMO					S	**Sg**	**12**	**08**	**12.1**	**+0.8**
FDMO					AML	AML				
	comp=N,2145µm,0.3s									
FDMO					AML	AML				
	comp=E,1825µm,0.2s									
RM33	**Pellescritta (**	**0.28**	**182**	⇑	P	**Pg**	**12**	**08**	**08.2**	**+0.3**
RM33					S	**Sb**	**12**	**08**	**13.1**	**-0.9**
RM33					AML	AML				
	comp=E,1270µm,0.7s									
RM33					AML	AML				
	comp=N,1450µm,0.4s									
RM33					AML	AML				
	comp=E,1184µm,0.7s									
RM33					AML	AML				
	comp=N,1440µm,0.4s									
RM33					AML	AML				
	comp=E,1265µm,0.7s									
RM33					AML	AML				
	comp=N,1450µm,0.4s									
RM33					AML	AML				
	comp=E,1185µm,0.7s									
RM33					AML	AML				
	comp=N,11300µm,0.8s									
RM33					AML	AML				
	comp=N,11300µm,0.8s									
RM33					AML	AML				
	comp=E,13750µm,0.9s									
RM33					AML	AML				
	comp=E,13450µm,0.9s									
GUMA	**Gualdo di Mace**	**0.28**	**16**	⇑	P	**Pg**	**12**	**08**	**08.2**	**+0.3**
GUMA					AML	AML				
	comp=N,4990µm,0.6s									
GUMA					AML	AML				
	comp=E,7080µm,0.2s									
GUMA					AML	AML				
	comp=E,6260µm,0.8s									
GUMA					AML	AML				
	comp=N,5320µm,0.5s									
CAMP	**Campotosto**	**0.29**	**153**	⇓	P	**Pg**	**12**	**08**	**08.0**	**0.0**
CAMP					S	**Sg**	**12**	**08**	**12.8**	**+0.9**
CAMP					AML	AML				
	comp=E,824µm,0.7s									
CAMP					AML	AML				
	comp=N,642µm,0.7s									
CAMP					AML	AML				
	comp=N,9190µm,0.3s									
CAMP					AML	AML				
	comp=E,10680µm,0.2s									
CSP1	**Cessapalombo**	**0.30**	**356**	⇓	P	**Pg**	**12**	**08**	**08.2**	**-0.1**
CSP1					S	**Sg**	**12**	**08**	**13.3**	**+0.9**
CSP1					AML	AML				
	comp=E,3650µm,0.2s									
CSP1					AML	AML				
	comp=N,4515µm,1.1s									
CSP1					AML	AML				
	comp=N,4510µm,1.1s									
CSP1					AML	AML				
	comp=E,3645µm,0.2s									
CESI	**CESI - Serrava**	**0.32**	**312**	⇓	P	**Pg**	**12**	**08**	**08.6**	**0.0**
CESI					S	**Sg**	**12**	**08**	**13.9**	**+0.9**
CESI					AML	AML				
	comp=E,1945µm,0.2s									
CESI					AML	AML				
	comp=N,3000µm,0.4s									
TERO	**Teramo**	**0.32**	**121**	⇓	P	**Pg**	**12**	**08**	**08.5**	**-0.1**
TERO					S	**Sg**	**12**	**08**	**13.8**	**+0.8**
TERO					AML	AML				
	comp=E,1745µm,0.1s									
TERO					AML	AML				
	comp=N,1695µm,0.2s									
TERO					AML	AML				
	comp=E,2030µm,0.3s									
TERO					AML	AML				
	comp=N,1835µm,0.2s									
TERO					AML	AML				
	comp=E,1750µm,0.1s									
TERO					AML	AML				
	comp=N,1700µm,0.2s									
TERO					AML	AML				
	comp=E,3905µm,0.7s									
TERO					AML	AML				
	comp=N,5435µm,0.6s									
TERO					AML	AML				
	comp=E,4555µm,0.7s									
TERO					AML	AML				
	comp=N,6140µm,0.6s									
TERO					AML	AML				
	comp=E,3910µm,0.7s									
OFFI	**Offida**	**0.36**	**66**		P	**Pb**	**12**	**08**	**10.3**	**-0.3**
OFFI					S	**Sb**	**12**	**08**	**17.5**	**+1.2**
OFFI					AML	AML				
	comp=E,2135µm,0.5s									
OFFI					AML	AML				
	comp=N,3280µm,0.5s									
OFFI					AML	AML				
	comp=E,3345µm,0.3s									
OFFI					AML	AML				
	comp=N,4070µm,0.7s									
ARRO	**Arrone**	**0.40**	**239**	⇓	P	**Pg**	**12**	**08**	**10.3**	**+0.2**
ARRO					S	**Sb**	**12**	**08**	**17.1**	**-0.3**
ARRO					AML	AML				
	comp=E,816µm,0.2s									
ARRO					AML	AML				
	comp=N,720µm,1.5s									
ARRO					AML	AML				
	comp=N,1125µm,1.1s									
SEF1	**Sefro**	**0.41**	**330**		P	**Pg**	**12**	**08**	**10.2**	**-0.1**
SEF1					S	**Sb**	**12**	**08**	**16.8**	**-1.0**
SEF1					AML	AML				
	comp=N,3520µm,1.6s									
SEF1					AML	AML				
	comp=E,2855µm,0.7s									
SEF1					AML	AML				
	comp=N,3515µm,1.6s									
SEF1					AML	AML				
	comp=N,2415µm,0.2s									
GIGS	**Gran Sasso**	**0.42**	**144**		P	**Pg**	**12**	**08**	**10.3**	**-0.1**
GIGS					S	**Sb**	**12**	**08**	**17.3**	**-0.8**
GIGS					AML	AML				
	comp=E,141µm,1.0s									
GIGS					AML	AML				
	comp=N,155µm,0.6s									
GIGS					AML	AML				
	comp=N,645µm,0.5s									
GIGS					AML	AML				
	comp=N,644µm,0.5s									
GIGS					AML	AML				
	comp=E,650µm,0.8s									
GAG1	**Gagliole**	**0.46**	**345**	⇓	P	**Pg**	**12**	**08**	**11.6**	**+0.4**
ASSB	**Assisi San Ben**	**0.49**	**301**	⇓	P	**Pg**	**12**	**08**	**11.5**	**-0.2**
ASSB					S	**Sb**	**12**	**08**	**19.3**	**-0.8**
ASSB					AML	AML				
	comp=E,1075µm,0.2s									
ASSB					AML	AML				
	comp=N,1220µm,0.2s									
TRTR	**Tortoreto Alta**	**0.50**	**88**	⇑	P	**Pb**	**12**	**08**	**13.4**	**+0.5**
TRTR					AML	AML				
	comp=E,1860µm,0.5s									
TRTR					AML	AML				
	comp=N,1505µm,1.0s									
SNTG	**Esanatoglia**	**0.51**	**335**	⇓	P	**Pg**	**12**	**08**	**11.8**	**-0.3**
SNTG					S	**Sb**	**12**	**08**	**20.0**	**-0.6**
SNTG					AML	AML				
	comp=E,466µm,0.2s									
SNTG					AML	AML				
	comp=N,627µm,0.9s									
SNTG					AML	AML				
	comp=E,467µm,0.2s									
CESX	**Cesi**	**0.51**	**250**		P	**Pg**	**12**	**08**	**11.9**	**-0.2**
CESX					S	**Sb**	**12**	**08**	**20.6**	**0.0**
CESX					AML	AML				
	comp=E,499µm,1.5s									
CESX					AML	AML				
	comp=N,484µm,0.2s									
CESX					AML	AML				
	comp=E,766µm,0.2s									
CESX					AML	AML				
	comp=N,800µm,0.3s									
FIAM	**Fiamignano**	**0.53**	**189**		P	**Pg**	**12**	**08**	**12.3**	**-0.1**
FIAM					S	**Sb**	**12**	**08**	**20.8**	**-0.4**
FIAM					AML	AML				
	comp=E,496µm,0.8s									
FIAM					AML	AML				
	comp=N,392µm,0.3s									
FIAM					AML	AML				
	comp=N,1046µm,0.6s									
FIAM					AML	AML				
	comp=E,933µm,0.5s									
EL6	**Elcito**	**0.55**	**350**	⇓	P	**Pg**	**12**	**08**	**12.5**	**-0.3**
EL6					S	**Sb**	**12**	**08**	**21.9**	**+0.2**
FAGN	**Fagnano**	**0.58**	**153**	⇓	P	**Pb**	**12**	**08**	**14.6**	**+0.2**
FAGN					AML	AML				
	comp=E,668µm,0.4s									
FAGN					AML	AML				
	comp=N,620µm,0.5s									
FAGN					AML	AML				
	comp=E,3305µm,0.4s									
FAGN					AML	AML				
	comp=N,3380µm,0.4s									
ATCC	**AVT- Casa Cast**	**0.59**	**313**	⇓	P	**Pg**	**12**	**08**	**13.4**	**-0.2**
ATCC					S	**Sb**	**12**	**08**	**22.8**	**0.0**
ATCC					AML	AML				
	comp=E,730µm,1.3s									
ATCC					AML	AML				
	comp=N,852µm,0.2s									
ATCC					AML	AML				
	comp=E,731µm,1.3s									
CING	**Cingoli**	**0.59**	**357**	⇑	P	**Pg**	**12**	**08**	**13.2**	**-0.3**
CING					S	**Sb**	**12**	**08**	**22.8**	**0.0**
CING					AML	AML				
	comp=N,624µm,0.1s									
CING					AML	AML				
	comp=E,637µm,0.8s									
VCEL	**Villa Celiera**	**0.60**	**131**		P	**Pg**	**12**	**08**	**13.8**	**0.0**
VCEL					S	**Sb**	**12**	**08**	**24.1**	**+0.9**
VCEL					AML	AML				
	comp=E,430µm,0.6s									
VCEL					AML	AML				
	comp=N,446µm,0.6s									
VCEL					AML	AML				
	comp=E,1795µm,0.5s									
VCEL					AML	AML				
	comp=N,2105µm,0.7s									
FOSV	**Fossato di Vic**	**0.61**	**326**	⇓	P	**Pg**	**12**	**08**	**13.6**	**-0.4**
FOSV					S	**Sb**	**12**	**08**	**23.4**	**-0.1**
FOSV					AML	AML				
	comp=E,1090µm,0.2s									
FOSV					AML	AML				
	comp=N,1430µm,0.2s									
PP3	**Marolino**	**0.65**	**25**	⇑	P	**Pn**	**12**	**08**	**16.3**	**-1.0**
PP3					AML	AML				
	comp=E,1855µm,0.6s									
PP3					AML	AML				
	comp=N,1620µm,1.2s									
PP3					AML	AML				
	comp=E,1037µm,0.3s									
T0110	**Collepietro**	**0.69**	**144**	⇑	P	**Pg**	**12**	**08**	**15.2**	**-0.4**
T0110					S	**Sb**	**12**	**08**	**27.1**	**+1.2**
T0110					AML	AML				
	comp=E,346µm,0.5s									
T0110					AML	AML				
	comp=N,368µm,0.8s									
T0110					AML	AML				
	comp=E,1185µm,0.4s									
T0110					AML	AML				
	comp=N,990µm,1.2s									
SSFR	**Montelago di S**	**0.72**	**333**	⇑	P	**Pg**	**12**	**08**	**16.1**	**0.0**
SSFR					AML	AML				
	comp=E,1570µm,0.2s									
SSFR					AML	AML				
	comp=E,1460µm,0.2s									
SSFR					AML	AML				
	comp=N,1270µm,1.3s									
SSFR					AML	AML				
	comp=N,1400µm,0.2s									
ARVD	**Arcevia**	**0.74**	**343**	⇑	P	**Pg**	**12**	**08**	**15.9**	**-0.5**
ARVD					S	**Sb**	**12**	**08**	**27.9**	**+0.8**
ARVD					AML	AML				
	comp=N,194µm,0.2s									
ARVD					AML	AML				
	comp=E,280µm,0.2s									
ATFO	**Monte Foce - G**	**0.75**	**320**		P	**Pg**	**12**	**08**	**16.2**	**-0.4**
ATFO					S	**Sb**	**12**	**08**	**28.1**	**+0.5**
ATFO					AML	AML				
	comp=E,292µm,0.5s									
ATFO					AML	AML				
	comp=N,331µm,0.2s									
ATTE	**AVT- Monte Tez**	**0.76**	**303**		P	**Pg**	**12**	**08**	**16.5**	**-0.4**
ATTE					S	**Sb**	**12**	**08**	**28.9**	**+1.0**
FRON	**Frontone**	**0.82**	**333**	⇑	P	**Pg**	**12**	**08**	**17.3**	**-0.6**
FRON					S	**Sb**	**12**	**08**	**30.2**	**+0.8**
FRON					AML	AML				
	comp=N,586µm,0.3s									
FRON					AML	AML				
	comp=E,310µm,0.7s									
MGAB	**Montegabbione**	**0.83**	**279**		P	**Pb**	**12**	**08**	**18.4**	**-0.2**
MGAB					S	**Sn**	**12**	**08**	**32.0**	**-0.1**
MGAB					AML	AML				
	comp=E,732µm,0.4s									
MGAB					AML	AML				
	comp=E,876µm,0.4s									
MGAB					AML	AML				
	comp=N,908µm,1.1s									
MGAB					AML	AML				
	comp=E,730µm,0.4s									
MGAB					AML	AML				
	comp=N,874µm,1.1s									
ATVO	**AVT- Monte Val**	**0.84**	**315**	⇑	P	**Pg**	**12**	**08**	**17.9**	**-0.6**
ATVO					S	**Sb**	**12**	**08**	**31.1**	**+0.9**
ATVO					AML	AML				
	comp=N,167µm,1.4s									
ATVO					AML	AML				
	comp=E,156µm,0.8s									
COR1	**Corinaldo**	**0.86**	**349**		P	**Pb**	**12**	**08**	**19.2**	**+0.1**
COR1					S	**Sn**	**12**	**08**	**34.0**	**+1.3**
ATMI	**Monte Miggiano**	**0.89**	**308**	⇑	P	**Pb**	**12**	**08**	**19.6**	**0.0**
ATMI					AML	AML				
	comp=E,440µm,0.3s									
ATMI					AML	AML				
	comp=N,382µm,0.8s									
ATPI	**Pietralunga -**	**0.90**	**318**		P	**Pg**	**12**	**08**	**18.9**	**-0.5**
ATPI					S	**Sn**	**12**	**08**	**32.8**	**-0.9**
ATPI					AML	AML				
	comp=E,134µm,0.6s									
ATPI					AML	AML				
	comp=N,139µm,0.8s									
PIEI	**Pieia**	**0.90**	**326**	⇑	P	**Pg**	**12**	**08**	**18.7**	**-0.8**
PIEI					S	**Sn**	**12**	**08**	**33.4**	**-0.5**
PIEI					AML	AML				
	comp=N,172µm,0.2s									
PIEI					AML	AML				
	comp=E,189µm,0.3s									
INTR	**Introdacqua**	**0.92**	**147**	⇓	P	**Pg**	**12**	**08**	**19.3**	**-0.6**
INTR					AML	AML				
	comp=E,116µm,0.6s									
INTR					AML	AML				
	comp=N,299µm,0.6s									
INTR					AML	AML				
	comp=E,233µm,0.8s									
INTR					AML	AML				
	comp=N,408µm,1.6s									
NARO	**Abbazia di Nar**	**0.95**	**330**		P	**Pg**	**12**	**08**	**19.2**	**-1.1**
NARO					S	**Sn**	**12**	**08**	**34.5**	**-0.5**
NARO					AML	AML				
	comp=N,90µm,0.9s									
NARO					AML	AML				
	comp=E,132µm,0.2s									
FSSB	**Fossombrone**	**0.96**	**340**	⇑	P	**Pg**	**12**	**08**	**20.2**	**-0.4**
FSSB					S	**Sn**	**12**	**08**	**36.0**	**+0.7**
FSSB					AML	AML				
	comp=N,704µm,0.2s									
FSSB					AML	AML				
	comp=E,756µm,0.3s									
SACS	**San Casciano d**	**0.97**	**274**	⇑	P	**Pb**	**12**	**08**	**21.1**	**0.0**
SACS					S	**Sn**	**12**	**08**	**37.4**	**+1.8**
SACS					AML	AML				
	comp=N,189µm,1.0s									
SACS					AML	AML				
	comp=E,125µm,1.4s									
BADI	**Badiali**	**1.02**	**315**		P	**Pg**	**12**	**08**	**21.2**	**-0.5**
CAFI	**Castiglion Fio**	**1.07**	**301**	⇑	P	**Pb**	**12**	**08**	**22.2**	**-0.5**
CAFI					S	**Sn**	**12**	**08**	**38.9**	**+0.9**
CAFI					AML	AML				
	comp=E,118µm,0.5s									
CAFI					AML	AML				
	comp=N,102µm,1.4s									
PARC	**Parchiule**	**1.12**	**320**	⇑	P	**Pb**	**12**	**08**	**23.1**	**-0.5**
PARC					AML	AML				
	comp=N,85µm,1.4s									
PARC					AML	AML				
	comp=E,88µm,0.8s									
OSSC	**Osservatorio P**	**1.63**	**297**		P	**Pb**	**12**	**08**	**31.6**	**-0.6**
OSSC					AML	AML				
	comp=E,26µm,1.4s									
OSSC					AML	AML				
	comp=N,26µm,0.8s									
MELA	**Melanico ??? S**	**1.78**	**127**		S	**Sb**	**12**	**08**	**57.0**	**0.0**
DUGI	**Dugi Otok**	**1.79**	**47**		*e*Pn	**Pn**	**12**	**08**	**33.2**	**+0.2**
VIRC	**Vir**	**2.00**	**41**		*e*Pn	**Pn**	**12**	**08**	**36.2**	**+0.3**
NVLJ	**Novalja**	**2.13**	**33**		*e*Pn	**Pn**	**12**	**08**	**38.0**	**+0.3**
NVLJ					Sn	**Sn**	**12**	**09**	**04.6**	**+0.4**
BRJN	**Brijuni**	**2.15**	**10**		*e*Pn	**Pn**	**12**	**08**	**37.6**	**-0.3**
BRJN					Sn	**Sb**	**12**	**09**	**06.2**	**-1.5**
VBKN	**Vesuvio Bunker**	**2.15**	**155**	⇑	P	**Pb**	**12**	**08**	**40.5**	**-0.7**
SMRN	**Sveta Marina**	**2.34**	**16**		*e*Pn	**Pn**	**12**	**08**	**39.9**	**-0.7**
SMRN					Sn	**Sn**	**12**	**09**	**09.8**	**+0.6**
HVAR	**Hvar**	**2.39**	**80**		*e*Pn	**Pn**	**12**	**08**	**42.8**	**+1.6**
KIJV	**Kijevo**	**2.61**	**61**		*e*Pn	**Pn**	**12**	**08**	**46.3**	**+2.0**
CDRU	**Civita di Ruta**	**2.77**	**145**		P	**Pb**	**12**	**08**	**49.6**	**-2.1**
PZUN	**Potenza**	**2.88**	**137**		P	**Pn**	**12**	**08**	**47.5**	**-0.5**
BOJS	**Bojanci**	**3.08**	**28**	⇓	P	**Pn**	**12**	**08**	**50.9**	**+0.2**
PTRP	**Pietrapertosa**	**3.10**	**136**		S	**Sb**	**12**	**09**	**35.0**	**-0.3**
SALO	**Salr**	**3.43**	**326**		S	**Sn**	**12**	**09**	**35.0**	**-1.3**
LEOD	**Capriano del C**	**3.48**	**321**		S	**Sn**	**12**	**09**	**40.0**	**+2.6**
ZONE	**Zone**	**3.72**	**324**		P	**Pg**	**12**	**09**	**12.1**	**-1.3**
ZONE					S	**Sn**	**12**	**09**	**43.0**	**-0.4**
EUCT	**Pavia**	**3.81**	**311**	⇑	P	**Pb**	**12**	**09**	**10.8**	**+1.4**
QLNO	**Quiliano**	**3.87**	**295**		P	**Pn**	**12**	**09**	**04.4**	**+2.9**
CANO	**Canova, Maglio**	**3.90**	**293**		P	**Pg**	**12**	**09**	**14.5**	**-2.2**
CANO					S	**Sn**	**12**	**09**	**49.0**	**+1.2**
BRMO	**Bormio**	**4.21**	**332**	⇓	P	**Pn**	**12**	**09**	**03.1**	**-3.3**
ENR	**Entracque**	**4.46**	**291**		S	**Sg**	**12**	**10**	**26.0**	**+0.6**
MILZ	**Milazzo**	**4.76**	**161**		P	**Pb**	**12**	**09**	**21.7**	**-3.9**
MPNC	**Port Mandanici**	**4.91**	**160**		P	**Pn**	**12**	**09**	**16.5**	**+0.6**
GMB	**Gambarie**	**5.02**	**156**		S	**Sb**	**12**	**10**	**31.0**	**+0.4**

ROM 26 12:08:57.5±0.1, 42°09'N±0'.004×13°30'2E±0'.006, h9km, ML2.7/33, 15C-17D, Error ellipse: s-maj=0.5km s-min=0.4km az=44.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op		h	m	s	ISC
CAMP	**Campotosto**	**0.11**	**133**	⇓	P	Pg	12	09	00.7	+0.6
CAMP					S	Sg	12	09	02.8	+0.8
CAMP					AML	AML				
	comp=E,10680µm,0.2s									
CAMP					AML	AML				
	comp=N,9190µm,0.3s									
RM33	**Pellescritta (**	**0.12**	**213**	⇑	P	Pg	12	09	00.9	+0.6
RM33					S	Sg	12	09	03.2	+0.9
RM33					AML	AML				
	comp=E,13400µm,0.9s									
RM33					AML	AML				
	comp=E,13750µm,0.9s									
RM33					AML	AML				
	comp=N,11250µm,0.8s									
RM33					AML	AML				
	comp=N,11300µm,0.8s									
RM33					AML	AML				
	comp=E,13450µm,0.9s									
RM33					AML	AML				
	comp=N,11300µm,0.8s									
T1243	**Rocca Santa Ma**	**0.14**	**51**	⇑	P	Pg	12	09	01.2	+0.6
T1243					S	Sg	12	09	03.6	+0.8
T1243					AML	AML				
	comp=E,12700µm,1.2s									
T1243					AML	AML				
	comp=N,15250µm,0.2s									
T1243					AML	AML				
	comp=E,12550µm,1.2s									
T1243					AML	AML				
	comp=N,15400µm,0.6s									
T1243					AML	AML				
	comp=E,12750µm,1.2s									
T1243					AML	AML				
	comp=N,15300µm,0.2s									
LNSS	**Leonessa**	**0.19**	**268**	⇑	P	Pg	12	09	02.2	+0.7
LNSS					S	Sg	12	09	05.6	+1.3
LNSS					AML	AML				
	comp=E,8225µm,0.6s									
LNSS					AML	AML				
	comp=N,4810µm,0.6s									
TERO	**Teramo**	**0.22**	**86**		P	Pg	12	09	02.5	+0.5
TERO					S	Sg	12	09	06.2	+1.1
TERO					AML	AML				
	comp=E,3905µm,0.7s									
TERO					AML	AML				
	comp=N,5435µm,0.6s									
TERO					AML	AML				
	comp=N,6140µm,0.6s									
TERO					AML	AML				
	comp=E,3910µm,0.7s									
TERO					AML	AML				
	comp=E,4555µm,0.7s									
GIGS	**Gran Sasso**	**0.25**	**129**	⇓	P	Pg	12	09	03.2	+0.6
GIGS					S	Sg	12	09	07.1	+1.1
GIGS					AML	AML				
	comp=N,645µm,0.5s									
GIGS					AML	AML				
	comp=E,650µm,0.8s									
GIGS					AML	AML				
	comp=N,644µm,0.5s									
NRCA	**Norcia**	**0.26**	**328**	⇑	P	Pg	12	09	03.5	+0.7
NRCA					S	Sg	12	09	07.7	+1.3
NRCA					AML	AML				
	comp=E,6735µm,0.1s									
NRCA					AML	AML				
	comp=E,6030µm,0.1s									
NRCA					AML	AML				
	comp=N,5465µm,0.1s									
NRCA					AML	AML				
	comp=N,4965µm,0.1s									
NRCA					AML	AML				
	comp=E,6740µm,0.1s									
MC2	**Monte Cornacci**	**0.31**	**345**	⇓	P	Pg	12	09	04.4	+0.6
MC2					S	Sb	12	09	09.7	-1.1
MC2					AML	AML				
	comp=E,1500µm,1.0s									
MC2					AML	AML				
	comp=N,1485µm,1.0s									
MC2					AML	AML				
	comp=E,1494µm,1.0s									
MC2					AML	AML				
	comp=E,1494µm,1.0s									
MC2					AML	AML				
	comp=N,1485µm,1.0s									
FIAM	**Fiamignano**	**0.37**	**202**	⇑	P	Pg	12	09	05.1	+0.3
FIAM					S	Sb	12	09	12.4	+0.2
FIAM					AML	AML				
	comp=E,928µm,0.5s									
FIAM					AML	AML				

comp=E,933µm,0.5s
FIAM AML AML
comp=N,1046µm,0.6s
ARRO Arrone 0.40 266 ⇓P Pg 12 09 05.8 +0.5
ARRO S Sb 12 09 11.8 -1.2
ARRO AML AML
comp=N,1125µm,1.1s
ARRO AML AML
comp=E,652µm,0.2s
FAGN Fagnano 0.40 149 ⇓P Pg 12 09 05.9 +0.5
FAGN S Sb 12 09 14.0 +0.9
FAGN AML AML
comp=E,3305µm,0.4s
FAGN AML AML
comp=N,3380µm,0.4s
OFFI Offida 0.43 41 ⇑P Pb 12 09 07.4 +0.1
OFFI S Sb 12 09 15.3 +1.3
OFFI AML AML
comp=N,4070µm,0.7s
OFFI AML AML
comp=E,3345µm,0.3s
VCEL Villa Celiera 0.45 118 ⇑P Pb 12 09 07.3 -0.4
VCEL AML AML
comp=N,2110µm,0.7s
VCEL AML AML
comp=N,2105µm,0.7s
VCEL AML AML
comp=E,1795µm,0.5s
FDMO Fiordimonte 0.46 340 P Pg 12 09 06.7 +0.4
FDMO S Sb 12 09 13.9 -0.8
CSP1 Cessapalombo 0.49 352 ⇓P Pg 12 09 07.4 +0.4
CSP1 S Sb 12 09 15.4 -0.3
CESI CESI - Serrava 0.49 324 ⇓P Pg 12 09 07.4 +0.4
CESI S Sb 12 09 15.2 -0.6
CESI AML AML
comp=N,973µm,0.4s
CESI AML AML
comp=E,897µm,0.7s
TRTR Tortoreto Alta 0.49 66 ⇑P Pb 12 09 08.8 +0.4
TRTR AML AML
comp=E,1870µm,0.5s
TRTR AML AML
comp=N,1580µm,0.4s
T0110 Collepietro 0.52 137 ⇑P Pg 12 09 08.2 +0.6
T0110 AML AML
comp=N,990µm,1.2s
T0110 AML AML
comp=E,1185µm,0.4s
CESX Cesi 0.53 270 ⇓P Pg 12 09 08.0 +0.2
CESX S Sg 12 09 15.7 +0.9
CESX AML AML
comp=N,800µm,0.3s
CESX AML AML
comp=E,766µm,0.2s
PTQR Pietraquaria 0.59 173 P Pg 12 09 08.8 -0.1
PTQR AML AML
comp=E,214µm,1.1s
PTQR AML AML
comp=N,198µm,0.6s
PTQR AML AML
comp=E,214µm,0.9s
ASSB Assisi San Ben 0.64 313 ⇓P Pg 12 09 10.2 +0.3
ASSB S Sb 12 09 20.3 +0.3
ASSB AML AML
comp=N,536µm,0.4s
ASSB AML AML
comp=E,464µm,0.5s
ASSB AML AML
comp=E,464µm,1.5s
SRES S.Oreste - Sor 0.69 238 ⇑P Pg 12 09 11.1 +0.2
SRES AML AML
comp=N,265µm,0.3s
SRES AML AML
comp=E,228µm,0.2s
SRES AML AML
comp=N,265µm,1.7s
SNTG Esanatoglia 0.70 338 P Pg 12 09 10.9 -0.1
SNTG AML AML
comp=N,248µm,0.4s
SNTG AML AML
comp=E,256µm,0.4s
SNTG AML AML
comp=N,248µm,0.4s
EL6 Elcito 0.73 349 ⇓P Pg 12 09 11.7 +0.1
EL6 S Sb 12 09 24.0 +1.2
INTR Introdacqua 0.75 143 ⇓P Pg 12 09 11.7 -0.2
INTR AML AML
comp=N,417µm,0.8s
INTR AML AML
comp=E,233µm,0.8s
INTR AML AML
comp=N,418µm,0.8s
CING Cingoli 0.77 354 ⇓P Pg 12 09 12.5 +0.2
CING AML AML
comp=N,624µm,0.1s
CING AML AML
comp=E,637µm,0.8s
FOSV Fossato di Vico 0.79 330 ⇑P Pg 12 09 12.8 0.0
FOSV AML AML
comp=E,368µm,0.7s
FOSV AML AML
comp=N,320µm,0.5s
LPEL Lama dei Pelig 0.86 130 ⇑P Pg 12 09 14.3 +0.3
LPEL S Sb 12 09 27.0 +0.6
LPEL AML AML
comp=E,288µm,1.0s
LPEL AML AML
comp=N,214µm,0.4s
LPEL AML AML
comp=E,288µm,1.0s
LPEL AML AML
comp=N,214µm,1.6s
ATTE AVT- Monte Tez 0.91 311 ⇑P Pn 12 09 17.4 +0.8
ARVD Arcevia 0.93 344 ⇑P Pg 12 09 15.2 -0.1
ARVD S Sn 12 09 31.0 +0.8
ARVD AML AML
comp=E,204µm,0.7s
ARVD AML AML
comp=N,140µm,0.6s
ARVD AML AML
comp=N,140µm,1.4s
ATFO Monte Foce - G 0.93 325 ⇑P Pb 12 09 15.6 -0.2
ATFO AML AML
comp=E,195µm,1.6s
ATFO AML AML
comp=N,220µm,1.6s
ATFO AML AML
comp=E,195µm,0.4s
ATFO AML AML
comp=N,220µm,0.4s
MGAB Montegabbione 0.93 289 ⇓P Pb 12 09 15.8 0.0
MGAB AML AML
comp=N,874µm,1.1s
MGAB AML AML
comp=E,732µm,0.4s
MGAB AML AML
comp=E,730µm,0.4s
MGAB AML AML
comp=N,874µm,1.1s
MGAB AML AML
comp=N,908µm,1.1s
MGAB AML AML
comp=E,876µm,0.4s
VIVA Pratoni del Vi 0.94 205 ⇓P Pn 12 09 17.2 +0.2
VIVA AML AML
comp=E,812µm,1.4s
VIVA AML AML
comp=N,778µm,0.3s
VIVA AML AML
comp=E,812µm,1.4s
VIVA AML AML
comp=N,777µm,0.3s
VIVA AML AML
comp=E,812µm,0.6s
GIUL Giuliano Di Ro 1.05 182 ⇓P Pn 12 09 19.7 +1.2
PIEI Pieia 1.08 329 ⇓P Pb 12 09 18.6 +0.2
PIEI AML AML
comp=N,180µm,1.4s
PIEI AML AML
comp=E,188µm,0.4s
PIEI AML AML
comp=N,180µm,0.6s
TOLF Tolfa 1.11 241 P Pg 12 09 18.8 0.0
TOLF AML AML
comp=N,234µm,0.7s
TOLF AML AML
comp=E,202µm,0.9s
TOLF AML AML
comp=N,234µm,0.7s
NARO Abbazia di Nar 1.13 332 P Pg 12 09 18.7 -0.5
NARO AML AML
comp=E,94µm,1.4s
NARO AML AML
comp=N,134µm,0.6s
NARO AML AML
comp=E,94µm,0.6s
FSSB Fossombrone 1.15 341 ⇓P Pg 12 09 19.4 -0.2
FSSB AML AML
comp=E,470µm,1.5s
FSSB AML AML
comp=E,470µm,0.5s
FSSB AML AML
comp=N,704µm,0.4s
MAIM Mastiano 2.43 303 S Sg 12 10 14.0 -1.6
GSCL Gusciola 2.63 312 P Pn 12 09 39.8 -0.5
BOJS Bojanci 3.22 25 S Sn 12 10 28.0 +1.3

ROM 26 12:09:38.4±0.1,**42°608N**±0°004×**13°301E**±0°005,
h8km,ML2.4/6,4C-1D,Error ellipse: s-maj=0.4km
s-min=0.3km az=51.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.11**	**132**	⇓P	Pg	12 09 41.5	+0.5
CAMP				S	Sg	12 09 43.6	+0.8
CAMP				AML	AML		
	comp=N,2210µm,0.3s						
CAMP				AML	AML		
	comp=E,2955µm,0.2s						
RM33	**Pellescritta (**	**0.12**	**213**	⇑P	Pg	12 09 41.7	+0.6
RM33				S	Sg	12 09 43.9	+0.9
RM33				AML	AML		
	comp=E,4315µm,1.0s						
RM33				AML	AML		
	comp=E,4315µm,0.9s						
RM33				AML	AML		
	comp=N,3880µm,0.8s						
RM33				AML	AML		
	comp=N,3805µm,0.8s						
RM33				AML	AML		
	comp=E,4165µm,0.9s						
RM33				AML	AML		
	comp=E,4310µm,0.9s						
T1243	**Rocca Santa Ma**	**0.14**	**51**	⇑P	Pg	12 09 42.0	+0.4
T1243				S	Sg	12 09 44.5	+0.9
T1243				AML	AML		
	comp=E,5635µm,0.7s						
T1243				AML	AML		
	comp=N,5655µm,0.2s						
T1243				AML	AML		
	comp=N,5725µm,0.2s						
T1243				AML	AML		
	comp=N,5655µm,0.2s						
T1243				AML	AML		
	comp=E,5395µm,0.7s						
T1243				AML	AML		
	comp=E,5395µm,1.3s						
T1243				AML	AML		
	comp=E,5635µm,1.3s						
LNSS	**Leonessa**	**0.19**	**269**	P	Pg	12 09 42.9	+0.5
LNSS				S	Sg	12 09 46.3	+1.2
LNSS				AML	AML		
	comp=N,1435µm,0.4s						
LNSS				AML	AML		
	comp=N,1430µm,0.4s						
LNSS				AML	AML		
	comp=E,1795µm,0.5s						
TERO	**Teramo**	**0.22**	**86**	P	Pg	12 09 43.4	+0.5
TERO				S	Sg	12 09 46.8	+0.8
TERO				AML	AML		
	comp=N,1415µm,0.5s						
TERO				AML	AML		
	comp=E,1760µm,0.1s						
GIGS	**Gran Sasso**	**0.25**	**128**	P	Pg	12 09 44.0	+0.5
GIGS				S	Sg	12 09 47.9	+1.0
NRCA	**Norcia**	**0.26**	**329**	⇑P	Pn	12 09 48.9	+0.2
NRCA				AML	AML		
	comp=N,1660µm,0.4s						
NRCA				AML	AML		
	comp=E,1875µm,1.5s						
NRCA				AML	AML		
	comp=E,1875µm,0.5s						
MC2	**Monte Cornacci**	**0.32**	**345**	P	Pb	12 09 46.1	-0.4
MC2				S	Sb	12 09 50.7	-1.2
ARRO	**Arrone**	**0.40**	**266**	P	Pg	12 09 46.8	+0.6
ARRO				S	Sb	12 09 52.7	-1.2
VCEL	**Villa Celiera**	**0.45**	**118**	P	Pb	12 09 48.2	-0.5
VCEL				S	Sb	12 09 55.8	+0.1
GUMA	**Gualdo di Mace**	**0.46**	**3**	P	Pb	12 09 48.1	-0.6
GUMA				S	Sb	12 09 55.3	-0.4
FDMO	**Fiordimonte**	**0.46**	**340**	P	Pg	12 09 47.8	+0.4
FDMO				S	Sb	12 09 55.0	-0.8
CSP1	**Cessapalombo**	**0.49**	**352**	P	Pg	12 09 48.4	+0.5
CSP1				S	Sb	12 09 56.1	-0.7
CSP1				AML	AML		
	comp=E,390µm,0.3s						
CSP1				AML	AML		
	comp=N,340µm,1.1s						
CESI	**CESI - Serrava**	**0.49**	**324**	P	Pg	12 09 48.7	+0.7
CESI				S	Sb	12 09 56.1	-0.7
T0110	**Collepietro**	**0.52**	**137**	P	Pg	12 09 49.0	+0.5
T0110				S	Sb	12 09 57.0	-0.6
CESX	**Cesi**	**0.53**	**270**	P	Pb	12 09 49.5	-0.5
CESX				S	Sg	12 09 56.6	+0.9
ASSB	**Assisi San Ben**	**0.64**	**313**	P	Pb	12 09 51.7	-0.3
ASSB				S	Sb	12 10 00.9	-0.2
CING	**Cingoli**	**0.77**	**354**	⇑P	Pg	12 09 53.3	0.0
SSFR	**Montelago di S**	**0.91**	**335**	S	Sb	12 10 09.0	+0.1
ARVD	**Arcevia**	**0.93**	**344**	S	Sn	12 10 12.0	+0.6

*IDC **26** 12:17:00.2±2.2,27°51N×61°86E,h0km,mb3.8/7,*
mbtmp3.8/8,ML3.1/1,Error ellipse: s-maj=48.9km
s-min=29.1km az=125.0
*TEH **26** 12:17:04.9,27°38N×61°81E,h28km,ML3.4*
*OMAN **26** 12:17:13.4±0.3,26°97N×61°29E,h10km,mb4.8/6,*
ml3.6/10,Error ellipse: s-maj=4.8km s-min=3.5km az=40.0
*DSN **26** 12:17:17.0±1.8,26°85N×61°05E,h10km,ML3.4/10,Error*
ellipse: s-maj=44.0km s-min=16.9km az=156.0

ISC 26 12:16:58.5±0.7,**26°91N**±0°04×**61°50E**±0°04,**h10**km,**n57,**
σ2°76/71,mb3.8/7,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRVN	**Saravan**	**0.94**	**58**	*e*Pg	**Pg**	**12 17 17.6**	**+1.0**
SRVN				*e*Sg	**Sg**	**12 17 25.8**	**-3.1**
SRVN				*e*		12 17 28.2	
	comp=Z,72µm,0.3s						
NGCH	**Negor - Chabah**	**1.57**	**192**	*e*Pn	Pg	12 17 40.2	+11
NGCH	**Negor - Chabah** SNR=59	**1.57**	**192**	P	Pg	12 17 40.3	+12
NGCH				S	Sg	12 18 05.7	+17
CHBR	**Chabahar**	**1.59**	**215**	*e*Pn	Pg	12 17 41.4	+12
ZHDN	**Zahedan**	**2.56**	**346**	*e*Pn	**Pn**	**12 17 42.6**	**+2.4**
ZHSF	**Zahedan**	**2.77**	**347**	*e*Pn	**Pn**	**12 17 45.1**	**+2.0**
JASK	**Jask - Hormozg**	**3.42**	**253**	*e*Pn	**Pg**	**12 18 04.8**	**+0.8**
JASK	**Jask - Hormozg** SNR=18	**3.42**	**253**	P	**Pg**	**12 18 06.2**	**+2.2**
JASK				S	**Sg**	**12 18 47.8**	**-0.5**
KBAM	**BAM**	**3.49**	**310**	*e*Pn	**Pb**	**12 17 58.9**	**-1.6**
KBAM				*e*		12 18 41.9	
	comp=Z,647nm,0.3s						
KHNJ	**Kahnooj**	**3.53**	**288**	*e*Pn	**Pb**	**12 18 02.7**	**+1.6**
KHNJ				*e*		12 18 54.2	
	comp=Z,507nm,0.3s						
WSAR	**Wadi Sarin**	**4.48**	**216**	Pn	**Pb**	**12 18 18.8**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=60,slow=6.5,SNR=16						
WSAR				Sn	**Sb**	**12 19 10.7**	**-0.8**
	comp=Z,15nm,0.3s,baz=212,slow=20,SNR=36						
	comp=Z,1.3nm,0.3s						
BIDO	**Bidbid**	**4.55**	**223**	P	**Pg**	**12 18 21.9**	**-3.8**
BIDO				S	**Sb**	**12 19 13.2**	**-0.2**
NHDN	**Nehbandan**	**4.65**	**345**	*e*Pn	**Pn**	**12 18 10.5**	**+1.6**
NHDN				*e*		12 19 01.1	
	comp=Z,517nm,0.6s						
GENO	**Geno**	**4.77**	**277**	*e*Pn	**Pb**	**12 18 20.8**	**-1.5**
WBK	**Wadi Bani Khal** SNR=28	**4.86**	**209**	P	**Pb**	**12 18 23.6**	**-0.1**
WBK				S	**Sb**	**12 19 20.9**	**-1.3**

SHME Shamm 4.88 261 P **Pb** **12 18 25.4 +1.3**
SNR=22
SHME S **Sb** **12 19 21.0 -1.8**
SHME Shamm 4.88 261 *i* P **Pb** **12 18 25.3 +1.3**
SNR=22
MDH Madha 4.94 252 P **Pb** **12 18 25.1 -0.1**
SNR=23
MDH S **Sb** **12 19 20.4 -4.3**
MDH Madha 4.94 252 *i* P **Pb** **12 18 25.0 -0.1**
SNR=23
SMDO Samad 4.95 220 P **Pb** **12 18 27.1 +1.8**
HOQ Hoqain 5.03 230 P **Pb** **12 18 26.6 -0.1**
HOQ S **Sb** **12 19 23.9 -3.4**
MASF Masafi 5.04 254 P **Pb** **12 18 26.7 -0.1**
SNR=11
MASF S **Sb** **12 19 23.1 -4.4**
MSFE Esma-Masafi 5.04 253 *i* P **Pb** **12 18 26.3 -0.5**
SNR=11
UOSS Minazif 5.15 249 P **Pb** **12 18 28.0 -0.7**
UOSS S **Sb** **12 19 25.7 -5.0**
UOSS Minazif 5.15 249 *i* P **Pb** **12 18 27.5 -1.3**
SNR=23
KRBR Kerman 5.18 307 *e*Pn Pn 12 18 21.9 +5.6
HATD Hatta, Dubai 5.26 248 P **Pb** **12 18 30.0 -0.6**
SNR=7.6
HATD S **Sb** **12 19 28.1 -5.8**
HATD Hatta, Dubai 5.26 248 P **Pb** **12 18 29.4 -1.1**
HATD S **Sb** **12 19 27.7 -6.2**
SOHO SOHO 5.27 239 P **Pb** **12 18 29.9 -0.8**
SOHO S **Sb** **12 19 28.4 -5.6**
SOHO SOHO 5.27 239 *i* P **Pb** **12 18 29.6 -1.1**
SNR=16
ASHO Ashiyiah 5.38 247 P **Pb** **12 18 32.0 -0.7**
SNR=22
ASHO Ashiyiah 5.38 247 *i* P **Pb** **12 18 31.4 -1.3**
SNR=25
BSRN Basiran 5.45 338 *e*Pn **Pn** **12 18 22.5 +2.6**
JMDO Jabal Madar 5.47 215 P **Pb** **12 18 34.8 +0.6**
JMDO S **Sb** **12 19 37.5 -2.5**
BSY Bisya 5.69 224 P **Pb** **12 18 38.6 +0.6**
BSY S **Sb** **12 19 44.2 -2.1**
FAQ Al Faqa, Dubai 5.74 249 P **Pb** **12 18 38.9 +0.1**
FAQ S **Sb** **12 19 44.5 -3.1**
FAQ Al Faqa, Dubai 5.74 249 *i* P **Pb** **12 18 38.4 -0.3**
SNR=12
ARQ Araqi 5.74 233 P **Pb** **12 18 39.7 +0.9**
SNR=50
ARQ S **Sb** **12 19 46.8 -0.9**
ALNE Al Ain 5.92 243 P **Pb** **12 18 41.3 -0.5**
ALNE S **Sb** **12 19 47.3 -5.5**
ALNE Al Ain 5.92 243 *i* P **Pb** **12 18 40.8 -1.0**
SNR=9.7
ASUD Al Ashush, Dub 6.01 249 P **Pb** **12 18 43.0 -0.4**
ASUD S **Sb** **12 19 49.8 -5.5**
ASUD Al Ashush, Dub 6.01 249 *i* P **Pb** **12 18 42.6 -0.7**
SNR=9.7
AJN Ajban 6.32 250 P **Pb** **12 18 46.5 -2.2**
AJN S **Sb** **12 19 57.3 -7.0**
SHRT Shahrakht 6.80 351 *e*Pn **Pn** **12 18 38.7 +0.3**
TABS Tabas 7.71 332 *e*Pn **Pn** **12 18 55.0 +4.0**
SHMA Al-Shehemyia 9.51 266 P Pn 12 19 27.6 +12
SHMA S **Sn** **12 21 10.6 +8.2**
SAKB Bahrain 9.87 267 P Pn 12 19 31.8 +11
THW Thamme Wali 10.65 54 P Pn 12 19 26.5 -4.7
RAYN Ar Rayn 14.87 260 P **P** **12 20 38.5 +3.8**
AKTO Aktyubinsk 23.65 354 P **P** **12 22 07.2 -2.7**
comp=Z,0.9nm,0.3s,baz=163,slow=7.1,SNR=4.4
comp=Z,0.9nm,0.3s
MKAR Makanchi Array 25.76 34 P **P** **12 22 26.2 -3.1**
comp=Z,0.3nm,0.3s,baz=222,slow=9.4,SNR=5.6
comp=Z,0.3nm,0.3s
BVAR Borovoye Array 26.92 12 P **P** **12 22 37.5 -2.2**
comp=Z,0.7nm,0.5s,baz=195,slow=11,SNR=4.6
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 34.16 323 P **P** **12 23 44.8 +1.2**
comp=Z,1.1nm,0.4s,baz=122,slow=8.5,SNR=6.7
comp=Z,1.1nm,0.4s
FINES FINESS Array B 41.89 335 P **P** **12 24 48.0 -0.7**
comp=Z,0.5nm,0.3s,baz=134,slow=6.7,SNR=7.9
comp=Z,0.5nm,0.3s
ARCES ARCESS Array B 47.51 344 P **P** **12 25 33.1 -0.4**
comp=Z,0.8nm,0.4s,baz=145,slow=8.6,SNR=11
comp=Z,0.8nm,0.4s
NB2 NORSAR Subarra 47.86 330 P **P** **12 25 36.3 -0.1**
comp=Z,0.4nm,0.4s,baz=110,slow=7.9
NOA NORSAR Array B 47.86 330 P **P** **12 25 36.8 +0.4**
comp=Z,1.0nm,0.7s,baz=128,slow=6.9,SNR=3.7
comp=Z,1.0nm,0.7s

*IDC **26** 12:23:30.6±0.8,19°81N×94°99W,h0km,mb4.2/10,*
mbtmp4.3/14,ML4.5/4,MS3.3/14,Error ellipse:
s-maj=27.5km s-min=15.0km az=54.0
*NEIC **26** 12:23:31.3±2.4,19°82N±0°05×95°20W±0°06,h10km±1km,*
mb4.6/241,Md4.8/117(MEX),Error ellipse: s-maj=10.0km
s-min=8.7km az=226.0
*MEX **26** 12:23:36.5±1.0,19°75N×95°39W,h24km±21km,MD4.8*

ISC 26 12:23:29.6±2.3,**19.77N**±0°04×**95°28W**±0°03,**h1**km±16km,
n448,σ1°76/467,mb4.5/75,MS3.3/10,Veracruz

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVIG	**Laguna Verde**	**1.07**	**268**	*i* P	**Pb**	**12 23 51.6**	**+0.7**
LVIG				*e*S	**Sb**	**12 24 03.0**	**-2.4**
JAUV	**Jalcomulco**	**1.49**	**255**	*i* P	**Pn**	**12 23 58.3**	**+0.7**
JAUV				*e*S	**Sn**	**12 24 14.7**	**-3.0**
TUIG	**Tuzandepetl**	**1.91**	**155**	*e*P	**Pb**	**12 24 05.4**	**+0.2**
TUIG				*i* S	**Sn**	**12 24 28.4**	**+0.5**
OZST	**Orizaba**	**1.94**	**242**	*e*P	**Pn**	**12 24 05.0**	**+1.2**
OZST				*e*S	**Sn**	**12 24 26.3**	**-2.5**
NEUV	**Arroyo Zacate**	**2.10**	**194**	*i* P	**Pn**	**12 24 07.7**	**+1.7**
NEUV				*e*S	**Sn**	**12 24 30.9**	**-1.9**
CXUV	**Coxquihui**	**2.21**	**281**	*e*P	**Pn**	**12 24 07.9**	**+0.4**
CXUV				*e*S	**Sn**	**12 24 31.6**	**-3.8**
THEZ	**Tehuacan**	**2.37**	**237**	*e*P	**Pn**	**12 24 11.4**	**+1.7**
THEZ				*e*S	**Sn**	**12 24 37.8**	**-1.8**
TOIG	**Toxpalan**	**2.37**	**226**	*i* P	**Pn**	**12 24 11.9**	**+2.2**
TOIG				*e*S	**Sn**	**12 24 37.1**	**-2.5**
TPIG	**Tehuac#an**	**2.38**	**236**		**Pn**	**12 24 11.9**	**+1.9**
TPIG					**Sn**	**12 24 37.7**	**-2.2**
TPIG	**Tehuac#an**	**2.38**	**236**	*e*P	**Pn**	**12 24 11.9**	**+1.9**
TPIG				*e*S	**Sn**	**12 24 37.7**	**-2.2**
CMIG	**Matias Romero**	**2.69**	**172**	Pn	**Pn**	**12 24 16.6**	**+2.5**
	140nm,0.3s,baz=351,slow=11,SNR=1140						
CMIG				Sn	**Sn**	**12 24 46.5**	**-0.9**
	49nm,0.3s,baz=36,slow=12,SNR=3.8						
CMIG				LR	LR	12 25 36.0	
	comp=Z,375nm,19.5s,baz=78,slow=46						
	352nm,0.4s						
CMIG	**Matias Romero**	**2.69**	**172**	*i* P	**Pn**	**12 24 16.6**	**+2.5**
CMIG				*e*S	**Sn**	**12 24 46.3**	**-1.0**
VHSA	**Villahermosa**	**2.84**	**128**	*i* P	**Pn**	**12 24 21.0**	**-0.1**
VHSA				*i* S	**Sn**	**12 24 52.2**	**+1.1**
OXLC	**Oaxaca**	**3.01**	**207**	*e*P	**Pn**	**12 24 21.7**	**+3.0**
OXLC				*e*S	**Sn**	**12 24 55.0**	**-0.5**
VHO	**Vista Hermosa**	**3.02**	**207**	*e*P	**Pn**	**12 24 21.5**	**+2.8**
VHO				*e*S	**Sn**	**12 24 54.6**	**-1.0**
OXBJ	**Oaxaca**	**3.02**	**207**		**Pn**	**12 24 22.1**	**+3.4**
OXBJ					**Sn**	**12 24 54.6**	**-1.1**
OXBJ	**Oaxaca**	**3.02**	**207**	*e*P	**Pn**	**12 24 22.1**	**+3.4**
OXBJ				*e*S	**Sn**	**12 24 54.6**	**-1.1**
PPM	**Popocatepetl**	**3.23**	**258**	*i* P	**Pn**	**12 24 26.0**	**+4.1**
PPM				*e*S	**Sn**	**12 25 03.7**	**+2.2**
NILT	**Santiago Nilte**	**3.25**	**169**	*i* P	**Pn**	**12 24 24.4**	**+2.6**
NILT				*e*S	**Sn**	**12 25 00.9**	**-0.2**
TXIG	**Tlaxiaco**	**3.44**	**224**	*e*P	**Pn**	**12 24 27.4**	**+2.7**
TXIG				*e*S	**Sn**	**12 25 04.1**	**-2.1**
TXVM	**Universitario**	**3.44**	**265**	*e*P	**Pb**	**12 24 31.0**	**-0.6**
TXVM				*e*S	**Sn**	**12 25 05.3**	**-1.0**
THVM	**De Xico**	**3.51**	**263**	*e*P	**Pn**	**12 24 26.9**	**+1.3**
THVM				*e*S	**Sn**	**12 25 02.9**	**-5.0**
DEIG	**Demacu**	**3.57**	**279**	*e*P	**Pn**	**12 24 27.9**	**+1.5**
DEIG				*e*S	**Sn**	**12 25 08.2**	**-1.1**
YOIG	**Yosondua**	**3.61**	**217**	*e*P	**Pn**	**12 24 30.1**	**+3.2**
YOIG				*e*S	**Sn**	**12 25 08.2**	**-2.2**
GMVM	**Gustavo A Made**	**3.62**	**266**	*e*P	**Pn**	**12 24 28.9**	**+1.8**
GMVM				*e*S	**Sn**	**12 25 11.2**	**+0.6**
XCVM	**Xochimilco**	**3.65**	**263**	*e*P	**Pb**	**12 24 34.4**	**-0.8**
XCVM				*e*S	**Sn**	**12 25 17.2**	**+5.7**
HMTT	**Tlapaneco**	**3.67**	**238**		**Pn**	**12 24 29.2**	**+1.6**
HMTT					**Sn**	**12 25 11.4**	**-0.3**
HMTT	**Tlapaneco**	**3.67**	**238**	*e*P	**Pn**	**12 24 29.2**	**+1.6**
HMTT				*i* S	**Sn**	**12 25 11.4**	**-0.3**

COVM Coyoacan 3.68 264 eS Sn 12 25 11.8 -0.2
YAIG Yautepec 3.69 256 Pn 12 24 31.4 +3.5
YAIG Sn 12 25 12.8 +0.7
YAIG Yautepec 3.69 256 eP Pn 12 24 31.4 +3.5
YAIG eS Sn 12 25 12.8 +0.7
BJVM Benito Juarez 3.69 265 eP Pn 12 24 30.9 +2.8
BJVM eS Sn 12 25 12.6 +0.2
TLVM San Miguel Top 3.69 262 eP Pn 12 24 32.4 +4.2
TLVM eS Sn 12 25 08.9 -3.7
UNM Universidad Na 3.70 264 Pn Pn 12 24 28.8 +0.6
APVM Azcapotzalco 3.71 266 eP Pn 12 24 29.8 +1.5
APVM eS Sn 12 25 13.7 +0.8
CARR Arriaga 3.74 159 eP Pn 12 24 30.7 +2.3
CARR i S Sn 12 25 12.1 -1.1
TLIG Tlapa 3.81 235 i P Pn 12 24 31.8 +2.2
TLIG eS Sn 12 25 13.4 -1.8
AOVM Tlapan 3.84 263 eP Pn 12 24 35.1 +4.8
AOVM eS Sn 12 25 11.8 -4.7
INVM La Marquesa 3.90 264 eP Pn 12 24 27.8 -3.2
INVM eS Sn 12 25 16.8 -0.9
SCIG Sabancuy 3.95 101 eP Pn 12 24 35.0 +3.7
SCIG eS Sn 12 25 14.7 -3.7
HUIG Huatulco 4.06 191 Pn 12 24 35.5 +2.6
HUIG Sn 12 25 20.3 -0.8
HUIG Huatulco 4.06 191 eP Pn 12 24 35.5 +2.6
HUIG eS Sn 12 25 20.3 -0.8
MAVM Malinalco, Edo 4.06 259 Pb 12 24 41.8 -0.2
MAVM Sn 12 25 23.5 +2.1
MAVM Malinalco, Edo 4.06 259 eP Pb 12 24 41.8 -0.2
MAVM eS Sn 12 25 23.5 +2.1
MGIG Malinaltepec 4.06 232 eP Pn 12 24 34.7 +1.6
MGIG eS Sn 12 25 20.9 -0.4
PEIG Puerto Escondi 4.15 206 eP Pn 12 24 36.4 +2.2
PEIG eS Sn 12 25 20.4 -3.0
PLIG Platanillo 4.22 252 Pn 12 24 38.3 +3.1
PLIG Sn 12 25 24.8 -0.4
PLIG Platanillo 4.22 252 eP Pn 12 24 38.3 +3.1
PLIG eS Sn 12 25 24.8 -0.4
PNIG Pinotepa 4.31 219 Pn 12 24 37.4 +1.0
PNIG Sn 12 25 26.7 -0.7
PNIG Pinotepa 4.31 219 eP Pn 12 24 37.4 +1.0
PNIG eS Sn 12 25 26.7 -0.7
PCIG 4.50 154 Pn 12 24 41.1 +2.2
PCIG Sn 12 25 29.1 -2.7
PCIG 4.50 154 eP Pn 12 24 41.1 +2.2
PCIG eS Sn 12 25 29.1 -2.7
MEIG Mezcala 4.50 247 Pn 12 24 40.8 +1.8
MEIG Sn 12 25 29.3 -2.8
MEIG Mezcala 4.50 247 eP Pn 12 24 40.8 +1.8
MEIG eS Sn 12 25 29.3 -2.8
CRIG Cruz Grande 4.74 231 Pn 12 24 42.2 -0.1
CRIG Sn 12 25 35.7 -2.2
CRIG Cruz Grande 4.74 231 eP Pn 12 24 42.2 -0.1
CRIG eS Sn 12 25 35.7 -2.2
RPIG Rio Verde 4.88 296 eP Pn 12 24 44.9 +0.6
RPIG eS Sn 12 25 37.1 -4.3
GTIG Gomez Farias 4.89 313 eP Pn 12 24 43.6 -0.7
GTIG i S Sn 12 25 32.3 -9.2
JRQG Juriquilla Cam 4.94 282 eP Pn 12 24 46.4 +1.2
JRQG eS Sn 12 25 42.4 -0.8
DAIG Los Arroyos 4.97 237 Pn 12 24 45.8 +0.4
DAIG Sn 12 25 39.2 -4.3
DAIG Los Arroyos 4.97 237 eP Pn 12 24 45.8 +0.4
DAIG eS Sn 12 25 39.2 -4.3
ARIG Puente Sto Nin 5.02 254 Pn 12 24 48.9 +2.8
ARIG Sn 12 25 45.4 +0.7
ARIG Puente Sto Nin 5.02 254 eP Pn 12 24 48.9 +2.8
ARIG eS Sn 12 25 45.4 +0.7
MYIG Mrida 5.33 76 eP Pn 12 24 54.5 +4.1
MYIG eS Sn 12 25 50.7 -1.8
PAVE Pavencul 5.43 146 eP Pn 12 24 54.0 +2.0
PAVE eS Sn 12 25 53.9 -1.3
CAIG El Cayaco 5.45 241 Pn 12 24 52.2 +0.1
CAIG Sn 12 25 52.8 -2.7
CAIG El Cayaco 5.45 241 eP Pn 12 24 52.2 +0.1
CAIG eS Sn 12 25 52.8 -2.7
PATR El Naranjo 5.47 147 eP Pn 12 24 55.3 +2.9
PATR eS Sn 12 25 54.4 -1.8
CHUJ Union Juarez 5.55 146 eP Pn 12 24 55.8 +2.1
CHUJ eS Sn 12 25 55.4 -2.8
MOIG Morelia 5.56 270 eP Pn 12 25 01.9 +8.1
HUEH Huehuetenango 5.71 140 Pn 12 24 56.0 +0.2
PETF Flores 5.87 118 Pn 12 25 00.8 +2.9
RTAL Retalhuleu 6.24 146 Pn Pn 12 25 06.4 +3.5
ZIIG Zihuatanejo 6.24 251 Pn 12 25 05.2 +2.2
ZIIG eS Sn 12 26 16.2 +1.2
ZIIG Zihuatanejo 6.24 251 eP Pn 12 25 05.2 +2.2
ZIIG eS Sn 12 26 16.2 +1.2
LNIG Linares 6.41 324 eP Pn 12 25 03.5 -1.6
LNIG eS Sn 12 26 09.2 -10
TEIG Tepich 6.60 85 Pn Pn 12 25 08.8 +1.0
AAIG Aguscalientes 6.99 289 eP Pn 12 25 15.0 +1.7
AAIG eS Sn 12 26 28.6 -5.1
MNIG Monterrey 7.43 322 eP Pn 12 25 18.4 -0.9
ESQI Esquipulas 7.69 131 Pn Pn 12 25 24.1 +1.3
MTO3 Montecristo 7.78 132 Pn 12 25 26.1 +1.8
KVTX Kingsville 8.10 343 Pn Pn 12 25 29.3 +0.9
833A Chaparral WMA, 9.31 337 Pn Pn 12 25 45.7 +0.8
833A Chaparral WMA, baz=154,SNR=179 9.31 337 P Pn 12 25 45.3 +0.3
735A Kenedy 9.33 346 Pn 12 25 46.9 +1.5
TGUH Tegucigalpa,Un 9.54 125 Pn Pn 12 25 49.9 +1.6
HKT Hockley 10.15 357 Pn Pn 12 25 55.4 -1.1
CRIN San Cristobal 10.58 130 Pn 12 26 02.5 0.0
441A DeRidder 11.10 9 Pn 12 26 08.6 -0.9
435B Jarrell 11.16 350 Pn Pn 12 26 10.8 +0.4
435B Jarrell baz=168 11.16 350 P Pn 12 26 10.7 +0.3
MATN Matagalpa 11.26 126 Pn 12 26 10.4 -1.5
JCT Junction City 11.42 340 Pn 12 26 15.6 +1.6
JCT Junction City baz=157,SNR=60 11.42 340 P Pn 12 26 13.6 -0.4
BOAB BOACO BROADBAN 11.76 127 Pn Pn 12 26 17.0 -1.6
SOR Soroa 11.83 73 Pn Pn 12 26 18.8 -0.8
342A Flagon Creek P 11.86 12 Pn 12 26 19.2 -1.7
NATX Nacogdoches 11.95 3 Pn Pn 12 26 19.3 -1.9
NATX Nacogdoches baz=182,SNR=19 11.95 3 P Pn 12 26 20.5 -0.7
237A Washetta, Mont 12.19 358 Pn 12 26 23.8 -0.7
TX31 Lajitas Ar. Si 12.20 323 Pn 12 26 27.7 +3.0
TX32 Lajitas Array 12.20 323 Pn 12 26 27.0 +2.4
TXAR Lajitas Array 12.20 323 Pn Pn 12 26 28.5 +3.9
1.0nm,0.3s,baz=151,slow=16,SNR=25
TXAR LR LR 12 31 40.6
comp=Z,35nm,21.8s,baz=126,slow=40
5.5nm,0.7s
TXAR Lajitas Array 12.20 323 Pn Pn 12 26 27.8 +3.2
WHTX Lake Whitney, 12.33 351 Pn 12 26 25.9 -0.4
WHTX Lake Whitney, baz=170,SNR=228 12.33 351 P Pn 12 26 25.9 -0.4
344A Westbrook Farm 12.33 19 Pn 12 26 23.3 -3.1
ACON Acoyapa 12.43 127 Pn 12 26 25.5 -2.3
ESPN Las Esperanzas 12.96 124 Pn 12 26 34.9 -0.2
143A Socs Landing, 13.34 14 Pn 12 26 38.6 -1.5
ABTX Abilene, Hawle 13.38 344 Pn Pn 12 26 40.4 -0.3
ABTX Abilene, Hawle baz=161,SNR=39 13.38 344 P Pn 12 26 40.5 -0.3
Z38A Mt. Pleasant 13.44 1 Pn Pn 12 26 40.9 -0.6
Z35A Perchaven, San 13.62 353 Pn 12 26 43.7 -0.3
JTS Las Juntas de 13.72 132 Pn Pn 12 26 42.1 -3.3
WLAR White Oak Lake 14.00 8 Pn Pn 12 26 49.5 +0.4
LOOK Love County 14.27 354 Pn Pn 12 26 52.4 -0.4
LCCY Blossom Villag 14.31 88 Pn Pn 12 26 53.5 -0.1
CCAR Cane Creek 14.43 12 Pn 12 26 55.4 +0.3
061Z Ochoppi 14.57 63 Pn Pn 12 26 55.6 -1.4
LPIG La Paz 14.59 290 LR LR 12 32 32.4
comp=Z,77nm,19.9s,baz=100,slow=36
HTMS Hat Mesa 14.70 331 Pn 12 27 02.1 +3.3
CLN7 Carlsbad 7 14.73 330 Pn 12 27 02.0 +2.8
CVTR Volcan Turrial 14.75 129 Pn Pn 12 27 01.3 +1.3
X37A Clayton 14.76 360 Pn 12 26 58.8 -0.8
MIAR Mount Ida 14.79 6 Pn Pn 12 27 00.6 +0.5
MIAR Mount Ida baz=186,SNR=147 14.79 6 P Pn 12 27 00.3 +0.3
GDL2 Guadalupe Moun 14.82 328 Pn Pn 12 27 03.5 +3.0
RIMA Rio Macho 14.85 130 Pn Pn 12 26 57.8 -3.3
Y45A Yeager Farm, C 14.94 19 Pn Pn 12 27 00.7 -1.3
X34A Smith Ranch, M 14.95 352 Pn Pn 12 27 02.0 -0.1
MNTX Cornudas Mount 14.95 325 Pn Pn 12 27 02.0 -0.2
MNTX Cornudas Mount 14.95 325 P Pn 12 27 03.1 +0.9
baz=140
656A Willston 15.01 48 Pn 12 26 59.2 -3.9
LRAL Lakeview Retre 15.14 28 P Pn 12 27 02.5 -2.2
baz=211,SNR=6.9
UALR University of 15.17 9 Pn Pn 12 27 04.8 -0.3
WMOK Wichita Mounta 15.23 349 P Pn 12 27 04.8 -1.1
baz=167,SNR=68
PEZE Perez Zeledon, 15.25 131 Pn Pn 12 27 03.9 -2.4
PEZE IAmb IAmb 12 27 24.8
comp=Z,47nm,0.9s
FNO Franklin 15.54 354 Pn 12 27 11.4 +1.4
SRBA San Rafael, Bu 15.58 131 IAmb IAmb 12 27 17.6
comp=Z,84nm,1.2s
OXF Oxford 15.58 18 P Pn 12 27 08.1 -2.3
baz=201,SNR=24
MSTX Muleshoe 15.63 336 Pn 12 27 11.0 -0.3
MSTX IAmb IAmb 12 27 43.8
comp=Z,42nm,0.8s
MSTX Muleshoe 15.63 336 P Pn 12 27 11.4 +0.1
baz=152,SNR=28
TIGA Tifton 15.68 40 Pn 12 27 09.1 -2.6
TIGA IAmb IAmb 12 27 11.4
comp=Z,40nm,0.6s
TIGA Tifton 15.68 40 P Pn 12 27 08.9 -2.8
baz=225
WHAR Wooly Hollow 15.69 9 Pn Pn 12 27 10.2 -1.7
OK025 Westminster Rd 15.86 354 Pn 12 27 14.2 +0.1
152A Waverly Hall 15.95 34 Pn 12 27 13.7 -1.6
152A IAmb IAmb 12 27 22.4
comp=Z,22nm,0.9s
BCOK Bluff Creek, N 15.96 353 Pn 12 27 15.5 +0.1
BCOK IAmb IAmb 12 27 39.2
comp=Z,195nm,0.7s
DEOK Depew 16.05 356 Pn Pn 12 27 15.3 -1.2
DEOK IAmb IAmb 12 27 19.6
comp=Z,168nm,0.8s
OK029 Liberty Lake 16.08 354 Pn Pn 12 27 17.0 0.0
AMTX Amarillo 16.09 341 Pn Pn 12 27 17.8 +0.6
AMTX IAmb IAmb 12 27 48.8
comp=Z,83nm,0.8s
AMTX Amarillo baz=157 16.09 341 P Pn 12 27 18.0 +0.8
TUL1 Leonard 16.09 359 Pn Pn 12 27 17.4 +0.3
TUL1 Leonard baz=178,SNR=25 16.09 359 P Pn 12 27 16.9 -0.2
CSTR Hydro, Custer 16.10 350 Pn Pn 12 27 16.5 -0.7
CSTR IAmb IAmb 12 27 48.4
comp=Z,38nm,0.8s
Y49A Blount Mountai 16.10 28 Pn 12 27 15.9 -1.4
Y49A IAmb IAmb 12 27 24.1
comp=Z,26nm,1.0s
OK030 Cody Creek RV 16.15 356 Pn 12 27 16.9 -1.0
OK031 S. Brethren Rd 16.18 355 Pn 12 27 17.1 -1.2
Z51A Franklin 16.23 32 Pn Pn 12 27 17.6 -1.3
Z51A IAmb IAmb 12 28 01.1
comp=Z,25nm,0.3s
W45A Hickory Valley 16.25 18 Pn 12 27 18.1 -1.0
W45A IAmb IAmb 12 27 35.0
comp=Z,60nm,0.6s
FCAR Ozark Folk Cen 16.30 9 Pn 12 27 19.7 0.0
FCAR IAmb IAmb 12 27 30.1
comp=Z,43nm,0.7s
RLO Rose Lookout 16.34 1 Pn Pn 12 27 18.5 -1.8
RLO IAmb IAmb 12 27 23.2
comp=Z,84nm,0.7s
X48A Hartselle 16.35 25 Pn Pn 12 27 18.7 -1.7
QUOK Quay 16.39 356 Pn 12 27 19.9 -1.0
QUOK IAmb IAmb 12 27 24.2
comp=Z,201nm,0.5s
PLAL Pickwick Lake 16.44 21 Pn Pn 12 27 21.0 -0.6
HHAR Hobbs 16.49 4 Pn Pn 12 27 21.8 -0.5
HHAR IAmb IAmb 12 27 50.8
comp=Z,42nm,0.7s
U38A Gravette 16.63 3 Pn Pn 12 27 23.6 -0.4
U38A IAmb IAmb 12 27 27.8
comp=Z,46nm,0.4s
ELIS Ellis County 16.64 348 Pn 12 27 24.8 +0.7
ELIS IAmb IAmb 12 27 54.9
comp=Z,166nm,0.9s
LCAR Lake Charles 16.64 12 Pn 12 27 23.4 -0.7
LCAR IAmb IAmb 12 27 26.4
comp=Z,34nm,0.7s
154A Montrose 16.80 38 Pn 12 27 23.4 -2.9
154A IAmb IAmb 12 27 31.9
comp=Z,78nm,0.8s
CROK Carrier 16.84 352 Pn Pn 12 27 25.3 -1.4
CROK IAmb IAmb 12 27 30.3
comp=Z,134nm,0.6s
MTDJ Mount Denham 16.86 92 Pn 12 27 27.1 +0.1
MTDJ IAmb IAmb 12 27 36.4
comp=Z,37nm,0.8s
U32A Winter Ranch, 16.87 350 Pn Pn 12 27 26.5 -0.5
OK038 West end E0370 16.92 350 Pn Pn 12 27 25.6 -2.1
121A Cookes Peak, D 16.94 321 IAmb IAmb 12 27 40.7
comp=Z,26nm,0.9s
121A Cookes Peak, D baz=135,SNR=18 16.94 321 P Pn 12 27 28.9 +0.8
PEBM Pemiscott Bayo 16.96 15 Pn Pn 12 27 27.9 -0.3
BLOK Blackwell 17.01 355 Pn 12 27 28.5 -0.3
BLOK IAmb IAmb 12 27 42.7
comp=Z,105nm,0.8s
FPAL Fort Paine 17.03 28 P Pn 12 27 28.8 -0.3
319A Douglas 17.10 315 Pn Pn 12 27 29.0 -1.1
319A IAmb IAmb 12 27 34.8
comp=Z,28nm,1.0s
T35A Sooner Cattle 17.12 357 Pn Pn 12 27 29.5 -0.6
OK032 Salt Plains WL 17.16 352 Pn 12 27 30.1 -0.7
GOGA Godfrey 17.19 35 Pn 12 27 27.6 -3.5
GOGA Godfrey baz=220 17.19 35 P Pn 12 27 29.3 -1.8
Y52A Lilburn 17.22 33 Pn 12 27 30.8 -0.8
Y52A IAmb IAmb 12 27 37.1
comp=Z,68nm,1.5s
KAN17 Caldwell West 17.35 353 Pn Pn 12 27 32.3 -0.8
X51A Calhoun 17.39 30 Pn Pn 12 27 32.5 -1.2
KAN09 Caldwell North 17.42 354 Pn 12 27 33.2 -0.8
KS20 Mayfield South 17.51 354 Pn 12 27 34.0 -1.0
BNM Barren Site 17.51 327 Pn Pn 12 27 35.3 -0.1
MGMO Mountain Grove 17.52 8 P Pn 12 27 35.1 -0.1
MGMO IAmb IAmb 12 27 41.0
comp=Z,56nm,0.7s
KAN06 Argonia West S 17.56 353 P Pn 12 27 35.4 -0.3
KAN16 Harper-W Stat 17.56 353 IAmb IAmb 12 28 09.2
comp=Z,67nm,0.7s
WVT Waverly 17.57 20 Pn Pn 12 27 34.2 -1.5
WVT IAmb IAmb 12 27 49.6
comp=Z,20nm,0.5s
WVT Waverly baz=204 17.57 20 P Pn 12 27 34.3 -1.5
Y22D IRIS PASSCAL I 17.60 326 IAmb IAmb 12 27 43.9
comp=Z,52nm,0.8s
SBM South Baldy 17.66 326 Pn 12 27 37.8 +0.4
LENM Lemitar 17.70 326 P 12 27 40.5 +1.8
S39A Bolivar 17.94 5 P 12 27 41.1 +0.1
S39A IAmb IAmb 12 27 45.7
comp=Z,52nm,0.7s
ANMO Albuquerque 18.06 329 P P 12 27 46.1 +3.4
comp=Z,0.9nm,0.3s,baz=143,slow=12,SNR=44
comp=Z,17nm,0.8s
ANMO Albuquerque 18.06 329 Pn 12 27 42.8 +0.7
ANMO Albuquerque baz=143 18.06 329 P Pn 12 27 42.7 +0.6
CLTN Cedars of Leba 18.06 24 Pn 12 27 41.2 -0.8
CLTN IAmb IAmb 12 27 47.6
comp=Z,12nm,0.4s
CGM3 Cape Girardeau 18.14 15 Pn 12 27 41.6 -1.3
CGM3 IAmb IAmb 12 27 56.3
comp=Z,13nm,0.6s
CPCT Cooper Cave 18.28 29 Pn 12 27 42.8 -1.8
HODGE Hodges 18.47 36 Pn 12 27 46.2 -0.7
CCM Cathedral Cave 18.56 10 P 12 27 47.1 -0.7
CCM IAmb IAmb 12 27 53.2
comp=Z,45nm,0.7s
CCM Cathedral Cave baz=192 18.56 10 P P 12 27 47.3 -0.5
T47A Sharon Grove 18.59 21 P 12 27 46.4 -1.7
T47A IAmb IAmb 12 28 08.2
comp=Z,28nm,0.6s
S44A Carbondale 18.61 15 IAmb IAmb 12 28 03.0
comp=Z,28nm,0.7s
FVM French Village 18.63 12 P P 12 27 47.9 -0.8
FVM IAmb IAmb 12 28 12.1
comp=Z,18nm,0.7s
SIUC Southern Illin 18.64 15 IAmb IAmb 12 28 02.0
comp=Z,32nm,0.6s
U49A Red Boiling Sp 18.65 25 IAmb IAmb 12 27 58.8
comp=Z,16nm,0.5s
TUC Tucson 18.68 315 P P 12 27 48.1 -1.3
TUC Tucson baz=128 18.68 315 P Pn 12 27 50.2 +0.6
BG3 Lake Jocassee 18.69 33 P P 12 27 47.8 -1.5
TKL Tuckaleechee C 18.80 30 P P 12 27 49.8 -0.7
comp=Z,1.0nm,0.3s,baz=201,slow=13,SNR=8.8
TKL LR LR 12 37 21.6
comp=Z,24nm,18.4s,baz=209,slow=45
comp=Z,9.0nm,0.8s
R32A Long Quarter, 18.82 352 P Pn 12 27 51.2 0.0
T25A Trinidad 19.06 337 IAmb IAmb 12 28 41.2
comp=Z,37nm,0.9s
T25A Trinidad baz=152,SNR=15 19.06 337 P Pn 12 27 54.4 +0.2
V53A Saluda 19.27 32 P 12 27 54.6 -1.2
KSU1 Kansas State U 19.30 357 P 12 27 56.3 +0.3
KSU1 Kansas State U baz=176,SNR=19 19.30 357 P Pn 12 27 57.0 +0.1
CBKS Cedar Bluff 19.37 349 P Pn 12 27 58.2 +0.4
baz=167,SNR=20
T50A Nancy 19.46 26 P P 12 27 56.8 -1.0
TZTN Tazewell 19.62 29 P Pn 12 28 00.6 -0.3
baz=214
X18A Snowflake 19.62 322 IAmb IAmb 12 28 04.6
comp=Z,27nm,0.9s
KMSC Kings Mountain 19.65 36 P Pn 12 28 01.0 -0.2
baz=222
BIRD Birdtown, Kers 19.79 39 IAmb IAmb 12 28 03.8
comp=Z,12nm,0.7s
Q44A Meyer Farm, Va 19.82 15 P 12 27 59.1 -2.6
Q44A IAmb IAmb 12 28 21.6
comp=Z,27nm,0.6s
214A Organ Pipe Nat 19.87 311 P P 12 28 03.8 +1.5
baz=123
P40A Paris 19.89 7 P P 12 28 02.8 +0.3
OLIL Olney 19.89 17 P P 12 28 00.7 -1.8
OLIL IAmb IAmb 12 28 18.9
comp=Z,20nm,0.6s
W18A Petrified Fore 19.92 323 P P 12 28 02.8 -0.2
W18A IAmb IAmb 12 28 07.6
comp=Z,27nm,0.9s
W18A Petrified Fore baz=136,SNR=14 19.92 323 P Pn 12 28 04.6 0.0
WCI Wyandotte Cave 19.98 21 P P 12 28 02.0 -1.5
WCI IAmb IAmb 12 28 13.3
comp=Z,17nm,0.6s
WCI Wyandotte Cave baz=205 19.98 21 P P 12 28 03.5 0.0
SDCO Great Sand Dun 20.00 336 P Pn 12 28 05.8 +0.1
SDCO Great Sand Dun baz=150,SNR=27 20.00 336 P Pn 12 28 06.1 +0.4
KSCO Kaye Shedlock' 20.20 343 IAmb IAmb 12 28 51.4
comp=Z,33nm,0.8s
KSCO Kaye Shedlock' baz=159 20.20 343 P Pn 12 28 08.0 +0.2
V55A Taylorsville 20.25 35 P P 12 28 05.0 -1.4
V55A IAmb IAmb 12 28 09.6
comp=Z,19nm,0.8s
P43A Skaggs, Pawnee 20.42 13 IAmb IAmb 12 28 36.5
comp=Z,34nm,1.1s
W57A Gilead 20.42 38 P P 12 28 07.5 -0.8
W57A IAmb IAmb 12 28 11.1
comp=Z,18nm,0.9s
R49A Shelbyville 20.44 23 IAmb IAmb 12 28 17.7
comp=Z,18nm,0.4s
U54A Nelsons Funny 20.44 32 P P 12 28 08.9 +0.4
U54A IAmb IAmb 12 28 11.6
comp=Z,33nm,0.9s
X16A Lo Mia Camp, P 20.45 319 IAmb IAmb 12 28 16.5
comp=Z,17nm,1.0s
S51A Beattyville 20.51 27 P P 12 28 08.1 -1.1
S51A IAmb IAmb 12 28 15.6
comp=Z,17nm,0.7s
S22A 4UR Ranch, Cre 20.54 333 P Pn 12 28 12.6 +0.6
baz=147,SNR=23
MVCO Mesa Verde 20.86 329 P Pn 12 28 15.4 -0.3
MVCO Mesa Verde baz=142,SNR=61 20.86 329 P Pn 12 28 15.7 0.0
Q24A Divide 20.95 338 P P 12 28 15.3 +1.1
Q24A IAmb IAmb 12 28 18.7
comp=Z,20nm,1.0s
Q24A Divide baz=153,SNR=8.7 20.95 338 P P 12 28 15.6 +1.3
P46A Rosedale 20.97 18 P P 12 28 11.8 -2.4
P46A IAmb IAmb 12 28 35.1
comp=Z,23nm,0.8s
113A Mohawk Valley, 20.99 312 P P 12 28 15.7 +1.3
N35A Tabor 21.02 359 P 12 28 16.1
U56A King 21.06 35 IAmb IAmb 12 28 18.0
comp=Z,30nm,0.8s
Y14A Wickenburg 21.15 315 P P 12 28 15.8 -0.4
WUAZ Wupatki 21.15 321 P P 12 28 17.0 +0.6
WUAZ IAmb IAmb 12 28 21.0
comp=Z,21nm,0.9s
WUAZ Wupatki baz=133,SNR=18 21.15 321 P P 12 28 18.9 +2.5
P48A Milroy 21.38 21 P P 12 28 16.9 -1.7
P48A IAmb IAmb 12 28 40.9
comp=Z,13nm,0.6s
V58A Windy Hill, Pi 21.38 38 P P 12 28 17.7 -0.9
V58A IAmb IAmb 12 28 21.0
comp=Z,18nm,0.7s
BLA Blacksburg baz=221 21.69 34 P P 12 28 23.0 +1.0
S54A Dingess, Beckl 21.69 31 P P 12 28 20.3 -1.8
S54A IAmb IAmb 12 28 24.4
comp=Z,18nm,1.0s
P49A Miami Univ. Ec 21.70 23 P P 12 28 19.9 -2.2
P49A IAmb IAmb 12 28 39.7
comp=Z,12nm,0.7s
P49A Miami Univ. Ec baz=208 21.70 23 P P 12 28 23.1 +1.0
SFIN Lafayette 21.71 17 P P 12 28 23.5 +1.4
SFIN IAmb IAmb 12 28 40.5
comp=Z,16nm,0.8s
SFIN Lafayette baz=201 21.71 17 P P 12 28 23.4 +1.4
PV15 Paradox Valley 21.76 331 IAmb IAmb 12 28 32.5
comp=Z,36nm,0.8s
PV13 Radium Mtn., P 21.77 330 P P 12 28 22.7 -0.4
PV13 IAmb IAmb 12 28 31.6
comp=Z,41nm,0.9s
Q51A Peebles 21.79 26 IAmb IAmb 12 28 28.0
comp=Z,27nm,1.0s
R53A Hurricane 21.82 29 IAmb IAmb 12 28 39.6
comp=Z,27nm,1.3s
SMCO Snowmass 21.82 335 IAmb IAmb 12 28 27.7
comp=Z,15nm,0.9s
ISCO Idaho Springs 21.85 338 P P 12 28 21.4 -2.6
ISCO Idaho Springs baz=153,SNR=11 21.85 338 P P 12 28 25.4 +1.4
OGNE Ogallala 21.88 346 P P 12 28 23.3 -0.8
OGNE Ogallala baz=162,SNR=5.5 21.88 346 P P 12 28 25.4 +1.4
GLA Glamis 21.89 311 P P 12 28 22.4 -1.8
GLA IAmb IAmb 12 28 55.7
comp=Z,28nm,1.5s
GLA Glamis baz=122 21.89 311 P P 12 28 27.2 +3.0
PV07 Paradox Valley 21.92 331 IAmb IAmb 12 28 34.4
comp=Z,48nm,1.1s
BLYC Blythe 22.06 313 P P 12 28 26.0 0.0
BLYC IAmb IAmb 12 28 45.6
comp=Z,17nm,1.3s
PDMCI Parker Dam,Lak baz=126 22.12 315 P P 12 28 29.4 +2.8
L34A Svendsen Farm, 22.15 358 P P 12 28 25.7 -1.1
T57A Hurt 22.16 36 P P 12 28 26.1 -0.9
T57A IAmb IAmb 12 28 29.7
comp=Z,14nm,1.0s
O48B Farmland baz=206 22.19 21 P P 12 28 28.5 +1.2
Q52A Bidwell 22.19 28 P P 12 28 26.9 -0.5
Q52A IAmb IAmb 12 28 31.9
comp=Z,34nm,1.1s
P51A Williamsport 22.29 26 IAmb IAmb 12 28 32.2
comp=Z,36nm,0.9s
U15A North Rim 22.31 322 P P 12 28 27.3 -1.7
O49A Covington 22.41 22 P P 12 28 28.1 -1.6
O49A IAmb IAmb 12 28 36.2
comp=Z,13nm,0.9s
W13A Hualapai Mount 22.43 317 P P 12 28 30.6 +0.4
L40A Anamosa 22.49 8 P P 12 28 29.4 -1.1
L40A IAmb IAmb 12 28 55.3

	comp=Z,32nm,0.9s							
BC3	**Big Chuckawall**	**22.66**	**312**	P	**P**	**12 28 33.8**	**+1.3**	
	baz=122							
R55A	**Marlinton**	**22.66**	**32**	P	**P**	**12 28 30.6**	**-1.8**	
R55A				IAmb	IAmb	12 28 54.1		
	comp=Z,12nm,0.8s							
L42A	**Oliver, Polo**	**22.67**	**11**	P	**P**	**12 28 31.8**	**-0.7**	
L42A				IAmb	IAmb	12 28 50.3		
	comp=Z,22nm,0.7s							
IRM	**Iron Mountain**	**22.72**	**313**	P	**P**	**12 28 35.0**	**+1.9**	
	baz=124							
P52A	**Corning**	**22.80**	**27**	P	**P**	**12 28 33.2**	**-0.7**	
	baz=213							
S57A	**Dark Hollow, R**	**22.88**	**35**	P	**P**	**12 28 34.6**	**0.0**	
S57A				IAmb	IAmb	12 28 54.9		
	comp=Z,20nm,1.2s							
K38A	**Parkersburg**	**22.91**	**5**	P	**P**	**12 28 34.3**	**-0.6**	
N23A	**Red Feather La**	**22.94**	**339**	P	**P**	**12 28 33.2**	**-2.3**	
N23A				IAmb	IAmb	12 29 15.9		
	comp=Z,11nm,0.8s							
N23A	**Red Feather La**	**22.94**	**339**	P	**P**	**12 28 37.6**	**+2.0**	
	baz=153							
ACSO	**Alum Creek Sta**	**22.96**	**25**	P	**P**	**12 28 32.6**	**-2.9**	
ACSO				IAmb	IAmb	12 28 39.3		
	comp=Z,18nm,0.9s							
ACSO	**Alum Creek Sta**	**22.96**	**25**	P	**P**	**12 28 35.0**	**-0.5**	
	baz=211							
MONP2	**Monument Peak**	**22.96**	**309**	P	**P**	**12 28 38.1**	**+2.3**	
	baz=119							
P53A	**Whipple**	**23.01**	**28**	P	**P**	**12 28 33.5**	**-2.5**	
P53A				IAmb	IAmb	12 29 06.1		
	comp=Z,19nm,1.2s							
KNB	**Kanab**	**23.03**	**322**	P	**P**	**12 28 35.1**	**-1.3**	
KNB				IAmb	IAmb	12 28 56.7		
	comp=Z,30nm,1.5s							
PKCU	**Pink Cliffs**	**23.03**	**323**	P	**P**	**12 28 36.6**	**-0.1**	
PKCU				IAmb	IAmb	12 29 16.3		
	comp=Z,17nm,1.1s							
O20A	**White River Ci**	**23.14**	**334**	P	**P**	**12 28 37.4**	**-0.3**	
O20A				IAmb	IAmb	12 29 02.1		
	comp=Z,21nm,1.1s							
O20A	**White River Ci**	**23.14**	**334**	P	**P**	**12 28 40.1**	**+2.5**	
	baz=147,SNR=10.0							
BELC	**Belle Mtn. Jos**	**23.23**	**312**	P	**P**	**12 28 40.3**	**+1.9**	
	baz=122							
LCMT	**Little Creek M**	**23.27**	**321**	P	**P**	**12 28 37.1**	**-1.8**	
O52A	**Adamsville**	**23.33**	**27**	P	**P**	**12 28 36.9**	**-2.4**	
O52A				IAmb	IAmb	12 28 42.6		
	comp=Z,21nm,0.8s							
SRU	**San Rafael Swe**	**23.34**	**329**	P	**P**	**12 28 39.3**	**-0.3**	
SRU				IAmb	IAmb	12 29 01.6		
	comp=Z,9.1nm,0.8s							
PFO	**Pinyon Flats O**	**23.35**	**310**	LR	LR	12 38 04.5		
	comp=Z,116nm,21.5s,baz=128,slow=37							
PFO	**Pinyon Flats O**	**23.35**	**310**	P	**P**	**12 28 39.2**	**-0.5**	
MTPU	**Mount Pierson**	**23.39**	**325**	P	**P**	**12 28 42.4**	**+2.0**	
MTPU				IAmb	IAmb	12 28 49.7		
	comp=Z,16nm,1.0s							
GMRC	**Granite Mounta**	**23.42**	**314**	P	**P**	**12 28 42.5**	**+2.0**	
	baz=124							
JFWS	**Jewell Farm**	**23.46**	**9**	P	**P**	**12 28 39.7**	**-0.9**	
JFWS	**Jewell Farm**	**23.46**	**9**	P	**P**	**12 28 42.5**	**+1.9**	
	baz=192							
Q16A	**Castle Valley**	**23.51**	**328**	P	**P**	**12 28 41.5**	**+0.1**	
Q16A				IAmb	IAmb	12 28 45.0		
	comp=Z,35nm,1.3s							
SZCU	**Shurtz Canyon**	**23.58**	**323**	P	**P**	**12 28 40.2**	**-1.9**	
P18A	**Preston Nutter**	**23.61**	**330**	P	**P**	**12 28 41.6**	**-0.9**	
P18A				IAmb	IAmb	12 29 06.0		
	comp=Z,22nm,1.2s							
CCUT	**Cedar City**	**23.71**	**322**	P	**P**	**12 28 42.6**	**-0.7**	
O53A	**New Philadelph**	**23.71**	**28**	P	**P**	**12 28 44.0**	**+0.9**	
	baz=214							
P17A	**Butcher Ranch,**	**23.73**	**329**	P	**P**	**12 28 43.0**	**-0.5**	
P17A				IAmb	IAmb	12 28 47.7		
	comp=Z,20nm,1.1s							
MSU	**Marysvale**	**23.73**	**325**	P	**P**	**12 28 41.2**	**-2.4**	
MVU	**Marysvale**	**23.74**	**325**	P	**P**	**12 28 42.1**	**-1.6**	
N51A	**Ashland**	**23.79**	**25**	P	**P**	**12 28 41.6**	**-2.2**	
N51A				IAmb	IAmb	12 28 46.2		
	comp=Z,29nm,1.0s							
TMUT	**Trail Mountain**	**23.82**	**328**	P	**P**	**12 28 45.9**	**+1.4**	
TMUT				IAmb	IAmb	12 28 48.7		
	comp=Z,13nm,0.9s							
MURC	**Murrieta**	**23.87**	**310**	P	**P**	**12 28 47.7**	**+3.0**	
	baz=119							
HEC	**Hector,Ludlow**	**23.91**	**313**	P	**P**	**12 28 47.5**	**+2.4**	
	baz=123							
ECSD	**EROS Data Cent**	**23.92**	**358**	P	**P**	**12 28 46.1**	**+1.0**	
	baz=176							
TUQ	**Turquoise Moun**	**23.97**	**315**	P	**P**	**12 28 48.2**	**+2.4**	
	baz=125							
BBRC	**Big Bear Solar**	**24.01**	**311**	P	**P**	**12 28 48.4**	**+2.1**	
	baz=121							
RDMU	**Red Mountain**	**24.07**	**333**	P	**P**	**12 28 46.5**	**-0.2**	
RWWY	**Rawlins**	**24.09**	**338**	P	**P**	**12 28 45.4**	**-1.6**	
RWWY				IAmb	IAmb	12 29 04.9		
	comp=Z,10nm,0.7s							
SHPR	**Sheep Range**	**24.11**	**318**	P	**P**	**12 28 47.0**	**-0.2**	
N53A	**Lisbon**	**24.33**	**27**	P	**P**	**12 28 47.9**	**-1.0**	
N53A				IAmb	IAmb	12 28 51.8		
	comp=Z,30nm,0.9s							
GSC	**Goldstone, Bar**	**24.49**	**314**	P	**P**	**12 28 50.7**	**+0.1**	
	baz=123							
BFSC	**Mount Baldy Ra**	**24.52**	**311**	P	**P**	**12 28 52.0**	**+1.0**	
	baz=120							
SCI2	**San Clemente I**	**24.58**	**307**	P	**P**	**12 28 52.8**	**+1.5**	
	baz=116							
MPU	**Maple Canyon**	**24.58**	**329**	P	**P**	**12 28 52.4**	**+1.0**	
MPU				IAmb	IAmb	12 28 55.4		
	comp=Z,9.1nm,0.9s							
PRN	**Pahroc Range**	**24.61**	**320**	P	**P**	**12 28 53.0**	**+1.3**	
P57A	**Homestead Farm**	**24.64**	**33**	P	**P**	**12 28 50.3**	**-1.4**	
P57A				IAmb	IAmb	12 28 55.7		
	comp=Z,11nm,0.8s							
PSUT	**Pine Spring**	**24.67**	**323**	P	**P**	**12 28 51.9**	**-0.3**	
PSUT				IAmb	IAmb	12 28 56.9		
	comp=Z,6.9nm,0.8s							
K22A	**Casper**	**24.71**	**340**	IAmb	IAmb	12 28 56.5		
	comp=Z,18nm,0.8s							
K22A	**Casper**	**24.71**	**340**	P	**P**	**12 28 55.0**	**+2.4**	
	baz=154,SNR=16							
NLU	**North Lily Min**	**24.75**	**328**	P	**P**	**12 28 53.7**	**+0.7**	
SUSD	**Miller**	**24.79**	**354**	P	**P**	**12 28 54.5**	**+1.4**	
SUSD	**Miller**	**24.79**	**354**	P	**P**	**12 28 55.2**	**+2.1**	
	baz=171							
GWY	**Greenwater Val**	**24.90**	**316**	P	**P**	**12 28 53.5**	**-0.8**	
QSM	**Queen of Sheba**	**24.90**	**315**	P	**P**	**12 28 53.6**	**-0.6**	
QSM				IAmb	IAmb	12 29 11.4		
	comp=Z,6.3nm,0.9s							
M53A	**WI Miller and**	**24.92**	**27**	P	**P**	**12 28 54.1**	**-0.2**	
	baz=214							
JLU	**Jordanelle**	**24.95**	**330**	P	**P**	**12 28 53.2**	**-1.6**	
TPNV	**Topopah Spring**	**25.07**	**317**	P	**P**	**12 28 57.1**	**+1.2**	
	baz=127							
EDW2	**Edwards Air Fo**	**25.09**	**312**	P	**P**	**12 28 57.4**	**+1.4**	
	baz=120							
CTU	**Camp Tracy**	**25.16**	**330**	IAmb	IAmb	12 29 01.2		
	comp=Z,11nm,1.0s							
LRMC	**Laurel Mtn Rad**	**25.19**	**313**	P	**P**	**12 28 58.6**	**+1.7**	
	baz=122							
FURC	**Furnace Creek,**	**25.19**	**316**	P	**P**	**12 28 59.2**	**+2.6**	
	baz=125							
S11A	**Rachel**	**25.19**	**319**	IAmb	IAmb	12 29 22.1		
	comp=Z,9.7nm,1.0s							
SPR3	**Spring Creek 3**	**25.26**	**323**	IAmb	IAmb	12 29 01.9		
	comp=Z,6.0nm,0.9s							
DUG	**Dugway, Tooele**	**25.31**	**327**	P	**P**	**12 28 59.3**	**+1.4**	
DUG	**Dugway, Tooele**	**25.31**	**327**	P	**P**	**12 28 59.7**	**+1.8**	
	baz=138							
TCUT	**Toone Canyon**	**25.34**	**331**	IAmb	IAmb	12 29 03.2		
	comp=Z,22nm,0.7s							
RSSD	**Black Hills**	**25.36**	**345**	P	**P**	**12 28 59.6**	**+1.1**	
RSSD				IAmb	IAmb	12 29 38.5		
	comp=Z,11nm,0.6s							
RSSD	**Black Hills**	**25.36**	**345**	P	**P**	**12 28 59.5**	**+1.1**	
	baz=160							
MPMC	**Manual Prospec**	**25.37**	**314**	P	**P**	**12 29 00.5**	**+1.8**	
	baz=123,SNR=6.5							
SPMN	**Marine on St.**	**25.47**	**4**	P	**P**	**12 28 58.1**	**-1.1**	
SPMN	**Marine on St.**	**25.47**	**4**	P	**P**	**12 28 59.3**	**+0.2**	
	baz=185							
R11A	**Troy Canyon, C**	**25.55**	**321**	P	**P**	**12 29 01.2**	**+1.1**	
R11A	**Troy Canyon, C**	**25.55**	**321**	P	**P**	**12 29 01.6**	**+1.4**	
	baz=130							
SSPA	**Standing Stone**	**25.57**	**32**	P	**P**	**12 29 00.9**	**+0.8**	
SSPA				IAmb	IAmb	12 29 04.3		
	comp=Z,9.1nm,0.9s							
SSPA	**Standing Stone**	**25.57**	**32**	P	**P**	**12 29 00.7**	**+0.5**	
	baz=220							
ERPA	**Erie**	**25.77**	**27**	P	**P**	**12 29 01.6**	**-0.4**	
	baz=215							
M55A	**Ridgway**	**25.79**	**29**	P	**P**	**12 29 02.8**	**+0.6**	
M55A				IAmb	IAmb	12 29 07.4		
	comp=Z,15nm,0.8s							
HWUT	**Hardware Ranch**	**25.79**	**331**	IAmb	IAmb	12 29 07.2		
	comp=Z,11nm,0.9s							
BW06	**Boulder Array**	**25.90**	**335**	P	**P**	**12 29 02.6**	**-0.8**	
BW06	**Boulder Array**	**25.90**	**335**	P	**P**	**12 29 04.4**	**+1.0**	
	baz=148							
PD31	**Pinedale Array**	**25.90**	**335**	P	**P**	**12 29 02.5**	**-0.9**	
PDAR	**Pinedale Array**	**25.90**	**335**	P	**P**	**12 29 06.3**	**+2.9**	
	comp=Z,2.5nm,0.8s,baz=163,slow=11,SNR=14							
PDAR				LR	LR	12 42 42.2		
	comp=Z,47nm,18.4s,baz=141,slow=44							
	comp=Z,2.5nm,0.8s							
PDAR	**Pinedale Array**	**25.90**	**335**	P	**P**	**12 29 04.0**	**+0.6**	
GMN	**Gold Mountain**	**25.93**	**317**	P	**P**	**12 29 03.0**	**-0.7**	
BGU	**Big Grassy Mou**	**25.96**	**328**	P	**P**	**12 29 03.0**	**-1.0**	
F36A	**Milaca**	**26.06**	**3**	P	**P**	**12 29 04.1**	**-0.4**	
LCH	**Last Change Ra**	**26.14**	**316**	P	**P**	**12 29 03.6**	**-1.9**	
SDV	**Santo Domingo**	**26.18**	**111**	P	**P**	**12 29 05.7**	**-0.5**	
	comp=Z,6.8nm,0.4s,baz=5.8,slow=9.7,SNR=4.9							
	comp=Z,6.8nm,0.4s							
SDV	**Santo Domingo**	**26.18**	**111**	P	**P**	**12 29 04.5**	**-1.6**	
SDV				IAmb	IAmb	12 29 09.3		
	comp=Z,9.4nm,0.6s							
MZP	**Montezuma Peak**	**26.25**	**318**	P	**P**	**12 29 08.0**	**+1.3**	
TPH	**Tonopah**	**26.37**	**318**	IAmb	IAmb	12 29 33.2		
	comp=Z,27nm,1.1s							
HVU	**Hansel Valley**	**26.49**	**330**	IAmb	IAmb	12 29 26.0		
	comp=Z,6.9nm,0.8s							
AHID	**Auburn Hatcher**	**26.52**	**333**	IAmb	IAmb	12 29 19.5		
	comp=Z,7.6nm,1.0s							
WVNY	**West Valley, N**	**26.61**	**28**	IAmb	IAmb	12 29 15.1		
	comp=Z,19nm,0.8s							
REDW	**Red Top Meadow**	**26.91**	**334**	P	**P**	**12 29 14.3**	**+1.7**	
REDW				IAmb	IAmb	12 29 33.4		
	comp=Z,8.8nm,0.9s							
SNOW	**Snow King Moun**	**26.96**	**335**	IAmb	IAmb	12 29 20.4		
	comp=Z,10nm,0.7s							
ELK	**Elko**	**26.98**	**325**	P	**P**	**12 29 15.7**	**+2.5**	
	comp=Z,2.0nm,0.8s,baz=129,slow=7.1,SNR=11							
	comp=Z,2.0nm,0.8s							
ELK	**Elko**	**26.98**	**325**	P	**P**	**12 29 15.3**	**+2.2**	
LOHW	**Long Hollow**	**27.02**	**335**	P	**P**	**12 29 15.8**	**+2.2**	
TPAW	**Teton Pass**	**27.06**	**334**	IAmb	IAmb	12 29 20.1		
	comp=Z,17nm,1.4s							
FXWY	**Fox Creek**	**27.21**	**334**	P	**P**	**12 29 17.4**	**+2.1**	
FXWY				IAmb	IAmb	12 29 23.4		
	comp=Z,6.1nm,0.9s							
NVAR	**Mina Array Bea**	**27.27**	**318**	P	**P**	**12 29 17.9**	**+2.1**	
	comp=Z,2.6nm,0.8s,baz=134,slow=10.0,SNR=24							
	comp=Z,2.6nm,0.8s							
LHV	**Little Huntoon**	**27.29**	**317**	IAmb	IAmb	12 29 43.7		
	comp=Z,11nm,1.3s							
IMW	**Indian Meadow**	**27.39**	**335**	P	**P**	**12 29 18.1**	**+1.2**	
IMW				IAmb	IAmb	12 29 37.4		
	comp=Z,11nm,1.4s							
KVN	**Kaiserville**	**27.51**	**319**	P	**P**	**12 29 16.4**	**-1.5**	
RYN	**Ryan**	**27.52**	**318**	P	**P**	**12 29 18.0**	**0.0**	
RYN				IAmb	IAmb	12 29 33.4		
	comp=Z,6.2nm,0.9s							
SJG	**San Juan**	**27.59**	**89**	LR	LR	12 39 41.0		
	comp=Z,32nm,21.4s,baz=218,slow=36							
GCPR	**Guaynabo City**	**27.62**	**88**	P	**P**	**12 29 16.7**	**-2.2**	
GCPR				IAmb	IAmb	12 29 25.8		
	comp=Z,24nm,1.2s							
RLMT	**Red Lodge**	**27.82**	**338**	P	**P**	**12 29 22.6**	**+2.0**	
	baz=150							
EYMN	**Ely**	**28.27**	**5**	P	**P**	**12 29 26.2**	**+1.8**	
	baz=187							
PNTR	**Pine Nut**	**28.47**	**318**	P	**P**	**12 29 28.4**	**+1.8**	
PNTR				IAmb	IAmb	12 29 55.5		
	comp=Z,15nm,1.4s							
HLID	**Hailey**	**28.64**	**330**	P	**P**	**12 29 29.6**	**+1.7**	
	baz=140							
BEKR	**Beckworth**	**29.40**	**318**	P	**P**	**12 29 36.5**	**+1.7**	
LONY	**Lake Ozonia**	**30.17**	**30**	P	**P**	**12 29 42.4**	**+1.0**	
	baz=221							
HRV	**Adam Dziewonsk**	**30.24**	**36**	P	**P**	**12 29 42.5**	**+0.6**	
	baz=229							
J08A	**Circle Bar Ran**	**30.52**	**326**	IAmb	IAmb	12 30 01.9		
	comp=Z,12nm,0.9s							
EGMT	**Eagleton**	**30.53**	**341**	P	**P**	**12 29 46.5**	**+2.0**	
	baz=152							
MSO	**Missoula**	**31.01**	**335**	P	**P**	**12 29 50.8**	**+2.0**	
	baz=144							
LBNH	**Lisbon**	**31.22**	**33**	P	**P**	**12 29 50.9**	**+0.4**	
	baz=226							
YBH	**Yreka Blue Hor**	**31.94**	**319**	LR	LR	12 43 32.5		
	comp=Z,53nm,20.1s,baz=156,slow=38							
I05D	**Terrebonne, OR**	**32.72**	**324**	P	**P**	**12 30 05.5**	**+1.6**	
	baz=130							
NEW	**Newport**	**33.46**	**333**	LR	LR	12 46 44.0		
	comp=Z,53nm,19.2s,baz=131,slow=42							
SCHQ	**Schefferville**	**41.12**	**25**	P	**P**	**12 31 15.8**	**+0.7**	
	comp=Z,7.9nm,0.5s,baz=224,slow=7.2,SNR=17							
	comp=Z,7.9nm,0.5s							
SCHQ	**Schefferville**	**41.12**	**25**	P	**P**	**12 31 15.5**	**+0.4**	
SCHQ				IAmb	IAmb	12 31 16.9		
	comp=Z,10nm,0.8s							
BBB	**Bella Bella**	**41.22**	**330**	LR	LR	12 49 35.8		
	comp=Z,43nm,18.1s,baz=125,slow=38							
LPAZ	**La Paz**	**44.68**	**141**	P	**P**	**12 31 44.4**	**-0.7**	
	comp=Z,1.1nm,0.6s,baz=284,slow=4.2,SNR=6.0							
	comp=Z,1.1nm,0.6s							
YKA	**Yellowknife Ar**	**44.73**	**347**	P	**P**	**12 31 44.7**	**+0.5**	
	comp=Z,2.4nm,0.9s,baz=152,slow=7.5,SNR=6.4							
	comp=Z,2.4nm,0.9s							
SIV	**San Ignacio**	**48.93**	**134**	LR	LR	12 52 00.4		
	comp=Z,60nm,18.9s,baz=133,slow=35							
MMPY	**Sheldon Lake,**	**49.42**	**339**	P	**P**	**12 32 22.9**	**+1.9**	
	baz=133							
M31M	**Drury Creek, Y**	**50.24**	**337**	P	**P**	**12 32 28.8**	**+1.6**	
	baz=129							
M29M	**Somme Creek**	**51.90**	**336**	P	**P**	**12 32 41.7**	**+1.9**	
	baz=125							
DAWY	**Dawson**	**53.18**	**338**	P	**P**	**12 32 50.5**	**+1.4**	
	baz=125							
L27K	**Beaver Creek,**	**53.53**	**336**	P	**P**	**12 32 53.5**	**+1.8**	
	baz=122							
INK	**Inuvik**	**54.05**	**343**	LR	LR	13 02 19.0		
	comp=Z,29nm,18.2s,baz=139,slow=43							
K27K	**Chicken**	**54.14**	**337**	P	**P**	**12 32 57.8**	**+1.7**	
	baz=122							
EGAK	**Eagle**	**54.21**	**338**	P	**P**	**12 32 57.8**	**+1.1**	
	baz=123							
M24K	**Tolsona, Glenn**	**54.82**	**333**	P	**P**	**12 33 02.9**	**+1.8**	
	baz=116							
ILAR	**Eielson Array**	**56.33**	**336**	P	**P**	**12 33 12.6**	**+0.7**	
	comp=Z,0.5nm,0.7s,baz=116,slow=6.7,SNR=6.3							
ILAR				PcP	**PcP**	**12 34 11.2**	**+2.1**	
	comp=Z,0.9nm,0.7s,baz=137,slow=2.1,SNR=7.5							
	comp=Z,0.5nm,0.7s							
F26K	**Sheenjek River**	**56.82**	**340**	P	**P**	**12 33 17.1**	**+1.7**	
	baz=122							
O20K	**Slope Mountain**	**56.93**	**330**	P	**P**	**12 33 18.2**	**+1.9**	
	baz=109							
H24K	**Noodor Dome**	**57.19**	**337**	P	**P**	**12 33 18.9**	**+0.9**	
	baz=117							
BPAW	**Bear Paw Mtn.**	**57.65**	**335**	P	**P**	**12 33 21.9**	**+0.6**	
	baz=113							
H23K	**Yukon River**	**57.80**	**337**	P	**P**	**12 33 23.6**	**+1.3**	
	baz=115							
MLY	**Manley**	**57.92**	**336**	P	**P**	**12 33 24.0**	**+0.8**	
	baz=114							
K20K	**Telida**	**58.66**	**333**	P	**P**	**12 33 29.0**	**+0.6**	
	baz=109							
ESDC	**Sonseca Array**	**78.63**	**52**	P	**P**	**12 35 32.8**	**-0.8**	
	comp=Z,1.5nm,0.8s,baz=303,slow=6.0,SNR=9.0							
	comp=Z,1.5nm,0.8s							
ARCES	**ARCESS Array B**	**81.65**	**18**	LR	LR	13 12 45.4		
	comp=Z,32nm,20.9s,baz=246,slow=36							
TORD	**Torodi Ar. Bea**	**92.03**	**75**	P	**P**	**12 36 40.5**	**-0.6**	
	comp=Z,1.8nm,0.4s,baz=278,slow=3.9,SNR=4.0							
TORD				LR	LR	13 16 56.8		
	comp=Z,36nm,18.2s,baz=318,slow=35							
	comp=Z,1.8nm,0.4s							
WRA	**Warramunga Arr**	**133.47**	**261**	PKP	**PKPdf**	**12 42 49.3**	**+0.7**	
	comp=Z,0.5nm,0.5s,baz=83,slow=2.2,SNR=2.5							
ASAR	**Alice Springs**	**134.31**	**256**	PKP	**PKiKP**	**12 42 51.9**	**+0.4**	
	comp=Z,0.3nm,0.8s,baz=101,slow=2.9,SNR=2.1							

*IDC **26** 12:26:38.6±0.9,54.98S×30.22W,h0km,mb4.1/6, mbtmp4.1/7,ML4.2/1,MS3.5/2,Error ellipse: s-maj=34.6km s-min=20.3km az=73.0*

*NEIC **26** 12:26:43.7±1.7,55.41S±0.06×31.7W±0.3,h10km±2km, mb4.2/8,Error ellipse: s-maj=24.6km s-min=11.0km az=92.0*

ISC 26 12:26:43.4±1.0,55.4S±0.1×31.7W±0.2,h10km,n27, σ1s23/21,mb4.2/5,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.97**	**290**		**Pn**	**12 27 30.5**	**-0.1**
ORCD	**Orcadas**	**8.74**	**227**	Pn	**Pn**	**12 28 49.6**	**-0.1**
VNA1	**Neumayer--Stat**	**18.43**	**155**	P	**Pn**	**12 31 00.4**	**+1.8**
PMSA	**Palmer Station**	**18.45**	**226**	P	Pn	12 31 06.7	+7.8
	0.7nm,0.3s,baz=103,slow=6.9,SNR=4.4						
PMSA				LR	LR	12 37 13.5	
	comp=Z,58nm,18.6s,baz=69,slow=33						
	5.5nm,0.8s						
VNA3	**Neumayer Olymp**	**18.54**	**158**	P	**P**	**12 30 59.3**	**-0.5**
VNA2	**Neumayer--Watz**	**18.83**	**155**	P	**P**	**12 31 02.5**	**-0.5**
	baz=309,slow=12						
SNAA	**Sanae**	**20.44**	**154**	P	**P**	**12 31 18.3**	**-2.2**
SNAA	**Sanae**	**20.44**	**154**	P	**P**	**12 31 18.3**	**-2.2**
	3.0nm,0.8s,baz=300,slow=8.8,SNR=12						
	3.0nm,0.8s						
SNAA	**Sanae**	**20.44**	**154**	P	**P**	**12 31 18.5**	**-2.0**
SNAA				IAmb	IAmb	12 31 45.5	
	comp=Z,12nm,1.4s						
TROLL	**Troll, Antarti**	**22.02**	**152**	P	**P**	**12 31 38.1**	**+0.5**
BELA	**Belgrano 2**	**22.62**	**182**	P	**P**	**12 31 42.9**	**-1.0**
MG05	**Puerto Natales**	**24.27**	**262**	P	**P**	**12 32 01.3**	**+0.9**
GO09	**Cerro Castillo**	**24.35**	**263**	P	**P**	**12 32 02.5**	**+1.2**
CPUP	**Villa Florida**	**34.50**	**317**	P	**P**	**12 33 30.2**	**-1.3**
	comp=Z,7.1nm,0.9s,baz=144,slow=7.3,SNR=3.7						
	comp=Z,2.7nm,0.9s						
QSPA	**South Pole Qui**	**34.87**	**180**	P	**P**	**12 33 33.7**	**-0.9**
	comp=Z,2.6nm,0.9s,baz=245,slow=1.3,SNR=8.0						
	comp=Z,2.6nm,0.9s						
QSPA	**South Pole Qui**	**34.87**	**180**	P	**P**	**12 33 35.2**	**+0.6**
QSPA				IAmb	IAmb	12 33 57.1	
	comp=Z,4.2nm,1.1s						
VNDA	**Vanda**	**47.09**	**184**	P	**P**	**12 35 14.8**	**0.0**
	comp=Z,0.8nm,1.0s,baz=186,slow=4.7,SNR=3.0						
	comp=Z,0.8nm,1.0s						
VNDA	**Vanda**	**47.09**	**184**	P	**P**	**12 35 15.0**	**+0.2**
LPAZ	**La Paz**	**47.93**	**310**	P	**P**	**12 35 22.5**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=95,slow=5.7,SNR=11						
	comp=Z,2.3nm,0.5s						
LPAZ	**La Paz**	**47.93**	**310**	P	**P**	**12 35 22.8**	**+0.1**
LPAZ				IAmb	IAmb	12 35 27.2	
	comp=Z,2.8nm,0.7s						
H10N1	**ASCENSION HYDR**	**49.35**	**23**	T	T	13 28 30.2	
	baz=192,slow=75,SNR=4.9						
H10N3	**ASCENSION HYDR**	**49.35**	**23**	T	T	13 28 29.8	
	baz=192,slow=75,SNR=7.9						
H10N2	**ASCENSION HYDR**	**49.37**	**23**	T	T	13 28 26.7	
	baz=192,slow=75,SNR=7.2						
BBTS	**Babate**	**70.94**	**16**	LR	LR	13 01 34.7	
	comp=Z,66nm,21.0s,baz=300,slow=30						
TORD	**Torodi Ar. Bea**	**73.83**	**34**	P	P	12 38 10.8	-7.3
	comp=Z,2.1nm,0.3s,baz=224,slow=6.0,SNR=3.6						
	comp=Z,2.1nm,0.3s						
ILAR	**Eielson Array**	**147.77**	**313**	PKPbc	**PKPdf**	**12 46 24.7**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=128,slow=1.5,SNR=11						
SONM	**Songino Array**	**153.26**	**89**	PKPbc	**PKPdf**	**12 46 34.7**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=210,slow=8.1,SNR=4.7						

*IDC **26** 12:28:48.7±7.0,20.71S×177.66W,h536km±46km, mb3.3/6, mbtmp4.2/7,Error ellipse: s-maj=143.2km s-min=24.3km az=143.0*

*NEIC **26** 12:28:51.5±0.7,20.0S±0.3×177.91W±0.10,h559km±20km, mb4.1/12,Error ellipse: s-maj=41.7km s-min=8.2km az=165.0*

ISC 26 12:28:50.8±0.8,20.2S±0.2×177.9W±0.1,h550km,n28, σ0s98/29,mb4.1/12,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.53**	**301**	P	**P**	**12 30 18.3**	**+1.4**
	20nm,0.5s,baz=272,slow=23,SNR=24						
MSVF	**Nonsavu**	**4.53**	**301**	P	**P**	**12 30 17.9**	**+0.9**
AFI	**Afiamalu**	**8.54**	**44**	P	**P**	**12 30 52.9**	**-1.2**
MARNC	**Mare, Loyalty**	**13.23**	**262**	P	**P**	**12 31 40.3**	**-1.7**
ONTNC	**Ouen Toro**	**14.75**	**259**	P	**P**	**12 31 58.7**	**+0.9**
EIDS	**Eidsvold**	**29.03**	**254**

0.9nm,0.5s,baz=26,slow=3.9,SNR=6.5

LJU ***26*** *13:00:50.1,46˚.39N×15˚.07E,h0km, Confirmed Rockburst*
VIE 26 13:00:49.9±0.4, 46˚.38N×15˚.08E, h0km, mb1.1/2, ml1.0/3, Error ellipse: s-maj=3.0km s-min=1.7km az=2.0 21 km NW of Celje Suspected Mining induced., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOKA	**Soboth**	**0.30**	**353**	*e*Pg	Pg	13 00 55.0	-0.7
	1.9nm,0.2s						
SOKA				*e*Sg	Sg	13 01 00.8	+1.1
	0.9nm,0.2s						
OBKA	**Obir**	**0.39**	**290**	*e*Pg	Pg	13 00 57.2	-0.2
	1.8nm,0.2s						
OBKA				*e*Sg	Sg	13 01 03.7	+1.3
	4.0nm,0.3s						
ARSA	**Arzberg**	**0.93**	**19**	*e*Pg	Pg	13 01 07.7	+0.1
	1.7nm,0.3s						
ARSA				*e*Sg	Sg	13 01 20.4	+0.8
	0.1nm,0.1s						

RHSSO 26 13:01:17.2±0.5, 44˚.88N×16˚.91E, h4km±3km, ML1.2/3, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
A051A	**Mrakovica**	**0.13**	**1**	⇑*i*Pg	Pg	13 01 19.4	-0.5
A051A				*e*Sg	Sg	13 01 22.4	+0.7
BLY	**Banja Luka**	**0.24**	**124**	*e*Pg	Pg	13 01 20.9	-0.9
BLY				*e*Sg	Sg	13 01 26.0	+1.0
A050A	**Klekovaca**	**0.48**	**214**	*e*Pg	Pg	13 01 25.6	-0.8
A050A				*e*Sg	Sg	13 01 32.8	+0.1
MGRS	**Mrkonjic Grad**	**0.48**	**165**	*e*Pg	Pg	13 01 26.7	+0.2
MGRS				*e*Sg	Sg	13 01 33.8	+1.1
SRKY	**Kupres RS**	**0.83**	**167**	*e*Sg	Sg	13 01 43.4	-0.6
BOJS	**Bojanci**	**1.32**	**299**	*e*Pg	Pn	13 01 41.7	-0.7
BOJS				*e*Sg	Sg	13 01 59.4	-0.3

IDC ***26*** *13:04:30.5±1.4,42˚.42N×78˚.45E,h0km,mb3.2/2, mbtmp3.3/6,ML3.0/4,MS3.1/1, Error ellipse: s-maj=21.6km s-min=16.2km az=117.0*
MOS ***26*** *13:04:32.5±0.9,42˚.54N×78˚.50E,h9km,mb4.5/1, Error ellipse: s-maj=6.0km s-min=5.1km az=101.8*
KRNET ***26*** *13:04:32.3±0.1,42˚.50N×78˚.46E,h17km,mb4.5*
SOME ***26*** *13:04:32.0,42˚.45N×78˚.43E,h15km,MS2.6*
NNC ***26*** *13:04:33.3±0.6,42˚.55N×78˚.45E,h0km,mb4.5,mpv4.4, Error ellipse: s-maj=4.6km s-min=2.3km az=161.0*
KNET ***26*** *13:04:33.7±0.3,42˚.49N×78˚.24E,h0km,ml3.6, Error ellipse: s-maj=4.8km s-min=2.2km az=174.0*
ISC 26 13:04:32.7±0.9, 42˚.49N±0˚.03×78˚.39E±0˚.02, h5km±6km, n144, σ1$57/246, mb3.9/3, 19C-42D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.01**	**122**	*i* PG	**Pg**	**13 04 34.4**	**+0.4**
SATY	**Saty**	**0.57**	**1**	*d i*PG	**Pg**	**13 04 43.1**	**-0.6**
SATY				*i* S	**Sg**	**13 04 51.2**	**+0.1**
SATY	**Saty**	**0.57**	**1**	*e*P	**Pg**	**13 04 43.2**	**-0.6**
	259nm,0.1s						
SATY				*e*S	**Sg**	**13 04 51.0**	**-0.2**
	2µm,0.0s						
SATY	**Saty**	**0.57**	**1**	⇓*i*P	**Pg**	**13 04 43.2**	**-0.5**
	baz=351						
SATY				*i* S	**Sg**	**13 04 51.3**	**+0.1**
	baz=351						
SATY	**Saty**	**0.57**	**1**	P	**Pg**	**13 04 43.2**	**-0.5**
	259nm,0.2s						
SATY				S	**Sg**	**13 04 51.0**	**-0.2**
	2µm,0.2s						
SATY	**Saty**	**0.57**	**1**	*e*P	**Pg**	**13 04 43.2**	**-0.5**
	baz=56						
SATY				*e*S	**Sg**	**13 04 51.0**	**-0.2**
	baz=56						
ANVS	**Anan'yevo**	**0.61**	**299**	*e*PG	**Pg**	**13 04 45.1**	**+0.7**
ANVS				*i* S	**Sb**	**13 04 54.0**	**-0.9**
ANVS	**Anan'yevo**	**0.61**	**299**	⇓*e*P	**Pg**	**13 04 45.1**	**+0.7**
	baz=96						
ANVS				⇓*i*S	**Sb**	**13 04 54.0**	**-0.9**
	baz=96						
ZHN	**Zhinishke**	**0.68**	**3**	*i* PG	**Pg**	**13 04 45.1**	**-0.7**
ZHN				*i* S	**Sg**	**13 04 54.6**	**-0.1**
ZHN	**Zhinishke**	**0.68**	**3**	*e*P	**Pg**	**13 04 45.1**	**-0.7**
	157nm,0.2s						
ZHN				*e*S	**Sg**	**13 04 54.5**	**-0.2**
	3µm,0.3s						
ZHN	**Zhinishke**	**0.68**	**3**	*i* P	**Pg**	**13 04 45.1**	**-0.7**
	baz=354						
ZHN				*i* S	**Sg**	**13 04 54.7**	**-0.1**
	baz=354						
ZHN	**Zhinishke**	**0.68**	**3**	P	**Pg**	**13 04 45.1**	**-0.7**
	157nm,0.2s						
ZHN				S	**Sg**	**13 04 54.5**	**-0.2**
	3µm,0.3s						
ZHN	**Zhinishke**	**0.68**	**3**	*e*P	**Pg**	**13 04 45.1**	**-0.7**
	baz=59						
ZHN				*e*S	**Sg**	**13 04 54.5**	**-0.1**
	baz=59						
UZB	**Uzynbulak**	**0.81**	**35**	*i* PG	**Pg**	**13 04 46.6**	**-1.5**
UZB				*e*S	**Sg**	**13 04 57.3**	**-1.4**
UZB	**Uzynbulak**	**0.81**	**35**	*e*P	**Pg**	**13 04 46.7**	**-1.5**
	17nm,0.0s						
UZB				*e*S	**Sg**	**13 04 57.3**	**-1.4**
	420nm,0.0s						
UZB	**Uzynbulak**	**0.81**	**35**	*i* P	**Pg**	**13 04 46.7**	**-1.5**
	baz=28						
UZB				*e*S	**Sg**	**13 04 57.4**	**-1.4**
	baz=28						
UZB	**Uzynbulak**	**0.81**	**35**	P	**Pg**	**13 04 46.7**	**-1.5**
	17nm,0.3s						
UZB				S	**Sg**	**13 04 57.3**	**-1.4**
	426nm,0.2s						
UZB	**Uzynbulak**	**0.81**	**35**	*e*P	**Pg**	**13 04 46.7**	**-1.5**
	baz=33						
UZB				*e*S	**Sg**	**13 04 57.3**	**-1.4**
	baz=33						
KPKS	**Kokpek**	**1.00**	**12**	*d i*PG	**Pb**	**13 04 50.7**	**-1.9**
KPKS				*i* S	**Sb**	**13 05 04.1**	**-2.0**
KPKS	**Kokpek**	**1.00**	**12**	*e*P	**Pb**	**13 04 50.7**	**-1.9**
	252nm,0.0s						
KPKS				*e*S	**Sb**	**13 05 04.1**	**-2.0**
	1µm,0.2s						
KPKS	**Kokpek**	**1.00**	**12**	⇓*i*P	**Pb**	**13 04 50.7**	**-1.9**
	baz=6.4						
KPKS				*i* S	**Sb**	**13 05 04.2**	**-2.0**
	baz=6.4						
KPKS	**Kokpek**	**1.00**	**12**	P	**Pb**	**13 04 50.7**	**-1.9**
	254nm,0.1s						
KPKS				S	**Sb**	**13 05 04.1**	**-2.0**
	1µm,0.2s						
KPKS	**Kokpek**	**1.00**	**12**	*e*P	**Pb**	**13 04 50.7**	**-1.9**
	baz=10.0						
KPKS				*e*S	**Sb**	**13 05 04.1**	**-2.0**
	baz=10.0						
KURS	**Kuram**	**1.01**	**351**	*e*P	**Pb**	**13 04 51.4**	**-1.3**
	78nm,0.2s						
KURS				*e*S	**Sb**	**13 05 05.2**	**-1.1**
	116nm,0.2s						
KURS	**Kuram**	**1.01**	**351**	P	**Pb**	**13 04 51.4**	**-1.3**
	78nm,0.2s						
KURS				S	**Sb**	**13 05 05.2**	**-1.1**
	116nm,0.2s						
KURS	**Kuram**	**1.01**	**351**	*e*P	**Pb**	**13 04 51.4**	**-1.3**
	baz=48						
KURS				*e*S	**Sb**	**13 05 05.2**	**-1.1**
	baz=48						
SHLS	**Shalkode**	**1.03**	**49**	*e*PG	**Pn**	**13 04 55.4**	**+1.5**
SHLS				*e*S	**Sn**	**13 05 12.1**	**+3.3**
SHLS	**Shalkode**	**1.03**	**49**	*e*P	**Pn**	**13 04 55.6**	**+1.6**
	126nm,0.0s						
SHLS				*e*S	**Sn**	**13 05 12.3**	**+3.5**
	435nm,0.4s						
SHLS	**Shalkode**	**1.03**	**49**	*e*P	**Pn**	**13 04 55.5**	**+1.5**
	baz=55						
SHLS				*e*S	**Sn**	**13 05 12.2**	**+3.3**
	baz=55						
SHLS	**Shalkode**	**1.03**	**49**	P	**Pn**	**13 04 55.6**	**+1.6**
	126nm,0.2s						
SHLS				S	**Sn**	**13 05 12.3**	**+3.5**
	429nm,0.5s						
SHLS	**Shalkode**	**1.03**	**49**	*e*P	**Pn**	**13 04 55.6**	**+1.6**
	baz=58						
SHLS				*e*S	**Sn**	**13 05 12.4**	**+3.5**
	baz=58						
MDOK	**Medeo**	**1.19**	**305**	*i* PG	**Pn**	**13 04 55.1**	**-1.0**
MDOK				*e*S	**Sg**	**13 05 12.4**	**+1.3**
MDOK	**Medeo**	**1.19**	**305**	*e*P	**Pn**	**13 04 55.2**	**-1.0**
	519nm,0.1s						
MDOK				*e*S	**Sn**	**13 05 11.7**	**-1.1**
	152nm,0.3s						
MDOK	**Medeo**	**1.19**	**305**	*i* P	**Pn**	**13 04 55.2**	**-1.0**
	baz=303						
MDOK				*e*S	**Sg**	**13 05 12.4**	**+1.3**
	baz=303						
MDOK	**Medeo**	**1.19**	**305**	⇓P	**Pn**	**13 04 55.1**	**-1.0**
	213nm,0.3s						
MDOK				Pg	**Pn**	**13 04 55.2**	**-1.0**
	519nm,0.2s						
MDOK				⇓S	**Sn**	**13 05 11.5**	**-1.3**
	132nm,0.5s						
MDOK				Lg	Lg	13 05 11.7	
	152nm,0.3s						
MDOK	**Medeo**	**1.19**	**305**	*e*P	**Pb**	**13 04 55.2**	**-0.7**
	baz=3.0						
MDOK				*e*S	**Sn**	**13 05 11.7**	**-1.1**
	baz=3.0						
KOTS	**Kotyrbulak**	**1.20**	**309**	*e*P	**Pb**	**13 04 55.3**	**-0.6**
	580nm,0.3s						
KOTS				*e*S	**Sg**	**13 05 12.3**	**+1.1**
	386nm,0.0s						
KOTS	**Kotyrbulak**	**1.20**	**309**	P	**Pb**	**13 04 55.3**	**-0.6**
	574nm,0.3s						
KOTS				S	**Sg**	**13 05 12.3**	**+1.1**
	386nm,0.3s						
KOTS	**Kotyrbulak**	**1.20**	**309**	*e*P	**Pb**	**13 04 55.3**	**-0.6**
	baz=7.0						
KOTS				*e*S	**Sg**	**13 05 12.3**	**+1.1**
	baz=7.0						
KNDC	**Almaty**	**1.27**	**305**	PG	**Pb**	**13 04 56.8**	**-0.4**
KNDC				S	**Sg**	**13 05 15.1**	**+1.4**
KNDC	**Almaty**	**1.27**	**305**	⇓P	**Pb**	**13 04 56.8**	**-0.4**
	216nm,0.5s						
KNDC				⇑S	**Sg**	**13 05 15.1**	**+1.4**
	483nm,0.5s						
AAA	**Alma-Ata**	**1.30**	**304**	*i* PG	**Pg**	**13 04 57.6**	**0.0**
AAA				*e*S	**Sg**	**13 05 15.9**	**+1.4**
AAA	**Alma-Ata**	**1.30**	**304**	*e*P	**Pb**	**13 04 57.4**	**-0.2**
	1µm,0.1s						
AAA				*e*S	**Sg**	**13 05 15.8**	**+1.2**
	420nm,0.0s						
AAA	**Alma-Ata**	**1.30**	**304**	*i* P	**Pg**	**13 04 57.7**	**0.0**
	baz=302						
AAA				*e*S	**Sg**	**13 05 15.9**	**+1.4**
	baz=302						
AAA	**Alma-Ata**	**1.30**	**304**	*e*P	**Pb**	**13 04 57.4**	**-0.2**
	baz=2.0						
AAA				*e*S	**Sg**	**13 05 15.7**	**+1.2**
	baz=2.0						
MTBS	**Maitube**	**1.58**	**295**	*e*P	**Pb**	**13 05 01.9**	**-0.5**
	124nm,0.1s						
MTBS				*e*S	**Sg**	**13 05 23.5**	**+0.1**
	314nm,0.3s						
MTBS	**Maitube**	**1.58**	**295**	P	**Pb**	**13 05 01.9**	**-0.5**
	124nm,0.5s						
MTBS				S	**Sg**	**13 05 23.5**	**+0.1**
	314nm,0.3s						
MTBS	**Maitube**	**1.58**	**295**	*e*P	**Pb**	**13 05 01.9**	**-0.5**
	baz=93						
MTBS				*e*S	**Sg**	**13 05 23.5**	**+0.1**
	baz=93						
BLB	**Baldybastay**	**1.61**	**2**	*e*P	**Pb**	**13 05 02.0**	**-1.0**
	910nm,0.3s						
BLB				*e*S	**Sb**	**13 05 23.3**	**-0.3**
	2µm,0.3s						
BLB	**Baldybastay**	**1.61**	**2**	P	**Pb**	**13 05 02.0**	**-1.0**
	910nm,0.3s						
BLB				S	**Sb**	**13 05 23.3**	**-0.3**
	2µm,0.3s						
ULHL	**Ulahol**	**1.61**	**262**	⇓P	**Pb**	**13 05 02.3**	**-0.7**
	76nm,0.1s,SNR=36						
ULHL				⇓S	**Sg**	**13 05 24.7**	**+0.3**
	365nm,0.2s						
ULHL	**Ulahol**	**1.61**	**262**	*e*PN	**Pb**	**13 05 02.6**	**-0.4**
ULHL				*e*S	**Sg**	**13 05 24.7**	**+0.3**
ULHL	**Ulahol**	**1.61**	**262**	⇓*e*P	**Pb**	**13 05 02.6**	**-0.4**
	baz=62						
ULHL				⇓*e*S	**Sg**	**13 05 24.7**	**+0.3**
	baz=62						
CHKK	**Chushkaly**	**1.71**	**324**	⇓*i*PN	**Pb**	**13 05 04.1**	**-0.4**
CHKK				*e*S	**Sg**	**13 05 27.3**	**-0.2**
CHKK	**Chushkaly**	**1.71**	**324**	*e*P	**Pb**	**13 05 04.2**	**-0.4**
	554nm,0.1s						
CHKK				*e*S	**Sg**	**13 05 27.5**	**0.0**
	525nm,0.1s						
CHKK	**Chushkaly**	**1.71**	**324**	⇓*i*P	**Pb**	**13 05 04.1**	**-0.4**
	baz=322						
CHKK				*e*S	**Sg**	**13 05 27.4**	**-0.2**
	baz=322						
CHKK	**Chushkaly**	**1.71**	**324**	P	**Pb**	**13 05 04.2**	**-0.4**
	514nm,0.3s						
CHKK				S	**Sg**	**13 05 27.5**	**0.0**
	525nm,0.3s						
CHKK	**Chushkaly**	**1.71**	**324**	*e*P	**Pb**	**13 05 04.2**	**-0.4**
	baz=22						
CHKK				*e*S	**Sg**	**13 05 27.5**	**0.0**
	baz=22						
KTBS	**Karatobe**	**1.75**	**315**	*e*P	**Pb**	**13 05 05.2**	**-0.1**
	363nm,0.4s						
KTBS				*e*S	**Sg**	**13 05 29.2**	**+0.3**
	676nm,0.5s						
KTBS	**Karatobe**	**1.75**	**315**	P	**Pb**	**13 05 05.2**	**-0.1**
	363nm,0.4s						
KTBS				S	**Sg**	**13 05 29.2**	**+0.3**
	676nm,0.5s						
KTBS	**Karatobe**	**1.75**	**315**	*e*P	**Pb**	**13 05 05.2**	**-0.1**
	baz=14						
KTBS				*e*S	**Sg**	**13 05 29.2**	**+0.3**
	baz=14						
ARXS	**Arharly**	**1.77**	**347**	*e*P	**Pb**	**13 05 05.1**	**-0.6**
	434nm,0.3s						
ARXS				*e*S	**Sb**	**13 05 28.9**	**+0.7**
	726nm,0.1s						
ARXS	**Arharly**	**1.77**	**347**	P	**Pb**	**13 05 05.1**	**-0.6**
	434nm,0.3s						
ARXS				S	**Sb**	**13 05 28.9**	**+0.7**
	726nm,0.6s						
KST	**Kastek**	**1.87**	**288**	*e*P	**Pb**	**13 05 07.1**	**-0.3**
	396nm,0.1s						
KST				*e*S	**Sg**	**13 05 32.4**	**-0.4**
	400nm,0.2s						
KST	**Kastek**	**1.87**	**288**	P	**Pb**	**13 05 07.1**	**-0.3**
	396nm,0.4s						
KST				S	**Sg**	**13 05 32.4**	**-0.4**
	402nm,0.6s						
KST	**Kastek**	**1.87**	**288**	*e*P	**Pb**	**13 05 07.1**	**-0.3**
	baz=87						
KST				*e*S	**Sg**	**13 05 32.4**	**-0.4**
	baz=87						
KNOS	**Konyrlen**	**1.96**	**17**	*e*P	**Pb**	**13 05 07.8**	**-1.0**
	86nm,0.0s						
KNOS				*e*S	**Sb**	**13 05 33.4**	**-0.2**
	516nm,0.1s						
KUU	**Kurty**	**2.05**	**314**	*e*PN	**Pb**	**13 05 09.9**	**-0.6**
KUU				*e*		13 05 38.2	
KUU	**Kurty**	**2.05**	**314**	*e*P	**Pb**	**13 05 10.2**	**-0.2**
	612nm,0.1s						
KUU				*e*S	**Sg**	**13 05 37.9**	**-0.8**
	310nm,0.2s						
KUU	**Kurty**	**2.05**	**314**	*e*Pb	**Pb**	**13 05 09.9**	**-0.6**
	baz=312						
KUU				*e*Sb	**Sg**	**13 05 38.2**	**-0.5**
	baz=312						
KUU	**Kurty**	**2.05**	**314**	Pg	**Pb**	**13 05 10.2**	**-0.2**
	612nm,0.3s						
KUU				Lg	Lg	13 05 37.9	
	302nm,0.3s						
DGS	**Degeres**	**2.06**	**292**	*e*P	**Pb**	**13 05 11.1**	**+0.4**
	210nm,0.1s						
DGS				*e*S	**Sg**	**13 05 39.2**	**+0.1**
	465nm,0.4s						
DGS	**Degeres**	**2.06**	**292**	Pg	**Pb**	**13 05 11.1**	**+0.4**
	207nm,0.4s						
DGS				Lg	Lg	13 05 39.2	
	465nm,0.4s						
TKM2	**Tokmak 2**	**2.10**	**283**	⇑P	**Pb**	**13 05 11.3**	**-0.2**
	159nm,0.4s,SNR=85						
TKM2				⇑S	**Sg**	**13 05 39.8**	**-0.5**
	450nm,0.2s						
TKM2	**Tokmak 2**	**2.10**	**283**	*e*PN	**Pb**	**13 05 11.0**	**-0.4**
TKM2	**Tokmak 2**	**2.10**	**283**	⇓Pn	**Pb**	**13 05 11.0**	**-0.4**
	92nm,0.7s						
TKM2				⇓Sn	**Sg**	**13 05 39.6**	**-0.7**
	190nm,0.4s						
TKM2	**Tokmak 2**	**2.10**	**283**	⇓*e*P	**Pb**	**13 05 11.0**	**-0.4**
	baz=82						
TKM2				⇓*e*S	**Sb**	**13 05 39.0**	**+1.1**
	baz=82						
DJR	**Jarkent**	**2.11**	**29**	*e*P	**Pb**	**13 05 10.2**	**-1.2**
	82nm,0.2s						
DJR				*e*S	**Sb**	**13 05 37.6**	**-0.2**
	626nm,0.0s						
DJR	**Jarkent**	**2.11**	**29**	Pg	**Pb**	**13 05 10.2**	**-1.2**
	82nm,0.2s						
DJR				Lg	Lg	13 05 37.6	
	626nm,0.3s						
KRBS	**Karabastau**	**2.33**	**302**	*e*P	**Pb**	**13 05 14.8**	**-0.3**
	372nm,0.1s						
KRBS				*e*S	**Sb**	**13 05 45.7**	**+1.6**
	424nm,0.1s						
KRBS	**Karabastau**	**2.33**	**302**	Pg	**Pb**	**13 05 14.8**	**-0.3**
	372nm,0.4s						
KRBS				Lg	Lg	13 05 45.7	
	425nm,0.6s						
TDK	**Taldyqorghan**	**2.51**	**0**	*e*PN	**Pn**	**13 05 13.9**	**-0.2**
TDK				*e*		13 05 18.9	
TDK				*e*		13 05 51.0	
TDK	**Taldyqorghan**	**2.51**	**0**	*e*P	**Pb**	**13 05 17.6**	**-0.7**
	110nm,0.3s						
TDK				*e*S	**Sb**	**13 05 50.5**	**+1.0**
	473nm,0.1s						
TDK	**Taldyqorghan**	**2.51**	**0**	*e*Pn	**Pn**	**13 05 14.0**	**-0.2**
	baz=358						
TDK				*e*Pg	**Pb**	**13 05 19.0**	**+0.7**
	baz=358						
TDK				*e*Sb	**Sb**	**13 05 51.0**	**+1.5**
	baz=358						
TDK	**Taldyqorghan**	**2.51**	**0**	Pg	**Pb**	**13 05 17.6**	**-0.7**
	110nm,0.3s						
TDK				Lg	Lg	13 05 50.5	
	459nm,0.6s						
KBK	**Karagaybulak**	**2.55**	**275**	⇓P	**Pb**	**13 05 17.6**	**-1.3**
	72nm,0.2s,SNR=60						
KBK				⇑S	**Sb**	**13 05 52.4**	**+1.8**
	220nm,0.3s						
KBK	**Karagaybulak**	**2.55**	**275**	*i* PN	**Pb**	**13 05 17.2**	**-1.8**
KBK				*e*S	**Sb**	**13 05 49.6**	**-1.0**
KBK	**Karagaybulak**	**2.55**	**275**	⇑*e*P	**Pb**	**13 05 17.2**	**-1.8**
	baz=75						
KBK				⇑*e*S	**Sb**	**13 05 49.6**	**-1.0**
	baz=75						
CHMS	**Chumysh**	**2.73**	**282**	⇑P	**Pb**	**13 05 20.1**	**-1.8**
	46nm,0.3s,SNR=29						
CHMS				⇑S	**Sb**	**13 05 56.3**	**+0.6**
	187nm,0.6s						
CHMS	**Chumysh**	**2.73**	**282**	*e*PN	**Pb**	**13 05 19.6**	**-2.3**
CHMS	**Chumysh**	**2.73**	**282**	⇑Pn	**Pb**	**13 05 20.3**	**-1.6**
	35nm,0.5s						
CHMS				⇓Sn	**Sb**	**13 05 57.2**	**+1.5**
	84nm,0.5s						
CHMS	**Chumysh**	**2.73**	**282**	⇓*e*P	**Pb**	**13 05 19.6**	**-2.3**
	baz=82						
CHMS				⇓*e*S	**Sb**	**13 05 53.7**	**-2.0**
	baz=82						
FRU1	**Bishkek**	**2.79**	**278**	*i* PN	**Pb**	**13 05 20.7**	**-2.4**
FRU1				*e*S	**Sb**	**13 05 55.5**	**-2.0**
FRU1	**Bishkek**	**2.79**	**278**	⇓*e*P	**Pb**	**13 05 20.7**	**-2.4**
	baz=78						
FRU1				⇓*e*S	**Sb**	**13 05 55.5**	**-2.0**
	baz=78						
AAK	**Ala-Archa**	**2.88**	**274**	⇑P	**Pb**	**13 05 21.9**	**-2.8**
	22nm,0.2s,SNR=24						
AAK				⇓S	**Sb**	**13 06 00.2**	**0.0**
	124nm,0.4s						
AAK	**Ala-Archa**	**2.88**	**274**	*i* PN	**Pb**	**13 05 21.6**	**-3.0**
AAK	**Ala-Archa**	**2.88**	**274**	⇑*i*P	**Pb**	**13 05 21.8**	**-2.8**
	baz=74						
AAK				⇑*e*S	**Sb**	**13 05 57.6**	**-2.6**
	baz=74						
SGDS	**Sogindy**	**2.92**	**291**	*e*PN	**Pb**	**13 05 21.8**	**-3.4**
SGDS				*e*		13 06 04.7	
SGDS	**Sogindy**	**2.92**	**291**	*e*P	**Pb**	**13 05 25.6**	**+0.3**
	41nm,0.3s						
SGDS				*e*S	**Sg**	**13 06 04.0**	**-2.5**
	103nm,0.6s						
SGDS	**Sogindy**	**2.92**	**291**	*e*Pn	**Pb**	**13 05 21.9**	**-3.4**
	baz=290						
SGDS				*e*Pb	Pg	13 05 24.6	-4.1
	baz=290						
SGDS				*e*Sb	**Sg**	**13 06 04.7**	**-1.8**
	baz=290						
SGDS	**Sogindy**	**2.92**	**291**	Pg	**Pb**	**13 05 25.6**	**+0.3**
	41nm,0.3s						
SGDS				Lg	Lg	13 06 04.0	
	103nm,0.6s						
USP	**Ospenovka**	**2.96**	**287**	⇑P	**Pb**	**13 05 22.9**	**-3.1**
	46nm,0.2s,SNR=14						
USP	**Ospenovka**	**2.96**	**287**	*e*PN	**Pb**	**13 05 22.6**	**-3.4**
USP	**Ospenovka**	**2.96**	**287**	⇓*e*P	**Pb**	**13 05 22.6**	**-3.4**
	baz=86						
USP				⇓*e*S	**Sb**	**13 05 59.4**	**-3.0**
	baz=86						
EKS2	**Erkin-Say**	**3.41**	**274**	⇓P	**Pb**	**13 05 29.9**	**-3.7**
	21nm,0.3s,SNR=12						
EKS2	**Erkin-Say**	**3.41**	**274**	*e*PN	**Pn**	**13 05 29.0**	**+2.4**
EKS2	**Erkin-Say**	**3.41**	**274**	⇓*e*P	**Pn**	**13 05 29.0**	**+2.4**
	baz=74						
EKS2				⇓*e*S	**Sn**	**13 06 10.2**	**+2.7**
	baz=74						
AML	**Almayashu**	**3.50**	**266**	*e*PN	**Pn**	**13 05 30.5**	**+2.4**
AML				*e*S	**Sn**	**13 06 12.7**	**+2.7**
BTLS	**Baital**	**4.05**	**311**	*i* PN	**Pn**	**13 05 37.2**	**+1.9**
BTLS				*e*		13 05 46.5	
BTLS				*e*		13 06 38.2	
BTLS	**Baital**	**4.05**	**311**	*i* Pn	**Pn**	**13 05 37.2**	**+1.9**
	baz=310						
BTLS				*e*Pb	**Pb**	**13 05 44.5**	**0.0**
	baz=310						
BTLS				*e*Pg	**Pg**	**13 05 46.5**	**-3.8**
	baz=310						
BTLS				*e*Sb	**Sb**	**13 06 38.3**	**+4.6**
	baz=310						
MAKZ	**Makanchi**	**5.02**	**29**	PN	**Pn**	**13 05 50.1**	**+1.5**
MAKZ				S	**Sn**	**13 06 48.6**	**+1.6**
MAKZ	**Makanchi**	**5.02**	**29**	⇓Pn	**Pn**	**13 05 50.1**	**+1.5**
	2.2nm,0.3s						
MAKZ				⇑Sn	**Sn**	**13 06 48.6**	**+1.6**
	6.1nm,0.6s						
MAKZ				⇑Lg	Lg	13 07 09.5	
	9.9nm,0.5s						
MK31	**Makanchi Array**	**5.13**	**32**	*d i*PN	**Pn**	**13 05 50.9**	**+0.8**
MK31	**Makanchi Array**	**5.13**	**32**	⇓Pn	**Pn**	**13 05 51.2**	**+1.2**
	1.1nm,0.2s,baz=214,slow=12,SNR=78						
MK31				⇓Sn	**Sn**	**13 06 50.5**	**+1.0**
	15nm,0.6s,baz=212,slow=24,SNR=6.3						
MK31				⇓Lg	Lg	13 07 11.2	
	9.1nm,0.5s,baz=210,slow=29,SNR=8.4						
MKAR	**Makanchi Array**	**5.13**	**32**	Pn	**Pn**	**13 05 51.0**	**+1.0**
	1.0nm,0.3s,baz=211,slow=14,SNR=50						
MKAR				Sn	**Sn**	**13 06 50.1**	**+0.5**
	3.9nm,0.3s,baz=209,slow=24,SNR=12						
MKAR			

ZSN	**Zaisan**	**6.76**	**41**	*e*Pn	**Pn**	**13 06 11.6**	**-1.0**
	baz=40							
ZSN				*e*Sn	**Sn**	**13 07 28.8**	**-1.0**
	baz=40							
OTUK	**Ortayu**	**7.16**	**326**	PN	**Pn**	**13 06 18.5**	**+0.5**
OTUK	**Ortayu**	**7.16**	**326**	⇓Pn	**Pn**	**13 06 18.5**	**+0.5**
	2.9nm,0.6s							
OTUK				⇑Lg	Lg	13 08 18.2		
	12nm,0.5s							
KURBB	**Kurchatov Arra**	**8.14**	**1**	Pn	**Pn**	**13 06 31.2**	**-0.1**
	0.1nm,0.3s,baz=178,slow=12,SNR=4.1							
KURBB				Lg	Lg	13 08 46.1		
	0.3nm,0.3s,baz=187,slow=28,SNR=9.8							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**8.14**	**1**	P	**Pn**	**13 06 33.6**	**+2.3**
KURBB	**Kurchatov Arra**	**8.14**	**1**	⇓Pn	**Pn**	**13 06 33.6**	**+2.3**
	2.4nm,1.1s							
KURBB				⇓Lg	Lg	13 08 45.6		
	40nm,0.7s							
KURK	**Kurchatov**	**8.23**	**1**	*i* P	**Pn**	**13 06 33.4**	**+0.8**
KURK	**Kurchatov**	**8.23**	**1**	⇓Pn	**Pn**	**13 06 33.5**	**+0.8**
	2.1nm,1.1s							
KURK				⇑Lg	Lg	13 08 50.7		
	8.7nm,0.6s							
BRZS	**Berezniki**	**8.47**	**334**	*e*P	**Pn**	**13 06 36.0**	**0.0**
BRZS	**Berezniki**	**8.47**	**334**	*e*Pn	**Pn**	**13 06 36.0**	**0.0**
	baz=334							
DGZ	**Jazzator, Alta**	**9.56**	**38**	*i* P	**Pn**	**13 06 52.3**	**+1.3**
DGZ				pmax	pmax			
	comp=Z,1.0nm,1.0s							
BVAR	**Borovoye Array**	**11.83**	**336**	Pn	**Pn**	**13 07 20.0**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=148,slow=14,SNR=5.9							
BVAR				Lg	Lg	13 10 47.7		
	comp=Z,0.3nm,0.3s,baz=128,slow=35,SNR=4.3							
	comp=Z,0.5nm,0.3s							
BRVK	**Borovoye**	**11.89**	**336**	*i* P	**Pn**	**13 07 22.3**	**-0.4**
ZALV	**Zalesovo Beam**	**12.23**	**18**	Pn	**Pn**	**13 07 27.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=213,slow=15,SNR=2.9							
	comp=Z,0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**12.23**	**18**	*i* P	Pn	13 07 32.9	+5.5	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**20.40**	**65**	P	Pn	13 09 09.6	-2.9	
	comp=Z,0.4nm,0.5s,baz=255,slow=10,SNR=2.8							
	comp=Z,0.4nm,0.5s							
KIV	**Kislovodsk**	**25.94**	**286**	*e*P	**P**	**13 10 07.7**	**+1.9**
KIV				pmax	pmax			
	comp=Z,7.0nm,1.0s							
ZEA	**Zeya**	**33.86**	**53**	*e*P	P	13 11 18.8	+3.0	
HFS	**Hagfors**	**42.20**	**318**	LR	LR	13 32 21.4		
	comp=Z,25nm,18.9s,baz=176,slow=40							
TORD	**Torodi Ar. Bea**	**71.46**	**271**	P	**P**	**13 15 53.0**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=40,slow=4.4,SNR=3.8							
WRA	**Warramunga Arr**	**80.71**	**128**	*i* P	**P**	**13 16 49.0**	**+2.1**
ASAR	**Alice Springs**	**83.38**	**130**	P	**P**	**13 16 59.1**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=332,slow=5.5,SNR=4.9							
	comp=Z,0.3nm,0.8s							

ROM 26 13:34:34.1±0.1, 42°622N±0°004×13°317E±0°006, h8km, ML2.5/11, 5C-4D, Error ellipse: s-maj=0.5km s-min=0.1km az=237.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.11**	**142**	P		P	Pg	13 34 37.3	+0.6
CAMP				S		S	Sg	13 34 39.4	+0.8
CAMP				AML		AML			
	comp=E,5530μm,0.2s								
CAMP				AML		AML			
	comp=N,3710μm,0.7s								
T1243	**Rocca Santa Ma**	**0.12**	**52**	⇑P		Pg		13 34 37.6	+0.6
T1243				S		Sg		13 34 39.5	+0.5
T1243				AML		AML			
	comp=N,6945μm,0.3s								
T1243				AML		AML			
	comp=E,6245μm,0.4s								
T1243				AML		AML			
	comp=N,6950μm,0.3s								
T1243				AML		AML			
	comp=N,7070μm,0.3s								
T1243				AML		AML			
	comp=E,6435μm,0.4s								
T1243				AML		AML			
	comp=N,6950μm,0.3s								
RM33	**Pellescritta (**	**0.14**	**214**	⇑P		Pg		13 34 38.0	+0.9
RM33				S		Sg		13 34 40.4	+1.2
RM33				AML		AML			
	comp=E,5775μm,0.7s								
RM33				AML		AML			
	comp=N,6890μm,0.3s								
RM33				AML		AML			
	comp=N,7165μm,0.3s								
RM33				AML		AML			
	comp=E,5520μm,0.7s								
RM33				AML		AML			
	comp=N,6890μm,0.3s								
RM33				AML		AML			
	comp=N,7170μm,0.3s								
RM33				AML		AML			
	comp=E,5525μm,0.7s								
RM33				AML		AML			
	comp=E,5780μm,0.7s								
LNSS	**Leonessa**	**0.20**	**265**	P		Pg		13 34 39.2	+0.8
LNSS				S		Sg		13 34 42.8	+1.6
LNSS				AML		AML			
	comp=N,1975μm,0.7s								
LNSS				AML		AML			
	comp=E,1955μm,0.7s								
LNSS				AML		AML			
	comp=N,1980μm,0.7s								
LNSS				AML		AML			
	comp=N,3435μm,0.1s								
LNSS				AML		AML			
	comp=E,3430μm,0.2s								
TERO	**Teramo**	**0.21**	**90**	⇑P		Pg		13 34 38.9	+0.5
TERO				S		Sg		13 34 42.2	+0.8
TERO				AML		AML			
	comp=E,1785μm,0.9s								
TERO				AML		AML			
	comp=N,2225μm,0.5s								
GIGS	**Gran Sasso**	**0.25**	**133**	P		Pg		13 34 39.5	+0.3
GIGS				S		Sg		13 34 43.5	+0.8
GIGS				AML		AML			
	comp=N,436μm,0.1s								
GIGS				AML		AML			
	comp=E,612μm,1.2s								
GIGS				AML		AML			
	comp=N,436μm,0.1s								
NRCA	**Norcia**	**0.26**	**325**	P		Pg		13 34 40.0	+0.7
NRCA				S		Sg		13 34 44.2	+1.4
NRCA				AML		AML			
	comp=E,85350μm,0.2s								
NRCA				AML		AML			
	comp=N,55350μm,0.5s								
NRCA				AML		AML			
	comp=N,62000μm,0.5s								
NRCA				AML		AML			
NRCA				AML		AML			
	comp=E,85250μm,0.1s								
MMO1	**Montemonaco**	**0.28**	**2**	P		Pg		13 34 40.5	+0.8
MMO1				S		Sb		13 34 45.0	-1.3
MC2	**Monte Cornacci**	**0.30**	**342**	P		Pb		13 34 41.1	-0.8
MC2				S		Sb		13 34 46.2	-1.1
FIAM	**Fiamignano**	**0.38**	**203**	P		Pg		13 34 42.0	+0.4
FIAM				AML		AML			
	comp=N,366μm,1.3s								
FIAM				AML		AML			
	comp=E,664μm,0.6s								
FIAM				AML		AML			
	comp=N,366μm,1.3s								
FAGN	**Fagnano**	**0.41**	**151**	P		Pb		13 34 43.4	-0.2
FAGN				S		Sb		13 34 49.0	-1.0
FAGN				AML		AML			
	comp=N,908μm,0.3s								
FAGN				AML		AML			
	comp=E,1010μm,1.0s								
ARRO	**Arrone**	**0.41**	**264**	P		Pg		13 34 42.5	+0.4
ARRO				AML		AML			
	comp=E,200μm,0.7s								
ARRO				AML		AML			
	comp=N,254μm,1.1s								
ARRO				AML		AML			
	comp=N,856μm,0.6s								
ARRO				AML		AML			
	comp=E,556μm,0.2s								
OFFI	**Offida**	**0.41**	**41**	⇑P		Pb		13 34 43.5	-0.2
OFFI				AML		AML			
	comp=E,1640μm,0.7s								
OFFI				AML		AML			
	comp=N,2210μm,0.6s								
GUMA	**Gualdo di Mace**	**0.44**	**2**	P		Pb		13 34 43.5	-0.6
GUMA				S		Sb		13 34 50.9	-0.1
FDMO	**Fiordimonte**	**0.45**	**338**	P		Pg		13 34 43.5	+0.6
FDMO				S		Sb		13 34 50.2	-0.9
VCEL	**Villa Celiera**	**0.45**	**120**	P		Pg		13 34 43.4	+0.6
VCEL				S		Sb		13 34 51.0	-0.2
VCEL				AML		AML			
	comp=E,1150μm,0.9s								
VCEL				AML		AML			
	comp=N,922μm,1.4s								
VCEL				AML		AML			
	comp=E,1152μm,0.9s								
VCEL				AML		AML			
	comp=N,920μm,1.4s								
CSP1	**Cessapalombo**	**0.48**	**350**	P		Pg		13 34 43.8	+0.4
CSP1				S		Sb		13 34 51.4	-0.7
TRTR	**Tortoreto Alta**	**0.48**	**67**	P		Pb		13 34 44.9	+0.2
TRTR				AML		AML			
	comp=E,956μm,0.4s								
TRTR				AML		AML			
	comp=N,794μm,1.4s								
TRTR				AML		AML			
	comp=E,955μm,0.4s								
CESI	**CESI - Serrava**	**0.49**	**322**	P		Pg		13 34 43.9	+0.3
CESI				S		Sb		13 34 51.6	-0.8
T0110	**Collepietro**	**0.52**	**139**	P		Pg		13 34 44.4	+0.1
T0110				S		Sb		13 34 52.7	-0.6
T0110				AML		AML			
	comp=E,710μm,0.8s								
T0110				AML		AML			
	comp=N,684μm,1.6s								
T0110				AML		AML			
	comp=E,710μm,0.8s								
CESX	**Cesi**	**0.54**	**269**	P		Pg		13 34 44.8	+0.1
CESX				AML		AML			
	comp=E,186μm,0.5s								
CESX				AML		AML			
	comp=N,265μm,0.3s								
CESX				AML		AML			
	comp=E,494μm,0.3s								
CESX				AML		AML			
	comp=N,436μm,0.2s								
ASSB	**Assisi San Ben**	**0.64**	**311**	P		Pb		13 34 47.3	-0.3
ASSB				AML		AML			
	comp=E,289μm,0.4s								
ASSB				AML		AML			
	comp=N,316μm,0.3s								
ASSB				AML		AML			
	comp=N,753μm,0.8s								
ASSB				AML		AML			
	comp=E,711μm,0.3s								
SRES	**S.Oreste - Sor**	**0.71**	**237**	P		Pg		13 34 44.2	-3.6
SRES				S		Sb		13 34 60.0	+1.3
SRES				AML		AML			
	comp=E,103μm,0.3s								
SRES				AML		AML			
	comp=N,156μm,0.4s								
MTCE	**Montecelio**	**0.73**	**216**	⇓P		Pn		13 34 50.8	0.0
MTCE				AML		AML			
	comp=N,90μm,0.5s								
MTCE				AML		AML			
	comp=E,194μm,0.6s								
MTCE				AML		AML			
	comp=N,90μm,0.5s								
INTR	**Introdacqua**	**0.75**	**144**	⇓P		Pg		13 34 48.0	-0.5
INTR				AML		AML			
	comp=E,117μm,0.3s								
INTR				AML		AML			
	comp=N,176μm,0.9s								
CING	**Cingoli**	**0.76**	**353**	⇓P		Pg		13 34 43.6	-5.2
CING				AML		AML			
	comp=E,208μm,0.4s								
CING				AML		AML			
	comp=N,124μm,1.2s								
CING				AML		AML			
	comp=N,205μm,1.1s								
MGAB	**Montegabbione**	**0.93**	**289**	⇑P		Pb		13 34 52.5	-0.1
SACS	**San Casciano d**	**1.06**	**283**	⇓P		Pn		13 34 56.0	+0.6
SACS				AML		AML			
	comp=E,83μm,0.7s								
SACS				AML		AML			
	comp=N,97μm,0.8s								

ROM 26 13:35:30.1±0.1, 42°811N±0°003×13°174E±0°005, h10km, ML2.3/34, 11C-15D, Error ellipse: s-maj=0.4km s-min=0.1km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05**	**297**	⇑P		Pg		13 35 32.6	+0.4
NRCA				S		Sg		13 35 33.9	+0.3
NRCA				AML		AML			
	comp=E,85200μm,0.2s								
NRCA				AML		AML			
	comp=E,85450μm,0.2s								
NRCA				AML		AML			
	comp=N,55350μm,0.5s								
NRCA				AML		AML			
NRCA				AML		AML			
	comp=E,85350μm,0.2s								
NRCA				AML		AML			
	comp=N,62000μm,0.5s								
NRCA				AML		AML			
	comp=E,85250μm,0.1s								
NRCA				AML		AML			
	comp=N,55350μm,0.5s								
MC2	**Monte Cornacci**	**0.10**	**7**	P		Pg		13 35 33.4	+0.5
MC2				S		Sg		13 35 35.6	+0.7
MC2				AML		AML			
	comp=E,6205μm,1.2s								
MC2				AML		AML			
	comp=N,6120μm,1.2s								
MC2				AML		AML			
	comp=N,6115μm,1.2s								
MC2				AML		AML			
	comp=E,6210μm,1.2s								
MMO1	**Montemonaco**	**0.14**	**52**	⇓P		Pg		13 35 34.0	+0.6
MMO1				S		Sg		13 35 36.5	+0.9
MMO1				AML		AML			
	comp=E,3690μm,0.4s								
MMO1				AML		AML			
	comp=N,3450μm,0.3s								
MMO1				AML		AML			
	comp=N,3455μm,0.3s								
FEMA	**Monte Fema**	**0.18**	**329**	⇑P		Pg		13 35 34.5	+0.5
FEMA				S		Sg		13 35 37.6	+0.9
LNSS	**Leonessa**	**0.23**	**205**	⇓P		Pg		13 35 35.7	+0.8
LNSS				S		Sg		13 35 39.8	+1.7
LNSS				AML		AML			
	comp=N,3435μm,0.1s								
LNSS				AML		AML			
	comp=E,3430μm,0.2s								
T1243	**Rocca Santa Ma**	**0.23**	**119**	P		Pg		13 35 35.6	+0.7
T1243				S		Sg		13 35 39.5	+1.4
T1243				AML		AML			
	comp=E,4260μm,1.4s								
T1243				AML		AML			
	comp=E,4255μm,1.4s								
T1243				AML		AML			
	comp=N,5060μm,0.2s								
T1243				AML		AML			
	comp=N,5050μm,0.2s								
T1243				AML		AML			
	comp=E,4250μm,1.4s								
T1243				AML		AML			
	comp=E,4260μm,1.4s								
FDMO	**Fiordimonte**	**0.23**	**344**	P		Pg		13 35 35.4	+0.4
FDMO				S		Sg		13 35 39.2	+1.0
FDMO				AML		AML			
	comp=N,1077μm,0.2s								
FDMO				AML		AML			
	comp=E,1275μm,1.1s								
CESI	**CESI - Serrava**	**0.28**	**314**	P		Pg		13 35 36.2	+0.5
CESI				S		Sg		13 35 40.7	+1.2
CESI				AML		AML			
	comp=E,2900μm,0.6s								
CESI				AML		AML			
	comp=N,4425μm,0.3s								
GUMA	**Gualdo di Mace**	**0.28**	**25**	P		Pb		13 35 36.6	-0.7
GUMA				S		Sb		13 35 41.4	-0.7
GUMA				AML		AML			
	comp=N,3035μm,0.6s								
GUMA				AML		AML			
	comp=E,3220μm,0.3s								
GUMA				AML		AML			
	comp=N,3040μm,0.6s								
GUMA				AML		AML			
	comp=E,2800μm,0.4s								
GUMA				AML		AML			
	comp=N,3405μm,0.6s								
CSP1	**Cessapalombo**	**0.28**	**5**	P		Pg		13 35 36.4	+0.5
CSP1				S		Sg		13 35 40.9	+1.2
CSP1				AML		AML			
	comp=E,994μm,0.5s								
CSP1				AML		AML			
	comp=N,1282μm,0.3s								
CSP1				AML		AML			
	comp=N,1285μm,1.1s								
CSP1				AML		AML			
	comp=E,995μm,0.5s								
RM33	**Pellescritta (**	**0.30**	**174**	P		Pg		13 35 37.0	+0.7
RM33				S		Sb		13 35 42.1	-0.8
RM33				AML		AML			
	comp=E,628μm,0.9s								
RM33				AML		AML			
	comp=N,1081μm,0.2s								
RM33				AML		AML			
	comp=E,628μm,0.9s								
RM33				AML		AML			
	comp=N,1084μm,0.2s								
CAMP	**Campotosto**	**0.33**	**148**	⇑P		Pg		13 35 37.1	+0.5
CAMP				S		Sb		13 35 42.4	-1.1
TERO	**Teramo**	**0.37**	**121**	⇑P		Pg		13 35 37.7	+0.3
TERO				S		Sb		13 35 43.8	-0.9
TERO				AML		AML			
	comp=E,1033μm,0.1s								
TERO				AML		AML			
	comp=N,994μm,1.6s								
SEF1	**Sefro**	**0.38**	**334**	⇓P		Pg		13 35 37.9	+0.4
SEF1				S		Sb		13 35 44.1	-0.8
SEF1				AML		AML			
	comp=E,2580μm,1.3s								
SEF1				AML		AML			
	comp=N,1715μm,1.6s								
ARRO	**Arrone**	**0.38**	**233**	⇓P		Pg		13 35 38.2	+0.6
ARRO				S		Sb		13 35 44.4	-0.6
ARRO				AML		AML			
	comp=N,856μm,0.6s								
ARRO				AML		AML			
	comp=E,556μm,0.2s								
ARRO				AML		AML			
	comp=N,856μm,0.6s								
OFFI	**Offida**	**0.40**	**72**	P		Pb		13 35 39.2	-0.1
OFFI				AML		AML			
	comp=E,696μm,0.6s								
OFFI				AML		AML			
	comp=N,712μm,0.4s								
ASSB	**Assisi San Ben**	**0.44**	**302**	⇑P		Pg		13 35 39.0	+0.2
ASSB				S		Sb		13 35 45.8	-1.1
ASSB				AML		AML			
	comp=E,711μm,0.3s								
ASSB				AML		AML			
	comp=N,753μm,0.8s								
GIGS	**Gran Sasso**	**0.46**	**141**	⇓P		Pg		13 35 39.2	+0.1
GIGS				S		Sg		13 35 46.3	+1.0
GIGS				AML		AML			
	comp=N,146μm,0.5s								
GIGS				AML		AML			
	comp=E,141μm,1.3s								
SNTG	**Esanatoglia**	**0.48**	**339**	P		Pg		13 35 39.7	+0.3
SNTG				S		Sb		13 35 47.2	-0.6
SNTG				AML		AML			
	comp=N,352μm,1.2s								
SNTG				AML		AML			
	comp=E,254μm,0.9s								
CESX	**Cesi**	**0.48**	**246**	⇓P		Pb		13 35 40.3	-0.5
CESX				AML		AML			
	comp=N,436μm,0.2s								
CESX				AML		AML			
	comp=E,494μm,0.3s								
EL6	**Elcito**	**0.52**	**354**	P		Pg		13 35 40.5	+0.2
EL6				S		Sb		13 35 48.9	-0.2
ATCC	**AVT- Casa Cast**	**0.54**	**314**	P		Pg		13 35 40.9	+0.2
ATCC				S		Sb		13 35 49.7	0.0
ATCC				AML		AML			
	comp=E,432μm,0.3s								
ATCC				AML		AML			
	comp=N,346μm,0.4s								
ATCC				AML		AML			
	comp=N,345μm,0.4s								
FIAM	**Fiamignano**	**0.54**	**184**	P		Pg		13 35 41.0	+0.3
FIAM				S		Sb		13 35 49.8	0.0
FIAM				AML		AML			
	comp=E,140μm,0.6s								
FIAM				AML		AML			
	comp=N,135μm,0.6s								
TRTR	**Tortoreto Alta**	**0.54**	**90**	⇓P		Pb		13 35 42.4	+0.6
CING	**Cingoli**	**0.56**	**2**	⇓P		Pg		13 35 41.5	+0.4
CING				S		Sb		13 35 50.2	-0.1
CING				AML		AML			
	comp=E,196μm,0.5s								
CING				AML		AML			
	comp=N,205μm,1.1s								
FOSV	**Fossato di Vic**	**0.57**	**328**	P		Pg		13 35 41.4	+0.1
FOSV				S		Sb		13 35 50.3	-0.2
FOSV				AML		AML			
	comp=N,364μm,0.3s								
FOSV				AML		AML			
	comp=E,317μm,0.3s								
FAGN	**Fagnano**	**0.62**	**151**	⇓P		Pb		13 35 44.1	+1.0
FAGN				AML		AML			
	comp=E,397μm,0.9s								
FAGN				AML		AML			
	comp=N,389μm,0.3s								
VCEL	**Villa Celiera**	**0.64**	**130**	⇑P		Pg		13 35 43.0	+0.4
MURB	**Monte Urbino**	**0.66**	**314**	P		Pg		13 35 43.0	+0.2
MURB				AML		AML			
	comp=N,568μm,0.2s								
MURB				AML		AML			
	comp=E,584μm,1.1s								
MURB				AML		AML			
	comp=N,568μm,0.2s								
ARVD	**Arcevia**	**0.71**	**346**	⇓P		Pg		13 35 44.1	+0.3
ARVD				S		Sn		13 35 56.0	-1.3
ARVD				AML		AML			
	comp=E,112μm,0.8s								
ARVD				AML		AML			
	comp=N,72μm,0.5s								
ATFO	**Monte Foce - G**	**0.71**	**322**	P		Pg		13 35 43.9	0.0
ATFO				AML		AML			
	comp=E,128μm,1.4s								
ATFO				AML		AML			
	comp=N,111μm,0.7s								
ATFO				AML		AML			
	comp=E,128μm,1.4s								
ATFO				AML		AML			
	comp=N,111μm,0.7s								
T0110	**Collepietro**	**0.73**	**142**	⇓P		Pg		13 35 44.4	+0.1
T0110				AML		AML			
	comp=E,264μm,0.4s								
T0110				AML		AML			
	comp=N,270μm,0.4s								
FRON	**Frontone**	**0.78**	**335**	⇑P		Pg		13 35 45.0	-0.2
MGAB	**Montegabbione**	**0.79**	**278**	⇓P		Pb		13 35 45.9	-0.1
MGAB				AML		AML			
	comp=E,186μm,1.6s								
MGAB				AML		AML			
	comp=N,264μm,0.4s								
ATVO	**AVT- Monte Val**	**0.80**	**316**	P		Pg		13 35 45.4	-0.2
ATVO				AML		AML			
	comp=N,90μm,0.8s								
ATVO				AML		AML			
	comp=E,115μm,0.9s								
ATVO				AML		AML			
	comp=N,90μm,0.8s								
PIEI	**Pieia**	**0.86**	**327**	⇑P		Pg		13 35 46.5	-0.3
PIEI				AML		AML			
	comp=N,55μm,0.3s								
PIEI				AML		AML			
	comp=E,97μm,0.2s								
MPAG	**Monte Paganucc**	**0.87**	**340**	⇑P		Pg		13 35 47.1	+0.1
MPAG				S		Sn		13 36 02.0	+0.5
MPAG				AML		AML			
	comp=E,121μm,0.3s								
MPAG				AML		AML			
	comp=N,78μm,0.9s								
MPAG				AML		AML			

comp=E,121μm,0.3s

FSSB	**Fossombrone**	**0.93**	**342**	⇑P	Pg	13 35 48.2	+0.2	
FSSB				S	Sn	13 36 03.0	+0.2	
FSSB				AML	AML			

comp=N,319μm,0.4s

FSSB				AML	AML			

comp=E,222μm,1.4s

FSSB				AML	AML			

comp=N,320μm,0.4s

SACS	**San Casciano d**	**0.93**	**273**	⇓P	Pn	13 35 49.3	-0.1	
SACS				AML	AML			

comp=N,79μm,0.6s

SACS				AML	AML			

comp=E,81μm,1.3s

INTR	**Introdacqua**	**0.96**	**146**	⇓P	Pg	13 35 48.0	-0.7	
VVLD	**Villa Vallelon**	**1.00**	**160**	⇑P	Pg	13 35 48.8	-0.5	
VVLD				AML	AML			

comp=N,65μm,0.6s

VVLD				AML	AML			

comp=N,65μm,0.6s

VVLD				AML	AML			

comp=E,59μm,1.3s

CAFI	**Castiglion Fio**	**1.03**	**301**	P	Pg	13 35 49.8	-0.1	
CAFI				AML	AML			

comp=E,67μm,1.5s

CAFI				AML	AML			

comp=N,61μm,0.8s

CSNT	**Castellina Chi**	**1.53**	**296**	⇓P	Pn	13 35 56.9	-0.7	
CSNT				AML	AML			

comp=E,18μm,0.1s

CSNT				AML	AML			

comp=N,22μm,1.1s

CARD	**Cardoso**	**2.31**	**303**	S	Sg	13 36 44.0	-0.2	

DDA ***26*** *13:37:27.6±0.0,38°.57N×24°.27E,h6km±3km,MW4.3*
ISK ***26*** *13:37:31.9,38°.64N×24°.52E,h11km,ML3.9/31*
IDC ***26*** *13:37:31.7±0.8,38°.58N×24°.50E,h0km,mb4.0/12, mbtmp4.0/17,ML3.6/5,MS3.0/19,Error ellipse: s-maj=17.5km s-min=14.2km az=86.0*
PDG ***26*** *13:37:32.5±0.6,38°.59N×24°.54E,h18km,ML4.1/11,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
MOS ***26*** *13:37:32.1±1.1,38°.58N×24°.50E,h12km,mb4.1/8,Error ellipse: s-maj=8.0km s-min=4.2km az=106.3*
ATH ***26*** *13:37:32.9,38°.57N×24°.51E,h17km,Mw3.9,Moment Tensor Solution. s7 Moment tensor: Mrr-6.15; Mθθ6.08; Mφφ0.07; Mrθ-0.44; Mθφ-3.64; Mφr-2.54; Fault plane solution: NP1:φs317.00000°,δ52.00000°,λ-59.00000°. NP2:φs93.00000°,δ47.00000°,λ-123.00000°.*
NEIC ***26*** *13:37:33.5±1.9,38°.59N±0°.05×24°.56E±0°.07,h13km±7km, mb4.5/7,Mwr4.2/27 Error ellipse: s-maj=7.7km s-min=7.3km az=96.0*
THE ***26*** *13:37:33.1,38°.56N×24°.51E,h10km,ML4.1/8,Error ellipse: s-maj=0.7km s-min=0.3km az=283.0*
NEIC ***26*** *13:37:33.5,38°.59N×24°.56E,h51km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.98; Mθθ0.91; Mφφ-1.89; Mrθ-0.73; Mθφ-2.22; Mφr0.20; Fault plane solution: M=2.86000×10^15^ NP1:φs250.63000°, δ73.68000°,λ159.11000°. NP2:φs346.75000°,δ69.99000°, λ17.40000°. Principal axes: T 2.4918, Plg26.0000°, Azm208.0000°; N 0.6287, Plg64.0000°, Azm34.0000°; P -3.1205, Plg2.0000°, Azm299.0000°;*
BEO ***26*** *13:37:34.2±0.8,38°.75N×24°.69E,h0km,ML3.6/9*
ISC 26 13:37:32.6±0.8,38°.60N±0°.02×24°.50E±0°.02,h6km±6km, n344,σ1§25/403,mb4.2/21,MS3.0/12,32C-13D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKY	**Skiros Island**	**0.28**	**9**	P	**Pb**	**13 37 39.6**	**-0.5**
SKY				S	**Sb**	**13 37 44.2**	**-0.8**

56μm,0.3s

SKY	**Skiros Island**	**0.28**	**9**	P	**Pb**	**13 37 39.5**	**-0.6**
SKY				S	**Sb**	**13 37 44.0**	**-1.0**
SKY				AML	AML	13 37 45.5	
SKY				AML	AML	13 37 45.5	

comp=N,93498μm,0.2s

KYMI	**Kymi, Euboea I**	**0.31**	**276**	P	**Pb**	**13 37 39.8**	**-0.8**
KYMI				S	**Sb**	**13 37 44.5**	**-1.5**

comp=N,34μm,0.3s

KYMI	**Kymi, Euboea I**	**0.31**	**276**	P	**Pb**	**13 37 39.9**	**-0.8**
KYMI				S	**Sb**	**13 37 44.6**	**-1.4**
KYMI				AML	AML	13 37 46.0	

comp=E,72777μm,0.2s

KYMI				AML	AML	13 37 46.2		

comp=N,62153μm,0.4s

DION	**Dionisos Attik**	**0.69**	**220**	P	**Pg**	**13 37 45.8**	**0.0**
DION				S	**Sg**	**13 37 55.5**	**+0.8**
DION	**Dionisos Attik**	**0.69**	**220**	P	**Pg**	**13 37 45.6**	**-0.2**
DION				S	**Sg**	**13 37 55.3**	**+0.6**
DION				AML	AML	13 37 58.7	
DION				AML	AML	13 37 58.7	
ALNA	**Alonissos**	**0.73**	**318**	P	**Pb**	**13 37 47.9**	**+0.1**
ALNA				S	**Sb**	**13 37 58.3**	**+0.2**
ALNA				AML	AML	13 38 00.7	

comp=N,47433μm,0.7s

ALNA				AML	AML	13 38 04.0		

comp=E,54246μm,0.6s

PTL	**Penteli**	**0.74**	**222**	P	**Pg**	**13 37 46.6**	**-0.3**
ATHU	**Athens Univers**	**0.85**	**222**	P	**Pg**	**13 37 48.4**	**-0.4**
ATHU				S	**Sb**	**13 38 00.6**	**-0.7**

comp=E,15μm,0.8s

ATHU	**Athens Univers**	**0.85**	**222**	P	**Pg**	**13 37 48.3**	**-0.6**
ATHU				S	**Sg**	**13 37 59.6**	**-0.2**
ATHU				AML	AML	13 38 02.4	

comp=E,11067μm,0.9s

ATHU				AML	AML	13 38 02.6		

comp=N,50363μm,0.7s

ATH	**Athens Observa**	**0.88**	**225**	P	**Pg**	**13 37 49.2**	**-0.3**
ATH				S	**Sg**	**13 38 01.3**	**+0.5**

comp=N,29μm,0.3s

ATH	**Athens Observa**	**0.88**	**225**	P	**Pg**	**13 37 49.2**	**-0.3**
ATH				S	**Sg**	**13 38 01.3**	**+0.5**
ATH	**Athens Observa**	**0.88**	**225**	P	**Pg**	**13 37 49.2**	**-0.3**
ATH				S	**Sg**	**13 38 00.6**	**-0.3**
ATH				AML	AML	13 38 03.9	

comp=N,57555μm,0.3s

ATH				AML	AML	13 38 04.4		

comp=E,57793μm,0.4s

VLY	**Voula,Athens**	**0.93**	**217**	P	**Pg**	**13 37 49.9**	**-0.5**
VLY				S	**Sb**	**13 38 03.1**	**-0.7**
VLY	**Voula,Athens**	**0.93**	**217**	P	**Pg**	**13 37 49.6**	**-0.8**
VLY				AML	AML	13 38 04.4	

comp=N,78085μm,0.4s

VLY				AML	AML	13 38 05.7		

comp=E,93561μm,0.4s

VILL	**Villia**	**1.03**	**245**	P	**Pg**	**13 37 51.9**	**-0.4**
VILL				S	**Sb**	**13 38 07.0**	**+0.4**

comp=E,24μm,0.6s

VIL2	**Platees**	**1.04**	**248**	P	**Pg**	**13 37 51.7**	**-0.8**
VIL2				S	**Sg**	**13 38 05.6**	**-0.5**
VIL2				AML	AML	13 38 08.1	

comp=E,48509μm,0.6s

VIL2				AML	AML	13 38 08.3		

comp=N,36835μm,0.5s

ATAL	**Atalanti**	**1.16**	**275**	P	**Pg**	**13 37 54.4**	**-0.4**
ATAL				S	**Sn**	**13 38 11.5**	**-0.1**

comp=N,4μm,0.7s

ATAL	**Atalanti**	**1.16**	**275**	P	**Pg**	**13 37 54.5**	**-0.4**
ATAL				AML	AML	13 38 12.9		

comp=N,9038μm,0.6s

ATAL				AML	AML	13 38 14.0		

comp=E,6006μm,1.2s

NEO	**Neokhori**	**1.22**	**306**	P	**Pg**	**13 37 55.6**	**-0.4**
NEO	**Neokhori**	**1.22**	**306**	P	**Pg**	**13 37 55.5**	**-0.4**
NEO				AML	AML	13 38 18.4	

comp=E,14737μm,0.4s

NEO				AML	AML	13 38 18.6		

comp=N,17860μm,0.5s

SIGR	**SIGRI**	**1.22**	**60**	P	**Pg**	**13 37 55.3**	**-0.8**
SIGR				S	**Sn**	**13 38 13.1**	**0.0**

comp=N,4μm,0.5s

SIGR	**SIGRI**	**1.22**	**60**	PN	**Pg**	**13 37 54.7**	**-1.3**
SIGR				SN	**Sg**	**13 38 11.8**	**-0.1**
SIGR	**SIGRI**	**1.22**	**60**	P	**Pg**	**13 37 55.2**	**-0.8**
SIGR				AML	AML	13 38 17.2	

comp=N,10734μm,0.6s

SIGR				AML	AML	13 38 19.7		

comp=E,6265μm,0.6s

CHOS	**Chios island**	**1.24**	**99**	P	**Pg**	**13 37 55.7**	**-0.7**
CHOS	**Chios island**	**1.24**	**99**	PN	**Pg**	**13 37 55.9**	**-0.5**
CHOS	**Chios island**	**1.24**	**99**	P	**Pg**	**13 37 55.6**	**-0.7**
CHOS				AML	AML	13 38 19.5	

comp=E,9502μm,0.6s

CHOS				AML	AML	13 38 22.3		

comp=N,9514μm,0.5s

XOR	**Xorichti**	**1.27**	**307**	P	**Pn**	**13 37 56.2**	**-0.8**
XOR	**Xorichti**	**1.27**	**307**	P	**Pn**	**13 37 55.9**	**-1.1**
XOR				AML	AML	13 38 19.5	

comp=E,10312μm,0.5s

XOR				AML	AML	13 38 20.6		

comp=N,14076μm,1.0s

LOUT	**Loutraki**	**1.34**	**243**	P	**Pn**	**13 37 57.1**	**-0.9**
LOUT				S	**Sb**	**13 38 14.8**	**-0.9**

comp=N,14μm,0.5s

LOUT	**Loutraki**	**1.34**	**243**	P	**Pn**	**13 37 57.2**	**-0.7**
LIA	**Limnos Island**	**1.40**	**22**	P	**Pn**	**13 37 57.9**	**-0.8**
LIA	**Limnos Island**	**1.40**	**22**	P	**Pn**	**13 37 57.5**	**-1.1**
LIA				AML	AML	13 38 22.6	

comp=N,5779μm,0.4s

LIA				AML	AML	13 38 23.7		

comp=E,5928μm,0.4s

AXAR	**Agios Charalam**	**1.45**	**277**	P	**Pn**	**13 37 58.9**	**-0.5**
AXAR	**Agios Charalam**	**1.45**	**277**	P	**Pn**	**13 37 59.0**	**-0.4**
AXAR				AML	AML	13 38 27.1	

comp=E,17051μm,0.5s

AXAR				AML	AML	13 38 29.7		

comp=N,19889μm,0.4s

EPID	**Epidavros**	**1.47**	**228**	P	**Pn**	**13 37 58.8**	**-0.8**
EPID	**Epidavros**	**1.47**	**228**	P	**Pn**	**13 37 58.8**	**-0.8**
PAIG	**Paliouri**	**1.47**	**335**	P	**Pn**	**13 37 59.0**	**-0.6**
PAIG	**Paliouri**	**1.47**	**335**	P	**Pn**	**13 37 59.2**	**-0.5**
PRK	**Paraskevi**	**1.53**	**65**	P	**Pn**	**13 37 59.3**	**-1.1**
PRK	**Paraskevi**	**1.53**	**65**	P	**Pn**	**13 38 00.5**	**+0.1**
PRK				AML	AML	13 38 27.3	

comp=N,8244μm,0.9s

PRK				AML	AML	13 38 32.4		

comp=E,6589μm,0.9s

THAL	**Thalero**	**1.55**	**249**	P	**Pn**	**13 38 00.6**	**-0.2**
THAL				AML	AML	13 38 26.4		

comp=E,20634μm,0.4s

THAL				AML	AML	13 38 26.7		

comp=N,32207μm,0.6s

KOCA	**Canakkale, Ayv**	**1.56**	**54**	P	**Pn**	**13 38 00.0**	**-0.9**
KOCA				S	**Sg**	**13 38 25.0**	**+2.2**
KRND	**KRANIDI**	**1.62**	**222**	P	**Pn**	**13 38 00.8**	**-0.9**
KRND				AML	AML	13 38 27.5	

comp=E,8374μm,0.6s

KRND				AML	AML	13 38 32.6		

comp=N,10935μm,1.0s

ZEYE	**Izmir, Urla-Ze**	**1.62**	**102**	P	**Pn**	**13 38 01.0**	**-0.7**
ZEYE				S	**Sn**	**13 38 23.1**	**+0.2**
URLA	**Izmir**	**1.67**	**98**	PN	**Pn**	**13 38 01.5**	**-0.9**
URLA	**Izmir**	**1.67**	**98**	P	**Pb**	**13 38 03.5**	**-0.2**
URLA				S	**Sg**	**13 38 26.9**	**+0.8**
BOZC	**Bozcaada**	**1.73**	**44**	PN	**Pn**	**13 38 01.8**	**-1.4**
BOZC				SN	**Sn**	**13 38 23.6**	**-2.1**
BOZC	**Bozcaada**	**1.73**	**44**	P	**Pn**	**13 38 02.1**	**-1.2**
BOZC				S	**Sg**	**13 38 31.0**	**+2.8**
APE	**Apeiranthos**	**1.74**	**152**	⇑P	**Pn**	**13 38 02.3**	**-1.0**
APE				⇓S	**Sg**	**13 38 28.4**	**0.0**
APE	**Apeiranthos**	**1.74**	**152**	P	**Pn**	**13 38 01.9**	**-1.4**
APE	**Apeiranthos**	**1.74**	**152**	PN	**Pn**	**13 38 02.2**	**-1.2**
APE	**Apeiranthos**	**1.74**	**152**	*d* i P	**Pn**	**13 38 02.0**	**-1.4**
APE	**Apeiranthos**	**1.74**	**152**	P	**Pn**	**13 38 02.0**	**-1.3**
APE				S	**Sb**	**13 38 27.1**	**+0.1**
APE	**Apeiranthos**	**1.74**	**152**	P	**Pn**	**13 38 02.2**	**-1.2**
APE				AML	AML	13 38 31.2	

comp=N,3439μm,0.5s

APE				AML	AML	13 38 32.0		

comp=E,3228μm,0.5s

OUR	**Ouranopolis**	**1.77**	**347**	P	**Pn**	**13 38 03.4**	**-0.4**
AYVA	**Ayvalik**	**1.85**	**67**	P	**Pn**	**13 38 03.9**	**-1.0**
AYVA				S	**Sg**	**13 38 32.6**	**+0.5**
EZN	**Ezine**	**1.87**	**49**	PN	**Pn**	**13 38 03.9**	**-1.3**
EZN	**Ezine**	**1.87**	**49**	P	**Pn**	**13 38 03.4**	**-1.8**
EZN				S	**Sg**	**13 38 35.3**	**+2.5**
MAKR	**Makrakomi, Fth**	**1.89**	**283**	P	**Pn**	**13 38 06.0**	**+0.5**
GADA	**Gvkgeada**	**1.92**	**34**	PN	**Pn**	**13 38 04.7**	**-1.2**
GOKA	**anakkale-Gk**	**1.93**	**34**	P	**Pn**	**13 38 05.2**	**-0.7**
GOKA				S	**Sg**	**13 38 34.0**	**-0.5**
KLV	**Kalavryta, Ach**	**1.93**	**254**	P	**Pn**	**13 38 05.4**	**-0.6**
KLV	**Kalavryta, Ach**	**1.93**	**254**	P	**Pn**	**13 38 05.5**	**-0.6**
KLV				AML	AML	13 38 36.9	

comp=N,3054μm,1.1s

KLV				AML	AML	13 38 37.9		

comp=E,2221μm,0.8s

DKL	**Dikili**	**1.94**	**75**	PN	**Pn**	**13 38 05.1**	**-1.0**
DKL	**Dikili**	**1.94**	**75**	P	**Pb**	**13 38 07.7**	**-0.7**
DKL				S	**Sg**	**13 38 35.2**	**+0.4**
ECEA	**Canakkale, Ece**	**1.94**	**42**	P	**Pn**	**13 38 07.2**	**+1.1**
ECEA				S	**Sg**	**13 38 39.8**	**+4.8**
BAYC	**CANAKKALE_Bayr**	**1.96**	**54**	P	**Pn**	**13 38 05.2**	**-1.2**
BAYC				S	**Sg**	**13 38 35.5**	**0.0**
BLCB	**Balcova**	**2.01**	**95**	PN	**Pn**	**13 38 06.5**	**-0.6**
BLCB	**Balcova**	**2.01**	**95**	P	**Pn**	**13 38 07.1**	**0.0**
BLCB				S	**Sg**	**13 38 37.3**	**+0.2**
THAS	**Thassos island**	**2.01**	**5**	P	**Pn**	**13 38 06.0**	**-1.1**
LAKA	**Lakka**	**2.01**	**260**	P	**Pn**	**13 38 07.2**	**+0.1**
SMG	**Samos**	**2.05**	**115**	P	**Pn**	**13 38 06.8**	**-0.8**
EVR	**Evrytania**	**2.12**	**279**	P	**Pn**	**13 38 09.4**	**+0.6**
THL	**Klokotos Trika**	**2.16**	**297**	P	**Pn**	**13 38 09.0**	**-0.1**
LIT	**Litokhoron**	**2.16**	**315**	Pn	**Pn**	**13 38 08.9**	**-0.2**
LIT	**Litokhoron**	**2.16**	**315**	P	**Pn**	**13 38 09.0**	**-0.2**
LIT	**Litokhoron**	**2.16**	**315**	P	**Pn**	**13 38 08.7**	**-0.5**
LIT				S	**Sn**	**13 38 34.0**	**-2.3**
BUHA	**Balikesir, Bur**	**2.20**	**65**	P	**Pn**	**13 38 08.4**	**-1.3**
BUHA				S	**Sg**	**13 38 45.3**	**+2.0**
KOKK	**Kokkinochori,**	**2.25**	**350**	P	**Pn**	**13 38 09.9**	**-0.4**
VLI	**Veliai**	**2.25**	**214**	P	**Pn**	**13 38 09.4**	**-1.0**
HORT	**Hortiatis**	**2.27**	**332**	P	**Pn**	**13 38 10.7**	**0.0**
HORT	**Hortiatis**	**2.27**	**332**	PN	**Pn**	**13 38 09.8**	**-0.9**
HORT				SN	**Sn**	**13 38 37.5**	**-1.5**
GCAM	**G?zelcaml?**	**2.34**	**112**	PN	**Pn**	**13 38 11.3**	**-0.3**
THE	**Thessaloniki**	**2.35**	**330**	P	**Pn**	**13 38 12.2**	**+0.5**
SANT	**Santorini**	**2.35**	**161**	⇑P	**Pn**	**13 38 11.4**	**-0.4**
SANT				⇑S	**Sb**	**13 38 42.8**	**-2.0**
SANT	**Santorini**	**2.35**	**161**	PN	**Pn**	**13 38 11.9**	**0.0**
SANT	**Santorini**	**2.35**	**161**		**Pn**	**13 38 12.1**	**+0.2**
SANT	**Santorini**	**2.35**	**161**	P	**Pn**	**13 38 11.7**	**-0.2**
SANT				S	**Sg**	**13 38 48.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**2.36**	**40**	PN	**Pn**	**13 38 10.8**	**-1.1**
SOH	**Sokhos**	**2.38**	**339**	P	**Pn**	**13 38 12.4**	**+0.1**
CAVK	**Edirne/Enez-Ca**	**2.45**	**31**	P	**Pn**	**13 38 14.0**	**+0.8**
CAVK				S	**Sg**	**13 38 50.8**	**-0.6**
ITM	**Ithomi**	**2.48**	**236**	Pn	**Pn**	**13 38 14.0**	**+0.4**
ENEZ	**Enez**	**2.48**	**30**	PN	**Pn**	**13 38 13.0**	**-0.6**
ALN	**Alexandroupoli**	**2.58**	**27**	PN	**Pn**	**13 38 14.3**	**-0.7**
ALN	**Alexandroupoli**	**2.58**	**27**		**Pn**	**13 38 14.3**	**-0.7**
ALN	**Alexandroupoli**	**2.58**	**27**	P	**Pn**	**13 38 14.3**	**-0.7**
ALN	**Alexandroupoli**	**2.58**	**27**	P	**Pn**	**13 38 14.6**	**-0.3**
ALN				S	**Sg**	**13 38 54.8**	**-0.8**
SRS	**Serrai**	**2.61**	**345**	*e*Pn	**Pn**	**13 38 15.1**	**-0.2**
STEP	**BALIKESIR_Sava**	**2.63**	**72**	P	**Pb**	**13 38 19.0**	**-1.1**
STEP				S	**Sg**	**13 38 57.8**	**+0.8**
RDO	**Rodhopi**	**2.66**	**17**	PN	**Pn**	**13 38 15.2**	**-0.9**
RDO	**Rodhopi**	**2.66**	**17**	Pn	**Pn**	**13 38 15.6**	**-0.5**
BALY	**Balya**	**2.68**	**64**	P	**Pn**	**13 38 17.9**	**+1.5**
BALY				S	**Sg**	**13 38 57.8**	**-0.9**
KOSK	**Kos Island**	**2.70**	**132**	PN	**Pn**	**13 38 16.6**	**0.0**
BODT	**Bodrum**	**2.71**	**124**	PN	**Pn**	**13 38 15.8**	**-0.9**
BODT	**Bodrum**	**2.71**	**124**	P	**Pn**	**13 38 15.5**	**-1.2**
BODT				S	**Sg**	**13 39 00.7**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**2.75**	**103**	PN	**Pn**	**13 38 17.2**	**-0.2**
KESN	**Edirne-Kesan**	**2.79**	**36**	P	**Pn**	**13 38 17.1**	**-1.0**
KESN				S	**Sg**	**13 39 02.9**	**+0.7**
NVR	**Nevrokopi**	**2.79**	**350**	P	**Pn**	**13 38 17.6**	**-0.2**
BDRM	**Kayabasi**	**2.79**	**122**	P	**Pn**	**13 38 17.5**	**-0.3**
BDRM				S	**Sg**	**13 39 08.7**	**+6.4**
KNT	**Kendrikon**	**2.84**	**335**	P	**Pn**	**13 38 19.1**	**+0.6**
GONE	**Gonen-Balikesi**	**2.86**	**59**	PN	**Pn**	**13 38 18.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.94**	**44**	PN	**Pn**	**13 38 19.2**	**-0.7**
MMB	**Musomiste**	**3.04**	**349**	P	**Pn**	**13 38 20.9**	**-0.4**
DAT	**Datca**	**3.08**	**126**	PN	**Pn**	**13 38 21.9**	**0.0**
RZN	**Rozhen**	**3.09**	**3**	P	**Pn**	**13 38 24.9**	**+2.8**
KDZ	**Kurdzhali**	**3.12**	**13**	PN	**Pn**	**13 38 21.3**	**-1.1**
KDZ	**Kurdzhali**	**3.12**	**13**	P	**Pn**	**13 38 20.3**	**-2.1**
KDZ	**Kurdzhali**	**3.12**	**13**	P	**Pn**	**13 38 21.9**	**-0.5**
MANT	**Manisa**	**3.19**	**91**		**Pn**	**13 38 22.5**	**-1.0**
IDI	**Anoyia**	**3.32**	**174**	⇑P	**Pn**	**13 38 24.3**	**-0.9**
IDI	**Anoyia**	**3.32**	**174**	Pn	**Pn**	**13 38 24.4**	**-0.9**

comp=E,6.7nm,0.3s,baz=335,slow=12,SNR=34

IDI				Sn	**Sn**	**13 39 00.8**	**-4.2**

comp=E,13nm,0.3s,baz=304,slow=15,SNR=5.8

IDI				LR	LR	13 40 10.2		

comp=E,132nm,20.0s,baz=330,slow=48
comp=E,26nm,0.3s

IDI	**Anoyia**	**3.32**	**174**		**Pn**	**13 38 24.2**	**-1.0**
YER	**Yerkesik**	**3.33**	**115**	PN	**Pn**	**13 38 25.4**	**0.0**
YER	**Yerkesik**	**3.33**	**115**	P	**Pn**	**13 38 25.7**	**+0.3**
KKB	**Krupnik**	**3.44**	**342**	*i* P	**Pn**	**13 38 27.1**	**+0.4**
TURN	**Turunc**	**3.49**	**120**	PN	**Pn**	**13 38 27.6**	**+0.2**
PLD	**Plovdiv**	**3.50**	**3**	PN	**Pn**	**13 38 27.2**	**-0.4**
PLD	**Plovdiv**	**3.50**	**3**	P	**Pb**	**13 38 32.0**	**-3.0**
PLD	**Plovdiv**	**3.50**	**3**	*e*Pn	**Pn**	**13 38 28.5**	**+0.9**
PLD	**Plovdiv**	**3.50**	**3**	P	**Pg**	**13 38 39.4**	**-0.3**
STIP	**Stip**	**3.56**	**331**	*i* Pn	**Pn**	**13 38 28.8**	**+0.4**
EDRB	**Edirne**	**3.67**	**27**	PN	**Pn**	**13 38 29.6**	**-0.3**
KARP	**Karpathos**	**3.72**	**144**	Pn	**Pn**	**13 38 29.9**	**-0.7**
ARG	**Arkhangelos**	**3.75**	**128**	Pn	**Pn**	**13 38 30.2**	**-0.8**
ARG	**Arkhangelos**	**3.75**	**128**	P	**Pn**	**13 38 30.2**	**-0.8**
DALY	**Dalyan (Mula)**	**3.75**	**117**	PN	**Pn**	**13 38 31.5**	**+0.5**
OHR	**Ohrid**	**3.79**	**313**	*i* Pn	**Pn**	**13 38 34.2**	**+2.6**
OHR				*e*Sn	**Sb**	**13 39 25.9**	**-0.3**
KEK	**Kerkira**	**3.82**	**288**	Pn	**Pn**	**13 38 34.7**	**+2.8**
ARMT	**Armutlu**	**3.90**	**58**	PN	**Pn**	**13 38 33.2**	**+0.1**
PGB	**Panagyurishte**	**3.95**	**356**	*i* P	**Pb**	**13 38 44.1**	**+1.4**
TVSB	**Tavsanli**	**3.96**	**76**	PN	**Pn**	**13 38 33.9**	**-0.1**
SKO	**Skopje**	**4.10**	**326**	*e*Pn	**Pn**	**13 38 36.7**	**+0.9**
VTS	**Vitosha**	**4.12**	**347**	⇑P	**Pn**	**13 38 36.9**	**+0.6**
VTS	**Vitosha**	**4.12**	**347**	Pn	**Pn**	**13 38 36.9**	**+0.6**
VTS	**Vitosha**	**4.12**	**347**	P	**Pn**	**13 38 36.9**	**+0.6**
VTS	**Vitosha**	**4.12**	**347**	*e*Pn	**Pn**	**13 38 37.1**	**+0.8**
VTS				*e*Sn	**Sn**	**13 39 23.5**	**-1.5**
VTS	**Vitosha**	**4.12**	**347**	*i* P	**Pn**	**13 38 37.2**	**+0.9**
CAME	**Cameli-Denizli**	**4.15**	**112**	PN	**Pn**	**13 38 37.3**	**+0.6**
BOSS	**Bosilegrad**	**4.18**	**339**	*e*Pn	**Pn**	**13 38 38.1**	**+1.1**
BOSS				*e*Sn	**Sn**	**13 39 26.3**	**+0.1**
YLV	**Yalova**	**4.25**	**61**	PN	**Pn**	**13 38 37.9**	**0.0**
ISK	**Istanbul-Kandi**	**4.29**	**54**	PN	**Pn**	**13 38 38.4**	**0.0**
KAVV	**Kandilli-Istan**	**4.29**	**54**	PN	**Pn**	**13 38 38.3**	**-0.1**
PRVS	**Prvonek**	**4.32**	**335**	*e*Pn	**Pn**	**13 38 39.7**	**+0.9**
CAVI	**Cavuskoy**	**4.44**	**67**	PN	**Pn**	**13 38 40.7**	**+0.2**
TIR	**Tirane**	**4.49**	**309**	⇑P	**Pn**	**13 38 41.6**	**+0.4**
BARS	**Barje**	**4.68**	**335**	*e*Pn	**Pn**	**13 38 44.6**	**+0.8**
AKAS	**Kas**	**4.70**	**119**		**Pn**	**13 38 48.8**	**+4.6**
SILT	**Sile**	**4.71**	**56**	PN	**Pn**	**13 38 42.7**	**-1.5**
MPEP	**Malo Peshtene**	**4.78**	**

MORH S Sn 13 41 16.3 -2.3
UDBI Udbina 8.82 315 *i* P Pn 13 39 41.8 +1.1
KOVH Kovagotottos 8.85 330 S Sn 13 41 23.6 +2.5
KOVH Kovagotottos 8.85 330 P Pn 13 39 42.5 +1.5
DUGI Dugi Otok 8.91 310 *i* P Pn 13 39 41.5 -0.3
BURAR Bucovina Array 9.02 3 ⇑P Pn 13 39 44.7 +1.2
MOSL Moslavina 9.06 323 *i* P Pn 13 39 44.8 +0.8
VIRC Vir 9.08 312 *i* P Pn 13 39 43.9 -0.3
KALN Kalnik 9.59 324 *i* P Pn 13 39 51.5 +0.3
PTJ Puntijarka 9.65 322 P Pn 13 39 52.5 +0.4
BOJS Bojanci 9.73 318 *e*Pn Pn 13 39 53.3 +0.2
CRES Cresnjev 9.85 320 *e*Pn Pn 13 39 54.8 +0.1
MPLH Magyarpolny 9.96 331 P Pn 13 39 58.4 +2.2
MURB Monte Urbino 10.18 301 Pn Pn 13 39 59.9 +0.6
MMAI Mount Meron Ar 10.46 119 Pn Pn 13 40 02.3 -0.9
comp=Z,0.8nm,0.3s,baz=304,slow=12,SNR=4.5
comp=Z,1.0nm,0.4s
SOKA Soboth 10.66 322 *e*Pn Pn 13 40 06.6 +0.7
comp=Z,2.6nm,0.4s
OBKA Obir 10.78 320 *e*Pn Pn 13 40 16.4 +9.0
comp=Z,1.8nm,0.4s
ARSA Arzberg 10.85 326 *e*Pn Pn 13 40 08.5 0.0
comp=Z,2.2nm,0.3s
CONA Conrad Observa 11.24 329 *e*Pn Pn 13 40 17.2 +3.4
comp=Z,0.8nm,0.4s
STAL STALIGIAL 11.58 315 Pn 13 40 17.5 -1.0
CLUD Cludinico 11.61 316 Pn 13 40 18.5 -0.3
TEOL Teolo 11.68 309 Pn Pn 13 40 18.1 -1.8
CIMO Cimolais 11.76 315 Pn 13 40 20.2 -0.7
KBA Koelnbreinsper 11.77 320 *e*Pn Pn 13 40 21.4 +0.3
comp=Z,0.8nm,0.3s
VRAC Vranov 12.11 335 LR LR 13 44 58.2
comp=Z,42nm,21.1s,baz=142,slow=37
AKASG Malin Array Be 12.55 14 LR LR 13 45 32.7
comp=Z,46nm,18.4s,baz=250,slow=38
AKBB Malin Array Si 12.55 14 *i* P Pn 13 40 32.4 +0.8
WATA Walderalm 12.86 317 *e*Pn Pn 13 40 36.0 0.0
comp=Z,2.0nm,0.3s
GEC2 GERESS Array S 12.86 326 Pn Pn 13 40 37.3 +1.3
GEC2 GERESS Array S 12.86 326 P Pn 13 40 37.8 +1.8
GERES GERESS Array B 12.86 326 Pn Pn 13 40 37.5 +1.5
comp=Z,0.2nm,0.3s,baz=150,slow=14,SNR=21
comp=Z,2.6nm,0.8s
SQTA Sankt Quirin 12.99 316 *e*Pn Pn 13 40 38.3 +0.5
comp=Z,1.6nm,0.6s
MOTA Moosalm 13.12 316 *e*Pn Pn 13 40 40.2 +0.6
comp=Z,1.3nm,0.3s
KHC Kasperske Hory 13.13 327 Pn 13 40 41.4 +1.8
KHC Kasperske Hory 13.13 327 P Pn 13 40 41.4 +1.8
FETA Feichten 13.14 314 *e*Pn Pn 13 40 39.3 -0.5
comp=Z,1.5nm,0.4s
DAVOX Davos/Dischmat 13.49 312 LR LR 13 46 31.2
comp=Z,44nm,18.8s,baz=253,slow=40
SBF Sospel 13.87 298 P Pn 13 40 50.2 +0.5
KBZ Khabaz 14.77 64 LR LR 13 46 28.7
comp=Z,34nm,20.9s,baz=216,slow=36
LPG La Plagne 14.86 303 P P 13 41 08.4 -1.0
CLL Collm 15.06 331 *e*P P 13 41 13.0 +1.7
CLL Collm 15.06 331 *e*PP P 13 41 13.0 +1.7
CABF La Chapelle 15.72 307 P P 13 41 19.0 +0.3
MNK Minsk 16.07 7 *i* P Pn 13 41 15.4 -3.6
MNK *i* S Sn 13 44 15.2 -2.2
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=Z,4.0nm,0.6s
MNK MLR MLR
comp=Z,112nm,22.0s
MNK MLR MLR
comp=N,11nm,15.0s
MNK MLR MLR
comp=E,32nm,22.0s
MNK Minsk 16.07 7 *i* P Pn 13 41 15.5 -3.6
comp=E,1.0nm,0.7s
MNK *i* P Pn 13 41 15.5 -3.6
comp=N,6.0nm,0.8s
MNK *i* P Pn 13 41 15.5 -3.6
comp=Z,4.0nm,0.6s,baz=190
MNK *i* PP pP 13 41 24.2 +0.4
MNK *i* PPP PPP 13 41 31.9
MNK *i* S Sn 13 44 15.3 -2.2
MNK *i* SS SnSn 13 44 29.6 -0.8
MNK *i* SSS SSS 13 44 42.2
MNK *i* LQ LQ 13 46 00.9
MNK *i* LR LR 13 47 04.2
MNK *i* LRM MLR 13 47 44.2
comp=Z,112nm,21.9s
MNK *i* LRM MLR 13 48 19.1
comp=E,32nm,21.9s
MNK *i* LRM MLR 13 48 19.1
comp=N,11nm,15.5s
HAU Haudompre 16.18 311 P Pn 13 41 19.1 -1.4
SMF Signal de Mont 17.16 305 P P 13 41 34.9 +0.3
MTLF Montolieu 17.46 293 P P 13 41 37.6 -0.4
SSF Saint Saulge 17.52 306 P P 13 41 39.5 +0.9
AVF Avril sur Loir 17.53 305 P P 13 41 39.5 +0.8
BGF Bois d'Agland 17.78 304 P P 13 41 42.5 +1.1
ETSF Etsaut 19.44 291 P Pn 13 42 02.5 +1.6
MFF Saint Martin d 19.77 302 P Pn 13 42 04.6 -0.1
VSU Vasula 19.93 3 *i* P Pn 13 42 08.0 +1.5
VSU pmax pmax
comp=Z,26nm,1.1s
LDF La Druitiere 20.35 307 P P 13 42 09.4 -0.2
FLN La Foliniere 20.64 308 P P 13 42 12.5 -0.2
GRR Gorron 20.75 306 P P 13 42 13.5 -0.4
BELG Belogornoye 21.16 42 LR LR 13 50 32.5
comp=Z,40nm,18.8s,baz=151,slow=37
ESBB Sonseca Array 22.07 282 P P 13 42 27.2 -1.1
ESBB IAmb IAmb 13 42 31.1
comp=Z,9.2nm,0.8s
ESDC Sonseca Array 22.07 282 P P 13 42 27.2 -1.0
comp=Z,6.6nm,0.8s,baz=76,slow=9.7,SNR=33
comp=Z,6.6nm,0.8s
ESDC Sonseca Array 22.07 282 P P 13 42 26.5 -1.7
QUIF Quistinic 22.09 304 P P 13 42 27.8 -0.6
PAB San Pablo 22.38 282 P P 13 42 32.0 +0.4
PAB IAmb IAmb 13 42 34.0
comp=Z,7.0nm,0.7s
PAB San Pablo 22.38 282 P P 13 42 32.0 +0.4
PAB pmax pmax
comp=Z,7.0nm,0.7s
HFS Hagfors 22.61 346 P P 13 42 33.0 -0.8
comp=Z,1.6nm,0.5s,baz=144,slow=8.9,SNR=6.7
HFS LR LR 13 51 45.6
comp=Z,32nm,19.6s,baz=155,slow=38
comp=Z,1.6nm,0.5s
HFS Hagfors 22.61 346 P P 13 42 33.0 -0.8
FINES FINESS Array B 22.89 2 P P 13 42 37.7 +1.0
comp=Z,1.6nm,0.8s,baz=152,slow=9.9,SNR=8.3
FINES LR LR 13 52 15.2
comp=Z,79nm,18.3s,baz=168,slow=39
comp=Z,1.6nm,0.8s
FINES FINESS Array B 22.89 2 P P 13 42 36.2 -0.5
FINES FINESS Array B 22.89 2 *i* P P 13 42 40.0 +3.3
FINES pmax pmax
comp=Z,2.0nm,0.6s
NC602 NORSAR Array S 23.60 344 P P 13 42 43.5 -0.5
NC602 IAmb IAmb 13 42 52.9
comp=Z,37nm,1.3s
NB2 NORSAR Subarra 23.95 344 P P 13 42 46.6 -0.8
comp=Z,3.9nm,0.8s,baz=150,slow=10
NOA NORSAR Array B 23.95 344 P P 13 42 46.6 -0.8
comp=Z,3.3nm,1.0s,baz=149,slow=9.5,SNR=6.7
NOA LR LR 13 53 31.3
comp=Z,27nm,18.2s,baz=160,slow=40
comp=Z,3.3nm,1.0s
KLMR Klimovskoe 24.18 18 *e*P P 13 42 48.4 -1.0
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 24.18 18 *e*P P 13 42 48.5 -1.0
KLMR AMP 13 42 53.3
comp=Z,9.0nm,1.2s
MDT Midelt 24.27 265 P P 13 42 51.4 +0.7
comp=Z,1.5nm,0.7s,baz=96,slow=9.2,SNR=3.9
comp=Z,1.5nm,0.7s
EKA Eskdalemuir Ar 24.98 321 P P 13 42 56.5 -0.2
comp=Z,5.3nm,0.8s,baz=114,slow=10,SNR=13
comp=Z,5.3nm,0.8s
PVAQ Vaqueiros 25.35 277 P P 13 42 59.6 -0.7
PVAQ IAmb IAmb 13 43 23.5
comp=Z,33nm,1.5s
KIRV Kirov 25.64 31 LR LR 13 54 13.7
comp=Z,36nm,18.4s,baz=280,slow=39

AKTO Aktyubinsk 26.44 52 LR LR 13 55 31.4
comp=Z,22nm,18.9s,baz=13,slow=41
ARU Arti 28.69 40 *i* P P 13 43 30.1 -0.1
ARU pmax pmax
comp=Z,1.0nm,1.0s
ARCES ARCESS Array B 31.00 1 P P 13 43 50.8 +0.3
comp=Z,1.1nm,0.6s,baz=185,slow=8.7,SNR=4.7
ARCES LR LR 13 56 32.7
comp=Z,60nm,19.1s,baz=186,slow=37
comp=Z,1.1nm,0.6s
ARCES ARCESS Array B 31.00 1 P P 13 43 50.7 +0.3
TOA0 Torodi Ar. Sit 32.43 225 P P 13 44 02.5 -1.0
TOA0 IAmb IAmb 13 44 04.1
comp=Z,5.8nm,1.2s
TORD Torodi Ar. Bea 32.43 225 P P 13 44 03.3 -0.3
comp=Z,2.6nm,0.4s,baz=36,slow=9.1,SNR=12
comp=Z,2.6nm,0.4s
BRVK Borovoye 34.39 50 *i* P P 13 44 22.0 +1.6
BRVK pmax pmax
comp=Z,11nm,3.6s
BORG Borgarnes 37.30 329 LR LR 14 02 19.2
comp=Z,18nm,18.1s,baz=162,slow=40
MKAR Makanchi Array 42.41 60 P P 13 45 28.0 +0.2
comp=Z,0.6nm,0.5s,baz=276,slow=7.5,SNR=8.6
MKAR LR LR 14 06 43.3
comp=Z,27nm,18.1s,baz=254,slow=41
comp=Z,0.6nm,0.5s
MKAR Makanchi Array 42.41 60 P P 13 45 27.5 -0.4
MKAR Makanchi Array 42.41 60 *i* P P 13 45 27.8 -0.1
MKAR pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 43.07 49 LR LR 14 04 27.1
comp=Z,29nm,18.9s,baz=54,slow=38
NRIK Noril'sk 45.02 27 *i* P P 13 45 51.4 +2.9
NRIK pmax pmax
comp=Z,3.0nm,1.1s
DGZ Jazzator, Alta 45.25 55 *i* P P 13 45 52.9 +2.1
DGZ pmax pmax
comp=Z,1.0nm,0.9s
SCHQ Schefferville 60.25 318 P P 13 47 41.5 0.0
comp=Z,1.7nm,0.6s,baz=39,slow=6.5,SNR=2.0
comp=Z,1.7nm,0.6s
BOSA Boshof 66.87 179 P P 13 48 25.8 +0.3
comp=Z,2.1nm,0.5s,baz=358,slow=6.1,SNR=5.4
comp=Z,2.1nm,0.5s
KSRS Korea Array 76.62 53 LR LR 14 26 14.5
comp=Z,9.4nm,19.5s,baz=225,slow=38
PETK Petropavlovsk- 80.08 26 LR LR 14 27 27.6
comp=Z,15nm,19.0s,baz=306,slow=37
TXAR Lajitas Array 96.89 316 P P 13 51 06.0 +0.9
comp=Z,0.6nm,0.8s,baz=49,slow=4.1,SNR=3.9
comp=Z,0.6nm,0.8s

ROM 26 13:38:17.2±0.1, 42.736N±0.004×13.194E±0.007, h8km, ML1.7/8, 2C-2D, Error ellipse: s-maj=0.6km s-min=0.1km az=276.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**329**	P	Pg	13 38 20.3	+0.3
NRCA				S	Sg	13 38 22.0	+0.2
LNSS	**Leonessa**	**0.17**	**221**	⇑P	Pg	13 38 21.8	+0.8
LNSS				S	Sg	13 38 25.0	+1.6
LNSS				AML	AML		
	comp=E,588μm,0.2s						
LNSS				AML	AML		
	comp=N,746μm,0.7s						
MC2	**Monte Cornacci**	**0.18**	**359**	P	Pg	13 38 21.6	+0.6
MC2				S	Sg	13 38 24.9	+1.3
MMO1	**Montemonaco**	**0.19**	**31**	P	Pg	13 38 21.7	+0.5
MMO1				S	Sg	13 38 25.1	+1.1
RM33	**Pellescritta (**	**0.23**	**176**	⇓P	Pg	13 38 22.0	+0.2
RM33				S	Sg	13 38 26.7	+1.7
RM33				AML	AML		
	comp=E,166μm,0.2s						
RM33				AML	AML		
	comp=N,186μm,0.2s						
FDMO	**Fiordimonte**	**0.31**	**345**	P	Pg	13 38 23.9	+0.5
FDMO				S	Sg	13 38 28.6	+1.0
FDMO				AML	AML		
	comp=E,136μm,0.7s						
FDMO				AML	AML		
	comp=N,152μm,1.1s						
CESI	**CESI - Serrava**	**0.34**	**322**	AML	AML		
	comp=N,209μm,0.6s						
CESI				AML	AML		
	comp=E,115μm,1.6s						
CESI				AML	AML		
	comp=N,210μm,0.6s						
CESI				AML	AML		
	comp=E,115μm,1.6s						
ARRO	**Arrone**	**0.35**	**244**	⇓P	Pg	13 38 24.8	+0.6
ARRO				S	Sb	13 38 30.7	-0.7
GIGS	**Gran Sasso**	**0.40**	**136**	P	Pb	13 38 25.9	-0.7
GIGS				S	Sb	13 38 31.7	-1.1
ASSB	**Assisi San Ben**	**0.50**	**308**	⇑P	Pg	13 38 27.1	+0.2
ASSB				S	Sb	13 38 35.0	-0.7
ASSB				AML	AML		
	comp=N,58μm,1.6s						
ASSB				AML	AML		
	comp=E,67μm,1.3s						
SNTG	**Esanatoglia**	**0.55**	**340**	P	Pg	13 38 28.6	+0.6
SNTG				S	Sb	13 38 36.7	-0.6
EL6	**Elcito**	**0.60**	**354**	P	Pg	13 38 29.2	+0.4
EL6				S	Sb	13 38 39.0	+0.4

IDC 26 13:49:38.7±1.7, 4.71S×151.05E, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=82.6km s-min=17.7km az=150.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.05**	**68**	Pg	Pg	13 49 58.5	-0.3
	1.6nm,0.3s,baz=217,slow=5.1,SNR=3.1						
WRA	**Warramunga Arr**	**22.23**	**226**	P	P	13 54 35.6	-1.5
	0.5nm,0.5s,baz=50,slow=10,SNR=7.4						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**25.07**	**220**	P	P	13 55 05.7	+0.6
	0.9nm,0.7s,baz=52,slow=9.1,SNR=7.7						
	0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.62**	**288**	PKPbc	PKPbc	14 09 29.1	+0.2
	0.5nm,0.8s,baz=64,slow=3.4,SNR=2.6						

IDC 26 14:29:39.0±333.0, 52.44N×32.49E, h0km, Error ellipse: s-maj=130.4km s-min=102.7km az=23.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON 5.10**	**31**	*i*			15 01 30.0	
	0.1nm,1.1s,baz=214,slow=316,SNR=1.7						
I26DE	**FREYUNG INFRAS12.44**	**261**	*i*			15 45 40.0	
	baz=66,slow=322,SNR=0.6						
I31KZ	**AKTYUBINSK INF 16.04**	**87**	*i*			16 10 50.0	
	baz=287,slow=312,SNR=0.9						
I48TN	**KESRA INFRASON23.36**	**234**	*i*			16 53 10.0	
	baz=38,slow=320,SNR=1.7						

*ROM **26** 14:32:50.6±0.0, 42.597N±0.002×13.282E±0.004, h10km, ML3.7/5, Error ellipse: s-maj=0.3km s-min=0.2km az=65.0*
*BEO **26** 14:32:52.4±0.9, 42.59N×13.32E, h0km, ML3.5/6*
*PRU **26** 14:32:55.1±0.0, 42.81N×13.82E, h0km*
*VIE **26** 14:33:07.8, 43.85N×14.05E, h0km, mb3.5/1, ML2.8/2*
127 km E of San Marino

ISC 26 14:32:50.8±0.8, 42.60N±0.01×13.27E±0.02, h12km±4km, n155, σ1°03/188, 29C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.06**	**55**	⇑P	**Pg**	**14 32 53.1**	**-0.2**
SMA1				S	**Sg**	**14 32 54.6**	**-0.5**
SMA1				AML	AML		
SMA1				AML	AML		
T1201	**Domo (RI)**	**0.06**	**345**	⇓P	**Pg**	**14 32 53.2**	**-0.1**
T1201				S	**Sg**	**14 32 54.8**	**-0.4**
T1204	**Amatrice, Fraz**	**0.09**	**23**	⇑P	**Pg**	**14 32 53.4**	**-0.2**
T1204				S	**Sg**	**14 32 55.1**	**-0.5**
RM33	**Pellescritta (**	**0.10**	**206**	⇑P	**Pg**	**14 32 53.8**	**+0.1**
RM33				S	**Sg**	**14 32 55.9**	**+0.1**
RM33				AML	AML		
	comp=E,76600μm,0.3s						
RM33				AML	AML		
	comp=E,75100μm,0.3s						
RM33				AML	AML		
	comp=N,41400μm,0.9s						
RM33				AML	AML		
	comp=N,39700μm,0.9s						
RM33				AML	AML		
	comp=N,39750μm,0.9s						
RM33				AML	AML		
	comp=N,41350μm,0.9s						
RM33				AML	AML		
	comp=E,76550μm,0.3s						
T1202	**Accumoli, Fraz**	**0.11**	**342**	⇓P	**Pg**	**14 32 54.0**	**+0.1**
T1202				S	**Sg**	**14 32 56.3**	**+0.1**
CAMP	**Campotosto**	**0.12**	**122**	⇑P	**Pg**	**14 32 53.9**	**-0.1**
CAMP				S	**Sg**	**14 32 56.0**	**-0.3**
T1218	**Civita (PG)**	**0.14**	**302**	P	**Pg**	**14 32 54.3**	**+0.1**
T1218				S	**Sg**	**14 32 56.8**	**0.0**
T1243	**Rocca Santa Ma**	**0.16**	**53**	P	**Pg**	**14 32 54.5**	**-0.2**
T1243				S	**Sg**	**14 32 57.2**	**-0.1**
T1243				AML	AML		
	comp=E,41800μm,0.3s						
T1243				AML	AML		
	comp=N,62150μm,0.3s						
T1243				AML	AML		
	comp=E,42100μm,0.3s						
T1243				AML	AML		
	comp=N,62150μm,0.3s						
T1243				AML	AML		
	comp=N,61950μm,0.3s						
T1213	**Norcia, Frazio**	**0.17**	**320**	P	**Pg**	**14 32 54.7**	**0.0**
T1213				S	**Sg**	**14 32 57.7**	**+0.3**
T1214	**Arquata del Tr**	**0.17**	**344**	⇓P	**Pg**	**14 32 54.9**	**+0.1**
T1214				S	**Sg**	**14 32 58.1**	**+0.6**
LNSS	**Leonessa**	**0.17**	**272**	⇑P	**Pg**	**14 32 55.0**	**+0.2**
LNSS				S	**Sg**	**14 32 58.2**	**+0.7**
LNSS				AML	AML		
	comp=E,54500μm,0.4s						
LNSS				AML	AML		
	comp=N,40700μm,1.4s						
T1212	**Cascia, Frazio**	**0.23**	**313**	⇑P	**Pg**	**14 32 55.8**	**+0.1**
T1212				S	**Sg**	**14 32 59.7**	**+0.7**
T1242	**Castelluccio d**	**0.24**	**348**	⇑P	**Pg**	**14 32 56.1**	**+0.2**
T1242				S	**Sg**	**14 32 60.0**	**+0.7**
TERO	**Teramo**	**0.25**	**84**	⇑P	**Pg**	**14 32 55.8**	**-0.2**
TERO				S	**Sg**	**14 32 59.6**	**+0.2**
TERO				AML	AML		
	comp=E,15750μm,0.3s						
TERO				AML	AML		
	comp=N,33350μm,0.6s						
TERO				AML	AML		
	comp=N,34750μm,0.7s						
TERO				AML	AML		
	comp=N,33400μm,0.6s						
TERO				AML	AML		
	comp=E,16850μm,0.3s						
TERO				AML	AML		
	comp=E,15800μm,0.3s						
NRCA	**Norcia**	**0.26**	**334**	⇑P	**Pg**	**14 32 56.4**	**+0.1**
NRCA				S	**Sg**	**14 33 00.7**	**+0.7**
NRCA				AML	AML		
	comp=E,32050μm,0.4s						
NRCA				AML	AML		
	comp=E,35350μm,0.4s						
NRCA				AML	AML		
	comp=N,47900μm,0.1s						
NRCA				AML	AML		
	comp=N,43350μm,0.1s						
GIGS	**Gran Sasso**	**0.27**	**124**	⇑P	**Pg**	**14 32 56.1**	**-0.2**
GIGS				S	**Sg**	**14 33 00.4**	**+0.4**
T1241	**Roccafluvione,**	**0.28**	**24**	⇑P	**Pg**	**14 32 56.6**	**-0.1**
T1241				S	**Sg**	**14 33 01.1**	**+0.5**
MMO1	**Montemonaco**	**0.30**	**8**	⇑P	**Pg**	**14 32 57.1**	**0.0**
MMO1				S	**Sg**	**14 33 01.9**	**+0.7**
T1211	**Morro Reatino**	**0.32**	**258**	⇑P	**Pg**	**14 32 57.4**	**+0.1**
T1211				S	**Sg**	**14 33 02.5**	**+0.9**
MC2	**Monte Cornacci**	**0.32**	**349**	⇑P	**Pg**	**14 32 57.5**	**+0.1**
MC2				S	**Sb**	**14 33 02.9**	**-1.0**
FIAM	**Fiamignano**	**0.35**	**199**	⇑P	**Pg**	**14 32 57.9**	**0.0**
FIAM				S	**Sg**	**14 33 03.4**	**+0.8**
T1215	**Vallo di Nera,**	**0.36**	**305**	⇑P	**Pg**	**14 32 58.0**	**-0.1**
T1215				S	**Sg**	**14 33 03.7**	**+0.8**
FEMA	**Monte Fema**	**0.40**	**336**	P	**Pg**	**14 32 58.8**	**0.0**
FEMA				S	**Sb**	**14 33 05.2**	**-0.9**
FAGN	**Fagnano**	**0.40**	**145**	⇑P	**Pg**	**14 32 58.9**	**0.0**
OFFI	**Offida**	**0.45**	**42**	⇑P	**Pb**	**14 33 00.5**	**-0.3**
FDMO	**Fiordimonte**	**0.46**	**343**	⇑P	**Pg**	**14 32 59.7**	**-0.1**
FDMO				S	**Sb**	**14 33 06.9**	**-0.8**
VCEL	**Villa Celiera**	**0.47**	**116**	P	**Pg**	**14 33 00.2**	**+0.2**
VCEL				S	**Sb**	**14 33 07.1**	**-0.9**
CESI	**CESI - Serrava**	**0.49**	**327**	⇑P	**Pg**	**14 33 00.3**	**-0.1**
CESI				S	**Sb**	**14 33 08.1**	**-0.5**
CSP1	**Cessapalombo**	**0.50**	**354**	⇑P	**Pg**	**14 33 00.5**	**-0.1**
CSP1				S	**Sb**	**14 33 08.2**	**-0.6**
CESX	**Cesi**	**0.51**	**272**	⇑P	**Pg**	**14 33 00.6**	**-0.3**
CESX				S	**Sb**	**14 33 08.5**	**-0.6**
TRTR	**Tortoreto Alta**	**0.52**	**66**	P	**Pb**	**14 33 01.7**	**-0.2**
T0110	**Collepietro**	**0.53**	**135**	⇓P	**Pg**	**14 33 01.0**	**-0.2**
MNTP	**Montappone**	**0.56**	**15**	P	**Pb**	**14 33 02.1**	**-0.5**
PTQR	**Pietraquaria**	**0.58**	**171**	P	**Pg**	**14 33 01.6**	**-0.6**
SEF1	**Sefro**	**0.60**	**337**	P	**Pg**	**14 33 02.3**	**-0.2**
MDAR	**Monte D'Aria**	**0.60**	**351**	P	**Pg**	**14 33 02.2**	**-0.3**
MDAR				S	**Sb**	**14 33 11.6**	**-0.3**
FIU1	**Fiuminata**	**0.64**	**337**	P	**Pg**	**14 33 03.2**	**-0.1**
FIU1				S	**Sb**	**14 33 12.6**	**-0.3**
SRES	**S.Oreste - Sor**	**0.67**	**238**	⇑P	**Pg**	**14 33 03.2**	**-0.6**
CERT	**Cerreto**	**0.68**	**198**	⇑P	**Pg**	**14 33 03.3**	**-0.8**
CADA	**Capodarco di F**	**0.70**	**31**	P	**Pb**	**14 33 04.4**	**-0.5**
MTCE	**Montecelio**	**0.70**	**215**	⇑P	**Pg**	**14 33 03.6**	**-0.7**
SNTG	**Esanatoglia**	**0.70**	**340**	P	**Pg**	**14 33 03.9**	**-0.5**
TRE1	**Treia**	**0.71**	**2**	P	**Pb**	**14 33 04.9**	**-0.3**
EL6	**Elcito**	**0.74**	**350**	⇑P	**Pg**	**14 33 04.8**	**-0.4**
ATCC	**AVT- Casa Cast**	**0.75**	**322**	P	**Pg**	**14 33 05.1**	**-0.2**
INTR	**Introdacqua**	**0.75**	**141**	⇓P	**Pg**	**14 33 04.4**	**-0.9**
CIMA	**Civitanova Mar**	**0.77**	**22**	P	**Pg**	**14 33 05.2**	**-0.5**
VVLD	**Villa Vallelon**	**0.77**	**160**	P	**Pg**	**14 33 05.4**	**-0.3**
CING	**Cingoli**	**0.78**	**356**	⇑P	**Pg**	**14 33 05.4**	**-0.5**
RCAV	**Rocca di Cave**	**0.79**	**198**	P	**Pb**	**14 33 06.5**	**0.0**
GUAR	**Guarcino**	**0.80**	**178**	P	**Pb**	**14 33 06.7**	**-0.1**
PP3	**Marolino**	**0.82**	**18**	⇑P	**Pb**	**14 33 07.0**	**0.0**
MURB	**Monte Urbino**	**0.86**	**321**	P	**Pg**	**14 33 07.2**	**-0.3**
MMUR	**Monte Murano**	**0.87**	**347**	P	**Pg**	**14 33 07.4**	**-0.2**
LPEL	**Lama dei Pelig**	**0.87**	**129**	P	**Pg**	**14 33 06.5**	**-1.2**
RMP	**Rome, Mte Porz**	**0.89**	**208**	P	**Pg**	**14 33 07.6**	**-0.4**
ATTE	**AVT- Monte Tez**	**0.90**	**312**	P	**Pg**	**14 33 07.8**	**-0.4**
MGAB	**Montegabbione**	**0.91**	**291**	P	**Pg**	**14 33 07.9**	**-0.5**
SSFR	**Montelago di S**	**0.91**	**337**	P	**Pg**	**14 33 07.9**	**-0.5**
ATFO	**Monte Foce - G**	**0.92**	**326**	P	**Pg**	**14 33 08.4**	**-0.3**
ARVD	**Arcevia**	**0.93**	**345**	P	**Pg**	**14 33 08.0**	**-0.8**
RDP	**Rocca di Papa**	**0.94**	**206**	P	**Pb**	**14 33 08.9**	**-0.1**
POFI	**Posta Fibreno**	**0.94**	**159**	P	**Pg**	**14 33 08.3**	**-0.6**
ATLO	**AVT- Montelove**	**0.96**	**319**	P	**Pg**	**14 33 08.7**	**-0.6**
AOI	**Ancona**	**0.98**	**14**	P	**Pg**	**14 33 09.2**	**-0.6**
ATVA	**AVT- Monte Val**	**0.99**	**314**	P	**Pg**	**14 33 08.5**	**-1.5**
FRON	**Frontone**	**1.00**	**337**	P	**Pg**	**14 33 09.3**	**-0.9**
ATVO	**AVT- Monte Val**	**1.01**	**321**	P	**Pg**	**14 33 09.4**	**-0.8**
TB03	**Pietralunga**	**1.02**	**322**	P	**Pg**	**14 33 09.5**	**-1.0**
SACS	**San Casciano d**	**1.03**	**284**	P	**Pg**	**14 33 10.2**	**-0.5**
GIUL	**Giuliano Di Ro**	**1.04**	**181**	P	**Pg**	**14 33 10.0**	**-0.8**
ATMI	**Monte Miggiano**	**1.04**	**315**	P	**Pg**	**14 33 10.7**	**-0.1**
ATPI	**Pietralunga -**	**1.06**	**323**	P	**Pg**	**14 33 11.0**	**-0.3**
PIEI	**Pieia**	**1.08**	**330**	P	**Pg**	**14 33 11.0**	**-0.6**
LATE	**Laterza**	**1.08**	**271**	P	**Pg**	**14 33 10.9**	**-0.8**
TOLF	**Tolfa**	**1.08**	**241**	⇑P	**Pb**	**14 33 10.6**	**-0.9**
MPAG	**Monte Paganucc**	**1.10**	**340**	P	**Pg**	**14 33 11.1**	**-0.9**
RNI2	**Rionero Sannit**	**1.11**	**144**	P	**Pb**	**14 33 11.9**	**-0.1**
LATB	**Latina**	**1.13**	**192**	P	**Pb**	**14 33 11.3**	**-0.9**
LATB				AML	AML		
	comp=N,382μm,0.8s						
LATB				AML	AML		
	comp=N,383μm,0.8s						
LATB				AML	AML		
	comp=E,463μm,0.9s						
NARO	**Abbazia di Nar**	**1.13**	**334**	P	**Pb**	**14 33 11.8**	**-0.5**
CERA	**Filignano**	**1.14**	**151**	P	**Pb**	**14 33 11.3**	**-1.3**
FSSB	**Fossombrone**	**1.15**	**342**	P	**Pb**	**14 33 12.1**	**-0.6**
BADI	**Badiali**	**1.18**	**321**	P	**Pb**	**14 33 12.5**	**-0.7**
SF03	**Valle Cupa**	**1.19**	**280**	P	**Pb**	**14 33 13.3**	**0.0**
MCIV	**Monte Civitell**	**1.19**	**279**	P	**Pb**	**14 33 13.2**	**-0.1**
CAFI	**Castiglion Fio**	**1.21**	**308**	P	**Pb**	**14 33 13.4**	**-0.2**
SF11	**Podere del Sol**	**1.21**	**284**	P	**Pb**	**14 33 12.9**	**-0.8**
SF04	**Casetta**	**1.21**	**282**	P	**P

PE3	Peglio	1.24	333	P		Pg	14 33 14.4	-0.1	
TRIV	Trivento	1.26	131	P		Pn	14 33 14.0	-0.3	
SF01	Poggio Pratacc	1.28	280	P		Pb	14 33 15.0	+0.2	
ARCI	Arcidosso	1.35	281	P		Pn	14 33 15.7	+0.1	
PESA	Pesaro	1.38	347	P		Pg	14 33 17.3	0.0	
VAGA	Valle Agricola	1.38	148	P		Pn	14 33 15.8	-0.3	
CRE	Caprese Michel	1.41	317	P		Pn	14 33 16.6	+0.2	
BSSO	Busso	1.44	136	P		Pb	14 33 17.3	-0.3	
MODR	Mondragone	1.52	162	P		Pb	14 33 19.1	+0.1	
ASQU	Asqua	1.62	318	P		Pb	14 33 20.1	-0.5	
MELA	Melanico ??? S	1.64	122	P		Pn	14 33 20.0	+0.5	
FROS	Frosini	1.67	292	P		Pn	14 33 20.6	+0.7	
CSNT	Castellina Chi	1.69	302	P		Pb	14 33 21.2	-0.8	
CASP	Castiglione de	1.79	277	P		Pn	14 33 21.8	+0.3	
RUFI	Rufina	1.79	315	P		Pn	14 33 22.1	+0.6	
APRC	Apricena	1.89	116	P		Pb	14 33 24.1	-1.2	
DUGI	Dugi Otok	1.91	42	*e*Pn		Pn	14 33 23.7	+0.5	
MPPT	Montemurlo	2.09	311	P		Pn	14 33 26.5	+0.7	
VIRC	Vir	2.13	37	*e*Pn		Pn	14 33 26.8	+0.5	
MSAG	Monte S. Angel	2.15	113	P		Pn	14 33 27.9	+1.3	
MORI	Morici	2.19	54	*e*Pn		Pn	14 33 27.5	+0.5	
NVLJ	Novalja	2.28	30	*e*Pn		Pn	14 33 28.5	+0.2	
BRJN	Brijuni	2.33	8	*e*Pn		Pn	14 33 28.7	-0.3	
BRJN	Brijuni	2.33	8	P		Pn	14 33 29.6	+0.6	
HVAR	Hvar	2.41	75	*e*Pn		Pn	14 33 30.6	+0.6	
HVAR	Hvar	2.41	75	P		Pn	14 33 30.9	+0.8	
SMRN	Sveta Marina	2.52	14	*e*Pn		Pn	14 33 31.4	-0.2	
UDBI	Udbina	2.65	42	*e*Pn		Pn	14 33 35.0	+1.6	
LSTV	Lastovo	2.67	85	*e*Pn		Pn	14 33 33.5	-0.2	
KIJV	Kijevo	2.69	57	*i* Pn		Pn	14 33 35.7	+1.8	
MAKA	Makarska	2.84	75	*e*Pn		Pn	14 33 36.7	+0.8	
PLIT	Plitvice	2.85	36	*e*Pn		Pn	14 33 38.4	+2.3	
RICI	Ricice	2.97	71	*e*Pn		Pn	14 33 39.5	+1.7	
STON	Ston	3.27	84	*e*Pn		Pn	14 33 42.2	+0.2	
STON	Ston	3.27	84	*e*Pn		Pn	14 33 42.3	+0.4	
STON				*e*Sn		Sn	14 34 21.2	+0.4	
OZLJ	Ozalj	3.41	27	*e*Pn		Pn	14 33 44.2	+0.5	
BLY	Banja Luka	3.56	52	*e*Pn		Pb	14 33 50.6	-3.1	
DBRK	Dubrovnik	3.60	87	*e*Pn		Pn	14 33 47.6	+1.2	
TREB	Trebinje	3.75	86	*e*Pn		Pn	14 33 50.3	+1.8	
TREB				*e*Sn		Sn	14 34 34.5	+2.0	
OBKA	Obir	4.02	13	*e*Pn		Pn	14 33 52.9	+0.7	
	comp=E,1.1nm,0.2s								
MYKA	Terra Mystica	4.04	4	*e*Pn		Pn	14 33 54.4	+1.8	
	comp=E,4.7nm,0.4s								
ABTA	Abfaltersbach	4.18	353	*e*Pn		Pn	14 33 56.4	+1.8	
	comp=E,22nm,0.5s								
SOKA	Soboth	4.27	17	*e*Pn		Pn	14 33 56.2	+0.5	
	comp=E,1.6nm,0.3s								
PDG	Podgorica	4.43	90	*e*Pn		Pn	14 34 00.0	+2.2	
PDG				*e*Sn		Sn	14 34 51.4	+2.2	
KBA	Koelnbreinsper	4.48	1	*e*Pn		Pn	14 33 59.9	+1.2	
	comp=E,6.0nm,0.6s								
BBLS	Lazići	4.66	72	*e*Pn		Pn	14 34 03.3	+2.3	
BBLS				*e*Sn		Sn	14 34 58.0	+2.9	
FETA	Feichten	4.78	339	*e*Pn		Pn	14 34 07.1	+4.3	
	comp=E,0.8nm,0.3s								
WTTA	Wattenberg	4.81	347	*e*Pn		Pn	14 34 07.0	+3.8	
	comp=E,2.8nm,0.3s								
SQTA	Sankt Quirin	4.85	343	*e*Pn		Pn	14 34 08.6	+4.9	
	comp=E,4.0nm,0.3s								
WATA	Walderalm	4.89	346	*e*Pn		Pn	14 34 09.3	+5.0	
	comp=E,1.9nm,0.2s								
ARSA	Arzberg	4.92	18	*e*Pn		Pn	14 34 05.7	+1.1	
	comp=E,3.0nm,0.4s								
SJES	Sjenica	4.96	80	*e*Pn		Pn	14 34 07.8	+2.5	
SJES				*e*Sn		Sn	14 35 05.8	+3.1	
MOTA	Moosalm	4.99	343	*e*Pn		Pn	14 34 11.2	+5.5	
	comp=E,3.5nm,0.4s								
BIOA	Bad Ischl, Aus	5.10	3	*e*Pn		Pn	14 34 08.6	+1.6	
	comp=E,6.1nm,0.3s								
DIVS	Divibare	5.12	71	*e*Sn		Sn	14 35 03.9	-2.7	
IVAS	Ivanjica	5.13	77	*e*Pn		Pn	14 34 09.3	+1.7	
IVAS				*e*Sn		Sn	14 35 06.1	-0.7	
RETA	Reutte	5.20	341	*e*Pn		Pn	14 34 14.3	+5.7	
	comp=E,1.8nm,0.3s								
DAVA	Damuels	5.27	334	*e*Pn		Pn	14 34 15.2	+5.7	
	comp=E,5.3nm,0.6s								
MOA	Molln	5.30	7	*e*Pn		Pn	14 34 11.4	+1.6	
	comp=E,2.2nm,0.3s								
RONA	Rosalia, Austr	5.53	22	*e*Pn		Pn	14 34 13.3	+0.2	
	comp=E,1.6nm,0.3s								
CONA	Conrad Observa	5.63	18	*e*Pn		Pn	14 34 14.7	+0.2	
	comp=E,0.7nm,0.3s								
SELS	Selova	5.80	81	*e*Pn		Pn	14 34 18.1	+1.4	
CKRC	Cesky Krumlov	6.26	6	*e*SN		Sn	14 35 32.9	-1.7	
PRVS	Prvonek	6.50	88	*e*Pn		Pn	14 34 27.9	+1.5	
PRVS				*e*Sn		Sn	14 35 41.9	+1.4	
KHC	Kasperske Hory	6.54	2	*e*PN		Pn	14 34 28.8	+2.0	
KHC				*e*SN		Sn	14 35 38.5	-2.8	
ZAGS	Zajecar	6.66	76	*e*Pn		Pn	14 34 30.1	+1.6	
ZAPS	Zavoj	6.91	81	*e*Sn		Sn	14 35 49.8	-0.6	

ROM 26 14:33:40.9±0.1, 42°669N±0″004×13°210E±0″005, h15km±1km, ML2.8/2, 6C-2D, Error ellipse: s-maj=0.4km s-min=0.2km az=48.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
SMA1	**SAN MARTINO**	**0.10**	**112**	P	Pb	14 33 44.6		0.0
SMA1				S	Sg	14 33 46.6		+0.1
SMA1				AML	AML			
	comp=E,25650μm,0.3s							
SMA1				AML	AML			
	comp=N,14050μm,0.6s							
SMA1				AML	AML			
	comp=N,13756μm,0.2s							
SMA1				AML	AML			
	comp=E,24609μm,0.2s							
LNSS	**Leonessa**	**0.14**	**242**	⇑P	Pg	14 33 44.9		+0.2
LNSS				S	Sg	14 33 47.7		+0.4
LNSS				AML	AML			
	comp=E,6065μm,0.4s							
LNSS				AML	AML			
	comp=N,6950μm,0.3s							
LNSS				AML	AML			
	comp=N,6955μm,0.3s							
LNSS				AML	AML			
	comp=E,6062μm,0.4s							
LNSS				AML	AML			
	comp=N,6954μm,0.3s							
RM33	**Pellescritta (**	**0.16**	**179**	P	Pb	14 33 45.3		-0.3
RM33				S	Sb	14 33 48.5		-0.3
RM33				AML	AML			
	comp=N,4275μm,0.9s							
RM33				AML	AML			
	comp=N,4315μm,0.9s							
RM33				AML	AML			
	comp=E,6185μm,0.3s							
RM33				AML	AML			
	comp=N,4310μm,0.9s							
RM33				AML	AML			
	comp=N,4275μm,0.9s							
RM33				AML	AML			
	comp=E,6210μm,0.3s							
RM33				AML	AML			
	comp=E,5588μm,0.1s							
RM33				AML	AML			
	comp=E,5639μm,0.1s							
RM33				AML	AML			
	comp=N,3365μm,0.2s							
RM33				AML	AML			
	comp=N,3350μm,0.1s							
T1243	**Rocca Santa Ma**	**0.18**	**81**	P	Pg	14 33 45.6		+0.3
T1243				S	Sg	14 33 48.5		+0.4
T1243				AML	AML			
	comp=E,11600μm,0.4s							
T1243				AML	AML			
	comp=N,9915μm,0.2s							
T1243				AML	AML			
	comp=N,9930μm,0.2s							
T1243				AML	AML			
	comp=N,9910μm,0.2s							
T1243				AML	AML			
	comp=E,11550μm,0.4s							
T1243				AML	AML			
	comp=E,11400μm,0.4s							
T1243				AML	AML			
	comp=E,10974μm,0.3s							
T1243				AML	AML			
	comp=N,9823μm,0.1s							
T1243				AML	AML			
	comp=E,11046μm,0.3s							
T1243				AML	AML			
	comp=N,9878μm,0.1s							
NRCA	**Norcia**	**0.18**	**337**	⇓P	Pg	14 33 45.3		+0.1
NRCA				S	Sg	14 33 48.0		-0.2
NRCA				AML	AML			
	comp=E,8740μm,0.2s							
NRCA				AML	AML			
	comp=N,8470μm,0.7s							
NRCA				AML	AML			
	comp=E,9490μm,0.2s							
NRCA				AML	AML			
	comp=N,9525μm,0.7s							
NRCA				AML	AML			
	comp=E,9500μm,0.2s							
NRCA				AML	AML			
	comp=N,8058μm,0.2s							
NRCA				AML	AML			
	comp=N,9043μm,0.2s							
NRCA				AML	AML			
	comp=E,8742μm,0.2s							
CAMP	**Campotosto**	**0.20**	**132**	⇑P	Pb	14 33 46.0		-0.3
CAMP				S	Sg	14 33 49.3		+0.6
CAMP				AML	AML			
	comp=E,1054μm,0.3s							
CAMP				AML	AML			
	comp=N,1260μm,0.4s							
MC2	**Monte Cornacci**	**0.24**	**357**	P	Pg	14 33 46.7		+0.4
MC2				S	Sb	14 33 51.0		-0.4
MMO1	**Montemonaco**	**0.25**	**20**	⇑P	Pg	14 33 46.5		+0.2
MMO1				S	Sb	14 33 50.8		-0.5
MMO1				AML	AML			
	comp=N,1684μm,0.1s							
MMO1				AML	AML			
	comp=E,1873μm,0.5s							
TERO	**Teramo**	**0.29**	**99**	⇑P	Pg	14 33 47.4		+0.3
TERO				S	Sg	14 33 52.0		+0.6
TERO				AML	AML			
	comp=N,2645μm,0.3s							
TERO				AML	AML			
	comp=N,3160μm,0.5s							
TERO				AML	AML			
	comp=N,2640μm,0.3s							
TERO				AML	AML			
	comp=E,2715μm,1.3s							
TERO				AML	AML			
	comp=E,2220μm,1.3s							
TERO				AML	AML			
	comp=N,2798μm,0.1s							
TERO				AML	AML			
	comp=E,2159μm,0.1s							
TERO				AML	AML			
	comp=N,2274μm,0.1s							
TERO				AML	AML			
	comp=E,1752μm,0.1s							
GIGS	**Gran Sasso**	**0.34**	**129**	⇑P	Pg	14 33 48.3		+0.3
GIGS				S	Sg	14 33 53.4		+0.6
GIGS				AML	AML			
	comp=N,308μm,0.1s							
GIGS				AML	AML			
	comp=E,269μm,0.1s							
FDMO	**Fiordimonte**	**0.38**	**346**	P	Pg	14 33 48.7		+0.2
FDMO				S	Sg	14 33 54.4		+0.6
FDMO				AML	AML			
	comp=N,553μm,0.2s							
FDMO				AML	AML			
	comp=E,600μm,0.2s							
CESI	**CESI - Serrava**	**0.40**	**326**	⇓P	Pg	14 33 49.2		+0.2
CESI				S	Sg	14 33 55.0		+0.4
CESI				AML	AML			
	comp=E,556μm,0.2s							
CESI				AML	AML			
	comp=N,1030μm,0.3s							
CSP1	**Cessapalombo**	**0.42**	**360**	P	Pg	14 33 49.5		+0.1
CSP1				S	Sb	14 33 56.1		-0.3
CSP1				AML	AML			
	comp=E,755μm,0.3s							
CSP1				AML	AML			
	comp=N,1183μm,0.3s							
CESX	**Cesi**	**0.47**	**263**	P	Pg	14 33 50.1		-0.1
CESX				AML	AML			
	comp=E,472μm,0.2s							
CESX				AML	AML			
	comp=N,478μm,0.4s							
SNTG	**Esanatoglia**	**0.62**	**341**	⇑P	Pb	14 33 53.3		-0.1
SNTG				S	Sn	14 34 04.0		-0.9
SNTG				AML	AML			
	comp=N,173μm,0.8s							
SNTG				AML	AML			
	comp=E,125μm,0.7s							
ARVD	**Arcevia**	**0.85**	**347**	S	Sn	14 34 11.0		+0.4
LPEL	**Lama dei Pelig**	**0.95**	**130**	S	Sn	14 34 13.0		-0.1
LIK	**San Giovanni I**	**1.19**	**167**	S	Sb	14 34 17.0		-1.4

*NEIC **26** 14:46:02.9±1.3, 57°.46S±0°.09×25°.9W±0°.2, h76km±8km, mb4.8/30, Error ellipse: s-maj=14.2km s-min=10.0km az=135.0*
*IDC **26** 14:46:04.3±4.8, 57°.36S×25°.96W, h86km±43km, mb4.2/10, mbtmp4.4/12, MS3.7/6, Error ellipse: s-maj=20.7km s-min=14.8km az=55.0*
ISC 26 14:46:01.8±0.4, 57°.49S±0°.06×25°.97W±0°.08, h65km, n205, σ0°89/201, mb4.7/22, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
HOPE	**Hope Point**	**6.73**	**294**	Pn	**Pn**	**14 47 40.8**		**+2.9**
ORCD	**Orcadas**	**10.17**	**243**	Pn	**Pn**	**14 48 25.8**		**+1.0**
VNA1	**Neumayer--Stat**	**15.21**	**157**	P	**Pn**	**14 49 33.0**		**+0.7**
VNA1				S	**Sn**	**14 52 15.0**		**-4.4**
VNA3	**Neumayer Olymp**	**15.41**	**160**	P	**Pn**	**14 49 35.0**		**+0.1**
VNA3				S	Sn	14 52 10.5		-14
VNA2	**Neumayer--Watz**	**15.60**	**157**	P	**Pn**	**14 49 37.7**		**+0.4**
	baz=315,slow=14							
SNAA	**Sanae**	**17.15**	**155**	P	**P**	**14 49 58.3**		**+0.7**
SNAA	**Sanae**	**17.15**	**155**	P	**P**	**14 49 58.4**		**+0.9**
	2.4nm,0.4s,baz=313,slow=14,SNR=37							
SNAA	**Sanae**	**17.15**	**155**	P	**P**	**14 49 58.2**		**+0.7**
TROLL	**Troll, Antarti**	**18.66**	**152**	P	**P**	**14 50 13.3**		**-0.9**
EFI	**East Falkland**	**19.36**	**274**	P	**Pn**	**14 50 23.9**		**+0.4**
EFI				IAmb	IAmb	14 50 32.2		
	comp=Z,42nm,1.2s							
PMSA	**Palmer Station**	**19.50**	**232**	P	**Pn**	**14 50 26.6**		**+1.6**
	comp=Z,6.7nm,0.5s,baz=48,slow=7.1,SNR=2.1							
PMSA				LR	LR	14 57 00.9		
	comp=Z,174nm,18.0s,baz=56,slow=34							
PMSA	**Palmer Station**	**19.50**	**232**	*e*P	**P**	**14 50 17.5**		**-5.8**
BELA	**Belgrano 2**	**20.69**	**185**	P	**P**	**14 50 36.7**		**+0.6**
TRQA	**Tornquist**	**30.51**	**294**	P	**P**	**14 52 08.5**		**0.0**
PLTB	**Pedras Altas**	**31.96**	**312**	P	**P**	**14 52 21.1**		**-0.3**
PLTB				IAmb	IAmb	14 52 21.4		
	comp=Z,5.4nm,0.6s							
PLTB	**Pedras Altas**	**31.96**	**312**	*e*P	**P**	**14 52 20.4**		**-1.0**
QSPA	**South Pole Qui**	**32.76**	**180**	P	**P**	**14 52 29.9**		**+1.7**
	comp=Z,13nm,0.6s,baz=216,slow=1.8,SNR=168							
	comp=Z,13nm,0.6s							
QSPA	**South Pole Qui**	**32.76**	**180**	P	**P**	**14 52 29.9**		**+1.7**
QSPA				IAmb	IAmb	14 52 31.5		
	comp=Z,14nm,0.6s							
QSPA	**South Pole Qui**	**32.76**	**180**	P	**P**	**14 52 29.9**		**+1.7**
QSPA				pP	**pwP**	**14 52 48.4**		**+1.5**
PLCA	**Paso Flores**	**32.92**	**281**	P	**P**	**14 52 28.4**		**-1.4**
	comp=Z,0.7nm,0.5s,baz=162,slow=6.4,SNR=4.0							
PLCA				LR	LR	15 05 08.3		
	comp=Z,56nm,18.4s,baz=168,slow=35							
	comp=Z,0.7nm,0.5s							
PLCA	**Paso Flores**	**32.92**	**281**	P	**P**	**14 52 28.8**		**-1.1**
PLCA				IAmb	IAmb	14 52 39.3		
	comp=Z,11nm,1.4s							
PLCA	**Paso Flores**	**32.92**	**281**	*e*P	**P**	**14 52 28.7**		**-1.1**
CNLB	**Canela**	**33.09**	**318**	*e*P	**P**	**14 52 31.5**		**+0.2**
CPSB	**Cacapava Do Su**	**33.09**	**313**	*e*P	**P**	**14 52 30.4**		**-0.8**
ITQB	**Itaqui**	**35.03**	**309**	*e*P	**P**	**14 52 47.0**		**-1.0**
LR04	**Corral**	**35.06**	**279**	P	**P**	**14 52 47.3**		**-0.9**
ITAB	**Concordia**	**35.44**	**317**	*e*P	**P**	**14 52 51.9**		**+0.4**
PARB	**Paraibuna**	**36.96**	**329**	*e*P	**P**	**14 53 05.4**		**+0.7**
MAN01	**Angra dos Reis**	**36.97**	**332**	*e*P	**P**	**14 53 05.7**		**+1.0**
DUB01	**Friburgo-RJ**	**37.34**	**334**	*e*P	**P**	**14 53 08.8**		**+1.0**
CAM01	**Campos-RJ**	**37.42**	**336**	*e*P	**P**	**14 53 09.3**		**+0.9**
VAO	**Valinhos**	**37.66**	**327**	*e*P	**P**	**14 53 11.3**		**+0.7**
CPUP	**Vila Florida**	**38.26**	**311**	P	**P**	**14 53 14.5**		**-1.0**
	comp=Z,1.9nm,0.4s,baz=156,slow=8.0,SNR=4.3							
	comp=Z,1.9nm,0.4s							
CPUP	**Vila Florida**	**38.26**	**311**	*e*P	**P**	**14 53 14.8**		**-0.7**
MAW	**Mawson**	**38.59**	**142**	P	**P**	**14 53 18.9**		**+1.1**
	comp=Z,1.4nm,0.5s,baz=245,slow=7.3,SNR=2.8							
	comp=Z,1.4nm,0.5s							

MAW	**Mawson**	**38.59**	**142**	P		**P**	**14 53 18.0**		**+0.1**
MT02	**Curacav**	**38.88**	**289**	P		**P**	**14 53 19.9**		**-0.8**
RIB01	**Linhares ES**	**39.59**	**338**	*e*P		**P**	**14 53 27.3**		**+0.6**
BB19B	**Bebedouro**	**39.95**	**326**	*e*P		**P**	**14 53 30.4**		**+0.7**
PCMB	**Pacaembu**	**40.31**	**322**	*e*P		**P**	**14 53 32.0**		**-0.6**
SJMB	**Sao Joao De Ma**	**40.34**	**337**	*e*P		**P**	**14 53 33.4**		**+0.5**
SUR	**Sutherland**	**40.41**	**72**	LR		LR	15 06 19.7		
	comp=Z,110nm,18.9s,baz=164,slow=30								
NAN01	**Guarapari, ES**	**40.97**	**339**	*e*P		**P**	**14 53 38.1**		**+0.1**
CO01	**Juntas del Tor**	**40.99**	**293**	P		**P**	**14 53 37.6**		**-0.9**
CO01				IAmb	IAmb	14 54 19.4			
	comp=Z,13nm,1.4s								
DIAM	**Diamantina, MG**	**41.29**	**334**	*e*P		**P**	**14 53 41.6**		**+0.7**
PMNB	**Patos De Minas**	**41.76**	**330**	*e*P		**P**	**14 53 45.4**		**+0.7**
ITRB	**Iturama**	**41.80**	**324**	*e*P		**P**	**14 53 45.2**		**+0.3**
GUA01	**Guaratinga, BA**	**42.13**	**340**	*e*P		**P**	**14 53 48.3**		**+0.7**
IPMB	**Ipameri, GO**	**42.77**	**328**	*e*P		**P**	**14 53 53.6**		**+0.8**
MC01	**Montes Claros**	**42.88**	**334**	*e*P		**P**	**14 53 53.6**		**-0.1**
AQDB	**Aquidauana**	**42.91**	**317**	*e*P		**P**	**14 53 53.1**		**-0.8**
AC04	**Llanos de Chal**	**42.93**	**293**	P		**P**	**14 53 52.5**		**-1.5**
AC04				IAmb	IAmb	14 54 05.8			
	comp=Z,24nm,1.1s								
JANB	**Januaria**	**44.56**	**334**	*e*P		**P**	**14 54 07.0**		**-0.2**
SBA	**Scott Base**	**44.69**	**184**	P		**P**	**14 54 10.3**		**+2.9**
SBA	**Scott Base**	**44.69**	**184**	P		**P**	**14 54 09.9**		**+2.4**
GDU01	**Guandu, BA**	**44.89**	**341**	*e*P		**P**	**14 54 09.7**		**0.0**
BDFB	**Brasilia**	**44.95**	**329**	P		**P**	**14 54 10.7**		**+0.4**
	comp=Z,4.0nm,0.4s,baz=212,slow=7.0,SNR=6.4								
	comp=Z,4.0nm,0.4s								
BDFB	**Brasilia**	**44.95**	**329**	P		**P**	**14 54 10.8**		**+0.4**
BDFB	**Brasilia**	**44.95**	**329**	*e*P		**P**	**14 54 11.1**		**+0.8**
VNDA	**Vanda**	**45.16**	**182**	P		**P**	**14 54 13.5**		**+2.2**
	comp=Z,6.1nm,0.6s,baz=188,slow=6.4,SNR=46								
	comp=Z,6.1nm,0.6s								
VNDA	**Vanda**	**45.16**	**182**	P		**P**	**14 54 13.3**		**+2.1**
VNDA				IAmb	IAmb	14 54 14.1			
	comp=Z,7.1nm,0.7s								
VNDA	**Vanda**	**45.16**	**182**	P		**P**	**14 54 13.3**		**+2.1**
VNDA				pP		**sP**	**14 54 32.4**		**-1.6**
VNDA				sP		pwP	14 54 41.4		+11
BOSA	**Boshof**	**45.71**	**73**	P		**P**	**14 54 16.1**		**-0.2**
	comp=Z,1.0nm,0.5s,baz=203,slow=9.2,SNR=4.2								
BOSA				LR	LR	15 09 06.7			
	comp=Z,82nm,20.2s,baz=189,slow=30								
	comp=Z,1.0nm,0.5s								
BOSA	**Boshof**	**45.71**	**73**	P		**P**	**14 54 15.8**		**-0.5**
CCD	**Concordia, Ant**	**46.14**	**169**	P		**P**	**14 54 20.1**		**+0.6**
LVC	**Limon Verde**	**46.60**	**300**	P		**P**	**14 54 22.9**		**-0.8**
LVC				IAmb	IAmb	14 54 27.5			
	comp=Z,9.2nm,1.1s								
LVC	**Limon Verde**	**46.60**	**300**	*e*P		**P**	**14 54 23.0**		**-0.6**
SALV	**Santo Antonio**	**47.12**	**319**	*e*P		**P**	**14 54 26.9**		**-0.4**
SDBA	**SAO DESIDERIO**	**47.25**	**334**	*e*P		**P**	**14 54 28.3**		**-0.1**
NBLA	**Lagarto - SE**	**47.28**	**344**	*e*P		**P**	**14 54 29.1**		**+0.6**
PB07	**IPOC Station P**	**47.82**	**300**	P		**P**	**14 54 32.1**		**-0.8**
NBAN	**Anadia - AL**	**48.37**	**346**	*e*P		**P**	**14 54 36.8**		**-0.2**
PTLB	**Pontes e Lacer**	**48.80**	**315**	P		**P**	**14 54 39.9**		**-0.3**
PTLB				IAmb	IAmb	14 54 40.5			
	comp=Z,6.8nm,0.5s								
PTLB	**Pontes e Lacer**	**48.80**	**315**	*e*P		**P**	**14 54 39.8**		**-0.5**
LBTB	**Lobatse**	**48.82**	**71**	LR		LR	15 10 57.3		
	comp=Z,91nm,20.0s,baz=156,slow=31								
H10S2	**ASCENSION HYDR**	**49.20**	**15**	T		T	15 48 21.3		
	baz=32,slow=74,SNR=34								
H10S3	**ASCENSION HYDR**	**49.21**	**15**	T		T	15 48 23.8		
	baz=188,slow=74,SNR=57								
GO01	**Chusmiza**	**49.27**	**302**	P		**P**	**14 54 43.8**		**-0.7**
GO01				IAmb	IAmb	14 54 55.4			
	comp=Z,12nm,1.4s								
SNDB	**Serra Nova Dou**	**49.37**	**327**	*e*P		**P**	**14 54 45.2**		**+0.6**
H10N1	**ASCENSION HYDR**	**50.32**	**15**	T		T	15 49 48.0		
	baz=181,slow=71,SNR=28								
H10N3	**ASCENSION HYDR**	**50.33**	**15**	T		T	15 49 53.6		
	baz=181,slow=71,SNR=86								
H10N2	**ASCENSION HYDR**	**50.34**	**15**	T		T	15 49 48.5		
	baz=181,slow=71,SNR=59								
SMTB	**Santa Maria do**	**51.32**	**332**	*e*P		**P**	**14 55 00.1**		**+0.7**
PDRB	**Porto dos Gac**	**51.46**	**320**	*e*P		**P**	**14 54 59.9**		**-0.5**
VILB	**Vilhena**	**51.48**	**316**	*e*P		**P**	**14 55 00.5**		**-0.1**
LPAZ	**La Paz**	**51.75**	**305**	P		**P**	**14 55 03.0**		**-0.3**
	comp=Z,7.4nm,0.4s,baz=140,slow=5.0,SNR=36								
	comp=Z,7.4nm,0.4s								
LPAZ	**La Paz**	**51.75**	**305**	P		**P**	**14 55 02.9**		**-0.5**
LPAZ	**La Paz**	**51.75**	**305**	*e*P		**P**	**14 55 03.0**		**-0.3**
LPAZ	**La Paz**	**51.75**	**305**	P		**P**	**14 55 02.8**		**-0.5**
LPAZ				pP		**pP**	**14 55 19.9**		**+0.6**
LPAZ				sP		**sP**	**14 55 26.3**		**0.0**
CLDB	**Colider**	**51.83**	**322**	*e*P		**P**	**14 55 02.6**		**-0.6**
RCBR	**Riachuelo**	**52.11**	**347**	*e*P		**P**	**14 55 05.8**		**+0.6**
PRPB	**Parauapebas**	**54.48**	**330**	*e*P		**P**	**14 55 23.2**		**+0.6**
NPGB	**Novo Progresso**	**55.28**	**324**	*e*P		**P**	**14 55 27.9**		**-0.5**
DRV	**Dumont d'Urvil**	**55.72**	**173**	P		**P**	**14 55 31.5**		**+0.7**
SAML	**Samuel**	**56.29**	**314**	P		**P**	**14 55 35.1**		**-0.5**
SAML				IAmb	IAmb	14 55 35.9

	baz=106						
PAX	**Paxson**	**150.48 306**	P		**PKPbc**	**15 05 44.8**	**+0.3**
	baz=107						
M24K	**Tolsona, Glenn**	**150.52 304**	P		**PKiKP**	**15 05 45.5**	**+0.2**
	baz=108						
GLI	**Glacier Island**	**150.53 302**	P		**PKiKP**	**15 05 45.1**	**-0.2**
	baz=110						
G26K	**Porcupine Rive**	**150.79 314**	P		**PKPbc**	**15 05 45.3**	**+0.3**
	baz=102						
K24K	**Donnelly Dome**	**150.85 308**	P		**PKiKP**	**15 05 45.8**	**-0.1**
	baz=106						
J25K	**Salcha River,**	**150.89 309**	P		**PKPbc**	**15 05 45.7**	**+0.3**
	baz=105,SNR=10						
SCM	**Sheep Creek Mo**	**150.95 303**	P		**PKiKP**	**15 05 46.2**	**-0.1**
	baz=108,SNR=5.2						
F26K	**Sheenjek River**	**151.07 316**	P		**PKiKP**	**15 05 46.5**	**+0.3**
	baz=100,SNR=13						
PWL	**Port Wells**	**151.09 301**	P		**PKPbc**	**15 05 46.2**	**+0.2**
	baz=109						
M23K	**Glacier View**	**151.12 303**	P		**PKPbc**	**15 05 46.2**	**+0.2**
	baz=108						
PRP	**Porcupine Dome**	**151.17 311**	P		**PKPbc**	**15 05 46.3**	**+0.2**
	baz=103						
C27K	**Jago River**	**151.21 320**	P		**PKiKP**	**15 05 46.8**	**+0.4**
	baz=97						
KNK	**Knik Glacier**	**151.33 302**	P		**PKiKP**	**15 05 46.8**	**-0.1**
	baz=108						
DHY	**Denali Highway**	**151.34 306**	P		**PKiKP**	**15 05 47.1**	**+0.1**
	baz=106						
WAT6	**Susitna Watana**	**151.36 305**	P		**PKiKP**	**15 05 46.9**	**-0.2**
	baz=107,SNR=6.5						
SML	**Sawmill**	**151.40 303**	P		**PKiKP**	**15 05 46.9**	**-0.2**
	baz=108,SNR=8.5						
H25K	**Birch Creek**	**151.45 313**	P		**PKiKP**	**15 05 47.1**	**+0.2**
	baz=101						
HDA	**Harding Lake**	**151.50 309**	P		**PKiKP**	**15 05 47.3**	**+0.1**
	baz=104						
ILAR	**Eielson Array**	**151.56 309**	PKPbc		**PKPbc**	**15 05 46.9**	**0.0**
	comp=Z,9.7nm,0.7s,baz=143,slow=4.2,SNR=127						
F25K	**Christian Rive**	**151.62 316**	P		**PKiKP**	**15 05 47.4**	**-0.1**
	baz=99,SNR=14						
E25K	**Arctic Village**	**151.67 317**	P		**PKiKP**	**15 05 47.4**	**-0.1**
	baz=98,SNR=14						
WAT1	**Susitna Watana**	**151.79 305**	P		**PKiKP**	**15 05 47.8**	**-0.1**
	baz=106						
RC01	**Rabbit Creek A**	**151.82 301**	P		**PKiKP**	**15 05 48.0**	**+0.1**
	baz=108						
BRSE	**Bradley Lake S**	**151.85 298**	P		**PKiKP**	**15 05 47.9**	**-0.2**
	baz=110,SNR=5.2						
POKR	**Poker Flat Res**	**151.87 310**	P		**PKPbc**	**15 05 47.4**	**-0.2**
	baz=102						
COLA	**College**	**151.99 309**	P		**PKPbc**	**15 05 47.6**	**-0.2**
	baz=102						
TCOL	**CIGO, UAF Yank**	**151.99 309**	P		**PKPbc**	**15 05 47.4**	**-0.4**
	baz=102						
KDAK	**Kodiak Island**	**152.03 294**	P		**PKiKP**	**15 05 48.3**	**-0.2**
	baz=112						
D25K	**Kavik River**	**152.11 319**	P		**PKPbc**	**15 05 48.2**	**+0.1**
	baz=95						
OHAK	**Old Harbor**	**152.17 292**	P		**PKiKP**	**15 05 49.2**	**+0.5**
	baz=113						
G24K	**Hadweenzic Riv**	**152.18 313**	P		**PKiKP**	**15 05 48.5**	**-0.1**
	baz=99,SNR=8.7						
MCK	**McKinley**	**152.19 307**	P		**PKiKP**	**15 05 48.6**	**-0.1**
	baz=104,SNR=9.1						
M22K	**Willow**	**152.19 302**	P		**PKiKP**	**15 05 48.7**	**0.0**
	baz=107						
H24K	**Noodor Dome**	**152.19 311**	P		**PKiKP**	**15 05 48.5**	**-0.1**
	baz=101						
Q20K	**Shuyak Island**	**152.25 295**	P		**PKiKP**	**15 05 49.0**	**+0.1**
	baz=111						
SII	**Sitkinak Islan**	**152.35 290**	P		**PKiKP**	**15 05 49.5**	**+0.3**
	baz=114						
NEA2	**Nenana**	**152.44 309**	P		**PKPbc**	**15 05 48.3**	**-0.5**
	baz=102,SNR=8.5						
CUT	**Chulitna**	**152.44 304**	P		**PKiKP**	**15 05 49.1**	**0.0**
	baz=105						
F24K	**Squaw Lake**	**152.46 315**	P		**PKiKP**	**15 05 49.5**	**+0.4**
	baz=97,SNR=5.1						
TRF	**Thorofare Moun**	**152.71 306**	P		**PKPbc**	**15 05 49.5**	**-0.2**
	baz=103,SNR=5.7						
E24K	**Your Creek**	**152.75 316**	P		**PKiKP**	**15 05 50.3**	**+0.5**
	baz=96,SNR=8.7						
O20K	**Slope Mountain**	**152.85 298**	P		**PKiKP**	**15 05 50.3**	**+0.1**
	baz=108						
H23K	**Yukon River**	**152.87 311**	P		**PKiKP**	**15 05 50.0**	**0.0**
	baz=99						
Q19K	**Cape Douglas,**	**152.97 295**	P		**PKPbc**	**15 05 50.3**	**0.0**
	baz=110						
P19K	**Oil Pt**	**153.01 297**	P		**PKiKP**	**15 05 50.4**	**-0.1**
	baz=109						
BPAW	**Bear Paw Mtn.**	**153.15 307**	P		**PKPbc**	**15 05 49.9**	**-0.6**
	baz=102,SNR=29						
G23K	**Bananza Creek**	**153.19 313**	P		**PKiKP**	**15 05 51.1**	**+0.4**
	baz=97,SNR=7.0						
TOLK	**Toolik Lake Re**	**153.20 317**	P		**PKiKP**	**15 05 50.8**	**+0.2**
	baz=94						
MLY	**Manley**	**153.22 309**	P		**PKPbc**	**15 05 50.1**	**-0.6**
	baz=100						
PPLA	**Purkeypile**	**153.42 304**	P		**PKPbc**	**15 05 51.2**	**0.0**
	baz=103						
CAST	**Castle Rocks**	**153.49 305**	P		**PKPbc**	**15 05 50.8**	**-0.4**
	baz=102,SNR=6.2						
M20K	**Styx River**	**153.60 302**	P		**PKPbc**	**15 05 51.0**	**-0.6**
	baz=104,SNR=6.0						
C23K	**Itkillik River**	**153.62 320**	P		**PKiKP**	**15 05 51.8**	**+0.4**
	baz=90						
H22K	**Ishtalitna Cre**	**153.62 311**	P		**PKiKP**	**15 05 51.8**	**+0.2**
	baz=98						
CHUM	**Lake Minchumin**	**153.68 306**	P		**PKPbc**	**15 05 51.6**	**0.0**
	baz=101						
O19K	**Port Alsworth**	**153.70 298**	P		**PKPbc**	**15 05 51.2**	**-0.5**
	baz=107						
I21K	**Tanana**	**153.77 309**	P		**PKiKP**	**15 05 51.8**	**0.0**
	baz=99						
R17K	**Ugashik Creek**	**153.88 292**	P		**PKiKP**	**15 05 52.3**	**0.0**
	baz=111						
P18K	**Big Mountain,**	**153.89 296**	P		**PKPbc**	**15 05 51.9**	**-0.4**
	baz=108						
N19K	**Bonanza Creek**	**153.95 299**	P		**PKPbc**	**15 05 51.9**	**-0.5**
	baz=106						
E22K	**Anaktuvuk Pass**	**154.00 316**	P		**PKPbc**	**15 05 52.0**	**-0.3**
	baz=93						
O18K	**Koktuh Hills**	**154.02 297**	P		**PKPbc**	**15 05 51.9**	**-0.6**
	baz=107						
L20K	**Farewell, AK**	**154.09 303**	P		**PKPbc**	**15 05 51.9**	**-0.7**
	baz=103						
F22K	**John River**	**154.10 315**	P		**PKPbc**	**15 05 52.1**	**-0.3**
	baz=94						
H21K	**Melozitna Rive**	**154.17 310**	P		**PKPbc**	**15 05 52.1**	**-0.6**
	baz=97						
M19K	**Big River Lodg**	**154.19 302**	P		**PKPbc**	**15 05 52.1**	**-0.7**
	baz=104						
K20K	**Telida**	**154.35 305**	P		**PKPbc**	**15 05 52.2**	**-0.9**
	baz=101						
Q16K	**King Salmon**	**154.37 294**	P		**PKPbc**	**15 05 52.7**	**-0.5**
	baz=109						
P17K	**Kvichak River**	**154.42 295**	P		**PKPbc**	**15 05 53.0**	**-0.2**
	baz=108						
G21K	**Allakaket**	**154.55 312**	P		**PKPbc**	**15 05 53.1**	**-0.3**
	baz=95						
F21K	**Alatna River**	**154.59 314**	P		**PKiKP**	**15 05 53.6**	**0.0**
	baz=93						
O17K	**Koliganek Bris**	**154.91 296**	P		**PKPbc**	**15 05 53.8**	**-0.5**
	baz=106						
TTA	**Tatalina**	**155.14 304**	P		PKPdf	15 05 54.1	+8.2
	baz=100						

*IDC **26** 14:54:50.0±0.9, 3.°97S×150.°88E, h0km, mb3.9/6, mbtmp3.9/6, MS3.1/6, Error ellipse: s-maj=26.3km s-min=17.1km az=2.0*
*NEIC **26** 14:54:50.1±0.7, 3.°80S±0.°05×150.°90E±0.°08, h10km±2km, mb4.3/8, Error ellipse: s-maj=14.0km s-min=6.0km az=244.0*

ISC 26 14:54:54.7±0.8, 3.°9S±0.°2×150.°82E±0.°08, h35km, n22, σ1s 46/19, mb4.0/9, MS3.2/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.26**	**108**	Pn	**Pn**	**14 55 14.4**	**-1.4**
	31nm,0.3s,baz=245,slow=1.8,SNR=18						
KRVT				Sn	**Sn**	**14 55 32.3**	**+0.8**
	36nm,0.3s,baz=278,slow=24,SNR=15						
RABL	**Rabaul**	**1.36**	**101**	Pn	**Pn**	**14 55 14.6**	**-2.7**
MANU	**Manus Island**	**3.92**	**298**	Pn	**Pn**	**14 55 49.8**	**-2.7**
HNR	**Honiara**	**10.59**	**122**	LR	LR	15 01 30.8	
	comp=Z,59nm,19.5s,baz=226,slow=38						
GUMO	**Guam**	**18.37**	**341**	LR	LR	15 06 36.9	
	comp=Z,26nm,19.5s,baz=159,slow=38						
MTN	**Manton Dam**	**21.38**	**244**	P	**P**	**14 59 39.1**	**-0.3**
WB0	**Warramunga Arr**	**22.47**	**224**	P	**P**	**14 59 50.2**	**-0.9**
WR0	**Warramunga Arr**	**22.50**	**224**	P	**P**	**14 59 50.6**	**-0.7**
WR0				IAmb	IAmb	14 59 55.3	
	comp=Z,17nm,1.4s						
WRAB	**Tennant Creek**	**22.61**	**224**	P	**P**	**14 59 51.6**	**-1.0**
WRAB				IAmb	IAmb	15 00 09.1	
	comp=Z,9.3nm,1.1s						
WB2	**Warramunga Arr**	**22.61**	**224**	P	**P**	**14 59 51.7**	**-0.9**
WB2				IAmb	IAmb	14 59 57.1	
	comp=Z,9.3nm,1.2s						
WRA	**Warramunga Arr**	**22.62**	**224**	P	**P**	**14 59 51.8**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=50,slow=10,SNR=33						
	comp=Z,2.1nm,0.5s						
DZM	**Mont Dzumac**	**23.56**	**141**	LR	LR	15 07 60.0	
	comp=Z,94nm,19.9s,baz=2.5,slow=34						
AS31	**Alice Springs**	**25.54**	**218**	P	**P**	**15 00 21.2**	**+0.9**
ASAR	**Alice Springs**	**25.54**	**218**	P	**P**	**15 00 20.4**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=51,slow=8.7,SNR=46						
ASAR				LR	LR	15 11 27.0	
	comp=Z,56nm,18.1s,baz=24,slow=39						
	comp=Z,2.7nm,0.7s						
ASAR	**Alice Springs**	**25.54**	**218**	P	**P**	**15 00 20.3**	**0.0**
DAV	**Davao City (W)**	**27.46**	**293**	LR	LR	15 10 39.7	
	comp=Z,34nm,18.8s,baz=169,slow=34						
FITZ	**Fitzroy Crossi**	**28.39**	**238**	P	**P**	**15 00 47.9**	**+1.9**
	comp=Z,3.1nm,1.0s,baz=72,slow=6.4,SNR=2.7						
	comp=Z,3.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**28.39**	**238**	P	**P**	**15 00 46.9**	**+0.9**
FITZ				IAmb	IAmb	15 00 52.2	
	comp=Z,6.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**55.72**	**295**	P	**P**	**15 04 30.3**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=117,slow=6.7,SNR=4.5						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**79.34**	**327**	P	**P**	**15 06 58.5**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=115,slow=6.5,SNR=3.6						
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**82.10**	**23**	P	**P**	**15 07 10.7**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=256,slow=6.1,SNR=1.5						
ILAR				LR	LR	15 39 28.4	
	comp=Z,23nm,19.7s,baz=236,slow=33						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.16**	**289**	PKPbc	**PKPbc**	**15 14 38.4**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=60,slow=2.6,SNR=7.8						

IDC 26 15:11:05.6±346.0, 52.°81N×32.°99E, h0km, Error ellipse: s-maj=141.2km s-min=98.4km az=21.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.63**	**30**	*i*		15 40 30.0	
	baz=214,slow=317,SNR=1.0						
I31KZ	**AKTYUBINSK INF**	**15.72**	**89**	*i*		16 49 10.0	
	baz=289,slow=311,SNR=1.2						
I48TN	**KESRA INFRASON**	**23.82**	**234**	*i*		17 36 40.0	
	baz=37,slow=321,SNR=1.2						

IDC 26 15:17:09.0±7.2, 27.°31S×178.°95W, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=258.4km s-min=116.7km az=161.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.52**	**264**	P	P	15 25 06.6	0.0
	0.4nm,1.0s,baz=104,slow=6.6,SNR=2.0						
	0.4nm,1.0s						
WRA	**Warramunga Arr**	**43.23**	**269**	P	P	15 25 12.0	-0.3
	0.5nm,1.1s,baz=109,slow=7.9,SNR=10						
	0.5nm,1.1s						
FINES	**FINESS Array B**	**141.96**	**341**	PKP	PKPdf	15 36 41.9	-0.3
	0.8nm,0.4s,baz=64,slow=4.4,SNR=8.7						

*IDC **26** 15:19:39.8±3.3, 40.°36N×78.°60E, h0km, mb3.5/2, mbtmp3.5/6, ML3.0/4, Error ellipse: s-maj=63.2km s-min=21.1km az=126.0*
*SOME **26** 15:19:41.8, 40.°65N×78.°28E, h15km*
*KRNET **26** 15:19:42.2±0.1, 40.°30N×78.°25E, mb4.0*
*NNC **26** 15:19:45.6±1.1, 40.°82N×78.°25E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=8.0km s-min=6.0km az=167.0*

ISC 26 15:19:46.2±1.4, 40.°85N±0.°05×78.°11E±0.°03, h11km±9km, n77, σ1s 51/113, mb3.7/3, 20C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn**	**1.70**	**291**	⇓*eP*	**Pb**	**15 20 17.0**	**-0.7**
	baz=4.0						
NRN				⇓*iS*	**Sg**	**15 20 42.7**	**+1.8**
	baz=4.0						
ULHL	**Ulahol**	**1.98**	**315**	⇑*iP*	**Pb**	**15 20 23.0**	**+0.6**
	baz=23						
ULHL				⇑*iS*	**Sg**	**15 20 52.1**	**+2.2**
	baz=23						
KSH	**Kashi**	**2.11**	**232**	Pn	**Pg**	**15 20 27.8**	**+1.1**
KSH				Sn	Sg	15 21 03.5	+9.4
KSH				pmax	pmax		
	comp=Z,27nm,0.5s						
KSH				smax	smax		
	comp=N,640nm,0.7s						
KSH				smax	smax		
	comp=E,790nm,0.7s						
SATY	**Saty**	**2.22**	**6**	*eP*	**Pb**	**15 20 27.2**	**+0.8**
	comp=E,96nm,0.3s						
SATY				*eS*	**Sg**	**15 20 59.6**	**+2.1**
	comp=E,464nm,0.2s						
SATY	**Saty**	**2.22**	**6**	Pg	**Pb**	**15 20 27.2**	**+0.8**
	comp=E,96nm,0.3s						
SATY				Lg	Lg	15 20 59.6	
	comp=E,464nm,0.6s						
SATY	**Saty**	**2.22**	**6**	*eP*	**Pb**	**15 20 27.2**	**+0.8**
	baz=2.0						
SATY				*eS*	**Sg**	**15 20 59.6**	**+2.1**
	baz=2.0						
ZHN	**Zhinishke**	**2.33**	**6**	*eP*	**Pb**	**15 20 28.2**	**-0.1**
	comp=E,20nm,0.0s						
ZHN				*eS*	**Sg**	**15 21 01.7**	**+0.6**
	comp=E,195nm,0.0s						
ZHN	**Zhinishke**	**2.33**	**6**	Pg	**Pb**	**15 20 28.2**	**-0.1**
	comp=E,20nm,0.2s						
ZHN				Lg	Lg	15 21 01.7	
	comp=E,195nm,0.8s						
UZB	**Uzynbulak**	**2.39**	**16**	*eP*	**Pb**	**15 20 28.6**	**-0.8**
	comp=E,18nm,0.1s						
UZB				*eS*	**Sg**	**15 21 02.5**	**-0.6**
	comp=E,143nm,0.1s						
UZB	**Uzynbulak**	**2.39**	**16**	Pg	**Pb**	**15 20 28.6**	**-0.8**
	comp=E,18nm,0.4s						
UZB				Lg	Lg	15 21 02.5	
	comp=E,143nm,0.5s						
UZB	**Uzynbulak**	**2.39**	**16**	*eP*	**Pb**	**15 20 28.6**	**-0.8**
	baz=11						
UZB				*eS*	**Sg**	**15 21 02.5**	**-0.6**
	baz=11						
MDOK	**Medeo**	**2.44**	**341**	*eP*	**Pb**	**15 20 31.5**	**+1.2**
	comp=E,100nm,0.1s						
MDOK				*eS*	**Sg**	**15 21 07.0**	**+2.2**
	comp=E,261nm,0.3s						
MDOK	**Medeo**	**2.44**	**341**	⇓Pn	**Pb**	**15 20 29.8**	**-0.4**
	comp=E,63nm,0.5s						
MDOK				Pg	**Pb**	**15 20 31.5**	**+1.2**
	comp=E,97nm,0.4s						
MDOK				Lg	Lg	15 21 04.2	
	comp=E,274nm,0.7s						
MDOK				Lg	Lg	15 21 07.0	
	comp=E,261nm,0.9s						
KOTS	**Kotyrbulak**	**2.50**	**343**	*eP*	**Pb**	**15 20 32.3**	**+1.1**
	comp=E,100nm,0.4s						
KOTS				*eS*	**Sg**	**15 21 08.4**	**+2.0**
	comp=E,479nm,0.1s						
KOTS	**Kotyrbulak**	**2.50**	**343**	Pg	**Pb**	**15 20 32.3**	**+1.1**
	comp=E,100nm,0.4s						
KOTS				Lg	Lg	15 21 08.4	
	comp=E,482nm,0.6s						
KNDC	**Almaty**	**2.51**	**341**	⇓Pg	**Pb**	**15 20 31.5**	**0.0**
	comp=E,135nm,0.8s						
KNDC				⇑Lg	Lg	15 21 09.6	
	comp=E,720nm,0.8s						
SHLS	**Shalkode**	**2.52**	**23**	*eP*	**Pb**	**15 20 32.2**	**+0.7**
	comp=E,11nm,0.1s						
SHLS				*eS*	**Sg**	**15 21 08.3**	**+1.3**
	comp=E,161nm,0.1s						
SHLS	**Shalkode**	**2.52**	**23**	Pg	**Pb**	**15 20 32.2**	**+0.7**
	comp=E,8.2nm,0.4s						
SHLS				Lg	Lg	15 21 08.3	
	comp=E,161nm,0.8s						
SHLS	**Shalkode**	**2.52**	**23**	*eP*	**Pb**	**15 20 32.2**	**+0.7**
	baz=23						
SHLS				*eS*	**Sg**	**15 21 08.3**	**+1.3**
	baz=23						
MTBS	**Maitube**	**2.60**	**332**	*eP*	**Pb**	**15 20 34.0**	**+1.0**
	comp=E,22nm,0.1s						
MTBS				*eS*	**Sg**	**15 21 11.1**	**+1.3**
	comp=E,158nm,0.0s						
MTBS	**Maitube**	**2.60**	**332**	Pg	**Pb**	**15 20 33.9**	**+1.0**
	comp=E,22nm,0.4s						
MTBS				Lg	Lg	15 21 11.1	
	comp=E,158nm,0.5s						
KURS	**Kuram**	**2.64**	**1**	*eP*	**Pb**	**15 20 34.8**	**+1.3**
	comp=E,109nm,0.1s						
KURS				*eS*	**Sg**	**15 21 12.6**	**+1.6**
	comp=E,220nm,0.1s						
KURS	**Kuram**	**2.64**	**1**	Pg	**Pb**	**15 20 34.8**	**+1.3**
	comp=E,108nm,0.7s						
KURS				Lg	Lg	15 21 12.6	
	comp=E,222nm,0.6s						
KPKS	**Kokpek**	**2.65**	**9**	*eP*	**Pb**	**15 20 34.3**	**+0.6**
	comp=E,126nm,0.0s						
KPKS				*eS*	**Sg**	**15 21 11.8**	**+0.5**
	comp=E,422nm,0.2s						
KPKS	**Kokpek**	**2.65**	**9**	Pg	**Pb**	**15 20 34.3**	**+0.6**
	comp=E,126nm,0.4s						
KPKS				Lg	Lg	15 21 11.8	
	comp=E,424nm,0.6s						
KST	**Kastek**	**2.71**	**325**	*eP*	**Pb**	**15 20 35.9**	**+1.0**
	comp=E,64nm,0.0s						
KST				*eS*	**Sg**	**15 21 14.8**	**+1.4**
	comp=E,163nm,0.1s						
KST	**Kastek**	**2.71**	**325**	Pg	**Pb**	**15 20 35.9**	**+1.0**
	comp=E,65nm,0.6s						
KST				Lg	Lg	15 21 14.8	
	comp=E,164nm,0.6s						
TKM2	**Tokmak 2**	**2.79**	**319**	P	**Pb**	**15 20 34.9**	**-1.4**
	SNR=12						
TKM2	**Tokmak 2**	**2.79**	**319**	⇑Pn	**Pb**	**15 20 34.7**	**-1.6**
	comp=E,12nm,0.4s						
TKM2				⇓Lg	Lg	15 21 15.9	
	comp=E,63nm,0.5s						
TKM2	**Tokmak 2**	**2.79**	**319**	⇑*eP*	**Pb**	**15 20 34.4**	**-1.9**
	baz=24						
TKM2				⇑*iS*	**Sb**	**15 21 11.8**	**+1.2**
	baz=24						
DGS	**Degeres**	**2.96**	**325**	*eP*	**Pb**	**15 20 40.2**	**+1.2**
	comp=E,26nm,0.3s						
DGS				*eS*	**Sg**	**15 21 22.1**	**+0.8**
	comp=E,126nm,0.3s						
DGS	**Degeres**	**2.96**	**325**	Pg	**Pb**	**15 20 40.2**	**+1.2**
	comp=E,26nm,0.6s						
DGS				Lg	Lg	15 21 22.0	
	comp=E,120nm,0.5s						
KBK	**Karagaybulak**	**2.98**	**308**	P	**Pb**	**15 20 41.3**	**+1.9**
	SNR=17						
KBK	**Karagaybulak**	**2.98**	**308**	⇓*eP*	**Pn**	**15 20 36.2**	**+2.6**
	baz=15						
KBK				⇓*iS*	**Sb**	**15 21 14.9**	**-0.9**
	baz=15						
ARLS	**Aral**	**3.03**	**291**	⇑*eP*	**Pn**	**15 20 34.7**	**+0.5**
	baz=99						
ARLS				⇑*iS*	**Sn**	**15 21 12.9**	**+2.4**
	baz=99						
KTBS	**Karatobe**	**3.05**	**340**	*eP*	**Pb**	**15 20 41.6**	**+1.1**
	comp=E,50nm,0.1s						
KTBS				*eS*	**Sg**	**15 21 24.8**	**+0.6**
	comp=E,346nm,0.2s						
KTBS	**Karatobe**	**3.05**	**340**	Pg	**Pb**	**15 20 41.6**	**+1.1**
	comp=E,48nm,0.3s						
KTBS				Lg	Lg	15 21 24.8	
	comp=E,360nm,0.7s						
CHKK	**Chushkaly**	**3.12**	**345**	*eP*	**Pb**	**15 20 42.7**	**+1.1**
	comp=E,54nm,0.2s						
CHKK				*eS*	**Sg**	**15 21 26.5**	**+0.3**
	comp=E,238nm,0.1s						
CHKK	**Chushkaly**	**3.12**	**345**	Pg	**Pb**	**15 20 42.7**	**+1.1**
	comp=E,54nm,0.4s						
CHKK				Lg	Lg	15 21 26.5	
	comp=E,240nm,0.5s						
AAK	**Ala-Archa**	**3.24**	**305**	P	**Pb**	**15 20 45.8**	**+1.9**
	SNR=8.4						
AAK	**Ala-Archa**	**3.24**	**305**	⇓*eP*	**Pn**	**15 20 39.4**	**+2.2**
	baz=11						
AAK				⇓*eS*	**Sb**	**15 21 20.8**	**-2.7**
	baz=11						
BLB	**Baldybastay**	**3.26**	**5**	*eP*	**Pb**	**15 20 45.0**	**+0.9**
	comp=E,95nm,0.1s						
BLB				*eS*	**Sg**	**15 21 30.4**	**-0.4**
	comp=E,358nm,0.1s						
BLB	**Baldybastay**	**3.26**	**5**	Pg	**Pb**	**15 20 45.0**	**+0.9**
	comp=E,95nm,0.4s						
BLB				Lg	Lg	15 21 30.4	
	comp=E,361nm,0.4s						
FRU1	**Bishkek**	**3.26**	**308**	⇑*eP*	**Pn**	**15 20 40.1**	**+2.8**
	baz=14						
FRU1				⇑*eS*	**Sb**	**15 21 21.8**	**-1.9**
	baz=14						
CHMS	**Chumysh**	**3.30**	**312**	P	**Pb**	**15 20 46.7**	**+1.9**
	SNR=14						
CHMS	**Chumysh**	**3.30**	**312**	⇑Pn	**Pb**	**15 20 46.2**	**+1.4**
	comp=E,29nm,0.7s						
CHMS				⇑Lg	Lg	15 21 33.0	
	comp=E,86nm,0.6s						
CHMS	**Chumysh**	**3.30**	**312**	⇓*iP*	**Pn**	**15 20 40.6**	**+2.7**
	baz=17						
CHMS				⇓*iS*	**Sb**	**15 21 23.2**	**-1.8**
	baz=17						
KUU	**Kurty**	**3.31**	**337**	*eP*	**Pb**	**15 20 45.9**	**+0.9**
	comp=E,16nm,0.1s						
KUU				*eS*	**Sg**	**15 21 32.0**	**-0.6**
	comp=E,50nm,0.1s						
KUU	**Kurty**	**3.31**	**337**	Pg	**Pb**	**15 20 45.9**	**+0.9**
	comp=E,14nm,0.4s						
KUU				Lg	Lg	15 21 32.0	
	comp=E,50nm,0.4s						
ARXS	**Arharly**	**3.37**	**357**	*eP*	**Pb**	**15 20 46.7**	**+0.7**
	comp=E,14nm,0.4s						
ARXS				*eS*	**Sg**	**15 21 33.5**	**-0.8**
	comp=E,110nm,0.5s						
ARXS	**Arharly**	**3.37**	**357**	Pg	**Pb**	**15 20 46.7**	**+0.7**
	comp=E,14nm,0.4s						
ARXS				Lg	Lg	15 21 33.5	
	comp=E,110nm,0.5s						
KRBS	**Karabastau**	**3.37**	**328**	*eP*	**Pb**	**15 20 46.9**	**+0.9**
	comp=E,20nm,0.1s						
KRBS				*eS*	**Sg**	**15 21 33.9**	**-0.6**
	comp=E,68nm,0.1s						
KRBS	**Karabastau**	**3.37**	**328**	Pg	**Pb**	**15 20 46.9**	**+0.9**
	comp=E,20nm,0.4s

TDK					Lg	Lg	15 21 59.2		
	comp=E,125nm,0.1s								
KK31	**Karatay Array**	**6.09**	**294**	⇑Pg	**Pg**		**15 21 40.4**	**-2.5**	
	comp=E,1.0nm,0.4s,baz=113,slow=17,SNR=7.5								
KK31				⇓Lg	Lg		15 23 05.0		
	comp=E,3.2nm,0.5s,baz=108,slow=26,SNR=4.0								
MAKZ	**Makanchi**	**6.58**	**24**	⇑Pn	**Pn**		**15 21 24.0**	**+1.1**	
	comp=E,1.4nm,0.8s								
MAKZ				⇑Sn	**Sn**		**15 22 38.6**	**+0.7**	
	comp=E,2.5nm,0.7s								
MAKZ				⇓Lg	Lg		15 23 12.4		
	comp=E,5.0nm,0.8s								
MK31	**Makanchi Array**	**6.66**	**26**	⇑Pn	**Pn**		**15 21 25.8**	**+1.8**	
	comp=E,0.7nm,0.6s,baz=64,slow=26,SNR=19								
MK31				Pg	**Pb**		**15 21 45.8**	**+3.7**	
	comp=E,0.5nm,0.4s,baz=202,slow=11,SNR=5.1								
MK31				⇑Sn	**Sn**		**15 22 41.2**	**+1.2**	
	comp=E,4.5nm,0.7s,baz=197,slow=20,SNR=5.5								
MK31				⇓Lg	Lg		15 23 14.1		
	comp=E,1.5nm,0.4s,baz=213,slow=27,SNR=4.0								
MKAR	**Makanchi Array**	**6.66**	**26**	Pn	**Pn**		**15 21 24.9**	**+0.9**	
	comp=E,0.4nm,0.3s,baz=209,slow=15,SNR=13								
MKAR				Sn	**Sn**		**15 22 41.8**	**+1.8**	
	comp=E,0.6nm,0.3s,baz=199,slow=21,SNR=8.3								
	comp=E,0.4nm,0.3s								
CHCP	**Chirah Chowk**	**8.15**	**210**	P	**Pn**		**15 21 43.9**	**-0.6**	
CEP	**Cherat**	**8.58**	**217**	P	**Pn**		**15 21 51.4**	**+1.0**	
KURBB	**Kurchatov Arra**	**9.78**	**2**	Pn	**Pn**		**15 22 07.8**	**+1.2**	
	comp=E,0.1nm,0.3s,baz=188,slow=12,SNR=8.1								
	comp=E,1.0nm,0.2s								
KURBB	**Kurchatov Arra**	**9.78**	**2**	⇓Lg	Lg		15 24 54.5		
	comp=E,21nm,0.8s								
KURK	**Kurchatov**	**9.87**	**2**	⇑Lg	Lg		15 24 58.5		
	comp=E,8.6nm,0.8s								
BVAR	**Borovoye Array**	**13.26**	**339**	Pn	**Pn**		**15 22 54.2**	**-0.1**	
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=4.3								
	comp=E,0.4nm,0.5s								
ZALV	**Zalesovo Beam**	**13.86**	**17**	Pn	**Pn**		**15 23 00.6**	**-1.9**	
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=1.7								
	comp=E,0.5nm,0.6s								
GERES	**GERESS Array B**	**45.12**	**303**	P	**P**		**15 28 02.7**	**+0.2**	
	comp=E,0.3nm,0.5s,baz=64,slow=8.9,SNR=3.6								
	comp=E,0.3nm,0.5s								
ESDC	**Sonseca Array**	**60.33**	**298**	P	**P**		**15 29 54.1**	**-1.0**	
	comp=E,0.3nm,0.5s,baz=60,slow=7.6,SNR=2.7								
	comp=E,0.3nm,0.5s								
TORD	**Torodi Ar. Bea**	**71.29**	**271**	P	**P**		**15 31 03.5**	**-2.5**	
	comp=E,0.4nm,0.7s,baz=46,slow=6.2,SNR=2.5								

SNET ***26*** *15:38:09.5±1.0, 12.°99N×89.°11W, h51km±23km, ML3.5*
INET ***26*** *15:38:14.2±1.2, 13.°01N×88.°76W, h15km±10km, MW3.1*
ISC 26 15:38:06.3±2.1, 12.°86N±0.°10×89.°13W±0.°10, h15km±16km, n22,σ1s0.6/26, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.76**	**5**	***e*P**		**Pn**	**15 38 22.4**	**-0.3**
JAYA	**Jayaque - finc**	**0.85**	**338**	***e*P**		**Pb**	**15 38 24.3**	**+1.4**
JAYA				***e*S**		**Sg**	**15 38 34.4**	**+0.3**
JAYA				IAML			15 38 36.5	
	comp=Z,4μm,0.2s							
PAVA	**Las Pavas**	**0.87**	**12**	***e*P**		**Pn**	**15 38 24.2**	**0.0**
BOQS	**Boqueron**	**0.88**	**350**	***e*P**		**Pb**	**15 38 24.5**	**+1.0**
BOQS				IAML			15 38 38.3	
	comp=Z,639nm,0.2s							
LFU	**La Fuente**	**0.88**	**1**	***e*P**		**Pb**	**15 38 24.2**	**+0.8**
SCLA	**Alcaldia de Sa**	**0.92**	**25**	***e*P**		**Pn**	**15 38 24.9**	**+0.1**
SCLA				IAML			15 38 25.6	
	comp=Z,130nm,0.1s							
PQSS	**Presa 15 de Se**	**0.94**	**36**	***e*S**		**Sn**	**15 38 37.3**	**-0.9**
LCY	**Lacayo**	**0.98**	**55**	***e*P**		**Pn**	**15 38 26.4**	**+0.7**
LCY				IAML			15 38 41.5	
	comp=Z,610nm,0.2s							
PACA	**Pacayal**	**0.99**	**52**	***e*P**		**Pn**	**15 38 27.0**	**+1.2**
PACA				***e*S**		**Sn**	**15 38 39.6**	**0.0**
PACA				IAML			15 38 41.1	
	comp=Z,16μm,0.2s							
PACA	**Pacayal**	**0.99**	**52**	***e*P**		**Pn**	**15 38 27.0**	**+1.2**
CEVE	**Cerro Verde**	**1.08**	**333**	IAML			15 38 49.5	
	comp=Z,1μm,0.3s							
P5NO	**Presa 5 de nov**	**1.17**	**18**	***e*P**		**Pn**	**15 38 28.1**	**-0.2**
NUBE	**Las Nubes**	**1.22**	**328**	***e*S**		**Sg**	**15 38 43.9**	**-1.8**
CNCH	**Conchagua**	**1.32**	**72**	***e*P**		**Pn**	**15 38 31.5**	**+1.1**
CNCH				***e*S**		**Sn**	**15 38 47.9**	**0.0**
CSGN	**Cosiguina Volc**	**1.53**	**86**	***e*P**		**Pb**	**15 38 35.1**	**+0.6**
MTO3	**Montecristo**	**1.55**	**352**	***e*P**		**Pn**	**15 38 33.4**	**-0.2**
MTO3	**Montecristo**	**1.55**	**352**	***e*P**		**Pb**	**15 38 33.4**	**-0.2**
CRIN	**San Cristobal**	**2.03**	**94**	***e*P**		**Pb**	**15 38 42.7**	**-0.3**
CRIN				***e*S**		**Sn**	**15 39 03.5**	**-1.8**
TEL3	**Telica 3**	**2.24**	**97**	***e*P**		**Pb**	**15 38 45.3**	**-1.3**
TELN	**Telica**	**2.25**	**96**	***e*P**		**Pn**	**15 38 44.4**	**+1.3**
CNGN	**Cerro Negro**	**2.40**	**98**	***e*P**		**Pb**	**15 38 49.0**	**-0.2**
MOMN	**Momotombo**	**2.56**	**100**	***e*P**		**Pn**	**15 38 49.3**	**+1.9**
MOMN				***e*S**		**Sn**	**15 39 17.1**	**-1.2**

IDC ***26*** *15:44:51.6±10.0, 37.°63N×21.°18E, h0km, mb3.6/4, mbtmp3.5/5, ML2.8/1, MS3.3/2, Error ellipse: s-maj=185.9km s-min=37.6km az=28.0*
THE ***26*** *15:44:56.3, 37.°65N×21.°34E, h20km±1km, ML3.4/6, Error ellipse: s-maj=1.1km s-min=0.4km az=123.0*
ATH ***26*** *15:44:56.1, 37.°64N×21.°32E, h11km±2km, ML3.4/12, Error ellipse: s-maj=2.6km s-min=1.0km az=23.0*
ISC 26 15:44:55.9±1.2, 37.°64N±0.°04×21.°32E±0.°03, h23km±10km, n48,σ0.°70/59, mb3.5/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.44**	**15**	P		**Pb**	**15 45 04.8**	**-0.2**
RLS				S		**Sb**	**15 45 11.3**	**+0.1**
	6μm,0.4s							
RLS	**Riolos of Patr**	**0.44**	**15**	P		**Pb**	**15 45 04.4**	**-0.6**
RLS				S		**Sb**	**15 45 11.2**	**+0.1**
RLS				AML		AML	15 45 13.4	
	comp=E,14752μm,0.5s							
RLS				AML		AML	15 45 15.9	
	comp=N,8976μm,0.5s							
DRO	**Drossia**	**0.44**	**44**	P		**Pb**	**15 45 04.4**	**-0.7**
DRO				S		**Sb**	**15 45 10.9**	**-0.4**
DRO				AML		AML	15 45 12.2	
	comp=N,47290μm,0.5s							
DRO				AML		AML	15 45 12.3	
	comp=E,49789μm,0.5s							
ITM	**Ithomi**	**0.67**	**133**	P		**Pb**	**15 45 08.8**	**-0.1**
ITM				S		**Sn**	**15 45 18.5**	**-1.1**
	comp=E,3μm,0.4s							
ITM	**Ithomi**	**0.67**	**133**	P		**Pb**	**15 45 08.6**	**-0.3**
ITM				S		**Sb**	**15 45 18.4**	**+0.7**
ITM				AML		AML	15 45 20.7	
	comp=N,6591μm,0.4s							
ITM				AML		AML	15 45 20.9	
	comp=E,5934μm,0.3s							
PSDA	**Pessada-Kefalo**	**0.75**	**309**	P		**Pb**	**15 45 10.4**	**+0.1**
PSDA				S		**Sn**	**15 45 21.6**	**-0.1**
	comp=E,468nm,0.2s							
PSDA	**Pessada-Kefalo**	**0.75**	**309**	P		**Pb**	**15 45 10.3**	**0.0**
PSDA				S		**Sn**	**15 45 21.3**	**-0.4**
KLV	**Kalavryta, Ach**	**0.77**	**58**	P		**Pb**	**15 45 10.2**	**-0.5**
KLV				S		**Sb**	**15 45 21.2**	**+0.4**
	comp=E,2μm,0.7s							
KLV	**Kalavryta, Ach**	**0.77**	**58**	P		**Pb**	**15 45 09.8**	**-0.9**
KLV				S		**Sb**	**15 45 21.3**	**+0.4**
KLV				AML		AML	15 45 29.1	
	comp=N,3225μm,0.7s							
KLV				AML		AML	15 45 29.8	
	comp=E,2549μm,0.6s							
VLS	**Valsamata**	**0.79**	**313**	P		**Pb**	**15 45 10.7**	**-0.3**
VLS	**Valsamata**	**0.79**	**313**	P		**Pb**	**15 45 10.7**	**-0.3**
VLS				AML		AML	15 45 26.2	
	comp=E,3475μm,0.2s							
VLS				AML		AML	15 45 29.6	
	comp=N,4054μm,0.3s							
LAKA	**Lakka**	**0.80**	**41**	P		**Pb**	**15 45 10.5**	**-0.6**
LAKA				S		**Sb**	**15 45 22.0**	**+0.5**
	comp=N,7μm,0.6s							
LAKA	**Lakka**	**0.80**	**41**	P		**Pb**	**15 45 10.3**	**-0.7**
LAKA				S		**Sb**	**15 45 21.9**	**+0.5**
LAKA				AML		AML	15 45 23.6	
	comp=N,10886μm,0.4s							
LAKA				AML		AML	15 45 25.9	
	comp=E,14362μm,0.6s							
ALIK	**Aliki, Aigiali**	**0.88**	**45**	P		**Pb**	**15 45 12.4**	**-0.1**
EFP	**Efpalio**	**0.91**	**30**	P		**Pn**	**15 45 13.2**	**-0.1**
KEF4	**Livadi, Kephal**	**0.94**	**311**	P		**Pb**	**15 45 13.5**	**0.0**
KEF4				S		**Sn**	**15 45 27.3**	**+0.9**
KEF4	**Livadi, Kephal**	**0.94**	**311**	P		**Pn**	**15 45 13.7**	**0.0**
KEF3	**Kipouria, Keph**	**0.95**	**307**	P		**Pn**	**15 45 13.8**	**-0.1**
KEF3	**Kipouria, Keph**	**0.95**	**307**	P		**Pn**	**15 45 13.7**	**-0.1**
DMLN	**Damoulianata-K**	**0.96**	**309**	P		**Pn**	**15 45 14.1**	**+0.2**
SERG	**Sergoula**	**0.97**	**37**	P		**Pb**	**15 45 13.8**	**-0.2**
SERG				AML		AML	15 45 31.2	
	comp=E,3835μm,0.4s							
SERG				AML		AML	15 45 31.8	
	comp=N,4041μm,0.5s							
PVO	**Paravola**	**0.99**	**9**	P		**Pb**	**15 45 15.1**	**+0.7**
FSK	**Fiskardo**	**1.02**	**324**	P		**Pb**	**15 45 15.9**	**+1.1**
FSK				AML		AML	15 45 36.2	
	comp=N,3334μm,0.7s							
FSK				AML		AML	15 45 37.8	
	comp=E,1957μm,0.4s							
EVGI	**Lefkada island**	**1.11**	**332**	P		**Pn**	**15 45 16.1**	**+0.1**
EVGI	**Lefkada island**	**1.11**	**332**	P		**Pn**	**15 45 16.2**	**+0.1**
THAL	**Thalero**	**1.14**	**69**	P		**Pn**	**15 45 16.4**	**+0.1**
THAL	**Thalero**	**1.14**	**69**	P		**Pn**	**15 45 16.5**	**+0.1**
THAL				AML		AML	15 45 44.2	
	comp=E,10037μm,0.8s							
THAL				AML		AML	15 45 47.1	
	comp=N,6131μm,0.5s							
NYDR	**Nydri-Lefkada**	**1.18**	**336**	P		**Pn**	**15 45 16.7**	**-0.3**
DRAG	**Dragano-Lefkad**	**1.20**	**331**	P		**Pn**	**15 45 16.9**	**-0.3**
DRAG				S		**Sb**	**15 45 33.4**	**+0.4**
	comp=N,7μm,0.4s							
LKD2	**Lefkada island**	**1.26**	**336**	P		**Pn**	**15 45 18.2**	**+0.1**
LKD2	**Lefkada island**	**1.26**	**336**	P		**Pb**	**15 45 19.1**	**+0.1**
LKD2				AML		AML	15 45 44.3	
	comp=N,2749μm,0.6s							
LKD2				AML		AML	15 45 48.6	
	comp=E,2415μm,0.5s							
TSLK	**Tsoukalades, L**	**1.30**	**336**	P		**Pn**	**15 45 18.5**	**-0.1**
EVR	**Evrytania**	**1.33**	**17**	P		**Pb**	**15 45 21.2**	**+0.9**
LOUT	**Loutraki**	**1.36**	**75**	P		**Pb**	**15 45 20.8**	**+0.2**
KRND	**KRANIDI**	**1.48**	**99**	P		**Pb**	**15 45 23.7**	**+1.1**
MAKR	**Makrakomi, Fth**	**1.52**	**25**	P		**Pb**	**15 45 24.4**	**+1.1**
MAKR				AML		AML	15 45 50.6	
	comp=N,1238μm,0.5s							
MAKR				AML		AML	15 45 53.2	
	comp=E,1762μm,0.4s							
AXAR	**Agios Charalam**	**1.54**	**43**	P		**Pb**	**15 45 24.8**	**+0.9**
VLI	**Veliai**	**1.58**	**125**	P		**Pb**	**15 45 24.9**	**+0.4**
VLI				AML		AML	15 45 54.2	
	comp=E,897μm,0.8s							
VLI				AML		AML	15 45 55.6	
	comp=N,604μm,0.6s							
VIL2	**Platees**	**1.64**	**69**	P		**Pb**	**15 45 26.0**	**+0.5**
ATAL	**Atalanti**	**1.71**	**51**	P		**Pb**	**15 45 27.2**	**+0.6**
ATHU	**Athens Univers**	**1.98**	**80**	P		**Pb**	**15 45 30.4**	**-0.8**
BRTR	**Keskin Array B**	**9.86**	**74**	Pn		**Pn**	**15 47 19.3**	**+3.1**
	comp=N,0.1nm,0.3s,baz=265,slow=14,SNR=1.7							
	comp=N,0.4nm,0.5s							
GNI	**Garni**	**18.39**	**75**	LR		LR	15 57 58.5	
	comp=N,25nm,19.5s,baz=357,slow=42							
FINES	**FINESS Array B**	**24.02**	**6**	P		**P**	**15 50 08.7**	**0.0**
	comp=N,0.6nm,0.4s,baz=183,slow=8.8,SNR=14							
	comp=N,0.6nm,0.4s							
NOA	**NORSAR Array B**	**24.27**	**348**	P		**P**	**15 50 10.2**	**-0.9**
	comp=N,0.4nm,0.5s,baz=151,slow=12,SNR=3.5							
	comp=N,0.4nm,0.5s							
ARCES	**ARCESS Array B**	**32.04**	**3**	P		**P**	**15 51 18.8**	**-1.5**
	comp=N,3.0nm,0.9s,baz=192,slow=7.9,SNR=6.3							
	comp=N,3.0nm,0.9s							
MKAR	**Makanchi Array**	**45.05**	**58**	P		**P**	**15 53 09.7**	**0.0**
	comp=N,0.3nm,0.5s,baz=277,slow=7.3,SNR=5.3							
	comp=N,0.3nm,0.5s							
YAK	**Yakutsk**	**65.27**	**30**	LR		LR	16 29 32.5	
	comp=N,83nm,18.6s,baz=270,slow=41							

MOS ***26*** *15:48:36.9±0.8, 8.°65S×146.°67E, h27km, mb5.1/29, Error ellipse: s-maj=11.3km s-min=6.2km az=106.1*
BJI ***26*** *15:48:37.0±0.0, 8.°45S×146.°94E, h26km, mb4.9/54, mB5.0/32, Ms4.9/21, Ms7 4.6/22*
NEIC ***26*** *15:48:39.0±2.2, 8.°70S±0.°06×146.°58E±0.°08, h23km±4km, mb5.2/68, Error ellipse: s-maj=13.6km s-min=3.2km az=127.0*
IDC ***26*** *15:48:40.5±0.4, 8.°71S×146.°70E, h41km±3km, mb4.6/20, mbtmp4.9/25, ML5.0/5, MS4.2/24, Error ellipse: s-maj=13.2km s-min=9.8km az=74.0*
DJA ***26*** *15:48:42.7±0.4, 9.°S±2.°×14.°7E±.°, h55km±4km, M5.2/44, mB5.5/20, mb5.0/44, mBc6.3/19, Mjma5.0/14, ML5.7/3, MLv5.5/4, Ms(BB)4.9/44, Mw(mB)5.0/20, MwmBc5.6/19, MwMwp5.0/3, Mwp5.2/3*
GCMT ***26*** *15:48:43.0±0.3, 8.°96S±0.°02×146.°60E±0.°03, h42km±1km, MW5.0/79, Moment Tensor Solution. s41,c50; s79,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.66±.25; $M_{\theta\theta}$-2.81±.16; $M_{\phi\phi}$0.15±.20; $M_{r\theta}$1.42±.13; $M_{\theta\phi}$2.80±.11; $M_{\phi r}$-0.57±.16; Best double couple: M○3.90800×10^{16} NP1:○s111.00000°, δ57.00000°, λ77.00000°. NP2: ○s315.00000°, δ35.00000°, λ110.00000°. Principal axes: T 3.0150, Plg74.0000°, Azm345.0000°; N 1.7910, Plg11.0000°, Azm118.0000°; P -4.8020, Plg11.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 15:48:39.6±0.4, 8.°80S±0.°04×146.°55E±0.°05, h33km±1km, h33km:pP-P, n424,σ1s0.54/423, mb5.0/98, MS4.3/31, 13C-4D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**6.11**	**213**	P		**Pn**	**15 50 08.3**	**+0.7**
	baz=6.3,SNR=51							
COEN				S		**Sn**	**15 51 14.8**	**-1.6**
	baz=6.3							
COEN	**Coen**	**6.11**	**213**	Pn		**Pn**	**15 50 08.4**	**+0.7**
COEN	**Coen**	**6.11**	**213**	P		**Pn**	**15 50 08.5**	**+0.9**
KRVT	**Keravat (AS076**	**7.03**	**51**	P		**Pn**	**15 50 20.2**	**-0.2**
	6.2nm,0.3s,baz=28,slow=0.9,SNR=24							
	82nm,0.6s							
RABL	**Rabaul**	**7.21**	**51**	Pn		**Pn**	**15 50 22.2**	**-0.7**
RABL	**Rabaul**	**7.21**	**51**	P		**Pn**	**15 50 23.6**	**+0.7**
GENI	**Genyem**	**8.85**	**314**	P		Pn	15 50 51.2	+5.9
	0.4nm62nm,1.0s							
MTSU	**Mount Surprise**	**9.53**	**193**	P		**Pn**	**15 50 55.6**	**+0.9**
	baz=9.7,SNR=398							
MTSU	**Mount Surprise**	**9.53**	**193**	P		**Pn**	**15 50 56.1**	**+1.4**
SMPI	**Sami**	**10.32**	**310**	P		**Pn**	**15 51 09.9**	**+4.3**
	42nm,1.2s							
CTA	**Charters Tower**	**11.23**	**181**	P		**Pn**	**15 51 19.9**	**+1.9**
	12nm,0.3s,baz=11,slow=15,SNR=193							
CTA				LR		LR	15 55 32.1	
	comp=Z,2μm,19.5s,baz=8.5,slow=36							
	53nm,0.5s							
CTA	**Charters Tower**	**11.23**	**181**	P		**Pn**	**15 51 19.3**	**+1.3**
CTAO	**Charters Tower**	**11.23**	**181**	Pn		**Pn**	**15 51 19.9**	**+1.9**
CTAO	**Charters Tower**	**11.23**	**181**	P		**Pn**	**15 51 19.9**	**+1.9**
CTAO	**Charters Tower**	**11.23**	**181**	P		**Pn**	**15 51 19.4**	**+1.4**
HNR	**Honiara**	**13.24**	**94**	LR		LR	15 56 51.6	
	comp=Z,403nm,18.3s,baz=258,slow=38							
QIS	**Mount Isa**	**13.48**	**209**	P		**Pn**	**15 51 49.6**	**+0.8**
	baz=14,SNR=66							
QIS				S		**Sn**	**15 54 11.1**	**-6.5**
	baz=14							
QIS	**Mount Isa**	**13.48**	**209**	P		**Pn**	**15 51 49.2**	**+0.5**
KDU	**Kakadu**	**14.36**	**253**	P		**Pn**	**15 52 01.6**	**+0.8**
	baz=14,SNR=156							
KDU				S		**Sn**	**15 54 30.7**	**-8.3**
	baz=14							
KDU	**Kakadu**	**14.36**	**253**	P		**Pn**	**15 52 01.7**	**+0.9**
RK1H	**Rockhampton Ha**	**14.99**	**166**	P		**Pn**	**15 52 10.8**	**+1.6**
FAKI	**Fak Fak**	**15.37**	**291**	P		**Pn**	**15 52 14.0**	**-0.3**
MTN	**Manton Dam**	**15.67**	**254**	P		**Pn**	**15 52 18.6**	**+0.5**
	baz=16,SNR=78							
MTN				S		**Sn**	**15 55 01.4**	**-9.4**
	baz=16							
MTN	**Manton Dam**	**15.67**	**254**	Pn		**Pn**	**15 52 18.6**	**+0.5**
MTN				IAmb		IAmb	15 52 25.7	
	comp=Z,135nm,0.8s							
MTN	**Manton Dam**	**15.67**	**254**	P		**Pn**	**15 52 18.6**	**+0.5**
WB0	**Warramunga Arr**	**16.04**	**226**	Pn		**Pn**	**15 52 23.6**	**+0.7**
WB0				IAmb		IAmb	15 52 29.9	
	comp=Z,114nm,0.8s							
WR0	**Warramunga Arr**	**16.07**	**225**	Pn		**Pn**	**15 52 24.1**	**+0.9**
WR0				IAmb		IAmb	15 52 30.2	
	comp=Z,169nm,1.1s							
WRAB	**Tennant Creek**	**16.18**	**226**	P		**Pn**	**15 52 25.4**	**+0.6**
WRAB	**Tennant Creek**	**16.18**	**226**	*ce*P		**P**	**15 52 30.7**	**+3.1**
WRAB				pmax		pmax		
	comp=Z,153nm,1.7s							
WRAB	**Tennant Creek**	**16.18**	**226**	P		**Pn**	**15 52 25.3**	**+0.6**
WB2	**Warramunga Arr**	**16.19**	**225**	Pn		**Pn**	**15 52 25.6**	**+0.8**
WB2				IAmb		IAmb	15 52 31.6	
	comp=Z,120nm,0.8s							
WRA	**Warramunga Arr**	**16.20**	**226**	P		**Pn**	**15 52 25.7**	**+0.8**
	comp=Z,17nm,0.3s,baz=52,slow=12,SNR=551							
WRA				S		**Sn**	**15 55 15.6**	**-8.0**
	comp=Z,12nm,0.4s,baz=40,slow=22,SNR=8.5							
WRA				LR		LR	15 59 19.0	
	comp=Z,1μm,19.5s,baz=25,slow=39							
	comp=Z,28nm,0.3s							
WRA	**Warramunga Arr**	**16.20**	**226**	P		**Pn**	**15 52 25.6**	**+0.6**
EIDS	**Eidsvold**	**17.04**	**166**	P		**P**	**15 52 36.9**	**0.0**
	baz=17,SNR=7.3							
EIDS	**Eidsvold**	**17.04**	**166**			**P**	**15 52 37.0**	**0.0**
EIDS	**Eidsvold**	**17.04**	**166**	P		**P**	**15 52 37.1**	**+0.1**
SIJI	**Sorong**	**17.14**	**297**	P		**P**	**15 52 39.5**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=93,slow=7.4,SNR=18							
	comp=Z,50nm,1.1s							
SWI	**Sorong**	**17.14**	**297**	P		**P**	**15 52 40.9**	**+2.6**
	comp=Z,1μmcomp=Z,67nm,1.1s							
RMQ	**Roma**	**17.72**	**173**	P		**P**	**15 52 46.0**	**+1.4**
	baz=18,SNR=7.5							
RMQ	**Roma**	**17.72**	**173**	P		**P**	**15 52 46.6**	**+2.0**
QLP	**Quilpie**	**17.83**	**187**	P		**P**	**15 52 46.8**	**+1.0**
	baz=18,SNR=20							
KNRA	**Kununurra**	**18.67**	**247**	P		**Pn**	**15 52 57.6**	**+1.9**
	baz=19,SNR=212							
KNRA	**Kununurra**	**18.67**	**247**	P		**Pn**	**15 52 57.1**	**+1.5**
KNRA				IAmb		IAmb	15 53 00.6	
	comp=Z,152nm,0.7s							
KNRA	**Kununurra**	**18.67**	**247**	P		**Pn**	**15 52 57.2**	**+1.5**
AS31	**Alice Springs**	**19.11**	**218**	Pn		**Pn**	**15 53 02.6**	**+1.7**
ASAR	**Alice Springs**	**19.11**	**218**	P		**Pn**	**15 53 02.2**	**+1.3**
	comp=Z,5.3nm,0.3s,baz=29,slow=12,SNR=535							
ASAR				S		Sn	15 56 23.4	-11
	comp=Z,3.3nm,0.5s,baz=30,slow=28,SNR=4.0							
ASAR				LR		LR	16 00 59.5	
	comp=Z,1μm,18.8s,baz=46,slow=38							
	comp=Z,74nm,0.7s							
ASAR	**Alice Springs**	**19.11**	**218**	P		**Pn**	**15 53 02.5**	**+1.5**
ASAR	**Alice Springs**	**19.11**	**218**	P		**Pn**	**15 53 02.5**	**+1.5**
INKA	**Innaminka**	**19.63**	**195**	P		**Pn**	**15 53 07.9**	**+0.9**
LBMI	**Labuha**	**20.63**	**292**	P		Pn	15 53 19.1	+0.1
	comp=Z,756nmcomp=Z,64nm,1.3s							
KOUNC	**Koumac, New Ca**	**20.73**	**126**	P		**P**	**15 53 17.6**	**0.0**
OOD	**Oodnadatta**	**21.50**	**207**	P		**P**	**15 53 27.2**	**+1.4**
SANI	**Sanana**	**21.53**	**287**	P		**P**	**15 53 28.5**	**+2.3**
	comp=Z,33nm,1.0s							
ARMA	**Armidale**	**22.03**	**168**	P		**P**	**15 53 32.1**	**+0.6**
	baz=22,SNR=4.3							
ARMA	**Armidale**	**22.03**	**168**	P		**P**	**15 53 33.4**	**+1.8**
FITZ	**Fitzroy Crossi**	**22.32**	**243**	P		**P**	**15 53 35.4**	**+0.7**
	comp=Z,22nm,0.7s,baz=61,slow=12,SNR=68							
FITZ				LR		LR	16 03 10.6	
	comp=Z,993nm,18.3s,baz=56,slow=39							
	comp=Z,22nm,0.7s							
FITZ	**Fitzroy Crossi**	**22.32**	**243**	P		**P**	**15 53 35.4**	**+0.7**
	baz=22,SNR=26							
FITZ	**Fitzroy Crossi**	**22.32**	**243**	P		**P**	**15 53 35.4**	**+0.7**
BATI	**Baumata**	**22.62**	**265**	P		**P**	**15 53 41.5**	**+3.6**
	comp=Z,51nm,0.9s,baz=74,slow=2.9,SNR=9.2							
BATI				LR		LR	16 03 57.6	
	comp=Z,1μm,20.6s,baz=124,slow=40							
	comp=Z,51nm,0.9s							
BATI	**Baumata**	**22.62**	**265**	P		**P**	**15 53 41.2**	**+3.3**
	comp=Z,39nm,1.0s							
CMSA	**Cobar Meteorol**	**22.64**	**182**	P		**P**	**15 53 38.6**	**+0.6**
	baz=23,SNR=11							
CMSA	**Cobar Meteorol**	**22.64**	**182**	P		**P**	**15 53 38.7**	**+0.7**
LCRK	**Leigh Creek**	**22.91**	**199**	P		**P**	**15 53 41.6**	**+0.8**
NOUC	**Port Laguerre**	**23.14**	**127**	P		**P**	**15 53 42.8**	**-0.5**
DZM	**Mont Dzumac**	**23.24**	**127**	P		**P**	**15 53 44.5**	**+0.2**
	comp=Z,27nm,1.1s,baz=312,slow=9.3,SNR=7.2							
DZM				LR		LR	16 01 00.1	
	comp=Z

TPUB **Ta-pu** 40.75 322 P **P** 15 56 15.8 -2.0
RPZ **Rata Peaks** 40.82 153 P **P** 15 56 19.3 +1.1
comp=Z,18nm,0.9s,baz=241,slow=3.7,SNR=7.7
RPZ LR LR 16 11 10.6
comp=Z,322nm,19.0s,baz=322,slow=33
comp=Z,18nm,0.9s
RPZ **Rata Peaks** 40.82 153 P **P** 15 56 19.7 +1.6
AFI **Afiamalu** 41.13 101 LR LR 16 10 44.7
comp=Z,304nm,19.5s,baz=284,slow=32
BFZ **Birch Farm** 41.27 145 P **P** 15 56 22.3 +0.4
YHNB **Yeheng** 41.34 324 P **P** 15 56 24.7 +2.0
JSU **Suzuyama** 42.94 340 P **P** 15 56 35.2 -0.4
JSU IAmb IAmb 15 57 15.9
comp=Z,54nm,1.4s
JMN **Monobe** 43.97 345 P **P** 15 56 41.9 -2.0
JYT **Yasato** 45.18 353 P **P** 15 56 52.1 -1.3
QIZ **Qiongzhong** 45.54 308 P **P** 15 56 56.8 +0.2
QIZ IAmb IAmb 15 57 42.3
comp=Z,23nm,1.0s
QIZ **Qiongzhong** 45.54 308 P **P** 15 56 57.5 +0.9
QIZ sP **pP** 15 57 07.0 +0.6
QIZ PcP **PcP** 15 58 35.0 0.0
QIZ S **S** 16 03 39.5 +2.7
QIZ pmax pmax
comp=Z,23nm,1.2s
QIZ **Qiongzhong** 45.54 308 P **P** 15 56 57.8 +1.2
MJAR **Matsushiro Arr** 45.77 351 P **P** 15 56 56.7 -1.5
comp=Z,4.1nm,0.6s,baz=172,slow=9.6,SNR=16
comp=Z,4.1nm,0.6s
MAJO **Matsushiro** 45.77 351 P **P** 15 56 56.0 -2.1
MAJO IAmb IAmb 15 56 57.3
comp=Z,16nm,0.6s
MAJO **Matsushiro** 45.77 351 *i* P **P** 15 56 56.6 -1.6
MAJO pmax pmax
comp=Z,10.0nm,0.8s
MAJO **Matsushiro** 45.77 351 P **P** 15 56 56.9 -1.3
UBPT **Khong Chiam** 47.22 300 P **P** 15 57 10.1 +0.3
NJ2 **Nanjing** 48.48 328 ⇑P **P** 15 57 20.0 +0.7
NJ2 pmax pmax
comp=Z,23nm,0.9s
KSCHJ **Chungju** 48.66 340 P **P** 15 57 19.9 -0.7
KSRS **Korea Array** 49.20 340 P **P** 15 57 25.1 +0.4
comp=Z,8.8nm,0.6s,baz=156,slow=8.4,SNR=54
KSRS pP **pP** 15 57 35.9 +1.2
comp=Z,7.3nm,0.7s,baz=159,slow=8.5,SNR=8.9
KSRS LR LR 16 15 48.5
comp=Z,289nm,22.0s,baz=145,slow=33
comp=Z,8.8nm,0.6s
KSAR **Wonju Array Be** 49.21 340 P **P** 15 57 23.5 -1.3
KSAR **Wonju Array Be** 49.21 340 P **P** 15 57 23.5 -1.3
KS19 **Wonju Array Si** 49.27 340 P **P** 15 57 23.2 -2.0
JTM **Tenmabayashi** 49.59 355 P **P** 15 57 26.2 -1.5
GSI **Gunungsitoli** 49.82 279 P **P** 15 57 28.8 -1.2
SEHB **SEOHWA** 49.84 341 P **P** 15 57 29.6 0.0
SEHB IAmb IAmb 15 57 55.0
comp=Z,63nm,1.5s
RAR **Rarotonga** 53.06 110 LR LR 16 17 03.1
comp=Z,64nm,20.6s,baz=261,slow=32
LYN **LuoYang** 53.85 325 ⇑*i*P **P** 15 57 59.0 -0.6
LYN pP pP 15 58 11.0 +1.4
LYN sP sP 15 58 16.5 +3.0
LYN S **S** 16 05 32.8 +0.3
LYN SS **SS** 16 09 13.0 -1.2
LYN pmax pmax
comp=Z,20nm,0.6s
LYN pmax pmax
comp=Z,70nm,3.7s
LYN LR LR
comp=Z,160nm,14.3s
LYN LR LR
comp=Z,130nm,12.9s
LYN LR LR
comp=Z,160nm,20.3s
CM31 **Chiang Mai Arr** 54.22 300 P **P** 15 58 03.7 +1.1
CM31 IAmb IAmb 15 59 04.3
comp=Z,31nm,0.9s
CMAR **Chiang Mai Arr** 54.22 300 P **P** 15 58 04.4 +1.8
comp=Z,14nm,0.7s,baz=116,slow=5.7,SNR=110
CMAR pP **sP** 15 58 15.8 -0.7
comp=Z,19nm,0.8s,baz=125,slow=5.6,SNR=18
comp=Z,14nm,0.7s
CMAR **Chiang Mai Arr** 54.22 300 P **P** 15 58 02.5 -0.1
CHTO **Chiang Mai** 54.37 301 P **P** 15 58 04.1 +0.4
CHTO IAmb IAmb 15 58 17.2
comp=Z,17nm,0.8s
CHTO **Chiang Mai** 54.37 301 P **P** 15 58 04.1 +0.4
CHTO pmax pmax
comp=Z,17nm,0.8s
USA0B **Ussuriysk Arra** 54.37 347 P **P** 15 58 03.0 -0.2
USA0B **Ussuriysk Arra** 54.37 347 P **P** 15 58 03.0 -0.2
USA0B pmax pmax
comp=Z,8.0nm,0.7s
USRK **Ussuriysk Ar.** 54.37 347 P **P** 15 58 03.2 0.0
comp=Z,16nm,0.6s,baz=168,slow=6.3,SNR=30
USRK pP **pP** 15 58 14.4 +1.2
comp=Z,6.3nm,0.7s,baz=184,slow=8.6,SNR=4.6
comp=Z,16nm,0.6s
USRK **Ussuriysk Ar.** 54.37 347 P **P** 15 58 02.5 -0.7
KMI **Kunming** 54.38 309 ⇓P **P** 15 58 06.0 +2.1
KMI pmax pmax
comp=Z,11nm,1.1s
HNS **HongShan** 54.77 329 ⇑P **P** 15 58 06.3 0.0
HNS pmax pmax
comp=Z,14nm,0.8s
MDJ **Mudanjiang** 55.33 345 P **P** 15 58 10.0 -0.2
MDJ pP pP 15 58 18.3 -1.9
MDJ sP sP 15 58 23.3 -0.8
MDJ S **S** 16 05 56.8 +4.7
MDJ ScS **ScS** 16 07 55.3 -1.6
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,270nm,4.3s
MDJ LR LR
comp=Z,310nm,8.0s
MDJ LR LR
comp=Z,170nm,3.8s
MDJ LR LR
comp=Z,500nm,17.0s
YSS **Yuzh-Sakhalins** 55.60 357 P **P** 15 58 11.4 -0.6
YSS **Yuzh-Sakhalins** 55.60 357 *eP* **P** 15 58 11.3 -0.7
YSS pmax pmax
comp=Z,10.0nm,0.9s
BJI **Beijing** 56.13 332 P **P** 15 58 16.3 +0.3
BJI pmax pmax
comp=Z,15nm,1.5s
BNX **BinXian** 56.94 344 ⇓P **P** 15 58 21.0 -0.7
BNX pmax pmax
comp=Z,15nm,0.6s
BNX pmax pmax
comp=Z,120nm,3.9s
HHC **Hu-ho-hao-te** 58.98 329 *eP* **P** 15 58 37.5 +1.3
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.7s
KLR **Kul'dur** 59.22 349 *ceP* **P** 15 58 36.1 -1.5
KLR pmax pmax
comp=Z,15nm,2.5s
XLT **XiLinHaoTe** 59.28 335 ⇑*i*P **P** 15 58 38.0 -0.2
XLT pmax pmax
comp=Z,14nm,1.0s
XLT pmax pmax
comp=Z,94nm,4.0s
TYV **Tymovskoe** 59.51 357 *eP* **P** 15 58 39.6 +0.1
TYV *eS* **S** 16 06 51.3 +4.5
TYV pmax pmax
comp=Z,17nm,0.6s
TYV pmax pmax
comp=Z,500nm,2.8s
TYV smax smax
comp=N,400nm,3.6s
TYV smax smax
comp=E,300nm,3.6s
LZH **Lanzhou** 60.05 321 *eP* **P** 15 58 44.8 +1.0
LZH sP sP 15 58 56.5 -1.3
LZH pmax pmax
comp=E,23nm,1.2s
PEA0B **Petropavlovsk-** 62.39 8 P **P** 15 58 58.4 -0.7
PEA0B **Petropavlovsk-** 62.39 8 P **P** 15 58 58.4 -0.7
PEA0B pmax pmax
comp=Z,88nm,1.6s
PETK **Petropavlovsk-** 62.39 8 P **P** 15 58 58.6 -0.4
comp=Z,15nm,0.8s,baz=154,slow=6.1,SNR=27
comp=Z,15nm,0.8s

PETK **Petropavlovsk-** 62.39 8 P **P** 15 58 57.7 -1.3
CASY **Casey** 62.46 196 P **P** 15 59 00.3 +1.0
PPT2 **Papeete2** 62.56 105 *e*LR LR 16 17 38.0
comp=Z,210nm,22.8s
PPT **Papeete** 62.56 105 LR LR 16 21 04.2
comp=Z,114nm,21.1s,baz=268,slow=31
TBI **Tubuai** 62.73 112 *e*LR LR 16 17 42.6
comp=Z,317nm,30.2s
ZEA **Zeya** 64.41 347 *eP* **P** 15 59 12.5 +0.1
ZEA *e* 15 59 24.7
ZEA pmax pmax
comp=N,20nm,0.5s
ZEA pmax pmax
comp=Z,30nm,0.7s
GTA **Gaotai** 64.61 321 ⇑P **P** 15 59 14.5 +0.3
GTA pP pP 15 59 23.0 -1.4
GTA sP sP 15 59 27.5 -0.8
GTA pmax pmax
comp=Z,6.0nm,1.8s
GTA pmax pmax
comp=Z,52nm,4.7s
GTA LR LR
comp=Z,220nm,17.8s
GTA LR LR
comp=Z,290nm,18.9s
GTA LR LR
comp=Z,370nm,18.9s
LSA **Lhasa** 65.58 308 P **P** 15 59 21.5 +0.4
GOMU **GeErMu** 66.06 316 P **P** 15 59 25.0 +1.0
GOMU pP pP 15 59 29.5 -4.7
GOMU SS SS 16 12 28.0 +1.5
GOMU pmax pmax
comp=Z,4.0nm,1.3s
GOMU LR LR
comp=Z,200nm,18.0s
GOMU LR LR
comp=Z,270nm,21.8s
GOMU LR LR
comp=Z,440nm,22.3s
ULN **Ulaanbaatar** 66.34 332 P **P** 15 59 24.7 -0.6
ULN IAmb IAmb 16 00 59.1
comp=Z,24nm,0.8s
ULN **Ulaanbaatar** 66.34 332 *ceP* **P** 15 59 25.9 +0.6
ULN pmax pmax
comp=Z,31nm,1.7s
SONM **Songino Array** 66.63 332 P **P** 15 59 27.8 +0.8
comp=Z,4.7nm,0.6s,baz=152,slow=4.3,SNR=33
comp=Z,4.7nm,0.6s
SONM **Songino Array** 66.63 332 P **P** 15 59 27.4 +0.3
SONM IAmb IAmb 15 59 29.0
comp=Z,53nm,1.8s
CIT **Chita** 66.87 339 *eP* **P** 15 59 28.0 -0.4
CIT *e* 15 59 34.1
CIT *e* 16 03 33.7
CIT pmax pmax
comp=Z,86nm,1.8s
VNDA **Vanda** 69.17 176 P **P** 15 59 43.5 +1.1
comp=Z,3.1nm,0.8s,baz=322,slow=7.2,SNR=15
VNDA pP **sP** 15 59 55.3 -1.2
comp=Z,6.6nm,0.9s,baz=321,slow=7.6,SNR=15
VNDA LR LR 16 26 26.6
comp=Z,134nm,20.0s,baz=330,slow=33
comp=Z,3.1nm,0.8s
VNDA **Vanda** 69.17 176 P **P** 15 59 43.4 +1.0
SBA **Scott Base** 69.82 176 P **P** 15 59 47.9 +1.5
SBA IAmb IAmb 16 00 10.4
comp=Z,40nm,2.0s
SBA **Scott Base** 69.82 176 P **P** 15 59 47.9 +1.5
SBA pmax pmax
comp=Z,40nm,2.0s
ZAK **Zakamensk** 69.88 332 *eP* **P** 15 59 46.4 -0.9
ZAK *e* 15 59 58.7
ZAK pmax pmax
comp=Z,22nm,1.3s
ZAK pmax pmax
comp=Z,12nm,1.4s
BOD **Bodaibo** 71.49 342 *eP* **P** 15 59 55.4 -1.4
BOD pmax pmax
comp=Z,17nm,1.3s
SEY **Seymchan** 71.66 3 *i* P **P** 15 59 55.3 -2.4
SEY pmax pmax
comp=Z,7.0nm,1.0s
MOY **Mondy** 71.81 332 *eP* **P** 15 59 59.8 +0.7
MOY pmax pmax
comp=Z,31nm,1.9s
YAK **Yakutsk** 71.82 352 *i* P **P** 15 59 57.5 -1.2
YAK pmax pmax
comp=Z,7.0nm,0.8s
WMQ **Urumqi** 74.62 320 *eP* **P** 16 00 16.8 +1.0
WMQ pmax pmax
comp=Z,21nm,1.3s
WMQ LR LR
comp=Z,230nm,19.9s
WMQ LR LR
comp=Z,300nm,18.5s
WMQ LR LR
comp=Z,210nm,18.5s
SDPT **Sand Point** 77.57 28 P **P** 16 00 30.7 -1.4
baz=234
DGZ **Jazzator, Alta** 77.65 325 *i* P **P** 16 00 32.0 -1.0
DGZ pmax pmax
comp=Z,8.0nm,0.9s
BILL **Bilibino** 77.92 7 *de*P **P** 16 00 31.4 -2.5
BILL *e* 16 03 31.6
BILL *eS* S 16 10 40.2 +16
BILL pmax pmax
comp=Z,8.0nm,1.1s
BILL MLR MLR
comp=Z,38nm,20.0s
ZSN **Zaisan** 78.08 322 *eP* **P** 16 00 34.5 -0.7
ZSN **Zaisan** 78.08 322 *eP* **P** 16 00 34.5 -0.7
baz=322
CHGN **Chignik** 79.07 28 P **P** 16 00 40.0 -0.4
baz=236
MK31 **Makanchi Array** 79.37 321 P **P** 16 00 42.0 -0.3
MK31 IAmb IAmb 16 02 25.9
comp=Z,21nm,0.8s
MK31 **Makanchi Array** 79.37 321 *i* P **P** 16 00 42.1 -0.3
MKAR **Makanchi Array** 79.37 321 P **P** 16 00 42.6 +0.2
comp=Z,6.8nm,0.6s,baz=101,slow=6.6,SNR=103
comp=Z,6.8nm,0.6s
MAW **Mawson** 79.51 203 P **P** 16 00 42.9 +0.1
comp=Z,1.4nm,0.8s,baz=27,slow=4.5,SNR=2.0
MAW pP **sP** 16 00 56.0 -0.9
comp=Z,9.6nm,1.0s,baz=90,slow=6.7,SNR=9.0
comp=Z,1.4nm,0.8s
MAW **Mawson** 79.51 203 P **P** 16 00 43.1 +0.4
baz=80,SNR=6.7
MAKZ **Makanchi** 79.57 321 P **P** 16 00 43.5 0.0
MAKZ IAmb IAmb 16 02 26.5
comp=Z,19nm,0.9s
MAKZ **Makanchi** 79.57 321 P **P** 16 00 43.5 0.0
MAKZ pmax pmax
comp=Z,19nm,1.0s
SHLS **Shalkode** 79.75 317 *eP* **P** 16 00 42.6 -2.0
SHLS pmax pmax
comp=Z,20nm,1.9s
SHLS **Shalkode** 79.75 317 *eP* **P** 16 00 42.6 -2.0
comp=Z,20nm,1.9s,baz=316
UZB **Uzynbulak** 80.04 317 *eP* **P** 16 00 45.9 -0.4
UZB **Uzynbulak** 80.04 317 *eP* **P** 16 00 45.9 -0.4
baz=316
KPKS **Kokpek** 80.39 317 *eP* **P** 16 00 47.3 -0.8
KPKS **Kokpek** 80.39 317 *eP* **P** 16 00 47.3 -0.8
baz=316
SATY **Saty** 80.43 316 *eP* **P** 16 00 47.5 -0.8
SATY pmax pmax
comp=Z,22nm,2.1s
SATY **Saty** 80.43 316 *eP* **P** 16 00 47.5 -0.8
comp=Z,22nm,2.1s,baz=316
R17K **Ugashik Creek** 80.74 27 P **P** 16 00 48.5 -0.9
baz=237,SNR=8.0
P16K **Nushagak River** 80.81 26 P **P** 16 00 49.2 -0.5
baz=236
KSH **Kashi** 80.91 312 P **P** 16 00 52.5 +1.5
KSH sP sP 16 01 04.0 -1.2
KSH pmax pmax
comp=Z,4.0nm,0.8s
KSH LR LR
comp=Z,200nm,17.5s
KSH LR LR
comp=Z,260nm,16.8s
KSH LR LR
comp=Z,330nm,22.0s
O16K **Kokwok River B** 81.08 25 P **P** 16 00 50.0 -1.2
baz=235,SNR=6.0

ZAA0 **Zalesovo Array** 81.13 328 P **P** 16 00 50.4 -1.3
ZALV **Zalesovo Beam** 81.13 328 P **P** 16 00 51.0 -0.6
comp=Z,14nm,0.6s,baz=112,slow=4.9,SNR=61
comp=Z,14nm,0.6s
ZALV **Zalesovo Beam** 81.13 328 P **P** 16 00 50.2 -1.4
ZALV **Zalesovo Beam** 81.13 328 *i* P **P** 16 00 50.7 -0.9
ZALV pmax pmax
comp=Z,14nm,0.6s
QSPA **South Pole Qui** 81.19 180 LR LR 16 36 57.8
comp=Z,146nm,18.9s,baz=2.5,slow=36
QSPA **South Pole Qui** 81.19 180 P **P** 16 00 51.6 -0.4
QSPA IAmb IAmb 16 01 05.3
comp=Z,36nm,0.9s
NIL **Nilore** 81.19 306 P **P** 16 00 52.3 -0.2
NIL **Nilore** 81.19 306 P **P** 16 00 52.3 -0.2
NIL pmax pmax
comp=Z,35nm,0.7s
N16K **Nishlik Lake** 81.31 24 P **P** 16 00 51.9 -0.6
baz=235
MDOK **Medeo** 81.39 316 *eP* **P** 16 00 53.2 -0.3
MDOK **Medeo** 81.39 316 *eP* **P** 16 00 53.2 -0.3
baz=316
O17K **Koliganek Bris** 81.60 25 P **P** 16 00 53.3 -0.7
baz=236,SNR=18
CHKK **Chushkaly** 81.67 317 *eP* **P** 16 00 53.8 -1.0
CHKK **Chushkaly** 81.67 317 *eP* **P** 16 00 53.9 -1.0
baz=316
OHAK **Old Harbor** 81.95 28 P **P** 16 00 54.8 -1.1
OHAK IAmb IAmb 16 03 16.7
comp=Z,50nm,1.6s
OHAK **Old Harbor** 81.95 28 P **P** 16 00 54.3 -1.5
baz=240
KUU **Kurty** 82.13 317 *i* P **P** 16 00 56.6 -0.6
KUU pmax pmax
comp=Z,19nm,1.8s
KUU **Kurty** 82.13 317 *i* P **P** 16 00 56.7 -0.6
comp=Z,19nm,1.8s,baz=316
P18K **Big Mountain,** 82.19 26 P **P** 16 00 55.7 -1.5
baz=238
O18K **Koktuh Hills** 82.45 26 P **P** 16 00 56.7 -1.8
baz=238
KDAK **Kodiak Island** 82.56 28 P **P** 16 00 57.6 -1.4
baz=240
N18K **Kilae Creek** 82.60 25 P **P** 16 00 58.4 -0.8
baz=237
Q19K **Cape Douglas,** 82.65 27 P **P** 16 00 57.6 -1.9
baz=239
SVW2 **Sparrevohn** 82.96 24 P **P** 16 01 00.3 -0.8
SVW2 IAmb IAmb 16 01 01.7
comp=Z,16nm,0.8s
AAK **Ala-Archa** 82.98 315 *ceP* **P** 16 01 02.9 +1.0
AAK pmax pmax
comp=Z,10.0nm,1.3s
Q20K **Shuyak Island** 83.05 27 P **P** 16 00 59.7 -1.9
baz=241
SGDS **Sogindy** 83.15 316 *eP* **P** 16 01 01.2 -1.4
SGDS pmax pmax
comp=Z,9.0nm,1.6s
SGDS **Sogindy** 83.15 316 *eP* **P** 16 01 01.2 -1.4
comp=Z,9.0nm,1.6s,baz=316
KURK **Kurchatov** 83.18 324 P **P** 16 01 01.8 -0.6
KURK **Kurchatov** 83.18 324 *ceP* **P** 16 01 02.6 +0.2
KURK pmax pmax
comp=Z,18nm,1.3s
P19K **Oil Pt** 83.20 26 P **P** 16 01 00.8 -1.6
baz=240
N19K **Bonanza Creek** 83.26 25 P **P** 16 01 01.6 -1.1
N19K IAmb IAmb 16 01 02.9
comp=Z,22nm,1.4s
N19K **Bonanza Creek** 83.26 25 P **P** 16 01 01.7 -1.1
baz=238
TTA **Tatalina** 83.78 23 P **P** 16 01 03.9 -1.5
baz=237
L19K **White Mountain** 83.83 24 P **P** 16 01 04.5 -1.1
L19K IAmb IAmb 16 01 05.9
comp=Z,15nm,0.9s
L19K **White Mountain** 83.83 24 P **P** 16 01 04.4 -1.2
baz=238,SNR=12
M19K **Big River Lodg** 83.87 24 P **P** 16 01 04.9 -0.9
M19K IAmb IAmb 16 01 05.8
comp=Z,9.6nm,0.8s
M19K **Big River Lodg** 83.87 24 P **P** 16 01 05.3 -0.5
baz=238,SNR=10
BTLS **Baital** 84.06 317 *eP* **P** 16 01 06.4 -0.7
BTLS pmax pmax
comp=Z,14nm,1.5s
BTLS **Baital** 84.06 317 *eP* **P** 16 01 06.4 -0.7
comp=Z,14nm,1.5s,baz=317
BRSE **Bradley Lake S** 84.35 27 P **P** 16 01 07.4 -0.8
baz=242
M20K **Styx River** 84.37 24 P **P** 16 01 07.0 -1.4
baz=240,SNR=8.9
L20K **Farewell, AK** 84.38 24 P **P** 16 01 07.5 -0.9
baz=239,SNR=13
GCSA **Galena City Sc** 84.47 21 P **P** 16 01 07.5 -1.2
baz=236
K20K **Telida** 84.76 23 IAmb IAmb 16 01 10.7
comp=Z,10nm,0.8s
K20K **Telida** 84.76 23 P **P** 16 01 09.3 -1.0
baz=239,SNR=11
J20K **Nowinta River** 85.16 22 P **P** 16 01 11.6 -0.6
baz=238,SNR=11
SUA **Susitna One** 85.16 25 P **P** 16 01 10.5 -2.0
baz=242
DZA **Taraz** 85.28 315 *eP* **P** 16 01 12.4 -1.0
DZA **Taraz** 85.28 315 *eP* **P** 16 01 12.5 -1.0
baz=314
RC01 **Rabbit Creek A** 85.42 26 P **P** 16 01 11.6 -1.9
baz=243,SNR=5.3
CAST **Castle Rocks** 85.56 23 P **P** 16 01 11.9 -2.4
baz=240,SNR=10
CHUM **Lake Minchumin** 85.70 23 P **P** 16 01 13.8 -1.2
baz=240,SNR=16
CHGR **Chuyangaron** 85.73 310 P **P** 16 01 15.4 -0.4
CHGR IAmb IAmb 16 01 16.1
comp=Z,16nm,0.7s
CHGR **Chuyangaron** 85.73 310 P **P** 16 01 15.4 -0.4
CHGR pmax pmax
comp=Z,16nm,0.7s
CUT **Chulitna** 85.80 25 P **P** 16 01 14.4 -1.1
baz=242
PMR **Palmer** 85.90 26 P **P** 16 01 14.3 -1.7
baz=243
KKAR **Karatay Array** 85.92 315 P **P** 16 01 15.4 -1.1
KKAR **Karatay Array** 85.92 315 P **P** 16 01 15.4 -1.1
PWL **Port Wells** 85.92 26 P **P** 16 01 14.5 -1.6
baz=244
IUG **Iuzhnay** 86.00 314 *eP* **P** 16 01 15.6 -1.4
IUG **Iuzhnay** 86.00 314 *eP* **P** 16 01 15.7 -1.4
baz=313
KNK **Knik Glacier** 86.11 26 P **P** 16 01 15.4 -1.6
baz=244
TRF **Thorofare Moun** 86.28 24 P **P** 16 01 16.0 -2.0
baz=242
BPAW **Bear Paw Mtn.** 86.32 23 P **P** 16 01 16.5 -1.6
baz=241,SNR=5.8
SML **Sawmill** 86.34 26 P **P** 16 01 16.4 -1.8
baz=244,SNR=7.2
H21K **Melozitna Rive** 86.41 21 IAmb IAmb 16 01 19.0
comp=Z,43nm,2.0s
H21K **Melozitna Rive** 86.41 21 P **P** 16 01 17.0 -1.4
baz=240,SNR=8.0
I21K **Tanana** 86.47 22 P **P** 16 01 17.7 -1.0
baz=240,SNR=7.1
GLI **Glacier Island** 86.48 27 P **P** 16 01 17.6 -1.3
baz=245
BRZS **Berezniki** 86.49 322 *eP* **P** 16 01 18.2 -1.0
BRZS pmax pmax
comp=Z,9.0nm,1.8s
BRZS **Berezniki** 86.49 322 *eP* **P** 16 01 18.3 -1.0
comp=Z,9.2nm,1.8s,baz=321
M23K **Glacier View** 86.59 26 P **P** 16 01 17.7 -1.8
baz=244
G21K **Allakaket** 86.61 20 P **P** 16 01 18.1 -1.3
baz=239,SNR=5.5
WAT1 **Susitna Watana** 86.70 25 P **P** 16 01 18.2 -1.8
baz=244
SCM **Sheep Creek Mo** 86.78 26 P **P** 16 01 19.3 -1.2
baz=245
MLY **Manley** 86.86 22 P **P** 16 01 19.1 -1.6
baz=242,SNR=18
WAT6 **Susitna Watana** 86.93 25 P **P** 16 01 19.6 -1.6
baz=244
EYAK **Cordova Ski Ar** 86.94 27 P **P** 16 01 20.0 -1.1
baz=246
MCK **McKinley** 86.95 24 IAmb IAmb 16 01 20.1
comp=Z,28nm,1.2s

MCK	**McKinley**	86.95	24	P		**P**	16 01 19.1	-2.1
	baz=243,SNR=6.3							
F21K	**Alatna River**	86.98	20	P		**P**	16 01 19.9	-1.3
	baz=239							
H22K	**Ishtalitna Cre**	87.04	21	P		**P**	16 01 20.3	-1.2
	baz=241,SNR=8.8							
KLU	**Klutina**	87.25	26	P		**P**	16 01 21.3	-1.4
	baz=246,SNR=7.0							
NEA2	**Nenana**	87.29	23	P		**P**	16 01 20.5	-2.3
	baz=243							
DHY	**Denali Highway**	87.29	25	P		**P**	16 01 21.4	-1.6
	baz=245,SNR=5.4							
M24K	**Tolsona, Glenn**	87.39	26	P		**P**	16 01 22.2	-1.2
	baz=246							
G22K	**Bettles**	87.50	20	P		**P**	16 01 22.6	-1.0
	baz=241							
F22K	**John River**	87.56	20	P		**P**	16 01 22.9	-1.1
	baz=240							
BMRM	**Bremner River**	87.63	27	P		**P**	16 01 23.1	-1.4
	baz=247							
H23K	**Yukon River**	87.67	22	IAmb		IAmb	16 01 24.7	
	comp=Z,36nm,1.8s							
H23K	**Yukon River**	87.67	22	P		**P**	16 01 23.3	-1.3
	baz=243,SNR=8.4							
NRIK	**Noril'sk**	87.78	342	P		**P**	16 01 23.4	-1.5
	comp=Z,7.6nm,0.7s,baz=113,slow=3.6,SNR=18							
NRIK				pP		**pP**	16 01 36.1	+0.6
	comp=Z,12nm,0.8s,baz=118,slow=4.4,SNR=10.0							
	comp=Z,7.6nm,0.7s							
NRIK	**Noril'sk**	87.78	342	IAmb		IAmb	16 01 37.0	
	comp=Z,13nm,0.8s							
TCOL	**CIGO, UAF Yank**	87.88	23	P		**P**	16 01 23.1	-2.4
	baz=244							
N25K	**Chitina, Valde**	87.88	26	P		**P**	16 01 23.9	-1.8
	baz=247							
COLA	**College**	87.88	23	P		**P**	16 01 23.1	-2.4
	baz=244							
G23K	**Bananza Creek**	87.91	21	P		**P**	16 01 24.6	-1.2
	baz=242,SNR=7.5							
E22K	**Anaktuvuk Pass**	87.99	19	P		**P**	16 01 25.2	-0.9
	baz=240,SNR=6.1							
HDA	**Harding Lake**	88.03	23	IAmb		IAmb	16 01 25.9	
	comp=Z,10.0nm,1.0s							
HDA	**Harding Lake**	88.03	23	P		**P**	16 01 24.4	-1.9
	baz=245,SNR=6.9							
PAX	**Paxson**	88.04	25	P		**P**	16 01 24.8	-1.7
	baz=246							
GLB	**Gilahina Butte**	88.17	27	IAmb		IAmb	16 01 27.0	
	comp=Z,15nm,0.8s							
ILAR	**Eielson Array**	88.21	23	P		**P**	16 01 24.4	-2.7
	comp=Z,12nm,0.7s,baz=255,slow=4.8,SNR=88							
	comp=Z,12nm,0.7s							
K24K	**Donnelly Dome**	88.25	24	P		**P**	16 01 26.2	-1.2
	baz=246							
H24K	**Noodor Dome**	88.29	22	P		**P**	16 01 26.4	-1.2
	baz=244,SNR=6.7							
MCARA	**McCarthy VSAT**	88.49	27	P		**P**	16 01 27.2	-1.4
	baz=249							
RIDG	**Independent Ri**	88.60	24	P		**P**	16 01 27.5	-1.6
	baz=247,SNR=9.6							
J25K	**Salcha River,**	88.74	24	P		**P**	16 01 27.9	-1.8
	baz=246,SNR=38							
D23K	**Nanushuk River**	88.76	19	P		**P**	16 01 29.2	-0.4
	baz=242,SNR=13							
G24K	**Hadweenzic Riv**	88.81	21	P		**P**	16 01 29.2	-0.8
	baz=244,SNR=10							
BRVK	**Borovoye**	88.83	324	*ce*P		**P**	16 01 30.7	+0.4
BRVK				pmax		pmax		
	comp=Z,9.0nm,2.5s							
M26K	**Nabesna, AK**	88.88	26	P		**P**	16 01 28.9	-1.5
	baz=249							
L26K	**Log Cabin Wild**	88.96	25	P		**P**	16 01 29.7	-1.0
	baz=248							
TOLK	**Toolik Lake Re**	88.96	19	P		**P**	16 01 29.7	-0.9
	baz=243,SNR=6.2							
F24K	**Squaw Lake**	89.02	20	P		**P**	16 01 30.1	-0.8
	baz=244,SNR=14							
PRP	**Porcupine Dome**	89.04	23	P		**P**	16 01 30.2	-1.0
	baz=246							
SCRK	**Sand Creek**	89.05	24	P		**P**	16 01 29.5	-1.7
	baz=248,SNR=6.0							
E24K	**Your Creek**	89.07	20	P		**P**	16 01 30.1	-1.1
	baz=244							
CTG	**Chitna Glacier**	89.11	28	P		**P**	16 01 29.5	-2.1
	baz=250							
C23K	**Itkillik River**	89.20	18	P		**P**	16 01 30.8	-0.8
	baz=242,SNR=11							
H25K	**Birch Creek**	89.23	22	P		**P**	16 01 30.8	-1.1
	baz=246,SNR=5.3							
PINM	**Pinnacle**	89.33	29	P		**P**	16 01 31.4	-1.2
	baz=251							
M27K	**Edge Creek, AK**	89.35	26	P		**P**	16 01 32.3	-0.4
	baz=250							
J26L	**Joseph Creek**	89.42	24	IAmb		IAmb	16 01 33.0	
	comp=Z,11nm,0.8s							
J26L	**Joseph Creek**	89.42	24	P		**P**	16 01 32.1	-0.9
	baz=248,SNR=15							
D24K	**Happy Valley**	89.44	19	P		**P**	16 01 32.5	-0.3
	baz=243							
O28M	**Mount Upton**	89.58	28	P		**P**	16 01 32.9	-1.1
	baz=251							
PNL	**Peninsula**	89.60	29	P		**P**	16 01 33.0	-0.8
	baz=252							
L27K	**Beaver Creek,**	89.62	26	P		**P**	16 01 33.0	-0.8
	baz=250,SNR=9.9							
C24K	**Franklin Bluff**	89.73	18	P		**P**	16 01 33.7	-0.5
	baz=243							
YUK3	**Moose Creek**	89.78	27	P		**P**	16 01 33.8	-1.1
	baz=251							
BVCY	**Beaver Creek**	89.81	26	P		**P**	16 01 34.0	-0.7
	baz=251							
F25K	**Christian Rive**	89.84	21	P		**P**	16 01 34.3	-0.5
	baz=246,SNR=8.5							
K27K	**Chicken**	89.85	25	P		**P**	16 01 34.5	-0.3
	baz=250							
I26K	**Coal Creek Min**	89.88	23	P		**P**	16 01 33.6	-1.3
	baz=248							
E25K	**Arctic Village**	90.08	20	P		**P**	16 01 35.3	-0.6
	baz=246,SNR=7.8							
O29M	**Mount Kennedy**	90.19	29	P		**P**	16 01 36.1	-0.6
	baz=253							
G26K	**Porcupine Rive**	90.25	22	P		**P**	16 01 36.5	-0.2
	baz=248,SNR=20							
D25K	**Kavik River**	90.30	19	P		**P**	16 01 35.8	-1.1
	baz=246,SNR=10							
P29M	**Windy Craggy**	90.39	29	P		**P**	16 01 36.6	-0.9
	baz=253							
F26K	**Sheenjek River**	90.41	21	P		**P**	16 01 36.9	-0.5
	baz=248,SNR=11							
EGAK	**Eagle**	90.48	24	P		**P**	16 01 36.6	-1.2
	baz=250,SNR=6.8							
I27K	**Kandik River**	90.58	23	P		**P**	16 01 37.3	-1.1
	baz=250,SNR=9.1							
H27K	**Steamboat Moun**	90.83	23	P		**P**	16 01 39.1	-0.4
	baz=250,SNR=10							
HYT	**Haines Junctio**	90.85	28	P		**P**	16 01 39.1	-0.6
	baz=254							
M29M	**Somme Creek**	90.88	27	P		**P**	16 01 39.1	-0.8
	baz=253							
P30M	**Million Dollar**	90.91	29	P		**P**	16 01 39.8	-0.2
	baz=254							
DAWY	**Dawson**	90.98	25	P		**P**	16 01 39.7	-0.4
	baz=252							
G27K	**Doyon Strip**	90.98	22	P		**P**	16 01 39.6	-0.6
	baz=250							
PLBC	**Pleasant Camp**	91.02	30	P		**P**	16 01 39.5	-0.9
	baz=254							
N30M	**Aishikik Lake**	91.22	28	P		**P**	16 01 40.0	-1.4
	baz=254							
C27K	**Jago River**	91.28	19	P		**P**	16 01 40.8	-0.6
	baz=248							
E27K	**Coleen River**	91.48	21	P		**P**	16 01 41.9	-0.5
	baz=250,SNR=7.5							
O30N	**Mendenhall**	91.50	29	P		**P**	16 01 41.8	-0.9
	baz=255							
M30M	**Minto, Yukon**	91.66	27	P		**P**	16 01 42.4	-0.9
	baz=254							
K29M	**Barlow Dome**	91.70	25	P		**P**	16 01 42.8	-0.8
	baz=254							
N31M	**Braeburn, Yuko**	91.83	28	P		**P**	16 01 43.5	-0.7
	baz=255							
EPYK	**Eagle Plains**	92.73	23	P		**P**	16 01 46.5	-1.7
	baz=254							
P33M	**Teslin, Yukon**	92.94	30	P		**P**	16 01 47.8	-1.5
	baz=256							
FARO	**Faro, Yukon**	93.13	28	P		**P**	16 01 49.1	-1.1
	baz=257							
BELA	**Belgrano 2**	93.46	180	IAmb		IAmb	16 02 05.5	
	comp=Z,10.0nm,0.9s							

R33M	**Jennings River**	93.69	31	P		**P**	16 01 52.1	-0.9
	baz=259							
DLBC	**Dease Lake**	93.99	32	LR		LR	16 40 14.4	
	comp=Z,46nm,18.8s,baz=286,slow=33							
BBB	**Bella Bella**	94.03	38	LR		LR	16 39 15.7	
	comp=Z,106nm,19.2s,baz=278,slow=32							
MMPY	**Sheldon Lake,**	94.16	27	P		**P**	16 01 54.7	-0.3
	baz=259							
INK	**Inuvik**	94.40	22	LR		LR	16 40 05.3	
	comp=Z,113nm,21.9s,baz=248,slow=33							
L02F	**Cave Junction**	95.74	48	P		**P**	16 02 01.8	-0.7
	baz=263							
I03D	**Drain, OR**	96.08	47	P		**P**	16 02 02.8	-1.2
	baz=264							
ARU	**Arti**	96.15	326	P		**P**	16 02 02.5	-1.5
ARU							16 05 56.1	
ARU				S		**SKSac**	16 12 36.3	-1.7
ARU				SS		**SS**	16 19 50.2	-2.8
ARU				MLR		MLR		
	comp=Z,112nm,20.0s							
YBH	**Yreka Blue Hor**	96.33	49	LR		LR	16 37 28.4	
	comp=Z,170nm,21.9s,baz=318,slow=30							
SNAA	**Sanae**	97.18	189	LR		LR	16 45 18.3	
	comp=Z,203nm,19.5s,baz=146,slow=35							
PKM	**Mcpherson Peak**	97.93	56	P		**P**	16 02 12.2	-0.7
	baz=265							
VNA2	**Neumayer--Watz**	98.54	188	PKiKP		**PKiKP**	16 06 47.0	+0.7
NVAR	**Mina Array Bea**	99.42	52	P		**Pdif**	16 02 21.1	+1.6
	comp=Z,1.0nm,0.7s,baz=246,slow=6.6,SNR=9.6							
NVAR				pP		**sP**	16 02 34.2	+0.3
	comp=Z,0.8nm,0.7s,baz=268,slow=4.7,SNR=4.7							
NVAR				LR		LR	16 39 30.0	
	comp=Z,193nm,21.7s,baz=279,slow=31							
CWC	**Cottonwood Cre**	99.46	54	P		**Pdif**	16 02 18.9	-0.8
	baz=266							
LRMC	**Laurel Mtn Rad**	99.72	55	P		**Pdif**	16 02 20.0	-0.8
	baz=266							
R11A	**Troy Canyon, C**	101.55	53	P		**Pdif**	16 02 28.1	-0.8
	baz=268							
BELG	**Belogornoye**	102.36	322	*i* P		**Pdif**	16 02 32.3	+0.4
BELG				pmax		pmax		
	comp=Z,1.0nm,1.1s							
HLID	**Hailey**	102.54	47	P		**Pdif**	16 02 33.0	-0.3
	baz=270							
TXAR	**Lajitas Array**	111.48	62	PKiKP		**PKiKP**	16 07 08.8	-2.5
	comp=Z,0.4nm,0.8s,baz=224,slow=2.5,SNR=3.5							
PLCA	**Paso Flores**	120.02	148	PKP		**PKPdf**	16 07 27.3	-0.1
	comp=Z,2.0nm,1.0s,baz=202,slow=4.2,SNR=4.5							
PLCA				pPKP		**pPKPdf**	16 07 39.8	+1.5
	comp=Z,1.0nm,0.6s,baz=319,slow=3.1,SNR=1.5							
BRG	**Berggiesshubel**	122.78	326	*e*PKiKP		**PKPdf**	16 07 29.1	-3.2
BRG				pmax		pmax		
	comp=Z,2.0nm,0.6s							
BRG				pmax		pmax		
	comp=Z,8.0nm,1.3s							
BRG	**Berggiesshubel**	122.78	326	*ex*		x	16 07 29.1	
CLL	**Collm**	123.07	327	*e*PKiKP		**PKiKP**	16 07 34.0	+1.0
CLL	**Collm**	123.07	327	*es*PKPdf		**sPKPdf**	16 07 43.0	-4.4
CLL				Lm		MLR	17 02 00.0	
	comp=Z,100nm,21.3s							
CLL	**Collm**	123.07	327	*e*Pn		**PKiKP**	16 07 34.0	+1.0
O48B	**Farmland**	124.51	47	P		**PKPdf**	16 07 34.0	-1.9
	baz=290							
P49A	**Miami Univ. Ec**	125.07	47	P		**PKPdf**	16 07 35.5	-1.5
	baz=290							
TZTN	**Tazewell**	126.92	51	P		**PKPdf**	16 07 39.3	-1.4
	baz=289							
TKL	**Tuckaleechee C**	127.02	52	PKP		**PKPdf**	16 07 40.1	-0.7
	comp=Z,1.7nm,0.7s,baz=164,slow=3.6,SNR=5.3							
KMSC	**Kings Mountain**	129.07	52	P		**PKPdf**	16 07 43.8	-1.0
	baz=289							
SSPA	**Standing Stone**	129.47	44	P		**PKPdf**	16 07 44.5	-0.9
	baz=296							
LONY	**Lake Ozonia**	129.64	38	P		**PKPdf**	16 07 44.8	-0.8
	baz=302							
LPAZ	**La Paz**	137.58	126	PKP		**PKPdf**	16 08 02.1	+0.1
	comp=Z,1.5nm,0.7s,baz=225,slow=3.6,SNR=6.1							
LPAZ				pPKP		**sPKPdf**	16 08 14.9	-1.7
	comp=Z,3.2nm,1.0s,baz=276,slow=3.8,SNR=5.1							
LPAZ	**La Paz**	137.58	126	PKPdf		**PKPdf**	16 08 01.6	-0.5
SIV	**San Ignacio**	143.19	132	PKP		PKPbc	16 08 09.6	+1.1
	comp=Z,1.0nm,0.5s,baz=221,slow=4.2,SNR=7.2							
SIV				pPKP		pPKPdf	16 08 23.8	+1.5
	comp=Z,2.5nm,0.8s,baz=270,slow=1.2,SNR=5.6							
PTLB	**Pontes e Lacer**	144.96	133	PKPdf		**PKPab**	16 08 13.0	-0.7
TOA0	**Torodi Ar. Sit**	145.25	280			**PKPab**	16 08 14.9	0.0
TORD	**Torodi Ar. Bea**	145.25	280	PKPbc		**PKPbc**	16 08 13.8	-1.0
	comp=Z,32nm,0.7s,baz=79,slow=3.6,SNR=7.7							
TORD				pPKPbc		sPKPab	16 08 27.8	-1.4
	comp=Z,53nm,1.0s,baz=84,slow=3.6,SNR=6.8							
SAML	**Samuel**	145.53	120	PKPdf		**PKPdf**	16 08 14.1	-1.5
SAML	**Samuel**	145.53	120	PKiKP		**PKPdf**	16 08 14.1	-1.5
VILB	**Vilhena**	145.75	129			**PKPdf**	16 08 14.3	-1.7
SJG	**San Juan**	146.93	70	PKPbc		**PKPdf**	16 08 17.7	-0.1
	comp=Z,29nm,0.8s,baz=27,slow=3.5,SNR=8.9							
HUMP	**Col San Antoni**	147.20	70			**PKPdf**	16 08 19.2	+1.0
KIC	**Kosan Boka**	151.44	267	⇑*iP*		**PKPab**	16 08 40.5	+0.8
	comp=Z,2.6nm,0.5s							
DBIC	**Dimbokro**	151.59	268	PKPbc		**PKPbc**	16 08 30.9	-0.8
	comp=Z,5.3nm,0.9s,baz=130,slow=2.5,SNR=6.7							
DBIC				pPKPbc		**pPKPbc**	16 08 42.8	+0.3
	comp=Z,4.4nm,0.6s,baz=91,slow=3.5,SNR=4.4							
LIC	**Lamto**	151.71	267	⇓*eP*		**PKPab**	16 08 41.2	+0.4
	comp=Z,12nm,0.5s							
TIC	**Toumodi**	151.75	268	⇑*iP*		**PKPab**	16 08 43.2	+2.2
	comp=Z,3.8nm,0.2s							
BDFB	**Brasilia**	151.76	149	PKPbc		**PKPbc**	16 08 31.3	-0.8
	comp=Z,17nm,0.7s,baz=222,slow=1.2,SNR=22							
BDFB				pPKPbc		**pPKPbc**	16 08 44.1	+1.2
	comp=Z,25nm,0.8s,baz=152,slow=1.4,SNR=13							
BDFB	**Brasilia**	151.76	149			**PKPbc**	16 08 31.4	-0.6

MAN ***26*** *15:53:20, 10.˚13N×126.˚12E, h35km, Ms4.8*
GCMT ***26*** *15:53:21.6±0.3, 10.˚15N±0.˚02×126.˚20E±0.˚02, h41km±1km, MW5.0/78, Moment Tensor Solution. s49,c56; s78,c105; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.07±.16; Mθθ0.05±.10; Mθφ-3.12±.10; Mrθ0.62±.08; Mθφ0.26±.06; Mφr1.53±.11; Best double couple: M₀3.51700×10¹⁶ NP1:ϕs7.00000°, δ59.00000°, λ103.00000°. NP2: ϕs164.00000°, δ33.00000°, λ70.00000°. Principal axes: T 3.5540, Plg73.0000°, Azm309.0000°; N -0.0700, Plg11.0000°, Azm181.0000°; P -3.4810, Plg13.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***26*** *15:53:21.9±1.5, 10.˚12N×125.˚93E, h64km±12km, mb4.5/32, mbtmp4.8/35, MS3.9/31 Error ellipse: s-maj=18.2km s-min=9.5km az=67.0*
BJI ***26*** *15:53:23.3±0.0, 10.˚08N×125.˚97E, h101km, mb4.7/50, mB4.9/29*
NEIC ***26*** *15:53:25.6±1.6, 10.˚14N±0.˚08×125.˚9E±0.˚1, h95km±6km, mb4.9/42, Error ellipse: s-maj=15.1km s-min=10.8km az=80.0*
DJA ***26*** *15:53:28.4±0.7, 10˚N±4˚×12˚6E±˚, h101km±6km, M5.0/37, mB5.3/15, mb4.8/37, MLv5.6/1, Mw(mB)4.7/15*
ISC 26 15:53:23.5±0.4, **10.˚16N**±0.˚03×**125.˚98E**±0.˚04, **h77**km,3km, **h77**km;**pP-P, n406,** σ1s**50**/422, **mb4.8**/68, **25C-24D, Leyte**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SCPH	**Surigao**	0.61	232	⇑*iP*	**Pn**	15 53 33.3	-4.6
SCPH				*i* S	**Sn**	15 53 42.5	-6.2
MSLP	**Maasin**	1.10	269	⇓*eP*	**Pn**	15 53 41.2	-2.3
MSLP				*eS*	**Sn**	15 54 02.5	+3.9
BUTP	**Butuan**	1.23	197	⇓*eP*	**Pn**	15 53 41.5	-3.8
BUTP				*eS*	**Sn**	15 53 59.9	-1.8
BESP	**Borongan**	1.53	340	⇓*eP*	**Pn**	15 53 47.2	-1.9
BESP				*eS*	**Sn**	15 54 10.2	+1.8
OCLP	**Ormoc**	1.61	304	⇓*eP*	**Pn**	15 53 49.0	-1.1
OCLP				*eS*	**Sn**	15 54 16.1	+5.7
LLP	**Lapu-Lapu**	1.98	275	⇓*eP*	**Pn**	15 53 54.8	-0.3
LLP				*eS*	**Sn**	15 54 20.1	+0.8
CGP	**Cagayan de Oro**	2.11	217	⇑*iP*	**Pn**	15 53 55.2	-1.6
CGP				*i* S	**Sn**	15 54 21.8	-0.5
CNP	**Catarman**	2.67	331	⇓*eP*	**Pn**	15 54 02.6	-1.7
CNP				*eS*	**Sn**	15 54 35.2	-0.5
SNPH	**Sibulan**	2.82	254	⇓*iP*	**Pn**	15 54 06.0	-0.4
SNPH				*i* S	**Sn**	15 54 46.7	+7.3
DCPH	**Dipolog City**	3.02	239	⇑*iP*	**Pn**	15 54 08.2	-1.0
DCPH				*eS*	**Sn**	15 54 44.7	+0.4
DAV	**Davao City (W)**	3.09	187	P	**Pn**	15 54 09.7	-0.4

	571nm,0.5s,baz=344,slow=1.8,SNR=7.3							
DAV				S		**Sn**	15 54 49.2	+3.2
	805nm,0.6s,baz=35,slow=23,SNR=6.4							
DAV	**Davao City (W)**	3.09	187			**Pn**	15 54 09.9	-0.2
MMPH	**Masbate**	3.18	314	⇓*iP*		**Pn**	15 54 11.1	-0.1
MMPH				*i* S		**Sn**	15 54 48.5	+0.5
MATI	**Mati**	3.20	175	⇓*eP*		**Pn**	15 54 08.7	-2.9
MATI				*eS*		**Sn**	15 54 52.1	+3.4
KCP	**Kidapawan**	3.25	196	⇑*iP*		**Pn**	15 54 11.5	-0.8
KCP				*i* S		**Sn**	15 54 50.4	+0.5
CNOP	**Candoni, Negro**	3.30	265	⇓*eP*		**Pn**	15 54 12.9	0.0
CNOP				*eS*		**Sn**	15 54 52.3	+1.2
CTBH	**Cotabato--PC H**	3.38	210	⇑*iP*		**Pn**	15 54 13.0	-1.0
PAGZ	**Pagadian**	3.44	228	⇓*eP*		**Pn**	15 54 14.0	-0.8
PAGZ				*eS*		**Sn**	15 54 53.6	-0.9
RCP	**Roxas**	3.46	294	⇓*eP*		**Pn**	15 54 15.3	+0.2
JAP	**San Jose, Anti**	4.01	279	⇓*eP*		**Pn**	15 54 24.2	+1.8
DDMP	**Don Marcelino,**	4.04	184	⇓*eP*		**Pn**	15 54 20.4	-2.5
DDMP				*eS*		**Sn**	15 55 09.3	+0.2
GSPH	**General Santos**	4.17	194	⇑*eP*		**Pn**	15 54 25.1	+0.2
GSPH				*i* S		**Sn**	15 55 16.8	+4.3
GQP	**Guinayangan**	5.08	318	⇓*eP*		**Pn**	15 54 36.6	-0.5
GQP				*eS*		**Sn**	15 55 29.1	-5.4
LQP	**Lukban**	5.85	313	⇑*eP*		**Pn**	15 54 48.2	+0.3
PGP	**Puerto Galera**	5.93	305	⇓*eP*		**Pn**	15 54 49.7	+0.8
TGY	**Tagaytay City**	6.29	309	P		**Pn**	15 54 53.3	-0.6
	315nm,0.7s,baz=96,slow=0.8,SNR=7.8							
TGY	**Tagaytay City**	6.29	309	⇑*eP*		**Pn**	15 54 57.4	+3.6
SGSI	**Sangihe**	6.45	184	P		**Pn**	15 54 55.2	-0.7
PPR	**Puerto Princes**	7.15	268	⇑*iP*		**Pn**	15 55 07.0	+1.5
PCPH	**Palayan**	7.17	319	⇑*eP*		**Pn**	15 55 04.1	-1.7
MYLDM	**Lahad Datu**	8.91	237	Pn		**Pn**	15 55 32.4	+3.0
KMSI	**Cibinong**	9.73	192	P		Pn	15 55 46.7	+6.0
	103nm,0.8s							
GTOI	**Gorontalo**	9.91	197	P		**Pn**	15 55 44.1	+0.9
MRSI	**Marisa**	10.42	203	P		Pn	15 55 55.3	+5.2
	761nm40nm,1.0s							
KKM	**Kota Kinabalu**	10.49	248			**Pn**	15 55 53.6	+2.4
LBMI	**Labuha**	10.83	172	P		Pn	15 56 03.8	+8.0
	738nm40nm,0.8s							
MPSI	**Mapaga**	11.48	212	P		Pn	15 56 10.4	+5.9
	12nm,1.1s							
LUWI	**Luwuk**	11.57	196	P		Pn	15 56 12.0	+6.1
	2µm136nm,1.0s							
APSI	**Ampana**	11.81	202	P		Pn	15 56 15.8	+6.7
	509nm44nm,0.8s							
SIJI	**Sorong**	12.15	154	P		**Pn**	15 56 10.5	-3.3
	8.6nm,0.7s,baz=356,slow=2.2,SNR=3.7							
NLAI	**Namlea**	13.36	175	P		**P**	15 56 37.8	+1.1
	6µm32nm,0.9s							
TWG	**Pinlang**	13.44	340	Pn		**Pn**	15 56 32.2	+1.3
MSAI	**Masohi**	13.73	167	P		P	15 56 51.0	+10
YULB	**Yu-li**	13.90	342	Pn		**Pn**	15 56 38.7	+1.7
TPUB	**Ta-pu**	14.03	339	Pn		**Pn**	15 56 41.4	+2.6
SSLB	**Suanglung**	14.38	341	Pn		**Pn**	15 56 45.1	+1.9
FAKI	**Fak Fak**	14.42	154	P		**P**	15 56 47.6	-1.0
TTSI	**Tana Toraja**	14.48	205	P		**P**	15 56 49.1	-0.1
	1µm58nm,1.0s							
SPSI	**Sidrap Palu**	15.33	204	P		**P**	15 57 00.3	+1.6
	37nm,0.7s							
SBUM	**Sibu**	15.66	242			**P**	15 57 01.5	-0.9
KAPI	**Kappang**	16.30	203	P		**Pn**	15 57 08.5	+0.7
	9.2nm,0.3s,baz=6.3,slow=5.8,SNR=5.4							
BKSI	**Bulukumba**	16.45	201	P		**P**	15 57 16.6	+5.5
	26nm,0.8s							
SMPI	**Sarmi**	17.50	133	P		**P**	15 57 29.1	+6.3
	34nm,1.1s							
STKI	**Sintang**	17.57	236	P		**P**	15 57 25.8	+2.3
	14nm,0.7s							
QIZ	**Qiongzhong**	17.92	301	P		**Pn**	15 57 27.8	+0.1
QIZ				pP		**pP**	15 57 45.5	+2.9
QIZ				S		**S**	16 00 50.0	+1.8
QIZ				pmax		pmax		
	comp=Z,15nm,1.1s							
QIZ				pmax		pmax		
	comp=Z,200nm,4.8s							
QIZ				LR		LR		
	comp=N,500nm,19.0s							
QIZ				LR		LR		
	comp=E,340nm,20.5s							
QIZ				LR		LR		
	comp=Z,600nm,19.9s							
GENI	**Genyem**	18.98	131	P		**Pn**	15 57 45.0	+4.5
	2µm117nm,1.0s							
MMRI	**Maumere**	19.04	191	P		**Pn**	15 57 45.0	+3.9
	46nm,0.

PZH PP PnPn 16 00 02.3 +2.4
PZH S S 16 03 47.5 -0.3
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.7s
PZH LR LR
comp=Z,710nm,17.7s
PZH LR LR
comp=Z,610nm,17.8s
PZH LR LR
comp=Z,900nm,20.1s
XAN Xi'an 28.45 329 P P 15 59 09.9 -1.4
HNS HongShan 28.96 341 ⇑P P 15 59 17.3 +1.6
HNS eS S 16 04 00.5 -0.6
HNS pmax pmax
comp=Z,16nm,0.9s
HNS LR LR
comp=Z,260nm,15.4s
HNS LR LR
comp=Z,280nm,15.3s
HNS LR LR
comp=Z,320nm,19.6s
WRA Warramunga Arr 31.02 165 P P 15 59 32.0 -2.1
comp=Z,4.4nm,0.6s,baz=344,slow=9.4,SNR=5.3
WRA ScP ScP 16 06 05.0 +0.3
comp=Z,0.9nm,0.8s,baz=336,slow=3.7,SNR=5.8
WRA LR LR 16 13 16.0
comp=Z,165nm,21.8s,baz=19,slow=38
comp=Z,4.4nm,0.6s
WB2 Warramunga Arr 31.03 165 P P 15 59 32.6 -1.5
WB2 IAmb IAmb 15 59 33.0
comp=Z,12nm,0.8s
PSA00 Pilbara Seismi 32.10 191 P P 15 59 44.4 +0.9
PSA00 IAmb IAmb 16 00 04.8
comp=Z,40nm,1.6s
LZH Lanzhou 32.70 326 eP P 15 59 49.0 +0.1
LZH pP pP 16 00 09.8 +2.8
LZH sP sP 16 00 22.0 +6.0
LZH pmax pmax
comp=Z,35nm,1.4s
LZH LR LR
comp=Z,320nm,15.5s
LZH LR LR
comp=Z,430nm,15.5s
LZH LR LR
comp=Z,530nm,18.2s
HHC Hu-ho-hao-te 33.12 340 eP P 15 59 52.0 -0.4
HHC pmax pmax
comp=Z,35nm,1.0s
HHC pmax pmax
comp=Z,200nm,4.7s
HHC LR LR
comp=Z,450nm,17.1s
HHC LR LR
comp=Z,510nm,13.4s
USRK Ussuriysk Ar. 34.31 8 P P 16 00 02.8 +0.2
comp=Z,3.9nm,0.5s,baz=181,slow=7.9,SNR=9.1
comp=Z,3.9nm,0.5s
USRK Ussuriysk Ar. 34.31 8 P P 16 00 02.6 0.0
MDJ Mudanjiang 34.47 5 P P 16 00 04.8 +0.8
MDJ S S 16 05 28.3 +1.5
MDJ pmax pmax
comp=Z,17nm,2.1s
MDJ pmax pmax
comp=Z,210nm,3.5s
MDJ LR LR
comp=Z,200nm,4.7s
MDJ LR LR
comp=Z,260nm,4.6s
MDJ LR LR
comp=Z,210nm,5.3s
AS31 Alice Springs 34.50 167 P P 16 00 03.1 -1.4
AS31 IAmb IAmb 16 00 05.3
comp=Z,4.7nm,0.5s
ASAR Alice Springs 34.50 167 P P 16 00 02.9 -1.6
comp=Z,3.0nm,0.4s,baz=352,slow=6.9,SNR=16
ASAR PcP PcP 16 02 37.5 -0.6
comp=Z,2.7nm,0.6s,baz=352,slow=3.2,SNR=5.9
ASAR ScP ScP 16 06 17.6 +0.8
comp=Z,1.2nm,0.7s,baz=342,slow=3.0,SNR=4.9
ASAR LR LR 16 15 23.0
comp=Z,117nm,20.3s,baz=16,slow=38
comp=Z,3.0nm,0.4s
ASAR Alice Springs 34.50 167 P P 16 00 03.6 -0.9
XLT XiLinHaoTe 34.70 347 ⇑iP P 16 00 06.0 0.0
XLT sP sP 16 00 40.8 +7.7
XLT pmax pmax
comp=Z,28nm,0.8s
XLT pmax pmax
comp=Z,180nm,4.3s
BNX BinXian 35.48 2 ⇓P P 16 00 13.0 +0.4
BNX pmax pmax
comp=Z,9.0nm,0.5s
BNX pmax pmax
comp=Z,260nm,3.9s
CTA Charters Tower 36.08 146 LR LR 16 15 17.2
comp=Z,144nm,21.9s,baz=305,slow=36
GTA Gaotai 37.31 326 ⇑P P 16 00 28.0 -0.5
GTA pmax pmax
comp=Z,17nm,1.0s
GTA pmax pmax
comp=Z,70nm,4.2s
GTA LR LR
comp=Z,220nm,17.5s
GTA LR LR
comp=Z,290nm,16.7s
GTA LR LR
comp=Z,370nm,18.2s
HNR Honiara 39.01 119 LR LR 16 14 50.1
comp=Z,120nm,21.7s,baz=249,slow=33
ODAN Odare 39.98 300 eP P 16 00 50.5 -0.7
H11N1 WAKE ISLAND Hy 40.56 72 T T 16 44 14.4
baz=264,slow=74,SNR=1020
H11N2 WAKE ISLAND Hy 40.57 72 T T 16 44 15.1
baz=264,slow=74,SNR=578
H11N3 WAKE ISLAND Hy 40.58 72 T T 16 44 15.8
baz=264,slow=74,SNR=943
RAMN Ramite 40.68 300 eP P 16 00 56.4 -0.6
FORT Forrest 40.75 177 P P 16 00 56.4 -0.6
ULN Ulaanbaatar 40.83 340 P P 16 00 58.1 +0.3
ULN Ulaanbaatar 40.83 340 P P 16 00 58.2 +0.5
ULN pP pP 16 01 18.2 +1.9
SONM Songino Array 41.02 340 P P 16 00 59.4 +0.1
comp=Z,7.9nm,0.7s,baz=158,slow=9.0,SNR=15
SONM PcP PcP 16 02 58.0 +0.1
comp=Z,4.0nm,0.7s,baz=149,slow=3.8,SNR=6.7
SONM ScP ScP 16 06 43.5 +2.5
comp=Z,1.2nm,0.7s,baz=172,slow=4.5,SNR=5.0
SONM LR LR 16 19 55.0
comp=Z,140nm,20.6s,baz=143,slow=39
comp=Z,7.9nm,0.7s
SONM Songino Array 41.02 340 P P 16 00 59.0 -0.3
JIRN Jiri 41.24 301 eP P 16 01 00.7 -1.0
comp=Z,25nm,0.5s
GUN Gumba 41.57 301 eP P 16 01 03.0 -1.4
comp=Z,23nm,0.5s
PKI Pulchoki 41.88 300 eP P 16 01 06.0 -0.8
comp=Z,8.1nm,0.4s
PKIN Phulchoki 41.89 300 eP P 16 01 05.8 -1.1
comp=Z,12nm,0.4s
DMN Daman 42.15 300 eP P 16 01 08.4 -0.5
comp=Z,12nm,0.4s
GKN Gorkha 42.65 300 eP P 16 01 12.3 -0.6
KOLN Koldanda 43.47 300 eP P 16 01 19.5 -0.1
DANN Dangsing 43.49 301 eP P 16 01 18.8 -1.1
NWAO Narrogin (SRO) 43.65 191 P P 16 01 20.2 -0.4
BBOO Buckleboo 43.80 168 P P 16 01 21.0 -0.8
BBOO IAmb IAmb 16 01 31.1
comp=Z,26nm,0.8s
STKA Stephens Creek 44.39 161 P P 16 01 25.8 -0.8
comp=Z,4.8nm,0.7s,baz=342,slow=7.9,SNR=12
STKA LR LR 16 23 11.7
comp=Z,84nm,18.2s,baz=3.2,slow=40
comp=Z,4.8nm,0.7s
STKA Stephens Creek 44.39 161 P P 16 01 26.0 -0.6
HYBB Hyderabad (bro 46.52 284 eP P 16 01 43.0 -0.7
HYBB eS S 16 08 24.7 -2.3
WMQ Urumqi 47.13 322 eP P 16 01 49.8 +1.6
WMQ LR LR
comp=Z,250nm,18.1s
WMQ LR LR
comp=Z,230nm,18.1s
WMQ LR LR
comp=Z,210nm,19.5s
PCHI Peechi 48.78 275 eP P 16 02 00.3 -0.9
PETK Petropavlovsk- 49.86 24 P P 16 02 10.3 +1.5
comp=Z,3.1nm,0.6s,baz=222,slow=2.0,SNR=5.8
comp=Z,3.1nm,0.6s
CAN Canberra 50.20 155 P P 16 02 12.6 +0.9
ZSN Zaisan 50.79 325 eP P 16 02 14.6 -1.5
baz=325
LIFNC LIFOU 50.90 127 P P 16 02 17.2 +0.1
DZM Mont Dzumac 51.00 129 P P 16 02 18.7 +0.6
comp=Z,18nm,0.5s,baz=276,slow=8.1,SNR=27
DZM LR LR 16 21 57.8
comp=Z,51nm,20.5s,baz=357,slow=34
comp=Z,18nm,0.5s
DZM Mont Dzumac 51.00 129 eLR LR 16 17 01.8
comp=Z,254nm,26.1s
DZM Mont Dzumac 51.00 129 P P 16 02 18.7 +0.6
DZM Mont Dzumac 51.00 129 P P 16 02 18.5 +0.5
YAK Yakutsk 51.85 2 P P 16 02 24.0 +0.4
YAK Yakutsk 51.85 2 P P 16 02 23.6 0.0
YAK pP pP 16 02 44.8 +2.1
MK31 Makanchi Array 51.94 323 P P 16 02 24.2 -0.4
MKAR Makanchi Array 51.94 323 P P 16 02 24.2 -0.4
comp=Z,26nm,0.8s,baz=122,slow=8.3,SNR=43
MKAR PcP PcP 16 03 36.0 -0.3
comp=Z,14nm,0.8s,baz=111,slow=5.1,SNR=7.9
MKAR ScP ScP 16 07 28.2 +1.7
comp=Z,1.6nm,0.8s,baz=115,slow=4.3,SNR=5.3
MKAR LR LR 16 26 19.6
comp=Z,239nm,21.0s,baz=110,slow=38
comp=Z,26nm,0.8s
SHLS Shalkode 52.03 318 eP P 16 02 22.7 -2.8
baz=318
MAKZ Makanchi 52.13 323 P P 16 02 25.7 -0.4
MAKZ Makanchi 52.13 323 P P 16 02 25.6 -0.5
UZB Uzynbulak 52.32 317 eP P 16 02 26.7 -1.0
baz=318
KPKS Kokpek 52.68 318 eP P 16 02 29.1 -1.2
comp=Z,5.2nm,0.9s,baz=318
SATY Saty 52.69 317 eP P 16 02 29.5 -0.9
comp=Z,6.8nm,0.8s,baz=317
NIL Nilore 53.56 304 P P 16 02 36.0 -0.7
MDOK Medeo 53.65 317 eP P 16 02 36.4 -1.1
baz=317
AAA Alma-Ata 53.76 317 eP P 16 02 37.1 -1.0
baz=317
CHKK Chushkaly 53.96 318 eP P 16 02 37.9 -1.7
baz=318
KUU Kurty 54.41 317 eP P 16 02 41.8 -1.0
comp=Z,16nm,0.8s,baz=317
ZAA0 Zalesovo Array 54.58 331 P P 16 02 42.2 -1.6
ZAA0 IAmb IAmb 16 02 43.5
comp=Z,10nm,0.8s
ZALV Zalesovo Beam 54.58 331 P P 16 02 42.9 -1.0
comp=Z,12nm,0.7s,baz=117,slow=6.8,SNR=17
ZALV PcP PcP 16 03 45.0 -1.1
comp=Z,4.2nm,0.5s,baz=152,slow=3.7,SNR=5.0
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 54.58 331 P P 16 02 42.7 -1.2
KURK Kurchatov 55.99 326 P P 16 02 53.6 -0.5
KURK Kurchatov 55.99 326 P P 16 02 52.9 -1.1
BTLS Bakhtal 56.36 318 eP P 16 02 55.4 -1.4
baz=318
DZA Taraz 57.49 315 eP P 16 03 03.5 -1.4
baz=315
KKAR Karatay Array 58.12 315 P P 16 03 08.6 -0.7
IUG Iuzhnay 58.19 314 eP P 16 03 08.9 -0.9
baz=314
MSVF Nonsavu 58.42 118 LR LR 16 24 00.5
comp=Z,70nm,21.8s,baz=352,slow=32
BRZS Berezniki 59.09 323 eP P 16 03 14.5 -1.4
comp=Z,4.6nm,0.7s,baz=323
TIXI Tiksi 61.47 1 LR LR 16 32 06.1
comp=Z,92nm,20.1s,baz=180,slow=38
TIXI Tiksi 61.47 1 P P 16 03 31.7 +0.1
TIXI pP pP 16 03 52.8 +1.5
BRVK Borovoye 61.66 325 P P 16 03 32.6 -0.8
BRVK Borovoye 61.66 325 P P 16 03 32.5 -0.8
NRIK Noril'sk 64.05 346 P P 16 03 48.7 -0.1
comp=Z,10nm,0.8s,baz=147,slow=4.7,SNR=13
comp=Z,10nm,0.8s
WSAR Wadi Sarin 65.32 291 LR LR 16 36 22.6
comp=Z,32nm,19.3s,baz=118,slow=40
AFI Afiamalu 66.21 110 LR LR 16 27 42.4
comp=Z,126nm,21.8s,baz=70,slow=31
GEYT Alibeck 66.38 307 P P 16 04 04.0 -0.6
comp=Z,4.9nm,0.9s,baz=165,slow=6.2,SNR=7.7
GEYT PcP sP 16 04 33.4 +0.3
comp=Z,5.3nm,0.8s,baz=197,slow=4.5,SNR=5.3
GEYT LR LR 16 37 35.3
comp=Z,118nm,21.2s,baz=94,slow=40
comp=Z,4.9nm,0.9s
ABKAR Akbulak array 66.77 319 P P 16 04 04.3 -2.5
NIKH Nikolski High 67.07 37 P P 16 04 09.1 +0.5
baz=256
MDH Madha 67.42 293 P P 16 04 09.8 -1.5
RPZ Rata Peaks 67.45 146 LR LR 16 35 36.8
comp=Z,133nm,18.1s,baz=259,slow=38
UOSS Minazif 67.51 293 P P 16 04 10.8 -1.1
UOSS IAmb IAmb 16 04 11.6
comp=Z,11nm,0.7s
UOSS Minazif 67.51 293 *i* P P 16 04 10.5 -1.4
SNR=6.8
UOSS Minazif 67.51 293 P P 16 04 10.2 -1.8
MSFE Esma-Masafi 67.54 293 P P 16 04 10.1 -2.1
SHME Shamm 67.55 294 P P 16 04 12.6 +0.4
HATD Hatta, Dubai 67.58 293 *i* P P 16 04 12.0 -0.4
SNR=13
ASHO Ashiyiah 67.65 293 *i* P P 16 04 12.1 -0.8
SNR=14
URZ Urewera 67.77 139 LR LR 16 36 13.1
comp=Z,100nm,18.6s,baz=212,slow=38
ALNE Al Ain 67.94 292 *i* P P 16 04 14.2 -0.5
SNR=12
NAZ Nazwa, Dubai 68.00 293 P P 16 04 14.0 -1.0
FAQ Al Faqa, Dubai 68.07 293 *i* P P 16 04 14.4 -1.0
SNR=6.5
AKTO Aktyubinsk 68.22 320 LR LR 16 36 24.4
comp=Z,219nm,19.7s,baz=103,slow=38
ASUD Al Ashush, Dub 68.31 292 *i* P P 16 04 16.7 -0.3
SNR=9.2
UNV Unalaska Valle 68.64 36 P P 16 04 19.1 +0.7
baz=258
ARU Arti 69.16 327 P P 16 04 19.9 -1.8
ARU IAmb IAmb 16 04 21.4
comp=Z,24nm,0.7s
ARU Arti 69.16 327 P P 16 04 20.4 -1.3
MZR Muzera 70.07 291 *i* P P 16 04 27.7 -0.1
SNR=19
SDPT Sand Point 72.36 35 P P 16 04 41.6 +0.6
baz=262
CHGN Chignik 73.63 34 P P 16 04 49.2 +0.7
baz=264
N16K Nishlik Lake 73.96 30 P P 16 04 51.5 +1.0
baz=262,SNR=6.6
P16K Nushagak River 74.17 31 P P 16 04 52.2 +0.6
baz=263
O16K Kokwok River B 74.18 31 P P 16 04 52.2 +0.5
baz=263,SNR=9.9
R16K Pilot Point 74.22 33 P P 16 04 52.5 +0.6
baz=264
O17K Koliganek Bris 74.70 31 P P 16 04 55.4 +0.7
baz=264
R17K Ugashik Creek 74.86 33 P P 16 04 56.6 +0.9
baz=265
P17K Kvichak River 74.98 31 P P 16 04 57.6 +1.3
baz=265
GCSA Galena City Sc 75.39 26 P P 16 04 59.8 +1.3
baz=263
N18K Kilae Creek 75.39 30 P P 16 04 59.4 +0.7
baz=265
TTA Tatalina 75.56 28 P P 16 05 00.5 +0.7
baz=264
P18K Big Mountain, 75.61 31 P P 16 05 00.3 +0.3
baz=266
O18K Koktuh Hills 75.66 31 P P 16 05 01.3 +1.0
baz=266,SNR=9.1
L19K White Mountain 76.02 28 P P 16 05 02.5 +0.2
L19K White Mountain 76.02 28 P P 16 05 03.6 +1.3
baz=265,SNR=7.5
N19K Bonanza Creek 76.09 30 P P 16 05 02.1 -0.7
N19K IAmb IAmb 16 05 05.5
comp=Z,9.6nm,0.9s
N19K Bonanza Creek 76.09 30 P P 16 05 03.8 +1.0
baz=266
M19K Big River Lodg 76.22 29 P P 16 05 04.4 +1.0
baz=266
A21K Barrow 76.41 19 P P 16 05 05.8 +1.6
baz=261
K20K Telida 76.48 27 P P 16 05 05.9 +1.0
baz=266
L20K Farewell, AK 76.50 28 P P 16 05 06.1 +1.1
baz=266
J20K Nowinta River 76.51 26 P P 16 05 04.5 -0.4
J20K Nowinta River 76.51 26 P P 16 05 06.2 +1.2
baz=265
OHAK Old Harbor 76.51 34 P P 16 05 06.4 +1.3
baz=268
M20K Styx River 76.81 29 P P 16 05 08.0 +1.1
baz=267
IMAR Indian Mountai 76.82 24 P P 16 05 05.6 -1.1
GNI Garni 76.85 309 LR LR 16 44 07.0
comp=Z,79nm,21.1s,baz=82,slow=40
KDAK Kodiak Island 76.91 33 P P 16 05 08.5 +1.2
baz=268
G21K Allakaket 76.97 24 P P 16 05 08.9 +1.4
baz=265,SNR=10
F21K Alatna River 77.03 23 P P 16 05 08.9 +0.9
baz=265
Q20K Shuyak Island 77.04 32 P P 16 05 08.7 +0.6
baz=268
CASY Casey 77.08 186 P P 16 05 07.3 -0.7
CASY IAmb IAmb 16 05 08.9
comp=Z,19nm,0.8s
H21K Melozitna River 77.19 25 P P 16 05 08.6 -0.2
H21K Melozitna River 77.19 25 P P 16 05 09.9 +1.2
baz=266,SNR=9.2
CHUM Lake Minchumin 77.29 27 P P 16 05 10.5 +1.2
baz=267
RAYN Ar Rayn 77.34 292 P P 16 05 08.4 -2.1
RAYN IAmb IAmb 16 05 11.1
comp=Z,19nm,0.9s
RAYN Ar Rayn 77.34 292 *i* P P 16 05 10.1 -0.4
SNR=22
CAST Castle Rocks 77.37 27 P P 16 05 10.8 +0.9
baz=267,SNR=8.1
I21K Tanana 77.50 25 P P 16 05 11.6 +1.1
baz=267,SNR=10
F22K John River 77.56 23 P P 16 05 12.1 +1.3
baz=266,SNR=9.6
E22K Anaktuvuk Pass 77.73 22 P P 16 05 13.4 +1.6
baz=267,SNR=6.7
G22K Bettles 77.78 24 P P 16 05 13.5 +1.4
baz=267
H22K Ishtalitna Cre 77.79 25 P P 16 05 13.5 +1.4
baz=268,SNR=8.2
BPAW Bear Paw Mtn. 77.89 26 P P 16 05 13.5 +0.8
BPAW IAmb IAmb 16 05 14.8
comp=Z,15nm,0.8s
BPAW Bear Paw Mtn. 77.89 26 P P 16 05 13.8 +1.1
baz=268,SNR=11
SUA Susitna One 77.93 29 P P 16 05 13.6 +0.5
baz=269
MLY Manley 78.02 26 P P 16 05 14.2 +0.7
baz=268,SNR=11
KBZ Khabaz 78.07 313 P P 16 05 13.4 -0.7
comp=Z,8.3nm,0.9s,baz=143,slow=3.7,SNR=13
KBZ LR LR 16 44 12.1
comp=Z,86nm,18.9s,baz=66,slow=39
comp=Z,8.3nm,0.9s
TRF Thorofare Moun 78.18 27 P P 16 05 14.6 +0.1
baz=269
D23K Nanushuk River 78.19 21 P P 16 05 15.4 +1.1
baz=268,SNR=6.3
KIV Kislovodsk 78.21 313 P P 16 05 15.5 +0.4
M22K Willow 78.24 29 P P 16 05 15.7 +1.1
baz=270
C23K Itkillik River 78.26 21 P P 16 05 16.1 +1.5
baz=267,SNR=9.5
G23K Bananza Creek 78.36 24 P P 16 05 16.9 +1.6
baz=269,SNR=10
H23K Yukon River 78.54 25 P P 16 05 16.9 +0.5
H23K Yukon River 78.54 25 P P 16 05 17.4 +1.1
baz=269,SNR=9.7
TOLK Toolik Lake Re 78.58 22 P P 16 05 17.1 +0.6
TOLK IAmb IAmb 16 05 18.6
comp=Z,9.4nm,0.8s
TOLK Toolik Lake Re 78.58 22 P P 16 05 17.8 +1.2
baz=269,SNR=10
NEA2 Nenana 78.73 26 P P 16 05 18.2 +0.9
baz=270,SNR=7.0
MCK McKinley 78.79 27 P P 16 05 16.9 -0.8
MCK IAmb IAmb 16 05 19.0
comp=Z,18nm,0.7s
MCK McKinley 78.79 27 P P 16 05 18.1 +0.3
baz=270,SNR=11
D24K Happy Valley 78.87 21 P P 16 05 19.4 +1.4
baz=269
C24K Franklin Bluff 78.92 21 P P 16 05 19.5 +1.2
baz=269
WAT1 Susitna Watana 78.97 28 P P 16 05 18.5 -0.3
baz=271
E24K Your Creek 78.98 22 P P 16 05 19.2 +0.5
baz=270,SNR=7.8
KNK Knik Glacier 79.03 29 P P 16 05 19.2 +0.1
baz=271
SML Sawmill 79.09 29 P P 16 05 20.1 +0.7
baz=271
PWL Port Wells 79.10 30 P P 16 05 20.0 +0.5
baz=271
F24K Squaw Lake 79.21 23 P P 16 05 20.7 +0.7
baz=270,SNR=12
H24K Noodor Dome 79.23 25 P P 16 05 20.9 +0.8
baz=271,SNR=6.2
RAR Rarotonga 79.26 114 LR LR 16 33 54.4
comp=Z,84nm,20.2s,baz=280,slow=31
WAT6 Susitna Watana 79.35 28 P P 16 05 21.2 +0.2
baz=272,SNR=6.6
M23K Glacier View 79.37 29 P P 16 05 21.7 +0.8
baz=272
G24K Hadweenzic Riv 79.38 24 P P 16 05 21.8 +1.0
baz=271,SNR=8.0
KLMR Klimovskoe 79.48 330 eP P 16 05 19.2 -2.3
KLMR AMP 16 05 22.1
comp=Z,10.0nm,0.8s
KLMR ePP PP 16 08 18.7 -3.8
DHY Denali Highway 79.50 28 P P 16 05 22.4 +0.6
baz=272
SCM Sheep Creek Mo 79.56 29 P P 16 05 23.1 +1.0
baz=272
HDA Harding Lake 79.65 26 P P 16 05 22.2 -0.2
baz=272,SNR=6.7
ILAR Eielson Array 79.67 26 P P 16 05 22.0 -0.4
comp=Z,2.7nm,0.7s,baz=240,slow=5.0,SNR=20
comp=Z,2.7nm,0.7s
GLI Glacier Island 79.71 30 P P 16 05 22.9 +0.2
baz=272
D25K Kavik River 79.74 21 P P 16 05 23.8 +1.0
baz=272,SNR=9.1
H25K Birch Creek 80.05 24 P P 16 05 25.5 +1.0
baz=272,SNR=9.2
F25K Christian River 80.07 23 P P 16 05 25.8 +1.1
baz=272,SNR=7.3
E25K Arctic Village 80.07 22 P P 16 05 25.6 +0.9
baz=272,SNR=6.2
M24K Tolsona, Glenn 80.09 28 P P 16 05 25.9 +1.0
baz=273
K24K Donnelly Dome 80.19 27 P P 16 05 26.0 +0.6
baz=273
J25K Salcha River, 80.32 26 P P 16 05 25.5 -0.5
baz=273
PAX Paxson 80.37 28 P P 16 05 27.1 +0.6
baz=273
EYAK Cordova Ski Ar 80.39 30 P P 16 05 27.5 +1.1
baz=274
BMAR Burnt Mountain 80.48 23 P P 16 05 27.0 +0.1
HARP HAARP 80.55 28 P P 16 05 28.2 +0.9
baz=274
RIDG Independent Ri 80.61 27 P P 16 05 28.0 +0.4
baz=274,SNR=5.7
F26K Sheenjek River 80.63 23 P P 16 05 29.1 +1.5
baz=274
C27K Jago River 80.66 21 P P 16 05 28.7 +1.0
baz=274,SNR=7.4
G26K Porcupine Rive 80.83 24 P P 16 05 29.9 +1.3
baz=274
N25K Chitina, Valde 80.87 29 P P 16 05 30.3 +1.2
baz=274
SCRK Sand Creek 80.97 27 P P 16 05 30.5 +0.9
baz=275,SNR=5.4
J26L Joseph Creek 81.11 26 P P 16 05 30.1 -0.2
J26L Joseph Creek 81.11 26 P P 16 05 30.8 +0.5
baz=275
I26K Coal Creek Min 81.21 25 P P 16 05 31.3 +0.6
baz=275
E27K Coleen River 81.55 22 P P 16 05 33.6 +1.1
baz=276,SNR=6.8
M26K Nabesna, AK 81.56 28 P P 16 05 33.2 +0.5

baz=276
MCARA **McCarthy VSAT** 81.64 29 P P 16 05 34.0 +0.9
baz=276
G27K **Doyon Strip** 81.67 24 P P 16 05 34.5 +1.3
baz=276
H27K **Steamboat Moun** 81.79 24 P P 16 05 35.2 +1.4
baz=276
K27K **Chicken** 81.80 26 P P 16 05 35.4 +1.5
baz=276
I27K **Kandik River** 81.82 25 P P 16 05 35.2 +1.1
baz=276
L27K **Beaver Creek,** 82.02 27 P P 16 05 36.3 +1.2
baz=277
BCAR **Beaver Creek A** 82.04 27 P P 16 05 35.2 0.0
M27K **Edge Creek, AK** 82.08 28 P P 16 05 36.5 +1.0
baz=277
EGAK **Eagle** 82.11 26 P P 16 05 35.3 -0.2
EGAK IAmb IAmb 16 05 46.4
comp=Z,16nm,1.6s
EGAK **Eagle** 82.11 26 P P 16 05 36.1 +0.6
baz=277
CTG **Chitna Glacier** 82.50 29 P P 16 05 39.1 +1.4
baz=277
BVCY **Beaver Creek** 82.54 28 P P 16 05 38.9 +1.1
baz=278
YUK3 **Moose Creek** 82.82 29 P P 16 05 40.8 +1.3
baz=278
DAWY **Dawson** 82.97 26 P P 16 05 41.4 +1.4
baz=279
O28M **Mount Upton** 83.09 30 P P 16 05 42.0 +1.1
baz=278
PINM **Pinnacle** 83.15 30 P P 16 05 42.3 +1.2
baz=278
I29M **Ogilvie Camp,** 83.22 25 P P 16 05 42.3 +1.0
baz=280
M29M **Somme Creek** 83.64 28 P P 16 05 45.2 +1.6
baz=280
EPYK **Eagle Plains** 83.69 24 P P 16 05 44.8 +1.1
baz=281
K29M **Barlow Dome** 83.82 26 P P 16 05 45.9 +1.4
baz=280
ASF **Jabal al Asfar** 83.90 301 P P 16 05 46.1 +0.6
comp=Z,13nm,0.8s,baz=97,slow=3.2,SNR=28
comp=Z,13nm,0.8s
YUK6 **Outpost Mounta** 83.94 29 P P 16 05 47.1 +1.8
baz=280
O29M **Mount Kennedy** 83.95 30 P P 16 05 46.2 +1.0
baz=280
SPITS **Spitsbergen Ar** 84.07 349 LR LR 16 49 46.3
comp=Z,81nm,18.4s,baz=40,slow=40
ARCES **ARCESS Array B** 84.20 340 P P 16 05 45.8 -0.3
comp=Z,2.6nm,0.6s,baz=78,slow=5.7,SNR=12
comp=Z,2.6nm,0.6s
HYT **Haines Junctio** 84.38 29 P P 16 05 48.6 +1.3
HYT IAmb IAmb 16 05 50.2
comp=Z,12nm,0.8s
HYT **Haines Junctio** 84.38 29 P P 16 05 49.1 +1.8
baz=281
M30M **Minto, Yukon** 84.38 27 P P 16 05 48.9 +1.7
baz=281
N30M **Aishikik Lake** 84.46 29 P P 16 05 49.5 +1.9
baz=281
P29M **Windy Craggy** 84.48 30 P P 16 05 49.4 +1.6
baz=281
INK **Inuvik** 84.49 22 P P 16 05 48.4 +0.9
baz=284
MMAI **Mount Meron Ar** 85.02 303 P P 16 05 51.8 +0.6
comp=Z,8.6nm,0.8s,baz=66,slow=4.7,SNR=14
comp=Z,8.6nm,0.8s
N31M **Braeburn, Yuko** 85.07 28 P P 16 05 51.7 +1.0
baz=282
O30N **Mendenhall** 85.07 29 P P 16 05 52.0 +1.3
baz=282
PLBC **Pleasant Camp** 85.20 31 P P 16 05 52.7 +1.3
baz=282
BRTR **Keskin Array B** 85.38 309 P P 16 05 51.8 -1.1
comp=Z,9.2nm,0.8s,baz=106,slow=4.2,SNR=49
BRTR LR LR 16 49 36.6
comp=Z,66nm,20.4s,baz=95,slow=40
comp=Z,9.2nm,0.8s
BRTR **Keskin Array B** 85.38 309 P P 16 05 51.3 -1.6
M31M **Drury Creek, Y** 85.55 28 P P 16 05 54.3 +1.2
baz=283
WHY **Whitehorse** 85.67 29 P P 16 05 55.3 +1.5
baz=283
SKAG **Skagway** 85.72 30 P P 16 05 55.1 +1.2
baz=283
FIA1 **FINESS Array S** 85.85 332 P P 16 05 53.0 -1.5
FIA1 IAmb IAmb 16 05 54.2
comp=Z,8.1nm,0.7s
FINES **FINESS Array B** 85.85 332 P P 16 05 53.9 -0.6
comp=Z,5.3nm,0.5s,baz=70,slow=4.7,SNR=49
comp=Z,5.3nm,0.5s
EIL **Elat** 85.93 299 P P 16 05 56.0 +0.3
comp=Z,24nm,0.8s,baz=346,slow=2.7,SNR=15
EIL LR LR 16 49 19.3
comp=Z,52nm,20.3s,baz=89,slow=39
comp=Z,24nm,0.8s
FARO **Faro, Yukon** 86.02 27 P P 16 05 56.3 +0.8
baz=284
A36M **Sachs Harbour** 86.10 17 P P 16 05 56.4 +0.8
baz=291
CSS **Mathiatis** 86.41 305 P P 16 05 57.3 -0.6
AKASG **Malin Array Be** 86.47 321 P P 16 05 56.4 -1.4
comp=Z,11nm,0.9s,baz=65,slow=4.8,SNR=30
comp=Z,11nm,0.9s
MNK **Minsk** 86.47 325 *i* P P 16 05 58.1 +0.3
comp=E,1.0nm,0.6s
MNK *i* P P 16 05 58.1 +0.3
comp=N,8.0nm,0.9s
MNK *i* P P 16 05 58.1 +0.3
comp=Z,19nm,0.9s,baz=258
MNK *i* pP **sP** 16 06 24.3 -2.6
MNK *i* PP **PP** 16 09 20.5 +0.6
MNK *i* PPP PPP 16 11 14.9
MNK *i* S **SKSac** 16 16 14.3 -3.1
MNK *i* sS **sS** 16 17 01.9 -1.4
MNK *i* SS **SS** 16 22 09.2 +0.2
MNK *i* SSS SSS 16 25 42.0
MNK *i* LQ LQ 16 39 13.0
MNK *i* LR LR 16 45 34.0
MNK *i* LRM MLR 16 45 43.2
comp=E,40nm,19.8s
MNK *i* LRM MLR 16 45 45.8
comp=N,18nm,17.2s
MNK *i* LRM MLR 16 46 07.8
comp=Z,77nm,23.0s
MMPY **Sheldon Lake,** 86.86 27 P P 16 06 00.5 +1.0
baz=286
PURM **Purcari** 86.88 317 ⇓P P 16 05 59.4 -0.4
C36M **Paulatuk** 87.44 20 P P 16 06 02.8 +0.6
baz=292
SORM **Soroca** 87.56 318 ⇓P P 16 06 01.2 -1.9
PPT **Papeete** 87.81 108 LR LR 16 37 55.1
comp=Z,54nm,21.3s,baz=266,slow=30
PPT2 **Papeete2** 87.81 108 *e*LR LR 16 34 05.7
comp=Z,90nm,22.8s
TLCR 87.87 315 ⇑P P 16 06 04.3 -0.4
JURR **Jurilovca** 87.92 315 ⇑P P 16 06 04.5 -0.4
TPGR **Topolog** 88.22 315 ⇑P P 16 06 05.4 -1.0
TIRR **Tirgusor** 88.31 315 ⇓P P 16 06 05.8 -1.0
MANR **Mangalia** 88.32 314 ⇓P P 16 06 07.4 +0.5
EUNU **Eureka** 88.39 5 P P 16 06 06.7 +0.1
EUNU IAmb IAmb 16 06 08.0
comp=Z,11nm,0.8s
TGTN **Hyland Airport** 88.53 27 P P 16 06 08.3 +0.8
baz=289
HARR **Harsova** 88.59 315 ⇑P P 16 06 07.4 -0.7
KMBO **Kilima Mbogo** 88.94 269 P P 16 06 09.8 -0.9
comp=Z,3.6nm,0.9s,baz=56,slow=4.5,SNR=5.8
KMBO LR LR 16 43 30.3
comp=Z,46nm,20.6s,baz=94,slow=34
comp=Z,3.6nm,0.9s
KMBO **Kilima Mbogo** 88.94 269 P P 16 06 10.7 0.0
TBI **Tubuai** 89.05 114 *e*LR LR 16 34 41.3
comp=Z,206nm,29.0s
TESR **Tescani** 89.05 317 ⇑P P 16 06 09.7 -0.6
MAW **Mawson** 89.50 200 P P 16 06 11.9 +0.2
comp=Z,5.2nm,0.8s,baz=242,slow=3.8,SNR=8.6
comp=Z,5.2nm,0.8s
MAW **Mawson** 89.50 200 P P 16 06 11.4 -0.3
BURAR **Bucovina Array** 89.73 318 ⇓P P 16 06 13.5 -0.1
BURAR **Bucovina Array** 89.73 318 P P 16 06 12.9 -0.7
BURAR IAmb IAmb 16 06 15.2
comp=Z,9.7nm,0.7s
MLR **Muntele Rosu** 89.78 316 ⇑P P 16 06 13.8 -0.1
MLR **Muntele Rosu** 89.78 316 P P 16 06 13.7 -0.1
comp=Z,3.6nm,0.6s,baz=96,slow=1.0,SNR=4.6
MLR LR LR 16 51 42.6
comp=Z,140nm,20.5s,baz=62,slow=39
comp=Z,3.6nm,0.6s
VNDA **Vanda** 89.86 173 P P 16 06 13.3 +0.1
comp=Z,3.3nm,0.7s,baz=323,slow=6.2,SNR=25
comp=Z,3.3nm,0.7s
VNDA **Vanda** 89.86 173 P P 16 06 13.1 -0.1
RES **Resolute Bay** 91.66 10 LR LR 16 48 20.8
comp=Z,30nm,21.8s,baz=108,slow=36
CRVS **Cervenica-Dubn** 91.78 320 *e*P P 16 06 23.1 +0.2
HFS **Hagfors** 92.01 332 P P 16 06 22.7 -1.0
comp=Z,5.9nm,0.8s,baz=199,slow=3.1,SNR=8.5
HFS LR LR 16 50 59.1
comp=Z,65nm,21.1s,baz=46,slow=38
comp=Z,5.9nm,0.8s
DJES **Djerdap** 92.33 316 ⇑P P 16 06 24.9 -0.7
SIRR **Siria** 92.44 318 ⇑P P 16 06 25.1 -1.0
NB2 **NORSAR Subarra** 92.73 334 P P 16 06 25.6 -1.5
comp=Z,1.1nm,0.7s,baz=64,slow=4.6
NOA **NORSAR Array B** 92.73 334 P P 16 06 26.0 -1.1
comp=Z,1.8nm,0.7s,baz=64,slow=4.7,SNR=5.8
NOA LR LR 16 51 11.0
comp=Z,65nm,21.9s,baz=70,slow=37
comp=Z,1.8nm,0.7s
MDVR **Moldovita** 92.85 316 ⇓P P 16 06 26.8 -1.3
IDI **Anoyia** 93.10 306 P P 16 06 29.1 -0.2
comp=Z,15nm,0.9s,bao=0.0,slow=1.0,SNR=3.7
comp=Z,15nm,0.9s
JMIC **Jan Mayen** 93.47 346 LR LR 16 52 35.1
comp=Z,40nm,20.7s,baz=73,slow=38
YKA **Yellowknife Ar** 93.98 24 P P 16 06 33.5 +0.8
comp=Z,3.6nm,0.7s,baz=300,slow=4.6,SNR=15
YKA PKKP **PKKPdf** 16 23 33.8 -1.6
comp=Z,0.8nm,0.7s,baz=129,slow=3.2,SNR=5.2
comp=Z,3.6nm,0.7s
JAVC **Velka Javorina** 94.17 321 *e*P P 16 06 34.5 +0.5
VRAC **Vranov** 94.67 322 P P 16 06 36.3 +0.1
comp=Z,4.5nm,0.7s,baz=80,slow=12,SNR=7.3
comp=Z,4.5nm,0.7s
VRAC **Vranov** 94.67 322 *e*P P 16 06 36.0 -0.2
KRUC **Moravsky** 94.88 322 *e*P P 16 06 36.6 -0.6
TAOE **Nuku Hiva Isla** 95.31 98 *e*LR LR 16 37 35.8
comp=Z,198nm,24.9s
CLL **Collm** 96.02 324 *i* P P 16 06 42.4 +0.1
GERES **GERESS Array B** 96.60 322 P P 16 06 44.9 -0.2
comp=Z,3.0nm,0.8s,baz=67,slow=3.5,SNR=20
comp=Z,3.0nm,0.8s
GERES **GERESS Array B** 96.60 322 P P 16 06 44.1 -1.0
NVAR **Mina Array Bea** 103.13 47 PKKPbc PKKPbc 16 23 11.2 -0.2
comp=Z,0.9nm,0.8s,baz=141,slow=3.5,SNR=5.6
HLID **Hailey** 103.49 41 P **Pdif** 16 07 16.5 +0.4
baz=298
KEST **Kesra** 104.90 311 Pdiff **Pdif** 16 07 24.6 +2.2
comp=Z,1.8nm,0.6s,baz=5.7,slow=10,SNR=2.7
PDAR **Pinedale Array** 106.96 39 PKKPbc PKKPbc 16 22 57.3 -2.7
comp=Z,0.3nm,0.6s,baz=117,slow=5.6,SNR=4.4
TORD **Torodi Ar. Bea** 120.04 292 PKP **PKPdf** 16 12 05.7 -0.7
comp=Z,4.6nm,0.3s,baz=68,slow=2.5,SNR=2.0
JCT **Junction City** 120.29 46 P **PKPdf** 16 12 05.8 -0.8
baz=305
CCM **Cathedral Cave** 120.75 34 P **PKPdf** 16 12 07.2 0.0
baz=316
SFIN **Lafayette** 121.14 29 P **PKPdf** 16 12 07.3 -0.5
baz=321
MIAR **Mount Ida** 121.85 38 P **PKPdf** 16 12 09.2 -0.2
baz=313
M53A **Wi Miller and** 123.10 24 P **PKPdf** 16 12 10.7 -0.9
baz=328
LBNH **Lisbon** 123.47 15 P **PKPdf** 16 12 11.7 -0.6
baz=339
O53A **New Philadelph** 123.88 25 P **PKPdf** 16 12 12.7 -0.4
baz=327
P52A **Corning** 124.01 26 P **PKPdf** 16 12 12.9 -0.5
baz=326
WVT **Waverly** 124.02 33 P **PKPdf** 16 12 13.2 -0.3
baz=319
SSPA **Standing Stone** 124.86 22 P **PKPdf** 16 12 14.8 -0.2
baz=331
L61B **Northampton** 124.93 17 P **PKPdf** 16 12 14.7 -0.4
baz=338
TKL **Tuckaleechee C** 126.47 30 PKP **PKPdf** 16 12 17.2 -1.0
comp=Z,4.0nm,0.8s,baz=105,slow=6.6,SNR=4.2
DBIC **Dimbokro** 128.26 287 PKP **PKPdf** 16 12 20.4 -1.8
comp=Z,3.6nm,0.7s,baz=334,slow=4.1,SNR=3.7
PLCA **Paso Flores** 146.22 157 PKPbc **PKPab** 16 12 56.3 -0.1
comp=Z,5.9nm,0.7s,baz=222,slow=2.8,SNR=18
SDV **Santo Domingo** 154.88 42 PKPbc **PKiKP** 16 13 17.8 +0.3
comp=Z,3.3nm,0.3s,baz=305,slow=3.8,SNR=3.8
LPAZ **La Paz** 164.98 115 PKP **PKPdf** 16 13 21.2 +0.6
comp=Z,1.0nm,0.7s,baz=239,slow=5.9,SNR=4.8
SIV **San Ignacio** 171.01 131 PKP **PKPdf** 16 13 24.8 +0.8
comp=Z,2.4nm,0.9s,baz=243,slow=2.3,SNR=6.5

PRU ***26*** *16:05:27.0±0.0,42.°67N×13.°14E,h0km*
LDG ***26*** *16:05:28.0±0.1,42.°70N×13.°15E,h2km,Md3.3/2,Ml3.3/22, Error ellipse: s-maj=2.5km s-min=1.4km az=48.0*
BEO ***26*** *16:05:29.9±0.6,42.°72N×13.°12E,h0km,ML3.7/10*
PDG ***26*** *16:05:29.5±0.5,42.°71N×13.°14E,h16km,ML3.8/12,Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ROM ***26*** *16:05:29.2±0.0,42.°692N±0.°003×13.°161E±0.°004, h11km,ML3.8/46,Mw3.5,Error ellipse: s-maj=0.3km s-min=0.2km az=77.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-1.55; Mθθ0.58; Mφφ0.97; Mrθ0.76; Mθφ-0.93; Mφr-0.83; Fault plane solution: M₀1.98901×10¹⁴ NP1:φs143.00000°,δ28.00000°, λ-86.00000°. NP2:φs319.00000°,δ62.00000°, λ-92.00000°.*
IDC ***26*** *16:05:31.6±2.6,42.°97N×13.°22E,h0km,mb3.6/4, mbtmp3.6/9,ML3.3/5 Error ellipse: s-maj=42.9km s-min=18.9km az=60.0*
ISC 26 16:05:29.8±0.7,42.°69N±0.°01×13.°13E±0.°01,h11km±3km, n293,σ1s99/385,mb3.8/3,44C-22D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
T1218	**Civita (PG)**	**0.02**	**215**	⇑P		**Pg**	**16 05 31.7**	**-0.2**
T1218				S		**Sg**	**16 05 33.3**	**-0.1**
T1213	**Norcia, Frazio**	**0.04**	**351**	⇓P		**Pg**	**16 05 31.6**	**-0.4**
T1213				S		**Sg**	**16 05 33.1**	**-0.4**
T1202	**Accumoli, Fraz**	**0.07**	**78**	⇓P		**Pg**	**16 05 31.8**	**-0.5**
T1202				S		**Sg**	**16 05 33.6**	**-0.5**
T1214	**Arquata del Tr**	**0.09**	**38**	⇓P		**Pg**	**16 05 31.9**	**-0.6**
T1214				S		**Sg**	**16 05 33.8**	**-0.8**
T1212	**Cascia, Frazio**	**0.09**	**313**	⇑P		**Pg**	**16 05 32.3**	**-0.2**
T1212				S		**Sg**	**16 05 34.4**	**-0.1**
T1201	**Domo (RI)**	**0.09**	**110**	⇓P		**Pg**	**16 05 32.2**	**-0.3**
T1201				S		**Sg**	**16 05 34.3**	**-0.2**
LNSS	**Leonessa**	**0.11**	**219**	⇑*i*P		**Pg**	**16 05 32.9**	**+0.2**
LNSS				S		**Sg**	**16 05 35.6**	**+0.7**
LNSS				AML	AML			
LNSS				AML	AML			
T1204	**Amatrice, Fraz**	**0.14**	**96**	⇓P		**Pg**	**16 05 32.7**	**-0.5**
T1244	**Arquata del Tr**	**0.14**	**61**	P		**Pg**	**16 05 32.7**	**-0.4**
T1244				S		**Sg**	**16 05 35.2**	**-0.4**
NRCA	**Norcia**	**0.14**	**354**	⇓*i*P		**Pg**	**16 05 32.8**	**-0.4**
NRCA				S		**Sg**	**16 05 35.2**	**-0.5**
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
T1242	**Castelluccio d**	**0.15**	**20**	⇓P		**Pg**	**16 05 32.9**	**-0.5**
T1242				S		**Sg**	**16 05 35.3**	**-0.6**
RM33	**Pellescritta (**	**0.19**	**162**	⇑*i*P		**Pg**	**16 05 33.8**	**-0.1**
RM33				S		**Sg**	**16 05 37.2**	**+0.4**
RM33				AML	AML			
	comp=E,23800μm,0.6s							
RM33				AML	AML			
	comp=N,17600μm,1.6s							
RM33				AML	AML			
	comp=N,18450μm,0.6s							
RM33				AML	AML			
	comp=N,17550μm,1.6s							
RM33				AML	AML			
	comp=E,23750μm,0.6s							
RM33				AML	AML			
	comp=E,23000μm,0.6s							
T1215	**Vallo di Nera,**	**0.23**	**300**	⇑P		**Pg**	**16 05 34.4**	**-0.1**
T1215				S		**Sg**	**16 05 38.4**	**+0.6**
MC2	**Monte Cornacci**	**0.23**	**11**	⇓*e*P		**Pg**	**16 05 34.2**	**-0.5**
MC2				S		**Sg**	**16 05 38.0**	**0.0**
MC2				AML	AML			
MC2				AML	AML			
MC2				AML	AML			
MC2				AML	AML			
MC2				AML	AML			
MC2				AML	AML			
MC2				AML	AML			
T1243	**Rocca Santa Ma**	**0.23**	**88**	⇓P		**Pg**	**16 05 34.0**	**-0.7**
T1243				S		**Sg**	**16 05 37.8**	**-0.2**
T1243				AML	AML			
	comp=E,46750μm,1.6s							
T1243				AML	AML			
	comp=N,52900μm,0.3s							
T1243				AML	AML			
	comp=E,46600μm,1.6s							
T1243				AML	AML			
	comp=E,46800μm,1.6s							
T1243				AML	AML			
	comp=E,46800μm,1.6s							
T1243				AML	AML			
	comp=N,52850μm,0.3s							
T1243				AML	AML			
	comp=N,52850μm,0.3s							
T1243				AML	AML			
	comp=N,52750μm,0.3s							
MMO1	**Montemonaco**	**0.25**	**34**	⇑*i*P		**Pg**	**16 05 34.5**	**-0.6**
MMO1				S		**Sg**	**16 05 38.3**	**-0.3**
CAMP	**Campotosto**	**0.26**	**127**	⇓P		**Pg**	**16 05 34.6**	**-0.5**
CAMP				S		**Sg**	**16 05 38.5**	**-0.2**
T1211	**Morro Reatino**	**0.26**	**233**	P		**Pg**	**16 05 35.2**	**+0.1**
T1211				S		**Sg**	**16 05 39.9**	**+1.2**
T1241	**Roccafluvione,**	**0.28**	**53**	⇑P		**Pg**	**16 05 34.7**	**-0.8**
T1241				S		**Sg**	**16 05 38.8**	**-0.4**
FEMA	**Monte Fema**	**0.28**	**347**	⇓P		**Pg**	**16 05 35.1**	**-0.5**
FEMA				S		**Sg**	**16 05 39.6**	**+0.1**
FEMA				AML	AML			
FEMA				AML	AML			
	comp=N,94950μm,1.5s							
FEMA				AML	AML			
FEMA				AML	AML			
	comp=N,94750μm,1.5s							
FEMA				AML	AML			
FEMA				AML	AML			
	comp=N,95050μm,1.5s							
ARRO	**Arrone**	**0.29**	**248**	⇑*i*P		**Pg**	**16 05 35.8**	**+0.1**
ARRO				AML	AML			
	comp=N,15050μm,0.6s							
ARRO				AML	AML			
	comp=E,12800μm,0.4s							
FDMO	**Fiordimonte**	**0.35**	**354**	⇓*e*P		**Pg**	**16 05 36.2**	**-0.6**
FDMO				S		**Sg**	**16 05 41.5**	**0.0**
FDMO				AML	AML			
	comp=E,33000μm,0.2s							
FDMO				AML	AML			
	comp=N,40950μm,0.3s							
TERO	**Teramo**	**0.35**	**101**	⇑*i*P		**Pg**	**16 05 36.0**	**-0.9**
TERO				S		**Sg**	**16 05 41.0**	**-0.6**
CESI	**CESI - Serrava**	**0.36**	**332**	⇓*e*P		**Pg**	**16 05 36.6**	**-0.4**
CESI				S		**Sg**	**16 05 42.2**	**+0.4**
CESI				AML	AML			
	comp=N,47250μm,0.3s							
CESI				AML	AML			
	comp=E,21900μm,1.0s							
GIGS	**Gran Sasso**	**0.40**	**126**	P		**Pg**	**16 05 36.9**	**-0.9**
GIGS				S		**Sg**	**16 05 42.9**	**-0.2**
GIGS				AML	AML			
	comp=N,1530μm,1.2s							
GIGS				AML	AML			
	comp=N,1535μm,1.2s							
GIGS				AML	AML			
	comp=E,1960μm,0.7s							
CSP1	**Cessapalombo**	**0.41**	**7**	P		**Pg**	**16 05 37.2**	**-0.7**
CSP1				S		**Sg**	**16 05 43.3**	**0.0**
CSP1				AML	AML			
	comp=N,58100μm,1.1s							
CSP1				AML	AML			
	comp=E,47700μm,0.4s							
CSP1				AML	AML			
	comp=N,58050μm,1.1s							
CESX	**Cesi**	**0.42**	**259**	⇑*i*P		**Pg**	**16 05 37.8**	**-0.2**
CESX				S		**Sb**	**16 05 44.8**	**-0.7**
CESX				AML	AML			
	comp=N,16700μm,0.3s							
CESX				AML	AML			
	comp=E,13100μm,0.3s							
FIAM	**Fiamignano**	**0.42**	**182**	⇑*i*P		**Pg**	**16 05 37.8**	**-0.4**
FIAM				S		**Sg**	**16 05 44.3**	**+0.6**
FIAM				AML	AML			
	comp=N,5525μm,0.8s							
FIAM				AML	AML			
	comp=E,7175μm,0.5s							
OFFI	**Offida**	**0.47**	**59**	⇑*i*P		**Pg**	**16 05 39.0**	**-0.1**
OFFI				S		**Sb**	**16 05 47.5**	**+0.3**
OFFI				AML	AML			
	comp=N,43400μm,0.6s							
OFFI				AML	AML			
	comp=E,35100μm,0.5s							
SEF1	**Sefro**	**0.48**	**343**	P		**Pg**	**16 05 38.5**	**-0.7**
SEF1				S		**Sg**	**16 05 45.7**	**+0.2**
SEF1				AML	AML			
	comp=E,41100μm,1.1s							
SEF1				AML	AML			
	comp=N,31800μm,0.2s							
SEF1				AML	AML			
	comp=E,41150μm,1.1s							
SEF1				AML	AML			
	comp=N,31750μm,0.2s							
ASSB	**Assisi San Ben**	**0.50**	**315**	P		**Pg**	**16 05 39.0**	**-0.5**
ASSB				S		**Sg**	**16 05 46.8**	**+0.7**
ASSB				AML	AML			
	comp=E,19850μm,0.3s							
ASSB				AML	AML			
	comp=N,16050μm,0.5s							
PIO1	**Pioraco**	**0.50**	**347**	P		**Pg**	**16 05 39.0**	**-0.6**
PIO1				S		**Sg**	**16 05 46.9**	**+0.7**
PIO1				AML	AML			
	comp=N,17300μm,0.5s							
PIO1				AML	AML			
	comp=E,9795μm,0.5s							
PIO1				AML	AML			
	comp=N,17350μm,0.5s							
PIO1				AML	AML			
	comp=E,9810μm,0.5s							
MDAR	**Monte D'Aria**	**0.50**	**1**	P		**Pg**	**16 05 38.8**	**-0.8**
MDAR				S		**Sg**	**16 05 46.5**	**+0.2**
MNTP	**Montappone**	**0.51**	**29**	⇑*i*P		**Pg**	**16 05 39.5**	**-0.3**
MNTP				AML	AML			
	comp=E,21200μm,1.4s							
MNTP				AML	AML			
	comp=N,18550μm,0.3s							
MNTP				AML	AML			
	comp=N,18550μm,0.3s							
FIU1	**Fiuminata**	**0.52**	**344**	P		**Pg**	**16 05 39.2**	**-0.8**
FIU1				S		**Sg**	**16 05 47.4**	**+0.5**
FIU1				AML	AML			
	comp=E,11950μm,1.4s							
FIU1				AML	AML			
	comp=N,11100μm,0.7s							
FIU1				AML	AML			
	comp=N,11150μm,0.7s							
FAGN	**Fagnano**	**0.54**	**142**	P		**Pg**	**16 05 39.5**	**-0.8**
FAGN				AML	AML			
	comp=E,13250μm,0.7s							
FAGN				AML	AML			
	comp=N,7770μm,1.6s							
SSM1	**San Severino M**	**0.54**	**3**	P		**Pg**	**16 05 39.5**	**-0.9**
SSM1				S		**Sg**	**16 05 47.4**	**-0.1**
GAG1	**Gagliole**	**0.55**	**355**	P		**Pg**	**16 05 39.9**	**-0.7**
GAG1				S		**Sg**	**16 05 48.4**	**+0.6**
MTL1	**Matelica**	**0.57**	**351**	P		**Pg**	**16 05 40.3**	**-0.7**
MTL1				S		**Sg**	**16 05 49.1**	**+0.5**
MTL1				AML	AML			
	comp=E,39700μm,0.4s							
MTL1				AML	AML			
	comp=N,34600μm,0.3s							
SNTG	**Esanatoglia**	**0.58**	**346**	⇓P		**Pg**	**16 05 40.2**	**-1.0**
SNTG				S		**Sg**	**16 05 49.5**	**+0.6**
SNTG				AML	AML			
	comp=E,758μm,0.9s							
SNTG				AML	AML			
	comp=N,946μm,0.9s							
SNTG				AML	AML			
	comp=E,5740μm,0.9s							
SNTG				AML	AML			
	comp=N,8235μm,0.9s							

SNTG AML AML
comp=N,946µm,0.9s
TRTR Tortoreto Alta 0.59 78 ⇑P Pg 16 05 41.3 +0.1
TRTR AML AML
comp=E,19200µm,0.7s
TRTR AML AML
comp=N,18700µm,0.5s
VCEL Villa Celiera 0.60 119⇑eP Pg 16 05 40.8 -0.7
VCEL AML AML
comp=N,5855µm,0.8s
VCEL AML AML
comp=E,5635µm,0.6s
VCEL AML AML
comp=N,5850µm,0.8s
ATCC AVT- Casa Cast 0.61 324⇓eP Pg 16 05 41.1 -0.6
ATCC S Sb 16 05 50.7 -0.5
ATCC AML AML
comp=N,12100µm,0.2s
ATCC AML AML
comp=E,12300µm,1.0s
TRE1 Treia 0.64 12 P Pg 16 05 41.7 -0.4
EL6 Elcito 0.64 358 ⇑P Pg 16 05 41.3 -0.9
EL6 S Sg 16 05 51.3 +0.6
EL6 AML AML
comp=E,24900µm,0.3s
EL6 AML AML
comp=E,24850µm,0.3s
EL6 AML AML
comp=N,20950µm,0.3s
SRES S.Oreste - Sor 0.65 226⇑iP Pg 16 05 41.7 -0.6
FOSV Fossato di Vic 0.66 336 ⇓P Pg 16 05 41.7 -1.0
FOSV AML AML
comp=N,8465µm,0.4s
FOSV AML AML
comp=E,4075µm,0.7s
T0110 Collepietro 0.67 134 P Pg 16 05 41.6 -1.1
T0110 AML AML
comp=E,4605µm,0.6s
T0110 AML AML
comp=N,4465µm,1.0s
CADA Capodarco di F 0.68 42 P Pg 16 05 43.1 +0.1
CADA AML AML
comp=N,19850µm,0.4s
CADA AML AML
comp=E,17800µm,0.4s
CADA AML AML
comp=E,17750µm,0.4s
CING Cingoli 0.69 4 ⇑P Pg 16 05 42.1 -1.1
PTQR Pietraquaria 0.70 163 P Pg 16 05 42.2 -1.1
PTQR AML AML
comp=E,1625µm,0.7s
PTQR AML AML
comp=N,1355µm,1.6s
MTCE Montecelio 0.73 204⇑eP Pg 16 05 42.8 -1.0
MTCE AML AML
comp=N,2400µm,0.5s
MTCE AML AML
comp=E,2635µm,1.0s
MURB Monte Urbino 0.73 322 P Pg 16 05 43.5 -0.4
MURB S Sb 16 05 55.2 +0.7
MURB AML AML
comp=N,27200µm,0.4s
MURB AML AML
comp=E,21850µm,0.3s
MURB AML AML
comp=N,27150µm,0.4s
MURB AML AML
comp=N,28350µm,0.3s
MURB AML AML
comp=E,24700µm,0.3s
MURB AML AML
comp=E,21900µm,0.3s
CERT Cerreto 0.75 189 ⇑P Pg 16 05 43.1 -1.2
CERT AML AML
comp=E,4360µm,0.7s
CERT AML AML
comp=N,3830µm,1.6s
MMUR Monte Murano 0.76 352 P Pg 16 05 43.8 -0.7
ATTE AVT- Monte Tez 0.77 312 P Pg 16 05 44.0 -0.7
ATTE S Sb 16 05 55.7 +0.1
ATTE AML AML
comp=E,4610µm,0.6s
ATTE AML AML
comp=N,3970µm,0.4s
PP3 Marolino 0.77 27 ⇑P Pg 16 05 44.4 -0.3
PP3 AML AML
comp=E,24750µm,0.4s
PP3 AML AML
comp=N,21100µm,0.6s
PP3 AML AML
comp=E,24800µm,0.4s
PP3 AML AML
comp=N,18600µm,0.7s
PP3 AML AML
comp=N,21150µm,0.6s
PP3 AML AML
comp=E,27300µm,0.5s
MGAB Montegabbione 0.78 287 P Pg 16 05 44.1 -0.8
MGAB AML AML
comp=N,7435µm,1.6s
MGAB AML AML
comp=N,8030µm,1.0s
MGAB AML AML
comp=E,10695µm,0.5s
MGAB AML AML
comp=E,10675µm,0.5s
MGAB AML AML
comp=E,10750µm,0.5s
SSFR Montelago di S 0.79 341 P Pg 16 05 44.4 -0.6
SSFR AML AML
comp=E,14500µm,0.2s
SSFR AML AML
comp=N,11350µm,0.7s
SSFR AML AML
comp=E,13350µm,0.2s
SSFR AML AML
comp=N,12350µm,0.7s
ATFO Monte Foce - G 0.79 329 ⇑P Pg 16 05 44.3 -0.8
ATFO AML AML
comp=E,4915µm,0.4s
ATFO AML AML
comp=N,4870µm,0.7s
ATSC Scheggia e Pas 0.80 336 ⇑P Pg 16 05 44.2 -1.1
ARVD Arcevia 0.82 350 P Pg 16 05 44.7 -0.9
ARVD S Sb 16 05 57.1 -0.1
ARVD AML AML
comp=N,5050µm,0.5s
ARVD AML AML
comp=E,4435µm,0.5s
ATLO AVT- Montelove 0.82 320 ⇑P Pg 16 05 44.8 -0.9
ATLO S Sb 16 05 57.5 +0.3
RCAV Rocca di Cave 0.85 190 P Pg 16 05 44.9 -1.4
RCAV AML AML
comp=E,5910µm,0.6s
RCAV AML AML
comp=N,4645µm,1.1s
ATVA AVT- Monte Val 0.86 314⇑eP Pg 16 05 45.8 -0.6
TB01 Gubbio 0.86 324 P Pg 16 05 45.5 -0.9
TB02 Pietralunga 0.86 322 P Pg 16 05 45.5 -0.9
ATVO AVT- Monte Val 0.87 323 P Pg 16 05 45.7 -1.0
ATVO AML AML
comp=N,3350µm,0.9s
ATVO AML AML
comp=E,3730µm,1.3s
FRON Frontone 0.88 340 P Pg 16 05 45.4 -1.3
FRON AML AML
comp=E,5485µm,0.7s
FRON AML AML
comp=N,6795µm,0.7s
INTR Introdacqua 0.89 140 P Pg 16 05 45.1 -1.7
INTR AML AML
comp=E,2µm,0.6s
INTR AML AML
comp=N,4570µm,0.7s
INTR AML AML
comp=E,2020µm,0.6s
INTR AML AML
comp=N,3µm,0.7s
TB03 Pietralunga 0.89 324 P Pg 16 05 45.7 -1.2
VVLD Villa Vallelon 0.89 156 P Pg 16 05 46.1 -0.9
VVLD AML AML
comp=E,2060µm,0.6s
VVLD AML AML
comp=N,2135µm,0.8s
GUAR Guarcino 0.90 172 P Pg 16 05 46.5 -0.7
GUAR AML AML
comp=E,2645µm,1.5s
GUAR AML AML
comp=N,3075µm,1.0s
ATMI Monte Miggiano 0.91 316 P Pg 16 05 47.0 -0.3
ATMI AML AML
comp=E,9855µm,0.5s
ATMI AML AML
comp=N,13050µm,0.8s
SACS San Casciano d 0.92 280 ⇑P Pg 16 05 46.9 -0.6
SACS AML AML
comp=E,3765µm,0.4s
SACS AML AML
comp=N,4565µm,0.9s
SACS AML AML
comp=E,3400µm,0.4s
SACS AML AML
comp=N,4680µm,0.9s
AOI Ancona 0.93 22⇑iP Pg 16 05 46.5 -1.1
AOI AML AML
comp=E,5170µm,0.3s
AOI AML AML
comp=N,4350µm,0.4s
ATPI Pietralunga - 0.93 325 P Pg 16 05 46.9 -0.9
ATPI AML AML
comp=N,3630µm,1.6s
ATPI AML AML
comp=N,3635µm,1.6s
ATPI AML AML
comp=E,4295µm,0.7s
ATPC Poggio Castell 0.93 328 ⇑P Pg 16 05 46.8 -1.0
COR1 Corinaldo 0.95 354⇑eP Pg 16 05 47.7 -0.4
COR1 AML AML
comp=E,13550µm,1.1s
COR1 AML AML
comp=N,11300µm,0.7s
COR1 AML AML
comp=E,7130µm,1.1s
COR1 AML AML
comp=N,11050µm,0.7s
PIEI Pieia 0.95 333 P Pg 16 05 47.0 -1.2
PIEI AML AML
comp=E,3565µm,0.4s
PIEI AML AML
comp=N,5650µm,0.5s
MPAG Monte Paganucc 0.98 344 ⇑P Pg 16 05 47.4 -1.3
MPAG AML AML
comp=E,3270µm,0.4s
MPAG AML AML
comp=N,3605µm,0.8s
MPAG AML AML
comp=E,3445µm,0.3s
MPAG AML AML
comp=N,3895µm,1.4s
RDP Rocca di Papa 0.98 199 P Pg 16 05 47.2 -1.4
RDP AML AML
comp=E,6615µm,0.7s
RDP AML AML
comp=N,8455µm,0.5s
LATE Laterza 0.98 266 ⇑P Pg 16 05 48.2 -0.6
NARO Abbazia di Nar 1.01 336 P Pg 16 05 48.0 -1.2
NARO AML AML
comp=E,3355µm,0.8s
NARO AML AML
comp=N,2705µm,1.2s
LPEL Lama dei Pelig 1.01 129 P Pg 16 05 47.3 -1.9
LPEL AML AML
comp=E,2815µm,0.9s
LPEL AML AML
comp=N,1455µm,1.0s
APEC Apecchio 1.01 329 P Pg 16 05 48.4 -1.0
SENI Senigallia 1.02 4 P Pg 16 05 48.9 -0.5
SENI AML AML
comp=E,20100µm,0.5s
SENI AML AML
comp=N,26500µm,0.3s
ATMC Monte Cedrone 1.02 318 P Pg 16 05 48.6 -0.9
FSSB Fossombrone 1.04 346 P Pg 16 05 48.5 -1.2
FSSB AML AML
comp=E,8410µm,1.1s
FSSB AML AML
comp=N,13050µm,0.4s
FSSB AML AML
comp=E,8405µm,1.1s
BADI Badiali 1.05 322 P Pg 16 05 49.2 -0.8
BADI AML AML
comp=E,362µm,0.5s
BADI AML AML
comp=E,362µm,0.5s
BADI AML AML
comp=N,4085µm,1.0s
TOLF Tolfa 1.05 234⇑iP Pg 16 05 48.8 -1.1
TOLF AML AML
comp=E,1740µm,0.6s
TOLF AML AML
comp=N,1410µm,0.8s
POFI Posta Fibreno 1.06 156 P Pg 16 05 49.1 -1.1
POFI AML AML
comp=E,991µm,0.8s
POFI AML AML
comp=N,979µm,0.7s
CAFI Castiglion Fio 1.07 307 P Pg 16 05 49.4 -1.0
CAFI AML AML
comp=E,2575µm,0.7s
CAFI AML AML
comp=N,2115µm,1.2s
CAFI AML AML
comp=E,2680µm,0.7s
CAFI AML AML
comp=N,2295µm,0.3s
SF03 Valle Cupa 1.07 277 P Pb 16 05 50.7 +0.3
MCIV Monte Civitell 1.08 275 P Pg 16 05 49.7 -0.8
MCIV AML AML
comp=E,1755µm,0.4s
MCIV AML AML
comp=N,1600µm,0.9s
SF11 Podere del Sol 1.09 280 P Pg 16 05 50.6 -0.1
LRP Arpino 1.09 162 AML AML
comp=N,1330µm,0.7s
LRP AML AML
comp=E,848µm,1.4s
PE3 Peglio 1.11 335 P Pb 16 05 50.4 -0.7
PE3 AML AML
comp=E,23µm,0.4s
PE3 AML AML
comp=N,23µm,0.4s
SF14 Selvena 1.12 274 P Pb 16 05 50.5 -0.7
GIUL Giuliano Di Ro 1.13 175 P Pb 16 05 50.1 -1.3
GIUL AML AML
comp=E,1515µm,0.8s
GIUL AML AML
comp=N,1045µm,0.6s
SSP9 Sansepolcro 1.15 321 P Pb 16 05 51.5 -0.2
SSP9 AML AML
comp=E,2060µm,1.6s
SSP9 AML AML
comp=N,2064µm,0.6s
PARC Parchiule 1.16 326 P Pb 16 05 51.0 -0.9
PARC AML AML
comp=E,3985µm,0.5s
PARC AML AML
comp=N,2535µm,0.4s
SF01 Poggio Pratacc 1.16 277 P Pb 16 05 51.6 -0.4
SF01 AML AML
comp=E,3305µm,1.0s
SF01 AML AML
comp=N,3710µm,0.4s
LATB Latina 1.20 186 AML AML
comp=N,324µm,1.3s
LATB AML AML
comp=E,512µm,0.8s
ARCI Arcidosso 1.23 278 P Pn 16 05 52.6 -0.5
RNI2 Rionero Sannit 1.24 142 P Pn 16 05 53.4 +0.2
CPGN Carpegna, Ital 1.26 332 P Pn 16 05 53.7 +0.2
PESA Pesaro 1.27 350 P Pn 16 05 53.6 +0.1
PESA AML AML
comp=E,5825µm,0.4s
PESA AML AML
comp=N,5380µm,0.4s
CRE Caprese Michel 1.27 317 P Pn 16 05 52.3 -1.3
CRE AML AML
comp=E,1145µm,0.4s
CRE AML AML
comp=N,1950µm,0.3s
CERA Filignano 1.27 149 P Pn 16 05 52.0 -1.5
CERA AML AML
comp=E,1430µm,0.9s
CERA AML AML
comp=N,1580µm,0.9s
CERA AML AML
comp=E,1465µm,0.9s
CERA AML AML
comp=N,1675µm,0.8s
FRES Fresagrandinar 1.34 122 P Pn 16 05 54.9 +0.4
ASQU Asqua 1.48 319 P Pn 16 05 55.6 -0.8
VAGA Valle Agricola 1.51 147 P Pn 16 05 56.9 0.0
SFI Santa Sofia 1.54 323 P Pn 16 05 56.5 -0.7
FROS Frosini 1.54 290 P Pn 16 05 57.3 +0.1
CSNT Castellina Chi 1.56 301 P Pn 16 05 57.8 +0.3
CSNT AML AML
comp=E,530µm,0.5s
CSNT AML AML
comp=N,540µm,0.5s
BSSO Busso 1.58 136 P Pn 16 05 58.5 +0.7
OSSC Osservatorio P 1.61 302 P Pn 16 05 58.2 0.0
OSSC AML AML
comp=E,528µm,0.8s
OSSC AML AML
comp=N,500µm,1.1s
RUFI Rufina 1.65 315 P Pn 16 05 58.2 -0.5
RUFI AML AML
comp=E,870µm,0.6s
RUFI AML AML
comp=N,980µm,0.4s
CASP Castiglione de 1.67 274 P Pn 16 05 58.5 -0.6
CASP AML AML
comp=E,230µm,1.6s
CASP AML AML
comp=N,244µm,0.6s
TRIF Trifonti 1.69 285 ⇑P Pn 16 05 59.3 0.0
TRIF AML AML
comp=E,618µm,0.9s
TRIF AML AML
comp=N,576µm,0.5s
BRIS BRISIGHELLA 1.88 322 P Pb 16 06 04.4 +0.3
SEI Scarperia 1.88 317 AML AML
comp=N,1375µm,0.6s
SEI AML AML
comp=E,782µm,0.6s
DUGI Dugi Otok 1.92 47 ePn Pn 16 06 01.3 -1.0
MPPT Montemurlo 1.96 311 P Pn 16 06 02.7 -0.2
MOCO Biccari - m.te 2.00 130 P Pb 16 06 05.5 -0.8
APRC Apricena 2.02 117 P Pn 16 06 04.5 +0.7
MTCR Monte La Croce 2.05 311 P Pn 16 06 04.1 -0.2
VIRC Vir 2.13 40 ePn Pn 16 06 04.4 -0.8
SGRT San Giovanni R 2.15 115 P Pn 16 06 06.4 +0.7
MORI Morici 2.22 57 ePn Pn 16 06 06.0 -0.4
NVLJ Novalja 2.26 33 ePn Pn 16 06 06.3 -0.7
BRJN Brijuni 2.26 11 ePn Pn 16 06 05.9 -1.1
BRJN Brijuni 2.26 11 P Pn 16 06 06.4 -0.7
MSAG Monte S. Angel 2.28 114 P Pn 16 06 08.3 +0.9
MSAG AML AML
comp=E,630µm,0.5s
MSAG AML AML
comp=N,1008µm,0.5s
MSAG AML AML
comp=E,655µm,0.5s
MSAG AML AML
comp=N,1030µm,0.5s
MAIM Mastiano 2.29 303 P Pn 16 06 07.5 +0.1
MAIM AML AML
comp=E,262µm,0.6s
MAIM AML AML
comp=N,244µm,0.8s
BDI Bagni Di Lucca 2.30 307 P Pn 16 06 07.2 -0.5
BDI AML AML
comp=E,144µm,0.3s
BDI AML AML
comp=N,116µm,0.9s
CARD Cardoso 2.35 306 P Pn 16 06 08.1 -0.3
CARD AML AML
comp=E,304µm,0.4s
CARD AML AML
comp=N,362µm,1.3s
RABC Rab 2.38 30 ePn Pn 16 06 07.9 -0.9
SMRN Sveta Marina 2.46 17 ePn Pn 16 06 09.0 -0.8
HVAR Hvar 2.48 78 ePn Pn 16 06 09.8 -0.4
VLC Villacollemand 2.48 307 P Pn 16 06 09.6 -0.6
VLC AML AML
comp=E,166µm,0.8s
VLC AML AML
comp=N,158µm,1.0s
VLC AML AML
comp=E,152µm,0.9s
VLC AML AML
comp=N,148µm,0.9s
EQUI Equi 2.63 305 P Pn 16 06 11.8 -0.3
EQUI AML AML
comp=E,103µm,0.4s
EQUI AML AML
comp=N,164µm,0.9s
UDBI Udbina 2.65 45 ePn Pn 16 06 12.9 +0.4
KIJV Kijevo 2.72 60 ePn Pn 16 06 13.8 +0.3
LSTV Lastovo 2.77 87 ePn Pn 16 06 13.5 -0.6
PLIT Pitvice 2.83 39 ePn Pn 16 06 15.0 -0.1
TEOL Teolo 2.87 339 P Pn 16 06 16.8 +1.3
SMPL Sampolo 2.91 260 AML AML
comp=E,36µm,0.5s
SMPL AML AML
comp=N,52µm,0.7s
MAKA Makarska 2.91 77 ePn Pn 16 06 15.5 -0.5
SKDS Skadanscina 2.93 12 ePn Pn 16 06 15.5 -0.7
SKDS Skadanscina 2.93 12 i Pn Pn 16 06 15.5 -0.7
SKDS i Sn Sn 16 06 51.3 -0.2
SKDS IAML 16 06 54.3
comp=Z,103nm,0.3s
RICI Ricice 3.04 73 ePn Pn 16 06 18.5 +0.7
A050A Klekovaca 3.05 53 ePn Pn 16 06 18.8 +0.8
PGF Pioggiola 3.06 269 eP Pn 16 06 18.8 +0.7
PGF eSn Sn 16 06 50.3 -4.4
comp=Z,33nm,0.7s
MSSA Maissana 3.09 303 AML AML
comp=N,121µm,0.7s
MSSA AML AML
comp=E,96µm,1.0s
AMUR Altamura 3.15 123 AML AML
comp=E,184µm,0.9s
AMUR AML AML
comp=N,131µm,0.7s
BOJS Bojanci 3.20 28 ePn Pn 16 06 20.8 +0.8
BOJS Bojanci 3.20 28 AML AML
comp=N,434µm,0.8s
BOJS AML AML
comp=E,682µm,0.6s
SRKY Kupres RS 3.25 64 ePn Pn 16 06 21.3 +0.6
SABO M.te Sabotino 3.31 6 AML AML
comp=E,549µm,0.6s
SABO AML AML
comp=E,2345µm,0.6s
SABO AML AML
comp=N,2050µm,0.7s
SABO AML AML
comp=N,536µm,0.5s
AJAC Base Areonaval 3.33 258 P Pn 16 06 22.9 +1.1
CGRP Cima Grappa 3.33 344 AML AML
comp=E,700µm,1.0s
CGRP AML AML
comp=N,516µm,0.4s
CGRP AML AML
comp=E,646µm,1.0s
CGRP AML AML
comp=N,510µm,0.5s
MGRS Mrkonjic Grad 3.35 58 ePn Pn 16 06 23.4 +1.3
MATE Matera 3.36 126 ⇑P Pb 16 06 26.1 -3.3
STON Ston 3.37 85 ePn Pn 16 06 20.6 -1.7
STON Ston 3.37 85 ePn Pn 16 06 20.1 -2.1
STON Ston 3.37 85 ePn Pn 16 06 21.5 -0.8
STON eSn Sn 16 07 01.7 -0.5
OZLJ Ozalj 3.37 29 ePn Pn 16 06 21.9 -0.5
LTRZ Laterza 3.46 126 AML AML
comp=E,87µm,0.8s
LTRZ AML AML
comp=N,624µm,1.6s
SALO Salr 3.48 328 AML AML
comp=E,376µm,0.3s
SALO AML AML
comp=N,360µm,0.5s
SALO AML AML
comp=E,392µm,0.8s
SALO AML AML
comp=N,336µm,0.8s
DOSS Dosso del Somm 3.48 337 AML AML

comp=N,254µm,0.7s
DOSS AML AML
comp=E,298µm,0.5s
DOSS AML AML
comp=E,248µm,0.6s
DOSS AML AML
comp=N,284µm,0.6s
LJU Ljubljana 3.50 16 AML AML
comp=E,1445µm,0.7s
LJU AML AML
comp=N,2290µm,1.1s
BAD Bernadia 3.55 1 ⇑P **Pn 16 06 24.5 -0.4**
CRES Cresnjev 3.55 27 *e*Pn **Pn 16 06 26.7 +1.8**
MPRI Monte Prat 3.55 358 ⇑P **Pn 16 06 24.9 0.0**
MAGA Magasa 3.57 331 AML AML
comp=N,468µm,0.6s
MAGA AML AML
comp=E,725µm,0.5s
A051A Mrakovica 3.58 48 *e*Pn **Pn 16 06 24.9 -0.4**
STAL STALIGIAL 3.58 355 P **Pn 16 06 25.2 -0.1**
STAL AML AML
comp=E,384µm,0.2s
STAL AML AML
comp=N,430µm,0.7s
STAL AML AML
comp=E,490µm,0.3s
STAL AML AML
comp=N,338µm,0.3s
BLY Banja Luka 3.59 54 *e*Pn **Pn 16 06 27.9 +2.6**
BLY Banja Luka 3.59 54 *e*Pn **Pn 16 06 26.6 +1.3**
LUSI Trento, Gardas 3.63 335 AML AML
comp=E,269µm,1.0s
LUSI AML AML
comp=N,405µm,1.3s
BOO Bordano 3.63 360 ⇑P **Pn 16 06 25.4 -0.5**
CIMO Cimolais 3.65 352 P **Pn 16 06 26.2 -0.1**
CIMO AML AML
comp=E,103µm,1.3s
CIMO AML AML
comp=N,87µm,0.8s
CIMO AML AML
comp=E,102µm,1.3s
CIMO AML AML
comp=N,90µm,1.6s
PTCC Patocco-Chiusa 3.72 2 P **Pn 16 06 26.5 -0.7**
PTCC AML AML
comp=E,174µm,0.7s
PTCC AML AML
comp=N,162µm,1.1s
CLUD Cludinico 3.77 357 P **Pn 16 06 27.5 -0.4**
CLUD AML AML
comp=E,210µm,0.8s
CLUD AML AML
comp=N,176µm,0.9s
TREB Trebinje 3.84 88 *e*Pn **Pn 16 06 28.8 -0.1**
TREB Trebinje 3.84 88 *e*Pn **Pn 16 06 29.5 +0.6**
TREB *e*Sn **Sn 16 07 15.3 +1.3**
ZOU Zoufplan 3.87 358 AML AML
comp=N,187µm,1.5s
ZOU AML AML
comp=E,229µm,0.7s
MOSL Moslavina 3.92 40 *e*Pn **Pn 16 06 28.9 -0.9**
OBKA Obir 3.95 14 *e*Pn **Pn 16 06 31.7 +1.3**
OBKA Obir 3.95 14 *e*Pn **Pn 16 06 31.9 +1.5**
comp=E,2.7nm,0.2s
OBKA *e*Sn **Sg 16 07 37.5 +0.9**
comp=E,97nm,0.5s
MYKA Terra Mystica 3.96 5 Pn **Pn 16 06 30.9 +0.5**
comp=E,6.6nm,0.5s,SNR=4.5
MYKA *e*Sn **Sn 16 07 17.4 +0.5**
comp=E,25nm,0.4s
HCY Herceg Novi 3.97 92 *e*Pn **Pn 16 06 30.7 +0.2**
HCY Herceg Novi 3.97 92 ⇓*i*Pn **Pn 16 06 31.1 +0.6**
HCY *i* Sn **Sn 16 07 18.1 +1.1**
KOSI Kohlern 3.98 342 P **Pn 16 06 32.0 +1.2**
BRY Bratogost 3.98 85 *e*Pn **Pn 16 06 31.6 +0.7**
BRY Bratogost 3.98 85 ⇑*i*Pn **Pn 16 06 31.4 +0.5**
BRY *e*Sn **Sn 16 07 18.5 +0.8**
APPI Appiano 4.03 341 P **Pn 16 06 32.4 +1.0**
ABTA Abfaltersbach 4.08 354 Pn **Pn 16 06 33.1 +0.9**
comp=E,33nm,0.4s,SNR=19
ABTA *e*Sn **Sn 16 07 22.2 +2.2**
comp=E,33nm,0.5s
SOKA Soboth 4.21 18 *e*Pn **Pn 16 06 34.3 +0.3**
comp=E,3.6nm,0.4s
SOKA *e*Sn **Sn 16 07 23.9 +0.7**
comp=E,19nm,0.0s
UPM Unac-Piva 4.27 81 *e*Pn **Pn 16 06 35.8 +0.9**
UPM Unac-Piva 4.27 81 ⇓*i*Pn **Pn 16 06 35.3 +0.4**
UPM *i* Sn **Sn 16 07 25.1 +0.4**
BRMO Bormio 4.27 333 P **Pn 16 06 36.6 +1.8**
VSL Villasalto 4.27 223 P **Pn 16 06 35.6 +0.9**
VSL AML AML
VSL AML AML
CEME Cevo 4.27 90 ⇑*i*Pn **Pn 16 06 35.3 +0.5**
CEME *i* Sn **Sn 16 07 25.2 +0.6**
BUM Brajici-Budva 4.28 93 ⇓*i*Pn **Pn 16 06 35.5 +0.6**
BUM *i* Sn **Sn 16 07 25.4 +0.6**
NKME Niksic 4.29 87 ⇓*i*Pn **Pn 16 06 35.6 +0.6**
NKME *i* Sn **Sn 16 07 25.4 +0.4**
RISI Rein 4.32 350 AML AML
comp=N,456µm,0.4s
RISI AML AML
comp=E,460µm,1.4s
MOSI Grossmontoni 4.34 336 P **Pn 16 06 38.5 +2.6**
KBA Koelnbreinsper 4.39 2 Pn **Pn 16 06 37.2 +0.6**
comp=E,1.6nm,0.1s,SNR=5.8
KBA *e*Sn **Sn 16 07 27.2 -0.6**
comp=E,10nm,0.3s
CGL Cagliari Serpe 4.41 222 P **Pn 16 06 38.2 +1.4**
DRME Dracevica, Mon 4.51 94 *e*Pn **Pn 16 06 38.9 +0.9**
DRME Dracevica, Mon 4.51 94 ⇓*i*Pn **Pn 16 06 38.8 +0.8**
DRME *i* Sn **Sn 16 07 31.1 +0.8**
PDG Podgorica 4.53 91 *e*Pn **Pn 16 06 39.1 +0.9**
PDG *e*Sn **Sn 16 07 32.6 +1.7**
TTG Podgorica 4.53 91 ⇑*i*Pn **Pn 16 06 39.1 +0.9**
TTG *i* Sn **Sn 16 07 31.4 +0.5**
ULC Ulcinj 4.59 97 ⇑*i*Pn **Pn 16 06 39.6 +0.5**
ULC *i* Sn **Sn 16 07 32.5 +0.1**
PLE Pljevlja 4.63 80 ⇑*i*Pn **Pn 16 06 40.3 +0.5**
PLE *i* Sn **Sn 16 07 34.0 +0.4**
FETA Feichten 4.66 339 Pn **Pn 16 06 42.8 +2.7**
comp=E,2.7nm,0.2s,SNR=8.4
FETA *e*Sn **Sn 16 07 36.6 +2.4**
comp=E,36nm,0.9s
RUDO Rudo 4.66 76 *e*Pn **Pn 16 06 40.9 +0.9**
WTTA Wattenberg 4.70 347 Pn **Pn 16 06 43.0 +2.3**
comp=E,3.3nm,0.2s,SNR=4.5
WTTA *e*Sn **Sn 16 07 39.0 +3.8**
comp=E,31nm,0.3s
KOME Kolasin 4.70 86 ⇑*i*Pn **Pn 16 06 41.2 +0.5**
KOME *i* Sn **Sn 16 07 35.9 +0.6**
DAVOX Davos/Dischmat 4.70 332 Pn **Pn 16 06 40.6 -0.3**
comp=E,4.6nm,0.3s,baz=154,slow=18,SNR=23
DAVOX Sn **Sn 16 07 35.7 +0.3**
comp=E,2.3nm,0.3s,baz=125,slow=21,SNR=10
comp=E,11nm,0.5s
DAVOX Davos/Dischmat 4.70 332 P **Pn 16 06 42.7 +1.9**
BBLS Lazići 4.73 73 *e*Pn **Pn 16 06 42.3 +1.2**
BBLS *e*Sn **Sn 16 07 36.2 +0.3**
SQTA Sankt Quirin 4.73 344 Pn **Pn 16 06 43.9 +2.7**
comp=E,5.4nm,0.3s,SNR=7.0
SQTA *e*Sn **Sn 16 07 38.0 +1.9**
comp=E,16nm,0.3s
WATA Walderalm 4.78 347 *i* Pn **Pn 16 06 44.2 +2.4**
comp=E,4.6nm,0.2s,SNR=8.9
WATA *e*Sn **Sn 16 07 40.6 +3.4**
comp=E,31nm,0.3s
ARSA Arzberg 4.87 20 *e*Pn **Pn 16 06 42.6 -0.3**
comp=E,1.6nm,0.4s,SNR=6.8
ARSA *e*Sn **Sn 16 07 35.7 -3.5**
comp=E,12nm,0.3s
MOTA Moosalm 4.87 344 *i* Pn **Pn 16 06 45.6 +2.4**
comp=E,4.5nm,0.4s,SNR=6.2
MOTA *e*Sn **Sn 16 07 43.9 +4.3**
comp=E,34nm,0.5s
LMR La Mourre 4.90 280 *e*P **Pn 16 06 43.4 0.0**
LMR *e*Sn **Sn 16 07 34.7 -5.3**
comp=E,2.0nm,0.3s
IVA Berane 4.98 86 ⇑*i*Pn **Pn 16 06 45.5 +1.0**
IVA *i* Sn **Sn 16 07 42.7 +0.6**
BIOA Bad Ischl, Aus 5.01 4 *e*Pn **Pn 16 06 45.8 +0.8**
comp=E,6.6nm,0.3s
BIOA *e*Sn **Sn 16 07 43.6 +0.7**
comp=E,24nm,0.4s

MBDF Montbardon 5.04 296 *e*P **Pn 16 06 47.0 +1.5**
MBDF *e*Sn **Sn 16 07 38.0 -5.7**
comp=E,12nm,0.6s
SJES Sjenica 5.05 81 *e*Pn **Pn 16 06 47.9 +2.4**
SJES *e*Sn **Sn 16 07 45.2 +1.3**
RETA Reutte 5.08 342 *e*Pn **Pn 16 06 48.5 +2.6**
comp=E,2.6nm,0.2s
RETA *e*Sn **Sn 16 07 46.8 +2.2**
comp=E,28nm,0.6s
DAVA Damuels 5.14 334 *e*Pn **Pn 16 06 50.6 +3.8**
comp=E,4.4nm,0.3s
DAVA *e*Sn **Sn 16 07 49.1 +2.9**
comp=E,11nm,0.3s
DIVS Divibare 5.19 72 *e*Pn **Pn 16 06 48.5 +1.0**
DIVS Divibare 5.19 72 *e*Pn **Pn 16 06 48.7 +1.2**
DIVS *e*Sn **Sn 16 07 47.1 -0.3**
IVAS Ivanjica 5.21 78 *e*Pn **Pn 16 06 48.3 +0.6**
IVAS *e*Sn **Sn 16 07 48.5 +0.7**
MOA Molln 5.22 8 *e*Pn **Pn 16 06 49.3 +1.5**
MOA *e*Sn **Sn 16 07 46.8 -1.2**
MOA Molln 5.22 8 *e*Pn **Pn 16 06 45.4 -2.5**
comp=E,7.2nm,0.8s
MOA *e*Sn **Sn 16 07 45.1 -2.9**
comp=E,5.2nm,0.2s
LPG La Plagne 5.39 304 *e*P **Pn 16 06 52.1 +1.8**
LPG *e*Sn **Sn 16 07 46.1 -6.3**
comp=E,12nm,0.5s
LPL La Plagne 5.41 304 *e*P **Pn 16 06 52.3 +1.8**
LPL *e*Sn **Sn 16 07 46.6 -6.2**
comp=E,15nm,0.5s
FRGS Fruska Gora 5.42 61 *e*Pn **Pn 16 06 49.5 -1.0**
RONA Rosalia, Austr 5.49 23 *e*Pn **Pn 16 06 51.1 -0.3**
comp=E,1.6nm,0.2s
RONA *e*Sn **Sn 16 07 50.9 -3.6**
comp=E,3.9nm,0.4s
TRUS Trudelj 5.51 71 *e*Pn **Pn 16 06 51.7 -0.1**
TRUS *e*Sn **Sn 16 07 54.3 -0.8**
CONA Conrad Observa 5.58 19 *i* Pn **Pn 16 06 53.0 +0.3**
SNR=16
CONA *e*Sn **Sn 16 07 53.9 -3.0**
comp=E,6.2nm,0.4s
SMRF Simiane la Rot 5.66 286 *e*P **Pn 16 06 55.5 +1.6**
SMRF *e*Sn **Sn 16 07 52.6 -6.3**
comp=E,4.8nm,0.5s
GRUS Gruza 5.66 75 *e*Pn **Pn 16 06 54.3 +0.5**
ORIF Oris-en-Rattie 5.70 295 *e*P **Pn 16 06 56.6 +2.1**
ORIF *e*Sn **Sn 16 07 53.8 -6.1**
comp=E,7.4nm,0.4s
SELS Selova 5.88 82 *e*Pn **Pn 16 06 57.8 +0.9**
SELS *e*Sn **Sn 16 08 04.7 +0.4**
GERES GERESS Array B 6.17 3 Pn **Pn 16 07 00.3 -0.6**
comp=E,0.8nm,0.3s,baz=181,slow=9.4,SNR=11
GERES Sn **Sn 16 08 08.2 -3.3**
comp=E,4.2nm,0.3s,baz=179,slow=22,SNR=11
comp=E,1.3nm,0.3s
CKRC Cesky Krumlov 6.19 7 *e*PN **Pn 16 06 59.7 -1.3**
CKRC *e*SN **Sn 16 08 08.4 -3.3**
BOVS Bovan 6.34 79 ⇓P **Pn 16 07 03.1 0.0**
CABF La Chapelle 6.37 310 *e*P **Pn 16 07 05.1 +1.4**
CABF *e*Sn **Sn 16 08 09.4 -7.0**
comp=E,13nm,0.7s
MODS Modra-Piesok 6.38 26 *e*PN **Pn 16 07 05.3 +1.5**
MODS *e*SN **Sn 16 08 11.7 -4.9**
BARS Barje 6.39 86 *e*Pn **Pn 16 07 04.3 +0.4**
KHC Kasperske Hory 6.45 3 *e*PN **Pn 16 07 03.9 -0.8**
KHC *e*SN **Sn 16 08 15.4 -2.9**
VIVF Saint-Julien-l 6.50 292 *e*P **Pn 16 07 07.4 +2.1**
VIVF *e*Sn **Sn 16 08 12.5 -6.9**
comp=E,2.7nm,0.5s
PRVS Prvonek 6.60 89 *e*Pn **Pn 16 07 07.2 +0.4**
PRVS *e*Sn **Sn 16 08 20.9 -1.1**
ZAGS Zajecar 6.74 77 *e*Pn **Pn 16 07 09.1 +0.5**
KRUC Moravsky 6.77 19 *e*PN **Pn 16 07 08.1 -0.9**
KRUC *e*SN **Sn 16 08 22.9 -3.1**
HINF Hinteralfeld 6.78 321 *e*P **Pn 16 07 09.9 +0.7**
HINF *e*Sn **Sn 16 08 19.3 -7.0**
comp=E,31nm,0.5s
LASF Ste Croix 6.90 285 *e*P **Pn 16 07 12.8 +1.9**
LASF *e*Sn **Sn 16 08 22.0 -7.3**
comp=E,1.4nm,0.5s
BOSS Bosilegrad 6.90 88 *e*Pn **Pn 16 07 11.5 +0.6**
BOSS *e*Sn **Sn 16 08 27.6 -1.8**
ZAPS Zavoj 6.99 82 *e*Pn **Pn 16 07 13.2 +1.1**
ZAPS *e*Sn **Sn 16 08 29.5 -2.1**
CDF Champ du Feu 7.04 326 *e*P **Pn 16 07 12.7 -0.2**
CDF *e*Sn **Sn 16 08 25.9 -7.1**
comp=E,26nm,0.7s
VYHS Vyhne 7.05 33 *e*PN **Pn 16 07 13.1 +0.2**
HAU Haudompre 7.15 320 *e*P **Pn 16 07 15.9 +1.7**
HAU *e*Sn **Sn 16 08 28.3 -7.1**
comp=E,37nm,0.5s
VTS Vitosha 7.45 87 *e*Pn **Pn 16 07 18.6 +0.1**
SMF Signal de Mont 7.71 304 *e*P **Pn 16 07 24.0 +2.0**
SMF *e*Sn **Sn 16 08 41.6 -7.7**
comp=E,6.5nm,0.5s
PAGF Fort de Pagny 7.83 321 *e*P **Pn 16 07 26.1 +2.5**
SFTF Sexfontaines 7.92 317 *e*P **Pn 16 07 27.4 +2.5**
SRS Serrai 7.96 98 *e*Pn **Pn 16 07 26.4 +1.0**
LOR Lormes 8.01 308 *e*P **Pn 16 07 28.2 +2.1**
baz=124
LOR *e*Sn **Sn 16 08 48.8 -7.8**
comp=E,5.7nm,0.3s
MTLF Montolieu 8.03 278 *e*P **Pn 16 07 29.7 +3.4**
MTLF *e*Sn **Sn 16 08 49.1 -7.9**
comp=E,3.0nm,0.6s
AVF Avril sur Loir 8.08 304 *e*P **Pn 16 07 28.9 +1.9**
AVF *e*Sn **Sn 16 08 50.2 -8.1**
comp=E,1.2nm,0.3s
SSF Saint Saulge 8.11 306 *e*P **Pn 16 07 27.8 +0.3**
SSF *e*Sn **Sn 16 08 50.9 -8.2**
comp=E,4.7nm,0.5s
MEZF Maizieres J'vi 8.12 319 *e*P **Pn 16 07 30.0 +2.5**
SAVF Savonnieres en 8.16 319 *e*P **Pn 16 07 28.8 +0.8**
BRG Berggiesshubel 8.21 4 Amp 16 07 33.9
comp=E,2.0nm,0.6s
BRG *ex* x 16 08 55.9
BRG *ex* x 16 09 38.1
BRG Amp 16 10 14.6
comp=E,7.8nm,1.3s
CAF Calviac 8.31 289 *e*P **Pn 16 07 32.6 +2.4**
CAF *e*Sn **Sn 16 08 55.8 -8.3**
comp=E,0.5nm,0.2s
TCF Toulx Ste Croi 8.60 298 *e*P **Pn 16 07 36.5 +2.4**
CLL Collm 8.62 359 *e*Sn Sn 16 08 51.0 -21
CLL *ex* x 16 09 08.0
CLL *ex* x 16 09 38.0
CLL *e*Sg **Sg 16 10 02.0 -4.3**
comp=E,8.0nm,0.8s
CLL Collm 8.62 359 *e*Pg **Pg 16 08 14.0 -0.7**
RJF Les Rejaudoux 8.77 291 *e*P **Pn 16 07 39.4 +2.9**
EKA Eskdalemuir Ar 16.51 326 Pn **Pn 16 09 22.5 +1.4**
baz=128,slow=14
comp=E,1.2nm,0.9s
HFS Hagfors 17.47 1 P **P 16 09 34.4 0.0**
comp=E,0.1nm,0.3s,baz=191,slow=14,SNR=2.7
comp=E,3.7nm,0.9s
NOA NORSAR Array B 18.41 357 P **P 16 09 45.0 +0.2**
baz=173,slow=11,SNR=1.7
comp=E,0.9nm,0.6s
FINES FINESS Array B 20.32 18 P **P 16 10 06.3 +0.7**
comp=E,3.1nm,0.8s,baz=211,slow=12,SNR=5.8
comp=E,3.1nm,0.8s
KBZ Khabaz 21.67 77 P **P 16 10 22.8 +2.5**
comp=E,2.0nm,0.8s,baz=298,slow=4.7,SNR=3.5
comp=E,2.0nm,0.8s
MKAR Makanchi Array 47.85 60 P **P 16 14 08.5 +1.1**
comp=E,0.7nm,0.7s,baz=284,slow=5.8,SNR=6.7
comp=E,2.0nm,0.7s
SONM Songino Array 61.90 50 P **P 16 15 52.2 +2.9**
comp=E,0.5nm,0.7s,baz=293,slow=7.7,SNR=4.1
comp=E,0.5nm,0.7s

*IDC **26** 16:06:17.2±1.0, 12°.33N×87°.50W, h0km, mb4.1/9, mbtmp4.0/10, ML3.3/1, MS3.1/2, Error ellipse: s-maj=41.3km s-min=16.8km az=51.0*
*NEIC **26** 16:06:20.2±2.2, 12°.10N±0°.05×87°.92W±0°.06, h18km±7km, mb4.4/7, Md4.0(SNET), Error ellipse: s-maj=9.2km s-min=6.5km az=223.0*
*INET **26** 16:06:20.4±0.9, 12°.15N×87°.88W, h5km±5km, MW4.0*
ISC 26 16:06:18.7±1.4, 12°.13N±0°.05×87°.90W±0°.04, h14km±8km, n75, σ1§17/95, mb4.3/14, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.91**	**22**	*e*P		**Pn**	**16 06 37.7**	**+0.5**
CRIN	**San Cristobal**	**1.01**	**56**			**Pn**	**16 06 39.5**	**+0.9**
CRIN					Sn	**Sn**	**16 06 53.8**	**+1.1**
CRIN	**San Cristobal**	**1.01**	**56**	*e*P		**Pn**	**16 06 39.6**	**+1.0**
CRIN				*e*S		**Sn**	**16 06 54.2**	**+1.6**
TEL3	**Telica 3**	**1.13**	**67**	*e*P		**Pn**	**16 06 40.5**	**+0.3**
CNCH	**Conchagua**	**1.14**	**3**	*e*P		**Pn**	**16 06 41.2**	**+0.8**
CNCH				*e*S		**Sn**	**16 06 57.4**	**+1.4**
CNCH	**Conchagua**	**1.14**	**3**	*e*P		**Pn**	**16 06 41.2**	**+0.8**
CNCH				*e*P		**Pn**	**16 06 41.3**	**+0.8**
CNCH				*e*S		**Sn**	**16 06 57.4**	**+1.4**
TELN	**Telica**	**1.15**	**66**	*e*P		**Pn**	**16 06 41.1**	**+0.6**
CNGN	**Cerro Negro**	**1.23**	**72**	Pn		**Pg**	**16 06 42.3**	**-0.2**
CNGN	**Cerro Negro**	**1.23**	**72**	*e*P		**Pb**	**16 06 41.8**	**-0.1**
COPN	**Copaltepe**	**1.28**	**88**	*e*P		**Pg**	**16 06 42.9**	**-0.5**
VSM	**San Miguel**	**1.34**	**344**	*e*P		**Pg**	**16 06 44.9**	**+0.3**
VSM	**San Miguel**	**1.34**	**344**	*e*P		**Pg**	**16 06 44.9**	**+0.3**
RANC	**El Ranchito**	**1.35**	**344**	*e*P		**Pg**	**16 06 44.3**	**-0.4**
RANC				*e*S		**Sg**	**16 07 03.4**	**+1.0**
RANC	**El Ranchito**	**1.35**	**344**	*e*P		**Pg**	**16 06 44.3**	**-0.4**
RANC				*e*S		**Sg**	**16 07 03.4**	**+1.0**
MOMN	**Momotombo**	**1.36**	**78**	*e*P		**Pb**	**16 06 43.9**	**-0.2**
PACA	**Pacayal**	**1.39**	**343**	*e*P		**Pg**	**16 06 45.4**	**-0.2**
PACA				*e*S		**Sg**	**16 07 03.6**	**-0.1**
PACA	**Pacayal**	**1.39**	**343**	*e*P		**Pg**	**16 06 45.4**	**-0.2**
PACA				*e*S		**Sg**	**16 07 03.6**	**-0.1**
PACA	**Pacayal**	**1.39**	**343**	*e*P		**Pb**	**16 06 45.0**	**+0.3**
COEB	**Comit de Eme**	**1.49**	**336**	*e*P		**Pn**	**16 06 45.3**	**+0.1**
COEB				*e*S		**Sg**	**16 07 06.4**	**-0.5**
COEB	**Comit de Eme**	**1.49**	**336**	*e*P		**Pn**	**16 06 45.3**	**+0.1**
COEB				*e*S		**Sg**	**16 07 06.4**	**-0.5**
APYN	**Apoyeque**	**1.52**	**86**	*e*P		**Pn**	**16 06 45.9**	**+0.3**
TISN	**Laguna Tiscapa**	**1.60**	**89**	*e*P		**Pb**	**16 06 47.8**	**-0.3**
MGAN	**Managua**	**1.62**	**89**	*e*P		**Pb**	**16 06 48.6**	**+0.1**
HUEN		**1.71**	**83**	*e*P		**Pn**	**16 06 49.0**	**+0.9**
UESV	**Universidad de**	**1.73**	**330**	*e*S		**Sn**	**16 07 10.1**	**-0.3**
UESV	**Universidad de**	**1.73**	**330**	*e*S		**Sn**	**16 07 10.1**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.76**	**333**	*e*P		**Pn**	**16 06 49.9**	**+1.1**
SCLA				*e*S		**Sb**	**16 07 12.5**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.76**	**333**	*e*P		**Pn**	**16 06 49.9**	**+1.1**
SCLA				*e*S		**Sb**	**16 07 12.5**	**-0.3**
LFRS	**El Faro**	**1.87**	**323**	*e*P		**Pn**	**16 06 50.9**	**+0.5**
LFRS	**El Faro**	**1.87**	**323**	*e*P		**Pn**	**16 06 50.9**	**+0.5**
PAVA	**Las Pavas**	**1.87**	**328**	*e*S		**Sn**	**16 07 14.6**	**+0.6**
PAVA	**Las Pavas**	**1.87**	**328**	*e*S		**Sn**	**16 07 14.6**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.01**	**18**	Pn		**Pn**	**16 06 53.7**	**+1.3**
TGUH	**Tegucigalpa,Un**	**2.01**	**18**	*e*P		**Pn**	**16 06 53.4**	**+1.0**
SNET	**Serv Nac Est T**	**2.02**	**320**	Pn		**Pn**	**16 06 52.3**	**-0.2**
P5NO	**Presa 5 de nov**	**2.03**	**336**	*e*P		**Pn**	**16 06 53.6**	**+1.1**
P5NO				*e*S		**Sn**	**16 07 18.3**	**+0.6**
MATN	**Matagalpa**	**2.09**	**67**			**Pn**	**16 06 54.2**	**+0.8**
MATN	**Matagalpa**	**2.09**	**67**	*e*P		**Pn**	**16 06 54.3**	**+0.8**
JAYA	**Jayaque - finc**	**2.14**	**315**	*e*P		**Pn**	**16 06 54.1**	**-0.1**
JAYA				*e*S		**Sn**	**16 07 20.6**	**0.0**
JAYA	**Jayaque - finc**	**2.14**	**315**	*e*P		**Pn**	**16 06 54.1**	**-0.1**
JAYA				*e*S		**Sn**	**16 07 20.6**	**0.0**
RCON	**San Juan de Ri**	**2.17**	**51**	*e*P		**Pn**	**16 06 55.8**	**+1.1**
BOAB	**BOACO BROADBAN**	**2.21**	**81**	Pn		**Pn**	**16 06 55.2**	**+0.2**
NUBE	**Las Nubes**	**2.54**	**314**	*e*P		**Pn**	**16 07 00.5**	**+0.8**
NUBE				*e*S		**Sn**	**16 07 29.4**	**-1.2**
NUBE	**Las Nubes**	**2.54**	**314**	*e*P		**Pn**	**16 07 00.5**	**+0.8**
NUBE				*e*S		**Sn**	**16 07 29.4**	**-1.2**
HZTE	**Horizontes, Gu**	**2.66**	**122**			**Pn**	**16 07 02.4**	**+1.1**
MTO3	**Montecristo**	**2.67**	**328**	Pn		**Pn**	**16 07 01.3**	**-0.2**
ACOY	**Acoyapa**	**2.68**	**93**			**Pn**	**16 07 00.8**	**-0.7**
ORTG	**Ortega, Santa**	**2.97**	**126**			**Pn**	**16 07 06.0**	**+0.4**
JTS	**Las Juntas de**	**3.42**	**122**			**Pn**	**16 07 12.6**	**+0.9**
JACO	**JACO, Garabito**	**4.02**	**127**			**Pn**	**16 07 22.3**	**+2.4**
RIMA	**Rio Macho**	**4.61**	**120**			**Pn**	**16 07 30.8**	**+2.6**
PEZE	**Perez Zeledon,**	**4.97**	**123**			**Pn**	**16 07 35.4**	**+2.4**
PETF	**Flores**	**5.13**	**338**			**Pn**	**16 07 33.7**	**-1.5**
SRBA	**San Rafael, Bu**	**5.31**	**122**	Pn		**Pn**	**16 07 39.7**	**+1.9**
DRK0	**Durika**	**5.39**	**121**			**Pn**	**16 07 41.8**	**+2.8**
CMIG	**Matias Romero**	**8.37**	**307**	Pn		**Pn**	**16 08 22.7**	**+3.1**
	0.3nm,0.3s,baz=127,slow=10,SNR=1.8							
CMIG					Sn	**Sn**	**16 09 58.8**	**+4.8**
	0.2nm,0.3s,baz=226,slow=8.1,SNR=1.6							
CMIG					LR	LR	16 12 02.7	
	comp=E,111nm,20.5s,baz=119,slow=40							
	1.1nm,0.3s							
BAUV	**El Baul**	**19.78**	**97**	P		**P**	**16 10 48.0**	**-0.7**
BIRV	**Birongo**	**21.28**	**92**	P		**P**	**16 11 04.6**	**-0.4**
BIRV					IAmb	IAmb	16 11 11.5	
	comp=Z,14nm,1.0s							
ATAH	**Atahualpa**	**21.35**	**153**		LR	LR	16 18 07.0	
	comp=Z,47nm,19.4s,baz=90,slow=33							
TX32	**Lajitas Array**	**22.55**	**322**	P		**P**	**16 11 20.2**	**+1.5**
TX32					IAmb	IAmb	16 11 22.6	
	comp=Z,13nm,0.8s							
TXAR	**Lajitas Array**	**22.55**	**322**	P		**P**	**16 11 20.3**	**+1.7**
	comp=Z,10nm,0.7s,baz=135,slow=11,SNR=109							
	comp=Z,10nm,0.7s							
TX31	**Lajitas Ar. Si**	**22.55**	**322**	P		**P**	**16 11 20.2**	**+1.6**
TKL	**Tuckaleechee C**	**23.72**	**8**	P		**P**	**16 11 29.2**	**-1.3**
	comp=Z,2.7nm,0.6s,baz=180,slow=12,SNR=4.7							
	comp=Z,2.7nm,0.6s							
MSTX	**Muleshoe**	**25.62**	**330**	P		**P**	**16 11 48.3**	**+0.3**
MSTX					IAmb	IAmb	16 11 50.5	
	comp=Z,23nm,0.8s							
SAML	**Samuel**	**32.28**	**129**	P		**P**	**16 12 46.8**	**-0.6**
SAML					IAmb	IAmb	16 12 47.5	
	comp=Z,3.5nm,0.8s							
PDAR	**Pinedale Array**	**35.85**	**332**	P		**P**	**16 13 18.9**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=132,slow=10,SNR=9.9							
PDAR					PcP	**PcP**	**16 15 46.6**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=134,slow=3.9,SNR=2.1							
	comp=Z,1.2nm,0.7s							
TPAW	**Teton Pass**	**37.05**	**332**	P		**P**	**16 13 29.0**	**+0.4**
TPAW					IAmb	IAmb	16 13 31.7	
	comp=Z,5.6nm,0.7s							
NVAR	**Mina Array Bea**	**37.65**	**319**	P		**P**	**16 13 36.3**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=120,slow=8.4,SNR=4.3							
NVAR					PcP	**PcP**	**16 15 52.2**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=154,slow=4.9,SNR=2.3							
	comp=Z,0.5nm,0.7s							
SIV	**San Ignacio**	**38.54**	**136**	P		**P**	**16 13 40.7**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=304,slow=8.4,SNR=13							
	comp=Z,4.0nm,0.7s							
ULM	**Lac du Bonnet**	**38.57**	**352**	P		**P**	**16 13 40.4**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=165,slow=8.8,SNR=4.2							
	comp=Z,2.2nm,0.5s							
SCHQ	**Schefferville**	**45.71**	**17**	P		**P**	**16 14 37.3**	**-2.0**
	comp=Z,1.9nm,0.5s,baz=238,slow=9.3,SNR=2.2							
	comp=Z,1.9nm,0.5s							
BDFB	**Brasilia**	**48.16**	**124**	P		**P**	**16 14 58.0**	**-1.1**
	comp=Z,2.1nm,0.4s,baz=342,slow=9.6,SNR=2.0							
	comp=Z,2.1nm,0.4s							
YKA	**Yellowknife Ar**	**53.80**	**345**	P		**P**	**16 15 39.7**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=132,slow=8.5,SNR=6.4							
	comp=Z,0.5nm,0.6s							
WRA	**Warramunga Arr**	**138.75**	**254**	PKP		**PKPdf**	**16 25 45.9**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=93,slow=2.7,SNR=2.0							
CMAR	**Chiang Mai Arr**	**148.87**	**347**	PKPbc		**PKPbc**	**16 26 06.4**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=345,slow=3.9,SNR=8.8							

*NEIC **26** 16:09:03.9±1.8, 17°.7S±0°.2×178°.69W±0°.09, h533km±17km, mb4.1/19, Error ellipse: s-maj=34.6km s-min=12.6km az=174.0*
*IDC **26** 16:09:04.9±1.5, 17°.60S×178°.71W, h554km±16km, mb3.3/6, mbtmp4.3/9, Error ellipse: s-maj=62.8km s-min=20.1km az=154.0*
ISC 26 16:09:04.4±0.8, 17°.7S±0°.2×178°.7W±0°.1, h550km, n35, σ1§00/36, mb4.2/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MSVF	**Nonsavu**	**3.09**	**268**	P		**P**	**16 10 21.8**	**+1.8**
	68nm,0.7s,baz=117,slow=6.8,SNR=46							
MSVF	**Nonsavu**	**3.09**	**268**	P		**P**	**16 10 20.8**	**+0.7**
**A

EIDS					IAmb	IAmb	16 14 28.7	
	comp=Z,7.7nm,1.1s							
ARMA	**Armidale**	**29.82**	**239**	P	**P**		**16 14 28.4**	**+0.9**
CTAO	**Charters Tower**	**33.20**	**260**	P	**P**		**16 14 55.4**	**-0.9**
CTAO					IAmb	IAmb	16 15 08.3	
	comp=Z,5.7nm,0.9s							
CAN	**Canberra**	**33.63**	**232**	P	**P**		**16 14 58.4**	**-1.4**
CAN					IAmb	IAmb	16 15 00.9	
	comp=Z,5.5nm,0.9s							
COEN	**Coen**	**36.81**	**270**	P	**P**		**16 15 27.0**	**+0.6**
COEN					IAmb	IAmb	16 15 36.3	
	comp=Z,8.5nm,1.1s							
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**		**16 15 40.9**	**+0.9**
	comp=Z,2.9nm,0.5s,baz=99,slow=10,SNR=18							
	comp=Z,2.9nm,0.5s							
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**		**16 15 40.7**	**+0.7**
BBOO	**Buckleboo**	**43.28**	**241**	P	**P**		**16 16 18.4**	**+0.5**
BBOO					IAmb	IAmb	16 16 19.5	
	comp=Z,7.1nm,0.9s							
WB0	**Warramunga Arr**	**44.36**	**260**	P	**P**		**16 16 27.0**	**+0.5**
WB2	**Warramunga Arr**	**44.38**	**259**	P	**P**		**16 16 26.3**	**-0.4**
WB2					IAmb	IAmb	16 16 41.2	
	comp=Z,4.3nm,1.1s							
WRAB	**Tennant Creek**	**44.39**	**259**	P	**P**		**16 16 26.0**	**-0.7**
WRAB					IAmb	IAmb	16 16 31.6	
	comp=Z,5.1nm,1.1s							
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**		**16 16 26.0**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=96,slow=7.6,SNR=32							
	comp=Z,1.5nm,0.6s							
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**		**16 16 25.3**	**-1.4**
AS31	**Alice Springs**	**44.58**	**254**	P	**P**		**16 16 28.1**	**-0.1**
AS31					IAmb	IAmb	16 16 28.9	
	comp=Z,5.4nm,0.6s							
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**		**16 16 28.3**	**+0.1**
	comp=Z,16nm,0.5s,baz=89,slow=7.9,SNR=587							
ASAR				PcP	**PcP**		**16 17 59.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=97,slow=4.6,SNR=2.1							
	comp=Z,16nm,0.5s							
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**		**16 16 27.9**	**-0.3**
MTN	**Manton Dam**	**48.52**	**268**	P	**P**		**16 16 58.0**	**0.0**
MTN					IAmb	IAmb	16 17 11.2	
	comp=Z,10nm,1.1s							
FORT	**Forrest**	**49.86**	**244**	P	**P**		**16 17 07.1**	**-0.6**
KNRA	**Kununurra**	**50.23**	**264**	P	**P**		**16 17 11.1**	**+0.6**
KNRA					IAmb	IAmb	16 17 20.8	
	comp=Z,13nm,1.1s							
SIJI	**Sorong**	**51.90**	**283**	P	**P**		**16 17 23.3**	**+0.6**
	comp=Z,4.0nm,0.5s,baz=107,slow=19,SNR=2.5							
	comp=Z,4.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**52.79**	**260**	P	**P**		**16 17 29.2**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=77,slow=5.9,SNR=11							
	comp=Z,0.6nm,0.3s							
FITZ	**Fitzroy Crossi**	**52.79**	**260**	P	**P**		**16 17 29.7**	**+0.8**
MBWA	**Marble Bar**	**57.86**	**256**	P	**P**		**16 18 04.3**	**0.0**
MBWA					IAmb	IAmb	16 18 17.6	
	comp=Z,6.1nm,1.0s							
QSPA	**South Pole Qui**	**72.41**	**180**	P	**P**		**16 19 36.3**	**+1.4**
PDAR	**Pinedale Array**	**87.36**	**44**	P	**P**		**16 20 54.0**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=223,slow=4.9,SNR=2.2							
	comp=Z,0.2nm,0.6s							

HEL 26 16:19:53.1±0.6, 69°51N×30°94E, h0km, ML1.2, Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.40**	**282**	*eP*	Pn	16 20 19.7	-0.1
KEV				*eS*	Sg	16 20 37.2	-0.8
KEV	**Kevo**	**1.40**	**282**	PN	Pn	16 20 19.5	-0.3
KEV				MSG		16 20 35.4	
	comp=Z,1.8nm,0.2s						
KEV				SG	Sg	16 20 37.2	-0.8
VRF	**Varrio**	**1.84**	**196**	PG	Pn	16 20 26.4	+0.5
VRF				SB	Sn	16 20 47.8	-2.0
VRF				MSG		16 20 47.8	
	comp=Z,1.1nm,0.2s						
ARA0	**ARCESS Array S**	**1.91**	**273**	*eP*	Pb	16 20 28.6	-0.2
ARA0				*eS*	Sn	16 20 51.6	0.0
ARA0				IAML		16 20 55.0	
	comp=Z,1.7nm,0.2s						
ARA0	**ARCESS Array S**	**1.91**	**273**	PG	Pb	16 20 27.9	-0.9
	baz=89						
ARA0				SG	Sn	16 20 51.7	0.0
SGF	**Sodankyl**	**2.64**	**220**	SB	Sn	16 21 11.4	+1.9
RNF	**Rovaniemi**	**3.45**	**215**	SB	Sb	16 21 35.6	-1.8
KIF	**Kilpisjarvi**	**3.64**	**267**	SG	Sb	16 21 42.6	-0.3
PAJU	**Pajala**	**3.83**	**233**	PG	Pb	16 21 01.5	0.0

HEL 26 16:20:22.7±0.6, 67°66N×20°79E, h0km, ML1.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.60**	**48**	SG	Sg	16 20 40.7	-1.2
PAJU	**Pajala**	**1.10**	**124**	PG	Pg	16 20 42.2	-1.6
	baz=306						
ERTU	**Ertsjaerv**	**1.24**	**153**	PG	Pg	16 20 44.6	-1.7
ERTU				SN	Sn	16 21 06.2	+1.6
KLF	**Kolari**	**1.29**	**108**	PN	Pg	16 20 46.1	-1.3
KLF	**Kolari**	**1.29**	**108**	PG	Pg	16 20 46.1	-1.3
KLF				SN	Sn	16 21 07.1	+1.1
HEF	**Hetta**	**1.31**	**54**	MSG		16 21 02.4	
	comp=Z,1.9nm,0.2s						
HEF				SG	Sg	16 21 04.1	-0.8
KIF	**Kilpisjarvi**	**1.35**	**0**	*eP*	Pg	16 20 43.2	-5.4
KIF	**Kilpisjarvi**	**1.35**	**0**	PG	Pg	16 20 48.2	-0.4
KIF				MSG		16 21 04.7	
	comp=Z,2.2nm,0.2s						
KIF	**Kilpisjarvi**	**1.35**	**0**	PN	Pg	16 20 48.2	-0.4
KTK1	**Kautokeino**	**1.64**	**33**	SN	Sn	16 21 11.4	-3.0
KTK1	**Kautokeino**	**1.64**	**33**	SG	Sn	16 21 11.4	-3.0
TOF	**Tornio**	**2.11**	**137**	PG	Pb	16 21 01.0	-0.8
TOF				MSG		16 21 25.4	
	comp=Z,1.4nm,0.2s						
STEI	**Steigen**	**2.13**	**280**	*eP*	Pn	16 20 51.7	-7.7
KEV	**Kevo**	**3.09**	**44**	SB	Sn	16 21 53.2	+2.9
KEV				MSG		16 21 53.6	
	comp=Z,0.8nm,0.2s						

*IDC **26** 16:20:33.4±1.6, 28°28N×139°79E, h411km±21km, mb3.0/7, mbtmp3.8/9, Error ellipse: s-maj=83.6km s-min=15.4km az=83.0*
*JMA **26** 16:20:34.3±0.5, 29°N±2°×14°0E±°, h436km, MV3.4/32, W OFF OGASAWARA*

ISC 26 16:20:31.8±1.2, 28°23N±0°09×140°4E±0°2, h400km, n21, σ1s51/23, mb3.4/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**4.89**	**354**	P	**Pn**	**16 21 55.0**	**+2.4**
	88nm,0.7s,baz=285,slow=23,SNR=8.2						
JHJ				S	**S**	**16 22 59.1**	**+0.8**
	128nm,0.9s,baz=250,slow=23,SNR=1.6						
TK02	**Tokai 2**	**6.11**	**339**	P	**Pn**	**16 22 08.2**	**+2.9**
BSO1	**Boso 1**	**6.42**	**5**	S	**S**	**16 23 25.8**	**-1.4**
BSO3	**Boso 3**	**6.55**	**1**	*eP*	**Pn**	**16 22 13.2**	**+2.3**
BSO3				*eS*	**S**	**16 23 29.7**	**-0.6**
BSO4	**Boso 4**	**6.74**	**360**	*eS*	**S**	**16 23 32.8**	**-1.6**
JIE	**Ise**	**6.88**	**334**	P	**P**	**16 22 16.4**	**+1.8**
JKN2	**Miekihoku**	**6.93**	**331**	*eP*	**P**	**16 22 16.6**	**+1.5**
JNY	**Yasuok**	**7.41**	**344**	P	**P**	**16 22 21.7**	**+1.2**
JHU	**Hanno**	**7.65**	**353**	*eP*	**P**	**16 22 23.1**	**0.0**
JRY	**Ryogami san**	**7.86**	**351**	P	**P**	**16 22 25.9**	**+0.5**
JYT	**Yasato**	**7.97**	**359**	*eP*	**P**	**16 22 28.0**	**+1.3**
JAG	**Ashikaga**	**8.20**	**355**	P	**P**	**16 22 29.5**	**+0.2**
JHO	**Hitachi**	**8.36**	**1**	P	**P**	**16 22 32.3**	**+1.3**
MJAR	**Matsushiro Arr**	**8.48**	**348**	P	**Pn**	**16 22 31.8**	**-0.3**
	1.0nm,0.5s,baz=156,slow=9.2,SNR=2.8						
KLR	**Kul'dur**	**21.98**	**345**	P	**P**	**16 24 53.5**	**-0.6**
	0.8nm,0.5s,baz=161,slow=10.0,SNR=4.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**48.24**	**188**	P	**P**	**16 28 34.7**	**+0.3**
	0.6nm,1.0s,baz=4.6,slow=7.5,SNR=4.8						
	0.6nm,1.0s						
MKAR	**Makanchi Array**	**48.49**	**309**	P	**P**	**16 28 33.6**	**-2.5**
	0.1nm,0.5s,baz=82,slow=11,SNR=1.9						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**51.97**	**188**	P	**P**	**16 29 02.5**	**+0.5**
	0.6nm,1.1s,baz=3.5,slow=5.7,SNR=5.9						
	0.6nm,1.1s						
ARCES	**ARCESS Array B**	**71.93**	**340**	P	**P**	**16 31 12.4**	**-0.1**
	2.4nm,0.8s,baz=64,slow=8.2,SNR=6.3						
FINES	**FINESS Array B**	**76.20**	**333**	P	**P**	**16 31 36.0**	**-1.0**
	1.2nm,0.3s,baz=66,slow=5.1,SNR=22						
	1.2nm,0.3s						
NOA	**NORSAR Array B**	**81.95**	**338**	P	**P**	**16 32 06.5**	**-1.3**
	0.6nm,0.6s,baz=46,slow=5.1,SNR=2.0						
	0.6nm,0.6s						

*ISK **26** 16:21:48.8, 39°36N×43°82E, h11km, ML2.6/5*
*DDA **26** 16:21:53.3±0.0, 39°62N×43°83E, h8km±1km, ML1.7*

ISC 26 16:21:49.6±1.2, 39°32N±0°04×43°87E±0°05, h13km±10km, n11, σ1s03/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.18**	**167**	PG	**Pg**	**16 21 54.0**	**+0.1**
DYDN	**Diyadin**	**0.26**	**329**	P	**Pg**	**16 21 55.1**	**-0.1**
DYDN				S	**Sg**	**16 21 59.1**	**+0.1**
DYDN				*i* AML	AML	16 22 04.0	
	comp=N,367nm,0.7s						
DYDN				*i* AML	AML	16 22 06.0	
	comp=E,337nm,0.5s						
IGDI	**IGDIR**	**0.57**	**17**	P	**Pg**	**16 21 59.8**	**-1.0**
IGDI				*i* AML	AML	16 22 14.0	
	comp=E,75nm,0.4s						
KOTA	**Agri, Merkez-K**	**0.70**	**314**	P	**Pb**	**16 22 03.6**	**-0.2**
AGRB	**Hanur-Agry**	**0.72**	**291**	PG	**Pg**	**16 22 02.7**	**-1.0**
TASB	**TASBURUN-IGDIR**	**0.72**	**23**	PG	**Pg**	**16 22 02.9**	**-0.8**
MLAZ	**Malazgirt-MUS**	**1.04**	**261**	PG	**Pg**	**16 22 07.9**	**-1.7**
GNI	**Garni**	**1.07**	**39**	PG	**Pg**	**16 22 09.5**	**-0.7**
EATA	**Eleskirt**	**1.19**	**298**	P	**Pn**	**16 22 13.8**	**+1.5**
EATA				*i* AML	AML	16 22 37.0	
	comp=E,18nm,0.4s						
EATA				*i* AML	AML	16 22 39.0	
	comp=N,16nm,0.5s						
AKDM	**Akdamar-Van**	**1.21**	**215**	PN	**Pn**	**16 22 12.5**	**+0.2**
HOMI	**Horasan**	**1.68**	**296**	P	**Pg**	**16 22 22.2**	**+0.4**
HOMI				*i* AML	AML	16 22 58.0	
	comp=N,25nm,0.4s						

*JMA **26** 16:25:47.8±0.2, 26°N±1°×14°2E±°, h412km±1km, MV4.3/27, NEAR CHICHIJIMA ISLAND*
*IDC **26** 16:25:47.9±1.9, 25°88N×140°90E, h419km±22km, mb3.1/17, mbtmp4.0/21, Error ellipse: s-maj=20.1km s-min=8.9km az=89.0*

ISC 26 16:25:46.4±0.6, 25°99N±0°06×141°0E±0°1, h400km, n31, σ2s01/37, mb3.4/17, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.22**	**58**	*eS*	**S**	**16 27 20.4**	**+0.2**
JCJ	**Chichijima**	**1.51**	**43**	S	**S**	**16 27 21.6**	**-1.0**
	319nm,0.4s,baz=323,slow=22,SNR=12						
JHJ	**Hachijo jima 2**	**7.18**	**352**	P	**P**	**16 27 34.4**	**+1.7**
	61nm,0.3s,baz=180,slow=14,SNR=7.9						
JHJ				S	**S**	**16 28 55.9**	**-2.5**
	62nm,0.5s,baz=71,slow=23,SNR=1.3						
BSO3	**Boso 3**	**8.79**	**357**	*eP*	**Pn**	**16 27 50.6**	**+0.5**
BSO3				*eS*	**S**	**16 29 27.3**	**-4.4**
BSO4	**Boso 4**	**8.99**	**356**	*eS*	**S**	**16 29 32.6**	**-3.4**
JKN2	**Miekihoku**	**9.19**	**335**	*eP*	**Pn**	**16 27 57.0**	**+2.0**
JNY	**Yasuok**	**9.72**	**345**	P	**Pn**	**16 28 03.0**	**+1.8**
JHU	**Hanno**	**9.94**	**352**	*eP*	**Pn**	**16 28 04.1**	**+0.5**
JHU				*eS*	**S**	**16 29 51.5**	**-4.5**
JAG	**Ashikaga**	**10.48**	**353**	*eS*	**S**	**16 30 03.5**	**-3.6**
JHO	**Hitachi**	**10.59**	**358**	P	**Pn**	**16 28 12.0**	**+0.8**
JHO				*eS*	**S**	**16 30 06.9**	**-2.3**
MJAR	**Matsushiro Arr**	**10.79**	**348**	P	**Pn**	**16 28 14.0**	**+0.5**
	0.7nm,0.3s,baz=209,slow=30,SNR=3.1						
MJAR				S	**S**	**16 30 11.2**	**-2.1**
	0.8nm,0.6s,baz=185,slow=23,SNR=4.5						
GUMO	**Guam**	**12.86**	**163**	P	**P**	**16 28 37.0**	**+1.3**
	16nm,0.4s,baz=352,slow=18,SNR=2.5						
KSRS	**Korea Array**	**15.94**	**319**	P	**P**	**16 29 14.2**	**+5.3**
	1.8nm,0.5s,baz=146,slow=8.6,SNR=12						
USRK	**Ussuriysk Ar.**	**19.59**	**340**	P	**P**	**16 29 48.1**	**+1.2**
	2.8nm,0.9s,baz=161,slow=10,SNR=6.0						
KLR	**Kul'dur**	**24.29**	**345**	P	**P**	**16 30 30.5**	**+1.0**
	1.3nm,0.6s,baz=166,slow=12,SNR=3.3						
	1.3nm,0.6s						
SIJI	**Sorong**	**28.32**	**201**	P	**P**	**16 31 04.2**	**-1.4**
	2.5nm,0.4s,baz=24,slow=16,SNR=4.9						
	2.5nm,0.4s						
SONM	**Songino Array**	**34.81**	**318**	P	**P**	**16 32 01.5**	**0.0**
	0.4nm,0.6s,baz=117,slow=1.9,SNR=2.9						
	0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.53**	**268**	P	**P**	**16 32 40.0**	**-0.9**
	0.2nm,0.4s,baz=95,slow=6.4,SNR=1.4						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**46.12**	**189**	P	**P**	**16 33 31.6**	**-1.3**
	2.2nm,0.3s,baz=13,slow=8.9,SNR=75						
	2.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**46.31**	**200**	P	**P**	**16 33 33.4**	**-0.9**
	1.6nm,0.7s,baz=15,slow=9.3,SNR=8.8						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**49.85**	**189**	P	**P**	**16 33 59.7**	**-1.3**
	0.4nm,0.4s,baz=14,slow=8.4,SNR=34						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**50.38**	**310**	P	**P**	**16 34 04.8**	**0.0**
	0.9nm,0.7s,baz=92,slow=9.6,SNR=10						
MKAR				PcP	**PcP**	**16 35 15.5**	**-1.1**
	0.4nm,0.8s,baz=103,slow=3.3,SNR=2.2						
	0.9nm,0.7s						
STKA	**Stephens Creek**	**57.55**	**179**	P	**P**	**16 34 54.9**	**-1.1**
	2.4nm,0.7s,baz=349,slow=8.5,SNR=9.8						
	2.4nm,0.7s						
ILAR	**Eielson Array**	**59.17**	**28**	P	**P**	**16 35 07.4**	**+0.7**
	1.0nm,0.7s,baz=253,slow=5.2,SNR=8.3						
	1.0nm,0.7s						
YKA	**Yellowknife Ar**	**73.60**	**28**	P	**P**	**16 36 37.7**	**+0.7**
	0.7nm,0.8s,baz=299,slow=5.7,SNR=2.4						
	0.7nm,0.8s						
ARCES	**ARCESS Array B**	**74.23**	**341**	P	**P**	**16 36 40.7**	**+0.3**
	2.8nm,1.0s,baz=64,slow=10,SNR=5.0						
	2.8nm,1.0s						
FINES	**FINESS Array B**	**78.47**	**334**	P	**P**	**16 37 03.6**	**-0.5**
	1.0nm,0.6s,baz=63,slow=4.8,SNR=12						
	1.0nm,0.6s						
NVAR	**Mina Array Bea**	**82.02**	**51**	P	**P**	**16 37 24.4**	**+0.8**
	0.2nm,0.5s,baz=295,slow=4.9,SNR=1.8						
	0.2nm,0.5s						
AKASG	**Malin Array Be**	**82.88**	**323**	P	**P**	**16 37 26.8**	**-0.6**
	0.3nm,0.4s,baz=58,slow=1.4,SNR=1.4						
	0.3nm,0.4s						
NOA	**NORSAR Array B**	**84.24**	**338**	P	**P**	**16 37 33.8**	**-0.3**
	0.3nm,0.4s,baz=10,slow=15,SNR=1.6						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**85.73**	**44**	P	**P**	**16 37 42.4**	**+0.3**
	0.4nm,0.8s,baz=287,slow=6.0,SNR=3.9						
	0.4nm,0.8s						

IDC 26 16:35:43.3±0.9, 28°90S×179°47W, h200km±16km, mb3.0/3, mbtmp3.5/3, Error ellipse: s-maj=40.1km s-min=26.5km az=38.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.40**	**105**	P	Pn	16 36 16.0	0.0
	299nm,0.2s,baz=266,slow=19,SNR=6.3						
RAO				S	Sn	16 36 41.6	+0.1
	438nm,0.3s,baz=240,slow=20,SNR=8.3						
ASAR	**Alice Springs**	**41.93**	**266**	P		16 43 15.1	+0.5
	0.3nm,0.6s,baz=100,slow=7.0,SNR=7.6						
ASAR				PcP	PcP	16 45 03.5	-2.8
	0.4nm,0.9s,baz=112,slow=4.2,SNR=1.7						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**42.78**	**271**	P	P	16 43 21.1	-0.4
	0.5nm,0.5s,baz=108,slow=6.4,SNR=17						
	0.5nm,0.5s						
VNDA	**Vanda**	**49.46**	**185**	P	P	16 44 12.8	+0.1
	0.4nm,0.5s,baz=16,slow=4.7,SNR=8.4						
	0.4nm,0.5s						
NOA	**NORSAR Array B**	**147.07**	**350**	PKPbc	PKPbc	16 55 02.8	+0.8
	0.6nm,0.7s,baz=1.7,slow=4.3,SNR=3.3						

*IDC **26** 16:47:11.0±1.6, 10°17N×126°19E, h0km, mb3.5/6, mbtmp3.5/6, MS2.6/1, Error ellipse: s-maj=74.1km s-min=20.2km az=66.0*

ISC 26 16:47:19.0±1.6, 10°07N±0°06×126°1E±0°1, h56km±14km, n25, σ1s41/17, mb3.4/6, 2C-8D, Philippine Islands region

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

SCPH	**Surigao**	**0.63**	**243**	*eP*	**Pn**	**16 47 30.9**	**-1.2**
SCPH				*i* S	**Sn**	**16 47 41.0**	**-0.8**
BUTP	**Butuan**	**1.18**	**201**	*eP*	**Pn**	**16 47 39.8**	**+0.5**
BUTP				*eS*	Sn	16 47 59.0	+4.6
MSLP	**Maasin**	**1.18**	**273**	*eP*	**Pn**	**16 47 39.0**	**-0.2**
MSLP				*eS*	**Sn**	**16 47 56.3**	**+1.9**
BESP	**Borongan**	**1.64**	**338**	*eP*	**Pn**	**16 47 46.4**	**+0.9**
OCLP	**Ormoc**	**1.72**	**304**	*eP*	Pn	16 47 47.6	+1.0
OCLP				*eS*	Sn	16 48 11.3	+3.7
LLP	**Lapu-Lapu**	**2.07**	**277**	*eP*	Pn	16 47 52.5	+1.2
LLP				*eS*	**Sn**	**16 48 17.9**	**+1.8**
CGP	**Cagayan de Oro**	**2.10**	**220**	*iP*	Pn	16 47 53.1	+1.3
CGP				*i* S	**Sn**	**16 48 19.7**	**+3.1**
TBP	**Tagbilaran**	**2.19**	**260**	*eP*	Pn	16 47 54.4	+1.3
TBP				*i* S	Sn	16 48 22.1	+3.1
DAV	**Davao City (W)**	**3.02**	**189**	LR	LR	16 49 42.4	
	comp=Z,90nm,20.1s,baz=130,slow=48						
DCPH	**Dipolog City**	**3.05**	**241**	*eP*	Pn	16 48 07.0	+2.2
DCPH				*eS*	**Sn**	**16 48 39.0**	**-1.1**
KCP	**Kidapawan**	**3.19**	**197**	*eP*	Pn	16 48 09.8	+3.0
KCP				*eS*	**Sn**	**16 48 45.0**	**+1.3**
CNOP	**Candoni, Negro**	**3.37**	**266**	*eP*	Pn	16 48 10.5	+1.3
CNOP				*eS*	**Sn**	**16 48 48.8**	**+0.7**
RCP	**Roxas**	**3.57**	**295**	*eP*	Pn	16 48 13.7	+1.8
CMAR	**Chiang Mai Arr**	**27.54**	**291**	P	**P**	**16 53 00.7**	**0.0**
	0.3nm,0.5s,baz=90,slow=14,SNR=1.5						
	0.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**28.00**	**181**	P	**P**	**16 53 05.5**	**+0.8**
	1.3nm,0.9s,baz=7.1,slow=8.1,SNR=1.5						
	1.3nm,0.9s						
WRA	**Warramunga Arr**	**30.92**	**165**	P	**P**	**16 53 29.8**	**-0.8**
	0.5nm,0.8s,baz=342,slow=8.5,SNR=2.9						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**34.40**	**167**	P	**P**	**16 54 00.3**	**-0.7**
	0.3nm,0.4s,baz=352,slow=7.2,SNR=16						
	0.3nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**40.18**	**73**	T	T	17 37 40.4	
	baz=262,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**40.19**	**73**	T	T	17 37 40.4	
	baz=262,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**40.20**	**73**	T	T	17 37 45.0	
	baz=262,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**40.52**	**71**	T	T	17 38 10.0	
	baz=264,slow=74,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**40.52**	**71**	T	T	17 38 10.2	
	baz=264,slow=74,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**40.53**	**71**	T	T	17 38 12.8	
	baz=264,slow=74,SNR=6.9						
SONM	**Songino Array**	**41.13**	**340**	P	**P**	**16 54 57.0**	**-0.6**
	0.2nm,0.4s,baz=140,slow=9.4,SNR=2.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.05**	**323**	P	**P**	**16 56 22.3**	**-0.8**
	0.3nm,0.6s,baz=128,slow=7.9,SNR=3.8						
	0.3nm,0.6s						

*JMA **26** 17:06:22.5±0.5, 45°N±2°×14°7E±°, h181km, MV2.8/25, NEAR ETOROFU ISLAND*
*SKHL **26** 17:06:22.9±0.4, 44°50N×146°60E, h171km±1km, mb3.8/3, msha4.2/2*

ISC 26 17:06:23.4±2.8, 44°5N±0°1×146°7E±0°1, h187km±18km, n16, σ0s95/25, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.72**	**235**	*eP*	**Pn**	**17 06 49.4**	**-0.6**
YUK				AMB	AMB	17 06 50.4	
	70nm,0.3s						
YUK				*eS*	**Sn**	**17 07 10.3**	**-0.2**
YUK				A	A	17 07 15.0	
	110nm,0.8s						
YUK				A	A	17 07 15.0	
	130nm,0.8s						
KUR	**Kuril'sk**	**1.15**	**47**	*eP*	**Pn**	**17 06 53.0**	**+0.1**
KUR				AMB	AMB	17 06 53.8	
	60nm,0.7s						
JRA	**Rausu**	**1.23**	**246**	*eP*	**Pn**	**17 06 52.9**	**-0.7**
NEM2	**Nemuro 2**	**1.28**	**212**	*eP*	**Pn**	**17 06 53.6**	**-0.3**
NEM2				*eS*	**Sn**	**17 07 18.1**	**+0.5**
NMR	**Nemuro--Hokkai**	**1.28**	**213**	*i* P	**Pn**	**17 06 53.6**	**-0.4**
NMR				AMB	AMB	17 06 54.8	
	20nm,0.6s						
NMR				*eS*	**Sn**	**17 07 17.2**	**-0.4**
NMR				A	A	17 07 20.9	
	20nm,0.3s						
NMR				A	A	17 07 20.9	
	20nm,0.3s						
JNSB	**Nemuroshibetsu**	**1.38**	**241**	*eP*	**Pn**	**17 06 54.8**	**0.0**
JNK	**Nakash**	**1.66**	**239**	*eP*	**Pn**	**17 06 57.2**	**-0.1**
JKHN	**Kushirohamanak**	**1.75**	**219**	*eP*	**Pn**	**17 06 58.7**	**+0.3**
AKK	**Akkeshi**	**1.96**	**223**	*eP*	**Pn**	**17 07 00.2**	**-0.2**
AKK				*eS*	**Sn**	**17 07 29.4**	**+0.2**
JAK	**Akkeshi**	**2.04**	**225**	*eP*	**Pn**	**17 07 01.5**	**+0.2**
JAK				*eS*	**Sn**	**17 07 31.5**	**+0.6**
JTKR	**Abashiri--Toko**	**2.05**	**257**	*eP*	**Pn**	**17 07 00.4**	**-1.0**
JAR	**Ashorobuto**	**2.40**	**242**	*eP*	**Pn**	**17 07 05.7**	**+0.4**
JAR				*eS*	**Sn**	**17 07 40.5**	**+2.7**
JOB	**Onbets**	**2.58**	**234**	*eP*	**Pn**	**17 07 07.9**	**+0

comp=E,29286µm,0.3s
ALNA AML AML 17 24 06.4
comp=N,29002µm,0.6s
THL Klokotos Trika 0.81 296 P **Pg** **17 23 52.4 -1.0**
THL S **Sg** **17 24 03.7 -0.3**
comp=N,2µm,0.6s
THL Klokotos Trika 0.81 296 P **Pg** **17 23 52.4 -1.0**
THL S **Sg** **17 24 03.5 -0.5**
THL AML AML 17 24 10.3
comp=N,4902µm,0.6s
THL AML AML 17 24 10.8
comp=E,4067µm,0.5s
DLFA Delphi 0.82 206 P **Pn** **17 23 53.7 -1.2**
DLFA AML AML 17 24 11.5
comp=N,10113µm,0.5s
DLFA AML AML 17 24 13.7
comp=E,8754µm,0.6s
PAIG Paliouri 0.91 38 P **Pg** **17 23 55.4 +0.1**
PAIG Paliouri 0.91 38 P **Pg** **17 23 55.3 0.0**
EVR Evrytania 0.94 252 P **Pn** **17 23 55.8 -0.9**
EVR Evrytania 0.94 252 P **Pn** **17 23 56.0 -0.7**
EVR AML AML 17 24 16.5
comp=N,4962µm,0.9s
EVR AML AML 17 24 17.1
comp=E,3660µm,0.6s
LIT Litokhoron 0.96 338 P **Pb** **17 23 55.1 -1.1**
LIT Litokhoron 0.96 338 P **Pb** **17 23 55.1 -1.1**
LIT S **Sb** **17 24 07.7 -1.0**
LIT AML AML 17 24 11.7
comp=N,12345µm,0.4s
LIT AML AML 17 24 11.8
comp=E,7576µm,0.6s
VIL2 Platees 1.03 166 P **Pn** **17 23 59.2 +1.4**
VIL2 S **Sn** **17 24 15.4 +3.3**
VIL2 AML AML 17 24 23.1
comp=E,10221µm,0.6s
VIL2 AML AML 17 24 23.3
comp=N,5454µm,0.7s
SERG Sergoula 1.06 222 P **Pg** **17 23 57.9 -0.4**
SERG AML AML 17 24 17.2
comp=E,6117µm,0.5s
SERG AML AML 17 24 20.3
comp=N,6101µm,0.3s
KYMI Kymi, Euboea I 1.06 123 P **Pg** **17 23 59.3 +1.0**
KYMI S **Sn** **17 24 15.4 +2.4**
comp=N,2µm,0.4s
KYMI Kymi, Euboea I 1.06 123 P **Pg** **17 23 59.0 +0.7**
KYMI AML AML 17 24 17.9
comp=E,4310µm,0.7s
KYMI AML AML 17 24 20.9
comp=N,3293µm,0.4s
VILL Villia 1.08 165 P **Pg** **17 23 59.4 +0.7**
VILL S **Sn** **17 24 15.6 +2.1**
comp=N,4µm,0.6s
EFP Efpalio 1.13 227 P **Pg** **17 23 59.1 -0.5**
EFP AML AML 17 24 20.2
comp=N,7067µm,0.6s
EFP AML AML 17 24 23.4
comp=E,4557µm,0.5s
THAL Thalero 1.20 191 P **Pg** **17 24 00.9 +0.1**
THAL Thalero 1.20 191 P **Pg** **17 24 01.5 +0.7**
LOUT Loutraki 1.22 179 P **Pg** **17 24 01.6 +0.3**
LOUT Loutraki 1.22 179 P **Pg** **17 24 01.7 +0.3**
LAKA Lakka 1.23 218 P **Pg** **17 24 01.3 -0.4**
LAKA Lakka 1.23 218 P **Pg** **17 24 01.3 -0.3**
LAKA AML AML 17 24 30.2
comp=N,4744µm,1.0s
LAKA AML AML 17 24 30.5
comp=E,4836µm,0.9s
PVO Paravola 1.26 242 P **Pg** **17 24 02.1 0.0**
SKY Skiros Island 1.29 105 P **Pg** **17 24 02.2 -0.3**
KLV Kalavryta, Ach 1.33 209 P **Pg** **17 24 03.0 -0.2**
KLV Kalavryta, Ach 1.33 209 P **Pg** **17 24 03.0 -0.2**
DION Dionisos Attik 1.37 146 P **Pg** **17 24 03.9 -0.2**
DION Dionisos Attik 1.37 146 P **Pg** **17 24 03.9 -0.2**
DION AML AML 17 24 27.7
comp=E,6966µm,0.3s
DION AML AML 17 24 28.7
comp=N,5665µm,0.5s
OUR Ouranopolis 1.37 35 P **Pn** **17 24 02.5 0.0**
ATH Athens Observa 1.38 154 P **Pg** **17 24 04.3 +0.1**
ATH AML AML 17 24 27.9
comp=N,4135µm,0.4s
ATH AML AML 17 24 30.1
comp=E,5682µm,0.3s
HORT Hortiatis 1.39 5 PN **Pn** **17 24 02.3 -0.6**
HORT SN **Sn** **17 24 19.5 -1.6**
HORT Hortiatis 1.39 5 P **Pn** **17 24 02.1 -0.8**
HORT AML AML 17 24 21.8
comp=N,2433µm,0.4s
HORT AML AML 17 24 22.0
comp=E,3883µm,0.4s
ATHU Athens Univers 1.40 152 P **Pg** **17 24 04.6 -0.1**
ATHU Athens Univers 1.40 152 P **Pg** **17 24 04.5 -0.3**
ATHU AML AML 17 24 27.6
comp=E,1158µm,0.7s
ATHU AML AML 17 24 30.5
comp=N,1641µm,0.4s
THE Thessaloniki 1.42 0 P **Pn** **17 24 02.2 -0.9**
KZN Kozani 1.42 321 P **Pn** **17 24 03.0 -0.3**
VLY Voula,Athens 1.51 154 P **Pg** **17 24 06.0 -0.7**
VLY Voula,Athens 1.51 154 P **Pg** **17 24 06.0 -0.7**
DRO Drossia 1.59 218 P **Pg** **17 24 07.0 -1.3**
DRO AML AML 17 24 37.9
comp=N,2366µm,0.4s
DRO AML AML 17 24 42.8
comp=E,2767µm,0.5s
EPID Epidavros 1.60 175 P **Pg** **17 24 07.1 -1.4**
SOH Sokhos 1.64 11 P **Pn** **17 24 06.3 +0.1**
KOKK Kokkinochori, 1.79 26 P **Pn** **17 24 08.3 0.0**
KOKK Kokkinochori, 1.79 26 P **Pn** **17 24 08.1 -0.2**
THAS Thassos island 1.94 44 P **Pn** **17 24 09.8 -0.6**
KNT Kendrikon 1.95 359 P **Pn** **17 24 10.6 +0.1**
SRS Serrai 1.96 14 P **Pn** **17 24 10.6 -0.1**
SRS Serrai 1.96 14 *e*Pn **Pn** **17 24 10.8 +0.1**
SRS *e*Sn **Sn** **17 24 35.5 +0.3**
ITM Ithomi 2.19 202 PN **Pb** **17 24 17.3 +0.2**
ITM SN **Sg** **17 24 45.2 -2.8**
SIGR SIGRI 2.25 89 PN **Pn** **17 24 14.4 -0.2**
SIGR SN **Sn** **17 24 40.8 -1.5**
MMB Musomiste 2.45 14 P **Pn** **17 24 17.2 -0.2**
GADA Gvkgeada 2.47 66 PN **Pn** **17 24 17.6 -0.1**
BOZC Bozcaada 2.48 74 PN **Pn** **17 24 17.3 -0.4**
BOZC SN **Sn** **17 24 45.7 -2.1**
KKB Krupnik 2.65 2 P **Pn** **17 24 20.2 0.0**
EZN Ezine 2.68 76 PN **Pn** **17 24 20.7 +0.2**
RDO Rodhopi 2.77 45 PN **Pn** **17 24 21.2 -0.5**
RZN Rozhen 2.81 28 P **Pn** **17 24 22.8 +0.2**
ENEZ Enez 2.89 57 PN **Pn** **17 24 23.1 -0.3**
ALN Alexandroupoli 2.91 54 PN **Pn** **17 24 23.6 -0.1**
APE Apeiranthos 2.95 136 ⇑P **Pn** **17 24 26.2 +1.9**
APE Apeiranthos 2.95 136 PN **Pn** **17 24 26.1 +1.8**
KTHA Kythira Island 2.95 178 PN **Pb** **17 24 27.2 -3.0**
GELI Tayfur-Gelibol 2.96 65 PN **Pn** **17 24 24.3 0.0**
URLA Izmir 2.97 106 PN **Pn** **17 24 25.1 +0.5**
DKL Dikili 3.08 91 PN **Pn** **17 24 26.3 +0.4**
KDZ Kurdzhali 3.08 37 PN **Pn** **17 24 24.9 -1.1**
KDZ Kurdzhali 3.08 37 P **Pn** **17 24 24.9 -1.1**
PLD Plovdiv 3.18 24 PN **Pn** **17 24 27.6 +0.2**
PLD Plovdiv 3.18 24 *e*Pn **Pn** **17 24 28.4 +1.0**
TIR Tirane 3.18 313 *e*Pn **Pn** **17 24 29.7 +2.3**
BOSS Bosilegrad 3.30 354 *e*Pn **Pn** **17 24 29.4 +0.3**
BOSS *e*Sn **Sn** **17 25 08.0 -0.1**
PRVS Prvonek 3.36 349 *e*Pn **Pn** **17 24 30.2 +0.3**
VTS Vitosha 3.41 3 ⇑P **Pn** **17 24 31.2 +0.6**
VTS Vitosha 3.41 3 *e*Pn **Pn** **17 24 31.3 +0.6**
VTS *e*Sn **Sn** **17 25 09.5 -1.5**
VTS Vitosha 3.41 3 P **Pn** **17 24 31.1 +0.4**
PGB Panagyurishte 3.46 15 P **Pn** **17 24 33.0 +1.7**
BARS Barje 3.70 347 *e*Pn **Pn** **17 24 35.1 +0.5**
IMMV Iera Moni Meta 3.83 167 PN **Pb** 17 24 39.8 -5.4
EDRB Edirne 3.91 46 PN **Pn** **17 24 37.7 +0.3**
KNDR Palaiochora Ch 4.01 171 PN **Pn** **17 24 42.5 +3.6**
ZAPS Zavoj 4.06 357 *e*Pn **Pn** **17 24 40.4 +0.8**
PVY Plav 4.07 327 ⇓*i*Pn **Pn** **17 24 40.7 +0.9**
PVY *i* Sn **Sn** **17 25 28.2 +0.9**
DRME Dracevica, Mon 4.13 317 ⇑*i*Pn **Pn** **17 24 41.5 +1.1**
DRME *i* Sn **Sn** **17 25 29.4 +0.9**
IDI Anoyia 4.21 158 ⇓P **Pn** **17 24 44.1 +2.4**
IDI Anoyia 4.21 158 Pn **Pn** **17 24 44.1 +2.4**
comp=E,2.9nm,0.3s,baz=328,slow=12,SNR=15
IDI Sn **Sn** **17 25 31.7 +1.0**
comp=E,2.0nm,0.3s,baz=280,slow=18,SNR=1.4
comp=E,12nm,0.5s
IDI Anoyia 4.21 158 PN **Pn** **17 24 44.9 +3.3**
SELS Selova 4.24 342 *e*Pn **Pn** **17 24 41.5 -0.4**
PDG Podgorica 4.27 320 ⇑P **Pn** **17 24 42.2 -0.2**
PDG ⇑S **Sn** **17 25 31.8 -0.1**
PDG Podgorica 4.27 320 *e*Pn **Pn** **17 24 44.4 +2.1**
PDG *e*Sn **Sn** **17 25 35.7 +3.8**
TTG Podgorica 4.27 320 ⇑*i*Pn **Pn** **17 24 44.3 +2.0**
TTG *i* Sn **Sn** **17 25 33.3 +1.4**
IVA Berane 4.33 329 ⇓*i*Pn **Pn** **17 24 43.6 +0.4**
IVA *i* Sn **Sn** **17 25 34.0 +0.5**
BUM Brajici-Budva 4.36 316 ⇓*i*Pn **Pn** **17 24 44.4 +0.7**
BUM *i* Sn **Sn** **17 25 35.1 +0.7**
PVL Pavlikeni 4.38 23 P **Pn** **17 24 42.5 -1.4**
BLKB Belogradchik 4.41 357 ⇓P **Pn** **17 24 44.3 -0.1**
BLKB ⇑S **Sn** **17 25 34.2 -1.4**
GVDS Gavdos 4.46 168 PN **Pn** **17 24 48.7 +3.8**
GVD Gavdhos 4.46 168 PN **Pn** **17 24 48.7 +3.7**
KOME Kolasin 4.47 326 ⇓*i*Pn **Pn** **17 24 46.1 +0.9**
KOME *i* Sn **Sn** **17 25 37.9 +0.8**
BOVS Bovan 4.52 348 ⇑P **Pn** **17 24 45.5 -0.3**
BOVS Bovan 4.52 348 *e*Pn **Pn** **17 24 45.5 -0.3**
CEME Cevo 4.52 319 ⇑*i*Pn **Pn** **17 24 47.0 +1.1**
CEME *i* Sn **Sn** **17 25 39.1 +0.8**
SJES Sjenica 4.63 332 *e*Pn **Pn** **17 24 48.8 +1.4**
ZAGS Zajecar 4.63 354 *e*Pn **Pn** **17 24 47.2 -0.1**
SZH Strazhica 4.63 28 P **Pn** **17 24 47.7 +0.4**
NKME Niksic 4.67 321 ⇑*i*Pn **Pn** **17 24 49.2 +1.3**
NKME *i* Sn **Sn** **17 25 42.4 +0.5**
HCY Herceg Novi 4.68 315 ⇑*i*Pn **Pn** **17 24 49.1 +1.1**
HCY *i* Sn **Sn** **17 25 43.2 +1.1**
TIP Timpagrande 4.81 272 ⇓P **Pn** **17 24 50.1 +0.2**
TIP ⇓S **Sn** **17 25 46.1 +0.5**
IVAS Ivanjica 4.84 335 *e*Pn **Pn** **17 24 50.2 -0.1**
ZKR Zakros 4.85 146 PN **Pn** **17 24 53.6 +3.2**
TREB Trebinje 4.94 317 *e*Pn **Pn** **17 24 52.8 +1.2**
TREB *e*Sn **Sn** **17 25 49.7 +1.2**
GRUS Gruza 4.96 341 *e*Pn **Pn** **17 24 54.5 +2.6**
BRY Bratogost 4.97 319 ⇑*i*Pn **Pn** **17 24 54.0 +1.9**
BRY *i* Sn **Sn** **17 25 50.2 +0.7**
MATE Matera 5.01 289 ⇑P **Pn** **17 24 52.6 0.0**
MATE ⇓S **Sn** **17 25 50.2 -0.1**
UPM Unac-Piva 5.02 324 ⇓*i*Pn **Pn** **17 24 53.8 +0.9**
UPM *i* Sn **Sn** **17 25 51.3 +0.5**
RAZG Razgrad 5.11 30 ⇑P **Pn** **17 24 54.5 +0.7**
KUBS Kucevo 5.28 350 *e*Pn **Pn** **17 24 56.4 +0.1**
BBLS Lazići 5.36 331 *e*Pn **Pn** **17 24 58.1 +0.7**
TRUS Trudelj 5.36 340 *e*Pn **Pn** **17 24 59.0 +1.7**
DIVS Divibare 5.36 337 *e*Pn **Pn** **17 24 57.9 +0.4**
STON Ston 5.40 314 *e*Pn **Pn** **17 24 57.5 -0.3**
STON *e*Sn **Sn** **17 25 59.6 -0.2**
MDVR Moldovita 5.64 351 ⇓P **Pn** **17 25 00.9 -0.3**
LOT Lotru 6.26 5 ⇓P **Pn** **17 25 09.9 +0.1**
FRGS Fruska Gora 6.38 340 ⇓P **Pn** **17 25 11.8 +0.4**
FRGS Fruska Gora 6.38 340 *e*Pn **Pn** **17 25 13.5 +2.1**
BZS Buzias 6.48 352 ⇓P **Pn** **17 25 12.4 -0.3**
BZS Buzias 6.48 352 *e*Pn **Pn** **17 25 12.9 +0.2**
MLR Muntele Rosu 6.65 18 ⇑P **Pn** **17 25 16.5 +1.3**
MLR Muntele Rosu 6.65 18 Pn **Pn** **17 25 17.1 +1.9**
comp=E,3.4nm,0.3s,baz=266,slow=7.8,SNR=22
MLR Sn **Sn** **17 26 30.8 -0.1**
comp=E,0.5nm,0.3s,baz=292,slow=19,SNR=0.9
DOPR Dopca 6.99 14 ⇑P **Pn** **17 25 20.2 +0.6**
COVR Voineasa-Covas 7.05 19 ⇓P **Pn** **17 25 22.2 +1.7**
PLOR Plostina 7.17 21 ⇑P **Pn** **17 25 23.0 +0.7**
VRI Vrincioaia 7.21 22 ⇑P **Pn** **17 25 24.4 +1.7**
MORH Mrgy, Hungar 7.68 337 P Pn 17 25 36.0 +6.8
BRTR Keskin Array B 8.28 83 Pn **Pn** **17 25 39.9 +2.3**
comp=E,0.3nm,0.3s,baz=266,slow=11,SNR=12
comp=E,1.3nm,0.5s
CSKK Cskako 8.83 339 P Pn 17 25 53.0 +8.0
VRAC Vranov 11.07 338 LR LR 17 31 31.0
comp=E,33nm,19.1s,baz=264,slow=42
GERES GERESS Array B 11.70 328 Pn **Pn** **17 26 25.3 +1.0**
comp=E,0.1nm,0.3s,baz=139,slow=17,SNR=2.4
comp=E,0.2nm,0.3s
MMAI Mount Meron Ar 11.81 118 Pn **Pn** **17 26 27.2 +1.3**
comp=E,0.3nm,0.3s,baz=315,slow=14,SNR=2.0
comp=E,0.6nm,0.5s
AKASG Malin Array Be 12.31 19 Pn **Pn** **17 26 32.5 0.0**
comp=E,0.4nm,0.3s,baz=207,slow=12,SNR=2.8
AKASG LR LR 17 31 12.2
comp=E,25nm,18.6s,baz=180,slow=37
comp=E,0.9nm,0.7s
ESDC Sonseca Array 20.77 280 P Pn 17 28 19.5 -1.2
comp=E,1.4nm,0.9s,baz=75,slow=11,SNR=8.0
comp=E,1.4nm,0.9s
HFS Hagfors 21.74 347 P **P** **17 28 28.6 +0.1**
comp=E,1.2nm,0.6s,baz=150,slow=12,SNR=1.5
comp=E,1.2nm,0.6s
FINES FINESS Array B 22.34 4 P **P** **17 28 35.3 +0.4**
comp=E,1.2nm,0.7s,baz=191,slow=9.1,SNR=5.7
comp=E,1.2nm,0.7s
NOA NORSAR Array B 23.04 345 P **P** **17 28 42.7 +0.3**
comp=E,0.5nm,0.6s,baz=155,slow=11,SNR=2.4
comp=E,0.5nm,0.6s
EKA Eskdalemuir Ar 23.75 321 P **P** **17 28 48.8 -0.6**
comp=E,0.8nm,0.6s,baz=116,slow=9.7,SNR=2.9
comp=E,0.8nm,0.6s
MKAR Makanchi Array 43.14 60 P **P** **17 31 38.0 +0.3**
comp=E,0.6nm,0.5s,baz=276,slow=8.3,SNR=6.8
comp=E,0.6nm,0.5s
ZALV Zalesovo Beam 43.58 49 P **P** **17 31 41.4 +0.3**
comp=E,0.5nm,0.5s,baz=290,slow=9.0,SNR=2.1
comp=E,0.5nm,0.5s
PDAR Pinedale Array 87.74 327 P **P** **17 36 25.7 -0.9**
comp=E,0.1nm,0.5s,baz=53,slow=9.2,SNR=2.0
comp=E,0.1nm,0.5s
ASAR Alice Springs 120.40 97 PKP **PKiKP** **17 42 28.4 -0.8**
comp=E,0.3nm,0.7s,baz=321,slow=1.8,SNR=5.3

*SNET **26** 17:45:56.5±1.1, 12°.03N×88°.34W, h15km±23km, ML3.3*
*INET **26** 17:45:59.7±0.4, 12°.03N×87°.95W, h19km, MW3.1*
ISC 26 17:45:49.0±3.0, 11°.7N±0°.2×88°.4W±0°.1, h20km, n11,
σ1§19/13, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.55**	**32**	*e*P	**Pb**	**17 46 17.7**	**+0.5**
CRIN	**San Cristobal**	**1.69**	**52**	*e*P	**Pb**	**17 46 19.2**	**-0.3**
CNCH	**Conchagua**	**1.70**	**19**	*e*P	**Pb**	**17 46 19.7**	**-0.1**
CNCH				IAML		17 46 45.2	
comp=Z,818nm,0.1s							
TEL3	**Telica 3**	**1.78**	**59**	*e*P	**Pb**	**17 46 20.1**	**-0.9**
PACA	**Pacayal**	**1.80**	**3**	*e*P	**Pb**	**17 46 22.4**	**+1.0**
PACA				*e*S	**Sn**	**17 46 42.0**	**+0.6**
TEL	**Telica**	**1.81**	**59**	*e*P	**Pb**	**17 46 20.7**	**-0.9**
CNGN	**Cerro Negro**	**1.88**	**63**	*e*P	**Pb**	**17 46 22.3**	**-0.4**
MOMN	**Momotombo**	**1.98**	**68**	*e*P	**Pb**	**17 46 23.3**	**-1.2**
JAYA	**Jayaque - finc**	**2.23**	**333**	*e*P	**Pb**	**17 46 28.8**	**0.0**
JAYA				*e*S	**Sb**	**17 46 53.4**	**-2.5**
JAYA				IAML		17 46 55.4	
comp=Z,142nm,0.2s							
P5NO	**Presa 5 de nov**	**2.34**	**352**	*e*P	**Pb**	**17 46 29.8**	**-0.7**
BOAB	**BOACO BROADBAN**	**2.80**	**73**	*e*P	**Pn**	**17 46 34.2**	**+1.5**

IDC 26 17:46:58.8±346.0, 52°.72N×32°.96E, h0km, Error ellipse: s-maj=140.1km s-min=98.4km az=21.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.71**	**30**	*i*		18 16 50.0	
baz=214,slow=319,SNR=0.9							
I31KZ	**AKTYUBINSK INF**	**15.74**	**88**	*i*		19 24 40.0	
baz=288,slow=317,SNR=1.0							
I48TN	**KESRA INFRASON**	**23.76**	**234**	*i*		20 12 20.0	
baz=37,slow=322,SNR=0.9							

*TEH **26** 17:47:15.7, 29°.72N×50°.47E, h10km, ML3.3*
*IDC **26** 17:47:16.8±15.0, 29°.98N×50°.38E, h0km, mb3.6/5, mbtmp3.6/6, ML3.0/1, Error ellipse: s-maj=307.3km s-min=33.1km az=4.0*
*OMAN **26** 17:47:24.1±1.1, 29°.53N×51°.04E, h9km, mb4.5/11, ml3.5/1, Error ellipse: s-maj=11.9km s-min=9.6km az=56.0*
ISC 26 17:47:16.8±0.8, 29°.75N±0°.05×50°.60E±0°.06, h10km, n57,
σ1§94/69, mb3.4/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.90**	**340**	*e*Pg	**Pb**	**17 47 33.9**	**-0.6**
ABEH				*e*		17 47 58.6	
comp=Z,28µm,0.6s							
KAZ1	**Kazerun**	**0.91**	**98**	*e*Pg	**Pn**	**17 47 36.3**	**+0.5**
KAZ1				*e*		17 48 02.1	
comp=Z,21µm,0.6s							
KLNJ	**Kolanjah**	**1.52**	**34**	*e*Pg	**Pg**	**17 47 46.5**	**+0.5**
KLNJ				*e*		17 48 11.7	
comp=Z,6µm,0.5s							
SHI	**Shiraz**	**1.67**	**93**	*e*Pg	**Pg**	**17 47 49.7**	**+0.9**
SHI				*e*		17 48 22.4	
comp=Z,6µm,0.6s							
AMIS	**Naft Sefid**	**2.22**	**330**	*e*Pn	**Pb**	**17 47 54.9**	**-2.2**
IBRJ	**Brojen**	**2.22**	**15**	*e*Pn	**Pb**	**17 47 56.9**	**-0.4**
IBRJ				*e*		17 48 33.5	
comp=Z,1µm,0.6s							
IRAM	**Ramesheh**	**2.56**	**36**	*e*Pn	**Pb**	**17 48 01.5**	**-1.5**
IRAM				*e*		17 48 47.4	
comp=Z,949nm,0.4s							
SHK1	**Shahrekord**	**2.58**	**5**	*e*Pn	**Pn**	**17 48 00.6**	**+1.7**
IGAR	**Gharneh**	**2.92**	**25**	*e*		**17 48 21.1**	
comp=Z,473nm,0.2s							
IGAR				*e*Pn	**Pn**	**17 48 06.3**	**+2.8**
IPIR	**Pirpir**	**2.93**	**5**	*e*		17 48 52.2	
comp=Z,725nm,0.5s							
IPIR				*e*Pn	**Pb**	**17 48 06.3**	**-3.1**
IZEF	**Zefreh**	**3.47**	**25**	*e*Pn	**Pn**	**17 48 13.2**	**+2.1**
NASN	**Na'in**	**3.58**	**31**	*e*Pn	**Pn**	**17 48 13.1**	**+0.4**
IKLH	**Kolahrood**	**3.65**	**13**	*e*Pn	**Pn**	**17 48 16.1**	**+2.4**
IKLH				*e*		17 49 12.3	
comp=Z,276nm,0.5s							
IMEH	**Mehriz**	**3.83**	**64**	*e*Pn	**Pn**	**17 48 19.3**	**+3.3**
IMEH				*e*		17 49 33.1	
comp=Z,390nm,1.1s							
KHMZ	**Khomeyn**	**4.01**	**352**	*e*Pn	**Pn**	**17 48 20.2**	**+1.6**
QAMS	**Qamsar**	**4.03**	**9**	*e*Pn	**Pn**	**17 48 21.6**	**+2.8**
QAMS				*e*		17 49 12.0	
comp=Z,511nm,0.4s							
ICHK	**Chekchek**	**4.11**	**52**	*e*Pn	**Pn**	**17 48 22.3**	**+2.4**
YZKH	**Yazd**	**4.32**	**51**	*e*Pn	**Pn**	**17 48 23.0**	**+0.4**
KRSH	**Karshahi**	**4.40**	**17**	*e*Pn	**Pn**	**17 48 25.5**	**+1.6**
IKFM	**Kafar-mosalman**	**4.43**	**329**	*e*Pn	**Pn**	**17 48 24.8**	**+0.7**
IDOB	**Doab**	**4.52**	**333**	*e*Pn	**Pn**	**17 48 26.3**	**+0.7**
GHVR	**GHOM**	**4.75**	**7**	*e*Pn	**Pn**	**17 48 29.9**	**+1.3**
HSAM	**Samen**	**4.76**	**340**	*e*Pn	**Pn**	**17 48 29.8**	**+0.9**
HSAM				*e*		17 48 57.2	
comp=Z,163nm,0.4s							
ISFB	**Sefidab**	**4.79**	**16**	*e*Pn	**Pn**	**17 48 30.5**	**+1.3**
ASAO	**Ashtian**	**4.81**	**354**	*e*Pn	**Pn**	**17 48 31.2**	**+1.7**
KHGB	**Koh Gabri**	**5.13**	**82**	*e*Pn	**Pn**	**17 48 37.0**	**+3.0**
IKOM	**Komasi**	**5.13**	**330**	*e*Pn	**Pn**	**17 48 35.0**	**+1.1**
JRN	**Qarnain Island**	**5.19**	**157**	P	**Pn**	**17 48 38.0**	**+3.4**
JRN				S	**Sn**	**17 49 36.6**	**+2.1**
KRBR	**Kerman**	**5.35**	**86**	*e*Pn	**Pn**	**17 48 37.2**	**+0.1**
DAMV	**Damavand**	**5.97**	**11**	*e*Pn	**Pn**	**17 48 47.1**	**+1.5**
SNGE	**Sanandaj**	**5.99**	**334**	*e*Pn	**Pn**	**17 48 47.2**	**+1.4**
CHTH	**Charan**	**6.16**	**4**	*e*Pn	**Pn**	**17 48 49.2**	**+1.2**
NAZ	**Nazwa, Dubai**	**6.54**	**135**	P	**Pn**	**17 48 55.0**	**+1.9**
NAZ				S	**Sn**	**17 50 06.2**	**-1.5**
MASF	**Masafi**	**6.58**	**130**	P	**Pn**	**17 48 56.7**	**+2.9**
MASF				S	**Sn**	**17 50 07.3**	**-1.6**
TNSJ	**Nastanj**	**6.61**	**49**	*e*Pn	**Pn**	**17 48 56.7**	**+2.5**
ASUD	**Al Ashush, Dub**	**6.62**	**139**	P	**Pn**	**17 48 56.2**	**+2.0**
SNR=21							
ASUD				S	**Sn**	**17 50 10.0**	**+0.3**
FAQ	**Al Faqa, Dubai**	**6.68**	**137**	P	**Pn**	**17 48 56.4**	**+1.4**
FAQ				S	**Sn**	**17 50 09.1**	**-2.1**
TABS	**Tabas**	**6.78**	**53**	*e*Pn	**Pn**	**17 48 56.7**	**+0.2**
KBAM	**BAM**	**6.87**	**93**	*e*Pn	**Pn**	**17 49 00.9**	**+3.1**
UOSS	**Minazif**	**6.91**	**133**	P	**Pn**	**17 49 00.3**	**+2.1**
UOSS				S	**Sn**	**17 50 14.4**	**-2.5**
HATD	**Hatta, Dubai**	**6.95**	**134**	P	**Pn**	**17 49 00.6**	**+1.9**
HATD				S	**Sn**	**17 50 15.4**	**-2.4**
ASHO	**Ashiyiah**	**7.00**	**135**	P	**Pn**	**17 49 01.1**	**+1.6**
SNR=14							
ASHO				S	**Sn**	**17 50 16.4**	**-2.9**
MZR	**Muzera**	**7.20**	**158**	P	**Pn**	**17 49 04.1**	**+1.9**
SNR=10							
MZR				S	**Sn**	**17 50 24.6**	**+0.6**
ALNE	**Al Ain**	**7.30**	**140**	P	**Pn**	**17 49 06.0**	**+2.4**
SNR=6.6							
JASK	**Jask - Hormozg**	**7.51**	**119**	P	**Pn**	**17 49 07.5**	**+1.1**
JASK				S	**Sn**	**17 50 30.5**	**-1.1**
SHRO	**Shahrood**	**7.71**	**35**	*e*Pn	**Pn**	**17 49 10.8**	**+1.6**
ARQ	**Araqi**	**8.30**	**139**	P	**Pn**	**17 49 18.0**	**+0.7**
SNR=38							
HOQ	**Hoqain**	**8.59**	**134**	P	**Pn**	**17 49 23.0**	**+1.7**
SNR=6.3							
HOQ				S	**Sn**	**17 50 54.6**	**-3.6**
MRVT	**Maraveh tapeh**	**9.11**	**29**	*e*Pn	**Pn**	**17 49 30.0**	**+1.5**
BSY	**Bisya**	**9.15**	**138**	P	**Pn**	**17 49 30.0**	**+1.0**
SMDO	**Samad**	**9.43**	**133**	P	**Pn**	**17 49 35.4**	**+2.5**
SMDO				S	**Sn**	**17 51 15.1**	**-4.0**
BRTR	**Keskin Array B**	**17.10**	**310**	Pn	**P**	**17 51 17.2**	**-0.6**
baz=108,slow=10,SNR=3.9							
comp=Z,1.1nm,1.0s							
AKASG	**Malin Array Be**	**26.36**	**329**	P	**P**	**17 52 51.9**	**-1.1**
comp=Z,0.2nm,0.3s,baz=134,slow=8.9,SNR=5.2							
comp=Z,0.2nm,0.3s							
BVAR	**Borovoye Array**	**27.41**	**26**	P	**P**	**17 53 02.9**	**+0.5**
comp=Z,0.5nm,0.5s,baz=216,slow=8.9,SNR=4.3							
comp=Z,0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**29.54**	**37**	P	**P**	**17 53 22.2**	**+0.8**
comp=Z,0.4nm,0.8s,baz=235,slow=9.8,SNR=3.7							
comp=Z,0.4nm,0.8s							
MKAR	**Makanchi Array**	**29.87**	**46**	P	**P**	**17 53 26.2**	**+1.7**
comp=Z,0.4nm,0.7s,baz=231,slow=9.1,SNR=2.1							
comp=Z,0.4nm,0.7s							
HFS	**Hagfors**	**39.15**	**332**	P	**P**	**17 54 42.7**	**-1.7**
comp=Z,3.0nm,1.0s,baz=115,slow=9.7,SNR=1.4							
comp=Z,3.0nm,1.0s							

*NEIC **26** 17:54:48.8±2.2, 71°.64N±0°.08×69°.6W±0°.2, h10km±1km, Error ellipse: s-maj=14.5km s-min=11.6km az=199.0*
*IDC **26** 17:54:49.6±0.6, 71°.71N×70°.07W, h0km, mb3.9/14, mbtmp4.0/18, ML3.6/4, MS3.3/27, Error ellipse: s-maj=15.6km s-min=11.9km az=128.0*
*OTT **26** 17:54:51.4±0.3, 71°.65N×69°.89W, h18km, MN4.1/4, 140km northeast from Clyde River, Nu Eastern Arctic Background Seismic Zone.*
*DNK **26** 17:54:59.8±1.1, 71°.79N×68°.26W, h18km±48km, ML2.8*
ISC 26 17:54:48.4±0.3, 71°.64N±0°.04×69°.11W±0°.02, h10km, n175,
σ2§54/164, mb4.5/39, MS3.3/23, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLRN	**Clyde River**	**1.18**	**171**	PG	**Pg**	**17 55 15.1**	**+4.1**
CLRN				SG	**Sn**	**17 55 30.6**	**+3.6**
CLRN				Trac		17 55 40.5	
comp=Z,3µm,0.2s							
UPNV	**Upernavik**	**4.14**	**68**	*i* P	Pn	17 55 57.2	+5.7
UPNV				*i* S	**Sn**	**17 56 39.4**	**-0.5**
UPNV				IAML		17 56 47.9	
comp=Z,208nm,0.3s							
ILON	**Igloolik, Nuna**	**4.82**	**248**	PN	**Pn**	**17 55 59.5**	**-1.4**
ILON				SN	**Sn**	**17 56 50.0**	**-6.8**
NUUG	**Nuugaatsiaq**	**5.04**	**84**	*i* P	Pn	17 56 09.2	+5.3
NUUG				*i* S	**Sn**	**17 57

comp=Z,2.9nm,0.3s,baz=4.6,slow=18,SNR=3.6
comp=Z,4.5nm,0.5s
SFJD Kangerlussuaq 8.00 116 Pn **Pn** **17 56 47.5 +3.0**
SFJD Sn **Sn** **17 58 14.0 -1.0**
SFJD Kangerlussuaq 8.00 116 *i* P Pn 17 56 49.7 +5.2
SFJD *i* S **Sn** **17 58 12.9 -2.0**
SFJD IAML 17 58 26.2
comp=Z,4.4nm,0.3s
SFJD Kangerlussuaq 8.00 116 PN Pn 17 56 49.5 +5.0
SFJD SN **Sn** **17 58 15.0 +0.1**
SFJD Trac 17 58 27.5
comp=Z,1.9nm,0.6s
RES Resolute Bay 8.04 304 Pn **Pn** **17 56 42.6 -2.3**
comp=Z,3.2nm,0.3s,baz=80,slow=8.7,SNR=23
RES Sn Sn 17 58 05.2 -10
comp=Z,2.6nm,0.3s,baz=342,slow=20,SNR=1.9
RES Lg Lg 17 58 54.2
comp=Z,3.6nm,0.3s,baz=148,slow=23,SNR=3.9
RES LR LR 17 59 54.8
comp=Z,161nm,19.5s,baz=102,slow=39
comp=Z,21nm,0.7s
RES Resolute Bay 8.04 304 **Pn** **17 56 42.5 -2.4**
RES Resolute Bay 8.04 304 PN **Pn** **17 56 42.9 -2.0**
RES SN **Sn** **17 58 06.8 -8.9**
RES Trac 17 59 51.6
comp=Z,80nm,0.8s
EUNU Eureka 9.39 342 **Pn** **17 57 02.9 -0.6**
SUMG Summit 9.42 70 **Pn** **17 57 07.5 +3.2**
SUMG Sn **Sn** **17 58 46.4 -3.9**
SUMG Summit 9.42 70 *i* P **Pn** **17 57 08.6 +4.4**
SUMG *e*S Sn 17 58 43.0 -7.2
SUMG IAML 17 58 57.1
comp=Z,51nm,0.3s
DY2G Dye2 9.63 111 *i* P **Pn** **17 57 11.5 +4.5**
DY2G *i* S **Sn** **17 58 49.5 -5.6**
ICESG Greenland Ices 10.17 90 *i* P **Pn** **17 57 18.9 +4.4**
ICESG *e*P 17 57 20.0
ICESG *i* S Sn 17 58 59.4 -9.1
ICESG IAML 17 59 13.1
comp=Z,16nm,0.4s
DAG Danmarks Havn 14.21 46 *e*P **Pn** **17 58 09.2 0.0**
DAG *i* S Sn 18 00 34.1 -12
DAG IAML 18 00 43.4
comp=Z,20nm,0.3s
DBG Daneborg 14.22 57 *i* P **Pn** **17 58 09.4 -0.1**
DBG *i* S Sn 18 00 38.9 -8.1
DBG IAML 18 00 50.0
comp=Z,8.4nm,0.4s
NOR Nord 14.86 27 *i* P **Pn** **17 58 17.1 -1.0**
SCO Scoresbysund 15.05 72 Pn **Pn** **17 58 21.6 +0.9**
SCO Scoresbysund 15.05 72 *e*P **Pn** **17 58 21.5 +0.9**
SCO *e*S **Sn** **18 01 00.1 -7.0**
FCC Fort Churchill 16.42 231 P **Pn** **17 58 32.8 -5.8**
FCC IAmb IAmb 17 58 51.8
comp=Z,49nm,1.1s
SCHQ Schefferville 16.90 175 Pn **Pn** **17 58 42.3 -2.4**
comp=Z,0.8nm,0.3s,baz=4.8,slow=14,SNR=4.2
SCHQ Sn Sn 18 01 43.0 -9.2
comp=Z,1.3nm,0.3s,baz=53,slow=20,SNR=3.5
SCHQ Lg Lg 18 03 34.0
comp=Z,1.1nm,0.3s,baz=270,slow=20,SNR=2.3
SCHQ LR LR 18 04 26.4
comp=Z,48nm,21.2s,baz=70,slow=34
comp=Z,3.3nm,0.5s
SCHQ Schefferville 16.90 175 **Pn** **17 58 40.3 -4.4**
SCHQ IAmb IAmb 17 58 59.9
comp=Z,35nm,1.2s
A36M Sachs Harbour 17.00 298 Pn Pn 17 58 38.9 -6.8
BORG Borgarnes 18.54 88 LR LR 18 06 07.2
comp=Z,23nm,18.5s,baz=315,slow=36
YKA Yellowknife Ar 19.41 265 P **P** **17 59 10.6 -3.6**
comp=Z,1.8nm,0.7s,baz=45,slow=12,SNR=9.4
YKA S Sn 18 02 27.8 -25
comp=Z,0.8nm,0.5s,baz=60,slow=16,SNR=2.0
YKA Lg Lg 18 04 34.1
comp=Z,0.4nm,0.3s,baz=40,slow=28,SNR=3.8
YKA LR LR 18 07 19.0
comp=Z,25nm,18.3s,baz=340,slow=39
YKA Yellowknife Ar 19.41 265 P **P** **17 59 08.8 -5.4**
KBS Kingsbay 19.94 34 P **P** **17 59 19.5 -0.4**
SPITS Spitsbergen Ar 21.06 35 P **P** **17 59 36.4 +4.4**
comp=Z,6.1nm,0.9s,baz=287,slow=15,SNR=1.4
SPITS Lg Lg 18 05 56.3
baz=66,slow=26
comp=Z,6.1nm,0.9s
SPB2 Spitsbergen Ar 21.07 35 P **P** **17 59 29.5 -2.6**
INK Inuvik 21.36 293 P **P** **17 59 35.0 -0.1**
comp=Z,1.7nm,0.4s,baz=43,slow=10,SNR=1.7
INK S S 18 03 15.9 -16
comp=Z,1.5nm,0.3s,baz=83,slow=10,SNR=1.3
INK Lg Lg 18 05 49.0
comp=Z,0.3nm,0.3s,baz=76,slow=8.3,SNR=1.5
comp=Z,1.7nm,0.4s
INK Inuvik 21.36 293 P **P** **17 59 35.1 -0.1**
INK Inuvik 21.36 293 P **P** **17 59 33.7 -1.5**
baz=52
DRLN Deer Lake 23.08 160 P **P** **17 59 54.5 +0.8**
DRLN IAmb IAmb 18 00 04.8
comp=Z,27nm,1.1s
C27K Jago River 23.39 302 P **P** **17 59 56.2 -0.5**
baz=51
EPYK Eagle Plains 23.56 291 P **P** **17 59 57.1 -1.3**
EPYK IAmb IAmb 18 00 12.1
comp=Z,6.8nm,0.7s
EPYK Eagle Plains 23.56 291 P **P** **17 59 57.2 -1.3**
baz=47
E27K Coleen River 23.74 298 P **P** **17 59 58.7 -1.5**
baz=49,SNR=6.5
VLDQ Val d'Or 23.92 194 P **P** **18 00 02.6 +0.6**
D25K Kavik River 24.30 303 P **P** **18 00 05.4 -0.1**
baz=49
BATG Bathurst New B 24.48 175 P **P** **18 00 09.6 +2.4**
MMPY Sheldon Lake, 24.57 281 P **P** **18 00 07.0 -1.1**
baz=42
D62A Allapoint, All 24.63 180 P **P** **18 00 11.0 +2.4**
D62A IAmb IAmb 18 00 23.7
comp=Z,9.4nm,0.8s
ULM Lac du Bonnet 24.65 224 P **P** **18 00 09.8 +1.1**
comp=Z,5.3nm,0.5s,baz=14,slow=8.6,SNR=8.7
ULM S **S** **18 04 32.1 +2.4**
comp=Z,0.9nm,0.4s,baz=90,slow=20,SNR=1.3
ULM Lg Lg 18 07 30.1
comp=Z,0.8nm,0.3s,baz=288,slow=21,SNR=5.3
comp=Z,5.3nm,0.5s
ULM Lac du Bonnet 24.65 224 P **P** **18 00 07.8 -0.9**
ULM IAmb IAmb 18 00 19.8
comp=Z,11nm,1.1s
G27K Doyon Strip 24.70 295 P **P** **18 00 08.6 -0.5**
baz=47,SNR=7.0
I29M Ogilvie Camp, 24.73 291 P **P** **18 00 08.5 -0.9**
I29M Ogilvie Camp, 24.73 291 P **P** **18 00 09.3 -0.1**
baz=45
F26K Sheenjek River 24.79 298 P **P** **18 00 09.5 -0.4**
baz=47
D24K Happy Valley 25.06 304 P **P** **18 00 13.1 +0.8**
baz=48
H27K Steamboat Moun 25.06 294 P **P** **18 00 13.0 +0.6**
baz=46,SNR=6.4
C23K Itkillik River 25.06 306 P **P** **18 00 13.6 +1.2**
baz=48
BMAR Burnt Mountain 25.09 298 P **P** **18 00 12.8 +0.1**
E62A Clayton Lake 25.09 181 P **P** **18 00 15.5 +2.8**
E62A IAmb IAmb 18 00 27.9
comp=Z,7.1nm,0.8s
G26K Porcupine Rive 25.20 297 P **P** **18 00 14.4 +0.8**
baz=46
F25K Christian Rive 25.27 299 P **P** **18 00 14.9 +0.6**
baz=46
FARO Faro, Yukon 25.51 282 P **P** **18 00 17.4 +0.9**
baz=42
I27K Kandik River 25.53 293 P **P** **18 00 17.2 +0.5**
baz=45,SNR=5.4
K29M Barlow Dome 25.59 287 P **P** **18 00 17.5 +0.2**
baz=43
TOLK Toolik Lake Re 25.61 303 P **P** **18 00 19.2 +1.9**
TOLK IAmb IAmb 18 00 21.9
comp=Z,8.2nm,0.8s
TOLK Toolik Lake Re 25.61 303 P **P** **18 00 18.5 +1.1**
baz=47,SNR=6.4
D23K Nanushuk River 25.68 304 P **P** **18 00 19.9 +2.0**
baz=47,SNR=9.4
E24K Your Creek 25.72 302 P **P** **18 00 19.2 +0.8**
baz=46
F64A Sherman 25.85 179 P **P** **18 00 19.6 -0.1**
F64A IAmb IAmb 18 00 52.0
comp=Z,9.4nm,0.9s

F24K Squaw Lake 25.94 300 P **P** **18 00 21.8 +1.4**
baz=46
EYMN Ely 25.95 216 P **P** **18 00 19.9 -0.7**
EYMN Ely 25.95 216 P **P** **18 00 22.6 +2.0**
baz=16
B35A Bob, Littlefor 25.99 219 P **P** **18 00 21.0 +0.1**
B35A IAmb IAmb 18 00 33.8
comp=Z,11nm,0.9s
DAWY Dawson 25.99 289 P **P** **18 00 19.7 -1.2**
DAWY Dawson 25.99 289 P **P** **18 00 22.6 +1.8**
baz=43
EGAK Eagle 26.00 292 P **P** **18 00 20.2 -0.6**
EGAK Eagle 26.00 292 P **P** **18 00 22.7 +1.8**
baz=44
F63A Nahmakanta, Br 26.01 180 P **P** **18 00 22.7 +1.6**
F63A IAmb IAmb 18 00 58.0
comp=Z,11nm,1.0s
H25K Birch Creek 26.26 297 P **P** **18 00 24.6 +1.4**
baz=44
M30M Minto, Yukon 26.31 285 P **P** **18 00 26.2 +2.5**
baz=42
E46A Sault Ste Mari 26.35 204 P **P** **18 00 22.1 -2.1**
E46A IAmb IAmb 18 00 29.0
comp=Z,12nm,0.8s
G24K Hadweenzic Riv 26.41 299 P **P** **18 00 27.5 +2.9**
baz=44
AGMN Agassiz Nation 26.49 222 P **P** **18 00 24.0 -1.4**
AGMN IAmb IAmb 18 01 05.4
comp=Z,8.8nm,0.6s
AGMN Agassiz Nation 26.49 222 P **P** **18 00 27.2 +1.7**
baz=18
E22K Anaktuvuk Pass 26.56 304 P **P** **18 00 28.8 +2.9**
baz=45
K27K Chicken 26.82 291 P **P** **18 00 30.6 +2.3**
baz=42
G23K Bananza Creek 27.11 300 P **P** **18 00 34.0 +3.1**
baz=44,SNR=7.1
F22K John River 27.11 303 P **P** **18 00 34.4 +3.5**
baz=44,SNR=9.8
H24K Noodor Dome 27.16 298 P **P** **18 00 31.1 -0.2**
H24K Noodor Dome 27.16 298 P **P** **18 00 33.9 +2.5**
baz=43
E38A The Farm, Brul 27.26 215 P **P** **18 00 31.4 -1.0**
E38A IAmb IAmb 18 00 48.0
comp=Z,18nm,1.2s
J25K Salcha River, 27.35 294 P **P** **18 00 35.9 +2.8**
baz=42
G22K Bettles 27.36 302 P **P** **18 00 35.9 +2.8**
baz=43
SADO Sadowa 27.38 196 Lg Lg 18 08 56.0
comp=Z,0.5nm,0.3s,baz=95,slow=22,SNR=9.0
SADO LR LR 18 11 47.9
comp=Z,130nm,18.2s,baz=348,slow=37
DLBC Dease Lake 27.42 273 Lg Lg 18 08 55.2
comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=1.8
DLBC Dease Lake 27.42 273 P **P** **18 00 36.7 +2.9**
baz=37
BCAR Beaver Creek A 27.45 289 P **P** **18 00 32.3 -1.7**
O30N Mendenhall 27.48 282 P **P** **18 00 36.3 +2.0**
baz=39
P32M Atlin 27.66 278 P **P** **18 00 39.1 +3.1**
baz=38
F21K Alatna River 27.66 303 P **P** **18 00 38.6 +2.8**
baz=43
ILAR Eielson Array 27.66 296 P **P** **18 00 35.8 -0.1**
comp=Z,0.3nm,0.5s,baz=35,slow=8.0,SNR=3.3
comp=Z,0.3nm,0.5s
ILAR Eielson Array 27.66 296 P **P** **18 00 32.7 -3.1**
NCB Newcomb 27.85 188 P **P** **18 00 37.6 -0.1**
NCB IAmb IAmb 18 00 52.6
comp=Z,12nm,0.8s
H22K Ishtalitna Cre 28.08 300 P **P** **18 00 42.4 +2.8**
baz=42
G21K Allakaket 28.19 302 P **P** **18 00 44.0 +3.4**
baz=42
M26K Nabesna, AK 28.32 289 P **P** **18 00 44.8 +3.0**
baz=40
ARCES ARCESS Array B 28.49 47 P **P** **18 00 46.0 +2.8**
comp=Z,5.2nm,0.9s,baz=307,slow=7.7,SNR=4.0
ARCES LR LR 18 12 11.7
comp=Z,28nm,19.9s,baz=352,slow=36
comp=Z,5.2nm,0.9s
ARCES ARCESS Array B 28.49 47 P **P** **18 00 42.3 -0.9**
ARCES IAmb IAmb 18 00 58.8
comp=Z,20nm,1.4s
IMAR Indian Mountai 28.66 302 P **P** **18 00 44.1 -0.6**
M24K Tolsona, Glenn 29.50 291 P **P** **18 00 49.4 -2.8**
J20K Nowinta River 30.16 300 P **P** **18 00 57.7 -0.2**
J20K Nowinta River 30.16 300 P **P** **18 01 01.3 +3.4**
baz=39
EGMT Eagleton 30.18 240 P **P** **18 00 58.8 +0.4**
EGMT IAmb IAmb 18 01 02.3
comp=Z,3.8nm,0.6s
K20K Telida 30.78 299 P **P** **18 01 03.8 +0.3**
NOA NORSAR Array B 31.30 67 LR LR 18 12 38.3
comp=Z,16nm,21.6s,baz=245,slow=34
RC01 Rabbit Creek A 31.35 293 P **P** **18 01 09.0 +0.5**
baz=37
TTA Tatalina 31.66 299 P **P** **18 01 11.1 -0.1**
baz=37
O53A New Philadelph 32.05 198 P **P** **18 01 17.7 +2.9**
baz=6.7
NEW Newport 32.08 249 LR LR 18 14 42.0
comp=Z,29nm,19.1s,baz=76,slow=38
ACSO Alum Creek Sta 32.25 200 P **P** **18 01 19.2 +2.6**
baz=7.7
O48B Farmland 32.48 203 P **P** **18 01 20.5 +2.0**
baz=8.9
HFS Hagfors 32.76 67 P P 18 01 26.2 +5.3
comp=Z,4.9nm,1.0s,baz=12,slow=7.4,SNR=2.5
HFS LR LR 18 12 56.8
comp=Z,33nm,20.8s,baz=340,slow=33
comp=Z,4.9nm,1.0s
BOZ Bozeman (W) 32.92 241 P **P** **18 01 22.2 -0.4**
Q54A Coxs Mills 33.27 197 P **P** **18 01 25.5 0.0**
P18K Big Mountain, 34.33 295 P **P** **18 01 34.8 +0.3**
baz=34
S54A Dingess, Beckl 34.48 197 P **P** **18 01 33.4 -2.7**
PDAR Pinedale Array 34.98 236 LR LR 18 16 15.4
comp=Z,106nm,18.8s,baz=50,slow=37
FINES FINESS Array B 35.12 56 LR LR 18 15 30.7
comp=Z,49nm,18.0s,baz=338,slow=35
R40A Maddies Statio 35.45 212 P **P** **18 01 43.5 -0.9**
S44A Carbondale 35.56 208 P **P** **18 01 45.1 -0.2**
TCUT Toone Canyon 37.02 238 P **P** **18 01 55.5 -2.6**
V48A Smith Brothers 37.14 204 P **P** **18 01 58.6 -0.2**
V48A IAmb IAmb 18 02 01.9
comp=Z,5.9nm,0.8s
Q24A Divide 37.46 229 P **P** **18 02 00.9 -1.0**
FCAR Ozark Folk Cen 37.77 211 P **P** **18 02 04.1 -0.1**
FCAR IAmb IAmb 18 02 17.0
comp=Z,6.7nm,0.8s
ELK Elko 38.41 242 LR LR 18 17 34.7
comp=Z,63nm,19.4s,baz=46,slow=36
KLMR Klimovskoe 38.97 48 *e*P **P** **18 02 18.0 +4.0**
KLMR AMP 18 02 19.4
comp=Z,12nm,1.1s
NVAR Mina Array Bea 41.43 244 LR LR 18 20 24.5
comp=Z,74nm,18.0s,baz=32,slow=37
MNK Minsk 41.59 61 *i* P P 18 02 28.5 -7.3
comp=E,1.0nm,0.5s
MNK *i* P P 18 02 28.5 -7.3
comp=N,6.0nm,0.8s
MNK *i* P P 18 02 28.5 -7.3
comp=Z,6.0nm,0.6s,baz=332
MNK *i* PP **PP** **18 04 05.3 -6.3**
MNK *i* PPP PPP 18 04 33.9
MNK *i* S **S** **18 08 46.1 -5.3**
MNK *i* SS **SS** **18 11 53.5 -2.2**
MNK *i* SSS SSS 18 12 22.4
MNK *i* LR LR 18 19 45.5
MNK *i* LRM MLR 18 21 32.5
comp=E,43nm,25.6s
MNK *i* LRM MLR 18 21 45.2
comp=N,19nm,18.6s
MNK *i* LRM MLR 18 22 26.8
comp=Z,53nm,21.7s
ANMO Albuquerque 41.60 229 LR LR 18 20 40.2
comp=Z,93nm,19.3s,baz=36,slow=37
VRAC Vranov 42.90 74 LR LR 18 19 40.4
comp=Z,15nm,20.2s,baz=320,slow=34
DAVOX Davos/Dischmat 43.07 81 LR LR 18 20 02.1
comp=Z,28nm,19.0s,baz=258,slow=35
ESDC Sonseca Array 45.10 99 P P 18 03 10.7 +6.3
comp=Z,0.7nm,0.8s,baz=334,slow=8.8,SNR=5.0
comp=Z,0.7nm,0.8s
AKASG Malin Array Be 45.35 62 P **P** **18 03 10.5 +4.4**
comp=Z,0.1nm,0.3s,baz=334,slow=8.6,SNR=2.0
AKASG LR LR 18 22 10.0
comp=Z,30nm,18.1s,baz=354,slow=36
comp=Z,0.1nm,0.3s
TX31 Lajitas Ar. Si 46.35 223 P **P** **18 03 13.7 -0.7**
TX31 IAmb IAmb 18 03 27.6
comp=Z,7.1nm,0.8s
TX32 Lajitas Array 46.35 223 P **P** **18 03 14.0 -0.4**
TXAR Lajitas Array 46.35 223 P **P** **18 03 16.2 +1.8**
comp=Z,0.5nm,0.6s,baz=27,slow=6.1,SNR=9.3
TXAR LR LR 18 23 16.4
comp=Z,100nm,21.5s,baz=3.5,slow=37
comp=Z,0.5nm,0.6s
BVAR Borovoye Array 52.39 30 LR LR 18 28 32.2
comp=Z,28nm,19.2s,baz=341,slow=38
AKTO Aktyubinsk 52.64 40 LR LR 18 27 52.6
comp=Z,19nm,18.9s,baz=336,slow=38
LPIG La Paz 52.91 229 LR LR 18 26 25.7
comp=Z,32nm,20.7s,baz=322,slow=36
ZAA0 Zalesovo Array 53.37 19 P **P** **18 04 08.1 +0.8**
ZAA0 IAmb IAmb 18 04 12.1
comp=Z,6.9nm,1.1s
ZALV Zalesovo Beam 53.37 19 P **P** **18 04 10.2 +3.0**
comp=Z,3.4nm,0.7s,baz=340,slow=7.9,SNR=14
ZALV LR LR 18 28 12.8
comp=Z,27nm,20.8s,baz=334,slow=38
comp=Z,3.4nm,0.7s
ZALV Zalesovo Beam 53.37 19 P **P** **18 04 09.2 +1.9**
KURK Kurchatov 55.82 24 P **P** **18 04 26.0 +0.8**
KURK IAmb IAmb 18 04 29.8
comp=Z,2.9nm,0.7s
KURBB Kurchatov Arra 55.90 24 P **P** **18 04 27.3 +1.6**
comp=Z,1.5nm,0.6s,baz=352,slow=6.3,SNR=11
comp=Z,1.5nm,0.6s
CMIG Matias Romero 56.63 210 LR LR 18 31 38.1
comp=Z,35nm,18.0s,baz=50,slow=39
BRTR Keskin Array B 56.65 64 P **P** **18 04 35.6 +4.2**
comp=Z,0.7nm,0.7s,baz=339,slow=6.6,SNR=3.7
comp=Z,0.7nm,0.7s
MKAR Makanchi Array 60.14 22 P **P** **18 04 59.1 +3.6**
comp=Z,0.9nm,0.9s,baz=339,slow=7.7,SNR=4.5
comp=Z,0.9nm,0.9s
ULN Ulaanbaatar 60.77 3 P **P** **18 05 00.2 +0.2**
ULN IAmb IAmb 18 05 05.8
comp=Z,4.8nm,1.1s
SONM Songino Array 60.79 3 P **P** **18 05 03.8 +3.7**
comp=Z,1.0nm,0.9s,baz=344,slow=6.0,SNR=5.5
comp=Z,1.0nm,0.9s
SDV Santo Domingo 62.70 182 LR LR 18 32 52.3
comp=Z,51nm,19.2s,baz=17,slow=36
WMQ Urumqi 63.67 19 *e*P P 18 05 26.8 +7.4
WMQ ScP 18 09 53.8
WMQ pmax pmax
comp=Z,8.0nm,1.1s
MDP Montagnes des 67.26 162 LR LR 18 37 10.5
comp=Z,46nm,18.1s,baz=256,slow=38
HHC Hu-ho-hao-te 67.82 359 *e*P P 18 05 54.5 +8.3
HHC pmax pmax
comp=Z,46nm,0.9s
HHC pmax pmax
comp=Z,220nm,4.7s
GTA Gaotai 68.98 9 *e*P **P** **18 05 57.5 +4.0**
GTA pP pwP 18 06 02.8 +6.5
GTA sP sP 18 06 06.0 +8.7
GTA pmax pmax
comp=Z,2.0nm,0.9s
LZH Lanzhou 72.46 6 *e*P **P** **18 06 13.5 -1.3**
LZH sP pwP 18 06 23.0 +5.4
LZH pmax pmax
comp=Z,19nm,1.0s
ATAH Atahualpa 78.85 189 LR LR 18 44 47.4
comp=Z,16nm,18.2s,baz=327,slow=38
PZH PanZhiHua 81.92 8 P **P** **18 07 07.3 -0.7**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,4.4s
WRA Warramunga Arr 126.52 332 PKP **PKiKP** **18 13 53.0 +1.5**
comp=Z,0.4nm,0.8s,baz=348,slow=2.0,SNR=1.8
ASAR Alice Springs 130.25 332 PKP **PKiKP** **18 14 00.6 +1.6**
comp=Z,0.4nm,0.7s,baz=5.4,slow=2.7,SNR=8.2
VNA1 Neumayer--Stat 147.43 147 PKP **PKPab** **18 14 34.6 +2.2**
VNA3 Neumayer Olymp 147.71 149 PKP **PKPab** **18 14 34.7 +1.2**
VNA2 Neumayer--Watz 147.82 147 PKP **PKPab** **18 14 35.2 +1.2**
baz=325,slow=5.3
SNAA Sanae 149.25 145 PKP **PKPbc** **18 14 35.0 -0.2**
SNAA Sanae 149.25 145 PKPbc **PKiKP** **18 14 38.7 +2.4**
comp=Z,0.6nm,0.6s,baz=281,slow=2.2,SNR=7.7

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*JMA **26** 18:02:22.6±0.6,23°N±3°×12°3E±°,h56km,MV2.6/11,FAR*
S OFF ISHIGAKIJIMA
*TAP **26** 18:02:24.1,22°77N×122°50E,h65km±2km,ML2.7,D*
ISC 26 18:02:19.2±1.3,22°80N±0°03×122°62E±0°03,h10km±10km,
n47,s072/88,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**1.07**	**263**	*i*	P		**Pn**	**18 02 41.4**	**+1.1**
	baz=264								
LDUT				*i*	S		**Sg**	**18 02 51.7**	**-2.0**
	baz=264								
CHKT	**Chengkung**	**1.19**	**285**	*e*P			**Pg**	**18 02 42.5**	**+0.3**
	baz=288								
CHKT				*e*S			**Sb**	**18 02 56.0**	**-1.5**
	baz=288								
EDH	**Donghe**	**1.23**	**278**	*i*	P		**Pg**	**18 02 43.7**	**+0.9**
	baz=280								
EDH					S		**Sb**	**18 02 57.7**	**-0.7**
	baz=280								
LYUB	**Lan-yu**	**1.25**	**230**	*e*P			**Pg**	**18 02 43.8**	**+0.6**
	baz=228								
LYUB				*e*S			**Sb**	**18 02 58.5**	**-0.5**
	baz=228								
LAY	**Lan-yu**	**1.25**	**233**		P		**Pg**	**18 02 43.6**	**+0.4**
	baz=230								
LAY				*e*S			**Sb**	**18 02 58.5**	**-0.6**
	baz=230								
FULB	**Fuli**	**1.28**	**288**		P		**Pg**	**18 02 44.1**	**+0.2**
	baz=291								
FULB				*e*S			**Sb**	**18 02 58.7**	**-1.4**
	baz=291								
HGSD	**Ruisui**	**1.30**	**302**		P		**Pg**	**18 02 44.2**	**0.0**
	baz=306								
HGSD				*e*S			**Sb**	**18 02 59.5**	**-1.0**
	baz=306								
EYUL	**Yuli**	**1.31**	**295**		P		**Pg**	**18 02 45.0**	**+0.5**
	baz=298								
EYUL				*e*S			**Sn**	**18 03 01.2**	**-0.1**
	baz=298								
ECS	**Chishang**	**1.32**	**283**	*e*P			**Pg**	**18 02 45.6**	**+0.9**
	baz=285								
ECS				*e*S			**Sg**	**18 03 02.1**	**+0.3**
	baz=285								
TWF1	**Yuli**	**1.33**	**295**	*e*P			**Pg**	**18 02 45.2**	**+0.3**
	baz=298								
TWF1				*e*S			**Sb**	**18 03 01.6**	**0.0**
	baz=298								
YULB	**Yu-li**	**1.35**	**296**		P		**Pg**	**18 02 45.6**	**+0.4**
	baz=299								
YULB				*e*S			**Sb**	**18 03 02.0**	**-0.1**
	baz=299								
LONT	**Longtian**	**1.38**	**275**	*e*P			**Pg**	**18 02 46.8**	**+1.0**
	baz=276								
LONT				*e*S			**Sg**	**18 03 03.3**	**-0.3**
	baz=276								
EHY	**Hungye**	**1.39**	**301**	*e*P			**Pg**	**18 02 45.8**	**0.0**
	baz=304								
EHY				*e*S			**Sn**	**18 03 03.1**	**+0.1**
	baz=304								
EGFH	**Guangfu**	**1.40**	**308**		P		**Pg**	**18 02 46.2**	**+0.2**
	baz=312								
EGFH				*e*S			**Sg**	**18 03 03.9**	**-0.3**
	baz=312								
TWGBT	**Beinan**	**1.42**	**271**	*e*P			**Pg**	**18 02 47.2**	**+0.7**
	baz=272								
TWGBT				*e*S			**Sb**	**18 03 04.1**	**+0.1**
	baz=272								
ESL	**Shilin**	**1.48**	**313**	*e*P			**Pb**	**18 02 47.1**	**+0.2**
	baz=317								
ESL				*e*S			**Sn**	**18 03 03.9**	**-1.6**
	baz=317								
ELDTW	**Lidau**	**1.53**	**285**	*e*P			**Pb**	**18 02 48.1**	**+0.4**
	baz=287								
ELDTW				*e*S			**Sn**	**18 03 05.8**	**-0.9**
	baz=287								
ECL	**Taimali**	**1.55**	**263**	*e*P			**Pb**	**18 02 48.6**	**+0.5**
	baz=263								

ECL				*e*S		**Sn**	**18 03 07.0**	**-0.1**
	baz=263								
ETM	**Tongmen**	**1.55**	**318**	*e*P		**Pb**	**18 02 48.8**	**+0.6**
	baz=322								
TWD	**Chiawan**	**1.58**	**324**	*e*P		**Pb**	**18 02 48.9**	**+0.3**
	baz=328								
TWD				*e*S		**Sn**	**18 03 07.2**	**-0.7**
	baz=328								
ETL	**Fush Village**	**1.63**	**326**	*e*P		**Pb**	**18 02 49.5**	**0.0**
	baz=330								
VWDT	**VWDT**	**1.66**	**305**	*e*P		**Pb**	**18 02 50.6**	**+0.7**
	baz=308								
VWDT				*e*S		**Sn**	**18 03 10.2**	**+0.5**
	baz=308								
HATJ	**Hateruma jima**	**1.66**	**41**	*e*P		**Pb**	**18 02 49.7**	**-0.2**
HATJ				*e*S		**Sn**	**18 03 09.3**	**-0.5**
NACB	**Ninganchiao**	**1.66**	**326**	P		**Pb**	**18 02 49.4**	**-0.5**
	baz=329								
NACB				*e*S		**Sn**	**18 03 08.7**	**-1.1**
	baz=329								
TAWH	**Dawu Township**	**1.67**	**254**	*e*P		**Pb**	**18 02 50.0**	**0.0**
	baz=254								
TAWH				*e*S		**Sn**	**18 03 09.7**	**-0.2**
	baz=254								
JYNG	**Yonagunijimaku**	**1.67**	**10**	P		**Pb**	**18 02 50.8**	**+0.7**
JYNG				*e*S		**Sn**	**18 03 10.7**	**+0.6**
YUS	**Yu-Shan**	**1.68**	**294**	*e*P		**Pb**	**18 02 51.0**	**+0.4**
	baz=297								
YUS				*e*S		**Sn**	**18 03 10.4**	**-0.7**
	baz=297								
EAST	**Anshuo**	**1.69**	**256**	*e*P		**Pg**	**18 02 51.6**	**-0.1**
	baz=256								
EAST				*e*S		**Sb**	**18 03 11.4**	**-0.4**
	baz=256								
YOJ	**Yonaguni jima**	**1.69**	**12**	P		**Pb**	**18 02 51.5**	**+1.0**
	baz=15								
YOJ				*e*S		**Sb**	**18 03 12.2**	**+0.4**
	baz=15								
ETLH	**Xiulin Townshi**	**1.75**	**324**	*e*P		**Pb**	**18 02 51.2**	**-0.3**
	baz=327								
ETLH				*e*S		**Sn**	**18 03 12.1**	**0.0**
	baz=327								
OWD	**Renai**	**1.75**	**311**	P		**Pb**	**18 02 51.6**	**-0.1**
	baz=314								
OWD				*e*S		**Sn**	**18 03 11.9**	**-0.5**
	baz=314								
ALS	**Alishan**	**1.81**	**293**	*e*P		**Pg**	**18 02 53.5**	**-0.5**
	baz=295								
WUSB	**Renai**	**1.82**	**311**	P		**Pb**	**18 02 53.2**	**+0.5**
	baz=314								
WUSB				*e*S		**Sn**	**18 03 14.1**	**+0.1**
	baz=314								
CHGB	**Renai**	**1.83**	**314**	*e*P		**Pb**	**18 02 53.4**	**+0.5**
	baz=316								
CHGB				*e*S		**Sn**	**18 03 14.6**	**+0.3**
	baz=316								
WHF	**Hehuan Shan**	**1.83**	**317**	*e*P		**Pb**	**18 02 53.2**	**+0.1**
	baz=320								
WHF				*e*S		**Sn**	**18 03 14.2**	**-0.4**
	baz=320								
IRIF	**Iriomote-Funau**	**1.84**	**34**	P		**Pb**	**18 02 52.5**	**-0.5**
IRIF				*e*S		**Sn**	**18 03 13.7**	**-0.4**
MASBT	**Mashibuluo**	**1.84**	**265**	*e*P		**Pb**	**18 02 53.6**	**+0.5**
	baz=265								
HEN	**Hengchun**	**1.91**	**246**	*e*P		**Pg**	**18 02 55.2**	**-0.7**
	baz=245								
HEN				*e*S		**Sb**	**18 03 17.1**	**-1.1**
	baz=245								
FUSS	**Fushou**	**1.92**	**319**	*e*P		**Pb**	**18 02 54.2**	**-0.3**
	baz=322								
FUSS				*e*S		**Sn**	**18 03 16.3**	**-0.2**
	baz=322								
JKRS	**Kuro-shima**	**1.92**	**41**	P		**Pb**	**18 02 53.7**	**-0.6**
JKRS				S		**Sn**	**18 03 15.6**	**-0.6**
NDS	**Dongshan**	**2.00**	**336**	*e*P		**Pb**	**18 02 54.9**	**-0.9**
	baz=339								
NDS				*e*S		**Sn**	**18 03 18.0**	**-0.3**
	baz=339								
TWK	**Hsinying**	**2.02**	**284**	*e*P		**Pg**	**18 02 57.2**	**-0.7**
	baz=285								
TWK				*e*S		**Sg**	**18 03 22.9**	**-1.2**
	baz=285								
JIJ	**Ishigaki jima**	**2.09**	**42**	P		**Pn**	**18 02 55.6**	**+1.2**
JIJ				S		**Sn**	**18 03 18.9**	**-1.6**
FUSB	**Fushanzhiwuyua**	**2.17**	**334**	*e*P		**Pb**	**18 02 58.5**	**-0.2**
	baz=337								
LIOB	**Emei**	**2.35**	**322**	*e*P		**Pb**	**18 03 02.4**	**+0.7**
	baz=324								
JISG	**Ishigakijimahi**	**2.36**	**41**	P		**Pn**	**18 02 59.4**	**+1.3**
JISG				*e*S		**Sn**	**18 03 26.3**	**-0.8**
JTJ	**Tarama**	**2.65**	**46**	*e*P		**Pn**	**18 03 03.5**	**+1.5**
JTJ				*e*S		**Sn**	**18 03 33.1**	**-1.1**

*NEIC **26** 18:19:08.2±0.8, 18°.5S±0°.2×177°.7W±0°.2, h625km±6km, mb4.4/18, Error ellipse: s-maj=28.8km s-min=25.7km az=140.0*

*IDC **26** 18:19:09.3±1.6, 18°.55S×177°.91W, h620km±19km, mb3.2/9, mbtmp4.1/11, Error ellipse: s-maj=34.0km s-min=16.3km az=155.0*

ISC 26 18:19:09.1±1.1,**18°.5S**±0°.1×**177°.9W**±0°.1,**h623**km±12km, **n32,σ0°.71/37,mb4.2**/19, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.93**	**281**	P	**P**	**18 20 35.7**	**-0.3**
	28nm,0.8s,baz=130,slow=13,SNR=13						
MSVF	**Nonsavu**	**3.93**	**281**	P	**P**	**18 20 36.0**	**0.0**
RAO	**Raoul Island**	**10.66**	**180**	P	**P**	**18 21 34.6**	**-0.2**
	230nm,0.4s,baz=54,slow=23,SNR=2.0						
DZM	**Mont Dzumac**	**15.10**	**254**	P	**P**	**18 22 17.7**	**+0.4**
	4.6nm,0.9s,baz=81,slow=19,SNR=1.7						
CAN	**Canberra**	**33.71**	**234**	P	**P**	**18 25 01.2**	**+0.2**
CTAO	**Charters Tower**	**33.82**	**261**	P	**P**	**18 25 02.2**	**+0.1**
TOO	**Toolangi**	**37.15**	**232**	P	**P**	**18 25 29.8**	**+0.5**
COEN	**Coen**	**37.59**	**271**	P	**P**	**18 25 34.5**	**+1.4**
COEN				IAmb	IAmb	18 25 34.8	
	comp=Z,8.6nm,0.5s						
STKA	**Stephens Creek**	**38.75**	**242**	P	**P**	**18 25 42.7**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=87,slow=9.0,SNR=9.2						
	comp=Z,1.5nm,0.4s						
STKA	**Stephens Creek**	**38.75**	**242**	P	**P**	**18 25 43.0**	**+0.7**
BBOO	**Buckleboo**	**43.52**	**242**	P	**P**	**18 26 19.8**	**0.0**
BBOO				IAmb	IAmb	18 26 31.3	
	comp=Z,32nm,1.5s						
WR0	**Warramunga Arr**	**44.80**	**260**	P	**P**	**18 26 29.6**	**-0.1**
WR0				IAmb	IAmb	18 27 04.5	
	comp=Z,11nm,1.3s						
WR0				PcP	**PcP**	**18 27 55.4**	**-2.5**
WB0	**Warramunga Arr**	**44.96**	**260**	P	**P**	**18 26 31.0**	**0.0**
WB0				IAmb	IAmb	18 26 31.5	
	comp=Z,6.4nm,0.5s						
WB0				PcP	**PcP**	**18 27 58.0**	**-0.5**
WB2	**Warramunga Arr**	**44.98**	**260**	P	**P**	**18 26 31.2**	**+0.1**
WB2				IAmb	IAmb	18 26 31.7	
	comp=Z,5.3nm,0.5s						
WB2				PcP	**PcP**	**18 27 57.6**	**-0.9**
WRA	**Warramunga Arr**	**44.99**	**260**	P	**P**	**18 26 31.2**	**0.0**
	comp=Z,3.4nm,0.4s,baz=98,slow=6.8,SNR=150						
WRA				PcP	**PcP**	**18 27 58.6**	**+0.1**
	comp=Z,1.2nm,1.1s,baz=102,slow=3.4,SNR=2.5						
	comp=Z,3.4nm,0.4s						
WRA	**Warramunga Arr**	**44.99**	**260**	P	**P**	**18 26 30.3**	**-0.9**
AS31	**Alice Springs**	**45.08**	**255**	P	**P**	**18 26 32.0**	**+0.1**
ASAR	**Alice Springs**	**45.08**	**255**	P	**P**	**18 26 32.0**	**+0.2**
	comp=Z,7.1nm,0.7s,baz=90,slow=7.6,SNR=192						
ASAR				PcP	**PcP**	**18 27 58.9**	**0.0**
	comp=Z,0.5nm,0.5s,baz=101,slow=4.8,SNR=3.0						
	comp=Z,7.1nm,0.7s						
MTN	**Manton Dam**	**49.26**	**269**	P	**P**	**18 27 02.6**	**-0.5**
MTN				IAmb	IAmb	18 27 15.4	
	comp=Z,31nm,1.4s						
WRKA	**Warakurna**	**50.11**	**253**	P	**P**	**18 27 09.4**	**+0.2**
KNRA	**Kununurra**	**50.90**	**265**	P	**P**	**18 27 15.0**	**0.0**
KNRA				IAmb	IAmb	18 27 20.8	
	comp=Z,9.0nm,1.0s						
FAKI	**Fak Fak**	**51.17**	**282**	P	**P**	**18 27 17.1**	**+0.1**
FAKI				IAmb	IAmb	18 27 43.1	
	comp=Z,42nm,1.3s						
SIJI	**Sorong**	**52.84**	**283**	P	**P**	**18 27 29.7**	**+0.8**
	comp=Z,15nm,0.7s,baz=143,slow=5.0,SNR=11						
	comp=Z,15nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.40**	**261**	P	**P**	**18 27 33.3**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=42,slow=6.2,SNR=10						
	comp=Z,0.9nm,0.3s						
PSA00	**Pilbara Seismi**	**58.22**	**256**	P	**P**	**18 28 05.6**	**-0.3**
JAGI	**Jajag, Banyuwa**	**66.50**	**269**	P	**P**	**18 28 58.6**	**-0.7**
JAGI				IAmb	IAmb	18 29 17.3	
	comp=Z,28nm,1.2s						
CLES	**Cleveland East**	**71.40**	**5**	P	**P**	**18 29 26.3**	**-1.3**
CLES				IAmb	IAmb	18 29 40.4	
	comp=Z,87nm,0.9s						
QSPA	**South Pole Qui**	**71.52**	**180**	P	**P**	**18 29 28.1**	**-0.3**
QSPA				IAmb	IAmb	18 30 11.8	
	comp=Z,7.4nm,1.4s						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**18 30 14.0**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=225,slow=8.2,SNR=3.6						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**85.93**	**57**	P	**P**	**18 30 46.3**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=216,slow=6.3,SNR=5.7						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**86.39**	**13**	P	**P**	**18 30 46.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=226,slow=4.8,SNR=5.0						
	comp=Z,0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.48**	**43**	P	**P**	**18 30 52.5**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=128,slow=2.5,SNR=1.7						
	comp=Z,0.3nm,0.8s						

*IDC **26** 18:20:43.8±0.5, 9°.24N×93°.79E, h0km, mb4.0/19, mbtmp4.0/21, ML3.6/2, MS3.6/26, Error ellipse: s-maj=24.1km s-min=13.5km az=65.0*

*NDI **26** 18:20:43.5±3.3, 9°.09N×94°.47E, h10km, mb4.4, mb4.7(NEIC)*

*NEIC **26** 18:20:45.6±2.5, 9°.23N±0°.06×93°.96E±0°.07, h10km±1km, mb4.7/51, Error ellipse: s-maj=12.9km s-min=9.8km az=53.0*

*BJI **26** 18:20:46.5±0.0, 8°.76N×93°.87E, h46km, mb4.3/41, mB4.8/20, Ms4.2/12, Ms7 3.9/13*

ISC 26 18:20:49.1±0.4,**9°.15N**±0°.05×**93°.95E**±0°.05,**h39**km±3km, **n171,σ1°53/168,mb4.5**/65,**MS3.6**/26,**4C-3D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.76**	**335**	Pn	**Pn**	**18 21 29.8**	**-1.0**
PBA	**Port Blair**	**2.76**	**335**	*e*P	**Pn**	**18 21 30.9**	**0.0**
DGPR	**DIGLIPUR**	**4.13**	**346**	*ex*	**Pn**	**18 21 54.0**	**+4.4**
SRIT	**Nakonsritamara**	**5.61**	**95**		**Pn**	**18 22 09.0**	**-1.1**
KULM	**Kulim**	**7.67**	**120**	Pn	**Pn**	**18 22 36.2**	**-2.2**
PSI	**Prapat**	**8.01**	**142**	Pn	**Pn**	**18 22 46.9**	**+3.7**
	1.0nm,0.3s,baz=352,slow=9.0,SNR=8.9						
PSI				LR	LR	18 26 18.8	
	comp=Z,718nm,19.3s,baz=306,slow=40						
	12nm,0.7s						
RPSI	**Rantau Prapat**	**8.10**	**142**		**Pn**	**18 22 44.3**	**0.0**
RPSI	**Rantau Prapat**	**8.10**	**142**		**Pn**	**18 22 46.9**	**+2.6**
IPM	**Ipoh**	**8.42**	**123**	Pn	**Pn**	**18 22 49.9**	**+1.2**
GSI	**Gunungsitoli**	**8.59**	**155**	Pn	**Pn**	**18 22 53.6**	**+2.7**
CM31	**Chiang Mai Arr**	**10.44**	**27**		**Pn**	**18 23 17.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**10.44**	**27**	Pn	**Pn**	**18 23 17.7**	**+1.3**
	0.9nm,0.3s,baz=214,slow=15,SNR=42						
CMAR	**Chiang Mai Arr**	**10.44**	**27**	Pn	**Pn**	**18 23 16.4**	**+0.1**
CHTO	**Chiang Mai**	**10.76**	**26**	Pn	**Pn**	**18 23 20.8**	**+0.1**
CRAI	**Chiangrai**	**12.64**	**29**	Pn	**Pn**	**18 23 45.7**	**-0.8**
UBPT	**Khong Chiam**	**12.80**	**60**		**Pn**	**18 23 48.6**	**0.0**
MND	**Mandalay**	**12.96**	**9**	Pn	**Pn**	**18 23 51.4**	**+0.6**
PALK	**Pallekele**	**13.24**	**263**	Pn	**Pn**	**18 23 51.5**	**-3.3**
	0.3nm,0.3s,baz=185,slow=12,SNR=1.3						
PALK				LR	LR	18 28 37.7	
	comp=Z,358nm,21.1s,baz=172,slow=36						
	6.2nm,0.9s						
PALK	**Pallekele**	**13.24**	**263**	Pn	**Pn**	**18 23 54.8**	**0.0**
RAGD	**RAYAGADA**	**14.28**	**316**	*e*P	**Pn**	**18 24 11.1**	**+2.3**
SALM	**Salem**	**15.69**	**280**	*e*P	**P**	**18 24 30.1**	**-0.9**
KOD	**Kodaikanal**	**16.29**	**275**	*e*P	**P**	**18 24 39.3**	**+1.3**
SHL	**Shillong**	**16.45**	**353**	Pn	**Pn**	**18 24 34.5**	**-2.7**
KOHI	**KOHIMA**	**16.48**	**1**	*e*P	**Pn**	**18 24 35.9**	**-1.8**
KOHI				IAmb	IAmb	18 24 45.3	
	comp=Z,42nm,0.4s						
HYBB	**Hyderabad (bro**	**17.08**	**300**	*e*P	**Pn**	**18 24 45.6**	**+0.5**
HYBB				*e*S	**S**	**18 28 04.3**	**+1.7**
MOKO	**MOKOCHONG**	**17.09**	**2**	*e*P	**Pn**	**18 24 44.3**	**-0.9**
MOKO				IAmb	IAmb	18 24 53.0	
	comp=Z,21nm,0.4s						
BLSP	**Bilaspur**	**17.19**	**320**	*e*P	**P**	**18 24 49.5**	**+1.8**
PCHI	**Peechi**	**17.40**	**276**	*e*P	**Pn**	**18 24 49.0**	**-0.1**
PCHI				*e*S	Sn	18 27 50.8	-11
TEZP	**TEZPUR**	**17.41**	**357**	*e*P	**Pn**	**18 24 46.5**	**-2.5**
TEZP				IAmb	IAmb	18 24 55.1	
	comp=Z,6.2nm,0.8s						
ITAN	**ITANAGAR**	**17.90**	**359**	*e*P	**Pn**	**18 24 54.5**	**-0.6**
ITAN				IAmb	IAmb	18 24 58.6	
	comp=Z,56nm,1.1s						
KMI	**Kunming**	**17.95**	**27**	⇓P	**P**	**18 25 01.0**	**+4.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
QIZ	**Qiongzhong**	**18.26**	**56**	P	**P**	**18 24 59.5**	**0.0**
QIZ				S	**Sn**	**18 28 22.8**	**+0.1**
QIZ				sS	**sS**	**18 28 42.5**	**+0.8**
QIZ				PcP	**PcP**	**18 29 30.8**	**-0.1**
QIZ				LR	LR		
	comp=Z,970nm,14.1s						
QIZ				LR	LR		
	comp=Z,530nm,13.5s						
QIZ				LR	LR		
	comp=Z,220nm,17.6s						
ZIRO	**ZIRO**	**18.28**	**360**	*e*P	**P**	**18 24 56.0**	**-3.8**
ZIRO				IAmb	IAmb	18 25 01.7	
	comp=Z,9.7nm,0.9s						
PZH	**PanZhiHua**	**18.77**	**22**	P	**Pn**	**18 25 07.5**	**+1.6**
PZH				S	**Sn**	**18 28 32.0**	**-3.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,290nm,4.5s						
PZH				LR	LR		
	comp=Z,260nm,15.3s						
PZH				LR	LR		
	comp=Z,340nm,14.5s						
PZH				LR	LR		
	comp=Z,400nm,13.5s						
RAMN	**Ramite**	**19.02**	**339**	*e*P	**Pn**	**18 25 08.5**	**-0.5**
	comp=Z,23nm,0.6s						
JIRN	**Jiri**	**19.82**	**339**	*e*P	**P**	**18 25 17.3**	**+0.4**
PKI	**Pulchoki**	**20.02**	**337**	*e*P	**P**	**18 25 19.5**	**+0.5**
PKIN	**Phulchoki**	**20.03**	**337**	*e*P	**P**	**18 25 19.4**	**+0.3**
GUN	**Gumba**	**20.15**	**339**	*e*P	**P**	**18 25 21.4**	**+0.9**
	comp=Z,40nm,0.5s						
LSA	**Lhasa**	**20.61**	**353**		**P**	**18 25 24.8**	**-0.8**
LSA				IAmb	IAmb	18 25 40.2	
	comp=Z,14nm,0.6s						
LSA	**Lhasa**	**20.61**	**353**	P	**P**	**18 25 20.3**	**-5.3**
GKN	**Gorkha**	**20.71**	**336**	*e*P	**P**	**18 25 26.9**	**+0.6**
	comp=Z,90nm,0.8s						
LEM	**Lembang**	**20.91**	**139**	LR	LR	18 33 40.5	
	comp=Z,243nm,21.5s,baz=340,slow=37						
KOLN	**Koldanda**	**20.94**	**334**	*e*P	**P**	**18 25 28.7**	**-0.2**
GYA	**Guiyang**	**21.01**	**33**	⇑P	**P**	**18 25 31.8**	**+2.2**
GYA				pmax	pmax		
	comp=Z,11nm,0.9s						
DANN	**Dangsing**	**21.37**	**335**	*e*P	**P**	**18 25 34.1**	**+0.5**
	comp=Z,44nm,0.6s						
PYUN	**Piuthan**	**21.50**	**333**	*e*P	**P**	**18 25 35.3**	**+0.5**
	comp=Z,31nm,0.5s						
KKM	**Kota Kinabalu**	**22.28**	**96**	P	**P**	**18 25 39.3**	**-4.0**
	comp=Z,20nm,1.2s						
CD2	**Chengdu**	**23.50**	**22**	P	**P**	**18 25 57.5**	**+1.9**
LGT	**Lohaghat**	**23.94**	**329**	*e*P	**P**	**18 26 01.0**	**+1.3**
PTH	**Pithoragarh**	**24.03**	**329**	*e*P	**P**	**18 26 02.4**	**+1.6**
GOMU	**GeErMu**	**26.94**	**2**	P	**P**	**18 26 28.3**	**+1.0**
GOMU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,52nm,5.4s						
H08S3	**Diego Garcia H**	**27.12**	**233**	T	T	18 53 26.7	
	baz=52,slow=76						
H08S2	**Diego Garcia H**	**27.12**	**233**	T	T	18 53 29.3	
	baz=52,slow=76						
H08S1	**Diego Carcia H**	**27.13**	**233**	T	T	18 53 37.0	
	baz=52,slow=76						
LZH	**Lanzhou**	**28.29**	**17**	*e*P	**P**	**18 26 41.3**	**+2.2**
LZH				pP	sP	18 26 55.5	+2.4
LZH				SS	SS	18 32 57.0	-27
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				LR	LR		
	comp=Z,230nm,15.1s						
LZH				LR	LR		
	comp=Z,260nm,15.5s						
LZH				LR	LR		
	comp=Z,250nm,17.5s						
XAN	**Xi'an**	**28.34**	**27**	P	**P**	**18 26 40.0**	**+0.5**
XAN				pP	pP	18 26 48.5	-0.9
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
KAPI	**Kappang**	**29.32**	**118**	LR	LR	18 39 12.9	
	comp=Z,140nm,19.5s,baz=283,slow=38						
LYN	**LuoYang**	**30.46**	**31**	⇑P	**P**	**18 26 59.8**	**+1.6**
LYN				pmax	pmax		
	comp=Z,40nm,5.5s						
LYN				LR	LR		
	comp=Z,210nm,14.7s						
LYN				LR	LR		
	comp=Z,190nm,12.0s						
GTA	**Gaotai**	**30.59**	**9**	⇑P	**P**	**18 27 00.8**	**+1.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NIL	**Nilore**	**30.95**	**325**	P	**P**	**18 27 02.2**	**-0.4**
DAV	**Davao City (W)**	**31.38**	**91**	LR	LR	18 40 46.8	
	comp=Z,85nm,18.8s,baz=295,slow=38						
HNS	**HongShan**	**33.81**	**30**	⇑P	**P**	**18 27 30.3**	**+2.8**
HNS				pmax	pmax		
	comp=Z,13nm,0.8s						
KBL	**Kabul**	**34.06**	**322**	P	**P**	**18 27 29.7**	**-0.3**
KBL				IAmb	IAmb	18 27 40.4	
	comp=Z,8.0nm,0.6s						
KSH	**Kashi**	**34.24**	**335**	P	**P**	**18 27 30.3**	**-1.2**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WMQ	**Urumqi**	**34.97**	**352**	*e*P	**P**	**18 27 39.3**	**+1.7**
HHC	**Hu-ho-hao-te**	**35.23**	**23**	*e*P	**P**	**18 27 41.8**	**+1.9**
HHC				pmax	pmax		
	comp=Z,50nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
BATI	**Baumata**	**35.27**	**122**	LR	LR	18 42 01.3	
	comp=Z,236nm,21.6s,baz=306,slow=36						
GAR	**Garm**	**36.49**	**328**	P	**P**	**18 27 49.9**	**-0.9**
BJI	**Beijing**	**36.58**	**29**	P	**P**	**18 27 53.5**	**+2.1**
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
CHGR	**Chuyangaron**	**36.86**	**327**	P	**P**	**18 27 53.1**	**-0.8**
CHGR				IAmb	IAmb	18 28 02.4	
	comp=Z,20nm,0.6s						
AAK	**Ala-Archa**	**37.47**	**336**	P	**P**	**18 27 59.0**	**-0.1**
AAK				IAmb	IAmb	18 28 09.4	
	comp=Z,13nm,1.1s						
SIJI	**Sorong**	**38.48**	**103**	LR	LR	18 46 50.4	
	comp=Z,24nm,18.5s,baz=219,slow=40						
MK31	**Makanchi Array**	**38.81**	**347**	P	**P**	**18 28 09.9**	**-0.3**
MKAR	**Makanchi Array**	**38.81**	**347**	P	**P**	**18 28 09.3**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=181,slow=8.0,SNR=8.6						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**38.81**	**347**	P	**P**	**18 28 09.5**	**-0.7**
MAKZ	**Makanchi**	**38.89**	**347**	P	**P**	**18 28 10.4**	**-0.5**
MBWA	**Marble Bar**	**39.35**	**140**	P	**P**	**18 28 13.5**	**-1.4**
MBWA				IAmb	IAmb	18 28 31.2	
	comp=Z,19nm,1.4s						
KK31	**Karatay Array**	**39.55**	**333**	P	**P**	**18 28 15.9**	**-0.5**
KKAR	**Karatay Array**	**39.55**	**333**	P	**P**	**18 28 15.9**	**-0.5**
KKAR	**Karatay Array**	**39.55**	**333**	P	**P**	**18 28 16.2**	**-0.1**
KKAR				IAmb	IAmb	18 28 25.9	
	comp=Z,3.7nm,0.8s						
XLT	**XiLinHaoTe**	**39.61**	**25**	⇓*i*P	**P**	**18 28 19.0**	**+2.0**
XLT				pmax	pmax		
	comp=Z,11nm,0.7s						
XLT				pmax	pmax		
	comp=Z,140nm,4.1s						
PSA00	**Pilbara Seismi**	**39.73**	**141**	P	**P**	**18 28 16.6**	**-1.5**
PSA00				IAmb	IAmb	18 28 32.8	
	comp=Z,16nm,1.2s						
SONM	**Songino Array**	**39.97**	**13**	P	**P**	**18 28 19.9**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=182,slow=5.6,SNR=9.2						
SONM				PcP	**PcP**	**18 30 25.8**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=202,slow=3.6,SNR=5.0						
SONM				ScP	**ScP**	**18 34 15.7**	**+4.9**
	comp=Z,0.7nm,0.7s,baz=188,slow=4.2,SNR=4.2						
SONM				LR	LR	18 46 17.8	
	comp=Z,79nm,18.7s,baz=186,slow=38						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**39.97**	**13**	P	**P**	**18 28 19.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**41.38**	**131**	LR	LR	18 46 39.8	
	comp=Z,65nm,19.4s,baz=290,slow=37						
GEYT	**Alibeck**	**43.13**	**317**	P	**P**	**18 28 44.7**	**-1.3**
	comp=Z,3.1nm,0.6s,baz=148,slow=8.7,SNR=6.2						
	comp=Z,3.1nm,0.6s						
GEYT	**Alibeck**	**43.13**	**317**	P	**P**	**18 28 45.2**	**-0.7**
GEYT				IAmb	IAmb	18 28 56.8	
	comp=Z,8.7nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**43.13**	**317**	P	**P**	**18 28 45.1**	**-0.9**
GYA0B				IAmb	IAmb	18 28 56.7	
	comp=Z,10.0nm,0.8s						
KURBB	**Kurchatov Arra**	**43.27**	**346**	P	**P**	**18 28 46.4**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=166,slow=7.5,SNR=13						
KURBB				PcP	**PcP**	**18 30 35.9**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=145,slow=2.8,SNR=5.8						
KURBB				LR	LR	18 49 24.6	
	comp=Z,76nm,20.3s,baz=145,slow=40						
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**43.34**	**346**	P	**P**	**18 28 46.5**	**-0.7**
CN2	**Changchun**	**44.06**	**33**	*e*P	**P**	**18 28 55.3**	**+2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZAA0	**Zalesovo Array**	**45.27**	**352**	P	**P**	**18 29 01.6**	**-1.1**
ZAA0				IAmb	IAmb	18 29 12.5	
	comp=Z,6.0nm,0.8s						
ZALV	**Zalesovo Beam**	**45.27**	**352**	P	**P**	**18 29 02.8**	**+0.

AKTO	**Aktyubinsk**	**50.75 331**	LR	LR	18 53 17.7		
	comp=Z,36nm,19.9s,baz=144,slow=39						
ASAR	**Alice Springs**	**50.88 131**	P	**P**	**18 29 47.3**	**+0.8**	
	comp=Z,0.8nm,0.9s,baz=305,slow=6.8,SNR=4.5						
ASAR			PcP	**PcP**	**18 31 03.9**	**+1.1**	
	comp=Z,0.4nm,0.7s,baz=310,slow=4.3,SNR=1.7						
ASAR			LR	LR	18 53 01.2		
	comp=Z,44nm,20.0s,baz=297,slow=38						
	comp=Z,0.8nm,0.9s						
ARU	**Arti**	**54.65 337**	P	**P**	**18 30 13.0**	**-0.9**	
ARU			IAmb	IAmb	18 30 22.8		
	comp=Z,6.3nm,1.0s						
EIL	**Elat**	**58.64 299**	LR	LR	18 56 39.3		
	comp=Z,79nm,21.6s,baz=89,slow=37						
MMAI	**Mount Meron Ar**	**58.76 303**	LR	LR	18 59 57.9		
	comp=Z,51nm,18.6s,baz=270,slow=40						
NRIK	**Noril'sk**	**60.27 357**	P	**P**	**18 30 53.2**	**0.0**	
	comp=Z,2.2nm,0.6s,baz=131,slow=7.2,SNR=3.6						
	comp=Z,2.2nm,0.6s						
STKA	**Stephens Creek**	**61.12 134**	LR	LR	19 00 24.4		
	comp=Z,51nm,20.5s,baz=220,slow=39						
BR131	**Keskin Array S**	**61.46 310**	P	**P**	**18 31 00.8**	**-1.3**	
BR131			IAmb	IAmb	18 31 07.0		
	comp=Z,6.5nm,0.9s						
BRTR	**Keskin Array B**	**61.46 310**	P	**P**	**18 31 00.9**	**-1.2**	
	comp=Z,0.8nm,0.8s,baz=129,slow=7.4,SNR=3.8						
BRTR			PP	**PP**	**18 33 16.2**	**-1.5**	
	comp=Z,0.5nm,0.6s,baz=118,slow=7.9,SNR=3.1						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**61.46 310**	P	**P**	**18 31 00.2**	**-1.9**	
TIXI	**Tiksi**	**66.03 11**	P	**P**	**18 31 30.4**	**-0.9**	
TOO	**Toolangi**	**66.92 137**	P	**P**	**18 31 37.7**	**0.0**	
AKASG	**Malin Array Be**	**67.05 321**	P	**P**	**18 31 37.1**	**-1.2**	
	comp=Z,0.4nm,0.5s,baz=90,slow=5.9,SNR=3.0						
	comp=Z,0.4nm,0.5s						
PETK	**Petropavlovsk-**	**67.09 36**	LR	LR	19 04 00.1		
	comp=Z,34nm,18.4s,baz=263,slow=39						
BURAR	**Bucovina Array**	**68.98 318**	P	**P**	**18 31 49.7**	**-1.0**	
LVZ	**Lovozero**	**70.31 340**	P	**P**	**18 31 57.4**	**-0.9**	
FIA1	**FINESS Array S**	**71.50 332**	P	**P**	**18 32 04.7**	**-0.9**	
FIA1			IAmb	IAmb	18 32 09.1		
	comp=Z,9.8nm,1.2s						
FINES	**FINESS Array B**	**71.50 332**	P	**P**	**18 32 05.2**	**-0.4**	
	comp=Z,2.2nm,0.6s,baz=99,slow=5.6,SNR=18						
FINES			LR	LR	19 07 22.5		
	comp=Z,33nm,19.8s,baz=84,slow=39						
	comp=Z,2.2nm,0.6s						
FINES	**FINESS Array B**	**71.50 332**	P	**P**	**18 32 04.7**	**-0.9**	
KEV	**Kevo**	**73.58 340**	P	**P**	**18 32 16.5**	**-1.3**	
ARCES	**ARCESS Array B**	**74.01 340**	P	**P**	**18 32 20.3**	**-0.1**	
	comp=Z,1.6nm,0.6s,baz=96,slow=5.5,SNR=11						
	comp=Z,1.6nm,0.6s						
ARCES	**ARCESS Array B**	**74.01 340**	P	**P**	**18 32 19.4**	**-1.0**	
ARCES			IAmb	IAmb	18 32 42.1		
	comp=Z,17nm,1.4s						
CONA	**Conrad Observa**	**75.29 317**	*e*P	**P**	**18 32 30.2**	**+1.9**	
SOKA	**Soboth**	**75.80 316**	*e*P	**P**	**18 32 31.9**	**+0.6**	
	comp=Z,4.5nm,1.5s						
BOSA	**Boshof**	**76.10 238**	P	**P**	**18 32 34.1**	**+0.7**	
	comp=Z,2.1nm,0.9s,baz=61,slow=10,SNR=4.6						
	comp=Z,2.1nm,0.9s						
BOSA	**Boshof**	**76.10 238**	P	**P**	**18 32 32.5**	**-0.9**	
OBKA	**Obir**	**76.13 316**	*e*P	**P**	**18 32 32.9**	**-0.3**	
	comp=Z,6.2nm,1.4s						
MOA	**Molln**	**76.36 317**	*e*P	**P**	**18 32 34.2**	**-0.2**	
	comp=Z,1.9nm,0.9s						
GERES	**GERESS Array B**	**76.76 318**	P	**P**	**18 32 36.6**	**-0.1**	
	comp=Z,1.2nm,0.7s,baz=90,slow=6.7,SNR=10						
	comp=Z,1.2nm,0.7s						
GERES	**GERESS Array B**	**76.76 318**	P	**P**	**18 32 35.4**	**-1.4**	
BIOA	**Bad Ischl, Aus**	**76.78 317**	*e*P	**P**	**18 32 35.7**	**-1.1**	
	comp=Z,0.9nm,0.4s						
PRED	**Cave del Predi**	**76.81 316**	P	**P**	**18 32 36.5**	**-0.5**	
PRED			IAmb	IAmb	18 32 49.3		
	comp=Z,4.1nm,0.8s						
CLL	**Collm**	**77.26 321**	*e*pP	**P**	**18 32 43.0**	**+3.7**	
	comp=Z,10.0nm,1.8s						
CLL			*e*PcP	**pP**	**18 32 50.0**	**-0.1**	
CLL			*es*PcP		18 32 56.0		
CLL			*e*PP	**PP**	**18 35 34.0**	**+0.4**	
CLUD	**Cludinico**	**77.28 316**	P	**P**	**18 32 38.7**	**-1.0**	
CLUD			IAmb	IAmb	18 32 48.6		
	comp=Z,5.4nm,0.9s						
STAL	**STALIGIAL**	**77.40 315**	P	**P**	**18 32 39.7**	**-0.6**	
STAL			IAmb	IAmb	18 32 48.6		
	comp=Z,11nm,1.4s						
ABTA	**Abfaltersbach**	**77.54 316**	*e*Pn	**P**	**18 32 39.7**	**-1.5**	
	comp=Z,3.7nm,1.2s						
MURB	**Monte Urbino**	**77.56 312**	P	**P**	**18 32 39.8**	**-1.5**	
MURB			IAmb	IAmb	18 33 15.4		
	comp=Z,12nm,1.2s						
CIMO	**Cimolais**	**77.59 315**	P	**P**	**18 32 40.5**	**-0.8**	
CIMO			IAmb	IAmb	18 32 50.5		
	comp=Z,6.5nm,1.0s						
WTTA	**Wattenberg**	**78.13 316**	*e*P	**P**	**18 32 45.4**	**+0.8**	
	comp=Z,2.7nm,0.6s						
NC405	**NORSAR Array S**	**78.29 331**	P	**P**	**18 32 44.5**	**-0.4**	
NC602	**NORSAR Array S**	**78.36 330**	P	**P**	**18 32 44.3**	**-1.0**	
SQTA	**Sankt Quirin**	**78.43 316**	*e*P	**P**	**18 32 46.3**	**+0.2**	
	comp=Z,4.2nm,0.9s						
NC303	**NORSAR Array S**	**78.47 331**	P	**P**	**18 32 44.0**	**-1.9**	
NC303			IAmb	IAmb	18 33 01.1		
	comp=Z,12nm,1.2s						
MOTA	**Moosalm**	**78.50 316**	*e*P	**P**	**18 32 46.6**	**+0.1**	
	comp=Z,3.8nm,1.0s						
NB201	**NORSAR Array S**	**78.50 330**	P	**P**	**18 32 46.1**	**+0.1**	
NB2	**NORSAR Subarra**	**78.53 330**	P	**P**	**18 32 45.4**	**-0.9**	
	comp=Z,1.1nm,0.6s,baz=92,slow=5.3						
NOA	**NORSAR Array B**	**78.53 330**	P	**P**	**18 32 45.6**	**-0.7**	
	comp=Z,1.2nm,0.6s,baz=92,slow=5.7,SNR=4.4						
NOA			PKPPKP	**P'P'df**	**18 59 42.9**	**-4.4**	
	comp=Z,1.0nm,1.0s,baz=266,slow=2.1,SNR=3.5						
	comp=Z,1.2nm,0.6s						
RETA	**Reutte**	**78.72 317**	*e*P	**P**	**18 32 46.5**	**-1.2**	
	comp=Z,5.9nm,0.9s						
FETA	**Feichten**	**78.76 316**	*e*P	**P**	**18 32 47.3**	**-0.7**	
	comp=Z,2.4nm,0.9s						
DAVA	**Damuels**	**79.33 316**	*e*P	**P**	**18 32 51.4**	**+0.3**	
	comp=Z,2.7nm,0.8s						
DAVOX	**Davos/Dischmat**	**79.35 316**	LR	LR	19 12 52.8		
	comp=Z,24nm,19.0s,baz=78,slow=40						
MAW	**Mawson**	**79.74 192**	P	**P**	**18 32 53.5**	**+1.0**	
	comp=Z,2.5nm,0.7s,baz=54,slow=7.6,SNR=8.9						
	comp=Z,2.5nm,0.7s						
MAW	**Mawson**	**79.74 192**	P	**P**	**18 32 52.9**	**+0.4**	
ESDC	**Sonseca Array**	**90.26 310**	P	**P**	**18 33 44.7**	**-1.5**	
	comp=Z,0.2nm,0.6s,baz=61,slow=4.6,SNR=2.0						
	comp=Z,0.2nm,0.6s						
K20K	**Telida**	**91.47 25**	P	**P**	**18 33 51.6**	**+0.4**	
K20K			IAmb	IAmb	18 34 02.9		
	comp=Z,4.3nm,0.8s						
MDT	**Midelt**	**92.21 304**	LR	LR	19 23 42.8		
	comp=Z,46nm,18.1s,baz=142,slow=41						
CAST	**Castle Rocks**	**92.25 24**	P	**P**	**18 33 54.4**	**-0.4**	
CAST			IAmb	IAmb	18 34 06.5		
	comp=Z,4.3nm,0.9s						
ILAR	**Eielson Array**	**93.64 22**	P	**P**	**18 34 01.0**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=306,slow=3.9,SNR=6.0						
ILAR			LR	LR	19 20 38.7		
	comp=Z,18nm,18.5s,baz=86,slow=38						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**123.92 30**	PKP	**PKiKP**	**18 39 45.0**	**+0.9**	
	comp=Z,0.4nm,0.7s,baz=299,slow=1.9,SNR=3.5						
PLCA	**Paso Flores**	**145.67 201**	PKPbc	**PKPab**	**18 40 25.2**	**+0.8**	
	comp=Z,4.0nm,1.0s,baz=104,slow=0.5,SNR=8.0						

*NEIC **26** 18:22:55.9±1.2,9.°1N±0.°1×94.°5E±0.°1,h10km±1km, mb4.4/11,Error ellipse: s-maj=21.1km s-min=17.1km az=87.0*
*IDC **26** 18:22:56.5±1.2,9.°17N×93.°55E,h0km,mb3.8/8, mbtmp3.8/9,ML3.9/1,MS3.6/4,Error ellipse: s-maj=49.1km s-min=27.4km az=65.0*

ISC 26 18:22:55.2±0.8,9.°1N±0.°1×94.°4E±0.°1,h10km,n35, σ0s72/28,mb4.2/14,MS3.6/4,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.05**	**327**	Pn		**Pn**	**Pn**	**18 23 42.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**10.29**	**25**	Pn		Pn	Pn	18 25 31.0	+7.9
	0.3nm,0.3s,baz=212,slow=15,SNR=4.0								
	1.3nm,0.5s								
PALK	**Pallekele**	**13.71**	**263**	Pn		**Pn**	**Pn**	**18 26 09.2**	**-0.7**
PALK	**Pallekele**	**13.71**	**263**	Sn		**Pn**	**Pn**	**18 26 09.6**	**-0.4**
	0.5nm,0.3s,baz=298,slow=15,SNR=1.5								
RAGD	**RAYAGADA**	**14.66**	**315**	*ex*		P		18 26 38.7	+9.5
KOHI	**KOHIMA**	**16.55**	**359**	*ex*		**Pn**		**18 26 48.2**	**+0.6**
HYBB	**Hyderabad (bro**	**17.53**	**300**	*e*P		**Pn**		**18 27 01.0**	**+1.0**
HYBB				*e*S		S		18 30 38.4	+15
NIL	**Nilore**	**31.27**	**325**	P		**P**		**18 29 15.0**	**-0.5**
GAR	**Garm**	**36.80**	**328**	P		**P**		**18 30 03.6**	**+0.1**
GAR				IAmb		IAmb		18 30 11.9	
	comp=Z,11nm,1.1s								
CHGR	**Chuyangaron**	**37.17**	**326**	P		**P**		**18 30 06.1**	**-0.5**
CHGR				IAmb		IAmb		18 30 07.1	
	comp=Z,7.5nm,0.8s								
MK31	**Makanchi Array**	**38.98**	**347**	P		**P**		**18 30 21.6**	**-0.1**
MKAR	**Makanchi Array**	**38.98**	**347**	P		**P**		**18 30 21.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=154,slow=8.3,SNR=2.3								
	comp=Z,0.6nm,0.7s								
MKAR	**Makanchi Array**	**38.98**	**347**	P		**P**		**18 30 21.4**	**-0.3**
UOSS	**Minazif**	**39.64**	**298**	P		**P**		**18 30 28.3**	**+0.7**
UOSS				IAmb		IAmb		18 30 42.8	
	comp=Z,7.6nm,1.1s								
FITZ	**Fitzroy Crossi**	**40.97**	**131**	P		**P**		**18 30 38.1**	**-0.5**
KSAR	**Wonju Array Be**	**41.33**	**42**	P		**P**		**18 30 40.5**	**-0.8**
ROCAM	**Rodrigues Isla**	**41.92**	**227**	P		**P**		**18 30 46.1**	**-0.2**
GEYT	**Alibeck**	**43.51**	**317**	P		**P**		**18 30 59.4**	**+0.3**
GEYT				IAmb		IAmb		18 31 09.0	
	comp=Z,3.5nm,0.7s								
ZAA0	**Zalesovo Array**	**45.40**	**352**	P		**P**		**18 31 14.5**	**+0.6**
ZAA0				IAmb		IAmb		18 31 16.5	
	comp=Z,2.3nm,0.7s								
ZALV	**Zalesovo Beam**	**45.40**	**352**	P		**P**		**18 31 15.2**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=180,slow=8.5,SNR=4.1								
	comp=Z,1.7nm,0.6s								
ZALV	**Zalesovo Beam**	**45.40**	**352**	P		**P**		**18 31 14.6**	**+0.7**
BVAR	**Borovoye Array**	**47.95**	**341**	P		**P**		**18 31 34.3**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=139,slow=7.3,SNR=1.8								
	comp=Z,0.2nm,0.4s								
WRA	**Warramunga Arr**	**48.73**	**127**	P		P		18 31 48.6	+8.1
	comp=Z,0.6nm,0.9s,baz=308,slow=8.3,SNR=1.7								
	comp=Z,0.6nm,0.9s								
RAYN	**Ar Rayn**	**48.87**	**293**	P		**P**		**18 31 41.4**	**-0.2**
RAYN				IAmb		IAmb		18 31 51.2	
	comp=Z,3.0nm,0.8s								
ABKAR	**Akbulak array**	**49.32**	**331**	P		**P**		**18 31 44.7**	**+0.2**
ABKAR	**Akbulak array**	**49.32**	**331**	P		**P**		**18 31 44.9**	**+0.4**
ABKAR				IAmb		IAmb		18 31 45.8	
	comp=Z,3.1nm,1.1s								
BELG	**Belogornoye**	**57.44**	**328**	LR		LR		19 01 47.0	
	comp=Z,50nm,18.4s,baz=153,slow=41								
CTA	**Charters Tower**	**58.65**	**120**	LR		LR		18 59 58.3	
	comp=Z,52nm,20.3s,baz=264,slow=37								
AKASG	**Malin Array Be**	**67.39**	**321**	LR		LR		19 04 04.3	
	comp=Z,44nm,21.9s,baz=179,slow=37								
FINES	**FINESS Array B**	**71.78**	**332**	P		**P**		**18 34 17.7**	**0.0**
	comp=Z,9.9nm,0.5s,baz=97,slow=4.9,SNR=5.0								
	comp=Z,0.9nm,0.5s								
ARCES	**ARCESS Array B**	**74.23**	**340**	P		**P**		**18 34 33.2**	**+1.1**
	comp=Z,4.4nm,1.1s,baz=101,slow=4.7,SNR=1.4								
	comp=Z,4.4nm,1.1s								
GERES	**GERESS Array B**	**77.12**	**318**	P		**P**		**18 34 48.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=101,slow=4.3,SNR=3.5								
	comp=Z,0.6nm,0.8s								
NOA	**NORSAR Array B**	**78.83**	**330**	P		**P**		**18 34 58.2**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=96,slow=5.3,SNR=3.2								
	comp=Z,1.0nm,0.8s								
EKA	**Eskdalemuir Ar**	**86.89**	**325**	LR		LR		19 18 11.1	
	comp=Z,42nm,19.0s,baz=42,slow=38								
PLCA	**Paso Flores**	**145.78**	**200**	PKPbc		**PKPab**		**18 42 37.2**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=200,slow=5.1,SNR=2.6								

DJA 26 18:23:30.5±0.2,9.°S±4.°×11.°9E±.°,h10km,M3.8/13,mb3.9/2, MLv3.7/13,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.68**	**124**	P		P	Pg	18 23 43.2	-0.5
WBSI				S		S	Sg	18 23 52.4	-0.2
PLAI	**Plampang**	**1.12**	**293**	P		Pb	18 23 51.5	-0.4	
PLAI				S		Sb	18 24 06.8	+0.3	
PLAI	**Plampang**	**1.12**	**293**	P		Pg	18 23 52.0	0.0	
BASI	**Baing, Sumba**	**1.98**	**119**	P		Pn	18 24 04.4	+0.3	
BASI				S		Sb	18 24 31.3	0.0	
TWSI	**Taliwang, Sumb**	**1.98**	**285**	P		Pn	18 24 04.0	-0.1	
TWSI				S		Sn	18 24 29.4	+0.3	
EDFI	**Ende, Flores**	**2.88**	**80**	P		Pn	18 24 16.3	-0.3	
MMRI	**Maumere**	**3.43**	**80**	P		Pn	18 24 24.6	+0.5	
BSSI	**Bau Bau, Buton**	**3.51**	**28**	P		Pn	18 24 24.6	-0.6	
DNP	**Denpasar**	**3.61**	**279**	P		Pn	18 24 19.8	-6.8	
SRBI	**Singaraja**	**3.75**	**288**	P		Pn	18 24 28.0	-0.5	
BKSI	**Bulukumba**	**4.12**	**18**	P		Pn	18 24 33.3	-0.3	
JAGI	**Jajag, Banyuwa**	**4.68**	**279**	P		Pn	18 24 40.8	-0.5	
ABJI	**Asem Bagus**	**4.76**	**287**	P		Pn	18 24 41.8	-0.6	
BATI	**Baumata**	**4.87**	**102**	P		Pn	18 24 44.6	+0.7	
GMJI	**Gumukmas**	**5.40**	**280**	P		Pn	18 24 52.0	+0.8	
	0.1nm24nm,1.2s								
FITZ	**Fitzroy Crossi**	**11.00**	**144**	P		Pn	18 26 05.5	-2.6	
KDU	**Kakadu**	**13.83**	**105**	P		P	18 26 53.5	-1.7	

*NEIC **26** 18:24:21.0±1.3,9.°0N±0.°2×95.°56E±0.°10,h14km±6km, mb4.5/19,Error ellipse: s-maj=30.3km s-min=10.9km az=198.0*
*IDC **26** 18:24:27.0±0.8,9.°35N×94.°08E,h0km,mb3.8/16, mbtmp3.8/17,ML3.6/1,Error ellipse: s-maj=29.7km s-min=19.7km az=61.0*

ISC 26 18:24:28.4±0.8,9.°4N±0.°1×94.°2E±0.°1,h10km,n45, σ1s18/38,mb4.2/25,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.64**	**327**	Pn		**Pg**		**18 25 18.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**10.10**	**27**	Pn		Pn		18 26 59.0	+5.4
	0.6nm,0.3s,baz=210,slow=15,SNR=9.3								
PALK	**Pallekele**	**13.52**	**262**	Pn		**Pn**		**18 27 40.0**	**-0.4**
	0.3nm,0.3s,baz=24,slow=10.0,SNR=1.5								
PALK				Sn		Sn		18 29 53.6	-17
	0.3nm,0.3s,baz=287,slow=19,SNR=1.1								
	8.2nm,0.9s								
HYBB	**Hyderabad (bro**	**17.16**	**299**	*e*P		P		18 28 44.1	+14
HYBB				*e*S		S		18 32 08.8	+20
H08S3	**Diego Garcia H**	**27.47**	**233**	T		T		18 57 21.1	
	baz=51								
H08S2	**Diego Garcia H**	**27.47**	**233**	T		T		18 57 20.5	
	baz=51								
H08S1	**Diego Carcia H**	**27.49**	**233**	T		T		18 57 20.5	
	baz=51								
NIL	**Nilore**	**30.86**	**324**	P		**P**		**18 30 45.1**	**+0.1**
DRK	**Karamyk**	**36.00**	**330**	P		**P**		**18 31 30.8**	**+0.7**
GAR	**Garm**	**36.39**	**328**	P		**P**		**18 31 33.7**	**+0.5**
GAR				IAmb		IAmb		18 31 42.2	
	comp=Z,13nm,1.1s								
CHGR	**Chuyangaron**	**36.76**	**326**	P		**P**		**18 31 36.4**	**+0.1**
CHGR				IAmb		IAmb		18 31 44.8	
	comp=Z,8.7nm,0.6s								
BTK	**Batken**	**36.93**	**330**	P		**P**		**18 31 38.0**	**+0.3**
BTK				IAmb		IAmb		18 31 52.4	
	comp=Z,6.0nm,0.9s								
AAK	**Ala-Archa**	**37.32**	**336**	P		**P**		**18 31 40.4**	**-0.7**
MKAR	**Makanchi Array**	**38.60**	**347**	P		**P**		**18 31 52.4**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=164,slow=8.8,SNR=2.4								
	comp=Z,0.7nm,0.8s								
MKAR	**Makanchi Array**	**38.60**	**347**	P		**P**		**18 31 49.5**	**-2.2**
UOSS	**Minazif**	**39.27**	**298**	P		**P**		**18 31 59.4**	**+1.7**
UOSS				IAmb		IAmb		18 32 05.4	
	comp=Z,7.0nm,1.1s								
KK31	**Karatay Array**	**39.42**	**332**	P		**P**		**18 31 58.0**	**-0.6**
KKAR	**Karatay Array**	**39.42**	**332**	P		**P**		**18 31 57.9**	**-0.7**
KKAR	**Karatay Array**	**39.42**	**332**	P		**P**		**18 31 58.8**	**+0.1**
KKAR				IAmb		IAmb		18 32 08.3	
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**39.65**	**13**	P		**P**		**18 32 01.3**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=205,slow=7.7,SNR=3.7								
	comp=Z,0.6nm,0.8s								
KSAR	**Wonju Array Be**	**41.25**	**42**	P		P		18 31 58.5	-15
KURBB	**Kurchatov Arra**	**43.07**	**345**	P		**P**		**18 32 29.1**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=162,slow=7.1,SNR=3.9								
	comp=Z,0.7nm,0.9s								
GEYT	**Alibeck**	**43.10**	**317**	P		**P**		**18 32 28.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=150,slow=12,SNR=3.6								
	comp=Z,1.9nm,0.5s								
GEYT	**Alibeck**	**43.10**	**317**	P		**P**		**18 32 29.8**	**+0.8**
GEYT				IAmb		IAmb		18 32 44.1	
	comp=Z,5.1nm,0.8s								
GYA0B	**ALIBECK ARRAY**	**43.10**	**317**	P		**P**		**18 32 30.1**	**+1.1**
GYA0B				IAmb		IAmb		18 32 38.8	
	comp=Z,6.0nm,0.8s								
KURK	**Kurchatov**	**43.13**	**346**	P		**P**		**18 32 26.4**	**-2.6**
KURK				IAmb		IAmb		18 33 00.1	
	comp=Z,6.4nm,1.4s								
ZAA0	**Zalesovo Array**	**45.04**	**352**	P		**P**		**18 32 39.9**	**-4.4**
ZAA0				IAmb		IAmb		18 32 55.0	
	comp=Z,4.3nm,0.9s								
ZALV	**Zalesovo Beam**	**45.04**	**352**	P		**P**		**18 32 45.7**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=190,slow=7.3,SNR=4.8								
	comp=Z,2.3nm,0.8s								
BVAR	**Borovoye Array**	**47.55**	**341**	P		**P**		**18 33 04.2**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=155,slow=11,SNR=3.7								
	comp=Z,0.5nm,0.7s								
JHJ2	**Mitsune**	**48.12**	**54**	P		P		18 32 52.7	-16
RAYN	**Ar Rayn**	**48.52**	**293**	P		**P**		**18 33 13.2**	**+1.1**
RAYN				IAmb		IAmb		18 33 21.5	
	comp=Z,3.7nm,0.9s								
ABKAR	**Akbulak array**	**48.91**	**331**	P		**P**		**18 33 14.4**	**-0.2**
ABKAR	**Akbulak array**	**48.91**	**331**	P		**P**		**18 33 13.7**	**-0.9**
ABKAR				IAmb		IAmb		18 33 23.6	
	comp=Z,2.1nm,0.8s								
WRA	**Warramunga Arr**	**49.13**	**127**	P		P		**18 33 16.8**	**+0.1**
	comp=Z,1.0nm,1.1s,baz=322,slow=2.6,SNR=2.6								
	comp=Z,1.0nm,1.1s								
ASAR	**Alice Springs**	**50.87**	**131**	P		**P**		**18 33 30.9**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=301,slow=7.4,SNR=2.1								
	comp=Z,0.2nm,0.4s								
BRTR	**Keskin Array B**	**61.47**	**310**	P		**P**		**18 34 45.3**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=84,slow=6.9,SNR=3.7								
	comp=Z,0.8nm,0.7s								
AKASG	**Malin Array Be**	**66.98**	**321**	P		**P**		**18 35 22.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=99,slow=7.4,SNR=1.7								
	comp=Z,0.1nm,0.3s								
FINES	**FINESS Array B**	**71.38**	**332**	P		**P**		**18 35 48.0**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=76,slow=6.2,SNR=6.1								
	comp=Z,1.4nm,0.7s								
ARCES	**ARCESS Array B**	**73.84**	**340**	P		**P**		**18 36 03.2**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=92,slow=4.6,SNR=2.5								
	comp=Z,3.1nm,0.9s								
BOSA	**Boshof**	**76.45**	**238**	P		**P**		**18 36 18.1**	**-0.8**
	comp=Z,2.7nm,1.0s,baz=104,slow=8.3,SNR=1.5								
	comp=Z,2.7nm,1.0s								
GERES	**GERESS Array B**	**76.72**	**318**	P		**P**		**18 36 20.2**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=80,slow=8.1,SNR=3.4								
	comp=Z,0.8nm,0.8s								
CIMO	**Cimolais**	**77.56**	**315**	P		**P**		**18 36 23.4**	**-1.4**
CIMO				IAmb		IAmb		18 36 25.7	
	comp=Z,6.2nm,1.2s								
NOA	**NORSAR Array B**	**78.42**	**330**	P		**P**		**18 36 29.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=92,slow=5.7,SNR=2.6								
	comp=Z,0.6nm,0.6s								
ILAR	**Eielson Array**	**93.30**	**22**	P		**P**		**18 37 43.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=304,slow=5.3,SNR=2.5								
	comp=Z,0.3nm,0.7s								
PLCA	**Paso Flores**	**146.00**	**201**	PKPbc		**PKPab**		**18 44 08.4**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=178,slow=7.6,SNR=3.3								

*IDC **26** 18:33:21.3±1.5,9.°16N×94.°05E,h0km,mb3.7/7, mbtmp3.7/8,ML3.3/1,MS3.1/1,Error ellipse: s-maj=43.2km s-min=30.8km az=46.0*

ISC 26 18:33:24.8±1.2,9.°2N±0.°2×94.°1E±0.°2,h22km,n9,σ0s78/8, mb3.7/7,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.36**	**27**	Pn		Pn	**Pn**	**18 35 52.3**	**+0.1**
	0.1nm,0.3s,baz=212,slow=15,SNR=3.0								
	0.6nm,0.3s								
PALK	**Pallekele**	**13.37**	**263**	LR		LR		18 40 32.7	
	comp=Z,80nm,19.5s,baz=178,slow=32								
SONM	**Songino Array**	**39.91**	**13**	P		**P**		**18 40 58.1**	**+0.8**
	0.6nm,1.0s,baz=165,slow=6.0,SNR=4.0								
	0.6nm,1.0s								
GEYT	**Alibeck**	**43.20**	**317**	P		**P**		**18 41 24.5**	**+0.2**
	0.7nm,0.6s,baz=125,slow=7.2,SNR=2.2					

THL					S	Sg	18 47 38.8	0.0		
	comp=E,2µm,0.7s									
THL	**Klokotos Trika**	**0.78**	**293**		P	Pg	18 47 27.5	-1.0		
THL					AML	AML	18 47 42.0			
	comp=N,4705µm,0.3s									
THL					AML	AML	18 47 45.4			
	comp=E,3387µm,0.4s									
DLFA	**Delphi**	**0.86**	**204**		P	Pb	18 47 29.7	-0.4		
PAIG	**Paliouri**	**0.87**	**41**		P	Pb	18 47 29.9	-0.2		
PAIG					S	Sn	18 47 42.4	-1.0		
PAIG	**Paliouri**	**0.87**	**41**		P	Pg	18 47 30.3	+0.1		
LIT	**Litokhoron**	**0.90**	**337**		P	Pb	18 47 29.8	-1.0		
LIT					S	Sg	18 47 43.1	+0.4		
	comp=E,6µm,0.3s									
EVR	**Evrytania**	**0.95**	**249**		P	Pg	18 47 32.1	+0.3		
VIL2	**Platees**	**1.09**	**167**		P	Pg	18 47 35.1	+0.8		
KYMI	**Kymi, Euboea I**	**1.10**	**125**		P	Pb	18 47 33.9	-0.2		
KYMI					S	Sb	18 47 48.0	-0.3		
	comp=E,1µm,0.7s									
KYMI	**Kymi, Euboea I**	**1.10**	**125**		P	Pg	18 47 35.5	+0.9		
KYMI					AML	AML	18 47 52.5			
	comp=E,2805µm,0.7s									
KYMI					AML	AML	18 47 55.5			
	comp=N,2659µm,0.5s									
VILL	**Villia**	**1.14**	**165**		P	Pn	18 47 34.1	-0.7		
VILL					S	Sb	18 47 49.3	-0.1		
	comp=N,3µm,0.4s									
THAL	**Thalero**	**1.25**	**190**		P	Pb	18 47 36.7	+0.1		
LAKA	**Lakka**	**1.28**	**217**		P	Pn	18 47 36.9	+0.2		
LOUT	**Loutraki**	**1.28**	**179**		P	Pn	18 47 36.7	0.0		
OUR	**Ouranopolis**	**1.33**	**37**		P	Pn	18 47 36.9	-0.5		
OUR	**Ouranopolis**	**1.33**	**37**		PN	Pn	18 47 36.3	-1.1		
OUR					SN	Sn	18 47 52.8	-2.0		
HORT	**Hortiatis**	**1.33**	**5**		P	Pn	18 47 36.7	-0.8		
HORT					S	Sb	18 47 53.7	-1.3		
	comp=N,2µm,0.3s									
HORT	**Hortiatis**	**1.33**	**5**		PN	Pn	18 47 36.6	-0.9		
HORT					SN	Sb	18 47 54.3	-0.7		
HORT	**Hortiatis**	**1.33**	**5**		P	Pn	18 47 36.8	-0.7		
THE	**Thessaloniki**	**1.36**	**1**		P	Pn	18 47 37.2	-0.6		
THE					S	Sn	18 47 54.5	-1.1		
	comp=N,620nm,0.4s									
KZN	**Kozani**	**1.38**	**319**		P	Pb	18 47 38.5	-0.4		
KZN					S	Sn	18 47 54.5	-1.6		
	comp=N,1µm,0.7s									
DION	**Dionisos Attik**	**1.42**	**147**		P	Pn	18 47 38.9	+0.3		
DION					S	Sn	18 47 56.6	-0.5		
	comp=N,4µm,0.8s									
ATH	**Athens Observa**	**1.43**	**155**		P	Pn	18 47 39.0	+0.3		
ATH					S	Sn	18 47 57.1	-0.2		
	comp=N,2µm,0.3s									
ATHU	**Athens Univers**	**1.46**	**153**		P	Pn	18 47 39.4	+0.2		
VLY	**Voula,Athens**	**1.56**	**155**		P	Pn	18 47 40.4	-0.2		
VLY					S	Sn	18 48 00.2	-0.4		
	comp=N,1µm,0.4s									
SOH	**Sokhos**	**1.58**	**11**		P	Pn	18 47 40.8	-0.1		
SOH					S	Sn	18 47 59.6	-1.6		
	comp=N,2µm,0.5s									
KOKK	**Kokkinochori,**	**1.75**	**27**		P	Pn	18 47 42.6	-0.5		
KNT	**Kendrikon**	**1.89**	**359**		P	Pn	18 47 45.6	+0.5		
KNT					S	Sn	18 48 09.0	+0.3		
	comp=N,415nm,1.0s									
THAS	**Thassos island**	**1.91**	**45**		P	Pn	18 47 44.4	-0.9		
SRS	**Serrai**	**1.91**	**15**		P	Pn	18 47 45.2	-0.2		
SRS					S	Sn	18 48 08.2	-1.0		
	comp=N,520nm,0.5s									
SRS	**Serrai**	**1.91**	**15**	*e*	Pn	Pn	18 47 45.4	0.0		
SRS				*e*	Sn	Sn	18 48 09.9	+0.7		
KAVA	**Kavala**	**2.10**	**34**		P	Pn	18 47 47.3	-0.7		
ITM	**Ithomi**	**2.24**	**201**		PN	Pb	18 47 52.1	-1.4		
SIGR	**SIGRI**	**2.26**	**91**		PN	Pn	18 47 49.7	-0.5		
MMB	**Musomiste**	**2.39**	**14**		P	Pn	18 47 51.6	-0.5		
GADA	**Gvkgeada**	**2.46**	**67**		PN	Pn	18 47 52.4	-0.5		
BOZC	**Bozcaada**	**2.47**	**76**		PN	Pn	18 47 52.1	-1.0		
BOZC	**Bozcaada**	**2.47**	**76**		P	Pn	18 47 51.8	-1.3		
BOZC					S	Sn	18 48 17.8	-5.1		
OHR	**Ohrid**	**2.47**	**319**	*i*	Pn	Pn	18 47 54.9	+1.8		
KOCA	**Canakkale, Ayv**	**2.48**	**84**		P	Pn	18 47 53.1	-0.2		
KOCA					S	Sn	18 48 20.0	-3.4		
KOCA				*i*	AML	AML	18 48 38.0			
	comp=N,70nm,0.8s									
CHOS	**Chios island**	**2.58**	**109**		PN	Pn	18 47 54.5	-0.2		
KKB	**Krupnik**	**2.60**	**2**		P	Pn	18 47 55.2	+0.3		
EZN	**Ezine**	**2.67**	**77**		PN	Pn	18 47 55.6	-0.2		
RDO	**Rodhopi**	**2.73**	**46**		PN	Pn	18 47 56.4	-0.2		
RZN	**Rozhen**	**2.77**	**29**		P	Pn	18 47 57.4	0.0		
BAYC	**CANAKKALE_Bayr**	**2.83**	**79**		P	Pn	18 47 57.8	-0.1		
BAYC					S	Sn	18 48 28.9	-2.9		
ALN	**Alexandroupoli**	**2.88**	**55**		PN	Pn	18 47 58.3	-0.4		
SKO	**Skopje**	**2.93**	**337**	*i*	Pn	Pn	18 47 59.5	+0.1		
GELI	**Tayfur-Gelibol**	**2.94**	**66**		PN	Pn	18 47 59.1	-0.4		
URLA	**Izmir**	**2.99**	**107**		PN	Pn	18 48 00.2	-0.1		
URLA	**Izmir**	**2.99**	**107**		P	Pn	18 47 59.3	-1.0		
URLA				*i*	AML	AML	18 49 01.0			
	comp=N,56nm,1.8s									
URLA				*i*	AML	AML	18 49 01.0			
	comp=N,83nm,1.4s									
APE	**Apeiranthos**	**3.00**	**136**		PN	Pn	18 48 00.9	+0.5		
KTHA	**Kythira Island**	**3.01**	**178**		PN	Pn	18 48 02.3	+1.8		
KDZ	**Kurdzhali**	**3.03**	**38**		PN	Pn	18 47 59.8	-1.1		
KDZ	**Kurdzhali**	**3.03**	**38**		P	Pn	18 47 58.7	-1.1		
PLD	**Plovdiv**	**3.13**	**25**		PN	Pn	18 48 02.6	+0.4		
PLD	**Plovdiv**	**3.13**	**25**	*e*	Pn	Pn	18 48 03.9	+1.7		
PLD				*e*	Sn	Sn	18 48 40.3	+1.0		
BUHA	**Balikesir, Bur**	**3.21**	**85**		P	Pn	18 48 03.5	+0.2		
ZEDA	**zmir-Bergama**	**3.23**	**94**		P	Pn	18 48 04.3	+0.8		
BOSS	**Bosilegrad**	**3.24**	**354**	*e*	Pn	Pn	18 48 04.0	+0.3		
PRVS	**Prvonek**	**3.30**	**349**	*e*	Pn	Pn	18 48 04.9	+0.3		
VTS	**Vitosha**	**3.35**	**4**	⇑	P	Pn	18 48 05.7	+0.3		
VTS				⇑	S	Sn	18 48 44.4	-0.6		
VTS	**Vitosha**	**3.35**	**4**	*e*	Pn	Pn	18 48 05.3	-0.1		
VTS				*e*	Sn	Sn	18 48 44.6	-0.4		
VTS	**Vitosha**	**3.35**	**4**		P	Pn	18 48 05.6	+0.2		
BALY	**Balya**	**3.65**	**81**		P	Pn	18 48 09.0	-0.3		
BARS	**Barje**	**3.65**	**347**	*e*	Pn	Pn	18 48 09.7	+0.4		
STEP	**BALIKESIR_Sava**	**3.70**	**87**		P	Pn	18 48 10.3	+0.2		
STEP				*i*	AML	AML	18 49 15.0			
	comp=N,42nm,0.8s									
STEP				*i*	AML	AML	18 49 16.0			
	comp=N,36nm,0.8s									
ULC	**Ulcinj**	**3.90**	**315**	⇓	*i* Pn	Pn	18 48 14.6	+1.9		
ULC					*i* Sn	Sn	18 48 56.3	-1.9		
ZAPS	**Zavoj**	**4.01**	**357**	*e*	Pn	Pn	18 48 14.8	+0.5		
DRME	**Dracevica, Mon**	**4.08**	**317**	⇑	*i* Pn	Pn	18 48 16.4	+1.2		
DRME					*i* Sn	Sn	18 49 00.9	-1.9		
SELS	**Selova**	**4.18**	**341**	*e*	Pn	Pn	18 48 16.6	0.0		
PDG	**Podgorica**	**4.22**	**320**	⇑	P	Pn	18 48 16.6	-0.5		
PDG				⇓	S	Sn	18 49 05.4	-0.7		
PDG	**Podgorica**	**4.22**	**320**	*e*	Pn	Pn	18 48 18.5	+1.4		
PDG				*e*	Sn	Sn	18 49 08.1	+2.0		
TTG	**Podgorica**	**4.22**	**320**	⇑	*i* Pn	Pn	18 48 18.1	+1.0		
TTG					*i* Sn	Sn	18 49 04.1	-2.0		
IVA	**Berane**	**4.28**	**328**	⇓	*i* Pn	Pn	18 48 19.3	+1.3		
IVA					*i* Sn	Sn	18 49 06.1	-1.6		
BUM	**Brajici-Budva**	**4.32**	**316**	⇑	*i* Pn	Pn	18 48 19.7	+1.2		
BUM					*i* Sn	Sn	18 49 09.4	+0.8		
PVL	**Pavlikeni**	**4.33**	**24**		P	Pn	18 48 17.1	-1.6		
BLKB	**Belogradchik**	**4.35**	**357**	⇑	P	Pn	18 48 19.9	+0.8		
BLKB				⇑	S	Sn	18 49 09.2	-0.3		
KOME	**Kolasin**	**4.42**	**325**	⇑	*i* Pn	Pn	18 48 21.3	+1.3		
KOME					*i* Sn	Sn	18 49 09.4	-1.8		
BOVS	**Bovan**	**4.46**	**348**	⇑	P	Pn	18 48 19.9	-0.5		
BOVS	**Bovan**	**4.46**	**348**	*e*	Pn	Pn	18 48 20.9	+0.5		
CEME	**Cevo**	**4.48**	**318**	⇓	*i* Pn	Pn	18 48 21.7	+1.0		
CEME					*i* Sn	Sn	18 49 10.1	-2.5		
ZAGS	**Zajecar**	**4.57**	**354**	*e*	Pn	Pn	18 48 22.0	+0.1		
SJES	**Sjenica**	**4.57**	**332**	*e*	Pn	Pn	18 48 23.4	+1.3		
SZH	**Strazhica**	**4.58**	**28**		P	Pn	18 48 22.1	0.0		
NKME	**Niksic**	**4.62**	**320**	⇑	*i* Pn	Pn	18 48 23.7	+1.0		
NKME					*i* Sn	Sn	18 49 15.8	-2.3		
HCY	**Herceg Novi**	**4.63**	**315**	⇓	*i* Pn	Pn	18 48 23.6	+0.8		
HCY					*i* Sn	Sn	18 49 13.7	-2.7		
IVAS	**Ivanjica**	**4.79**	**335**	*e*	Pn	Pn	18 48 25.3	+0.3		
TIP	**Timpagrande**	**4.81**	**271**	⇑	P	Pn	18 48 26.5	+1.2		
TIP				⇑	S	Sn	18 49 20.8	+0.1		
PLE	**Pljevlja**	**4.86**	**328**	⇓	*i* Pn	Pn	18 48 27.5	+1.4		
PLE					*i* Sn	Sn	18 49 20.2	-1.9		
TREB	**Trebinje**	**4.89**	**316**	*e*	Pn	Pn	18 48 27.8	+1.4		
TREB				*e*	Sn	Sn	18 49 21.9	-0.9		
GRUS	**Gruza**	**4.91**	**341**	*e*	Pn	Pn	18 48 28.8	+2.2		
BRY	**Bratogost**	**4.92**	**319**	⇑	*i* Pn	Pn	18 48 27.9	+0.9		
BRY					*i* Sn	Sn	18 49 20.9	-2.8		
UPM	**Unac-Piva**	**4.97**	**324**	⇑	*i* Pn	Pn	18 48 28.9	+1.2		
UPM					*i* Sn	Sn	18 49 22.6	-2.4		
DBRK	**Dubrovnik**	**4.97**	**315**	*e*	Pn	Pn	18 48 26.8	-0.7		
MATE	**Matera**	**4.99**	**288**	⇑	P	Pn	18 48 28.4	+0.7		
MATE				⇓	S	Sn	18 49 24.6	-0.5		
KUBS	**Kucevo**	**5.23**	**350**	*e*	Pn	Pn	18 48 31.4	+0.4		
BBLS	**Lazići**	**5.30**	**331**	*e*	Pn	Pn	18 48 31.9	-0.2		
DIVS	**Divibare**	**5.31**	**336**	*e*	Pn	Pn	18 48 31.5	-0.7		
STON	**Ston**	**5.35**	**314**	*e*	Pn	Pn	18 48 32.3	-0.4		
STON	**Ston**	**5.35**	**314**	*e*	Pn	Pn	18 48 32.4	-0.3		
STON				*e*	Sn	Sn	18 49 33.0	-1.1		
MDVR	**Moldovita**	**5.58**	**351**	⇑	P	Pn	18 48 35.5	-0.4		
HERR	**Herculane**	**5.62**	**356**	⇑	P	Pn	18 48 35.8	-0.6		
LSTV	**Lastovo**	**5.76**	**309**	*e*	Pn	Pn	18 48 38.5	+0.2		
MAKA	**Makarska**	**6.00**	**314**	*e*	Pn	Pn	18 48 40.9	-0.7		
RICI	**Ricice**	**6.08**	**316**	*e*	Pn	Pn	18 48 43.7	+1.0		
GZR	**Gura Zlata**	**6.12**	**359**	⇑	P	Pn	18 48 43.8	+0.5		
GZR				⇓	S	Sn	18 49 53.1	0.0		
HVAR	**Hvar**	**6.26**	**311**	*e*	Pn	Pn	18 48 45.2	0.0		
FRGS	**Fruska Gora**	**6.33**	**339**	⇑	P	Pn	18 48 45.8	-0.3		
VOIR		**6.36**	**13**	⇑	P	Pn	18 48 47.6	+1.0		
BZS	**Buzias**	**6.42**	**352**	⇑	P	Pn	18 48 47.6	+0.2		
BZS	**Buzias**	**6.42**	**352**	*e*	Pn	Pn	18 48 47.5	+0.2		
MLR	**Muntele Rosu**	**6.60**	**19**	⇑	P	Pn	18 48 51.1	+1.1		
NEHR	**Nehoiu**	**6.63**	**21**	⇑	P	Pn	18 48 51.0	+0.7		
KIJV	**Kijevo**	**6.81**	**316**	*e*	Pn	Pn	18 48 52.8	+0.1		
TPGR	**Topolog**	**6.91**	**34**	⇓	P	Pn	18 48 55.7	+1.6		
DOPR	**Dopca**	**6.93**	**14**	⇑	P	Pn	18 48 55.3	+0.9		
COVR	**Voineasa-Covas**	**7.00**	**19**	⇑	P	Pn	18 48 56.5	+1.1		
CFR	**Carcaliu**	**7.05**	**31**	⇑	P	Pn	18 48 56.1	+0.2		
MORI	**Morici**	**7.11**	**313**	*e*	Pn	Pn	18 48 57.2	+0.4		
PLOR	**Plostina**	**7.12**	**21**	⇓	P	Pn	18 48 57.4	+0.4		
OZUR		**7.13**	**16**	⇑	P	Pn	18 48 57.8	+0.6		
VRI	**Vrincioaia**	**7.16**	**22**	⇓	P	Pn	18 48 57.6	+0.1		
KOVH	**Kovagotottos**	**7.69**	**334**		P	Pn	18 49 05.7	+0.9		
TESR	**Tescani**	**7.73**	**19**	⇓	P	Pn	18 49 06.2	+0.9		
BIZ	**Bicaz**	**8.01**	**16**	⇑	P	Pn	18 49 10.3	+1.2		
BRTR	**Keskin Array B**	**8.28**	**83**		P	Pn	18 49 14.9	+1.9		
	comp=N,0.2nm,0.3s,baz=268,slow=11,SNR=7.5									
	comp=N,1.2nm,0.6s									
TIH	**Tihany**	**8.47**	**336**		P	Pn	18 49 18.2	+2.7		
BURAR	**Bucovina Array**	**8.50**	**10**	⇑	P	Pn	18 49 16.9	+0.8		
MPLH	**Magyarpolny**	**8.83**	**335**		P	Pn	18 49 22.9	+2.6		
VRAC	**Vranov**	**11.02**	**338**		LR	LR	18 54 59.2			
	comp=N,27nm,18.5s,baz=275,slow=41									
GERES	**GERESS Array B**	**11.65**	**328**		P	Pn	18 50 03.6	+4.5		
	comp=N,0.1nm,0.3s,baz=136,slow=14,SNR=2.2									
	comp=N,0.1nm,0.3s									
ESDC	**Sonseca Array**	**20.75**	**280**		P	Pn	18 51 55.5	-0.6		
	comp=N,1.2nm,1.0s,baz=82,slow=9.9,SNR=6.7									
	comp=N,1.2nm,1.0s									
FINES	**FINESS Array B**	**22.29**	**4**		P	P	18 52 11.2	+1.5		
	comp=N,1.1nm,0.7s,baz=201,slow=10.0,SNR=4.4									
	comp=N,1.1nm,0.7s									
NOA	**NORSAR Array B**	**22.98**	**345**		P	P	18 52 20.3	+3.1		
	comp=N,0.3nm,0.6s,baz=158,slow=10,SNR=2.2									
	comp=N,0.3nm,0.6s									
MKAR	**Makanchi Array**	**43.11**	**60**		P	P	18 55 13.0	+0.1		
	comp=N,0.4nm,0.5s,baz=278,slow=7.4,SNR=7.5									
	comp=N,0.4nm,0.5s									

MRB 26 18:47:26.0±0.3, 41°.81N×2°.63E, ML0.0/8, Error ellipse: s-maj=2.0km s-min=1.0km az=166.0, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CFON	**Fontmartina**	**0.16**	**253**	P		Pg	18 47 29.8	+0.8
CFON				S		Sg	18 47 32.6	+1.7
	7.5nm,0.2s							
CCAS	**Cassa de la Se**	**0.22**	**70**	P		Pg	18 47 30.6	+0.4
CCAS				S		Sg	18 47 33.9	+0.9
	1.6nm,0.1s							
CBEU	**Beuda**	**0.45**	**4**	P		Pg	18 47 34.7	+0.1
CBEU				S		Sg	18 47 40.9	+0.5
	1.1nm,0.3s							
CORI	**Orista**	**0.47**	**291**	P		Pg	18 47 34.9	0.0
CORI				S		Sg	18 47 41.3	+0.4
	1.8nm,0.1s							
CBRU	**Bruguera**	**0.58**	**325**	P		Pg	18 47 36.9	-0.3
CBRU				S		Sg	18 47 45.3	+0.5
	0.8nm,0.4s							
CPAL	**Palau Saverder**	**0.64**	**38**	P		Pg	18 47 37.9	-0.3
CPAL				S		Sg	18 47 46.7	+0.1
SJAF	**Saint Jean de**	**0.70**	**15**	P		Pg	18 47 38.7	-0.8
SJAF				S		Sg	18 47 48.6	+0.1
	0.9nm,0.2s							
FILF	**Fillols**	**0.75**	**356**	P		Pg	18 47 40.1	-0.3
FILF				S		Sg	18 47 50.7	+0.5
	0.5nm,0.1s							
CLLI	**Llivia**	**0.83**	**324**	P		Pg	18 47 41.3	-0.6
CLLI				S		Sg	18 47 52.8	+0.1
	0.3nm,0.2s							

ROM 26 18:51:38.2±0.1, 42°.686N±0°.004×13°.174E±0°.006, h10km, ML2.8/21, 9C-8D, Error ellipse: s-maj=0.4km s-min=0.3km az=237.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**230**	P		Pg	18 51 41.9	+0.7
LNSS				S		Sg	18 51 44.5	+1.0
LNSS				AML		AML		
	comp=E,4250µm,0.2s							
LNSS				AML		AML		
	comp=N,4610µm,0.1s							
LNSS				AML		AML		
	comp=E,7845µm,0.4s							
LNSS				AML		AML		
	comp=N,6055µm,0.5s							
LNSS				AML		AML		
	comp=E,7840µm,0.4s							
LNSS				AML		AML		
	comp=E,4253µm,0.2s							
LNSS				AML		AML		
	comp=N,4612µm,0.1s							
NRCA	**Norcia**	**0.15**	**343**	⇓	P	Pg	18 51 42.1	+0.4
NRCA					S	Sg	18 51 44.6	+0.5
NRCA					AML	AML		
	comp=E,13350µm,0.1s							
NRCA					AML	AML		
	comp=E,14900µm,0.1s							
NRCA					AML	AML		
	comp=E,14550µm,1.0s							
NRCA					AML	AML		
	comp=N,8985µm,0.1s							
NRCA					AML	AML		
	comp=E,16450µm,1.0s							
NRCA					AML	AML		
	comp=N,10015µm,0.1s							
NRCA					AML	AML		
	comp=E,14550µm,1.0s							
NRCA					AML	AML		
	comp=N,8983µm,0.1s							
NRCA					AML	AML		
	comp=N,10002µm,0.1s							
NRCA					AML	AML		
	comp=E,13371µm,0.1s							
NRCA					AML	AML		
	comp=E,14902µm,0.1s							
RM33	**Pellescritta (**	**0.18**	**170**	P		Pg	18 51 42.7	+0.6
RM33				S		Sg	18 51 46.1	+1.4
RM33				AML		AML		
	comp=E,916µm,0.8s							
RM33				AML		AML		
	comp=N,1570µm,0.3s							
RM33				AML		AML		
	comp=E,934µm,1.0s							
RM33				AML		AML		
	comp=N,1560µm,0.3s							
RM33				AML		AML		
	comp=E,12450µm,0.3s							
RM33				AML		AML		
	comp=N,11200µm,0.4s							
RM33				AML		AML		
	comp=E,12250µm,0.3s							
RM33				AML		AML		
	comp=E,12300µm,0.3s							
RM33				AML		AML		
	comp=N,11150µm,0.4s							
RM33				AML		AML		
	comp=E,12500µm,0.3s							
RM33				AML		AML		
	comp=N,11250µm,0.4s							
RM33				AML		AML		
	comp=N,11100µm,0.4s							
RM33				AML		AML		
	comp=N,1095µm,0.3s							
RM33				AML		AML		
	comp=E,846µm,0.3s							
RM33				AML		AML		
	comp=E,813µm,0.3s							
RM33				AML		AML		
	comp=N,1077µm,0.3s							
T1243	**Rocca Santa Ma**	**0.20**	**87**	P		Pg	18 51 43.2	+0.7
T1243				AML		AML		
	comp=N,29350µm,1.5s							
T1243				AML		AML		
	comp=N,29550µm,1.5s							
T1243				AML		AML		
	comp=N,29300µm,1.5s							
T1243				AML		AML		
	comp=E,26150µm,1.5s							
T1243				AML		AML		
	comp=E,26300µm,1.5s							
T1243				AML		AML		
	comp=E,4009µm,0.3s							
T1243				AML		AML		
	comp=N,4119µm,0.3s							
T1243				AML		AML		
	comp=E,3967µm,0.3s							
T1243				AML		AML		
	comp=N,4071µm,0.3s							
MC2	**Monte Cornacci**	**0.23**	**3**	P		Pg	18 51 43.4	+0.4
MC2				S		Sg	18 51 47.4	+1.1
MC2				AML		AML		
	comp=E,1528µm,0.2s							
MC2				AML		AML		
	comp=N,1538µm,0.2s							
MC2				AML		AML		
	comp=E,1722µm,0.5s							
MC2				AML		AML		
	comp=E,1722µm,0.5s							
MC2				AML		AML		
	comp=N,1695µm,0.5s							
MC2				AML		AML		
	comp=E,1525µm,0.2s							
MC2				AML		AML		
	comp=N,1540µm,0.2s							
CAMP	**Campotosto**	**0.23**	**131**	P		Pg	18 51 43.7	+0.7
CAMP				S		Sg	18 51 47.4	+1.2
CAMP				AML		AML		
	comp=N,12250µm,0.3s							
CAMP				AML		AML		
	comp=E,12650µm,0.8s							
CAMP				AML		AML		
	comp=E,176µm,0.4s							
CAMP				AML		AML		
	comp=N,199µm,0.4s							
MMO1	**Montemonaco**	**0.24**	**28**	⇓	P	Pg	18 51 43.6	+0.4
MMO1					S	Sg	18 51 47.6	+1.1
MMO1					AML	AML		
	comp=N,2555µm,0.3s							
MMO1					AML	AML		
	comp=E,2990µm,0.3s							
MMO1					AML	AML		
	comp=N,2560µm,0.3s							
MMO1					AML	AML		
	comp=N,1304µm,0.2s							
MMO1					AML	AML		
	comp=N,206µm,0.2s							
MMO1					AML	AML		
	comp=E,1225µm,0.2s							
ARRO	**Arrone**	**0.32**	**251**	⇑	P	Pg	18 51 44.9	+0.4
ARRO					AML	AML		
	comp=E,412µm,0.8s							
ARRO					AML	AML		
	comp=N,914µm,0.2s							
ARRO					AML	AML		
	comp=E,1210µm,1.1s							
ARRO					AML	AML		
	comp=N,1620µm,0.6s							
ARRO					AML	AML		
	comp=N,913µm,0.2s							
ARRO					AML	AML		
	comp=E,402µm,0.2s							
TERO	**Teramo**	**0.32**	**101**	⇑	P	Pg	18 51 44.9	+0.2
TERO					S	Sg	18 51 49.7	+0.7
TERO					AML	AML		
	comp=N,5380µm,0.2s							
TERO					AML	AML		
	comp=E,5100µm,0.8s							
TERO					AML	AML		
	comp=E,4535µm,0.2s							
TERO					AML	AML		
	comp=N,6395µm,0.2s							
TERO					AML	AML		
	comp=N,5375µm,0.2s							
TERO					AML	AML		
	comp=N,468µm,0.3s							
TERO					AML	AML		
	comp=E,437µm,0.1s							
TERO					AML	AML		
	comp=E,424µm,0.2s							
TERO					AML	AML		
	comp=N,425µm,0.3s							
FDMO	**Fiordimonte**	**0.36**	**350**	⇓	P	Pg	18 51 45.5	+0.2
FDMO					S	Sg	18 51 51.1	+1.1
FDMO					AML	AML		
	comp=N,1830µm,0.2s							
FDMO					AML	AML		
	comp=E,1095µm,1.5s							
FDMO					AML	AML		
	comp=E,415µm,0.1s							
FDMO					AML	AML		
	comp=N,525µm,0.4s							
CESI	**CESI - Serrava**	**0.38**	**328**	⇓	P	Pg	18 51 45.9	+0.2
CESI					S	Sg	18 51 51.7	+1.1
CESI					AML

CESX				AML	AML			
	comp=N,360µm,0.2s							
CESX				AML	AML			
	comp=E,306µm,0.4s							
OFFI	**Offida**	**0.45**	**56**	⇑P	Pb	18 51 48.1	-0.1	
OFFI				AML	AML			
	comp=E,3425µm,0.7s							
OFFI				AML	AML			
	comp=N,5820µm,0.6s							
OFFI				AML	AML			
	comp=E,969µm,0.5s							
OFFI				AML	AML			
	comp=N,1045µm,0.5s							
ASSB	**Assisi San Ben**	**0.52**	**313**	P	Pg	18 51 48.7	+0.4	
ASSB				S	Sb	18 51 56.5	-0.6	
ASSB				AML	AML			
	comp=N,918µm,1.2s							
ASSB				AML	AML			
	comp=E,862µm,0.8s							
ASSB				AML	AML			
	comp=E,274µm,0.2s							
ASSB				AML	AML			
	comp=N,255µm,0.1s							
TRTR	**Tortoreto Alta**	**0.56**	**77**	P	Pb	18 51 50.1	0.0	
TRTR				AML	AML			
	comp=N,3100µm,0.4s							
TRTR				AML	AML			
	comp=E,2430µm,0.3s							
TRTR				AML	AML			
	comp=N,503µm,0.4s							
TRTR				AML	AML			
	comp=E,495µm,0.4s							
VCEL	**Villa Celiera**	**0.57**	**120**	⇑P	Pb	18 51 49.9	-0.5	
VCEL				S	Sb	18 51 58.6	0.0	
VCEL				AML	AML			
	comp=E,2915µm,1.6s							
VCEL				AML	AML			
	comp=N,2465µm,0.8s							
SNTG	**Esanatoglia**	**0.59**	**343**	P	Pg	18 51 49.9	+0.2	
SNTG				S	Sb	18 51 59.0	-0.2	
SNTG				AML	AML			
	comp=N,380µm,1.1s							
SNTG				AML	AML			
	comp=N,380µm,1.1s							
SNTG				AML	AML			
	comp=E,306µm,0.5s							
SNTG				AML	AML			
	comp=N,155µm,0.2s							
SNTG				AML	AML			
	comp=E,121µm,0.1s							
ATCC	**AVT- Casa Cast**	**0.64**	**322**	⇑P	Pg	18 51 50.7	+0.2	
ATCC				S	Sb	18 52 00.4	0.0	
ATCC				AML	AML			
	comp=E,818µm,0.6s							
ATCC				AML	AML			
	comp=N,714µm,0.9s							
ATCC				AML	AML			
	comp=N,714µm,0.9s							
ATCC				AML	AML			
	comp=E,816µm,0.6s							
ATCC				AML	AML			
	comp=E,166µm,0.1s							
ATCC				AML	AML			
	comp=N,144µm,0.2s							
T0110	**Collepietro**	**0.64**	**136**	P	Pg	18 51 50.6	0.0	
T0110				AML	AML			
	comp=E,2035µm,0.3s							
T0110				AML	AML			
	comp=N,2485µm,0.4s							
EL6	**Elcito**	**0.65**	**355**	P	Pg	18 51 50.4	-0.3	
EL6				AML	AML			
	comp=E,337µm,0.3s							
EL6				AML	AML			
	comp=N,309µm,0.2s							
SRES	**S.Oreste - Sor**	**0.67**	**228**	P	Pg	18 51 51.3	+0.3	
SRES				AML	AML			
	comp=N,348µm,0.9s							
SRES				AML	AML			
	comp=E,335µm,0.2s							
SRES				AML	AML			
	comp=E,118µm,0.2s							
SRES				AML	AML			
	comp=N,94µm,0.3s							
FOSV	**Fossato di Vic**	**0.68**	**334**	⇓P	Pg	18 51 51.4	+0.1	
FOSV				AML	AML			
	comp=E,379µm,0.6s							
FOSV				AML	AML			
	comp=N,399µm,1.0s							
FOSV				AML	AML			
	comp=E,378µm,0.6s							
FOSV				AML	AML			
	comp=N,400µm,1.0s							
FOSV				AML	AML			
	comp=E,69µm,0.2s							
FOSV				AML	AML			
	comp=N,120µm,0.3s							
CING	**Cingoli**	**0.69**	**1**	⇑P	Pg	18 51 51.6	+0.1	
CING				AML	AML			
	comp=N,473µm,0.3s							
CING				AML	AML			
	comp=E,600µm,1.2s							
CING				AML	AML			
	comp=N,122µm,0.1s							
CING				AML	AML			
	comp=E,153µm,0.2s							
ATTE	**AVT- Monte Tez**	**0.79**	**311**	⇑P	Pn	18 51 55.7	+0.3	
MGAB	**Montegabbione**	**0.81**	**287**	⇓P	Pb	18 51 54.2	-0.2	
MGAB				AML	AML			
	comp=N,892µm,0.4s							
MGAB				AML	AML			
	comp=E,1085µm,1.2s							
MGAB				AML	AML			
	comp=N,816µm,0.4s							
MGAB				AML	AML			
	comp=E,949µm,0.5s							
ARVD	**Arcevia**	**0.83**	**348**	⇑P	Pg	18 51 54.4	+0.2	
ARVD				S	Sn	18 52 08.0	-0.3	
ARVD				AML	AML			
	comp=E,380µm,0.7s							
ARVD				AML	AML			
	comp=N,186µm,0.5s							
ARVD				AML	AML			
	comp=N,185µm,0.5s							
SACS	**San Casciano d**	**0.94**	**280**	⇓P	Pg	18 51 56.5	+0.2	
SACS				AML	AML			
	comp=E,184µm,0.6s							
SACS				AML	AML			
	comp=N,224µm,0.7s							
PIEI	**Pieia**	**0.97**	**331**	⇑P	Pn	18 51 58.0	+0.1	
PIEI				S	Sn	18 52 13.0	+1.2	
PIEI				AML	AML			
	comp=E,219µm,1.1s							
PIEI				AML	AML			
	comp=N,205µm,1.3s							
PIEI				AML	AML			
	comp=E,254µm,0.5s							
PIEI				AML	AML			
	comp=N,206µm,0.5s							
PIEI				AML	AML			
	comp=N,89µm,0.3s							
MA9	**Marino**	**0.99**	**203**	S	Sn	18 52 12.0	-0.2	
APEC	**Apecchio**	**1.03**	**328**	⇓P	Pn	18 51 58.8	0.0	
APEC				S	Sg	18 52 11.0	-0.5	

ROM 26 18:52:07.1±0.1, 42°613N±0'.004×13°295E±0'.005, h8km, ML2.8/29, 24C-16D, Error ellipse: s-maj=0.4km s-min=0.3km az=63.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.11**	**132**	P	Pg	18 52 10.3	+0.6
CAMP				S	Sg	18 52 12.2	+0.7
CAMP				AML	AML		
	comp=E,12650µm,0.8s						
CAMP				AML	AML		
	comp=N,12250µm,0.3s						
RM33	**Pellescritta (**	**0.12**	**210**	⇑P	Pg	18 52 10.6	+0.8
RM33				S	Sg	18 52 12.7	+1.0
RM33				AML	AML		
	comp=E,12450µm,0.3s						
RM33				AML	AML		
	comp=N,11200µm,0.4s						
RM33				AML	AML		
	comp=E,12250µm,0.3s						
RM33				AML	AML		
	comp=N,11150µm,0.4s						
RM33				AML	AML		
	comp=N,11100µm,0.4s						
RM33				AML	AML		
	comp=E,12500µm,0.3s						
RM33				AML	AML		
	comp=N,11250µm,0.4s						
RM33				AML	AML		
	comp=E,12300µm,0.3s						
RM33				AML	AML		
	comp=E,12300µm,1.7s						
RM33				AML	AML		
	comp=E,12500µm,1.7s						
T1243	**Rocca Santa Ma**	**0.14**	**53**	⇑P	Pg	18 52 10.8	+0.6
T1243				S	Sg	18 52 13.3	+1.0
T1243				AML	AML		
	comp=E,26150µm,1.5s						
T1243				AML	AML		
	comp=E,26300µm,1.5s						
T1243				AML	AML		
	comp=N,29300µm,1.5s						
T1243				AML	AML		
	comp=N,29550µm,1.5s						
T1243				AML	AML		
	comp=N,29350µm,1.5s						
T1243				AML	AML		
	comp=E,26150µm,0.5s						
T1243				AML	AML		
	comp=E,26300µm,0.5s						
T1243				AML	AML		
	comp=N,29300µm,0.5s						
T1243				AML	AML		
	comp=N,29550µm,0.5s						
LNSS	**Leonessa**	**0.19**	**267**	P	Pg	18 52 11.8	+0.9
LNSS				S	Sg	18 52 15.1	+1.5
LNSS				AML	AML		
	comp=E,7845µm,0.4s						
LNSS				AML	AML		
	comp=N,6055µm,0.5s						
LNSS				AML	AML		
	comp=E,7840µm,0.4s						
TERO	**Teramo**	**0.23**	**87**	⇑P	Pg	18 52 12.2	+0.5
TERO				S	Sg	18 52 15.8	+1.1
TERO				AML	AML		
	comp=N,5380µm,0.2s						
TERO				AML	AML		
	comp=E,5100µm,0.8s						
TERO				AML	AML		
	comp=N,5375µm,0.2s						
TERO				AML	AML		
	comp=E,4535µm,0.2s						
TERO				AML	AML		
	comp=N,6395µm,0.2s						
NRCA	**Norcia**	**0.26**	**329**	⇓P	Pg	18 52 13.1	+0.9
NRCA				S	Sg	18 52 17.1	+1.4
NRCA				AML	AML		
	comp=E,14550µm,1.0s						
NRCA				AML	AML		
	comp=N,8685µm,0.1s						
NRCA				AML	AML		
	comp=N,8690µm,0.1s						
NRCA				AML	AML		
	comp=E,16450µm,1.0s						
NRCA				AML	AML		
	comp=N,9675µm,0.1s						
NRCA				AML	AML		
	comp=N,8705µm,0.1s						
NRCA				AML	AML		
	comp=N,8705µm,1.9s						
NRCA				AML	AML		
	comp=N,9675µm,1.9s						
NRCA				AML	AML		
	comp=E,16450µm,1.0s						
NRCA				AML	AML		
	comp=E,14550µm,1.0s						
GIGS	**Gran Sasso**	**0.26**	**129**	⇑P	Pg	18 52 12.6	+0.3
GIGS				S	Sg	18 52 16.6	+0.9
GIGS				AML	AML		
	comp=N,928µm,0.7s						
GIGS				AML	AML		
	comp=E,902µm,0.5s						
MMO1	**Montemonaco**	**0.29**	**5**	⇓P	Pg	18 52 13.6	+0.8
MMO1				S	Sb	18 52 18.2	-1.4
MMO1				AML	AML		
	comp=N,2555µm,0.3s						
MMO1				AML	AML		
	comp=E,2990µm,0.3s						
MMO1				AML	AML		
	comp=N,2560µm,0.3s						
MC2	**Monte Cornacci**	**0.31**	**346**	⇓P	Pg	18 52 14.0	+0.8
MC2				S	Sb	18 52 19.5	-0.9
MC2				AML	AML		
	comp=E,1725µm,0.5s						
MC2				AML	AML		
	comp=N,1700µm,0.5s						
MC2				AML	AML		
	comp=E,1722µm,0.5s						
MC2				AML	AML		
	comp=N,1695µm,0.5s						
MC2				AML	AML		
	comp=E,1722µm,0.5s						
FIAM	**Fiamignano**	**0.37**	**201**	P	Pg	18 52 15.0	+0.7
FIAM				S	Sb	18 52 21.1	-0.8
FIAM				AML	AML		
	comp=E,717µm,0.8s						
FIAM				AML	AML		
	comp=N,676µm,0.8s						
FIAM				AML	AML		
	comp=N,676µm,0.8s						
FIAM				AML	AML		
	comp=E,716µm,0.8s						
FIAM				AML	AML		
	comp=N,676µm,1.2s						
ARRO	**Arrone**	**0.39**	**265**	P	Pg	18 52 15.2	+0.5
ARRO				AML	AML		
	comp=N,1620µm,0.6s						
ARRO				AML	AML		
	comp=E,1210µm,1.1s						
FEMA	**Monte Fema**	**0.39**	**333**	P	Pg	18 52 15.5	+0.7
FEMA				S	Sb	18 52 21.7	-1.0
FAGN	**Fagnano**	**0.41**	**148**	P	Pg	18 52 15.7	+0.7
FAGN				S	Sb	18 52 22.9	-0.1
FAGN				AML	AML		
	comp=N,3605µm,0.3s						
FAGN				AML	AML		
	comp=E,4450µm,0.6s						
OFFI	**Offida**	**0.43**	**42**	P	Pb	18 52 16.8	-0.1
OFFI				AML	AML		
	comp=N,5820µm,0.6s						
OFFI				AML	AML		
	comp=E,3425µm,0.7s						
OFFI				AML	AML		
	comp=N,5820µm,1.4s						
FDMO	**Fiordimonte**	**0.45**	**340**	P	Pg	18 52 16.3	+0.5
FDMO				S	Sb	18 52 23.3	-0.9
FDMO				AML	AML		
	comp=E,1095µm,1.5s						
FDMO				AML	AML		
	comp=N,1830µm,0.2s						
FDMO				AML	AML		
	comp=E,1095µm,0.5s						
VCEL	**Villa Celiera**	**0.46**	**118**	⇑P	Pg	18 52 16.6	+0.7
VCEL				S	Sb	18 52 24.4	-0.1
VCEL				AML	AML		
	comp=E,2915µm,1.6s						
VCEL				AML	AML		
	comp=N,2465µm,0.8s						
VCEL				AML	AML		
	comp=E,2915µm,0.4s						
CSP1	**Cessapalombo**	**0.48**	**352**	⇓P	Pg	18 52 17.0	+0.5
CSP1				S	Sb	18 52 24.8	-0.5
CSP1				AML	AML		
	comp=E,1344µm,0.3s						
CSP1				AML	AML		
	comp=N,1435µm,0.2s						
CSP1				AML	AML		
	comp=N,1438µm,0.2s						
CSP1				AML	AML		
	comp=E,1345µm,0.3s						
CESI	**CESI - Serrava**	**0.49**	**324**	P	Pg	18 52 17.1	+0.6
CESI				S	Sb	18 52 24.2	-1.1
CESI				AML	AML		
	comp=N,1146µm,0.3s						
CESI				AML	AML		
	comp=N,1150µm,0.3s						
CESI				AML	AML		
	comp=E,1225µm,0.3s						
TRTR	**Tortoreto Alta**	**0.50**	**67**	⇑P	Pb	18 52 18.3	+0.3
TRTR				AML	AML		
	comp=N,3100µm,0.4s						
TRTR				AML	AML		
	comp=E,2430µm,0.3s						
TRTR				AML	AML		
	comp=N,3100µm,1.6s						
TRTR				AML	AML		
	comp=E,2430µm,1.7s						
T0110	**Collepietro**	**0.53**	**137**	⇑P	Pg	18 52 17.5	+0.3
T0110				S	Sb	18 52 26.2	-0.2
T0110				AML	AML		
	comp=E,2035µm,0.3s						
T0110				AML	AML		
	comp=N,2485µm,0.4s						
T0110				AML	AML		
	comp=E,2035µm,1.7s						
CESX	**Cesi**	**0.53**	**270**	P	Pg	18 52 17.5	+0.2
CESX				S	Sg	18 52 25.2	+1.0
CESX				AML	AML		
	comp=E,1155µm,1.1s						
CESX				AML	AML		
	comp=N,1070µm,0.3s						
MNTP	**Montappone**	**0.54**	**14**	⇑P	Pb	18 52 18.7	-0.2
SSM1	**San Severino M**	**0.62**	**352**	⇓P	Pb	18 52 19.8	-0.5
ASSB	**Assisi San Ben**	**0.64**	**313**	P	Pg	18 52 19.8	+0.4
ASSB				S	Sb	18 52 29.7	+0.1
ASSB				AML	AML		
	comp=E,862µm,0.8s						
ASSB				AML	AML		
	comp=N,918µm,1.2s						
SRES	**S.Oreste - Sor**	**0.69**	**237**	P	Pb	18 52 21.0	-0.4
SRES				AML	AML		
	comp=E,335µm,0.2s						
SRES				AML	AML		
	comp=E,335µm,1.8s						
SRES				AML	AML		
	comp=N,348µm,0.9s						
SNTG	**Esanatoglia**	**0.69**	**338**	⇑P	Pg	18 52 20.6	+0.2
SNTG				S	Sb	18 52 32.0	+0.8
SNTG				AML	AML		
	comp=E,306µm,0.5s						
SNTG				AML	AML		
	comp=N,380µm,1.1s						
SNTG				AML	AML		
	comp=N,380µm,1.1s						
SNTG				AML	AML		
	comp=N,380µm,0.9s						
CERT	**Cerreto**	**0.70**	**199**	P	Pb	18 52 21.7	+0.1
CERT				AML	AML		
	comp=N,282µm,0.6s						
CERT				AML	AML		
	comp=E,530µm,0.6s						
MTCE	**Montecelio**	**0.72**	**215**	AML	AML		
	comp=N,246µm,0.8s						
MTCE				AML	AML		
	comp=E,320µm,0.4s						
MTCE				AML	AML		
	comp=N,246µm,1.2s						
MTCE				AML	AML		
	comp=E,320µm,1.6s						
EL6	**Elcito**	**0.73**	**349**	⇓P	Pg	18 52 21.3	+0.2
ATCC	**AVT- Casa Cast**	**0.75**	**320**	⇑P	Pg	18 52 21.8	+0.3
ATCC				AML	AML		
	comp=E,818µm,0.6s						
ATCC				AML	AML		
	comp=N,714µm,0.9s						
ATCC				AML	AML		
	comp=N,714µm,0.9s						
ATCC				AML	AML		
	comp=E,816µm,0.6s						
ATCC				AML	AML		
	comp=N,714µm,1.1s						
INTR	**Introdacqua**	**0.75**	**143**	⇑P	Pg	18 52 21.1	-0.4
INTR				AML	AML		
	comp=N,768µm,0.6s						
INTR				AML	AML		
	comp=E,309µm,0.5s						
INTR				AML	AML		
	comp=E,309µm,1.5s						
CING	**Cingoli**	**0.77**	**355**	⇑P	Pg	18 52 22.0	+0.2
CING				AML	AML		
	comp=E,600µm,1.2s						
CING				AML	AML		
	comp=E,600µm,0.8s						
CING				AML	AML		
	comp=N,473µm,0.3s						
FOSV	**Fossato di Vic**	**0.79**	**330**	⇑P	Pg	18 52 22.5	+0.3
FOSV				AML	AML		
	comp=E,379µm,0.6s						
FOSV				AML	AML		
	comp=N,399µm,1.0s						
FOSV				AML	AML		
	comp=E,378µm,0.6s						
FOSV				AML	AML		
	comp=N,400µm,1.0s						
FOSV				AML	AML		
	comp=E,378µm,1.4s						
PP3	**Marolino**	**0.80**	**17**	⇑P	Pb	18 52 23.8	+0.6
LPEL	**Lama dei Pelig**	**0.87**	**130**	P	Pg	18 52 23.1	-0.7
LPEL				S	Sb	18 52 36.3	+0.1
LPEL				AML	AML		
	comp=N,385µm,0.7s						
LPEL				AML	AML		
	comp=E,668µm,0.3s						
ATTE	**AVT- Monte Tez**	**0.91**	**311**	P	Pn	18 52 26.8	+0.5
ATTE				AML	AML		
	comp=E,294µm,0.4s						
ATTE				AML	AML		
	comp=N,240µm,0.6s						
ATTE				AML	AML		
	comp=E,294µm,1.6s						
MGAB	**Montegabbione**	**0.92**	**289**	⇑P	Pb	18 52 25.3	0.0
MGAB				AML	AML		
	comp=N,892µm,0.4s						
MGAB				AML	AML		
	comp=N,816µm,0.4s						
MGAB				AML	AML		
	comp=E,1085µm,1.2s						
MGAB				AML	AML		
	comp=E,949µm,0.5s						
MGAB				AML	AML		
	comp=E,1085µm,0.8s						
ARVD	**Arcevia**	**0.92**	**344**	⇑P	Pg	18 52 24.9	+0.1
ARVD				S	Sn	18 52 40.0	+0.1
ARVD				AML	AML		
	comp=N,185µm,0.5s						
ARVD				AML	AML		
	comp=E,380µm,0.7s						
ATFO	**Monte Foce - G**	**0.92**	**325**	⇑P	Pb	18 52 25.2	-0.2
ATFO				AML	AML		
	comp=E,296µm,0.8s						
ATFO				AML	AML		
	comp=N,368µm,0.4s						
ATFO				AML	AML		
	comp=N,368µm,1.6s						
COR1	**Corinaldo**	**1.04**	**348**	⇓P	Pn	18 52 28.3	+0.3
ATMI	**Monte Miggiano**	**1.04**	**314**	S	Sn	18 52 44.0	+1.1
SACS	**San Casciano d**	**1.05**	**283**	⇓P	Pn	18 52 29.9	+1.7
SACS				AML	AML		
	comp=N,224µm,0.7s						
SACS				AML	AML		
	comp=E,184µm,0.6s						
TOLF	**Tolfa**	**1.11**	**241**	P	Pg	18 52 28.1	-0.2
TOLF				AML	AML		
	comp=N,194µm,1.1s						
TOLF				AML	AML		
	comp=E,134µm,0.9s						
FSSB	**Fossombrone**	**1.14**	**341**	⇓P	Pb	18 52 29.2	0.0
FSSB				AML	AML		
	comp=N,868µm,0.4s						
FSSB				AML	AML		
	comp=E,776µm,0.4s						
CERA	**Filignano**	**1.15**	**152**	P	Pg	18 52 27.9	-1.2
CERA				AML	AML		
	comp=E,184µm,0.7s						
CERA				AML	AML		
	comp=N,223µm,1.0s						
CAFI	**Castiglion Fio**	**1.21**	**307**	⇓P	Pn	18 52 31.4	+1.1
CAFI				AML	AML		
	comp=E,142µm,1.3s						
CAFI				AML	AML		
	comp=N,155µm,0.7s						
CAFI				AML	AML		
	comp=E,142µm,0.7s						
TRIV	**Trivento**	**1.26**	**132**	⇓P	Pg	18 52 33.1	+1.9
TRIV				AML	AML		
	comp=N,147µm,0.7s						

TRIV					AML	AML				
	comp=E,150µm,0.8s									
TRIV					AML	AML				
	comp=E,150µm,1.2s									
CRE	**Caprese Michel**	**1.41**	**316**	⇓P	Pg	Pb	18 52 34.6	+0.5		
CRE					AML	AML				
	comp=N,103µm,0.3s									
CRE					AML	AML				
	comp=E,87µm,1.5s									
MELA	**Melanico ??? S**	**1.64**	**123**	P	Pb		18 52 37.8	+0.3		
MELA					AML	AML				
	comp=N,172µm,0.5s									
MELA					AML	AML				
	comp=E,152µm,0.5s									
RUFI	**Rufina**	**1.79**	**314**	P	Pb		18 52 40.2	0.0		
VENT	**Ventotene**	**1.82**	**177**	S	Sg		18 53 07.0	+1.5		
APRC	**Apricena**	**1.88**	**116**	⇑P	Pg		18 52 43.1	0.0		
VBKN	**Vesuvio Bunker**	**1.97**	**154**	S	Sn		18 53 05.0	-0.9		
SGRT	**San Giovanni R**	**2.01**	**114**	S	Sg		18 53 11.0	-0.7		
MSAG	**Monte S. Angel**	**2.14**	**114**	⇑P	Pg		18 52 47.3	-0.8		
MORI	**Morici**	**2.16**	**54**	*e*Pn	Pn		18 52 43.3	-0.1		
NVLJ	**Novalja**	**2.26**	**30**	*e*Pn	Pn		18 52 43.8	-0.9		
HVAR	**Hvar**	**2.38**	**75**	*e*Pn	Pn		18 52 47.1	+0.7		
LSTV	**Lastovo**	**2.66**	**85**	*e*Pn	Pn		18 52 50.7	+0.5		
KIJV	**Kijevo**	**2.66**	**57**	*e*Pn	Pn		18 52 52.0	+1.7		
CAVE	**Cavezzo**	**2.80**	**324**	⇓P	Pb		18 52 57.2	-0.1		
RICI	**Ricice**	**2.95**	**71**	*e*Pn	Pn		18 52 55.9	+1.7		
STON	**Ston**	**3.25**	**84**	*e*Pn	Pn		18 52 58.6	+0.2		
DOSS	**Dosso del Somm**	**3.60**	**336**	⇑P	Pn		18 53 05.3	+2.0		
DOSS					AML	AML				
	comp=E,23µm,0.5s									
DOSS					AML	AML				
	comp=N,22µm,0.8s									
MAGA	**Magasa**	**3.70**	**330**	⇑P	Pn		18 53 06.0	+1.4		
MAGA					AML	AML				
	comp=E,63µm,0.5s									
MAGA					AML	AML				
	comp=N,38µm,0.8s									
CIMO	**Cimolais**	**3.75**	**351**	⇓P	Pn		18 53 06.4	+1.2		
CIMO					AML	AML				
	comp=E,8µm,1.6s									
CIMO					AML	AML				
	comp=N,9µm,1.1s									
LUSI	**Trento, Gardas**	**3.75**	**334**	⇓P	Pn		18 53 07.0	+1.8		
LUSI					AML	AML				
	comp=E,21µm,0.9s									
LUSI					AML	AML				
	comp=N,32µm,0.6s									
ZONE	**Zone**	**3.89**	**325**	S	Sn		18 53 57.0	+3.8		
SARZ	**Sarezzano**	**3.90**	**307**	⇑P	Pb		18 53 12.6	-3.4		
SARZ				S	Sb		18 54 01.0	-2.3		
ZOU	**Zoufplan**	**3.95**	**357**	⇑P	Pn		18 53 09.1	+1.0		
OBKA	**Obir**	**4.00**	**13**	*e*Pn	Pn		18 53 10.7	+1.9		
	comp=N,3.9nm,1.1s									
MYKA	**Terra Mystica**	**4.02**	**3**	*e*Pn	Pn		18 53 10.3	+1.3		
	comp=N,1.0nm,0.4s									
KOSI	**Kohlern**	**4.09**	**341**	⇑P	Pn		18 53 12.0	+2.0		
ABTA	**Abfaltersbach**	**4.17**	**353**	*e*Pn	Pn		18 53 14.1	+3.0		
	comp=N,5.7nm,0.5s									
MGRO	**Montegrosso**	**4.25**	**292**	P	Pn		18 53 13.6	+1.4		
FETA	**Feichten**	**4.77**	**338**	*e*Pn	Pn		18 53 22.3	+2.9		
	comp=N,2.9nm,0.7s									
WTTA	**Wattenberg**	**4.80**	**346**	*e*Pn	Pn		18 53 20.7	+0.9		
	comp=N,1.5nm,0.4s									
EPZF	**Pizzo Felice**	**4.93**	**165**	⇓P	Pb		18 53 34.5	+0.8		
MOTA	**Moosalm**	**4.98**	**343**	*e*Pn	Pn		18 53 21.2	-1.1		
	comp=N,0.2nm,0.3s									
DAVA	**Damuels**	**5.26**	**334**	*e*Pn	Pn		18 53 27.8	+1.6		
	comp=N,1.8nm,0.6s									
RONA	**Rosalia, Austr**	**5.51**	**22**	*e*Pn	Pn		18 53 27.4	-2.0		
	comp=N,2.3nm,0.8s									
CONA	**Conrad Observa**	**5.62**	**18**	*e*Pn	Pn		18 53 30.7	-0.2		
	comp=N,0.7nm,0.4s									

IDC ***26*** *18:57:34.1±1.9,29°.53N×50°.37E,h0km,mb3.7/9, mbtmp3.7/15,ML3.4/6,MS3.1/1,Error ellipse: s-maj=37.7km s-min=19.8km az=12.0*
TEH ***26*** *18:57:37.5,29°.70N×50°.46E,h14km, ML3.6*
DSN ***26*** *18:57:45.8±2.5,29°.10N×50°.72E,h10km,ML3.9/11,Error ellipse: s-maj=33.8km s-min=13.4km az=179.0*
OMAN ***26*** *18:57:47.1±0.2,28°.99N×50°.59E,h15km,mb4.0/16, ml3.8/1,Error ellipse: s-maj=4.7km s-min=2.7km az=5.0*

ISC 26 18:57:37.9±0.6,**29°.60N**±0°.05×**50°.35E**±0°.05,**h25**km,**n104,**
σ**2s18**/126,**mb3.6**/9,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABEH	**Behbahan**	**1.00**	**355**	*e*Pg		**Pn**	**18 57 55.1**	**-1.3**
ABEH				*e*Sg		**Sb**	**18 58 08.4**	**-0.9**
ABEH				*e*			18 58 32.1	
	comp=Z,29µm,0.6s							
KAZ1	**Kazerun**	**1.12**	**88**	*e*Pg		**Pn**	**18 57 56.5**	**-1.7**
KAZ1				*e*Sg		**Sb**	**18 58 11.7**	**-1.3**
KAZ1				*e*			18 58 23.4	
	comp=Z,44µm,0.6s							
KLNJ	**Kolanjah**	**1.77**	**37**	*e*			18 58 32.6	
	comp=Z,9µm,0.4s							
KLNJ				*e*Pg		**Pn**	**18 58 07.2**	**-0.1**
SHI	**Shiraz**	**1.89**	**88**	*e*Pn		**Pn**	**18 58 09.8**	**+1.1**
AMIS	**Naft Sefid**	**2.25**	**336**	*e*Pn		**Pn**	**18 58 14.8**	**+1.2**
AMIS				*e*			18 59 09.3	
	comp=Z,7µm,0.5s							
AHWZ	**Ahwaz**	**2.27**	**320**	*e*Pn		**Pn**	**18 58 15.4**	**+1.6**
IBRJ	**Brojen**	**2.43**	**19**	*e*Pn		**Pn**	**18 58 17.3**	**+1.0**
IBRJ				*e*			18 58 58.3	
	comp=Z,2µm,0.8s							
SHK1	**Shahrekord**	**2.76**	**9**	*e*Pn		**Pn**	**18 58 21.7**	**+0.9**
SHK1				*e*			18 59 17.9	
	comp=Z,1µm,0.6s							
IRAM	**Ramesheh**	**2.81**	**38**	*e*Pn		**Pn**	**18 58 22.6**	**+1.1**
IRAM				*e*			18 59 08.3	
	comp=Z,1µm,0.5s							
IPIR	**Pirpir**	**3.11**	**8**	*e*Pn		**Pn**	**18 58 27.1**	**+1.4**
IPIR				*e*			18 59 13.0	
	comp=Z,1µm,0.6s							
IGAR	**Gharneh**	**3.15**	**27**	*e*Pn		**Pn**	**18 58 27.1**	**+0.9**
ISAD	**Sadrabad**	**3.68**	**50**	*e*Pn		**Pn**	**18 58 33.9**	**+0.4**
ISAD				*e*			18 58 48.6	
	comp=Z,533nm,0.3s							
IZEF	**Zefreh**	**3.70**	**27**	*e*Pn		**Pn**	**18 58 34.0**	**+0.3**
NASN	**Na'in**	**3.82**	**33**	*e*Pn		**Pn**	**18 58 35.7**	**+0.2**
IKLH	**Kolahrood**	**3.85**	**16**	*e*Pn		**Pn**	**18 58 37.2**	**+1.4**
IKLH				*e*			19 00 01.7	
	comp=Z,446nm,0.6s							
IMEH	**Mehriz**	**4.09**	**63**	*e*Pn		**Pn**	**18 58 40.3**	**+1.2**
IMEH				*e*			18 59 54.0	
	comp=Z,710nm,1.0s							
KHMZ	**Khomeyn**	**4.14**	**355**	*e*Pn		**Pn**	**18 58 40.5**	**+0.8**
QAMS	**Qamsar**	**4.22**	**12**	*e*Pn		**Pn**	**18 58 42.0**	**+1.1**
QAMS				*e*			18 59 32.9	
	comp=Z,620nm,0.4s							
IKFM	**Kafar-mosalman**	**4.46**	**332**	*e*Pn		**Pn**	**18 58 44.6**	**+0.7**
IDOB	**Doab**	**4.56**	**337**	*e*Pn		**Pn**	**18 58 47.1**	**+1.5**
YZKH	**Yazd**	**4.58**	**52**	*e*Pn		**Pn**	**18 58 46.0**	**+0.3**
KRSH	**Karshahi**	**4.61**	**19**	*e*Pn		**Pn**	**18 58 46.9**	**+0.7**
HSAM	**Samen**	**4.83**	**343**	*e*Pn		**Pn**	**18 58 50.5**	**+1.2**
IBAF	**Bafgh**	**4.92**	**65**	*e*Pn		**Pn**	**18 58 51.0**	**+0.6**
GHVR	**GHŌM**	**4.93**	**9**	*e*Pn		**Pn**	**18 58 50.8**	**+0.3**
ISFB	**Sefidab**	**5.00**	**18**	*e*Pn		**Pn**	**18 58 51.6**	**+0.1**
JRN	**Qarnain Island**	**5.15**	**154**	P		**Pn**	**18 58 57.7**	**+4.3**
IKOM	**Komasi**	**5.16**	**333**	*e*Pn		**Pn**	**18 58 55.4**	**+1.7**
IKOM				*e*			19 00 52.7	
	comp=Z,1µm,1.1s							
IQOM	**Qom**	**5.26**	**6**	*e*Pn		**Pn**	**18 58 55.2**	**0.0**
IBZA	**Bozab**	**5.29**	**337**	*e*Pn		**Pn**	**18 58 57.0**	**+1.3**
KHGB	**Koh Gabri**	**5.37**	**80**	*e*Pn		**Pn**	**18 58 57.7**	**+1.0**
NGRK	**Negar Kerman**	**5.56**	**88**	*e*Pn		**Pn**	**18 59 00.6**	**+1.2**
NGRK				*e*			18 59 02.3	
	comp=Z,697nm,0.3s							
GENO	**Geno**	**5.57**	**112**	*e*Pn		**Pn**	**18 59 00.4**	**+0.9**
TVBK	**TV Kerman**	**5.59**	**84**	*e*Pn		**Pn**	**18 59 01.6**	**+1.8**
ILIN	**Lien**	**6.03**	**332**	*e*Pn		**Pn**	**18 59 07.4**	**+1.7**
ILIN				*e*			19 00 25.8	
	comp=Z,554nm,0.6s							
IDHR	**Dehrash**	**6.09**	**328**	*e*Pn		**Pn**	**18 59 07.7**	**+1.1**
QABG	**Abgarm-Qazvin**	**6.12**	**354**	*e*Pn		**Pn**	**18 59 08.1**	**+1.1**
DAMV	**Damavand**	**6.17**	**12**	*e*Pn		**Pn**	**18 59 07.3**	**-0.3**
SHME	**Shamm**	**6.23**	**123**	P		**Pn**	**18 59 10.5**	**+2.2**
SHME				S		**Sn**	**19 00 18.7**	**0.0**
SHME	**Shamm**	**6.23**	**123**	P		**Pn**	**18 59 09.9**	**+1.6**
CHTH	**Charan**	**6.32**	**6**	*e*Pn		**Pn**	**18 59 10.4**	**+0.6**
IFIR	**Firoozkooh**	**6.36**	**18**	*e*Pn		**Pn**	**18 59 11.2**	**+1.0**
NAZ	**Nazwa, Dubai**	**6.59**	**133**	*e*Pn		**Pn**	**18 59 16.0**	**+2.8**
NAZ	**Nazwa, Dubai**	**6.59**	**133**	P		**Pn**	**18 59 16.0**	**+2.8**
	SNR=5.4							
NAZ				S		**Sn**	**19 00 27.1**	**-0.5**
NAZ	**Nazwa, Dubai**	**6.59**	**133**	P		**Pn**	**18 59 15.5**	**+2.2**
MZWR	**Madinat Zayed**	**6.62**	**151**	*e*Pn		**Pn**	**18 59 18.3**	**+4.7**
ASUD	**Al Ashush, Dub**	**6.65**	**137**	*e*Pn		**Pn**	**18 59 17.9**	**+3.8**
ASUD	**Al Ashush, Dub**	**6.65**	**137**	P		**Pn**	**18 59 17.3**	**+3.3**
	SNR=53							
ASUD	**Al Ashush, Dub**	**6.65**	**137**	*i* P		**Pn**	**18 59 16.9**	**+2.8**
	SNR=53							
MASF	**Masafi**	**6.66**	**128**	P		**Pn**	**18 59 17.3**	**+3.0**
MASF				S		**Sn**	**19 00 27.4**	**-2.0**
MSFE	**Esma-Masafi**	**6.67**	**128**	P		**Pn**	**18 59 15.8**	**+1.4**
MSFE				S		**Sn**	**19 00 25.4**	**-4.2**
FAQ	**Al Faqa, Dubai**	**6.72**	**135**	*e*Pn		**Pn**	**18 59 17.7**	**+2.6**
FAQ	**Al Faqa, Dubai**	**6.72**	**135**	P		**Pn**	**18 59 18.0**	**+3.0**
FAQ				S		**Sn**	**19 00 30.0**	**-0.9**
FAQ	**Al Faqa, Dubai**	**6.72**	**135**	P		**Pn**	**18 59 17.0**	**+1.9**
IPRN	**Peran**	**6.83**	**14**	*e*Pn		**Pn**	**18 59 17.4**	**+0.8**
UOSS	**Minazif**	**6.97**	**130**	P		**Pn**	**18 59 21.9**	**+3.3**
UOSS				S		**Sn**	**19 00 35.4**	**-1.7**
UOSS	**Minazif**	**6.97**	**130**	P		**Pn**	**18 59 20.3**	**+1.7**
HATD	**Hatta, Dubai**	**7.01**	**131**	*e*Pn		**Pn**	**18 59 22.3**	**+3.3**
HATD	**Hatta, Dubai**	**7.01**	**131**	P		**Pn**	**18 59 22.5**	**+3.5**
HATD				S		**Sn**	**19 00 35.6**	**-2.3**
HATD	**Hatta, Dubai**	**7.01**	**131**	P		**Pn**	**18 59 21.1**	**+2.0**
TABS	**Tabas**	**7.04**	**53**	*e*Pn		**Pn**	**18 59 19.7**	**+0.2**
ASHO	**Ashiyiah**	**7.06**	**133**	*e*Pn		**Pn**	**18 59 21.9**	**+2.1**
ASHO	**Ashiyiah**	**7.06**	**133**	P		**Pn**	**18 59 22.1**	**+2.4**
	SNR=8.6							
ASHO				S		**Sn**	**19 00 37.7**	**-1.5**
ASHO	**Ashiyiah**	**7.06**	**133**	*i* P		**Pn**	**18 59 21.4**	**+1.7**
	SNR=8.7							
KBAM	**BAM**	**7.09**	**92**	*e*Pn		**Pn**	**18 59 20.8**	**+0.6**
MZR	**Muzera**	**7.15**	**156**	*e*Pn		**Pn**	**18 59 25.0**	**+4.1**
MZR	**Muzera**	**7.15**	**156**	P		**Pn**	**18 59 25.1**	**+4.2**
	SNR=25							
MZR	**Muzera**	**7.15**	**156**	*i* P		**Pn**	**18 59 23.9**	**+3.0**
	SNR=25							
ALNE	**Al Ain**	**7.33**	**138**	*e*Pn		**Pn**	**18 59 25.5**	**+2.0**
ALNE	**Al Ain**	**7.33**	**138**	P		**Pn**	**18 59 26.0**	**+2.6**
	SNR=18							
ALNE	**Al Ain**	**7.33**	**138**	*i* P		**Pn**	**18 59 25.9**	**+2.4**
	SNR=8.5							
RAYN	**Ar Rayn**	**7.45**	**217**	P		**Pn**	**18 59 29.2**	**+4.1**
RAYN	**Ar Rayn**	**7.45**	**217**	*i* P		**Pn**	**18 59 28.2**	**+3.1**
	SNR=12							
BSRN	**Basiran**	**7.91**	**70**	*e*Pn		**Pn**	**18 59 31.9**	**+0.4**
SHRO	**Shahrood**	**7.95**	**35**	*e*Pn		**Pn**	**18 59 31.5**	**-0.6**
UMZA	**Um Al Zommool**	**8.11**	**147**	*e*Pn		**Pn**	**18 59 37.1**	**+3.0**
ARQ	**Araqi**	**8.34**	**137**	P		**Pn**	**18 59 39.1**	**+1.8**
	SNR=10							
ARQ				S		**Sn**	**19 01 08.5**	**-2.2**
HOQ	**Hoqain**	**8.64**	**132**	P		**Pn**	**18 59 43.6**	**+2.1**
	SNR=15							
HOQ				S		**Sn**	**19 01 16.8**	**-1.4**
ZHSF	**Zahedan**	**9.08**	**87**	*e*Pn		**Pn**	**18 59 47.9**	**+0.4**
BSY	**Bisya**	**9.19**	**136**	P		**Pn**	**18 59 51.0**	**+2.0**
	SNR=7.1							
BSY				S		**Sn**	**19 01 27.7**	**-3.9**
MRVT	**Maraveh tapeh**	**9.35**	**29**	*e*Pn		**Pn**	**18 59 51.5**	**+0.3**
SMDO	**Samad**	**9.49**	**132**	P		**Pn**	**18 59 55.4**	**+2.2**
SMDO				S		**Sn**	**19 01 37.7**	**-1.5**
WSAR	**Wadi Sarin**	**9.76**	**129**	Pn		**Pn**	**18 59 56.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=315,slow=11,SNR=1.7							
WSAR				Sn		**Sn**	**19 01 39.0**	**-6.6**
	comp=Z,0.4nm,0.3s,baz=318,slow=15,SNR=3.2							
	comp=Z,2.2nm,0.7s							
CHBR	**Chabahar**	**9.83**	**112**	*e*Pn		**Pn**	**18 59 58.2**	**+0.5**
JMDO	**Jabal Madar**	**10.02**	**134**	P		**Pn**	**19 00 02.2**	**+1.8**
JMDO				S		**Sn**	**19 01 49.1**	**-3.0**
WBK	**Wadi Bani Khal**	**10.41**	**130**	P		**Pn**	**19 00 08.1**	**+2.4**
WBK				S		**Sn**	**19 01 59.7**	**-2.0**
GEYT	**Alibeck**	**10.52**	**36**	Pn		**Pn**	**19 00 07.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=238,slow=8.2,SNR=1.8							
	comp=Z,0.9nm,0.5s							
ASF	**Jabal al Asfar**	**11.84**	**286**	Pn		**Pn**	**19 00 25.2**	**0.0**
	comp=Z,0.5nm,0.3s,baz=240,slow=3.6,SNR=6.2							
ASF				Sn		**Sn**	**19 02 29.8**	**-6.8**
	comp=Z,0.4nm,0.3s,baz=272,slow=14,SNR=2.1							
ASF				Lg		Lg	19 04 03.3	
	baz=270,slow=20							
	comp=Z,1.1nm,0.4s							
WHFO	**Wadi Hawf**	**12.04**	**164**	P		**Pn**	**19 00 30.6**	**+2.6**
ABTO	**Aybut**	**12.49**	**167**	P		**Pn**	**19 00 36.1**	**+2.0**
ABTO				S		**Sn**	**19 02 50.8**	**-1.7**
RBK	**Rabkut**	**12.55**	**163**	P		**Pn**	**19 00 37.0**	**+2.0**
RBK				S		**Sn**	**19 02 51.1**	**-2.9**
DMTO	**DMTO**	**12.56**	**159**	P		**Pn**	**19 00 37.0**	**+1.9**
	SNR=15							
DMTO				S		**Sn**	**19 02 49.6**	**-4.5**
MMAI	**Mount Meron Ar**	**13.22**	**289**	Pn		**Pn**	**19 00 45.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=108,slow=17,SNR=3.2							
MMAI				Sn		**Sn**	**19 03 07.0**	**-3.4**
	comp=Z,0.5nm,0.3s,baz=106,slow=26,SNR=2.8							
MMAI				Lg		Lg	19 04 41.5	
	baz=150,slow=38							
	comp=Z,0.2nm,0.3s							
KBZ	**Khabaz**	**15.30**	**339**	Pn		**P**	**19 01 15.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=166,slow=7.7,SNR=5.6							
	comp=Z,2.6nm,0.7s							
BRTR	**Keskin Array B**	**17.03**	**311**	P		**Pn**	**19 01 35.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=126,slow=10,SNR=5.0							
	comp=Z,2.4nm,1.1s							
AKTO	**Aktyubinsk**	**21.60**	**13**	P		**P**	**19 02 27.9**	**+2.1**
	comp=Z,1.1nm,0.5s,baz=194,slow=11,SNR=4.0							
	comp=Z,1.1nm,0.5s							
AKASG	**Malin Array Be**	**26.38**	**329**	P		**P**	**19 03 12.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=134,slow=9.0,SNR=7.1							
	comp=Z,0.3nm,0.3s							
BVAR	**Borovoye Array**	**27.64**	**26**	P		**P**	**19 03 23.9**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=237,slow=5.1,SNR=5.1							
	comp=Z,0.7nm,0.6s							
KURBB	**Kurchatov Arra**	**29.79**	**37**	P		**P**	**19 03 42.8**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=236,slow=9.3,SNR=5.7							
	comp=Z,0.6nm,0.7s							
MKAR	**Makanchi Array**	**30.13**	**46**	P		**P**	**19 03 45.9**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=235,slow=8.6,SNR=6.4							
MKAR				LR		LR	19 16 25.2	
	comp=Z,29nm,18.1s,baz=149,slow=38							
	comp=Z,1.2nm,0.8s							
ZALV	**Zalesovo Beam**	**34.83**	**36**	P		**P**	**19 04 26.6**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=262,slow=7.3,SNR=5.9							
	comp=Z,1.2nm,0.7s							
FINES	**FINESS Array B**	**35.66**	**340**	P		**P**	**19 04 33.8**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=140,slow=8.8,SNR=3.5							
	comp=Z,1.3nm,0.9s							
NOA	**NORSAR Array B**	**40.70**	**332**	P		**P**	**19 05 16.2**	**0.0**
	comp=Z,0.8nm,0.8s,baz=109,slow=9.3,SNR=1.5							
	comp=Z,0.8nm,0.8s							
KSRS	**Korea Array**	**63.47**	**60**	P		**P**	**19 08 05.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=284,slow=6.4,SNR=4.2							
	comp=Z,0.8nm,0.6s							

ROM 26 19:02:27.7±0.1,**42°.626N**±0°.005×**13°.304E**±0°.006,
h8km,**ML2.0**/5,**7C-1D**,**Error ellipse: s-maj=0.6km s-min=0.3km az=189.0**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**139**	⇑P		Pg	19 02 31.0	+0.6
CAMP				S		Sg	19 02 33.0	+0.6
CAMP				AML		AML		
	comp=E,3160µm,0.5s							
CAMP				AML		AML		
	comp=N,1805µm,0.7s							
CAMP				AML		AML		
	comp=N,1005µm,0.3s							
CAMP				AML		AML		
	comp=E,1270µm,0.2s							
T1243	**Rocca Santa Ma**	**0.13**	**57**	⇑P		Pg	19 02 31.2	+0.6
T1243				S		Sg	19 02 33.6	+1.0
T1243				AML		AML		
	comp=N,9495µm,0.2s							
T1243				AML		AML		
	comp=E,9815µm,0.2s							
T1243				AML		AML		
	comp=E,9770µm,0.2s							
T1243				AML		AML		
	comp=N,9545µm,0.2s							
T1243				AML		AML		
	comp=N,3764µm,0.3s							
T1243				AML		AML		
	comp=N,3568µm,0.2s							
T1243				AML		AML		
	comp=E,3413µm,0.2s							
T1243				AML		AML		
	comp=E,3422µm,0.2s							
RM33	**Pellescritta (**	**0.13**	**209**	⇑P		Pg	19 02 31.3	+0.6
RM33				S		Sg	19 02 33.6	+0.9
RM33				AML		AML		
	comp=E,9970µm,0.3s							
RM33				AML		AML		
	comp=N,7120µm,0.4s							
RM33				AML		AML		
	comp=N,7465µm,0.4s							
RM33				AML		AML		
	comp=E,9940µm,0.3s							
RM33				AML		AML		
	comp=E,9585µm,0.3s							
RM33				AML		AML		
	comp=N,2428µm,0.3s							
RM33				AML		AML		
	comp=N,2419µm,0.3s							
RM33				AML		AML		
	comp=E,2258µm,0.4s							
RM33				AML		AML		
	comp=E,2282µm,0.5s							
LNSS	**Leonessa**	**0.20**	**263**	⇑P		Pg	19 02 32.4	+0.7
LNSS				S		Sg	19 02 35.8	+1.3
LNSS				AML		AML		
	comp=E,8445µm,0.5s							
LNSS				AML		AML		
	comp=N,8110µm,0.1s							
LNSS				AML		AML		
	comp=N,1191µm,0.3s							
LNSS				AML		AML		
	comp=E,962µm,0.3s							
TERO	**Teramo**	**0.22**	**91**	⇑P		Pg	19 02 32.7	+0.5
TERO				S		Sg	19 02 36.3	+1.1
TERO				AML		AML		
	comp=E,2755µm,1.0s							
TERO				AML		AML		
	comp=N,3915µm,0.7s							
TERO				AML		AML		
	comp=N,4100µm,0.7s							
TERO				AML		AML		
	comp=E,2955µm,1.0s							
TERO				AML		AML		
	comp=N,3920µm,0.7s							
TERO				AML		AML		
	comp=E,1575µm,0.1s							
TERO				AML		AML		
	comp=N,1456µm,0.1s							
TERO				AML		AML		
	comp=N,1259µm,0.2s							
TERO				AML		AML		
	comp=E,1354µm,0.1s							
NRCA	**Norcia**	**0.25**	**326**	⇑P		Pg	19 02 33.5	+0.8
NRCA				S		Sg	19 02 37.5	+1.4
NRCA				AML		AML		
	comp=E,3370µm,0.1s							
NRCA				AML		AML		
	comp=N,1890µm,0.5s							
NRCA				AML		AML		
	comp=E,12000µm,0.1s							
NRCA				AML		AML		
	comp=E,13400µm,0.1s							
NRCA				AML		AML		
	comp=N,6290µm,1.0s							
NRCA				AML		AML		
	comp=N,5565µm,1.0s							
NRCA				AML		AML		
	comp=N,1598µm,0.5s							
NRCA				AML		AML		
	comp=N,1702µm,0.1s							
NRCA				AML		AML		
	comp=E,3034µm,0.1s							
NRCA				AML		AML		
	comp=E,3372µm,0.1s							
GIGS	**Gran Sasso**	**0.26**	**132**	⇑P		Pg	19 02 33.3	+0.3
GIGS				S		Sg	19 02 37.3	+0.8
GIGS				AML		AML		
	comp=E,182µm,1.0s							
GIGS				AML		AML		
	comp=N,178µm,0.2s							
GIGS				AML		AML		
	comp=N,456µm,0.5s							
GIGS				AML		AML		
	comp=E,528µm,0.4s							
GIGS				AML		AML		
	comp=E,182µm,0.2s							
GIGS				AML		AML		
	comp=N,179µm,0.2s							
MC2	**Monte Cornacci**	**0.30**	**344**	S		Sb	19 02 40.0	-0.7
ARRO	**Arrone**	**0.40**	**263**	⇓P		Pg	19 02 35.9	+0.4
ARRO				S		Sb	19 02 42.2	-1.2
ARRO				AML		AML		
	comp=N,1300µm,0.2s							
ARRO				AML		AML		
	comp=E,1020µm,1.4s							
ARRO				AML		AML		
	comp=E,196µm,0.2s							
ARRO				AML		AML		
	comp=N,269µm,0.2s							
FAGN	**Fagnano**	**0.41**	**150**	P		Pb	19 02 36.8	-0.5
FAGN				S		Sb	19 02 43.9	0.0

FIAM				AML	AML			
	comp=E,684μm,1.3s							
FIAM				AML	AML			
	comp=N,632μm,1.2s							
FAGN	**Fagnano**	**0.42**	**152**	P	Pg	19 03 26.7	+0.6	
FAGN				S	Sb	19 03 34.3	+0.1	
FAGN				AML	AML			
	comp=E,1875μm,0.5s							
FAGN				AML	AML			
	comp=N,2180μm,1.5s							
FAGN				AML	AML			
	comp=N,2180μm,0.5s							
FDMO	**Fiordimonte**	**0.43**	**337**	P	Pg	19 03 26.7	+0.5	
FDMO				S	Sb	19 03 33.7	-0.7	
CSP1	**Cessapalombo**	**0.46**	**350**	P	Pg	19 03 27.2	+0.4	
CSP1				S	Sb	19 03 34.9	-0.4	
VCEL	**Villa Celiera**	**0.46**	**122**	P	Pb	19 03 27.5	-0.7	
VCEL				S	Sb	19 03 35.3	+0.1	
TRTR	**Tortoreto Alta**	**0.47**	**69**	AML	AML			
	comp=N,2765μm,0.3s							
TRTR				AML	AML			
	comp=E,3325μm,0.5s							
TRTR				AML	AML			
	comp=E,3325μm,1.5s							
TRTR				AML	AML			
	comp=N,2765μm,1.7s							
MNTP	**Montappone**	**0.51**	**13**	⇑P	Pb	19 03 29.4	+0.3	
MNTP				AML	AML			
	comp=N,5805μm,1.1s							
MNTP				AML	AML			
	comp=N,5810μm,1.1s							
MNTP				AML	AML			
	comp=N,5810μm,1.0s							
MNTP				AML	AML			
	comp=E,6080μm,0.8s							
T0110	**Collepietro**	**0.54**	**140**	⇑P	Pg	19 03 28.5	+0.3	
T0110				S	Sb	19 03 37.0	-0.4	
T0110				AML	AML			
	comp=N,1145μm,0.4s							
T0110				AML	AML			
	comp=E,940μm,1.3s							
T0110				AML	AML			
	comp=N,1140μm,0.4s							
T0110				AML	AML			
	comp=E,940μm,1.3s							
T0110				AML	AML			
	comp=E,940μm,0.7s							
CESX	**Cesi**	**0.54**	**267**	⇑P	Pg	19 03 28.2	-0.2	
CESX				S	Sb	19 03 37.0	-0.6	
CESX				AML	AML			
	comp=E,783μm,0.4s							
CESX				AML	AML			
	comp=E,782μm,0.4s							
CESX				AML	AML			
	comp=N,948μm,0.3s							
GAG1	**Gagliole**	**0.62**	**343**	S	Sb	19 03 41.0	+1.0	
ASSB	**Assisi San Ben**	**0.63**	**310**	P	Pb	19 03 30.7	-0.4	
ASSB				AML	AML			
	comp=N,1014μm,0.2s							
ASSB				AML	AML			
	comp=E,680μm,1.6s							
ASSB				AML	AML			
	comp=E,680μm,0.4s							
SNTG	**Esanatoglia**	**0.67**	**336**	⇓P	Pg	19 03 31.0	+0.1	
SNTG				AML	AML			
	comp=N,364μm,1.5s							
SNTG				AML	AML			
	comp=E,448μm,1.4s							
SNTG				AML	AML			
	comp=E,448μm,1.4s							
SNTG				AML	AML			
	comp=N,364μm,1.5s							
SNTG				AML	AML			
	comp=N,364μm,0.5s							
EL6	**Elcito**	**0.71**	**347**	⇓P	Pg	19 03 31.7	+0.2	
EL6				S	Sn	19 03 44.0	-1.4	
SRES	**S.Oreste - Sor**	**0.72**	**236**	⇓P	Pg	19 03 31.9	+0.2	
SRES				AML	AML			
	comp=E,242μm,1.2s							
SRES				AML	AML			
	comp=N,328μm,1.2s							
SRES				AML	AML			
	comp=N,328μm,0.8s							
CERT	**Cerreto**	**0.73**	**200**	P	Pg	19 03 31.7	-0.2	
CERT				AML	AML			
	comp=E,592μm,0.6s							
CERT				AML	AML			
	comp=E,592μm,1.4s							
CERT				AML	AML			
	comp=N,366μm,0.5s							
ATCC	**AVT- Casa Cast**	**0.74**	**318**	P	Pg	19 03 32.4	+0.4	
ATCC				AML	AML			
	comp=E,492μm,1.6s							
ATCC				AML	AML			
	comp=N,544μm,0.4s							
ATCC				AML	AML			
	comp=N,544μm,0.4s							
ATCC				AML	AML			
	comp=E,491μm,1.6s							
MTCE	**Montecelio**	**0.75**	**215**	⇑P	Pn	19 03 34.1	-0.6	
MTCE				AML	AML			
	comp=N,291μm,0.5s							
MTCE				AML	AML			
	comp=E,570μm,0.4s							
MTCE				AML	AML			
	comp=E,570μm,1.6s							
INTR	**Introdacqua**	**0.77**	**145**	⇑P	Pg	19 03 31.8	-0.7	
INTR				AML	AML			
	comp=E,342nm,0.7s							
INTR				AML	AML			
	comp=N,362nm,1.2s							
INTR				AML	AML			
	comp=E,336μm,0.6s							
INTR				AML	AML			
	comp=N,538μm,0.5s							
GUAR	**Guarcino**	**0.84**	**180**	⇑P	Pn	19 03 37.6	+1.5	
GUAR				AML	AML			
	comp=N,393μm,0.4s							
GUAR				AML	AML			
	comp=E,339μm,0.6s							
GUAR				AML	AML			
	comp=E,339μm,1.4s							
LPEL	**Lama dei Pelig**	**0.88**	**132**	⇓P	Pg	19 03 35.0	+0.3	
LPEL				AML	AML			
	comp=E,266μm,0.8s							
LPEL				AML	AML			
	comp=N,200μm,0.5s							
SSFR	**Montelago di S**	**0.89**	**334**	P	Pg	19 03 33.5	-1.4	
SSFR				AML	AML			
	comp=N,827μm,1.5s							
SSFR				AML	AML			
	comp=E,728μm,0.7s							
SSFR				AML	AML			
	comp=N,838μm,1.5s							
SSFR				AML	AML			
	comp=E,902μm,1.2s							
SSFR				AML	AML			
	comp=N,838μm,0.5s							
SSFR				AML	AML			
	comp=N,827μm,0.5s							
SSFR				AML	AML			
	comp=E,902μm,0.8s							
ARVD	**Arcevia**	**0.90**	**342**	⇑P	Pg	19 03 35.3	+0.2	
ARVD				S	Sn	19 03 50.0	-0.1	
ARVD				AML	AML			
	comp=E,302μm,1.0s							
ARVD				AML	AML			
	comp=N,215μm,0.7s							
MGAB	**Montegabbione**	**0.93**	**288**	⇓P	Pg	19 03 35.8	+0.1	
MGAB				AML	AML			
	comp=N,590μm,0.4s							
MGAB				AML	AML			
	comp=E,706μm,0.5s							
MGAB				AML	AML			
	comp=N,596μm,0.3s							
MGAB				AML	AML			
	comp=E,752μm,0.5s							
MGAB				AML	AML			
	comp=E,752μm,1.5s							
MGAB				AML	AML			
	comp=N,590μm,1.6s							
MGAB				AML	AML			
	comp=E,706μm,1.5s							
AOI	**Ancona**	**0.93**	**13**	S	Sn	19 03 53.0	+2.1	
RMP	**Rome, Mte Porz**	**0.94**	**209**	⇑P	Pn	19 03 38.1	+0.7	
RMP				AML	AML			
	comp=E,428μm,0.9s							
RMP				AML	AML			
	comp=N,442μm,0.7s							
VIVA	**Pratoni del Vi**	**0.98**	**205**	P	Pn	19 03 37.6	-0.2	
VIVA				AML	AML			
	comp=E,704μm,0.4s							
VIVA				AML	AML			
	comp=N,915μm,1.3s							
VIVA				AML	AML			
	comp=N,915μm,0.7s							
ATVO	**AVT- Monte Val**	**1.00**	**318**	⇑P	Pg	19 03 37.1	+0.1	
ATVO				AML	AML			
	comp=E,208μm,0.6s							
ATVO				AML	AML			
	comp=N,211μm,0.5s							
COR1	**Corinaldo**	**1.02**	**347**	⇑P	Pn	19 03 38.6	+0.2	
SACS	**San Casciano d**	**1.06**	**282**	⇑P	Pn	19 03 39.2	+0.2	
SACS				AML	AML			
	comp=N,238μm,0.4s							
SACS				AML	AML			
	comp=E,188μm,0.8s							
PIEI	**Pieia**	**1.06**	**328**	P	Pg	19 03 38.2	0.0	
PIEI				AML	AML			
	comp=E,204μm,0.2s							
PIEI				AML	AML			
	comp=N,226μm,0.4s							
MPAG	**Monte Paganucc**	**1.07**	**338**	S	Sn	19 03 56.0	+1.7	
GIUL	**Giuliano Di Ro**	**1.08**	**182**	⇓P	Pn	19 03 40.3	+0.9	
FSSB	**Fossombrone**	**1.12**	**340**	⇓P	Pg	19 03 39.4	0.0	
FSSB				AML	AML			
	comp=E,552μm,0.5s							
FSSB				AML	AML			
	comp=N,962μm,0.4s							
FSSB				AML	AML			
	comp=N,962μm,1.6s							
FSSB				AML	AML			
	comp=E,552μm,1.5s							
TOLF	**Tolfa**	**1.13**	**240**	⇓P	Pg	19 03 38.8	-0.7	
TOLF				AML	AML			
	comp=N,193μm,0.8s							
TOLF				AML	AML			
	comp=E,132μm,0.7s							
TOLF				AML	AML			
	comp=N,193μm,1.2s							
CAFI	**Castiglion Fio**	**1.21**	**305**	⇑P	Pn	19 03 43.4	+2.3	
CAFI				AML	AML			
	comp=E,143μm,0.4s							
CAFI				AML	AML			
	comp=E,143μm,1.6s							
CAFI				AML	AML			
	comp=N,155μm,0.5s							
VAGA	**Valle Agricola**	**1.40**	**150**	⇓P	Pn	19 03 44.0	+0.2	
VAGA				AML	AML			
	comp=E,57μm,1.2s							
VAGA				AML	AML			
	comp=N,85μm,0.7s							
DUGI	**Dugi Otok**	**1.86**	**43**	*e*Pn	Pn	19 03 50.5	+0.6	
VIRC	**Vir**	**2.08**	**37**	*e*Pn	Pn	19 03 53.2	+0.2	
NVLJ	**Novalja**	**2.23**	**30**	*e*Pn	Pn	19 03 55.7	+0.7	
HVAR	**Hvar**	**2.36**	**76**	*e*Pn	Pn	19 03 56.9	0.0	
UDBI	**Udbina**	**2.59**	**42**	*e*Pn	Pn	19 04 01.9	+1.8	
KIJV	**Kijevo**	**2.63**	**58**	*e*Pn	Pn	19 04 02.4	+1.7	
LSTV	**Lastovo**	**2.64**	**86**	*e*Pn	Pn	19 04 01.4	+0.7	
CAVE	**Cavezzo**	**2.79**	**324**	S	Sg	19 04 50.0	+2.7	
GRAM	**Graiana**	**3.00**	**309**	S	Sg	19 04 55.0	+0.8	
MGR	**Morigerati**	**3.01**	**145**	S	Sb	19 04 50.0	+1.3	
STON	**Ston**	**3.24**	**84**	*e*Pn	Pn	19 04 08.8	-0.1	
GORR	**Gorreto**	**3.52**	**305**	⇓P	Pg	19 04 28.2	+2.9	
MAGA	**Magasa**	**3.68**	**329**	P	Pn	19 04 17.0	+1.9	
MAGA				S	Sn	19 05 02.0	+3.2	
MAGA				AML	AML			
	comp=N,56μm,0.4s							
MAGA				AML	AML			
	comp=E,68μm,0.5s							
SARZ	**Sarezzano**	**3.89**	**306**	P	Pb	19 04 28.7	+2.0	
EUCT	**Pavia**	**3.96**	**312**	⇑P	Pb	19 04 26.9	-0.9	
OBKA	**Obir**	**3.97**	**12**	*e*Pn	Pn	19 04 23.4	+4.3	
	comp=E,2.6nm,1.0s							
MYKA	**Terra Mystica**	**4.00**	**3**	*e*Pn	Pn	19 04 22.4	+3.0	
	comp=E,1.3nm,0.4s							
SPS2	**Spezzano della**	**4.05**	**145**	S	Sn	19 05 13.0	+5.2	
MILN	**Milano**	**4.09**	**315**	P	Pn	19 04 20.6	0.0	
ABTA	**Abfaltersbach**	**4.15**	**352**	*e*Pn	Pn	19 04 23.8	+2.3	
	comp=E,4.4nm,0.5s							
IACL	**Alicudi**	**4.18**	**169**	P	Pn	19 04 25.9	+4.0	
SOKA	**Soboth**	**4.22**	**16**	*e*Pn	Pn	19 04 19.3	-3.2	
	comp=E,2.2nm,1.1s							
FETA	**Feichten**	**4.75**	**338**	*e*Pn	Pn	19 04 29.6	-0.3	
	comp=E,0.9nm,0.4s							
WTTA	**Wattenberg**	**4.78**	**346**	*e*Pn	Pn	19 04 28.2	-2.0	
	comp=E,2.3nm,0.6s							
SQTA	**Sankt Quirin**	**4.82**	**343**	*e*Pn	Pn	19 04 34.5	+3.7	
	comp=E,1.4nm,0.4s							
GMB	**Gambarie**	**4.86**	**156**	P	Pn	19 04 33.4	+2.0	
MOTA	**Moosalm**	**4.96**	**342**	*e*Pn	Pn	19 04 35.9	+3.1	
	comp=E,2.0nm,0.6s							
RETA	**Reutte**	**5.17**	**340**	*e*Pn	Pn	19 04 40.5	+4.9	
	comp=E,0.6nm,0.3s							
DAVA	**Damuels**	**5.25**	**334**	*e*Pn	Pn	19 04 35.9	-0.8	
	comp=E,2.8nm,1.0s							
CONA	**Conrad Observa**	**5.58**	**18**	*e*Pn	Pn	19 04 40.5	-0.8	
	comp=E,1.9nm,1.0s							

JMA ***26*** *19:03:47.0±0.2, 45°.0N±0°.6×145°.0E±0°.9, h24km±2km, MV3.3/33, SOUTHERN SEA OF OKHOTSK*
SKHL ***26*** *19:03:47.2±0.2, 45°.00N×145°.10E, h36km±5km, mb3.8/3*
ISC 26 19:03:46.7±2.7, 44°.99N±0°.04×145°.11E±0°.04, h26km±24km, n17, σ0s65/28, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**1.05**	**180**	*e*P	**Pn**	**19 04 06.0**	**+0.2**
JRA				*e*S	**Sn**	**19 04 19.9**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**1.10**	**151**	*i* P	**Pn**	**19 04 06.1**	**-0.3**
YUK				AMB	AMB	19 04 07.9	
	80nm,0.2s						
YUK				*e*S	**Sn**	**19 04 20.6**	**-0.1**
YUK				A	A	19 04 22.6	
	100nm,0.2s						
YUK				A	A	19 04 22.6	
	130nm,0.2s						
JNSB	**Nemuroshibetsu**	**1.22**	**184**	*e*P	**Pn**	**19 04 08.5**	**+0.4**
JNSB				*e*S	**Sb**	**19 04 24.0**	**-0.4**
JTKR	**Abashiri--Toko**	**1.34**	**221**	*e*P	**Pn**	**19 04 09.5**	**-0.2**
JTKR				*e*S	**Sn**	**19 04 25.6**	**-1.0**
JNK	**Nakash**	**1.44**	**192**	*e*P	**Pn**	**19 04 10.8**	**-0.3**
JNK				*e*S	**Sn**	**19 04 28.6**	**-0.5**
JMP	**Maruseppu**	**1.60**	**232**	*e*P	**Pn**	**19 04 13.3**	**0.0**
NMR	**Nemuro--Hokkai**	**1.68**	**165**	*i* P	**Pn**	**19 04 14.6**	**+0.1**
NMR				*e*S	**Sn**	**19 04 35.6**	**+0.5**
NEM2	**Nemuro 2**	**1.69**	**164**	*e*P	**Pn**	**19 04 15.0**	**+0.4**
NEM2				*e*S	**Sn**	**19 04 35.8**	**+0.5**
JSE	**Soyaes**	**1.79**	**270**	*e*P	**Pn**	**19 04 16.3**	**+0.3**
JKHN	**Kushirohamanak**	**1.91**	**179**	*e*P	**Pn**	**19 04 19.1**	**+1.5**
JAR	**Ashorobuto**	**1.95**	**210**	*e*P	**Pn**	**19 04 18.9**	**+0.8**
KUR	**Kuril'sk**	**1.96**	**82**	*e*P	**Pn**	**19 04 18.6**	**+0.3**
KUR				AMB	AMB	19 04 19.6	
	20nm,0.4s						
KUR				*e*S	**Sn**	**19 04 41.3**	**-0.8**
KUR				A	A	19 04 42.5	
	100nm,0.3s						
KUR				A	A	19 04 42.5	
	40nm,0.3s						
AKK	**Akkeshi**	**1.98**	**186**	*e*P	**Pn**	**19 04 19.0**	**+0.4**
AKK				*e*S	**Sn**	**19 04 41.9**	**-0.7**
ASAJ	**Asahikawa**	**2.00**	**245**	*e*P	**Pn**	**19 04 19.5**	**+0.6**
ASAJ				*e*S	**Sn**	**19 04 42.8**	**-0.3**
JAK	**Akkeshi**	**2.02**	**189**	*e*P	**Pn**	**19 04 19.7**	**+0.7**
JKK2	**Kamakawa 2**	**2.03**	**237**	*e*P	**Pn**	**19 04 19.9**	**+0.7**
YSS	**Yuzh-Sakhalins**	**2.56**	**321**	*e*P	**Pn**	**19 04 27.5**	**+1.0**
YSS				AMB	AMB	19 04 33.8	
	10.0nm,0.5s						
YSS				*e*S	**Sn**	**19 04 55.9**	**-0.9**
YSS				A	A	19 04 58.3	
	60nm,0.6s						
YSS				A	A	19 04 58.3	
	40nm,0.6s						

MOS ***26*** *19:35:58.7±1.3, 42°.67N×145°.82E, h37km, mb3.7/1, Error ellipse: s-maj=30.8km s-min=11.6km az=88.3*
JMA ***26*** *19:36:04.5±0.1, 43°.2N±0°.5×146°.0E±0°.8, h48km, MV3.9/39, OFF NEMURO PENINSULA*

JMA Felt II J1 at OFF NEMURO PENINSULA .
NIED ***26*** *19:36:04.5, 43°.15N×145°.98E, h48km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.51; Mθθ-0.83; Mφφ-2.69; Mrθ1.61; Mrφ-1.84; Mθφ0.14; Fault plane solution: M₀4.02000×10¹⁴ NP1: φs194.00000°, δ41.00000°, λ61.00000°. NP2:φs50.00000°, δ55.00000°, λ113.00000°.*
SKHL ***26*** *19:36:05.4±0.1, 43°.20N×146°.00E, h68km±4km, mb4.2/2*
IDC ***26*** *19:36:08.2±17.0, 43°.04N×145°.88E, h90km±87km, mb3.3/6, mbtmp3.7/7, ML2.8/1, MS2.7/1, Error ellipse: s-maj=240.4km s-min=35.1km az=167.0*
ISC 26 19:36:03.7±1.2, 43°.13N±0°.08×146°.01E±0°.06, h47km±7km, n36, σ1s22/40, mb3.5/6, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.30**	**320**	*e*P	**Pn**	**19 36 13.2**	**+0.7**
NEM2				*e*S	**Sn**	**19 36 19.2**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.31**	**319**	⇓*i*PN	**Pn**	**19 36 13.2**	**+0.6**
NMR				*e*S	**Sn**	**19 36 19.1**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.31**	**319**	*i* P	**Pn**	**19 36 13.3**	**+0.6**
NMR				*e*S	**Sn**	**19 36 19.2**	**+0.2**
JKHN	**Kushirohamanak**	**0.62**	**266**	*e*P	**Pn**	**19 36 17.3**	**+1.0**
JKHN				*e*S	**Sn**	**19 36 26.5**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**0.91**	**353**	*d* PN	**Pn**	**19 36 20.2**	**+0.1**
YUK				pmax	pmax		
	comp=E,181nm,0.1s						
YUK				pmax	pmax		
	comp=Z,824nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**0.91**	**353**	*i* P	**Pn**	**19 36 20.2**	**+0.1**
YUK				AMB	AMB	19 36 21.9	
	comp=Z,80nm,0.4s						
YUK				*e*S	**Sn**	**19 36 31.4**	**-0.7**
YUK				A	A	19 36 32.4	
	comp=Z,220nm,0.5s						
YUK				A	A	19 36 32.4	
	comp=Z,570nm,0.5s						
JAK	**Akkeshi**	**0.97**	**262**	*e*P	**Pn**	**19 36 21.4**	**+0.5**
JAK				*e*S	**Sn**	**19 36 34.0**	**+0.5**
JNSB	**Nemuroshibetsu**	**0.97**	**312**	*e*P	**Pn**	**19 36 21.5**	**+0.5**
JNSB				*e*S	**Sn**	**19 36 34.1**	**+0.4**
JRA	**Rausu**	**1.03**	**322**	*e*P	**Pn**	**19 36 22.6**	**+0.8**
JRA				*e*S	**Sn**	**19 36 35.4**	**+0.4**
JNK	**Nakash**	**1.04**	**296**	*e*P	**Pn**	**19 36 22.3**	**+0.3**
JNK				*e*S	**Sn**	**19 36 35.3**	**-0.1**
RUSJ	**Misakicho**	**1.12**	**331**	⇓*i*PN	**Pn**	**19 36 24.1**	**+1.2**
RUSJ				*e*S	**Sn**	**19 36 39.1**	**+1.9**
JOB	**Onbets**	**1.61**	**263**	*e*P	**Pn**	**19 36 30.4**	**+0.8**
JOB				*e*S	**Sn**	**19 36 49.5**	**+0.3**
JAR	**Ashorobuto**	**1.65**	**277**	*e*P	**Pn**	**19 36 31.1**	**+1.0**
JAR				*e*S	**Sn**	**19 36 50.8**	**+0.7**
JTKR	**Abashiri--Toko**	**1.74**	**299**	*e*P	**Pn**	**19 36 33.1**	**+1.6**
JTKR				*e*S	**Sn**	**19 36 53.7**	**+1.2**
KUR	**Kuril'sk**	**2.49**	**32**	*e*PN	**Pn**	**19 36 43.7**	**+2.0**
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
KUR				pmax	pmax		
	comp=E,21nm,0.2s						
KUR				pmax	pmax		
	comp=N,34nm,0.4s						
KUR	**Kuril'sk**	**2.49**	**32**	*e*P	**Pn**	**19 36 43.7**	**+2.0**
KUR				AMB	AMB	19 36 45.0	
	comp=N,80nm,0.4s						
KUR				*e*S	**Sn**	**19 37 12.9**	**+2.1**
KUR				A	A	19 37 17.0	
	comp=N,190nm,0.4s						
KUR				A	A	19 37 17.0	
	comp=N,80nm,0.4s						
KLR	**Kul'dur**	**11.61**	**307**	LR	LR	19 43 37.6	
	comp=N,33nm,18.9s,baz=142,slow=39						
PETK	**Petropavlovsk-**	**12.66**	**34**	P	**P**	**19 39 06.6**	**-4.5**
	comp=N,0.2nm,0.3s,baz=192,slow=13,SNR=5.8						
	comp=N,1.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.20**	**136**	T	T	20 12 46.4	
	baz=328,slow=76						
H11N1	**WAKE ISLAND Hy**	**29.21**	**137**	T	T	20 12 51.6	
	baz=328,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.22**	**136**	T	T	20 12 51.1	
	baz=328,slow=76						
H11S1	**WAKE ISLAND Hy**	**30.14**	**138**	T	T	20 13 59.7	
	baz=330,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.14**	**138**	T	T	20 13 59.5	
	baz=330,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.16**	**138**	T	T	20 14 02.0	
	baz=330,slow=76						
ILAR	**Eielson Array**	**42.48**	**36**	P	**P**	**19 43 54.9**	**+1.1**
	comp=N,0.4nm,0.6s,baz=277,slow=7.9,SNR=4.3						
	comp=N,0.4nm,0.6s						
MKAR	**Makanchi Array**	**44.14**	**298**	P	**P**	**19 44 06.7**	**-0.7**
	comp=N,0.3nm,0.7s,baz=75,slow=9.3,SNR=2.1						
	comp=N,0.3nm,0.7s						
KURK	**Kurchatov**	**45.19**	**304**	P	**P**	**19 44 16.5**	**+0.8**
KURK	**Kurchatov**	**45.19**	**304**	*e*P	**P**	**19 44 16.5**	**+0.8**
KURBB	**Kurchatov Arra**	**45.27**	**304**	P	**P**	**19 44 16.5**	**+0.1**
	comp=N,0.2nm,0.4s,baz=73,slow=9.0,SNR=3.8						
	comp=N,0.2nm,0.4s						
FINES	**FINESS Array B**	**65.04**	**333**	P	**P**	**19 46 38.6**	**-0.1**
	comp=N,1.1nm,0.5s,baz=60,slow=8.2,SNR=9.8						
	comp=N,1.1nm,0.5s						
NB2	**NORSAR Subarra**	**69.88**	**338**	P	**P**	**19 47 09.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=34,slow=6.2						
NOA	**NORSAR Array B**	**69.88**	**338**	P	**P**	**19 47 09.2**	**0.0**
	comp=Z,0.8nm,0.7s,baz=35,slow=6.0,SNR=3.9						
	comp=Z,0.8nm,0.7s						
AKASG	**Malin Array Be**	**71.58**	**323**	P	**P**	**19 47 19.9**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=40,slow=6.5,SNR=6.3						
	comp=Z,0.5nm,0.3s						
H03N2	**Juan Fernandez**	**143.80**	**90**	T	T	22 36 22.5	
	baz=306,slow=76						
H03N3	**Juan Fernandez**	**143.81**	**90**	T	T	22 36 28.4	
	baz=306						
H03N1	**Juan Fernandez**	**143.81**	**90**	T	T	22 36 22.5	
	baz=306,slow=76						

IDC ***26*** *19:39:36.3±0.8, 7°.38N×146°.52E, h0km, mb3.8/10, mbtmp3.9/11, ML4.6/1, MS3.4/27, Error ellipse: s-maj=30.5km s-min=18.4km az=92.0*
NEIC ***26*** *19:39:37.6±2.5, 7°.3N±0°.1×146°.9E±0°.1, h14km±4km, mb4.5/14, Error ellipse: s-maj=17.2km s-min=14.2km az=218.0*
ISC 26 19:39:37.2±0.6, 7°.39N±0°.08×146°.9E±0°.1, h10km, n59, σ2s09/33, mb4.3/18, MS3.4/24, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.50**	**342**	P	**Pn**	**19 41 09.9**	**-3.1**
	13nm,0.3s,baz=159,slow=6.9,SNR=13						
GUMO				Sn	**Sn**	**19 42 21.8**	**-5.3**
	12nm,0.3s,baz=9.0,slow=19,SNR=2.1						
GUMO				LR	LR	19 43 55.2	
	comp=Z,66nm,19.8s,baz=152,slow=41						
	29nm,0.2s						
GUMO	**Guam**	**6.50**	**342**		Pn	19 41 09.7	-3.2
PATS	**Pohnpei**	**11.29**	**92**	Pn	**Pn**	**19 42 15.6**	**-3.2**
KRVT	**Keravat (AS076**	**12.67**	**156**	LR	LR	19 46 29.5	
	comp=Z,175nm,20.9s,baz=147,slow=32						
SIJI	**Sorong**	**17.66**	**243**	LR	LR	19 48 39.0	
	comp=Z,106nm,21.9s,baz=92,slow=31						
HNR	**Honiara**	**21.14**	**142**	LR	LR	19 52 49.2	
	comp=Z,81nm,18.2s,baz=99,slow=37						
H11S3	**WAKE ISLAND Hy**	**22.16**	**58**	T	T	20 08 07.2	
	baz=244,slow=75						
H11S2	**WAKE ISLAND Hy**	**22.17**	**58**	T	T	20 07 55.5	
	baz=244,slow=75						
H11S1	**WAKE ISLAND Hy**	**22.17**	**58**	T	T	20 08 00.0	
	baz=244,slow=75						
H11N1	**WAKE ISLAND Hy**	**22.90**	**56**	T	T	20 08 53.6	
	baz=241,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.92**	**56**	T	T	20 08 33.0	
	baz=241,slow=75						
H11N3	**WAKE ISLAND Hy**	**22.92**	**56**	T	T	20 08 40.0	
	baz=241,slow=75						
JHJ2	**Mitsune**	**26.44**	**346**	P	**P**	**19 45 15.7**	**+1.4**
JHJ	**Hachijo jima 2**	**26.45**	**346**	LR	LR	19 54 13.7	
	comp=Z,94nm,20.3s,baz=196,

comp=Z,13nm,1.1s
WRA **Warramunga Arr** **29.86 204** P **P** **19 45 42.7 -2.3**
comp=Z,2.9nm,0.6s,baz=28,slow=9.8,SNR=32
comp=Z,2.9nm,0.6s
WRA **Warramunga Arr** **29.86 204** P **P** **19 45 43.9 -1.1**
MJAR **Matsushiro Arr** **30.10 346** LR LR 19 56 05.2
comp=Z,100nm,21.2s,baz=170,slow=33
FITZ **Fitzroy Crossi** **32.92 219** LR LR 19 59 22.6
comp=Z,99nm,18.4s,baz=29,slow=36
FITZ **Fitzroy Crossi** **32.92 219** P **P** **19 46 09.3 -2.7**
ASAR **Alice Springs** **33.39 202** P **P** **19 46 14.6 -1.5**
comp=Z,0.6nm,0.8s,baz=24,slow=8.3,SNR=4.9
ASAR LR LR 20 00 10.8
comp=Z,65nm,18.2s,baz=12,slow=37
comp=Z,0.6nm,0.8s
KSRS **Korea Array** **34.56 333** P **P** **19 46 30.5 +4.4**
comp=Z,4.1nm,0.9s,baz=148,slow=10,SNR=8.1
KSRS LR LR 19 59 20.0
comp=Z,31nm,19.3s,baz=135,slow=34
DZM **Mont Dzumac** **34.96 147** LR LR 19 58 40.9
comp=Z,43nm,18.8s,baz=357,slow=32
STKA **Stephens Creek** **39.37 187** P **P** **19 47 07.0 -0.1**
comp=Z,2.2nm,0.9s,baz=12,slow=9.3,SNR=1.5
comp=Z,2.2nm,0.9s
ENH **Enshi** **41.83 308** P **P** **19 47 29.0 +1.4**
ENH IAmb IAmb 19 47 33.5
comp=Z,8.7nm,1.0s
KLR **Kul'dur** **43.63 346** LR LR 20 06 07.0
comp=Z,27nm,18.1s,baz=174,slow=36
PETK **Petropavlovsk-** **46.42 9** LR LR 20 04 46.3
comp=Z,31nm,21.3s,baz=180,slow=32
CMAR **Chiang Mai Arr** **47.93 288** P **P** **19 48 15.6 -0.7**
comp=Z,2.7nm,1.1s,baz=93,slow=6.2,SNR=10
CMAR LR LR 20 06 21.2
comp=Z,29nm,21.9s,baz=105,slow=34
comp=Z,2.7nm,1.1s
CMAR **Chiang Mai Arr** **47.93 288** P P 19 48 10.8 -5.5
ULN **Ulaanbaatar** **52.64 327** P **P** **19 48 54.0 +2.2**
ULN IAmb IAmb 19 48 59.2
comp=Z,6.6nm,1.1s
SONM **Songino Array** **52.98 327** P **P** **19 48 53.8 -0.4**
comp=Z,0.6nm,0.7s,baz=134,slow=8.0,SNR=3.0
SONM LR LR 20 09 49.5
comp=Z,46nm,21.9s,baz=150,slow=34
comp=Z,0.6nm,0.7s
SONM **Songino Array** **52.98 327** P **P** **19 48 55.5 +1.3**
SONM IAmb IAmb 19 49 02.5
comp=Z,8.0nm,1.2s
RPZ **Rata Peaks** **55.35 159** LR LR 20 13 06.2
comp=Z,120nm,18.1s,baz=270,slow=36
MK31 **Makanchi Array** **67.39 318** P **P** **19 50 32.1 -0.8**
MK31 IAmb IAmb 19 50 39.9
comp=Z,3.9nm,1.0s
MKAR **Makanchi Array** **67.39 318** P **P** **19 50 32.0 -1.0**
comp=Z,0.9nm,0.8s,baz=90,slow=8.1,SNR=5.4
comp=Z,0.9nm,0.8s
MKAR **Makanchi Array** **67.39 318** P **P** **19 50 31.8 -1.1**
MAKZ **Makanchi** **67.60 318** P **P** **19 50 33.7 -0.5**
MAKZ IAmb IAmb 19 51 07.8
comp=Z,12nm,1.4s
ZALV **Zalesovo Beam** **67.85 326** P **P** **19 50 34.8 -0.9**
comp=Z,0.6nm,0.5s,baz=104,slow=6.5,SNR=2.9
ZALV LR LR 20 20 40.5
comp=Z,18nm,19.5s,baz=87,slow=36
comp=Z,0.6nm,0.5s
KURK **Kurchatov** **70.64 321** P **P** **19 50 52.2 -0.8**
ILAR **Eielson Array** **73.31 24** P **P** **19 51 11.3 +2.5**
comp=Z,0.4nm,0.6s,baz=254,slow=6.1,SNR=4.4
ILAR LR LR 20 21 27.3
comp=Z,16nm,19.4s,baz=118,slow=34
comp=Z,0.4nm,0.6s
BMAR **Burnt Mountain** **75.03 22** P **P** **19 51 20.6 +1.8**
KKAR **Karatay Array** **75.09 313** P **P** **19 51 20.4 +0.7**
EGAK **Eagle** **75.67 25** P **P** **19 51 22.8 +0.3**
EGAK IAmb IAmb 19 51 27.6
comp=Z,6.1nm,1.4s
BVAR **Borovoye Array** **76.05 323** LR LR 20 24 35.0
comp=Z,26nm,20.8s,baz=98,slow=36
BRVK **Borovoye** **76.12 323** P **P** **19 51 24.4 -0.9**
BRVK IAmb IAmb 19 51 32.8
comp=Z,3.9nm,0.9s
BBB **Bella Bella** **81.11 38** LR LR 20 19 42.7
comp=Z,21nm,21.9s,baz=252,slow=30
ABKAR **Akbulak array** **82.50 319** P **P** **19 51 59.5 -0.7**
ABKAR **Akbulak array** **82.50 319** P **P** **19 52 00.0 -0.2**
AKTO **Aktyubinsk** **83.68 320** LR LR 20 32 11.1
comp=Z,12nm,19.5s,baz=88,slow=38
YKA **Yellowknife Ar** **87.40 27** P **P** **19 52 26.5 +1.9**
comp=Z,0.2nm,0.4s,baz=265,slow=4.8,SNR=2.2
YKA LR LR 20 27 50.9
comp=Z,23nm,20.8s,baz=0.0,slow=33
comp=Z,0.2nm,0.4s
NVAR **Mina Array Bea** **89.17 52** P **P** **19 52 36.0 +2.2**
comp=Z,0.1nm,0.3s,baz=228,slow=1.1,SNR=1.5
comp=Z,0.1nm,0.3s
BELG **Belogornoye** **89.86 323** LR LR 20 32 35.9
comp=Z,25nm,21.8s,baz=162,slow=36
ELK **Elko** **91.12 49** LR LR 20 33 04.8
comp=Z,21nm,18.6s,baz=243,slow=35
ARCES **ARCESS Array B** **93.58 343** LR LR 20 37 26.3
comp=Z,22nm,19.2s,baz=307,slow=37
ANMO **Albuquerque** **99.20 53** LR LR 20 32 19.3
comp=Z,23nm,19.8s,baz=246,slow=32
LPAZ **La Paz** **144.60 108** PKPbc **PKPdf** **19 59 16.1 +0.2**
comp=Z,2.5nm,0.8s,baz=241,slow=1.3,SNR=5.4

IDC 26 19:58:09.7±1.2, 55.19S×30.17W, h0km, mb4.0/3, mbtmp4.0/3, MS3.1/2, Error ellipse: s-maj=57.6km s-min=31.6km az=53.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.23**	**155**	P	P	20 02 46.0	0.0
	0.8nm,0.8s,baz=303,slow=10.0,SNR=7.9						
SNAA				LR	LR	20 08 58.4	
	comp=Z,51nm,20.1s,baz=68,slow=32						
	0.8nm,0.8s						
PLCA	**Paso Flores**	**30.18**	**282**	LR	LR	20 14 55.0	
	comp=Z,44nm,19.2s,baz=179,slow=33						
H10S2	**ASCENSION HYDR**	**47.73**	**21**	T	T	20 58 17.1	
	baz=28,slow=74,SNR=7.0						
H10S3	**ASCENSION HYDR**	**47.73**	**21**	T	T	20 58 12.6	
	baz=192,slow=74,SNR=16						
LPAZ	**La Paz**	**48.50**	**308**	P	P	20 06 54.7	-0.2
	1.3nm,0.5s,baz=172,slow=8.1,SNR=6.5						
	1.3nm,0.5s						
H10N1	**ASCENSION HYDR**	**48.85**	**21**	T	T	20 59 37.5	
	baz=191,slow=75,SNR=6.2						
H10N3	**ASCENSION HYDR**	**48.85**	**21**	T	T	20 59 38.0	
	baz=191,slow=75,SNR=11						
H10N2	**ASCENSION HYDR**	**48.86**	**21**	T	T	20 59 40.7	
	baz=191,slow=75,SNR=9.2						
TORD	**Torodi Ar. Bea**	**73.19**	**32**	P	P	20 09 42.2	0.0
	2.6nm,0.3s,baz=202,slow=6.5,SNR=1.8						
	2.6nm,0.3s						
ILAR	**Eielson Array**	**148.28**	**313**	PKPbc	PKPbc	20 17 55.9	-0.4
	3.1nm,0.8s,baz=121,slow=1.8,SNR=20						
SONM	**Songino Array**	**152.37**	**87**	PKPbc	PKPbc	20 18 06.5	-0.3
	0.7nm,0.6s,baz=264,slow=3.2,SNR=5.9						

*JMA **26** 20:11:01.5±0.2, 23.6N±0.8×12.2E±, h16km±3km, MV3.0/10, TAIWAN REGION*
*TAP **26** 20:11:03.8, 23.68N×121.67E, h34km, ML3.3, B*

ISC 26 20:11:02.7±0.9, 23.64N±0.02×121.75E±0.02, h33km±7km, n79, σ0.83/149, 14C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.20**	**291**	⇓*i*	P	**20 11 10.0**	**+0.5**
	baz=286						
TEGC				*i*	S	**20 11 14.8**	**+1.0**
	baz=286						
TEYL	**Yanliau Villag**	**0.27**	**330**	⇑*i*	P	**20 11 10.9**	**+0.5**
	baz=345						
TEYL					S	**20 11 16.4**	**+1.0**
	baz=345						
EGFH	**Guangfu**	**0.29**	**277**	⇓*i*	P	**20 11 10.7**	**-0.1**
	baz=268						
EGFH					S	**20 11 16.3**	**+0.2**
	baz=268						
HGSD	**Ruisui**	**0.33**	**244**	⇓	P	**20 11 11.3**	**+0.1**
	baz=231						
HGSD				*e*	S	**20 11 17.4**	**+0.5**
	baz=231						
ESL	**Shilin**	**0.34**	**302**	*i*	P	**20 11 10.9**	**-0.5**
	baz=303						
ESL					S	**20 11 16.0**	**-0.5**
	baz=303						
HWA	**Hwalien**	**0.36**	**339**	P	P	**20 11 11.6**	**-0.1**
	baz=350						
HWA				*e*	S	**20 11 18.1**	**+0.3**
	baz=350						
ETM	**Tongmen**	**0.40**	**325**	⇑P	P	**20 11 11.9**	**-0.4**
	baz=331						
ETM				*e*	S	**20 11 17.8**	**-0.3**
	baz=331						
EHY	**Hungye**	**0.41**	**252**	⇓*i*	P	**20 11 12.2**	**-0.1**
	baz=241						
EHY					S	**20 11 18.4**	**-0.5**
	baz=241						
ECBN	**Changbin**	**0.42**	**221**	*e*	S	**20 11 19.7**	**+0.6**
	baz=209						
TWD	**Chiawan**	**0.46**	**343**	⇑*i*	P	**20 11 12.8**	**0.0**
	baz=352						
TWD					S	**20 11 19.7**	**+0.1**
	baz=352						
YULB	**Yu-li**	**0.48**	**240**	⇓*i*	P	**20 11 13.3**	**0.0**
	baz=230						
YULB				*e*	S	**20 11 20.3**	**-0.3**
	baz=230						
EYUL	**Yuli**	**0.48**	**234**	*e*	P	**20 11 13.8**	**+0.4**
	baz=224						
EYUL				*e*	S	**20 11 21.6**	**+0.8**
	baz=224						
TWF1	**Yuli**	**0.50**	**236**	⇓*i*	P	**20 11 13.7**	**+0.1**
	baz=226						
TWF1				*e*	S	**20 11 20.9**	**-0.2**
	baz=226						
ETL	**Fush Village**	**0.53**	**348**	⇑	P	**20 11 13.7**	**-0.2**
	baz=355						
ETL				*e*	S	**20 11 21.4**	**-0.1**
	baz=355						
NACB	**Ninganchiao**	**0.55**	**346**	⇑*i*	P	**20 11 13.9**	**-0.3**
	baz=352						
NACB				*e*	S	**20 11 21.5**	**-0.5**
	baz=352						
VWDT	**VWDT**	**0.57**	**282**	⇓*i*	P	**20 11 14.6**	**+0.1**
	baz=279						
VWDT				*e*	S	**20 11 22.9**	**+0.1**
	baz=279						
FULB	**Fuli**	**0.60**	**224**	*e*	P	**20 11 15.0**	**0.0**
	baz=216						
FULB				*e*	S	**20 11 24.6**	**+1.0**
	baz=216						
OWD	**Renai**	**0.61**	**301**	⇓*i*	P	**20 11 15.0**	**-0.3**
	baz=301						
OWD					S	**20 11 23.0**	**-0.8**
	baz=301						
ETLH	**Xiulin Townshi**	**0.62**	**337**	⇑	P	**20 11 15.0**	**-0.3**
	baz=342						
ETLH				*e*	S	**20 11 23.1**	**-0.8**
	baz=342						
CHKT	**Chengkung**	**0.64**	**213**	*e*	P	**20 11 14.8**	**-0.7**
	baz=205						
CHKT				*e*	S	**20 11 23.1**	**-1.1**
	baz=205						
WHF	**Hehuan Shan**	**0.67**	**319**	⇓	P	**20 11 15.9**	**-0.5**
	baz=322						
WHF				*e*	S	**20 11 24.6**	**-1.1**
	baz=322						
CHGB	**Renai**	**0.67**	**309**	⇓	P	**20 11 16.3**	**0.0**
	baz=310						
CHGB				*e*	S	**20 11 25.1**	**-0.4**
	baz=310						
WUSB	**Renai**	**0.68**	**302**	⇓*i*	P	**20 11 16.3**	**+0.1**
	baz=302						
WUSB				*e*	S	**20 11 25.2**	**-0.3**
	baz=302						
ECS	**Chishang**	**0.72**	**222**	*e*	P	**20 11 17.0**	**+0.3**
	baz=216						
ECS				*e*	S	**20 11 27.8**	**+1.1**
	baz=216						
SSLB	**Suanglung**	**0.74**	**282**	P	P	**20 11 16.9**	**-0.1**
SSLB	**Suanglung**	**0.74**	**282**	⇓	P	**20 11 16.9**	**-0.1**
	baz=280						
SSLB				*e*	S	**20 11 26.7**	**-0.5**
	baz=280						
YUS	**Yu-Shan**	**0.74**	**259**	⇓	P	**20 11 17.6**	**+0.2**
	baz=254						
YUS				*e*	S	**20 11 27.2**	**-0.5**
	baz=254						
FUSS	**Fushou**	**0.76**	**323**	⇓	P	**20 11 17.6**	**+0.1**
	baz=326						
FUSS				*e*	S	**20 11 27.5**	**-0.5**
	baz=326						
EDH	**Donghe**	**0.77**	**212**	⇑*e*	P	**20 11 17.1**	**-0.7**
	baz=206						
EDH				*e*	S	**20 11 27.3**	**-0.8**
	baz=206						
ENA	**Nanau**	**0.79**	**360**	⇑*e*	P	**20 11 17.6**	**-0.4**
	baz=6.0						
ENA				*e*	S	**20 11 28.2**	**-0.3**
	baz=6.0						
ELDTW	**Lidau**	**0.80**	**237**	*e*	P	**20 11 17.7**	**-0.7**
	baz=231						
ELDTW				*e*	S	**20 11 27.5**	**-1.5**
	baz=231						
TWT	**Tachien**	**0.81**	**320**	*e*	P	**20 11 18.6**	**+0.6**
	baz=321						
TWT				*e*	S	**20 11 28.7**	**-0.5**
	baz=321						
EWUT	**Wuta**	**0.81**	**2**	⇑*e*	P	**20 11 16.9**	**-1.4**
	baz=7.0						
EWUT				*e*	S	**20 11 27.6**	**-1.4**
	baz=7.0						
SMLT	**Sun Moon Lake**	**0.81**	**288**	⇓*e*	P	**20 11 18.3**	**+0.2**
	baz=286						
SMLT				*e*	S	**20 11 29.4**	**+0.3**
	baz=286						
WPL	**Puli Township**	**0.81**	**298**	*e*	P	**20 11 18.4**	**+0.4**
	baz=297						
TDCB	**Techi**	**0.82**	**319**	⇓*e*	P	**20 11 18.5**	**+0.4**
	baz=321						
TDCB				*e*	S	**20 11 28.5**	**-1.0**
	baz=321						
WHYT	**Xinyi Township**	**0.82**	**274**	*e*	P	**20 11 18.7**	**+0.7**
	baz=271						
WHYT				*e*	S	**20 11 28.8**	**-0.6**
	baz=271						
DPDB	**Guoxing**	**0.85**	**298**	⇓*e*	P	**20 11 19.1**	**+0.6**
	baz=298						
DPDB				*e*	S	**20 11 29.9**	**0.0**
	baz=298						
NNSB	**Datong**	**0.86**	**337**	*e*	P	**20 11 18.9**	**-0.4**
	baz=341						
NNSB				*e*	S	**20 11 29.6**	**-1.0**
	baz=341						
NNSH	**Datong**	**0.86**	**337**	⇑*e*	P	**20 11 18.8**	**-0.5**
	baz=341						
NNSH				*e*	S	**20 11 29.5**	**-1.0**
	baz=341						
TYC	**Yuchr**	**0.86**	**288**	⇓*e*	P	**20 11 18.9**	**+0.4**
	baz=287						
TYC				*e*	S	**20 11 30.5**	**+0.5**
	baz=287						
NNS	**Nan Shan**	**0.87**	**337**	*e*	P	**20 11 18.2**	**-1.3**
	baz=341						
NNS				*e*	S	**20 11 29.0**	**-1.9**
	baz=341						
ALS	**Alishan**	**0.87**	**262**	⇓	P	**20 11 19.9**	**+0.8**
	baz=258						
ALS				*e*	S	**20 11 31.1**	**+0.4**
	baz=258						
WCS	**Beigang Elemen**	**0.87**	**299**	⇓*e*	P	**20 11 18.3**	**-0.4**
	baz=299						
WCS				*e*	S	**20 11 29.3**	**-1.5**
	baz=299						
LATG	**Datong**	**0.92**	**347**	*e*	P	**20 11 19.8**	**+0.3**
	baz=351						
LATG				*e*	S	**20 11 31.7**	**-0.5**
	baz=351						
LONT	**Longtian**	**0.92**	**218**	⇑*e*	P	**20 11 19.2**	**-0.2**
	baz=213						
LONT				*e*	S	**20 11 31.2**	**-0.9**
	baz=213						
WJS	**Zhushan**	**0.95**	**282**	*e*	P	**20 11 21.2**	**+0.5**
	baz=280						
WJS				*e*	S	**20 11 34.0**	**+1.7**
	baz=280						
WHP	**Taichung City**	**0.97**	**311**	*e*	P	**20 11 21.2**	**+0.1**
	baz=312						
WHP				*e*	S	**20 11 33.5**	**+0.5**
	baz=312						
TWC	**Suao**	**0.97**	**6**	*e*	P	**20 11 20.8**	**-0.4**
	baz=11						
TWC				*e*	S	**20 11 33.6**	**+0.8**
	baz=11						
CHN5	**Tsauling**	**0.98**	**268**	*e*	P	**20 11 20.9**	**-0.5**
	baz=265						
NDT	**Datong Townshi**	**0.99**	**348**	*e*	P	**20 11 21.0**	**-0.4**
	baz=351						
NDT				*e*	S	**20 11 33.0**	**-1.1**
	baz=351						
LDUT	**Ludao**	**0.99**	**195**	⇑*e*	P	**20 11 19.7**	**-0.7**
	baz=190						
LDUT				*e*	S	**20 11 32.0**	**-2.2**
	baz=190						
NDS	**Dongshan**	**0.99**	**358**	*e*	P	**20 11 20.0**	**-0.5**
	baz=3.0						
NDS				*e*	S	**20 11 32.6**	**-1.7**
	baz=3.0						
WNT	**Mingjian**	**1.00**	**284**	*e*	P	**20 11 22.3**	**+0.7**
	baz=283						
WNT				*e*	S	**20 11 35.3**	**+1.8**
	baz=283						
STYH	**Taoyuan**	**1.00**	**243**	*e*	P	**20 11 20.6**	**0.0**
	baz=239						
STYH				*e*	S	**20 11 33.0**	**-1.6**
	baz=239						
ENTT	**Nioudou**	**1.01**	**351**	*e*	P	**20 11 20.3**	**-0.4**
	baz=355						
ENTT				*e*	S	**20 11 33.3**	**-0.6**
	baz=355						
WNT1	**Nantou City**	**1.01**	**286**	*e*	P	**20 11 22.7**	**+0.9**
	baz=284						
TWGBT	**Beinan**	**1.02**	**217**	*e*	P	**20 11 20.4**	**-0.4**
	baz=212						
TWGBT				*e*	S	**20 11 33.0**	**-0.9**
	baz=212						
STYT	**Tauyuan**	**1.02**	**243**	*e*	P	**20 11 21.9**	**0.0**
	baz=238						
STYT				*e*	S	**20 11 34.8**	**-0.3**
	baz=238						
WWF	**Wufeng**	**1.04**	**293**	*e*	P	**20 11 22.0**	**-0.2**
	baz=292						
WWF				*e*	S	**20 11 38.5**	**+2.8**
	baz=292						
WCKO	**Fanlu**	**1.07**	**260**	*e*	P	**20 11 22.4**	**-0.3**
	baz=256						
WCKO				*e*	S	**20 11 37.1**	**+0.8**
	baz=256						
TPUB	**Ta-pu**	**1.08**	**252**	P	P	**20 11 23.2**	**+0.3**
TPUB	**Ta-pu**	**1.08**	**252**	*e*	P	**20 11 23.3**	**+0.3**
	baz=249						
TPUB				*e*	S	**20 11 37.5**	**+0.8**
	baz=249						
YHNB	**Yeheng**	**1.08**	**342**	P	P	**20 11 22.4**	**-0.7**
YHNB	**Yeheng**	**1.08**	**342**	⇑*e*	P	**20 11 22.6**	**-0.5**
	baz=345						
YHNB				*e*	S	**20 11 35.7**	**0.0**
	baz=345						
WGK	**Gukeng**	**1.09**	**273**	*e*	P	**20 11 23.2**	**+0.2**
	baz=270						
WGK				*e*	S	**20 11 37.7**	**+0.8**
	baz=270						
NSK	**Sanguang**	**1.10**	**341**	⇑*e*	P	**20 11 21.7**	**-0.2**
	baz=344						
NSK				*e*	S	**20 11 35.0**	**-0.9**
	baz=344						
TCU	**Taichung**	**1.10**	**298**	*e*	P	**20 11 24.1**	**+0.7**
	baz=297						
FUSB	**Fushanzhiwuyua**	**1.13**	**353**	*e*	P	**20 11 23.1**	**-0.7**
	baz=356						
FUSB				*e*	S	**20 11 36.0**	**-0.8**
	baz=356						
TWQ1	**Liyutan**	**1.14**	**309**	*e*	P	**20 11 24.4**	**+0.5**
	baz=309						
TWQ1				*e*	S	**20 11 38.8**	**+0.3**
	baz=309						
NFF	**Wufeng Townshi**	**1.15**	**330**	*e*	P	**20 11 22.9**	**+0.4**
	baz=332						
NFF				*e*	S	**20 11 37.1**	**-0.1**
	baz=332						
TWB1	**Santiao Chiao**	**1.39**	**9**	*e*	P	**20 11 27.3**	**-0.8**
	baz=13						
TWB1				*e*	S	**20 11 44.4**	**-1.0**
	baz=13						
YOJ	**Yonaguni jima**	**1.42**	**54**	*e*	P	**20 11 28.1**	**-0.5**
	baz=57						
YOJ				*e*	S	**20 11 45.7**	**-0.7**
	baz=57						
YOJ	**Yonaguni jima**	**1.42**	**54**	P	P	**20 11 27.8**	**-0.8**
YOJ				*e*	S	**20 11 45.7**	**-0.7**
HATJ	**Hateruma jima**	**1.93**	**77**	*e*	S	**20 11 57.9**	**+1.5**
IRIF	**Iriomote-Funau**	**1.94**	**69**	P	P	**20 11 35.3**	**+1.8**
IRIF				S	S	**20 11 58.4**	**+1.6**
JKRS	**Kuro-shima**	**2.16**	**73**	P	P	**20 11 38.4**	**+2.0**
JKRS				*e*	S	**20 12 04.7**	**+2.7**
JIJ	**Ishigaki jima**	**2.31**	**71**	P	P	**20 11 39.5**	**+1.0**
JIJ				S	S	**20 12 06.3**	**+0.5**
JISG	**Ishigakijimahi**	**2.53**	**67**	P	P	**20 11 42.6**	**+1.1**
JISG				S	S	**20 12 11.2**	**0.0**

ROM 26 20:23:47.0±0.1, 42.739N±0.003×13.180E±0.005, h10km, ML2.6/14, Error ellipse: s-maj=0.3km s-min=0.1km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**333**	P	Pg	20 23 49.9	+0.2
NRCA				S	Sg	20 23 51.7	0.0
LNSS	**Leonessa**	**0.17**	**217**	P	Pg	20 23 51.4	+0.7
LNSS				S	Sg	20 23 54.6	+1.3
LNSS				AML	AML		
	comp=E,6210μm,0.4s						
LNSS				AML	AML		
	comp=N,6195μm,0.2s						
LNSS				AML	AML		
	comp=E,6205μm,0.4s						
LNSS				AML	AML		
	comp=N,6192μm,0.2s						
LNSS				AML	AML		
	comp=E,6206μm,0.4s						
MC2	**Monte Cornacci**	**0.17**	**3**	S	Sg	20 23 52.0	-1.5
MMO1	**Montemonaco**	**0.19**	**34**	P	Pg	20 23 51.5	+0.4
MMO1				S	Sg	20 23 55.2	+1.3
MMO1				AML	AML		
	comp=E,7120μm,0.3s						
MMO1				AML	AML		
	comp=N,6785μm,1.2s						
MMO1				AML	AML		
	comp=N,2447μm,0.2s						
MMO1				AML	AML		
	comp=E,3015μm,0.1s						
MMO1				AML	AML		
	comp=N,357μm,0.1s						
T1243	**Rocca Santa Ma**	**0.20**	**102**	P	Pg	20 23 52.1	+0.8
T1243				S	Sg	20 23 55.4	+1.2
T1243				AML	AML		
	comp=E,20850μm,0.2s						
T1243				AML	AML		
	comp=N,18400μm,0.3s						
T1243				AML	AML		
	comp=E,20750μm,0.2s						
T1243				AML	AML		
	comp=N,18400μm,0.3s						
T1243				AML	AML		
	comp=E,20900μm,0.2s						
T1243				AML	AML		
	comp=E,20879μm,0.2s						
T1243				AML	AML		
	comp=N,18412μm,0.3s						
T1243				AML	AML		
	comp=E,20746μm,0.2s						
T1243				AML	AML		
	comp=N,18406μm,0.3s						
RM33	**Pellescritta (**	**0.23**	**174**	P	Pg	20 23 52.4	+0.7
RM33				S	Sg	20 23 56.6	+1.6
RM33				AML	AML		
	comp=N,2370μm,0.2s						
RM33				AML	AML		
	comp=E,3370μm,0.2s						
RM33				AML	AML		
	comp=N,2360μm,0.2s						
RM33				AML	AML		
	comp=E,3365μm,0.2s						
RM33				AML	AML		
	comp=N,2360μm,0.2s						
RM33				AML	AML		
	comp=E,3370μm,0.2s						

RM33					AML	AML		
	comp=E,3375µm,0.2s							
RM33					AML	AML		
	comp=N,2365µm,0.2s							
RM33					AML	AML		
	comp=N,2367µm,0.2s							
RM33					AML	AML		
	comp=N,2362µm,0.2s							
RM33					AML	AML		
	comp=E,3373µm,0.2s							
CAMP	**Campotosto**	**0.26**	**140**	P	Pg	20 23 53.1	+0.7	
CAMP				S	Sb	20 23 57.6	-1.0	
FDMO	**Fiordimonte**	**0.30**	**347**	P	Pg	20 23 53.4	+0.3	
FDMO				S	Sb	20 23 58.7	-1.1	
FDMO				AML	AML			
	comp=E,1405µm,0.2s							
FDMO				AML	AML			
	comp=N,1181µm,1.1s							
FDMO				AML	AML			
	comp=E,1402µm,0.2s							
FDMO				AML	AML			
	comp=N,971µm,0.2s							
CESI	**CESI - Serrava**	**0.33**	**323**	P	Pg	20 23 54.0	+0.3	
CESI				S	Sb	20 23 59.5	-1.1	
CESI				AML	AML			
	comp=E,2245µm,0.2s							
CESI				AML	AML			
	comp=N,3610µm,0.7s							
CESI				AML	AML			
	comp=E,973µm,0.2s							
CESI				AML	AML			
	comp=N,1943µm,0.2s							
TERO	**Teramo**	**0.33**	**110**	P	Pg	20 23 54.1	+0.5	
TERO				S	Sb	20 23 59.5	-1.0	
TERO				AML	AML			
	comp=E,1700µm,0.2s							
TERO				AML	AML			
	comp=E,1865µm,0.2s							
TERO				AML	AML			
	comp=N,3060µm,0.6s							
TERO				AML	AML			
	comp=N,2840µm,0.6s							
TERO				AML	AML			
	comp=E,1860µm,0.2s							
TERO				AML	AML			
	comp=E,1863µm,0.2s							
TERO				AML	AML			
	comp=N,2493µm,0.2s							
TERO				AML	AML			
	comp=N,2736µm,0.2s							
TERO				AML	AML			
	comp=E,1701µm,0.2s							
ARRO	**Arrone**	**0.34**	**243**	P	Pg	20 23 54.4	+0.5	
ARRO				S	Sb	20 24 00.1	-0.7	
ARRO				AML	AML			
	comp=E,1230µm,1.1s							
ARRO				AML	AML			
	comp=N,1370µm,0.6s							
ARRO				AML	AML			
	comp=E,1181µm,0.2s							
ARRO				AML	AML			
	comp=N,1233µm,0.2s							
CSP1	**Cessapalombo**	**0.35**	**3**	S	Sb	20 23 60.0	-1.2	
GIGS	**Gran Sasso**	**0.41**	**135**	P	Pg	20 23 55.4	+0.4	
GIGS				S	Sb	20 24 01.7	-1.0	
GIGS				AML	AML			
	comp=E,186µm,0.3s							
GIGS				AML	AML			
	comp=N,202µm,0.6s							
GIGS				AML	AML			
	comp=N,203µm,0.6s							
GIGS				AML	AML			
	comp=E,186µm,0.3s							
GIGS				AML	AML			
	comp=N,152µm,0.4s							
FIAM	**Fiamignano**	**0.47**	**186**	P	Pg	20 23 56.7	+0.4	
FIAM				S	Sb	20 24 04.0	-0.6	
SNTG	**Esanatoglia**	**0.55**	**341**	P	Pg	20 23 57.9	+0.3	
SNTG				S	Sb	20 24 06.6	-0.1	
FAGN	**Fagnano**	**0.56**	**148**	P	Pg	20 23 57.2	-0.7	
FAGN				S	Sb	20 24 07.5	+0.5	
FAGN				AML	AML			
	comp=E,1053µm,0.5s							
FAGN				AML	AML			
	comp=N,942µm,0.3s							
FAGN				AML	AML			
	comp=N,942µm,0.3s							
FAGN				AML	AML			
	comp=E,1051µm,0.5s							
EL6	**Elcito**	**0.59**	**354**	P	Pg	20 23 58.9	+0.3	
EL6				S	Sb	20 24 08.1	0.0	
FOSV	**Fossato di Vic**	**0.64**	**331**	P	Pg	20 23 59.3	0.0	
FOSV				S	Sb	20 24 09.3	0.0	
MPAG	**Monte Paganucc**	**0.94**	**341**	S	Sn	20 24 20.0	0.0	
NARO	**Abbazia di Nar**	**0.98**	**334**	S	Sn	20 24 22.0	+1.2	
OBKA	**Obir**	**3.89**	**14**	*e*Pn	Pb	20 24 53.9	-1.9	
	comp=E,3.7nm,1.4s							
MYKA	**Terra Mystica**	**3.91**	**5**	*e*Pn	Pn	20 24 49.5	+2.3	
	comp=E,1.1nm,0.4s							
ABTA	**Abfaltersbach**	**4.04**	**353**	*e*Pn	Pn	20 24 48.3	-0.6	
	comp=E,2.0nm,0.5s							
SOKA	**Soboth**	**4.15**	**18**	*e*Pn	Pn	20 24 54.2	+3.6	
	comp=E,2.4nm,1.3s							
FETA	**Feichten**	**4.62**	**339**	*e*Pn	Pb	20 25 09.6	+1.4	
	comp=E,2.5nm,1.0s							

*IDC **26** 20:24:10.7±1.4,4°.09S×128°.77E,h0km,mb3.7/2, mbtmp3.8/4,ML3.6/2,MS2.9/1,Error ellipse: s-maj=49.9km s-min=26.7km az=81.0*

*DJA **26** 20:24:13.0±0.4,4°S±3°×12°9E±°,h10km,M3.7/12,mb3.6/2, MLv3.7/12*

ISC 26 20:24:14.7±1.0,4°.05S±0°.07×128°.74E±0°.05,h35km,n14, σ1§38/16,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.65**	**303**	P	**Pn**	**20 24 26.3**	**-1.2**
AAI				S	**Sn**	**20 24 36.0**	**-0.5**
MSAI	**Masohi**	**0.72**	**15**	P	**Pn**	**20 24 26.9**	**-1.5**
MSAI				S	**Sn**	**20 24 36.5**	**-1.7**
BNDI	**Bandanaira**	**1.25**	**112**	P	**Pn**	**20 24 36.0**	**+0.2**
NLAI	**Namlea**	**1.82**	**296**	P	**Pn**	**20 24 43.6**	**0.0**
SANI	**Sanana**	**3.39**	**306**	P	**Pn**	**20 25 05.9**	**+0.8**
LBMI	**Labuha**	**3.60**	**340**	P	**Pn**	**20 25 10.0**	**+1.9**
FAKI	**Fak Fak**	**3.68**	**72**	P	**Pn**	**20 25 10.9**	**+1.8**
SIJI	**Sorong**	**4.04**	**39**	Pn	**Pn**	**20 25 15.0**	**+0.9**
	9.1nm,0.3s,baz=221,slow=10,SNR=43						
SIJI				Sn	**Sn**	**20 25 59.6**	**-0.6**
	4.0nm,0.3s,baz=230,slow=23,SNR=2.1 19nm,0.3s						
SWI	**Sorong**	**4.04**	**39**	P	**Pn**	**20 25 14.5**	**+0.4**
BBSI	**Bau Bau**	**6.31**	**257**	P	**Pn**	**20 25 45.5**	**+0.1**
DAV	**Davao City (W)**	**11.48**	**344**	LR	LR	20 32 28.7	
	comp=Z,57nm,18.0s,baz=150,slow=43						
WRA	**Warramunga Arr**	**16.72**	**161**	Pn	**Pn**	**20 28 03.9**	**-2.5**
	0.1nm,0.3s,baz=343,slow=11,SNR=10 1.3nm,0.9s						
ASAR	**Alice Springs**	**20.14**	**166**	P	Pn	20 28 47.3	-0.7
	4.6nm,0.7s,baz=346,slow=11,SNR=64						
ASAR				PcP	**PcP**	**20 33 00.9**	**+0.6**
	0.3nm,0.6s,baz=2.9,slow=1.2,SNR=6.0 4.6nm,0.7s						
MKAR	**Makanchi Array**	**65.08**	**327**	P	**P**	**20 34 53.5**	**+1.6**
	0.3nm,0.5s,baz=120,slow=8.4,SNR=4.9 0.3nm,0.5s						

ROM 26 20:24:19.0±0.1,42°.831N±0°.003×13°.234E±0°.004, h9km,ML2.2/4,7C-3D,Error ellipse: s-maj=0.3km s-min=0.2km az=43.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.09**	**339**	P	Pg	20 24 21.9	+0.3
MC2				S	Sg	20 24 23.6	+0.2
MC2				AML	AML		
	comp=E,6705µm,0.2s						
MC2				AML	AML		
	comp=N,6700µm,0.2s						
MC2				AML	AML		
	comp=E,6700µm,0.2s						
MC2				AML	AML		
	comp=N,6695µm,0.2s						
MC2				AML	AML		
	comp=E,6699µm,0.2s						
MC2				AML	AML		
	comp=N,6698µm,0.2s						
NRCA	**Norcia**	**0.09**	**272**	P	Pg	20 24 21.9	+0.5
NRCA				S	Sg	20 24 23.5	+0.4
NRCA				AML	AML		
	comp=E,42750µm,0.1s						
NRCA				AML	AML		
	comp=N,25500µm,0.6s						
NRCA				AML	AML		
	comp=E,47000µm,0.1s						
NRCA				AML	AML		
	comp=N,28400µm,0.6s						
NRCA				AML	AML		
	comp=E,42750µm,0.1s						
NRCA				AML	AML		
	comp=E,47005µm,0.1s						
NRCA				AML	AML		
	comp=E,42756µm,0.1s						
NRCA				AML	AML		
	comp=N,22321µm,0.1s						
NRCA				AML	AML		
	comp=N,24678µm,0.1s						
MMO1	**Montemonaco**	**0.10**	**45**	P	Pg	20 24 22.0	+0.4
MMO1				S	Sg	20 24 23.8	+0.4
MMO1				AML	AML		
	comp=N,6785µm,1.2s						
MMO1				AML	AML		
	comp=E,7120µm,0.3s						
MMO1				AML	AML		
	comp=E,872µm,1.0s						
MMO1				AML	AML		
	comp=N,5496µm,0.3s						
MMO1				AML	AML		
	comp=N,821µm,0.3s						
MMO1				AML	AML		
	comp=E,6521µm,0.3s						
FEMA	**Monte Fema**	**0.19**	**314**	⇓P	Pg	20 24 23.7	+0.7
FEMA				S	Sg	20 24 27.0	+1.2
FEMA				AML	AML		
	comp=N,3776µm,0.1s						
FEMA				AML	AML		
	comp=E,4728µm,0.5s						
T1243	**Rocca Santa Ma**	**0.21**	**130**	P	Pg	20 24 23.8	+0.5
T1243				S	Sg	20 24 27.6	+1.4
T1243				AML	AML		
	comp=E,5420µm,0.3s						
T1243				AML	AML		
	comp=N,6120µm,0.3s						
T1243				AML	AML		
	comp=N,6135µm,0.3s						
T1243				AML	AML		
	comp=N,6115µm,0.3s						
T1243				AML	AML		
	comp=E,5330µm,0.3s						
T1243				AML	AML		
	comp=N,6138µm,0.3s						
T1243				AML	AML		
	comp=E,5332µm,0.3s						
T1243				AML	AML		
	comp=N,6118µm,0.3s						
T1243				AML	AML		
	comp=E,5421µm,0.3s						
FDMO	**Fiordimonte**	**0.23**	**332**	P	Pg	20 24 24.4	+0.7
FDMO				S	Sg	20 24 28.1	+1.2
CSP1	**Cessapalombo**	**0.26**	**355**	P	Pg	20 24 24.9	+0.6
CSP1				S	Sg	20 24 29.2	+1.3
LNSS	**Leonessa**	**0.27**	**212**	⇑P	Pg	20 24 25.2	+0.8
LNSS				S	Sb	20 24 29.8	-1.0
LNSS				AML	AML		
	comp=E,5315µm,0.2s						
LNSS				AML	AML		
	comp=N,4285µm,0.4s						
LNSS				AML	AML		
	comp=E,5310µm,0.2s						
LNSS				AML	AML		
	comp=N,3912µm,0.1s						
LNSS				AML	AML		
	comp=E,5314µm,0.2s						
CESI	**CESI - Serrava**	**0.30**	**306**	P	Pg	20 24 25.6	+0.6
CESI				S	Sg	20 24 30.2	+1.2
CAMP	**Campotosto**	**0.32**	**156**	⇓P	Pg	20 24 26.0	+0.6
CAMP				S	Sb	20 24 31.2	-1.1
CAMP				AML	AML		
	comp=E,758µm,0.2s						
CAMP				AML	AML		
	comp=N,519µm,0.4s						
RM33	**Pellescritta (**	**0.32**	**182**	P	Pb	20 24 26.3	-0.7
RM33				S	Sb	20 24 31.6	-0.7
RM33				AML	AML		
	comp=E,978µm,1.6s						
RM33				AML	AML		
	comp=N,876µm,0.5s						
RM33				AML	AML		
	comp=E,986µm,1.6s						
RM33				AML	AML		
	comp=E,974µm,1.6s						
RM33				AML	AML		
	comp=N,866µm,1.0s						
RM33				AML	AML		
	comp=E,987µm,1.6s						
RM33				AML	AML		
	comp=N,876µm,0.5s						
RM33				AML	AML		
	comp=E,788µm,0.1s						
RM33				AML	AML		
	comp=N,803µm,0.2s						
RM33				AML	AML		
	comp=N,784µm,0.1s						
RM33				AML	AML		
	comp=E,787µm,0.2s						
TERO	**Teramo**	**0.34**	**127**	⇑P	Pg	20 24 26.3	+0.5
TERO				S	Sb	20 24 31.9	-1.0
TERO				AML	AML		
	comp=E,1400µm,0.2s						
TERO				AML	AML		
	comp=N,1510µm,1.2s						
TERO				AML	AML		
	comp=N,1380µm,1.2s						
TERO				AML	AML		
	comp=N,1204µm,0.2s						
TERO				AML	AML		
	comp=E,1404µm,0.2s						
TERO				AML	AML		
	comp=E,1208µm,0.1s						
OFFI	**Offida**	**0.35**	**72**	⇑P	Pb	20 24 27.4	0.0
OFFI				AML	AML		
	comp=N,1638µm,0.4s						
OFFI				AML	AML		
	comp=E,1536µm,0.2s						
GIGS	**Gran Sasso**	**0.45**	**147**	⇑P	Pg	20 24 28.4	+0.5
GIGS				S	Sb	20 24 35.3	-0.8
GIGS				AML	AML		
	comp=N,202µm,0.6s						
GIGS				AML	AML		
	comp=N,203µm,0.6s						
GIGS				AML	AML		
	comp=N,178µm,0.1s						
GIGS				AML	AML		
	comp=E,170µm,0.5s						
GIGS				AML	AML		
	comp=E,162µm,0.1s						
ASSB	**Assisi San Ben**	**0.47**	**297**	P	Pg	20 24 28.5	+0.3
ASSB				S	Sb	20 24 35.8	-0.8
TRTR	**Tortoreto Alta**	**0.50**	**92**	⇑P	Pb	20 24 30.6	+0.7
CESX	**Cesi**	**0.53**	**246**	⇓P	Pb	20 24 30.1	-0.3
CESX				S	Sb	20 24 37.8	-0.4
CESX				AML	AML		
	comp=E,244µm,0.4s						
CESX				AML	AML		
	comp=N,313µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.56**	**309**	P	Pg	20 24 30.3	+0.4
ATCC				S	Sb	20 24 39.1	-0.1
VCEL	**Villa Celiera**	**0.62**	**134**	⇑P	Pb	20 24 31.8	-0.3
MRB1	**Monte Rocchett**	**2.14**	**142**	⇑P	Pg	20 25 01.5	+1.4

*IDC **26** 20:32:26.6±2.7,60°.70S×32°.59W,h0km,mb4.8/1, mbtmp4.8/1,MS3.6/6,Error ellipse: s-maj=162.0km s-min=83.5km az=156.0*

ISC 26 20:32:27.6±2.1,60.8S±0°.3×32°.8W±0°.6,h10km,n19, σ2§07/8,MS3.6/5,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**13.95**	**148**	P	**Pn**	**20 35 43.5**	**-1.6**
VNA1	**Neumayer--Stat**	**13.99**	**145**	P	**Pn**	**20 35 43.7**	**-1.8**
VNA2	**Neumayer--Watz**	**14.38**	**145**	P	**Pn**	**20 35 49.4**	**-1.6**
	baz=306,slow=16						
SNAA	**Sanae**	**16.03**	**145**	P	**Pn**	**20 36 13.4**	**+0.6**
SNAA	**Sanae**	**16.03**	**145**	LR	LR	20 41 12.5	
	comp=Z,108nm,20.4s,baz=285,slow=33						
TROLL	**Troll, Antarti**	**17.70**	**144**	P	**P**	**20 36 38.4**	**+3.5**
PLCA	**Paso Flores**	**30.55**	**294**	LR	LR	20 51 32.8	
	comp=Z,82nm,18.5s,baz=168,slow=37						
MAW	**Mawson**	**38.15**	**142**	LR	LR	20 54 01.0	
	comp=Z,102nm,19.9s,baz=332,slow=34						
H10S2	**ASCENSION HYDR**	**53.47**	**23**	T	T	21 39 26.9	
	baz=190,slow=74,SNR=8.1						
H10S3	**ASCENSION HYDR**	**53.48**	**23**	T	T	21 39 27.0	
	baz=30,slow=74,SNR=12						
H10N1	**ASCENSION HYDR**	**54.59**	**22**	T	T	21 40 52.1	
	baz=190,slow=75,SNR=9.2						
H10N3	**ASCENSION HYDR**	**54.59**	**22**	T	T	21 40 49.5	
	baz=190,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**54.61**	**22**	T	T	21 40 51.4	
	baz=190,slow=75,SNR=24						
MDP	**Montagnes des**	**67.51**	**339**	LR	LR	21 12 36.5	
	comp=Z,66nm,18.6s,baz=168,slow=36						
TORD	**Torodi Ar. Bea**	**78.65**	**34**	P	**P**	**20 44 29.4**	**-0.1**
	5.0nm,0.6s,baz=186,slow=6.3,SNR=1.5 5.0nm,0.6s						
SJG	**San Juan**	**83.09**	**328**	LR	LR	21 24 40.1	
	comp=Z,26nm,19.8s,baz=240,slow=38						
CMIG	**Matias Romero**	**92.00**	**302**	LR	LR	21 19 23.4	
	comp=Z,45nm,20.2s,baz=194,slow=31						
ZALV	**Zalesovo Beam**	**146.86**	**73**	PKPbc	**PKPbc**	**20 52 08.2**	**-0.5**
	0.5nm,0.5s,baz=259,slow=1.5,SNR=2.1						
ILAR	**Eielson Array**	**150.83**	**307**	PKPbc	**PKiKP**	**20 52 19.0**	**-0.2**
	0.6nm,0.9s,baz=129,slow=2.6,SNR=5.0						

IDC 26 20:32:40.5±16.0,52°.11N×178°.01W,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=318.9km s-min=61.1km az=81.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**20.37**	**40**	P	P	20 37 18.5	+0.2
	1.9nm,0.6s,baz=238,slow=9.7,SNR=16 1.9nm,0.6s						
YKA	**Yellowknife Ar**	**34.37**	**47**	P	P	20 39 28.5	-0.2
	0.6nm,0.6s,baz=282,slow=8.1,SNR=3.4 0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.40**	**206**	T	T	21 17 19.5	
	baz=18,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**34.41**	**206**	T	T	21 17 20.1	
	baz=18,slow=76,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**34.42**	**206**	T	T	21 17 20.8	
	baz=18,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**35.62**	**205**	T	T	21 18 50.7	
	baz=16,slow=74						
H11S2	**WAKE ISLAND Hy**	**35.64**	**205**	T	T	21 18 49.6	
	baz=16,slow=74						
H11S3	**WAKE ISLAND Hy**	**35.64**	**205**	T	T	21 18 56.2	
	baz=16						
NVAR	**Mina Array Bea**	**42.98**	**84**	P	P	20 40 41.8	+0.3
	0.7nm,0.7s,baz=299,slow=7.3,SNR=6.5 0.7nm,0.7s						
PDAR	**Pinedale Array**	**45.62**	**73**	P	P	20 41 01.9	-0.7
	1.9nm,0.5s,baz=291,slow=3.8,SNR=4.3 1.9nm,0.5s						
TXAR	**Lajitas Array**	**58.06**	**82**	P	P	20 42 35.5	0.0
	0.2nm,0.4s,baz=308,slow=6.2,SNR=4.0 0.2nm,0.4s						

*NEIC **26** 20:33:17.9±2.0,52°.67N±0°.10×174°.57W±0°.09, h200km±8km,mb4.1/37,ML3.4/26(AEIC),Error ellipse: s-maj=14.4km s-min=7.7km az=172.0*

*AEIC **26** 20:33:18.4±3.7,52°.6N±0°.1×174°.6W±0°.1,h192km±6km, Error ellipse: s-maj=19.6km s-min=8.1km az=162.0*

ISC 26 20:33:17.9±0.8,52°.7N±0°.1×174°.51W±0°.06,h200km,n93, σ1§08/99,mb4.4/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONE	**Korovin Northe**	**0.36**	**138**		**Pn**	**20 33 45.0**	**+0.4**
KOKL	**Mount Kliuchef**	**0.39**	**151**		**Pn**	**20 33 45.4**	**+0.7**
KOFP	**Korovin Flat P**	**0.46**	**147**		**Pn**	**20 33 45.3**	**+0.3**
ATKA	**Atka Island**	**0.50**	**157**		**Pn**	**20 33 44.9**	**-0.1**
ATKA					**Sn**	**20 34 05.8**	**-0.1**
GSTR	**Great Sitkin T**	**1.11**	**240**		**Pn**	**20 33 48.9**	**+0.4**
GSMY	**Great Sitkin M**	**1.13**	**237**		**Pn**	**20 33 48.9**	**+0.3**
GSTD	**Great Sitkin T**	**1.17**	**239**		**Pn**	**20 33 49.4**	**+0.4**
GSTD					**Sn**	**20 34 13.0**	**0.0**
GSCK	**Great Sitkin C**	**1.21**	**238**		**Pn**	**20 33 49.5**	**+0.3**
ADK	**Adak**	**1.55**	**241**	Pn	**Pn**	**20 33 52.2**	**+0.2**
ADK				Sn	**Sn**	**20 34 17.8**	**-0.6**
KICM	**Kanaga Island**	**1.81**	**247**		**Pn**	**20 33 55.3**	**+0.8**
KIKV	**Kanaga Island**	**1.81**	**245**		**Pn**	**20 33 55.4**	**+0.8**
KIWB	**Kanaga Island**	**1.81**	**245**		**Pn**	**20 33 55.2**	**+0.7**
KIMD	**Kanaga Island**	**1.91**	**243**		**Pn**	**20 33 55.9**	**+0.5**
KIMD					**Sn**	**20 34 24.1**	**-0.4**
TAPA	**Tanaga Point A**	**2.20**	**249**		**Pn**	**20 33 59.4**	**+0.8**
TAFP	**Tanaga Falls P**	**2.27**	**252**		**Pn**	**20 34 00.0**	**+0.8**
TASE	**Tanaga Southea**	**2.32**	**250**		**Pn**	**20 34 00.3**	**+0.5**
GAEA	**Gareloi East**	**2.75**	**253**		**Pn**	**20 34 05.6**	**+1.0**
GANO	**Gareloi North**	**2.77**	**254**		**Pn**	**20 34 05.7**	**+0.8**
CLES	**Cleveland East**	**2.81**	**85**	Pn	**Pn**	**20 34 06.2**	**+0.9**
NIKH	**Nikolski High**	**3.44**	**83**	Pn	**Pn**	**20 34 12.8**	**+0.1**
CERAA	**Semis' Rag'd T**	**3.65**	**260**		**Pn**	**20 34 16.3**	**+1.1**
CEPE	**Semis' Perret**	**3.65**	**261**		**Pn**	**20 34 16.4**	**+1.1**
CESW	**Semis' Southwe**	**3.72**	**261**		**Pn**	**20 34 17.1**	**+0.9**
AMKA	**Amchitka**	**4.03**	**254**		**Pn**	**20 34 19.9**	**-0.1**
AMKA				Sn	**Sn**	**20 35 05.3**	**-3.5**
LSSE	**Little Sitkin**	**4.31**	**263**		**Pn**	**20 34 24.9**	**+1.4**
UNV	**Unalaska Valle**	**4.95**	**73**	Pn	**Pn**	**20 34 32.3**	**+0.8**
SPIA	**Saint Paul Isl**	**5.15**	**27**	Pn	**Pn**	**20 34 34.0**	**0.0**
AKUT	**Akutan**	**5.43**	**71**	Pn	**Pn**	**20 34 38.7**	**+1.0**
AKUT					**Sn**	**20 35 40.0**	**-0.7**
FALS	**False Pass**	**6.93**	**67**	Pn	**Pn**	**20 34 56.9**	**-0.2**
SDPT	**Sand Point**	**8.69**	**66**	Pn	**Pn**	**20 35 18.3**	**-1.6**
CNBA	**Chernabura Isl**	**9.10**	**70**	Pn	**Pn**	**20 35 23.9**	**-1.4**
CHGN	**Chignik**	**10.05**	**62**	Pn	**Pn**	**20 35 37.1**	**-0.4**
CHIR	**Chirikof Islan**	**11.49**	**67**	Pn	**Pn**	**20 35 54.9**	**-1.1**
SII	**Sitkinak Islan**	**12.40**	**64**	Pn	**Pn**	**20 36 06.5**	**-1.1**
P18K	**Big Mountain,**	**12.68**	**50**		**Pn**	**20 36 13.1**	**+1.9**
O18K	**Koktuh Hills**	**12.89**	**48**	Pn	**Pn**	**20 36 10.5**	**-3.2**
N18K	**Kilae Creek**	**12.97**	**44**	Pn	**Pn**	**20 36 11.7**	**-3.0**
OHAK	**Old Harbor**	**13.00**	**61**	P	**Pn**	**20 36 12.3**	**-2.8**
Q19K	**Cape Douglas,**	**13.27**	**54**	P	**Pn**	**20 36 19.0**	**+0.4**
SVW2	**Sparrevohn**	**13.31**	**43**	P	**Pn**	**20 36 18.2**	**-0.9**
TNA	**Tin City**	**13.36**	**12**		**Pn**	**20 36 19.2**	**-0.3**
KDAK	**Kodiak Island**	**13.49**	**59**	P	**Pn**	**20 36 19.2**	**-2.1**
N19K	**Bonanza Creek**	**13.64**	**45**	P	**Pn**	**20 36 22.3**	**-0.8**
P19K	**Oil Pt**	**13.72**	**51**	P	**P**	**20 36 26.1**	**-0.3**
ILSW	**Iliamna Southw**	**13.89**	**50**	P	**P**	**20 36 27.7**	**-0.6**
L19K	**White Mountain**	**14.19**	**40**		**P**	**20 36 31.5**	**0.0**
TTA	**Tatalina**	**14.19**	**36**	P	**P**	**20 36 31.6**	**+0.1**
M19K	**Big River Lodg**	**14.22**	**42**	P	**P**	**20 36 31.9**	**+0.1**
CNPM	**China Poot**	**14.64**	**53**	P	**Pn**	**20 36 36.1**	**+0.7**
M20K	**Styx River**	**14.72**	**43**	P	**P**	**20 36 39.1**	**+1.6**
BRLK	**Bradley Lake**	**14.88**	**52**	P	**P**	**20 36 39.1**	**-0.1**
PPLA	**Purkeypile**	**15.61**	**40**	P	**Pn**	**20 36 49.8**	**+2.4**
PPLA				IAmb	IAmb	20 37 10.6	
	comp=Z,7.8nm,1.2s						
O22K	**Cooper Landing**	**15.66**	**50**	P	**P**	**20 36 46.6**	**-1.2**
RC01	**Rabbit Creek A**	**15.86**	**48**		**Pn**	**20 36 51.1**	**+0.9**
RC01				IAmb	IAmb	20 37 10.9	
	comp=Z,6.6nm,0.9s						
CAST	**Castle Rocks**	**15.93**	**39**	P	**Pn**	**20 36 52.4**	**+1.3**
PWL	**Port Wells**	**16.43**	**50**	P	**P**	**20 36 56.4**	**+0.1**
KTH	**Kantishna Hill**	**16.44**	**39**	P	**Pn**	**20 36 57.2**	**-0.1**
KTH				IAmb	IAmb	20 37 00.6	
	comp=Z,7.6nm,0.7s						
GHO	**Glory Hole Cre**	**16.48**	**46**	Pn	**Pn**	**20 36 58.8**	**+1.1**
GHO				IAmb	IAmb	20 37 37.7	
	comp=Z,7.1nm,1.0s						
TRF	**Thorofare Moun**	**16.64**	**40**	P	**Pn**	**20 36 59.6**	**-0.1**
BPAW	**Bear Paw Mtn.**	**16.70**	**38**	P	**Pn**	**20 37 01.4**	**+1.0**
BPAW				IAmb	IAmb	20 37 06.1	
	comp=Z,6.1nm,0.5s						
SML	**Sawmill**	**16.75**	**47**	P	**P**	**20 36 58.8**	**-1.0**
SML				IAmb	IAmb	20 37 23.9	
	comp=Z,13nm,1.4s						
IMAR	**Indian Mountai**	**16.91**	**30**	P	**Pn**	**20 37 02.7**	**-0.1**
H21K	**Melozitna Rive**	**17.00**	**32**	P	**Pn**	**20 37 04.4**	**+0.7**
GLI	**Glacier Island**	**17.02**	**50**	P	**P**	**20 37 02.6**	**-0.1**
RND	**Reindeer

SCM				IAmb	IAmb	20 37 37.1	
	comp=Z,19nm,1.4s						
FID	**Port Fidalgo**	**17.27**	**51**	P	**P**	**20 37 04.4**	**-1.0**
MCK	**McKinley**	**17.30**	**40**	P	**P**	**20 37 05.7**	**-0.1**
MLY	**Manley**	**17.31**	**35**	P	**Pn**	**20 37 07.5**	**0.0**
MLY				IAmb	IAmb	20 37 08.8	
	comp=Z,4.4nm,0.6s						
DHY	**Denali Highway**	**17.65**	**43**	P	**P**	**20 37 10.8**	**+1.0**
NEA2	**Nenana**	**17.68**	**38**	P	**P**	**20 37 09.8**	**0.0**
NEA2				IAmb	IAmb	20 37 12.1	
	comp=Z,3.1nm,0.4s						
M24K	**Tolsona, Glenn**	**17.81**	**47**	P	**Pn**	**20 37 12.8**	**-0.6**
WRH	**Wood River Hil**	**17.98**	**39**	P	**P**	**20 37 12.1**	**-1.1**
MDM	**Murphy Dome**	**18.17**	**37**	P	**P**	**20 37 15.4**	**+0.2**
CCB	**Clear Creek Bu**	**18.18**	**38**	P	**P**	**20 37 14.4**	**-0.8**
N25K	**Chitina, Valde**	**18.38**	**49**	P	**P**	**20 37 15.9**	**-1.6**
N25K				IAmb	IAmb	20 37 46.5	
	comp=Z,7.4nm,1.2s						
HDA	**Harding Lake**	**18.39**	**40**	P	**P**	**20 37 15.5**	**-2.1**
HDA				IAmb	IAmb	20 37 20.8	
	comp=Z,6.1nm,0.6s						
PAX	**Paxson**	**18.42**	**45**	P	**P**	**20 37 18.6**	**+0.6**
IL31		**18.58**	**39**	P	**P**	**20 37 18.2**	**-1.4**
H24K	**Noodor Dome**	**18.75**	**35**	P	**P**	**20 37 21.4**	**-0.2**
H24K				IAmb	IAmb	20 37 24.6	
	comp=Z,6.8nm,0.8s						
RIDG	**Independent Ri**	**18.96**	**43**	P	**P**	**20 37 21.8**	**-2.0**
RIDG				IAmb	IAmb	20 37 26.3	
	comp=Z,3.9nm,0.5s						
J25K	**Salcha River,**	**19.10**	**40**	P	**P**	**20 37 23.9**	**-1.4**
DOT	**Dot Lake**	**19.25**	**43**	P	**P**	**20 37 27.4**	**+0.5**
DOT				IAmb	IAmb	20 37 31.7	
	comp=Z,5.8nm,0.6s						
SCRK	**Sand Creek**	**19.40**	**42**	P	**P**	**20 37 28.6**	**0.0**
SCRK				IAmb	IAmb	20 37 30.8	
	comp=Z,5.2nm,0.9s						
J26L	**Joseph Creek**	**19.77**	**41**	P	**P**	**20 37 32.5**	**0.0**
J26L				IAmb	IAmb	20 37 35.7	
	comp=Z,4.3nm,0.6s						
TOLK	**Toolik Lake Re**	**19.90**	**27**	P	**P**	**20 37 33.7**	**-0.1**
BMAR	**Burnt Mountain**	**20.71**	**33**	P	**P**	**20 37 43.0**	**+0.6**
EGAK	**Eagle**	**20.83**	**41**	P	**P**	**20 37 43.5**	**-0.2**
EGAK				IAmb	IAmb	20 37 47.7	
	comp=Z,9.9nm,1.4s						
I29M	**Ogilvie Camp,**	**22.17**	**41**	P	**P**	**20 37 56.8**	**-0.4**
I29M				IAmb	IAmb	20 37 58.6	
	comp=Z,2.5nm,0.5s						
NEW	**Newport**	**35.96**	**73**	P	**P**	**20 40 00.3**	**+1.1**
NEW				IAmb	IAmb	20 40 01.5	
	comp=Z,4.7nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.86**	**288**	*e*P	**P**	**20 41 50.3**	**-0.4**
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,6.3s						
WMQ	**Urumqi**	**60.83**	**305**	*e*P	**P**	**20 43 09.8**	**+1.0**
PZH	**PanZhiHua**	**65.70**	**282**	P	**P**	**20 43 41.3**	**+0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						

*IDC **26** 20:38:14.8±7.4,22°.30S×176°.43W,h51km±67km,mb4.1/4, mbtmp4.4/6,ML3.4/2,Error ellipse: s-maj=55.3km s-min=26.9km az=158.0*
*NEIC **26** 20:38:15.6±1.8,22°.5S±0°.2×176°.3W±0°.1,h62km±3km, mb4.8/19,Error ellipse: s-maj=24.8km s-min=13.2km az=154.0*

ISC 26 20:38:15.6±0.5,22°.63S±0°.09×176°.09W±0°.08,h71km,n38, σ1s93/40,mb4.7/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.76**	**60**	Pn		**Pn**	**20 39 53.5**	**+1.3**
NIUE				Sn		**Sn**	**20 41 01.8**	**-6.1**
MSVF	**Nonsavu**	**7.35**	**310**	Pn		**Pn**	**20 40 02.7**	**+2.3**
RAR	**Rarotonga**	**15.21**	**88**	P		**Pn**	**20 41 50.0**	**+3.6**
	0.5nm,0.3s,baz=253,slow=19,SNR=1.4							
RAR				S		Sn	20 44 25.2	-8.8
	14nm,0.8s,baz=58,slow=17,SNR=2.1 4.9nm,0.3s							
DZM	**Mont Dzumac**	**16.17**	**269**			**P**	**20 41 59.8**	**-0.8**
URZ	**Urewera**	**16.63**	**199**	P		**P**	**20 42 07.4**	**+1.9**
	0.5nm,0.3s,baz=307,slow=20,SNR=1.6							
URZ				S		**Sn**	**20 45 03.6**	**-4.6**
	33nm,1.1s,baz=303,slow=23,SNR=3.6 8.4nm,0.7s							
LTZ	**Lake Taylor**	**22.31**	**203**	P		**P**	**20 43 08.5**	**+1.2**
LTZ				IAmb	IAmb	20 43 15.9		
	comp=Z,81nm,1.4s							
RPZ	**Rata Peaks**	**23.56**	**204**	P		**P**	**20 43 22.2**	**+2.4**
	comp=Z,8.8nm,0.8s,baz=52,slow=16,SNR=1.2 comp=Z,8.8nm,0.8s							
MLZ	**Mavora Lakes**	**26.09**	**206**	P		**P**	**20 43 43.1**	**+0.4**
MLZ				IAmb	IAmb	20 43 56.7		
	comp=Z,32nm,1.3s							
DCZ	**Deep Cove**	**26.57**	**207**	P		**P**	**20 43 46.5**	**-0.4**
DCZ				IAmb	IAmb	20 44 00.5		
	comp=Z,51nm,1.5s							
WHZ	**Wether Hill Ro**	**26.59**	**205**	P		**P**	**20 43 48.7**	**+1.5**
WHZ				IAmb	IAmb	20 43 57.7		
	comp=Z,49nm,1.5s							
CTAO	**Charters Tower**	**35.10**	**267**	P		**P**	**20 45 02.5**	**+0.1**
CTAO				IAmb	IAmb	20 45 21.2		
	comp=Z,33nm,1.5s							
STKA	**Stephens Creek**	**38.53**	**247**	P		**P**	**20 45 31.8**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=90,slow=14,SNR=3.0 comp=Z,1.0nm,0.3s							
BBOO	**Buckleboo**	**43.24**	**246**	P		**P**	**20 46 08.8**	**-1.4**
AS31	**Alice Springs**	**45.80**	**258**	P		**P**	**20 46 29.9**	**-0.8**
ASAR	**Alice Springs**	**45.80**	**258**	P		**P**	**20 46 30.0**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=89,slow=6.7,SNR=39							
ASAR				PcP		**PcP**	**20 48 07.2**	**0.0**
	comp=Z,0.6nm,0.7s,baz=106,slow=3.6,SNR=4.8 comp=Z,3.1nm,0.7s							
ASAR	**Alice Springs**	**45.80**	**258**	P		**P**	**20 46 28.6**	**-2.1**
WR0	**Warramunga Arr**	**45.91**	**264**	P		**P**	**20 46 29.8**	**-1.8**
WB0	**Warramunga Arr**	**46.09**	**264**	P		**P**	**20 46 31.4**	**-1.6**
WB0				IAmb	IAmb	20 46 33.3		
	comp=Z,5.0nm,0.6s							
WB2	**Warramunga Arr**	**46.09**	**264**	P		**P**	**20 46 31.5**	**-1.4**
WB2				IAmb	IAmb	20 46 33.0		
	comp=Z,5.8nm,0.8s							
WRA	**Warramunga Arr**	**46.10**	**264**	P		**P**	**20 46 31.2**	**-1.9**
	comp=Z,3.0nm,0.6s,baz=93,slow=8.3,SNR=60							
WRA				PcP		**PcP**	**20 48 08.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=104,slow=4.2,SNR=2.0 comp=Z,3.0nm,0.6s							
WRA	**Warramunga Arr**	**46.10**	**264**	P		**P**	**20 46 31.1**	**-1.9**
FORT	**Forrest**	**50.12**	**248**	P		**P**	**20 47 02.2**	**-1.6**
MTN	**Manton Dam**	**50.98**	**272**	P		**P**	**20 47 08.0**	**-2.6**
KNRA	**Kununurra**	**52.31**	**267**	P		**P**	**20 47 18.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**54.53**	**263**	P		**P**	**20 47 36.2**	**-0.5**
MBWA	**Marble Bar**	**59.14**	**258**	P		**P**	**20 48 08.2**	**-1.1**
MORW	**Morawa**	**60.68**	**248**	P		**P**	**20 48 20.7**	**+0.9**
QSPA	**South Pole Qui**	**67.45**	**180**	P		**P**	**20 49 06.3**	**+2.6**
QSPA				IAmb	IAmb	20 51 05.7		
	comp=Z,23nm,1.9s							
ADK	**Adak**	**74.19**	**360**	P		**P**	**20 49 44.4**	**+0.1**
H03S2	**Juan Fernandez** baz=246	**83.33**	**124**	T		T	22 22 44.5	
H03S1	**Juan Fernandez** baz=246	**83.34**	**124**	T		T	22 22 42.1	
H03S3	**Juan Fernandez** baz=246	**83.35**	**124**	T		T	22 22 40.8	
MKAR	**Makanchi Array**	**113.94**	**313**	PKiKP		**PKiKP**	**20 56 45.5**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=145,slow=0.5,SNR=1.9							
ARCES	**ARCESS Array B**	**131.32**	**350**	PKP		**PKiKP**	**20 57 19.8**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=7.4,slow=2.1,SNR=5.5							
FINES	**FINESS Array B**	**138.30**	**344**	PKP		**PKPdf**	**20 57 32.4**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=42,slow=2.3,SNR=4.1							
AKASG	**Malin Array Be**	**145.73**	**331**	PKPbc		**PKPbc**	**20 57 46.1**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=40,slow=4.7,SNR=11							
BRTR	**Keskin Array B**	**149.58**	**311**	PKPbc		**PKiKP**	**20 57 57.8**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=100,slow=3.3,SNR=2.6							
GERES	**GERESS Array B**	**152.71**	**346**	PKPbc		**PKiKP**	**20 58 04.7**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=48,slow=1.5,SNR=2.6							
GERES				PKPab		**PKPab**	**20 58 15.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=22,slow=5.4,SNR=2.3							

ROM 26 20:58:18.9±0.1,42°.781N±0°.004×13°.246E±0°.005, h9km,ML2.1/4,6C-2D,Error ellipse: s-maj=0.5km s-min=0.0km az=63.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**298**	⇑P		Pg	20 58 21.9	+0.3
NRCA				S		Sg	20 58 23.8	+0.2
NRCA				AML		AML		
	comp=E,1275μm,0.1s							
NRCA				AML		AML		
	comp=E,1270μm,0.1s							
NRCA				AML		AML		
	comp=N,971μm,0.6s							
NRCA				AML		AML		
	comp=E,1121μm,0.0s							
NRCA				AML		AML		
	comp=N,759μm,0.1s							
NRCA				AML		AML		
	comp=N,870μm,0.1s							
NRCA				AML		AML		
	comp=E,1273μm,0.1s							
MMO1	**Montemonaco**	**0.13**	**27**	P		Pg	20 58 22.4	+0.5
MMO1				S		Sg	20 58 24.7	+0.6
MMO1				AML		AML		
	comp=E,207μm,0.2s							
MMO1				AML		AML		
	comp=N,384μm,0.1s							
MC2	**Monte Cornacci**	**0.14**	**343**	⇓P		Pg	20 58 22.6	+0.5
MC2				S		Sg	20 58 25.4	+1.0
MC2				AML		AML		
	comp=E,260μm,0.9s							
MC2				AML		AML		
	comp=N,245μm,0.3s							
MC2				AML		AML		
	comp=N,850μm,1.6s							
MC2				AML		AML		
	comp=E,1050μm,1.6s							
T1243	**Rocca Santa Ma**	**0.17**	**119**	⇑P		Pg	20 58 23.1	+0.6
T1243				S		Sg	20 58 26.1	+1.0
T1243				AML		AML		
	comp=N,795μm,0.0s							
T1243				AML		AML		
	comp=E,588μm,0.2s							
T1243				AML		AML		
	comp=N,807μm,0.2s							
T1243				AML		AML		
	comp=E,616μm,0.2s							
LNSS	**Leonessa**	**0.23**	**220**	⇑P		Pg	20 58 24.5	+0.8
LNSS				S		Sg	20 58 28.4	+1.5
LNSS				AML		AML		
	comp=N,321μm,0.3s							
LNSS				AML		AML		
	comp=E,287μm,0.3s							
RM33	**Pellescritta (**	**0.27**	**185**	P		Pb	20 58 25.4	-0.5
RM33				S		Sb	20 58 30.0	-0.7
RM33				AML		AML		
	comp=N,916μm,0.5s							
RM33				AML		AML		
	comp=N,940μm,1.2s							
RM33				AML		AML		
	comp=E,696μm,1.0s							
RM33				AML		AML		
	comp=E,734μm,0.9s							
RM33				AML		AML		
	comp=N,79μm,0.3s							
RM33				AML		AML		
	comp=N,100μm,0.3s							
RM33				AML		AML		
	comp=E,105μm,0.2s							
RM33				AML		AML		
	comp=E,125μm,0.8s							
FDMO	**Fiordimonte**	**0.28**	**335**	⇑P		Pg	20 58 25.1	+0.5
FDMO				S		Sb	20 58 29.6	-1.3
FDMO				AML		AML		
	comp=N,143μm,0.2s							
FDMO				AML		AML		
	comp=E,140μm,0.2s							
TERO	**Teramo**	**0.31**	**121**	P		Pg	20 58 25.5	+0.5
TERO				S		Sb	20 58 30.6	-1.1
TERO				AML		AML		
	comp=E,278μm,0.3s							
TERO				AML		AML		
	comp=N,376μm,0.4s							
TERO				AML		AML		
	comp=E,61μm,0.2s							
TERO				AML		AML		
	comp=N,136μm,0.1s							
TERO				AML		AML		
	comp=E,66μm,0.2s							
TERO				AML		AML		
	comp=N,159μm,0.1s							
CSP1	**Cessapalombo**	**0.31**	**354**	⇑P		Pb	20 58 26.2	-0.4
CSP1				S		Sb	20 58 31.1	-0.8
CESI	**CESI - Serrava**	**0.34**	**312**	⇓P		Pg	20 58 25.9	+0.3
CESI				S		Sb	20 58 31.4	-1.1
CESI				AML		AML		
	comp=N,202μm,0.2s							
CESI				AML		AML		
	comp=E,118μm,0.0s							
SNTG	**Esanatoglia**	**0.52**	**335**	⇑P		Pg	20 58 29.3	+0.3
SNTG				S		Sb	20 58 37.8	-0.2
SNTG				AML		AML		
	comp=E,27μm,0.1s							
SNTG				AML		AML		
	comp=N,161μm,0.8s							
SNTG				AML		AML		
	comp=E,149μm,0.8s							
SNTG				AML		AML		
	comp=N,26μm,0.2s							
EL6	**Elcito**	**0.56**	**349**	S		Sb	20 58 40.0	+1.0
RCAV	**Rocca di Cave**	**0.96**	**194**	S		Sn	20 58 52.0	-0.3

ROM 26 20:59:16.3±0.1,42°.600N±0°.003×13°.311E±0°.004, h7km,ML1.8/6,Error ellipse: s-maj=0.3km s-min=0.1km az=16.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.10**	**131**	P		Pg	20 59 19.2	+0.5
CAMP				S		Sg	20 59 21.0	+0.7
RM33	**Pellescritta (**	**0.12**	**218**	P		Pg	20 59 19.4	+0.5
RM33				S		Sg	20 59 21.4	+0.6
RM33				AML		AML		
	comp=E,734μm,0.9s							
RM33				AML		AML		
	comp=N,940μm,1.2s							
RM33				AML		AML		
	comp=N,916μm,0.5s							
RM33				AML		AML		
	comp=E,696μm,1.0s							
RM33				AML		AML		
	comp=N,940μm,0.0s							
RM33				AML		AML		
	comp=E,807μm,0.0s							
RM33				AML		AML		
	comp=N,916μm,0.5s							
T1243	**Rocca Santa Ma**	**0.14**	**46**	AML		AML		
	comp=E,752μm,0.2s							
T1243				AML		AML		
	comp=N,957μm,1.3s							
T1243				AML		AML		
	comp=N,969μm,1.3s							
T1243				AML		AML		
	comp=E,752μm,0.2s							
T1243				AML		AML		
	comp=E,723μm,0.2s							
T1243				AML		AML		
	comp=N,965μm,1.3s							
T1243				AML		AML		
	comp=N,955μm,1.3s							
T1243				AML		AML		
	comp=N,955μm,0.7s							
T1243				AML		AML		
	comp=N,965μm,0.7s							
LNSS	**Leonessa**	**0.20**	**271**	P		Pg	20 59 21.1	+0.7
LNSS				S		Sg	20 59 24.4	+1.2
LNSS				AML		AML		
	comp=E,362μm,1.4s							
LNSS				AML		AML		
	comp=N,454μm,0.3s							
LNSS				AML		AML		
	comp=N,453μm,0.3s							
LNSS				AML		AML		
	comp=E,361μm,1.4s							
LNSS				AML		AML		
	comp=E,361μm,0.6s							
TERO	**Teramo**	**0.22**	**84**	P		Pg	20 59 21.3	+0.6
TERO				S		Sg	20 59 25.1	+1.4
TERO				AML		AML		
	comp=N,376μm,0.4s							
TERO				AML		AML		
	comp=N,376μm,0.4s							
TERO				AML		AML		
	comp=E,278μm,0.3s							
GIGS	**Gran Sasso**	**0.24**	**128**	P		Pg	20 59 21.7	+0.5
GIGS				S		Sg	20 59 25.6	+1.2
MMO1	**Montemonaco**	**0.30**	**2**	P		Pg	20 59 23.1	+0.8
MMO1				S		Sb	20 59 28.1	-1.2
MMO1				AML		AML		
	comp=E,246μm,1.3s							
MMO1				AML		AML		
	comp=N,132μm,0.2s							
MC2	**Monte Cornacci**	**0.33**	**344**	AML		AML		
	comp=E,1150μm,1.6s							
MC2				AML		AML		
	comp=E,1000μm,1.6s							
MC2				AML		AML		
	comp=N,750μm,1.6s							
MC2				AML		AML		
	comp=N,810μm,1.6s							
MC2				AML		AML		
	comp=N,810μm,0.4s							
FIAM	**Fiamignano**	**0.36**	**203**	P		Pb	20 59 24.3	-0.8
FAGN	**Fagnano**	**0.39**	**149**	P		Pb	20 59 25.2	-0.4
ARRO	**Arrone**	**0.40**	**267**	P		Pg	20 59 24.8	+0.6
VCEL	**Villa Celiera**	**0.44**	**117**	P		Pb	20 59 25.9	-0.6
GUMA	**Gualdo di Mace**	**0.46**	**2**	S		Sg	20 59 27.0	-4.4
CSP1	**Cessapalombo**	**0.50**	**351**	P		Pb	20 59 27.0	-0.5
CESI	**CESI - Serrava**	**0.50**	**324**	S		Sg	20 59 24.0	-8.7
T0110	**Collepietro**	**0.51**	**137**	P		Pg	20 59 26.8	+0.6

*IDC **26** 21:00:48.6±1.2,29°.77S×71°.86W,h0km,mb4.3/4, mbtmp4.1/7,ML3.9/3,MS2.9/2,Error ellipse: s-maj=45.0km s-min=30.2km az=79.0*
*NEIC **26** 21:00:48.6±1.8,29°.60S±0°.03×72°.10W±0°.04,h10km±1km, mb4.4/4,Mwr4.0/56,ML3.6(GUC),Error ellipse: s-maj=6.1km s-min=5.4km az=243.0*
*NEIC **26** 21:00:48.6,29°.60S×72°.10W,h16km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr1.12; Mθθ0.09; Mϕϕ-1.21; Mrθ0.27; Mθϕ-0.17; Mϕr-0.08; Fault plane solution: M0 1.21000×10^15^ NP1:φs173.38000°, δ47.83000°,λ70.53000°. NP2:φs21.15000°,δ45.67000°, λ110.20000°. Principal axes: T 1.1908, Plg76.0000°, Azm11.0000°; N 0.0418, Plg14.0000°, Azm187.0000°; P -1.2326, Plg1.0000°, Azm277.0000°;*
*GUC **26** 21:00:50.6±0.7,29°.68S×71°.92W,h37km±4km,ML3.8*
*VAO **26** 21:01:14.4±1.9,28°.72S×70°.49W,h83km±11km,mb3.9*

ISC 26 21:00:47.2±1.5,29°.61S±0°.03×72°.06W±0°.05,h3km±9km, n102,σ1s33/114,mb4.4/6,8C-5D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.78**	**113**	Pg		**Pb**	**21 01 04.0**	**+0.6**
CO05				Sg		**Sb**	**21 01 13.7**	**-0.7**
CO05	**La Serena**	**0.78**	**113**	⇓*i*P		**Pb**	**21 01 04.1**	**+0.6**
CO05				*i* S		**Sb**	**21 01 13.7**	**-0.7**
CO05				IAML			21 01 16.2	
	comp=E,6μm,0.5s							
CO06	**Fray Jorge**	**1.12**	**161**			**Pb**	**21 01 09.2**	**-0.1**
CO06				Sg		**Sb**	**21 01 23.4**	**-0.9**
CO06	**Fray Jorge**	**1.12**	**161**	⇑*i*P		**Pb**	**21 01 09.2**	**-0.1**
CO06				*i* S		**Sb**	**21 01 22.5**	**-1.8**
GO04	**Tololo Observa**	**1.23**	**117**			**Pb**	**21 01 11.7**	**+0.4**
GO04				Sg		**Sn**	**21 01 27.4**	**-1.6**
GO04	**Tololo Observa**	**1.23**	**117**	⇓*i*P		**Pb**	**21 01 11.7**	**+0.4**
GO04				*i* S		**Sn**	**21 01 27.3**	**-1.6**
LCO	**Las Campanas**	**1.33**	**64**			**Pg**	**21 01 14.1**	**+1.4**
LCO						**Sg**	**21 01 31.9**	**+1.9**
LCO	**Las Campanas**	**1.33**	**64**	⇓*i*P		**Pg**	**21 01 13.8**	**+1.1**
LCO				*i* S		**Sg**	**21 01 31.5**	**+1.5**
AC04	**Llanos de Chal**	**1.65**	**32**			**Pn**	**21 01 17.9**	**+0.9**
AC04				Sn		**Sb**	**21 01 38.7**	**-0.7**
AC04	**Llanos de Chal**	**1.65**	**32**	⇑*i*P		**Pn**	**21 01 17.8**	**+0.8**
AC04				*e*S		**Sb**	**21 01 38.3**	**-1.1**
AC04				IAML			21 01 52.1	
	comp=N,1μm,0.5s							
CO03	**El Pedregal**	**1.71**	**136**			**Pn**	**21 01 18.6**	**+0.7**
CO03				Sn		**Sb**	**21 01 41.0**	**-0.2**
CO03	**El Pedregal**	**1.71**	**136**	⇑*i*P		**Pn**	**21 01 18.5**	**+0.5**
CO03				*i* S		**Sb**	**21 01 40.2**	**-1.0**
CO03				IAML			21 01 45.0	
	comp=E,2μm,0.6s							
AC05	**El Transito**	**1.74**	**64**			**Pb**	**21 01 20.3**	**+0.4**
AC05				Sn		**Sg**	**21 01 43.3**	**0.0**
AC05	**El Transito**	**1.74**	**64**	⇑*i*P		**Pb**	**21 01 20.3**	**+0.4**
AC05				*i* S		**Sg**	**21 01 43.5**	**+0.3**
CO01	**Juntas del Tor**	**1.75**	**103**			**Pb**	**21 01 20.3**	**+0.2**
CO01				Sn		**Sg**	**21 01 43.0**	**-0.5**
CO01	**Juntas del Tor**	**1.75**	**103**	⇓*i*P		**Pb**	**21 01 20.5**	**+0.3**
CO01				*i* S		**Sg**	**21 01 41.8**	**-1.7**
CO01				IAML			21 01 46.6	
	comp=N,979nm,0.2s							
CO02	**Combarbal**	**1.84**	**150**			**Pn**	**21 01 20.7**	**+1.0**
CO02	**Combarbal**	**1.84**	**150**	⇑*i*P		**Pn**	**21 01 20.7**	**+1.0**
CO02				*i* S		**Sn**	**21 01 42.9**	**-0.7**
GO03	**Copiap**	**2.57**	**39**			**Pn**	**21 01 31.2**	**+1.3**
GO03	**Copiap**	**2.57**	**39**	⇑*i*P		**Pn**	**21 01 30.9**	**+1.1**
GO03				*i* S		**Sb**	**21 02 04.5**	**-1.6**
GO03				IAML			21 02 20.4	
	comp=E,741nm,0.5s							
AC06	**Mina Casimiro**	**2.70**	**34**			**Pn**	**21 01 33.2**	**+1.6**
AC06	**Mina Casimiro**	**2.70**	**34**	*i* P		**Pn**	**21 01 33.4**	**+1.8**
AC06				*i* S		**Sg**	**21 02 13.7**	**-0.3**
AC06				IAML			21 02 27.6	
	comp=N,498nm,0.6s							
VA06	**Catapilco**	**3.02**	**168**	Pn		**Pn**	**21 01 36.3**	**+0.5**
VA03	**San Esteban**	**3.40**	**158**			**Pn**	**21 01 42.7**	**+1.5**
VA03	**San Esteban**	**3.40**	**158**	*e*P		**Pn**	**21 01 43.1**	**+1.8**
VA03				IAML			21 02 39.2	
	comp=E,681nm,0.6s							
VA01	**Torpederas**	**3.42**	**174**	Pn		**Pn**	**21 01 42.0**	**+0.5**
ROC1	**El Roble**	**3.47**	**165**			**Pn**	**21 01 43.0**	**+0.6**
VCA	**Vinchina**	**3.48**	**76**	⇑*i*P		**Pb**	**21 01 48.1**	**-1.5**
VCA				*i* S		**Sg**	**21 02 34.6**	**-4.6**
ZON	**Zonda**	**3.50**	**124**			**Pn**	**21 01 43.8**	**+1.2**
AC01	**Pan de Azucar**	**3.68**	**21**	Pn		**Pn**	**21 01 45.1**	**0.0**
AC01	**Pan de Azucar**	**3.68**	**21**	*i* P		**Pn**	**21 01 45.1**	**0.0**
AC01				*i* S		**Sg**	**21 02 46.9**	**+1.4**
PEL	**Peldehue**	**3.71**	**162**	Pn		**Pn**	**21 01 46.0**	**+0.5**
PEL	**Peldehue**	**3.71**	**162**	*e*P		**Pn**	**21 01 46.6**	**+1.1**
PEL				*i* S		**Sn**	**21 02 29.8**	**-0.1**
MT02	**Curacav**	**3.72**	**168**			**Pn**	**21 01 46.8**	**+1.2**
MT02	**Curacav**	**3.72**	**168**	⇑*i*P		**Pn**	**21 01 46.3**	**+0.7**
MT02				*i* S		**Sb**	**21 02 40.9**	**+1.7**
AC02	**Maricunga**	**3.79**	**44**	Pn		**Pn**	**21 01 48.8**	**+1.9**
MT05	**Renca**	**3.94**	**164**			**Pn**	**21 01 49.4**	**+0.8**
FCH	**Farellones**	**4.00**	**158**	*e*P		**Pn**	**21 01 51.6**	**+1.9**
VA05	**Santo Domingo**	**4.05**	**175**			**Pn**	**21 01 50.4**	**+0.3**
MT03	**Universidad Ad**	**4.09**	**161**	Pn		**Pn**	**21 01 52.0**	**+1.2**
MT09	**Talagante**	**4.25**	**168**	Pn		**Pn**	**21 01 54.0**	**+1.0**
MT09	**Talagante**	**4.25**	**168**	⇓*i*P		**Pn**	**21 01 54.2**	**+1.1**
MT01	**Popeta**	**4.30**	**171**			**Pn**	**21 01 53.7**	**+0.2**

VA04	**Juan Fernndez**	**7.03**	**233**	Pn	**Pn**	**21 02 30.3**	**-0.7**
H03S3	**Juan Fernandez**	**7.19**	**232**	Pn	Pn	21 02 31.2	-1.7
	baz=63						
H03S3				Sn	Sn	21 03 44.4	-11
	baz=108						
H03S1	**Juan Fernandez**	**7.20**	**232**	Pn	Pn	21 02 30.8	-2.2
	baz=63						
H03S1				Sn	Sn	21 03 43.9	-11
	baz=108						
H03S2	**Juan Fernandez**	**7.21**	**232**	Pn	Pn	21 02 31.1	-2.1
	baz=63						
H03S2				Sn	Sn	21 03 44.6	-11
	baz=108						
PB06	**IPOC Station P**	**7.23**	**19**	Pn	**Pn**	**21 02 32.8**	**-1.2**
PB04	**IPOC Station P**	**7.45**	**14**	Pn	**Pn**	**21 02 35.3**	**-1.6**
AF01	**San Pedro de A**	**7.49**	**29**	Pn	**Pn**	**21 02 37.1**	**-0.5**
LVC	**Limon Verde**	**7.52**	**23**	Pn	**Pn**	**21 02 38.1**	**0.0**
	comp=E,1.0nm,0.3s,baz=222,slow=10,SNR=2.9						
LVC				Sn	**Sn**	**21 04 02.7**	**-1.5**
	comp=E,1.1nm,0.3s,baz=189,slow=3.8,SNR=1.3						
LVC				LR	LR	21 06 01.6	
	comp=E,50nm,21.4s,baz=218,slow=41						
LVC	**Limon Verde**	**7.52**	**23**	*e*P	Pn	21 02 44.5	+6.4
PB07	**IPOC Station P**	**8.09**	**15**	Pn	**Pn**	**21 02 46.4**	**+0.6**
PB09	**IPOC Station P**	**8.19**	**19**	Pn	**Pn**	**21 02 47.6**	**+0.5**
PB02	**IPOC Station P**	**8.48**	**14**	Pn	**Pn**	**21 02 50.4**	**-0.8**
PB01	**IPOC Station P**	**8.84**	**16**	Pn	**Pn**	**21 02 55.0**	**-1.0**
TA01	**Diego Aracena**	**9.16**	**11**	Pn	**Pn**	**21 03 01.1**	**+0.7**
GO01	**Chusmiza**	**10.23**	**15**	Pn	**Pn**	**21 03 15.5**	**0.0**
PB12	**IPOC Station P**	**11.06**	**9**	Pn	**Pn**	**21 03 25.6**	**-0.9**
PLCA	**Paso Flores**	**11.17**	**174**	Pn	**Pn**	**21 03 28.1**	**+0.3**
	comp=E,0.2nm,0.3s,baz=328,slow=9.9,SNR=8.0						
	comp=E,1.5nm,0.6s						
PLCA	**Paso Flores**	**11.17**	**174**	Pn	**Pn**	**21 03 27.9**	**+0.1**
CPUP	**Villa Florida**	**13.43**	**79**	Lg	Lg	21 07 41.2	
	comp=E,0.2nm,0.3s,baz=350,slow=15,SNR=1.8						
CPUP				LR	LR	21 09 30.5	
	comp=E,102nm,21.5s,baz=228,slow=39						
ITQB	**Itaqui**	**13.43**	**94**	*e*P	**P**	**21 04 04.5**	**-3.9**
LPAZ	**La Paz**	**13.74**	**16**	Pn	**P**	**21 04 09.0**	**-3.5**
	comp=E,0.2nm,0.3s,baz=188,slow=5.8,SNR=7.6						
	comp=E,1.9nm,0.6s						
LPAZ	**La Paz**	**13.74**	**16**		**Pn**	**21 04 06.4**	**+2.8**
LPAZ	**La Paz**	**13.74**	**16**	*e*P	**P**	**21 04 09.5**	**-3.0**
SIV	**San Ignacio**	**16.91**	**39**	Pn	**P**	**21 04 46.5**	**-0.6**
	baz=218,slow=11,SNR=15						
	comp=E,4.0nm,0.7s						
PTLB	**Pontes e Lacer**	**18.45**	**43**	*e*P	**P**	**21 05 05.6**	**+1.6**
VILB	**Vilhena**	**19.90**	**36**	*e*P	**Pn**	**21 05 23.9**	**+2.4**
SALV	**Santo Antonio**	**20.31**	**51**	*e*P	Pn	21 05 25.7	-0.8
PCMB	**Pacaembu**	**20.36**	**72**	*e*P	Pn	21 05 26.1	-0.9
ETMB	**Extrema**	**20.44**	**17**	*e*P	Pn	21 05 30.6	+2.8
TMAB	**Tom-Au,PA,Br**	**35.39**	**44**	*e*P	P	21 07 49.7	+5.4
ORCD	**Orcadas**	**36.07**	**157**	P	**P**	**21 07 48.2**	**-1.6**
BCIP	**Isla Barro Col**	**39.27**	**348**	P	**P**	**21 08 15.9**	**-1.3**
BCIP				IAmb	IAmb	21 08 31.1	
	comp=Z,9.1nm,1.1s						
VNA3	**Neumayer Olymp**	**53.44**	**159**	P	**P**	**21 10 09.3**	**+1.2**
VNA1	**Neumayer--Stat**	**53.73**	**158**	P	**P**	**21 10 12.0**	**+1.8**
VNA2	**Neumayer--Watz**	**54.07**	**158**	P	**P**	**21 10 14.0**	**+1.3**
	baz=284,slow=8.2						
SNAA	**Sanae**	**55.66**	**159**	P	**P**	**21 10 24.7**	**+0.5**
TROLL	**Troll, Antarti**	**57.38**	**159**	P	**P**	**21 10 37.8**	**+1.3**
QSPA	**South Pole Qui**	**60.61**	**180**	P	**P**	**21 11 00.7**	**+1.6**
QSPA				IAmb	IAmb	21 11 01.8	
	comp=Z,3.3nm,0.8s						
TXAR	**Lajitas Array**	**65.92**	**330**	P	**P**	**21 11 37.8**	**+3.2**
	comp=Z,0.4nm,0.7s,baz=150,slow=9.2,SNR=4.0						
	comp=Z,0.4nm,0.7s						
DBIC	**Dimbokro**	**73.84**	**72**	P	**P**	**21 12 25.1**	**+1.5**
	comp=Z,2.3nm,0.6s,baz=202,slow=11,SNR=1.9						
	comp=Z,2.3nm,0.6s						
BOSA	**Boshof**	**82.15**	**118**	P	**P**	**21 13 10.4**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=280,slow=6.1,SNR=1.3						
	comp=Z,1.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.75**	**71**	P	**P**	**21 13 13.8**	**+0.8**
	comp=Z,5.8nm,0.4s,baz=257,slow=4.7,SNR=1.6						
	comp=Z,5.8nm,0.4s						
H11S2	**WAKE ISLAND Hyl**	**25.69**	**272**	T	T	23 38 51.4	
	baz=114,slow=74,SNR=8.2						
H11S1	**WAKE ISLAND Hyl**	**25.70**	**272**	T	T	23 38 53.5	
	baz=114,slow=74,SNR=6.0						
H11S3	**WAKE ISLAND Hyl**	**25.71**	**272**	T	T	23 38 52.7	
	baz=114,slow=74,SNR=6.2						
BVAR	**Borovoye Array**	**143.98**	**39**	PKP	**PKPdf**	**21 20 24.2**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=298,slow=3.2,SNR=4.9						
KURBB	**Kurchatov Arra**	**149.56**	**38**	PKPbc	**PKiKP**	**21 20 39.3**	**+0.6**
	comp=Z,0.8nm,0.2s,baz=294,slow=3.1,SNR=12						
ZALV	**Zalesovo Beam**	**150.45**	**28**	PKPbc	**PKiKP**	**21 20 41.8**	**+1.3**
	comp=Z,9.2nm,0.7s,baz=298,slow=3.0,SNR=37						
MKAR	**Makanchi Array**	**153.71**	**42**	PKPbc	**PKiKP**	**21 20 49.0**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=343,slow=2.5,SNR=4.3						
PZH	**PanZhiHua**	**173.71**	**118**	PKP	**PKPdf**	**21 20 58.0**	**-0.7**

IDC 26 21:11:42.0±3.4, 32°.63S×178°.45W, h0km, mb3.4/2, mbtmp3.5/3, ML3.5/1, MS3.2/1, Error ellipse: s-maj=80.3km s-min=49.9km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.69**	**212**	Pn	Pn	21 13 21.0	-0.4
	0.9nm,0.3s,baz=298,slow=22,SNR=1.2						
URZ				Sn	Sn	21 14 34.2	-4.0
	0.5nm,0.3s,baz=296,slow=23,SNR=1.7						
	6.9nm,0.9s						
PPT	**Papeete**	**30.02**	**67**	LR	LR	21 30 06.1	
	comp=Z,40nm,18.8s,baz=172,slow=37						
ASAR	**Alice Springs**	**42.65**	**270**	P	P	21 19 40.6	+0.1
	0.2nm,0.5s,baz=108,slow=7.5,SNR=1.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**43.84**	**275**	P	P	21 19 49.8	-0.3
	0.9nm,0.9s,baz=115,slow=7.5,SNR=4.6						
	0.9nm,0.9s						
FINES	**FINESS Array B**	**147.08**	**338**	PKPbc	PKPbc	21 31 25.3	-0.7
	5.7nm,1.2s,baz=81,slow=1.8,SNR=1.4						

*IDC **26** 21:26:15.6±3.6, 0°.05N×123°.42E, h155km±38km, mb3.2/6, mbtmp3.8/9, Error ellipse: s-maj=38.3km s-min=15.2km az=66.0*
*NEIC **26** 21:26:15.6±2.7, 0°.08S±0°.08×123°.4E±0°.1, h137km±8km, mb4.2/12, Error ellipse: s-maj=20.6km s-min=11.5km az=77.0*
*DJA **26** 21:26:16.1±0.4, 0°.5S×3°×12°.3E±°, h132km±6km, M4.0/13, mb4.1/1, MLv3.9/13*
ISC 26 21:26:15.8±0.6, 0°.14S±0°.05×123°.36E±0°.06, h157km, n46, σ1°.64/52, mb3.9/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.94**	**42**	P	**Pn**	**21 26 39.5**	**-1.3**
LUWI	**Luwuk**	**1.07**	**213**	Pn	**Pn**	**21 26 40.5**	**-1.4**
LUWI				Sn	**Sn**	**21 26 58.6**	**-3.3**
LUWI	**Luwuk**	**1.07**	**213**	P	**Pn**	**21 26 40.1**	**-1.8**
LUWI				S	**Sn**	**21 26 58.4**	**-3.5**
LUWI	**Luwuk**	**1.07**	**213**	P	**Pn**	**21 26 40.8**	**-1.1**
MRSI	**Marisa**	**1.54**	**293**	P	**Pn**	**21 26 43.7**	**-2.6**
APSI	**Ampana**	**1.87**	**246**	P	**Pn**	**21 26 48.5**	**-1.4**
APSI				S	**Sn**	**21 27 12.8**	**-3.4**
SANI	**Sanana**	**3.25**	**126**	P	**Pn**	**21 27 05.9**	**-0.7**
SANI	**Sanana**	**3.25**	**126**	P	**Pn**	**21 27 06.0**	**-0.7**
MPSI	**Mapaga**	**3.49**	**278**	P	**Pn**	**21 27 09.1**	**-0.6**
LBMI	**Labuha**	**4.17**	**97**	P	**Pn**	**21 27 19.1**	**+0.5**
TTSI	**Tana Toraja**	**4.56**	**231**	P	**Pn**	**21 27 23.2**	**-0.5**
NLAI	**Namlea**	**4.85**	**130**	P	**Pn**	**21 27 29.1**	**+1.7**
SPSI	**Sidrap Palu**	**5.22**	**223**	P	**Pn**	**21 27 32.0**	**-0.4**
KAPI	**Kappang**	**6.04**	**217**	P	**Pn**	**21 27 45.2**	**+2.1**
	3.5nm,0.5s,baz=90,slow=18,SNR=2.1						
KAPI				S	**Sn**	**21 28 48.6**	**-2.9**
	3.8nm,0.7s,baz=73,slow=23,SNR=1.4						
KAPI	**Kappang**	**6.04**	**217**	Pn	**Pn**	**21 27 44.8**	**+1.7**
KAPI	**Kappang**	**6.04**	**217**	P	**Pn**	**21 27 45.9**	**+2.8**
	9.3nm,1.3s						
MYLDM	**Lahad Datu**	**7.17**	**318**	Pn	**Pn**	**21 28 00.3**	**+2.1**
MYLDM					**Sn**	**21 29 19.1**	**+0.5**
FAKI	**Fak Fak**	**9.31**	**107**	P	**Pn**	**21 28 26.2**	**-0.5**
	33nm,1.4s						
KKM	**Kota Kinabalu**	**9.41**	**311**	Pn	**Pn**	**21 28 29.5**	**+1.5**
KKM	**Kota Kinabalu**	**9.41**	**311**	P	**Pn**	**21 28 31.3**	**+3.2**
	13nm,1.2s						
BATI	**Baumata**	**10.01**	**178**	P	**Pn**	**21 28 38.4**	**+2.4**
	6.8nm,0.3s,baz=35,slow=17,SNR=2.2						
MTN	**Manton Dam**	**14.79**	**149**		**P**	**21 29 39.3**	**0.0**
MTN	**Manton Dam**	**14.79**	**149**	P	**P**	**21 29 39.6**	**+0.2**
	12nm,0.8s						
KDU	**Kakadu**	**15.40**	**144**	P	**Pn**	**21 29 45.5**	**+0.5**
	16nm,0.8s						
KNRA	**Kununurra**	**16.34**	**161**		**P**	**21 29 57.6**	**+1.2**
KNRA				IAmb	IAmb	21 30 12.5	
	comp=Z,22nm,1.4s						
FITZ	**Fitzroy Crossi**	**17.99**	**173**	P	**Pn**	**21 30 16.5**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=12,slow=8.1,SNR=9.1						
FITZ	**Fitzroy Crossi**	**17.99**	**173**	P	**Pn**	**21 30 16.5**	**+0.3**
	comp=Z,6.7nm,2.4s						
WB0	**Warramunga Arr**	**22.31**	**152**	P	**P**	**21 31 01.6**	**+1.0**
WRAB	**Tennant Creek**	**22.43**	**152**	P	**P**	**21 31 03.2**	**+1.4**
	comp=Z,1.1nm,2.5s						
WRA	**Warramunga Arr**	**22.43**	**152**	P	**P**	**21 31 02.9**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=332,slow=10,SNR=16						
	comp=Z,1.4nm,0.5s						
WB2	**Warramunga Arr**	**22.44**	**152**	P	**P**	**21 31 03.0**	**+1.1**
WB2				IAmb	IAmb	21 31 30.6	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**22.54**	**152**	P	**P**	**21 31 04.3**	**+1.5**
WR0				IAmb	IAmb	21 31 45.0	
	comp=Z,6.8nm,1.1s						
QIZ	**Qiongzhong**	**23.21**	**326**	P	**P**	**21 31 09.4**	**+0.4**
QIZ				IAmb	IAmb	21 31 23.8	
	comp=Z,27nm,1.5s						
KULM	**Kulim**	**23.31**	**284**	P	**P**	**21 31 10.2**	**+0.2**
UBPT	**Khong Chiam**	**23.39**	**312**	P	**P**	**21 31 10.2**	**-0.5**
UBPT				IAmb	IAmb	21 31 39.4	
	comp=Z,6.8nm,1.2s						
TPUB	**Ta-pu**	**23.45**	**354**	P	**P**	**21 31 11.8**	**+0.7**
TPUB				IAmb	IAmb	21 31 12.8	
	comp=Z,20nm,1.1s						
ASAR	**Alice Springs**	**25.53**	**157**	P	**P**	**21 31 31.4**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=344,slow=14,SNR=6.9						
ASAR				PcP	**PcP**	**21 34 58.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=356,slow=2.0,SNR=5.2						
	comp=Z,0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.28**	**309**	P	**P**	**21 32 12.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=127,slow=5.2,SNR=4.1						
	comp=Z,0.5nm,0.6s						
MJAR	**Matsushiro Arr**	**39.01**	**19**	P	**P**	**21 33 25.5**	**-1.7**
	comp=Z,1.7nm,0.8s,baz=188,slow=9.7,SNR=5.7						
	comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	**50.01**	**345**	P	**P**	**21 34 53.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=161,slow=9.7,SNR=7.3						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**58.91**	**328**	P	**P**	**21 35 56.2**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=121,slow=8.6,SNR=4.8						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**58.91**	**328**	P	**P**	**21 35 57.0**	**-1.4**
KURK	**Kurchatov**	**63.27**	**330**	P	**P**	**21 36 26.4**	**-1.2**
NIKH	**Nikolski High**	**76.90**	**35**	P	**P**	**21 37 51.5**	**+0.8**
VNDA	**Vanda**	**80.06**	**172**	P	**P**	**21 38 09.6**	**+2.1**
SDPT	**Sand Point**	**82.26**	**34**	P	**P**	**21 38 19.5**	**0.0**

*NEIC **26** 21:43:06.9±2.1, 12°.91N±0°.07×88°.80W±0°.07, h40km±11km, mb4.1/9, Md4.3(SNET), Error ellipse: s-maj=13.1km s-min=6.5km az=224.0*
*SNET **26** 21:43:06.6±1.0, 12°.90N×88°.79W, h36km±3km, ML4.2*
*UCR **26** 21:43:07.0±1.0, 12°.92N×88°.80W, h35km±10km, ML4.1, mb4.1(NEIC)*
*INET **26** 21:43:07.4±1.0, 12°.96N×88°.75W, h36km±45km, MW3.9*
ISC 26 21:43:06.6±1.3, 12°.88N±0°.06×88°.80W±0°.04, h46km±15km, n68, σ0°.79/88, mb4.1/4, 2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCY	**Lacayo**	**0.73**	**42**	*e*P	**Pn**	**21 43 20.5**	**-0.2**
LCY	**Lacayo**	**0.73**	**42**	*e*P	**Pn**	**21 43 20.5**	**-0.2**
SNVI	**San Vicente**	**0.73**	**357**	*e*P	**Pn**	**21 43 20.6**	**-0.1**
SNVI	**San Vicente**	**0.73**	**357**	*e*P	**Pn**	**21 43 20.6**	**-0.1**
COEG	**Centro de Oper**	**0.74**	**354**	*e*P	**Pn**	**21 43 20.5**	**-0.3**
COEG				*e*S	**Sn**	**21 43 30.9**	**-0.2**
COEG	**Centro de Oper**	**0.74**	**354**	*e*P	**Pn**	**21 43 20.5**	**-0.3**
COEG				*e*S	**Sn**	**21 43 30.9**	**-0.2**
PACA	**Pacayal**	**0.74**	**38**	*e*P	**Pn**	**21 43 20.9**	**0.0**
PACA				*e*S	**Sn**	**21 43 31.6**	**+0.3**
PACA	**Pacayal**	**0.74**	**38**	*e*P	**Pn**	**21 43 20.9**	**0.0**
PACA				*e*S	**Sn**	**21 43 31.6**	**+0.3**
PACA	**Pacayal**	**0.74**	**38**	*e*P	**Pn**	**21 43 20.9**	**0.0**
PQSS	**Presa 15 de Se**	**0.77**	**17**	*e*P	**Pn**	**21 43 21.2**	**0.0**
PQSS				*e*S	**Sn**	**21 43 32.2**	**+0.5**
PQSS				IAML		21 43 34.4	
	comp=Z,7μm,0.1s						
PQSS	**Presa 15 de Se**	**0.77**	**17**	*e*P	**Pn**	**21 43 21.2**	**0.0**
PQSS				*e*S	**Sn**	**21 43 32.2**	**+0.5**
PQSS				IAML		21 43 34.4	
	comp=Z,7μm,0.1s						
LFRS	**El Faro**	**0.78**	**341**	*i* P	**Pn**	**21 43 21.1**	**-0.4**
LFRS	**El Faro**	**0.78**	**341**	*i* P	**Pn**	**21 43 21.1**	**-0.4**
SCLA	**Alcaldia de Sa**	**0.82**	**5**	*e*P	**Pn**	**21 43 21.9**	**0.0**
SCLA				*e*S	**Sn**	**21 43 33.5**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.82**	**5**	*e*P	**Pn**	**21 43 21.9**	**0.0**
SCLA				*e*S	**Sn**	**21 43 33.5**	**+0.6**
PAVA	**Las Pavas**	**0.84**	**351**	ǁ *i*P	**Pn**	**21 43 22.0**	**-0.2**
PAVA				*e*S	**Sn**	**21 43 33.8**	**+0.2**
PAVA				IAML		21 43 35.5	
	comp=Z,13μm,0.4s						
PAVA	**Las Pavas**	**0.84**	**351**	ǁ *i*P	**Pn**	**21 43 22.0**	**-0.2**
PAVA				*e*S	**Sn**	**21 43 33.8**	**+0.2**
PAVA				IAML		21 43 35.5	
	comp=Z,13μm,0.4s						
SNET	**Serv Nac Est T**	**0.91**	**332**	Pn	**Pn**	**21 43 22.3**	**-0.8**
SNET				Sn	**Sn**	**21 43 34.9**	**-0.2**
SNET	**Serv Nac Est T**	**0.91**	**332**	*e*P	**Pn**	**21 43 22.7**	**-0.4**
SNET				*e*S	**Sn**	**21 43 34.8**	**-0.3**
LFU	**La Fuente**	**0.92**	**340**	*e*P	**Pn**	**21 43 23.0**	**-0.2**
LFU	**La Fuente**	**0.92**	**340**	*e*P	**Pn**	**21 43 23.0**	**-0.2**
UEES	**Universidad Ev**	**0.94**	**333**	*e*S	**Sn**	**21 43 35.3**	**-0.5**
UEES	**Universidad Ev**	**0.94**	**333**	*e*S	**Sn**	**21 43 35.3**	**-0.5**
BOQS	**Boqueron**	**0.97**	**331**	*e*P	**Pn**	**21 43 23.9**	**-0.2**
BOQS	**Boqueron**	**0.97**	**331**	*e*P	**Pn**	**21 43 23.9**	**-0.2**
JAYA	**Jayaque - finc**	**1.00**	**321**	*e*P	**Pn**	**21 43 24.0**	**-0.4**
JAYA				*e*S	**Sn**	**21 43 37.1**	**-0.3**
JAYA				IAML		21 43 40.8	
	comp=Z,5μm,0.2s						
JAYA	**Jayaque - finc**	**1.00**	**321**	*e*P	**Pn**	**21 43 24.0**	**-0.4**
JAYA				*e*S	**Sn**	**21 43 37.1**	**-0.3**
JAYA				IAML		21 43 40.8	
	comp=Z,5μm,0.2s						
CNCH	**Conchagua**	**1.02**	**67**	*e*P	**Pn**	**21 43 24.1**	**-0.5**
CNCH				*e*P	**Pn**	**21 43 24.2**	**-0.4**
CNCH	**Conchagua**	**1.02**	**67**	*e*P	**Pn**	**21 43 24.1**	**-0.5**
CNCH				*e*P	**Pn**	**21 43 24.2**	**-0.4**
CSGN	**Cosiguina Volc**	**1.21**	**85**	*e*P	**Pn**	**21 43 27.0**	**-0.2**
CEVE	**Cerro Verde**	**1.24**	**320**	*e*P	**Pn**	**21 43 27.8**	**0.0**
CEVE				IAML		21 43 52.8	
	comp=Z,3μm,0.3s						
CEVE	**Cerro Verde**	**1.24**	**320**	*e*P	**Pn**	**21 43 27.8**	**0.0**
CEVE				IAML		21 43 52.8	
	comp=Z,3μm,0.3s						
RTR	**El Retiro**	**1.30**	**321**	*e*P	**Pn**	**21 43 28.7**	**+0.1**
RTR	**El Retiro**	**1.30**	**321**	*e*P	**Pn**	**21 43 28.7**	**+0.1**
NUBE	**Las Nubes**	**1.39**	**317**	*e*P	**Pn**	**21 43 29.6**	**-0.1**
NUBE				*e*S	**Sn**	**21 43 47.0**	**-0.1**
NUBE	**Las Nubes**	**1.39**	**317**	*e*P	**Pn**	**21 43 29.6**	**-0.1**
NUBE				*e*S	**Sn**	**21 43 47.0**	**-0.1**
SLOZ	**Alcaldia de Sa**	**1.49**	**320**	*e*P	**Pn**	**21 43 31.2**	**+0.2**
SLOZ				*e*S	**Sn**	**21 43 50.5**	**+1.3**
MTO3	**Montecristo**	**1.60**	**340**	Pn	**Pn**	**21 43 32.5**	**-0.2**
MTO3	**Montecristo**	**1.60**	**340**	*e*P	**Pn**	**21 43 32.5**	**-0.2**
CRIN	**San Cristobal**	**1.71**	**96**	Pn	**Pn**	**21 43 33.8**	**-0.3**
CRIN	**San Cristobal**	**1.71**	**96**	*e*P	**Pn**	**21 43 34.2**	**+0.1**
CRIN				*e*S	**Sn**	**21 43 54.3**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.89**	**52**	Pn	**Pn**	**21 43 36.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.89**	**52**	*e*P	**Pn**	**21 43 36.3**	**-0.3**
TEL3	**Telica 3**	**1.93**	**99**	*e*P	**Pn**	**21 43 36.7**	**-0.3**
TELN	**Telica**	**1.94**	**98**	*e*P	**Pn**	**21 43 37.2**	**0.0**
CNGN	**Cerro Negro**	**2.08**	**100**	Pn	**Pn**	**21 43 37.8**	**-1.4**
MOMN	**Momotombo**	**2.25**	**102**	*e*P	**Pn**	**21 43 41.3**	**-0.1**
RCON	**San Juan de Ri**	**2.64**	**77**	*e*P	**Pn**	**21 43 46.4**	**-0.5**
MATN	**Matagalpa**	**2.80**	**89**		**Pn**	**21 43 48.3**	**-0.8**
MATN	**Matagalpa**	**2.80**	**89**	*e*P	**Pn**	**21 43 48.3**	**-0.8**
BOAB	**BOACO BROADBAN**	**3.09**	**98**		**Pn**	**21 43 52.1**	**-0.7**
RTAL	**Retalhuleu**	**3.25**	**300**	Pn	**Pn**	**21 43 55.1**	**-0.1**
HZTE	**Horizontes, Gu**	**3.80**	**124**	Pn	**Pn**	**21 44 05.8**	**+3.0**
ORTG	**Ortega, Santa**	**4.12**	**127**	Pn	**Pn**	**21 44 07.7**	**+0.5**
JTS	**Las Juntas de**	**4.56**	**124**	Pn	**Pn**	**21 44 13.5**	**+0.3**
JACO	**JACO, Garabito**	**5.17**	**128**	Pn	**Pn**	**21 44 23.8**	**+2.3**
RIMA	**Rio Macho**	**5.74**	**122**	Pn	**Pn**	**21 44 32.9**	**+3.4**
CDITO	**Canoas**	**7.23**	**126**	Pn	**Pn**	**21 44 47.1**	**-2.7**
TEIG	**Tepich**	**7.32**	**4**	Pn	**Pn**	**21 44 51.7**	**+0.7**
833A	**Chaparral WMA,**	**18.27**	**329**	P	**P**	**21 47 15.8**	**-0.7**
344A	**Westbrook Farm**	**18.57**	**355**	P	**P**	**21 47 19.4**	**-0.4**
344A				IAmb	IAmb	21 47 24.0	
	comp=Z,16nm,1.1s						
GOGA	**Godfrey**	**21.01**	**13**	P	**P**	**21 47 45.9**	**-0.4**
GOGA				IAmb	IAmb	21 48 11.4	
	comp=Z,13nm,1.5s						
MIAR	**Mount Ida**	**22.00**	**349**	P	**P**	**21 47 57.8**	**+0.8**
CUPR	**Culebra, Puert**	**23.27**	**74**	P	**P**	**21 48 11.3**	**+0.9**
CUPR				IAmb	IAmb	21 48 14.2	
	comp=Z,7.3nm,0.8s						
SIUC	**Southern Illin**	**24.73**	**359**	P	**P**	**21 48 24.2**	**+0.5**
AMTX	**Amarillo**	**24.82**	**334**	P	**P**	**21 48 25.9**	**+1.2**
AMTX				IAmb	IAmb	21 48 26.5	
	comp=Z,4.7nm,0.6s						
CCM	**Cathedral Cave**	**25.17**	**355**	P	**P**	**21 48 27.1**	**-0.5**
CCM				IAmb	IAmb	21 48 39.8	
	comp=Z,2.8nm,0.9s						
KAN09	**Caldwell North**	**25.41**	**343**	P	**P**	**21 48 28.3**	**-1.6**

*IDC **26** 22:08:33.5±2.4, 19°.28N×69°.66W, h68km±25km, mb3.9/14, mbtmp4.3/17, MS3.1/15, Error ellipse: s-maj=23.3km s-min=14.5km az=14.0*
*NEIC **26** 22:08:35.1±1.3, 19°.15N±0°.05×69°.63W±0°.05, h84km±7km, mb4.5/235, Error ellipse: s-maj=8.4km s-min=6.0km az=204.0*
*OSPL **26** 22:08:36.5±3.0, 19°.28N×69°.65W, h97km±16km, ML4.5*
ISC 26 22:08:33.4±0.6, 19°.12N±0°.03×69°.66W±0°.03, h80km±6km, n478, σ1°.68/476, mb4.5/106, 3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONA1	**Toro Cenizo, N**	**0.32**	**322**	*i* P	**Pn**	**22 08 48.3**	**+2.4**
LONA1				*e*S	**Sn**	**22 08 59.2**	**+4.1**
LONA1				IAML		22 09 02.8	
	comp=Z,8μm,0.4s						
SDD	**Santo Domingo**	**0.71**	**200**	Pn	**Pn**	**22 08 51.5**	**+2.3**
SDD				Sn	**Sn**	**22 09 03.8**	**+2.9**
SC01	**Santiago de lo**	**1.06**	**287**		**Pn**	**22 08 55.5**	**+2.3**
SC01				Sn	**Sn**	**22 09 11.1**	**+3.1**
SDDR	**Presa de Saban**	**1.55**	**265**	Pn	**Pn**	**22 09 01.6**	**+2.1**
SDDR				Sn	**Sn**	**22 09 22.8**	**+3.5**
SDDR	**Presa de Saban**	**1.55**	**265**	*e*P	**Pn**	**22 09 02.5**	**+3.0**
SDDR				*e*S	**Sn**	**22 09 22.7**	**+3.5**
SDDR	**Presa de Saban**	**1.55**	**265**	*e*P	**Pn**	**22 09 01.9**	**+2.4**
SDDR				*e*S	**Sn**	**22 09 22.6**	**+3.4**
SDDR	**Presa de Saban**	**1.55**	**265**	*i* P	**Pn**	**22 09 01.9**	**+2.4**
SDDR				*e*S	**Sn**	**22 09 23.0**	**+3.8**
SDDR				IAML		22 09 24.3	
	comp=Z,7μm,0.5s						
LOPP1	**Punta Rusia, P**	**1.63**	**297**	*i* P	**Pn**	**22 09 02.2**	**+1.8**
LOPP1				*e*S	**Sn**	**22 09 22.3**	**+1.4**
LOPP1				IAML		22 09 30.0	
	comp=Z,5μm,0.4s						
LOBA2	**Hotel Casa Bon**	**1.71**	**233**	*i* P	**Pn**	**22 09 04.2**	**+2.6**
LO

FDF Fort de France 9.23 117 eP Pn 22 10 44.4 +0.5
FDF Fort de France 9.23 117 eS Sn 22 12 24.8 -1.4
BIM Bigot 9.41 118 Pn 22 10 47.6 +1.3
BIM Bigot 9.41 118 eP Pn 22 10 47.3 +1.1
BIM Bigot 9.41 118 eS Sn 22 12 24.8 -5.6
ILAM Ilet Lapin Mar 9.45 116 Pn Pn 22 10 48.3 +1.6
ILAM Ilet Lapin Mar 9.45 116 eP Pn 22 10 48.4 +1.6
ILAM Ilet Lapin Mar 9.45 116 eS Sn 22 12 32.1 +0.7
H05S1 Guadeloupe/Mar 9.65 118 P Pn 22 10 52.4 +2.8
SNR=28
H05S1 S Sn 22 12 38.6 +2.3
SLBI Saint Lucia, B 9.74 120 eP Pn 22 10 50.7 -0.1
SLBI Saint Lucia, B 9.74 120 eS Sn 22 12 27.9 -11
LCCY Blossom Villag 9.86 275 Pn Pn 22 10 50.6 -1.7
MCLT Moule a Chique 9.94 121 Pn Pn 22 10 58.5 +5.0
SVB Belmont 9.95 125 Pn 22 10 54.3 +0.6
SVB Belmont 9.95 125 eP Pn 22 10 53.7 +0.1
SVB Belmont 9.95 125 eS Sn 22 12 34.1 -10
MGV Manicaragua 10.12 289 eP Pn 22 10 49.5 -6.4
PCRV Puerto La Cruz 10.13 151 P Pn 22 10 57.8 +1.7
comp=Z,54nm,0.6s
PCRV S Sn 22 12 42.6 -5.5
SDV Santo Domingo 10.22 185 P Pn 22 10 59.5 +1.9
comp=Z,77nm,0.6s,baz=16,slow=8.7,SNR=34
SDV S Sn 22 12 43.9 -6.6
comp=Z,26nm,0.5s,baz=354,slow=13,SNR=2.0
SDV LR LR 22 15 29.2
comp=Z,110nm,18.6s,baz=23,slow=40
SDV Santo Domingo 10.22 185 Pn Pn 22 10 59.3 +1.8
BAUV El Baul 10.24 171 Pn Pn 22 10 58.7 +1.1
BAUV El Baul 10.24 171 eP Pn 22 10 59.1 +1.5
BAUV El Baul 10.24 171 eS Sn 22 12 45.6 -5.2
GCMP Grenada, Carri 10.31 129 eP Pn 22 10 58.1 -0.3
GCMP Grenada, Carri 10.31 129 eS Sn 22 12 45.1 -7.2
GRGR Grenville 10.38 131 Pn Pn 22 10 59.8 +0.4
GRGR Grenville 10.38 131 eP Pn 22 10 57.9 -1.5
GRGR Grenville 10.38 131 eS Sn 22 12 49.0 -5.1
SOCV Socops 10.84 186 eP Pn 22 11 07.8 +2.0
TRN Trinidad (W) 11.60 135 eP Pn 22 11 16.3 +0.2
TRN Trinidad (W) 11.60 135 eS Sn 22 13 01.7 -5.2
TOSP Speyside 11.74 130 Pn Pn 22 11 20.6 +2.5
TOSP Speyside 11.74 130 eP Pn 22 11 20.5 +2.5
TOSP Speyside 11.74 130 eS Sn 22 13 20.9 -6.4
PAMC Pamplona, Colo 12.08 195 eP Pn 22 11 23.7 +0.6
060A Indiantown 12.61 311 Pn Pn 22 11 32.0 +2.2
UREC San Jos de Ur 12.66 208 eP Pn 22 11 32.1 +1.5
BARC Barichara 12.92 196 eP Pn 22 11 32.2 -2.0
PTBC PUERTO BERRIO, 13.35 201 eP Pn 22 11 40.8 +1.0
RUSC La Rusia 13.57 195 eP Pn 22 11 43.9 +0.8
BBSR BB Station 13.92 18 Pn Pn 22 11 47.3 +0.2
BCIP Isla Barro Col 13.97 226 Pn Pn 22 11 47.7 -0.2
BCIP Isla Barro Col 13.97 226 eP Pn 22 11 47.2 -0.6
SPBC San Pablo de B 14.07 198 eP Pn 22 11 50.6 +1.4
HELC Santa Helena 14.07 205 eP P 22 11 52.4 -2.3
NORC Norcasia 14.40 201 eP Pn 22 11 55.2 +1.7
CBOC Ciudad Bolivar 14.56 206 eP P 22 11 58.4 -1.6
GUY2C Guyana, Caldas 14.90 203 eP P 22 12 02.3 -1.7
ROSC El Rosal 14.91 196 P P 22 12 03.7 -0.4
comp=Z,16nm,0.5s,baz=39,slow=5.8,SNR=7.8
ROSC S Sn 22 14 42.4 -2.5
comp=Z,8.2nm,0.4s,baz=163,slow=21,SNR=1.8
ROSC El Rosal 14.91 198 P P 22 12 06.5 +2.4
ROSC El Rosal 14.91 198 eP P 22 12 06.7 +2.6
CHIC Chingaza 14.95 196 eP P 22 12 04.2 -0.3
PTGC Puerto Gaitan, 15.03 190 eP Pn 22 12 01.1 -0.5
656A Willston 15.54 313 Pn Pn 22 12 06.9 -1.0
ANIL Santa Ana 15.59 202 eP P 22 12 12.7 +1.1
ESPN Las Esperanzas 15.69 246 Pn 22 12 09.8 -0.1
ESPN IAmb IAmb 22 12 47.5
comp=Z,29nm,0.9s
BATAN Batan 16.02 238 Pn Pn 22 12 14.3 +0.3
456A Hilliard 16.09 318 Pn Pn 22 12 14.0 -0.7
PRAC Prado 16.15 199 eP Pn 22 12 15.4 -0.3
BRU2 Volcan 16.28 233 Pn Pn 22 12 16.8 -0.7
BRU2 IAmb IAmb 22 12 58.1
comp=Z,36nm,1.1s
CVTR Volcan Turrial 16.37 238 Pn Pn 22 12 17.5 -1.3
CVTR IAmb IAmb 22 12 23.0
comp=Z,21nm,0.8s
DRK0 Durika 16.41 235 Pn 22 12 19.3 +0.2
COVE Coope Vega, Sa 16.51 242 Pn Pn 22 12 19.9 -0.3
SRBA San Rafael, Bu 16.52 235 Pn Pn 22 12 20.4 0.0
ACON Acoyapa 16.55 247 P P 22 12 22.3 +0.4
CDTO Canoas 16.56 233 P 22 12 22.8 +0.8
CSU Charleston Sou 16.66 328 Pn Pn 22 12 21.9 0.0
Y60A Bolivia 16.67 334 P Pn 22 12 21.8 -0.2
BOAB BOACO BROADBAN 16.77 249 P P 22 12 25.1 +0.8
MATN Matagalpa 16.80 251 Pn Pn 22 12 23.2 -0.7
NHSC New Hope 16.81 328 P Pn 22 12 23.0 -0.8
NHSC New Hope 16.81 328 P P 22 12 25.3 +0.7
baz=143
Y59A Loris 16.93 333 Pn Pn 22 12 25.2 -0.1
JTS Las Juntas de 17.19 241 P P 22 12 29.9 +0.8
JTS IAmb IAmb 22 12 53.3
comp=Z,48nm,1.1s
Y58A Scranton 17.22 331 P 22 12 29.2 +0.1
TIGA Tifton 17.56 317 P P 22 12 31.7 -1.2
TIGA IAmb IAmb 22 12 44.2
comp=Z,25nm,0.8s
TIGA Tifton 17.56 317 P Pn 22 12 34.1 +1.2
baz=131
TEIG Tepich 17.57 277 P P 22 12 32.7 -0.4
ORTG Ortega, Santa 17.58 243 P Pn 22 12 34.8 +1.4
ORTG IAmb IAmb 22 12 56.0
comp=Z,27nm,1.3s
X58A Rowland 17.61 333 P Pn 22 12 34.0 +0.4
CNNC Cliffs of the 17.63 337 P P 22 12 33.4 -0.3
CNNC Cliffs of the 17.63 337 P Pn 22 12 34.9 +1.2
baz=153
Y57A Sumter 17.65 329 P Pn 22 12 34.6 +0.5
Y57A IAmb IAmb 22 12 36.3
comp=Z,45nm,0.9s
CNGN Cerro Negro 17.66 251 P Pn 22 12 34.4 0.0
CNGN IAmb IAmb 22 12 50.7
comp=Z,57nm,1.4s
V61A Roper 17.69 341 P Pn 22 12 35.2 +0.7
CRIN San Cristobal 17.90 252 P Pn 22 12 37.6 +0.3
CRIN IAmb IAmb 22 13 15.6
comp=Z,62nm,1.3s
154A Montrose 18.06 321 P Pn 22 12 39.4 +0.4
BIRD Birdtown, Kers 18.20 330 P Pn 22 12 41.0 +0.4
BIRD IAmb IAmb 22 12 42.9
comp=Z,41nm,1.1s
JSC Jenkinsville 18.29 328 P Pn 22 12 42.0 +0.3
JSC IAmb IAmb 22 12 44.6
comp=Z,50nm,1.4s
W57A Gilead 18.41 332 P Pn 22 12 43.0 -0.2
W57A IAmb IAmb 22 12 50.4
comp=Z,48nm,1.4s
352A Blakely 18.47 315 P Pn 22 12 43.9 0.0
352A IAmb IAmb 22 13 16.2
comp=Z,14nm,0.6s
BBAC Balboa, Cauca 18.55 205 eP Pn 22 12 46.3 +1.0
V58A Windy Hill, Pi 18.59 335 P Pn 22 12 45.1 -0.2
V58A IAmb IAmb 22 12 47.9
comp=Z,22nm,1.1s
U59A Littleton 18.60 339 P Pn 22 12 45.3 -0.2
HODGE Hodges 18.77 326 IAmb IAmb 22 12 50.4
comp=Z,28nm,1.0s
GOGA Godfrey 18.84 322 Pn 22 12 48.9 +0.6
GOGA Godfrey 18.84 322 P Pn 22 12 48.7 +0.4
baz=136
BOAV Boa Vista 18.88 151 P P 22 12 47.8 +0.3
BOAV IAmb IAmb 22 13 07.3
comp=Z,14nm,0.9s
T60A Surry 18.99 342 P P 22 12 49.3 +0.7
PAULI Pauline 19.00 328 P Pn 22 12 50.3 +0.1
PAULI IAmb IAmb 22 12 52.4
comp=Z,43nm,1.1s
KMSC Kings Mountain 19.02 329 IAmb IAmb 22 12 52.5
comp=Z,32nm,0.8s
KMSC Kings Mountain 19.02 329 P Pn 22 12 50.4 0.0
baz=144,SNR=16
T59A Double "B" Far 19.08 340 P P 22 12 50.3 +0.7
T59A IAmb IAmb 22 12 55.7
comp=Z,15nm,0.7s
152A Waverly Hall 19.09 318 P Pn 22 12 51.1 -0.2
MTO3 Montecristo 19.44 259 PcP 22 17 10.3 -2.1
Y52A Lilburn 19.51 322 P Pn 22 12 55.4 -0.8
Y52A IAmb IAmb 22 13 00.4
comp=Z,24nm,1.2s
U56A King 19.58 333 P Pn 22 12 56.1 -1.0
U56A IAmb IAmb 22 13 05.5
comp=Z,20nm,0.6s
250A Grady 19.68 314 P P 22 12 56.7 +0.6
250A IAmb IAmb 22 12 59.4
comp=Z,27nm,0.9s
T57A Hurt 19.70 337 P Pn 22 12 57.8 -0.7
BG3 Lake Jocassee 19.71 326 P Pn 22 12 57.8 -0.8
BG3 IAmb IAmb 22 13 01.3
comp=Z,25nm,0.8s
BRAL Brewton 19.76 311 P Pn 22 12 58.3 -0.9
BRAL Brewton 19.76 311 P Pn 22 12 58.6 -0.7
baz=123
Z51A Franklin 19.80 319 P Pn 22 12 58.9 -0.9
Z51A IAmb IAmb 22 13 00.5
comp=Z,29nm,0.9s
JSRW J. Sargeant Re 19.85 340 P P 22 12 58.9 +1.0
R58B Mineral 20.09 341 P Pn 22 13 02.0 -1.1
CBN Corbin Frederi 20.17 342 P Pn 22 13 02.7 -1.2
CBN Corbin Frederi 20.17 342 P P 22 13 02.4 +1.1
baz=158
V53A Saluda 20.17 327 P Pn 22 13 02.7 -1.3
V53A IAmb IAmb 22 13 12.3
comp=Z,16nm,0.9s
S57A Dark Hollow, R 20.27 338 IAmb IAmb 22 13 07.5
comp=Z,46nm,1.4s
W52A Murphy 20.32 324 P Pn 22 13 04.5 -1.3
BLA Blacksburg 20.34 335 P P 22 13 04.3 +1.1
BLA IAmb IAmb 22 13 15.7
comp=Z,25nm,0.7s
BLA Blacksburg 20.34 335 P P 22 13 04.4 +1.1
baz=150,SNR=6.8
U54A Nelsons Funny 20.37 331 P P 22 13 04.5 +0.9
U54A IAmb IAmb 22 13 09.2
comp=Z,32nm,1.0s
X51A Calhoun 20.47 322 P P 22 13 05.7 +1.0
X51A IAmb IAmb 22 13 07.0
comp=Z,22nm,0.9s
IMBA Imbabura, San 20.52 205 P Pn 22 13 07.8 -0.9
OTAV Otavalo 20.66 206 P P 22 13 08.7 +1.4
OTAV IAmb IAmb 22 13 43.0
comp=Z,20nm,1.1s
TKL Tuckaleechee C 20.66 326 P P 22 13 07.6 +0.9
comp=Z,8.0nm,0.6s,baz=155,slow=12,SNR=13
TKL S S 22 16 44.7 -8.4
comp=Z,6.6nm,0.8s,baz=210,slow=20,SNR=2.2
TKL LR LR 22 20 41.5
comp=Z,25nm,20.3s,baz=145,slow=36
comp=Z,8.0nm,0.6s
TKL Tuckaleechee C 20.66 326 IAmb IAmb 22 13 13.4
comp=Z,34nm,1.1s
V52A Sevierville 20.70 326 P P 22 13 08.1 +0.9
V52A IAmb IAmb 22 13 17.2
comp=Z,19nm,1.0s
LRAL Lakeview Retre 20.80 315 P P 22 13 09.8 +1.5
LRAL Lakeview Retre 20.80 315 P Pn 22 13 10.1 -1.4
baz=128,SNR=20
GSR Geological Sur 20.86 343 P P 22 13 10.1 +1.3
PULU Pululahua 20.88 206 P Pn 22 13 11.5 -1.4
FPAL Fort Paine 20.90 320 P P 22 13 10.2 +0.9
FPAL IAmb IAmb 22 13 20.6
comp=Z,19nm,1.0s
Y49A Blount Mountai 20.94 318 P P 22 13 10.9 +1.1
Y49A IAmb IAmb 22 13 11.6
comp=Z,13nm,0.6s
V51A Loudon 21.08 325 P P 22 13 12.3 +1.1
V51A IAmb IAmb 22 13 13.6
comp=Z,18nm,0.8s
SDMD Soldier's Deli 21.15 344 P P 22 13 13.0 +1.0
SDMD IAmb IAmb 22 13 24.6
comp=Z,14nm,0.6s
W50A Signal Mountai 21.18 322 P P 22 13 13.7 +1.4
W50A IAmb IAmb 22 13 15.0
comp=Z,32nm,0.9s
S54A Dingess, Beckl 21.21 334 P P 22 13 13.7 +1.1
S54A IAmb IAmb 22 13 14.7
comp=Z,19nm,0.8s
TZTN Tazewell 21.22 328 P P 22 13 14.1 +1.4
TZTN IAmb IAmb 22 13 19.7
comp=Z,36nm,1.0s
TZTN Tazewell 21.22 328 P P 22 13 13.8 +1.1
baz=141,SNR=12
WUPA West Chester U 21.36 347 P P 22 13 15.3 +1.1
Q56A Snyder Ridge, 21.50 339 P P 22 13 14.6 -1.1
Q56A IAmb IAmb 22 13 37.5
comp=Z,27nm,1.2s
P57A Homestead Farm 21.54 342 P P 22 13 16.3 +0.2
SWET Sewanee 21.55 321 P P 22 13 17.1 +0.8
SWET IAmb IAmb 22 13 18.6
comp=Z,19nm,1.2s
Z47A Carrollton 21.62 314 P P 22 13 17.9 +0.9
Z47A IAmb IAmb 22 13 21.1
comp=Z,16nm,0.7s
346A Big Creek Wild 21.64 308 P P 22 13 17.0 -0.2
346A IAmb IAmb 22 13 25.9
comp=Z,23nm,0.8s
X48A Hartselle 21.72 318 P P 22 13 18.7 +0.6
PAGS Pennsylvania G 21.89 345 P P 22 13 22.0 +2.2
PAGS IAmb IAmb 22 13 29.0
comp=Z,28nm,0.9s
BRNJ Basking Ridge 21.90 350 P P 22 13 20.5 +0.6
CPNY Central Park 21.91 351 P P 22 13 20.5 +0.5
CPNY IAmb IAmb 22 13 33.7
comp=Z,18nm,0.9s
R53A Hurricane 21.93 333 P P 22 13 20.9 +0.6
LUPA Lehigh Univers 21.96 348 P P 22 13 21.4 +0.9
LUPA IAmb IAmb 22 13 34.0
comp=Z,16nm,0.6s
146A Union 21.99 312 P P 22 13 20.8 -0.2
Q54A Coxs Mills 22.04 336 P P 22 13 22.6 +1.2
Q54A IAmb IAmb 22 13 25.5
comp=Z,34nm,1.3s
S51A Beattyville 22.10 329 P P 22 13 22.6 +0.5
S51A IAmb IAmb 22 13 38.5
comp=Z,15nm,0.9s
PAL Palisades 22.11 351 P P 22 13 22.9 +0.7
PAL IAmb IAmb 22 13 50.0
comp=Z,15nm,0.8s
PAL Palisades 22.11 351 P P 22 13 24.5 +2.4
baz=169
T50A Nancy 22.25 326 P P 22 13 24.4 +0.7
MCWV Mont Chateau 22.27 339 P P 22 13 24.7 +0.7
MCWV IAmb IAmb 22 13 27.8
comp=Z,32nm,1.4s
MCWV Mont Chateau 22.27 339 P P 22 13 25.6 +1.6
baz=154
ODNJ Ogdensburg 22.29 350 P P 22 13 25.5 +1.4
ODNJ IAmb IAmb 22 13 38.8
comp=Z,18nm,0.8s
TRNY Table Rock, Ra 22.30 351 P P 22 13 24.7 +0.5
TRNY IAmb IAmb 22 13 40.0
comp=Z,12nm,0.7s
U49A Red Boiling Sp 22.38 324 P P 22 13 25.8 +0.7
CLTN Cedars of Leba 22.39 322 P P 22 13 25.2 -0.1
V48A Smith Brothers 22.44 321 P P 22 13 26.6 +0.9
V48A IAmb IAmb 22 13 50.4
comp=Z,13nm,0.8s
N58A Sunbury 22.47 346 P P 22 13 26.6 +0.5
N58A IAmb IAmb 22 13 41.9
comp=Z,17nm,0.9s
SSPA Standing Stone 22.57 344 P P 22 13 27.9 +0.8
SSPA IAmb IAmb 22 13 44.0
comp=Z,27nm,1.1s
SSPA Standing Stone 22.57 344 P P 22 13 28.5 +1.4
baz=159
Q52A Bidwell 22.59 334 P P 22 13 27.1 -0.3
344A Westbrook Farm 22.62 307 P P 22 13 28.4 +0.7
344A IAmb IAmb 22 13 49.7
comp=Z,26nm,1.1s
P53A Whipple 22.68 336 P P 22 13 29.1 +0.8
PLAL Pickwick Lake 22.71 318 P P 22 13 28.9 +0.3
PLAL IAmb IAmb 22 13 52.8
comp=Z,18nm,0.6s
O54A Avella 22.93 339 P P 22 13 31.5 +0.7
R50A Paris 22.96 329 P P 22 13 32.7 +1.5
R50A IAmb IAmb 22 13 34.9
comp=Z,18nm,0.8s
Y45A Yeager Farm, C 23.01 314 P P 22 13 32.2 +0.5
M57A Sunshine Farm, 23.04 346 P P 22 13 32.9 +0.9
P52A Corning 23.10 335 P P 22 13 33.0 +0.4
P52A IAmb IAmb 22 13 56.5
comp=Z,15nm,1.0s
P52A Corning 23.10 335 P P 22 13 33.7 +1.2
baz=149
Q51A Peebles 23.11 332 P P 22 13 33.5 +0.9
Q51A IAmb IAmb 22 13 56.3
comp=Z,24nm,0.8s
O53A New Philadelph 23.28 337 P P 22 13 34.9 +0.7
O53A IAmb IAmb 22 13 36.4
comp=Z,15nm,0.8s
O53A New Philadelph 23.28 337 P P 22 13 34.8 +0.6
baz=151,SNR=5.9
OXF Oxford 23.30 315 P P 22 13 34.9 +0.5
OXF Oxford 23.30 315 P P 22 13 35.0 +0.6
baz=126
WVT Waverly 23.30 320 P P 22 13 35.1 +0.7
WVT IAmb IAmb 22 13 36.1
comp=Z,15nm,0.7s
WVT Waverly 23.30 320 P P 22 13 35.1 +0.7
baz=132
P51A Williamsport 23.36 333 P P 22 13 35.3 +0.4
P51A IAmb IAmb 22 13 58.0
comp=Z,18nm,1.0s
HRV Adam Dziewonsk 23.36 356 P P 22 13 35.5 +0.6
baz=175
R49A Shelbyville 23.39 328 P P 22 13 35.7 +0.5
L61B Northampton 23.39 354 P P 22 13 36.3 +1.1
baz=173
O52A Adamsville 23.40 336 P P 22 13 34.7 -0.6
O52A IAmb IAmb 22 13 37.6
comp=Z,18nm,0.8s
W45A Hickory Valley 23.53 317 P P 22 13 36.7 +0.1
BINY Binghamton 23.62 348 P P 22 13 38.4 +1.1
BINY IAmb IAmb 22 14 10.7
comp=Z,16nm,1.1s
BINY Binghamton 23.62 348 P P 22 13 38.6 +1.3
baz=165
N53A Lisbon 23.64 338 P P 22 13 38.3 +0.8
N53A IAmb IAmb 22 14 02.7
comp=Z,37nm,1.4s
143A Socs Landing, 23.72 309 P P 22 13 39.2 +1.0
143A IAmb IAmb 22 13 52.5
comp=Z,16nm,0.7s
TRY Troy 23.78 353 P P 22 13 38.5 -0.1
TRY IAmb IAmb 22 13 59.4
comp=Z,22nm,1.2s
L56A Greenwood 23.90 345 P P 22 13 40.6 +0.8
WCI Wyandotte Cave 23.92 326 P P 22 13 40.7 +0.8
WCI Wyandotte Cave 23.92 326 P P 22 13 41.4 +1.5
baz=138
ACSO Alum Creek Sta 23.96 334 P P 22 13 41.0 +0.8
ACSO IAmb IAmb 22 13 44.2
comp=Z,22nm,1.1s
ACSO Alum Creek Sta 23.96 334 P P 22 13 41.5 +1.3
baz=148
HALT Halls 24.10 318 P P 22 13 42.9 +1.4
P49A Miami Univ. Ec 24.14 331 P P 22 13 42.2 +0.2
P49A IAmb IAmb 22 13 45.6
comp=Z,22nm,1.1s
P49A Miami Univ. Ec 24.14 331 P P 22 13 43.0 +1.1
baz=143,SNR=5.5
M53A WI Miller and 24.15 339 P P 22 13 42.5 +0.5
M53A IAmb IAmb 22 13 45.5
comp=Z,18nm,1.1s
M53A WI Miller and 24.15 339 P P 22 13 43.2 +1.3
baz=154
K57A Scipio Center 24.24 348 P P 22 13 43.9 +1.1
K57A IAmb IAmb 22 14 04.8
comp=Z,19nm,1.0s
P48A Milroy 24.42 329 P P 22 13 44.2 -0.2
USIN University of 24.47 324 P P 22 13 46.1 +1.2
O49A Covington 24.50 332 P P 22 13 45.8 +0.7
O49A IAmb IAmb 22 13 48.4
comp=Z,13nm,0.7s
MMNY Mt. Morris Dam 24.55 345 P P 22 13 46.7 +1.1
MMNY IAmb IAmb 22 14 09.2
comp=Z,14nm,0.9s
CCAR Cane Creek 24.60 311 P P 22 13 46.5 +0.4
J58A Remsen 24.62 350 P P 22 13 46.7 +0.4
BLO Bloomington 24.74 327 P P 22 13 47.4 0.0
BLO IAmb IAmb 22 14 12.7
comp=Z,20nm,1.1s
J57A Williamstown 24.80 349 P P 22 13 47.9 0.0
J57A IAmb IAmb 22 14 13.2
comp=Z,17nm,1.1s
O48B Farmland 24.92 331 P P 22 13 49.8 +0.7
baz=143,SNR=7.3
LBNH Lisbon 25.11 356 P P 22 13 51.4 +0.7
baz=175
CGM3 Cape Girardeau 25.18 320 P P 22 13 52.0 +0.7
CGM3 IAmb IAmb 22 13 52.8
comp=Z,5.4nm,0.8s
SIUC Southern Illin 25.19 321 P P 22 13 52.6 +1.1
S44A Carbondale 25.20 321 P P 22 13 52.1 +0.5
J54A Appleton 25.24 344 P P 22 13 52.5 +0.6
J54A IAmb IAmb 22 14 14.8
comp=Z,14nm,0.8s
OLIL Olney 25.25 325 P P 22 13 52.6 +0.5
OLIL IAmb IAmb 22 13 54.2
comp=Z,16nm,0.8s
LCAR Lake Charles 25.36 316 P P 22 13 53.9 +0.8
P46A Rosedale 25.43 327 P P 22 13 54.8 +1.2
N47A Urbana 25.67 331 P P 22 13 56.1 +0.4
WHAR Wooly Hollow 25.68 313 P P 22 13 57.0 +1.0
WHAR IAmb IAmb 22 14 00.5
comp=Z,13nm,0.8s
LONY Lake Ozonia 25.75 352 P P 22 13 57.9 +1.4
baz=169
NATX Nacogdoches 25.78 304 P P 22 13 57.5 +0.6
NATX IAmb IAmb 22 14 00.0
comp=Z,18nm,0.8s
NATX Nacogdoches 25.78 304 P P 22 13 58.1 +1.2
baz=113
Q44A Meyer Farm, Va 25.88 324 P P 22 13 57.8 +0.1
Q44A IAmb IAmb 22 13 59.8
comp=Z,16nm,0.7s
FCAR Ozark Folk Cen 25.90 315 P P 22 13 58.8 +0.8
SFIN Lafayette 25.95 328 P P 22 13 59.9 +1.7
baz=140
AAM Ann Arbor 25.98 336 P P 22 13 59.2 +0.6
L48A N Adams 25.99 334 P P 22 13 58.6 -0.1
L48A IAmb IAmb 22 14 02.4
comp=Z,13nm,0.8s
PKME Peaks-Kenny Pk 26.07 1 P P 22 14 00.2 +0.9
baz=181
HKT Hockley 26.08 299 P P 22 13 59.3 -0.2
FVM French Village 26.09 320 P P 22 14 00.1 +0.5
FVM IAmb IAmb 22 14 04.7
comp=Z,14nm,1.2s
MIAR Mount Ida 26.20 311 P P 22 14 01.8 +1.1
baz=120
O44A Mansfield 26.48 326 P P 22 14 03.6 +0.5
O44A IAmb IAmb 22 14 05.1
comp=Z,12nm,0.8s
CCM Cathedral Cave 26.63 320 P P 22 14 04.8 +0.3
CCM Cathedral Cave 26.63 320 P P 22 14 05.0 +0.5
baz=129
P43A Skaggs, Pawnee 26.68 324 P P 22 14 05.7 +0.8
MGMO Mountain Grove 26.73 317 P P 22 14 05.6 +0.2
MGMO IAmb IAmb 22 14 34.6
comp=Z,9.1nm,0.8s
SADO Sadowa 26.77 345 LR LR 22 25 37.2
comp=Z,35nm,18.8s,baz=160,slow=38
L46A Eue Claire 26.84 332 P P 22 14 06.5 +0.2
HDIL Hopedale 27.20 326 P P 22 14 10.0 +0.4
baz=136
HHAR Hobbs 27.35 314 P P 22 14 11.2 +0.2
R40A Maddies Statio 27.41 319 P P 22 14 12.1 +0.7
ATAH Atahualpa 27.48 199 LR LR 22 25 23.5
comp=Z,49nm,19.7s,baz=8.1,slow=37
L44A Lake County Fo 27.72 330 P P 22 14 14.8 +0.6
baz=140
P40A Paris 28.05 321 P P 22 14 17.1 -0.1
P40A IAmb IAmb 22 14 18.6
comp=Z,6.5nm,0.8s
LATQ La Tuque 28.30 356 P P 22 14 17.2 -2.1
LATQ IAmb IAmb 22 14 18.6
comp=Z,14nm,1.2s
K43A Burlington 28.32 330 P P 22 14 20.0 +0.5
L42A Oliver, Polo 28.45 328 P P 22 14 20.7 0.0
L42A IAmb IAmb 22 14 22.5
comp=Z,8.5nm,0.8s
TUL1 Leonard 28.45 311 P P 22 14 21.7 +0.9
baz=119
ETMB Extrema 28.96 173 P P 22 14 24.8 -0.6
ETMB IAmb IAmb 22 15 06.4
comp=Z,6.9nm,1.1s
P38A Dawn 29.00 320 P P 22 14 25.6 0.0
L40A Anamosa 29.29 326 P P 22 14 28.2 0.0
L40A IAmb IAmb 22 14 29.0
comp=Z,6.7nm,0.6s
X34A Smith Ranch, M 29.36 307 P P 22 14 28.5 -0.4

X34A IAmb IAmb 22 15 04.3
comp=Z,16nm,1.1s
JFWS Jewell Farm 29.41 328 P **P** **22 14 29.8 +0.6**
JFWS Jewell Farm 29.41 328 P **P** **22 14 29.8 +0.6**
baz=137
T35A Sooner Cattle 29.45 313 P **P** **22 14 30.0 +0.3**
T35A IAmb IAmb 22 14 31.6
comp=Z,7.4nm,0.8s
H43A Windswept, Lux 29.46 333 P **P** **22 14 30.3 +0.7**
H43A IAmb IAmb 22 14 31.6
comp=Z,15nm,0.9s
I42A Draeger Farm, 29.51 331 P **P** **22 14 30.6 +0.6**
BLOK Blackwell 29.87 312 P **P** **22 14 34.4 +1.1**
BLOK IAmb IAmb 22 14 49.9
comp=Z,9.5nm,0.9s
WMOK Wichita Mounta 30.13 307 P **P** **22 14 36.2 +0.5**
WMOK IAmb IAmb 22 14 37.2
comp=Z,5.9nm,0.7s
WMOK Wichita Mounta 30.13 307 P **P** **22 14 36.5 +0.8**
baz=114,SNR=9.9
KAN13 South Haven SW 30.17 312 P **P** **22 14 36.6 +0.5**
KAN13 IAmb IAmb 22 14 38.1
comp=Z,9.2nm,0.8s
I40A Norwalk 30.31 329 P **P** **22 14 37.4 +0.2**
KAN01 Argonia South 30.44 312 P **P** **22 14 39.7 +1.3**
K38A Parkersburg 30.53 325 P **P** **22 14 39.6 +0.5**
KSU1 Kansas State U 30.65 316 P **P** **22 14 40.1 -0.1**
KSU1 IAmb IAmb 22 15 16.4
comp=Z,5.6nm,0.8s
G40A Rib Lake 31.15 331 P **P** **22 14 45.3 +0.6**
COWI Conover 31.34 334 P **P** **22 14 47.1 +0.9**
COWI IAmb IAmb 22 14 48.4
comp=Z,16nm,1.2s
NNA Nana 31.72 193 LR LR 22 29 32.1
comp=Z,37nm,18.4s,baz=350,slow=40
I37A Lemond, Waseca 31.80 327 P **P** **22 14 51.3 +1.0**
D41A Chassel 31.88 335 P **P** **22 14 51.6 +0.7**
SPMN Marine on St. 32.35 329 P **P** **22 14 55.2 +0.1**
SPMN IAmb IAmb 22 14 56.6
comp=Z,4.2nm,0.7s
TXAR Lajitas Array 32.53 295 P **P** **22 14 57.9 +0.9**
comp=Z,0.4nm,0.5s,baz=111,slow=8.1,SNR=7.7
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 32.53 295 P **P** **22 14 57.7 +0.6**
TX31 Lajitas Ar. Si 32.54 295 P **P** **22 14 58.0 +0.9**
TX31 IAmb IAmb 22 15 27.1
comp=Z,5.7nm,0.8s
TX32 Lajitas Array 32.54 295 P **P** **22 14 57.4 +0.4**
E38A The Farm, Brul 32.78 332 P **P** **22 14 59.6 +0.7**
E38A IAmb IAmb 22 15 00.1
comp=Z,6.8nm,0.7s
MSTX Muleshoe 32.94 303 P **P** **22 15 00.7 +0.1**
MSTX IAmb IAmb 22 15 02.0
comp=Z,6.6nm,0.7s
MSTX Muleshoe 32.94 303 P **P** **22 15 01.3 +0.8**
baz=108
F36A Milaca 33.16 329 P **P** **22 15 02.4 +0.2**
F36A IAmb IAmb 22 15 39.3
comp=Z,7.3nm,1.1s
CLN7 Carlsbad 7 33.33 300 P **P** **22 15 04.6 +0.6**
ECSD EROS Data Cent 33.36 323 P **P** **22 15 04.1 +0.1**
ECSD IAmb IAmb 22 15 05.5
comp=Z,5.4nm,0.8s
ECSD EROS Data Cent 33.36 323 P **P** **22 15 04.3 +0.3**
baz=129
GDL2 Guadalupe Moun 33.73 300 P **P** **22 15 07.5 +0.1**
EYMN Ely 33.79 333 P **P** **22 15 07.5 -0.2**
EYMN IAmb IAmb 22 15 08.8
comp=Z,7.3nm,0.8s
EYMN Ely 33.79 333 P **P** **22 15 07.7 +0.1**
baz=141
K31A O'Neill 33.95 320 P **P** **22 15 09.4 +0.2**
MNTX Cornudas Mount 34.46 298 P **P** **22 15 14.2 +0.6**
MNTX IAmb IAmb 22 15 49.2
comp=Z,5.5nm,0.9s
MNTX Cornudas Mount 34.46 298 P **P** **22 15 14.7 +1.1**
baz=103,SNR=7.4
F33A 5 Mile Ranch, 34.55 326 P **P** **22 15 14.1 -0.1**
F33A IAmb IAmb 22 15 15.4
comp=Z,7.3nm,0.8s
LPAZ La Paz 35.22 177 LR LR 22 31 26.7
comp=Z,50nm,18.0s,baz=66,slow=39
SCHQ Schefferville 35.71 3 P **P** **22 15 23.8 -0.2**
comp=Z,2.2nm,0.7s,baz=188,slow=7.1,SNR=1.1
SCHQ LR LR 22 29 38.1
comp=Z,22nm,19.3s,baz=134,slow=36
comp=Z,2.2nm,0.7s
SIV San Ignacio 35.90 166 LR LR 22 32 12.9
comp=Z,36nm,18.3s,baz=107,slow=39
AGMN Agassiz Nation 36.02 330 P **P** **22 15 27.2 +0.4**
AGMN IAmb IAmb 22 15 28.0
comp=Z,6.0nm,0.8s
AGMN Agassiz Nation 36.02 330 P **P** **22 15 27.1 +0.3**
baz=135
BNM Barren Site 36.06 302 P **P** **22 15 28.5 +0.9**
ANMO Albuquerque 36.14 303 LR LR 22 34 22.8
comp=Z,34nm,18.1s,baz=126,slow=43
ANMO Albuquerque 36.14 303 P **P** **22 15 29.1 +0.8**
baz=106
SDCO Great Sand Dun 36.29 308 P **P** **22 15 30.1 +0.6**
SDCO Great Sand Dun 36.29 308 P **P** **22 15 30.3 +0.7**
baz=111
Q24A Divide 36.48 310 P **P** **22 15 31.4 +0.2**
baz=113
121A Cookes Peak, D 36.63 299 P **P** **22 15 33.3 +0.9**
baz=102
ISCO Idaho Springs 37.13 311 P **P** **22 15 37.8 +1.1**
ISCO IAmb IAmb 22 15 39.3
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 37.13 311 P **P** **22 15 37.9 +1.1**
baz=113
S22A 4UR Ranch, Cre 37.28 308 P **P** **22 15 38.7 +0.7**
baz=109
ULM Lac du Bonnet 37.42 332 P **P** **22 15 38.2 -0.4**
comp=Z,5.8nm,0.9s,baz=117,slow=9.8,SNR=4.5
comp=Z,5.8nm,0.9s
LPIG La Paz 38.02 285 LR LR 22 31 59.5
comp=Z,17nm,19.6s,baz=234,slow=37
PV15 Paradox Valley 38.70 308 P **P** **22 15 51.3 +1.4**
PV15 IAmb IAmb 22 15 53.5
comp=Z,6.3nm,0.8s
H07S1 FLORES T-PHASE 38.77 50 T T 22 56 17.0
SNR=8.6
Q16A Castle Valley 40.89 308 P **P** **22 16 08.3 +0.3**
TMUT Trail Mountain 41.02 308 P **P** **22 16 09.7 +0.5**
PDAR Pinedale Array 41.02 314 P **P** **22 16 08.4 -0.7**
comp=Z,0.5nm,0.6s,baz=119,slow=9.3,SNR=6.2
PDAR PP **PP** **22 17 43.5 -1.6**
comp=Z,0.1nm,0.3s,baz=94,slow=12,SNR=3.9
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 41.02 314 P **P** **22 16 08.7 -0.4**
RLMT Red Lodge 41.78 317 P **P** **22 16 16.3 +1.0**
RLMT IAmb IAmb 22 16 17.1
comp=Z,5.0nm,0.7s
RLMT Red Lodge 41.78 317 P **P** **22 16 15.9 +0.7**
baz=115,SNR=7.7
HWUT Hardware Ranch 42.01 312 P **P** **22 16 17.0 -0.1**
LOHW Long Hollow 42.05 315 P **P** **22 16 18.1 +0.6**
REDW Red Top Meadow 42.13 314 P **P** **22 16 18.6 +0.4**
REDW IAmb IAmb 22 16 20.1
comp=Z,5.2nm,0.9s
MOOW Moose Ponds 42.20 315 P **P** **22 16 19.3 +0.7**
DUG Dugway, Tooele 42.47 309 P **P** **22 16 21.5 +0.7**
DUG Dugway, Tooele 42.47 309 P **P** **22 16 21.6 +0.7**
baz=107
PSUT Pine Spring 42.81 306 P **P** **22 16 24.7 +1.0**
BGU Big Grassy Mou 42.84 310 P **P** **22 16 24.4 +0.6**
IRM Iron Mountain 42.98 300 P **P** **22 16 26.6 +1.7**
baz=98
SPR3 Spring Creek 3 43.28 307 P **P** **22 16 28.3 +0.7**
SPR3 IAmb IAmb 22 16 30.5
comp=Z,3.0nm,0.7s
GMRC Granite Mounta 43.49 301 P **P** **22 16 30.0 +0.9**
baz=99
BOZ Bozeman (W) 43.50 317 P **P** **22 16 29.9 +0.8**
BOZ Bozeman (W) 43.50 317 P **P** **22 16 29.8 +0.8**
baz=113,SNR=5.4
R11A Troy Canyon, C 44.09 306 P **P** **22 16 35.3 +1.4**
baz=102
LRM Limekiln Ridge 44.12 317 P **P** **22 16 34.7 +0.6**
TPNV Topopah Spring 44.33 304 P **P** **22 16 36.8 +1.0**
baz=100
ELK Elko 44.40 309 LR LR 22 36 47.0
comp=Z,28nm,18.4s,baz=110,slow=38
WCT Wildcat Mounta 44.59 303 P **P** **22 16 37.8 -0.1**
FRB Frobisher Bay 44.59 1 LR LR 22 35 18.8
comp=Z,16nm,19.3s,baz=336,slow=36
HLID Hailey 44.63 313 P **P** **22 16 39.3 +1.1**
baz=109
GMN Gold Mountain 45.18 304 P **P** **22 16 44.1 +1.3**
TPH Tonopah 45.30 305 P **P** **22 16 44.0 +0.4**
EDW2 Edwards Air Fo 45.41 300 P **P** **22 16 45.9 +1.5**
baz=97
NV11 Mina Array Sit 46.08 305 P **P** **22 16 50.8 +1.0**
PLID Pearl Lake 46.20 315 P **P** **22 16 50.8 +0.2**
PLID IAmb IAmb 22 16 52.5
comp=Z,5.9nm,1.1s
NVAR Mina Array Bea 46.20 305 P **P** **22 16 51.3 +0.6**
comp=Z,1.7nm,0.8s,baz=91,slow=7.0,SNR=14
comp=Z,1.7nm,0.8s
LHV Little Huntoon 46.32 305 P **P** **22 16 52.6 +1.3**
YERR Yerington 47.02 306 P **P** **22 16 58.3 +1.3**
YERR IAmb IAmb 22 16 59.9
comp=Z,4.8nm,0.9s
SFJD Kangerlussuaq 49.40 10 LR LR 22 37 22.6
comp=Z,16nm,18.7s,baz=211,slow=35
YBH Yreka Blue Hor 50.11 309 LR LR 22 41 25.6
comp=Z,15nm,18.1s,baz=174,slow=39
ILULI Ilulissat 51.38 8 P **P** **22 17 29.1 -0.4**
YKA Yellowknife Ar 53.19 336 P **P** **22 17 42.4 -0.7**
comp=Z,1.9nm,0.8s,baz=117,slow=7.0,SNR=5.6
comp=Z,1.9nm,0.8s
MESJ Messejana 56.16 57 *e*P **P** **22 18 07.2 +2.2**
PGAV Gavieira, Arco 56.31 52 *e*P **P** **22 18 06.6 +0.4**
PVRL Vila Real 56.68 53 *e*P **P** **22 18 09.2 +0.5**
MTE Manteigas 56.77 54 *e*P **P** **22 18 10.7 +1.3**
PCBR Castelo Branco 56.80 54 *e*P **P** **22 18 10.8 +1.3**
PMRV Marv??o 56.85 55 *e*P **P** **22 18 11.5 +1.6**
PBAR Barrancos 57.10 56 *e*P **P** **22 18 13.9 +2.2**
MVO Moncorvo 57.20 53 *e*P **P** **22 18 14.2 +1.8**
ESDC Sonseca Array 59.51 55 P **P** **22 18 29.8 +1.3**
comp=Z,5.6nm,0.7s,baz=278,slow=7.1,SNR=70
comp=Z,5.6nm,0.7s
ESDC Sonseca Array 59.51 55 IAmb IAmb 22 18 30.7
comp=Z,4.3nm,1.1s
ESBB Sonseca Array 59.51 55 P **P** **22 18 30.5 +2.0**
INK Inuvik 62.80 338 LR LR 22 45 11.4
comp=Z,22nm,21.8s,baz=177,slow=35
BCAR Beaver Creek A 65.04 331 P **P** **22 19 06.0 +1.0**
RCHB Rochefort 65.92 43 *d*P **P** **22 19 11.2 +0.3**
WLF Walferdange 66.54 43 P **P** **22 19 15.5 +0.7**
WLF IAmb IAmb 22 19 17.7
comp=Z,6.7nm,1.0s
WLF Walferdange 66.54 43 *d*P **P** **22 19 16.4 +1.6**
ECH Echery 67.27 45 P **P** **22 19 20.0 +0.5**
SENIN Lac Senin/Sane 67.50 47 P **P** **22 19 21.6 +0.3**
SENIN IAmb IAmb 22 19 23.9
comp=Z,4.5nm,0.9s
TORD Torodi Ar. Bea 68.40 83 P **P** **22 19 27.4 +0.2**
comp=Z,5.5nm,0.4s,baz=290,slow=6.6,SNR=1.2
comp=Z,2.5nm,0.4s
DAVA Damuels 69.18 46 *e*P **P** **22 19 33.2 +1.6**
comp=Z,1.2nm,0.6s
RETA Reutte 69.75 45 *e*P **P** **22 19 36.4 +1.3**
comp=Z,2.9nm,1.1s
FETA Feichten 69.78 46 *e*P **P** **22 19 37.1 +1.7**
comp=Z,5.5nm,1.2s
MOTA Moosalm 70.00 46 *e*P **P** **22 19 37.8 +1.1**
comp=Z,2.4nm,0.8s
SQTA Sankt Quirin 70.09 46 *e*P **P** **22 19 38.4 +1.2**
comp=Z,1.6nm,0.6s
WATA Walderalm 70.32 46 *e*P **P** **22 19 40.5 +1.8**
comp=Z,2.2nm,0.5s
KEST Kesra 70.36 58 P **P** **22 19 40.6 +1.6**
comp=Z,5.7nm,0.8s,baz=81,slow=1.0,SNR=7.8
comp=Z,5.7nm,0.8s
KEST Kea 70.36 58 IAmb IAmb 22 19 41.5
comp=Z,7.6nm,0.9s
CIMO Cimolais 71.04 47 P **P** **22 19 43.8 +0.8**
CIMO IAmb IAmb 22 19 44.9
comp=Z,4.0nm,1.0s
BSD Bornholm Skovb 71.46 37 *i* P P 22 19 33.0 -12
BSD *i* S S 22 19 48.6 -549
GERES GERESS Array B 71.53 44 P **P** **22 19 46.7 +0.8**
comp=Z,1.6nm,0.9s,baz=246,slow=5.6,SNR=9.5
comp=Z,1.6nm,0.9s
GERES GERESS Array B 71.53 44 P **P** **22 19 46.3 +0.4**
KBA Koelnbreinsper 71.55 46 *e*P **P** **22 19 47.5 +1.4**
comp=Z,2.3nm,1.0s
OBKA Obir 72.45 46 *e*P **P** **22 19 52.1 +0.6**
comp=Z,3.9nm,0.9s
SOKA Soboth 72.76 46 *e*P **P** **22 19 51.3 -1.9**
comp=Z,2.5nm,1.2s
CONA Conrad Observa 73.10 44 *e*P **P** **22 19 54.8 -0.5**
comp=Z,0.8nm,0.6s
RONA Rosalia, Austr 73.43 45 *e*P **P** **22 19 58.9 +1.7**
comp=Z,5.2nm,1.3s
ARCES ARCESS Array B 74.04 21 P **P** **22 20 00.6 +0.3**
comp=Z,4.3nm,0.9s,baz=305,slow=4.3,SNR=6.6
comp=Z,4.3nm,0.9s
FINES FINESS Array B 76.10 30 P **P** **22 20 13.1 +0.9**
comp=Z,1.7nm,0.7s,baz=264,slow=5.6,SNR=6.9
comp=Z,1.7nm,0.7s
BURAR Bucovina Array 79.31 43 P **P** **22 20 31.3 +0.8**
NIKH Nikolski High 80.33 323 P **P** **22 20 36.5 +0.8**
baz=71
MLR Muntele Rosu 80.41 45 P **P** **22 20 37.1 +0.6**
MLR IAmb IAmb 22 20 39.8
comp=Z,5.9nm,0.8s
OPA Opana 81.67 290 P **P** **22 20 43.2 -0.2**
BRTR Keskin Array B 87.73 49 P **P** **22 21 14.5 +0.7**
comp=Z,1.6nm,0.8s,baz=218,slow=2.9,SNR=7.2
comp=Z,1.6nm,0.8s
PZH PanZhiHua 133.88 11 PKP **PKPdf** **22 27 42.0 -0.1**
WRA Warramunga Arr 157.37 264 PKPab **PKPab** **22 28 53.3 +0.6**
comp=Z,3.3nm,0.6s,baz=89,slow=3.2,SNR=1.2
ASAR Alice Springs 157.61 254 PKPab **PKPab** **22 28 56.3 +2.5**
comp=Z,0.5nm,0.9s,baz=103,slow=4.0,SNR=3.4

ROM 26 22:13:35.4±0.0, 42°34'N±0'.002×13°16'E±0'.004, h10km, ML2.0/24, 21C-2D, Error ellipse: s-maj=0.3km s-min=0.1km az=252.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.12**	**323**	⇑P	Pg	22 13 38.8	+0.3
NRCA				S	Sg	22 13 40.9	+0.3
NRCA				AML	AML		
	comp=E,1780μm,0.6s						
NRCA				AML	AML		
	comp=N,1475μm,0.1s						
NRCA				AML	AML		
	comp=E,1780μm,1.4s						
T1243	**Rocca Santa Ma**	**0.18**	**102**	⇑P	Pg	22 13 39.8	+0.6
T1243				S	Sg	22 13 42.8	+0.9
T1243				AML	AML		
	comp=E,3925μm,0.2s						
T1243				AML	AML		
	comp=N,3885μm,0.8s						
T1243				AML	AML		
	comp=E,3925μm,0.2s						
T1243				AML	AML		
	comp=N,3970μm,0.8s						
T1243				AML	AML		
	comp=N,5405μm,0.2s						
T1243				AML	AML		
	comp=E,7210μm,0.2s						
T1243				AML	AML		
	comp=N,5405μm,0.2s						
T1243				AML	AML		
	comp=N,5380μm,0.2s						
T1243				AML	AML		
	comp=E,7215μm,0.2s						
T1243				AML	AML		
	comp=E,7230μm,0.2s						
MC2	**Monte Cornacci**	**0.18**	**354**	⇑P	Pg	22 13 39.9	+0.6
MC2				S	Sg	22 13 43.2	+1.1
MC2				AML	AML		
	comp=E,490μm,0.6s						
MC2				AML	AML		
	comp=N,510μm,0.7s						
LNSS	**Leonessa**	**0.18**	**225**	⇑P	Pg	22 13 40.0	+0.7
LNSS				S	Sg	22 13 43.5	+1.4
LNSS				AML	AML		
	comp=N,1325μm,0.4s						
LNSS				AML	AML		
	comp=E,1033μm,0.3s						
LNSS				AML	AML		
	comp=E,1032μm,0.3s						
LNSS				AML	AML		
	comp=N,1320μm,0.4s						
LNSS				AML	AML		
	comp=E,1033μm,1.7s						
MMO1	**Montemonaco**	**0.18**	**26**	⇑P	Pg	22 13 39.9	+0.6
MMO1				S	Sg	22 13 43.3	+1.1
MMO1				AML	AML		
	comp=N,518μm,0.3s						
MMO1				AML	AML		
	comp=E,493μm,0.7s						
MMO1				AML	AML		
	comp=N,658μm,0.3s						
MMO1				AML	AML		
	comp=E,493μm,1.3s						
MMO1				AML	AML		
	comp=N,658μm,1.7s						
RM33	**Pellescritta (**	**0.23**	**180**	⇑P	Pg	22 13 40.8	+0.7
RM33				S	Sg	22 13 44.8	+1.5
RM33				AML	AML		
	comp=E,527μm,0.6s						
RM33				AML	AML		
	comp=N,645μm,0.2s						
RM33				AML	AML		
	comp=E,549μm,0.6s						
RM33				AML	AML		
	comp=N,634μm,0.2s						
RM33				AML	AML		
	comp=N,1980μm,0.3s						
RM33				AML	AML		
	comp=E,2020μm,0.2s						
RM33				AML	AML		
	comp=N,1975μm,0.3s						
RM33				AML	AML		
	comp=E,2010μm,0.2s						
RM33				AML	AML		
	comp=E,2025μm,0.2s						
RM33				AML	AML		
	comp=N,2010μm,0.3s						
CAMP	**Campotosto**	**0.24**	**144**	⇑P	Pg	22 13 41.1	+0.6
CAMP				S	Sg	22 13 45.0	+1.2
CAMP				AML	AML		
	comp=E,314μm,0.4s						
CAMP				AML	AML		
	comp=N,218μm,0.4s						
CAMP				AML	AML		
	comp=N,219μm,0.4s						
CAMP				AML	AML		
	comp=E,314μm,0.4s						
TERO	**Teramo**	**0.31**	**111**	⇑P	Pg	22 13 42.1	+0.5
TERO				S	Sb	22 13 47.2	-1.0
TERO				AML	AML		
	comp=N,638μm,1.4s						
TERO				AML	AML		
	comp=E,860μm,0.1s						
TERO				AML	AML		
	comp=N,638μm,0.6s						
FDMO	**Fiordimonte**	**0.32**	**343**	⇑P	Pg	22 13 42.2	+0.4
FDMO				S	Sb	22 13 47.5	-1.0
FDMO				AML	AML		
	comp=N,136μm,0.2s						
FDMO				AML	AML		
	comp=E,124μm,0.2s						
GUMA	**Gualdo di Mace**	**0.34**	**15**	P	Pb	22 13 43.1	-0.5
GUMA				AML	AML		
	comp=E,2165μm,0.3s						
GUMA				AML	AML		
	comp=N,1305μm,0.7s						
GUMA				AML	AML		
	comp=N,1465μm,0.3s						
GUMA				AML	AML		
	comp=E,2600μm,0.3s						
GUMA				AML	AML		
	comp=E,2165μm,0.3s						
GUMA				AML	AML		
	comp=N,1305μm,1.3s						
CESI	**CESI - Serrava**	**0.35**	**320**	⇑P	Pg	22 13 42.9	+0.5
CESI				S	Sb	22 13 48.4	-1.1
CESI				AML	AML		
	comp=N,236μm,0.3s						
CESI				AML	AML		
	comp=E,214μm,0.4s						
CESI				AML	AML		
	comp=N,237μm,0.3s						
CSP1	**Cessapalombo**	**0.36**	**359**	⇑P	Pg	22 13 43.0	+0.5
CSP1				S	Sb	22 13 49.1	-0.6
ARRO	**Arrone**	**0.37**	**245**	⇑P	Pg	22 13 43.1	+0.4
ARRO				AML	AML		
	comp=N,140μm,0.6s						
ARRO				AML	AML		
	comp=E,128μm,0.2s						
ARRO				AML	AML		
	comp=N,140μm,0.6s						
GIGS	**Gran Sasso**	**0.39**	**137**	⇑P	Pg	22 13 43.6	+0.6
GIGS				S	Sb	22 13 50.0	-0.4
GIGS				AML	AML		
	comp=E,38μm,0.1s						
GIGS				AML	AML		
	comp=N,32μm,0.5s						
GIGS				AML	AML		
	comp=E,120μm,1.3s						
GIGS				AML	AML		
	comp=N,94μm,0.1s						
GIGS				AML	AML		
	comp=E,120μm,0.7s						
GIGS				AML	AML		
	comp=N,95μm,0.1s						
OFFI	**Offida**	**0.40**	**60**	⇑P	Pb	22 13 44.7	+0.1
OFFI				AML	AML		
	comp=E,920μm,0.4s						
OFFI				AML	AML		
	comp=N,578μm,0.5s						
FIAM	**Fiamignano**	**0.47**	**189**	⇑P	Pg	22 13 44.9	+0.3
FIAM				AML	AML		
	comp=E,175μm,0.4s						
FIAM				AML	AML		
	comp=N,216μm,0.7s						
CESX	**Cesi**	**0.48**	**255**	⇓P	Pg	22 13 45.4	+0.6
CESX				AML	AML		
	comp=N,69μm,1.0s						
CESX				AML	AML		
	comp=N,75μm,0.2s						
CESX				AML	AML		
	comp=E,89μm,0.5s						
ASSB	**Assisi San Ben**	**0.51**	**307**	⇓P	Pg	22 13 45.8	+0.4
ASSB				AML	AML		
	comp=E,97μm,0.6s						
ASSB				AML	AML		
	comp=N,86μm,1.2s						
ASSB				AML	AML		
	comp=N,86μm,1.2s						
ASSB				AML	AML		
	comp=E,97μm,1.4s						
ASSB				AML	AML		
	comp=N,86μm,0.8s						
FAGN	**Fagnano**	**0.54**	**150**	⇑P	Pb	22 13 47.2	+0.2
FAGN				AML	AML		
	comp=E,494μm,0.3s						
FAGN				AML	AML		
	comp=N,334μm,0.3s						
FAGN				AML	AML		
	comp=E,494μm,1.7s						
VCEL	**Villa Celiera**	**0.57**	**126**	P	Pg	22 13 46.7	+0.1
VCEL				AML	AML		
	comp=E,275μm,0.4s						
VCEL				AML	AML		
	comp=N,259μm,0.2s						
VCEL				AML	AML		
	comp=E,274μm,0.4s						
EL6	**Elcito**	**0.60**	**352**	⇑P	Pg	22 13 47.4	+0.3
ATCC	**AVT- Casa Cast**	**0.62**	**317**	⇑P	Pg	22 13 47.7	+0.3
ATCC				AML	AML		
	comp=N,48μm,1.0s						
ATCC				AML	AML		
	comp=N,48μm,1.0s						
ATCC				AML	AML		
	comp=E,53μm,0.4s						
CING	**Cingoli**	**0.64**	**359**	⇑P	Pb	22 13 48.4	-0.3
CING				AML	AML		
	comp=E,84μm,0.5s						
CING				AML	AML		
	comp=N,60μm,0.5s						
CING				AML	AML		
	comp=N,61μm,0.5s						
T0110	**Collepietro**	**0.66**	**140**	⇑P	Pb	22 13 48.9	-0.2
T0110				AML	AML		
	comp=E,284μm,0.6s						
T0110				AML	AML		
	comp=N,300μm,0.4s						
T0110				AML	AML		
	comp=E,284μm,0.6s						

T0110				AML	AML			
	comp=N,300µm,1.6s							
T0110				AML	AML			
	comp=E,284µm,1.4s							
ARVD	**Arcevia**	**0.79**	**345**	⇑P	Pg	22 13 50.8	+0.2	
ARVD				S	Sn	22 14 04.0	-0.5	
ARVD				AML	AML			
	comp=N,21µm,1.1s							
ARVD				AML	AML			
	comp=E,19µm,0.2s							
ARVD				AML	AML			
	comp=N,21µm,0.9s							
ATFO	**Monte Foce - G**	**0.79**	**323**	P	Pb	22 13 51.3	+0.1	
ATFO				AML	AML			
	comp=N,21µm,1.1s							
ATFO				AML	AML			
	comp=E,24µm,1.4s							
ATFO				AML	AML			
	comp=N,22µm,0.6s							
ATFO				AML	AML			
	comp=E,24µm,0.3s							
ATFO				AML	AML			
	comp=N,21µm,0.9s							
PIEI	**Pieia**	**0.94**	**328**	P	Pb	22 13 54.3	+0.4	
PIEI				AML	AML			
	comp=E,17µm,1.0s							
PIEI				AML	AML			
	comp=N,18µm,0.8s							
VIVA	**Pratoni del Vi**	**1.04**	**199**	S	Sg	22 14 07.0	-1.8	
TOLF	**Tolfa**	**1.12**	**234**	P	Pn	22 13 57.3	+0.1	

*ROM **26** 22:14:17.1±0.1, 42°628**N**±0.′004×13°319**E**±0.′005, h9km, ML1.9/17, 7C-1D, Error ellipse: s-maj=0.3km s-min=0.3km az=40.0, Central Italy*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.11**	**144**	P	Pg	22 14 20.4	+0.6
CAMP				S	Sg	22 14 22.4	+0.7
CAMP				AML	AML		
	comp=E,314µm,0.4s						
CAMP				AML	AML		
	comp=N,218µm,0.4s						
CAMP				AML	AML		
	comp=N,219µm,0.4s						
CAMP				AML	AML		
	comp=E,314µm,0.4s						
T1243	**Rocca Santa Ma**	**0.12**	**54**	P	Pg	22 14 20.5	+0.6
T1243				S	Sg	22 14 22.8	+1.0
RM33	**Pellescritta (**	**0.14**	**213**	⇑P	Pg	22 14 21.0	+0.7
RM33				S	Sg	22 14 23.4	+1.0
RM33				AML	AML		
	comp=E,2010µm,0.2s						
RM33				AML	AML		
	comp=N,2015µm,0.3s						
RM33				AML	AML		
	comp=E,2020µm,0.2s						
RM33				AML	AML		
	comp=N,1975µm,0.3s						
RM33				AML	AML		
	comp=N,1980µm,0.3s						
RM33				AML	AML		
	comp=E,2025µm,0.2s						
LNSS	**Leonessa**	**0.21**	**263**	⇑P	Pg	22 14 22.1	+0.8
LNSS				S	Sg	22 14 25.7	+1.4
LNSS				AML	AML		
	comp=E,533µm,0.2s						
LNSS				AML	AML		
	comp=N,445µm,0.7s						
LNSS				AML	AML		
	comp=N,445µm,1.3s						
TERO	**Teramo**	**0.21**	**91**	P	Pg	22 14 21.9	+0.5
TERO				S	Sg	22 14 25.2	+0.9
TERO				AML	AML		
	comp=E,860µm,0.1s						
TERO				AML	AML		
	comp=N,638µm,1.4s						
NRCA	**Norcia**	**0.26**	**324**	P	Pb	22 14 23.1	-0.8
NRCA				S	Sb	22 14 27.1	-1.4
NRCA				AML	AML		
	comp=E,919µm,0.2s						
NRCA				AML	AML		
	comp=N,424µm,1.5s						
NRCA				AML	AML		
	comp=N,424µm,0.5s						
GIGS	**Gran Sasso**	**0.26**	**134**	P	Pg	22 14 22.7	+0.4
GIGS				S	Sg	22 14 26.6	+0.9
GIGS				AML	AML		
	comp=N,94µm,0.1s						
GIGS				AML	AML		
	comp=E,120µm,1.3s						
GIGS				AML	AML		
	comp=N,94µm,0.1s						
GIGS				AML	AML		
	comp=E,120µm,0.7s						
GIGS				AML	AML		
	comp=N,95µm,0.1s						
MMO1	**Montemonaco**	**0.27**	**1**	P	Pg	22 14 23.3	+0.7
MMO1				S	Sb	22 14 27.8	-1.2
MMO1				AML	AML		
	comp=N,658µm,0.3s						
MMO1				AML	AML		
	comp=E,334µm,0.4s						
MMO1				AML	AML		
	comp=N,658µm,1.7s						
MC2	**Monte Cornacci**	**0.30**	**342**	P	Pg	22 14 23.9	+0.7
MC2				S	Sb	22 14 28.9	-1.1
FIAM	**Fiamignano**	**0.39**	**203**	P	Pg	22 14 25.3	+0.5
FIAM				S	Sg	22 14 31.1	+1.2
FIAM				AML	AML		
	comp=N,216µm,0.7s						
FIAM				AML	AML		
	comp=E,175µm,0.4s						
OFFI	**Offida**	**0.41**	**41**	P	Pb	22 14 26.5	0.0
OFFI				AML	AML		
	comp=E,920µm,0.4s						
OFFI				AML	AML		
	comp=N,578µm,0.5s						
ARRO	**Arrone**	**0.41**	**263**	⇑P	Pg	22 14 25.5	+0.4
ARRO				S	Sb	22 14 32.0	-0.9
ARRO				AML	AML		
	comp=N,81µm,0.5s						
ARRO				AML	AML		
	comp=E,92µm,0.2s						
FAGN	**Fagnano**	**0.41**	**151**	P	Pb	22 14 26.5	-0.1
FAGN				S	Sb	22 14 32.4	-0.6
FAGN				AML	AML		
	comp=E,493µm,0.3s						
FAGN				AML	AML		
	comp=N,334µm,0.3s						
FAGN				AML	AML		
	comp=E,494µm,0.3s						
FAGN				AML	AML		
	comp=E,494µm,1.7s						
GUMA	**Gualdo di Mace**	**0.43**	**2**	⇑P	Pb	22 14 26.5	-0.5
GUMA				AML	AML		
	comp=E,370µm,0.4s						
GUMA				AML	AML		
	comp=N,437µm,0.5s						
FDMO	**Fiordimonte**	**0.44**	**337**	⇑P	Pg	22 14 26.3	+0.5
FDMO				AML	AML		
	comp=N,88µm,0.3s						
FDMO				AML	AML		
	comp=E,72µm,0.2s						
FDMO				AML	AML		
	comp=E,72µm,1.8s						
FDMO				AML	AML		
	comp=N,88µm,1.7s						
VCEL	**Villa Celiera**	**0.45**	**121**	P	Pg	22 14 26.6	+0.7
VCEL				S	Sb	22 14 34.1	-0.1
VCEL				AML	AML		
	comp=E,275µm,0.4s						
VCEL				AML	AML		
	comp=N,259µm,0.2s						
VCEL				AML	AML		
	comp=E,274µm,0.4s						
CSP1	**Cessapalombo**	**0.47**	**350**	⇓P	Pg	22 14 26.8	+0.5
CSP1				AML	AML		
	comp=N,150µm,0.8s						
CSP1				AML	AML		
	comp=E,116µm,1.2s						
CSP1				AML	AML		
	comp=E,116µm,0.8s						
TRTR	**Tortoreto Alta**	**0.47**	**67**	P	Pb	22 14 28.1	+0.4
CESI	**CESI - Serrava**	**0.48**	**321**	⇑P	Pg	22 14 27.1	+0.6
CESI				AML	AML		
	comp=N,110µm,0.2s						
CESI				AML	AML		
	comp=N,110µm,0.2s						
CESI				AML	AML		
	comp=E,78µm,1.5s						
T0110	**Collepietro**	**0.53**	**140**	P	Pg	22 14 27.7	+0.4
T0110				S	Sb	22 14 35.6	-0.7
T0110				AML	AML		
	comp=E,284µm,0.6s						
T0110				AML	AML		
	comp=N,300µm,0.4s						
T0110				AML	AML		
	comp=E,284µm,0.6s						
T0110				AML	AML		
	comp=E,284µm,1.4s						
T0110				AML	AML		
	comp=N,300µm,1.6s						
SRES	**S.Oreste - Sor**	**0.71**	**237**	S	Sn	22 14 44.0	-0.6
CING	**Cingoli**	**0.75**	**353**	⇑P	Pg	22 14 31.9	+0.4
CING				AML	AML		
	comp=E,75µm,0.2s						
CING				AML	AML		
	comp=N,54µm,0.3s						
RMP	**Rome, Mte Porz**	**0.94**	**210**	S	Sg	22 14 47.0	-0.2

*IDC **26** 22:34:23.9±2.8, 60.′23S×33.′11W, h0km, mb5.0/1, mbtmp5.0/1, MS3.4/7, Error ellipse: s-maj=164.3km s-min=89.0km az=155.0*
ISC 26 22:34:23.6±2.2, 60.′7S±0.′3×32.′9W±0.′6, h10km, n17, σ0§49/5, MS3.3/6, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**14.75**	**241**	LR	LR	22 42 00.7	
	comp=Z,78nm,19.2s,baz=25,slow=31						
SNAA	**Sanae**	**16.08**	**145**	P	**Pn**	**22 38 09.1**	**-0.4**
TROLL	**Troll, Antarti**	**17.75**	**144**	P	**Pn**	**22 38 31.1**	**+0.5**
PLCA	**Paso Flores**	**30.51**	**294**	LR	LR	22 51 22.1	
	comp=Z,119nm,18.1s,baz=165,slow=34						
CPUP	**Villa Florida**	**38.23**	**323**	LR	LR	22 59 02.8	
	comp=Z,32nm,18.2s,baz=194,slow=39						
LVC	**Limon Verde**	**45.58**	**310**	LR	LR	23 00 15.8	
	comp=Z,26nm,20.6s,baz=186,slow=34						
SIV	**San Ignacio**	**49.10**	**323**	LR	LR	23 06 51.3	
	comp=Z,35nm,18.1s,baz=114,slow=40						
LPAZ	**La Paz**	**51.10**	**315**	LR	LR	23 05 11.8	
	comp=Z,19nm,19.6s,baz=152,slow=36						
LBTB	**Lobatse**	**53.17**	**75**	LR	LR	23 02 34.3	
	comp=Z,92nm,18.1s,baz=132,slow=32						
H10S2	**ASCENSION HYDR**	**53.43**	**23**	T	T	23 41 22.6	
	baz=190,slow=74,SNR=9.3						
H10S3	**ASCENSION HYDR**	**53.44**	**23**	T	T	23 41 24.5	
	baz=30,slow=74,SNR=18						
H10N1	**ASCENSION HYDR**	**54.55**	**23**	T	T	23 42 48.2	
	baz=190,slow=75,SNR=16						
H10N3	**ASCENSION HYDR**	**54.55**	**23**	T	T	23 42 50.6	
	baz=190,slow=75,SNR=22						
H10N2	**ASCENSION HYDR**	**54.57**	**23**	T	T	23 42 52.2	
	baz=190,slow=75,SNR=25						
TORD	**Torodi Ar. Bea**	**78.62**	**34**	P	**P**	**22 46 25.5**	**+0.1**
	4.5nn,0.3s,baz=197,slow=6.8,SNR=1.6 4.5nn,0.3s						
ZALV	**Zalesovo Beam**	**146.87**	**73**	PKPbc	**PKPab**	**22 54 05.9**	**-0.3**
	0.4nn,0.4s,baz=250,slow=2.9,SNR=2.7						
ILAR	**Eielson Array**	**150.78**	**307**	PKPbc	**PKiKP**	**22 54 15.1**	**0.0**
	0.7nn,1.0s,baz=126,slow=1.6,SNR=2.4						

*DSN **26** 22:40:14.1±2.0, 29.′26N×50.′68E, h10km, ML3.3/10, Error ellipse: s-maj=26.5km s-min=12.3km az=3.0*
*OMAN **26** 22:40:16.2±0.2, 28.′96N×50.′53E, h8km, mb4.7/6, Error ellipse: s-maj=4.8km s-min=2.2km az=7.0*
ISC 26 22:40:12.5±3.6, 29.′3N±0.′2×50.′55E±0.′08, h10km, n23, σ1§16/35, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHME	**Shamm**	**5.93**	**122**	P	**Pn**	**22 41 39.5**	**-0.9**
NAZ	**Nazwa, Dubai**	**6.27**	**132**	P	**Pn**	**22 41 46.2**	**+1.1**
NAZ	**Nazwa, Dubai**	**6.27**	**132**	P	**Pn**	**22 41 45.6**	**+0.5**
ASUD	**Al Ashush, Dub**	**6.33**	**137**	P	**Pn**	**22 41 47.8**	**+2.0**
	SNR=32						
ASUD				S	**Sn**	**22 42 58.1**	**-0.1**
ASUD	**Al Ashush, Dub**	**6.33**	**137**	*i* P	**Pn**	**22 41 47.0**	**+1.2**
	SNR=32						
FAQ	**Al Faqa, Dubai**	**6.40**	**134**	P	**Pn**	**22 41 48.2**	**+1.4**
FAQ				S	**Sn**	**22 43 00.2**	**+0.2**
FAQ	**Al Faqa, Dubai**	**6.40**	**134**	P	**Pn**	**22 41 46.9**	**0.0**
UOSS	**Minazif**	**6.66**	**130**	P	**Pn**	**22 41 52.1**	**+1.6**
UOSS				S	**Sn**	**22 43 05.9**	**-0.5**
UOSS	**Minazif**	**6.66**	**130**	P	**Pn**	**22 41 50.6**	**+0.2**
HATD	**Hatta, Dubai**	**6.69**	**131**	P	**Pn**	**22 41 52.0**	**+1.1**
HATD				S	**Sn**	**22 43 06.7**	**-0.5**
HATD	**Hatta, Dubai**	**6.69**	**131**	P	**Pn**	**22 41 50.6**	**-0.3**
ASHO	**Ashiyiah**	**6.74**	**132**	P	**Pn**	**22 41 53.0**	**+1.4**
	SNR=10						
ASHO				S	**Sn**	**22 43 07.8**	**-0.6**
ASHO	**Ashiyiah**	**6.74**	**132**	*i* P	**Pn**	**22 41 51.7**	**+0.1**
	SNR=10.0						
ASHO				S	**Sn**	**22 43 07.0**	**-1.5**
MZR	**Muzera**	**6.82**	**157**	P	**Pn**	**22 41 55.3**	**+2.7**
	SNR=8.3						
MZR	**Muzera**	**6.82**	**157**	*i* P	**Pn**	**22 41 54.6**	**+2.0**
	SNR=11						
ALNE	**Al Ain**	**7.01**	**137**	P	**Pn**	**22 41 56.7**	**+1.5**
	SNR=8.6						
ALNE				S	**Sn**	**22 43 15.8**	**+0.8**
ALNE	**Al Ain**	**7.01**	**137**	*i* P	**Pn**	**22 41 56.5**	**+1.2**
	SNR=8.5						
RAYN	**Ar Rayn**	**7.34**	**219**	P	**Pn**	**22 41 59.3**	**-0.5**
RAYN				S	**Sn**	**22 43 21.9**	**-1.3**
RAYN	**Ar Rayn**	**7.34**	**219**	*i* P	**Pn**	**22 41 58.8**	**-1.0**
	SNR=6.2						
ARQ	**Araqi**	**8.01**	**137**	P	**Pn**	**22 42 09.0**	**0.0**
	SNR=51						
ARQ				S	**Sn**	**22 43 39.8**	**+0.1**
HOQ	**Hoqain**	**8.32**	**132**	P	**Pn**	**22 42 13.3**	**-0.1**
HOQ				S	**Sn**	**22 43 46.1**	**-1.3**
BSY	**Bisya**	**8.86**	**136**	P	**Pn**	**22 42 21.2**	**+0.4**
BSY				S	**Sn**	**22 43 58.8**	**-1.9**
SMDO	**Samad**	**9.17**	**131**	P	**Pn**	**22 42 25.6**	**+0.6**
SMDO				S	**Sn**	**22 44 08.6**	**+0.1**

*IDC **26** 23:11:24.3±0.7, 63.′66N×148.′52W, h0km, mb4.0/17, mbtmp3.9/19, ML3.6/2, MS3.0/2, Error ellipse: s-maj=14.9km s-min=14.0km az=97.0*
*ANF **26** 23:11:24.8±0.1, 63.′56N×148.′02W, h0km, ML4.2/82, ML4.2/81, Error ellipse: s-maj=1.4km s-min=1.1km az=93.0*
*AEIC **26** 23:11:25.5±1.8, 63.′56N±0.′01×148.′00W±0.′03, h2km±5km, ML3.8/144, ML4.0/176(NEIC), Mwr3.7/95(NEIC), Error ellipse: s-maj=2.0km s-min=1.9km az=91.0*
*NEIC **26** 23:11:25, 63.′56N×148.′00W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr4.34; Mθθ-4.21; Mϕϕ-0.14; Mrθ1.51; Mϕθ-1.75; Mϕr1.14; Fault plane solution: M0 4.99000×10^14^ NP1:ϕs257.23000°, δ34.71000°, λ102.05000°. NP2:ϕs62.67000°, δ56.16000°, λ81.77000°. Principal axes: T 4.7548, Plg77.0000°, Azm306.0000°; N 0.4499, Plg7.0000°, Azm67.0000°; P -5.2047, Plg11.0000°, Azm159.0000°;*
*NEIC **26** 23:11:25.7±1.9, 63.′55N±0.′01×148.′02W±0.′03, h6km±4km Error ellipse: s-maj=2.3km s-min=1.8km az=136.0*
ISC 26 23:11:25.7±1.0, 63.′56N±0.′01×148.′04W±0.′02, h9km±6km, n298, σ1§03/345, mb4.1/17, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RND	**Reindeer**	**0.40**	**248**	Pg	**Pg**	**23 11 33.7**	**+0.1**
RND				Sg	**Sg**	**23 11 38.1**	**-0.7**
MCK	**McKinley**	**0.44**	**294**	Pg	**Pg**	**23 11 34.6**	**+0.3**
MCK				Sg	**Sg**	**23 11 40.6**	**+0.6**
MCK	**McKinley**	**0.44**	**294**	P	**Pg**	**23 11 34.5**	**+0.3**
	baz=112,SNR=795						
MCK				S	**Sg**	**23 11 40.0**	**0.0**
	baz=112						
DHY	**Denali Highway**	**0.57**	**148**	Pg	**Pg**	**23 11 36.2**	**-0.6**
DHY				Sg	**Sg**	**23 11 43.8**	**-0.4**
DHY	**Denali Highway**	**0.57**	**148**	P	**Pg**	**23 11 36.2**	**-0.6**
	baz=330,SNR=1000						
DHY				S	**Sg**	**23 11 43.6**	**-0.7**
	baz=330						
WAT1	**Susitna Watana**	**0.77**	**198**		**Pg**	**23 11 39.6**	**-0.9**
WAT1	**Susitna Watana**	**0.77**	**198**	P	**Pg**	**23 11 39.7**	**-0.9**
	baz=18						
WAT1				S	**Sg**	**23 11 49.7**	**-0.8**
	baz=18						
WAT7	**Susitna Watana**	**0.82**	**207**		**Pg**	**23 11 40.5**	**-0.9**
WAT7					**Sg**	**23 11 51.4**	**-0.7**
BWN	**Browne**	**0.88**	**315**		**Pg**	**23 11 42.0**	**-0.7**
BWN				Sg	**Sn**	**23 11 57.2**	**-0.1**
WRH	**Wood River Hil**	**0.92**	**359**		**Pg**	**23 11 43.4**	**0.0**
WRH				Sg	**Sb**	**23 11 56.4**	**+0.3**
WRH				IAML		23 11 58.2	
	comp=E,6µm,0.7s						
WRH				IAML		23 11 58.6	
	comp=N,5µm,0.8s						
HDA	**Harding Lake**	**0.98**	**29**	Pg	**Pg**	**23 11 44.3**	**-0.2**
HDA					**Sb**	**23 11 58.1**	**+0.3**
HDA				IAML		23 11 60.0	
	comp=E,6µm,0.5s						
HDA	**Harding Lake**	**0.98**	**29**	P	**Pg**	**23 11 44.4**	**-0.2**
	baz=209,SNR=912						
HDA				S	**Sg**	**23 11 56.4**	**-0.8**
	baz=209						
HDA				S	**Sg**	**23 11 56.4**	**-0.8**
	baz=209						
WAT6	**Susitna Watana**	**0.99**	**172**		**Pg**	**23 11 43.5**	**-1.2**
WAT6	**Susitna Watana**	**0.99**	**172**	P	**Pg**	**23 11 43.6**	**-1.2**
	baz=353,SNR=757						
WAT6				S	**Sg**	**23 11 56.4**	**-1.2**
	baz=353						
TRF	**Thorofare Moun**	**1.02**	**265**		**Pg**	**23 11 44.6**	**-0.7**
TRF	**Thorofare Moun**	**1.02**	**265**		**Sg**	**23 11 58.2**	**-0.3**
TRF	**Thorofare Moun**	**1.02**	**265**	P	**Pg**	**23 11 44.6**	**-0.7**
	baz=83,SNR=200						
TRF				S	**Sg**	**23 11 57.9**	**-0.6**
	baz=83						
PS10	**TAPS Pump St10**	**1.03**	**97**		**Pg**	**23 11 44.7**	**-0.7**
PS10					**Sg**	**23 11 57.8**	**-0.9**
K24K	**Donnelly Dome**	**1.03**	**75**		**Pg**	**23 11 45.2**	**-0.4**
K24K	**Donnelly Dome**	**1.03**	**75**	P	**Pg**	**23 11 45.2**	**-0.4**
	baz=257,SNR=297						
K24K				S	**Sb**	**23 11 59.2**	**-0.4**
	baz=257						
PS09	**TAPS Pump Stn9**	**1.07**	**69**		**Pg**	**23 11 46.0**	**-0.3**
CCB	**Clear Creek Bu**	**1.10**	**5**		**Pg**	**23 11 46.0**	**-0.8**
CCB					**Sb**	**23 12 01.7**	**+0.4**
CCB				IAML		23 12 02.7	
	comp=E,2µm,0.9s						
PS08	**TAPS Pump Stn8**	**1.12**	**28**		**Pg**	**23 11 46.9**	**-0.3**
PS08					**Sg**	**23 12 01.2**	**-0.6**
NEA2	**Nenana**	**1.13**	**337**		**Pg**	**23 11 47.0**	**-0.4**
NEA2				Sg	**Sg**	**23 12 02.4**	**+0.2**
NEA2	**Nenana**	**1.13**	**337**	P	**Pg**	**23 11 47.1**	**-0.4**
	baz=155,SNR=1000						
NEA2				S	**Sg**	**23 12 02.1**	**-0.1**
	baz=155						
KTH	**Kantishna Hill**	**1.29**	**271**	Pg	**Pg**	**23 11 49.7**	**-0.8**
KTH				IAML		23 12 09.9	
	comp=E,2µm,1.3s						
KTH				IAML		23 12 10.2	
	comp=N,2µm,1.0s						
PAX	**Paxson**	**1.30**	**116**		**Pg**	**23 11 49.2**	**-1.5**
PAX	**Paxson**	**1.30**	**116**	P	**Pg**	**23 11 48.4**	**-2.3**
	baz=298,SNR=222						
PAX				S	**Sg**	**23 12 05.6**	**-2.0**
	baz=298						
IL31		**1.32**	**22**		**Pg**	**23 11 50.1**	**-0.9**
ILAR	**Eielson Array**	**1.32**	**22**	Pg	**Pg**	**23 11 49.7**	**-1.3**
	comp=N,113nm,0.3s,baz=204,slow=17,SNR=1336						
ILAR				Lg	Lg	23 12 07.8	
	comp=N,390nm,0.3s,baz=205,slow=27,SNR=118						
ILAR				LR	LR	23 12 19.4	
	comp=N,511nm,20.7s,baz=146,slow=42						
ILAR	**Eielson Array**	**1.32**	**22**		**Pg**	**23 11 49.9**	**-1.0**
TCOL	**CIGO, UAF Yank**	**1.32**	**3**		**Pg**	**23 11 50.2**	**-0.9**
TCOL	**CIGO, UAF Yank**	**1.32**	**3**	P	**Pg**	**23 11 50.2**	**-0.9**
	baz=183,SNR=121						
TCOL				S	**Sg**	**23 12 07.4**	**-0.8**
	baz=183						
COLA	**College**	**1.32**	**3**		**Pg**	**23 11 50.2**	**-0.9**
COLA	**College**	**1.32**	**3**	P	**Pg**	**23 11 50.1**	**-0.9**
	baz=183						
COLA				S	**Sg**	**23 12 07.3**	**-0.9**
	baz=183						
MDM	**Murphy Dome**	**1.41**	**357**		**Pn**	**23 11 51.4**	**-0.2**
MDM				IAML		23 12 13.7	
	comp=N,1µm,0.6s						
BPAW	**Bear Paw Mtn.**	**1.42**	**294**		**Pn**	**23 11 50.7**	**-1.0**
BPAW				IAML		23 12 11.8	
	comp=N,2µm,0.8s						
BPAW	**Bear Paw Mtn.**	**1.42**	**294**	P	**Pn**	**23 11 50.9**	**-0.8**
	baz=111,SNR=666						
BPAW				S	**Sg**	**23 12 09.7**	**-1.6**
	baz=111						
RIDG	**Independent Ri**	**1.43**	**81**		**Pn**	**23 11 51.7**	**-0.3**
RIDG				IAML		23 12 15.0	
	comp=E,2µm,0.6s						
RIDG				IAML		23 12 15.1	
	comp=N,3µm,0.6s						
RIDG	**Independent Ri**	**1.43**	**81**	P	**Pn**	**23 11 51.8**	**-0.3**
	baz=264,SNR=668						
RIDG				S	**Sn**	**23 12 11.7**	**+0.7**
	baz=264						
CUT	**Chulitna**	**1.54**	**222**		**Pn**	**23 11 53.6**	**+0.2**
CUT	**Chulitna**	**1.54**	**222**	P	**Pn**	**23 11 53.1**	**-0.3**
	baz=41,SNR=70						
CUT				S	**Sn**	**23 12 14.2**	**+0.6**
	baz=41						
J25K	**Salcha River,**	**1.58**	**47**		**Pn**	**23 11 53.7**	**-0.3**
J25K				IAML		23 12 17.4	
	comp=N,2µm,0.5s						
J25K				IAML		23 12 19.3	
	comp=E,2µm,0.6s						
J25K	**Salcha River,**	**1.58**	**47**	P	**Pn**	**23 11 53.6**	**-0.3**
	baz=229,SNR=590						
J25K				S	**Sb**	**23 12 15.5**	**+0.3**
	baz=229						
POKR	**Poker Plat Res**	**1.58**	**9**		**Pn**	**23 11 53.8**	**-0.2**
POKR				IAML		23 12 17.5	
	comp=N,1µm,0.5s						
POKR				IAML		23 12 19.5	
	comp=E,1µm,1.0s						
POKR	**Poker Plat Res**	**1.58**	**9**	P	**Pn**	**23 11 53.8**	**-0.2**
	baz=189,SNR=128						
POKR				S	**Sn**	**23 12 15.2**	**+0.6**
	baz=189						
M24K	**Tolsona, Glenn**	**1.69**	**149**		**Pn**	**23 11 56.0**	**+0.5**
M24K	**Tolsona, Glenn**	**1.69**	**149**	P	**Pn**	**23 11 56.3**	**+0.8**
	baz=331,SNR=385						
M24K				S	**Sb**	**23 12 18.7**	**+0.3**
	baz=331						
HARP	**HAARP**	**1.76**	**130**		**Pn**	**23 11 57.2**	**+0.9**
HARP	**HAARP**	**1.76**	**130**	P	**Pn**	**23 11 57.3**	**+0.9**
	baz=313,SNR=216						
HARP				S	**Sb**	**23 12 20.2**	**-0.1**
	baz=313						
PS07	**TAPS Pump Stn7**	**1.76**	**357**		**Pn**	**23 11 56.7**	**+0.3**
SCM	**Sheep Creek Mo**	**1.76**	**169**		**Pn**	**23 11 56.3**	**-0.3**
SCM				IAML		23 12 24.0	
	comp=N,2µm,0.8s						
SCM				IAML		23 12 25.1	
	comp=E,2µm,0.5s						
SCM	**Sheep Creek Mo**	**1.76**	**169**	P	**Pn**	**23 11 56.2**	**-0.3**
	baz=350,SNR=246						
SCM				S	**Sn**	**23 12 19.3**	**+0.2**
	baz=350						
SML	**Sawmill**	**1.77**	**185**		**Pn**	**23 11 55.9**	**-0.6**
SML				IAML		23 12 23.8	
	comp=N,2µm,0.9s						
SML	**Sawmill**	**1.77**	**185**	P	**Pn**	**23 11 55.6**	**-0.9**
	baz=4.8,SNR=796						
SML				S	**Sn**	**23 12 19.5**	**+0.3**
	baz=4.8						
DOT	**Dot Lake**	**1.78**	**85**		**Pn**	**23 11 56.6**	**-0.1**
M23K	**Glacier View**	**1.78**	**175**		**Pn**	**23 11 56.2**	**-0.5**
M23K	**Glacier View**	**1.78**	**175**	P	**Pn**	**23 11 56.0**	**-0.7**
	baz=356,SNR=534						
M23K				S	**Sn**	**23 12 19.4**	**0.0**
	baz=356						
CAST	**Castle Rocks**	**1.82**	**267**		**Pn**	**23 11 56.5**	**-0.8**
CAST	**Castle Rocks**	**1.82**	**267**	P	**Pn**	**23 11 56.2**	**-1.1**
	baz=84,SNR=179						
CAST				Sb	**Sb**	**23 12 23.3**	**+1.1**
	baz=84						

GHO Glory Hole Cre 1.84 193 Pn 23 11 57.1 -0.5
GHO IAML 23 12 28.6
comp=E,1µm,0.7s
GHO IAML 23 12 29.9
comp=N,1µm,0.7s
SCRK Sand Creek 1.85 75 Pn **Pn 23 11 57.5 -0.3**
SCRK IAML 23 12 25.6
comp=N,920nm,0.5s
SCRK IAML 23 12 25.6
comp=E,1µm,0.5s
SCRK Sand Creek 1.85 75 P **Pn 23 11 57.4 -0.3**
baz=258,SNR=386
SCRK S **Sn 23 12 22.3 +1.1**
baz=258
MLY Manley 1.89 323 Pn 23 11 57.9 -0.4
MLY Manley 1.89 323 P **Pn 23 11 57.9 -0.4**
baz=140,SNR=436
MLY S **Sn 23 12 20.9 -1.3**
baz=140
PS11 TAPS Pump St11 1.90 140 Pb 23 11 59.7 -0.8
CHUM Lake Minchumin 1.93 282 Pn 23 11 58.0 -0.8
CHUM Lake Minchumin 1.93 282 P **Pn 23 11 58.0 -0.8**
baz=98,SNR=250
CHUM Sb **Sb 23 12 26.4 +1.1**
baz=98
PPLA Purkeypile 2.00 252 Pn 23 12 00.9 +1.1
PPLA Purkeypile 2.00 252 P **Pn 23 12 00.2 +0.4**
baz=69,SNR=232
PPLA Sb **Sb 23 12 28.7 +1.5**
baz=69
PMR Palmer 2.04 195 Pn 23 11 59.8 -0.4
PMR Palmer 2.04 195 P **Pn 23 12 00.2 0.0**
baz=14,SNR=146
PMR S **Sn 23 12 26.4 +0.7**
baz=14
MENT Mentasta 2.05 106 Pn 23 12 01.5 +1.1
M22K Willow 2.05 209 Pn 23 12 00.1 -0.2
M22K Willow 2.05 209 P **Pn 23 12 00.2 -0.2**
baz=27,SNR=24
M22K S **Sn 23 12 27.7 +1.6**
baz=27
KNK Knik Glacier 2.16 185 Pn 23 12 02.2 +0.2
KNK IAML 23 12 32.3
comp=E,1µm,0.6s
KNK IAML 23 12 37.0
comp=N,1µm,0.7s
KNK Knik Glacier 2.16 185 P **Pn 23 12 01.9 -0.1**
baz=5.4,SNR=125
KNK S **Sn 23 12 30.5 +1.6**
baz=5.4
J26L Joseph Creek 2.18 62 Pn 23 12 02.0 -0.3
J26L IAML 23 12 34.7
comp=N,1µm,0.5s
J26L IAML 23 12 36.1
comp=E,755nm,0.5s
J26L Joseph Creek 2.18 62 P **Pn 23 12 02.5 +0.2**
baz=246,SNR=424
L26K Log Cabin Wild 2.18 102 Pb 23 12 06.3 +0.9
L26K Log Cabin Wild 2.18 102 P **Pn 23 12 02.7 +0.4**
baz=286,SNR=356
PRP Porcupine Dome 2.25 28 Pn 23 12 02.8 -0.4
PRP IAML 23 12 39.3
comp=E,988nm,0.5s
PRP IAML 23 12 44.1
comp=N,1µm,1.0s
PRP Porcupine Dome 2.25 28 P **Pn 23 12 03.4 +0.2**
baz=210,SNR=239
H24K Noodor Dome 2.29 2 Pn 23 12 03.9 +0.2
H24K IAML 23 12 43.6
comp=N,524nm,1.0s
H24K IAML 23 12 47.2
comp=E,652nm,1.4s
H24K Noodor Dome 2.29 2 P **Pn 23 12 04.1 +0.3**
baz=181,SNR=138
KLU Klutina 2.29 154 Pn 23 12 03.9 0.0
KLU IAML 23 12 38.6
comp=E,520nm,0.5s
KLU IAML 23 12 42.3
comp=N,802nm,0.6s
KLU Klutina 2.29 154 P **Pn 23 12 04.6 +0.8**
baz=336,SNR=193
I21K Tanana 2.36 315 Pn 23 12 04.4 -0.2
I21K Pg **Pg 23 12 11.3 +0.3**
I21K IAML 23 12 48.4
comp=N,663nm,1.0s
I21K IAML 23 12 48.6
comp=E,609nm,1.1s
I21K Tanana 2.36 315 P **Pn 23 12 04.5 -0.2**
baz=132,SNR=37
H23K Yukon River 2.37 345 Pn 23 12 05.0 +0.3
H23K Yukon River 2.37 345 P **Pn 23 12 05.0 +0.3**
baz=163,SNR=102
H23K S **Sn 23 12 34.4 +0.5**
baz=163
PS06 TAPS Pump Stn6 2.42 343 Pn 23 12 06.0 +0.5
N25K Chitina, Valde 2.52 139 Pn 23 12 08.1 +1.1
N25K Chitina, Valde 2.52 139 P **Pn 23 12 08.2 +1.2**
baz=323,SNR=124
M26K Nabesna, AK 2.58 115 Pn 23 12 08.5 +0.8
M26K IAML 23 12 47.4
comp=E,927nm,0.4s
M26K Nabesna, AK 2.58 115 P **Pn 23 12 08.7 +1.0**
baz=299,SNR=240
JPK Jack Peak 2.60 164 Pn 23 12 09.6 +1.5
RC01 Rabbit Creek A 2.60 199 Pn 23 12 08.5 +0.5
RC01 IAML 23 12 50.7
comp=E,926nm,0.8s
RC01 IAML 23 12 52.8
comp=N,523nm,0.6s
RC01 Rabbit Creek A 2.60 199 P **Pn 23 12 09.7 +1.7**
baz=17,SNR=107
VMT TAPS TI Valdez 2.60 162 Pn 23 12 09.9 +1.9
FIS Fire Island 2.63 204 Pn 23 12 07.6 -0.7
FIS IAML 23 13 02.7
comp=N,842nm,0.6s
DIV Divide 2.66 156 Pn 23 12 09.4 +0.6
K27K Chicken 2.69 77 Pn 23 12 08.9 -0.2
K27K IAML 23 12 53.1
comp=N,464nm,0.6s
PWL Port Wells 2.71 183 Pn 23 12 10.8 +1.2
PWL IAML 23 12 51.8
comp=N,770nm,0.6s
PWL IAML 23 12 54.0
comp=E,660nm,0.7s
PWL Port Wells 2.71 183 P **Pn 23 12 11.1 +1.5**
baz=3.1,SNR=44
K20K Telida 2.72 268 Pn **Pn 23 12 08.3 -1.3**
K20K Telida 2.72 268 P **Pn 23 12 08.4 -1.2**
baz=83,SNR=12
GLI Glacier Island 2.73 170 Pn 23 12 10.7 +1.0
GLI IAML 23 12 49.4
comp=N,769nm,0.8s
GLI Glacier Island 2.73 170 P **Pn 23 12 11.0 +1.3**
baz=351,SNR=64
H22K Ishtalitna Cre 2.75 330 Pn 23 12 10.2 +0.2
I26K Coal Creek Min 2.75 48 Pn **Pn 23 12 10.1 +0.1**
J20K Nowinta River 2.77 286 Pn 23 12 09.1 -1.2
J20K IAML 23 12 59.2
comp=E,422nm,0.9s
J20K IAML 23 13 01.9
comp=N,382nm,0.9s
J20K Nowinta River 2.77 286 P **Pn 23 12 09.5 -0.8**
baz=100,SNR=84
L27K Beaver Creek, 2.85 97 Pn 23 12 11.5 +0.1
L27K IAML 23 12 56.0
comp=N,470nm,0.7s
L27K IAML 23 12 59.0
comp=E,405nm,0.5s
L27K Beaver Creek, 2.85 97 P **Pn 23 12 11.4 +0.1**
baz=283,SNR=288
BC03 2.86 97 Pn 23 12 11.8 +0.2
BCAR Beaver Creek A 2.86 97 Pn **Pn 23 12 11.6 0.0**
L20K Farewell, AK 2.88 250 Pn 23 12 12.2 +0.4
L20K Farewell, AK 2.88 250 P **Pn 23 12 11.8 0.0**
baz=65,SNR=41
H25K Birch Creek 2.88 18 Pn 23 12 12.6 +0.9
H25K Birch Creek 2.88 18 P **Pn 23 12 12.6 +0.9**
baz=200,SNR=111
M20K Styx River 2.89 237 Pn 23 12 12.0 0.0
GLB Gilahina Butte 2.89 135 Pn **Pn 23 12 13.2 +1.2**
GLB IAML 23 12 59.6
comp=N,322nm,0.6s
FID Port Fidalgo 2.91 165 Pn 23 12 13.5 +1.3
FID IAML 23 13 01.8
comp=N,575nm,0.6s
FID IAML 23 13 03.4
comp=E,634nm,0.5s
SPCG Spurr Capps Gl 2.94 221 Pn 23 12 14.2 +1.5
H21K Melozitna Rive 2.94 318 Pn 23 12 11.9 -0.8
H21K IAML 23 13 05.9
comp=E,331nm,0.7s
H21K IAML 23 13 07.2
comp=N,337nm,0.8s
H21K Melozitna Rive 2.94 318 P **Pn 23 12 12.2 -0.4**
baz=133,SNR=62
SPCN Chakachatna No 3.04 221 Pn 23 12 16.4 +2.4
BMRM Bremner River 3.06 147 Pn **Pn 23 12 15.6 +1.4**
BMRM Bremner River 3.06 147 P **Pn 23 12 14.9 +0.6**
baz=330,SNR=79
M27K Edge Creek, AK 3.06 110 Pn 23 12 15.3 +0.9
M27K IAML 23 13 04.4
comp=E,471nm,0.6s
M27K IAML 23 13 06.5
comp=N,585nm,0.6s
M27K Edge Creek, AK 3.06 110 P **Pn 23 12 15.6 +1.2**
baz=296,SNR=206
SPCR Spurr Chakacha 3.06 221 P **Pn 23 12 15.5 +1.1**
baz=38,SNR=14
SPNN North Nagishla 3.09 227 Pn 23 12 16.0 +1.2
G24K Hadweenzic Riv 3.16 4 Pn 23 12 16.0 +0.3
G24K Hadweenzic Riv 3.16 4 P **Pn 23 12 15.9 +0.2**
baz=184,SNR=55
MCARA McCarthy VSAT 3.19 131 Pn 23 12 17.6 +1.5
MCARA IAML 23 13 15.9
comp=E,463nm,0.9s
MCARA McCarthy VSAT 3.19 131 P **Pn 23 12 17.8 +1.7**
baz=316,SNR=36
O22K Cooper Landing 3.19 195 Pn 23 12 16.7 +0.7
O22K Cooper Landing 3.19 195 Pb **Pb 23 12 21.8 -0.7**
baz=14,SNR=19
EYAK Cordova Ski Ar 3.21 159 Pn 23 12 17.5 +1.2
EYAK Cordova Ski Ar 3.21 159 P **Pn 23 12 17.5 +1.2**
baz=342,SNR=19
SLKM Skilak Lake 3.23 200 Pn 23 12 18.9 +2.2
FYU Fort Yukon 3.24 20 Pn **Pn 23 12 17.0 +0.3**
EGAK Eagle 3.25 65 Pn **Pn 23 12 16.8 -0.1**
EGAK Pg **Pb 23 12 25.5 +2.0**
EGAK IAML 23 13 26.6
comp=E,520nm,0.8s
EGAK Eagle 3.25 65 P **Pn 23 12 16.7 -0.1**
baz=251,SNR=24
HIN Hinchinbrook I 3.26 166 Pn 23 12 17.2 +0.2
HIN Pg **Pb 23 12 25.5 +1.9**
HIN IAML 23 13 09.9
comp=N,502nm,1.1s
G23K Bananza Creek 3.27 346 Pn 23 12 17.7 +0.4
G23K Bananza Creek 3.27 346 P **Pn 23 12 17.6 +0.4**
baz=164,SNR=60
M19K Big River Lodg 3.37 243 Pn 23 12 18.1 -0.4
M19K IAML 23 13 18.1
comp=E,199nm,0.6s
M19K IAML 23 13 18.1
comp=N,202nm,0.8s
M19K Big River Lodg 3.37 243 P **Pn 23 12 19.1 +0.7**
baz=58,SNR=16
L19K White Mountain 3.42 249 Pn 23 12 19.6 +0.4
L19K IAML 23 13 32.8
comp=E,259nm,1.1s
L19K White Mountain 3.42 249 P **Pn 23 12 18.5 -0.7**
baz=63,SNR=48
I27K Kandik River 3.44 51 Pn 23 12 20.1 +0.5
I27K Kandik River 3.44 51 P **Pn 23 12 19.8 +0.2**
baz=236,SNR=48
IM03 3.45 317 Pn 23 12 19.4 -0.2
IMAR Indian Mountai 3.45 317 Pn **Pn 23 12 19.4 -0.2**
BVCY Beaver Creek 3.47 106 P **Pn 23 12 20.2 +0.3**
baz=293,SNR=19
RAGM Ragged Mountai 3.56 152 Pb 23 12 29.9 +1.0
TTA Tatalina 3.66 264 Pn **Pn 23 12 22.7 +0.1**
TTA IAML 23 13 33.1
comp=N,162nm,0.8s
TTA Tatalina 3.66 264 P **Pn 23 12 22.2 -0.4**
baz=77,SNR=11
TT01 Tatalina 3.67 263 Pn 23 12 24.8 +2.1
HMT Hamilton 3.69 149 Pb 23 12 31.6 +0.5
DFR Drift River 3.69 218 Pn 23 12 25.4 +2.4
TGL Tana Glacier 3.73 137 Pn 23 12 23.5 0.0
TGL Pg **Pg 23 12 35.3 -1.7**
TGL IAML 23 13 23.3
comp=E,171nm,0.7s
TGL IAML 23 13 23.7
comp=N,221nm,0.9s
YUK2 White River 3.76 115 Pn 23 12 25.4 +1.4
G21K Allakaket 3.77 324 Pn 23 12 24.2 +0.2
G21K Allakaket 3.77 324 P **Pn 23 12 23.7 -0.2**
baz=139,SNR=36
BERG Berg Lake 3.78 145 Pn 23 12 23.9 -0.3
NCT North Crescent 3.79 220 Pn 23 12 26.9 +2.5
G26K Porcupine Rive 3.84 26 Pn 23 12 25.1 +0.1
G26K Porcupine Rive 3.84 26 P **Pn 23 12 25.1 +0.1**
baz=209,SNR=69
NICHA Nichawak Mount 3.85 148 Pn 23 12 27.6 +2.4
KHIT Khitrov Hills 3.86 142 Pn 23 12 27.7 +2.4
H27K Steamboat Moun 3.86 43 Pn 23 12 25.5 +0.3
H27K Steamboat Moun 3.86 43 P **Pn 23 12 25.2 -0.1**
baz=229,SNR=38
DAWY Dawson 3.87 79 Pn **Pn 23 12 25.4 0.0**
DAWY IAML 23 13 35.1
comp=N,300nm,0.8s
DAWY IAML 23 13 40.9
comp=E,216nm,0.6s
DAWY Dawson 3.87 79 P **Pn 23 12 25.4 0.0**
baz=266,SNR=24
WAX Waxell Ridge 3.96 140 Pn **Pn 23 12 26.8 +0.1**
WAX IAML 23 13 37.6
comp=E,281nm,1.0s
F24K Squaw Lake 3.98 1 Pn 23 12 27.6 +0.8
F24K Squaw Lake 3.98 1 P **Pn 23 12 27.8 +0.9**
baz=181,SNR=116
ISLE Juniper Island 4.00 135 Pn 23 12 28.1 +0.8
ISLE IAML 23 13 36.1
comp=E,172nm,1.1s
ISLE IAML 23 13 39.1
comp=N,226nm,1.0s
KAIM Kayak Island 4.03 153 Pn 23 12 27.7 +0.1
KAIM IAML 23 13 45.5
comp=N,200nm,1.2s
KAIM IAML 23 13 53.0
comp=E,169nm,1.8s
SUCK Suckling Hills 4.04 148 Pb 23 12 39.3 +2.3
SUCK IAML 23 13 41.5
comp=E,223nm,1.7s
BRLK Bradley Lake 4.04 201 Pn 23 12 30.6 +2.8
BRLK IAML 23 13 56.9
comp=E,114nm,0.4s
GCSA Galena City Sc 4.05 291 P Pn 23 12 27.5 -0.3
baz=103
CTG Chitna Glacier 4.07 127 P Pn 23 12 28.1 -0.2
baz=313,SNR=37
CTGM Chitina Glacie 4.07 127 Pn 23 12 27.8 -0.5
N19K Bonanza Creek 4.09 231 Pn 23 12 29.0 +0.5
N19K IAML 23 13 48.1
comp=N,146nm,0.8s
N19K Bonanza Creek 4.09 231 P **Pn 23 12 28.9 +0.4**
baz=45,SNR=11
BM03 Burnt Mountain 4.13 19 Pn 23 12 29.4 +0.5
BMAR Burnt Mountain 4.14 19 Pn **Pn 23 12 29.4 +0.3**
BM01 Burnt Mountain 4.17 19 Pn 23 12 29.7 +0.2
F25K Christian Rive 4.17 13 Pn 23 12 30.0 +0.5
F25K Christian Rive 4.17 13 P **Pn 23 12 30.0 +0.5**
baz=195,SNR=51
SNH Sunshine Point 4.19 142 Pn 23 12 30.2 +0.4
SNH IAML 23 13 45.8
comp=E,186nm,1.0s
SNH IAML 23 13 49.6
comp=N,155nm,1.3s
G27K Doyon Strip 4.23 37 Pn 23 12 30.3 0.0
G27K Doyon Strip 4.23 37 P **Pn 23 12 30.3 0.0**
baz=222,SNR=48
IVE Iliamna Volcan 4.27 216 Pn 23 12 32.8 +1.8
LOGN Logan Glacier 4.29 127 Pn 23 12 33.3 +2.0
SVW2 Sparrevohn 4.30 238 Pn 23 12 31.6 +0.3
SVW2 IAML 23 13 48.5
comp=N,114nm,0.7s
SVW2 IAML 23 13 52.6
comp=E,118nm,1.0s
F21K Alatna River 4.33 331 Pn 23 12 32.4 +0.8
F21K Alatna River 4.33 331 P **Pn 23 12 32.5 +0.8**
baz=146,SNR=68
CNPM China Poot 4.33 202 Pn 23 12 32.5 +0.8
CNPM IAML 23 13 42.6
comp=E,97nm,1.1s
ILSW Iliamna Southw 4.33 216 Pn 23 12 33.0 +1.2
ILSW IAML 23 13 45.4
comp=N,99nm,0.8s
ILSW IAML 23 13 46.0
comp=E,97nm,0.8s
YAH Yahtse 4.37 134 Pn 23 12 33.3 +0.8
MESA MESA 4.45 137 Pn 23 12 33.2 -0.3
MESA IAML 23 13 45.7
comp=N,115nm,0.7s
MESA IAML 23 13 50.9
comp=E,114nm,0.9s
F26K Sheenjek River 4.45 19 Pn 23 12 33.9 +0.5
F26K Sheenjek River 4.45 19 P **Pn 23 12 33.9 +0.5**
baz=203,SNR=95
M29M Somme Creek 4.51 100 Pn 23 12 34.6 +0.4
M29M Somme Creek 4.51 100 P **Pn 23 12 34.4 +0.2**
baz=289,SNR=31
TABL Table Mountain 4.51 131 Pn **Pn 23 12 35.1 +0.7**
I29M Ogilvie Camp, 4.58 62 Pn 23 12 35.5 +0.3
I29M Ogilvie Camp, 4.58 62 IAML 23 13 54.3
comp=E,133nm,0.7s
I29M IAML 23 14 00.6
comp=N,194nm,0.8s
I29M Ogilvie Camp, 4.58 62 P **Pn 23 12 35.4 +0.2**
baz=251,SNR=124
P19K Oil Pt 4.64 215 Pn 23 12 36.7 +0.7
P19K IAML 23 13 50.9
comp=E,142nm,1.2s
P19K IAML 23 13 51.0
comp=N,159nm,0.9s
N18K Kilae Creek 4.68 235 Pn 23 12 37.5 +0.9
N18K IAML 23 14 06.7
comp=N,86nm,1.1s
N18K IAML 23 14 11.8
comp=E,78nm,0.8s
N18K Kilae Creek 4.68 235 P **Pn 23 12 37.1 +0.5**
baz=49,SNR=30
K29M Barlow Dome 4.69 82 P **Pn 23 12 36.7 0.0**
baz=271,SNR=20
E25K Arctic Village 4.69 11 P **Pn 23 12 37.3 +0.6**
baz=193
YUK4 Talbot Arm 4.89 113 P **Pn 23 12 40.5 +0.9**
baz=300
O18K Koktuh Hills 5.04 226 Pn 23 12 42.4 +0.8
O18K IAML 23 14 09.7
comp=N,76nm,1.1s
O18K IAML 23 14 22.2
comp=E,60nm,1.3s
PCA Pinnacle 5.06 130 Pn **Pn 23 12 42.6 +0.7**
TOLK Toolik Lake Re 5.14 354 Pn 23 12 44.2 +1.3
TOLK Toolik Lake Re 5.14 354 P **Pn 23 12 44.5 +1.7**
baz=172,SNR=49
M30M Minto, Yukon 5.21 96 Pn **Pn 23 12 44.0 +0.2**
M30M Minto, Yukon 5.21 96 P **Pn 23 12 43.4 -0.4**
baz=286,SNR=9.0
E27K Coleen River 5.34 27 Pn 23 12 45.6 0.0
E27K Coleen River 5.34 27 P **Pn 23 12 45.6 0.0**
baz=212,SNR=9.1
Q19K Cape Douglas, 5.38 213 Pn 23 12 47.7 +1.6
Q19K Cape Douglas, 5.38 213 P **Pn 23 12 47.1 +1.0**
baz=28
BCPM Bancas Point 5.38 128 Pn 23 12 46.6 +0.5
Q20K Shuyak Island 5.40 205 P **Pn 23 12 47.0 +0.7**
baz=21
P18K Big Mountain, 5.42 223 Pn 23 12 47.3 +0.6
P18K Big Mountain, 5.42 223 P **Pn 23 12 47.7 +1.1**
baz=36
N30M Aishikik Lake 5.49 108 Pn 23 12 48.9 +1.2
N30M Aishikik Lake 5.49 108 P **Pn 23 12 47.8 +0.1**
baz=297
D23K Nanushuk River 5.53 350 Pn 23 12 50.3 +2.1
D23K Nanushuk River 5.53 350 P **Pn 23 12 49.9 +1.7**
baz=168
EPYK Eagle Plains 5.57 55 Pn 23 12 48.8 0.0
EPYK Eagle Plains 5.57 55 P **Pn 23 12 48.7 0.0**
baz=245,SNR=46
HYT Haines Junctio 5.64 114 Pn **Pn 23 12 50.6 +0.8**
HYT Pg **Pb 23 13 08.5 +4.1**
O17K Koliganek Bris 5.75 233 Pn 23 12 52.0 +0.9
O17K Koliganek Bris 5.75 233 P **Pn 23 12 51.8 +0.7**
baz=45,SNR=9.8
D25K Kavik River 5.83 6 Pn 23 12 54.1 +1.8
D25K Kavik River 5.83 6 P **Pn 23 12 53.8 +1.5**
baz=187,SNR=94
N16K Nishlik Lake 5.92 243 P **Pn 23 12 53.8 +0.2**
baz=54
KAHC Katmai Hardscr 5.97 218 Pn 23 12 56.6 +2.2
N31M Braeburn, Yuko 6.04 105 Pb 23 13 15.2 +4.1
C24K Franklin Bluff 6.19 358 Pn 23 12 58.9 +1.7
C24K Franklin Bluff 6.19 358 P **Pn 23 12 58.0 +0.8**
baz=177,SNR=23
KDAK Kodiak Island 6.21 203 P **Pn 23 12 57.7 +0.2**
baz=19
O16K Kokwok River B 6.23 235 Pn 23 12 58.0 +0.2
O16K Kokwok River B 6.23 235 P **Pn 23 12 57.6 -0.2**
baz=46
O30N Mendenhall 6.25 111 P **Pn 23 12 58.4 +0.2**
baz=302
P29M Windy Craggy 6.30 124 Pn 23 13 00.2 +1.5
C27K Jago River 6.33 14 Pn 23 13 00.6 +1.4
C27K Jago River 6.33 14 P **Pn 23 13 00.5 +1.4**
baz=198,SNR=32
C23K Itkillik River 6.39 352 Pn 23 13 01.3 +1.4
C23K Itkillik River 6.39 352 P **Pn 23 13 01.0 +1.2**
baz=169,SNR=8.0
M31M Drury Creek, Y 6.39 96 Pn 23 13 00.1 +0.1
C26K Camden Bay 6.50 10 Pn 23 13 03.1 +1.7
C26K Camden Bay 6.50 10 P **Pn 23 13 02.8 +1.4**
baz=192,SNR=8.3
P16K Nushagak River 6.60 231 P **Pn 23 13 03.4 +0.6**
baz=42
WHY Whitehorse 6.82 109 Pn **Pn 23 13 06.5 +0.5**
FARO Faro, Yukon 6.84 95 Pn 23 13 06.1 -0.1
FARO Faro, Yukon 6.84 95 P **Pn 23 13 06.4 +0.2**
baz=288
INK Inuvik 7.59 45 Pn **Pn 23 13 16.1 -0.3**
comp=E,1.2nm,0.3s,baz=237,slow=17,SNR=11
INK Sn **Sn 23 14 38.6 -3.8**
comp=E,0.3nm,0.3s,baz=146,slow=15,SNR=3.0
INK Lg Lg 23 15 20.9
comp=E,0.9nm,0.3s,baz=196,slow=18,SNR=1.9
comp=E,4.4nm,0.5s
INK Inuvik 7.59 45 Pn **Pn 23 13 15.3 -1.1**
INK Inuvik 7.59 45 P **Pn 23 13 16.1 -0.3**
baz=238
MMPY Sheldon Lake, 7.67 90 P **Pn 23 13 17.5 -0.1**
baz=284
DLBC Dease Lake 10.12 112 Lg Lg 23 16 43.0
comp=E,0.3nm,0.3s,baz=55,slow=26,SNR=6.2
C36M Paulatuk 11.14 48 Pn **Pn 23 14 02.8 -2.1**
C36M Paulatuk 11.14 48 P **Pn 23 14 03.3 -1.6**
baz=250
A36M Sachs Harbour 11.98 35 Pn **Pn 23 14 14.6 -1.8**
YKA Yellowknife Ar 15.11 79 Pn **Pn 23 14 59.1 +0.1**
comp=E,0.1nm,0.3s,baz=294,slow=14,SNR=3.7
comp=E,1.0nm,0.7s
PDAR Pinedale Array 30.34 115 P **P 23 17 39.8 +2.1**
comp=E,2.5nm,0.9s,baz=327,slow=7.1,SNR=11
comp=E,2.5nm,0.9s
NVAR Mina Array Bea 30.82 131 P **P 23 17 44.1 +2.2**
comp=E,0.7nm,0.7s,baz=326,slow=7.9,SNR=6.5
comp=E,0.7nm,0.7s
TXAR Lajitas Array 44.34 119 P **P 23 19 37.6 +1.6**
comp=E,0.6nm,0.5s,baz=329,slow=8.1,SNR=12
TXAR PcP **PcP 23 21 20.6 +0.6**
comp=E,0.4nm,0.7s,baz=292,slow=4.8,SNR=3.4
comp=E,0.6nm,0.5s
ARCES ARCESS Array B 47.11 3 P **P 23 19 58.2 +0.9**
comp=E,2.0nm,0.9s,baz=1.5,slow=10.0,SNR=1.3
ARCES PcP **PcP 23 21 30.4 +1.5**
comp=E,3.6nm,0.9s,baz=24,slow=4.9,SNR=4.0
comp=E,2.0nm,0.9s
SONM Songino Array 54.56 307 P **P 23 20 53.2 -0.7**
comp=E,0.5nm,0.7s,baz=15,slow=6.1,SNR=4.5
comp=E,0.5nm,0.7s
NOA NORSAR Array B 54.73 12 LR LR 23 47 37.8
comp=E,7.2nm,18.2s,baz=250,slow=40
FINES FINESS Array B 55.23 3 P **P 23 20 57.0 -1.4**
comp=E,1.5nm,0.9s,baz=2.5,slow=9.7,SNR=4.6
comp=E,1.5nm,0.9s
ZALV Zalesovo Beam 55.84 325 P **P 23 21 00.8 -2.0**
comp=E,1.0nm,0.6s,baz=10,slow=9.0,SNR=4.7
comp=E,1.0nm,0.6s
HFS Hagfors 55.85 11 P **P 23 21 02.1 -0.7**
comp=E,1.8nm,0.8s,baz=69,slow=7.9,SNR=1.5
comp=E,1.8nm,0.8s

EKA	**Eskdalemuir Ar**	**58.36**	**23**	P	**P**	**23**	**21**	**19.9**	**-0.8**
	comp=E,1.2nm,0.5s,baz=332,slow=5.6,SNR=12								
	comp=E,1.2nm,0.5s								
ARU	**Arti**	**58.59**	**343**	P	**P**	**23**	**21**	**21.3**	**-1.0**
	comp=E,1.3nm,0.4s,baz=0.0,slow=13,SNR=4.3								
ARU				LR	LR	23	48	12.0	
	comp=E,22nm,18.9s,baz=34,slow=38								
	comp=E,1.3nm,0.4s								
BVAR	**Borovoye Array**	**59.95**	**334**	P	**P**	**23**	**21**	**30.4**	**-1.4**
	comp=E,0.5nm,0.5s,baz=44,slow=6.6,SNR=6.1								
	comp=E,0.5nm,0.5s								
MKAR	**Makanchi Array**	**63.04**	**324**	P	**P**	**23**	**21**	**50.0**	**-2.7**
	comp=E,0.8nm,0.6s,baz=48,slow=6.5,SNR=10								
	comp=E,0.8nm,0.6s								
AKASG	**Malin Array Be**	**66.06**	**2**	P	**P**	**23**	**22**	**11.2**	**-1.2**
	comp=E,1.4nm,0.6s,baz=360,slow=6.3,SNR=11								
	comp=E,1.4nm,0.6s								
ESDC	**Sonseca Array**	**73.21**	**28**	P	**P**	**23**	**22**	**56.8**	**+0.1**
	comp=E,2.1nm,0.7s,baz=342,slow=5.8,SNR=21								
	comp=E,2.1nm,0.7s								
BRTR	**Keskin Array B**	**77.05**	**359**	P	**P**	**23**	**23**	**19.6**	**+0.6**
	comp=E,0.7nm,0.9s,baz=347,slow=5.9,SNR=2.3								
	comp=E,0.7nm,0.9s								
KEST	**Kesra**	**79.42**	**19**	P	**P**	**23**	**23**	**32.2**	**+0.1**
	comp=E,3.2nm,0.8s,baz=264,slow=3.8,SNR=4.8								
	comp=E,3.2nm,0.8s								
MDT	**Midelt**	**79.66**	**31**	P	**P**	**23**	**23**	**34.0**	**+0.6**
	comp=E,1.2nm,0.6s,baz=297,slow=11,SNR=5.2								
	comp=E,1.2nm,0.6s								
BOSA	**Boshof**	**144.78**	**10**	PKP	**PKPab**	**23**	**31**	**00.3**	**-1.1**
	comp=E,1.9nm,0.7s,baz=22,slow=5.4,SNR=5.0								
VNA3	**Neumayer Olymp**	**162.62**	**134**	PKPab	**PKPab**	**23**	**32**	**15.0**	**+0.2**
VNA2	**Neumayer--Watz**	**163.39**	**133**	PKPab	**PKPab**	**23**	**32**	**18.3**	**+0.2**
	baz=301,slow=5.1								
TROLL	**Troll, Antarti**	**166.19**	**140**	PKPab	**PKPab**	**23**	**32**	**31.4**	**+0.8**

PRU ***26*** *23:13:36.3±0.0, 42.˚80N×13.˚32E, h0km*
ROM ***26*** *23:13:36.9±0.1, 42.˚842N±0.˚003×13.˚258E±0.˚004, h8km, ML3.2/74, Error ellipse: s-maj=0.3km s-min=0.3km az=266.0*
LDG ***26*** *23:13:37.8±0.1, 42.˚83N×13.˚13E, h2km, Ml2.8/20, Error ellipse: s-maj=4.2km s-min=2.8km az=39.0*
IDC ***26*** *23:13:38.2±1.4, 42.˚97N×13.˚48E, h0km, mb4.4/1, mbtmp3.6/5, ML3.3/4, Error ellipse: s-maj=34.9km s-min=14.3km az=91.0*
BEO ***26*** *23:13:38.5±0.7, 42.˚77N×13.˚21E, h0km, ML3.3/5*

ISC 26 23:13:37.7±0.8, 42.84N±0.02×13.22E±0.02, h10km±4km, n186, σ2ᵠ26/253, 36C-28D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MC2	**Monte Cornacci**	**0.07**	**344**	P	**Pg**	**23 13 39.2**	**-0.9**
MC2				S	**Sg**	**23 13 41.3**	**-0.6**
MC2				AML	AML		
	comp=E,33550μm,0.7s						
MC2				AML	AML		
	comp=N,33900μm,0.7s						
MC2				AML	AML		
	comp=E,33515μm,0.7s						
NRCA	**Norcia**	**0.08**	**262**	P	**Pg**	**23 13 39.8**	**-0.3**
NRCA				S	**Sg**	**23 13 41.8**	**+0.1**
NRCA				AML	AML		
	comp=E,65300μm,1.5s						
NRCA				AML	AML		
	comp=N,71050μm,0.8s						
NRCA				AML	AML		
	comp=E,70100μm,0.8s						
NRCA				AML	AML		
	comp=N,77650μm,0.8s						
NRCA				AML	AML		
	comp=E,65250μm,1.5s						
NRCA				AML	AML		
	comp=E,70150μm,0.8s						
NRCA				AML	AML		
	comp=E,70133μm,0.8s						
MMO1	**Montemonaco**	**0.10**	**56**	P	**Pg**	**23 13 39.3**	**-1.0**
MMO1				S	**Sg**	**23 13 40.8**	**-1.4**
MMO1				AML	AML		
	comp=E,43350μm,0.8s						
MMO1				AML	AML		
	comp=E,3385μm,0.5s						
MMO1				AML	AML		
	comp=E,3390μm,0.5s						
MMO1				AML	AML		
	comp=N,54200μm,1.5s						
MMO1				AML	AML		
	comp=N,8035μm,1.5s						
MMO1				AML	AML		
	comp=E,43400μm,0.8s						
MMO1				AML	AML		
	comp=E,43400μm,1.2s						
FDMO	**Fiordimonte**	**0.21**	**334**	P	**Pg**	**23 13 42.4**	**+0.2**
FDMO				S	**Sg**	**23 13 46.2**	**+0.9**
FDMO				AML	AML		
	comp=E,7090μm,0.4s						
FDMO				AML	AML		
	comp=N,9540μm,0.7s						
FDMO				AML	AML		
	comp=N,9540μm,1.3s						
T1243	**Rocca Santa Ma**	**0.23**	**131**	P	**Pg**	**23 13 42.0**	**-0.4**
T1243				S	**Sg**	**23 13 45.4**	**-0.2**
T1243				AML	AML		
	comp=E,53500μm,0.3s						
T1243				AML	AML		
	comp=E,53500μm,0.3s						
T1243				AML	AML		
	comp=N,58600μm,0.2s						
T1243				AML	AML		
	comp=E,53450μm,0.3s						
T1243				AML	AML		
	comp=N,58700μm,0.2s						
T1243				AML	AML		
	comp=E,53500μm,1.7s						
T1243				AML	AML		
	comp=N,58600μm,1.8s						
T1243				AML	AML		
	comp=N,58700μm,1.8s						
T1243				AML	AML		
	comp=E,53450μm,1.7s						
CSP1	**Cessapalombo**	**0.25**	**358**	P	**Pg**	**23 13 43.0**	**+0.1**
CSP1				S	**Sg**	**23 13 47.1**	**+0.8**
CSP1				AML	AML		
	comp=E,8855μm,0.5s						
CSP1				AML	AML		
	comp=N,10260μm,0.3s						
CSP1				AML	AML		
	comp=E,8845μm,0.5s						
CSP1				AML	AML		
	comp=N,10295μm,0.3s						
CSP1				AML	AML		
	comp=N,10250μm,0.3s						
CSP1				AML	AML		
	comp=N,10250μm,1.7s						
CSP1				AML	AML		
	comp=E,8880μm,0.5s						
LNSS	**Leonessa**	**0.27**	**208**	P	**Pg**	**23 13 43.4**	**+0.2**
LNSS				S	**Sb**	**23 13 48.4**	**-1.2**
LNSS				AML	AML		
	comp=N,17550μm,0.2s						
LNSS				AML	AML		
	comp=E,32100μm,0.8s						
LNSS				AML	AML		
	comp=E,32100μm,1.2s						
CESI	**CESI - Serrava**	**0.28**	**305**	P	**Pg**	**23 13 43.4**	**0.0**
CESI				S	**Sb**	**23 13 48.9**	**-0.9**
CESI				AML	AML		
	comp=N,15500μm,0.3s						
CESI				AML	AML		
	comp=E,11215μm,0.3s						
RM33	**Pellescritta (**	**0.34**	**180**	P	**Pg**	**23 13 44.1**	**-0.3**
RM33				S	**Sb**	**23 13 50.0**	**-1.3**
RM33				AML	AML		
	comp=N,6995μm,1.4s						
RM33				AML	AML		
	comp=E,8800μm,0.6s						
RM33				AML	AML		
	comp=N,6925μm,1.4s						
RM33				AML	AML		
	comp=N,6930μm,1.4s						
RM33				AML	AML		
	comp=N,6930μm,0.6s						
RM33				AML	AML		
	comp=N,6995μm,0.6s						
RM33				AML	AML		
	comp=E,8805μm,0.6s						
RM33				AML	AML		
	comp=E,8660μm,0.6s						
SEF1	**Sefro**	**0.36**	**327**	⇑P	**Pg**	**23 13 45.4**	**+0.5**
SEF1				S	**Sb**	**23 13 51.5**	**-0.5**
SEF1				AML	AML		
	comp=N,9055μm,0.4s						
SEF1				AML	AML		
	comp=N,9035μm,0.4s						
SEF1				AML	AML		
	comp=E,7225μm,1.2s						
SEF1				AML	AML		
	comp=E,7225μm,0.8s						
TERO	**Teramo**	**0.36**	**128**	P	**Pg**	**23 13 44.0**	**-0.9**
TERO				S	**Sg**	**23 13 49.8**	**+0.1**
TERO				AML	AML		
	comp=N,14500μm,0.5s						
TERO				AML	AML		
	comp=N,14550μm,0.5s						
TERO				AML	AML		
	comp=N,15550μm,0.5s						
TERO				AML	AML		
	comp=E,12100μm,0.8s						
TERO				AML	AML		
	comp=E,12700μm,0.8s						
TERO				AML	AML		
	comp=N,14550μm,1.5s						
TERO				AML	AML		
	comp=N,15550μm,1.5s						
GAG1	**Gagliole**	**0.41**	**345**	⇓P	**Pb**	**23 13 46.9**	**-0.2**
GAG1				AML	AML		
	comp=N,12150μm,0.3s						
GAG1				AML	AML		
	comp=E,8570μm,0.4s						
GAG1				AML	AML		
	comp=N,12150μm,1.7s						
ARRO	**Arrone**	**0.42**	**232**	P	**Pg**	**23 13 45.9**	**-0.1**
ASSB	**Assisi San Ben**	**0.46**	**296**	P	**Pg**	**23 13 46.6**	**0.0**
ASSB				S	**Sb**	**23 13 54.6**	**-0.2**
ASSB				AML	AML		
	comp=N,7740μm,0.3s						
ASSB				AML	AML		
	comp=E,5765μm,0.3s						
SNTG	**Esanatoglia**	**0.46**	**334**	⇓P	**Pg**	**23 13 45.2**	**-1.4**
SNTG				S	**Sb**	**23 13 55.0**	**+0.2**
SNTG				AML	AML		
	comp=E,263μm,1.1s						
SNTG				AML	AML		
	comp=N,2840μm,1.5s						
SNTG				AML	AML		
	comp=E,263μm,1.1s						
SNTG				AML	AML		
	comp=N,350μm,1.4s						
SNTG				AML	AML		
	comp=E,1920μm,0.3s						
SNTG				AML	AML		
	comp=N,350μm,0.6s						
SNTG				AML	AML		
	comp=E,263μm,0.9s						
SNTG				AML	AML		
	comp=N,2840μm,0.5s						
GIGS	**Gran Sasso**	**0.47**	**146**	⇑P	**Pg**	**23 13 45.6**	**-1.3**
GIGS				S	**Sg**	**23 13 53.4**	**+0.2**
GIGS				AML	AML		
	comp=N,1185μm,0.6s						
GIGS				AML	AML		
	comp=N,1180μm,0.6s						
GIGS				AML	AML		
	comp=E,1220μm,0.6s						
EL6	**Elcito**	**0.49**	**350**	⇑P	**Pg**	**23 13 44.1**	**-3.2**
EL6				AML	AML		
	comp=E,4375μm,0.4s						
EL6				AML	AML		
	comp=N,4645μm,0.4s						
EL6				AML	AML		
	comp=N,4640μm,0.4s						
TRTR	**Tortoreto Alta**	**0.51**	**94**	⇓P	**Pg**	**23 13 47.3**	**-0.4**
TRTR				AML	AML		
	comp=N,15750μm,0.5s						
TRTR				AML	AML		
	comp=E,13250μm,0.7s						
CESX	**Cesi**	**0.52**	**244**	⇓P	**Pg**	**23 13 47.9**	**-0.1**
CESX				AML	AML		
	comp=E,2375μm,0.5s						
CESX				AML	AML		
	comp=N,2335μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.54**	**309**	⇑P	**Pg**	**23 13 46.5**	**-1.7**
ATCC				AML	AML		
	comp=E,4920μm,0.8s						
ATCC				AML	AML		
	comp=N,5205μm,0.6s						
FOSV	**Fossato di Vic**	**0.56**	**324**	⇓P	**Pg**	**23 13 46.4**	**-2.2**
FOSV				S	**Sg**	**23 13 57.0**	**+1.0**
FOSV				AML	AML		
	comp=E,2920μm,0.2s						
FOSV				AML	AML		
	comp=N,9140μm,0.3s						
PP3	**Marolino**	**0.61**	**28**	⇓P	**Pg**	**23 13 48.4**	**-1.0**
PP3				AML	AML		
	comp=E,5260μm,0.5s						
PP3				AML	AML		
	comp=N,7065μm,0.6s						
PP3				AML	AML		
	comp=E,5255μm,0.5s						
PP3				AML	AML		
	comp=N,6975μm,0.6s						
PP3				AML	AML		
	comp=E,5785μm,0.5s						
FAGN	**Fagnano**	**0.64**	**155**	P	**Pg**	**23 13 49.2**	**-0.8**
FAGN				AML	AML		
	comp=E,4285μm,0.3s						
FAGN				AML	AML		
	comp=N,4555μm,0.4s						
MURB	**Monte Urbino**	**0.66**	**310**	P	**Pg**	**23 13 50.7**	**+0.3**
MURB				AML	AML		
	comp=E,7330μm,0.3s						
MURB				AML	AML		
	comp=E,8590μm,0.3s						
MURB				AML	AML		
	comp=E,7335μm,0.3s						
MURB				AML	AML		
	comp=N,8065μm,0.3s						
MURB				AML	AML		
	comp=N,7370μm,0.3s						
MURB				AML	AML		
	comp=N,8065μm,1.7s						
MURB				AML	AML		
	comp=N,7370μm,1.7s						
ARVD	**Arcevia**	**0.68**	**343**	⇑P	**Pg**	**23 13 49.0**	**-1.9**
ARVD				S	**Sb**	**23 14 03.0**	**+1.7**
ARVD				AML	AML		
	comp=E,970μm,1.2s						
ARVD				AML	AML		
	comp=N,1130μm,0.6s						
ATFO	**Monte Foce - G**	**0.70**	**318**	⇓P	**Pg**	**23 13 49.4**	**-1.9**
ATFO				AML	AML		
	comp=E,2170μm,0.5s						
ATFO				AML	AML		
	comp=N,1375μm,1.0s						
ATTE	**AVT- Monte Tez**	**0.72**	**299**	⇓P	**Pg**	**23 13 50.0**	**-1.7**
ATTE				AML	AML		
	comp=E,1279μm,0.4s						
ATTE				AML	AML		
	comp=N,1032μm,1.5s						
T0110	**Collepietro**	**0.74**	**146**	⇑P	**Pg**	**23 13 48.8**	**-3.2**
T0110				AML	AML		
	comp=E,3325μm,0.6s						
T0110				AML	AML		
	comp=N,2700μm,1.5s						
AOI	**Ancona**	**0.76**	**22**	P	**Pb**	**23 13 53.2**	**+0.1**
AOI				AML	AML		
	comp=E,1021μm,1.5s						
AOI				AML	AML		
	comp=N,1164μm,0.3s						
AOI				AML	AML		
	comp=E,1021μm,0.5s						
FRON	**Frontone**	**0.76**	**332**	⇑P	**Pg**	**23 13 50.4**	**-2.1**
FRON				AML	AML		
	comp=N,1720μm,0.4s						
FRON				AML	AML		
	comp=E,1365μm,0.7s						
FRON				AML	AML		
	comp=N,1720μm,1.6s						
ATVO	**AVT- Monte Val**	**0.80**	**312**	⇓P	**Pg**	**23 13 51.0**	**-2.1**
ATVO				AML	AML		
	comp=E,1165μm,0.3s						
ATVO				AML	AML		
	comp=N,1010μm,0.6s						
ATVO				AML	AML		
	comp=E,1165μm,1.7s						
SRES	**S.Oreste - Sor**	**0.80**	**221**	P	**Pg**	**23 13 52.7**	**-0.5**
SRES				S	**Sb**	**23 14 05.1**	**+0.4**
SRES				AML	AML		
	comp=E,922μm,0.8s						
SRES				AML	AML		
	comp=N,876μm,0.5s						
COR1	**Corinaldo**	**0.80**	**349**	⇑P	**Pb**	**23 13 53.6**	**-0.2**
COR1				AML	AML		
	comp=E,1745μm,0.6s						
COR1				AML	AML		
	comp=N,2195μm,0.6s						
COR1				AML	AML		
	comp=N,2195μm,1.4s						
COR1				AML	AML		
	comp=E,1745μm,1.4s						
MGAB	**Montegabbione**	**0.81**	**275**	⇑P	**Pg**	**23 13 53.2**	**-0.2**
MGAB				AML	AML		
	comp=N,2225μm,0.4s						
MGAB				AML	AML		
	comp=E,2020μm,0.3s						
MGAB				AML	AML		
	comp=N,1955μm,0.4s						
MGAB				AML	AML		
	comp=E,1795μm,1.0s						
MGAB				AML	AML		
	comp=E,2020μm,1.7s						
ATMI	**Monte Miggiano**	**0.85**	**305**	⇓P	**Pg**	**23 13 53.7**	**-0.4**
ATMI				AML	AML		
	comp=E,3010μm,0.4s						
ATMI				AML	AML		
	comp=N,3385μm,0.4s						
ATMI				AML	AML		
	comp=E,3010μm,1.6s						
ATPI	**Pietralunga -**	**0.85**	**316**	⇓P	**Pg**	**23 13 53.9**	**-0.2**
PIEI	**Pieia**	**0.85**	**324**	⇓P	**Pg**	**23 13 52.4**	**-1.7**
PIEI				S	**Sn**	**23 14 08.0**	**-0.5**
PIEI				AML	AML		
	comp=N,670μm,1.1s						
PIEI				AML	AML		
	comp=E,772μm,0.8s						
PIEI				AML	AML		
	comp=E,772μm,1.2s						
PIEI				AML	AML		
	comp=N,670μm,0.9s						
MPAG	**Monte Paganucc**	**0.85**	**337**	⇑P	**Pg**	**23 13 52.5**	**-1.7**
MPAG				S	**Sn**	**23 14 09.0**	**+0.5**
MPAG				AML	AML		
	comp=E,1155μm,0.9s						
MPAG				AML	AML		
	comp=E,1215μm,0.9s						
MPAG				AML	AML		
	comp=N,1148μm,1.6s						
MPAG				AML	AML		
	comp=N,1075μm,1.6s						
MPAG				AML	AML		
	comp=N,1148μm,0.4s						
MPAG				AML	AML		
	comp=N,1075μm,0.4s						
SENI	**Senigallia**	**0.86**	**1**	⇑P	**Pn**	**23 13 55.7**	**-0.2**
SENI				AML	AML		
	comp=E,1283μm,0.6s						
SENI				AML	AML		
	comp=N,995μm,1.0s						
SENI				AML	AML		
	comp=N,995μm,1.0s						
SENI				AML	AML		
	comp=E,1283μm,1.4s						
MTCE	**Montecelio**	**0.89**	**203**	⇑P	**Pg**	**23 13 54.6**	**-0.3**
MTCE				AML	AML		
	comp=E,1056μm,0.6s						
MTCE				AML	AML		
	comp=N,921μm,1.0s						
MTCE				AML	AML		
	comp=E,1056μm,1.4s						
MTCE				AML	AML		
	comp=N,921μm,1.0s						
NARO	**Abbazia di Nar**	**0.90**	**329**	⇑P	**Pg**	**23 13 52.7**	**-2.3**
NARO				AML	AML		
	comp=N,750μm,0.8s						
NARO				AML	AML		
	comp=E,564μm,0.8s						
FSSB	**Fossombrone**	**0.91**	**339**	⇓P	**Pg**	**23 13 53.8**	**-1.4**
FSSB				S	**Sn**	**23 14 11.0**	**+1.2**
FSSB				AML	AML		
	comp=E,3335μm,0.4s						
FSSB				AML	AML		
	comp=N,3305μm,0.3s						
CERT	**Cerreto**	**0.91**	**191**	⇑P	**Pg**	**23 13 54.0**	**-1.3**
CERT				AML	AML		
	comp=E,1890μm,1.2s						
CERT				AML	AML		
	comp=N,2115μm,0.4s						
CERT				AML	AML		
	comp=N,2115μm,1.6s						
APEC	**Apecchio**	**0.92**	**321**	S	**Sb**	**23 14 09.0**	**+0.8**
SACS	**San Casciano d**	**0.96**	**271**	⇑P	**Pg**	**23 13 55.8**	**-0.5**
SACS				AML	AML		
	comp=E,873μm,1.6s						
SACS				AML	AML		
	comp=N,1067μm,0.8s						
SACS				AML	AML		
	comp=E,866μm,1.6s						
SACS				AML	AML		
	comp=N,1017μm,0.8s						
SACS				AML	AML		
	comp=E,873μm,0.4s						
SACS				AML	AML		
	comp=N,1067μm,1.2s						
SACS				AML	AML		
	comp=N,1017μm,1.2s						
SACS				AML	AML		
	comp=E,866μm,0.4s						
BADI	**Badiali**	**0.97**	**313**	P	**Pg**	**23 13 56.1**	**-0.3**
INTR	**Introdacqua**	**0.98**	**148**	⇓P	**Pn**	**23 13 58.5**	**+0.9**
INTR				AML	AML		
	comp=E,962μm,0.6s						
INTR				AML	AML		
	comp=N,3000μm,0.6s						
RCAV	**Rocca di Cave**	**1.02**	**192**	⇑P	**Pn**	**23 13 58.4**	**+0.3**
RCAV				AML	AML		
	comp=N,2605μm,0.4s						
RCAV				AML	AML		
	comp=E,2020μm,0.4s						
RCAV				AML	AML		
	comp=N,2605μm,1.6s						
CAFI	**Castiglion Fio**	**1.04**	**298**	⇓P	**Pg**	**23 13 55.7**	**-1.9**
CAFI				AML	AML		
	comp=N,855μm,1.1s						
CAFI				AML	AML		
	comp=E,732μm,1.1s						
GUAR	**Guarcino**	**1.05**	**176**	⇑P	**Pb**	**23 13 58.4**	**+0.3**
GUAR				AML	AML		
	comp=E,1295μm,0.4s						
GUAR				AML	AML		
	comp=N,1575μm,0.4s						
LATE	**Laterza**	**1.07**	**258**	⇓P	**Pb**	**23 13 58.5**	**+0.3**
SSP9	**Sansepolcro**	**1.08**	**313**	⇓P	**Pn**	**23 13 59.8**	**+0.9**
PESA	**Pesaro**	**1.13**	**346**	⇓P	**Pn**	**23 14 00.1**	**+0.5**
PESA				AML	AML		
	comp=E,1370μm,0.6s						
PESA				AML	AML		
	comp=N,1340μm,0.3s						
PESA				AML	AML		
	comp=E,1370μm,1.4s						
SF04	**Casetta**	**1.15**	**270**	⇑P	**Pg**	**23 13 58.8**	**-0.9**
POFI	**Posta Fibreno**	**1.19**	**162**	⇑P	**Pn**	**23 14 02.0**	**+1.5**
TOLF	**Tolfa**	**1.19**	**230**	⇑P	**Pg**	**23 13 59.7**	**-0.9**
TOLF				AML	AML		
	comp=E,611μm,0.9s						
TOLF				AML	AML		
	comp=N,442μm,0.3s						
TOLF				AML	AML		
	comp=E,611μm,1.1s						
CRE	**Caprese Michel**	**1.21**	**310**	⇑P	**Pg**	**23 13 59.9**	**-1.0**
CRE				AML	AML		
	comp=N,505μm,0.7s						
CRE				AML	AML		
	comp=E,387μm,0.6s						
CRE				AML	AML		
	comp=N,505μm,1.3s						
CRE				AML	AML		
	comp=E,387μm,1.4s						
LRP	**Arpino**	**1.23**	**167**	⇑P	**Pn**	**23 14 02.4**	**+1.5**
LRP				AML	AML		
	comp=E,408μm,0.6s						

LRP					AML	AML				
	comp=N,586µm,0.7s									
GIUL	**Giuliano Di Ro**	**1.28**	**179**	⇑P		**Pg**	**23 14 03.6**	**+1.2**		
GIUL					AML	AML				
	comp=N,622µm,0.9s									
GIUL					AML	AML				
	comp=E,386µm,0.7s									
FRES	**Fresagrandinar**	**1.38**	**128**	P		**Pg**	**23 14 04.0**	**-0.2**		
FRES					AML	AML				
	comp=E,355µm,0.6s									
FRES					AML	AML				
	comp=N,384µm,0.7s									
FRES					AML	AML				
	comp=N,384µm,1.3s									
FRES					AML	AML				
	comp=E,355µm,1.4s									
TRIV	**Trivento**	**1.46**	**137**	⇑P		**Pg**	**23 14 05.8**	**0.0**		
TRIV					AML	AML				
	comp=E,807µm,0.8s									
TRIV					AML	AML				
	comp=N,696µm,0.8s									
OSSC	**Osservatorio P**	**1.59**	**296**	P		**Pn**	**23 14 06.8**	**+0.7**		
OSSC					AML	AML				
	comp=E,154µm,0.9s									
OSSC					AML	AML				
	comp=N,164µm,0.6s									
OSSC					AML	AML				
	comp=E,154µm,1.1s									
RUFI	**Rufina**	**1.59**	**309**	⇓P		**Pb**	**23 14 07.5**	**+0.2**		
RUFI					AML	AML				
	comp=E,316µm,0.6s									
RUFI					AML	AML				
	comp=N,302µm,0.8s									
RUFI					AML	AML				
	comp=E,316µm,1.4s									
RUFI					AML	AML				
	comp=N,302µm,1.2s									
VAGA	**Valle Agricola**	**1.62**	**152**	⇑P		**Pg**	**23 14 08.6**	**-0.1**		
VAGA					AML	AML				
	comp=N,363µm,0.4s									
VAGA					AML	AML				
	comp=E,218µm,1.3s									
VAGA					AML	AML				
	comp=E,218µm,0.7s									
CIGN	**Sant'Elia a Pi**	**1.73**	**133**	⇑P		**Pb**	**23 14 09.6**	**0.0**		
CIGN					AML	AML				
	comp=N,207µm,1.0s									
CIGN					AML	AML				
	comp=E,224µm,0.7s									
CASP	**Castiglione de**	**1.73**	**269**	⇓P		**Pn**	**23 14 08.1**	**+0.1**		
CASP					AML	AML				
	comp=E,56µm,0.5s									
CASP					AML	AML				
	comp=N,60µm,0.9s									
CASP					AML	AML				
	comp=E,56µm,1.5s									
DUGI	**Dugi Otok**	**1.77**	**49**	*e*Pn		**Pn**	**23 14 08.7**	**+0.3**		
MELA	**Melanico ??? S**	**1.82**	**128**	⇑P		**Pn**	**23 14 08.4**	**-0.6**		
MELA					AML	AML				
	comp=E,568µm,1.2s									
MELA					AML	AML				
	comp=E,568µm,0.8s									
MELA					AML	AML				
	comp=N,628µm,0.9s									
MELA					AML	AML				
	comp=E,610µm,1.0s									
MELA					AML	AML				
	comp=N,637µm,0.7s									
TREM	**Isole Tremiti**	**1.84**	**112**	⇑P		**Pb**	**23 14 10.6**	**-0.9**		
TREM					AML	AML				
	comp=N,663µm,0.8s									
TREM					AML	AML				
	comp=E,608µm,0.6s									
TREM					AML	AML				
	comp=N,663µm,1.2s									
MOCO	**Biccari - m.te**	**2.06**	**135**	⇑P		**Pb**	**23 14 14.6**	**-0.8**		
MOCO					AML	AML				
	comp=N,86µm,0.6s									
MOCO					AML	AML				
	comp=E,161µm,0.7s									
NVLJ	**Novalja**	**2.10**	**34**	*e*Pn		**Pn**	**23 14 12.0**	**-0.9**		
BRJN	**Brijuni**	**2.10**	**10**	*e*Pn		**Pn**	**23 14 12.8**	**-0.1**		
SGRT	**San Giovanni R**	**2.17**	**119**	⇓P		**Pn**	**23 14 14.9**	**+1.0**		
SGRT					AML	AML				
	comp=N,368µm,0.6s									
SGRT					AML	AML				
	comp=E,256µm,0.7s									
RABC	**Rab**	**2.22**	**30**	*e*Pn		**Pn**	**23 14 14.3**	**-0.3**		
SMRN	**Sveta Marina**	**2.29**	**17**	*e*Pn		**Pn**	**23 14 14.3**	**-1.3**		
MSAG	**Monte S. Angel**	**2.30**	**119**	⇓P		**Pn**	**23 14 16.4**	**+0.6**		
MSAG					AML	AML				
	comp=N,672µm,0.4s									
MSAG					AML	AML				
	comp=E,318µm,1.6s									
SGTA	**Sant Agata di**	**2.34**	**136**	⇑P		**Pb**	**23 14 18.3**	**-1.7**		
SGTA					AML	AML				
	comp=N,104µm,0.8s									
SGTA					AML	AML				
	comp=E,162µm,0.6s									
HVAR	**Hvar**	**2.39**	**81**	*e*Pn		**Pn**	**23 14 16.6**	**-0.4**		
HVAR	**Hvar**	**2.39**	**81**	⇑P		**Pn**	**23 14 18.3**	**+1.3**		
UDBI	**Udbina**	**2.50**	**47**	*e*Pn		**Pn**	**23 14 18.9**	**+0.4**		
PLIT	**Plitvice**	**2.68**	**40**	*e*Pn		**Pn**	**23 14 19.8**	**-1.1**		
SKDS	**Skadanscina**	**2.76**	**12**	*e*Pn		**Pn**	**23 14 20.6**	**-1.5**		
MAKA	**Makarska**	**2.82**	**80**	*e*Pn		**Pn**	**23 14 21.9**	**-1.0**		
A050A	**Klekovaca**	**2.91**	**55**	*e*Pn		**Pn**	**23 14 24.6**	**+0.4**		
RICI	**Ricice**	**2.94**	**76**	*e*Pn		**Pn**	**23 14 24.1**	**-0.4**		
BOJS	**Bojanci**	**3.04**	**28**	*e*Pn		**Pn**	**23 14 25.6**	**-0.2**		
BOJS	**Bojanci**	**3.04**	**28**	⇑P		**Pn**	**23 14 27.4**	**+1.6**		
BOJS					AML	AML				
	comp=E,316µm,0.7s									
BOJS					AML	AML				
	comp=N,164µm,0.7s									
BOJS					AML	AML				
	comp=E,316µm,1.3s									
BOJS					AML	AML				
	comp=N,164µm,1.3s									
PGF	**Pioggiola**	**3.12**	**266**	*e*Pn		**Pn**	**23 14 25.2**	**-1.9**		
PGF	**Pioggiola**	**3.12**	**266**	*e*P		**Pn**	**23 14 28.3**	**+1.2**		
PGF				*e*Sn		**Sn**	**23 14 59.9**	**-4.6**		
	comp=N,10nm,0.7s									
SRKY	**Kupres RS**	**3.12**	**66**	*e*Pn		**Pn**	**23 14 28.9**	**+1.8**		
A251A	**Rujevac**	**3.17**	**43**	*e*Pn		**Pn**	**23 14 28.0**	**+0.3**		
CGRP	**Cima Grappa**	**3.20**	**342**	⇑P		**Pn**	**23 14 30.0**	**+1.7**		
CGRP					AML	AML				
	comp=E,166µm,0.4s									
CGRP					AML	AML				
	comp=N,137µm,0.7s									
MTSN	**Montesano sull**	**3.20**	**143**	⇑P		**Pn**	**23 14 30.7**	**+2.5**		
MTSN					AML	AML				
	comp=N,29µm,0.7s									
MTSN					AML	AML				
	comp=E,38µm,0.8s									
MTSN					AML	AML				
	comp=N,29µm,1.3s									
OZLJ	**Ozalj**	**3.21**	**30**	*e*Pn		**Pn**	**23 14 27.6**	**-0.6**		
MGRS	**Mrkonjic Grad**	**3.22**	**59**	*e*Pn		**Pn**	**23 14 30.6**	**+2.2**		
STON	**Ston**	**3.30**	**88**	*e*Pn		**Pn**	**23 14 26.9**	**-2.5**		
STON	**Ston**	**3.30**	**88**	*e*Pn		**Pn**	**23 14 29.0**	**-0.4**		
STON				*e*Sn		**Sn**	**23 15 07.6**	**-1.0**		
STON	**Ston**	**3.30**	**88**	P		**Pn**	**23 14 28.0**	**-1.4**		
STON					AML	AML				
	comp=E,43µm,0.9s									
STON					AML	AML				
	comp=N,43µm,1.0s									
LJU	**Ljubljana**	**3.33**	**16**	P		**Pn**	**23 14 30.0**	**+0.1**		
LJU					AML	AML				
	comp=E,464µm,0.8s									
LJU					AML	AML				
	comp=N,580µm,0.6s									
DOSS	**Dosso del Somm**	**3.37**	**335**	⇓P		**Pn**	**23 14 32.8**	**+2.2**		
DOSS					AML	AML				
	comp=N,98µm,0.6s									
DOSS					AML	AML				
	comp=E,90µm,0.6s									
DOSS					AML	AML				
	comp=E,90µm,1.4s									
CRES	**Cresnjev**	**3.39**	**28**	*e*Pn		**Pn**	**23 14 30.6**	**-0.1**		
STAL	**STALIGIAL**	**3.43**	**354**	⇑P		**Pn**	**23 14 32.6**	**+1.2**		
STAL					AML	AML				
	comp=E,120µm,0.8s									
STAL					AML	AML				
	comp=N,94µm,1.2s									
STAL					AML	AML				
	comp=E,120µm,1.2s									
STAL					AML	AML				
	comp=N,94µm,0.8s									
A051A	**Mrakovica**	**3.44**	**50**	*e*Pn		**Pn**	**23 14 33.3**	**+1.9**		
BLY	**Banja Luka**	**3.45**	**55**	*e*Pn		**Pb**	**23 14 38.9**	**+0.1**		
BLY	**Banja Luka**	**3.45**	**55**	*e*Pn		**Pn**	**23 14 34.4**	**+2.9**		
MAGA	**Magasa**	**3.47**	**329**	⇓P		**Pn**	**23 14 33.8**	**+1.9**		
MAGA					AML	AML				
	comp=N,190µm,0.4s									
MAGA					AML	AML				
	comp=E,206µm,0.9s									
RNCA	**Ronca, Sant'Ol**	**3.50**	**299**	P		**Pb**	**23 14 42.2**	**+2.5**		
CIMO	**Cimolais**	**3.51**	**351**	⇑P		**Pn**	**23 14 33.3**	**+0.9**		
CIMO					AML	AML				
	comp=N,33µm,0.4s									
CIMO					AML	AML				
	comp=E,30µm,0.7s									
LUSI	**Trento, Gardas**	**3.52**	**333**	⇓P		**Pn**	**23 14 34.7**	**+2.2**		
LUSI					AML	AML				
	comp=E,64µm,0.5s									
LUSI					AML	AML				
	comp=N,80µm,1.1s									
ACOM	**Acomizza, Ital**	**3.71**	**3**	⇓P		**Pn**	**23 14 35.1**	**-0.1**		
ACOM					AML	AML				
	comp=E,94µm,0.9s									
ACOM					AML	AML				
	comp=N,92µm,0.6s									
ZOU	**Zoufplan**	**3.72**	**357**	⇓P		**Pn**	**23 14 35.6**	**+0.3**		
ZOU					AML	AML				
	comp=N,118µm,1.6s									
ZOU					AML	AML				
	comp=N,75µm,1.0s									
ZOU					AML	AML				
	comp=E,90µm,1.1s									
ZOU					AML	AML				
	comp=E,60µm,1.3s									
MOSL	**Moslavina**	**3.76**	**41**	*e*Pn		**Pn**	**23 14 34.6**	**-1.2**		
TREB	**Trebinje**	**3.78**	**90**	*e*Pn		**Pn**	**23 14 36.3**	**+0.2**		
TREB	**Trebinje**	**3.78**	**90**	*e*Pn		**Pn**	**23 14 37.5**	**+1.4**		
TREB				*e*Sn		**Sn**	**23 15 22.3**	**+1.7**		
OBKA	**Obir**	**3.79**	**14**	*e*Pn		**Pn**	**23 14 36.7**	**+0.5**		
OBKA	**Obir**	**3.79**	**14**	*e*Pn		**Pn**	**23 14 37.7**	**+1.5**		
OBKA				*e*Sn		**Sn**	**23 15 20.8**	**-0.1**		
	comp=E,9.8nm,0.6s									
MYKA	**Terra Mystica**	**3.80**	**4**	*e*Pn		**Pn**	**23 14 38.0**	**+1.7**		
	comp=E,0.2nm,0.1s									
MYKA				*e*Sn		**Sn**	**23 15 20.4**	**-0.7**		
	comp=E,3.0nm,0.4s									
BRY	**Bratogost**	**3.91**	**87**	*e*Pn		**Pn**	**23 14 37.4**	**-0.6**		
HCY	**Herceg Novi**	**3.91**	**94**	*e*Pn		**Pn**	**23 14 36.7**	**-1.2**		
ABTA	**Abfaltersbach**	**3.94**	**353**	Pn		**Pn**	**23 14 38.5**	**+0.2**		
	comp=E,19nm,0.5s,SNR=22									
ABTA				*e*Sn		**Sn**	**23 15 26.0**	**+1.4**		
	comp=E,9.7nm,0.7s									
SOKA	**Soboth**	**4.05**	**18**	*e*Pn		**Pn**	**23 14 41.8**	**+2.0**		
	comp=E,0.4nm,0.2s									
SOKA				*e*Sn		**Sn**	**23 15 27.7**	**+0.5**		
	comp=E,3.5nm,0.5s									
UPM	**Unac-Piva**	**4.19**	**83**	*e*Pn		**Pn**	**23 14 44.0**	**+2.2**		
KBA	**Koelnbreinsper**	**4.24**	**1**	Pn		**Pn**	**23 14 43.4**	**+0.9**		
	comp=E,1.5nm,0.2s,SNR=9.1									
KBA				*e*Sn		**Sn**	**23 15 32.9**	**+0.8**		
	comp=E,8.0nm,0.5s									
SBF	**Sospel**	**4.34**	**286**	*e*Pn		**Pn**	**23 14 41.5**	**-2.3**		
SBF	**Sospel**	**4.34**	**286**	*e*P		**Pn**	**23 14 45.1**	**+1.3**		
SBF				*e*Sn		**Sn**	**23 15 29.0**	**-5.4**		
	comp=E,13nm,0.6s									
VSL	**Villasalto**	**4.42**	**222**	⇓P		**Pn**	**23 14 44.8**	**-0.1**		
VSL					AML	AML				
VSL					AML	AML				
DRME	**Dracevica, Mon**	**4.46**	**96**	*e*Pn		**Pn**	**23 14 45.2**	**-0.2**		
PDG	**Podgorica**	**4.47**	**93**	*e*Pn		**Pn**	**23 14 47.5**	**+1.9**		
PDG				*e*Sn		**Sn**	**23 15 39.3**	**+1.6**		
FETA	**Feichten**	**4.53**	**338**	Pn		**Pn**	**23 14 49.6**	**+3.1**		
	comp=E,2.3nm,0.5s,SNR=6.7									
FETA				*e*Sn		**Sn**	**23 15 40.7**	**+1.2**		
	comp=E,2.4nm,0.6s									
WTTA	**Wattenberg**	**4.56**	**346**	*e*Pn		**Pn**	**23 14 48.1**	**+1.2**		
	comp=E,1.6nm,0.3s									
WTTA				*e*Sn		**Sn**	**23 15 41.4**	**+1.3**		
	comp=E,19nm,0.6s									
RUDO	**Rudo**	**4.56**	**78**	*e*Pn		**Pn**	**23 14 46.4**	**-0.4**		
DAVOX	**Davos/Dischmat**	**4.60**	**330**	Pn		**Pn**	**23 14 50.3**	**+2.9**		
	comp=E,1.7nm,0.3s,baz=172,slow=18,SNR=17									
DAVOX				Sn		**Sn**	**23 15 44.9**	**+3.9**		
	comp=E,0.5nm,0.3s,baz=278,slow=21,SNR=2.1									
	comp=E,3.2nm,0.3s									
SQTA	**Sankt Quirin**	**4.60**	**343**	Pn		**Pn**	**23 14 48.9**	**+1.5**		
	comp=E,1.4nm,0.3s,SNR=7.0									
SQTA				*e*Sn		**Sn**	**23 15 42.7**	**+1.7**		
	comp=E,11nm,0.4s									
BBLS	**Lazići**	**4.63**	**75**	*e*Pn		**Pn**	**23 14 49.8**	**+2.0**		
WATA	**Walderalm**	**4.64**	**346**	*i* Pn		**Pn**	**23 14 51.2**	**+3.2**		
	comp=E,1.6nm,0.2s,SNR=4.5									
WATA				*e*Sn		**Sn**	**23 15 41.7**	**-0.3**		
	comp=E,19nm,0.6s									
ARSA	**Arzberg**	**4.70**	**20**	*e*Pn		**Pn**	**23 14 48.8**	**+0.1**		
	comp=E,0.7nm,0.3s									
ARSA				*e*Sn		**Sn**	**23 15 41.8**	**-1.5**		
	comp=E,2.4nm,0.4s									
MOTA	**Moosalm**	**4.74**	**342**	Pn		**Pn**	**23 14 52.3**	**+2.9**		
	comp=E,4.1nm,0.5s,SNR=7.3									
MOTA				*e*Sn		**Sn**	**23 15 44.2**	**-0.4**		
	comp=E,4.3nm,0.6s									
BIOA	**Bad Ischl, Aus**	**4.86**	**3**	*e*Pn		**Pn**	**23 14 54.0**	**+3.2**		
BIOA				*e*Sn		**Sn**	**23 15 48.8**	**+1.6**		
	comp=E,12nm,0.8s									
LMR	**La Mourre**	**4.94**	**278**	*e*Pn		**Pn**	**23 14 49.7**	**-2.2**		
LMR	**La Mourre**	**4.94**	**278**	*e*P		**Pn**	**23 14 53.6**	**+1.7**		
LMR				*e*Sn		**Sn**	**23 15 44.0**	**-5.1**		
	comp=E,0.7nm,0.4s									
RETA	**Reutte**	**4.96**	**340**	Pn		**Pn**	**23 14 54.4**	**+2.1**		
	SNR=5.8									
RETA				*e*Sn		**Sn**	**23 15 50.5**	**+0.8**		
	comp=E,1.9nm,0.4s									
SJES	**Sjenica**	**4.97**	**83**	*e*Pn		**Pn**	**23 14 54.7**	**+2.2**		
SJES				*e*Sn		**Sn**	**23 15 52.3**	**+2.2**		
DAVA	**Damuels**	**5.03**	**333**	Pn		**Pn**	**23 14 56.2**	**+2.8**		
	comp=E,4.3nm,0.5s,SNR=5.3									
DAVA				*e*Sn		**Sn**	**23 15 54.9**	**+3.2**		
	comp=E,3.4nm,0.3s									
MBDF	**Montbardon**	**5.03**	**294**	*e*P		**Pn**	**23 14 57.0**	**+3.6**		
MBDF				*e*Sn		**Sn**	**23 15 45.3**	**-6.4**		
	comp=E,2.8nm,0.5s									
MOA	**Molln**	**5.06**	**8**	*e*Pn		**Pn**	**23 14 56.5**	**+2.8**		
MOA	**Molln**	**5.06**	**8**	*e*Pn		**Pn**	**23 14 55.3**	**+1.6**		
	comp=E,0.6nm,0.2s									
MOA				*e*Sn		**Sn**	**23 15 53.4**	**+1.2**		
	comp=E,2.1nm,0.4s									
IVAS	**Ivanjica**	**5.12**	**79**	*e*Pn		**Pn**	**23 14 54.4**	**-0.2**		
IVAS				*e*Sn		**Sn**	**23 15 52.9**	**-0.9**		
TIR	**Tirane**	**5.17**	**105**	*e*Pn		**Pn**	**23 14 54.7**	**-0.4**		
TIR				*e*Sn		**Sn**	**23 15 55.5**	**+0.7**		
FRGS	**Fruska Gora**	**5.29**	**62**	*e*Pn		**Pn**	**23 14 56.8**	**0.0**		
RONA	**Rosalia, Austr**	**5.32**	**23**	*e*Pn		**Pn**	**23 14 56.2**	**-1.0**		
	comp=E,0.3nm,0.2s									
RONA				*e*Sn		**Sn**	**23 15 58.2**	**-0.4**		
	comp=E,0.9nm,0.3s									
LPG	**La Plagne**	**5.35**	**302**	*e*P		**Pn**	**23 15 02.5**	**+4.6**		
LPG				*e*Sn		**Sn**	**23 15 53.7**	**-6.1**		
	comp=E,3.6nm,0.5s									
LPL	**La Plagne**	**5.37**	**302**	*e*P		**Pn**	**23 15 01.9**	**+3.7**		
LPL				*e*Sn		**Sn**	**23 15 54.4**	**-5.8**		
	comp=E,2.1nm,0.4s									
TRUS	**Trudelj**	**5.41**	**73**	*e*Pn		**Pn**	**23 15 00.2**	**+1.8**		
CONA	**Conrad Observa**	**5.41**	**19**	*e*Pn		**Pn**	**23 14 57.9**	**-0.7**		
	comp=E,0.7nm,0.3s									
CONA				*e*Sn		**Sn**	**23 16 00.3**	**-0.7**		
	comp=E,4.5nm,0.9s									
GRUS	**Gruza**	**5.56**	**77**	*e*Pn		**Pn**	**23 15 02.0**	**+1.4**		
SMRF	**Simiane la Rot**	**5.68**	**284**	*e*P		**Pn**	**23 15 04.8**	**+2.6**		
SMRF				*e*Sn		**Sn**	**23 16 00.8**	**-6.7**		
	comp=E,3.4nm,0.8s									
ORIF	**Oris-en-Rattie**	**5.69**	**294**	*e*P		**Pn**	**23 15 05.3**	**+2.9**		
ORIF				*e*Sn		**Sn**	**23 16 01.4**	**-6.5**		
	comp=E,1.6nm,0.4s									
SELS	**Selova**	**5.80**	**84**	*e*Pn		**Pn**	**23 15 05.1**	**+1.2**		
GERES	**GERESS Array B**	**6.01**	**3**	Pn		**Pn**	**23 15 06.5**	**-0.3**		
	comp=E,0.3nm,0.3s,baz=175,slow=12,SNR=9.4									
GERES				Sn		**Sn**	**23 16 14.9**	**-0.8**		
	comp=E,0.8nm,0.3s,baz=180,slow=23,SNR=6.1									
	comp=E,0.5nm,0.3s									
CKRC	**Cesky Krumlov**	**6.03**	**7**	*e*PN		**Pn**	**23 15 06.9**	**0.0**		
CKRC				*e*SN		**Sn**	**23 16 14.0**	**-1.9**		
KHC	**Kasperske Hory**	**6.29**	**2**	*e*PN		**Pn**	**23 15 11.0**	**+0.4**		
KHC				*e*SN		**Sn**	**23 16 21.8**	**-0.8**		
CABF	**La Chapelle**	**6.32**	**309**	*e*P		**Pn**	**23 15 13.3**	**+2.3**		
CABF				*e*Sn		**Sn**	**23 16 19.6**	**-3.7**		
	comp=E,2.8nm,0.5s									
BARS	**Barje**	**6.32**	**87**	*e*Pn		**Pn**	**23 15 11.8**	**+0.8**		
BARS				*e*Sn		**Sn**	**23 16 23.0**	**-0.3**		
VIVF	**Saint-Julien-l**	**6.50**	**291**	*e*P		**Pn**	**23 15 16.7**	**+3.3**		
PRVS	**Prvonek**	**6.54**	**90**	*e*Pn		**Pn**	**23 15 15.5**	**+1.5**		
PRVS				*e*Sn		**Sn**	**23 16 29.4**	**+0.8**		
ZAGS	**Zajecar**	**6.65**	**79**	*e*Pn		**Pn**	**23 15 16.2**	**+0.8**		
HINF	**Hinteralfeld**	**6.69**	**320**	*e*P		**Pn**	**23 15 18.5**	**+2.4**		
HINF				*e*Sn		**Sn**	**23 16 25.5**	**-7.0**		
	comp=E,7.4nm,0.5s									
BOSS	**Bosilegrad**	**6.84**	**90**	*e*Pn		**Pn**	**23 15 19.9**	**+1.8**		
ZAPS	**Zavoj**	**6.91**	**83**	*e*Pn		**Pn**	**23 15 20.7**	**+1.6**		
ZAPS				*e*Sn		**Sn**	**23 16 37.3**	**-0.5**		
LASF	**Ste Croix**	**6.92**	**283**	*e*P		**Pn**	**23 15 20.7**	**+1.5**		
LASF				*e*Sn		**Sn**	**23 16 33.3**	**-4.7**		
	comp=E,0.4nm,0.4s									
CDF	**Champ du Feu**	**6.95**	**325**	*e*P		**Pn**	**23 15 21.2**	**+1.5**		
CDF				*e*Sn		**Sn**	**23 16 32.2**	**-6.6**		
	comp=E,2.7nm,0.4s									
HAU	**Haudompre**	**7.07**	**319**	*e*P		**Pn**	**23 15 23.6**	**+2.4**		
HAU				*e*Sn		**Sn**	**23 16 34.6**	**-7.0**		
	comp=E,12nm,0.5s									
VTS	**Vitosha**	**7.38**	**88**	*e*Pn		**Pn**	**23 15 26.9**	**+1.2**		
VTS				*e*Sn		**Sn**	**23 16 47.9**	**-1.6**		
SMF	**Signal de Mont**	**7.68**	**303**	*e*Pn		**Pn**	**23 15 28.4**	**-1.2**		
SMF				*e*Sn		**Sn**	**23 16 49.8**	**-6.8**		
	comp=E,1.6nm,0.4s									
KEST	**Kesra**	**7.71**	**204**	Pn		Pn	23 15 35.5	+5.3		
	comp=E,0.3nm,0.3s,baz=349,slow=5.2,SNR=7.5									
	comp=E,1.2nm,0.5s									
PAGF	**Fort de Pagny**	**7.75**	**320**	*e*P		**Pn**	**23 15 34.3**	**+3.7**		
	baz=139									
SFTF	**Sexfontaines**	**7.85**	**316**	*e*P		**Pn**	**23 15 36.6**	**+4.6**		
	baz=136									
SFTF				*e*Sn		**Sn**	**23 16 55.2**	**-5.7**		
	comp=E,0.9nm,0.3s									
SRS	**Serrai**	**7.92**	**99**	*e*Pn		**Pn**	**23 15 34.1**	**+1.2**		
LOR	**Lormes**	**7.96**	**307**	*e*P		**Pn**	**23 15 38.0**	**+4.5**		
	baz=127									
LOR				*e*Sn		**Sn**	**23 16 55.8**	**-7.9**		
	comp=E,2.4nm,0.5s									
MEZF	**Maizieres J'vi**	**8.04**	**318**	*e*Sn		**Sn**	**23 16 59.7**	**-5.8**		
	comp=E,3.8nm,0.6s									
AVF	**Avril sur Loir**	**8.04**	**303**	*e*P		**Pn**	**23 15 38.7**	**+4.1**		
AVF				*e*Sn		**Sn**	**23 16 59.6**	**-6.0**		
	comp=E,0.5nm,0.4s									
SSF	**Saint Saulge**	**8.07**	**305**	*e*P		**Pn**	**23 15 36.4**	**+1.4**		
SSF				*e*Sn		**Sn**	**23 17 00.3**	**-6.0**		
	comp=E,1.0nm,0.4s									
SAVF	**Savonnieres en**	**8.08**	**318**	*e*Pn		**Pn**	**23 15 35.5**	**+0.4**		
CAF	**Calviac**	**8.32**	**288**	*e*P		**Pn**	**23 15 39.9**	**+1.5**		
MMAI	**Mount Meron Ar**	**20.01**	**112**	P		Pn	23 18 12.3	0.0		
	comp=E,0.2nm,0.3s,baz=324,slow=11,SNR=3.9									
	comp=E,1.6nm,0.7s									
TORD	**Torodi Ar. Bea**	**31.22**	**202**	P		**P**	**23 20 00.0**	**+2.6**		
	comp=E,2.3nm,0.5s,baz=0.5,slow=8.9,SNR=1.5									
	comp=E,2.3nm,0.5s									

*IDC **26** 23:17:17.0±1.4, 63°.65N×148°.59W, h0km, mb3.3/5, mbtmp3.3/6, ML3.4/1, Error ellipse: s-maj=29.7km s-min=15.9km az=104.0*

*ANF **26** 23:17:18.0±0.2, 63°.56N×148°.04W, h1km±2km, ML3.5/74, ML3.5/73, Error ellipse: s-maj=1.5km s-min=1.3km az=56.0*

*NEIC **26** 23:17:18.2±1.7, 63°.55N±0°.01×147°.95W±0°.04, h1km±9km, Error ellipse: s-maj=2.7km s-min=1.8km az=97.0*

*AEIC **26** 23:17:18.7±1.4, 63°.56N±0°.01×148°.06W±0°.04, h4km±6km, ML3.2/111, ML3.3/164(NEIC), Error ellipse: s-maj=2.8km s-min=1.8km az=100.0*

ISC 26 23:17:18.6±1.0, 63°.57N±0°.01×148°.05W±0°.02, h5km±8km, n234, σ0s96/276, mb3.4/5, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RND	**Reindeer**	**0.40**	**246**		**Pg**	**23 17 26.5**	**+0.3**
RND				Sg	**Sg**	**23 17 31.5**	**+0.1**
MCK	**McKinley**	**0.43**	**293**		**Pg**	**23 17 27.3**	**+0.4**
MCK				Sg	**Sg**	**23 17 33.6**	**+1.1**
MCK				IAML		23 17 34.6	
	comp=E,2µm,0.2s						
MCK				IAML		23 17 34.7	
	comp=N,2µm,0.4s						
MCK	**McKinley**	**0.43**	**293**	P	**Pb**	**23 17 27.7**	**-1.1**
	baz=113

comp=N,31nm,0.3s,baz=203,slow=17,SNR=51
ILAR Lg Lg 23 18 00.9
comp=N,112nm,0.3s,baz=204,slow=28,SNR=34
ILAR Eielson Array 1.31 22 Pg 23 17 43.0 -0.7
TCOL CIGO, UAF Yank 1.31 3 Pg 23 17 43.2 -0.6
TCOL CIGO, UAF Yank 1.31 3 P Pg 23 17 43.2 -0.6
baz=184,SNR=6.1
TCOL S **Sg 23 18 00.3 -0.6**
baz=184
COLA College 1.32 4 Pg 23 17 43.2 -0.6
COLA College 1.32 4 P Pg 23 17 43.2 -0.6
baz=184
COLA S **Sg 23 18 00.4 -0.4**
baz=184
MDM Murphy Dome 1.40 357 Pn 23 17 44.5 -0.4
MDM IAML 23 18 05.1
comp=E,423nm,0.8s
BPAW Bear Paw Mtn. 1.41 294 Pn 23 17 43.8 -1.1
BPAW IAML 23 18 04.8
comp=N,726nm,0.8s
BPAW IAML 23 18 05.5
comp=E,373nm,0.5s
BPAW Bear Paw Mtn. 1.41 294 P Pn 23 17 44.0 -1.0
baz=111,SNR=112
BPAW S **Sg 23 18 02.9 -0.9**
baz=111
RIDG Independent Ri 1.44 82 Pn 23 17 44.9 -0.5
RIDG IAML 23 18 08.3
comp=N,528nm,0.5s
RIDG IAML 23 18 08.6
comp=E,354nm,0.5s
RIDG Independent Ri 1.44 82 P Pn 23 17 44.9 -0.5
baz=264,SNR=64
RIDG S **Sn 23 18 04.7 +0.1**
baz=264
CUT Chulitna 1.55 222 Pn 23 17 46.4 -0.4
CUT Chulitna 1.55 222 P Pn 23 17 46.5 -0.2
baz=40,SNR=15
CUT S **Sn 23 18 07.5 +0.3**
baz=40
J25K Salcha River, 1.58 47 Pn Pn 23 17 46.6 -0.7
J25K IAML 23 18 10.4
comp=N,457nm,0.4s
J25K IAML 23 18 11.5
comp=E,316nm,0.5s
J25K Salcha River, 1.58 47 P Pn 23 17 46.6 -0.7
baz=229,SNR=63
POKR Poker Plat Res 1.58 9 Pn 23 17 47.0 -0.4
POKR IAML 23 18 10.1
comp=E,288nm,0.3s
POKR IAML 23 18 10.4
comp=N,321nm,0.5s
POKR Poker Plat Res 1.58 9 P Pn 23 17 46.9 -0.4
baz=190,SNR=38
POKR S **Sn 23 18 08.3 +0.2**
baz=190
M24K Tolsona, Glenn 1.70 149 Pn 23 17 48.9 0.0
M24K IAML 23 18 17.7
comp=N,438nm,1.1s
M24K IAML 23 18 18.1
comp=E,456nm,1.0s
M24K Tolsona, Glenn 1.70 149 P Pn 23 17 49.3 +0.3
baz=330,SNR=53
M24K S **Sn 23 18 11.2 +0.2**
baz=330
PS07 TAPS Pump Stn7 1.75 357 Pn 23 17 49.8 +0.1
HARP HAARP 1.77 130 Pn 23 17 50.5 +0.7
HARP HAARP 1.77 130 P Pn 23 17 50.5 +0.7
baz=313,SNR=13
HARP S **Sn 23 18 13.2 +0.6**
baz=313
SCM Sheep Creek Mo 1.77 169 Pn 23 17 49.5 -0.5
SCM IAML 23 18 18.4
comp=E,314nm,0.5s
SCM Sheep Creek Mo 1.77 169 P Pn 23 17 49.6 -0.4
baz=349,SNR=62
SCM S **Sn 23 18 12.4 -0.5**
baz=349
SML Sawmill 1.77 184 Pn 23 17 49.4 -0.6
SML IAML 23 18 13.8
comp=E,451nm,0.7s
SML Sawmill 1.77 184 P Pn 23 17 49.0 -1.0
baz=4.0,SNR=106
SML S **Sn 23 18 12.1 -0.8**
baz=4.0
DOT Dot Lake 1.78 86 Pn 23 17 49.2 -0.9
M23K Glacier View 1.79 175 Pn 23 17 49.3 -0.8
M23K Glacier View 1.79 175 P Pn 23 17 49.4 -0.8
baz=355,SNR=106
M23K S **Sn 23 18 12.7 -0.5**
baz=355
CAST Castle Rocks 1.82 267 Pn 23 17 49.8 -0.8
CAST Castle Rocks 1.82 267 IAML 23 18 18.1
comp=E,288nm,0.5s
CAST Castle Rocks 1.82 267 P Pn 23 17 49.6 -0.9
baz=84,SNR=38
CAST Sb **Sg 23 18 16.3 -0.6**
baz=84
GHO Glory Hole Cre 1.85 193 Pn 23 17 50.7 -0.3
GHO IAML 23 18 21.6
comp=E,247nm,0.7s
GHO IAML 23 18 22.7
comp=N,265nm,0.8s
SCRK Sand Creek 1.85 75 Pn 23 17 50.6 -0.5
SCRK Sand Creek 1.85 75 P Pn 23 17 50.4 -0.8
baz=259,SNR=46
SCRK S **Sn 23 18 15.2 +0.3**
baz=259
MLY Manley 1.88 323 Pn 23 17 51.0 -0.5
MLY IAML 23 18 15.2
comp=E,221nm,0.4s
MLY Manley 1.88 323 P Pn 23 17 50.9 -0.6
baz=140,SNR=87
MLY S **Sn 23 18 13.6 -2.0**
baz=140
PS11 TAPS Pump St11 1.90 140 Pn 23 17 51.0 -0.7
CHUM Lake Minchumin 1.93 281 Pn 23 17 51.3 -0.7
CHUM Lake Minchumin 1.93 281 P Pn 23 17 50.9 -1.1
baz=98,SNR=31
CHUM Sb **Sg 23 18 19.7 -0.7**
baz=98
PPLA Purkeypile 1.99 252 Pn Pn 23 17 53.2 +0.1
PPLA Purkeypile 1.99 252 P Pn 23 17 53.6 +0.5
baz=68,SNR=44
PMR Palmer 2.04 195 Pn 23 17 53.2 -0.4
PMR IAML 23 18 21.8
comp=E,192nm,0.4s
PMR IAML 23 18 21.9
comp=N,191nm,0.4s
PMR Palmer 2.04 195 P Pn 23 17 54.8 +1.2
baz=14,SNR=30
M22K Willow 2.06 209 Pn 23 17 53.8 0.0
M22K Willow 2.06 209 P Pn 23 17 54.4 +0.6
baz=27,SNR=5.4
MENT Mentasta 2.06 106 Pn 23 17 54.3 +0.4
KNK Knik Glacier 2.17 185 Pn 23 17 54.4 -1.0
KNK IAML 23 18 26.5
comp=N,294nm,0.4s
KNK Knik Glacier 2.17 185 P Pn 23 17 55.9 +0.5
baz=4.8,SNR=24
J26L Joseph Creek 2.19 63 Pn 23 17 55.5 -0.2
J26L IAML 23 18 27.7
comp=N,201nm,0.4s
J26L Joseph Creek 2.19 63 P Pn 23 17 55.5 -0.2
baz=246,SNR=31
L26K Log Cabin Wild 2.19 102 Pn 23 17 55.7 0.0
L26K Log Cabin Wild 2.19 102 Pb Pb 23 17 58.6 0.0
baz=286,SNR=88
PRP Porcupine Dome 2.24 28 Pn 23 17 56.4 -0.1
PRP IAML 23 18 32.2
comp=E,262nm,0.5s
PRP IAML 23 18 37.0
comp=N,215nm,1.0s
PRP Porcupine Dome 2.24 28 P Pn 23 17 56.4 -0.1
baz=210,SNR=31
H24K Noodor Dome 2.28 2 Pn 23 17 57.0 0.0
H24K Noodor Dome 2.28 2 P Pn 23 17 57.0 0.0
baz=182,SNR=17
H24K S **Sn 23 18 23.6 -1.8**
baz=182
KLU Klutina 2.30 154 Pn 23 17 57.0 -0.3
KLU IAML 23 18 31.6
comp=N,188nm,0.3s
KLU IAML 23 18 31.6
comp=E,159nm,0.4s
KLU Klutina 2.30 154 P Pn 23 17 57.3 +0.1
baz=336,SNR=37

I21K Tanana 2.36 315 Pn 23 17 57.7 -0.2
I21K IAML 23 18 41.5
comp=E,152nm,1.1s
I21K IAML 23 18 42.4
comp=N,178nm,0.7s
I21K Tanana 2.36 315 P Pn 23 17 57.4 -0.5
baz=132,SNR=35
H23K Yukon River 2.36 345 Pn 23 17 58.2 +0.2
H23K Yukon River 2.36 345 P Pn 23 17 58.0 0.0
baz=164,SNR=13
N25K Chitina, Valde 2.53 139 Pn Pn 23 18 01.3 +0.9
N25K Chitina, Valde 2.53 139 P Pn 23 18 01.8 +1.4
baz=322,SNR=30
M26K Nabesna, AK 2.58 115 Pn 23 18 01.5 +0.4
M26K IAML 23 18 38.6
comp=N,203nm,0.6s
M26K IAML 23 18 40.4
comp=E,181nm,0.5s
M26K Nabesna, AK 2.58 115 P Pn 23 18 02.5 +1.4
baz=299,SNR=27
RC01 Rabbit Creek A 2.61 198 Pn 23 18 01.7 +0.3
RC01 IAML 23 18 38.4
comp=N,146nm,0.4s
RC01 IAML 23 18 43.4
comp=E,189nm,0.6s
RC01 Rabbit Creek A 2.61 198 P Pn 23 18 02.6 +1.3
baz=17,SNR=24
JPK Jack Peak 2.61 164 Pn 23 18 02.8 +1.3
FIS Fire Island 2.63 204 Pn Pn 23 18 01.4 -0.3
DIV Divide 2.67 156 Pn 23 18 02.8 +0.6
K27K Chicken 2.69 77 Pn Pn 23 18 02.8 +0.2
K27K IAML 23 18 46.1
comp=N,90nm,0.6s
K20K Telida 2.71 268 Pn 23 18 02.0 -0.8
K20K IAML 23 18 51.6
comp=N,96nm,0.5s
K20K IAML 23 18 52.3
comp=E,90nm,0.6s
K20K Telida 2.71 268 P Pn 23 18 01.7 -1.1
baz=83
PWL Port Wells 2.72 183 Pn 23 18 03.0 0.0
PWL IAML 23 18 44.8
comp=N,182nm,0.6s
PWL IAML 23 18 47.0
comp=E,151nm,0.8s
PWL Port Wells 2.72 183 P Pn 23 18 04.1 +1.1
baz=2.6,SNR=9.9
GLI Glacier Island 2.73 170 Pn 23 18 03.0 -0.1
GLI IAML 23 18 42.4
comp=N,178nm,0.7s
GLI Glacier Island 2.73 170 P Pn 23 18 04.3 +1.2
baz=351,SNR=15
I26K Coal Creek Min 2.75 48 Pn 23 18 03.4 +0.1
I26K IAML 23 18 49.5
comp=E,174nm,0.8s
J20K Nowinta River 2.77 286 Pn Pn 23 18 02.8 -0.8
J20K **Pg 23 18 12.6 +1.0**
J20K IAML 23 18 51.2
comp=N,109nm,0.6s
J20K IAML 23 18 52.1
comp=E,132nm,0.6s
J20K Nowinta River 2.77 286 P Pn 23 18 02.8 -0.8
baz=100,SNR=6.2
L27K Beaver Creek, 2.85 97 Pn 23 18 04.5 -0.3
L27K IAML 23 18 49.1
comp=N,84nm,0.7s
L27K Beaver Creek, 2.85 97 P Pn 23 18 04.4 -0.4
baz=283
BC03 2.87 97 Pn 23 18 05.0 0.0
BCAR Beaver Creek A 2.87 97 Pn Pn 23 18 04.3 -0.7
H25K Birch Creek 2.87 18 Pn 23 18 05.5 +0.5
H25K Birch Creek 2.87 18 P Pn 23 18 05.3 +0.3
baz=200,SNR=8.1
L20K Farewell, AK 2.87 250 P Pn 23 18 04.9 -0.2
baz=65
M20K Styx River 2.89 236 Pn 23 18 05.6 +0.3
M20K IAML 23 18 54.6
comp=E,77nm,0.6s
GLB Gilahina Butte 2.90 135 Pn Pn 23 18 06.6 +1.2
FID Port Fidalgo 2.92 165 Pn 23 18 06.0 +0.3
FID IAML 23 18 54.9
comp=N,130nm,0.5s
FID IAML 23 18 56.4
comp=E,134nm,0.5s
H21K Melozitna Rive 2.93 318 Pn 23 18 05.7 -0.2
H21K Melozitna Rive 2.93 318 Pg Pg 23 18 14.5 -0.2
H21K IAML 23 19 00.1
comp=E,78nm,0.8s
H21K IAML 23 19 00.1
comp=N,75nm,0.8s
H21K Melozitna Rive 2.93 318 P Pn 23 18 05.4 -0.5
baz=134,SNR=9.1
SPCG Spurr Capps Gl 2.94 221 Pn 23 18 06.6 +0.6
BMRM Bremner River 3.06 147 Pn Pn 23 18 07.5 -0.2
BMRM Bremner River 3.06 147 P Pn 23 18 09.1 +1.3
baz=330
M27K Edge Creek, AK 3.07 111 Pn 23 18 08.3 +0.4
M27K Pg **Pb 23 18 14.7 +1.0**
M27K IAML 23 18 57.4
comp=E,74nm,0.6s
M27K IAML 23 18 59.1
comp=N,97nm,0.7s
M27K Edge Creek, AK 3.07 111 P Pn 23 18 08.9 +1.1
baz=296,SNR=20
M27K Sb **Sb 23 18 52.9 +1.5**
baz=296
SPNN North Nagishla 3.09 226 Pn 23 18 09.1 +1.0
G24K Hadweenzic Riv 3.16 4 Pn 23 18 09.1 +0.1
G24K Hadweenzic Riv 3.16 4 P Pn 23 18 08.9 0.0
baz=185,SNR=9.1
O22K Cooper Landing 3.19 195 Pn 23 18 08.8 -0.6
O22K Cooper Landing 3.19 195 P Pn 23 18 09.5 +0.1
baz=14
MCARA McCarthy VSAT 3.20 131 Pn 23 18 09.1 -0.4
MCARA IAML 23 19 07.5
comp=N,99nm,1.0s
MCARA IAML 23 19 09.0
comp=E,86nm,0.9s
EYAK Cordova Ski Ar 3.21 159 Pn 23 18 08.9 -0.8
SLKM Skilak Lake 3.24 199 Pn 23 18 12.1 +2.1
FYU Fort Yukon 3.24 20 Pn 23 18 09.0 -1.0
EGAK Eagle 3.25 65 Pn 23 18 10.5 +0.3
EGAK IAML 23 19 03.3
comp=E,95nm,0.6s
EGAK IAML 23 19 08.2
comp=E,123nm,0.7s
HIN Hinchinbrook I 3.26 166 Pn Pn 23 18 09.7 -0.7
HIN IAML 23 19 04.4
comp=N,120nm,1.0s
G23K Bananza Creek 3.27 346 Pn 23 18 10.8 +0.3
G23K Bananza Creek 3.27 346 P Pn 23 18 10.7 +0.3
baz=164,SNR=9.3
M19K Big River Lodg 3.36 243 Pn 23 18 12.6 +0.8
M19K IAML 23 19 11.1
comp=N,54nm,0.7s
M19K Big River Lodg 3.36 243 P Pn 23 18 12.0 +0.2
baz=58,SNR=9.2
L19K White Mountain 3.41 249 Pn 23 18 12.9 +0.4
L19K IAML 23 19 21.6
comp=E,52nm,1.1s
L19K White Mountain 3.41 249 P Pn 23 18 12.6 +0.1
baz=63
IM03 3.44 317 Pn 23 18 12.6 -0.2
IMAR Indian Mountai 3.44 317 Pn 23 18 12.8 -0.1
I27K Kandik River 3.44 51 Pn 23 18 13.8 +0.9
I27K Kandik River 3.44 51 P Pn 23 18 13.2 +0.3
baz=236
BVCY Beaver Creek 3.48 106 P Pn 23 18 13.9 +0.6
baz=292,SNR=17
RAGM Ragged Mountai 3.56 152 Pn Pn 23 18 13.2 -1.3
RAGM **Pb 23 18 23.3 +1.2**
TTA Tatalina 3.66 264 Pn 23 18 19.7 +3.8
HMT Hamilton 3.70 149 Pb 23 18 22.4 -2.0
TGL Tana Glacier 3.73 137 Pn 23 18 17.0 0.0
TGL IAML 23 19 16.7
comp=N,42nm,0.8s
G21K Allakaket 3.76 324 Pn 23 18 17.3 +0.1
G21K Allakaket 3.76 324 P Pn 23 18 17.3 +0.1
baz=140,SNR=8.2
BERG Berg Lake 3.79 145 Pn Pn 23 18 17.0 -0.6
G26K Porcupine Rive 3.84 26 Pn 23 18 18.3 0.0
G26K Porcupine Rive 3.84 26 P Pn 23 18 18.1 -0.2
baz=210,SNR=16
H27K Steamboat Moun 3.86 43 Pn 23 18 18.1 -0.4
H27K Steamboat Moun 3.86 43 P Pn 23 18 18.7 +0.1
baz=229,SNR=5.8
DAWY Dawson 3.87 79 Pn 23 18 19.1 +0.4
DAWY Dawson 3.87 79 IAML 23 19 28.5
comp=N,44nm,0.6s
DAWY IAML 23 19 33.9
comp=E,38nm,0.6s
DAWY Dawson 3.87 79 P Pn 23 18 18.6 -0.2
baz=266
F24K Squaw Lake 3.97 1 Pn 23 18 20.7 +0.6
F24K Squaw Lake 3.97 1 P Pn 23 18 20.7 +0.6
baz=181,SNR=12
WAX Waxell Ridge 3.97 140 Pn Pn 23 18 19.0 -1.2
WAX **Pb 23 18 28.7 -0.3**
WAX IAML 23 19 19.8
comp=E,53nm,0.6s
ISLE Juniper Island 4.00 135 Pn Pn 23 18 20.6 -0.1
ISLE **Pb 23 18 31.9 +2.2**
ISLE IAML 23 19 36.9
comp=E,42nm,1.3s
ISLE IAML 23 19 43.3
comp=N,41nm,1.4s
CTG Chitna Glacier 4.08 127 P Pn 23 18 22.0 +0.3
baz=313
CTGM Chitina Glacie 4.08 127 Pn 23 18 21.2 -0.6
CTGM IAML 23 20 11.1
comp=N,31nm,0.4s
N19K Bonanza Creek 4.09 230 Pn Pn 23 18 19.9 -1.9
N19K IAML 23 19 41.1
comp=N,33nm,0.7s
N19K Bonanza Creek 4.09 230 P Pn 23 18 22.2 +0.4
baz=45
BM03 Burnt Mountain 4.13 19 Pn 23 18 22.4 +0.2
BMAR Burnt Mountain 4.14 19 Pn 23 18 22.1 -0.3
F25K Christian Rive 4.17 13 Pn 23 18 23.1 +0.3
F25K Christian Rive 4.17 13 P Pn 23 18 22.9 +0.1
baz=195,SNR=10.0
BM01 Burnt Mountain 4.17 19 Pn 23 18 23.0 +0.2
G27K Doyon Strip 4.22 37 Pn 23 18 23.4 -0.3
G27K Doyon Strip 4.22 37 P Pn 23 18 23.3 -0.3
baz=223,SNR=7.3
LOGN Logan Glacier 4.29 127 Pn 23 18 23.2 -1.5
SVW2 Sparrevohn 4.30 238 Pn Pn 23 18 24.5 -0.2
SVW2 IAML 23 19 37.8
comp=N,27nm,1.4s
SVW2 IAML 23 19 41.8
comp=E,25nm,0.8s
F21K Alatna River 4.32 331 Pn 23 18 25.6 +0.6
F21K Alatna River 4.32 331 P Pn 23 18 25.5 +0.6
baz=146,SNR=13
CNPM China Poot 4.33 202 Pn Pn 23 18 26.6 +1.5
CNPM IAML 23 19 23.4
comp=N,25nm,3.0s
CNPM IAML 23 20 01.1
comp=E,26nm,2.3s
ILSW Iliamna Southw 4.33 216 Pn Pn 23 18 27.2 +2.0
ILSW IAML 23 19 38.4
comp=N,22nm,0.8s
ILSW IAML 23 19 38.7
comp=E,21nm,0.7s
YAH Yahtse 4.38 134 Pn 23 18 27.5 +1.6
YAH IAML 23 20 46.5
comp=N,27nm,2.4s
F26K Sheenjek River 4.45 20 Pn 23 18 26.9 +0.2
F26K Sheenjek River 4.45 20 P Pn 23 18 26.7 0.0
baz=203,SNR=15
M29M Somme Creek 4.51 100 Pn 23 18 27.9 +0.2
M29M Somme Creek 4.51 100 P Pn 23 18 27.8 +0.2
baz=289
TABL Table Mountain 4.52 131 Pb 23 18 34.0 -4.5
I29M Ogilvie Camp, 4.58 63 Pn 23 18 28.5 -0.1
I29M Ogilvie Camp, 4.58 63 P Pn 23 18 28.4 -0.1
baz=251,SNR=13
P19K Oil Pt 4.64 215 Pn Pn 23 18 31.9 +2.5
P19K IAML 23 19 44.8
comp=E,43nm,0.6s
P19K IAML 23 19 48.0
comp=N,37nm,1.4s
N18K Kilae Creek 4.68 235 Pn Pn 23 18 30.0 +0.1
N18K Kilae Creek 4.68 235 P Pn 23 18 30.4 +0.5
baz=48,SNR=7.3
E25K Arctic Village 4.69 11 P Pn 23 18 30.4 +0.5
baz=194,SNR=5.1
K29M Barlow Dome 4.69 82 P Pn 23 18 30.2 +0.1
baz=271
O18K Koktuh Hills 5.05 226 Pn Pn 23 18 36.3 +1.4
PCA Pinnacle 5.07 130 Pn Pn 23 18 32.9 -2.4
TOLK Toolik Lake Re 5.13 354 Pn 23 18 38.0 +1.9
TOLK IAML 23 19 38.8
comp=E,27nm,0.6s
TOLK Toolik Lake Re 5.13 354 P Pn 23 18 37.7 +1.6
baz=172,SNR=11
M30M Minto, Yukon 5.21 96 Pn Pn 23 18 36.8 -0.4
M30M IAML 23 21 29.8
comp=E,25nm,0.8s
M30M Minto, Yukon 5.21 96 P Pn 23 18 36.8 -0.4
baz=286
E27K Coleen River 5.34 27 Pn 23 18 38.4 -0.4
E27K Coleen River 5.34 27 P Pn 23 18 38.5 -0.4
baz=213
Q19K Cape Douglas, 5.38 213 Pn Pn 23 18 40.3 +0.8
Q19K Cape Douglas, 5.38 213 P Pn 23 18 40.7 +1.2
baz=28
Q20K Shuyak Island 5.40 205 P Pn 23 18 41.1 +1.4
baz=21
P18K Big Mountain, 5.42 223 Pn Pn 23 18 39.0 -1.0
N30M Aishikik Lake 5.50 108 P Pn 23 18 42.8 +1.6
baz=297
D23K Nanushuk River 5.53 350 Pn 23 18 43.6 +2.2
D23K Nanushuk River 5.53 350 P Pn 23 18 43.7 +2.2
baz=168
EPYK Eagle Plains 5.57 55 P Pn 23 18 42.0 0.0
baz=245,SNR=6.2
HYT Haines Junctio 5.65 114 Pn Pn 23 18 44.0 +0.7
HYT Pg **Pb 23 19 01.8 +4.2**
O17K Koliganek Bris 5.75 233 P Pn 23 18 44.8 +0.4
baz=45
D25K Kavik River 5.82 6 Pn 23 18 47.2 +1.7
D25K Kavik River 5.82 6 P Pn 23 18 47.0 +1.5
baz=187,SNR=13
N16K Nishlik Lake 5.92 243 P Pn 23 18 47.9 +1.0
baz=54
N31M Braeburn, Yuko 6.05 105 Pn Pn 23 18 47.1 -1.6
C24K Franklin Bluff 6.19 358 Pn 23 18 51.9 +1.4
C24K Franklin Bluff 6.19 358 P Pn 23 18 51.8 +1.3
baz=177
KDAK Kodiak Island 6.21 203 Pn Pn 23 18 49.6 -1.3
C27K Jago River 6.33 14 Pn 23 18 53.8 +1.4
C27K Jago River 6.33 14 P Pn 23 18 53.4 +1.0
baz=198
C23K Itkillik River 6.38 352 Pn 23 18 54.2 +1.1
C23K Itkillik River 6.38 352 P Pn 23 18 54.5 +1.4
baz=170
C26K Camden Bay 6.50 10 P Pn 23 18 55.8 +1.1
baz=192
INK Inuvik 7.59 45 Pn Pn 23 19 09.3 -0.4
comp=E,0.3nm,0.3s,baz=229,slow=9.9,SNR=2.2
comp=E,2.4nm,0.6s
PDAR Pinedale Array 30.35 115 P P 23 23 32.3 +1.1
comp=E,0.4nm,0.7s,baz=312,slow=9.4,SNR=4.4
comp=E,0.4nm,0.7s
NVAR Mina Array Bea 30.82 130 P P 23 23 37.4 +2.0
comp=E,0.1nm,0.3s,baz=302,slow=11,SNR=2.2
comp=E,0.1nm,0.3s
TXAR Lajitas Array 44.34 119 P P 23 25 30.7 +1.1
comp=E,0.1nm,0.5s,baz=321,slow=8.5,SNR=3.8
comp=E,0.1nm,0.5s
MKAR Makanchi Array 63.03 324 P P 23 27 44.2 -2.0
comp=E,0.2nm,0.6s,baz=46,slow=6.2,SNR=2.5
comp=E,0.2nm,0.6s
ESDC Sonseca Array 73.21 28 P P 23 28 49.2 -1.0
comp=E,0.4nm,0.7s,baz=345,slow=4.5,SNR=4.7
comp=E,0.4nm,0.7s

NEIC ***26*** *23:26:00.8±1.7, 10.7°S±0.1°×165.7°E±0.1°, h40km±11km, mb4.6/17, Error ellipse: s-maj=19.3km s-min=13.5km az=58.0*
IDC ***26*** *23:26:02.6±3.7, 10.88°S×165.63°E, h60km±31km, mb3.7/8, mbtmp4.2/10, ML4.8/2, MS3.5/10, Error ellipse: s-maj=24.9km s-min=23.5km az=71.0*
ISC 26 23:25:59.7±0.7, 10.78°S±0.07°×165.77°E±0.09, h35km, n45, σ1§25/42, **mb4.2**/13, **MS3.5**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.89**	**283**	P		**Pn**	**23 27 25.8**	**+1.3**

42nm,0.3s,baz=177,slow=9.0,SNR=2.5
HNR S **Sn** **23 28 32.1 +1.3**
67nm,0.4s,baz=202,slow=19,SNR=1.4
140nm,0.4s
HNR Honiara 5.89 283 Pn **Pn** **23 27 24.2 -0.3**
KOUNC **Koumac, New Ca 9.82 188** **Pn** **23 28 19.1 +0.6**
LIFNC **LIFOU 10.04 172** Pn **Pn** **23 28 19.8 -1.7**
MARNC **Mare, Loyalty 10.86 169** Pn **Pn** **23 28 34.3 +1.6**
DZM Mont Dzumac 11.25 177 P **Pn** **23 28 39.1 +0.9**
4.1nm,0.3s,baz=12,slow=20,SNR=45
DZM S **Sn** **23 30 40.7 -2.1**
3.8nm,0.8s,baz=52,slow=13,SNR=1.3
9.8nm,0.4s
DZM Mont Dzumac 11.25 177 **Pn** **23 28 39.5 +1.4**
ONTNC **Ouen Toro 11.48 177** **Pn** **23 28 43.0 +1.7**
OUENC **Ouen Island, N 11.62 175** Pn **Pn** **23 28 44.3 +1.2**
PINNC **Pines Island, 11.88 172** Pn **Pn** **23 28 48.0 +1.3**
PATS Pohnpei 19.01 337 P **P** **23 30 16.4 -2.2**
PATS IAmb IAmb 23 30 59.6
comp=Z,157nm,1.5s
KWAJ Kwajalein Atol 19.54 5 P **P** **23 30 24.5 +0.1**
EIDS Eidsvold 20.11 222 **P** **23 30 31.9 +1.3**
EIDS IAmb IAmb 23 30 33.0
comp=Z,14nm,0.9s
CTA Charters Tower 20.95 241 P **P** **23 30 40.1 +0.4**
comp=Z,13nm,1.0s,baz=64,slow=8.0,SNR=5.5
comp=Z,13nm,1.0s
CTAO Charters Tower 20.95 241 P **P** **23 30 40.1 +0.4**
CTAO IAmb IAmb 23 30 46.1
comp=Z,14nm,0.8s
AFI Afiamalu 22.15 100 LR LR 23 37 56.4
comp=Z,103nm,18.9s,baz=26,slow=32
ARMA Armidale 23.55 212 P **P** **23 31 07.4 +0.2**
ARMA IAmb IAmb 23 31 18.0
comp=Z,31nm,1.4s
STKA Stephens Creek 30.65 223 P **P** **23 32 11.2 +0.2**
comp=Z,1.6nm,0.5s,baz=62,slow=11,SNR=5.5
STKA LR LR 23 43 35.4
comp=Z,104nm,20.5s,baz=27,slow=34
comp=Z,1.6nm,0.5s
STKA Stephens Creek 30.65 223 P **P** **23 32 11.7 +0.8**
TUWZ Tuamarina 31.37 168 P **P** **23 32 15.4 -1.7**
WR0 Warramunga Arr 31.41 249 P **P** **23 32 15.6 -2.2**
WR0 IAmb IAmb 23 32 34.3
comp=Z,14nm,1.5s
THZ Tophouse 31.49 170 P **P** **23 32 19.4 +1.1**
WB0 Warramunga Arr 31.51 250 P **P** **23 32 17.9 -0.8**
WB0 IAmb IAmb 23 32 18.9
comp=Z,4.9nm,0.7s
WB2 Warramunga Arr 31.59 249 P **P** **23 32 18.2 -1.2**
WB2 IAmb IAmb 23 32 30.1
comp=Z,12nm,1.2s
WRA Warramunga Arr 31.60 249 P **P** **23 32 17.7 -1.8**
comp=Z,2.9nm,0.7s,baz=82,slow=8.8,SNR=18
WRA PcP **PcP** **23 35 11.3 -0.2**
comp=Z,0.4nm,0.8s,baz=65,slow=2.6,SNR=1.4
WRA LR LR 23 45 16.8
comp=Z,100nm,18.2s,baz=36,slow=37
comp=Z,2.9nm,0.7s
WRA Warramunga Arr 31.60 249 P **P** **23 32 18.0 -1.5**
BSWZ Blackbirch Sta 31.63 168 P **P** **23 32 21.4 +2.0**
TOO Toolangi 32.31 211 P **P** **23 32 25.4 -0.1**
TOO IAmb IAmb 23 33 06.8
comp=Z,27nm,1.4s
AS31 Alice Springs 32.93 243 P **P** **23 32 29.8 -1.4**
ASAR Alice Springs 32.93 243 P **P** **23 32 28.9 -2.3**
comp=Z,2.9nm,0.8s,baz=74,slow=9.4,SNR=23
ASAR PcP **PcP** **23 35 14.8 -0.3**
comp=Z,0.4nm,0.6s,baz=85,slow=2.0,SNR=2.7
ASAR LR LR 23 45 03.2
comp=Z,79nm,18.7s,baz=144,slow=35
comp=Z,2.9nm,0.8s
ASAR Alice Springs 32.93 243 P **P** **23 32 31.0 -0.2**
BBOO Buckleboo 35.03 227 P **P** **23 32 49.0 -0.3**
FITZ Fitzroy Crossi 39.47 255 P **P** **23 33 26.0 -1.1**
FITZ IAmb IAmb 23 34 08.2
comp=Z,11nm,1.4s
PPT Papeete 43.74 104 LR LR 23 48 16.9
comp=Z,54nm,19.2s,baz=6.0,slow=30
MORW Morawa 49.77 241 P **P** **23 34 49.2 0.0**
PETK Petropavlovsk- 64.00 355 LR LR 23 57 34.3
comp=Z,21nm,20.8s,baz=139,slow=30
KLR Kul'dur 66.82 336 LR LR 00 06 36.8
comp=Z,15nm,18.0s,baz=188,slow=36
SONM Songino Array 78.47 324 P **P** **23 37 57.6 +0.3**
comp=Z,0.2nm,0.3s,baz=145,slow=5.3,SNR=1.8
comp=Z,0.2nm,0.3s
QSPA South Pole Qui 79.22 180 P **P** **23 38 00.8 -0.4**
ILAR Eielson Array 83.25 19 P **P** **23 38 22.5 +0.2**
comp=Z,0.7nm,0.7s,baz=230,slow=6.1,SNR=4.4
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 85.83 50 P **P** **23 38 37.4 +1.2**
comp=Z,0.3nm,0.8s,baz=241,slow=9.2,SNR=2.0
comp=Z,0.3nm,0.8s
PFO Pinyon Flats O 85.91 55 LR LR 00 12 44.4
comp=Z,30nm,18.3s,baz=218,slow=32
ELK Elko 88.75 48 LR LR 00 15 58.6
comp=Z,26nm,18.1s,baz=252,slow=34
MKAR Makanchi Array 93.34 317 P **P** **23 39 10.7 -0.5**
comp=Z,0.4nm,0.6s,baz=90,slow=6.3,SNR=4.2
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 95.68 61 LR LR 00 17 52.0
comp=Z,23nm,18.7s,baz=202,slow=32

*IDC **26** 23:34:05.8±3.1,6.78S×155.06E,h83km±28km,mb3.8/15, mbtmp4.1/17,MS3.4/2,Error ellipse: s-maj=18.7km s-min=16.1km az=80.0*
*NEIC **26** 23:34:07.9±1.8,6.7S±0.1×155.0E±0.2,h92km±6km, mb4.4/21,Error ellipse: s-maj=27.5km s-min=9.1km az=53.0*
ISC 26 23:34:03.1±0.5,6.75S±0.09×155.2E±0.1,h56km,n46, σ1s21/47,mb4.3/26,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.91**	**310**	Pn	**Pn**	**23 35 02.9**	**+2.2**
KRVT	**Keravat (AS076**	**3.94**	**308**	P	**Pn**	**23 35 04.5**	**+3.4**
	110nm,0.3s,baz=221,slow=2.6,SNR=13						
COEN	**Coen**	**13.78**	**238**	P	**P**	**23 37 22.6**	**0.0**
DZM	**Mont Dzumac**	**18.74**	**146**	P	**Pn**	**23 38 19.6**	**+1.1**
	4.8nm,0.8s,baz=295,slow=17,SNR=1.6						
DZM				LR	LR	23 43 34.4	
	comp=Z,55nm,18.2s,baz=255,slow=30						
WRA	**Warramunga Arr**	**24.08**	**235**	P	**P**	**23 39 11.8**	**-1.7**
	2.1nm,0.6s,baz=60,slow=9.4,SNR=15						
WRA				PcP	**PcP**	**23 42 53.8**	**-0.2**
	0.8nm,0.5s,baz=60,slow=2.7,SNR=6.7						
	2.1nm,0.6s						
SIJI	**Sorong**	**24.52**	**283**	P	**P**	**23 39 15.7**	**-1.9**
	3.1nm,0.3s,baz=86,slow=16,SNR=1.7						
	3.1nm,0.3s						
MSVF	**Nonsavu**	**24.87**	**118**	P	**P**	**23 39 20.8**	**0.0**
	3.9nm,0.7s,baz=241,slow=10,SNR=1.8						
	3.9nm,0.7s						
ASAR	**Alice Springs**	**26.45**	**228**	P	**P**	**23 39 33.1**	**-1.9**
	1.5nm,0.7s,baz=63,slow=9.1,SNR=14						
ASAR				PcP	**PcP**	**23 42 58.4**	**-0.9**
	0.5nm,0.8s,baz=57,slow=3.4,SNR=2.7						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**28.02**	**205**	P	**P**	**23 39 49.5**	**+0.6**
	2.0nm,0.6s,baz=22,slow=11,SNR=6.5						
	2.0nm,0.6s						
NNZ	**Nelson**	**37.98**	**157**	P	**P**	**23 41 16.0**	**+0.5**
THZ	**Tophouse**	**38.27**	**158**	P	**P**	**23 41 20.2**	**+2.2**
KSRS	**Korea Array**	**50.79**	**332**	P	**P**	**23 42 56.4**	**-1.4**
	0.9nm,0.4s,baz=141,slow=7.9,SNR=2.4						
	0.9nm,0.4s						
PETK	**Petropavlovsk-**	**59.67**	**2**	P	**P**	**23 44 02.2**	**+0.7**
	2.4nm,0.6s,baz=160,slow=8.9,SNR=2.6						
	2.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**60.81**	**295**	P	**P**	**23 44 10.8**	**+0.9**
	2.7nm,0.7s,baz=120,slow=4.9,SNR=17						
	2.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**60.81**	**295**	P	**P**	**23 44 10.4**	**+0.4**
SONM	**Songino Array**	**69.21**	**327**	P	**P**	**23 45 03.5**	**-0.7**
	0.5nm,0.4s,baz=129,slow=3.9,SNR=4.0						
	0.5nm,0.4s						
M19K	**Big River Lodg**	**78.67**	**22**	P	**P**	**23 46 00.1**	**+1.1**
M19K				IAmb	IAmb	23 46 01.5	
	comp=Z,11nm,1.4s						
L19K	**White Mountain**	**78.67**	**22**	P	**P**	**23 45 60.0**	**+1.0**
L19K				IAmb	IAmb	23 46 01.1	
	comp=Z,6.6nm,1.0s						
M20K	**Styx River**	**79.12**	**22**	P	**P**	**23 46 00.5**	**-1.0**
M20K				IAmb	IAmb	23 46 44.5	
	comp=Z,7.4nm,1.5s						
RC01	**Rabbit Creek A**	**79.98**	**24**	P	**P**	**23 46 06.6**	**+0.5**
J20K	**Nowinta River**	**80.18**	**20**	P	**P**	**23 46 08.2**	**+1.1**
J20K				IAmb	IAmb	23 46 09.1	
	comp=Z,1.9nm,0.6s						
MCK	**McKinley**	**81.77**	**22**	P	**P**	**23 46 15.8**	**+0.1**
MCK				IAmb	IAmb	23 46 16.2	
	comp=Z,5.8nm,0.7s						
MLY	**Manley**	**81.87**	**20**	P	**P**	**23 46 15.7**	**-0.5**
M24K	**Tolsona, Glenn**	**81.97**	**24**	P	**P**	**23 46 17.8**	**+1.0**
IL31		**83.09**	**21**	P	**P**	**23 46 21.7**	**-0.7**
ILAR	**Eielson Array**	**83.09**	**21**	P	**P**	**23 46 21.6**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=243,slow=5.7,SNR=9.0						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**83.09**	**21**	P	**P**	**23 46 22.5**	**0.0**
H24K	**Noodor Dome**	**83.31**	**20**	P	**P**	**23 46 24.8**	**+1.1**
MKAR	**Makanchi Array**	**83.32**	**319**	P	**P**	**23 46 23.8**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=102,slow=5.9,SNR=9.7						
	comp=Z,0.9nm,0.7s						
MENT	**Mentasta**	**83.37**	**24**	P	**P**	**23 46 25.0**	**+1.0**
MENT				IAmb	IAmb	23 46 31.1	
	comp=Z,3.8nm,1.1s						
LOGN	**Logan Glacier**	**83.53**	**26**	P	**P**	**23 46 26.1**	**+1.1**
MAKZ	**Makanchi**	**83.53**	**319**	P	**P**	**23 46 25.5**	**+0.4**
J25K	**Salcha River,**	**83.57**	**22**	P	**P**	**23 46 25.3**	**+0.3**
J25K				IAmb	IAmb	23 46 25.7	
	comp=Z,3.1nm,0.7s						
SCRK	**Sand Creek**	**83.77**	**23**	P	**P**	**23 46 26.7**	**+0.6**
M27K	**Edge Creek, AK**	**83.85**	**25**	P	**P**	**23 46 28.0**	**+1.4**
M27K				IAmb	IAmb	23 46 28.9	
	comp=Z,7.3nm,0.9s						
ZALV	**Zalesovo Beam**	**84.06**	**326**	P	**P**	**23 46 26.1**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=110,slow=8.0,SNR=2.8						
	comp=Z,0.6nm,0.5s						
J26L	**Joseph Creek**	**84.19**	**22**	P	**P**	**23 46 28.7**	**+0.5**
J26L				IAmb	IAmb	23 47 08.8	
	comp=Z,7.4nm,1.4s						
BCAR	**Beaver Creek A**	**84.21**	**24**	P	**P**	**23 46 29.5**	**+1.3**
TOLK	**Tolik Lake Re**	**84.34**	**18**	P	**P**	**23 46 29.1**	**+0.3**
TOLK				IAmb	IAmb	23 46 44.1	
	comp=Z,2.5nm,0.8s						
K27K	**Chicken**	**84.54**	**23**	P	**P**	**23 46 31.2**	**+1.4**
K27K				IAmb	IAmb	23 46 33.3	
	comp=Z,2.3nm,0.8s						
NVAR	**Mina Array Bea**	**91.45**	**52**	P	**P**	**23 47 04.9**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=240,slow=5.0,SNR=5.4						
	comp=Z,0.7nm,0.8s						
NEW	**Newport**	**93.47**	**42**	LR	LR	00 21 50.7	
	comp=Z,36nm,21.1s,baz=281,slow=31						
YKA	**Yellowknife Ar**	**96.05**	**28**	P	**P**	**23 47 22.9**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=256,slow=4.0,SNR=4.7						
	comp=Z,1.8nm,0.9s						
PDAR	**Pinedale Array**	**98.42**	**48**	P	**P**	**23 47 33.6**	**-2.1**
	comp=Z,0.1nm,0.4s,baz=246,slow=1.6,SNR=2.9						
	comp=Z,0.1nm,0.4s						
BDFB	**Brasilia**	**148.04**	**134**	PKPbc	**PKPbc**	**23 53 43.3**	**-0.3**
	comp=Z,5.1nm,0.7s,baz=198,slow=1.7,SNR=8.5						
TORD	**Torodi Ar. Bea**	**153.10**	**286**	PKPbc	**PKPbc**	**23 53 54.8**	**-0.8**
	comp=Z,2.3nm,0.3s,baz=65,slow=2.3,SNR=2.3						

*HEL **26** 23:43:13.5,67.84N×19.98E,h0km,ML1.6,Explosion*
UPP 26 23:43:14.4±0.0,67.83N×20.20E,h0km,ML2.0, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**23**	P	Pg	23 43 17.2	+0.3
KUA				S	Sg	23 43 19.2	+0.5
KUA	**Kurravaara**	**0.14**	**23**	*i* P	Pg	23 43 17.2	+0.3
KUA				*i* S	Sg	23 43 19.2	+0.5
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	23 43 19.0	+0.2
RATU	**Laukkuluspa**	**0.23**	**268**	*i* P	Pg	23 43 19.0	+0.2
KOVU	**Salmi**	**0.39**	**358**	P	Pg	23 43 22.1	+0.1
KOVU	**Salmi**	**0.39**	**358**	*i* P	Pg	23 43 22.1	+0.1
NIKU	**Nikkaluokta**	**0.44**	**275**	P	Pg	23 43 22.9	+0.1
NIKU	**Nikkaluokta**	**0.44**	**275**	*i* P	Pg	23 43 22.9	+0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 43 27.8	-0.2
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 43 27.8	-0.2
LANU				*e*S	Sg	23 43 37.7	+0.5
MASU	**Masugnsbyn**	**0.79**	**118**	P	Pg	23 43 29.3	-0.1
MASU	**Masugnsbyn**	**0.79**	**118**	*i* P	Pg	23 43 29.3	-0.1
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 43 29.3	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	23 43 29.3	-0.2
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pb	23 43 37.9	-0.1
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PB	Pb	23 43 37.7	-0.3
KIF				MSG		23 43 51.1	
	comp=Z,6.2nm,0.2s						
KIF				*e*SB	Sg	23 43 53.4	+0.5
PAJU	**Pajala**	**1.39**	**124**	P	Pg	23 43 39.7	-1.2
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	23 43 39.5	-1.4
PAJU				*e*SB	Sg	23 43 58.3	-0.6
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 43 40.6	-0.8
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 43 40.7	-0.8
HEF				MSG		23 43 58.3	
	comp=Z,2.9nm,0.2s						
HEF				*e*SB	Sg	23 43 59.2	-0.8
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	23 43 41.7	-0.8
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*P	Pn	23 43 41.7	-0.8
ERTU				*e*SN	Sg	23 44 02.5	0.0
KLF	**Kolari**	**1.57**	**111**	*e*P	Pn	23 43 43.0	-0.4
KLF				*e*S	Sn	23 44 04.0	-0.4
KTK1	**Kautokeino**	**1.64**	**42**	*e*SN	Sb	23 44 06.4	-0.1
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 43 56.4	+1.6
TOF				MSG		23 44 26.3	
	comp=Z,2.2nm,0.2s						
TOF				*e*SG	Sb	23 44 28.1	-0.2
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pb	23 43 57.5	-1.8
SGF				*e*SG	Sb	23 44 30.3	+0.3
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pn	23 43 59.1	+1.9
RNF				*e*SB	Sb	23 44 32.6	-0.9
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*PB	Pn	23 43 59.4	+1.9
	baz=230						
ARA0				*e*SB	Sb	23 44 32.2	-1.7
KEV	**Kevo**	**3.14**	**49**	*e*S	Sn	23 44 44.3	+1.2
KEV				MSG		23 44 47.3	
	comp=Z,1.2nm,0.2s						

*HEL **26** 23:43:59.0±0.1,67.85N×20.20E,h0km,ML2.0, ML2.2(UPP),Explosion*
UPP 26 23:43:58.4±0.1,67.85N×20.21E,h0km,ML2.2, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.11**	**26**	P	Pg	23 44 00.8	+0.2
KUA				S	Sg	23 44 02.4	+0.4
KUA	**Kurravaara**	**0.11**	**26**	*i* P	Pg	23 44 00.8	+0.2
KUA				*i* S	Sg	23 44 02.4	+0.4
KOVU	**Salmi**	**0.37**	**357**	P	Pg	23 44 05.6	+0.1
KOVU	**Salmi**	**0.37**	**357**	*i* P	Pg	23 44 05.6	+0.1
LANU	**Lannavaara**	**0.70**	**73**	P	Pg	23 44 11.7	-0.1
LANU	**Lannavaara**	**0.70**	**73**	*e*P	Pg	23 44 11.8	0.0
LANU				*e*S	Sg	23 44 21.1	+0.2
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	23 44 13.2	-0.3
MASU	**Masugnsbyn**	**0.79**	**119**	*i* P	Pg	23 44 13.2	-0.3
SALU	**Saltoluokta**	**0.81**	**235**	P	Pg	23 44 13.6	-0.2
SALU	**Saltoluokta**	**0.81**	**235**	*i* P	Pg	23 44 13.6	-0.2
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*PB	Pb	23 44 21.5	-0.1
KIF				MSG		23 44 36.6	
	comp=Z,20nm,0.2s						
KIF				*e*SB	Sb	23 44 37.0	-0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pg	23 44 23.8	-1.3
PAJU	**Pajala**	**1.40**	**125**	*e*P	Pg	23 44 24.1	-1.1
	baz=305						
PAJU				*e*SB	Sg	23 44 43.1	-0.1
HEF	**Hetta**	**1.41**	**65**	*e*PG	Pn	23 44 25.0	-0.3
HEF				MSG		23 44 41.8	
	comp=Z,14nm,0.2s						
HEF				*e*SB	Sg	23 44 43.2	-0.4
ERTU	**Ertsjaerv**	**1.52**	**148**	P	Pn	23 44 26.0	-0.7
ERTU	**Ertsjaerv**	**1.52**	**148**	*e*PN	Pg	23 44 27.4	0.0
ERTU				*e*SN	Sn	23 44 47.2	0.0
KLF	**Kolari**	**1.57**	**112**	*e*PN	Pb	23 44 28.0	-0.3
KLF				*e*SN	Sg	23 44 48.8	0.0
KTK1	**Kautokeino**	**1.62**	**42**	*e*PN	Pg	23 44 29.9	+0.6
KTK1				*e*SN	Sn	23 44 49.8	+0.2
HARU	**Harads**	**1.72**	**170**	P	Pn	23 44 29.6	0.0
HARU	**Harads**	**1.72**	**170**	*e*P	Pn	23 44 29.6	0.0
TRO	**Tromso**	**1.85**	**346**	*e*SN	Sb	23 44 56.8	+0.2
TOF	**Tornio**	**2.41**	**136**	MSG		23 45 10.0	
	comp=Z,6.4nm,0.2s						
TOF				*e*SG	Sb	23 45 12.8	+0.1
SGF	**Sodankyl**	**2.45**	**97**	*e*PB	Pb	23 44 41.8	-1.4
SGF				*e*SG	Sb	23 45 14.9	+0.9
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*PB	Pb	23 44 43.5	-1.8
	baz=228						
ARA0				*e*SB	Sb	23 45 16.4	-1.0
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pb	23 44 43.9	-1.6
RNF				*e*SB	Sb	23 45 17.0	-0.6
KEV	**Kevo**	**3.12**	**49**	*e*P	Pn	23 44 48.2	-0.5
KEV				MSG		23 45 31.3	
	comp=Z,3.8nm,0.2s						
KEV				*e*SB	Sb	23 45 33.0	-0.2
VRF	**Varrio**	**3.57**	**87**	*e*PG	Pb	23 45 02.5	+0.2
OUL	**Oulu**	**3.60**	**138**	*e*PG	Pg	23 45 05.1	-2.1
OLKF	**Oulanka, Finla**	**3.91**	**109**	*e*PG	Pb	23 45 09.1	+1.0
KU6	**Riekki**	**4.23**	**111**	*e*PG	Pb	23 45 14.3	+0.8
	baz=297						

*IDC **26** 23:48:13.9±2.2,40.48N×144.06E,h0km,mb3.8/5, mbtmp3.8/7,ML2.3/2,MS3.1/3,Error ellipse: s-maj=53.4km s-min=29.7km az=76.0*
*NIED **26** 23:48:17.2,40.46N×143.55E,h12km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr3.10; Mθθ0.91; Mϕϕ-4.02; Mrθ3.89; Mθϕ-0.22; Mrϕ4.00; Fault plane solution: M0 6.65000×10^14^ NP1: ϕs157.00000°,δ25.00000°,λ35.00000°. NP2:ϕs35.00000°, δ76.00000°,λ111.00000°.*
*JMA **26** 23:48:17.2±0.4,40.5N±0.6×144.4E±,h12km±4km, MV3.8/33,FAR E OFF SANRIKU*
ISC 26 23:48:15.7±3.8,40.45N±0.05×143.65E±0.08,h5km±24km, n31,σ1s28/30,mb3.8/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.46**	**250**	P	**Pn**	**23 48 42.4**	**-0.3**
JKEN	**Kujiedanarisaw**	**1.50**	**261**	P	**Pn**	**23 48 42.8**	**-0.5**
JEM	**Erimo**	**1.60**	**347**	P	**Pn**	**23 48 45.6**	**+0.9**
JEM				*e*S	**Sb**	**23 49 06.5**	**+0.1**
JANG	**Nango**	**1.63**	**268**	*i* P	**Pn**	**23 48 44.9**	**-0.2**
JANG				*e*S	**Sn**	**23 49 04.5**	**-1.9**
MIYJ	**Miyakonagasawa**	**1.65**	**239**	P	**Pn**	**23 48 45.4**	**0.0**
JNBK	**Urakawa-nobuka**	**1.94**	**340**	P	**Pn**	**23 48 50.5**	**+1.1**
JNBK				S	**Sn**	**23 49 14.9**	**+0.7**
JTM	**Tenmabayashi**	**1.99**	**280**	P	**Pb**	**23 48 50.9**	**-1.5**
JOM	**Ohasama**	**2.06**	**242**	*i* P	**Pn**	**23 48 51.8**	**+0.9**
JCH	**Churui**	**2.17**	**354**	P	**Pn**	**23 48 53.1**	**+0.6**
JCH				*e*S	**Sn**	**23 49 19.1**	**-0.6**
JOT	**Ohata**	**2.17**	**296**	P	**Pn**	**23 48 53.5**	**+0.9**
JOT				*e*S	**Sn**	**23 49 19.0**	**-0.9**
JAH	**Hinai**	**2.32**	**264**	P	**Pn**	**23 48 55.8**	**+1.3**
JMK	**Ichinoseki**	**2.40**	**232**	P	**Pn**	**23 48 56.5**	**+0.8**
JMK				*e*S	**Sn**	**23 49 25.0**	**-0.4**
JAK	**Akkeshi**	**2.66**	**17**	P	**Pn**	**23 49 00.2**	**+1.0**
JAK				S	**Sn**	**23 49 30.2**	**-1.6**
JAR	**Ashorobuto**	**2.84**	**2**	P	**Pn**	**23 49 02.0**	**+0.2**
JAR				S	**Sn**	**23 49 34.2**	**-2.2**
JYK	**Kaneyama**	**2.96**	**240**	P	**Pn**	**23 49 04.6**	**+1.2**
MJAR	**Matsushiro Arr**	**5.78**	**229**	Pn	**Pn**	**23 49 44.4**	**+2.2**
	0.2nm,0.3s,baz=44,slow=11,SNR=6.7						
	2.8nm,0.5s						
USRK	**Ussuriysk Ar.**	**9.41**	**297**	Pn	**Pn**	**23 50 35.3**	**+3.4**
	0.2nm,0.3s,baz=105,slow=15,SNR=4.8						
	2.9nm,0.6s						
KSRS	**Korea Array**	**12.60**	**261**	LR	LR	23 55 46.5	
	comp=Z,24nm,18.5s,baz=65,slow=35						
SONM	**Songino Array**	**27.52**	**298**	P	**P**	**23 54 04.4**	**+1.2**
	0.6nm,0.6s,baz=106,slow=9.8,SNR=3.7						
	0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.68**	**129**	T	T	00 24 27.8	
	baz=322,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**28.69**	**129**	T	T	00 24 33.4	
	baz=322,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**28.70**	**129**	T	T	00 24 19.2	
	baz=322,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**29.52**	**131**	T	T	00 25 26.4	
	baz=323,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**29.52**	**131**	T	T	00 25 23.4	
	baz=323,slow=76,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	**29.54**	**131**	T	T	00 25 27.0	
	baz=323,slow=76,SNR=8.3						
DAV	**Davao City (W)**	**36.96**	**211**	LR	LR	00 10 28.2	
	comp=Z,16nm,19.4s,baz=344,slow=36						
ZALV	**Zalesovo Beam**	**40.99**	**310**	P	**P**	**23 56 00.1**	**+0.7**
	1.4nm,0.6s,baz=81,slow=9.2,SNR=5.0						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**43.87**	**300**	P	**P**	**23 56 23.2**	**+0.3**
	0.6nm,0.6s,baz=75,slow=6.7,SNR=3.8						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**60.71**	**190**	P	**P**	**23 58 27.7**	**-0.4**
	0.5nm,0.7s,baz=2.3,slow=6.8,SNR=2.6						
	0.5nm,0.7s						
FINES	**FINESS Array B**	**66.60**	**332**	P	**P**	**23 59 06.5**	**-0.1**
	1.6nm,1.0s,baz=37,slow=7.1,SNR=3.8						
	1.6nm,1.0s						
SFJD	**Kangerlussuaq**	**72.32**	**6**	LR	LR	00 33 19.2	
	comp=Z,26nm,18.2s,baz=308,slow=37						

*NOU **26** 23:54:08.5,19.86S×168.82E,h8km,MLv4.5/14,Vanuatu Islands*
*IDC **26** 23:54:09.5±5.7,19.96S×169.11E,h45km±55km,mb3.8/6, mbtmp4.1/7,ML3.9/1,MS3.3/11,Error ellipse: s-maj=82.3km s-min=34.6km az=161.0*
ISC 26 23:54:09.0±0.9,19.90S±0.06×169.0E±0.1,h35km,n31, σ1s29/25,mb4.0/6,MS3.2/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.81**	**210**	P	**Pn**	**23 54 38.1**	**+0.4**
LIFNC	**LIFOU**	**1.86**	**242**	P	**Pn**	**23 54 37.1**	**-1.3

VNA3	**Neumayer Olymp**	**89.09**	**180**	P	**P**	**00 06 59.9**	**-0.4**
VNA2	**Neumayer--Watz**	**89.38**	**181**	P	**P**	**00 07 01.5**	**-0.1**
	baz=180,slow=5.0						
NVAR	**Mina Array Bea**	**89.41**	**49**	P	**P**	**00 07 01.5**	**-1.0**
	0.2nm,0.5s,baz=210,slow=7.1,SNR=3.7						
	0.2nm,0.5s						
ARCES	**ARCESS Array B**	**125.65**	**345**	PKP	**PKPdf**	**00 13 04.6**	**-1.4**
	6.0nm,1.0s,baz=90,slow=0.9,SNR=4.6						
GERES	**GERESS Array B**	**144.96**	**331**	PKPbc	**PKPab**	**00 13 41.6**	**-0.2**
	0.5nm,0.6s,baz=52,slow=2.4,SNR=6.2						

ROM 27 00:03:25.1±0.1, 42°671N±0°003×13°275E±0°005,
h10km, ML2.4/11, 3C-1D, Error ellipse: s-maj=0.4km
s-min=0.3km az=229.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1243	**Rocca Santa Ma**	**0.13**	**79**	P	Pb	00 03 29.0	-0.7
T1243				S	Sg	00 03 31.4	+1.0
T1243				AML	AML		
	comp=E,748μm,0.6s						
T1243				AML	AML		
	comp=N,852μm,1.0s						
T1243				AML	AML		
	comp=E,739μm,0.6s						
T1243				AML	AML		
	comp=N,841μm,0.7s						
T1243				AML	AML		
	comp=E,21150μm,0.7s						
T1243				AML	AML		
	comp=N,18350μm,1.3s						
T1243				AML	AML		
	comp=E,20700μm,0.7s						
T1243				AML	AML		
	comp=N,18550μm,1.3s						
T1243				AML	AML		
	comp=N,18400μm,1.3s						
CAMP	**Campotosto**	**0.17**	**144**	P	Pg	00 03 29.4	+0.6
CAMP				S	Sg	00 03 32.3	+0.9
CAMP				AML	AML		
	comp=E,6865μm,0.2s						
CAMP				AML	AML		
	comp=N,10150μm,0.2s						
RM33	**Pellescritta (**	**0.17**	**195**	P	Pg	00 03 29.4	+0.6
RM33				S	Sg	00 03 32.5	+1.1
RM33				AML	AML		
	comp=E,232μm,0.1s						
RM33				AML	AML		
	comp=N,261μm,1.3s						
RM33				AML	AML		
	comp=E,7135μm,0.5s						
RM33				AML	AML		
	comp=N,8965μm,0.3s						
RM33				AML	AML		
	comp=N,8925μm,0.3s						
RM33				AML	AML		
	comp=N,9275μm,0.3s						
RM33				AML	AML		
	comp=E,7370μm,0.5s						
RM33				AML	AML		
	comp=E,7135μm,0.5s						
LNSS	**Leonessa**	**0.19**	**249**	P	Pg	00 03 29.7	+0.6
LNSS				S	Sg	00 03 33.0	+1.1
LNSS				AML	AML		
	comp=E,508μm,0.5s						
LNSS				AML	AML		
	comp=N,559μm,0.4s						
LNSS				AML	AML		
	comp=N,1920μm,0.7s						
LNSS				AML	AML		
	comp=E,1835μm,0.5s						
NRCA	**Norcia**	**0.20**	**324**	P	Pg	00 03 29.9	+0.5
NRCA				S	Sg	00 03 33.2	+0.9
MMO1	**Montemonaco**	**0.23**	**10**	P	Pg	00 03 30.5	+0.6
MMO1				S	Sg	00 03 34.5	+1.3
MMO1				AML	AML		
	comp=E,178μm,0.3s						
MMO1				AML	AML		
	comp=N,336μm,0.3s						
MMO1				AML	AML		
	comp=E,758μm,0.7s						
MMO1				AML	AML		
	comp=N,852μm,0.9s						
TERO	**Teramo**	**0.25**	**101**	P	Pg	00 03 30.3	+0.1
TERO				S	Sg	00 03 34.5	+1.0
TERO				AML	AML		
	comp=N,4395μm,0.4s						
TERO				AML	AML		
	comp=N,4695μm,0.4s						
TERO				AML	AML		
	comp=E,6980μm,0.1s						
TERO				AML	AML		
	comp=E,6165μm,0.1s						
MC2	**Monte Cornacci**	**0.25**	**346**	P	Pg	00 03 30.8	+0.5
GIGS	**Gran Sasso**	**0.31**	**135**	P	Pg	00 03 31.6	+0.3
GIGS				AML	AML		
	comp=E,37μm,0.1s						
GIGS				AML	AML		
	comp=N,36μm,0.8s						
GIGS				AML	AML		
	comp=E,918μm,0.6s						
GIGS				AML	AML		
	comp=N,1137μm,0.8s						
GIGS				AML	AML		
	comp=N,1132μm,0.8s						
ARRO	**Arrone**	**0.39**	**256**	P	Pg	00 03 32.1	-0.6
ARRO				AML	AML		
	comp=E,533μm,1.3s						
ARRO				AML	AML		
	comp=E,532μm,1.3s						
ARRO				AML	AML		
	comp=N,348μm,1.5s						
FDMO	**Fiordimonte**	**0.39**	**339**	P	Pg	00 03 33.2	+0.4
FDMO				S	Sb	00 03 39.3	-0.9
FDMO				AML	AML		
	comp=E,237μm,0.7s						
FDMO				AML	AML		
	comp=N,158μm,0.8s						
GUMA	**Gualdo di Mace**	**0.39**	**6**	P	Pb	00 03 33.6	-0.5
GUMA				S	Sb	00 03 40.5	+0.2
GUMA				AML	AML		
	comp=E,694μm,0.4s						
GUMA				AML	AML		
	comp=N,628μm,0.2s						
GUMA				AML	AML		
	comp=E,632μm,0.9s						
GUMA				AML	AML		
	comp=N,894μm,1.3s						
OFFI	**Offida**	**0.40**	**49**	⇑P	Pb	00 03 34.4	+0.1
OFFI				S	Sb	00 03 42.1	+1.7
OFFI				AML	AML		
	comp=E,2995μm,0.5s						
OFFI				AML	AML		
	comp=N,1755μm,0.4s						
FIAM	**Fiamignano**	**0.42**	**196**	⇑P	Pg	00 03 33.7	+0.3
FIAM				S	Sb	00 03 40.2	-0.7
FIAM				AML	AML		
	comp=E,764μm,0.6s						
FIAM				AML	AML		
	comp=N,558μm,0.8s						
FIAM				AML	AML		
	comp=E,764μm,0.6s						
CSP1	**Cessapalombo**	**0.42**	**353**	⇑P	Pg	00 03 33.8	+0.4
CSP1				S	Sb	00 03 40.5	-0.7
CESI	**CESI - Serrava**	**0.43**	**321**	P	Pg	00 03 33.8	+0.3
CESI				S	Sb	00 03 40.6	-0.7
CESI				AML	AML		
	comp=N,270μm,1.5s						
CESI				AML	AML		
	comp=N,271μm,1.5s						
CESI				AML	AML		
	comp=E,212μm,0.6s						
FAGN	**Fagnano**	**0.47**	**150**	P	Pb	00 03 35.1	-0.2
FAGN				AML	AML		
	comp=E,1980μm,0.4s						
FAGN				AML	AML		
	comp=N,2275μm,0.2s						
VCEL	**Villa Celiera**	**0.50**	**123**	P	Pb	00 03 35.4	-0.6
VCEL				AML	AML		
	comp=E,65μm,0.3s						
VCEL				AML	AML		
	comp=N,85μm,0.4s						
VCEL				AML	AML		
	comp=E,2575μm,0.3s						
VCEL				AML	AML		
	comp=N,3560μm,0.2s						
VCEL				AML	AML		
	comp=N,3560μm,0.2s						
EL6	**Elcito**	**0.67**	**349**	⇓P	Pb	00 03 39.2	+0.3
ATCC	**AVT- Casa Cast**	**0.69**	**318**	S	Sn	00 03 51.0	-0.8
CING	**Cingoli**	**0.71**	**355**	P	Pg	00 03 39.0	+0.3
CING				AML	AML		
	comp=E,142μm,0.4s						
CING				AML	AML		
	comp=N,102μm,0.2s						
CING				AML	AML		
	comp=E,141μm,0.4s						

ROM 27 00:04:23.3±0.1, 42°629N±0°005×13°304E±0°006,
h11km, ML2.5/14, 6C-4D, Error ellipse: s-maj=0.5km
s-min=0.4km az=199.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**140**	P	Pg	00 04 26.9	+0.5
CAMP				S	Sg	00 04 29.2	+0.6
CAMP				AML	AML		
	comp=E,6865μm,0.2s						
CAMP				AML	AML		
	comp=N,10150μm,0.2s						
T1243	**Rocca Santa Ma**	**0.13**	**58**	P	Pg	00 04 26.8	+0.3
T1243				S	Sg	00 04 29.0	+0.3
T1243				AML	AML		
	comp=E,21100μm,0.7s						
T1243				AML	AML		
	comp=E,20700μm,0.7s						
T1243				AML	AML		
	comp=N,18550μm,1.3s						
T1243				AML	AML		
	comp=E,21150μm,0.7s						
T1243				AML	AML		
	comp=N,18350μm,1.3s						
T1243				AML	AML		
	comp=N,18400μm,1.3s						
RM33	**Pellescritta (**	**0.14**	**209**	⇑P	Pg	00 04 27.2	+0.6
RM33				S	Sg	00 04 29.9	+1.0
RM33				AML	AML		
	comp=E,7130μm,0.5s						
RM33				AML	AML		
	comp=N,9250μm,0.3s						
RM33				AML	AML		
	comp=E,7375μm,0.5s						
RM33				AML	AML		
	comp=N,8950μm,0.3s						
RM33				AML	AML		
	comp=N,9260μm,0.3s						
RM33				AML	AML		
	comp=N,8935μm,0.3s						
RM33				AML	AML		
	comp=E,7135μm,0.5s						
RM33				AML	AML		
	comp=N,9245μm,0.3s						
RM33				AML	AML		
	comp=N,8965μm,0.3s						
RM33				AML	AML		
	comp=N,9225μm,0.3s						
RM33				AML	AML		
	comp=N,8925μm,0.3s						
RM33				AML	AML		
	comp=E,7370μm,0.5s						
RM33				AML	AML		
	comp=E,7135μm,0.5s						
LNSS	**Leonessa**	**0.20**	**263**	P	Pg	00 04 27.9	+0.4
LNSS				S	Sg	00 04 31.4	+0.9
LNSS				AML	AML		
	comp=N,1915μm,0.7s						
LNSS				AML	AML		
	comp=N,1920μm,0.7s						
LNSS				AML	AML		
	comp=E,1835μm,0.5s						
TERO	**Teramo**	**0.22**	**91**	P	Pg	00 04 28.2	+0.3
TERO				S	Sg	00 04 31.8	+0.6
TERO				AML	AML		
	comp=E,6165μm,0.1s						
TERO				AML	AML		
	comp=N,4695μm,0.4s						
TERO				AML	AML		
	comp=E,6170μm,0.1s						
TERO				AML	AML		
	comp=N,4395μm,0.4s						
TERO				AML	AML		
	comp=E,6980μm,0.1s						
NRCA	**Norcia**	**0.25**	**326**	P	Pg	00 04 28.6	+0.2
NRCA				S	Sg	00 04 32.5	+0.6
NRCA				AML	AML		
	comp=E,1625μm,0.7s						
NRCA				AML	AML		
	comp=N,1665μm,0.1s						
NRCA				AML	AML		
	comp=E,1625μm,0.7s						
NRCA				AML	AML		
	comp=N,1880μm,0.1s						
NRCA				AML	AML		
	comp=N,1668μm,0.1s						
NRCA				AML	AML		
	comp=E,1810μm,0.7s						
GIGS	**Gran Sasso**	**0.27**	**132**	P	Pg	00 04 29.2	+0.5
GIGS				S	Sg	00 04 33.2	+0.8
GIGS				AML	AML		
	comp=N,1138μm,0.8s						
GIGS				AML	AML		
	comp=N,1137μm,0.8s						
GIGS				AML	AML		
	comp=E,918μm,0.6s						
GIGS				AML	AML		
	comp=N,1132μm,0.8s						
MC2	**Monte Cornacci**	**0.30**	**344**	P	Pg	00 04 29.8	+0.4
FIAM	**Fiamignano**	**0.39**	**201**	P	Pg	00 04 31.3	+0.3
FIAM				AML	AML		
	comp=E,764μm,0.6s						
FIAM				AML	AML		
	comp=E,764μm,0.6s						
FIAM				AML	AML		
	comp=N,558μm,0.8s						
ARRO	**Arrone**	**0.40**	**263**	P	Pg	00 04 31.2	+0.1
ARRO				AML	AML		
	comp=E,532μm,1.3s						
ARRO				AML	AML		
	comp=N,348μm,1.5s						
ARRO				AML	AML		
	comp=E,533μm,1.3s						
ARRO				AML	AML		
	comp=N,348μm,1.5s						
ARRO				AML	AML		
	comp=E,532μm,1.3s						
OFFI	**Offida**	**0.42**	**42**	⇑P	Pb	00 04 32.5	-0.2
OFFI				AML	AML		
	comp=N,1755μm,0.4s						
OFFI				AML	AML		
	comp=E,2995μm,0.5s						
FAGN	**Fagnano**	**0.42**	**150**	P	Pb	00 04 34.0	+1.3
FAGN				AML	AML		
	comp=N,2275μm,0.2s						
FAGN				AML	AML		
	comp=E,1980μm,0.4s						
GUMA	**Gualdo di Mace**	**0.43**	**3**	P	Pg	00 04 32.2	+0.4
GUMA				AML	AML		
	comp=E,1010μm,1.6s						
GUMA				AML	AML		
	comp=N,1012μm,0.6s						
GUMA				AML	AML		
	comp=N,908μm,0.5s						
GUMA				AML	AML		
	comp=E,815μm,0.7s						
FDMO	**Fiordimonte**	**0.44**	**339**	P	Pb	00 04 33.6	+0.5
FDMO				AML	AML		
	comp=E,237μm,0.7s						
FDMO				AML	AML		
	comp=N,172μm,0.4s						
VCEL	**Villa Celiera**	**0.46**	**120**	P	Pb	00 04 32.9	-0.6
VCEL				AML	AML		
	comp=N,3565μm,0.2s						
VCEL				AML	AML		
	comp=E,2570μm,0.3s						
VCEL				AML	AML		
	comp=N,3560μm,0.2s						
VCEL				AML	AML		
	comp=E,2575μm,0.3s						
CSP1	**Cessapalombo**	**0.47**	**351**	P	Pg	00 04 32.7	+0.2
CESI	**CESI - Serrava**	**0.48**	**322**	P	Pg	00 04 33.0	+0.4
CESI				AML	AML		
	comp=E,242μm,0.4s						
CESI				AML	AML		
	comp=E,241μm,0.4s						
CESI				AML	AML		
	comp=N,270μm,1.5s						
CESI				AML	AML		
	comp=N,271μm,1.5s						
TRTR	**Tortoreto Alta**	**0.48**	**68**	P	Pb	00 04 34.0	+0.2
TRTR				AML	AML		
	comp=E,1735μm,0.4s						
TRTR				AML	AML		
	comp=N,1405μm,0.5s						
CESX	**Cesi**	**0.53**	**268**	P	Pg	00 04 33.9	+0.2
CESX				AML	AML		
	comp=E,258μm,0.4s						
CESX				AML	AML		
	comp=N,232μm,0.8s						
T0110	**Collepietro**	**0.53**	**139**	⇑P	Pg	00 04 33.9	+0.1
T0110				AML	AML		
	comp=N,2220μm,0.3s						
T0110				AML	AML		
	comp=E,1575μm,0.7s						
ASSB	**Assisi San Ben**	**0.63**	**311**	P	Pb	00 04 36.2	-0.1
ASSB				AML	AML		
	comp=N,158μm,0.2s						
ASSB				AML	AML		
	comp=E,166μm,0.9s						
ASSB				AML	AML		
	comp=N,160μm,0.3s						
SNTG	**Esanatoglia**	**0.68**	**337**	P	Pg	00 04 36.1	-0.3
SNTG				AML	AML		
	comp=E,57μm,1.4s						
SNTG				AML	AML		
	comp=N,82μm,0.3s						
CERT	**Cerreto**	**0.72**	**199**	⇑P	Pg	00 04 37.0	-0.1
CERT				AML	AML		
	comp=E,308μm,0.6s						
CERT				AML	AML		
	comp=E,308μm,0.6s						
CERT				AML	AML		
	comp=N,288μm,1.1s						
MTCE	**Montecelio**	**0.73**	**215**	P	Pn	00 04 39.5	-0.1
ATCC	**AVT- Casa Cast**	**0.74**	**319**	P	Pg	00 04 37.5	-0.1
ATCC				AML	AML		
	comp=E,156μm,0.7s						
ATCC				AML	AML		
	comp=N,164μm,0.7s						
CING	**Cingoli**	**0.75**	**354**	⇑P	Pg	00 04 37.8	-0.1
CING				AML	AML		
	comp=E,142μm,0.4s						
CING				AML	AML		
	comp=N,102μm,0.2s						
CING				AML	AML		
	comp=E,141μm,0.4s						
INTR	**Introdacqua**	**0.76**	**144**	⇑P	Pg	00 04 37.4	-0.6
INTR				AML	AML		
	comp=N,460μm,0.4s						
INTR				AML	AML		
	comp=E,278μm,0.7s						
PP3	**Marolino**	**0.78**	**17**	⇓P	Pg	00 04 38.5	+0.1
PP3				AML	AML		
	comp=E,315μm,0.9s						
PP3				AML	AML		
	comp=N,420μm,0.7s						
PP3				AML	AML		
	comp=E,350μm,0.6s						
PP3				AML	AML		
	comp=N,350μm,0.7s						
CAFR	**Castel Frentan**	**0.87**	**117**	⇓P	Pg	00 04 40.0	0.0
CAFR				AML	AML		
	comp=E,1μm,1.6s						
CAFR				AML	AML		
	comp=N,191μm,0.3s						
CAFR				AML	AML		
	comp=E,1μm,1.6s						
LPEL	**Lama dei Pelig**	**0.87**	**131**	⇓P	Pg	00 04 39.8	-0.3
LPEL				AML	AML		
	comp=N,456μm,1.2s						
LPEL				AML	AML		
	comp=E,497μm,0.3s						
MGAB	**Montegabbione**	**0.92**	**288**	⇓P	Pn	00 04 43.1	+0.9
SACS	**San Casciano d**	**1.05**	**283**	P	Pg	00 04 41.5	-2.0
SACS				AML	AML		
	comp=E,102μm,1.2s						
SACS				AML	AML		
	comp=N,86μm,0.8s						
SACS				AML	AML		
	comp=N,86μm,0.8s						
SACS				AML	AML		
	comp=E,102μm,1.2s						
MPAG	**Monte Paganucc**	**1.08**	**338**	P	Pn	00 04 45.2	+0.8
CSNT	**Castellina Chi**	**1.70**	**300**	S	Sg	00 05 17.0	-0.9
DUGI	**Dugi Otok**	**1.87**	**43**	*i* Pn	Pn	00 04 55.8	+0.6
VIRC	**Vir**	**2.10**	**37**	*e*Pn	Pn	00 04 58.8	+0.5
NVLJ	**Novalja**	**2.24**	**30**	*e*Pn	Pn	00 05 00.7	+0.3
HVAR	**Hvar**	**2.38**	**76**	*e*Pn	Pn	00 05 02.7	+0.5
RABC	**Rab**	**2.38**	**26**	*e*Pn	Pn	00 05 02.6	+0.4
UDBI	**Udbina**	**2.61**	**42**	*e*Pn	Pn	00 05 06.9	+1.5
KIJV	**Kijevo**	**2.65**	**58**	*e*Pn	Pn	00 05 07.8	+1.9
LSTV	**Lastovo**	**2.65**	**86**	*e*Pn	Pn	00 05 06.7	+0.8
STON	**Ston**	**3.25**	**84**	*e*Pn	Pn	00 05 14.1	0.0
OBKA	**Obir**	**3.98**	**12**	*e*Pn	Pg	00 05 39.0	-0.5
	comp=E,0.8nm,0.5s						
ABTA	**Abfaltersbach**	**4.16**	**352**	*e*Pn	Pn	00 05 27.0	+0.2
	comp=E,1.7nm,0.5s						

ROM 27 00:05:08.8±0.1, 42°618N±0°004×13°325E±0°006,
h10km, ML2.3/9, 5C-1D, Error ellipse: s-maj=0.4km
s-min=0.4km az=87.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.10**	**143**	P	Pg	00 05 12.0	+0.5
CAMP				S	Sg	00 05 14.1	+0.6
CAMP				AML	AML		
	comp=N,1825μm,0.2s						
CAMP				AML	AML		
	comp=E,1645μm,0.2s						
T1243	**Rocca Santa Ma**	**0.12**	**49**	P	Pg	00 05 12.1	+0.3
T1243				AML	AML		
	comp=E,6110μm,0.4s						
T1243				AML	AML		
	comp=E,5965μm,0.4s						
T1243				AML	AML		
	comp=N,3240μm,0.2s						
T1243				AML	AML		
	comp=N,3290μm,0.2s						
RM33	**Pellescritta (**	**0.14**	**217**	⇑P	Pg	00 05 12.6	+0.7
RM33				S	Sg	00 05 15.1	+1.0
RM33				AML	AML		
	comp=E,2535μm,0.7s						
RM33				AML	AML		
	comp=N,2725μm,0.2s						
RM33				AML	AML		
	comp=N,2615μm,0.2s						
RM33				AML	AML		
	comp=N,2730μm,0.2s						
RM33				AML	AML		
	comp=E,2420μm,0.7s						
TERO	**Teramo**	**0.21**	**88**	⇑P	Pg	00 05 13.5	+0.5
TERO				S	Sg	00 05 16.8	+0.8
TERO				AML	AML		
	comp=E,875μm,0.8s						
TERO				AML	AML		
	comp=N,1220μm,0.7s						
LNSS	**Leonessa**	**0.21**	**266**	⇑P	Pg	00 05 13.8	+0.6
LNSS				S	Sg	00 05 17.4	+1.2
LNSS				AML	AML		
	comp=E,836μm,0.4s						
LNSS				AML	AML		
	comp=N,1050μm,0.2s						
LNSS				AML	AML		
	comp=E,832μm,0.4s						
LNSS				AML	AML		
	comp=N,1050μm,0.2s						
GIGS	**Gran Sasso**	**0.25**	**133**	P	Pg	00 05 14.3	+0.5
GIGS				S	Sg	00 05 18.1	+0.9
GIGS				AML	AML		
	comp=E,248μm,0.1s						
GIGS				AML	AML		
	comp=N,173μm,0.3s						
GIGS				AML	AML		
	comp=N,174μm,0.3s						
NRCA	**Norcia**	**0.27**	**324**	P	Pg	00 05 14.7	+0.5
NRCA				S	Sg	00 05 18.9	+1.0
NRCA				AML	AML		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,912μm,0.1s						
NRCA				AML	AML		
	comp=N,701μm,0.2s						
MMO1	Montemonaco	0.28	0	P	Pg	00 05 15.0	+0.5
MMO1				S	Sg	00 05 19.5	+1.2
MC2	Monte Cornacci	0.31	342	P	Pg	00 05 15.7	+0.6
MC2				S	Sb	00 05 21.0	-0.8
MC2				AML	AML		
	comp=E,800μm,1.6s						
MC2				AML	AML		
	comp=N,650μm,1.6s						
FIAM	Fiamignano	0.38	204	P	Pg	00 05 16.8	+0.4
FIAM				S	Sb	00 05 22.7	-1.0
FAGN	Fagnano	0.40	151	⇑P	Pb	00 05 17.8	-0.2
OFFI	Offida	0.41	40	P	Pb	00 05 18.2	0.0
ARRO	Arrone	0.41	265	⇑P	Pg	00 05 17.1	+0.2
VCEL	Villa Celiera	0.44	120	P	Pb	00 05 18.4	-0.4
GUMA	Gualdo di Mace	0.45	1	P	Pb	00 05 18.2	-0.5
GUMA				S	Sb	00 05 25.2	-0.3
FDMO	Fiordimonte	0.45	337	P	Pg	00 05 18.1	+0.4
CSP1	Cessapalombo	0.48	349	P	Pg	00 05 18.5	+0.3
CESI	CESI - Serrava	0.49	322	P	Pg	00 05 18.8	+0.4
T0110	Collepietro	0.52	139	P	Pg	00 05 19.1	+0.3
T0110				S	Sb	00 05 27.3	-0.3
CESX	Cesi	0.55	269	P	Pg	00 05 19.4	0.0
ASSB	Assisi San Ben	0.65	311	P	Pb	00 05 22.1	-0.2
ASSB				AML	AML		
	comp=N,160μm,0.3s						
ASSB				AML	AML		
	comp=E,134μm,1.6s						
SRES	S.Oreste - Sor	0.71	238	P	Pg	00 05 22.9	+0.4
SSFR	Montelago di S	0.91	334	⇓P	Pn	00 05 28.4	+0.7

ROM 27 00:38:02.6±0.1, 42°.890N±0°.004×13°.209E±0°.006, h9km, ML1.8/6, 2C, Error ellipse: s-maj=0.5km s-min=0.4km az=74.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	Monte Cornacci	0.03	328	P	Pg	00 38 04.5	0.0
MC2	Monte Cornacci	0.03	328	S	Sg	00 38 05.6	-0.3
MC2				AML	AML		
	comp=E,1626μm,1.4s						
MC2				AML	AML		
	comp=N,1590μm,1.4s						
MMO1	Montemonaco	0.09	84	P	Pg	00 38 05.2	+0.3
MMO1				S	Sg	00 38 06.8	+0.2
MMO1				AML	AML		
	comp=E,75μm,0.7s						
MMO1				AML	AML		
	comp=N,79μm,0.4s						
MMO1				AML	AML		
	comp=N,1375μm,0.4s						
MMO1				AML	AML		
	comp=E,820μm,0.1s						
MMO1	Montemonaco	0.09	84	P	Pg	00 38 05.2	+0.3
MMO1				AML	AML		
	comp=E,820μm,0.1s						
MMO1				AML	AML		
	comp=N,1375μm,0.4s						
MMO1				AML	AML		
	comp=E,820μm,0.1s						
MMO1				AML	AML		
	comp=N,1375μm,0.4s						
MMO1				AML	AML		
	comp=E,820μm,0.1s						
MMO1				AML	AML		
	comp=N,1375μm,0.4s						
NRCA	Norcia	0.09	231	P	Pg	00 38 05.5	+0.5
NRCA				S	Sg	00 38 07.3	+0.7
NRCA	Norcia	0.09	231	P	Pg	00 38 05.5	+0.5
NRCA				S	Sg	00 38 07.3	+0.6
NRCA				AML	AML		
	comp=E,2035μm,0.2s						
NRCA				AML	AML		
	comp=N,2115μm,0.1s						
NRCA				AML	AML		
	comp=E,2155μm,0.6s						
NRCA				AML	AML		
	comp=N,2295μm,0.1s						
NRCA				AML	AML		
	comp=E,2035μm,0.2s						
NRCA				AML	AML		
	comp=N,2110μm,0.1s						
NRCA				AML	AML		
	comp=E,2155μm,0.6s						
NRCA				AML	AML		
	comp=N,2295μm,0.1s						
NRCA				AML	AML		
	comp=N,2110μm,0.1s						
NRCA				AML	AML		
	comp=E,2035μm,0.2s						
NRCA				AML	AML		
	comp=E,2155μm,0.6s						
NRCA				AML	AML		
	comp=N,2295μm,0.1s						
FDMO	Fiordimonte	0.17	329	P	Pg	00 38 06.7	+0.4
FDMO				S	Sg	00 38 09.7	+1.0
FDMO				AML	AML		
	comp=E,239μm,0.1s						
FDMO				AML	AML		
	comp=N,338μm,0.2s						
FDMO				AML	AML		
	comp=E,240μm,0.1s						
FDMO	Fiordimonte	0.17	329	P	Pg	00 38 06.7	+0.4
FDMO				S	Sg	00 38 09.4	+0.7
FDMO				AML	AML		
	comp=E,240μm,0.1s						
FDMO				AML	AML		
	comp=N,338μm,0.2s						
FDMO				AML	AML		
	comp=E,239μm,0.1s						
FDMO				AML	AML		
	comp=N,338μm,0.2s						
FDMO				AML	AML		
	comp=N,338μm,0.2s						
FDMO				AML	AML		
	comp=E,240μm,0.1s						
GUMA	Gualdo di Mace	0.20	28	P	Pg	00 38 07.4	+0.8
GUMA				S	Sg	00 38 11.0	+1.6
GUMA				AML	AML		
	comp=E,718μm,1.6s						
GUMA				AML	AML		
	comp=E,748μm,0.4s						
GUMA				AML	AML		
	comp=N,778μm,0.2s						
GUMA				AML	AML		
	comp=N,768μm,0.3s						
GUMA	Gualdo di Mace	0.20	28	P	Pg	00 38 07.4	+0.7
GUMA				S	Sg	00 38 10.9	+1.4
GUMA				AML	AML		
	comp=E,748μm,0.4s						
GUMA				AML	AML		
	comp=N,778μm,0.2s						
GUMA				AML	AML		
	comp=N,778μm,0.2s						
GUMA				AML	AML		
	comp=E,748μm,0.4s						
CSP1	Cessapalombo	0.20	359	P	Pg	00 38 07.2	+0.4
CSP1				S	Sg	00 38 10.7	+1.0
CSP1	Cessapalombo	0.20	359	⇑P	Pg	00 38 07.2	+0.4
CSP1				S	Sg	00 38 10.5	+0.8
CSP1				AML	AML		
	comp=E,380μm,0.1s						
CSP1				AML	AML		
	comp=N,316μm,0.4s						
CSP1				AML	AML		
	comp=E,380μm,0.1s						
CSP1				AML	AML		
	comp=N,316μm,0.4s						
CESI	CESI - Serrava	0.25	297	P	Pg	00 38 08.3	+0.6
CESI				S	Sb	00 38 12.9	-1.0
CESI				AML	AML		
	comp=E,216μm,0.4s						
CESI				AML	AML		
	comp=N,312μm,0.2s						
CESI	CESI - Serrava	0.25	297	P	Pg	00 38 08.3	+0.6
CESI				S	Sb	00 38 12.6	-1.4
CESI				AML	AML		
	comp=E,216μm,0.4s						
CESI				AML	AML		
	comp=N,312μm,0.2s						
CESI				AML	AML		
	comp=E,216μm,0.4s						
CESI				AML	AML		
	comp=N,312μm,0.2s						
CESI				AML	AML		
	comp=E,216μm,0.4s						
CESI				AML	AML		
	comp=N,312μm,0.2s						
T1243	Rocca Santa Ma	0.26	138	P	Pg	00 38 08.5	+0.6
T1243				S	Sb	00 38 12.9	-1.4
T1243				AML	AML		
	comp=E,149μm,0.3s						
T1243				AML	AML		
	comp=N,164μm,0.2s						
T1243				AML	AML		
	comp=E,362μm,0.4s						
T1243				AML	AML		
	comp=N,288μm,0.3s						
T1243				AML	AML		
	comp=N,288μm,0.3s						
T1243				AML	AML		
	comp=E,362μm,0.4s						
LNSS	Leonessa	0.31	203	P	Pg	00 38 09.5	+0.6
LNSS				S	Sb	00 38 14.7	-1.0
LNSS				AML	AML		
	comp=E,228μm,0.2s						
LNSS				AML	AML		
	comp=N,223μm,0.3s						
LNSS				AML	AML		
	comp=E,228μm,0.2s						
LNSS				AML	AML		
	comp=N,223μm,0.3s						
OFFI	Offida	0.35	83	P	Pb	00 38 11.1	0.0
RM33	Pellescritta (	0.38	179	P	Pg	00 38 10.7	+0.6
RM33				S	Sb	00 38 17.1	-0.6
CAMP	Campotosto	0.38	157	P	Pg	00 38 10.2	+0.1
CAMP				S	Sb	00 38 17.0	-0.8
TERO	Teramo	0.40	132	P	Pg	00 38 10.8	+0.5
TERO	Teramo	0.40	132	AML	AML		
	comp=E,129μm,1.0s						
TERO				AML	AML		
	comp=N,139μm,0.1s						
SNTG	Esanatoglia	0.41	332	P	Pg	00 38 11.0	+0.2
SNTG				S	Sb	00 38 17.5	-1.1
SNTG				AML	AML		
	comp=E,46μm,0.1s						
SNTG				AML	AML		
	comp=N,40μm,1.1s						
SNTG				AML	AML		
	comp=N,40μm,1.1s						
SNTG				AML	AML		
	comp=E,46μm,0.1s						
ASSB	Assisi San Ben	0.43	291	P	Pg	00 38 11.4	+0.3
ASSB				S	Sb	00 38 18.2	-0.9
ASSB				AML	AML		
	comp=E,128μm,0.2s						
ASSB				AML	AML		
	comp=N,120μm,1.0s						
ASSB				AML	AML		
	comp=N,120μm,1.0s						
ASSB				AML	AML		
	comp=E,128μm,0.2s						
EL6	Elcito	0.45	350	P	Pg	00 38 11.7	+0.3
EL6				S	Sb	00 38 18.9	-0.6
ARRO	Arrone	0.45	227	P	Pg	00 38 11.9	+0.6
ARRO	Arrone	0.45	227	P	Pg	00 38 11.9	+0.5
ARRO				S	Sb	00 38 18.7	-0.9
CING	Cingoli	0.48	359	P	Pg	00 38 12.3	+0.2
CING				S	Sb	00 38 20.1	-0.5
CING				AML	AML		
	comp=E,60μm,1.0s						
CING				AML	AML		
	comp=N,60μm,0.1s						
CING				AML	AML		
	comp=N,60μm,0.1s						
CING				AML	AML		
	comp=E,60μm,1.0s						
ATCC	AVT- Casa Cast	0.51	305	P	Pg	00 38 13.0	+0.5
ATCC				S	Sb	00 38 21.1	-0.3
FOSV	Fossato di Vic	0.52	321	P	Pg	00 38 13.1	+0.4
FOSV				S	Sb	00 38 21.2	-0.4
ARVD	Arcevia	0.64	342	P	Pg	00 38 15.2	+0.2
ARVD				S	Sb	00 38 24.9	-0.2
FRON	Frontone	0.72	331	P	Pg	00 38 16.4	-0.1
FRON				S	Sb	00 38 27.2	-0.2
RDP	Rocca di Papa	1.19	198	⇑P	Pb	00 38 24.3	-1.0

HVO 27 00:47:10.8±1.3, 19°.2N±0°.1×155°.47W±0°.02, h39km±4km, ML2.6/22, ML2.7/48(NEIC), Error ellipse: s-maj=16.1km s-min=2.7km az=180.0

NEIC 27 00:47:09.7±0.8, 19°.25N±0°.03×155°.48W±0°.02, h40km±3km, Error ellipse: s-maj=3.9km s-min=3.0km az=196.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	Hot Caves	0.08	99		Pn	00 47 16.7	+0.4
AIN	Ainahou	0.12	11		Pn	00 47 17.2	+0.5
AIN				Sn	Sn	00 47 22.0	+0.4
KHU	Kahuku	0.12	268		Pn	00 47 17.1	+0.3
KHU				Sn	Sn	00 47 21.7	0.0
HLP	Hilina Pali	0.17	75		Pn	00 47 17.1	+0.2
HLP				Sn	Sn	00 47 21.8	0.0
HPO	Honuapo	0.17	203		Pn	00 47 16.9	+0.1
HPO					Sn	00 47 20.9	-0.8
SDHHI	Sand Hill	0.23	52		Pn	00 47 17.5	+0.1
SDHHI				Sn	Sn	00 47 22.4	-0.3
WRMHI	West Rim	0.23	48		Pn	00 47 17.4	0.0
WRMHI				IAML		00 47 23.2	
	comp=N,2μm,0.5s						
WRMHI					Sn	00 47 23.3	+0.5
RIM	Rim	0.24	54		Pn	00 47 17.5	0.0
RIM				Sn	Sn	00 47 21.9	-1.2
RIM				IAML		00 47 24.6	
	comp=N,799nm,0.5s						
RIM				IAML		00 47 24.9	
	comp=E,859nm,0.3s						
UWE	Uwekahuna	0.25	46		Pn	00 47 17.6	0.0
UWE				Sn	Sn	00 47 22.6	-0.4
UWE				IAML		00 47 23.1	
	comp=N,2μm,0.3s						
NPH	North Pit	0.25	50		Pn	00 47 17.6	0.0
NPH				Sn	Sn	00 47 22.3	-0.8
OBL	Observatory Le	0.25	48		Pn	00 47 17.5	-0.1
OBL					Sn	00 47 22.7	-0.5
KKO	Keanakako`i	0.25	54		Pn	00 47 17.6	0.0
KKO				Sn	Sn	00 47 22.5	-0.7
KKO				IAML		00 47 22.9	
	comp=E,684nm,0.4s						
KKO				IAML		00 47 23.1	
	comp=N,948nm,0.4s						
MWH	Moku'aweowe	0.26	335	Pn	Pn	00 47 18.2	0.0
MWH				IAML		00 47 19.2	
	comp=E,692nm,0.3s						
MWH				Sn	Sn	00 47 23.9	-0.1
MWH				IAML		00 47 25.2	
	comp=N,626nm,0.3s						
MLH	Mauna Loa	0.26	21		Pn	00 47 18.2	+0.3
MLH				IAML		00 47 23.8	
	comp=E,941nm,0.3s						
UWB	Uwekahuna B	0.26	48		Pn	00 47 17.5	-0.2
UWB					Sn	00 47 22.4	-0.9
BYL	Byron's Ledge	0.27	53		Pn	00 47 17.7	-0.1
BYL					Sn	00 47 22.9	-0.4
BYL				IAML		00 47 23.4	
	comp=E,868nm,0.4s						
BYL				IAML		00 47 25.0	
	comp=N,643nm,0.4s						
SBLHI	Steaming Bluff	0.27	49	Sn	Sn	00 47 22.6	-0.8
SBLHI				IAML		00 47 23.1	
	comp=E,1μm,0.2s						
HATHI	Halema'uma'u T	0.27	51		Sn	00 47 22.9	-0.6
HATHI				IAML		00 47 23.1	
	comp=E,1μm,0.7s						
HATHI				IAML		00 47 23.3	
	comp=N,1μm,0.7s						
PUH	Pauahi	0.28	64		Pn	00 47 17.7	-0.2
PUH				Sn	Sn	00 47 22.7	-0.9
PUH				IAML		00 47 23.5	
	comp=E,958nm,0.3s						
PUH				IAML		00 47 24.5	
	comp=N,1μm,0.3s						
RSD	Rainshed	0.29	42		Pn	00 47 17.9	-0.2
RSD				Sn	Sn	00 47 23.0	-0.8
MLOA	Mauna Loa Obse	0.30	343		Pn	00 47 18.6	+0.1
MLOA				Sn	Sn	00 47 24.3	-0.2
HMH	Humu'ula Sheep	0.35	360		Pn	00 47 19.4	+0.5
NPOC	North of Pu'u	0.38	68	Pn	Pn	00 47 19.6	+0.6
NPOC				IAML		00 47 24.8	
	comp=N,868nm,0.2s						
NPOC				IAML		00 47 24.8	
	comp=E,1μm,0.3s						
JCUZ	Jacuzzi	0.38	70	Pn	Pn	00 47 18.2	-0.8
JCUZ					Sn	00 47 24.6	-0.9
JCUZ				IAML		00 47 25.0	
	comp=E,976nm,0.6s						
JCUZ				IAML		00 47 25.1	
	comp=N,1μm,0.3s						
POHA	Pohakuloa	0.51	355		Pn	00 47 20.7	-0.1
POHA				Sn	Sn	00 47 28.2	-0.4
POHA				IAML		00 47 29.0	
	comp=N,452nm,0.2s						
KHLU	Kahalu`u	0.52	311		Pn	00 47 20.6	-0.2
KHLU				Sn	Sn	00 47 28.0	-0.5
KHLU				IAML		00 47 28.4	
	comp=N,711nm,0.1s						
HUH	Hualalai	0.55	322		Pn	00 47 21.5	+0.2
HUH				Sn	Sn	00 47 29.2	-0.3
HUH				IAML		00 47 38.0	
	comp=E,529nm,0.4s						
HUH				IAML		00 47 40.3	
	comp=N,533nm,0.2s						
HPAH	Hawaii Prepara	0.80	345		Pn	00 47 23.8	-0.8
HPAH				Sn	Sn	00 47 34.0	-1.4
MHA	Mahukona	1.01	337	Pn	Pn	00 47 27.7	+0.2
MHA				Sn	Sn	00 47 40.4	-0.1
HLK	Haleakala	1.66	335	Pn	Pn	00 47 36.0	-0.6
HLK				Sn	Sn	00 47 54.0	-2.9
KHLH	Kahului Airpor	1.86	332	Pn	Pn	00 47 38.7	-0.4
KHLH				Sn	Sn	00 48 01.3	-0.1

IDC 27 00:52:12.9±23.0, 23°.02S×179°.69E, h561km±229km, mb3.4/2, mbtmp4.4/2, Error ellipse: s-maj=226.9km s-min=122.3km az=142.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.91	260	P	P	00 59 15.2	0.0
	2.0nm,0.5s,baz=96,slow=8.0,SNR=20						
	2.0nm,0.5s						
WRA	Warramunga Arr	42.19	265	P	P	00 59 17.1	-0.4
	3.2nm,0.4s,baz=103,slow=8.2,SNR=169						
	3.2nm,0.4s						
BVAR	Borovoye Array	119.59	319	PKP	PKPdf	01 09 58.5	-0.6
	0.3nm,0.3s,baz=119,slow=1.9,SNR=3.0						
AKASG	Malin Array Be	144.08	328	PKP	PKPbc	01 10 44.5	+0.1
	0.8nm,0.4s,baz=42,slow=3.4,SNR=7.2						
BRTR	Keskin Array B	146.82	308	PKPbc	PKPbc	01 10 52.2	-0.7
	0.8nm,0.6s,baz=61,slow=5.5,SNR=4.5						
EKA	Eskdalemuir Ar	147.66	3	PKPbc	PKPbc	01 10 53.8	-0.6
	0.3nm,0.4s,baz=346,slow=2.7,SNR=8.0						

IDC 27 01:07:58.1±1.4, 8°.28N×92°.07E, h0km, mb3.7/5, mbtmp3.8/8, ML4.1/3, MS2.9/1, Error ellipse: s-maj=36.6km s-min=22.5km az=52.0

ISC 27 01:08:01.8±0.9, 8°.3N±0°.1×92°.1E±0°.1, h24km, n11, σ0.55/8, mb3.7/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	8.73	128	Pn	Pn	01 10 06.8	0.0
	0.9nm,0.3s,baz=308,slow=15,SNR=2.0						
	2.8nm,0.4s						
PALK	Pallekele	11.29	266	Pn	Pn	01 10 42.2	+0.5
	0.5nm,0.3s,baz=90,slow=5.1,SNR=8.8						
PALK				LR	LR	01 14 25.2	
	comp=Z,59nm,19.6s,baz=191,slow=34						
	11nm,1.0s						
CMAR	Chiang Mai Arr	12.14	33	Pn	Pn	01 10 54.0	+0.7
	1.5nm,0.3s,baz=224,slow=11,SNR=7.3						
	2.5nm,0.4s						
H08S3	Diego Garcia H	25.09	232	T	T	01 39 31.7	
	baz=55,slow=75						
H08S2	Diego Garcia H	25.10	231	T	T	01 39 36.3	
	baz=55,slow=75						
H08S1	Diego Carcia H	25.11	231	T	T	01 39 39.4	
	baz=55,slow=75						
MKAR	Makanchi Array	39.29	349	P	P	01 15 28.4	-0.3
	0.5nm,0.6s,baz=170,slow=7.4,SNR=5.9						
	0.5nm,0.6s						
SONM	Songino Array	41.27	15	P	P	01 15 45.2	0.0
	0.9nm,0.7s,baz=214,slow=6.8,SNR=4.2						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	43.69	348	P	P	01 16 03.8	-0.8
	0.4nm,0.2s,baz=164,slow=7.0,SNR=1.8						
	0.4nm,0.2s						
WRA	Warramunga Arr	50.18	124	P	P	01 16 55.8	-0.2
	0.6nm,0.8s,baz=306,slow=8.7,SNR=8.2						
	0.6nm,0.8s						
AKTO	Aktyubinsk	50.63	332	P	P	01 16 58.7	-0.2
	0.4nm,0.5s,baz=143,slow=10,SNR=1.5						
	0.4nm,0.5s						

KRNET 27 01:11:42.5±0.1, 40°.48N×77°.23E, mb2.5

NNC 27 01:11:43.9±0.7, 40°.58N×77°.33E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=4.6km s-min=3.5km az=2.0

SOME 27 01:11:46.7, 40°.67N×77°.33E, h5km

ISC 27 01:11:45.6±2.8, 40°.7N±0°.1×77°.25E±0°.04, h5km±15km, n35, σ1.33/55, 9C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.21	309	⇑*i*P	Pb	01 12 07.5	-1.7
	baz=15						
NRN				⇑*i*S	Sn	01 12 25.8	-0.7
	baz=15						
ULHL	Ulahol	1.75	335	⇓*i*P	Pb	01 12 17.6	-0.7
	baz=37						
ULHL				⇓*i*S	Sg	01 12 43.1	+1.4
	baz=37						
MDOK	Medeo	2.50	357	*e*P	Pg	01 12 33.6	+0.2
	6.3nm,0.3s						
MDOK				*e*S	Sg	01 13 06.7	+0.9
	23nm,0.2s						
MDOK	Medeo	2.50	357	⇑Pg	Pb	01 12 31.0	0.0
	3.7nm,0.4s						
MDOK				Pg	Pg	01 12 31.7	-1.8
	6.3nm,0.4s						
MDOK				Lg	Lg	01 13 06.7	
	23nm,0.5s						
MDOK				Lg	Lg	01 13 07.1	
	16nm,0.5s						
ARLS	Aral	2.51	299	⇑*e*P	Pn	01 12 26.9	-0.2
	baz=3.0						
ARLS				⇑*i*S	Sn	01 12 59.3	+1.1
	baz=3.0						
MTBS	Maitube	2.53	346	*e*P	Pg	01 12 34.6	+0.5
	2.1nm,0.4s						
MTBS				*e*S	Sg	01 13 08.3	+1.3
	15nm,0.3s						
MTBS	Maitube	2.53	346	Pg	Pb	01 12 32.2	+0.6
	3.0nm,0.2s						
MTBS				Lg	Lg	01 13 08.3	
	16nm,0.4s						
SATY	Saty	2.54	20	*e*P	Pg	01 12 33.6	-0.6
	2.5nm,0.7s						
SATY				*e*S	Sg	01 13 06.8	-0.4
	16nm,0.3s						
SATY	Saty	2.54	20	Pg	Pb	01 12 31.7	0.0
	3.4nm,0.2s						
SATY				Lg	Lg	01 13 06.8	
	16nm,0.3s						
KST	Kastek	2.56	338	*e*P	Pg	01 12 35.1	+0.5
	1.8nm,0.6s						
KST				*e*S	Sg	01 13 09.3	+1.5
	10nm,0.3s						
KST	Kastek	2.56	338	Pg	Pb	01 12 33.1	+1.0
	2.1nm,0.5s						
KST				Lg	Lg	01 13 09.3	
	9.3nm,0.8s						
TKM2	Tokmak 2	2.57	332	⇑Pg	Pb	01 12 31.8	-0.4
	2.0nm,0.7s						
TKM2				⇑Lg	Lg	01 13 09.5	
	7.7nm,0.7s						
TKM2	Tokmak 2	2.57	332	⇑*i*P	Pn	01 12 29.0	+1.0
	baz=34						
TKM2				⇑*i*S	Sb	01 13 02.7	-1.5
	baz=34						
DGS	Degeres	2.80	337	*e*P	Pg	01 12 39.1	-0.1
	1.1nm,0.5s						

DGS					*e*S		**Sg**	**01 13 16.3**	**+0.9**
	10.0nm,0.6s								
DGS	**Degeres**	**2.80**	**337**		Pg		**Pb**	**01 12 37.0**	**+0.9**
	1.4nm,0.5s								
DGS					Lg		Lg	01 13 16.0	
	10.0nm,0.6s								
UZB	**Uzynbulak**	**2.81**	**28**	*e*P			**Pb**	**01 12 37.9**	**+1.6**
	0.5nm,0.4s								
UZB					*e*S		**Sg**	**01 13 14.3**	**-1.5**
	8.8nm,0.5s								
UZB	**Uzynbulak**	**2.81**	**28**	Pg			**Pb**	**01 12 36.1**	**-0.2**
	1.2nm,0.4s								
UZB					Lg		Lg	01 13 14.3	
	10nm,0.8s								
KURS	**Kuram**	**2.90**	**13**	*e*P			**Pg**	**01 12 40.9**	**-0.2**
	2.2nm,0.5s								
KURS					*e*S		**Sg**	**01 13 19.2**	**+0.5**
	4.6nm,0.7s								
KURS	**Kuram**	**2.90**	**13**	Pg			**Pb**	**01 12 38.4**	**+0.6**
	3.1nm,0.8s								
KURS					Lg		Lg	01 13 18.5	
	7.6nm,0.6s								
SHLS	**Shalkode**	**2.98**	**33**	*e*P			**Pg**	**01 12 45.2**	**+2.4**
	8.9nm,0.3s								
SHLS					*e*S		**Sg**	**01 13 26.2**	**+4.8**
	9.8nm,0.7s								
SHLS	**Shalkode**	**2.98**	**33**	Pg			**Pg**	**01 12 42.6**	**-0.1**
	3.5nm,0.1s								
SHLS					Lg		Lg	01 13 26.0	
	9.8nm,0.7s								
KPKS	**Kokpek**	**2.99**	**20**	*e*P			**Pg**	**01 12 41.9**	**-1.0**
	2.5nm,0.8s								
KPKS					*e*S		**Sg**	**01 13 21.0**	**-0.7**
	18nm,0.4s								
KPKS	**Kokpek**	**2.99**	**20**	Pg			**Pb**	**01 12 39.7**	**+0.3**
	2.9nm,0.4s								
KPKS					Lg		Lg	01 13 20.8	
	18nm,0.4s								
KTBS	**Karatobe**	**3.07**	**352**	*e*P			**Pg**	**01 12 44.0**	**-0.4**
	1.0nm,0.4s								
KTBS					*e*S		**Sg**	**01 13 24.5**	**+0.4**
	18nm,0.4s								
KTBS	**Karatobe**	**3.07**	**352**	Pg			**Pb**	**01 12 41.8**	**+1.1**
	1.2nm,0.4s								
KTBS					Lg		Lg	01 13 24.3	
	18nm,0.4s								
CHKK	**Chushkaly**	**3.19**	**357**	*e*P			**Pg**	**01 12 46.1**	**-0.6**
	4.0nm,0.3s								
CHKK					*e*S		**Sg**	**01 13 28.1**	**+0.1**
	13nm,0.2s								
CHKK	**Chushkaly**	**3.19**	**357**	Pg			**Pb**	**01 12 43.8**	**+1.1**
	4.0nm,0.3s								
CHKK					Lg		Lg	01 13 28.1	
	16nm,0.5s								
KRBS	**Karabastau**	**3.24**	**339**	*e*P			**Pg**	**01 12 47.4**	**-0.3**
	1.1nm,0.4s								
KRBS					*e*S		**Sg**	**01 13 30.3**	**+0.6**
	7.7nm,0.6s								
KRBS	**Karabastau**	**3.24**	**339**	Pg			**Pb**	**01 12 45.0**	**+1.4**
	1.6nm,0.5s								
KRBS					Lg		Lg	01 13 29.8	
	7.7nm,0.6s								
BLB	**Baldybastay**	**3.54**	**14**	*e*P			**Pg**	**01 12 51.5**	**-2.0**
	2.7nm,0.5s								
BLB					*e*S		**Sg**	**01 13 37.3**	**-2.1**
	19nm,0.3s								
BLB	**Baldybastay**	**3.54**	**14**	Pg			**Pb**	**01 12 49.2**	**+0.4**
	3.0nm,0.4s								
BLB					Lg		Lg	01 13 37.3	
	19nm,0.3s								
ARXS	**Arharly**	**3.57**	**7**	*e*P			**Pg**	**01 12 52.5**	**-1.4**
	0.8nm,0.4s								
ARXS					*e*S		**Sg**	**01 13 39.0**	**-1.1**
	6.0nm,0.4s								
ARXS	**Arharly**	**3.57**	**7**	Pg			**Pb**	**01 12 50.0**	**+0.8**
	1.8nm,0.6s								
ARXS					Lg		Lg	01 13 38.5	
	6.1nm,0.5s								
DJR	**Jarkent**	**4.12**	**26**	*e*P			**Pg**	**01 13 01.9**	**-2.5**
	0.5nm,0.4s								
DJR					*e*S		**Sg**	**01 13 55.0**	**-2.7**
	3.9nm,0.2s								
DJR	**Jarkent**	**4.12**	**26**	Pg			**Pb**	**01 12 59.6**	**+1.1**
	0.6nm,0.2s								
DJR					Lg		Lg	01 13 54.9	
	4.0nm,0.3s								

IDC ***27*** *01:14:28.2±0.6, 31°.37N×77°.57E, h0km, mb4.4/27, mbtmp4.4/30, ML4.1/3, MS3.4/9, Error ellipse: s-maj=16.2km s-min=11.6km az=35.0*

MOS ***27*** *01:14:30.9±1.0, 31°.53N×77°.60E, h26km, mb4.8/33, Error ellipse: s-maj=7.7km s-min=3.6km az=104.7*

NEIC ***27*** *01:14:30.1±1.6, 31°.48N±0°.07×77°.71E±0°.08, h10km±1km, mb4.6/69, Error ellipse: s-maj=13.8km s-min=9.5km az=226.0*

NDI ***27*** *01:14:32.6±3.9, 31°.35N×77°.61E, h8km±12km, mb4.5, ML4.0, mb4.6(NEIC)*

BJI ***27*** *01:14:32.1±0.0, 31°.55N×77°.84E, h21km, mb4.5/36, mB4.7/22, ML4.2/2, Ms4.0/21, Ms7 3.8/21*

ISC 27 01:14:32.1±1.0, 31°.43N±0°.03×77°.61E±0°.03, h26km±7km, n321, σ1§49/344, mb4.6/98, MS3.5/14, 16C-7D, Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**0.48**	**232**	*e*P	**Pb**	**01 14 41.0**	**-1.1**
SMLA				*e*S	**Sb**	**01 14 47.8**	**-1.1**
SMLA				IAML		01 14 49.2	
	comp=E,10μm,0.5s						
SMLA				IAML		01 14 53.2	
	comp=N,7μm,0.1s						
BHK	**Bhakra**	**1.02**	**270**	*e*P	**Pb**	**01 14 51.7**	**+0.5**
BHK				*e*S	**Sn**	**01 15 08.1**	**+3.7**
DDI	**Dehra Dun**	**1.16**	**161**	*e*P	**Pb**	**01 14 54.9**	**+1.2**
DDI				*e*S	**Sb**	**01 15 10.5**	**+2.2**
DDI				IAML		01 15 16.3	
	comp=N,6μm,0.3s						
DDI				IAML		01 15 20.0	
	comp=E,6μm,0.4s						
KKR	**Kurukshetra**	**1.61**	**205**	*e*P	**Pb**	**01 15 02.2**	**+1.0**
THN	**Thein Dam**	**1.90**	**302**	*e*P	**Pb**	**01 15 05.7**	**-0.4**
THN				*e*S	**Sb**	**01 15 31.1**	**+1.7**
MERT	**Meerut**	**2.45**	**178**	*e*P	**Pb**	**01 15 13.8**	**-1.7**
JMU	**Jammu**	**2.64**	**300**	*e*P	**Pb**	**01 15 17.4**	**-1.3**
JMU				*e*S	**Sb**	**01 15 52.2**	**+1.5**
NDI	**New Delhi**	**2.76**	**187**	*e*P	**Pn**	**01 15 16.5**	**+1.9**
NDI				*i* x	x	01 15 21.7	
PTH	**Pithoragarh**	**2.92**	**129**	*e*P	**Pn**	**01 15 19.9**	**+2.8**
LGTI	**Lohaghat**	**3.01**	**130**	*e*P	**Pn**	**01 15 20.5**	**+2.3**
SONA	**Sohna**	**3.20**	**188**	*e*P	**Pn**	**01 15 23.3**	**+2.5**
KUDL	**Kundal**	**3.41**	**197**	*e*P	**Pn**	**01 15 25.7**	**+2.0**
KUDL				*i* x	x	01 15 35.0	
KHET	**Khetri**	**3.69**	**206**	*e*P	**Pn**	**01 15 28.3**	**+0.8**
KHET				*i* x	x	01 15 39.8	
SARP	**Sargodha**	**4.24**	**278**	P	**Pn**	**01 15 36.2**	**+1.1**
CHCP	**Chirah Chowk**	**4.29**	**302**	P	**Pn**	**01 15 38.3**	**+2.4**
NIL	**Nilore**	**4.30**	**302**		**Pn**	**01 15 37.6**	**+1.7**
NIL	**Nilore**	**4.30**	**302**	P	**Pn**	**01 15 37.6**	**+1.7**
THW	**Thamme Wali**	**5.16**	**287**	P	**Pn**	**01 15 49.0**	**+1.2**
CEP	**Cherat**	**5.37**	**298**	P	**Pn**	**01 15 52.8**	**+2.0**
AJM	**Ajmer**	**5.57**	**209**	*e*P	**Pn**	**01 15 56.5**	**+3.1**
JHNI	**Jhansi**	**6.00**	**172**	*e*P	**Pn**	**01 16 01.1**	**+1.8**
DANN	**Dangsing**	**6.15**	**118**	*e*Pn	**Pn**	**01 16 03.9**	**+2.2**
DANN				*e*Sn	**Sn**	**01 17 12.9**	**+1.5**
	comp=E,91nm,0.3s						
GKN	**Gorkha**	**7.00**	**117**	*e*Pn	**Pn**	**01 16 15.0**	**+1.9**
GKN				*e*Sn	**Sn**	**01 17 32.6**	**+0.7**
	comp=E,131nm,0.3s						
ALBI	**Allahabad**	**7.13**	**148**	*e*P	**Pn**	**01 16 14.7**	**0.0**
JASL	**Jaisalmer**	**7.38**	**234**	*e*P	**Pn**	**01 16 17.4**	**-0.9**
DMN	**Daman**	**7.55**	**118**	*e*Pn	**Pn**	**01 16 22.0**	**+1.1**
DMN				*e*Sn	**Sn**	**01 17 46.5**	**+0.7**
	comp=E,115nm,0.3s						
KKN	**Kakani**	**7.59**	**117**	*e*Pn	**Pn**	**01 16 22.5**	**+1.1**
KKN	**Kakani**	**7.59**	**117**	*e*Pn	**Pn**	**01 16 22.8**	**+1.4**
KKN	**Kakani**	**7.59**	**117**	*e*Pn	**Pn**	**01 16 23.1**	**+1.7**
KKN				*e*Sn	**Sn**	**01 17 46.3**	**-0.4**
	comp=E,109nm,0.2s						
KKN				*e*Sn	**Sn**	**01 17 47.3**	**+0.6**
	comp=E,113nm,0.2s						
PKIN	**Phulchoki**	**7.79**	**118**	*e*Pn	**Pn**	**01 16 25.6**	**+1.5**
PKIN				*e*Sn	**Sn**	**01 17 51.6**	**-0.1**
	comp=E,123nm,0.3s						
PKI	**Pulchoki**	**7.80**	**118**	*e*Pn	**Pn**	**01 16 25.6**	**+1.2**
PKI				*e*Sn	**Sn**	**01 17 52.5**	**+0.4**
	comp=E,105nm,0.4s						
KBL	**Kabul**	**7.84**	**296**	Pn	**Pn**	**01 16 25.1**	**+0.4**
KBL	**Kabul**	**7.84**	**296**	P	**Pn**	**01 16 25.1**	**+0.4**
GUN	**Gumba**	**8.00**	**114**	*e*Pn	**Pn**	**01 16 27.8**	**+0.8**
GUN				*e*Sn	**Sn**	**01 17 56.1**	**-0.8**
	comp=E,40nm,0.3s						
BHPL	**Bhopal**	**8.16**	**181**	*e*P	**Pn**	**01 16 27.8**	**-1.2**
BHPL				*e*S	**Sn**	**01 17 55.9**	**-4.5**
KSH	**Kashi**	**8.18**	**351**	Pn	**Pn**	**01 16 28.5**	**-0.8**
KSH				Sn	**Sn**	**01 17 53.0**	**-8.0**
KSH				smax	smax		
	comp=E,90nm,0.8s						
KSH				smax	smax		
	comp=E,77nm,0.9s						
KSH				LR	LR		
	comp=E,840nm,8.8s						
JBP	**Jabalpur**	**8.49**	**165**	*e*P	**Pn**	**01 16 29.9**	**-3.5**
JBP				⇓*e*S	**Sn**	**01 18 02.9**	**-5.6**
DRK	**Karamyk**	**9.33**	**331**		**Pn**	**01 16 45.0**	**-0.2**
GAR	**Garm**	**9.62**	**324**		**Pn**	**01 16 48.9**	**-0.2**
CHGR	**Chuyangaron**	**10.00**	**318**	Pn	**Pn**	**01 16 53.4**	**-0.8**
CHGR	**Chuyangaron**	**10.00**	**318**	P	**Pn**	**01 16 53.4**	**-0.8**
BTK	**Batken**	**10.23**	**329**	Pn	**Pn**	**01 16 56.7**	**-0.6**
BTK	**Batken**	**10.23**	**329**	P	**Pn**	**01 16 56.7**	**-0.6**
NGP	**Nagpur**	**10.31**	**172**	*e*P	**Pn**	**01 16 59.2**	**+0.6**
BOK	**Bokaro**	**10.56**	**134**	*e*P	**Pn**	**01 17 00.9**	**-0.9**
BOK				IAmb	IAmb	01 17 03.3	
	comp=Z,13nm,0.7s						
AKL	**Akola**	**10.69**	**183**	*e*P	**Pn**	**01 17 01.8**	**-1.9**
PRZ	**Przheval'sk**	**11.05**	**3**	Pn	**Pn**	**01 17 05.8**	**-2.9**
PRZ	**Przheval'sk**	**11.05**	**3**	P	**Pn**	**01 17 05.8**	**-2.9**
ARK	**Arkit**	**11.30**	**338**	P	**Pn**	**01 17 12.1**	**+0.1**
AAK	**Ala-Archa**	**11.46**	**348**	Pn	**Pn**	**01 17 13.8**	**-0.5**
AAK	**Ala-Archa**	**11.46**	**348**	*i* P	**Pn**	**01 17 14.3**	**0.0**
TKM2	**Tokmak 2**	**11.59**	**353**	*i* P	**Pn**	**01 17 16.5**	**+0.5**
TKM2				pmax	pmax		
	comp=E,6.0nm,0.7s						
SATY	**Saty**	**11.63**	**3**	*e*P	**Pn**	**01 17 16.1**	**-0.4**
SATY	**Saty**	**11.63**	**3**	*e*P	**Pn**	**01 17 16.1**	**-0.4**
	baz=2.8						
MDOK	**Medeo**	**11.72**	**358**	*e*P	**Pn**	**01 17 17.6**	**-0.2**
MDOK	**Medeo**	**11.72**	**358**	*e*P	**Pn**	**01 17 17.7**	**-0.2**
	baz=358						
UZB	**Uzynbulak**	**11.75**	**5**	*e*P	**Pn**	**01 17 18.1**	**-0.1**
UZB	**Uzynbulak**	**11.75**	**5**	*e*P	**Pn**	**01 17 18.1**	**-0.1**
	baz=5.0						
LSA	**Lhasa**	**11.79**	**95**	Pn	**Pn**	**01 17 16.2**	**-3.0**
LSA	**Lhasa**	**11.79**	**95**	P	**Pn**	**01 17 16.2**	**-3.0**
SHLS	**Shalkode**	**11.80**	**7**	*e*P	**Pn**	**01 17 19.1**	**+0.3**
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SHLS	**Shalkode**	**11.80**	**7**	*e*P	**Pn**	**01 17 19.2**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=8.1						
KPKS	**Kokpek**	**12.05**	**4**	*e*P	**Pn**	**01 17 21.5**	**-0.7**
KPKS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KPKS	**Kokpek**	**12.05**	**4**	*e*P	**Pn**	**01 17 21.5**	**-0.7**
	comp=Z,5.7nm,0.7s,baz=3.6						
SGDS	**Sogindy**	**12.23**	**350**	*e*P	**Pn**	**01 17 25.4**	**+0.7**
SGDS	**Sogindy**	**12.23**	**350**	*e*P	**Pn**	**01 17 25.5**	**+0.7**
	baz=349						
IUG	**Iuzhnay**	**12.30**	**333**	*e*P	**Pn**	**01 17 25.1**	**-0.5**
IUG	**Iuzhnay**	**12.30**	**333**	*e*P	**Pn**	**01 17 25.1**	**-0.5**
	baz=332						
CHKK	**Chushkaly**	**12.42**	**358**	*e*P	**Pn**	**01 17 27.9**	**+0.7**
CHKK	**Chushkaly**	**12.42**	**358**	*e*P	**Pn**	**01 17 27.9**	**+0.7**
	baz=358						
KUU	**Kurty**	**12.49**	**356**	*e*P	**Pn**	**01 17 28.1**	**0.0**
KUU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KUU	**Kurty**	**12.49**	**356**	*e*P	**Pn**	**01 17 28.2**	**0.0**
	comp=Z,2.9nm,0.7s,baz=356						
DZA	**Taraz**	**12.49**	**338**	*e*P	**Pn**	**01 17 27.6**	**-0.5**
DZA	**Taraz**	**12.49**	**338**	*e*P	**Pn**	**01 17 27.7**	**-0.5**
	baz=338						
KK31	**Karatay Array**	**12.95**	**336**	Pn	**Pn**	**01 17 32.8**	**-1.7**
KK31	**Karatay Array**	**12.95**	**336**	P	**Pn**	**01 17 33.0**	**-1.4**
KKAR	**Karatay Array**	**12.95**	**336**	Pn	**Pn**	**01 17 31.9**	**-2.5**
KKAR	**Karatay Array**	**12.95**	**336**	Pn	**Pn**	**01 17 31.9**	**-2.5**
KKAR	**Karatay Array**	**12.95**	**336**	P	**Pn**	**01 17 31.9**	**-2.5**
HRA	**Herat**	**13.25**	**287**	Pn	**Pn**	**01 17 37.8**	**-0.9**
POO	**Poona**	**13.29**	**196**	IAmb	IAmb	01 17 58.8	
	comp=Z,95nm,0.1s						
SHL	**Shillong**	**13.84**	**111**	Pn	**Pn**	**01 17 44.9**	**-1.9**
SHL	**Shillong**	**13.84**	**111**	P	**Pn**	**01 17 44.9**	**-1.9**
BTLS	**Baital**	**13.88**	**349**	*e*P	**Pn**	**01 17 46.4**	**-0.7**
BTLS	**Baital**	**13.88**	**349**	*e*P	**Pn**	**01 17 46.4**	**-0.7**
	baz=349						
HYBB	**Hyderabad (bro**	**13.97**	**176**	*e*Pn	**Pn**	**01 17 49.4**	**+0.8**
HYBB				*e*Sn	**Sn**	**01 20 26.4**	**+3.5**
HYB	**Hyderabad**	**13.97**	**176**	IAmb	IAmb	01 17 47.8	
	comp=Z,21nm,1.0s						
TEZP	**TEZPUR**	**14.12**	**106**	IAmb	IAmb	01 17 58.8	
	comp=Z,7.0nm,0.6s						
WMQ	**Urumqi**	**14.71**	**30**	*e*P	**Pn**	**01 17 59.8**	**+1.3**
WMQ				pP	P	01 18 06.5	+2.1
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ				LR	LR		
	comp=Z,380nm,14.5s						
WMQ				LR	LR		
	comp=Z,210nm,13.7s						
WMQ				LR	LR		
	comp=Z,190nm,15.9s						
KOHI	**KOHIMA**	**15.56**	**107**	IAmb	IAmb	01 18 09.9	
	comp=Z,7.5nm,0.7s						
MAKZ	**Makanchi**	**15.72**	**11**		**Pn**	**01 18 10.2**	**-1.6**
MAKZ	**Makanchi**	**15.72**	**11**	P	**Pn**	**01 18 10.2**	**-1.6**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.7s						
MK31	**Makanchi Array**	**15.76**	**12**		**Pn**	**01 18 11.4**	**-1.0**
MK31	**Makanchi Array**	**15.76**	**12**	*i* P	**Pn**	**01 18 09.4**	**-3.0**
MK31				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR	**Makanchi Array**	**15.76**	**12**	Pn	**Pn**	**01 18 09.9**	**-2.4**
	comp=Z,1.7nm,0.3s,baz=196,slow=12,SNR=31						
MKAR				Sn	**Sn**	**01 20 56.8**	**-9.4**
	comp=Z,0.4nm,0.3s,baz=188,slow=20,SNR=2.8						
MKAR				LR	LR	01 24 28.1	
	comp=Z,60nm,19.9s,baz=162,slow=38						
	comp=Z,3.3nm,0.5s						
MKAR	**Makanchi Array**	**15.76**	**12**		**Pn**	**01 18 11.2**	**-1.2**
MKAR	**Makanchi Array**	**15.76**	**12**	*i* P	**Pn**	**01 18 13.3**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZSN	**Zaisan**	**16.94**	**17**	*e*P	**Pn**	**01 18 26.5**	**-0.8**
ZSN	**Zaisan**	**16.94**	**17**	*e*P	**Pn**	**01 18 26.5**	**-0.8**
	baz=17						
OTUK	**Ortayu**	**17.27**	**348**	P	**Pn**	**01 18 30.2**	**-1.2**
GEYT	**Alibeck**	**17.29**	**297**	P	**Pn**	**01 18 29.2**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=105,slow=11,SNR=4.3						
	comp=Z,1.7nm,0.5s						
GEYT	**Alibeck**	**17.29**	**297**	Pn	**Pn**	**01 18 30.9**	**-0.8**
GYA0	**ALIBECK ARRAY**	**17.29**	**297**	P	**Pn**	**01 18 31.1**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**17.29**	**297**	Pn	**Pn**	**01 18 31.1**	**-0.6**
BRZS	**Berezniki**	**18.90**	**350**	*e*P	**P**	**01 18 50.3**	**-0.3**
BRZS	**Berezniki**	**18.90**	**350**	*e*P	**P**	**01 18 50.4**	**-0.3**
	baz=350						
SEM	**Semipalatinsk**	**19.07**	**5**	*e*P	**P**	**01 18 52.4**	**-0.3**
SEM	**Semipalatinsk**	**19.07**	**5**	*e*P	**P**	**01 18 52.5**	**-0.3**
	baz=5.1						
KURBB	**Kurchatov Arra**	**19.19**	**2**	P	**P**	**01 18 53.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=21						
	comp=Z,1.9nm,0.2s						
KURK	**Kurchatov**	**19.29**	**2**		**P**	**01 18 54.1**	**-0.7**
KURK	**Kurchatov**	**19.29**	**2**	*ce*P	**P**	**01 18 54.8**	**0.0**
KURK				pmax	pmax		
	comp=Z,13nm,0.8s						
DGZ	**Jazzator, Alta**	**19.69**	**19**	*i* P	**P**	**01 18 59.5**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,21nm,1.0s						
GTA	**Gaotai**	**19.74**	**60**	⇑P	**Pn**	**01 19 01.3**	**-0.3**
GTA				pP	pP	01 19 07.0	-0.8
GTA				sP	sP	01 19 09.8	-1.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,45nm,4.9s						
GTA				LR	LR		
	comp=Z,290nm,14.5s						
GTA				LR	LR		
	comp=Z,270nm,14.9s						
GTA				LR	LR		
	comp=Z,350nm,14.2s						
PCHI	**Peechi**	**20.83**	**184**	*e*P	Pn	01 19 17.1	+2.7
PCHI				*e*S	**S**	**01 22 58.1**	**-4.9**
PZH	**PanZhiHua**	**21.66**	**97**	P	**P**	**01 19 22.0**	**+1.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,5.1s						
BVA0	**Borovoye Array**	**22.21**	**348**	*i* P	**P**	**01 19 26.4**	**-0.1**
BVAR	**Borovoye Array**	**22.21**	**348**	P	**P**	**01 19 26.8**	**+0.3**
	comp=Z,4.2nm,0.3s,baz=163,slow=10,SNR=63						
BVAR				LR	LR	01 28 57.3	
	comp=Z,71nm,18.8s,baz=162,slow=39						
	comp=Z,4.2nm,0.3s						
AB31	**Akbulak array**	**22.23**	**328**	*i* P	**P**	**01 19 27.2**	**+0.5**
ABKAR	**Akbulak array**	**22.23**	**328**	P	**P**	**01 19 27.0**	**+0.3**
BRVK	**Borovoye**	**22.26**	**348**	P	**P**	**01 19 27.2**	**+0.2**
BRVK				IAmb	IAmb	01 19 29.1	
	comp=Z,34nm,0.9s						
BRVK	**Borovoye**	**22.26**	**348**	*ce*P	**P**	**01 19 27.7**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,51nm,1.3s						
LZH	**Lanzhou**	**22.27**	**71**	*e*P	**P**	**01 19 27.8**	**+0.3**
LZH				pP	pP	01 19 35.5	+0.2
LZH				sP	sP	01 19 40.0	+1.0
LZH				pmax	pmax		
	comp=Z,39nm,1.3s						
LZH				pmax	pmax		
	comp=Z,220nm,5.2s						
LZH				LR	LR		
	comp=Z,290nm,16.1s						
LZH				LR	LR		
	comp=Z,180nm,15.5s						
LZH				LR	LR		
	comp=Z,230nm,16.8s						
KMI	**Kunming**	**22.98**	**100**	⇑P	**P**	**01 19 34.5**	**-0.6**
KMI				sP	sP	01 19 47.5	+0.7
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	**22.99**	**118**	P	**P**	**01 19 34.5**	**-0.5**
CHTO				IAmb	IAmb	01 19 35.9	
	comp=Z,16nm,0.8s						
CHTO	**Chiang Mai**	**22.99**	**118**	P	**P**	**01 19 34.5**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,16nm,0.8s						
ZAA0	**Zalesovo Array**	**23.10**	**11**	P	**P**	**01 19 35.0**	**-0.8**
ZALV	**Zalesovo Beam**	**23.10**	**11**	P	**P**	**01 19 35.9**	**+0.1**
	comp=Z,5.3nm,0.3s,baz=198,slow=10.0,SNR=19						
ZALV				LR	LR	01 29 51.1	
	comp=Z,47nm,19.2s,baz=180,slow=40						
	comp=Z,5.3nm,0.3s						
ZALV	**Zalesovo Beam**	**23.10**	**11**	P	**P**	**01 19 35.0**	**-0.8**
ZALV	**Zalesovo Beam**	**23.10**	**11**	*i* P	**P**	**01 19 36.7**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
CM31	**Chiang Mai Arr**	**23.20**	**119**	P	**P**	**01 19 36.8**	**-0.4**
CM31				IAmb	IAmb	01 19 39.9	
	comp=Z,26nm,1.0s						
CMAR	**Chiang Mai Arr**	**23.20**	**119**	P	**P**	**01 19 37.8**	**+0.6**
	comp=Z,11nm,0.9s,baz=298,slow=9.6,SNR=52						
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	**23.20**	**119**	P	**P**	**01 19 36.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**23.20**	**119**	*ce*P	**P**	**01 19 37.9**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,11nm,0.9s						
CRAI	**Chiangrai**	**23.28**	**113**	P	**P**	**01 19 38.0**	**+0.1**
CRAI				IAmb	IAmb	01 19 40.3	
	comp=Z,13nm,1.0s						
AKTO	**Aktyubinsk**	**23.95**	**328**	P	**P**	**01 19 44.6**	**+0.5**
	comp=Z,12nm,0.8s,baz=135,slow=8.2,SNR=31						
	comp=Z,12nm,0.8s						
PALK	**Pallekele**	**24.20**	**173**	LR	LR	01 29 28.8	
	comp=Z,184nm,18.8s,baz=96,slow=37						
LKRN	**Lenkeran, Azer**	**24.63**	**295**	P	**P**	**01 19 54.3**	**+3.9**
MNGR	**Mingechevir, A**	**26.26**	**299**	P	**P**	**01 20 09.4**	**+4.2**
SEKA	**Sheki**	**26.27**	**300**	P	**P**	**01 20 09.5**	**+4.1**
XAN	**Xi'an**	**26.41**	**76**	P	**P**	**01 20 09.5**	**+2.7**
XAN				pP	sP	01 20 19.3	+0.9
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
GANJ	**Ganja**	**26.81**	**299**	P	**P**	**01 20 14.3**	**+4.1**
NAX	**Nakhchivan**	**27.23**	**295**	P	**P**	**01 20 17.8**	**+3.7**
SONM	**Songino Array**	**27.35**	**45**	P	**P**	**01 20 16.7**	**+1.6**
	comp=Z,9.6nm,0.9s,baz=241,slow=9.3,SNR=45						
SONM				PcP	**PcP**	**01 23 33.5**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=225,slow=1.8,SNR=3.2						
	comp=Z,9.6nm,0.9s						
SONM	**Songino Array**	**27.35**	**45**	P	**P**	**01 20 15.3**	**+0.1**
SONM				IAmb	IAmb	01 20 18.1	
	comp=Z,9.7nm,1.0s						
BTO	**Baotou**	**27.64**	**62**	*e*P	**P**	**01 20 19.0**	**+1.2**
ULN	**Ulaanbaatar**	**27.76**	**45**	P	**P**	**01 20 18.7**	**-0.2**
ULN				IAmb	IAmb	01 20 21.4	
	comp=Z,9.6nm,1.0s						
ULN	**Ulaanbaatar**	**27.76**	**45**	*ce*P	**P**	**01 20 20.5**	**+1.6**
ULN				pmax	pmax		
	comp=Z,11nm,1.0s

KLMR **Klimovskoe** 38.58 331 *e*P P 01 21 52.2 -0.3
KLMR pmax pmax
comp=Z,11nm,1.0s
KLMR **Klimovskoe** 38.58 331 *e*P P 01 21 52.2 -0.3
KLMR AMP 01 21 54.0
comp=Z,11nm,1.0s
NACB **Ninganchiao** 39.37 89 P P 01 21 59.0 -0.6
NACB IAmb IAmb 01 22 07.7
comp=Z,12nm,0.7s
TWG **Pinlang** 39.41 92 P P 01 21 59.9 -0.1
ELL **Elmali** 39.54 291 P P 01 22 00.8 -0.3
ELL **Elmali** 39.54 291 P P 01 22 00.8 -0.3
ELL pmax pmax
comp=Z,31nm,0.8s
AK05 **Malin Array Si** 40.41 313 P P 01 22 07.5 -0.4
AK05 IAmb IAmb 01 22 09.1
comp=Z,9.0nm,0.9s
AKASG **Malin Array Be** 40.41 313 P P 01 22 07.4 -0.6
comp=Z,1.4nm,0.7s,baz=88,slow=6.7,SNR=11
AKASG PP PP 01 23 40.2 -0.9
comp=Z,0.2nm,0.4s,baz=94,slow=9.6,SNR=4.2
comp=Z,1.4nm,0.7s
AKASG **Malin Array Be** 40.41 313 P P 01 22 07.0 -1.0
AKASG **Malin Array Be** 40.41 313 *ce*P P 01 22 08.1 +0.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB **Malin Array Si** 40.41 313 P P 01 22 07.0 -1.0
AKBB **Malin Array Si** 40.41 313 *ce*P P 01 22 08.6 +0.6
KSRS **Korea Array** 41.52 67 P P 01 22 17.8 +0.4
comp=Z,1.9nm,0.8s,baz=277,slow=10.0,SNR=4.3
KSRS LR LR 01 41 44.6
comp=Z,52nm,19.3s,baz=290,slow=39
comp=Z,1.9nm,0.8s
MNK **Minsk** 41.95 318 *i* P P 01 22 19.5 -1.0
MNK *i* 01 23 56.7
MNK *i* 01 24 14.9
MNK *i* PPP PPP 01 24 26.3
MNK *i* S S 01 28 35.7 -1.6
MNK *i* SS SS 01 31 43.9 -0.4
MNK pmax pmax
comp=Z,22nm,0.9s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK MLR MLR
comp=Z,54nm,16.0s
MNK **Minsk** 41.95 318 *i* P P 01 22 19.5 -1.0
comp=E,1.0nm,0.9s
MNK *i* P P 01 22 19.5 -1.0
MNK *i* P P 01 22 19.5 -1.0
comp=Z,22nm,0.9s,baz=102
MNK *i* PP PP 01 23 56.7 -1.0
MNK *i* PPP PPP 01 24 26.4
MNK *i* S S 01 28 35.7 -1.6
MNK *i* SS SS 01 31 43.9 -0.4
MNK *i* LQ LQ 01 36 42.0
MNK *i* LR LR 01 39 53.1
MNK *i* LRM MLR 01 44 17.4
comp=Z,54nm,16.3s
MNK *i* LRM MLR 01 44 24.5
MNK *i* LRM MLR 01 45 05.3
comp=E,65nm,16.7s
MLR **Muntele Rosu** 42.12 305 P P 01 22 22.1 -0.2
MLR **Muntele Rosu** 42.12 305 P P 01 22 22.1 -0.2
MLR pmax pmax
comp=Z,6.0nm,0.9s
MDJ **Mudanjiang** 42.33 57 P P 01 22 23.4 -0.5
VALR **Valaam** 42.52 329 *i* P P 01 22 26.2 +1.1
VALR pmax pmax
comp=Z,25nm,0.9s
NACGM **Naroch** 42.66 319 ⇓ *e*P P 01 22 27.6 +1.3
baz=101
BURAR **Bucovina Array** 42.69 308 P P 01 22 26.7 -0.2
VSU **Vasula** 43.54 324 *e*P P 01 22 33.7 +0.4
KLR **Kul'dur** 43.94 50 P P 01 22 37.3 +0.5
comp=Z,3.5nm,0.7s,baz=262,slow=9.5,SNR=5.6
KLR LR LR 01 42 35.9
comp=Z,60nm,18.4s,baz=222,slow=38
comp=Z,3.5nm,0.7s
KLR **Kul'dur** 43.94 50 *i* P P 01 22 36.7 0.0
KLR pmax pmax
comp=Z,2.0nm,0.8s
KKM **Kota Kinabalu** 44.05 117 P P 01 22 36.4 -1.8
VTS **Vitosha** 44.15 301 P P 01 22 38.6 -0.1
VTS **Vitosha** 44.15 301 P P 01 22 38.6 -0.1
VTS pmax pmax
comp=Z,7.0nm,1.2s
PABE **Paberze** 44.36 319 P P 01 22 40.2 +0.2
PABE **Paberze** 44.36 319 *e*P P 01 22 40.9 +0.9
UZH **Uzhgorod** 44.69 309 *e*P P 01 22 44.1 +1.3
UZH *i* 01 22 47.1
UZH *e* 01 22 57.5
FIA1 **FINESS Array S** 44.72 328 P P 01 22 42.2 -0.7
FINES **FINESS Array B** 44.72 328 P P 01 22 43.6 +0.8
comp=Z,16nm,0.8s,baz=118,slow=10.0,SNR=66
comp=Z,16nm,0.8s
FINES **FINESS Array B** 44.72 328 P P 01 22 42.4 -0.4
FINES **FINESS Array B** 44.72 328 *ce*P P 01 22 44.0 +1.2
FINES pmax pmax
comp=Z,14nm,0.8s
MTSE **Matsula** 45.08 324 *e*P P 01 22 46.6 +0.9
YAK **Yakutsk** 45.14 32 LR LR 01 41 54.5
comp=Z,25nm,19.9s,baz=269,slow=36
YAK **Yakutsk** 45.14 32 *i* P P 01 22 46.9 +0.7
YAK pmax pmax
comp=Z,15nm,0.9s
MEF **Metsahovi** 45.16 326 *e*P P 01 22 47.4 +1.1
PSZ **Piszkesteto** 46.29 308 P P 01 22 55.5 0.0
PSZ IAmb IAmb 01 23 03.9
comp=Z,3.8nm,0.8s
PSZ **Piszkesteto** 46.29 308 P P 01 22 55.5 0.0
PSZ pmax pmax
comp=Z,4.0nm,0.8s
OJC **Ojcow** 46.36 311 P P 01 22 54.9 -1.1
OJC IAmb IAmb 01 23 12.7
comp=Z,9.7nm,1.4s
OJC **Ojcow** 46.36 311 P P 01 22 54.9 -1.1
OJC pmax pmax
comp=Z,10.0nm,1.4s
DIVS **Divibare** 46.40 303 P P 01 22 57.1 +0.6
MORC **Moravsky Berou** 47.81 311 P P 01 23 07.5 +0.1
MORC IAmb IAmb 01 23 09.1
comp=Z,3.5nm,0.8s
MORC **Moravsky Berou** 47.81 311 P P 01 23 07.5 +0.1
MORC pmax pmax
comp=Z,4.0nm,0.8s
ARA0 **ARCESS Array S** 47.91 338 *e*P P 01 23 09.2 +1.5
ARCES **ARCESS Array B** 47.91 338 P P 01 23 09.2 +1.4
comp=Z,19nm,0.7s,baz=109,slow=8.0,SNR=76
comp=Z,19nm,0.7s
ARCES **ARCESS Array B** 47.91 338 P P 01 23 07.8 +0.1
KRLC **Kraliky** 48.30 311 *e*P P 01 23 12.2 +1.0
KTK1 **Kautokeino** 48.44 337 *e*P P 01 23 12.9 +1.0
KTK1 IAmb IAmb 01 23 13.7
comp=Z,14nm,0.7s
TIXI **Tiksi** 48.58 19 P P 01 23 13.5 +0.7
comp=Z,2.8nm,0.3s,baz=271,slow=24,SNR=1.8
comp=Z,2.8nm,0.3s
TIXI **Tiksi** 48.58 19 *i* P P 01 23 15.7 +2.8
TIXI pmax pmax
comp=Z,10.0nm,1.1s
DPC **Dobruska-Polom** 48.59 311 *e*P P 01 23 14.2 +0.8
CHVC **Chvalec** 48.75 312 *e*P P 01 23 15.6 +1.0
HAMF **Hammerfest** 48.93 339 *e*P P 01 23 17.4 +1.8
HAMF IAmb IAmb 01 23 18.3
comp=Z,24nm,0.8s
CONA **Conrad Observa** 49.00 308 *i* P P 01 23 17.4 +0.8
comp=Z,4.0nm,0.9s,SNR=7.1
ARSA **Arzberg** 49.27 307 *e*P P 01 23 19.9 +1.2
comp=Z,5.0nm,1.2s
JETT **Jettan, Norway** 49.57 337 *e*P P 01 23 22.7 +2.0
SOKA **Soboth** 49.66 307 *e*P P 01 23 22.1 +0.4
comp=Z,5.7nm,0.9s
PRU **Pruhonice** 49.74 311 *e*P P 01 23 23.1 +0.9
MJAR **Matsushiro Arr** 49.79 67 P P 01 23 21.5 -1.2
comp=Z,1.6nm,0.8s,baz=285,slow=7.8,SNR=3.2
comp=Z,1.6nm,0.8s
CKRC **Cesky Krumlov** 49.97 310 *e*P P 01 23 24.4 +0.5
OBKA **Obir** 50.01 307 *e*P P 01 23 25.3 +0.9
comp=Z,6.5nm,1.0s
MOA **Molln** 50.07 308 *e*P P 01 23 24.9 +0.1
comp=Z,4.4nm,0.7s
BRG **Berggiesshubel** 50.09 312 *i* P P 01 23 25.8 +1.1
BRG Amp 01 23 26.8
comp=Z,5.2nm,0.9s
BRG **Berggiesshubel** 50.09 312 *i* P P 01 23 25.8 +1.1
BRG pmax pmax
comp=Z,5.0nm,0.9s
TRO **Tromso** 50.09 337 *e*P P 01 23 25.7 +1.2
TRO IAmb IAmb 01 23 26.7
comp=Z,31nm,1.3s
DEL **Delary** 50.10 320 *i* P P 01 23 24.0 -0.7
KMBO **Kilima Mbogo** 50.12 238 *ce*P P 01 23 29.5 +3.8
KMBO pmax pmax
comp=Z,3.0nm,0.9s
GEC2 **GERESS Array S** 50.37 310 P P 01 23 27.2 +0.1
GERES **GERESS Array B** 50.37 310 P P 01 23 27.5 +0.5
comp=Z,1.1nm,0.6s,baz=89,slow=6.8,SNR=14
comp=Z,1.1nm,0.6s
GERES **GERESS Array B** 50.37 310 P P 01 23 27.1 +0.1
KHC **Kasperske Hory** 50.43 310 *e*P P 01 23 28.3 +0.9
CLL **Collm** 50.66 313 P P 01 23 28.9 -0.1
CLL IAmb IAmb 01 23 33.4
comp=Z,7.2nm,1.5s
CLL **Collm** 50.66 313 P P 01 23 28.9 -0.1
CLL pmax pmax
comp=Z,7.0nm,1.5s
CLL **Collm** 50.66 313 *e*P P 01 23 27.0 -2.0
PRED **Cave del Predi** 50.69 307 P P 01 23 29.2 -0.2
PRED IAmb IAmb 01 23 31.0
comp=Z,4.9nm,0.9s
KBA **Koelnbreinsper** 50.77 307 *e*P P 01 23 30.6 +0.3
comp=Z,1.9nm,0.6s
FAUS **Fauske** 50.80 334 *e*P P 01 23 31.5 +1.7
MOR8 **Moi Rana** 50.89 332 *e*P P 01 23 30.6 0.0
ABTA **Abfaltersbach** 51.38 307 *e*P P 01 23 34.1 -0.6
comp=Z,5.2nm,0.9s
YSS **Yuzh-Sakhalins** 51.38 53 *ce*P P 01 23 36.3 +1.8
YSS pmax pmax
comp=Z,27nm,1.7s
CIMO **Cimolais** 51.48 306 P P 01 23 34.5 -0.9
CIMO IAmb IAmb 01 23 36.1
comp=Z,9.2nm,0.9s
NC602 **NORSAR Array S** 51.52 325 *e*P P 01 23 35.6 +0.2
NC602 IAmb IAmb 01 23 36.1
comp=Z,11nm,1.0s
NC303 **NORSAR Array S** 51.63 326 P P 01 23 36.2 0.0
NB2 **NORSAR Subarra** 51.70 325 P P 01 23 36.8 0.0
comp=Z,8.5nm,0.7s,baz=94,slow=7.9
NB2 **NORSAR Subarra** 51.70 325 P P 01 23 36.8 0.0
baz=94,slow=7.9
NOA **NORSAR Array B** 51.70 325 P P 01 23 36.9 +0.1
comp=Z,9.0nm,0.8s,baz=95,slow=7.3,SNR=27
comp=Z,9.0nm,0.8s
MURB **Monte Urbino** 51.88 303 P P 01 23 39.3 +0.9
WTTA **Wattenberg** 51.91 308 *e*P P 01 23 38.3 -0.4
comp=Z,2.3nm,0.5s
NBO00 **NORSAR Array S** 51.91 325 P P 01 23 38.1 -0.2
WATA **Walderalm** 51.94 308 *e*P P 01 23 38.1 -0.8
comp=Z,2.5nm,0.7s
SQTA **Sankt Quirin** 52.20 308 *e*P P 01 23 40.4 -0.5
comp=Z,2.8nm,0.6s
MOTA **Moosalm** 52.26 308 *i* P P 01 23 40.6 -0.7
comp=Z,7.8nm,0.8s,SNR=8.2
KONO **Kongsberg** 52.45 324 *e*P P 01 23 42.7 +0.4
RETA **Reutte** 52.47 308 *i* P P 01 23 42.8 0.0
comp=Z,4.7nm,0.8s,SNR=4.3
LATE **Laterza** 52.51 302 P P 01 23 42.6 -0.5
LATE IAmb IAmb 01 23 43.9
comp=Z,11nm,1.0s
FETA **Feichten** 52.55 308 *e*P P 01 23 42.8 -0.8
comp=Z,3.8nm,0.9s
SALO **Salr** 52.90 306 P P 01 23 45.3 -0.6
DAVA **Damuels** 53.09 308 *i* P P 01 23 47.3 -0.1
comp=Z,14nm,0.7s,SNR=13
SNART **Snartemo** 53.70 322 *e*P P 01 23 52.4 +0.9
BFO **Black Forest** 53.97 309 P P 01 23 52.8 -0.9
BFO IAmb IAmb 01 23 54.6
comp=Z,7.7nm,1.5s
BFO **Black Forest** 53.97 309 P P 01 23 52.8 -0.9
BFO pmax pmax
comp=Z,8.0nm,1.5s
KAPI **Kappang** 54.09 124 P P 01 23 54.4 -0.6
KAPI **Kappang** 54.09 124 P P 01 23 54.4 -0.6
KAPI pmax pmax
comp=Z,14nm,1.0s
BER **Bergen** 54.58 325 *e*P P 01 23 58.3 +0.4
MBAR **Mbarara** 54.62 244 P P 01 23 59.2 +0.1
MBAR IAmb IAmb 01 24 01.7
comp=Z,6.9nm,1.2s
MBAR **Mbarara** 54.62 244 P P 01 23 59.2 +0.1
MBAR pmax pmax
comp=Z,7.0nm,1.3s
SENIN **Lac Senin/Sane** 54.99 307 P P 01 24 01.4 0.0
MEM **Membach** 55.13 313 *d*P P 01 24 02.4 +0.3
WLF **Walferdange** 55.18 311 P P 01 24 02.5 0.0
WLF IAmb IAmb 01 24 07.6
comp=Z,4.7nm,0.9s
WLF **Walferdange** 55.18 311 P P 01 24 02.5 0.0
WLF pmax pmax
comp=Z,5.0nm,0.9s
BCLA **Clavier** 55.60 312 *d*P P 01 24 06.1 +0.7
BNI **Bardonecchia** 55.67 306 P P 01 24 05.5 -0.8
BNI IAmb IAmb 01 24 07.7
comp=Z,6.7nm,1.2s
BNI **Bardonecchia** 55.67 306 P P 01 24 05.5 -0.8
BNI pmax pmax
comp=Z,7.0nm,1.2s
RCHB **Rochefort** 55.69 312 *d*P P 01 24 06.7 +0.6
comp=Z,2.6nm,0.9s
BMRD **Maredsous** 55.96 312 *d*P P 01 24 08.4 +0.4
comp=Z,6.4nm,0.9s
KEST **Kesra** 56.00 294 P P 01 24 08.7 0.0
comp=Z,2.8nm,0.8s,baz=56,slow=3.6,SNR=3.5
comp=Z,2.8nm,0.8s
DOU **Dourbes** 56.10 312 *d*P P 01 24 09.7 +0.6
comp=Z,4.2nm,1.0s
SSB **Saint Sauveur** 57.10 306 P P 01 24 15.7 -0.6
SSB IAmb IAmb 01 24 17.2
comp=Z,5.0nm,0.8s
SSB **Saint Sauveur** 57.10 306 P P 01 24 15.7 -0.6
SSB pmax pmax
comp=Z,5.0nm,0.8s
CLF **Chambon-Foret** 58.02 310 P P 01 24 22.8 +0.2
CLF IAmb IAmb 01 24 22.8
comp=Z,4.2nm,0.7s
PETK **Petropavlovsk-** 59.82 43 P P 01 24 35.4 +0.3
comp=Z,3.3nm,0.9s,baz=289,slow=4.4,SNR=2.1
comp=Z,3.3nm,0.9s
PETK **Petropavlovsk-** 59.82 43 P P 01 24 35.0 -0.1
PET **Petropavlovsk** 60.40 43 *ce*P P 01 24 39.0 0.0
PET pmax pmax
comp=Z,34nm,1.3s
BILL **Bilibino** 60.77 26 *i* P P 01 24 42.8 +1.4
BILL pmax pmax
comp=Z,16nm,0.9s
ESBB **Sonseca Array** 64.75 302 P P 01 25 07.8 -0.6
ESBB IAmb IAmb 01 25 09.9
comp=Z,5.6nm,0.9s
ESDC **Sonseca Array** 64.75 302 P P 01 25 08.3 -0.1
comp=Z,3.9nm,0.8s,baz=60,slow=7.1,SNR=37
comp=Z,3.9nm,0.8s
ESDC **Sonseca Array** 64.75 302 P P 01 25 07.9 -0.5
ESDC IAmb IAmb 01 25 09.2
comp=Z,3.3nm,0.9s
TORD **Torodi Ar. Bea** 71.34 274 P P 01 25 49.6 -0.6
comp=Z,4.3nm,0.4s,baz=41,slow=5.0,SNR=1.8
comp=Z,4.3nm,0.4s
WB0 **Warramunga Arr** 74.53 125 P P 01 26 08.1 -0.7
WRA **Warramunga Arr** 74.61 125 P P 01 26 10.2 +0.9
comp=Z,5.3nm,0.9s,baz=320,slow=5.3,SNR=25
comp=Z,5.3nm,0.9s
WRA **Warramunga Arr** 74.61 125 P P 01 26 09.7 +0.4
WRA **Warramunga Arr** 74.61 125 *ce*P P 01 26 10.1 +0.8
WRA pmax pmax
comp=Z,6.0nm,0.9s
WRAB **Tennant Creek** 74.62 125 P P 01 26 09.2 -0.1
WRAB IAmb IAmb 01 26 27.5
comp=Z,6.3nm,0.8s
WRAB **Tennant Creek** 74.62 125 *ce*P P 01 26 10.8 +1.5
WRAB pmax pmax
comp=Z,11nm,1.3s
H21K **Melozitna Rive** 75.73 19 P P 01 26 15.2 0.0
H21K IAmb IAmb 01 26 22.0
comp=Z,9.2nm,1.3s
BMAR **Burnt Mountain** 76.46 15 P P 01 26 19.3 +0.1
TSUM **Tsumeb** 76.47 237 LR LR 02 03 02.9
comp=Z,85nm,18.2s,baz=146,slow=38
AS31 **Alice Springs** 76.83 128 P P 01 26 21.0 -1.0
ASAR **Alice Springs** 76.83 128 P P 01 26 22.5 +0.6
comp=Z,2.2nm,0.8s,baz=318,slow=5.9,SNR=16
comp=Z,2.2nm,0.8s
ASAR **Alice Springs** 76.83 128 P P 01 26 21.8 -0.1
NEA2 **Nenana** 77.58 19 P P 01 26 25.4 -0.2
NEA2 IAmb IAmb 01 26 36.9
comp=Z,4.8nm,1.1s
BOSA **Boshof** 77.77 225 P P 01 26 26.6 -0.6
comp=Z,3.9nm,0.9s,baz=5.7,slow=2.0,SNR=4.0
comp=Z,3.9nm,0.9s
ILAR **Eielson Array** 78.03 18 P P 01 26 27.4 -0.6
comp=Z,0.5nm,0.8s,baz=308,slow=5.8,SNR=5.4
ILAR PP PP 01 29 23.2 -0.5
comp=Z,0.9nm,1.0s,baz=307,slow=8.5,SNR=5.6
comp=Z,0.5nm,0.8s
ILAR **Eielson Array** 78.03 18 P P 01 26 26.9 -1.1
FORT **Forrest** 78.21 137 P P 01 26 28.9 -0.5
EPYK **Eagle Plains** 79.03 13 P P 01 26 33.1 -0.5
EPYK IAmb IAmb 01 26 33.9
comp=Z,9.9nm,1.2s
O18K **Koktuh Hills** 79.21 24 P P 01 26 35.3 +0.6
O18K IAmb IAmb 01 26 37.2
comp=Z,7.5nm,0.8s
YKA **Yellowknife Ar** 85.89 6 P P 01 27 08.5 -0.9
comp=Z,0.8nm,0.6s,baz=353,slow=4.8,SNR=4.7
comp=Z,0.8nm,0.6s
STKA **Stephens Creek** 87.34 130 P P 01 27 16.4 -0.5
comp=Z,2.0nm,0.6s,baz=353,slow=8.1,SNR=3.6
comp=Z,2.0nm,0.6s
TXAR **Lajitas Array** 119.56 1 PKP PKiKP 01 33 20.5 +0.3
comp=Z,0.1nm,0.3s,baz=339,slow=0.8,SNR=4.1
ARNL **Arenillas** 145.21 318 PKPbc PKPbc 01 34 07.6 -0.2
LPAZ **La Paz** 145.41 288 PKPbc PKPbc 01 34 09.2 +0.1
comp=Z,1.2nm,0.6s,baz=78,slow=6.0,SNR=6.1
LPAZ **La Paz** 145.41 288 PKPab 01 34 10.0 +0.7
GO01 **Chusmiza** 147.97 283 PKPbc PKPbc 01 34 15.7 -0.6

IDC ***27*** *01:19:37.7±3.6,36.29N×70.90E,h181km±33km,mb3.5/11, mbtmp3.9/15,MS3.4/1,Error ellipse: s-maj=21.3km s-min=19.0km az=163.0*

NEIC ***27*** *01:19:39.5±0.6,36.56N±0.05×70.9E±0.1,h202km±11km, mb4.0/3,Error ellipse: s-maj=12.9km s-min=6.3km az=109.0*

NNC ***27*** *01:19:41.3±17.0,37.11N×70.67E,h0km,mb4.7,mpv4.3, Error ellipse: s-maj=139.5km s-min=122.5km az=171.0*

ISC 27 01:19:39.0±0.7,**36.58N**±0.05×**70.90E**±0.06,**h189**km±7km, **n48,**σ**1**ᵠ**29**/59,**mb3.7**/10,**4C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.46**	**349**	Pn	**Pn**	**01 20 23.1**	**+1.2**
GAR				Sn	**Sn**	**01 20 54.9**	**-0.4**
CHGR	**Chuyangaron**	**2.49**	**327**	Pn	**Pn**	**01 20 23.2**	**+1.1**
CHGR				Sn	**Sn**	**01 20 55.1**	**-0.8**
KBL	**Kabul**	**2.53**	**217**	Pn	**Pn**	**01 20 23.9**	**+1.0**
KBL				Sn	**Sn**	**01 20 55.9**	**-1.0**
CEP	**Cherat**	**2.87**	**163**	P	**Pn**	**01 20 28.4**	**+1.7**
CEP				S	**Sn**	**01 21 03.0**	**-0.9**
DRK	**Karamyk**	**2.98**	**14**	Pn	**Pn**	**01 20 29.9**	**+1.8**
DRK				Sn	**Sn**	**01 21 06.9**	**+0.4**
BTK	**Batken**	**3.47**	**359**	Pn	**Pn**	**01 20 35.7**	**+1.8**
BTK				Sn	**Sn**	**01 21 16.5**	**-0.4**
CHCP	**Chirah Chowk**	**3.50**	**146**	P	**Pn**	**01 20 35.0**	**+0.8**
NIL	**Nilore**	**3.50**	**146**	Pn	**Pn**	**01 20 35.3**	**+1.0**
NIL				Sn	**Sn**	**01 21 16.1**	**-1.4**
SARP	**Sargodha**	**4.87**	**162**	P	**Pn**	**01 20 51.4**	**-0.2**
TAS	**Tashkent**	**4.90**	**346**		**Pn**	**01 20 53.5**	**+1.7**
TAS				Sn	**Sn**	**01 21 48.5**	**-0.6**
AML	**Almayashu**	**5.95**	**20**	P	**Pn**	**01 21 06.4**	**+0.6**
	SNR=66						
EKS2	**Erkin-Say**	**6.47**	**19**	P	**Pn**	**01 21 13.3**	**+1.0**
	SNR=6.5						
KK31	**Karatay Array**	**6.52**	**358**	Pn	**Pn**	**01 21 13.5**	**+0.6**
KK31	**Karatay Array**	**6.52**	**358**	Pn	**Pn**	**01 21 13.5**	**+0.6**
	12nm,0.5s,baz=183,slow=12,SNR=75						
KK31				⇑Sn	**Sn**	**01 22 23.4**	**-3.7**
	9.5nm,0.3s,baz=189,slow=25,SNR=12						
KKAR	**Karatay Array**	**6.52**	**358**	Pn	**Pn**	**01 21 12.8**	**-0.1**
KKAR	**Karatay Array**	**6.52**	**358**	Pn	**Pn**	**01 21 13.3**	**+0.4**
AAK	**Ala-Archa**	**6.66**	**24**	Pn	**Pn**	**01 21 15.0**	**+0.3**
CHMS	**Chumysh**	**7.06**	**24**	P	**Pn**	**01 21 20.7**	**+0.8**
	SNR=5.4						
CHMS	**Chumysh**	**7.06**	**24**	⇑Pn	**Pn**	**01 21 20.4**	**+0.5**
	13nm,0.6s						
CHMS				⇑Sn	**Sn**	**01 22 37.7**	**-2.2**
	9.4nm,0.6s						
USP	**Ospenovka**	**7.23**	**21**	P	**Pn**	**01 21 22.5**	**+0.4**
	SNR=21						
TKM2	**Tokmak 2**	**7.29**	**28**	P	**Pn**	**01 21 24.1**	**+1.0**
	SNR=12						
TKM2	**Tokmak 2**	**7.29**	**28**	⇓Pn	**Pn**	**01 21 23.2**	**+0.1**
	18nm,0.5s						
TKM2				⇑Sn	**Sn**	**01 22 42.0**	**-3.7**
	9.9nm,1.1s						
GEYT	**Alibeck**	**10.28**	**281**	P	**Pn**	**01 22 00.7**	**-1.3**
	1.9nm,0.6s,baz=93,slow=8.8,SNR=3.2						
GEYT				S	**Sn**	**01 23 57.0**	**+0.5**
	1.6nm,0.3s,baz=94,slow=19,SNR=4.7						
MAKZ	**Makanchi**	**13.14**	**36**	Pn	**Pn**	**01 22 38.2**	**-0.3**
MKAR	**Makanchi Array**	**13.28**	**36**	P	**P**	**01 22 43.8**	**+0.4**
	0.9nm,0.8s,baz=207,slow=11,SNR=1.5						
ABKAR	**Akbulak array**	**14.97**	**331**		**Pn**	**01 23 00.7**	**-0.5**
BVAR	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**01 23 21.1**	**+2.0**
	0.7nm,0.6s,baz=158,slow=14,SNR=3.5						
BRVK	**Borovoye**	**16.48**	**359**	P	**P**	**01 23 18.7**	**0.0**
AKTO	**Aktyubinsk**	**16.67**	**330**	P	**Pn**	**01 23 23.4**	**+1.7**
	3.2nm,0.4s,baz=144,slow=8.1,SNR=13						
ZAA0	**Zalesovo Array**	**19.88**	**25**	P	**P**	**01 23 55.0**	**-0.6**
ZAA0				IAmb	IAmb	01 23 58.1	
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**P**	**01 23 56.6**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=210,slow=10,SNR=4.3						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**P**	**01 23 55.1**	**-0.5**
HYBB	**Hyderabad (bro**	**20.25**	**158**	*e*P	**P**	**01 23 59.2**	**-0.8**
MMAI	**Mount Meron Ar**	**29.26**	**274**	LR	LR	01 39 08.9	
	comp=Z,8.5nm,19.0s,baz=196,slow=40						
AKASG	**Malin Array Be**	**32.83**	**309**	P	**P**	**01 25 56.1**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=79,slow=7.3,SNR=4.6						
	comp=Z,1.1nm,0.6s						
BURAR	**Bucovina Array**	**35.17**	**303**	P	**P**	**01 26 13.6**	**-1.3**
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**01 26 34.9**	**+1.8**
	comp=Z,0.7nm,0.4s,baz=120,slow=11,SNR=7.0						
	comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**01 26 32.0**	**-1.1**
ARCES	**ARCESS Array B**	**41.04**	**338**	P	**P**	**01 27 04.9**	**+1.5**
	comp=Z,0.9nm,0.4s,baz=114,slow=8.2,SNR=7.6						
	comp=Z,0.9nm,0.4s						
ARCES	**ARCESS Array B**	**41.04**	**338**	P	**P**	**01 27 02.4**	**-1.0**
ARCES				IAmb	IAmb	01 27 29.0	
	comp=Z,8.9nm,1.2s						
NB2	**NORSAR Subarra**	**44.27**	**323**	P	**P**	**01 27 30.6**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**01 27 30.6**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=96,slow=7.7,SNR=5.7						
	comp=Z,1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.64**	**269**	P	**P**	**01 30 01.9**	**-1.2**
	comp=Z,2.7nm,0.4s,baz=51,slow=6.0,SNR=1.8						
	comp=Z,2.7nm,0.4s						
INK	**Inuvik**	**73.84**	**9**	P	**P**	**01 30 53.4**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=49,slow=2.0,SNR=1.8						
	comp=Z,0.9nm,0.5s						
BOSA	**Boshof**	**77.75**	**220**	P	**P**	**01 31 14.3**	**-0.9**
	comp=Z,3.1nm,1.0s,baz=45,slow=4.8,SNR=1.8						
	comp=Z,3.1nm,1.0s						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**01 31 33.8**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=352,slow=5.2,SNR=5.9						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**82.10**	**122**	P	**P**	**01 31 37.1**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=323,slow=4.8,SNR=1.6						
	comp=Z,0.5nm,0.9s						
ASAR	**Alice Springs**	**84.37**	**125**	P	**P**	**01 31 49.2**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=309,slow=5.6,SNR=4.1						
	comp=Z,0.4nm,0.6s						

IDC ***27*** *01:23:47.3±1.9,31.42N×77.73E,h0km,mb3.7/6, mbtmp3.7/7,ML3.3/1,Error ellipse: s-maj=49.7km s-min=29.1km az=56.0*

NDI ***27*** *01:23:50.0±3.4,31.42N×77.61E,h10km,ML3.2*

ISC 27 01:23:47.9±1.8,**31.45N**±0.06×**77.70E**±0.06,**h2**km±13km, **n15,**σ**1**ᵠ**00**/20,**mb3.7**/6,**Northern India**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMLA	**Simla**	**0.56**	**235**	*e*Pg	**Pb**	**01 24 00.0**	**-0.4**

SMLA				*i* Sg	**Sg**	**01 24 05.0**	**-0.9**	
SMLA				IAML		01 24 06.0		
	comp=E,734nm,0.2s							
SMLA				IAML		01 24 06.0		
	comp=N,483nm,0.2s							
BHK	**Bhakra**	**1.10**	**268**	*e*Pg	**Pg**	**01 24 09.3**	**+0.4**	
BHK				*i* Sg	**Sn**	**01 24 25.2**	**-1.0**	
DDI	**Dehra Dun**	**1.17**	**165**	*e*Pg	**Pg**	**01 24 10.3**	**0.0**	
DDI				*e*S	**Sn**	**01 24 29.1**	**+1.2**	
DDI				IAML		01 24 33.6		
	comp=N,1μm,0.1s							
DDI				IAML		01 24 33.9		
	comp=E,821nm,0.3s							
KKR	**Kurukshetra**	**1.67**	**207**	*e*P	**Pg**	**01 24 20.1**	**+0.2**	
KKR				*e*S	**Sg**	**01 24 41.4**	**0.0**	
THN	**Thein Dam**	**1.95**	**301**	*e*Pg	**Pb**	**01 24 23.9**	**-0.2**	
THN				*e*S	**Sb**	**01 24 49.0**	**0.0**	
CHCP	**Chirah Chowk**	**4.34**	**302**	P	**Pn**	**01 24 56.8**	**+1.8**	
THW	**Thamme Wali**	**5.23**	**286**	P	**Pn**	**01 25 07.3**	**+0.1**	
CEP	**Cherat**	**5.43**	**297**	P	**Pn**	**01 25 12.6**	**+2.6**	
MKAR	**Makanchi Array**	**15.72**	**12**	Pn	**Pn**	**01 27 29.1**	**-1.4**	
	comp=E,0.1nm,0.3s,baz=193,slow=13,SNR=3.6							
	comp=E,0.4nm,0.5s							
BVAR	**Borovoye Array**	**22.20**	**348**	P	**P**	**01 28 45.6**	**+0.2**	
	comp=E,0.5nm,0.5s,baz=162,slow=11,SNR=6.7							
	comp=E,0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**23.06**	**11**	P	**P**	**01 28 54.5**	**0.0**	
	comp=E,0.7nm,0.3s,baz=196,slow=12,SNR=1.8							
	comp=E,0.7nm,0.3s							
SONM	**Songino Array**	**27.28**	**45**	P	**P**	**01 29 33.4**	**-0.4**	
	comp=E,0.6nm,0.8s,baz=258,slow=7.2,SNR=2.4							
	comp=E,0.6nm,0.8s							
FINES	**FINESS Array B**	**44.74**	**328**	P	**P**	**01 32 01.9**	**-0.4**	
	comp=E,1.3nm,0.6s,baz=103,slow=10,SNR=4.4							
	comp=E,1.3nm,0.6s							
ARCES	**ARCESS Array B**	**47.91**	**338**	P	**P**	**01 32 27.3**	**+0.1**	
	comp=E,2.0nm,0.7s,baz=107,slow=7.3,SNR=9.2							
	comp=E,2.0nm,0.7s							
WRA	**Warramunga Arr**	**74.57**	**125**	P	**P**	**01 35 28.2**	**-0.4**	
	comp=E,1.2nm,1.2s,baz=323,slow=6.4,SNR=1.6							
	comp=E,1.2nm,1.2s							

NNC ***27*** *01:24:06.4±1.9, 42.°55N×69.°59E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=10.0km s-min=7.6km az=58.0, Suspected Mining explosion.*
SOME ***27*** *01:24:07.1, 42.°50N×69.°70E, h10km*
KRNET ***27*** *01:24:07.7±0.1, 42.°51N×69.°76E, h8km, mb3.4*
ISC 27 01:24:08.2±1.1, 42.°54N±0.°04×69.°77E±0.°04, h10km, n21, σ1s 87/37, 10C, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHM	**Chimkent**	**0.25**	**210**	*e*P	**Pg**	**01 24 11.8**	**-1.4**
	42nm,0.1s						
CHM				*e*S	**Sg**	**01 24 15.2**	**-1.4**
	867nm,0.2s						
TCH	**Chimkent**	**0.25**	**210**	*e*P	**Pg**	**01 24 11.9**	**-1.4**
	baz=13						
TCH				*e*S	**Sg**	**01 24 15.3**	**-1.4**
	baz=13						
IUG	**Iuzhnay**	**0.43**	**154**	*e*P	**Pg**	**01 24 15.7**	**-1.0**
	80nm,0.1s						
IUG				*e*S	**Sg**	**01 24 22.2**	**-0.2**
	209nm,0.2s						
IUG	**Iuzhnay**	**0.43**	**154**	*e*P	**Pg**	**01 24 15.7**	**-1.0**
	baz=51						
IUG				*e*S	**Sg**	**01 24 22.2**	**-0.2**
	baz=51						
KK31	**Karatay Array**	**0.79**	**44**	⇑P	**Pg**	**01 24 23.6**	**+0.3**
	2.2nm,0.2s,baz=230,slow=15						
KK31				⇑S	**Sb**	**01 24 35.7**	**+1.0**
	4.5nm,0.2s,baz=233,slow=28,SNR=19						
KKAR	**Karatay Array**	**0.79**	**44**	⇑*i*P	**Pg**	**01 24 23.2**	**-0.1**
	baz=43						
KKAR				⇑*i*S	**Sb**	**01 24 35.5**	**+0.8**
	baz=43						
DZA	**Taraz**	**1.20**	**72**	*e*P	**Pn**	**01 24 30.6**	**-0.5**
	20nm,0.1s						
DZA				*e*S	**Sn**	**01 24 48.2**	**+0.7**
	122nm,0.2s						
DZA	**Taraz**	**1.20**	**72**	*e*P	**Pn**	**01 24 30.6**	**-0.5**
	baz=71						
DZA				*e*S	**Sn**	**01 24 48.2**	**+0.7**
	baz=71						
TRKS	**Terek-Say**	**1.43**	**134**	⇑*i*P	**Pg**	**01 24 35.1**	**-0.5**
	baz=34						
TRKS				⇑*i*S	**Sg**	**01 24 56.7**	**+2.5**
	baz=34						
ARK	**Arkit**	**1.79**	**114**	⇑*i*P	**Pb**	**01 24 41.1**	**0.0**
	baz=13						
ARK				⇑*i*S	**Sg**	**01 25 06.5**	**+0.8**
	baz=13						
EKS2	**Erkin-Say**	**2.96**	**86**	⇑*i*P	**Pn**	**01 24 57.9**	**+2.6**
	baz=86						
EKS2				⇑*i*S	**Sb**	**01 25 36.1**	**-1.2**
	baz=86						
SGDS	**Sogindy**	**3.68**	**74**	*e*P	**Pb**	**01 25 15.4**	**+2.1**
	1.6nm,0.5s						
SGDS				*e*S	**Sg**	**01 26 04.5**	**-1.8**
	5.4nm,0.6s						
SGDS	**Sogindy**	**3.68**	**74**	Pg	**Pb**	**01 25 14.2**	**+0.9**
	1.2nm,0.4s						
SGDS				Lg	Lg	01 26 02.8	
	5.4nm,0.8s						
DGS	**Degeres**	**4.46**	**79**	*e*P	**Pg**	**01 25 30.7**	**-3.0**
	1.2nm,0.3s						
DGS				*e*S	**Sg**	**01 26 30.4**	**-1.1**
	6.7nm,0.7s						
DGS	**Degeres**	**4.46**	**79**	Pg	**Pb**	**01 25 29.5**	**+2.8**
	1.9nm,0.6s						
DGS				Lg	Lg	01 26 28.7	
	6.5nm,0.6s						
KRBS	**Karabastau**	**4.47**	**73**	*e*P	**Pg**	**01 25 30.6**	**-3.3**
	0.5nm,0.3s						
KRBS				*e*S	**Sg**	**01 26 30.2**	**-1.5**
	2.6nm,0.5s						
KRBS	**Karabastau**	**4.47**	**73**	Pg	**Pb**	**01 25 29.5**	**+2.7**
	0.8nm,0.2s						
KRBS				Lg	Lg	01 26 28.7	
	2.6nm,0.5s						
KST	**Kastek**	**4.58**	**82**	*e*P	**Pg**	**01 25 32.8**	**-3.1**
	1.0nm,0.3s						
KST				*e*S	**Sg**	**01 26 34.3**	**-1.1**
	3.7nm,0.7s						
KST	**Kastek**	**4.58**	**82**	Pg	**Pb**	**01 25 30.8**	**+2.1**
	1.4nm,0.3s						
KST				Lg	Lg	01 26 31.0	
	3.4nm,0.4s						
KTBS	**Karatobe**	**5.19**	**75**	*e*P	**Pg**	**01 25 44.0**	**-3.6**
	1.5nm,0.8s						
KTBS				*e*S	**Sg**	**01 26 53.2**	**-1.6**
	5.3nm,0.6s						
KTBS	**Karatobe**	**5.19**	**75**	Pg	**Pg**	**01 25 44.0**	**-3.6**
	1.5nm,0.8s						
KTBS				Lg	Lg	01 26 53.2	
	5.3nm,0.6s						

STR ***27*** *01:26:37.4±1.7, 43.°N×9.°1E±1.°2, h10km, mb3.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=121.2, preliminary*
PRU ***27*** *01:26:38.3±0.0, 42.°78N×13.°29E, h0km*
ROM ***27*** *01:26:39.8±0.0, 42.°838N±0.°002×13.°244E±0.°003, h9km, ML3.7/125, Mw3.7, Error ellipse: s-maj=0.2km s-min=0.1km az=249.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-4.22; Mθθ0.31; Mφφ3.91; Mrθ-0.13; Mθφ-2.39; Mφr1.57; Fault plane solution: Mo4.93063×10¹⁴ NP1:φs324.00000°, δ37.00000°, λ-105.00000°. NP2:φs162.00000°, δ54.00000°, λ-79.00000°.*
IDC ***27*** *01:26:40.9±1.3, 42.°98N×13.°11E, h0km, mb3.8/8, mbtmp3.8/10, ML3.6/2, MS3.2/18 Error ellipse: s-maj=28.4km s-min=13.6km az=88.0*
BEO ***27*** *01:26:40.1±0.6, 42.°74N×13.°11E, h0km, ML3.8/9*
LDG ***27*** *01:26:40.8±0.1, 42.°76N×13.°16E, h9km, Ml3.2/29, Error ellipse: s-maj=4.7km s-min=2.7km az=41.0*
PDG ***27*** *01:26:40.5±0.5, 42.°84N×13.°24E, h10km, ML3.7/14, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
ISC 27 01:26:40.8±0.7, 42.°83N±0.°01×13.°21E±0.°02, h8km±4km, n406, σ1s 96/500, mb3.8/7, MS3.3/11, 57C-32D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.01**	**279**	⇑P	**Pg**	**01 26 41.5**	**-0.9**
T1242				S	**Sg**	**01 26 42.5**	**-0.9**
T1214	**Arquata del Tr**	**0.07**	**183**	⇑P	**Pg**	**01 26 42.4**	**-0.4**
T1214				S	**Sg**	**01 26 44.5**	**+0.2**
NRCA	**Norcia**	**0.07**	**274**	⇑P	**Pg**	**01 26 42.6**	**-0.2**
NRCA				S	**Sg**	**01 26 44.5**	**+0.3**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
MC2	**Monte Cornacci**	**0.09**	**349**	⇓P	**Pg**	**01 26 42.3**	**-0.8**
MC2				S	**Sg**	**01 26 44.0**	**-0.8**
MC2				AML	AML		
	comp=E,74300μm,0.8s						
MC2				AML	AML		
	comp=N,73250μm,0.8s						
MC2				AML	AML		
	comp=E,74350μm,0.8s						
T1244	**Arquata del Tr**	**0.10**	**139**	⇓P	**Pg**	**01 26 42.6**	**-0.5**
T1244				S	**Sg**	**01 26 44.7**	**0.0**
MMO1	**Montemonaco**	**0.11**	**50**	⇑P	**Pg**	**01 26 42.1**	**-1.2**
MMO1				S	**Sg**	**01 26 44.3**	**-0.8**
MMO1				AML	AML		
	comp=E,9170μm,0.3s						
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
	comp=N,15450μm,0.9s						
MMO1				AML	AML		
MMO1				AML	AML		
	comp=E,9135μm,0.3s						
T1213	**Norcia, Frazio**	**0.12**	**212**	⇑P	**Pg**	**01 26 43.4**	**-0.1**
T1213				S	**Sg**	**01 26 46.4**	**+1.1**
T1202	**Accumoli, Fraz**	**0.12**	**176**	⇑P	**Pg**	**01 26 43.5**	**-0.1**
T1202				S	**Sg**	**01 26 46.4**	**+0.9**
T1212	**Cascia, Frazio**	**0.15**	**238**	⇑P	**Pg**	**01 26 44.0**	**+0.2**
T1212				S	**Sg**	**01 26 47.5**	**+1.4**
T1216	**Preci, Frazion**	**0.16**	**294**	⇑P	**Pg**	**01 26 44.0**	**-0.1**
T1216				S	**Sg**	**01 26 47.4**	**+1.1**
T1241	**Roccafluvione,**	**0.16**	**80**	⇑P	**Pg**	**01 26 43.3**	**-0.9**
T1241				S	**Sg**	**01 26 46.0**	**-0.5**
T1204	**Amatrice, Fraz**	**0.17**	**153**	P	**Pg**	**01 26 44.0**	**-0.3**
T1204				S	**Sg**	**01 26 47.4**	**+0.6**
T1201	**Domo (RI)**	**0.17**	**171**	⇓P	**Pg**	**01 26 44.4**	**+0.1**
T1218	**Civita (PG)**	**0.17**	**204**	⇑P	**Pg**	**01 26 44.5**	**+0.1**
T1218				S	**Sg**	**01 26 48.2**	**+1.4**
FEMA	**Monte Fema**	**0.18**	**318**	P	**Pg**	**01 26 44.3**	**-0.2**
FEMA				S	**Sg**	**01 26 47.8**	**+0.7**
FEMA				AML	AML		
	comp=E,49500μm,1.5s						
FEMA				AML	AML		
	comp=N,42300μm,1.6s						
FEMA				AML	AML		
	comp=E,49500μm,1.5s						
FEMA				AML	AML		
	comp=N,42300μm,1.6s						
T1243	**Rocca Santa Ma**	**0.22**	**127**	⇓P	**Pg**	**01 26 44.5**	**-0.7**
T1243				S	**Sg**	**01 26 48.1**	**0.0**
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
FDMO	**Fiordimonte**	**0.23**	**336**	P	**Pg**	**01 26 44.9**	**-0.4**
FDMO				S	**Sg**	**01 26 48.9**	**+0.5**
FDMO				AML	AML		
	comp=E,33700μm,0.2s						
FDMO				AML	AML		
	comp=N,38600μm,0.2s						
T1215	**Vallo di Nera,**	**0.26**	**264**	⇑P	**Pg**	**01 26 45.9**	**+0.1**
T1215				S	**Sb**	**01 26 51.1**	**-1.2**
LNSS	**Leonessa**	**0.26**	**209**	⇑P	**Pg**	**01 26 46.0**	**+0.1**
LNSS				S	**Sg**	**01 26 50.9**	**+1.5**
LNSS				AML	AML		
LNSS				AML	AML		
	comp=N,86650μm,0.5s						
CSP1	**Cessapalombo**	**0.26**	**359**	⇓P	**Pg**	**01 26 45.4**	**-0.7**
CSP1				S	**Sg**	**01 26 49.9**	**+0.3**
CSP1				AML	AML		
	comp=E,20050μm,0.7s						
CSP1				AML	AML		
	comp=E,20100μm,0.7s						
CSP1				AML	AML		
	comp=N,30300μm,0.4s						
CSP1				AML	AML		
	comp=N,30350μm,0.4s						
CESI	**CESI - Serrava**	**0.29**	**308**	⇑P	**Pg**	**01 26 46.3**	**-0.2**
CESI				S	**Sg**	**01 26 51.4**	**+1.1**
CESI				AML	AML		
	comp=N,43050μm,0.2s						
CESI				AML	AML		
	comp=E,24250μm,0.5s						
RM33	**Pellescritta (**	**0.32**	**180**	P	**Pg**	**01 26 47.0**	**0.0**
RM33				S	**Sg**	**01 26 52.6**	**+1.3**
RM33				AML	AML		
	comp=E,55000μm,1.3s						
RM33				AML	AML		
	comp=N,30350μm,1.5s						
RM33				AML	AML		
	comp=E,55250μm,1.3s						
RM33				AML	AML		
	comp=N,29750μm,1.5s						
CAMP	**Campotosto**	**0.33**	**154**	⇓P	**Pg**	**01 26 46.6**	**-0.6**
CAMP				S	**Sg**	**01 26 51.9**	**+0.4**
CAMP				AML	AML		
	comp=N,26600μm,0.4s						
CAMP				AML	AML		
	comp=E,22050μm,0.7s						
TERO	**Teramo**	**0.35**	**125**	⇓P	**Pg**	**01 26 46.9**	**-0.9**
TERO				S	**Sg**	**01 26 52.5**	**+0.1**
TERO				AML	AML		
	comp=E,58450μm,0.9s						
TERO				AML	AML		
	comp=N,64050μm,0.4s						
TERO				AML	AML		
	comp=E,58500μm,0.9s						
TERO				AML	AML		
	comp=E,60800μm,0.9s						
TERO				AML	AML		
	comp=N,66900μm,0.4s						
TERO				AML	AML		
	comp=N,64000μm,0.4s						
MNTP	**Montappone**	**0.36**	**31**	⇑P	**Pg**	**01 26 47.5**	**-0.3**
MNTP				AML	AML		
	comp=E,30000μm,0.7s						
MNTP				AML	AML		
	comp=N,24850μm,1.6s						
MNTP				AML	AML		
	comp=E,29950μm,0.7s						
OFFI	**Offida**	**0.36**	**73**	⇑P	**Pg**	**01 26 47.8**	**-0.1**
OFFI				AML	AML		
	comp=N,40300μm,1.2s						
OFFI				AML	AML		
	comp=E,26100μm,1.3s						
MDAR	**Monte D'Aria**	**0.37**	**352**	P	**Pg**	**01 26 47.4**	**-0.6**
MDAR				S	**Sg**	**01 26 53.5**	**+0.6**
SEF1	**Sefro**	**0.37**	**329**	P	**Pg**	**01 26 47.6**	**-0.4**
SEF1				S	**Sg**	**01 26 54.0**	**+1.0**
SEF1				AML	AML		
	comp=E,29700μm,0.3s						
SEF1				AML	AML		
	comp=N,27800μm,0.3s						
SEF1				AML	AML		
	comp=N,27850μm,0.3s						
SEF1				AML	AML		
	comp=E,29750μm,0.3s						
PIO1	**Pioraco**	**0.39**	**334**	P	**Pg**	**01 26 47.9**	**-0.5**
PIO1				AML	AML		
	comp=N,13700μm,0.7s						
PIO1				AML	AML		
	comp=E,11800μm,1.5s						
PIO1				AML	AML		
	comp=N,13750μm,0.7s						
T1211	**Morro Reatino**	**0.40**	**222**	⇑P	**Pg**	**01 26 48.4**	**-0.1**
T1211				S	**Sg**	**01 26 54.9**	**+1.2**
SSM1	**San Severino M**	**0.40**	**356**	P	**Pg**	**01 26 47.9**	**-0.7**
ARRO	**Arrone**	**0.41**	**233**	⇑P	**Pg**	**01 26 48.7**	**-0.1**
ARRO				AML	AML		
	comp=E,9575μm,1.0s						
ARRO				AML	AML		
	comp=N,11300μm,1.2s						
ARRO				AML	AML		
	comp=E,9545μm,1.0s						
ARRO				AML	AML		
	comp=N,11250μm,1.2s						
FIU1	**Fiuminata**	**0.41**	**330**	P	**Pg**	**01 26 48.5**	**-0.4**
FIU1				AML	AML		
	comp=E,5755μm,0.9s						
FIU1				AML	AML		
	comp=N,6785μm,1.4s						
FIU1				AML	AML		
	comp=N,6785μm,1.4s						
FIU1				AML	AML		
	comp=E,5755μm,0.8s						
GAG1	**Gagliole**	**0.42**	**345**	P	**Pg**	**01 26 48.5**	**-0.5**
GAG1				AML	AML		
	comp=N,32800μm,1.1s						
GAG1				AML	AML		
	comp=N,32800μm,1.1s						
GAG1				AML	AML		
	comp=E,28750μm,0.2s						
MTL1	**Matelica**	**0.45**	**341**	P	**Pg**	**01 26 49.0**	**-0.5**
MTL1				AML	AML		
	comp=E,23150μm,0.9s						
MTL1				AML	AML		
	comp=N,21500μm,1.0s						
MTL1				AML	AML		
	comp=E,23200μm,0.9s						
ASSB	**Assisi San Ben**	**0.46**	**298**	⇑P	**Pg**	**01 26 49.3**	**-0.4**
ASSB				AML	AML		
	comp=N,12150μm,1.1s						
ASSB				AML	AML		
	comp=E,16500μm,0.2s						
GIGS	**Gran Sasso**	**0.46**	**145**	⇓P	**Pg**	**01 26 48.5**	**-1.2**
GIGS				AML	AML		
	comp=N,5805μm,1.3s						
GIGS				AML	AML		
	comp=N,5810μm,1.3s						
GIGS				AML	AML		
	comp=E,5405μm,0.5s						
SNTG	**Esanatoglia**	**0.47**	**335**	⇑P	**Pg**	**01 26 49.2**	**-0.7**
SNTG				S	**Sg**	**01 26 56.9**	**+0.8**
SNTG				AML	AML		
	comp=N,841μm,0.7s						
SNTG				AML	AML		
	comp=E,646μm,1.5s						
SNTG				AML	AML		
	comp=E,5010μm,0.8s						
SNTG				AML	AML		
	comp=N,6455μm,0.7s						
TRE1	**Treia**	**0.49**	**9**	P	**Pg**	**01 26 49.8**	**-0.4**
TRE1				AML	AML		
	comp=E,13000μm,1.2s						
TRE1				AML	AML		
	comp=N,13825μm,0.9s						
TRE1				AML	AML		
	comp=E,13050μm,1.1s						
TRE1				AML	AML		
	comp=N,13840μm,0.9s						
EL6	**Elcito**	**0.51**	**351**	P	**Pg**	**01 26 49.8**	**-0.8**
EL6				AML	AML		
	comp=E,9385μm,1.0s						
EL6				AML	AML		
	comp=E,9405μm,1.0s						
EL6				AML	AML		
	comp=N,12200μm,0.9s						
CESX	**Cesi**	**0.52**	**245**	⇑P	**Pg**	**01 26 50.3**	**-0.4**
CESX				AML	AML		
	comp=E,9485μm,1.6s						
CESX				AML	AML		
	comp=N,8590μm,0.5s						
TRTR	**Tortoreto Alta**	**0.52**	**92**	P	**Pg**	**01 26 50.5**	**-0.2**
CADA	**Capodarco di F**	**0.54**	**48**	P	**Pg**	**01 26 51.7**	**+0.5**
CADA				AML	AML		
	comp=E,28650μm,1.2s						
CADA				AML	AML		
	comp=N,25200μm,0.5s						
CING	**Cingoli**	**0.55**	**359**	P	**Pg**	**01 26 50.5**	**-0.9**
CING				AML	AML		
	comp=N,4100μm,0.3s						
CING				AML	AML		
	comp=E,5165μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.55**	**311**	⇑P	**Pg**	**01 26 51.0**	**-0.4**
ATCC				AML	AML		
	comp=E,11300μm,1.1s						
ATCC				AML	AML		
	comp=E,11250μm,1.1s						
ATCC				AML	AML		
	comp=N,16300μm,0.8s						
FIAM	**Fiamignano**	**0.56**	**187**	P	**Pg**	**01 26 51.2**	**-0.4**
FIAM				S	**Sg**	**01 26 59.6**	**+0.5**
FOSV	**Fossato di Vic**	**0.57**	**325**	⇑P	**Pg**	**01 26 51.2**	**-0.6**
FOSV				AML	AML		
	comp=E,8560μm,0.2s						
FOSV				AML	AML		
	comp=E,8555μm,0.2s						
FOSV				AML	AML		
	comp=N,27250μm,0.3s						
CIMA	**Civitanova Mar**	**0.58**	**35**	P	**Pg**	**01 26 52.2**	**+0.2**
PP3	**Marolino**	**0.62**	**28**	P	**Pg**	**01 26 52.1**	**-0.6**
PP3				AML	AML		
	comp=N,11550μm,1.6s						
PP3				AML	AML		
	comp=E,18150μm,0.5s						
PP3				AML	AML		
	comp=E,17950μm,0.5s						
PP3				AML	AML		
	comp=N,10850μm,1.6s						
FAGN	**Fagnano**	**0.62**	**154**	⇓P	**Pg**	**01 26 51.5**	**-1.3**
FAGN				AML	AML		
	comp=N,22000μm,0.5s						
FAGN				AML	AML		
	comp=E,26350μm,0.5s						
MMUR	**Monte Murano**	**0.63**	**346**	P	**Pg**	**01 26 52.1**	**-0.9**
VCEL	**Villa Celiera**	**0.64**	**133**	⇓P	**Pg**	**01 26 52.2**	**-0.8**
VCEL				AML	AML		
	comp=N,25750μm,0.5s						
VCEL				AML	AML		
	comp=E,18300μm,0.6s						
MURB	**Monte Urbino**	**0.67**	**311**	P	**Pg**	**01 26 53.0**	**-0.6**
MURB				AML	AML		
	comp=N,15900μm,0.2s						
MURB				AML	AML		
	comp=E,13750μm,0.3s						
MURB				AML	AML		
	comp=E,12750μm,0.3s						
MURB				AML	AML		
	comp=N,17750μm,0.2s						
SSFR	**Montelago di S**	**0.69**	**333**	P	**Pg**	**01 26 53.1**	**-0.9**
SSFR				AML	AML		
	comp=E,13450μm,1.1s						
SSFR				AML	AML		
	comp=N,16750μm,0.2s						
SSFR				AML	AML		
	comp=N,15850μm,0.2s						
SSFR				AML	AML		
	comp=E,14300μm,1.1s						
ARVD	**Arcevia**	**0.70**	**344**	P	**Pg**	**01 26 53.3**	**-0.9**
ARVD				AML	AML		
	comp=N,2320μm,0.9s						
ARVD				AML	AML		
	comp=E,3160μm,0.2s						
ATFO	**Monte Foce - G**	**0.71**	**319**	P	**Pg**	**01 26 53.8**	**-0.7**
ATFO				AML	AML		
	comp=E,5940μm,0.8s						
ATFO				AML	AML		
	comp=N,4520μm,0.9s						
ATTE	**AVT- Monte Tez**	**0.73**	**301**	P	**Pg**	**01 26 54.1**	**-0.7**
ATTE				AML	AML		
	comp=E,3715μm,1.4s						
ATTE				AML	AML		
	comp=N,3115μm,0.9s						
T0110	**Collepietro**	**0.73**	**145**	⇓P	**Pg**	**01 26 53.5**	**-1.4**
AOI	**Ancona**	**0.78**	**21**	P	**Pg**	**01 26 54.6**	**-1.1**
AOI				AML	AML		
	comp=E,2395μm,0.4s						
AOI				AML	AML		
	comp=N,3180μm,1.0s						
FRON	**Frontone**	**0.78**	**333**	P	**Pg**	**01 26 54.6**	**-1.1**
FRON				AML	AML		
	comp=E,3640μm,1.0s						
FRON				AML	AML		
	comp=N,6115μm,1.1s						
SRES	**S.Oreste - Sor**	**0.79**	**222**	⇑P	**Pg**	**01 26 55.0**	**-0.8**
SRES				AML	AML		
	comp=E,5355μm,0.8s						
SRES				AML	AML		
	comp=N,4665μm,1.5s						

ATVO	**AVT- Monte Val**	**0.81**	**313**	⇑P	**Pg**	**01 26 55.4**	**-0.9**
ATVO				AML	AML		
	comp=E,4060µm,1.0s						
ATVO				AML	AML		
	comp=N,2660µm,1.3s						
MGAB	**Montegabbione**	**0.81**	**276**	P	**Pg**	**01 26 55.9**	**-0.5**
MGAB				AML	AML		
	comp=E,5945µm,1.4s						
MGAB				AML	AML		
	comp=N,6100µm,0.7s						
MGAB				AML	AML		
	comp=E,5845µm,1.4s						
MGAB				AML	AML		
	comp=N,5550µm,0.6s						
COR1	**Corinaldo**	**0.82**	**349**	P	**Pg**	**01 26 56.4**	**-0.1**
COR1				AML	AML		
	comp=E,7890µm,0.9s						
COR1				AML	AML		
	comp=E,4555µm,1.6s						
COR1				AML	AML		
	comp=N,7785µm,0.5s						
COR1				AML	AML		
	comp=N,8375µm,0.9s						
PTQR	**Pietraquaria**	**0.82**	**170**	P	**Pg**	**01 26 55.2**	**-1.3**
PTQR				AML	AML		
	comp=N,3820µm,0.8s						
PTQR				AML	AML		
	comp=E,4710µm,0.8s						
ATMI	**Monte Miggiano**	**0.86**	**306**	P	**Pg**	**01 26 56.5**	**-0.7**
ATMI				AML	AML		
	comp=E,7155µm,0.6s						
ATMI				AML	AML		
	comp=N,9795µm,0.7s						
ATPI	**Pietralunga -**	**0.86**	**317**	⇑P	**Pg**	**01 26 56.4**	**-0.9**
ATPI				AML	AML		
	comp=E,3285µm,0.8s						
ATPI				AML	AML		
	comp=N,2815µm,1.4s						
PIEI	**Pieia**	**0.86**	**325**	P	**Pg**	**01 26 56.1**	**-1.2**
PIEI				AML	AML		
	comp=E,2270µm,0.2s						
PIEI				AML	AML		
	comp=N,2355µm,1.3s						
MPAG	**Monte Paganucc**	**0.87**	**338**	P	**Pg**	**01 26 56.5**	**-1.0**
MPAG				AML	AML		
	comp=N,3440µm,0.8s						
MPAG				AML	AML		
	comp=E,2690µm,1.3s						
MPAG				AML	AML		
	comp=E,2590µm,1.3s						
MPAG				AML	AML		
	comp=N,3480µm,0.9s						
MTCE	**Montecelio**	**0.88**	**204**	P	**Pg**	**01 26 56.3**	**-1.3**
MTCE				AML	AML		
	comp=N,5635µm,1.4s						
MTCE				AML	AML		
	comp=E,7505µm,0.6s						
SENI	**Senigallia**	**0.88**	**1**	AML	AML		
	comp=N,2666µm,0.7s						
SENI				AML	AML		
	comp=E,9975µm,0.6s						
SENI				AML	AML		
	comp=N,9790µm,0.4s						
SENI				AML	AML		
	comp=E,3525µm,0.7s						
CERT	**Cerreto**	**0.90**	**191**	P	**Pg**	**01 26 56.8**	**-1.1**
CERT				AML	AML		
	comp=N,10980µm,0.7s						
CERT				AML	AML		
	comp=E,11950µm,0.4s						
NARO	**Abbazia di Nar**	**0.91**	**330**	P	**Pg**	**01 26 56.9**	**-1.3**
NARO				AML	AML		
	comp=N,2245µm,1.1s						
NARO				AML	AML		
	comp=E,2440µm,0.8s						
FSSB	**Fossombrone**	**0.92**	**340**	P	**Pg**	**01 26 57.5**	**-0.9**
FSSB				AML	AML		
	comp=E,6445µm,0.4s						
FSSB				AML	AML		
	comp=N,7830µm,0.5s						
APEC	**Apecchio**	**0.93**	**322**	P	**Pg**	**01 26 58.1**	**-0.6**
SACS	**San Casciano d**	**0.96**	**272**	⇑P	**Pg**	**01 26 58.7**	**-0.5**
SACS				AML	AML		
	comp=N,3650µm,1.0s						
SACS				AML	AML		
	comp=E,5145µm,1.6s						
SACS				AML	AML		
	comp=E,5065µm,1.6s						
SACS				AML	AML		
	comp=N,3820µm,1.0s						
INTR	**Introdacqua**	**0.96**	**148**	P	**Pg**	**01 26 57.2**	**-2.0**
INTR				AML	AML		
	comp=N,12µm,0.8s						
INTR				AML	AML		
	comp=E,5135µm,1.4s						
INTR				AML	AML		
	comp=N,17700µm,0.8s						
INTR				AML	AML		
	comp=E,5µm,1.4s						
BADI	**Badiali**	**0.98**	**314**	P	**Pg**	**01 26 58.8**	**-0.9**
RCAV	**Rocca di Cave**	**1.00**	**192**	P	**Pg**	**01 26 59.2**	**-0.8**
RCAV				AML	AML		
	comp=N,14500µm,0.5s						
RCAV				AML	AML		
	comp=E,11455µm,1.2s						
VVLD	**Villa Vallelon**	**1.00**	**162**	⇑P	**Pg**	**01 26 58.7**	**-1.4**
VVLD				AML	AML		
	comp=E,6870µm,0.7s						
VVLD				AML	AML		
	comp=N,4845µm,0.9s						
PE3	**Peglio**	**1.01**	**329**	P	**Pg**	**01 26 59.2**	**-1.0**
PE3				AML	AML		
	comp=E,11µm,0.3s						
PE3				AML	AML		
	comp=N,11µm,1.6s						
CAFR	**Castel Frentan**	**1.03**	**125**	AML	AML		
	comp=E,22µm,0.5s						
CAFR				AML	AML		
	comp=N,5710µm,0.9s						
GUAR	**Guarcino**	**1.04**	**176**	P	**Pg**	**01 26 59.8**	**-0.8**
CAFI	**Castiglion Fio**	**1.04**	**299**	P	**Pg**	**01 26 59.8**	**-0.9**
CAFI				AML	AML		
	comp=E,2565µm,1.6s						
CAFI				AML	AML		
	comp=E,2660µm,1.6s						
CAFI				AML	AML		
	comp=N,3015µm,1.3s						
CAFI				AML	AML		
	comp=N,3140µm,1.3s						
LATE	**Laterza**	**1.06**	**259**	⇑P	**Pg**	**01 27 00.3**	**-0.8**
LPEL	**Lama dei Pelig**	**1.06**	**137**	P	**Pg**	**01 26 59.2**	**-1.9**
LPEL				AML	AML		
	comp=E,4295µm,1.3s						
LPEL				AML	AML		
	comp=N,3445µm,0.8s						
PARC	**Parchiule**	**1.09**	**319**	AML	AML		
	comp=E,3185µm,0.9s						
PARC				AML	AML		
	comp=N,2815µm,1.0s						
SSP9	**Sansepolcro**	**1.09**	**314**	AML	AML		
	comp=N,4960µm,1.4s						
SSP9				AML	AML		
	comp=E,3315µm,1.6s						
VIVA	**Pratoni del Vi**	**1.13**	**197**	AML	AML		
	comp=N,16200µm,0.9s						
VIVA				AML	AML		
	comp=E,13700µm,0.5s						
RDP	**Rocca di Papa**	**1.13**	**199**	P	**Pg**	**01 27 01.3**	**-1.1**
RDP				AML	AML		
	comp=N,19350µm,1.1s						
RDP				AML	AML		
	comp=E,14900µm,0.6s						
MCIV	**Monte Civitell**	**1.13**	**268**	⇑P	**Pg**	**01 27 01.2**	**-1.3**
MCIV				AML	AML		
	comp=N,1330µm,1.0s						
MCIV				AML	AML		
	comp=E,1315µm,0.9s						
SF04	**Casetta**	**1.14**	**271**	P	**Pg**	**01 27 02.1**	**-0.6**
SF04				AML	AML		
	comp=N,1466µm,1.1s						
SF04				AML	AML		
	comp=E,1706µm,1.1s						
PESA	**Pesaro**	**1.15**	**346**	P	**Pg**	**01 27 02.0**	**-0.7**
PESA				AML	AML		
	comp=E,4850µm,0.9s						
PESA				AML	AML		
	comp=N,5085µm,1.2s						
POFI	**Posta Fibreno**	**1.17**	**161**	P	**Pg**	**01 27 01.3**	**-1.9**
POFI				AML	AML		
	comp=E,2995µm,0.6s						
POFI				AML	AML		
	comp=E,3125µm,0.7s						
POFI				AML	AML		
	comp=N,2675µm,0.7s						
POFI				AML	AML		
	comp=N,2650µm,0.9s						
TOLF	**Tolfa**	**1.18**	**230**	P	**Pg**	**01 27 02.1**	**-1.2**
TOLF				AML	AML		
	comp=E,3465µm,0.7s						
TOLF				AML	AML		
	comp=N,1870µm,1.1s						
LRP	**Arpino**	**1.21**	**167**	AML	AML		
	comp=E,2190µm,0.6s						
LRP				AML	AML		
	comp=N,3935µm,0.6s						
SF01	**Poggio Pratacc**	**1.21**	**270**	P	**Pg**	**01 27 03.4**	**-0.7**
SF01				AML	AML		
	comp=E,2145µm,0.6s						
SF01				AML	AML		
	comp=N,2420µm,0.9s						
CRE	**Caprese Michel**	**1.22**	**311**	P	**Pg**	**01 27 02.8**	**-1.3**
CRE				AML	AML		
	comp=E,1340µm,1.4s						
CRE				AML	AML		
	comp=N,1680µm,1.4s						
GIUL	**Giuliano Di Ro**	**1.27**	**179**	P	**Pn**	**01 27 03.4**	**-1.4**
GIUL				AML	AML		
	comp=N,3960µm,1.2s						
GIUL				AML	AML		
	comp=E,2375µm,0.6s						
ARCI	**Arcidosso**	**1.28**	**272**	P	**Pn**	**01 27 04.2**	**-0.9**
ARCI				AML	AML		
	comp=N,642µm,1.0s						
ARCI				AML	AML		
	comp=E,621µm,1.6s						
RNI2	**Rionero Sannit**	**1.32**	**148**	P	**Pn**	**01 27 03.8**	**-1.8**
RNI2				AML	AML		
	comp=E,6180µm,1.3s						
RNI2				AML	AML		
	comp=E,6410µm,1.3s						
RNI2				AML	AML		
	comp=N,4130µm,1.3s						
RNI2				AML	AML		
	comp=N,4015µm,1.3s						
LATB	**Latina**	**1.35**	**188**	P	**Pn**	**01 27 04.6**	**-1.3**
LATB				AML	AML		
	comp=N,947µm,1.4s						
LATB				AML	AML		
	comp=E,1350µm,1.6s						
LIK	**San Giovanni I**	**1.35**	**169**	P	**Pn**	**01 27 04.9**	**-0.9**
LIK				AML	AML		
	comp=N,7005µm,0.7s						
LIK				AML	AML		
	comp=E,5370µm,1.1s						
CERA	**Filignano**	**1.37**	**154**	P	**Pn**	**01 27 04.5**	**-1.7**
CERA				AML	AML		
	comp=E,3975µm,0.7s						
CERA				AML	AML		
	comp=N,3765µm,0.7s						
FRES	**Fresagrandinar**	**1.38**	**128**	P	**Pn**	**01 27 04.8**	**-1.5**
FRES				AML	AML		
	comp=E,2560µm,1.4s						
FRES				AML	AML		
	comp=N,2330µm,0.8s						
ASQU	**Asqua**	**1.42**	**313**	P	**Pn**	**01 27 06.4**	**-0.6**
ASQU				AML	AML		
	comp=E,1145µm,1.4s						
ASQU				AML	AML		
	comp=N,1224µm,0.7s						
TRIV	**Trivento**	**1.45**	**136**	P	**Pn**	**01 27 07.3**	**-0.1**
TRIV				AML	AML		
	comp=E,4085µm,0.6s						
TRIV				AML	AML		
	comp=N,3830µm,0.8s						
TRIV				AML	AML		
	comp=E,3915µm,0.7s						
TRIV				AML	AML		
	comp=N,4175µm,0.6s						
SFI	**Santa Sofia**	**1.47**	**318**	P	**Pn**	**01 27 07.3**	**-0.3**
SFI				AML	AML		
	comp=N,1410µm,1.2s						
SFI				AML	AML		
	comp=E,1295µm,1.3s						
SFI				AML	AML		
	comp=N,1480µm,1.2s						
SFI				AML	AML		
	comp=E,1320µm,1.3s						
CSNT	**Castellina Chi**	**1.55**	**295**	P	**Pn**	**01 27 08.1**	**-0.5**
CSNT				AML	AML		
	comp=E,651µm,1.3s						
CSNT				AML	AML		
	comp=N,546µm,1.1s						
FROS	**Frosini**	**1.56**	**285**	P	**Pn**	**01 27 08.4**	**-0.4**
OSSC	**Osservatorio P**	**1.60**	**296**	P	**Pn**	**01 27 08.8**	**-0.5**
RUFI	**Rufina**	**1.60**	**310**	P	**Pn**	**01 27 09.2**	**-0.2**
RUFI				AML	AML		
	comp=E,1002µm,1.2s						
RUFI				AML	AML		
	comp=N,1082µm,0.8s						
VAGA	**Valle Agricola**	**1.60**	**151**	AML	AML		
	comp=E,1255µm,0.9s						
VAGA				AML	AML		
	comp=N,1670µm,0.7s						
VAGA				AML	AML		
	comp=N,1725µm,0.7s						
VAGA				AML	AML		
	comp=E,1315µm,0.9s						
BSSO	**Busso**	**1.64**	**141**	P	**Pn**	**01 27 09.6**	**-0.4**
BSSO				AML	AML		
	comp=E,2035µm,1.0s						
BSSO				AML	AML		
	comp=N,656µm,1.5s						
BSSO				AML	AML		
	comp=E,858µm,1.0s						
BSSO				AML	AML		
	comp=N,1637µm,1.6s						
LMD	**Lutirano**	**1.66**	**319**	P	**Pn**	**01 27 10.3**	**0.0**
LMD				AML	AML		
	comp=N,1162µm,1.4s						
LMD				AML	AML		
	comp=E,1009µm,1.1s						
CIGN	**Sant'Elia a Pi**	**1.72**	**132**	P	**Pn**	**01 27 10.8**	**-0.3**
CIGN				AML	AML		
	comp=E,1480µm,0.9s						
CIGN				AML	AML		
	comp=N,1725µm,0.7s						
TRIF	**Trifonti**	**1.72**	**280**	P	**Pn**	**01 27 10.3**	**-0.8**
TRIF				AML	AML		
	comp=E,572µm,0.9s						
TRIF				AML	AML		
	comp=N,440µm,0.9s						
CASP	**Castiglione de**	**1.73**	**270**	P	**Pn**	**01 27 10.5**	**-0.6**
CASP				AML	AML		
	comp=E,391µm,1.6s						
CASP				AML	AML		
	comp=N,353µm,1.2s						
MODR	**Mondragone**	**1.75**	**163**	P	**Pn**	**01 27 11.5**	**0.0**
MODR				AML	AML		
	comp=E,768µm,0.8s						
MODR				AML	AML		
	comp=N,1088µm,0.8s						
DUGI	**Dugi Otok**	**1.78**	**49**	*e*Pn	**Pn**	**01 27 11.5**	**-0.4**
PIGN	**Pignataro Magg**	**1.78**	**156**	P	**Pn**	**01 27 12.2**	**+0.4**
MELA	**Melanico ??? S**	**1.81**	**128**	P	**Pn**	**01 27 11.8**	**-0.4**
MELA				AML	AML		
	comp=N,5325µm,1.4s						
MELA				AML	AML		
	comp=E,4055µm,1.1s						
MELA				AML	AML		
	comp=N,5085µm,1.4s						
MELA				AML	AML		
	comp=E,4195µm,1.1s						
BRIS	**BRISIGHELLA**	**1.81**	**317**	P	**Pb**	**01 27 14.2**	**0.0**
SACR	**S. Croce Del S**	**1.81**	**142**	P	**Pn**	**01 27 12.4**	**+0.1**
SACR				AML	AML		
	comp=N,1128µm,1.1s						
SACR				AML	AML		
	comp=E,1021µm,1.0s						
GATE	**Gambatesa**	**1.82**	**136**	P	**Pn**	**01 27 12.7**	**+0.2**
SEI	**Scarperia**	**1.82**	**313**	P	**Pn**	**01 27 12.5**	**0.0**
TREM	**Isole Tremiti**	**1.84**	**112**	P	**Pn**	**01 27 12.2**	**-0.5**
TREM				AML	AML		
	comp=E,3280µm,0.7s						
TREM				AML	AML		
	comp=N,3580µm,0.8s						
MPPT	**Montemurlo**	**1.92**	**307**	P	**Pn**	**01 27 13.6**	**-0.2**
MPPT				AML	AML		
	comp=N,526µm,0.9s						
MPPT				AML	AML		
	comp=E,758µm,1.3s						
VITU	**Vitulano (BN)**	**1.95**	**147**	P	**Pn**	**01 27 14.8**	**+0.5**
VITU				AML	AML		
	comp=N,1200µm,0.6s						
VITU				AML	AML		
	comp=E,992µm,0.5s						
VIRC	**Vir**	**1.98**	**42**	*e*Pn	**Pn**	**01 27 13.5**	**-1.1**
PSB1	**Pescosannita**	**2.00**	**143**	P	**Pn**	**01 27 14.7**	**-0.2**
PSB1				AML	AML		
	comp=N,955µm,1.4s						
PSB1				AML	AML		
	comp=N,892µm,1.4s						
PSB1				AML	AML		
	comp=E,1100µm,1.4s						
PSB1				AML	AML		
	comp=E,1185µm,1.4s						
MTCR	**Monte La Croce**	**2.01**	**307**	P	**Pn**	**01 27 14.8**	**-0.3**
FNVD	**Fontana Vidola**	**2.03**	**312**	P	**Pn**	**01 27 15.7**	**+0.4**
APRC	**Apricena**	**2.03**	**121**	P	**Pn**	**01 27 14.7**	**-0.6**
APRC				AML	AML		
	comp=E,1790µm,0.7s						
APRC				AML	AML		
	comp=N,2075µm,0.7s						
MOCO	**Biccari - m.te**	**2.05**	**135**	P	**Pn**	**01 27 15.6**	**-0.1**
MORI	**Morici**	**2.09**	**59**	*e*Pn	**Pn**	**01 27 15.3**	**-0.8**
NVLJ	**Novalja**	**2.11**	**34**	*i* Pn	**Pn**	**01 27 15.5**	**-0.8**
BRJN	**Brijuni**	**2.11**	**10**	*e*Pn	**Pn**	**01 27 15.5**	**-0.9**
BRJN	**Brijuni**	**2.11**	**10**	P	**Pn**	**01 27 15.8**	**-0.6**
MRB1	**Monte Rocchett**	**2.15**	**142**	P	**Pn**	**01 27 16.6**	**-0.4**
PII	**Pisa**	**2.16**	**295**	P	**Pn**	**01 27 16.8**	**-0.2**
PII				AML	AML		
	comp=E,318µm,1.6s						
PII				AML	AML		
	comp=N,509µm,0.8s						
POPM	**Popiglio**	**2.16**	**305**	P	**Pn**	**01 27 16.6**	**-0.5**
SGRT	**San Giovanni R**	**2.16**	**119**	P	**Pn**	**01 27 16.6**	**-0.6**
SGRT				AML	AML		
	comp=E,1350µm,0.8s						
SGRT				AML	AML		
	comp=N,1775µm,0.6s						
CELB	**S.Piero in Cam**	**2.21**	**269**	P	**Pn**	**01 27 17.4**	**-0.4**
CELB				AML	AML		
	comp=N,170µm,1.6s						
CELB				AML	AML		
	comp=E,126µm,1.0s						
RABC	**Rab**	**2.23**	**30**	*e*Pn	**Pn**	**01 27 17.1**	**-0.9**
MSAG	**Monte S. Angel**	**2.29**	**118**	P	**Pn**	**01 27 19.3**	**+0.3**
MSAG				AML	AML		
	comp=E,1515µm,0.9s						
MSAG				AML	AML		
	comp=N,3020µm,0.5s						
MSAG				AML	AML		
	comp=E,1670µm,0.9s						
MSAG				AML	AML		
	comp=N,3100µm,0.5s						
SMRN	**Sveta Marina**	**2.31**	**17**	*e*Pn	**Pn**	**01 27 18.0**	**-1.1**
SGTA	**Sant Agata di**	**2.33**	**136**	P	**Pn**	**01 27 18.9**	**-0.6**
SGTA				AML	AML		
	comp=N,646µm,0.9s						
SGTA				AML	AML		
	comp=E,1075µm,0.8s						
SGTA				AML	AML		
	comp=N,668µm,0.7s						
SGTA				AML	AML		
	comp=E,1125µm,0.9s						
HVAR	**Hvar**	**2.40**	**81**	*e*Pn	**Pn**	**01 27 19.8**	**-0.5**
HVAR	**Hvar**	**2.40**	**81**	P	**Pn**	**01 27 20.2**	**-0.2**
SNAL	**S. Angelo Dei**	**2.42**	**141**	AML	AML		
	comp=N,1040µm,1.0s						
SNAL				AML	AML		
	comp=E,1039µm,1.4s						
SNAL				AML	AML		
	comp=N,1070µm,1.0s						
SNAL				AML	AML		
	comp=E,1030µm,1.2s						
UDBI	**Udbina**	**2.51**	**47**	*e*Pn	**Pn**	**01 27 22.5**	**+0.5**
CAPA	**Cerignola FG**	**2.56**	**130**	AML	AML		
	comp=E,1955µm,1.1s						
CAPA				AML	AML		
	comp=N,1675µm,1.0s						
EQUI	**Equi**	**2.60**	**302**	P	**Pn**	**01 27 22.7**	**-0.4**
EQUI				AML	AML		
	comp=N,218µm,1.2s						
EQUI				AML	AML		
	comp=E,172µm,1.5s						
KIJV	**Kijevo**	**2.61**	**62**	*e*Pn	**Pn**	**01 27 23.0**	**-0.3**
RIY	**Rijeka**	**2.66**	**20**	*e*Pn	**Pn**	**01 27 22.8**	**-1.1**
PLIT	**Plitvice**	**2.69**	**40**	*e*Pn	**Pn**	**01 27 24.7**	**+0.3**
LSTV	**Lastovo**	**2.71**	**90**	*e*Pn	**Pn**	**01 27 24.2**	**-0.4**
PLMA	**Palmaria, Port**	**2.74**	**298**	AML	AML		
	comp=N,126µm,0.5s						
PLMA				AML	AML		
	comp=E,105µm,1.2s						
SKDS	**Skadanscina**	**2.78**	**12**	*e*Pn	**Pn**	**01 27 24.5**	**-1.1**
SKDS	**Skadanscina**	**2.78**	**12**	*i* Pn	**Pn**	**01 27 24.8**	**-0.8**
SKDS				*e*Sn	**Sn**	**01 27 59.2**	**-0.2**
SKDS				IAML		01 28 16.0	
	comp=Z,53nm,0.3s						
PALZ	**Palazzo San Ge**	**2.78**	**132**	⇓P	**Pn**	**01 27 26.1**	**+0.4**
PALZ				AML	AML		
	comp=E,1260µm,1.1s						
PALZ				AML	AML		
	comp=N,1245µm,1.4s						
MAKA	**Makarska**	**2.83**	**79**	*e*Pn	**Pn**	**01 27 26.1**	**-0.1**
MRVN	**Minervino Murg**	**2.84**	**127**	AML	AML		
	comp=N,434µm,0.8s						
MRVN				AML	AML		
	comp=E,325µm,1.3s						
ACER	**Acerenza**	**2.88**	**134**	P	**Pn**	**01 27 26.8**	**-0.3**
ACER				AML	AML		
	comp=E,761µm,0.8s						
ACER				AML	AML		
	comp=N,802µm,0.7s						
ACER				AML	AML		
	comp=E,728µm,0.8s						
ACER				AML	AML		
	comp=N,804µm,0.7s						
A050A	**Klekovaca**	**2.92**	**54**	*e*Pn	**Pn**	**01 27 28.7**	**+1.1**
RICI	**Ricice**	**2.94**	**76**	*e*Pn	**Pn**	**01 27 28.2**	**+0.3**
SMPL	**Sampolo**	**3.00**	**257**	P	**Pn**	**01 27 29.0**	**+0.4**
SMPL	**Sampolo**	**3.00**	**257**	P	**Pn**	**01 27 28.6**	**0.0**
SMPL				AML	AML		
	comp=E,37µm,0.6s						
SMPL				AML	AML		
	comp=N,38µm,1.6s						
BOJS	**Bojanci**	**3.05**	**28**	*e*Pn	**Pn**	**01 27 29.7**	**+0.4**
BOJS	**Bojanci**	**3.05**	**28**	P	**Pn**	**01 27 28.8**	**-0.5**
BOJS				AML	AML		
	comp=N,528µm,1.0s						
BOJS				AML	AML		
	comp=E,894µm,1.5s						
PGF	**Pioggiola**	**3.12**	**266**	*e*P	**Pn**	**01 27 31.1**	**+0.7**
PGF				*e*Sn	**Sn**	**01 28 02.6**	**-5.3**
	comp=E,47nm,0.9s						
PGF	**Pioggiola**	**3.12**	**266**	P	**Pn**	**01 27 31.0**	**+0.6**
SRKY	**Kupres RS**	**3.13**	**65**	*e*Pn	**Pn**	**01 27 32.0**	**+1.4**
PTRP	**Pietrapertosa**	**3.14**	**136**	P	**Pn**	**01 27 30.3**	**-0.3**
PTRP				AML	AML		
	comp=N,720µm,0.9s						
PTRP				AML	AML		
	comp=E,526µm,1.1s						
SABO	**M.te Sabotino**	**3.16**	**5**	P	**Pn**	**01 27 30.3**	**-0.6**
SABO				AML	AML		
	comp=E,1855µm,0.6s						
SABO				AML	AML		
	comp=N,2625µm,0.9s						
SABO				AML	AML		
	comp=E,470µm,0.6s						
SABO				AML	AML		
	comp=N,613µm,0.9s						
AMUR	**Altamura**	**3.18**	**126**	P	**Pn**	**01 27 31.2**	**+0.1**
AMUR				AML	AML		
	comp=N,358µm,0.6s						
AMUR				AML	AML		
	comp=E,520µm,0.6s						
A251A	**Rujevac**	**3.19**	**43**	*e*Pn	**Pn**	**01 27 31.5**	**+0.4**
OZLJ	**Ozalj**	**3.22**	**29**	*e*Pn	**Pn**	**01 27 31.3**	**-0.3**
MGRS	**Mrkonjic Grad**	**3.23**	**59**	*e*Pn	**Pn**	**01 27 33.6**	**+1.8**
MIGL	**Miglionico**	**3.28**	**132**	P	**Pn**	**01 27 31.8**	**-0.7**
MIGL				AML	AML		
	comp=E,1400µm,0.7s						

MIGL AML AML
comp=N,1685µm,1.0s
STON Ston 3.30 88 *e*Pn **Pn** 01 27 31.6 -1.1
STON Ston 3.30 88 *e*Pn **Pn** 01 27 31.3 -1.4
STON Ston 3.30 88 *e*Pn **Pn** 01 27 31.7 -1.0
STON *e*Sn **Sn** 01 28 12.0 -0.1
STON Ston 3.30 88 P **Pn** 01 27 31.6 -1.1
STON AML AML
comp=E,182µm,0.8s
STON AML AML
comp=N,234µm,1.1s
PRIJ Prijedor 3.32 48 *e*Pn **Pb** 01 27 37.9 -2.0
LJU Ljubljana 3.35 16 AML AML
comp=E,1585µm,1.3s
LJU AML AML
comp=N,1400µm,0.7s
DOSS Dosso del Somm 3.38 335 P **Pn** 01 27 33.8 -0.2
DOSS AML AML
comp=E,244µm,0.8s
DOSS AML AML
comp=N,277µm,1.6s
SALO Salr 3.39 326 P **Pn** 01 27 33.9 -0.1
SALO AML AML
comp=N,467µm,0.9s
SALO AML AML
comp=E,313µm,1.2s
MATE Matera 3.40 129 ⇑P **Pn** 01 27 34.3 +0.2
MATE ⇑S **Sn** 01 28 13.6 -1.0
CRES Cresnjev 3.40 27 *e*Pn **Pn** 01 27 33.9 -0.3
AJAC Base Areonaval 3.42 256 P **Pn** 01 27 35.0 +0.7
AJAC S **Sb** 01 28 19.6 -3.7
MPRI Monte Prat 3.42 357 P **Pn** 01 27 34.1 -0.3
MPRI AML AML
comp=N,458µm,1.6s
MPRI AML AML
comp=E,469µm,1.6s
A051A Mrakovica 3.45 49 *e*Pn **Pn** 01 27 35.0 +0.1
STAL STALIGIAL 3.45 354 P **Pn** 01 27 34.3 -0.6
STAL AML AML
comp=N,298µm,0.8s
STAL AML AML
comp=E,338µm,0.8s
BLY Banja Luka 3.46 55 *e*Pn **Pn** 01 27 36.3 +1.4
BLY Banja Luka 3.46 55 *e*Pn **Pn** 01 27 36.8 +1.9
MAGA Magasa 3.48 329 P **Pn** 01 27 35.8 +0.4
MAGA AML AML
comp=E,780µm,1.1s
MAGA AML AML
comp=N,358µm,0.4s
LTRZ Laterza 3.50 128 P **Pn** 01 27 35.2 -0.3
CIMO Cimolais 3.52 351 P **Pn** 01 27 35.3 -0.6
CIMO AML AML
comp=E,89µm,0.9s
CIMO AML AML
comp=N,91µm,0.7s
CIMO AML AML
comp=E,95µm,0.9s
CIMO AML AML
comp=N,90µm,0.8s
NOCI Noci 3.53 124 P **Pn** 01 27 36.2 +0.3
NOCI AML AML
comp=E,379µm,0.5s
NOCI AML AML
comp=N,580µm,1.0s
LUSI Trento, Gardas 3.53 333 P **Pn** 01 27 35.8 -0.2
LUSI AML AML
comp=E,233µm,0.8s
LUSI AML AML
comp=N,306µm,1.6s
PTCC Patocco-Chiusa 3.58 2 P **Pn** 01 27 35.9 -0.7
PTCC AML AML
comp=E,136µm,1.5s
PTCC AML AML
comp=N,134µm,1.0s
GAGG Gaggia 3.63 334 P **Pn** 01 27 38.7 +1.3
GAGG AML AML
comp=N,282µm,1.1s
GAGG AML AML
comp=E,376µm,1.5s
CLUD Cludinico 3.64 356 P **Pn** 01 27 37.4 0.0
CLUD AML AML
comp=E,238µm,0.9s
CLUD AML AML
comp=N,211µm,1.1s
CLUD AML AML
comp=E,232µm,0.8s
CLUD AML AML
comp=N,215µm,1.1s
DBRK Dubrovnik 3.64 91 *e*Pn **Pn** 01 27 36.5 -0.9
ZONE Zone 3.68 324 P **Pn** 01 27 38.6 +0.6
ZONE AML AML
comp=E,149µm,1.0s
ZONE AML AML
comp=N,168µm,0.8s
ACOM Acomizza, Ital 3.73 3 AML AML
comp=E,280µm,1.1s
ACOM AML AML
comp=N,282µm,0.9s
ACOM AML AML
comp=N,280µm,1.0s
ACOM AML AML
comp=E,283µm,1.1s
ZOU Zoufplan 3.73 357 P **Pn** 01 27 38.4 -0.4
ZOU AML AML
comp=E,332µm,1.3s
ZOU AML AML
comp=N,246µm,1.0s
ZOU AML AML
comp=N,309µm,1.6s
ZOU AML AML
comp=E,298µm,1.3s
MOSL Moslavina 3.77 41 *e*Pn **Pn** 01 27 38.6 -0.7
TREB Trebinje 3.78 90 *e*Pn **Pn** 01 27 39.9 +0.5
TREB Trebinje 3.78 90 *e*Pn **Pn** 01 27 40.2 +0.8
TREB *e*Sn **Sn** 01 28 26.1 +2.0
OBKA Obir 3.80 14 *e*Pn **Pn** 01 27 39.7 0.0
OBKA Obir 3.80 14 *e*Pn **Pn** 01 27 40.7 +0.9
comp=E,2.8nm,0.5s
OBKA *e*Sn **Sn** 01 28 21.9 -2.8
comp=E,14nm,0.3s
MYKA Terra Mystica 3.81 4 *i* Pn **Pn** 01 27 40.6 +0.8
comp=E,5.9nm,0.5s,SNR=6.9
MYKA *e*Sn **Sn** 01 28 26.0 +1.0
comp=E,7.0nm,0.4s
TAR1 Taranto 3.82 126 AML AML
comp=N,300µm,0.8s
TAR1 AML AML
comp=E,301µm,0.7s
KOSI Kohlern 3.86 341 P **Pn** 01 27 40.4 -0.3
KOSI AML AML
comp=N,302µm,1.5s
KOSI AML AML
comp=E,334µm,1.5s
APPI Appiano 3.92 339 P **Pn** 01 27 41.8 +0.5
APPI AML AML
comp=N,178µm,1.2s
APPI AML AML
comp=E,178µm,0.9s
HCY Herceg Novi 3.92 94⇑ *i*Pn **Pn** 01 27 41.4 +0.2
HCY *i* Sn **Sn** 01 28 24.3 -3.0
HCY Herceg Novi 3.92 94⇑ *i*Pn **Pn** 01 27 41.9 +0.7
HCY *i* Sn **Sn** 01 28 28.2 +0.8
BRY Bratogost 3.92 87 *e*Pn **Pn** 01 27 41.6 +0.3
BRY Bratogost 3.92 87⇑ *i*Pn **Pn** 01 27 42.8 +1.5
BRY *i* Sn **Sn** 01 28 25.7 -1.9
BRY Bratogost 3.92 87⇑ *i*Pn **Pn** 01 27 41.7 +0.4
BRY *i* Sn **Sn** 01 28 28.3 +0.7
ABTA Abfaltersbach 3.95 353 *i* Pn **Pn** 01 27 42.5 +0.7
comp=E,31nm,0.5s,SNR=45
ABTA *e*Sn **Sn** 01 28 26.1 -2.3
comp=E,24nm,0.6s
SOKA Soboth 4.06 18 *e*Pn **Pn** 01 27 43.8 +0.6
comp=E,6.0nm,0.9s
SOKA *e*Sn **Sn** 01 28 31.4 +0.3
comp=E,17nm,0.7s
UPM Unac-Piva 4.19 83⇑ *i*Pn **Pn** 01 27 46.9 +1.7
UPM *i* Sn **Sn** 01 28 33.1 -1.3
UPM Unac-Piva 4.19 83⇓ *i*Pn **Pn** 01 27 46.0 +0.8
UPM *i* Sn **Sn** 01 28 35.0 +0.6
RISI Rein 4.20 349 P **Pn** 01 27 45.3 0.0
CEME Cevo 4.21 92⇑ *i*Pn **Pn** 01 27 46.3 +0.9
CEME *i* Sn **Sn** 01 28 32.0 -2.8
CEME Cevo 4.21 92⇓ *i*Pn **Pn** 01 27 45.9 +0.5
CEME *i* Sn **Sn** 01 28 35.6 +0.8
NKME Niksic 4.22 89⇑ *i*Pn **Pn** 01 27 46.8 +1.3
NKME *i* Sn **Sn** 01 28 32.9 -2.2
NKME Niksic 4.22 89⇓ *i*Pn **Pn** 01 27 45.9 +0.4
NKME *i* Sn **Sn** 01 28 35.8 +0.7
BUM Brajici-Budva 4.23 95⇑ *i*Pn **Pn** 01 27 46.4 +0.8
BUM *i* Sn **Sn** 01 28 31.8 -3.4
BUM Brajici-Budva 4.23 95⇑ *i*Pn **Pn** 01 27 46.3 +0.7
BUM *i* Sn **Sn** 01 28 36.3 +1.1
A252A Venje 4.23 50 *e*Pn **Pn** 01 27 44.9 -0.7
KBA Koelnbreinsper 4.25 1 *i* Pn **Pn** 01 27 47.0 +1.0
comp=E,11nm,0.5s,SNR=16
KBA *e*Sn **Sn** 01 28 35.8 -0.1
comp=E,17nm,0.5s
NKY Niksic 4.25 88⇓ *i*Pn **Pn** 01 27 47.4 +1.5
NKY *i* Sn **Sn** 01 28 33.5 -2.3
NKY Niksic 4.25 88⇑ *i*Pn **Pn** 01 27 46.4 +0.5
NKY *i* Sn **Sn** 01 28 37.0 +1.2
ROSI Rosskopf 4.29 343 P **Pn** 01 27 47.6 +1.0
ROSI AML AML
comp=E,242µm,0.6s
ROSI AML AML
comp=N,322µm,1.4s
MUGIO Muggio 4.30 317 P **Pn** 01 27 47.1 +0.5
MUGIO AML AML
comp=N,69µm,0.9s
MUGIO AML AML
comp=E,58µm,1.5s
SBF Sospel 4.34 286 *e*P **Pn** 01 27 47.7 +0.6
SBF *e*Sn **Sn** 01 28 32.6 -5.3
comp=E,21nm,0.5s
ESCA l'Escarene 4.38 285 P **Pn** 01 27 49.5 +1.9
TURF col de Turini 4.39 287 P **Pn** 01 27 48.6 +0.7
VSL Villasalto 4.41 222 P **Pn** 01 27 48.9 +0.8
VSL AML AML
VSL AML AML
DRME Dracevica, Mon 4.46 96 *e*Pn **Pn** 01 27 49.7 +1.0
DRME Dracevica, Mon 4.46 96⇑ *i*Pn **Pn** 01 27 49.6 +0.9
DRME *i* Sn **Sn** 01 28 37.3 -3.9
DRME Dracevica, Mon 4.46 96⇑ *i*Pn **Pn** 01 27 49.6 +0.9
DRME *i* Sn **Sn** 01 28 41.5 +0.7
PDG Podgorica 4.48 93 ⇓P **Pn** 01 27 49.6 +0.7
PDG ⇑S **Sn** 01 28 39.8 -1.4
PDG Podgorica 4.48 93 *e*Pn **Pn** 01 27 49.8 +0.9
PDG *e*Sn **Sn** 01 28 42.3 +1.1
TTG Podgorica 4.48 93⇑ *i*Pn **Pn** 01 27 49.9 +1.0
TTG *i* Sn **Sn** 01 28 37.9 -3.2
TTG Podgorica 4.48 93⇓ *i*Pn **Pn** 01 27 49.6 +0.7
TTG *i* Sn **Sn** 01 28 41.9 +0.8
SPIF crte de Spivo 4.52 288 P **Pn** 01 27 51.8 +2.1
TIP Timpagrande 4.53 142 ⇑P **Pn** 01 27 50.2 +0.6
FETA Feichten 4.55 338 *i* Pn **Pn** 01 27 52.2 +2.1
comp=E,5.1nm,0.6s,SNR=13
FETA *e*Sn **Sn** 01 28 42.2 -1.0
comp=E,6.4nm,0.5s
ULC Ulcinj 4.55 99⇓ *i*Pn **Pn** 01 27 50.3 +0.3
ULC *i* Sn **Sn** 01 28 38.9 -4.1
ULC Ulcinj 4.55 99⇓ *i*Pn **Pn** 01 27 50.7 +0.7
ULC *i* Sn **Sn** 01 28 43.6 +0.6
PLE Pljevlja 4.55 82⇓ *i*Pn **Pn** 01 27 50.4 +0.3
PLE *i* Sn **Sn** 01 28 43.9 +0.7
CGL Cagliari Serpe 4.55 222 P **Pn** 01 27 50.5 +0.4
CGL AML AML
comp=N,160µm,0.6s
CGL AML AML
comp=E,154µm,0.8s
RUDO Rudo 4.57 78 *e*Pn **Pn** 01 27 50.4 +0.2
WTTA Wattenberg 4.57 346 *i* Pn **Pn** 01 27 52.7 +2.2
comp=E,12nm,0.6s,SNR=9.6
WTTA *e*Sn **Sn** 01 28 42.5 -1.4
comp=E,15nm,0.3s
SQTA Sankt Quirin 4.62 343 *i* Pn **Pn** 01 27 52.9 +2.0
comp=E,9.2nm,0.4s,SNR=16
SQTA *e*Sn **Sn** 01 28 45.0 +0.2
comp=E,41nm,0.6s
BBLS Lazići 4.63 75 *e*Pn **Pn** 01 27 53.4 +2.3
BBLS *e*Sn **Sn** 01 28 45.0 -0.2
KOME Kolasin 4.63 88⇓ *i*Pn **Pn** 01 27 52.8 +1.6
KOME *i* Sn **Sn** 01 28 42.9 -2.3
KOME Kolasin 4.63 88⇓ *i*Pn **Pn** 01 27 52.0 +0.8
KOME *i* Sn **Sn** 01 28 46.0 +0.8
WATA Walderalm 4.65 346 *i* Pn **Pn** 01 27 52.9 +1.4
comp=E,14nm,0.6s,SNR=12
WATA *e*Sn **Sn** 01 28 43.9 -1.9
comp=E,5.1nm,0.3s
ISO Isola 4.68 289 P **Pn** 01 27 54.1 +2.2
CALF Calern 4.68 284 P **Pn** 01 27 52.3 +0.5
ARSA Arzberg 4.71 20 *e*Pn **Pn** 01 27 53.1 +0.8
comp=E,3.0nm,0.5s
ARSA *e*Sn **Sn** 01 28 45.9 -1.2
comp=E,7.4nm,0.6s
MOTA Moosalm 4.76 342 *i* Pn **Pn** 01 27 55.5 +2.6
comp=E,17nm,0.8s,SNR=14
MOTA *e*Sn **Sn** 01 28 49.3 +0.9
comp=E,6.0nm,0.3s
KOVH Kovagotottos 4.78 45 P **Pn** 01 27 52.5 -0.6
BIOA Bad Ischl, Aus 4.87 3 *i* Pn **Pn** 01 27 55.2 +0.8
comp=E,8.6nm,0.3s,SNR=20
BIOA *e*Sn **Sn** 01 28 54.2 +3.2
comp=E,66nm,0.7s
IVA Berane 4.91 87⇑ *i*Pn **Pn** 01 27 56.7 +1.7
IVA *i* Sn **Sn** 01 28 49.3 -2.7
IVA Berane 4.91 87⇑ *i*Pn **Pn** 01 27 55.9 +0.9
IVA *i* Sn **Sn** 01 28 52.7 +0.7
SURF Saint Ours 4.93 292 P **Pn** 01 27 56.4 +1.1
LMR La Mourre 4.94 278 *e*P **Pn** 01 27 55.1 -0.1
LMR *e*Sn **Sn** 01 28 46.2 -6.3
comp=E,2.7nm,0.5s
RETA Reutte 4.97 340 *i* Pn **Pn** 01 27 58.1 +2.4
comp=E,9.2nm,0.4s,SNR=14
RETA *e*Sn **Sn** 01 28 59.0 +5.5
comp=E,12nm,0.4s
SJES Sjenica 4.97 83 *e*Pn **Pn** 01 27 57.4 +1.5
PVY Plav 4.98 90⇑ *i*Pn **Pn** 01 27 57.2 +1.3
PVY *i* Sn **Sn** 01 28 50.6 -3.1
PVY Plav 4.98 90⇓ *i*Pn **Pn** 01 27 57.1 +1.2
PVY *i* Sn **Sn** 01 28 54.3 +0.6
MBDF Montbardon 5.04 294 *e*P **Pn** 01 27 58.3 +1.6
MBDF *e*Sn **Sn** 01 28 49.5 -5.7
comp=E,19nm,0.8s
DAVA Damuels 5.04 333 *i* Pn **Pn** 01 28 00.2 +3.3
comp=E,10nm,0.5s,SNR=14
DAVA *e*Sn **Sn** 01 29 01.5 +6.1
comp=E,30nm,0.6s
TRIGF Trigance 5.05 283 P **Pn** 01 27 57.7 +0.7
MOA Molln 5.08 8 *e*Pn **Pn** 01 27 57.9 +0.7
MOA *e*Sn **Sn** 01 28 58.0 +2.0
MOA Molln 5.08 8 *e*Pn **Pn** 01 27 57.8 +0.6
comp=E,5.2nm,0.5s
MOA *e*Sn **Sn** 01 28 57.2 +1.2
comp=E,15nm,0.8s
DIVS Divibare 5.09 73 *e*Pn **Pn** 01 27 58.0 +0.5
DIVS Divibare 5.09 73 *e*Pn **Pn** 01 27 59.1 +1.6
OGAG Argentiere 5.11 291 P **Pn** 01 28 02.6 +4.9
FLAF Flassans-sur-l 5.12 279 P **Pn** 01 27 58.3 +0.5
IVAS Ivanjica 5.13 79 *e*Pn **Pn** 01 27 58.4 +0.5
IVAS *e*Sn **Sn** 01 28 57.7 +0.4
MORH Mrgy, Hungar 5.15 47 ⇑P **Pn** 01 28 01.3 +3.1
MORH Mrgy, Hungar 5.15 47 P Pn 01 28 03.9 +5.7
TIR Tirane 5.17 104 ⇓P **Pn** 01 27 58.8 +0.4
TIR ⇓S **Sn** 01 28 57.4 -0.8
TIR Tirane 5.17 104 *e*Pn **Pn** 01 27 58.8 +0.4
TIR *e*Sn **Sn** 01 28 57.4 -0.8
DIX Grande Dixence 5.28 310 S **Sn** 01 29 07.0 +5.7
DIX Grande Dixence 5.28 310 P **Pn** 01 28 02.1 +2.0
FRGS Fruska Gora 5.30 62 ⇑P **Pn** 01 28 02.4 +2.2
FRGS Fruska Gora 5.30 62 *e*Pn **Pn** 01 28 01.9 +1.7
FRGS Fruska Gora 5.30 62 *e*Pn **Pn** 01 28 00.2 0.0
RONA Rosalia, Austr 5.33 23 *e*Pn **Pn** 01 28 01.0 +0.2
comp=E,6.0nm,1.2s
RONA *e*Sn **Sn** 01 28 59.3 -3.1
comp=E,1.1nm,0.3s
BLAF les Blancs 5.34 285 P **Pn** 01 28 02.9 +2.0
LPG La Plagne 5.36 302 *e*P **Pn** 01 28 04.0 +2.7
LPG *e*Sn **Sn** 01 28 57.8 -5.6
comp=E,13nm,0.7s
LPL La Plagne 5.38 302 *e*P **Pn** 01 28 04.1 +2.6
LPL *e*Sn **Sn** 01 28 57.6 -6.2
comp=E,7.1nm,0.4s
SOP Sopron 5.40 25 P **Pn** 01 28 03.5 +1.9
SOP S **Sb** 01 29 18.3 -1.9
TRUS Trudelj 5.41 73 *e*Pn **Pn** 01 28 03.2 +1.4
CONA Conrad Observa 5.43 19 *e*Pn **Pn** 01 28 02.5 +0.4
comp=E,2.5nm,0.5s
CONA *e*Sn **Sn** 01 29 03.8 -1.0
comp=E,18nm,1.2s
EGYH Egyhazaskeszo 5.43 31 P **Pn** 01 28 07.4 +5.3
ARTF Artigues 5.47 280 P **Pn** 01 28 03.3 +0.7
RSL Roselend 5.53 303 P **Pn** 01 28 05.7 +2.2
MLYF Mely 5.55 285 P **Pn** 01 28 06.1 +2.5
GRUS Gruza 5.57 76 *e*Pn **Pn** 01 28 05.0 +1.0
BSTF la Bastide-des 5.62 283 P **Pn** 01 28 05.6 +1.0
OGSI Sixt 5.64 307 P **Pn** 01 28 07.5 +2.5
SMRF Simiane la Rot 5.68 284 *e*P **Pn** 01 28 07.5 +2.0
SMRF *e*Sn **Sn** 01 29 06.7 -4.2
comp=E,2.8nm,0.6s
ORIF Oris-en-Rattie 5.70 294 *e*P **Pn** 01 28 08.8 +3.0
ORIF *e*Sn **Sn** 01 29 05.3 -6.1
comp=E,10nm,0.6s
RUSF Rustrel 5.74 284 P **Pn** 01 28 07.4 +1.1
SELS Selova 5.81 83 *e*Pn **Pn** 01 28 08.1 +0.8
SELS *e*Sn **Sn** 01 29 15.6 +1.5
TORNY Torny/Romont 5.95 314 P **Pn** 01 28 10.9 +1.8
SLE Schleitheim 5.95 328 P **Pn** 01 28 10.0 +0.8
BALST Balsthal 5.96 321 P **Pn** 01 28 10.2 +0.8
GERES GERESS Array B 6.03 3 Pn **Pn** 01 28 10.0 -0.3
comp=E,1.0nm,0.3s,baz=172,slow=12,SNR=21
GERES Sn **Sn** 01 29 17.5 -2.1
comp=E,1.6nm,0.3s,baz=173,slow=24,SNR=7.4
comp=E,1.4nm,0.4s
CKRC Cesky Krumlov 6.04 7 *e*PN **Pn** 01 28 09.0 -1.4
CKRC *e*SN **Sn** 01 29 17.4 -2.4
BOURR Bourrignon 6.22 319 P **Pn** 01 28 14.4 +1.4
MODS Modra-Piesok 6.24 26 *e*PN **Pn** 01 28 15.8 +2.7
MODS *e*SN **Sn** 01 29 22.6 -1.9
FELD Feldberg im Sc 6.24 326 P **Pn** 01 28 14.2 +0.9
BOVS Bovan 6.26 80 ⇓P **Pn** 01 28 13.4 0.0
BOVS ⇑S **Sn** 01 29 24.9 -0.1
BOVS Bovan 6.26 80 *e*Pn **Pn** 01 28 13.8 +0.4
BOVS *e*Sn **Sn** 01 29 24.9 -0.1
BRANT Les Verrieres 6.31 313 S **Sn** 01 29 30.7 +4.2
BRANT Les Verrieres 6.31 313 P **Pn** 01 28 16.2 +2.0
KHC Kasperske Hory 6.31 2 *e*PN **Pn** 01 28 13.6 -0.5
KHC *e*SN **Sn** 01 29 23.1 -3.3
BARS Barje 6.33 87 *e*Pn **Pn** 01 28 14.7 +0.4
BARS *e*Sn **Sn** 01 29 26.9 +0.1
CABF La Chapelle 6.33 309 *e*P **Pn** 01 28 17.1 +2.7
CABF *e*Sn **Sn** 01 29 21.2 -5.8
comp=E,4.8nm,0.5s
KIZ Kirchzarten 6.34 326 P **Pn** 01 28 15.0 +0.5
OG35 Corcelles 6.34 303 P **Pn** 01 28 17.8 +3.1
CHMF Charmoille 6.41 316 P **Pn** 01 28 16.5 +1.0
VIVF Saint-Julien-l 6.50 291 *e*P **Pn** 01 28 18.6 +1.9
VIVF *e*Sn **Sn** 01 29 28.7 -2.4
comp=E,7.4nm,0.9s
RIVEL MONT RIVEL 6.51 310 P **Pn** 01 28 19.8 +3.0
PRVS Prvonek 6.54 90 *e*Pn **Pn** 01 28 17.9 +0.6
PRVS *e*Sn **Sn** 01 29 32.2 +0.1
MOF Molkenrain 6.60 322 P **Pn** 01 28 18.9 +0.8
BOUC Bouclans 6.62 314 P **Pn** 01 28 19.6 +1.2
KRUC Moravsky 6.62 18 *e*PN **Pn** 01 28 17.7 -0.6
BZS Buzias 6.65 62 ⇓P **Pn** 01 28 20.6 +1.8
BZS Buzias 6.65 62 *e*Pn **Pn** 01 28 18.2 -0.6
ZAGS Zajecar 6.65 78 *e*Pn **Pn** 01 28 19.8 +1.0
OPP Oppenau 6.67 330 P **Pn** 01 28 21.4 +2.3
HINF Hinteralfeld 6.71 320 *e*P **Pn** 01 28 21.9 +2.3
HINF *e*Sn **Sn** 01 29 29.9 -6.2
comp=E,7.3nm,0.3s
RONF Ronchamp 6.73 319 P **Pn** 01 28 21.1 +1.3
BOSS Bosilegrad 6.84 90 *e*Pn **Pn** 01 28 22.6 +1.2
BOSS *e*Sn **Sn** 01 29 38.2 -1.3
ECH Echery 6.86 324 P **Pn** 01 28 22.0 +0.4
VRAC Vranov 6.89 19 LR LR 01 31 17.2
comp=E,82nm,19.8s,baz=212,slow=41
VRAC Vranov 6.89 19 *e*PN **Pn** 01 28 21.9 -0.2
VYHS Vyhne 6.90 33 *e*PN **Pn** 01 28 22.7 +0.5
ZAPS Zavoj 6.92 83 *e*Pn **Pn** 01 28 23.3 +0.8
LASF Ste Croix 6.92 284 *e*P **Pn** 01 28 24.6 +2.1
LASF *e*Sn Sn 01 29 31.3 -10
comp=E,1.7nm,0.6s
WLS Welschbruch 6.93 326 P **Pn** 01 28 23.3 +0.6
BLKB Belogradchik 6.96 80 ⇓P **Pn** 01 28 23.9 +0.9
BLKB ⇓S **Sn** 01 29 42.5 +0.1
HERR Herculane 6.96 70 ⇓P **Pn** 01 28 23.9 +0.9
CDF Champ du Feu 6.96 325 *e*P **Pn** 01 28 25.8 +2.7
CDF *e*Sn **Sn** 01 29 36.7 -5.8
comp=E,3.0nm,0.3s
HAU Haudompre 7.08 319 *e*Pn **Pn** 01 28 23.0 -1.7
HAU Haudompre 7.08 319 *e*P **Pn** 01 28 27.8 +3.1
HAU *e*Sn **Sn** 01 29 39.1 -6.2
comp=E,26nm,0.5s
GZR Gura Zlata 7.34 66 ⇓P **Pn** 01 28 29.9 +1.5
VTS Vitosha 7.38 88 ⇑P **Pn** 01 28 29.9 +0.9
VTS ⇑S **Sn** 01 29 51.3 -1.7
VTS Vitosha 7.38 88 *e*Pn **Pn** 01 28 29.7 +0.7
VTS *e*Sn **Sn** 01 29 51.2 -1.8
SMF Signal de Mont 7.69 303 *e*P **Pn** 01 28 35.5 +2.5
SMF *e*Sn **Sn** 01 29 53.0 -7.2
comp=E,12nm,0.8s
KEST Kesra 7.69 204 Pn **Pn** 01 28 37.6 +4.4
comp=E,0.8nm,0.3s,baz=333,slow=14,SNR=14
KEST LR LR 01 31 45.0
comp=E,223nm,18.5s,baz=298,slow=39
comp=E,2.7nm,0.5s
PAGF Fort de Pagny 7.76 320 *e*P **Pn** 01 28 37.1 +3.1
baz=129
PAGF *e*Sn **Sn** 01 29 55.4 -6.6
comp=E,35nm,0.9s
DRGR 7.83 56 ⇑P **Pn** 01 28 37.7 +2.7
SFTF Sexfontaines 7.86 316 *e*Pn **Pn** 01 28 33.1 -2.3
baz=137
SFTF Sexfontaines 7.86 316 *e*P **Pn** 01 28 38.3 +2.9
baz=136
SFTF *e*Sn **Sn** 01 29 57.6 -7.0
SRS Serrai 7.92 99 *e*Pn **Pn** 01 28 35.5 -0.7
LOR Lormes 7.97 307 *e*P **Pn** 01 28 40.0 +3.1
baz=128
LOR *e*Sn **Sn** 01 29 59.8 -7.5
comp=E,3.4nm,0.3s
LOR Lormes 7.97 307 P **Pn** 01 28 36.5 -0.4
MEZF Maizieres J'vi 8.05 318 *e*P **Pn** 01 28 40.9 +2.9
baz=140
MEZF *e*Sn **Sn** 01 30 04.3 -4.8
comp=E,5.5nm,0.4s
AVF Avril sur Loir 8.05 303 *e*P **Pn** 01 28 40.6 +2.6
MTLF Montolieu 8.07 277 *e*P **Pn** 01 28 40.7 +2.5
MTLF *e*Sn **Sn** 01 30 01.5 -8.1
comp=E,0.7nm,0.3s
SSF Saint Saulge 8.08 305 *e*P **Pn** 01 28 41.4 +3.0
SSF *e*Sn **Sn** 01 30 02.4 -7.5
comp=E,6.2nm,0.7s
SAVF Savonnieres en 8.09 318 *e*P **Pn** 01 28 42.1 +3.6
baz=139
SAVF *e*Sn **Sn** 01 30 03.4 -6.7
comp=E,6.4nm,0.5s
BGF Bois d'Agland 8.27 300 *e*P **Pn** 01 28 44.2 +3.2
CAF Calviac 8.32 288 *e*P **Pn** 01 28 44.6 +2.9
CLL Collm 8.48 359 *e*Pn **Pn** 01 28 43.0 -0.9
CLL *e*Sn Sn 01 30 05.0 -15
CLL *ex* x 01 30 20.0
CLL *ex* x 01 30 34.0
CLL *ex* x 01 30 53.0
CLL *ex* x 01 31 01.0
CLL *e*Sg **Sg** 01 31 11.0 -1.9
comp=Z,27nm,1.4s
CLL Lmax 01 32 00.0
TCF Toulx Ste Croi 8.58 298 *e*P **Pn** 01 28 47.6 +2.3
TCF *e*Sn **Sn** 01 30 14.4 -7.9
comp=Z,1.2nm,0.5s
RJF Les Rejaudoux 8.78 290 *e*P **Pn** 01 28 49.7 +1.7
RJF *e*Sn Sn 01 30 15.5 -12
comp=Z,0.4nm,0.3s
VOIR 8.90 69 ⇑P **Pn** 01 28 51.5 +1.7
LFF La Frestale 9.25 287 *e*P **Pn** 01 28 56.0 +1.6
LFF *e*Sn Sn 01 30 28.1 -11
comp=Z,1.2nm,0.4s
GIVF Givet 9.29 324 *e*P **Pn** 01 28 56.4 +1.4
GIVF *e*Sn **Sn** 01 30 31.0 -8.6
comp=Z,2.7nm,0.4s
EPF Esparros 9.45 276 *e*P **Pn** 01 28 56.9 -0.3
MLR Muntele Rosu 9.53 69 ⇑P **Pn** 01 28 59.7 +1.3
MLR Muntele Rosu 9.53 69 LR LR 01 33 30.5
comp=Z,332nm,19.6s,baz=246,slow=43
ETSF Etsaut 10.12 275 *e*P **Pn** 01 29 10.6 +4.3
SJPF Ste Jean 10.59 276 *e*Pn **Pn** 01 29 11.5 -1.3
ESDC Sonseca Array 13.30 262 LR LR 01 34 17.7
comp=Z,87nm,20.6s,baz=72,slow=34
AKASG Malin Array Be 13.49 49 LR LR 01 35 47.5

comp=Z,72nm,18.9s,baz=206,slow=41
MDT Midelt 17.24 240 LR LR 01 36 37.1
comp=Z,110nm,18.1s,baz=126,slow=35
HFS Hagfors 17.33 1 LR LR 01 37 05.1
comp=Z,28nm,18.3s,baz=194,slow=36
FINES FINESS Array B 20.18 18 P **P 01 31 15.2 -0.2**
comp=Z,3.5nm,0.9s,baz=189,slow=8.2,SNR=2.1
FINES LR LR 01 39 38.0
comp=Z,47nm,19.6s,baz=78,slow=39
comp=Z,3.5nm,0.9s
ASF Jabal al Asfar 21.52 112 P **P 01 31 34.0 +3.6**
comp=Z,4.9nm,0.9s,baz=336,slow=4.1,SNR=8.5
comp=Z,4.9nm,0.9s
KBZ Khabaz 21.58 77 P **P 01 31 33.2 +2.4**
comp=Z,3.8nm,0.8s,baz=304,slow=4.8,SNR=7.0
KBZ LR LR 01 41 34.1
comp=Z,33nm,18.7s,baz=286,slow=41
comp=Z,3.8nm,0.8s
GNI Garni 23.70 86 LR LR 01 42 28.2
comp=Z,20nm,21.1s,baz=354,slow=40
TORD Torodi Ar. Bea 31.21 202 P **P 01 33 01.9 +1.3**
comp=Z,2.4nm,0.3s,baz=19,slow=7.9,SNR=1.7
TORD LR LR 01 46 55.2
comp=Z,48nm,19.1s,baz=222,slow=39
comp=Z,2.4nm,0.3s
AKTO Aktyubinsk 31.29 60 LR LR 01 47 06.7
comp=Z,40nm,19.8s,baz=275,slow=39
ARU Arti 31.74 49 P **P 01 33 04.5 -0.5**
comp=Z,1.2nm,0.5s,baz=265,slow=10,SNR=1.6
ARU LR LR 01 47 20.3
comp=Z,63nm,18.3s,baz=258,slow=39
comp=Z,1.2nm,0.5s
KOWA Kowa 31.89 213 LR LR 01 45 17.1
comp=Z,64nm,18.5s,baz=220,slow=35
BVAR Borovoye Array 38.68 54 P **P 01 34 05.8 +1.1**
comp=Z,0.7nm,0.8s,baz=271,slow=8.7,SNR=4.3
BVAR LR LR 01 51 18.6
comp=Z,44nm,20.4s,baz=263,slow=38
comp=Z,0.7nm,0.8s
NRIK Noril'sk 45.27 29 LR LR 01 56 01.2
comp=Z,38nm,18.7s,baz=288,slow=39
ZALV Zalesovo Beam 46.88 50 LR LR 01 56 44.2
comp=Z,34nm,18.4s,baz=342,slow=38
MKAR Makanchi Array 47.73 60 P **P 01 35 18.8 +0.8**
comp=Z,0.4nm,0.6s,baz=290,slow=6.3,SNR=3.6
MKAR LR LR 01 59 18.4
comp=Z,44nm,18.5s,baz=276,slow=41
comp=Z,0.4nm,0.6s
SONM Songino Array 61.77 50 P **P 01 37 00.7 +0.8**
comp=Z,0.2nm,0.3s,baz=295,slow=11,SNR=3.8
comp=Z,0.2nm,0.3s

*IDC **27** 01:35:04.1±0.7,31.°35N×77.°56E,h0km,mb4.1/19, mbtmp4.1/22,ML3.7/3,MS3.4/5,Error ellipse: s-maj=19.7km s-min=13.6km az=47.0*
*NEIC **27** 01:35:05.9±1.4,31.°48N±0.°09×77.°7E±0.°1,h10km±1km, mb4.5/36,Error ellipse: s-maj=19.1km s-min=9.8km az=221.0*
*BJI **27** 01:35:06.8±0.0,31.°40N×77.°56E,h32km,mb4.3/28, mB4.3/12,ML3.9/4,Ms3.7/11,Ms7 3.6/13*
*MOS **27** 01:35:07.2±1.3,31.°51N×77.°66E,h33km,mb4.5/15,Error ellipse: s-maj=9.5km s-min=5.3km az=109.6*
*NDI **27** 01:35:09.0±3.7,31.°34N×77.°57E,h10km,mb4.3,ML4.0, mb4.5(NEIC)*

ISC 27 01:35:05.3±0.3,31.°49N±0.°03×77.°63E±0.°03,h9km,n159, σ1s55/177,mb4.3/53,MS3.3/6,7C-3D,Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**0.54**	**227**	*e*P		**Pg**		**01 35 16.5**	**+0.8**
SMLA				*e*S		**Sg**		**01 35 22.5**	**-0.3**
SMLA				IAML				01 35 23.5	
	comp=N,6μm,0.2s								
SMLA				IAML				01 35 23.9	
	comp=E,9μm,0.2s								
BHK	**Bhakra**	**1.04**	**266**	*e*P		**Pn**		**01 35 27.0**	**+1.0**
BHK				*e*S		**Sn**		**01 35 43.4**	**+2.6**
DDI	**Dehra Dun**	**1.22**	**162**	*e*P		**Pg**		**01 35 29.7**	**+1.0**
DDI				*e*S		**Sn**		**01 35 45.8**	**+0.5**
DDI				IAML				01 35 51.9	
	comp=N,7μm,0.1s								
DDI				IAML				01 35 52.1	
	comp=E,5μm,0.3s								
KKR	**Kurukshetra**	**1.68**	**205**	*e*P		**Pg**		**01 35 37.5**	**+0.1**
THN	**Thein Dam**	**1.88**	**300**	*e*P		**Pg**		**01 35 41.1**	**-0.2**
THN				*e*S		**Sg**		**01 36 07.0**	**+1.4**
JMU	**Jammu**	**2.62**	**298**	*e*P		**Pg**		**01 35 54.4**	**-1.1**
JMU				*e*x		x		01 36 31.9	
NDI	**New Delhi**	**2.82**	**187**	*e*P		**Pn**		**01 35 53.3**	**+2.7**
PTH	**Pithoragarh**	**2.96**	**130**	*e*P		**Pb**		**01 35 56.2**	**-2.0**
SONA	**Sohna**	**3.27**	**188**	*e*P		**Pn**		**01 35 58.7**	**+2.0**
KUDL	**Kundal**	**3.48**	**197**	*e*P		**Pn**		**01 36 00.9**	**+1.3**
KHET	**Khetri**	**3.76**	**205**	*e*P		**Pn**		**01 36 04.0**	**+0.5**
KHET				*i* x		x		01 36 15.3	
SARP	**Sargodha**	**4.25**	**277**	P		**Pn**		**01 36 11.2**	**+1.1**
CHCP	**Chirah Chowk**	**4.27**	**302**	P		**Pn**		**01 36 14.1**	**+3.6**
NIL	**Nilore**	**4.28**	**301**	Pn		**Pn**		**01 36 13.4**	**+2.8**
NIL	**Nilore**	**4.28**	**301**	P		**Pn**		**01 36 13.4**	**+2.8**
THW	**Thamme Wali**	**5.16**	**286**	P		**Pn**		**01 36 25.1**	**+2.4**
CEP	**Cherat**	**5.35**	**297**	P		**Pn**		**01 36 29.7**	**+4.2**
AJM	**Ajmer**	**5.64**	**208**	*e*P		**Pn**		**01 36 30.6**	**+1.3**
AJM				*e*S		**Sn**		**01 37 35.9**	**+1.6**
JHNI	**Jhansi**	**6.06**	**172**	*e*P		**Pn**		**01 36 36.0**	**+0.9**
DANN	**Dangsing**	**6.17**	**119**	*e*Pn		**Pn**		**01 36 39.4**	**+2.5**
DANN				*e*Sn		**Sn**		**01 37 48.1**	**+0.3**
	comp=E,90nm,0.4s								
GKN	**Gorkha**	**7.01**	**118**	*e*Pn		**Pn**		**01 36 50.2**	**+1.8**
GKN				*e*Sn		**Sn**		**01 38 07.8**	**-0.6**
	comp=E,70nm,0.4s								
ALBI	**Allahabad**	**7.18**	**148**	*e*P		**Pn**		**01 36 54.6**	**+4.2**
DMN	**Daman**	**7.58**	**119**	*e*Pn		**Pn**		**01 36 57.8**	**+1.6**
DMN				*e*Sn		**Sn**		**01 38 23.6**	**+1.3**
	comp=E,32nm,0.2s								
PKIN	**Phulchoki**	**7.81**	**118**	*e*Pn		**Pn**		**01 37 00.6**	**+1.2**
PKIN				*e*Sn		**Sn**		**01 38 27.1**	**-1.0**
	comp=E,108nm,0.4s								
PKI	**Pulchoki**	**7.82**	**118**	*e*Pn		**Pn**		**01 37 00.9**	**+1.3**
PKI				*e*Sn		**Sn**		**01 38 28.5**	**0.0**
	comp=E,52nm,0.3s								
KBL	**Kabul**	**7.82**	**295**			**Pn**		**01 37 01.2**	**+1.7**
KBL	**Kabul**	**7.82**	**295**	P		**Pn**		**01 37 01.2**	**+1.7**
GUN	**Gumba**	**8.01**	**114**	*e*Pn		**Pn**		**01 37 03.6**	**+1.3**
KSH	**Kashi**	**8.12**	**351**	P		**Pn**		**01 37 05.8**	**+2.4**
KSH				S		**Sn**		**01 38 28.8**	**-6.6**
KSH				pmax	pmax				
	comp=E,9.0nm,0.8s								
KSH				smax	smax				
	comp=E,35nm,0.8s								
KSH				smax	smax				
	comp=E,49nm,0.7s								
KSH				LR	LR				
	comp=E,250nm,5.9s								
KSH				LR	LR				
	comp=E,160nm,5.7s								
KSH				LR	LR				
	comp=E,330nm,7.6s								
BHPL	**Bhopal**	**8.22**	**181**	*e*P		**Pn**		**01 37 03.7**	**-1.1**
BHPL				*e*S		**Sn**		**01 38 30.7**	**-7.2**
DRK	**Karamyk**	**9.28**	**331**	Pn		**Pn**		**01 37 20.6**	**+1.1**
GAR	**Garm**	**9.58**	**323**			**Pn**		**01 37 24.5**	**+1.0**
CHGR	**Chuyangaron**	**9.96**	**318**	Pn		**Pn**		**01 37 29.9**	**+1.3**
CHGR	**Chuyangaron**	**9.96**	**318**	P		**Pn**		**01 37 29.9**	**+1.3**
BLSP	**Bilaspur**	**10.15**	**156**	*e*P		**Pn**		**01 37 33.1**	**+1.7**
BTK	**Batken**	**10.18**	**329**			**Pn**		**01 37 32.8**	**+1.2**
BTK	**Batken**	**10.18**	**329**	P		**Pn**		**01 37 32.8**	**+1.2**
NGP	**Nagpur**	**10.38**	**173**	*e*P		**Pn**		**01 37 33.7**	**-0.7**
AKL	**Akola**	**10.76**	**183**	*e*P		**Pn**		**01 37 39.0**	**-0.6**
PRZ	**Przheval'sk**	**10.99**	**3**	Pn		**Pn**		**01 37 42.3**	**-0.5**
PRZ	**Przheval'sk**	**10.99**	**3**	P		**Pn**		**01 37 42.3**	**-0.5**
AAK	**Ala-Archa**	**11.40**	**348**	Pn		**Pn**		**01 37 48.4**	**0.0**
AAK	**Ala-Archa**	**11.40**	**348**	*i* P		**Pn**		**01 37 47.3**	**-1.1**
LSA	**Lhasa**	**11.79**	**95**	Pn		**Pn**		**01 37 53.6**	**-0.5**
LSA	**Lhasa**	**11.79**	**95**	P		**Pn**		**01 37 53.6**	**-0.5**
KK31	**Karatay Array**	**12.89**	**336**	Pn		**Pn**		**01 38 08.6**	**-0.1**
KK31	**Karatay Array**	**12.89**	**336**	P		**Pn**		**01 38 08.6**	**-0.1**
KKAR	**Karatay Array**	**12.89**	**336**	Pn		**Pn**		**01 38 08.1**	**-0.6**
KKAR	**Karatay Array**	**12.89**	**336**	Pn		**Pn**		**01 38 08.6**	**-0.1**
KKAR	**Karatay Array**	**12.89**	**336**	P		**Pn**		**01 38 08.1**	**-0.6**
HRA	**Herat**	**13.24**	**287**	Pn		**Pn**		**01 38 14.0**	**+0.3**
SHL	**Shillong**	**13.85**	**112**	Pn		**Pn**		**01 38 20.4**	**-1.6**
SHL	**Shillong**	**13.85**	**112**	P		**Pn**		**01 38 20.4**	**-1.6**
HYBB	**Hyderabad (bro**	**14.04**	**176**	*e*Pn		**Pn**		**01 38 22.6**	**-1.8**
HYBB				*e*Sn		**Sn**		**01 41 02.0**	**+1.5**
TEZP	**TEZPUR**	**14.13**	**106**	IAmb		IAmb		01 38 38.1	
	comp=Z,6.4nm,0.8s								
WMQ	**Urumqi**	**14.65**	**30**	*e*P		**Pn**		**01 38 35.8**	**+3.1**
WMQ				LR		LR			
	comp=Z,240nm,14.1s								
WMQ				LR		LR			
	comp=Z,100nm,16.1s								
KOHI	**KOHIMA**	**15.57**	**108**	IAmb		IAmb		01 38 52.6	
	comp=Z,11nm,0.8s								
MAKZ	**Makanchi**	**15.66**	**11**			**Pn**		**01 38 46.4**	**+0.3**
MAKZ	**Makanchi**	**15.66**	**11**	P		**Pn**		**01 38 46.4**	**+0.3**
MAKZ				pmax	pmax				
	comp=Z,8.0nm,0.7s								
MK31	**Makanchi Array**	**15.70**	**12**	Pn		**Pn**		**01 38 46.9**	**+0.3**
MK31	**Makanchi Array**	**15.70**	**12**	P		**Pn**		**01 38 46.9**	**+0.3**
MK31				pmax	pmax				
	comp=Z,5.0nm,1.1s								
MKAR	**Makanchi Array**	**15.70**	**12**	Pn		**Pn**		**01 38 45.5**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=194,slow=13,SNR=21								
MKAR				Sn		**Sn**		**01 41 35.5**	**-5.1**
	comp=Z,0.1nm,0.3s,baz=189,slow=27,SNR=3.9								
MKAR				LR		LR		01 45 03.1	
	comp=Z,33nm,18.3s,baz=232,slow=38								
	comp=Z,2.3nm,0.6s								
MKAR	**Makanchi Array**	**15.70**	**12**	Pn		**Pn**		**01 38 47.2**	**+0.6**
MKAR	**Makanchi Array**	**15.70**	**12**	*i* P		**Pn**		**01 38 46.5**	**-0.1**
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
GEYT	**Alibeck**	**17.27**	**297**	P		**Pn**		**01 39 06.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=134,slow=12,SNR=2.0								
	comp=Z,1.0nm,0.6s								
GEYT	**Alibeck**	**17.27**	**297**	Pn		**Pn**		**01 39 07.0**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**17.27**	**297**	Pn		**Pn**		**01 39 06.5**	**-0.2**
KURBB	**Kurchatov Arra**	**19.12**	**2**	P		**P**		**01 39 28.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=191,slow=11,SNR=16								
	comp=Z,1.6nm,0.5s								
KURK	**Kurchatov**	**19.22**	**2**			**P**		**01 39 29.4**	**0.0**
KURK	**Kurchatov**	**19.22**	**2**	*ce*P		**Pn**		**01 39 30.8**	**+0.4**
KURK				pmax	pmax				
	comp=Z,6.0nm,0.8s								
DGZ	**Jazzator, Alta**	**19.62**	**19**	*i* P		**P**		**01 39 34.7**	**+0.6**
DGZ				pmax	pmax				
	comp=Z,13nm,0.9s								
GTA	**Gaotai**	**19.69**	**60**	*e*P		**Pn**		**01 39 36.5**	**+0.1**
GTA				pP		sP		01 39 42.5	+2.8
GTA				sP		pP		01 39 45.3	+7.1
GTA				pmax	pmax				
	comp=Z,3.0nm,1.2s								
PCHI	**Peechi**	**20.89**	**184**	*e*S		Sn		01 43 51.9	+5.3
PZH	**PanZhiHua**	**21.65**	**97**	P		**P**		**01 39 56.8**	**+0.5**
PZH				pmax	pmax				
	comp=Z,10.0nm,0.8s								
PZH				pmax	pmax				
	comp=Z,80nm,4.9s								
BVAR	**Borovoye Array**	**22.15**	**348**	P		**P**		**01 40 02.6**	**+1.4**
	comp=Z,5.1nm,0.8s,baz=161,slow=9.4,SNR=35								
	comp=Z,5.1nm,0.8s								
ABKAR	**Akbulak array**	**22.18**	**328**	P		**P**		**01 40 02.3**	**+0.7**
BRVK	**Borovoye**	**22.20**	**348**	P		**P**		**01 40 03.0**	**+1.2**
BRVK				IAmb		IAmb		01 40 05.1	
	comp=Z,15nm,0.8s								
BRVK	**Borovoye**	**22.20**	**348**	*ce*P		**P**		**01 40 03.6**	**+1.8**
BRVK				pmax	pmax				
	comp=Z,16nm,0.8s								
KMI	**Kunming**	**22.97**	**100**	⇓P		**P**		**01 40 11.5**	**+1.0**
KMI				pP		sP		01 40 16.0	+0.9
KMI				pmax	pmax				
	comp=Z,17nm,0.6s								
CHTO	**Chiang Mai**	**23.00**	**118**	P		**P**		**01 40 09.9**	**-0.7**
CHTO				IAmb		IAmb		01 40 11.4	
	comp=Z,8.7nm,0.8s								
CHTO	**Chiang Mai**	**23.00**	**118**	P		**P**		**01 40 09.9**	**-0.7**
CHTO				pmax	pmax				
	comp=Z,9.0nm,0.9s								
ZAA0	**Zalesovo Array**	**23.03**	**11**	P		**P**		**01 40 11.1**	**+0.6**
ZAA0				IAmb		IAmb		01 40 19.7	
	comp=Z,6.6nm,0.8s								
ZALV	**Zalesovo Beam**	**23.03**	**11**	P		**P**		**01 40 12.6**	**+2.1**
	comp=Z,2.0nm,0.4s,baz=199,slow=8.5,SNR=9.5								
	comp=Z,2.0nm,0.4s								
ZALV	**Zalesovo Beam**	**23.03**	**11**	P		**P**		**01 40 10.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**23.22**	**119**	P		**P**		**01 40 13.2**	**+0.4**
	comp=Z,4.3nm,0.5s,baz=299,slow=9.7,SNR=23								
	comp=Z,4.3nm,0.5s								
CMAR	**Chiang Mai Arr**	**23.22**	**119**	P		**P**		**01 40 12.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**23.22**	**119**	*ce*P		**P**		**01 40 13.5**	**+0.7**
CMAR				pmax	pmax				
	comp=Z,7.0nm,0.8s								
CRAI	**Chiangrai**	**23.29**	**113**	P		**P**		**01 40 13.1**	**-0.4**
AKTO	**Aktyubinsk**	**23.90**	**328**	P		**P**		**01 40 20.0**	**+0.8**
	comp=Z,4.1nm,0.8s,baz=124,slow=8.2,SNR=16								
	comp=Z,4.1nm,0.8s								
PALK	**Pallekele**	**24.27**	**173**	LR		LR		01 50 20.7	
	comp=Z,110nm,19.6s,baz=105,slow=38								
XAN	**Xi'an**	**26.39**	**76**	P		**P**		**01 40 45.0**	**+2.9**
XAN				pP		sP		01 40 52.3	+5.3
XAN				pmax	pmax				
	comp=Z,14nm,1.0s								
SONM	**Songino Array**	**27.29**	**45**	P		**P**		**01 40 52.0**	**+1.8**
	comp=Z,5.3nm,0.9s,baz=242,slow=9.6,SNR=25								
SONM				LR		LR		01 52 45.4	
	comp=Z,65nm,18.4s,baz=155,slow=39								
	comp=Z,5.3nm,0.9s								
SONM	**Songino Array**	**27.29**	**45**	P		**P**		**01 40 51.7**	**+1.5**
SONM				IAmb		IAmb		01 40 54.2	
	comp=Z,6.0nm,1.0s								
SONM	**Songino Array**	**27.29**	**45**	P		**P**		**01 40 51.7**	**+1.5**
SONM				pmax	pmax				
	comp=Z,6.0nm,1.0s								
ULN	**Ulaanbaatar**	**27.70**	**45**	P		**P**		**01 40 54.7**	**+0.7**
ULN				IAmb		IAmb		01 40 56.8	
	comp=Z,7.2nm,1.1s								
ULN	**Ulaanbaatar**	**27.70**	**45**	*ce*P		**P**		**01 40 55.2**	**+1.3**
ULN				pmax	pmax				
	comp=Z,7.0nm,1.1s								
ARU	**Arti**	**28.26**	**337**	P		**P**		**01 40 59.7**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=127,slow=5.1,SNR=3.2								
	comp=Z,2.0nm,0.5s								
ARU	**Arti**	**28.26**	**337**	*d i*P		**P**		**01 40 59.8**	**+1.2**
ARU								01 41 45.9	
ARU				S		**S**		**01 45 45.6**	**+1.0**
ARU				SS		**SnSn**		**01 46 59.1**	**-2.0**
ARU				pmax	pmax				
	comp=Z,3.0nm,0.7s								
HHC	**Hu-ho-hao-te**	**28.79**	**62**	*e*P		**P**		**01 41 04.3**	**+0.6**
HHC				pmax	pmax				
	comp=Z,19nm,0.9s								
KIV	**Kislovodsk**	**30.08**	**304**	*e*P		**P**		**01 41 15.0**	**0.0**
KIV				pmax	pmax				
	comp=Z,3.0nm,1.1s								
KIV				MLR	MLR				
	comp=Z,24nm,15.0s								
XLT	**XiLinHaoTe**	**32.56**	**57**	⇓*i*P		**P**		**01 41 39.5**	**+2.6**
XLT				pmax	pmax				
	comp=Z,10.0nm,0.9s								
XLT				pmax	pmax				
	comp=Z,130nm,4.4s								
HIA	**Hailar**	**36.11**	**48**	*i* P		**P**		**01 42 09.8**	**+2.3**
HIA				pmax	pmax				
	comp=Z,4.0nm,0.7s								
BRTR	**Keskin Array B**	**36.40**	**295**	P		**P**		**01 42 11.9**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=93,slow=7.2,SNR=1.5								
	comp=Z,0.3nm,0.7s								
OBN	**Obninsk**	**37.29**	**321**	*i* P		**P**		**01 42 18.2**	**+0.8**
OBN				*i*				01 42 28.6	
OBN				*i*				01 44 35.6	
OBN				pmax	pmax				
	comp=Z,3.0nm,0.9s								
NRIK	**Noril'sk**	**38.31**	**6**	P		**P**		**01 42 27.1**	**+1.2**
	comp=Z,4.9nm,1.0s,baz=164,slow=4.4,SNR=4.5								
	comp=Z,4.9nm,1.0s								
NRIK	**Noril'sk**	**38.31**	**6**	P		**P**		**01 42 25.9**	**+0.1**
NRIK				IAmb		IAmb		01 42 28.6	
	comp=Z,11nm,1.2s								
NRIK	**Noril'sk**	**38.31**	**6**	*ce*P		**P**		**01 42 27.3**	**+1.4**
NRIK				pmax	pmax				
	comp=Z,6.0nm,1.0s								
MYKOM	**Kota Tinggi**	**38.55**	**135**	P		**P**		**01 42 28.1**	**-0.3**
TIRR	**Tirgusor**	**40.32**	**303**	P		**P**		**01 42 44.0**	**+1.0**
TIRR	**Tirgusor**	**40.32**	**303**	P		**P**		**01 42 44.0**	**+1.0**
TIRR				pmax	pmax				
	comp=Z,72nm,1.3s								
AKASG	**Malin Array Be**	**40.37**	**313**	P		**P**		**01 42 44.3**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=105,slow=9.6,SNR=5.0								
	comp=Z,0.4nm,0.5s								
KSRS	**Korea Array**	**41.49**	**68**	LR		LR		02 02 12.7	
	comp=Z,43nm,18.6s,baz=265,slow=39								
MNK	**Minsk**	**41.91**	**318**	*i* P		**P**		**01 42 55.5**	**-0.4**
MNK				*i*				01 44 31.8	
MNK				*i*				01 44 49.9	
MNK				*i* PPP		PPP		01 45 01.6	
MNK				*i* S		**S**		**01 49 10.9**	**-3.1**
MNK				*i* SS		**SS**		**01 52 19.2**	**-1.0**
MNK				pmax	pmax				
	comp=E,1.0nm,0.8s								
MNK				pmax	pmax				
	comp=Z,5.0nm,0.8s								
MNK				MLR	MLR				
	comp=E,5.0nm,16.0s								
MNK				MLR	MLR				
	comp=Z,36nm,16.0s								
MNK	**Minsk**	**41.91**	**318**	*i* P		**P**		**01 42 55.5**	**-0.4**
	comp=E,1.0nm,0.8s								
MNK				*i* P		**P**		**01 42 55.5**	**-0.4**
MNK				*i* P		**P**		**01 42 55.5**	**-0.4**
	comp=Z,5.0nm,0.8s,baz=102								
MNK				*i* PP		**PP**		**01 44 31.9**	**-0.8**
MNK				*i* PPP		PPP		01 45 01.6	
MNK				*i* S		**S**		**01 49 10.9**	**-3.1**
MNK				*i* SS		**SS**		**01 52 19.2**	**-1.0**
MNK				*i* LQ		LQ		01 57 17.5	
MNK				*i* LR		LR		02 00 28.7	
MNK				*i* LRM		MLR		02 02 31.1	
	comp=E,5.0nm,16.1s								
MNK				*i* LRM		MLR		02 03 45.8	
MNK				*i* LRM		MLR		02 04 19.3	
	comp=Z,36nm,16.1s								
KLR	**Kul'dur**	**43.88**	**50**	*ce*P		**P**		**01 43 12.0**	**0.0**
KLR				pmax	pmax				
	comp=Z,24nm,2.5s								
PABE	**Paberze**	**44.31**	**319**	P		**P**		**01 43 16.3**	**+1.0**
PABE				IAmb		IAmb		01 43 19.3	
	comp=Z,8.7nm,0.9s								
FINES	**FINESS Array B**	**44.67**	**328**	P		**P**		**01 43 19.3**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=116,slow=8.3,SNR=20								
	comp=Z,4.4nm,0.8s								
FINES	**FINESS Array B**	**44.67**	**328**	*i* P		**P**		**01 43 19.5**	**+1.4**
FINES				pmax	pmax				
	comp=Z,4.0nm,0.8s								
ARCES	**ARCESS Array B**	**47.85**	**338**	P		**P**		**01 43 44.5**	**+1.5**
	comp=Z,11nm,0.8s,baz=114,slow=8.2,SNR=31								
	comp=Z,11nm,0.8s								
ARCES	**ARCESS Array B**	**47.85**	**338**	P		**P**		**01 43 43.6**	**+0.6**
SMRI	**Semarang**	**49.52**	**135**	P		**P**		**01 43 55.7**	**-0.8**
SOKA	**Soboth**	**49.63**	**307**	*e*P		**P**		**01 43 57.8**	**+0.7**
	comp=Z,2.8nm,1.0s								
GERES	**GERESS Array B**	**50.34**	**310**	P		**P**		**01 44 03.4**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=88,slow=7.1,SNR=5.3								
	comp=Z,0.3nm,0.5s								
PRED	**Cave del Predi**	**50.66**	**306**	P		**P**		**01 44 05.1**	**+0.1**
CLUD	**Cludinico**	**51.13**	**307**	P		**P**		**01 44 08.3**	**-0.1**
CLUD				IAmb		IAmb		01 44 18.6	
	comp=Z,4.4nm,0.9s								
STAL	**STALIGIAL**	**51.27**	**306**	P		**P**		**01 44 09.1**	**-0.4**
STAL				IAmb		IAmb		01 44 13.4	
	comp=Z,3.4nm,0.8s								
NC405	**NORSAR Array S**	**51.41**	**325**	P		**P**		**01 44 09.9**	**-0.4**
CIMO	**Cimolais**	**51.45**	**306**	P		**P**		**01 44 10.0**	**-0.8**
CIMO				IAmb		IAmb		01 44 11.6	
	comp=Z,2.4nm,0.8s								
NC303	**NORSAR Array S**	**51.59**	**326**	P		**P**		**01 44 11.6**	**0.0**
NC303				IAmb		IAmb		01 44 22.1	
	comp=Z,20nm,1.4s								
NB2	**NORSAR Subarra**	**51.65**	**325**	P		**P**		**01 44 12.7**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=96,slow=7.4								
NOA	**NORSAR Array B**	**51.65**	**325**	P		**P**		**01 44 12.7**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=94,slow=7.4,SNR=11								
	comp=Z,3.5nm,0.8s								
MURB	**Monte Urbino**	**51.85**	**303**	P		**P**		**01 44 14.4**	**+0.5**
MURB				IAmb		IAmb		01 44 21.8	
	comp=Z,16nm,1.1s								
JHJ	**Hachijo jima 2**	**51.86**	**71**	LR		LR		02 06 39.7	
	comp=Z,76nm,19.1s,baz=180,slow=36								
WTTA	**Wattenberg**	**51.88**	**308**	*e*P		**P**		**01 44 14.0**	**-0.2**
	comp=Z,0.8nm,0.4s								
WATA	**Walderalm**	**51.91**	**308**	*e*P		**P**		**01 44 14.8**	**+0.4**
	comp=Z,1.4nm,0.4s								
MOTA	**Moosalm**	**52.23**	**308**	*e*P		**P**		**01 44 16.7**	**0.0**
	comp=Z,2.2nm,0.7s								
FETA	**Feichten**	**52.52**	**308**	*e*P		**P**		**01 44 18.7**	**-0.3**
	comp=Z,2.4nm,1.3s								
SALO	**Salr**	**52.87**	**306**	P		**P**		**01 44 21.2**	**-0.3**
SALO				IAmb		IAmb		01 44 28.9	
	comp=Z,7.4nm,0.7s								
DAVA	**Damuels**	**53.06**	**308**	*e*P		**P**		**01 44 22.8**	**-0.1**
	comp=Z,5.7nm,0.7s								
SENIN	**Lac Senin/Sane**	**54.96**	**307**	P		**P**		**01 44 36.2**	**-0.7**
SENIN				IAmb		IAmb		01 44 38.5	
	comp=Z,3.8nm,0.8s					

CZD				S		Sb	01 52 36.1	+1.3
IFR	**Ifrane**	**1.22**	**69**	P		Pn	01 52 20.3	+1.3
IFR				S		Sb	01 52 34.3	-0.5
SRHM	**Skhour des Reh**	**1.34**	**243**	P		Pn	01 52 21.9	+1.3
SRHM				S		Sb	01 52 40.0	+1.8
MD31	**MD31**	**1.47**	**98**	P		Pn	01 52 23.3	+1.0
MD31				S		Sn	01 52 41.5	+0.2
LCRM	**LCR**	**1.49**	**66**	P		Pn	01 52 24.3	+1.6
LCRM				S		Sn	01 52 40.9	-1.0
MDT	**Midelt**	**1.60**	**99**	P		Pn	01 52 25.4	+1.2
MDT				S		Sn	01 52 44.5	-0.1
OUK	**Oukaimeden**	**2.21**	**212**	P		Pn	01 52 32.8	0.0
OUK				S		Sn	01 52 57.4	-2.6
AKLM	**AKL**	**2.60**	**56**	P		Pn	01 52 40.0	+1.9
AKLM				S		Sn	01 53 12.2	+2.8
TTIG	**Tnine Tigouga,**	**3.03**	**214**	P		Pn	01 52 42.3	-1.6
TTIG				S		Sn	01 53 16.7	-3.2
JBK	**JBK**	**3.49**	**68**	P		Pn	01 52 51.8	+1.4
JBK				S		Sn	01 53 30.1	-1.4
EMIJ	**Mijas**	**3.75**	**22**	P		Pn	01 52 55.3	+1.6
EMIJ				⇑*i*Vmb_V			01 52 56.7	
	112nm,SNR=1.4							
EMIJ				S		Sn	01 53 36.8	-0.7
PBDV	**Barranco-do-Ve**	**4.32**	**344**	*e*Sn		Sn	01 53 50.3	-1.3
PBDV				A		A	01 53 54.3	
	2.7nm,0.3s							
PVAQ	**Vaqueiros**	**4.43**	**347**	P		Pn	01 53 05.4	+2.4
PVAQ				S		Sn	01 53 64.2	-0.1
PVAQ	**Vaqueiros**	**4.43**	**347**	*e*Pn		Pn	01 53 05.1	+2.1
PVAQ				*e*Sn		Sn	01 53 52.7	-1.6
PVAQ				A		A	01 53 56.8	
	3.1nm,0.5s							
ELGU	**Los Guajares,**	**4.44**	**31**	P		Pn	01 53 04.8	+1.4
ELGU				⇑*i*Vmb_V			01 53 06.1	
	91nm,SNR=1.4							
ELGU				S		Sn	01 53 53.2	-1.6
PFVI	**Vila Bisbo**	**4.47**	**335**	P		Pn	01 53 02.3	-1.4
PFVI				S		Sn	01 53 54.9	-0.5
PFVI	**Vila Bisbo**	**4.47**	**335**	*e*Pn		Pn	01 53 05.9	+2.3
PFVI				*e*Sn		Sn	01 53 54.5	-0.9
EGRO	**El Granado**	**4.52**	**350**	P		Pn	01 53 06.0	+1.8
EGRO				⇑*i*Vmb_V			01 53 08.3	
	109nm,SNR=0.7							
EGRO				S		Sn	01 53 54.4	-2.0
MORF	**Marmelete**	**4.57**	**338**	*e*S		Sn	01 53 55.5	-2.4
MORF				IAML			01 53 58.8	
	comp=N,10nm,0.4s							
MORF	**Marmelete**	**4.57**	**338**	*e*Pn		Pn	01 53 07.5	+2.5
MORF				*e*Sn		Sn	01 53 57.0	-0.9
MORF				A		A	01 53 57.3	
	comp=N,2.5nm,0.2s							
EMIN	**Mina Concepcio**	**4.68**	**358**	P		Pn	01 53 07.7	+1.3
EMIN				⇑*i*Vmb_V			01 53 08.5	
	comp=N,45nm,SNR=0.5							
EMIN				S		Sn	01 53 57.3	-3.1
PCVE	**Castro Verde**	**4.71**	**345**	*e*Pn		Pn	01 53 09.2	+2.3
PCVE				*e*Sn		Sn	01 54 00.2	-1.1
PCVE				A		A	01 54 00.9	
	comp=N,2.8nm,0.4s							
PTEO	**Sao Teotonio**	**4.81**	**338**	*e*Pn		Pn	01 53 11.3	+3.0
PTEO				*e*Sn		Sn	01 54 02.3	-1.5
MESJ	**Messejana**	**4.95**	**344**	*e*P		Pn	01 53 12.8	+2.5
MESJ				*e*S		Sn	01 54 04.2	-3.1
MESJ				IAML			01 54 08.1	
	comp=N,3.4nm,0.2s							
MESJ	**Messejana**	**4.95**	**344**	*e*Pn		Pn	01 53 13.0	+2.8
MESJ				*e*Sn		Sn	01 54 05.3	-1.9
MESJ				A		A	01 54 10.0	
	comp=N,2.2nm,0.6s							
ECAB	**El Cabril**	**5.06**	**10**	P		Pn	01 53 13.3	+1.6
ECAB				⇑*i*Vmb_V			01 53 14.9	
	comp=N,42nm,SNR=1.0							
ECAB				S		Sn	01 54 06.9	-2.9
PBEJ	**Beja**	**5.06**	**348**	*e*Sn		Sn	01 54 07.9	-1.9
PBEJ				A		A	01 54 11.1	
	comp=N,1.6nm,0.2s							
PBAR	**Barrancos**	**5.10**	**355**	*e*Pn		Pn	01 53 14.5	+2.2
PBAR				*e*Sn		Sn	01 54 08.3	-2.6
PBAR				A		A	01 54 12.2	
	comp=N,1.2nm,0.2s							
PNCL	**Nicolau / Gran**	**5.29**	**342**	*e*Pn		Pn	01 53 16.9	+2.1
PNCL				*e*Sn		Sn	01 54 13.0	-2.4
PNCL				A		A	01 54 16.1	
	comp=N,1.8nm,0.6s							
EADA	**Adamuz**	**5.30**	**16**	P		Pn	01 53 16.8	+1.7
EADA				⇑*i*Vmb_V			01 53 18.2	
	comp=N,27nm,SNR=0.5							
EADA				S		Sn	01 54 13.0	-2.9
EBAD	**Badajoz**	**5.68**	**356**	P		Pn	01 53 22.1	+1.9
EBAD				⇑*i*Vmb_V			01 53 23.2	
	comp=N,229nm,SNR=2.6							
EBAD				S		Sn	01 54 22.0	-3.0
PESTR	**Estremoz**	**5.84**	**351**	*e*Pn		Pn	01 53 24.6	+2.1
PESTR				*e*Sn		Sn	01 54 27.2	-1.9
PESTR				A		A	01 54 30.2	
	comp=N,0.9nm,0.8s							
PMTG	**Montargil**	**6.14**	**347**	*e*Pn		Pn	01 53 28.7	+2.2
PMTG				*e*Sn		Sn	01 54 34.4	-2.0
PMTG				A		A	01 54 39.4	
	comp=N,1.0nm,0.5s							
PMRV	**Marv??o**	**6.38**	**354**	*e*Pn		Pn	01 53 31.9	+2.1
PMRV				*e*Sn		Sn	01 54 39.3	-3.0
PMRV				A		A	01 54 40.2	
	comp=N,1.2nm,0.4s							
PAB	**San Pablo**	**6.67**	**14**	P		Pn	01 53 35.8	+1.8
PAB				⇑*i*Vmb_V			01 53 40.2	
	comp=N,28nm,SNR=0.5							
PAB				S		Sn	01 54 44.5	-5.2
PSBE	**So Bento**	**6.68**	**344**	*e*Sn		Sn	01 54 46.8	-3.1
PCBR	**Castelo Branco**	**6.79**	**354**	*e*Pn		Pn	01 53 37.7	+2.2

*IDC **27** 02:09:36.2±1.4, 36°29S×99°78W, h0km, mb3.8/6, mbtmp3.8/6, MS3.5/12, Error ellipse: s-maj=44.5km s-min=27.5km az=53.0*
ISC 27 02:09:38.0±1.1, 36°3S±0°2×99°7W±0°2, h10km, n27, σ0§48/11, mb3.9/6, MS3.5/11, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**12.26**	**316**	LR	LR	02 15 51.5	
	comp=Z,211nm,19.4s,baz=96,slow=31						
H03S2	**Juan Fernandez**	**17.20**	**88**	T	T	02 31 18.1	
	baz=254,SNR=16						
H03S1	**Juan Fernandez**	**17.22**	**88**	T	T	02 31 19.9	
	baz=254,SNR=10						
H03S3	**Juan Fernandez**	**17.22**	**88**	T	T	02 31 20.0	
	baz=254,SNR=13						
H03N2	**Juan Fernandez**	**17.30**	**87**	T	T	02 31 18.6	
	baz=247,slow=72,SNR=9.3						
H03N3	**Juan Fernandez**	**17.30**	**87**	T	T	02 31 22.2	
	baz=247,slow=72,SNR=12						
H03N1	**Juan Fernandez**	**17.32**	**87**	T	T	02 31 21.5	
	baz=247,slow=72,SNR=16						
PLCA	**Paso Flores**	**23.20**	**110**	P	**P**	**02 14 45.2**	**+0.2**
	5.0nm,1.1s,baz=261,slow=7.7,SNR=6.2						
PLCA				LR	LR	02 21 32.9	
	comp=Z,63nm,18.5s,baz=268,slow=31						
	5.0nm,1.1s						
LVC	**Limon Verde**	**29.96**	**71**	LR	LR	02 24 26.1	
	comp=Z,131nm,20.1s,baz=236,slow=30						
NNA	**Nana**	**31.80**	**46**	LR	LR	02 25 44.2	
	comp=Z,42nm,19.5s,baz=192,slow=30						
LPAZ	**La Paz**	**34.40**	**63**	P	**P**	**02 16 26.2**	**0.0**
	2.3nm,1.1s,baz=207,slow=11,SNR=4.0						
LPAZ				LR	LR	02 27 29.8	
	comp=Z,43nm,21.1s,baz=225,slow=31						
	2.3nm,1.1s						
ATAH	**Atahualpa**	**34.97**	**39**	LR	LR	02 27 10.2	
	comp=Z,86nm,21.4s,baz=224,slow=30						
CPUP	**Villa Florida**	**37.31**	**87**	LR	LR	02 30 20.0	
	comp=Z,34nm,19.8s,baz=212,slow=33						
ROSC	**El Rosal**	**47.33**	**36**	LR	LR	02 34 38.3	
	comp=Z,84nm,19.8s,baz=233,slow=32						
CMIG	**Matias Romero**	**53.29**	**6**	LR	LR	02 36 36.7	
	comp=Z,37nm,20.4s,baz=222,slow=30						
VNA3	**Neumayer Olymp**	**56.12**	**157**	P	**P**	**02 19 17.3**	**+0.2**
VNA1	**Neumayer--Stat**	**56.72**	**157**	P	**P**	**02 19 21.5**	**+0.2**
VNA2	**Neumayer--Watz**	**56.92**	**157**	P	**P**	**02 19 22.3**	**-0.5**
	baz=236,slow=7.0						
SNAA	**Sanae**	**58.10**	**158**	P	**P**	**02 19 31.2**	**+0.1**
SNAA	**Sanae**	**58.10**	**158**	LR	LR	02 38 05.8	
	comp=Z,43nm,20.0s,baz=29,slow=29						
TROLL	**Troll, Antarti**	**59.55**	**159**	P	**P**	**02 19 41.3**	**0.0**

MDP	**Montagnes des**	**60.27**	**57**	LR		LR	02 43 09.6	
	comp=Z,57nm,19.9s,baz=220,slow=33							
TXAR	**Lajitas Array**	**65.39**	**356**	P		**P**	**02 20 21.1**	**+0.4**
	0.3nm,0.9s,baz=180,slow=9.9,SNR=2.9							
	0.3nm,0.9s							
RPZ	**Rata Peaks**	**65.55**	**233**	LR		LR	02 45 27.6	
	comp=Z,133nm,18.2s,baz=237,slow=33							
MAW	**Mawson**	**75.58**	**173**	P		**P**	**02 21 22.4**	**-0.1**
	1.3nm,0.7s,baz=256,slow=8.3,SNR=1.7							
	1.3nm,0.7s							
NVAR	**Mina Array Bea**	**76.31**	**345**	P		**P**	**02 21 27.6**	**+0.5**
	0.4nm,0.6s,baz=172,slow=6.9,SNR=4.7							
	0.4nm,0.6s							
PDAR	**Pinedale Array**	**79.19**	**353**	P		**P**	**02 21 42.0**	**-1.0**
	1.2nm,0.9s,baz=146,slow=6.6,SNR=8.7							
	1.2nm,0.9s							

*IDC **27** 02:13:56.0±9.0, 13°.23N×93°.24W, h0km, mb3.3/2, mbtmp3.2/3, ML3.3/1, MS3.0/1, Error ellipse: s-maj=316.5km s-min=132.4km az=43.0*
*MEX **27** 02:14:02.6±0.7, 14°.48N×94°.25W, h16km, MD3.9*
ISC 27 02:14:07.9±2.7, 14°.67N±0°.09×93°.63W±0°.09, h6km±15km, n13, σ2§36/17, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.10**	**21**	*e*P	**Pg**	**02 14 25.7**	**-3.4**
PCIG				*i*S	**Sn**	**02 14 45.1**	**-0.2**
PATR	**El Naranjo**	**1.42**	**72**	*e*P	**Pg**	**02 14 34.1**	**-1.1**
PAVE	**Pavencul**	**1.50**	**70**	*e*P	**Pb**	**02 14 34.3**	**-2.0**
PAVE				*i*S	**Sg**	**02 14 58.8**	**+2.6**
CHUJ	**Union Juarez**	**1.53**	**74**	*e*P	**Pg**	**02 14 35.6**	**-1.8**
CHUJ				*i*S	**Sg**	**02 15 00.5**	**+3.3**
CARR	**Arriaga**	**1.59**	**350**	*e*P	Pn	02 14 29.2	-7.4
CARR				*i*S	**Sn**	**02 14 55.5**	**-1.9**
TGIG		**2.15**	**13**	*e*P	**Pg**	**02 14 49.8**	**+0.6**
TGIG				*i*S	**Sg**	**02 15 18.9**	**+1.8**
CCIG	**Comitan**	**2.15**	**42**	*e*P	**Pg**	**02 14 51.1**	**+1.8**
CCIG				*i*S	**Sg**	**02 15 17.1**	**-0.1**
UXUV	**UXUV**	**2.68**	**349**	*e*P	**Pn**	**02 14 50.2**	**-1.4**
UXUV				*e*S	**Sn**	**02 15 24.3**	**0.0**
CMIG	**Matias Romero**	**2.69**	**334**	*e*P	Pn	02 14 39.2	-13
TXAR	**Lajitas Array**	**17.29**	**329**	P	**P**	**02 18 16.1**	**+4.5**
	baz=147,slow=12,SNR=2.9							
	0.2nm,0.7s							
NVAR	**Mina Array Bea**	**32.16**	**322**	P	**P**	**02 20 37.8**	**+1.0**
	0.2nm,0.6s,baz=136,slow=9.4,SNR=3.7							
	0.2nm,0.6s							
SADO	**Sadowa**	**32.42**	**19**	LR	LR	02 36 12.8		
	comp=Z,21nm,18.6s,baz=19,slow=40							
ILAR	**Eielson Array**	**61.60**	**337**	P	**P**	**02 24 25.0**	**-1.1**
	0.4nm,0.8s,baz=144,slow=6.3,SNR=4.1							
	0.4nm,0.8s							

NOU 27 02:23:58.8, 17°.30S×168°.99E, h62km, mB5.9/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**3.83**	**205**	P	Pn	02 24 54.5	-0.8
YATNC	**Mamie plateau,**	**5.13**	**202**	P	Pn	02 25 11.9	-1.2
DZM	**Mont Dzumac**	**5.32**	**206**	P	Pn	02 25 16.4	+0.6
OUENC	**Ouen Island, N**	**5.48**	**201**	P	Pn	02 25 17.4	-0.5
	27nm,1.6s						
MSVF	**Nonsavu**	**8.65**	**94**	P	Pn	02 26 00.9	-0.6
	23nm,1.7s						
MTSU	**Mount Surprise**	**23.52**	**264**	P	P	02 29 03.9	+0.3
	5.2nm,0.5s						

*MOS **27** 02:34:37.8±1.0, 13°.31N×57°.93E, h14km, mb5.0/71, MS4.3/13, Error ellipse: s-maj=6.5km s-min=3.6km az=103.6*
*IDC **27** 02:34:37.4±0.5, 13°.28N×58°.13E, h0km, mb4.6/30, mbtmp4.6/31, ML4.7/2, MS4.1/68, Error ellipse: s-maj=12.4km s-min=12.0km az=134.0*
*BJI **27** 02:34:38.1±0.0, 13°.02N×57°.82E, h28km, mb4.8/53, mB5.0/31, Ms4.5/31, Ms7 4.3/31*
*GCMT **27** 02:34:38.3±0.2, 13°.38N±0°.01×57°.91E±0°.01, h12km, MW5.0/123, Moment Tensor Solution. s65,c82; s123,c200; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.39±.07; Mθθ2.77±.07; Mϕϕ-2.38±.07; Mrθ0.84±.19; Mθϕ2.33±.06; Mϕr0.00±.20; Best double couple: Mo3.56200×10¹⁶ NP1:ϕ114.00000°, δ87.00000°, λ12.00000°. NP2:ϕ23.00000°, δ78.00000°, λ177.00000°. Principal axes: T 3.8150, Plg11.0000°, Azm339.0000°; N -0.5030, Plg78.0000°, Azm129.0000°; P -3.3100, Plg6.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **27** 02:34:40.4±1.8, 13°.32N±0°.07×57°.98E±0°.08, h10km±1km, mb5.0/154 Error ellipse: s-maj=13.2km s-min=12.2km az=280.0*
*DSN **27** 02:34:41.7±0.8, 13°.52N×57°.80E, h10km, mb5.4/6, Ms4.4/13, Error ellipse: s-maj=13.2km s-min=7.7km az=111.0*
*OMAN **27** 02:34:41.5±5.5, 13°.46N×57°.98E, h19km±36km, mb6.3/26, ml4.6/1, ms4.3/14, Mwp5.1/5, Error ellipse: s-maj=15.5km s-min=8.6km az=127.0*
ISC 27 02:34:39.2±0.3, 13°.35N±0°.04×57°.94E±0°.04, h10km, n626, σ1§37/616, mb4.9/219, MS4.2/94, 43C-34D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMTO	**DMTO**	**5.22**	**327**	P	**Pn**	**02 35 57.5**	**+0.2**
	SNR=93						
RBK	**Rabkut**	**5.49**	**319**	P	**Pn**	**02 36 02.0**	**+0.9**
	SNR=7.4						
RBK				P	**Pn**	**02 36 02.0**	**+0.9**
	SNR=7.4						
ABTO	**Aybut**	**6.00**	**312**	P	**Pn**	**02 36 09.8**	**+1.6**
WHFO	**Wadi Hawf**	**6.07**	**319**	P	**Pn**	**02 36 10.6**	**+1.5**
	SNR=20						
DQM	**DQM**	**6.56**	**357**	P	**Pn**	**02 36 15.9**	**+0.1**
	SNR=51						
JMDO	**Jabal Madar**	**8.98**	**1**	P	**Pn**	**02 36 48.7**	**-0.3**
	SNR=316						
JMDO				P	**Pn**	**02 36 48.7**	**-0.3**
	SNR=316						
WBK	**Wadi Bani Khal**	**9.27**	**6**	P	**Pn**	**02 36 52.5**	**-0.5**
	SNR=13						
WBK				P	**Pn**	**02 36 52.5**	**-0.5**
	SNR=13						
BSY	**Bisya**	**9.37**	**356**	P	**Pn**	**02 36 54.6**	**+0.1**
	SNR=64						
SMDO	**Samad**	**9.66**	**1**	P	**Pn**	**02 36 57.9**	**-0.6**
	SNR=127						
SMDO				P	**Pn**	**02 36 57.9**	**-0.6**
	SNR=127						
SMDO				P	**Pn**	**02 36 57.9**	**-0.6**
	SNR=127						
WSAR	**Wadi Sarin**	**9.86**	**4**	Pn	**Pn**	**02 37 00.6**	**-0.6**
	47nm,0.3s,baz=216,slow=10,SNR=400						
WSAR				Sn	**Sn**	**02 38 44.5**	**-7.5**
	1.4nm,0.3s,baz=167,slow=20,SNR=1.0						
WSAR				LR	LR	02 40 28.5	
	comp=Z,3μm,19.4s,baz=198,slow=35						
ARQ	**Araqi**	**10.03**	**352**	P	**Pn**	**02 37 04.0**	**+0.5**
	SNR=55						
BIDO	**Bidbid**	**10.12**	**1**	P	**Pn**	**02 37 04.1**	**-0.6**
	SNR=21						
BIDO				P	**Pn**	**02 37 04.1**	**-0.6**
	SNR=21						
BIDO				P	**Pn**	**02 37 04.1**	**-0.6**
	SNR=21						
HOQ	**Hoqain**	**10.20**	**357**	P	**Pn**	**02 37 05.7**	**-0.1**
	SNR=71						
MZR	**Muzera**	**10.50**	**337**	P	**Pn**	**02 37 09.9**	**0.0**
	SNR=27						
MZR				P	**Pn**	**02 37 09.9**	**0.0**
	SNR=27						
MZR	**Muzera**	**10.50**	**337**	*i* P	**Pn**	**02 37 10.1**	**+0.2**
	SNR=39						
ALNE	**Al Ain**	**10.85**	**349**	P	**Pn**	**02 37 16.3**	**+1.6**
ALNE				P	**Pn**	**02 37 16.3**	**+1.6**
ALNE	**Al Ain**	**10.85**	**349**	*i* P	**Pn**	**02 37 16.0**	**+1.2**
	SNR=12						
ASHO	**Ashiyiah**	**11.42**	**351**	P	**Pn**	**02 37 22.4**	**0.0**
	SNR=30						
ASHO				P	**Pn**	**02 37 22.4**	**0.0**
	SNR=30						
ASHO	**Ashiyiah**	**11.42**	**351**	*i* P	**Pn**	**02 37 22.2**	**-0.2**
	SNR=30						
ASUD	**Al Ashush, Dub**	**11.49**	**348**	P	**Pn**	**02 37 24.2**	**+0.8**
AJN	**Ajban**	**11.50**	**346**	P	**Pn**	**02 37 24.6**	**+1.0**
AJN				P	**Pn**	**02 37 24.6**	**+1.0**
HATD	**Hatta, Dubai**	**11.55**	**352**	P	**Pn**	**02 37 24.8**	**+0.6**
	SNR=36						
HATD	**Hatta, Dubai**	**11.55**	**352**	*i* P	**Pn**	**02 37 24.5**	**+0.2**
	SNR=36						
FAQ	**Al Faqa, Dubai**	**11.55**	**349**	P	**Pn**	**02 37 25.8**	**+1.5**
	SNR=13						
FAQ				P	**Pn**	**02 37 25.8**	**+1.5**
	SNR=13						
FAQ				P	**Pn**	**02 37 25.8**	**+1.5**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**11.55**	**349**	*i* P	**Pn**	**02 37 25.2**	**+0.9**
	SNR=12						
UOSS	**Minazif**	**11.65**	**352**	Pn	**Pn**	**02 37 25.4**	**-0.3**
UOSS	**Minazif**	**11.65**	**352**	P	**Pn**	**02 37 25.5**	**-0.2**
UOSS				P	**Pn**	**02 37 25.5**	**-0.2**
UOSS	**Minazif**	**11.65**	**352**	*i* P	**Pn**	**02 37 25.1**	**-0.6**
	SNR=15						
NAZ	**Nazwa, Dubai**	**11.78**	**350**	P	**Pn**	**02 37 29.1**	**+1.7**
	SNR=20						
NAZ	**Nazwa, Dubai**	**11.78**	**350**	*i* P	**Pn**	**02 37 28.2**	**+0.8**
	SNR=20						
MSFE	**Esma-Masafi**	**12.07**	**352**	*i* P	**Pn**	**02 37 31.3**	**-0.1**
	SNR=27						
MASF	**Masafi**	**12.08**	**352**	P	**Pn**	**02 37 32.1**	**+0.6**
	SNR=27						
MASF				P	**Pn**	**02 37 32.1**	**+0.6**
	SNR=27						
JASK	**Jask - Hormozg**	**12.46**	**360**	P	**Pn**	**02 37 37.5**	**+0.8**
	SNR=8.5						
JRN	**Qarnain Island**	**12.50**	**338**	P	**Pn**	**02 37 37.4**	**+0.2**
	SNR=9.7						
JRN				P	**Pn**	**02 37 37.4**	**+0.2**
	SNR=9.7						
SHME	**Shamm**	**12.75**	**353**	P	**Pn**	**02 37 40.7**	**0.0**
	SNR=24						
SHME				P	**Pn**	**02 37 40.7**	**0.0**
	SNR=24						
SHME	**Shamm**	**12.75**	**353**	*i* P	**Pn**	**02 37 40.2**	**-0.5**
	SNR=24						
SMRA	**Abu-Samra**	**13.18**	**330**	P	**Pn**	**02 37 46.8**	**+0.3**
SHMA	**Al-Shehemyia**	**14.07**	**333**	P	**Pn**	**02 37 58.2**	**-0.5**
ATD	**Arta Tunnel**	**14.85**	**265**	Pn	**P**	**02 38 13.4**	**-2.0**
	0.5nm,0.3s,baz=160,slow=1.2,SNR=9.0						
	6.0nm,0.8s						
ATD	**Arta Tunnel**	**14.85**	**265**	Pn	**Pn**	**02 38 08.2**	**-1.3**
ATD				P	**P**	**02 38 16.0**	**+0.6**
RAYN	**Ar Rayn**	**15.54**	**312**	Pn	**Pn**	**02 38 17.8**	**-0.8**
RAYN				IAmb	IAmb	02 38 20.5	
	comp=Z,92nm,0.8s						
RAYN	**Ar Rayn**	**15.54**	**312**	P	**Pn**	**02 38 17.8**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,93nm,0.8s						
RAYN	**Ar Rayn**	**15.54**	**312**	P	**Pn**	**02 38 17.1**	**-1.4**
RAYN	**Ar Rayn**	**15.54**	**312**	*i* P	**Pn**	**02 38 17.8**	**-0.8**
	SNR=124						
MNCI	**Minicoy**	**15.67**	**107**	Pn	**Pn**	**02 38 19.1**	**-1.3**
MSEY	**Mahe Island**	**18.07**	**188**	Pn	**Pn**	**02 38 47.9**	**-2.7**
MSEY	**Mahe Island**	**18.07**	**188**	P	**Pn**	**02 38 47.9**	**-2.7**
MSEY				pmax	pmax		
	comp=Z,89nm,1.4s						
PCHI	**Peechi**	**18.22**	**97**	*e*P	**Pn**	**02 38 50.5**	**-2.0**
FURI	**Furi**	**19.41**	**259**	P	**Pn**	**02 39 08.1**	**+0.8**
FURI				IAmb	IAmb	02 39 23.1	
	comp=Z,86nm,1.1s						
HYBB	**Hyderabad (bro**	**20.27**	**76**	*e*P	**P**	**02 39 15.7**	**+0.5**
HYBB				*e*S	**S**	**02 43 03.9**	**+1.1**
HRA	**Herat**	**21.31**	**10**	P	**P**	**02 39 27.1**	**+0.7**
HRA				IAmb	IAmb	02 39 30.9	
	comp=Z,102nm,1.6s						
PALK	**Pallekele**	**23.18**	**103**	LR	LR	02 47 12.4	
	comp=Z,408nm,19.5s,baz=32,slow=33						
PALK	**Pallekele**	**23.18**	**103**	P	**P**	**02 39 46.2**	**-0.1**
PALK				IAmb	IAmb	02 40 01.5	
	comp=Z,40nm,1.1s						
PALK	**Pallekele**	**23.18**	**103**	P	**P**	**02 39 46.2**	**-0.1**
PALK				pmax	pmax		
	comp=Z,40nm,1.2s						
KBL	**Kabul**	**23.38**	**24**	P	**P**	**02 39 50.5**	**+2.2**
KBL				IAmb	IAmb	02 39 59.5	
	comp=Z,64nm,1.3s						
KBL	**Kabul**	**23.38**	**24**	P	**P**	**02 39 50.5**	**+2.2**
KBL				pmax	pmax		
	comp=Z,65nm,1.3s						
LODK	**Lodwar**	**24.39**	**248**	P	**P**	**02 40 00.2**	**+2.1**
LODK				IAmb	IAmb	02 40 04.5	
	comp=Z,71nm,1.2s						
GEYT	**Alibeck**	**24.48**	**0**	P	**P**	**02 39 59.5**	**+0.9**
	comp=Z,34nm,0.8s,baz=194,slow=10,SNR=59						
GEYT				LR	LR	02 50 12.0	
	comp=Z,198nm,19.7s,baz=180,slow=38						
	comp=Z,34nm,0.8s						
GEYT	**Alibeck**	**24.48**	**0**	P	**P**	**02 39 59.3**	**+0.7**
GYA0	**ALIBECK ARRAY**	**24.48**	**0**	P	**P**	**02 39 59.4**	**+0.8**
GYA0B	**ALIBECK ARRAY**	**24.48**	**0**	P	**P**	**02 39 59.3**	**+0.7**
NIL	**Nilore**	**24.55**	**32**	P	**P**	**02 40 00.3**	**+1.0**
NIL				IAmb	IAmb	02 40 14.2	
	comp=Z,22nm,0.9s						
NIL	**Nilore**	**24.55**	**32**	P	**P**	**02 40 00.3**	**+1.0**
NIL				pmax	pmax		
	comp=Z,22nm,1.0s						
KMBO	**Kilima Mbogo**	**25.05**	**237**	P	**P**	**02 40 06.0**	**+1.7**
	comp=Z,34nm,0.9s,baz=45,slow=12,SNR=44						
KMBO				LR	LR	02 49 30.2	
	comp=Z,456nm,19.7s,baz=84,slow=36						
	comp=Z,34nm,0.9s						
KMBO	**Kilima Mbogo**	**25.05**	**237**	P	**P**	**02 40 05.7**	**+1.5**
KMBO	**Kilima Mbogo**	**25.05**	**237**	*i* P	**P**	**02 40 05.2**	**+0.9**
KMBO	**Kilima Mbogo**	**25.05**	**237**	P	**P**	**02 40 06.2**	**+1.9**
KMBO				P	**P**	**02 40 06.2**	**+1.9**
KMBO	**Kilima Mbogo**	**25.05**	**237**	*i* P	**P**	**02 40 06.3**	**+2.1**
	SNR

comp=Z,1µm,18.2s,baz=148,slow=40
comp=Z,12nm,0.8s
GNI Garni 29.11 339 P **P** **02 40 41.7 +1.3**
GNI IAmb IAmb 02 40 44.2
comp=Z,21nm,0.9s
GNI Garni 29.11 339 *ce*P **P** **02 40 41.5 +1.1**
GNI pmax pmax
comp=Z,69nm,1.7s
GNI Garni 29.11 339 P **P** **02 40 42.3 +1.8**
SEKA Sheki 29.30 343 P **P** **02 40 43.0 +1.0**
KARS Kars 30.14 337 P **P** **02 40 49.8 +0.3**
KARS Kars 30.14 337 P **P** **02 40 49.8 +0.3**
KARS pmax pmax
comp=Z,68nm,1.2s
MBAR Mbarara 30.32 245 LR LR 02 52 57.1
comp=Z,512nm,19.1s,baz=56,slow=36
MBAR Mbarara 30.32 245 P **P** **02 40 52.2 +0.8**
MBAR Mbarara 30.32 245 P **P** **02 40 52.2 +0.8**
MBAR pmax pmax
comp=Z,6.0nm,0.7s
KSH Kashi 30.54 28 P **P** **02 40 49.5 -3.5**
KSH pmax pmax
comp=Z,14nm,1.0s
KSH LR LR
comp=Z,480nm,19.9s
KSH LR LR
comp=Z,350nm,20.6s
KSH LR LR
comp=Z,400nm,20.6s
KOPT Kop Dagi 30.68 333 P **P** **02 40 56.1 +1.7**
KOPT IAmb IAmb 02 41 10.5
comp=Z,14nm,1.0s
MAK Makhachkala 30.86 345 *e*P P 02 40 49.7 -5.9
MAK pmax pmax
comp=Z,102nm,1.2s
MAK MLR MLR
comp=Z,417nm,20.0s
CSS Mathiatis 30.95 318 P **P** **02 40 56.8 +0.3**
CSS IAmb IAmb 02 41 07.0
comp=Z,16nm,0.9s
GUDG Gudauri 31.27 341 P **P** **02 40 60.0 +0.4**
GUDG Gudauri 31.27 341 P **P** **02 41 00.0 +0.4**
GUDG pmax pmax
comp=Z,10.0nm,1.1s
GROC Groznyy 31.54 343 *e*P **P** **02 41 02.4 +0.8**
GROC *e* 02 42 05.2
GROC *e* 02 43 56.5
GROC pmax pmax
comp=Z,10.0nm,0.8s
KK31 Karatay Array 31.57 18 P **P** **02 41 04.2 +2.2**
KK31 Karatay Array 31.57 18 *i* P **P** **02 41 03.3 +1.3**
KKAR Karatay Array 31.57 18 P **P** **02 41 03.3 +1.3**
KKAR Karatay Array 31.57 18 P **P** **02 41 03.0 +1.0**
KKAR Karatay Array 31.57 18 P **P** **02 41 03.3 +1.3**
KKAR pmax pmax
comp=Z,4.0nm,1.1s
BNN Bunyan 32.06 326 P **P** **02 41 07.7 +1.3**
NCK Nalchik 32.48 340 *i* P **P** **02 41 11.4 +1.4**
NCK pmax pmax
comp=Z,5.0nm,1.2s
AAK Ala-Archa 32.51 23 P **P** **02 41 11.8 +1.4**
AAK IAmb IAmb 02 41 22.9
comp=Z,15nm,1.1s
AAK Ala-Archa 32.51 23 *ce*P **P** **02 41 10.8 +0.4**
AAK pmax pmax
comp=Z,16nm,1.3s
AAK Ala-Archa 32.51 23 P **P** **02 41 12.9 +2.5**
KBZ Khabaz 32.92 340 P **P** **02 41 15.2 +1.5**
comp=Z,7.9nm,0.7s,baz=160,slow=7.3,SNR=19
KBZ LR LR 02 56 20.3
comp=Z,491nm,18.9s,baz=146,slow=39
comp=Z,7.9nm,0.7s
KBZ Khabaz 32.92 340 *ce*P **P** **02 41 14.4 +0.7**
KBZ pmax pmax
comp=Z,14nm,0.9s
SHA1 Shidzhatmaz 33.01 339 *i* P **P** **02 41 15.2 +0.4**
TKM2 Tokmak 2 33.18 24 P **P** **02 41 16.4 +0.1**
KVAR Kislovodsk Arr 33.19 340 LR LR 02 57 34.5
comp=Z,384nm,19.5s,baz=66,slow=41
KIV Kislovodsk 33.19 340 ⇑P **P** **02 41 17.9 +1.6**
KIV Kislovodsk 33.19 340 P **P** **02 41 17.6 +1.4**
KIV IAmb IAmb 02 41 45.2
comp=Z,13nm,1.0s
KIV Kislovodsk 33.19 340 *e*P **P** **02 41 17.0 +0.7**
KIV *e* 02 42 26.8
KIV *e*SS **S** **02 46 37.0 +0.9**
KIV *e*SS **SnSn** **02 48 37.3 +1.7**
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,224nm,15.0s
KIV Kislovodsk 33.19 340 P **P** **02 41 17.3 +1.1**
KIV P **P** **02 41 17.3 +1.1**
KIV Kislovodsk 33.19 340 P **P** **02 41 17.2 +1.0**
OPO Ambohidratompo 33.44 199 LR LR 02 52 15.9
comp=Z,207nm,18.8s,baz=180,slow=32
ABPO Ambohimpanom 33.85 198 P **P** **02 41 22.4 +0.1**
ABPO Ambohimpanom 33.85 198 P **P** **02 41 22.4 +0.1**
ABPO pmax pmax
comp=Z,12nm,1.1s
BR131 Keskin Array S 33.89 325 P **P** **02 41 23.4 +1.0**
BR131 Keskin Array S 33.89 325 P **P** **02 41 23.4 +1.0**
BR131 pmax pmax
comp=Z,8.0nm,0.9s
BRTR Keskin Array B 33.89 325 P **P** **02 41 23.8 +1.4**
comp=Z,3.6nm,0.8s,baz=141,slow=11,SNR=25
BRTR LR LR 02 56 52.5
comp=Z,776nm,20.9s,baz=130,slow=39
comp=Z,3.6nm,0.8s
BRTR Keskin Array B 33.89 325 P **P** **02 41 23.3 +0.9**
MDOK Medeo 33.97 25 P **P** **02 41 25.1 +2.0**
PRZ Przheval'sk 34.01 28 P **P** **02 41 23.9 +0.4**
PRZ IAmb IAmb 02 41 31.9
comp=Z,11nm,0.9s
PRZ Przheval'sk 34.01 28 P **P** **02 41 23.9 +0.4**
PRZ pmax pmax
comp=Z,11nm,0.9s
GOF Gofitskoye 34.06 341 ⇑*e*P **P** **02 41 25.0 +1.4**
SHL Shillong 34.13 64 P **P** **02 41 24.7 0.0**
SHL IAmb IAmb 02 41 25.8
comp=Z,28nm,0.9s
SHL Shillong 34.13 64 P **P** **02 41 24.7 0.0**
SHL pmax pmax
comp=Z,28nm,0.9s
AKAS Kas 34.14 317 P **P** **02 41 25.0 +0.3**
ELL Elmali 34.24 318 P **P** **02 41 26.8 +1.3**
ELL Elmali 34.24 318 P **P** **02 41 26.8 +1.3**
ELL pmax pmax
comp=Z,73nm,0.7s
BR231 Keskin MP Arra 34.45 325 P **P** **02 41 28.9 +1.6**
BR231 IAmb IAmb 02 41 32.8
comp=Z,19nm,0.9s
ANTO Ankara 34.46 325 P **P** **02 41 29.0 +1.7**
ANTO IAmb IAmb 02 41 30.2
comp=Z,15nm,0.7s
ANTO Ankara 34.46 325 P **P** **02 41 29.0 +1.7**
ANTO pmax pmax
comp=Z,15nm,0.7s
ISP Isparta 34.49 320 P **P** **02 41 27.8 +0.2**
ISP IAmb IAmb 02 41 30.6
comp=Z,14nm,0.7s
ISP Isparta 34.49 320 P **P** **02 41 27.8 +0.2**
ISP pmax pmax
comp=Z,14nm,0.7s
LSA Lhasa 34.75 57 P **P** **02 41 30.3 -0.1**
LSA Lhasa 34.75 57 P **P** **02 41 30.3 -0.1**
LSA pmax pmax
comp=Z,14nm,1.3s
ILGA Ilgaz 34.78 327 P **P** **02 41 31.5 +1.2**
KARP Karpathos 35.45 314 P **P** **02 41 37.0 +1.1**
AB31 Akbulak array 35.84 2 *i* P **P** **02 41 39.7 +0.7**
ABKAR Akbulak array 35.84 2 P **P** **02 41 40.2 +1.2**
ABKAR IAmb IAmb 02 41 47.7
comp=Z,24nm,1.0s
ABKAR Akbulak array 35.84 2 P **P** **02 41 40.1 +1.1**
ANN Anapa 35.89 335 *e*P **P** **02 41 41.3 +1.8**
ANN *e* 02 42 58.4
ANN *e*PPP PPP 02 43 15.5
ANN *e*S **S** **02 47 20.3 +2.8**
ANN pmax pmax
comp=Z,22nm,0.8s
MANT Manisa 36.13 319 P **P** **02 41 42.6 +0.7**
MANT IAmb IAmb 02 41 51.1
comp=Z,14nm,0.9s
VOI Vohitsoka 36.70 197 P **P** **02 41 48.7 +2.0**
VOI IAmb IAmb 02 41 48.8
comp=Z,79nm,2.0s
IDI Anoyia 36.94 312 ⇑P **P** **02 41 49.9 +1.3**
IDI Anoyia 36.94 312 P **P** **02 41 49.3 +0.6**
AKTO Aktyubinsk 36.99 0 LR LR 02 57 40.3
comp=Z,150nm,22.0s,baz=170,slow=37
AKTO Aktyubinsk 36.99 0 P **P** **02 41 49.3 +0.5**
SANT Santorini 37.05 314 P **P** **02 41 49.2 -0.4**
SIM Simferopol' 37.46 332 *e*P **P** **02 41 50.7 -2.2**
SIM pmax pmax
comp=Z,27nm,0.8s
MAKZ Makanchi 38.98 26 P **P** **02 42 05.9 +0.2**
MAKZ Makanchi 38.98 26 P **P** **02 42 05.9 +0.2**
MAKZ pmax pmax
comp=Z,11nm,1.0s
MK31 Makanchi Array 39.11 27 P **P** **02 42 07.2 +0.4**
MK31 Makanchi Array 39.11 27 *i* P **P** **02 42 06.6 -0.2**
MKAR Makanchi Array 39.11 27 P **P** **02 42 07.4 +0.6**
comp=Z,6.2nm,0.7s,baz=212,slow=8.3,SNR=44
MKAR LR LR 03 00 20.2
comp=Z,285nm,19.7s,baz=216,slow=40
comp=Z,6.2nm,0.7s
WMQ Urumqi 39.65 34 *e*P **P** **02 42 14.0 +2.6**
WMQ LR LR
comp=Z,290nm,19.5s
WMQ LR LR
comp=Z,490nm,18.3s
WMQ LR LR
comp=Z,150nm,19.3s
CM31 Chiang Mai Arr 39.70 77 P **P** **02 42 12.3 +0.2**
CM31 IAmb IAmb 02 42 20.0
comp=Z,25nm,1.1s
CMAR Chiang Mai Arr 39.70 77 P **P** **02 42 12.2 +0.1**
comp=Z,7.0nm,0.8s,baz=275,slow=8.9,SNR=35
CMAR LR LR 02 57 55.9
comp=Z,77nm,21.1s,baz=270,slow=35
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 39.70 77 P **P** **02 42 11.9 -0.1**
CMAR Chiang Mai Arr 39.70 77 P **P** **02 42 11.9 -0.1**
CHTO Chiang Mai 39.70 77 P **P** **02 42 11.8 -0.3**
CHTO Chiang Mai 39.70 77 P **P** **02 42 11.8 -0.3**
CHTO pmax pmax
comp=Z,12nm,1.3s
BELG Belogornoye 39.82 350 *i* P **P** **02 42 12.1 -0.4**
BELG pmax pmax
comp=Z,4.0nm,0.9s
ITM Ithomi 39.93 313 P **P** **02 42 14.5 +0.7**
ITM IAmb IAmb 02 42 26.6
comp=Z,28nm,0.7s
TIRR Tirgusor 39.95 327 ⇑P **P** **02 42 13.4 -0.4**
TIRR Tirgusor 39.95 327 P **P** **02 42 14.0 +0.2**
TIRR IAmb IAmb 02 42 16.5
comp=Z,67nm,1.2s
TIRR Tirgusor 39.95 327 P **P** **02 42 14.0 +0.2**
TIRR pmax pmax
comp=Z,67nm,1.2s
VRH Novokhopyorsk 39.98 344 *e*P **P** **02 42 13.4 -0.5**
VRH pmax pmax
comp=Z,50nm,1.2s
GOMU GeErMu 40.12 49 P **P** **02 42 15.8 0.0**
GOMU S **S** **02 48 17.0 -5.5**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU pmax pmax
comp=Z,63nm,3.7s
GOMU LR LR
comp=Z,160nm,16.4s
GOMU LR LR
comp=Z,140nm,13.3s
GOMU LR LR
comp=Z,170nm,16.1s
TLBR Topalu 40.21 326 ⇓P **P** **02 42 17.1 +1.2**
TPGR Topolog 40.22 327 ⇑P **P** **02 42 16.1 +0.1**
HARR Harsova 40.37 327 ⇑P **P** **02 42 18.6 +1.4**
RAZG Razgrad 40.43 324 ⇑P **P** **02 42 19.0 +1.2**
VSR Storozhevoye 40.72 342 *e*P **P** **02 42 19.3 -0.7**
VSR pmax pmax
comp=Z,20nm,0.9s
KURBB Kurchatov Arra 40.78 20 LR LR 03 00 44.4
comp=Z,343nm,20.8s,baz=208,slow=38
KURBB Kurchatov Arra 40.78 20 P **P** **02 42 22.0 +1.5**
BVAR Borovoye Array 40.81 11 LR LR 03 01 33.9
comp=Z,163nm,20.4s,baz=194,slow=40
BRVK Borovoye 40.82 11 P **P** **02 42 22.1 +1.3**
BRVK Borovoye 40.82 11 *ce*P **P** **02 42 22.3 +1.5**
BRVK pmax pmax
comp=Z,12nm,2.5s
KURK Kurchatov 40.89 20 P **P** **02 42 22.4 +0.9**
KURK Kurchatov 40.89 20 *ce*P **P** **02 42 22.3 +0.9**
KURK pmax pmax
comp=Z,11nm,1.3s
LSZ Lusaka 40.93 227 P **P** **02 42 23.6 +1.2**
comp=Z,6.7nm,0.6s,baz=52,slow=7.5,SNR=24
LSZ LR LR 03 00 13.7
comp=Z,140nm,18.1s,baz=90,slow=37
comp=Z,6.7nm,0.6s
CRAI Chiangrai 41.11 75 P **P** **02 42 23.9 +0.2**
VORR Voronezh 41.11 342 *e*P **P** **02 42 23.8 +0.6**
VORR pmax pmax
comp=Z,28nm,1.7s
MILM Milestii Mici 41.43 330 ⇓P **P** **02 42 26.2 +0.3**
GHRR 41.55 328 ⇑P **P** **02 42 28.4 +1.5**
NEHR Nehoiu 41.73 326 ⇑P **P** **02 42 29.4 +1.0**
VRI Vrincioaia 41.78 327 ⇓P **P** **02 42 30.5 +1.6**
PLOR Plostina 41.81 327 ⇑P **P** **02 42 30.2 +1.0**
VTS Vitosha 41.81 321 ⇑P **P** **02 42 30.7 +1.4**
VTS Vitosha 41.81 321 P **P** **02 42 30.0 +0.7**
VTS Vitosha 41.81 321 P **P** **02 42 30.0 +0.7**
VTS pmax pmax
comp=Z,11nm,0.8s
PSI Prapat 41.83 101 LR LR 02 57 25.1
comp=Z,213nm,21.5s,baz=268,slow=33
PSI Prapat 41.83 101 P **P** **02 42 29.8 -0.1**
PSI pmax pmax
comp=Z,18nm,1.1s
RPSI Rantau Prapat 41.87 101 P **P** **02 42 29.8 -0.2**
MLR Muntele Rosu 41.95 326 ⇑P **P** **02 42 31.1 +0.7**
MLR Muntele Rosu 41.95 326 LR LR 03 02 30.1
comp=Z,263nm,19.9s,baz=154,slow=40
MLR Muntele Rosu 41.95 326 P **P** **02 42 31.9 +1.4**
MLR IAmb IAmb 02 42 50.5
comp=Z,14nm,0.7s
MLR Muntele Rosu 41.95 326 P **P** **02 42 31.9 +1.4**
MLR pmax pmax
comp=Z,14nm,0.7s
LPSR Galich'ya Gora 42.01 343 *e*P **P** **02 42 29.7 -0.9**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
COVR Voineasa-Covas 42.04 327 ⇓P **P** **02 42 31.5 +0.4**
TESR Tescani 42.24 328 ⇓P **P** **02 42 32.7 +0.1**
KBN Korca 42.33 317 P **P** **02 42 34.1 +0.5**
KBN Korca 42.33 317 P **P** **02 42 34.1 +0.5**
KBN pmax pmax
comp=Z,15nm,0.9s
VOIR 42.41 325 ⇓P **P** **02 42 35.5 +1.3**
OZUR 42.43 327 ⇓P **P** **02 42 34.5 +0.3**
SORM Soroca 42.50 331 ⇑P **P** **02 42 33.4 -1.3**
DOPR Dopca 42.56 326 ⇑P **P** **02 42 36.3 +1.0**
KEK Kerkira 42.57 315 P **P** **02 42 36.2 +0.8**
KEK IAmb IAmb 02 42 52.5
comp=Z,19nm,1.0s
ARR Arges 42.60 325 ⇓P **P** **02 42 36.4 +0.7**
BLKB Belogradchik 42.71 322 ⇓P **P** **02 42 36.8 +0.3**
BIZ Bicaz 42.81 328 ⇓P **P** **02 42 38.4 +1.2**
KULM Kulim 42.84 97 P **P** **02 42 38.0 0.0**
ARU Arti 42.99 1 P **P** **02 42 39.3 +0.7**
ARU Arti 42.99 1 *c* *i*P **P** **02 42 39.4 +0.8**
ARU 02 44 18.8
ARU S **S** **02 49 07.1 +3.3**
ARU pmax pmax
comp=Z,19nm,1.4s
PZH PanZhiHua 43.00 65 P **P** **02 42 43.5 +4.2**
PZH S **S** **02 49 10.8 +5.8**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,80nm,4.4s
PZH LR LR
comp=Z,640nm,22.8s
PZH LR LR
comp=Z,390nm,19.6s
PZH LR LR
comp=Z,750nm,20.8s
MDB Medias 43.22 326 ⇓P **P** **02 42 42.1 +1.6**
BOVS Bovan 43.30 321 ⇓P **P** **02 42 42.7 +1.4**
DGZ Jazzator, Alta 43.57 28 *i* P **P** **02 42 43.9 +0.4**
DGZ pmax pmax
comp=Z,6.0nm,0.9s
HERR Herculane 43.58 323 ⇑P **P** **02 42 44.4 +0.9**
GZR Gura Zlata 43.66 324 ⇑P **P** **02 42 45.2 +1.0**
KMI Kunming 43.70 68 ⇓P **P** **02 42 45.0 0.0**
KMI S **S** **02 49 17.3 +1.8**
KMI pmax pmax
comp=Z,26nm,0.8s
KMI pmax pmax
comp=Z,71nm,3.5s
KMI LR LR
comp=Z,300nm,20.8s
KMI LR LR
comp=Z,340nm,21.5s
KMI LR LR
comp=Z,380nm,23.8s
BURAR Bucovina Array 43.70 328 ⇓P **P** **02 42 46.0 +1.4**
BUR08 Bucovina Ar. S 43.73 328 P **P** **02 42 45.7 +0.9**
ARCR ARCALIA 43.82 327 ⇑P **P** **02 42 46.5 +1.1**
AK05 Malin Array Si 43.91 334 P **P** **02 42 45.9 -0.2**
AK05 IAmb IAmb 02 42 53.7
comp=Z,23nm,1.2s
MDVR Moldovita 43.93 323 ⇓P **P** **02 42 47.1 +0.7**
AKASG Malin Array Be 43.96 334 P **P** **02 42 46.4 -0.1**
comp=Z,5.9nm,0.9s,baz=131,slow=8.1,SNR=27
AKASG PP **PP** **02 44 27.2 -1.6**
comp=Z,2.2nm,0.8s,baz=140,slow=10.0,SNR=5.6
AKASG LR LR 03 05 24.7
comp=Z,303nm,18.4s,baz=159,slow=42
comp=Z,5.9nm,0.9s
AKBB Malin Array Si 43.96 334 IAmb IAmb 02 42 49.5
comp=Z,18nm,0.9s
AKBB Malin Array Si 43.96 334 *ce*P **P** **02 42 46.2 -0.2**
BLWY Bulawayo 44.05 221 ⇑*i*P **P** **02 42 48.1 +0.4**
BLWY IAmb IAmb 02 42 48.9
comp=Z,186nm,0.9s
CBBR Cluj-Babes-Bol 44.05 326 ⇑P **P** **02 42 47.9 +0.6**
MATP Matopo 44.33 221 ⇑*i*P **P** **02 42 50.3 +0.4**
MATP IAmb IAmb 02 42 51.3
comp=Z,112nm,0.8s
BZS Buzias 44.46 324 ⇑P **P** **02 42 51.2 +0.6**
TIP Timpagrande 44.47 313 P **P** **02 42 50.9 +0.1**
DRGR 44.53 326 ⇓P **P** **02 42 52.6 +1.4**
DIVS Divibare 44.60 321 P **P** **02 42 51.8 0.0**
BKNI Bangkinang 44.60 103 P **P** **02 42 53.0 +0.9**
BMR Baia Mare 44.64 327 ⇓P **P** **02 42 53.3 +1.4**
SIRR Siria 44.81 324 ⇓P **P** **02 42 54.6 +1.3**
MUSN Musina, Limpop 44.86 218 *e*P **P** **02 42 53.7 -0.3**
MUSN IAmb IAmb 02 42 55.7
comp=Z,20nm,1.2s
OBN Obninsk 44.89 343 LR LR 03 04 18.9
comp=Z,113nm,19.7s,baz=176,slow=40
OBN Obninsk 44.89 343 *i* P **P** **02 42 54.4 +0.6**
OBN *i* 02 44 35.2
OBN *i* 02 44 41.1
OBN *i* S **S** **02 49 26.9 -4.5**
OBN *e*SS **ScS** **02 52 45.0 -6.2**
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,443nm,19.0s
MOPA Mopani 44.91 216 *e*P **P** **02 42 54.2 -0.1**
MOPA IAmb IAmb 02 42 55.8
comp=Z,16nm,0.9s
GTA Gaotai 45.05 47 *e*P **P** **02 42 55.5 0.0**
GTA pP *s*P 02 43 00.0 +1.5
GTA S **S** **02 49 35.5 +0.9**
GTA SS **ScS** **02 52 48.5 -4.8**
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA pmax pmax
comp=Z,42nm,5.1s
GTA LR LR
comp=Z,210nm,18.2s
GTA LR LR
comp=Z,310nm,20.7s
GTA LR LR
comp=Z,490nm,22.5s
MOS Moscow 45.14 344 *e*P **P** **02 42 52.8 -3.0**
MOS pmax pmax
comp=Z,30nm,1.3s
FRGS Fruska Gora 45.27 322 ⇑P **P** **02 42 57.5 +0.5**
CUC Castrocucco 45.46 314 P **P** **02 43 00.9 +2.2**
CUC IAmb IAmb 02 43 07.2
comp=Z,14nm,1.1s
RAFF Raffo Rosso 45.49 310 P **P** **02 43 00.0 +1.1**
KIRV Kirov 45.61 354 LR LR 03 06 44.4
comp=Z,301nm,18.6s,baz=167,slow=42
KIRV Kirov 45.61 354 *ce*P **P** **02 43 00.0 +0.6**
ZAA0 Zalesovo Array 45.72 22 P **P** **02 43 00.4 0.0**
ZALV Zalesovo Beam 45.72 22 P **P** **02 43 00.1 -0.3**
comp=Z,6.5nm,0.7s,baz=226,slow=7.6,SNR=19
ZALV LR LR 03 04 15.0
comp=Z,203nm,19.7s,baz=224,slow=39
comp=Z,6.5nm,0.7s
ZALV Zalesovo Beam 45.72 22 P **P** **02 43 00.3 -0.1**
ZALV Zalesovo Beam 45.72 22 P **P** **02 43 00.3 -0.1**
LVV L'vov 45.74 330 *e*P **P** **02 43 00.5 -0.1**
LVV *e*S **S** **02 49 41.7 -2.2**
LVV pmax pmax
comp=Z,40nm,1.4s
LVV MLR MLR
comp=E,100nm,16.0s
LVV MLR MLR
comp=N,200nm,15.0s
LVV MLR MLR
comp=Z,200nm,16.0s
UZH Uzhgorod 45.87 327 *e*P **P** **02 43 05.3 +3.6**
UZH *e* 02 43 12.2
UZH *e* 02 44 44.2
UZH *e*S **S** **02 49 48.8 +3.0**
UZH *e* 02 53 04.9
KOLS Kolonicke sedl 46.06 328 *e*P **P** **02 43 04.4 +1.1**
KOLS pmax pmax
comp=Z,13nm,0.7s
KOLS Kolonicke sedl 46.06 328 *e*P **P** **02 43 04.4 +1.1**
CRVS Cervenica-Dubn 46.47 327 *e*P **P** **02 43 08.5 +2.1**
CRVS pmax pmax
comp=Z,19nm,1.3s
CRVS Cervenica-Dubn 46.47 327 *e*P **P** **02 43 08.5 +2.1**
MORH Mrgy, Hungar 46.52 323 ⇑P **P** **02 43 07.5 +0.6**
MORH Mrgy, Hungar 46.52 323 P **P** **02 43 06.6 -0.3**
PAOL Paolisi 46.75 314 P **P** **02 43 10.0 +1.2**
KOVH Kovagotottos 46.78 322 P **P** **02 43 09.0 +0.1**
MYKOM Kota Tinggi 46.84 100 P **P** **02 43 10.2 +0.4**
LZH Lanzhou 46.91 53 *e*P **P** **02 43 11.3 +1.0**
LZH pP pwP 02 43 16.5 0.0
LZH S **S** **02 50 06.5 +5.0**
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,91nm,4.3s
LZH LR LR
comp=Z,420nm,16.2s
LZH LR LR
comp=Z,650nm,16.5s
LZH LR LR
comp=Z,1µm,19.6s
LEPH Lephalale, Lim 47.28 219 *e*P **P** **02 43 14.3 +1.1**
LEPH IAmb IAmb 02 43 14.6
comp=Z,27nm,0.8s
MNK Minsk 47.34 337 *i* P **P** **02 43 11.9 -1.1**
MNK *i* 02 45 02.3
MNK *i* PPP PPP 02 45 46.5
MNK *i* S **S** **02 50 05.3 -1.4**
MNK *i* SS **SS** **02 53 34.4 +0.2**
MNK pmax pmax
comp=Z,18nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK MLR MLR
comp=E,27nm,17.0s
MNK MLR MLR
comp=Z,259nm,17.0s
MNK Minsk 47.34 337 *i* P **P** **02 43 12.0 -1.1**
comp=E,2.0nm,0.8s
MNK *i* P **P** **02 43 12.0 -1.1**
MNK *i* P **P** **02 43 12.0 -1.1**
comp=Z,18nm,0.8s,baz=138
MNK *i* PcP PcP 02 44 33.9 -10
MNK *i* PP **PP** **02 45 02.4 -1.9**
MNK *i* PPP PPP 02 45 46.5
MNK *i* S **S** **02 50 05.4 -1.4**

MNK *i* SS **SS** **02 53 34.5 +0.2**
MNK *i* LQ LQ 02 59 57.3
MNK *i* LR LR 03 03 46.1
MNK *i* LRM MLR 03 05 24.3
MNK *i* LRM MLR 03 05 45.8
comp=E,27nm,16.5s
MNK *i* LRM MLR 03 05 51.5
comp=Z,259nm,16.5s
CSKK Cskako 47.36 324 P **P** **02 43 13.9 +0.5**
CRLN Carolina, Mapu 47.62 215 *e*P **P** **02 43 16.6 +0.8**
CRLN IAmb IAmb 02 43 17.1
comp=Z,15nm,1.0s
VYHS Vyhne 47.65 325 *e*P **P** **02 43 15.6 -0.1**
VYHS pmax pmax
comp=Z,14nm,1.7s
VYHS Vyhne 47.65 325 *e*P **P** **02 43 15.6 -0.1**
MPLH Magyarpolny 47.67 323 P **P** **02 43 15.1 -0.7**
LANS Liptovska Anna 47.68 326 *e*P **P** **02 43 17.1 +1.2**
LANS pmax pmax
comp=Z,4.0nm,0.7s
LANS Liptovska Anna 47.68 326 *e*P **P** **02 43 17.1 +1.2**
POGA Pongola 47.80 212 P **P** **02 43 17.8 +0.8**
NACGM Naroch 48.06 336⇓ *e*P **P** **02 43 19.7 +1.0**
baz=137
KOGS Kog 48.07 322 *i* P **P** **02 43 19.2 +0.3**
KOGS *e*S **S** **02 50 20.2 +2.9**
OJC Ojcow 48.12 328 P **P** **02 43 19.1 -0.2**
OJC IAmb IAmb 02 43 26.6
comp=Z,22nm,1.6s
OJC Ojcow 48.12 328 P **P** **02 43 19.1 -0.2**
OJC pmax pmax
comp=Z,22nm,1.6s
BOJS Bojanci 48.23 320 *i* P **P** **02 43 20.3 +0.1**
BOJS *e*S **S** **02 50 22.1 +2.5**
SLR Silverton 48.41 217 *e*P **P** **02 43 22.9 +0.9**
SLR IAmb IAmb 02 43 25.9
comp=Z,154nm,2.4s
SMOL Smolenice 48.44 325 *e*P **P** **02 43 21.3 -0.5**
MODS Modra-Piesok 48.45 325 *e*P **P** **02 43 21.8 -0.1**
MODS pmax pmax
comp=Z,35nm,1.6s
MODS Modra-Piesok 48.45 325 *e*P **P** **02 43 21.8 -0.1**
ZST Bratislava 48.46 324 *e*P **P** **02 43 22.6 +0.7**
ZST Bratislava 48.46 324 *e*P **P** **02 43 22.6 +0.7**
JAVC Velka Javorina 48.49 325 *e*P **P** **02 43 23.2 +0.9**
GROS Grobnik 48.53 321 *i* P **P** **02 43 22.6 +0.1**
IIGN Ignalina 48.61 336 *e*P **P** **02 43 24.4 +1.4**
RONA Rosalia, Austr 48.67 323 *i* P **P** **02 43 23.9 +0.3**
comp=Z,5.0nm,0.5s,SNR=6.3
OKC Ostrava-Krasne 48.77 327 AMS AMS 03 07 10.0
comp=Z,400nm,16.2s
ISAL Salakas 48.81 337 *e*P **P** **02 43 25.2 +0.7**
RUDU RUNDU 48.85 231 *e*P **P** **02 43 26.8 +1.4**
RUDU IAmb IAmb 02 43 30.4
comp=Z,193nm,2.9s
HRAO HartRAO 48.88 217 *e*P **P** **02 43 25.7 +0.1**
ARSA Arzberg 48.90 322 *e*P **P** **02 43 24.8 -0.6**
comp=Z,1.6nm,0.5s
SOKA Soboth 48.91 322 *e*P **P** **02 43 25.5 -0.1**
comp=Z,7.1nm,1.3s
KEST Kesra 48.92 306 P **P** **02 43 28.1 +2.3**
comp=Z,3.4nm,0.8s,baz=14,slow=8.3,SNR=4.6
KEST LR LR 03 05 54.1
comp=Z,348nm,18.3s,baz=356,slow=38
comp=Z,3.4nm,0.8s
KEST Kesra 48.92 306 P **P** **02 43 26.7 +0.9**
PRGR Permogore 49.03 352 *e*P **P** **02 43 24.5 -1.6**
CONA Conrad Observa 49.03 323 *i* P **P** **02 43 26.6 +0.2**
comp=Z,9.2nm,1.4s,SNR=7.7
NWCL Newcastle 49.06 213 *e*P **P** **02 43 26.8 -0.1**
NWCL IAmb IAmb 02 43 41.6
comp=Z,23nm,1.1s
MORC Moravsky Berou 49.07 326⇓ P **P** **02 43 26.9 +0.3**
MORC Moravsky Berou 49.07 326 IAmb IAmb 02 43 35.8
comp=Z,10nm,1.0s
MORC Moravsky Berou 49.07 326 *e*P **P** **02 43 26.4 -0.2**
OBKA Obir 49.13 321 *e*P **P** **02 43 27.7 +0.4**
comp=Z,7.1nm,1.3s
TRI Trieste 49.25 320 P **P** **02 43 26.4 -1.6**
TRI IAmb IAmb 02 43 38.4
comp=Z,24nm,1.3s
TRI Trieste 49.25 320 P **P** **02 43 26.4 -1.6**
TRI pmax pmax
comp=Z,24nm,1.3s
LATE Laterza 49.26 315 P **P** **02 43 28.4 +0.2**
LATE IAmb IAmb 02 43 35.9
comp=Z,29nm,1.4s
KLMR Klimovskoe 49.30 348 *e*P **P** **02 43 26.8 -1.4**
KLMR pmax pmax
comp=Z,47nm,1.4s
KLMR Klimovskoe 49.30 348 *e*P **P** **02 43 26.8 -1.4**
KLMR AMP 02 43 31.0
comp=Z,47nm,1.4s
KSR Koster 49.31 218 *e*P **P** **02 43 29.1 +0.1**
KSR IAmb IAmb 02 43 29.2
comp=Z,60nm,1.2s
KRUC Moravsky 49.31 325 *e*P **P** **02 43 28.3 -0.2**
VRAC Vranov 49.33 325⇓ P **P** **02 43 29.2 +0.5**
VRAC Vranov 49.33 325 LR LR 03 07 39.6
comp=Z,249nm,18.4s,baz=125,slow=40
VRAC Vranov 49.33 325 *e*P **P** **02 43 28.6 -0.1**
SABO M.te Sabotino 49.47 320 P **P** **02 43 30.1 +0.3**
SABO IAmb IAmb 02 43 44.1
comp=Z,9.3nm,0.9s
LBTB Lobatse 49.49 220 LR LR 03 02 56.3
comp=Z,104nm,19.6s,baz=42,slow=34
LBTB Lobatse 49.49 220 P **P** **02 43 30.8 +0.6**
LBTB Lobatse 49.49 220 P **P** **02 43 30.8 +0.6**
LBTB pmax pmax
comp=Z,47nm,1.1s
LBTB Lobatse 49.49 220⇑ *i*P **P** **02 43 31.4 +1.1**
LBTB IAmb IAmb 02 43 31.9
comp=Z,51nm,1.1s
PABE Paberze 49.62 335 P **P** **02 43 30.9 +0.2**
PABE Paberze 49.62 335 *e*P **P** **02 43 31.2 +0.6**
KRLC Kraliky 49.64 326 *e*P **P** **02 43 30.5 -0.5**
KRLC *e* 02 43 37.4
KRLC MLR MLR
comp=Z,300nm,14.9s
KRLC Kraliky 49.64 326 *e*P **P** **02 43 30.5 -0.5**
KRLC *e*pP **pwP** **02 43 37.4 +0.2**
KRLC AMS AMS 03 07 50.0
comp=Z,300nm,14.9s
PRED Cave del Predi 49.70 321 P **P** **02 43 32.2 +0.6**
PRED IAmb IAmb 02 43 40.1
comp=Z,20nm,1.8s
MYKA Terra Mystica 49.74 321 *e*P **P** **02 43 32.0 +0.1**
comp=Z,6.2nm,1.1s
PRYS Parys 49.85 216 *e*P **P** **02 43 32.6 -0.4**
PRYS IAmb IAmb 02 43 40.5
comp=Z,4.1nm,0.7s
MOA Molln 49.93 323 *i* P **P** **02 43 33.0 -0.3**
comp=Z,4.5nm,0.6s,SNR=6.6
TREC Trest 49.95 325 *e*P **P** **02 43 33.0 -0.3**
TREC Trest 49.95 325 *e*P **P** **02 43 33.0 -0.3**
CASP Castiglione de 49.97 315 P **P** **02 43 33.6 0.0**
CASP IAmb IAmb 02 43 36.3
comp=Z,48nm,1.8s
QIZ Qiongzhong 50.02 76 P **P** **02 43 34.1 -0.2**
QIZ IAmb IAmb 02 43 41.1
comp=Z,22nm,1.1s
QIZ Qiongzhong 50.02 76 P **P** **02 43 35.3 +1.0**
QIZ S **S** **02 50 47.5 +1.9**
QIZ LR LR
comp=Z,140nm,16.3s
QIZ LR LR
comp=Z,140nm,18.5s
QIZ LR LR
comp=Z,180nm,27.5s
DPC Dobruska-Polom 50.04 326 *e*P **P** **02 43 34.1 +0.1**
DPC *e* 02 43 40.5
DPC MLR MLR
comp=Z,300nm,16.5s
DPC Dobruska-Polom 50.04 326 *e*P **P** **02 43 34.1 +0.1**
DPC *e*pP **pwP** **02 43 40.5 +0.3**
DPC AMS AMS 03 08 20.0
comp=Z,300nm,16.5s
KBA Koelnbreinsper 50.12 321 *e*P **P** **02 43 34.9 0.0**
comp=Z,4.3nm,1.1s
CLUD Cludinico 50.13 320 P **P** **02 43 35.0 +0.1**
CLUD IAmb IAmb 02 43 45.0
comp=Z,16nm,1.1s
STAL STALIGIAL 50.15 320 IAmb IAmb 02 43 43.1
comp=Z,27nm,1.3s
OSTC Ostas 50.21 326 *e*P **P** **02 43 35.1 -0.2**
OSTC *ex* x 02 43 41.8
OSTC AMS AMS 03 08 30.0
comp=Z,300nm,15.1s
BIOA Bad Ischl, Aus 50.23 322 *e*P **P** **02 43 35.2 -0.4**
comp=Z,0.8nm,0.3s
UPC Upice 50.29 326 *e*P **P** **02 43 35.7 -0.2**
UPC MLR MLR
comp=Z,400nm,16.6s
UPC Upice 50.29 326 *e*P **P** **02 43 35.7 -0.2**
UPC AMS AMS 03 08 40.0
comp=Z,400nm,16.6s
ENH Enshi 50.30 62 P **P** **02 43 35.2 -1.1**
CHVC Chvalec 50.31 326 *e*P **P** **02 43 35.5 -0.6**
CIMO Cimolais 50.34 320 IAmb IAmb 02 43 46.8
comp=Z,24nm,1.6s
CKRC Cesky Krumlov 50.38 324 *e*P **P** **02 43 36.1 -0.5**
CKRC AMS AMS 03 07 40.0
comp=Z,200nm,19.4s
TEOL Teolo 50.43 319 P **P** **02 43 38.0 +1.0**
TEOL IAmb IAmb 02 43 54.7
comp=Z,10.0nm,0.8s
XAN Xi'an 50.45 57⇑ *i*P **P** **02 43 36.5 -1.0**
XAN pP pwP 02 43 43.5 -0.2
XAN pmax pmax
comp=Z,15nm,1.1s
ZCCA Zocca 50.48 317 P **P** **02 43 39.4 +1.9**
ABTA Abfaltersbach 50.49 321 *e*P **P** **02 43 38.7 +1.1**
comp=Z,7.8nm,1.4s
TAM Tamanrasset 50.49 289 P **P** **02 43 33.6 -4.5**
TAM IAmb IAmb 02 43 35.7
comp=Z,14nm,0.9s
TAM Tamanrasset 50.49 289 P **P** **02 43 33.6 -4.5**
TAM pmax pmax
comp=Z,14nm,0.9s
SNKL Senekal, Frees 50.65 215 *e*P **P** **02 43 38.8 -0.2**
SNKL IAmb IAmb 02 43 46.7
comp=Z,43nm,0.7s
GEC2 GERESS Array S 50.74 323 P **P** **02 43 39.6 +0.2**
GERES GERESS Array B 50.74 323 P **P** **02 43 38.6 -0.8**
comp=Z,0.6nm,0.6s,baz=120,slow=7.9,SNR=7.1
GERES PcP **PcP** **02 44 56.3 -0.2**
comp=Z,1.5nm,0.9s,baz=160,slow=5.1,SNR=4.1
comp=Z,0.6nm,0.6s
GERES GERESS Array B 50.74 323 P **P** **02 43 39.5 +0.1**
VSU Vasula 50.75 339 *i* P **P** **02 43 40.1 +0.9**
VSU pmax pmax
comp=Z,42nm,0.9s
VSU Vasula 50.75 339 *e*P **P** **02 43 39.4 +0.2**
VLC Villacollemand 50.80 317 P **P** **02 43 41.2 +1.3**
VLC IAmb IAmb 02 43 49.3
comp=Z,23nm,1.4s
PRU Pruhonice 50.83 325 *e*P **P** **02 43 39.6 -0.3**
PRU *e*S **S** **02 50 56.7 +0.7**
PRU MLR MLR
comp=Z,300nm,16.1s
PRU Pruhonice 50.83 325 *e*P **P** **02 43 39.6 -0.3**
PRU *e*S **S** **02 50 56.7 +0.7**
PRU AMS AMS 03 08 40.0
comp=Z,300nm,16.1s
KHC Kasperske Hory 50.95 324 IAmb IAmb 02 43 48.8
comp=Z,23nm,1.8s
KHC Kasperske Hory 50.95 324 *e*P **P** **02 43 39.7 -1.2**
KHC *e* 02 43 46.2
KHC MLR MLR
comp=Z,200nm,16.8s
KHC Kasperske Hory 50.95 324 *e*P **P** **02 43 39.7 -1.2**
KHC *e*pP **pwP** **02 43 46.2 -0.9**
KHC AMS AMS 03 10 40.0
comp=Z,200nm,16.8s
SWZ Schweizer 51.23 218 *e*P **P** **02 43 42.8 -0.7**
SWZ IAmb IAmb 02 43 43.2
comp=Z,45nm,1.4s
TSUM Tsumeb 51.25 232 LR LR 03 06 32.1
comp=Z,349nm,18.9s,baz=59,slow=37
TSUM Tsumeb 51.25 232 P **P** **02 43 44.3 +0.6**
TSUM IAmb IAmb 02 43 53.3
comp=Z,12nm,0.9s
TSUM Tsumeb 51.25 232 *e*P **P** **02 43 44.2 +0.6**
TSUM IAmb IAmb 02 43 46.0
comp=Z,8.6nm,0.8s
WTTA Wattenberg 51.25 321 *e*P **P** **02 43 42.5 -0.9**
comp=Z,2.5nm,0.5s
WATA Walderalm 51.32 321 *i* P **P** **02 43 42.4 -1.5**
comp=Z,0.1nm,0.2s,SNR=6.7
SQTA Sankt Quirin 51.50 321 *i* P **P** **02 43 44.3 -0.9**
comp=Z,5.4nm,0.5s,SNR=7.6
MOY Mondy 51.51 33 *e*P **P** **02 43 46.1 +0.9**
MOY pmax pmax
comp=Z,19nm,2.3s
BRG Berggiesshubel 51.61 326 *e*P **P** **02 43 45.5 -0.3**
BRG Amp 02 43 47.9
comp=Z,5.1nm,1.1s
BRG *ex* x 02 43 52.2
BRG Amp 02 43 54.9
comp=Z,8.1nm,1.2s
BRG Berggiesshubel 51.61 326 *e*P **P** **02 43 45.4 -0.3**
BRG *e* 02 43 52.2
BRG S **S** **02 51 04.0 -2.7**
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,8.0nm,1.2s
MOTA Moosalm 51.62 321 *e*P **P** **02 43 44.8 -1.4**
comp=Z,4.9nm,0.8s
FETA Feichten 51.71 320 *e*P **P** **02 43 46.1 -0.8**
comp=Z,6.4nm,1.3s
FUORN Ofenpass-Fuorn 51.84 320 P **P** **02 43 48.0 +0.1**
RETA Reutte 51.88 321 *e*P **P** **02 43 46.5 -1.6**
comp=Z,1.5nm,0.4s
DAVOX Davos/Dischmat 52.15 320 LR LR 03 07 51.6
comp=Z,201nm,21.3s,baz=104,slow=38
CLL Collm 52.34 326 IAmb IAmb 02 44 00.6
comp=Z,36nm,1.7s
CLL Collm 52.34 326 *i* P **P** **02 43 51.3 +0.1**
CLL *i* 02 43 58.2
CLL *e*S **S** **02 51 18.0 +1.3**
CLL pmax pmax
comp=Z,68nm,2.3s
CLL Collm 52.34 326 *i* P **P** **02 43 51.3 +0.1**
comp=Z,68nm,2.3s
CLL *i* x x 02 43 58.2
CLL *e*PP **PP** **02 45 53.0 +3.2**
CLL *ex* x 02 46 45.0
CLL *e*PPP PPP 02 46 54.0
CLL *e*S **S** **02 51 18.0 +1.3**
CLL *e*SS **SKiKP** **02 55 06.0 -8.8**
CLL *e*SSS SSS 02 56 36.0
BOSA Boshof 52.34 217 P **P** **02 43 51.5 -0.2**
comp=Z,6.3nm,0.9s,baz=58,slow=11,SNR=7.0
comp=Z,6.3nm,0.9s
BOSA Boshof 52.34 217 P **P** **02 43 51.8 +0.1**
BOSA IAmb IAmb 02 43 54.5
comp=Z,46nm,1.6s
BOSA Boshof 52.34 217 P **P** **02 43 51.8 +0.1**
BOSA pmax pmax
comp=Z,46nm,1.7s
BOSA Boshof 52.34 217 *e*P **P** **02 43 51.5 -0.2**
BOSA IAmb IAmb 02 43 53.3
comp=Z,80nm,1.6s
DAVA Damuels 52.35 320 *i* P **P** **02 43 50.6 -1.0**
comp=Z,2.5nm,0.4s,SNR=8.1
GRFO Grafenberg 52.57 323 P **P** **02 43 52.5 -0.5**
GRFO IAmb IAmb 02 43 53.1
comp=Z,29nm,1.5s
GRFO Grafenberg 52.57 323 P **P** **02 43 52.5 -0.5**
GRFO pmax pmax
comp=Z,29nm,1.5s
SONM Songino Array 52.81 39 P **P** **02 43 55.0 0.0**
comp=Z,2.0nm,0.8s,baz=242,slow=6.9,SNR=14
SONM LR LR 03 09 08.2
comp=Z,216nm,19.9s,baz=238,slow=39
comp=Z,2.0nm,0.8s
SONM Songino Array 52.81 39 P **P** **02 43 55.1 +0.1**
SONM Songino Array 52.81 39 P **P** **02 43 55.0 0.0**
ULN Ulaanbaatar 53.23 39 P **P** **02 43 59.2 +1.1**
ULN Ulaanbaatar 53.23 39*ce*P **P** **02 43 57.9 -0.2**
ULN pmax pmax
comp=Z,5.0nm,1.3s
LEM Lembang 53.24 109 LR LR 03 02 51.7
comp=Z,154nm,21.6s,baz=276,slow=32
FIA1 FINESS Array S 53.25 342 P **P** **02 43 56.9 -0.9**
FIA1 IAmb IAmb 02 43 58.1
comp=Z,18nm,0.8s
FINES FINESS Array B 53.25 342 P **P** **02 43 57.6 -0.2**
comp=Z,12nm,0.8s,baz=138,slow=8.1,SNR=45
FINES LR LR 03 11 00.3
comp=Z,217nm,18.8s,baz=182,slow=41
comp=Z,12nm,0.8s
FINES FINESS Array B 53.25 342 P **P** **02 43 57.7 0.0**
STU Stuttgart 53.37 322 P **P** **02 44 00.1 +1.2**
STU IAmb IAmb 02 44 01.6
comp=Z,9.1nm,0.6s
STU Stuttgart 53.37 322 P **P** **02 44 00.1 +1.2**
BNI Bardonecchia 53.59 317 P **P** **02 44 00.9 +0.1**
BNI IAmb IAmb 02 44 22.3
comp=Z,15nm,1.3s
BNI Bardonecchia 53.59 317 P **P** **02 44 00.9 +0.1**
BNI pmax pmax
comp=Z,15nm,1.3s
WIN Windhoek 53.62 229 *e*P **P** **02 44 04.1 +2.7**
SENIN Lac Senin/Sane 53.64 318 IAmb IAmb 02 44 09.6
comp=Z,17nm,1.4s
HVD Gariep Dam 53.70 215 *e*P **P** **02 44 01.9 +0.1**
HVD IAmb IAmb 02 44 03.5
comp=Z,45nm,1.1s
BFO Black Forest 53.72 321 P **P** **02 44 01.0 -0.5**
BFO Black Forest 53.72 321 P **P** **02 44 01.0 -0.5**
BFO pmax pmax
comp=Z,7.0nm,1.1s
HHC Hu-ho-hao-te 54.03 49 *e*P **P** **02 44 05.8 +1.8**
HHC S **S** **02 51 39.5 -0.8**
HHC pmax pmax
comp=Z,31nm,0.8s
HHC pmax pmax
comp=Z,230nm,5.0s
HHC LR LR
comp=Z,490nm,16.5s
HHC LR LR
comp=Z,660nm,16.5s
HHC LR LR
comp=Z,660nm,17.8s
ECH Echery 54.40 320 IAmb IAmb 02 44 14.6
comp=Z,14nm,1.3s
UPI Upington 54.59 220 *e*P **P** **02 44 07.7 -0.5**
UPI IAmb IAmb 02 44 09.9
comp=Z,12nm,1.0s
TOA0 Torodi Ar. Sit 54.65 277 P **P** **02 44 09.6 +0.9**
TOA0 IAmb IAmb 02 44 15.3
comp=Z,9.4nm,0.9s
TORD Torodi Ar. Bea 54.65 277 P **P** **02 44 09.4 +0.7**
comp=Z,3.5nm,0.4s,baz=103,slow=3.1,SNR=26
comp=Z,3.5nm,0.4s
SBUM Sibu 54.72 97 P **P** **02 44 09.0 -0.3**
SBUM IAmb IAmb 02 44 16.6
comp=Z,30nm,1.3s
KEIM Keimoes 55.01 220 *e*P **P** **02 44 11.6 +0.4**
SSB Saint Sauveur 55.10 316 P **P** **02 44 10.6 -1.0**
SSB IAmb IAmb 02 44 19.9
comp=Z,31nm,1.3s
SSB Saint Sauveur 55.10 316 P **P** **02 44 10.6 -1.0**
SSB pmax pmax
comp=Z,31nm,1.3s
AUGR Augrabies 55.33 221 *e*P **P** **02 44 14.7 +1.2**
ARMS Ukamas 55.33 222⇓ *i*P **P** **02 44 14.3 +0.8**
ARMS IAmb IAmb 02 44 15.6
comp=Z,34nm,1.0s
WLF Walferdange 55.56 322 P **P** **02 44 15.1 +0.3**
WLF IAmb IAmb 02 44 23.6
comp=Z,10nm,0.9s
WLF Walferdange 55.56 322 P **P** **02 44 15.1 +0.3**
WLF pmax pmax
comp=Z,10.0nm,0.9s
WLF Walferdange 55.56 322 *d*P **P** **02 44 15.3 +0.5**
BFON Badsfontein, M 55.62 216 *e*P **P** **02 44 16.3 +0.7**
BFON IAmb IAmb 02 44 24.9
comp=Z,242nm,2.4s
HNS HongShan 55.70 54⇑ P **P** **02 44 17.5 +1.5**
BHOU Houvegnez 55.91 322 *d*P **P** **02 44 17.3 0.0**
MEM Membach 56.00 323 *d*P **P** **02 44 18.5 +0.5**
BSTI Sart Tilman 56.25 323 *d*P **P** **02 44 19.9 +0.2**
RCHB Rochefort 56.30 322 *d*P **P** **02 44 20.0 -0.1**
BCLA Clavier 56.35 322 *d*P **P** **02 44 20.0 -0.4**
APA Apatity 56.52 349⇓ *i*P **P** **02 44 20.5 -0.9**
APA pmax pmax
comp=Z,9.0nm,0.8s
LVZ Lovozero 56.59 350 P **P** **02 44 22.2 +0.3**
LVZ Lovozero 56.59 350 P **P** **02 44 22.2 +0.3**
LVZ pmax pmax
comp=Z,31nm,1.2s
BMRD Maredsous 56.63 322 *d*P **P** **02 44 22.3 -0.1**
DOU Dourbes 56.66 322 *d*P **P** **02 44 22.4 -0.2**
comp=Z,7.2nm,1.0s
AUSN Aus 56.77 225 *e*P **P** **02 44 25.5 +1.5**
AUSN IAmb IAmb 02 44 38.0
comp=Z,179nm,2.2s
HFS Hagfors 56.80 335 LR LR 03 11 27.6
comp=Z,329nm,21.2s,baz=142,slow=39
GRAN Grantham 56.85 216 *e*P **P** **02 44 25.8 +1.5**
GRAN IAmb IAmb 02 44 32.8
comp=Z,10nm,0.8s
FRAZ Fraserburg 57.03 217 *e*P **P** **02 44 26.2 +0.6**
BJT Baijiatuao 57.28 51 P **P** **02 44 26.8 -0.5**
BJT IAmb IAmb 02 44 29.4
comp=Z,17nm,1.3s
BJT Baijiatuao 57.28 51 P **P** **02 44 26.8 -0.5**
BJT pmax pmax
comp=Z,17nm,1.3s
BJI Beijing 57.29 51 P **P** **02 44 26.8 -0.5**
BJI pmax pmax
comp=Z,10.0nm,1.1s
TIA Tai'an 57.44 55⇓ *i*P **P** **02 44 28.8 +0.3**
TIA pmax pmax
comp=Z,12nm,1.1s
CVNA Calvinia 57.69 219 *e*P **P** **02 44 30.7 +0.4**
CVNA IAmb IAmb 02 44 40.3
comp=Z,14nm,0.8s
SUR Sutherland 57.70 217 LR LR 03 06 33.8
comp=Z,88nm,21.9s,baz=54,slow=33
KKM Kota Kinabalu 57.79 91 P **P** **02 44 31.9 +0.5**
KKM IAmb IAmb 02 44 33.1
comp=Z,15nm,0.9s
XLT XiLinHaoTe 58.00 46⇓ *i*P **P** **02 44 35.0 +2.6**
XLT S **S** **02 52 37.0 +3.9**
XLT pmax pmax
comp=Z,15nm,1.0s
XLT pmax pmax
comp=Z,73nm,3.5s
XLT LR LR
comp=Z,31nm,17.5s
XLT LR LR
comp=Z,260nm,17.8s
XLT LR LR
comp=Z,390nm,21.1s
NC602 NORSAR Array S 58.02 335 *e*P **P** **02 44 29.5 -2.6**
NC602 IAmb IAmb 02 44 31.3
comp=Z,20nm,1.2s
NB2 NORSAR Subarra 58.33 335 P **P** **02 44 32.7 -1.6**
comp=Z,22nm,1.7s,baz=118,slow=7.9
NB2 NORSAR Subarra 58.33 335 P **P** **02 44 32.7 -1.6**
baz=118,slow=7.9
NOA NORSAR Array B 58.33 335 P **P** **02 44 33.0 -1.3**
comp=Z,2.9nm,0.9s,baz=117,slow=7.5,SNR=6.3
NOA LR LR 03 12 24.3
comp=Z,267nm,20.2s,baz=140,slow=39
comp=Z,2.9nm,0.9s
NJ2 Nanjing 58.47 61 *e*P **P** **02 44 34.0 -1.7**
NJ2 pmax pmax
comp=Z,22nm,0.9s
MATJ Matjiesfontein 58.47 217 *e*P **P** **02 44 35.6 -0.2**
MATJ IAmb IAmb 02 44 42.7
comp=Z,346nm,2.5s
NRIK Noril'sk 59.02 12 P **P** **02 44 38.5 -0.4**
comp=Z,3.1nm,0.5s,baz=206,slow=5.3,SNR=5.9
NRIK LR LR 03 15 08.8
comp=Z,230nm,18.3s,baz=218,slow=41
comp=Z,3.1nm,0.5s
NRIK Noril'sk 59.02 12 P **P** **02 44 39.2 +0.3**
NRIK IAmb IAmb 02 44 48.2
comp=Z,14nm,1.1s
NRIK Noril'sk 59.02 12*ce*P **P** **02 44 40.0 +1.1**
NRIK pmax pmax
comp=Z,7.0nm,1.0s
KEV Kevo 59.63 348 P **P** **02 44 42.9 -0.2**
KEV Kevo 59.63 348 P **P** **02 44 42.9 -0.2**
KEV pmax pmax
comp=Z,34nm,1.2s
DOMB Dombas 59.74 336 *e*P **P** **02 44 44.5 +0.5**
ARCES ARCESS Array B 59.76 347 P **P** **02 44 43.6 -0.5**
comp=Z,13nm,0.8s,baz=145,slow=6.7,SNR=35
ARCES LR LR 03 13 30.1
comp=Z,157nm,22.0s,baz=159,slow=39

comp=Z,13nm,0.8s
ARCES ARCESS Array B 59.76 347 P **P** **02 44 43.9 -0.1**
ARCES ARCESS Array B 59.76 347 P **P** **02 44 43.9 -0.1**
ARCES pmax pmax
comp=Z,19nm,0.9s
KTK1 Kautokeino 59.85 346 *e*P **P** **02 44 44.6 -0.1**
KTK1 IAmb IAmb 02 44 44.8
comp=Z,13nm,1.0s
MDT Midelt 59.90 300 LR LR 03 13 04.0
comp=Z,342nm,18.1s,baz=105,slow=38
KOWA Kowa 59.98 279 LR LR 03 09 49.5
comp=Z,228nm,18.9s,baz=93,slow=35
KOWA Kowa 59.98 279 P **P** **02 44 47.0 +0.5**
ESBB Sonseca Array 60.02 308 P **P** **02 44 46.4 -0.1**
ESBB IAmb IAmb 02 44 48.8
comp=Z,10nm,0.8s
ESDC Sonseca Array 60.03 308 P **P** **02 44 45.8 -0.7**
comp=Z,7.6nm,0.8s,baz=84,slow=5.9,SNR=54
comp=Z,7.6nm,0.8s
ESDC Sonseca Array 60.03 308 P **P** **02 44 46.2 -0.2**
PAB San Pablo 60.30 308 P **P** **02 44 47.9 -0.6**
PAB IAmb IAmb 02 44 50.9
comp=Z,8.2nm,0.9s
PAB San Pablo 60.30 308 P **P** **02 44 47.9 -0.6**
PAB pmax pmax
comp=Z,8.0nm,0.9s
FAUS Fauske 60.77 343 *e*P **P** **02 44 50.4 -0.5**
FAUS IAmb IAmb 02 44 52.4
comp=Z,20nm,0.9s
JETT Jettan, Norway 60.93 346 *e*P **P** **02 44 51.9 -0.2**
JETT IAmb IAmb 02 44 52.4
comp=Z,33nm,0.8s
HAMF Hammerfest 61.02 348 *e*P **P** **02 44 52.1 -0.5**
HAMF IAmb IAmb 02 44 54.0
comp=Z,17nm,0.6s
STEI Steigen 61.14 343 *e*P **P** **02 44 53.7 +0.3**
TRO Tromso 61.34 345 *e*P **P** **02 44 54.1 -0.6**
TRO IAmb IAmb 02 44 56.0
comp=Z,15nm,0.8s
KIC Kosan Boka 62.02 270⇑ *i*P **P** **02 45 01.1 +0.7**
comp=Z,2nm,0.6s
DBIC Dimbokro 62.07 271 P **P** **02 45 01.0 +0.3**
comp=Z,9.2nm,0.8s,baz=80,slow=8.6,SNR=9.7
DBIC LR LR 03 13 09.9
comp=Z,129nm,18.0s,baz=89,slow=37
comp=Z,9.2nm,0.8s
DBIC Dimbokro 62.07 271 P **P** **02 45 01.0 +0.3**
DBIC Dimbokro 62.07 271⇑ *i*P **P** **02 45 00.8 +0.1**
TIC Toumodi 62.23 271⇑ *i*P **P** **02 45 02.6 +0.8**
comp=Z,9.1nm,0.3s
PBAR Barrancos 62.25 306 *e*P **P** **02 45 01.1 -0.4**
comp=Z,33nm,1.6s
AVE Averroes 62.27 301 P **P** **02 45 02.8 +1.0**
LIC Lamto 62.33 270⇑ *i*P **P** **02 45 03.3 +0.9**
comp=Z,16nm,0.3s
PBRG Braganca 62.39 310 *e*P **P** **02 45 01.9 -0.6**
comp=Z,14nm,1.4s
TWSI Taliwang, Sumb 62.49 107 P **P** **02 45 02.1 -1.4**
comp=Z,14nm,0.9s
MVO Moncorvo 62.53 310 *e*P **P** **02 45 03.6 +0.2**
comp=Z,24nm,1.7s
MVO *e*S S 02 53 22.4 -8.9
MVO *e*LR LR 02 58 45.7
comp=Z,114nm,18.0s
PMRV Marv??o 62.63 308 *e*P **P** **02 45 04.4 +0.3**
comp=Z,24nm,1.5s
PMRV Marv??o 62.63 308 *e*LR LR 02 59 17.7
comp=Z,135nm,18.0s
PVAQ Vaqueiros 62.73 305 *e*P **P** **02 45 05.3 +0.6**
PCBR Castelo Branco 62.74 308 *e*P **P** **02 45 04.7 0.0**
EKA Eskdalemuir Ar 62.81 326 LR LR 03 15 35.5
comp=Z,121nm,21.8s,baz=98,slow=39
MTE Manteigas 62.84 309 *e*S S 02 53 44.6 +9.4
MTE *e*LR LR 02 59 04.0
comp=Z,156nm,18.0s
PBDV Barranco-do-Ve 62.89 305 *e*P **P** **02 45 05.8 -0.1**
PBEJ Beja 62.89 306 *e*P **P** **02 45 05.9 +0.1**
PCVE Castro Verde 63.00 306 *e*P **P** **02 45 06.7 +0.1**
PVRL Vila Real 63.06 310 *e*P **P** **02 45 07.0 +0.1**
comp=Z,31nm,1.8s
POLO Lamas de Olo 63.12 310 *e*P **P** **02 45 08.0 +0.6**
comp=Z,11nm,1.7s
MESJ Messejana 63.16 306 *e*P **P** **02 45 07.7 +0.1**
PCAB Cabril 63.33 310 *e*P **P** **02 45 09.0 +0.3**
PNCL Nicolau / Gran 63.42 306 *e*P **P** **02 45 09.4 +0.1**
PGAV Gavieira, Arco 63.54 310 *e*LR LR 02 59 57.4
comp=Z,100nm,20.0s
PFVI Vila Bisbo 63.60 305 *e*P **P** **02 45 10.9 +0.4**
PSBE So Bento 63.72 308 *e*P **P** **02 45 11.8 +0.5**
KAPI Kappang 64.01 102 LR LR 03 10 26.4
comp=Z,66nm,21.9s,baz=290,slow=34
KAPI Kappang 64.01 102 P **P** **02 45 13.2 -0.4**
KAPI Kappang 64.01 102 P **P** **02 45 13.2 -0.4**
KAPI pmax pmax
comp=Z,31nm,1.0s
CN2 Changchun 64.67 48 *e*P **P** **02 45 18.0 +0.6**
CN2 *e*S **S** **02 53 57.5 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,100nm,15.0s
CN2 LR LR
comp=Z,200nm,18.0s
WBSI Waikabubak, Su 65.13 107 P **P** **02 45 17.7 -3.2**
comp=Z,46nm,0.9s
KSAR Wonju Array Be 66.14 55 P **P** **02 45 27.5 +0.5**
KSAR Wonju Array Be 66.14 55 P **P** **02 45 27.5 +0.5**
KSRS Korea Array 66.17 55 P **P** **02 45 25.6 -1.7**
comp=Z,3.2nm,0.7s,baz=266,slow=8.2,SNR=7.6
KSRS LR LR 03 15 32.7
comp=Z,127nm,21.2s,baz=275,slow=37
comp=Z,3.2nm,0.7s
BNX BinXian 66.24 46⇓ P **P** **02 45 28.3 +0.7**
BNX pmax pmax
comp=Z,9.0nm,1.7s
BNX pmax pmax
comp=Z,300nm,4.3s
DAV Davao City (W) 66.69 88 LR LR 03 17 28.7
comp=Z,85nm,18.4s,baz=340,slow=39
SPITS Spitsbergen Ar 68.00 352 LR LR 03 20 25.9
comp=Z,106nm,18.6s,baz=125,slow=40
USRK Ussuriysk Ar. 69.40 48 P **P** **02 45 46.7 -0.8**
comp=Z,6.5nm,1.1s,baz=268,slow=6.3,SNR=5.8
comp=Z,6.5nm,1.1s
USRK Ussuriysk Ar. 69.40 48 P **P** **02 45 47.5 0.0**
USRK Ussuriysk Ar. 69.40 48 P **P** **02 45 47.5 0.0**
KLR Kul'dur 69.44 42 LR LR 03 18 35.2
comp=Z,278nm,21.1s,baz=234,slow=38
MBWA Marble Bar 69.69 119 P **P** **02 45 49.9 +0.3**
SOEI Soe 69.72 106 P **P** **02 45 49.2 -0.9**
YAK Yakutsk 69.75 29 P **P** **02 45 48.7 -0.6**
YAK Yakutsk 69.75 29*ce*P **P** **02 45 49.1 -0.2**
YAK pmax pmax
comp=Z,14nm,0.6s
JMIC Jan Mayen 69.87 341 LR LR 03 19 58.8
comp=Z,166nm,18.4s,baz=94,slow=39
LBMI Labuha 70.28 96 P **P** **02 45 51.8 -1.7**
comp=Z,683nmcomp=Z,52nm,1.0s
TIXI Tiksi 71.44 18 LR LR 03 20 03.1
comp=Z,300nm,21.0s,baz=191,slow=38
TIXI Tiksi 71.44 18 *i* P **P** **02 46 01.2 +1.8**
TIXI pmax pmax
comp=Z,11nm,1.2s
H01W3 Cape Leeuwin H 71.66 134 T T 04 04 00.5
baz=302,slow=75
H01W2 Cape Leeuwin H 71.67 134 T T 04 04 15.6
baz=302,slow=75
H01W1 Cape Leeuwin H 71.68 134 T T 04 03 56.4
baz=302,slow=75
BBTS Babate 71.95 281 LR LR 03 18 31.3
comp=Z,127nm,18.2s,baz=67,slow=36
BORG Borgarnes 73.44 334 LR LR 03 23 54.5
comp=Z,82nm,18.7s,baz=112,slow=40
FITZ Fitzroy Crossi 73.71 114 LR LR 03 13 07.4
comp=Z,66nm,19.3s,baz=294,slow=31
FITZ Fitzroy Crossi 73.71 114 P **P** **02 46 14.8 +0.9**
FITZ IAmb IAmb 02 46 17.6
comp=Z,16nm,1.4s
SIJI Sorong 73.99 95 LR LR 03 18 46.6
comp=Z,41nm,21.9s,baz=190,slow=36
DAG Danmarks Havn 74.03 347 *i* P **P** **02 46 14.0 -0.8**
DAG IAmb IAmb 02 46 21.9
comp=Z,16nm,0.9s
DBG Daneborg 74.03 344 *i* P **P** **02 46 15.5 +0.7**
DBG IAmb IAmb 02 46 33.3
comp=Z,23nm,1.5s
JSD Sado 74.33 54 P **P** **02 46 18.3 +1.0**
MJAR Matsushiro Arr 74.42 55 LR LR 03 21 02.1
comp=Z,142nm,21.9s,baz=280,slow=38
JHJ Hachijo jima 2 76.07 59 LR LR
comp=Z,90nm,20.1s,baz=177,slow=37 03 21 49.9
YSS Yuzh-Sakhalins 76.86 44 *e*P **P** **02 46 27.3 -4.2**
YSS MLR MLR
comp=Z,200nm,13.0s
MTN Manton Dam 77.06 107 P **P** **02 46 33.9 +0.7**
SUMG Summit 79.28 342 P **P** **02 46 45.0 0.0**
SUMG IAmb IAmb 02 46 48.3
comp=Z,10nm,0.9s
SUMG Summit 79.28 342 P **P** **02 46 45.0 0.0**
SUMG pmax pmax
comp=Z,10.0nm,0.9s
SUMG Summit 79.28 342 *i* P **P** **02 46 45.2 +0.2**
SUMG IAmb IAmb 02 46 59.8
comp=Z,25nm,1.4s
MA2 Magadan 80.03 31 LR LR 03 24 15.6
comp=Z,110nm,21.3s,baz=273,slow=37
MAW Mawson 80.81 178 P **P** **02 46 53.0 +0.3**
comp=Z,18nm,0.9s,baz=11,slow=6.1,SNR=23
MAW LR LR 03 16 22.5
comp=Z,147nm,18.1s,baz=7.0,slow=31
comp=Z,18nm,0.9s
MAW Mawson 80.81 178 P **P** **02 46 53.3 +0.7**
MAW Mawson 80.81 178 P **P** **02 46 53.0 +0.3**
NEEM North Greenlan 81.11 348 *i* P **P** **02 46 54.8 0.0**
NEEM IAmb IAmb 02 46 57.0
comp=Z,16nm,1.0s
WB0 Warramunga Arr 82.09 112 P **P** **02 47 00.6 0.0**
WB0 IAmb IAmb 02 47 06.2
comp=Z,30nm,1.6s
WRA Warramunga Arr 82.09 113 P **P** **02 46 58.0 -2.6**
comp=Z,3.5nm,1.1s,baz=298,slow=4.2,SNR=18
comp=Z,3.5nm,1.1s
WRA Warramunga Arr 82.09 113 P **P** **02 46 58.0 -2.6**
WRAB Tennant Creek 82.10 113 P **P** **02 46 57.1 -3.5**
WRAB IAmb IAmb 02 47 06.7
comp=Z,7.8nm,0.8s
WRAB Tennant Creek 82.10 113*ce*P **P** **02 46 59.3 -1.3**
WRAB pmax pmax
comp=Z,17nm,2.5s
WB2 Warramunga Arr 82.10 113 P **P** **02 46 58.7 -2.0**
WB2 IAmb IAmb 02 47 07.4
comp=Z,9.2nm,1.0s
WR0 Warramunga Arr 82.28 113 P **P** **02 47 01.3 -0.2**
WR0 IAmb IAmb 02 47 06.3
comp=Z,12nm,1.1s
ASAR Alice Springs 82.82 116 P **P** **02 47 01.9 -2.5**
comp=Z,3.5nm,0.8s,baz=292,slow=5.1,SNR=22
ASAR LR LR 03 18 20.3
comp=Z,80nm,19.4s,baz=298,slow=32
comp=Z,3.5nm,0.8s
ASAR Alice Springs 82.82 116 P **P** **02 47 02.6 -1.8**
ASAR Alice Springs 82.82 116 P **P** **02 47 02.6 -1.8**
DY2G Dye2 83.44 337 *i* P **P** **02 47 07.2 +0.2**
DY2G IAmb IAmb 02 47 15.5
comp=Z,34nm,1.2s
GUMO Guam 84.01 77 LR LR 03 22 47.1
comp=Z,31nm,20.7s,baz=273,slow=34
BILL Bilibino 84.41 21 *i* P **P** **02 47 13.6 +2.0**
BILL pmax pmax
comp=Z,9.0nm,1.0s
SFJD Kangerlussuaq 84.89 338 LR LR 03 27 19.8
comp=Z,58nm,21.9s,baz=64,slow=37
SFJD Kangerlussuaq 84.89 338 *i* P **P** **02 47 13.4 -0.6**
SFJD IAmb IAmb 02 47 20.0
comp=Z,101nm,1.9s
EUNU Eureka 84.93 354 P **P** **02 47 14.9 +0.7**
PETK Petropavlovsk- 85.21 37 LR LR 03 28 13.3
comp=Z,163nm,21.9s,baz=281,slow=38
NVL N'lazarevskaya 89.59 194 *e*P **P** **02 47 40.7 +4.2**
NVL pmax pmax
comp=Z,12nm,1.0s
RES Resolute Bay 90.52 353 LR LR 03 34 01.7
comp=Z,84nm,19.5s,baz=22,slow=39
STKA Stephens Creek 91.66 122 LR LR 03 22 08.5
comp=Z,75nm,21.8s,baz=214,slow=31
FRB Frobisher Bay 92.98 339 LR LR 03 33 07.6
comp=Z,100nm,20.2s,baz=28,slow=38
SNAA Sanae 93.86 196 LR LR 03 19 47.6
comp=Z,50nm,20.5s,baz=316,slow=29
SNAA Sanae 93.86 196*ce*P **P** **02 47 57.1 +0.7**
SNAA pmax pmax
comp=Z,3.0nm,1.2s
SHEM Shemya Is, Ala 94.52 33 LR LR 03 34 12.1
comp=Z,119nm,21.2s,baz=282,slow=38
C23K Itkilik River 94.66 10 P **P** **02 48 01.4 +1.2**
baz=332
NBRF Rio Formoso - 94.93 262 *e*P **P** **02 48 00.1 -2.4**
RCBR Riachuelo 95.05 265 *e*P **P** **02 48 00.9 -2.3**
D23K Nanushuk River 95.43 10 P **P** **02 48 05.1 +1.3**
baz=332
D25K Kavik River 95.78 8 P **P** **02 48 05.9 +0.4**
baz=336
C27K Jago River 95.85 7 P **P** **02 48 06.7 +1.0**
baz=339
TOLK Toolik Lake Re 95.90 10 P **P** **02 48 07.1 +1.1**
TOLK IAmb IAmb 02 48 14.3
comp=Z,8.4nm,1.0s
TOLK Toolik Lake Re 95.90 10 P **P** **02 48 06.4 +0.4**
baz=333
E22K Anaktuvuk Pass 95.96 11 P **P** **02 48 08.1 +1.8**
baz=331
NBAN Anadia - AL 96.25 262 *e*P **P** **02 48 07.0 -1.6**
F21K Alatna River 96.44 12 P **P** **02 48 08.5 +0.1**
baz=329
F22K John River 96.44 11 P **P** **02 48 09.5 +1.0**
baz=331
E24K Your Creek 96.59 10 P **P** **02 48 10.1 +1.0**
baz=334
E25K Arctic Village 97.00 9 P **P** **02 48 12.1 +1.1**
baz=337
F24K Squaw Lake 97.19 10 P Pdif 02 48 13.2 +1.3
baz=335
IMAR Indian Mountai 97.45 13 P Pdif 02 48 14.0 +0.9
F25K Christian Rive 97.48 9 P Pdif 02 48 14.0 +0.7
baz=337
G23K Bananza Creek 97.55 11 P **P** **02 48 13.6 +0.1**
baz=333
F26K Sheenjek River 97.60 8 P Pdif 02 48 14.4 +0.6
baz=338
SCHQ Schefferville 97.71 331 LR LR 03 34 50.8
comp=Z,79nm,20.6s,baz=118,slow=37
BMAR Burnt Mountain 97.79 9 P **P** **02 48 14.8 +0.3**
H21K Melozitna Rive 97.93 12 P **P** **02 48 15.0 -0.2**
H21K IAmb IAmb 02 48 22.7
comp=Z,4.5nm,1.1s
H21K Melozitna Rive 97.93 12 P Pdif 02 48 16.0 +0.8
baz=330
NBLA Lagarto - SE 97.98 261 *e*P **P** **02 48 13.2 -3.2**
G24K Hadweenzic Riv 98.00 10 P Pdif 02 48 16.1 +0.5
baz=335
H22K Ishtalitna Cre 98.01 12 P Pdif 02 48 16.2 +0.6
baz=331
INK Inuvik 98.15 4 LR LR 03 38 10.7
comp=Z,49nm,20.0s,baz=356,slow=39
G26K Porcupine Rive 98.35 8 P Pdif 02 48 18.0 +1.0
baz=339
H23K Yukon River 98.43 11 P Pdif 02 48 18.4 +1.0
H23K IAmb IAmb 02 48 25.4
comp=Z,4.5nm,1.1s
H23K Yukon River 98.43 11 P Pdif 02 48 18.1 +0.6
baz=333
MLY Manley 98.90 12 P **P** **02 48 19.6 0.0**
baz=332
PRP Porcupine Dome 99.41 10 P **Pdif** **02 48 22.9 +0.9**
baz=337
ILAR Eielson Array 99.87 11 P **Pdif** **02 48 24.0 +0.1**
comp=Z,0.4nm,0.9s,baz=318,slow=3.8,SNR=2.5
ILAR PP **PP** **02 52 28.4 +0.7**
comp=Z,1.0nm,1.1s,baz=327,slow=7.6,SNR=5.4
comp=Z,0.4nm,0.9s
ILAR Eielson Array 99.87 11 P **Pdif** **02 48 24.0 +0.1**
DZM Mont Dzumac 111.85 109 *e*LR LR 03 26 33.6
comp=Z,106nm,22.3s
PDAR Pinedale Array 123.00 349 PKP **PKPdf** **02 53 35.5 -1.1**
comp=Z,0.9nm,0.7s,baz=76,slow=2.7,SNR=9.7
NVAR Mina Array Bea 128.38 356 PKP **PKiKP** **02 53 48.0 +0.4**
comp=Z,3.2nm,1.0s,baz=26,slow=1.3,SNR=14
TXAR Lajitas Array 134.00 337 PKP **PKPdf** **02 53 56.8 -0.9**
comp=Z,0.3nm,0.8s,baz=92,slow=2.7,SNR=2.6
TXAR PP **PP** **02 56 23.4 -3.0**
comp=Z,0.2nm,0.8s,baz=41,slow=2.9,SNR=4.4
TBI Tubuai 152.20 115 *e*LR LR 03 45 15.5
comp=Z,156nm,32.8s
PPT2 Papeete2 153.16 103 *e*LR LR 03 45 41.3
comp=Z,68nm,24.0s

PRU **27** *02:49:11.8±0.0, 49°.87N×18°.44E, h0km*
IPEC 27 02:49:11.1±0.1, 49°.85N×18°.50E, h0km, ML1.2/4, Error ellipse: s-maj=1.7km s-min=0.7km az=162.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**267**	*e*PG	Pg	02 49 15.8	+0.3
OKC				*e*SG	Sg	02 49 18.7	+0.3
	comp=Z,36nm,0.4s						
MORC	**Moravsky Berou**	**0.62**	**264**	*e*Pg	Pg	02 49 23.4	+0.4
	baz=83						
MORC				*e*Sg	Sg	02 49 30.4	-0.7
	5.2nm,0.3s,baz=83						
MORC	**Moravsky Berou**	**0.62**	**264**	*e*PG	Pg	02 49 23.4	+0.4
MORC				*e*SG	Sg	02 49 30.4	-0.7
OJC	**Ojcow**	**0.92**	**66**	*e*Pg	Pg	02 49 28.6	-0.1
OJC				*e*Sg	Sg	02 49 41.2	+0.7
LANS	**Liptovska Anna**	**0.94**	**138**	*e*PG	Pb	02 49 30.1	-0.2
LANS				*e*SG	Sn	02 49 45.8	0.0
LANS				*e*LG	Lg	02 49 48.1	
JAVC	**Velka Javorina**	**1.13**	**209**	*e*Pg	Pg	02 49 32.9	+0.2
	baz=28						
JAVC	**Velka Javorina**	**1.13**	**209**	*e*PG	Pg	02 49 33.0	+0.3
KRLC	**Kraliky**	**1.13**	**282**	*e*PG	Pg	02 49 31.3	-1.5
KRLC				*e*SG	Sg	02 49 46.4	-1.1
	comp=Z,5.4nm,0.4s						
NIE	**Niedzica**	**1.25**	**110**	*e*Pg	Pn	02 49 36.3	+0.4
NIE				*e*Sg	Sn	02 49 53.9	+0.5
VRAC	**Vranov**	**1.35**	**247**	*e*Pg	Pg	02 49 36.3	-0.7
	baz=66						
VRAC				*e*Sg	Sg	02 49 53.4	-1.2
	2.8nm,0.3s,baz=66						
VRAC	**Vranov**	**1.35**	**247**	*e*PG	Pg	02 49 36.3	-0.7
VRAC				*e*SG	Sg	02 49 53.4	-1.2
VYHS	**Vyhne**	**1.37**	**171**	*e*PG	Pg	02 49 37.1	-0.3
VYHS				*e*SG	Sn	02 49 57.1	+0.7
DPC	**Dobruska-Polom**	**1.49**	**291**	*e*PG	Pn	02 49 38.4	-0.8
DPC				*e*SG	Sg	02 49 58.2	-0.7
	comp=Z,2.6nm,0.3s						
KRUC	**Moravsky**	**1.58**	**241**	*e*Pg	Pn	02 49 40.1	-0.3
	baz=59						
KRUC				*e*Sg	Sn	02 50 00.5	-1.1
	3.1nm,0.4s,baz=59						
KRUC	**Moravsky**	**1.58**	**241**	*e*PG	Pn	02 49 40.1	-0.3
KRUC				*e*SG	Sn	02 50 00.5	-1.1
OSTC	**Ostas**	**1.63**	**297**	*e*PG	Pn	02 49 40.0	-0.2
OSTC				*e*SG	Sn	02 50 02.7	-0.1
KHC	**Kasperske Hory**	**3.29**	**259**	*e*SG	Sg	02 50 55.3	-1.4

MOS **27** *02:50:58.5±2.0, 42°.84N×13°.14E, h10km, mb4.1/10, Error ellipse: s-maj=7.2km s-min=4.7km az=86.6*
NEIC **27** *02:50:59.3±1.3, 42°.86N±0°.05×13°.27E±0°.06, h4km±2km, mb4.2/10, Mwr4.1/41, ML4.0(ROM), Mwr4.0(VIE), Error ellipse: s-maj=8.1km s-min=5.6km az=196.0*
ROM **27** *02:50:59.3±0.0, 42°.843N±0°.003×13°.238E±0°.004, h8km, ML3.9/120, Mw4.0, Error ellipse: s-maj=0.3km s-min=0.1km az=242.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-1.18; Mθθ 0.25; Mφφ 0.94; Mrθ-0.04; Mrφ-0.49; Mθφ 0.33; Fault plane solution: M0 1.23262×10^15 NP1:φs 327.00000°, δ 38.00000°, λ -99.00000°. NP2:φs 158.00000°, δ 53.00000°, λ -83.00000°.*
MED_RC **27** *02:50:59.0±0.5, 42°.84N×13°.25E, h10km, MW4.3/9, Moment Tensor Solution. Mantle waves: s9,c11; Duration: 1!0 Moment tensor: Scale 10^15 Nm; Mrr-1.41±.26; Mθθ-0.66±.28; Mφφ 2.07±.15; Mrθ 2.59±.85; Mθφ-1.00±.21; Mφr-1.51±.45; Best double couple: M0 3.65000×10^15 NP1:φs 308.00000°, δ 77.00000°, λ -116.00000°. NP2: φs 194.00000°, δ 29.00000°, λ -27.00000°. Principal axes: T 3.6100, Plg28.0000°, Azm59.000°; N 0.0900, Plg26.0000°, Azm314.0000°; P -3.7000, Plg51.0000°, Azm188.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC **27** *02:51:00, 42°.83N×13°.16E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-1.31; Mθθ 0.12; Mφφ 1.19; Mrθ 0.44; Mθφ-0.39; Mφr 0.66; Fault plane solution: M0 1.54000×10^15 NP1:φs 323.76000°, δ 37.72000°, λ -123.12000°. NP2:φs 183.27000°, δ 59.18000°, λ -67.09000°. Principal axes: T 1.4173, Plg11.0000°, Azm257.0000°; N 0.2168, Plg20.0000°, Azm351.0000°; P -1.6341, Plg67.0000°, Azm138.0000°;*
IDC **27** *02:51:00.5±0.9, 42°.93N×13°.20E, h0km, mb3.8/8, mbtmp3.7/17, ML3.6/9, MS3.8/10 Error ellipse: s-maj=14.8km s-min=11.8km az=80.0*
PDG **27** *02:51:00.0±0.6, 42°.85N×13°.23E, h12km, ML4.1/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
LDG **27** *02:51:00.7±0.1, 42°.77N×13°.07E, h2km, Ml3.5/30, Error ellipse: s-maj=3.7km s-min=2.2km az=39.0*
BEO **27** *02:51:01.3±0.6, 42°.81N×13°.25E, h0km, ML3.9/10*
STR **27** *02:51:01.9±1.5, 43°N±6°×1°3E±1°2, h10km, mb3.9/24, Error ellipse: s-maj=0.0km s-min=0.0km az=100.7, preliminary*
PRU **27** *02:51:03.1±0.0, 42°.93N×13°.32E, h8km, M4.2*
ISC 27 02:51:00.0±0.6, 42°.83N±0°.01×13°.22E±0°.02, h7km±3km, n559, σ1!98/669, mb4.1/24, MS3.8/9, 57C-46D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1242	**Castelluccio d**	**0.01**	**242**	⇑P	**Pg**	**02 51 00.8**	**-0.7**
T1242				S	**Sg**	**02 51 01.9**	**-0.6**
NRCA	**Norcia**	**0.07**	**270**	Pg	**Pg**	**02 51 01.9**	**-0.1**
NRCA	**Norcia**	**0.07**	**270**	⇑P	**Pg**	**02 51 01.9**	**-0.1**
NRCA				S	**Sg**	**02 51 03.9**	**+0.5**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1214	**Arquata del Tr**	**0.07**	**184**	⇑P	**Pg**	**02 51 01.8**	**-0.2**
T1214				S	**Sg**	**02 51 03.8**	**+0.3**
MC2	**Monte Cornacci**	**0.08**	**347**	P	**Pg**	**02 51 01.8**	**-0.5**
MC2				S	**Sg**	**02 51 03.3**	**-0.5**
MC2				AML	AML		
MC2				AML	AML		
T1244	**Arquata del Tr**	**0.10**	**142**	P	**Pg**	**02 51 02.2**	**-0.1**
T1244				S	**Sg**	**02 51 04.2**	**+0.3**
MMO1	**Montemonaco**	**0.10**	**51**	⇑P	**Pg**	**02 51 01.4**	**-1.1**
MMO1				S	**Sg**	**02 51 03.0**	**-1.2**
MMO1				AML	AML		
	comp=E,13500μm,0.4s						
MMO1				AML	AML		
	comp=E,13450μm,0.4s						
MMO1				AML	AML		
	comp=N,40500μm,1.4s						
MMO1				AML	AML		
MMO1				AML	AML		
T1213	**Norcia, Frazio**	**0.13**	**211**	⇑P	**Pg**	**02 51 02.9**	**+0.1**
T1213				S	**Sg**	**02 51 06.2**	**+1.5**
T1202	**Accumoli, Fraz**	**0.13**	**177**	⇑P	**Pg**	**02 51 03.0**	**+0.1**
T1202				S	**Sg**	**02 51 05.8**	**+0.9**
T1212	**Cascia, Frazio**	**0.15**	**237**	⇑P	**Pg**	**02 51 03.4**	**+0.2**
T1212				S	**Sg**	**02 51 06.8**	**+1.5**
T1216	**Preci, Frazion**	**0.16**	**291**	⇑P	**Pg**	**02 51 03.4**	**+0.1**
T1241	**Roccafluvione,**	**0.16**	**82**	⇑P	**Pg**	**02 51 02.6**	**-0.7**
T1241				S	**Sg**	**02 51 05.2**	**-0.4**
T1204	**Amatrice, Fraz**	**0.17**	**155**	⇓P	**Pg**	**02 51 03.6**	**0.0**
T1204				S	**Sg**	**02 51 07.1**	**+1.0**
FEMA	**Monte Fema**	**0.18**	**316**	P	**Pg**	**02 51 03.9**	**+0.2**
FEMA				S	**Sg**	**02 51 07.0**	**+0.8**
FEMA				AML	AML		
	comp=E,65850μm,0.8s						
FEMA				AML	AML		
	comp=N,65800μm,0.6s						
FEMA				AML	AML		
	comp=E,65900μm,0.8s						
T1201	**Domo (RI)**	**0.18**	**172**	P	**Pg**	**02 51 04.0**	**+0.3**
T1201				S	**Sg**	**02 51 07.6**	**+1.4**

T1218	**Civita (PG)**	**0.18**	**204**	⇑P		**Pg**	**02 51 03.9**	**+0.2**
T1218				S		**Sg**	**02 51 07.7**	**+1.5**
T1243	**Rocca Santa Ma**	**0.22**	**129**	⇓P		**Pg**	**02 51 04.0**	**-0.4**
T1243				S		**Sg**	**02 51 07.7**	**+0.3**
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
FDMO	**Fiordimonte**	**0.22**	**335**	P		**Pg**	**02 51 04.4**	**-0.1**
FDMO				S		**Sg**	**02 51 08.2**	**+0.7**
FDMO				AML	AML			
	comp=N,76300µm,0.3s							
FDMO				AML	AML			
	comp=E,66500µm,0.2s							
CSP1	**Cessapalombo**	**0.26**	**358**	P		**Pg**	**02 51 05.0**	**-0.2**
CSP1				S		**Sg**	**02 51 09.3**	**+0.6**
CSP1				AML	AML			
	comp=E,49950µm,1.6s							
CSP1				AML	AML			
	comp=N,66450µm,0.3s							
CSP1				AML	AML			
	comp=N,66400µm,0.3s							
T1215	**Vallo di Nera,**	**0.26**	**263**	⇑P		**Pg**	**02 51 05.3**	**+0.2**
T1215				S		**Sb**	**02 51 10.5**	**-1.2**
LNSS	**Leonessa**	**0.27**	**209**	⇑P		**Pg**	**02 51 05.5**	**+0.2**
LNSS				S		**Sg**	**02 51 10.5**	**+1.7**
LNSS				AML	AML			
LNSS				AML	AML			
CESI	**CESI - Serrava**	**0.29**	**307**	⇑P		**Pg**	**02 51 05.7**	**0.0**
CESI				S		**Sg**	**02 51 11.0**	**+1.5**
CESI				AML	AML			
	comp=E,49250µm,0.3s							
CESI				AML	AML			
	comp=N,89450µm,0.3s							
RM33	**Pellescritta (**	**0.33**	**180**	P		**Pg**	**02 51 06.6**	**+0.2**
RM33				S		**Sg**	**02 51 11.9**	**+1.2**
RM33				AML	AML			
	comp=E,99700µm,1.3s							
RM33				AML	AML			
	comp=N,47350µm,1.6s							
RM33				AML	AML			
	comp=N,47250µm,1.6s							
RM33				AML	AML			
	comp=N,47350µm,1.6s							
RM33				AML	AML			
	comp=N,47200µm,1.6s							
RM33				AML	AML			
	comp=E,99000µm,1.3s							
RM33				AML	AML			
	comp=E,99700µm,1.3s							
CAMP	**Campotosto**	**0.33**	**154**	⇓P		**Pg**	**02 51 06.2**	**-0.4**
CAMP				S		**Sg**	**02 51 11.3**	**+0.4**
TERO	**Teramo**	**0.35**	**126**	⇓P		**Pg**	**02 51 06.4**	**-0.5**
TERO				S		**Sg**	**02 51 12.1**	**+0.4**
TERO				AML	AML			
TERO				AML	AML			
TERO				AML	AML			
TERO				AML	AML			
TERO				AML	AML			
TERO				AML	AML			
MNTP	**Montappone**	**0.36**	**31**	P		**Pg**	**02 51 07.0**	**0.0**
MNTP				AML	AML			
	comp=N,41150µm,1.3s							
MNTP				AML	AML			
	comp=E,46300µm,0.7s							
MNTP				AML	AML			
	comp=E,46250µm,0.7s							
OFFI	**Offida**	**0.36**	**74**	P		**Pg**	**02 51 07.3**	**+0.3**
MDAR	**Monte D'Aria**	**0.36**	**352**	P		**Pg**	**02 51 07.1**	**-0.1**
MDAR				S		**Sg**	**02 51 13.0**	**+1.1**
MDAR				AML	AML			
	comp=N,30400µm,1.3s							
MDAR				AML	AML			
	comp=E,25000µm,0.3s							
SEF1	**Sefro**	**0.37**	**328**	P		**Pg**	**02 51 07.4**	**+0.2**
SEF1				S		**Sg**	**02 51 13.5**	**+1.4**
SEF1				AML	AML			
	comp=E,46350µm,1.3s							
SEF1				AML	AML			
	comp=E,46400µm,1.3s							
SEF1				AML	AML			
	comp=N,60700µm,0.2s							
PIO1	**Pioraco**	**0.38**	**334**	P		**Pg**	**02 51 07.2**	**-0.3**
PIO1				AML	AML			
	comp=N,21700µm,0.3s							
PIO1				AML	AML			
	comp=E,16600µm,0.8s							
SSM1	**San Severino M**	**0.40**	**356**	P		**Pg**	**02 51 07.3**	**-0.4**
T1211	**Morro Reatino**	**0.40**	**222**	P		**Pg**	**02 51 08.0**	**+0.1**
T1211				S		**Sg**	**02 51 14.5**	**+1.4**
FIU1	**Fiuminata**	**0.41**	**330**	P		**Pg**	**02 51 07.9**	**-0.1**
FIU1				AML	AML			
	comp=E,15850µm,0.7s							
FIU1				AML	AML			
	comp=N,9865µm,1.5s							
ARRO	**Arrone**	**0.42**	**233**	P		**Pg**	**02 51 08.3**	**+0.1**
MTL1	**Matelica**	**0.45**	**340**	P		**Pg**	**02 51 08.5**	**-0.2**
MTL1				AML	AML			
	comp=N,36650µm,0.9s							
MTL1				AML	AML			
	comp=E,43550µm,0.8s							
ASSB	**Assisi San Ben**	**0.46**	**297**	P		**Pg**	**02 51 08.8**	**-0.1**
ASSB				S		**Sb**	**02 51 16.5**	**-1.0**
ASSB				AML	AML			
	comp=N,27500µm,0.3s							
ASSB				AML	AML			
	comp=E,34200µm,0.2s							
GIGS	**Gran Sasso**	**0.46**	**146**	P		**Pg**	**02 51 08.2**	**-0.8**
GIGS				AML	AML			
	comp=N,10295µm,0.7s							
GIGS				AML	AML			
	comp=E,9380µm,0.7s							
SNTG	**Esanatoglia**	**0.47**	**334**	P		**Pg**	**02 51 08.7**	**-0.3**
SNTG				S		**Sg**	**02 51 16.4**	**+1.2**
SNTG				AML	AML			
	comp=E,1028µm,1.0s							
SNTG				AML	AML			
	comp=E,8265µm,0.6s							
SNTG				AML	AML			
	comp=N,1595µm,0.3s							
SNTG				AML	AML			
	comp=N,13050µm,0.3s							
SNTG				AML	AML			
	comp=E,1025µm,1.0s							
EL6	**Elcito**	**0.50**	**350**	P		**Pg**	**02 51 09.3**	**-0.5**
EL6				AML	AML			
	comp=E,15900µm,0.3s							
EL6				AML	AML			
	comp=N,23500µm,0.2s							
TRTR	**Tortoreto Alta**	**0.51**	**93**	P		**Pg**	**02 51 10.4**	**+0.4**
TRTR				AML	AML			
	comp=N,96300µm,1.1s							
TRTR				AML	AML			
	comp=E,81100µm,0.6s							
CESX	**Cesi**	**0.52**	**245**	P		**Pg**	**02 51 09.8**	**-0.2**
CESX				AML	AML			
	comp=E,15850µm,1.6s							
CESX				AML	AML			
	comp=N,13350µm,0.9s							
CADA	**Capodarco di F**	**0.54**	**48**	P		**Pb**	**02 51 11.2**	**-0.5**
CADA				AML	AML			
	comp=E,43750µm,0.6s							
CADA				AML	AML			
	comp=N,43900µm,0.5s							
CING	**Cingoli**	**0.54**	**358**	P		**Pg**	**02 51 09.7**	**-0.8**
ATCC	**AVT- Casa Cast**	**0.55**	**310**	P		**Pg**	**02 51 10.5**	**-0.2**
ATCC				S		**Sb**	**02 51 19.6**	**-0.5**
ATCC				AML	AML			
	comp=E,19600µm,0.7s							
ATCC				AML	AML			
	comp=N,20450µm,1.6s							
ATCC				AML	AML			
	comp=E,19650µm,0.7s							
FOSV	**Fossato di Vic**	**0.57**	**324**	P		**Pg**	**02 51 09.9**	**-1.1**
FOSV				S		**Sb**	**02 51 20.0**	**-0.6**
FOSV				AML	AML			
	comp=E,16800µm,0.2s							
FOSV				AML	AML			
	comp=E,16850µm,0.2s							
FOSV				AML	AML			
	comp=N,69400µm,0.3s							
FIAM	**Fiamignano**	**0.57**	**187**	P		**Pg**	**02 51 10.8**	**-0.2**
FIAM				S		**Sg**	**02 51 19.6**	**+1.1**
PP3	**Marolino**	**0.61**	**28**	P		**Pg**	**02 51 11.9**	**+0.1**
PP3				AML	AML			
	comp=E,26100µm,0.4s							
PP3				AML	AML			
	comp=N,21850µm,0.5s							
PP3				AML	AML			
	comp=E,26100µm,0.6s							
PP3				AML	AML			
	comp=N,21900µm,0.5s							
PP3				AML	AML			
	comp=N,21250µm,0.4s							
PP3				AML	AML			
	comp=E,25700µm,0.6s							
FAGN	**Fagnano**	**0.63**	**154**	⇑P		**Pg**	**02 51 11.5**	**-0.7**
FAGN				AML	AML			
	comp=E,48900µm,0.7s							
FAGN				AML	AML			
	comp=N,38500µm,0.5s							
VCEL	**Villa Celiera**	**0.64**	**133**	⇓P		**Pg**	**02 51 11.8**	**-0.5**
VCEL				AML	AML			
	comp=E,34300µm,0.9s							
VCEL				AML	AML			
	comp=N,42000µm,0.5s							
VCEL				AML	AML			
	comp=E,34350µm,0.9s							
MURB	**Monte Urbino**	**0.66**	**310**	Pg		**Pg**	**02 51 12.4**	**-0.4**
MURB	**Monte Urbino**	**0.66**	**310**	P		**Pg**	**02 51 12.4**	**-0.4**
MURB				AML	AML			
	comp=E,29200µm,0.3s							
MURB				AML	AML			
	comp=E,29250µm,0.3s							
MURB				AML	AML			
	comp=E,34700µm,0.2s							
MURB				AML	AML			
	comp=N,30350µm,0.2s							
MURB				AML	AML			
	comp=N,29550µm,1.6s							
SSFR	**Montelago di S**	**0.68**	**332**	P		**Pg**	**02 51 12.5**	**-0.6**
SSFR				AML	AML			
	comp=N,32200µm,0.2s							
SSFR				AML	AML			
	comp=E,25800µm,0.8s							
SSFR				AML	AML			
	comp=N,34300µm,0.2s							
SSFR				AML	AML			
	comp=E,26300µm,0.8s							
SSFR				AML	AML			
	comp=N,32150µm,0.2s							
ARVD	**Arcevia**	**0.69**	**343**	P		**Pg**	**02 51 12.8**	**-0.6**
ARVD				S		**Sb**	**02 51 24.3**	**+0.1**
ARVD				AML	AML			
	comp=E,5625µm,0.8s							
ARVD				AML	AML			
	comp=N,3950µm,0.7s							
ATFO	**Monte Foce - G**	**0.71**	**319**	P		**Pg**	**02 51 13.1**	**-0.6**
ATTE	**AVT- Monte Tez**	**0.73**	**300**	P		**Pg**	**02 51 13.6**	**-0.5**
ATTE				AML	AML			
	comp=E,5655µm,0.7s							
ATTE				AML	AML			
	comp=N,5370µm,1.5s							
T0110	**Collepietro**	**0.74**	**145**	⇓P		**Pg**	**02 51 13.0**	**-1.1**
T0110				AML	AML			
	comp=N,28050µm,0.9s							
T0110				AML	AML			
	comp=E,36850µm,0.5s							
AOI	**Ancona**	**0.77**	**21**	P		**Pg**	**02 51 14.2**	**-0.6**
AOI				AML	AML			
	comp=E,4520µm,0.7s							
AOI				AML	AML			
	comp=N,5970µm,0.9s							
SRES	**S.Oreste - Sor**	**0.79**	**221**	⇑P		**Pg**	**02 51 14.4**	**-0.8**
SRES				AML	AML			
	comp=E,8440µm,0.8s							
SRES				AML	AML			
	comp=N,6695µm,1.5s							
ATVO	**AVT- Monte Val**	**0.81**	**313**	P		**Pg**	**02 51 14.7**	**-0.9**
ATVO				AML	AML			
	comp=E,6295µm,1.6s							
ATVO				AML	AML			
	comp=N,4240µm,1.3s							
COR1	**Corinaldo**	**0.81**	**349**	P		**Pg**	**02 51 15.6**	**0.0**
COR1				AML	AML			
	comp=E,13250µm,0.6s							
COR1				AML	AML			
	comp=N,13085µm,1.1s							
COR1				AML	AML			
	comp=E,7465µm,0.7s							
COR1				AML	AML			
	comp=N,12145µm,1.1s							
COR1				AML	AML			
	comp=E,7510µm,0.7s							
COR1				AML	AML			
	comp=N,12200µm,1.1s							
COR1				AML	AML			
	comp=E,13300µm,0.6s							
MGAB	**Montegabbione**	**0.81**	**276**	P		**Pg**	**02 51 15.4**	**-0.2**
MGAB				AML	AML			
	comp=E,10105µm,1.6s							
MGAB				AML	AML			
	comp=N,9980µm,1.3s							
MGAB				AML	AML			
	comp=N,10450µm,1.3s							
MGAB				AML	AML			
	comp=E,10120µm,1.6s							
MGAB				AML	AML			
	comp=N,9985µm,1.3s							
MGAB				AML	AML			
	comp=E,10300µm,1.6s							
PTQR	**Pietraquaria**	**0.82**	**170**	P		**Pg**	**02 51 14.7**	**-1.1**
PTQR				AML	AML			
	comp=N,5880µm,1.4s							
PTQR				AML	AML			
	comp=E,8750µm,0.8s							
ATMI	**Monte Miggiano**	**0.86**	**306**	P		**Pg**	**02 51 16.1**	**-0.4**
ATMI				AML	AML			
	comp=N,13950µm,1.6s							
ATMI				AML	AML			
	comp=E,12450µm,1.6s							
ATPI	**Pietralunga -**	**0.86**	**316**	P		**Pg**	**02 51 15.7**	**-0.8**
ATPI				AML	AML			
	comp=E,5095µm,0.5s							
ATPI				AML	AML			
	comp=E,5100µm,0.5s							
ATPI				AML	AML			
	comp=N,4730µm,1.1s							
PIEI	**Pieia**	**0.86**	**325**	P		**Pg**	**02 51 15.7**	**-0.9**
PIEI				AML	AML			
	comp=N,3600µm,1.5s							
PIEI				AML	AML			
	comp=E,3675µm,0.8s							
MPAG	**Monte Paganucc**	**0.86**	**337**	P		**Pg**	**02 51 16.1**	**-0.5**
MPAG				AML	AML			
	comp=N,6290µm,0.8s							
MPAG				AML	AML			
	comp=E,4845µm,0.9s							
MPAG				AML	AML			
	comp=N,6180µm,0.9s							
MPAG				AML	AML			
	comp=E,4850µm,0.9s							
MPAG				AML	AML			
	comp=E,4855µm,0.9s							
SENI	**Senigallia**	**0.87**	**1**	P		**Pb**	**02 51 17.2**	**-0.3**
SENI				AML	AML			
	comp=E,6950µm,0.9s							
SENI				AML	AML			
	comp=N,5542µm,0.8s							
SENI				AML	AML			
	comp=E,6940µm,0.9s							
SENI				AML	AML			
	comp=N,5630µm,0.8s							
MTCE	**Montecelio**	**0.88**	**204**	⇑P		**Pg**	**02 51 15.8**	**-1.2**
MTCE				AML	AML			
	comp=N,9175µm,0.8s							
MTCE				AML	AML			
	comp=E,12340µm,0.6s							
CERT	**Cerreto**	**0.90**	**191**	P		**Pg**	**02 51 16.1**	**-1.2**
CERT				AML	AML			
	comp=N,19000µm,0.5s							
CERT				AML	AML			
	comp=E,18550µm,0.7s							
NARO	**Abbazia di Nar**	**0.91**	**329**	P		**Pg**	**02 51 16.4**	**-1.0**
NARO				AML	AML			
	comp=E,4050µm,0.8s							
NARO				AML	AML			
	comp=N,3570µm,1.0s							
FSSB	**Fossombrone**	**0.92**	**340**	P		**Pg**	**02 51 16.9**	**-0.7**
FSSB				AML	AML			
	comp=E,10140µm,0.4s							
FSSB				AML	AML			
	comp=N,14400µm,0.3s							
FSSB				AML	AML			
	comp=E,10145µm,0.4s							
APEC	**Apecchio**	**0.93**	**321**	P		**Pg**	**02 51 17.4**	**-0.5**
APEC				AML	AML			
	comp=N,2020µm,1.5s							
APEC				AML	AML			
	comp=E,1620µm,1.4s							
SACS	**San Casciano d**	**0.96**	**271**	⇑P		**Pg**	**02 51 18.0**	**-0.5**
SACS				AML	AML			
	comp=N,7275µm,0.9s							
SACS				AML	AML			
	comp=E,7855µm,1.5s							
SACS				AML	AML			
	comp=N,7080µm,0.9s							
SACS				AML	AML			
	comp=E,7665µm,1.6s							
INTR	**Introdacqua**	**0.97**	**148**	⇓P		**Pg**	**02 51 16.8**	**-1.8**
INTR				AML	AML			
	comp=E,9µm,1.4s							
INTR				AML	AML			
	comp=N,22µm,0.6s							
INTR				AML	AML			
	comp=E,9085µm,1.4s							
INTR				AML	AML			
	comp=N,32600µm,0.6s							
INTR				AML	AML			
	comp=E,9µm,1.4s							
INTR				AML	AML			
	comp=N,22µm,0.6s							
BADI	**Badiali**	**0.98**	**314**	P		**Pg**	**02 51 18.0**	**-0.9**
BADI				AML	AML			
	comp=E,416µm,1.1s							
BADI				AML	AML			
	comp=E,416µm,1.1s							
BADI				AML	AML			
	comp=N,3900µm,0.6s							
VVLD	**Villa Vallelon**	**1.01**	**162**	⇑P		**Pg**	**02 51 18.1**	**-1.2**
VVLD				AML	AML			
	comp=N,8450µm,0.8s							
VVLD				AML	AML			
	comp=N,8455µm,0.8s							
VVLD				AML	AML			
	comp=E,12450µm,0.6s							
PE3	**Peglio**	**1.01**	**329**	P		**Pg**	**02 51 18.7**	**-0.7**
PE3				AML	AML			
	comp=E,22µm,0.3s							
PE3				AML	AML			
	comp=N,25µm,0.3s							
CAFR	**Castel Frentan**	**1.03**	**126**	P		**Pg**	**02 51 18.3**	**-1.5**
CAFR				AML	AML			
	comp=E,39µm,0.5s							
CAFR				AML	AML			
	comp=N,9320µm,0.9s							
CAFI	**Castiglion Fio**	**1.04**	**299**	P		**Pg**	**02 51 19.3**	**-0.7**
CAFI				AML	AML			
	comp=E,3915µm,0.7s							
CAFI				AML	AML			
	comp=N,4330µm,1.5s							
CAFI				AML	AML			
	comp=E,4085µm,0.7s							
CAFI				AML	AML			
	comp=N,4145µm,1.4s							
CAFI				AML	AML			
	comp=E,3920µm,0.7s							
GUAR	**Guarcino**	**1.04**	**176**	P		**Pg**	**02 51 20.0**	**0.0**
GUAR				AML	AML			
	comp=N,18650µm,0.8s							
GUAR				AML	AML			
	comp=E,13000µm,0.5s							
LATE	**Laterza**	**1.06**	**259**	Pg		**Pg**	**02 51 19.9**	**-0.5**
LATE	**Laterza**	**1.06**	**259**	⇑P		**Pg**	**02 51 19.7**	**-0.7**
LPEL	**Lama dei Pelig**	**1.06**	**137**	P		**Pg**	**02 51 18.7**	**-1.7**
LPEL				AML	AML			
	comp=N,5875µm,0.5s							
LPEL				AML	AML			
	comp=E,7020µm,1.3s							
PARC	**Parchiule**	**1.08**	**319**	P		**Pg**	**02 51 19.8**	**-1.0**
PARC				AML	AML			
	comp=E,4835µm,0.7s							
PARC				AML	AML			
	comp=N,3915µm,0.9s							
SSP9	**Sansepolcro**	**1.08**	**313**	P		**Pg**	**02 51 20.0**	**-0.9**
SSP9				AML	AML			
	comp=N,7345µm,1.6s							
SSP9				AML	AML			
	comp=E,5155µm,1.5s							
RMP	**Rome, Mte Porz**	**1.09**	**201**	AML	AML			
	comp=N,18900µm,0.6s							
RMP				AML	AML			
	comp=E,12150µm,0.7s							
VIVA	**Pratoni del Vi**	**1.13**	**197**	AML	AML			
	comp=E,21550µm,0.5s							
VIVA				AML	AML			
	comp=N,23950µm,1.3s							
MCIV	**Monte Civitell**	**1.13**	**268**	⇑P		**Pg**	**02 51 20.9**	**-0.9**
MCIV				AML	AML			
	comp=N,2165µm,1.6s							
MCIV				AML	AML			
	comp=E,2345µm,1.4s							
RDP	**Rocca di Papa**	**1.14**	**199**	AML	AML			
	comp=E,22200µm,0.7s							
RDP				AML	AML			
	comp=N,30250µm,1.2s							
PESA	**Pesaro**	**1.14**	**346**	AML	AML			
	comp=E,7475µm,0.9s							
PESA				AML	AML			
	comp=N,8060µm,0.8s							
SF04	**Casetta**	**1.14**	**271**	P		**Pg**	**02 51 21.7**	**-0.2**
SF04				AML	AML			
	comp=E,2260µm,1.2s							
SF04				AML	AML			
	comp=N,2280µm,0.9s							
POFI	**Posta Fibreno**	**1.18**	**162**	P		**Pg**	**02 51 20.9**	**-1.6**
POFI				AML	AML			
	comp=N,4560µm,1.1s							
POFI				AML	AML			
	comp=E,5445µm,0.6s							
POFI				AML	AML			
	comp=N,4660µm,1.1s							
POFI				AML	AML			
	comp=E,5680µm,0.6s							
TOLF	**Tolfa**	**1.18**	**230**	⇑P		**Pg**	**02 51 21.6**	**-1.1**
TOLF				AML	AML			
	comp=E,4865µm,0.6s							
TOLF				AML	AML			
	comp=N,3355µm,1.0s							
CRE	**Caprese Michel**	**1.21**	**311**	P		**Pg**	**02 51 22.3**	**-1.0**
CRE				AML	AML			
	comp=N,2730µm,1.4s							
CRE				AML	AML			
	comp=E,1790µm,1.6s							
SF01	**Poggio Pratacc**	**1.22**	**270**	P		**Pg**	**02 51 22.9**	**-0.4**
SF01				AML	AML			
	comp=N,3905µm,0.9s							
SF01				AML	AML			
	comp=E,2935µm,0.7s							
LRP	**Arpino**	**1.22**	**167**	AML	AML			
	comp=E,4045µm,0.6s							
LRP				AML	AML			
	comp=N,6995µm,0.6s							
GIUL	**Giuliano Di Ro**	**1.27**	**179**	P		**Pn**	**02 51 24.4**	**+0.2**
GIUL				AML	AML			
	comp=N,6055µm,1.2s							
GIUL				AML	AML			
	comp=E,4510µm,0.6s							
ARCI	**Arcidosso**	**1.28**	**271**	P		**Pn**	**02 51 24.0**	**-0.4**
ARCI				AML	AML			
	comp=E,1076µm,1.6s							
ARCI				AML	AML			
	comp=N,1060µm,1.2s							
RNI2	**Rionero Sannit**	**1.33**	**148**	P		**Pn**	**02 51 23.4**	**-1.6**
LATB	**Latina**	**1.35**	**188**	AML	AML			
	comp=N,1655µm,0.8s							
LATB				AML	AML			
	comp=E,2305µm,1.6s							
CERA	**Filignano**	**1.37**	**154**	P		**Pn**	**02 51 23.8**	**-1.8**
CERA				AML	AML			
	comp=E,8305µm,0.7s							
CERA				AML	AML			
	comp=N,5880µm,0.7s							
CERA				AML	AML			
	comp=N,6135µm,0.7s							
CERA				AML	AML			
	comp=E,8035µm,0.7s							
FRES	**Fresagrandinar**	**1.38**	**128**	P		**Pb**	**02 51 26.1**	**0.0**

FRES AML AML
comp=E,4010µm,0.6s
FRES AML AML
comp=N,4100µm,0.8s
ASQU Asqua 1.42 313 AML AML
comp=N,2130µm,0.8s
ASQU AML AML
comp=E,2040µm,0.6s
TRIV Trivento 1.46 137 ⇓P **Pb 02 51 27.7 +0.3**
TRIV AML AML
comp=E,7680µm,0.8s
TRIV AML AML
comp=N,7270µm,0.8s
TRIV AML AML
comp=N,7095µm,0.6s
TRIV AML AML
comp=E,7335µm,0.8s
SFI Santa Sofia 1.46 317 AML AML
comp=N,2125µm,1.3s
SFI AML AML
comp=N,2130µm,1.3s
SFI AML AML
comp=E,1780µm,1.4s
SFI AML AML
comp=E,1790µm,1.4s
CSNT Castellina Chi 1.55 295 ⇑P **Pn 02 51 27.4 -0.5**
CSNT AML AML
comp=E,921µm,1.1s
CSNT AML AML
comp=N,835µm,1.2s
OSSC Osservatorio P 1.60 296 Pn **Pn 02 51 28.5 -0.1**
RUFI Rufina 1.60 310 P **Pn 02 51 28.9 +0.2**
RUFI AML AML
comp=E,1545µm,1.4s
RUFI AML AML
comp=N,1765µm,1.4s
VAGA Valle Agricola 1.61 152 P **Pn 02 51 29.3 +0.4**
VAGA AML AML
comp=N,3255µm,0.8s
VAGA AML AML
comp=E,2225µm,1.3s
VAGA AML AML
comp=E,2305µm,1.3s
VAGA AML AML
comp=N,3375µm,0.8s
BSSO Busso 1.65 141 P **Pn 02 51 30.1 +0.7**
LMD Lutirano 1.66 319 AML AML
comp=N,1715µm,1.2s
LMD AML AML
comp=E,1395µm,1.2s
CIGN Sant'Elia a Pi 1.72 133 ⇓P **Pn 02 51 31.2 +0.8**
CIGN AML AML
comp=E,2635µm,1.0s
CIGN AML AML
comp=N,2705µm,0.8s
TRIF Trifonti 1.72 280 ⇑P **Pn 02 51 29.8 -0.5**
TRIF AML AML
comp=N,598µm,0.6s
TRIF AML AML
comp=E,764µm,1.0s
CASP Castiglione de 1.73 269 Pn **Pn 02 51 29.8 -0.6**
CASP Castiglione de 1.73 269 ⇑P **Pn 02 51 29.8 -0.6**
CASP AML AML
comp=N,598µm,1.2s
CASP AML AML
comp=E,576µm,1.6s
MODR Mondragone 1.76 163 ⇓P **Pn 02 51 31.1 +0.3**
MODR AML AML
comp=N,2030µm,0.8s
MODR AML AML
comp=E,1440µm,0.9s
DUGI Dugi Otok 1.77 49 *e*Pn **Pn 02 51 30.4 -0.6**
MELA Melanico ??? S 1.81 128 ⇓P **Pn 02 51 32.2 +0.6**
MELA AML AML
comp=E,6575µm,1.3s
MELA AML AML
comp=E,6850µm,1.3s
MELA AML AML
comp=N,9125µm,1.3s
MELA AML AML
comp=N,8770µm,1.3s
SEI Scarperia 1.82 313 AML AML
comp=E,1480µm,0.6s
SEI AML AML
comp=N,2495µm,0.5s
GATE Gambatesa 1.82 136 AML AML
comp=E,2010µm,0.9s
GATE AML AML
comp=E,1480µm,1.2s
GATE AML AML
comp=N,1590µm,0.8s
GATE AML AML
comp=N,1535µm,0.8s
TREM Isole Tremiti 1.84 112 ⇓P **Pn 02 51 32.4 +0.5**
TREM AML AML
comp=N,5615µm,0.8s
TREM AML AML
comp=E,5675µm,0.7s
MPPT Montemurlo 1.91 307 P **Pn 02 51 33.3 +0.3**
MPPT AML AML
comp=N,773µm,1.3s
MPPT AML AML
comp=E,1175µm,1.3s
VITU Vitulano (BN) 1.96 147 AML AML
comp=N,1980µm,0.7s
VITU AML AML
comp=N,1865µm,0.7s
VITU AML AML
comp=E,650µm,1.2s
VITU AML AML
comp=E,2020µm,0.6s
VIRC Vir 1.98 42 *e*Pn **Pn 02 51 33.2 -0.7**
MTCR Monte La Croce 2.01 307 AML AML
comp=E,914µm,1.5s
MTCR AML AML
comp=N,1265µm,0.8s
APRC Apricena 2.03 121 ⇓P **Pn 02 51 34.8 +0.1**
APRC AML AML
comp=N,3245µm,0.7s
APRC AML AML
comp=E,2895µm,0.7s
MOCO Biccari - m.te 2.06 135 ⇓P **Pn 02 51 36.2 +1.2**
MOCO AML AML
comp=E,1745µm,0.8s
MOCO AML AML
comp=N,816µm,1.5s
MOCO AML AML
comp=N,825µm,1.5s
MOCO AML AML
comp=E,1780µm,0.8s
PAOL Paolisi 2.06 150 Pn **Pn 02 51 35.9 +0.7**
MORI Morici 2.09 60 *e*Pn **Pn 02 51 34.9 -0.5**
NVLJ Novalja 2.10 34 *e*Pn **Pn 02 51 35.1 -0.5**
BRJN Brijuni 2.11 10 *e*Pn **Pn 02 51 34.9 -0.7**
BRJN Brijuni 2.11 10 P **Pn 02 51 35.0 -0.7**
POPM Popiglio 2.16 305 P **Pn 02 51 35.6 -0.8**
POPM AML AML
comp=E,600µm,1.5s
POPM AML AML
comp=N,608µm,1.6s
SGRT San Giovanni R 2.16 119 Pn **Pn 02 51 36.3 -0.2**
SGRT San Giovanni R 2.16 119 ⇓P **Pn 02 51 36.6 +0.1**
SGRT AML AML
comp=E,2280µm,0.7s
SGRT AML AML
comp=N,3095µm,0.7s
CELB S.Piero in Cam 2.21 269 P **Pn 02 51 36.4 -0.8**
CELB AML AML
comp=E,228µm,1.6s
CELB AML AML
comp=N,288µm,1.6s
ZCCA Zocca 2.22 314 Pn **Pn 02 51 36.8 -0.5**
RABC Rab 2.23 30 *e*Pn **Pn 02 51 36.8 -0.5**
MAIM Mastiano 2.26 299 P **Pn 02 51 37.6 -0.2**
MAIM AML AML
comp=E,536µm,1.4s
MAIM AML AML
comp=N,494µm,0.8s
BDI Bagni Di Lucca 2.27 304 P **Pn 02 51 37.3 -0.6**
BDI AML AML
comp=N,224µm,1.5s
BDI AML AML
comp=E,762µm,0.7s
BDI AML AML
comp=E,280µm,0.8s
BDI AML AML
comp=N,469µm,1.0s

MSAG Monte S. Angel 2.29 118 ⇓P **Pn 02 51 38.3 0.0**
MSAG AML AML
comp=E,2955µm,0.6s
MSAG AML AML
comp=N,4905µm,0.6s
MSAG AML AML
comp=E,2650µm,0.6s
MSAG AML AML
comp=N,4960µm,0.6s
SMRN Sveta Marina 2.30 17 *e*Pn **Pn 02 51 37.7 -0.7**
CARD Cardoso 2.32 302 AML AML
comp=N,594µm,1.0s
CARD AML AML
comp=E,489µm,1.3s
CAFE Carife 2.35 139 ⇓P **Pn 02 51 40.6 +1.5**
CAFE AML AML
comp=E,1124µm,1.0s
CAFE AML AML
comp=N,1135µm,1.6s
CAFE AML AML
comp=N,1140µm,1.6s
CAFE AML AML
comp=E,1155µm,1.0s
HVAR Hvar 2.40 81 *e*Pn **Pn 02 51 39.1 -0.5**
HVAR Hvar 2.40 81 ⇓P **Pn 02 51 39.3 -0.4**
SNAL S. Angelo Dei 2.42 141 P **Pn 02 51 41.4 +1.4**
SNAL AML AML
comp=N,1890µm,1.1s
SNAL AML AML
comp=E,1895µm,1.2s
SNAL AML AML
comp=E,1900µm,1.2s
SNAL AML AML
comp=N,1750µm,1.1s
GSCL Gusciola 2.44 309 P **Pn 02 51 40.9 +0.6**
GSCL AML AML
comp=N,777µm,1.0s
GSCL AML AML
comp=E,734µm,1.1s
VLC Villacollemand 2.45 304 Pn **Pn 02 51 39.7 -0.6**
VLC Villacollemand 2.45 304 AML AML
comp=E,424µm,1.5s
VLC AML AML
comp=E,423µm,1.5s
VLC AML AML
comp=N,484µm,1.4s
VLC AML AML
comp=N,480µm,1.3s
UDBI Udbina 2.51 47 *e*Pn **Pn 02 51 41.9 +0.7**
MCRV Calabrutti - M 2.52 144 AML AML
comp=E,640µm,1.3s
MCRV AML AML
comp=N,671µm,0.9s
CAPA Cerignola FG 2.56 130 AML AML
comp=E,3425µm,1.1s
CAPA AML AML
comp=N,2945µm,1.0s
VULT Monte Vulture 2.59 136 ⇓P **Pn 02 51 43.3 +0.8**
VULT AML AML
comp=N,2330µm,1.0s
VULT AML AML
comp=N,2435µm,1.0s
VULT AML AML
comp=E,1470µm,0.8s
VULT AML AML
comp=E,1455µm,0.8s
EQUI Equi 2.60 302 P **Pn 02 51 42.2 -0.2**
EQUI AML AML
comp=N,306µm,1.5s
EQUI AML AML
comp=E,267µm,0.7s
KIJV Kijevo 2.60 62 *e*Pn **Pn 02 51 42.3 -0.2**
RIY Rijeka 2.65 20 *e*Pn **Pn 02 51 42.8 -0.4**
MRLC Muro Lucano 2.68 140 ⇓P **Pn 02 51 44.6 +1.0**
MRLC AML AML
comp=E,705µm,0.9s
MRLC AML AML
comp=N,643µm,1.0s
PLIT Plitvice 2.69 40 *e*Pn **Pn 02 51 43.9 +0.3**
LSTV Lastovo 2.71 90 *e*Pn **Pn 02 51 43.2 -0.6**
PLMA Palmaria, Port 2.74 298 AML AML
comp=N,230µm,0.6s
PLMA AML AML
comp=E,184µm,1.4s
TEOL Teolo 2.76 337 Pn **Pn 02 51 44.3 -0.4**
SKDS Skadanscina 2.77 12 *e*Pn **Pn 02 51 43.8 -1.0**
SKDS Skadanscina 2.77 12 *i* Pn **Pn 02 51 44.0 -0.9**
SKDS *i* Sn **Sn 02 52 19.2 +0.7**
SKDS IAML 02 52 37.0
comp=Z,125nm,0.4s
PALZ Palazzo San Ge 2.79 132 ⇓P **Pn 02 51 45.8 +0.8**
PALZ AML AML
comp=E,2430µm,1.1s
PALZ AML AML
comp=N,2230µm,0.8s
CDRU Civita di Ruta 2.82 146 P **Pn 02 51 46.1 +0.6**
CDRU AML AML
comp=N,207µm,1.2s
CDRU AML AML
comp=E,334µm,0.9s
GRAM Graiana 2.82 307 AML AML
comp=N,668µm,1.6s
GRAM AML AML
comp=E,712µm,1.6s
MAKA Makarska 2.82 79 *e*Pn **Pn 02 51 45.7 +0.2**
MRVN Minervino Murg 2.84 128 AML AML
comp=E,564µm,1.3s
MRVN AML AML
comp=N,715µm,0.9s
PRMA PARMA 2.85 314 Pn **Pn 02 51 47.1 +1.3**
ACER Acerenza 2.89 134 ⇓P **Pn 02 51 47.1 +0.6**
ACER AML AML
comp=N,1185µm,0.8s
ACER AML AML
comp=N,1258µm,0.8s
ACER AML AML
comp=E,1160µm,0.9s
ACER AML AML
comp=E,1205µm,0.9s
TRI Trieste 2.90 8 **Pn 02 51 45.6 -0.9**
TRI Trieste 2.90 8 P **Pn 02 51 45.6 -0.9**
TRI Trieste 2.90 8 AML AML
comp=N,330µm,1.1s
TRI AML AML
comp=E,351µm,0.8s
A050A Klekovaca 2.92 54 *e*Pn **Pn 02 51 47.7 +0.9**
RICI Ricice 2.94 76 *e*Pn **Pn 02 51 47.6 +0.5**
CMPR Campora 2.96 147 AML AML
comp=E,292µm,0.8s
CMPR AML AML
comp=N,225µm,0.8s
SMPL Sampolo 3.00 257 P **Pn 02 51 47.9 -0.1**
SMPL Sampolo 3.00 257 P **Pn 02 51 48.2 +0.2**
SMPL AML AML
comp=E,50µm,1.1s
SMPL AML AML
comp=N,70µm,1.4s
BOJS Bojanci 3.04 28 *e*Pn **Pn 02 51 48.4 -0.1**
BOJS Bojanci 3.04 28 P **Pn 02 51 49.0 +0.5**
BOJS AML AML
comp=E,1425µm,0.9s
BOJS AML AML
comp=N,743µm,1.0s
MSSA Maissana 3.07 300 Pn **Pn 02 51 48.6 -0.4**
MSSA Maissana 3.07 300 P **Pn 02 51 48.9 0.0**
MSSA AML AML
comp=E,249µm,0.7s
MSSA AML AML
comp=N,254µm,1.2s
PGF Pioggiola 3.12 266 *e*P **Pn 02 51 50.3 +0.6**
PGF *e*Sn **Sn 02 52 22.3 -5.0**
comp=N,82nm,1.0s
PGF Pioggiola 3.12 266 P **Pn 02 51 50.5 +0.8**
SRKY Kupres RS 3.13 65 *e*Pn **Pn 02 51 51.6 +1.8**
PTRP Pietrapertosa 3.14 136 AML AML
comp=E,914µm,0.9s
PTRP AML AML
comp=N,1135µm,1.0s
SABO M.te Sabotino 3.16 5 **Pn 02 51 49.3 -0.8**
SABO M.te Sabotino 3.16 5 P **Pn 02 51 49.5 -0.6**
SABO AML AML
comp=N,3685µm,1.0s
SABO AML AML
comp=E,731µm,0.6s
SABO AML AML
comp=E,2740µm,0.6s

SABO AML AML
comp=N,956µm,0.6s
AMUR Altamura 3.18 126 P **Pn 02 51 51.0 +0.6**
A251A Rujevac 3.18 43 *e*Pn **Pn 02 51 50.8 +0.4**
MTSN Montesano sull 3.19 143 ⇓P **Pn 02 51 52.2 +1.5**
MTSN AML AML
comp=E,451µm,1.6s
MTSN AML AML
comp=N,362µm,1.2s
BULG Bulgheria - Ca 3.20 149 AML AML
comp=E,240µm,1.6s
BULG AML AML
comp=N,378µm,0.9s
ROVR Rover Verones 3.21 332 P **Pn 02 51 51.7 +0.8**
ROVR AML AML
comp=E,149µm,0.8s
ROVR AML AML
comp=N,190µm,0.8s
CGRP Cima Grappa 3.21 342 P **Pn 02 51 51.3 +0.3**
CGRP AML AML
comp=E,814µm,1.0s
CGRP AML AML
comp=N,652µm,0.8s
CGRP AML AML
comp=N,640µm,0.7s
CGRP AML AML
comp=E,822µm,1.0s
OZLJ Ozalj 3.22 29 *e*Pn **Pn 02 51 50.6 -0.2**
MGRS Mrkonjic Grad 3.22 59 *e*Pn **Pn 02 51 51.8 +0.8**
VARN Col Varnada, M 3.26 346 P **Pn 02 51 51.5 -0.1**
VARN AML AML
comp=N,612µm,0.8s
VARN AML AML
comp=N,625µm,1.6s
VARN AML AML
comp=E,866µm,0.7s
VARN AML AML
comp=E,856µm,0.7s
STON Ston 3.30 88 *e*Pn **Pn 02 51 51.0 -0.9**
STON Ston 3.30 88 *e*Pn **Pn 02 51 50.7 -1.3**
STON Ston 3.30 88 *e*Pn **Pn 02 51 51.1 -0.9**
STON *e*Sn **Sn 02 52 30.1 -1.3**
STON Ston 3.30 88 AML AML
comp=N,398µm,1.2s
STON AML AML
comp=E,306µm,0.9s
PRIJ Prijedor 3.31 49 *e*Pn **Pn 02 51 53.4 +1.2**
LJU Ljubljana 3.34 16 AML AML
comp=N,2785µm,0.6s
LJU AML AML
comp=E,2705µm,0.8s
DOSS Dosso del Somm 3.38 335 P **Pn 02 51 54.4 +1.2**
DOSS AML AML
comp=N,412µm,1.6s
DOSS AML AML
comp=E,504µm,1.6s
DOSS AML AML
comp=E,404µm,0.6s
DOSS AML AML
comp=N,480µm,1.6s
SALO Salr 3.39 326 **Pn 02 51 53.1 -0.2**
SALO Salr 3.39 326 AML AML
comp=N,622µm,0.9s
SALO AML AML
comp=E,501µm,1.2s
SALO AML AML
comp=N,666µm,1.6s
SALO AML AML
comp=E,468µm,1.1s
CRES Cresnjev 3.40 27 *e*Pn **Pn 02 51 53.8 +0.4**
MATE Matera 3.40 129 ⇑P **Pn 02 51 54.6 +1.2**
MATE ⇓S **Sn 02 52 35.5 +1.5**
MATE Matera 3.40 129 AML AML
comp=N,871µm,0.6s
MATE AML AML
comp=E,600µm,0.7s
MPRI Monte Prat 3.41 357 P **Pn 02 51 53.8 +0.1**
MPRI AML AML
comp=E,548µm,1.6s
MPRI AML AML
comp=N,790µm,0.9s
AJAC Base Areonaval 3.42 256 P **Pn 02 51 54.8 +1.1**
VINO Villanova 3.42 1 P **Pn 02 51 53.2 -0.6**
VINO AML AML
comp=E,240µm,0.7s
VINO AML AML
comp=N,274µm,0.5s
GEPF Gemona 3.44 359 P **Pn 02 51 53.4 -0.5**
GEPF AML AML
comp=E,290µm,0.5s
GEPF AML AML
comp=N,396µm,0.9s
A051A Mrakovica 3.44 49 *e*Pn **Pn 02 51 53.4 -0.7**
STAL STALIGIAL 3.44 354 **Pn 02 51 53.2 -0.9**
STAL STALIGIAL 3.44 354 P **Pn 02 51 54.1 0.0**
STAL AML AML
comp=E,454µm,0.7s
STAL AML AML
comp=N,488µm,0.8s
STAL AML AML
comp=N,428µm,0.7s
STAL AML AML
comp=E,576µm,0.8s
CUC Castrocucco 3.45 145 Pn **Pn 02 51 55.2 +1.1**
CRAC Craco 3.45 135 P **Pn 02 51 55.0 +0.9**
CRAC AML AML
comp=N,1240µm,1.0s
CRAC AML AML
comp=E,1133µm,1.5s
BLY Banja Luka 3.45 55 *e*Pn **Pn 02 51 55.6 +1.5**
BLY Banja Luka 3.45 55 *e*Pn **Pn 02 51 57.1 +3.0**
MAGA Magasa 3.48 329 P **Pn 02 51 55.4 +0.8**
MAGA AML AML
comp=E,1565µm,0.7s
MAGA AML AML
comp=N,620µm,0.4s
LTRZ Laterza 3.50 128 P **Pn 02 51 55.5 +0.7**
CIMO Cimolais 3.52 351 Pn **Pn 02 51 54.5 -0.6**
CIMO Cimolais 3.52 351 P **Pn 02 51 54.8 -0.3**
CIMO AML AML
comp=N,154µm,0.7s
CIMO AML AML
comp=E,172µm,0.8s
CIMO AML AML
comp=E,184µm,0.8s
CIMO AML AML
comp=N,151µm,0.7s
LUSI Trento, Gardas 3.52 333 AML AML
comp=E,418µm,0.8s
LUSI AML AML
comp=N,446µm,1.5s
NOCI Noci 3.53 124 P **Pn 02 51 55.8 +0.6**
NOCI AML AML
comp=E,568µm,0.9s
NOCI AML AML
comp=N,916µm,1.1s
PTCC Patocco-Chiusa 3.57 2 P **Pn 02 51 55.2 -0.6**
PTCC AML AML
comp=E,212µm,1.5s
PTCC AML AML
comp=N,218µm,0.8s
PRED Cave del Predi 3.62 4 **Pn 02 51 56.0 -0.4**
GAGG Gaggia 3.63 334 AML AML
comp=E,630µm,1.2s
GAGG AML AML
comp=N,428µm,0.9s
CLUD Cludinico 3.63 356 Pn **Pn 02 51 56.5 -0.1**
CLUD Cludinico 3.63 356 P **Pn 02 51 56.5 -0.1**
CLUD AML AML
comp=N,326µm,1.0s
CLUD AML AML
comp=E,370µm,0.9s
CLUD AML AML
comp=N,324µm,1.0s
CLUD AML AML
comp=E,376µm,0.8s
DBRK Dubrovnik 3.63 91 *e*Pn **Pn 02 51 56.3 -0.4**
ZONE Zone 3.68 324 P **Pn 02 51 58.3 +1.0**
ZONE AML AML
comp=E,262µm,0.8s
ZONE AML AML
comp=N,232µm,0.7s
DGI Dorgali Grotta 3.69 228 ⇑P **Pn 02 51 57.7 +0.2**
ACOM Acomizza, Ital 3.72 3 P **Pn 02 51 58.4 +0.4**
ACOM AML AML
comp=N,493µm,1.6s

ACOM AML AML
comp=N,462µm,1.6s
ACOM AML AML
comp=E,436µm,1.0s
ACOM AML AML
comp=E,438µm,1.6s
ZOU Zoufplan 3.73 357 AML AML
comp=E,462µm,1.3s
ZOU AML AML
comp=N,464µm,1.4s
ZOU AML AML
comp=E,472µm,1.3s
ZOU AML AML
comp=N,367µm,1.3s
MOSL Moslavina 3.77 41 *e*Pn **Pn 02 51 57.5 -1.0**
TREB Trebinje 3.78 90 *e*Pn **Pn 02 51 59.0 +0.3**
TREB Trebinje 3.78 90 *e*Pn **Pn 02 51 59.2 +0.5**
TREB *e*Sn **Sn 02 52 44.6 +1.2**
OBKA Obir 3.80 14 *e*Pn **Pn 02 51 59.1 +0.1**
OBKA Obir 3.80 14 *e*Pn **Pn 02 51 59.7 +0.7**
comp=N,0.4nm,0.2s
OBKA *e*Sn **Sb 02 52 51.5 -2.0**
comp=N,42nm,0.5s
MYKA Terra Mystica 3.81 4 *i* Pn **Pn 02 51 59.9 +0.8**
comp=N,8.6nm,0.2s,SNR=9.4
MYKA *e*Sn **Sn 02 52 45.8 +1.7**
comp=N,38nm,0.5s
TAR1 Taranto 3.82 126 AML AML
comp=E,463µm,0.7s
TAR1 AML AML
comp=N,460µm,0.7s
KOSI Kohlern 3.86 341 P **Pn 02 52 00.6 +0.8**
KOSI AML AML
comp=N,482µm,1.0s
KOSI AML AML
comp=E,592µm,1.6s
CET2 Cetraro 3.90 147 P **Pn 02 52 01.9 +1.6**
CET2 AML AML
comp=N,358µm,0.9s
CET2 AML AML
comp=E,334µm,0.8s
APPI Appiano 3.91 339 P **Pn 02 52 01.3 +0.8**
APPI AML AML
comp=E,327µm,1.0s
APPI AML AML
comp=N,273µm,0.7s
BRY Bratogost 3.91 87 *e*Pn **Pn 02 52 01.9 +1.3**
BRY Bratogost 3.91 87⇑*i*Pn **Pn 02 52 01.3 +0.7**
BRY *i* Sn **Sn 02 52 46.5 -0.3**
BRY Bratogost 3.91 87⇓*i*Pn **Pn 02 52 01.1 +0.5**
BRY *i* Sn **Sn 02 52 47.8 +1.0**
HCY Herceg Novi 3.91 94 *e*Pn **Pn 02 52 01.0 +0.6**
HCY Herceg Novi 3.91 94⇑*i*Pn **Pn 02 52 00.7 +0.2**
HCY *i* Sn **Sn 02 52 45.1 -1.5**
HCY Herceg Novi 3.91 94⇓*i*Pn **Pn 02 52 01.1 +0.6**
HCY *i* Sn **Sn 02 52 47.9 +1.3**
ABTA Abfaltersbach 3.94 353 *i* Pn **Pn 02 52 01.6 +0.6**
comp=N,64nm,0.6s,SNR=61
ABTA *e*Sn **Sn 02 52 47.4 -0.2**
comp=N,49nm,0.6s
SOKA Soboth 4.06 18 *e*Pn **Pn 02 52 03.3 +0.8**
comp=N,2.3nm,0.4s
SOKA *e*Sn **Sn 02 52 50.5 +0.3**
comp=N,7.6nm,0.4s
UPM Unac-Piva 4.19 83 *e*Pn **Pn 02 52 06.1 +1.7**
UPM Unac-Piva 4.19 83⇑*i*Pn **Pn 02 52 05.8 +1.4**
UPM *i* Sn **Sn 02 52 53.9 +0.2**
UPM Unac-Piva 4.19 83⇓*i*Pn **Pn 02 52 05.4 +1.0**
UPM *i* Sn **Sn 02 52 54.4 +0.7**
RISI Rein 4.19 349 AML AML
comp=N,577µm,0.5s
RISI AML AML
comp=E,560µm,0.4s
CEME Cevo 4.21 92⇓*i*Pn **Pn 02 52 05.1 +0.4**
CEME *i* Sn **Sn 02 52 52.4 -1.7**
CEME Cevo 4.21 92⇓*i*Pn **Pn 02 52 05.1 +0.4**
CEME *i* Sn **Sn 02 52 54.7 +0.6**
NKME Niksic 4.22 89⇑*i*Pn **Pn 02 52 05.5 +0.7**
NKME *i* Sn **Sn 02 52 53.7 -0.6**
NKME Niksic 4.22 89⇑*i*Pn **Pn 02 52 05.4 +0.7**
NKME *i* Sn **Sn 02 52 55.3 +1.0**
BUM Brajici-Budva 4.23 95⇑*i*Pn **Pn 02 52 05.0 +0.1**
BUM *i* Sn **Sn 02 52 52.4 -2.1**
BUM Brajici-Budva 4.23 95⇓*i*Pn **Pn 02 52 05.4 +0.5**
BUM *i* Sn **Sn 02 52 55.5 +1.0**
A252A Venje 4.23 50 *e*Pn **Pn 02 52 04.4 -0.4**
KBA Koelnbreinsper 4.25 1 *i* Pn **Pn 02 52 06.0 +0.8**
comp=E,8.6nm,0.4s,SNR=27
KBA *e*Sn **Sn 02 52 55.1 +0.1**
comp=E,47nm,0.5s
NKY Niksic 4.25 88⇑*i*Pn **Pn 02 52 06.0 +0.8**
NKY *i* Sn **Sn 02 52 54.1 -1.0**
NKY Niksic 4.25 88⇓*i*Pn **Pn 02 52 06.0 +0.8**
NKY *i* Sn **Sn 02 52 56.0 +0.9**
ROSI Rosskopf 4.29 343 P **Pn 02 52 06.9 +1.1**
ROSI AML AML
comp=N,428µm,1.3s
ROSI AML AML
comp=E,366µm,0.5s
MUGIO Muggio 4.30 317 AML AML
comp=N,103µm,0.7s
MUGIO AML AML
comp=E,89µm,1.1s
FUORN Ofenpass-Fuorn 4.33 332 Pn **Pn 02 52 06.0 -0.4**
SBF Sospel 4.34 286 *e*P **Pn 02 52 07.4 +1.0**
SBF *e*Sn **Sn 02 52 52.1 -5.1**
comp=E,38nm,0.6s
ESCA l'Escarene 4.38 285 P **Pn 02 52 07.9 +1.1**
TURF col de Turini 4.39 287 P **Pn 02 52 07.8 +0.6**
VARE Varese 4.40 315 AML AML
comp=N,194µm,0.7s
VARE AML AML
comp=E,192µm,0.7s
VSL Villasalto 4.42 222 P **Pn 02 52 08.0 +0.5**
VSL AML AML
VSL AML AML
DRME Dracevica, Mon 4.46 96 *e*Pn **Pn 02 52 08.8 +0.8**
DRME Dracevica, Mon 4.46 96⇓*i*Pn **Pn 02 52 08.0 0.0**
DRME *i* Sn **Sn 02 52 57.8 -2.3**
DRME Dracevica, Mon 4.46 96⇓*i*Pn **Pn 02 52 08.8 +0.8**
DRME *i* Sn **Sn 02 53 01.0 +0.9**
PDG Podgorica 4.47 93 ⇑P **Pn 02 52 09.2 +1.1**
PDG ⇑S **Sn 02 52 59.6 -0.8**
PDG Podgorica 4.47 93 Pn **Pn 02 52 07.1 -1.1**
PDG Podgorica 4.47 93 *e*Pn **Pn 02 52 09.6 +1.4**
PDG *e*Sn **Sn 02 53 01.7 +1.3**
PDG Podgorica 4.47 93 P **Pn 02 52 09.3 +1.1**
PDG AML AML
comp=E,220µm,0.5s
PDG AML AML
comp=N,236µm,1.6s
PDG AML AML
comp=N,322µm,1.6s
PDG AML AML
comp=E,300µm,1.3s
TTG Podgorica 4.47 93⇑*i*Pn **Pn 02 52 08.6 +0.4**
TTG *i* Sn **Sn 02 52 58.7 -1.7**
TTG Podgorica 4.47 93⇓*i*Pn **Pn 02 52 08.9 +0.7**
TTG *i* Sn **Sn 02 53 01.3 +0.9**
SPIF crte de Spivo 4.52 288 P **Pn 02 52 10.6 +1.6**
TIP Timpagrande 4.53 143 ⇑P **Pn 02 52 11.9 +2.9**
TIP Timpagrande 4.53 143 Pn **Pn 02 52 08.3 -0.7**
FETA Feichten 4.54 338 *i* Pn **Pn 02 52 11.4 +2.1**
comp=E,6.5nm,0.5s,SNR=16
FETA *e*Sn **Sn 02 53 03.7 +1.3**
comp=E,15nm,0.7s
ULC Ulcinj 4.55 99⇑*i*Pn **Pn 02 52 09.1 -0.1**
ULC *i* Sn **Sn 02 52 59.6 -2.7**
ULC Ulcinj 4.55 99⇑*i*Pn **Pn 02 52 09.9 +0.7**
ULC *i* Sn **Sn 02 53 02.8 +0.5**
PLE Pljevlja 4.55 82⇑*i*Pn **Pn 02 52 10.9 +1.6**
PLE *i* Sn **Sn 02 53 02.9 +0.4**
PLE Pljevlja 4.55 82⇑*i*Pn **Pn 02 52 10.2 +0.9**
PLE *i* Sn **Sn 02 53 03.3 +0.8**
RUDO Rudo 4.56 78 *e*Pn **Pn 02 52 10.0 +0.6**
WTTA Wattenberg 4.57 346 *i* Pn **Pn 02 52 11.8 +2.2**
comp=E,4.3nm,0.2s,SNR=15
WTTA *e*Sn **Sn 02 53 01.8 -1.3**
comp=E,39nm,0.4s
WTTA Wattenberg 4.57 346 P **Pn 02 52 11.6 +1.9**
DAVOX Davos/Dischmat 4.61 330 Pn **Pn 02 52 12.5 +2.3**
comp=E,6.3nm,0.3s,baz=159,slow=18,SNR=53
DAVOX Sn **Sn 02 53 05.2 +1.3**
comp=E,2.2nm,0.3s,baz=164,slow=24,SNR=1.6
DAVOX LR LR 02 53 35.7
comp=E,40nm,21.0s,baz=158,slow=34
comp=E,21nm,0.4s
SQTA Sankt Quirin 4.61 343 **Pn 02 52 12.5 +2.3**
SQTA **Sn 02 53 04.0 0.0**
SQTA Sankt Quirin 4.61 343 *i* Pn **Pn 02 52 12.5 +2.3**
comp=E,12nm,0.4s,SNR=20
SQTA *e*Sn **Sn 02 53 04.0 0.0**
comp=E,20nm,0.3s
BBLS Lazići 4.63 75 *e*Pn **Pn 02 52 12.1 +1.7**
KOME Kolasin 4.63 88⇓*i*Pn **Pn 02 52 11.5 +1.1**
KOME *i* Sn **Sn 02 53 03.5 -1.0**
KOME Kolasin 4.63 88⇓*i*Pn **Pn 02 52 11.7 +1.3**
KOME *i* Sn **Sn 02 53 04.9 +0.4**
WATA Walderalm 4.65 346 **Pn 02 52 13.0 +2.3**
WATA **Sn 02 53 05.6 +0.6**
WATA Walderalm 4.65 346 P **Pn 02 52 13.0 +2.3**
WATA 02 53 05.6
WATA Walderalm 4.65 346 *i* Pn **Pn 02 52 13.0 +2.3**
comp=E,9.2nm,0.4s,SNR=14
WATA *e*Sn **Sn 02 53 05.6 +0.6**
comp=E,40nm,0.4s
CALF Calern 4.69 283 P **Pn 02 52 11.8 +0.6**
ARSA Arzberg 4.71 20 *e*Pn **Pn 02 52 11.9 +0.4**
comp=E,1.8nm,0.3s
ARSA *e*Sn **Sn 02 53 04.6 -1.7**
comp=E,8.8nm,0.4s
MOTA Moosalm 4.75 342 **Pn 02 52 15.3 +3.1**
MOTA **Sn 02 53 08.2 +0.7**
MOTA Moosalm 4.75 342 *i* Pn **Pn 02 52 15.3 +3.1**
comp=E,11nm,0.6s,SNR=19
MOTA *e*Sn **Sn 02 53 08.2 +0.7**
comp=E,19nm,0.4s
KOVH Kovagotottos 4.78 45 P **Pn 02 52 11.6 -0.7**
KOVH S **Sn 02 53 04.9 -2.9**
SCTE Santa Cesarea 4.81 123 Pn **Pn 02 52 12.4 -0.4**
BIOA Bad Ischl, Aus 4.87 3 **Pn 02 52 14.2 +0.6**
BIOA **Sn 02 53 08.9 -1.3**
BIOA Bad Ischl, Aus 4.87 3 *i* Pn **Pn 02 52 14.2 +0.6**
comp=E,7.1nm,0.3s,SNR=31
BIOA *e*Sn **Sn 02 53 08.9 -1.3**
comp=E,39nm,0.4s
IVA Berane 4.91 87⇓*i*Pn **Pn 02 52 15.3 +1.1**
IVA *i* Sn **Sn 02 53 09.9 -1.4**
IVA Berane 4.91 87⇓*i*Pn **Pn 02 52 15.4 +1.2**
IVA *i* Sn **Sn 02 53 11.8 +0.5**
SURF Saint Ours 4.93 292 P **Pn 02 52 15.6 +1.0**
LMR La Mourre 4.94 278 *e*P **Pn 02 52 15.4 +0.9**
LMR *e*Sn **Sn 02 53 05.9 -6.0**
comp=E,27nm,1.0s
RETA Reutte 4.97 340 *i* Pn **Pn 02 52 16.9 +1.8**
comp=E,5.0nm,0.3s,SNR=18
RETA *e*Sn **Sn 02 53 15.9 +3.2**
comp=E,21nm,0.5s
SJES Sjenica 4.97 83 *e*Pn **Pn 02 52 16.6 +1.5**
PVY Plav 4.97 90⇓*i*Pn **Pn 02 52 15.7 +0.5**
PVY *i* Sn **Sn 02 53 11.3 -1.7**
PVY Plav 4.97 90⇓*i*Pn **Pn 02 52 15.9 +0.7**
PVY *i* Sn **Sn 02 53 13.7 +0.7**
CEL Celeste 5.00 155 Pn **Pn 02 52 13.3 -2.3**
MBDF Montbardon 5.04 294 *e*P **Pn 02 52 17.8 +1.8**
MBDF *e*Sn **Sn 02 53 08.8 -5.7**
comp=E,52nm,0.9s
DAVA Damuels 5.04 333 *i* Pn **Pn 02 52 18.5 +2.4**
comp=E,17nm,0.6s,SNR=17
DAVA *e*Sn **Sn 02 53 15.0 +0.4**
comp=E,61nm,1.2s
TRIGF Trigance 5.05 283 P **Pn 02 52 17.4 +1.1**
MOA Molln 5.07 8 *e*Pn **Pn 02 52 17.1 +0.7**
MOA *e*Sn **Sn 02 53 17.0 +1.8**
MOA Molln 5.07 8 *e*Pn **Pn 02 52 17.0 +0.7**
comp=E,2.9nm,0.3s
MOA *e*Sn **Sn 02 53 16.6 +1.4**
comp=E,10nm,0.3s
DIVS Divibare 5.09 73 **Pn 02 52 16.6 -0.2**
DIVS Divibare 5.09 73 *e*Pn **Pn 02 52 17.5 +0.8**
DIVS Divibare 5.09 73 *e*Pn **Pn 02 52 18.5 +1.8**
DIVS *e*Sn **Sn 02 53 16.6 +0.8**
OGAG Argentiere 5.11 291 P **Pn 02 52 20.5 +3.5**
IVAS Ivanjica 5.12 79 *e*Pn **Pn 02 52 17.9 +0.7**
IVAS *e*Sn **Sn 02 53 16.1 -0.5**
FLAF Flassans-sur-I 5.13 279 P **Pn 02 52 17.8 +0.7**
MORH Mrgy, Hungar 5.15 47 ⇑P **Pn 02 52 17.6 +0.2**
MORH Mrgy, Hungar 5.15 47 P **Pn 02 52 20.2 +2.8**
TIR Tirane 5.17 104 ⇓⇓P **Pn 02 52 18.7 +1.0**
TIR ⇑⇑S **Sn 02 53 16.7 -0.8**
TIR Tirane 5.17 104 P **Pn 02 52 18.5 +0.8**
TIR S **Sn 02 53 15.3 -2.2**
TIR Tirane 5.17 104 **Pn 02 52 16.0 -1.7**
TIR Tirane 5.17 104 P **Pn 02 52 16.0 -1.7**
TIR Tirane 5.17 104 *e*Pn **Pn 02 52 18.5 +0.8**
TIR *e*Sn **Sn 02 53 16.3 -1.2**
OGDI Digne 5.19 287 P **Pn 02 52 21.4 +3.3**
BNI Bardonecchia 5.21 297 Pn **Pn 02 52 16.2 -2.2**
BNI Bardonecchia 5.21 297 P **Pn 02 52 16.3 -2.2**
CLTB Caltabellotta 5.25 180 **Pn 02 52 17.1 -1.9**
DIX Grande Dixence 5.27 310 P **Pn 02 52 22.8 +3.4**
FRGS Fruska Gora 5.29 62 ⇓P **Pn 02 52 20.0 +0.6**
FRGS Fruska Gora 5.29 62 *e*Pn **Pn 02 52 19.5 0.0**
FRGS Fruska Gora 5.29 62 *e*Pn **Pn 02 52 19.9 +0.4**
MPLI Magyarpolny 5.31 34 P **Pn 02 52 20.6 +0.9**
RONA Rosalia, Austr 5.33 23 **Pn 02 52 19.9 -0.1**
RONA **Sn 02 53 20.8 -0.8**
RONA Rosalia, Austr 5.33 23 *e*Pn **Pn 02 52 19.8 -0.1**
comp=E,1.2nm,0.2s
RONA *e*Sn **Sn 02 53 20.8 -0.8**
comp=E,3.8nm,0.4s
BLAF les Blancs 5.34 284 P **Pn 02 52 22.7 +2.6**
LPG La Plagne 5.36 302 *e*P **Pn 02 52 23.3 +2.7**
LPG *e*Sn **Sn 02 53 17.4 -5.3**
comp=E,66nm,1.1s
LPL La Plagne 5.38 302 *e*P **Pn 02 52 23.3 +2.5**
LPL *e*Sn **Sn 02 53 17.7 -5.4**
comp=E,28nm,0.7s
SOP Sopron 5.39 25 P **Pn 02 52 20.5 -0.3**
SOP S **Sn 02 53 22.2 -0.9**
TRUS Trudelj 5.41 73 *e*Pn **Pn 02 52 22.5 +1.5**
CONA Conrad Observa 5.42 19 *i* Pn **Pn 02 52 21.6 +0.3**
comp=E,1.1nm,0.3s,SNR=8.4
CONA *e*Sn **Sn 02 53 22.5 -1.5**
comp=E,18nm,0.7s
VAE Valguarnera 5.43 170 Pn Pn 02 52 26.9 +5.6
comp=E,0.1nm,0.3s,baz=308,slow=12,SNR=2.5
ARTF Arbois 5.47 280 P **Pn 02 52 22.9 +1.1**
PHP Peshkopia 5.48 100 P **Pn 02 52 23.8 +1.7**
SENIN Lac Senin/Sane 5.50 312 Pn **Pn 02 52 22.9 +0.4**
RSL Roselend 5.53 303 P **Pn 02 52 25.3 +2.5**
MLYF Mely 5.55 285 P **Pn 02 52 25.3 +2.3**
GRUS Gruza 5.57 77 *e*Pn **Pn 02 52 24.8 +1.6**
BSTF la Bastide-des 5.62 283 P **Pn 02 52 25.1 +1.2**
OGSI Sixt 5.64 307 P **Pn 02 52 27.2 +2.9**
SMRF Simiane la Rot 5.68 284 *e*P **Pn 02 52 26.9 +2.1**
SMRF *e*Sn **Sn 02 53 23.8 -6.5**
comp=E,25nm,0.9s
AIGLE Aigle 5.68 310 P **Pn 02 52 27.9 +3.1**
ORIF Oris-en-Rattie 5.70 294 *e*P **Pn 02 52 27.9 +2.8**
ORIF *e*Sn **Sn 02 53 24.6 -6.1**
comp=E,16nm,0.6s
ORIF Oris-en-Rattie 5.70 294 P **Pn 02 52 27.9 +2.8**
RUSF Rustrel 5.74 284 P **Pn 02 52 28.3 +2.7**
ARBF Arbois 5.80 279 P **Pn 02 52 28.7 +2.2**
SELS Selova 5.81 84 *e*Pn **Pn 02 52 27.8 +1.3**
SELS *e*Sn **Sn 02 53 32.1 -1.2**
KEK Kerkira 5.86 120 P **Pn 02 52 28.1 +0.9**
KEK Kerkira 5.86 120 Pn **Pn 02 52 26.5 -0.7**
TORNY Torny/Romont 5.94 314 P **Pn 02 52 30.2 +1.7**
SLE Schleitheim 5.95 328 P **Pn 02 52 29.5 +1.0**
BALST Balsthal 5.96 321 P **Pn 02 52 30.0 +1.4**
GUT Gutenstein 5.98 333 P **Pn 02 52 30.1 +1.2**
GEC2 GERESS Array S 6.02 3 Pn **Pn 02 52 28.6 -0.9**
GERES GERESS Array B 6.02 3 Pn **Pn 02 52 28.9 -0.6**
comp=E,1.0nm,0.3s,baz=173,slow=12,SNR=36
GERES Sn **Sn 02 53 37.8 -0.9**
comp=E,3.0nm,0.3s,baz=176,slow=25,SNR=8.4
comp=E,1.7nm,0.3s
GERES GERESS Array B 6.02 3 Pn **Pn 02 52 28.4 -1.1**
CKRC Cesky Krumlov 6.04 7 *e*PN **Pn 02 52 28.9 -0.7**
CKRC *e*SN **Sn 02 53 37.0 -1.9**
KBN Korca 6.08 109 P **Pn 02 52 31.2 +0.9**
KBN S **Sn 02 53 38.9 -1.2**
KBN Korca 6.08 109 **Pn 02 52 30.4 +0.1**
KBN Korca 6.08 109 P **Pn 02 52 30.4 +0.1**
LSK Leskovik 6.16 113 P **Pn 02 52 32.1 +0.7**
LSK S **Sn 02 53 41.3 -0.8**
GIMEL St. Georges / 6.18 309 P **Pn 02 52 33.2 +1.5**
BOURR Bourrignon 6.22 319 P **Pn 02 52 33.7 +1.4**
MODS Modra-Piesok 6.23 26 *e*P **Pn 02 52 33.7 +1.4**
MODS *e* 02 53 41.8
MODS Modra-Piesok 6.23 26 *e*PN **Pn 02 52 33.7 +1.4**
MODS *e*SN **Sn 02 53 41.8 -1.9**
FELD Feldberg im Sc 6.24 326 P **Pn 02 52 33.3 +0.8**
BOVS Bovan 6.25 80 ⇓⇓P **Pn 02 52 32.5 -0.1**
BOVS ⇑⇑S **Sn 02 53 43.3 -0.9**
BOVS Bovan 6.25 80 *e*Pn **Pn 02 52 32.7 +0.1**
BOVS *e*Sn **Sn 02 53 43.8 -0.5**
KHC Kasperske Hory 6.30 2 P **Pn 02 52 32.9 -0.5**
KHC Kasperske Hory 6.30 2 *e*P **Pn 02 52 32.6 -0.7**
KHC *e* 02 53 42.3
KHC MLR MLR
comp=Z,300nm,8.7s
KHC Kasperske Hory 6.30 2 *e*PN **Pn 02 52 32.6 -0.7**
KHC *e*SN **Sn 02 53 42.3 -3.3**
KHC AMS AMS 02 55 10.0
comp=Z,300nm,8.7s
BRANT Les Verrieres 6.31 313 P **Pn 02 52 35.6 +2.2**
BARS Barje 6.32 87 *e*Pn **Pn 02 52 35.0 +1.4**
BARS *e*Sn **Sn 02 53 45.9 -0.2**
CABF La Chapelle 6.33 309 *e*P **Pn 02 52 36.9 +3.2**
CABF *e*Sn **Sn 02 53 39.7 -6.5**
comp=Z,31nm,0.8s
KIZ Kirchzarten 6.33 326 P **Pn 02 52 34.6 +0.8**
OG35 Corcelles 6.34 303 P **Pn 02 52 35.0 +1.1**
NEST Nestorio 6.35 110 P **Pn 02 52 36.1 +2.1**
NEST S **Sn 02 53 46.2 -0.6**
CHMF Charmoille 6.41 316 P **Pn 02 52 35.8 +0.9**
CHMF S **Sn 02 53 49.5 +1.3**
MDVR Moldovita 6.45 70 ⇑P **Pn 02 52 36.7 +1.3**
BFO Black Forest 6.48 330 **Pn 02 52 35.0 -0.7**
BFO Black Forest 6.48 330 P **Pn 02 52 35.0 -0.7**
VIVF Saint-Julien-l 6.50 291 *e*P **Pn 02 52 38.0 +2.0**
VIVF *e*Sn **Sn 02 53 43.7 -6.7**
VOGT Vogtsburg - To 6.54 325 S **Sn 02 53 52.9 +1.6**
VOGT Vogtsburg - To 6.54 325 P **Pn 02 52 37.2 +0.6**
PRVS Prvonek 6.54 90 *e*Pn **Pn 02 52 38.0 +1.4**
PRVS *e*Sn **Sn 02 53 49.1 -2.3**
STU Stuttgart 6.57 336 Pn **Pn 02 52 36.2 -0.7**
STU Stuttgart 6.57 336 P **Pn 02 52 36.2 -0.7**
MOF Molkenrain 6.60 322 P **Pn 02 52 38.0 +0.6**
KRUC Moravsky 6.61 18 *e*PN **Pn 02 52 36.1 -1.4**
BOUC Bouclans 6.62 314 P **Pn 02 52 39.4 +1.8**
BZS Buzias 6.64 62 ⇑P **Pn 02 52 39.2 +1.2**
BZS Buzias 6.64 62 *e*Pn **Pn 02 52 38.4 +0.4**
ZAGS Zajecar 6.65 78 *e*Pn **Pn 02 52 39.3 +1.3**
HINF Hinteralfeld 6.70 320 *e*P **Pn 02 52 41.6 +2.8**
HINF *e*Sn **Sn 02 53 49.7 -5.7**
comp=Z,12nm,0.4s
SSB Saint Sauveur 6.71 294 Pn **Pn 02 52 38.6 -0.4**
SSB Saint Sauveur 6.71 294 P **Pn 02 52 38.6 -0.4**
RONF Ronchamp 6.73 319 P **Pn 02 52 39.7 +0.6**
RONF S **Sn 02 53 56.0 +0.1**
BOSS Bosilegrad 6.84 90 *e*Pn **Pn 02 52 42.1 +1.4**
BOSS *e*Sn **Sn 02 53 57.3 -1.4**
ECH Echery 6.86 324 Pn **Pn 02 52 40.8 -0.1**
ECH Echery 6.86 324 P **Pn 02 52 40.8 -0.1**
ECH Echery 6.86 324 P **Pn 02 52 41.4 +0.5**
ECH S **Sn 02 54 00.6 +1.4**
VRAC Vranov 6.89 19 LR LR 02 55 57.0
comp=Z,285nm,18.3s,baz=202,slow=44
VRAC Vranov 6.89 19 *e*PN **Pn 02 52 39.9 -1.4**
VYHS Vyhne 6.89 33 *e*P **Pn 02 52 42.1 +0.7**
VYHS *e* 02 53 56.0
VYHS Vyhne 6.89 33 *e*PN **Pn 02 52 42.1 +0.7**
VYHS *e*SN **Sn 02 53 56.0 -4.1**
ZAPS Zavoj 6.91 83 *e*Pn **Pn 02 52 43.6 +1.9**
ZAPS *e*Sn **Sn 02 53 59.3 -1.3**
LASF Ste Croix 6.92 284 *e*P **Pn 02 52 44.7 +2.9**
LASF *e*Sn **Sn 02 53 53.6 -7.2**
comp=Z,4.1nm,0.7s
WLS Welschbruch 6.93 326 P **Pn 02 52 42.3 +0.4**
SIRR Siria 6.94 57 ⇓⇓P **Pn 02 52 43.9 +1.8**
LKD2 Lefkada island 6.94 123 P **Pn 02 52 43.4 +1.3**
LKD2 S **Sn 02 53 59.0 -2.3**
BLKB Belogradchik 6.96 80 ⇓⇓P **Pn 02 52 42.9 +0.6**
BLKB ⇓⇓S **Sn 02 54 00.4 -1.2**
HERR Herculane 6.96 70 ⇑⇑P **Pn 02 52 43.6 +1.3**
CDF Champ du Feu 6.96 325 *e*P **Pn 02 52 43.8 +1.4**
CDF *e*Sn **Sn 02 53 56.2 -5.6**
comp=Z,33nm,0.8s
GRFO Grafenberg 7.00 349 Pn **Pn 02 52 42.3 -0.5**
GRFO Grafenberg 7.00 349 P **Pn 02 52 42.3 -0.5**
WDD Wied Dalam 7.06 171 Pn **Pn 02 52 43.8 +0.1**
HAU Haudompre 7.08 319 *e*P **Pn 02 52 46.6 +2.7**
HAU *e*Sn **Sn 02 53 58.7 -5.9**
comp=Z,21nm,0.3s
GZR Gura Zlata 7.34 66 ⇑P **Pn 02 52 49.0 +1.4**
MAHO Mahon 7.34 249 Pn **Pn 02 52 46.0 -1.5**
KKB Krupnik 7.37 94 P **Pn 02 52 49.7 +1.7**
VTS Vitosha 7.38 88 ⇑P **Pn 02 52 49.0 +0.8**
VTS ⇑S **Sn 02 54 10.7 -1.6**
VTS Vitosha 7.38 88 **Pn 02 52 47.5 -0.8**
VTS Vitosha 7.38 88 P **Pn 02 52 47.5 -0.8**
VTS Vitosha 7.38 88 *e*Pn **Pn 02 52 49.4 +1.1**
VTS *e*Sn **Sn 02 54 10.0 -2.3**
VTS Vitosha 7.38 88 P **Pn 02 52 49.2 +0.9**
LIT Litokhoron 7.48 108 Pn **Pn 02 52 48.5 -1.0**
LIT Litokhoron 7.48 108 P **Pn 02 52 48.5 -1.0**
MORC Moravsky Berou 7.56 22 ⇑P **Pn 02 52 53.5 +2.9**
MORC Moravsky Berou 7.56 22 Pn **Pn 02 52 49.2 -1.4**
MORC Moravsky Berou 7.56 22 P **Pn 02 52 49.2 -1.4**
MORC Moravsky Berou 7.56 22 *e*PN **Pn 02 52 50.0 -0.6**
EVR Evrytania 7.59 118 P **Pn 02 52 53.3 +2.2**
SMF Signal de Mont 7.68 303 *e*P **Pn 02 52 55.6 +3.3**
SMF *e*Sn **Sn 02 54 12.2 -7.3**
comp=Z,16nm,0.7s
KEST Kesra 7.70 204 Pn **Pn 02 52 57.0 +4.4**
comp=Z,1.2nm,0.3s,baz=335,slow=9.3,SNR=19
KEST Sn **Sn 02 54 22.8 +2.7**
baz=297,slow=2.7
KEST LR LR 02 56 04.4
comp=Z,381nm,18.6s,baz=20,slow=39
comp=Z,4.1nm,0.5s
KEST Kesra 7.70 204 **Pn 02 52 51.9 -0.7**
PAGF Fort de Pagny 7.76 320 *e*P **Pn 02 52 56.2 +2.9**
baz=141
PAGF *e*Sn **Sn 02 54 15.1 -6.2**
comp=Z,52nm,0.9s
DPC Dobruska-Polom 7.82 15 *e*P **Pn 02 52 54.2 +0.1**
DPC Dobruska-Polom 7.82 15 *e*PN **Pn 02 52 54.2 +0.1**
SFTF Sexfontaines 7.86 316 *e*P **Pn 02 52 57.2 +2.5**
baz=136
SFTF *e*Sn **Sn 02 54 17.6 -6.2**
comp=Z,2.5nm,0.3s
MMB Musomiste 7.90 96 P **Pn 02 52 56.0 +0.7**
SRS Serrai 7.92 99 *e*Pn **Pn 02 52 56.5 +1.0**
SRS *e*Sn **Sn 02 54 22.9 -2.4**
LOR Lormes 7.97 307 *e*P **Pn 02 52 58.1 +1.9**
baz=127
LOR *e*Sn **Sn 02 54 19.3 -7.3**
comp=Z,9.0nm,0.4s
LOR Lormes 7.97 307 P **Pn 02 52 57.7 +1.5**
MEZF Maizieres J'vi 8.05 318 *e*P **Pn 02 53 00.2 +3.0**
baz=139
MEZF *e*Sn **Sn 02 54 21.6 -6.8**
comp=Z,27nm,0.9s
AVF Avril sur Loir 8.05 303 *e*P **Pn 02 53 00.5 +3.2**
AVF *e*Sn **Sn 02 54 21.2 -7.3**
comp=Z,19nm,1.1s
BRG Berggiesshubel 8.06 3 *e*P **Pn 02 52 58.7 +1.3**
BRG Amp 02 53 03.5
comp=Z,3.2nm,0.9s
BRG *ex* x 02 54 23.0
BRG Berggiesshubel 8.06 3 SS Sb 02 55 05.0 +9.1
BRG *ex* x 02 55 25.2
BRG Amp 02 56 06.7
comp=Z,67nm,1.8s
BRG Amp 03 09 35.0
comp=N,0.2nm,17.5s
BRG Amp 03 09 40.0
comp=E,0.3nm,14.8s
BRG Amp 03 09 45.0
comp=E,0.2nm,17.3s
BRG Berggiesshubel 8.06 3 *e*P **Pn 02 52 58.7 +1.3**
BRG *e* 02 54 22.9
BRG pmax pmax
comp=Z,3.0nm,0.9s

BRG pmax pmax
comp=Z,67nm,1.8s
MTLF Montolieu 8.07 277 *e*P **Pn 02 53 00.9 +3.4**
MTLF *e*Sn **Sn 02 54 20.5 -8.5**
comp=Z,1.8nm,0.5s
SSF Saint Saulge 8.08 305 *e*P **Pn 02 53 01.1 +3.4**
SSF *e*Sn **Sn 02 54 21.2 -8.0**
comp=Z,5.8nm,0.6s
SAVF Savonnieres en 8.09 318 *e*P **Pn 02 53 01.6 +3.8**
baz=139
SAVF *e*Sn **Sn 02 54 22.5 -6.9**
comp=Z,15nm,0.7s
BGF Bois d'Agland 8.27 300 *e*P **Pn 02 53 03.6 +3.3**
BGF *e*Sn **Sn 02 54 26.4 -7.5**
comp=Z,6.3nm,0.6s
CAF Calviac 8.32 288 *e*P **Pn 02 53 02.3 +1.2**
CAF *e*Sn Sn 02 54 24.7 -11
comp=Z,0.6nm,0.3s
WLF Walferdange 8.40 327 Pn **Pn 02 53 00.1 -2.0**
WLF Walferdange 8.40 327 P **Pn 02 53 00.1 -2.0**
CLL Collm 8.48 359 Pn **Pn 02 53 01.9 -1.3**
CLL Collm 8.48 359 *e*P **Pn 02 53 02.0 -1.1**
CLL Collm 8.48 359 *e*Pn **Pn 02 53 02.0 -1.1**
CLL *ex* x 02 53 11.0
CLL *e*Pg **Pg 02 53 43.0 +0.8**
CLL *e*Sn Sn 02 54 25.0 -14
CLL *ex* x 02 54 37.0
CLL *ex* x 02 54 54.0
CLL *ex* x 02 55 11.0
CLL *e*Sg **Sg 02 55 30.0 -2.0**
comp=Z,38nm,1.5s
CLL Lm MLR 02 56 00.0
comp=N,100nm,20.3s
CLL Lm MLR 02 56 00.0
comp=E,300nm,20.0s
CLL *e*Lmax 02 56 15.0
PLD Plovdiv 8.52 91 *e*Pn **Pn 02 53 05.8 +2.0**
TCF Toulx Ste Croi 8.58 297 *e*P **Pn 02 53 08.2 +3.6**
TCF *e*Sn **Sn 02 54 33.8 -7.8**
RZN Rozhen 8.61 94 P **Pn 02 53 05.4 +0.3**
HYF Humbligny 8.70 304 *e*P **Pn 02 53 10.1 +3.9**
HYF *e*Sn **Sn 02 54 38.6 -5.9**
RJF Les Rejaudoux 8.78 290 *e*P **Pn 02 53 10.2 +2.9**
MONQ Montcuq 8.86 284 P **Pn 02 53 11.0 +2.7**
LFF La Frestale 9.25 287 *e*Pn **Pn 02 53 11.4 -2.3**
LFF *e*Sn **Sn 02 54 50.4 -7.6**
comp=E,0.7nm,0.3s
CLF Chambon-Foret 9.29 308 Pn **Pn 02 53 13.8 -0.4**
GIVF Givet 9.29 324 *e*P **Pn 02 53 18.9 +4.7**
GIVF *e*Sn **Sn 02 54 51.2 -7.7**
comp=E,2.0nm,0.2s
EPF Esparros 9.45 276 *e*P **Pn 02 53 17.9 +1.4**
KWP Kalwaria Pacla 9.45 41 Pn **Pn 02 53 15.4 -1.1**
KWP Kalwaria Pacla 9.45 41 P **Pn 02 53 15.4 -1.1**
MLR Muntele Rosu 9.53 69 ⇑P **Pn 02 53 18.5 +0.8**
MLR Muntele Rosu 9.53 69 Pn **Pn 02 53 21.0 +3.4**
comp=E,0.2nm,0.3s,baz=282,slow=14,SNR=4.7
comp=E,3.7nm,0.8s
MLR Muntele Rosu 9.53 69 P **Pn 02 53 21.0 +3.4**
BURAR Bucovina Array 9.72 56 Pn **Pn 02 53 18.0 -2.3**
BUR08 Bucovina Ar. S 9.72 56 Pn **Pn 02 53 17.8 -2.5**
ETSF Etsaut 10.12 275 *e*P **Pn 02 53 29.1 +3.4**
SJPF Ste Jean 10.59 276 *e*P **Pn 02 53 33.8 +1.7**
IDI Anoyia 11.79 126 Pn **Pn 02 53 49.7 +1.2**
comp=E,0.3nm,0.3s,baz=11,slow=21,SNR=2.2
IDI Sn **Sn 02 55 53.4 -6.9**
comp=E,0.5nm,0.3s,baz=288,slow=20,SNR=2.0
comp=E,10.0nm,0.9s
ESDC Sonseca Array 13.31 262 Pn **Pn 02 54 09.7 +0.4**
baz=68,slow=12,SNR=5.0
comp=E,0.4nm,0.8s
AKASG Malin Array Be 13.48 49 Pn **Pn 02 54 12.4 +0.9**
comp=E,0.4nm,0.3s,baz=224,slow=14,SNR=2.0
comp=E,0.3nm,0.4s
ELL Elmali 14.19 110 Pn **Pn 02 54 19.4 -2.1**
ELL Elmali 14.19 110 P **Pn 02 54 19.4 -2.1**
BRTR Keskin Array B 15.66 95 Pn **Pn 02 54 43.5 +2.3**
baz=286,slow=13,SNR=3.3
comp=E,0.7nm,0.8s
EKA Eskdalemuir Ar 16.42 325 Pn **Pn 02 54 50.9 +0.1**
baz=142,slow=13
comp=E,0.3nm,0.5s
BNN Bunyan 17.57 95 Pn **Pn 02 54 59.5 -5.9**
BNN IAmb IAmb 02 55 23.0
comp=Z,34nm,1.2s
OBN Obninsk 19.53 43 *i* P **Pn 02 55 29.3 +0.3**
OBN pmax pmax
comp=Z,6.0nm,0.9s
MMAI Mount Meron Ar 20.01 112 P **P 02 55 34.3 +1.0**
comp=Z,8.6nm,0.7s,baz=325,slow=10,SNR=19
comp=Z,8.6nm,0.7s
FINES FINESS Array B 20.17 18 P **P 02 55 35.1 +0.5**
comp=Z,1.9nm,0.6s,baz=195,slow=10,SNR=8.8
comp=Z,1.9nm,0.6s
MOS Moscow 20.36 42 *e*P Pn 02 55 41.0 +2.1
MOS pmax pmax
comp=Z,34nm,1.1s
TAM Tamanrasset 20.99 200 P **P 02 55 41.0 -3.0**
TAM Tamanrasset 20.99 200 P **P 02 55 41.0 -3.0**
TAM pmax pmax
comp=Z,7.0nm,1.2s
KIV Kislovodsk 21.40 77 P **P 02 55 47.4 -0.8**
KIV Kislovodsk 21.40 77 *e*P **P 02 55 50.9 +2.7**
KIV pmax pmax
comp=Z,13nm,1.0s
SHA1 Shidzhatmaz 21.41 77 *i* P **P 02 55 51.4 +2.9**
ASF Jabal al Asfar 21.52 112 P **P 02 55 54.3 +4.6**
comp=Z,6.0nm,0.8s,baz=246,slow=3.4,SNR=13
KBZ Khabaz 21.58 77 P **P 02 55 52.0 +1.9**
comp=Z,5.2nm,0.9s,baz=293,slow=9.1,SNR=9.6
comp=Z,5.2nm,0.9s
KBZ Khabaz 21.58 77*ce*P **P 02 55 52.4 +2.4**
KBZ pmax pmax
comp=Z,11nm,1.1s
MARD Mardin 21.75 95 P **P 02 55 51.5 -0.6**
MARD IAmb IAmb 02 55 56.8
comp=Z,15nm,1.3s
GURO Guroymak-BITLI 22.21 91 P **P 02 55 55.1 -2.0**
GURO IAmb IAmb 02 56 07.8
comp=Z,9.9nm,1.1s
BELG Belogornoye 24.88 55 *i* P **P 02 56 26.1 +3.1**
BELG pmax pmax
comp=Z,3.0nm,1.0s
MAK Makhachkala 25.02 78 *e*P **P 02 56 20.7 -3.7**
MAK *e*S **S 03 00 44.5 -4.1**
MAK pmax pmax
comp=Z,62nm,0.8s
MAK MLR MLR
comp=Z,179nm,14.0s
TORD Torodi Ar. Bea 31.21 202 P **P 02 57 21.4 +1.4**
comp=Z,2.2nm,0.3s,baz=8.0,slow=9.0,SNR=12
comp=Z,2.2nm,0.3s
ARU Arti 31.74 49 P **P 02 57 21.9 -2.4**
ARU Arti 31.74 49*c* *i*P **P 02 57 26.5 +2.3**
ARU 02 58 28.1
ARU S **S 03 02 38.6 +4.5**
ARU SS **SnSn 03 04 24.9 +4.6**
ARU pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 38.60 54 P **P 02 58 23.1 -0.3**
BRVK IAmb IAmb 02 58 27.4
comp=Z,5.5nm,1.1s
BRVK Borovoye 38.60 54*ce*P **P 02 58 25.3 +1.9**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
HRA Herat 38.76 86 P **P 02 58 24.0 -1.3**
HRA IAmb IAmb 02 58 25.7
comp=Z,3.2nm,0.8s
KKAR Karatay Array 41.21 69 P **P 02 58 44.0 -1.2**
KKAR Karatay Array 41.21 69 P **P 02 58 44.0 -1.2**
KURK Kurchatov 44.15 56 *i* P **P 02 59 12.0 +3.1**
KURK pmax pmax
comp=Z,2.0nm,1.0s
ZALV Zalesovo Beam 46.87 50 LR LR 03 21 55.4
comp=Z,62nm,18.2s,baz=249,slow=40
MK31 Makanchi Array 47.72 60 P **P 02 59 36.9 -0.4**
MK31 Makanchi Array 47.72 60 P **P 02 59 36.9 -0.4**
MK31 pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 47.72 60 P **P 02 59 37.5 +0.2**
comp=Z,0.6nm,0.7s,baz=318,slow=5.8,SNR=5.0
MKAR LR LR 03 23 46.3
comp=Z,91nm,18.8s,baz=287,slow=41
comp=Z,0.6nm,0.7s
MKAR Makanchi Array 47.72 60 P **P 02 59 35.8 -1.4**
MKAR Makanchi Array 47.72 60*ce*P **P 02 59 37.7 +0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
KMBO Kilima Mbogo 48.82 147 *i* P **P 02 59 48.4 +2.2**
DGZ Jazzator, Alta 49.83 55 *i* P **P 02 59 56.4 +2.9**
DGZ pmax pmax
comp=Z,1.0nm,1.0s
WMQ Urumqi 52.42 62 *e*P **P 03 00 15.8 +2.8**
WMQ pP sP 03 00 19.8 +3.0
WMQ pmax pmax
comp=Z,24nm,0.9s
SONM Songino Array 61.76 50 P **P 03 01 21.2 +2.0**
comp=Z,0.5nm,0.6s,baz=302,slow=8.5,SNR=4.6
comp=Z,0.5nm,0.6s
ULN Ulaanbaatar 62.12 49*ce*P **P 03 01 22.9 +1.3**
ULN pmax pmax
comp=Z,1.0nm,0.9s
BILL Bilibino 67.60 11 *i* P **P 03 01 56.4 -0.4**
BILL pmax pmax
comp=Z,23nm,1.0s
HHC Hu-ho-hao-te 68.88 54 *e*P **P 03 02 03.5 -1.9**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,170nm,5.2s
PZH PanZhiHua 71.48 71 P **P 03 02 21.0 -0.6**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,80nm,5.1s
ILAR Eielson Array 71.60 351 P **P 03 02 23.2 +1.7**
comp=Z,0.3nm,0.8s,baz=9.4,slow=7.3,SNR=4.2
comp=Z,0.3nm,0.8s
CMAR Chiang Mai Arr 74.62 79 P **P 03 02 40.7 +0.7**
comp=Z,1.2nm,0.3s,baz=306,slow=7.7,SNR=1.6
CMAR LR LR 03 42 41.2
comp=Z,16nm,18.0s,baz=145,slow=42
KSRS Korea Array 80.47 47 LR LR 03 43 51.9
comp=Z,29nm,19.8s,baz=250,slow=39
BDFB Brasilia 80.82 239 LR LR 03 34 13.6
comp=Z,199nm,21.7s,baz=123,slow=32
TXAR Lajitas Array 87.72 309 P **P 03 03 52.5 +2.7**
comp=Z,0.3nm,1.0s,baz=77,slow=1.9,SNR=2.5
comp=Z,0.3nm,1.0s
SIV San Ignacio 89.65 248 LR LR 03 41 46.4
comp=Z,92nm,20.3s,baz=114,slow=34
LPAZ La Paz 94.73 252 LR LR 03 45 35.5
comp=Z,68nm,19.6s,baz=78,slow=35
LVC Limon Verde 99.55 248 LR LR 03 49 36.5
comp=Z,82nm,19.0s,baz=106,slow=35

*ROM **27** 03:00:07.4±0.1,42.°842N±0.°003×13.°247E±0.°005, h9km, ML2.9/52, Error ellipse: s-maj=0.4km s-min=0.2km az=57.0*
*PRU **27** 03:00:09.8±0.0,42.°91N×13.°72E, h0km*
ISC 27 03:00:07.9±0.8,**42.°84N**±0.°02×**13.°27E**±0.°02,**h7**km±5km,
n99,σ1s**17**/120,**28C-24D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMO1	**Montemonaco**	**0.07**	**39**	⇑P	**Pg**	**03 00 09.7**	**-0.1**
MMO1				S	**Sg**	**03 00 11.4**	**+0.2**
MMO1				AML	AML		
	comp=E,2195μm,0.4s						
MMO1				AML	AML		
	comp=N,3410μm,0.3s						
MMO1				AML	AML		
	comp=E,31850μm,0.8s						
MMO1				AML	AML		
	comp=N,22350μm,0.3s						
MMO1				AML	AML		
	comp=E,34100μm,0.8s						
MMO1				AML	AML		
	comp=N,32550μm,1.6s						
MC2	**Monte Cornacci**	**0.09**	**321**	⇓P	**Pg**	**03 00 09.9**	**-0.3**
MC2				S	**Sg**	**03 00 11.6**	**-0.2**
MC2				AML	AML		
	comp=E,16200μm,0.4s						
MC2				AML	AML		
	comp=N,16050μm,0.4s						
MC2				AML	AML		
	comp=E,24300μm,0.4s						
MC2				AML	AML		
	comp=N,24150μm,0.4s						
NRCA	**Norcia**	**0.11**	**265**	P	**Pg**	**03 00 10.2**	**-0.2**
NRCA				S	**Sg**	**03 00 12.7**	**+0.6**
NRCA				AML	AML		
	comp=N,17350μm,0.7s						
NRCA				AML	AML		
	comp=E,40500μm,0.8s						
NRCA				AML	AML		
	comp=N,18600μm,0.7s						
NRCA				AML	AML		
	comp=E,37250μm,0.8s						
NRCA				AML	AML		
	comp=E,37300μm,0.8s						
NRCA				AML	AML		
	comp=N,23150μm,0.2s						
NRCA				AML	AML		
	comp=N,24850μm,0.2s						
FEMA	**Monte Fema**	**0.20**	**307**	P	**Pg**	**03 00 12.0**	**0.0**
FEMA				S	**Sg**	**03 00 15.5**	**+0.8**
FEMA				AML	AML		
	comp=E,5460μm,0.8s						
FEMA				AML	AML		
	comp=N,5930μm,0.5s						
FEMA				AML	AML		
	comp=N,5925μm,0.5s						
FEMA				AML	AML		
	comp=E,8345μm,1.5s						
FEMA				AML	AML		
	comp=N,6950μm,0.7s						
T1243	**Rocca Santa Ma**	**0.20**	**137**	P	**Pg**	**03 00 12.5**	**+0.5**
T1243				S	**Sg**	**03 00 16.1**	**+1.5**
T1243				AML	AML		
	comp=E,21350μm,0.2s						
T1243				AML	AML		
	comp=E,21200μm,0.2s						
T1243				AML	AML		
	comp=N,15750μm,0.2s						
T1243				AML	AML		
	comp=E,21400μm,0.2s						
T1243				AML	AML		
	comp=N,15750μm,0.2s						
T1243				AML	AML		
	comp=E,21350μm,0.2s						
GUMA	**Gualdo di Mace**	**0.23**	**13**	⇑P	**Pg**	**03 00 12.9**	**+0.5**
GUMA				S	**Sg**	**03 00 17.3**	**+1.8**
GUMA				AML	AML		
	comp=E,16250μm,0.8s						
GUMA				AML	AML		
	comp=N,18000μm,0.5s						
GUMA				AML	AML		
	comp=E,23050μm,0.3s						
GUMA				AML	AML		
	comp=N,15450μm,0.5s						
GUMA				AML	AML		
	comp=N,27550μm,0.2s						
GUMA				AML	AML		
	comp=N,21400μm,0.6s						
GUMA				AML	AML		
	comp=E,30350μm,0.3s						
GUMA				AML	AML		
	comp=E,45800μm,0.3s						
FDMO	**Fiordimonte**	**0.23**	**326**	P	**Pg**	**03 00 12.5**	**-0.1**
FDMO				S	**Sg**	**03 00 16.7**	**+1.0**
FDMO				AML	AML		
	comp=E,3515μm,0.3s						
FDMO				AML	AML		
	comp=N,3700μm,0.6s						
FDMO				AML	AML		
	comp=E,8050μm,0.2s						
FDMO				AML	AML		
	comp=N,7655μm,0.2s						
CSP1	**Cessapalombo**	**0.25**	**350**	P	**Pg**	**03 00 13.0**	**+0.1**
CSP1				S	**Sg**	**03 00 17.6**	**+1.3**
CSP1				AML	AML		
	comp=E,3300μm,1.5s						
CSP1				AML	AML		
	comp=N,4360μm,0.4s						
CSP1				AML	AML		
	comp=E,7510μm,0.2s						
CSP1				AML	AML		
	comp=N,7960μm,0.4s						
CSP1				AML	AML		
	comp=E,7500μm,0.2s						
CSP1				AML	AML		
	comp=N,7965μm,0.4s						
LNSS	**Leonessa**	**0.29**	**215**	P	**Pg**	**03 00 13.7**	**0.0**
LNSS				S	**Sg**	**03 00 19.1**	**+1.5**
LNSS				AML	AML		
	comp=E,8400μm,0.2s						
LNSS				AML	AML		
	comp=E,8395μm,0.2s						
LNSS				AML	AML		
	comp=N,5270μm,1.0s						
CESI	**CESI - Serrava**	**0.31**	**301**	⇑P	**Pg**	**03 00 13.9**	**-0.1**
CESI				S	**Sg**	**03 00 19.3**	**+1.1**
CESI				AML	AML		
	comp=E,4510μm,1.4s						
CESI				AML	AML		
	comp=N,8700μm,0.3s						
CESI				AML	AML		
	comp=E,4505μm,1.4s						
CESI				AML	AML		
	comp=N,8705μm,0.3s						
OFFI	**Offida**	**0.32**	**73**	P	**Pb**	**03 00 15.5**	**-0.6**
OFFI				AML	AML		
	comp=E,5435μm,0.4s						
OFFI				AML	AML		
	comp=N,7050μm,0.5s						
CAMP	**Campotosto**	**0.33**	**161**	⇓P	**Pg**	**03 00 14.4**	**+0.1**
CAMP				S	**Sb**	**03 00 20.2**	**-1.4**
CAMP				AML	AML		
	comp=E,2005μm,0.4s						
CAMP				AML	AML		
	comp=N,2330μm,0.5s						
MNTP	**Montappone**	**0.33**	**27**	P	**Pb**	**03 00 15.3**	**-0.9**
MNTP				AML	AML		
	comp=E,4095μm,0.7s						
MNTP				AML	AML		
	comp=N,3725μm,0.5s						
MNTP				AML	AML		
	comp=E,6875μm,0.5s						
MNTP				AML	AML		
	comp=N,4630μm,0.9s						
TERO	**Teramo**	**0.33**	**131**	P	**Pg**	**03 00 14.6**	**+0.1**
TERO				S	**Sb**	**03 00 20.5**	**-1.3**
TERO				AML	AML		
	comp=E,3665μm,1.0s						
TERO				AML	AML		
	comp=E,3760μm,1.0s						
TERO				AML	AML		
	comp=N,4260μm,0.5s						
TERO				AML	AML		
	comp=N,4615μm,0.5s						
RM33	**Pellescritta (**	**0.34**	**186**	⇓P	**Pg**	**03 00 14.8**	**+0.3**
RM33				S	**Sb**	**03 00 20.8**	**-1.2**
RM33				AML	AML		
	comp=E,3795μm,1.5s						
RM33				AML	AML		
	comp=N,1925μm,0.7s						
RM33				AML	AML		
	comp=N,1925μm,0.7s						
RM33				AML	AML		
	comp=E,3740μm,1.5s						
SEF1	**Sefro**	**0.38**	**323**	P	**Pg**	**03 00 16.1**	**+0.6**
SEF1				AML	AML		
	comp=E,3330μm,1.3s						
SEF1				AML	AML		
	comp=N,3350μm,1.3s						
SEF1				AML	AML		
	comp=E,6285μm,0.3s						
SEF1				AML	AML		
	comp=N,3985μm,0.4s						
SSM1	**San Severino M**	**0.39**	**350**	P	**Pg**	**03 00 15.8**	**+0.2**
GIGS	**Gran Sasso**	**0.45**	**150**	⇑P	**Pg**	**03 00 16.8**	**+0.1**
GIGS				S	**Sb**	**03 00 25.0**	**-0.3**
GIGS				AML	AML		
	comp=E,513μm,0.7s						
GIGS				AML	AML		
	comp=N,398μm,1.2s						
ARRO	**Arrone**	**0.45**	**235**	⇑P	**Pg**	**03 00 16.4**	**-0.3**
ARRO				AML	AML		
	comp=E,919μm,0.2s						
ARRO				AML	AML		
	comp=N,926μm,0.2s						
ARRO				AML	AML		
	comp=N,926μm,0.2s						
ARRO				AML	AML		
	comp=E,920μm,0.2s						
SNTG	**Esanatoglia**	**0.48**	**330**	P	**Pg**	**03 00 16.8**	**-0.3**
SNTG				AML	AML		
	comp=E,756μm,0.7s						
SNTG				AML	AML		
	comp=N,1485μm,0.9s						
SNTG				AML	AML		
	comp=E,1120μm,0.5s						
SNTG				AML	AML		
	comp=N,1590μm,0.9s						
TRTR	**Tortoreto Alta**	**0.48**	**94**	⇑P	**Pb**	**03 00 18.8**	**+0.1**
TRTR				AML	AML		
	comp=E,3765μm,0.4s						
TRTR				AML	AML		
	comp=N,5345μm,0.7s						
ASSB	**Assisi San Ben**	**0.49**	**294**	⇑P	**Pg**	**03 00 17.0**	**-0.4**
ASSB				AML	AML		
	comp=E,2170μm,0.3s						
ASSB				AML	AML		
	comp=N,2620μm,0.3s						
ASSB				AML	AML		
	comp=E,3250μm,0.3s						
EL6	**Elcito**	**0.50**	**346**	⇑P	**Pg**	**03 00 17.4**	**-0.2**
EL6				S	**Sb**	**03 00 27.0**	**+0.3**
EL6				AML	AML		
	comp=E,2914μm,0.2s						
EL6				AML	AML		
	comp=N,2058μm,0.3s						
CING	**Cingoli**	**0.54**	**354**	⇑P	**Pg**	**03 00 18.1**	**-0.2**
CING				AML	AML		
	comp=E,1115μm,0.2s						
CING				AML	AML		
	comp=N,892μm,0.8s						
CESX	**Cesi**	**0.56**	**245**	P	**Pg**	**03 00 18.0**	**-0.6**
CESX				AML	AML		
	comp=E,850μm,1.3s						
CESX				AML	AML		
	comp=N,715μm,0.6s						
CESX				AML	AML		
	comp=E,1054μm,0.7s						
CESX				AML	AML		
	comp=N,910μm,0.6s						
FOSV	**Fossato di Vic**	**0.58**	**321**	P	**Pg**	**03 00 18.8**	**-0.4**
FOSV				S	**Sg**	**03 00 27.9**	**+1.0**
FOSV				AML	AML		
	comp=E,896μm,0.4s						
FOSV				AML	AML		
	comp=N,4740μm,0.3s						
FOSV				AML	AML		
	comp=E,1415μm,1.5s						
FOSV				AML	AML		
	comp=N,6515μm,0.3s						
FIAM	**Fiamignano**	**0.58**	**191**	⇑P	**Pg**	**03 00 18.9**	**-0.4**
FIAM				S	**Sb**	**03 00 29.0**	**-0.1**
FIAM				AML	AML		
	comp=N,766μm,0.4s						
FIAM				AML	AML		
	comp=E,834μm,0.8s						
PP3	**Marolino**	**0.59**	**25**	⇓P	**Pb**	**03 00 20.4**	**-0.3**
PP3				AML	AML		
	comp=E,2400μm,0.4s						
PP3				AML	AML		
	comp=N,2610μm,1.5s						
PP3				AML	AML		
	comp=E,2585μm,0.4s						
PP3				AML	AML		
	comp=N,2515μm,1.5s						
PP3				AML	AML		
	comp=N,3945μm,0.5s						
PP3				AML	AML		
	comp=E,3210μm,0.5s						
PP3				AML	AML		
	comp=N,3800μm,0.5s						
PP3				AML	AML		
	comp=E,2890μm,0.3s						
VCEL	**Villa Celiera**	**0.62**	**136**	⇓P	**Pg**	**03 00 19.8**	**-0.1**
VCEL				AML	AML		
	comp=E,1170μm,0.5s						
VCEL				AML	AML		
	comp=N,1145μm,0.6s						
FAGN	**Fagnano**	**0.62**	**158**	⇓P	**Pg**	**03 00 19.5**	**-0.4**
FAGN				AML	AML		
	comp=N,1880μm,0.4s						

FAGN				AML	AML			
	comp=E,1700µm,0.5s							
SSFR	**Montelago di S**	**0.69**	**329**	⇑P	**Pg**	**03 00 20.9**	**-0.4**	
SSFR				AML	AML			
	comp=E,3125µm,0.2s							
SSFR				AML	AML			
	comp=N,2855µm,0.3s							
SSFR				AML	AML			
	comp=N,2760µm,0.2s							
SSFR				AML	AML			
	comp=E,3275µm,0.2s							
T0110	**Collepietro**	**0.72**	**148**	⇓P	**Pg**	**03 00 21.4**	**-0.4**	
T0110				AML	AML			
	comp=N,1315µm,0.5s							
T0110				AML	AML			
	comp=E,1145µm,0.7s							
ATFO	**Monte Foce - G**	**0.73**	**316**	⇑P	**Pg**	**03 00 21.4**	**-0.6**	
ATFO				AML	AML			
	comp=E,568µm,0.5s							
ATFO				AML	AML			
	comp=N,758µm,0.6s							
ATFO				AML	AML			
	comp=E,638µm,0.6s							
ATFO				AML	AML			
	comp=N,757µm,0.6s							
ATTE	**AVT- Monte Tez**	**0.76**	**298**	⇑P	**Pg**	**03 00 21.9**	**-0.6**	
ATTE				AML	AML			
	comp=E,618µm,1.0s							
ATTE				AML	AML			
	comp=E,652µm,1.1s							
ATTE				AML	AML			
	comp=N,398µm,0.4s							
FRON	**Frontone**	**0.78**	**330**	⇓P	**Pg**	**03 00 22.3**	**-0.7**	
FRON				AML	AML			
	comp=N,824µm,0.3s							
FRON				AML	AML			
	comp=E,700µm,0.8s							
COR1	**Corinaldo**	**0.81**	**346**	⇓P	**Pb**	**03 00 24.1**	**-0.3**	
SRES	**S.Oreste - Sor**	**0.82**	**223**	⇓P	**Pg**	**03 00 23.5**	**-0.3**	
SRES				AML	AML			
	comp=E,217µm,0.4s							
SRES				AML	AML			
	comp=N,232µm,0.7s							
SRES				AML	AML			
	comp=N,326µm,0.7s							
SRES				AML	AML			
	comp=E,226µm,0.6s							
ATVO	**AVT- Monte Val**	**0.83**	**311**	⇑P	**Pg**	**03 00 23.1**	**-0.8**	
ATVO				AML	AML			
	comp=E,439µm,0.4s							
ATVO				AML	AML			
	comp=N,357µm,0.7s							
ATVO				AML	AML			
	comp=E,488µm,0.8s							
ATVO				AML	AML			
	comp=N,486µm,0.5s							
MGAB	**Montegabbione**	**0.85**	**275**	⇑P	**Pg**	**03 00 23.7**	**-0.6**	
MGAB				AML	AML			
	comp=E,868µm,1.5s							
MGAB				AML	AML			
	comp=N,1181µm,0.4s							
MGAB				AML	AML			
	comp=E,916µm,0.4s							
MGAB				AML	AML			
	comp=N,1160µm,0.4s							
MPAG	**Monte Paganucc**	**0.87**	**335**	⇓P	**Pg**	**03 00 24.4**	**-0.3**	
MPAG				S	**Sn**	**03 00 39.0**	**-0.7**	
MPAG				AML	AML			
	comp=E,554µm,0.6s							
MPAG				AML	AML			
	comp=N,513µm,0.9s							
PIEI	**Pieia**	**0.88**	**323**	⇑P	**Pg**	**03 00 24.1**	**-0.7**	
PIEI				S	**Sb**	**03 00 39.0**	**+1.5**	
PIEI				AML	AML			
	comp=E,239µm,0.4s							
PIEI				AML	AML			
	comp=N,266µm,0.8s							
PIEI				AML	AML			
	comp=E,440µm,0.3s							
PIEI				AML	AML			
	comp=N,296µm,0.7s							
ATMI	**Monte Miggiano**	**0.88**	**304**	⇑P	**Pg**	**03 00 25.3**	**+0.5**	
ATMI				AML	AML			
	comp=E,1700µm,0.5s							
ATMI				AML	AML			
	comp=N,1515µm,0.4s							
MTCE	**Montecelio**	**0.91**	**205**	P	**Pg**	**03 00 24.2**	**-1.1**	
MTCE				AML	AML			
	comp=E,380µm,0.5s							
MTCE				AML	AML			
	comp=N,251µm,1.0s							
MTCE				AML	AML			
	comp=E,404µm,0.6s							
MTCE				AML	AML			
	comp=N,320µm,1.4s							
CERT	**Certeto**	**0.92**	**193**	⇑P	**Pb**	**03 00 26.1**	**-0.2**	
CERT				AML	AML			
	comp=N,610µm,0.9s							
CERT				AML	AML			
	comp=E,656µm,0.7s							
FSSB	**Fossombrone**	**0.92**	**337**	⇑P	**Pg**	**03 00 25.6**	**0.0**	
FSSB				AML	AML			
	comp=N,1940µm,0.5s							
FSSB				AML	AML			
	comp=E,1215µm,0.4s							
APEC	**Apecchio**	**0.94**	**319**	⇓P	**Pg**	**03 00 26.2**	**+0.1**	
APEC				S	**Sn**	**03 00 41.0**	**-0.5**	
INTR	**Introdacqua**	**0.96**	**150**	⇓P	**Pg**	**03 00 25.1**	**-1.2**	
INTR				AML	AML			
	comp=N,936µm,0.5s							
INTR				AML	AML			
	comp=E,466µm,0.9s							
SACS	**San Casciano d**	**1.00**	**271**	⇓P	**Pg**	**03 00 26.5**	**-0.6**	
SACS				AML	AML			
	comp=N,346µm,1.4s							
SACS				AML	AML			
	comp=N,378µm,0.7s							
SACS				AML	AML			
	comp=E,354µm,1.6s							
SACS				AML	AML			
	comp=E,342µm,1.4s							
PE3	**Peglio**	**1.02**	**327**	⇓P	**Pg**	**03 00 27.7**	**+0.2**	
PARC	**Parchiule**	**1.10**	**317**	⇓P	**Pg**	**03 00 29.0**	**0.0**	
PARC				AML	AML			
	comp=E,488µm,1.0s							
PARC				AML	AML			
	comp=N,346µm,0.8s							
PESA	**Pesaro**	**1.14**	**344**	⇓P	**Pg**	**03 00 29.8**	**-0.1**	
PESA				AML	AML			
	comp=E,566µm,0.5s							
PESA				AML	AML			
	comp=N,630µm,0.4s							
MCIV	**Monte Civitell**	**1.17**	**267**	⇑P	**Pg**	**03 00 30.5**	**+0.1**	
MCIV				AML	AML			
	comp=E,129µm,0.4s							
MCIV				AML	AML			
	comp=N,152µm,1.0s							
TOLF	**Tolfa**	**1.22**	**231**	⇑P	**Pn**	**03 00 30.4**	**-1.1**	
TOLF				AML	AML			
	comp=E,235µm,0.6s							
TOLF				AML	AML			
	comp=N,176µm,0.5s							
CRE	**Caprese Michel**	**1.23**	**309**	⇓P	**Pg**	**03 00 32.1**	**+0.5**	
CRE				AML	AML			
	comp=E,167µm,0.5s							
CRE				AML	AML			
	comp=N,186µm,0.5s							
GIUL	**Giuliano Di Ro**	**1.28**	**180**	⇓P	**Pg**	**03 00 33.7**	**+1.2**	
CERA	**Filignano**	**1.36**	**156**	⇑P	**Pg**	**03 00 35.5**	**+1.4**	
TRIV	**Trivento**	**1.44**	**138**	⇑P	**Pg**	**03 00 36.5**	**+1.0**	
VAGA	**Valle Agricola**	**1.60**	**153**	⇑P	**Pg**	**03 00 39.3**	**+0.7**	
RUFI	**Rufina**	**1.62**	**308**	⇓P	**Pb**	**03 00 38.2**	**0.0**	
DUGI	**Dugi Otok**	**1.74**	**48**	*e*Pn	**Pb**	**03 00 39.2**	**-1.0**	
TRIF	**Trifonti**	**1.75**	**280**	⇓P	**Pn**	**03 00 38.6**	**-0.3**	
TRIF				AML	AML			
	comp=E,63µm,0.8s							
TRIF				AML	AML			
	comp=N,70µm,0.7s							
MODR	**Mondragone**	**1.76**	**165**	⇓P	**Pg**	**03 00 41.4**	**-0.2**	
MELA	**Melanico ??? S**	**1.79**	**129**	⇓P	**Pb**	**03 00 40.7**	**-0.3**	
VIRC	**Vir**	**1.95**	**41**	*e*Pn	**Pn**	**03 00 41.9**	**+0.5**	
APRC	**Apricena**	**2.01**	**122**	⇓P	**Pb**	**03 00 43.7**	**-1.1**	
MORI	**Morici**	**2.05**	**59**	*e*Pn	**Pn**	**03 00 43.3**	**+0.4**	
NVLJ	**Novalja**	**2.08**	**34**	*e*Pn	**Pn**	**03 00 43.5**	**+0.3**	
RABC	**Rab**	**2.20**	**29**	*e*Pn	**Pn**	**03 00 45.5**	**+0.6**	
HVAR	**Hvar**	**2.36**	**81**	*e*Pn	**Pn**	**03 00 47.6**	**+0.5**	

UDBI	**Udbina**	**2.47**	**46**	*e*Pn	**Pb**	**03 00 50.4**	**-2.4**	
KIJV	**Kijevo**	**2.56**	**62**	*e*Pn	**Pb**	**03 00 51.4**	**-2.8**	
LSTV	**Lastovo**	**2.67**	**90**	*e*Pn	**Pn**	**03 00 51.8**	**+0.4**	
MAKA	**Makarska**	**2.79**	**80**	*e*Pn	**Pn**	**03 00 53.9**	**+1.0**	
RICI	**Ricice**	**2.90**	**76**	*e*Pn	**Pn**	**03 00 56.1**	**+1.5**	
STON	**Ston**	**3.26**	**88**	*e*Pn	**Pn**	**03 00 59.0**	**-0.5**	
MPRI	**Monte Prat**	**3.40**	**357**	⇑P	**Pn**	**03 01 02.7**	**+1.2**	
STAL	**STALIGIAL**	**3.44**	**354**	⇑P	**Pn**	**03 01 02.7**	**+0.7**	
STAL				AML	AML			
	comp=E,58µm,0.7s							
STAL				AML	AML			
	comp=N,38µm,0.3s							
MAGA	**Magasa**	**3.49**	**328**	⇑P	**Pn**	**03 01 04.9**	**+2.1**	
ORI	**Oriolo Calabro**	**3.67**	**138**	S	**Sn**	**03 01 51.0**	**+2.4**	
OBKA	**Obir**	**3.78**	**14**	*e*Pn	**Pn**	**03 01 07.5**	**+0.8**	
	comp=N,0.1nm,0.1s							
KOSI	**Kohlern**	**3.86**	**340**	S	**Sn**	**03 01 57.0**	**+3.4**	
BOSI	**Bolzano**	**3.91**	**340**	S	**Sn**	**03 01 50.0**	**-4.5**	
ABTA	**Abfaltersbach**	**3.94**	**352**	*e*Pn	**Pn**	**03 01 10.1**	**+1.2**	
	comp=N,2.8nm,0.4s							
SOKA	**Soboth**	**4.04**	**18**	*e*Pn	**Pn**	**03 01 10.5**	**+0.2**	
	comp=N,0.2nm,0.3s							
KBA	**Koelnbreinsper**	**4.24**	**1**	*e*Pn	**Pn**	**03 01 14.3**	**+1.2**	
	comp=N,0.2nm,0.2s							
ROSI	**Rosskopf**	**4.29**	**343**	S	**Sn**	**03 02 04.0**	**-0.3**	
VSL	**Villasalto**	**4.45**	**223**	⇑P	**Pn**	**03 01 17.4**	**+1.5**	
FETA	**Feichten**	**4.55**	**338**	*e*Pn	**Pn**	**03 01 17.6**	**+0.3**	
	comp=N,0.5nm,0.4s							
WTTA	**Wattenberg**	**4.57**	**346**	*e*Pn	**Pn**	**03 01 16.9**	**-0.7**	
	comp=N,0.4nm,0.2s							
SQTA	**Sankt Quirin**	**4.61**	**342**	*e*Pn	**Pn**	**03 01 18.0**	**-0.2**	
	comp=N,0.8nm,0.2s							
WATA	**Walderalm**	**4.65**	**346**	*e*Pn	**Pn**	**03 01 20.8**	**+2.1**	
	comp=N,0.6nm,0.3s							
ARSA	**Arzberg**	**4.69**	**19**	*e*Pn	**Pn**	**03 01 15.1**	**-4.0**	
	comp=N,1.4nm,0.5s							
MOTA	**Moosalm**	**4.75**	**342**	*e*Pn	**Pn**	**03 01 22.8**	**+2.7**	
	comp=N,0.2nm,0.1s							
RETA	**Reutte**	**4.97**	**340**	*e*Pn	**Pn**	**03 01 25.5**	**+2.5**	
	comp=N,0.7nm,0.3s							
DAVA	**Damuels**	**5.05**	**333**	*e*Pn	**Pn**	**03 01 26.4**	**+2.2**	
	comp=N,0.4nm,0.3s							
MOA	**Molln**	**5.06**	**8**	*e*Pn	**Pn**	**03 01 24.7**	**+0.5**	
	comp=N,0.3nm,0.3s							
RONA	**Rosalia, Austr**	**5.31**	**23**	*e*Pn	**Pn**	**03 01 26.7**	**-1.0**	
	comp=N,1.0nm,0.5s							
CONA	**Conrad Observa**	**5.40**	**19**	*e*Pn	**Pn**	**03 01 27.1**	**-1.9**	
	comp=N,0.2nm,0.2s							
KHC	**Kasperske Hory**	**6.29**	**2**	*e*PN	**Pn**	**03 01 42.3**	**+1.1**	
KHC				*e*SN	**Sn**	**03 02 51.7**	**-1.6**	

ROM 27 03:00:54.5±0.1, 42°.840N±0°.004×13°.247E±0°.006, h8km, ML3.1/31, 22C-17D, Error ellipse: s-maj=0.5km s-min=0.4km az=240.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMO1	**Montemonaco**	**0.08**	**45**	⇑P	Pg	03 00 56.9	+0.2
MMO1				S	Sg	03 00 58.5	+0.1
MMO1				AML	AML		
	comp=E,34150µm,0.8s						
MMO1				AML	AML		
	comp=N,32550µm,1.6s						
MMO1				AML	AML		
	comp=E,34100µm,0.8s						
MC2	**Monte Cornacci**	**0.08**	**330**	⇓P	Pg	03 00 57.1	+0.3
MC2				S	Sg	03 00 58.6	+0.1
MC2				AML	AML		
	comp=E,24300µm,0.4s						
MC2				AML	AML		
	comp=N,24150µm,0.4s						
NRCA	**Norcia**	**0.10**	**266**	⇑P	Pg	03 00 57.4	+0.5
NRCA				S	Sg	03 00 59.1	+0.5
NRCA				AML	AML		
	comp=N,23150µm,0.2s						
NRCA				AML	AML		
	comp=E,22300µm,0.2s						
NRCA				AML	AML		
	comp=N,24850µm,0.2s						
NRCA				AML	AML		
	comp=E,24250µm,0.2s						
T1243	**Rocca Santa Ma**	**0.21**	**134**	⇓P	Pg	03 00 59.4	+0.7
T1243				S	Sg	03 01 02.7	+1.2
T1243				AML	AML		
	comp=N,7355µm,0.3s						
T1243				AML	AML		
	comp=E,9300µm,0.3s						
T1243				AML	AML		
	comp=N,7330µm,0.3s						
T1243				AML	AML		
	comp=E,9290µm,0.3s						
T1243				AML	AML		
	comp=N,7355µm,0.3s						
T1243				AML	AML		
	comp=N,7350µm,0.3s						
T1243				AML	AML		
	comp=E,9305µm,0.3s						
T1243				AML	AML		
	comp=E,9295µm,0.3s						
T1243				AML	AML		
	comp=N,7335µm,0.3s						
FDMO	**Fiordimonte**	**0.23**	**329**	P	Pg	03 00 59.7	+0.6
FDMO				S	Sg	03 01 03.5	+1.3
FDMO				AML	AML		
	comp=E,8050µm,0.2s						
FDMO				AML	AML		
	comp=N,7655µm,0.2s						
GUMA	**Gualdo di Mace**	**0.23**	**16**	⇓P	Pg	03 00 59.8	+0.6
GUMA				AML	AML		
	comp=E,30300µm,0.3s						
GUMA				AML	AML		
	comp=N,27550µm,0.2s						
GUMA				AML	AML		
	comp=E,45800µm,0.3s						
GUMA				AML	AML		
	comp=E,30350µm,0.3s						
GUMA				AML	AML		
	comp=N,21400µm,0.6s						
CSP1	**Cessapalombo**	**0.25**	**353**	⇑P	Pg	03 01 00.2	+0.6
CSP1				AML	AML		
	comp=E,7505µm,0.2s						
CSP1				AML	AML		
	comp=N,7970µm,0.4s						
CSP1				AML	AML		
	comp=E,7510µm,0.2s						
CSP1				AML	AML		
	comp=N,7960µm,0.4s						
CSP1				AML	AML		
	comp=E,7500µm,0.2s						
CSP1				AML	AML		
	comp=N,7965µm,0.4s						
LNSS	**Leonessa**	**0.28**	**213**	P	Pg	03 01 00.8	+0.7
LNSS				S	Sb	03 01 06.2	-0.6
LNSS				AML	AML		
	comp=N,3740µm,0.6s						
LNSS				AML	AML		
	comp=E,5530µm,0.6s						
CESI	**CESI - Serrava**	**0.30**	**303**	⇑P	Pg	03 01 01.1	+0.7
CESI				S	Sb	03 01 06.4	-0.9
CESI				AML	AML		
	comp=E,4510µm,1.4s						
CESI				AML	AML		
	comp=N,8700µm,0.3s						
CESI				AML	AML		
	comp=N,8705µm,0.3s						
CESI				AML	AML		
	comp=E,4505µm,1.4s						
CAMP	**Campotosto**	**0.33**	**159**	⇓P	Pg	03 01 01.6	+0.6
CAMP				S	Sb	03 01 07.0	-1.1
CAMP				AML	AML		
	comp=E,2005µm,0.4s						
CAMP				AML	AML		
	comp=N,2330µm,0.5s						
RM33	**Pellescritta (**	**0.33**	**184**	⇑P	Pg	03 01 01.9	+0.8
RM33				S	Sb	03 01 07.6	-0.6
RM33				AML	AML		
	comp=E,2920µm,0.8s						
RM33				AML	AML		
	comp=E,2855µm,0.8s						
RM33				AML	AML		
	comp=E,2915µm,0.8s						
RM33				AML	AML		
	comp=N,1925µm,0.7s						
RM33				AML	AML		
	comp=E,2850µm,0.8s						

RM33				AML	AML			
	comp=N,1925µm,0.7s							
OFFI	**Offida**	**0.34**	**73**	⇓P	Pb	03 01 02.9	+0.1	
OFFI				AML	AML			
	comp=E,5435µm,0.4s							
OFFI				AML	AML			
	comp=N,7050µm,0.5s							
TERO	**Teramo**	**0.34**	**129**	⇓P	Pg	03 01 01.8	+0.6	
TERO				S	Sb	03 01 07.5	-0.9	
TERO				AML	AML			
	comp=E,3660µm,1.0s							
TERO				AML	AML			
	comp=E,3665µm,1.0s							
TERO				AML	AML			
	comp=N,3150µm,0.6s							
TERO				AML	AML			
	comp=E,3760µm,1.0s							
TERO				AML	AML			
	comp=N,3235µm,0.5s							
SEF1	**Sefro**	**0.38**	**324**	S	Sb	03 01 10.0	+0.5	
GAG1	**Gagliole**	**0.42**	**342**	⇑P	Pb	03 01 03.7	-0.5	
GAG1				AML	AML			
	comp=E,4900µm,0.2s							
GAG1				AML	AML			
	comp=N,4810µm,1.6s							
GAG1				AML	AML			
	comp=E,4905µm,0.2s							
GAG1				AML	AML			
	comp=N,4805µm,1.6s							
ARRO	**Arrone**	**0.44**	**234**	⇑P	Pg	03 01 03.2	+0.2	
ARRO				AML	AML			
	comp=E,666µm,0.3s							
ARRO				AML	AML			
	comp=N,868µm,0.8s							
GIGS	**Gran Sasso**	**0.46**	**149**	⇓P	Pg	03 01 03.9	+0.5	
GIGS				S	Sb	03 01 11.4	-0.3	
GIGS				AML	AML			
	comp=N,398µm,1.2s							
GIGS				AML	AML			
	comp=E,513µm,0.7s							
SNTG	**Esanatoglia**	**0.47**	**332**	⇑P	Pg	03 01 04.0	+0.4	
SNTG				AML	AML			
	comp=N,1590µm,0.9s							
SNTG				AML	AML			
	comp=E,1120µm,0.5s							
ASSB	**Assisi San Ben**	**0.48**	**295**	⇓P	Pg	03 01 03.8	+0.1	
ASSB				S	Sb	03 01 13.0	+0.6	
ASSB				AML	AML			
	comp=N,2570µm,0.2s							
ASSB				AML	AML			
	comp=E,3250µm,0.3s							
TRTR	**Tortoreto Alta**	**0.49**	**94**	⇓P	Pb	03 01 06.0	+0.6	
TRTR				AML	AML			
	comp=E,3635µm,0.5s							
TRTR				AML	AML			
	comp=N,5345µm,0.7s							
EL6	**Elcito**	**0.50**	**348**	⇑P	Pg	03 01 04.8	+0.6	
EL6				S	Sb	03 01 14.0	+0.9	
CING	**Cingoli**	**0.54**	**356**	⇑P	Pg	03 01 05.3	+0.5	
CING				AML	AML			
	comp=E,1115µm,0.2s							
CING				AML	AML			
	comp=N,892µm,0.8s							
CESX	**Cesi**	**0.54**	**245**	⇑P	Pg	03 01 05.2	+0.3	
CESX				AML	AML			
	comp=E,1054µm,0.7s							
CESX				AML	AML			
	comp=N,910µm,0.6s							
ATCC	**AVT- Casa Cast**	**0.56**	**308**	⇑P	Pg	03 01 05.8	+0.5	
ATCC				S	Sb	03 01 16.0	+1.2	
ATCC				AML	AML			
	comp=E,2425µm,0.6s							
ATCC				AML	AML			
	comp=N,2715µm,0.8s							
FOSV	**Fossato di Vic**	**0.58**	**322**	⇓P	Pg	03 01 06.1	+0.4	
FOSV				S	Sb	03 01 16.0	+0.8	
FOSV				AML	AML			
	comp=E,1415µm,1.5s							
FOSV				AML	AML			
	comp=N,6515µm,0.3s							
FIAM	**Fiamignano**	**0.58**	**190**	⇓P	Pg	03 01 06.2	+0.5	
PP3	**Marolino**	**0.60**	**26**	⇑P	Pb	03 01 07.8	+0.6	
PP3				AML	AML			
	comp=E,2885µm,0.3s							
PP3				AML	AML			
	comp=N,3950µm,0.5s							
PP3				AML	AML			
	comp=E,3210µm,0.5s							
PP3				AML	AML			
	comp=E,2890µm,0.3s							
PP3				AML	AML			
	comp=N,3945µm,0.5s							
PP3				AML	AML			
	comp=N,3800µm,0.5s							
VCEL	**Villa Celiera**	**0.62**	**135**	⇑P	Pg	03 01 05.9	-0.7	
MURB	**Monte Urbino**	**0.68**	**309**	⇓P	Pb	03 01 08.3	-0.3	
MURB				S	Sn	03 01 20.0	-1.2	
MURB				AML	AML			
	comp=E,3365µm,1.6s							
MURB				AML	AML			
	comp=N,2645µm,0.3s							
SSFR	**Montelago di S**	**0.69**	**330**	⇑P	Pb	03 01 08.6	-0.2	
SSFR				AML	AML			
	comp=N,2760µm,0.2s							
SSFR				AML	AML			
	comp=E,3125µm,0.2s							
SSFR				AML	AML			
	comp=N,2855µm,0.3s							
SSFR				AML	AML			
	comp=E,3275µm,0.2s							
ARVD	**Arcevia**	**0.69**	**341**	⇑P	Pg	03 01 07.8	-0.1	
ATFO	**Monte Foce - G**	**0.72**	**317**	⇑P	Pg	03 01 08.6	+0.2	
ATFO				S	Sn	03 01 21.0	-1.4	
ATFO				AML	AML			
	comp=E,638µm,0.6s							
ATFO				AML	AML			
	comp=N,730µm,0.5s							
ATFO				AML	AML			
	comp=E,638µm,0.6s							
T0110	**Collepietro**	**0.73**	**147**	⇑P	Pg	03 01 08.7	+0.2	
T0110				AML	AML			
	comp=N,1315µm,0.5s							
T0110				AML	AML			
	comp=E,1128µm,1.1s							
FRON	**Frontone**	**0.78**	**331**	⇓P	Pg	03 01 09.5	+0.1	
FRON				AML	AML			
	comp=N,824µm,0.3s							
FRON				AML	AML			
	comp=E,700µm,0.8s							
COR1	**Corinaldo**	**0.81**	**347**	⇑P	Pn	03 01 11.8	-0.5	
SRES	**S.Oreste - Sor**	**0.81**	**222**	⇑P	Pg	03 01 10.0	-0.1	
ATVO	**AVT- Monte Val**	**0.82**	**312**	⇓P	Pg	03 01 10.3	+0.1	
ATVO				AML	AML			
	comp=N,486µm,0.5s							
ATVO				AML	AML			
	comp=N,486µm,0.5s							
ATVO				AML	AML			
	comp=E,488µm,0.8s							
MGAB	**Montegabbione**	**0.84**	**275**	⇓P	Pn	03 01 13.1	+0.5	
MPAG	**Monte Paganucc**	**0.86**	**336**	⇓P	Pb	03 01 11.7	-0.1	
MPAG				S	Sn	03 01 26.0	+0.1	
PIEI	**Pieia**	**0.87**	**323**	⇓P	Pg	03 01 11.4	+0.2	
PIEI				S	Sn	03 01 26.0	+0.1	
NARO	**Abbazia di Nar**	**0.91**	**328**	⇑P	Pg	03 01 12.1	+0.1	
NARO				S	Sn	03 01 27.0	+0.1	
FSSB	**Fossombrone**	**0.92**	**338**	⇑P	Pb	03 01 13.0	+0.3	
FSSB				AML	AML			
	comp=N,1940µm,0.5s							
FSSB				AML	AML			
	comp=E,1215µm,0.4s							
APEC	**Apecchio**	**0.94**	**320**	S	Sn	03 01 28.0	+0.4	
MAIM	**Mastiano**	**2.28**	**299**	P	Pg	03 01 38.1	0.0	

NOU 27 03:24:56.2, 17°.39S×168°.02E, h45km, MLv4.3/15, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.37**	**154**	P	Pn	03 25 07.0	+1.4
RTV	**Rentapao**	**0.56**	**136**	P	Pn	03 25 09.6	+1.7
LIFNC	**LIFOU**	**3.45**	**192**	P	Pn	03 25 45.9	-1.5
MARNC	**Mare, Loyalty**	**4.07**	**180**	P	Pn	03 25 54.9	-1.1
KOUNC	**Koumac, New Ca**	**4.73**	**228**	P	Pn	03 26 05.0	0.0
YATNC	**Mamie plateau,**	**4.76**	**193**	P	Pn	03 26 04.7	-0.8
DZM	**Mont Dzumac**	**4.89**	**197**	P	Pn	03 26 07.1	-0.2

NOUC	**Port Laguerre**	**4.96**	**199**	P	Pn	03 26 08.3 +0.1
ONTNC	**Ouen Toro**	**5.11**	**197**	P	Pn	03 26 11.4 +1.2
	49nm,0.6s					
OUENC	**Ouen Island, N**	**5.12**	**192**	P	Pn	03 26 11.9 +1.5
	42nm,1.1s					
PINNC	**Pines Island,**	**5.22**	**186**	P	Pn	03 26 12.1 +0.3
	74nm,1.3s					

*IDC **27** 03:33:23.9±1.9,5°.19S×154°.05E,h158km±16km,mb3.5/8, mbtmp4.0/9,MS2.9/1,Error ellipse: s-maj=25.2km s-min=18.1km az=81.0*

ISC 27 03:33:23.1±1.0,5°.2S±0°.1×154°.2E±0°.1,h150km,n11, σ0s65/11,mb3.7/7,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.30**	**293**	P	**Pn**	**03 34 03.0**	**+1.2**
	127nm,0.3s,baz=117,slow=2.3,SNR=22						
KRVT				S	**Sn**	**03 34 31.2**	**-0.4**
	355nm,0.3s,baz=206,slow=21,SNR=12						
DZM	**Mont Dzumac**	**20.55**	**146**	P	**P**	**03 37 50.7**	**+0.6**
	6.9nm,0.6s,baz=306,slow=14,SNR=11						
	6.9nm,0.6s						
WRA	**Warramunga Arr**	**24.20**	**231**	P	**P**	**03 38 25.5**	**-0.5**
	0.9nm,0.5s,baz=56,slow=10,SNR=22						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**26.78**	**225**	P	**P**	**03 38 48.5**	**-0.7**
	0.3nm,0.7s,baz=57,slow=9.1,SNR=4.6						
	0.3nm,0.7s						
STKA	**Stephens Creek**	**29.01**	**202**	P	**P**	**03 39 08.8**	**-0.1**
	0.8nm,0.4s,baz=18,slow=13,SNR=3.7						
	0.8nm,0.4s						
AFI	**Afiamalu**	**34.65**	**107**	LR	LR	03 52 41.8	
	comp=Z,17nm,19.2s,baz=162,slow=33						
VNDA	**Vanda**	**72.37**	**178**	P	**P**	**03 44 32.5**	**+0.3**
	1.2nm,0.6s,baz=327,slow=7.6,SNR=17						
	1.2nm,0.6s						
ILAR	**Eielson Array**	**82.04**	**22**	P	**P**	**03 45 26.1**	**-0.1**
	0.5nm,0.6s,baz=233,slow=4.5,SNR=7.0						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**82.25**	**326**	P	**P**	**03 45 26.9**	**-0.5**
	0.7nm,0.5s,baz=100,slow=3.1,SNR=2.4						
	0.7nm,0.5s						
MAW	**Mawson**	**85.70**	**203**	P	**P**	**03 45 44.8**	**0.0**
	3.5nm,0.6s,baz=78,slow=10,SNR=10						
	3.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**151.71**	**288**	PKPbc	**PKPbc**	**03 53 00.3**	**-0.6**
	1.3nm,0.4s,baz=72,slow=2.8,SNR=1.1						

*NEIC **27** 03:38:08.3±2.4,31°.2N±0°.1×77°.8E±0°.1,h10km±2km, mb4.1/18,Error ellipse: s-maj=23.5km s-min=13.6km az=215.0*

*IDC **27** 03:38:10.5±0.8,31°.34N×77°.52E,h0km,mb4.0/14, mbtmp4.0/16,ML3.6/2,MS3.1/3,Error ellipse: s-maj=25.6km s-min=15.5km az=45.0*

*NDI **27** 03:38:15.5±3.2,31°.32N×77°.54E,h10km,ML3.9, mb4.1(NEIC)*

ISC 27 03:38:10.5±0.5,31°.49N±0°.04×77°.72E±0°.05,h9km,n64, σ2s18/68,mb4.0/22,Northern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMLA	**Simla**	**0.59**	**233**	*e*P	**Pg**	**03 38 21.0**	**-1.1**
SMLA				*e*S	**Sg**	**03 38 28.8**	**-1.0**
BHK	**Bhakra**	**1.11**	**267**	*e*P	**Pn**	**03 38 32.9**	**+0.6**
BHK				*e*S	**Sn**	**03 38 48.9**	**+1.1**
DDI	**Dehra Dun**	**1.20**	**166**	*e*P	**Pb**	**03 38 33.1**	**-0.4**
DDI				*i* x	x	03 38 36.4	
DDI				*e*S	**Sn**	**03 38 53.5**	**+3.5**
DDI				IAML		03 38 57.6	
	comp=N,3μm,0.1s						
DDI				IAML		03 39 00.6	
	comp=E,3μm,0.2s						
DDI				IAML		03 39 01.9	
	comp=N,2μm,0.5s						
KKR	**Kurukshetra**	**1.71**	**207**	*e*P	**Pg**	**03 38 44.1**	**+0.8**
THN	**Thein Dam**	**1.94**	**299**	*e*P	**Pg**	**03 38 47.8**	**0.0**
THN				*e*S	**Sg**	**03 39 13.1**	**0.0**
JMU	**Jammu**	**2.69**	**298**	*e*P	**Pg**	**03 39 01.6**	**-0.4**
JMU				*ex*	x	03 39 38.3	
NDI	**New Delhi**	**2.83**	**189**	*e*P	**Pn**	**03 38 58.9**	**+2.9**
NDI				*i* x	x	03 39 02.8	
PTH	**Pithoragarh**	**2.90**	**131**	*e*P	**Pb**	**03 39 02.0**	**-0.5**
KUDL	**Kundal**	**3.50**	**198**	*e*P	**Pn**	**03 39 07.7**	**+2.5**
CHCP	**Chirah Chowk**	**4.34**	**301**	P	**Pn**	**03 39 20.2**	**+3.5**
NIL	**Nilore**	**4.34**	**301**		**Pn**	**03 39 15.3**	**-1.4**
AJM	**Ajmer**	**5.67**	**209**	*e*P	**Pn**	**03 39 38.4**	**+3.3**
AJM				*ex*	x	03 40 44.0	
KBL	**Kabul**	**7.89**	**295**	Pn	**Pn**	**03 40 03.9**	**-1.8**
KSH	**Kashi**	**8.13**	**350**	Pn	**Pn**	**03 40 12.5**	**+3.6**
KSH				Sn	**Sn**	**03 41 37.0**	**-4.1**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH				smax	smax		
	comp=N,21nm,0.7s						
KSH				smax	smax		
	comp=E,26nm,0.9s						
BHPL	**Bhopal**	**8.22**	**182**	*e*P	**Pn**	**03 40 10.6**	**+0.5**
BHPL				*e*S	**Sn**	**03 41 37.9**	**-5.3**
BHPL				IAML		03 41 58.1	
	comp=E,144nm,0.3s						
GAR	**Garm**	**9.63**	**323**	Pn	**Pn**	**03 40 30.6**	**+1.2**
CHGR	**Chuyangaron**	**10.01**	**318**	Pn	**Pn**	**03 40 34.5**	**-0.2**
BTK	**Batken**	**10.22**	**329**	Pn	**Pn**	**03 40 37.5**	**+0.1**
AAK	**Ala-Archa**	**11.42**	**348**	Pn	**Pn**	**03 40 55.3**	**+1.3**
KK31	**Karatay Array**	**12.93**	**336**		**Pn**	**03 41 15.3**	**+0.9**
KKAR	**Karatay Array**	**12.93**	**336**		**Pn**	**03 41 14.8**	**+0.4**
KKAR	**Karatay Array**	**12.93**	**336**		**Pn**	**03 41 15.5**	**+1.1**
SHL	**Shillong**	**13.78**	**112**	Pn	Pn	03 41 21.2	-5.1
HYBB	**Hyderabad (bro**	**14.03**	**177**	*e*Pn	Pn	03 41 23.2	-6.4
HYBB				*e*Sn	**Sn**	**03 43 58.9**	**-6.7**
MAKZ	**Makanchi**	**15.64**	**11**	Pn	**Pn**	**03 41 51.8**	**+0.6**
MK31	**Makanchi Array**	**15.68**	**12**	Pn	**Pn**	**03 41 51.6**	**-0.1**
MKAR	**Makanchi Array**	**15.68**	**12**	Pn	**Pn**	**03 41 53.5**	**+1.8**
	comp=E,0.7nm,0.3s,baz=200,slow=12,SNR=12						
MKAR				Sn	**Sn**	**03 44 40.2**	**-5.4**
	comp=E,0.1nm,0.3s,baz=198,slow=21,SNR=3.9						
	comp=E,0.9nm,0.4s						
MKAR	**Makanchi Array**	**15.68**	**12**	Pn	**Pn**	**03 41 51.6**	**-0.1**
KURBB	**Kurchatov Arra**	**19.12**	**2**	P	**Pn**	**03 42 35.5**	**+1.0**
	comp=E,0.1nm,0.3s,baz=196,slow=9.4,SNR=10						
KURBB				LR	LR	03 50 02.5	
	comp=E,39nm,21.7s,baz=190,slow=37						
	comp=E,1.1nm,0.6s						
KURK	**Kurchatov**	**19.22**	**2**	P	**P**	**03 42 36.2**	**+1.5**
BVAR	**Borovoye Array**	**22.17**	**348**	P	**P**	**03 43 09.7**	**+3.0**
	comp=E,1.8nm,0.5s,baz=162,slow=11,SNR=14						
	comp=E,1.8nm,0.5s						
BRVK	**Borovoye**	**22.22**	**348**	P	**P**	**03 43 08.2**	**+1.0**
BRVK				IAmb	IAmb	03 43 11.4	
	comp=Z,6.7nm,0.8s						
ABKAR	**Akbulak array**	**22.23**	**328**	P	**P**	**03 43 08.3**	**+1.0**
ABKAR	**Akbulak array**	**22.23**	**328**	P	**P**	**03 43 08.7**	**+1.4**
ABKAR				IAmb	IAmb	03 43 10.6	
	comp=Z,2.7nm,0.8s						
CHTO	**Chiang Mai**	**22.94**	**118**	P	P	03 43 08.9	-6.2
CHTO				IAmb	IAmb	03 43 17.9	
	comp=Z,5.0nm,0.9s						
ZAA0	**Zalesovo Array**	**23.02**	**11**	P	**P**	**03 43 13.6**	**-2.1**
ZALV	**Zalesovo Beam**	**23.02**	**11**	P	**P**	**03 43 19.1**	**+3.4**
	comp=Z,1.3nm,0.4s,baz=202,slow=12,SNR=6.8						
ZALV				LR	LR	03 53 33.4	
	comp=Z,24nm,20.1s,baz=76,slow=40						
	comp=Z,1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**23.02**	**11**	P	**P**	**03 43 16.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**23.15**	**119**	P	**P**	**03 43 19.6**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=300,slow=9.7,SNR=10						
	comp=Z,1.3nm,0.3s						
AKTO	**Aktyubinsk**	**23.94**	**328**	P	**P**	**03 43 26.0**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=131,slow=10.0,SNR=6.3						
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**27.24**	**45**	P	**P**	**03 43 58.2**	**+3.2**
	comp=Z,2.9nm,1.0s,baz=244,slow=11,SNR=10						
	comp=Z,2.9nm,1.0s						
SONM	**Songino Array**	**27.24**	**45**	P	**P**	**03 43 54.7**	**-0.3**
SONM				IAmb	IAmb	03 44 00.7	
	comp=Z,2.0nm,1.0s						
MDJ	**Mudanjiang**	**42.22**	**57**	P	**P**	**03 46 02.6**	**-1.3**
MDJ				IAmb	IAmb	03 46 13.1	
	comp=Z,13nm,1.4s						
FINES	**FINESS Array B**	**44.72**	**328**	P	**P**	**03 46 25.5**	**+1.8**
	comp=Z,1.9nm,0.5s,baz=121,slow=10,SNR=12						
	comp=Z,1.9nm,0.5s						

PSZ	**Piszkesteto**	**46.32**	**308**	P	**P**	**03 46 35.3**	**-1.5**
PSZ				IAmb	IAmb	03 46 39.0	
	comp=Z,3.4nm,1.0s						
ARCES	**ARCESS Array B**	**47.88**	**338**	P	**P**	**03 46 51.0**	**+2.5**
	comp=Z,6.2nm,0.7s,baz=108,slow=7.8,SNR=14						
	comp=Z,6.2nm,0.7s						
ARCES	**ARCESS Array B**	**47.88**	**338**	P	**P**	**03 46 48.6**	**+0.1**
GEC2	**GERESS Array S**	**50.40**	**310**	P	**P**	**03 47 05.5**	**-2.7**
GEC2				IAmb	IAmb	03 47 11.9	
	comp=Z,2.7nm,1.3s						
GERES	**GERESS Array B**	**50.40**	**310**	P	**P**	**03 47 09.5**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=97,slow=8.3,SNR=4.9						
	comp=Z,0.6nm,0.9s						
GERES	**GERESS Array B**	**50.40**	**310**	P	**P**	**03 47 05.2**	**-3.0**
HFS	**Hagfors**	**50.41**	**324**	P	**P**	**03 47 09.4**	**+1.4**
	comp=Z,5.5nm,0.8s,baz=108,slow=9.5,SNR=9.9						
	comp=Z,5.5nm,0.8s						
PRED	**Cave del Predi**	**50.73**	**306**	P	**P**	**03 47 08.8**	**-1.9**
PRED				IAmb	IAmb	03 47 15.4	
	comp=Z,2.5nm,1.0s						
NB2	**NORSAR Subarra**	**51.70**	**325**	P	**P**	**03 47 18.7**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=95,slow=7.4						
NOA	**NORSAR Array B**	**51.70**	**325**	P	**P**	**03 47 18.6**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=95,slow=7.4,SNR=8.0						
	comp=Z,1.9nm,0.8s						
JHJ	**Hachijo jima 2**	**51.79**	**71**	LR	LR	04 09 44.6	
	comp=Z,48nm,18.1s,baz=132,slow=36						
GRA1	**Grafenberg Arr**	**51.94**	**311**	P	**P**	**03 47 20.0**	**+0.3**
GRFO	**Grafenberg**	**51.94**	**311**	P	**P**	**03 47 19.2**	**-0.5**
GRFO				IAmb	IAmb	03 47 40.4	
	comp=Z,2.4nm,0.7s						
SENIN	**Lac Senin/Sane**	**55.02**	**307**	P	**P**	**03 47 40.8**	**-1.8**
SENIN				IAmb	IAmb	03 47 45.2	
	comp=Z,3.7nm,0.8s						
ESDC	**Sonseca Array**	**64.79**	**302**	P	**P**	**03 48 50.5**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=63,slow=6.6,SNR=10.0						
	comp=Z,0.9nm,0.8s						
SUMG	**Summit**	**67.53**	**343**	P	**P**	**03 49 05.7**	**-1.5**
TORD	**Torodi Ar. Bea**	**71.43**	**274**	P	**P**	**03 49 32.1**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=50,slow=5.4,SNR=2.0						
	comp=Z,1.9nm,0.3s						
WRA	**Warramunga Arr**	**74.58**	**125**	P	**P**	**03 49 51.8**	**+1.6**
	comp=Z,1.4nm,0.9s,baz=318,slow=5.6,SNR=6.1						
	comp=Z,1.4nm,0.9s						
ASAR	**Alice Springs**	**76.80**	**129**	P	**P**	**03 50 04.8**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=324,slow=6.1,SNR=4.1						
	comp=Z,0.6nm,0.8s						
RND	**Reindeer**	**78.47**	**19**	P	**P**	**03 50 09.1**	**-2.6**

*THE **27** 03:42:30.9,37°.21N×20°.62E,h3km±8km,ML2.9/5,Error ellipse: s-maj=8.1km s-min=2.3km az=56.0*

*ATH **27** 03:42:31.1,37°.24N×20°.74E,h12km±4km,ML2.5/9,Error ellipse: s-maj=4.5km s-min=1.7km az=222.0*

ISC 27 03:42:31.4±2.3,37°.24N±0°.09×20°.74E±0°.08,h9km±11km, n23,σ0s74/32,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAK2	**Zakynthos**	**0.56**	**13**	P	**Pb**	**03 42 44.4**	**+1.0**
ZAK2				S	**Sb**	**03 42 52.1**	**+0.6**
	3μm,0.4s						
PSDA	**Pessada-Kefalo**	**0.88**	**352**	P	**Pg**	**03 42 47.6**	**-0.7**
PSDA				S	**Sg**	**03 43 00.2**	**+0.5**
PSDA	**Pessada-Kefalo**	**0.88**	**352**	P	**Pg**	**03 42 47.6**	**-0.7**
PSDA				S	**Sb**	**03 43 00.3**	**-0.3**
VLS	**Valsamata**	**0.94**	**353**	P	**Pg**	**03 42 48.5**	**-1.0**
VLS				S	**Sg**	**03 43 02.1**	**+0.4**
	525nm,0.2s						
VLS	**Valsamata**	**0.94**	**353**	P	**Pg**	**03 42 48.6**	**-0.9**
VLS				S	**Sg**	**03 43 01.9**	**+0.2**
VLS				AML	AML	03 43 03.2	
	comp=E,894μm,0.1s						
VLS				AML	AML	03 43 03.4	
	comp=N,1252μm,0.2s						
ARGA	**Argostoli. Kep**	**0.95**	**348**	P	**Pg**	**03 42 49.6**	**-0.1**
ITM	**Ithomi**	**0.95**	**94**	P	**Pg**	**03 42 49.6**	**-0.1**
ITM	**Ithomi**	**0.95**	**94**	P	**Pg**	**03 42 49.5**	**-0.3**
ITM				AML	AML	03 43 07.9	
	comp=N,476μm,0.3s						
ITM				AML	AML	03 43 10.0	
	comp=E,551μm,0.4s						
RLS	**Riolos of Patr**	**1.00**	**35**	P	**Pg**	**03 42 49.5**	**-1.1**
RLS				AML	AML	03 43 06.6	
	comp=E,377μm,0.4s						
RLS				AML	AML	03 43 07.8	
	comp=N,429μm,0.4s						
KEF3	**Kipouria, Keph**	**1.00**	**342**	P	**Pg**	**03 42 50.0**	**-0.7**
KEF3				S	**Sn**	**03 43 05.8**	**-0.2**
	comp=N,1μm,0.1s						
KEF3	**Kipouria, Keph**	**1.00**	**342**	P	**Pg**	**03 42 50.4**	**-0.3**
DMLN	**Damoulianata-K**	**1.03**	**344**	P	**Pg**	**03 42 50.5**	**-0.8**
DMLN				S	**Sb**	**03 43 05.5**	**+0.3**
	comp=N,495nm,0.3s						
DRO	**Drossia**	**1.05**	**47**	P	**Pg**	**03 42 50.4**	**-1.2**
DRO				AML	AML	03 43 11.9	
	comp=E,763μm,0.5s						
DRO				AML	AML	03 43 12.9	
	comp=N,802μm,0.4s						
FSK	**Fiskardo**	**1.22**	**354**	P	**Pn**	**03 42 54.1**	**-0.6**
FSK				AML	AML	03 43 15.1	
	comp=N,246μm,0.3s						
FSK				AML	AML	03 43 15.6	
	comp=E,410μm,0.4s						
EVGI	**Lefkada island**	**1.38**	**357**	P	**Pn**	**03 42 55.9**	**-0.9**
EVGI				S	**Sg**	**03 43 17.1**	**+1.4**
	comp=E,188nm,0.3s						
EVGI	**Lefkada island**	**1.38**	**357**	P	**Pn**	**03 42 56.0**	**-0.9**
KLV	**Kalavryta, Ach**	**1.38**	**54**	P	**Pn**	**03 42 56.0**	**-1.0**
LAKA	**Lakka**	**1.40**	**44**	P	**Pn**	**03 42 56.1**	**-1.1**
EFP	**Efpalio**	**1.50**	**38**	P	**Pn**	**03 42 58.4**	**-0.1**
EFP				AML	AML	03 43 22.7	
	comp=E,274μm,0.3s						
EFP				AML	AML	03 43 24.3	
	comp=N,201μm,0.3s						
PVO	**Paravola**	**1.51**	**24**	P	**Pn**	**03 42 58.8**	**+0.2**
LKD2	**Lefkada island**	**1.54**	**358**	P	**Pn**	**03 42 58.8**	**-0.4**
LKD2				S	**Sb**	**03 43 20.3**	**+0.4**
LKD2				AML	AML	03 43 22.3	
	comp=E,285μm,0.5s						
LKD2				AML	AML	03 43 24.8	
	comp=N,328μm,0.5s						
SERG	**Sergoula**	**1.57**	**41**	P	**Pn**	**03 42 59.6**	**+0.1**
SERG				AML	AML	03 43 29.0	
	comp=N,197μm,0.7s						
SERG				AML	AML	03 43 29.1	
	comp=E,289μm,0.3s						
TSLK	**Tsoukalades, L**	**1.58**	**358**	P	**Pn**	**03 42 59.7**	**+0.1**
TSLK				AML	AML	03 43 24.2	
	comp=E,261μm,0.4s						
TSLK				AML	AML	03 43 25.1	
	comp=N,473μm,0.5s						

*THE **27** 03:43:55.8,35°.35N×23°.56E,h16km±7km,ML2.3/4,Error ellipse: s-maj=8.1km s-min=0.6km az=51.0*

*ATH **27** 03:43:56.6,35°.37N×23°.60E,h16km±1km,ML2.5/3,Error ellipse: s-maj=2.8km s-min=0.9km az=40.0*

ISC 27 03:43:56.1±1.2,35°.36N±0°.04×23°.57E±0°.04,h15km±10km, n15,σ0s75/25,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RODP	**Rodopos**	**0.25**	**38**	P	**Pg**	**03 44 01.8**	**+0.2**
RODP				S	**Sg**	**03 44 06.0**	**+0.7**
	328nm,0.3s						
IMMV	**Iera Moni Meta**	**0.35**	**73**	P	**Pg**	**03 44 02.7**	**-0.6**
IMMV				S	**Sb**	**03 44 08.8**	**-0.7**
	892nm,0.4s						
IMMV	**Iera Moni Meta**	**0.35**	**73**	P	**Pg**	**03 44 02.8**	**-0.4**
IMMV				S	**Sg**	**03 44 08.4**	**+0.2**
IMMV				AML	AML	03 44 09.9	
	comp=E,2213μm,0.3s						
IMMV				AML	AML	03 44 12.6	
	comp=N,1400μm,0.4s						
CHAN	**Chania**	**0.42**	**67**	P	**Pg**	**03 44 04.1**	**-0.4**
CHAN				S	**Sb**	**03 44 10.7**	**-0.7**
CHAN				AML	AML	03 44 11.6	
	comp=N,1719μm,0.5s						
CHAN				AML	AML	03 44 13.1	
	comp=E,1428μm,0.3s						
ANKY	**Antikythira Is**	**0.55**	**337**	P	**Pg**	**03 44 06.5**	**-0.5**
ANKY				S	**Sb**	**03 44 15.1**	**-0.1**
	comp=E,322nm,1.2s						
ANKY	**Antikythira Is**	**0.55**	**337**	P	**Pg**	**03 44 07.4**	**+0.4**
ANKY				S	**Sb**	**03 44 15.3**	**+0.1**
GVDS	**Gavdos**	**0.67**	**140**	P	**Pg**	**03 44 08.3**	**-0.9**
GVDS				S	**Sb**	**03 44 18.5**	**-0.1**
	comp=E,412nm,0.3s						
GVD	**Gavdhos**	**0.67**	**140**	P	**Pb**	**03 44 09.7**	**+0.2**
GVD				S	**Sb**	**03 44 19.1**	**+0.5**
GVD				AML	AML	03 44 21.3	
	comp=E,955μm,0.2s						
GVD				AML	AML	03 44 22.4	
	comp=N,1115μm,0.3s						
KTHA	**Kythira Island**	**0.98**	**335**	P	**Pb**	**03 44 14.9**	**0.0**
KTHR	**Kythira**	**1.01**	**333**	P	**Pb**	**03 44 15.1**	**-0.2**
KTHR				S	**Sg**	**03 44 29.0**	**+0.2**
TMBK	**Timbaki Herakl**	**1.02**	**106**	P	**Pb**	**03 44 14.5**	**-1.0**
SIVA	**Sivas**	**1.07**	**108**	P	**Pb**	**03 44 16.3**	**0.0**
IDI	**Anoyia**	**1.08**	**93**	P	**Pb**	**03 44 15.8**	**-0.7**
IDI				S	**Sb**	**03 44 30.4**	**-0.2**
KSTL	**Kastelli Herak**	**1.23**	**92**	P	**Pg**	**03 44 22.3**	**+2.6**
VLI	**Veliai**	**1.45**	**340**	P	**Pb**	**03 44 22.4**	**-0.3**

ROM 27 03:45:36.2±0.1,42°.555N±0°.004×13°.235E±0°.005, h11km,ML2.0/19,1D,Error ellipse: s-maj=0.5km s-min=0.3km az=0.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.05**	**198**	P	Pg	03 45 38.7	+0.3
RM33				S	Sg	03 45 40.2	+0.1
RM33				AML	AML		
	comp=N,3915μm,0.3s						
RM33				AML	AML		
	comp=N,3805μm,0.3s						
RM33				AML	AML		
	comp=E,4950μm,0.1s						
RM33				AML	AML		
	comp=E,4915μm,0.1s						
RM33				AML	AML		
	comp=N,3800μm,0.3s						
RM33				AML	AML		
	comp=N,3920μm,0.3s						
T1201	**Domo (RI)**	**0.10**	**7**	P	Pg	03 45 39.5	+0.5
T1201				S	Sg	03 45 41.7	+0.7
CAMP	**Campotosto**	**0.13**	**99**	P	Pg	03 45 39.8	+0.4
CAMP				S	Sg	03 45 42.3	+0.6
CAMP				AML	AML		
	comp=E,252μm,0.8s						
CAMP				AML	AML		
	comp=N,357μm,0.5s						
T1204	**Amatrice, Fraz**	**0.14**	**27**	P	Pg	03 45 40.0	+0.4
T1204				S	Sg	03 45 42.5	+0.6
T1218	**Civita (PG)**	**0.14**	**322**	P	Pg	03 45 40.0	+0.3
T1218				S	Sg	03 45 42.4	+0.4
T1202	**Accumoli, Fraz**	**0.15**	**357**	P	Pg	03 45 40.3	+0.7
LNSS	**Leonessa**	**0.15**	**288**	P	Pg	03 45 40.2	+0.5
LNSS				S	Sg	03 45 43.0	+0.8
LNSS				AML	AML		
	comp=N,2665μm,0.1s						
LNSS				AML	AML		
	comp=E,3005μm,0.2s						
T1243	**Rocca Santa Ma**	**0.21**	**48**	P	Pg	03 45 41.1	+0.4
T1243				S	Sg	03 45 44.5	+0.7
T1243				AML	AML		
	comp=N,1750μm,0.3s						
T1243				AML	AML		
	comp=E,1700μm,0.2s						
T1243				AML	AML		
	comp=N,1755μm,0.3s						
T1243				AML	AML		
	comp=E,1690μm,0.2s						
T1243				AML	AML		
	comp=N,1755μm,0.2s						
GIGS	**Gran Sasso**	**0.27**	**113**	P	Pg	03 45 42.0	+0.3
GIGS				S	Sg	03 45 46.2	+0.8
GIGS				AML	AML		
	comp=E,87μm,0.1s						
GIGS				AML	AML		
	comp=N,73μm,1.4s						
T1211	**Morro Reatino**	**0.28**	**266**	P	Pg	03 45 42.3	+0.3
T1211				S	Sg	03 45 46.7	+0.9
TERO	**Teramo**	**0.28**	**76**	P	Pg	03 45 42.1	+0.2
TERO				S	Sg	03 45 46.5	+0.8
TERO				AML	AML		
	comp=E,291μm,0.4s						
TERO				AML	AML		
	comp=N,261μm,0.3s						
FIAM	**Fiamignano**	**0.30**	**197**	P	Pg	03 45 42.9	+0.6
FIAM				AML	AML		
	comp=E,110μm,1.1s						
FIAM				AML	AML		
	comp=N,87μm,0.7s						
ARRO	**Arrone**	**0.35**	**274**	P	Pg	03 45 43.4	+0.3
ARRO				AML	AML		
	comp=E,104μm,0.2s						
ARRO				AML	AML		
	comp=N,114μm,0.2s						
MMO1	**Montemonaco**	**0.35**	**11**	AML	AML		
	comp=E,967μm,0.4s						
MMO1				AML	AML		
	comp=E,557μm,0.2s						
MMO1				AML	AML		
	comp=N,554μm,0.2s						
FAGN	**Fagnano**	**0.39**	**138**	P	Pg	03 45 44.2	+0.3
FAGN				AML	AML		
	comp=E,244μm,0.6s						
FAGN				AML	AML		
	comp=E,244μm,0.6s						
FAGN				AML	AML		
	comp=N,218μm,0.2s						
VCEL	**Villa Celiera**	**0.48**	**109**	P	Pb	03 45 46.1	-0.5
VCEL				S	Sb	03 45 53.7	0.0
VCEL				AML	AML		
	comp=E,306μm,0.3s						
VCEL				AML	AML		
	comp=N,310μm,0.8s						
CESX	**Cesi**	**0.49**	**277**	P	Pg	03 45 45.7	0.0
CESX				AML	AML		
	comp=N,56μm,1.6s						
CESX				AML	AML		
	comp=E,48μm,0.5s						
FDMO	**Fiordimonte**	**0.49**	**347**	AML	AML		
	comp=N,203μm,0.1s						
FDMO				AML	AML		
	comp=E,225μm,1.2s						
OFFI	**Offida**	**0.50**	**41**	P	Pb	03 45 47.0	-0.1
OFFI				AML	AML		
	comp=E,204μm,0.6s						
OFFI				AML	AML		
	comp=N,340μm,0.6s						
CESI	**CESI - Serrava**	**0.51**	**332**	P	Pg	03 45 46.3	+0.2
CESI				AML	AML		
	comp=N,530μm,0.2s						
CESI				AML	AML		
	comp=E,322μm,0.5s						
T0110	**Collepietro**	**0.52**	**129**	P	Pg	03 45

*THE **27** 04:19:23.1, 38°45N×20°68E, h16km±2km, ML3.4/10, Error ellipse: s-maj=2.5km s-min=0.4km az=286.0*

ISC 27 04:19:23.1±0.8, **38°45N**±0°02×**20°70E**±0°03, **h13**km±6km, **n51**, σ0**963**/71, **mb4.0**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.11**	**275**	P	**Pg**	**04 19 26.3**	**+0.1**
FSK				S	**Sg**	**04 19 28.7**	**+0.3**
FSK				AML	AML	04 19 29.3	
	comp=E,51100μm,0.3s						
FSK				AML	AML	04 19 29.6	
	comp=N,32304μm,0.5s						
EVGI	**Lefkada island**	**0.17**	**348**	P	**Pg**	**04 19 26.6**	**-0.6**
EVGI				S	**Sb**	**04 19 30.8**	**-0.9**
	comp=N,17μm,0.1s						
EVGI	**Lefkada island**	**0.17**	**348**	P	**Pg**	**04 19 27.0**	**-0.2**
EVGI				S	**Sg**	**04 19 30.6**	**+0.6**
DRAG	**Dragano-Lefkad**	**0.25**	**337**	P	**Pg**	**04 19 28.4**	**-0.1**
DRAG				S	**Sb**	**04 19 33.3**	**-0.7**
	comp=N,38μm,0.5s						
NYDR	**Nydri-Lefkada**	**0.26**	**359**	P	**Pg**	**04 19 28.3**	**-0.4**
NYDR				S	**Sg**	**04 19 33.1**	**+0.7**
	comp=N,4μm,0.4s						
VLS	**Valsamata**	**0.29**	**198**	P	**Pg**	**04 19 28.7**	**-0.4**
VLS				S	**Sg**	**04 19 33.7**	**+0.6**
	comp=N,16μm,0.2s						
VLS	**Valsamata**	**0.29**	**198**	P	**Pg**	**04 19 28.6**	**-0.5**
VLS				S	**Sg**	**04 19 33.2**	**+0.2**
VLS				AML	AML	04 19 33.9	
	comp=N,34018μm,0.3s						
VLS				AML	AML	04 19 34.0	
	comp=E,29782μm,0.2s						
KEF4	**Livadi, Kephal**	**0.29**	**229**	P	**Pg**	**04 19 29.1**	**-0.1**
KEF4				S	**Sb**	**04 19 34.4**	**-0.6**
	comp=E,61μm,0.2s						
KEF4	**Livadi, Kephal**	**0.29**	**229**	P	**Pg**	**04 19 29.1**	**-0.1**
KEF4				S	**Sg**	**04 19 33.7**	**+0.5**
ARGA	**Argostoli. Kep**	**0.33**	**213**	P	**Pg**	**04 19 30.2**	**+0.5**
ARGA				S	**Sg**	**04 19 34.2**	**0.0**
DMLN	**Damoulianata-K**	**0.34**	**231**	P	**Pg**	**04 19 29.7**	**-0.2**
DMLN				S	**Sg**	**04 19 34.9**	**+0.4**
	comp=E,8μm,0.5s						
LKD2	**Lefkada island**	**0.34**	**354**	P	**Pg**	**04 19 30.1**	**+0.1**
LKD2				S	**Sb**	**04 19 35.7**	**-0.8**
	comp=E,5μm,0.6s						
LKD2	**Lefkada island**	**0.34**	**354**	P	**Pg**	**04 19 30.1**	**+0.1**
LKD2				S	**Sg**	**04 19 34.7**	**0.0**
LKD2				AML	AML	04 19 39.1	
	comp=E,10244μm,0.4s						
LKD2				AML	AML	04 19 40.2	
	comp=N,7980μm,0.4s						
PSDA	**Pessada-Kefalo**	**0.35**	**196**	P	**Pg**	**04 19 29.8**	**-0.4**
PSDA				S	**Sb**	**04 19 35.8**	**-0.8**
PSDA	**Pessada-Kefalo**	**0.35**	**196**	P	**Pg**	**04 19 29.8**	**-0.4**
PSDA				S	**Sg**	**04 19 35.1**	**+0.2**
KEF3	**Kipouria, Keph**	**0.37**	**229**	P	**Pg**	**04 19 29.8**	**-0.8**
KEF3				S	**Sg**	**04 19 36.2**	**+0.6**
	comp=N,16μm,0.4s						
KEF3	**Kipouria, Keph**	**0.37**	**229**	P	**Pg**	**04 19 29.9**	**-0.8**
KEF3				S	**Sg**	**04 19 35.8**	**+0.1**
TSLK	**Tsoukalades, L**	**0.38**	**354**	P	**Pg**	**04 19 30.8**	**+0.2**
TSLK				S	**Sg**	**04 19 36.4**	**+0.6**
	comp=N,3μm,0.4s						
TSLK	**Tsoukalades, L**	**0.38**	**354**	P	**Pg**	**04 19 30.9**	**+0.2**
TSLK				S	**Sg**	**04 19 35.8**	**0.0**
TSLK				AML	AML	04 19 40.2	
	comp=E,6469μm,0.3s						
TSLK				AML	AML	04 19 41.2	
	comp=N,7684μm,0.6s						
PVO	**Paravola**	**0.67**	**75**	P	**Pg**	**04 19 36.2**	**+0.1**
RLS	**Riolos of Patr**	**0.72**	**123**	P	**Pg**	**04 19 36.9**	**-0.1**
RLS				S	**Sb**	**04 19 48.3**	**+1.1**
	comp=N,838nm,0.8s						
RLS	**Riolos of Patr**	**0.72**	**123**	P	**Pg**	**04 19 36.9**	**-0.1**
RLS				S	**Sg**	**04 19 46.5**	**+0.1**
RLS				AML	AML	04 19 53.8	
	comp=N,1478μm,0.5s						
RLS				AML	AML	04 19 59.2	
	comp=E,1622μm,0.9s						
DRO	**Drossia**	**0.94**	**122**	P	**Pb**	**04 19 40.7**	**-0.5**
DRO				AML	AML	04 20 01.3	
	comp=E,3185μm,0.4s						
DRO				AML	AML	04 20 05.5	
	comp=N,1858μm,0.4s						
EFP	**Efpalio**	**0.94**	**91**	P	**Pb**	**04 19 40.5**	**-0.9**
EFP				AML	AML	04 20 03.4	
	comp=N,1795μm,0.3s						
EFP				AML	AML	04 20 03.8	
	comp=E,1820μm,0.7s						
EVR	**Evrytania**	**0.98**	**61**	P	**Pb**	**04 19 41.6**	**-0.5**
EVR	**Evrytania**	**0.98**	**61**	P	**Pb**	**04 19 41.5**	**-0.6**
EVR				AML	AML	04 20 07.2	
	comp=E,956μm,0.8s						
EVR				AML	AML	04 20 09.0	
	comp=N,982μm,0.9s						
LAKA	**Lakka**	**1.02**	**101**	P	**Pb**	**04 19 42.0**	**-0.7**
LAKA	**Lakka**	**1.02**	**101**	P	**Pb**	**04 19 41.9**	**-0.8**
LAKA				AML	AML	04 20 04.7	
	comp=E,5862μm,0.7s						
LAKA				AML	AML	04 20 05.0	
	comp=N,3921μm,0.8s						
SERG	**Sergoula**	**1.06**	**92**	P	**Pb**	**04 19 42.6**	**-0.8**
SERG				AML	AML	04 20 08.1	
	comp=E,1936μm,0.4s						
SERG				AML	AML	04 20 08.3	
	comp=N,2896μm,0.5s						
KLV	**Kalavryta, Ach**	**1.21**	**109**	P	**Pn**	**04 19 45.0**	**-0.8**
KLV				AML	AML	04 20 12.6	
	comp=E,743μm,0.7s						
KLV				AML	AML	04 20 18.0	
	comp=N,630μm,1.0s						
JAN	**Janina**	**1.21**	**5**	P	**Pb**	**04 19 45.8**	**-0.2**
JAN				AML	AML	04 20 08.2	
	comp=E,1092μm,0.5s						
JAN				AML	AML	04 20 13.8	
	comp=N,625μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.25**	**63**	P	**Pn**	**04 19 46.3**	**0.0**
MAKR				AML	AML	04 20 12.6	
	comp=E,2569μm,1.1s						
MAKR				AML	AML	04 20 17.5	
	comp=N,1556μm,0.8s						
KASA	**Kassiopi**	**1.43**	**335**	P	**Pn**	**04 19 48.3**	**-0.4**
KEK	**Kerkira**	**1.44**	**331**	P	**Pn**	**04 19 49.3**	**+0.3**
KEK				AML	AML	04 20 20.7	
	comp=E,374μm,0.4s						
KEK				AML	AML	04 20 35.1	
	comp=N,362μm,0.8s						
AXAR	**Agios Charalam**	**1.56**	**78**	P	**Pn**	**04 19 50.8**	**+0.1**
AXAR				AML	AML	04 20 26.6	
	comp=N,1668μm,0.7s						
AXAR				AML	AML	04 20 28.8	
	comp=E,1379μm,0.6s						
ITM	**Ithomi**	**1.60**	**142**	P	**Pb**	**04 19 52.3**	**-0.2**
ITM				AML	AML	04 20 26.8	
	comp=N,545μm,1.0s						
ITM				AML	AML	04 20 27.6	
	comp=E,506μm,0.8s						
DBRK	**Dubrovnik**	**4.64**	**336**	*e*Pn	**Pn**	**04 20 31.8**	**-1.1**
LSTV	**Lastovo**	**5.20**	**327**	*e*Pn	**Pn**	**04 20 39.5**	**-1.1**
MAKA	**Makarska**	**5.58**	**331**	*e*Pn	**Pn**	**04 20 45.8**	**0.0**
RICI	**Ricice**	**5.72**	**333**	*e*Pn	**Pn**	**04 20 47.4**	**-0.3**
HVAR	**Hvar**	**5.72**	**327**	*e*Pn	**Pn**	**04 20 46.2**	**-1.6**
KIJV	**Kijevo**	**6.42**	**331**	*e*Pn	**Pn**	**04 20 57.3**	**-0.1**
MORI	**Morici**	**6.59**	**327**	*e*Pn	**Pn**	**04 20 59.8**	**+0.1**
DUGI	**Dugi Otok**	**6.98**	**324**	*e*Pn	**Pn**	**04 21 05.1**	**+0.1**
UDBI	**Udbina**	**7.11**	**330**	*e*Pn	**Pn**	**04 21 08.0**	**+1.1**
VIRC	**Vir**	**7.22**	**326**	*e*Pn	**Pn**	**04 21 08.6**	**+0.3**
BRTR	**Keskin Array B**	**10.14**	**79**	LR	LR	04 25 32.9	
	comp=E,24nm,22.0s,baz=334,slow=37						
FINES	**FINESS Array B**	**23.26**	**7**	P	**P**	**04 24 29.1**	**-0.9**
	comp=E,5.5nm,1.2s,baz=195,slow=9.6,SNR=1.0						
	comp=E,5.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**30.33**	**219**	P	**P**	**04 25 36.9**	**+2.4**
	comp=E,2.0nm,0.3s,baz=42,slow=9.9,SNR=1.6						
	comp=E,2.0nm,0.3s						
MKAR	**Makanchi Array**	**45.04**	**59**	P	**P**	**04 27 38.2**	**-0.2**
	comp=E,0.4nm,0.6s,baz=282,slow=7.9,SNR=4.7						
	comp=E,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**45.40**	**48**	P	**P**	**04 27 41.1**	**-0.1**
	comp=E,0.8nm,0.4s,baz=284,slow=11,SNR=2.2						
	comp=E,0.8nm,0.4s						

*TEH **27** 04:22:44.8, 29°81N×50°55E, h19km, ML3.3*

*OMAN **27** 04:22:49.1±0.4, 29°53N×50°88E, h9km, mb4.8/15, ml3.8/1, Error ellipse: s-maj=12.7km s-min=6.2km az=41.0*
*DSN **27** 04:22:51.6±1.2, 29°20N×50°83E, h10km, ML3.5/6, Error ellipse: s-maj=22.3km s-min=10.3km az=30.0*
*IDC **27** 04:22:53.5± 18.0, 31°67N×50°58E, h0km, mb3.5/4, mbtmp3.5/5, ML3.0/1, Error ellipse: s-maj=382.6km s-min=37.6km az=7.0*

ISC 27 04:22:44.8±0.7, **29°76N**±0°05×**50°56E**±0°05, **h22**km, **n81**, σ1**974**/101, **mb3.4**/4, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.88**	**342**	*e*Pg	**Pb**	**04 23 00.0**	**-1.5**
ABEH				*e*Sg	**Sb**	**04 23 13.6**	**+0.8**
ABEH				*e*		04 23 32.5	
	comp=E,25μm,0.4s						
KAZ1	**Kazerun**	**0.95**	**98**	*e*Sg	**Sn**	**04 23 17.4**	**+1.7**
KAZ1				*e*Pg	**Pb**	**04 23 03.4**	**+0.9**
KAZ1				*e*		04 23 26.0	
	comp=E,16μm,0.4s						
AHBU	**AHRAM**	**1.09**	**144**	*e*Sg	**Sn**	**04 23 23.5**	**+4.3**
AHBU				*e*Pg	**Pn**	**04 23 06.0**	**+1.2**
AHBU				*e*		04 23 27.9	
	comp=E,99nm,0.4s						
KLNJ	**Kolanjah**	**1.53**	**35**	*e*Pn	**Pn**	**04 23 12.4**	**+1.2**
KLNJ				*e*		04 23 37.4	
	comp=E,4μm,0.6s						
SHI	**Shiraz**	**1.70**	**93**	*e*Pg	**Pn**	**04 23 16.2**	**+2.9**
SHI				*e*		04 23 45.8	
	comp=E,5μm,0.4s						
AMIS	**Naft Sefid**	**2.20**	**330**	*e*Pn	**Pn**	**04 23 21.0**	**+1.0**
IBRJ	**Brojen**	**2.23**	**15**	*e*Pn	**Pn**	**04 23 22.5**	**+1.8**
IBRJ				*e*		04 23 57.6	
	comp=E,1μm,0.5s						
AHWZ	**Ahwaz**	**2.28**	**314**	*e*Pg	**Pb**	**04 23 26.2**	**+1.0**
AHWZ				*e*Sg	**Sb**	**04 23 57.9**	**+4.9**
QIR1	**Qir**	**2.52**	**120**	*e*Pn	**Pn**	**04 23 26.9**	**+2.5**
IRAM	**Ramesheh**	**2.58**	**37**	*e*Pn	**Pn**	**04 23 27.3**	**+1.9**
IRAM				*e*		04 23 35.9	
	comp=E,1μm,0.4s						
IGAR	**Gharneh**	**2.93**	**25**	*e*Pn	**Pn**	**04 23 32.0**	**+1.7**
IGAR				*e*		04 23 43.0	
	comp=E,522nm,0.3s						
IPIR	**Pirpir**	**2.93**	**5**	*e*Pn	**Pn**	**04 23 32.5**	**+2.1**
IPIR				*e*		04 24 31.9	
	comp=Z,907nm,0.9s						
ISAD	**Sadrabad**	**3.44**	**51**	*e*Pn	**Pn**	**04 23 39.1**	**+1.7**
ISAD				*e*		04 23 49.4	
	comp=Z,313nm,0.3s						
IZEF	**Zefreh**	**3.48**	**25**	*e*Pn	**Pn**	**04 23 39.6**	**+1.8**
NASN	**Na'in**	**3.59**	**32**	*e*Pn	**Pn**	**04 23 40.6**	**+1.1**
IKLH	**Kolahrood**	**3.66**	**13**	*e*Pn	**Pn**	**04 23 42.2**	**+1.9**
IKLH				*e*		04 25 00.6	
	comp=Z,408nm,0.8s						
IMEH	**Mehriz**	**3.85**	**64**	*e*Pn	**Pn**	**04 23 45.2**	**+2.2**
IMEH				*e*		04 23 46.9	
	comp=Z,260nm,0.4s						
SHMA	**Al-Shehemyia**	**3.90**	**175**	P	**Pn**	**04 23 46.8**	**+3.4**
KHMZ	**Khomeyn**	**4.00**	**353**	*e*Pn	**Pn**	**04 23 45.8**	**+0.8**
QAMS	**Qamsar**	**4.03**	**10**	*e*Pn	**Pn**	**04 23 46.7**	**+1.3**
QAMS				*e*		04 24 37.7	
	comp=Z,433nm,0.4s						
YZKH	**Yazd**	**4.34**	**52**	*e*Pn	**Pn**	**04 23 51.1**	**+1.6**
KRSH	**Karshahi**	**4.41**	**17**	*e*Pn	**Pn**	**04 23 51.7**	**+1.1**
IDOB	**Doab**	**4.50**	**334**	*e*Pn	**Pn**	**04 23 54.2**	**+2.3**
IBAF	**Bafgh**	**4.68**	**66**	*e*Pn	**Pn**	**04 23 55.9**	**+1.6**
HSAM	**Samen**	**4.75**	**340**	*e*Pn	**Pn**	**04 23 55.9**	**+0.7**
HSAM				*e*		04 24 26.6	
	comp=Z,193nm,0.3s						
GHVR	**GHOM**	**4.75**	**7**	*e*Pn	**Pn**	**04 23 56.1**	**+0.9**
ISFB	**Sefidab**	**4.80**	**17**	*e*Pn	**Pn**	**04 23 56.6**	**+0.8**
ASAO	**Ashtian**	**4.80**	**355**	*e*Pn	**Pn**	**04 23 57.0**	**+1.0**
IKOM	**Komasi**	**5.11**	**330**	*e*Pn	**Pn**	**04 24 01.9**	**+1.7**
HAGD	**Aghdareh**	**5.19**	**347**	*e*Pn	**Pn**	**04 24 02.2**	**+0.8**
HAGD				*e*		04 25 06.7	
	comp=Z,244nm,0.4s						
JRN	**Qarnain Island**	**5.21**	**156**	P	**Pn**	**04 24 03.5**	**+2.1**
IBZA	**Bozab**	**5.23**	**335**	*e*Pn	**Pn**	**04 24 03.1**	**+1.2**
NGRK	**Negar Kerman**	**5.37**	**90**	*e*Pn	**Pn**	**04 24 06.2**	**+2.3**
KRBR	**Kerman**	**5.39**	**86**	*e*Pn	**Pn**	**04 24 05.9**	**+1.8**
GENO	**Geno**	**5.46**	**114**	*e*Pn	**Pn**	**04 24 07.1**	**+2.1**
SNGE	**Sanandaj**	**5.98**	**334**	*e*Pn	**Pn**	**04 24 12.6**	**+0.5**
IFIR	**Firoozkooh**	**6.15**	**17**	*e*Pn	**Pn**	**04 24 16.8**	**+2.2**
SHME	**Shamm**	**6.16**	**125**	*e*Pn	**Pn**	**04 24 18.2**	**+3.7**
SHME	**Shamm**	**6.16**	**125**	P	**Pn**	**04 24 16.0**	**+1.5**
SHME				S	**Sn**	**04 25 23.7**	**-0.6**
NAZ	**Nazwa, Dubai**	**6.56**	**135**	*e*Pn	**Pn**	**04 24 21.6**	**+1.6**
NAZ	**Nazwa, Dubai**	**6.56**	**135**	P	**Pn**	**04 24 21.9**	**+1.9**
	SNR=5.2						
NAZ				S	**Sn**	**04 25 34.0**	**-0.2**
MASF	**Masafi**	**6.61**	**130**	P	**Pn**	**04 24 21.4**	**+0.7**
MASF				S	**Sn**	**04 25 33.7**	**-1.8**
MSFE	**Esma-Masafi**	**6.62**	**130**	*e*Pn	**Pn**	**04 24 23.4**	**+2.6**
TNSJ	**Nastanj**	**6.64**	**49**	*e*Pn	**Pn**	**04 24 22.6**	**+1.5**
ASUD	**Al Ashush, Dub**	**6.64**	**139**	*e*Pn	**Pn**	**04 24 22.3**	**+1.2**
ASUD	**Al Ashush, Dub**	**6.64**	**139**	P	**Pn**	**04 24 23.0**	**+1.9**
	SNR=37						
ASUD				S	**Sn**	**04 25 37.1**	**+1.0**
ASUD	**Al Ashush, Dub**	**6.64**	**139**	P	**Pn**	**04 24 22.5**	**+1.5**
FAQ	**Al Faqa, Dubai**	**6.70**	**137**	*e*Pn	**Pn**	**04 24 23.3**	**+1.4**
FAQ	**Al Faqa, Dubai**	**6.70**	**137**	P	**Pn**	**04 24 23.5**	**+1.5**
	SNR=5.3						
FAQ				S	**Sn**	**04 25 36.8**	**-0.9**
MDH	**Madha**	**6.75**	**130**	P	**Pn**	**04 24 23.0**	**+0.3**
MDH				S	**Sn**	**04 25 36.9**	**-2.0**
TKDS	**Koohdasht(Taba**	**6.79**	**54**	*e*Pn	**Pn**	**04 24 24.6**	**+1.4**
UOSS	**Minazif**	**6.94**	**132**	*e*Pn	**Pn**	**04 24 26.9**	**+1.8**
UOSS	**Minazif**	**6.94**	**132**	P	**Pn**	**04 24 25.8**	**+0.7**
UOSS				S	**Sn**	**04 25 40.7**	**-2.7**
HATD	**Hatta, Dubai**	**6.97**	**133**	*e*Pn	**Pn**	**04 24 27.3**	**+1.6**
HATD	**Hatta, Dubai**	**6.97**	**133**	P	**Pn**	**04 24 28.1**	**+2.4**
HATD				S	**Sn**	**04 25 44.6**	**+0.2**
HATD	**Hatta, Dubai**	**6.97**	**133**	P	**Pn**	**04 24 26.9**	**+1.2**
ASHO	**Ashiyiah**	**7.03**	**135**	*e*Pn	**Pn**	**04 24 27.9**	**+1.5**
ASHO	**Ashiyiah**	**7.03**	**135**	P	**Pn**	**04 24 28.0**	**+1.5**
	SNR=18						
ASHO				S	**Sn**	**04 25 44.3**	**-1.4**
ASHO	**Ashiyiah**	**7.03**	**135**	P	**Pn**	**04 24 27.1**	**+0.6**
ASHO				S	**Sn**	**04 25 42.4**	**-3.3**
MZR	**Muzera**	**7.21**	**158**	*e*Pn	**Pn**	**04 24 30.7**	**+1.7**
MZR	**Muzera**	**7.21**	**158**	P	**Pn**	**04 24 31.3**	**+2.3**
MZR				S	**Sn**	**04 25 51.1**	**+0.8**
MZR	**Muzera**	**7.21**	**158**	P	**Pn**	**04 24 29.1**	**+0.2**
ALNE	**Al Ain**	**7.33**	**140**	*e*Pn	**Pn**	**04 24 31.3**	**+0.8**
ALNE	**Al Ain**	**7.33**	**140**	P	**Pn**	**04 24 31.6**	**+1.1**
	SNR=8.3						
ALNE				S	**Sn**	**04 25 52.6**	**-0.4**
ALNE	**Al Ain**	**7.33**	**140**	P	**Pn**	**04 24 30.8**	**+0.3**
JASK	**Jask - Hormozg**	**7.54**	**119**	P	**Pn**	**04 24 33.0**	**-0.3**
JASK				S	**Sn**	**04 25 57.4**	**-0.8**
SHRO	**Shahrood**	**7.72**	**35**	*e*Pn	**Pn**	**04 24 36.8**	**+0.8**
SOHO	**SOHO**	**7.73**	**135**	P	**Pn**	**04 24 34.8**	**-1.2**
SOHO				S	**Sn**	**04 26 02.0**	**-0.9**
SOHO	**SOHO**	**7.73**	**135**	P	**Pn**	**04 24 36.0**	**0.0**
ARQ	**Araqi**	**8.32**	**139**	P	**Pn**	**04 24 44.4**	**+0.1**
	SNR=24						
ARQ				S	**Sn**	**04 26 15.1**	**-2.5**
HOQ	**Hoqain**	**8.61**	**134**	P	**Pn**	**04 24 49.3**	**+1.2**
HOQ				S	**Sn**	**04 26 21.9**	**-2.8**
BSY	**Bisya**	**9.18**	**138**	P	**Pn**	**04 24 56.5**	**+0.6**
SMDO	**Samad**	**9.46**	**133**	P	**Pn**	**04 25 01.8**	**+2.0**
SMDO				S	**Sn**	**04 26 44.8**	**-0.8**
JMDO	**Jabal Madar**	**10.00**	**136**	P	**Pn**	**04 25 07.1**	**0.0**
WHFO	**Wadi Hawf**	**12.14**	**165**	P	**Pn**	**04 25 37.1**	**+0.6**
DMTO	**DMTO**	**12.64**	**161**	P	**Pn**	**04 25 42.0**	**-1.2**
	SNR=16						
BRTR	**Keskin Array B**	**17.07**	**310**	Pn	**Pn**	**04 26 40.4**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=117,slow=12,SNR=3.1						
	comp=Z,0.5nm,0.7s						
AKASG	**Malin Array Be**	**26.34**	**329**	P	**P**	**04 28 17.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=131,slow=9.9,SNR=2.9						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**29.89**	**46**	P	**P**	**04 28 51.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=242,slow=4.3						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**35.58**	**340**	P	P	04 29 37.2	-3.1
	comp=Z,2.4nm,1.0s,baz=132,slow=8.3,SNR=1.5						
	comp=Z,2.4nm,1.0s						
NOA	**NORSAR Array B**	**40.66**	**332**	P	**P**	**04 30 21.0**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=109,slow=9.4,SNR=1.5						
	comp=Z,0.6nm,0.8s						

*IDC **27** 04:33:39.0±3.8, 55°07S×31°41W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=122.3km s-min=48.3km az=5.0*
*NEIC **27** 04:33:39.7±2.0, 55°3S±0°1×31°6W±0°1, h10km±2km, mb4.2/6, Error ellipse: s-maj=20.8km s-min=8.8km az=152.0*

ISC 27 04:33:39.3±0.8, **55°3S**±0°1×**31°6W**±0°1, **h10**km, **n21**, σ1**922**/18, **mb4.5**/5, **South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.02**	**287**	Pn	**Pn**	**04 34 28.1**	**+1.1**
ORCD	**Orcadas**	**8.88**	**226**	Pn	**Pn**	**04 35 48.6**	**+1.2**
ESPZ	**Base Esperanza**	**15.23**	**227**	Pn	**Pn**	**04 37 13.6**	**-0.4**
VNA1	**Neumayer--Stat**	**18.50**	**155**	P	**Pn**	**04 37 57.1**	**+1.8**
VNA3	**Neumayer Olymp**	**18.61**	**158**	P	**P**	**04 37 55.0**	**-1.5**
VNA2	**Neumayer--Watz**	**18.90**	**155**	P	**Pn**	**04 38 01.0**	**+0.8**
	baz=310,slow=13						
SNAA	**Sanae**	**20.50**	**154**	P	**P**	**04 38 15.5**	**-1.6**
SNAA	**Sanae**	**20.50**	**154**	P	**P**	**04 38 16.5**	**-0.6**
SNAA				IAmb	IAmb	04 38 28.7	
	comp=Z,8.0nm,1.2s						
MG05	**Puerto Natales**	**24.37**	**261**	P	**P**	**04 38 54.9**	**-2.4**
PTLB	**Pontes e Lacer**	**45.06**	**321**	P	**P**	**04 41 55.5**	**+0.2**
PTLB				IAmb	IAmb	04 41 56.2	
	comp=Z,2.2nm,0.6s						
SIV	**San Ignacio**	**45.28**	**318**	P	**P**	**04 41 56.2**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=154,slow=7.1,SNR=2.0						
	comp=Z,0.5nm,0.5s						
LPAZ	**La Paz**	**47.93**	**310**	P	**P**	**04 42 20.2**	**+1.7**
	comp=Z,3.7nm,0.5s,baz=179,slow=5.3,SNR=20						
	comp=Z,3.7nm,0.5s						
H10N3	**ASCENSION HYDR**	**49.21**	**23**	T	T	05 35 23.1	
	baz=192,slow=75,SNR=12						
H10N1	**ASCENSION HYDR**	**49.21**	**23**	T	T	05 35 23.9	
	baz=192,slow=75,SNR=6.2						
H10N2	**ASCENSION HYDR**	**49.23**	**23**	T	T	05 35 25.0	
	baz=192,slow=75,SNR=10						
BOAV	**Boa Vista**	**62.20**	**327**	P	**P**	**04 44 00.1**	**-0.8**
BOAV				IAmb	IAmb	04 44 17.9	
	comp=Z,4.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**73.68**	**34**	P	**P**	**04 45 13.5**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=192,slow=7.5,SNR=2.0						
	comp=Z,2.5nm,0.4s						
BCAR	**Beaver Creek A**	**145.09**	**312**	PKPbc	**PKPab**	**04 53 15.4**	**+0.3**
ILAR	**Eielson Array**	**147.75**	**313**	PKPbc	**PKPbc**	**04 53 22.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=125,slow=2.1,SNR=8.1						
ILAR	**Eielson Array**	**147.75**	**313**	PKPbc	**PKPbc**	**04 53 22.7**	**0.0**
TOLK	**Toolik Lake Re**	**149.48**	**320**	PKPbc	**PKPbc**	**04 53 27.4**	**+0.3**

*IDC **27** 04:37:40.0±0.9, 20°40S×66°80W, h226km±11km, mb2.7/3, mbtmp3.4/7, Error ellipse: s-maj=20.4km s-min=10.3km az=103.0*
*SCB **27** 04:37:43.9±1.3, 20°47S×66°93W, h222km±2km, ML3.2/5, MW3.3, Error ellipse: s-maj=5.7km s-min=4.3km az=1.0*

ISC 27 04:37:40.4±0.8, **20°41S**±0°05×**66°91W**±0°05, **h228**km±8km, **n33**, σ1**950**/47, **mb3.1**/3, **5C-1D**, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.45**	**125**	P	**Pn**	**04 38 18.7**	**+1.9**
MOCB				S	**S**	**04 38 43.0**	**-2.1**
MOCB				IAML		04 38 47.6	
	232nm,0.7s						
MOCB				IAML		04 38 49.1	
	153nm,0.4s						
YJA	**Yavi**	**2.19**	**144**	P	**Pn**	**04 38 25.1**	**+1.8**
GO01	**Chusmiza**	**2.27**	**289**	*e*P	**Pn**	**04 38 24.5**	**+0.3**
GO01	**Chusmiza**	**2.27**	**289**	P	**Pn**	**04 38 25.7**	**+1.4**
PB01	**IPOC Station P**	**2.49**	**255**	⇓*i*P	**Pn**	**04 38 27.0**	**+0.9**
PB01				*i* S	**S**	**04 39 01.5**	**-0.3**
PB01				IAML		04 39 02.9	
	comp=N,140nm,0.2s						
PB09	**IPOC Station P**	**2.58**	**237**	*e*P	**Pn**	**04 38 28.2**	**+1.2**
PB09				*i* S	**S**	**04 39 04.3**	**+0.7**
LVC	**Limon Verde**	**2.87**	**220**	P	**Pn**	**04 38 31.9**	**+1.5**
	comp=N,6.8nm,0.4s,baz=25,slow=8.1,SNR=20						
LVC				S	**S**	**04 39 10.8**	**+1.0**
	comp=N,19nm,0.4s,baz=136,slow=19,SNR=31						
LVC	**Limon Verde**	**2.87**	**220**	*e*P	**Pn**	**04 38 31.1**	**+0.6**
LVC				*i* S	**S**	**04 39 09.4**	**-0.3**
LVC	**Limon Verde**	**2.87**	**220**	P	**Pn**	**04 38 32.

FAKI	**Fak Fak**	**5.88**	**40**	P		**Pn**	04 45 15.5	**-0.5**	
	0.8nm3µm176nm,0.6s								
MTN	**Manton Dam**	**5.91**	**154**			**Pn**	04 45 18.4	**+2.1**	
MTN	**Manton Dam**	**5.91**	**154**	P		**Pn**	04 45 18.6	**+2.3**	
MMRI	**Maumere**	**6.31**	**259**	Pn		**Pn**	04 45 22.2	**+0.5**	
MMRI	**Maumere**	**6.31**	**259**	P		**Pn**	04 45 22.9	**+1.2**	
	0.7nm4µm127nm,0.7s								
KDU	**Kakadu**	**6.47**	**143**	P		**Pn**	04 45 26.0	**+2.2**	
EDFI	**Ende, Flores**	**6.86**	**259**	P		**Pn**	04 45 30.9	**+1.7**	
	0.1nm397nm33nm,1.0s								
SIJI	**Sorong**	**7.14**	**23**	P		**Pn**	04 45 33.9	**+1.1**	
	71nm,0.3s,baz=230,slow=22,SNR=57								
SIJI				S		**Sn**	04 46 49.8	**-3.1**	
	7.8nm,0.3s,baz=105,slow=22,SNR=1.2								
SWI	**Sorong**	**7.14**	**23**	P		**Pn**	04 45 33.8	**+1.0**	
	0.8nm3µm130nm,0.4s								
KNRA	**Kununurra**	**8.13**	**178**	Pn		**Pn**	04 45 46.9	**+0.9**	
KNRA	**Kununurra**	**8.13**	**178**	P		**Pn**	04 45 46.9	**+0.9**	
WBSI	**Waikabubak, Su**	**9.26**	**256**	P		**Pn**	04 45 58.9	**-2.2**	
	975nm79nm,0.7s								
PLAI	**Plampang**	**10.70**	**262**	P		**Pn**	04 46 18.9	**-1.3**	
	67nm,0.6s								
PLAI	**Plampang**	**10.70**	**262**	P		**Pn**	04 46 19.7	**-0.5**	
FITZ	**Fitzroy Crossi**	**10.90**	**195**	P		**Pn**	04 46 21.4	**-1.3**	
	12nm,0.4s,baz=25,slow=11,SNR=98								
FITZ				S		**Sn**	04 48 16.1	**-7.2**	
	21nm,0.3s,baz=116,slow=11,SNR=10								
FITZ	**Fitzroy Crossi**	**10.90**	**195**	Pn		**Pn**	04 46 21.5	**-1.1**	
FITZ	**Fitzroy Crossi**	**10.90**	**195**	P		**Pn**	04 46 21.4	**-1.3**	
WB0	**Warramunga Arr**	**13.46**	**155**	Pn		**Pn**	04 46 55.3	**-0.7**	
WRAB	**Tennant Creek**	**13.60**	**156**	Pn		**Pn**	04 46 58.1	**+0.4**	
WRAB	**Tennant Creek**	**13.60**	**156**	P		**Pn**	04 46 57.5	**-0.2**	
WRA	**Warramunga Arr**	**13.60**	**156**	P		**Pn**	04 46 54.9	**-2.8**	
	1.4nm,0.4s,baz=201,slow=16,SNR=48								
WRA				S		Sn	04 49 17.5	-11	
	9.4nm,0.4s,baz=327,slow=23,SNR=10								
WRA	**Warramunga Arr**	**13.60**	**156**			**Pn**	04 46 57.0	**-0.7**	
WB2	**Warramunga Arr**	**13.61**	**156**	Pn		**Pn**	04 46 58.5	**+0.8**	
WR0	**Warramunga Arr**	**13.70**	**155**			**Pn**	04 46 58.4	**-0.6**	
COEN	**Coen**	**15.77**	**115**			**Pn**	04 47 23.7	**-1.1**	
COEN				IAmb		IAmb	04 47 30.0		
	comp=Z,14nm,0.4s								
COEN	**Coen**	**15.77**	**115**	P		**P**	04 47 28.4	**+2.8**	
MBWA	**Marble Bar**	**16.01**	**211**			**Pn**	04 47 27.5	**-0.2**	
MBWA				IAmb		IAmb	04 47 29.4		
	comp=Z,43nm,1.5s								
MBWA	**Marble Bar**	**16.01**	**211**	P		**Pn**	04 47 23.3	**-4.4**	
	comp=Z,12nm,2.3s								
PSA00	**Pilbara Seismi**	**16.30**	**210**			**Pn**	04 47 30.7	**-0.5**	
QIS	**Mount Isa**	**16.85**	**142**	P		**Pn**	04 47 39.6	**+1.7**	
AS31	**Alice Springs**	**16.89**	**163**	P		**Pn**	04 47 39.6	**+1.2**	
AS31				IAmb		IAmb	04 47 43.3		
	comp=Z,12nm,0.4s								
ASAR	**Alice Springs**	**16.89**	**163**	P		**Pn**	04 47 40.3	**+1.9**	
	comp=Z,19nm,0.7s,baz=341,slow=11,SNR=196								
ASAR				S		S	04 50 34.8	-11	
	comp=Z,1.1nm,0.5s,baz=316,slow=16,SNR=4.1								
ASAR	**Alice Springs**	**16.89**	**163**			**Pn**	04 47 40.0	**+1.6**	
CTA	**Charters Tower**	**21.27**	**128**	P		**P**	04 48 27.4	**+2.0**	
	comp=Z,3.1nm,0.5s,baz=291,slow=9.6,SNR=6.4								
	comp=Z,3.1nm,0.5s								
FORT	**Forrest**	**23.16**	**181**	P		**P**	04 48 44.3	**+0.3**	
MORW	**Morawa**	**24.46**	**207**	P		**P**	04 48 57.3	**+1.4**	
BBOO	**Buckleboo**	**26.14**	**165**	P		**P**	04 49 10.9	**-0.1**	
STKA	**Stephens Creek**	**27.15**	**155**	P		**P**	04 49 21.4	**+1.3**	
	comp=Z,6.2nm,0.5s,baz=324,slow=9.7,SNR=21								
	comp=Z,6.2nm,0.5s								
STKA	**Stephens Creek**	**27.15**	**155**	P		**P**	04 49 19.5	**-0.5**	
TOO	**Toolangi**	**33.67**	**155**	P		**P**	04 50 18.3	**+0.9**	
CMAR	**Chiang Mai Arr**	**38.94**	**312**	P		**P**	04 51 02.0	**-0.2**	
	comp=Z,1.5nm,0.4s,baz=140,slow=7.1,SNR=4.8								
	comp=Z,1.5nm,0.4s								
PZH	**PanZhiHua**	**42.63**	**323**	P		**P**	04 51 34.3	**+1.7**	
PZH				pmax		pmax			
	comp=Z,10.0nm,0.6s								
PZH				pmax		pmax			
	comp=Z,120nm,4.3s								
HHC	**Hu-ho-hao-te**	**50.58**	**343**	*eP*		**P**	04 52 35.3	**+1.1**	
HHC				pmax		pmax			
	comp=Z,16nm,0.8s								
HHC				pmax		pmax			
	comp=Z,140nm,6.6s								
SONM	**Songino Array**	**58.46**	**343**	P		**P**	04 53 31.2	**+0.2**	
	comp=Z,0.8nm,0.6s,baz=162,slow=5.9,SNR=4.3								
	comp=Z,0.8nm,0.6s								
SONM	**Songino Array**	**58.46**	**343**	P		**P**	04 53 31.1	**+0.1**	
SONM				IAmb		IAmb	04 53 32.5		
	comp=Z,3.3nm,1.4s								
WMQ	**Urumqi**	**63.02**	**328**	*eP*		**P**	04 54 03.3	**+1.5**	
PETK	**Petropavlovsk-**	**65.27**	**19**	P		**P**	04 54 16.3	**+0.1**	
	comp=Z,2.3nm,0.9s,baz=207,slow=2.9,SNR=2.4								
	comp=Z,2.3nm,0.9s								
MK31	**Makanchi Array**	**67.84**	**328**	P		**P**	04 54 31.7	**-1.0**	
MK31				IAmb		IAmb	04 54 33.3		
	comp=Z,3.0nm,1.2s								
MKAR	**Makanchi Array**	**67.84**	**328**	P		**P**	04 54 32.5	**-0.2**	
	comp=Z,2.3nm,0.7s,baz=125,slow=8.0,SNR=17								
	comp=Z,2.3nm,0.7s								
MKAR	**Makanchi Array**	**67.84**	**328**	P		**P**	04 54 31.4	**-1.3**	
MAKZ	**Makanchi**	**68.02**	**327**	P		**P**	04 54 32.8	**-1.0**	
MAKZ				IAmb		IAmb	04 54 34.2		
	comp=Z,3.7nm,1.1s								
ZALV	**Zalesovo Beam**	**71.38**	**334**	P		**P**	04 54 52.8	**-1.4**	
	comp=Z,1.5nm,0.5s,baz=129,slow=4.8,SNR=7.1								
	comp=Z,1.5nm,0.5s								
ZALV	**Zalesovo Beam**	**71.38**	**334**	P		**P**	04 54 52.6	**-1.6**	
VNDA	**Vanda**	**72.14**	**173**	P		**P**	04 54 59.1	**+0.8**	
	comp=Z,1.3nm,0.6s,baz=321,slow=7.1,SNR=19								
	comp=Z,1.3nm,0.6s								
VNDA	**Vanda**	**72.14**	**173**	P		**P**	04 54 58.5	**+0.1**	
KURK	**Kurchatov**	**72.18**	**329**	P		**P**	04 54 58.2	**-0.9**	
KURK				IAmb		IAmb	04 54 59.4		
	comp=Z,5.7nm,1.0s								
KKAR	**Karatay Array**	**72.75**	**319**	P		**P**	04 55 01.9	**-0.8**	
MAW	**Mawson**	**73.95**	**201**	P		**P**	04 55 10.0	**+0.9**	
	comp=Z,0.8nm,0.4s,baz=41,slow=11,SNR=1.9								
	comp=Z,0.8nm,0.4s								
HRA	**Herat**	**75.10**	**308**	P		**P**	04 55 16.7	**-0.1**	
HRA				IAmb		IAmb	04 55 26.1		
	comp=Z,8.2nm,1.2s								
BRVK	**Borovoye**	**77.77**	**328**	P		**P**	04 55 29.5	**-1.6**	
BRVK				IAmb		IAmb	04 55 31.3		
	comp=Z,4.6nm,1.1s								
ABKAR	**Akbulak array**	**81.98**	**322**	P		**P**	04 55 52.1	**-1.7**	
QSPA	**South Pole Qui**	**82.48**	**180**	P		**P**	04 55 56.5	**+0.2**	
	comp=Z,3.4nm,0.6s,baz=336,slow=0.3,SNR=28								
	comp=Z,3.4nm,0.6s								
GERES	**GERESS Array B**	**111.85**	**320**	PKiKP		**PKiKP**	05 02 07.6	**-0.4**	
	comp=Z,0.3nm,0.5s,baz=42,slow=2.2,SNR=4.2								
TXAR	**Lajitas Array**	**126.45**	**59**	PKP		**PKiKP**	05 02 37.1	**0.0**	
	comp=Z,0.1nm,0.3s,baz=266,slow=1.4,SNR=1.8								
CPUP	**Villa Florida**	**145.90**	**171**	PKPbc		**PKPdf**	05 03 12.6	**+0.2**	
	comp=Z,1.8nm,0.6s,baz=260,slow=1.3,SNR=2.9								
LPAZ	**La Paz**	**151.19**	**145**	PKPbc		**PKPbc**	05 03 28.3	**+0.2**	
	comp=Z,1.5nm,0.4s,baz=69,slow=5.1,SNR=3.3								

IDC ***27*** *04:51:03.3±1.1,56°.27S×26°.76W,h42km±8km,mb4.7/20, mbtmp5.0/22,ML4.9/2,MS4.0/37,Error ellipse: s-maj=12.3km s-min=11.1km az=54.0*

MOS ***27*** *04:51:03.2±1.0,56°.30S×26°.85W,h53km,mb5.4/10,Error ellipse: s-maj=19.7km s-min=9.8km az=109.8*

GCMT ***27*** *04:51:04.5±0.3,56°.37S±0°.02×26°.23W±0°.03,h45km, MW5.0/80,Moment Tensor Solution. s69,c88; s80,c105; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.18±.14; Mθθ-0.38±.12; Mφφ-2.79±.11; Mrθ0.01±.10; Mrφ1.52±.07; Mθφ1.40±.08; Best double couple: M☉3.64000×10^16 NP1:φs345.00000°,δ56.00000°,λ103.00000°. NP2: φs143.00000°,δ36.00000°,λ72.00000°. Principal axes: T 3.5250, Plg75.0000°, Azm292.0000°; N 0.2390, Plg10.0000°, Azm158.0000°; P -3.7550, Plg10.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***27*** *04:51:05.0±0.0,56°.30S×26°.90W,h60km,mB5.3/5, Ms5.5/2,Ms7 4.9/2*

NEIC ***27*** *04:51:05.5±1.3,56°.29S±0°.08×26°.89W±0°.05,h59km±4km, mb5.4/144,Error ellipse: s-maj=12.3km s-min=2.4km az=163.0*

ISC 27 04:51:04.5±0.4,56°.31S±0°.05×26°.86W±0°.05,h54km±3km, h54km:pP-P,n675,σθ90/665,mb5.3/91,MS4.1/39,10C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
HOPE	**Hope Point**	**5.86**	**286**	Pn	**Pn**	**04 52 29.6**	**+0.9**	
HOPE				Sn	**Sn**	**04 53 34.1**	**-0.4**	
HOPE	**Hope Point**	**5.86**	**286**	P	**Pn**	**04 52 29.6**	**+0.9**	
HOPE						04 53 34.1		
ORCD	**Orcadas**	**10.34**	**237**	Pn	**Pn**	**04 53 30.3**	**+0.5**	
VNA1	**Neumayer--Stat**	**16.49**	**158**	P	**Pn**	**04 54 52.2**	**+0.5**	
VNA1	**Neumayer--Stat**	**16.49**	**158**	ScP	**ScP**	**05 03 11.7**	**+2.2**	
VNA3	**Neumayer Olymp**	**16.68**	**161**	P	**Pn**	**04 54 54.7**	**+0.5**	
VNA3	**Neumayer Olymp**	**16.68**	**161**	PcP	**PcP**	**04 59 41.1**	**+0.8**	
VNA3	**Neumayer Olymp**	**16.68**	**161**	ScP	**ScP**	**05 03 10.2**	**+0.2**	
VNA2	**Neumayer--Watz**	**16.88**	**158**	P	**Pn**	**04 54 55.4**	**-1.3**	
	baz=318,slow=14							
VNA2	**Neumayer--Watz**	**16.88**	**158**	PcP	**PcP**	**04 59 41.1**	**+0.5**	
VNA2	**Neumayer--Watz**	**16.88**	**158**	ScP	**ScP**	**05 03 10.9**	**+0.6**	
SNAA	**Sanae**	**18.43**	**156**	P	**P**	**04 55 14.7**	**-0.4**	
SNAA	**Sanae**	**18.43**	**156**	PcP	**PcP**	**04 59 43.8**	**+0.6**	
SNAA	**Sanae**	**18.43**	**156**	ScP	**ScP**	**05 03 14.6**	**+0.8**	
SNAA	**Sanae**	**18.43**	**156**	P	**P**	**04 55 14.9**	**-0.2**	
	3.0nm,0.3s,baz=301,slow=10,SNR=112							
SNAA				PcP	**PcP**	**04 59 43.6**	**+0.4**	
	7.0nm,0.6s,baz=279,slow=1.8,SNR=5.4							
SNAA				LR	LR	05 01 04.5		
	comp=Z,406nm,21.6s,baz=305,slow=33							
SNAA				ScP	**ScP**	**05 03 14.5**	**+0.8**	
	3.3nm,0.7s,baz=242,slow=8.1,SNR=9.7							
	22nm,0.6s							
SNAA	**Sanae**	**18.43**	**156**	P	**P**	**04 55 14.9**	**-0.2**	
EFI	**East Falkland**	**18.82**	**271**	P	**P**	**04 55 19.7**	**+0.2**	
EFI	**East Falkland**	**18.82**	**271**	*ceP*	**Pn**	**04 55 21.5**	**+1.0**	
EFI				pmax	pmax			
	comp=Z,46nm,0.8s							
PMSA	**Palmer Station**	**19.87**	**230**	P	**Pn**	**04 55 32.8**	**0.0**	
	comp=Z,5.5nm,0.3s,baz=75,slow=8.9,SNR=118							
PMSA				PcP	**PcP**	**04 59 46.3**	**+0.6**	
	comp=Z,6.3nm,0.6s,baz=24,slow=2.4,SNR=4.1							
PMSA				LR	LR	05 02 20.5		
	comp=Z,787nm,18.5s,baz=88,slow=34							
	comp=Z,122nm,0.8s							
PMSA	**Palmer Station**	**19.87**	**230**	P	**Pn**	**04 55 33.2**	**+0.4**	
PMSA				IAmb	IAmb	04 55 35.3		
	comp=Z,123nm,0.8s							
PMSA	**Palmer Station**	**19.87**	**230**	*eP*	**Pn**	**04 55 34.2**	**+1.4**	
TROLL	**Troll, Antarti**	**19.93**	**153**	P	**P**	**04 55 31.2**	**-0.3**	
SMAI	**San Martin Ant**	**21.69**	**221**	P	**P**	**04 55 52.2**	**+1.9**	
BELA	**Belgrano 2**	**21.83**	**184**	P	**P**	**04 55 51.4**	**-0.4**	
BELA				IAmb	IAmb	04 55 55.0		
	comp=Z,148nm,0.7s							
NVL	**N'lazarevskaya**	**21.95**	**146**	*iP*	**P**	**04 55 52.0**	**-1.0**	
NVL				pmax	pmax			
	comp=Z,34nm,0.8s							
MG01	**Puerto William**	**22.83**	**256**	P	**P**	**04 56 02.9**	**+0.3**	
MG01				IAmb	IAmb	04 56 14.1		
	comp=Z,71nm,0.6s							
USHA	**Ushuaia**	**23.30**	**256**	P	**P**	**04 56 07.7**	**+0.5**	
	comp=Z,17nm,0.7s,baz=92,slow=5.9,SNR=11							
	comp=Z,17nm,0.7s							
MG02	**Cerro Sombrero**	**24.54**	**260**	P	**P**	**04 56 19.4**	**+0.7**	
MG02				IAmb	IAmb	04 56 38.3		
	comp=Z,123nm,0.8s							
GO10	**Punta Arenas**	**25.38**	**258**	P	**P**	**04 56 26.0**	**-0.4**	
MG05	**Puerto Natales**	**26.84**	**260**	P	**P**	**04 56 38.3**	**-1.1**	
GO09	**Cerro Castillo**	**26.94**	**261**	P	**P**	**04 56 39.6**	**-0.8**	
COYC	**Coyhaique**	**29.92**	**272**	P	**P**	**04 57 06.3**	**-0.7**	
COYC	**Coyhaique**	**29.92**	**272**	P	**P**	**04 57 06.9**	**-0.1**	
COYC				pP	**pP**	**04 57 20.5**	**-0.1**	
PLTB	**Pedras Altas**	**30.81**	**312**	P	**P**	**04 57 14.7**	**-0.2**	
PLTB				IAmb	IAmb	04 57 16.4		
	comp=Z,36nm,0.6s							
PLTB	**Pedras Altas**	**30.81**	**312**	*eP*	**P**	**04 57 15.5**	**+0.5**	
AY01	**Puyuhuapi**	**30.95**	**273**	P	**P**	**04 57 14.6**	**-1.4**	
AY01					**PcP**	**05 00 10.6**	**-0.5**	
CNLB	**Canela**	**31.89**	**318**	*eP*	**P**	**04 57 25.8**	**+1.3**	
CPSB	**Cacapava Do Su**	**31.93**	**313**	*eP*	**P**	**04 57 25.9**	**+1.2**	
TER01	**Tubaro-SC**	**31.97**	**321**	*eP*	**P**	**04 57 26.2**	**+1.0**	
PLCA	**Paso Flores**	**32.23**	**280**	P	**P**	**04 57 26.2**	**-1.2**	
	comp=Z,3.2nm,0.9s,baz=165,slow=5.3,SNR=7.4							
PLCA				PcP	**PcP**	**05 00 15.1**	**+0.4**	
	comp=Z,8.4nm,0.7s,baz=91,slow=1.8,SNR=16							
PLCA				ScP	**ScP**	**05 03 52.5**	**-0.9**	
	comp=Z,1.7nm,0.7s,baz=150,slow=2.2,SNR=4.6							
PLCA				LR	LR	05 10 05.7		
	comp=Z,415nm,20.1s,baz=146,slow=35							
	comp=Z,3.2nm,0.9s							
PLCA	**Paso Flores**	**32.23**	**280**	P	**P**	**04 57 27.3**	**-0.1**	
PLCA				PcP	**PcP**	**05 00 14.3**	**-0.4**	
PLCA	**Paso Flores**	**32.23**	**280**	*eP*	**P**	**04 57 28.0**	**+0.6**	
PLCA	**Paso Flores**	**32.23**	**280**	P	**P**	**04 57 26.3**	**-1.2**	
RODS	**Rosario do Sul**	**32.71**	**311**	*eP*	**P**	**04 57 32.0**	**+0.4**	
LL04	**Puerto Octay**	**33.13**	**278**	P	**P**	**04 57 34.4**	**-0.8**	
LL04				PcP	**PcP**	**05 00 16.8**	**-0.3**	
ALGR	**Alto Alegre (B**	**33.18**	**315**	*eP*	**P**	**04 57 36.8**	**+0.9**	
UNIS	**Unistalda (Bra**	**33.77**	**312**	*eP*	**P**	**04 57 41.1**	**+0.1**	
ITQB	**Itaqui**	**33.90**	**309**	P	**P**	**04 57 40.8**	**-1.2**	
ITQB				IAmb	IAmb	04 57 42.9		
	comp=Z,20nm,0.7s							
ITQB	**Itaqui**	**33.90**	**309**	*eP*	**P**	**04 57 41.7**	**-0.3**	
QSPA	**South Pole Qui**	**33.94**	**180**	P	**P**	**04 57 43.3**	**+1.0**	
	comp=Z,77nm,0.6s,baz=195,slow=3.4,SNR=291							
QSPA				PcP	**PcP**	**05 00 19.4**	**+0.2**	
	comp=Z,8.1nm,0.5s,baz=191,slow=9.6,SNR=3.0							
QSPA				ScP	**ScP**	**05 03 58.6**	**-0.4**	
	comp=Z,7.0nm,0.7s,baz=249,slow=1.8,SNR=7.9							
QSPA				LR	LR	05 11 18.3		
	comp=Z,392nm,19.3s,baz=193,slow=36							
	comp=Z,77nm,0.6s							
QSPA	**South Pole Qui**	**33.94**	**180**	P	**P**	**04 57 42.9**	**+0.6**	
QSPA	**South Pole Qui**	**33.94**	**180**	P	**P**	**04 57 43.4**	**+1.2**	
ITAB	**Concordia**	**34.24**	**317**	P	**P**	**04 57 45.8**	**+0.8**	
ITAB	**Concordia**	**34.24**	**317**	*eP*	**P**	**04 57 46.1**	**+1.1**	
CRSM	**Crissiumal (Br**	**34.75**	**315**	*eP*	**P**	**04 57 50.0**	**+0.6**	
PET01	**Itanhaem-SP**	**35.29**	**327**	*eP*	**P**	**04 57 55.0**	**+1.0**	
PARB	**Paraibuna**	**35.70**	**330**	*eP*	**P**	**04 57 59.4**	**+1.8**	
MAN01	**Angra dos Reis**	**35.70**	**332**	*eP*	**P**	**04 57 58.6**	**+1.0**	
FRBT	**Francisco Belt**	**35.73**	**317**	*eP*	**P**	**04 57 58.8**	**+0.9**	
DUB01	**Friburgo-RJ**	**36.06**	**335**	*eP*	**P**	**04 58 02.0**	**+1.3**	
VAS01	**Vassouras-RJ**	**36.13**	**333**	*eP*	**P**	**04 58 02.4**	**+1.2**	
VAO	**Valinhos**	**36.41**	**328**	*eP*	**P**	**04 58 05.6**	**+1.9**	
PTGB	**Pitanga**	**36.50**	**319**	*eP*	**P**	**04 58 05.2**	**+0.7**	
LMEL	**Las Melosas**	**37.10**	**289**	P	**P**	**04 58 10.4**	**+0.8**	
LMEL				PcP	**PcP**	**05 00 29.0**	**0.0**	
ALF01	**Guarapari-ES**	**37.11**	**338**	*eP*	**P**	**04 58 10.9**	**+1.4**	
CPUP	**Villa Florida**	**37.12**	**311**	P	**P**	**04 58 09.6**	**-0.1**	
	comp=Z,21nm,0.7s,baz=146,slow=6.6,SNR=44							
CPUP				PcP	**PcP**	**05 00 29.1**	**+0.2**	
	comp=Z,9.2nm,0.6s,baz=179,slow=1.4,SNR=10							
CPUP				LR	LR	05 11 05.5		
	comp=Z,185nm,21.7s,baz=168,slow=32							
	comp=Z,21nm,0.7s							
CPUP	**Villa Florida**	**37.12**	**311**	P	**P**	**04 58 08.6**	**-1.0**	
CPUP				IAmb	IAmb	04 58 10.4		
	comp=Z,20nm,0.7s							
CPUP					**PcP**	**05 00 28.5**	**-0.4**	
CPUP	**Villa Florida**	**37.12**	**311**	*eP*	**P**	**04 58 09.4**	**-0.3**	
CPUP	**Villa Florida**	**37.12**	**311**	P	**P**	**04 58 09.4**	**-0.2**	
CPUP				pP	**pP**	**04 58 22.6**	**-0.7**	
MCR1	**Marechal Candi**	**37.47**	**317**	*eP*	**P**	**04 58 13.4**	**+0.7**	
MT03	**Universidad Ad**	**37.53**	**289**	P	**P**	**04 58 12.4**	**-0.8**	
MT03				IAmb	IAmb	04 58 15.6		
	comp=Z,69nm,1.2s							
MT03					**PcP**	**05 00 29.7**	**-0.6**	
BSCB	**Bom Sucesso**	**37.70**	**332**	*eP*	**P**	**04 58 16.1**	**+1.5**	
PEL	**Peldehue**	**37.90**	**289**	P	**P**	**04 58 15.5**	**-0.7**	
MT02	**Curacav**	**38.04**	**288**	IAmb	IAmb	04 58 18.8		
	comp=Z,42nm,0.7s							
ZON	**Zonda**	**38.10**	**293**	P	**P**	**04 58 16.8**	**-1.2**	
ZON				PcP	**PcP**	**05 00 31.9**	**-0.1**	
VA03	**San Esteban**	**38.12**	**289**	P	**P**	**04 58 18.3**	**+0.1**	
VA03				IAmb	IAmb	04 58 23.6		
	comp=Z,44nm,1.3s							
VA03					**PcP**	**05 00 32.5**	**+0.4**	
ROC1	**El Roble**	**38.20**	**289**	IAmb	IAmb	04 58 23.8		
	comp=Z,39nm,0.6s							
RIB01	**Linhares ES**	**38.31**	**339**	*eP*	**P**	**04 58 20.6**	**+0.9**	
TRCB	**Terra Rica**	**38.47**	**320**	P	**P**	**04 58 21.4**	**+0.3**	
TRCB	**Terra Rica**	**38.47**	**320**	*eP*	**P**	**04 58 22.3**	**+1.2**	
BB19B	**Bebedouro**	**38.70**	**327**	*eP*	**P**	**04 58 24.4**	**+1.3**	
SJMB	**Sao Joao De Ma**	**39.06**	**338**	*eP*	**P**	**04 58 26.4**	**+0.4**	
PCMB	**Pacaembu**	**39.08**	**322**	*eP*	**P**	**04 58 26.7**	**+0.5**	
CO02	**Combarbal**	**39.58**	**291**	IAmb	IAmb	04 58 38.4		
	comp=Z,57nm,1.4s							
NAN01	**Guarapari, ES**	**39.69**	**340**	*eP*	**P**	**04 58 31.6**	**+0.4**	
CO03	**El Pedregal**	**39.71**	**291**	P	**P**	**04 58 32.3**	**+0.8**	
CO03					**PcP**	**05 00 36.8**	**-0.3**	
MAW	**Mawson**	**39.83**	**143**	P	**P**	**04 58 32.6**	**+0.7**	
	comp=Z,12nm,0.6s,baz=227,slow=7.8,SNR=34							
MAW				PcP	**PcP**	**05 00 37.3**	**+0.6**	
	comp=Z,3.7nm,0.7s,baz=260,slow=6.3,SNR=2.4							
MAW				ScP	**ScP**	**05 04 22.6**	**+2.0**	
	comp=Z,1.8nm,0.6s,baz=284,slow=16,SNR=1.8							
MAW				LR	LR	05 12 31.9		
	comp=Z,349nm,21.9s,baz=256,slow=32							
	comp=Z,12nm,0.6s							
MAW	**Mawson**	**39.83**	**143**	P	**P**	**04 58 32.6**	**+0.7**	
DIAM	**Diamantina, MG**	**40.01**	**335**	*eP*	**P**	**04 58 35.0**	**+0.9**	
CO01	**Juntas del Tor**	**40.09**	**293**	P	**P**	**04 58 34.4**	**-0.4**	
ANTJ	**Antonio Joao (**	**40.45**	**316**	*eP*	**P**	**04 58 37.3**	**-0.3**	
PMNB	**Patos De Minas**	**40.49**	**331**	*eP*	**P**	**04 58 39.1**	**+1.1**	
SUR	**Sutherland**	**40.53**	**74**	P	**P**	**04 58 38.2**	**-0.2**	
	comp=Z,6.4nm,0.9s,baz=67,slow=11,SNR=2.2							
SUR				LR	LR	05 11 27.4		
	comp=Z,673nm,19.0s,baz=226,slow=30							
	comp=Z,6.4nm,0.9s							
ITRB	**Iturama**	**40.55**	**325**	*eP*	**P**	**04 58 39.5**	**+1.1**	
AC05	**El Transito**	**41.10**	**293**	IAmb	IAmb	04 58 44.9		
	comp=Z,55nm,1.0s							
LCO	**Las Campanas**	**41.18**	**293**	P	**P**	**04 58 43.4**	**-0.4**	
LCO	**Las Campanas**	**41.18**	**293**	P	**P**	**04 58 43.4**	**-0.4**	
LCO				pmax	pmax			
	comp=Z,17nm,0.7s							
LCO	**Las Campanas**	**41.18**	**293**	P	**P**	**04 58 43.0**	**-0.8**	
LCO				pP	**pP**	**04 58 57.1**	**-0.7**	
LCO				sP	**sP**	**04 59 02.1**	**-1.9**	
IPMB	**Ipameri, GO**	**41.51**	**328**	*eP*	**P**	**04 58 47.6**	**+1.2**	
MC01	**Montes Claros**	**41.60**	**335**	*eP*	**P**	**04 58 47.2**	**+0.1**	
AQDB	**Aquidauana**	**41.72**	**317**	IAmb	IAmb	04 58 49.2		
	comp=Z,37nm,0.8s							
AQDB	**Aquidauana**	**41.72**	**317**	*eP*	**P**	**04 58 47.4**	**-0.6**	
CMC01	**Camacan, BA**	**42.00**	**342**	*eP*	**P**	**04 58 50.6**	**+0.3**	
AC04	**Llanos de Chal**	**42.02**	**293**	IAmb	IAmb	04 58 52.0		
	comp=Z,78nm,1.0s							
GO03	**Copiap**	**42.09**	**295**	P	**P**	**04 58 50.4**	**-0.7**	
GO03				IAmb	IAmb	04 58 52.1		
	comp=Z,42nm,0.7s							
AC02	**Maricunga**	**42.16**	**296**	IAmb	IAmb	04 58 54.6		
	comp=Z,64nm,0.8s							
C2SB	**Chapadao do Su**	**42.25**	**322**	*eP*	**P**	**04 58 53.3**	**+1.0**	
AC06	**Mina Casimiro**	**42.34**	**295**	IAmb	IAmb	04 58 53.9		
	comp=Z,33nm,0.7s							
**RV

RCBR Riachuelo 50.85 348 P **P** 04 59 59.3 -0.4
RCBR Riachuelo 50.85 348 P **P** 04 59 59.3 -0.4
RCBR pmax pmax
comp=Z,10.0nm,1.0s
RCBR Riachuelo 50.85 348 *eP* **P** 05 00 00.8 +1.1
PRPB Parauapebas 53.21 331 *eP* **P** 05 00 18.1 +0.9
CASY Casey 53.60 160 P **P** 05 00 20.1 +0.7
CASY lAmb lAmb 05 00 21.2
comp=Z,20nm,0.8s
CASY Casey 53.60 160 P **P** 05 00 20.1 +0.7
NPGB Novo Progresso 54.03 324 *eP* **P** 05 00 22.9 -0.4
ROSB Rosario 55.03 339 *eP* **P** 05 00 30.6 +0.3
ETMB Extrema 55.57 311 lAmb lAmb 05 00 35.1
comp=Z,32nm,0.8s
ETMB Extrema 55.57 311 *eP* **P** 05 00 34.1 -0.2
TMAB Tom-Au,PA,Br 56.42 334 *eP* **P** 05 00 40.8 +0.4
ITTB Itaituba 56.67 325 *eP* **P** 05 00 42.0 -0.2
DRV Dumont d'Urvil 56.95 174 P **pwP** 05 00 43.5 +0.1
DRV pP **pwP** 05 00 59.1 -1.1
LSZ Lusaka 58.29 68 LR LR 05 24 41.0
comp=Z,181nm,18.0s,baz=197,slow=35
NNA Nana 58.53 299 LR LR 05 25 46.6
comp=Z,122nm,22.0s,baz=144,slow=36
NNA Nana 58.53 299 P **P** 05 00 55.5 +0.2
NNA lAmb lAmb 05 00 57.2
comp=Z,25nm,0.7s
NNA Nana 58.53 299 *ceP* **P** 05 00 55.0 -0.4
NNA pmax pmax
comp=Z,132nm,2.5s
NNA Nana 58.53 299 P **P** 05 00 55.5 +0.2
MALB Monte Alegre 58.59 327 *eP* **P** 05 00 56.4 +0.8
MACA Manacapuru-AM 59.48 320 *eP* **P** 05 01 00.9 -0.9
CZSB Cruzeiro do Su 60.29 305 P **P** 05 01 05.9 -1.5
CZSB lAmb lAmb 05 01 07.2
comp=Z,38nm,0.7s
CZSB Cruzeiro do Su 60.29 305 *eP* **P** 05 01 06.5 -0.9
TBTG Tabatinga, AM 62.20 310 lAmb lAmb 05 01 21.4
comp=Z,26nm,0.8s
ATAH Atahualpa 63.48 300 LR LR 05 30 01.4
comp=Z,74nm,21.1s,baz=154,slow=37
RPN Rapa Nui 63.79 260 LR LR 05 25 09.4
comp=Z,108nm,20.4s,baz=121,slow=32
BOAV Boa Vista 64.60 322 P **P** 05 01 35.7 -0.4
BOAV lAmb lAmb 05 01 36.4
comp=Z,39nm,0.6s
BOAV Boa Vista 64.60 322 *eP* **P** 05 01 35.5 -0.6
MDP Montagnes des 64.75 331 LR LR 05 26 45.1
comp=Z,114nm,21.2s,baz=176,slow=33
MPGF Montagnes des 64.76 331 P **P** 05 01 37.3 +0.2
LIC Lamto 64.86 24⇑ *iP* **P** 05 01 38.1 +0.4
comp=Z,29nm,0.4s
KIC Kosan Boka 65.05 24⇑ *iP* **P** 05 01 39.6 +0.6
comp=Z,9.0nm,0.5s
TIC Toumodi 65.26 24⇓ *iP* **P** 05 01 40.7 +0.3
comp=Z,23nm,0.4s
DBIC Dimbokro 65.33 24 P **P** 05 01 40.5 -0.3
comp=Z,11nm,0.6s,baz=193,slow=6.5,SNR=18
DBIC LR LR 05 23 10.1
comp=Z,276nm,21.5s,baz=188,slow=30
comp=Z,11nm,0.6s
DBIC Dimbokro 65.33 24 P **P** 05 01 40.2 -0.6
DBIC Dimbokro 65.33 24 P **P** 05 01 40.5 -0.3
BOSC San Juan Bosco 67.00 302 lAmb lAmb 05 01 54.0
comp=Z,30nm,0.5s
COHC Cochancay 67.96 301 *eP* **P** 05 01 58.8 +1.1
PTLC Puerto Leguiza 68.23 307 *eP* **P** 05 01 57.1 -2.3
PORT Chimborazo Vol 68.61 302 lAmb lAmb 05 02 10.6
comp=Z,30nm,0.9s
CHSH Refugio Sur-Vo 68.63 302 lAmb lAmb 05 02 04.6
comp=Z,56nm,0.8s
SLOR San Lorenzo - 69.12 303 lAmb lAmb 05 02 08.4
comp=Z,23nm,0.9s
GUVC San Jose del G 69.41 310 *eP* **P** 05 02 05.8 -0.8
PPLP Puerto Lpez 69.49 300 *eP* **P** 05 02 07.5 +0.2
FLOC Florencia 69.87 307 *eP* **P** 05 02 09.0 -0.5
OTAV Otavalo 69.95 303 P **P** 05 02 10.5 -0.1
OTAV lAmb lAmb 05 02 13.9
comp=Z,29nm,0.7s
OTAV Otavalo 69.95 303 P **P** 05 02 10.5 -0.1
OTAV pmax pmax
comp=Z,29nm,0.7s
OTAV Otavalo 69.95 303 *eP* **P** 05 02 11.3 +0.8
OTAV Otavalo 69.95 303 *eP* **P** 05 02 09.8 -0.8
OTAV Otavalo 69.95 303 P **P** 05 02 11.3 +0.8
OTAV sP **PcP** 05 02 33.0 +0.4
FLF1 Flavio Alfaro- 70.08 302 *eP* **P** 05 02 10.9 0.0
CMBC Cumbal 70.28 304 *eP* **P** 05 02 14.7 +2.2
GARC Garzon, Huila 70.33 307 *eP* **P** 05 02 11.2 -1.5
BBAC Balboa, Cauca 70.97 305 *eP* **P** 05 02 16.2 -0.3
POPC Popayan, Colom 71.17 306 *eP* **P** 05 02 18.1 +0.3
BBTS Babate 71.23 11 LR LR 05 25 59.2
comp=Z,125nm,21.9s,baz=212,slow=29
VILC Villavicencio, 71.27 310 *eP* **P** 05 02 18.0 -0.2
PRAC Prado 71.43 308 *eP* **P** 05 02 18.7 -0.3
CHIC Chingaza 71.75 310 *eP* **P** 05 02 20.6 -0.7
MBAR Mbarara 72.10 63 LR LR 05 31 48.9
comp=Z,96nm,18.8s,baz=203,slow=34
ROSC El Rosal 72.19 310 P **P** 05 02 23.7 -0.3
comp=Z,31nm,0.7s,baz=143,slow=5.1,SNR=23
ROSC LR LR 05 35 55.9
comp=Z,73nm,19.3s,baz=194,slow=37
comp=Z,31nm,0.7s
ROSC El Rosal 72.19 310 lAmb lAmb 05 02 26.1
comp=Z,35nm,0.8s
ROSC El Rosal 72.19 310 *eP* **P** 05 02 25.0 +1.0
GR1C Gorgona, Isla 72.26 305 *eP* **P** 05 02 24.8 +0.9
YOTC Yotoco, Valle 72.31 307 *eP* **P** 05 02 23.2 -1.2
RUSC La Rusia 72.61 311 *eP* **P** 05 02 25.4 -1.2
MALC Bahia Malaga 72.78 306 *eP* **P** 05 02 28.4 +1.4
SPBC San Pablo de B 72.81 310 *eP* **P** 05 02 25.0 -2.3
GUY2C Guyana, Caldas 72.98 309 *eP* **P** 05 02 28.1 -0.8
NORC Norcasia 73.07 309 *eP* **P** 05 02 27.4 -1.4
KOWA Kowa 73.09 23 LR LR 05 27 50.1
comp=Z,178nm,22.0s,baz=136,slow=30
KOWA Kowa 73.09 23 P **P** 05 02 28.5 -0.2
PLMC San Jos del P 73.10 308 *eP* **P** 05 02 28.1 -1.0
TOA0 Torodi Ar. Sit 73.19 29 P **P** 05 02 28.9 -0.5
TOA0 lAmb lAmb 05 02 30.4
comp=Z,19nm,0.7s
TORD Torodi Ar. Bea 73.19 29 P **P** 05 02 29.5 +0.1
comp=Z,13nm,0.6s,baz=198,slow=6.2,SNR=9.3
comp=Z,13nm,0.6s
TORD Torodi Ar. Bea 73.19 29 P **P** 05 02 29.7 +0.3
PCRV Puerto La Cruz 73.27 321 LR LR 05 34 36.0
comp=Z,95nm,21.9s,slow=36
BARC Barichara 73.28 311 *eP* **P** 05 02 27.7 -2.5
BAUV El Baul 73.37 317 *eP* **P** 05 02 30.1 -0.3
PAMC Pamplona, Colo 73.76 312 *eP* **P** 05 02 32.2 -1.1
PTBC PUERTO BERRIO, 73.77 310 *eP* **P** 05 02 30.6 -2.3
CBOC Ciudad Bolivar 73.84 308 *eP* **P** 05 02 31.6 -1.9
SOCV Socops 73.86 314 *eP* **P** 05 02 33.2 -0.2
HELC Santa Helena 73.92 309 *eP* **P** 05 02 32.6 -1.6
GRGR Grenville 74.09 325 P **P** 05 02 35.2 +0.6
GRGR Grenville 74.09 325 *eP* **P** 05 02 35.1 +0.6
SDV Santo Domingo 74.32 315 LR LR 05 34 44.3
comp=Z,145nm,21.7s,baz=114,slow=35
SDV Santo Domingo 74.32 315 P **P** 05 02 36.3 0.0
SDV lAmb lAmb 05 02 37.3
comp=Z,53nm,0.8s
SDV Santo Domingo 74.32 315 *eP* **P** 05 02 36.5 +0.2
GCMP Grenada, Carri 74.35 325 *eP* **P** 05 02 35.1 -1.0
ZARC Zaragoza, Cauc 74.80 310 *eP* **P** 05 02 37.3 -1.5
OCAC Ocana 74.82 312 *eP* **P** 05 02 36.8 -2.4
DBBC Dabeiba 74.95 309 *eP* **P** 05 02 39.1 -0.8
SVB Belmont 75.03 325 P **P** 05 02 39.9 -0.2
SVB lAmb lAmb 05 02 42.5
comp=Z,31nm,0.6s
SVB Belmont 75.03 325 *eP* **P** 05 02 41.1 +1.0
SSV Crater Summit 75.06 325 *eP* **P** 05 02 29.3 -11
UREC San Jos de Ur 75.32 310 *eP* **P** 05 02 39.9 -1.9
SLBI Saint Lucia, B 75.65 326 *eP* **P** 05 02 44.4 +0.8
MPOM Morne Pois Mar 76.01 326 *eP* **P** 05 02 44.6 -1.1
BIM Bigot 76.14 326 *eP* **P** 05 02 47.4 +0.9
LLSC La Loma 6 Bece 76.16 313 *eP* **P** 05 02 44.6 -2.0
ILAM Ilet Lapin Mar 76.32 326 *eP* **P** 05 02 35.5 -12
FDF Fort de France 76.37 326 P **P** 05 02 48.7 +0.9
FDF lAmb lAmb 05 02 50.5
comp=Z,33nm,0.8s
FDF Fort de France 76.37 326 P **P** 05 02 48.7 +0.9
FDF pmax pmax
comp=Z,33nm,0.8s
FDF Fort de France 76.37 326 *eP* **P** 05 02 49.0 +1.3
ARGC Ariguani, Magd 76.67 312 *eP* **P** 05 02 49.6 +0.1
MDN Morne-Daniel 77.00 326 *eP* **P** 05 02 49.9 -1.3

SJCC San Jacinto, C 77.09 311 *eP* **P** 05 02 52.2 +0.3
DSLB Salisbury 77.12 326 *eP* **P** 05 02 53.3 +1.4
CRJC Cerrejon, Guaj 77.16 314 *eP* **P** 05 02 50.5 -1.9
WHZ Wether Hill Ro 77.41 191 P **P** 05 02 53.7 +0.3
WHZ lAmb lAmb 05 02 55.5
comp=Z,24nm,0.8s
MAGL Barre de l'ile 77.56 326 *eP* **P** 05 02 54.2 -0.2
TDBA Terre de Bas, 77.57 326 *eP* **P** 05 02 55.6 +1.1
CBE Ff, Capester 77.77 326 *eP* **P** 05 02 56.7 +1.1
GDSD La Dsirade Is 77.83 326 P **P** 05 02 56.2 +0.3
GDSD lAmb lAmb 05 02 57.9
comp=Z,69nm,1.6s
SMRC Santa Marta, M 77.84 312 *eP* **P** 05 02 55.9 -0.1
ODZ Otahua Downs 77.95 193 P **P** 05 02 56.7 +0.3
ODZ lAmb lAmb 05 02 57.5
comp=Z,75nm,1.7s
ABD La Joyeuse, An 78.11 326 *eP* **P** 05 02 56.8 -0.6
WKZ Wanaka 78.35 191 P **P** 05 02 59.9 +1.3
WKZ lAmb lAmb 05 03 01.9
comp=Z,47nm,1.0s
BCIP Isla Barro Col 78.47 306 lAmb lAmb 05 03 01.2
comp=Z,22nm,0.8s
BCIP Isla Barro Col 78.47 306 *eP* **P** 05 02 59.0 -0.6
MLYT Lee's Yard 78.57 326 *eP* **P** 05 02 59.0 -1.0
MBFL Flemmings, Mon 78.60 326 *eP* **P** 05 03 00.8 +0.6
LBZ Lake Benmore 78.65 192 P **P** 05 03 01.9 +1.7
LBZ lAmb lAmb 05 03 05.9
comp=Z,50nm,1.3s
ANBD Bethesda, Anti 78.74 326 *eP* **P** 05 03 00.7 -0.2
RPZ Rata Peaks 79.21 193 P **P** 05 03 03.7 +0.4
comp=Z,21nm,0.8s,baz=198,slow=4.4,SNR=9.7
comp=Z,21nm,0.8s
CDITO Canoas 79.33 303 lAmb lAmb 05 03 06.3
comp=Z,35nm,0.9s
LTZ Lake Taylor 79.96 194 P **P** 05 03 07.5 0.0
LTZ lAmb lAmb 05 03 12.1
comp=Z,33nm,0.9s
SMRT St. Maarten 80.09 325 lAmb lAmb 05 03 08.9
comp=Z,27nm,0.6s
SRBA San Rafael, Bu 80.14 303 lAmb lAmb 05 03 10.4
comp=Z,36nm,0.9s
CDVI St. Croix 80.36 324 lAmb lAmb 05 03 12.8
comp=Z,36nm,0.6s
CDVI St. Croix 80.36 324 *eP* **P** 05 03 09.5 -0.2
PEZE Perez Zeledon, 80.42 303 lAmb lAmb 05 03 12.6
comp=Z,48nm,0.9s
MTP Monte Pirata 80.95 323 P **P** 05 03 12.2 -0.7
STVI Saint Thomas 80.98 324 P **P** 05 03 12.5 -0.5
STVI lAmb lAmb 05 03 13.8
comp=Z,34nm,0.7s
TAU Tasmania Unive 81.03 176 P **P** 05 03 13.4 +0.3
TAU lAmb lAmb 05 03 14.0
comp=Z,60nm,0.8s
TAU Tasmania Unive 81.03 176 P **P** 05 03 13.4 +0.3
TAU pmax pmax
comp=Z,60nm,0.8s
TUWZ Tuamarina 81.05 196 P **P** 05 03 13.4 +0.2
CUPR Culebra, Puert 81.05 323 P **P** 05 03 13.2 -0.2
CUPR lAmb lAmb 05 03 14.5
comp=Z,35nm,0.7s
HUMP Col San Antoni 81.09 323 lAmb lAmb 05 03 15.4
comp=Z,21nm,0.8s
HDC Heredia 81.16 303 P **P** 05 03 15.0 +0.7
SJG San Juan 81.16 322 LR LR 05 39 26.7
comp=Z,52nm,21.9s,baz=146,slow=36
SJG San Juan 81.16 322 P **P** 05 03 13.4 -0.5
SJG San Juan 81.16 322 P **P** 05 03 13.4 -0.5
SJG pmax pmax
comp=Z,10.0nm,0.7s
SJG San Juan 81.16 322 *eP* **P** 05 03 12.9 -1.0
CBYP Canovanas 81.21 323 lAmb lAmb 05 03 14.8
comp=Z,23nm,0.6s
CELP Cerrillos 81.27 322 lAmb lAmb 05 03 17.4
comp=Z,60nm,1.6s
GCPR Guaynabo City 81.32 323 lAmb lAmb 05 03 15.7
comp=Z,20nm,0.8s
MLPR Magueyes Islan 81.34 322 P **P** 05 03 12.6 -2.3
AOPR Arecibo Observ 81.59 322 *eP* **P** 05 03 14.6 -1.7
JTS Las Juntas de 81.81 302 P **P** 05 03 16.8 -0.7
JTS lAmb lAmb 05 03 19.4
comp=Z,84nm,1.4s
JTS Las Juntas de 81.81 302 *iP* **P** 05 03 17.1 -0.4
JTS pmax pmax
comp=Z,51nm,1.3s
QRZ Quartz Range 81.85 195 P **P** 05 03 17.8 +0.3
COVE Coope Vega, Sa 81.92 303 P **P** 05 03 18.3 +0.2
ORTG Ortega, Santa 82.11 302 P **P** 05 03 19.1 -0.1
ORTG lAmb lAmb 05 03 20.8
comp=Z,41nm,0.8s
HZTE Horizontes, Gu 82.48 302 P **P** 05 03 20.8 -0.2
ACON Acoyapa 83.38 303 *eP* **P** 05 03 25.3 -0.3
TAM Tamanrasset 83.42 30 P P 05 03 20.9 -5.0
TAM Tamanrasset 83.42 30 P P 05 03 20.9 -5.0
TAM pmax pmax
comp=Z,7.0nm,1.0s
URZ Urewera 83.62 199 P **P** 05 03 26.2 -0.5
comp=Z,14nm,0.7s,baz=122,slow=23,SNR=3.8
comp=Z,14nm,0.7s
SDDR Presa de Saban 83.79 318 *eP* **P** 05 03 27.6 -0.1
MATN Matagalpa 84.57 303 lAmb lAmb 05 03 33.2
comp=Z,35nm,0.9s
TGUH Tegucigalpa,Un 86.18 302 P **P** 05 03 39.7 -0.2
TGUH lAmb lAmb 05 03 42.7
comp=Z,43nm,1.1s
TGUH Tegucigalpa,Un 86.18 302 *eP* **P** 05 03 39.1 -0.8
TBI Tubuai 87.06 231 *eS* **S** 05 14 17.4 -1.4
comp=Z,119nm,36.5s
TBI Tubuai 87.06 231 *e*LR LR 05 31 26.9
comp=Z,299nm,26.5s
ATD Arta Tunnel 88.59 67 P **P** 05 03 53.0 +1.5
ATD lAmb lAmb 05 03 55.7
comp=Z,35nm,1.7s
BBOO Buckleboo 90.05 166 P **P** 05 03 57.9 -0.2
BBOO lAmb lAmb 05 03 58.8
comp=Z,18nm,0.8s
FORT Forrest 90.67 159 P **P** 05 04 00.4 -0.6
MDT Midelt 90.77 19 LR LR 05 38 53.7
comp=Z,135nm,21.5s,baz=188,slow=32
STKA Stephens Creek 91.61 170 P **P** 05 04 04.4 -1.0
comp=Z,9.9nm,0.7s,baz=145,slow=4.6,SNR=14
STKA PP **PP** 05 07 41.5 -1.7
comp=Z,4.1nm,0.7s,baz=143,slow=8.3,SNR=5.2
STKA LR LR 05 43 07.1
comp=Z,92nm,20.9s,baz=203,slow=34
comp=Z,9.9nm,0.7s
STKA Stephens Creek 91.61 170 P **P** 05 04 06.6 +1.2
STKA Stephens Creek 91.61 170 *iP* **P** 05 04 05.3 -0.1
SOR Soroa 91.91 310 lAmb lAmb 05 04 08.4
comp=Z,19nm,1.0s
PPT2 Papeete2 92.17 233 *e*LR LR 05 33 48.3
comp=Z,366nm,28.2s
PPT Papeete 92.19 233 LR LR 05 37 55.4
comp=Z,71nm,19.4s,baz=151,slow=30
CMIG Matias Romero 92.47 297 LR LR 05 40 04.0
comp=Z,34nm,20.0s,baz=121,slow=32
RAR Rarotonga 93.18 223 LR LR 05 38 54.9
comp=Z,61nm,19.8s,baz=196,slow=31
TAOE Nuku Hiva Isla 95.21 246 *e*LR LR 05 35 12.1
comp=Z,223nm,28.0s
KEST Kesra 96.71 29 LR LR 05 44 20.3
comp=Z,94nm,20.4s,baz=240,slow=33
ESDC Sonseca Array 97.57 18 P Pdif 05 04 33.3 +1.0
comp=Z,1.6nm,0.9s,baz=190,slow=4.7,SNR=12
ESDC PKKPbc **PKKPbc** 05 21 08.8 +1.0
comp=Z,0.9nm,1.0s,baz=5.4,slow=2.5,SNR=5.7
ESDC LR LR 05 44 09.1
comp=Z,63nm,20.3s,baz=188,slow=33
comp=Z,1.6nm,0.9s
ASAR Springs 98.69 162 P **P** 05 04 37.2 -0.7
comp=Z,3.7nm,0.6s,baz=180,slow=4.0,SNR=32
ASAR PP **PP** 05 08 35.6 -2.7
comp=Z,1.4nm,0.7s,baz=188,slow=6.9,SNR=5.5
ASAR PKKPbc **PKKPdf** 05 21 05.0 -0.2
comp=Z,1.3nm,0.6s,baz=16,slow=2.2,SNR=11
ASAR LR LR 05 48 19.1
comp=Z,45nm,18.7s,baz=160,slow=35
comp=Z,3.7nm,0.6s
ASAR Alice Springs 98.69 162 P **P** 05 04 36.9 -1.0
AS31 Alice Springs 98.69 162 P **P** 05 04 37.7 -0.2
DZM Mont Dzumac 101.12 193 P **Pdif** 05 04 48.8 0.0
comp=Z,8.9nm,1.1s,baz=273,slow=19,SNR=1.6
DZM Mont Dzumac 101.12 193 *e*SS SS 05 23 24.4 +2.7
comp=Z,195nm,24.8s
DZM Mont Dzumac 101.12 193 *e*LR LR 05 37 59.0
comp=Z,157nm,22.7s
WRA Warramunga Arr 102.40 162 P **Pdif** 05 04 53.7 -0.7
comp=Z,1.3nm,0.5s,baz=194,slow=4.4,SNR=14
WRA PP **PP** 05 09 01.1 -5.4
comp=Z,1.1nm,0.7s,baz=189,slow=6.1,SNR=4.3
WRA PKKPbc **PKKPbc** 05 20 54.5 +1.8
comp=Z,1.1nm,0.6s,baz=356,slow=2.8,SNR=17
WRAB Tennant Creek 102.41 162 *i* P **Pdif** 05 04 53.9 -0.6
WRAB pmax pmax
comp=Z,4.0nm,0.9s
TXAR Lajitas Array 107.08 297 PKiKP **PKiKP** 05 09 23.7 -0.3
comp=Z,0.4nm,0.6s,baz=138,slow=2.0,SNR=8.1
TXAR PKKPbc **PKKPbc** 05 20 38.3 -1.0
comp=Z,0.2nm,0.7s,baz=22,slow=1.0,SNR=2.1
TXAR PKKP **PKKPab** 05 20 54.3 +0.7
comp=Z,0.5nm,0.8s,baz=288,slow=3.4,SNR=3.6
CLL Collm 112.20 26 *eP* **Pdif** 05 05 40.0 +3.1
CLL *e* 05 10 26.0
CLL Collm 112.20 26 *e*Pdif **Pdif** 05 05 40.0 +3.1
CLL *e*PP PP 05 10 26.0 +6.9
CLL *e*PS PS 05 19 50.0 -2.0
CLL *e*SS SS 05 26 06.0 +12
CLL *e*(SSS) 05 30 36.0
CLL *ex* x 05 33 06.0
SOC Sochi 114.17 47 *i* PKIKP PKPdf 05 09 36.1 -0.6
SOC *e* 05 10 31.8
SOC *e*PPP PPP 05 12 57.8
SOC *e*SS SS 05 26 18.4 -1.6
SOC *e*SSS SSS 05 30 42.7
SCHQ Schefferville 115.48 336 PKP **PKPdf** 05 09 38.2 -0.7
comp=Z,3.5nm,0.9s,baz=198,slow=2.1,SNR=6.0
KIV Kislovodsk 115.70 49 *i* PKIKP **PKiKP** 05 09 42.5 +2.7
KIV pmax pmax
comp=Z,4.0nm,1.1s
MVCO Mesa Verde 115.80 299 **PKPdf** 05 09 39.9 -0.5
AKASG Malin Array Be 116.30 36 PKP **PKPdf** 05 09 39.6 -1.0
comp=Z,0.8nm,0.5s,baz=234,slow=1.1,SNR=5.3
AKBB Malin Array Si 116.30 36*c* *i*PKIKP **PKPdf** 05 09 39.5 -1.1
SMCO Snowmass 116.62 301 PKPdf **PKiKP** 05 09 42.3 +0.1
GSC Goldstone, Bar 118.51 291 P **PKiKP** 05 09 45.7 +0.1
baz=141
MSU Marysvale 118.63 297 PKPdf **PKPdf** 05 09 45.6 -0.2
MSU Marysvale 118.63 297 PKIKP **PKPdf** 05 09 45.6 -0.2
EDW2 Edwards Air Fo 118.80 290 P **PKiKP** 05 09 46.2 +0.1
baz=141
LRMC Laurel Mtn Rad 119.10 291 P **PKiKP** 05 09 46.9 +0.2
baz=140
K22A Casper 119.13 304 P **PKPdf** 05 09 45.9 -0.6
baz=141
RSSD Black Hills 119.14 306 PKPdf **PKPdf** 05 09 45.9 -0.7
RSSD Black Hills 119.14 306 PKIKP **PKPdf** 05 09 45.9 -0.7
RSSD Black Hills 119.14 306 P **PKPdf** 05 09 46.0 -0.6
baz=142
MPMC Manual Prospec 119.44 292 P **PKiKP** 05 09 47.6 +0.1
baz=140
TPNV Topopah Spring 119.49 293 P **PKiKP** 05 09 48.1 +0.6
baz=140
ISA Isabella, Lake 119.65 291 PKPdf **PKiKP** 05 09 48.0 +0.3
ISA Isabella, Lake 119.65 291 PKIKP **PKiKP** 05 09 48.0 +0.3
ISA Isabella, Lake 119.65 291 P **PKiKP** 05 09 48.3 +0.5
baz=140
CWC Cottonwood Cre 120.04 291 P **PKiKP** 05 09 48.7 +0.1
baz=140
GRAC Grapevine Rang 120.10 292 P **PKiKP** 05 09 49.3 +0.7
baz=140
R11A Troy Canyon, C 120.22 295 P **PKiKP** 05 09 49.1 +0.2
baz=140
DUG Dugway, Tooele 120.24 298 P **PKPdf** 05 09 48.8 0.0
baz=140
ULM Lac du Bonnet 120.56 316 PKP **PKPdf** 05 09 47.5 -1.3
baz=270,slow=20
ULM Lac du Bonnet 120.56 316 PKPdf **PKPdf** 05 09 47.6 -1.1
ULM Lac du Bonnet 120.56 316 PKIKP **PKPdf** 05 09 47.7 -1.1
PDAR Pinedale Array 120.64 302 PKP **PKPdf** 05 09 48.4 -1.2
comp=Z,2.0nm,0.5s,baz=137,slow=4.9,SNR=33
PDAR PKKPbc **PKKPab** 05 19 54.5 +0.5
comp=Z,0.6nm,0.6s,baz=119,slow=1.6,SNR=5.8
BW06 Boulder Array 120.64 302 P **PKPdf** 05 09 48.7 -0.9
baz=140
NB2 NORSAR Subarra120.78 20 PKPdf **PKPdf** 05 09 48.5 -0.5
comp=Z,1.5nm,0.6s,baz=204,slow=1.9
NOA NORSAR Array B120.78 20 PKP **PKPdf** 05 09 48.8 -0.2
comp=Z,1.8nm,0.7s,baz=203,slow=1.9,SNR=7.9
NOA PKKPbc **PKKPbc** 05 19 53.6 +0.4
comp=Z,1.1nm,0.6s,baz=25,slow=3.3,SNR=5.2
BGU Big Grassy Mou 120.91 298 PKPdf **PKiKP** 05 09 50.2 +0.1
OMMB Old Mammoth Mi 121.41 292 **PKiKP** 05 09 51.8 +0.3
HVU Hansel Valley 121.43 299 PKPdf **PKPdf** 05 09 50.8 -0.2
HVU Hansel Valley 121.43 299 PKIKP **PKPdf** 05 09 50.8 -0.2
NVAR Mina Array Bea 121.67 293 PKP **PKiKP** 05 09 52.5 +0.7
comp=Z,1.7nm,0.6s,baz=143,slow=2.7,SNR=21
NVAR PKKPbc **PKKPab** 05 19 51.9 +1.8
comp=Z,0.4nm,0.7s,baz=270,slow=3.4,SNR=4.5
MOOW Moose Ponds 121.95 302 PKPdf **PKPdf** 05 09 51.9 -0.2
LAO LASA Array 122.10 307 P **PKPdf** 05 09 51.6 -0.4
baz=140,SNR=7.4
RLMT Red Lodge 122.30 304 P **PKPdf** 05 09 52.1 -0.5
baz=139
OBN Obninsk 122.44 38 *i* PKIKP **PKPdf** 05 09 51.1 -1.1
OBN pmax pmax
comp=Z,5.0nm,1.0s
DGMT Dagmar 122.58 310 P **PKPdf** 05 09 52.9 0.0
baz=140
NIL Nilore 122.65 77 PKPdf **PKiKP** 05 09 54.4 +0.8
NIL Nilore 122.65 77 PKIKP **PKiKP** 05 09 54.4 +0.8
DY2G Dye2 123.33 351 *i* P **PKPdf** 05 09 53.2 -0.8
AFDM Forest Hills D 123.44 291 PKPdf **PKPdf** 05 09 54.9 +0.1
HLID Hailey 123.57 299 P **PKiKP** 05 09 55.3 0.0
baz=138
BOZ Bozeman (W) 123.75 303 P **PKiKP** 05 09 55.5 -0.1
baz=138
BELG Belogornoye 124.39 46 *i* PKIKP **PKPdf** 05 09 55.7 -0.3
BELG pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 124.53 28 PKP **PKPdf** 05 09 55.7 -0.3
comp=Z,9.7nm,0.5s,baz=150,slow=1.8,SNR=97
EGMT Eagleton 124.69 306 P **PKPdf** 05 09 56.9 -0.1
baz=138,SNR=6.9
CMAR Chiang Mai Arr 124.80 110 PKP **PKPdf** 05 09 57.9 -0.1
comp=Z,4.1nm,0.8s,baz=232,slow=3.6,SNR=16
ICESG Greenland Ices 125.44 354 *i* P **PKPdf** 05 09 56.1 -1.9
MSO Missoula 125.75 302 P **PKPdf** 05 09 59.1 +0.1
baz=137,SNR=12
MND Mandalay 126.22 105 PKPdf **PKPdf** 05 10 00.5 -0.1
YBH Yreka Blue Hor 126.38 292 PKP **PKPdf** 05 09 60.0 -0.4
comp=Z,2.1nm,0.7s,baz=43,slow=3.1,SNR=7.7
YBH Yreka Blue Hor 126.38 292 PKIKP **PKPdf** 05 10 00.0 -0.4
G08A Pilot Rock 127.05 298 PKPdf **PKPdf** 05 10 01.8 +0.2
FAUS Fauske 127.29 19 *eP* **PKPdf** 05 10 01.1 -0.1
FAUS lAmb lAmb 05 10 01.4
comp=Z,10nm,0.5s
AKTO Aktyubinsk 127.34 53 PKP **PKPdf** 05 10 01.5 -0.3
comp=Z,4.4nm,0.9s,baz=175,slow=1.7,SNR=9.6
ABKAR Akbulak array 127.36 55 PKPdf **PKPdf** 05 10 01.3 -0.6
LOF Lofoten 127.65 18 *eP* **PKiKP** 05 10 02.5 +0.1
KLMR Klimovskoe 127.93 35 *e*PKIKP **PKPdf** 05 10 01.1 -1.5
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 127.93 35 *e*PKPdf **PKPdf** 05 10 01.1 -1.5
KLMR AMP 05 10 03.4
comp=Z,15nm,1.2s
KK31 Karatay Array 128.15 67 PKPdf **PKPdf** 05 10 03.5 -0.2
KK31 Karatay Array 128.15 67 PKIKP **PKPdf** 05 10 03.5 -0.2
KKAR Karatay Array 128.15 67 PKPdf **PKPdf** 05 10 03.5 -0.2
KKAR Karatay Array 128.15 67 PKIKP **PKPdf** 05 10 03.5 -0.2
KSH Kashi 128.46 74 PKP **PKPdf** 05 10 04.0 -0.5
SUMG Summit 128.85 356 PKPdf **PKiKP** 05 10 05.2 -0.1
SUMG Summit 128.85 356 PKIKP **PKiKP** 05 10 05.2 -0.1
SUMG Summit 128.85 356 *i* P **PKPdf** 05 10 04.0 -0.6
KIRV Kirov 129.65 41 PKP **PKPdf** 05 10 04.6 -1.3
comp=Z,13nm,0.6s,baz=51,slow=6.2,SNR=3.8
KIRV Kirov 129.65 41*c* *i*PKIKP **PKiKP** 05 10 06.8 +0.2
AAK Ala-Archa 129.89 71 PKPdf **PKPdf** 05 10 06.9 -0.3
AAK Ala-Archa 129.89 71*c* *i*PKIKP **PKPdf** 05 10 06.5 -0.7
AAK pmax pmax
comp=Z,4.0nm,1.0s
KTK1 Kautokeino 130.22 21 *eP* **PKPdf** 05 10 06.8 0.0
KTK1 lAmb lAmb 05 10 07.2
comp=Z,7.1nm,0.8s
PRGR Permogore 130.50 37 *e*PKIKP **PKPdf** 05 10 06.2 -1.2
ARA0 ARCESS Array S 131.12 22 *eP* **PKPdf** 05 10 08.3 -0.1
ARCES ARCESS Array B 131.12 22 PKP **PKPdf** 05 10 08.3 -0.1
comp=Z,5.3nm,0.5s,baz=192,slow=1.7,SNR=58
ARCES SKPbc **SKPab** 05 13 29.1 +0.5
comp=Z,4.4nm,0.9s,baz=333,slow=6.8,SNR=3.9
ARU Arti 131.73 48 PKP **PKPdf** 05 10 10.2 +0.2
comp=Z,5.3nm,0.6s,baz=216,slow=2.5,SNR=7.5

ARU SKPbc **SKPbc** **05 13 31.1 +0.4**
comp=Z,4.6nm,0.9s,baz=86,slow=1.1,SNR=5.0
ARU Arti 131.73 48 *i* PKIKP **PKPdf** **05 10 10.0 0.0**
PZH PanZhiHua 132.85 107 PKP **PKiKP** **05 10 14.5 +0.1**
BRVK Borovoye 134.73 57 PKPdf **PKiKP** **05 10 16.6 -0.6**
BRVK Borovoye 134.73 57 *c i* PKIKP **PKPdf** **05 10 16.2 +0.5**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BVAR Borovoye Array 134.76 58 PKP **PKPdf** **05 10 16.1 +0.3**
comp=Z,4.1nm,0.8s,baz=202,slow=1.6,SNR=16
BVAR SKPbc **SKPbc** **05 13 41.9 +0.8**
comp=Z,1.0nm,0.8s,baz=198,slow=4.2,SNR=4.3
BBB Bella Bella 136.16 299 PKP **PKiKP** **05 10 19.9 -0.1**
comp=Z,9.1nm,0.9s,baz=179,slow=20,SNR=1.7
GOMU GeErMu 136.46 92 PKP **PKiKP** **05 10 22.5 +0.8**
GOMU AMB AMB
comp=Z,93nm,4.8s
YKA Yellowknife Ar 136.49 318 PKP **PKPdf** **05 10 18.3 -0.4**
comp=Z,7.9nm,0.6s,baz=117,slow=2.8,SNR=11
YKA PP **PP** **05 12 59.5 -2.2**
comp=Z,2.1nm,0.7s,baz=119,slow=6.1,SNR=3.9
YKA SKPbc **SKPbc** **05 13 48.1 +2.0**
comp=Z,3.0nm,0.9s,baz=129,slow=3.7,SNR=3.8
SPITS Spitsbergen Ar 136.78 12 PKP **PKPdf** **05 10 19.4 +0.5**
comp=Z,12nm,1.0s,baz=156,slow=6.4,SNR=5.4
MK31 Makanchi Array 136.79 71 PKPdf **PKPdf** **05 10 19.1 -0.7**
MK31 Makanchi Array 136.79 71 PKIKP **PKPdf** **05 10 19.1 -0.7**
MKAR Makanchi Array 136.79 71 PKhKP PKPpre 05 10 10.8
comp=Z,1.1nm,1.0s,baz=194,slow=7.5,SNR=3.1
MKAR PKP **PKPdf** **05 10 17.8 -2.0**
comp=Z,1.0nm,0.7s,baz=258,slow=3.6,SNR=4.9
MKAR SKPbc **SKPbc** **05 13 48.4 +0.7**
comp=Z,0.7nm,0.8s,baz=297,slow=0.3,SNR=3.9
MKAR Makanchi Array 136.79 71 PKPdf **PKPdf** **05 10 18.8 -1.0**
MKAR Makanchi Array 136.79 71 PKIKP **PKPdf** **05 10 18.8 -1.0**
KURBB Kurchatov Arra 137.25 65 PKhKP PKPpre 05 10 13.3
comp=Z,1.3nm,0.8s,baz=228,slow=4.0,SNR=1.5
KURBB PKP **PKPdf** **05 10 18.3 -2.2**
comp=Z,2.3nm,0.6s,baz=236,slow=3.1,SNR=9.7
KURBB SKPbc **SKPbc** **05 13 49.4 +0.6**
comp=Z,1.5nm,0.2s,baz=232,slow=3.8,SNR=9.8
KURK Kurchatov 137.35 65 **PKPdf** **05 10 18.9 -1.8**
KURK Kurchatov 137.35 65 PKIKP **PKPdf** **05 10 18.9 -1.8**
CD2 Chengdu 137.41 105 PKP **PKPdf** **05 10 21.8 +0.3**
WMQ Urumqi 137.78 78 *e* PKP **PKiKP** **05 10 23.0 -0.8**
EUNU Eureka 140.23 346 PKPdf **PKPdf** **05 10 25.6 +0.4**
DLBC Dease Lake 140.62 306 PKhKP PKPpre 05 10 18.6
comp=Z,4.6nm,0.8s,baz=127,slow=11,SNR=3.4
LZH Lanzhou 141.38 100 PKP **PKPdf** **05 10 24.5 -4.2**
LZH sPKP 05 10 53.5
GTA Gaotai 141.53 93 *e* PKP **PKiKP** **05 10 33.8 +2.1**
ZALV Zalesovo Beam 142.32 64 PKhKP PKPpre 05 10 24.5
comp=Z,1.3nm,0.4s,baz=251,slow=4.1,SNR=6.1
ZALV Zalesovo Beam 142.32 64 PKPdf **PKiKP** **05 10 32.0 -0.5**
ZALV Zalesovo Beam 142.32 64 PKIKP **PKiKP** **05 10 32.1 -0.5**
XAN Xi'an 142.59 108 PKP **PKPdf** **05 10 27.3 -3.5**
O30N Mendenhall 144.44 307 P PKPbc 05 10 32.2 +0.3
baz=115,SNR=24
A36M Sachs Harbour 144.53 328 PKPdf PKPbc 05 10 32.1 +0.4
A36M Sachs Harbour 144.53 328 P PKPbc 05 10 32.2 +0.4
baz=108
P30M Million Dollar 144.55 306 P PKPbc 05 10 32.8 +0.5
baz=116
N31M Braeburn, Yuko 144.61 308 P PKPbc 05 10 32.5 +0.1
baz=114,SNR=20
P29M Windy Craggy 144.69 305 P PKPbc 05 10 33.0 +0.3
baz=116,SNR=32
LYN LuoYang 144.85 111 ⇑ *i* PKP **PKPab** **05 10 32.5 -1.4**
LYN PP **PP** **05 13 55.8 +2.8**
LYN SKS **SKSdf** **05 17 40.0 +1.0**
LYN AMB AMB
comp=Z,100nm,3.8s
HYT Haines Junctio 145.09 307 P **PKPdf** **05 10 34.7 +0.2**
baz=114,SNR=26
N30M Aishikik Lake 145.17 308 P **PKPdf** **05 10 34.8 +0.3**
baz=114,SNR=78
O29M Mount Kennedy 145.36 306 P **PKPab** **05 10 35.5 +0.3**
baz=114,SNR=6.8
PNL Peninsula 145.47 304 P **PKPab** **05 10 35.6 +0.1**
baz=115
M30M Minto, Yukon 145.48 310 **PKPab** **05 10 35.5 0.0**
M30M Minto, Yukon 145.48 310 P **PKPbc** **05 10 35.2 +0.1**
baz=112,SNR=61
MAYO Mayo, Yukon 145.48 312 P **PKPab** **05 10 35.6 +0.2**
baz=112,SNR=19
YUK4 Talbot Arm 145.81 307 P **PKPab** **05 10 36.9 0.0**
baz=113,SNR=50
PINM Pinnacle 146.04 305 P **PKPab** **05 10 37.4 -0.3**
baz=114,SNR=14
PCA Pinnacle 146.04 305 PKPbc **PKPab** **05 10 37.5 -0.2**
NJ2 Nanjing 146.05 121 PKPbc **PKPbc** **05 10 37.5 -0.2**
INK Inuvik 146.12 320 PKPbc **PKPbc** **05 10 36.9 0.0**
comp=Z,46nm,0.7s,baz=70,slow=2.7,SNR=69
INK Inuvik 146.12 320 PKPdf **PKPbc** **05 10 36.7 -0.2**
INK Inuvik 146.12 320 P **PKPbc** **05 10 36.8 0.0**
baz=107,SNR=44
M29M Somme Creek 146.15 309 P **PKPbc** **05 10 37.7 +0.4**
baz=112,SNR=87
K29M Barlow Dome 146.25 312 P **PKPbc** **05 10 37.5 0.0**
baz=110,SNR=70
O28M Mount Upton 146.28 306 P **PKPab** **05 10 38.4 -0.4**
baz=113,SNR=28
EPYK Eagle Plains 146.74 316 **PKPbc** **05 10 38.7 -0.1**
EPYK Eagle Plains 146.74 316 P **PKPbc** **05 10 38.7 -0.1**
baz=107
J29M Klondike Camp 146.74 313 **PKPbc** **05 10 39.1 +0.2**
J29M Klondike Camp 146.74 313 P **PKPbc** **05 10 39.1 +0.2**
baz=109
YUK3 Moose Creek 146.78 307 P **PKPbc** **05 10 39.0 -0.3**
baz=111,SNR=15
YAH Yahtse 146.83 305 **PKPab** **05 10 40.4 -0.5**
MESA MESA 146.85 304 **PKPab** **05 10 40.3 -0.7**
MESA MESA 146.85 304 P **PKPbc** **05 10 39.9 +0.4**
baz=113,SNR=5.6
CTGM Chitina Glacie 146.87 306 **PKPbc** **05 10 39.9 +0.4**
CTG Chitina Glacier 146.87 306 P **PKPbc** **05 10 39.8 +0.3**
baz=112,SNR=16
I29M Ogilvie Camp, 147.06 314 P **PKPbc** **05 10 39.1 -0.7**
baz=108,SNR=18
DAWY Dawson 147.10 312 P **PKPbc** **05 10 39.6 -0.3**
baz=109,SNR=64
BVCY Beaver Creek 147.18 308 P **PKPbc** **05 10 40.1 0.0**
baz=110,SNR=24
BGLC Bering Glacier 147.45 304 P **PKPbc** **05 10 41.2 +0.4**
baz=112
M27K Edge Creek, AK 147.61 308 P **PKPbc** **05 10 41.2 -0.2**
baz=110,SNR=31
BERG Berg Lake 147.74 304 **PKPbc** **05 10 41.4 -0.3**
MCARA McCarthy VSAT 147.79 306 P **PKPbc** **05 10 41.8 0.0**
baz=110,SNR=6.2
BCAR Beaver Creek A 147.80 309 PKPbc **PKPbc** **05 10 42.3 +0.4**
L27K Beaver Creek, 147.82 309 PKPbc **PKPbc** **05 10 42.3 +0.4**
L27K Beaver Creek, 147.82 309 P **PKPbc** **05 10 41.9 +0.1**
baz=108,SNR=52
EGAK Eagle 148.05 312 PKPbc **PKPbc** **05 10 42.3 -0.1**
EGAK Eagle 148.05 312 P **PKPbc** **05 10 41.8 -0.6**
baz=106,SNR=18
M26K Nabesna, AK 148.12 308 PKPbc **PKPbc** **05 10 42.8 +0.1**
M26K Nabesna, AK 148.12 308 P **PKPbc** **05 10 42.3 -0.4**
baz=109,SNR=9.0
GLB Gilahina Butte 148.16 306 **PKPbc** **05 10 42.4 -0.5**
HNS HongShan 148.19 110 ⇑ PKPbc **PKPbc** **05 10 43.5 -0.1**
K27K Chicken 148.22 311 P **PKPbc** **05 10 43.3 +0.5**
baz=107
BMRM Bremner River 148.36 305 P **PKPbc** **05 10 43.5 +0.1**
baz=110,SNR=19
I27K Kandik River 148.46 314 P **PKPbc** **05 10 43.6 +0.1**
baz=105,SNR=34
L26K Log Cabin Wild 148.46 309 PKPbc **PKPbc** **05 10 44.2 +0.6**
L26K Log Cabin Wild 148.46 309 P **PKPbc** **05 10 43.9 +0.4**
baz=108,SNR=28
TIA Tai'an 148.53 114 PKPbc **PKPbc** **05 10 44.5 0.0**
N25K Chitina, Valde 148.57 306 **PKPbc** **05 10 43.7 -0.3**
N25K Chitina, Valde 148.57 306 P **PKPbc** **05 10 44.4 +0.5**
baz=109
H27K Steamboat Moun 148.57 315 P **PKPbc** **05 10 44.1 +0.4**
baz=104,SNR=69
EYAK Cordova Ski Ar 148.75 303 P **PKPbc** **05 10 44.8 +0.6**
baz=110,SNR=14
G27K Doyon Strip 148.76 316 P **PKPbc** **05 10 44.3 +0.1**
baz=103,SNR=25
J26L Joseph Creek 148.97 311 P **PKPbc** **05 10 45.2 +0.3**
baz=105,SNR=51
I26K Coal Creek Min 149.00 313 P **PKPbc** **05 10 45.1 +0.3**
baz=104
SCRK Sand Creek 149.01 310 P **PKPbc** **05 10 45.5 +0.4**
baz=106,SNR=66
E27K Coleen River 149.01 319 P **PKPbc** **05 10 45.0 +0.2**
baz=101,SNR=25
HIN Hinchinbrook I 149.05 303 **PKPbc** **05 10 45.1 0.0**
HARP HAARP 149.07 307 P **PKPbc** **05 10 45.4 +0.4**
baz=107
NRIK Noril'sk 149.09 39 PKPbc **PKPbc** **05 10 45.1 +0.2**
comp=Z,15nm,0.8s,baz=135,slow=1.9,SNR=7.9
NRIK Noril'sk 149.09 39 **PKPbc** **05 10 44.6 -0.3**
NRIK Noril'sk 149.09 39 *c i* PKIKP **PKPdf** **05 10 41.1 +0.4**
NRIK pmax pmax
comp=Z,14nm,0.9s
KLU Klutina 149.14 305 P **PKiKP** **05 10 46.1 -0.5**
baz=108,SNR=40
RIDG Independent Ri 149.31 310 PKPbc **PKiKP** **05 10 46.6 -0.2**
RIDG Independent Ri 149.31 310 P **PKiKP** **05 10 46.3 -0.5**
baz=105,SNR=70
PAX Paxson 149.37 308 PKPab **PKPab** **05 10 51.4 +0.5**
PAX Paxson 149.37 308 PKP2 **PKPab** **05 10 51.4 +0.5**
PAX Paxson 149.37 308 P **PKPbc** **05 10 45.8 -0.1**
baz=106,SNR=38
M24K Tolsona, Glenn 149.44 306 P **PKiKP** **05 10 47.0 -0.2**
baz=107
GLI Glacier Island 149.48 304 PKPab **PKPab** **05 10 51.6 +0.3**
GLI Glacier Island 149.48 304 P **PKPbc** **05 10 46.3 +0.2**
baz=109,SNR=9.3
MOY Mondy 149.61 76 *e* PKP2 **PKPbc** **05 10 46.9 0.0**
MOY pmax pmax
comp=Z,20nm,1.7s
G26K Porcupine Rive 149.61 316 P **PKPbc** **05 10 46.5 +0.3**
baz=101,SNR=30
K24K Donnelly Dome 149.73 310 P **PKPbc** **05 10 46.8 +0.1**
baz=105,SNR=9.0
J25K Salcha River, 149.75 311 PKPbc **PKiKP** **05 10 47.5 -0.2**
J25K PKPab **PKPab** **05 10 53.1 +0.7**
J25K Salcha River, 149.75 311 P **PKPbc** **05 10 47.0 +0.2**
baz=104,SNR=16
F26K Sheenjek River 149.88 317 P **PKiKP** **05 10 47.6 -0.2**
baz=99,SNR=28
SCM Sheep Creek Mo 149.88 305 **PKPbc** **05 10 47.5 +0.4**
SCM Sheep Creek Mo 149.88 305 PKP2 **PKPbc** **05 10 47.5 +0.4**
SCM Sheep Creek Mo 149.88 305 P **PKiKP** **05 10 47.6 -0.4**
baz=107,SNR=18
C27K Jago River 149.98 321 P **PKPbc** **05 10 47.5 +0.4**
baz=96,SNR=16
BMAR Burnt Mountain 150.00 317 PKPab **PKPab** **05 10 54.6 +1.3**
PRP Porcupine Dome 150.02 313 PKPbc **PKPbc** **05 10 47.7 +0.2**
PRP PKPab **PKPab** **05 10 54.2 +0.7**
PRP Porcupine Dome 150.02 313 P **PKPbc** **05 10 47.6 +0.2**
baz=102,SNR=39
M23K Glacier View 150.05 305 P **PKPbc** **05 10 47.7 +0.2**
baz=107,SNR=15
PWL Port Wells 150.05 303 P **PKPbc** **05 10 47.8 +0.2**
baz=108,SNR=30
FYU Fort Yukon 150.10 315 PKPbc **PKiKP** **05 10 48.5 +0.3**
FYU PKPab **PKPab** **05 10 55.6 +2.0**
ZAK Zakamensk 150.21 80 *e* PKIKP **PKPbc** **05 10 47.4 -1.0**
ZAK pmax pmax
comp=Z,12nm,1.1s
DHY Denali Highway 150.24 308 P **PKiKP** **05 10 48.6 -0.3**
baz=105
WAT6 Susitna Watana 150.27 307 P **PKPbc** **05 10 48.6 +0.4**
baz=105
KNK Knik Glacier 150.28 304 PKPab **PKPab** **05 10 55.1 +0.5**
KNK Knik Glacier 150.28 304 P **PKPbc** **05 10 48.3 +0.2**
baz=107,SNR=9.6
H25K Birch Creek 150.28 314 P **PKiKP** **05 10 48.3 -0.3**
baz=100,SNR=16
SML Sawmill 150.33 305 P **PKPbc** **05 10 48.3 +0.1**
baz=106,SNR=22
HDA Harding Lake 150.37 311 PKPdf **PKPdf** **05 10 40.5 -2.4**
HDA PKPbc **PKiKP** **05 10 48.5 -0.4**
HDA Harding Lake 150.37 311 P **PKPbc** **05 10 47.8 -0.4**
baz=103,SNR=15
ILAR Eielson Array 150.43 311 PKPbc **PKPbc** **05 10 47.8 -0.5**
comp=Z,28nm,0.7s,baz=138,slow=2.3,SNR=144
C26K Camden Bay 150.43 322 P **PKiKP** **05 10 48.6 -0.2**
baz=95,SNR=6.6
F25K Christian Rive 150.43 317 P **PKiKP** **05 10 48.8 -0.2**
baz=98,SNR=38
E25K Arctic Village 150.47 318 P **PKiKP** **05 10 48.9 -0.2**
baz=97,SNR=49
SONM Sonogino Array 150.56 87 PKPbc **PKPbc** **05 10 48.9 -0.4**
comp=Z,16nm,0.8s,baz=221,slow=2.6,SNR=67
O22K Cooper Landing 150.59 302 P **PKPbc** **05 10 48.9 +0.1**
baz=108
PMR Palmer 150.63 304 P **PKPbc** **05 10 49.0 +0.1**
baz=106,SNR=9.9
WAT1 Susitna Watana 150.70 307 P **PKPbc** **05 10 49.1 +0.1**
baz=104
POKR Poker Flat Res 150.72 312 PKPab **PKPab** **05 10 56.7 +0.4**
POKR Poker Flat Res 150.72 312 P **PKPbc** **05 10 48.6 -0.4**
baz=101,SNR=5.5
RC01 Rabbit Creek A 150.77 303 PKPab **PKPab** **05 10 56.0 -0.6**
RC01 Rabbit Creek A 150.77 303 P **PKPbc** **05 10 49.5 +0.3**
baz=107,SNR=36
CCB Clear Creek Bu 150.79 311 PKPab **PKPab** **05 10 57.1 +0.5**
BRSE Bradley Lake S 150.84 300 P **PKPbc** **05 10 49.6 +0.1**
baz=108
COLA College 150.85 311 **PKPbc** **05 10 48.9 -0.3**
COLA PKPab **PKPab** **05 10 57.0 +0.2**
COLA College 150.85 311 PKIKP **PKPab** **05 10 57.0 +0.2**
COLA College 150.85 311 P **PKPbc** **05 10 49.0 -0.3**
baz=101
TCOL CIGO, UAF Yank 150.85 311 P **PKPbc** **05 10 48.8 -0.4**
baz=101,SNR=10
D25K Kavik River 150.89 321 P **PKPbc** **05 10 49.2 -0.1**
baz=94,SNR=17
BJT Baijiatuan 150.90 108 **PKPbc** **05 10 49.7 -0.5**
BJT Baijiatuan 150.90 108 PKIKP **PKPbc** **05 10 49.7 -0.5**
BJI Beijing 150.91 108 PKPbc **PKPbc** **05 10 49.5 -0.7**
BRLK Bradley Lake 150.92 300 PKPab **PKPab** **05 10 58.0 +0.7**
ULN Ulaanbaatar 150.94 87 **PKPbc** **05 10 49.9 -0.3**
ULN Ulaanbaatar 150.94 87 PKIKP **PKPbc** **05 10 49.9 -0.3**
G24K Hadweenzic Riv 151.01 315 P **PKiKP** **05 10 50.1 -0.1**
baz=98,SNR=23
FIS Fire Island 151.01 303 PKPab **PKPab** **05 10 59.4 +1.8**
CNPM China Poot 151.02 300 pPKPdf 05 11 00.2 +0.6
H24K Noodor Dome 151.04 313 P **PKPbc** **05 10 49.9 +0.1**
baz=100,SNR=26
MCK McKinley 151.08 309 P **PKPbc** **05 10 50.1 +0.3**
baz=102
KDAK Kodiak Island 151.10 296 **PKPbc** **05 10 49.4 -0.6**
KDAK Kodiak Island 151.10 296 PKIKP **PKPbc** **05 10 49.4 -0.6**
KDAK Kodiak Island 151.10 296 P **PKiKP** **05 10 50.3 -0.2**
baz=111
M22K Willow 151.13 305 P **PKPbc** **05 10 50.2 +0.2**
baz=105,SNR=18
OHAK Old Harbor 151.25 294 P **PKPbc** **05 10 50.4 0.0**
baz=111,SNR=16
HOM Homer 151.25 300 P **PKiKP** **05 10 50.6 -0.2**
baz=108
F24K Squaw Lake 151.27 317 P **PKiKP** **05 10 50.7 0.0**
baz=96,SNR=14
Q20K Shuyak Island 151.29 298 P **PKiKP** **05 10 50.7 -0.2**
baz=109
NEA2 Nenana 151.31 311 P **PKPbc** **05 10 49.9 -0.5**
baz=101,SNR=23
CAPN Captain Cook N 151.35 302 PKPab **PKPab** **05 11 01.2 +2.2**
CUT Chulitna 151.37 306 PKPab **PKPab** **05 10 59.4 +0.4**
CUT Chulitna 151.37 306 P **PKiKP** **05 10 50.8 -0.2**
baz=104,SNR=13
SII Sitkinak Islan 151.47 293 P **PKPbc** **05 10 51.2 +0.2**
baz=112
E24K Your Creek 151.56 318 P **PKiKP** **05 10 51.3 0.0**
baz=95
TRF Thorofare Moun 151.61 308 PKPab **PKPab** **05 11 00.4 +0.1**
TRF Thorofare Moun 151.61 308 P **PKPbc** **05 10 51.3 -0.1**
baz=102,SNR=25
H23K Yukon River 151.71 313 PKPbc **PKPbc** **05 10 51.5 +0.2**
H23K Yukon River 151.71 313 P **PKPbc** **05 10 51.2 -0.1**
baz=98,SNR=12
C24K Franklin Bluff 151.73 321 P **PKPbc** **05 10 51.3 +0.1**
baz=92
D24K Happy Valley 151.75 320 P **PKPbc** **05 10 51.0 -0.3**
baz=93
SKT Skwentna 151.84 305 P **PKPbc** **05 10 51.7 0.0**
baz=104
O20K Slope Mountain 151.85 300 P **PKPbc** **05 10 51.6 -0.2**
baz=107,SNR=7.8
CHIR Chirikof Islan 151.93 291 P **PKiKP** **05 10 52.4 0.0**
baz=113
SPCR Spurr Chakacha 151.96 303 P **PKPbc** **05 10 51.7 -0.3**
baz=105
TOLK Toolik Lake Re 152.00 319 PKPdf **PKPdf** **05 10 43.1 -2.1**
TOLK PKPbc **PKiKP** **05 10 52.9 +0.7**
TOLK Toolik Lake Re 152.00 319 P **PKiKP** **05 10 52.1 -0.1**
baz=93,SNR=6.3
Q19K Cape Douglas, 152.01 298 PKPab **PKPab** **05 11 02.4 +0.5**
Q19K Cape Douglas, 152.01 298 P **PKPbc** **05 10 52.0 -0.2**
baz=108,SNR=9.2
G23K Bananza Creek 152.02 315 P **PKiKP** **05 10 52.6 +0.3**
baz=96,SNR=36
P19K Oil Pt 152.02 299 PKPab **PKPab** **05 11 01.6 -0.3**
P19K Oil Pt 152.02 299 P **PKPbc** **05 10 51.9 -0.3**
baz=107,SNR=6.5
BPAW Bear Paw Mtn. 152.04 309 P **PKPbc** **05 10 51.9 -0.1**
baz=100,SNR=71
ILSW Iliamna Southw 152.07 300 **PKPbc** **05 10 52.0 -0.4**
ILSW PKPab **PKPab** **05 11 02.0 -0.2**
MLY Manley 152.09 311 P **PKPbc** **05 10 51.4 -0.8**
baz=99,SNR=9.9
PPLA Purkeypile 152.34 306 **PKPbc** **05 10 52.9 0.0**
PPLA Purkeypile 152.34 306 P **PKPbc** **05 10 52.8 -0.2**
baz=102,SNR=17
CAST Castle Rocks 152.39 308 **PKPab** **05 11 03.5 +0.2**
CAST Castle Rocks 152.39 308 P **PKPbc** **05 10 52.4 -0.5**
baz=101,SNR=20
C23K Itkillik River 152.40 322 P **PKiKP** **05 10 53.0 +0.1**
baz=90,SNR=11
D23K Nanushuk River 152.41 320 P **PKiKP** **05 10 52.9 -0.1**
baz=91
H22K Ishtalitna Cre 152.47 313 P **PKiKP** **05 10 53.2 0.0**
baz=97
M20K Styx River 152.55 304 P **PKPbc** **05 10 53.0 -0.4**
baz=103
CHUM Lake Minchumin 152.58 308 P **PKPbc** **05 10 53.0 -0.2**
baz=100,SNR=26
G22K Bettles 152.62 315 P **PKiKP** **05 10 53.6 +0.1**
baz=94
I21K Tanana 152.63 311 P **PKPbc** **05 10 52.9 -0.4**
baz=98,SNR=9.3
O19K Port Alsworth 152.70 300 **PKPbc** **05 10 53.0 -0.6**
O19K PKPab **pPKPdf** **05 11 02.2 +0.1**
O19K Port Alsworth 152.70 300 P **PKPbc** **05 10 52.9 -0.7**
baz=105,SNR=5.2
E22K Anaktuvuk Pass 152.81 318 P **PKPbc** **05 10 53.8 +0.1**
baz=92
F22K John River 152.92 316 P **PKiKP** **05 10 54.3 +0.2**
baz=93
P18K Big Mountain, 152.92 298 P **PKPbc** **05 10 53.4 -0.8**
baz=106
N19K Bonanza Creek 152.94 301 P **PKPbc** **05 10 53.5 -0.8**
baz=104,SNR=12
R17K Ugashik Creek 152.97 294 P **PKPbc** **05 10 54.3 +0.1**
baz=109
L20K Farewell, AK 153.02 305 P **PKiKP** **05 10 54.4 -0.1**
baz=101,SNR=10
H21K Melozitna Rive 153.03 312 PKPbc **PKPbc** **05 10 53.9 -0.3**
H21K Melozitna Rive 153.03 312 P **PKiKP** **05 10 54.3 -0.1**
baz=96,SNR=16
O18K Koktuh Hills 153.04 299 P **PKPbc** **05 10 53.8 -0.6**
baz=106
M19K Big River Lodg 153.14 304 P **PKPbc** **05 10 54.2 -0.4**
baz=102,SNR=6.7
K20K Telida 153.26 307 P **PKPbc** **05 10 54.5 -0.3**
baz=99,SNR=11
G21K Allakaket 153.38 314 P **PKiKP** **05 10 55.0 0.0**
baz=94,SNR=7.5
L19K White Mountain 153.41 304 **PKPbc** **05 10 54.9 -0.3**
L19K PKPab **PKPab** **05 11 07.4 -0.3**
L19K White Mountain 153.41 304 P **PKiKP** **05 10 55.3 0.0**
baz=101,SNR=6.5
F21K Alatna River 153.41 316 P **PKiKP** **05 10 55.4 +0.2**
baz=92,SNR=7.2
J20K Nowinta River 153.42 309 P **PKPbc** **05 10 54.9 -0.2**
baz=98
Q16K King Salmon 153.43 296 P **PKPbc** **05 10 54.9 -0.3**
baz=107
P17K Kvichak River 153.47 297 P **PKPbc** **05 10 54.9 -0.4**
baz=106
SVW2 Sparrevohn 153.52 302 **PKPbc** **05 10 54.9 -0.6**
SVW2 **sPKPdf** **05 11 08.7 -0.2**
N18K Kilae Creek 153.57 301 **PKPbc** **05 10 55.0 -0.5**
N18K PKPab **PKPab** **05 11 08.5 0.0**
N18K Kilae Creek 153.57 301 P **PKPbc** **05 10 55.0 -0.5**
baz=103,SNR=5.5
CHNA Chernabura Isl 153.64 287 P **PKPbc** **05 10 55.4 -0.5**
baz=113
O17K Koliganek Bris 153.94 298 P **PKPbc** **05 10 55.9 -0.5**
baz=104,SNR=8.1
TTA Tatalina 154.07 306 P **PKiKP** **05 10 57.0 +0.3**
baz=99
GCSA Galena City Sc 154.66 310 P **PKiKP** **05 10 58.4 +0.7**
baz=94,SNR=6.3
KSRS Korea Array 154.69 128 PKPab **PKPab** **05 11 13.9 +0.2**
comp=Z,3.9nm,0.9s,baz=215,slow=3.3,SNR=5.9
MJAR Matsushiro Arr 157.80 147 PKPab **PKPab** **05 11 26.9 -0.2**
comp=Z,3.5nm,0.7s,baz=176,slow=4.9,SNR=6.0
BOD Bodaibo 158.86 70 *e* PKP2 **PKPab** **05 11 30.0 -1.2**
BOD pmax pmax
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 161.93 123 PKPab **PKPab** **05 11 44.0 -1.0**
comp=Z,2.7nm,0.6s,baz=217,slow=5.2,SNR=7.3
USRK Ussuriysk Ar. 161.93 123 PKP2 **PKPab** **05 11 44.0 -1.0**
KLR Kul'dur 165.28 110 PKPab **PKPab** **05 11 57.7 -1.9**
comp=Z,3.0nm,0.7s,baz=280,slow=6.0,SNR=7.1
PETK Petropavlovsk- 175.84 221 PKPab **PKPab** **05 12 45.6 -0.6**
comp=Z,2.2nm,0.7s,baz=86,slow=9.1,SNR=2.4

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*KRNET **27** 04:55:07.2±0.1,39°.34N×73°.74E,mb3.0*
*SOME **27** 04:55:10.5,39°.68N×73°.40E,h0km*
*NNC **27** 04:55:12.0±3.6,39°.60N×73°.73E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=27.0km s-min=12.6km az=172.0
ISC 27 04:55:13.8±1.7,39°.47N±0°.08×73°.40E±0°.05,h29km,n18,
σ2s72/31,13C-1D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**2.07**	**287**	⇑ *i*P	**Pb**	**04 55 49.3**	**-1.5**
	baz=89						
BTK				⇑ *i*S	**Sb**	**04 56 20.0**	**+3.8**
	baz=89						
GAR	**Garm**	**2.44**	**260**	⇑ *e*P	**Pb**	**04 55 53.7**	**-3.3**
	baz=64						
GAR				⇑ *i*S	**Sb**	**04 56 27.6**	**+1.0**
	baz=64						
ARLS	**Aral**	**2.50**	**16**	⇑ *i*P	**Pn**	**04 55 51.9**	**-0.7**
	baz=10.0						
ARLS				⇑ *i*S	**Sb**	**04 56 24.5**	**-3.8**
	baz=10.0						
TRKS	**Terek-Say**	**2.69**	**321**	⇑ *i*P	**Pb**	**04 55 56.5**	**-4.7**
	baz=18						
TRKS				⇑ *i*S	**Sb**	**04 56 32.5**	**-1.3**
	baz=18						
IUG	**luzhnay**	**3.70**	**317**	*e*P	**Pb**	**04 56 15.4**	**-3.1**
	55nm,0.4s						
IUG				*e*S	**Sb**	**04 57 01.5**	**-1.5**
	9.3nm,0.3s						
IUG	**luzhnay**	**3.70**	**317**	Pg	**Pb**	**04 56 15.4**	**-3.1**
	55nm,0.4s						
IUG				Lg	Lg	04 57 01.5	
	7.2nm,0.2s						
TKM2	**Tokmak 2**	**3.83**	**25**	⇑ Pg	**Pb**	**04 56 19.9**	**-0.9**
	0.4nm,0.2s						
TKM2				⇑ Lg	Lg	04 57 07.7	
	2.6nm,0.2s						
CHM	**Chimkent**	**4.05**	**316**	*e*P	**Pb**	**04 56 22.1**	**-2.2**
	150nm,0.4s						
CHM				*e*S	**Sb**	**04 57 13.1**	**+0.3**
	193nm,0.2s						
KST	**Kastek**	**4.06**	**28**	*e*P	**Pb**	**04 56 21.0**	**-3.6**
	1.9nm,0.3s						
KST				*e*S	**Sb**	**04 57 11.6**	**-1.8**
	5.8nm,0.5s						
KST	**Kastek**	**4.06**	**28**	Pg	**Pb**	**04 56 21.1**	**-3.6**
	2.1nm,0.3s						
KST				Lg	Lg	04 57 11.9	
	4.8nm,0.6s						
SGDS	**Sogindy**	**4.09**	**13**	*e*P	**Pb**	**04 56 22.3**	**-2.8**
	1.0nm,0.1s						
SGDS				*e*S	**Sb**	**04 57 13.5**	**-0.6**
	13nm,0.1s						
DGS	**Degeres**	**4.17**	**25**	*e*P	**Pb**	**04 56 24.8**	**-1.8**
	2.8nm,0.6s						
DGS				*e*S	**Sb**	**04 57 17.9**	**+1.4**
	5.2nm,0.6s						
DGS	**Degeres**	**4.17**	**25**	Pg	**Pb**	**04 56 23.9**	**-2.7**
DGS				Lg	Lg	04 57 16.1	
KK31	**Karatay Array**	**4.24**	**330**	⇑ Pn	**Pn**	**04 56 17.5**	**+1.2**
	0.2nm,0.3s,baz=134,slow=13,SNR=3.9						
KK31				⇓ Pg	**Pb**	**04 56 27.7**	**+0.2**

0.6nm,0.4s,baz=130,slow=14,SNR=8.1
KK31 ⇑Sn **Sn** **04 57 10.3 +5.5**
0.4nm,0.3s,baz=125,slow=27,SNR=4.3
KK31 ⇑Lg Lg 04 57 27.7
0.5nm,0.3s,baz=163,slow=28,SNR=3.9
KUU Kurty 4.94 26 *e*P **Pb** **04 56 38.1 -1.5**
1.4nm,0.3s
KUU *e*S **Sb** **04 57 41.1 +2.6**
4.1nm,0.3s
KUU Kurty 4.94 26 Pg **Pb** **04 56 38.1 -1.5**
1.4nm,0.4s
KUU Lg Lg 04 57 41.1
4.1nm,0.3s
ARXS Arharly 5.78 33 *e*P **Pb** **04 56 53.2 -0.8**
3.1nm,0.9s
ARXS *e*S **Sb** **04 58 07.0 +4.2**
2.2nm,0.5s
ARXS Arharly 5.78 33 Pg **Pb** **04 56 53.1 -0.8**
3.2nm,0.9s
ARXS Lg Lg 04 58 06.9
4.1nm,0.8s

IDC ***27*** *04:56:35.8±1.1,1˚.77S×120˚.93E,h0km,mb3.6/6, mbtmp3.7/7,ML4.0/1,MS3.1/2,Error ellipse: s-maj=47.1km s-min=18.3km az=74.0*
DJA ***27*** *04:56:37.4±0.2,2˚.5±2˚.×12˚.0E±˚,h10km,M4.3/13,mb4.6/2, MLv4.2/13*
NEIC ***27*** *04:56:38.3±2.4,1˚.83S±0˚.05×120˚.10E±0˚.07,h44km±12km, mb4.1/11,Error ellipse: s-maj=11.2km s-min=5.3km az=57.0*
ISC 27 04:56:38.7±0.7,1˚.88S±0˚.04×120˚.35E±0˚.06,h33km,n36, σ1s97/36,mb4.0/12,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.27**	**205**	P	**Pn**	**04 56 59.2**	**-0.9**
APSI	**Ampana**	**1.62**	**53**	P	**Pn**	**04 57 04.5**	**-0.4**
APSI				S	**Sb**	**04 57 27.1**	**-0.9**
SPSI	**Sidrap Palu**	**2.15**	**196**	P	**Pn**	**04 57 14.9**	**+2.7**
MPSI	**Mapaga**	**2.25**	**348**	P	**Pn**	**04 57 13.4**	**-0.3**
LUWI	**Luwuk**	**2.56**	**71**		**Pn**	**04 57 17.5**	**-0.4**
LUWI				Sn	**Sb**	**04 57 55.0**	**0.0**
LUWI	**Luwuk**	**2.56**	**71**	P	**Pn**	**04 57 16.6**	**-1.3**
MRSI	**Marisa**	**2.83**	**34**	P	**Pn**	**04 57 21.8**	**+0.2**
MRSI				S	**Sn**	**04 57 56.9**	**+2.3**
TOLI2	**Tolitoli**	**3.01**	**8**		**Pn**	**04 57 26.0**	**+1.9**
KAPI	**Kappang**	**3.17**	**191**	Pn	**Pn**	**04 57 29.5**	**+3.3**
	13nm,0.3s,baz=323,slow=6.8,SNR=17						
KAPI				Sn	**Sb**	**04 58 14.5**	**+2.0**
	9.6nm,0.3s,baz=202,slow=21,SNR=8.6						
KAPI				LR	LR	04 58 42.5	
	comp=Z,60nm,18.1s,baz=28,slow=37						
	37nm,0.3s						
KAPI	**Kappang**	**3.17**	**191**		**Pn**	**04 57 26.9**	**+0.7**
BKSI	**Bulukumba**	**3.42**	**184**	P	**Pn**	**04 57 31.6**	**+1.8**
BKB	**Balikpapan**	**3.51**	**280**		Pn	04 57 25.4	-5.6
GTOI	**Gorontalo**	**3.65**	**47**	P	**Pn**	**04 57 32.9**	**0.0**
BSSI	**Bau Bau, Buton**	**4.23**	**178**	P	**Pn**	**04 57 42.0**	**+1.1**
KMSI	**Cibinong**	**4.37**	**56**	P	**Pn**	**04 57 43.6**	**+0.8**
MYLDM	**Lahad Datu**	**7.26**	**345**		**Pn**	**04 58 19.9**	**-2.5**
MNAI	**Manna**	**17.54**	**262**		**Pn**	**05 00 36.2**	**-4.7**
PSA00	**Pilbara Seismi**	**19.58**	**181**	P	**P**	**05 01 04.4**	**+0.4**
PSA00				IAmb	IAmb	05 01 24.8	
	comp=Z,7.8nm,0.7s						
WB0	**Warramunga Arr**	**22.46**	**143**	P	**P**	**05 01 34.9**	**-0.4**
WB0				IAmb	IAmb	05 01 56.1	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**22.56**	**144**	P	**P**	**05 01 35.1**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=319,slow=11,SNR=7.4						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**22.56**	**144**	P	**P**	**05 01 37.0**	**+0.6**
WRAB	**Tennant Creek**	**22.56**	**144**	P	**P**	**05 01 36.1**	**-0.2**
WRAB				IAmb	IAmb	05 01 45.7	
	comp=Z,7.4nm,1.1s						
WB2	**Warramunga Arr**	**22.57**	**144**	P	**P**	**05 01 38.1**	**+1.8**
WB2				IAmb	IAmb	05 01 51.5	
	comp=Z,5.9nm,0.9s						
WR0	**Warramunga Arr**	**22.70**	**143**	P	**P**	**05 01 37.5**	**-0.2**
WR0				IAmb	IAmb	05 01 42.6	
	comp=Z,13nm,1.4s						
ASAR	**Alice Springs**	**25.32**	**150**	P	**P**	**05 02 03.1**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=340,slow=13,SNR=1.6						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**29.20**	**315**	LR	LR	05 16 12.2	
	comp=Z,20nm,20.1s,baz=170,slow=40						
CHTO	**Chiang Mai**	**29.43**	**315**	P	P	05 02 34.6	-5.0
CHTO				IAmb	IAmb	05 02 35.8	
	comp=Z,5.3nm,1.2s						
NWAO	**Narrogin (SRO)**	**31.02**	**185**	P	**P**	**05 02 51.7**	**-1.6**
TOO	**Toolangi**	**42.37**	**150**	P	**P**	**05 04 28.4**	**-1.6**
TOO				IAmb	IAmb	05 04 37.3	
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**51.00**	**348**	P	**P**	**05 05 39.3**	**+1.8**
	comp=Z,0.7nm,1.0s,baz=147,slow=7.6,SNR=2.2						
	comp=Z,0.7nm,1.0s						
MK31	**Makanchi Array**	**58.87**	**330**	P	**P**	**05 06 31.4**	**-3.0**
MKAR	**Makanchi Array**	**58.87**	**330**	P	**P**	**05 06 37.9**	**+3.6**
	comp=Z,0.6nm,0.7s,baz=133,slow=8.4,SNR=6.6						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**58.87**	**330**	P	**P**	**05 06 32.4**	**-1.9**
ZALV	**Zalesovo Beam**	**62.97**	**337**	P	**P**	**05 07 04.7**	**+2.7**
	comp=Z,0.4nm,0.5s,baz=123,slow=10,SNR=1.8						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.30**	**332**	P	**P**	**05 07 07.7**	**+3.5**
	comp=Z,1.0nm,0.2s,baz=137,slow=6.8,SNR=1.4						
	comp=Z,1.0nm,0.2s						
NRIK	**Noril'sk**	**74.48**	**348**	LR	LR	05 42 39.4	
	comp=Z,16nm,19.5s,baz=98,slow=37						

ROM ***27*** *04:56:44.8±0.1,42˚.749N±0˚.003×13˚.248E±0˚.005, h10km,ML2.9/48,Error ellipse: s-maj=0.3km s-min=0.2km az=56.0*
PRU ***27*** *04:56:46.6±0.0,42˚.80N×13˚.73E,h0km*
ISC 27 04:56:45.0±0.8,42˚.73N±0˚.01×13˚.25E±0˚.02,h14km±5km, n92,σ1s08/120,18C-21D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.14**	**317**	⇓P	**Pg**	**04 56 48.4**	**-0.3**
NRCA				S	**Sg**	**04 56 50.7**	**-0.5**
NRCA				AML	AML		
	comp=E,52750μm,0.2s						
NRCA				AML	AML		
	comp=N,46050μm,0.1s						
NRCA				AML	AML		
	comp=N,49350μm,0.1s						
NRCA				AML	AML		
	comp=N,46000μm,0.1s						
NRCA				AML	AML		
	comp=E,57950μm,0.2s						
NRCA				AML	AML		
	comp=E,52700μm,0.2s						
T1243	**Rocca Santa Ma**	**0.15**	**102**	P	**Pg**	**04 56 49.0**	**+0.1**
T1243				S	**Sg**	**04 56 51.7**	**+0.2**
T1243				AML	AML		
	comp=N,13100μm,0.6s						
T1243				AML	AML		
	comp=E,17150μm,0.1s						
T1243				AML	AML		
	comp=E,16850μm,0.1s						
T1243				AML	AML		
	comp=N,12900μm,0.7s						
T1243				AML	AML		
	comp=N,13050μm,0.6s						
MMO1	**Montemonaco**	**0.18**	**19**	P	**Pg**	**04 56 49.0**	**-0.3**
MMO1				S	**Sg**	**04 56 51.9**	**-0.3**
MMO1				AML	AML		
	comp=N,2650μm,0.6s						
MMO1				AML	AML		
	comp=E,30850μm,0.2s						
MMO1				AML	AML		
	comp=E,2160μm,0.2s						
MMO1				AML	AML		
	comp=E,30900μm,0.2s						
MMO1				AML	AML		
	comp=E,2165μm,0.2s						
MMO1				AML	AML		
	comp=N,17300μm,0.6s						
MC2	**Monte Cornacci**	**0.19**	**347**	⇓P	**Pg**	**04 56 49.1**	**-0.3**
MC2				S	**Sg**	**04 56 52.2**	**-0.3**
MC2				AML	AML		
	comp=N,11850μm,0.4s						
MC2				AML	AML		
	comp=N,11900μm,0.4s						
MC2				AML	AML		
	comp=E,11900μm,0.4s						
LNSS	**Leonessa**	**0.20**	**230**	P	**Pg**	**04 56 49.8**	**+0.3**
LNSS				S	**Sb**	**04 56 53.6**	**-0.5**
LNSS				AML	AML		
	comp=E,8760μm,1.3s						
LNSS				AML	AML		
	comp=E,8765μm,1.3s						
LNSS				AML	AML		
	comp=N,8065μm,0.5s						
RM33	**Pellescritta (**	**0.22**	**186**	⇑P	**Pb**	**04 56 50.4**	**-0.5**
RM33				S	**Sb**	**04 56 54.5**	**-0.3**
RM33				AML	AML		
	comp=E,9980μm,0.9s						
RM33				AML	AML		
	comp=N,5570μm,1.3s						
RM33				AML	AML		
	comp=E,10045μm,0.9s						
RM33				AML	AML		
	comp=E,9945μm,0.9s						
RM33				AML	AML		
	comp=E,10055μm,0.9s						
RM33				AML	AML		
	comp=N,5450μm,1.3s						
RM33				AML	AML		
	comp=E,9960μm,0.9s						
RM33				AML	AML		
	comp=E,10060μm,0.9s						
CAMP	**Campotosto**	**0.23**	**148**	P	**Pb**	**04 56 50.4**	**-0.5**
CAMP				S	**Sb**	**04 56 54.5**	**-0.5**
CAMP				AML	AML		
	comp=E,3885μm,0.3s						
CAMP				AML	AML		
	comp=N,2975μm,0.2s						
FEMA	**Monte Fema**	**0.27**	**328**	P	**Pg**	**04 56 50.5**	**-0.3**
FEMA				S	**Sg**	**04 56 54.8**	**0.0**
FEMA				AML	AML		
	comp=E,7650μm,0.5s						
FEMA				AML	AML		
	comp=E,7650μm,0.5s						
FEMA				AML	AML		
	comp=N,6875μm,0.4s						
FEMA				AML	AML		
	comp=E,7655μm,0.5s						
FEMA				AML	AML		
	comp=N,6870μm,0.4s						
TERO	**Teramo**	**0.28**	**112**	P	**Pg**	**04 56 51.1**	**+0.2**
TERO				S	**Sb**	**04 56 55.7**	**-0.9**
TERO				AML	AML		
	comp=N,4415μm,0.1s						
TERO				AML	AML		
	comp=E,3935μm,1.2s						
TERO				AML	AML		
	comp=N,5125μm,0.1s						
TERO				AML	AML		
	comp=E,3350μm,1.2s						
FDMO	**Fiordimonte**	**0.33**	**339**	⇓P	**Pg**	**04 56 51.3**	**-0.4**
FDMO				S	**Sg**	**04 56 56.3**	**0.0**
FDMO				AML	AML		
	comp=N,2990μm,0.7s						
FDMO				AML	AML		
	comp=E,2160μm,0.2s						
GUMA	**Gualdo di Mace**	**0.34**	**11**	⇑P	**Pg**	**04 56 52.0**	**+0.1**
GUMA				S	**Sb**	**04 56 57.6**	**-0.6**
GUMA				AML	AML		
	comp=E,21100μm,0.3s						
GUMA				AML	AML		
	comp=N,45400μm,0.3s						
GUMA				AML	AML		
	comp=N,31850μm,0.5s						
GUMA				AML	AML		
	comp=N,45350μm,0.3s						
GUMA				AML	AML		
	comp=E,21050μm,0.3s						
GUMA				AML	AML		
	comp=E,46450μm,0.3s						
CSP1	**Cessapalombo**	**0.36**	**355**	⇓P	**Pg**	**04 56 52.0**	**-0.4**
CSP1				S	**Sg**	**04 56 57.6**	**+0.2**
CSP1				AML	AML		
	comp=E,5285μm,1.4s						
CSP1				AML	AML		
	comp=E,5290μm,1.4s						
CSP1				AML	AML		
	comp=N,5560μm,1.0s						
GIGS	**Gran Sasso**	**0.37**	**140**	P	**Pg**	**04 56 52.5**	**+0.1**
GIGS				S	**Sb**	**04 56 58.3**	**-0.6**
GIGS				AML	AML		
	comp=E,589μm,0.4s						
GIGS				AML	AML		
	comp=N,457μm,1.5s						
GIGS				AML	AML		
	comp=N,458μm,1.5s						
GIGS				AML	AML		
	comp=E,588μm,0.4s						
CESI	**CESI - Serrava**	**0.37**	**318**	⇓P	**Pg**	**04 56 52.2**	**-0.3**
CESI				S	**Sg**	**04 56 57.9**	**+0.2**
CESI				AML	AML		
	comp=E,3315μm,1.0s						
CESI				AML	AML		
	comp=N,7150μm,0.4s						
OFFI	**Offida**	**0.38**	**57**	⇑P	**Pb**	**04 56 53.4**	**-0.1**
OFFI				AML	AML		
	comp=N,4845μm,0.5s						
OFFI				AML	AML		
	comp=E,3840μm,0.7s						
ARRO	**Arrone**	**0.39**	**247**	P	**Pg**	**04 56 52.8**	**+0.1**
ARRO				S	**Sb**	**04 56 59.7**	**+0.2**
FIAM	**Fiamignano**	**0.47**	**192**	⇑P	**Pg**	**04 56 54.5**	**+0.2**
FIAM				S	**Sb**	**04 57 02.0**	**0.0**
FIAM				AML	AML		
	comp=N,1380μm,0.2s						
FIAM				AML	AML		
	comp=E,2800μm,0.6s						
TRTR	**Tortoreto Alta**	**0.50**	**81**	AML	AML		
	comp=E,4480μm,0.4s						
TRTR				AML	AML		
	comp=N,4845μm,0.5s						
SSM1	**San Severino M**	**0.50**	**354**	P	**Pg**	**04 56 55.1**	**+0.2**
CESX	**Cesi**	**0.51**	**257**	⇑P	**Pg**	**04 56 54.7**	**-0.3**
CESX				S	**Sb**	**04 57 03.0**	**+0.1**
CESX				AML	AML		
	comp=N,1225μm,0.5s						
CESX				AML	AML		
	comp=E,1280μm,1.6s						
FAGN	**Fagnano**	**0.53**	**152**	P	**Pb**	**04 56 56.0**	**0.0**
FAGN				S	**Sb**	**04 57 04.5**	**+1.0**
FAGN				AML	AML		
	comp=N,1730μm,0.7s						
FAGN				AML	AML		
	comp=N,1725μm,0.7s						
FAGN				AML	AML		
	comp=E,1655μm,0.6s						
ASSB	**Assisi San Ben**	**0.53**	**306**	P	**Pg**	**04 56 55.1**	**-0.4**
ASSB				S	**Sb**	**04 57 03.3**	**-0.5**
ASSB				AML	AML		
	comp=E,1365μm,0.1s						
ASSB				AML	AML		
	comp=N,1300μm,0.8s						
VCEL	**Villa Celiera**	**0.55**	**127**	P	**Pb**	**04 56 56.2**	**-0.3**
VCEL				AML	AML		
	comp=E,1665μm,1.4s						
VCEL				AML	AML		
	comp=E,1660μm,1.4s						
VCEL				AML	AML		
	comp=N,2090μm,1.5s						
SNTG	**Esanatoglia**	**0.57**	**337**	⇓P	**Pg**	**04 56 55.5**	**-0.7**
SNTG				AML	AML		
	comp=N,730μm,0.4s						
SNTG				AML	AML		
	comp=E,502μm,1.3s						
EL6	**Elcito**	**0.61**	**350**	⇓P	**Pg**	**04 56 56.3**	**-0.6**
EL6				S	**Sb**	**04 57 06.0**	**0.0**
ATCC	**AVT- Casa Cast**	**0.64**	**316**	⇓P	**Pg**	**04 56 56.8**	**-0.6**
ATCC				AML	AML		
	comp=E,1126μm,0.4s						
ATCC				AML	AML		
	comp=N,1006μm,1.1s						
ATCC				AML	AML		
	comp=E,1126μm,0.4s						
ATCC				AML	AML		
	comp=N,1007μm,1.1s						
T0110	**Collepietro**	**0.64**	**142**	P	**Pg**	**04 56 57.3**	**-0.1**
T0110				AML	AML		
	comp=E,1205μm,0.4s						
T0110				AML	AML		
	comp=N,1093μm,0.4s						
CING	**Cingoli**	**0.65**	**357**	⇓P	**Pg**	**04 56 57.2**	**-0.5**
CING				AML	AML		
	comp=E,1385μm,1.3s						
CING				AML	AML		
	comp=N,1085μm,0.4s						
FOSV	**Fossato di Vic**	**0.67**	**328**	⇓P	**Pg**	**04 56 57.3**	**-0.7**
FOSV				AML	AML		
	comp=E,628μm,0.7s						
FOSV				AML	AML		
	comp=N,808μm,0.3s						
PP3	**Marolino**	**0.70**	**22**	⇓P	**Pb**	**04 56 59.1**	**+0.2**
PP3				AML	AML		
	comp=E,5280μm,0.4s						
PP3				AML	AML		
	comp=N,3500μm,0.6s						
PP3				AML	AML		
	comp=N,3500μm,0.6s						
PP3				AML	AML		
	comp=E,5565μm,0.6s						
PP3				AML	AML		
	comp=N,3280μm,0.7s						
SRES	**S.Oreste - Sor**	**0.73**	**228**	P	**Pg**	**04 56 59.0**	**-0.2**
SRES				AML	AML		
	comp=N,456μm,0.4s						
SRES				AML	AML		
	comp=E,519μm,0.3s						
MURB	**Monte Urbino**	**0.75**	**315**	S	**Sn**	**04 57 12.0**	**-0.5**
SSFR	**Montelago di S**	**0.78**	**334**	⇓P	**Pg**	**04 56 59.5**	**-0.8**
SSFR				AML	AML		
	comp=E,1430μm,0.2s						
SSFR				AML	AML		
	comp=N,1056μm,0.3s						
SSFR				AML	AML		
	comp=N,932μm,0.3s						
SSFR				AML	AML		
	comp=E,1310μm,0.2s						
ARVD	**Arcevia**	**0.80**	**344**	⇓P	**Pg**	**04 56 60.0**	**-0.5**
ARVD				S	**Sn**	**04 57 13.0**	**-0.7**
ARVD				AML	AML		
	comp=E,390μm,0.5s						
ARVD				AML	AML		
	comp=N,376μm,0.8s						
ARVD				AML	AML		
	comp=N,376μm,0.8s						
CERT	**Cerreto**	**0.80**	**194**	⇑P	**Pg**	**04 56 59.9**	**-0.7**
CERT				AML	AML		
	comp=N,982μm,0.4s						
CERT				AML	AML		
	comp=E,1049μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.81**	**306**	⇓P	**Pb**	**04 57 01.0**	**+0.2**
ATTE				AML	AML		
	comp=N,384μm,1.5s						
ATTE				AML	AML		
	comp=E,318μm,0.5s						
ATFO	**Monte Foce - G**	**0.81**	**322**	⇑P	**Pg**	**04 56 59.9**	**-0.7**
ATFO				AML	AML		
	comp=E,404μm,0.5s						
ATFO				AML	AML		
	comp=N,396μm,1.0s						
MGAB	**Montegabbione**	**0.85**	**283**	⇑P	**Pg**	**04 57 01.5**	**0.0**
MGAB				AML	AML		
	comp=N,1115μm,0.4s						
MGAB				AML	AML		
	comp=E,786μm,0.4s						
MGAB				AML	AML		
	comp=E,814μm,0.6s						
MGAB				AML	AML		
	comp=N,1055μm,0.3s						
AOI	**Ancona**	**0.86**	**17**	P	**Pg**	**04 57 01.4**	**-0.2**
AOI				S	**Sn**	**04 57 16.0**	**+0.8**
AOI				AML	AML		
	comp=N,624μm,1.4s						
AOI				AML	AML		
	comp=N,623μm,1.4s						
AOI				AML	AML		
	comp=E,546μm,0.4s						
INTR	**Introdacqua**	**0.87**	**146**	P	**Pg**	**04 57 00.9**	**-0.9**
INTR				S	**Sn**	**04 57 16.0**	**+0.6**
INTR				AML	AML		
	comp=E,304μm,1.1s						
INTR				AML	AML		
	comp=N,562μm,0.4s						
FRON	**Frontone**	**0.88**	**334**	⇑P	**Pg**	**04 57 00.9**	**-1.0**
FRON				S	**Sb**	**04 57 14.0**	**+0.4**
FRON				AML	AML		
	comp=N,464μm,0.5s						
FRON				AML	AML		
	comp=E,290μm,0.6s						
VVLD	**Villa Vallelon**	**0.90**	**162**	⇑P	**Pn**	**04 57 04.4**	**+1.1**
VVLD				AML	AML		
	comp=E,329μm,1.1s						
VVLD				AML	AML		
	comp=N,304μm,0.7s						
COR1	**Corinaldo**	**0.92**	**349**	⇓P	**Pb**	**04 57 03.0**	**+0.3**
COR1				AML	AML		
	comp=N,991μm,1.6s						
COR1				AML	AML		
	comp=E,605μm,1.6s						
PIEI	**Pieia**	**0.96**	**327**	⇓P	**Pb**	**04 57 02.7**	**-0.8**
PIEI				S	**Sn**	**04 57 18.0**	**+0.4**
PIEI				AML	AML		
	comp=E,276μm,1.4s						
PIEI				AML	AML		
	comp=N,205μm,1.2s						
MPAG	**Monte Paganucc**	**0.97**	**339**	⇑P	**Pb**	**04 57 02.8**	**-0.8**
MPAG				AML	AML		
	comp=N,288μm,1.0s						
MPAG				AML	AML		
	comp=E,396μm,0.5s						
LPEL	**Lama dei Peligi**	**0.97**	**134**	S	**Sn**	**04 57 19.0**	**+1.1**
RMP	**Rome, Mte Porz**	**1.00**	**204**	⇓P	**Pn**	**04 57 05.4**	**+0.7**
RMP				AML	AML		
	comp=E,683μm,0.5s						
RMP				AML	AML		
	comp=N,620μm,0.8s						
NARO	**Abbazia di Nar**	**1.01**	**331**	P	**Pb**	**04 57 03.2**	**-1.0**
NARO				AML	AML		
	comp=E,196μm,0.8s						
NARO				AML	AML		
	comp=N,204μm,0.3s						
FSSB	**Fossombrone**	**1.02**	**341**	⇑P	**Pb**	**04 57 03.8**	**-0.6**
FSSB				S	**Sn**	**04 57 21.0**	**+1.9**
FSSB				AML	AML		
	comp=N,1215μm,0.4s						
FSSB				AML	AML		
	comp=E,1560μm,0.4s						
POFI	**Posta Fibreno**	**1.07**	**161**	⇑P	**Pn**	**04 57 08.0**	**+2.4**
CAFI	**Castiglion Fio**	**1.11**	**303**	⇓P	**Pb**	**04 57 06.2**	**+0.1**
CAFI				S	**Sn**	**04 57 23.0**	**+1.6**
CAFI				AML	AML		
	comp=E,270μm,0.5s						
CAFI				AML	AML		
	comp=N,226μm,0.7s						
TOLF	**Tolfa**	**1.14**	**235**	⇓P	**Pb**	**04 57 06.2**	**-0.2**
TOLF				AML	AML		
	comp=E,178μm,0.5s						
TOLF				AML	AML		
	comp=N,186μm,0.3s						
GIUL	**Giuliano Di Ro**	**1.17**	**180**	⇓P	**Pg**	**04 57 08.5**	**+1.0**
GIUL				AML	AML		
	comp=N,190μm,0.5s						
GIUL				AML	AML		
	comp=E,202μm,0.4s						
SF04	**Casetta**	**1.17**	**276**	P	**Pb**	**04 57 07.1**	**+0.1**
TRIV	**Trivento**	**1.36**	**134**	⇑P	**Pg**	**04 57 12.4**	**+1.2**
CASP	**Castiglione de**	**1.75**	**273**	⇓P	**Pn**	**04 57 15.2**	**+0.2**
CASP				AML	AML		
	comp=E,26μm,1.2s						
CASP				AML	AML		
	comp=N,22μm,1.0s						
DUGI	**Dugi Otok**	**1.83**	**46**	*e*Pn	**Pn**	**04 57 16.3**	**+0.3**
VIRC	**Vir**	**2.04**	**39**	*e*Pn	**Pn**	**04 57 19.3**	**+0.4**
MRB1	**Monte Rocchett**	**2.06**	**141**	S	**Sn**	**04 57 43.0**	**-1.6**
MORI	**Morici**	**2.12**	**57**	*e*Pn	**Pn**	**04 57 20.9**	**+0.8**
NVLJ	**Novalja**	**2.18**	**32**	*e*Pn	**Pn**	**04 57 20.9**	**+0.1**
BRJN	**Brijuni**	**2.21**	**9**	*i* Pn	**Pn**	**04 57 21.3**	**+0.2**
RABC	**Rab**	**2.31**	**28**	*e*Pn	**Pn**	**04 57 22.6**	**+0.1**
HVAR	**Hvar**	**2.39**	**78**	*e*Pn	**Pn**	**04 57 24.7**	**+1.0**
SMRN	**Sveta Marina**	**2.40**	**16**	*e*Pn	**Pn**	**04 57 23.2**	**-0.6**
UDBI	**Udbina**	**2.56**	**45**	*e*Pn	**Pn**	**04 57 27.4**	**+1.2**
KIJV	**Kijevo**	**2.63**	**60**	*e*Pn	**Pn**	**04 57 28.2**	**+1.2**
PLIT	**Plitvice**	**2.75**	**38**	*e*Pn	**Pn**	**04 57 29.4**	**+0.7**
VENL	**Venezia Lido**	**2.76**	**347**	S	**Sb**	**04 58 10.0**	**+2.3**
RICI	**Ricice**	**2.95**	**74**	*e*Pn	**Pn**	**04 57 33.2**	**+1.9**
STON	**Ston**	**3.28**	**86**	*e*Pn	**Pn**	**04 57 35.1**	**-0.8**

STON	**Ston**	**3.28**	**86**	⇑P		**Pn**	**04 57 36.7**	**+0.8**
STON				S		**Sn**	**04 58 16.0**	**+1.3**
STON				AML	AML			
	comp=N,22μm,1.3s							
STON				AML	AML			
	comp=E,26μm,1.4s							
MAGA	**Magasa**	**3.58**	**329**	⇑P		**Pn**	**04 57 42.0**	**+1.8**
CIMO	**Cimolais**	**3.63**	**351**	S		**Sg**	**04 58 39.0**	**-2.4**
OBKA	**Obir**	**3.89**	**13**	*e*Pn		**Pn**	**04 57 44.0**	**-0.4**
	comp=E,1.2nm,0.3s							
MYKA	**Terra Mystica**	**3.91**	**4**	*e*Pn		**Pn**	**04 57 46.6**	**+1.9**
	comp=E,0.7nm,0.2s							
BOSI	**Bolzano**	**4.01**	**341**	⇑P		**Pn**	**04 57 43.3**	**-2.7**
BOSI				P		**Pb**	**04 57 54.7**	**-0.7**
ABTA	**Abfaltersbach**	**4.05**	**353**	*e*Pn		**Pn**	**04 57 47.5**	**+0.9**
	comp=E,4.4nm,0.6s							
SOKA	**Soboth**	**4.15**	**17**	*e*Pn		**Pn**	**04 57 47.8**	**-0.1**
	comp=E,0.8nm,0.4s							
SPS2	**Spezzano della**	**4.15**	**145**	⇑P		**Pg**	**04 58 02.4**	**-2.1**
FETA	**Feichten**	**4.65**	**338**	*e*Pn		**Pn**	**04 57 56.5**	**+1.6**
	comp=E,0.8nm,0.4s							
WTTA	**Wattenberg**	**4.68**	**346**	*e*Pn		**Pn**	**04 57 53.8**	**-1.5**
	comp=E,0.3nm,0.2s							
SQTA	**Sankt Quirin**	**4.72**	**343**	*e*Pn		**Pn**	**04 57 57.3**	**+1.5**
	comp=E,1.6nm,0.3s							
WATA	**Walderalm**	**4.76**	**346**	*e*Pn		**Pn**	**04 57 56.2**	**-0.2**
	comp=E,0.8nm,0.4s							
PLLN	**Pollina**	**4.78**	**171**	P		**Pb**	**04 58 05.4**	**-3.2**
ARSA	**Arzberg**	**4.80**	**19**	*e*Pn		**Pn**	**04 57 59.5**	**+2.7**
	comp=E,0.4nm,0.3s							
MOTA	**Moosalm**	**4.86**	**343**	*e*Pn		**Pn**	**04 57 59.4**	**+1.6**
	comp=E,0.3nm,0.2s							
BIOA	**Bad Ischl, Aus**	**4.97**	**3**	*e*Pn		**Pn**	**04 58 03.5**	**+4.3**
	comp=E,1.4nm,0.3s							
DAVA	**Damuels**	**5.14**	**334**	*e*Pn		**Pn**	**04 58 04.5**	**+2.8**
	comp=E,0.5nm,0.2s							
MOA	**Molln**	**5.17**	**8**	*e*Pn		**Pn**	**04 58 03.1**	**+1.1**
	comp=E,0.7nm,0.3s							
CONA	**Conrad Observa**	**5.52**	**19**	*e*Pn		**Pn**	**04 58 07.7**	**+0.9**
	comp=E,0.2nm,0.2s							
KHC	**Kasperske Hory**	**6.41**	**2**	*e*SN		**Sn**	**04 59 31.5**	**-0.4**

ROM 27 04:57:41.8±0.1, 42°07'N±0'.004×13°12'E±0'.006, h8km, ML2.4/8, 1C-6D, Error ellipse: s-maj=0.5km s-min=0.1km az=46.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.12**	**216**	P	Pg	04 57 45.4	+0.8
RM33				S	Sg	04 57 47.6	+1.1
RM33				AML	AML		
	comp=E,3345μm,1.0s						
RM33				AML	AML		
	comp=E,3340μm,1.0s						
RM33				AML	AML		
	comp=E,3325μm,1.0s						
RM33				AML	AML		
	comp=N,3010μm,0.3s						
RM33				AML	AML		
	comp=N,2940μm,0.3s						
T1243	**Rocca Santa Ma**	**0.14**	**48**	P	Pg	04 57 45.6	+0.7
T1243				AML	AML		
	comp=E,5005μm,0.3s						
T1243				AML	AML		
	comp=N,5595μm,0.3s						
T1243				AML	AML		
	comp=E,4970μm,0.2s						
T1243				AML	AML		
	comp=N,5705μm,0.3s						
T1243				AML	AML		
	comp=N,5595μm,0.3s						
LNSS	**Leonessa**	**0.20**	**269**	P	Pg	04 57 46.6	+0.7
LNSS				S	Sg	04 57 50.2	+1.4
LNSS				AML	AML		
	comp=N,1570μm,1.2s						
LNSS				AML	AML		
	comp=E,1510μm,0.4s						
LNSS				AML	AML		
	comp=N,1565μm,1.2s						
TERO	**Teramo**	**0.22**	**86**	P	Pg	04 57 46.8	+0.6
TERO				S	Sg	04 57 50.4	+1.2
TERO				AML	AML		
	comp=E,1505μm,0.4s						
TERO				AML	AML		
	comp=N,1305μm,0.1s						
TERO				AML	AML		
	comp=N,1595μm,0.1s						
TERO				AML	AML		
	comp=E,1504μm,0.4s						
TERO				AML	AML		
	comp=E,1750μm,0.4s						
TERO				AML	AML		
	comp=N,1310μm,0.1s						
GIGS	**Gran Sasso**	**0.25**	**130**	P	Pg	04 57 47.3	+0.6
GIGS				S	Sg	04 57 51.3	+1.2
GIGS				AML	AML		
	comp=N,276μm,0.3s						
GIGS				AML	AML		
	comp=E,278μm,0.2s						
NRCA	**Norcia**	**0.27**	**327**	P	Pg	04 57 47.9	+0.7
NRCA				S	Sg	04 57 52.2	+1.4
NRCA				AML	AML		
	comp=E,3865μm,0.1s						
NRCA				AML	AML		
	comp=N,3390μm,0.1s						
NRCA				AML	AML		
	comp=E,4240μm,0.1s						
NRCA				AML	AML		
	comp=N,3730μm,0.5s						
NRCA				AML	AML		
	comp=E,3860μm,0.1s						
NRCA				AML	AML		
	comp=N,3395μm,0.1s						
MMO1	**Montemonaco**	**0.29**	**2**	P	Pg	04 57 48.3	+0.6
MMO1				S	Sb	04 57 53.0	-1.4
MC2	**Monte Cornacci**	**0.32**	**344**	P	Pg	04 57 48.9	+0.8
MC2				S	Sb	04 57 54.4	-0.9
FIAM	**Fiamignano**	**0.37**	**203**	⇓P	Pg	04 57 49.6	+0.6
FAGN	**Fagnano**	**0.40**	**149**	P	Pg	04 57 49.7	+0.2
FAGN				S	Sb	04 57 56.6	-0.7
ARRO	**Arrone**	**0.40**	**266**	P	Pg	04 57 50.1	+0.4
OFFI	**Offida**	**0.43**	**40**	P	Pb	04 57 51.7	+0.1
VCEL	**Villa Celiera**	**0.45**	**118**	P	Pb	04 57 51.5	-0.4
VCEL				S	Sb	04 57 59.1	+0.3
VCEL				AML	AML		
	comp=E,950μm,0.9s						
VCEL				AML	AML		
	comp=N,1175μm,1.5s						
FDMO	**Fiordimonte**	**0.46**	**339**	P	Pb	04 57 51.5	-0.7
FDMO				AML	AML		
	comp=N,212μm,1.1s						
FDMO				AML	AML		
	comp=E,214μm,0.7s						
TRTR	**Tortoreto Alta**	**0.49**	**65**	P	Pb	04 57 52.8	+0.2
CSP1	**Cessapalombo**	**0.49**	**351**	⇓P	Pg	04 57 51.9	+0.5
CESI	**CESI - Serrava**	**0.50**	**323**	P	Pg	04 57 52.0	+0.5
T0110	**Collepietro**	**0.51**	**138**	P	Pg	04 57 52.3	+0.5
CESX	**Cesi**	**0.54**	**271**	P	Pg	04 57 52.4	+0.2
ASSB	**Assisi San Ben**	**0.65**	**312**	⇓P	Pb	04 57 55.0	-0.4
ASSB				AML	AML		
	comp=N,232μm,0.2s						
ASSB				AML	AML		
	comp=E,214μm,0.8s						
SRES	**S.Oreste - Sor**	**0.70**	**238**	P	Pg	04 57 55.6	+0.4
SNTG	**Esanatoglia**	**0.70**	**337**	⇓P	Pg	04 57 55.6	+0.2
EL6	**Elcito**	**0.74**	**348**	⇓P	Pg	04 57 56.3	+0.3
INTR	**Introdacqua**	**0.74**	**143**	P	Pg	04 57 56.0	0.0
TOLF	**Tolfa**	**1.11**	**241**	⇓P	Pg	04 58 02.6	-0.6
NARO	**Abbazia di Nar**	**1.14**	**332**	⇑P	Pn	04 58 06.0	+2.0
SGG	**Gregorio Mates**	**1.46**	**147**	S	Sg	04 58 32.0	+3.4

IDC 27 04:58:11.3±1.9, 17°.77S×178°.45W, h563km±23km, mb3.6/7, mbtmp4.6/9, Error ellipse: s-maj=37.3km s-min=18.8km az=159.0
NEIC 27 04:58:12.5±1.4, 18°.0S±0°.2×178°.4W±0°.1, h580km±10km, mb4.2/27, Error ellipse: s-maj=24.3km s-min=16.0km az=148.0
ISC 27 04:58:11.9±0.6, 17°.8S±0°.1×178°.46W±0°.09, h579km, n49, σ0°76/50, mb4.2/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**271**	P	**P**	**04 59 31.0**	**-0.4**

AFI	**Afiamalu**	**7.50**	**60**	P		**P**	**05 00 04.6**	**-1.4**
	18nm,0.4s,baz=3.0,slow=9.8,SNR=4.8								
AFI	**Afiamalu**	**7.50**	**60**	P		**P**	**05 00 05.1**	**-0.8**
NIUE	**Niue**	**8.20**	**100**	P		**P**	**05 00 11.8**	**-0.6**
PINNC	**Pines Island,**	**14.07**	**248**	P		**P**	**05 01 12.1**	**+0.4**
DZM	**Mont Dzumac**	**14.82**	**251**	P		**P**	**05 01 18.9**	**-0.1**
	12nm,0.8s,baz=163,slow=22,SNR=11								
DZM	**Mont Dzumac**	**14.82**	**251**	P		**P**	**05 01 19.8**	**+0.7**
EIDS	**Eidsvold**	**29.26**	**250**	P		**P**	**05 03 28.7**	**+0.2**
EIDS				IAmb		IAmb	05 03 29.0		
	comp=Z,6.7nm,0.8s								
ARMA	**Armidale**	**29.95**	**240**	P		**P**	**05 03 33.4**	**-1.1**
CTA	**Charters Tower**	**33.42**	**260**	P		**P**	**05 04 03.9**	**0.0**
	comp=Z,4.6nm,0.6s,baz=76,slow=8.3,SNR=2.7								
	comp=Z,4.6nm,0.6s								
COEN	**Coen**	**37.06**	**270**	P		**P**	**05 04 33.7**	**-0.4**
COEN				IAmb		IAmb	05 04 44.3		
	comp=Z,17nm,1.4s								
STKA	**Stephens Creek**	**38.64**	**241**	P		**P**	**05 04 47.9**	**+1.1**
	comp=Z,9.8nm,0.5s,baz=88,slow=7.5,SNR=19								
	comp=Z,9.8nm,0.5s								
STKA	**Stephens Creek**	**38.64**	**241**	P		**P**	**05 04 47.2**	**+0.5**
STKA				IAmb		IAmb	05 04 48.3		
	comp=Z,2.3nm,0.6s								
BBOO	**Buckleboo**	**43.42**	**241**	P		**P**	**05 05 25.0**	**+0.5**
WB0	**Warramunga Arr**	**44.57**	**260**	P		**P**	**05 05 34.1**	**+0.5**
WB0				IAmb		IAmb	05 05 34.3		
	comp=Z,11nm,0.9s								
WB2	**Warramunga Arr**	**44.59**	**259**	P		**P**	**05 05 33.9**	**0.0**
WB2				IAmb		IAmb	05 05 34.3		
	comp=Z,5.4nm,0.7s								
WRA	**Warramunga Arr**	**44.60**	**259**	P		**P**	**05 05 33.5**	**-0.4**
	comp=Z,3.3nm,0.5s,baz=96,slow=7.4,SNR=51								
WRA				PcP		**PcP**	**05 07 04.9**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=92,slow=3.5,SNR=3.0								
	comp=Z,3.3nm,0.5s								
WRA	**Warramunga Arr**	**44.60**	**259**	P		**P**	**05 05 34.1**	**+0.2**
AS31	**Alice Springs**	**44.77**	**254**	P		**P**	**05 05 34.8**	**-0.4**
ASAR	**Alice Springs**	**44.77**	**254**	P		**P**	**05 05 35.7**	**+0.5**
	comp=Z,38nm,0.6s,baz=88,slow=8.4,SNR=299								
ASAR				PcP		**PcP**	**05 07 05.6**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=98,slow=3.9,SNR=4.8								
	comp=Z,38nm,0.6s								
MTN	**Manton Dam**	**48.75**	**268**	P		**P**	**05 06 04.3**	**-0.8**
FORT	**Forrest**	**50.01**	**245**	P		**P**	**05 06 12.8**	**-1.4**
KNRA	**Kununurra**	**50.45**	**264**	P		**P**	**05 06 18.3**	**+0.7**
KNRA				IAmb		IAmb	05 06 18.4		
	comp=Z,11nm,0.8s								
FITZ	**Fitzroy Crossi**	**53.00**	**260**	P		**P**	**05 06 36.5**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=98,slow=3.0,SNR=13								
	comp=Z,2.0nm,0.7s								
FITZ	**Fitzroy Crossi**	**53.00**	**260**	P		**P**	**05 06 35.1**	**-0.8**
FITZ				IAmb		IAmb	05 06 49.9		
	comp=Z,13nm,1.4s								
PSA00	**Pilbara Seismi**	**57.89**	**255**	P		**P**	**05 07 08.6**	**-1.2**
PSA00				IAmb		IAmb	05 07 09.9		
	comp=Z,16nm,1.2s								
MBWA	**Marble Bar**	**58.05**	**256**	P		**P**	**05 07 10.9**	**0.0**
MBWA				IAmb		IAmb	05 07 14.3		
	comp=Z,19nm,1.4s								
MORW	**Morawa**	**60.48**	**246**	P		**P**	**05 07 26.6**	**-0.3**
MORW				IAmb		IAmb	05 07 32.1		
	comp=Z,34nm,1.4s								
SBA	**Scott Base**	**60.52**	**184**	P		**P**	**05 07 26.6**	**+0.3**
VNDA	**Vanda**	**60.55**	**185**	P		**P**	**05 07 25.7**	**-0.7**
CASY	**Casey**	**66.21**	**205**	P		**P**	**05 08 01.5**	**-1.3**
CASY				IAmb		IAmb	05 08 05.4		
	comp=Z,7.1nm,1.2s								
QSPA	**South Pole Qui**	**72.25**	**180**	P		**P**	**05 08 39.0**	**-0.1**
QSPA				IAmb		IAmb	05 08 41.7		
	comp=Z,15nm,1.4s								
YUH	**Yuha Desert**	**78.02**	**50**	P		**P**	**05 09 12.2**	**+0.7**
X18A	**Snowflake**	**83.30**	**51**	P		**P**	**05 09 37.5**	**-1.5**
MTPU	**Mount Pierson**	**83.33**	**47**	P		P	05 09 45.4	+6.1
MAW	**Mawson**	**83.94**	**200**	P		**P**	**05 09 42.5**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=84,slow=9.2,SNR=2.0								
	comp=Z,0.8nm,0.4s								
MAW	**Mawson**	**83.94**	**200**	P		**P**	**05 09 41.5**	**+0.2**
Q16A	**Castle Valley**	**84.44**	**46**	P		**P**	**05 09 45.0**	**+0.4**
Q16A				IAmb		IAmb	05 09 47.4		
	comp=Z,3.5nm,1.2s								
TMUT	**Trail Mountain**	**84.59**	**46**	P		**P**	**05 09 46.4**	**+1.0**
TMUT				IAmb		IAmb	05 09 50.5		
	comp=Z,4.8nm,0.6s								
JLU	**Jordanelle**	**85.05**	**45**	P		**P**	**05 09 48.5**	**+1.0**
JLU				IAmb		IAmb	05 09 59.4		
	comp=Z,9.1nm,1.5s								
TCUT	**Toone Canyon**	**85.32**	**44**	P		**P**	**05 09 49.7**	**+0.8**
LRM	**Limekiln Ridge**	**86.92**	**40**	P		**P**	**05 09 57.2**	**+0.9**
TROLL	**Troll, Antarti**	**90.41**	**180**	P		**P**	**05 10 12.7**	**+0.7**
SNAA	**Sanae**	**90.70**	**179**	P		**P**	**05 10 13.7**	**+0.4**
SNAA	**Sanae**	**90.70**	**179**	P		**P**	**05 10 13.4**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=208,slow=8.2,SNR=8.6								
	comp=Z,1.0nm,0.6s								
VNA3	**Neumayer Olymp**	**90.85**	**176**	P		**P**	**05 10 14.8**	**+0.9**
BRTR	**Keskin Array B**	**144.67**	**315**	PKP		**PKPdf**	**05 16 44.5**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=123,slow=4.6,SNR=4.8								
CLL	**Collm**	**145.35**	**347**	*e*PKPbc		**PKPbc**	**05 16 46.0**	**+0.5**
GERES	**GERESS Array B**	**147.50**	**345**	PKPbc		**PKPbc**	**05 16 51.9**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=25,slow=3.2,SNR=8.4								

TEH 27 05:01:06.8, 29°.82N×50°.57E, h18km, ML3.2
OMAN 27 05:01:11.1±1.3, 29°.46N×50°.86E, h10km, mb4.5/8, Error ellipse: s-maj=48.1km s-min=9.8km az=44.0
ISC 27 05:01:07.7±1.2, 29°.73N±0°.06×50°.56E±0°.07, h25km, n41, σ1°39/51, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABEH	**Behbahan**	**0.91**	**343**	*e*Pg	**Pn**	**05 01 22.9**	**-2.1**
ABEH				*e*		05 01 40.0	
	comp=N,27μm,0.4s						
KAZ1	**Kazerun**	**0.94**	**96**	*e*Pg	**Pn**	**05 01 24.9**	**-0.6**
KAZ1				*e*Sg	**Sb**	**05 01 38.8**	**+1.2**
KAZ1				*e*		05 01 45.2	
	comp=N,21μm,0.5s						
AHBU	**AHRAM**	**1.07**	**143**	*e*Pg	**Pb**	**05 01 28.2**	**+0.6**
AHBU				*e*Sg	**Sb**	**05 01 45.3**	**+4.1**
AHBU				*e*		05 01 52.3	
	comp=Z,99nm,0.6s						
KLNJ	**Kolanjah**	**1.56**	**35**	*e*Pn	**Pn**	**05 01 34.1**	**-0.1**
KLNJ				*e*		05 01 59.1	
	comp=Z,4μm,0.4s						
SHI	**Shiraz**	**1.70**	**92**	*e*Pg	**Pb**	**05 01 38.0**	**-0.4**
SHI				*e*		05 02 09.6	
	comp=Z,5μm,0.7s						
AMIS	**Naft Sefid**	**2.22**	**331**	*e*Pn	**Pn**	**05 01 42.8**	**-0.2**
AMIS				*e*		05 02 29.8	
	comp=Z,3μm,0.6s						
IBRJ	**Brojen**	**2.25**	**15**	*e*Pn	**Pn**	**05 01 44.5**	**+0.8**
IRAM	**Ramesheh**	**2.60**	**37**	*e*Pn	**Pn**	**05 01 48.8**	**+0.4**
IRAM				*e*		05 01 50.6	
	comp=Z,733nm,0.2s						
SHK1	**Shahrekord**	**2.61**	**6**	*e*Pn	**Pn**	**05 01 48.9**	**+0.4**
SHK1				*e*		05 02 30.4	
	comp=Z,520nm,0.6s						
IGAR	**Gharneh**	**2.95**	**25**	*e*Pn	**Pn**	**05 01 54.0**	**+0.7**
IGAR				*e*		05 02 05.9	
	comp=Z,383nm,0.2s						
IPIR	**Pirpir**	**2.96**	**5**	*e*Pn	**Pn**	**05 01 53.4**	**0.0**
IPIR				*e*		05 02 40.9	
	comp=Z,403nm,0.7s						
ISAD	**Sadrabad**	**3.46**	**50**	*e*Pn	**Pn**	**05 02 01.2**	**+0.9**
IZEF	**Zefreh**	**3.50**	**25**	*e*		05 02 06.9	
	comp=Z,178nm,0.2s						
IZEF				*e*Pn	**Pn**	**05 02 01.7**	**+0.9**
NASN	**Na'in**	**3.61**	**32**	*e*Pn	**Pn**	**05 02 02.9**	**+0.4**
IKLH	**Kolahrood**	**3.68**	**13**	*e*Pn	**Pn**	**05 02 03.5**	**+0.2**
IKLH				*e*		05 02 55.4	
	comp=Z,216nm,0.4s						
IMEH	**Mehriz**	**3.87**	**64**	*e*Pn	**Pn**	**05 02 06.7**	**+0.9**
KHMZ	**Khomeyn**	**4.03**	**353**	*e*Pn	**Pn**	**05 02 09.8**	**+1.7**
QAMS	**Qamsar**	**4.06**	**10**	*e*Pn	**Pn**	**05 02 08.1**	**-0.4**
YZKH	**Yazd**	**4.36**	**51**	*e*Pn	**Pn**	**05 02 12.7**	**+0.3**
KRSH	**Karshahi**	**4.43**	**17**	*e*Pn	**Pn**	**05 02 14.3**	**+0.7**
IKFM	**Kafar-mosalman**	**4.44**	**329**	*e*Pn	**Pn**	**05 02 12.7**	**-0.7**
IKFM				*e*		05 03 48.1	
	comp=Z,681nm,0.8s						
GHVR	**GHOM**	**4.78**	**7**	*e*Pn	**Pn**	**05 02 19.9**	**+1.7**
ISFB	**Sefidab**	**4.83**	**17**	*e*Pn	**Pn**	**05 02 18.6**	**-0.3**
ASAO	**Ashtian**	**4.83**	**355**	*e*Pn	**Pn**	**05 02 20.9**	**+1.8**
IKOM	**Komasi**	**5.14**	**330**	*e*Pn	**Pn**	**05 02 22.2**	**-1.0**
KRBR	**Kerman**	**5.39**	**86**	*e*Pn	**Pn**	**05 02 25.6**	**-1.2**
GENO	**Geno**	**5.45**	**114**	*e*Pn	**Pn**	**05 02 28.5**	**+0.9**

SNGE	**Sanandaj**	**6.00**	**334**	*e*Pn		**Pn**	**05 02 37.8**	**+2.7**
NAZ	**Nazwa, Dubai**	**6.54**	**135**	P		**Pn**	**05 02 42.3**	**-0.1**
MASF	**Masafi**	**6.59**	**130**	P		**Pn**	**05 02 43.2**	**0.0**
MASF				S		**Sn**	**05 03 55.6**	**-2.0**
ASUD	**Al Ashush, Dub**	**6.62**	**139**	P		**Pn**	**05 02 44.1**	**+0.7**
	SNR=16								
ASUD				S		**Sn**	**05 03 57.5**	**-0.7**
TNSJ	**Nastanj**	**6.65**	**49**	*e*Pn		**Pn**	**05 02 44.4**	**+0.4**
FAQ	**Al Faqa, Dubai**	**6.68**	**137**	P		**Pn**	**05 02 44.8**	**+0.5**
FAQ				S		**Sn**	**05 03 58.7**	**-1.0**
UOSS	**Minazif**	**6.92**	**132**	P		**Pn**	**05 02 47.2**	**-0.4**
UOSS				S		**Sn**	**05 04 03.4**	**-2.1**
HATD	**Hatta, Dubai**	**6.96**	**133**	P		**Pn**	**05 02 48.6**	**+0.5**
HATD				S		**Sn**	**05 04 04.8**	**-1.6**
ASHO	**Ashiyiah**	**7.01**	**134**	P		**Pn**	**05 02 48.8**	**-0.1**
	SNR=7.1								
ASHO				S		**Sn**	**05 04 04.6**	**-3.3**
BSRN	**Basiran**	**7.69**	**71**	*e*Pn		**Pn**	**05 02 58.0**	**-0.3**
SOHO	**SOHO**	**7.71**	**135**	P		**Pn**	**05 02 57.9**	**-0.5**
SHRO	**Shahrood**	**7.74**	**35**	*e*Pn		**Pn**	**05 02 59.7**	**+0.7**
ARQ	**Araqi**	**8.30**	**139**	P		**Pn**	**05 03 05.8**	**-0.9**
	SNR=18								
ARQ				S		**Sn**	**05 04 37.4**	**-2.3**
BSY	**Bisya**	**9.15**	**138**	P		**Pn**	**05 03 17.6**	**-0.7**
	SNR=5.7								
BSY				S		**Sn**	**05 04 57.1**	**-3.5**

IDC 27 05:09:33.4±1.1, 52°.84N×164°.45W, h0km, mb4.0/15, mbtmp4.0/16, ML3.4/1, MS2.9/3, Error ellipse: s-maj=31.9km s-min=15.5km az=16.0
NEIC 27 05:09:33.9±1.6, 52°.62N±0°.1×164°.57W±0°.08, h10km±2km, mb3.9/9, ML3.8/10, ML3.7(AEIC), Error ellipse: s-maj=16.3km s-min=7.5km az=167.0
AEIC 27 05:09:36±1.8, 52°.5N±0°.1×164°.55W±0°.09, h2km±8km, Error ellipse: s-maj=15.1km s-min=7.1km az=169.0
ISC 27 05:09:37.2±0.8, 52°.7N±0°.1×164°.57W±0°.06, h35km, n86, σ1°34/76, mb4.1/15, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**1.63**	**336**		**Pn**	**05 10 02.9**	**-0.5**
AKUT	**Akutan**	**1.65**	**335**		**Pn**	**05 10 03.2**	**-0.4**
AKUT	**Akutan**	**1.65**	**335**	IAML		05 10 29.4	
	comp=E,542nm,0.3s						
AKBBA	**Akutan Broad B**	**1.66**	**331**		**Pn**	**05 10 03.3**	**-0.5**
UNV	**Unalaska Valle**	**1.66**	**317**		**Pn**	**05 10 03.3**	**-0.6**
AKMO	**Akutan Morgan**	**1.68**	**330**		**Pn**	**05 10 04.1**	**0.0**
AKLV	**Akutan Long Va**	**1.72**	**332**		**Pn**	**05 10 04.2**	**-0.6**
AKRB	**Akutan Reef Bi**	**1.73**	**329**		**Pn**	**05 10 04.8**	**+0.1**
AKGG	**Akutan Green G**	**1.76**	**332**		**Pn**	**05 10 04.1**	**-1.2**
MNAT	**Makushin Natee**	**1.77**	**315**		**Pn**	**05 10 04.9**	**-0.4**
MGOD	**Makushin Gods**	**1.79**	**310**		**Pn**	**05 10 05.0**	**-0.7**
MTBL	**Makushin Table**	**1.82**	**317**		**Pn**	**05 10 06.1**	**-0.1**
MSW	**Makushin Switc**	**1.83**	**314**		**Pn**	**05 10 05.8**	**-0.4**
MAPS	**Pakushin South**	**1.83**	**310**		**Pn**	**05 10 05.6**	**-0.6**
WESP	**Westdahl Peak**	**1.84**	**357**		**Pn**	**05 10 05.7**	**-0.7**
WECS	**Westdahl Cape**	**1.88**	**356**		**Pn**	**05 10 06.9**	**0.0**
WESN	**West Dahl Nort**	**1.92**	**360**		**Pn**	**05 10 07.5**	**+0.1**
BRPK	**Brown Peak**	**2.06**	**14**		**Pn**	**05 10 08.6**	**-0.7**
SSLS	**Shishaldin Sou**	**2.09**	**9**		**Pn**	**05 10 09.5**	**-0.3**
ISLZ	**Isanotski Laza**	**2.14**	**14**		**Pn**	**05 10 09.7**	**-0.7**
SSBA	**Shishaldin**	**2.14**	**7**		**Pn**	**05 10 10.0**	**-0.5**
OKFG	**Magazine Ridge**	**2.15**	**292**		**Pn**	**05 10 08.7**	**-1.9**
SSLN	**Shishaldin Nor**	**2.19**	**9**		**Pn**	**05 10 11.9**	**+0.8**
OKNC	**Okmok New Cone**	**2.29**	**292**		**Pn**	**05 10 11.5**	**-1.0**
OKCE	**Okmok Cone E**	**2.30**	**291**		**Pn**	**05 10 11.2**	**-1.5**
FALS	**False Pass**	**2.31**	**17**		**Pn**	**05 10 12.2**	**-0.5**
NIKH	**Nikolski High**	**2.62**	**279**		**Pn**	**05 10 15.4**	**-1.6**
CLCO	**Concord Point,**	**3.13**	**274**		**Pn**	**05 10 22.7**	**-1.3**
PS4A	**Pavlof South-4**	**3.14**	**30**		**Pn**	**05 10 23.9**	**-0.3**
CLES	**Cleveland East**	**3.24**	**275**		**Pn**	**05 10 24.7**	**-0.8**
CLES	**Cleveland East**	**3.24**	**275**	IAML		05 11 03.2	
	comp=E,666nm,0.3s						
CLES				IAML		05 11 07.6	
	comp=N,561nm,0.3s						
SDPT	**Sand Point**	**3.62**	**40**		**Pn**	**05 10 30.4**	**-0.4**
SDPT	**Sand Point**	**3.62**	**40**	IAML		05 11 13.8	
	comp=E,203nm,0.6s						
SDPT				IAML		05 11 13.8	
	comp=N,154nm,0.6s						
CNBA	**Chernabura Isl**	**3.67**	**52**		**Pn**	**05 10 30.2**	**-1.2**
CNBA	**Chernabura Isl**	**3.67**	**52**	IAML		05 11 12.5	
	comp=E,82nm,0.7s						
VNFG	**Fog Glacier, M**	**4.67**	**37**		**Pn**	**05 10 45.6**	**+0.4**
VNHG	**Veniaminof 1**	**4.77**	**39**		**Pn**	**05 10 46.9**	**+0.3**
CHGN	**Chignik**	**5.12**	**42**		**Pn**	**05 10 51.1**	**-0.2**
CHGN	**Chignik**	**5.12**	**42**	IAML		05 11 52.6	
	comp

comp=Z,2.2nm,0.7s
SONM Songino Array 53.63 303 P **P** 05 18 56.5 +1.6
comp=Z,0.7nm,0.5s,baz=43,slow=6.7,SNR=5.4
comp=Z,0.7nm,0.5s
ARCES ARCESS Array B 57.90 356 P **P** 05 19 24.0 -1.0
comp=Z,3.9nm,0.8s,baz=13,slow=8.7,SNR=3.9
comp=Z,3.9nm,0.8s
ZALV Zalesovo Beam 59.14 320 P **P** 05 19 34.9 +1.0
comp=Z,0.7nm,0.4s,baz=35,slow=5.8,SNR=2.8
comp=Z,0.7nm,0.4s
KURBB Kurchatov Arra 64.16 321 P **P** 05 20 09.2 +1.4
comp=Z,1.8nm,1.0s,baz=51,slow=6.7,SNR=8.1
comp=Z,1.8nm,1.0s
BVAR Borovoye Array 65.12 327 P **P** 05 20 15.8 +1.8
comp=Z,1.7nm,0.8s,baz=33,slow=5.7,SNR=7.5
comp=Z,1.7nm,0.8s
ARU Arti 65.64 335 P **P** 05 20 17.8 +0.5
comp=Z,1.8nm,0.3s,baz=357,slow=11,SNR=3.0
comp=Z,1.8nm,0.3s
MKAR Makanchi Array 65.69 316 P **P** 05 20 18.4 +0.6
comp=Z,1.0nm,0.7s,baz=44,slow=6.6,SNR=8.2
comp=Z,1.0nm,0.7s
FINES FINESS Array B 65.93 354 P **P** 05 20 19.7 +0.6
comp=Z,1.3nm,0.6s,baz=350,slow=10,SNR=5.7
comp=Z,1.3nm,0.6s
AKASG Malin Array Be 76.36 351 P **P** 05 21 22.5 +0.2
comp=Z,1.2nm,0.6s,baz=12,slow=6.1,SNR=5.3
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 86.64 346 P **P** 05 22 18.7 +1.6
comp=Z,0.8nm,0.8s,baz=0.0,slow=1.9,SNR=4.0
comp=Z,0.8nm,0.8s

IDC 27 05:17:09.0±3.1, 32°.96S×178°.78W, h0km, mb3.4/2, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=72.5km s-min=46.0km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.26**	**211**	Pn	Pn	05 18 42.2	-0.3
	2.9nm,0.3s,baz=308,slow=20,SNR=13						
URZ				Sn	Sn	05 19 47.8	-6.9
	2.3nm,0.3s,baz=111,slow=22,SNR=1.4						
	5.7nm,0.3s						
ASAR	**Alice Springs**	**42.38**	**270**	P	P	05 25 05.6	+0.3
	0.3nm,0.7s,baz=110,slow=7.3,SNR=1.8						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**43.60**	**275**	P	P	05 25 14.9	-0.3
	0.3nm,0.4s,baz=116,slow=7.7,SNR=11						
	0.3nm,0.4s						
H03S2	**Juan Fernandez**	**79.61**	**124**	T	T	06 57 41.1	
	baz=235						
H03S1	**Juan Fernandez**	**79.62**	**124**	T	T	06 57 43.9	
	baz=235						
H03S3	**Juan Fernandez**	**79.62**	**124**	T	T	06 57 40.2	
	baz=235						
H03N3	**Juan Fernandez**	**79.81**	**123**	T	T	06 57 55.5	
	baz=239,slow=72,SNR=6.7						
H03N2	**Juan Fernandez**	**79.82**	**123**	T	T	06 57 55.5	
	baz=239,slow=72,SNR=4.3						
H03N1	**Juan Fernandez**	**79.83**	**123**	T	T	06 57 55.0	
	baz=239,slow=72,SNR=6.6						
FINES	**FINESS Array B**	**147.29**	**338**	PKPbc	PKPbc	05 36 52.9	-0.8
	3.7nm,1.1s,baz=44,slow=4.2,SNR=5.3						

NIED ***27*** *05:17:38.5, 47°.49N×147°.16E, h493km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.57; $M_{\theta\theta}$0.76; $M_{\phi\phi}$-3.33; $M_{r\theta}$-2.15; $M_{\theta\phi}$1.11; $M_{\phi r}$-3.37; Fault plane solution: $M_0$5.11000×10^{15} NP1: ϕ_s318.00000°, δ31.00000°, λ33.00000°. NP2: ϕ_s199.00000°, δ74.00000°, λ117.00000°.*

SKHL ***27*** *05:17:38.4±0.1, 47°.90N×147°.10E, h462km±13km, mb5.1/8, msha5.0/6*

MOS ***27*** *05:17:38.0±1.0, 48°.04N×146°.89E, h456km, mb4.4/21, Error ellipse: s-maj=8.6km s-min=6.8km az=82.4*

JMA ***27*** *05:17:38.5±0.5, 47°N×14°.7E, h493km, MV4.1/30, SOUTHERN SEA OF OKHOTSK*

IDC ***27*** *05:17:40.0±1.2, 48°.10N×146°.80E, h460km±14km, mb3.6/23, mbtmp4.5/29, Error ellipse: s-maj=11.0km s-min=8.4km az=149.0*

NEIC ***27*** *05:17:39.7±1.1, 48°.1N±0°.1×146°.8E±0°.2, h453km±10km, mb4.3/76, Error ellipse: s-maj=20.5km s-min=13.7km az=157.0*

ISC 27 05:17:37.9±0.3, 47°.88N±0°.04×146°.98E±0°.04, h442km, n467, σ1§24/495, mb4.3/88, 17C-4D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.72**	**167**	⇓*i* Pn	**P**	**05 18 45.2**	**+2.9**
KUR				*e*S	**S**	**05 19 37.8**	**+3.2**
KUR				pmax	pmax		
	comp=Z,110nm,0.4s						
KUR				smax	smax		
	comp=E,105nm,0.8s						
KUR				smax	smax		
	comp=N,101nm,0.7s						
KUR	**Kuril'sk**	**2.72**	**167**	*i* P	**P**	**05 18 45.2**	**+2.9**
KUR				AMB	AMB	05 18 45.4	
	comp=N,110nm,0.4s						
KUR				*e*S	**S**	**05 19 37.8**	**+3.2**
KUR				A	A	05 19 38.7	
	comp=N,100nm,0.8s						
KUR				A	A	05 19 38.7	
	comp=N,110nm,0.8s						
YSS	**Yuzh-Sakhalins**	**3.01**	**254**		**P**	**05 18 47.5**	**+3.1**
YSS	**Yuzh-Sakhalins**	**3.01**	**254**α	*i* PN	**P**	**05 18 47.6**	**+3.2**
YSS				*e*S	**S**	**05 19 41.5**	**+3.1**
YSS				pmax	pmax		
	comp=Z,320nm,1.0s						
YSS				smax	smax		
	comp=N,100nm,1.1s						
YSS				smax	smax		
	comp=E,80nm,1.1s						
YSS				smax	smax		
	comp=N,500nm,2.0s						
YSS				MLR	MLR		
	comp=Z,200nm,11.0s						
YSS	**Yuzh-Sakhalins**	**3.01**	**254**	*i* P	**P**	**05 18 47.1**	**+2.7**
YSS				AMB	AMB	05 18 48.1	
	comp=Z,90nm,0.5s						
YSS				*e*S	**S**	**05 19 40.8**	**+2.4**
YSS				A	A	05 19 42.7	
	comp=Z,20nm,0.5s						
YSS				A	A	05 19 42.7	
	comp=Z,20nm,0.5s						
UGL	**Uglegorsk**	**3.48**	**292**	⇑*i* PN	**P**	**05 18 50.6**	**+2.6**
UGL				*e*S	**S**	**05 19 47.8**	**+2.8**
UGL				pmax	pmax		
	comp=Z,827nm,0.5s						
UGL				smax	smax		
	comp=E,226nm,1.2s						
UGL				smax	smax		
	comp=N,93nm,1.1s						
UGL	**Uglegorsk**	**3.48**	**292**	*i* P	**P**	**05 18 50.5**	**+2.6**
UGL				AMB	AMB	05 18 51.5	
	comp=N,670nm,0.5s						
UGL				*e*S	**S**	**05 19 47.8**	**+2.8**
UGL				A	A	05 19 48.4	
	comp=N,50nm,0.4s						
UGL				A	A	05 19 48.4	
	comp=N,100nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**192**	*e*PN	**P**	**05 18 53.6**	**+1.6**
YUK				*e*S	**S**	**05 19 54.7**	**+2.6**
YUK				pmax	pmax		
	comp=Z,180nm,0.2s						
YUK				pmax	pmax		
	comp=E,26nm,0.1s						
YUK				pmax	pmax		
	comp=N,77nm,0.2s						
YUK				smax	smax		
	comp=N,434nm,0.5s						
YUK				smax	smax		
	comp=E,813nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.93**	**192**	*e*P	**P**	**05 18 54.0**	**+2.0**
YUK				AMB	AMB	05 18 55.4	
	comp=E,170nm,0.3s						
YUK				*e*S	**S**	**05 19 55.0**	**+2.9**
YUK				A	A	05 20 01.5	
	comp=E,570nm,0.5s						
YUK				A	A	05 20 01.5	
	comp=E,1μm,0.5s						
RUSJ	**Misakicho**	**3.97**	**198**	*e*PN	**P**	**05 18 54.6**	**+2.3**
RUSJ				*e*S	**S**	**05 19 55.9**	**+3.1**
TYV	**Tymovskoe**	**4.11**	**318**	*e*PN	**P**	**05 18 55.5**	**+2.1**
TYV				*e*S	**S**	**05 19 53.4**	**-1.5**
TYV				pmax	pmax		
	comp=Z,205nm,0.7s						
TYV				pmax	pmax		
	comp=Z,500nm,2.4s						
TYV				smax	smax		
	comp=N,58nm,0.9s						
TYV				smax	smax		
	comp=E,70nm,0.9s						
TYV				smax	smax		
	comp=N,600nm,3.9s						
TYV				smax	smax		
	comp=E,1μm,3.9s						
TYV	**Tymovskoe**	**4.11**	**318**	*e*P	**P**	**05 18 55.4**	**+2.1**
TYV				AMB	AMB	05 18 55.9	
	comp=E,160nm,0.6s						
TYV				*e*S	**S**	**05 19 56.0**	**+1.1**
TYV				A	A	05 19 57.6	
	comp=E,40nm,0.6s						
TYV				A	A	05 19 57.6	
	comp=E,50nm,0.6s						
JRA	**Rausu**	**4.15**	**199**	*e*P	**P**	**05 18 55.7**	**+1.8**
JSE	**Soyaes**	**4.22**	**228**	*e*P	**P**	**05 18 57.6**	**+3.1**
JSE				*e*S	**S**	**05 19 59.2**	**+2.4**
JWK2	**Keihoku**	**4.34**	**236**	*e*P	**P**	**05 18 59.1**	**+3.5**
JWK2				*e*S	**S**	**05 20 02.5**	**+3.6**
JTKR	**Abashiri--Toko**	**4.46**	**210**	*e*P	**P**	**05 18 59.0**	**+2.2**
JNK	**Nakash**	**4.58**	**201**	*e*P	**P**	**05 18 58.9**	**+1.0**
JNK				*e*S	**S**	**05 20 03.5**	**+0.4**
NMR	**Nemuro--Hokkai**	**4.60**	**191**	*e*PN	**P**	**05 18 57.6**	**-0.5**
NMR				*e*S	**S**	**05 20 00.7**	**-2.6**
NEM2	**Nemuro 2**	**4.60**	**191**	*e*P	**P**	**05 18 57.8**	**-0.3**
NEM2				*e*S	**S**	**05 20 00.7**	**-2.6**
JMP	**Maruseppu**	**4.62**	**214**	*e*P	**P**	**05 19 00.7**	**+2.3**
JMP				*e*S	**S**	**05 20 05.8**	**+2.0**
JRBN	**Rebuntou**	**4.75**	**241**	*e*P	**P**	**05 19 01.7**	**+2.2**
JAR	**Ashorobuto**	**5.11**	**207**	*e*P	**P**	**05 19 04.4**	**+1.4**
JAR				*e*S	**S**	**05 20 12.2**	**-0.1**
JAK	**Akkeshi**	**5.14**	**199**	*e*P	**P**	**05 19 03.4**	**+0.1**
JAK				*e*S	**S**	**05 20 09.8**	**-3.1**
JFR	**Furan**	**5.63**	**215**	*e*P	**P**	**05 19 10.0**	**+1.8**
JCH	**Churui**	**5.85**	**207**	*e*P	**P**	**05 19 10.3**	**-0.1**
JBT2	**Biratori 2**	**6.05**	**214**	*e*S	**S**	**05 20 29.2**	**-0.5**
OKH	**Okha**	**6.23**	**337**	*e*P	**P**	**05 19 15.6**	**+1.6**
OKH				AMB	AMB	05 19 16.8	
	comp=E,180nm,0.8s						
JNBK	**Urakawa-nobuka**	**6.35**	**210**	*e*P	**P**	**05 19 15.4**	**-0.2**
JNBK				*e*S	**S**	**05 20 31.3**	**-4.1**
JEW	**Eniwo**	**6.37**	**220**	P	**P**	**05 19 17.4**	**+1.6**
JEW	**Eniwo**	**6.37**	**220**	*e*P	**P**	**05 19 17.4**	**+1.6**
JEW				*e*S	**S**	**05 20 34.2**	**-1.6**
ERM	**Erimo**	**6.46**	**206**	P	**P**	**05 19 18.1**	**+1.3**
ERM	**Erimo**	**6.46**	**206**	*i* PN	**P**	**05 19 18.5**	**+1.7**
SKR	**Severo-Kuril's**	**6.60**	**62**	*e*PN	**P**	**05 19 20.2**	**+2.1**
SKR				*e*S	**S**	**05 20 39.2**	**-0.9**
SKR				pmax	pmax		
	comp=Z,433nm,0.5s						
SKR				smax	smax		
	comp=N,42nm,0.7s						
SKR				smax	smax		
	comp=E,53nm,0.8s						
SKR				MLR	MLR		
	comp=Z,100nm,15.0s						
SKR	**Severo-Kuril's**	**6.60**	**62**	*e*P	**P**	**05 19 20.2**	**+2.1**
SKR				AMB	AMB	05 19 20.6	
	comp=Z,430nm,0.5s						
SKR				*e*S	**S**	**05 20 39.2**	**-0.9**
SKR				A	A	05 20 41.2	
	comp=Z,40nm,0.8s						
SKR				A	A	05 20 41.2	
	comp=Z,50nm,0.8s						
PAU	**Pauzhetka**	**7.32**	**57**	*e*P	**P**	**05 19 27.2**	**+1.5**
PAU				AMB	AMB	05 19 27.6	
	comp=Z,90nm,0.5s						
TEY	**Ternei**	**7.71**	**252**	⇑*e*PN	**P**	**05 19 32.1**	**+2.1**
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
TEY	**Ternei**	**7.71**	**252**	*e*P	**P**	**05 19 32.1**	**+2.1**
JOT	**Ohata**	**7.75**	**215**	*e*P	**P**	**05 19 31.4**	**+0.8**
JOSM	**Okushiri--Mats**	**7.87**	**225**	*e*S	**S**	**05 21 02.0**	**-3.1**
JTM	**Tenmabayashi**	**8.26**	**213**	P	**P**	**05 19 37.0**	**+0.9**
JSI2	**Shiura 2**	**8.28**	**217**	*e*S	**S**	**05 21 08.2**	**-5.3**
JANG	**Nango**	**8.47**	**210**	*e*P	**P**	**05 19 38.8**	**+0.4**
JANG				*e*S	**S**	**05 21 12.0**	**-5.3**
PEA0B	**Petropavlovsk-**	**8.60**	**49**	P	**P**	**05 19 40.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**8.60**	**49**	*ce*PN	**P**	**05 19 40.6**	**+1.0**
PETK	**Petropavlovsk-**	**8.60**	**49**	P	**P**	**05 19 40.7**	**+1.1**
	comp=N,24nm,0.9s,baz=226,slow=8.8,SNR=31						
PETK	**Petropavlovsk-**	**8.60**	**49**	P	**P**	**05 19 40.2**	**+0.6**
PETK	**Petropavlovsk-**	**8.60**	**49**	PN	**P**	**05 19 40.2**	**+0.6**
JIW	**Iwasaki**	**8.84**	**217**	*e*P	**P**	**05 19 42.9**	**+0.5**
JIW				*e*S	**S**	**05 21 20.9**	**-3.7**
PET	**Petropavlovsk**	**9.05**	**51**	*ce*PN	**P**	**05 19 45.6**	**+1.2**
PET				pmax	pmax		
	comp=Z,47nm,1.3s						
PET	**Petropavlovsk**	**9.05**	**51**	*e*P	**P**	**05 19 45.6**	**+1.2**
KLR	**Kul'dur**	**10.19**	**283**	P	**P**	**05 19 58.6**	**+1.6**
	comp=Z,18nm,0.5s,baz=83,slow=9.9,SNR=62						
KLR	**Kul'dur**	**10.19**	**283**	*ce*PN	**P**	**05 19 57.1**	**+0.2**
KLR				pmax	pmax		
	comp=Z,48nm,1.3s						
KLR	**Kul'dur**	**10.19**	**283**	*i* P	**P**	**05 19 58.8**	**+1.9**
JMM	**Marumori**	**10.99**	**207**	P	**P**	**05 20 08.1**	**+2.3**
USRK	**Ussuriysk Ar.**	**11.05**	**256**	P	**P**	**05 20 07.0**	**+0.6**
	comp=Z,6.2nm,0.3s,baz=58,slow=10,SNR=38						
USRK	**Ussuriysk Ar.**	**11.05**	**256**	P	**P**	**05 20 06.4**	**0.0**
VLA	**Vladivostok**	**11.61**	**251**	*i* PN	**P**	**05 20 13.7**	**+1.2**
VLA				pmax	pmax		
	comp=Z,17nm,0.8s						
VLA	**Vladivostok**	**11.61**	**251**	*e*P	**P**	**05 20 13.7**	**+1.2**
JSD	**Sado**	**11.72**	**216**	P	**P**	**05 20 16.2**	**+2.4**
MSHR	**Mys Shultsa**	**12.34**	**250**	*ce*PN	**P**	**05 20 22.9**	**+2.4**
MSHR				pmax	pmax		
	comp=Z,12nm,0.5s						
MDJ	**Mudanjiang**	**12.47**	**261**	P	**P**	**05 20 22.6**	**+0.7**
MDJ	**Mudanjiang**	**12.47**	**261**	P	**P**	**05 20 22.3**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,120nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,210nm,5.1s						
MAJO	**Matsushiro**	**13.05**	**213**	P	**P**	**05 20 30.2**	**+1.9**
MAJO	**Matsushiro**	**13.05**	**213**	*i* PN	**P**	**05 20 31.1**	**+2.8**
MAJO				pmax	pmax		
	comp=Z,17nm,0.9s						
MJAR	**Matsushiro Arr**	**13.05**	**213**	P	**P**	**05 20 30.8**	**+2.5**
	comp=Z,8.8nm,0.5s,baz=17,slow=12,SNR=23						
ZEA	**Zeya**	**13.76**	**303**	*e*P	**P**	**05 20 35.6**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA	**Zeya**	**13.76**	**303**	*e*P	**P**	**05 20 35.6**	**-0.1**
INU	**Inuyama**	**14.55**	**214**	P	**P**	**05 20 46.4**	**+1.9**
JHS	**Saiiyo**	**16.51**	**224**	P	**P**	**05 21 07.0**	**+1.7**
SEHB	**SEOHWA**	**16.68**	**242**	P	**P**	**05 21 08.5**	**+1.5**
YAK	**Yakutsk**	**17.22**	**332**	P	**P**	**05 21 10.4**	**-1.9**
	comp=Z,12nm,0.3s,baz=129,slow=5.4,SNR=7.9						
YAK	**Yakutsk**	**17.22**	**332**	P	**P**	**05 21 10.1**	**-2.3**
YAK	**Yakutsk**	**17.22**	**332**	*ce*P	**P**	**05 21 10.1**	**-2.3**
YAK				pmax	pmax		
	comp=Z,32nm,0.7s						
YAK	**Yakutsk**	**17.22**	**332**	*e*P	**P**	**05 21 10.1**	**-2.3**
JMN	**Monobe**	**17.23**	**220**	P	**P**	**05 21 14.6**	**+1.6**
KSRS	**Korea Array**	**17.42**	**240**	P	**P**	**05 21 16.5**	**+1.7**
	comp=Z,21nm,0.6s,baz=45,slow=9.7,SNR=39						
KS19	**Wonju Array Si**	**17.42**	**240**	P	**P**	**05 21 16.4**	**+1.6**
KSAR	**Wonju Array Be**	**17.45**	**240**	P	**P**	**05 21 15.9**	**+0.8**
KSAR	**Wonju Array Be**	**17.45**	**240**	P	**P**	**05 21 15.9**	**+0.8**
AMKA	**Amchitka**	**21.13**	**68**	P	**P**	**05 21 50.6**	**+0.8**
XLT	**XiLinHaoTe**	**21.79**	**271**	⇓*i* P	**P**	**05 21 55.5**	**-0.5**
XLT				pmax	pmax		
	comp=Z,24nm,0.6s						
XLT				pmax	pmax		
	comp=Z,160nm,4.8s						
BILL	**Bilibino**	**22.45**	**19**	*i* P	**P**	**05 22 01.7**	**+0.1**
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	**Bilibino**	**22.45**	**19**	*e*P	**P**	**05 22 01.7**	**+0.1**
BJT	**Baijiatuan**	**23.41**	**262**	P	**P**	**05 22 11.7**	**+1.1**
BJT	**Baijiatuan**	**23.41**	**262**	P	**P**	**05 22 11.7**	**+1.1**
BJT				pmax	pmax		
	comp=Z,12nm,0.7s						
ADK	**Adak**	**23.59**	**67**	P	**P**	**05 22 12.2**	**+0.2**
ADK				lAmb	lAmb	05 22 36.2	
	comp=Z,15nm,1.1s						
ADK	**Adak**	**23.59**	**67**	P	**P**	**05 22 12.2**	**+0.2**
ADK				pmax	pmax		
	comp=Z,15nm,1.2s						
TIXI	**Tiksi**	**25.30**	**347**	*i* P	**P**	**05 22 26.9**	**0.0**
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s						
TIXI	**Tiksi**	**25.30**	**347**	*e*P	**P**	**05 22 26.9**	**0.0**
HHC	**Hu-ho-hao-te**	**26.10**	**268**	*e*P	**P**	**05 22 35.5**	**+0.9**
HHC				pmax	pmax		
	comp=Z,58nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,5.3s						
ULN	**Ulaanbaatar**	**26.57**	**285**	P	**P**	**05 22 38.2**	**-0.5**
ULN	**Ulaanbaatar**	**26.57**	**285**	*ce*P	**P**	**05 22 38.1**	**-0.7**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**26.57**	**285**	*e*P	**P**	**05 22 38.1**	**-0.7**
SONM	**Songino Array**	**27.01**	**285**	P	**P**	**05 22 42.4**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=82,slow=8.7,SNR=12						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**27.01**	**285**	P	**P**	**05 22 42.1**	**-0.5**
NIKH	**Nikolski High**	**28.24**	**63**	P	**P**	**05 22 54.8**	**+1.6**
	baz=278						
ZAK	**Zakamensk**	**28.39**	**292**	*e*P	**P**	**05 22 53.8**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ZAK	**Zakamensk**	**28.39**	**292**	*e*P	**P**	**05 22 53.8**	**-0.9**
WHN	**Wuhan**	**30.34**	**247**	⇑P	**P**	**05 23 12.5**	**+0.8**
XAN	**Xi'an**	**31.55**	**258**	P	**P**	**05 23 22.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
RDOG	**Red Dog Mine**	**32.05**	**33**	P	**P**	**05 23 26.6**	**+0.6**
	baz=257						
S14K	**Fog Glacier**	**33.14**	**55**	P	**P**	**05 23 36.3**	**+0.7**
	baz=279						
N16K	**Nishlik Lake**	**33.15**	**47**	P	**P**	**05 23 36.4**	**+0.9**
	baz=273						
CHNA	**Chernabura Isl**	**33.36**	**58**	P	**P**	**05 23 37.9**	**+0.5**
	baz=281						
CNBA	**Chernabura Isl**	**33.37**	**58**	P	**P**	**05 23 37.2**	**-0.2**
CNBA				lAmb	lAmb	05 24 02.0	
	comp=Z,13nm,1.0s						
O16K	**Kokwok River B**	**33.55**	**49**	P	**P**	**05 23 39.7**	**+0.8**
	baz=275						
LZH	**Lanzhou**	**33.74**	**266**	*e*P	**P**	**05 23 42.0**	**+0.9**
LZH				pP	pP	05 25 00.5	+0.2
LZH				sP	sP	05 25 53.0	+1.9
LZH				pmax	pmax		
	comp=Z,59nm,1.1s						
GCSA	**Galena City Sc**	**34.02**	**40**	P	**P**	**05 23 42.4**	**-0.3**
	baz=268						
R16K	**Pilot Point**	**34.04**	**52**	P	**P**	**05 23 43.8**	**+0.7**
	baz=278						
O17K	**Koliganek Bris**	**34.04**	**48**	P	**P**	**05 23 43.6**	**+0.6**
	baz=275						
TTA	**Tatalina**	**34.38**	**43**	P	**P**	**05 23 46.6**	**+0.5**
	baz=272						
N18K	**Kilae Creek**	**34.56**	**47**	P	**P**	**05 23 48.6**	**+1.1**
N18K				lAmb	lAmb	05 23 49.7	
	comp=Z,8.4nm,0.8s						
N18K	**Kilae Creek**	**34.56**	**47**	P	**P**	**05 23 48.8**	**+1.3**
	baz=275,SNR=5.8						
SVW2	**Sparrevohn**	**34.68**	**46**	P	**P**	**05 23 49.8**	**+1.4**
GTA	**Gaotai**	**34.70**	**274**	⇓P	**P**	**05 23 49.8**	**+0.7**
GTA				pP	PP	05 25 23.3	+3.4
GTA				sP	PcP	05 26 09.3	-1.7
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
L19K	**White Mountain**	**34.95**	**44**	P	**P**	**05 23 51.3**	**+0.6**
	baz=274						
O18K	**Koktuh Hills**	**34.98**	**48**	P	**P**	**05 23 51.7**	**+0.7**
	baz=277						
P18K	**Big Mountain,**	**35.02**	**49**	P	**P**	**05 23 51.9**	**+0.5**
	baz=277						
M19K	**Big River Lodg**	**35.19**	**45**	P	**P**	**05 23 53.2**	**+0.5**
	baz=274						
J20K	**Nowinta River**	**35.19**	**41**	P	**P**	**05 23 52.7**	**0.0**
J20K				lAmb	lAmb	05 23 54.4	
	comp=Z,11nm,0.6s						
J20K	**Nowinta River**	**35.19**	**41**	P	**P**	**05 23 53.3**	**+0.6**
	baz=272,SNR=16						
N19K	**Bonanza Creek**	**35.23**	**46**	P	**P**	**05 23 54.0**	**+0.7**
	baz=276						
K20K	**Telida**	**35.25**	**42**	P	**P**	**05 23 53.8**	**+0.6**
K20K	**Telida**	**35.25**	**42**	P	**P**	**05 23 53.9**	**+0.6**
	baz=273,SNR=5.1						
IMAR	**Indian Mountai**	**35.36**	**37**	P	**P**	**05 23 54.3**	**+0.2**
L20K	**Farewell, AK**	**35.39**	**44**	P	**P**	**05 23 54.9**	**+0.4**
	baz=274						
G21K	**Allakaket**	**35.47**	**37**	P	**P**	**05 23 55.0**	**-0.1**
	baz=269,SNR=14						
F21K	**Alatna River**	**35.51**	**35**	P	**P**	**05 23 55.3**	**-0.1**
	baz=268,SNR=5.7						
NRIK	**Noril'sk**	**35.62**	**328**	*i* P	**P**	**05 23 54.9**	**-1.3**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
H21K	**Melozitna Rive**	**35.75**	**38**	P	**P**	**05 23 56.9**	**-0.5**
H21K	**Melozitna Rive**	**35.75**	**38**	P	**P**	**05 23 57.3**	**0.0**
	baz=271,SNR=8.1						
M20K	**Styx River**	**35.78**	**44**	P	**P**	**05 23 58.8**	**+1.0**
M20K				lAmb	lAmb	05 23 59.6	
	comp=Z,5.7nm,0.6s						
M20K	**Styx River**	**35.78**	**44**	P	**P**	**05 23 58.9**	**+1.0**
	baz=276						
Q19K	**Cape Douglas,**	**35.89**	**50**	P	**P**	**05 23 59.0**	**+0.3**
	baz=279						
CHUM	**Lake Minchumin**	**36.01**	**41**	P	**P**	**05 24 00.2**	**+0.6**
	baz=274						
F22K	**John River**	**36.02**	**35**	P	**P**	**05 23 59.6**	**-0.1**
	baz=269						
SII	**Sitkinak Islan**	**36.03**	**54**	P	**P**	**05 24 00.0**	**+0.2**
	baz=282						
I21K	**Tanana**	**36.10**	**39**	P	**P**	**05 24 00.5**	**+0.2**
I21K	**Tanana**	**36.10**	**39**	P	**P**	**05 24 00.5**	**+0.2**
	baz=272						
PPLA	**Purkeypile**	**36.13**	**43**	P	**P**	**05 24 01.6**	**+0.9**
PPLA	**Purkeypile**	**36.13**	**43**	P	**P**	**05 24 01.4**	**+0.6**
	baz=275						
CAST	**Castle Rocks**	**36.14**	**42**	P	**P**	**05 24 01.3**	**+0.6**
	baz=274						
E22K	**Anaktuvuk Pass**	**36.19**	**34**	P	**P**	**05 24 00.7**	**-0.3**
	baz=268						
O20K	**Slope Mountain**	**36.24**	**48**	P	**P**	**05 24 02.6**	**+1.0**
	baz=278						
G22K	**Bettles**	**36.27**	**36**	P	**P**	**05 24 01.2**	**-0.5**
	baz=270						
H22K	**Ishtalitna Cre**	**36.34**	**38**	P	**P**	**05 24 02.5**	**+0.2**
	baz=272,SNR=11						
OHAK	**Old Harbor**	**36.38**	**52**	P	**P**	**05 24 02.7**	**0.0**
	baz=282

BRSE Bradley Lake S 37.23 48 P P 05 24 10.1 +0.4
baz=280
D24K Happy Valley 37.31 32 P P 05 24 09.9 -0.4
baz=270
C24K Franklin Bluff 37.36 31 P P 05 24 10.0 -0.6
baz=269
NEA2 Nenana 37.38 40 P P 05 24 11.0 +0.1
NEA2 lAmb lAmb 05 24 11.8
comp=Z,13nm,0.6s
NEA2 Nenana 37.38 40 P P 05 24 11.0 +0.1
baz=275,SNR=15
E24K Your Creek 37.43 34 P P 05 24 11.3 -0.1
baz=271
RC01 Rabbit Creek A 37.50 45 P P 05 24 11.9 0.0
baz=279
MCK McKinley 37.52 41 P P 05 24 12.5 +0.4
MCK lAmb lAmb 05 24 13.3
comp=Z,6.3nm,0.7s
MCK McKinley 37.52 41 P P 05 24 12.5 +0.4
MCK pmax pmax
comp=Z,6.0nm,0.7s
MCK McKinley 37.52 41 P P 05 24 12.2 +0.1
baz=276
F24K Squaw Lake 37.67 35 P P 05 24 13.0 -0.3
baz=272,SNR=10
MDM Murphy Dome 37.70 39 P P 05 24 13.3 -0.2
PMR Palmer 37.71 45 P P 05 24 14.0 +0.4
baz=279
H24K Noodor Dome 37.77 38 P P 05 24 14.8 +0.6
H24K lAmb lAmb 05 24 15.6
comp=Z,6.5nm,0.8s
H24K Noodor Dome 37.77 38 P P 05 24 14.6 +0.4
baz=275,SNR=8.8
GHO Glory Hole Cre 37.78 44 P P 05 24 14.3 0.0
GHO lAmb lAmb 05 24 15.3
comp=Z,12nm,0.6s
WAT1 Susitna Watana 37.80 43 P P 05 24 13.9 -0.5
baz=278
WRH Wood River Hil 37.81 40 P P 05 24 14.4 0.0
WRH lAmb lAmb 05 24 15.9
comp=Z,7.0nm,0.6s
TCOL CIGO, UAF Yank 37.87 39 P P 05 24 15.0 +0.1
baz=276
COLA College 37.87 39 *i* P P 05 24 15.2 +0.3
COLA pmax pmax
comp=Z,12nm,0.6s
COLA College 37.87 39 P P 05 24 15.1 +0.2
baz=276
G24K Hadweenzic Riv 37.88 36 P P 05 24 15.1 +0.2
baz=274,SNR=9.2
CCB Clear Creek Bu 37.91 40 P P 05 24 15.1 -0.1
CCB lAmb lAmb 05 24 15.8
comp=Z,4.3nm,0.5s
POKR Poker Plat Res 38.02 39 P P 05 24 16.5 +0.3
baz=276
SML Sawmill 38.05 44 P P 05 24 16.6 0.0
SML lAmb lAmb 05 24 18.1
comp=Z,14nm,0.9s
SML Sawmill 38.05 44 P P 05 24 16.8 +0.3
baz=280,SNR=5.8
KNK Knik Glacier 38.05 45 P P 05 24 16.6 +0.1
baz=280
D25K Kavik River 38.18 32 P P 05 24 16.9 -0.6
baz=272,SNR=19
WAT6 Susitna Watana 38.20 43 P P 05 24 17.3 -0.6
baz=279
PWL Port Wells 38.21 46 P P 05 24 17.5 -0.3
baz=281
IL31 38.29 39 P P 05 24 18.5 +0.2
IL31 lAmb lAmb 05 24 19.3
comp=Z,11nm,0.7s
ILAR Eielson Array 38.29 39 P P 05 24 18.1 -0.3
comp=Z,7.3nm,0.6s,baz=272,slow=7.7,SNR=94
ILAR PcP PcP 05 26 20.1 -1.2
comp=Z,0.4nm,0.6s,baz=308,slow=5.0,SNR=3.4
comp=Z,7.3nm,0.6s
DHY Denali Highway 38.30 42 P P 05 24 18.4 -0.3
baz=279,SNR=12
HDA Harding Lake 38.31 40 P P 05 24 18.1 -0.4
HDA lAmb lAmb 05 24 19.1
comp=Z,9.3nm,0.4s
HDA Harding Lake 38.31 40 P P 05 24 17.8 -0.7
baz=277,SNR=13
SCM Sheep Creek Mo 38.52 44 P P 05 24 20.6 +0.2
baz=280
E25K Arctic Village 38.52 34 P P 05 24 20.6 +0.3
baz=274,SNR=6.5
ZALV Zalesovo Beam 38.52 303 P P 05 24 18.9 -1.6
comp=Z,1.1nm,0.3s,baz=74,slow=6.6,SNR=5.5
ZALV PcP PcP 05 26 21.6 -0.6
comp=Z,1.8nm,0.7s,baz=54,slow=3.1,SNR=4.9
ZALV ScP ScP 05 29 24.0 -3.3
comp=Z,1.0nm,0.6s,baz=90,slow=4.4,SNR=4.0
comp=Z,1.1nm,0.3s
ZALV Zalesovo Beam 38.52 303 P P 05 24 19.0 -1.4
F25K Christian Rive 38.53 35 P P 05 24 20.5 +0.1
baz=274,SNR=8.0
H25K Birch Creek 38.57 37 P P 05 24 21.1 +0.5
baz=276,SNR=12
PRP Porcupine Dome 38.78 38 P P 05 24 22.8 +0.2
baz=277,SNR=19
K24K Donnelly Dome 38.90 41 P P 05 24 22.6 -0.8
baz=279,SNR=5.3
J25K Salcha River, 38.96 39 P P 05 24 23.4 -0.5
baz=278
M24K Tolsona, Glenn 39.00 43 P P 05 24 24.7 +0.4
baz=281
F26K Sheenjek River 39.09 34 P P 05 24 25.3 +0.4
baz=276,SNR=14
C27K Jago River 39.11 31 P P 05 24 24.9 -0.1
baz=274,SNR=17
PAX Paxson 39.17 42 P P 05 24 27.0 +1.3
baz=280
KLU Klutina 39.24 44 P P 05 24 26.7 +0.4
baz=282
G26K Porcupine Rive 39.31 36 P P 05 24 27.2 +0.6
baz=277,SNR=20
RIDG Independent Ri 39.32 41 P P 05 24 26.3 -0.5
baz=280,SNR=8.9
HARP HAARP 39.42 43 P P 05 24 28.2 +0.6
baz=281
EYAK Cordova Ski Ar 39.52 46 P P 05 24 28.9 +0.5
baz=283
SCRK Sand Creek 39.65 40 P P 05 24 28.9 -0.8
baz=280,SNR=24
J26L Joseph Creek 39.75 39 P P 05 24 30.3 0.0
baz=280,SNR=6.5
GOMU GeErMu 39.75 273 P P 05 24 31.3 +0.2
GOMU pmax pmax
comp=Z,27nm,0.7s
GOMU pmax pmax
comp=Z,46nm,5.4s
I26K Coal Creek Min 39.79 38 P P 05 24 29.6 -0.9
I26K Coal Creek Min 39.79 38 P P 05 24 29.7 -0.9
baz=279
N25K Chitina, Valde 39.84 44 P P 05 24 31.2 +0.1
baz=283
BMRM Bremner River 39.97 45 P P 05 24 32.5 +0.3
baz=283
E27K Coleen River 40.00 33 P P 05 24 32.2 -0.1
baz=277
L26K Log Cabin Wild 40.11 42 P P 05 24 33.8 +0.6
baz=282
G27K Doyon Strip 40.16 36 P P 05 24 34.1 +0.5
baz=279,SNR=9.6
H27K Steamboat Moun 40.30 36 P P 05 24 35.0 +0.3
baz=280,SNR=6.0
I27K Kandik River 40.37 37 P P 05 24 35.3 -0.1
baz=280,SNR=5.7
M26K Nabesna, AK 40.40 42 P P 05 24 36.2 +0.5
baz=283,SNR=7.8
K27K Chicken 40.47 40 P P 05 24 36.1 0.0
K27K Chicken 40.47 40 P P 05 24 36.2 +0.2
baz=282
WMQ Urumqi 40.61 287 *eP* P 05 24 36.0 -1.6
WMQ pmax pmax
comp=Z,31nm,0.7s
EGAK Eagle 40.71 39 P P 05 24 37.5 -0.5
baz=282,SNR=18
L27K Beaver Creek, 40.78 41 P P 05 24 38.9 +0.2
L27K lAmb lAmb 05 24 40.4
comp=Z,12nm,1.1s
L27K Beaver Creek, 40.78 41 P P 05 24 39.6 +0.9
baz=283,SNR=15
BCAR Beaver Creek A 40.80 41 P P 05 24 39.5 +0.7
M27K Edge Creek, AK 40.92 42 P P 05 24 40.6 +0.7
M27K lAmb lAmb 05 24 41.7
comp=Z,11nm,0.8s
M27K Edge Creek, AK 40.92 42 P P 05 24 40.8 +0.9
baz=284,SNR=9.2
PZH PanZhiHua 41.15 255 P P 05 24 45.0 +2.8
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,70nm,4.6s
BVCY Beaver Creek 41.37 42 P P 05 24 44.1 +0.8
baz=284
KMI Kunming 41.46 253 ⇑P P 05 24 44.5 -0.3
KMI pmax pmax
comp=Z,6.0nm,0.8s
CTG Chitna Glacier 41.52 44 P P 05 24 45.6 +0.9
baz=286
CTGM Chitina Glacie 41.52 44 P P 05 24 44.9 +0.2
CTGM lAmb lAmb 05 24 46.3
comp=Z,12nm,0.6s
DAWY Dawson 41.62 39 P P 05 24 45.3 0.0
baz=284
YUK3 Moose Creek 41.71 43 P P 05 24 46.5 +0.2
baz=286
I29M Ogilvie Camp, 41.77 37 P P 05 24 46.5 0.0
I29M lAmb lAmb 05 24 47.6
comp=Z,5.3nm,0.6s
I29M Ogilvie Camp, 41.77 37 P P 05 24 46.4 -0.1
baz=283
O28M Mount Upton 42.11 44 P P 05 24 49.5 0.0
baz=287
EPYK Eagle Plains 42.18 36 P P 05 24 49.4 -0.3
EPYK Eagle Plains 42.18 36 P P 05 24 49.8 0.0
baz=283,SNR=11
G30M tAoh Zraii Nji 42.24 35 P P 05 24 49.6 -0.6
baz=283
PINM Pinnacle 42.28 45 P P 05 24 50.5 -0.1
baz=288
M29M Somme Creek 42.44 42 P P 05 24 52.8 +0.9
baz=286,SNR=5.5
K29M Barlow Dome 42.47 39 P P 05 24 52.6 +0.4
baz=286,SNR=5.0
MK31 Makanchi Array 42.69 294 *i* P P 05 24 53.3 -0.7
MKAR Makanchi Array 42.69 294 P P 05 24 53.3 -0.7
comp=Z,5.4nm,0.5s,baz=68,slow=7.2,SNR=54
MKAR ScP ScP 05 29 41.0 -3.0
comp=Z,0.8nm,0.6s,baz=56,slow=4.4,SNR=6.2
comp=Z,5.4nm,0.5s
MKAR Makanchi Array 42.69 294 P P 05 24 53.5 -0.6
MAKZ Makanchi 42.87 294 P P 05 24 54.8 -0.7
MAKZ lAmb lAmb 05 24 55.7
comp=Z,16nm,1.4s
MAKZ Makanchi 42.87 294 P P 05 24 54.8 -0.7
MAKZ pmax pmax
comp=Z,16nm,1.4s
INK Inuvik 42.94 32 P P 05 24 55.2 -0.4
comp=Z,8.1nm,0.3s,baz=299,slow=9.8,SNR=128
comp=Z,8.1nm,0.3s
INK Inuvik 42.94 32 P P 05 24 55.0 -0.6
INK Inuvik 42.94 32 P P 05 24 55.2 -0.4
baz=284
F31M Tsiigehtchic 43.07 34 P P 05 24 55.9 -0.7
baz=285
M30M Minto, Yukon 43.14 41 P P 05 24 58.6 +1.2
baz=287,SNR=6.2
KURK Kurchatov 43.22 300 P P 05 24 56.9 -1.2
KURK lAmb lAmb 05 24 57.8
comp=Z,26nm,1.3s
KURK Kurchatov 43.22 300 *ce*P P 05 24 56.4 -1.7
KURK pmax pmax
comp=Z,16nm,1.3s
KURK Kurchatov 43.22 300 *eP* P 05 24 56.4 -1.7
HYT Haines Junctio 43.35 44 P P 05 25 00.8 +1.6
HYT lAmb lAmb 05 25 01.6
comp=Z,18nm,0.9s
HYT Haines Junctio 43.35 44 P P 05 25 00.6 +1.4
baz=289,SNR=9.0
P29M Windy Craggy 43.63 45 P P 05 25 02.9 +1.6
P29M Windy Craggy 43.63 45 P P 05 25 03.1 +1.8
baz=290
P30M Million Dollar 43.84 45 P P 05 25 04.3 +1.4
baz=290
N31M Braeburn, Yuko 43.93 42 P P 05 25 05.1 +1.5
baz=289
O30N Mendenhall 44.03 43 P P 05 25 05.2 +0.8
baz=290
M31M Drury Creek, Y 44.32 41 P P 05 25 07.2 +0.6
baz=290
WHY Whitehorse 44.62 43 P P 05 25 10.2 +1.1
baz=291
FARO Faro, Yukon 44.77 41 P P 05 25 10.9 +0.7
baz=290
MMPY Sheldon Lake, 45.55 40 P P 05 25 16.7 +0.6
baz=291
R32K Eaglecrest 45.67 46 P P 05 25 17.4 +0.3
baz=293
P33M Teslin, Yukon 45.74 43 P P 05 25 18.1 +0.4
P33M Teslin, Yukon 45.74 43 P P 05 25 18.4 +0.8
baz=292
C36M Paulatuk 45.91 30 P P 05 25 17.8 -0.9
baz=291
LSA Lhasa 46.09 268 P P 05 25 23.0 +1.7
LSA Lhasa 46.09 268 P P 05 25 23.0 +1.7
LSA pmax pmax
comp=Z,18nm,0.7s
CRAI Chiangrai 46.49 250 P P 05 25 24.2 +0.3
CRAI lAmb lAmb 05 25 25.4
comp=Z,7.1nm,0.6s
BRVK Borovoye 46.91 306 P P 05 25 25.6 -1.0
BRVK Borovoye 46.91 306 *ce*P P 05 25 24.9 -1.7
BRVK pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 46.91 306 *eP* P 05 25 24.9 -1.7
TGTN Hyland Airport 47.27 41 P P 05 25 29.7 +0.5
baz=294
DLBC Dease Lake 47.77 45 P P 05 25 33.9 +0.8
baz=296
SHL Shillong 48.29 263 P P 05 25 37.5 -0.1
SHL Shillong 48.29 263 P P 05 25 37.5 -0.1
SHL pmax pmax
comp=Z,25nm,0.8s
T35M Bob Quinn 48.30 47 P P 05 25 37.7 +0.7
baz=297
ULHL Ulahol 48.68 291 P P 05 25 40.6 +0.2
SNR=12
CMAR Chiang Mai Arr 48.70 250 P P 05 25 41.6 +1.0
comp=Z,2.0nm,0.4s,baz=37,slow=7.2,SNR=12
comp=Z,2.0nm,0.4s
TKM2 Tokmak 2 48.73 292 P P 05 25 40.7 0.0
SNR=8.5
USP Ospenovka 49.22 293 P P 05 25 44.3 +0.1
SNR=8.3
AAK Ala-Archa 49.56 292 *ce*P P 05 25 46.8 -0.1
AAK pmax pmax
comp=Z,6.0nm,0.7s
AAK Ala-Archa 49.56 292 *eP* P 05 25 46.8 -0.1
EKS2 Erkin-Say 49.99 293 P P 05 25 50.1 +0.1
SNR=12
AML Almayashu 50.34 292 P P 05 25 53.1 +0.3
SNR=6.4
KSH Kashi 50.34 288 P P 05 25 56.5 +3.8
KSH pmax pmax
comp=Z,11nm,0.7s
GUN Gumba 50.78 270 *eP* P 05 25 56.5 +0.2
comp=Z,16nm,0.3s
KKN Kakani 51.26 270 *eP* P 05 25 59.8 +0.1
ARU Arti 51.30 315 P P 05 25 58.2 -0.9
ARU lAmb lAmb 05 25 58.4
comp=Z,9.6nm,0.5s
ARU Arti 51.30 315 *d* iP P 05 25 57.9 -1.3
ARU *PP pP 05 27 28.5 +1.7
ARU 05 27 56.2
ARU S S 05 32 42.4 -1.3
ARU pmax pmax
comp=Z,8.0nm,0.6s
ARU Arti 51.30 315 *eP* P 05 25 57.9 -1.3
PKI Pulchoki 51.32 270 *eP* P 05 26 00.2 0.0
comp=Z,10nm,0.4s
PKIN Phulchoki 51.32 270 *eP* P 05 26 00.3 +0.1
comp=Z,14nm,0.4s
DMN Daman 51.50 270 *eP* P 05 26 02.2 +0.8
comp=Z,20nm,0.4s
GKN Gorkha 51.56 271 *eP* P 05 26 02.1 +0.4
comp=Z,40nm,0.4s
KK31 Karatay Array 51.76 295 P P 05 26 02.4 -0.5
KK31 Karatay Array 51.76 295 P P 05 26 02.4 -0.5
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 51.76 295 P P 05 26 01.5 -1.3
KKAR Karatay Array 51.76 295 P P 05 26 01.5 -1.3
DANN Dangsing 51.92 272 *eP* P 05 26 06.0 +1.4
comp=Z,74nm,0.6s
YKA Yellowknife Ar 52.47 35 P P 05 26 07.1 -0.5
comp=Z,3.0nm,0.6s,baz=303,slow=7.1,SNR=7.5
comp=Z,3.0nm,0.6s
GAR Garm 54.23 291 P P 05 26 20.5 -0.3
ABKAR Akbulak array 54.44 306 P P 05 26 21.6 -0.3
AKTO Aktyubinsk 54.80 309 P P 05 26 21.9 -2.5
comp=Z,1.9nm,0.5s,baz=42,slow=6.6,SNR=5.6
comp=Z,1.9nm,0.5s
CHGR Chuyangaron 55.16 291 P P 05 26 26.6 -0.7
CHGR Chuyangaron 55.16 291 P P 05 26 26.6 -0.7
CHGR pmax pmax
comp=Z,67nm,0.4s
ARCES ARCESS Array B 55.34 339 P P 05 26 25.5 -2.4
comp=Z,1.3nm,0.7s,baz=51,slow=7.5,SNR=1.4
comp=Z,1.3nm,0.7s
LLLB Lillooet 55.84 50 P P 05 26 32.5 +0.7
EDM Edmonton 58.47 44 P P 05 26 49.8 -0.1
EDM Edmonton 58.47 44 P P 05 26 49.8 -0.1
EDM pmax pmax
comp=Z,7.0nm,0.9s
BELG Belogornoye 58.84 315 *i* P P 05 26 51.3 -0.9
BELG pmax pmax
comp=Z,2.0nm,0.9s
I03D Drain, OR 59.21 58 P P 05 26 56.2 +1.3
baz=309
G05D Wamic, OR 59.39 55 P P 05 26 57.7 +1.6
baz=309
C09A Chrisman Ranch 59.43 51 P P 05 26 56.8 +0.5
C09A lAmb lAmb 05 26 57.5
comp=Z,6.4nm,0.5s
K02D Willamette Mer 59.66 59 P P 05 26 59.3 +1.3
baz=309
I04A Tendick Farm, 59.68 57 P P 05 26 59.3 +1.1
baz=309
NEW Newport 59.74 50 P P 05 26 59.1 +0.7
baz=310,SNR=5.2
I05D Terrebonne, OR 59.94 56 P P 05 27 01.1 +1.2
baz=309
L02F Cave Junction 60.07 59 P P 05 27 02.1 +1.3
baz=309
J04D Umpqua Nationa 60.20 57 P P 05 27 03.1 +1.2
baz=310
J05D Fort Rock, OR 60.67 57 P P 05 27 06.4 +1.6
baz=310
L04D Klamath Falls 60.74 58 P P 05 27 06.7 +1.4
baz=310
K04D Chiloquin, OR 60.79 58 P P 05 27 06.8 +1.2
baz=310
FIA1 FINESS Array S 61.15 332 P P 05 27 05.8 -1.7
FINES FINESS Array B 61.15 332 P P 05 27 06.2 -1.4
comp=Z,5.8nm,0.5s,baz=37,slow=8.5,SNR=52
comp=Z,5.8nm,0.5s
FINES FINESS Array B 61.15 332 P P 05 27 05.8 -1.7
OBN Obninsk 61.94 322 *i* P P 05 27 14.3 +1.5
OBN pmax pmax
comp=Z,5.0nm,1.0s
MSO Missoula 62.31 50 P P 05 27 16.4 +0.7
MSO lAmb lAmb 05 27 17.8
comp=Z,12nm,1.5s
MSO Missoula 62.31 50 P P 05 27 16.3 +0.7
baz=312
GEYT Alibeck 62.40 297 P P 05 27 16.1 -0.1
comp=Z,9.0nm,0.6s,baz=20,slow=4.7,SNR=14
comp=Z,9.0nm,0.6s
GEYT Alibeck 62.40 297 P P 05 27 15.6 -0.6
GYA0B ALIBECK ARRAY 62.40 297 P P 05 27 16.3 +0.1
HRY Holter Researc 63.47 49 P P 05 27 23.8 +0.7
EGMT Eagleton 63.61 47 P P 05 27 24.5 +0.6
baz=313,SNR=6.0
HLID Hailey 64.24 53 P P 05 27 29.1 +0.9
baz=313
BOZ Bozeman (W) 64.33 50 P P 05 27 29.6 +0.9
baz=313,SNR=14
YERR Yerington 64.61 59 P P 05 27 31.4 +0.8
YERR lAmb lAmb 05 27 32.8
comp=Z,15nm,1.2s
KVN Kaiserville 65.23 59 P P 05 27 35.6 +1.0
KVN lAmb lAmb 05 27 36.7
comp=Z,8.4nm,0.7s
KVN Kaiserville 65.23 59 P P 05 27 35.6 +1.0
KVN pmax pmax
comp=Z,8.0nm,0.7s
NVAR Mina Array Bea 65.53 59 P P 05 27 37.9 +1.4
comp=Z,4.2nm,0.7s,baz=293,slow=6.2,SNR=48
comp=Z,4.2nm,0.7s
LHV Little Huntoon 65.53 60 P P 05 27 37.7 +1.5
LHV lAmb lAmb 05 27 39.1
comp=Z,10nm,1.0s
NB2 NORSAR Subarra 65.71 338 P P 05 27 35.9 -1.1
comp=Z,1.3nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 65.71 338 P P 05 27 35.8 -1.2
comp=Z,2.5nm,0.7s,baz=31,slow=6.6,SNR=16
comp=Z,2.5nm,0.7s
RLMT Red Lodge 65.86 49 P P 05 27 39.0 +0.6
RLMT lAmb lAmb 05 27 40.0
comp=Z,3.4nm,0.6s
RLMT Red Lodge 65.86 49 P P 05 27 39.3 +0.8
baz=315,SNR=5.8
DGMT Dagmar 65.96 44 P P 05 27 39.0 +0.3
baz=316
LAO LASA Array 66.27 46 P P 05 27 41.3 +0.5
baz=316
DSP Deep Springs 66.44 60 P P 05 27 43.2 +1.3
DSP lAmb lAmb 05 27 44.6
comp=Z,7.8nm,1.1s
VES Vestal, Richgr 66.83 62 P P 05 27 44.8 +0.5
baz=313,SNR=5.1
KIV Kislovodsk 66.95 310 *eP* P 05 27 44.4 -0.7
KIV pmax pmax
comp=Z,11nm,1.0s
KIV Kislovodsk 66.95 310 *eP* P 05 27 44.4 -0.7
KBZ Khabaz 67.00 310 P P 05 27 45.4 +0.1
comp=Z,4.6nm,0.6s,baz=68,slow=6.2,SNR=8.5
comp=Z,4.6nm,0.6s
KBZ Khabaz 67.00 310 *ce*P P 05 27 44.8 -0.5
KBZ pmax pmax
comp=Z,8.0nm,1.1s
KBZ Khabaz 67.00 310 *eP* P 05 27 44.8 -0.5
CWC Cottonwood Cre 67.01 61 P P 05 27 46.6 +0.9
baz=314
PKM Mcpherson Peak 67.04 63 P P 05 27 47.0 +1.1
baz=314
GRAC Grapevine Rang 67.05 60 P P 05 27 47.1 +1.4
baz=314,SNR=14
SHA1 Shidzhatmaz 67.12 310 *i* P P 05 27 45.5 -0.8
R11A Troy Canyon, C 67.14 58 P P 05 27 47.4 +0.9
baz=314,SNR=8.9
ISA Isabella, Lake 67.31 62 P P 05 27 47.8 +0.3
baz=314
BW06 Boulder Array 67.36 51 P P 05 27 48.4 +0.5
baz=315,SNR=9.5
PDAR Pinedale Array 67.36 51 P P 05 27 48.4 +0.5
comp=Z,4.8nm,0.7s,baz=313,slow=0.9,SNR=50
comp=Z,4.8nm,0.7s
DUG Dugway, Tooele 67.42 55 P P 05 27 49.3 +1.1
baz=314,SNR=6.1
MPMC Manual Prospec 67.62 61 P P 05 27 50.5 +0.9
baz=314,SNR=5.6
FURC Furnace Creek, 67.70 60 P P 05 27 51.1 +1.4
baz=314,SNR=13
TPNV Topopah Spring 67.73 59 P P 05 27 51.2 +1.1
baz=314,SNR=12
LRMC Laurel Mtn Rad 67.90 61 P P 05 27 52.1 +0.9
baz=314
EDW2 Edwards Air Fo 68.13 62 P P 05 27 53.6 +1.0
baz=314
AKASG Malin Array Be 68.20 323 P P 05 27 51.1 -1.4
comp=Z,3.8nm,0.5s,baz=37,slow=6.5,SNR=16
comp=Z,3.8nm,0.5s
ULM Lac du Bonnet 68.30 38 P P 05 27 52.1 -1.0
comp=Z,2.7nm,0.8s,baz=282,slow=5.2,SNR=3.0
comp=Z,2.7nm,0.8s
SHOC Shoshone, Teco 68.44 60 P P 05 27 54.9 +0.6
baz=314
WRA Warramunga Arr 68.46 193 P P 05 27 55.2 +0.7
comp=Z,1.1nm,0.6s,baz=9.2,slow=6.5,SNR=16
comp=Z,1.1nm,0.6s
GSC Goldstone, Bar 68.54 61 P P 05 27 56.1 +1.0
baz=314
BFSC Mount Baldy Ra 68.78 62 P P 05 27 57.4 +0.8
baz=314
CIS Catalina Islan 68.90 63 P P 05 27 58.0 +0.8
baz=314
TUQ Turquoise Moun 68.97 60 P P 05 27 58.9 +1.2
baz=315

K22A	Casper	69.01	49	P		P	05 27 57.9	0.0
	baz=317							
HEC	Hector,Ludlow	69.15	61	P		P	05 27 59.6	+0.8
	baz=315							
RSSD	Black Hills	69.19	47	P		P	05 27 59.2	+0.2
	baz=317							
BBRC	Big Bear Solar	69.20	62	P		P	05 28 00.2	+1.0
	baz=315							
MURC	Murrieta	69.50	62	P		P	05 28 01.4	+0.6
	baz=315							
GMRC	Granite Mounta	69.58	61	P		P	05 28 02.1	+0.8
	baz=315							
AGMN	Agassiz Nation	69.80	39	P		P	05 28 01.6	-0.7
	baz=321							
BELC	Belle Mtn. Jos	69.93	61	P		P	05 28 03.8	+0.3
	baz=315							
O20A	White River Ci	69.93	52	P		P	05 28 03.7	+0.2
	baz=316							
IRM	Iron Mountain	70.32	61	P		P	05 28 06.5	+0.8
	baz=315,SNR=6.0							
U15A	North Rim	70.36	57	P		P	05 28 07.3	+1.1
U15A				IAmb		IAmb	05 28 08.6	
	comp=Z,4.4nm,0.8s							
W13A	Hualapai Mount	70.39	59	P		P	05 28 07.1	+0.8
MONP2	Monument Peak	70.45	62	P		P	05 28 07.2	+0.4
	baz=315							
N23A	Red Feather La	70.58	50	P		P	05 28 07.6	+0.2
	baz=317							
PDMCI	Parker Dam,Lak	70.80	60	P		P	05 28 09.4	+0.9
	baz=316							
IKP	In-Ko-Pah, Jac	70.81	62	P		P	05 28 09.3	+0.6
	baz=315							
BLYC	Blythe	70.97	61	P		P	05 28 10.8	+1.3
BLYC				IAmb		IAmb	05 28 11.6	
	comp=Z,9.4nm,0.8s							
PV13	Radium Mtn., P	71.05	54	P		P	05 28 11.1	+0.8
PV13				IAmb		IAmb	05 28 12.0	
	comp=Z,6.2nm,0.6s							
SUSD	Miller	71.37	44	P		P	05 28 11.7	0.0
	baz=320							
WUAZ	Wupatki	71.53	57	P		P	05 28 14.3	+1.3
	baz=316							
ISCO	Idaho Springs	71.56	51	P		P	05 28 13.8	+0.5
	baz=318							
Y14A	Wickenburg	71.72	60	P		P	05 28 15.2	+1.1
EYMN	Ely	71.89	37	P		P	05 28 14.2	-0.6
	baz=323							
MVCO	Mesa Verde	71.91	54	P		P	05 28 16.0	+0.7
	baz=317							
ASAR	Alice Springs	72.18	193	P		P	05 28 18.4	+1.8
	comp=Z,1.8nm,0.6s,baz=2.0,slow=5.1,SNR=18							
	comp=Z,1.8nm,0.6s							
X16A	Lo Mia Camp, P	72.28	58	P		P	05 28 18.5	+1.1
X16A				IAmb		IAmb	05 28 19.8	
	comp=Z,5.0nm,0.8s							
S22A	4UR Ranch, Cre	72.42	53	P		P	05 28 19.4	+1.0
	baz=318,SNR=5.4							
OGNE	Ogallala	72.53	48	P		P	05 28 18.8	+0.1
	baz=319							
ECSD	EROS Data Cent	73.00	43	P		P	05 28 20.9	-0.3
ECSD				IAmb		IAmb	05 28 21.8	
	comp=Z,5.3nm,0.8s							
ECSD	EROS Data Cent	73.00	43	P		P	05 28 21.0	-0.3
	baz=321,SNR=7.9							
SDCO	Great Sand Dun	73.13	52	P		P	05 28 22.7	+0.3
	baz=318							
214A	Organ Pipe Nat	73.26	61	P		P	05 28 23.8	+0.8
	baz=317							
SPMN	Marine on St.	73.51	40	P		P	05 28 23.7	-0.5
	baz=323							
CLL	Collm	73.60	332	*i* P		P	05 28 23.3	-1.2
CLL				pmax		pmax		
	comp=Z,4.0nm,0.5s							
CLL	Collm	73.60	332	*i* P		P	05 28 23.3	-1.2
	comp=Z,4.0nm,0.5s							
VYHS	Vyhne	74.00	327	*e*P		P	05 28 26.7	-0.2
VYHS	Vyhne	74.00	327	*e*P		P	05 28 26.7	-0.2
T25A	Trinidad	74.16	52	P		P	05 28 28.5	+0.2
	baz=319							
TUC	Tucson	74.18	59	P		P	05 28 29.1	+0.8
	baz=317							
BRTR	Keskin Array B	74.63	313	P		P	05 28 30.2	-0.6
	comp=Z,0.8nm,0.5s,baz=83,slow=3.0,SNR=4.8							
	comp=Z,0.8nm,0.5s							
ANMO	Albuquerque	74.69	55	*ce*P		P	05 28 32.0	+0.7
ANMO				pmax		pmax		
	comp=Z,3.0nm,1.4s							
ANMO	Albuquerque	74.69	55	P		P	05 28 32.2	+0.9
	baz=318							
GERES	GERESS Array B	75.50	330	P		P	05 28 34.3	-1.1
	comp=Z,0.7nm,0.6s,baz=40,slow=7.0,SNR=6.9							
	comp=Z,0.7nm,0.6s							
121A	Cookes Peak, D	75.74	57	P		P	05 28 38.3	+1.2
	baz=318							
AMTX	Amarillo	77.31	52	P		P	05 28 46.3	+0.5
	baz=320							
MNTX	Cornudas Mount	77.71	56	P		P	05 28 48.6	+0.8
	baz=319,SNR=6.2							
HDIL	Hopedale	78.80	40	P		P	05 28 53.3	-0.3
	baz=326							
WMOK	Wichita Mounta	78.94	50	P		P	05 28 54.4	0.0
	baz=322							
TUL1	Leonard	79.53	47	P		P	05 28 57.5	0.0
	baz=323							
STKA	Stephens Creek	79.54	185	P		P	05 28 58.5	+1.2
	comp=Z,0.8nm,0.3s,baz=332,slow=5.1,SNR=3.0							
	comp=Z,0.8nm,0.3s							
CCM	Cathedral Cave	79.97	43	P		P	05 28 59.5	-0.3
	baz=325							
TX32	Lajitas Array	80.47	57	P		P	05 29 03.4	+0.7
TX32				IAmb		IAmb	05 29 04.0	
	comp=Z,3.7nm,0.7s							
TXAR	Lajitas Array	80.47	57	P		P	05 29 03.6	+0.9
	comp=Z,2.6nm,0.5s,baz=288,slow=4.3,SNR=66							
	comp=Z,2.6nm,0.5s							
TXAR	Lajitas Array	80.47	57	P		P	05 29 03.2	+0.5
TXAR	Lajitas Array	80.47	57	P		P	05 29 03.2	+0.5
P49A	Miami Univ. Ec	81.59	38	P		P	05 29 07.6	-0.7
	baz=328							
MIAR	Mount Ida	81.70	47	P		P	05 29 09.1	+0.2
	baz=324							
JCT	Junction City	81.71	53	P		P	05 29 09.0	-0.1
	baz=322							
WHTX	Lake Whitney,	81.78	51	P		P	05 29 09.5	+0.2
	baz=322							
LBNH	Lisbon	82.09	27	P		P	05 29 09.4	-1.3
	baz=335							
P52A	Corning	82.56	36	P		P	05 29 12.2	-1.0
	baz=329							
BINY	Binghamton	82.59	31	P		P	05 29 12.3	-1.0
	baz=333							
WVT	Waverly	83.11	42	P		P	05 29 15.9	-0.1
	baz=327							
833A	Chaparral WMA,	83.62	54	P		P	05 29 19.3	+0.6
	baz=322							
OXF	Oxford	83.72	44	P		P	05 29 19.1	0.0
	baz=326							
BDFB	Brasilia	145.55	26	PKPbc		PKPdf	05 36 25.5	+0.5
	comp=Z,1.7nm,0.7s,baz=35,slow=6.7,SNR=3.5							
TROLL	Troll, Antarti	150.82	202	PKPbc		PKiKP	05 36 38.5	0.0
TROLL	Troll, Antarti	150.82	202	pPKiKP		pPKiKP	05 38 30.5	+6.9
SNAA	Sanae	152.33	200	PKPbc		PKPbc	05 36 41.0	-0.4
SNAA	Sanae	152.33	200	PKPbc		PKPbc	05 36 41.0	-0.4
	baz=207,slow=7.0							
SNAA	Sanae	152.33	200	PKIKP		PKPbc	05 36 41.0	-0.4
PLCA	Paso Flores	152.42	89	PKPbc		PKPbc	05 36 42.5	-0.1
	comp=Z,1.2nm,0.8s,baz=307,slow=1.4,SNR=12							
VNA2	Neumayer--Watz	153.89	199	PKPbc		PKPbc	05 36 44.4	-0.3
	baz=108,slow=2.0							
VNA2	Neumayer--Watz	153.89	199	pPKiKP		pPKiKP	05 38 37.6	+7.9
	baz=105,slow=1.0							
VNA3	Neumayer Olymp	154.12	197	PKPbc		PKPbc	05 36 44.8	-0.4
VNA3	Neumayer Olymp	154.12	197	pPKiKP		pPKiKP	05 38 38.3	+8.1

IDC ***27*** *05:22:20.9±0.7,29°.22S×61°.17E,h0km,mb4.1/11, mbtmp4.1/12,ML3.9/1,MS3.7/15,Error ellipse: s-maj=24.7km s-min=19.7km az=86.0*
NEIC ***27*** *05:22:20.6±1.8,29°.08S±0°.08×61°.26E±0°.09,h10km±1km, mb4.7/18,Error ellipse: s-maj=14.4km s-min=12.6km az=298.0*

ISC 27 05:22:21.0±0.5,**29°.12S**±0°.08×**61°.20E**±0°.09,**h10**km,**n56,** σ1**f42**/41,**mb4.4**/18,**MS3.8**/15,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.34**	**327**	Pn	**Pn**	**05 24 34.1**	**-1.7**
ROCAM	**Rodrigues Isla**	**9.53**	**12**	Pn	**Pn**	**05 24 36.0**	**-2.3**
FOMA	**Nahampoana Res**	**13.33**	**285**	Pn	**Pn**	**05 25 29.2**	**-1.1**
VOI	**Vohitsoka**	**14.85**	**296**		**Pn**	**05 25 50.8**	**-0.5**
AIS	**Amsterdam Isla**	**16.15**	**127**	Pn	**Pn**	**05 26 06.2**	**-1.9**
OPO	**Ambohidratompo**	**16.55**	**306**	Pn	**Pn**	**05 26 14.3**	**+0.8**
	baz=107,slow=20,SNR=2.1						
OPO				Sn	Sn	05 29 03.0	-14
	0.1nm,0.3s,baz=270,slow=20,SNR=2.9						
	3.2nm,0.6s						
CRZF	**Crozet Islands**	**18.77**	**200**	P	**P**	**05 26 39.4**	**-0.8**
CRZF				IAmb	IAmb	05 27 05.9	
	comp=Z,106nm,0.8s						
H08S1	**Diego Carcia H**	**23.85**	**29**	T	T	05 52 31.2	
	baz=204,slow=75,SNR=60						
H08S2	**Diego Garcia H**	**23.86**	**29**	T	T	05 52 37.1	
	baz=204,slow=75,SNR=26						
H08S3	**Diego Garcia H**	**23.87**	**29**	T	T	05 52 37.5	
	baz=204,slow=75,SNR=56						
POGA	**Pongola**	**26.02**	**267**	P	**P**	**05 27 52.7**	**-1.7**
POGA				IAmb	IAmb	05 28 20.6	
	comp=Z,19nm,1.3s						
BOSA	**Boshof**	**31.41**	**262**	LR	LR	05 38 56.6	
	comp=Z,78nm,18.0s,baz=87,slow=32						
LBTB	**Lobatse**	**31.89**	**269**	LR	LR	05 40 49.7	
	comp=Z,49nm,19.0s,baz=110,slow=35						
SUR	**Sutherland**	**34.72**	**254**	LR	LR	05 40 19.6	
	comp=Z,94nm,21.2s,baz=120,slow=31						
MAW	**Mawson**	**38.53**	**179**	P	**P**	**05 29 44.4**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=324,slow=6.0,SNR=5.3						
MAW				LR	LR	05 44 11.9	
	comp=Z,112nm,18.7s,baz=15,slow=34						
	comp=Z,2.5nm,0.8s						
MBAR	**Mbarara**	**40.60**	**309**	LR	LR	05 44 44.8	
	comp=Z,50nm,20.6s,baz=86,slow=33						
PALK	**Pallekele**	**40.77**	**30**	LR	LR	05 43 55.8	
	comp=Z,53nm,19.2s,baz=323,slow=32						
CASY	**Casey**	**47.67**	**155**	P	**P**	**05 30 55.4**	**-1.9**
CASY				IAmb	IAmb	05 30 58.0	
	comp=Z,5.5nm,0.8s						
WSAR	**Wadi Sarin**	**52.11**	**357**	LR	LR	05 48 10.7	
	comp=Z,111nm,21.4s,baz=223,slow=30						
SNAA	**Sanae**	**54.52**	**200**	P	**P**	**05 31 49.0**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=66,slow=9.7,SNR=4.2						
	comp=Z,1.1nm,0.9s						
SNAA	**Sanae**	**54.52**	**200**	P	**P**	**05 31 48.8**	**+0.1**
SBUM	**Sibu**	**58.03**	**66**	P	**P**	**05 32 12.8**	**-1.7**
SBUM				IAmb	IAmb	05 32 17.6	
	comp=Z,12nm,1.5s						
CMAR	**Chiang Mai Arr**	**59.70**	**42**	P	**P**	**05 32 28.7**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=229,slow=7.0,SNR=6.0						
CMAR				LR	LR	05 53 14.2	
	comp=Z,84nm,21.8s,baz=225,slow=31						
	comp=Z,1.0nm,0.3s						
QSPA	**South Pole Qui**	**61.04**	**180**	P	**P**	**05 32 35.3**	**+0.6**
	comp=Z,2.2nm,1.0s,baz=335,slow=2.3,SNR=5.2						
QSPA				LR	LR	05 57 17.8	
	comp=Z,32nm,18.3s,baz=326,slow=34						
	comp=Z,2.2nm,1.0s						
QSPA	**South Pole Qui**	**61.04**	**180**	P	**P**	**05 32 34.6**	**-0.2**
QSPA				IAmb	IAmb	05 32 40.3	
	comp=Z,4.9nm,1.2s						
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**05 32 55.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=280,slow=6.8,SNR=7.0						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**05 32 54.3**	**-0.3**
VNDA				IAmb	IAmb	05 32 57.6	
	comp=Z,3.3nm,1.4s						
ASAR	**Alice Springs**	**64.42**	**104**	P	**P**	**05 32 59.0**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=240,slow=6.8,SNR=15						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**66.24**	**100**	P	**P**	**05 33 11.0**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=246,slow=5.8,SNR=11						
	comp=Z,1.4nm,0.8s						
WRA	**Warramunga Arr**	**66.24**	**100**	P	**P**	**05 33 08.2**	**-1.5**
GEYT	**Alibeck**	**66.76**	**357**	P	**P**	**05 33 11.1**	**-1.4**
GEYT				IAmb	IAmb	05 33 36.1	
	comp=Z,2.6nm,0.6s						
TOA0	**Torodi Ar. Sit**	**71.15**	**298**	P	**P**	**05 33 39.3**	**-0.9**
TOA0				IAmb	IAmb	05 34 06.9	
	comp=Z,9.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**71.15**	**298**	P	**P**	**05 33 41.6**	**+1.4**
	comp=Z,2.3nm,0.3s,baz=145,slow=3.1,SNR=1.9						
	comp=Z,2.3nm,0.3s						
KARP	**Karpathos**	**71.88**	**331**	P	**P**	**05 33 43.0**	**-1.2**
ARG	**Arkhangelos**	**72.05**	**332**	P	**P**	**05 33 43.1**	**-2.1**
ARG				IAmb	IAmb	05 33 51.5	
	comp=Z,34nm,1.3s						
KK31	**Karatay Array**	**72.37**	**7**	P	**P**	**05 33 46.7**	**-0.3**
KKAR	**Karatay Array**	**72.37**	**7**	P	**P**	**05 33 48.1**	**+1.1**
KBZ	**Khabaz**	**74.41**	**346**	LR	LR	06 04 54.4	
	comp=Z,71nm,20.5s,baz=202,slow=34						
KOWA	**Kowa**	**76.42**	**295**	LR	LR	06 07 36.9	
	comp=Z,44nm,18.7s,baz=182,slow=36						
MK31	**Makanchi Array**	**77.93**	**15**	P	**P**	**05 34 19.4**	**+0.4**
MKAR	**Makanchi Array**	**77.93**	**15**	P	**P**	**05 34 20.9**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=64,slow=33,SNR=2.9						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**77.93**	**15**	P	**P**	**05 34 19.2**	**+0.3**
ABKAR	**Akbulak array**	**78.03**	**359**	P	**P**	**05 34 20.8**	**+1.4**
ABKAR	**Akbulak array**	**78.03**	**359**	P	**P**	**05 34 20.3**	**+0.9**
AKTO	**Aktyubinsk**	**79.25**	**358**	LR	LR	06 04 42.9	
	comp=Z,84nm,21.4s,baz=196,slow=32						
KEST	**Kesra**	**80.89**	**320**	LR	LR	06 10 02.8	
	comp=Z,52nm,20.1s,baz=270,slow=35						
ZAA0	**Zalesovo Array**	**85.22**	**14**	P	**P**	**05 34 56.8**	**-0.4**
ZAA0				IAmb	IAmb	05 35 02.1	
	comp=Z,5.1nm,1.2s						
ZALV	**Zalesovo Beam**	**85.22**	**14**	P	**P**	**05 34 59.1**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=202,slow=2.3,SNR=1.2						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**85.22**	**14**	P	**P**	**05 34 57.4**	**+0.2**
KHZ	**Kahutara**	**85.46**	**137**	P	**P**	**05 34 58.2**	**-0.8**
SONM	**Songino Array**	**86.69**	**29**	LR	LR	06 11 26.6	
	comp=Z,65nm,21.7s,baz=83,slow=34						
KSRS	**Korea Array**	**91.03**	**47**	LR	LR	06 12 29.8	
	comp=Z,48nm,21.4s,baz=195,slow=33						
ESDC	**Sonseca Array**	**91.39**	**316**	P	**P**	**05 35 29.2**	**+2.0**
	comp=Z,0.6nm,0.9s,baz=113,slow=5.7,SNR=3.4						
	comp=Z,0.6nm,0.9s						
PDAR	**Pinedale Array**	**164.47**	**334**	PKP	**PKPdf**	**05 42 26.1**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=180,slow=0.4,SNR=5.0						
TXAR	**Lajitas Array**	**166.78**	**275**	PKP	**PKPdf**	**05 42 29.4**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=132,slow=3.5,SNR=4.8						
NVAR	**Mina Array Bea**	**170.70**	**358**	PKP	**PKPdf**	**05 42 32.2**	**+2.4**
	comp=Z,0.1nm,0.5s,baz=172,slow=1.4,SNR=1.6						

ROM 27 05:26:11.6±0.0,**42°.737N**±0°.002×**13°.196E**±0°.004, **h10**km,**ML2.2**/4,**Error ellipse: s-maj=0.3km s-min=0.2km az=82.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**328**	P	Pg	05 26 14.6	+0.1
LNSS	**Leonessa**	**0.18**	**221**	P	Pg	05 26 16.0	+0.6
LNSS				S	Sg	05 26 19.3	+1.3
LNSS				AML	AML		
	comp=E,775μm,0.4s						
LNSS				AML	AML		
	comp=N,744μm,0.1s						
LNSS				AML	AML		
	comp=N,743μm,0.1s						
MC2	**Monte Cornacci**	**0.18**	**359**	P	Pg	05 26 16.1	+0.6
MMO1	**Montemonaco**	**0.19**	**31**	P	Pg	05 26 16.1	+0.5
MMO1				S	Sg	05 26 19.6	+1.2
MMO1				AML	AML		
	comp=E,332μm,0.7s						
MMO1				AML	AML		
	comp=N,166μm,0.4s						
MMO1				AML	AML		
	comp=E,331μm,0.7s						
MMO1				AML	AML		
	comp=N,166μm,0.4s						
T1243	**Rocca Santa Ma**	**0.19**	**102**	P	Pb	05 26 16.4	-0.8
T1243				S	Sg	05 26 19.6	+1.1
T1243				AML	AML		
	comp=E,2160μm,0.2s						
T1243				AML	AML		
	comp=N,2070μm,0.3s						
T1243				AML	AML		
	comp=E,2155μm,0.2s						
T1243				AML	AML		
	comp=N,2070μm,0.3s						
T1243				AML	AML		
	comp=N,2040μm,0.3s						
T1243				AML	AML		
	comp=E,2140μm,0.2s						
RM33	**Pellescritta (**	**0.23**	**177**	P	Pg	05 26 16.9	+0.6
RM33				S	Sg	05 26 21.1	+1.6
CAMP	**Campotosto**	**0.26**	**142**	P	Pg	05 26 17.5	+0.7
FDMO	**Fiordimonte**	**0.31**	**345**	P	Pg	05 26 18.3	+0.5
FDMO				S	Sb	05 26 23.7	-0.6
FDMO				AML	AML		
	comp=N,58μm,1.0s						
FDMO				AML	AML		
	comp=N,58μm,1.0s						
FDMO				AML	AML		
	comp=E,60μm,1.1s						
CESI	**CESI - Serrava**	**0.34**	**321**	P	Pg	05 26 18.8	+0.4
ARRO	**Arrone**	**0.35**	**244**	P	Pg	05 26 19.0	+0.4
CSP1	**Cessapalombo**	**0.35**	**1**	P	Pg	05 26 19.1	+0.5
GIGS	**Gran Sasso**	**0.40**	**136**	P	Pg	05 26 19.8	+0.4
FIAM	**Fiamignano**	**0.47**	**187**	P	Pg	05 26 21.1	+0.3
ASSB	**Assisi San Ben**	**0.50**	**308**	P	Pg	05 26 21.5	+0.2
ASSB				S	Sb	05 26 29.2	-0.6

SOME ***27*** *05:29:43.6,44°.70N×82°.13E,h15km*
NNC ***27*** *05:29:44.7±0.7,44°.66N×82°.06E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=7.9km s-min=2.3km az=126.0*

ISC 27 05:29:39.6±1.9,**44°.53N**±0°.05×**82°.26E**±0°.07,**h0**km±19km, **n31,**σ1**f37**/51,**2C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.78**	**264**	*e*P	**Pg**	**05 30 15.9**	**+2.1**
	7.9nm,0.5s						
DJR				*e*S	**Sg**	**05 30 39.0**	**+2.1**
	30nm,0.4s						
DJR	**Jarkent**	**1.78**	**264**	P	**Pg**	**05 30 15.9**	**+2.1**
	7.9nm,0.5s						
DJR				S	**Sg**	**05 30 39.0**	**+2.1**
	30nm,0.4s						
KNOS	**Konyrlen**	**2.22**	**267**	*e*P	**Pg**	**05 30 23.8**	**+1.7**
	9.3nm,0.7s						
KNOS				*e*S	**Sg**	**05 30 52.5**	**+1.7**
	85nm,0.4s						
MK31	**Makanchi Array**	**2.26**	**0**	⇓Pn	**Pb**	**05 30 21.8**	**+0.4**
	14nm,0.3s,baz=186,slow=17,SNR=230						
MK31				⇓Sn	**Sb**	**05 30 49.9**	**-0.1**
	50nm,0.7s,baz=185,slow=27,SNR=19						
MAKZ	**Makanchi**	**2.29**	**355**	⇑Pn	**Pb**	**05 30 21.9**	**+0.1**
	8.8nm,0.5s						
MAKZ				⇑Sn	**Sb**	**05 30 50.1**	**-0.5**
	29nm,0.6s						
SHLS	**Shalkode**	**2.45**	**237**	*e*P	**Pb**	**05 30 24.8**	**+0.2**
	6.2nm,0.3s						
SHLS				*e*S	**Sb**	**05 30 54.4**	**-0.9**
	84nm,0.5s						
SHLS	**Shalkode**	**2.45**	**237**	Pg	**Pb**	**05 30 24.8**	**+0.2**
	6.2nm,0.3s						
SHLS				Lg	Lg	05 30 54.4	
	84nm,0.5s						
UZB	**Uzynbulak**	**2.72**	**241**	*e*P	**Pg**	**05 30 32.6**	**+0.8**
	2.7nm,0.4s						
UZB				*e*S	**Sg**	**05 31 07.6**	**+0.5**
	14nm,0.4s						
UZB	**Uzynbulak**	**2.72**	**241**	Pg	**Pg**	**05 30 32.6**	**+0.8**
	2.7nm,0.4s						
UZB				Lg	Lg	05 31 07.6	
	14nm,0.4s						
BLB	**Baldybastay**	**2.75**	**262**	*e*P	**Pg**	**05 30 32.8**	**+0.4**
	17nm,0.3s						
BLB				*e*S	**Sg**	**05 31 08.5**	**+0.5**
	32nm,0.3s						
BLB	**Baldybastay**	**2.75**	**262**	Pg	**Pg**	**05 30 32.8**	**+0.4**
	17nm,0.3s						
BLB				Lg	Lg	05 31 08.5	
	32nm,0.3s						
TDK	**Taldyqorghan**	**2.79**	**281**	*e*P	**Pg**	**05 30 32.8**	**-0.2**
	57nm,0.3s						
TDK				*e*S	**Sb**	**05 31 07.8**	**+2.8**
	83nm,0.4s						
TDK	**Taldyqorghan**	**2.79**	**281**	Pg	**Pg**	**05 30 32.8**	**-0.2**
	57nm,0.3s						
TDK				Lg	Lg	05 31 07.8	
	83nm,0.4s						
KPKS	**Kokpek**	**2.79**	**249**	*e*P	**Pg**	**05 30 33.5**	**+0.3**
	4.0nm,0.2s						
KPKS				*e*S	**Sg**	**05 31 10.0**	**+0.7**
	58nm,0.3s						
KPKS	**Kokpek**	**2.79**	**249**	Pg	**Pg**	**05 30 33.5**	**+0.3**
	4.0nm,0.2s						
KPKS				Lg	Lg	05 31 10.0	
	58nm,0.3s						
KURS	**Kuram**	**3.13**	**252**	*e*P	**Pg**	**05 30 39.9**	**+0.2**
	5.7nm,0.6s						
KURS				*e*S	**Sg**	**05 31 20.2**	**0.0**
	7.9nm,0.4s						
KURS	**Kuram**	**3.13**	**252**	Pg	**Pg**	**05 30 39.9**	**+0.2**
	5.7nm,0.6s						
KURS				Lg	Lg	05 31 20.2	
	7.9nm,0.4s						
SATY	**Saty**	**3.16**	**244**	*e*P	**Pg**	**05 30 40.3**	**+0.2**
	3.4nm,0.4s						
SATY				*e*S	**Sg**	**05 31 20.8**	**-0.2**
	26nm,0.2s						
SATY	**Saty**	**3.16**	**244**	Pg	**Pg**	**05 30 40.3**	**+0.2**
	3.4nm,0.4s						
SATY				Lg	Lg	05 31 20.8	
	26nm,0.2s						
ARXS	**Arharly**	**3.20**	**266**	*e*P	**Pg**	**05 30 39.9**	**-1.0**
	4.0nm,0.4s						
ARXS				*e*S	**Sg**	**05 31 20.9**	**-1.4**
	28nm,0.6s						
ZSN	**Zaisan**	**3.44**	**31**	*e*P	**Pb**	**05 30 42.0**	**+0.6**
	2.2nm,0.5s						
ZSN				*e*S	**Sb**	**05 31 23.6**	**-0.1**
	7.4nm,0.5s						
KOTS	**Kotyrbulak**	**3.94**	**253**	*e*P	**Pg**	**05 30 54.7**	**-0.5**
	4.9nm,0.5s						
KOTS				*e*S	**Sg**	**05 31 45.7**	**-0.6**
	17nm,0.4s						
KOTS	**Kotyrbulak**	**3.94**	**253**	Pg	**Pg**	**05 30 54.7**	**-0.5**
	4.9nm,0.5s						
KOTS				Lg	Lg	05 31 45.7	
	17nm,0.4s						
MDOK	**Medeo**	**4.01**	**252**	*e*P	**Pg**	**05 30 55.2**	**-1.3**
	1.3nm,0.6s						
MDOK				*e*S	**Sg**	**05 31

T1243				AML	AML			
	comp=N,1530μm,0.3s							
T1243				AML	AML			
	comp=E,2160μm,1.2s							
RM33	**Pellescritta (**	**0.17**	**194**	P	Pg	05	36	10.3 +0.7
RM33				S	Sg	05	36	13.4 +1.2
RM33				AML	AML			
	comp=E,651μm,0.8s							
RM33				AML	AML			
	comp=N,810μm,0.3s							
RM33				AML	AML			
	comp=N,1345μm,0.1s							
RM33				AML	AML			
	comp=E,2055μm,0.6s							
RM33				AML	AML			
	comp=N,1370μm,0.1s							
RM33				AML	AML			
	comp=E,2120μm,0.6s							
RM33				AML	AML			
	comp=N,1350μm,0.1s							
LNSS	**Leonessa**	**0.18**	**246**	P	Pg	05	36	10.4 +0.6
LNSS				S	Sg	05	36	13.6 +1.0
LNSS				AML	AML			
	comp=E,542μm,0.5s							
LNSS				AML	AML			
	comp=N,576μm,1.0s							
LNSS				AML	AML			
	comp=E,1495μm,0.3s							
LNSS				AML	AML			
	comp=E,1490μm,0.3s							
LNSS				AML	AML			
	comp=N,1625μm,0.1s							
NRCA	**Norcia**	**0.19**	**324**	⇑P	Pg	05	36	10.6 +0.6
NRCA				S	Sg	05	36	13.8 +1.0
MMO1	**Montemonaco**	**0.23**	**11**	P	Pg	05	36	11.2 +0.7
MMO1				S	Sg	05	36	15.2 +1.5
MC2	**Monte Cornacci**	**0.24**	**346**	P	Pg	05	36	11.4 +0.6
MC2				S	Sg	05	36	15.8 +1.6
TERO	**Teramo**	**0.25**	**102**	P	Pg	05	36	11.6 +0.7
TERO				S	Sg	05	36	15.6 +1.2
TERO				AML	AML			
	comp=E,314μm,0.8s							
TERO				AML	AML			
	comp=N,310μm,0.6s							
TERO				AML	AML			
	comp=N,710μm,0.2s							
TERO				AML	AML			
	comp=E,536μm,1.4s							
TERO				AML	AML			
	comp=N,710μm,0.2s							
GIGS	**Gran Sasso**	**0.32**	**136**	P	Pg	05	36	12.5 +0.4
GIGS				S	Sb	05	36	17.8 -1.1
GIGS				AML	AML			
	comp=E,38μm,0.8s							
GIGS				AML	AML			
	comp=N,63μm,1.4s							
GIGS				AML	AML			
	comp=E,101μm,0.6s							
GIGS				AML	AML			
	comp=N,69μm,0.4s							
CSP1	**Cessapalombo**	**0.42**	**353**	S	Sb	05	36	22.0 +0.2
FIAM	**Fiamignano**	**0.42**	**195**	⇑P	Pg	05	36	14.4 +0.3
FIAM				S	Sb	05	36	20.9 -1.0
FIAM				AML	AML			
	comp=N,147μm,1.0s							
FIAM				AML	AML			
	comp=E,228μm,0.5s							
FAGN	**Fagnano**	**0.47**	**150**	⇑P	Pg	05	36	15.3 +0.3
FAGN				S	Sb	05	36	22.9 -0.4
FAGN				AML	AML			
	comp=E,148μm,1.6s							
FAGN				AML	AML			
	comp=N,127μm,0.2s							
FAGN				AML	AML			
	comp=N,128μm,0.2s							
VCEL	**Villa Celiera**	**0.51**	**124**	⇑P	Pb	05	36	16.4 -0.4
VCEL				AML	AML			
	comp=E,162μm,0.7s							
VCEL				AML	AML			
	comp=N,180μm,1.3s							
VCEL				AML	AML			
	comp=N,180μm,1.3s							
CESX	**Cesi**	**0.51**	**263**	S	Sb	05	36	24.0 -0.4
T0110	**Collepietro**	**0.59**	**140**	P	Pg	05	36	17.3 +0.1
T0110				AML	AML			
	comp=E,99μm,1.4s							
T0110				AML	AML			
	comp=N,120μm,0.3s							
EL6	**Elcito**	**0.66**	**349**	AML	AML			
	comp=E,102μm,0.8s							
EL6				AML	AML			
	comp=N,110μm,1.6s							
INTR	**Introdacqua**	**0.81**	**145**	P	Pg	05	36	21.2 -0.3
INTR				AML	AML			
	comp=N,38μm,0.6s							
INTR				AML	AML			
	comp=E,18μm,0.8s							
GUAR	**Guarcino**	**0.88**	**178**	S	Sn	05	36	37.0 -0.2
APEC	**Apecchio**	**1.08**	**325**	S	Sg	05	36	36.0 -4.5

ROM 27 05:37:04.8±0.1, 42°.644N±0°.004×13°.252E±0°.005, h10km, ML1.9/21, 11C-12D, Error ellipse: s-maj=0.3km s-min=0.3km az=209.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.14**	**192**	⇓P	Pg	05 37 08.7	+0.6
RM33				S	Sg	05 37 11.1	+0.8
RM33				AML	AML		
	comp=E,2120μm,0.6s						
RM33				AML	AML		
	comp=N,1350μm,0.1s						
RM33				AML	AML		
	comp=E,2050μm,0.6s						
RM33				AML	AML		
	comp=E,2055μm,0.6s						
RM33				AML	AML		
	comp=N,1370μm,0.1s						
RM33				AML	AML		
	comp=E,2120μm,0.6s						
RM33				AML	AML		
	comp=N,1345μm,0.1s						
RM33				AML	AML		
	comp=N,1350μm,0.1s						
T1243	**Rocca Santa Ma**	**0.15**	**70**	⇑P	Pg	05 37 09.0	+0.6
T1243				S	Sg	05 37 11.6	+0.8
T1243				AML	AML		
	comp=E,2140μm,1.2s						
T1243				AML	AML		
	comp=E,2135μm,1.2s						
T1243				AML	AML		
	comp=N,1185μm,0.3s						
T1243				AML	AML		
	comp=N,1186μm,0.3s						
T1243				AML	AML		
	comp=E,2160μm,1.2s						
T1243				AML	AML		
	comp=N,1195μm,1.2s						
CAMP	**Campotosto**	**0.16**	**133**	⇓P	Pg	05 37 09.1	+0.7
CAMP				S	Sg	05 37 11.9	+1.0
CAMP				AML	AML		
	comp=E,296μm,0.6s						
CAMP				AML	AML		
	comp=N,268μm,0.5s						
LNSS	**Leonessa**	**0.16**	**255**	⇑P	Pg	05 37 09.0	+0.5
LNSS				S	Sg	05 37 11.8	+0.8
LNSS				AML	AML		
	comp=E,1495μm,0.3s						
LNSS				AML	AML		
	comp=N,1625μm,0.1s						
LNSS				AML	AML		
	comp=E,1490μm,0.3s						
NRCA	**Norcia**	**0.21**	**332**	⇑P	Pg	05 37 09.9	+0.5
NRCA				S	Sg	05 37 13.4	+0.9
NRCA				AML	AML		
	comp=N,1145μm,0.1s						
NRCA				AML	AML		
	comp=E,1660μm,0.7s						
NRCA				AML	AML		
	comp=N,1042μm,0.1s						
NRCA				AML	AML		
	comp=E,1855μm,0.7s						
NRCA				AML	AML		
	comp=N,1040μm,0.1s						
TERO	**Teramo**	**0.26**	**95**	⇑P	Pg	05 37 10.7	+0.5
TERO				AML	AML		
	comp=N,710μm,0.2s						
TERO				AML	AML		
	comp=N,710μm,0.2s						
TERO				AML	AML		
	comp=E,536μm,1.4s						
MMO1	**Montemonaco**	**0.26**	**12**	⇑P	Pg	05 37 10.8	+0.6
MMO1				S	Sb	05 37 15.2	-1.1
MMO1				AML	AML		
	comp=E,455μm,0.9s						
MMO1				AML	AML		
	comp=N,266μm,0.4s						
MMO1				AML	AML		
	comp=N,312μm,1.4s						
MMO1				AML	AML		
	comp=E,512μm,0.4s						
MMO1				AML	AML		
	comp=N,586μm,1.0s						
MMO1				AML	AML		
	comp=E,454μm,0.9s						
MC2	**Monte Cornacci**	**0.27**	**350**	⇑P	Pg	05 37 11.0	+0.6
MC2				S	Sb	05 37 15.9	-0.8
GIGS	**Gran Sasso**	**0.30**	**130**	⇓P	Pg	05 37 11.4	+0.4
GIGS				S	Sg	05 37 16.0	+1.0
GIGS				AML	AML		
	comp=E,100μm,0.6s						
GIGS				AML	AML		
	comp=N,69μm,0.4s						
GIGS				AML	AML		
	comp=E,101μm,0.6s						
ARRO	**Arrone**	**0.36**	**260**	⇑P	Pg	05 37 12.3	+0.2
ARRO				AML	AML		
	comp=E,125μm,1.0s						
ARRO				AML	AML		
	comp=E,125μm,1.0s						
ARRO				AML	AML		
	comp=N,158μm,0.2s						
ARRO				AML	AML		
	comp=N,157μm,0.2s						
FIAM	**Fiamignano**	**0.39**	**195**	⇓P	Pg	05 37 12.8	+0.3
FIAM				AML	AML		
	comp=E,228μm,0.5s						
FIAM				AML	AML		
	comp=N,147μm,1.0s						
FDMO	**Fiordimonte**	**0.41**	**343**	P	Pg	05 37 13.3	+0.4
FDMO				AML	AML		
	comp=E,120μm,0.3s						
FDMO				AML	AML		
	comp=N,118μm,0.2s						
FDMO				AML	AML		
	comp=N,91μm,0.9s						
FDMO				AML	AML		
	comp=E,102μm,0.6s						
GUMA	**Gualdo di Mace**	**0.42**	**8**	⇓P	Pb	05 37 14.0	-0.4
GUMA				AML	AML		
	comp=N,501μm,0.7s						
GUMA				AML	AML		
	comp=E,740μm,0.3s						
OFFI	**Offida**	**0.43**	**48**	⇓P	Pb	05 37 14.7	+0.1
OFFI				AML	AML		
	comp=E,264μm,0.8s						
OFFI				AML	AML		
	comp=N,270μm,0.6s						
CESI	**CESI - Serrava**	**0.44**	**325**	P	Pg	05 37 14.0	+0.4
CESI				S	Sb	05 37 20.8	-0.7
CESI				AML	AML		
	comp=E,93μm,0.2s						
CESI				AML	AML		
	comp=E,93μm,0.2s						
CESI				AML	AML		
	comp=N,181μm,0.2s						
CSP1	**Cessapalombo**	**0.45**	**356**	⇑P	Pg	05 37 14.0	+0.4
FAGN	**Fagnano**	**0.45**	**147**	⇑P	Pb	05 37 14.3	-0.6
FAGN				AML	AML		
	comp=E,148μm,1.6s						
FAGN				AML	AML		
	comp=N,116μm,0.3s						
FAGN				AML	AML		
	comp=E,148μm,1.6s						
CESX	**Cesi**	**0.50**	**266**	⇓P	Pg	05 37 14.5	0.0
CESX				AML	AML		
	comp=E,93μm,1.3s						
CESX				AML	AML		
	comp=N,144μm,0.2s						
CESX				AML	AML		
	comp=E,93μm,1.3s						
VCEL	**Villa Celiera**	**0.50**	**120**	P	Pb	05 37 15.3	-0.5
VCEL				AML	AML		
	comp=E,162μm,0.7s						
VCEL				AML	AML		
	comp=N,180μm,1.3s						
VCEL				AML	AML		
	comp=N,180μm,1.3s						
ASSB	**Assisi San Ben**	**0.59**	**313**	⇑P	Pg	05 37 16.6	+0.3
ASSB				S	Sb	05 37 26.0	+0.2
ASSB				AML	AML		
	comp=E,90μm,0.7s						
ASSB				AML	AML		
	comp=N,86μm,0.7s						
SNTG	**Esanatoglia**	**0.65**	**340**	⇑P	Pb	05 37 18.6	+0.2
SNTG				AML	AML		
	comp=E,45μm,0.4s						
SNTG				AML	AML		
	comp=N,39μm,1.1s						
SNTG				AML	AML		
	comp=N,39μm,1.1s						
EL6	**Elcito**	**0.69**	**351**	⇓P	Pb	05 37 18.8	-0.3
EL6				S	Sb	05 37 30.0	+1.2
EL6				AML	AML		
	comp=E,94μm,0.2s						
EL6				AML	AML		
	comp=N,102μm,1.2s						
EL6				AML	AML		
	comp=E,94μm,0.2s						
EL6				AML	AML		
	comp=N,101μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.70**	**320**	⇓P	Pb	05 37 19.4	+0.2
CERT	**Cerreto**	**0.72**	**196**	⇓P	Pg	05 37 18.3	-0.5
CERT				AML	AML		
	comp=N,34μm,0.4s						
CERT				AML	AML		
	comp=E,52μm,0.5s						
CERT				AML	AML		
	comp=N,34μm,0.4s						
CING	**Cingoli**	**0.73**	**357**	AML	AML		
	comp=E,66μm,0.4s						
CING				AML	AML		
	comp=N,77μm,0.1s						
PP3	**Marolino**	**0.78**	**20**	P	Pn	05 37 22.5	+0.7
MGAB	**Montegabbione**	**0.88**	**288**	⇓P	Pn	05 37 24.1	+0.8
ARVD	**Arcevia**	**0.88**	**345**	⇓P	Pg	05 37 20.2	-1.6
ARVD				S	Sb	05 37 34.0	-0.1

ROM 27 06:08:29.9±0.1, 42°.838N-0°.004×13°.236E±0°.006, h7km, ML3.3/91, Error ellipse: s-maj=0.5km s-min=0.2km az=243.0
PRU 27 06:08:31.9±0.0, 42°.91N×13°.80E, h0km
PDG 27 06:08:32.8±0.1, 42°.59N×13°.44E, h11km±11km, ML3.5/9, Error ellipse: s-maj=3.3km s-min=106.1km az=0.0
BEO 27 06:08:33.3±0.8, 43°.08N×13°.36E, h0km, ML3.2/6

ISC 27 06:08:30.7±0.8, 42°.84N±0°.01×13°.23E±0°.01, h6km±5km, n166, σ1s30/233, 55C-36D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MC2	**Monte Cornacci**	**0.08**	**339**	⇓P	**Pg**	**06 08 32.3**	**-0.5**
MC2				S	**Sg**	**06 08 34.2**	**-0.1**
MC2				AML	AML		
	comp=E,57050μm,0.8s						
MC2				AML	AML		
	comp=N,56600μm,0.8s						
MC2				AML	AML		
	comp=E,57100μm,0.8s						
NRCA	**Norcia**	**0.09**	**267**	⇑P	**Pg**	**06 08 32.8**	**0.0**
NRCA				S	**Sg**	**06 08 34.8**	**+0.6**
NRCA				AML	AML		
	comp=E,95100μm,0.2s						
NRCA				AML	AML		
	comp=N,80400μm,0.1s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,88050μm,0.1s						
NRCA				AML	AML		
	comp=E,95050μm,0.2s						
NRCA				AML	AML		
	comp=N,80400μm,0.2s						
MMO1	**Montemonaco**	**0.10**	**49**	P	**Pg**	**06 08 32.1**	**-0.8**
MMO1				S	**Sg**	**06 08 34.1**	**-0.3**
MMO1				AML	AML		
	comp=N,15350μm,0.6s						
MMO1				AML	AML		
	comp=E,89050μm,0.7s						
MMO1				AML	AML		
MMO1				AML	AML		
	comp=N,15300μm,0.6s						
MMO1				AML	AML		
	comp=N,15350μm,0.7s						
MMO1				AML	AML		
MMO1				AML	AML		
	comp=E,6440μm,0.6s						
MMO1				AML	AML		
	comp=E,89100μm,0.7s						
MMO1				AML	AML		
	comp=N,15300μm,0.7s						
FEMA	**Monte Fema**	**0.18**	**313**	P	**Pg**	**06 08 34.5**	**0.0**
FEMA				S	**Sg**	**06 08 37.9**	**+1.0**
FEMA				AML	AML		
	comp=E,23650μm,0.4s						
FEMA				AML	AML		
	comp=N,18950μm,1.4s						
FEMA				AML	AML		
	comp=E,23600μm,0.4s						
FEMA				AML	AML		
	comp=N,18950μm,1.4s						
FEMA				AML	AML		
	comp=N,18900μm,1.4s						
T1243	**Rocca Santa Ma**	**0.21**	**131**	⇑P	**Pg**	**06 08 34.8**	**-0.2**
T1243				S	**Sg**	**06 08 38.7**	**+0.8**
T1243				AML	AML		
	comp=E,46000μm,0.2s						
T1243				AML	AML		
	comp=N,49800μm,0.9s						
T1243				AML	AML		
	comp=E,46000μm,0.2s						
T1243				AML	AML		
	comp=E,45450μm,0.8s						
T1243				AML	AML		
	comp=E,45950μm,0.2s						
T1243				AML	AML		
	comp=N,49850μm,0.9s						
FDMO	**Fiordimonte**	**0.22**	**332**	⇓P	**Pg**	**06 08 34.9**	**-0.3**
FDMO				S	**Sg**	**06 08 38.8**	**+0.6**
FDMO				AML	AML		
	comp=N,17600μm,0.8s						
FDMO				AML	AML		
	comp=E,16000μm,0.3s						
GUMA	**Gualdo di Mace**	**0.24**	**19**	⇑P	**Pg**	**06 08 35.4**	**-0.1**
GUMA				S	**Sg**	**06 08 39.6**	**+1.0**
GUMA				AML	AML		
	comp=E,62750μm,0.5s						
GUMA				AML	AML		
	comp=N,45050μm,0.6s						
GUMA				AML	AML		
	comp=N,51200μm,0.5s						
GUMA				AML	AML		
	comp=E,62800μm,0.4s						
GUMA				AML	AML		
	comp=E,66700μm,0.5s						
GUMA				AML	AML		
	comp=N,45050μm,0.6s						
CSP1	**Cessapalombo**	**0.25**	**356**	⇑P	**Pg**	**06 08 35.4**	**-0.4**
CSP1				S	**Sg**	**06 08 39.9**	**+0.7**
CSP1				AML	AML		
	comp=N,16400μm,0.4s						
CSP1				AML	AML		
	comp=E,13550μm,0.4s						
LNSS	**Leonessa**	**0.27**	**211**	⇑P	**Pg**	**06 08 36.3**	**+0.2**
LNSS				S	**Sb**	**06 08 41.7**	**-1.3**
LNSS				AML	AML		
	comp=N,20050μm,1.0s						
LNSS				AML	AML		
	comp=E,18300μm,0.9s						
CESI	**CESI - Serrava**	**0.29**	**305**	⇑P	**Pg**	**06 08 36.4**	**-0.1**
CESI				S	**Sg**	**06 08 41.6**	**+1.2**
CESI				AML	AML		
	comp=E,11050μm,0.4s						
CESI				AML	AML		
	comp=N,18650μm,1.5s						
RM33	**Pellescritta (**	**0.33**	**182**	⇑P	**Pg**	**06 08 37.2**	**+0.1**
RM33				S	**Sb**	**06 08 43.3**	**-1.3**
RM33				AML	AML		
	comp=N,6410μm,1.4s						
RM33				AML	AML		
	comp=E,13650μm,1.5s						
RM33				AML	AML		
	comp=N,6420μm,1.5s						
RM33				AML	AML		
	comp=E,13650μm,1.5s						
RM33				AML	AML		
	comp=E,13700μm,1.5s						
RM33				AML	AML		
	comp=N,6405μm,1.4s						
RM33				AML	AML		
	comp=E,13700μm,1.5s						
CAMP	**Campotosto**	**0.33**	**156**	⇓P	**Pg**	**06 08 36.9**	**-0.3**
CAMP				S	**Sg**	**06 08 42.7**	**+1.1**
CAMP				AML	AML		
	comp=E,7620μm,0.5s						
CAMP				AML	AML		
	comp=N,5315μm,1.5s						
MNTP	**Montappone**	**0.35**	**30**	P	**Pg**	**06 08 37.8**	**+0.3**
MNTP				S	**Sb**	**06 08 44.5**	**-0.7**
MNTP				AML	AML		
	comp=N,14250μm,0.5s						
MNTP				AML	AML		
	comp=N,14200μm,0.5s						
MNTP				AML	AML		
	comp=E,14550μm,0.6s						
OFFI	**Offida**	**0.35**	**74**	P	**Pg**	**06 08 38.0**	**+0.4**
OFFI				S	**Sb**	**06 08 45.2**	**0.0**
OFFI				AML	AML		
	comp=E,16250μm,0.4s						
OFFI				AML	AML		
	comp=N,20250μm,0.5s						
TERO	**Teramo**	**0.35**	**128**	⇓P	**Pg**	**06 08 37.1**	**-0.4**
TERO				S	**Sg**	**06 08 43.0**	**+0.9**
TERO				AML	AML		
	comp=N,17250μm,0.5s						
TERO				AML	AML		
	comp=E,10150μm,0.5s						
TERO				AML	AML		
	comp=N,16150μm,0.5s						
TERO				AML	AML		
	comp=E,10145μm,0.5s						
TERO				AML	AML		
	comp=E,11450μm,0.5s						
SEF1	**Sefro**	**0.37**	**326**	P	**Pg**	**06 08 38.0**	**0.0**
SEF1				S	**Sg**	**06 08 44.2**	**+1.3**
SEF1				AML	AML		
	comp=E,13100μm,1.3s						
SEF1				AML	AML		
	comp=N,10295μm,0.8s						
SEF1				AML	AML		
	comp=N,10275μm,0.8s						
SSM1	**San Severino M**	**0.39**	**354**	P	**Pg**	**06 08 38.1**	**-0.2**
SSM1				S	**Sb**	**06 08 45.1**	**-1.3**
GAG1	**Gagliole**	**0.42**	**344**	P	**Pg**	**06 08 38.8**	**0.0**
GAG1				S	**Sg**	**06 08 45.7**	**+1.4**
GAG1				AML	AML		
	comp=E,13260μm,0.9s						
GAG1				AML	AML		
	comp=N,17850μm,0.8s						
GAG1				AML	AML		
	comp=E,13225μm,0.9s						
GAG1				AML	AML		
	comp=N,17800μm,0.8s						
ARRO	**Arrone**	**0.43**	**233**	P	**Pg**	**06 08 39.0**	**0.0**
ARRO				AML	AML		
	comp=N,2680μm,1.1s						
ARRO				AML	AML		
	comp=E,2575μm,1.3s						
GIGS	**Gran Sasso**	**0.46**	**147**	⇓P	**Pg**	**06 08 39.0**	**-0.7**
GIGS				S	**Sg**	**06 08 46.9**	**+1.2**
GIGS				AML	AML		
	comp=E,1285μm,0.5s						
GIGS				AML	AML		
	comp=N,1330μm,1.2s						
ASSB	**Assisi San Ben**	**0.47**	**296**	⇑P	**Pg**	**06 08 39.4**	**-0.3**
ASSB				S	**Sb**	**06 08 47.3**	**-1.2**
ASSB				AML	AML		

ASSB AML AML
comp=N,7125µm,0.3s
comp=E,5345µm,0.2s
SNTG Esanatoglia 0.47 333 P **Pg 06 08 39.3 -0.5**
SNTG S **Sb 06 08 48.0 -0.6**
SNTG AML AML
comp=E,378µm,0.7s
SNTG AML AML
comp=E,2880µm,0.5s
SNTG AML AML
comp=N,4810µm,0.7s
SNTG AML AML
comp=E,378µm,0.7s
SNTG AML AML
comp=N,532µm,0.7s
EL6 Elcito 0.50 349 P **Pg 06 08 40.0 -0.4**
EL6 S **Sb 06 08 48.7 -0.9**
EL6 AML AML
comp=E,6045µm,0.6s
EL6 AML AML
comp=N,5635µm,0.7s
TRTR Tortoreto Alta 0.51 93 P **Pb 06 08 41.3 -0.7**
TRTR S **Sb 06 08 51.4 +1.8**
TRTR AML AML
comp=N,15150µm,1.2s
TRTR AML AML
comp=E,11350µm,0.5s
CESX Cesi 0.53 245 P **Pg 06 08 40.6 -0.4**
CESX AML AML
comp=N,2665µm,1.1s
CESX AML AML
comp=E,2845µm,1.5s
CING Cingoli 0.54 357 P **Pg 06 08 40.5 -0.6**
CING AML AML
comp=N,2320µm,0.8s
CING AML AML
comp=E,2255µm,0.5s
ATCC AVT- Casa Cast 0.55 309 ↑P **Pg 06 08 41.1 -0.4**
ATCC S **Sb 06 08 50.6 -0.5**
ATCC AML AML
comp=E,4295µm,0.5s
ATCC AML AML
comp=N,5855µm,1.3s
FOSV Fossato di Vic 0.57 323 ↑P **Pg 06 08 41.3 -0.4**
FOSV S **Sb 06 08 50.6 -1.0**
FOSV AML AML
comp=E,3170µm,0.5s
FOSV AML AML
comp=N,14400µm,0.3s
FIAM Fiamignano 0.58 188 ↑P **Pg 06 08 41.4 -0.4**
FIAM S **Sb 06 08 51.0 -0.7**
FIAM AML AML
comp=N,2400µm,0.7s
FIAM AML AML
comp=E,2755µm,0.8s
PP3 Marolino 0.61 27 ↓P **Pg 06 08 43.1 +0.7**
PP3 AML AML
comp=N,11100µm,0.5s
PP3 AML AML
comp=E,7625µm,0.3s
PP3 AML AML
comp=E,7345µm,0.3s
PP3 AML AML
comp=N,11050µm,0.5s
PP3 AML AML
comp=N,10850µm,0.5s
FAGN Fagnano 0.63 155 ↑P **Pg 06 08 42.3 -0.6**
FAGN AML AML
comp=E,4530µm,0.5s
FAGN AML AML
comp=N,4105µm,0.3s
VCEL Villa Celiera 0.63 134 ↓P **Pg 06 08 42.5 -0.4**
VCEL S **Sb 06 08 53.4 0.0**
VCEL AML AML
comp=E,3275µm,1.0s
VCEL AML AML
comp=N,4590µm,0.9s
VCEL AML AML
comp=N,4595µm,0.9s
MURB Monte Urbino 0.67 310 ↓P **Pg 06 08 43.4 -0.3**
MURB S **Sb 06 08 55.0 +0.6**
MURB AML AML
comp=N,6560µm,0.3s
MURB AML AML
comp=E,7100µm,0.3s
MURB AML AML
comp=E,6070µm,0.3s
MURB AML AML
comp=N,6565µm,0.3s
MURB AML AML
comp=N,6455µm,1.5s
SSFR Montelago di S 0.68 331 ↑P **Pg 06 08 41.9 -1.9**
SSFR AML AML
comp=E,5910µm,0.2s
SSFR AML AML
comp=N,6100µm,0.9s
SSFR AML AML
comp=N,4995µm,0.3s
SSFR AML AML
comp=E,6180µm,0.6s
ARVD Arcevia 0.69 342 ↓P **Pg 06 08 43.4 -0.6**
ARVD S **Sb 06 08 56.0 +0.9**
ARVD AML AML
comp=E,1425µm,0.5s
ARVD AML AML
comp=N,1161µm,0.5s
ATFO Monte Foce - G 0.71 318 ↑P **Pg 06 08 43.9 -0.6**
ATFO AML AML
comp=E,2085µm,1.1s
ATFO AML AML
comp=N,2515µm,0.6s
T0110 Collepietro 0.73 146 ↓P **Pg 06 08 44.0 -0.9**
T0110 AML AML
comp=N,2990µm,1.6s
T0110 AML AML
comp=E,4045µm,0.6s
ATTE AVT- Monte Tez 0.74 300 ↑P **Pg 06 08 44.3 -0.6**
ATTE AML AML
comp=E,1438µm,1.0s
ATTE AML AML
comp=N,1490µm,0.9s
AOI Ancona 0.76 21 ↑P **Pg 06 08 45.1 -0.2**
AOI AML AML
comp=N,956µm,0.4s
AOI AML AML
comp=E,1400µm,0.6s
FRON Frontone 0.77 332 ↓P **Pg 06 08 44.9 -0.7**
FRON AML AML
comp=N,2855µm,0.6s
FRON AML AML
comp=E,1830µm,0.8s
SRES S.Oreste - Sor 0.80 222 ↓P **Pg 06 08 45.9 -0.2**
SRES AML AML
comp=E,674µm,1.0s
SRES AML AML
comp=N,878µm,1.4s
COR1 Corinaldo 0.81 348 ↑P **Pb 06 08 47.6 +0.4**
COR1 AML AML
comp=N,2925µm,0.6s
COR1 AML AML
comp=E,2090µm,0.5s
ATVO AVT- Monte Val 0.81 312 ↑P **Pg 06 08 45.5 -0.8**
ATVO AML AML
comp=N,1245µm,1.4s
ATVO AML AML
comp=E,1355µm,0.7s
MGAB Montegabbione 0.82 276 P **Pg 06 08 46.1 -0.5**
MGAB AML AML
comp=E,1790µm,1.6s
MGAB AML AML
comp=N,3295µm,0.5s
MGAB AML AML
comp=E,2070µm,1.6s
MGAB AML AML
comp=N,3275µm,0.4s
MGAB AML AML
comp=E,1795µm,1.6s
PTQR Pietraquaria 0.82 171 ↓P **Pg 06 08 46.3 -0.3**
PTQR AML AML
comp=E,958µm,1.6s
PTQR AML AML
comp=N,669µm,0.6s
PTQR AML AML
comp=E,959µm,1.6s
ATMI Monte Miggiano 0.86 305 ↑P **Pg 06 08 46.9 -0.4**
ATMI AML AML
comp=E,4390µm,0.5s
ATMI AML AML
comp=N,3335µm,1.6s
ATPI Pietralunga - 0.86 316 ↑P **Pg 06 08 46.5 -0.7**
ATPI AML AML
comp=E,1470µm,1.6s
ATPI AML AML
comp=N,1106µm,0.7s
ATPI AML AML
comp=E,1475µm,1.6s
ATPI AML AML
comp=N,1108µm,0.7s
MPAG Monte Paganucc 0.86 337 ↑P **Pg 06 08 46.7 -0.6**
MPAG AML AML
comp=E,2350µm,0.5s
MPAG AML AML
comp=E,2355µm,0.5s
MPAG AML AML
comp=N,1445µm,0.4s
MTCE Montecelio 0.89 204 ↓P **Pg 06 08 47.3 -0.5**
MTCE AML AML
comp=N,1242µm,1.2s
MTCE AML AML
comp=E,991µm,1.5s
NARO Abbazia di Nar 0.91 329 ↑P **Pg 06 08 47.3 -0.8**
NARO S **Sn 06 09 03.0 -0.4**
NARO AML AML
comp=E,836µm,0.6s
NARO AML AML
comp=N,794µm,0.5s
CERT Cerreto 0.91 192 ↑P **Pg 06 08 46.9 -1.2**
CERT AML AML
comp=N,2465µm,1.0s
CERT AML AML
comp=E,1530µm,1.1s
FSSB Fossombrone 0.92 339 ↑P **Pg 06 08 47.7 -0.6**
FSSB S **Sn 06 09 03.0 -0.7**
FSSB AML AML
comp=N,5140µm,0.5s
FSSB AML AML
comp=E,4040µm,1.4s
APEC Apecchio 0.93 321 S **Sn 06 09 04.0 -0.1**
INTR Introdacqua 0.97 149 ↓P **Pg 06 08 47.7 -1.6**
INTR AML AML
comp=E,1µm,0.9s
INTR AML AML
comp=N,2µm,0.7s
INTR AML AML
comp=E,1236µm,0.9s
INTR AML AML
comp=N,2µm,0.7s
INTR AML AML
comp=N,3315µm,0.7s
INTR AML AML
comp=E,1µm,0.9s
SACS San Casciano d 0.97 271 ↑P **Pg 06 08 49.0 -0.4**
SACS AML AML
comp=E,1068µm,1.0s
SACS AML AML
comp=N,1335µm,1.6s
SACS AML AML
comp=N,1245µm,1.6s
SACS AML AML
comp=E,1240µm,1.0s
BADI Badiali 0.98 313 ↓P **Pg 06 08 49.0 -0.7**
BADI AML AML
comp=N,932µm,1.6s
BADI AML AML
comp=E,127µm,1.4s
CAFI Castiglion Fio 1.05 298 ↑P **Pg 06 08 50.0 -0.8**
CAFI S **Sn 06 09 07.0 0.0**
CAFI AML AML
comp=E,953µm,1.6s
CAFI AML AML
comp=N,1012µm,0.6s
CAFI AML AML
comp=E,942µm,1.6s
CAFI AML AML
comp=N,978µm,0.6s
LPEL Lama dei Pelig 1.06 138 ↑P **Pg 06 08 50.8 -0.3**
LPEL S **Sn 06 09 07.0 -0.3**
LPEL AML AML
comp=E,826µm,1.3s
LPEL AML AML
comp=N,979µm,0.9s
RMP Rome, Mte Porz 1.10 201 ↓P **Pn 06 08 53.2 +0.5**
RMP AML AML
comp=E,1480µm,1.0s
RMP AML AML
comp=N,1870µm,0.9s
MCIV Monte Civitell 1.14 268 ↑P **Pb 06 08 53.0 0.0**
MCIV AML AML
comp=E,360µm,1.5s
MCIV AML AML
comp=N,350µm,0.8s
POFI Posta Fibreno 1.18 162 ↑P **Pn 06 08 55.4 +1.6**
TOLF Tolfa 1.19 230 P **Pg 06 08 50.1 -3.5**
TOLF AML AML
comp=E,715µm,0.6s
TOLF AML AML
comp=N,431µm,1.5s
CRE Caprese Michel 1.22 310 P **Pg 06 08 53.9 -0.2**
CRE AML AML
comp=E,598µm,0.4s
CRE AML AML
comp=N,620µm,0.4s
SF01 Poggio Pratacc 1.23 269 ↓P **Pn 06 08 54.9 +0.4**
ARCI Arcidosso 1.29 271 ↓P **Pg 06 08 56.0 +0.5**
ARCI AML AML
comp=E,172µm,1.6s
ARCI AML AML
comp=N,154µm,1.6s
RNI2 Rionero Sannit 1.33 149 ↓P **Pg 06 08 57.3 +1.2**
RNI2 AML AML
comp=E,1540µm,1.1s
RNI2 AML AML
comp=N,1014µm,1.3s
RNI2 AML AML
comp=E,1605µm,1.1s
RNI2 AML AML
comp=N,1005µm,1.3s
FRES Fresagrandinar 1.37 129 ↑P **Pg 06 08 57.3 +0.3**
FRES AML AML
comp=N,476µm,0.8s
FRES AML AML
comp=E,508µm,0.6s
TRIV Trivento 1.45 137 ↓P **Pg 06 08 58.7 +0.1**
TRIV AML AML
comp=E,882µm,0.8s
TRIV AML AML
comp=N,922µm,1.3s
SFI Santa Sofia 1.47 317 ↑P **Pg 06 08 59.0 +0.2**
SFI AML AML
comp=N,404µm,1.6s
SFI AML AML
comp=E,362µm,1.2s
OSSC Osservatorio P 1.60 296 ↑P **Pb 06 09 00.7 0.0**
OSSC AML AML
comp=E,256µm,1.0s
OSSC AML AML
comp=E,254µm,1.1s
OSSC AML AML
comp=N,251µm,0.8s
OSSC AML AML
comp=N,274µm,1.3s
RUFI Rufina 1.60 309 ↑P **Pn 06 09 00.1 +0.5**
VAGA Valle Agricola 1.61 152 ↑P **Pg 06 09 01.7 +0.2**
VAGA AML AML
comp=E,341µm,1.3s
VAGA AML AML
comp=N,516µm,1.0s
BSSO Busso 1.64 141 ↑P **Pg 06 09 02.2 0.0**
BSSO AML AML
comp=E,380µm,1.6s
BSSO AML AML
comp=N,428µm,1.1s
BSSO AML AML
comp=E,152µm,1.2s
BSSO AML AML
comp=N,162µm,1.1s
TRIF Trifonti 1.73 280 ↓P **Pn 06 09 01.2 -0.2**
TRIF AML AML
comp=E,191µm,0.7s
TRIF AML AML
comp=N,178µm,0.5s
CASP Castiglione de 1.74 269 ↓P **Pn 06 09 01.0 -0.5**
CASP AML AML
comp=N,85µm,1.4s
CASP AML AML
comp=E,81µm,1.4s
MELA Melanico ??? S 1.81 128 ↑P **Pb 06 09 03.3 -0.9**
MELA AML AML
comp=N,885µm,1.1s
MELA AML AML
comp=N,864µm,1.2s
MELA AML AML
comp=E,938µm,1.0s
MELA AML AML
comp=E,903µm,1.0s
TREM Isole Tremiti 1.83 112 ↑P **Pb 06 09 04.0 -0.6**
TREM AML AML
comp=E,798µm,0.8s
TREM AML AML
comp=N,740µm,1.1s
MTCR Monte La Croce 2.01 307 P **Pn 06 09 05.2 -0.2**
MTCR AML AML
comp=N,225µm,1.3s
MTCR AML AML
comp=E,170µm,0.5s
APRC Apricena 2.03 121 ↑P **Pn 06 09 06.5 +1.0**
APRC AML AML
comp=E,232µm,0.6s
APRC AML AML
comp=N,378µm,0.5s
SGRT San Giovanni R 2.16 119 ↑P **Pn 06 09 07.8 +0.6**
SGRT AML AML
comp=E,380µm,0.9s
SGRT AML AML
comp=N,296µm,1.0s
MSAG Monte S. Angel 2.29 119 ↓P **Pn 06 09 10.1 +1.1**
MSAG AML AML
comp=E,438µm,1.2s
MSAG AML AML
comp=N,788µm,0.5s
SNAL S. Angelo Dei 2.42 142 ↓P **Pb 06 09 14.0 -0.7**
VULT Monte Vulture 2.59 136 P **Pn 06 09 14.6 +1.3**
VULT AML AML
comp=E,192µm,0.6s
VULT AML AML
comp=N,262µm,0.8s
MRLC Muro Lucano 2.68 140 ↑P **Pn 06 09 16.6 +2.2**
MRLC AML AML
comp=E,100µm,1.3s
MRLC AML AML
comp=N,105µm,1.4s
SKDS Skadanscina 2.77 12 *e*Pn **Pn 06 09 14.6 -1.0**
MRVN Minervino Murg 2.84 128 ↑P **Pn 06 09 17.7 +1.1**
MRVN AML AML
comp=E,74µm,1.5s
MRVN AML AML
comp=N,73µm,0.9s
A050A Klekovaca 2.91 54 *e*Pn **Pn 06 09 19.4 +1.8**
BOJS Bojanci 3.04 28 *e*Pn **Pn 06 09 20.6 +1.3**
SRKY Kupres RS 3.12 65 *e*Pn **Pn 06 09 22.6 +2.1**
SABO M.te Sabotino 3.15 5 P **Pn 06 09 21.0 0.0**
SABO AML AML
comp=E,1620µm,1.6s
SABO AML AML
comp=N,1685µm,1.2s
SABO AML AML
comp=E,189µm,0.7s
SABO AML AML
comp=N,224µm,0.6s
AMUR Altamura 3.17 126 ↑P **Pn 06 09 22.0 +0.8**
AMUR AML AML
comp=N,86µm,1.1s
AMUR AML AML
comp=E,81µm,1.0s
CGRP Cima Grappa 3.21 342 ↑P **Pn 06 09 22.9 +1.0**
CGRP AML AML
comp=N,176µm,0.9s
CGRP AML AML
comp=E,183µm,0.7s
MGRS Mrkonjic Grad 3.21 59 *e*Pn **Pn 06 09 24.9 +3.1**
VARN Col Varnada, M 3.26 346 ↓P **Pn 06 09 22.1 -0.3**
VARN AML AML
comp=E,218µm,0.6s
VARN AML AML
comp=N,162µm,0.6s
STON Ston 3.29 88 *e*Pn **Pn 06 09 20.1 -2.6**
STON Ston 3.29 88 *e*Pn **Pn 06 09 22.2 -0.5**
STON *e*Sn **Sn 06 10 00.6 -1.5**
STON Ston 3.29 88 P **Pb 06 09 29.5 +0.1**
CRES Cresnjev 3.39 27 *e*Pn **Pn 06 09 24.6 +0.5**
MPRI Monte Prat 3.41 357 ↑P **Pn 06 09 25.1 +0.7**
MPRI AML AML
comp=E,138µm,0.9s
MPRI AML AML
comp=N,178µm,0.7s
A051A Mrakovica 3.43 49 *e*Pn **Pn 06 09 25.6 +0.8**
BLY Banja Luka 3.44 55 *e*Pn **Pb 06 09 29.2 -2.9**
STAL STALIGIAL 3.44 354 ↑P **Pn 06 09 25.4 +0.5**
STAL AML AML
comp=N,128µm,0.7s
STAL AML AML
comp=E,136µm,0.4s
MAGA Magasa 3.48 328 ↑P **Pn 06 09 26.8 +1.3**
MAGA AML AML
comp=E,320µm,0.6s
MAGA AML AML
comp=N,189µm,0.5s
LTRZ Laterza 3.49 129 ↓P **Pn 06 09 27.0 +1.4**
LTRZ P **Pb 06 09 31.8 -1.2**
CIMO Cimolais 3.52 351 ↓P **Pn 06 09 25.9 0.0**
CIMO AML AML
comp=N,34µm,0.7s
CIMO AML AML
comp=E,32µm,0.9s
NOCI Noci 3.52 124 ↓P **Pn 06 09 26.9 +0.9**
NOCI AML AML
comp=E,71µm,1.4s
NOCI AML AML
comp=N,82µm,0.4s
LUSI Trento, Gardas 3.52 333 ↑P **Pn 06 09 27.3 +1.3**
LUSI AML AML
comp=E,84µm,0.6s
LUSI AML AML
comp=N,104µm,0.4s
PTCC Patocco-Chiusa 3.57 1 S **Sn 06 10 09.0 -0.2**
GAGG Gaggia 3.63 334 P **Pn 06 09 29.3 +1.7**
ZONE Zone 3.68 324 P **Pn 06 09 27.3 -0.9**
ZONE AML AML
comp=N,99µm,0.6s
ZONE AML AML
comp=E,69µm,0.3s
ZOU Zoufplan 3.72 357 ↑P **Pn 06 09 29.1 +0.2**
ZOU AML AML
comp=N,80µm,1.0s
ZOU AML AML
comp=E,102µm,1.6s
FVI Forni Avoltri 3.77 355 ↑P **Pn 06 09 29.6 +0.1**
TREB Trebinje 3.77 90 *e*Pn **Pn 06 09 28.1 -1.3**
TREB Trebinje 3.77 90 *e*Pn **Pn 06 09 30.3 +0.9**
TREB *e*Sn **Sn 06 10 14.0 -0.1**
OBKA Obir 3.79 14 *e*Pn **Pn 06 09 30.3 +0.6**
OBKA Obir 3.79 14 *e*Pn **Pn 06 09 30.6 +0.9**
comp=E,0.8nm,0.2s
OBKA *e*Sn **Sn 06 10 14.2 -0.4**
comp=E,12nm,0.4s
MYKA Terra Mystica 3.80 4 *e*Pn **Pn 06 09 30.3 +0.4**
comp=E,1.9nm,0.3s
MYKA *e*Sn **Sn 06 10 15.1 +0.2**
comp=E,6.0nm,0.4s
KOSI Kohlern 3.86 341 ↓P **Pn 06 09 31.8 +1.1**
KOSI AML AML
comp=E,103µm,0.7s
KOSI AML AML
comp=N,114µm,1.6s
BRY Bratogost 3.90 87 *e*Pn **Pn 06 09 31.5 +0.1**
BRY Bratogost 3.90 87 ↓*i*Pn **Pn 06 09 32.1 +0.7**
BRY *i* Sn **Sn 06 10 17.5 -0.1**
HCY Herceg Novi 3.90 94 *e*Pn **Pn 06 09 30.4 -0.8**
HCY Herceg Novi 3.90 94 ↑*i*Pn **Pn 06 09 31.7 +0.5**
HCY *i* Sn **Sn 06 10 16.7 -0.7**
ABTA Abfaltersbach 3.94 353 Pn **Pn 06 09 32.4 +0.6**
comp=N,13nm,0.4s,SNR=23
ABTA *e*Sn **Sn 06 10 17.8 -0.7**
comp=N,26nm,0.6s
SOKA Soboth 4.05 18 *e*Pn **Pn 06 09 35.2 +1.9**
comp=N,0.7nm,0.2s
SOKA *e*Sn **Sn 06 10 22.8 +1.8**
comp=N,4.0nm,0.5s
UPM Unac-Piva 4.18 83 *e*Pn **Pn 06 09 34.9 -0.3**

CEME	**Cevo**	**4.20**	**92**	⇓*i*Pn	**Pn**	**06 09 36.0 +0.6**
CEME				*i* Sn	**Sn**	**06 10 24.1 -0.7**
NKME	**Niksic**	**4.21**	**89**	⇑*i*Pn	**Pn**	**06 09 35.7 +0.2**
NKME				*i* Sn	**Sn**	**06 10 23.5 -1.5**
BUM	**Brajici-Budva**	**4.22**	**95**	⇑*i*Pn	**Pn**	**06 09 36.2 +0.6**
BUM				*i* Sn	**Sn**	**06 10 24.2 -1.0**
KBA	**Koelnbreinsper**	**4.24**	**1**	*e*Pn	**Pn**	**06 09 36.7 +0.6**
	comp=N,3.1nm,0.4s					
KBA				*e*Sn	**Sn**	**06 10 25.3 -0.6**
	comp=N,9.4nm,0.6s					
ROSI	**Rosskopf**	**4.29**	**343**	⇓P	**Pn**	**06 09 38.5 +1.8**
IST3	**Stromboli F**	**4.31**	**159**	S	**Sn**	**06 10 29.0 +1.6**
VSL	**Villasalto**	**4.43**	**222**	⇑P	**Pn**	**06 09 39.9 +1.5**
VSL				AML	AML	
VSL				AML	AML	
DRME	**Dracevica, Mon**	**4.45**	**96**	*e*Pn	**Pn**	**06 09 39.7 +1.0**
DRME	**Dracevica, Mon**	**4.45**	**96**	⇓*i*Pn	**Pn**	**06 09 40.0 +1.3**
DRME				*i* Sn	**Sn**	**06 10 29.6 -1.2**
PDG	**Podgorica**	**4.46**	**93**	*e*Pn	**Pn**	**06 09 40.7 +1.8**
PDG				*e*Sn	**Sn**	**06 10 30.4 -0.8**
ULC	**Ulcinj**	**4.54**	**99**	⇓*i*Pn	**Pn**	**06 09 40.5 +0.5**
ULC				*i* Sn	**Sn**	**06 10 31.5 -1.6**
FETA	**Feichten**	**4.54**	**338**	*i* Pn	**Pn**	**06 09 42.2 +2.1**
	comp=N,2.5nm,0.5s,SNR=8.3					
FETA				*e*Sn	**Sn**	**06 10 34.8 +1.4**
	comp=N,3.9nm,0.5s					
RUDO	**Rudo**	**4.55**	**78**	*e*Pn	**Pn**	**06 09 37.6 -2.6**
WTTA	**Wattenberg**	**4.57**	**346**	Pn	**Pn**	**06 09 42.7 +2.2**
	comp=N,1.9nm,0.2s,SNR=6.4					
WTTA				*e*Sn	**Sn**	**06 10 34.7 +0.8**
	comp=N,8.1nm,0.4s					
SQTA	**Sankt Quirin**	**4.61**	**343**	Pn	**Pn**	**06 09 42.5 +1.5**
	comp=N,4.3nm,0.2s,SNR=6.8					
SQTA				*e*Sn	**Sn**	**06 10 35.9 +1.0**
	comp=N,8.9nm,0.3s					
BBLS	**Lazići**	**4.62**	**75**	*e*Pn	**Pn**	**06 09 43.2 +2.1**
KOME	**Kolasin**	**4.62**	**88**	⇑*i*Pn	**Pn**	**06 09 42.2 +1.0**
KOME				*i* Sn	**Sn**	**06 10 34.8 -0.4**
WATA	**Walderalm**	**4.65**	**346**	*i* Pn	**Pn**	**06 09 44.2 +2.6**
	comp=N,2.8nm,0.2s,SNR=5.9					
WATA				*e*Sn	**Sn**	**06 10 37.9 +2.1**
	comp=N,16nm,0.5s					
ARSA	**Arzberg**	**4.70**	**19**	*e*Pn	**Pn**	**06 09 46.6 +4.4**
	comp=N,1.7nm,0.4s					
ARSA				*e*Sn	**Sn**	**06 10 34.5 -2.6**
	comp=N,4.2nm,0.6s					
MOTA	**Moosalm**	**4.75**	**342**	*e*Pn	**Pn**	**06 09 45.5 +2.5**
	comp=N,3.7nm,0.5s					
MOTA				*e*Sn	**Sn**	**06 10 41.6 +3.2**
	comp=N,7.0nm,0.5s					
BIOA	**Bad Ischl, Aus**	**4.86**	**3**	*e*Sn	**Sn**	**06 10 42.1 +1.0**
	comp=N,8.9nm,0.4s					
IVA	**Berane**	**4.90**	**87**	⇓*i*Pn	**Pn**	**06 09 46.2 +1.2**
IVA				*i* Sn	**Sn**	**06 10 41.6 -0.4**
SJES	**Sjenica**	**4.96**	**83**	*e*Pn	**Pn**	**06 09 47.6 +1.7**
PVY	**Plav**	**4.96**	**91**	⇑*i*Pn	**Pn**	**06 09 46.8 +0.9**
PVY				*i* Sn	**Sn**	**06 10 42.8 -0.9**
RETA	**Reutte**	**4.96**	**340**	Pn	**Pn**	**06 09 45.0 -0.9**
	comp=N,1.9nm,0.3s,SNR=7.2					
RETA				*e*Sn	**Sn**	**06 10 46.4 +2.8**
	comp=N,4.2nm,0.5s					
DAVA	**Damuels**	**5.04**	**333**	*e*Pn	**Pn**	**06 09 48.5 +1.5**
	comp=N,6.6nm,0.6s					
DAVA				*e*Sn	**Sn**	**06 10 49.2 +3.6**
	comp=N,9.2nm,0.5s					
MOA	**Molln**	**5.07**	**8**	*e*Pn	**Pn**	**06 09 47.9 +0.7**
MOA				*e*Sn	**Sn**	**06 10 39.2 -6.8**
MOA	**Molln**	**5.07**	**8**	*e*Pn	**Pn**	**06 09 48.0 +0.8**
	comp=N,0.9nm,0.1s					
IVAS	**Ivanjica**	**5.11**	**79**	*e*Pn	**Pn**	**06 09 48.5 +0.6**
IVAS				*e*Sn	**Sn**	**06 10 46.9 -0.4**
TIR	**Tirane**	**5.16**	**105**	*e*Pn	**Pn**	**06 09 49.7 +1.3**
RONA	**Rosalia, Austr**	**5.32**	**23**	*e*Pn	**Pn**	**06 09 51.1 +0.3**
	comp=N,1.2nm,0.4s					
RONA				*e*Sn	**Sn**	**06 10 50.5 -1.8**
	comp=N,2.2nm,0.4s					
TRUS	**Trudelj**	**5.40**	**73**	*e*Pn	**Pn**	**06 09 53.8 +2.0**
CONA	**Conrad Observa**	**5.42**	**19**	*e*Pn	**Pn**	**06 09 52.4 +0.3**
	comp=N,0.4nm,0.2s					
CONA				*e*Sn	**Sn**	**06 10 50.9 -3.9**
	comp=N,4.5nm,0.6s					
GRUS	**Gruza**	**5.56**	**77**	*e*Pn	**Pn**	**06 09 55.7 +1.8**
SELS	**Selova**	**5.80**	**84**	*e*Pn	**Pn**	**06 09 58.4 +1.2**
CKRC	**Cesky Krumlov**	**6.03**	**7**	*e*SN	**Sn**	**06 11 07.1 -2.7**
KHC	**Kasperske Hory**	**6.30**	**2**	*e*PN	**Pn**	**06 10 03.9 -0.3**
KHC				*e*SN	**Sn**	**06 11 12.8 -3.6**
KHC				*ex*	x	06 11 48.0
BARS	**Barje**	**6.31**	**87**	*e*Pn	**Pn**	**06 10 05.1 +0.8**
PRVS	**Prvonek**	**6.53**	**90**	*e*Pn	**Pn**	**06 10 09.1 +1.8**
PRVS				*e*Sn	**Sn**	**06 11 21.1 -1.0**
ZAGS	**Zajecar**	**6.64**	**79**	*e*Pn	**Pn**	**06 10 09.2 +0.4**
ZAPS	**Zavoj**	**6.90**	**83**	*e*Pn	**Pn**	**06 10 14.0 +1.5**
ZAPS				*e*Sn	**Sn**	**06 11 29.6 -1.7**

INET ***27*** *06:11:00.7±0.5, 12°.51N×87°.77W, h53km±5km, MW2.9*
SNET ***27*** *06:11:01.6±1.2, 12°.62N×87°.85W, h56km±27km, ML2.4*
ISC 27 06:10:59.8±2.0, 12°.5N±0°.1×87°.81W±0°.08, h59km±26km, n17, σ0°.48/23, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.55**	**26**	*e*P	**Pn**	**06 11 12.2**	**-0.2**
CRIN	**San Cristobal**	**0.77**	**73**	*e*P	**Pn**	**06 11 15.3**	**+0.4**
CRIN				*e*S	**Sn**	**06 11 26.8**	**+0.7**
CNCH	**Conchagua**	**0.79**	**358**	*e*P	**Pn**	**06 11 15.0**	**-0.3**
CNCH				*e*S	**Sn**	**06 11 26.3**	**-0.3**
TEL3	**Telica 3**	**0.94**	**84**	*e*P	**Pn**	**06 11 16.9**	**-0.2**
TELN	**Telica**	**0.96**	**83**	*e*P	**Pn**	**06 11 17.9**	**+0.5**
RANC	**El Ranchito**	**1.06**	**334**	*e*P	**Pn**	**06 11 19.7**	**+0.9**
RANC				*e*S	**Sn**	**06 11 32.6**	**-0.2**
PACA	**Pacayal**	**1.10**	**333**	*e*P	**Pn**	**06 11 19.8**	**+0.4**
PACA				*e*S	**Sn**	**06 11 33.1**	**-0.7**
PACA				IAML		06 11 37.5	
	comp=Z,1μm,0.3s						
PACA	**Pacayal**	**1.10**	**333**	*e*P	**Pn**	**06 11 20.0**	**+0.6**
COPN	**Copaltepe**	**1.23**	**104**	*e*P	**Pn**	**06 11 20.5**	**-0.3**
MOMN	**Momotombo**	**1.24**	**93**	*e*P	**Pn**	**06 11 21.0**	**-0.1**
PQSS	**Presa 15 de Se**	**1.35**	**327**	*e*P	**Pn**	**06 11 23.0**	**+0.5**
PQSS				*e*S	**Sn**	**06 11 39.2**	**-0.3**
PQSS				IAML		06 11 43.9	
	comp=Z,33nm,0.1s						
UESV	**Universidad de**	**1.49**	**320**	*e*P	**Pn**	**06 11 24.6**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.51**	**324**	*e*P	**Pn**	**06 11 25.4**	**+0.7**
SCLA				*e*S	**Sn**	**06 11 43.1**	**-0.2**
SCLA				IAML		06 11 46.7	
	comp=Z,11nm,0.2s						
COEG	**Centro de Oper**	**1.54**	**317**	*e*P	**Pn**	**06 11 25.3**	**+0.2**
COEG				IAML		06 11 47.2	
	comp=Z,55nm,0.2s						
PAVA	**Las Pavas**	**1.65**	**318**	*e*P	**Pn**	**06 11 26.1**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.65**	**18**	*e*P	**Pn**	**06 11 26.7**	**0.0**
RCON	**San Juan de Ri**	**1.89**	**58**	*e*P	**Pn**	**06 11 30.1**	**+0.1**

LDG ***27*** *06:20:30.4±0.1, 42°.64N×13°.31E, h11km, Md3.4/2, Ml2.9/20, Error ellipse: s-maj=2.7km s-min=1.4km az=44.0*
ROM ***27*** *06:20:30.2±0.2, 42°.548N±0°.008×13°.31E±0°.01, h16km±1km, ML3.4/37, Mw3.2, Error ellipse: s-maj=0.9km s-min=0.7km az=263.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}=7.80; $M_{\theta\phi}$3.79; $M_{\phi\phi}$4.01; $M_{r\theta}$-1.45; $M_{\theta\theta}$-4.95; $M_{r\phi}$-2.29; Fault plane solution: M_o8.80422×10^{13} NP1:ϕ_s118.00000°,δ46.00000°, λ-117.00000°. NP2:ϕ_s334.00000°,δ50.00000°, λ-65.00000°.*
BEO ***27*** *06:20:31.2±0.7, 42°.54N×13°.23E, h0km, ML3.5/8*
IDC ***27*** *06:20:31.8±1.8, 42°.75N×13°.60E, h0km, mb4.0/2, mbtmp3.8/5, ML3.3/3, MS2.7/1, Error ellipse: s-maj=51.9km s-min=15.5km az=98.0*
PRU ***27*** *06:20:34.7±0.0, 42°.78N×13°.52E, h0km*
ISC 27 06:20:31.0±0.8, 42°.61N±0°.02×13°.22E±0°.02, h14km±5km, n176, σ2s47/233, 26C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**181**	⇑P	**Pg**	**06 20 34.2**	**0.0**
RM33				S	**Sg**	**06 20 36.2**	**-0.2**
RM33				AML	AML		
	comp=E,80200μm,0.4s						
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
	comp=E,77950μm,0.4s						
RM33				AML	AML		
	comp=E,80150μm,0.4s						
RM33				AML	AML		
LNSS	**Leonessa**	**0.13**	**266**	⇑P	**Pb**	**06 20 35.6**	**+0.3**
LNSS				S	**Sg**	**06 20 38.8**	**+1.8**
LNSS				AML	AML		
	comp=E,61000μm,0.6s						
LNSS				AML	AML		
	comp=N,61300μm,0.3s						
CAMP	**Campotosto**	**0.16**	**118**	P	**Pg**	**06 20 33.6**	**-1.3**
CAMP				S	**Sg**	**06 20 35.9**	**-1.8**
CAMP				AML	AML		
	comp=E,36000μm,0.5s						
CAMP				AML	AML		
	comp=N,36450μm,1.1s						
T1243	**Rocca Santa Ma**	**0.19**	**64**	⇑P	**Pg**	**06 20 34.7**	**-0.7**
T1243				AML	AML		
	comp=E,76400μm,1.5s						
T1243				AML	AML		
	comp=N,71400μm,1.6s						
T1243				AML	AML		
	comp=N,73600μm,1.6s						
T1243				AML	AML		
	comp=N,73650μm,1.6s						
T1243				AML	AML		
	comp=E,75900μm,1.5s						
T1243				AML	AML		
	comp=N,73600μm,1.6s						
T1243				AML	AML		
	comp=E,76350μm,1.5s						
T1243				AML	AML		
	comp=E,75850μm,1.5s						
NRCA	**Norcia**	**0.23**	**341**	P	**Pb**	**06 20 36.9**	**-0.1**
NRCA				S	**Sg**	**06 20 41.4**	**+1.9**
NRCA				AML	AML		
	comp=N,18700μm,0.8s						
NRCA				AML	AML		
	comp=N,20900μm,0.8s						
NRCA				AML	AML		
	comp=E,22650μm,0.1s						
NRCA				AML	AML		
	comp=N,18750μm,0.8s						
NRCA				AML	AML		
	comp=N,18700μm,0.8s						
NRCA				AML	AML		
	comp=E,25050μm,0.1s						
NRCA				AML	AML		
	comp=E,22600μm,0.1s						
TERO	**Teramo**	**0.29**	**88**	⇑P	**Pg**	**06 20 36.0**	**-0.9**
TERO				AML	AML		
	comp=N,21650μm,0.3s						
TERO				AML	AML		
	comp=E,25700μm,0.3s						
TERO				AML	AML		
	comp=N,20550μm,0.3s						
TERO				AML	AML		
	comp=E,24250μm,0.3s						
MMO1	**Montemonaco**	**0.30**	**16**	P	**Pg**	**06 20 37.5**	**+0.3**
MMO1				S	**Sb**	**06 20 42.4**	**-0.6**
MMO1				AML	AML		
	comp=E,1734μm,0.9s						
MMO1				AML	AML		
	comp=N,2190μm,0.3s						
MMO1				AML	AML		
	comp=E,17850μm,0.9s						
MMO1				AML	AML		
	comp=E,1731μm,0.9s						
MMO1				AML	AML		
	comp=N,2190μm,0.3s						
MMO1				AML	AML		
	comp=N,15400μm,0.3s						
MMO1				AML	AML		
	comp=E,1730μm,0.9s						
MC2	**Monte Cornacci**	**0.30**	**356**	P	**Pb**	**06 20 38.0**	**-0.3**
MC2				AML	AML		
	comp=E,9880μm,0.5s						
MC2				AML	AML		
	comp=N,9970μm,0.5s						
MC2				AML	AML		
	comp=N,9980μm,0.5s						
MC2				AML	AML		
	comp=N,9995μm,0.5s						
MC2				AML	AML		
	comp=E,9850μm,0.5s						
GIGS	**Gran Sasso**	**0.31**	**122**	⇑P	**Pg**	**06 20 36.3**	**-1.1**
GIGS				AML	AML		
	comp=E,4645μm,0.6s						
GIGS				AML	AML		
	comp=N,4265μm,0.6s						
ARRO	**Arrone**	**0.34**	**264**	P	**Pb**	**06 20 38.9**	**+0.2**
ARRO				S	**Sb**	**06 20 44.3**	**+0.3**
FIAM	**Fiamignano**	**0.35**	**192**	⇑P	**Pg**	**06 20 38.3**	**+0.1**
FIAM				AML	AML		
	comp=E,7480μm,0.7s						
FIAM				AML	AML		
	comp=N,6810μm,0.5s						
FDMO	**Fiordimonte**	**0.43**	**347**	P	**Pb**	**06 20 40.4**	**-0.1**
FDMO				S	**Sb**	**06 20 47.6**	**+0.7**
FAGN	**Fagnano**	**0.44**	**142**	⇑P	**Pg**	**06 20 38.8**	**-0.9**
FAGN				AML	AML		
	comp=N,16100μm,0.4s						
FAGN				AML	AML		
	comp=E,15950μm,0.5s						
CESI	**CESI - Serrava**	**0.45**	**330**	P	**Pb**	**06 20 40.9**	**0.0**
CESI				S	**Sb**	**06 20 49.0**	**+1.5**
GUMA	**Gualdo di Mace**	**0.46**	**11**	P	**Pb**	**06 20 40.7**	**-0.2**
GUMA				S	**Sb**	**06 20 48.6**	**+1.0**
CESX	**Cesi**	**0.47**	**270**	S	**Sb**	**06 20 50.0**	**+2.1**
OFFI	**Offida**	**0.47**	**47**	⇑P	**Pb**	**06 20 40.8**	**-0.3**
OFFI				AML	AML		
	comp=E,14100μm,0.6s						
OFFI				AML	AML		
	comp=N,14150μm,0.9s						
CSP1	**Cessapalombo**	**0.48**	**359**	S	**Sb**	**06 20 49.0**	**+0.7**
CSP1	**Cessapalombo**	**0.48**	**359**	P	**Pb**	**06 20 41.0**	**-0.3**
VCEL	**Villa Celiera**	**0.51**	**115**	⇑P	**Pg**	**06 20 40.4**	**-0.6**
VCEL				AML	AML		
	comp=E,12800μm,0.9s						
VCEL				AML	AML		
	comp=N,15600μm,0.4s						
VCEL				AML	AML		
	comp=N,15550μm,0.4s						
TRTR	**Tortoreto Alta**	**0.55**	**69**	⇓P	**Pb**	**06 20 42.2**	**-0.2**
TRTR				AML	AML		
	comp=E,12800μm,0.5s						
TRTR				AML	AML		
	comp=N,12650μm,1.2s						
T0110	**Collepietro**	**0.57**	**133**	⇑P	**Pg**	**06 20 41.0**	**-1.1**
T0110				S	**Sg**	**06 20 50.0**	**+0.3**
T0110				AML	AML		
	comp=E,6845μm,0.4s						
T0110				AML	AML		
	comp=N,7585μm,1.3s						
SEF1	**Sefro**	**0.57**	**340**	P	**Pb**	**06 20 42.8**	**+0.1**
SEF1				S	**Sb**	**06 20 52.3**	**+1.5**
PTQR	**Pietraquaria**	**0.61**	**167**	⇑P	**Pg**	**06 20 41.9**	**-0.9**
PTQR				AML	AML		
	comp=E,1540μm,1.3s						
PTQR				AML	AML		
	comp=N,1265μm,1.3s						
GAG1	**Gagliole**	**0.63**	**350**	P	**Pb**	**06 20 44.0**	**+0.1**
GAG1				S	**Sn**	**06 20 54.5**	**-1.1**
SRES	**S.Oreste - Sor**	**0.64**	**235**	⇓P	**Pb**	**06 20 44.5**	**+0.5**
SRES				AML	AML		
	comp=E,2245μm,0.9s						
SRES				AML	AML		
	comp=N,1945μm,0.4s						
SNTG	**Esanatoglia**	**0.67**	**343**	P	**Pb**	**06 20 44.5**	**-0.1**
SNTG				S	**Sn**	**06 20 55.7**	**-0.9**
CERT	**Cerreto**	**0.69**	**195**	⇑P	**Pg**	**06 20 43.8**	**-0.5**
CERT				AML	AML		
	comp=E,3155μm,0.6s						
CERT				AML	AML		
	comp=N,3410μm,1.3s						
MTCE	**Montecelio**	**0.69**	**211**	⇑P	**Pb**	**06 20 45.2**	**+0.5**
MTCE				AML	AML		
	comp=N,2180μm,0.7s						
MTCE				AML	AML		
	comp=E,3800μm,0.6s						
EL6	**Elcito**	**0.72**	**353**	P	**Pb**	**06 20 45.3**	**-0.1**
EL6				S	**Sn**	**06 20 57.5**	**-0.3**
FOSV	**Fossato di Vic**	**0.76**	**334**	P	**Pb**	**06 20 46.2**	**+0.2**
FOSV				S	**Sn**	**06 20 58.8**	**+0.1**
CING	**Cingoli**	**0.76**	**359**	P	**Pb**	**06 20 45.9**	**-0.2**
CING				S	**Sn**	**06 20 58.4**	**-0.3**
INTR	**Introdacqua**	**0.79**	**139**	⇑P	**Pg**	**06 20 44.9**	**-1.4**
INTR				AML	AML		
	comp=E,2μm,0.7s						
INTR				AML	AML		
	comp=N,2μm,1.0s						
INTR				AML	AML		
	comp=N,3035μm,1.0s						
INTR				AML	AML		
	comp=E,1555μm,0.6s						
RCAV	**Rocca di Cave**	**0.79**	**195**	⇓P	**Pn**	**06 20 48.5**	**+0.7**
RCAV				AML	AML		
	comp=E,3155μm,0.6s						
RCAV				AML	AML		
	comp=N,3670μm,1.3s						
VVLD	**Villa Vallelon**	**0.80**	**158**	P	**Pg**	**06 20 46.4**	**-0.1**
VVLD				AML	AML		
	comp=E,1535μm,0.6s						
VVLD				AML	AML		
	comp=N,1980μm,0.6s						
GUAR	**Guarcino**	**0.82**	**175**	⇓P	**Pb**	**06 20 47.4**	**+0.3**
GUAR				AML	AML		
	comp=E,1860μm,0.6s						
GUAR				AML	AML		
	comp=N,2875μm,1.3s						
SSFR	**Montelago di S**	**0.88**	**339**	P	**Pb**	**06 20 48.5**	**+0.4**
SSFR				S	**Sn**	**06 21 02.5**	**+0.8**
LPEL	**Lama dei Pelig**	**0.91**	**128**	⇓P	**Pg**	**06 20 46.9**	**-1.7**
LPEL				S	**Sb**	**06 21 01.0**	**+0.3**
LPEL				AML	AML		
	comp=N,1450μm,0.7s						
LPEL				AML	AML		
	comp=E,1440μm,0.9s						
POFI	**Posta Fibreno**	**0.97**	**157**	⇑P	**Pg**	**06 20 49.3**	**-0.3**
LAV9	**Lanuvio**	**1.01**	**203**	P	**Pn**	**06 20 52.3**	**+1.6**
LAV9				AML	AML		
	comp=N,4990μm,0.5s						
LAV9				AML	AML		
	comp=E,5055μm,1.6s						
LAV9				AML	AML		
	comp=N,4820μm,0.5s						
LAV9				AML	AML		
	comp=E,5035μm,1.6s						
GIUL	**Giuliano Di Ro**	**1.05**	**178**	⇑P	**Pb**	**06 20 50.8**	**-0.2**
GIUL				AML	AML		
	comp=N,1255μm,0.7s						
GIUL				AML	AML		
	comp=E,932μm,0.6s						
TOLF	**Tolfa**	**1.06**	**239**	⇓P	**Pn**	**06 20 52.8**	**+1.4**
TOLF				AML	AML		
	comp=E,2340μm,0.7s						
TOLF				AML	AML		
	comp=N,1595μm,1.0s						
TRIV	**Trivento**	**1.30**	**130**	⇓P	**Pg**	**06 20 58.1**	**+2.1**
TRIV				AML	AML		
	comp=N,862μm,1.0s						
TRIV				AML	AML		
	comp=E,711μm,1.0s						
VAGA	**Valle Agricola**	**1.42**	**147**	⇓P	**Pg**	**06 20 59.0**	**+0.8**
VAGA				AML	AML		
	comp=E,446μm,1.3s						
VAGA				AML	AML		
	comp=N,490μm,0.6s						
BSSO	**Busso**	**1.48**	**136**	⇓P	**Pg**	**06 21 01.1**	**+1.7**
BSSO				AML	AML		
	comp=E,176μm,0.9s						
BSSO				AML	AML		
	comp=N,220μm,1.1s						
MODR	**Mondragone**	**1.55**	**161**	⇓P	**Pg**	**06 21 02.1**	**+1.4**
MODR				AML	AML		
	comp=E,238μm,0.8s						
MODR				AML	AML		
	comp=N,299μm,1.3s						
OSSC	**Osservatorio P**	**1.71**	**303**	P	**Pn**	**06 21 00.7**	**+0.3**
CASP	**Castiglione de**	**1.74**	**277**	⇓P	**Pb**	**06 21 02.8**	**0.0**
TREM	**Isole Tremiti**	**1.77**	**105**	⇑P	**Pg**	**06 21 05.0**	**+0.1**
TREM				AML	AML		
	comp=N,972μm,0.6s						
TREM				AML	AML		
	comp=E,1049μm,0.7s						
DUGI	**Dugi Otok**	**1.93**	**44**	*e*Pn	**Pn**	**06 21 04.0**	**+0.6**
APRC	**Apricena**	**1.93**	**116**	⇑P	**Pb**	**06 21 05.8**	**-0.1**
APRC				AML	AML		
	comp=E,355μm,0.8s						
APRC				AML	AML		
	comp=N,464μm,0.8s						
SGRT	**San Giovanni R**	**2.06**	**114**	P	**Pb**	**06 21 07.1**	**-1.2**
SGRT				S	**Sb**	**06 21 35.0**	**+1.1**
SGRT				AML	AML		
	comp=N,436μm,0.8s						
SGRT				AML	AML		
	comp=E,361μm,0.6s						
VIRC	**Vir**	**2.15**	**38**	*e*Pn	**Pn**	**06 21 07.2**	**+0.8**
MSAG	**Monte S. Angel**	**2.19**	**113**	⇓P	**Pb**	**06 21 09.7**	**-0.9**
MSAG				AML	AML		
	comp=N,804μm,0.5s						
MSAG				AML	AML		
	comp=E,556μm,0.6s						
MORI	**Morici**	**2.21**	**55**	*e*Pn	**Pn**	**06 21 08.1**	**+0.9**
NVLJ	**Novalja**	**2.29**	**31**	*e*Pn	**Pn**	**06 21 09.3**	**+0.9**
BRJN	**Brijuni**	**2.32**	**9**	*e*Pn	**Pn**	**06 21 10.3**	**+1.5**
RABC	**Rab**	**2.42**	**27**	*e*Pn	**Pn**	**06 21 11.3**	**+1.2**
HVAR	**Hvar**	**2.44**	**76**	*e*Pn	**Pn**	**06 21 11.0**	**+0.6**
HVAR	**Hvar**	**2.44**	**76**	⇑P	**Pn**	**06 21 11.7**	**+1.3**
SMRN	**Sveta Marina**	**2.52**	**15**	*e*Pn	**Pn**	**06 21 12.1**	**+0.7**
UDBI	**Udbina**	**2.66**	**43**	*e*Pn	**Pn**	**06 21 15.5**	**+2.0**
KIJV	**Kijevo**	**2.71**	**58**	*i* Pn	**Pn**	**06 21 16.0**	**+1.8**
A253A	**Karojba, Istri**	**2.71**	**9**	*e*Pn	**Pn**	**06 21 15.3**	**+1.1**
LSTV	**Lastovo**	**2.71**	**85**	*e*Pn	**Pn**	**06 21 14.6**	**+0.4**
EQUI	**Equi**	**2.72**	**306**	⇓P	**Pb**	**06 21 17.3**	**-2.1**
A250A	**Rusevo Krmpots**	**2.76**	**26**	*e*Pn	**Pn**	**06 21 16.5**	**+1.7**
PLIT	**Plitvice**	**2.86**	**37**	*e*Pn	**Pn**	**06 21 16.3**	**+0.1**
MAKA	**Makarska**	**2.87**	**75**	*e*Pn	**Pn**	**06 21 17.6**	**+1.3**
GRAM	**Graiana**	**2.96**	**310**	P	**Pb**	**06 21 20.8**	**-2.8**
SKDS	**Skadanscina**	**2.99**	**11**	*e*Pn	**Pn**	**06 21 19.3**	**+1.3**
RICI	**Ricice**	**3.00**	**72**	*e*Pn	**Pn**	**06 21 19.7**	**+1.5**
A050A	**Klekovaca**	**3.05**	**51**	*e*Pn	**Pn**	**06 21 21.0**	**+2.1**
AMUR	**Altamura**	**3.05**	**123**	⇑P	**Pn**	**06 21 20.9**	**+2.0**
AMUR				AML	AML		
	comp=E,105μm,0.5s						
AMUR				AML	AML		
	comp=N,80μm,0.5s						
PGF	**Pioggiola**	**3.12**	**270**	*e*P	**Pn**	**06 21 22.3**	**+2.5**
PGF				*e*Sn	**Sn**	**06 21 54.3**	**-2.6**
	comp=N,10.0nm,0.6s						
SRKY	**Kupres RS**	**3.23**	**62**	*e*Pn	**Pn**	**06 21 23.3**	**+2.0**
BOJS	**Bojanci**	**3.24**	**26**	*e*Pn	**Pn**	**06 21 23.4**	**+2.0**
BOJS	**Bojanci**	**3.24**	**26**	P	**Pn**	**06 21 23.7**	**+2.2**
STON	**Ston**	**3.31**	**84**	*e*Pn	**Pn**	**06 21 21.7**	**-0.7**
STON	**Ston**	**3.31**	**84**	*e*Pn	**Pn**	**06 21 22.3**	**-0.1**
STON	**Ston**	**3.31**	**84**	*e*Pn	**Pn**	**06 21 22.3**	**-0.1**
STON				*e*Sn	**Sn**	**06 22 01.7**	**+0.2**
MGRS	**Mrkonjic Grad**	**3.34**	**56**	*e*Pn	**Pn**	**06 21 25.6**	**+2.8**
SABO	**M.te Sabotino**	**3.38**	**5**	⇓P	**Pn**	**06 21 25.2**	**+1.9**
ROVR	**Rover Verones**	**3.40**	**334**	⇑P	**Pn**	**06 21 27.0**	**+3.2**
OZLJ	**Ozalj**	**3.41**	**28**	*e*Pn	**Pn**	**06 21 25.8**	**+2.0**
CGRP

MYKA eSn **Sn** **06 22 23.0 +3.6**
comp=N,5.4nm,0.3s
KOSI Kohlern 4.07 342 P **Pn** **06 21 35.9 +3.0**
SPS2 Spezzano della 4.07 143 S **Sn** **06 22 18.0 -2.4**
ABTA Abfaltersbach 4.16 353 *i* Pn **Pn** **06 21 36.8 +2.6**
comp=N,30nm,0.5s,SNR=27
ABTA eSn **Sn** **06 22 25.1 +2.4**
comp=N,15nm,0.6s
VSL Villasalto 4.26 224 ⇓P **Pn** **06 21 38.1 +2.7**
SOKA Soboth 4.27 17 Pn **Pn** **06 21 38.0 +2.4**
comp=N,1.8nm,0.2s,SNR=6.8
SOKA eSn **Sn** **06 22 27.7 +2.5**
comp=N,3.8nm,0.6s
CGL Cagliari Serpe 4.40 224 P **Pn** **06 21 40.9 +3.5**
SBF Sospel 4.41 288 eP **Pn** **06 21 39.7 +2.2**
DRME Dracevica, Mon 4.44 93 ePn **Pn** **06 21 39.4 +1.5**
KBA Koelnbreinsper 4.47 1 ePn **Pn** **06 21 41.1 +2.7**
comp=N,6.6nm,0.4s
KBA eSn **Sn** **06 22 32.3 +2.0**
comp=N,3.7nm,0.3s
PDG Podgorica 4.47 90 ePn **Pn** **06 21 39.8 +1.5**
PDG eSn **Sn** **06 22 32.0 +2.0**
ROSI Rosskopf 4.50 344 ⇓P **Pn** **06 21 42.4 +3.4**
RUDO Rudo 4.62 75 ePn **Pn** **06 21 41.6 +1.3**
BBLS Lazići 4.69 72 ePn **Pn** **06 21 43.5 +2.1**
BBLS eSn **Sn** **06 22 38.2 +2.5**
FETA Feichten 4.75 339 Pn **Pn** **06 21 46.2 +3.9**
comp=N,6.4nm,0.5s,SNR=10
FETA eSn **Sn** **06 22 39.4 +2.1**
comp=N,5.0nm,0.5s
WTTA Wattenberg 4.78 347 Pn **Pn** **06 21 46.9 +4.1**
comp=N,1.3nm,0.2s,SNR=7.6
WTTA eSn **Sn** **06 22 40.0 +1.8**
comp=N,6.6nm,0.4s
DAVOX Davos/Dischmat 4.80 331 Pn **Pn** **06 21 47.2 +4.2**
comp=N,1.9nm,0.3s,baz=141,slow=13,SNR=19
DAVOX Sn **Sn** **06 22 42.1 +3.6**
comp=N,1.3nm,0.3s,baz=163,slow=19,SNR=4.3
comp=N,5.0nm,0.4s
SQTA Sankt Quirin 4.82 343 ePn **Pn** **06 21 47.2 +3.9**
comp=N,2.4nm,0.2s
SQTA eSn **Sn** **06 22 41.8 +2.8**
comp=N,5.3nm,0.4s
WATA Walderalm 4.86 347 Pn **Pn** **06 21 48.3 +4.4**
comp=N,2.5nm,0.2s,SNR=7.3
WATA eSn **Sn** **06 22 43.1 +3.1**
comp=N,10nm,0.3s
ARSA Arzberg 4.92 19 ePn **Pn** **06 21 45.8 +1.3**
comp=N,2.0nm,0.3s
ARSA eSn **Sn** **06 22 41.6 +0.4**
comp=N,3.0nm,0.3s
MOTA Moosalm 4.96 343 ePn **Pn** **06 21 49.5 +4.3**
comp=N,0.8nm,0.2s
MOTA eSn **Sn** **06 22 45.0 +2.5**
comp=N,4.6nm,0.3s
LMR La Mourre 4.97 281 eP **Pn** **06 21 47.5 +2.3**
BIOA Bad Ischl, Aus 5.09 3 ePn Pn 06 21 51.4 +4.6
comp=N,2.0nm,0.2s
BIOA eSn **Sn** **06 22 48.4 +3.0**
comp=N,27nm,0.6s
MBDF Montbardon 5.13 297 eP **Pn** **06 21 50.3 +2.8**
MBDF eSn **Sn** **06 22 41.9 -4.7**
comp=N,8.4nm,0.7s
DIVS Divíbare 5.16 71 ePn Pn 06 21 54.1 +6.2
IVAS Ivanjica 5.17 77 ePn **Pn** **06 21 49.4 +1.4**
IVAS eSn **Sn** **06 22 46.7 -0.8**
RETA Reutte 5.17 341 ePn **Pn** **06 21 51.2 +3.2**
comp=N,0.6nm,0.2s
RETA eSn **Sn** **06 22 48.6 +1.0**
comp=N,4.6nm,0.5s
DAVA Damuels 5.24 334 *i* Pn **Pn** **06 21 53.0 +4.0**
comp=N,7.2nm,0.4s,SNR=5.3
DAVA eSn **Sn** **06 22 50.3 +0.9**
comp=N,7.1nm,0.5s
MOA Molln 5.29 8 ePn **Pn** **06 21 52.6 +3.0**
MOA eSn **Sn** **06 22 51.6 +1.3**
MOA Molln 5.29 8 *i* Pn **Pn** **06 21 52.8 +3.2**
comp=N,4.1nm,0.3s,SNR=6.6
MOA eSn **Sn** **06 22 52.1 +1.7**
comp=N,3.5nm,0.4s
BNI Bardonecchia 5.32 299 P **Pb** **06 21 59.7 -4.1**
FRGS Fruska Gora 5.40 60 ePn Pn 06 21 55.7 +4.6
TRUS Trudelj 5.48 70 ePn **Pn** **06 21 53.5 +1.3**
LPG La Plagne 5.48 304 eP **Pn** **06 21 55.5 +3.0**
LPG eSn **Sn** **06 22 50.5 -4.9**
comp=N,2.2nm,0.3s
LPL La Plagne 5.50 304 eP **Pn** **06 21 55.4 +2.7**
LPL eSn **Sn** **06 22 50.9 -4.9**
comp=N,3.1nm,0.5s
RONA Rosalia, Austr 5.53 22 ePn **Pn** **06 21 54.7 +1.7**
comp=N,1.5nm,0.2s
RONA eSn **Sn** **06 22 55.2 -1.2**
comp=N,1.4nm,0.4s
GRUS Gruza 5.62 74 ePn **Pn** **06 21 55.3 +1.1**
GRUS eSn **Sn** **06 22 59.8 +1.2**
CONA Conrad Observa 5.63 18 *i* Pn **Pn** **06 21 56.1 +1.7**
comp=N,0.5nm,0.2s,SNR=7.3
CONA eSn **Sn** **06 22 58.2 -0.7**
comp=N,2.9nm,0.5s
SMRF Simiane la Rot 5.74 286 eP **Pn** **06 21 58.9 +3.1**
ORIF Oris-en-Rattie 5.79 296 eP **Pn** **06 22 00.8 +4.2**
SELS Selova 5.83 81 ePn **Pn** **06 21 58.8 +1.7**
SELS eSn **Sn** **06 23 03.6 -0.2**
GERES GERESS Array B 6.24 3 Pn **Pn** **06 22 03.4 +0.7**
comp=N,0.3nm,0.3s,baz=184,slow=13,SNR=11
GERES Sn **Sn** **06 23 13.6 -0.4**
comp=N,1.1nm,0.3s,baz=180,slow=27,SNR=1.8
comp=N,0.9nm,0.4s
CKRC Cesky Krumlov 6.25 7 eSN **Sn** **06 23 12.8 -1.3**
BARS Barje 6.34 85 ePn **Pn** **06 22 04.6 +0.6**
CABF La Chapelle 6.47 311 eP **Pn** **06 22 08.8 +2.9**
CABF eSn **Sn** **06 23 14.0 -5.5**
comp=N,11nm,0.8s
KHC Kasperske Hory 6.52 2 ePN **Pn** **06 22 08.2 +1.6**
KHC eSN **Sn** **06 23 19.4 -1.4**
PRVS Prvonek 6.54 88 ePn **Pn** **06 22 08.3 +1.5**
PRVS eSn **Sn** **06 23 20.1 -1.2**
PRVS Prvonek 6.54 88 eSn **Sn** **06 23 21.5 +0.2**
VIVF Saint-Julien-l 6.58 293 eP **Pn** **06 22 10.6 +3.2**
VIVF eSn **Sn** **06 23 16.5 -5.7**
comp=N,0.7nm,0.3s
ZAGS Zajecar 6.70 77 ePn **Pn** **06 22 08.9 0.0**
ZAGS eSn **Sn** **06 23 24.2 -0.8**
BOSS Bosilegrad 6.84 88 ePn **Pn** **06 22 10.6 -0.3**
HINF Hinteralfeld 6.87 321 eP **Pn** **06 22 14.1 +2.7**
HINF eSn **Sn** **06 23 23.5 -5.9**
comp=N,6.6nm,0.5s
ZAPS Zavoj 6.94 81 eSn **Sn** **06 23 30.7 -0.4**
LASF Ste Croix 6.98 285 eP **Pn** **06 22 15.4 +2.6**
LASF eSn **Sn** **06 23 25.8 -6.2**
comp=N,1.0nm,0.5s
VYHS Vyhne 7.08 32 ePN **Pn** **06 22 15.9 +1.7**
CDF Champ du Feu 7.14 326 ePn **Pn** **06 22 17.3 +2.2**
CDF eSn **Sn** **06 23 30.0 -6.1**
comp=N,5.9nm,0.6s
HAU Haudompre 7.25 320 eP **Pn** **06 22 18.8 +2.4**
HAU eSn **Sn** **06 23 32.5 -6.0**
comp=N,11nm,0.3s
KEST Kesra 7.50 205 Pn Pn 06 22 25.3 +5.3
comp=N,0.7nm,0.3s,baz=22,slow=5.4,SNR=5.2
KEST LR LR 06 24 55.9
comp=N,61nm,21.5s,baz=50,slow=34
comp=N,3.0nm,0.5s
PAGF Fort de Pagny 7.93 321 eP **Pn** **06 22 29.2 +3.4**
SFTF Sexfontaines 8.02 317 eP **Pn** **06 22 30.5 +3.4**
MTLF Montolieu 8.10 279 eP **Pn** **06 22 31.2 +3.0**
LOR Lormes 8.11 308 eP **Pn** **06 22 31.6 +3.4**
baz=123
LOR eSn **Sn** **06 23 53.0 -6.7**
comp=N,1.6nm,0.5s
MEZF Maizieres J'vi 8.21 319 ePn **Pn** **06 22 27.2 -2.5**
CAF Calviac 8.40 290 eP **Pn** **06 22 35.2 +3.0**
CAF eSn **Sn** **06 23 59.9 -6.9**
comp=N,0.9nm,0.4s
CLL Collm 8.70 359 eSn Sn 06 24 00.0 -14
CLL *ex* x 06 24 15.0
CLL *ex* x 06 24 34.0
CLL eSg **Sg** **06 25 05.0 -4.9**
RJF Les Rejaudoux 8.86 292 ePn **Pn** **06 22 36.2 -2.4**
RJF Les Rejaudoux 8.86 292 eP **Pn** **06 22 42.0 +3.4**
RJF eSn **Sn** **06 24 10.8 -7.4**
comp=N,1.0nm,0.3s
MFF Saint Martin d 10.33 297 eP **Pn** **06 23 02.3 +3.6**
MFF eSn **Sn** **06 24 45.9 -8.3**
comp=N,0.5nm,0.3s

FINES FINESS Array B 20.38 18 P Pn 06 25 08.3 -0.8
comp=N,1.3nm,0.7s,baz=193,slow=11,SNR=1.0
comp=N,1.3nm,0.7s
TORD Torodi Ar. Bea 31.01 202 P P 06 26 53.2 +5.1
comp=N,2.5nm,0.3s,baz=25,slow=9.1,SNR=1.7
comp=N,2.5nm,0.3s

ROM 27 06:40:07.4±0.1, 42°.593N±0°.004×13°.274E±0°.004, h10km, ML2.2/8, 6C-3D, Error ellipse: s-maj=0.4km s-min=0.2km az=160.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
RM33	**Pellescritta (**	**0.09**	**208**	⇑P	Pg	06 40 10.4	+0.4
RM33				S	Sg	06 40 12.2	+0.4
RM33				AML	AML		
	comp=E,634μm,0.6s						
RM33				AML	AML		
	comp=N,360μm,0.8s						
RM33				AML	AML		
	comp=E,632μm,0.6s						
RM33				AML	AML		
	comp=N,376μm,0.6s						
RM33				AML	AML		
	comp=N,1750μm,0.4s						
RM33				AML	AML		
	comp=N,1740μm,0.4s						
RM33				AML	AML		
	comp=E,1480μm,0.8s						
RM33				AML	AML		
	comp=E,1395μm,0.8s						
RM33				AML	AML		
	comp=N,1750μm,0.4s						
CAMP	**Campotosto**	**0.12**	**120**	⇑P	Pg	06 40 10.7	+0.5
CAMP				S	Sg	06 40 12.9	+0.5
CAMP				AML	AML		
	comp=N,582μm,0.6s						
CAMP				AML	AML		
	comp=N,581μm,0.6s						
CAMP				AML	AML		
	comp=E,492μm,0.8s						
T1243	**Rocca Santa Ma**	**0.17**	**51**	⇑P	Pg	06 40 11.5	+0.5
T1243				S	Sg	06 40 14.6	+1.0
T1243				AML	AML		
	comp=E,444μm,0.6s						
T1243				AML	AML		
	comp=N,475μm,0.9s						
T1243				AML	AML		
	comp=E,15500μm,0.3s						
T1243				AML	AML		
	comp=E,15500μm,0.3s						
T1243				AML	AML		
	comp=N,23200μm,0.2s						
T1243				AML	AML		
	comp=N,23250μm,0.2s						
LNSS	**Leonessa**	**0.17**	**273**	⇑P	Pg	06 40 11.7	+0.5
LNSS				S	Sg	06 40 14.8	+1.1
LNSS				AML	AML		
	comp=E,265μm,0.2s						
LNSS				AML	AML		
	comp=N,233μm,0.4s						
LNSS				AML	AML		
	comp=E,9765μm,0.3s						
LNSS				AML	AML		
	comp=N,13000μm,0.3s						
LNSS				AML	AML		
	comp=E,9715μm,0.3s						
TERO	**Teramo**	**0.25**	**83**	⇓P	Pg	06 40 12.8	+0.3
TERO				AML	AML		
	comp=E,106μm,0.4s						
TERO				AML	AML		
	comp=N,102μm,0.3s						
TERO				AML	AML		
	comp=E,850μm,0.3s						
TERO				AML	AML		
	comp=E,850μm,0.3s						
TERO				AML	AML		
	comp=N,1415μm,0.5s						
GIGS	**Gran Sasso**	**0.26**	**123**	P	Pg	06 40 13.1	+0.4
GIGS				AML	AML		
	comp=E,24μm,0.3s						
GIGS				AML	AML		
	comp=N,16μm,1.5s						
GIGS				AML	AML		
	comp=E,146μm,0.9s						
GIGS				AML	AML		
	comp=N,101μm,1.1s						
GIGS				AML	AML		
	comp=E,146μm,0.9s						
NRCA	**Norcia**	**0.27**	**334**	P	Pg	06 40 13.5	+0.6
NRCA				AML	AML		
	comp=E,40100μm,0.8s						
NRCA				AML	AML		
	comp=E,42900μm,0.8s						
NRCA				AML	AML		
	comp=N,37700μm,0.1s						
NRCA				AML	AML		
	comp=N,33900μm,0.1s						
MC2	**Monte Cornacci**	**0.33**	**349**	P	Pb	06 40 15.6	+0.1
MC2				AML	AML		
	comp=E,10850μm,0.2s						
MC2				AML	AML		
	comp=N,10800μm,0.2s						
MC2				AML	AML		
	comp=N,10760μm,0.2s						
MC2				AML	AML		
	comp=E,10870μm,0.2s						
ARRO	**Arrone**	**0.38**	**268**	⇑P	Pg	06 40 15.2	+0.4
ARRO				AML	AML		
	comp=E,841μm,0.2s						
ARRO				AML	AML		
	comp=N,935μm,0.2s						
ARRO				AML	AML		
	comp=E,840μm,0.2s						
ARRO				AML	AML		
	comp=N,934μm,0.2s						
FDMO	**Fiordimonte**	**0.46**	**343**	P	Pg	06 40 16.7	+0.2
FDMO				AML	AML		
	comp=N,2300μm,1.0s						
FDMO				AML	AML		
	comp=E,1935μm,1.0s						
VCEL	**Villa Celiera**	**0.46**	**115**	⇓P	Pb	06 40 17.4	-0.4
VCEL				AML	AML		
	comp=E,254μm,0.8s						
VCEL				AML	AML		
	comp=N,329μm,0.6s						
CSP1	**Cessapalombo**	**0.50**	**354**	⇑P	Pg	06 40 17.7	+0.5
ASSB	**Assisi San Ben**	**0.64**	**315**	P	Pg	06 40 20.2	+0.4
ASSB				AML	AML		
	comp=E,1090μm,1.3s						
ASSB				AML	AML		
	comp=N,776μm,0.3s						
GIUL	**Giuliano Di Ro**	**1.03**	**181**	⇓P	Pn	06 40 29.2	+1.2
LIK	**San Giovanni I**	**1.11**	**169**	S	Sn	06 40 46.0	+1.7

ROM 27 06:41:03.4±0.1, 42°.781N±0°.003×13°.164E±0°.007, h10km, ML2.5/40, Error ellipse: s-maj=0.6km s-min=0.2km az=90.0

ISC 27 06:41:03.7±0.8, 42°.78N±0°.02×13°.15E±0°.02, h11km±5km, n58, σ0.96/77, 24C-8D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
NRCA	**Norcia**	**0.06**	**333**	P	**Pg**	**06 41 06.0**	**-0.1**
NRCA				S	**Sg**	**06 41 07.5**	**-0.4**
NRCA				AML	AML		
	comp=E,40050μm,0.8s						
NRCA				AML	AML		
	comp=E,40050μm,0.8s						
NRCA				AML	AML		
	comp=N,33900μm,0.1s						
NRCA				AML	AML		
	comp=N,37700μm,0.1s						
NRCA				AML	AML		
	comp=E,40100μm,0.8s						
NRCA				AML	AML		
	comp=N,33850μm,0.1s						
NRCA				AML	AML		
	comp=E,42900μm,0.8s						
MC2	**Monte Cornacci**	**0.13**	**13**	P	**Pg**	**06 41 07.2**	**0.0**
MC2				S	**Sg**	**06 41 09.8**	**+0.1**
MC2				AML	AML		
	comp=N,10750μm,0.2s						
MC2				AML	AML		
	comp=E,10850μm,0.2s						
MC2				AML	AML		
	comp=N,10800μm,0.2s						
MC2				AML	AML		
	comp=N,10760μm,0.2s						
MC2				AML	AML		
	comp=E,10870μm,0.2s						
MMO1	**Montemonaco**	**0.17**	**48**	⇑P	**Pg**	**06 41 07.6**	**0.0**
MMO1				S	**Sg**	**06 41 10.5**	**0.0**
MMO1				AML	AML		
	comp=N,4530μm,0.8s						
MMO1				AML	AML		
	comp=N,4535μm,0.8s						
MMO1				AML	AML		
	comp=E,5490μm,0.5s						
LNSS	**Leonessa**	**0.20**	**204**	⇑P	**Pb**	**06 41 08.5**	**-0.9**
LNSS				S	**Sg**	**06 41 12.0**	**+1.0**
LNSS				AML	AML		
	comp=N,13000μm,0.3s						
LNSS				AML	AML		
	comp=E,9765μm,0.3s						
LNSS				AML	AML		
	comp=E,9715μm,0.3s						
FDMO	**Fiordimonte**	**0.26**	**350**	⇑P	**Pg**	**06 41 09.2**	**+0.2**
FDMO				S	**Sg**	**06 41 13.3**	**+0.7**
FDMO				AML	AML		
	comp=E,1935μm,1.0s						
FDMO				AML	AML		
	comp=N,2300μm,1.0s						
RM33	**Pellescritta (**	**0.28**	**170**	⇑P	**Pg**	**06 41 09.6**	**+0.2**
RM33				S	**Sb**	**06 41 14.3**	**-1.2**
RM33				AML	AML		
	comp=N,1750μm,0.4s						
RM33				AML	AML		
	comp=E,1390μm,0.8s						
RM33				AML	AML		
	comp=N,1750μm,0.4s						
RM33				AML	AML		
	comp=E,1395μm,0.8s						
RM33				AML	AML		
	comp=N,1740μm,0.4s						
RM33				AML	AML		
	comp=E,1480μm,0.8s						
CESI	**CESI - Serrava**	**0.28**	**321**	P	**Pg**	**06 41 09.9**	**+0.3**
CESI				S	**Sg**	**06 41 14.0**	**+0.5**
CESI				AML	AML		
	comp=E,3890μm,0.7s						
CESI				AML	AML		
	comp=N,5830μm,0.3s						
CSP1	**Cessapalombo**	**0.31**	**8**	⇑P	**Pg**	**06 41 10.1**	**0.0**
CSP1				S	**Sb**	**06 41 15.2**	**-1.3**
CSP1				AML	AML		
	comp=E,2995μm,0.4s						
CSP1				AML	AML		
	comp=N,3550μm,1.0s						
CSP1				AML	AML		
	comp=N,3545μm,1.0s						
CSP1				AML	AML		
	comp=E,2990μm,0.4s						
GUMA	**Gualdo di Mace**	**0.31**	**26**	P	**Pb**	**06 41 10.4**	**-0.9**
GUMA				S	**Sb**	**06 41 15.7**	**-0.7**
GUMA				AML	AML		
	comp=N,7200μm,0.7s						
GUMA				AML	AML		
	comp=E,6430μm,0.5s						
CAMP	**Campotosto**	**0.31**	**142**	⇑P	**Pg**	**06 41 10.1**	**0.0**
CAMP				S	**Sg**	**06 41 14.8**	**+0.4**
CAMP				AML	AML		
	comp=N,582μm,0.6s						
CAMP				AML	AML		
	comp=N,581μm,0.6s						
CAMP				AML	AML		
	comp=E,494μm,0.6s						
ARRO	**Arrone**	**0.35**	**234**	⇑P	**Pg**	**06 41 11.1**	**+0.4**
ARRO				AML	AML		
	comp=E,841μm,0.2s						
ARRO				AML	AML		
	comp=N,932μm,0.2s						
ARRO				AML	AML		
	comp=N,935μm,0.2s						
ARRO				AML	AML		
	comp=E,840μm,0.2s						
ARRO				AML	AML		
	comp=N,934μm,0.2s						
TERO	**Teramo**	**0.37**	**115**	⇑P	**Pg**	**06 41 10.9**	**-0.2**
TERO				AML	AML		
	comp=E,850μm,0.3s						
TERO				AML	AML		
	comp=E,850μm,0.3s						
TERO				AML	AML		
	comp=N,1415μm,0.5s						
SEF1	**Sefro**	**0.39**	**338**	P	**Pg**	**06 41 11.7**	**+0.1**
SEF1				S	**Sb**	**06 41 18.0**	**-0.8**
OFFI	**Offida**	**0.42**	**69**	⇑P	**Pb**	**06 41 12.8**	**-0.4**
OFFI				AML	AML		
	comp=E,1155μm,0.4s						
OFFI				AML	AML		
	comp=N,1190μm,0.5s						
ASSB	**Assisi San Ben**	**0.44**	**306**	⇑P	**Pg**	**06 41 12.6**	**+0.1**
ASSB				AML	AML		
	comp=E,1090μm,1.3s						
ASSB				AML	AML		
	comp=N,776μm,0.3s						
CESX	**Cesi**	**0.45**	**248**	⇑P	**Pg**	**06 41 12.8**	**+0.1**
CESX				AML	AML		
	comp=E,666μm,1.1s						
CESX				AML	AML		
	comp=N,781μm,0.3s						
CESX				AML	AML		
	comp=E,666μm,1.1s						
GIGS	**Gran Sasso**	**0.46**	**137**	⇓P	**Pg**	**06 41 12.3**	**-0.4**
GIGS				AML	AML		
	comp=N,120μm,0.7s						
GIGS				AML	AML		
	comp=E,146μm,0.9s						
GIGS				AML	AML		
	comp=E,146μm,0.9s						
GIGS				AML	AML		
	comp=N,120μm,0.7s						
SNTG	**Esanatoglia**	**0.50**	**342**	P	**Pg**	**06 41 13.2**	**-0.2**
SNTG				S	**Sb**	**06 41 21.2**	**-0.5**
SNTG				AML	AML		
	comp=E,444μm,1.6s						
SNTG				AML	AML		
	comp=N,560μm,0.2s						
FIAM	**Fiamignano**	**0.52**	**183**	⇑P	**Pg**	**06 41 13.6**	**-0.2**
FIAM				S	**Sb**	**06 41 23.0**	**+0.7**
FIAM				AML	AML		
	comp=N,508μm,0.6s						
FIAM				AML	AML		
	comp=E,524μm,0.5s						
EL6	**Elcito**	**0.55**	**356**	P	**Pg**	**06 41 14.3**	**-0.1**
EL6				S	**Sb**	**06 41 22.8**	**-0.4**
EL6				AML	AML		
	comp=E,1089μm,0.1s						
EL6				AML	AML		
	comp=N,1390μm,1.1s						
EL6				AML	AML		
	comp=E,1090μm,0.1s						
EL6				AML	AML		
	comp=N,1388μm,1.1s						
ATCC	**AVT- Casa Cast**	**0.55**	**317**	⇑P	**Pg**	**06 41 14.6**	**+0.1**
ATCC				AML	AML		
	comp=E,627μm,0.8s						
ATCC				AML	AML		
	comp=N,574μm,0.3s						
ATCC				AML	AML		
	comp=N,574μm,0.3s						
FOSV	**Fossato di Vic**	**0.58**	**331**	P	**Pg**	**06 41 15.1**	**-0.1**
FOSV				S	**Sb**	**06 41 24.1**	**-0.2**
FOSV				AML	AML		
	comp=E,307μm,0.7s						
FOSV				AML	AML		
	comp=N,402μm,0.4s						
FAGN	**Fagnano**	**0.61**	**148**	⇑P	**Pb**	**06 41 16.2**	**-0.2**
FAGN				AML	AML		
	comp=N,432μm,0.5s						
FAGN				AML	AML		
	comp=E,572μm,0.6s						
VCEL	**Villa Celiera**	**0.64**	**127**	⇑P	**Pb**	**06 41 16.3**	**-0.7**
VCEL				AML	AML		
	comp=E,359μm,0.4s						
VCEL				AML	AML		
	comp=N,351μm,0.4s						
MURB	**Monte Urbino**	**0.66**	**317**	⇑P	**Pb**	**06 41 17.1**	**-0.2**
MURB				AML	AML		
	comp=E,1260μm,0.3s						

MURB				AML	AML			
	comp=N,1058μm,1.1s							
ATTE	**AVT- Monte Tez**	**0.72**	**306**	⇑P	**Pn**	**06 41 19.0**	**-0.8**	
ATTE				AML	AML			
	comp=N,224μm,0.4s							
ATTE				AML	AML			
	comp=E,264μm,0.4s							
ATFO	**Monte Foce - G**	**0.72**	**324**	⇑P	**Pg**	**06 41 17.6**	**-0.1**	
ATFO				S	**Sn**	**06 41 30.0**	**-0.9**	
ATFO				AML	AML			
	comp=E,234μm,0.8s							
ATFO				AML	AML			
	comp=N,239μm,0.5s							
T0110	**Collepietro**	**0.73**	**140**	⇓P	**Pg**	**06 41 17.5**	**-0.3**	
T0110				AML	AML			
	comp=E,329μm,0.3s							
T0110				AML	AML			
	comp=N,310μm,0.5s							
ARVD	**Arcevia**	**0.73**	**348**	⇓P	**Pg**	**06 41 17.7**	**-0.2**	
ARVD				S	**Sn**	**06 41 30.0**	**-1.1**	
ARVD				AML	AML			
	comp=E,226μm,1.5s							
ARVD				AML	AML			
	comp=N,169μm,0.6s							
MGAB	**Montegabbione**	**0.77**	**280**	⇑P	**Pg**	**06 41 18.8**	**+0.2**	
MGAB				AML	AML			
	comp=N,784μm,1.0s							
MGAB				AML	AML			
	comp=N,875μm,1.0s							
MGAB				AML	AML			
	comp=E,722μm,0.8s							
MGAB				AML	AML			
	comp=E,763μm,0.4s							
FRON	**Frontone**	**0.80**	**337**	⇑P	**Pg**	**06 41 18.9**	**-0.2**	
FRON				AML	AML			
	comp=E,196μm,0.6s							
FRON				AML	AML			
	comp=N,308μm,1.5s							
ATVO	**AVT- Monte Val**	**0.81**	**318**	⇓P	**Pg**	**06 41 19.3**	**-0.1**	
ATVO				AML	AML			
	comp=N,183μm,0.7s							
ATVO				AML	AML			
	comp=E,178μm,0.5s							
CERT	**Cerreto**	**0.84**	**188**	⇓P	**Pn**	**06 41 21.1**	**-0.4**	
CERT				AML	AML			
	comp=E,282μm,0.5s							
CERT				AML	AML			
	comp=N,232μm,0.3s							
COR1	**Corinaldo**	**0.85**	**353**	⇑P	**Pn**	**06 41 21.4**	**-0.2**	
ATPI	**Pietralunga -**	**0.86**	**321**	⇑P	**Pg**	**06 41 20.3**	**-0.1**	
ATPI				AML	AML			
	comp=N,140μm,1.4s							
ATPI				AML	AML			
	comp=E,158μm,0.6s							
PIEI	**Pieia**	**0.88**	**329**	P	**Pg**	**06 41 20.6**	**-0.1**	
PIEI				AML	AML			
	comp=N,148μm,0.8s							
PIEI				AML	AML			
	comp=E,172μm,0.9s							
MPAG	**Monte Paganucc**	**0.89**	**342**	P	**Pg**	**06 41 20.8**	**-0.2**	
MPAG				S	**Sn**	**06 41 36.0**	**+0.8**	
MPAG				AML	AML			
	comp=E,286μm,0.3s							
MPAG				AML	AML			
	comp=N,168μm,0.7s							
SACS	**San Casciano d**	**0.91**	**275**	⇑P	**Pb**	**06 41 21.6**	**0.0**	
SACS				AML	AML			
	comp=E,174μm,0.6s							
SACS				AML	AML			
	comp=N,226μm,1.2s							
FSSB	**Fossombrone**	**0.95**	**344**	⇑P	**Pg**	**06 41 21.7**	**-0.3**	
FSSB				S	**Sn**	**06 41 37.0**	**+0.5**	
FSSB				AML	AML			
	comp=N,942μm,0.3s							
FSSB				AML	AML			
	comp=E,735μm,0.3s							
INTR	**Introdacqua**	**0.95**	**144**	P	**Pg**	**06 41 21.2**	**-0.8**	
INTR				AML	AML			
	comp=E,91μm,0.6s							
INTR				AML	AML			
	comp=N,230μm,1.0s							
INTR				AML	AML			
	comp=E,90μm,0.6s							
CAFI	**Castiglion Fio**	**1.02**	**303**	⇓P	**Pn**	**06 41 23.8**	**-0.2**	
CAFI				AML	AML			
	comp=N,166μm,0.9s							
CAFI				AML	AML			
	comp=E,172μm,0.5s							
PE3	**Peglio**	**1.03**	**333**	⇓P	**Pn**	**06 41 24.7**	**+0.6**	
TOLF	**Tolfa**	**1.11**	**230**	P	**Pb**	**06 41 23.6**	**-1.4**	
TOLF				AML	AML			
	comp=N,98μm,0.3s							
TOLF				AML	AML			
	comp=E,110μm,0.7s							
CRE	**Caprese Michel**	**1.21**	**314**	P	**Pg**	**06 41 28.4**	**+1.4**	
GIUL	**Giuliano Di Ro**	**1.23**	**176**	P	**Pg**	**06 41 28.5**	**+1.2**	
DUGI	**Dugi Otok**	**1.84**	**48**	*e*Pn	**Pn**	**06 41 35.6**	**+0.4**	
VIRC	**Vir**	**2.05**	**42**	*e*Pn	**Pn**	**06 41 38.6**	**+0.6**	
BRJN	**Brijuni**	**2.17**	**11**	*e*Pn	**Pn**	**06 41 39.6**	**0.0**	
A253A	**Karojba, Istri**	**2.56**	**11**	*e*Pn	**Pn**	**06 41 43.0**	**-2.0**	
UDBI	**Udbina**	**2.58**	**47**	*e*Pn	**Pn**	**06 41 47.1**	**+1.7**	
KIJV	**Kijevo**	**2.67**	**62**	*e*Pn	**Pn**	**06 41 48.5**	**+1.9**	
VENL	**Venezia Lido**	**2.69**	**348**	⇓P	**Pn**	**06 41 44.5**	**-2.3**	
LSTV	**Lastovo**	**2.76**	**89**	*e*Pn	**Pn**	**06 41 48.5**	**+0.8**	
OBKA	**Obir**	**3.86**	**15**	*e*Pn	**Pn**	**06 42 05.5**	**+2.5**	
	comp=E,0.5nm,0.2s							
MYKA	**Terra Mystica**	**3.86**	**5**	*e*Pn	**Pn**	**06 42 06.1**	**+3.1**	
	comp=E,1.6nm,0.4s							
ABTA	**Abfaltersbach**	**3.99**	**354**	*e*Pn	**Pn**	**06 42 06.7**	**+1.9**	
	comp=E,3.1nm,0.5s							
SOKA	**Soboth**	**4.12**	**18**	*e*Pn	**Pn**	**06 42 06.7**	**+0.1**	
	comp=E,0.3nm,0.2s							
KBA	**Koelnbreinsper**	**4.30**	**2**	*e*Pn	**Pn**	**06 42 12.3**	**+3.2**	
	comp=E,0.6nm,0.3s							

JMA ***27*** *06:59:12.8±0.1,38.°8N×0.°3×140.°3E±0.°5,h131km, MV3.2/40,NORTHERN YAMAGATA PREF*
IDC ***27*** *06:59:13.0±2.1,38.°75N×140.°06E,h138km±19km, mb3.3/10,mbtmp3.7/13,MS3.1/1,Error ellipse: s-maj=25.9km s-min=13.9km az=67.0*
ISC 27 06:59:12.4±0.7,38.°77N±0.°05×140.°25E±0.°05,h137km±5km, n27,σ0°90/41,mb3.6/10,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.17**	**30**	P			**Pn**	**06 59 30.6**	**-0.4**
JYK				S			**Sn**	**06 59 43.8**	**-1.4**
JYYZ	**Yamagatayuza**	**0.35**	**314**	P			**Pn**	**06 59 31.5**	**0.0**
JYYZ				*e*S			**Sn**	**06 59 46.1**	**+0.1**
JYA	**Atsumi**	**0.46**	**247**	*i* P			**Pn**	**06 59 31.9**	**-0.1**
JYA				S			**Sn**	**06 59 46.1**	**-0.7**
JOU	**Okura**	**0.52**	**141**	*i* P			**Pn**	**06 59 32.6**	**+0.2**
JOU				S			**Sn**	**06 59 47.7**	**+0.2**
JYS	**Shirataka**	**0.57**	**195**	*i* P			**Pn**	**06 59 33.0**	**+0.3**
JYS				S			**Sn**	**06 59 48.2**	**+0.2**
JRG	**Rokugo**	**0.69**	**25**	*i* P			**Pn**	**06 59 33.1**	**-0.4**
JRG				S			**Sn**	**06 59 48.7**	**-0.7**
JMK	**Ichinoseki**	**0.78**	**76**	*i* P			**Pn**	**06 59 33.7**	**-0.3**
JAW	**Awa shima**	**0.85**	**248**	*i* P			**Pn**	**06 59 34.6**	**0.0**
JAW				*e*S			**Sn**	**06 59 51.0**	**-0.4**
JIO	**Ouri**	**0.92**	**110**	*i* P			**Pn**	**06 59 34.9**	**-0.3**
JIO				S			**Sn**	**06 59 51.8**	**-0.7**
JOM	**Ohasama**	**1.07**	**49**	*i* P			**Pn**	**06 59 36.5**	**-0.1**
JOM				*e*S			**Sn**	**06 59 54.6**	**-0.3**
JNS	**Sasagawa**	**1.20**	**218**	P			**Pn**	**06 59 38.1**	**+0.3**
JNS				*e*S			**Sn**	**06 59 57.5**	**+0.3**
JFT	**Otama**	**1.25**	**177**	P			**Pn**	**06 59 39.0**	**+0.6**
JFT				S			**Sn**	**06 59 59.3**	**+1.1**
JSD	**Sado**	**1.73**	**245**	P			**Pn**	**06 59 43.5**	**0.0**
JSD				*e*S			**Sn**	**07 00 07.7**	**+0.4**
JANG	**Nango**	**1.87**	**31**	P			**Pn**	**06 59 45.1**	**-0.1**
JANG				*e*S			**Sn**	**07 00 09.6**	**-0.8**
MJAR	**Matsushiro Arr**	**2.75**	**217**	P			**Pn**	**06 59 55.4**	**-0.8**
	4.6nm,0.6s,baz=24,slow=16,SNR=13								
JHJ	**Hachijo jima 2**	**5.65**	**184**	P			**Pn**	**07 00 33.6**	**-0.7**
	43nm,0.6s,baz=68,slow=19,SNR=1.9								
JHJ				S			**Sn**	**07 01 35.2**	**-3.1**
	45nm,0.4s,baz=72,slow=22,SNR=6.2								
USRK	**Ussuriysk Ar.**	**8.23**	**314**	P			**Pn**	**07 01 09.9**	**+1.0**
	2.6nm,0.7s,baz=132,slow=15,SNR=5.0								
SONM	**Songino Array**	**26.07**	**301**	P			**P**	**07 04 33.2**	**0.0**
	0.5nm,0.4s,baz=124,slow=13,SNR=1.9								
	0.5nm,0.4s								

ZALV	**Zalesovo Beam**	**40.07**	**311**	P		**P**	**07 06 31.7**	**-2.3**
	1.1nm,0.6s,baz=74,slow=7.7,SNR=2.8							
	1.1nm,0.6s							
MKAR	**Makanchi Array**	**42.43**	**300**	P		**P**	**07 06 52.1**	**-1.3**
	0.5nm,0.6s,baz=87,slow=9.6,SNR=6.3							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**44.22**	**306**	P		**P**	**07 07 07.5**	**-0.2**
	1.5nm,0.4s,baz=82,slow=8.3,SNR=20							
	1.5nm,0.4s							
ILAR	**Eielson Array**	**48.53**	**33**	P		**P**	**07 07 41.9**	**+0.8**
	0.2nm,0.5s,baz=259,slow=6.0,SNR=2.2							
	0.2nm,0.5s							
BVAR	**Borovoye Array**	**48.73**	**311**	P		**P**	**07 07 42.8**	**-0.1**
	0.9nm,0.4s,baz=88,slow=7.9,SNR=6.1							
	0.9nm,0.4s							
AKTO	**Aktyubinsk**	**56.84**	**311**	P		**P**	**07 08 42.2**	**-0.2**
	0.7nm,0.3s,baz=117,slow=3.5,SNR=2.8							
AKTO				LR		LR	07 35 32.3	
	comp=Z,16nm,19.1s,baz=70,slow=38							
	0.7nm,0.3s							
WRA	**Warramunga Arr**	**58.67**	**187**	P		**P**	**07 08 55.4**	**0.0**
	0.6nm,0.5s,baz=1.7,slow=7.4,SNR=15							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**62.40**	**187**	P		**P**	**07 09 21.5**	**+0.8**
	0.4nm,0.6s,baz=360,slow=7.0,SNR=7.2							
	0.4nm,0.6s							
NVAR	**Mina Array Bea**	**74.68**	**53**	P		**P**	**07 10 38.7**	**+1.6**
	0.2nm,0.6s,baz=319,slow=3.6,SNR=3.6							
	0.2nm,0.6s							

RSNC 27 07:02:01.7±1.1,6.°84N×73.°12W,h149km±4km,ML3.1, Mw3.5,2C-6D,Fault plane solution: NP1:ϕ88.00000°, δ54.00000°,λ-105.00000°,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**194**	⇓*i* P			Pn	07 02 22.0	-0.4
BARC				*e*S			Sn	07 02 37.7	-0.3
BARC				*i*				07 02 41.5	
	comp=Z,254nm,0.3s								
BRRC	**Barranca, Sant**	**0.64**	**295**	⇓*i* P			Pn	07 02 23.8	0.0
BRRC				*e*S			Sn	07 02 40.3	-0.3
BRRC				*i*				07 02 47.0	
	comp=Z,249nm,0.1s								
PAMC	**Pamplona, Colo**	**0.65**	**40**	⇓*i* P			Pn	07 02 24.7	+0.3
PAMC				*e*S			Sn	07 02 41.8	+0.2
PAMC				*i*				07 02 42.5	
	comp=Z,381nm,0.2s								
RUSC	**La Rusia**	**0.94**	**178**	⇓*i* P			Pn	07 02 26.1	-0.4
RUSC				*e*S			Sn	07 02 44.4	-0.9
RUSC				*i*				07 02 46.2	
	comp=Z,186nm,0.2s								
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	⇓*i* P			Pn	07 02 28.6	-1.2
PTBC				*e*S			Sn	07 02 49.5	-1.7
PTBC				*i*				07 02 52.2	
	comp=Z,209nm,0.2s								
TAMC	**Tame, Arauca**	**1.38**	**107**	⇓*i* P			Pn	07 02 30.4	+0.4
TAMC				*e*S			Sn	07 02 51.2	-0.4
TAMC				*i*				07 02 52.7	
	comp=Z,136nm,0.3s								
OCAC	**Ocana**	**1.41**	**352**	*e*P			Pn	07 02 29.9	-0.6
OCAC				*e*S			Sn	07 02 51.5	-1.0
OCAC				*i*				07 02 54.9	
	comp=Z,470nm,0.2s								
SPBC	**San Pablo de B**	**1.51**	**219**	*e*P			Pn	07 02 30.9	-0.5
SPBC				*e*S			Sn	07 02 53.1	-1.1
SPBC				*i*				07 03 00.2	
	comp=Z,256nm,0.2s								
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P			Pn	07 02 34.3	-0.6
ZARC				*e*S			Sn	07 03 00.0	-0.5
ZARC				*i*				07 03 06.0	
	comp=Z,369nm,0.4s								
NORC	**Norcasia**	**2.15**	**234**	*e*P			Pn	07 02 38.0	-0.6
NORC				*e*S			Sn	07 03 06.8	-0.2
NORC				*i*				07 03 12.6	
	comp=Z,128nm,0.4s								
CHIC	**Chingaza**	**2.28**	**195**	*e*P			Pn	07 02 40.5	0.0
CHIC				*e*S			Sn	07 03 09.5	-0.8
CHIC				*i*				07 03 13.7	
	comp=Z,84nm,0.4s								
ROSC	**El Rosal**	**2.31**	**211**	*e*P			Pn	07 02 41.9	+0.9
ROSC				*e*S			Sn	07 03 11.5	+0.4
ROSC				*i*				07 03 16.2	
	comp=Z,174nm,0.5s								
HELC	**Santa Helena**	**2.48**	**255**	*e*P			Pn	07 02 42.5	-0.3
HELC				*e*S			Sn	07 03 15.3	+0.8
HELC				*i*				07 03 21.4	
	comp=Z,123nm,0.5s								
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P			Pn	07 02 41.9	-1.7
UREC				*e*S			Sn	07 03 13.6	-2.2
UREC				*i*				07 03 27.6	
	comp=Z,128nm,0.3s								
SOCV	**Socops**	**2.67**	**57**	⇑*i* P			Pn	07 02 44.8	-0.1
SOCV				*e*S			Sn	07 03 17.0	-1.2
LL1C	**La Loma 1 Cana**	**2.72**	**351**	*e*S			Sn	07 03 20.2	+0.8
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*e*P			Pn	07 02 46.5	+0.1
GUY2C				*e*S			Sn	07 03 21.5	+0.8
GUY2C				*i*				07 03 33.5	
	comp=Z,80nm,0.6s								
VILC	**Villavicencio,**	**2.77**	**192**	*e*P			Pn	07 02 46.0	-0.2
VILC				*e*S			Sn	07 03 20.4	-0.3
VILC				*i*				07 03 26.0	
	comp=Z,92nm,0.4s								
PTGC	**Puerto Gaitan,**	**2.80**	**159**	*e*P			Pn	07 02 45.4	-1.2
PTGC				*e*S			Sn	07 03 18.9	-2.3
PTGC				*i*				07 03 21.6	
	comp=Z,64nm,0.5s								
LL6C	**La Loma 6 Bece**	**2.88**	**357**	*e*P			Pn	07 02 46.7	-0.9
LL6C				*e*S			Sn	07 03 21.3	-1.8
LL6C				*i*				07 03 23.8	
	comp=Z,23nm,0.5s								
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*e*P			Pn	07 02 49.8	+0.2
CBOC				*e*S			Sn	07 03 27.2	+0.6
CBOC				*i*				07 03 36.5	
	comp=Z,30nm,0.3s								
DBBC	**Dabeiba**	**3.07**	**274**	*e*P			Pn	07 02 49.6	-0.4
DBBC				*e*S			Sn	07 03 27.0	-0.4
DBBC				*i*				07 03 34.8	
	comp=Z,42nm,0.7s								
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P			Pn	07 02 52.2	+0.5
ARGC				*e*S			Sn	07 03 29.3	-1.0
ARGC				*i*				07 03 37.3	
	comp=Z,24nm,0.3s								
ANIL	**Santa Ana**	**3.25**	**224**	*e*P			Pn	07 02 53.1	+0.5
ANIL				*e*S			Sn	07 03 34.4	+2.4
PRAC	**Prado**	**3.57**	**210**	*e*P			Pn	07 02 55.5	-0.8
PRAC				*e*S			Sn	07 03 38.5	-0.3
PRAC				*i*				07 03 44.0	
	comp=Z,81nm,0.3s								
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P			Pn	07 02 56.3	-1.3
SJCC				*e*S			Sn	07 03 37.2	-3.7
SJCC				*i*				07 03 40.6	
	comp=Z,24nm,0.3s								
PLMC	**San Jos del P**	**3.68**	**239**	⇑*i* P			Pn	07 02 57.7	-0.2
PLMC				*e*S			Sn	07 03 40.5	-1.0
PLMC				*i*				07 03 49.8	
	comp=Z,23nm,0.2s								
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*e*P			Pn	07 03 02.1	-2.1
CRJC				*e*S			Sn	07 03 48.4	-4.4
CRJC				*i*				07 03 52.6	
	comp=Z,37nm,0.4s								
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P			Pn	07 03 05.0	-0.8
YOTC				*e*S			Sn	07 03 58.1	+2.4
GUVC	**San Jose del G**	**4.29**	**173**	*e*P			Pn	07 03 05.3	-0.6
GUVC				*e*S			Sn	07 03 54.6	-1.1
GUVC				*i*				07 04 02.4	
	comp=Z,24nm,0.2s								
CAPC	**Capurgana**	**4.56**	**293**	*e*P			Pn	07 03 07.1	-2.1
CAPC				*e*S			Sn	07 03 56.7	-5.2
CAPC				*i*				07 04 00.5	
	comp=Z,12nm,0.1s								
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P			Pn	07 03 09.2	-2.2
MACC				*e*S			Sn	07 04 01.5	-4.3
MACC				*i*				07 04 05.4	
	comp=Z,17nm,0.5s								
DABV	**Dabajuro**	**4.74**	**31**	*e*P			Pn	07 03 10.7	-1.1
DABV				*e*S			Sn	07 04 02.0	-4.3
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P			Pn	07 03 12.3	-2.3
URIC				*e*S			Sn	07 04 06.5	-5.0
URIC				*i*				07 04 07.9	
	comp=Z,5.6nm,0.4s								
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P			Pn	07 03 16.4	-1.5
GARC				*e*S			Sn	07 04 15.9	-1.5
GARC				*i*				07 04 19.6	
	comp=Z,23nm,0.2s								
POPC	**Popayan, Colom**	**5.55**	**220**	*e*P			Pn	07 03 21.3	-1.4
POPC				*e*S			Sn	07 04 25.7	-0.1
FLOC	**Florencia**	**5.80**	**206**	*e*P			Pn	07 03 24.7	-1.1
FLOC				*e*S			Sn	07 04 31.4	-0.2
BBAC	**Balboa, Cauca**	**6.31**	**221**	*e*P			Pn	07 03 32.8	0.0
BBAC				*e*S			Sn	07 04 42.2	-1.8
BBAC				*i*				07 04 49.9	
	comp=Z,3.5nm,0.9s								

IDC ***27*** *07:07:18.0±1.3,31.°47N×77.°71E,h0km,mb3.8/9, mbtmp3.7/11,ML3.3/2,MS3.5/1,Error ellipse: s-maj=41.3km s-min=17.6km az=56.0*
NDI ***27*** *07:07:20.2±1.5,31.°46N×77.°59E,h10km±13km,ML3.5*
ISC 27 07:07:18.8±1.8,31.°51N±0.°05×77.°67E±0.°07,h4km±13km, n18,σ0°84/22,mb3.6/9,Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**0.57**	**229**	*i* Pg			**Pg**	**07 07 30.1**	**+0.3**
SMLA				*i* Sg			**Sg**	**07 07 36.1**	**-1.1**
SMLA				IAML				07 07 37.9	
	comp=N,2μm,0.1s								
SMLA				IAML				07 07 38.1	
	comp=E,2μm,0.2s								
BHK	**Bhakra**	**1.08**	**266**	*i* Pg			**Pn**	**07 07 40.9**	**+0.3**
BHK				*i* Sg			**Sn**	**07 07 55.5**	**-0.6**
DDI	**Dehra Dun**	**1.23**	**164**	*i* Pg			**Pn**	**07 07 43.0**	**+0.3**
DDI				*i* Sg			**Sn**	**07 08 00.7**	**+0.9**
DDI				IAML				07 08 05.5	
	comp=N,2μm,0.3s								
DDI				IAML				07 08 05.7	
	comp=E,1μm,0.2s								
KKR	**Kurukshetra**	**1.71**	**206**	*i* Pg			**Pg**	**07 07 51.4**	**-0.1**
KKR				*i* Sg			**Sg**	**07 08 13.6**	**0.0**
THN	**Thein Dam**	**1.90**	**300**	*i* Pg			**Pg**	**07 07 55.4**	**+0.1**
THN				*i* Sg			**Sg**	**07 08 20.6**	**+0.7**
KUDL	**Kundal**	**3.50**	**197**	*e*Pn			**Pn**	**07 08 15.4**	**+1.4**
MKAR	**Makanchi Array**	**15.68**	**12**	Pn			**Pn**	**07 11 00.3**	**-0.1**
	comp=E,0.2nm,0.3s,baz=194,slow=12,SNR=9.3								
	comp=E,0.5nm,0.5s								
KURBB	**Kurchatov Arra**	**19.11**	**2**	P			**P**	**07 11 42.5**	**+0.1**
	baz=186,slow=11,SNR=7.5								
	comp=E,0.4nm,0.5s								
BVAR	**Borovoye Array**	**22.15**	**348**	P			**P**	**07 12 14.8**	**-0.6**
	comp=E,1.0nm,0.5s,baz=172,slow=12,SNR=7.2								
	comp=E,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**23.01**	**11**	P			**P**	**07 12 24.6**	**+0.1**
	comp=E,0.8nm,0.4s,baz=175,slow=8.9,SNR=4.5								
	comp=E,0.8nm,0.4s								
CMAR	**Chiang Mai Arr**	**23.20**	**119**	P			**P**	**07 12 24.8**	**-2.0**
	comp=E,1.5nm,0.3s,baz=296,slow=9.4,SNR=6.0								
	comp=E,1.5nm,0.3s								
AKTO	**Aktyubinsk**	**23.91**	**328**	P			**P**	**07 12 32.2**	**-1.3**
	comp=E,1.0nm,0.7s,baz=340,slow=10,SNR=3.6								
	comp=E,1.0nm,0.7s								
SONM	**Songino Array**	**27.26**	**45**	P			**P**	**07 13 04.3**	**+0.2**
	comp=E,1.0nm,0.9s,baz=246,slow=10.0,SNR=5.1								
	comp=E,1.0nm,0.9s								
FINES	**FINESS Array B**	**44.68**	**328**	P			**P**	**07 15 33.0**	**+0.5**
	comp=E,2.6nm,0.8s,baz=129,slow=11,SNR=5.7								
	comp=E,2.6nm,0.8s								
ARCES	**ARCESS Array B**	**47.85**	**338**	P			**P**	**07 15 58.2**	**+0.9**
	comp=E,3.1nm,0.8s,baz=113,slow=8.0,SNR=10								
	comp=E,3.1nm,0.8s								
MBAR	**Mbarara**	**54.70**	**244**	LR			LR	07 43 17.1	
	comp=E,42nm,18.1s,baz=110,slow=40								
WRA	**Warramunga Arr**	**74.62**	**125**	P			**P**	**07 18 59.1**	**-0.3**
	comp=E,0.7nm,0.9s,baz=321,slow=5.5,SNR=3.6								
	comp=E,0.7nm,0.9s								
ASAR	**Alice Springs**	**76.84**	**128**	P			**P**	**07 19 12.6**	**+0.5**
	comp=E,0.5nm,0.8s,baz=320,slow=5.9,SNR=4.5								
	comp=E,0.5nm,0.8s								

IDC ***27*** *07:08:44.0±0.9,31.°39N×77.°60E,h0km,mb3.8/13, mbtmp3.8/15,ML3.4/2,Error ellipse: s-maj=30.5km s-min=15.4km az=48.0*
NDI ***27*** *07:08:46.1±2.0,31.°50N×77.°63E,h10km,ML3.7*
ISC 27 07:08:45.0±1.4,31.°53N±0.°04×77.°72E±0.°04,h4km±9km, n36,σ1°36/52,mb3.9/13,Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**0.62**	**230**	*i* Pg			**Pg**	**07 08 56.4**	**-0.6**
SMLA				*i* Sg			**Sg**	**07 09 03.3**	**-1.8**
SMLA				IAML				07 09 04.2	
	comp=E,3μm,0.3s								
SMLA				IAML				07 09 04.7	
	comp=N,2μm,0.3s								
BHK	**Bhakra**	**1.12**	**264**	*i* Pg			**Pb**	**07 09 07.2**	**+0.2**
BHK				*e*S			**Sb**	**07 09 22.2**	**+0.1**
BHK	**Bhakra**	**1.12**	**264**	*e*Pg			**Pn**	**07 09 08.1**	**+0.5**
BHK				*i* Sg			**Sn**	**07 09 25.0**	**+1.5**
BHK	**Bhakra**	**1.12**	**264**	*e*PN			**Pg**	**07 09 04.0**	**-2.6**
BHK				*e*SN			**Sb**	**07 09 22.2**	**+0.1**
DDI	**Dehra Dun**	**1.24**	**167**	*i* Pg			**Pn**	**07 09 09.9**	**+0.7**
DDI				*i* Sg			**Sg**	**07 09 26.2**	**+1.3**
DDI				IAML				07 09 32.1	
	comp=N,3μm,0.3s								
DDI				IAML				07 09 32.3	
	comp=E,5μm,0.4s								
KKR	**Kurukshetra**	**1.75**	**207**	*i* Pg			**Pb**	**07 09 17.9**	**+0.2**
KKR				*e*S			**Sn**	**07 09 39.8**	**+0.9**

comp=Z,11nm,1.7s,baz=95,slow=7.9
NOA NORSAR Array B 51.66 325 P **P** **07 17 52.1 -0.6**
comp=Z,1.1nm,0.8s,baz=95,slow=7.6,SNR=3.9
comp=Z,1.1nm,0.8s
EKA Eskdalemuir Ar 59.71 319 P **P** **07 18 49.5 -1.1**
comp=Z,0.2nm,0.4s,baz=87,slow=6.4,SNR=3.6
comp=Z,0.2nm,0.4s
ESDC Sonseca Array 64.77 302 P **P** **07 19 24.2 -0.7**
comp=Z,0.7nm,0.9s,baz=67,slow=6.6,SNR=5.6
comp=Z,0.7nm,0.9s
WRA Warramunga Arr 74.60 125 P **P** **07 20 25.4 -0.2**
comp=Z,1.0nm,0.7s,baz=323,slow=5.9,SNR=10
comp=Z,1.0nm,0.7s
ASAR Alice Springs 76.82 129 P **P** **07 20 38.0 -0.3**
comp=Z,0.4nm,0.6s,baz=315,slow=5.7,SNR=7.1
comp=Z,0.4nm,0.6s

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*ATH **27** 07:14:46.5, 39°.30N × 22°.96E, h25km ± 9km, ML2.5/2, Error ellipse: s-maj=11.2km s-min=1.4km az=59.0*
*THE **27** 07:14:47.1, 39°.26N × 22°.96E, h18km ± 1km, ML2.2/5, Error ellipse: s-maj=1.5km s-min=0.3km az=73.0*
ISC 27 07:14:46.6 ± 1.5, **39°.29N** ± 0°.05 × **22°.97E** ± 0°.07, **h20** km ± 3km, **n12**, σ 0§**44**/19, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.19**	**67**	P		**Pb**	**07 14 52.2**	**+0.1**
XOR				S		**Sb**	**07 14 56.0**	**0.0**
	1µm,0.4s							
XOR	**Xorichti**	**0.19**	**67**	P		**Pb**	**07 14 52.2**	**+0.1**
XOR				S		**Sb**	**07 14 55.8**	**-0.2**
XOR				AML		AML	07 14 56.7	
	comp=N,2963µm,0.2s							
XOR				AML		AML	07 14 56.7	
	comp=E,1787µm,0.2s							
NEO	**Neokhori**	**0.20**	**86**	P		**Pb**	**07 14 52.2**	**0.0**
NEO				S		**Sb**	**07 14 55.9**	**-0.2**
	comp=E,2µm,0.2s							
NEO	**Neokhori**	**0.20**	**86**	P		**Pb**	**07 14 52.2**	**0.0**
NEO				S		**Sb**	**07 14 55.7**	**-0.3**
NEO				AML		AML	07 14 56.9	
	comp=E,2075µm,0.2s							
NEO				AML		AML	07 14 56.9	
	comp=N,6882µm,0.3s							
AXAR	**Agios Charalam**	**0.58**	**205**	P		**Pb**	**07 14 58.2**	**+0.1**
ATAL	**Atalanti**	**0.60**	**176**	P		**Pb**	**07 14 58.4**	**-0.1**
ATAL				S		**Sb**	**07 15 06.5**	**0.0**
	comp=N,145nm,0.6s							
ATAL	**Atalanti**	**0.60**	**176**	P		**Pb**	**07 14 58.2**	**-0.2**
LKR	**Lokris**	**0.64**	**178**	P		**Pb**	**07 14 58.4**	**-0.8**
MAKR	**Makrakomi, Fth**	**0.71**	**247**	P		**Pb**	**07 15 00.0**	**-0.3**
MAKR				S		**Sb**	**07 15 10.4**	**+0.8**
	comp=N,430nm,0.3s							
MAKR	**Makrakomi, Fth**	**0.71**	**247**	P		**Pb**	**07 14 60.0**	**-0.3**
THL	**Klokotos Trika**	**0.79**	**290**	P		**Pb**	**07 15 00.8**	**-0.8**
LIT	**Litokhoron**	**0.89**	**335**	P		**Pn**	**07 15 03.9**	**0.0**
LIT				S		**Sn**	**07 15 17.0**	**+0.8**
	comp=N,118nm,0.3s							

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*NOU **27** 07:41:40.4, 13°.53S × 170°.62E, h670km, mb4.3/15, Vanuatu Islands Region*
*NEIC **27** 07:41:44.3 ± 2.0, 14°.0S ± 0°.2 × 170°.76E ± 0°.03, h634km ± 13km, mb4.3/20, Error ellipse: s-maj=22.9km s-min=4.1km az=184.0*
*IDC **27** 07:41:45.1 ± 2.4, 13°.96S × 170°.61E, h650km ± 29km, mb3.1/6, mbtmp4.2/7, Error ellipse: s-maj=31.1km s-min=16.5km az=3.0*
ISC 27 07:41:43.6 ± 0.8, **13°.9S** ± 0°.1 × **170°.68E** ± 0°.08, **h628** km, **n52**, σ 1§**13**/54, **mb4.4**/16, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**4.46**	**212**	P		**P**	**07 43 15.8**	**+1.5**
LIFNC	**LIFOU**	**7.55**	**205**	P		**P**	**07 43 38.3**	**-1.4**
LIFNC	**LIFOU**	**7.55**	**205**	P		**P**	**07 43 39.0**	**-0.8**
MARNC	**Mare, Loyalty**	**7.91**	**198**	P		**P**	**07 43 42.8**	**-0.3**
MARNC	**Mare, Loyalty**	**7.91**	**198**	P		**P**	**07 43 43.3**	**+0.2**
MSVF	**Nonsavu**	**8.03**	**119**	P		**P**	**07 43 44.6**	**+0.2**
MSVF	**Nonsavu**	**8.03**	**119**	P		**P**	**07 43 45.3**	**+0.9**
YATNC	**Mamie plateau,**	**8.84**	**204**	P		**P**	**07 43 52.7**	**+0.9**
KOUNC	**Koumac, New Ca**	**8.97**	**222**	P		**P**	**07 43 55.2**	**+2.1**
DZM	**Mont Dzumac**	**9.04**	**206**	P		**P**	**07 43 54.7**	**+1.0**
	5.9nm,0.6s,baz=311,slow=21,SNR=9.8							
DZM	**Mont Dzumac**	**9.04**	**206**	P		**P**	**07 43 55.7**	**+1.9**
DZM	**Mont Dzumac**	**9.04**	**206**	P		**P**	**07 43 56.0**	**+2.2**
NOUC	**Port Laguerre**	**9.12**	**207**	P		**P**	**07 43 56.0**	**+1.5**
PINNC	**Pines Island,**	**9.16**	**199**	P		**P**	**07 43 55.9**	**+1.1**
OUENC	**Ouen Island, N**	**9.19**	**203**	P		**P**	**07 43 56.4**	**+1.3**
OUENC	**Ouen Island, N**	**9.19**	**203**	P		**P**	**07 43 56.9**	**+1.8**
ONTNC	**Ouen Toro**	**9.24**	**205**	P		**P**	**07 43 57.4**	**+1.7**
ONTNC	**Ouen Toro**	**9.24**	**205**	P		**P**	**07 43 57.7**	**+2.1**
FUNA	**Funafuti**	**9.93**	**58**	P		**P**	**07 44 02.0**	**-0.4**
CTAO	**Charters Tower**	**24.13**	**252**	P		**P**	**07 46 12.3**	**-0.6**
URZ	**Urewera**	**24.89**	**168**	P		**P**	**07 46 18.4**	**-0.9**
	16nm,0.8s,baz=121,slow=24,SNR=3.9							
	16nm,0.8s							
BKZ	**Black Stump Fm**	**25.65**	**170**	P		**P**	**07 46 25.4**	**-0.6**
BKZ	**Black Stump Fm**	**25.65**	**170**	P		**P**	**07 46 25.4**	**-0.6**
COEN	**Coen**	**26.69**	**267**	P		**P**	**07 46 35.7**	**+0.2**
COEN				IAmb		IAmb	07 46 38.0	
	comp=Z,11nm,1.1s							
BFZ	**Birch Farm**	**27.08**	**171**	P		**P**	**07 46 36.9**	**-1.6**
SNZO	**South Karori**	**27.49**	**173**	P		**P**	**07 46 41.1**	**-1.0**
SNZO	**South Karori**	**27.49**	**173**	P		**P**	**07 46 41.4**	**-0.7**
THZ	**Tophouse**	**27.79**	**176**	P		**P**	**07 46 44.8**	**+0.1**
KHZ	**Kahutara**	**28.48**	**176**	P		**P**	**07 46 49.3**	**-1.3**
RPZ	**Rata Peaks**	**29.67**	**179**	P		**P**	**07 47 00.0**	**-0.9**
STKA	**Stephens Creek**	**32.04**	**231**	P		**P**	**07 47 22.8**	**+1.5**
	comp=Z,1.4nm,0.5s,baz=65,slow=10,SNR=5.5							
	comp=Z,1.4nm,0.5s							
STKA	**Stephens Creek**	**32.04**	**231**	P		**P**	**07 47 22.3**	**+1.0**
TOO	**Toolangi**	**32.49**	**219**	P		**P**	**07 47 25.9**	**+0.9**
TOO				IAmb		IAmb	07 47 54.4	
	comp=Z,16nm,1.2s							
WR0	**Warramunga Arr**	**35.03**	**255**	P		**P**	**07 47 45.5**	**-0.9**
WR0				IAmb		IAmb	07 48 11.6	
	comp=Z,7.4nm,1.2s							
WB0	**Warramunga Arr**	**35.16**	**255**	P		**P**	**07 47 46.9**	**-0.5**
WRA	**Warramunga Arr**	**35.22**	**255**	P		**P**	**07 47 47.5**	**-0.4**
	comp=Z,5.2nm,0.5s,baz=86,slow=8.5,SNR=113							
WRA				S		**S**	**07 52 38.3**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=90,slow=14,SNR=2.4							
	comp=Z,5.2nm,0.5s							
WRA	**Warramunga Arr**	**35.22**	**255**	P		**P**	**07 47 46.9**	**-1.1**
AS31	**Alice Springs**	**36.04**	**249**	P		**P**	**07 47 54.8**	**+0.1**
AS31				IAmb		IAmb	07 47 55.1	
	comp=Z,4.8nm,0.3s							
ASAR	**Alice Springs**	**36.04**	**249**	P		**P**	**07 47 54.6**	**-0.1**
	comp=Z,4.2nm,0.3s,baz=76,slow=9.1,SNR=102							
ASAR				S		**S**	**07 52 48.5**	**-2.7**
	comp=Z,0.5nm,0.5s,baz=81,slow=16,SNR=5.1							
	comp=Z,4.2nm,0.3s							
ASAR	**Alice Springs**	**36.04**	**249**	P		**P**	**07 47 54.2**	**-0.4**
BBOO	**Buckleboo**	**36.68**	**233**	P		**P**	**07 48 00.8**	**+1.0**
BBOO				IAmb		IAmb	07 48 19.2	
	comp=Z,26nm,1.4s							
MTN	**Manton Dam**	**38.46**	**267**	P		**P**	**07 48 14.5**	**+0.1**
MTN				IAmb		IAmb	07 48 32.2	
	comp=Z,20nm,1.3s							
KNRA	**Kununurra**	**40.52**	**262**	P		**P**	**07 48 30.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**43.41**	**258**	P		**P**	**07 48 53.4**	**+0.1**
FITZ				IAmb		IAmb	07 49 22.7	
	comp=Z,10.0nm,1.4s							
PSA00	**Pilbara Seismi**	**48.83**	**253**	P		**P**	**07 49 33.7**	**-0.4**
VNDA	**Vanda**	**63.75**	**182**	P		**P**	**07 51 15.6**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=358,slow=7.0,SNR=11							
	comp=Z,0.5nm,0.5s							
VNDA	**Vanda**	**63.75**	**182**	P		**P**	**07 51 15.0**	**0.0**
SBA	**Scott Base**	**63.95**	**181**	P		**P**	**07 51 17.3**	**+0.9**
QSPA	**South Pole Qui**	**76.08**	**180**	P		**P**	**07 52 27.8**	**-0.5**
QSPA				IAmb		IAmb	07 53 10.7	
	comp=Z,6.3nm,1.5s							
NVAR	**Mina Array Bea**	**84.27**	**48**	P		**P**	**07 53 10.7**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=225,slow=8.7,SNR=1.9							
	comp=Z,0.1nm,0.5s							
PMSA	**Palmer Station**	**91.37**	**160**	P		**P**	**07 53 43.0**	**-0.7**
PMSA				IAmb		IAmb	07 54 00.2	
	comp=Z,9.3nm,1.5s							
YMR	**Madison River**	**91.60**	**44**	P		**P**	**07 53 46.7**	**+1.2**
YMR				IAmb		IAmb	07 53 50.8	
	comp=Z,2.0nm,1.0s							

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*IDC **27** 07:53:27.2 ± 4.0, 13°.68N × 89°.82W, h42km ± 35km, mb3.8/7, mbtmp4.0/8, ML4.0/1, MS3.1/3, Error ellipse: s-maj=28.9km s-min=23.8km az=41.0*
*INET **27** 07:53:28.4 ± 0.8, 13°.47N × 90°.30W, h16km ± 8km, MW4.2*
*NEIC **27** 07:53:30.0 ± 2.1, 13°.52N ± 0°.06 × 90°.25W ± 0°.06, h59km ± 8km, mb4.0/20, Md4.6(SNET), Error ellipse: s-maj=10.0km s-min=7.9km az=217.0*
*UCR **27** 07:53:29.0 ± 0.9, 13°.49N × 90°.30W, h53km ± 10km, ML4.6, mb4.0(NEIC)*
*SNET **27** 07:53:29.3 ± 0.9, 13°.50N × 90°.27W, h54km ± 9km, ML4.6*
*GCG **27** 07:53:31.1 ± 0.8, 13°.69N × 90°.35W, h78km ± 16km, MD4.1*
ISC 27 07:53:29.5 ± 0.8, **13°.50N** ± 0°.05 × **90°.23W** ± 0°.05, **h66** km ± 7km, **n135**, σ 0§**91**/148, **mb4.0**/13, **8C-27D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.59**	**48**	*i* P		**Pn**	**07 53 42.5**	**-0.6**
NUBE				*e* S		**Sn**	**07 53 52.7**	**-0.4**
NUBE	**Las Nubes**	**0.59**	**48**	*i* P		**Pn**	**07 53 42.5**	**-0.6**
NUBE				*e* S		**Sn**	**07 53 52.7**	**-0.4**
LOAL	**Lomas de Alarc**	**0.66**	**42**	*e* P		**Pn**	**07 53 43.6**	**-0.2**
LOAL	**Lomas de Alarc**	**0.66**	**42**	*e* P		**Pn**	**07 53 43.6**	**-0.2**
CEVE	**Cerro Verde**	**0.67**	**61**	*i* P		**Pn**	**07 53 43.8**	**-0.3**
CEVE				IAML			07 53 57.3	
	comp=Z,23µm,0.5s							
CEVE	**Cerro Verde**	**0.67**	**61**	*i* P		**Pn**	**07 53 43.8**	**-0.3**
CEVE				IAML			07 53 57.3	
	comp=Z,23µm,0.5s							
SLOZ	**Alcaldia de Sa**	**0.68**	**40**	*i* P		**Pn**	**07 53 43.7**	**-0.3**
RTR	**El Retiro**	**0.69**	**55**	*i* P		**Pn**	**07 53 44.1**	**-0.1**
RTR	**El Retiro**	**0.69**	**55**	*i* P		**Pn**	**07 53 44.1**	**-0.1**
SNJE	**San Jose**	**0.71**	**59**	*i* P		**Pn**	**07 53 44.2**	**-0.3**
SNJE	**San Jose**	**0.71**	**59**	*i* P		**Pn**	**07 53 44.2**	**-0.3**
JAYA	**Jayaque - finc**	**0.77**	**79**	*i* P		**Pn**	**07 53 44.8**	**-0.4**
JAYA				*e* S		**Sn**	**07 53 56.5**	**-0.2**
JAYA				IAML			07 53 58.2	
	comp=Z,38µm,0.4s							
JAYA	**Jayaque - finc**	**0.77**	**79**	*i* P		**Pn**	**07 53 44.8**	**-0.4**
JAYA				*e* S		**Sn**	**07 53 56.5**	**-0.2**
JAYA				IAML			07 53 58.2	
	comp=Z,38µm,0.4s							
UNIC	**Universidad Ca**	**0.81**	**54**	*i* P		**Pn**	**07 53 45.5**	**-0.1**
UNIC	**Universidad Ca**	**0.81**	**54**	*i* P		**Pn**	**07 53 45.5**	**-0.1**
CEDA	**San Andres**	**0.86**	**70**	*i* P		**Pn**	**07 53 46.2**	**0.0**
CEDA				IAML			07 54 07.2	
	comp=Z,20µm,0.6s							
CEDA	**San Andres**	**0.86**	**70**	*i* P		**Pn**	**07 53 46.2**	**0.0**
CEDA				IAML			07 54 07.2	
	comp=Z,20µm,0.6s							
PMON	**Piamonte**	**0.91**	**77**	*i* P		**Pn**	**07 53 46.9**	**0.0**
PMON	**Piamonte**	**0.91**	**77**	*i* P		**Pn**	**07 53 46.9**	**0.0**
ITCA	**Escuela Especi**	**0.94**	**80**	*e* P		**Pn**	**07 53 47.1**	**-0.1**
ITCA	**Escuela Especi**	**0.94**	**80**	*e* P		**Pn**	**07 53 47.1**	**-0.1**
BOQS	**Boqueron**	**0.95**	**76**	*e* P		**Pn**	**07 53 47.6**	**+0.2**
BOQS	**Boqueron**	**0.95**	**76**	*e* P		**Pn**	**07 53 47.6**	**+0.2**
PCG	**Pacaya**	**0.96**	**338**	*e* P		**Pn**	**07 53 47.7**	**+0.1**
PCG				*e* S		**Sn**	**07 54 01.3**	**+0.5**
UEES	**Universidad Ev**	**0.99**	**78**	*i* P		**Pn**	**07 53 47.9**	**+0.1**
UEES				IAML			07 54 07.6	
	comp=Z,7µm,0.3s							
UEES	**Universidad Ev**	**0.99**	**78**	*i* P		**Pn**	**07 53 47.9**	**+0.1**
UEES				IAML			07 54 07.6	
	comp=Z,7µm,0.3s							
SNET	**Serv Nac Est T**	**0.99**	**79**			**Pn**	**07 53 47.4**	**-0.3**
SNET	**Serv Nac Est T**	**0.99**	**79**	*e* P		**Pn**	**07 53 47.7**	**0.0**
SNET				*e* S		**Sn**	**07 54 02.1**	**+0.8**
SNET	**Serv Nac Est T**	**0.99**	**79**	*e* P		**Pn**	**07 53 47.7**	**0.0**
SNET				*e* S		**Sn**	**07 54 02.1**	**+0.8**
SNET	**Serv Nac Est T**	**0.99**	**79**	*e* P		**Pn**	**07 53 47.8**	**0.0**
SNET				*e* S		**Sn**	**07 54 02.7**	**+1.4**
SEMO	**Seminario San**	**1.00**	**78**	*e* P		**Pn**	**07 53 48.0**	**+0.2**
UESS	**Universidad de**	**1.02**	**78**	*e* P		**Pn**	**07 53 48.5**	**+0.3**
UESS	**Universidad de**	**1.02**	**78**	*e* P		**Pn**	**07 53 48.5**	**+0.3**
IGN	**Direccin Gen**	**1.05**	**78**	*e* P		**Pn**	**07 53 48.9**	**+0.3**
IGN	**Direccin Gen**	**1.05**	**78**	*e* P		**Pn**	**07 53 48.9**	**+0.3**
NBG	**Las Nubes**	**1.08**	**354**	*e* P		**Pn**	**07 53 50.6**	**+1.4**
NBG				*e* S		**Sn**	**07 54 04.5**	**+0.7**
AEIL	**Aeropuerto Ilo**	**1.10**	**80**	*e* P		**Pn**	**07 53 50.0**	**+0.9**
AEIL				IAML			07 54 11.7	
	comp=Z,8µm,0.4s							
AEIL	**Aeropuerto Ilo**	**1.10**	**80**	*e* P		**Pn**	**07 53 50.0**	**+0.9**
AEIL				IAML			07 54 11.7	
	comp=Z,8µm,0.4s							
FUG	**Fuego 3**	**1.11**	**328**	*e* P		**Pn**	**07 53 49.0**	**-0.5**
FUG				*e* S		**Sn**	**07 54 06.0**	**+1.7**
LFU	**La Fuente**	**1.11**	**77**	*e* P		**Pn**	**07 53 50.0**	**+0.6**
LFU	**La Fuente**	**1.11**	**77**	*e* P		**Pn**	**07 53 50.0**	**+0.6**
LFRS	**El Faro**	**1.14**	**84**	*i* P		**Pn**	**07 53 49.7**	**-0.1**
LFRS	**El Faro**	**1.14**	**84**	*i* P		**Pn**	**07 53 49.7**	**-0.1**
LBRS	**Las Brisas**	**1.18**	**78**	*e* P		**Pn**	**07 53 51.2**	**+1.0**
LBRS	**Las Brisas**	**1.18**	**78**	*e* P		**Pn**	**07 53 51.2**	**+1.0**
MTO3	**Montecristo**	**1.23**	**43**			**Pn**	**07 53 50.7**	**-0.3**
MTO3	**Montecristo**	**1.23**	**43**	*i* P		**Pn**	**07 53 51.1**	**+0.1**
MTO3	**Montecristo**	**1.23**	**43**	*i* P		**Pn**	**07 53 51.1**	**+0.1**
MTO3	**Montecristo**	**1.23**	**43**	*e* P		**Pn**	**07 53 51.1**	**+0.1**
MTO3				*e* S		**Sn**	**07 54 08.7**	**+1.7**
PAVA	**Las Pavas**	**1.27**	**80**	*e* P		**Pn**	**07 53 51.9**	**+0.4**
PAVA	**Las Pavas**	**1.27**	**80**	*e* P		**Pn**	**07 53 51.9**	**+0.4**
COEG	**Centro de Oper**	**1.32**	**85**	*e* P		**Pn**	**07 53 52.2**	**+0.2**
COEG	**Centro de Oper**	**1.32**	**85**	*e* P		**Pn**	**07 53 52.2**	**+0.2**
ESQI	**Esquipulas**	**1.36**	**39**			**Pn**	**07 53 52.9**	**+0.3**
ESQI	**Esquipulas**	**1.36**	**39**	*i* P		**Pn**	**07 53 53.0**	**+0.4**
LLGN	**La Laguna**	**1.41**	**62**	*e* P		**Pn**	**07 53 53.4**	**+0.1**
LLGN	**La Laguna**	**1.41**	**62**	*e* P		**Pn**	**07 53 53.4**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.47**	**82**	*e* P		**Pn**	**07 53 54.3**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.47**	**82**	*e* P		**Pn**	**07 53 54.3**	**+0.3**
P5NO	**Presa 5 de nov**	**1.51**	**71**	*i* P		**Pn**	**07 53 54.2**	**-0.3**
PQSS	**Presa 15 de Se**	**1.63**	**86**	*e* P		**Pn**	**07 53 56.3**	**+0.2**
PQSS	**Presa 15 de Se**	**1.63**	**86**	*e* P		**Pn**	**07 53 56.3**	**+0.2**
MRL	**Marmol**	**1.66**	**19**	*e* P		**Pn**	**07 53 58.1**	**+1.4**
MRL				*e* S		**Sn**	**07 54 18.1**	**+0.9**
RTAL	**Retalhuleu**	**1.75**	**306**			**Pn**	**07 53 56.2**	**-1.5**
RTAL	**Retalhuleu**	**1.75**	**306**	*i* P		**Pn**	**07 53 56.0**	**-1.7**
STG3	**Santiaguito 3,**	**1.77**	**313**	*e* P		**Pn**	**07 53 57.8**	**-0.4**
PACA	**Pacayal**	**1.85**	**91**	*e* P		**Pn**	**07 54 00.6**	**+1.3**
PACA	**Pacayal**	**1.85**	**91**	*e* P		**Pn**	**07 54 00.6**	**+1.3**
PACA	**Pacayal**	**1.85**	**91**	*e* P		**Pn**	**07 54 00.5**	**+1.3**
CAHU	**Cacacuatique**	**1.98**	**82**	*e* P		**Pn**	**07 54 01.4**	**+0.4**
CAHU	**Cacacuatique**	**1.98**	**82**	*e* P		**Pn**	**07 54 01.4**	**+0.4**
HUEH	**Huehuetenango**	**2.19**	**326**	Pn		**Pn**	**07 54 04.0**	**+0.2**
CNCH	**Conchagua**	**2.34**	**95**	*i* P		**Pn**	**07 54 06.1**	**+0.2**
CNCH	**Conchagua**	**2.34**	**95**	*i* P		**Pn**	**07 54 06.1**	**+0.2**
CSGN	**Cosiguina Volc**	**2.65**	**101**	*e* P		**Pn**	**07 54 10.0**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.92**	**79**	Pn		**Pn**	**07 54 13.7**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.92**	**79**	*e* P		**Pn**	**07 54 14.1**	**+0.3**
CRIN	**San Cristobal**	**3.20**	**104**			**Pn**	**07 54 17.4**	**-0.1**
CRIN	**San Cristobal**	**3.20**	**104**	*e* P		**Pn**	**07 54 18.6**	**+1.1**
CRIN				*e* S		**Sn**	**07 54 56.3**	**+1.8**
TELN	**Telica**	**3.43**	**105**	*e* P		**Pn**	**07 54 20.8**	**+0.1**
CNGN	**Cerro Negro**	**3.58**	**106**			**Pn**	**07 54 22.5**	**-0.2**
COPN	**Copaltepe**	**3.79**	**110**	*e* P		**Pn**	**07 54 26.5**	**+1.1**
RCON	**San Juan de Ri**	**3.96**	**90**	*e* P		**Pn**	**07 54 28.4**	**+0.4**
MATN	**Matagalpa**	**4.23**	**97**			**Pn**	**07 54 31.4**	**-0.2**
MATN	**Matagalpa**	**4.23**	**97**	*e* P		**Pn**	**07 54 31.5**	**-0.2**
BOAB	**BOACO BROADBAN**	**4.57**	**103**	Pn		**Pn**	**07 54 35.7**	**-0.4**
ACON	**Acoyapa**	**5.16**	**107**	Pn		**Pn**	**07 54 44.0**	**-0.3**
HZTE	**Horizontes, Gu**	**5.31**	**121**	Pn		**Pn**	**07 54 48.0**	**+1.7**
ORTG	**Ortega, Santa**	**5.62**	**123**			**Pn**	**07 54 51.3**	**+0.7**
CMIG	**Matias Romero**	**5.73**	**309**	P		**Pn**	**07 54 52.0**	**-0.1**
	comp=Z,4.2nm,0.3s,baz=146,slow=9.8,SNR=59							
CMIG				S		**Sn**	**07 55 59.6**	**+3.1**
	comp=Z,24nm,0.6s,baz=53,slow=9.0,SNR=4.2							
	comp=Z,12nm,0.4s							
ESPN	**Las Esperanzas**	**5.93**	**102**	Pn		**Pn**	**07 54 55.1**	**+0.4**
JTS	**Las Juntas de**	**6.07**	**121**	Pn		**Pn**	**07 54 57.7**	**+0.9**
JACO	**JACO, Garabito**	**6.66**	**124**	Pn		**Pn**	**07 55 06.6**	**+1.8**
TEIG	**Tepich**	**6.94**	**15**	Pn		**Pn**	**07 55 09.7**	**+1.1**
TEIG	**Tepich**	**6.94**	**15**	*e* P		**Pn**	**07 55 10.2**	**+1.6**
RIMA	**Rio Macho**	**7.26**	**120**			**Pn**	**07 55 13.5**	**+0.4**
SRBA	**San Rafael, Bu**	**7.96**	**122**	Pn		**Pn**	**07 55 23.0**	**+0.3**
DRK0	**Durika**	**8.04**	**121**			**Pn**	**07 55 25.4**	**+1.5**
BRU2	**Volcan**	**8.75**	**122**	Pn		**Pn**	**07 55 33.9**	**+0.3**
SOR	**Soroa**	**11.51**	**36**			**Pn**	**07 56 13.2**	**+2.3**
MTDJ	**Mount Denham**	**13.08**	**67**	Pn		**Pn**	**07 56 34.3**	**+1.7**
PAYG	**Puerto Ayora**	**14.09**	**180**	Pn		**Pn**	**07 56 46.0**	**+0.1**
352A	**Blakely**	**18.54**	**14**	P		**Pn**	**07 57 42.2**	**+0.5**
WHTX	**Lake Whitney,**	**19.56**	**341**	P		**P**	**07 57 50.5**	**-1.4**
WHTX				IAmb		IAmb	07 57 53.2	
	comp=Z,5.5nm,0.6s							
Z47A	**Carrollton**	**19.70**	**5**	P		**P**	**07 57 54.2**	**+0.7**
Z47A				IAmb		IAmb	07 57 57.0	
	comp=Z,8.1nm,0.8s							
152A	**Waverly Hall**	**19.73**	**14**	P		**P**	**07 57 54.4**	**+0.5**
152A				IAmb		IAmb	07 57 55.5	
	comp=Z,9.7nm,1.2s							
SDV	**Santo Domingo**	**19.76**	**101**	LR		LR	08 06 06.4	
	comp=Z,32nm,21.1s,baz=277,slow=39							
TX32	**Lajitas Array**	**20.08**	**324**	P		**P**	**07 57 58.3**	**+0.5**
TXAR	**Lajitas Array**	**20.08**	**324**	P		Pn	07 57 59.3	-0.8
	comp=Z,6.0nm,0.4s,baz=145,slow=11,SNR=23							
TXAR				PcP		**PcP**	**08 02 11.2**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=260,slow=0.6,SNR=5.0							
	comp=Z,0.6nm,0.4s							
TXAR	**Lajitas Array**	**20.08**	**324**	P		**P**	**07 57 59.0**	**+1.2**
TX31	**Lajitas Ar. Si**	**20.09**	**324**	P		**P**	**07 57 58.9**	**+1.1**
Y49A	**Blount Mountai**	**20.56**	**9**	P		**P**	**07 58 04.3**	**+1.5**
X48A	**Hartselle**	**21.05**	**7**	P		**P**	**07 58 09.5**	**+1.4**
X48A				IAmb		IAmb	07 58 12.0	
	comp=Z,4.5nm,0.7s							
X37A	**Clayton**	**21.50**	**348**	P		**P**	**07 58 13.6**	**+0.7**
X37A				IAmb		IAmb	07 58 15.2	
	comp=Z,5.1nm,0.9s							
HODGE	**Hodges**	**21.87**	**18**	P		**P**	**07 58 16.9**	**+0.2**
HODGE				IAmb		IAmb	07 58 20.5	
	comp=Z,6.3nm,1.1s							
SWET	**Sewanee**	**21.96**	**9**	P		**P**	**07 58 17.7**	**-0.2**
SWET				IAmb		IAmb	07 58 18.9	
	comp=Z,6.1nm,0.9s							
V48A	**Smith Brothers**	**22.35**	**7**			**P**	**07 58 22.2**	**+0.2**
V48A				IAmb		IAmb	07 58 24.1	
	comp=Z,4.7nm,0.8s							
Y58A	**Scranton**	**22.46**	**24**	P		**P**	**07 58 22.9**	**-0.4**
WVT	**Waverly**	**22.63**	**5**	P		**P**	**07 58 25.2**	**+0.2**
TKL	**Tuckaleechee C**	**22.81**	**14**	P		**P**	**07 58 24.7**	**-2.2**
	comp=Z,4.6nm,0.9s,baz=186,slow=8.7,SNR=6.0							
TKL				LR		LR	08 08 03.0	
	comp=Z,52nm,19.2s,baz=189,slow=39							
	comp=Z,4.6nm,0.9s							
TKL	**Tuckaleechee C**	**22.81**	**14**	P		**P**	**07 58 26.1**	**-0.8**
OK029	**Liberty Lake**	**23.13**	**345**			**P**	**07 58 27.6**	**-2.5**
U49A	**Red Boiling Sp**	**23.26**	**9**	P		**P**	**07 58 30.4**	**-0.9**
U49A				IAmb		IAmb	07 58 31.4	
	comp=Z,7.5nm,1.1s							
SJG	**San Juan**	**23.61**	**76**	LR		LR	08 07 15.6	
	comp=Z,61nm,21.0s,baz=279,slow=36							
SADO	**Sadowa**	**32.56**	**15**	P		**P**	**07 59

baz=27,SNR=225
WMOK S Sb 08 17 05.6 0.0
baz=27
RLO Rose Lookout 2.18 95 IAmb_Lg 08 17 20.3
comp=Z,470nm,0.8s
R32A Long Quarter, 2.20 339 Pn 08 16 46.7 +1.7
R32A Long Quarter, 2.20 339 P Pn 08 16 46.3 +1.3
baz=159,SNR=345
LOOK Love County 2.41 170 Pn 08 16 49.0 +1.0
LOOK IAmb_Lg 08 17 25.0
comp=Z,283nm,0.9s
X37A Clayton 2.61 132 Pn 08 16 51.8 +1.2
X37A IAmb_Lg 08 17 32.8
comp=Z,393nm,0.7s
X37A Clayton 2.61 132 P Pn 08 16 52.0 +1.3
baz=314,SNR=229
X37A S Sn 08 17 24.9 +2.4
baz=314
U38A Gravette 2.68 88 Pn 08 16 53.1 +1.5
KSU1 Kansas State U 2.86 17 Pn 08 16 55.6 +1.5
KSU1 IAmb_Lg 08 17 43.1
comp=Z,288nm,0.7s
KSU1 Kansas State U 2.86 17 P Pn 08 16 54.9 +0.8
baz=198,SNR=39
KSU1 Kansas State U 2.86 17 P Pn 08 16 54.4 +0.3
baz=198,SNR=44
KSU1 Sb Sb 08 17 36.9 +2.2
baz=198
CBKS Cedar Bluff 2.92 327 Pn 08 16 55.8 +0.8
CBKS IAmb_Lg 08 17 48.5
comp=Z,243nm,0.8s
CBKS Cedar Bluff 2.92 327 P Pn 08 16 56.0 +1.1
baz=146,SNR=29
CBKS Cedar Bluff 2.92 327 P Pn 08 16 55.3 +0.4
baz=146,SNR=108
CBKS Sb Sb 08 17 38.4 +2.0
baz=146
HHAR Hobbs 3.04 91 Pn 08 16 57.3 +0.7
Z35A Perchaven, San 3.06 173 Pn 08 16 58.0 +1.2
Z35A Perchaven, San 3.06 173 P Pn 08 16 58.0 +1.2
baz=353,SNR=58
Z35A S Sn 08 17 36.3 +2.6
baz=353
AMTX Amarillo 3.56 247 Pn 08 17 05.0 +1.2
AMTX IAmb_Lg 08 18 01.2
comp=Z,278nm,0.8s
AMTX Amarillo 3.56 247 P Pn 08 17 04.8 +1.0
baz=64,SNR=26
AMTX Amarillo 3.56 247 P Pn 08 17 04.4 +0.6
baz=64
AMTX Sb Sb 08 17 58.7 +3.8
baz=64
S39A Bolivar 3.75 68 Pn 08 17 07.5 +1.2
S39A Bolivar 3.75 68 P Pn 08 17 07.4 +1.1
baz=251,SNR=13
Z38A Mt. Pleasant 3.83 143 Pn 08 17 08.2 +0.9
Z38A Mt. Pleasant 3.83 143 P Pn 08 17 08.3 +0.9
baz=325,SNR=8.0
MIAR Mount Ida 3.83 117 Pn 08 17 08.3 +0.9
MIAR IAmb_Lg 08 18 18.7
comp=Z,312nm,0.8s
MIAR Mount Ida 3.83 117 P Pn 08 17 08.5 +0.9
baz=300,SNR=45
MIAR S Sn 08 17 54.9 +2.1
baz=300
MIAR Mount Ida 3.83 117 P Pn 08 17 08.4 +0.9
baz=300,SNR=18
MIAR S Sn 08 17 53.1 +0.3
baz=300
ABTX Abilene, Hawle 4.07 204 IAmb_Lg 08 18 17.5
comp=Z,242nm,0.8s
N33B J Bar K, Exete 4.36 3 P Pn 08 17 14.4 -0.3
baz=183,SNR=25
N33A J Bar K, Exete 4.36 3 Pn 08 17 14.7 -0.1
N33A IAmb_Lg 08 18 32.4
comp=Z,167nm,0.7s
WHTX Lake Whitney, 4.38 177 Pn 08 17 15.4 +0.6
WHTX Lake Whitney, 4.38 177 P Pn 08 17 15.6 +0.6
baz=357,SNR=33
WHTX Lake Whitney, 4.38 177 P Pn 08 17 15.5 +0.6
baz=357,SNR=12
MGMO Mountain Grove 4.44 78 Pn 08 17 17.0 +1.2
MGMO IAmb_Lg 08 18 30.8
comp=Z,201nm,0.7s
WHAR Wooly Hollow 4.53 102 IAmb_Lg 08 18 38.0
comp=Z,272nm,0.7s
FCAR Ozark Folk Cen 4.55 94 IAmb_Lg 08 18 36.1
comp=Z,140nm,0.7s
WLAR White Oak Lake 4.63 124 Pn 08 17 19.1 +0.8
WLAR IAmb_Lg 08 18 39.8
comp=Z,238nm,0.7s
P38A Dawn 4.63 44 Pn 08 17 19.3 +0.9
P38A IAmb_Lg 08 18 35.1
comp=Z,336nm,0.7s
P38A Dawn 4.63 44 P Pn 08 17 18.9 +0.5
baz=227
237A Washetta, Mont 4.63 160 Pn 08 17 18.6 +0.1
237A Washetta, Mont 4.63 160 P Pn 08 17 18.8 +0.3
baz=341,SNR=48
UALR University of 4.66 108 IAmb_Lg 08 18 39.1
comp=Z,300nm,0.9s
KSCO Kaye Shedlock' 4.71 306 IAmb_Lg 08 18 45.1
comp=Z,179nm,0.8s
KSCO Kaye Shedlock' 4.71 306 P Pn 08 17 20.5 +0.9
baz=123,SNR=23
KSCO Kaye Shedlock' 4.71 306 P Pn 08 17 20.2 +0.6
baz=123,SNR=9.1
KSCO S Sn 08 18 14.8 +0.3
baz=123
R40A Maddies Statio 4.74 65 Pn 08 17 20.7 +0.7
R40A IAmb_Lg 08 18 46.2
comp=Z,160nm,0.9s
R40A Maddies Statio 4.74 65 P Pn 08 17 20.6 +0.7
baz=248,SNR=45
MSTX Muleshoe 4.79 241 P Pn 08 17 21.3 +0.6
baz=58
MSTX Muleshoe 4.79 241 P Pn 08 17 21.8 +1.1
baz=58
BGNE Belgrade 5.04 356 Pn 08 17 24.1 0.0
BGNE Belgrade 5.04 356 P Pn 08 17 24.1 0.0
baz=176,SNR=76
BGNE Belgrade 5.04 356 P Pn 08 17 24.0 0.0
baz=176,SNR=37
BGNE S Sn 08 18 23.2 +0.6
baz=176
NATX Nacogdoches 5.25 150 P Pn 08 17 27.9 +1.0
baz=332
NATX S Sn 08 18 26.7 -1.0
baz=332
LCAR Lake Charles 5.31 91 IAmb_Lg 08 18 55.6
comp=Z,129nm,0.7s
CCM Cathedral Cave 5.43 70 IAmb_Lg 08 19 07.5
comp=Z,193nm,0.9s
CCM Cathedral Cave 5.43 70 P Pn 08 17 29.3 -0.1
baz=254
T25A Trinidad 5.44 280 IAmb_Lg 08 19 10.2
comp=Z,211nm,0.9s
T25A Trinidad 5.44 280 P Pn 08 17 29.3 -0.4
baz=96,SNR=5.5
CCAR Cane Creek 5.45 115 IAmb_Lg 08 19 07.9
comp=Z,291nm,0.9s
CCAR Cane Creek 5.45 115 P Pn 08 17 30.8 +1.2
baz=298
P40A Paris 5.47 53 Pn 08 17 30.7 +0.7
435B Jarrell 5.58 179 IAmb_Lg 08 19 15.0
comp=Z,157nm,0.7s
435B Jarrell 5.58 179 P Pn 08 17 31.9 +0.4
baz=359
435B S Sn 08 18 36.4 +0.7
baz=359
N38A Joes South For 5.63 37 Pn 08 17 32.8 +0.6
OGNE Ogallala 5.68 325 IAmb_Lg 08 19 17.6
comp=Z,144nm,0.8s
OGNE Ogallala 5.68 325 P Pn 08 17 34.1 +1.2
baz=142,SNR=21
OGNE Ogallala 5.68 325 P Pn 08 17 33.0 +0.1
baz=142,SNR=9.6
FVM French Village 6.03 72 Pn 08 17 37.7 0.0
FVM IAmb_Lg 08 19 23.4
comp=Z,114nm,0.8s
FVM French Village 6.03 72 P Pn 08 17 37.8 0.0
baz=257,SNR=13
JCT Junction City 6.13 197 P Pn 08 17 39.2 +0.1
baz=16
K31A O'Neill 6.29 353 Pn 08 17 41.7 +0.4
K31A O'Neill 6.29 353 P Pn 08 17 41.7 +0.4
baz=172,SNR=17

SLM Saint Louis 6.36 67 IAmb_Lg 08 19 27.8
comp=Z,151nm,0.8s
143A Socs Landing, 6.36 123 IAmb_Lg 08 19 42.2
comp=Z,125nm,0.8s
SDCO Great Sand Dun 6.38 285 IAmb_Lg 08 19 38.4
comp=Z,103nm,1.1s
SDCO Great Sand Dun 6.38 285 P Pn 08 17 42.7 0.0
baz=100,SNR=6.4
MET Memphis--Engin 6.44 99 IAmb_Lg 08 19 38.9
comp=Z,228nm,0.8s
Q24A Divide 6.44 296 IAmb_Lg 08 19 43.6
comp=Z,141nm,0.8s
Q24A Divide 6.44 296 P Pn 08 17 43.4 -0.2
baz=112
CGM3 Cape Girardeau 6.52 79 IAmb_Lg 08 19 38.7
comp=Z,137nm,0.8s
SCIA State Center 6.54 31 P Pn 08 17 44.4 -0.2
baz=214
HALT Halls 6.79 91 IAmb_Lg 08 19 47.8
comp=Z,224nm,1.0s
S44A Carbondale 6.89 76 IAmb_Lg 08 19 45.0
comp=Z,172nm,0.9s
S44A Carbondale 6.89 76 P Pn 08 17 50.0 +0.6
baz=262,SNR=9.9
N41A Harden Midland 6.90 49 IAmb_Lg 08 20 02.2
comp=Z,195nm,0.7s
SIUC Southern Illin 6.92 76 IAmb_Lg 08 19 57.1
comp=Z,134nm,0.8s
OXF Oxford 7.02 103 IAmb_Lg 08 19 58.3
comp=Z,190nm,1.0s
OXF Oxford 7.02 103 P Pn 08 17 51.2 -0.1
baz=288
OXF S Sn 08 19 10.8 -0.6
baz=288
W45A Hickory Valley 7.03 97 IAmb_Lg 08 19 51.3
comp=Z,155nm,0.8s
ISCO Idaho Springs 7.11 301 IAmb_Lg 08 20 01.6
comp=Z,94nm,0.8s
ISCO Idaho Springs 7.11 301 P Pn 08 17 52.6 -0.2
baz=116,SNR=5.7
ISCO S Sn 08 19 14.5 +0.5
baz=116
Y45A Yeager Farm, C 7.14 108 IAmb_Lg 08 20 05.4
comp=Z,133nm,0.7s
P43A Skaggs, Pawnee 7.24 61 Pn Pn 08 17 55.1 +0.9
ANMO Albuquerque 7.26 261 Pn Pn 08 17 54.7 -0.1
comp=Z,0.1nm,0.3s,baz=83,slow=13,SNR=2.1
ANMO Pg Pb 08 18 20.1 +5.6
comp=Z,1.5nm,0.3s,baz=82,slow=16,SNR=16
ANMO Lg Lg 08 19 55.0
comp=Z,4.6nm,0.3s,baz=261,slow=4.7,SNR=5.9
ANMO LR LR 08 21 02.4
comp=Z,80nm,19.7s,baz=73,slow=41
comp=Z,0.2nm,0.3s
ECSD EROS Data Cent 7.40 6 Pn 08 17 55.5 -0.9
ECSD IAmb_Lg 08 20 13.3
comp=Z,72nm,0.8s
ECSD EROS Data Cent 7.40 6 P Pn 08 17 55.2 -1.3
baz=187,SNR=10
ECSD S Sn 08 19 18.9 -1.7
baz=187
L40A Anamosa 7.59 40 Pn 08 17 58.4 -0.7
L40A IAmb_Lg 08 20 14.7
comp=Z,194nm,0.9s
PHWY Pilot Hill 7.79 311 Pn 08 18 02.4 +0.2
PHWY IAmb_Lg 08 20 24.9
comp=Z,150nm,0.9s
HDIL Hopedale 7.81 55 P Pn 08 18 00.7 -1.4
baz=240,SNR=13
N23A Red Feather La 7.87 308 IAmb_Lg 08 20 18.8
comp=Z,116nm,1.0s
N23A Red Feather La 7.87 308 P Pn 08 18 03.0 -0.1
baz=122,SNR=9.9
Y22D IRIS PASSCAL I 7.88 256 IAmb_Lg 08 20 37.2
comp=Z,131nm,0.8s
MNTX Cornudas Mount 7.89 236 Pn 08 18 03.0 -0.3
MNTX Cornudas Mount 7.89 236 P Pn 08 18 03.3 0.0
baz=52
WVT Waverly 7.99 89 P Pn 08 18 04.2 -0.3
baz=275
146A Union 8.05 115 IAmb_Lg 08 20 34.1
comp=Z,63nm,0.8s
SUSD Miller 8.12 354 IAmb_Lg 08 20 34.0
comp=Z,108nm,1.0s
SUSD Miller 8.12 354 P Pn 08 18 05.7 -0.6
baz=173
833A Chaparral WMA, 8.15 191 IAmb_Lg 08 20 37.0
comp=Z,89nm,0.9s
833A Chaparral WMA, 8.15 191 P Pn 08 18 07.8 +1.0
baz=9.5
L42A Oliver, Polo 8.40 46 IAmb_Lg 08 20 48.4
comp=Z,138nm,0.7s
Z47A Carlton 8.54 109 IAmb_Lg 08 20 49.3
comp=Z,65nm,0.8s
T47A Sharon Grove 8.54 83 Pn 08 18 12.6 +0.5
TXAR Lajitas Array 8.62 217 Pn Pn 08 18 12.9 -0.5
comp=Z,0.3nm,0.3s,baz=38,slow=10,SNR=22
TXAR Lg Lg 08 20 35.8
comp=Z,3.9nm,0.3s,baz=50,slow=30,SNR=4.0
comp=Z,0.5nm,0.5s
MVCO Mesa Verde 8.70 279 P Pn 08 18 14.3 -0.2
baz=92
JFWS Jewell Farm 8.70 39 Pn 08 18 14.3 0.0
JFWS IAmb_Lg 08 20 56.4
comp=Z,159nm,0.8s
JFWS Jewell Farm 8.70 39 P Pn 08 18 13.5 -0.8
baz=224,SNR=7.4
RWWY Rawlins 9.10 309 IAmb_Lg 08 21 05.1
comp=Z,74nm,1.1s
RSSD Black Hills 9.12 330 P Pn 08 18 20.6 +0.3
baz=146
SFIN Lafayette 9.24 61 P Pn 08 18 22.0 +0.3
baz=248
K22A Casper 9.25 315 Pn 08 18 21.8 -0.2
K22A IAmb_Lg 08 21 12.2
comp=Z,117nm,1.1s
K22A Casper 9.25 315 P Pn 08 18 22.3 +0.3
baz=130,SNR=10
I40A Norwalk 9.26 34 IAmb_Lg 08 20 59.8
comp=Z,57nm,0.7s
WCI Wyandotte Cave 9.28 75 P Pn 08 18 22.5 +0.2
baz=262
BLO Bloomington 9.29 69 Pn Pn 08 18 22.3 -0.1
HQIL Hanson Quary C 9.38 52 IAmb_Lg 08 21 07.8
comp=Z,127nm,1.0s
F33A 5 Mile Ranch, 9.52 6 IAmb_Lg 08 21 17.9
comp=Z,54nm,0.8s
L44A Lake County Fo 9.55 50 P Pn 08 18 25.0 -0.9
baz=236
SPMN Marine on St. 9.59 21 IAmb_Lg 08 21 32.4
comp=Z,81nm,0.9s
SPMN Marine on St. 9.59 21 P Pn 08 18 26.7 +0.2
baz=204
I42A Draeger Farm, 10.08 39 Pn 08 18 31.9 -1.3
G40A Rib Lake 10.55 30 Pn 08 18 39.0 -0.6
O48B Farmland 10.60 65 P Pn 08 18 38.2 -2.1
baz=252,SNR=5.4
P49A Miami Univ. Ec 10.73 69 P Pn 08 18 40.8 -1.4
baz=257
BW06 Boulder Array 11.15 309 P Pn 08 18 47.1 -0.9
baz=121
PDAR Pinedale Array 11.15 309 Pn Pn 08 18 46.3 -1.7
comp=Z,0.3nm,0.3s,baz=118,slow=12,SNR=11
PDAR LR LR 08 23 20.0
comp=Z,28nm,19.6s,baz=98,slow=39
comp=Z,0.6nm,0.4s
TKL Tuckaleechee C 11.31 90 Pn Pn 08 18 49.7 -0.4
comp=Z,0.4nm,0.3s,baz=208,slow=7.8,SNR=8.6
TKL Lg Lg 08 21 58.8
comp=Z,1.8nm,0.3s,baz=16,slow=20,SNR=14
comp=Z,1.5nm,0.5s
ACSO Alum Creek Sta 12.19 67 P Pn 08 19 00.5 -1.6
baz=256
RLMT Red Lodge 12.37 319 P Pn 08 19 03.9 -0.8
baz=131
P52A Corning 12.71 70 P Pn 08 19 07.7 -1.5
baz=260
DGMT Dagmar 13.00 340 P Pn 08 19 10.8 -2.3
baz=156
GLMI Grayling 13.03 46 P Pn 08 19 10.5 -3.1
baz=234
O53A New Philadelph 13.52 68 P Pn 08 19 19.1 -1.1
baz=259
BLA Blacksburg 13.88 81 P Pn 08 19 23.9 -1.3
baz=272
ULM Lac du Bonnet 13.94 5 Pn Pn 08 19 19.9 -5.9
comp=Z,0.4nm,0.3s,baz=190,slow=12,SNR=2.4
comp=Z,1.6nm,0.4s

M53A WI Miller and 14.19 64 P Pn 08 19 28.0 -1.4
baz=255
PFO Pinyon Flats O 15.61 265 LR LR 08 25 38.7
comp=Z,27nm,20.2s,baz=117,slow=37
ILAR Eielson Array 40.57 330 P P 08 23 48.1 +0.3
comp=Z,0.5nm,0.6s,baz=105,slow=7.4,SNR=5.6
comp=Z,0.5nm,0.6s

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*AEIC **27** 08:24:07.7±2.9,53.14°N±0.04×166.74°W±0.05,h26km±4km, ML4.4,mb4.5/58(NEIC),ML4.5/6(NEIC),Error ellipse: s-maj=7.1km s-min=3.7km az=151.0*
*IDC **27** 08:24:08.4±3.8,53.05°N×166.89°W,h33km±28km,mb4.0/22, mbtmp4.2/23,ML3.5/1,MS3.3/40,Error ellipse: s-maj=21.0km s-min=12.0km az=9.0*
*NEIC **27** 08:24:09.8±2.1,53.21°N±0.02×166.80°W±0.06,h36km±8km, Error ellipse: s-maj=6.0km s-min=1.6km az=123.0*
ISC 27 08:24:08.4±1.4,53.12°N±0.06×166.72°W±0.04,h32km±9km, n438,σ1§19/411,mb4.5/42,MS3.4/41,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.69**	**353**		**Pn**	**08 24 21.0**	**-0.8**
MGOD					**Sn**	**08 24 30.6**	**-0.8**
MREP	**Makushin Rep't**	**0.70**	**359**		**Pn**	**08 24 21.3**	**-0.7**
MAPS	**Pakushin South**	**0.71**	**349**		**Pn**	**08 24 21.2**	**-0.9**
MAPS					**Sn**	**08 24 31.4**	**-0.5**
UNV	**Unalaska Valle**	**0.74**	**10**	Pn	**Pn**	**08 24 21.2**	**-1.3**
UNV	**Unalaska Valle**	**0.74**	**10**	P	**Pn**	**08 24 21.3**	**-1.3**
	baz=191,SNR=1000						
UNV				S	**Sn**	**08 24 30.6**	**-2.2**
	baz=191						
MNAT	**Makushin Natee**	**0.77**	**2**		**Pn**	**08 24 22.2**	**-0.8**
MNAT					**Sn**	**08 24 32.6**	**-0.9**
OKFG	**Magazine Ridge**	**0.77**	**293**		**Pn**	**08 24 21.9**	**-1.1**
OKFG					**Sb**	**08 24 32.5**	**-1.1**
MSW	**Makushin Switc**	**0.80**	**357**		**Sn**	**08 24 33.3**	**-0.9**
OKSO	**Okmok South**	**0.90**	**286**		**Pn**	**08 24 23.6**	**-1.2**
OKSO					**Sn**	**08 24 35.0**	**-1.6**
OKNC	**Okmok New Cone**	**0.91**	**293**		**Pb**	**08 24 25.0**	**-0.7**
OKCE	**Okmok Cone E**	**0.92**	**290**		**Pn**	**08 24 24.4**	**-0.7**
OKCE					**Sb**	**08 24 37.3**	**-0.5**
AKMO	**Akutan Morgan**	**1.06**	**23**		**Pn**	**08 24 26.3**	**-0.8**
AKMO					**Sn**	**08 24 40.0**	**-0.8**
AKRB	**Akutan Reef Bi**	**1.09**	**21**		**Pn**	**08 24 26.7**	**-0.7**
AKRB					**Sn**	**08 24 41.1**	**-0.2**
AKBBA	**Akutan Broad B**	**1.09**	**25**		**Pn**	**08 24 26.4**	**-1.0**
AKLV	**Akutan Long Va**	**1.14**	**23**		**Pn**	**08 24 27.2**	**-0.9**
AKUT	**Akutan**	**1.17**	**29**		**Pn**	**08 24 27.6**	**-0.8**
AKUT	**Akutan**	**1.17**	**29**	IAML		08 24 45.9	
	comp=E,11μm,0.2s						
AKUT				IAML		08 24 46.0	
	comp=N,17μm,0.4s						
AKGG	**Akutan Green G**	**1.17**	**22**		**Pn**	**08 24 26.9**	**-1.6**
AKSA	**Akutan Strait**	**1.19**	**30**		**Pn**	**08 24 27.5**	**-1.3**
NIKH	**Nikolski High**	**1.29**	**264**	Pn	**Pn**	**08 24 29.8**	**-0.4**
NIKH	**Nikolski High**	**1.29**	**264**		**Sn**	**08 24 45.1**	**-1.2**
NIKH	**Nikolski High**	**1.29**	**264**	P	**Pn**	**08 24 30.1**	**-0.1**
	baz=82						
NIKH				S	**Sn**	**08 24 45.8**	**-0.6**
	baz=82						
WECS	**Westdahl Cape**	**1.83**	**38**		**Pn**	**08 24 37.8**	**+0.2**
WECS					**Sn**	**08 24 59.3**	**-0.3**
CLCO	**Concord Point,**	**1.84**	**261**		**Pn**	**08 24 38.2**	**+0.5**
WESN	**West Dahl Nort**	**1.93**	**40**		**Pn**	**08 24 39.3**	**+0.4**
CLES	**Cleveland East**	**1.94**	**263**	Pn	**Pn**	**08 24 39.4**	**+0.4**
CLES				IAML		08 25 14.8	
	comp=N,7μm,0.5s						
CLES				IAML		08 25 22.8	
	comp=E,5μm,0.6s						
WTUG	**Tugumak**	**2.22**	**38**		**Pn**	**08 24 42.8**	**-0.1**
SSBA	**Shishaldin**	**2.26**	**42**		**Pn**	**08 24 43.5**	**-0.1**
SSBA					**Sn**	**08 25 12.6**	**+2.3**
SSLS	**Shishaldin Sou**	**2.27**	**44**		**Pn**	**08 24 44.1**	**+0.4**
BRPK	**Brown Peak**	**2.34**	**48**		**Pn**	**08 24 44.9**	**+0.4**
SSLN	**Shishaldin Nor**	**2.34**	**42**		**Pn**	**08 24 45.4**	**+0.8**
ISLZ	**Isanotski Laza**	**2.40**	**47**		**Pn**	**08 24 45.6**	**+0.2**
ISNN	**Isanotski Nort**	**2.45**	**44**		**Pn**	**08 24 47.0**	**+1.0**
FALS	**False Pass**	**2.62**	**47**		**Pn**	**08 24 49.6**	**+1.3**
FALS	**False Pass**	**2.62**	**47**	P	**Pn**	**08 24 48.5**	**+0.2**
	baz=230						
HAG	**Hague Volcano**	**3.59**	**50**		**Pn**	**08 25 03.0**	**+1.4**
PS4A	**Pavlof South-4**	**3.63**	**50**		**Pn**	**08 25 03.6**	**+1.4**
SDPT	**Sand Point**	**4.29**	**56**		**Pn**	**08 25 11.4**	**+0.1**
SDPT	**Sand Point**	**4.29**	**56**	P	**Pn**	**08 25 11.5**	**+0.1**
	baz=242,SNR=21						
SPIA	**Saint Paul Isl**	**4.54**	**335**	Pn	**Pn**	**08 25 16.7**	**+2.0**
SPIA	**Saint Paul Isl**	**4.54**	**335**	P	**Pn**	**08 25 15.9**	**+1.1**
	baz=152,SNR=8.1						
SPIA				S	**Sn**	**08 26 07.9**	**+1.5**
	baz=152						
CNBA	**Chernabura Isl**	**4.54**	**65**	Pn	**Pn**	**08 25 14.0**	**-0.8**
CNBA				IAML		08 26 33.8	
	comp=N,272nm,0.9s						
CHNA	**Chernabura Isl**	**4.55**	**65**	P	**Pn**	**08 25 14.1**	**-0.7**
	baz=251,SNR=17						
KOFP	**Korovin Flat P**	**4.56**	**262**		**Pn**	**08 25 17.2**	**+2.0**
ATKA	**Atka Island**	**4.64**	**262**		**Pn**	**08 25 18.6**	**+2.4**
S14K	**Fog Glacier**	**5.23**	**50**	P	**Pn**	**08 25 25.2**	**+0.9**
	baz=236,SNR=14						
VNFG	**Fog Glacier, M**	**5.23**	**50**		**Pn**	**08 25 25.6**	**+1.3**
VNHG	**Veniaminof 1**	**5.38**	**52**		**Pn**	**08 25 27.7**	**+1.4**
CHGN	**Chignik**	**5.78**	**53**		**Pn**	**08 25 32.3**	**+0.6**
CHGN	**Chignik**	**5.78**	**53**	P	**Pn**	**08 25 32.4**	**+0.7**
	baz=240						
GSCK	**Great Sitkin C**	**5.86**	**263**		**Pn**	**08 25 35.6**	**+2.7**
ADK	**Adak**	**6.21**	**263**	Pn	**Pn**	**08 25 40.4**	**+2.8**
KIKV	**Kanaga Island**	**6.50**	**263**		**Pn**	**08 25 44.3**	**+2.7**
KIMD	**Kanaga Island**	**6.57**	**262**		**Pn**	**08 25 45.4**	**+2.8**
CHIR	**Chirikof Islan**	**7.01**	**63**	Pn	**Pn**	**08 25 47.7**	**-1.0**
CHIR	**Chirikof Islan**	**7.01**	**63**	P	**Pn**	**08 25 48.2**	**-0.5**
	baz=252						
TASE	**Tanaga Southea**	**7.03**	**264**		**Pn**	**08 25 51.8**	**+2.8**
R17K	**Ugashik Creek**	**7.43**	**48**		**Pn**	**08 25 55.4**	**+1.0**
R17K	**Ugashik Creek**	**7.43**	**48**	P	**Pn**	**08 25 55.5**	**+1.2**
	baz=237						
P16K	**Nushagak River**	**7.68**	**36**		**Pn**	**08 25 59.3**	**+1.6**
P16K	**Nushagak River**	**7.68**	**36**	P	**Pn**	**08 25 59.4**	**+1.7**
	baz=225						
O16K	**Kokwok River B**	**8.06**	**33**		**Pn**	**08 26 04.3**	**+1.3**
O16K	**Kokwok River B**	**8.06**	**33**	P	**Pn**	**08 26 04.3**	**+1.3**
	baz=220,SNR=23						
O16K				S	**Sn**	**08 27 34.3**	**+1.3**
	baz=220						
P17K	**Kvichak River**	**8.36**	**39**	P	**Pn**	**08 26 08.4**	**+1.2**
	baz=228						
O17K	**Koliganek Bris**	**8.54**	**35**		**Pn**	**08 26 10.3**	**+0.8**
O17K	**Koliganek Bris**	**8.54**	**35**	P	**Pn**	**08 26 10.6**	**+1.1**
	baz=223,SNR=16						
O17K				S	**Sn**	**08 27 45.6**	**+1.0**
	baz=223						
N16K	**Nishlik Lake**	**8.56**	**27**	P	**Pn**	**08 26 11.1**	**+1.1**
	baz=214						
OHAK	**Old Harbor**	**8.72**	**56**	Pn	**Pn**	**08 26 10.6**	**-1.4**
OHAK	**Old Harbor**	**8.72**	**56**	P	**Pn**	**08 26 10.8**	**-1.2**
	baz=248						
AMKA	**Amchitka**	**8.75**	**264**	Pn	**Pn**	**08 26 14.6**	**+2.1**
P18K	**Big Mountain,**	**8.96**	**41**		**Pn**	**08 26 17.0**	**+1.6**
P18K	**Big Mountain,**	**8.96**	**41**	P	**Pn**	**08 26 14.8**	**-0.6**
	baz=231						
O18K	**Koktuh Hills**	**9.27**	**39**		**Pn**	**08 26 21.7**	**+2.0**
O18K	**Koktuh Hills**	**9.27**	**39**	P	**Pn**	**08 26 19.4**	**-0.2**
	baz=228						
KDAK	**Kodiak Island**	**9.29**	**54**	Pn	**Pn**	**08 26 18.4**	**-1.5**
KDAK	**Kodiak Island**	**9.29**	**54**	P	**Pn**	**08 26 19.1**	**-0.7**
	baz=246						
Q19K	**Cape Douglas,**	**9.35**	**46**	Pn	**Pn**	**08 26 20.6**	**-0.1**
Q19K	**Cape Douglas,**	**9.35**	**46**	P	**Pn**	**08 26 21.1**	**+0.5**
	baz=237						
N18K	**Kilae Creek**	**9.61**	**34**		**Pn**	**08 26 25.8**	**+1.5**
N18K	**Kilae Creek**	**9.61**	**34**	P	**Pn**	**08 26 25.2**	**+0.9**
	baz=223						
Q20K	**Shuyak Island**	**9.74**	**50**	P	**Pn**	**08 26 25.6**	**-0.5**
	baz=242						
P19K	**Oil Pt**	**9.93**	**43**	Pn	**Pn**	**08 26 30.1**	**+1.5**
SVW2	**Sparrevohn**	**10.02**	**33**	Pn	**Pn**	**08 26 31.6**	**+1.7**
ILSW	**Iliamna Southw**	**10.16**	**42**		**Pn**	**08 26 33.7**	**+1.8**
N19K	**Bonanza Creek**	**10.19**	**36**	Pn	**Pn**	**08 26 34.2**	**+2.0**
N19K	**Bonanza Creek**	**10.19**	**36**	P	**Pn**	**08 26 33.8**	**+1.5**
	baz=226,SNR=10						
N19K				S	**Sn**	**08 28 26.6**	**+1.3**
	baz=226						
O20K	**Slope Mountain**	**10.43**	**42**	P	**Pn**	**08 26 37.1**	**+1.5**

baz=234
GAMB Gambell 11.00 348 P Pn 08 26 44.6 +1.4
baz=164
M19K Big River Lodg 11.01 32 Pn 08 26 44.8 +1.4
M19K Big River Lodg 11.01 32 P Pn 08 26 45.0 +1.7
baz=222
BRSE Bradley Lake S 11.04 47 P Pn 08 26 44.3 +0.4
baz=240
L19K White Mountain 11.07 30 Pn 08 26 45.3 +1.0
L19K White Mountain 11.07 30 P Pn 08 26 45.4 +1.2
baz=220,SNR=10
M20K Styx River 11.40 34 P Pn 08 26 51.3 +2.5
baz=226
ANM Nome 11.51 3 Pn Pn 08 26 48.5 -1.7
ANM Nome 11.51 3 P Pn 08 26 52.3 +2.1
baz=184
SHEM Shemya Is, Ala 11.58 276 LR LR 08 30 56.9
comp=N,120nm,21.5s,baz=94,slow=36
L20K Farewell, AK 11.59 31 P Pn 08 26 52.9 +1.5
baz=222
O22K Cooper Landing 11.86 45 P Pn 08 26 55.6 +0.7
baz=239
SKT Skwentna 12.03 36 Pn 08 26 58.1 +0.7
SKT Skwentna 12.03 36 P Pn 08 26 58.2 +0.8
baz=229
RC01 Rabbit Creek A 12.18 42 Pn 08 26 57.9 -1.4
RC01 Rabbit Creek A 12.18 42 P Pn 08 26 59.9 +0.6
baz=237
K20K Telida 12.21 28 Pn 08 27 00.2 +0.4
K20K Telida 12.21 28 P Pn 08 27 00.3 +0.5
baz=219
M22K Willow 12.41 39 Pn 08 27 00.4 -2.1
M22K Willow 12.41 39 P Pn 08 27 04.4 +1.9
baz=233
TNA Tin City 12.50 358 P Pn 08 27 06.3 +2.6
baz=177
PWL Port Wells 12.64 45 Pn Pn 08 27 02.7 -3.0
PWL Port Wells 12.64 45 P Pn 08 27 04.9 -0.7
baz=240
GCSA Galena City Sc 12.70 19 P Pn 08 27 07.6 +1.2
baz=208
J20K Nowinta River 12.84 25 Pn 08 27 09.9 +1.5
J20K Nowinta River 12.84 25 P Pn 08 27 09.8 +1.4
baz=216,SNR=17
CHUM Lake Minchumin 13.12 29 P Pn 08 27 14.3 +2.1
baz=221
SML Sawmill 13.14 41 Pn Pn 08 27 13.5 +1.0
SML Sawmill 13.14 41 P Pn 08 27 12.1 -0.4
baz=237
GLI Glacier Island 13.18 46 P Pn 08 27 11.9 -1.1
baz=243
HIN Hinchinbrook I 13.23 49 Pn 08 27 11.1 -2.6
M23K Glacier View 13.37 42 P Pn 08 27 14.2 -1.4
baz=238
TRF Thorofare Moun 13.44 33 Pn 08 27 18.5 +1.8
TRF Thorofare Moun 13.44 33 P Pn 08 27 18.2 +1.5
baz=227
SCM Sheep Creek Mo 13.55 42 Pn 08 27 15.8 -2.4
SCM Sheep Creek Mo 13.55 42 P Pn 08 27 16.4 -1.8
baz=239
EYAK Cordova Ski Ar 13.63 49 P Pn 08 27 16.8 -2.4
baz=246
BPAW Bear Paw Mtn. 13.68 30 P Pn 08 27 20.1 +0.3
baz=224
WAT6 Susitna Watana 13.80 39 P Pn 08 27 19.6 -2.0
baz=235
KLU Klutina 13.97 45 Pn 08 27 20.9 -3.0
KLU Klutina 13.97 45 P Pn 08 27 20.7 -3.2
baz=242,SNR=17
M24K Tolsona, Glenn 14.16 42 P Pn 08 27 23.0 -3.5
baz=240
DHY Denali Highway 14.22 38 P Pn 08 27 24.9 -2.5
baz=234
BMRM Bremner River 14.32 48 Pn 08 27 29.7 +1.1
H21K Melozitna Rive 14.38 24 Pn 08 27 31.7 +2.3
H21K Melozitna Rive 14.38 24 P Pn 08 27 29.8 +0.4
baz=216
MLY Manley 14.44 28 Pn 08 27 32.3 +2.2
MLY Manley 14.44 28 P Pn 08 27 29.9 -0.3
baz=222
N25K Chitina, Valde 14.59 46 P Pn 08 27 30.1 -2.2
baz=244
NEA2 Nenana 14.62 31 P Pn 08 27 33.9 +1.4
baz=226
HARP HAARP 14.72 42 P Pn 08 27 34.1 +0.1
baz=241
WRH Wood River Hil 14.85 33 Pn 08 27 36.9 +1.2
PAX Paxson 14.89 40 P Pn 08 27 33.8 -2.5
baz=238
H22K Ishtalitna Cre 14.93 25 P Pn 08 27 37.4 +0.6
baz=218
G21K Allakaket 14.94 21 P Pn 08 27 37.5 +0.6
baz=212
CCB Clear Creek Bu 15.06 33 Pn 08 27 39.3 +0.9
MDM Murphy Dome 15.13 31 Pn 08 27 40.3 +0.8
MCARA McCarthy VSAT 15.19 48 P Pn 08 27 40.0 -0.2
baz=248
H23K Yukon River 15.36 27 Pn 08 27 43.7 +1.2
H23K Yukon River 15.36 27 P Pn 08 27 42.2 -0.3
baz=222,SNR=8.6
IL31 15.44 33 Pn 08 27 44.4 +1.0
ILAR Eielson Array 15.44 33 Pn Pn 08 27 43.3 -0.2
comp=N,0.2nm,0.3s,baz=223,slow=12,SNR=8.9
ILAR LR LR 08 34 05.1
comp=N,101nm,18.3s,baz=182,slow=38
comp=N,0.7nm,0.5s
RIDG Independent Ri 15.54 38 Pn 08 27 45.4 +0.6
RIDG IAmb IAmb 08 28 22.1
comp=Z,9.4nm,0.6s
RIDG Independent Ri 15.54 38 P Pn 08 27 45.4 +0.6
baz=237
F21K Alatna River 15.55 19 P Pn 08 27 44.0 -0.9
baz=211,SNR=8.4
M26K Nabesna, AK 15.62 44 P Pn 08 27 45.1 -0.8
baz=244
L26K Log Cabin Wild 15.75 42 P Pn 08 27 48.4 +0.8
baz=242
CTG Chitna Glacier 15.80 50 P Pn 08 27 48.4 +0.1
baz=252
H24K Noodor Dome 15.85 29 P Pn 08 27 47.5 -1.3
baz=226,SNR=13
J25K Salcha River, 15.85 35 Pn 08 27 48.1 -0.7
J25K Salcha River, 15.85 35 P Pn 08 27 47.2 -1.7
baz=234
G23K Bananza Creek 15.91 25 P Pn 08 27 50.5 +0.9
baz=219
LOGN Logan Glacier 15.92 51 Pn 08 27 48.3 -1.5
LOGN IAmb IAmb 08 28 10.6
comp=Z,19nm,1.2s
SCRK Sand Creek 15.99 38 P Pn 08 27 49.1 -1.6
baz=238,SNR=9.7
F22K John River 16.06 20 P Pn 08 27 51.5 0.0
baz=213
M27K Edge Creek, AK 16.07 45 P Pn 08 27 52.5 +0.8
M27K Edge Creek, AK 16.07 45 P Pn 08 27 51.3 -0.4
baz=246
PINM Pinnacle 16.08 54 P Pn 08 27 49.7 -2.1
baz=256
O28M Mount Upton 16.28 51 P Pn 08 27 53.6 -1.0
baz=254
PRP Porcupine Dome 16.36 32 P Pn 08 27 56.5 +1.1
PRP Porcupine Dome 16.36 32 P Pn 08 27 54.5 -0.9
baz=231
L27K Beaver Creek, 16.39 43 P Pn 08 27 55.8 +0.1
baz=244
PNL Peninsula 16.40 56 P Pn 08 27 54.1 -1.8
baz=259,SNR=6.0
J26L Joseph Creek 16.43 37 P Pn 08 27 54.7 -1.5
baz=237,SNR=8.7
YUK3 Moose Creek 16.47 48 P Pn 08 27 54.9 -2.0
baz=250,SNR=7.2
G24K Hadweenzic Riv 16.58 27 P Pn 08 27 58.3 +0.3
baz=224
E22K Anaktuvuk Pass 16.66 20 P Pn 08 27 58.9 -0.3
baz=213
K27K Chicken 16.74 40 P Pn 08 28 00.1 0.0
K27K Chicken 16.74 40 P Pn 08 27 59.7 -0.3
baz=241
H25K Birch Creek 16.75 30 P Pn 08 27 59.4 -0.8
baz=228
O29M Mount Kennedy 16.94 54 P Pn 08 28 02.3 -0.4
baz=258
I26K Coal Creek Min 17.02 35 P Pn 08 28 03.2 -0.4
I26K Coal Creek Min 17.02 35 P Pn 08 28 03.3 -0.4
baz=236
F24K Squaw Lake 17.07 25 P Pn 08 28 04.2 0.0
baz=222
YUK6 Outpost Mounta 17.19 52 P Pn 08 28 05.1 -0.9
baz=256
P29M Windy Craggy 17.23 56 P Pn 08 28 05.9 -0.3
baz=261
E24K Your Creek 17.35 23 P P 08 28 08.8 -0.1
baz=219
EGAK Eagle 17.46 38 P P 08 28 10.0 0.0
EGAK Eagle 17.46 38 P Pn 08 28 09.0 0.0
baz=240
TOLK Toolik Lake Re 17.55 21 P P 08 28 11.8 +0.7
TOLK Toolik Lake Re 17.55 21 P Pn 08 28 09.5 -0.8
baz=216,SNR=5.6
HYT Haines Junctio 17.57 52 P P 08 28 12.3 +0.8
HYT IAmb IAmb 08 28 45.4
comp=Z,15nm,0.8s
HYT Haines Junctio 17.57 52 P Pn 08 28 09.9 -0.7
baz=257,SNR=10
M29M Somme Creek 17.58 47 P Pn 08 28 10.3 -0.4
baz=251,SNR=10
D23K Nanushuk River 17.59 19 P P 08 28 11.4 0.0
baz=214
P30M Million Dollar 17.70 55 P P 08 28 12.8 +0.1
baz=260
F25K Christian Rive 17.72 27 P Pn 08 28 11.2 -1.1
baz=226,SNR=11
I27K Kandik River 17.72 35 P Pn 08 28 11.4 -1.0
baz=237
DAWY Dawson 17.81 41 P P 08 28 14.0 +0.1
DAWY Dawson 17.81 41 P Pn 08 28 12.7 -0.7
baz=245,SNR=6.9
G26K Porcupine Rive 17.82 30 P Pn 08 28 12.3 -1.1
baz=230
PLBC Pleasant Camp 17.89 57 P Pn 08 28 13.6 -0.8
baz=263
N30M Aishikik Lake 17.92 51 P Pn 08 28 14.6 -0.2
baz=256,SNR=15
H27K Steamboat Moun 18.10 34 P Pn 08 28 15.7 -1.3
baz=236
E25K Arctic Village 18.11 26 P Pn 08 28 16.5 -0.6
baz=224,SNR=9.4
D24K Happy Valley 18.13 21 P Pn 08 28 16.5 -0.7
baz=217
F26K Sheenjek River 18.20 28 P Pn 08 28 17.2 -1.0
baz=228
O30N Mendenhall 18.24 53 P P 08 28 17.4 -1.3
baz=259,SNR=13
C23K Ikilliik River 18.34 18 P P 08 28 19.1 -0.6
baz=212
M30M Minto, Yukon 18.36 47 P Pn 08 28 20.2 +0.1
M30M Minto, Yukon 18.36 47 P P 08 28 19.7 -0.3
baz=253
G27K Doyon Strip 18.39 32 P P 08 28 19.6 -0.7
baz=234
SKAG Skagway 18.42 57 P Pn 08 28 22.1 +1.3
baz=264
K29M Barlow Dome 18.48 43 P P 08 28 21.0 -0.4
baz=248,SNR=11
N31M Braeburn, Yuko 18.54 51 P Pn 08 28 24.0 +1.7
N31M IAmb IAmb 08 28 27.3
comp=Z,18nm,0.7s
N31M Braeburn, Yuko 18.54 51 P P 08 28 21.6 -0.3
baz=257,SNR=9.0
C24K Franklin Bluff 18.61 20 P Pn 08 28 22.8 -0.3
baz=216
I29M Ogilvie Camp, 18.80 38 P P 08 28 24.1 -0.7
baz=243
D25K Kavik River 18.80 23 P P 08 28 24.5 -0.4
baz=221
WHY Whitehorse 18.80 54 P Pn 08 28 26.2 +0.5
baz=261
JIS Juneau Island 18.82 61 P Pn 08 28 26.2 +0.5
JIS IAmb IAmb 08 28 37.7
comp=Z,43nm,1.5s
P32M Atlin 19.25 57 P P 08 28 30.1 +0.3
baz=265,SNR=7.5
E27K Coleen River 19.26 29 P P 08 28 29.4 -0.3
baz=231
M31M Drury Creek, Y 19.34 49 P Pn 08 28 31.6 -0.4
M31M IAmb IAmb 08 28 33.6
comp=Z,29nm,0.6s
M31M Drury Creek, Y 19.34 49 P Pn 08 28 31.7 -0.3
baz=257,SNR=47
C26K Camden Bay 19.59 23 P P 08 28 32.8 -0.6
baz=222
CRAG Craig 19.64 70 P Pn 08 28 35.6 0.0
CRAG IAmb IAmb 08 28 37.5
comp=Z,24nm,0.7s
CRAG Craig 19.64 70 P Pn 08 28 35.1 -0.5
baz=277
C27K Jago River 19.66 24 P P 08 28 34.2 0.0
baz=224,SNR=9.2
N32M Quiet Lake 19.75 53 P P 08 28 36.0 +0.8
baz=261
P33M Teslin, Yukon 19.76 55 P Pn 08 28 36.8 -0.2
P33M IAmb IAmb 08 28 47.1
comp=Z,24nm,0.8s
P33M Teslin, Yukon 19.76 55 P P 08 28 35.8 +0.4
baz=264
FARO Faro, Yukon 19.82 49 P P 08 28 36.5 +0.5
FARO Faro, Yukon 19.82 49 P P 08 28 36.9 +0.9
baz=258
EPYK Eagle Plains 19.84 36 P P 08 28 35.2 -0.9
baz=243
WRAK Wrangell Islan 19.98 67 P Pn 08 28 39.5 0.0
WRAK IAmb IAmb 08 28 53.6
comp=Z,20nm,1.0s
WRAK Wrangell Islan 19.98 67 P Pn 08 28 38.8 -0.7
baz=275
H02S1 DAWSON INLET T 20.43 76 T T 08 49 51.0
SNR=9.7
V35K Ketchikan 20.51 70 P Pn 08 28 45.1 -0.7
baz=278
R33M Jennings River 20.64 58 P P 08 28 45.2 +0.2
baz=268,SNR=9.8
MMPY Sheldon Lake, 20.85 49 P P 08 28 47.4 +0.2
baz=259,SNR=17
DLBC Dease Lake 21.12 61 P P 08 28 52.0 +1.9
comp=Z,11nm,0.7s,baz=289,slow=8.2,SNR=21
comp=Z,11nm,0.7s
DLBC Dease Lake 21.12 61 P P 08 28 50.0 -0.1
baz=271,SNR=6.7
PEA0B Petropavlovsk- 21.23 284 P P 08 28 52.6 +1.4
PEA0B IAmb IAmb 08 29 16.4
comp=Z,45nm,1.4s
PETK Petropavlovsk- 21.23 284 P P 08 28 50.0 -1.2
comp=Z,1.1nm,0.5s,baz=106,slow=9.1,SNR=2.1
PETK LR LR 08 36 24.2
comp=Z,67nm,21.2s,baz=69,slow=35
comp=Z,1.1nm,0.5s
INK Inuvik 21.84 33 P P 08 28 58.3 +0.7
comp=Z,12nm,0.6s,baz=246,slow=7.4,SNR=19
INK LR LR 08 38 16.3
comp=Z,96nm,18.1s,baz=307,slow=39
comp=Z,12nm,0.6s
INK Inuvik 21.84 33 P P 08 28 58.2 +0.7
INK IAmb IAmb 08 29 03.0
comp=Z,13nm,0.7s
INK Inuvik 21.84 33 P P 08 28 56.5 -1.1
baz=243,SNR=16
BBB Bella Bella 23.26 77 LR LR 08 36 21.1
comp=Z,58nm,18.9s,baz=342,slow=31
SEY Seymchan 23.37 311 P P 08 29 14.1 +0.4
comp=Z,4.5nm,0.7s,baz=134,slow=8.9,SNR=5.0
comp=Z,4.5nm,0.7s
MA2 Magadan 24.08 303 LR LR 08 37 59.9
comp=Z,70nm,21.3s,baz=125,slow=35
C36M Paulatuk 25.41 34 P P 08 29 32.0 -0.4
baz=252
A36M Sachs Harbour 26.00 28 P P 08 29 39.7 +2.0
A36M Sachs Harbour 26.00 28 P P 08 29 38.8 +1.1
baz=246
YKA Yellowknife Ar 28.53 50 P P 08 30 01.2 +0.7
comp=Z,1.8nm,0.7s,baz=277,slow=6.7,SNR=8.4
YKA LR LR 08 44 00.6
comp=Z,48nm,18.0s,baz=207,slow=42
comp=Z,1.8nm,0.7s
I02E Swisshome, OR 29.35 90 P P 08 30 09.9 +1.9
K02D Willamette Mer 30.25 93 P P 08 30 17.4 +1.3
baz=305
I04A Tendick Farm, 30.39 90 P P 08 30 18.4 +1.1
baz=304
L02F Cave Junction 30.65 93 P P 08 30 20.6 +1.1
baz=306
J04D Umpqua Nationa 30.88 90 P P 08 30 23.0 +1.2
baz=305
NEW Newport 31.27 79 P P 08 30 25.8 +0.8
comp=Z,7.3nm,0.7s,baz=293,slow=8.0,SNR=25
NEW LR LR 08 40 39.1
comp=Z,48nm,21.0s,baz=294,slow=32
comp=Z,7.3nm,0.7s
NEW Newport 31.27 79 P P 08 30 25.4 +0.4
NEW IAmb IAmb 08 30 26.7
comp=Z,7.6nm,0.8s
NEW Newport 31.27 79 P P 08 30 24.1 -0.9
baz=298,SNR=10
L04D Klamath Falls 31.35 92 P P 08 30 25.8 0.0
baz=306
J05D Fort Rock, OR 31.38 90 P P 08 30 26.8 +0.7
baz=304
YBH Yreka Blue Hor 31.39 93 P P 08 30 27.5 +1.3
comp=Z,7.0nm,0.7s,baz=324,slow=4.6,SNR=22
YBH LR LR 08 40 02.5
comp=Z,64nm,21.8s,baz=316,slow=30
comp=Z,7.0nm,0.7s
YBH Yreka Blue Hor 31.39 93 P P 08 30 28.5 +2.3
YBH IAmb IAmb 08 30 29.6
comp=Z,7.5nm,0.8s
K05A Summer Lake 31.91 90 P P 08 30 32.9 +2.0
MOD Modoc Plateau 32.74 91 P P 08 30 39.6 +1.5
MOD IAmb IAmb 08 30 40.4
comp=Z,6.0nm,0.8s
TIXI Tiksi 32.94 328 LR LR 08 45 28.8
comp=Z,86nm,18.5s,baz=188,slow=39
J08A Circle Bar Ran 33.01 87 P P 08 30 41.2 +0.9
J08A IAmb IAmb 08 30 42.8
comp=Z,4.7nm,0.8s
JTMT Jette 33.20 78 P P 08 30 42.3 +0.3
MSO Missoula 33.86 79 P P 08 30 47.0 -0.7
baz=301,SNR=6.3
YAK Yakutsk 33.90 311 LR LR 08 44 14.5
comp=Z,48nm,20.2s,baz=89,slow=36
PAHR Pah Rah Range 34.63 93 P P 08 30 55.6 +1.1
PNTR Pine Nut 34.89 94 P P 08 30 58.3 +1.5
RES Resolute Bay 35.00 26 P P 08 30 58.8 +1.7
comp=Z,6.1nm,0.9s,baz=227,slow=8.5,SNR=6.2
RES LR LR 08 47 09.1
comp=Z,46nm,19.7s,baz=348,slow=39
comp=Z,6.1nm,0.9s
HRY Holter Researc 35.16 78 P P 08 30 59.7 +0.6
HLID Hailey 35.33 84 P P 08 31 00.2 -0.4
baz=305,SNR=6.9
MCMT McKenzie Canyo 35.56 81 P P 08 31 03.4 +0.8
EGMT Eagleton 35.71 75 P P 08 31 03.0 -0.6
baz=300,SNR=16
KVN Kaiserville 35.82 93 P P 08 31 06.2 +1.4
KVN IAmb IAmb 08 31 07.1
comp=Z,2.4nm,0.7s
RYN Ryan 35.83 94 P P 08 31 05.4 +0.6
RYN IAmb IAmb 08 31 06.9
comp=Z,4.3nm,0.7s
BOZ Bozeman (W) 35.87 79 P P 08 31 04.6 -0.6
baz=303,SNR=20
NVAR Mina Array Bea 36.09 94 P P 08 31 08.9 +1.7
comp=Z,4.3nm,0.6s,baz=302,slow=8.5,SNR=57
NVAR LR LR 08 42 46.7
comp=Z,36nm,21.5s,baz=291,slow=31
comp=Z,4.3nm,0.6s
OMMB Old Mammoth Mi 36.20 96 P P 08 31 09.9 +1.6
OMMB IAmb IAmb 08 31 11.1
comp=Z,4.4nm,0.8s
ELK Elko 36.49 89 LR LR 08 43 36.5
comp=Z,63nm,21.6s,baz=311,slow=32
YHL Hebgen Lake 36.54 80 P P 08 31 11.8 +0.7
YHL IAmb IAmb 08 31 12.5
comp=Z,6.6nm,0.8s
SMMC Simmler 37.15 100 P P 08 31 17.9 +1.9
baz=314
H17A Grant Village 37.15 80 P P 08 31 16.9 +0.7
baz=304
VES Vestal, Richgr 37.33 98 P P 08 31 17.7 +0.2
baz=313
RLMT Red Lodge 37.52 78 P P 08 31 18.4 -0.9
baz=304,SNR=9.2
CWC Cottonwood Cre 37.53 96 P P 08 31 20.1 +0.7
baz=312
GRAC Grapevine Rang 37.59 95 P P 08 31 21.2 +1.5
baz=312
KLR Kul'dur 37.73 290 LR LR 08 46 41.7
comp=Z,62nm,20.2s,baz=205,slow=36
R11A Troy Canyon, C 37.78 92 P P 08 31 21.8 +0.3
baz=310
ISA Isabella, Lake 37.82 98 P P 08 31 21.8 +0.1
baz=313
MPMC Manual Prospec 38.14 96 P P 08 31 24.1 -0.4
baz=312,SNR=5.0
FURC Furnace Creek, 38.24 95 P P 08 31 24.7 -0.4
baz=312
DUG Dugway, Tooele 38.29 87 P P 08 31 25.4 -0.3
baz=308,SNR=7.7
TPNV Topopah Spring 38.29 94 P P 08 31 26.0 +0.2
baz=312,SNR=6.2
LRMC Laurel Mtn Rad 38.41 97 P P 08 31 26.5 -0.3
baz=313
LAO LASA Array 38.46 74 P P 08 31 27.5 +0.6
LAO IAmb IAmb 08 31 28.3
comp=Z,7.5nm,0.7s
LAO LASA Array 38.46 74 P P 08 31 26.7 -0.3
baz=303,SNR=7.5
DGMT Dagmar 38.68 71 P P 08 31 28.4 -0.4
baz=301
BW06 Boulder Array 38.69 82 P P 08 31 29.0 -0.2
baz=306,SNR=8.4
PDAR Pinedale Array 38.69 82 P P 08 31 29.5 +0.3
comp=Z,3.7nm,0.8s,baz=304,slow=4.3,SNR=40
PDAR LR LR 08 45 05.2
comp=Z,32nm,21.9s,baz=310,slow=32
comp=Z,3.7nm,0.8s
PDAR Pinedale Array 38.69 82 P P 08 31 29.2 +0.1
SHOC Shoshone, Teco 38.97 96 P P 08 31 32.1 +0.7
baz=312
GSC Goldstone, Bar 39.06 97 P P 08 31 32.7 +0.5
baz=313
H11N2 WAKE ISLAND Hy 39.06 222 T T 09 13 03.9
baz=24,slow=76,SNR=1220
H11N3 WAKE ISLAND Hy 39.07 222 T T 09 13 11.6
baz=24,slow=76,SNR=1365
H11N1 WAKE ISLAND Hy 39.08 222 T T 09 13 03.3
baz=24,slow=76,SNR=836
FCC Fort Churchill 39.22 52 P P 08 31 33.2 +0.2
BFSC Mount Baldy Ra 39.28 99 P P 08 31 34.9 +0.8
baz=314
HEC Hector,Ludlow 39.66 97 P P 08 31 37.4 +0.2
baz=314
TMUT Trail Mountain 39.81 87 P P 08 31 39.0 +0.4
TMUT IAmb IAmb 08 31 40.6
comp=Z,6.9nm,0.8s
P17A Butcher Ranch, 39.98 87 P P 08 31 40.8 +0.8
RDMU Red Mountain 40.01 85 P P 08 31 40.1 0.0
RDMU IAmb IAmb 08 31 41.8
comp=Z,7.2nm,0.8s
Q16A Castle Valley 40.08 88 P P 08 31 41.3 +0.6
Q16A IAmb IAmb 08 31 42.9
comp=Z,11nm,1.2s
GMRC Granite Mounta 40.10 96 P P 08 31 41.6 +0.8
baz=314
H11S1 WAKE ISLAND Hy 40.24 221 T T 09 14 48.1
baz=24,slow=76,SNR=1403
H11S2 WAKE ISLAND Hy 40.26 221 T T 09 14 44.6
baz=24,slow=76,SNR=826
H11S3 WAKE ISLAND Hy 40.26 221 T T 09 14 48.5
baz=24,slow=76,SNR=871
PFO Pinyon Flats O 40.43 98 LR LR 08 44 39.8
comp=Z,74nm,20.4s,baz=300,slow=30
K22A Casper 40.57 80 P P 08 31 44.2 -0.5
baz=307,SNR=5.7
IRM Iron Mountain 40.84 97 P P 08 31 47.3 +0.4
baz=314
O20A White River Ci 41.07 84 P P 08 31 49.3 +0.4
O20A White River Ci 41.07 84 P P 08 31 48.4 -0.5
baz=309,SNR=14
RSSD Black Hills 41.17 76 P P 08 31 49.8 +0.1
baz=306
MJAR Matsushiro Arr 41.33 269 LR LR 08 48 39.6
comp=Z,24nm,19.8s,baz=50,slow=36
MDND Maddock 41.62 69 P P 08 31 53.2 +0.1
baz=303
N23A Red Feather La 41.98 82 P P 08 31 56.4 0.0
baz=308
PV13 Radium Mtn., P 41.98 87 P P 08 31 57.0 +0.6
WUAZ Wupatki 42.18 92 P P 08 31 58.3 +0.3
baz=313,SNR=6.9
JHJ Hachijo jima 2 42.71 264 LR LR 08 49 04.4
comp=Z,31nm,19.8s,baz=114,slow=35
MVCO Mesa Verde 42.79 88 P P 08 32 03.2 +0.2
baz=311

ISCO	**Idaho Springs**	**42.85**	**83**	P	**P**	**08 32 04.2**	**+0.5**	
	baz=309							
W18A	**Petrified Fore**	**43.43**	**91**	P	**P**	**08 32 09.1**	**+0.9**	
	baz=313							
S22A	**4UR Ranch, Cre**	**43.44**	**86**	P	**P**	**08 32 07.9**	**-0.4**	
	baz=311							
AGMN	**Agassiz Nation**	**43.45**	**67**	P	**P**	**08 32 07.1**	**-0.8**	
	baz=304							
SUSD	**Miller**	**43.93**	**73**	P	**P**	**08 32 11.3**	**-0.6**	
	baz=307							
SDCO	**Great Sand Dun**	**44.24**	**85**	P	**P**	**08 32 14.8**	**0.0**	
	baz=311							
B35A	**Bob, Littlefor**	**44.59**	**65**	P	**P**	**08 32 16.7**	**-0.4**	
B35A				IAmb	IAmb	08 32 16.9		
	comp=Z,4.7nm,0.6s							
TUC	**Tucson**	**44.74**	**95**	P	**P**	**08 32 18.9**	**+0.3**	
	baz=315							
KSCO	**Kaye Shedlock'**	**45.14**	**81**	P	**P**	**08 32 21.7**	**0.0**	
	baz=310							
T25A	**Trinidad**	**45.29**	**85**	P	**P**	**08 32 23.3**	**+0.2**	
	baz=312,SNR=5.4							
ANMO	**Albuquerque**	**45.53**	**89**	P	**P**	**08 32 25.4**	**+0.4**	
	comp=Z,0.7nm,0.5s,baz=314,slow=5.5,SNR=5.5							
ANMO				PcP	**PcP**	**08 34 03.4**	**+0.2**	
	comp=Z,0.5nm,0.4s,baz=297,slow=2.3,SNR=5.5							
ANMO				LR	LR	08 48 35.3		
	comp=Z,56nm,21.9s,baz=309,slow=32							
	comp=Z,0.7nm,0.5s							
ANMO	**Albuquerque**	**45.53**	**89**	P	**P**	**08 32 25.9**	**+0.9**	
	baz=313							
ECSD	**EROS Data Cent**	**45.71**	**72**	P	**P**	**08 32 24.7**	**-1.3**	
ECSD				IAmb	IAmb	08 32 25.5		
	comp=Z,5.5nm,0.6s							
ECSD	**EROS Data Cent**	**45.71**	**72**	P	**P**	**08 32 24.4**	**-1.7**	
	baz=308,SNR=7.8							
BGNE	**Belgrade**	**46.26**	**76**	P	**P**	**08 32 29.8**	**-0.6**	
	baz=309							
121A	**Cookes Peak, D**	**46.39**	**92**	P	**P**	**08 32 32.2**	**+0.5**	
	baz=315,SNR=6.1							
KSRS	**Korea Array**	**46.91**	**278**	LR	LR	08 54 15.3		
	comp=Z,9.7nm,18.4s,baz=45,slow=39							
SPMN	**Marine on St.**	**46.96**	**68**	P	**P**	**08 32 34.5**	**-1.3**	
	baz=308							
CBKS	**Cedar Bluff**	**46.98**	**80**	P	**P**	**08 32 36.0**	**-0.1**	
	baz=311							
I37A	**Lemond, Waseca**	**47.37**	**70**	P	**P**	**08 32 38.5**	**-0.5**	
FRB	**Frobisher Bay**	**47.43**	**37**	LR	LR	08 53 33.7		
	comp=Z,59nm,20.5s,baz=343,slow=37							
MNTX	**Cornudas Mount**	**48.42**	**91**	P	**P**	**08 32 48.2**	**+0.8**	
MNTX				IAmb	IAmb	08 32 49.0		
	comp=Z,5.5nm,0.7s							
MNTX	**Cornudas Mount**	**48.42**	**91**	P	**P**	**08 32 47.7**	**+0.3**	
	baz=315,SNR=15							
KSU1	**Kansas State U**	**48.64**	**77**	P	**P**	**08 32 47.8**	**-1.2**	
	baz=311							
SCIA	**State Center**	**48.80**	**72**	P	**P**	**08 32 48.8**	**-1.3**	
	baz=310							
SUMG	**Summit**	**49.58**	**18**	P	**P**	**08 32 56.0**	**-0.1**	
SUMG				IAmb	IAmb	08 33 06.4		
	comp=Z,8.7nm,1.0s							
SUMG	**Summit**	**49.58**	**18**	*i* P	**P**	**08 32 55.0**	**-1.1**	
JFWS	**Jewell Farm**	**49.84**	**69**	P	**P**	**08 32 56.6**	**-1.5**	
	baz=310							
WMOK	**Wichita Mounta**	**50.28**	**83**	P	**P**	**08 33 00.7**	**-0.8**	
	baz=314							
E46A	**Sault Ste Mari**	**50.90**	**62**	P	**P**	**08 33 05.6**	**-0.4**	
E46A				IAmb	IAmb	08 33 06.0		
	comp=Z,5.9nm,0.8s							
LPIG	**La Paz**	**51.04**	**102**	LR	LR	08 49 25.0		
	comp=Z,26nm,21.6s,baz=280,slow=30							
TX31	**Lajitas Ar. Si**	**51.14**	**92**	P	**P**	**08 33 08.4**	**+0.3**	
TXAR	**Lajitas Array**	**51.14**	**92**	P	**P**	**08 33 08.2**	**+0.1**	
	comp=Z,5.9nm,0.7s,baz=299,slow=5.4,SNR=76							
TXAR				LR	LR	08 52 43.9		
	comp=Z,22nm,19.6s,baz=301,slow=34							
	comp=Z,5.9nm,0.7s							
TUL1	**Leonard**	**51.26**	**80**	P	**P**	**08 33 07.9**	**-1.0**	
	baz=313							
HDIL	**Hopedale**	**51.92**	**71**	P	**P**	**08 33 12.3**	**-1.4**	
	baz=312							
SONM	**Songino Array**	**52.29**	**302**	P	**P**	**08 33 15.9**	**-0.6**	
	comp=Z,0.6nm,0.8s,baz=52,slow=9.3,SNR=2.9							
SONM				PcP	**PcP**	**08 34 27.1**	**-0.3**	
	comp=Z,1.2nm,0.9s,baz=72,slow=2.4,SNR=4.6							
SONM				ScP	**ScP**	**08 38 21.9**	**+0.1**	
	comp=Z,0.3nm,0.4s,baz=69,slow=2.9,SNR=3.9							
SONM				LR	LR	08 55 47.0		
	comp=Z,44nm,21.0s,baz=32,slow=36							
	comp=Z,0.6nm,0.8s							
CCM	**Cathedral Cave**	**52.47**	**74**	P	**P**	**08 33 15.7**	**-2.1**	
	baz=313							
JCT	**Junction City**	**52.65**	**88**	P	**P**	**08 33 18.1**	**-1.2**	
	baz=316,SNR=5.5							
WHTX	**Lake Whitney,**	**52.99**	**84**	P	**P**	**08 33 21.2**	**-0.5**	
	baz=315,SNR=5.9							
SFIN	**Lafayette**	**53.29**	**70**	P	**P**	**08 33 22.2**	**-1.6**	
	baz=312							
MIAR	**Mount Ida**	**53.51**	**79**	P	**P**	**08 33 24.4**	**-1.1**	
	baz=314							
435B	**Jarrell**	**53.77**	**86**	P	**P**	**08 33 26.3**	**-1.1**	
	baz=316							
HHC	**Hu-ho-hao-te**	**54.14**	**292**	*e*P	**P**	**08 33 31.8**	**+1.6**	
HHC				pmax	pmax			
	comp=Z,39nm,0.9s							
HHC				pmax	pmax			
	comp=Z,150nm,5.3s							
833A	**Chaparral WMA,**	**54.45**	**89**	P	**P**	**08 33 32.0**	**-0.4**	
	baz=317							
O48B	**Farmland**	**54.46**	**68**	P	**P**	**08 33 30.0**	**-2.4**	
	baz=313							
SADO	**Sadowa**	**54.68**	**61**	LR	LR	08 56 31.3		
	comp=Z,30nm,18.0s,baz=196,slow=36							
H06N1	**SOCORRO T-PHAS**	**54.71**	**106**	T	T	09 32 51.0		
	SNR=9.9							
NATX	**Nacogdoches**	**54.82**	**83**	P	**P**	**08 33 33.8**	**-1.3**	
	baz=316							
P49A	**Miami Univ. Ec**	**55.20**	**69**	P	**P**	**08 33 35.1**	**-2.7**	
	baz=314							
WCI	**Wyandotte Cave**	**55.20**	**71**	P	**P**	**08 33 35.2**	**-2.6**	
	baz=314							
JMIC	**Jan Mayen**	**55.22**	**9**	LR	LR	08 58 31.3		
	comp=Z,34nm,19.4s,baz=44,slow=37							
WVT	**Waverly**	**55.78**	**74**	P	**P**	**08 33 40.6**	**-1.4**	
	baz=314							
OXF	**Oxford**	**55.99**	**76**	P	**P**	**08 33 42.3**	**-1.2**	
OXF	**Oxford**	**55.99**	**76**	P	**P**	**08 33 41.8**	**-1.7**	
	baz=315							
M53A	**WI Miller and**	**56.13**	**65**	P	**P**	**08 33 43.0**	**-1.4**	
	baz=314							
P52A	**Corning**	**56.58**	**67**	P	**P**	**08 33 45.8**	**-1.8**	
	baz=314							
O53A	**New Philadelph**	**56.66**	**66**	P	**P**	**08 33 46.3**	**-1.8**	
	baz=314							
LONY	**Lake Ozonia**	**57.15**	**58**	P	**P**	**08 33 49.9**	**-1.7**	
	baz=314							
L56A	**Greenwood**	**57.32**	**62**	P	**P**	**08 33 52.1**	**-0.8**	
ARCES	**ARCESS Array B**	**57.33**	**355**	LR	LR	09 00 23.8		
	comp=Z,33nm,18.6s,baz=312,slow=38							
MCWV	**Mont Chateau**	**57.82**	**66**	P	**P**	**08 33 55.2**	**-1.2**	
	baz=315							
ZALV	**Zalesovo Beam**	**57.94**	**319**	P	**P**	**08 33 58.5**	**+1.4**	
	comp=Z,0.9nm,0.4s,baz=51,slow=9.7,SNR=3.8							
ZALV				LR	LR	09 00 23.8		
	comp=Z,50nm,19.8s,baz=62,slow=38							
	comp=Z,0.9nm,0.4s							
TZTN	**Tazewell**	**57.94**	**71**	P	**P**	**08 33 55.9**	**-1.5**	
	baz=315							
BINY	**Binghamton**	**58.11**	**61**	P	**P**	**08 33 57.6**	**-0.9**	
	baz=315							
SSPA	**Standing Stone**	**58.20**	**64**	P	**P**	**08 33 58.1**	**-1.0**	
	baz=315							
LRAL	**Lakeview Retre**	**58.45**	**76**	P	**P**	**08 33 58.5**	**-2.4**	
	baz=316							
BLA	**Blacksburg**	**59.23**	**68**	P	**P**	**08 34 05.1**	**-1.2**	
	baz=316							
BORG	**Borgarnes**	**59.47**	**16**	LR	LR	09 01 12.7		
	comp=Z,29nm,20.7s,baz=1.6,slow=37							
GOGA	**Godfrey**	**60.23**	**73**	P	**P**	**08 34 11.4**	**-1.8**	
	baz=317							
LZH	**Lanzhou**	**61.79**	**293**	*e*P	**P**	**08 34 25.5**	**+1.6**	
LZH				pP	sP	08 34 38.5	+1.4	
LZH				sP	pP	08 34 43.8	+10	
LZH				pmax	pmax			
	comp=Z,16nm,1.2s							
BVAR	**Borovoye Array**	**64.01**	**326**	LR	LR	09 06 01.5		
	comp=Z,56nm,18.3s,baz=39,slow=39							
WMQ	**Urumqi**	**64.32**	**309**	*e*P	**P**	**08 34 43.8**	**+3.3**	
MKAR	**Makanchi Array**	**64.44**	**315**	P	**P**	**08 34 41.2**	**0.0**	
	comp=Z,0.5nm,0.4s,baz=1.6,slow=6.6,SNR=6.6							
MKAR				LR	LR	09 03 32.0		
	comp=Z,29nm,19.5s,baz=54,slow=37							
	comp=Z,0.5nm,0.4s							
ARU	**Arti**	**64.67**	**334**	LR	LR	09 05 58.0		
	comp=Z,31nm,19.6s,baz=355,slow=39							
FINES	**FINESS Array B**	**65.33**	**353**	P	**P**	**08 34 45.5**	**-1.2**	
	comp=Z,4.2nm,1.0s,baz=14,slow=6.3,SNR=1.7							
FINES				LR	LR	09 04 45.0		
	comp=Z,32nm,19.6s,baz=70,slow=37							
	comp=Z,4.2nm,1.0s							
TAOE	**Nuku Hiva Isla**	**65.75**	**151**	*e*LR	LR	08 54 36.2		
	comp=Z,81nm,24.7s							
TAOE	**Nuku Hiva Isla**	**65.75**	**151**	*e*T	T	09 46 31.4		
	comp=Z,34nm,0.2s							
NOA	**NORSAR Array B**	**66.18**	**1**	LR	LR	09 06 43.6		
	comp=Z,11nm,18.1s,baz=5.0,slow=39							
HFS	**Hagfors**	**67.10**	**360**	LR	LR	09 05 19.9		
	comp=Z,17nm,18.6s,baz=357,slow=37							
PMOR	**Pomariorio Ree**	**69.75**	**161**	*e*T	T	09 51 27.5		
	comp=Z,5.1nm,0.2s							
PZH	**PanZhiHua**	**70.14**	**288**	P	**P**	**08 35 17.0**	**-0.7**	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,100nm,5.4s							
BELG	**Belogornoye**	**71.00**	**339**	LR	LR	09 11 55.5		
	comp=Z,22nm,18.1s,baz=68,slow=40							
MSVF	**Nonsavu**	**71.77**	**195**	LR	LR	09 00 21.5		
	comp=Z,48nm,19.8s,baz=46,slow=30							
PPT	**Papeete**	**71.94**	**163**	LR	LR	08 58 57.9		
	comp=Z,61nm,21.1s,baz=352,slow=29							
PPT2	**Papeete2**	**71.96**	**163**	*e*LR	LR	08 57 29.3		
	comp=Z,86nm,22.5s							
AKASG	**Malin Array Be**	**75.69**	**350**	P	**P**	**08 35 49.4**	**-0.6**	
	comp=Z,0.5nm,0.3s,baz=13,slow=5.8,SNR=3.2							
	comp=Z,0.5nm,0.3s							
CRAI	**Chiangrai**	**75.78**	**285**	P	**P**	**08 35 51.5**	**+0.4**	
CRAI				IAmb	IAmb	08 35 52.8		
	comp=Z,6.7nm,0.8s							
TBI	**Tubuai**	**77.61**	**164**	*e*LR	LR	09 00 05.7		
	comp=Z,102nm,28.2s							
TBI	**Tubuai**	**77.61**	**164**	*e*T	T	10 01 21.5		
	comp=Z,2.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**78.00**	**285**	P	**P**	**08 36 03.0**	**-0.6**	
	comp=Z,2.4nm,0.5s,baz=21,slow=6.0,SNR=13							
	comp=Z,2.4nm,0.5s							
BRTR	**Keskin Array B**	**85.87**	**344**	P	**P**	**08 36 44.6**	**-0.1**	
	comp=Z,1.3nm,0.7s,baz=20,slow=3.9,SNR=5.9							
	comp=Z,1.3nm,0.7s							
ESDC	**Sonseca Array**	**86.38**	**13**	P	**P**	**08 36 46.4**	**-0.8**	
	comp=Z,0.4nm,0.5s,baz=345,slow=7.5,SNR=4.4							
	comp=Z,0.4nm,0.5s							
WRA	**Warramunga Arr**	**88.74**	**234**	P	**P**	**08 36 56.9**	**-1.7**	
	comp=Z,0.7nm,0.7s,baz=37,slow=5.7,SNR=8.0							
	comp=Z,0.7nm,0.7s							
ASAR	**Alice Springs**	**92.12**	**232**	P	**P**	**08 37 13.6**	**-0.6**	
	comp=Z,0.7nm,0.6s,baz=33,slow=5.0,SNR=11							
	comp=Z,0.7nm,0.6s							
RPN	**Rapa Nui**	**94.15**	**131**	LR	LR	09 13 38.0		
	comp=Z,12nm,19.2s,baz=298,slow=32							
H03N2	**Juan Fernandez**	**114.72**	**113**	T	T	10 47 46.1		
	baz=322,slow=77,SNR=98							
H03N1	**Juan Fernandez**	**114.73**	**113**	T	T	10 47 48.3		
	baz=322,slow=77,SNR=93							
H03N3	**Juan Fernandez**	**114.74**	**113**	T	T	10 47 50.2		
	baz=322,slow=77,SNR=104							
MAW	**Mawson**	**152.47**	**219**	PKPbc	**PKPbc**	**08 43 58.9**	**-0.7**	
	comp=Z,1.5nm,0.6s,baz=62,slow=5.2,SNR=3.6							
VNA3	**Neumayer Olymp**	**159.16**	**159**	PKPab	**PKPab**	**08 44 37.9**	**-0.8**	
VNA2	**Neumayer--Watz**	**159.88**	**160**	PKPab	**PKPab**	**08 44 41.1**	**-0.8**	
	baz=266,slow=3.0							
VNA1	**Neumayer--Stat**	**159.91**	**159**	PKPab	**PKPab**	**08 44 41.2**	**-0.7**	
SNAA	**Sanae**	**160.07**	**165**	PKPab	**PKPab**	**08 44 41.6**	**-1.2**	
TROLL	**Troll, Antarti**	**160.47**	**170**	PKPab	**PKPab**	**08 44 44.0**	**-0.6**	

IDC ***27*** *08:28:31.3±0.7,54°.96S×32°.04W,h0km,mb4.2/11, mbtmp4.2/12,ML3.6/1,MS3.3/8,Error ellipse: s-maj=22.8km s-min=16.4km az=69.0*

NEIC ***27*** *08:28:34.3±1.2,55°.17S±0°.10×32°.4W±0°.2,h10km±1km, mb4.6/17,Error ellipse: s-maj=19.5km s-min=15.2km az=57.0*

ISC 27 08:28:33.0±0.5,54°.98S±0°.09×32°.09W±0°.09,h10km,n48, σ0997/37,mb4.5/18,MS3.4/7,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**2.65**	**283**		**Pn**	**08 29 15.7**	**0.0**
ORCD	**Orcadas**	**8.87**	**224**	Pn	Pn	08 30 37.9	-3.2
PMSA	**Palmer Station**	**18.58**	**225**	P	**P**	**08 32 50.0**	**+0.2**
	0.2nm,0.3s,baz=74,slow=3.1,SNR=2.4						
PMSA				LR	LR	08 38 08.4	
	comp=Z,118nm,21.8s,baz=65,slow=31						
	3.0nm,0.7s						
VNA1	**Neumayer--Stat**	**18.89**	**155**	P	**P**	**08 32 54.4**	**+1.2**
VNA3	**Neumayer Olymp**	**18.99**	**158**	P	**P**	**08 32 54.6**	**+0.2**
VNA2	**Neumayer--Watz**	**19.29**	**155**	P	**P**	**08 33 00.4**	**+2.8**
	baz=314,slow=12						
SNAA	**Sanae**	**20.89**	**154**	P	**P**	**08 33 14.0**	**-1.1**
SNAA	**Sanae**	**20.89**	**154**	P	**P**	**08 33 14.6**	**-0.5**
	2.3nm,0.8s,baz=312,slow=12,SNR=9.2						
	2.3nm,0.8s						
SNAA	**Sanae**	**20.89**	**154**	P	**P**	**08 33 17.0**	**+1.9**
MG02	**Cerro Sombrero**	**21.84**	**260**	P	**P**	**08 33 23.8**	**-1.5**
TROLL	**Troll, Antarti**	**22.47**	**152**	P	**P**	**08 33 31.4**	**-0.7**
BELA	**Belgrano 2**	**23.02**	**181**	P	**P**	**08 33 37.1**	**-0.6**
MG05	**Puerto Natales**	**24.12**	**261**	P	**P**	**08 33 47.8**	**-0.9**
MG05				IAmb	IAmb	08 33 54.8	
	comp=Z,43nm,1.4s						
TRQA	**Tornquist**	**26.34**	**298**	P	**P**	**08 34 10.1**	**+1.0**
TRQA				IAmb	IAmb	08 34 44.1	
	comp=Z,13nm,1.3s						
PLCA	**Paso Flores**	**29.05**	**283**	LR	LR	08 46 10.9	
	comp=Z,106nm,18.7s,baz=142,slow=36						
GO05	**Huala**	**33.90**	**289**	P	**P**	**08 35 15.4**	**-0.5**
CPUP	**Villa Florida**	**34.06**	**317**	P	**P**	**08 35 16.9**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=132,slow=6.4,SNR=8.7						
CPUP				LR	LR	08 50 03.2	
	comp=Z,44nm,18.6s,baz=194,slow=38						
	comp=Z,4.4nm,0.7s						
MT09	**Talagante**	**34.32**	**292**	P	**P**	**08 35 19.4**	**-0.4**
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**08 35 26.9**	**-0.8**
	comp=Z,4.3nm,1.0s,baz=200,slow=2.8,SNR=10						
	comp=Z,4.3nm,1.0s						
QSPA	**South Pole Qui**	**35.28**	**180**	P	**P**	**08 35 27.6**	**-0.1**
CO01	**Juntas del Tor**	**36.84**	**297**	P	**P**	**08 35 43.2**	**+1.8**
CO01				IAmb	IAmb	08 35 59.0	
	comp=Z,7.4nm,0.9s						
GO02	**Mina Guanaco**	**40.54**	**302**	P	**P**	**08 36 13.1**	**+0.5**
GO02				IAmb	IAmb	08 36 39.7	
	comp=Z,13nm,1.0s						
BDFB	**Brasilia**	**41.15**	**336**	P	**P**	**08 36 17.6**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=112,slow=16,SNR=3.1						
	comp=Z,2.5nm,0.8s						
LVC	**Limon Verde**	**42.37**	**305**	LR	LR	08 53 08.2	
	comp=Z,16nm,22.0s,baz=178,slow=35						
MAW	**Mawson**	**42.64**	**146**	P	**P**	**08 36 29.9**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=267,slow=15,SNR=4.1						
	comp=Z,1.3nm,0.5s						
SUR	**Sutherland**	**43.14**	**81**	LR	LR	08 51 47.9	
	comp=Z,44nm,18.3s,baz=148,slow=32						
PB01	**IPOC Station P**	**43.99**	**305**	P	**P**	**08 36 41.1**	**+0.6**
PB01				IAmb	IAmb	08 37 05.2	
	comp=Z,11nm,1.2s						
PTLB	**Pontes e Lacer**	**44.65**	**321**	P	**P**	**08 36 46.7**	**+1.0**
PTLB				IAmb	IAmb	08 36 48.3	
	comp=Z,7.6nm,0.9s						
GO01	**Chusmiza**	**45.04**	**307**	P	**P**	**08 36 50.2**	**+0.9**
GO01				IAmb	IAmb	08 36 59.0	
	comp=Z,6.0nm,1.0s						
VNDA	**Vanda**	**47.48**	**184**	P	**P**	**08 37 07.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=211,slow=1.4,SNR=3.4						
VNDA				LR	LR	08 54 07.7	
	comp=Z,11nm,18.5s,baz=250,slow=32						
	comp=Z,0.4nm,0.7s						
LPAZ	**La Paz**	**47.51**	**310**	P	**P**	**08 37 09.1**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=141,slow=5.5,SNR=13						
	comp=Z,2.5nm,0.5s						
LPAZ	**La Paz**	**47.51**	**310**	P	**P**	**08 37 10.0**	**+1.0**
LPAZ				IAmb	IAmb	08 37 16.3	
	comp=Z,3.9nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.95**	**24**	T	T	09 28 45.3	
	baz=193,slow=74,SNR=7.1						
H10S3	**ASCENSION HYDR**	**47.95**	**23**	T	T	09 28 46.1	
	baz=27,slow=74,SNR=16						
BOSA	**Boshof**	**48.49**	**81**	P	**P**	**08 37 15.2**	**-0.7**
	comp=Z,3.8nm,0.9s,baz=204,slow=12,SNR=3.8						
	comp=Z,3.8nm,0.9s						
H10N3	**ASCENSION HYDR**	**49.06**	**23**	T	T	09 30 08.3	
	baz=192,slow=76,SNR=23						
H10N1	**ASCENSION HYDR**	**49.06**	**23**	T	T	09 30 09.2	
	baz=192,slow=76,SNR=17						
H10N2	**ASCENSION HYDR**	**49.08**	**23**	T	T	09 30 09.5	
	baz=192,slow=76,SNR=28						
RCBR	**Riachuelo**	**49.10**	**355**	LR	LR	08 53 57.0	
	comp=Z,50nm,21.3s,baz=323,slow=31						
LBTB	**Lobatse**	**51.45**	**79**	P	**P**	**08 37 38.1**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=203,slow=8.1,SNR=4.1						
	comp=Z,2.1nm,0.6s						
ETMB	**Extrema**	**52.50**	**316**	P	**P**	**08 37 46.1**	**-0.1**
ETMB				IAmb	IAmb	08 37 48.3	
	comp=Z,1.7nm,0.9s						
MDP	**Montagnes des**	**62.26**	**337**	LR	LR	09 04 11.5	
	comp=Z,43nm,20.3s,baz=216,slow=34						
DBIC	**Dimbokro**	**65.49**	**30**	P	**P**	**08 39 15.7**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=185,slow=7.7,SNR=5.2						
	comp=Z,3.6nm,0.6s						
DBIC	**Dimbokro**	**65.49**	**30**	P	**P**	**08 39 15.7**	**-0.5**
TOA0	**Torodi Ar. Sit**	**73.61**	**34**	P	**P**	**08 40 05.8**	**-0.5**
TOA0				IAmb	IAmb	08 40 07.3	
	comp=Z,3.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.61**	**34**	P	**P**	**08 40 05.8**	**-0.5**
	comp=Z,3.1nm,0.3s,baz=202,slow=6.4,SNR=1.2						
	comp=Z,3.1nm,0.3s						
ZALV	**Zalesovo Beam**	**144.42**	**65**	PKP	**PKPab**	**08 48 06.5**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=251,slow=2.5,SNR=6.0						
ILAR	**Eielson Array**	**147.34**	**314**	PKPbc	**PKPdf**	**08 48 14.5**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=135,slow=2.2,SNR=18						

ROM 27 08:30:50.0±0.1,42°.816N±0°.003×13°.239E±0°.005, h9km,ML2.8/41,11C-23D,Error ellipse: s-maj=0.3km s-min=0.3km az=227.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.09**	**281**	⇑P	Pg	08 30 52.9	+0.4
NRCA				S	Sg	08 30 54.7	+0.3
NRCA				AML	AML		
	comp=E,34550μm,1.3s						
NRCA				AML	AML		
	comp=N,36100μm,0.2s						
NRCA				AML	AML		
	comp=N,40000μm,0.2s						
NRCA				AML	AML		
	comp=E,36650μm,1.3s						
MC2	**Monte Cornacci**	**0.10**	**340**	P	Pg	08 30 53.1	+0.3
MC2				S	Sg	08 30 55.1	+0.4
MC2				AML	AML		
	comp=N,10650μm,0.7s						
MC2				AML	AML		
	comp=N,10605μm,0.7s						
MC2				AML	AML		
	comp=N,10600μm,0.7s						
MC2				AML	AML		
	comp=E,10600μm,0.7s						
MMO1	**Montemonaco**	**0.10**	**38**	P	Pg	08 30 53.1	+0.4
MMO1				S	Sg	08 30 55.0	+0.4
MMO1				AML	AML		
	comp=E,2170μm,0.2s						
MMO1				AML	AML		
	comp=N,2870μm,0.2s						
MMO1				AML	AML		
	comp=E,32950μm,0.7s						
MMO1				AML	AML		
	comp=N,19000μm,0.3s						
T1243	**Rocca Santa Ma**	**0.20**	**128**	P	Pg	08 30 54.8	+0.7
T1243				S	Sg	08 30 58.1	+1.1
T1243				AML	AML		
	comp=E,12550μm,0.3s						
T1243				AML	AML		
	comp=N,11500μm,0.8s						
T1243				AML	AML		
	comp=E,12500μm,0.3s						
T1243				AML	AML		
	comp=E,12450μm,0.3s						
T1243				AML	AML		
	comp=N,11450μm,0.8s						
T1243				AML	AML		
	comp=N,11500μm,0.8s						
FEMA	**Monte Fema**	**0.20**	**316**	P	Pg	08 30 55.0	+0.7
FEMA				S	Sg	08 30 58.5	+1.3
FEMA				AML	AML		
	comp=E,6705μm,1.4s						
FEMA				AML	AML		
	comp=N,4035μm,0.7s						
FEMA				AML	AML		
	comp=E,6700μm,1.4s						
FDMO	**Fiordimonte**	**0.25**	**333**	⇓P	Pg	08 30 55.6	+0.5
FDMO				S	Sg	08 30 59.9	+1.4
FDMO				AML	AML		
	comp=E,3345μm,0.3s						
FDMO				AML	AML		
	comp=N,3585μm,0.2s						
GUMA	**Gualdo di Mace**	**0.26**	**16**	⇓P	Pb	08 30 56.3	-0.6
GUMA				S	Sb	08 31 00.9	-0.5
GUMA				AML	AML		
	comp=E,7945μm,0.5s						
GUMA				AML	AML		
	comp=N,10750μm,0.7s						
GUMA				AML	AML		
	comp=E,9170μm,0.7s						
GUMA				AML	AML		
	comp=N,9015μm,1.5s						
GUMA				AML	AML		
	comp=N,10800μm,0.7s						
GUMA				AML	AML		
	comp=E,7945μm,0.5s						

CESI				AML	AML			
	comp=N,5880µm,0.5s							
CESI				AML	AML			
	comp=E,2920µm,0.5s							
OFFI	**Offida**	**0.35**	**70**	⇑P	Pb	08 30 58.6	+0.2	
OFFI				AML	AML			
	comp=E,1575µm,0.5s							
OFFI				AML	AML			
	comp=E,2625µm,0.6s							
OFFI				AML	AML			
	comp=N,2120µm,0.5s							
SEF1	**Sefro**	**0.39**	**327**	P	Pb	08 30 58.5	-0.7	
SEF1				S	Sb	08 31 05.0	-0.3	
SEF1				AML	AML			
	comp=E,2365µm,1.2s							
SEF1				AML	AML			
	comp=N,2110µm,0.2s							
ARRO	**Arrone**	**0.42**	**236**	⇑P	Pg	08 30 58.9	+0.7	
ARRO				AML	AML			
	comp=E,751µm,0.5s							
ARRO				AML	AML			
	comp=N,750µm,0.5s							
ARRO				AML	AML			
	comp=E,1260µm,0.9s							
ARRO				AML	AML			
	comp=N,1585µm,0.2s							
GIGS	**Gran Sasso**	**0.44**	**146**	P	Pg	08 30 59.1	+0.5	
GIGS				AML	AML			
	comp=E,284µm,0.3s							
GIGS				AML	AML			
	comp=N,168µm,1.6s							
GIGS				AML	AML			
	comp=E,570µm,0.5s							
GIGS				AML	AML			
	comp=N,400µm,1.5s							
GAG1	**Gagliole**	**0.44**	**343**	⇑P	Pb	08 30 59.9	-0.1	
ASSB	**Assisi San Ben**	**0.48**	**298**	⇑P	Pg	08 30 59.8	+0.3	
ASSB				AML	AML			
	comp=E,1510µm,1.5s							
ASSB				AML	AML			
	comp=N,1145µm,0.2s							
SNTG	**Esanatoglia**	**0.49**	**334**	⇓P	Pg	08 30 60.0	+0.4	
SNTG				S	Sb	08 31 09.0	+0.8	
SNTG				AML	AML			
	comp=E,594µm,1.0s							
SNTG				AML	AML			
	comp=E,594µm,1.0s							
SNTG				AML	AML			
	comp=N,658µm,0.1s							
TRTR	**Tortoreto Alta**	**0.50**	**91**	⇑P	Pb	08 31 01.5	+0.6	
TRTR				AML	AML			
	comp=N,2125µm,0.5s							
TRTR				AML	AML			
	comp=E,1730µm,0.4s							
EL6	**Elcito**	**0.52**	**349**	⇓P	Pg	08 31 00.6	+0.4	
EL6				S	Sb	08 31 10.0	+0.8	
EL6				AML	AML			
	comp=E,1388µm,0.1s							
EL6				AML	AML			
	comp=N,1463µm,0.3s							
EL6				AML	AML			
	comp=E,1385µm,0.1s							
EL6				AML	AML			
	comp=N,1457µm,0.3s							
CESX	**Cesi**	**0.53**	**247**	⇓P	Pg	08 31 00.7	+0.4	
CESX				AML	AML			
	comp=E,570µm,0.6s							
CESX				AML	AML			
	comp=N,724µm,0.2s							
CESX				AML	AML			
	comp=E,826µm,0.2s							
CESX				AML	AML			
	comp=N,755µm,0.6s							
FIAM	**Fiamignano**	**0.56**	**189**	⇓P	Pg	08 31 01.0	+0.2	
FIAM				S	Sb	08 31 10.0	0.0	
FIAM				AML	AML			
	comp=E,476µm,1.3s							
FIAM				AML	AML			
	comp=N,360µm,0.7s							
FIAM				AML	AML			
	comp=E,1218µm,0.5s							
FIAM				AML	AML			
	comp=N,970µm,0.5s							
CING	**Cingoli**	**0.56**	**357**	⇑P	Pg	08 31 01.4	+0.5	
CING				AML	AML			
	comp=E,816µm,0.1s							
CING				AML	AML			
	comp=N,686µm,0.1s							
ATCC	**AVT- Casa Cast**	**0.57**	**310**	⇑P	Pg	08 31 01.6	+0.4	
ATCC				S	Sb	08 31 12.0	+1.4	
ATCC				AML	AML			
	comp=E,911µm,0.3s							
ATCC				AML	AML			
	comp=N,1070µm,0.4s							
ATCC				AML	AML			
	comp=E,912µm,0.3s							
ATCC				AML	AML			
	comp=N,1071µm,0.4s							
FOSV	**Fossato di Vic**	**0.59**	**324**	⇓P	Pg	08 31 01.9	+0.4	
FAGN	**Fagnano**	**0.61**	**155**	⇓P	Pg	08 31 02.2	+0.5	
FAGN				S	Sb	08 31 13.0	+1.6	
FAGN				AML	AML			
	comp=E,1031µm,0.6s							
FAGN				AML	AML			
	comp=N,858µm,0.4s							
FAGN				AML	AML			
	comp=E,2050µm,0.4s							
FAGN				AML	AML			
	comp=N,1705µm,0.5s							
VCEL	**Villa Celiera**	**0.61**	**133**	⇓P	Pb	08 31 02.8	-0.2	
VCEL				S	Sb	08 31 13.0	+1.3	
VCEL				AML	AML			
	comp=E,680µm,0.4s							
VCEL				AML	AML			
	comp=N,648µm,0.4s							
VCEL				AML	AML			
	comp=E,1790µm,0.3s							
VCEL				AML	AML			
	comp=N,2280µm,0.3s							
MURB	**Monte Urbino**	**0.69**	**311**	⇓P	Pg	08 31 03.7	+0.3	
MURB				AML	AML			
	comp=E,1110µm,1.3s							
MURB				AML	AML			
	comp=N,1090µm,0.9s							
T0110	**Collepietro**	**0.71**	**146**	⇓P	Pg	08 31 03.7	0.0	
T0110				AML	AML			
	comp=E,942µm,0.5s							
T0110				AML	AML			
	comp=N,715µm,0.4s							
T0110				AML	AML			
	comp=N,1180µm,0.3s							
T0110				AML	AML			
	comp=E,1084µm,0.3s							
ARVD	**Arcevia**	**0.72**	**342**	P	Pb	08 31 04.5	-0.2	
ARVD				S	Sb	08 31 16.0	+1.4	
ARVD				AML	AML			
	comp=E,352µm,0.1s							
ARVD				AML	AML			
	comp=N,206µm,0.7s							
ARVD				AML	AML			
	comp=E,352µm,0.1s							
ATFO	**Monte Foce - G**	**0.74**	**319**	⇓P	Pg	08 31 04.5	+0.2	
ATFO				AML	AML			
	comp=E,315µm,1.3s							
ATFO				AML	AML			
	comp=N,294µm,0.5s							
ATFO				AML	AML			
	comp=E,316µm,1.3s							
ATTE	**AVT- Monte Tez**	**0.75**	**301**	⇓P	Pg	08 31 04.8	+0.2	
ATTE				AML	AML			
	comp=N,184µm,1.6s							
ATTE				AML	AML			
	comp=E,225µm,0.7s							
ATVO	**AVT- Monte Val**	**0.83**	**313**	⇑P	Pg	08 31 06.0	-0.1	
ATVO				S	Sn	08 31 21.0	+0.6	
ATVO				AML	AML			
	comp=N,186µm,1.5s							
ATVO				AML	AML			
	comp=E,236µm,0.8s							
MGAB	**Montegabbione**	**0.83**	**277**	P	Pg	08 31 06.3	+0.2	
MGAB				AML	AML			
	comp=N,373µm,0.7s							
MGAB				AML	AML			
	comp=E,342µm,1.1s							
MGAB				AML	AML			
	comp=N,376µm,0.7s							
MGAB				AML	AML			
	comp=N,406µm,1.6s							
MGAB				AML	AML			
	comp=N,422µm,0.3s							
MGAB				AML	AML			
	comp=E,413µm,1.2s							
MGAB				AML	AML			
	comp=E,368µm,0.7s							
ATMI	**Monte Miggiano**	**0.88**	**306**	S	Sn	08 31 21.0	-0.5	
ATPI	**Pietralunga -**	**0.88**	**316**	⇑P	Pb	08 31 07.3	-0.2	
ATPI				S	Sn	08 31 22.0	+0.4	
ATPI				AML	AML			
	comp=E,243µm,0.6s							
ATPI				AML	AML			
	comp=N,178µm,0.6s							
ATPI				AML	AML			
	comp=N,178µm,0.6s							
ATPI				AML	AML			
	comp=E,242µm,0.6s							
PIEI	**Pieia**	**0.89**	**325**	⇓P	Pb	08 31 07.3	-0.2	
PIEI				S	Sn	08 31 22.0	+0.3	
PIEI				AML	AML			
	comp=E,170µm,0.2s							
PIEI				AML	AML			
	comp=N,143µm,0.5s							
MPAG	**Monte Paganucc**	**0.89**	**337**	⇓P	Pb	08 31 07.5	-0.1	
MPAG				S	Sn	08 31 22.0	+0.3	
MPAG				AML	AML			
	comp=E,243µm,0.4s							
MPAG				AML	AML			
	comp=N,229µm,0.3s							
MPAG				AML	AML			
	comp=N,230µm,0.3s							
CERT	**Cerreto**	**0.89**	**192**	P	Pg	08 31 06.3	-0.8	
CERT				AML	AML			
	comp=E,841µm,0.5s							
CERT				AML	AML			
	comp=N,544µm,0.4s							
FSSB	**Fossombrone**	**0.94**	**339**	⇓P	Pb	08 31 08.5	0.0	
FSSB				S	Sn	08 31 24.0	+1.0	
FSSB				AML	AML			
	comp=E,540µm,0.6s							
FSSB				AML	AML			
	comp=N,748µm,0.3s							
INTR	**Introdacqua**	**0.94**	**148**	⇓P	Pg	08 31 08.0	-0.2	
INTR				AML	AML			
	comp=E,162µm,0.4s							
INTR				AML	AML			
	comp=N,328µm,1.0s							
INTR				AML	AML			
	comp=E,182µm,0.4s							
INTR				AML	AML			
	comp=N,391µm,0.4s							
SACS	**San Casciano d**	**0.98**	**272**	⇓P	Pb	08 31 09.2	0.0	
SACS				AML	AML			
	comp=E,186µm,0.5s							
SACS				AML	AML			
	comp=N,158µm,0.7s							
CAFI	**Castiglion Fio**	**1.06**	**299**	⇓P	Pg	08 31 10.5	0.0	
CAFI				AML	AML			
	comp=E,141µm,0.7s							
CAFI				AML	AML			
	comp=N,128µm,1.4s							
TOLF	**Tolfa**	**1.19**	**231**	P	Pg	08 31 13.8	+1.0	
ARCI	**Arcidosso**	**1.30**	**272**	P	Pn	08 31 12.7	-1.7	
ARCI				S	Sn	08 31 36.0	+4.1	
FIU	**Minerbio Fiu**	**2.22**	**326**	S	Sg	08 32 02.0	+0.6	
GSCL	**Gusciola**	**2.46**	**309**	S	Sg	08 32 08.0	-1.2	
NDIM	**Novi di Modena**	**2.67**	**322**	S	Sg	08 32 18.0	+2.1	
SBPO	**S.Benedetto Po**	**2.79**	**324**	S	Sn	08 32 07.0	-1.6	

ROM 27 08:31:43.9±0.1, 42°.599N±0'.004×13°.276E±0'.005, h10km, ML2.7/29, 19C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**207**	P	Pg	08 31 47.2	+0.6
RM33				S	Sg	08 31 49.3	+0.7
RM33				AML	AML		
	comp=N,13950µm,0.6s						
RM33				AML	AML		
	comp=N,13800µm,0.6s						
RM33				AML	AML		
	comp=N,13850µm,0.6s						
RM33				AML	AML		
	comp=E,30000µm,0.3s						
RM33				AML	AML		
	comp=E,29500µm,0.3s						
CAMP	**Campotosto**	**0.12**	**123**	⇑P	Pg	08 31 47.4	+0.5
CAMP				S	Sg	08 31 49.6	+0.6
CAMP				AML	AML		
	comp=E,2290µm,1.0s						
CAMP				AML	AML		
	comp=N,1850µm,0.6s						
T1243	**Rocca Santa Ma**	**0.16**	**52**	⇑P	Pg	08 31 48.0	+0.4
T1243				S	Sg	08 31 51.0	+0.9
T1243				AML	AML		
	comp=N,10075µm,0.7s						
T1243				AML	AML		
	comp=N,10055µm,0.7s						
T1243				AML	AML		
	comp=E,10600µm,0.2s						
T1243				AML	AML		
	comp=E,10900µm,0.2s						
T1243				AML	AML		
	comp=N,10095µm,0.7s						
T1243				AML	AML		
	comp=N,10160µm,0.7s						
LNSS	**Leonessa**	**0.17**	**271**	⇑P	Pg	08 31 48.3	+0.6
LNSS				S	Sg	08 31 51.4	+1.0
LNSS				AML	AML		
	comp=E,11420µm,0.8s						
LNSS				AML	AML		
	comp=N,12300µm,0.6s						
TERO	**Teramo**	**0.24**	**84**	⇑P	Pg	08 31 49.3	+0.4
TERO				S	Sg	08 31 53.1	+0.8
TERO				AML	AML		
	comp=E,3010µm,0.2s						
TERO				AML	AML		
	comp=N,4470µm,0.2s						
TERO				AML	AML		
	comp=E,3255µm,0.2s						
TERO				AML	AML		
	comp=N,4105µm,0.2s						
GIGS	**Gran Sasso**	**0.26**	**124**	⇑P	Pg	08 31 49.6	+0.3
GIGS				S	Sg	08 31 53.8	+0.9
GIGS				AML	AML		
	comp=E,570µm,0.5s						
GIGS				AML	AML		
	comp=N,400µm,1.5s						
GIGS				AML	AML		
	comp=E,570µm,0.5s						
NRCA	**Norcia**	**0.26**	**333**	⇑P	Pg	08 31 49.7	+0.4
NRCA				S	Sg	08 31 53.8	+0.8
NRCA				AML	AML		
	comp=N,5005µm,0.5s						
NRCA				AML	AML		
	comp=N,5010µm,0.5s						
NRCA				AML	AML		
	comp=N,5555µm,0.5s						
NRCA				AML	AML		
	comp=E,8385µm,0.2s						
NRCA				AML	AML		
	comp=E,7695µm,0.2s						
MMO1	**Montemonaco**	**0.30**	**7**	⇑P	Pg	08 31 50.4	+0.4
MMO1				S	Sg	08 31 55.2	+1.0
MMO1				AML	AML		
	comp=N,3535µm,0.3s						
MMO1				AML	AML		
	comp=N,3530µm,0.3s						
MMO1				AML	AML		
	comp=E,6040µm,0.8s						
MC2	**Monte Cornacci**	**0.32**	**349**	⇑P	Pg	08 31 50.8	+0.3
MC2				S	Sb	08 31 56.1	-1.0
FIAM	**Fiamignano**	**0.35**	**200**	⇑P	Pg	08 31 51.3	+0.3
FIAM				S	Sb	08 31 56.8	-1.1
FIAM				AML	AML		
	comp=E,1218µm,0.5s						
FIAM				AML	AML		
	comp=N,970µm,0.5s						
ARRO	**Arrone**	**0.38**	**267**	⇑P	Pg	08 31 51.6	+0.3
ARRO				S	Sb	08 31 57.5	-1.0
ARRO				AML	AML		
	comp=E,1265µm,0.9s						
ARRO				AML	AML		
	comp=N,1585µm,0.2s						
ARRO				AML	AML		
	comp=E,1260µm,0.9s						
FEMA	**Monte Fema**	**0.40**	**335**	P	Pg	08 31 52.5	+0.6
FEMA				S	Sb	08 31 58.4	-0.9
FAGN	**Fagnano**	**0.40**	**145**	P	Pb	08 31 52.9	-0.3
FAGN				AML	AML		
	comp=N,1705µm,0.5s						
FAGN				AML	AML		
	comp=E,2050µm,0.4s						
OFFI	**Offida**	**0.45**	**42**	P	Pb	08 31 53.9	-0.1
OFFI				S	Sb	08 32 02.6	+1.9
OFFI				AML	AML		
	comp=N,1840µm,0.5s						
OFFI				AML	AML		
	comp=E,2625µm,0.6s						
FDMO	**Fiordimonte**	**0.46**	**342**	⇑P	Pg	08 31 53.0	+0.1
FDMO				S	Sb	08 32 00.2	-0.8
FDMO				AML	AML		
	comp=N,756µm,0.8s						
FDMO				AML	AML		
	comp=E,589µm,0.2s						
VCEL	**Villa Celiera**	**0.47**	**116**	P	Pb	08 31 53.7	-0.5
VCEL				S	Sb	08 32 01.5	+0.3
VCEL				AML	AML		
	comp=E,1795µm,0.3s						
VCEL				AML	AML		
	comp=N,2275µm,0.3s						
VCEL				AML	AML		
	comp=E,1790µm,0.3s						
VCEL				AML	AML		
	comp=N,2280µm,0.3s						
GUMA	**Gualdo di Mace**	**0.47**	**5**	P	Pg	08 31 53.6	+0.5
GUMA				S	Sb	08 32 01.1	-0.1
GUMA				AML	AML		
	comp=N,3500µm,1.4s						
GUMA				AML	AML		
	comp=N,4165µm,0.6s						
GUMA				AML	AML		
	comp=E,5855µm,0.3s						
GUMA				AML	AML		
	comp=E,4590µm,0.3s						
CESI	**CESI - Serrava**	**0.49**	**326**	P	Pg	08 31 53.9	+0.4
CESI				S	Sb	08 32 01.5	-0.4
CESI				AML	AML		
	comp=E,515µm,0.3s						
CESI				AML	AML		
	comp=N,830µm,0.6s						
CESI				AML	AML		
	comp=E,516µm,0.3s						
CSP1	**Cessapalombo**	**0.50**	**354**	P	Pg	08 31 53.6	0.0
CSP1				S	Sb	08 32 01.5	-0.6
CSP1				AML	AML		
	comp=E,806µm,0.9s						
CSP1				AML	AML		
	comp=N,942µm,0.4s						
CESX	**Cesi**	**0.51**	**271**	P	Pg	08 31 53.8	-0.1
CESX				S	Sg	08 32 01.6	+0.9
CESX				AML	AML		
	comp=N,755µm,0.6s						
CESX				AML	AML		
	comp=E,826µm,0.2s						
TRTR	**Tortoreto Alta**	**0.52**	**66**	P	Pb	08 31 55.3	+0.3
TRTR				S	Sn	08 32 04.6	-1.5
TRTR				AML	AML		
	comp=E,1790µm,1.5s						
TRTR				AML	AML		
	comp=N,2075µm,0.5s						
T0110	**Collepietro**	**0.53**	**135**	⇓P	Pg	08 31 54.4	+0.2
T0110				S	Sb	08 32 02.6	-0.4
T0110				AML	AML		
	comp=E,1084µm,0.3s						
T0110				AML	AML		
	comp=N,1180µm,0.3s						
PTQR	**Pietraquaria**	**0.58**	**171**	⇑P	Pg	08 31 54.2	-1.1
ASSB	**Assisi San Ben**	**0.64**	**315**	P	Pg	08 31 56.5	+0.2
ASSB				S	Sb	08 32 06.1	0.0
ASSB				AML	AML		
	comp=N,429µm,1.4s						
ASSB				AML	AML		
	comp=E,447µm,1.5s						
SRES	**S.Oreste - Sor**	**0.67**	**238**	⇑P	Pg	08 31 57.2	+0.3
SRES				AML	AML		
	comp=N,226µm,0.3s						
SRES				AML	AML		
	comp=E,239µm,0.4s						
CERT	**Cerreto**	**0.69**	**199**	⇓P	Pg	08 31 56.9	-0.3
CERT				AML	AML		
	comp=E,841µm,0.5s						
CERT				AML	AML		
	comp=N,544µm,0.4s						
SNTG	**Esanatoglia**	**0.70**	**340**	P	Pg	08 31 57.4	-0.1
SNTG				S	Sb	08 32 08.0	0.0
SNTG				AML	AML		
	comp=N,298µm,1.1s						
SNTG				AML	AML		
	comp=E,254µm,0.5s						
SNTG				AML	AML		
	comp=N,297µm,1.1s						
EL6	**Elcito**	**0.74**	**350**	⇓P	Pg	08 31 57.4	-0.9
EL6				S	Sn	08 32 12.0	+0.1
INTR	**Introdacqua**	**0.75**	**141**	⇑P	Pg	08 31 58.0	-0.4
INTR				AML	AML		
	comp=E,189µm,0.8s						
INTR				AML	AML		
	comp=N,398µm,0.5s						
INTR				AML	AML		
	comp=E,188µm,0.8s						
INTR				AML	AML		
	comp=N,398µm,0.5s						
CING	**Cingoli**	**0.78**	**356**	⇑P	Pg	08 31 58.7	-0.2
CING				AML	AML		
	comp=E,382µm,0.7s						
CING				AML	AML		
	comp=N,402µm,0.4s						
LPEL	**Lama dei Pelig**	**0.87**	**129**	⇑P	Pg	08 31 59.9	-0.8
MGAB	**Montegabbione**	**0.91**	**290**	⇑P	Pb	08 32 01.7	-0.2
MGAB				AML	AML		
	comp=E,413µm,1.2s						
MGAB				AML	AML		
	comp=N,422µm,0.3s						
MGAB				AML	AML		
	comp=N,406µm,1.6s						
MGAB				AML	AML		
	comp=E,341µm,1.2s						
LRP	**Arpino**	**0.98**	**166**	P	Pn	08 32 05.0	+1.3
SACS	**San Casciano d**	**1.04**	**284**	⇓P	Pn	08 32 05.2	+0.7
SACS				AML	AML		
	comp=E,186µm,0.5s						
SACS				AML	AML		
	comp=N,158µm,0.7s						
GIUL	**Giuliano Di Ro**	**1.04**	**181**	⇑P	Pn	08 32 05.9	+1.3
TOLF	**Tolfa**	**1.09**	**241**	⇓P	Pb	08 32 04.1	-0.6
TOLF				AML	AML		
	comp=E,118µm,0.5s						
TOLF				AML	AML		
	comp=N,172µm,0.7s						
MPAG	**Monte Paganucc**	**1.10**	**340**	⇓P	Pb	08 32 04.6	-0.4
SF04	**Casetta**	**1.21**	**282**	P	Pg	08 32 07.4	+0.2
CRE	**Caprese Michel**	**1.41**	**317**	⇑P	Pn	08 32 09.9	+0.2
CRE				AML	AML		
	comp=E,71µm,0.4s						
CRE				AML	AML		
	comp=N,68µm,0.7s						
OVO	**Vesuviano**	**1.96**	**154**	P	Pb	08 32 18.6	-1.1

ROM 27 08:32:27.4±0.1, 42°.808N±0'.003×13°.153E±0'.005, h10km, ML1.8/1,3C, Error ellipse: s-maj=0.4km s-min=0.3km az=287.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**312**	⇑P	Pg	08 32 29.6	+0.2
NRCA				S	Sg	08 32 30.8	-0.2
NRCA				AML	AML		
	comp=E,6815µm,0.5s						
NRCA				AML	AML		
	comp=N,5185µm,0.1s						
NRCA				AML	AML		
	comp=N,4515µm,0.1s						
NRCA				AML	AML		
	comp=E,6025µm,0.5s						
MC2	**Monte Cornacci**	**0.11**	**15**	⇑P	Pg	08 32 30.8	+0.4
MC2				S	Sg	08 32 33.0	+0.6
MMO1	**Montemonaco**	**0.16**	**54**	P	Pg	08 32 31.4	+0.5

MMO1				S	Sg	08 32 34.2	+0.8
MMO1				AML	AML		
	comp=N,587μm,0.4s						
MMO1				AML	AML		
	comp=E,590μm,0.3s						
LNSS	**Leonessa**	**0.22**	**202**	P	Pg	08 32 32.7	+0.7
LNSS				S	Sg	08 32 36.7	+1.5
FDMO	**Fiordimonte**	**0.23**	**348**	P	Pg	08 32 32.9	+0.6
CESI	**CESI - Serrava**	**0.27**	**317**	⇑P	Pg	08 32 33.5	+0.6
CESI				S	Sb	08 32 37.9	-1.1
TERO	**Teramo**	**0.38**	**119**	P	Pg	08 32 35.3	+0.4
TERO				S	Sb	08 32 41.2	-0.9

IDC 27 08:53:32.5±11.0, 0°.63N×98°.40E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=597.3km s-min=32.3km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**27.11**	**252**	T	T	09 26 03.1	
	baz=75,slow=75,SNR=26						
H08S3	**Diego Garcia H**	**27.12**	**252**	T	T	09 25 58.0	
	baz=75,slow=75,SNR=26						
H08S1	**Diego Carcia H**	**27.13**	**252**	T	T	09 26 04.5	
	baz=75,slow=75,SNR=48						
H01W3	**Cape Leeuwin H**	**38.27**	**159**	T	T	09 40 24.8	
	baz=333,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	**38.29**	**159**	T	T	09 40 25.6	
	baz=333,slow=76,SNR=13						
H01W1	**Cape Leeuwin H**	**38.29**	**159**	T	T	09 40 26.5	
	baz=333,slow=76,SNR=9.2						
WRA	**Warramunga Arr**	**40.72**	**122**	P	P	09 01 15.8	+0.4
	0.3nm,0.6s,baz=290,slow=8.3,SNR=5.3						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**42.10**	**127**	P	P	09 01 25.9	-0.8
	0.4nm,1.0s,baz=314,slow=8.8,SNR=2.1						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**48.09**	**345**	P	P	09 02 13.9	-0.1
	0.2nm,0.5s,baz=163,slow=10,SNR=2.6						
	0.2nm,0.5s						

WEL 27 08:54:19.0±0.4, 42°.5S×173°.3E, h21km±6km, M3.3/7, ML3.5/7, MLv3.3/7, Error ellipse: s-maj=0.0km s-min=0.0km az=110.5

NOU 27 08:54:19.1, 42°.31S×173°.52E, h35km, MLv3.8/7, South Island, New Zealand

ISC 27 08:54:19.0±1.0, 42°.24S±0°.03×173°.49E±0°.03, h32km±7km, n84, σ0s99/95, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.18**	**168**	P	**Pn**	**08 54 26.2**	**+0.7**
KHZ				S	**Sb**	**08 54 32.0**	**+2.6**
KHZ	**Kahutara**	**0.18**	**168**	P	**Pn**	**08 54 26.1**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.60**	**29**	P	**Pb**	**08 54 31.0**	**-0.1**
BSWZ				S	**Sn**	**08 54 40.5**	**+0.6**
THZ	**Tophouse**	**0.65**	**317**	P	**Pb**	**08 54 30.6**	**-1.4**
THZ				S	**Sb**	**08 54 39.8**	**-0.9**
CMWZ	**Cape Campbell**	**0.73**	**48**	P	**Pn**	**08 54 33.9**	**+0.8**
CMWZ				S	**Sn**	**08 54 45.9**	**+2.7**
GVZ	**Greta Valley S**	**0.80**	**205**	P	**Pn**	**08 54 34.7**	**+0.6**
GVZ				S	**Sn**	**08 54 46.3**	**+1.3**
TUWZ	**Tuamarina**	**0.88**	**23**	P	**Pn**	**08 54 35.0**	**-0.2**
TUWZ				S	**Sb**	**08 54 47.2**	**0.0**
MRNZ	**Matariki Terra**	**1.00**	**327**	P	**Pn**	**08 54 36.5**	**-0.4**
MRNZ				S	**Sn**	**08 54 49.7**	**-0.2**
NNZ	**Nelson**	**1.02**	**355**	P	**Pn**	**08 54 36.6**	**-0.5**
NNZ				S	**Sn**	**08 54 50.6**	**+0.1**
LTZ	**Lake Taylor**	**1.05**	**239**	P	**Pb**	**08 54 38.1**	**-0.6**
LTZ				S	**Sb**	**08 54 52.5**	**+0.3**
AMCZ	**Amberley**	**1.12**	**213**	P	**Pn**	**08 54 38.7**	**+0.1**
TCW	**Tory Channel**	**1.19**	**30**	P	**Pn**	**08 54 39.2**	**-0.2**
TKNZ	**Takaka Hill**	**1.27**	**342**	P	**Pn**	**08 54 40.5**	**-0.1**
TKNZ				S	**Sb**	**08 54 58.4**	**+0.1**
SNZO	**South Karori**	**1.30**	**45**	P	**Pn**	**08 54 40.9**	**0.0**
DSZ	**Denniston Nort**	**1.35**	**291**	P	**Pn**	**08 54 42.1**	**+0.4**
DSZ				S	**Sb**	**08 54 59.5**	**-1.2**
WEL	**Wellington**	**1.35**	**45**	P	**Pn**	**08 54 41.6**	**0.0**
DUWZ	**D'Urville Isla**	**1.47**	**13**	P	**Pn**	**08 54 43.3**	**-0.1**
PLWZ	**Palliser**	**1.48**	**64**	P	**Pn**	**08 54 42.7**	**-0.8**
OKCZ	**Okains Bay**	**1.52**	**192**	P	**Pn**	**08 54 43.7**	**-0.3**
OXZ	**Oxford**	**1.52**	**224**	P	**Pn**	**08 54 43.4**	**-0.7**
MSWZ	**Moikau Station**	**1.55**	**59**	P	**Pn**	**08 54 43.7**	**-0.7**
QRZ	**Quartz Range**	**1.59**	**333**	P	**Pn**	**08 54 45.4**	**+0.5**
QRZ	**Quartz Range**	**1.59**	**333**	P	**Pn**	**08 54 45.6**	**+0.5**
INZ	**Inchbonnie**	**1.59**	**252**	P	**Pn**	**08 54 45.5**	**+0.6**
MQZ	**McQueen's Vall**	**1.59**	**202**	P	**Pn**	**08 54 43.9**	**-1.1**
CAW	**Cannon Point**	**1.64**	**47**	P	**Pn**	**08 54 45.1**	**-0.5**
PAWZ	**Paruwai Farm**	**1.68**	**60**	P	**Pn**	**08 54 45.3**	**-0.9**
AKCZ	**Akaroa Harbour**	**1.69**	**194**	P	**Pn**	**08 54 45.8**	**-0.5**
KIW	**Kapiti Island**	**1.74**	**38**	P	**Pn**	**08 54 46.9**	**-0.2**
RACZ	**Rakaia**	**1.79**	**213**	P	**Pn**	**08 54 46.7**	**-0.9**
TRWZ	**Traveller**	**1.84**	**64**	P	**Pn**	**08 54 47.3**	**-1.2**
MTW	**Mount Morrison**	**1.85**	**55**	P	**Pn**	**08 54 47.4**	**-1.2**
OGWZ	**Otaki Gorge**	**1.90**	**42**	P	**Pn**	**08 54 48.7**	**-0.5**
HOWZ	**Holdsworth Sta**	**2.03**	**49**	P	**Pn**	**08 54 49.8**	**-1.2**
WACZ	**Wakanui South**	**2.09**	**215**	P	**Pn**	**08 54 51.1**	**-0.7**
TMWZ	**Te Maipa**	**2.12**	**59**	P	**Pn**	**08 54 51.0**	**-1.3**
WVZ	**Waitaha Valley**	**2.20**	**247**	P	**Pn**	**08 54 53.6**	**+0.3**
MRZ	**Mangatainoka R**	**2.23**	**46**	P	**Pn**	**08 54 52.6**	**-1.1**
RPZ	**Rata Peaks**	**2.32**	**230**	P	**Pn**	**08 54 54.5**	**-0.4**
RPZ	**Rata Peaks**	**2.32**	**230**	P	**Pn**	**08 54 54.7**	**-0.3**
ARCZ	**Arundel**	**2.41**	**224**	P	**Pn**	**08 54 55.7**	**-0.5**
POWZ	**Post Office Ro**	**2.52**	**44**	P	**Pn**	**08 54 57.2**	**-0.5**
GCSZ	**Gaunt Creek Bo**	**2.57**	**244**	P	**Pn**	**08 54 58.6**	**+0.2**
BFZ	**Birch Farm**	**2.59**	**54**	P	**Pn**	**08 54 57.9**	**-0.9**
BFZ	**Birch Farm**	**2.59**	**54**	P	**Pn**	**08 54 59.3**	**+0.6**
WAZ	**Wanganui**	**2.73**	**25**	P	**Pn**	**08 55 01.8**	**+1.2**
DVHZ	**Dannevirke**	**2.80**	**47**	P	**Pn**	**08 54 59.7**	**-1.9**
TMZ	**Timaru**	**2.81**	**219**	P	**Pn**	**08 55 01.0**	**-0.7**
LREZ	**Lake Rotokare**	**2.86**	**14**	P	**Pn**	**08 55 04.4**	**+2.0**
TSZ	**Takapari Road**	**2.87**	**41**	P	**Pn**	**08 55 01.3**	**-1.3**
KHEZ	**Kahui Hut**	**2.97**	**8**	P	**Pn**	**08 55 05.8**	**+1.8**
NBEZ	**Newall Road No**	**2.98**	**6**	P	**Pn**	**08 55 06.0**	**+1.9**
FOZ	**Fox Glacier**	**2.99**	**243**	P	**Pn**	**08 55 04.5**	**+0.2**
PKE	**Pukeiti**	**3.07**	**7**	P	**Pn**	**08 55 07.2**	**+1.9**
VRZ	**Vera Road**	**3.26**	**18**	P	**Pn**	**08 55 09.1**	**+1.2**
PKVZ	**Pokaka**	**3.27**	**26**	P	**Pn**	**08 55 08.8**	**+0.7**
MOVZ	**Moawhango**	**3.31**	**32**	P	**Pn**	**08 55 08.6**	**-0.1**
WNVZ	**Wahianoa**	**3.32**	**30**	P	**Pn**	**08 55 09.6**	**+0.4**
WHVZ	**Whangaehu Hut**	**3.36**	**29**	P	**Pn**	**08 55 09.7**	**+0.2**
FWVZ	**Far West T-bar**	**3.37**	**28**	P	**Pn**	**08 55 09.7**	**+0.1**
KRHZ	**Kereru**	**3.39**	**41**	P	**Pn**	**08 55 07.9**	**-1.9**
TUVZ	**Tukino**	**3.39**	**30**	P	**Pn**	**08 55 10.1**	**+0.2**
NGZ	**Ngauruhoe**	**3.46**	**28**	P	**Pn**	**08 55 10.9**	**+0.1**
ODZ	**Otahua Downs**	**3.48**	**215**	P	**Pn**	**08 55 09.8**	**-1.1**
ODZ	**Otahua Downs**	**3.48**	**215**	P	**Pn**	**08 55 10.2**	**-0.8**
OTVZ	**Oturere**	**3.49**	**29**	P	**Pn**	**08 55 10.7**	**-0.6**
NNVZ	**North Ngauruho**	**3.50**	**28**	P	**Pn**	**08 55 11.5**	**+0.1**
WTVZ	**West Tongariro**	**3.50**	**28**	P	**Pn**	**08 55 11.4**	**0.0**
ETVZ	**East Tongariro**	**3.53**	**29**	P	**Pn**	**08 55 11.9**	**+0.1**
TMVZ	**Te Maari**	**3.55**	**29**	P	**Pn**	**08 55 12.1**	**+0.2**
BKZ	**Black Stump Fm**	**3.83**	**38**	P	**Pn**	**08 55 16.1**	**+0.4**
HIZ	**Hauiti**	**3.87**	**16**	P	**Pn**	**08 55 17.3**	**+1.0**
HIZ	**Hauiti**	**3.87**	**16**	P	**Pn**	**08 55 17.3**	**+1.0**
JCZ	**Jackson Bay**	**3.90**	**240**	P	**Pn**	**08 55 17.0**	**+0.2**
MRHZ	**Matea Rd**	**4.07**	**34**	P	**Pn**	**08 55 16.9**	**-2.2**
TLZ	**Tolley Road**	**4.21**	**23**	P	**Pn**	**08 55 22.6**	**+1.3**
TUZ	**Tuapeka**	**4.64**	**215**	P	**Pn**	**08 55 26.2**	**-0.6**
TOZ	**Tahuroa Road**	**4.76**	**20**	P	**Pn**	**08 55 28.5**	**0.0**
CNGZ	**Carnagh Statio**	**5.20**	**45**	P	**Pn**	**08 55 31.6**	**-3.0**
AWAZ	**Awhitu Peninsu**	**5.25**	**10**	P	**Pn**	**08 55 36.0**	**+0.8**
MKAZ	**Moumakai**	**5.29**	**15**	P	**Pn**	**08 55 35.8**	**0.0**
ETAZ	**East Tamaki Re**	**5.39**	**12**	P	**Pn**	**08 55 37.9**	**+0.6**
MBAZ	**Motutapu North**	**5.57**	**12**	P	**Pn**	**08 55 40.5**	**+0.8**
WIAZ	**Waiheke Island**	**5.59**	**14**	P	**Pn**	**08 55 40.8**	**+0.9**

IDC 27 08:59:11.9±0.5, 29°.20S×61°.19E, h0km, mb4.4/21, mbtmp4.4/22, ML5.1/1, MS4.0/54, Error ellipse: s-maj=15.4km s-min=13.7km az=40.0

NEIC 27 08:59:13.8±1.2, 29°.10S±0°.08×61°.0E±0°.1, h10km±1km, mb4.9/41, Error ellipse: s-maj=15.5km s-min=14.1km az=89.0

GCMT 27 08:59:15.8±0.2, 29°.18S±0°.01×60°.87E±0°.03, h17km, MW5.0/95, Moment Tensor Solution. s40,c54; s95,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.28±.19; $M_{\theta\theta}$3.82±.14; $M_{\phi\phi}$-0.53±.14; $M_{r\theta}$0.92±.30; $M_{\theta\phi}$1.81±.11;

M_{0}7.16±.42; Best double couple: M_{0}4.16000×10^{16} NP1:ϕ236.00000°, δ56.00000°, λ-108.00000°. NP2: ϕ86.00000°, δ38.00000°, λ-65.00000°. Principal axes: T 4.6640, Plg9.0000°, Azm339.0000°; N -1.0070, Plg15.0000°, Azm247.0000°; P -3.6550, Plg72.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function.

ISC 27 08:59:13.6±0.4, 29°.16S±0°.06×61°.01E±0°.07, h10km, n149, σ1s28/100, mb4.8/49, MS4.0/59, 3C-2D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.28**	**328**	Pn	**Pn**	**09 01 24.6**	**-2.9**
ROCAM	**Rodrigues Isla**	**9.61**	**13**	Pn	**Pn**	**09 01 31.3**	**-0.6**
FOMA	**Nahampoana Res**	**13.18**	**285**	Pn	**Pn**	**09 02 18.7**	**-2.1**
VOI	**Vohitsoka**	**14.72**	**296**	Pn	**Pn**	**09 02 40.9**	**-1.1**
VOI	**Vohitsoka**	**14.72**	**296**	P	**Pn**	**09 02 43.0**	**+1.0**
OPO	**Ambohidratompo**	**16.44**	**307**	Pn	**Pn**	**09 03 04.6**	**-0.1**
	0.6nm,0.3s,baz=115,slow=12,SNR=26						
OPO				Sn	Sn	09 05 54.6	-13
	1.1nm,0.3s,baz=133,slow=20,SNR=8.7						
	20nm,0.5s						
SBV	**Sambava**	**18.71**	**324**	P	**Pn**	**09 03 37.0**	**+4.3**
H08S1	**Diego Carcia H**	**23.97**	**29**	T	T	09 29 10.0	
	baz=204,slow=75,SNR=27						
H08S2	**Diego Garcia H**	**23.98**	**29**	T	T	09 29 12.1	
	baz=204,slow=75,SNR=15						
H08S3	**Diego Garcia H**	**23.99**	**29**	T	T	09 29 11.9	
	baz=204,slow=75,SNR=20						
POGA	**Pongola**	**25.85**	**267**	P	**P**	**09 04 44.0**	**-1.4**
POGA				IAmb	IAmb	09 04 51.1	
	comp=Z,43nm,1.2s						
BOSA	**Boshof**	**31.24**	**262**	P	**P**	**09 05 34.6**	**+1.0**
	comp=Z,12nm,0.9s,baz=106,slow=7.6,SNR=14						
BOSA				LR	LR	09 16 18.4	
	comp=Z,407nm,19.2s,baz=104,slow=33						
	comp=Z,12nm,0.9s						
BOSA	**Boshof**	**31.24**	**262**	P	**P**	**09 05 33.7**	**+0.1**
BOSA				IAmb	IAmb	09 05 37.2	
	comp=Z,28nm,1.1s						
LBTB	**Lobatse**	**31.72**	**269**	P	**P**	**09 05 38.4**	**+0.5**
	comp=Z,8.1nm,1.0s,baz=92,slow=6.9,SNR=8.3						
LBTB				LR	LR	09 16 39.9	
	comp=Z,188nm,19.9s,baz=108,slow=33						
	comp=Z,8.1nm,1.0s						
LBTB	**Lobatse**	**31.72**	**269**	P	**P**	**09 05 36.9**	**-1.0**
LBTB				IAmb	IAmb	09 05 47.6	
	comp=Z,12nm,1.1s						
LSZ	**Lusaka**	**33.25**	**287**	LR	LR	09 17 24.2	
	comp=Z,154nm,22.0s,baz=78,slow=33						
SUR	**Sutherland**	**34.55**	**254**	LR	LR	09 18 09.7	
	comp=Z,325nm,18.5s,baz=121,slow=33						
SUR	**Sutherland**	**34.55**	**254**	P	**P**	**09 06 01.9**	**-0.7**
KMBO	**Kilima Mbogo**	**35.92**	**317**	LR	LR	09 18 20.6	
	comp=Z,382nm,19.4s,baz=96,slow=32						
MAW	**Mawson**	**38.49**	**179**	P	**P**	**09 06 34.3**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=349,slow=9.0,SNR=6.9						
MAW				LR	LR	09 18 36.2	
	comp=Z,278nm,19.8s,baz=360,slow=30						
	comp=Z,3.5nm,0.6s						
MAW	**Mawson**	**38.49**	**179**	P	**P**	**09 06 35.7**	**+0.2**
MBAR	**Mbarara**	**40.50**	**309**	LR	LR	09 22 18.2	
	comp=Z,300nm,19.1s,baz=138,slow=34						
MBAR	**Mbarara**	**40.50**	**309**	P	**P**	**09 06 52.0**	**-1.1**
TSUM	**Tsumeb**	**40.64**	**274**	P	**P**	**09 06 56.1**	**+1.9**
	comp=Z,8.4nm,1.0s,baz=120,slow=7.0,SNR=9.2						
TSUM				LR	LR	09 22 43.5	
	comp=Z,172nm,18.1s,baz=338,slow=35						
	comp=Z,8.4nm,1.0s						
TSUM	**Tsumeb**	**40.64**	**274**	P	**P**	**09 06 53.3**	**-0.9**
TSUM				IAmb	IAmb	09 06 58.5	
	comp=Z,22nm,1.2s						
LODK	**Lodwar**	**40.68**	**318**	P	**P**	**09 06 53.6**	**-0.8**
PALK	**Pallekele**	**40.89**	**31**	LR	LR	09 19 52.1	
	comp=Z,76nm,19.5s,baz=312,slow=30						
PALK	**Pallekele**	**40.89**	**31**	P	**P**	**09 06 55.3**	**-0.8**
PCHI	**Peechi**	**42.14**	**23**	*e*P	**P**	**09 07 07.1**	**+0.8**
PCHI				*e*S	S	09 12 53.0	-33
ATD	**Arta Tunnel**	**44.09**	**334**	P	**P**	**09 07 23.2**	**+1.1**
	comp=Z,2.1nm,0.3s,baz=259,slow=6.9,SNR=5.3						
ATD				LR	LR	09 22 44.5	
	comp=Z,386nm,21.2s,baz=158,slow=32						
	comp=Z,2.1nm,0.3s						
ATD	**Arta Tunnel**	**44.09**	**334**	P	**P**	**09 07 22.0**	**-0.1**
ATD				IAmb	IAmb	09 07 24.7	
	comp=Z,23nm,1.4s						
H01W2	**Cape Leeuwin H**	**44.97**	**112**	T	T	09 55 06.9	
	baz=261,slow=75,SNR=51						
H01W3	**Cape Leeuwin H**	**44.97**	**111**	T	T	09 55 04.6	
	baz=261,slow=75,SNR=36						
H01W1	**Cape Leeuwin H**	**44.99**	**112**	T	T	09 55 08.2	
	baz=261,slow=75,SNR=47						
CASY	**Casey**	**47.70**	**155**	P	**P**	**09 07 50.4**	**+0.4**
CASY				IAmb	IAmb	09 08 06.8	
	comp=Z,8.1nm,1.2s						
BKNI	**Bangkinang**	**48.17**	**60**	P	**P**	**09 07 52.0**	**-2.3**
	comp=Z,241nm,0.4s						
RPSI	**Rantau Prapat**	**48.19**	**55**	P	**P**	**09 07 54.7**	**+0.3**
RPSI				IAmb	IAmb	09 08 24.6	
	comp=Z,15nm,1.2s						
LEM	**Lembang**	**49.16**	**73**	LR	LR	09 24 20.9	
	comp=Z,94nm,20.4s,baz=184,slow=31						
HYBB	**Hyderabad (bro**	**49.31**	**22**	*e*P	**P**	**09 08 03.8**	**+0.8**
HYBB				*e*S	**S**	**09 15 09.5**	**0.0**
PWJI	**Pagerwojo**	**52.07**	**77**	P	**P**	**09 08 24.6**	**+0.7**
	comp=Z,31nm,1.1s						
WSAR	**Wadi Sarin**	**52.15**	**357**	LR	LR	09 24 57.8	
	comp=Z,126nm,21.7s,baz=190,slow=30						
TROLL	**Troll, Antarti**	**52.93**	**199**	P	**P**	**09 08 29.0**	**-0.7**
SNAA	**Sanae**	**54.42**	**200**	P	**P**	**09 08 40.2**	**-0.4**
SNAA	**Sanae**	**54.42**	**200**	P	**P**	**09 08 40.2**	**-0.4**
	comp=Z,2.8nm,1.0s,baz=115,slow=8.2,SNR=5.4						
SNAA				LR	LR	09 26 18.0	
	comp=Z,115nm,21.8s,baz=74,slow=30						
	comp=Z,2.8nm,1.0s						
RAYN	**Ar Rayn**	**54.46**	**342**	P	**P**	**09 08 40.0**	**-1.4**
RAYN				IAmb	IAmb	09 08 43.2	
	comp=Z,8.5nm,1.0s						
VNA2	**Neumayer--Watz**	**55.69**	**202**	P	**P**	**09 08 49.5**	**-0.2**
	baz=73,slow=7.0						
VNA1	**Neumayer--Stat**	**55.93**	**202**	P	**P**	**09 08 51.5**	**+0.1**
VNA3	**Neumayer Olymp**	**56.48**	**201**	P	**P**	**09 08 54.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**59.60**	**95**	P	**P**	**09 09 16.4**	**-1.5**
	comp=Z,2.4nm,0.8s,baz=251,slow=5.0,SNR=3.7						
FITZ				LR	LR	09 31 26.4	
	comp=Z,55nm,18.1s,baz=254,slow=33						
	comp=Z,2.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**59.85**	**42**	P	**P**	**09 09 19.4**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=235,slow=6.9,SNR=13						
CMAR				LR	LR	09 31 02.2	
	comp=Z,80nm,20.6s,baz=220,slow=32						
	comp=Z,3.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.85**	**42**	P	**P**	**09 09 19.2**	**-0.4**
QSPA	**South Pole Qui**	**61.00**	**180**	P	**P**	**09 09 26.7**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=258,slow=1.6,SNR=11						
QSPA				LR	LR	09 32 15.6	
	comp=Z,221nm,21.1s,baz=280,slow=32						
	comp=Z,2.9nm,0.7s						
QSPA	**South Pole Qui**	**61.00**	**180**	P	**P**	**09 09 26.7**	**-0.3**
QSPA				IAmb	IAmb	09 09 43.3	
	comp=Z,21nm,1.4s						
SHL	**Shillong**	**61.97**	**32**	P	**P**	**09 09 34.2**	**+0.2**
BELA	**Belgrano 2**	**62.90**	**194**	P	**P**	**09 09 41.0**	**+1.6**
BELA				IAmb	IAmb	09 09 57.8	
	comp=Z,14nm,1.8s						
EIL	**Elat**	**63.57**	**335**	LR	LR	09 34 00.1	
	comp=Z,194nm,19.6s,baz=88,slow=33						
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**09 09 47.3**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=272,slow=6.9,SNR=17						
VNDA				LR	LR	09 35 52.4	
	comp=Z,282nm,18.5s,baz=249,slow=34						
	comp=Z,3.4nm,0.8s						
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**09 09 47.4**	**+0.2**
TOLI2	**Tolitoli**	**64.47**	**73**	P	**P**	**09 09 49.0**	**-1.8**
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	**09 09 49.9**	**-1.5**
	comp=Z,3.7nm,0.8s,baz=240,slow=6.3,SNR=29						
ASAR				LR	LR	09 34 15.1	
	comp=Z,85nm,20.4s,baz=266,slow=33						
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	**09 09 50.5**	**-0.9**
AS31	**Alice Springs**	**64.58**	**104**	P	**P**	**09 09 50.7**	**-0.7**
WRA	**Warramunga Arr**	**66.40**	**100**	P	**P**	**09 10 01.6**	**-1.6**
	comp=Z,4.0nm,0.9s,baz=247,slow=5.8,SNR=16						
WRA				LR	LR	09 35 03.9	
	comp=Z,165nm,19.2s,baz=218,slow=32						
	comp=Z,4.0nm,0.9s						
WB2	**Warramunga Arr**	**66.41**	**100**	P	**P**	**09 10 02.2**	**-1.1**
WRAB	**Tennant Creek**	**66.41**	**100**	P	**P**	**09 10 02.9**	**-0.4**
WRAB				IAmb	IAmb	09 10 13.8	
	comp=Z,9.2nm,1.0s						
MMAI	**Mount Meron Ar**	**66.43**	**337**	LR	LR	09 36 06.2	
	comp=Z,130nm,19.5s,baz=342,slow=33						
GEYT	**Alibeck**	**66.79**	**358**	LR	LR	09 37 53.8	
	comp=Z,87nm,18.5s,baz=181,slow=35						
PZH	**PanZhiHua**	**67.74**	**39**	P	**P**	**09 10 14.0**	**+2.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,60nm,4.0s						
STKA	**Stephens Creek**	**67.89**	**115**	LR	LR	09 34 41.0	
	comp=Z,46nm,20.0s,baz=217,slow=31						
MARD	**Mardin**	**68.79**	**343**	P	**P**	**09 10 18.9**	**+1.0**
MARD				IAmb	IAmb	09 10 20.1	
	comp=Z,8.1nm,1.0s						
CSS	**Mathiatis**	**68.92**	**336**	P	**P**	**09 10 18.9**	**+0.2**
CSS				IAmb	IAmb	09 10 24.9	
	comp=Z,12nm,1.0s						
KSH	**Kashi**	**69.73**	**12**	P	**P**	**09 10 21.0**	**-2.7**
KSH				sP	pwP	09 10 29.0	-2.5
KSH				pmax	pmax		
	comp=Z,19nm,0.9s						
KSH				LR	LR		
	comp=Z,250nm,18.9s						
GNI	**Garni**	**70.59**	**347**	LR	LR	09 39 37.5	
	comp=Z,185nm,20.0s,baz=177,slow=34						
TOA0	**Torodi Ar. Sit**	**71.02**	**298**	P	**P**	**09 10 32.0**	**+0.1**
TOA0				IAmb	IAmb	09 10 35.9	
	comp=Z,11nm,1.1s						
TORD	**Torodi Ar. Bea**	**71.02**	**298**	P	**P**	**09 10 32.9**	**+0.9**
	comp=Z,3.1nm,0.3s,baz=121,slow=5.2,SNR=2.6						
	comp=Z,3.1nm,0.3s						
CD2	**Chengdu**	**72.29**	**38**	P	**P**	**09 10 39.0**	**-0.3**
KIC	**Kosan Boka**	**72.32**	**288**	⇓*i*P	P	09 10 43.7	+3.8
	comp=Z,8.1nm,0.7s						
GOMU	**GeErMu**	**72.37**	**28**	P	**P**	**09 10 42.5**	**+2.4**
GOMU				pP	pwP	09 10 46.0	-1.9
GOMU				sP	sP	09 10 47.3	+4.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,42nm,5.0s						
SIJI	**Sorong**	**72.38**	**81**	LR	LR	09 38 53.9	
	comp=Z,29nm,21.0s,baz=96,slow=33						
KK31	**Karatay Array**	**72.44**	**7**	P	**P**	**09 10 39.6**	**-0.3**
KK31				IAmb	IAmb	09 10 42.1	
	comp=Z,5.5nm,0.9s						
KKAR	**Karatay Array**	**72.44**	**7**	P	**P**	**09 10 40.2**	**+0.3**
LIC	**Lamto**	**72.48**	**288**	⇑*i*P	P	09 10 45.1	+4.2
	comp=Z,1.5nm,0.3s						
AAK	**Ala-Archa**	**72.51**	**10**	P	**P**	**09 10 40.3**	**-0.2**
DBIC	**Dimbokro**	**72.58**	**288**	P	**P**	**09 10 42.5**	**+1.1**
	comp=Z,8.5nm,0.8s,baz=134,slow=4.5,SNR=9.0						
DBIC				LR	LR	09 40 02.8	
	comp=Z,82nm,21.8s,baz=146,slow=34						
	comp=Z,8.5nm,0.8s						
TIC	**Toumodi**	**72.70**	**288**	⇑*e*P	**P**	**09 10 45.6**	**+3.4**
	comp=Z,7.2nm,0.3s						
BR131	**Keskin Array S**	**73.11**	**338**	P	**P**	**09 10 43.6**	**-0.6**
BR131				IAmb	IAmb	09 10 45.4	
	comp=Z,5.5nm,1.0s						
BRTR	**Keskin Array B**	**73.11**	**338**	P	**P**	**09 10 44.2**	**0.0**
	comp=Z,2.2nm,0.9s,baz=167,slow=7.3,SNR=9.9						
BRTR				LR	LR	09 40 00.7	
	comp=Z,92nm,20.7s,baz=141,slow=33						
	comp=Z,2.2nm,0.9s						
BRTR	**Keskin Array B**	**73.11**	**338**	P	**P**	**09 10 42.6**	**-1.6**
KBZ	**Khabaz**	**74.41**	**346**	LR	LR	09 41 36.5	
	comp=Z,222nm,21.9s,baz=158,slow=34					

comp=Z,23nm,19.1s,baz=194,slow=36
KIRV Kirov 87.94 354 LR LR 09 52 54.6
comp=Z,52nm,18.2s,baz=158,slow=37
GERES GERESS Array B 88.40 331 P **P 09 12 05.7 0.0**
comp=Z,0.1nm,0.3s,baz=138,slow=6.0,SNR=3.6
comp=Z,0.1nm,0.3s
DAVOX Davos/Dischmat 88.56 328 LR LR 09 52 02.0
comp=Z,34nm,20.5s,baz=245,slow=36
URZ Urewera 90.23 135 LR LR 09 44 57.8
comp=Z,174nm,20.6s,baz=211,slow=30
CLL Collm 90.57 332 *e*P **P 09 12 17.0 +1.4**
CLL *e*PPP PPP 09 17 54.0
CLL *e*S **S 09 23 06.0 -4.9**
CLL *e*PPS PPS 09 24 46.0
KSRS Korea Array 91.18 47 LR LR 09 51 42.2
comp=Z,15nm,18.5s,baz=240,slow=35
GUMO Guam 91.27 75 LR LR 09 52 51.6
comp=Z,27nm,18.7s,baz=259,slow=35
ESDC Sonseca Array 91.30 316 P **P 09 12 21.1 +1.7**
comp=Z,3.1nm,1.1s,baz=116,slow=3.7,SNR=12
comp=Z,3.1nm,1.1s
KLMR Klimovskoe 91.39 350 *e*P **P 09 12 18.9 -0.2**
KLMR AMP 09 12 23.0
comp=Z,13nm,1.3s
DZM Mont Dzumac 92.00 117 LR LR 09 48 26.6
comp=Z,66nm,18.6s,baz=328,slow=32
RCBR Riachuelo 93.20 262 LR LR 09 47 56.9
comp=Z,118nm,19.5s,baz=248,slow=31
NOA NORSAR Array B 98.55 338 LR LR 09 57 09.8
comp=Z,42nm,19.9s,baz=125,slow=35
RAO Raoul Island 99.14 131 LR LR 09 49 00.6
comp=Z,42nm,21.2s,baz=78,slow=30
TBI Tubuai 120.12 147 *e*LR LR 09 54 53.7
comp=Z,103nm,27.0s
PPT2 Papeete2 124.93 144 *e*LR LR 09 57 07.9
comp=Z,110nm,24.2s
TAOE Nuku Hiva Isla 137.05 148 *e*S 09 25 29.0
comp=Z,60nm,36.2s
TAOE Nuku Hiva Isla 137.05 148 *e*LR LR 10 02 44.8
comp=Z,135nm,26.8s
ILAR Eielson Array 140.29 18 PKP **PKPdf 09 18 41.3 -0.7**
comp=Z,0.5nm,0.8s,baz=320,slow=2.7,SNR=3.5
YKA Yellowknife Ar 146.54 356 PKPbc **PKPab 09 18 54.0 -1.4**
comp=Z,4.4nm,0.8s,baz=350,slow=2.8,SNR=6.9
ULM Lac du Bonnet 152.63 327 PKPbc **PKPbc 09 19 08.4 -1.7**
comp=Z,2.5nm,0.7s,baz=22,slow=4.8,SNR=6.2
PDAR Pinedale Array 164.41 333 PKP **PKPdf 09 19 17.4 -0.3**
comp=Z,1.4nm,0.9s,baz=114,slow=3.7,SNR=11
TXAR Lajitas Array 166.62 274 PKP **PKPdf 09 19 20.9 +1.1**
comp=Z,1.1nm,0.9s,baz=121,slow=2.2,SNR=11
NVAR Mina Array Bea 170.74 357 PKP **PKPdf 09 19 23.7 +1.3**
comp=Z,0.8nm,0.9s,baz=203,slow=2.3,SNR=5.6

*NEIC **27** 09:23:28.3±1.6,27°37.N±0°.06×127°.32E±0°.08, h101km±8km, mb4.4/35, Error ellipse: s-maj=10.3km s-min=8.0km az=76.0*
*JMA **27** 09:23:29.3±0.2,27°.N±1°×12°.7E±°, h104km±2km, MV3.7/16, NW OFF OKINAWAJIMA IS*
*IDC **27** 09:23:30.6±3.6,27°.31N×127°.34E, h134km±34km, mb3.5/10, mbtmp3.9/12, Error ellipse: s-maj=24.8km s-min=14.6km az=81.0*
ISC 27 09:23:28.7±0.7,**27°.32N**±0°.06×**127°.37E**±0°.06,**h111**km±7km, **n76**,σ0**s97**/91,**mb4.3**/28,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.61**	**118**	*i* P		**Pn**		**09 23 46.9**	**+0.4**
JIH				S		**Sn**		**09 23 59.9**	**+0.1**
JAGN	**Aguni-jima**	**0.74**	**189**	*i* P		**Pn**		**09 23 47.8**	**+0.2**
JAGN				S		**Sn**		**09 24 01.2**	**-0.5**
JOW	**Kunigami**	**0.94**	**121**			**Pn**		**09 23 49.7**	**+0.2**
JOW				Sn		**Sn**		**09 24 04.3**	**-0.8**
JOW	**Kunigami**	**0.94**	**121**	*i* P		**Pn**		**09 23 49.8**	**+0.2**
JOW				S		**Sn**		**09 24 04.5**	**-0.6**
JNTH	**Nagotoyohara**	**0.99**	**144**	*i* P		**Pn**		**09 23 50.4**	**+0.5**
JNTH				S		**Sn**		**09 24 05.4**	**-0.5**
JYRO	**Yoronjima**	**1.01**	**107**	*i* P		**Pn**		**09 23 50.4**	**+0.3**
JYRO				S		**Sn**		**09 24 05.9**	**-0.3**
JOKE	**Okinoerabujima**	**1.07**	**88**	P		**Pn**		**09 23 51.1**	**+0.3**
JOKE				S		**Sn**		**09 24 07.4**	**0.0**
JKE	**Kume jima 2**	**1.12**	**208**	*i* P		**Pn**		**09 23 51.6**	**+0.3**
JKE				S		**Sn**		**09 24 08.4**	**0.0**
JJT3	**Tamagusuku3**	**1.23**	**162**	P		**Pn**		**09 23 53.8**	**+1.3**
JJT3				S		**Sn**		**09 24 11.3**	**+0.8**
JTK	**Tokunoshima**	**1.48**	**71**	P		**Pn**		**09 23 55.7**	**+0.3**
JTK				*e*S		**Sn**		**09 24 14.6**	**-1.1**
JAMN	**Amaminishikomi**	**1.85**	**60**	P		**Pn**		**09 23 59.8**	**-0.1**
JAMN				S		**Sn**		**09 24 22.4**	**-1.2**
JAM	**Amami Oshima**	**2.26**	**61**	P		**Pn**		**09 24 05.2**	**+0.1**
JAM				S		**Sn**		**09 24 32.2**	**-0.7**
JTAJ	**Takarajima**	**2.44**	**41**	P		**Pn**		**09 24 08.0**	**+0.5**
JTAJ				*e*S		**Sn**		**09 24 38.2**	**+1.1**
JZK	**Kikaishima**	**2.51**	**66**	P		**Pn**		**09 24 09.1**	**+0.7**
JZK				*e*S		**Sn**		**09 24 39.5**	**+0.7**
YOJ	**Yonaguni jima**	**4.85**	**235**	Pn		**Pn**		**09 24 39.2**	**-0.3**
JSU	**Suzuyama**	**4.98**	**32**			**Pn**		**09 24 41.8**	**+0.7**
YHNB	**Yeheng**	**6.00**	**245**	Pn		**Pn**		**09 24 57.4**	**+2.2**
NACB	**Ninganchiao**	**6.08**	**240**	Pn		**Pn**		**09 24 54.9**	**-1.2**
YULB	**Yu-li**	**6.74**	**236**	Pn		**Pn**		**09 25 02.0**	**-3.2**
SSLB	**Suanglung**	**6.78**	**240**	Pn		**Pn**		**09 25 04.3**	**-1.4**
TPUB	**Ta-pu**	**7.29**	**238**	Pn		**Pn**		**09 25 12.6**	**-0.1**
JMN	**Monobe**	**8.50**	**40**	Pn		**Pn**		**09 25 27.3**	**-1.7**
JHS	**Saijyo**	**9.10**	**31**	Pn		**Pn**		**09 25 35.2**	**-1.9**
KSRS	**Korea Array**	**10.11**	**3**	P		**Pn**		**09 25 52.0**	**+1.2**
	4.2nm,0.9s,baz=184,slow=14,SNR=12								
INU	**Inuyama**	**11.49**	**43**	Pn		**Pn**		**09 26 10.9**	**+1.6**
MAJO	**Matsushiro**	**13.00**	**42**	Pn		**Pn**		**09 26 31.1**	**+1.9**
MJAR	**Matsushiro Arr**	**13.00**	**42**	P		**Pn**		**09 26 32.4**	**+3.2**
	1.2nm,0.7s,baz=219,slow=8.0,SNR=2.0								
JMM	**Marumori**	**15.43**	**44**			**Pn**		**09 27 00.7**	**+0.4**
SONM	**Songino Array**	**26.22**	**327**	P		**P**		**09 28 54.0**	**+0.7**
	0.7nm,0.4s,baz=138,slow=10,SNR=5.7								
	0.7nm,0.4s								
MTN	**Manton Dam**	**40.09**	**174**	P		**P**		**09 30 53.3**	**-0.2**
MK31	**Makanchi Array**	**40.24**	**311**	P		**P**		**09 30 53.1**	**-1.4**
MKAR	**Makanchi Array**	**40.24**	**311**	P		**P**		**09 30 53.4**	**-1.1**
	0.8nm,0.6s,baz=99,slow=9.9,SNR=10								
MKAR				PcP		**PcP**		**09 32 56.0**	**-0.2**
	0.4nm,0.7s,baz=116,slow=2.8,SNR=3.7								
	0.8nm,0.6s								
MKAR	**Makanchi Array**	**40.24**	**311**	P		**P**		**09 30 53.6**	**-0.8**
MAKZ	**Makanchi**	**40.45**	**311**	P		**P**		**09 30 54.5**	**-1.8**
ZALV	**Zalesovo Beam**	**40.91**	**322**	P		**P**		**09 30 59.1**	**-0.8**
	0.7nm,0.5s,baz=114,slow=11,SNR=2.7								
	0.7nm,0.5s								
KNRA	**Kununurra**	**42.76**	**178**	P		**P**		**09 31 15.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**45.18**	**182**	P		**P**		**09 31 35.0**	**+0.4**
FITZ				IAmb		IAmb		09 31 35.1	
	comp=Z,11nm,1.4s								
AMKA	**Amchitka**	**45.61**	**44**	P		**P**		**09 31 37.6**	**-0.1**
WRA	**Warramunga Arr**	**47.47**	**171**	P		**P**		**09 31 50.8**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=352,slow=8.4,SNR=9.3								
	comp=Z,1.3nm,0.7s								
WRA	**Warramunga Arr**	**47.47**	**171**	P		**P**		**09 31 52.8**	**+0.3**
WB2	**Warramunga Arr**	**47.47**	**171**	P		**P**		**09 31 52.6**	**+0.2**
WB2				IAmb		IAmb		09 32 05.4	
	comp=Z,7.4nm,1.3s								
ADK	**Adak**	**48.16**	**44**	P		**P**		**09 31 57.3**	**-0.2**
GSTR	**Great Sitkin T**	**48.57**	**43**	P		**P**		**09 31 59.9**	**-0.8**
ASAR	**Alice Springs**	**51.08**	**172**	P		**P**		**09 32 19.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=359,slow=13,SNR=6.7								
	comp=Z,0.5nm,0.6s								
ABKAR	**Akbulak array**	**55.34**	**313**	P		**P**		**09 32 51.1**	**+0.2**
SDPT	**Sand Point**	**57.96**	**40**	P		**P**		**09 33 08.2**	**-1.1**
SVW2	**Sparrevohn**	**60.27**	**33**	P		**P**		**09 33 26.2**	**+1.0**
STKA	**Stephens Creek**	**60.41**	**166**	P		**P**		**09 33 26.3**	**-0.1**
	comp=Z,4.6nm,1.1s,baz=326,slow=11,SNR=3.2								
	comp=Z,4.6nm,1.1s								
STKA	**Stephens Creek**	**60.41**	**166**	P		**P**		**09 33 26.7**	**+0.3**
L19K	**White Mountain**	**60.56**	**32**	P		**P**		**09 33 27.9**	**+0.7**
L19K				IAmb		IAmb		09 33 35.8	
	comp=Z,2.9nm,1.1s								
J20K	**Nowinta River**	**60.78**	**29**	P		**P**		**09 33 29.5**	**+0.9**
J20K				IAmb		IAmb		09 33 29.7	
	comp=Z,3.0nm,0.6s								
K20K	**Telida**	**60.85**	**30**	P		**P**		**09 33 30.0**	**+0.9**
K20K				IAmb		IAmb		09 33 30.7	
	comp=Z,4.7nm,0.9s								
BPAW	**Bear Paw Mtn.**	**62.16**	**29**	P		**P**		**09 33 38.7**	**+0.7**
MLY	**Manley**	**62.18**	**28**	P		**P**		**09 33 38.6**	**+0.5**
MLY				IAmb		IAmb		09 33 39.8	
	comp=Z,8.2nm,1.5s								
H23K	**Yukon River**	**62.60**	**27**	IAmb		IAmb		09 33 42.0	
H23K				P		**P**		**09 33 42.1**	**+1.3**
M22K	**Willow**	**62.82**	**32**	P		**P**		**09 33 42.1**	**-0.2**
NEA2	**Nenana**	**62.94**	**29**	P		**P**		**09 33 43.4**	**+0.3**
NEA2				IAmb		IAmb		09 33 43.6	
	comp=Z,4.2nm,0.6s								
RND	**Reindeer**	**63.19**	**30**			**P**		**09 33 44.6**	**-0.2**
MDM	**Murphy Dome**	**63.25**	**28**	P		**P**		**09 33 45.5**	**+0.3**
MDM				IAmb		IAmb		09 33 46.1	
	comp=Z,5.8nm,0.7s								
H24K	**Noodor Dome**	**63.28**	**27**	P		**P**		**09 33 46.1**	**+0.7**
H24K				IAmb		IAmb		09 33 46.9	
	comp=Z,3.5nm,1.0s								
CCB	**Clear Creek Bu**	**63.47**	**29**	P		**P**		**09 33 46.5**	**0.0**
CCB				IAmb		IAmb		09 33 47.5	
	comp=Z,4.9nm,1.4s								
ILAR	**Eielson Array**	**63.85**	**28**	P		**P**		**09 33 47.6**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=239,slow=3.9,SNR=10								
	comp=Z,0.5nm,0.7s								
BMAR	**Burnt Mountain**	**64.35**	**25**	P		**P**		**09 33 53.5**	**+1.1**
SCRK	**Sand Creek**	**65.23**	**29**	P		**P**		**09 33 57.8**	**-0.4**
SCRK				IAmb		IAmb		09 33 59.0	
	comp=Z,7.8nm,1.5s								
J26L	**Joseph Creek**	**65.30**	**28**	P		**P**		**09 33 58.0**	**-0.6**
J26L				IAmb		IAmb		09 33 58.5	
	comp=Z,3.1nm,0.8s								
I26K	**Coal Creek Min**	**65.31**	**28**	P		**P**		**09 33 58.2**	**-0.3**
MENT	**Mentasta**	**65.56**	**30**	P		**P**		**09 34 00.9**	**+0.7**
MENT				IAmb		IAmb		09 34 01.3	
	comp=Z,3.0nm,0.6s								
M26K	**Nabesna, AK**	**66.01**	**31**	P		**P**		**09 34 03.6**	**+0.5**
M26K				IAmb		IAmb		09 34 04.1	
	comp=Z,5.9nm,0.8s								
EPYK	**Eagle Plains**	**67.61**	**26**	P		**P**		**09 34 13.4**	**+0.2**
EPYK				IAmb		IAmb		09 34 13.9	
	comp=Z,6.2nm,0.8s								
INK	**Inuvik**	**68.19**	**23**	P		**P**		**09 34 16.6**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=297,slow=7.0,SNR=7.0								
	comp=Z,1.4nm,0.5s								
INK	**Inuvik**	**68.19**	**23**	P		**P**		**09 34 16.6**	**-0.1**
INK				IAmb		IAmb		09 34 17.3	
	comp=Z,4.0nm,1.2s								
N31M	**Braeburn, Yuko**	**69.54**	**31**	P		**P**		**09 34 26.3**	**+1.1**
N31M				IAmb		IAmb		09 34 26.4	
	comp=Z,12nm,1.1s								
FARO	**Faro, Yukon**	**70.36**	**29**	P		**P**		**09 34 30.9**	**+0.7**
FARO				IAmb		IAmb		09 34 31.6	
	comp=Z,6.3nm,0.8s								
YKA	**Yellowknife Ar**	**77.86**	**25**	P		**P**		**09 35 13.0**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=299,slow=5.9,SNR=5.6								
	comp=Z,2.1nm,0.7s								
B08A	**Colville Reser**	**83.95**	**38**	P		**P**		**09 35 47.0**	**+0.6**
PDAR	**Pinedale Array**	**92.79**	**38**	P		**P**		**09 36 29.3**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=286,slow=1.7,SNR=2.7								
	comp=Z,0.3nm,0.7s								

*IDC **27** 09:29:57.1±0.5,19°.22N×64°.66W, h0km, mb4.1/15, mbtmp4.2/19, ML3.6/3, MS3.7/45, Error ellipse: s-maj=14.7km s-min=11.8km az=73.0*
*NEIC **27** 09:30:00.4±1.5,19°.18N±0°.03×64°.58W±0°.03, h21km±5km, Error ellipse: s-maj=5.9km s-min=0.5km az=138.0*
*RSPR **27** 09:30:00.3,19°.19N×64°.45W, h73km±4km, MD4.3/5*
ISC 27 09:29:58.7±1.7,**19°.24N**±0°.04×**64°.60W**±0°.02,**h14**km±10km, **n470**,σ1**s49**/441,**mb4.7**/71,**MS3.7**/43,**12C-9D**,**Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.82**	**181**	*i*P		**Pb**		**09 30 15.6**	**+0.9**
TBVI	**Tortola**	**0.82**	**181**			**Pb**		**09 30 15.6**	**+0.9**
SJVI	**Gifft Hill Sch**	**0.92**	**190**			**Pn**		**09 30 17.4**	**+0.2**
SJVI	**Gifft Hill Sch**	**0.92**	**190**			**Sn**		**09 30 30.8**	**+0.6**
SJVI	**Gifft Hill Sch**	**0.92**	**190**			**Pn**		**09 30 17.4**	**+0.2**
SJVI						**Sn**		**09 30 30.8**	**+0.6**
STVI	**Saint Thomas**	**0.94**	**201**			**Pb**		**09 30 17.7**	**+0.9**
STVI	**Saint Thomas**	**0.94**	**201**			**Sn**		**09 30 31.3**	**+0.5**
STVI	**Saint Thomas**	**0.94**	**201**			**Pb**		**09 30 17.4**	**+0.6**
STVI						**Sg**		**09 30 30.5**	**+1.2**
STVI				IAML				09 30 35.5	
	comp=N,11µm,0.6s								
CUPR	**Culebra, Puert**	**1.13**	**215**			**Pn**		**09 30 20.4**	**+0.3**
CUPR	**Culebra, Puert**	**1.13**	**215**			**Sg**		**09 30 36.4**	**+1.2**
CUPR	**Culebra, Puert**	**1.13**	**215**			**Pn**		**09 30 20.2**	**+0.1**
CUPR						**Sn**		**09 30 35.7**	**+0.3**
CUPR				IAML				09 30 41.5	
	comp=E,12µm,0.7s								
MTP	**Monte Pirata**	**1.45**	**219**			**Pn**		**09 30 25.2**	**+0.7**
MTP	**Monte Pirata**	**1.45**	**219**			**Sb**		**09 30 44.2**	**+0.4**
MTP	**Monte Pirata**	**1.45**	**219**			**Pn**		**09 30 25.0**	**+0.5**
MTP				IAML				09 30 48.2	
	comp=E,5µm,0.3s								
MTP	**Monte Pirata**	**1.45**	**219**			**Sb**		**09 30 44.2**	**+0.4**
CDVI	**St. Croix**	**1.49**	**186**			**Pn**		**09 30 25.4**	**+0.4**
CDVI	**St. Croix**	**1.49**	**186**			**Sn**		**09 30 43.3**	**-0.9**
CDVI	**St. Croix**	**1.49**	**186**	Pn		**Pb**		**09 30 26.9**	**+0.8**
CDVI	**St. Croix**	**1.49**	**186**			**Sn**		**09 30 43.3**	**-0.9**
CDVI	**St. Croix**	**1.49**	**186**			**Pb**		**09 30 27.1**	**+1.0**
CDVI				*e*S		**Sb**		**09 30 46.6**	**+1.7**
CBYP	**Canovanas**	**1.53**	**231**			**Pn**		**09 30 26.3**	**+0.6**
CBYP	**Canovanas**	**1.53**	**231**			**Sn**		**09 30 46.1**	**+0.7**
CBYP	**Canovanas**	**1.53**	**231**			**Pn**		**09 30 26.1**	**+0.4**
CBYP	**Canovanas**	**1.53**	**231**			**Sn**		**09 30 46.1**	**+0.7**
HUMP	**Col San Antoni**	**1.61**	**228**			**Pn**		**09 30 27.3**	**+0.6**
HUMP	**Col San Antoni**	**1.61**	**228**			**Sn**		**09 30 47.8**	**+0.6**
HUMP	**Col San Antoni**	**1.61**	**228**	Pn		**Pn**		**09 30 27.5**	**+0.8**
HUMP				IAML				09 31 00.3	
	comp=N,6µm,0.5s								
HUMP	**Col San Antoni**	**1.61**	**228**			**Sn**		**09 30 47.8**	**+0.6**
GCPR	**Guaynabo City**	**1.68**	**237**			**Pn**		**09 30 28.2**	**+0.5**
GCPR	**Guaynabo City**	**1.68**	**237**			**Sb**		**09 30 50.2**	**-0.3**
GCPR	**Guaynabo City**	**1.68**	**237**			**Pn**		**09 30 28.2**	**+0.5**
GCPR						**Sn**		**09 30 49.9**	**+0.8**
PDPR	**Patillas Dam,**	**1.81**	**228**			**Pn**		**09 30 30.2**	**+0.7**
SJG	**San Juan**	**1.85**	**233**	Pn		**Pn**		**09 30 30.5**	**+0.6**
	comp=N,70nm,0.3s,baz=57,slow=10,SNR=180								
SJG				Sn		**Sn**		**09 30 53.3**	**+0.2**
	comp=N,216nm,0.3s,baz=74,slow=21,SNR=5.7								
SJG				LR		LR		09 31 34.3	
	comp=N,2µm,19.0s,baz=318,slow=54								
SJG	**San Juan**	**1.85**	**233**			**Pn**		**09 30 30.6**	**+0.6**
SJG	**San Juan**	**1.85**	**233**			**Pn**		**09 30 30.5**	**+0.6**
SMRT	**St. Maarten**	**1.87**	**129**			**Pn**		**09 30 29.0**	**-1.3**
SMRT				IAML				09 31 03.2	
	comp=E,5µm,0.4s								
SMRT				IAML				09 31 03.2	
	comp=N,4µm,0.9s								
SMRT	**St. Maarten**	**1.87**	**129**			**Pn**		**09 30 31.0**	**+0.7**
SMRT						**Sb**		**09 30 56.0**	**+0.2**
IGPR	**InterUniversit**	**1.91**	**229**			**Pn**		**09 30 31.6**	**+0.8**
IGPR	**InterUniversit**	**1.91**	**229**			**Sn**		**09 30 55.2**	**+0.6**
IGPR	**InterUniversit**	**1.91**	**229**			**Sn**		**09 30 55.2**	**+0.6**
EMPR	**Esperanza - Ma**	**1.98**	**248**			**Pn**		**09 30 32.6**	**+0.8**
EMPR	**Esperanza - Ma**	**1.98**	**248**			**Sb**		**09 30 58.3**	**-0.6**
EMPR	**Esperanza - Ma**	**1.98**	**248**	Pn		**Pn**		**09 30 32.5**	**+0.8**
EMPR	**Esperanza - Ma**	**1.98**	**248**			**Sb**		**09 30 58.3**	**-0.6**
CELP	**Cerrillos**	**2.20**	**239**			**Pn**		**09 30 35.5**	**+0.6**
CELP	**Cerrillos**	**2.20**	**239**			**Sn**		**09 31 03.1**	**+1.2**
CELP	**Cerrillos**	**2.20**	**239**			**Pn**		**09 30 35.6**	**+0.7**
CELP				IAML				09 31 10.6	
	comp=N,3µm,0.8s								
CELP				IAML				09 31 12.7	
	comp=E,2µm,0.8s								
CELP	**Cerrillos**	**2.20**	**239**			**Sn**		**09 31 03.1**	**+1.2**
AOPR	**Arecibo Observ**	**2.22**	**247**			**Pn**		**09 30 36.1**	**+0.9**
AOPR	**Arecibo Observ**	**2.22**	**247**			**Sn**		**09 31 03.8**	**+1.3**
AOPR	**Arecibo Observ**	**2.22**	**247**			**Pn**		**09 30 35.8**	**+0.6**
AOPR				IAML				09 31 21.4	
	comp=N,5µm,0.5s								
AOPR	**Arecibo Observ**	**2.22**	**247**			**Sn**		**09 31 03.8**	**+1.3**
AOPR	**Arecibo Observ**	**2.22**	**247**			**Pn**		**09 30 35.3**	**+0.1**
AOPR				*e*S		**Sn**		**09 31 02.4**	**-0.1**
UUPR	**Utuado, UPR, P**	**2.23**	**244**			**Pn**		**09 30 36.2**	**+0.9**
UUPR	**Utuado, UPR, P**	**2.23**	**244**			**Sn**		**09 31 04.8**	**+2.1**
UUPR	**Utuado, UPR, P**	**2.23**	**244**			**Pn**		**09 30 36.2**	**+0.9**
UUPR						**Sn**		**09 31 04.8**	**+2.1**
OBIP	**Obispado Ponce**	**2.24**	**238**			**Pn**		**09 30 35.8**	**+0.4**
OBIP	**Obispado Ponce**	**2.24**	**238**			**Sn**		**09 31 03.5**	**+0.6**
OBIP	**Obispado Ponce**	**2.24**	**238**			**Pn**		**09 30 35.4**	**0.0**
OBIP				IAML				09 31 11.0	
	comp=N,4µm,0.8s								
OBIP	**Obispado Ponce**	**2.24**	**238**			**Sn**		**09 31 03.5**	**+0.6**
AGPR	**Aguadilla, PR**	**2.50**	**253**			**Pn**		**09 30 39.9**	**+0.9**
AGPR	**Aguadilla, PR**	**2.50**	**253**			**Sn**		**09 31 11.5**	**+2.2**
AGPR	**Aguadilla, PR**	**2.50**	**253**			**Pn**		**09 30 39.5**	**+0.5**
AGPR				IAML				09 31 22.5	
	comp=N,2µm,0.8s								
AGPR				IAML				09 31 27.6	
	comp=E,2µm,0.8s								
AGPR	**Aguadilla, PR**	**2.50**	**253**			**Sn**		**09 31 11.5**	**+2.2**
GBPR	**Guanica, Bosqu**	**2.50**	**240**			**Pn**		**09 30 40.1**	**+1.1**
GBPR	**Guanica, Bosqu**	**2.50**	**240**			**Sn**		**09 31 10.3**	**+1.0**
LSP	**Las Mesas**	**2.58**	**246**			**Pn**		**09 30 41.3**	**+1.2**
LSP	**Las Mesas**	**2.58**	**246**			**Sn**		**09 31 12.8**	**+1.4**
MLPR	**Magueyes Islan**	**2.64**	**242**			**Pn**		**09 30 41.5**	**+0.6**
MLPR	**Magueyes Islan**	**2.64**	**242**			**Sn**		**09 31 14.2**	**+1.6**
MLPR	**Magueyes Islan**	**2.64**	**242**			**Pn**		**09 30 41.3**	**+0.4**
MLPR				IAML				09 31 22.6	
	comp=E,2µm,0.8s								
MLPR	**Magueyes Islan**	**2.64**	**242**			**Sn**		**09 31 14.2**	**+1.6**
CRPR	**Cabo Rojo, PR**	**2.68**	**243**			**Pn**		**09 30 42.1**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.68**	**243**			**Sn**		**09 31 15.3**	**+1.7**
CRPR	**Cabo Rojo, PR**	**2.68**	**243**			**Pn**		**09 30 41.7**	**+0.3**
CRPR				IAML				09 31 36.0	
	comp=N,1µm,0.8s								
CRPR	**Cabo Rojo, PR**	**2.68**	**243**			**Sn**		**09 31 15.3**	**+1.7**
IDE	**Isla Desecheo**	**2.85**	**253**			**Pn**		**09 30 44.7**	**+0.9**
IDE	**Isla Desecheo**	**2.85**	**253**			**Sn**		**09 31 20.1**	**+2.2**
ANWB	**Willy Bob**	**3.10**	**120**	Pn		**Pn**		**09 30 48.0**	**+0.8**
ANWB	**Willy Bob**	**3.10**	**120**			**Pn**		**09 30 47.7**	**+0.5**
ANWB	**Willy Bob**	**3.10**	**120**			**Pn**		**09 30 48.5**	**+1.4**
ANWB						*e*S		**Sb**	**09 31 28.1**	**-3.1**
MBFL	**Flemmings, Mon**	**3.36**	**137**			**Pn**		**09 30 52.0**	**+1.1**
ANDO	**Antigua, Disas**	**3.38**	**128**			**Pn**		**09 30 51.3**	**+0.2**
ANDO						*e*S		**Sn**	**09 31 31.2**	**+0.3**
MLYT	**Lee's Yard**	**3.40**	**137**			**Pn**		**09 30 52.3**	**+1.0**
ANBD	**Bethesda, Anti**	**3.47**	**128**			**Pn**		**09 30 51.9**	**-0.3**
ANBD	**Bethesda, Anti**	**3.47**	**128**			**Pn**		**09 30 52.0**	**-0.2**
ANBD						*e*S		**Sn**	**09 31 30.9**	**-2.2**
PCDR	**Punta Cana, DR**	**3.65**	**259**	Pn		**Pn**		**09 30 55.3**	**+0.5**
PCDR				IAML				09 31 55.4	
	comp=N,1µm,0.9s								
PCDR				IAML				09 32 02.9	
	comp=E,786nm,1.4s								
GDHS	**Morne Mazeau,**	**4.00**	**137**			**Pn**		**09 31 00.5**	**+0.8**
GDHS				IAML				09 32 23.4	
	comp=N,1µm,0.7s								
ABD	**La Joyeuse, An**	**4.04**	**132**			**Pn**		**09 31 00.7**	**+0.5**
ABD				IAML				09 32 28.8	
	comp=N,675nm,1.6s								
ABD				IAML				09 32 36.5	
	comp=E,616nm,2.1s								
ABD	**La Joyeuse, An**	**4.04**	**132**			**Pn**		**09 31 00.5**	**+0.4**
ABD	**La Joyeuse, An**	**4.04**	**132**			**Pn**		**09 31 01.2**	**+1.0**
ABD	**La Joyeuse, An**	**4.04**	**132**			**Sb**		**09 31 54.6**	**-3.9**
CBE	**Ff, Capester**	**4.25**	**137**			**Pn**		**09 31 04.5**	**+1.4**
CBE	**Ff, Capester**	**4.25**	**137**			**Pn**		**09 31 02.8**	**-0.3**
CBE	**Ff, Capester**	**4.25**	**137**			**Sn**		**09 31 55.0**	**+2.4**
TBG	**Guadaloupe-3**	**4.39**	**140**			**Pn**		**09 31 07.0**	**+2.0**
TBG	**Guadaloupe-3**

comp=N,4.3nm,0.3s,baz=123,slow=10.0,SNR=17
ROSC LR LR 09 41 23.8
comp=N,810nm,19.4s,baz=30,slow=40
comp=N,30nm,0.7s
ROSC El Rosal 17.17 215 P **P** **09 34 01.0 +0.7**
ROSC El Rosal 17.17 215 *eP* **P** **09 34 02.4 +2.1**
BOAV Boa Vista 17.21 166 P **Pn** **09 33 58.6 -0.2**
BOAV IAmb IAmb 09 34 14.9
comp=Z,7.1nm,0.6s
BOAV Boa Vista 17.21 166 *eP* **Pn** **09 33 58.6 -0.2**
CBOC Ciudad Bolivar 17.33 221 *eP* **Pn** **09 34 00.5 0.0**
GUY2C Guyana, Caldas 17.44 218 *eP* **P** **09 34 03.2 -0.2**
VILC Villavicencio, 17.46 212 *eP* **Pn** **09 34 02.4 +0.3**
DWPF Disney Wildern 17.75 303 P **Pn** **09 34 05.0 -0.5**
DWPF Disney Wildern 17.75 303 P **Pn** **09 34 03.3 -2.2**
baz=116
BCIP Isla Barro Col 17.83 238 P **Pn** **09 34 05.6 -0.9**
BCIP IAmb IAmb 09 34 15.7
comp=Z,27nm,0.8s
ANIL Santa Ana 18.05 217 *eP* **P** **09 34 10.5 +0.5**
PLMC San Jos del P 18.24 220 *eP* **Pn** **09 34 10.9 -0.7**
MDP Montagnes des 18.26 139 P **P** **09 34 13.0 +1.0**
comp=Z,0.6nm,0.3s,baz=322,slow=14,SNR=8.2
MDP LR LR 09 42 08.7
comp=Z,181nm,21.2s,baz=334,slow=40
comp=Z,7.5nm,0.7s
YOTC Yotoco, Valle 19.01 219 *eP* **P** **09 34 20.8 +0.5**
Y59A Loris 19.43 322 P **P** **09 34 21.7 -3.0**
Y59A IAmb IAmb 09 34 44.4
comp=Z,39nm,0.8s
NHSC New Hope 19.62 318 P **P** **09 34 25.7 -1.1**
baz=131
CACAO El Cacao, Vera 19.73 235 *eP* **Pn** **09 34 29.4 -0.2**
CNNC Cliffs of the 19.81 326 P **P** **09 34 27.4 -1.4**
baz=140
GARC Garzon, Huila 20.02 213 *eP* **P** **09 34 30.5 -1.1**
X58A Rowland 20.10 322 P **P** **09 34 32.5 +0.5**
X58A IAmb IAmb 09 34 48.9
comp=Z,25nm,0.8s
ESPN Las Esperanzas 20.20 253 P **P** **09 34 32.0 -1.3**
BRU2 Volcan 20.37 242 P **P** **09 34 35.8 +0.5**
POPC Popayan, Colom 20.37 217 *eP* **P** **09 34 35.0 -0.3**
DRK0 Durika 20.59 244 P **P** **09 34 38.0 +0.3**
FLOC Florencia 20.62 213 *eP* **P** **09 34 37.9 +0.1**
U59A Littleton 20.62 328 P **P** **09 34 38.0 +0.3**
CDITO Canoas 20.64 242 P **P** **09 34 38.0 0.0**
SRBA San Rafael, Bu 20.70 244 P **P** **09 34 39.0 +0.2**
SRBA IAmb IAmb 09 34 44.1
comp=Z,20nm,0.8s
T60A Surry 20.76 332 P **P** **09 34 39.7 +0.5**
RIMA Rio Macho 20.87 246 P **P** **09 34 36.8 -4.0**
RIMA IAmb IAmb 09 34 46.2
comp=Z,30nm,0.9s
PEZE Perez Zeledon, 20.90 245 P **P** **09 34 36.4 -4.6**
PEZE IAmb IAmb 09 34 48.7
comp=Z,44nm,1.1s
COVE Coope Vega, Sa 20.90 249 P **P** **09 34 36.1 -4.8**
W57A Gilead 20.90 322 P **P** **09 34 41.0 +0.3**
W57A IAmb IAmb 09 34 53.8
comp=Z,21nm,0.8s
TIGA Tifton 20.99 309 P **P** **09 34 41.0 -0.7**
baz=121
JSC Jenkinsville 21.07 319 P **P** **09 34 42.5 -0.1**
JSC IAmb IAmb 09 35 01.6
comp=Z,22nm,0.6s
ACON Acoyapa 21.08 253 P **P** **09 34 41.7 -1.1**
ACON IAmb IAmb 09 34 44.1
comp=Z,22nm,0.9s
ACON Acoyapa 21.08 253 *eP* **P** **09 34 43.7 +0.9**
BBAC Balboa, Cauca 21.12 217 *eP* **P** **09 34 42.1 -1.4**
154A Montrose 21.27 312 P **P** **09 34 41.4 -3.4**
CRUC La Cruz 21.32 216 *eP* **P** **09 34 44.7 -1.1**
MATN Matagalpa 21.42 256 P **P** **09 34 42.5 -4.0**
JTS Las Juntas de 21.58 249 P **P** **09 34 44.5 -3.7**
JTS IAmb IAmb 09 35 00.7
comp=Z,30nm,0.8s
JTS Las Juntas de 21.58 249 *eP* **P** **09 34 46.6 -1.5**
HODGE Hodges 21.67 317 P **P** **09 34 53.1 +4.1**
HODGE IAmb IAmb 09 35 04.3
comp=Z,22nm,0.9s
KMSC Kings Mountain 21.68 320 P **P** **09 34 49.4 +0.3**
KMSC IAmb IAmb 09 35 05.6
comp=Z,21nm,0.9s
KMSC Kings Mountain 21.68 320 P **P** **09 34 47.4 -1.7**
baz=132
JSRW J. Sargeant Re 21.74 331 P **P** **09 34 51.1 +1.4**
PAULI Pauline 21.77 319 P **P** **09 34 50.4 +0.4**
PAULI IAmb IAmb 09 35 17.5
comp=Z,19nm,0.8s
GCUF Volcan Galeras 21.83 216 *eP* **P** **09 34 51.6 +0.2**
T57A Hurt 21.86 327 P **P** **09 34 50.6 -0.4**
T57A IAmb IAmb 09 35 06.0
comp=Z,14nm,0.7s
CBN Corbin Frederi 21.93 332 P **P** **09 34 52.8 +1.1**
R58B Mineral 21.95 331 P **P** **09 34 52.6 +0.6**
R58B IAmb IAmb 09 35 13.9
comp=Z,20nm,0.5s
GOGA Godfrey 21.98 314 P **P** **09 34 51.8 -0.5**
GOGA Godfrey 21.98 314 P **P** **09 34 51.6 -0.7**
baz=125
ORTG Ortega, Santa 21.99 249 **P** **09 34 53.1 +0.4**
ORTG IAmb IAmb 09 35 02.9
comp=Z,24nm,0.8s
352A Blakely 22.00 308 P **P** **09 34 53.9 +1.3**
352A IAmb IAmb 09 35 22.1
comp=Z,43nm,1.1s
TEIG Tepich 22.31 277 P **P** **09 34 55.8 -0.1**
TGUH Tegucigalpa,Un 22.32 260 P **P** **09 34 55.8 -0.5**
TGUH Tegucigalpa,Un 22.32 260 *eP* **P** **09 34 59.6 +3.3**
CMBC Cumbal 22.33 217 *eP* **P** **09 34 57.4 +0.6**
152A Waverly Hall 22.44 311 P **P** **09 34 57.7 +0.4**
152A IAmb IAmb 09 35 21.4
comp=Z,13nm,0.7s
BG3 Lake Jocassee 22.58 318 P **P** **09 34 59.3 +0.6**
MACA Manacapuru-AM 22.59 170 P **P** **09 34 56.3 -2.7**
MACA IAmb IAmb 09 35 15.0
comp=Z,14nm,1.0s
BLA Blacksburg 22.63 326 P **P** **09 34 59.9 +0.5**
BLA Blacksburg 22.63 326 P **P** **09 34 59.4 0.0**
baz=138
Y52A Lilburn 22.64 314 P **P** **09 34 59.0 -0.5**
IMBA Imbabura, San 23.09 217 P **P** **09 35 04.7 0.0**
OTAV Otavalo 23.26 217 P **P** **09 35 06.4 -0.1**
OTAV IAmb IAmb 09 35 09.7
comp=Z,30nm,1.1s
OTAV Otavalo 23.26 217 *eP* **P** **09 35 06.7 +0.2**
MALB Monte Alegre 23.29 153 *eP* **P** **09 35 07.3 +1.0**
Q56A Snyder Ridge, 23.43 330 **S** **09 39 19.1 -1.4**
TKL Tuckaleechee C 23.53 318 P **P** **09 35 08.9 +0.3**
comp=Z,4.3nm,0.9s,baz=106,slow=6.5,SNR=5.3
TKL S **S** **09 39 31.5 +9.3**
comp=Z,18nm,0.4s,baz=287,slow=10,SNR=8.6
TKL LR LR 09 43 43.8
comp=Z,145nm,21.5s,baz=140,slow=35
comp=Z,4.3nm,0.9s
TBTG Tabatinga, AM 23.86 193 P **P** **09 35 10.6 -1.1**
TBTG IAmb IAmb 09 35 36.1
comp=Z,50nm,0.3s
V51A Loudon 23.99 317 P **P** **09 35 13.7 +0.8**
V51A IAmb IAmb 09 35 34.4
comp=Z,28nm,0.7s
FPAL Fort Paine 24.08 314 P **P** **09 35 14.0 +0.2**
FPAL IAmb IAmb 09 35 37.7
comp=Z,20nm,1.1s
SLOR San Lorenzo - 24.08 216 P **P** **09 35 14.8 +0.3**
SLOR IAmb IAmb 09 35 28.8
comp=Z,20nm,0.8s
ESQI Esquipulas 24.11 263 P **P** **09 35 14.4 0.0**
ESQI IAmb IAmb 09 35 17.5
comp=Z,36nm,0.8s
PETF Flores 24.12 269 P **P** **09 35 14.9 +0.5**
PETF IAmb IAmb 09 35 16.9
comp=Z,36nm,0.8s
MTO3 Montecristo 24.17 262 P **P** **09 35 15.4 +0.3**
MTO3 IAmb IAmb 09 35 21.1
comp=Z,38nm,0.9s
SNET Serv Nac Est T 24.24 261 P **P** **09 35 15.9 +0.3**
W50A Signal Mountai 24.25 315 P **P** **09 35 15.7 +0.3**
W50A IAmb IAmb 09 35 41.7
comp=Z,18nm,0.4s
LRAL Lakeview Retre 24.29 309 P **P** **09 35 16.7 +1.0**
LRAL Lakeview Retre 24.29 309 P **P** **09 35 14.5 -1.2**
baz=119,SNR=7.2
PORT Chimborazo Vol 24.84 216 P **P** **09 35 21.5 0.0**
PORT IAmb IAmb 09 35 44.2
comp=Z,29nm,1.1s
BINY Binghamton 24.85 340 P **P** **09 35 20.1 -0.6**
baz=153
CHSH Refugio Sur-Vo 24.92 216 P **P** **09 35 22.6 +0.4**
CHSH IAmb IAmb 09 35 25.7
comp=Z,40nm,0.9s
T50A Nancy 25.06 319 P **P** **09 35 23.1 +0.4**
Z47A Carrollton 25.16 308 P **P** **09 35 24.0 +0.5**
Z47A IAmb IAmb 09 35 47.9
comp=Z,15nm,0.8s
P52A Corning 25.33 327 P **P** **09 35 24.2 -0.9**
baz=138
U49A Red Boiling Sp 25.34 317 P **P** **09 35 25.9 +0.7**
U49A IAmb IAmb 09 35 55.4
comp=Z,16nm,1.1s
O53A New Philadelph 25.34 329 P **P** **09 35 25.1 -0.1**
baz=141
V48A Smith Brothers 25.57 315 P **P** **09 35 27.7 +0.4**
PLAL Pickwick Lake 26.03 312 P **P** **09 35 32.1 +0.6**
ACSO Alum Creek Sta 26.21 327 P **P** **09 35 32.4 -0.7**
baz=138
WVT Waverly 26.47 314 P **P** **09 35 36.4 +0.9**
WVT Waverly 26.47 314 P **P** **09 35 34.7 -0.7**
baz=123
344A Westbrook Farm 26.49 302 P **P** **09 35 34.3 -1.4**
344A IAmb IAmb 09 35 40.3
comp=Z,24nm,1.1s
OXF Oxford 26.75 310 P **P** **09 35 38.4 +0.3**
OXF IAmb IAmb 09 35 54.3
comp=Z,25nm,1.0s
OXF Oxford 26.75 310 P **P** **09 35 37.4 -0.6**
baz=118
143A Socs Landing, 27.48 305 P **P** **09 35 44.6 0.0**
143A IAmb IAmb 09 35 47.2
comp=Z,29nm,1.0s
CZSB Cruzeiro do Su 27.96 197 P **P** **09 35 47.7 -1.3**
CZSB IAmb IAmb 09 35 52.4
comp=Z,16nm,0.8s
CZSB Cruzeiro do Su 27.96 197 *eP* **P** **09 35 47.7 -1.3**
SADO Sadowa 28.20 338 LR LR 09 49 02.6
comp=Z,2nm,18.0s,baz=167,slow=41
CCAR Cane Creek 28.25 307 P **P** **09 35 52.8 +1.3**
CCAR IAmb IAmb 09 35 53.7
comp=Z,14nm,0.9s
SIUC Southern Illin 28.27 316 P **P** **09 35 50.8 -0.8**
SIUC IAmb IAmb 09 35 53.1
comp=Z,6.4nm,0.6s
CMIG Matias Romero 28.84 271 LR LR 09 49 17.2
comp=Z,94nm,20.6s,baz=94,slow=40
ETMB Extrema 28.91 183 P **P** **09 35 55.8 -1.7**
ETMB IAmb IAmb 09 36 17.4
comp=Z,3.0nm,0.7s
WLAR White Oak Lake 29.18 305 P **P** **09 36 00.7 +0.9**
WLAR IAmb IAmb 09 36 02.1
comp=Z,20nm,0.9s
FCAR Ozark Folk Cen 29.36 310 P **P** **09 36 02.0 +0.7**
ATAH Atahualpa 29.52 209 P **P** **09 36 04.1 +0.7**
comp=Z,2.6nm,0.7s,baz=274,slow=19,SNR=2.1
ATAH LR LR 09 49 42.7
comp=Z,365nm,20.2s,baz=2.1,slow=40
comp=Z,2.6nm,0.7s
NATX Nacogdoches 29.75 301 P **P** **09 36 05.3 +0.4**
NATX Nacogdoches 29.75 301 P **P** **09 36 03.6 -1.2**
baz=108
CCM Cathedral Cave 29.80 315 P **P** **09 36 04.8 -0.4**
baz=122
MIAR Mount Ida 29.87 307 P **P** **09 36 04.6 -1.3**
baz=113
GLMI Grayling 30.47 331 P **P** **09 36 11.3 +0.3**
baz=140
Z38A Mt. Pleasant 30.49 303 P **P** **09 36 12.1 +0.7**
Z38A IAmb IAmb 09 36 13.4
comp=Z,14nm,0.8s
HHAR Hobbs 30.85 309 P **P** **09 36 15.2 +0.6**
X37A Clayton 31.26 306 **P** **09 36 18.4 +0.3**
X37A IAmb IAmb 09 36 20.0
comp=Z,7.9nm,0.9s
TUL1 Leonard 32.07 308 P **P** **09 36 25.3 +0.1**
TUL1 IAmb IAmb 09 36 28.1
comp=Z,11nm,1.0s
TUL1 Leonard 32.07 308 P **P** **09 36 24.4 -0.9**
baz=113
WHTX Lake Whitney, 32.10 300 P **P** **09 36 24.4 -1.2**
baz=105
VILB Vilhena 32.28 172 P **P** **09 36 26.0 -1.3**
VILB IAmb IAmb 09 36 40.7
comp=Z,15nm,1.0s
VILB Vilhena 32.28 172 *eP* **P** **09 36 27.0 -0.3**
Z35A Perchaven, San 32.31 302 P **P** **09 36 28.5 +1.1**
SMTB Santa Maria do 32.57 148 *eP* **P** **09 36 30.9 +1.0**
OK030 Cody Creek RV 32.82 307 P **P** **09 36 32.0 +0.2**
OK030 IAmb IAmb 09 36 47.0
comp=Z,11nm,0.9s
OK031 S. Brethren Rd 32.87 307 **P** **09 36 32.2 -0.1**
OK031 IAmb IAmb 09 36 34.5
comp=Z,13nm,0.9s
OK025 Westminster Rd 33.12 306 P **P** **09 36 34.1 -0.4**
X34A Smith Ranch, M 33.17 304 P **P** **09 36 35.2 +0.3**
X34A IAmb IAmb 09 36 36.4
comp=Z,12nm,0.8s
OK029 Liberty Lake 33.28 307 **P** **09 36 36.2 +0.3**
NNA Nana 33.29 202 LR LR 09 52 38.0
comp=Z,162nm,20.6s,baz=350,slow=41
BCOK Bluff Creek, N 33.35 306 **P** **09 36 36.7 +0.2**
BCOK IAmb IAmb 09 36 37.6
comp=Z,14nm,0.8s
CROK Carrier 33.94 307 P **P** **09 36 41.9 +0.3**
CROK IAmb IAmb 09 36 43.2
comp=Z,15nm,0.9s
KAN14 Manchester OK 34.09 308 P **P** **09 36 43.6 +0.7**
KAN14 IAmb IAmb 09 37 05.3
comp=Z,8.6nm,0.8s
CSTR Hydro, Custer 34.17 306 **P** **09 36 44.0 +0.3**
CSTR IAmb IAmb 09 36 45.2
comp=Z,3.6nm,1.1s
ELIS Ellis County 34.87 306 P **P** **09 36 50.3 +0.5**
ELIS IAmb IAmb 09 36 51.6
comp=Z,32nm,1.3s
PTLB Pontes e Lacer 34.89 171 P **P** **09 36 49.0 -0.9**
PTLB IAmb IAmb 09 36 51.4
comp=Z,2.9nm,0.8s
PTLB Pontes e Lacer 34.89 171 *eP* **P** **09 36 50.2 +0.3**
H07S1 FLORES T-PHASE 35.08 48 T T 10 14 11.4
SNR=5.1
LPAZ La Paz 35.47 186 P **P** **09 36 57.5 +1.9**
comp=Z,1.5nm,0.8s,baz=32,slow=9.8,SNR=6.2
comp=Z,1.5nm,0.8s
LPAZ La Paz 35.47 186 P **P** **09 36 57.3 +1.7**
LPAZ La Paz 35.47 186 *eP* **P** **09 36 56.6 +0.9**
SCHQ Schefferville 35.57 358 P **P** **09 36 57.7 +2.2**
comp=Z,3.5nm,0.9s,baz=194,slow=7.8,SNR=3.5
SCHQ LR LR 09 50 52.6
comp=Z,52nm,18.5s,baz=80,slow=35
comp=Z,3.5nm,0.9s
CBKS Cedar Bluff 36.09 310 P **P** **09 36 59.3 -0.9**
baz=113
ECSD EROS Data Cent 36.26 319 P **P** **09 37 00.3 -1.2**
baz=122
AMTX Amarillo 36.28 303 P **P** **09 37 02.2 +0.3**
AMTX IAmb IAmb 09 37 03.1
comp=Z,16nm,1.1s
AMTX Amarillo 36.28 303 P **P** **09 37 01.0 -0.9**
baz=106
TX31 Lajitas Ar. Si 36.85 293 P **P** **09 37 05.8 -1.1**
TX31 IAmb IAmb 09 37 08.7
comp=Z,13nm,1.0s
TX32 Lajitas Array 36.85 293 P **P** **09 37 06.3 -0.6**
TXAR Lajitas Array 36.85 293 P **P** **09 37 06.9 0.0**
comp=Z,2.2nm,0.8s,baz=110,slow=9.9,SNR=33
TXAR PcP **PcP** **09 39 29.5 +0.8**
comp=Z,1.1nm,0.8s,baz=133,slow=5.5,SNR=4.3
TXAR LR LR 09 58 05.8
comp=Z,28nm,19.2s,baz=78,slow=46
comp=Z,2.2nm,0.8s
TXAR Lajitas Array 36.85 293 P **P** **09 37 07.4 +0.5**
MSTX Muleshoe 36.92 301 P **P** **09 37 07.0 -0.5**
MSTX IAmb IAmb 09 37 08.4
comp=Z,13nm,1.2s
MSTX Muleshoe 36.92 301 P **P** **09 37 05.7 -1.7**
baz=104
HTMS Hat Mesa 37.31 299 P **P** **09 37 10.4 -0.4**
KSCO Kaye Shedlock' 38.26 309 P **P** **09 37 18.8 0.0**
KSCO IAmb IAmb 09 37 37.5
comp=Z,9.6nm,0.8s
KSCO Kaye Shedlock' 38.26 309 P **P** **09 37 17.8 -1.0**
baz=110
AGMN Agassiz Nation 38.45 326 P **P** **09 37 19.4 -0.6**
baz=128
OGNE Ogallala 38.54 312 P **P** **09 37 20.6 -0.4**
baz=113
MNTX Cornudas Mount 38.64 297 P **P** **09 37 22.1 +0.3**
MNTX Cornudas Mount 38.64 297 P **P** **09 37 21.5 -0.3**
baz=99,SNR=5.9
GO01 Chusmiza 38.93 187 P **P** **09 37 21.7 -3.1**
GO01 IAmb IAmb 09 37 50.5
comp=Z,6.5nm,0.7s
T25A Trinidad 39.02 306 P **P** **09 37 25.4 +0.1**
T25A IAmb IAmb 09 37 27.1
comp=Z,13nm,1.1s
T25A Trinidad 39.02 306 P **P** **09 37 25.1 -0.2**
baz=106,SNR=12
ULM Lac du Bonnet 39.69 329 LR LR 09 56 23.5
comp=Z,192nm,18.1s,baz=122,slow=40
SDCO Great Sand Dun 40.02 306 P **P** **09 37 33.9 +0.2**
SDCO IAmb IAmb 09 37 37.2
comp=Z,9.1nm,1.0s
SDCO Great Sand Dun 40.02 306 P **P** **09 37 34.1 +0.4**
baz=106,SNR=17
ANMO Albuquerque 40.10 302 LR LR 09 56 06.6
comp=Z,83nm,21.7s,baz=122,slow=39
ANMO Albuquerque 40.10 302 P **P** **09 37 34.7 +0.4**
ANMO Albuquerque 40.10 302 P **P** **09 37 34.7 +0.4**
baz=102
CRNM Carthage 40.14 300 P **P** **09 37 35.4 +0.8**
PB01 IPOC Station P 40.32 187 P **P** **09 37 33.1 -2.8**
AQDB Aquidauana 40.42 167 *eP* **P** **09 37 37.0 +0.3**
ISCO Idaho Springs 40.71 309 P **P** **09 37 38.9 -0.5**
ISCO Idaho Springs 40.71 309 P **P** **09 37 39.5 +0.1**
baz=108,SNR=5.3
S22A 4UR Ranch, Cre 41.04 306 P **P** **09 37 42.1 +0.1**
S22A 4UR Ranch, Cre 41.04 306 P **P** **09 37 42.2 +0.1**
baz=105,SNR=5.8
PB07 IPOC Station P 41.04 187 P **P** **09 37 39.5 -2.5**
PHWY Pilot Hill 41.08 311 P **P** **09 37 42.9 +0.5**
LVC Limon Verde 41.80 186 LR LR 09 58 14.1
comp=Z,86nm,18.3s,baz=3.5,slow=41
ANTJ Antonio Joao (41.84 168 *eP* **P** **09 37 47.9 -0.5**
MVCO Mesa Verde 42.20 305 P **P** **09 37 51.5 -0.1**
baz=103
K22A Casper 42.29 313 P **P** **09 37 52.3 +0.2**
baz=110
LPIG La Paz 42.61 285 LR LR 09 58 18.2
comp=Z,50nm,20.8s,baz=72,slow=40
O20A White River Ci 42.73 309 P **P** **09 37 54.9 -0.9**
baz=106
TUC Tucson 43.27 297 P **P** **09 37 58.4 -1.7**
baz=96
LAO LASA Array 43.63 318 P **P** **09 38 01.4 -1.5**
baz=114
WUAZ Wupatki 44.17 301 P **P** **09 38 07.5 +0.1**
baz=99,SNR=11
PD31 Pinedale Array 44.44 312 P **P** **09 38 09.6 0.0**
PDAR Pinedale Array 44.44 312 P **P** **09 38 09.6 0.0**
comp=Z,3.8nm,0.9s,baz=117,slow=9.6,SNR=22
PDAR LR LR 09 56 43.3
comp=Z,70nm,21.4s,baz=122,slow=36
comp=Z,3.8nm,0.9s
PDAR Pinedale Array 44.44 312 P **P** **09 38 09.8 +0.2**
BW06 Boulder Array 44.44 312 P **P** **09 38 09.5 -0.1**
baz=108,SNR=8.5
RLMT Red Lodge 45.00 315 P **P** **09 38 13.0 -1.0**
baz=110
MVU Marysvale 45.34 305 P **P** **09 38 17.1 +0.2**
LOHW Long Hollow 45.43 313 P **P** **09 38 17.5 +0.1**
SNOW Snow King Moun 45.49 313 P **P** **09 38 17.9 0.0**
SNOW IAmb IAmb 09 38 43.6
comp=Z,8.9nm,1.1s
REDW Red Top Meadow 45.53 312 P **P** **09 38 18.7 +0.5**
REDW IAmb IAmb 09 38 37.9
comp=Z,11nm,1.2s
AHID Auburn Hatcher 45.53 312 P **P** **09 38 18.4 +0.2**
AHID IAmb IAmb 09 38 37.2
comp=Z,5.6nm,0.8s
HWUT Hardware Ranch 45.55 310 P **P** **09 38 18.9 +0.5**
HWUT IAmb IAmb 09 38 19.6
comp=Z,6.0nm,1.1s
MOOW Moose Ponds 45.56 313 P **P** **09 38 19.2 +0.7**
TPAW Teton Pass 45.63 313 P **P** **09 38 18.7 -0.4**
TPAW IAmb IAmb 09 38 27.3
comp=Z,4.5nm,0.8s
CPUP Villa Florida 45.84 171 P **P** **09 38 18.9 -1.6**
comp=Z,6.2nm,0.9s,baz=1.2,slow=7.7,SNR=10
comp=Z,6.2nm,0.9s
CPUP Villa Florida 45.84 171 P **P** **09 38 18.9 -1.6**
CPUP IAmb IAmb 09 38 21.2
comp=Z,6.9nm,0.9s
CPUP Villa Florida 45.84 171 *eP* **P** **09 38 19.1 -1.4**
W13A Hualapai Mount 46.14 300 P **P** **09 38 23.2 0.0**
DUG Dugway, Tooele 46.15 308 P **P** **09 38 22.2 -0.8**
baz=102,SNR=6.0
BGU Big Grassy Mou 46.47 309 P **P** **09 38 26.0 +0.5**
BGU IAmb IAmb 09 38 27.2
comp=Z,9.4nm,1.1s
HVU Hansel Valley 46.48 310 P **P** **09 38 25.3 -0.3**
BOZ Bozeman (W) 46.73 315 P **P** **09 38 26.2 -1.4**
baz=108
R11A Troy Canyon, C 47.93 305 P **P** **09 38 34.5 -2.6**
baz=98
MONP2 Monument Peak 48.06 297 P **P** **09 38 37.7 -0.5**
baz=93
ELK Elko 48.07 308 LR LR 09 59 27.6
comp=Z,73nm,19.8s,baz=102,slow=37
ELK Elko 48.07 308 P **P** **09 38 38.5 +0.3**
ELK IAmb IAmb 09 38 40.0
comp=Z,7.5nm,1.2s
HLID Hailey 48.08 312 P **P** **09 38 38.0 -0.1**
HLID Hailey 48.08 312 P **P** **09 38 37.7 -0.4**
baz=104,SNR=5.4
TPNV Topopah Spring 48.27 303 P **P** **09 38 38.8 -0.9**
baz=97,SNR=7.2
WCT Wildcat Mounta 48.55 302 P **P** **09 38 43.0 +1.3**
WCT IAmb IAmb 09 38 44.2
comp=Z,8.1nm,1.1s
SFJD Kangerlussuaq 48.58 7 LR LR 09 59 14.9
comp=Z,51nm,18.6s,baz=125,slow=36
ITQB Itaqui 49.23 171 P **P** **09 38 47.0 +0.2**
ITQB Itaqui 49.23 171 *eP* **P** **09 38 47.2 +0.5**
NVAR Mina Array Bea 50.06 304 P **P** **09 38 54.2 +0.7**
comp=Z,3.0nm,0.9s,baz=101,slow=6.5,SNR=22
NVAR LR LR 10 00 48.3
comp=Z,101nm,21.5s,baz=98,slow=37
comp=Z,3.0nm,0.9s
CNLB Canela 50.06 164 *eP* **P** **09 38 53.5 +0.3**
CPSB Cacapava Do Su 50.51 167 *eP* **P** **09 38 57.6 +1.1**
NEW Newport 51.11 317 LR LR 10 00 33.4
comp=Z,126nm,21.2s,baz=100,slow=36
NEW Newport 51.11 317 P **P** **09 39 00.5 -0.5**
NEW IAmb IAmb 09 39 13.6
comp=Z,5.8nm,0.9s
NEW Newport 51.11 317 P **P** **09 38 59.8 -1.2**
baz=106,SNR=6.8
K04D Chiloquin, OR 53.19 309 P **P** **09 39 16.0 -0.6**
baz=97
J04D Umpqua Nationa 53.52 310 P **P** **09 39 18.0 -1.3**
baz=98
L04D Klamath Falls 53.54 309 P **P** **09 39 18.1 -1.2**
baz=97
BORG Borgarnes 53.77 21 LR LR 09 58 44.4
comp=Z,38nm,20.7s,baz=141,slow=32
YBH Yreka Blue Hor 53.79 308 LR LR 10 02 21.7
comp=Z,51nm,20.9s,baz=104,slow=36
YKA Yellowknife Ar 55.11 334 P **P** **09 39 30.7 +0.6**
comp=Z,1.8nm,0.7s,baz=119,slow=9.2,SNR=2.5
comp=Z,1.8nm,0.7s
SUMG Summit 55.40 9 P **P** **09 39 33.7 +1.1**
SUMG IAmb IAmb 09 39 39.1
comp=Z,6.5nm,0.9s
SUMG Summit 55.40 9 *i* P **P** **09 39 33.0 +0.4**
ESDC Sonseca Array 55.54 55 P **P** **09 39 35.0 +1.3**
comp=Z,0.6nm,0.9s,baz=273,slow=6.5,SNR=4.9
ESDC LR LR 09 57 52.7
comp=Z,61nm,20.6s,baz=179,slow=30
comp=Z,0.6nm,0.9s
KOWA Kowa 57.93 85 LR LR 10 00 26.7
comp=Z,129nm,21.1s,baz=290,slow=32
EKA Eskdalemuir Ar 58.20 36 LR LR 10 02 03.3
comp=Z,56nm,19.2s,baz=174,slow=33
DBIC Dimbokro 59.29 94 P **P** **09 40 02.0 +1.5**
comp=Z,2.9nm,0.7s,baz=307,slow=4.1,SNR=3.2
DBIC LR LR 10 03 47.9
comp=Z,79nm,18.7s,baz=304,slow=34
comp=Z,2.9nm,0.7s

PLCA Paso Flores 59.92 185 P **P** 09 40 04.8 +0.5
comp=Z,0.8nm,0.7s,baz=321,slow=6.5,SNR=1.5
comp=Z,0.8nm,0.7s
PLCA Paso Flores 59.92 185 *e*P **P** 09 40 05.3 +0.9
JMIC Jan Mayen 61.17 18 LR LR 10 03 14.3
comp=Z,62nm,20.1s,baz=233,slow=33
TORD Torodi Ar. Bea 63.64 85 P **P** 09 40 31.4 +1.5
comp=Z,2.6nm,0.3s,baz=294,slow=6.5,SNR=2.2
comp=Z,2.6nm,0.3s
DAVOX Davos/Dischmat 65.69 47 LR LR 10 03 28.1
comp=Z,25nm,21.9s,baz=261,slow=31
DAWY Dawson 66.22 332 P **P** 09 40 45.0 -1.0
baz=95
KEST Kesra 66.23 59 LR LR 10 04 53.4
comp=Z,71nm,20.8s,baz=272,slow=32
NOA NORSAR Array B 66.50 31 LR LR 10 06 47.3
comp=Z,47nm,19.6s,baz=120,slow=33
EGAK Eagle 67.04 333 P **P** 09 40 50.2 -1.0
baz=94
L27K Beaver Creek, 67.25 331 P **P** 09 40 53.0 +0.5
L27K Beaver Creek, 67.25 331 P **P** 09 40 51.8 -0.7
baz=92
G27K Doyon Strip 67.38 335 P **P** 09 40 52.0 -1.3
baz=94
HFS Hagfors 67.70 32 LR LR 10 05 45.1
comp=Z,110nm,21.2s,baz=273,slow=32
I26K Coal Creek Min 67.91 334 P **P** 09 40 55.9 -0.7
baz=92
J26L Joseph Creek 68.06 333 P **P** 09 40 56.7 -1.1
baz=91
G26K Porcupine Rive 68.23 335 P **P** 09 40 57.7 -0.9
baz=92
SCRK Sand Creek 68.24 332 P **P** 09 40 58.2 -0.7
baz=91
C27K Jago River 68.33 338 P **P** 09 40 58.2 -1.0
baz=93
PRP Porcupine Dome 68.91 334 P **P** 09 41 01.9 -1.1
baz=90
F25K Christian Rive 68.97 336 P **P** 09 41 02.4 -0.9
baz=90
H25K Birch Creek 69.03 335 P **P** 09 41 02.1 -1.5
baz=90
ILAR Eielson Array 69.50 333 P **P** 09 41 05.8 -0.8
comp=Z,0.7nm,0.8s,baz=105,slow=3.5,SNR=6.7
comp=Z,0.7nm,0.8s
H24K Noodor Dome 69.88 334 P **P** 09 41 06.7 -2.2
baz=88
VRAC Vranov 69.98 44 LR LR 10 06 24.1
comp=Z,27nm,21.9s,baz=242,slow=31
VAE Valguarnera 70.02 56 LR LR 10 05 38.7
comp=Z,24nm,20.4s,baz=194,slow=31
E24K Your Creek 70.04 337 P **P** 09 41 08.9 -1.0
baz=88
MDM Murphy Dome 70.06 333 P **P** 09 41 10.0 0.0
MLY Manley 71.12 333 P **P** 09 41 15.6 -0.9
baz=85
E22K Anaktuvuk Pass 71.28 337 P **P** 09 41 15.6 -1.8
baz=85
H21K Melozitna Rive 71.92 334 P **P** 09 41 19.4 -1.9
baz=83
G21K Allakaket 72.10 335 P **P** 09 41 20.6 -1.8
baz=83
ARCES ARCESS Array B 72.18 22 P **P** 09 41 24.5 +1.7
comp=Z,2.3nm,0.8s,baz=263,slow=6.0,SNR=4.1
comp=Z,2.3nm,0.8s
J20K Nowinta River 72.68 333 P **P** 09 41 22.9 -3.0
baz=82
FINES FINESS Array B 73.63 30 LR LR 10 09 20.1
comp=Z,56nm,21.3s,baz=75,slow=32
MLR Muntele Rosu 76.91 46 LR LR 10 12 04.9
comp=Z,33nm,21.6s,baz=274,slow=33
AKASG Malin Array Be 77.72 40 LR LR 10 11 43.8
comp=Z,66nm,21.9s,baz=304,slow=32
TAOE Nuku Hiva Isla 79.46 257 *e*LQ LQ 10 03 30.7
comp=Z,1μm,43.4s
TAOE *e*LR LR 10 06 52.4
comp=Z,125nm,30.8s
SMAI San Martin Ant 87.14 181 P **P** 09 42 45.1 +1.5
SMAI IAmb IAmb 09 42 46.4
comp=Z,8.5nm,1.1s
BELG Belogornoye 87.72 35 LR LR 10 18 43.2
comp=Z,50nm,20.4s,baz=179,slow=33
KBZ Khabaz 88.87 44 LR LR 10 20 01.9
comp=Z,20nm,20.7s,baz=82,slow=34
TSUM Tsumeb 89.18 111 LR LR 10 17 44.8
comp=Z,78nm,18.2s,baz=318,slow=32
NRIK Noril'sk 89.44 10 LR LR 10 22 11.1
comp=Z,26nm,21.0s,baz=320,slow=35
ARU Arti 90.85 28 LR LR 10 19 39.1
comp=Z,42nm,21.3s,baz=292,slow=33
PPT2 Papeete2 91.11 252 *e*LR LR 10 12 15.8
comp=Z,53nm,23.8s
GNI Garni 91.69 46 LR LR 10 26 26.9
comp=Z,14nm,18.3s,baz=269,slow=37
AKTO Aktyubinsk 94.24 33 LR LR 10 24 50.3
comp=Z,39nm,18.7s,baz=298,slow=35
LBTB Lobatse 98.09 114 LR LR 10 21 20.0
comp=Z,49nm,20.1s,baz=265,slow=31
BVAR Borovoye Array 98.19 26 LR LR 10 23 32.8
comp=Z,48nm,21.7s,baz=313,slow=33
PZH PanZhiHua 132.64 17 PKP **PKPdf** 09 49 07.5 -6.4
STKA Stephens Creek 153.31 237 PKPbc **PKPbc** 09 49 55.6 -1.3
comp=Z,2.0nm,0.8s,baz=66,slow=5.4,SNR=2.9
WRA Warramunga Arr 162.14 265 PKP **PKPdf** 09 50 00.0 -0.6
comp=Z,0.9nm,0.9s,baz=68,slow=1.0,SNR=4.6
WRA PKPab **PKPab** 09 50 46.9 -0.5
comp=Z,1.5nm,0.7s,baz=84,slow=4.3,SNR=12
ASAR Alice Springs 162.22 252 PKP **PKPdf** 09 50 00.4 -0.3
comp=Z,0.5nm,0.9s,baz=115,slow=1.5,SNR=4.4
ASAR PKPab **PKPab** 09 50 47.1 -0.5
comp=Z,2.3nm,0.8s,baz=108,slow=4.5,SNR=15

*NEIC **27** 09:39:33.9±0.7, 19°.30N±0°.04×64°.48W±0°.06, h36km±51km, Error ellipse: s-maj=10.5km s-min=1.3km az=127.0*
*RSPR **27** 09:39:34.6, 19°.29N×64°.45W, h47km±8km, MD3.3/13*
ISC 27 09:39:33.1±1.9, 19°.28N±0°.08×64°.53W±0°.03, h19km±3km, n48, σ0s53/57, 6C-7D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.87 186**		i*e*P		**Pb**	**09 39 49.8**	**+0.3**
TBVI	**Tortola**	**0.87 186**		*e*S		**Sg**	**09 40 01.5**	**0.0**
TBVI	**Tortola**	**0.87 186**				**Pb**	**09 39 49.8**	**+0.3**
TBVI						**Sg**	**09 40 01.5**	**0.0**
SJVI	**Gifft Hill Sch**	**0.97 194**		i*e*P		**Pb**	**09 39 51.5**	**+0.1**
SJVI	**Gifft Hill Sch**	**0.97 194**		*e*S		**Sb**	**09 40 04.3**	**+0.4**
SJVI	**Gifft Hill Sch**	**0.97 194**				**Pb**	**09 39 51.5**	**+0.1**
SJVI						**Sb**	**09 40 04.3**	**+0.4**
STVI	**Saint Thomas**	**1.01 204**		i*e*P		**Pb**	**09 39 51.7**	**-0.3**
STVI	**Saint Thomas**	**1.01 204**		*e*S		**Sb**	**09 40 05.3**	**+0.4**
STVI	**Saint Thomas**	**1.01 204**				**Pb**	**09 39 51.6**	**-0.4**
STVI						**Sg**	**09 40 06.1**	**0.0**
STVI				IAML			09 40 12.7	
	comp=N,228nm,0.3s							
CUPR	**Culebra, Puert**	**1.21 217**		i*e*P		**Pn**	**09 39 54.7**	**-0.3**
CUPR	**Culebra, Puert**	**1.21 217**		*e*S		**Sb**	**09 40 09.9**	**-0.6**
CUPR	**Culebra, Puert**	**1.21 217**				**Pn**	**09 39 54.5**	**-0.4**
CUPR						**Sb**	**09 40 09.7**	**-0.8**
CUPR				IAML			09 40 14.3	
	comp=N,192nm,0.6s							
CUPR				IAML			09 40 15.8	
	comp=E,167nm,0.6s							
MTP	**Monte Pirata**	**1.53 220**		i*e*P		**Pn**	**09 39 59.4**	**-0.1**
MTP	**Monte Pirata**	**1.53 220**		*e*S		**Sn**	**09 40 18.3**	**-0.4**
MTP	**Monte Pirata**	**1.53 220**				**Pn**	**09 39 59.1**	**-0.3**
MTP				IAML			09 40 21.1	
	comp=E,165nm,0.3s							
MTP				IAML			09 40 24.8	
	comp=N,97nm,0.5s							
CDVI	**St. Croix**	**1.54 189**				**Pb**	**09 40 00.9**	**-0.1**
CDVI	**St. Croix**	**1.54 189**		*e*P		**Pb**	**09 40 01.0**	**-0.1**
CDVI				*e*S		**Sg**	**09 40 23.2**	**+0.3**
CBYP	**Canovanas**	**1.61 232**		i*e*P		**Pn**	**09 40 00.2**	**-0.4**
CBYP	**Canovanas**	**1.61 232**				**Pn**	**09 40 00.1**	**-0.4**
HUMP	**Col San Antoni**	**1.69 228**		i*e*P		**Pn**	**09 40 01.7**	**+0.1**
HUMP	**Col San Antoni**	**1.69 228**		*e*S		**Sn**	**09 40 23.0**	**+0.2**
HUMP	**Col San Antoni**	**1.69 228**				**Pn**	**09 40 01.4**	**-0.2**
HUMP				IAML			09 40 25.6	
	comp=N,140nm,0.5s							
GCPR	**Guaynabo City**	**1.77 237**		i*e*P		**Pn**	**09 40 02.4**	**-0.2**
GCPR	**Guaynabo City**	**1.77 237**				**Pn**	**09 40 01.9**	**-0.8**
SMRT	**St. Maarten**	**1.84 131**		*e*P		**Pn**	**09 40 02.3**	**-1.4**
SMRT				*e*S		**Sb**	**09 40 28.2**	**-0.7**
PDPR	**Patillas Dam,**	**1.90 229**		Pn		**Pn**	**09 40 04.8**	**+0.4**
SJG	**San Juan**	**1.93 233**				**Pn**	**09 40 04.9**	**0.0**
SJG				IAML			09 40 34.3	
	comp=N,59nm,0.6s							
IGPR	**InterUniversit**	**1.99 229**		i*e*P		**Pn**	**09 40 06.0**	**+0.3**
EMPR	**Esperanza - Ma**	**2.06 247**		i*e*P		**Pn**	**09 40 07.0**	**+0.3**
EMPR	**Esperanza - Ma**	**2.06 247**		*e*S		**Sn**	**09 40 32.2**	**+0.4**
EMPR	**Esperanza - Ma**	**2.06 247**				**Pn**	**09 40 07.0**	**+0.3**
EMPR						**Sn**	**09 40 31.5**	**-0.3**
EMPR				IAML			09 40 49.8	
	comp=N,86nm,0.5s							
CELP	**Cerrillos**	**2.29 239**		i*e*P		**Pn**	**09 40 10.1**	**+0.3**
CELP	**Cerrillos**	**2.29 239**		*e*S		**Sn**	**09 40 37.5**	**0.0**
CELP	**Cerrillos**	**2.29 239**				**Pn**	**09 40 10.4**	**+0.5**
CELP				IAML			09 40 44.5	
	comp=N,53nm,0.8s							
AOPR	**Arecibo Observ**	**2.31 247**		i*e*P		**Pn**	**09 40 10.2**	**0.0**
AOPR	**Arecibo Observ**	**2.31 247**		*e*S		**Sn**	**09 40 38.3**	**+0.3**
AOPR	**Arecibo Observ**	**2.31 247**				**Pn**	**09 40 10.2**	**0.0**
AOPR				IAML			09 41 01.0	
	comp=N,82nm,0.5s							
AOPR	**Arecibo Observ**	**2.31 247**		*e*P		**Pn**	**09 40 10.1**	**0.0**
AOPR				*e*S		**Sn**	**09 40 39.5**	**+1.5**
OBIP	**Obispado Ponce**	**2.33 238**				**Pn**	**09 40 09.3**	**-1.1**
OBIP				IAML			09 40 44.6	
	comp=N,52nm,0.6s							
AGPR	**Aguadilla, PR**	**2.58 252**		Pn		**Pn**	**09 40 13.9**	**+0.1**
AGPR				IAML			09 41 02.2	
	comp=N,55nm,2.2s							
AGPR				IAML			09 41 04.2	
	comp=E,71nm,2.6s							
LSP	**Las Mesas**	**2.66 246**		i*e*P		**Pn**	**09 40 15.4**	**+0.4**
MLPR	**Magueyes Islan**	**2.72 242**		Pn		**Pn**	**09 40 15.4**	**-0.4**
MLPR				IAML			09 40 56.2	
	comp=E,29nm,0.7s							
CRPR	**Cabo Rojo, PR**	**2.76 243**		Pn		**Pn**	**09 40 16.9**	**+0.6**
MBFL	**Flemmings, Mon**	**3.35 139**		*e*		**Pb**	**09 40 31.5**	**-0.4**
MLYT	**Lee's Yard**	**3.38 139**		*e*		**Pg**	**09 40 37.8**	**-0.2**
ANBD	**Bethesda, Anti**	**3.44 130**		*e*P		**Pn**	**09 40 26.3**	**+0.6**
ANBD				*e*S		**Sn**	**09 41 05.9**	**0.0**
ABD	**La Joyeuse, An**	**4.02 134**		*e*P		**Pn**	**09 40 35.1**	**+1.4**
ABD	**La Joyeuse, An**	**4.02 134**		*e*S		**Sn**	**09 41 21.4**	**+1.1**

*NEIC **27** 09:56:31.7±1.2, 19°.29N±0°.03×64°.56W±0°.07, h37km±52km, Error ellipse: s-maj=10.0km s-min=2.8km az=111.0*
*RSPR **27** 09:56:32.0, 19°.19N×64°.48W, h66km±8km, MD3.5/16*
ISC 27 09:56:29.3±1.8, 19°.24N±0°.07×64°.55W±0°.03, h10km±10km, n68, σ1s32/77, 9C-10D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.82 184**		i*e*P		**Pn**	**09 56 46.7**	**-0.2**
TBVI	**Tortola**	**0.82 184**		*e*S		**Sn**	**09 56 58.5**	**-0.5**
TBVI	**Tortola**	**0.82 184**				**Pn**	**09 56 46.7**	**-0.2**
TBVI						**Sn**	**09 56 58.5**	**-0.5**
SJVI	**Gifft Hill Sch**	**0.92 193**		i*e*P		**Pn**	**09 56 48.5**	**+0.1**
SJVI	**Gifft Hill Sch**	**0.92 193**		*e*S		**Sn**	**09 57 01.6**	**-0.1**
SJVI	**Gifft Hill Sch**	**0.92 193**				**Pn**	**09 56 48.5**	**+0.1**
SJVI						**Sn**	**09 57 01.6**	**-0.1**
STVI	**Saint Thomas**	**0.96 203**		i*e*P		**Pn**	**09 56 48.6**	**-0.2**
STVI	**Saint Thomas**	**0.96 203**		*e*S		**Sb**	**09 57 01.5**	**+0.7**
STVI	**Saint Thomas**	**0.96 203**				**Pn**	**09 56 48.5**	**-0.3**
STVI						**Sb**	**09 57 01.5**	**+0.7**
STVI				IAML			09 57 06.3	
	comp=N,389nm,0.2s							
CUPR	**Culebra, Puert**	**1.16 217**		i*e*P		**Pg**	**09 56 51.5**	**0.0**
CUPR	**Culebra, Puert**	**1.16 217**		*e*S		**Sg**	**09 57 07.2**	**+0.5**
CUPR	**Culebra, Puert**	**1.16 217**				**Pb**	**09 56 51.4**	**0.0**
CUPR						**Sg**	**09 57 07.1**	**+0.5**
CUPR				IAML			09 57 10.3	
	comp=N,333nm,0.5s							
MTP	**Monte Pirata**	**1.48 220**		i*e*P		**Pn**	**09 56 56.3**	**+0.3**
MTP	**Monte Pirata**	**1.48 220**		*e*S		**Sn**	**09 57 14.4**	**-1.0**
MTP	**Monte Pirata**	**1.48 220**				**Pn**	**09 56 56.1**	**+0.1**
CDVI	**St. Croix**	**1.49 188**	Pn			**Pg**	**09 56 57.9**	**0.0**
CDVI	**St. Croix**	**1.49 188**		*e*P		**Pg**	**09 56 57.9**	**0.0**
CDVI				*e*S		**Sg**	**09 57 18.6**	**+1.3**
CBYP	**Canovanas**	**1.56 232**		i*e*P		**Pn**	**09 56 57.1**	**-0.1**
CBYP	**Canovanas**	**1.56 232**		*e*S		**Sn**	**09 57 17.3**	**-0.2**
CBYP	**Canovanas**	**1.56 232**				**Pn**	**09 56 57.2**	**0.0**
HUMP	**Col San Antoni**	**1.64 229**		i*e*P		**Pn**	**09 56 58.5**	**+0.3**
HUMP	**Col San Antoni**	**1.64 229**		*e*S		**Sn**	**09 57 18.4**	**-1.0**
HUMP	**Col San Antoni**	**1.64 229**				**Pn**	**09 56 58.6**	**+0.3**
HUMP				IAML			09 57 20.0	
	comp=N,317nm,0.2s							
GCPR	**Guaynabo City**	**1.72 238**		i*e*P		**Pn**	**09 56 59.0**	**-0.3**
GCPR	**Guaynabo City**	**1.72 238**		*e*S		**Sn**	**09 57 21.6**	**+0.3**
GCPR	**Guaynabo City**	**1.72 238**				**Pn**	**09 56 59.0**	**-0.3**
SMRT	**St. Maarten**	**1.83 130**		*e*P		**Pg**	**09 57 03.5**	**-1.0**
SMRT				*e*S		**Sg**	**09 57 26.7**	**-1.6**
PDPR	**Patillas Dam,**	**1.85 229**		Pn		**Pn**	**09 57 01.8**	**+0.7**
SJG	**San Juan**	**1.88 234**				**Pn**	**09 57 01.9**	**+0.4**
SJG				IAML			09 57 31.1	
	comp=N,114nm,0.5s							
SJG				IAML			09 57 42.2	
	comp=N,98nm,0.4s							
IGPR	**InterUniversit**	**1.94 230**		i*e*P		**Pn**	**09 57 02.7**	**+0.4**
IGPR	**InterUniversit**	**1.94 230**		*e*S		**Sn**	**09 57 27.2**	**+0.4**
EMPR	**Esperanza - Ma**	**2.02 248**		i*e*P		**Pn**	**09 57 03.8**	**+0.4**
EMPR	**Esperanza - Ma**	**2.02 248**		*e*S		**Sn**	**09 57 28.9**	**+0.2**
EMPR	**Esperanza - Ma**	**2.02 248**				**Pn**	**09 57 03.9**	**+0.4**
EMPR				IAML			09 57 38.1	
	comp=E,178nm,0.9s							
EMPR				IAML			09 57 44.2	
	comp=N,141nm,0.7s							
CELP	**Cerrillos**	**2.24 239**		i*e*P		**Pn**	**09 57 07.2**	**+0.7**
CELP	**Cerrillos**	**2.24 239**		*e*S		**Sn**	**09 57 34.1**	**-0.1**
CELP	**Cerrillos**	**2.24 239**				**Pn**	**09 57 07.0**	**+0.5**
AOPR	**Arecibo Observ**	**2.27 247**		i*e*P		**Pn**	**09 57 07.0**	**+0.1**
AOPR	**Arecibo Observ**	**2.27 247**		*e*S		**Sn**	**09 57 34.8**	**0.0**
AOPR	**Arecibo Observ**	**2.27 247**				**Pn**	**09 57 06.9**	**+0.1**
AOPR	**Arecibo Observ**	**2.27 247**		*e*P		**Pn**	**09 57 06.7**	**-0.2**
AOPR				*e*S		**Sn**	**09 57 36.5**	**+1.6**
UUPR	**Utuado, UPR, P**	**2.28 245**		i*e*P		**Pn**	**09 57 08.0**	**+1.1**
UUPR	**Utuado, UPR, P**	**2.28 245**				**Pn**	**09 57 08.0**	**+1.1**
OBIP	**Obispado Ponce**	**2.28 239**		i*e*P		**Pn**	**09 57 06.6**	**-0.4**
OBIP	**Obispado Ponce**	**2.28 239**		*e*S		**Sn**	**09 57 34.5**	**-0.6**
OBIP	**Obispado Ponce**	**2.28 239**				**Pn**	**09 57 06.4**	**-0.6**
OBIP				IAML			09 57 41.7	
	comp=N,75nm,0.6s							
AGPR	**Aguadilla, PR**	**2.54 253**		i*e*P		**Pn**	**09 57 11.9**	**+1.3**
AGPR	**Aguadilla, PR**	**2.54 253**				**Pn**	**09 57 10.5**	**-0.1**
AGPR				IAML			09 57 51.9	
	comp=N,78nm,1.9s							
AGPR				IAML			09 57 57.9	
	comp=E,79nm,1.3s							
LSP	**Las Mesas**	**2.62 247**		i*e*P		**Pn**	**09 57 12.9**	**+1.2**
LSP	**Las Mesas**	**2.62 247**		*e*S		**Sn**	**09 57 44.1**	**+0.4**
MLPR	**Magueyes Islan**	**2.68 242**		i*e*P		**Pn**	**09 57 12.3**	**-0.2**
MLPR	**Magueyes Islan**	**2.68 242**		*e*S		**Sn**	**09 57 44.2**	**-0.7**
MLPR	**Magueyes Islan**	**2.68 242**				**Pn**	**09 57 12.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.72 244**		i*e*P		**Pn**	**09 57 13.8**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.72 244**		*e*S		**Sn**	**09 57 45.9**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.72 244**				**Pn**	**09 57 13.2**	**+0.2**
IDE	**Isla Desecheo**	**2.89 253**		i*e*P		**Pn**	**09 57 15.8**	**+0.3**
IDE	**Isla Desecheo**	**2.89 253**		*e*S		**Sn**	**09 57 49.9**	**-0.4**
ANWB	**Willy Bob**	**3.05 120**		*e*P		**Pn**	**09 57 19.4**	**+1.8**
ANWB				*e*S		**Sn**	**09 57 54.5**	**+0.3**
ANBD	**Bethesda, Anti**	**3.43 129**		*e*P		**Pn**	**09 57 23.0**	**+0.2**
ANBD				*e*S		**Sn**	**09 58 02.0**	**-1.5**
CBE	**Ff, Capester**	**4.22 138**		*e*P		**Pn**	**09 57 37.4**	**+3.7**
CBE	**Ff, Capester**	**4.22 138**		*e*S		**Sb**	**09 58 28.1**	**-6.6**
TDBA	**Terre de Bas,**	**4.37 140**		*e*P		**Pn**	**09 57 38.8**	**+3.1**
TDBA	**Terre de Bas,**	**4.37 140**		*e*S		**Sn**	**09 58 27.7**	**+0.9**
MAGL	**Barre de l'ile**	**4.52 136**		*e*P		**Pn**	**09 57 40.3**	**+2.5**
MAGL	**Barre de l'ile**	**4.52 136**		*e*S		**Sn**	**09 58 31.4**	**+1.0**
DSLB	**Salisbury**	**4.82 141**		*e*P		**Pn**	**09 57 45.5**	**+3.6**
MPOM	**Morne Pois Mar**	**5.93 143**		*e*P		**Pn**	**09 58 00.7**	**+3.4**

*IDC **27** 10:00:43.1±2.3, 38°.83N×142°.39E, h0km, mb3.7/4, mbtmp3.7/7, ML2.9/3, Error ellipse: s-maj=53.3km s-min=26.9km az=69.0*
*JMA **27** 10:00:56.8±0.1, 38°.6N±0°.2×141°.4E±0°.3, h74km, MV3.5/40, NORTHERN MIYAGI PREF*
JMA Felt II J1 at NORTHERN MIYAGI PREF .
ISC 27 10:00:56.1±1.0, 38°.64N±0°.04×141°.40E±0°.06, h78km±6km, n28, σ0s50/36, mb3.7/4, 12D, Near east coast of eastern Honshu

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

JKMT	**Kesennumamotoy**	**0.18 18**		i*e*P		**Pn**	**10 01 07.9**	**+0.2**
JKMT				*e*S		**Sn**	**10 01 16.0**	**-0.1**
JIO	**Ouri**	**0.19 193**		i*e*P		**Pn**	**10 01 07.8**	**+0.1**
JIO				*e*S		**Sn**	**10 01 15.8**	**-0.3**
JIKH	**Ishinomakikobu**	**0.33 171**		i*e*P		**Pn**	**10 01 08.7**	**+0.3**
JIKH				*e*S		**Sn**	**10 01 17.3**	**-0.1**
JMK	**Ichinoseki**	**0.34 336**		i*e*P		**Pn**	**10 01 08.5**	**0.0**
JMK				*e*S		**Sn**	**10 01 17.1**	**-0.4**
JOFO	**Osakifurukawao**	**0.39 265**		i P		**Pn**	**10 01 08.8**	**+0.1**
JOFO				S		**Sn**	**10 01 18.5**	**+0.5**
OFUJ	**Ofunato**	**0.49 25**		i*e*P		**Pn**	**10 01 10.1**	**+0.5**
OFUJ				*e*S		**Sn**	**10 01 19.9**	**+0.3**
JOU	**Okura**	**0.64 245**		i P		**Pn**	**10 01 11.1**	**+0.1**
JOU				S		**Sn**	**10 01 21.9**	**-0.1**
JOM	**Ohasama**	**0.84 354**		i*e*P		**Pn**	**10 01 13.5**	**+0.4**
JOM				*e*S		**Sn**	**10 01 25.6**	**-0.2**
JYK	**Kaneyama**	**0.86 289**		i P		**Pn**	**10 01 13.4**	**0.0**
JYK				S		**Sn**	**10 01 26.3**	**0.0**
JMM	**Marumori**	**0.91 212**		*i* P		**Pn**	**10 01 13.9**	**0.0**
JMM				S		**Sn**	**10 01 26.7**	**-0.5**
JRG	**Rokugo**	**0.96 322**		*i* P		**Pn**	**10 01 15.1**	**+0.4**
JRG				S		**Sn**	**10 01 29.3**	**+0.8**
JYS	**Shirataka**	**1.13 249**		*i* P		**Pn**	**10 01 16.8**	**+0.1**
JYS				*e*S		**Sn**	**10 01 32.6**	**+0.6**
JYA	**Atsumi**	**1.32 269**		P		**Pn**	**10 01 19.2**	**+0.1**
JYA				*e*S		**Sn**	**10 01 36.7**	**+0.3**
JFK	**Kawauchi**	**1.34 198**		*i* P		**Pn**	**10 01 19.7**	**+0.4**
JFK				S		**Sn**	**10 01 37.0**	**+0.3**
JFT	**Otama**	**1.40 217**		*i* P		**Pn**	**10 01 21.1**	**+1.0**
JFT				*e*S		**Sn**	**10 01 39.1**	**+1.0**
MJAR	**Matsushiro Arr**	**3.29 231**		Pn		**Pn**	**10 01 45.0**	**-0.4**
	0.3nm,0.3s,baz=45,slow=12,SNR=20							
	2.8nm,0.5s							
USRK	**Ussuriysk Ar.**	**8.99 311**		Pn		**Pn**	**10 03 01.7**	**-1.3**
	0.5nm,0.3s,baz=122,slow=14,SNR=5.0							
	1.2nm,0.3s							
KSRS	**Korea Array**	**10.70 268**		Pn		Pn	10 03 30.0	+3.6
	0.4nm,0.3s,baz=74,slow=14,SNR=5.6							
	1.5nm,0.5s							
H11N2	**WAKE ISLAND Hy 29.00 123**			T		T	10 37 12.2	
	baz=317,slow=76,SNR=47							
H11N1	**WAKE ISLAND Hy 29.01 123**			T		T	10 37 13.8	
	baz=317,slow=76,SNR=40							
H11N3	**WAKE ISLAND Hy 29.02 123**			T		T	10 37 13.8	
	baz=317,slow=76,SNR=34							
H11S1	**WAKE ISLAND Hy 29.76 125**			T		T	10 38 13.6	
	baz=318,slow=76,SNR=29							
H11S3	**WAKE ISLAND Hy 29.77 125**			T		T	10 38 16.0	
	baz=318,slow=76,SNR=32							
H11S2	**WAKE ISLAND Hy 29.78 125**			T		T	10 38 14.7	
	baz=318,slow=76,SNR=25							
ZALV	**Zalesovo Beam 40.84 311**			P		**P**	**10 08 30.4**	**+0.5**
	0.6nm,0.5s,baz=99,slow=9.2,SNR=1.9							
	0.6nm,0.5s							
MKAR	**Makanchi Array 43.28 301**			P		**P**	**10 08 50.4**	**+0.5**
	0.7nm,0.7s,baz=89,slow=10.0,SNR=6.2							
	0.7nm,0.7s							
KURBB	**Kurchatov Arra 45.02 307**			P		**P**	**10 09 03.8**	**0.0**
	1.6nm,0.6s,baz=81,slow=8.1,SNR=14							
	1.6nm,0.6s							
WRA	**Warramunga Arr 58.65 188**			P		**P**	**10 10 44.5**	**-0.8**
	0.4nm,0.6s,baz=5.8,slow=7.5,SNR=6.4							
	0.4nm,0.6s							

ROM 27 10:01:40.9±0.1, 42°.755N±0°.003×13°.235E±0°.005, h11km, ML2.2/6, 5C-6D, Error ellipse: s-maj=0.4km s-min=0.3km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12 312**		P		Pg	10 01 44.3	+0.4
NRCA				S		Sg	10 01 46.6	+0.5
NRCA				AML		AML		
	comp=E,1590μm,1.1s							
NRCA				AML		AML		
	comp=N,1315μm,0.8s							
NRCA	**Norcia**	**0.12 312**		P		Pg	10 01 44.3	+0.4
NRCA				S		Sg	10 01 46.6	+0.5
NRCA				AML		AML		
	comp=E,11350μm,1.1s							
NRCA				AML		AML		
	comp=N,13300μm,0.1s							
NRCA				AML		AML		
	comp=E,12350μm,1.1s							
NRCA				AML		AML		
	comp=N,14650μm,0.1s							
NRCA				AML		AML		
	comp=E,11350μm,1.1s							
NRCA				AML		AML		
	comp=N,13300μm,0.1s							
NRCA				AML		AML		
	comp=E,12350μm,1.1s							
NRCA				AML		AML		
	comp=N,14650μm,0.1s							
NRCA				AML		AML		
	comp=E,11350μm,1.1s							
NRCA				AML		AML		
	comp=E,12350μm,1.1s							
NRCA				AML		AML		
	comp=N,13300μm,0.1s							
NRCA				AML		AML		
	comp=N,14650μm,0.1s							
MMO1	**Montemonaco**	**0.16 25**		P		Pg	10 01 45.0	+0.5
MMO1				S		Sg	10 01 48.1	+1.0
MMO1				AML		AML		
	comp=E,150μm,0.4s							
MMO1				A

	comp=N,1197μm,0.2s								
RM33				AML	AML				
	comp=E,1380μm,1.4s								
RM33				AML	AML				
	comp=N,1127μm,0.2s								
RM33				AML	AML				
	comp=E,1385μm,1.4s								
RM33				AML	AML				
	comp=N,1130μm,0.2s								
RM33				AML	AML				
	comp=N,1130μm,0.2s								
RM33				AML	AML				
	comp=E,1385μm,1.4s								
CAMP	**Campotosto**	**0.25**	**150**	⇑P	Pg	10 01 46.5	+0.3		
CAMP				S	Sg	10 01 50.5	+0.8		
CAMP				AML	AML				
	comp=E,588μm,0.3s								
CAMP				AML	AML				
	comp=N,418μm,0.3s								
CAMP				AML	AML				
	comp=E,588μm,0.3s								
CAMP				AML	AML				
	comp=N,418μm,0.3s								
FDMO	**Fiordimonte**	**0.30**	**339**	P	Pg	10 01 47.3	+0.3		
FDMO				S	Sg	10 01 52.1	+1.0		
FDMO				AML	AML				
	comp=E,957μm,0.2s								
FDMO				AML	AML				
	comp=N,816μm,0.8s								
FDMO	**Fiordimonte**	**0.30**	**339**	P	Pg	10 01 47.3	+0.3		
FDMO				S	Sg	10 01 52.1	+1.0		
TERO	**Teramo**	**0.30**	**116**	P	Pg	10 01 47.3	+0.3		
TERO				AML	AML				
	comp=E,44μm,0.6s								
TERO				AML	AML				
	comp=N,53μm,0.5s								
TERO				AML	AML				
	comp=E,342μm,0.2s								
TERO				AML	AML				
	comp=N,358μm,0.4s								
GUMA	**Gualdo di Mace**	**0.32**	**13**	⇑P	Pb	10 01 48.1	-0.5		
GUMA				S	Sb	10 01 53.6	-0.1		
GUMA				AML	AML				
	comp=E,4105μm,0.4s								
GUMA				AML	AML				
	comp=N,4565μm,0.3s								
GUMA				AML	AML				
	comp=E,5035μm,0.3s								
GUMA				AML	AML				
	comp=N,3850μm,0.3s								
GUMA				AML	AML				
	comp=N,3850μm,0.3s								
GUMA				AML	AML				
	comp=E,4105μm,0.4s								
GUMA				AML	AML				
	comp=E,5035μm,0.3s								
GUMA				AML	AML				
	comp=N,4565μm,0.3s								
CSP1	**Cessapalombo**	**0.34**	**356**	P	Pg	10 01 48.0	+0.3		
CSP1				S	Sb	10 01 53.6	-0.8		
CSP1				AML	AML				
	comp=E,889μm,1.3s								
CSP1				AML	AML				
	comp=N,956μm,0.4s								
CSP1	**Cessapalombo**	**0.34**	**356**	P	Pg	10 01 48.1	+0.4		
CSP1				S	Sb	10 01 53.6	-0.9		
OFFI	**Offida**	**0.38**	**61**	⇓P	Pb	10 01 49.6	0.0		
OFFI				AML	AML				
	comp=E,656μm,0.7s								
OFFI				AML	AML				
	comp=N,968μm,0.4s								
OFFI				AML	AML				
	comp=E,656μm,0.7s								
OFFI				AML	AML				
	comp=N,968μm,0.4s								
ARRO	**Arrone**	**0.39**	**243**	S	Sg	10 01 49.0	-4.7		
GIGS	**Gran Sasso**	**0.39**	**141**	P	Pg	10 01 48.7	+0.1		
GIGS				AML	AML				
	comp=E,59μm,0.6s								
GIGS				AML	AML				
	comp=N,56μm,1.1s								
GIGS				AML	AML				
	comp=E,59μm,0.6s								
GIGS				AML	AML				
	comp=N,56μm,1.1s								
GIGS				AML	AML				
	comp=N,56μm,1.1s								
GIGS				AML	AML				
	comp=E,59μm,0.6s								
FIAM	**Fiamignano**	**0.49**	**190**	P	Pg	10 01 50.5	0.0		
FIAM				AML	AML				
	comp=E,192μm,0.5s								
FIAM				AML	AML				
	comp=N,198μm,1.1s								
FIAM				AML	AML				
	comp=N,198μm,1.1s								
FIAM				AML	AML				
	comp=E,192μm,0.5s								
ASSB	**Assisi San Ben**	**0.51**	**304**	S	Sg	10 01 51.0	-6.7		
VCEL	**Villa Celiera**	**0.57**	**129**	⇑P	Pg	10 01 52.5	+0.5		
VCEL				AML	AML				
	comp=E,204μm,0.3s								
VCEL				AML	AML				
	comp=N,232μm,0.3s								
VCEL				AML	AML				
	comp=E,204μm,0.3s								
VCEL				AML	AML				
	comp=N,232μm,0.3s								
EL6	**Elcito**	**0.58**	**350**	⇑P	Pg	10 01 52.4	+0.2		
EL6				S	Sb	10 02 02.0	+0.5		
CING	**Cingoli**	**0.62**	**357**	⇓P	Pg	10 01 53.2	+0.2		
CING				AML	AML				
	comp=E,320μm,0.3s								
CING				AML	AML				
	comp=N,326μm,0.1s								
CING				AML	AML				
	comp=E,320μm,0.3s								
CING				AML	AML				
	comp=N,326μm,0.1s								
T0110	**Collepietro**	**0.66**	**143**	⇓P	Pg	10 01 53.9	+0.1		
T0110				AML	AML				
	comp=E,126μm,1.5s								
T0110				AML	AML				
	comp=N,161μm,0.8s								
T0110				AML	AML				
	comp=N,161μm,0.8s								
T0110				AML	AML				
	comp=E,126μm,1.5s								
ARVD	**Arcevia**	**0.77**	**344**	⇓P	Pg	10 01 56.0	+0.2		
ARVD				AML	AML				
	comp=E,93μm,0.5s								
ARVD				AML	AML				
	comp=N,78μm,0.5s								
ARVD				AML	AML				
	comp=E,93μm,0.5s								
ARVD				AML	AML				
	comp=N,78μm,0.5s								
CERT	**Certeto**	**0.83**	**193**	⇓P	Pg	10 01 56.2	-0.6		
CERT				AML	AML				
	comp=E,144μm,0.4s								
CERT				AML	AML				
	comp=N,84μm,0.6s								
CERT				AML	AML				
	comp=N,84μm,0.6s								
CERT				AML	AML				
	comp=E,144μm,0.4s								
INTR	**Introdacqua**	**0.89**	**146**	P	Pn	10 02 00.3	+0.9		
INTR				AML	AML				
	comp=E,42μm,0.7s								
INTR				AML	AML				
	comp=N,82μm,0.5s								
INTR				AML	AML				
	comp=E,42μm,0.7s								
INTR				AML	AML				
	comp=N,82μm,0.5s								
RCAV	**Rocca di Cave**	**0.93**	**193**	S	Sg	10 02 09.0	-2.0		
VIVA	**Pratoni del Vi**	**1.06**	**199**	⇓P	Pb	10 01 58.7	-2.5		
SEI	**Scarperia**	**1.89**	**314**	P	Pn	10 02 13.2	+0.1		

*RSPR **27** 10:24:19.9, 19°.32N×68°.68W, h66km±1km, MD3.5/12*
*NEIC **27** 10:24:20.1±0.9, 18°.81N±0°.09×68°.88W±0°.03, h40km±25km, ML3.1/36, Md3.6/26(RSPR), Error ellipse: s-maj=14.0km s-min=2.3km az=197.0*
*OSPL **27** 10:24:20.6±6.6, 19°.19N×68°.47W, h0km±31km, ML3.0*

ISC 27 10:24:18.2±3.2, 19°.07N±0°.06×68°.67W±0°.03, h7km±23km, n53, σ0°88/59, 8C-4D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.61**	**153**			**Pb**		**10 24 31.4**	**+0.1**
PCDR				Sn		**Sb**		**10 24 39.8**	**-0.4**
PCDR	**Punta Cana, DR**	**0.61**	**153**	*i* P		**Pb**		**10 24 31.2**	**-0.1**
PCDR				*e*S		**Sb**		**10 24 39.6**	**-0.6**
PCDR				IAML				10 24 40.9	
	comp=Z,740nm,0.2s								
IDE	**Isla Desecheo**	**1.32**	**121**	⇓*e*P		**Pn**		**10 24 42.0**	**-1.1**
IDE	**Isla Desecheo**	**1.32**	**121**	*e*S		**Sn**		**10 24 59.5**	**-1.5**
SDD	**Santo Domingo**	**1.32**	**243**			Pn		10 24 38.4	-4.8
SDD				Sn		**Sn**		**10 25 01.8**	**+0.7**
SDD				IAML				10 25 02.7	
	comp=N,287nm,0.3s								
SDD	**Santo Domingo**	**1.32**	**243**	*i* P		**Pn**		**10 24 43.9**	**+0.7**
SDD				*e*S		**Sn**		**10 25 00.8**	**-0.3**
AGPR	**Aguadilla, PR**	**1.59**	**112**	⇑*e*P		**Pn**		**10 24 47.3**	**+0.4**
AGPR	**Aguadilla, PR**	**1.59**	**112**	*e*S		**Sn**		**10 25 07.8**	**0.0**
AGPR	**Aguadilla, PR**	**1.59**	**112**			**Pn**		**10 24 46.8**	**0.0**
AGPR				IAML				10 25 15.1	
	comp=N,259nm,0.5s								
AGPR	**Aguadilla, PR**	**1.59**	**112**	*i* P		**Pn**		**10 24 47.9**	**+1.0**
AGPR				IAML				10 25 14.9	
	comp=Z,184nm,0.5s								
BANI	**BANI**	**1.73**	**247**			Pn		10 24 43.8	-5.2
BANI	**BANI**	**1.73**	**247**	*i* P		Pn		10 24 42.2	-6.7
BANI				*e*S		**Sn**		**10 25 12.0**	**+0.6**
BANI				IAML				10 25 17.2	
	comp=Z,110nm,0.2s								
LSP	**Las Mesas**	**1.75**	**120**	⇑*e*P		**Pn**		**10 24 49.0**	**0.0**
LSP	**Las Mesas**	**1.75**	**120**	*e*S		**Sn**		**10 25 12.1**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.82**	**125**	⇑*e*P		**Pn**		**10 24 50.9**	**+1.0**
CRPR	**Cabo Rojo, PR**	**1.82**	**125**			**Pn**		**10 24 49.6**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.82**	**125**	*i* P		**Pn**		**10 24 49.9**	**0.0**
CRPR				*e*S		**Sn**		**10 25 14.5**	**+1.2**
CRPR				IAML				10 25 23.6	
	comp=Z,109nm,0.3s								
MLPR	**Magueyes Islan**	**1.89**	**125**	⇑*e*P		**Pn**		**10 24 51.4**	**+0.4**
MLPR	**Magueyes Islan**	**1.89**	**125**	*e*S		**Sn**		**10 25 16.1**	**+1.0**
MLPR	**Magueyes Islan**	**1.89**	**125**			**Pn**		**10 24 50.2**	**-0.8**
AOPR	**Arecibo Observ**	**1.95**	**111**	⇓*e*P		**Pn**		**10 24 51.5**	**-0.4**
AOPR	**Arecibo Observ**	**1.95**	**111**	*e*S		**Sn**		**10 25 16.5**	**-0.2**
AOPR	**Arecibo Observ**	**1.95**	**111**			**Pn**		**10 24 52.0**	**+0.1**
SC01	**Santiago de lo**	**1.98**	**281**			**Pn**		**10 24 49.2**	**-2.9**
SC01				IAML				10 25 35.1	
	comp=E,220nm,0.4s								
SC01	**Santiago de lo**	**1.98**	**281**	*i* P		**Pb**		**10 24 55.4**	**+0.8**
SC01				IAML				10 25 37.7	
	comp=Z,148nm,0.6s								
UUPR	**Utuado, UPR, P**	**2.02**	**113**	⇑*e*P		**Pn**		**10 24 52.4**	**-0.3**
UUPR	**Utuado, UPR, P**	**2.02**	**113**	*e*S		**Sn**		**10 25 18.2**	**0.0**
UUPR	**Utuado, UPR, P**	**2.02**	**113**			Pn		10 24 52.4	-0.3
UUPR						**Sn**		**10 25 18.2**	**0.0**
EMPR	**Esperanza - Ma**	**2.11**	**106**	⇓*e*P		**Pn**		**10 24 53.9**	**-0.1**
EMPR	**Esperanza - Ma**	**2.11**	**106**	*e*S		**Sn**		**10 25 19.8**	**-0.8**
EMPR	**Esperanza - Ma**	**2.11**	**106**	Pn		**Pn**		**10 24 54.5**	**+0.5**
OBIP	**Obispado Ponce**	**2.21**	**117**	⇑*e*P		**Pn**		**10 24 55.8**	**+0.4**
OBIP	**Obispado Ponce**	**2.21**	**117**	*e*S		**Sn**		**10 25 23.6**	**+0.7**
OBIP	**Obispado Ponce**	**2.21**	**117**			**Pn**		**10 24 55.7**	**+0.4**
OBIP				IAML				10 25 30.1	
	comp=E,112nm,0.5s								
OBIP				IAML				10 25 32.4	
	comp=N,101nm,0.4s								
CELP	**Cerrillos**	**2.22**	**116**	⇓*e*P		**Pn**		**10 24 55.5**	**0.0**
CELP	**Cerrillos**	**2.22**	**116**	*e*S		**Sn**		**10 25 23.2**	**+0.1**
CELP	**Cerrillos**	**2.22**	**116**			**Pn**		**10 24 55.1**	**-0.3**
CELP				IAML				10 25 29.9	
	comp=E,148nm,0.7s								
CELP				IAML				10 25 31.4	
	comp=N,177nm,0.4s								
SDDR	**Presa de Saban**	**2.48**	**268**			**Pn**		**10 24 57.5**	**-1.6**
SDDR				IAML				10 25 44.3	
	comp=N,133nm,0.6s								
SDDR				IAML				10 25 44.3	
	comp=N,130nm,0.4s								
SDDR	**Presa de Saban**	**2.48**	**268**	*i* P		**Pb**		**10 25 03.2**	**0.0**
SDDR				*e*S		**Sb**		**10 25 36.7**	**+2.8**
SDDR				IAML				10 25 44.5	
	comp=Z,102nm,0.6s								
GCPR	**Guaynabo City**	**2.57**	**107**			**Pn**		**10 25 01.0**	**+0.7**
SJG	**San Juan**	**2.57**	**111**			**Pn**		**10 25 00.5**	**+0.1**
SJG				IAML				10 25 39.1	
	comp=Z,98nm,0.5s								
SJG				IAML				10 25 40.2	
	comp=Z,105nm,0.5s								
CBYP	**Canovanas**	**2.78**	**106**			**Pn**		**10 25 04.8**	**+1.5**
HUMP	**Col San Antoni**	**2.83**	**109**			**Pn**		**10 25 04.6**	**+0.7**
HUMP				IAML				10 25 49.1	
	comp=E,72nm,0.2s								
LOPE2	**Hotel El Peder**	**3.09**	**251**	*i* P		**Pb**		**10 25 12.6**	**-1.0**
LOPE2				IAML				10 25 53.3	
	comp=Z,28nm,1.7s								
MTP	**Monte Pirata**	**3.11**	**108**	⇑*e*P		**Pn**		**10 25 07.7**	**-0.1**
MTP	**Monte Pirata**	**3.11**	**108**	*e*S		**Sn**		**10 25 44.9**	**-0.4**
MTP	**Monte Pirata**	**3.11**	**108**			**Pn**		**10 25 08.0**	**+0.2**
MTP				IAML				10 26 01.7	
	comp=E,30nm,0.2s								
GRTK	**Grand Turk**	**3.35**	**317**	Pn		**Pn**		**10 25 11.2**	**+0.1**
GRTK				IAML				10 27 29.8	
	comp=E,59nm,1.9s								
GRTK	**Grand Turk**	**3.35**	**317**	*i* P		**Pn**		**10 25 11.2**	**+0.1**
GRTK				*e*S		**Sn**		**10 25 50.6**	**-0.7**
GRTK				IAML				10 25 53.7	
	comp=Z,58nm,1.9s								
SJVI	**Gifft Hill Sch**	**3.77**	**101**	⇑*e*P		**Pn**		**10 25 15.8**	**-1.0**
SJVI	**Gifft Hill Sch**	**3.77**	**101**	*e*S		**Sn**		**10 26 00.0**	**-1.4**
SJVI	**Gifft Hill Sch**	**3.77**	**101**			Pn		**10 25 15.8**	**-1.0**
SJVI	**Gifft Hill Sch**	**3.77**	**101**	Pn		**Pn**		**10 25 17.8**	**+1.0**
SJVI				IAML				10 26 15.2	
	comp=N,16nm,0.8s								
SJVI				IAML				10 26 15.8	
	comp=E,14nm,0.5s								

ROM 27 10:25:54.7±0.1, 42°.833N±0°.004×13°.173E±0°.007, h6km, ML2.2/13, 10C, Error ellipse: s-maj=0.6km s-min=0.1km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**271**	⇑P		Pg		10 25 56.5	+0.3
NRCA				S		Sg		10 25 57.5	+0.2
NRCA				AML		AML			
	comp=E,42250μm,1.5s								
NRCA				AML		AML			
	comp=N,34000μm,0.4s								
NRCA				AML		AML			
	comp=N,37300μm,0.4s								
NRCA				AML		AML			
	comp=E,45300μm,1.5s								
NRCA				AML		AML			
	comp=E,42200μm,1.5s								
NRCA	**Norcia**	**0.04**	**271**	P		Pg		10 25 56.5	+0.3
NRCA				S		Sg		10 25 57.5	+0.2
MC2	**Monte Cornacci**	**0.08**	**9**	P		Pg		10 25 57.1	+0.3
MC2				S		Sg		10 25 58.9	+0.6
MC2				AML		AML			
	comp=E,11465μm,0.5s								
MC2				AML		AML			
	comp=N,11200μm,0.5s								
MC2				AML		AML			
	comp=N,11195μm,0.5s								
MC2				AML		AML			
	comp=E,11475μm,0.5s								
MC2				AML		AML			
	comp=N,11230μm,0.5s								
MC2				AML		AML			
	comp=E,11480μm,0.5s								
MC2				AML		AML			
	comp=N,11220μm,0.5s								
MC2	**Monte Cornacci**	**0.08**	**9**	P		Pg		10 25 57.1	+0.3
MC2				S		Sg		10 25 58.9	+0.5
MMO1	**Montemonaco**	**0.13**	**59**	⇑P		Pg		10 25 58.1	+0.6
MMO1				S		Sg		10 26 00.3	+0.9
MMO1				AML		AML			
	comp=N,4485μm,0.4s								
MMO1				AML		AML			
	comp=N,4490μm,0.4s								
MMO1				AML		AML			
	comp=E,4685μm,0.4s								
MMO1	**Montemonaco**	**0.13**	**59**	P		Pg		10 25 58.0	+0.5
MMO1				S		Sg		10 26 00.4	+1.0

FEMA	**Monte Fema**	**0.16**	**325**	P		Pg		10 25 58.6	+0.6
FEMA				S		Sg		10 26 01.6	+1.3
FDMO	**Fiordimonte**	**0.21**	**343**	P		Pg		10 25 59.5	+0.5
FDMO				S		Sg		10 26 03.0	+1.2
FDMO	**Fiordimonte**	**0.21**	**343**	P		Pg		10 25 59.5	+0.5
FDMO				S		Sg		10 26 03.0	+1.2
T1243	**Rocca Santa Ma**	**0.24**	**124**	P		Pg		10 26 00.5	+0.9
T1243				S		Sg		10 26 04.7	+1.9
T1243				AML		AML			
	comp=E,2765μm,0.3s								
T1243				AML		AML			
	comp=N,2920μm,0.9s								
T1243				AML		AML			
	comp=E,2765μm,0.3s								
T1243				AML		AML			
	comp=N,2880μm,0.2s								
T1243				AML		AML			
	comp=E,5745μm,0.2s								
T1243				AML		AML			
	comp=E,5705μm,0.2s								
T1243				AML		AML			
	comp=E,5750μm,0.2s								
T1243				AML		AML			
	comp=N,4700μm,0.9s								
T1243				AML		AML			
	comp=E,5700μm,0.2s								
T1243				AML		AML			
	comp=N,4765μm,0.9s								
T1243				AML		AML			
	comp=N,4705μm,0.9s								
T1243	**Rocca Santa Ma**	**0.24**	**124**	P		Pg		10 26 00.5	+1.0
T1243				S		Sg		10 26 04.6	+1.8
LNSS	**Leonessa**	**0.25**	**203**	⇑P		Pg		10 26 00.8	+1.1
LNSS				S		Sg		10 26 05.4	+2.4
LNSS				AML		AML			
	comp=E,2555μm,0.2s								
LNSS				AML		AML			
	comp=N,2565μm,0.6s								
LNSS				AML		AML			
	comp=E,2560μm,0.2s								
LNSS	**Leonessa**	**0.25**	**203**	P		Pg		10 26 00.6	+1.0
LNSS				S		Sg		10 26 05.4	+2.4
GUMA	**Gualdo di Mace**	**0.26**	**27**	P		Pg		10 26 00.8	+0.9
GUMA				S		Sb		10 26 05.4	-1.2
GUMA	**Gualdo di Mace**	**0.26**	**27**	P		Pg		10 26 00.7	+0.9
GUMA				S		Sb		10 26 05.5	-1.1
GUMA				AML		AML			
	comp=E,4265μm,1.5s								
GUMA				AML		AML			
	comp=N,3830μm,0.4s								
GUMA				AML		AML			
	comp=E,4095μm,0.3s								
GUMA				AML		AML			
	comp=N,5030μm,0.4s								
CSP1	**Cessapalombo**	**0.26**	**5**	P		Pg		10 26 00.4	+0.5
CSP1				S		Sb		10 26 05.3	-1.4
CSP1	**Cessapalombo**	**0.26**	**5**	P		Pg		10 26 00.3	+0.4
CSP1				S		Sb		10 26 05.2	-1.5
RM33	**Pellescritta (**	**0.33**	**175**	P		Pg		10 26 02.0	+0.9
RM33				S		Sb		10 26 07.6	-0.9
RM33				AML		AML			
	comp=N,2275μm,1.3s								
RM33				AML		AML			
	comp=E,3360μm,1.0s								
RM33				AML		AML			
	comp=E,3345μm,1.0s								
RM33				AML		AML			
	comp=N,2365μm,0.3s								
RM33				AML		AML			
	comp=N,2275μm,1.2s								
RM33	**Pellescritta (**	**0.33**	**175**	P		Pg		10 26 01.9	+0.8
RM33				S		Sb		10 26 07.7	-0.8
CAMP	**Campotosto**	**0.34**	**150**	⇑P		Pg		10 26 02.0	+0.5
CAMP				S		Sb		10 26 08.2	-0.9
CAMP				AML		AML			
	comp=E,1720μm,0.2s								
CAMP				AML		AML			
	comp=N,1175μm,0.6s								
CAMP	**Campotosto**	**0.34**	**150**	P		Pg		10 26 02.0	+0.5
CAMP				S		Sb		10 26 08.1	-1.0
SEF1	**Sefro**	**0.35**	**332**	P		Pg		10 26 02.3	+0.7
SEF1				S		Sb		10 26 08.2	-1.1
MDAR	**Monte D'Aria**	**0.36**	**356**	P		Pg		10 26 02.1	+0.3
MDAR				S		Sb		10 26 08.5	-1.0
TERO	**Teramo**	**0.38**	**123**	P		Pg		10 26 02.6	+0.5
TERO				S		Sb		10 26 09.1	-1.0
TERO				AML		AML			
	comp=E,1488μm,0.1s								
TERO				AML		AML			
	comp=N,1206μm,0.3s								
TERO				AML		AML			
	comp=E,1670μm,0.1s								
TERO				AML		AML			
	comp=N,1360μm,0.3s								
TERO	**Teramo**	**0.38**	**123**	P		Pg		10 26 02.7	+0.6
TERO				S		Sb		10 26 09.2	-0.9
OFFI	**Offida**	**0.39**	**75**	P		Pb		10 26 04.0	0.0
OFFI				AML		AML			
	comp=N,1550μm,0.5s								
OFFI				AML		AML			
	comp=E,1315μm,0.4s								
ARRO	**Arrone**	**0.39**	**230**	P		Pg		10 25 59.3	-3.0
GAG1	**Gagliole**	**0.41**	**349**	P		Pg		10 26 03.2	+0.5
GAG1				S		Sb		10 26 10.2	-0.7
ASSB	**Assisi San Ben**	**0.43**	**299**	S		Sg		10 26 04.0	-4.8
ASSB	**Assisi San Ben**	**0.43**	**299**	AML		AML			
	comp=E,426μm,0.3s								
ASSB				AML		AML			
	comp=N,442μm,0.3s								
SNTG	**Esanatoglia**	**0.46**	**338**	P		Pg		10 26 03.8	+0.2
SNTG				S		Sb		10 26 11.4	-0.8
SNTG				AML		AML			
	comp=E,354μm,0.3s								
SNTG				AML		AML			
	comp=N,416μm,1.2s								
SNTG				AML		AML			
	comp=N,416μm,1.2s								
GIGS	**Gran Sasso**	**0.48**	**143**	P		Pg		10 26 04.5	+0.5
GIGS				S		Sb		10 26 12.3	-0.7
GIGS				AML		AML			
	comp=E,274μm,0.2s								
GIGS				AML		AML			
	comp=E,274μm,0.2s								
GIGS				AML		AML			
	comp=N,235μm,0.3s								
GIGS				AML		AML			
	comp=N,234μm,0.3s								
GIGS	**Gran Sasso**	**0.48**	**143**	P		Pg		10 26 04.8	+0.7
GIGS				S		Sb		10 26 12.7	-0.3
CESX	**Cesi**	**0.49**	**243**	P		Pg		10 26 04.7	+0.5
EL6	**Elcito**	**0.50**	**354**	⇑P		Pg		10 26 04.7	+0.3
EL6				S		Sb		10 26 12.9	-0.6
ATCC	**AVT- Casa Cast**	**0.53**	**312**	P		Pg		10 26 05.5	+0.6
ATCC				S		Sb		10 26 14.1	-0.2
ATCC				AML		AML			
	comp=E,553μm,0.6s								
ATCC				AML		AML			
	comp=N,783μm,1.5s								
CING	**Cingoli**	**0.54**	**2**	P		Pg		10 26 05.5	+0.2
CING				S		Sb		10 26 14.7	-0.1
CING				AML		AML			
	comp=N,361μm,0.3s								
CING				AML		AML			
	comp=E,326μm,0.8s								
TRTR	**Tortoreto Alta**	**0.55**	**92**	⇑P		Pb		10 26 07.0	+0.4
TRTR				AML		AML			
	comp=E,957μm,1.2s								
TRTR				AML		AML			
	comp=N,1096μm,0.5s								
TRTR				AML		AML			
	comp=E,958μm,1.2s								
FIAM	**Fiamignano**	**0.57**	**184**	⇑P		Pb		10 26 06.5	-0.6
FIAM				AML		AML			
	comp=N,286μm,1.2s								
FIAM				AML		AML			
	comp=N,286μm,1.2s								
FIAM				AML		AML			
	comp=E,246μm,1.1s								
FIAM	**Fiamignano**	**0.57**	**184**	P		Pg		10 26 06.0	+0.3
FIAM				S		Sb		10 26 15.3	-0.1
PP3	**Marolino**	**0.63**	**30**	S		Sg		10 26 09.0	-6.1
FAGN	**Fagnano**	**0.64**	**152**	⇑P		Pb		10 26 08.3	-0.1
FAGN				AML		AML			
	comp=N,759μm,0.3s								
FAGN

comp=E,640μm,0.4s
FAGN Fagnano 0.64 152 P Pb 10 26 08.0 -0.4
VCEL Villa Celiera 0.66 131 ⇑P Pb 10 26 08.2 -0.4
VCEL AML AML
comp=E,1046μm,0.3s
VCEL AML AML
comp=N,1040μm,1.5s
VCEL AML AML
comp=E,1050μm,0.3s
VCEL AML AML
comp=E,1045μm,0.3s
VCEL Villa Celiera 0.66 131 P Pb 10 26 08.2 -0.5
VCEL S Sb 10 26 19.6 +1.5
ARVD Arcevia 0.69 346 P Pg 10 26 08.0 0.0
ARVD S Sb 10 26 19.4 +0.6
ARVD AML AML
comp=E,194μm,0.2s
ARVD AML AML
comp=N,140μm,1.2s
ATFO Monte Foce - G 0.69 321 P Pg 10 26 08.4 +0.3
ATFO AML AML
comp=E,244μm,0.4s
ATFO AML AML
comp=N,207μm,0.6s
T0110 Collepietro 0.75 143 P Pg 10 26 09.3 +0.1
T0110 AML AML
comp=E,449μm,1.0s
T0110 AML AML
comp=N,477μm,0.7s
T0110 AML AML
comp=E,448μm,1.0s
T0110 AML AML
comp=N,478μm,0.7s
T0110 Collepietro 0.75 143 P Pg 10 26 09.3 +0.1
FRON Frontone 0.76 335 P Pg 10 26 09.2 -0.1
FRON S Sb 10 26 21.4 +0.4
FRON AML AML
comp=E,169μm,1.1s
FRON AML AML
comp=N,292μm,1.5s
SRES S.Oreste - Sor 0.77 220 P Pb 10 26 10.5 0.0
ATVO AVT- Monte Val 0.79 315 P Pg 10 26 10.0 +0.1
ATVO AML AML
comp=E,148μm,1.5s
ATVO AML AML
comp=N,114μm,0.3s
PIEI Pieia 0.84 327 ⇑P Pg 10 26 10.9 0.0
PIEI S Sn 10 26 24.9 -1.0
PIEI AML AML
comp=E,118μm,1.1s
PIEI AML AML
comp=N,118μm,1.4s
MPAG Monte Paganucc 0.85 339 P Pg 10 26 11.3 +0.2
MPAG S Sn 10 26 25.1 -1.1
MPAG AML AML
comp=E,163μm,0.5s
MPAG AML AML
comp=N,181μm,1.2s
FSSB Fossombrone 0.91 342 P Pg 10 26 12.2 +0.1
FSSB S Sn 10 26 27.5 +0.1
FSSB AML AML
comp=E,373μm,0.3s
FSSB AML AML
comp=N,644μm,0.4s
CAFI Castiglion Fio 1.01 300 P Pb 10 26 15.1 +0.4
CAFI AML AML
comp=N,51μm,0.9s
CAFI AML AML
comp=E,69μm,0.4s

ROM 27 10:26:42.7±0.1, 42°604N±0'.007×13°315E±0'.007, h10km, ML2.4/16, 11C-6D, Error ellipse: s-maj=0.7km s-min=0.6km az=174.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.10**	**134**	⇑P	Pg	10 26 45.9	+0.5
CAMP				S	Sg	10 26 47.8	+0.5
CAMP				AML	AML		
	comp=E,1720μm,0.2s						
CAMP				AML	AML		
	comp=N,1175μm,0.6s						
RM33	**Pellescritta (**	**0.12**	**218**	P	Pg	10 26 46.3	+0.6
RM33				S	Sg	10 26 48.5	+0.7
RM33				AML	AML		
	comp=N,2365μm,0.3s						
RM33				AML	AML		
	comp=N,2275μm,1.3s						
RM33				AML	AML		
	comp=N,2275μm,1.2s						
RM33				AML	AML		
	comp=E,3345μm,1.0s						
RM33				AML	AML		
	comp=E,3360μm,1.0s						
T1243	**Rocca Santa Ma**	**0.14**	**47**	⇑P	Pg	10 26 46.4	+0.5
T1243				S	Sg	10 26 48.8	+0.6
T1243				AML	AML		
	comp=E,5745μm,0.2s						
T1243				AML	AML		
	comp=E,5700μm,0.2s						
T1243				AML	AML		
	comp=N,4700μm,0.9s						
T1243				AML	AML		
	comp=E,5705μm,0.2s						
T1243				AML	AML		
	comp=E,5750μm,0.2s						
T1243				AML	AML		
	comp=N,4765μm,0.9s						
T1243				AML	AML		
	comp=N,4705μm,0.9s						
LNSS	**Leonessa**	**0.20**	**270**	⇑P	Pg	10 26 47.6	+0.6
LNSS				S	Sg	10 26 51.0	+1.0
LNSS				AML	AML		
	comp=E,1695μm,0.4s						
LNSS				AML	AML		
	comp=E,1700μm,0.4s						
LNSS				AML	AML		
	comp=N,1915μm,0.4s						
TERO	**Teramo**	**0.21**	**85**	P	Pg	10 26 47.7	+0.5
TERO				S	Sg	10 26 51.1	+0.9
TERO				AML	AML		
	comp=E,1670μm,0.1s						
TERO				AML	AML		
	comp=N,1360μm,0.3s						
GIGS	**Gran Sasso**	**0.24**	**129**	⇑P	Pg	10 26 48.2	+0.5
GIGS				S	Sg	10 26 52.2	+1.1
GIGS				AML	AML		
	comp=N,234μm,0.3s						
GIGS				AML	AML		
	comp=E,274μm,0.2s						
GIGS				AML	AML		
	comp=N,235μm,0.3s						
GIGS				AML	AML		
	comp=E,274μm,0.2s						
NRCA	**Norcia**	**0.27**	**327**	P	Pg	10 26 48.7	+0.4
NRCA				S	Sg	10 26 53.0	+1.0
NRCA				AML	AML		
	comp=E,2445μm,0.1s						
NRCA				AML	AML		
	comp=E,2075μm,1.1s						
NRCA				AML	AML		
	comp=N,2905μm,0.4s						
NRCA				AML	AML		
	comp=N,3145μm,0.1s						
NRCA				AML	AML		
	comp=N,2910μm,0.5s						
MMO1	**Montemonaco**	**0.30**	**2**	⇑P	Pg	10 26 49.2	+0.5
MMO1				S	Sb	10 26 54.0	-1.2
MMO1				AML	AML		
	comp=N,759μm,0.1s						
MMO1				AML	AML		
	comp=N,758μm,0.1s						
MMO1				AML	AML		
	comp=E,507μm,0.3s						
MC2	**Monte Cornacci**	**0.32**	**343**	P	Pg	10 26 49.7	+0.4
MC2				S	Sb	10 26 55.4	-0.7
MC2				AML	AML		
	comp=E,760μm,0.2s						
MC2				AML	AML		
	comp=N,740μm,0.2s						
FIAM	**Fiamignano**	**0.37**	**204**	P	Pg	10 26 50.5	+0.5
FAGN	**Fagnano**	**0.39**	**149**	⇓P	Pb	10 26 51.3	-0.5
FAGN				AML	AML		
	comp=E,640μm,0.4s						
FAGN				AML	AML		
	comp=N,759μm,0.3s						
ARRO	**Arrone**	**0.41**	**267**	⇑P	Pg	10 26 51.0	+0.3
OFFI	**Offida**	**0.43**	**39**	P	Pb	10 26 52.6	+0.2
OFFI				AML	AML		
	comp=N,1008μm,0.5s						
OFFI				AML	AML		
	comp=E,1075μm,0.7s						
VCEL	**Villa Celiera**	**0.44**	**118**	⇑P	Pb	10 26 52.4	-0.2
VCEL				AML	AML		
	comp=E,1046μm,0.3s						
VCEL				AML	AML		
	comp=E,1050μm,0.3s						
VCEL				AML	AML		
	comp=N,1040μm,1.5s						
VCEL				AML	AML		
	comp=E,1045μm,0.3s						
GUMA	**Gualdo di Mace**	**0.46**	**2**	⇓P	Pb	10 26 52.6	-0.4
FDMO	**Fiordimonte**	**0.46**	**339**	⇑P	Pg	10 26 52.1	+0.3
FDMO				AML	AML		
	comp=N,316μm,0.3s						
FDMO				AML	AML		
	comp=E,191μm,0.2s						
TRTR	**Tortoreto Alta**	**0.49**	**65**	P	Pb	10 26 54.0	+0.7
CSP1	**Cessapalombo**	**0.49**	**351**	⇓P	Pg	10 26 52.8	+0.3
T0110	**Collepietro**	**0.51**	**138**	⇑P	Pg	10 26 53.2	+0.5
T0110				AML	AML		
	comp=E,449μm,1.0s						
T0110				AML	AML		
	comp=N,477μm,0.7s						
T0110				AML	AML		
	comp=E,448μm,1.0s						
T0110				AML	AML		
	comp=N,478μm,0.7s						
CESX	**Cesi**	**0.54**	**271**	P	Pg	10 26 53.3	0.0
ASSB	**Assisi San Ben**	**0.65**	**312**	⇓P	Pg	10 26 55.6	+0.2
ASSB				AML	AML		
	comp=N,261μm,0.2s						
ASSB				AML	AML		
	comp=E,236μm,0.3s						
SRES	**S.Oreste - Sor**	**0.70**	**239**	S	Sb	10 27 08.0	+1.3
SNTG	**Esanatoglia**	**0.71**	**337**	⇑P	Pg	10 26 56.6	+0.2
INTR	**Introdacqua**	**0.74**	**143**	⇑P	Pg	10 26 56.6	-0.4
EL6	**Elcito**	**0.74**	**348**	P	Pg	10 26 57.4	+0.3
CING	**Cingoli**	**0.78**	**354**	⇓P	Pg	10 26 57.4	-0.4
CING				AML	AML		
	comp=E,140μm,0.5s						
CING				AML	AML		
	comp=N,152μm,0.3s						
FOSV	**Fossato di Vic**	**0.80**	**330**	S	Sb	10 27 10.0	+0.3
LPEL	**Lama dei Pelig**	**0.85**	**131**	S	Sb	10 27 12.0	+0.9
MGAB	**Montegabbione**	**0.94**	**290**	⇓P	Pg	10 27 00.8	0.0
MGAB				AML	AML		
	comp=N,112μm,0.4s						
MGAB				AML	AML		
	comp=E,114μm,1.4s						
MGAB				AML	AML		
	comp=N,112μm,0.4s						
VIVA	**Pratoni del Vi**	**0.94**	**206**	S	Sn	10 27 15.0	-0.6
TOLF	**Tolfa**	**1.11**	**241**	P	Pn	10 27 04.5	+0.1

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*ROM **27** 10:40:14.2±0.0, 42°.847N±0°.002×13°.244E±0°.004, h8km, ML3.6/85, Mw3.5, Error ellipse: s-maj=0.3km s-min=0.1km az=250.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-1.56; Mθθ0.25; Mφφ1.31; Mrθ0.33; Mrφ-1.25; Mθφ1.34; Fault plane solution: M₀2.36103×10¹⁴ NP1:φs299.00000°, δ39.00000°, λ-137.00000°. NP2:φs173.00000°, δ65.00000°, λ-60.00000°.*

*PDG **27** 10:40:14.9±0.5, 42°.86N×13°.25E, h11km, ML3.6/14 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*LDG **27** 10:40:14.1±0.1, 42°.87N×13°.23E, h7km, Md3.4/2, Ml3.1/28, Error ellipse: s-maj=3.2km s-min=1.9km az=46.0*

*IDC **27** 10:40:15.7±1.3, 42°.99N×13°.40E, h0km, mb3.9/3, mbtmp3.8/8, ML3.4/5, MS2.9/9, Error ellipse: s-maj=26.9km s-min=13.8km az=85.0*

*BEO **27** 10:40:16.1±0.6, 42°.89N×13°.27E, h0km, ML3.5/8*

*PRU **27** 10:40:16.6±0.0, 42°.93N×13°.57E, h0km*

ISC 27 10:40:14.6±0.7, 42°84N±0°.01×13°21E±0°.02, h11km±3km, n292, σ2s11/392, mb3.6/3, MS2.9/5, 37C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.01**	**204**	⇑P	**Pg**	**10 40 15.9**	**-0.9**
T1242				S	**Sg**	**10 40 16.9**	**-1.3**
MC2	**Monte Cornacci**	**0.07**	**347**	⇓P	**Pg**	**10 40 16.5**	**-0.8**
MC2				S	**Sg**	**10 40 18.1**	**-1.0**
MC2				AML	AML		
MC2				AML	AML		
NRCA	**Norcia**	**0.07**	**263**	⇑P	**Pg**	**10 40 17.0**	**-0.1**
NRCA				S	**Sg**	**10 40 18.9**	**0.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,81150μm,0.4s						
NRCA				AML	AML		
	comp=N,89400μm,0.2s						
T1214	**Arquata del Tr**	**0.08**	**182**	⇑P	**Pg**	**10 40 17.0**	**-0.3**
T1214				S	**Sg**	**10 40 19.0**	**-0.1**
MMO1	**Montemonaco**	**0.10**	**56**	⇑P	**Pg**	**10 40 16.4**	**-1.1**
MMO1				S	**Sg**	**10 40 17.9**	**-1.6**
MMO1				AML	AML		
	comp=E,17550μm,1.6s						
MMO1				AML	AML		
	comp=N,31800μm,0.4s						
MMO1				AML	AML		
MMO1				AML	AML		
T1244	**Arquata del Tr**	**0.11**	**144**	⇓P	**Pg**	**10 40 17.2**	**-0.3**
T1244				S	**Sg**	**10 40 18.8**	**-0.7**
T1213	**Norcia, Frazio**	**0.13**	**208**	⇑P	**Pg**	**10 40 17.9**	**+0.1**
T1213				S	**Sg**	**10 40 21.3**	**+1.1**
T1202	**Accumoli, Fraz**	**0.14**	**176**	⇑P	**Pg**	**10 40 18.1**	**+0.1**
T1202				S	**Sg**	**10 40 21.1**	**+0.8**
T1216	**Preci, Frazion**	**0.15**	**289**	⇑P	**Pg**	**10 40 18.3**	**+0.2**
T1216				S	**Sg**	**10 40 21.5**	**+0.9**
T1212	**Cascia, Frazio**	**0.15**	**234**	P	**Pg**	**10 40 18.5**	**+0.3**
T1212				S	**Sg**	**10 40 21.9**	**+1.3**
FEMA	**Monte Fema**	**0.17**	**315**	⇑P	**Pg**	**10 40 18.5**	**0.0**
FEMA				S	**Sg**	**10 40 21.8**	**+0.6**
FEMA				AML	AML		
	comp=E,51150μm,0.2s						
FEMA				AML	AML		
	comp=N,35050μm,0.4s						
FEMA				AML	AML		
	comp=E,51100μm,0.2s						
FEMA				AML	AML		
	comp=N,35000μm,0.4s						
T1204	**Amatrice, Fraz**	**0.18**	**155**	P	**Pg**	**10 40 18.8**	**+0.1**
T1201	**Domo (RI)**	**0.19**	**171**	P	**Pg**	**10 40 19.2**	**+0.5**
T1201				S	**Sg**	**10 40 23.1**	**+1.6**
T1218	**Civita (PG)**	**0.19**	**203**	⇑P	**Pg**	**10 40 19.0**	**+0.2**
T1218				S	**Sg**	**10 40 22.8**	**+1.2**
FDMO	**Fiordimonte**	**0.21**	**335**	P	**Pg**	**10 40 19.1**	**-0.1**
FDMO				S	**Sg**	**10 40 22.7**	**+0.4**
FDMO				AML	AML		
	comp=N,38450μm,0.2s						
FDMO				AML	AML		
	comp=E,32500μm,0.9s						
T1243	**Rocca Santa Ma**	**0.23**	**130**	⇓P	**Pg**	**10 40 19.0**	**-0.4**
T1243				S	**Sg**	**10 40 23.0**	**+0.3**
T1243				AML	AML		
	comp=E,35600μm,0.3s						
T1243				AML	AML		
	comp=E,35550μm,0.3s						
T1243				AML	AML		
	comp=E,35650μm,0.3s						
T1243				AML	AML		
	comp=N,29900μm,0.2s						
T1243				AML	AML		
	comp=N,29800μm,0.2s						
T1243				AML	AML		
	comp=E,35650μm,0.2s						
T1243				AML	AML		
	comp=N,29850μm,0.2s						
GUMA	**Gualdo di Mace**	**0.24**	**22**	⇑P	**Pg**	**10 40 19.6**	**-0.1**
GUMA				S	**Sg**	**10 40 23.7**	**+0.7**
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
GUMA				AML	AML		
CSP1	**Cessapalombo**	**0.25**	**359**	⇑P	**Pg**	**10 40 19.6**	**-0.3**
CSP1				S	**Sg**	**10 40 23.7**	**+0.3**
CSP1				AML	AML		
	comp=E,38650μm,0.3s						
CSP1				AML	AML		
	comp=E,38600μm,0.3s						
CSP1				AML	AML		
	comp=N,51100μm,0.3s						
T1215	**Vallo di Nera,**	**0.26**	**261**	⇑P	**Pg**	**10 40 20.3**	**+0.4**
T1215				S	**Sb**	**10 40 26.0**	**+0.2**
LNSS	**Leonessa**	**0.27**	**208**	⇑P	**Pg**	**10 40 20.5**	**+0.3**
LNSS				S	**Sg**	**10 40 25.4**	**+1.5**
LNSS				AML	AML		
	comp=E,24550μm,0.7s						
LNSS				AML	AML		
	comp=N,20700μm,0.8s						
RM33	**Pellescritta (**	**0.33**	**180**	P	**Pg**	**10 40 21.4**	**0.0**
RM33				S	**Sg**	**10 40 27.3**	**+1.5**
CAMP	**Campotosto**	**0.34**	**155**	⇓P	**Pg**	**10 40 21.2**	**-0.3**
CAMP				S	**Sg**	**10 40 26.9**	**+0.9**
MNTP	**Montappone**	**0.35**	**33**	P	**Pg**	**10 40 21.8**	**+0.1**
MDAR	**Monte D'Aria**	**0.35**	**352**	P	**Pg**	**10 40 21.6**	**-0.2**
MDAR				S	**Sg**	**10 40 27.5**	**+1.0**
OFFI	**Offida**	**0.36**	**75**	⇑P	**Pg**	**10 40 22.2**	**+0.3**
SEF1	**Sefro**	**0.36**	**328**	P	**Pg**	**10 40 21.9**	**+0.1**
SEF1				S	**Sb**	**10 40 28.1**	**-0.7**
SEF1				AML	AML		
	comp=E,35100μm,0.3s						
SEF1				AML	AML		
	comp=N,29700μm,0.3s						
SEF1				AML	AML		
	comp=N,29750μm,0.3s						
TERO	**Teramo**	**0.36**	**127**	⇓P	**Pg**	**10 40 21.3**	**-0.5**
TERO				S	**Sg**	**10 40 27.2**	**+0.5**
TERO				AML	AML		
	comp=E,18550μm,1.0s						
TERO				AML	AML		
	comp=N,15650μm,1.0s						
TERO				AML	AML		
	comp=E,18500μm,1.0s						
TERO				AML	AML		
	comp=N,14900μm,1.0s						
TERO				AML	AML		
	comp=E,19500μm,1.0s						
PIO1	**Pioraco**	**0.38**	**334**	P	**Pg**	**10 40 22.1**	**0.0**
PIO1				S	**Sb**	**10 40 28.5**	**-0.7**
SSM1	**San Severino M**	**0.39**	**356**	P	**Pg**	**10 40 22.1**	**-0.2**
FIU1	**Fiuminata**	**0.40**	**329**	P	**Pg**	**10 40 22.6**	**0.0**
FIU1				S	**Sb**	**10 40 29.5**	**-0.5**
FIU1				AML	AML		
	comp=E,9885μm,0.6s						
FIU1				AML	AML		
	comp=N,7945μm,0.3s						
FIU1				AML	AML		
	comp=E,9905μm,0.6s						
T1211	**Morro Reatino**	**0.41**	**221**	P	**Pg**	**10 40 22.9**	**+0.2**
T1211				S	**Sg**	**10 40 29.5**	**+1.5**
GAG1	**Gagliole**	**0.41**	**345**	P	**Pg**	**10 40 22.8**	**+0.1**
GAG1				S	**Sb**	**10 40 29.5**	**-0.7**
GAG1				AML	AML		
	comp=E,29750μm,0.7s						
GAG1				AML	AML		
	comp=E,29800μm,0.7s						
GAG1				AML	AML		
	comp=N,27450μm,0.4s						
ARRO	**Arrone**	**0.42**	**232**	⇑P	**Pg**	**10 40 23.1**	**+0.2**
ARRO				AML	AML		
	comp=E,4965μm,1.4s						
ARRO				AML	AML		
	comp=N,4665μm,1.0s						
MTL1	**Matelica**	**0.44**	**340**	P	**Pg**	**10 40 23.4**	**+0.1**
MTL1				S	**Sb**	**10 40 30.8**	**-0.3**
MTL1				AML	AML		
	comp=E,25900μm,0.4s						
MTL1				AML	AML		
	comp=N,22150μm,0.4s						
MTL1				AML	AML		
	comp=N,22200μm,0.4s						
ASSB	**Assisi San Ben**	**0.45**	**296**	⇑P	**Pg**	**10 40 23.6**	**+0.1**
ASSB				S	**Sb**	**10 40 31.2**	**-0.3**
ASSB				AML	AML		
	comp=N,17000μm,0.4s						
ASSB				AML	AML		
	comp=E,15550μm,0.2s						
SNTG	**Esanatoglia**	**0.46**	**334**	⇑P	**Pg**	**10 40 23.4**	**-0.2**
SNTG				S	**Sg**	**10 40 30.8**	**+1.1**
SNTG				AML	AML		
	comp=N,940μm,1.3s						
SNTG				AML	AML		
	comp=N,7265μm,1.3s						
SNTG				AML	AML		
	comp=E,734μm,0.2s						
SNTG				AML	AML		
	comp=N,941μm,1.3s						
SNTG				AML	AML		
	comp=E,5865μm,0.2s						
GIGS	**Gran Sasso**	**0.47**	**146**	⇓P	**Pg**	**10 40 23.1**	**-0.8**
GIGS				S	**Sg**	**10 40 31.1**	**+0.9**
GIGS				AML	AML		
	comp=N,1870μm,0.6s						
GIGS				AML	AML		
	comp=E,2165μm,0.7s						
TRE1	**Treia**	**0.47**	**9**	P	**Pg**	**10 40 23.9**	**0.0**
TRE1				S	**Sb**	**10 40 31.9**	**-0.2**
TRE1				AML	AML		
	comp=E,14350μm,0.4s						
TRE1				AML	AML		
	comp=E,14350μm,0.4s						
TRE1				AML	AML		
	comp=N,14700μm,1.3s						
EL6	**Elcito**	**0.49**	**351**	⇓P	**Pg**	**10 40 24.1**	**-0.3**
EL6				S	**Sb**	**10 40 32.6**	**-0.1**
EL6				AML	AML		
	comp=N,13600μm,0.2s						
EL6				AML	AML		
	comp=N,13550μm,0.2s						
EL6				AML	AML		
	comp=E,16400μm,1.3s						
TRTR	**Tortoreto Alta**	**0.52**	**94**	⇓P	**Pb**	**10 40 25.5**	**-0.2**
TRTR				AML	AML		
	comp=E,22100μm,0.4s						
TRTR				AML	AML		
	comp=N,35700μm,0.6s						
CESX	**Cesi**	**0.52**	**244**	⇑P	**Pg**	**10 40 24.8**	**0.0**
CESX				AML	AML		
	comp=N,5225μm,0.9s						
CESX				AML	AML		
	comp=E,6745μm,1.0s						
CING	**Cingoli**	**0.53**	**359**	P	**Pg**	**10 40 24.6**	**-0.5**
CING				S	**Sb**	**10 40 33.8**	**0.0**
CING				AML	AML		
	comp=E,4475μm,0.4s						
CING				AML	AML		
	comp=N,3810μm,0.6s						
CADA	**Capodarco di F**	**0.54**	**49**	P	**Pb**	**10 40 26.1**	**0.0**
ATCC	**AVT- Casa Cast**	**0.54**	**309**	⇑P	**Pg**	**10 40 25.2**	**0.0**
ATCC				S	**Sb**	**10 40 34.2**	**+0.2**
FOSV	**Fossato di Vic**	**0.56**	**324**	⇑P	**Pg**	**10 40 25.4**	**-0.1**
FOSV				S	**Sb**	**10 40 34.3**	**-0.3**
FOSV				AML	AML		
	comp=E,8490μm,0.4s						
FOSV				AML	AML		
	comp=N,33750μm,0.3s						
FOSV				AML	AML		
	comp=E,8495μm,0.4s						
CIMA	**Civitanova Mar**	**0.57**	**36**	P	**Pg**	**10 40 26.3**	**+0.6**
FIAM	**Fiamignano**	**0.58**	**187**	⇑P	**Pg**	**10 40 25.7**	**-0.2**
FIAM				S	**Sg**	**10 40 34.2**	**+0.7**
FIAM				AML	AML		
	comp=E,5730μm,0.7s						
FIAM				AML	AML		
	comp=N,4570μm,1.2s						
PP3	**Marolino**	**0.61**	**28**	P	**Pg**	**10 40 26.5**	**+0.1**
PP3				AML	AML		
	comp=E,14550μm,0.3s						
PP3				AML	AML		
	comp=N,19150μm,0.5s						
PP3				AML	AML		
	comp=N,18100μm,0.5s						
PP3				AML	AML		
	comp=E,15600μm,0.3s						
PP3				AML	AML		
	comp=N,19100μm,0.5s						
PP3				AML	AML		
	comp=E,14500μm,0.3s						
MMUR	**Monte Murano**	**0.62**	**345**	P	**Pg**	**10 40 26.4**	**-0.3**

MMUR S Sb 10 40 36.7 +0.4
FAGN Fagnano 0.64 154 P Pg 10 40 26.0 -1.0
FAGN AML AML
comp=E,8285µm,0.6s
FAGN AML AML
comp=N,6415µm,0.7s
VCEL Villa Celiera 0.65 134 ⇓P Pg 10 40 26.7 -0.4
VCEL AML AML
comp=N,7115µm,0.7s
VCEL AML AML
comp=E,8120µm,0.6s
VCEL AML AML
comp=N,7120µm,0.7s
MURB Monte Urbino 0.66 310 ⇓P Pg 10 40 27.4 0.0
MURB S Sb 10 40 37.4 0.0
MURB AML AML
comp=N,14050µm,0.4s
MURB AML AML
comp=N,15150µm,0.3s
MURB AML AML
comp=E,21850µm,0.4s
MURB AML AML
comp=E,20200µm,0.3s
SSFR Montelago di S 0.67 332 ⇓P Pg 10 40 27.4 -0.3
SSFR S Sb 10 40 38.2 +0.4
SSFR AML AML
comp=N,14300µm,0.2s
SSFR AML AML
comp=E,11650µm,1.3s
SSFR AML AML
comp=E,11800µm,1.2s
SSFR AML AML
comp=N,14800µm,0.2s
ARVD Arcevia 0.69 343 P Pg 10 40 27.5 -0.4
ARVD S Sb 10 40 38.3 +0.2
ARVD AML AML
comp=N,1880µm,1.5s
ARVD AML AML
comp=E,3465µm,0.7s
ATSC Scheggia e Pas 0.70 327 P Pg 10 40 27.6 -0.5
ATSC S Sb 10 40 39.0 +0.4
ATFO Monte Foce - G 0.70 318 ⇑P Pg 10 40 28.0 -0.3
ATFO AML AML
comp=E,5845µm,1.2s
ATFO AML AML
comp=N,3380µm,0.7s
ATTE AVT- Monte Tez 0.72 300 ⇑P Pg 10 40 28.4 -0.3
ATTE AML AML
comp=E,3465µm,1.1s
ATTE AML AML
comp=N,2680µm,1.0s
T0110 Collepietro 0.74 146 ⇓P Pg 10 40 28.1 -0.9
ATLO AVT- Montelove 0.76 309 ⇑P Pg 10 40 28.9 -0.4
ATLO S Sb 10 40 40.8 +0.6
AOI Ancona 0.76 22 P Pg 10 40 28.9 -0.5
AOI AML AML
comp=N,3140µm,0.5s
AOI AML AML
comp=E,3610µm,1.2s
FRON Frontone 0.76 332 ⇑P Pg 10 40 28.8 -0.6
FRON S Sb 10 40 40.9 +0.5
FRON AML AML
comp=N,4820µm,0.3s
FRON AML AML
comp=E,4190µm,1.4s
TB02 Pietralunga 0.79 312 P Pg 10 40 29.5 -0.4
SRES S.Oreste - Sor 0.80 221 P Pg 10 40 29.4 -0.6
ATBU Serra di Buran 0.80 323 ⇑P Pg 10 40 29.8 -0.3
ATVO AVT- Monte Val 0.80 313 ⇑P Pg 10 40 29.6 -0.4
ATVO S Sb 10 40 41.8 +0.3
ATVO AML AML
comp=E,3200µm,0.4s
ATVO AML AML
comp=N,2895µm,0.6s
COR1 Corinaldo 0.80 349 P Pg 10 40 30.4 +0.2
COR1 AML AML
comp=E,7005µm,0.4s
COR1 AML AML
comp=N,6120µm,0.4s
COR1 AML AML
comp=E,3630µm,0.5s
COR1 AML AML
comp=N,6545µm,0.4s
ATVA AVT- Monte Val 0.81 303 P Pg 10 40 29.9 -0.3
TB03 Pietralunga 0.81 314 ⇑P Pg 10 40 29.8 -0.5
MGAB Montegabbione 0.81 275 ⇑P Pg 10 40 30.2 -0.1
MGAB AML AML
comp=N,5925µm,0.4s
MGAB AML AML
comp=E,4500µm,0.5s
MGAB AML AML
comp=N,5985µm,0.4s
MGAB AML AML
comp=E,3625µm,0.5s
PTQR Pietraquaria 0.83 170 P Pg 10 40 29.6 -1.1
ATPC Poggio Castell 0.84 319 P Pg 10 40 30.5 -0.5
ATMI Monte Miggiano 0.85 306 P Pg 10 40 30.8 -0.2
ATMI AML AML
comp=E,7430µm,1.4s
ATMI AML AML
comp=N,7060µm,1.1s
ATPI Pietralunga - 0.85 316 P Pg 10 40 30.6 -0.4
ATPI AML AML
comp=E,2665µm,1.6s
ATPI AML AML
comp=N,2385µm,0.5s
PIEI Pieia 0.85 325 ⇑P Pg 10 40 30.3 -0.8
PIEI AML AML
comp=E,2455µm,1.3s
PIEI AML AML
comp=N,2360µm,0.9s
PIEI AML AML
comp=E,2460µm,1.3s
MPAG Monte Paganucc 0.85 337 P Pg 10 40 30.6 -0.6
MPAG AML AML
comp=N,3065µm,1.3s
MPAG AML AML
comp=E,4060µm,0.4s
SENI Senigallia 0.86 1 P Pg 10 40 30.8 -0.5
SENI AML AML
comp=N,1980µm,0.7s
SENI AML AML
comp=E,2670µm,0.8s
MTCE Montecelio 0.89 203 P Pg 10 40 30.6 -1.1
MTCE AML AML
comp=E,2255µm,0.8s
MTCE AML AML
comp=N,1840µm,1.3s
NARO Abbazia di Nar 0.90 329 P Pg 10 40 31.1 -0.9
NARO AML AML
comp=E,1485µm,0.7s
NARO AML AML
comp=N,1655µm,1.0s
FSSB Fossombrone 0.91 340 P Pg 10 40 31.0 -1.1
FSSB AML AML
comp=E,10300µm,0.4s
FSSB AML AML
comp=N,10135µm,0.6s
CERT Cerreto 0.91 191 P Pg 10 40 31.0 -1.1
CERT AML AML
comp=E,4100µm,0.7s
CERT AML AML
comp=N,3510µm,0.6s
APEC Apecchio 0.92 321 P Pg 10 40 31.9 -0.4
SACS San Casciano d 0.96 271 P Pg 10 40 32.6 -0.5
SACS AML AML
comp=E,2370µm,1.4s
SACS AML AML
comp=E,2315µm,1.1s
SACS AML AML
comp=N,1800µm,1.2s
SACS AML AML
comp=N,1765µm,1.6s
ATMC Monte Cedrone 0.96 309 P Pg 10 40 33.0 -0.1
BADI Badiali 0.97 314 P Pg 10 40 32.8 -0.6
INTR Introdacqua 0.98 148 P Pg 10 40 31.8 -1.7
INTR AML AML
comp=N,4595µm,0.9s
INTR AML AML
comp=E,2150µm,0.9s
PE3 Peglio 1.00 329 P Pg 10 40 32.6 -1.3
RCAV Rocca di Cave 1.01 191 P Pg 10 40 33.5 -0.7
VVLD Villa Vallelon 1.02 162 P Pg 10 40 33.2 -1.0
CAFI Castiglion Fio 1.03 298 P Pg 10 40 34.0 -0.5
CAFI AML AML
comp=E,1750µm,0.7s
CAFI AML AML
comp=N,1625µm,0.7s
GUAR Guarcino 1.05 176 P Pg 10 40 33.8 -1.0
LATE Laterza 1.06 258 P Pg 10 40 34.9 -0.1
LPEL Lama dei Pelig 1.07 138 P Pg 10 40 33.2 -2.1
LPEL AML AML
comp=N,1910µm,0.8s
LPEL AML AML
comp=E,1995µm,0.4s
PARC Parchiule 1.07 319 P Pg 10 40 34.6 -0.7
PARC AML AML
comp=E,2235µm,0.7s
PARC AML AML
comp=N,2035µm,1.0s
SSP9 Sansepolcro 1.08 313 P Pg 10 40 34.6 -0.7
SSP9 AML AML
comp=N,2220µm,1.6s
SSP9 AML AML
comp=E,2100µm,1.6s
PESA Pesaro 1.13 346 P Pg 10 40 35.6 -0.8
PESA AML AML
comp=E,3300µm,0.4s
PESA AML AML
comp=N,3620µm,1.6s
SF04 Casetta 1.14 270 P Pg 10 40 35.9 -0.7
CPGN Carpegna, Ital 1.16 326 P Pg 10 40 36.8 -0.1
CPGN AML AML
CPGN AML AML
POFI Posta Fibreno 1.18 162 P Pg 10 40 36.0 -1.4
POFI AML AML
comp=N,1195µm,1.2s
POFI AML AML
comp=E,1115µm,1.1s
TOLF Tolfa 1.19 229 P Pg 10 40 36.5 -0.9
TOLF AML AML
comp=E,1034µm,0.9s
TOLF AML AML
comp=N,740µm,0.9s
CRE Caprese Michel 1.21 311 P Pg 10 40 37.0 -0.8
CRE AML AML
comp=N,972µm,0.9s
CRE AML AML
comp=E,1078µm,0.4s
LRP Arpino 1.23 167 AML AML
comp=E,1200µm,0.9s
LRP AML AML
comp=N,1515µm,0.7s
ARCI Arcidosso 1.28 271 P Pn 10 40 37.6 -1.0
ARCI AML AML
comp=E,325µm,1.0s
ARCI AML AML
comp=N,310µm,1.6s
RNI2 Rionero Sannit 1.34 148 P Pn 10 40 38.8 -0.6
LATB Latina 1.36 188 P Pn 10 40 40.0 +0.5
CERA Filignano 1.38 154 P Pn 10 40 39.1 -0.8
CERA AML AML
comp=N,1510µm,0.7s
CERA AML AML
comp=E,2085µm,0.7s
CERA AML AML
comp=N,1585µm,0.7s
CERA AML AML
comp=E,2005µm,0.6s
FRES Fresagrandinar 1.39 128 P Pn 10 40 38.8 -1.1
FRES AML AML
comp=E,746µm,0.7s
FRES AML AML
comp=N,622µm,0.8s
ASQU Asqua 1.41 313 P Pn 10 40 40.7 +0.4
SFI Santa Sofia 1.46 317 P Pn 10 40 40.8 -0.1
TRIV Trivento 1.46 137 P Pn 10 40 40.6 -0.5
TRIV AML AML
comp=N,1440µm,0.8s
TRIV AML AML
comp=E,1585µm,0.8s
CSNT Castellina Chi 1.54 295 P Pn 10 40 42.1 0.0
OSSC Osservatorio P 1.59 296 P Pn 10 40 43.4 +0.6
RUFI Rufina 1.59 309 P Pn 10 40 42.9 +0.1
VAGA Valle Agricola 1.62 152 P Pn 10 40 43.1 0.0
LMD Lutirano 1.65 319 P Pn 10 40 44.9 +1.3
BSSO Busso 1.65 141 P Pn 10 40 43.9 +0.2
BSSO AML AML
comp=N,360µm,0.9s
BSSO AML AML
comp=E,239µm,1.6s
TRIF Trifonti 1.72 280 P Pn 10 40 44.8 +0.2
CASP Castiglione de 1.73 269 ⇑P Pn 10 40 44.8 +0.1
CASP AML AML
comp=N,134µm,1.3s
CASP AML AML
comp=E,144µm,1.6s
CIGN Sant'Elia a Pi 1.73 133 P Pn 10 40 44.5 -0.2
DUGI Dugi Otok 1.77 49 *e*Pn Pn 10 40 45.7 +0.5
PTRJ Pietraroja 1.77 146 P Pn 10 40 45.7 +0.4
BRIS BRISIGHELLA 1.80 317 P Pb 10 40 48.5 +0.9
SEI Scarperia 1.81 313 P Pn 10 40 46.5 +0.6
MELA Melanico ??? S 1.82 128 AML AML
comp=N,1415µm,0.6s
MELA AML AML
comp=E,1480µm,0.7s
MELA AML AML
comp=N,1365µm,0.7s
MELA AML AML
comp=N,1350µm,0.7s
TREM Isole Tremiti 1.85 112 P Pn 10 40 45.9 -0.3
TREM AML AML
comp=E,1260µm,0.8s
TREM AML AML
comp=N,1098µm,0.8s
MPPT Montemurlo 1.91 307 P Pn 10 40 47.6 +0.5
MPPT AML AML
comp=N,277µm,1.3s
MPPT AML AML
comp=E,618µm,1.1s
VITU Vitulano (BN) 1.97 147 P Pb 10 40 50.5 +0.1
VIRC Vir 1.97 42 *i* Pn Pn 10 40 48.5 +0.5
MTCR Monte La Croce 2.00 307 P Pn 10 40 49.1 +0.6
MTCR AML AML
comp=E,385µm,0.9s
MTCR AML AML
comp=N,530µm,1.5s
FNVD Fontana Vidola 2.02 312 P Pn 10 40 50.2 +1.5
APRC Apricena 2.04 121 P Pn 10 40 48.2 -0.8
APRC AML AML
comp=N,614µm,0.6s
APRC AML AML
comp=E,424µm,1.0s
MORI Morici 2.09 60 *e*Pn Pn 10 40 50.2 +0.6
BRJN Brijuni 2.10 10 *e*Pn Pn 10 40 49.7 -0.1
BRJN Brijuni 2.10 10 P Pn 10 40 50.1 +0.4
NVLJ Novalja 2.10 34 *e*Pn Pn 10 40 49.6 -0.1
POPM Popiglio 2.15 305 AML AML
comp=N,244µm,0.9s
POPM AML AML
comp=E,234µm,1.4s
SGRT San Giovanni R 2.17 119 P Pn 10 40 50.5 -0.3
SGRT AML AML
comp=N,501µm,0.8s
SGRT AML AML
comp=E,486µm,1.1s
ZCCA Zocca 2.22 314 AML AML
comp=E,390µm,1.4s
ZCCA AML AML
comp=N,445µm,1.6s
RABC Rab 2.22 30 *e*Pn Pn 10 40 50.8 -0.6
MAIM Mastiano 2.25 299 AML AML
comp=E,216µm,0.7s
MAIM AML AML
comp=N,248µm,0.6s
SMRN Sveta Marina 2.30 17 *e*Pn Pn 10 40 52.2 -0.2
SGTA Sant Agata di 2.34 136 P Pn 10 40 52.8 -0.4
SGTA AML AML
comp=N,292µm,1.1s
SGTA AML AML
comp=E,348µm,0.7s
CAFE Carife 2.36 140 P Pn 10 40 53.3 -0.2
CAFE AML AML
comp=E,372µm,1.2s
CAFE AML AML
comp=N,266µm,1.4s
HVAR Hvar 2.40 81 *i* Pn Pn 10 40 54.1 +0.3
SNAL S. Angelo Dei 2.43 141 P Pn 10 40 53.7 -0.6
A253A Karojba, Istri 2.49 10 *e*Pn Pn 10 40 55.0 -0.1
UDBI Udbina 2.50 47 *e*Pn Pn 10 40 56.6 +1.2
A250A Rusevo Krmpots 2.56 28 *e*Pn Pn 10 40 56.6 +0.5
KIJV Kijevo 2.60 62 *e*Pn Pn 10 40 58.0 +1.3
VULT Monte Vulture 2.60 136 AML AML
comp=E,311µm,0.7s
VULT AML AML
comp=N,562µm,0.9s
RIY Rijeka 2.65 20 *e*Pn Pn 10 40 57.3 0.0
PLIT Plitvice 2.68 40 *e*Pn Pn 10 40 59.0 +1.2
LSTV Lastovo 2.71 90 *e*Pn Pn 10 40 58.4 +0.3
SKDS Skadanscina 2.76 12 *e*Pn Pn 10 40 58.2 -0.7
PALZ Palazzo San Ge 2.79 132 P Pn 10 40 59.1 -0.2
PALZ AML AML
comp=E,702µm,0.9s
PALZ AML AML
comp=N,555µm,1.3s
MAKA Makarska 2.83 80 *e*Pn Pn 10 41 00.0 +0.3
MRVN Minervino Murg 2.85 128 P Pn 10 41 00.0 -0.1
MRVN AML AML
comp=E,144µm,0.8s
MRVN AML AML
comp=N,120µm,0.9s
A050A Klekovaca 2.91 55 *e*Pn Pn 10 41 01.7 +0.7
RICI Ricice 2.94 76 *e*Pn Pn 10 41 02.4 +1.1
BOJS Bojanci 3.04 28 *e*Pn Pn 10 41 03.6 +0.9
BOJS Bojanci 3.04 28 P Pn 10 41 04.1 +1.4
BOJS AML AML
comp=N,380µm,0.5s
BOJS AML AML
comp=E,610µm,0.8s
PGF Pioggiola 3.12 266 *e*P Pn 10 41 05.3 +1.4
PGF *e*Sn Sn 10 41 37.8 -3.4
comp=E,11nm,0.6s
SRKY Kupres RS 3.13 66 *e*Pn Pb 10 41 07.9 -2.4
SABO M.te Sabotino 3.15 5 P Pn 10 41 04.5 +0.3
SABO AML AML
comp=N,2095µm,1.5s
SABO AML AML
comp=N,532µm,1.5s
SABO AML AML
comp=E,1500µm,0.7s
SABO AML AML
comp=E,376µm,0.7s
AMUR Altamura 3.19 126 P Pn 10 41 04.9 +0.2
AMUR AML AML
comp=E,130µm,1.1s
AMUR AML AML
comp=N,136µm,0.6s
CGRP Cima Grappa 3.20 342 P Pn 10 41 06.2 +1.2
CGRP AML AML
comp=E,344µm,0.6s
CGRP AML AML
comp=E,364µm,0.6s
CGRP AML AML
comp=N,307µm,0.5s
CGRP AML AML
comp=N,369µm,1.6s
MGRS Mrkonjic Grad 3.22 59 *e*Pn Pn 10 41 06.6 +1.4
STON Ston 3.30 88 *e*Pn Pn 10 41 03.0 -3.2
STON Ston 3.30 88 *e*Pn Pn 10 41 05.8 -0.4
STON Ston 3.30 88 *e*Pn Pn 10 41 06.0 -0.2
STON *e*Sn Sn 10 41 44.7 -0.7
STON Ston 3.30 88 AML AML
comp=E,81µm,0.6s
STON AML AML
comp=N,83µm,0.8s
DOSS Dosso del Somm 3.37 335 P Pn 10 41 09.2 +1.9
CRES Cresnjev 3.39 28 *e*Pn Pn 10 41 08.7 +1.2
MPRI Monte Prat 3.40 357 P Pn 10 41 08.6 +0.9
MPRI AML AML
comp=N,341µm,0.5s
MPRI AML AML
comp=E,246µm,1.3s
STAL STALIGIAL 3.44 354 P Pn 10 41 09.1 +1.0
STAL AML AML
comp=E,244µm,1.4s
STAL AML AML
comp=N,187µm,1.5s
A051A Mrakovica 3.44 50 *e*Pn Pn 10 41 08.7 +0.5
BLY Banja Luka 3.45 55 *e*Pn Pb 10 41 16.3 +0.6
MAGA Magasa 3.47 329 P Pn 10 41 09.6 +0.9
MAGA AML AML
comp=E,532µm,0.6s
MAGA AML AML
comp=N,358µm,0.4s
CIMO Cimolais 3.51 351 P Pn 10 41 09.6 +0.4
CIMO AML AML
comp=E,64µm,0.7s
CIMO AML AML
comp=N,59µm,0.6s
CIMO AML AML
comp=N,63µm,1.4s
CIMO AML AML
comp=E,66µm,0.6s
PTCC Patocco-Chiusa 3.56 2 P Pn 10 41 10.1 +0.2
PTCC AML AML
comp=E,103µm,0.6s
PTCC AML AML
comp=N,80µm,0.5s
GAGG Gaggia 3.62 334 P Pn 10 41 12.8 +2.0
CLUD Cludinico 3.62 356 P Pn 10 41 11.2 +0.5
CLUD AML AML
comp=E,152µm,0.7s
CLUD AML AML
comp=N,130µm,0.6s
ACOM Acomizza, Ital 3.71 3 P Pn 10 41 13.4 +1.3
ACOM AML AML
comp=N,200µm,1.5s
ACOM AML AML
comp=E,234µm,1.4s
ACOM AML AML
comp=E,230µm,1.4s
ACOM AML AML
comp=N,226µm,1.5s
ZOU Zoufplan 3.72 357 P Pn 10 41 12.8 +0.6
ZOU AML AML
comp=E,189µm,1.6s
ZOU AML AML
comp=N,172µm,1.4s
ZOU AML AML
comp=E,222µm,1.6s
ZOU AML AML
comp=N,200µm,1.4s
MOSL Moslavina 3.76 41 *e*Pn Pn 10 41 12.5 -0.2
TREB Trebinje 3.78 90 *e*Pn Pn 10 41 13.6 +0.7
TREB Trebinje 3.78 90 *e*Pn Pn 10 41 14.4 +1.5
TREB *e*Sn Sn 10 41 59.4 +2.0
OBKA Obir 3.79 14 *e*Pn Pn 10 41 12.7 -0.4
OBKA Obir 3.79 14 *e*Pn Pn 10 41 14.4 +1.3
OBKA *e*Sn Sn 10 41 59.9 +2.2
comp=N,0.7nm,0.2s
comp=N,24nm,0.4s
MYKA Terra Mystica 3.80 4 *e*Pn Pn 10 41 15.1 +1.9
MYKA *e*Sn Sn 10 41 59.4 +1.5
comp=N,5.9nm,0.4s
comp=N,8.6nm,0.4s
KOSI Kohlern 3.85 341 P Pn 10 41 15.6 +1.6
KOSI AML AML
comp=E,201µm,0.8s
KOSI AML AML
comp=N,176µm,0.6s
BRY Bratogost 3.92 87 *e*Pn Pn 10 41 14.4 -0.5
BRY Bratogost 3.92 87 ⇑*i*Pn Pn 10 41 16.0 +1.1
BRY *i* Sn Sn 10 42 02.3 +1.4
HCY Herceg Novi 3.92 94 *e*Pn Pn 10 41 13.3 -1.4
HCY Herceg Novi 3.92 94 ⇑*i*Pn Pn 10 41 15.9 +1.2
HCY *i* Sn Sn 10 42 02.2 +1.5
ABTA Abfaltersbach 3.94 353 *i* Pn Pn 10 41 16.5 +1.5
comp=N,19nm,0.5s,SNR=30
ABTA *e*Sn Sn 10 42 03.4 +2.1
comp=N,10nm,0.5s
SOKA Soboth 4.05 18 *e*Pn Pn 10 41 18.9 +2.2
comp=N,1.0nm,0.3s
SOKA *e*Sn Sn 10 42 06.0 +1.9
comp=N,2.7nm,0.3s
UPM Unac-Piva 4.19 83 *e*Pn Pn 10 41 21.0 +2.3
UPM Unac-Piva 4.19 83 ⇑*i*Pn Pn 10 41 19.8 +1.1
UPM *i* Sn Sn 10 42 09.2 +1.5
CEME Cevo 4.22 92 ⇓*i*Pn Pn 10 41 20.2 +1.3
CEME *i* Sn Sn 10 42 09.3 +1.1
NKME Niksic 4.22 89 ⇓*i*Pn Pn 10 41 20.0 +1.0
NKME *i* Sn Sn 10 42 10.2 +1.8
BUM Brajici-Budva 4.23 95 ⇓*i*Pn Pn 10 41 20.4 +1.3
BUM *i* Sn Sn 10 42 09.9 +1.4
KBA Koelnbreinsper 4.24 1 *i* Pn Pn 10 41 20.5 +1.2
comp=N,2.5nm,0.3s,SNR=11
KBA *e*Sn Sn 10 42 08.6 -0.2

comp=N,2.5nm,0.2s
NKY Niksic 4.25 88 ⇓*i* Pn **Pn 10 41 20.8 +1.4**
NKY *i* Sn **Sn 10 42 10.7 +1.6**
SBF Sospel 4.33 286 *e*P **Pn 10 41 21.8 +1.3**
SBF *e*Sn **Sn 10 42 06.8 -4.3**
comp=N,20nm,0.6s
VSL Villasalto 4.42 222 ⇓P **Pn 10 41 23.7 +2.1**
VSL AML AML
VSL AML AML
DRME Dracevica, Mon 4.46 96 *e*Pn **Pn 10 41 23.7 +1.5**
DRME Dracevica, Mon 4.46 96 ⇓*i* Pn **10 41 23.8 +1.5**
DRME *i* Sn **Sn 10 42 15.6 +1.4**
PDG Podgorica 4.48 93 *e*Pn **Pn 10 41 24.5 +2.1**
PDG *e*Sn **Sn 10 42 15.9 +1.4**
TTG Podgorica 4.48 93 ⇑*i* Pn **Pn 10 41 23.7 +1.3**
TTG *i* Sn **Sn 10 42 16.2 +1.7**
FETA Feichten 4.54 338 *i* Pn **Pn 10 41 26.2 +2.9**
comp=N,0.2nm,0.2s,SNR=12
FETA *e*Sn **Sn 10 42 19.8 +3.7**
comp=N,7.0nm,0.5s
PLE Pljevlja 4.55 82 ⇑*i* Pn **Pn 10 41 26.3 +2.7**
PLE *i* Sn **Sn 10 42 16.3 -0.2**
ULC Ulcinj 4.55 99 ⇓*i* Pn **Pn 10 41 24.7 +1.2**
ULC *i* Sn **Sn 10 42 17.4 +1.0**
WTTA Wattenberg 4.56 346 *e*Pn **Pn 10 41 26.9 +3.2**
comp=N,10.0nm,0.6s
WTTA *e*Sn **Sn 10 42 20.9 +4.1**
comp=N,17nm,0.4s
RUDO Rudo 4.57 78 *e*Pn **Pn 10 41 21.5 -2.2**
DAVOX Davos/Dischmat 4.60 330 Pn **Pn 10 41 27.2 +3.0**
comp=N,3.3nm,0.3s,baz=153,slow=20,SNR=28
DAVOX Sn **Sn 10 42 20.9 +3.1**
comp=N,1.8nm,0.3s,baz=118,slow=23,SNR=3.6
comp=N,12nm,0.4s
SQTA Sankt Quirin 4.60 343 *i* Pn **Pn 10 41 27.5 +3.3**
comp=N,7.2nm,0.4s,SNR=16
SQTA *e*Sn **Sn 10 42 20.3 +2.6**
comp=N,10nm,0.4s
BBLS Lazići 4.63 75 *e*Pn **Pn 10 41 26.8 +2.2**
KOME Kolasin 4.63 88 ⇓*i* Pn **Pn 10 41 26.7 +2.0**
KOME *i* Sn **Sn 10 42 19.9 +1.4**
WATA Walderalm 4.64 346 *i* Pn **Pn 10 41 28.6 +3.8**
comp=N,11nm,0.5s,SNR=9.2
WATA *e*Sn **Sn 10 42 21.7 +3.0**
comp=N,9.8nm,0.3s
ARSA Arzberg 4.70 20 *e*Pn **Pn 10 41 27.0 +1.4**
comp=N,1.2nm,0.3s
ARSA *e*Sn **Sn 10 42 18.8 -1.3**
comp=N,2.6nm,0.3s
MOTA Moosalm 4.74 342 *i* Pn **Pn 10 41 29.4 +3.2**
comp=N,11nm,0.8s,SNR=11
MOTA *e*Sn **Sn 10 42 22.4 +1.1**
comp=N,7.6nm,0.5s
KOVH Kovagotottos 4.77 45 P **Pn 10 41 26.3 -0.2**
KOVH S **Sn 10 42 19.4 -2.4**
BIOA Bad Ischl, Aus 4.86 3 *i* Pn **Pn 10 41 29.6 +1.9**
comp=N,5.3nm,0.2s,SNR=10
BIOA *e*Sn **Sn 10 42 26.3 +2.4**
comp=N,15nm,0.4s
IVA Berane 4.91 87 ⇓*i* Pn **Pn 10 41 30.2 +1.7**
IVA *i* Sn **Sn 10 42 26.6 +1.2**
LMR La Mourre 4.93 278 *e*P **Pn 10 41 29.5 +0.8**
LMR *e*Sn **Sn 10 42 21.0 -4.8**
comp=N,4.9nm,0.6s
RETA Reutte 4.96 340 *i* Pn **Pn 10 41 32.0 +2.9**
comp=N,7.7nm,0.4s,SNR=9.0
RETA *e*Sn **Sn 10 42 27.3 +0.8**
comp=N,10nm,0.5s
SJES Sjenica 4.97 83 *e*Pn **Pn 10 41 31.7 +2.4**
SJES *e*Sn **Sn 10 42 27.2 +0.3**
PVY Plav 4.98 91 ⇑*i* Pn **Pn 10 41 30.6 +1.2**
PVY *i* Sn **Sn 10 42 28.2 +1.2**
MBDF Montbardon 5.03 294 *e*P **Pn 10 41 32.5 +2.3**
MBDF *e*Sn **Sn 10 42 23.4 -4.9**
comp=N,4.5nm,0.4s
DAVA Damuels 5.03 333 *i* Pn **Pn 10 41 33.5 +3.3**
comp=N,11nm,0.5s,SNR=10
DAVA *e*Sn **Sn 10 42 30.7 +2.3**
comp=N,7.0nm,0.3s
MOA Molln 5.06 8 *e*Pn **Pn 10 41 31.9 +1.4**
MOA *e*Sn **Sn 10 42 29.0 0.0**
MOA Molln 5.06 8 *e*Pn **Pn 10 41 32.3 +1.9**
comp=N,1.3nm,0.2s
MOA *e*Sn **Sn 10 42 29.1 +0.1**
comp=N,3.5nm,0.3s
DIVS Divibare 5.09 73 *e*Pn **Pn 10 41 28.8 -2.2**
IVAS Ivanjica 5.12 79 *e*Pn **Pn 10 41 32.8 +1.4**
IVAS *e*Sn **Sn 10 42 29.6 -1.0**
TIR Tirane 5.17 105 *e*Pn **Pn 10 41 32.8 +0.8**
RONA Rosalia, Austr 5.32 23 *e*Pn **Pn 10 41 35.0 +0.9**
comp=N,1.0nm,0.3s
RONA *e*Sn **Sn 10 42 36.3 +0.9**
comp=N,0.2nm,0.1s
LPG La Plagne 5.35 302 *e*P **Pn 10 41 37.2 +2.5**
LPG *e*Sn **Sn 10 42 31.3 -5.2**
comp=N,4.2nm,0.4s
LPL La Plagne 5.37 302 *e*P Pn 10 41 40.2 +5.3
LPL *e*Sn **Sn 10 42 31.7 -5.2**
comp=N,6.6nm,0.4s
CONA Conrad Observa 5.42 19 *e*Pn **Pn 10 41 37.0 +1.5**
comp=N,0.7nm,0.2s
CONA *e*Sn **Sn 10 42 37.5 -0.3**
comp=N,3.8nm,0.6s
GRUS Gruza 5.57 77 *e*Pn **Pn 10 41 38.9 +1.5**
SMRF Simiane la Rot 5.68 284 *e*P **Pn 10 41 41.4 +2.4**
SMRF *e*Sn **Sn 10 42 39.0 -5.2**
comp=N,5.8nm,0.9s
ORIF Oris-en-Rattie 5.69 294 *e*P **Pn 10 41 41.7 +2.5**
ORIF *e*Sn **Sn 10 42 39.2 -5.4**
comp=N,10nm,0.8s
SELS Selova 5.81 84 *e*Pn **Pn 10 41 41.6 +0.9**
GERES GERESS Array B 6.01 3 Pn **Pn 10 41 43.9 +0.3**
comp=N,0.6nm,0.3s,baz=184,slow=12,SNR=17
GERES Sn **Sn 10 42 51.8 -0.7**
comp=N,2.1nm,0.3s,baz=175,slow=24,SNR=7.0
comp=N,1.2nm,0.3s
CKRC Cesky Krumlov 6.03 7 *e*PN **Pn 10 41 44.2 +0.5**
CKRC *e*SN **Sn 10 42 50.9 -1.8**
KHC Kasperske Hory 6.29 2 *e*PN **Pn 10 41 47.8 +0.4**
KHC *e*SN **Sn 10 42 56.8 -2.5**
CABF La Chapelle 6.32 309 *e*P **Pn 10 41 49.5 +1.7**
CABF *e*Sn **Sn 10 42 54.0 -6.0**
comp=N,3.9nm,0.4s
BARS Barje 6.33 87 *e*Pn **Pn 10 41 48.9 +1.1**
BARS *e*Sn **Sn 10 42 59.9 -0.2**
VIVF Saint-Julien-l 6.49 291 *e*P **Pn 10 41 52.6 +2.4**
VIVF *e*Sn **Sn 10 42 58.4 -5.9**
comp=N,0.3nm,0.3s
PRVS Prvonek 6.54 90 *e*Pn **Pn 10 41 51.3 +0.5**
PRVS *e*Sn **Sn 10 43 05.3 -0.2**
ZAGS Zajecar 6.65 79 *e*Pn **Pn 10 41 52.8 +0.5**
HINF Hinteralfeld 6.69 320 *e*P **Pn 10 41 54.6 +1.7**
HINF *e*Sn **Sn 10 43 03.0 -6.2**
comp=N,8.8nm,0.3s
BOSS Bosilegrad 6.84 90 *e*Pn **Pn 10 41 56.6 +1.7**
BOSS *e*Sn **Sn 10 43 11.3 -1.5**
VRAC Vranov 6.88 19 LR LR 10 45 03.1
comp=N,42nm,21.1s,baz=216,slow=43
ZAPS Zavoj 6.92 83 *e*Pn **Pn 10 41 57.3 +1.3**
ZAPS *e*Sn **Sn 10 43 14.1 -0.5**
LASF Ste Croix 6.92 283 *e*P **Pn 10 41 58.2 +2.2**
LASF *e*Sn **Sn 10 43 08.5 -6.2**
comp=N,0.7nm,0.3s
CDF Champ du Feu 6.95 325 *e*P **Pn 10 41 57.8 +1.3**
CDF *e*Sn **Sn 10 43 09.2 -6.4**
comp=N,5.5nm,0.4s
HAU Haudompre 7.07 319 *e*P **Pn 10 41 59.3 +1.3**
HAU *e*Sn **Sn 10 43 11.9 -6.4**
comp=N,13nm,0.3s
VTS Vitosha 7.38 88 *e*Pn **Pn 10 42 04.3 +1.8**
VTS *e*Sn **Sn 10 43 23.5 -2.8**
LTVH Ltavrtes, Hu 7.64 51 P **Pn 10 42 05.6 -0.2**
SMF Signal de Mont 7.68 303 *e*P **Pn 10 42 09.5 +3.1**
SMF *e*Sn **Sn 10 43 26.5 -6.8**
comp=N,2.9nm,0.5s
KEST Kesra 7.71 204 Pn Pn 10 42 13.3 +6.4
comp=N,0.4nm,0.3s,baz=22,slow=5.4,SNR=2.0
comp=N,2.1nm,0.4s
PAGF Fort de Pagny 7.75 320 *e*P **Pn 10 42 10.0 +2.6**
PAGF *e*Sn **Sn 10 43 28.1 -7.0**
comp=N,4.7nm,0.4s
SFTF Sexfontaines 7.85 316 *e*P **Pn 10 42 11.6 +2.8**
SFTF *e*Sn **Sn 10 43 30.5 -7.1**
comp=N,5.6nm,0.5s
SRS Serrai 7.92 99 *e*Pn **Pn 10 42 11.4 +1.6**
LOR Lormes 7.96 307 *e*P **Pn 10 42 12.6 +2.3**
baz=121
LOR *e*Sn **Sn 10 43 33.3 -7.1**
comp=N,3.8nm,0.3s
MEZF Maizieres J'vi 8.04 318 *e*P **Pn 10 42 14.1 +2.8**
MEZF *e*Sn **Sn 10 43 35.0 -7.2**
comp=N,3.9nm,0.4s
AVF Avril sur Loir 8.04 303 *e*P **Pn 10 42 14.3 +2.9**
AVF *e*Sn **Sn 10 43 35.3 -7.0**
comp=N,0.8nm,0.3s
BRG Berggiesshubel 8.05 3 *e*P **Pn 10 42 11.5 0.0**
BRG Amp 10 42 16.0
comp=Z,1.4nm,0.5s
BRG *e*x x 10 43 46.5
BRG *e*x x 10 44 51.5
BRG Amp 10 45 06.5
comp=Z,20nm,1.6s
MTLF Montolieu 8.06 277 *e*P **Pn 10 42 14.8 +3.1**
SSF Saint Saulge 8.07 305 *e*P **Pn 10 42 14.5 +2.7**
SSF *e*Sn **Sn 10 43 36.0 -7.0**
comp=Z,3.9nm,0.5s
SAVF Savonnieres en 8.08 318 *e*P **Pn 10 42 15.4 +3.5**
SAVF *e*Sn **Sn 10 43 35.6 -7.6**
comp=Z,4.1nm,0.3s
BGF Bois d'Agland 8.26 300 *e*Pn **Pn 10 42 12.1 -2.3**
BGF Bois d'Agland 8.26 300 *e*P **Pn 10 42 17.8 +3.4**
BGF *e*Sn **Sn 10 43 40.8 -7.0**
comp=Z,4.0nm,0.4s
CAF Calviac 8.32 288 *e*P **Pn 10 42 18.2 +3.0**
CAF *e*Sn **Sn 10 43 41.9 -7.2**
comp=Z,0.8nm,0.3s
CLL Collm 8.47 359 *e*Pn **Pn 10 42 17.0 -0.2**
CLL *e*Sn Sn 10 43 34.0 -19
CLL *ex* x 10 43 49.0
CLL *ex* x 10 44 16.0
CLL *e*Sg **Sg 10 44 41.0 -5.3**
comp=Z,15nm,1.5s
TCF Toulx Ste Croi 8.58 297 *e*P **Pn 10 42 22.0 +3.3**
TCF *e*Sn **Sn 10 43 48.3 -7.2**
comp=Z,0.7nm,0.3s
EPF Esparros 9.45 276 *e*Sn **Sn 10 44 09.0 -7.9**
comp=Z,0.5nm,0.3s
MLR Muntele Rosu 9.53 70 LR LR 10 47 27.6
comp=Z,106nm,21.0s,baz=246,slow=46
ETSF Etsaut 10.11 275 *e*P **Pn 10 42 43.4 +3.6**
LDF La Druitiere 10.95 306 *e*P **Pn 10 42 54.4 +3.2**
AKASG Malin Array Be 13.48 49 LR LR 10 49 32.5
comp=Z,20nm,20.0s,baz=246,slow=42
BRTR Keskin Array B 15.67 95 LR LR 10 51 12.9
comp=Z,48nm,20.0s,baz=290,slow=42
MMAI Mount Meron Ar 20.02 112 P Pn 10 44 49.3 +0.1
comp=Z,0.8nm,0.3s,baz=312,slow=7.7,SNR=3.6
comp=Z,1.3nm,0.5s
FINES FINESS Array B 20.16 18 P Pn 10 44 51.0 +0.4
comp=Z,0.2nm,0.3s,baz=224,slow=9.7,SNR=2.1
comp=Z,5.7nm,1.0s
KBZ Khabaz 21.58 77 P **P 10 45 06.1 +1.9**
comp=Z,1.9nm,0.7s,baz=309,slow=8.6,SNR=4.6
KBZ LR LR 10 54 28.6
comp=Z,24nm,19.6s,baz=186,slow=40
comp=Z,1.9nm,0.7s
BELG Belogornoye 24.87 55 LR LR 10 56 19.8
comp=Z,26nm,21.8s,baz=159,slow=39
TORD Torodi Ar. Bea 31.22 202 P **P 10 46 37.8 +3.6**
comp=Z,4.2nm,0.3s,baz=24,slow=8.4,SNR=0.7
comp=Z,4.2nm,0.3s
AKTO Aktyubinsk 31.29 60 LR LR 11 01 00.8
comp=Z,26nm,18.9s,baz=291,slow=40
ATD Arta Tunnel 40.44 132 LR LR 11 06 35.7
comp=Z,30nm,18.2s,baz=232,slow=39
MKAR Makanchi Array 47.72 60 P **P 10 48 51.9 +0.5**
comp=Z,0.4nm,0.7s,baz=284,slow=7.2,SNR=4.2
comp=Z,0.4nm,0.7s
YAK Yakutsk 63.71 28 LR LR 11 24 03.2
comp=Z,27nm,18.4s,baz=268,slow=41

*NEIC **27** 10:47:57.0±1.4, 72.00N±0.05×75.1W±0.3, h19km±7km, Error ellipse: s-maj=14.5km s-min=6.5km az=75.0*
*OTT **27** 10:47:58.1±0.1, 71.96N×75.13W, h18km, MN4.2/5, 127km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*
*IDC **27** 10:47:59.2±3.5, 71.89N×75.87W, h0km, mb3.3/4, mbtmp3.6/9, ML3.4/5, MS3.0/1, Error ellipse: s-maj=72.1km s-min=18.2km az=52.0*

ISC 27 10:47:57.5±0.6, 71.98N±0.05×75.01W±0.04, h32km, n29, σ28 83/40, mb3.5/6, Baffin Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLRN	**Clyde River**	**2.57**	**123**	Pn	**Pn**	**10 48 38.8**	**+1.9**
CLRN				Sn	**Sn**	**10 49 09.4**	**+2.5**
CLRN	**Clyde River**	**2.57**	**123**	PN	**Pn**	**10 48 38.8**	**+1.9**
CLRN				SN	**Sn**	**10 49 09.4**	**+2.5**
CLRN				LG	Lg	10 49 19.5	
CLRN				Trac		10 49 21.0	
comp=Z,451nm,0.2s							
ILON	**Igloolik, Nuna**	**3.46**	**224**	Pn	**Pn**	**10 48 50.2**	**+1.1**
ILON	**Igloolik, Nuna**	**3.46**	**224**	PN	**Pn**	**10 48 50.2**	**+1.1**
ILON				SN	**Sn**	**10 49 29.2**	**+0.3**
ILON				Trac		10 49 43.2	
comp=Z,566nm,0.4s							
ILON				LG	Lg	10 49 44.6	
UPNV	**Upernavik**	**5.78**	**73**	*i* P	**Pn**	**10 49 22.3**	**+1.4**
UPNV				*i* S	**Sn**	**10 50 24.0**	**-2.0**
UPNV				IAML		10 50 27.2	
comp=Z,37nm,0.7s							
RES	**Resolute Bay**	**6.31**	**305**	Pn	**Pn**	**10 49 29.6**	**+1.5**
comp=Z,0.8nm,0.3s,baz=105,slow=7.8,SNR=16							
RES				Sn	**Sn**	**10 50 36.5**	**-2.5**
comp=Z,1.2nm,0.3s,baz=20,slow=4.8,SNR=1.6							
RES				Lg	Lg	10 51 12.8	
comp=Z,12nm,0.3s,baz=190,slow=21,SNR=9.5							
comp=Z,8.4nm,0.9s							
RES	**Resolute Bay**	**6.31**	**305**	Pn	**Pn**	**10 49 28.8**	**+0.6**
RES	**Resolute Bay**	**6.31**	**305**	PN	**Pn**	**10 49 28.8**	**+0.6**
RES				SN	**Sn**	**10 50 37.2**	**-1.8**
RES				LG	Lg	10 51 20.2	
RES				Trac		10 51 27.1	
comp=Z,71nm,0.5s							
EUNU	**Eureka**	**8.54**	**347**	Pn	**Pn**	**10 49 59.6**	**+0.8**
EUNU	**Eureka**	**8.54**	**347**	Sn	**Sn**	**10 51 31.1**	**-2.8**
EUNU	**Eureka**	**8.54**	**347**	PN	**Pn**	**10 49 59.6**	**+0.8**
EUNU				SN	**Sn**	**10 51 30.6**	**-3.4**
EUNU				Trac		10 51 41.1	
comp=Z,38nm,1.4s							
FRB	**Frobisher Bay**	**8.62**	**160**	Pn	**Pn**	**10 50 00.7**	**+1.0**
comp=Z,1.3nm,0.3s,baz=352,slow=15,SNR=9.0							
FRB				Sn	**Sn**	**10 51 31.0**	**-4.7**
comp=Z,5.3nm,0.3s,baz=164,slow=9.0,SNR=7.6							
FRB				Lg	Lg	10 52 20.6	
comp=Z,42nm,0.3s,baz=70,slow=21,SNR=22							
comp=Z,11nm,0.7s							
FRB	**Frobisher Bay**	**8.62**	**160**	Pn	**Pn**	**10 50 00.5**	**+0.8**
FRB	**Frobisher Bay**	**8.62**	**160**	PN	**Pn**	**10 50 00.5**	**+0.8**
FRB				SN	**Sn**	**10 51 31.9**	**-3.8**
FRB				Trac		10 52 23.9	
comp=Z,199nm,0.7s							
FRB				LG	Lg	10 52 26.6	
KNGQ	**Kangiqsujuaq**	**10.51**	**172**	Pn	**Pn**	**10 50 26.1**	**+0.4**
KNGQ	**Kangiqsujuaq**	**10.51**	**172**	PN	**Pn**	**10 50 26.1**	**+0.4**
KNGQ				SN	**Sn**	**10 52 16.2**	**-5.9**
KNGQ				Trac		10 53 23.9	
comp=Z,72nm,0.4s							
KNGQ				LG	Lg	10 53 24.5	
SUMG	**Summit**	**11.04**	**70**	Pn	**Pn**	**10 50 33.3**	**+0.1**
SUMG	**Summit**	**11.04**	**70**	*i* P	**Pn**	**10 50 32.0**	**-1.3**
ICESG	**Greenland Ices**	**12.01**	**87**	*i* P	**Pn**	**10 50 48.4**	**+1.9**
ICESG				*i* S	**Sn**	**10 52 56.4**	**-2.9**
ICESG				IAML		10 53 02.1	
comp=Z,0.4nm,1.0s							
SCHQ	**Schefferville**	**17.57**	**164**	Pn	**Pn**	**10 51 59.5**	**-0.1**
comp=Z,0.4nm,0.3s,baz=355,slow=15,SNR=2.1							
SCHQ				Sn	**Sn**	**10 55 06.7**	**-7.2**
comp=Z,0.7nm,0.3s,baz=243,slow=18,SNR=3.6							
SCHQ				Lg	Lg	10 56 55.6	
comp=Z,2.1nm,0.3s,baz=248,slow=18,SNR=6.4							
comp=Z,2.6nm,0.6s							
YKA	**Yellowknife Ar**	**17.63**	**258**	Pn	**Pn**	**10 51 56.2**	**-4.1**
comp=Z,0.2nm,0.3s,baz=47,slow=11,SNR=2.1							
YKA				Lg	Lg	10 56 49.3	
comp=Z,1.0nm,0.3s,baz=42,slow=30,SNR=5.3							
comp=Z,1.1nm,0.6s							
INK	**Inuvik**	**19.50**	**288**	P	**Pn**	**10 52 24.4**	**+1.5**
comp=Z,0.1nm,0.3s,baz=48,slow=14,SNR=1.9							
INK				Sn	**S**	**10 55 55.1**	**-4.4**
comp=Z,0.2nm,0.3s,baz=254,slow=4.0,SNR=3.9							
INK				Lg	Lg	10 57 49.9	
comp=Z,0.1nm,0.3s,baz=152,slow=29,SNR=4.5							
comp=Z,0.7nm,0.5s							
I29M	**Ogilvie Camp,**	**22.86**	**285**	P	**P**	**10 52 58.1**	**+0.4**
I29M				IAmb	IAmb	10 53 06.1	
comp=Z,2.5nm,1.0s							
ULM	**Lac du Bonnet**	**23.74**	**215**	P	**P**	**10 53 10.4**	**+4.0**
comp=Z,1.4nm,0.5s,baz=14,slow=10,SNR=2.2							
comp=Z,1.4nm,0.5s							
ILAR	**Eielson Array**	**25.83**	**291**	P	**P**	**10 53 30.8**	**+5.4**
comp=Z,0.3nm,0.5s,baz=45,slow=8.0,SNR=9.4							
comp=Z,0.3nm,0.5s							
TRQ	**Mont Tremblant**	**25.84**	**179**	P	**P**	**10 53 27.0**	**+1.3**
TRQ				IAmb	IAmb	10 53 35.1	
comp=Z,10nm,1.3s							
TKL	**Tuckaleechee C**	**36.67**	**192**	LR	LR	11 09 38.6	
comp=Z,20nm,19.1s,baz=338,slow=36							
NVAR	**Mina Array Bea**	**39.99**	**237**	P	**P**	**10 55 32.2**	**+3.2**
comp=Z,0.2nm,0.7s,baz=10,slow=6.5,SNR=2.2							
comp=Z,0.2nm,0.7s							
TXAR	**Lajitas Array**	**45.44**	**216**	P	P	10 56 19.2	+6.0
comp=Z,0.2nm,0.5s,baz=30,slow=6.1,SNR=4.7							
comp=Z,0.2nm,0.5s							

ROM 27 11:00:51.4±0.1, 42.745N±0.003×13.249E±0.005, h10km, Md1.0/5, 3C-6D, Error ellipse: s-maj=0.4km s-min=0.2km az=273.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.13**	**312**	⇓P	Pg	11 00 55.0	+0.5
NRCA				S	Sg	11 00 57.4	+0.6
NRCA				AML	AML		
comp=E,18750μm,1.2s							
NRCA				AML	AML		
comp=N,18300μm,1.0s							
NRCA				AML	AML		
comp=E,18800μm,1.2s							
NRCA				AML	AML		
comp=N,18250μm,1.0s							
NRCA				AML	AML		
comp=E,20500μm,0.7s							
NRCA				AML	AML		
comp=N,20350μm,1.0s							
NRCA				END			
T1243	**Rocca Santa Ma**	**0.15**	**108**	P	Pb	11 00 55.9	-0.5
T1243				S	Sg	11 00 58.2	+0.9
T1243				AML	AML		
comp=E,1485μm,0.7s							
T1243				AML	AML		
comp=N,2040μm,0.3s							
T1243				AML	AML		
comp=E,1470μm,0.7s							
T1243				AML	AML		
comp=N,2025μm,0.3s							
T1243				AML	AML		
comp=E,1490μm,0.7s							
T1243				END			
MMO1	**Montemonaco**	**0.16**	**20**	P	Pg	11 00 55.5	+0.4
MMO1				S	Sg	11 00 58.4	+0.8
MMO1				AML	AML		
comp=N,1375μm,0.5s							
MMO1				AML	AML		
comp=E,1570μm,1.0s							
MMO1				END			
MC2	**Monte Cornacci**	**0.17**	**346**	P	Pg	11 00 55.7	+0.5
MC2				S	Sg	11 00 58.8	+0.8
MC2				END			
LNSS	**Leonessa**	**0.21**	**227**	⇑P	Pg	11 00 56.5	+0.6
LNSS				S	Sg	11 01 00.4	+1.6
LNSS				AML	AML		
comp=N,2290μm,0.3s							
LNSS				AML	AML		
comp=E,2555μm,0.2s							
LNSS				END			
RM33	**Pellescritta (**	**0.24**	**186**	P	Pg	11 00 56.9	+0.6
RM33				S	Sg	11 01 01.1	+1.5
RM33				AML	AML		
comp=E,308μm,0.4s							
RM33				AML	AML		
comp=N,490μm,0.3s							
CAMP	**Campotosto**	**0.24**	**151**	P	Pg	11 00 56.9	+0.5
CAMP				S	Sg	11 01 01.0	+1.2
CAMP				AML	AML		
comp=E,195μm,0.9s							
CAMP				AML	AML		
comp=N,196μm,0.2s							
TERO	**Teramo**	**0.29**	**115**	⇓P	Pg	11 00 57.8	+0.6
TERO				S	Sb	11 01 02.4	-1.1
TERO				AML	AML		
comp=E,312μm,1.6s							
TERO				AML	AML		
comp=N,296μm,0.5s							
TERO				AML	AML		
comp=E,312μm,1.6s							
TERO				AML	AML		
comp=N,296μm,0.5s							
FDMO	**Fiordimonte**	**0.31**	**338**	P	Pg	11 00 58.0	+0.3
FDMO				AML	AML		
comp=E,707μm,1.1s							
FDMO				AML	AML		
comp=N,720μm,0.2s							
GUMA	**Gualdo di Mace**	**0.32**	**11**	⇑P	Pb	11 00 58.7	-0.6
GUMA				S	Sb	11 01 04.2	-0.3
GUMA				AML	AML		
comp=E,1430μm,0.2s							
GUMA				AML	AML		
comp=N,1945μm,0.4s							
CSP1	**Cessapalombo**	**0.35**	**355**	P	Pg	11 00 58.7	+0.3
CSP1				S	Sb	11 01 04.3	-1.1
CSP1				AML	AML		
comp=E,1006μm,0.3s							
CSP1				AML	AML		
comp=N,1022μm,0.4s							
CSP1				AML	AML		
comp=E,1001μm,0.3s							
CSP1				AML	AML		
comp=N,1026μm,0.4s							
GIGS	**Gran Sasso**	**0.38**	**141**	⇓P	Pg	11 00 59.5	+0.6
GIGS				AML	AML		
comp=E,51μm,1.1s							
GIGS				AML	AML		
comp=N,53μm,0.2s							
FIAM	**Fiamignano**	**0.49**	**192**	P	Pg	11 01 01.1	+0.2
FIAM				AML	AML		
comp=E,103μm,0.2s							
FIAM				AML	AML		
comp=N,92μm,0.5s							
SNTG	**Esanatoglia**	**0.56**	**336**	⇓P	Pb	11 01 02.8	-0.4
SNTG				AML	AML		
comp=E,192μm,0.1s							
SNTG				AML	AML		
comp=N,194μm,0.7s							
EL6	**Elcito**	**0.59**	**350**	⇓P	Pg	11 01 03.3	+0.3
CING	**Cingoli**	**0.63**	**356**	S	Sb	11 01 14.0	+0.6
FOSV	**Fossato di Vic**	**0.66**	**327**	S	Sb	11 01 14.0	-0.1
PP3	**Marolino**	**0.69**	**23**	⇓P	Pn	11 01 07.4	+0.3
MGAB	**Montegabbione**	**0.85**	**282**	S	Sb	11 01 20.0	+0.2
PE3	**Peglio**	**1.10**	**330**	P	Pb	11 01 10.3	-2.2
LAV9	**Lanuvio**	**1.14**	**201**	S	Sb	11 01 28.0	-0.1
FIU	**Minerbio Fiu**	**2.28**	**327**	⇑P	Pn	11 01 28.8	-0.2

*NIED **27** 11:02:15.6, 31.04N×129.04E, h14km, MW3.5, Moment Tensor Solution. s3 Moment tenscor: Scale 10^14Nm; Mrr=1.20; Mθθ1.29; Mφφ-0.09; Mrθ1.47; Mθφ-0.09; Mφr0.19; Fault plane solution: M0 1.93000×10^14 NP1: φs103.00000°, δ21.00000°, λ-73.00000°. NP2: φs265.00000°, δ70.00000°, λ-96.00000°.*

JMA 27 11:02:15.6±0.2, 31.0N±0.3×129.0E±0.8, h14km±1km, MV3.6/29, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.86**	**42**	*e*P	Pg	11 02 31.7	-0.6
JSJ				*e*S	Sg	11 02 43.2	-0.4
JKC	**Kuchinoerabu**	**1.15**	**120**	*e*P	Pb	11 02 36.7	-0.6
JKC				*e*S	Sb	11 02 51.8	-0.3
JSU	**Suzuyama**	**1.30**	**69**	*e*P	Pn	11 02 39.4	0.0
JNN	**Nakanoshima**	**1.40**	**149**	*e*P	Pn	11 02 40.4	-0.3
JYAK	**Yakushimahirau**	**1.50**	**122**	*e*P	Pn	11 02 41.6	-0.5
JFU	**Fukue jima 2**	**1.63**	**351**	*e*P	Pn	11 02 44.5	+0.6

JTN	**Tanegashima 3**	**1.71**	**102**	*eP*	Pn	11 02 45.6 +0.5
JMTN	**Minamitare**	**1.73**	**111**	*eP*	Pn	11 02 45.4 +0.1

*IDC **27** 11:30:27.2±0.7, 6°.73N×72°.99W, h159km±9km, mb3.1/4, mbtmp3.7/6, Error ellipse: s-maj=31.4km s-min=7.8km az=130.0*
*RSNC **27** 11:30:28.8±1.1, 6°.80N×73°.14W, h143km±4km, ML3.5, Mw3.7*

ISC 27 11:30:27.3±0.8, **6°.83N**±0°.03×**73°.11W**±0°.03, **h152**km±6km, **n45**, σ1§**74**/83, **mb3.4**/4, **5C-1D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**197**	*iP*	**Pn**	**11 30 48.2**	**0.0**
BARC				*eS*	**Sn**	**11 31 03.0**	**-1.1**
BARC				*i*		11 31 05.3	
	comp=Z,776nm,0.2s						
PAMC	**Pamplona, Colo**	**0.65**	**39**	*i* P	**Pn**	**11 30 51.1**	**+0.9**
PAMC				*eS*	**Sn**	**11 31 07.8**	**+0.1**
PAMC				*i*		11 31 10.2	
	comp=Z,918nm,0.3s						
BRRC	**Barranca, Sant**	**0.66**	**295**⇑	*iP*	**Pn**	**11 30 50.1**	**+0.4**
BRRC				*eS*	**Sn**	**11 31 06.9**	**+0.1**
BRRC				*i*		11 31 10.9	
	comp=Z,669nm,0.3s						
RUSC	**La Rusia**	**0.93**	**178**⇑	*iP*	**Pn**	**11 30 52.3**	**+0.1**
RUSC				*eS*	**Sn**	**11 31 09.6**	**-1.6**
RUSC				*i*		11 31 12.1	
	comp=Z,402nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.37**	**258**	*eP*	**Pn**	**11 30 54.8**	**-0.8**
PTBC				*eS*	**Sn**	**11 31 16.3**	**-1.0**
PTBC				*i*		11 31 19.3	
	comp=Z,454nm,0.2s						
TAMC	**Tame, Arauca**	**1.37**	**107**⇑	*iP*	**Pn**	**11 30 56.6**	**+1.0**
TAMC				*eS*	**Sn**	**11 31 18.1**	**+0.7**
TAMC				*i*		11 31 18.7	
	comp=Z,216nm,0.3s						
OCAC	**Ocana**	**1.42**	**352**	*eP*	**Pn**	**11 30 56.3**	**0.0**
OCAC				*eS*	**Sn**	**11 31 18.0**	**-0.6**
OCAC				*i*		11 31 21.4	
	comp=Z,1μm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**219**⇑	*iP*	**Pn**	**11 30 57.2**	**0.0**
SPBC				*eS*	**Sn**	**11 31 19.1**	**-1.0**
SPBC				*i*		11 31 25.0	
	comp=Z,825nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*eP*	**Pn**	**11 31 01.2**	**+0.4**
ZARC				*eS*	**Sn**	**11 31 26.7**	**+0.1**
ZARC				*i*		11 31 32.1	
	comp=Z,556nm,0.3s						
NORC	**Norcasia**	**2.15**	**234**	*eP*	**Pn**	**11 31 04.3**	**-0.1**
NORC				*eS*	**Sn**	**11 31 31.7**	**-1.2**
NORC				*i*		11 31 36.0	
	comp=Z,580nm,0.4s						
CHIC	**Chingaza**	**2.27**	**196**	*eP*	**Pn**	**11 31 06.7**	**+0.6**
CHIC				*eS*	**Sn**	**11 31 34.9**	**-1.1**
CHIC				*i*		11 31 42.5	
	comp=Z,133nm,0.3s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**11 31 08.2**	**+1.6**
	comp=Z,53nm,0.3s,baz=241,slow=22,SNR=48						
ROSC				S	**Sn**	**11 31 37.4**	**+0.5**
	comp=Z,142nm,0.4s,baz=31,slow=20,SNR=13						
ROSC	**El Rosal**	**2.31**	**211**	*eP*	**Pn**	**11 31 08.5**	**+1.9**
ROSC				*eS*	**Sn**	**11 31 37.3**	**+0.4**
ROSC				*i*		11 31 43.5	
	comp=Z,404nm,0.5s						
HELC	**Santa Helena**	**2.48**	**255**	*eP*	**Pn**	**11 31 09.6**	**+0.9**
HELC				*eS*	**Sn**	**11 31 39.5**	**-1.0**
HELC				*i*		11 31 46.7	
	comp=Z,259nm,0.4s						
UREC	**San Jos de Ur**	**2.57**	**291**	*eP*	**Pn**	**11 31 08.7**	**-0.7**
UREC				*eS*	**Sn**	**11 31 38.7**	**-3.1**
UREC				*i*		11 31 55.5	
	comp=Z,269nm,0.2s						
SOCV	**Socops**	**2.66**	**57**⇓	*iP*	**Pn**	**11 31 11.1**	**+0.5**
SOCV				*eS*	**Sn**	**11 31 41.9**	**-2.0**
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*eP*	**Pn**	**11 31 13.1**	**+1.7**
LL1C				*eS*	**Sn**	**11 31 48.9**	**+3.4**
LL1C				*i*		11 31 57.1	
	comp=Z,373nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*eP*	**Pn**	**11 31 12.6**	**+0.6**
GUY2C				*eS*	**Sn**	**11 31 46.5**	**0.0**
GUY2C				*i*		11 31 54.6	
	comp=Z,367nm,0.4s						
VILC	**Villavicencio,**	**2.76**	**192**	*eP*	**Pn**	**11 31 12.0**	**+0.2**
VILC				*eS*	**Sn**	**11 31 46.8**	**+0.5**
VILC				*i*		11 31 56.6	
	comp=Z,213nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*eP*	**Pn**	**11 31 11.6**	**-0.5**
PTGC				*eS*	**Sn**	**11 31 45.1**	**-1.6**
PTGC				*i*		11 31 47.3	
	comp=Z,139nm,0.3s						
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**11 31 17.7**	**+0.4**
	comp=Z,102nm,0.3s,baz=174,slow=2.5,SNR=50						
SDV				S	**Sn**	**11 31 56.0**	**-0.1**
	comp=Z,67nm,0.4s,baz=7.3,slow=18,SNR=10						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*eP*	**Pn**	**11 31 18.8**	**+1.3**
ARGC				*eS*	**Sn**	**11 31 57.1**	**+0.8**
ARGC				*i*		11 32 07.3	
	comp=Z,51nm,0.7s						
ANIL	**Santa Ana**	**3.25**	**225**	*eP*	**Pn**	**11 31 20.2**	**+2.0**
ANIL				*eS*	**Sn**	**11 31 59.0**	**+1.3**
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*	**Pn**	**11 31 22.4**	**-0.9**
SJCC				*eS*	**Sn**	**11 32 03.9**	**-3.1**
SJCC				*i*		11 32 09.3	
	comp=Z,56nm,0.2s						
PLMC	**San Jos del P**	**3.69**	**239**	*eP*	**Pn**	**11 31 24.4**	**+0.7**
PLMC				*eS*	**Sn**	**11 32 05.2**	**-2.2**
PLMC				*i*		11 32 21.4	
	comp=Z,69nm,0.7s						
LCBC	**Los crdobas,**	**3.80**	**302**	*eP*	**Pn**	**11 31 25.1**	**+0.1**
LCBC				*eS*	**Sn**	**11 32 11.0**	**+1.1**
LCBC				*i*		11 32 17.2	
	comp=Z,47nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*eP*	**Pn**	**11 31 28.5**	**-1.4**
CRJC				*eS*	**Sn**	**11 32 14.3**	**-4.3**
CRJC				*i*		11 32 21.2	
	comp=Z,46nm,0.2s						
GUVC	**San Jose del G**	**4.28**	**174**	*eP*	**Pn**	**11 31 31.3**	**-0.1**
GUVC				*eS*	**Sn**	**11 32 19.8**	**-1.5**
GUVC				*i*		11 32 23.1	
	comp=Z,65nm,0.2s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*eP*	**Pn**	**11 31 31.4**	**-0.1**
YOTC				*eS*	**Sn**	**11 32 22.5**	**+1.2**
CAPC	**Capurgana**	**4.57**	**293**	*eP*	**Pn**	**11 31 34.4**	**-0.6**
CAPC				*eS*	**Sn**	**11 32 23.5**	**-4.4**
CAPC				*i*		11 32 30.1	
	comp=Z,41nm,0.1s						
MACC	**Macarena, Meta**	**4.71**	**189**	*eP*	**Pn**	**11 31 35.6**	**-1.3**
MACC				*eS*	**Sn**	**11 32 27.8**	**-3.5**
MACC				*i*		11 32 34.3	
	comp=Z,41nm,0.6s						
BETC	**Betania**	**4.73**	**210**	*eP*	**Pn**	**11 31 36.8**	**-0.4**
BETC				*eS*	**Sn**	**11 32 25.6**	**-6.2**
BETC				*i*		11 32 30.2	
	comp=Z,34nm,0.5s						
DABV	**Dabajuro**	**4.75**	**31**	*eP*	**Pn**	**11 31 37.1**	**-0.3**
DABV				*eS*	**Sn**	**11 32 29.8**	**-2.3**
URIC	**Uribia, Colomb**	**4.97**	**13**	*eP*	**Pn**	**11 31 38.6**	**-1.7**
MALC	**Bahia Malaga**	**5.05**	**237**	*eP*	**Pn**	**11 31 43.5**	**+2.1**
MALC				*eS*	**Sn**	**11 32 40.7**	**+1.5**
MALC				*i*		11 32 54.1	
	comp=Z,12nm,0.6s						
GARC	**Garzon, Huila**	**5.19**	**207**	*eP*	**Pn**	**11 31 42.9**	**-0.6**
GARC				*eS*	**Sn**	**11 32 40.3**	**-2.6**
GARC				*i*		11 32 46.7	
	comp=Z,54nm,0.3s						
POPC	**Popayan, Colom**	**5.55**	**220**	*eP*	**Pn**	**11 31 48.4**	**+0.2**
POPC				*eS*	**Sn**	**11 32 49.8**	**-1.7**
BBAC	**Balboa, Cauca**	**6.31**	**221**	*eP*	**Pn**	**11 31 59.5**	**+1.2**
BBAC				*eS*	**Sn**	**11 33 05.1**	**-4.6**
BBAC				*i*		11 33 15.9	
	comp=Z,8.8nm,0.4s						
GCUF	**Volcan Galeras**	**6.99**	**217**	*eP*	**Pn**	**11 32 08.9**	**+1.2**
GCUF				*eS*	**Sn**	**11 33 24.2**	**-2.1**
GCUF				*i*		11 33 32.7	
	comp=Z,6.9nm,0.4s						
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**11 37 18.6**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=122,slow=8.5,SNR=5.2						
	comp=Z,0.1nm,0.4s						
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**	**11 38 45.3**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=149,slow=5.9,SNR=1.7						
	comp=Z,1.4nm,0.5s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**11 38 52.0**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=122,slow=9.7,SNR=4.1						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**11 40 39.2**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=151,slow=5.8,SNR=4.5						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**11 49 57.2**	**+3.0**
	comp=Z,0.7nm,0.5s,baz=118,slow=3.6,SNR=17						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**11 50 00.6**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=107,slow=2.8,SNR=35						

*IDC **27** 12:03:00.7±2.2, 29°.38N×81°.27E, h0km, mb3.8/4, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=60.7km s-min=32.3km az=65.0*

ISC 27 12:03:05.6±1.3, **29°.5N**±0°.2×**81°.54E**±0°.08, **h27**km, **n7**, σ1§**92**/9, **mb3.7**/4, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**1.13**	**267**	*eP*g	**Pb**	**12 03 26.7**	**+0.1**
LGTI				*i* Sg	**Sb**	**12 03 44.2**	**+3.3**
PTH	**Pithoragarh**	**1.16**	**272**	*eP*g	**Pn**	**12 03 24.7**	**-1.5**
PTH				*i* Sg	**Sn**	**12 03 39.5**	**-1.8**
MKAR	**Makanchi Array**	**17.25**	**2**	P	**Pn**	**12 07 04.0**	**-0.6**
	0.2nm,0.3s,baz=183,slow=12,SNR=6.8						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**24.52**	**5**	P	**P**	**12 08 22.6**	**0.0**
	1.7nm,0.6s,baz=187,slow=9.9,SNR=8.0						
	1.7nm,0.6s						
SONM	**Songino Array**	**26.47**	**39**	P	**P**	**12 08 42.8**	**+2.3**
	0.3nm,0.5s,baz=249,slow=11,SNR=2.1						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**48.13**	**328**	P	**P**	**12 11 42.5**	**-0.4**
	5.0nm,0.9s,baz=109,slow=10,SNR=3.3						
	5.0nm,0.9s						
WRA	**Warramunga Arr**	**70.76**	**127**	P	**P**	**12 14 19.4**	**-0.3**
	0.4nm,0.8s,baz=324,slow=5.9,SNR=1.5						
	0.4nm,0.8s						

WEL 27 12:21:47.7±1.3, **32°.S**±20°×**17°.7W**±3°.5, **h398**km±33km, **M5.1**/4, **mB4.4**/2, **ML4.8**/11, **MLv5.1**/4, **Mw(mB)3.6**/2, **Error ellipse: s-maj=0.0km s-min=0.0km az=116.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**6.43**	**211**	P	Pn	12 23 27.3	+2.5
WMGZ				S	S	12 24 47.3	+3.2
PKGZ	**Pakihiroa**	**6.64**	**213**	P	P	12 23 28.2	+0.3
HAZ	**Te Kaha**	**6.67**	**215**	P	Pn	12 23 27.0	-0.5
HAZ				S	S	12 24 46.2	-2.8
PUZ	**Puketiti**	**6.71**	**211**	P	Pn	12 23 27.8	-0.1
PUZ				S	S	12 24 50.2	+0.4
RUGZ	**Raukumara Rang**	**6.89**	**215**	P	Pn	12 23 29.0	-1.0
GRZ	**Great Barrier**	**7.08**	**235**	P	P	12 23 35.1	+2.5
MWZ	**Matawai**	**7.25**	**214**	P	Pn	12 23 31.3	-2.8
MWZ				S	S	12 24 60.0	-1.1
URZ	**Urewera**	**7.40**	**216**	P	Pn	12 23 33.8	-1.8
SNGZ	**Shannon Statio**	**7.70**	**212**	P	Pn	12 23 39.3	+0.2
MUGZ	**Murupara**	**7.74**	**216**	P	Pn	12 23 35.8	-3.7
RAHZ	**Arahi**	**7.93**	**213**	P	P	12 23 42.7	+0.6
MTHZ	**Maungataniwha**	**7.99**	**214**	P	P	12 23 43.2	+0.3
MTHZ				S	S	12 25 16.5	0.0
NMHZ	**Naumai**	**8.20**	**214**	P	Pn	12 23 44.6	-0.3
ARHZ	**Aropaoanui**	**8.25**	**212**	P	P	12 23 45.7	0.0
ARHZ				S	S	12 25 22.4	+0.6
KAHZ	**Kahuranaki**	**8.74**	**210**	P	P	12 23 52.0	+0.8
BHHZ	**Black Hill Sta**	**8.87**	**215**	P	Pn	12 23 51.4	-1.1
PXZ	**Pawanui**	**8.94**	**210**	P	P	12 23 53.4	0.0
PXZ				S	S	12 25 38.8	+2.3

*IDC **27** 12:27:13.9±1.8, 38°.42N×72°.45E, h0km, mb4.0/3, mbtmp3.8/7, ML3.2/4, Error ellipse: s-maj=32.8km s-min=25.4km az=44.0*
*NNC **27** 12:27:15.5±6.1, 38°.49N×71°.97E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=47.0km s-min=33.9km az=0.0*
*SOME **27** 12:27:15.6, 38°.97N×72°.60E, h10km*

ISC 27 12:27:18.7±1.4, **38°.58N**±0°.09×**72°.44E**±0°.06, **h30**km, **n18**, σ3§**39**/28, **mb4.0**/3, **3C-3D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.01**	**334**	*eP*	**Pb**	**12 28 25.9**	**-2.8**
	517nm,0.5s						
IUG				*eS*	**Sb**	**12 29 17.3**	**+0.4**
	83nm,0.9s						
DZA	**Taraz**	**4.39**	**349**	*eP*	**Pn**	**12 28 27.5**	**+4.1**
	187nm,0.2s						
DZA				*eS*	**Sn**	**12 29 18.4**	**+4.8**
	208nm,0.6s						
KK31	**Karatay Array**	**4.75**	**343**	⇑Pn	**Pn**	**12 28 29.2**	**+0.9**
	23nm,0.7s,baz=158,slow=13,SNR=152						
KK31				⇑Sn	**Sn**	**12 29 24.2**	**+1.8**
	6.9nm,0.4s,baz=164,slow=26,SNR=4.8						
CHMS	**Chumysh**	**4.75**	**21**	⇑Pn	**Pn**	**12 28 30.4**	**+2.1**
	16nm,0.7s						
CHMS				⇓Sn	**Sb**	**12 29 32.6**	**-5.5**
	12nm,0.8s						
TKM2	**Tokmak 2**	**4.96**	**28**	⇓Pn	**Pn**	**12 28 34.8**	**+3.5**
	11nm,0.7s						
TKM2				⇓Sn	**Sn**	**12 29 36.6**	**+8.8**
	12nm,0.7s						
SGDS	**Sogindy**	**5.14**	**18**	*eP*	Pn	12 28 40.9	+7.1
	2.4nm,0.5s						
SGDS				*eS*	**Sb**	**12 29 42.5**	**-6.8**
	5.6nm,0.6s						
KST	**Kastek**	**5.20**	**30**	*eP*	**Pb**	**12 28 45.9**	**-3.2**
	4.2nm,0.7s						
KST				*eS*	**Sb**	**12 29 50.8**	**-0.2**
	8.2nm,0.6s						
DGS	**Degeres**	**5.30**	**27**	*eP*	**Pb**	**12 28 46.8**	**-3.9**
	4.6nm,1.2s						
DGS				*eS*	**Sb**	**12 29 52.8**	**-1.1**
	11nm,0.9s						
KRBS	**Karabastau**	**5.67**	**25**	*eP*	**Pb**	**12 28 53.8**	**-3.1**
	2.0nm,0.7s						
KRBS				*eS*	**Sb**	**12 30 03.9**	**-0.5**
	8.2nm,0.7s						
MDOK	**Medeo**	**5.76**	**36**	*eP*	**Pb**	**12 28 55.5**	**-3.1**
	2.6nm,0.6s						
MDOK				*eS*	**Sb**	**12 30 08.2**	**+1.0**
	8.0nm,0.6s						
KUU	**Kurty**	**6.07**	**28**	*eP*	**Pb**	**12 29 00.5**	**-3.2**
	4.6nm,0.5s						
KUU				*eS*	**Sb**	**12 30 15.7**	**-0.3**
	8.3nm,0.7s						
MKAR	**Makanchi Array**	**10.95**	**38**	Pn	**Pn**	**12 29 54.8**	**+1.5**
	0.1nm,0.3s,baz=228,slow=12,SNR=4.3						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**14.52**	**355**	Pn	**Pn**	**12 30 41.1**	**-0.8**
	0.1nm,0.3s,baz=171,slow=10,SNR=3.1						
	0.3nm,0.4s						
AKTO	**Aktyubinsk**	**15.66**	**324**	Pn	**Pn**	**12 30 56.5**	**-0.7**
	0.4nm,0.3s,baz=115,slow=15,SNR=4.7						
	1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**17.55**	**25**	P	**Pn**	**12 31 19.9**	**-1.0**
	0.2nm,0.3s,baz=221,slow=12,SNR=3.5						
	0.8nm,0.4s						
FINES	**FINESS Array B**	**36.43**	**324**	P	**P**	**12 34 20.0**	**-0.4**
	3.8nm,0.9s,baz=111,slow=10,SNR=4.8						
	3.8nm,0.9s						
ARCES	**ARCESS Array B**	**39.68**	**336**	P	**P**	**12 34 46.9**	**-0.8**
	3.2nm,1.0s,baz=101,slow=8.3,SNR=7.7						
	3.2nm,1.0s						
WRA	**Warramunga Arr**	**82.14**	**123**	P	**P**	**12 39 36.9**	**+0.2**
	0.4nm,0.6s,baz=312,slow=5.5,SNR=4.5						
	0.4nm,0.6s						

*IDC **27** 12:30:27.4±0.9, 38°.50N×72°.57E, h0km, mb3.9/10, mbtmp3.9/16, ML3.5/5, MS2.6/3, Error ellipse: s-maj=19.4km s-min=18.1km az=42.0*
*SOME **27** 12:30:27.0, 38°.80N×72°.55E, h10km*
*NNC **27** 12:30:31.9±2.3, 38°.76N×72°.43E, h0km, mb4.5, mpv4.0, Error ellipse: s-maj=18.2km s-min=13.3km az=7.0*

ISC 27 12:30:28.9±0.7, **38°.50N**±0°.06×**72°.40E**±0°.06, **h10**km, **n34**, σ1§**82**/45, **mb3.8**/10, **2C-4D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.07**	**334**	*eP*	**Pb**	**12 31 38.8**	**-1.9**
	1μm,1.1s						
IUG				*eS*	**Sb**	**12 32 29.7**	**-0.3**
	211nm,0.7s						
CEP	**Cherat**	**4.68**	**185**	P	**Pb**	**12 31 50.2**	**-1.0**
KK31	**Karatay Array**	**4.82**	**343**	Pn	**Pn**	**12 31 41.9**	**+0.3**
	17nm,0.4s,baz=157,slow=13,SNR=116						
KK31				⇓Sn	**Sn**	**12 32 37.3**	**-0.1**
	28nm,0.6s,baz=158,slow=26,SNR=5.3						
CHMS	**Chumysh**	**4.84**	**21**	⇓Pn	**Pn**	**12 31 43.1**	**+1.3**
	37nm,0.7s						
CHMS				⇑Sn	**Sn**	**12 32 37.5**	**-0.4**
	26nm,0.8s						
CHCP	**Chirah Chowk**	**4.88**	**172**	P	**Pb**	**12 31 51.8**	**-2.7**
TKM2	**Tokmak 2**	**5.04**	**28**	⇑Pn	**Pn**	**12 31 45.4**	**+0.6**
	6.8nm,0.7s						
TKM2				⇓Pg	**Pb**	**12 31 59.6**	**+2.3**
	22nm,0.7s						
TKM2				⇓Lg	Lg	12 33 06.1	
	83nm,1.4s						
SGDS	**Sogindy**	**5.23**	**18**	*eP*	**Pb**	**12 31 57.4**	**-3.1**
	7.0nm,0.4s						
SGDS				*eS*	**Sb**	**12 33 02.2**	**-1.0**
	17nm,0.7s						
KST	**Kastek**	**5.28**	**30**	*eP*	**Pb**	**12 31 59.3**	**-2.1**
	14nm,0.6s						
KST				*eS*	**Sb**	**12 33 06.1**	**+1.1**
	31nm,0.5s						
DGS	**Degeres**	**5.38**	**27**	*eP*	**Pb**	**12 32 02.1**	**-1.0**
	23nm,0.6s						
DGS				*eS*	**Sb**	**12 33 11.6**	**+3.8**
	46nm,0.6s						
MTBS	**Maitube**	**5.54**	**32**	*eP*	**Pb**	**12 32 04.4**	**-1.4**
	12nm,0.5s						
MTBS				*eS*	**Sb**	**12 33 14.6**	**+2.2**
	26nm,0.8s						
THW	**Thamme Wali**	**5.72**	**186**	P	Pb	12 32 02.2	-6.6
MDOK	**Medeo**	**5.84**	**36**	*eP*	**Pb**	**12 32 09.5**	**-1.4**
	4.7nm,0.6s						
MDOK				*eS*	**Sb**	**12 33 23.5**	**+2.5**
	21nm,0.9s						
KTBS	**Karatobe**	**6.13**	**30**	*eP*	**Pb**	**12 32 12.7**	**-3.1**
	4.0nm,0.7s						
KTBS				*eS*	**Sb**	**12 33 29.3**	**+0.1**
	47nm,0.3s						
KUU	**Kurty**	**6.15**	**28**	*eP*	**Pb**	**12 32 12.2**	**-4.0**
	3.2nm,0.4s						
KUU				*eS*	**Sb**	**12 33 28.0**	**-1.8**
	18nm,0.6s						
CHKK	**Chushkaly**	**6.37**	**31**	*eP*	**Pb**	**12 32 18.3**	**-1.5**
	4.5nm,0.6s						
CHKK				*eS*	**Sb**	**12 33 38.2**	**+2.1**
	15nm,0.6s						
ARXS	**Arharly**	**7.02**	**34**	*eP*	**Pb**	**12 32 30.1**	**-0.8**
	4.8nm,0.6s						
ARXS				*eS*	**Sb**	**12 33 57.8**	**+3.1**
	15nm,0.6s						
MKAR	**Makanchi Array**	**11.03**	**38**	Pn	**Pn**	**12 33 06.0**	**-0.6**
	0.1nm,0.3s,baz=224,slow=12,SNR=2.9						
MKAR				LR	LR	12 37 12.6	
	comp=Z,28nm,18.5s,baz=114,slow=37						
	0.9nm,0.7s						
GEYT	**Alibeck**	**11.26**	**272**	Pn	**Pn**	**12 33 11.7**	**+1.8**
	0.8nm,0.3s,baz=68,slow=18,SNR=3.6						
	2.7nm,0.5s						
KURBB	**Kurchatov Arra**	**12.88**	**18**	Pn	**Pn**	**12 33 31.7**	**-0.2**
	0.8nm,0.6s,baz=206,slow=12,SNR=6.0						
KURBB				Lg	Lg	12 37 09.8	
	baz=205,slow=28,SNR=4.8						
BVAR	**Borovoye Array**	**14.59**	**355**	Pn	**Pn**	**12 33 52.6**	**-2.8**
	0.2nm,0.3s,baz=170,slow=12,SNR=2.3						
	0.4nm,0.4s						
AKTO	**Aktyubinsk**	**15.71**	**324**	Pn	**Pn**	**12 34 09.8**	**-0.4**
	1.2nm,0.3s,baz=117,slow=8.4,SNR=14						
AKTO				LR	LR	12 41 00.5	
	comp=Z,14nm,19.3s,baz=161,slow=40						
	5.2nm,0.6s						
ZALV	**Zalesovo Beam**	**17.64**	**25**	P	**Pn**	**12 34 32.3**	**-2.3**
	0.4nm,0.3s,baz=216,slow=12,SNR=6.6						
	1.9nm,0.5s						
KBZ	**Khabaz**	**22.77**	**293**	LR	LR	12 46 19.7	
	comp=Z,21nm,18.8s,baz=103,slow=42						
FINES	**FINESS Array B**	**36.48**	**324**	P	**P**	**12 37 33.2**	**-0.7**
	2.0nm,0.4s,baz=121,slow=9.2,SNR=11						
	2.0nm,0.4s						
ARCES	**ARCESS Array B**	**39.74**	**336**	P	**P**	**12 38 00.3**	**-1.0**
	1.7nm,0.5s,baz=114,slow=8.1,SNR=18						
	1.7nm,0.5s						
GERES	**GERESS Array B**	**42.72**	**304**	P	**P**	**12 38 27.1**	**+1.0**
	0.3nm,0.6s,baz=74,slow=14,SNR=1.9						
	0.3nm,0.6s						
NB2	**NORSAR Subarra**	**43.48**	**322**	P	**P**	**12 38 33.5**	**+1.5**
	comp=Z,2.2nm,1.0s,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**43.48**	**322**	P	**P**	**12 38 32.7**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=92,slow=7.9,SNR=4.1						
	comp=Z,0.8nm,0.7s						
ESDC	**Sonseca Array**	**57.52**	**297**	P	**P**	**12 40 19.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=53,slow=7.6,SNR=2.8						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.88**	**269**	P	**P**	**12 41 22.7**	**+1.2**
	comp=Z,3.4nm,0.3s,baz=48,slow=5.6,SNR=2.1						
	comp=Z,3.4nm,0.3s						
INK	**Inuvik**	**71.75**	**10**	P	**P**	**12 41 51.6**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=304,slow=10,SNR=5.2						
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**72.55**	**17**	P	**P**	**12 41 54.3**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=326,slow=3.2,SNR=6.3						
	comp=Z,0.6nm,0.8s						
WRA	**Warramunga Arr**	**82.12**	**123**	P	**P**	**12 42 49.8**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=323,slow=5.1,SNR=11						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**84.50**	**126**

comp=E,67nm,0.3s
AFDM IAML 12 37 05.8
comp=N,74nm,0.5s
KPK Kanaka Peak 1.45 266 Pn 12 36 46.1 -0.3
NV09 Mina Array St 1.53 145 Pn 12 36 47.4 -0.2
NVAR Mina Array Bea 1.55 145 Pn Pn 12 36 46.5 -1.4
NV08 Mina Array St 1.56 146 Pn 12 36 47.9 -0.2
ORV Oroville 1.60 265 Pn 12 36 48.1 -0.3
ORV IAML 12 37 10.1
comp=N,42nm,0.7s
ORV IAML 12 37 10.9
comp=E,37nm,0.5s
NV11 Mina Array St 1.61 141 Pn 12 36 48.6 -0.1
NV11 Mina Array St 1.61 141 IAML 12 37 12.6
comp=N,46nm,0.7s
NV11 IAML 12 37 12.8
comp=E,31nm,0.8s
LHV Little Huntoon 1.62 153 Pn 12 36 49.1 +0.5
LUL Lundy Lake 1.66 173 Pb 12 36 51.0 +0.3
LCMM Colby Mountain 1.66 286 Pb 12 36 50.2 -0.5
CMB Columbia Colle 1.82 204 Pn 12 36 51.8 +0.3
BMN Battle Mountai 1.85 66 Pn 12 36 51.5 -0.5
Q09A Carvers 1.96 116 Pb 12 36 55.5 -0.3
MDYM Dry Creek 2.07 171 Pb 12 36 57.9 +0.2
MDPB Devils Postpil 2.09 172 Pb 12 36 57.2 -0.8
BENR Benton 2.10 161 Pb 12 36 58.0 -0.2
OMMB Old Mammoth Mi 2.11 171 Pb 12 36 58.2 -0.3
ORC Owens River 2.15 163 Pb 12 36 59.2 +0.1
MOD Modoc Plateau 2.29 344 Pb 12 37 01.5 0.0
MOD IAML 12 37 35.4
comp=E,16nm,0.8s
MOD IAML 12 37 35.6
comp=N,18nm,0.8s
TPH Tonopah 2.37 133 Pb 12 37 02.1 -0.7
MZP Montezuma Peak 2.56 141 Pb 12 37 05.5 -0.6
DSP Deep Springs 2.60 153 Pn 12 37 01.3 -0.8
WVOR Wild Horse Val 2.79 12 Pn 12 37 03.6 -1.4
WVOR IAML 12 37 53.8
comp=N,7.9nm,1.0s
LCH Last Change Ra 2.84 150 Pb 12 37 11.1 +0.3
GMN Gold Mountain 2.94 144 Pb 12 37 13.0 +0.4
K05A Summer Lake 3.21 341 Pb 12 37 14.3 -2.8
R11A Troy Canyon, C 3.29 113 Pn 12 37 12.3 +0.5
ELK Elko 3.38 71 Pn 12 37 13.8 +0.7
ELK IAML 12 38 09.9
comp=N,5.2nm,0.3s
ELK IAML 12 38 10.2
comp=N,8.4nm,0.3s
WCT Wildcat Mounta 3.65 142 Pg Pb 12 37 25.1 +0.5
TPNV Topopah Spring 3.72 137 Pg Pg 12 37 28.6 -2.3
TPNV IAML 12 38 23.8
comp=N,7.0nm,0.8s
TPNV IAML 12 38 23.8
comp=N,6.5nm,0.9s
J08A Circle Bar Ran 3.72 11 Pg Pb 12 37 28.1 +2.3
HUMO Hull Mountain 3.93 319 Pn Pn 12 37 20.1 -0.4
HUMO IAML 12 38 03.6
comp=N,7.4nm,3.1s
HUMO IAML 12 38 26.7
comp=E,7.1nm,3.2s
SPR3 Spring Creek 3 4.02 98 Pn 12 37 21.6 -0.4
PRN Pahroc Range 4.13 122 Pn 12 37 24.1 +0.7
DUG Dugway, Tooele 5.12 82 Pn Pn 12 37 35.6 -1.2

*IDC **27** 12:41:59.9±2.9,5.°38N×74.°18W,h106km±21km,mb4.1/1, mbtmp4.4/1,MS3.1/1,Error ellipse: s-maj=92.5km s-min=36.0km az=169.0*
*RSNC **27** 12:42:01.3±1.1,5.°64N×74.°38W,h82km±5km,ML2.6*
ISC 27 12:41:59.5±0.9,5°62N±0'03×74°39W±0'04,h92km±7km, n22,σ1°39/37,1D,Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.32**	**84**	⇓*iP*	**Pn**	**12 42 13.1**	**-0.2**
SPBC				*eS*	**Sn**	**12 42 22.5**	**-1.1**
SPBC				*i*		12 42 25.8	
	comp=Z,331nm,0.1s						
NORC	**Norcasia**	**0.48**	**263**	*eP*	**Pn**	**12 42 14.6**	**+0.2**
NORC				*eS*	**Sn**	**12 42 25.9**	**+0.4**
NORC				*i*		12 42 27.5	
	comp=Z,400nm,0.2s						
ROSC	**El Rosal**	**0.78**	**175**	P	**Pn**	**12 42 18.1**	**+0.7**
	comp=Z,36nm,0.3s,baz=10,slow=19,SNR=20						
ROSC				S	**Sn**	**12 42 31.8**	**+1.0**
	comp=Z,50nm,0.3s,baz=230,slow=21,SNR=18						
ROSC	**El Rosal**	**0.78**	**175**	*eP*	**Pn**	**12 42 18.1**	**+0.7**
ROSC				*eS*	**Sn**	**12 42 31.7**	**+1.0**
ROSC				*i*		12 42 33.0	
	comp=Z,59nm,0.3s						
PTBC	**PUERTO BERRIO,**	**0.92**	**356**	*eP*	**Pn**	**12 42 18.4**	**0.0**
PTBC				*eS*	**Sn**	**12 42 32.5**	**-0.1**
PTBC				*i*		12 42 34.1	
	comp=Z,97nm,0.4s						
GUY2C	**Guyana, Caldas**	**1.05**	**248**	*eP*	**Pn**	**12 42 20.9**	**+0.5**
GUY2C				*eS*	**Sn**	**12 42 37.1**	**+1.0**
GUY2C				*i*		12 42 43.7	
	comp=Z,86nm,0.4s						
CHIC	**Chingaza**	**1.18**	**146**	*eP*	**Pn**	**12 42 23.0**	**+1.1**
CHIC				*eS*	**Sn**	**12 42 39.2**	**+0.6**
CHIC				*i*		12 42 42.0	
	comp=Z,84nm,0.4s						
HELC	**Santa Helena**	**1.27**	**297**	*eP*	**Pn**	**12 42 23.6**	**+0.8**
HELC				*eS*	**Sn**	**12 42 41.6**	**+1.1**
HELC				*i*		12 42 44.3	
	comp=Z,48nm,0.2s						
RUSC	**La Rusia**	**1.32**	**78**	*eP*	**Pn**	**12 42 24.0**	**+0.4**
RUSC				*eS*	**Sn**	**12 42 42.8**	**+0.9**
RUSC				*i*		12 42 47.3	
	comp=Z,34nm,0.4s						
ANIL	**Santa Ana**	**1.51**	**222**	*eP*	**Pn**	**12 42 26.5**	**+0.8**
ANIL				*eS*	**Sn**	**12 42 46.2**	**+0.6**
ANIL				*i*		12 42 52.3	
	comp=Z,95nm,0.2s						
BARC	**Barichara**	**1.54**	**51**	*eP*	**Pn**	**12 42 26.7**	**+0.7**
BARC				*eS*	**Sn**	**12 42 46.8**	**+0.7**
BARC				*i*		12 42 55.0	
	comp=Z,67nm,0.3s						
BRRC	**Barranca, Sant**	**1.62**	**24**	*eP*	**Pn**	**12 42 27.4**	**+0.5**
BRRC				*eS*	**Sn**	**12 42 49.8**	**+2.1**
BRRC				*i*		12 42 52.0	
	comp=Z,49nm,0.2s						
VILC	**Villavicencio,**	**1.65**	**155**	*eP*	**Pn**	**12 42 28.9**	**+1.5**
VILC				*eS*	**Sn**	**12 42 50.2**	**+1.7**
VILC				*i*		12 42 57.3	
	comp=Z,48nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.92**	**346**	*eP*	**Pn**	**12 42 30.7**	**0.0**
ZARC				*eS*	**Sn**	**12 42 57.1**	**+2.6**
ZARC				*i*		12 43 02.2	
	comp=Z,112nm,0.3s						
PLMC	**San Jos del P**	**2.02**	**249**	*eP*	**Pn**	**12 42 33.8**	**+1.8**
PAMC	**Pamplona, Colo**	**2.39**	**44**	*eP*	**Pn**	**12 42 39.2**	**+1.8**
PAMC				*eS*	**Sn**	**12 43 10.4**	**+4.1**
SOCV	**Socops**	**4.39**	**53**	*eP*	**Pn**	**12 43 04.0**	**+0.1**
SOCV				*eS*	**Sn**	**12 43 53.4**	**-0.5**
SDV	**Santo Domingo**	**4.94**	**49**	S	**Sn**	**12 44 09.1**	**+1.6**
	comp=Z,8.2nm,0.4s,baz=34,slow=16,SNR=7.0						
BBTS	**Babate**	**57.52**	**76**	LR	LR	13 15 49.0	
	comp=Z,15nm,18.2s,baz=77,slow=35						
DBIC	**Dimbokro**	**69.09**	**85**	P	**P**	**12 52 53.9**	**-2.4**
	comp=Z,2.4nm,0.6s,baz=248,slow=7.4,SNR=5.5						
	comp=Z,2.4nm,0.6s						
ASAR	**Alice Springs**	**147.39**	**234**	PKPbc	**PKPdf**	**13 01 31.6**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=118,slow=3.8,SNR=5.0						
WRA	**Warramunga Arr**	**148.66**	**240**	PKPbc	**PKPbc**	**13 01 35.2**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=108,slow=2.8,SNR=7.0						

ASRS 27 13:03:28.2±0.4,52°N±2°×9°9E±°,h5km,MLh3.2/5,Error ellipse: s-maj=5.1km s-min=3.0km az=20.8,confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOY	**Mondy**	**1.69**	**116**	Pg	Pg	13 04 03.1	+2.6
MOY				Sg	Sg	13 04 23.0	+0.6
KNGR	**Kungurtug, Tuv**	**1.94**	**200**	Pg	Pg	13 04 09.4	+4.0
KNGR				Sg	Sg	13 04 33.6	+3.2
KZLR	**Kyzyl**	**2.63**	**256**	Pg	Pg	13 04 20.9	+2.2
KZLR				Sg	Sg	13 04 54.5	+1.7
ERNS	**Erzin**	**3.04**	**226**	Pg	Pg	13 04 26.0	-0.4
ERNS				Sg	Sg	13 05 05.4	-0.5
ARDR	**Aradan**	**3.14**	**275**	Pg	Pg	13 04 29.7	+1.3
ARDR				Sg	Sg	13 05 09.2	+0.3
ZAK	**Zakamensk**	**3.60**	**123**	Sg	Sg	13 05 23.7	0.0
DJOS	**Djoyskaya Sosn**	**4.38**	**278**	Sg	Sg	13 05 53.7	+4.9
GZLN	**Zheleznogorsk**	**4.85**	**327**	Sg	Sg	13 06 08.0	+4.2
LUZB	**Luzhba, Kemero**	**5.96**	**286**	Sg	Sg	13 06 35.3	-4.0

IDC 27 13:42:48.4±4.8,29.°63S×178.°04W,h0km,mb3.6/2, mbtmp3.6/2,Error ellipse: s-maj=236.1km s-min=74.3km az=165.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.12**	**266**	P	P	13 50 50.4	-0.4
	0.3nm,0.5s,baz=107,slow=7.4,SNR=6.9						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**44.04**	**271**	P	P	13 50 58.4	+0.2
	0.7nm,0.5s,baz=111,slow=7.9,SNR=15						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**144.42**	**340**	PKP	PKPdf	14 02 25.2	-0.7
	1.8nm,0.5s,baz=45,slow=4.3,SNR=10						

*IDC **27** 13:43:08.1±1.5,2.°05N×92.°44E,h0km,mb3.8/6, mbtmp4.0/9,ML4.4/3,MS3.2/8,Error ellipse: s-maj=40.6km s-min=20.5km az=54.0*
*NEIC **27** 13:43:10.1±2.0,2.°1N±0.°1×92.°2E±0.°1,h30km±7km, mb4.3/10,Error ellipse: s-maj=16.6km s-min=13.5km az=220.0*
*DJA **27** 13:43:11.4±1.7,2.°N±4.°×9.°2E±.°,h20km±15km,M5.1/22, mB5.5/12,mb4.9/22,MLv5.2/7,Mw(mB)5.0/12*
ISC 27 13:43:13.8±0.8,2.°11N±0.°09×92.°50E±0.°08,h35km,n55, σ2°94/46,mb4.3/15,MS3.3/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**5.14**	**99**	Pn	**Pn**	**13 44 28.6**	**+0.3**
GSI	**Gunungsitoli**	**5.14**	**99**	P	**Pn**	**13 44 28.6**	**+0.3**
	2.4nm14µm413nm,0.6s						
LHMI	**Lhok Sumawe**	**5.41**	**55**		**Pn**	**13 44 33.1**	**+1.0**
LHMI	**Lhok Sumawe**	**5.41**	**55**	P	**Pn**	**13 44 33.1**	**+1.0**
	1.2nm6µm196nm,0.8s						
KCSI	**Kotacane, Aceh**	**5.45**	**75**	P	**Pn**	**13 44 33.9**	**+1.3**
	2.4nm11µm464nm,0.7s						
TSI	**Tuntungan**	**6.21**	**77**	P	**Pn**	**13 44 43.9**	**+0.8**
	1.4nm6µm271nm,0.6s						
RPSI	**Rantau Prapat**	**6.45**	**85**	Pn	**Pn**	**13 44 46.4**	**+0.1**
PSI	**Prapat**	**6.46**	**84**	Pn	**Pn**	**13 44 46.8**	**+0.2**
	8.2nm,0.3s,baz=281,slow=6.4,SNR=41						
PSI				Sn	Sn	13 45 52.3	-6.8
	4.6nm,0.3s,baz=90,slow=20,SNR=2.7						
PSI				LR	LR	13 47 39.0	
	comp=Z,288nm,18.2s,baz=246,slow=42						
	22nm,0.4s						
SISI	**Saibi**	**7.42**	**117**	P	**Pn**	**13 44 59.8**	**+0.1**
	26nm,0.9s						
KULM	**Kulim**	**8.72**	**69**	Pn	**Pn**	**13 45 17.1**	**-0.5**
IPM	**Ipoh**	**8.83**	**74**	Pn	**Pn**	**13 45 18.2**	**-0.9**
PPSI	**Pulau Pagai**	**8.94**	**123**	P	**Pn**	**13 45 20.3**	**-0.2**
	200nm,1.4s						
PBA	**Port Blair**	**9.48**	**1**	Pn	**Pn**	**13 45 25.4**	**-2.6**
PBA	**Port Blair**	**9.48**	**1**	*eP*	**Pn**	**13 45 27.1**	**-0.9**
PBA				*eS*	Sn	13 47 03.4	-10
SRIT	**Nakonsritamara**	**9.56**	**47**		**Pn**	**13 45 28.4**	**-0.7**
DGPR	**DIGLIPUR**	**11.00**	**2**	*eP*	**Pn**	**13 45 50.6**	**+1.8**
DGPR				*eS*	Sn	13 47 41.5	-9.2
MNAI	**Manna**	**12.27**	**122**	Pn	**Pn**	**13 46 05.6**	**-0.6**
MNAI	**Manna**	**12.27**	**122**	P	**Pn**	**13 46 06.3**	**+0.1**
	292nm,1.0s						
PALK	**Pallekele**	**12.82**	**294**	Pn	**Pn**	**13 46 12.8**	**-0.9**
	1.4nm,0.3s,baz=226,slow=12,SNR=7.8						
PALK				Sn	Sn	13 48 25.0	-10
	7.5nm,0.3s,baz=339,slow=7.6,SNR=16						
	5.6nm,0.5s						
PALK	**Pallekele**	**12.82**	**294**	Pn	Pn	13 46 05.4	-8.4
CMAR	**Chiang Mai Arr**	**17.43**	**21**	P	**Pn**	**13 47 13.6**	**-0.8**
	0.5nm,0.3s,baz=216,slow=14,SNR=13						
CMAR				LR	LR	13 53 42.0	
	comp=Z,73nm,18.5s,baz=195,slow=36						
	1.1nm,0.4s						
PCHI	**Peechi**	**18.09**	**298**	*eP*	**P**	**13 47 27.4**	**+4.7**
PCHI				*eS*	Sn	13 50 29.0	-15
UBPT	**Khong Chiam**	**18.30**	**44**	P	**P**	**13 47 24.8**	**-0.2**
UBPT				IAmb	IAmb	13 47 26.0	
	comp=Z,16nm,1.2s						
SBUM	**Sibu**	**19.71**	**89**	P	**P**	**13 47 40.1**	**-0.4**
SBUM				IAmb	IAmb	13 47 42.6	
	comp=Z,14nm,0.9s						
HYBB	**Hyderabad (bro**	**20.47**	**319**	*eP*	**P**	**13 47 45.0**	**-3.7**
HYBB				*eS*	**S**	**13 51 27.7**	**-8.5**
UGM	**Wanagama**	**20.55**	**119**	P	**P**	**13 47 49.4**	**-0.3**
	comp=Z,87nm,1.6s						
H08S2	**Diego Garcia H**	**22.19**	**244**	T	T	14 10 18.9	
	baz=60,slow=76,SNR=4.0						
H08S3	**Diego Garcia H**	**22.19**	**244**	T	T	14 10 15.2	
	baz=60,slow=76,SNR=4.8						
H08S1	**Diego Carcia H**	**22.20**	**244**	T	T	14 10 18.9	
	baz=60,slow=76,SNR=3.5						
BOK	**Bokaro**	**22.48**	**344**	*eP*	P	13 48 24.6	+14
BOK				IAmb	IAmb	13 48 26.6	
	comp=Z,22nm,0.6s						
SHL	**Shillong**	**23.32**	**359**	*eP*	P	13 48 33.8	+15
SHL				*eS*	**S**	**13 52 39.1**	**+9.4**
KOHI	**KOHIMA**	**23.52**	**4**	*eP*	**P**	**13 48 22.6**	**+1.6**
KOHI				IAmb	IAmb	13 48 26.3	
	comp=Z,8.1nm,0.7s						
MOKO	**MOKOCHONG**	**24.15**	**4**	*eP*	**P**	**13 48 33.9**	**+7.0**
MOKO				IAmb	IAmb	13 48 42.2	
	comp=Z,18nm,0.5s						
MYLDM	**Lahad Datu**	**26.12**	**83**	P	**P**	**13 48 44.3**	**-0.6**
SMLA	**Simla**	**32.29**	**335**	*eP*	P	13 49 51.4	+12
SMLA				IAmb	IAmb	13 49 53.9	
	comp=Z,3.8nm,0.6s						
XAN	**Xi'an**	**35.27**	**24**	P	**P**	**13 50 05.0**	**-0.5**
XAN				pP	pP	13 50 11.5	-2.8
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.32**	**123**	P	**P**	**13 50 30.2**	**-1.3**
FITZ				IAmb	IAmb	13 50 46.6	
	comp=Z,4.6nm,1.1s						
MKAR	**Makanchi Array**	**45.38**	**350**	P	**P**	**13 51 27.7**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=186,slow=12,SNR=2.0						
	comp=Z,0.3nm,0.6s						
WB0	**Warramunga Arr**	**46.51**	**120**	P	**P**	**13 51 36.6**	**-1.6**
WB0				IAmb	IAmb	13 51 38.4	
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**46.53**	**120**	P	**P**	**13 51 37.3**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=298,slow=8.7,SNR=20						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**46.53**	**120**	P	**P**	**13 51 34.3**	**-4.1**
WRAB	**Tennant Creek**	**46.54**	**120**	P	**P**	**13 51 35.3**	**-3.1**
WRAB				IAmb	IAmb	13 51 52.8	
	comp=Z,4.5nm,1.1s						
WB2	**Warramunga Arr**	**46.54**	**120**	P	**P**	**13 51 36.6**	**-1.8**
WR0	**Warramunga Arr**	**46.71**	**120**	P	**P**	**13 51 38.5**	**-1.3**
WR0				IAmb	IAmb	13 51 56.5	
	comp=Z,3.7nm,1.1s						
SONM	**Songino Array**	**47.10**	**13**	P	**P**	**13 51 42.3**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=192,slow=8.7,SNR=11						
	comp=Z,1.6nm,0.5s						
AS31	**Alice Springs**	**47.73**	**125**	P	**P**	**13 51 45.1**	**-2.6**
ASAR	**Alice Springs**	**47.73**	**125**	P	**P**	**13 51 47.1**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=296,slow=7.4,SNR=11						
	comp=Z,0.4nm,0.4s						
KSRS	**Korea Array**	**47.91**	**38**	P	**P**	**13 51 48.9**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=220,slow=9.2,SNR=5.0						
KSRS				LR	LR	14 14 18.8	
	comp=Z,35nm,18.1s,baz=230,slow=39						
	comp=Z,1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**52.05**	**354**	P	**P**	**13 52 19.7**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=142,slow=5.1,SNR=2.7						
ZALV				LR	LR	14 15 48.1	
	comp=Z,16nm,21.3s,baz=94,slow=38						
	comp=Z,0.6nm,0.4s						
GUMO	**Guam**	**53.00**	**75**	LR	LR	14 13 50.3	
	comp=Z,12nm,22.0s,baz=165,slow=35						
MJAR	**Matsushiro Arr**	**54.29**	**45**	LR	LR	14 17 57.3	
	comp=Z,26nm,19.1s,baz=254,slow=38						
CTA	**Charters Tower**	**57.12**	**116**	LR	LR	14 18 17.6	
	comp=Z,22nm,21.0s,baz=56,slow=37						
VNDA	**Vanda**	**87.66**	**168**	LR	LR	14 30 21.0	
	comp=Z,29nm,18.6s,baz=252,slow=32						
TXAR	**Lajitas Array**	**145.11**	**25**	PKPbc	**PKPbc**	**14 02 48.2**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=222,slow=1.7,SNR=7.1						
LPAZ	**La Paz**	**156.29**	**232**	PKPbc	**PKPdf**	**14 03 14.3**	**+7.7**
	comp=Z,0.8nm,0.6s,baz=142,slow=4.7,SNR=3.7						

*MOS **27** 13:46:27.3±1.0,36.°04N×139.°85E,h64km,mb4.7/24,Error ellipse: s-maj=9.4km s-min=6.4km az=114.6*
*NIED **27** 13:46:28.4,36.°08N×139.°88E,h46km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.73; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-0.03; $M_{r\theta}$1.12; $M_{\theta\phi}$-0.57; $M_{\phi r}$1.06; Fault plane solution: $M_0$1.78000×10^{15} NP1: ϕ_s261.00000°,δ17.00000°,λ122.00000°. NP2: ϕ_s47.00000°,δ76.00000°,λ81.00000°.*
*NEIC **27** 13:46:28.2±2.1,36.°06N±0.°06×139.°88E±0.°07,h44km±6km, mb4.5/58 Error ellipse: s-maj=9.7km s-min=7.1km az=139.0*
*JMA **27** 13:46:28.4±0.1,36.°1N±0.°2×139.°9E±0.°3,h46km,MD4.1/39, MW4.1/39,SW IBARAKI PREF*
JMA Felt III J1 at SW IBARAKI PREF .
*IDC **27** 13:46:29.7±1.2,35.°94N×139.°78E,h69km±11km,mb3.8/19, mbtmp4.1/23,MS3.1/14,Error ellipse: s-maj=15.9km s-min=7.6km az=66.0*
ISC 27 13:46:28.1±0.6,36°07N±0'03×139°89E±0'04,h52km±5km, n192,σ1°12/169,mb4.4/63,MS3.2/12,4C-16D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.30**	**57**		**Pn**	**13 46 37.1**	**-0.3**
JYT				Sn	**Sn**	**13 46 42.9**	**-1.1**
JYT	**Yasato**	**0.30**	**57**	P	**Pn**	**13 46 37.1**	**-0.3**
JYT				S	**Sn**	**13 46 43.4**	**-0.7**
JYT	**Yasato**	**0.30**	**57**	A	A	13 46 37.1	
	comp=E,69nm,0.4s,comp=E,107nm,0.4s						
TOK	**Tokyo**	**0.39**	**195**	A	A	13 46 38.1	
	comp=E,55nm,0.6s,comp=E,60nm,0.6s						
JAG	**Ashikaga**	**0.50**	**316**	⇓*iP*	**Pn**	**13 46 39.3**	**-0.2**
JAG				⇓S	**Sn**	**13 46 47.0**	**-0.6**
JAG	**Ashikaga**	**0.50**	**316**	A	A	13 46 39.3	
	comp=E,38nm,0.2s,comp=E,61nm,0.4s						
JHU	**Hanno**	**0.53**	**247**	A	A	13 46 39.8	
	comp=E,6.0nm,0.9s,comp=E,8.0nm,0.7s						
JHYU	**Hitachinakayam**	**0.63**	**64**	A	A	13 46 41.0	
	comp=E,8.0nm,1.6s,comp=E,37nm,0.5s						
JSGW	**Sagamiharawaka**	**0.72**	**230**	A	A	13 46 42.3	
	comp=E,7.0nm,0.4s,comp=E,10.0nm,0.5s						
JHO	**Hitachi**	**0.78**	**45**	A	A	13 46 43.0	
	comp=E,7.0nm,0.9s,comp=E,11nm,0.8s						
JRY	**Ryogami san**	**0.80**	**267**	⇓P	**Pn**	**13 46 43.2**	**-0.1**
JRY				⇓S	**Sn**	**13 46 53.9**	**-0.4**
JRY	**Ryogami san**	**0.80**	**267**	A	A	13 46 43.2	
	comp=E,4.0nm,1.8s,comp=E,6.0nm,3.4s						
JYO	**Yokosk**	**0.86**	**192**	A	A	13 46 44.3	
	comp=E,21nm,1.1s,comp=E,13nm,1.3s						
JKT	**Katashina**	**0.87**	**324**	⇓*iP*	**Pn**	**13 46 43.9**	**-0.3**
JKT	**Katashina**	**0.87**	**324**	A	A	13 46 43.9	
	comp=E,27nm,0.6s,comp=E,23nm,0.3s						
JSB	**Shiboa**	**0.90**	**2**	A	A	13 46 44.7	
	comp=E,19nm,0.8s,comp=E,18nm,1.0s						
JKUC	**kamogawauchiur**	**0.94**	**164**	A	A	13 46 45.6	
	comp=E,11nm,1.3s,comp=E,9.0nm,2.6s						
JOD2	**Odawara 2**	**1.03**	**219**	P	**Pn**	**13 46 46.7**	**+0.4**
JOD2				S	**Sn**	**13 47 00.5**	**+0.7**
JOD2	**Odawara 2**	**1.03**	**219**	A	A	13 46 46.7	
	comp=E,9.0nm,2.7s,comp=E,7.0nm,2.2s						
JGK	**Kuni**	**1.12**	**297**	A	A	13 46 47.9	
	comp=E,4.0nm,0.3s,comp=E,5.0nm,1.2s						
JFFD	**Fukushimafurud**	**1.16**	**28**	A	A	13 46 48.4	
	comp=E,6.0nm,0.6s,comp=E,7.0nm,0.5s						
JYN	**Shimob**	**1.23**	**243**	P	**Pn**	**13 46 50.0**	**+1.0**
JHTM	**Izuhatsuma**	**1.32**	**213**	A	A	13 46 50.9	
	comp=E,13nm,0.9s,comp=E,13nm,0.3s						
JUON	**Uonuma**	**1.32**	**330**	P	**Pn**	**13 46 50.4**	**+0.2**
JFY	**Yanaizu**	**1.35**	**354**	⇓P	**Pn**	**13 46 51.0**	**+0.4**
JFY	**Yanaizu**	**1.35**	**354**	A	A	13 46 51.0	
	comp=E,7.0nm,1.5s,comp=E,3.0nm,6.8s						
BSO3	**Boso 3**	**1.36**	**158**	P	**Pn**	**13 46 50.7**	**+0.2**
JIM2	**Oshima 3**	**1.40**	**196**	P	**Pn**	**13 46 51.1**	**-0.2**
JIM2				S	**Sn**	**13 47 08.4**	**-0.2**
JIM2	**Oshima 3**	**1.40**	**196**	A	A	13 46 51.1	
	comp=E,10.0nm,2.5s,comp=E,9.0nm,1.7s						
JNT	**Takato**	**1.43**	**263**	A	A	13 46 52.5	
	comp=E,8.0nm,0.7s,comp=E,4.0nm,1.6s						
MJAR	**Matsushiro Arr**	**1.43**	**290**	P	**Pn**	**13 46 52.0**	**+0.2**
	250nm,0.3s,baz=91,slow=15,SNR=717						
MJAR				S	**Sn**	**13 47 11.0**	**+1.4**
	126nm,0.4s,baz=223,slow=28,SNR=4.6						
MJAR				LR	LR	13 47 40.0	
	comp=Z,430nm,20.8s,baz=142,slow=50						
MJAR	**Matsushiro Arr**	**1.43**	**290**	P	**Pn**	**13 46 52.0**	**+0.2**
MJAR				S	**Sn**	**13 47 11.0**	**+1.4**
MAJO	**Matsushiro**	**1.44**	**290**		**Pn**	**13 46 51.6**	**-0.2**
MAJO	**Matsushiro**	**1.44**	**290**	*d iP*	**Pn**	**13 46 52.2**	**+0.4**
JNG	**Nsakai**	**1.48**	**284**	A	A	13 46 53.2	
	comp=E,2.0nm,9.8s,comp=E,3.0nm,3.3s						
JFT	**Otama**	**1.49**	**14**	A	A	13 46 53.3	
	comp=E,10.0nm,2.1s,comp=E,9.0nm,3.3s						
JFK	**Kawauchi**	**1.52**	**31**	A	A	13 46 53.7	
	comp=E,3.0nm,1.0s,comp=E,3.0nm,4.0s						
SHZ3	**Shizuoka 3**	**1.69**	**234**	A	A	13 46 56.3	
	comp=E,4.0nm,0.9s,comp=E,4.0nm,1.0s						
JJN	**Nakama**	**1.73**	**307**	A	A	13 46 56.7	
	comp=E,3.0nm,0.7s,comp=E,3.0nm,4.5s						
JNY	**Yasuok**	**1.79**	**247**	A	A	13 46 57.7	
	comp=E,3.0nm,1.5s,comp=E,4.0nm,0.6s						
JMST	**Minamisoumatoc**	**1.84**	**26**	A	A	13 46 58.2	
	comp=E,5.0nm,0.4s,comp=E,4.0nm,0.4s						
JMM	**Marumori**	**1.94**	**22**	Pn	**Pn**	**13 46 58.9**	**+0.3**
JMM	**Marumori**	**1.94**	**22**	A	A	13 46 59.7	
	comp=E,5.0nm,3.5s,comp=E,4.0nm,0.7s						
JGF	**Kuroka**	**

comp=Z,32nm,18.4s,baz=21,slow=35
MA2 Magadan 24.57 13 P **P** 13 51 43.5 +0.6
comp=Z,11nm,0.9s,baz=151,slow=12,SNR=2.1
MA2 LR LR 14 02 59.9
comp=Z,23nm,18.3s,baz=162,slow=40
comp=Z,11nm,0.9s
MA2 Magadan 24.57 13 P **P** 13 51 43.3 +0.5
YAK Yakutsk 26.77 349 LR LR 14 02 14.0
comp=Z,32nm,19.1s,baz=276,slow=35
YAK Yakutsk 26.77 349*ce*P **P** 13 52 02.1 -0.6
YAK pmax pmax
comp=Z,9.0nm,0.7s
SONM Songino Array 27.33 306 P **P** 13 52 07.0 -1.1
comp=Z,1.1nm,0.5s,baz=108,slow=9.1,SNR=5.1
comp=Z,1.1nm,0.5s
SONM Songino Array 27.33 306 P **P** 13 52 07.0 -1.1
DGZ Jazzator, Alta 39.97 307*d i*P **P** 13 53 58.2 +0.6
DGZ pmax pmax
comp=Z,7.0nm,0.7s
CMAR Chiang Mai Arr 40.06 255 LR LR 14 10 59.2
comp=Z,14nm,18.2s,baz=210,slow=37
ZAA0 Zalesovo Array 41.67 313 P **P** 13 54 11.0 -0.2
ZAA0 IAmb IAmb 13 54 11.8
comp=Z,9.8nm,0.7s
ZALV Zalesovo Beam 41.67 313 P **P** 13 54 11.1 -0.2
comp=Z,11nm,0.6s,baz=96,slow=7.1,SNR=29
ZALV PcP **PcP** 13 56 06.4 -0.7
comp=Z,1.1nm,0.3s,baz=117,slow=2.4,SNR=4.3
comp=Z,11nm,0.6s
MK31 Makanchi Array 43.60 303 P **P** 13 54 26.8 -0.3
MK31 Makanchi Array 43.60 303 *i* P **P** 13 54 26.4 -0.7
MK31 pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 43.60 303 P **P** 13 54 26.7 -0.4
comp=Z,2.5nm,0.6s,baz=85,slow=9.7,SNR=25
comp=Z,2.5nm,0.6s
NRIK Noril'sk 43.64 336*de*P **P** 13 54 26.7 -0.4
NRIK pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 43.81 303 P **P** 13 54 28.6 -0.2
MAKZ IAmb IAmb 13 54 29.3
comp=Z,6.7nm,1.2s
MAKZ Makanchi 43.81 303 P **P** 13 54 28.6 -0.2
MAKZ pmax pmax
comp=Z,7.0nm,1.3s
SDPT Sand Point 44.35 45 P **P** 13 54 33.5 +0.5
SDPT IAmb IAmb 13 54 37.8
comp=Z,20nm,1.2s
KURK Kurchatov 45.57 309 P **P** 13 54 42.0 -0.6
KURK Kurchatov 45.57 309*c i*P **P** 13 54 41.8 -0.9
KURK pmax pmax
comp=Z,20nm,1.3s
KURBB Kurchatov Arra 45.63 309 P **P** 13 54 42.1 -1.1
PDGK Podgornoye 46.14 298 P **P** 13 54 46.9 -0.6
L19K White Mountain 47.41 35 P **P** 13 54 59.1 +2.1
L19K IAmb IAmb 13 55 30.8
comp=Z,4.9nm,1.3s
K20K Telida 47.82 34 P **P** 13 55 02.0 +1.9
K20K IAmb IAmb 13 55 02.6
comp=Z,3.0nm,0.6s
J20K Nowinta River 47.82 33 P **P** 13 55 01.9 +1.8
J20K IAmb IAmb 13 55 03.8
comp=Z,4.3nm,1.4s
IMAR Indian Mountai 48.11 30 P **P** 13 55 02.6 +0.3
H21K Melozitna Rive 48.47 31 P **P** 13 55 06.5 +1.4
H21K IAmb IAmb 13 55 48.8
comp=Z,5.3nm,1.4s
KDAK Kodiak Island 48.64 41 P **P** 13 55 06.7 +0.2
KDAK Kodiak Island 48.64 41 P **P** 13 55 06.7 +0.2
KDAK pmax pmax
comp=Z,25nm,1.2s
TKM2 Tokmak 2 49.01 299 *i* P **P** 13 55 10.2 +0.3
TKM2 pmax pmax
comp=Z,5.0nm,0.6s
MLY Manley 49.32 32 P **P** 13 55 12.9 +1.2
MLY IAmb IAmb 13 55 13.9
comp=Z,2.3nm,0.6s
MTN Manton Dam 49.34 191 P **P** 13 55 11.5 -0.7
TRF Thorofare Moun 49.52 34 P **P** 13 55 14.2 +0.8
TRF IAmb IAmb 13 55 38.9
comp=Z,5.7nm,1.3s
H23K Yukon River 49.83 31 P **P** 13 55 17.2 +1.7
H23K IAmb IAmb 13 55 21.3
comp=Z,2.9nm,0.9s
AAK Ala-Archa 49.87 299*de*P **P** 13 55 16.4 +0.1
AAK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 50.37 313 P **P** 13 55 19.5 -0.3
BRVK IAmb IAmb 13 55 24.5
comp=Z,4.4nm,1.0s
BRVK Borovoye 50.37 313↓ *e*P **P** 13 55 18.9 -0.9
BRVK pmax pmax
comp=Z,4.0nm,1.0s
MDM Murphy Dome 50.39 32 P **P** 13 55 20.9 +1.1
MDM IAmb IAmb 13 55 22.0
comp=Z,3.8nm,0.6s
WRH Wood River Hil 50.46 32 P **P** 13 55 21.1 +0.8
H24K Noodor Dome 50.51 31 P **P** 13 55 21.7 +1.0
CCB Clear Creek Bu 50.58 32 P **P** 13 55 22.6 +1.5
DHY Denali Highway 50.85 34 P **P** 13 55 24.5 +1.1
IL31 50.97 32 P **P** 13 55 24.6 +0.6
IL31 IAmb IAmb 13 55 27.9
comp=Z,5.3nm,1.3s
ILAR Eielson Array 50.97 32 P **P** 13 55 24.4 +0.3
comp=Z,1.6nm,0.6s,baz=267,slow=5.5,SNR=23
comp=Z,1.6nm,0.6s
ILAR Eielson Array 50.97 32 P **P** 13 55 24.9 +0.8
ILAR Eielson Array 50.97 32 P **P** 13 55 24.9 +0.8
SCM Sheep Creek Mo 50.97 36 P **P** 13 55 24.2 -0.1
SCM IAmb IAmb 13 55 47.0
comp=Z,17nm,1.5s
SCM Sheep Creek Mo 50.97 36 P **P** 13 55 24.2 -0.1
SCM pmax pmax
comp=Z,17nm,1.5s
PRP Porcupine Dome 51.50 31 P **P** 13 55 29.4 +1.2
PRP IAmb IAmb 13 55 50.4
comp=Z,4.3nm,1.3s
J25K Salcha River, 51.63 32 P **P** 13 55 30.9 +1.8
PAX Paxson 51.73 34 P **P** 13 55 29.8 -0.1
PAX Paxson 51.73 34 P **P** 13 55 29.8 -0.1
PAX pmax pmax
comp=Z,3.0nm,1.2s
BMAR Burnt Mountain 51.77 28 P **P** 13 55 31.0 +0.9
RIDG Independent Ri 51.93 33 P **P** 13 55 31.4 0.0
RIDG IAmb IAmb 13 55 38.3
comp=Z,2.1nm,0.6s
SCRK Sand Creek 52.29 33 P **P** 13 55 34.1 0.0
SCRK IAmb IAmb 13 55 36.6
comp=Z,3.9nm,1.2s
KNRA Kununurra 52.53 194 P **P** 13 55 35.7 -0.5
KK31 Karatay Array 52.55 300 *i* P **P** 13 55 35.8 -0.4
KKAR Karatay Array 52.55 300 P **P** 13 55 35.2 -1.0
KKAR Karatay Array 52.55 300 P **P** 13 55 35.2 -1.0
K27K Chicken 53.12 33 P **P** 13 55 41.2 +1.2
L27K Beaver Creek, 53.36 34 P **P** 13 55 43.5 +1.5
BCAR Beaver Creek A 53.38 34 P **P** 13 55 43.5 +1.4
EGAK Eagle 53.41 32 P **P** 13 55 42.6 +0.4
M27K Edge Creek, AK 53.45 35 P **P** 13 55 44.2 +1.5
M27K IAmb IAmb 13 55 47.9
comp=Z,3.1nm,0.8s
MESA MESA 53.79 37 P **P** 13 55 46.3 +1.0
CHGR Chuyangaron 54.97 296 P **P** 13 55 53.8 -0.3
CHGR Chuyangaron 54.97 296 P **P** 13 55 53.8 -0.3
CHGR pmax pmax
comp=Z,25nm,0.6s
EPYK Eagle Plains 54.97 29 P **P** 13 55 54.9 +1.3
EPYK IAmb IAmb 13 55 55.8
comp=Z,5.7nm,0.6s
FITZ Fitzroy Crossi 55.53 196 P **P** 13 55 57.9 -0.1
FITZ IAmb IAmb 13 56 01.2
comp=Z,9.9nm,1.4s
WB0 Warramunga Arr 55.77 186 P **P** 13 55 59.2 -0.6
INK Inuvik 55.80 27 P **P** 13 56 00.2 +0.8
comp=Z,6.2nm,0.7s,baz=308,slow=5.8,SNR=8.5
comp=Z,2.6nm,0.7s
INK Inuvik 55.80 27 P **P** 13 55 59.1 -0.3
INK IAmb IAmb 13 56 04.5
comp=Z,3.3nm,0.9s
INK Inuvik 55.80 27 P **P** 13 55 59.1 -0.3
INK pmax pmax
comp=Z,3.0nm,0.9s
HYT Haines Junctio 55.80 36 P **P** 13 55 59.0 -0.8
HYT IAmb IAmb 13 56 03.9
comp=Z,2.7nm,0.8s
WRAB Tennant Creek 55.94 186 P **P** 13 56 00.3 -0.6
WRAB Tennant Creek 55.94 186 *i* P **P** 13 56 00.4 -0.6
WRAB *i* *PP **pP** 13 56 15.1 -0.1
WB2 Warramunga Arr 55.95 186 P **P** 13 56 00.5 -0.6
WB2 IAmb IAmb 13 56 18.1
comp=Z,5.6nm,0.8s
WR0 Warramunga Arr 55.95 186 P **P** 13 56 00.8 -0.3
WRA Warramunga Arr 55.95 186 P **P** 13 56 00.6 -0.5
comp=Z,1.5nm,0.4s,baz=0.7,slow=7.5,SNR=57
comp=Z,1.5nm,0.4s
WRA Warramunga Arr 55.95 186 P **P** 13 56 00.4 -0.7
ARU Arti 56.27 319 LR LR 14 20 33.5
comp=Z,22nm,18.6s,baz=209,slow=36
ARU Arti 56.27 319 P **P** 13 56 03.0 0.0
ARU IAmb IAmb 13 56 03.2
comp=Z,6.4nm,0.6s
ARU Arti 56.27 319*d i*P **P** 13 56 02.7 -0.3
ARU 13 58 09.7
ARU S **S** 14 03 48.5 -0.4
ARU SS **SS** 14 07 29.5 -6.1
ARU pmax pmax
comp=Z,5.0nm,0.5s
A36M Sachs Harbour 57.61 22 P **P** 13 56 13.9 +1.7
AB31 Akbulak array 57.62 310 *e*P **P** 13 56 12.0 -0.7
ABKAR Akbulak array 57.62 310 P **P** 13 56 12.1 -0.6
ABKAR IAmb IAmb 13 56 13.1
comp=Z,4.7nm,0.6s
ASAR Alice Springs 59.68 186 P **P** 13 56 27.2 +0.1
comp=Z,0.7nm,0.6s,baz=16,slow=10.0,SNR=12
comp=Z,0.7nm,0.6s
ASAR Alice Springs 59.68 186 P **P** 13 56 27.9 +0.7
MBWA Marble Bar 60.03 202 P **P** 13 56 30.9 +1.3
MBWA IAmb IAmb 13 56 56.1
comp=Z,11nm,1.2s
KIRV Kirov 60.28 323*ce*P **P** 13 56 31.4 +0.5
EUNU Eureka 61.32 8 P **P** 13 56 37.9 0.0
EUNU IAmb IAmb 13 56 45.0
comp=Z,10nm,1.2s
DZM Mont Dzumac 63.05 152 LR LR 14 25 51.8
comp=Z,43nm,18.6s,baz=321,slow=38
GEYT Alibeck 63.22 299 P **P** 13 56 50.4 -0.8
comp=Z,2.1nm,0.7s,baz=169,slow=1.5,SNR=4.0
comp=Z,2.1nm,0.7s
BELG Belogornoye 63.67 317*d i*P **P** 13 56 53.1 -0.6
BELG pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 64.46 339 P **P** 13 56 59.0 +0.3
comp=Z,0.5nm,0.4s,baz=45,slow=7.3,SNR=5.6
ARCES LR LR 14 28 23.3
comp=Z,13nm,19.2s,baz=352,slow=39
comp=Z,0.5nm,0.4s
FINES FINESS Array B 69.09 332 P **P** 13 57 28.4 +0.2
comp=Z,5.0nm,0.9s,baz=35,slow=7.7,SNR=7.5
comp=Z,5.0nm,0.9s
FINES FINESS Array B 69.09 332 P **P** 13 57 27.7 -0.6
KBZ Khabaz 70.59 310 P **P** 13 57 38.0 +0.2
comp=Z,3.1nm,0.8s,baz=9.8,slow=2.4,SNR=5.6
comp=Z,3.1nm,0.8s
KBZ Khabaz 70.59 310*de*P **P** 13 57 38.0 +0.2
KIV Kislovodsk 70.60 311 *e*P **P** 13 57 36.2 -1.8
KIV pmax pmax
comp=Z,7.0nm,1.0s
SUMG Summit 71.64 359 P **P** 13 57 44.9 +0.7
SUMG IAmb IAmb 13 57 45.8
comp=Z,6.0nm,0.8s
SUMG Summit 71.64 359 P **P** 13 57 44.9 +0.7
SUMG pmax pmax
comp=Z,6.0nm,0.8s
AKASG Malin Array Be 74.30 322 P **P** 13 57 59.0 -0.8
comp=Z,0.9nm,0.4s,baz=45,slow=5.8,SNR=9.7
AKASG LR LR 14 31 13.9
comp=Z,24nm,20.5s,baz=344,slow=36
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 74.30 322 P **P** 13 57 59.0 -0.8
NC405 NORSAR Array S 74.38 337 P **P** 13 57 59.6 -0.5
NC204 NORSAR Array S 74.56 337 P **P** 13 58 00.8 -0.4
NB2 NORSAR Subarra 74.59 337 P **P** 13 58 00.8 -0.6
comp=Z,1.4nm,0.5s,baz=42,slow=5.9
NOA NORSAR Array B 74.59 337 P **P** 13 58 00.8 -0.6
comp=Z,1.3nm,0.5s,baz=45,slow=5.4,SNR=8.5
comp=Z,1.3nm,0.5s
NVAR Mina Array Bea 76.55 52 P **P** 13 58 14.5 +1.3
comp=Z,1.0nm,0.7s,baz=284,slow=5.1,SNR=10.0
comp=Z,1.0nm,0.7s
FRB Frobisher Bay 77.99 13 LR LR 14 36 37.0
comp=Z,17nm,18.2s,baz=0.0,slow=38
R11A Troy Canyon, C 78.33 51 P **P** 13 58 24.5 +1.4
BRTR Keskin Array B 78.56 311 P **P** 13 58 23.9 -0.4
comp=Z,0.4nm,0.5s,baz=79,slow=3.7,SNR=2.7
comp=Z,0.4nm,0.5s
P17A Butcher Ranch, 80.61 48 P **P** 13 58 36.7 +1.2
SRU San Rafael Swe 80.97 48 P **P** 13 58 38.7 +1.3
SRU San Rafael Swe 80.97 48 P **P** 13 58 38.7 +1.3
SRU pmax pmax
comp=Z,2.0nm,0.7s
VRAC Vranov 81.25 326 LR LR 14 37 26.2
comp=Z,18nm,18.9s,baz=42,slow=38
CLL Collm 81.31 329 *e*P **P** 13 58 38.0 -0.7
CLL pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 81.31 329 *e*P **P** 13 58 38.0 -0.7
comp=Z,3.0nm,0.6s
PV13 Radium Mtn., P 82.61 48 P **P** 13 58 48.5 +2.4
PV13 IAmb IAmb 13 58 49.0
comp=Z,7.1nm,1.5s
GERES GERESS Array B 82.87 327 P **P** 13 58 46.5 -0.6
comp=Z,0.3nm,0.4s,baz=37,slow=5.3,SNR=4.2
comp=Z,0.3nm,0.4s
DAVOX Davos/Dischmat 86.11 328 LR LR 14 40 55.9
comp=Z,13nm,18.2s,baz=79,slow=38
TXAR Lajitas Array 91.69 51 P **P** 13 59 31.2 +1.0
comp=Z,0.5nm,0.5s,baz=300,slow=3.0,SNR=10
comp=Z,0.5nm,0.5s

*IDC **27** 14:10:51.1±2.5,6.°84S×128.°34E,h0km,mb3.3/1, mbtmp3.2/3,ML3.2/2,Error ellipse: s-maj=208.5km s-min=32.8km az=66.0*
ISC 27 14:11:06.8±1.2,**7.°77S**±0.°10×**127.°9E**±0.°1,**h35**km,**n10,** σ3**°27**/10,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam**	**5.95**	**148**	P	**Pn**	**14 12 36.1**	**+3.6**
FAKI	**Fak Fak**	**6.46**	**42**	P	**Pn**	**14 12 38.6**	**-0.9**
KDU	**Kakadu**	**6.63**	**138**	P	**Pn**	**14 12 44.6**	**+2.8**
KNRA	**Kununurra**	**7.90**	**174**	P	**Pn**	**14 13 01.4**	**+2.1**
PLAI	**Plampang**	**10.10**	**263**	P	**Pn**	**14 13 29.2**	**-0.2**
	22nm,1.0s						
FITZ	**Fitzroy Crossi**	**10.51**	**192**	P	**Pn**	**14 13 36.8**	**+1.8**
	9.6nm,2.5s						
WRAB	**Tennant Creek**	**13.60**	**153**	P	**Pn**	**14 14 20.8**	**+3.4**
	6.2nm,2.2s						
WRA	**Warramunga Arr**	**13.61**	**153**	Pn	**Pn**	**14 14 14.3**	**-3.2**
	0.1nm,0.3s,baz=336,slow=9.6,SNR=13						
WRA				Sn	Sn	14 16 38.6	-8.9
	0.3nm,0.3s,baz=335,slow=23,SNR=7.9						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**16.82**	**161**	P	**Pn**	**14 14 57.7**	**-2.0**
	0.1nm,0.3s,baz=339,slow=11,SNR=21						
ASAR				S	**Sn**	**14 18 01.2**	**-4.4**
	0.6nm,1.0s,baz=313,slow=22,SNR=4.4						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**67.76**	**328**	P	P	14 21 47.2	-14
	0.1nm,0.4s,baz=123,slow=5.3,SNR=2.3						
	0.1nm,0.4s						

IDC 27 14:39:04.3±1.4,**5.°41S**×**147.°58E**,**h0**km,**mb3.7**/3, **mbtmp3.8**/5,**ML3.6/2**,**Error ellipse: s-maj=63.7km s-min=23.0km az=138.0**,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.57**	**76**	Pn	Pn	14 40 14.4	-0.3
	2.7nm,0.3s,baz=262,slow=7.1,SNR=4.7						
	29nm,0.8s						
WRA	**Warramunga Arr**	**19.35**	**221**	P	P	14 43 30.4	-1.2
	0.2nm,0.3s,baz=43,slow=11,SNR=15						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**22.42**	**215**	P	P	14 44 04.9	+0.1
	0.6nm,0.5s,baz=50,slow=8.6,SNR=16						
	0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.86**	**238**	P	P	14 44 29.4	+0.6
	4.5nm,1.0s,baz=51,slow=5.3,SNR=7.7						
	4.5nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**30.32**	**38**	T	T	15 17 04.7	
	baz=220,slow=74,SNR=25						
H11S2	**WAKE ISLAND Hy**	**30.33**	**38**	T	T	15 17 08.1	
	baz=220,slow=74,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**30.34**	**38**	T	T	15 17 04.5	
	baz=220,slow=74,SNR=14						
H11N1	**WAKE ISLAND Hy**	**31.38**	**37**	T	T	15 18 23.5	
	baz=219,slow=76,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**31.39**	**37**	T	T	15 18 24.7	
	baz=219,slow=76,SNR=10.0						
H11N2	**WAKE ISLAND Hy**	**31.40**	**37**	T	T	15 18 25.0	
	baz=219,slow=76,SNR=19						
ILAR	**Eielson Array**	**84.72**	**23**	P	P	14 51 40.0	0.0
	0.5nm,0.7s,baz=258,slow=4.2,SNR=5.9						
	0.5nm,0.7s						

*NEIC **27** 14:46:39.6±1.5,29.°0N±0.°1×66.°17E±0.°06,h10km±2km, mb4.2/4,Error ellipse: s-maj=22.9km s-min=7.2km az=192.0*
*IDC **27** 14:46:46.2±1.0,29.°86N×66.°43E,h0km,mb3.8/16, mbtmp3.9/18,ML3.6/2,MS3.3/15,Error ellipse: s-maj=22.1km s-min=18.6km az=27.0*
ISC 27 14:46:51.1±0.7,**29.°80N**±0.°09×**66.°34E**±0.°06,**h35**km,**n56,** σ1**°27**/46,**mb3.7**/16,**MS3.1**/14,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**5.26**	**25**	Pn	**Pn**	**14 48 08.4**	**+1.0**
THW	**Thamme Wali**	**5.51**	**56**	P	**Pn**	**14 48 10.0**	**-0.7**
HRA	**Herat**	**5.75**	**324**		**Pn**	**14 48 12.8**	**-1.3**
CEP	**Cherat**	**6.21**	**48**	P	**Pn**	**14 48 19.9**	**-0.6**
NIL	**Nilore**	**7.03**	**55**	Pn	**Pn**	**14 48 31.4**	**-0.1**
CHCP	**Chirah Chowk**	**7.04**	**55**	P	**Pn**	**14 48 31.9**	**+0.1**
JMU	**Jammu**	**7.88**	**66**	*e*S	**Sn**	**14 50 10.9**	**-0.3**
AJM	**Ajmer**	**8.04**	**112**	*e*P	Pn	14 49 00.0	+15
THN	**Thein Dam**	**8.46**	**70**	*e*P	Pn	14 48 57.7	+6.6
THN				*e*S	**Sn**	**14 50 25.7**	**+0.4**
BHK	**Bhakra**	**8.83**	**77**	*e*P	**Pn**	**14 48 58.7**	**+2.3**
BHK				*e*S	**Sn**	**14 50 33.7**	**-1.0**
KUDL	**Kundal**	**9.04**	**98**	*e*P	Pn	14 49 05.3	+6.1
CHGR	**Chuyangaron**	**9.14**	**14**	Pn	**Pn**	**14 49 00.8**	**+0.2**
SMLA	**Simla**	**9.44**	**79**	*e*P	**Pn**	**14 49 06.5**	**+1.9**
SMLA				IAML		14 51 11.6	
	comp=E,44nm,0.9s						
SMLA				IAML		14 51 12.8	
	comp=N,54nm,0.9s						
WSAR	**Wadi Sarin**	**9.50**	**228**	Pn	**Pn**	**14 49 05.2**	**-0.3**
	comp=N,0.8nm,0.3s,baz=65,slow=8.1,SNR=4.3						
	comp=N,3.2nm,0.4s						
GEYT	**Alibeck**	**10.60**	**322**	Pn	**Pn**	**14 49 20.9**	**+0.4**
	comp=N,0.3nm,0.3s,baz=151,slow=9.2,SNR=1.6						
GEYT				LR	LR	14 53 27.8	
	comp=N,80nm,19.0s,baz=160,slow=38						
	comp=N,0.8nm,0.5s						
KK31	**Karatay Array**	**13.70**	**13**	Pn	**Pn**	**14 50 05.5**	**+2.7**
KKAR	**Karatay Array**	**13.70**	**13**	Pn	**Pn**	**14 50 05.0**	**+2.2**
KKAR	**Karatay Array**	**13.70**	**13**	P	**P**	**14 50 11.9**	**+0.8**
PYUN	**Piuthan**	**14.68**	**93**	*e*P	**Pn**	**14 50 17.0**	**+0.6**
KOLN	**Koldanda**	**15.27**	**93**	*e*P	**Pn**	**14 50 24.8**	**+0.5**
DANN	**Dangsing**	**15.30**	**91**	*e*P	**Pn**	**14 50 24.3**	**-0.5**
HYBB	**Hyderabad (bro**	**16.63**	**135**	*e*Pn	Pn	14 50 27.1	-14
HYBB				*e*Sn	Sn	14 53 27.5	-18
PKIN	**Phulchoki**	**16.87**	**93**	*e*P	**P**	**14 50 46.0**	**-0.6**
	comp=N,6.2nm,0.4s						
PKI	**Pulchoki**	**16.88**	**93**	*e*P	**P**	**14 50 46.3**	**-0.5**
GUN	**Gumba**	**17.22**	**91**	*e*P	**Pn**	**14 50 48.8**	**-0.5**
	comp=N,17nm,0.4s						
JIRN	**Jiri**	**17.54**	**92**	*e*P	**P**	**14 50 54.3**	**+0.1**
	comp=N,15nm,0.5s						
RAMN	**Ramite**	**18.05**	**94**	*e*P	**P**	**14 51 03.1**	**+3.4**
	comp=N,8.2nm,0.6s						
ABKAR	**Akbulak array**	**20.04**	**348**		**P**	**14 51 20.2**	**-0.8**
ABKAR	**Akbulak array**	**20.04**	**348**		**P**	**14 51 20.5**	**-0.5**
ABKAR				IAmb	IAmb	14 51 28.2	
	comp=Z,6.0nm,0.8s						
GNI	**Garni**	**20.44**	**306**	P	**P**	**14 51 26.8**	**+1.2**
	comp=Z,4.7nm,0.4s,baz=76,slow=12,SNR=3.2						
	comp=Z,4.7nm,0.4s						
MAKZ	**Makanchi**	**20.89**	**31**	P	**P**	**14 51 30.0**	**-0.3**
MAKZ				IAmb	IAmb	14 51 35.8	
	comp=Z,16nm,1.1s						
MK31	**Makanchi Array**	**21.02**	**32**		**P**	**14 51 30.2**	**-1.4**
MK31				IAmb	IAmb	14 51 37.8	
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**21.02**	**32**	P	**P**	**14 51 30.8**	**-0.9**
	comp=Z,2.5nm,0.6s,baz=214,slow=9.9,SNR=30						
MKAR				LR	LR	14 59 47.2	
	comp=Z,31nm,18.3s,baz=302,slow=37						
	comp=Z,2.5nm,0.6s						
AKTO	**Aktyubinsk**	**21.55**	**345**	P	**P**	**14 51 37.1**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=146,slow=12,SNR=5.0						
AKTO				LR	LR	15 01 03.5	
	comp=Z,54nm,18.9s,baz=153,slow=40						
	comp=Z,1.7nm,0.5s						
KURBB	**Kurchatov Arra**	**22.73**	**20**	P	**P**	**14 51 48.4**	**-1.5**
	comp=Z,1.1nm,0.2s,baz=212,slow=9.3,SNR=8.1						
	comp=Z,1.1nm,0.2s						
KBZ	**Khabaz**	**23.27**	**313**	P	**P**	**14 51 57.5**	**+2.1**
	comp=Z,1.7nm,0.5s,baz=155,slow=6.9,SNR=4.0						
	comp=Z,1.7nm,0.5s						
BVAR	**Borovoye Array**	**23.40**	**6**	P	**P**	**14 51 56.2**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=182,slow=10,SNR=13						
	comp=Z,1.4nm,0.5s						
BRVK	**Borovoye**	**23.42**	**6**		**P**	**14 51 53.9**	**-2.9**
BELG	**Belogornoye**	**26.46**	**334**	P	**P**	**14 52 25.1**	**+0.4**
	comp=Z,10nm,0.8s,baz=304,slow=2.4,SNR=4.4						
BELG				LR	LR	15 05 29.5	
	comp=Z,42nm,18.3s,baz=136,slow=42						
	comp=Z,10nm,0.8s						
EIL	**Elat**	**27.22**	**278**	LR	LR	15 04 22.5	
	comp=Z,94nm,18.5s,baz=89,slow=39						
ZALV	**Zalesovo Beam**	**27.61**	**24**	P	**P**	**14 52 35.3**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=251,slow=8.7,SNR=3.6						
ZALV				LR	LR	15 04 46.8	
	comp=Z,57nm,19.2s,baz=210,slow=39						
	comp=Z,0.7nm,0.4s						
BRTR	**Keskin Array B**	**28.50**	**299**	P	**P**	**14 52 42.9**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=81,slow=8.9,SNR=2.5						
	comp=Z,0.4nm,0.6s						
AKASG	**Malin Array Be**	**34.68**	**318**	LR	LR	15 09 33.6	
	comp=Z,13nm,19.1s,baz=162,slow=39						
SONM	**Songino Array**	**35.55**	**48**	P	**P**	**14 53 43.2**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=224,slow=4.0,SNR=1.2						
SONM				LR	LR	15 10 42.2	
	comp=Z,155nm,19.1s,baz=248,slow=40						
	comp=Z,0.2nm,0.4s						
FINES	**FINESS Array B**	**41.21**	**332**	P	**P**	**14 54 31.2**	**-0.9**
	comp=Z,4.4nm,0.9s,baz=126,slow=7.1,SNR=3.7						
FINES				LR	LR	15 13 37.1	
	comp=Z,30nm,21.0s,baz=69,slow=39						
	comp=Z,4.4nm,0.9s						
VRAC	**Vranov**	**42.15**	**312**	LR	LR	15 14 46.8	
	comp=Z,24nm,18.4s,baz=194,slow=40						
GERES	**GERESS Array B**	**43.98**	**311**	P	**P**	**14 54 54.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=107,slow=7.1,SNR=4.6						
	comp=Z,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**46.04**	**341**	P	**P**	**14 55 09.8**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=127,slow=7.8,SNR=12						
	comp=Z,1.9nm,0.6s						
HFS	**Hagfors**	**46.21**	**327**	LR	LR	15 18 50.5	
	comp=Z,26nm,19.8s,baz=70,slow=42						
DAVOX	**Davos/Dischmat**	**46.43**	**308**	LR	LR	15 23 04.4	
	comp=Z,16nm,18.7s,baz=80,slow=47						
NOA	**NORSAR Array B**	**47.64**	**327**	LR	LR	15 17 57.6	
	comp=Z,23nm,20.1s,baz=115,slow=39						
LSZ	**Lusaka**	**57.98**	**225**	LR	LR	15 21 28.9	
	comp=Z,59nm,20.8s,baz=162,slow=36						
RES	**Resolute Bay**	**75.05**	**355**	LR	LR	15 35 44.4	
	comp=Z,108nm,19.1s,baz=286,slow=39						
WRA	**Warramunga Arr**	**82.03**	**118**	P	**P**	**14 59 09.1**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=318,slow=5.0,SNR=2.2						
	comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**82.24**	**14**	P	**P**	**14 59 08.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=321,slow=4.3,SNR=8.3						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**83.87**	**122**	P	**P**	**14 59 18.3**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=308,slow=5.1,SNR=8.7						
	comp=Z,0.4nm,0.6s						

*IDC **27** 14:53:58.2±1.3,23.°64S×82.°85E,h0km,mb3.7/6, mbtmp3.7/6,MS3.6/10,Error ellipse: s-maj=41.0km s-min=28.6km az=19.0*
ISC 27 14:53:59.7±1.2,**23.°75**±0.°3×**82.°9E**±0.°2,**h10**km,**n21,** σ0**°24**/6,**mb3.9**/6,**MS3.7**/10,**South Indian Ocean**

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

H08S2	**Diego Garcia H**	**18.78**	**326**	T	T	15 17 24.2			
	baz=151,slow=74,SNR=132								
H08S1	**Diego Garcia H**	**18.79**	**326**	T	T	15 17 21.3			
	baz=151,slow=74,SNR=140								
H08S3	**Diego Garcia H**	**18.80**	**326**	T	T	15 17 25.9			
	baz=151,slow=74,SNR=206								
LEM	**Lembang**	**29.09**	**59**	LR	LR	15 08 59.0			
	comp=Z,67nm,21.9s,baz=224,slow=31								
H01W3	**Cape Leeuwin H**	**29.37**	**119**	T	T	15 30 45.7			
	baz=284,slow=75,SNR=17								
H01W2	**Cape Leeuwin H**	**29.38**	**120**	T	T	15 30 45.9			
	baz=284,slow=75,SNR=18								
H01W1	**Cape Leeuwin H**	**29.39**	**120**	T	T	15 30 47.0			
	baz=284,slow=75,SNR=17								
CMAR	**Chiang Mai Arr**	**44.72**	**22**	LR	LR	15 18 03.8			
	comp=Z,26nm,18.3s,baz=205,slow=32								
ASAR	**Alice Springs**	**46.55**	**101**	P	**P**	**15 02 27.7**	**-0.2**		
	1.6nm,0.9s,baz=263,slow=7.2,SNR=8.5								
	1.6nm,0.9s								
WRA	**Warramunga Arr**	**47.74**	**96**	P	**P**	**15 02 37.6**	**+0.3**		
	0.8nm,0.9s,baz=258,slow=8.4,SNR=2.8								
	0.8nm,0.9s								
BOSA	**Boshof**	**51.52**	**251**	P	**P**	**15 03 06.2**	**0.0**		
	1.4nm,0.7s,baz=113,slow=6.7,SNR=3.6								
BOSA				LR	LR	15 20 52.5			
	comp=Z,60nm,18.2s,baz=86,slow=31								
	1.4nm,0.7s								
LBTB	**Lobatse**	**51.84**	**256**	LR	LR	15 21 16.9			
	comp=Z,68nm,18.5s,baz=81,slow=32								
STKA	**Stephens Creek**	**52.08**	**113**	LR	LR	15 22 15.4			
	comp=Z,56nm,21.6s,baz=208,slow=33								
WSAR	**Wadi Sarin**	**52.23**	**331**	LR	LR	15 21 12.4			
	comp=Z,49nm,19.7s,baz=156,slow=31								
ATD	**Arta Tunnel**	**52.46**	**307**	LR	LR	15 22 34.0			
	comp=Z,80nm,18.5s,baz=104,slow=33								
SUR	**Sutherland**	**54.79**	**246**	LR	LR	15 21 52.4			
	comp=Z,74nm,18.6s,baz=129,slow=30								
MKAR	**Makanchi Array**	**70.13**	**360**	P	**P**	**15 05 12.3**	**+0.1**		
	0.3nm,0.6s,baz=162,slow=5.9,SNR=4.4								
	0.3nm,0.6s								
EIL	**Elat**	**70.22**	**317**	LR	LR	15 31 44.6			
	comp=Z,40nm,19.2s,baz=83,slow=32								
KURBB	**Kurchatov Arra**	**74.06**	**357**	P	**P**	**15 05 35.5**	**-0.1**		
	0.3nm,0.8s,baz=161,slow=6.6,SNR=2.2								
	0.3nm,0.8s								
ZALV	**Zalesovo Beam**	**77.31**	**1**	P	**P**	**15 05 54.0**	**-0.2**		
	1.2nm,0.7s,baz=194,slow=3.1,SNR=4.3								
	1.2nm,0.7s								
USRK	**Ussuriysk Ar.**	**81.14**	**33**	LR	LR	15 38 54.1			
	comp=Z,145nm,21.8s,baz=137,slow=33								

IDC 27 15:03:48.2±4.8, 25°33S×130°25E, h0km, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=38.4km s-min=27.1km az=85.0, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**3.72**	**64**	Pn	Pn	15 04 46.6	-0.3
	0.1nm,0.3s,baz=243,slow=12,SNR=4.4						
ASAR				Pg	Pg	15 04 57.3	-2.2
	0.1nm,0.3s,baz=240,slow=16,SNR=6.9						
ASAR				Sn	Sn	15 05 34.6	+3.1
	0.2nm,0.3s,baz=247,slow=21,SNR=4.7						
ASAR				Lg	Lg	15 05 46.1	
	0.2nm,0.3s,baz=242,slow=28,SNR=3.0						
	0.7nm,1.0s						
WRA	**Warramunga Arr**	**6.56**	**36**	Pn	Pn	15 05 24.7	-1.3
	0.1nm,0.3s,baz=218,slow=13,SNR=1.6						
WRA				Lg	Lg	15 07 16.1	
	0.1nm,0.3s,baz=212,slow=28,SNR=1.7						
	0.3nm,0.8s						
STKA	**Stephens Creek**	**11.91**	**126**	Pn	Pn	15 06 39.5	+0.1
	0.1nm,0.3s,baz=305,slow=12,SNR=3.1						
	3.9nm,1.1s						

*NDI **27** 15:04:44.9±3.5, 23°.93N×93°.71E, h78km±132km, ML3.7*
*IDC **27** 15:04:44.3±2.4, 23°.82N×94°.03E, h67km±27km, mb3.5/6, mbtmp3.8/7, ML3.9/1, MS3.2/3, Error ellipse: s-maj=20.6km s-min=13.0km az=41.0*

ISC 27 15:04:43.4±0.8, 23°.91N±0°.05×93°.82E±0°.06, h68km, n37, σ2s08/51, mb3.6/9, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**1.82**	**8**	*eP*	**Pn**	**15 05 13.4**	**+0.6**
KOHI				*eP*		15 05 13.6	
KOHI				*eS*	**Sn**	**15 05 36.1**	**+1.1**
BRDH	**Bariadhala**	**2.35**	**239**	P	**Pn**	**15 05 22.5**	**+2.8**
	0.8nm,0.4s,baz=0.0,slow=20,SNR=6.2						
BRDH				S	**Sn**	**15 05 51.9**	**+4.4**
	1.2nm,0.3s,baz=90,slow=24,SNR=22						
SHL	**Shillong**	**2.41**	**314**	*eP*	**Pn**	**15 05 22.5**	**+1.7**
SHL				*eS*	**Sn**	**15 05 49.2**	**-0.2**
SHL				IAML		15 05 51.4	
	comp=E,812nm,0.2s						
SHL				IAML		15 05 51.6	
	comp=N,504nm,0.0s						
MOKO	**MOKOCHONG**	**2.48**	**15**	*ex*	**Pn**	**15 05 21.8**	**+0.1**
MOKO				*ex*	x	15 05 27.0	
TEZP	**TEZPUR**	**2.85**	**341**	*eP*	Pn	15 05 31.5	+4.9
TEZP				*eS*	**Sn**	**15 05 57.8**	**-2.0**
GUWA	**GUWAHATI**	**2.98**	**320**	*eP*	**Pn**	**15 05 28.6**	**+0.2**
GUWA				*ex*	x	15 05 47.1	
GUWA				*eS*	**Sn**	**15 06 00.9**	**-2.1**
GUWA				*eS*		15 06 01.2	
ITAN	**ITANAGAR**	**3.23**	**358**	*eP*	**Pn**	**15 05 32.4**	**+0.7**
ITAN				*eS*	**Sn**	**15 06 08.0**	**-0.9**
TURI	**Tura**	**3.57**	**298**	*eP*	**Pn**	**15 05 36.8**	**+0.4**
TURI				*eS*	**Sn**	**15 06 14.8**	**-2.5**
ZIRO	**ZIRO**	**3.60**	**0**	*eP*	**Pn**	**15 05 36.9**	**-0.1**
LKP	**Lekhapani**	**3.87**	**28**	*eP*	Pn	15 05 33.6	-6.9
ODAN	**Odare**	**6.51**	**298**	*ePn*	**Pn**	**15 06 17.9**	**+1.0**
ODAN	**Odare**	**6.51**	**298**	*ePn*	**Pn**	**15 06 18.3**	**+1.4**
ODAN	**Odare**	**6.51**	**298**	*ePn*	**Pn**	**15 06 18.3**	**+1.4**
ODAN				*eSn*	**Sn**	**15 07 28.4**	**-1.5**
	comp=N,71nm,0.3s						
ODAN				*eSn*	**Sn**	**15 07 28.4**	**-1.5**
RAMN	**Ramite**	**7.19**	**296**	*ePn*	**Pn**	**15 06 27.6**	**+1.4**
RAMN				*eSn*	**Sn**	**15 07 45.1**	**-1.5**
	comp=N,31nm,0.3s						
CMAR	**Chiang Mai Arr**	**7.23**	**138**	P	**Pn**	**15 06 26.1**	**-0.4**
	comp=N,0.6nm,0.3s,baz=313,slow=13,SNR=37						
CMAR				S	**Sn**	**15 07 42.4**	**-4.8**
	comp=N,2.5nm,0.7s,baz=313,slow=29,SNR=1.3						
	comp=N,6.9nm,0.9s						
JIRN	**Jiri**	**7.83**	**300**	*ePn*	**Pn**	**15 06 36.0**	**+1.1**
JIRN				*eSn*	**Sn**	**15 08 00.8**	**-1.4**
	comp=N,38nm,0.2s						
GUN	**Gumba**	**8.18**	**301**	*ePn*	**Pn**	**15 06 40.7**	**+0.9**
GUN				*eSn*	**Sn**	**15 08 08.3**	**-2.6**
PKI	**Pulchoki**	**8.41**	**297**	*ePn*	**Pn**	**15 06 43.2**	**+0.3**
PKI				*eSn*	**Sn**	**15 08 13.9**	**-2.7**
	comp=N,26nm,0.2s						
PKIN	**Phulchoki**	**8.43**	**297**	*ePn*	**Pn**	**15 06 43.2**	**+0.2**
PKIN				*eSn*	**Sn**	**15 08 13.6**	**-3.2**
	comp=N,39nm,0.2s						
DMN	**Daman**	**8.68**	**297**	*ePn*	**Pn**	**15 06 47.3**	**+0.9**
DMN				*eSn*	**Sn**	**15 08 18.8**	**-4.1**
GKN	**Gorkha**	**9.21**	**298**	*ePn*	**Pn**	**15 06 53.8**	**+0.1**
GKN				*eSn*	**Sn**	**15 08 32.1**	**-3.8**
	comp=N,75nm,0.4s						
KOLN	**Koldanda**	**9.97**	**295**	*ePn*	**Pn**	**15 07 03.8**	**-0.3**
KOLN	**Koldanda**	**9.97**	**295**	*ePn*	**Pn**	**15 07 04.4**	**+0.3**
KOLN	**Koldanda**	**9.97**	**295**	*ePn*	**Pn**	**15 07 04.5**	**+0.3**
DANN	**Dangsing**	**10.06**	**298**	*ePn*	**Pn**	**15 07 05.1**	**-0.3**
DANN				*eSn*	**Sn**	**15 08 53.1**	**-3.7**
PYUN	**Piuthan**	**10.60**	**295**	*ePn*	**Pn**	**15 07 11.6**	**-1.0**
PYUN				*eSn*	**Sn**	**15 09 04.6**	**-5.2**
MKAR	**Makanchi Array**	**24.64**	**341**	P	**P**	**15 09 59.6**	**+2.0**
	comp=N,0.5nm,0.4s,baz=155,slow=9.9,SNR=12						
MKAR				pP	**pP**	**15 10 16.3**	**+2.2**
	comp=N,1.9nm,0.7s,baz=152,slow=10,SNR=8.7						
	comp=N,0.5nm,0.4s						
SONM	**Songino Array**	**25.89**	**20**	P	**P**	**15 10 10.0**	**+1.0**
	comp=N,1.0nm,0.6s,baz=195,slow=8.3,SNR=6.1						
SONM				pP	**pP**	**15 10 25.9**	**+0.4**
	comp=N,1.1nm,0.7s,baz=209,slow=11,SNR=5.3						
SONM				LR	LR	15 21 53.1	
	comp=N,30nm,20.9s,baz=201,slow=40						
	comp=N,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**29.19**	**340**	P	**P**	**15 10 40.5**	**+2.2**
	comp=N,0.2nm,0.5s,baz=156,slow=7.3,SNR=1.6						
	comp=N,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**30.75**	**350**	P	**P**	**15 10 54.4**	**+2.3**
	comp=N,0.7nm,0.7s,baz=176,slow=8.7,SNR=2.4						
	comp=N,0.7nm,0.7s						
BVAR	**Borovoye Array**	**34.06**	**335**	pP	pP	15 11 39.6	+1.8
	comp=N,0.5nm,0.6s,baz=143,slow=13,SNR=3.2						
AKTO	**Aktyubinsk**	**38.33**	**323**	pP	pP	15 12 15.7	+1.3
	comp=N,0.8nm,0.6s,baz=111,slow=13,SNR=2.2						
GNI	**Garni**	**44.08**	**304**	LR	LR	15 35 11.9	
	comp=N,28nm,18.7s,baz=136,slow=41						
FITZ	**Fitzroy Crossi**	**52.03**	**140**	LR	LR	15 40 00.6	
	comp=N,55nm,19.6s,baz=13,slow=41						
WRA	**Warramunga Arr**	**58.81**	**134**	P	**P**	**15 14 34.5**	**-0.6**
	comp=N,1.4nm,0.6s,baz=321,slow=7.6,SNR=77						
	comp=N,1.4nm,0.6s						
ASAR	**Alice Springs**	**61.24**	**138**	P	**P**	**15 14 51.5**	**-0.1**
	comp=N,2.1nm,0.6s,baz=320,slow=6.8,SNR=43						
	comp=N,2.1nm,0.6s						
GERES	**GERESS Array B**	**66.03**	**315**	pP	pP	15 15 41.7	+0.3
	comp=N,0.4nm,0.6s,baz=76,slow=5.6,SNR=3.6						

*BJI **27** 15:14:03.0±0.0, 55°.80N×158°.40W, h10km, mb4.6/40, mB5.0/21, Ms4.7/19, Ms7 4.3/19*
*MOS **27** 15:14:04.4±1.1, 55°.84N×158°.40W, h10km, mb4.8/41, Error ellipse: s-maj=10.9km s-min=5.9km az=89.9*
*AEIC **27** 15:14:04±1.9, 55°.71N±0°.04×158°.27W±0°.06, h13km±3km, Error ellipse: s-maj=5.6km s-min=5.1km az=203.0*
*IDC **27** 15:14:05.2±0.5, 55°.93N×158°.51W, h0km, mb4.4/31, mbtmp4.4/34, ML4.4/3, MS3.8/59, Error ellipse: s-maj=16.8km s-min=10.1km az=11.0*
*NEIC **27** 15:14:07.0±1.9, 55°.81N±0°.04×158°.37W±0°.06, h15km±3km, mb5.1/96, ML4.5(AEIC), Error ellipse: s-maj=6.0km s-min=3.7km az=146.0*
*GCMT **27** 15:14:08.2±0.3, 55°.87N±0°.02×158°.18W±0°.05, h13km±1km, MW4.8/89, Moment Tensor Solution. s24,c26; s89,c123; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr 1.63±. 12; Mθθ -1.53±.08; Mϕϕ -0.09±.07; Mrθ -0.05±.17; Mϕθ -0.74±.04; Mϕr 0.07±.21; Best double couple: M0 1.74000×10^16^ NP1:ϕ±250.00000°, δ45.00000°, λ95.00000°. NP2: ϕ±64.00000°, δ45.00000°, λ85.00000°. Principal axes: T 1.6350, Plg87.0000°, Azm243.0000°; N 0.2090, Plg3.0000°, Azm67.0000°; P -1.8440, Plg0.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 15:14:05.8±1.0, 55°.78N±0°.03×158°.36W±0°.03, h8km±5km, n753, σ1s07/748, mb4.8/128, MS3.9/71, 13C-12D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**0.52**	**357**		**Pb**	**15 14 16.2**	**-0.9**
CHGN				Sg	**Sg**	**15 14 23.0**	**+0.3**
CHGN	**Chignik**	**0.52**	**357**	P	**Pb**	**15 14 16.3**	**-0.9**
	baz=172,SNR=870						
CHGN				S	**Sg**	**15 14 23.5**	**+0.8**
	baz=172						
VNHG	**Veniaminof 1**	**0.63**	**315**		**Pb**	**15 14 18.9**	**-0.2**
S14K	**Fog Glacier**	**0.84**	**307**	P	**Pb**	**15 14 23.1**	**+0.5**
	baz=128,SNR=983						
VNFG	**Fog Glacier, M**	**0.84**	**307**		**Pb**	**15 14 23.1**	**+0.5**
VNFG	**Fog Glacier, M**	**0.84**	**307**		**Pb**	**15 14 22.9**	**+0.3**
VNFG					**Sn**	**15 14 35.9**	**-0.6**
ANPB	**Aniakchak Plen**	**1.02**	**2**		**Pb**	**15 14 25.9**	**+0.1**
ANPK	**Aniakchak Peak**	**1.07**	**7**		**Pb**	**15 14 26.7**	**+0.1**
AZAC	**Aniakchak**	**1.12**	**4**		**Pn**	**15 14 27.8**	**0.0**
CHNA	**Chernabura Isl**	**1.19**	**217**	P	**Pn**	**15 14 26.3**	**-2.2**
	baz=40,SNR=1000						
CHNA				S	**Sb**	**15 14 43.1**	**-0.8**
	baz=40						
ANNW	**Aniakchak Nort**	**1.19**	**4**		**Pn**	**15 14 29.3**	**+0.5**
CNBA	**Chernabura Isl**	**1.19**	**217**		**Pn**	**15 14 26.3**	**-2.4**
CNBA				Sg	**Sb**	**15 14 43.3**	**-0.8**
SDPT	**Sand Point**	**1.28**	**251**		**Pn**	**15 14 28.8**	**-1.0**
SDPT					**Sn**	**15 14 47.2**	**0.0**
SDPT	**Sand Point**	**1.28**	**251**	P	**Pn**	**15 14 29.0**	**-0.9**
	baz=73,SNR=373						
SDPT				S	**Sn**	**15 14 47.1**	**0.0**
	baz=73						
CHIR	**Chirikof Islan**	**1.55**	**87**		**Pn**	**15 14 33.1**	**-0.4**
CHIR	**Chirikof Islan**	**1.55**	**87**		**Sn**	**15 14 54.0**	**+0.2**
CHIR	**Chirikof Islan**	**1.55**	**87**	P	**Pn**	**15 14 33.1**	**-0.4**
	baz=267,SNR=21						
CHIR				S	**Sn**	**15 14 54.1**	**+0.4**
	baz=267						
R16K	**Pilot Point**	**1.84**	**13**		**Pn**	**15 14 38.4**	**+0.8**
R16K					**Sb**	**15 15 03.8**	**+1.0**
R16K	**Pilot Point**	**1.84**	**13**	P	**Pn**	**15 14 38.4**	**+0.8**
	baz=192,SNR=20						
R16K				Sb	**Sb**	**15 15 04.2**	**+1.4**
	baz=192						
PVV	**Pavlof Volcano**	**1.99**	**260**		**Pn**	**15 14 40.1**	**+0.4**
PS4A	**Pavlof South-4**	**2.03**	**259**		**Pn**	**15 14 40.9**	**+0.6**
HAG	**Hague Volcano**	**2.07**	**258**		**Pn**	**15 14 41.4**	**+0.6**
HAG	**Hague Volcano**	**2.07**	**258**	P	**Pn**	**15 14 41.4**	**+0.6**
PN7A	**Pavlof North-7**	**2.09**	**262**		**Pn**	**15 14 42.2**	**+1.0**
PN7A					**Sb**	**15 15 10.8**	**+0.7**
R17K	**Ugashik Creek**	**2.16**	**29**		**Pn**	**15 14 43.2**	**+1.2**
R17K	**Ugashik Creek**	**2.16**	**29**	P	**Pn**	**15 14 43.1**	**+1.2**
	baz=209,SNR=144						
R17K				Sb	**Sb**	**15 15 13.3**	**+1.4**
	baz=209						
PLK3	**Peulik 3**	**2.23**	**30**		**Pn**	**15 14 44.1**	**+1.1**
PLK3					**Sb**	**15 15 13.5**	**-0.6**
PLK1	**Peulik 1**	**2.24**	**25**		**Pn**	**15 14 44.4**	**+1.3**
DT1	**Dutton Round H**	**2.33**	**255**		**Pn**	**15 14 44.9**	**+0.5**
SII	**Sitkinak Islan**	**2.46**	**70**		**Sn**	**15 15 18.1**	**+1.7**
SII	**Sitkinak Islan**	**2.46**	**70**	Pn	**Pn**	**15 14 46.7**	**+0.5**
SII	**Sitkinak Islan**	**2.46**	**70**	P	**Pn**	**15 14 46.4**	**+0.2**
	baz=251,SNR=17						
KELA	**Mount Kelaz**	**3.02**	**27**		**Pn**	**15 14 54.6**	**+0.7**
FALS	**False Pass**	**3.04**	**254**		**Pn**	**15 14 55.6**	**+1.6**
FALS	**False Pass**	**3.04**	**254**		**Sn**	**15 15 33.9**	**+3.4**
FALS	**False Pass**	**3.04**	**254**	P	**Pn**	**15 14 55.2**	**+1.2**
	baz=72						
Q16K	**King Salmon**	**3.05**	**17**	P	**Pn**	**15 14 55.1**	**+0.9**
	baz=197,SNR=61						
KAKN	**Katmai Knife C**	**3.10**	**34**		**Pn**	**15 14 56.4**	**+1.3**
OHAK	**Old Harbor**	**3.16**	**61**	Pn	**Pn**	**15 14 55.7**	**0.0**
OHAK	**Old Harbor**	**3.16**	**61**	P	**Pn**	**15 14 55.9**	**+0.2**
	baz=243,SNR=22						
ISLZ	**Isanotski Laza**	**3.24**	**253**		**Pn**	**15 14 57.8**	**+0.9**
ISLZ					**Sn**	**15 15 37.3**	**+1.7**
P16K	**Nushagak River**	**3.26**	**3**		**Pn**	**15 14 58.4**	**+1.2**
P16K	**Nushagak River**	**3.26**	**3**	P	**Pn**	**15 14 58.3**	**+1.2**
	baz=183,SNR=7.9						
P16K				Sb	**Sb**	**15 15 46.6**	**+2.9**
	baz=183						
SSLN	**Shishaldin Nor**	**3.37**	**256**		**Pn**	**15 14 59.5**	**+0.9**
SSLS	**Shishaldin Sou**	**3.40**	**254**		**Pn**	**15 14 59.9**	**+0.7**
KAHC	**Katmai Hardscr**	**3.40**	**31**		**Pn**	**15 15 00.2**	**+1.0**
SSBA	**Shishaldin**	**3.45**	**255**		**Pn**	**15 15 00.1**	**+0.3**
P17K	**Kvichak River**	**3.58**	**16**		**Pn**	**15 15 02.5**	**+1.0**
P17K	**Kvichak River**	**3.58**	**16**	P	**Pn**	**15 15 01.9**	**+0.5**
	baz=197,SNR=20						
KDAK	**Kodiak Island**	**3.76**	**55**	Pn	**Pn**	**15 15 04.3**	**+0.4**
KDAK	**Kodiak Island**	**3.76**	**55**	P	**Pn**	**15 15 04.3**	**+0.4**
KDAK	**Kodiak Island**	**3.76**	**55**	P	**Pn**	**15 15 04.1**	**+0.2**
	baz=239						
O16K	**Kokwok River B**	**3.83**	**2**		**Pn**	**15 15 05.6**	**+0.7**
O16K	**Kokwok River B**	**3.83**	**2**	P	**Pn**	**15 15 05.3**	**+0.4**
	baz=182,SNR=75						
WECS	**Westdahl Cape**	**3.89**	**254**		**Pn**	**15 15 07.2**	**+1.4**
P18K	**Big Mountain,**	**3.99**	**24**		**Pn**	**15 15 08.3**	**+1.1**
P18K	**Big Mountain,**	**3.99**	**24**	P	**Pn**	**15 15 07.6**	**+0.4**
	baz=205,SNR=15						
Q19K	**Cape Douglas,**	**4.06**	**37**		**Pn**	**15 15 09.3**	**+1.2**
Q19K	**Cape Douglas,**	**4.06**	**37**	P	**Pn**	**15 15 09.0**	**+0.9**
	baz=220,SNR=26						
O17K	**Koliganek Bris**	**4.06**	**9**		**Pn**	**15 15 09.0**	**+1.0**
O17K	**Koliganek Bris**	**4.06**	**9**	P	**Pn**	**15 15 08.9**	**+0.8**
	baz=189,SNR=46						
Q20K	**Shuyak Island**	**4.31**	**46**	P	**Pn**	**15 15 12.0**	**+0.5**
	baz=230						
SYI	**Shuyak Island**	**4.31**	**46**		**Pn**	**15 15 12.9**	**+1.3**
O18K	**Koktuh Hills**	**4.42**	**21**		**Pn**	**15 15 13.7**	**+0.6**
O18K	**Koktuh Hills**	**4.42**	**21**	P	**Pn**	**15 15 12.9**	**-0.1**
	baz=203,SNR=9.2						
AUCH	**Augustine Cone**	**4.46**	**34**		**Pn**	**15 15 16.6**	**+2.9**
AUQ	**Augustine Qik'**	**4.46**	**35**		**Pn**	**15 15 15.9**	**+2.2**
AKSA	**Akutan Strait**	**4.54**	**252**		**Pn**	**15 15 16.8**	**+2.1**
AKUT	**Akutan**	**4.58**	**252**	Pn	**Pn**	**15 15 15.1**	**-0.1**
AKLV	**Akutan Long Va**	**4.67**	**253**		**Pn**	**15 15 17.6**	**+1.1**
AKBBA	**Akutan Broad B**	**4.68**	**252**		**Pn**	**15 15 19.0**	**+2.3**
N16K	**Nishlik Lake**	**4.71**	**358**		**Pn**	**15 15 18.4**	**+1.3**
N16K	**Nishlik Lake**	**4.71**	**358**	P	**Pn**	**15 15 18.0**	**+1.0**
	baz=177,SNR=329						
AKMO	**Akutan Morgan**	**4.73**	**252**		**Pn**	**15 15 18.4**	**+1.1**
AKRB	**Akutan Reef Bi**	**4.74**	**253**		**Pn**	**15 15 19.1**	**+1.6**
P19K	**Oil Pt**	**4.75**	**33**		**Pn**	**15 15 20.1**	**+2.4**
P19K	**Oil Pt**	**4.75**	**33**	P	**Pn**	**15 15 18.0**	**+0.3**
	baz=216,SNR=12						
O19K	**Port Alsworth**	**4.92**	**24**		**Pn**	**15 15 21.1**	**+1.2**
O19K	**Port Alsworth**	**4.92**	**24**	P	**Pn**	**15 15 20.7**	**+0.8**
	baz=207,SNR=16						
ILSW	**Iliamna Southw**	**5.05**	**31**		**Pn**	**15 15 22.7**	**+0.9**
N18K	**Kilae Creek**	**5.08**	**14**		**Pn**	**15 15 23.3**	**+1.1**
N18K	**Kilae Creek**	**5.08**	**14**	P	**Pn**	**15 15 22.9**	**+0.7**
	baz=195,SNR=38						
UNV	**Unalaska Valle**	**5.09**	**251**		**Pn**	**15 15 21.9**	**-0.4**
UNV	**Unalaska Valle**	**5.09**	**251**	P	**Pn**	**15 15 22.9**	**+0.6**
	baz=65,SNR=21						
IVE	**Iliamna Volcan**	**5.11**	**32**		**Pn**	**15 15 23.8**	**+1.2**
MNAT	**Makushin Natee**	**5.17**	**252**		**Pn**	**15 15 24.9**	**+1.5**
O20K	**Slope Mountain**	**5.28**	**33**		**Pn**	**15 15 27.3**	**+2.4**
O20K	**Slope Mountain**	**5.28**	**33**	P	**Pn**	**15 15 25.2**	**+0.2**
	baz=217,SNR=26						
HOM	**Homer**	**5.30**	**40**	P	**Pn**	**15 15 25.6**	**+0.5**
	baz=225						
MGOD	**Makushin Gods**	**5.31**	**252**		**Pn**	**15 15 26.6**	**+1.2**
MAPS	**Pakushin South**	**5.34**	**252**		**Pn**	**15 15 26.9**	**+1.2**
CNPM	**China Poot**	**5.36**	**43**		**Pn**	**15 15 26.1**	**+0.2**
N19K	**Bonanza Creek**	**5.44**	**20**		**Pn**	**15 15 28.9**	**+1.7**
N19K	**Bonanza Creek**	**5.44**	**20**	P	**Pn**	**15 15 27.9**	**+0.7**
	baz=203,SNR=33						
RED	**Redoubt Volcan**	**5.51**	**30**		**Pn**	**15 15 30.3**	**+2.2**
SVW2	**Sparrevohn**	**5.53**	**14**	Pn	**Pn**	**15 15 29.4**	**+1.1**
RDWB	**Redoubt West**	**5.55**	**30**		**Pn**	**15 15 30.8**	**+2.1**
NCT	**North Crescent**	**5.59**	**29**		**Pn**	**15 15 31.3**	**+2.1**
RDJH	**Redoubt Jeurge**	**5.65**	**29**		**Pn**	**15 15 32.1**	**+2.1**
BRLK	**Bradley Lake**	**5.65**	**42**		**Pn**	**15 15 30.5**	**+0.5**
DFR	**Drift River**	**5.68**	**30**		**Pn**	**15 15 32.2**	**+1.8**
BRSE	**Bradley Lake S**	**5.69**	**43**		**Pn**	**15 15 30.7**	**+0.2**
BRSE	**Bradley Lake S**	**5.69**	**43**	P	**Pn**	**15 15 30.9**	**+0.4**
	baz=228,SNR=12						
CAPN	**Captain Cook N**	**6.28**	**34**	P	**Pn**	**15 15 39.2**	**+0.7**
	baz=220						
SPCR	**Spurr Chakacha**	**6.32**	**28**	P	**Pn**	**15 15 40.1**	**+1.0**
	baz=213,SNR=7.7						
SPNN	**North Nagishla**	**6.33**	**26**		**Pn**	**15 15 41.5**	**+2.0**
SLKM	**Skilak Lake**	**6.40**	**39**		**Pn**	**15 15 41.2**	**+0.9**
M19K	**Big River Lodg**	**6.47**	**17**		**Pn**	**15 15 42.6**	**+1.4**
M19K	**Big River Lodg**	**6.47**	**17**	P	**Pn**	**15 15 42.5**	**+1.2**
	baz=200,SNR=107						
L19K	**White Mountain**	**6.67**	**14**		**Pn**	**15 15 44.8**	**+0.8**
L19K	**White Mountain**	**6.67**	**14**	P	**Pn**	**15 15 45.0**	**+1.1**
	baz=197,SNR=76						
M20K	**Styx River**	**6.69**	**22**		**Pn**	**15 15 45.6**	**+1.3**
M20K	**Styx River**	**6.69**	**22**	P	**Pn**	**15 15 46.0**	**+1.7**
	baz=206,SNR=115						
SPIA	**Saint Paul Isl**	**6.73**	**287**		**Pn**	**15 15 46.4**	**+1.6**
SPIA	**Saint Paul Isl**	**6.73**	**287**	P	**Pn**	**15 15 46.1**	**+1.3**
	baz=98						
RC01	**Rabbit Creek A**	**6.98**	**37**		**Pn**	**15 15 50.1**	**+1.9**
RC01	**Rabbit Creek A**	**6.98**	**37**	P	**Pn**	**15 15 49.4**	**+1.2**
	baz=223,SNR=12						
L20K	**Farewell, AK**	**7.10**	**17**		**Pn**	**15 15 51.4**	**+1.5**
L20K	**Farewell, AK**	**7.10**	**17**	P	**Pn**	**15 15 51.0**	**+1.1**
	baz=200,SNR=63						
TT01	**Tatalina**	**7.25**	**9**		**Pn**	**15 15 52.6**	**+0.8**
TTA	**Tatalina**	**7.27**	**9**		**P

BAGL **Bagley Icefiel** 9.80 55 Pn 15 16 27.9 +1.1
PTPK **Patty Peak** 9.91 50 Pn 15 16 28.1 -0.5
YAH **Yahtse** 9.91 56 Pn 15 16 29.5 +0.9
I21K **Tanana** 9.93 16 P Pn 15 16 29.7 +1.1
baz=201,SNR=7.0
NEA2 **Nenana** 9.96 24 Pn 15 16 29.5 +0.5
NEA2 **Nenana** 9.96 24 P Pn 15 16 28.9 -0.1
baz=211,SNR=32
ATKA **Atka Island** 9.99 256 Pn 15 16 30.1 +0.8
MLY **Manley** 10.01 19 Pn 15 16 31.7 +2.0
MLY **Manley** 10.01 19 P Pn 15 16 31.1 +1.5
baz=205,SNR=14
WRH **Wood River Hil** 10.09 26 Pn 15 16 30.4 -0.4
K24K **Donnelly Dome** 10.22 33 P Pn 15 16 33.4 +0.8
baz=223,SNR=20
H21K **Melozitna Rive** 10.27 13 Pn 15 16 32.8 -0.4
H21K **Melozitna Rive** 10.27 13 P Pn 15 16 33.9 +0.7
baz=198,SNR=27
M26K **Nabesna, AK** 10.30 44 Pn Pn 15 16 34.6 +0.9
M26K **Nabesna, AK** 10.30 44 P Pn 15 16 33.9 +0.2
baz=236,SNR=18
CCB **Clear Creek Bu** 10.31 26 Pn 15 16 33.0 -0.7
CTG **Chitna Glacier** 10.32 53 P Pn 15 16 34.1 0.0
baz=247
MENT **Mentasta** 10.34 40 Pn 15 16 35.6 +1.5
HDA **Harding Lake** 10.34 29 P Pn 15 16 33.9 -0.3
baz=218,SNR=21
LOGN **Logan Glacier** 10.42 54 Pn 15 16 35.3 -0.1
MDM **Murphy Dome** 10.46 24 Pn 15 16 36.1 +0.2
RIDG **Independent Ri** 10.47 35 Pn 15 16 36.6 +0.6
RIDG **Independent Ri** 10.47 35 P Pn 15 16 36.3 +0.3
baz=226,SNR=24
IMAR **Indian Mountai** 10.48 10 Pn Pn 15 16 36.7 +0.7
TCOL **CIGO, UAF Yank** 10.48 25 P Pn 15 16 34.6 -1.4
baz=214
COLA **College** 10.48 25 Pn 15 16 34.7 -1.4
COLA **College** 10.48 25*d* *i*P Pn 15 16 35.6 -0.5
COLA **College** 10.48 25 P Pn 15 16 35.0 -1.1
baz=214
L26K **Log Cabin Wild** 10.53 40 P Pn 15 16 37.0 +0.3
baz=233,SNR=28
PINM **Pinnacle** 10.54 58 P Pn 15 16 37.3 +0.3
baz=253
IL31 10.64 27 Pn 15 16 37.2 -1.0
ILAR **Eielson Array** 10.64 27 Pn Pn 15 16 36.9 -1.5
1.4nm,0.3s,baz=216,slow=13,SNR=102
ILAR Sn Sn 15 18 31.6 -5.9
baz=216,slow=23
ILAR **Eielson Array** 10.64 27 Pn 15 16 37.3 -1.0
ILAR **Eielson Array** 10.64 27 P Pn 15 16 37.3 -1.0
H22K **Ishtalitna Cre** 10.69 16 P Pn 15 16 41.0 +2.0
baz=201,SNR=11
M27K **Edge Creek, AK** 10.72 45 Pn 15 16 40.5 +1.1
M27K **Edge Creek, AK** 10.72 45 P Pn 15 16 40.6 +1.1
baz=239,SNR=11
O28M **Mount Upton** 10.78 55 P Pn 15 16 41.6 +1.2
baz=250,SNR=11
POKR **Poker Plat Res** 10.79 25 Pn 15 16 40.3 0.0
POKR **Poker Plat Res** 10.79 25 P Pn 15 16 39.0 -1.3
baz=214,SNR=9.0
BCPM **Bancas Point** 10.80 60 Pn 15 16 39.8 -0.7
PNL **Peninsula** 10.85 61 P Pn 15 16 40.7 -0.5
baz=257
SCRK **Sand Creek** 10.91 35 P Pn 15 16 41.9 -0.2
baz=227,SNR=8.1
J25K **Salcha River,** 10.94 31 Pn 15 16 41.7 -0.8
J25K **Salcha River,** 10.94 31 P Pn 15 16 41.7 -0.8
baz=222,SNR=29
H23K **Yukon River** 10.94 19 Pn Pn 15 16 42.8 +0.3
H23K **Yukon River** 10.94 19 P Pn 15 16 42.1 -0.3
baz=207
G21K **Allakaket** 11.02 10 P Pn 15 16 43.5 0.0
baz=194
L27K **Beaver Creek,** 11.11 42 Pn 15 16 45.6 +0.8
L27K **Beaver Creek,** 11.11 42 P Pn 15 16 45.0 +0.2
baz=236,SNR=26
BCAR **Beaver Creek A** 11.13 42 Pn 15 16 45.7 +0.7
H24K **Noodor Dome** 11.29 22 Pn Pn 15 16 38.5 -8.6
O29M **Mount Kennedy** 11.40 58 P Pn 15 16 49.6 +0.7
baz=255,SNR=12
J26L **Joseph Creek** 11.40 34 Pn 15 16 49.4 +0.6
J26L **Joseph Creek** 11.40 34 P Pn 15 16 49.0 +0.2
baz=226,SNR=18
ADK **Adak** 11.50 258 Pn 15 16 50.9 +0.8
ADK **Adak** 11.50 258 P Pn 15 16 50.9 +0.8
PRP **Porcupine Dome** 11.59 27 Pn Pn 15 16 43.6 -7.8
P29M **Windy Craggy** 11.67 62 P Pn 15 16 52.9 +0.5
baz=259
KIWB **Kanaga Island** 11.77 258 Pn 15 16 52.4 -1.4
M29M **Somme Creek** 12.17 49 P Pn 15 16 59.4 +0.1
baz=245,SNR=39
PLBC **Pleasant Camp** 12.33 64 P Pn 15 17 02.2 +0.8
baz=262,SNR=7.3
EGAK **Eagle** 12.37 36 P Pn 15 17 01.5 -0.4
baz=231
N30M **Aishikik Lake** 12.42 54 P Pn 15 17 01.5 -1.2
baz=252,SNR=8.6
DAWY **Dawson** 12.58 41 P Pn 15 17 05.1 +0.3
baz=237,SNR=12
O30N **Mendenhall** 12.71 58 P Pn 15 17 07.3 +0.8
baz=256
SKAG **Skagway** 12.86 64 P Pn 15 17 09.7 +1.1
baz=263
M30M **Minto, Yukon** 12.94 49 Pn 15 17 11.1 +1.4
M30M **Minto, Yukon** 12.94 49 P Pn 15 17 10.6 +0.9
baz=248
N31M **Braeburn, Yuko** 13.03 55 Pn 15 17 12.1 +1.1
N31M **Braeburn, Yuko** 13.03 55 P Pn 15 17 11.0 -0.1
baz=254,SNR=9.7
K29M **Barlow Dome** 13.18 44 P Pn 15 17 13.6 +0.5
baz=241
WHY **Whitehorse** 13.27 59 Pn 15 17 13.9 -0.3
AMKA **Amchitka** 13.96 261 Pn 15 17 23.4 -0.3
P33M **Teslin, Yukon** 14.20 61 P P 15 17 34.3 -0.3
P33M **Teslin, Yukon** 14.20 61 P Pn 15 17 28.7 +1.6
baz=263,SNR=9.7
FARO **Faro, Yukon** 14.35 53 P Pn 15 17 28.8 -0.1
baz=254
EPYK **Eagle Plains** 14.80 36 P Pn 15 17 34.9 -0.3
baz=234
S34M **Telegraph Cree** 15.01 71 P Pn 15 17 40.1 +2.2
baz=273,SNR=9.1
R33M **Jennings River** 15.07 65 P Pn 15 17 39.8 +0.9
baz=268,SNR=8.6
MMPY **Sheldon Lake,** 15.38 53 P Pn 15 17 43.6 +0.7
baz=256,SNR=23
DLBC **Dease Lake** 15.57 68 Pn Pn 15 17 47.4 +2.1
0.3nm,0.3s,baz=295,slow=15,SNR=14
4.1nm,0.7s
DLBC **Dease Lake** 15.57 68 P Pn 15 17 45.3 0.0
baz=272
SHEM **Shemya Is, Ala** 16.33 271 Pn Pn 15 17 53.6 -1.5
1.5nm,0.3s,baz=51,slow=6.5,SNR=4.7
11nm,0.7s
TGTN **Hyland Airport** 16.57 57 P Pn 15 17 58.4 +0.1
baz=263,SNR=10
INK **Inuvik** 16.94 32 Pn Pn 15 18 03.6 +0.9
3.6nm,0.3s,baz=232,slow=14,SNR=10
10.0nm,0.4s
INK **Inuvik** 16.94 32 P P 15 18 04.9 +0.2
INK **Inuvik** 16.94 32 P P 15 18 04.9 +0.2
INK pmax pmax
comp=Z,29nm,1.3s
INK **Inuvik** 16.94 32 P Pn 15 18 02.6 -0.2
baz=234
BILL **Bilibino** 20.31 321 *i*P P 15 18 41.0 -0.7
BILL pmax pmax
comp=Z,32nm,1.4s
BILL MLR MLR
comp=Z,664nm,15.0s
C36M **Paulatuk** 20.44 35 P P 15 18 41.1 -2.0
C36M **Paulatuk** 20.44 35 P P 15 18 42.4 -0.7
baz=245
A36M **Sachs Harbour** 21.34 28 P P 15 18 51.7 -1.1
A36M **Sachs Harbour** 21.34 28 P P 15 18 53.3 +0.5
baz=238
YKA **Yellowknife Ar** 23.04 55 P P 15 19 10.8 -0.2
comp=Z,8.1nm,0.8s,baz=273,slow=9.9,SNR=15
YKA LR LR 15 28 36.5
comp=Z,255nm,18.2s,baz=290,slow=38
comp=Z,8.1nm,0.8s
YKA **Yellowknife Ar** 23.04 55 *i*P P 15 19 10.8 -0.2
YKA pmax pmax
comp=Z,6.0nm,0.7s
PET **Petropavlovsk** 24.88 282⇓*e*P P 15 19 27.9 -0.6
PET pmax pmax
comp=Z,24nm,1.1s
PEA0B **Petropavlovsk-** 25.37 282 P P 15 19 33.9 +0.8
PEA0B IAmb IAmb 15 19 52.3
comp=Z,62nm,1.4s
PEA0B **Petropavlovsk-** 25.37 282⇑*e*P P 15 19 32.6 -0.4
PETK **Petropavlovsk-** 25.37 282 P P 15 19 33.3 +0.2
comp=Z,15nm,0.6s,baz=79,slow=12,SNR=57
comp=Z,15nm,0.6s
PETK **Petropavlovsk-** 25.37 282 P P 15 19 32.7 -0.3
PETK **Petropavlovsk-** 25.37 282 P P 15 19 32.7 -0.3
J01E **Myrtle Point** 25.39 105 P P 15 19 33.7 +0.4
baz=312
SEY **Seymchan** 25.52 306 P P 15 19 33.6 -0.7
comp=Z,2.9nm,0.6s,baz=104,slow=10,SNR=7.5
comp=Z,2.9nm,0.6s
SEY **Seymchan** 25.52 306⇑*e*P P 15 19 33.0 -1.3
SEY pmax pmax
comp=Z,42nm,3.8s
K02D **Willamette Mer** 25.85 106 P P 15 19 37.5 -0.1
baz=312
EDM **Edmonton** 25.91 77 P P 15 19 38.4 +0.4
EDM **Edmonton** 25.91 77 P P 15 19 38.4 +0.4
EDM pmax pmax
comp=Z,175nm,2.0s
I05D **Terrebonne, OR** 26.06 100 P P 15 19 39.6 +0.2
baz=309
NEW **Newport** 26.14 89 P P 15 19 41.9 +1.8
comp=Z,12nm,0.8s,baz=324,slow=6.4,SNR=17
comp=Z,12nm,0.8s
NEW **Newport** 26.14 89 P P 15 19 41.1 +1.1
baz=302,SNR=13
L02F **Cave Junction** 26.29 107 P P 15 19 43.1 +1.6
baz=313
J04D **Umpqua Nationa** 26.34 103 P P 15 19 44.0 +1.8
baz=311
J05D **Fort Rock, OR** 26.79 102 P P 15 19 47.4 +1.2
baz=311,SNR=5.6
MA2 **Magadan** 26.91 299 LR LR 15 31 58.4
comp=Z,296nm,18.4s,baz=78,slow=40
L04D **Klamath Falls** 26.92 105 P P 15 19 48.9 +1.6
baz=313
YBH **Yreka Blue Hor** 27.03 106 P P 15 19 50.6 +2.4
comp=Z,1.6nm,0.7s,baz=349,slow=3.4,SNR=5.0
YBH LR LR 15 28 15.0
comp=Z,231nm,22.0s,baz=312,slow=31
comp=Z,1.6nm,0.7s
KMRM **Mail Ridge** 27.55 110 P P 15 19 54.1 +1.2
KMRM IAmb IAmb 15 20 02.0
comp=Z,29nm,1.5s
JTMT **Jette** 28.02 88 P P 15 19 57.8 +0.7
JTMT IAmb IAmb 15 19 59.6
comp=Z,16nm,0.7s
MSO **Missoula** 28.73 89 P P 15 20 03.5 +0.1
baz=305,SNR=5.5
HRY **Holter Researc** 29.98 88 P P 15 20 15.7 +1.1
EGMT **Eagleton** 30.42 84 P P 15 20 18.2 -0.1
baz=303
HLID **Hailey** 30.42 95 P P 15 20 18.9 +0.4
baz=309
BOZ **Bozeman (W)** 30.75 89 P P 15 20 21.7 +0.3
baz=306,SNR=6.8
YHL **Hebgen Lake** 31.45 90 P P 15 20 29.4 +1.7
YHL IAmb IAmb 15 20 31.1
comp=Z,35nm,1.8s
NVAR **Mina Array Bea** 31.75 106 P P 15 20 32.4 +2.1
comp=Z,3.5nm,0.7s,baz=302,slow=8.4,SNR=27
NVAR PcP PcP 15 23 22.5 +1.0
comp=Z,0.4nm,0.6s,baz=318,slow=1.2,SNR=3.8
NVAR LR LR 15 30 48.6
comp=Z,276nm,21.6s,baz=309,slow=31
comp=Z,3.5nm,0.7s
ELK **Elko** 31.81 100 LR LR 15 32 06.8
comp=Z,70nm,18.2s,baz=314,slow=34
H17A **Grant Village** 32.07 90 P P 15 20 35.0 +1.8
baz=308,SNR=8.1
RLMT **Red Lodge** 32.37 88 P P 15 20 33.8 -1.8
RLMT IAmb IAmb 15 20 39.3
comp=Z,22nm,1.4s
RLMT **Red Lodge** 32.37 88 P P 15 20 36.5 +0.9
baz=307,SNR=9.5
HWUT **Hardware Ranch** 33.29 95 P P 15 20 44.4 +0.6
R11A **Troy Canyon, C** 33.29 103 P P 15 20 44.9 +1.1
baz=316,SNR=15
GRAC **Grapevine Rang** 33.30 107 P P 15 20 45.1 +1.3
baz=318
TIXI **Tiksi** 33.32 327 P P 15 20 43.2 -0.2
comp=Z,9.6nm,0.8s,baz=90,slow=20,SNR=4.6
TIXI LR LR 15 37 03.8
comp=Z,292nm,18.4s,baz=3.5,slow=42
comp=Z,9.6nm,0.8s
TIXI **Tiksi** 33.32 327⇑*e*P P 15 20 44.4 +1.0
TIXI pmax pmax
comp=Z,14nm,0.9s
CWC **Cottonwood Cre** 33.33 108 P P 15 20 45.3 +1.2
baz=318
DUG **Dugway, Tooele** 33.54 98 P P 15 20 46.6 +0.7
baz=313,SNR=8.6
PKM **Mcpherson Peak** 33.59 112 P P 15 20 47.6 +1.3
baz=320
BW06 **Boulder Array** 33.67 92 P P 15 20 47.6 +0.5
baz=310,SNR=9.2
PDAR **Pinedale Array** 33.67 92 P P 15 20 48.6 +1.5
comp=Z,3.2nm,0.6s,baz=310,slow=4.8,SNR=52
PDAR PcP PcP 15 23 26.6 -0.2
comp=Z,0.2nm,0.5s,baz=326,slow=1.3,SNR=2.4
comp=Z,3.2nm,0.6s
ISA **Isabella, Lake** 33.70 110 P P 15 20 47.6 +0.4
baz=319,SNR=5.5
MPMC **Manual Prospec** 33.93 108 P P 15 20 51.2 +1.8
baz=319,SNR=8.2
TPNV **Topopah Spring** 33.94 106 P P 15 20 48.5 -0.9
TPNV **Topopah Spring** 33.94 106 P P 15 20 48.5 -0.9
TPNV pmax pmax
comp=Z,10.0nm,0.9s
TPNV **Topopah Spring** 33.94 106 P P 15 20 51.1 +1.7
baz=317,SNR=15
PSUT **Pine Spring** 34.12 101 P P 15 20 50.9 -0.1
LRMC **Laurel Mtn Rad** 34.26 109 P P 15 20 53.0 +0.8
baz=319,SNR=11
EDW2 **Edwards Air Fo** 34.55 110 P P 15 20 56.1 +1.5
baz=320
GSC **Goldstone, Bar** 34.87 108 P P 15 20 58.2 +0.8
baz=319
BFSC **Mount Baldy Ra** 35.22 110 P P 15 21 01.7 +1.3
baz=320
K22A **Casper** 35.46 89 P P 15 21 04.0 +1.5
baz=310,SNR=5.8
K22A **Casper** 35.46 89 P P 15 21 03.2 +0.7
baz=310,SNR=5.8
HEC **Hector,Ludlow** 35.48 108 P P 15 21 04.1 +1.5
baz=319
GMRC **Granite Mounta** 35.87 108 P P 15 21 07.0 +0.9
baz=319
YAK **Yakutsk** 35.89 310 LR LR 15 37 25.9
comp=Z,130nm,19.5s,baz=88,slow=39
YAK **Yakutsk** 35.89 310⇓*e*P P 15 21 04.9 -0.8
YAK pmax pmax
comp=Z,11nm,0.8s
RSSD **Black Hills** 35.93 86 P P 15 21 07.0 +0.4
RSSD **Black Hills** 35.93 86 P P 15 21 07.0 +0.4
RSSD pmax pmax
comp=Z,8.0nm,0.8s
RSSD **Black Hills** 35.93 86 P P 15 21 08.2 +1.6
baz=309,SNR=6.8
RSSD **Black Hills** 35.93 86 P P 15 21 07.5 +0.9
baz=308
O20A **White River Ci** 36.15 94 P P 15 21 09.8 +1.4
baz=313
MDND **Maddock** 36.17 77 P P 15 21 10.1 +1.8
baz=305
MDND **Maddock** 36.17 77 P P 15 21 09.4 +1.0
baz=305
BELC **Belle Mtn. Jos** 36.29 109 P P 15 21 10.9 +1.2
baz=320
PFO **Pinyon Flats O** 36.34 110 LR LR 15 33 41.1
comp=Z,225nm,18.4s,baz=316,slow=32
PFO **Pinyon Flats O** 36.34 110⇓*e*P P 15 21 10.9 +0.8
PFO pmax pmax
comp=Z,15nm,1.4s
IRM **Iron Mountain** 36.62 108 P P 15 21 13.4 +1.0
baz=320,SNR=7.2
ULM **Lac du Bonnet** 36.85 72 P P 15 21 14.6 +0.5
comp=Z,5.8nm,0.8s,baz=315,slow=9.8,SNR=7.1
ULM LR LR 15 36 06.9
comp=Z,103nm,18.6s,baz=201,slow=36
comp=Z,5.8nm,0.8s
MONP2 **Monument Peak** 36.91 111 P P 15 21 16.4 +1.3
baz=321
N23A **Red Feather La** 36.93 91 P P 15 21 16.6 +1.4
baz=312
PDMCI **Parker Dam,Lak** 37.05 107 P P 15 21 16.9 +0.9
baz=319
IKP **In-Ko-Pah, Jac** 37.27 110 P P 15 21 18.4 +0.5
baz=321
WUAZ **Wupatki** 37.66 103 P P 15 21 22.6 +1.2
baz=318
ISCO **Idaho Springs** 37.86 92 P P 15 21 23.5 +0.4
baz=313
AGMN **Agassiz Nation** 37.96 74 P P 15 21 23.9 +0.4
baz=306,SNR=10
AGMN **Agassiz Nation** 37.96 74 P P 15 21 24.2 +0.6
baz=305,SNR=10
MVCO **Mesa Verde** 38.04 98 P P 15 21 25.1 +0.5
baz=316
SUSD **Miller** 38.58 81 P P 15 21 28.9 0.0
baz=309
S22A **4UR Ranch, Cre** 38.59 96 P P 15 21 30.4 +1.1
baz=315
Q24A **Divide** 38.69 93 P P 15 21 31.0 +0.9
baz=314
B35A **Bob, Littlefor** 39.08 73 P P 15 21 33.4 +0.4
baz=306,SNR=6.9
OGNE **Ogallala** 39.11 88 P P 15 21 33.0 -0.4
OGNE **Ogallala** 39.11 88 P P 15 21 34.6 +1.2
baz=312
OGNE **Ogallala** 39.11 88 P P 15 21 34.9 +1.5
baz=312
F33A **5 Mile Ranch,** 39.19 78 P P 15 21 33.6 -0.3
SDCO **Great Sand Dun** 39.34 95 P P 15 21 37.4 +1.8
baz=315,SNR=7.3
SDCO **Great Sand Dun** 39.34 95 P P 15 21 37.5 +1.8
baz=315,SNR=7.3
214A **Organ Pipe Nat** 39.56 108 P P 15 21 37.0 -0.2
baz=321
KSCO **Kaye Shedlock'** 40.08 91 P P 15 21 42.3 +0.7
baz=314
ECSD **EROS Data Cent** 40.34 81 P P 15 21 43.6 +0.1
baz=310,SNR=5.9
ECSD **EROS Data Cent** 40.34 81 P P 15 21 43.5 0.0
baz=310,SNR=5.9
T25A **Trinidad** 40.38 94 P P 15 21 45.3 +1.1
baz=315,SNR=5.8
TUC **Tucson** 40.39 105 P P 15 21 43.8 -0.3
TUC **Tucson** 40.39 105 P P 15 21 43.8 -0.3
TUC pmax pmax
comp=Z,5.0nm,0.8s
TUC **Tucson** 40.39 105 P P 15 21 46.0 +1.9
baz=320
EYMN **Ely** 40.53 72 P P 15 21 45.4 +0.4
EYMN IAmb IAmb 15 21 46.8
comp=Z,22nm,0.8s
EYMN **Ely** 40.53 72 P P 15 21 45.6 +0.6
baz=307,SNR=15
EYMN **Ely** 40.53 72 P P 15 21 45.8 +0.8
baz=307,SNR=15
F36A **Milaca** 40.70 76 P P 15 21 46.6 +0.2
F36A IAmb IAmb 15 21 48.3
comp=Z,34nm,1.6s
F36A **Milaca** 40.70 76 P P 15 21 46.7 +0.2
baz=308,SNR=9.0
ANMO **Albuquerque** 40.81 98 LR LR 15 37 18.2
comp=Z,114nm,20.3s,baz=309,slow=34
ANMO **Albuquerque** 40.81 98*d*eP P 15 21 48.9 +1.2
ANMO pmax pmax
comp=Z,5.0nm,1.4s
ANMO **Albuquerque** 40.81 98 P P 15 21 48.3 +0.6
baz=317
BGNE **Belgrade** 40.99 84 P P 15 21 49.6 +0.7
baz=312
Y22A **Socorro** 41.27 100 P P 15 21 53.6 +2.2
baz=318,SNR=5.6
E38A **The Farm, Brul** 41.32 74 P P 15 21 52.3 +0.8
baz=308,SNR=6.1
KLR **Kul'dur** 41.37 291 LR LR 15 38 36.6
comp=Z,143nm,21.8s,baz=54,slow=36
SPMN **Marine on St.** 41.50 76 P P 15 21 53.5 +0.5
baz=309
L34A **Svendsen Farm,** 41.62 82 P P 15 21 54.8 +0.8
baz=311,SNR=6.6
CBKS **Cedar Bluff** 41.85 89 P P 15 21 58.1 +2.0
baz=314
CBKS **Cedar Bluff** 41.85 89 P P 15 21 56.9 +0.9
baz=314
121A **Cookes Peak, D** 41.87 102 P P 15 21 58.4 +2.0
baz=319,SNR=5.0
121A **Cookes Peak, D** 41.87 102 P P 15 21 57.8 +1.4
baz=319,SNR=5.0
I37B **Waseca** 41.94 78 P P 15 21 57.6 +0.9
baz=310,SNR=5.3
FRB **Frobisher Bay** 42.28 41 LR LR 15 41 16.8
comp=Z,219nm,18.1s,baz=274,slow=39
D41A **Chassel** 42.64 71 P P 15 22 03.3 +1.0
baz=309
N35A **Tabor** 42.76 83 P P 15 22 04.4 +1.0
baz=312,SNR=6.0
G40A **Rib Lake** 42.89 74 P P 15 22 04.8 +0.4
baz=310
COWI **Conover** 42.94 73 P P 15 22 05.2 +0.5
baz=309
KSU1 **Kansas State U** 43.42 86 P P 15 22 09.1 +0.4
baz=314
AMTX **Amarillo** 43.54 94 P P 15 22 09.8 0.0
baz=317
I40A **Norwalk** 43.55 76 P P 15 22 10.4 +0.7
baz=311,SNR=13
MSTX **Muleshoe** 43.59 96 P P 15 22 11.3 +1.0
baz=318
MSTX **Muleshoe** 43.59 96 P P 15 22 10.6 +0.3
baz=318
MNTX **Cornudas Mount** 43.83 101 P P 15 22 14.0 +1.9
baz=320,SNR=6.4
MNTX **Cornudas Mount** 43.83 101 P P 15 22 14.0 +1.9
baz=319,SNR=6.4
E43A **Lone Tree Farm** 43.91 71 P P 15 22 13.0 +0.4
baz=310
N38A **Joes South For** 44.16 81 P P 15 22 15.3 +0.7
baz=313
JFWS **Jewell Farm** 44.40 77 P P 15 22 16.3 -0.2
baz=312
JFWS **Jewell Farm** 44.40 77 P P 15 22 16.3 -0.2
baz=311
H43A **Windswept, Lux** 44.73 74 IAmb IAmb 15 22 20.6
comp=Z,24nm,0.7s
P38A **Dawn** 44.79 83 P P 15 22 20.1 +0.5
baz=314,SNR=14
WMOK **Wichita Mounta** 45.28 92 P P 15 22 24.9 +1.3
baz=317,SNR=7.3
WMOK **Wichita Mounta** 45.28 92 P P 15 22 25.0 +1.3
baz=317,SNR=7.3
E46A **Sault Ste Mari** 45.35 69 P P 15 22 24.7 +0.7
baz=310,SNR=5.9
SUMG **Summit** 45.42 22 P P 15 22 23.8 -0.9
SUMG IAmb IAmb 15 22 38.1
comp=Z,29nm,1.6s
SUMG **Summit** 45.42 22 P P 15 22 23.8 -0.9
SUMG pmax pmax
comp=Z,29nm,1.6s
SUMG **Summit** 45.42 22 *i*P P 15 22 25.0 +0.3
KBS **Kingsbay** 45.42 3*c*eP P 15 22 21.1 -3.1
KBS pmax pmax
comp=Z,63nm,2.5s
P40A **Paris** 45.68 82 IAmb IAmb 15 22 27.3
comp=Z,18nm,0.7s
P40A **Paris** 45.68 82 P P 15 22 27.0 +0.2
baz=314,SNR=11
TUL1 **Leonard** 46.12 88 P P 15 22 30.5 +0.2
baz=316
MJAR **Matsushiro Arr** 46.16 273 P P 15 22 29.9 -0.7
comp=Z,1.5nm,0.7s,baz=28,slow=7.4,SNR=12
MJAR LR LR 15 40 41.2
comp=Z,67nm,19.7s,baz=26,slow=35
comp=Z,1.5nm,0.7s
MAJO **Matsushiro** 46.16 273 P P 15 22 30.2 -0.4
MAJO IAmb IAmb 15 22 42.0
comp=Z,24nm,1.4s
MAJO **Matsushiro** 46.16 273⇑*e*P P 15 22 30.5 -0.1
MAJO pmax pmax
comp=Z,56nm,3.9s
GLMI **Grayling** 46.19 71 P P 15 22 29.9 -0.8
baz=311
SPITS **Spitsbergen Ar** 46.26 2 LR LR 15 41 53.1
comp=Z,116nm,19.1s,baz=303,slow=36
SFJD **Kangerlussuaq** 46.28 31 LR LR 15 42 19.4
comp=Z,75nm,21.4s,baz=319,slow=37
NRIK **Noril'sk** 46.40 333 P P 15 22 31.5 -0.5
comp=Z,4.3nm,0.6s,baz=70,slow=6.6,SNR=8.2

NRIK LR LR 15 46 14.2
comp=Z,209nm,18.9s,baz=61,slow=42
comp=Z,4.3nm,0.6s
NRIK Noril'sk 46.40 333 P P 15 22 31.5 -0.5
R40A Maddies Statio 46.42 83 P P 15 22 31.4 -1.2
R40A IAmb IAmb 15 22 32.4
comp=Z,11nm,0.5s
R40A Maddies Statio 46.42 83 P P 15 22 31.9 -0.7
baz=315,SNR=9.4
HDIL Hopedale 46.51 79 P P 15 22 33.2 -0.1
HDIL Hopedale 46.51 79 P P 15 22 33.6 +0.4
baz=313,SNR=9.1
HDIL Hopedale 46.51 79 P P 15 22 32.8 -0.5
baz=313,SNR=9.1
U38A Gravette 46.54 87 P P 15 22 33.2 -0.4
baz=316,SNR=5.4
TX31 Lajitas Ar. Si 46.59 101 P P 15 22 35.3 +1.2
baz=321,SNR=7.0
TX32 Lajitas Array 46.59 101 P P 15 22 33.9 -0.2
TX32 IAmb IAmb 15 22 37.6
comp=Z,24nm,1.9s
TXAR Lajitas Array 46.59 101 P P 15 22 35.3 +1.2
comp=Z,1.3nm,0.7s,baz=312,slow=6.1,SNR=17
TXAR PcP PcP 15 24 08.8 +0.8
comp=Z,1.6nm,0.6s,baz=213,slow=1.2,SNR=12
TXAR LR LR 15 40 22.1
comp=Z,156nm,21.3s,baz=310,slow=34
comp=Z,1.3nm,0.7s
TXAR Lajitas Array 46.59 101 P P 15 22 34.0 0.0
TXAR Lajitas Array 46.59 101 P P 15 22 34.1 0.0
P43A Skaggs, Pawnee 47.02 80 P P 15 22 37.4 +0.1
baz=314
LPIG La Paz 47.14 112 LR LR 15 39 00.1
comp=Z,60nm,21.7s,baz=306,slow=32
CCM Cathedral Cave 47.16 83 P P 15 22 37.6 -0.8
CCM IAmb IAmb 15 22 38.4
comp=Z,9.8nm,1.0s
CCM Cathedral Cave 47.16 83 P P 15 22 37.6 -0.8
CCM pmax pmax
comp=Z,10.0nm,1.0s
CCM Cathedral Cave 47.16 83 P P 15 22 37.6 -0.8
baz=315
X37A Clayton 47.31 89 IAmb IAmb 15 22 41.6
comp=Z,9.5nm,1.0s
X37A Clayton 47.31 89 P P 15 22 40.3 +0.6
baz=317,SNR=6.7
FVM French Village 47.67 82 P P 15 22 42.3 -0.1
baz=315,SNR=5.2
JHJ Hachijo jima 2 47.75 268 LR LR 15 41 07.3
comp=Z,27nm,21.5s,baz=57,slow=34
SFIN Lafayette 47.85 77 P P 15 22 44.0 +0.3
baz=314
SFIN Lafayette 47.85 77 P P 15 22 43.3 -0.3
baz=314
JCT Junction City 47.87 97 P P 15 22 44.0 0.0
baz=320
FCAR Ozark Folk Cen 48.21 85 IAmb IAmb 15 22 46.7
comp=Z,18nm,1.3s
N47A Urbana 48.27 76 P P 15 22 46.3 -0.7
baz=314,SNR=9.7
N47A P P 15 22 46.3 -0.7
baz=314,SNR=9.7
MIAR Mount Ida 48.36 88 P P 15 22 48.1 +0.4
baz=317,SNR=9.0
MIAR Mount Ida 48.36 88 P P 15 22 48.1 +0.4
baz=317,SNR=9.0
SCHQ Schefferville 48.37 51 P P 15 22 47.3 -0.3
comp=Z,2.5nm,0.6s,baz=315,slow=9.4,SNR=4.5
SCHQ LR LR 15 43 59.5
comp=Z,127nm,19.9s,baz=355,slow=37
comp=Z,2.5nm,0.6s
OLIL Olney 48.44 80 P P 15 22 48.8 +0.5
baz=315,SNR=9.6
S44A Carbondale 48.53 82 P P 15 22 49.1 +0.2
baz=315,SNR=9.6
CGM3 Cape Girardeau 48.59 82 IAmb IAmb 15 22 50.0
comp=Z,67nm,1.9s
O48B Farmland 49.00 76 P P 15 22 51.8 -0.8
baz=314,SNR=8.6
O48B Farmland 49.00 76 P P 15 22 52.6 0.0
baz=314,SNR=8.6
N49A Columbus Grove 49.07 75 P P 15 22 52.4 -0.7
baz=314,SNR=5.4
N49A P P 15 22 52.4 -0.7
baz=314,SNR=5.4
P48A Milroy 49.41 77 P P 15 22 55.1 -0.6
baz=315,SNR=12
P48A P P 15 22 55.1 -0.6
baz=315,SNR=12
P49A Miami Univ. Ec 49.75 76 P P 15 22 57.6 -0.7
baz=315,SNR=5.3
P49A Miami Univ. Ec 49.75 76 P P 15 22 57.9 -0.4
baz=315,SNR=5.3
WCI Wyandotte Cave 49.80 79 P P 15 22 58.1 -0.6
baz=315
ACSO Alum Creek Sta 50.21 75 P P 15 23 00.7 -1.1
baz=315
T47A Sharon Grove 50.23 81 P P 15 23 02.4 +0.3
baz=316,SNR=8.7
J54A Appleton 50.41 69 P P 15 23 02.9 -0.4
J54A Appleton 50.41 69 P P 15 23 03.9 +0.6
baz=314,SNR=5.0
J54A P P 15 23 03.9 +0.6
baz=314,SNR=5.0
WVT Waverly 50.45 82 P P 15 23 03.9 +0.2
WVT IAmb IAmb 15 23 05.1
comp=Z,38nm,1.1s
WVT Waverly 50.45 82 P P 15 23 03.9 +0.2
WVT pmax pmax
comp=Z,38nm,1.1s
WVT Waverly 50.45 82 P P 15 23 03.8 +0.2
baz=316,SNR=20
WVT Waverly 50.45 82 P P 15 23 03.4 -0.2
baz=316
TRQ Mont Tremblant 50.49 63 P P 15 23 03.5 -0.4
TRQ IAmb IAmb 15 23 04.8
comp=Z,48nm,1.4s
ERPA Erie 50.50 71 P P 15 23 03.4 -0.6
baz=314
M53A WI Miller and 50.61 72 P P 15 23 03.0 -1.8
baz=314
OXF Oxford 50.73 85 P P 15 23 04.8 -1.0
baz=317
R50A Paris 50.85 77 P P 15 23 06.7 0.0
baz=316,SNR=14
R50A P P 15 23 06.7 0.0
baz=316,SNR=14
J55A Hilton 50.85 68 IAmb IAmb 15 23 07.8
comp=Z,21nm,0.7s
J55A Hilton 50.85 68 P P 15 23 07.0 +0.5
baz=314,SNR=5.1
J55A P P 15 23 07.0 +0.5
baz=314,SNR=5.1
Q51A Peebles 50.86 76 P P 15 23 06.9 +0.2
baz=315,SNR=12
Q51A P P 15 23 06.9 +0.2
baz=315,SNR=12
O52A Adamsville 50.91 74 P P 15 23 06.6 -0.5
baz=315
O52A P P 15 23 06.6 -0.5
baz=315
N53A Lisbon 50.96 73 P P 15 23 07.4 -0.1
baz=315,SNR=5.1
N53A P P 15 23 07.4 -0.1
baz=315,SNR=5.1
WVNY West Valley, N 51.04 70 IAmb IAmb 15 23 09.3
comp=Z,23nm,0.8s
WVNY West Valley, N 51.04 70 P P 15 23 08.3 +0.3
baz=314,SNR=6.6
P52A Corning 51.09 75 P P 15 23 07.1 -1.4
baz=315
PLAL Pickwick Lake 51.14 83 IAmb IAmb 15 23 09.6
comp=Z,21nm,0.8s
O53A New Philadelph 51.15 73 P P 15 23 07.2 -1.7
baz=315
MMNY Mt. Morris Dam 51.18 69 IAmb IAmb 15 23 10.0
comp=Z,19nm,0.6s
KSRS Korea Array 51.27 282 P P 15 23 10.2 +0.5
comp=Z,1.7nm,0.5s,baz=44,slow=7.1,SNR=12
KSRS LR LR 15 45 07.1
comp=Z,40nm,21.2s,baz=215,slow=36
comp=Z,1.7nm,0.5s
V48A Smith Brothers 51.29 81 P P 15 23 10.2 +0.2
baz=317,SNR=6.1
U49A Red Boiling Sp 51.31 80 P P 15 23 09.4 -0.8
U49A IAmb IAmb 15 23 11.6
comp=Z,46nm,1.9s
U49A Red Boiling Sp 51.31 80 P P 15 23 09.9 -0.2
baz=316
T50A Nancy 51.47 79 P P 15 23 10.7 -0.6
baz=316
T50A P P 15 23 10.7 -0.6
baz=316
BMNY Brushton-Moira 51.47 65 P P 15 23 10.8 -0.5
baz=314
WCNY West Carthage 51.48 66 P P 15 23 11.6 +0.3
baz=314,SNR=10
LONY Lake Ozonia 51.59 65 P P 15 23 11.1 -1.0
baz=314
P53A Whipple 51.60 74 P P 15 23 12.0 -0.3
baz=316
P53A P P 15 23 12.0 -0.3
baz=316
M55A Ridgway 51.61 71 IAmb IAmb 15 23 13.6
comp=Z,32nm,0.8s
M55A Ridgway 51.61 71 P P 15 23 12.7 +0.4
baz=315,SNR=12
M55A P P 15 23 12.7 +0.4
baz=315,SNR=12
O54A Avella 51.65 73 P P 15 23 12.6 -0.1
baz=315
O54A P P 15 23 12.6 -0.1
baz=315
J57A Williamstown 51.70 67 P P 15 23 13.0 0.0
baz=315,SNR=5.2
J57A P P 15 23 13.0 0.0
baz=315,SNR=5.2
S51A Beattyville 51.71 77 IAmb IAmb 15 23 14.0
comp=Z,25nm,0.8s
S51A Beattyville 51.71 77 P P 15 23 13.1 -0.1
baz=316,SNR=9.5
S51A P P 15 23 13.1 -0.1
baz=316,SNR=9.5
JMIC Jan Mayen 51.72 12 LR LR 15 46 12.8
comp=Z,101nm,19.7s,baz=35,slow=37
L56A Greenwood 51.78 69 P P 15 23 14.0 +0.4
baz=315,SNR=17
L56A P P 15 23 14.0 +0.4
baz=315,SNR=17
PSDB Penn State Uni 51.86 71 P P 15 23 14.1 -0.1
baz=315
X48A Hartselle 52.10 83 IAmb IAmb 15 23 16.2
comp=Z,10nm,0.7s
X48A Hartselle 52.10 83 P P 15 23 15.8 -0.2
baz=317,SNR=6.5
J58A Remsen 52.11 67 P P 15 23 16.5 +0.5
baz=315,SNR=14
J58A P P 15 23 16.5 +0.5
baz=315,SNR=14
R53A Hurricane 52.12 76 P P 15 23 16.1 0.0
baz=316,SNR=6.0
R53A P P 15 23 16.1 0.0
baz=316,SNR=6.0
NCB Newcomb 52.23 65 P P 15 23 16.5 -0.4
NCB IAmb IAmb 15 23 19.0
comp=Z,64nm,1.8s
NCB Newcomb 52.23 65 P P 15 23 16.7 -0.2
baz=315,SNR=6.6
Q54A Coxs Mills 52.26 74 P P 15 23 16.7 -0.5
baz=316
Q54A P P 15 23 16.7 -0.5
baz=316
MCWV Mont Chateau 52.31 73 P P 15 23 17.6 0.0
baz=316
MCWV Mont Chateau 52.31 73 P P 15 23 17.2 -0.4
baz=316
J59A Piesco 52.44 66 IAmb IAmb 15 23 19.4
comp=Z,10nm,0.7s
J59A Piesco 52.44 66 P P 15 23 18.6 +0.1
baz=315,SNR=7.9
J59A P P 15 23 18.6 +0.1
baz=315,SNR=7.9
W50A Signal Mountai 52.53 81 P P 15 23 19.3 0.0
baz=317,SNR=7.0
TZTN Tazewell 52.53 78 P P 15 23 19.5 +0.3
baz=317,SNR=7.5
TZTN Tazewell 52.53 78 P P 15 23 18.4 -0.8
baz=317,SNR=7.5
BINY Binghamton 52.56 68 P P 15 23 19.8 +0.4
baz=315,SNR=6.1
BINY Binghamton 52.56 68 P P 15 23 19.4 0.0
baz=315,SNR=6.1
M57A Sunshine Farm, 52.57 70 IAmb IAmb 15 23 20.2
comp=Z,13nm,0.8s
M57A Sunshine Farm, 52.57 70 P P 15 23 19.8 +0.3
baz=315,SNR=7.2
M57A P P 15 23 19.8 +0.3
baz=315,SNR=7.2
V51A Loudon 52.62 80 P P 15 23 19.9 0.0
baz=317
SSPA Standing Stone 52.67 71 P P 15 23 19.7 -0.6
SSPA IAmb IAmb 15 23 21.2
comp=Z,23nm,0.8s
SSPA Standing Stone 52.67 71 P P 15 23 20.2 0.0
baz=316,SNR=8.5
SSPA Standing Stone 52.67 71 P P 15 23 19.6 -0.6
baz=316
E62A Clayton Lake 52.72 60 IAmb IAmb 15 23 21.0
comp=Z,8.0nm,0.6s
VT1 Waterbury 52.72 64 P P 15 23 20.4 -0.2
baz=315
Y49A Blount Mountai 52.90 83 IAmb IAmb 15 23 22.4
comp=Z,15nm,0.8s
Y49A Blount Mountai 52.90 83 P P 15 23 21.3 -0.7
baz=318,SNR=6.8
ACCN Adirondack Com 52.92 65 IAmb IAmb 15 23 24.0
comp=Z,12nm,0.7s
ACCN Adirondack Com 52.92 65 P P 15 23 22.6 +0.5
baz=315,SNR=5.5
F62A Pittston Farm, 53.01 61 P P 15 23 22.2 -0.5
baz=315
F62A P P 15 23 22.2 -0.5
baz=315
V52A Sevierville 53.01 79 P P 15 23 23.0 +0.1
baz=317,SNR=6.4
HCNY Howe Caverns 53.03 67 P P 15 23 23.7 +0.8
baz=315,SNR=18
L59A Walton 53.06 67 P P 15 23 23.8 +0.6
baz=316,SNR=7.1
L59A P P 15 23 23.8 +0.6
baz=316,SNR=7.1
KSPA Keystone Colle 53.13 68 P P 15 23 23.9 +0.3
baz=316
N58A Sunbury 53.14 70 P P 15 23 22.8 -0.9
N58A Sunbury 53.14 70 P P 15 23 23.7 0.0
baz=316,SNR=6.2
N58A P P 15 23 23.7 0.0
baz=316,SNR=6.2
LRAL Lakeview Retre 53.18 84 P P 15 23 22.9 -1.2
baz=318
LBNH Lisbon 53.21 64 P P 15 23 23.1 -1.1
baz=315
G62A West of Eustis 53.21 62 IAmb IAmb 15 23 25.1
comp=Z,67nm,1.6s
G62A West of Eustis 53.21 62 P P 15 23 23.9 -0.3
baz=315,SNR=5.5
G62A P P 15 23 23.9 -0.3
baz=315,SNR=5.5
H62A Milan 53.36 63 IAmb IAmb 15 23 26.0
comp=Z,12nm,0.7s
W52A Murphy 53.38 80 P P 15 23 25.6 0.0
baz=317
P57A Homestead Farm 53.42 72 P P 15 23 25.7 -0.1
baz=316,SNR=7.4
P57A P P 15 23 25.7 -0.1
baz=316,SNR=7.4
U54A Nelsons Funny 53.50 77 P P 15 23 26.7 +0.3
baz=317,SNR=6.1
U54A P P 15 23 26.7 +0.3
baz=317,SNR=6.1
J61A Chester 53.52 65 P P 15 23 26.7 +0.3
baz=316,SNR=5.2
J61A P P 15 23 26.7 +0.3
baz=316,SNR=5.2
V53A Saluda 53.57 79 P P 15 23 25.8 -1.2
V53A IAmb IAmb 15 23 28.2
comp=Z,24nm,1.0s
V53A Saluda 53.57 79 P P 15 23 26.7 -0.3
baz=317,SNR=14
V53A P P 15 23 26.7 -0.3
baz=317,SNR=14
BLA Blacksburg 53.76 75 P P 15 23 28.1 -0.3
baz=317
BLA Blacksburg 53.76 75 P P 15 23 28.1 -0.3
baz=317
PKME Peaks-Kenny Pk 53.79 61 P P 15 23 26.7 -1.7
baz=316
F64A Sherman 53.83 60 IAmb IAmb 15 23 29.4
comp=Z,50nm,1.5s
F64A Sherman 53.83 60 P P 15 23 28.0 -0.7
baz=316,SNR=5.8
F64A P P 15 23 28.0 -0.7
baz=316,SNR=5.8
NPNY Mohonk Preserv 53.84 67 P P 15 23 29.3 +0.5
baz=316
CASEE Lake Jocassee 54.00 79 P P 15 23 30.0 -0.1
baz=318,SNR=5.7
I63A Otisfield 54.02 63 P P 15 23 29.6 -0.5
ODNJ Ogdensburg 54.08 68 P P 15 23 30.7 +0.1
baz=316
L61B Northampton 54.10 66 P P 15 23 30.0 -0.7
baz=316
BRNY Black Rk. Fore 54.15 67 P P 15 23 31.5 +0.4
baz=316,SNR=7.0
K62A Royalston 54.17 65 IAmb IAmb 15 23 32.5
comp=Z,23nm,0.7s
K62A Royalston 54.17 65 P P 15 23 31.8 +0.6
baz=316,SNR=7.1
K62A P P 15 23 31.8 +0.6
baz=316,SNR=7.1
V55A Taylorsville 54.32 77 P P 15 23 32.6 +0.2
baz=317,SNR=5.9
V55A P P 15 23 32.6 +0.2
baz=317,SNR=5.9
250A Grady 54.37 84 P P 15 23 32.0 -0.8
TUPA Temple Univers 54.44 69 P P 15 23 33.2 0.0
baz=316,SNR=5.2
PAL Palisades 54.50 68 P P 15 23 32.7 -0.9
baz=316
BRAL Brewton 54.54 85 P P 15 23 33.9 -0.1
baz=319
ULN Ulaanbaatar 54.58 305 P P 15 23 32.5 -1.8
ULN Ulaanbaatar 54.58 305 *ce*P P 15 23 33.9 -0.4
ULN pmax pmax
comp=Z,4.0nm,1.0s
R58B Mineral 54.60 73 P P 15 23 35.3 +0.9
baz=317
R58B P P 15 23 35.3 +0.9
baz=317
HRV Adam Dziewonsk 54.63 65 P P 15 23 33.7 -0.8
baz=316
PAULI Pauline 54.75 78 P P 15 23 35.0 -0.5
baz=318
KMSC Kings Mountain 54.78 78 P P 15 23 35.5 -0.2
baz=318,SNR=5.8
KMSC Kings Mountain 54.78 78 P P 15 23 35.5 -0.2
baz=318,SNR=5.8
WES Weston 54.84 65 P P 15 23 35.2 -0.9
WES IAmb IAmb 15 23 37.1
comp=Z,19nm,0.6s
WES Weston 54.84 65 P P 15 23 35.2 -0.9
WES pmax pmax
comp=Z,19nm,0.6s
GOGA Godfrey 54.87 81 P P 15 23 35.2 -1.2
baz=318
SONM Songino Array 54.90 305 P P 15 23 36.6 0.0
comp=Z,3.9nm,0.5s,baz=48,slow=6.3,SNR=26
SONM LR LR 15 48 37.1
comp=Z,217nm,19.5s,baz=42,slow=38
comp=Z,3.9nm,0.5s
SONM Songino Array 54.90 305 P P 15 23 35.7 -0.9
SONM Songino Array 54.90 305 P P 15 23 35.7 -0.9
SONM pmax pmax
comp=Z,7.0nm,0.8s
HODGE Hodges 54.94 79 P P 15 23 36.4 -0.5
HODGE IAmb IAmb 15 23 37.3
comp=Z,13nm,0.7s
HODGE Hodges 54.94 79 P P 15 23 36.6 -0.2
baz=318,SNR=6.5
ARCES ARCESS Array B 54.96 358 P P 15 23 35.7 -0.9
comp=Z,3.5nm,0.9s,baz=8.8,slow=8.2,SNR=5.5
ARCES LR LR 15 48 24.2
comp=Z,73nm,19.4s,baz=85,slow=38
comp=Z,3.5nm,0.9s
BORG Borgarnes 55.39 21 LR LR 15 48 44.2
comp=Z,83nm,21.1s,baz=326,slow=38
JSC Jenkinsville 55.45 79 P P 15 23 40.3 -0.3
baz=318
T59A Double "B" Far 55.50 74 IAmb IAmb 15 23 41.5
comp=Z,18nm,0.8s
T59A Double "B" Far 55.50 74 P P 15 23 41.1 +0.2
baz=318,SNR=9.2
T59A P P 15 23 41.1 +0.2
baz=318,SNR=9.2
V58A Windy Hill, Pi 55.52 76 P P 15 23 41.0 0.0
baz=318,SNR=7.3
V58A P P 15 23 41.0 0.0
baz=318,SNR=7.3
LMN Caledonia Moun 55.55 58 P P 15 23 40.7 -0.5
LMN IAmb IAmb 15 23 41.7
comp=Z,18nm,0.8s
U59A Littleton 55.83 74 P P 15 23 42.8 -0.5
U59A IAmb IAmb 15 23 43.9
comp=Z,13nm,0.7s
U59A Littleton 55.83 74 P P 15 23 43.4 +0.2
baz=318,SNR=5.6
U59A P P 15 23 43.4 +0.2
baz=318,SNR=5.6
HHC Hu-ho-hao-te 57.52 296 *e*P P 15 23 53.3 -2.1
HHC pmax pmax
comp=Z,76nm,1.0s
HHC pmax pmax
comp=Z,120nm,4.3s
ZALV Zalesovo Beam 59.01 322 P P 15 24 04.7 -0.8
comp=Z,0.7nm,0.4s,baz=26,slow=7.1,SNR=5.6
ZALV LR LR 15 52 00.1
comp=Z,260nm,18.1s,baz=32,slow=39
comp=Z,0.7nm,0.4s
ZALV Zalesovo Beam 59.01 322 *i* P P 15 24 05.8 +0.3
ZALV pmax pmax
comp=Z,1.0nm,0.4s
NJ2 Nanjing 60.26 284 *e*P P 15 24 15.3 +0.9
NJ2 pmax pmax
comp=Z,12nm,1.1s
CMIG Matias Romero 61.16 102 LR LR 15 48 28.6
comp=Z,60nm,21.1s,baz=338,slow=34
DGZ Jazzator, Alta 61.50 318 *ie*P P 15 24 22.9 +0.1
DGZ pmax pmax
comp=Z,5.0nm,1.7s
KLMR Klimovskoe 62.85 350 *e*P P 15 24 30.6 -0.8
KLMR pmax pmax
comp=Z,18nm,1.5s
KLMR Klimovskoe 62.85 350 *e*P P 15 24 30.6 -0.8
KLMR AMP 15 24 44.9
comp=Z,18nm,1.5s
FINES FINESS Array B 63.06 358 P P 15 24 31.6 -1.2
comp=Z,1.9nm,0.6s,baz=23,slow=8.8,SNR=12
FINES LR LR 15 52 00.6
comp=Z,60nm,21.3s,baz=78,slow=36
comp=Z,1.9nm,0.6s
FINES FINESS Array B 63.06 358 *i* P P 15 24 33.5 +0.7
FINES pmax pmax
comp=Z,2.0nm,0.4s
NB2 NORSAR Subarra 63.23 6 P P 15 24 33.5 -0.5
comp=Z,1.7nm,0.7s,baz=355,slow=6.9
NOA NORSAR Array B 63.23 6 P P 15 24 33.3 -0.7
comp=Z,1.6nm,0.7s,baz=353,slow=6.7,SNR=8.7
NOA LR LR 15 53 39.9
comp=Z,36nm,18.7s,baz=320,slow=38
comp=Z,1.6nm,0.7s
KURK Kurchatov 63.82 324 P P 15 24 37.1 -0.9
KURK Kurchatov 63.82 324 *di* P P 15 24 38.3 +0.3
KURK pmax pmax
comp=Z,6.0nm,1.3s
KIRV Kirov 63.83 344 LR LR 15 57 12.3
comp=Z,162nm,18.1s,baz=3.9,slow=41
KIRV Kirov 63.83 344 *ce*P P 15 24 38.3 +0.4
KURBB Kurchatov Arra 63.93 324 P P 15 24 38.2 -0.5
comp=Z,0.9nm,0.4s,baz=25,slow=6.4,SNR=11
KURBB LR LR 15 54 14.5
comp=Z,184nm,18.9s,baz=22,slow=38
comp=Z,0.9nm,0.4s
XAN Xi'an 64.06 293 P P 15 24 39.8 -0.1
XAN pmax pmax
comp=Z,8.0nm,0.7s
ARU Arti 64.20 338 LR LR 15 55 29.3
comp=Z,176nm,19.4s,baz=24,slow=39
ARU Arti 64.20 338 P P 15 24 39.7 -0.7
ARU IAmb IAmb 15 24 42.6
comp=Z,8.1nm,0.7s
ARU Arti 64.20 338 *di* P P 15 24 40.4 0.0
ARU 15 25 15.6
ARU 15 26 57.8

ARU S **S** **15 33 20.0 +2.5**
ARU SS **SS** **15 37 25.4 -0.2**
ARU pmax pmax
comp=Z,8.0nm,0.7s
ARU MLR MLR
comp=Z,163nm,19.0s
HFS Hagfors 64.26 4 LR LR 15 53 00.1
comp=Z,18nm,21.7s,baz=5.5,slow=36
BVAR Borovoye Array 64.37 330 LR LR 15 56 17.1
comp=Z,123nm,18.6s,baz=24,slow=39
BRVK Borovoye 64.37 330 *e*P **P** **15 24 41.3 -0.3**
BRVK Borovoye 64.37 330 *ce*P **P** **15 24 40.7 -0.9**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
GTA Gaotai 64.40 303 ⇓P **P** **15 24 42.3 +0.1**
GTA pP pP 15 24 48.5 +3.7
GTA sP sP 15 24 51.5 +5.7
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,40nm,4.4s
GTA LR LR
comp=Z,150nm,18.5s
GTA LR LR
comp=Z,120nm,21.4s
GTA LR LR
comp=Z,190nm,18.5s
LZH Lanzhou 65.05 298 *e*P **P** **15 24 45.5 -1.0**
LZH pP pP 15 24 51.3 +2.1
LZH sP sP 15 24 53.5 +3.4
LZH S S 15 33 18.0 -11
LZH SS **SS** **15 37 37.8 -2.4**
LZH pmax pmax
comp=Z,23nm,1.0s
LZH LR LR
comp=Z,230nm,17.9s
LZH LR LR
comp=Z,310nm,18.2s
LZH LR LR
comp=Z,240nm,18.9s
MK31 Makanchi Array 65.84 319 P **P** **15 24 50.5 -0.8**
MK31 Makanchi Array 65.84 319 *d*P **P** **15 24 50.6 -0.7**
MK31 pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 65.84 319 P **P** **15 24 50.6 -0.7**
comp=Z,1.5nm,0.6s,baz=39,slow=5.7,SNR=18
MKAR LR LR 15 55 47.0
comp=Z,218nm,18.3s,baz=38,slow=38
comp=Z,1.5nm,0.6s
MKAR Makanchi Array 65.84 319 *i* P **P** **15 24 50.7 -0.7**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MAKZ Makanchi 65.94 319 P **P** **15 24 50.2 -1.8**
MAKZ Makanchi 65.94 319 P **P** **15 24 50.2 -1.8**
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
TAOE Nuku Hiva Isla 66.16 160 *e*LR LR 15 44 45.5
comp=Z,222nm,27.0s
WMQ Urumqi 66.21 314 *e*P **P** **15 24 56.8 +3.0**
WMQ LR LR
comp=Z,150nm,18.9s
WMQ LR LR
comp=Z,240nm,18.5s
WMQ LR LR
comp=Z,170nm,22.3s
ESK Eskdalemuir 67.42 15 P **P** **15 25 01.1 -0.1**
ESK IAmb IAmb 15 25 03.1
comp=Z,9.6nm,0.8s
ESK Eskdalemuir 67.42 15 P **P** **15 25 01.1 -0.1**
ESK pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 69.19 294 P **P** **15 25 15.0 +2.2**
CD2 pmax pmax
comp=Z,20nm,0.6s
GOMU GeErMu 69.33 304 P **P** **15 25 15.0 +1.0**
GOMU pP pP 15 25 19.0 +2.4
GOMU sP sP 15 25 20.8 +3.2
GOMU S S 15 34 08.5 -12
GOMU pmax pmax
comp=Z,3.0nm,0.7s
GOMU LR LR
comp=Z,130nm,15.2s
GOMU LR LR
comp=Z,110nm,17.7s
AKTO Aktyubinsk 69.91 336 LR LR 15 59 00.4
comp=Z,122nm,19.8s,baz=19,slow=39
AKTO Aktyubinsk 69.91 336 P **P** **15 25 16.7 -0.1**
MNK Minsk 69.96 356 *i* P **P** **15 25 19.9 +3.0**
MNK *i* 15 25 37.4
MNK pmax pmax
comp=Z,12nm,0.8s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=Z,90nm,18.0s
MNK MLR MLR
comp=E,33nm,18.0s
MNK Minsk 69.96 356 *i* P **P** **15 25 20.0 +3.0**
comp=E,3.0nm,0.8s
MNK *i* P **P** **15 25 20.0 +3.0**
MNK *i* P **P** **15 25 20.0 +3.0**
comp=Z,12nm,0.8s,baz=3.6
MNK *i* PcP **PcP** **15 25 37.4 -1.9**
MNK *i* PP PP 15 27 30.7 -20
MNK *i* PPP PPP 15 29 46.5
MNK *i* S S 15 34 35.6 +8.7
MNK *i* SS SS 15 38 13.8 -41
MNK *i* SSS SSS 15 41 50.2
MNK *i* LQ LQ 15 49 58.4
MNK *i* LR LR 15 52 10.6
MNK *i* LRM MLR 15 57 08.2
comp=Z,90nm,18.0s
MNK *i* LRM MLR 15 57 52.7
comp=E,33nm,18.4s
MNK *i* LRM MLR 15 58 06.7
BELG Belogornoye 70.07 343 LR LR 15 59 40.7
comp=E,157nm,19.1s,baz=322,slow=39
BELG Belogornoye 70.07 343 *d*P **P** **15 25 17.1 -0.6**
BELG pmax pmax
comp=Z,3.0nm,1.0s
AB31 Akbulak array 70.56 334 *i* P **P** **15 25 20.5 -0.3**
ABKAR Akbulak array 70.56 334 IAmb IAmb 15 25 21.6
comp=Z,12nm,1.3s
PMOR Pomariorio Ree 71.06 169 *e*T T 16 42 12.7
comp=Z,46nm,0.2s
TKM2 Tokmak 2 71.60 321 *i* P **P** **15 25 27.8 +0.3**
TKM2 pmax pmax
comp=Z,2.0nm,1.0s
AAK Ala-Archa 72.23 322 ⇑ *e*P **P** **15 25 32.5 +1.2**
AAK pmax pmax
comp=Z,6.0nm,1.3s
CLL Collm 73.04 6 *i* P **P** **15 25 31.9 -3.7**
CLL Collm 73.04 6 *i* P **P** **15 25 31.9 -3.7**
CLL *e*pP **pP** **15 25 36.0 -2.3**
CLL *e*PcP **PcP** **15 25 49.0 -3.5**
KK31 Karatay Array 73.16 325 *i* P **P** **15 25 37.1 +0.5**
PPT Papeete 73.44 171 LR LR 15 52 08.2
comp=Z,78nm,20.6s,baz=343,slow=31
TIAR Tiarei 73.45 171 *e*T T 16 45 04.1
comp=Z,3.4nm,0.3s
PPT2 Papeete2 73.46 171 *e*LR LR 15 48 07.3
comp=Z,160nm,24.5s
BRG Berggiesshubel 73.52 5 *e*P **P** **15 25 38.8 +0.3**
BRG Amp 15 25 44.4
comp=Z,11nm,1.4s
BRG *ex* x 15 25 52.3
BRG Amp 15 25 54.1
comp=Z,6.8nm,1.2s
BRG Berggiesshubel 73.52 5 *e*P **P** **15 25 38.8 +0.3**
BRG *e* 15 25 52.2
BRG pmax pmax
comp=Z,11nm,1.4s
BRG pmax pmax
comp=Z,7.0nm,1.2s
HNR Honiara 73.63 223 LR LR 15 51 38.2
comp=Z,55nm,21.8s,baz=318,slow=31
AKASG Malin Array Be 73.70 355 P **P** **15 25 38.6 -1.0**
comp=Z,2.9nm,0.4s,baz=8.8,slow=6.0,SNR=23
AKASG LR LR 16 01 38.4
comp=Z,81nm,18.3s,baz=5.0,slow=39
comp=Z,2.9nm,0.4s
AKBB Malin Array Si 73.70 355 *de*P **P** **15 25 39.1 -0.4**
PZH PanZhiHua 73.79 293 P **P** **15 25 41.8 +1.2**
PZH S **S** **15 35 10.3 -1.8**
PZH SKS **SKSac** **15 35 43.5 -4.4**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,50nm,3.9s
PZH LR LR
comp=Z,600nm,22.0s
PZH LR LR
comp=Z,300nm,20.8s
PZH LR LR
comp=Z,190nm,19.8s
DPC Dobruska-Polom 74.14 4 *e*P **P** **15 25 43.0 +0.7**
KRLC Kraliky 74.43 3 *e*P **P** **15 25 44.4 +0.4**
KSH Kashi 74.45 319 P **P** **15 25 48.3 +4.0**
KSH pmax pmax
comp=Z,5.0nm,0.8s
KSH LR LR
comp=Z,200nm,17.5s
KSH LR LR
comp=Z,220nm,16.5s
KSH LR LR
comp=Z,310nm,18.6s
VRAC Vranov 75.19 3 LR LR 16 00 56.8
comp=Z,25nm,19.5s,baz=14,slow=38
KHC Kasperske Hory 75.24 5 *e*P **P** **15 25 48.5 -0.1**
KHC *e* 15 26 02.0
KHC Kasperske Hory 75.24 5 *e*P **P** **15 25 49.7 +1.1**
KHC *e*PCP **PcP** **15 26 02.0 0.0**
LANS Liptovska Anna 75.42 1 *e*P **P** **15 25 51.1 +1.4**
LANS Liptovska Anna 75.42 1 *e*P **P** **15 25 51.1 +1.4**
KRUC Moravsky 75.43 4 *e*P **P** **15 25 48.7 -1.0**
GERES GERESS Array B 75.53 5 P **P** **15 25 50.6 +0.3**
comp=Z,1.1nm,0.6s,baz=349,slow=4.1,SNR=8.7
comp=Z,1.1nm,0.6s
CKRC Cesky Krumlov 75.59 5 *e*P **P** **15 25 51.8 +1.2**
UZH Uzhgorod 75.95 360 *e*P **P** **15 25 54.5 +1.9**
UZH *e* 15 25 58.8
UZH *i* 15 26 05.8
VYHS Vyhne 76.07 2 *e*P **P** **15 25 53.9 +0.6**
VYHS pmax pmax
comp=Z,15nm,1.7s
VYHS Vyhne 76.07 2 *e*P **P** **15 25 53.9 +0.6**
MODS Modra-Piesok 76.15 3 *e*P **P** **15 25 55.8 +2.0**
MODS Modra-Piesok 76.15 3 *e*P **P** **15 25 55.8 +2.0**
CELP Cerrillos 76.25 78 P **P** **15 25 54.3 -0.4**
CELP IAmb IAmb 15 25 56.0
comp=Z,14nm,0.8s
ZST Bratislava 76.32 3 *e*P **P** **15 25 56.3 +1.5**
ZST Bratislava 76.32 3 *e*P **P** **15 25 56.3 +1.5**
SJG San Juan 76.45 78 LR LR 16 03 19.2
comp=Z,20nm,18.3s,baz=225,slow=39
CONA Conrad Observa 76.55 4 *e*P **P** **15 25 57.1 +1.0**
comp=Z,4.5nm,1.1s
BIOA Bad Ischl, Aus 76.68 6 *e*P **P** **15 25 57.7 +0.9**
comp=Z,4.8nm,1.3s
RAR Rarotonga 76.70 181 LR LR 15 52 30.8
comp=Z,99nm,19.4s,baz=258,slow=30
RETA Reutte 76.70 8 *e*P **P** **15 25 57.5 +0.5**
comp=Z,4.9nm,1.2s
DAVA Damuels 76.83 8 *e*P **P** **15 25 58.9 +1.0**
comp=Z,4.3nm,1.0s
MOTA Moosalm 76.86 7 *e*P **P** **15 25 59.5 +1.5**
comp=Z,5.4nm,0.9s
WATA Walderalm 76.91 7 *e*P **P** **15 25 59.8 +1.5**
comp=Z,0.8nm,0.3s
WTTA Wattenberg 76.98 7 *e*P **P** **15 25 59.8 +1.0**
comp=Z,10nm,1.1s
SQTA Sankt Quirin 76.99 7 *e*P **P** **15 25 59.9 +1.1**
comp=Z,12nm,1.1s
FETA Feichten 77.16 8 *e*P **P** **15 26 01.4 +1.7**
comp=Z,3.9nm,1.2s
ARSA Arzberg 77.21 4 *e*P **P** **15 26 02.5 +2.7**
comp=Z,3.3nm,1.1s
KBA Kanbreinsper 77.27 6 *e*P **P** **15 26 01.7 +1.3**
comp=Z,16nm,1.4s
DAVOX Davos/Dischmat 77.33 8 LR LR 16 00 05.7
comp=Z,22nm,21.6s,baz=162,slow=36
ABTA Abfaltersbach 77.55 6 *e*P **P** **15 26 02.7 +0.8**
comp=Z,6.6nm,1.4s
MYKA Terra Mystica 77.74 6 *e*P **P** **15 26 04.1 +1.2**
comp=Z,0.9nm,0.3s
SOKA Soboth 77.76 5 *e*P **P** **15 26 04.0 +1.0**
OBKA Obir 77.91 5 *e*P **P** **15 26 04.9 +1.0**
comp=Z,3.8nm,0.5s
BNI Bardonecchia 78.75 11 P **P** **15 26 09.2 +0.7**
BNI Bardonecchia 78.75 11 P **P** **15 26 09.2 +0.7**
BNI pmax pmax
comp=Z,4.0nm,0.9s
MLR Muntele Rosu 79.03 357 LR LR 16 03 12.6
comp=Z,96nm,19.3s,baz=52,slow=37
KVAR Kislovodsk Arr 79.05 345 LR LR 16 04 32.4
comp=Z,84nm,20.3s,baz=258,slow=38
KIV Kislovodsk 79.05 345 *e*P **P** **15 26 10.3 +0.1**
KIV pmax pmax
comp=Z,9.0nm,0.9s
TBI Tubuai 79.18 172 *e*LR LR 15 50 46.0
comp=Z,138nm,26.2s
TBI Tubuai 79.18 172 *e*T T 16 52 14.8
comp=Z,5.9nm,0.3s
KBZ Khabaz 79.24 344 P **P** **15 26 12.3 +1.3**
comp=Z,4.4nm,0.8s,baz=354,slow=5.6,SNR=10
KBZ LR LR 16 04 37.1
comp=Z,81nm,20.7s,baz=32,slow=38
comp=Z,4.4nm,0.8s
KBZ Khabaz 79.24 344 *de*P **P** **15 26 12.2 +1.2**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
NCK Nalchik 79.36 344 ⇑ *e*P **P** **15 26 12.7 +0.9**
NCK pmax pmax
comp=Z,10.0nm,0.8s
PGAV Gavieira, Arco 79.37 22 *e*LR LR 15 51 12.4
comp=Z,45nm,18.0s
PBRG Bragança 79.84 21 *e*P **P** **15 26 15.9 +1.4**
comp=Z,21nm,1.4s
POLO Lamas de Olo 80.03 22 *e*P **P** **15 26 17.2 +1.6**
comp=Z,9.1nm,0.8s
MVO Moncorvo 80.40 22 *e*LR LR 15 52 59.8
comp=Z,81nm,20.0s
UBPT Khong Chiam 80.94 284 P **P** **15 26 20.3 -0.3**
UBPT IAmb IAmb 15 26 23.4
comp=Z,19nm,1.2s
MTE Manteigas 81.02 22 *e*P **P** **15 26 22.1 +1.2**
comp=Z,26nm,1.6s
MTE Manteigas 81.02 22 *e*LR LR 15 50 49.5
comp=Z,71nm,18.0s
SDV Santo Domingo 81.44 87 LR LR 16 05 25.0
comp=Z,38nm,18.1s,baz=328,slow=38
PCBR Castelo Branco 81.57 22 *e*P **P** **15 26 24.1 +0.4**
GEYT Alibeck 81.61 332 P **P** **15 26 24.6 +0.6**
comp=Z,2.9nm,0.6s,baz=319,slow=4.3,SNR=6.3
GEYT LR LR 16 09 18.4
comp=Z,170nm,18.1s,baz=14,slow=41
comp=Z,2.9nm,0.6s
CMAR Chiang Mai Arr 81.85 291 P **P** **15 26 25.4 0.0**
comp=Z,3.7nm,0.7s,baz=18,slow=5.6,SNR=22
CMAR LR LR 16 06 26.7
comp=Z,53nm,18.2s,baz=50,slow=38
comp=Z,3.7nm,0.7s
CMAR Chiang Mai Arr 81.85 291 P **P** **15 26 26.1 +0.6**
CMAR Chiang Mai Arr 81.85 291 *i* P **P** **15 26 25.7 +0.2**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
PMRV Marv??o 81.99 22 *e*LR LR 15 58 27.7
comp=Z,55nm,18.0s
PMTG Montargil 82.15 23 *e*P **P** **15 26 29.2 +2.4**
GNI Garni 82.43 342 LR LR 16 08 45.3
comp=Z,115nm,19.8s,baz=14,slow=40
ESDC Sonseca Array 82.44 20 P **P** **15 26 29.2 +0.8**
comp=Z,3.7nm,0.8s,baz=341,slow=4.8,SNR=26
ESDC LR LR 16 07 25.1
comp=Z,32nm,18.0s,baz=320,slow=39
comp=Z,3.7nm,0.8s
BAUV El Baul 82.86 85 P **P** **15 26 29.3 -1.5**
BAUV IAmb IAmb 15 26 30.6
comp=Z,13nm,0.8s
PNCL Nicolau / Gran 83.00 24 *e*P **P** **15 26 32.0 +0.8**
DZM Mont Dzumac 83.11 213 *e*LR LR 15 52 35.8
comp=Z,123nm,23.6s
PBAR Barrancos 83.27 22 *e*P **P** **15 26 33.9 +1.3**
comp=Z,41nm,2.0s
PVAQ Vaqueiros 83.86 23 *e*P **P** **15 26 35.3 -0.3**
BR131 Keskin Array S 84.31 351 *de*P **P** **15 26 38.7 +0.6**
BRTR Keskin Array B 84.31 351 P **P** **15 26 39.0 +0.9**
comp=Z,1.8nm,0.7s,baz=8.6,slow=3.8,SNR=9.6
BRTR LR LR 16 10 57.5
comp=Z,43nm,19.4s,baz=18,slow=40
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 84.31 351 *i* P **P** **15 26 39.2 +1.1**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
CTA Charters Tower 88.86 231 P **P** **15 27 02.5 +2.3**
comp=Z,4.9nm,0.9s,baz=25,slow=7.7,SNR=2.9
CTA LR LR 16 00 39.9
comp=Z,34nm,21.0s,baz=81,slow=31
comp=Z,4.9nm,0.9s
MDT Midelt 88.95 22 LR LR 16 10 09.9
comp=Z,35nm,18.1s,baz=342,slow=38
MMAI Mount Meron Ar 90.78 348 LR LR 16 10 32.5
comp=Z,32nm,21.9s,baz=215,slow=37
RPN Rapa Nui 92.53 138 LR LR 16 01 15.3
comp=Z,52nm,18.1s,baz=8.5,slow=30
EIL Elat 94.13 348 LR LR 16 14 23.8
comp=Z,21nm,19.6s,baz=34,slow=38
WRAB Tennant Creek 94.27 240 ⇑ *e*P **P** **15 27 25.5 +0.2**
WRAB pmax pmax
comp=Z,15nm,1.7s
WRA Warramunga Arr 94.28 240 P **P** **15 27 24.8 -0.6**
comp=Z,2.5nm,1.0s,baz=38,slow=5.6,SNR=9.1
comp=Z,2.5nm,1.0s
WRA Warramunga Arr 94.28 240 *i* P **P** **15 27 24.7 -0.7**
WRA pmax pmax
comp=Z,3.0nm,1.0s
WSAR Wadi Sarin 95.24 326 LR LR 16 14 43.5
comp=Z,76nm,18.3s,baz=41,slow=38
ASAR Alice Springs 97.65 239 P **P** **15 27 39.8 -0.8**
comp=Z,1.1nm,1.0s,baz=32,slow=5.5,SNR=5.6
comp=Z,1.1nm,1.0s
VNDA Vanda 135.31 191 PKP **PKiKP** **15 33 25.9 +0.2**
comp=Z,0.8nm,1.1s,baz=71,slow=4.1,SNR=2.6
QSPA South Pole Qui 145.56 180 PKPdf **PKPbc** **15 33 43.2 0.0**
LBTB Lobatse 149.13 353 **PKPbc** **15 33 54.6 +0.3**
LBTB Lobatse 149.13 353 PKP2 **PKPbc** **15 33 54.7 +0.3**
BELA Belgrano 2 150.79 159 **PKPbc** **15 33 56.2 -0.6**
BOSA Boshof 152.72 353 PKPbc **PKPbc** **15 34 02.8 0.0**
comp=Z,2.0nm,0.4s,baz=21,slow=2.6,SNR=14
MAW Mawson 157.66 222 PKPab **PKPab** **15 34 34.0 +0.5**
comp=Z,7.7nm,1.1s,baz=81,slow=9.3,SNR=5.4

BEO ***27*** *15:18:53.7±0.9, 41.40N×25.15E, h0km, ML2.4/4*
SOF ***27*** *15:18:54.9, 41.50N×24.93E, h17km, MD2.6*
ISK ***27*** *15:18:55.1, 41.50N×24.96E, h6km, ML2.5/11*
ATH ***27*** *15:18:55.4, 41.50N×24.92E, h9km±3km, ML2.2/4, Error ellipse: s-maj=3.2km s-min=0.9km az=320.0*
THE ***27*** *15:18:55.3, 41.48N×24.92E, h6km±22km, ML2.3/9, Error ellipse: s-maj=22.0km s-min=0.8km az=172.0*
DDA ***27*** *15:18:56.9±0.0, 41.53N×25.13E, h7km±1km, ML2.3*
ISC 27 15:18:55.3±1.0, **41.49N**±0.02×**24.93E**±0.02, **h9**km±8km,
n52, σ0**s52**/86, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RZN	**Rozhen**				**0.25 321**	*i* P	**Pg**	**15 19 00.6**	**+0.1**
KDZ	**Kurdzhali**				**0.40 66**	PG	**Pg**	**15 19 02.2**	**-1.0**
KDZ						SG	**Sg**	**15 19 06.6**	**-1.8**
KDZ	**Kurdzhali**				**0.40 66**	*i* P	**Pg**	**15 19 02.2**	**-1.0**
RDO	**Rodhopi**				**0.57 127**	P	**Pg**	**15 19 06.5**	**+0.1**
RDO						S	**Sg**	**15 19 14.1**	**+0.2**
	440nm,0.1s								
RDO	**Rodhopi**				**0.57 127**	PG	**Pg**	**15 19 06.6**	**+0.1**
RDO						SG	**Sg**	**15 19 14.5**	**+0.6**
RDO	**Rodhopi**				**0.57 127**	P	**Pg**	**15 19 06.5**	**+0.1**
RDO						S	**Sg**	**15 19 14.2**	**+0.3**
RDO						AML	AML	15 19 15.8	
	comp=E,809μm,0.1s								
RDO						AML	AML	15 19 16.1	
	comp=N,898μm,0.1s								
KAVA	**Kavala**				**0.58 212**	P	**Pg**	**15 19 06.6**	**0.0**
KAVA						S	**Sg**	**15 19 14.9**	**+0.7**
	comp=N,928nm,0.2s								
KAVA	**Kavala**				**0.58 212**	P	**Pg**	**15 19 06.5**	**-0.1**
KAVA						S	**Sg**	**15 19 15.2**	**+0.9**
PLD	**Plovdiv**				**0.64 345**	PG	**Pg**	**15 19 08.0**	**+0.4**
PLD						SG	**Sg**	**15 19 16.6**	**+0.6**
PLD	**Plovdiv**				**0.64 345**	*e*Pg	**Pg**	**15 19 08.0**	**+0.4**
PLD						*e*Sg	**Sg**	**15 19 16.5**	**+0.6**
PLD	**Plovdiv**				**0.64 345**	*i* P	**Pg**	**15 19 08.0**	**+0.4**
KVLA	**Kavala**				**0.69 217**	P	**Pg**	**15 19 08.5**	**0.0**
KVLA						S	**Sg**	**15 19 17.9**	**+0.3**
DIM	**Dimitrovgrad**				**0.72 39**	*i* P	**Pg**	**15 19 09.4**	**+0.2**
NVR	**Nevrokopi**				**0.81 260**	P	**Pg**	**15 19 10.4**	**-0.6**
NVR						S	**Sg**	**15 19 20.7**	**-0.9**
	comp=N,205nm,0.3s								
NVR	**Nevrokopi**				**0.81 260**	P	**Pg**	**15 19 10.4**	**-0.6**
NVR						S	**Sg**	**15 19 21.6**	**0.0**
NVR						AML	AML	15 19 25.2	
	comp=E,456μm,0.1s								
NVR						AML	AML	15 19 25.3	
	comp=N,349μm,0.2s								
THAS	**Thassos island**				**0.90 190**	P	**Pg**	**15 19 12.2**	**-0.3**
THAS						S	**Sg**	**15 19 23.9**	**-0.3**
	comp=N,280nm,0.3s								
MMB	**Musomiste**				**0.91 277**	*i* P	**Pg**	**15 19 12.0**	**-0.7**
KOKK	**Kokkinochori,**				**0.97 227**	P	**Pg**	**15 19 13.5**	**-0.5**
KOKK						S	**Sg**	**15 19 26.9**	**+0.3**
	comp=N,78nm,0.5s								
KOKK	**Kokkinochori,**				**0.97 227**	P	**Pg**	**15 19 13.4**	**-0.5**
KOKK						S	**Sg**	**15 19 26.8**	**+0.3**
ALN	**Alexandroupoli**				**1.03 125**	P	**Pg**	**15 19 15.0**	**-0.1**
ALN						S	**Sg**	**15 19 28.3**	**-0.2**
	comp=N,100nm,1.0s								
ALN	**Alexandroupoli**				**1.03 125**	PG	**Pb**	**15 19 15.3**	**0.0**
ALN						SG	**Sb**	**15 19 28.8**	**-0.1**
ALN	**Alexandroupoli**				**1.03 125**	P	**Pg**	**15 19 15.1**	**-0.1**
ALN						S	**Sg**	**15 19 28.7**	**+0.2**
ALN						AML	AML	15 19 32.1	
	comp=N,163μm,0.5s								
ALN						AML	AML	15 19 32.7	
	comp=E,217μm,0.3s								
SRS	**Serrai**				**1.07 250**	P	**Pg**	**15 19 15.2**	**-0.7**
SRS						S	**Sn**	**15 19 31.4**	**-0.2**
	comp=E,438nm,0.5s								
SRS	**Serrai**				**1.07 250**	*e*Pg	**Pg**	**15 19 15.4**	**-0.5**
SRS						*e*Sg	**Sb**	**15 19 30.3**	**+0.1**
SMTH	**Samothraki Isl**				**1.12 156**	P	**Pg**	**15 19 16.4**	**-0.3**
SMTH						S	**Sb**	**15 19 32.1**	**+0.7**
	comp=E,108nm,0.2s								
SMTH	**Samothraki Isl**				**1.12 156**	P	**Pg**	**15 19 16.4**	**-0.3**
SMTH						S	**Sg**	**15 19 31.4**	**+0.2**
SMTH						AML	AML	15 19 35.9	
	comp=E,212μm,0.1s								
SMTH						AML	AML	15 19 36.5	
	comp=N,205μm,0.3s								
ENEZ	**Enez**				**1.19 129**	PN	**Pn**	**15 19 18.2**	**0.0**
CAVK	**Edirne/Enez-Ca**				**1.23 130**	P	**Pn**	**15 19 18.7**	**0.0**
CAVK						S	**Sn**	**15 19 35.5**	**+0.1**
CAVK						*i* AML	AML	15 19 38.0	
	comp=N,102nm,0.3s								
CAVK						*i* AML	AML	15 19 39.0	
	comp=N,87nm,0.5s								
OUR	**Ouranopolis**				**1.36 212**	P	**Pb**	**15 19 20.9**	**0.0**
OUR	**Ouranopolis**				**1.36 212**	PN	**Pb**	**15 19 21.2**	**+0.3**
SOH	**Sokhos**				**1.36 241**	P	**Pn**	**15 19 20.2**	**-0.4**
SOH						S	**Sb**	**15 19 38.4**	**-0.2**
	comp=N,135nm,0.6s								
EDRB	**Edirne**				**1.41 75**	PN	**Pb**	**15 19 21.4**	**-0.3**
KKB	**Krupnik**				**1.43 286**	*i* P	**Pn**	**15 19 21.3**	**-0.2**
KESN	**Edirne-Kesan**				**1.48 116**	P	**Pb**	**15 19 23.3**	**+0.1**
KESN						S	**Sg**	**15 19 44.3**	**+1.4**
KESN						*i* AML	AML	15 19 46.0	
	comp=N,79nm,0.2s								
KESN						*i* AML	AML	15 19 47.0	
	comp=N,81nm,0.4s								
GADA	**Gvkgeada**				**1.49 150**	PN	**Pb**	**15 19 23.1**	**-0.1**
KNT	**Kendrikon**				**1.56 259**	P	**Pn**	**15 19 23.5**	**+0.2**
KNT						S	**Sb**	**15 19 44.6**	**+0.3**
KNT	**Kendrikon**				**1.56 259**	PN	**Pb**	**15 19 24.1**	**-0.3**
KNT	**Kendrikon**				**1.56 259**	P	**Pn**	**15 19 23.6**	**+0.3**
GELI	**Tayfur-Gelibol**				**1.60 132**	PN	**Pb**	**15 19 24.7**	**-0.3**
LIA	**Limnos Island**				**1.60 173**	P	**Pb**	**15 19 25.1**	**0.0**
HORT	**Hortiatis**				**1.65 238**	PN	**Pb**	**15 19 25.7**	**-0.2**
KIRK	**Kırklareli**				**1.65 79**	P	**Pn**	**15 19 25.0**	**+0.5**
KIRK						S	**Sn**	**15 19 46.0**	**+0.1**
KIRK						*i* AML	AML	15 19 48.0	
	comp=N,24nm,0.3s								
VTS	**Vitosha**				**1.69 312**	*e*Pn	**Pb**	**15 19 26.6**	**-0.1**
VTS						*e*Sn	**Sg**	**15 19 49.7**	**0.0**
VTS						*e*Sn	**Sg**	**15 19 49.7**	**0.0**
VTS	**Vitosha**				**1.69 312**	P	**Pb**	**15 19 26.6**	**-0.1**
RKY	**Sarkoy-Tekirda**				**1.88 115**	PN	**Pn**	**15 19 28.1**	**+0.4**
ARMN	**Kirklareli, Me**				**1.91 78**	P	**Pb**	**15 19 30.0**	**-0.3**

ARMN				S	**Sn**	**15 19 51.8**	**-0.4**
ARMN				*i* AML	AML	15 19 58.0	
	comp=N,20nm,0.8s						
ARMN				*i* AML	AML	15 19 59.0	
	comp=N,15nm,0.4s						
BOSS	**Bosilegrad**	**2.08**	**300**	*e*Pn	**Pb**	**15 19 33.7**	**+0.4**
BOSS				*e*Sn	**Sg**	**15 20 03.0**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**2.14**	**144**	P	**Pn**	**15 19 31.3**	**+0.1**
BAYC				S	**Sn**	**15 19 57.3**	**-0.6**
PRVS	**Prvonek**	**2.36**	**297**	*e*Pn	**Pn**	**15 19 34.4**	**+0.2**
PRVS				*e*Sn	**Sg**	**15 20 10.5**	**-0.5**
ZAPS	**Zavoj**	**2.46**	**317**	*e*Pn	**Pb**	**15 19 39.6**	**-0.2**
ZAPS				*e*Sn	**Sb**	**15 20 10.3**	**+0.1**
BARS	**Barje**	**2.67**	**301**	*e*Pn	**Pn**	**15 19 39.0**	**+0.5**
BARS				*e*Sn	**Sb**	**15 20 17.8**	**+1.7**
ZAGS	**Zajecar**	**3.06**	**320**	*e*Sn	**Sb**	**15 20 26.0**	**-1.2**

ROM 27 15:21:41.1±0.0, 42°613N±0°003×13°313E±0°004, h10km, ML1.1/6, Error ellipse: s-maj=0.3km s-min=0.2km az=211.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.02**	**43**	P	Pg	15 21 43.3	+0.1
SMA1				S	Sg	15 21 44.6	0.0
SMA1				AML	AML		
	comp=N,1660μm,0.2s						
SMA1				AML	AML		
	comp=E,3945μm,0.4s						
CAMP	**Campotosto**	**0.10**	**137**	P	Pg	15 21 44.4	+0.5
CAMP				S	Sg	15 21 46.6	+0.6
CAMP				AML	AML		
	comp=E,135μm,0.7s						
CAMP				AML	AML		
	comp=N,62μm,0.4s						
RM33	**Pellescritta (**	**0.13**	**215**	P	Pg	15 21 44.6	+0.5
RM33				S	Sg	15 21 47.2	+0.8
RM33				AML	AML		
	comp=E,150μm,0.9s						
RM33				AML	AML		
	comp=N,154μm,1.3s						
RM33				AML	AML		
	comp=E,150μm,0.9s						
RM33				AML	AML		
	comp=N,155μm,1.3s						
T1243	**Rocca Santa Ma**	**0.13**	**50**	P	Pg	15 21 44.7	+0.5
T1243				AML	AML		
	comp=N,462μm,1.0s						
T1243				AML	AML		
	comp=N,462μm,1.0s						
T1243				AML	AML		
	comp=E,436μm,0.3s						
LNSS	**Leonessa**	**0.20**	**267**	P	Pg	15 21 45.8	+0.4
LNSS				S	Sg	15 21 49.6	+1.3
LNSS				AML	AML		
	comp=E,84μm,0.3s						
LNSS				AML	AML		
	comp=N,73μm,0.1s						
TERO	**Teramo**	**0.21**	**87**	P	Pg	15 21 46.1	+0.5
TERO				S	Sg	15 21 50.2	+1.5
TERO				AML	AML		
	comp=N,74μm,0.4s						
TERO				AML	AML		
	comp=E,75μm,1.0s						
GIGS	**Gran Sasso**	**0.25**	**131**	P	Pg	15 21 46.8	+0.6
GIGS				S	Sg	15 21 51.0	+1.3
NRCA	**Norcia**	**0.27**	**327**	P	Pg	15 21 47.0	+0.5
NRCA				AML	AML		
	comp=E,671μm,0.1s						
NRCA				AML	AML		
	comp=N,516μm,1.0s						
MMO1	**Montemonaco**	**0.29**	**2**	P	Pg	15 21 47.4	+0.5
MMO1				S	Sb	15 21 52.2	-1.0
MMO1				AML	AML		
	comp=E,41μm,0.4s						
MMO1				AML	AML		
	comp=N,30μm,1.1s						
MC2	**Monte Cornacci**	**0.31**	**343**	P	Pb	15 21 48.2	-0.7
FDMO	**Fiordimonte**	**0.46**	**339**	P	Pg	15 21 50.6	+0.5
FDMO				AML	AML		
	comp=N,28μm,0.6s						
FDMO				AML	AML		
	comp=E,29μm,1.4s						
CSP1	**Cessapalombo**	**0.48**	**351**	S	Sb	15 21 59.0	0.0

*IDC **27** 15:24:57.8±0.9, 3°.93S×131°.67E, h0km, mb4.0/6, mbtmp4.1/9, ML3.9/3, MS3.5/4, Error ellipse: s-maj=35.8km s-min=18.0km az=73.0*
*NEIC **27** 15:24:59.1±2.6, 4°.10S±0°.07×131°.7E±0°.1, h35km±2km, mb4.1/16, Error ellipse: s-maj=21.7km s-min=11.2km az=282.0*
*DJA **27** 15:25:02.7±0.3, 4°S±3°×13°2E±°, h69km±21km, M4.2/11, mb4.6/7, mB4.5/1, MLv4.0/11, Mw(mB)3.7/1*
ISC 27 15:25:00.6±0.5, 4°11S±0°05×131°73E±0°07, h50km, n56, σ2s91/54, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.29**	**24**		**Pn**	**15 25 23.8**	**+1.5**
FAKI	**Fak Fak**	**1.29**	**24**	P	**Pn**	**15 25 23.9**	**+1.6**
BNDI	**Bandanaira**	**1.86**	**257**	P	**Pn**	**15 25 31.5**	**+1.4**
BNDI	**Bandanaira**	**1.86**	**257**	P	**Pn**	**15 25 32.2**	**+2.1**
MSAI	**Masohi**	**2.89**	**285**	P	**Pn**	**15 25 44.2**	**0.0**
SIJI	**Sorong**	**3.25**	**352**	Pn	**Pn**	**15 25 47.7**	**-1.4**
	4.1nm,0.3s,baz=215,slow=16,SNR=24						
SIJI				Sn	**Sn**	**15 26 22.0**	**-4.5**
	9.8nm,0.3s,baz=145,slow=22,SNR=10 11nm,0.2s						
SWI	**Sorong**	**3.25**	**352**	P	**Pn**	**15 25 48.0**	**-1.2**
AAI	**Ambon**	**3.55**	**277**	P	**Pn**	**15 25 53.8**	**+0.6**
BAKI	**Biak**	**5.25**	**57**	P	Pn	15 26 20.8	+4.2
	164nm,0.8s						
LBMI	**Labuha**	**5.45**	**309**	P	**Pn**	**15 26 18.7**	**-0.6**
	0.2nm552nm52nm,0.5s						
SANI	**Sanana**	**6.08**	**289**	P	**Pn**	**15 26 25.8**	**-2.2**
	0.2nm40nm,0.8s						
KDU	**Kakadu**	**8.56**	**175**	P	**Pn**	**15 27 04.6**	**+2.6**
MTN	**Manton Dam**	**8.70**	**184**		**Pn**	**15 27 05.7**	**+1.8**
BATI	**Baumata**	**10.03**	**232**	Pn	**Pn**	**15 27 25.8**	**+3.6**
	4.0nm,0.3s,baz=68,slow=8.1,SNR=8.7						
BATI				LR	LR	15 31 41.9	
	comp=Z,177nm,18.1s,baz=76,slow=40 36nm,0.7s						
BATI	**Baumata**	**10.03**	**232**	P	**Pn**	**15 27 25.9**	**+3.6**
	32nm,0.9s						
EDFI	**Ende, Flores**	**10.99**	**245**	P	**Pn**	**15 27 39.2**	**+3.9**
	5.5nm,0.9s						
KNRA	**Kununurra**	**11.86**	**194**	Pn	**Pn**	**15 27 46.4**	**-0.8**
KNRA	**Kununurra**	**11.86**	**194**	P	**Pn**	**15 27 47.4**	**+0.2**
KAPI	**Kappang**	**11.97**	**265**	LR	LR	15 32 37.6	
	comp=Z,149nm,20.3s,baz=94,slow=38						
PLAI	**Plampang**	**14.63**	**251**	P	**Pn**	**15 28 26.1**	**+1.3**
COEN	**Coen**	**14.95**	**132**	Pn	**Pn**	**15 28 27.9**	**-1.0**
COEN	**Coen**	**14.95**	**132**	P	**P**	**15 28 33.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**15.13**	**203**	Pn	**Pn**	**15 28 28.2**	**-3.0**
	0.9nm,0.3s,baz=34,slow=11,SNR=24						
FITZ				Sn	Sn	15 31 06.6	-11
	0.2nm,0.3s,baz=56,slow=18,SNR=2.0						
FITZ	**Fitzroy Crossi**	**15.13**	**203**	Pn	**Pn**	**15 28 28.4**	**-2.8**
FITZ				IAmb	IAmb	15 28 41.1	
	comp=Z,4.4nm,0.7s						
WB0	**Warramunga Arr**	**15.78**	**171**	Pn	**Pn**	**15 28 39.4**	**-0.3**
WRAB	**Tennant Creek**	**15.94**	**171**	Pn	**Pn**	**15 28 40.4**	**-1.3**
WRAB				IAmb	IAmb	15 29 11.8	
	comp=Z,7.1nm,0.9s						
WRA	**Warramunga Arr**	**15.95**	**171**	Pn	**Pn**	**15 28 40.4**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=355,slow=13,SNR=24						
WRA				Sn	**Sn**	**15 31 31.4**	**-6.3**
	comp=Z,0.4nm,0.3s,baz=352,slow=24,SNR=5.5						
WRA	**Warramunga Arr**	**15.95**	**171**	Pn	**Pn**	**15 28 40.8**	**-1.0**
WB2	**Warramunga Arr**	**15.95**	**171**	Pn	**Pn**	**15 28 40.9**	**-1.0**
WR0	**Warramunga Arr**	**16.00**	**170**	Pn	**Pn**	**15 28 42.3**	**-0.1**
WR0				IAmb	IAmb	15 29 20.9	
	comp=Z,10nm,1.1s						
JAGI	**Jajag, Banyuwa**	**17.99**	**255**		**P**	**15 29 05.3**	**-2.0**
JAGI				IAmb	IAmb	15 29 31.5	
	comp=Z,31nm,1.1s						
QIS	**Mount Isa**	**18.06**	**156**	P	**Pn**	**15 29 11.9**	**+3.8**
MTSU	**Mount Surprise**	**18.61**	**139**	P	**Pn**	**15 29 19.7**	**+4.9**
AS31	**Alice Springs**	**19.56**	**174**	P	**P**	**15 29 22.4**	**-2.1**
ASAR	**Alice Springs**	**19.56**	**174**	P	**Pn**	**15 29 27.7**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=352,slow=9.7,SNR=79						
ASAR				S	**S**	**15 32 57.6**	**-5.2**
	comp=Z,0.8nm,0.9s,baz=358,slow=28,SNR=3.1 comp=Z,3.4nm,0.7s						
ASAR	**Alice Springs**	**19.56**	**174**	P	**P**	**15 29 22.0**	**-2.4**
SBUM	**Sibu**	**20.55**	**288**	P	**P**	**15 29 34.7**	**-0.5**
SBUM				IAmb	IAmb	15 29 39.0	
	comp=Z,11nm,0.8s						
MBWA	**Marble Bar**	**20.57**	**214**	P	**P**	**15 29 33.3**	**-2.1**
MBWA				IAmb	IAmb	15 29 39.3	
	comp=Z,8.9nm,1.0s						
PSA00	**Pilbara Seismi**	**20.84**	**213**	P	**P**	**15 29 37.1**	**-1.3**
PSA00				IAmb	IAmb	15 29 40.6	
	comp=Z,10nm,0.7s						
PSA00	**Pilbara Seismi**	**20.84**	**213**	P	**P**	**15 29 37.1**	**-1.3**
PSA00				IAmb	IAmb	15 29 41.6	
	comp=Z,8.6nm,1.2s						
PSA00	**Pilbara Seismi**	**20.84**	**213**	P	**P**	**15 29 40.4**	**+2.0**
WRKA	**Warakurna**	**21.07**	**189**	P	**P**	**15 29 44.9**	**+4.1**
CTA	**Charters Tower**	**21.28**	**139**	P	**P**	**15 29 49.0**	**+6.0**
	comp=Z,3.3nm,0.7s,baz=327,slow=13,SNR=2.4 comp=Z,3.3nm,0.7s						
OOD	**Oodnadatta**	**23.86**	**171**	P	**P**	**15 30 14.4**	**+4.9**
LEM	**Lembang**	**24.15**	**263**	LR	LR	15 40 38.7	
	comp=Z,134nm,18.2s,baz=150,slow=39						
MULG	**Mulgathing**	**26.13**	**175**	P	**P**	**15 30 36.6**	**+6.5**
STKA	**Stephens Creek**	**29.14**	**163**	LR	LR	15 44 18.5	
	comp=Z,138nm,20.2s,baz=18,slow=40						
HKPS	**Hong Kong Po S**	**31.36**	**327**	P	**P**	**15 31 14.8**	**-1.9**
JCJ	**Chichijima**	**32.62**	**17**	P	**P**	**15 31 26.6**	**-1.2**
CAN	**Canberra**	**34.93**	**155**	P	**P**	**15 31 45.5**	**-2.3**
PINNC	**Pines Island,**	**39.15**	**121**	P	**P**	**15 32 20.0**	**-3.7**
CMAR	**Chiang Mai Arr**	**39.32**	**306**	P	**P**	**15 32 27.9**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=138,slow=6.1,SNR=9.2 comp=Z,0.7nm,0.3s						
PETK	**Petropavlovsk-**	**61.06**	**18**	P	**P**	**15 35 12.6**	**+3.4**
	comp=Z,2.2nm,0.8s,baz=244,slow=7.3,SNR=3.3 comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**66.80**	**325**	P	**P**	**15 35 50.2**	**+3.1**
	comp=Z,1.9nm,0.8s,baz=115,slow=7.6,SNR=19 comp=Z,1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**69.79**	**333**	P	**P**	**15 36 08.3**	**+2.7**
	comp=Z,0.9nm,0.7s,baz=123,slow=5.3,SNR=4.8 comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**75.10**	**174**	P	P	15 36 42.4	+5.5
	comp=Z,1.2nm,1.0s,baz=314,slow=6.8,SNR=6.9 comp=Z,1.2nm,1.0s						

WEL 27 15:48:00.4±1.3, 34°S±26'×17°8W±2'8, h196km±46km, M4.2/6, mB4.3/2, ML4.4/11, MLv4.2/6, Mw(mB)3.5/2, Error ellipse: s-maj=0.0km s-min=0.0km az=131.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.51**	**215**	P	Pn	15 49 07.6	-0.8
MXZ				S	Sn	15 50 01.9	0.0
WMGZ	**Waiomatatini S**	**4.67**	**212**	P	Pn	15 49 10.6	+0.3
WMGZ				S	Sn	15 50 06.0	+0.5
PKGZ	**Pakihiroa**	**4.88**	**214**	P	Pn	15 49 11.6	-1.5
PKGZ				S	Sn	15 50 10.6	+0.1
HAZ	**Te Kaha**	**4.92**	**217**	P	Pn	15 49 13.9	+0.4
HAZ				S	Sn	15 50 12.7	+1.5
PUZ	**Puketiti**	**4.95**	**212**	P	Pn	15 49 14.4	+0.5
PUZ				S	Sn	15 50 11.1	-0.9
RUGZ	**Raukumara Rang**	**5.13**	**217**	P	Pn	15 49 16.4	0.0
RUGZ				S	Sn	15 50 18.0	+1.5
TWGZ	**Tauwhareparae**	**5.16**	**213**	P	Pn	15 49 17.4	+0.7
TWGZ				S	Sn	15 50 18.9	+2.0
CNGZ	**Carnagh Statio**	**5.32**	**210**	P	Pn	15 49 17.8	-0.9
TKGZ	**Te Karaka**	**5.43**	**212**	P	Pn	15 49 20.6	+0.5
TKGZ				S	Sn	15 50 22.1	-1.0
MWZ	**Matawai**	**5.50**	**215**	P	Pn	15 49 19.8	-1.2
MWZ				S	Sn	15 50 24.3	-0.5
URZ	**Urewera**	**5.65**	**218**	P	Pn	15 49 22.6	-0.3
URZ				S	Sn	15 50 27.9	-0.2
OPRZ	**Ohinepanea**	**5.65**	**224**	P	Pn	15 49 23.7	+0.7
RIGZ	**Rimuhau**	**5.69**	**211**	P	Pn	15 49 24.1	+0.6
SNGZ	**Shannon Statio**	**5.94**	**214**	P	Pn	15 49 27.1	+0.3
SNGZ				S	Sn	15 50 36.6	+1.5
MUGZ	**Murupara**	**5.99**	**219**	P	Pn	15 49 28.0	+0.7
MUGZ				S	Sn	15 50 35.2	-0.9

*MOS **27** 16:26:11.9±0.0, 43°.40N×41°.02E, h15km, MPVA3.8*
*ISK **27** 16:26:12.1, 43°.51N×40°.77E, h28km, ML3.3/7*
*DDA **27** 16:26:14.6±0.0, 42°.60N×40°.10E, h8km, ML2.4*
ISC 27 16:26:11.9±1.1, 43°39N±0°03×40°98E±0°03, h7km±9km, n31, σ1s00/53, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARXR	**Arkhyz**	**0.27**	**51**	*i* Pg	**Pg**	**16 26 17.6**	**+0.2**
ARXR				*i* Sg	**Sg**	**16 26 21.9**	**+0.8**
DOMR	**Dombai**	**0.48**	**102**	*i* Pg	**Pg**	**16 26 20.2**	**-1.0**
DOMR				*e*Sg	**Sg**	**16 26 26.8**	**-0.7**
AHMR	**Akhmetovskaya**	**0.77**	**3**	*i* Pg	**Pg**	**16 26 26.6**	**-0.1**
AHMR				*i* Sg	**Sb**	**16 26 38.0**	**-0.3**
SOC	**Sochi**	**0.94**	**282**	*e*Pg	**Pg**	**16 26 29.5**	**-0.5**
SOC				*e*Sg	**Sg**	**16 26 41.9**	**-0.3**
LABN	**Labinsk**	**1.26**	**352**	*e*Pg	**Pn**	**16 26 35.4**	**-0.7**
LABN				*e*Sg	**Sn**	**16 26 53.1**	**-0.1**
SHA1	**Shidzhatmaz**	**1.27**	**74**	*e*Pg	**Pn**	**16 26 35.2**	**-1.1**
SHA1				*i* Sg	**Sb**	**16 26 51.6**	**-1.3**
NEY	**Neytrino**	**1.28**	**96**	*i* Pg	**Pn**	**16 26 34.7**	**-1.7**
NEY				*e*Sg	**Sb**	**16 26 51.7**	**-1.4**
LZRR	**Lazarevskoye**	**1.28**	**296**	*i* Pg	**Pn**	**16 26 36.8**	**+0.5**
LZRR				*e*Sg	**Sn**	**16 26 54.1**	**+0.3**
KIV	**Kislovodsk**	**1.36**	**65**	PN	**Pn**	**16 26 36.9**	**-0.5**
KIV				SN	**Sb**	**16 26 55.4**	**0.0**
KIV	**Kislovodsk**	**1.36**	**65**	*e*Pg	**Pn**	**16 26 36.9**	**-0.5**
KIV				*e*Sg	**Sb**	**16 26 54.8**	**-0.6**
NVNR	**Nevinnomyssk**	**1.41**	**30**	*e*Pg	**Pg**	**16 26 40.0**	**+0.9**
NVNR				*e*Sg	**Sn**	**16 26 57.2**	**+0.3**
KBZ	**Khabaz**	**1.43**	**76**	*i* Pg	**Pn**	**16 26 38.1**	**-0.2**
KBZ				*e*Sg	**Sn**	**16 26 57.0**	**-0.4**
GOYR	**Goytkh**	**1.44**	**307**	*e*Pg	**Pn**	**16 26 38.6**	**+0.1**
GOYR				*e*Sg	**Sg**	**16 26 58.9**	**+0.5**
BEYR	**Belyy Ugol+**	**1.47**	**64**	*e*Pg	**Pn**	**16 26 38.9**	**0.0**
BEYR				*e*Sg	**Sn**	**16 26 58.1**	**-0.2**
TKB	**Tkibuli**	**1.81**	**124**	P	**Pn**	**16 26 45.0**	**+1.5**
TKB				S	**Sb**	**16 27 10.3**	**+2.1**
BATM	**Batumi**	**1.86**	**163**	P	**Pn**	**16 26 45.2**	**+1.0**
BATM				S	**Sn**	**16 27 09.0**	**+1.0**
ALER	**Alexandrovskoy**	**1.95**	**45**	*e*Pg	**Pn**	**16 26 47.1**	**+1.5**
ONI	**Oni**	**1.98**	**113**	P	**Pb**	**16 26 48.3**	**0.0**
ONI	**Oni**	**1.98**	**113**	PN	**Pn**	**16 26 47.6**	**+1.6**
BCA	**Borcka**	**2.00**	**166**	PN	**Pn**	**16 26 47.1**	**+0.9**
BCA				SN	**Sn**	**16 27 12.4**	**+0.9**
HOPA	**Hopa-Artvin**	**2.03**	**170**	PN	**Pn**	**16 26 47.4**	**+0.8**
DBOC	**Borcka**	**2.11**	**166**	P	**Pn**	**16 26 47.1**	**-0.6**
DBOC				S	**Sn**	**16 27 11.5**	**-2.6**
DBOC				*i* AML	AML	16 27 18.0	
	comp=E,62nm,0.2s						
ABS	**Abastumani**	**2.12**	**140**	P	**Pn**	**16 26 48.1**	**+0.2**
ABS				S	**Sb**	**16 27 17.8**	**+0.4**
CHOM	**Cayeli-Rize**	**2.30**	**184**	PN	**Pn**	**16 26 50.6**	**+0.3**
DAGI	**Agillar**	**2.41**	**163**	P	**Pn**	**16 26 52.3**	**+0.3**
DAGI				S	**Sn**	**16 27 20.3**	**-1.5**
DAGI				*i* AML	AML	16 27 25.0	
	comp=N,15nm,0.3s						
DAGI				*i* AML	AML	16 27 28.0	
	comp=E,23nm,0.6s						
DBAD	**Bademkaya**	**2.43**	**167**	P	**Pn**	**16 26 50.9**	**-1.3**
DBAD				S	**Sn**	**16 27 21.5**	**-0.7**
DBAD				*i* AML	AML	16 27 26.0	
	comp=E,53nm,0.3s						
DBAD				*i* AML	AML	16 27 27.0	
	comp=N,89nm,0.6s						
BKRG	**Bakuriani**	**2.49**	**130**	P	**Pn**	**16 26 53.1**	**+0.1**
AKH	**Akhalkalaki**	**2.72**	**136**	PN	**Pn**	**16 26 57.9**	**+1.7**
AKH	**Akhalkalaki**	**2.72**	**136**	*e*Pn	**Pn**	**16 26 55.7**	**-0.5**
AKH				*e*Sn	**Sn**	**16 27 31.0**	**+1.7**
ESPY	**Espiye-Giresun**	**2.99**	**215**	PN	**Pn**	**16 26 59.2**	**-0.5**
SENK	**Senkaya-Erzuru**	**3.01**	**160**	PN	**Pn**	**16 27 01.7**	**+1.5**

*IDC **27** 16:39:22.6±0.8, 52°.41N×177°.25E, h0km, mb3.6/11, mbtmp3.6/12, ML2.0/1, MS3.3/24, Error ellipse: s-maj=29.8km s-min=15.0km az=173.0*
*NEIC **27** 16:39:22.4±1.8, 52°.1N±0°.1×177°.16E±0°.06, h9km±7km, mb4.0/24, ML3.6(AEIC), Error ellipse: s-maj=16.8km s-min=4.7km az=191.0*
*AEIC **27** 16:39:23±4.1, 52°.0N±0°.1×177°.29E±0°.04, h5km±6km, Error ellipse: s-maj=17.3km s-min=3.6km az=181.0*
ISC 27 16:39:27.0±0.6, 52°19N±0°10×177°29E±0°04, h35km, n161, σ1s52/136, mb3.8/22, MS3.3/22, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.79**	**106**		**Pn**	**16 39 38.6**	**-3.1**
LSSA	**Little Sitkin**	**0.80**	**107**		**Pn**	**16 39 38.9**	**-2.9**
LSPA	**Little Sitkin**	**0.83**	**106**		**Pn**	**16 39 39.4**	**-2.8**
LSPA					**Sn**	**16 39 51.2**	**-2.0**
LSSE	**Little Sitkin**	**0.83**	**108**		**Pn**	**16 39 39.5**	**-2.7**
CESW	**Semis' Southwe**	**1.44**	**101**		**Pn**	**16 39 49.5**	**-1.1**
CERB	**Semis' Cerberu**	**1.47**	**99**		**Sn**	**16 40 10.9**	**+1.9**
CEPE	**Semis' Perret**	**1.48**	**98**		**Pn**	**16 39 50.1**	**-1.0**
AMKA	**Amchitka**	**1.49**	**122**		**Pn**	**16 39 49.1**	**-2.2**
AMKA	**Amchitka**	**1.49**	**122**		**Sn**	**16 40 08.5**	**-1.0**
CERAA	**Semis' Rag'd T**	**1.51**	**100**		**Pn**	**16 39 50.5**	**-1.0**
SHEM	**Shemya Is, Ala**	**2.02**	**287**	Pn	**Pn**	**16 39 57.0**	**-1.5**
	19nm,0.3s,baz=113,slow=3.7,SNR=23						
SHEM				Sn	**Sn**	**16 40 22.6**	**0.0**
	46nm,0.3s,baz=268,slow=13,SNR=8.5						
SMY	**Shemya**	**2.02**	**287**	Pn	**Pn**	**16 39 55.2**	**-3.4**
GANO	**Gareloi North**	**2.44**	**97**		**Pn**	**16 40 04.3**	**-0.1**
GALAA	**Gareloi Lava P**	**2.48**	**99**		**Pn**	**16 40 04.6**	**-0.2**
GAEA	**Gareloi East**	**2.49**	**98**		**Pn**	**16 40 04.9**	**-0.1**
TASE	**Tanaga Southea**	**2.91**	**95**		**Pn**	**16 40 11.1**	**+0.2**
TAFP	**Tanaga Falls P**	**2.94**	**94**		**Pn**	**16 40 10.1**	**-1.1**
KIMD	**Kanaga Island**	**3.41**	**95**		**Pn**	**16 40 17.0**	**-0.7**
KIKV	**Kanaga Island**	**3.44**	**93**		**Pn**	**16 40 17.1**	**-1.0**
KIWB	**Kanaga Island**	**3.45**	**93**		**Pn**	**16 40 17.6**	**-0.7**
ADK	**Adak**	**3.73**	**92**		**Pn**	**16 40 21.2**	**-0.9**
GSTR	**Great Sitkin T**	**4.10**	**89**		**Pn**	**16 40 27.8**	**+0.7**
ATKA	**Atka Island**	**5.24**	**87**		**Pn**	**16 40 42.1**	**-0.6**
SPIA	**Saint Paul Isl**	**8.77**	**50**	Pn	**Pn**	**16 41 29.6**	**-1.6**
PETK	**Petropavlovsk-**	**11.93**	**282**	Pn	**Pn**	**16 42 11.6**	**-2.9**
	baz=155,slow=35,SNR=2.9						
PETK				LR	LR	16 46 39.1	
	comp=Z,72nm,21.3s,baz=91,slow=37 3.4nm,1.0s						
MA2	**Magadan**	**16.52**	**307**	LR	LR	16 49 15.1	
	comp=Z,63nm,18.6s,baz=116,slow=36						
N19K	**Bonanza Creek**	**17.68**	**50**	Pn	**Pn**	**16 43 28.8**	**-1.5**
N19K				IAmb	IAmb	16 43 42.1	
	comp=Z,18nm,1.1s						
L19K	**White Mountain**	**17.96**	**45**	P	**Pn**	**16 43 32.0**	**-1.6**
L19K	**White Mountain** baz=249	**17.96**	**45**	P	**Pn**	**16 43 31.4**	**-2.2**
L20K	**Farewell, AK** baz=249	**18.49**	**45**	P	**P**	**16 43 37.6**	**-2.2**
M20K	**Styx River** baz=252	**18.62**	**47**	P	**P**	**16 43 38.5**	**-2.8**
K20K	**Telida**	**18.74**	**42**	P	**Pn**	**16 43 44.5**	**+1.5**
K20K				IAmb	IAmb	16 43 51.9	
	comp=Z,9.0nm,1.2s						
K20K	**Telida** baz=247	**18.74**	**42**	P	**P**	**16 43 39.8**	**-2.6**
CNPM	**China Poot**	**18.98**	**55**	P	**Pn**	**16 43 47.9**	**+1.8**
CNPM				IAmb	IAmb	16 43 49.5	
	comp=Z,10nm,0.7s						
J20K	**Nowinta River**	**19.05**	**40**		**P**	**16 43 46.1**	**+0.3**
BRSE	**Bradley Lake S** baz=261	**19.26**	**54**	P	**P**	**16 43 44.9**	**-3.4**
CHUM	**Lake Minchumin** baz=248	**19.66**	**42**	P	**P**	**16 43 51.5**	**-1.1**
RC01	**Rabbit Creek A** baz=258	**20.00**	**51**	P	**P**	**16 43 56.7**	**+0.5**
IMAR	**Indian Mountai**	**20.03**	**35**	P	**P**	**16 43 56.4**	**-0.2**
H21K	**Melozitna Rive** baz=243	**20.22**	**37**	P	**P**	**16 43 58.7**	**+0.1**
BPAW	**Bear Paw Mtn.** baz=249	**20.29**	**42**	P	**P**	**16 43 58.6**	**-0.8**
I21K	**Tanana** baz=245	**20.32**	**38**	P	**P**	**16 43 58.6**	**-1.0**
TRF	**Thorofare Moun** baz=252	**20.36**	**44**	P	**P**	**16 43 57.2**	**-3.1**
G21K	**Allakaket** baz=240	**20.39**	**34**	P	**P**	**16 43 59.4**	**-1.0**
PWL	**Port Wells** baz=261	**20.63**	**52**	P	**P**	**16 44 02.2**	**-0.9**
MLY	**Manley**	**20.74**	**39**	P	**P**	**16 44 04.0**	**-0.3**
MLY	**Manley** baz=247,SNR=5.3	**20.74**	**39**	P	**P**	**16 44 02.8**	**-1.5**
F21K	**Alatna River** baz=238	**20.76**	**32**	P	**P**	**16 44 03.2**	**-1.3**
SML	**Sawmill**	**20.80**	**49**	P	**P**	**16 44 00.9**	**-4.1**
SML				IAmb	IAmb	16 44 17.1	
	comp=Z,9.5nm,0.8s						
SML	**Sawmill** baz=258	**20.80**	**49**	P	**P**	**16 44 01.6**	**-3.4**
H22K	**Ishtalitna Cre** baz=244	**20.85**	**37**	P	**P**	**16 44 05.6**	**+0.1**
RND	**Reindeer**	**20.96**	**45**	P	**P**	**16 44 03.3**	**-3.4**
M23K	**Glacier View** baz=259	**21.08**	**49**	P	**P**	**16 44 08.1**	**+0.1**
WAT6	**Susitna Watana** baz=257,SNR=7.4	**21.24**	**47**	P	**P**	**16 44 09.4**	**-0.4**
NEA2	**Nenana** baz=250	**21.24**	**41**	P	**P**	**16 44 08.6**	**-1.0**
SCM	**Sheep Creek Mo**	**21.27**	**49**	P	**P**	**16 44 06.0**	**-4.1**
SCM	**Sheep Creek Mo** baz=259	**21.27**	**49**	P	**P**	**16 44 09.5**	**-0.6**
H23K	**Yukon River** baz=247	**21.51**	**38

J26L	**Joseph Creek**	**23.50**	**43**	P	**P**	**16 44 33.4**	**0.0**
J26L	**Joseph Creek**	**23.50**	**43**	P	**P**	**16 44 33.9**	**+0.4**
	baz=257,SNR=10						
F25K	**Christian Rive**	**23.63**	**35**	P	**P**	**16 44 34.6**	**0.0**
	baz=248						
E25K	**Arctic Village**	**23.86**	**34**	P	**P**	**16 44 38.8**	**+2.1**
	baz=247						
I26K	**Coal Creek Min**	**23.86**	**41**	P	**P**	**16 44 36.5**	**-0.2**
I26K				IAmb	IAmb	16 44 43.3	
	comp=Z,3.5nm,1.1s						
M27K	**Edge Creek, AK**	**23.89**	**49**	P	**P**	**16 44 39.1**	**+1.9**
	baz=264,SNR=5.2						
BMAR	**Burnt Mountain**	**23.95**	**36**	P	**P**	**16 44 38.4**	**+0.8**
L27K	**Beaver Creek,**	**24.00**	**47**	P	**P**	**16 44 40.0**	**+1.9**
L27K	**Beaver Creek,**	**24.00**	**47**	P	**P**	**16 44 38.8**	**+0.7**
	baz=262,SNR=8.6						
BCAR	**Beaver Creek A**	**24.02**	**47**	P	**P**	**16 44 40.3**	**+2.1**
CTG	**Chitna Glacier**	**24.04**	**52**	P	**P**	**16 44 39.7**	**+1.2**
	baz=267						
K27K	**Chicken**	**24.04**	**45**	P	**P**	**16 44 38.7**	**+0.3**
K27K				IAmb	IAmb	16 44 43.4	
	comp=Z,4.0nm,0.9s						
G26K	**Porcupine Rive**	**24.08**	**37**	P	**P**	**16 44 38.9**	**+0.1**
	baz=251,SNR=5.6						
D25K	**Kavik River**	**24.10**	**31**	P	**P**	**16 44 40.4**	**+1.4**
	baz=243						
F26K	**Sheenjek River**	**24.20**	**35**	P	**P**	**16 44 40.5**	**+0.6**
	baz=249						
PINM	**Pinnacle**	**24.55**	**54**	P	**P**	**16 44 42.9**	**-0.3**
	baz=270						
EGAK	**Eagle**	**24.57**	**43**	P	**P**	**16 44 43.1**	**-0.1**
EGAK	**Eagle**	**24.57**	**43**	P	**P**	**16 44 43.5**	**+0.3**
	baz=259,SNR=12						
O28M	**Mount Upton**	**24.59**	**53**	P	**P**	**16 44 44.9**	**+1.1**
	baz=269,SNR=14						
C26K	**Camden Bay**	**24.83**	**30**	P	**P**	**16 44 47.4**	**+2.0**
	baz=244						
G27K	**Doyon Strip**	**24.84**	**38**	P	**P**	**16 44 45.7**	**0.0**
	baz=254						
PNL	**Peninsula**	**24.99**	**55**	P	**P**	**16 44 48.3**	**+1.2**
	baz=272						
C27K	**Jago River**	**25.08**	**31**	P	**P**	**16 44 50.0**	**+2.1**
	baz=246						
DAWY	**Dawson**	**25.21**	**45**	P	**P**	**16 44 50.5**	**+1.4**
	baz=262						
E27K	**Coleen River**	**25.27**	**35**	P	**P**	**16 44 50.7**	**+1.1**
	baz=252						
YUK4	**Talbot Arm**	**25.35**	**52**	P	**P**	**16 44 52.1**	**+1.5**
	baz=269						
M29M	**Somme Creek**	**25.48**	**49**	P	**P**	**16 44 51.8**	**+0.2**
	baz=267						
HYT	**Haines Junctio**	**25.91**	**53**	P	**P**	**16 44 57.6**	**+2.1**
	baz=271						
N30M	**Aishikik Lake**	**26.10**	**51**	P	**P**	**16 44 57.7**	**+0.4**
	baz=270,SNR=7.5						
O30N	**Mendenhall**	**26.60**	**53**	P	**P**	**16 45 02.1**	**+0.4**
	baz=272						
YAK	**Yakutsk**	**27.04**	**310**	LR	LR	16 56 14.3	
	comp=Z,48nm,18.5s,baz=89,slow=38						
INK	**Inuvik**	**28.21**	**37**	LR	LR	16 56 48.9	
	comp=Z,61nm,20.2s,baz=274,slow=37						
P33M	**Teslin, Yukon**	**28.26**	**54**	P	**P**	**16 45 17.4**	**+0.8**
	baz=276						
KLR	**Kul'dur**	**28.62**	**282**	LR	LR	16 56 49.4	
	comp=Z,45nm,18.8s,baz=100,slow=37						
DLBC	**Dease Lake**	**29.94**	**57**	LR	LR	16 57 45.5	
	comp=Z,72nm,20.6s,baz=184,slow=37						
USRK	**Ussuriysk Ar.**	**30.80**	**273**	P	**P**	**16 45 39.8**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=87,slow=8.6,SNR=1.9						
	comp=Z,0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**33.40**	**198**	T	T	17 21 16.1	
	baz=11,slow=76,SNR=74						
H11N3	**WAKE ISLAND Hy**	**33.41**	**198**	T	T	17 21 16.5	
	baz=11,slow=76,SNR=62						
H11N1	**WAKE ISLAND Hy**	**33.42**	**198**	T	T	17 21 17.3	
	baz=11,slow=76,SNR=72						
H11S1	**WAKE ISLAND Hy**	**34.63**	**198**	T	T	17 22 42.4	
	baz=11,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**34.65**	**198**	T	T	17 22 49.9	
	baz=11,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**34.65**	**198**	T	T	17 22 50.0	
	baz=11,slow=76,SNR=11						
YKA	**Yellowknife Ar**	**36.43**	**47**	LR	LR	17 02 56.1	
	comp=Z,85nm,18.3s,baz=298,slow=39						
KSRS	**Korea Array**	**37.23**	**267**	LR	LR	17 02 22.8	
	comp=Z,11nm,18.4s,baz=50,slow=37						
RES	**Resolute Bay**	**40.01**	**24**	LR	LR	17 05 07.2	
	comp=Z,14nm,20.0s,baz=354,slow=39						
SONM	**Songino Array**	**44.10**	**294**	LR	LR	17 05 43.7	
	comp=Z,24nm,20.9s,baz=84,slow=36						
HHC	**Hu-ho-hao-te**	**45.13**	**283**	*e*P	**P**	**16 47 40.3**	**+0.3**
HHC				pmax	pmax		
	comp=Z,56nm,0.8s						
HHC				pmax	pmax		
	comp=Z,290nm,5.3s						
NVAR	**Mina Array Bea**	**45.84**	**81**	P	**P**	**16 47 46.9**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=286,slow=7.3,SNR=5.4						
	comp=Z,0.5nm,0.6s						
ELK	**Elko**	**46.24**	**76**	LR	LR	17 03 51.3	
	comp=Z,22nm,19.2s,baz=214,slow=32						
GUMO	**Guam**	**46.43**	**226**	LR	LR	17 07 38.5	
	comp=Z,29nm,19.0s,baz=26,slow=36						
DUG	**Dugway, Tooele**	**48.03**	**75**	P	**P**	**16 48 00.7**	**-2.0**
	baz=309						
TPNV	**Topopah Spring**	**48.04**	**81**	P	**P**	**16 48 03.4**	**+0.6**
	baz=311						
PDAR	**Pinedale Array**	**48.35**	**71**	P	**P**	**16 48 04.2**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=284,slow=4.5,SNR=4.4						
	comp=Z,0.5nm,0.8s						
GMRC	**Granite Mounta**	**49.83**	**83**	P	**P**	**16 48 16.5**	**0.0**
	baz=312						
PFO	**Pinyon Flats O**	**50.13**	**84**	LR	LR	17 06 10.1	
	comp=Z,24nm,18.3s,baz=82,slow=32						
ZALV	**Zalesovo Beam**	**51.69**	**311**	LR	LR	17 13 10.2	
	comp=Z,19nm,18.4s,baz=41,slow=39						
FRB	**Frobisher Bay**	**53.57**	**30**	LR	LR	17 12 59.7	
	comp=Z,60nm,20.1s,baz=321,slow=38						
WMQ	**Urumqi**	**56.84**	**300**	*e*P	**P**	**16 49 07.5**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,40nm,0.7s						
MKAR	**Makanchi Array**	**57.60**	**306**	P	**P**	**16 49 10.9**	**-2.2**
	comp=Z,0.4nm,0.9s,baz=90,slow=4.3,SNR=3.2						
	comp=Z,0.4nm,0.9s						
BVAR	**Borovoye Array**	**58.67**	**317**	LR	LR	17 16 04.9	
	comp=Z,42nm,20.4s,baz=46,slow=38						
ARU	**Arti**	**60.60**	**326**	LR	LR	17 18 04.6	
	comp=Z,29nm,18.5s,baz=41,slow=38						
PZH	**PanZhiHua**	**60.83**	**276**	P	**P**	**16 49 38.0**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,70nm,4.0s						
SCHQ	**Schefferville**	**60.83**	**37**	LR	LR	17 16 04.8	
	comp=Z,39nm,19.5s,baz=268,slow=36						
TXAR	**Lajitas Array**	**60.91**	**79**	P	**P**	**16 49 37.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=302,slow=7.2,SNR=6.6						
	comp=Z,0.5nm,0.8s						
SADO	**Sadowa**	**63.24**	**51**	LR	LR	17 17 05.8	
	comp=Z,38nm,20.2s,baz=56,slow=36						
AKTO	**Aktyubinsk**	**65.58**	**322**	LR	LR	17 21 32.9	
	comp=Z,36nm,18.2s,baz=43,slow=39						
NOA	**NORSAR Array B**	**66.57**	**353**	P	**P**	**16 50 14.0**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=7.7,slow=6.0,SNR=2.0						
	comp=Z,0.7nm,0.8s						
SSPA	**Standing Stone**	**66.96**	**53**	P	**P**	**16 50 15.9**	**+0.1**
	baz=320						
TKL	**Tuckaleechee C**	**67.70**	**60**	LR	LR	17 21 20.2	
	comp=Z,41nm,18.1s,baz=14,slow=37						
LRAL	**Lakeview Retre**	**67.91**	**64**	P	**P**	**16 50 22.1**	**+0.2**
	baz=319						
CMAR	**Chiang Mai Arr**	**68.53**	**273**	P	**P**	**16 50 27.4**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=40,slow=6.7,SNR=4.3						
	comp=Z,0.6nm,0.7s						
AKASG	**Malin Array Be**	**73.98**	**340**	P	**P**	**16 50 58.8**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=25,slow=6.6,SNR=1.6						
AKASG				LR	LR	17 27 00.4	
	comp=Z,24nm,18.4s,baz=276,slow=39						
	comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**80.99**	**220**	P	**P**	**16 51 39.4**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=27,slow=6.3,SNR=6.5						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**84.51**	**219**	P	**P**	**16 51 58.4**	**+2.3**
	comp=Z,0.4nm,0.8s,baz=15,slow=6.7,SNR=4.8						
	comp=Z,0.4nm,0.8s						
ASF	**Jabal al Asfar**	**89.12**	**327**	LR	LR	17 36 38.6	
	comp=Z,119nm,20.7s,baz=108,slow=39						

*KRNET **27** 16:49:56.1±0.1, 39°.28N×73°.61E, mb2.6*
*ISU **27** 16:50:00, 40°.09N×73°.59E, h27km*
ISC 27 16:49:56.5±2.5, **39°.1N**±0°.1×**73°.57E**±0°.08, **h10**km, **n8,**
σ1s29/15, **8C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**1.87**	**313**	P	**Pn**	**16 50 28.8**	**+0.3**
FRG				S	**Sn**	**16 50 49.0**	**-3.2**
BTK	**Batken**	**2.33**	**295**	⇑*i*P	**Pb**	**16 50 37.6**	**-1.0**
	baz=91						
BTK				⇑*i*S	**Sb**	**16 51 07.6**	**+0.2**
	baz=91						
BTK	**Batken**	**2.33**	**295**	P	**Pb**	**16 50 38.3**	**-0.3**
BTK				S	**Sb**	**16 51 07.4**	**0.0**
GAR	**Garm**	**2.53**	**269**	⇓*i*P	**Pb**	**16 50 41.4**	**-0.7**
	baz=65						
GAR				⇓*i*S	**Sb**	**16 51 14.6**	**+1.2**
	baz=65						
ARLS	**Aral**	**2.81**	**12**	⇑*i*P	**Pn**	**16 50 42.1**	**+0.5**
	baz=12						
ARLS				⇑*i*S	**Sn**	**16 51 15.7**	**+0.1**
	baz=12						
TRKS	**Terek-Say**	**3.05**	**323**	⇑*e*P	**Pn**	**16 50 45.5**	**+0.6**
	baz=20						
TRKS				⇑*i*S	**Sn**	**16 51 21.6**	**+0.1**
	baz=20						
TKM2	**Tokmak 2**	**4.11**	**21**	⇓Pg	**Pb**	**16 51 07.9**	**-1.0**
	2.8nm,1.1s						
TKM2				⇓Lg	Lg	16 51 59.5	
	2.2nm,0.7s						
KK31	**Karatay Array**	**4.61**	**331**	⇓Pn	**Pn**	**16 51 07.3**	**+1.1**
	0.2nm,0.3s,baz=143,slow=16,SNR=4.8						
KK31				⇑Sn	**Sn**	**16 52 01.7**	**+1.9**
	0.4nm,0.3s						
KK31				⇑Lg	Lg	16 52 18.4	
	0.9nm,0.5s,baz=144,slow=29						

ROM 27 16:54:52.6±0.1, **42°.641N**±0°.004×**13°.289E**±0°.006,
h7km, **Md1.3**/5, **2C, Error ellipse: s-maj=0.5km**
s-min=0.2km az=31.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1243	**Rocca Santa Ma**	**0.13**	**65**	P	Pg	16 54 55.4	0.0
T1243				S	Sg	16 54 58.4	+1.0
T1243				AML	AML		
	comp=E,974μm,1.0s						
T1243				AML	AML		
	comp=N,1445μm,1.6s						
T1243				AML	AML		
	comp=E,964μm,1.4s						
T1243				AML	AML		
	comp=N,1445μm,0.2s						
T1243				AML	AML		
	comp=E,22150μm,0.3s						
T1243				AML	AML		
	comp=N,29250μm,0.3s						
T1243				AML	AML		
	comp=E,22000μm,0.3s						
T1243				AML	AML		
	comp=N,29250μm,0.3s						
T1243				END			
CAMP	**Campotosto**	**0.14**	**140**	P	Pg	16 54 56.2	+0.7
CAMP				S	Sg	16 54 58.7	+1.1
CAMP				END			
RM33	**Pellescritta (**	**0.14**	**203**	⇑P	Pg	16 54 56.3	+0.7
RM33				S	Sg	16 54 58.8	+1.1
RM33				AML	AML		
	comp=E,731μm,0.6s						
RM33				AML	AML		
	comp=N,855μm,0.7s						
RM33				AML	AML		
	comp=E,738μm,0.2s						
RM33				AML	AML		
	comp=N,774μm,0.7s						
RM33				AML	AML		
	comp=E,4010μm,1.4s						
RM33				AML	AML		
	comp=N,3035μm,1.3s						
RM33				AML	AML		
	comp=E,3905μm,1.4s						
RM33				AML	AML		
	comp=N,2950μm,1.3s						
RM33				END			
LNSS	**Leonessa**	**0.19**	**258**	⇑P	Pg	16 54 57.0	+0.6
LNSS				S	Sg	16 55 00.3	+1.3
LNSS				AML	AML		
	comp=E,710μm,0.4s						
LNSS				AML	AML		
	comp=N,701μm,0.1s						
LNSS				AML	AML		
	comp=E,23750μm,0.2s						
LNSS				AML	AML		
	comp=N,23200μm,0.3s						
NRCA	**Norcia**	**0.23**	**326**	P	Pg	16 54 58.1	+0.8
NRCA				AML	AML		
	comp=E,78800μm,0.2s						
NRCA				AML	AML		
	comp=N,57700μm,1.3s						
NRCA				AML	AML		
	comp=E,91300μm,0.2s						
NRCA				AML	AML		
	comp=N,64150μm,1.3s						
TERO	**Teramo**	**0.23**	**94**	P	Pg	16 54 57.8	+0.6
TERO				S	Sg	16 55 01.7	+1.3
TERO				AML	AML		
	comp=E,564μm,1.4s						
TERO				AML	AML		
	comp=N,760μm,0.6s						
TERO				AML	AML		
	comp=E,2225μm,0.4s						
TERO				AML	AML		
	comp=N,3095μm,0.2s						
TERO				AML	AML		
	comp=E,2630μm,1.0s						
TERO				AML	AML		
	comp=N,3505μm,0.2s						
TERO				END			
MMO1	**Montemonaco**	**0.26**	**6**	AML	AML		
	comp=E,220μm,0.4s						
MMO1				AML	AML		
	comp=N,195μm,0.7s						
MC2	**Monte Cornacci**	**0.28**	**345**	P	Pb	16 54 59.6	-0.5
MC2				AML	AML		
	comp=E,28300μm,0.4s						
MC2				AML	AML		
	comp=N,28050μm,0.4s						
GIGS	**Gran Sasso**	**0.28**	**133**	P	Pg	16 54 58.7	+0.5
GIGS				S	Sg	16 55 03.0	+1.1
GIGS				END			
ARRO	**Arrone**	**0.39**	**261**	P	Pg	16 55 00.6	+0.4
ARRO				AML	AML		
	comp=E,86μm,1.5s						
ARRO				AML	AML		
	comp=N,80μm,0.2s						
ARRO				AML	AML		
	comp=E,1340μm,1.1s						
ARRO				AML	AML		
	comp=N,1340μm,0.2s						
FIAM	**Fiamignano**	**0.39**	**199**	P	Pg	16 55 00.7	+0.5
FIAM				S	Sb	16 55 07.4	-0.8
FIAM				AML	AML		
	comp=E,74μm,0.5s						
FIAM				AML	AML		
	comp=N,64μm,1.1s						
FIAM				AML	AML		
	comp=E,996μm,1.0s						
FIAM				AML	AML		
	comp=N,835μm,0.8s						
FDMO	**Fiordimonte**	**0.42**	**340**	P	Pg	16 55 01.4	+0.7
FDMO				AML	AML		
	comp=E,1845μm,1.0s						
FDMO				AML	AML		
	comp=N,3215μm,0.3s						
CSP1	**Cessapalombo**	**0.46**	**352**	P	Pg	16 55 01.9	+0.4
CSP1				S	Sb	16 55 09.5	-0.6
CSP1				AML	AML		
	comp=E,3955μm,0.5s						
CSP1				AML	AML		
	comp=N,4175μm,0.4s						
VCEL	**Villa Celiera**	**0.48**	**121**	P	Pb	16 55 02.7	-0.6
VCEL				S	Sb	16 55 10.7	0.0
T0110	**Collepietro**	**0.55**	**139**	P	Pg	16 55 03.5	+0.3
T0110				S	Sb	16 55 12.7	0.0
EL6	**Elcito**	**0.70**	**349**	P	Pb	16 55 07.0	-0.2
ARVD	**Arcevia**	**0.89**	**344**	S	Sn	16 55 25.0	+0.2

*TIF **27** 16:55:13.8, 43°.19N×42°.85E, h22km±3km*
*ISK **27** 16:55:13.8, 43°.29N×43°.09E, h5km, ML2.6/4*
*NORS **27** 16:55:14.1±0.0, 43°.06N×42°.74E, h7km, MPVA3.3*
*DDA **27** 16:55:17.7±0.0, 42°.59N×40°.06E, h9km±4km, ML2.2*
ISC 27 16:55:15.0±1.2, **43°.20N**±0°.03×**42°.71E**±0°.05, **h28**km±14km,
n19, **σ1s98**/35, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIGR	**Digorskoe uzhe**	**0.71**	**115**	*e*Pg	**Pn**	**16 55 26.9**	**-2.4**
DIGR				*e*Sg	**Sn**	**16 55 36.1**	**-3.2**
KIV	**Kislovodsk**	**0.76**	**359**	PG	**Pb**	**16 55 28.4**	**-1.3**
KIV				SG	**Sb**	**16 55 38.9**	**-0.9**
ONI	**Oni**	**0.82**	**138**	P	**Pn**	**16 55 29.1**	**-1.6**
ONI				S	**Sn**	**16 55 39.2**	**-2.7**
ONI	**Oni**	**0.82**	**138**	PG	**Pn**	**16 55 29.0**	**-1.6**
ONI				SG	**Sn**	**16 55 39.2**	**-2.7**
LSNR	**Lesken**	**0.82**	**84**	*e*Pg	**Pn**	**16 55 29.8**	**-1.0**
LSNR				*e*Sg	**Sn**	**16 55 41.8**	**-0.1**
TKB	**Tkibuli**	**0.87**	**166**	P	**Pn**	**16 55 30.4**	**-1.0**
TKB				S	**Sn**	**16 55 42.1**	**-1.1**
STDR	**Stavd-Durt**	**1.00**	**80**	*e*Pg	**Pn**	**16 55 34.3**	**+1.1**
STDR				*e*Sg	**Sn**	**16 55 50.1**	**+3.6**
ARNR	**Ardon**	**1.15**	**90**	*e*Pg	**Pb**	**16 55 36.6**	**+0.3**
ARNR				*e*Sg	**Sn**	**16 55 54.2**	**+4.1**
LACR	**Lac**	**1.22**	**107**	*e*Pg	**Pb**	**16 55 36.7**	**-0.9**
LACR				*e*Sg	**Sn**	**16 55 53.5**	**+1.5**
ABS	**Abastumani**	**1.44**	**177**	P	**Pb**	**16 55 40.4**	**-1.0**
ABS				S	**Sb**	**16 55 59.9**	**+0.6**
BKRG	**Bakuriani**	**1.56**	**157**	P	**Pb**	**16 55 42.8**	**-0.5**
BATM	**Batumi**	**1.76**	**206**	P	**Pb**	**16 55 46.2**	**-0.4**
AKH	**Akhalkalaki**	**1.88**	**162**	P	**Pb**	**16 55 48.3**	**-0.5**
AKH				S	**Sb**	**16 56 12.8**	**+1.0**
AKH	**Akhalkalaki**	**1.88**	**162**	PN	**Pb**	**16 55 47.9**	**-0.8**
AKH				SN	**Sb**	**16 56 12.6**	**+0.8**
BCA	**Borcka**	**1.93**	**205**	PN	**Pb**	**16 55 50.7**	**+1.3**
BCA				SN	**Sb**	**16 56 18.6**	**+5.5**
DBOC	**Borcka**	**2.00**	**203**	P	**Pb**	**16 55 49.6**	**-1.2**
DBOC				S	**Sb**	**16 56 15.8**	**+0.5**
DBOC				*i* AML	AML	16 56 16.0	
	comp=E,29nm,0.4s						
DAGI	**Agillar**	**2.20**	**196**	P	**Pn**	**16 55 50.8**	**+1.1**
DAGI				S	**Sb**	**16 56 22.4**	**+1.5**
DBAD	**Bademkaya**	**2.30**	**199**	P	**Pb**	**16 55 54.6**	**-1.3**
DBAD				S	**Sb**	**16 56 24.7**	**+0.7**
DBAD				*i* AML	AML	16 56 25.0	
	comp=N,15nm,0.6s						
DBAD				*i* AML	AML	16 56 29.0	
	comp=E,19nm,0.4s						
DGRG	**David-gareji**	**2.64**	**131**	P	**Pb**	**16 56 03.0**	**+1.4**

ROM 27 16:55:30.9±0.1, **42°.826N**±0°.003×**13°.147E**±0°.005,
h10km, **ML2.7**/45, **14C-3D, Error ellipse: s-maj=0.4km**
s-min=0.1km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.03**	**288**	⇓P	Pg	16 55 33.2	+0.3
NRCA				S	Sg	16 55 34.3	+0.1
NRCA				AML	AML		
	comp=E,78800μm,0.2s						
NRCA				AML	AML		
	comp=N,57700μm,1.3s						
NRCA				AML	AML		
	comp=E,91300μm,0.2s						
NRCA				AML	AML		
	comp=N,64150μm,1.3s						
MC2	**Monte Cornacci**	**0.09**	**20**	⇑P	Pg	16 55 34.0	+0.4
MC2				S	Sg	16 55 35.9	+0.4
MC2				AML	AML		
	comp=N,28000μm,0.4s						
MC2				AML	AML		
	comp=E,28300μm,0.4s						
MC2				AML	AML		
	comp=N,28050μm,0.4s						
MC2				AML	AML		
	comp=E,28350μm,0.4s						
MMO1	**Montemonaco**	**0.15**	**61**	⇑P	Pg	16 55 34.8	+0.5
MMO1				S	Sg	16 55 37.4	+0.6
MMO1				AML	AML		
	comp=N,10050μm,0.3s						
MMO1				AML	AML		
	comp=E,9450μm,0.2s						
MMO1				AML	AML		
	comp=N,10045μm,0.3s						
FEMA	**Monte Fema**	**0.15**	**332**	⇓P	Pg	16 55 35.0	+0.5
FEMA				S	Sg	16 55 37.6	+0.7
FEMA				AML	AML		
	comp=E,9435μm,0.6s						
FEMA				AML	AML		
	comp=E,9415μm,0.6s						
FEMA				AML	AML		
	comp=N,6565μm,0.5s						
FEMA				AML	AML		
	comp=E,9410μm,0.6s						
FEMA				AML	AML		
	comp=N,6565μm,0.5s						
FDMO	**Fiordimonte**	**0.21**	**348**	⇑P	Pg	16 55 35.9	+0.5
FDMO				S	Sg	16 55 39.4	+1.0
FDMO				AML	AML		
	comp=E,1845μm,1.0s						
FDMO				AML	AML		
	comp=N,3215μm,0.3s						
LNSS	**Leonessa**	**0.24**	**199**	⇑P	Pg	16 55 36.5	+0.7
LNSS				S	Sg	16 55 40.9	+1.8
T1243	**Rocca Santa Ma**	**0.26**	**120**	P	Pg	16 55 36.7	+0.5
T1243				S	Sg	16 55 40.9	+1.2
T1243				AML	AML		
	comp=N,29250μm,0.3s						
T1243				AML	AML		
	comp=E,22150μm,0.3s						
T1243				AML	AML		
	comp=N,29250μm,0.3s						
T1243				AML	AML		
	comp=E,22000μm,0.3s						
T1243				AML	AML		
	comp=N,29300μm,0.3s						
CSP1	**Cessapalombo**	**0.27**	**9**	⇑P	Pg	16 55 36.9	+0.4
CSP1				S	Sg	16 55 41.3	+1.1
CSP1				AML	AML		
	comp=E,3955μm,0.5s						
CSP1				AML	AML		
	comp=N,4175μm,0.4s						
CSP1				AML	AML		
	comp=E,3960μm,0.5s						
RM33	**Pellescritta (**	**0.32**	**171**	⇑P	Pg	16 55 37.9	+0.6
RM33				S	Sb	16 55 43.4	-0.8
RM33				AML	AML		
	comp=E,4010μm,1.4s						
RM33				AML	AML		
	comp=N,3035μm,1.3s						
RM33				AML	AML		
	comp=E,4010μm,1.4s						
RM33				AML	AML		
	comp=N,3035μm,1.3s						
RM33				AML	AML		
	comp=E,3905μm,1.4s						
RM33				AML	AML		
	comp=N,2950μm,1.3s						
RM33				AML	AML		
	comp=E,3900μm,1.4s						
CAMP	**Campotosto**	**0.35**	**146**	⇓P	Pg	16 55 38.3	+0.4
CAMP				S	Sb	16 55 43.8	-1.1
CAMP				AML	AML		
	comp=N,1250μm,1.0s						
CAMP				AML	AML		
	comp=E,1290μm,0.2s						
SEF1	**Sefro**	**0.35**	**336**	P	Pg	16 55 38.3	+0.4
MDAR	**Monte D'Aria**	**0.37**	**360**	P	Pg	16 55 38.6	+0.3
ARRO	**Arrone**	**0.37**	**229**	P	Pg	16 55 38.9	+0.6
MNTP	**Montappone**	**0.39**	**37**	P	Pb	16 55 39.6	-0.4
TERO	**Teramo**	**0.39**	**121**	⇑P	Pg	16 55 39.0	+0.3
TERO				S	Sb	16 55 45.3	-0.9
TERO				AML	AML		
	comp=E,2225μm,0.4s						
TERO				AML	AML		
	comp=E,2630μm,1.0s						
TERO				AML	AML		
	comp=N,3505μm,0.2s						
TERO				AML	AML		

comp=N,3095μm,0.2s
TERO AML AML
comp=N,3090μm,0.2s
SSM1 San Severino M 0.40 3 P Pg 16 55 39.2 +0.3
OFFI Offida 0.41 74 P Pb 16 55 40.2 -0.1
OFFI AML AML
comp=N,4440μm,0.7s
OFFI AML AML
comp=E,2660μm,0.7s
GAG1 Gagliole 0.42 352 P Pg 16 55 39.6 +0.5
ASSB Assisi San Ben 0.42 301 P Pg 16 55 39.5 +0.3
ASSB S Sb 16 55 46.0 -1.0
ASSB AML AML
comp=E,1370μm,0.2s
ASSB AML AML
comp=N,1285μm,0.5s
SNTG Esanatoglia 0.46 341 P Pg 16 55 40.0 +0.2
SNTG S Sb 16 55 47.3 -0.6
SNTG AML AML
comp=E,443μm,0.4s
SNTG AML AML
comp=N,498μm,0.9s
CESX Cesi 0.47 243 P Pg 16 55 40.4 +0.3
CESX AML AML
comp=E,1024μm,1.4s
CESX AML AML
comp=N,1160μm,0.4s
GIGS Gran Sasso 0.49 140 P Pg 16 55 40.5 0.0
GIGS AML AML
comp=N,392μm,0.1s
GIGS AML AML
comp=E,422μm,1.2s
EL6 Elcito 0.50 356 P Pg 16 55 41.0 +0.2
EL6 AML AML
comp=N,1337μm,1.1s
EL6 AML AML
comp=N,1336μm,1.1s
EL6 AML AML
comp=E,1200μm,0.5s
ATCC AVT- Casa Cast 0.52 314 P Pg 16 55 41.3 +0.3
ATCC AML AML
comp=E,814μm,0.8s
ATCC AML AML
comp=N,820μm,0.3s
FOSV Fossato di Vic 0.55 329 P Pg 16 55 41.8 +0.3
FOSV AML AML
comp=N,495μm,0.7s
FOSV AML AML
comp=E,490μm,0.5s
FOSV AML AML
comp=N,494μm,0.7s
CING Cingoli 0.55 4 P Pg 16 55 41.8 +0.1
CING AML AML
comp=N,532μm,0.9s
CING AML AML
comp=E,676μm,1.5s
FIAM Fiamignano 0.56 182 P Pg 16 55 41.9 +0.1
FIAM S Sb 16 55 50.5 -0.4
FIAM AML AML
comp=N,835μm,0.8s
FIAM AML AML
comp=E,996μm,1.0s
TRTR Tortoreto Alta 0.56 92 P Pb 16 55 43.4 +0.5
TRTR AML AML
comp=E,3845μm,0.6s
TRTR AML AML
comp=N,2715μm,0.3s
MURB Monte Urbino 0.63 314 P Pg 16 55 43.5 +0.3
MURB AML AML
comp=E,1440μm,0.3s
MURB AML AML
comp=N,1290μm,0.8s
FAGN Fagnano 0.65 150 P Pg 16 55 43.6 +0.1
FAGN AML AML
comp=E,1680μm,0.6s
FAGN AML AML
comp=N,1410μm,0.3s
PP3 Marolino 0.65 31 P Pb 16 55 44.5 +0.1
PP3 AML AML
comp=N,4705μm,0.3s
PP3 AML AML
comp=N,4895μm,0.3s
PP3 AML AML
comp=N,4710μm,0.3s
PP3 AML AML
comp=N,4890μm,0.3s
PP3 AML AML
comp=E,3680μm,0.4s
PP3 AML AML
comp=E,3450μm,0.4s
SSFR Montelago di S 0.67 337 P Pg 16 55 44.0 +0.2
SSFR AML AML
comp=E,816μm,0.3s
SSFR AML AML
comp=E,778μm,0.3s
SSFR AML AML
comp=N,788μm,0.2s
SSFR AML AML
comp=N,868μm,0.8s
VCEL Villa Celiera 0.67 130 P Pg 16 55 44.2 +0.3
VCEL AML AML
comp=N,1185μm,0.8s
VCEL AML AML
comp=N,1190μm,0.8s
VCEL AML AML
comp=E,1350μm,0.4s
ATFO Monte Foce - G 0.69 322 P Pg 16 55 44.3 +0.1
ATFO AML AML
comp=E,332μm,0.9s
ATFO AML AML
comp=N,488μm,0.6s
ARVD Arcevia 0.69 347 P Pg 16 55 43.6 -0.6
ARVD AML AML
comp=E,257μm,0.5s
ARVD AML AML
comp=N,224μm,0.8s
ATTE AVT- Monte Tez 0.69 303 P Pg 16 55 44.7 +0.4
ATTE AML AML
comp=E,246μm,0.8s
ATTE AML AML
comp=N,252μm,0.9s
SRES S.Oreste - Sor 0.75 219 P Pg 16 55 45.2 -0.3
SRES AML AML
comp=E,284μm,0.3s
SRES AML AML
comp=N,210μm,0.3s
FRON Frontone 0.76 336 P Pg 16 55 45.5 -0.1
FRON AML AML
comp=E,240μm,0.8s
FRON AML AML
comp=N,385μm,1.2s
T0110 Collepietro 0.76 142 P Pg 16 55 45.3 -0.3
T0110 AML AML
comp=N,882μm,0.5s
T0110 AML AML
comp=N,883μm,0.5s
T0110 AML AML
comp=E,826μm,1.6s
MGAB Montegabbione 0.77 277 P Pg 16 55 45.9 +0.2
MGAB AML AML
comp=N,1156μm,0.4s
MGAB AML AML
comp=E,682μm,0.4s
MGAB AML AML
comp=N,1140μm,0.4s
MGAB AML AML
comp=E,744μm,0.4s
MGAB AML AML
comp=N,1158μm,0.4s
MGAB AML AML
comp=N,1140μm,0.4s
ATVO AVT- Monte Val 0.78 316 P Pg 16 55 45.9 0.0
ATVO AML AML
comp=N,253μm,0.6s
ATVO AML AML
comp=E,210μm,0.4s
PTQR Pietraquaria 0.82 167 P Pg 16 55 46.9 +0.1
PTQR AML AML
comp=E,232μm,1.5s
PTQR AML AML
comp=N,281μm,0.4s
PTQR AML AML
comp=E,232μm,1.5s
PTQR AML AML
comp=N,280μm,0.4s
ATPI Pietralunga - 0.83 319 P Pg 16 55 47.0 +0.1
ATPI AML AML
comp=N,170μm,1.4s
ATPI AML AML
comp=E,238μm,0.7s
PIEI Pieia 0.84 328 P Pg 16 55 47.0 -0.1
PIEI AML AML
comp=E,185μm,0.9s
PIEI AML AML
comp=N,158μm,0.4s
MPAG Monte Paganucc 0.85 341 P Pg 16 55 47.4 0.0
MPAG AML AML
comp=E,298μm,0.6s
MPAG AML AML
comp=N,234μm,0.6s
MTCE Montecelio 0.86 201 P Pg 16 55 46.5 -0.9
MTCE AML AML
comp=E,362μm,0.5s
MTCE AML AML
comp=N,249μm,0.5s
CERT Cerreto 0.89 188 P Pg 16 55 47.6 -0.3
CERT AML AML
comp=E,926μm,0.5s
CERT AML AML
comp=N,588μm,0.9s
NARO Abbazia di Nar 0.89 332 P Pg 16 55 47.9 -0.1
NARO AML AML
comp=E,138μm,0.3s
NARO AML AML
comp=N,149μm,0.7s
FSSB Fossombrone 0.91 343 P Pg 16 55 48.4 -0.1
FSSB AML AML
comp=E,704μm,0.4s
FSSB AML AML
comp=N,890μm,0.4s
SACS San Casciano d 0.91 272 P Pg 16 55 48.6 +0.2
SACS AML AML
comp=N,436μm,0.6s
SACS AML AML
comp=E,240μm,0.6s
INTR Introdacqua 0.99 145 P Pg 16 55 49.1 -0.8
INTR AML AML
comp=E,452nm,1.4s
INTR AML AML
comp=N,444nm,0.6s
INTR AML AML
comp=E,342μm,0.9s
INTR AML AML
comp=N,563μm,0.6s
PE3 Peglio 0.99 332 P Pb 16 55 50.5 +0.2
CAFI Castiglion Fio 1.00 301 P Pg 16 55 50.2 0.0
CAFI AML AML
comp=E,194μm,0.5s
CAFI AML AML
comp=N,200μm,0.6s
CAFI AML AML
comp=E,176μm,0.5s
CAFI AML AML
comp=N,195μm,0.6s
LPEL Lama dei Pelig 1.09 135 P Pg 16 55 51.0 -0.9
LPEL AML AML
comp=E,326μm,0.7s
LPEL AML AML
comp=N,282μm,0.3s
DUGI Dugi Otok 1.82 49 *e*Pn Pn 16 56 02.8 +0.5
VIRC Vir 2.02 43 *e*Pn Pn 16 56 05.8 +0.7
MORI Morici 2.14 60 *e*Pn Pn 16 56 07.4 +0.7
HVAR Hvar 2.45 81 *e*Pn Pn 16 56 11.9 +1.0
UDBI Udbina 2.55 47 *e*Pn Pn 16 56 14.1 +1.7
RICI Ricice 2.99 76 *e*Pn Pn 16 56 18.9 +0.4
STON Ston 3.35 88 *e*Pn Pn 16 56 23.3 0.0
OBKA Obir 3.82 15 *e*Pn Pn 16 56 33.4 +3.5
comp=N,0.5nm,0.2s
ABTA Abfaltersbach 3.95 354 *e*Pn Pn 16 56 33.7 +2.0
comp=N,2.0nm,0.4s
SOKA Soboth 4.08 19 *e*Pn Pn 16 56 34.3 +0.8
comp=N,0.2nm,0.2s
KBA Koelnbreinsper 4.25 2 *e*Pn Pn 16 56 37.5 +1.5
comp=N,1.1nm,0.2s
FETA Feichten 4.53 339 *e*Pn Pn 16 56 36.9 -2.9
comp=N,0.5nm,0.3s
WTTA Wattenberg 4.56 347 *e*Pn Pn 16 56 45.7 +5.4
comp=N,2.1nm,0.3s
SQTA Sankt Quirin 4.60 343 *e*Pn Pn 16 56 39.7 -1.1
comp=N,1.2nm,0.3s
WATA Walderalm 4.64 347 *e*Pn Pn 16 56 46.1 +4.8
comp=N,1.1nm,0.3s
MOTA Moosalm 4.75 343 *e*Pn Pn 16 56 40.0 -2.7
comp=N,0.3nm,0.2s
BIOA Bad Ischl, Aus 4.88 4 *e*Pn Pn 16 56 47.7 +3.3
comp=N,1.3nm,0.2s
RONA Roslia, Austr 5.36 23 *e*Pn Pn 16 56 53.0 +2.0
comp=N,0.6nm,0.3s
CONA Conrad Observa 5.45 20 *e*Pn Pn 16 56 53.7 +1.4
comp=N,0.3nm,0.2s

IDC 27 17:03:41.5±1.9, 0.37N×126.10E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=165.4km s-min=27.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.75**	**159**	P	P	17 08 32.8	-2.0
	0.6nm,0.9s,baz=338,slow=11,SNR=4.6 0.6nm,0.9s						
ASAR	**Alice Springs**	**25.07**	**163**	P	P	17 09 07.9	0.0
	0.2nm,0.7s,baz=341,slow=10,SNR=4.5 0.2nm,0.7s						
STKA	**Stephens Creek**	**35.27**	**157**	P	P	17 10 39.7	+1.6
	0.9nm,0.3s,baz=331,slow=11,SNR=1.8 0.9nm,0.3s						
MKAR	**Makanchi Array**	**59.97**	**327**	P	P	17 13 49.5	-0.2
	0.2nm,0.5s,baz=134,slow=8.0,SNR=2.7 0.2nm,0.5s						

*NOU **27** 17:34:48.7, 19°.88S×170°.14E, h11km, MLv3.9/12, Vanuatu Islands*
*IDC **27** 17:34:57.0±10.0, 19°.29S×168°.74E, h0km, mb3.6/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=195.7km s-min=49.7km az=99.0*
ISC 27 17:34:51.7±2.9, 19°.90S±0°.09×170°.1E±0°.2, h35km, n14, σ0s90/14, mb3.6/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.49**	**231**	P	**Pn**	**17 35 29.1**	**-0.6**
LIFNC	**LIFOU**	**2.81**	**252**	P	**Pn**	**17 35 32.2**	**-2.0**
DVP	**Devils Point**	**2.82**	**320**	P	**Pn**	**17 35 34.3**	**0.0**
PINNC	**Pines Island,**	**3.66**	**222**	P	**Pn**	**17 35 45.5**	**-0.3**
YATNC	**Mamie plateau,**	**3.68**	**234**	P	**Pn**	**17 35 46.4**	**+0.2**
OUENC	**Ouen Island, N**	**3.93**	**230**	P	**Pn**	**17 35 50.4**	**+0.8**
DZM	**Mont Dzumac**	**4.03**	**237**	Pn	**Pn**	**17 35 50.7**	**-0.4**
	1.6nm,0.3s,baz=63,slow=11,SNR=32						
DZM				Sn	**Sn**	**17 36 37.4**	**+0.1**
	0.1nm,0.3s,baz=123,slow=22,SNR=1.4 3.6nm,0.3s						
DZM	**Mont Dzumac**	**4.03**	**237**	P	**Pn**	**17 35 51.2**	**+0.1**
ONTNC	**Ouen Toro**	**4.15**	**234**	P	**Pn**	**17 35 53.4**	**+0.7**
NOUC	**Port Laguerre**	**4.16**	**238**	P	**Pn**	**17 35 53.7**	**+0.9**
KOUNC	**Koumac, New Ca**	**5.49**	**262**	P	**Pn**	**17 36 12.3**	**+1.3**
STKA	**Stephens Creek**	**28.18**	**239**	P	P	17 40 46.3	+5.2
	0.7nm,0.3s,baz=80,slow=18,SNR=1.8 0.7nm,0.3s						
WRA	**Warramunga Arr**	**33.58**	**264**	P	**P**	**17 41 28.1**	**-0.6**
	0.4nm,0.9s,baz=92,slow=8.3,SNR=2.9 0.4nm,0.9s						
ASAR	**Alice Springs**	**33.76**	**257**	P	**P**	**17 41 30.8**	**+0.4**
	0.4nm,0.5s,baz=83,slow=9.2,SNR=16 0.4nm,0.5s						

*BJI **27** 17:39:18.6±0.0, 6°.51S×148°.98E, h27km, mb4.6/26, mB5.1/16, Ms4.4/3, Ms7 4.0/4*
*NEIC **27** 17:39:21.2±2.7, 6°.41S±0°.07×148°.87E±0°.08, h34km±5km, mb4.7/49, Error ellipse: s-maj=12.1km s-min=10.2km az=116.0*
*GCMT **27** 17:39:23.2±0.3, 5°.99S±0°.02×148°.49E±0°.02, h19km±1km, MW4.8/85, Moment Tensor Solution. s18,c21; s85,c114; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.37±.10; Mθθ 1.64±.07; Mϕϕ -2.01±.09; Mrθ -0.25±.16; Mθϕ 0.40±.07; Mϕr 0.51±.19; Best double couple: M0 1.93800×10^16 NP1: ϕs 129.00000°, δ 88.00000°, λ -15.00000°. NP2: ϕs 219.00000°, δ 75.00000°, λ -178.00000°. Principal axes: T 1.7120, Plg9.0000°, Azm175.0000°; N 0.4480, Plg75.0000°, Azm300.0000°; P -2.1640, Plg12.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **27** 17:39:24.3±0.9, 6°.5S±4°.14°.9E±°, h36km±10km, M4.8/15, mB5.2/4, mb4.8/15, MLv4.8/2, Mw(mB)4.5/4*
*IDC **27** 17:39:25.1±2.4, 6°.55S×149°.05E, h80km±22km, mb4.1/14, mbtmp4.5/16, MS3.7/40, Error ellipse: s-maj=22.7km s-min=9.8km az=117.0*
ISC 27 17:39:22.8±0.4, 6°.46S±0°.06×148°.89E±0°.06, h53km, n119, σ1s58/96, mb4.6/46, MS3.8/38, 1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.79**	**56**	P	**Pn**	**17 40 18.9**	**+0.2**
	2μm,1.0s,baz=222,slow=2.8,SNR=42						
KRVT				LR	LR	17 41 47.1	
	comp=Z,2μm,18.4s,baz=16,slow=38						
RABL	**Rabaul**	**3.97**	**55**		**Pn**	**17 40 20.7**	**-0.6**
MANU	**Manus Island**	**4.65**	**341**		Pn	17 40 25.8	-4.8
COEN	**Coen**	**9.33**	**217**	Pn	**Pn**	**17 41 33.8**	**-1.0**
GENI	**Genyem**	**9.51**	**293**	P	**Pn**	**17 41 33.8**	**-3.4**
SMPI	**Sarmi**	**11.08**	**293**	P	**Pn**	**17 41 59.5**	**+0.8**
	22nm,1.5s						
CTA	**Charters Tower**	**13.78**	**190**	LR	LR	17 46 43.5	
	comp=Z,307nm,21.8s,baz=6.0,slow=32						
SIJI	**Sorong**	**18.44**	**287**	P	**Pn**	**17 43 36.6**	**+1.8**
	14nm,0.9s,baz=121,slow=7.3,SNR=6.4						
MTN	**Manton Dam**	**18.61**	**249**	P	**P**	**17 43 33.9**	**-2.1**
EIDS	**Eidsvold**	**18.92**	**174**	P	**P**	**17 43 38.5**	**-0.9**
EIDS				IAmb	IAmb	17 43 49.5	
	comp=Z,70nm,1.3s						
WB0	**Warramunga Arr**	**19.32**	**225**	P	**P**	**17 43 43.7**	**-0.1**
WB0					**S**	**17 47 19.5**	**-0.3**
WR0	**Warramunga Arr**	**19.34**	**225**	P	**P**	**17 43 44.2**	**+0.1**
WR0				IAmb	IAmb	17 44 04.3	
	comp=Z,26nm,1.0s						
WRAB	**Tennant Creek**	**19.46**	**225**	P	**P**	**17 43 45.1**	**-0.2**
WRAB					**S**	**17 47 23.7**	**+1.1**
WB2	**Warramunga Arr**	**19.46**	**225**	P	**Pn**	**17 43 46.6**	**-0.4**
WB2					**S**	**17 47 24.5**	**+1.7**
WRA	**Warramunga Arr**	**19.47**	**225**	P	**P**	**17 43 46.2**	**+0.6**
	comp=Z,16nm,0.7s,baz=52,slow=10,SNR=117						
WRA				S	**S**	**17 47 19.9**	**-3.1**
	comp=Z,13nm,1.3s,baz=48,slow=20,SNR=13						
WRA				LR	LR	17 52 09.0	
	comp=Z,516nm,18.3s,baz=115,slow=39						
WRA	**Warramunga Arr**	**19.47**	**225**	P	**P**	**17 43 46.1**	**+0.6**
GUMO	**Guam**	**20.32**	**349**	P	Pn	17 43 57.4	+0.3
	comp=Z,34nm,0.6s,baz=192,slow=19,SNR=3.6						
GUMO				LR	LR	17 50 42.3	
	comp=Z,152nm,18.4s,baz=176,slow=33 comp=Z,34nm,0.6s						
KNRA	**Kununurra**	**21.75**	**243**	P	**P**	**17 44 08.6**	**-1.5**
KNRA				IAmb	IAmb	17 44 23.4	
	comp=Z,21nm,0.7s						
AS31	**Alice Springs**	**22.36**	**219**	P	**P**	**17 44 17.6**	**+0.9**
AS31				IAmb	IAmb	17 44 32.7	
	comp=Z,9.1nm,0.6s						
ASAR	**Alice Springs**	**22.36**	**219**	P	**P**	**17 44 18.5**	**+1.8**
	comp=Z,22nm,0.8s,baz=53,slow=9.3,SNR=165						
ASAR				S	**S**	**17 48 21.9**	**+2.6**
	comp=Z,3.0nm,0.9s,baz=27,slow=24,SNR=5.7						
ASAR				LR	LR	17 53 13.3	
	comp=Z,291nm,20.6s,baz=45,slow=37 comp=Z,22nm,0.8s						
ASAR	**Alice Springs**	**22.36**	**219**	P	**P**	**17 44 17.6**	**+0.9**
ASAR					**S**	**17 48 14.2**	**-5.1**
DZM	**Mont Dzumac**	**22.98**	**134**	P	P	17 44 30.9	+7.6
	comp=Z,6.3nm,0.8s,baz=305,slow=18,SNR=2.4						
DZM				LR	LR	17 52 21.1	
	comp=Z,241nm,18.9s,baz=332,slow=34						
DZM	**Mont Dzumac**	**22.98**	**134**	P	**P**	**17 44 21.6**	**-1.7**
DZM				IAmb	IAmb	17 44 48.3	
	comp=Z,26nm,0.9s						
ARMA	**Armidale**	**23.97**	**174**	P	**P**	**17 44 31.8**	**-0.7**
ARMA				IAmb	IAmb	17 45 15.4	
	comp=Z,56nm,1.5s						
BATI	**Baumata**	**25.23**	**260**	P	**P**	**17 44 45.6**	**+1.5**
	comp=Z,34nm,0.6s,baz=90,slow=4.0,SNR=12						
BATI				LR	LR	17 57 51.6	
	comp=Z,246nm,18.4s,baz=116,slow=44 comp=Z,34nm,0.6s						
BATI	**Baumata**	**25.23**	**260**	P	**P**	**17 44 46.2**	**+2.1**
	comp=Z,28nm,0.6s						
FITZ	**Fitzroy Crossi**	**25.45**	**241**	P	**P**	**17 44 46.1**	**+0.1**
	comp=Z,19nm,1.0s,baz=62,slow=8.9,SNR=34						
FITZ				LR	LR	17 54 35.1	
	comp=Z,127nm,19.8s,baz=64,slow=36 comp=Z,19nm,1.0s						
FITZ	**Fitzroy Crossi**	**25.45**	**241**	P	**P**	**17 44 45.3**	**-0.8**
STKA	**Stephens Creek**	**26.19**	**194**	P	**P**	**17 44 53.1**	**+0.5**
	comp=Z,7.6nm,1.1s,baz=22,slow=13,SNR=4.5						
STKA				LR	LR	17 56 40.1	
	comp=Z,334nm,18.4s,baz=11,slow=40 comp=Z,7.6nm,1.1s						
STKA	**Stephens Creek**	**26.19**	**194**	P	**P**	**17 44 53.3**	**+0.7**
MMRI	**Maumere**	**26.50**	**264**	P	**P**	**17 44 55.1**	**-0.5**
DAV	**Davao City (W)**	**26.86**	**300**	LR	LR	17 55 35.8	
	comp=Z,84nm,19.6s,baz=122,slow=36						
EDFI	**Ende, Flores**	**27.05**	**263**	P	**P**	**17 44 56.7**	**-4.0**
	comp=Z,13nm,1.0s						
BASI	**Baing, Sumba**	**28.25**	**260**	P	**P**	**17 45 13.0**	**+1.7**
	comp=Z,60nm,0.9s						
BBOO	**Buckleboo**	**28.81**	**203**	P	**P**	**17 45 16.7**	**+0.7**
BBOO				IAmb	IAmb	17 45 42.1	
	comp=Z,25nm,1.4s						
KAPI	**Kappang**	**29.02**	**271**	LR	LR	17 58 09.5	
	comp=Z,143nm,20.7s,baz=85,slow=38						
WBSI	**Waikabubak, Su**	**29.37**	**262**	P	**P**	**17 45 22.3**	**+1.0**
	comp=Z,28nm,1.0s						
MSVF	**Nonsavu**	**30.58**	**114**	LR	LR	17 56 31.4	
	comp=Z,92nm,18.9s,baz=229,slow=34						
FORT	**Forrest**	**31.10**	**216**	P	**P**	**17 45 36.7**	**+0.4**
MBWA	**Marble Bar**	**31.77**	**240**	P	**P**	**17 45 41.4**	**-1.0**
MBWA				IAmb	IAmb	17 45 49.2	
	comp=Z,9.6nm,0.8s						
PSA00	**Pilbara Seismi**	**31.84**	**239**	P	**P**	**17 45 43.0**	**+0.1**
PSA00	**Pilbara Seismi**	**31.84**	**239**	P	**P**	**17 45 41.2**	**-1.8**
PSA00				IAmb	IAmb	17 46 00.3	
	comp=Z,9.2nm,0.9s						
BKB	**Balikpapan**	**32.32**	**278**	P	**P**	**17 45 44.9**	**-2.4**
JAGI	**Jajag, Banyuwa**	**34.49**	**264**	P	**P**	**17 46 04.4**	**-1.8**
MORW	**Morawa**	**38.29**	**230**	P	**P**	**17 46 38.9**	**+0.4**
JHJ	**Hachijo jima 2**	**40.30**	**348**	LR	LR	18 03 06.7	
	comp=Z,229nm,18.3s,baz=122,slow=35						
RPZ	**Rata Peaks**	**41.90**	**156**	LR	LR	18 01 22.4	
	comp=Z,126nm,19.6s,baz=329,slow=32						
MSWZ	**Moikau Station**	**41.98**	**150**	P	**P**	**17 47 08.0**	**-0.8**
INU	**Inuyama**	**43.07**	**346**	P	**P**	**17 47 16.8**	**-0.8**
JGF	**Kuroka**	**43.23**	**346**	P	**P**	**17 47 18.1**	**-0.9**
JGF				IAmb	IAmb	17 47 22.9	
	comp=Z,26nm,1.1s						
MJAR	**Matsushiro Arr**	**43.94**	**348**	P	**P**	**17 47 24.5**	**-0.2**
	comp=Z,19nm,1.0s,baz=167,slow=8.4,SNR=30						
MJAR				LR	LR	18 05 12.3	
	comp=Z,146nm,18.5s,baz=164,slow=35 comp=Z,19nm,1.0s						
MAJO	**Matsushiro**	**43.94**	**348**	P	**P**	**17 47 23.9**	**-0.8**
JSD	**Sado**	**45.37**	**348**	P	**P**	**17 47 35.1**	**-0.9**
QIZ	**Qiongzhong**	**46.06**	**304**	P	**P**	**17 47 42.5**	**+0.7**
QIZ				S	**S**	**17 54 27.0**	**+3.2**
QIZ				LR	LR		
	comp=Z,170nm,24.9s						
QIZ				LR	LR		
	comp=Z,120nm,18.8s						
QIZ				LR	LR		
	comp=Z,100nm,15.7s						
KSRS	**Korea Array**	**47.88**	**337**	P	**P**	**17 47 55.5**	**-0.1**
	comp=Z,7.0nm,0.9s,baz=153,slow=9.3,SNR=14						
KSRS				LR	LR	18 06 49.7	
	comp=Z,74nm,18.5s,baz=140,slow=34 comp=Z,7.0nm,0.9s						
KSAR	**Wonju Array Be**	**47.88**	**337**	P	**P**	**17 47 55.0**	**-0.7**
PSI	**Prapat**	**50.73**	**279**	LR	LR	18 12 38.9	
	comp=Z,95nm,18.5s,baz=140,slow=39						
USA0B	**Ussuriysk Arra**	**52.69**	**345**	P	**P**	**17 48 31.0**	**-0.9**
USA0B				IAmb	IAmb	17 48 36.5	
	comp=Z,5.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**52.69**	**345**	P	**P**	**17 48 31.2**	**-0.7**
	comp=Z,9.4nm,0.7s,baz=181,slow=8.6,SNR=2.4						
USRK				LR	LR	18 09 57.6	
	comp=Z,30nm,18.9s,baz=206,slow=35 comp=Z,9.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.69**	**345**	P	**P**	**17 48 32.0**	**+0.1**

MDJ	**Mudanjiang**	**53.73**	**343**	P	**P**	**17 48 41.8**	**+2.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,200nm,4.3s						
HNS	**HongShan**	**54.05**	**326**	⇓P	**P**	**17 48 44.3**	**+2.3**
KMI	**Kunming**	**54.77**	**307**	⇑P	P	17 48 54.3	+6.5
KMI				pP	pP	17 48 59.5	-2.0
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**55.12**	**298**	P	**P**	**17 48 52.4**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.2,SNR=2.0						
	comp=Z,0.3nm,0.4s						
PZH	**PanZhiHua**	**56.22**	**308**	P	**P**	**17 49 00.3**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
HHC	**Hu-ho-hao-te**	**58.22**	**327**	*e*P	P	17 49 16.5	+4.6
HHC				pmax	pmax		
	comp=Z,61nm,0.9s						
HHC				pmax	pmax		
	comp=Z,86nm,4.4s						
LZH	**Lanzhou**	**59.79**	**318**	*e*P	**P**	**17 49 24.8**	**+1.8**
LZH				pP	pP	17 49 31.5	-5.2
LZH				sP	pwP	17 49 35.0	-5.1
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
PETK	**Petropavlovsk-**	**59.81**	**6**	P	**P**	**17 49 21.9**	**-0.7**
	comp=Z,5.0nm,1.1s,baz=183,slow=6.4,SNR=3.7						
PETK				LR	LR	18 10 44.2	
	comp=Z,71nm,21.4s,baz=195,slow=31						
	comp=Z,5.0nm,1.1s						
PETK	**Petropavlovsk-**	**59.81**	**6**	P	**P**	**17 49 21.1**	**-1.5**
PPT	**Papeete**	**60.96**	**106**	LR	LR	18 12 26.9	
	comp=Z,34nm,20.3s,baz=197,slow=33						
HIA	**Hailar**	**61.05**	**339**	P	**P**	**17 49 31.7**	**+0.6**
SHEM	**Shemya Is, Ala**	**62.74**	**17**	LR	LR	18 13 02.6	
	comp=Z,53nm,21.2s,baz=345,slow=32						
GTA	**Gaotai**	**64.30**	**319**	*e*P	**P**	**17 49 55.3**	**+2.2**
GTA				pP	pP	17 49 59.5	-7.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	**65.43**	**330**	P	**P**	**17 49 59.9**	**-0.4**
ULN				IAmb	IAmb	17 50 20.8	
	comp=Z,5.6nm,1.1s						
SONM	**Songino Array**	**65.73**	**330**	P	**P**	**17 50 02.8**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=141,slow=5.4,SNR=6.1						
SONM				LR	LR	18 18 17.0	
	comp=Z,43nm,21.6s,baz=142,slow=35						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**65.73**	**330**	P	**P**	**17 50 01.4**	**-0.9**
MA2	**Magadan**	**65.84**	**1**	LR	LR	18 20 35.3	
	comp=Z,43nm,18.3s,baz=168,slow=38						
PALK	**Pallekele**	**69.37**	**280**	LR	LR	18 25 26.3	
	comp=Z,41nm,18.2s,baz=224,slow=40						
YAK	**Yakutsk**	**69.89**	**350**	LR	LR	18 22 51.4	
	comp=Z,18nm,19.0s,baz=194,slow=37						
VNDA	**Vanda**	**71.35**	**177**	P	P	17 50 41.0	+4.4
	comp=Z,1.6nm,0.7s,baz=326,slow=11,SNR=5.3						
VNDA				LR	LR	18 19 54.3	
	comp=Z,61nm,19.7s,baz=316,slow=34						
SBA	**Scott Base**	**71.96**	**176**	P	**P**	**17 50 40.5**	**+0.2**
SBA				IAmb	IAmb	17 50 57.3	
	comp=Z,14nm,1.5s						
WMQ	**Urumqi**	**74.37**	**319**	*e*P	**P**	**17 50 56.5**	**+1.3**
MK31	**Makanchi Array**	**79.05**	**320**	P	**P**	**17 51 21.4**	**-0.1**
MKAR	**Makanchi Array**	**79.05**	**320**	P	**P**	**17 51 21.8**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=103,slow=8.3,SNR=8.9						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**79.05**	**320**	P	**P**	**17 51 20.8**	**-0.7**
MAKZ	**Makanchi**	**79.26**	**320**	P	**P**	**17 51 22.0**	**-0.7**
ZAA0	**Zalesovo Array**	**80.41**	**327**	P	**P**	**17 51 29.1**	**+0.5**
ZALV	**Zalesovo Beam**	**80.41**	**327**	P	**P**	**17 51 29.7**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=96,slow=5.8,SNR=6.2						
ZALV				LR	LR	18 26 19.4	
	comp=Z,56nm,21.1s,baz=104,slow=35						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**80.41**	**327**	P	**P**	**17 51 29.4**	**+0.8**
MAW	**Mawson**	**82.55**	**203**	LR	LR	18 26 54.6	
	comp=Z,36nm,18.2s,baz=34,slow=34						
MAW	**Mawson**	**82.55**	**203**	P	**P**	**17 51 43.4**	**+3.7**
QSPA	**South Pole Qui**	**83.51**	**180**	P	**P**	**17 51 47.3**	**+2.4**
QSPA				IAmb	IAmb	17 51 57.2	
	comp=Z,17nm,1.4s						
MLY	**Manley**	**83.84**	**22**	P	**P**	**17 51 45.7**	**-0.8**
MLY				IAmb	IAmb	17 52 07.2	
	comp=Z,5.4nm,1.2s						
WRH	**Wood River Hil**	**84.57**	**23**	P	**P**	**17 51 49.3**	**-0.8**
WRH				IAmb	IAmb	17 52 09.2	
	comp=Z,7.0nm,1.2s						
CCB	**Clear Creek Bu**	**84.76**	**23**	P	**P**	**17 51 49.0**	**-2.0**
CCB				IAmb	IAmb	17 52 06.4	
	comp=Z,7.1nm,1.3s						
IL31		**85.17**	**23**	P	**P**	**17 51 51.1**	**-2.0**
IL31				IAmb	IAmb	17 52 10.3	
	comp=Z,4.1nm,0.9s						
ILAR	**Eielson Array**	**85.17**	**23**	P	**P**	**17 51 51.0**	**-2.1**
	comp=Z,1.2nm,0.9s,baz=252,slow=4.9,SNR=10						
ILAR				LR	LR	18 26 43.0	
	comp=Z,38nm,19.7s,baz=299,slow=33						
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**85.17**	**23**	P	**P**	**17 51 50.3**	**-2.9**
RIDG	**Independent Ri**	**85.54**	**24**	P	**P**	**17 51 53.2**	**-1.9**
RIDG				IAmb	IAmb	17 52 11.0	
	comp=Z,5.4nm,0.9s						
J25K	**Salcha River,**	**85.69**	**23**	P	**P**	**17 51 54.3**	**-1.5**
DOT	**Dot Lake**	**85.82**	**24**	P	**P**	**17 51 55.5**	**-0.9**
DOT				IAmb	IAmb	17 52 17.6	
	comp=Z,5.8nm,1.1s						
M27K	**Edge Creek, AK**	**86.25**	**26**	P	**P**	**17 51 57.1**	**-1.7**
M27K				IAmb	IAmb	17 52 14.6	
	comp=Z,12nm,1.4s						
NRIK	**Noril'sk**	**86.29**	**342**	P	P	17 52 03.0	+4.4
	comp=Z,1.5nm,0.5s,baz=121,slow=5.9,SNR=3.7						
NRIK				LR	LR	18 31 58.6	
	comp=Z,46nm,18.1s,baz=148,slow=36						
L27K	**Beaver Creek,**	**86.53**	**25**	P	**P**	**17 51 58.4**	**-1.5**
L27K				IAmb	IAmb	17 52 21.3	
	comp=Z,5.5nm,1.2s						
BCAR	**Beaver Creek A**	**86.55**	**25**	P	**P**	**17 51 59.5**	**-0.5**
EGAK	**Eagle**	**87.43**	**24**	P	**P**	**17 52 03.4**	**-0.8**
EGAK				IAmb	IAmb	17 52 25.1	
	comp=Z,6.6nm,1.1s						
HYT	**Haines Junctio**	**87.71**	**28**	P	**P**	**17 52 05.3**	**-0.5**
HYT				IAmb	IAmb	17 52 08.3	
	comp=Z,8.9nm,1.1s						
BBB	**Bella Bella**	**90.78**	**38**	LR	LR	18 25 09.4	
	comp=Z,54nm,21.4s,baz=334,slow=30						
DLBC	**Dease Lake**	**90.81**	**31**	LR	LR	18 26 10.1	
	comp=Z,36nm,21.4s,baz=288,slow=31						
INK	**Inuvik**	**91.40**	**21**	LR	LR	18 27 23.6	
	comp=Z,29nm,21.8s,baz=282,slow=32						
YBH	**Yreka Blue Hor**	**93.06**	**49**	LR	LR	18 28 45.2	
	comp=Z,44nm,19.9s,baz=285,slow=32						
GEYT	**Alibeck**	**94.53**	**308**	LR	LR	18 36 32.9	
	comp=Z,36nm,21.3s,baz=134,slow=36						
ARU	**Arti**	**95.52**	**326**	LR	LR	18 36 48.4	
	comp=Z,25nm,20.6s,baz=87,slow=36						
NVAR	**Mina Array Bea**	**96.17**	**52**	LR	LR	18 31 11.3	
	comp=Z,64nm,19.0s,baz=273,slow=32						
PFO	**Pinyon Flats O**	**97.40**	**57**	LR	LR	18 28 47.6	
	comp=Z,48nm,21.0s,baz=195,slow=30						
ELK	**Elko**	**98.62**	**50**	LR	LR	18 31 21.4	
	comp=Z,51nm,20.0s,baz=260,slow=32						
SNAA	**Sanae**	**99.83**	**189**	LR	LR	18 38 46.1	
	comp=Z,168nm,18.0s,baz=141,slow=36						
TORD	**Torodi Ar. Bea**	**147.02**	**284**	PKPbc	**PKPbc**	**17 58 59.6**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=79,slow=3.1,SNR=11						
BDFB	**Brasilia**	**152.38**	**143**	PKPab	**PKPab**	**17 59 22.1**	**-2.1**
	comp=Z,2.9nm,0.5s,baz=205,slow=17,SNR=6.2						

*DJA **27** 17:52:08.4±0.4,8˚S±4˚×10˚6E±˚, h10km, M4.2/11, mb4.4/1, MLv4.1/11*
*NEIC **27** 17:52:10.8±2.3, 7˚.67S±0˚.07×105˚.69E±0˚.06, h44km±9km, mb4.4/19, Error ellipse: s-maj=11.5km s-min=7.5km az=206.0*
*IDC **27** 17:52:16.2±4.0, 7˚.35S×105˚.94E, h84km±32km, mb3.7/14, mbtmp4.0/15, MS3.3/2, Error ellipse: s-maj=38.6km s-min=12.7km az=51.0*
ISC 27 17:52:09.7±0.6, 7˚.53S±0˚.06×105˚.78E±0˚.04, h32km, n63, σ1§30/58, mb4.3/22, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.93**	**56**	P	**Pb**	**17 52 27.0**	**-0.3**
CNJI	**Cibinong**	**1.35**	**81**	P	**Pn**	**17 52 31.9**	**-0.5**
DBJI	**Dramaga**	**1.37**	**45**	P	**Pb**	**17 52 34.2**	**-0.5**
CBJI	**Citeko**	**1.53**	**44**	P	**Pn**	**17 52 34.2**	**-0.6**
LEM	**Lembang**	**1.95**	**69**	P	**Pb**	**17 52 44.0**	**-0.7**
	180nm,0.4s,baz=282,slow=19,SNR=61						
LEM				S	**Sb**	**17 53 07.4**	**-1.4**
	396nm,0.7s,baz=292,slow=19,SNR=11						
LEM				LR	LR	17 53 44.3	
	comp=Z,165nm,20.0s,baz=272,slow=50						
LEM	**Lembang**	**1.95**	**69**	P	**Pb**	**17 52 43.1**	**-1.6**
BLSI	**Bandar Lampung**	**2.21**	**346**	P	**Pb**	**17 52 48.5**	**-0.6**
KASI	**Kota Agung**	**2.37**	**327**	P	**Pb**	**17 52 49.9**	**-1.8**
JCJI	**Jatiwangi**	**2.68**	**67**	P	**Pn**	**17 52 48.7**	**-1.9**
KLI	**Kotabumi**	**2.81**	**341**	P	**Pb**	**17 52 56.6**	**-2.6**
XMIS	**Christmas Isla**	**2.93**	**182**	Pn	**Pn**	**17 52 51.5**	**-2.6**
LWLI	**Liwa**	**3.03**	**325**	P	**Pn**	**17 52 59.3**	**+3.8**
MNAI	**Manna**	**4.22**	**318**	Pn	**Pn**	**17 53 12.4**	**+0.5**
MNAI	**Manna**	**4.22**	**318**	P	**Pn**	**17 53 15.6**	**+3.7**
UGM	**Wanagama**	**4.71**	**95**	Pn	**Pn**	**17 53 19.2**	**+0.5**
PCJI	**Pacitan**	**5.38**	**97**	P	**Pn**	**17 53 28.7**	**+0.9**
JAGI	**Jajag, Banyuwa**	**8.34**	**97**	Pn	**Pn**	**17 54 09.8**	**+1.3**
BKNI	**Bangkinang**	**9.13**	**329**		**Pn**	**17 54 20.5**	**+1.2**
GSI	**Gunungsitoli**	**12.00**	**317**	Pn	**Pn**	**17 54 57.6**	**-1.0**
MMRI	**Maumere**	**16.33**	**95**	Pn	**Pn**	**17 55 56.4**	**-0.4**
MMRI				IAmb	IAmb	17 56 04.4	
	comp=Z,19nm,0.7s						
TOLI2	**Tolitoli**	**17.25**	**61**	Pn	**Pn**	**17 56 07.3**	**-1.1**
BATI	**Baumata**	**17.87**	**100**	P	**P**	**17 56 17.4**	**+0.9**
	comp=Z,10nm,0.6s,baz=270,slow=7.1,SNR=3.1						
BATI				S	**S**	**17 59 38.0**	**-2.3**
	comp=Z,3.5nm,0.5s,baz=258,slow=14,SNR=1.2						
FITZ	**Fitzroy Crossi**	**22.00**	**120**	P	**P**	**17 57 02.7**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=297,slow=9.8,SNR=2.0						
	comp=Z,1.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.00**	**120**	P	**P**	**17 57 01.4**	**0.0**
KNRA	**Kununurra**	**23.90**	**112**	P	**P**	**17 57 21.4**	**+0.5**
KNRA				IAmb	IAmb	17 57 57.0	
	comp=Z,20nm,1.3s						
SAUI	**Saumlaki**	**25.29**	**93**	P	**P**	**17 57 33.0**	**-0.6**
MTN	**Manton Dam**	**25.49**	**104**	P	**P**	**17 57 33.4**	**-2.0**
MTN				IAmb	IAmb	17 58 04.3	
	comp=Z,31nm,1.5s						
CMAR	**Chiang Mai Arr**	**26.69**	**345**	P	**P**	**17 57 45.8**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=180,slow=8.0,SNR=6.5						
	comp=Z,0.6nm,0.5s						
FAKI	**Fak Fak**	**26.75**	**82**	P	**P**	**17 57 47.0**	**+0.3**
H01W3	**Cape Leeuwin H**	**28.29**	**165**	T	T	18 27 41.9	
	baz=344,slow=76,SNR=7.6						
H01W1	**Cape Leeuwin H**	**28.30**	**165**	T	T	18 27 43.6	
	baz=344,slow=76,SNR=7.7						
H01W2	**Cape Leeuwin H**	**28.30**	**165**	T	T	18 27 45.7	
	baz=344,slow=76,SNR=9.1						
WRA	**Warramunga Arr**	**30.30**	**117**	P	**P**	**17 58 18.0**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=289,slow=11,SNR=3.1						
	comp=Z,0.6nm,0.8s						
WRAB	**Tennant Creek**	**30.30**	**117**	P	**P**	**17 58 18.9**	**+0.5**
WRAB				IAmb	IAmb	17 58 59.6	
	comp=Z,9.1nm,1.3s						
WB2	**Warramunga Arr**	**30.31**	**117**	P	**P**	**17 58 19.4**	**+1.0**
WB2				IAmb	IAmb	17 58 40.5	
	comp=Z,15nm,1.4s						
ASAR	**Alice Springs**	**31.38**	**124**	P	**P**	**17 58 28.9**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=302,slow=8.3,SNR=9.6						
	comp=Z,0.3nm,0.6s						
H08S2	**Diego Garcia H**	**32.99**	**268**	T	T	18 34 03.6	
	baz=92,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**33.00**	**268**	T	T	18 34 04.4	
	baz=92,slow=76,SNR=28						
H08S1	**Diego Garcia H**	**33.01**	**268**	T	T	18 34 05.0	
	baz=92,slow=76,SNR=9.8						
STKA	**Stephens Creek**	**41.20**	**131**	P	**P**	**17 59 53.0**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=301,slow=8.4,SNR=5.5						
STKA				LR	LR	18 17 10.2	
	comp=Z,29nm,21.1s,baz=14,slow=36						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**41.20**	**131**	P	**P**	**17 59 52.2**	**+0.6**
RABL	**Rabaul**	**46.24**	**89**	P	**P**	**18 00 32.2**	**-0.3**
KSRS	**Korea Array**	**49.31**	**23**	P	**P**	**18 00 53.0**	**-2.8**
	comp=Z,0.6nm,0.5s,baz=219,slow=6.5,SNR=2.4						
	comp=Z,0.6nm,0.5s						
JHS	**Saijyo**	**49.55**	**30**	P	**P**	**18 00 57.2**	**-0.5**
SONM	**Songino Array**	**55.13**	**1**	P	**P**	**18 01 38.9**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=168,slow=8.8,SNR=5.3						
	comp=Z,0.5nm,0.4s						
MK31	**Makanchi Array**	**57.98**	**341**	P	**P**	**18 01 58.9**	**-0.3**
MKAR	**Makanchi Array**	**57.98**	**341**	P	**P**	**18 01 59.0**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=145,slow=7.8,SNR=22						
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**57.98**	**341**	P	**P**	**18 01 58.8**	**-0.4**
KKAR	**Karatay Array**	**59.72**	**331**	P	**P**	**18 02 11.7**	**+0.4**
KURBB	**Kurchatov Arra**	**62.54**	**341**	P	**P**	**18 02 30.2**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=152,slow=6.1,SNR=25						
	comp=Z,1.6nm,0.6s						
KURK	**Kurchatov**	**62.59**	**341**	P	**P**	**18 02 29.8**	**-0.8**
KURK				IAmb	IAmb	18 02 31.6	
	comp=Z,2.1nm,0.6s						
GEYT	**Alibeck**	**63.37**	**319**	P	**P**	**18 02 37.3**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=159,slow=14,SNR=3.7						
	comp=Z,1.9nm,0.6s						
ZAA0	**Zalesovo Array**	**63.75**	**346**	P	**P**	**18 02 38.3**	**0.0**
ZAA0				IAmb	IAmb	18 02 48.4	
	comp=Z,1.9nm,0.9s						
ZALV	**Zalesovo Beam**	**63.75**	**346**	P	**P**	**18 02 38.0**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=160,slow=6.0,SNR=10						
	comp=Z,1.5nm,0.3s						
ZALV	**Zalesovo Beam**	**63.75**	**346**	P	**P**	**18 02 38.1**	**-0.1**
BVAR	**Borovoye Array**	**67.39**	**338**	P	**P**	**18 03 02.2**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=144,slow=9.2,SNR=17						
	comp=Z,1.5nm,0.5s						
BRVK	**Borovoye**	**67.46**	**338**	P	**P**	**18 03 02.8**	**+0.6**
BRVK				IAmb	IAmb	18 03 03.2	
	comp=Z,2.0nm,0.5s						
ABKAR	**Akbulak array**	**69.25**	**330**	P	**P**	**18 03 14.4**	**+0.9**
ABKAR				IAmb	IAmb	18 03 33.1	
	comp=Z,4.5nm,1.1s						
ABKAR	**Akbulak array**	**69.25**	**330**	P	**P**	**18 03 14.3**	**+0.7**
ARU	**Arti**	**74.58**	**335**	P	**P**	**18 03 46.0**	**+0.6**
	comp=Z,1.5nm,0.4s,baz=108,slow=13,SNR=3.3						
	comp=Z,1.5nm,0.4s						
BRTR	**Keskin Array B**	**81.28**	**312**	P	**P**	**18 04 24.4**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=131,slow=7.9,SNR=2.1						
	comp=Z,1.1nm,0.7s						
VRAC	**Vranov**	**95.12**	**319**	LR	LR	18 57 03.6	
	comp=Z,20nm,18.1s,baz=44,slow=41						
TXAR	**Lajitas Array**	**144.82**	**48**	PKP	**PKPdf**	**18 11 44.4**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=270,slow=0.9,SNR=5.6						

*TIF **27** 18:00:42.9, 43˚.42N×40˚.72E, h4km±2km*
*AZER **27** 18:00:45.6±6.2, 43˚.60N×40˚.32E, h5km, Error ellipse: s-maj=52.3km s-min=38.6km az=10.0*
*IDC **27** 18:00:45.1±0.6, 43˚.34N×40˚.91E, h0km, mb3.6/9, mbtmp3.6/17, ML3.5/7, MS2.9/10, Error ellipse: s-maj=11.0km s-min=6.0km az=171.0*
*MOS **27** 18:00:46.8±0.0, 43˚.35N×40˚.98E, h1km±1km, MPVA4.5*
*ISK **27** 18:00:46.1, 43˚.60N×40˚.59E, h30km, ML4.0/7*
*CFUSG **27** 18:00:47.8, 43˚.17N×40˚.72E, h5km, mb2.8/4, MD3.5/3, Georgia Magtype MSH 3.4 from 4 stations*
ISC 27 18:00:46.9±1.0, 43˚.32N±0˚.02×40˚.94E±0˚.02, h8km±7km, n154, σ1§84/206, mb3.5/12, 17C-17D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARXR	**Arkhyz**	**0.35**	**45**	*e*PG	**Pg**	**18 00 53.5**	**-0.3**
ARXR	**Arkhyz**	**0.35**	**45**	*i* Pg	**Pg**	**18 00 53.5**	**-0.3**
ARXR				*e*Sg	**Sg**	**18 00 57.0**	**-1.4**
DOMR	**Dombai**	**0.50**	**93**	*i* PG	**Pg**	**18 00 56.3**	**-0.3**
DOMR	**Dombai**	**0.50**	**93**	*i* Pg	**Pg**	**18 00 56.3**	**-0.3**
DOMR				*i* Sg	**Sg**	**18 01 02.6**	**-0.6**
AHMR	**Akhmetovskaya**	**0.84**	**5**	*i* PG	**Pg**	**18 01 02.4**	**-0.7**
AHMR				*e*S	**Sg**	**18 01 13.8**	**-0.3**
AHMR	**Akhmetovskaya**	**0.84**	**5**	*e*Pg	**Pg**	**18 01 02.4**	**-0.7**
AHMR				*e*Sg	**Sg**	**18 01 14.0**	**-0.1**
SOC	**Sochi**	**0.93**	**287**	*e*PG	**Pg**	**18 01 03.4**	**-1.3**
SOC				*e*		18 01 14.1	
SOC				pmax	pmax		
	comp=Z,156nm,0.4s						
SOC				smax	smax		
	comp=E,1μm,0.3s						
SOC				smax	smax		
	comp=N,2μm,0.4s						
SOC	**Sochi**	**0.93**	**287**	*e*Pg	**Pg**	**18 01 03.9**	**-0.9**
SOC				*e*Sg	**Sb**	**18 01 17.8**	**0.0**
LZRR	**Lazarevskoye**	**1.29**	**299**	*e*PG	**Pg**	**18 01 12.4**	**+0.8**
LZRR	**Lazarevskoye**	**1.29**	**299**	*i* Pg	**Pg**	**18 01 12.5**	**+0.9**
LZRR				*e*Sg	**Sn**	**18 01 30.5**	**+1.8**
NEY	**Neytrino**	**1.30**	**92**	*e*PG	**Pn**	**18 01 10.6**	**-1.0**
NEY	**Neytrino**	**1.30**	**92**	*i* Pg	**Pn**	**18 01 10.5**	**-1.1**
NEY				*i* Sg	**Sb**	**18 01 27.7**	**-1.1**
SHA1	**Shidzhatmaz**	**1.32**	**71**	*c i* PG	**Pn**	**18 01 10.6**	**-1.3**
SHA1	**Shidzhatmaz**	**1.32**	**71**	*i* Pg	**Pn**	**18 01 10.9**	**-1.0**
SHA1				*i* Sg	**Sb**	**18 01 27.8**	**-1.4**
LABN	**Labinsk**	**1.33**	**353**	*e*PG	**Pg**	**18 01 12.5**	**0.0**
LABN	**Labinsk**	**1.33**	**353**	*e*Pg	**Pg**	**18 01 12.6**	**+0.2**
LABN				*e*Sg	**Sb**	**18 01 29.0**	**-0.4**
KIV	**Kislovodsk**	**1.42**	**63**	PN	**Pn**	**18 01 12.5**	**-0.6**
KIV				SN	**Sb**	**18 01 31.6**	**-0.4**
KIV	**Kislovodsk**	**1.42**	**63**	*i* Pg	**Pn**	**18 01 12.6**	**-0.5**
KIV				*e*Sg	**Sb**	**18 01 30.7**	**-1.3**
KIV0	**Kislovodsk Arr**	**1.43**	**63**	*e*Pg	**Pn**	**18 01 12.7**	**-0.5**
KIV0				*e*Sg	**Sb**	**18 01 30.7**	**-1.5**
KVAR	**Kislovodsk Arr**	**1.43**	**63**	Pg	**Pn**	**18 01 13.3**	**+0.1**
	baz=253,slow=19						
KVAR				Lg	Lg	18 01 31.0	
	baz=331,slow=19						
KVAR				LR	LR	18 01 47.7	
	comp=N,232nm,19.7s,baz=104,slow=44						
GOYR	**Goytkh**	**1.46**	**310**	*i* Pg	**Pb**	**18 01 14.7**	**+0.3**
GOYR				*e*Sg	**Sg**	**18 01 34.7**	**+0.8**
KBZ	**Khabaz**	**1.48**	**73**	Pg	**Pn**	**18 01 14.0**	**+0.2**
	comp=N,4.0nm,0.3s,baz=246,slow=16,SNR=84						
KBZ				Lg	Lg	18 01 33.2	
	comp=N,121nm,0.3s,baz=148,slow=19,SNR=12						
KBZ				LR	LR	18 01 55.2	
	comp=N,146nm,18.6s,baz=240,slow=47						
KBZ	**Khabaz**	**1.48**	**73**	*d i* PG	**Pn**	**18 01 13.4**	**-0.5**
KBZ	**Khabaz**	**1.48**	**73**	*i* Pg	**Pn**	**18 01 13.6**	**-0.3**
KBZ				*e*Sg	**Sn**	**18 01 33.0**	**-0.4**
BEYR	**Belyy Ugol+**	**1.53**	**62**	*e*Pg	**Pn**	**18 01 14.7**	**+0.1**
BEYR				*e*Sg	**Sn**	**18 01 34.3**	**-0.4**
TKB	**Tkibuli**	**1.79**	**122**	P	**Pg**	**18 01 19.1**	**-0.9**
TKB				S	**Sg**	**18 01 46.2**	**+1.6**
TKB	**Tkibuli**	**1.79**	**122**	PN	**Pb**	**18 01 19.1**	**-0.9**
TKB				S	**Sg**	**18 01 46.2**	**+1.6**
BATM	**Batumi**	**1.80**	**162**	P	**Pn**	**18 01 19.0**	**+0.7**
BATM				S	**Sg**	**18 01 46.3**	**+1.5**
BATM	**Batumi**	**1.80**	**162**	PN	**Pn**	**18 01 19.0**	**+0.7**
BATM	**Batumi**	**1.80**	**162**	*e*Pg	**Pn**	**18 01 19.0**	**+0.7**
BATM				*e*Sg	**Sg**	**18 01 46.3**	**+1.5**
KBTC	**Kuba-Taba**	**1.86**	**74**	*e*Pg	**Pg**	**18 01 22.2**	**-0.4**
KBTC				*e*Sg	**Sg**	**18 01 46.2**	**-0.6**
BCA	**Borcka**	**1.94**	**165**	⇓P	**Pg**	**18 01 23.3**	**-0.7**
BCA				⇓S	**Sg**	**18 01 48.1**	**-1.1**
BCA	**Borcka**	**1.94**	**165**	PN	**Pb**	**18 01 22.7**	**+0.2**
NCK	**Nalchik**	**1.94**	**84**	*d i* PN	**Pg**	**18 01 24.7**	**+0.5**
NCK				pmax	pmax		
	comp=Z,214nm,0.8s						
HOPA	**Hopa-Artvin**	**1.97**	**169**	PN	**Pb**	**18 01 22.6**	**-0.3**
DIGR	**Digorskoe uzhe**	**1.98**	**101**	*e*PN	**Pg**	**18 01 25.2**	**+0.4**
DIGR				*e*S	**Sg**	**18 01 53.4**	**+2.9**
DIGR				pmax	pmax		
	comp=Z,62nm,0.3s						
DIGR				smax	smax		
	comp=N,133nm,0.6s						
ONI	**Oni**	**1.98**	**111**	P	**Pb**	**18 01 23.3**	**0.0**
ONI				S	**Sg**	**18 01 52.3**	**+1.7**
ONI	**Oni**	**1.98**	**111**	PN	**Pb**	**18 01 23.4**	**+0.1**
ONI	**Oni**	**1.98**	**111**	PN	**Pb**	**18 01 23.3**	**0.0**
ONI				S	**Sg**	**18 01 52.3**	**+1.7**
ONI	**Oni**	**1.98**	**111**	*e*Pg	**Pb**	**18 01 23.3**	**0.0**
ONI				*e*Sg	**Sg**	**18 01 52.3**	**+1.7**
ALER	**Alexandrovskoy**	**2.03**	**44**	*e*Pg	**Pb**	**18 01 23.8**	**-0.3**
ALER				*e*Sg	**Sb**	**18 01 48.2**	**-1.2**
ABS	**Abastumani**	**2.09**	**138**	P	**Pb**	**18 01 23.8**	**-1.3**
ABS	

SUDU pmax pmax
comp=Z,6.0nm,0.3s
SUDU smax smax
comp=N,30nm,0.5s
SUDU smax smax
comp=E,13nm,0.6s
SUDU Sudak 4.56 292 *e*Pn **Pn 18 01 58.1 +2.0**
SUDU *i* Sn **Sn 18 02 50.6 +1.4**
SUDU Sudak 4.56 292 Sm 18 02 52.2
comp=N,30nm,0.5s
SUDU Sudak 4.56 292 *e*P **Pn 18 01 58.1 +2.0**
SUDU Sudak 4.56 292 Pm 18 01 58.6
comp=Z,6.0nm,0.3s
SUDU Sudak 4.56 292 *i* S **Sn 18 02 50.6 +1.4**
SUDU Sudak 4.56 292 Sm 18 02 52.2
comp=E,13nm,0.6s
GANJ Ganja 4.82 122 P Pb 18 02 06.5 -5.1
GANJ S **Sb 18 03 09.2 -0.5**
ALU Alushta 4.91 288 *e*PN **Pn 18 02 03.0 +2.1**
ALU *e*S **Sn 18 03 01.1 +3.2**
ALU pmax pmax
comp=Z,6.0nm,0.3s
ALU smax smax
comp=N,59nm,0.2s
ALU smax smax
comp=E,31nm,0.3s
ALU Alushta 4.91 288 *e*P **Pn 18 02 03.0 +2.1**
ALU Pm 18 02 04.8
comp=E,6.0nm,0.3s
ALU *e*S **Sn 18 03 01.1 +3.2**
ALU Sm 18 03 01.3
comp=N,59nm,0.2s
ALU Sm 18 03 01.3
comp=E,31nm,0.3s
ALU Alushta 4.91 288 *e*Pn **Pn 18 02 03.0 +2.1**
ALU *e*Sn **Sn 18 03 01.1 +3.2**
YAL Yalta 5.04 286 *e*P **Pn 18 02 04.2 +1.5**
YAL *e*S **Sn 18 03 02.7 +1.6**
YAL Sm 18 03 04.8
comp=N,13nm,0.3s
YAL Sm 18 03 04.8
comp=E,38nm,0.5s
YAL Pm 18 03 06.9
comp=Z,13nm,0.3s
MI20 Yalta 5.04 286 *e*Pn **Pn 18 02 04.2 +1.4**
MI20 *e*Sn **Sn 18 03 02.7 +1.5**
SIM Simferopol' 5.17 291 PN Pb 18 02 12.6 -5.0
SIM pmax pmax
comp=Z,10.0nm,1.0s
SBZ Shahbuz 5.23 137 P Pn 18 02 11.2 +5.6
SBZ S **Sb 18 03 17.6 -4.1**
BZK Bozkurt 5.29 258 ⇑P **Pn 18 02 07.2 +0.9**
BZK ⇑S **Sn 18 03 07.7 +0.3**
SEV Sevastopol' 5.39 286 *e*P **Pn 18 02 09.0 +1.4**
SEV *e*S **Sn 18 03 10.9 +1.1**
SEV pmax pmax
comp=Z,3.0nm,0.3s
SEV smax smax
comp=N,14nm,0.4s
SEV smax smax
comp=E,6.0nm,0.2s
SEV Sevastopol' 5.39 286 *e*P **Pn 18 02 09.0 +1.4**
SEV Pm 18 02 11.0
comp=Z,3.0nm,0.3s
SEV *e*S **Sn 18 03 10.9 +1.1**
SEV Sm 18 03 14.3
comp=N,14nm,0.4s
SEV Sm 18 03 14.3
comp=E,6.0nm,0.2s
SEV Sevastopol' 5.39 286 *e*Pn **Pn 18 02 09.0 +1.4**
SEV *e*Sn **Sn 18 03 10.9 +1.1**
QSAR Qusar 5.71 106 P Pn 18 02 18.0 +5.9
QSAR S **Sb 18 03 30.3 -5.2**
ORD Ordubad 5.81 137 P Pn 18 02 18.8 +5.3
ORD S **Sb 18 03 34.1 -4.3**
BR131 Keskin Array S 6.55 239⇑ *e*P **Pn 18 02 25.6 +2.0**
BRTR Keskin Array B 6.55 239 Pn **Pn 18 02 25.0 +1.3**
comp=E,0.3nm,0.3s,baz=35,slow=13,SNR=8.5
BRTR Sn **Sn 18 03 39.1 +0.5**
comp=E,0.3nm,0.3s,baz=48,slow=23,SNR=4.8
BRTR LR LR 18 06 06.2
comp=E,99nm,20.2s,baz=76,slow=49
comp=E,0.5nm,0.4s
BRTR Keskin Array B 6.55 239 *i* P **Pn 18 02 26.0 +2.4**
BRTR pmax pmax
comp=Z,1.0nm,0.3s
VRH Novokhopyorsk 7.91 4 *e*P **Pn 18 02 41.8 -0.3**
VRH pmax pmax
comp=Z,30nm,1.3s
VSR Storozhevoye 7.99 352 *e*P **Pn 18 02 43.6 +0.3**
VSR pmax pmax
comp=Z,7.0nm,0.4s
VORR Voronezh 8.44 353 *e*P **Pn 18 02 46.0 -3.4**
VORR pmax pmax
comp=Z,40nm,0.5s
TLCR 8.90 286 ⇑P **Pn 18 02 56.0 +0.3**
TLCR 8.90 286 ⇑P **Pn 18 02 56.0 +0.3**
TIRR Tirgusor 9.12 281 ⇓P **Pn 18 02 58.2 -0.5**
TIRR Tirgusor 9.12 281 ⇓P **Pn 18 02 58.2 -0.5**
TPGR Topolog 9.14 284 ⇑P **Pn 18 02 58.7 -0.4**
CFR Carcaliu 9.38 286 ⇓P **Pn 18 03 02.0 -0.2**
CFR Carcaliu 9.38 286 ⇓P **Pn 18 03 02.0 -0.2**
LPSR Galich'ya Gora 9.39 352 *e*P **Pn 18 03 00.3 -2.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
HARR Harsova 9.48 283 ⇑P **Pn 18 03 03.9 +0.3**
HARR Harsova 9.48 283 ⇑P **Pn 18 03 03.9 +0.3**
BELG Belogornoye 10.13 24 Pn **Pn 18 03 11.8 -0.7**
comp=Z,1.8nm,0.3s,baz=211,slow=4.8,SNR=5.4
BELG Sn **Sn 18 05 02.2 -4.0**
comp=Z,0.8nm,0.3s,baz=162,slow=20,SNR=1.8
BELG Lg Lg 18 06 10.1
comp=Z,0.4nm,0.3s,baz=217,slow=20,SNR=2.1
BELG LR LR 18 07 38.1
comp=Z,65nm,20.5s,baz=270,slow=41
comp=Z,12nm,0.7s
BELG Belogornoye 10.13 24 *i* P **Pn 18 03 12.3 -0.2**
VRI Vrincioaia 10.45 289 ⇓P **Pn 18 03 18.1 +1.1**
VRI Vrincioaia 10.45 289 ⇓P **Pn 18 03 18.1 +1.1**
COVR Voineasa-Covas 10.81 289 ⇑P **Pn 18 03 23.7 +1.7**
AKASG Malin Array Be 10.88 317 Pn **Pn 18 03 18.1 -4.7**
comp=Z,0.3nm,0.3s,baz=182,slow=11,SNR=1.5
AKASG Sn **Sn 18 05 20.2 -4.4**
comp=Z,0.9nm,0.3s,baz=124,slow=25,SNR=4.2
AKASG Lg Lg 18 06 33.7
comp=Z,0.3nm,0.3s,baz=118,slow=29,SNR=4.6
AKASG LR LR 18 07 45.2
comp=Z,29nm,18.6s,baz=128,slow=39
comp=Z,0.4nm,0.6s
AKASG Malin Array Be 10.88 317 *i* P **Pn 18 03 24.1 +1.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 10.88 317⇑ *e*P **Pn 18 03 22.3 -0.5**
MLR Muntele Rosu 10.95 287 ⇓P **Pn 18 03 23.9 0.0**
MLR Muntele Rosu 10.95 287 Pn **Pn 18 03 23.7 -0.2**
comp=Z,0.3nm,0.3s,baz=131,slow=19,SNR=10
MLR Sn **Sn 18 05 22.7 -3.9**
comp=Z,0.1nm,0.3s,baz=150,slow=20,SNR=1.8
comp=Z,6.2nm,0.9s
MLR Muntele Rosu 10.95 287 ⇓P **Pn 18 03 23.9 0.0**
VOIR 11.57 286 ⇓P **Pn 18 03 32.5 +0.2**
VOIR 11.57 286 ⇓P **Pn 18 03 32.6 +0.2**
BURAR Bucovina Array 11.84 297 ⇓P **Pn 18 03 36.2 +0.2**
BURAR Bucovina Array 11.84 297 ⇓P **Pn 18 03 36.3 +0.2**
OBN Obninsk 12.14 348 *i* P **Pn 18 03 43.0 +2.9**
OBN pmax pmax
comp=Z,3.0nm,0.6s
OBN MLR MLR
comp=Z,68nm,16.0s
AKTO Aktyubinsk 13.66 53 Pn Pn 18 03 55.5 -5.3
comp=Z,0.2nm,0.3s,baz=114,slow=8.6,SNR=2.2
AKTO Sn **Sn 18 06 24.3 -8.4**
comp=Z,0.3nm,0.3s,baz=259,slow=19,SNR=2.2
AKTO LR LR 18 10 56.8
comp=Z,29nm,18.4s,baz=225,slow=45
comp=Z,0.8nm,0.4s
EIL Elat 14.44 201 LR LR 18 10 17.0
comp=Z,83nm,18.8s,baz=14,slow=40
ARU Arti 17.28 34 P **Pn 18 04 46.3 -2.1**
baz=280,slow=15,SNR=2.4
ARU LR LR 18 12 18.3
comp=Z,34nm,19.8s,baz=197,slow=40
comp=Z,1.2nm,0.4s
ARU Arti 17.28 34 P **P 18 04 50.3 +0.4**
ARU S **Sn 18 08 04.2 +3.5**

VRAC Vranov 17.81 298 LR LR 18 12 51.7
comp=Z,22nm,21.0s,baz=129,slow=41
GERES GERESS Array B 19.63 296 P **P 18 05 14.3 -1.5**
baz=168,slow=40,SNR=2.3
comp=Z,0.2nm,0.7s
FINES FINESS Array B 20.20 339 P **P 18 05 22.1 +0.2**
comp=Z,2.8nm,0.9s,baz=138,slow=13,SNR=1.5
comp=Z,2.8nm,0.9s
CLL Collm 20.46 303 *e*P Pn 18 05 29.0 +2.1
CLL Collm 20.46 303 *e*Px Px 18 05 29.0
CLL *e*PPP PPP 18 05 51.0
BRVK Borovoye 21.71 53⇑ *e*P **P 18 05 42.6 +4.3**
BRVK pmax pmax
comp=Z,3.0nm,1.3s
BVAR Borovoye Array 21.77 53 P **P 18 05 39.9 +1.0**
comp=Z,0.7nm,0.7s,baz=248,slow=12,SNR=7.4
comp=Z,0.7nm,0.7s
DAVOX Davos/Dischmat 22.14 290 P **P 18 05 42.6 -0.5**
comp=Z,1.0nm,0.7s,baz=1.1,slow=18,SNR=1.9
comp=Z,1.0nm,0.7s
HFS Hagfors 23.57 325 P **P 18 05 56.0 -1.6**
comp=Z,5.7nm,1.0s,baz=176,slow=40,SNR=2.7
comp=Z,5.7nm,1.0s
AAK Ala-Archa 24.47 80⇓ *e*P **P 18 06 09.2 +2.7**
AAK pmax pmax
comp=Z,1.0nm,0.9s
NB2 NORSAR Subarra 25.09 325 P **P 18 06 13.1 +1.4**
comp=Z,4.3nm,1.1s,baz=127,slow=9.3
NOA NORSAR Array B 25.09 325 P **P 18 06 11.0 -0.7**
comp=Z,2.5nm,1.0s,baz=126,slow=9.6,SNR=7.9
NOA LR LR 18 16 22.2
comp=Z,17nm,19.9s,baz=135,slow=37
comp=Z,2.5nm,1.0s
KEST Kesra 25.41 263 P **P 18 06 15.3 +0.4**
comp=Z,3.4nm,0.9s,baz=68,slow=5.4,SNR=3.0
comp=Z,3.4nm,0.9s
KURBB Kurchatov Arra 26.45 61 P **P 18 06 23.3 -0.8**
comp=Z,0.3nm,0.7s,baz=276,slow=9.6,SNR=5.4
comp=Z,0.3nm,0.7s
KURK Kurchatov 26.51 61 P **P 18 06 23.3 -1.3**
MKAR Makanchi Array 29.18 69 P **P 18 06 48.6 -0.1**
comp=Z,0.3nm,0.7s,baz=276,slow=8.3,SNR=3.7
comp=Z,0.3nm,0.7s
EKA Eskdalemuir Ar 30.63 309 P **P 18 07 03.3 +2.1**
comp=Z,0.7nm,0.7s,baz=104,slow=12,SNR=2.6
ESDC Sonseca Array 33.52 279 P **P 18 07 27.2 +0.3**
comp=Z,0.3nm,0.7s,baz=66,slow=9.9,SNR=3.0
comp=Z,0.3nm,0.7s
TORD Torodi Ar. Bea 45.16 240 P **P 18 09 04.1 -0.1**
comp=Z,1.0nm,0.9s,baz=42,slow=7.9,SNR=4.8
LBTB Lobatse 69.44 195 LR LR 18 42 04.9
comp=Z,73nm,20.2s,baz=107,slow=36

*IDC **27** 18:03:15.1±1.1, 0.°20S×120.°64E, h0km, mb3.5/5, mbtmp3.5/6, ML4.0/1, MS2.7/1, Error ellipse: s-maj=58.0km s-min=18.5km az=70.0*
*DJA **27** 18:03:18.6±0.3, 0.°5S×12.°0E±.°, h10km, M4.1/15, mb4.3/3, mB5.4/1, MLv4.0/15, Mw(mB)4.9/1*
*NEIC **27** 18:03:21.8±1.9, 0.°44S±0.°06×120.°02E±0.°01, h44km±23km, mb4.1/5, Error ellipse: s-maj=8.6km s-min=1.7km az=174.0*
ISC 27 18:03:21.6±0.8, 0.°33S±0.°05×120.°04E±0.°05, h45km, n32, σ1°94/35, mb3.6/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**0.68**	**348**	P	**Pn**	**18 03 31.3**	**-3.6**
TOLI2	**Tolitoli**	**1.62**	**27**		**Pn**	**18 03 47.5**	**-0.2**
TOLI2				Sn	**Sn**	**18 04 10.3**	**+2.9**
APSI	**Ampana**	**1.71**	**110**	P	**Pn**	**18 03 47.7**	**-1.2**
MRSI	**Marisa**	**2.07**	**67**	P	**Pn**	**18 03 51.4**	**-2.4**
TTSI	**Tana Toraja**	**2.70**	**185**	P	**Pn**	**18 04 02.6**	**+0.1**
LUWI	**Luwuk**	**2.83**	**104**		**Pn**	**18 04 02.9**	**-1.3**
LUWI				Sn	**Sn**	**18 04 38.7**	**+1.7**
LUWI	**Luwuk**	**2.83**	**104**	P	**Pn**	**18 04 03.7**	**-0.5**
GTOI	**Gorontalo**	**3.13**	**72**	P	**Pn**	**18 04 04.1**	**-4.3**
BKB	**Balikpapan**	**3.27**	**254**	Pn	**Pn**	**18 04 09.0**	**-1.4**
BKB				Sn	**Sn**	**18 04 47.4**	**-0.7**
BKB	**Balikpapan**	**3.27**	**254**	P	**Pn**	**18 04 09.9**	**-0.5**
SPSI	**Sidrap Palu**	**3.62**	**184**	P	**Pn**	**18 04 14.1**	**-1.0**
KMSI	**Cibinong**	**4.05**	**77**	P	**Pn**	**18 04 20.1**	**-0.9**
KAPI	**Kappang**	**4.66**	**183**	Pn	**Pn**	**18 04 29.1**	**-0.3**
	5.6nm,0.3s,baz=9.7,slow=8.6,SNR=28						
KAPI				Sn	**Sn**	**18 05 25.5**	**+3.2**
	baz=345,slow=20						
	32nm,0.6s						
KAPI	**Kappang**	**4.66**	**183**		**Pn**	**18 04 28.0**	**-1.4**
BKSI	**Bulukumba**	**4.96**	**179**	P	**Pn**	**18 04 31.5**	**-2.0**
MYLDM	**Lahad Datu**	**5.69**	**344**		**Pn**	**18 04 46.1**	**+2.5**
SANI	**Sanana**	**6.19**	**106**	P	**Pn**	**18 04 47.5**	**-3.0**
KKM	**Kota Kinabalu**	**7.40**	**329**	Pn	**Pn**	**18 05 08.5**	**+1.4**
NLAI	**Namlea**	**7.63**	**112**	P	**Pn**	**18 05 10.0**	**-0.2**
	0.1nm3µm10nm,0.6s						
DAV	**Davao City (W)**	**9.20**	**37**	LR	LR	18 08 10.9	
	comp=Z,52nm,21.2s,baz=184,slow=34						
FAKI	**Fak Fak**	**12.47**	**102**	Pn	**Pn**	**18 06 16.0**	**-0.6**
KNRA	**Kununurra**	**17.51**	**151**	P	**P**	**18 07 21.9**	**-1.4**
KNRA				IAmb	IAmb	18 07 32.0	
	comp=Z,17nm,1.4s						
FITZ	**Fitzroy Crossi**	**18.49**	**163**	P	**Pn**	**18 07 35.3**	**+0.7**
WB0	**Warramunga Arr**	**23.89**	**145**	P	**P**	**18 08 29.4**	**-1.9**
WRAB	**Tennant Creek**	**24.00**	**145**	P	**P**	**18 08 32.0**	**-0.3**
WRAB				IAmb	IAmb	18 08 39.7	
	comp=Z,9.5nm,1.3s						
WRA	**Warramunga Arr**	**24.00**	**145**	P	**P**	**18 08 28.9**	**-3.4**
	comp=Z,2.3nm,1.1s,baz=325,slow=10,SNR=7.7						
	comp=Z,2.3nm,1.1s						
WB2	**Warramunga Arr**	**24.01**	**145**	P	**P**	**18 08 31.1**	**-1.3**
WB2				IAmb	IAmb	18 08 57.6	
	comp=Z,7.6nm,1.2s						
WR0	**Warramunga Arr**	**24.13**	**145**	P	**P**	**18 08 31.7**	**-1.8**
ASAR	**Alice Springs**	**26.82**	**151**	P	**P**	**18 08 56.8**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=342,slow=14,SNR=5.7						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**57.38**	**330**	P	**P**	**18 13 07.6**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=119,slow=8.9,SNR=4.6						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**61.43**	**337**	P	**P**	**18 13 32.6**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=132,slow=8.0,SNR=1.7						
	comp=Z,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**61.80**	**331**	P	**P**	**18 13 36.9**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=125,slow=6.3,SNR=4.4						
	comp=Z,0.4nm,0.8s						

*IDC **27** 18:18:18.0±1.8, 45.°11N×28.°29W, h0km, mb3.5/5, mbtmp3.4/7, ML3.7/2, MS3.1/8, Error ellipse: s-maj=42.8km s-min=35.6km az=66.0*
ISC 27 18:18:19.7±1.7, 45.°1N±0.°2×28.°2W±0.°2, h10km, n18, σ0°77/11, mb3.5/6, MS3.2/6, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**18.70**	**98**	P	**Pn**	**18 22 38.3**	**-0.1**
	0.1nm,0.3s,baz=289,slow=12,SNR=2.8						
ESDC				LR	LR	18 28 07.4	
	comp=Z,63nm,21.6s,baz=310,slow=32						
	0.3nm,0.7s						
EKA	**Eskdalemuir Ar**	**18.93**	**48**	P	**Pn**	**18 22 42.0**	**+0.9**
	baz=239,slow=8.2						
EKA				LR	LR	18 28 16.0	
	comp=Z,27nm,19.9s,baz=302,slow=32						
	0.6nm,0.7s						
BORG	**Borgarnes**	**20.07**	**9**	LR	LR	18 28 26.4	
	comp=Z,23nm,21.2s,baz=117,slow=30						
MDT	**Midelt**	**22.00**	**116**	LR	LR	18 30 43.8	
	comp=Z,37nm,19.0s,baz=119,slow=34						
GERES	**GERESS Array B**	**28.59**	**67**	P	**P**	**18 24 14.7**	**-1.2**
	0.4nm,0.8s,baz=289,slow=9.2,SNR=4.0						
	0.4nm,0.8s						
KOWA	**Kowa**	**36.75**	**138**	LR	LR	18 38 44.8	
	comp=Z,44nm,20.3s,baz=11,slow=33						
AKASG	**Malin Array Be**	**38.08**	**60**	P	**P**	**18 25 37.4**	**-0.9**
	0.8nm,0.8s,baz=278,slow=8.9,SNR=2.6						
	0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**40.75**	**132**	P	**P**	**18 26 01.1**	**+0.2**
	1.0nm,0.9s,baz=317,slow=8.3,SNR=6.0						
BRTR	**Keskin Array B**	**45.01**	**74**	P	**P**	**18 26 36.5**	**+1.1**
	0.6nm,0.7s,baz=316,slow=8.0,SNR=2.8						
BRTR				LR	LR	18 45 36.4	
	comp=Z,25nm,20.4s,baz=88,slow=36						
	0.6nm,0.7s						
EIL	**Elat**	**51.26**	**85**	LR	LR	18 47 59.8	
	comp=Z,28nm,20.9s,baz=102,slow=35						
H10N2	**ASCENSION HYDR**	**54.11**	**163**	T	T	19 25 33.5	
	baz=349,slow=75,SNR=4.6						
H10N3	**ASCENSION HYDR**	**54.12**	**163**	T	T	19 25 36.2	
	baz=349,slow=75,SNR=4.0						
H10N1	**ASCENSION HYDR**	**54.13**	**163**	T	T	19 25 36.9	
	baz=349,slow=75,SNR=4.3						
NEW	**Newport**	**57.70**	**308**	LR	LR	18 51 29.5	
	comp=Z,24nm,19.1s,baz=22,slow=34						
MKAR	**Makanchi Array**	**69.98**	**43**	P	**P**	**18 29 31.6**	**+0.5**
	0.2nm,0.6s,baz=327,slow=7.6,SNR=1.9						
	0.2nm,0.6s						
SONM	**Songino Array**	**79.25**	**29**	P	**P**	**18 30 25.0**	**-0.1**
	0.6nm,0.8s,baz=316,slow=6.2,SNR=3.9						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**151.05**	**36**	PKPbc	**PKPbc**	**18 38 12.4**	**-0.6**
	1.1nm,1.1s,baz=315,slow=3.3,SNR=5.5						
ASAR	**Alice Springs**	**154.14**	**40**	PKPbc	**PKiKP**	**18 38 20.1**	**+0.1**
	0.7nm,0.9s,baz=339,slow=2.4,SNR=4.9						
ASAR				PKPab	**PKPab**	**18 38 33.6**	**+0.2**
	0.6nm,0.9s,baz=336,slow=4.1,SNR=4.2						

*MOS **27** 18:21:36.3±0.0, 43.°35N×41.°04E, h13km, MPVA3.2*
ISC 27 18:21:36.8±1.1, 43.°37N±0.°04×41.°04E±0.°03, h14km±11km, n14, σ0°79/28, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARXR	**Arkhyz**	**0.26**	**42**	*e*Pg	**Pg**	**18 21 42.5**	**+0.1**
ARXR				*e*Sg	**Sg**	**18 21 46.8**	**+0.7**
DOMR	**Dombai**	**0.43**	**100**	*e*Pg	**Pg**	**18 21 44.2**	**-1.3**
DOMR				*e*Sg	**Sg**	**18 21 51.2**	**-0.2**
AHMR	**Akhmetovskaya**	**0.79**	**0**	*e*Pg	**Pg**	**18 21 51.5**	**-0.6**
AHMR				*e*Sg	**Sb**	**18 22 03.1**	**+0.2**
SHA1	**Shidzhatmaz**	**1.23**	**72**	*e*Pg	**Pg**	**18 22 00.2**	**-0.3**
SHA1				*e*Sg	**Sg**	**18 22 17.5**	**+0.9**
NEY	**Neytrino**	**1.23**	**95**	*e*Pg	**Pg**	**18 21 59.9**	**-0.7**
NEY				*e*Sg	**Sg**	**18 22 16.3**	**-0.3**
LABN	**Labinsk**	**1.29**	**350**	*e*Pg	**Pb**	**18 22 00.8**	**-0.1**
LABN				*e*Sg	**Sg**	**18 22 19.5**	**+1.0**
LZRR	**Lazarevskoye**	**1.33**	**296**	*e*Pg	**Pg**	**18 22 01.9**	**-0.5**
LZRR				*e*Sg	**Sg**	**18 22 20.1**	**+0.5**
KIV	**Kislovodsk**	**1.33**	**63**	*e*Pg	**Pg**	**18 22 02.2**	**-0.2**
KIV				*e*Sg	**Sg**	**18 22 19.4**	**-0.3**
KBZ	**Khabaz**	**1.40**	**74**	*e*Pg	**Pb**	**18 22 02.3**	**-0.4**
KBZ				*e*Sg	**Sg**	**18 22 21.8**	**0.0**
BEYR	**Belyy Ugol+**	**1.44**	**63**	*e*Pg	**Pb**	**18 22 03.2**	**-0.2**
BEYR				*i* Sg	**Sg**	**18 22 23.1**	**-0.1**
GOYR	**Goytkh**	**1.49**	**307**	*e*Pg	**Pn**	**18 22 03.3**	**+0.1**
GOYR				*e*Sg	**Sg**	**18 22 24.5**	**-0.2**
TKB	**Tkibuli**	**1.76**	**125**	P	**Pg**	**18 22 10.1**	**-0.5**
TKB				S	**Sg**	**18 22 34.6**	**+1.2**
ONI	**Oni**	**1.94**	**113**	P	**Pg**	**18 22 13.6**	**-0.3**
ONI				S	**Sg**	**18 22 41.7**	**+2.7**
ABS	**Abastumani**	**2.08**	**140**	P	**Pb**	**18 22 14.5**	**+0.2**
ABS				S	**Sg**	**18 22 43.6**	**0.0**

*IDC **27** 18:30:40.8±1.0, 45.°05N×27.°96W, h0km, mb3.4/9, mbtmp3.4/11, ML3.5/2, MS3.3/8, Error ellipse: s-maj=34.7km s-min=18.8km az=9.0*
ISC 27 18:30:43.0±0.9, 45.°1N±0.°2×28.°0W±0.°1, h14km, n23, σ0°91/14, mb3.5/10, MS3.4/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**18.50**	**98**	P	**Pn**	**18 34 58.8**	**-0.1**
	baz=300,slow=10,SNR=2.0						
ESDC				LR	LR	18 40 57.6	
	comp=Z,55nm,18.6s,baz=314,slow=33						
	0.2nm,0.8s						
EKA	**Eskdalemuir Ar**	**18.82**	**48**	P	**Pn**	**18 35 02.6**	**0.0**
	baz=250,slow=8.2						
	0.6nm,0.7s						
SFJD	**Kangerlussuaq**	**25.09**	**339**	LR	LR	18 43 49.9	
	comp=Z,53nm,18.5s,baz=338,slow=32						
SCHQ	**Schefferville**	**26.54**	**306**	LR	LR	18 45 02.2	
	comp=Z,46nm,19.9s,baz=272,slow=32						
NOA	**NORSAR Array B**	**27.92**	**41**	LR	LR	18 46 11.3	
	comp=Z,13nm,20.1s,baz=50,slow=33						
GERES	**GERESS Array B**	**28.43**	**67**	P	**P**	**18 36 38.4**	**+1.2**
	0.5nm,0.9s,baz=271,slow=8.6,SNR=4.1						
	0.5nm,0.9s						
SADO	**Sadowa**	**35.75**	**288**	LR	LR	18 51 12.2	
	comp=Z,95nm,20.1s,baz=9.5,slow=34						
AKASG	**Malin Array Be**	**37.94**	**60**	P	**P**	**18 37 59.0**	**-0.7**
	0.4nm,0.6s,baz=277,slow=9.7,SNR=2.4						
	0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**40.58**	**132**	P	**P**	**18 38 21.9**	**-0.2**
	1.2nm,0.9s,baz=323,slow=6.5,SNR=6.9						
ULM	**Lac du Bonnet**	**44.61**	**302**	LR	LR	18 55 47.9	
	comp=Z,60nm,18.9s,baz=132,slow=34						
BRTR	**Keskin Array B**	**44.85**	**74**	P	**P**	**18 38 57.5**	**+0.7**
	0.4nm,0.8s,baz=318,slow=8.5,SNR=2.6						
	0.4nm,0.8s						
YKA	**Yellowknife Ar**	**49.91**	**323**	LR	LR	18 57 33.1	
	comp=Z,35nm,19.6s,baz=338,slow=32						
H10N2	**ASCENSION HYDR**	**54.02**	**163**	T	T	19 38 02.0	
	baz=352						
H10N3	**ASCENSION HYDR**	**54.02**	**163**	T	T	19 38 05.6	
	baz=352						
H10N1	**ASCENSION HYDR**	**54.03**	**163**	T	T	19 38 04.3	
	baz=352						
PDAR	**Pinedale Array**	**56.39**	**299**	P	**P**	**18 40 23.9**	**-0.1**
	0.3nm,0.7s,baz=55,slow=7.8,SNR=2.5						
	0.3nm,0.7s						
TXAR	**Lajitas Array**	**60.22**	**283**	P	**P**	**18 40 50.6**	**-0.2**
	0.3nm,0.8s,baz=65,slow=7.1,SNR=2.6						
TXAR				LR	LR	19 06 21.7	
	comp=Z,37nm,19.9s,baz=38,slow=36						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**60.64**	**335**	P	**P**	**18 40 52.4**	**-0.5**
	0.4nm,0.7s,baz=62,slow=4.4,SNR=2.6						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**64.32**	**299**	P	**P**	**18 41 20.3**	**+2.0**
	0.2nm,0.5s,baz=4.4,slow=4.7,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**69.89**	**43**	P	**P**	**18 41 52.9**	**-0.4**
	0.3nm,0.8s,baz=312,slow=5.3,SNR=2.9						
	0.3nm,0.8s						
SONM	**Songino Array**	**79.20**	**29**	P	**P**	**18 42 47.2**	**-0.3**
	0.4nm,0.8s,baz=302,slow=6.3,SNR=2.4						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**150.98**	**36**	PKPbc	**PKPbc**	**18 50 34.6**	**-0.8**
	1.0nm,0.9s,baz=357,slow=2.4,SNR=5.2						
ASAR	**Alice Springs**	**154.05**	**41**	PKPbc	**PKPbc**	**18 50 41.2**	**-1.1**
	0.5nm,0.9s,baz=340,slow=2.6,SNR=3.6						

*NEIC **27** 18:36:44.8±2.1, 45.°22N±0.°03×74.°36W±0.°05, h14km±6km, Error ellipse: s-maj=6.0km s-min=0.9km az=127.0*
*LDO **27** 18:36:45.5±1.9, 45.°25N±0.°02×74.°35W±0.°04, h12km±5km, Error ellipse: s-maj=4.5km s-min=2.5km az=122.0*
*OTT **27** 18:36:45.2±0.0, 45.°22N×74.°37W, h18km, MN2.6/15, 13km southwest from Les Coteaux, Qc Western Quebec Seismic Zone.*
ISC 27 18:36:44.4±1.0, 45.°22N±0.°03×74.°35W±0.°02, h15km±9km, n45, σ0°80/65, Southern Ontario

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALFO	**Alfred**	**0.56**	**318**	PG	**Pb**	**18 36 55.7**	**-0.1**
ALFO				SG	**Sg**	**18 37 02.9**	**+0.2**
ALFO				Trac		18 37 03.4	
	comp=Z,31nm,0.0s						
MNTQ	**Montreal, Queb**	**0.59**	**61**		**Pb**	**18 36 56.2**	**-0.1**
MNTQ				Sg	**Sb**	**18 37 04.1**	**-0.4**
MNTQ	**Montreal, Queb**	**0.59**	**61**	PG	**Pb**	**18 36 56.3**	**-0.1**
MNTQ				SG	**Sb**	**18 37 04.2**	**-0.2**
MNTQ				Trac		18 37 05.0	
	comp=Z,22nm,0.1s						
LONY	**Lake Ozonia**	**0.62**	**195**	Pg	**Pg**	**18 36 56.5**	**0.0**
LONY				Sg	**Sg**	**18 37 05.1**	**+0.4**
LONY	**Lake Ozonia**	**0.62**	**195**	PG	**

GAC	**Glen Almond**	**0.93**	**302**	PG	**Pb**	**18 37 01.8**	**-0.4**
GAC				PG	**Pg**	**18 37 02.1**	**-0.3**
GAC				SG	**Sb**	**18 37 13.8**	**-0.4**
GAC				SG	**Sb**	**18 37 13.8**	**-0.4**
GAC				Trac		18 37 14.8	
	comp=Z,18nm,0.1s						
GAC				Trac		18 37 19.3	
	comp=Z,5.0nm,0.1s						
OTT	**Ottawa**	**0.98**	**281**	SG	**Sb**	**18 37 15.6**	**-0.1**
TRQ	**Mont Tremblant**	**1.01**	**352**		**Pb**	**18 37 03.3**	**-0.4**
TRQ				Sn	**Sb**	**18 37 16.6**	**-0.3**
TRQ	**Mont Tremblant**	**1.01**	**352**	PG	**Pb**	**18 37 03.4**	**-0.4**
TRQ				SG	**Sb**	**18 37 16.9**	**+0.1**
TRQ				Trac		18 37 18.5	
	comp=Z,15nm,0.1s						
NCB	**Newcomb**	**1.25**	**176**		**Pn**	**18 37 07.1**	**-0.2**
KB1O	**Rock site, Kin**	**1.30**	**279**	PG	**Pb**	**18 37 08.5**	**0.0**
KB1O				SG	**Sb**	**18 37 25.3**	**+0.4**
KB1O				Trac		18 37 29.3	
	comp=Z,7.3nm,0.1s						
MOQ	**Mont Orford**	**1.49**	**86**	PN	**Pb**	**18 37 11.4**	**-0.2**
MOQ				SN	**Sb**	**18 37 30.3**	**0.0**
MOQ				Trac		18 37 37.6	
	comp=Z,3.9nm,0.1s						
GRQ	**Grand Remous**	**1.74**	**323**	PN	**Pb**	**18 37 15.4**	**-0.6**
GRQ				SN	**Sn**	**18 37 36.0**	**+0.1**
GRQ				Trac		18 37 40.9	
	comp=Z,17nm,0.1s						
J59A	**Piesco**	**1.76**	**184**		**Pn**	**18 37 15.3**	**+1.1**
J59A				IAmb_Lg		18 37 40.0	
	comp=Z,6.2nm,1.2s						
DPQ	**Saint Jean**	**1.83**	**36**	PN	**Pn**	**18 37 15.9**	**+0.7**
DPQ				SN	**Sn**	**18 37 38.4**	**+0.3**
DPQ				Trac		18 37 43.4	
	comp=Z,5.8nm,0.1s						
ACCN	**Adirondack Com**	**1.90**	**165**	Pn	**Pb**	**18 37 18.1**	**-0.6**
PLVO	**Plevna**	**1.94**	**266**	PN	**Pn**	**18 37 17.1**	**+0.5**
PLVO				SN	**Sn**	**18 37 40.5**	**-0.2**
PLVO				LG	Lg	18 37 45.2	
PLVO				Trac		18 37 45.6	
	comp=Z,7.1nm,0.1s						
J58A	**Remsen**	**1.97**	**200**	Pn	**Pn**	**18 37 18.6**	**+1.3**
LBNH	**Lisbon**	**1.99**	**119**	Pn	**Pn**	**18 37 17.5**	**+0.1**
PEMO	**Pembroke**	**2.09**	**284**	PN	**Pn**	**18 37 19.6**	**+0.9**
PEMO				SN	**Sn**	**18 37 44.6**	**+0.2**
PEMO				LG	Lg	18 37 49.9	
PEMO				Trac		18 37 53.0	
	comp=Z,1.9nm,0.0s						
J57A	**Williamstown**	**2.16**	**214**	Pn	**Pn**	**18 37 20.4**	**+0.7**
J61A	**Chester**	**2.27**	**145**	Pn	**Pn**	**18 37 21.8**	**+0.5**
PECO	**Prince Edward**	**2.28**	**237**	Pn	**Pn**	**18 37 22.1**	**+0.7**
PECO	**Prince Edward**	**2.28**	**237**	PN	**Pn**	**18 37 21.9**	**+0.5**
PECO				SN	**Sn**	**18 37 48.9**	**-0.3**
PECO				LG	Lg	18 37 55.8	
PECO				Trac		18 38 00.3	
	comp=Z,4.1nm,0.1s						
H62A	**Milan**	**2.36**	**105**	Pn	**Pn**	**18 37 24.2**	**+1.7**
DELO	**Deloro Mine**	**2.42**	**254**	Pn	**Pn**	**18 37 24.5**	**+1.1**
DELO	**Deloro Mine**	**2.42**	**254**	PN	**Pn**	**18 37 23.8**	**+0.4**
DELO				SN	**Sn**	**18 37 52.1**	**-0.7**
DELO				LG	Lg	18 38 00.5	
DELO				Trac		18 38 02.4	
	comp=Z,4.7nm,0.1s						
BANO	**Bancroft**	**2.54**	**267**	PN	**Pn**	**18 37 25.9**	**+0.9**
BANO				SN	**Sn**	**18 37 54.8**	**-0.8**
BANO				LG	Lg	18 38 04.8	
BANO				Trac		18 38 09.6	
	comp=Z,6.0nm,0.1s						
I62A	**Tamworth**	**2.54**	**121**	Pn	**Pn**	**18 37 26.5**	**+1.5**
J56A	**Wolcott**	**2.65**	**224**	Pn	**Pn**	**18 37 28.6**	**+2.1**
G62A	**West of Eustis**	**2.70**	**89**	Pn	**Pn**	**18 37 28.4**	**+1.1**
I63A	**Otisfield**	**2.94**	**112**	Pn	**Pn**	**18 37 30.5**	**+0.1**
K57A	**Scipio Center**	**2.94**	**213**	Pn	**Pn**	**18 37 33.5**	**+3.0**
K62A	**Royalston**	**2.98**	**148**	Pn	**Pn**	**18 37 30.6**	**-0.4**
L61B	**Northampton**	**3.02**	**156**	Pn	**Pn**	**18 37 30.8**	**-0.8**
L59A	**Walton**	**3.07**	**190**	Pn	**Pn**	**18 37 31.4**	**-0.9**
J55A	**Hilton**	**3.16**	**233**	Pn	**Pn**	**18 37 35.7**	**+2.2**
BINY	**Binghamton**	**3.24**	**202**	Pn	**Pn**	**18 37 34.2**	**-0.5**
BINY				IAmb_Lg		18 38 35.7	
	comp=Z,4.5nm,0.9s						
SADO	**Sadowa**	**3.43**	**264**	Pn	**Pn**	**18 37 37.8**	**+0.6**
PKME	**Peaks-Kenny Pk**	**3.58**	**87**	Pn	**Pn**	**18 37 39.2**	**0.0**
LMQ	**La Malbaie**	**3.63**	**49**	IAmb_Lg		18 38 41.5	
	comp=Z,5.1nm,1.1s						
J54A	**Appleton**	**3.64**	**239**	Pn	**Pn**	**18 37 39.6**	**-0.5**
E62A	**Clayton Lake**	**3.65**	**66**	Pn	**Pn**	**18 37 40.8**	**+0.5**

IDC 27 18:38:13.2±1.2, 15°.01S×178°.29W, h0km, mb3.7/6, mbtmp3.6/7, ML4.5/1, MS3.2/4, Error ellipse: s-maj=46.4km s-min=24.9km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.44**	**232**	Pn	Pn	18 39 21.2	-0.7
	0.8nm,0.3s,baz=50,slow=17,SNR=1.9						
MSVF				Sn	Sn	18 40 07.8	-6.5
	0.3nm,0.3s,baz=7.8,slow=22,SNR=1.3						
	2.9nm,0.5s						
RAR	**Rarotonga**	**18.64**	**112**	LR	LR	18 47 18.1	
	comp=Z,91nm,20.7s,baz=257,slow=29						
HNR	**Honiara**	**21.97**	**282**	LR	LR	18 50 37.3	
	comp=Z,197nm,19.6s,baz=223,slow=34						
PPT	**Papeete**	**27.67**	**99**	LR	LR	18 54 29.6	
	comp=Z,25nm,18.2s,baz=256,slow=35						
STKA	**Stephens Creek**	**40.19**	**238**	P	P	18 45 52.1	+0.6
	1.7nm,0.7s,baz=98,slow=15,SNR=3.6						
STKA				LR	LR	19 01 17.2	
	comp=Z,14nm,18.9s,baz=31,slow=34						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**45.34**	**257**	P	P	18 46 32.2	-1.2
	0.6nm,1.1s,baz=92,slow=7.4,SNR=3.5						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**45.75**	**252**	P	P	18 46 36.7	0.0
	0.8nm,0.6s,baz=86,slow=8.4,SNR=5.7						
	0.8nm,0.6s						
VNDA	**Vanda**	**63.33**	**185**	P	P	18 48 43.8	+0.2
	0.6nm,0.4s,baz=4.4,slow=6.7,SNR=8.2						
	0.6nm,0.4s						
NVAR	**Mina Array Bea**	**77.27**	**44**	P	P	18 50 08.4	-1.4
	0.2nm,0.5s,baz=216,slow=9.7,SNR=2.9						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**83.05**	**13**	P	P	18 50 41.9	+1.7
	0.3nm,0.6s,baz=218,slow=5.1,SNR=1.8						
	0.3nm,0.6s						

IDC 27 19:00:48.0±3.1, 22°.96N×94°.38E, h81km±35km, mb2.9/3, mbtmp3.0/5, Error ellipse: s-maj=38.8km s-min=19.5km az=33.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.54**	**264**	P	Pn	19 01 27.6	+0.4
	0.9nm,0.3s,baz=88,slow=24,SNR=1.4						
BRDH				S	Sn	19 01 57.8	+0.5
	0.7nm,0.4s,baz=268,slow=24,SNR=0.8						
CMAR	**Chiang Mai Arr**	**6.19**	**136**	P	Pn	19 02 16.9	0.0
	0.4nm,0.4s,baz=311,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	**25.70**	**341**	P	P	19 06 10.7	+0.1
	0.2nm,0.5s,baz=153,slow=10.0,SNR=5.3						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**57.78**	**134**	P	P	19 10 30.5	-0.6
	0.3nm,0.8s,baz=320,slow=7.5,SNR=1.5						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**60.19**	**138**	P	P	19 10 48.2	+0.4
	0.2nm,0.9s,baz=315,slow=6.3,SNR=1.4						
	0.2nm,0.9s						

*RSPR **27** 19:01:47.2, 18°.50N×68°.26W, h167km±3km, MD3.8/21*
*NEIC **27** 19:01:47.8±1.6, 18°.48N±0°.10×68°.29W±0°.06, h163km±6km, Error ellipse: s-maj=14.6km s-min=7.5km az=203.0*
*IDC **27** 19:01:48.4±3.5, 18°.07N×68°.29W, h155km±36km, mb3.6/3, mbtmp4.1/3, MS2.6/2, Error ellipse: s-maj=58.1km s-min=21.6km az=2.0*
*OSPL **27** 19:01:49.1±2.3, 18°.27N×68°.30W, h169km±13km, ML4.0*

ISC 27 19:01:47.9±0.6, 18°.39N±0°.07×68°.28W±0°.03, h167km±5km, n160, σ1°66/169, mb4.1/7, 13C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.16**	**323**	↑*e*P	**Pn**	**19 02 10.0**	**-0.2**
PCDR	**Punta Cana, DR**	**0.16**	**323**		**Sn**	**19 02 27.3**	**+0.1**
PCDR	**Punta Cana, DR**	**0.16**	**323**		**Pn**	**19 02 09.5**	**-0.6**
PCDR	**Punta Cana, DR**	**0.16**	**323**	*i* P	**Pn**	**19 02 09.7**	**-0.5**
PCDR				*e*S	**Sn**	**19 02 27.2**	**0.0**
PCDR				IAML		19 02 30.2	
	comp=Z,2μm,0.8s						
AGPR	**Aguadilla, PR**	**1.11**	**86**	↓*e*P	**Pn**	**19 02 15.7**	**+0.4**
AGPR	**Aguadilla, PR**	**1.11**	**86**		**Pn**	**19 02 15.6**	**+0.4**
AGPR				IAML		19 02 38.0	
	comp=E,4μm,0.5s						
AGPR				IAML		19 02 38.8	
	comp=N,4μm,0.6s						
AGPR	**Aguadilla, PR**	**1.11**	**86**		**Sn**	**19 02 36.4**	**+0.3**
AGPR	**Aguadilla, PR**	**1.11**	**86**	*i* P	**Pn**	**19 02 15.6**	**+0.4**
AGPR				*e*S	**Sn**	**19 02 36.1**	**-0.1**
AGPR				IAML		19 02 40.1	
	comp=Z,2μm,0.3s						
DR12	**Loma Pena Alta**	**1.12**	**291**	↑*e*P	**Pn**	**19 02 14.5**	**-0.8**
DR12				*e*S	**Sn**	**19 02 34.6**	**-1.8**
DR12	**Loma Pena Alta**	**1.12**	**291**	Pn	**Pn**	**19 02 14.6**	**-0.8**
LSP	**Las Mesas**	**1.15**	**100**	↑*e*P	**Pn**	**19 02 16.0**	**+0.4**
LSP	**Las Mesas**	**1.15**	**100**	*e*S	**Sn**	**19 02 35.7**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.17**	**109**	↓*e*P	**Pn**	**19 02 15.3**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.17**	**109**	*e*S	**Sn**	**19 02 37.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.17**	**109**		**Pn**	**19 02 15.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.17**	**109**		**Sn**	**19 02 37.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.17**	**109**	IAML		19 02 40.0	
	comp=N,952nm,0.6s						
CRPR				IAML		19 02 41.0	
	comp=E,770nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.17**	**109**	*i* P	**Pn**	**19 02 15.2**	**-0.5**
CRPR				*e*S	**Sn**	**19 02 36.2**	**-0.9**
CRPR				IAML		19 02 41.0	
	comp=Z,1μm,1.0s						
MLPR	**Magueyes Islan**	**1.25**	**109**	↑*e*P	**Pn**	**19 02 15.1**	**-1.3**
MLPR	**Magueyes Islan**	**1.25**	**109**	*e*S	**Sn**	**19 02 36.5**	**-1.7**
MLPR	**Magueyes Islan**	**1.25**	**109**		**Pn**	**19 02 14.9**	**-1.4**
MLPR	**Magueyes Islan**	**1.25**	**109**		**Sn**	**19 02 36.5**	**-1.7**
MLPR	**Magueyes Islan**	**1.25**	**109**	IAML		19 02 38.2	
	comp=N,1μm,0.7s						
MLPR				IAML		19 02 41.2	
	comp=E,1μm,0.5s						
GBPR	**Guanica, Bosqu**	**1.39**	**107**	↓*e*P	**Pn**	**19 02 18.1**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.39**	**107**	*e*S	**Sn**	**19 02 40.9**	**+0.3**
AOPR	**Arecibo Observ**	**1.45**	**91**	↓*e*P	**Pn**	**19 02 18.2**	**-0.1**
AOPR	**Arecibo Observ**	**1.45**	**91**	*e*S	**Sn**	**19 02 41.3**	**-0.4**
AOPR	**Arecibo Observ**	**1.45**	**91**		**Pn**	**19 02 18.0**	**-0.3**
AOPR	**Arecibo Observ**	**1.45**	**91**		**Sn**	**19 02 41.3**	**-0.4**
AOPR	**Arecibo Observ**	**1.45**	**91**	IAML		19 02 44.7	
	comp=N,4μm,0.3s						
AOPR				IAML		19 02 45.9	
	comp=E,10μm,0.4s						
AOPR	**Arecibo Observ**	**1.45**	**91**	*e*P	**Pn**	**19 02 17.9**	**-0.4**
AOPR				*e*S	**Sn**	**19 02 40.7**	**-1.0**
UUPR	**Utuado, UPR, P**	**1.49**	**95**	↓*e*P	**Pn**	**19 02 19.1**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.49**	**95**		**Pn**	**19 02 19.1**	**+0.5**
SDD	**Santo Domingo**	**1.55**	**273**	Pn	**Pn**	**19 02 18.6**	**-0.6**
SDD				IAML		19 02 43.2	
	comp=N,1μm,0.5s						
SDD				IAML		19 02 45.6	
	comp=E,1μm,0.3s						
SDD	**Santo Domingo**	**1.55**	**273**	*i* P	**Pn**	**19 02 18.8**	**-0.5**
SDD				*e*S	**Sn**	**19 02 40.4**	**-3.0**
OBIP	**Obispado Ponce**	**1.63**	**102**	↑*e*P	**Pn**	**19 02 19.2**	**-0.9**
OBIP	**Obispado Ponce**	**1.63**	**102**	*e*S	**Sn**	**19 02 44.5**	**-0.4**
OBIP	**Obispado Ponce**	**1.63**	**102**		**Sn**	**19 02 44.5**	**-0.4**
OBIP	**Obispado Ponce**	**1.63**	**102**		**Pn**	**19 02 18.9**	**-1.1**
OBIP	**Obispado Ponce**	**1.63**	**102**	IAML		19 02 45.1	
	comp=N,646nm,0.5s						
CELP	**Cerrillos**	**1.65**	**101**	↑*e*P	**Pn**	**19 02 20.4**	**+0.2**
CELP	**Cerrillos**	**1.65**	**101**	*e*S	**Sn**	**19 02 46.1**	**+0.9**
CELP	**Cerrillos**	**1.65**	**101**		**Pn**	**19 02 20.1**	**-0.1**
CELP					**Sn**	**19 02 44.7**	**-0.5**
CELP				IAML		19 02 47.9	
	comp=N,1μm,0.6s						
CELP				IAML		19 02 49.0	
	comp=E,1μm,0.7s						
EMPR	**Esperanza - Ma**	**1.66**	**87**	↑*e*P	**Pn**	**19 02 20.3**	**-0.1**
EMPR	**Esperanza - Ma**	**1.66**	**87**	*e*S	**Sn**	**19 02 45.1**	**-0.4**
EMPR	**Esperanza - Ma**	**1.66**	**87**		**Pn**	**19 02 19.8**	**-0.6**
EMPR	**Esperanza - Ma**	**1.66**	**87**		**Sn**	**19 02 45.1**	**-0.4**
LONA1	**Toro Cenizo, N**	**1.80**	**304**	*i* P	**Pn**	**19 02 21.6**	**-0.3**
LONA1				*e*S	**Sn**	**19 02 46.8**	**-1.3**
LONA1				IAML		19 02 48.6	
	comp=Z,2μm,0.6s						
BANI	**BANI**	**1.97**	**271**	↑*e*P	**Pn**	**19 02 23.4**	**-0.5**
BANI	**BANI**	**1.97**	**271**	Pn	**Pn**	**19 02 23.6**	**-0.3**
BANI	**BANI**	**1.97**	**271**	*i* P	**Pn**	**19 02 23.6**	**-0.3**
BANI				*e*S	**Sn**	**19 02 50.0**	**-1.7**
BANI				IAML		19 02 59.4	
	comp=Z,559nm,0.5s						
SJG	**San Juan**	**2.04**	**97**	LR	LR	19 03 09.7	
	comp=Z,44nm,20.1s,baz=48,slow=40						
SJG	**San Juan**	**2.04**	**97**	Pn	**Pn**	**19 02 24.2**	**-0.3**
SJG				IAML		19 02 56.7	
	comp=Z,738nm,0.6s						
SJG				IAML		19 02 58.5	
	comp=Z,833nm,0.5s						
SJG	**San Juan**	**2.04**	**97**	*e*P	**Pn**	**19 02 25.2**	**+0.7**
SJG				*e*S	**Sn**	**19 02 51.8**	**-1.1**
GCPR	**Guaynabo City**	**2.09**	**92**	↑*e*P	**Pn**	**19 02 24.4**	**-0.7**
GCPR	**Guaynabo City**	**2.09**	**92**	*e*S	**Sn**	**19 02 51.6**	**-2.1**
GCPR	**Guaynabo City**	**2.09**	**92**		**Pn**	**19 02 24.2**	**-0.8**
GCPR				IAML		19 02 56.3	
	comp=N,786nm,0.6s						
GCPR	**Guaynabo City**	**2.09**	**92**		**Sn**	**19 02 51.6**	**-2.1**
IGPR	**InterUniversit**	**2.11**	**101**	↓*e*P	**Pn**	**19 02 25.5**	**+0.3**
IGPR	**InterUniversit**	**2.11**	**101**	*e*S	**Sn**	**19 02 54.0**	**-0.2**
IGPR	**InterUniversit**	**2.11**	**101**		**Sn**	**19 02 54.0**	**-0.2**
CBYP	**Canovanas**	**2.30**	**92**	↓*e*P	**Pn**	**19 02 27.5**	**-0.1**
CBYP	**Canovanas**	**2.30**	**92**	*e*S	**Sn**	**19 02 57.6**	**-0.7**
CBYP	**Canovanas**	**2.30**	**92**		**Pn**	**19 02 27.1**	**-0.5**
CBYP					**Sn**	**19 02 57.3**	**-1.0**
HUMP	**Col San Antoni**	**2.32**	**96**	↓*e*P	**Pn**	**19 02 27.7**	**0.0**
HUMP	**Col San Antoni**	**2.32**	**96**	*e*S	**Sn**	**19 02 57.8**	**-0.8**
HUMP	**Col San Antoni**	**2.32**	**96**		**Sn**	**19 02 27.3**	**-0.4**
HUMP					**Sn**	**19 02 57.7**	**-0.9**
HUMP				IAML		19 03 03.6	
	comp=N,1μm,0.3s						
SC01	**Santiago de Io**	**2.54**	**294**		**Pn**	**19 02 30.3**	**0.0**
SC01	**Santiago de Io**	**2.54**	**294**	*i* P	**Pn**	**19 02 30.4**	**+0.1**
SC01				*e*S	**Sn**	**19 03 02.8**	**-0.4**
SC01				IAML		19 03 13.2	
	comp=Z,784nm,0.8s						
MTP	**Monte Pirata**	**2.61**	**96**	↓*e*P	**Pn**	**19 02 31.8**	**+0.6**
MTP	**Monte Pirata**	**2.61**	**96**	*e*S	**Sn**	**19 03 05.7**	**+1.1**
MTP	**Monte Pirata**	**2.61**	**96**		**Pn**	**19 02 31.2**	**0.0**
MTP					**Sn**	**19 03 05.3**	**+0.7**
MTP				IAML		19 03 11.1	
	comp=N,408nm,0.4s						
LOBA2	**Hotel Casa Bon**	**2.69**	**264**	*e*S	**Sn**	**19 03 02.1**	**-4.4**
LOBA2				IAML		19 03 05.9	
	comp=Z,455nm,0.3s						
CUPR	**Culebra, Puert**	**2.85**	**91**	↑*e*P	**Pn**	**19 02 33.9**	**-0.1**
CUPR	**Culebra, Puert**	**2.85**	**91**	*e*S	**Sn**	**19 03 08.2**	**-1.7**
CUPR	**Culebra, Puert**	**2.85**	**91**		**Sn**	**19 03 08.2**	**-1.7**
CUPR	**Culebra, Puert**	**2.85**	**91**		**Pn**	**19 02 33.2**	**-0.9**
CUPR	**Culebra, Puert**	**2.85**	**91**	IAML		19 03 13.9	
	comp=N,260nm,0.6s						
CUPR				IAML		19 03 14.9	
	comp=E,281nm,0.6s						
SDDR	**Presa de Saban**	**2.91**	**282**		**Pn**	**19 02 34.5**	**-0.5**
SDDR				IAML		19 03 15.3	
	comp=E,589nm,0.7s						
SDDR				IAML		19 03 17.4	
	comp=E,540nm,0.6s						
SDDR	**Presa de Saban**	**2.91**	**282**	*e*P	**Pn**	**19 02 35.5**	**+0.6**
SDDR				*e*S	**Sn**	**19 03 11.8**	**+0.4**
SDDR	**Presa de Saban**	**2.91**	**282**	*e*P	**Pn**	**19 02 34.4**	**-0.5**
SDDR	**Presa de Saban**	**2.91**	**282**	*i* P	**Pn**	**19 02 35.7**	**+0.8**
SDDR				IAML		19 03 22.7	
	comp=Z,298nm,0.5s						
STVI	**Saint Thomas**	**3.16**	**90**	↑*e*P	**Pn**	**19 02 38.1**	**+0.2**
STVI	**Saint Thomas**	**3.16**	**90**	*e*S	**Sn**	**19 03 15.2**	**-1.6**
STVI	**Saint Thomas**	**3.16**	**90**		**Sn**	**19 03 15.2**	**-1.6**
STVI	**Saint Thomas**	**3.16**	**90**		**Pn**	**19 02 38.0**	**+0.1**
STVI	**Saint Thomas**	**3.16**	**90**	IAML		19 03 20.0	
	comp=N,382nm,0.3s						
LOPE2	**Hotel El Peder**	**3.31**	**264**	*i* P	**Pn**	**19 02 39.7**	**-0.1**
SJVI	**Gifft Hill Sch**	**3.33**	**90**	↑*e*P	**Pn**	**19 02 39.9**	**-0.2**
SJVI	**Gifft Hill Sch**	**3.33**	**90**	*e*S	**Sn**	**19 03 20.0**	**-0.7**
SJVI	**Gifft Hill Sch**	**3.33**	**90**		**Pn**	**19 02 39.9**	**-0.2**
SJVI					**Sn**	**19 03 20.0**	**-0.7**
CDVI	**St. Croix**	**3.40**	**100**		**Pn**	**19 02 40.0**	**-1.0**
CDVI				IAML		19 03 29.8	
	comp=N,509nm,0.5s						
CDVI				IAML		19 03 52.2	
	comp=E,510nm,0.5s						
CDVI	**St. Croix**	**3.40**	**100**	*e*P	**Pn**	**19 02 40.0**	**-1.0**
CDVI				*e*S	**Sn**	**19 03 19.1**	**-3.2**
TBVI	**Tortola**	**3.48**	**89**	↑*e*P	**Pn**	**19 02 41.8**	**-0.1**
TBVI	**Tortola**	**3.48**	**89**	*e*S	**Sn**	**19 03 22.3**	**-1.7**
TBVI	**Tortola**	**3.48**	**89**		**Pn**	**19 02 41.8**	**-0.1**
TBVI					**Sn**	**19 03 22.3**	**-1.7**
GRTK	**Grand Turk**	**4.11**	**320**		**Pn**	**19 02 48.7**	**-1.3**
GRTK	**Grand Turk**	**4.11**	**320**	*e*P	**Pn**	**19 02 48.7**	**-1.3**
SMRT	**St. Maarten**	**4.96**	**93**		**Pn**	**19 03 00.5**	**-0.6**
SMRT	**St. Maarten**	**4.96**	**93**	*e*P	**Pn**	**19 03 00.5**	**-0.6**
SMRT	**St. Maarten**	**4.96**	**93**	*e*S	**Sn**	**19 03 53.4**	**-4.9**
SKI	**Saint Kitts**	**5.38**	**100**	*e*P	**Pn**	**19 03 07.1**	**+0.5**
SKI	**Saint Kitts**	**5.38**	**100**	*e*S	**Sn**	**19 04 00.8**	**-7.5**
MASC	**Masc**	**5.90**	**289**	*e*P	**Pn**	**19 03 09.3**	**-4.1**
MASC				*e*S	**Sn**	**19 04 11.6**	**-8.9**
MBFL	**Flemmings, Mon**	**6.01**	**105**	*e*P	**Pn**	**19 03 15.7**	**+0.7**
ANWB	**Willy Bob**	**6.22**	**96**	Pn	**Pn**	**19 03 15.9**	**-1.8**
ANWB	**Willy Bob**	**6.22**	**96**	*e*P	**Pn**	**19 03 15.8**	**-1.9**
ANWB	**Willy Bob**	**6.22**	**96**	*e*S	**Sn**	**19 04 22.8**	**-5.4**
ANBD	**Bethesda, Anti**	**6.35**	**101**	*e*P	**Pn**	**19 03 19.1**	**-0.3**
ANBD	**Bethesda, Anti**	**6.35**	**101**	*e*S	**Sn**	**19 04 28.4**	**-2.9**
GDHS	**Morne Mazeau,**	**6.57**	**108**	Pn	**Pn**	**19 03 22.3**	**-0.1**
MOAC	**Moa**	**6.69**	**291**	*e*P	**Pn**	**19 03 19.0**	**-4.9**
ABD	**La Joyeuse, An**	**6.76**	**105**	Pn	**Pn**	**19 03 24.9**	**+0.2**
ABD	**La Joyeuse, An**	**6.76**	**105**	*e*P	**Pn**	**19 03 24.3**	**-0.5**
ABD	**La Joyeuse, An**	**6.76**	**105**	*e*S	**Sn**	**19 04 40.2**	**-0.8**
CBE	**Ff, Capester**	**6.78**	**109**	Pn	**Pn**	**19 03 25.4**	**+0.3**
CBE	**Ff, Capester**	**6.78**	**109**	*e*P	**Pn**	**19 03 24.8**	**-0.3**
CBE	**Ff, Capester**	**6.78**	**109**	*e*S	**Sn**	**19 04 43.8**	**+2.2**
TBG	**Guadaloupe-3**	**6.83**	**111**	*e*P	**Pn**	**19 03 26.5**	**+0.8**
TDBA	**Terre de Bas,**	**6.83**	**111**	*e*P	**Pn**	**19 03 27.0**	**+1.1**
MDCT	**Cottage Hill,**	**7.08**	**112**	*e*P	**Pn**	**19 03 30.7**	**+1.7**
MAGL	**Barre de l'ile**	**7.11**	**109**	*e*P	**Pn**	**19 03 30.2**	**+0.7**
MAGL	**Barre de l'ile**	**7.11**	**109**	*e*S	**Sn**	**19 04 53.4**	**+3.8**
MDVC	**Dominica, Viel**	**7.13**	**112**	*e*P	**Pn**	**19 03 32.0**	**+2.2**
DSLB	**Salisbury**	**7.19**	**113**	*e*P	**Pn**	**19 03 30.2**	**-0.3**
DSLB	**Salisbury**	**7.19**	**113**	*e*S	**Sn**	**19 04 53.7**	**+2.3**
RCC	**Rio Carpintero**	**7.19**	**284**	*e*P	**Pn**	**19 03 27.1**	**-3.4**
GDSD	**La Dsirade Is**	**7.19**	**106**	Pn	**Pn**	**19 03 30.9**	**+0.3**
H05N1	**Guadeloupe/Mar**	**7.20**	**106**	P	**Pn**	**19 03 31.1**	**+0.4**
	SNR=7.8						
H05N1				S	**Sn**	**19 04 49.7**	**-1.9**
	SNR=2.6						
MDN	**Morne-Daniel**	**7.26**	**114**	*e*P	**Pn**	**19 03 31.3**	**-0.2**
FDF	**Fort de France**	**7.74**	**117**	Pn	**Pn**	**19 03 38.2**	**+0.3**
BIM	**Bigot**	**7.91**	**118**	Pn	**Pn**	**19 03 41.2**	**+1.0**
BIM	**Bigot**	**7.91**	**118**	*e*P	**Pn**	**19 03 41.4**	**+1.2**
BIM	**Bigot**	**7.91**	**118**	*e*S	**Sn**	**19 05 04.2**	**-4.6**
BIRV	**Birongo**	**8.10**	**166**	Pn	**Pn**	**19 03 42.9**	**+0.2**
MPOM	**Morne Pois Mar**	**8.13**	**118**	*e*P	**Pn**	**19 03 45.8**	**+2.8**
MPOM	**Morne Pois Mar**	**8.13**	**118**	*e*S	Sn	19 05 05.3	-8.6
SVB	**Belmont**	**8.46**	**126**	Pn	**Pn**	**19 03 46.3**	**-1.1**
GRGR	**Grenville**	**8.92**	**133**	Pn	**Pn**	**19 03 54.5**	**+1.1**
CCCC

ILAR	**Eielson Array**	**87.04**	**18**	P	**P**	**19 33 15.0**	**+0.4**
ARCES	**ARCESS Array B**	**120.52**	**345**	PKP	**PKPdf**	**19 39 20.1**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=66,slow=2.2,SNR=1.4						

BJI **27** *19:21:59.7±0.0,20.03S×177.48W,h500km,mb4.7/34, mB4.8/16*
IDC **27** *19:22:01.5±1.9,20.25S×177.74W,h510km±19km, mb4.1/20,mbtmp4.9/21, Error ellipse: s-maj=14.2km s-min=11.0km az=122.0*
NEIC **27** *19:22:01.2±1.8,20.28S±0.09×177.64W±0.09, h508km±5km,mb4.8/75,Error ellipse: s-maj=14.6km s-min=11.2km az=219.0*
NOU **27** *19:22:02.2,20.28S×177.56W,h531km,mb4.8/57,Fiji Islands Region*
ISC 27 19:22:01.8±0.6,20°29S±0.05×177.71W±0.06, h519km±6km,n408,σ1°10/429,mb4.7/77,40C-16D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.75**	**302**	P	**P**	**19 23 30.0**	**+2.1**
NIUE	**Niue**	**7.43**	**82**	P	**P**	**19 23 51.8**	**-1.1**
NIUE	**Niue**	**7.43**	**82**	P	**P**	**19 23 54.2**	**+1.2**
AFI	**Afiamalu**	**8.51**	**43**	P	**P**	**19 24 03.0**	**-1.2**
	111nm,0.5s,baz=233,slow=20,SNR=18						
AFI				S	**S**	**19 25 37.8**	**-6.5**
	274nm,0.6s,baz=205,slow=23,SNR=12						
AFI	**Afiamalu**	**8.51**	**43**	P	**P**	**19 24 02.6**	**-1.5**
AFI	**Afiamalu**	**8.51**	**43**	P	**P**	**19 24 02.9**	**-1.2**
RAO	**Raoul Island**	**8.92**	**181**	P	**P**	**19 24 06.5**	**-1.5**
MARNC	**Mare, Loyalty**	**13.39**	**262**	P	**P**	**19 24 55.0**	**+0.1**
PINNC	**Pines Island,**	**14.02**	**258**	P	**P**	**19 25 02.7**	**+1.3**
LIFNC	**LIFOU**	**14.11**	**265**	P	**P**	**19 25 00.7**	**-1.8**
DZM	**Mont Dzumac**	**14.89**	**260**	*e*S	**S**	**19 27 44.6**	**-2.0**
	171nm,23.8s						
DZM	**Mont Dzumac**	**14.89**	**260**	P	**P**	**19 25 10.6**	**-0.2**
OUZ	**Omahuta**	**16.73**	**205**	P	**P**	**19 25 29.6**	**+0.4**
KOUNC	**Koumac, New Ca**	**16.88**	**266**	P	**P**	**19 25 32.1**	**+1.2**
MXZ	**Matakaoa Point**	**17.55**	**191**	P	P	19 25 46.7	+10
HAZ	**Te Kaha**	**17.84**	**192**	P	**P**	**19 25 39.4**	**-0.1**
PKGZ	**Pakihiroa**	**17.91**	**191**	P	**P**	**19 25 42.0**	**+1.7**
RUGZ	**Raukumara Rang**	**18.06**	**192**	P	**P**	**19 25 41.5**	**-0.3**
TGRZ	**Tauranga**	**18.15**	**196**	P	**P**	**19 25 44.8**	**+2.4**
TWGZ	**Tauwhareparae**	**18.21**	**191**	P	**P**	**19 25 44.5**	**+1.5**
TOZ	**Tahuroa Road**	**18.35**	**197**	P	**P**	**19 25 46.3**	**+2.0**
MWZ	**Matawai**	**18.45**	**192**	P	**P**	**19 25 44.1**	**-1.1**
URZ	**Urewera**	**18.46**	**193**	P	**P**	**19 25 42.6**	**-2.6**
	18nm,0.4s,baz=110,slow=12,SNR=37						
URZ				S	**S**	**19 28 39.4**	**-7.7**
	8.2nm,0.8s,baz=332,slow=23,SNR=2.1						
URZ	**Urewera**	**18.46**	**193**	P	**P**	**19 25 43.2**	**-1.9**
URZ	**Urewera**	**18.46**	**193**	P	**P**	**19 25 44.0**	**-1.2**
URZ	**Urewera**	**18.46**	**193**	P	**P**	**19 25 44.3**	**-0.9**
CNGZ	**Carnagh Statio**	**18.47**	**190**	P	**P**	**19 25 46.7**	**+1.4**
RAGZ	**Rawiri**	**18.62**	**192**	P	**P**	**19 25 46.8**	**0.0**
TLZ	**Tolley Road**	**18.90**	**197**	P	**P**	**19 25 51.7**	**+2.4**
SNGZ	**Shannon Statio**	**18.91**	**192**	P	**P**	**19 25 48.8**	**-0.7**
KNZ	**Kokohu**	**19.09**	**191**	P	**P**	**19 25 55.1**	**+4.2**
MTHZ	**Maungataniwha**	**19.09**	**193**	P	**P**	**19 25 51.2**	**+0.2**
RAHZ	**Arahi**	**19.10**	**193**	P	**P**	**19 25 51.2**	**+0.1**
MRHZ	**Matea Rd**	**19.16**	**194**	P	**P**	**19 25 50.0**	**-1.7**
NMHZ	**Naumai**	**19.33**	**193**	P	**P**	**19 25 54.0**	**+0.8**
BKZ	**Black Stump Fm**	**19.46**	**194**	P	**P**	**19 25 53.7**	**-0.8**
BKZ	**Black Stump Fm**	**19.46**	**194**	P	**P**	**19 25 53.7**	**-0.8**
BKZ	**Black Stump Fm**	**19.46**	**194**	P	**P**	**19 25 53.9**	**-0.5**
ETVZ	**East Tongariro**	**19.62**	**195**	P	**P**	**19 25 55.4**	**-0.5**
NNVZ	**North Ngauruho**	**19.64**	**196**	P	**P**	**19 25 56.2**	**0.0**
TUVZ	**Tukino**	**19.76**	**195**	P	**P**	**19 25 55.8**	**-1.4**
FWVZ	**Far West T-bar**	**19.77**	**196**	P	**P**	**19 25 54.3**	**-3.1**
WNVZ	**Wahianoa**	**19.83**	**195**	P	**P**	**19 25 56.9**	**-1.0**
VRZ	**Vera Road**	**19.86**	**197**	P	**P**	**19 25 57.9**	**0.0**
MOVZ	**Moawhango**	**19.86**	**195**	P	**P**	**19 25 57.5**	**-0.6**
BHHZ	**Black Hill Sta**	**19.87**	**194**	P	**P**	**19 25 56.9**	**-1.3**
KRHZ	**Kereru**	**19.95**	**194**	P	**P**	**19 25 58.1**	**-0.7**
KAHZ	**Kahuranaki**	**19.98**	**192**	P	**P**	**19 25 58.9**	**-0.2**
PNHZ	**Pukenui**	**20.24**	**194**	P	**P**	**19 26 01.1**	**-0.4**
BFZ	**Birch Farm**	**20.97**	**193**	P	**P**	**19 26 06.7**	**-1.2**
BFZ	**Birch Farm**	**20.97**	**193**	P	**P**	**19 26 06.8**	**-1.2**
MRZ	**Mangatainoka R**	**21.09**	**194**	P	**P**	**19 26 07.0**	**-2.2**
HOWZ	**Holdsworth Sta**	**21.34**	**194**	P	**P**	**19 26 10.1**	**-1.3**
OGWZ	**Otaki Gorge**	**21.34**	**195**	P	**P**	**19 26 11.1**	**-0.3**
MSWZ	**Moikau Station**	**21.89**	**194**	P	**P**	**19 26 17.0**	**+0.6**
SNZO	**South Karori**	**21.92**	**195**	P	**P**	**19 26 16.0**	**-0.6**
TCW	**Tory Channel**	**21.94**	**196**	P	**P**	**19 26 17.3**	**+0.5**
QRZ	**Quartz Range**	**22.09**	**200**	P	**P**	**19 26 18.6**	**+0.4**
QRZ	**Quartz Range**	**22.09**	**200**	P	**P**	**19 26 18.6**	**+0.4**
NNZ	**Nelson**	**22.19**	**198**	P	**P**	**19 26 18.6**	**-0.4**
NNZ	**Nelson**	**22.19**	**198**	P	**P**	**19 26 18.5**	**-0.6**
TUWZ	**Tuamarina**	**22.23**	**197**	P	**P**	**19 26 18.6**	**-0.8**
MRNZ	**Matariki Terra**	**22.55**	**199**	P	**P**	**19 26 22.2**	**0.0**
THZ	**Tophouse**	**22.83**	**198**	P	**P**	**19 26 24.8**	**0.0**
THZ	**Tophouse**	**22.83**	**198**	P	**P**	**19 26 24.5**	**-0.4**
KHZ	**Kahutara**	**23.26**	**197**	P	**P**	**19 26 27.9**	**-0.6**
KHZ	**Kahutara**	**23.26**	**197**	P	**P**	**19 26 27.9**	**-0.6**
HNR	**Honiara**	**24.11**	**293**	P	**P**	**19 26 37.8**	**+1.2**
RPZ	**Rata Peaks**	**25.17**	**199**	P	**P**	**19 26 44.6**	**-0.9**
	5.9nm,0.6s,baz=340,slow=2.9,SNR=6.4						
	5.9nm,0.6s						
RPZ	**Rata Peaks**	**25.17**	**199**	P	**P**	**19 26 45.2**	**-0.4**
RPZ	**Rata Peaks**	**25.17**	**199**	P	**P**	**19 26 46.8**	**+1.2**
WHZ	**Wether Hill Ro**	**28.13**	**202**	P	**P**	**19 27 12.1**	**+0.6**
EIDS	**Eidsvold**	**29.17**	**254**	P	**P**	**19 27 21.0**	**+0.1**
EIDS	**Eidsvold**	**29.17**	**254**	P	**P**	**19 27 21.9**	**+1.0**
ARMA	**Armidale**	**29.41**	**244**	P	**P**	**19 27 24.1**	**+1.0**
ARMA	**Armidale**	**29.41**	**244**	P	**P**	**19 27 24.5**	**+1.5**
RMQ	**Roma**	**31.33**	**252**	P	**P**	**19 27 40.8**	**+1.2**
CNB	**Canberra Magne**	**32.57**	**236**	P	**P**	**19 27 51.2**	**+1.1**
KRVT	**Keravat (AS076**	**33.47**	**294**	P	**P**	**19 27 57.5**	**-0.4**
	9.7nm,0.5s,baz=195,slow=14,SNR=4.1						
	9.7nm,0.5s						
CTA	**Charters Tower**	**33.78**	**264**	P	**P**	**19 28 00.8**	**+0.3**
	36nm,0.6s,baz=94,slow=9.9,SNR=50						
	36nm,0.6s						
CTA	**Charters Tower**	**33.78**	**264**	P	**P**	**19 28 01.1**	**+0.6**
CTAO	**Charters Tower**	**33.78**	**264**	P	**P**	**19 28 00.9**	**+0.3**
CTAO	**Charters Tower**	**33.78**	**264**	P	**P**	**19 28 01.2**	**+0.7**
CTAO	**Charters Tower**	**33.78**	**264**	P	**P**	**19 28 00.9**	**+0.3**
CMSA	**Cobar Meteorol**	**34.62**	**244**	P	**P**	**19 28 08.1**	**+0.7**
PATS	**Pohnpei**	**35.82**	**316**	P	**P**	**19 28 18.2**	**+0.7**
PATS	**Pohnpei**	**35.82**	**316**	P	**P**	**19 28 17.5**	**0.0**
	60nm,1.9s						
TOO	**Toolangi**	**36.24**	**234**	P	**P**	**19 28 21.4**	**+0.6**
TOO				IAmb	IAmb	19 28 22.9	
	comp=Z,84nm,1.9s						
COEN	**Coen**	**37.85**	**273**	P	**P**	**19 28 34.4**	**+0.1**
COEN				IAmb	IAmb	19 28 35.2	
	comp=Z,21nm,0.9s						
COEN	**Coen**	**37.85**	**273**	P	**P**	**19 28 35.3**	**+1.0**
STKA	**Stephens Creek**	**38.13**	**244**	P	**P**	**19 28 37.0**	**+0.6**
	comp=Z,3.8nm,0.5s,baz=92,slow=11,SNR=21						
STKA				PcP	**PcP**	**19 30 38.5**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=104,slow=4.2,SNR=4.1						
	comp=Z,3.8nm,0.5s						
STKA	**Stephens Creek**	**38.13**	**244**	P	**P**	**19 28 36.7**	**+0.4**
STKA	**Stephens Creek**	**38.13**	**244**	P	**P**	**19 28 37.2**	**+0.9**
INKA	**Innaminka**	**38.53**	**251**	P	**P**	**19 28 41.1**	**+1.5**
MANU	**Manus Island**	**38.62**	**294**	P	**P**	**19 28 40.5**	**-0.1**
QIS	**Mount Isa**	**39.92**	**262**	P	**P**	**19 28 51.4**	**+0.4**
HTT	**Hallett**	**40.56**	**242**	P	**P**	**19 28 56.6**	**+0.5**
LCRK	**Leigh Creek**	**40.87**	**247**	P	**P**	**19 28 59.3**	**+0.8**
TWOA	**Tennyson Woods**	**41.08**	**240**	P	**P**	**19 29 00.3**	**+0.3**
BBOO	**Buckleboo**	**42.89**	**243**	P	**P**	**19 29 14.6**	**+0.2**
BBOO				IAmb	IAmb	19 29 14.8	
	comp=Z,19nm,0.5s						
BBOO	**Buckleboo**	**42.89**	**243**	P	**P**	**19 29 14.7**	**+0.3**
OOD	**Oodnadatta**	**43.01**	**251**	P	**P**	**19 29 16.3**	**+0.9**
MULG	**Mulgathing**	**44.45**	**247**	P	**P**	**19 29 26.9**	**+0.3**
GENI	**Genyem**	**44.69**	**288**	P	**P**	**19 29 28.7**	**+0.1**
	comp=Z,105nm,1.0s						
WR0	**Warramunga Arr**	**44.71**	**262**	P	**P**	**19 29 28.0**	**-0.7**
WR0				IAmb	IAmb	19 29 29.9	
	comp=Z,30nm,1.2s						
AS31	**Alice Springs**	**44.83**	**256**	P	**P**	**19 29 29.7**	**0.0**
AS31				IAmb	IAmb	19 29 31.0	
	comp=Z,24nm,1.2s						
AS31				PcP	**PcP**	**19 31 00.6**	**0.0**
ASAR	**Alice Springs**	**44.84**	**256**	P	**P**	**19 29 29.6**	**0.0**
	comp=Z,50nm,0.8s,baz=97,slow=7.6,SNR=343						
ASAR				PcP	**PcP**	**19 31 00.5**	**0.0**
	comp=Z,4.6nm,0.6s,baz=107,slow=3.2,SNR=10						
ASAR				S	**S**	**19 35 26.3**	**-3.0**
	comp=Z,3.3nm,0.7s,baz=96,slow=16,SNR=18						
	comp=Z,50nm,0.8s						
ASAR	**Alice Springs**	**44.84**	**256**	P	**P**	**19 29 29.7**	**0.0**
ASAR				PcP	**PcP**	**19 31 00.2**	**-0.3**
WB0	**Warramunga Arr**	**44.88**	**262**	P	**P**	**19 29 29.6**	**-0.4**
WB2	**Warramunga Arr**	**44.89**	**262**	P	**P**	**19 29 29.5**	**-0.6**
WB2				IAmb	IAmb	19 29 30.5	
	comp=Z,46nm,1.1s						
WRAB	**Tennant Creek**	**44.89**	**262**	P	**P**	**19 29 29.4**	**-0.7**
WRAB				IAmb	IAmb	19 29 30.4	
	comp=Z,35nm,1.0s						
WRAB	**Tennant Creek**	**44.89**	**262**	P	**P**	**19 29 29.9**	**-0.2**
WRAB	**Tennant Creek**	**44.89**	**262**	P	**P**	**19 29 29.5**	**-0.7**
WRA	**Warramunga Arr**	**44.90**	**262**	P	**P**	**19 29 29.5**	**-0.7**
	comp=Z,16nm,0.5s,baz=97,slow=7.7,SNR=100						
WRA				PcP	**PcP**	**19 31 00.6**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=92,slow=4.8,SNR=2.7						
WRA				S	**S**	**19 35 25.8**	**-4.4**
	comp=Z,0.9nm,0.9s,baz=94,slow=13,SNR=4.0						
	comp=Z,16nm,0.5s						
WRA	**Warramunga Arr**	**44.90**	**262**	P	**P**	**19 29 29.3**	**-0.9**
SMPI	**Sarmi**	**46.26**	**287**	P	**P**	**19 29 40.2**	**-0.4**
	comp=Z,28nm,0.9s						
KDU	**Kakadu**	**48.22**	**271**	P	**P**	**19 29 55.4**	**0.0**
MTN	**Manton Dam**	**49.44**	**270**	P	**P**	**19 30 03.7**	**-0.7**
MTN				IAmb	IAmb	19 30 05.0	
	comp=Z,42nm,0.8s						
MTN	**Manton Dam**	**49.44**	**270**	P	**P**	**19 30 04.2**	**-0.2**
FORT	**Forrest**	**49.63**	**246**	P	**P**	**19 30 04.7**	**-0.9**
FORT				IAmb	IAmb	19 30 06.0	
	comp=Z,38nm,0.7s						
FORT	**Forrest**	**49.63**	**246**	P	**P**	**19 30 05.4**	**-0.2**
WRKA	**Warakurna**	**49.79**	**254**	P	**P**	**19 30 06.9**	**0.0**
KNRA	**Kununurra**	**50.95**	**266**	P	**P**	**19 30 15.3**	**-0.1**
KNRA				IAmb	IAmb	19 30 15.8	
	comp=Z,28nm,0.7s						
KNRA	**Kununurra**	**50.95**	**266**	P	**P**	**19 30 15.5**	**+0.1**
FAKI	**Fak Fak**	**51.72**	**283**	P	**P**	**19 30 20.9**	**-0.3**
FAKI				IAmb	IAmb	19 30 49.0	
	comp=Z,94nm,1.5s						
FAKI	**Fak Fak**	**51.72**	**283**	P	**P**	**19 30 21.1**	**0.0**
FITZ	**Fitzroy Crossi**	**53.33**	**262**	P	**P**	**19 30 32.5**	**-0.1**
	comp=Z,9.2nm,0.5s,baz=83,slow=3.7,SNR=69						
	comp=Z,9.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**53.33**	**262**	P	**P**	**19 30 32.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.33**	**262**	P	**P**	**19 30 32.7**	**+0.1**
SIJI	**Sorong**	**53.45**	**285**	P	**P**	**19 30 33.7**	**+0.2**
	comp=Z,60nm,0.8s,baz=89,slow=6.1,SNR=26						
	comp=Z,60nm,0.8s						
SWI	**Sorong**	**53.46**	**285**	P	**P**	**19 30 33.7**	**+0.1**
	comp=Z,807nmcomp=Z,101nm,0.8s						
DRV	**Dumont d'Urvil**	**53.64**	**199**	P	**P**	**19 30 34.7**	**+0.8**
LBMI	**Labuha**	**56.98**	**283**	P	**P**	**19 30 58.3**	**+0.2**
	comp=Z,27nm,0.9s						
BATI	**Baumata**	**57.20**	**271**	P	**P**	**19 31 00.8**	**+1.1**
	comp=Z,32nm,0.7s,baz=147,slow=2.2,SNR=12						
	comp=Z,32nm,0.7s						
BATI	**Baumata**	**57.20**	**271**	P	**P**	**19 31 00.6**	**+0.9**
	comp=Z,22nm,0.8s						
PSA00	**Pilbara Seismi**	**57.98**	**257**	P	**P**	**19 31 04.4**	**-0.5**
PSA00				IAmb	IAmb	19 31 05.2	
	comp=Z,31nm,0.7s						
PSA00	**Pilbara Seismi**	**57.98**	**257**	P	**P**	**19 31 04.1**	**-0.8**
PSA00				IAmb	IAmb	19 31 05.3	
	comp=Z,12nm,0.8s						
PSA00					**PcP**	**19 31 50.0**	**0.0**
PSA00	**Pilbara Seismi**	**57.98**	**257**	P	**P**	**19 31 04.7**	**-0.2**
VNDA	**Vanda**	**58.14**	**185**	P	**P**	**19 31 07.2**	**+2.2**
	comp=Z,0.4nm,0.4s,baz=344,slow=7.4,SNR=5.4						
VNDA	**Vanda**	**58.14**	**185**	P	**P**	**19 31 05.7**	**+0.7**
MBWA	**Marble Bar**	**58.17**	**257**	P	**P**	**19 31 05.8**	**-0.4**
MBWA				IAmb	IAmb	19 31 06.4	
	comp=Z,24nm,0.7s						
MBWA	**Marble Bar**	**58.17**	**257**	P	**P**	**19 31 05.9**	**-0.2**
MBWA	**Marble Bar**	**58.17**	**257**	P	**P**	**19 31 05.7**	**-0.4**
MEEK	**Meekatharra**	**58.25**	**251**	P	**P**	**19 31 06.2**	**-0.5**
KLBR	**Kellerberrin**	**58.39**	**245**	P	**P**	**19 31 07.5**	**0.0**
NWAO	**Narrogin (SRO)**	**58.71**	**243**	P	**P**	**19 31 08.4**	**-1.2**
NWAO	**Narrogin (SRO)**	**58.71**	**243**	P	**P**	**19 31 10.2**	**+0.6**
	comp=Z,66nm,1.8s						
MMRI	**Maumere**	**59.02**	**272**	P	**P**	**19 31 11.2**	**-0.8**
MMRI				IAmb	IAmb	19 31 12.4	
	comp=Z,60nm,1.0s						
BLDU	**Ballidu**	**59.39**	**246**	P	**P**	**19 31 14.2**	**0.0**
MUN	**Mundaring**	**59.66**	**244**	P	**P**	**19 31 16.6**	**+0.6**
MORW	**Morawa**	**60.16**	**247**	P	**P**	**19 31 19.1**	**-0.3**
MORW				IAmb	IAmb	19 32 35.7	
	comp=Z,105nm,1.8s						
MORW	**Morawa**	**60.16**	**247**	P	**P**	**19 31 19.3**	**-0.1**
LUWI	**Luwuk**	**61.17**	**280**	P	**P**	**19 31 26.4**	**+0.1**
LUWI				IAmb	IAmb	19 31 27.8	
	comp=Z,47nm,0.9s						
CCD	**Concordia, Ant**	**62.73**	**194**	P	**P**	**19 31 37.0**	**+1.1**
CCD				pP	**pP**	**19 33 20.6**	**+0.1**
GIRL	**Giralia**	**62.87**	**254**	P	**P**	**19 31 38.1**	**+0.9**
GIRL	**Giralia**	**62.87**	**254**	P	**P**	**19 31 38.5**	**+1.3**
PLAI	**Plampang**	**63.15**	**270**	P	**P**	**19 31 39.0**	**-0.1**
CASY	**Casey**	**64.27**	**205**	P	**P**	**19 31 45.7**	**+0.4**
CASY				IAmb	IAmb	19 33 05.1	
	comp=Z,22nm,1.6s						
JHJ2	**Mitsune**	**66.82**	**322**	P	**P**	**19 32 02.8**	**+1.0**
QSPA	**South Pole Qui**	**69.77**	**180**	P	**P**	**19 32 20.6**	**+1.1**
JMM	**Marumori**	**69.78**	**326**	P	**P**	**19 32 19.9**	**+0.2**
JMM				IAmb	IAmb	19 34 13.9	
	comp=Z,53nm,1.2s						
MJAR	**Matsushiro Arr**	**70.21**	**323**	P	**P**	**19 32 21.9**	**-0.4**
	comp=Z,8.3nm,0.6s,baz=154,slow=6.3,SNR=40						
	comp=Z,8.3nm,0.6s						
MAJO	**Matsushiro**	**70.21**	**323**	P	**P**	**19 32 22.4**	**+0.1**
MAJO				IAmb	IAmb	19 32 23.1	
	comp=Z,16nm,0.6s						
MAJO	**Matsushiro**	**70.21**	**323**	P	**P**	**19 32 22.9**	**+0.6**
MAJO	**Matsushiro**	**70.21**	**323**	P	**P**	**19 32 22.4**	**+0.1**
UGM	**Wanagama**	**70.24**	**269**	P	**P**	**19 32 22.4**	**-0.6**
UGM	**Wanagama**	**70.24**	**269**	P	**P**	**19 32 22.9**	**-0.2**
JMN	**Monobe**	**70.81**	**319**	P	**P**	**19 32 26.2**	**+0.2**
JMN				IAmb	IAmb	19 33 27.5	
	comp=Z,50nm,1.3s						
JSD	**Sado**	**71.26**	**325**	P	**P**	**19 32 28.8**	**+0.4**
JSD				IAmb	IAmb	19 32 32.9	
	comp=Z,49nm,1.5s						
AMKA	**Amchitka**	**71.41**	**358**	P	**P**	**19 32 28.5**	**-0.5**
JSU	**Suzuyama**	**71.57**	**315**	P	**P**	**19 32 30.9**	**+0.4**
JSU				IAmb	IAmb	19 32 31.7	
	comp=Z,20nm,0.7s						
KIWB	**Kanaga Island**	**71.84**	**0**	P	**P**	**19 32 31.5**	**0.0**
JTM	**Tenmabayashi**	**71.84**	**328**	P	**P**	**19 32 31.9**	**+0.2**
ADK	**Adak**	**71.87**	**1**	P	**P**	**19 32 31.3**	**-0.4**
ADK				IAmb	IAmb	19 32 32.1	
	comp=Z,49nm,1.4s						
ADK	**Adak**	**71.87**	**1**	P	**P**	**19 32 31.7**	**0.0**
ADK	**Adak**	**71.87**	**1**	P	**P**	**19 32 31.3**	**-0.4**
JHS	**Saijyo**	**72.13**	**319**	P	**P**	**19 32 34.3**	**+0.7**
JEW	**Eniwo**	**73.22**	**330**	P	**P**	**19 32 40.0**	**+0.3**
LEM	**Lembang**	**73.32**	**269**	P	**P**	**19 32 41.0**	**-0.1**
	comp=Z,62nm,0.8s,baz=89,slow=6.6,SNR=17						
	comp=Z,62nm,0.8s						
YULB	**Yu-li**	**73.62**	**303**	P	**P**	**19 32 41.1**	**-1.3**
YULB				IAmb	IAmb	19 33 29.9	
	comp=Z,24nm,1.2s						
NACB	**Ninganchiao**	**73.79**	**304**	P	**P**	**19 32 42.3**	**-1.0**
NACB				IAmb	IAmb	19 32 43.6	
	comp=Z,29nm,0.8s						
SSLB	**Suanglung**	**74.09**	**303**	P	**P**	**19 32 44.0**	**-1.2**
SSLB				IAmb	IAmb	19 32 44.8	
	comp=Z,19nm,0.5s						
SSLB	**Suanglung**	**74.09**	**303**	P	**P**	**19 32 44.5**	**-0.6**
TPUB	**Ta-pu**	**74.10**	**303**	P	**P**	**19 32 44.0**	**-1.2**
TPUB	**Ta-pu**	**74.10**	**303**	P	**P**	**19 32 44.2**	**-1.0**
YHNB	**Yeheng**	**74.22**	**304**	P	**P**	**19 32 45.8**	**-0.1**
YHNB				IAmb	IAmb	19 32 46.9	
	comp=Z,27nm,0.9s						
YHNB	**Yeheng**	**74.22**	**304**	P	**P**	**19 32 46.3**	**+0.4**
TATO	**Taipei**	**74.29**	**305**	P	**P**	**19 32 46.0**	**-0.2**
YSS	**Yuzh-Sakhalins**	**75.84**	**333**	P	**P**	**19 32 55.3**	**+1.0**
YSS				IAmb	IAmb	19 32 56.5	
	comp=Z,25nm,0.7s						
PEA0B	**Petropavlovsk-**	**76.14**	**345**	P	**P**	**19 32 55.8**	**-0.1**
PETK	**Petropavlovsk-**	**76.14**	**345**	P	**P**	**19 32 56.1**	**+0.2**
	comp=Z,10nm,0.8s,baz=148,slow=8.7,SNR=17						
	comp=Z,10nm,0.8s						
PETK	**Petropavlovsk-**	**76.14**	**345**	P	**P**	**19 32 55.6**	**-0.3**
KSRS	**Korea Array**	**76.92**	**318**	P	**P**	**19 33 01.5**	**+1.0**
	comp=Z,4.3nm,0.7s,baz=129,slow=6.1,SNR=17						
	comp=Z,4.3nm,0.7s						
KSAR	**Wonju Array Be**	**76.93**	**318**	P	**P**	**19 33 01.1**	**+0.5**
SEHB	**SEOHWA**	**77.22**	**319**	P	**P**	**19 33 03.1**	**+0.9**
SMAI	**San Martin Ant**	**78.70**	**159**	P	**P**	**19 33 11.5**	**+1.9**
SMAI				IAmb	IAmb	19 36 04.6	
	comp=Z,40nm,2.0s						
USRK	**Ussuriysk Ar.**	**78.95**	**326**	P	**P**	**19 33 12.6**	**+1.3**
	comp=Z,17nm,0.7s,baz=132,slow=3.0,SNR=21						
	comp=Z,17nm,0.7s						
NJ2	**Nanjing**	**79.96**	**310**	*e*P	**P**	**19 33 17.5**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MDJ	**Mudanjiang**	**80.51**	**325**	P	**P**	**19 33 20.2**	**+0.6**
MDJ				IAmb	IAmb	19 33 21.7	
	comp=Z,20nm,0.8s						
NVAR	**Mina Array Bea**	**80.69**	**43**	P	**P**	**19 33 24.1**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=221,slow=8.1,SNR=3.6						
MAW	**Mawson**	**81.85**	**200**	P	**P**	**19 33 26.8**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=163,slow=4.0,SNR=7.2						
	comp=Z,1.3nm,0.5s						
MAW	**Mawson**	**81.85**	**200**	P	**P**	**19 33 26.9**	**+0.8**
KLR	**Kul'dur**	**82.49**	**329**	P	**P**	**19 33 30.6**	**+1.0**
	baz=107,slow=3.6						
UBPT	**Khong Chiam**	**83.33**	**289**	P	**P**	**19 33 35.2**	**+0.6**
UBPT				IAmb	IAmb	19 33 36.3	
	comp=Z,14nm,1.0s						
L19K	**White Mountain**	**84.19**	**11**	P	**P**	**19 33 38.4**	**+0.6**
L19K				IAmb	IAmb	19 35 10.3	
	comp=Z,22nm,1.8s						
RPSI	**Rantau Prapat**	**84.71**	**275**	P	**P**	**19 33 40.7**	**-0.7**
RPSI				IAmb	IAmb	19 33 42.6	
	comp=Z,18nm,1.0s						
PSI	**Prapat**	**84.75**	**275**	P	**P**	**19 33 40.6**	**-1.2**
	comp=Z,14nm,0.9s,baz=109,slow=1.3,SNR=14						
	comp=Z,14nm,0.9s						
K20K	**Telida**	**85.42**	**10**	P	**P**	**19 33 44.1**	**+0.3**
GSI	**Gunungsitoli**	**85.49**	**273**	P	**P**	**19 33 46.0**	**+0.7**
HNS	**HongShan**	**85.61**	**312**	⇑P	**P**	**19 33 46.5**	**+1.3**
HNS				pmax	pmax		
	comp=Z,15nm,0.9s						
CAST	**Castle Rocks**	**85.82**	**11**	P	**P**	**19 33 44.5**	**-1.2**
BJI	**Beijing**	**85.94**	**315**	P	**P**	**19 33 47.5**	**+0.7**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ENH	**Enshi**	**86.15**	**304**	P	**P**	**19 33 48.4**	**+0.3**
SRIT	**Nakonsritamara**	**86.17**	**281**	P	**P**	**19 33 48.9**	**+0.4**
TRF	**Thorofare Moun**	**86.19**	**12**	P	**P**	**19 33 47.6**	**0.0**
RND	**Reindeer**	**86.44**	**13**	P	**P**	**19 33 48.5**	**-0.2**
RND				IAmb	IAmb	19 33 49.7	
	comp=Z,11nm,0.9s						
TXAR	**Lajitas Array**	**86.71**	**57**	P	**P**	**19 33 52.6**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=208,slow=5.5,SNR=4.5						
TXAR				pP	**pwP**	**19 35 49.2**	**+1.5**
	comp=Z,1.1nm,1.1s,baz=227,slow=3.6,SNR=6.1						
TXAR	**Lajitas Array**	**86.71**	**57**

NB2 NORSAR Subarra 138.81 353 PKP PKPpre 19 40 18.2
comp=Z,0.6nm,0.6s,baz=16,slow=3.2
NOA NORSAR Array B 138.81 353 PKhKP PKPpre 19 40 20.1
comp=Z,0.4nm,0.6s,baz=22,slow=3.9,SNR=4.3
BORU Boraas 141.92 351 *i* P **PKPdf 19 40 28.9 -5.0**
FABU Falkenberg 142.54 351 *i* P **PKPdf 19 40 31.4 -3.6**
MARD Mardin 142.56 305 PKPdf 19 40 32.9 -3.1
BLEU Blekinge 142.65 348 *i* P **PKPdf 19 40 31.2 -4.1**
DEL Delary 142.86 349 *i* P **PKPdf 19 40 32.8 -2.9**
AKASG Malin Array Be 142.97 331 PKhKP PKPpre 19 40 32.9
comp=Z,14nm,0.5s,baz=42,slow=4.6,SNR=97
AKBB Malin Array Si 142.97 331 PKPdf **PKPdf 19 40 32.8 -3.3**
BJUU Bjuv 143.38 350 *i* P PKPab 19 40 34.4 -0.4
MUD Monsted U'grnd 143.53 354 *i* P PKPab 19 40 35.1 -0.2
LODK Lodwar 143.68 247 PKPbc 19 40 37.4 0.0
LUNU Lund 143.73 349 *i* P PKPab 19 40 35.7 -0.4
COP Copenhagen 143.85 350 *i* P PKPbc 19 40 36.2 -0.3
GKP Gorka Klasztor 145.13 344 *e*PKP **PKPbc 19 40 40.9 +0.4**
SORM Soroca 145.17 329 ↑P **PKPdf 19 40 39.2 -0.7**
MBAR Mbarara 145.26 237 PKPbc **PKPab 19 40 43.0 -0.4**
comp=Z,6.2nm,0.6s,baz=126,slow=5.8,SNR=12
BEL Belsk 145.36 340 *e*PKP **PKPbc 19 40 41.8 +0.6**
PURM Purcari 145.47 326 ↑P **PKPbc 19 40 42.3 +0.5**
MILM Milestii Mici 145.77 327 ↑P **PKPdf 19 40 41.3 +0.3**
VASR Vaslui 146.48 328 ↑P **PKPbc 19 40 45.3 +0.7**
KWP Kalwaria Pacla 146.51 336 *e*PKP **PKPbc 19 40 44.9 +0.2**
KWP Kalwaria Pacla 146.51 336 PKPbc 19 40 44.5 -0.2
VLDR Vladesti 146.87 326 ↑P **PKPbc 19 40 46.5 +0.8**
GIRR Girov 146.90 329 P **PKPbc 19 40 46.2 +0.4**
TLCR 146.90 325 ↑P **PKPbc 19 40 46.0 +0.2**
BR131 Keskin Array S 146.91 313 PKPbc 19 40 46.1 -0.1
BRTR Keskin Array B 146.91 313 PKPbc **PKPbc 19 40 45.9 -0.4**
comp=Z,6.9nm,0.6s,baz=138,slow=4.9,SNR=39
BRTR Keskin Array B 146.91 313 PKPbc 19 40 46.0 -0.2
ASF Jabal al Asfar 146.92 298 PKPbc **PKPbc 19 40 46.8 +0.3**
comp=Z,9.9nm,0.7s,baz=72,slow=1.8,SNR=21
BUR08 Bucovina Ar. S 147.00 331 PKPbc 19 40 46.3 +0.2
BURAR Bucovina Array 147.02 331 ↑P **PKPbc 19 40 47.0 +0.8**
BURAR Bucovina Array 147.02 331 PKPbc 19 40 46.7 +0.5
GHRR 147.07 327 ↑P **PKiKP 19 40 47.5 -0.5**
OJC Ojcow 147.07 339 *e*PKP **PKPbc 19 40 45.3 -0.8**
OJC Ojcow 147.07 339 PKPbc 19 40 45.2 -0.9
BIZ Bicaz 147.10 329 ↑P **PKiKP 19 40 47.4 -0.7**
TESR Tescani 147.13 328 ↑P **PKiKP 19 40 46.7 +0.3**
KOLS Kolonicke sedl 147.24 335 *e*PKP **PKPbc 19 40 47.2 +0.6**
KOLS *e* 19 40 50.7
CFR Carcaliu 147.28 325 ↑P **PKPbc 19 40 47.0 +0.3**
PANC Panciu 147.33 327 ↑P **PKiKP 19 40 47.8 -0.8**
TPGR Topolog 147.33 325 ↑P **PKPbc 19 40 47.6 +0.6**
VRI Vrincioaia 147.55 327 ↑P **PKPbc 19 40 47.6 +0.1**
KSP Ksiaz 147.57 343 *e*PKP **PKiKP 19 40 48.2 -0.8**
NIE Niedzica 147.58 338 *e*PKP **PKiKP 19 40 48.4 -0.7**
PLOR Plostina 147.59 327 ↑P **PKPbc 19 40 47.3 -0.4**
HARR Harsova 147.70 325 ↑P **PKPbc 19 40 48.2 +0.3**
TLBR Topalu 147.73 324 ↑P **PKPbc 19 40 48.4 +0.4**
COVR Voineasa-Covas 147.82 328 ↑P **PKPbc 19 40 48.0 -0.3**
OZUR 147.85 329 ↑P **PKPbc 19 40 49.0 +0.7**
OSTC Ostas 147.85 343 ↑*e*PKP **PKiKP 19 40 49.2 -0.4**
CLL Collm 147.93 347 PKPbc 19 40 48.2 -0.1
CLL Collm 147.93 347 ↓*i* PKPbc **PKPbc 19 40 48.6 +0.3**
comp=Z,27nm,0.8s
CLL *i* PKPab **PKPab 19 40 52.6 -0.1**
comp=Z,9.0nm,1.0s
CLL *e*pPKPab **pPKPbc 19 42 48.0 -0.6**
MMAI Mount Meron Ar 147.95 300 PKPbc **PKPbc 19 40 49.5 +0.4**
comp=Z,15nm,0.6s,baz=74,slow=6.2,SNR=44
DPC Dobruska-Polom 148.01 343 ↑*e*PKP **PKiKP 19 40 49.3 -0.7**
DPC *e*PKPAB **PKPab 19 40 54.0 +0.8**
LANS Liptovska Anna 148.09 338 *e* **PKPab 19 40 55.0 +1.4**
LANS Liptovska Anna 148.09 338 ePKP PKiKP 19 40 50.3 +0.1
BRG Berggiesshubel 148.13 346 *i* PKP **PKPbc 19 40 49.3 +0.5**
BRG Amp 19 40 50.1
comp=Z,12nm,0.7s
BRG *i* x x 19 40 53.9
BRG Amp 19 40 54.5
comp=Z,8.5nm,0.8s
KRLC Kraliky 148.13 342 ↑*e*PKP **PKPbc 19 40 49.2 +0.3**
KRLC *e*PKPAB **PKPab 19 40 54.3 +0.6**
DOPR Dopca 148.14 329 ↑P **PKiKP 19 40 50.0 -0.3**
MORC Moravsky Berou 148.17 341 P **PKiKP 19 40 49.8 -0.5**
MORC Moravsky Berou 148.17 341 PKPbc 19 40 49.2 +0.2
MORC Moravsky Berou 148.17 341 *e*PKP **PKPbc 19 40 49.5 +0.5**
MDUB Mudurnu 148.19 316 PKPbc 19 40 48.7 -0.8
MLR Muntele Rosu 148.20 328 ↓P **PKPbc 19 40 49.1 -0.2**
MLR ↑P **PKiKP 19 40 49.4 -1.2**
MLR Muntele Rosu 148.20 328 PKPbc **PKPbc 19 40 49.2 -0.2**
comp=Z,5.6nm,0.6s,baz=334,slow=8.0,SNR=15
PVCC Panska Ves 148.30 345 ↑*e*PKP **PKPbc 19 40 49.7 +0.5**
SECR 148.46 327 ↑P **PKPbc 19 40 49.8 0.0**
VOIR 148.68 328 ↑P **PKPbc 19 40 50.9 +0.4**
PRU Pruhonice 148.81 345 ↑*e*PKP **PKPbc 19 40 50.7 +0.2**
PRU *e*PKPAB **PKPab 19 40 57.1 +0.7**
VYHS Vyhne 148.87 339 *e* **PKPab 19 40 57.6 +0.9**
VYHS Vyhne 148.87 339 *e*PKP **PKPbc 19 40 51.1 +0.4**
VRAC Vranov 148.87 342 ↑P **PKiKP 19 40 51.5 -0.2**
VRAC Vranov 148.87 342 PKPbc **PKPbc 19 40 50.9 +0.1**
comp=Z,4.8nm,0.8s,baz=122,slow=4.1,SNR=8.3
VRAC Vranov 148.87 342 *e* **PKPab 19 40 57.1 +0.4**
VRAC Vranov 148.87 342 *e*PKP **PKiKP 19 40 51.3 -0.4**
JAVC Velka Javorina 148.94 340 *e*PKP **PKiKP 19 40 52.3 +0.4**
PSZ Piszkesteto 148.98 337 PKP **PKiKP 19 40 52.6 +0.5**
CSS Mathiatis 149.01 305 PKPdf **PKPdf 19 40 45.1 -1.6**
CSS **PKPbc 19 40 51.3 -0.2**
CSS PKPab **PKPab 19 40 58.4 +0.6**
EIL Elat 149.05 294 PKPbc **PKPbc 19 40 51.5 -0.2**
comp=Z,9.5nm,0.7s,baz=14,slow=4.1,SNR=8.4
KRUC Moravsky 149.15 342 *e* **PKPab 19 40 58.3 +0.5**
KRUC Moravsky 149.15 342 *e*PKP **PKPbc 19 40 51.4 0.0**
DEV Deva 149.37 331 ↑P **PKPbc 19 40 51.8 -0.2**
MODS Modra-Piesok 149.49 340 *e*PKP **PKiKP 19 40 53.2 +0.2**
MEM Membach 149.61 355 *d*PKiKP **PKiKP 19 40 52.6 +0.2**
SIRR Siria 149.62 335 ↑P **PKiKP 19 40 53.1 -0.2**
BTNL Ternell 149.62 355 *d*PKiKP **PKPbc 19 40 52.5 +0.1**
BSTI Sart Tilman 149.66 356 *d*PKiKP **PKPbc 19 40 52.9 +0.3**
GZR Gura Zlata 149.80 331 ↑P **PKPbc 19 40 53.2 0.0**
KHC Kasperske Hory 149.84 345 *e*PKPDF **PKPdf 19 40 47.1 -0.6**
KHC ↑*e*PKP **PKPbc 19 40 53.3 +0.2**
KHC *e*PKPAB **PKPab 19 41 01.1 +0.3**
BHOU Houvegnez 149.86 355 *d*PKiKP **PKiKP 19 40 53.5 -0.2**
CKRC Cesky Krumlov 149.95 344 *e*PKPDF **PKPdf 19 40 48.6 +0.8**
CKRC ↑*e*PKP **PKPbc 19 40 53.6 +0.3**
CKRC *e*PKPAB **PKPab 19 41 01.4 +0.2**
BMRD Maredsous 149.99 357 *d*PKiKP **PKiKP 19 40 53.8 -0.2**
BMRD *d*PKPab **PKPab 19 41 01.2 -0.1**
GEC2 GERESS Array S 150.08 345 PKPbc 19 40 53.3 -0.4
GERES GERESS Array B 150.08 345 PKP **PKPdf 19 40 47.6 -0.5**
comp=Z,0.2nm,0.6s,baz=321,slow=1.4,SNR=5.3
GERES PKPbc **PKPbc 19 40 53.7 0.0**
comp=Z,4.9nm,0.8s,baz=48,slow=2.0,SNR=46
GERES PKPab **PKPab 19 41 01.8 0.0**
comp=Z,0.9nm,0.5s,baz=35,slow=4.9,SNR=7.1
RCHB Rochefort 150.11 356 *d*PKiKP **PKPbc 19 40 53.8 +0.2**
BZS Buzias 150.15 332 ↓P **PKPbc 19 40 53.7 -0.2**
DOU Dourbes 150.21 357 *d*PKiKP **PKPbc 19 40 53.8 -0.1**
DOU *d*PKPab **PKPab 19 41 02.0 -0.1**
CONA Conrad Observa 150.33 341 *e*P **PKiKP 19 40 54.7 -0.2**
comp=Z,2.7nm,0.5s
HERR Herculane 150.35 330 ↓P **PKPbc 19 40 53.9 -0.4**
RONA Rosalia, Austr 150.40 341 *e*P **PKPbc 19 40 54.6 +0.2**
comp=Z,8.1nm,0.5s
MPLH Magyarpolny 150.46 339 PKP **PKPbc 19 40 54.7 +0.1**
WLF Walferdange 150.53 355 *d*PKiKP **PKPbc 19 40 54.8 +0.1**
MDVR Moldovita 150.75 331 ↑P **PKPbc 19 40 55.5 +0.1**
MOA Molln 150.85 343 P **PKPbc 19 40 55.3 -0.1**
comp=Z,3.2nm,0.6s,SNR=4.0
MORH Mrgy, Hungar 150.88 336 ↑P **PKPbc 19 40 55.6 +0.1**
MORH Mrgy, Hungar 150.88 336 PKP **PKPbc 19 40 55.1 -0.4**
MORH Mrgy, Hungar 150.88 336 PKP **PKPbc 19 40 55.1 -0.4**
ARSA Arzberg 151.03 341 *e*P **PKiKP 19 40 58.2 +1.9**
comp=Z,2.5nm,0.9s
BIOA Bad Ischl, Aus 151.16 344 *e*P **PKPbc 19 40 55.8 -0.4**
comp=Z,2.8nm,0.6s
FRGS Fruska Gora 151.28 334 ↑P **PKPbc 19 40 55.6 -0.9**
BFO Black Forest 151.61 352 PKPbc 19 40 56.6 -0.5
VTS Vitosha 151.61 326 PKPbc 19 40 57.1 -0.4
BOVS Bovan 151.63 329 ↓P **PKPbc 19 40 56.6 -0.7**
SOKA Soboth 151.70 341 *i* P **PKPbc 19 40 56.9 -0.6**
comp=Z,1.8nm,0.5s,SNR=6.9
KBA Koelnbreinsper 151.81 344 *i* P **PKPbc 19 40 57.5 -0.4**
comp=Z,3.5nm,0.8s,SNR=4.1
WATA Walderalm 151.99 346 *e*P **PKPbc 19 40 57.3 -0.9**
comp=Z,1.9nm,0.5s
OBKA Obir 151.99 342 *e*P **PKPbc 19 40 57.3 -0.9**
comp=Z,2.1nm,0.6s
RETA Reutte 152.01 348 *e*P **PKiKP 19 41 01.2 +2.8**
comp=Z,4.0nm,1.4s
WTTA Wattenberg 152.04 346 *e*P **PKPbc 19 40 58.2 -0.1**
comp=Z,2.0nm,0.4s
DIVS Divibare 152.06 332 PKPbc 19 40 58.3 -0.1
MOTA Moosalm 152.08 347 *e*P **PKPbc 19 40 58.0 -0.4**
comp=Z,4.6nm,0.9s
MYKA Terra Mystica 152.14 343 *e*P **PKPbc 19 40 57.7 -0.8**
comp=Z,4.8nm,0.8s
SQTA Sankt Quirin 152.18 347 *e*P **PKPbc 19 40 58.5 -0.1**
comp=Z,8.8nm,1.4s
VNDS Vrh nad Dolski 152.32 341 *i* PKPbc **PKPbc 19 40 58.4 -0.4**
ABTA Abfaltersbach 152.32 345 *i* P **PKPbc 19 40 58.3 -0.5**
comp=Z,7.7nm,0.6s,SNR=5.9
PRED Cave del Predi 152.33 343 PKPab 19 41 10.8 -0.5
DAVA Damuels 152.38 349 *e*P **PKiKP 19 40 60.0 +0.7**
comp=Z,4.3nm,1.0s
LJU Ljubljana 152.42 341 *i* PKPbc **PKPbc 19 40 58.8 -0.2**
CRNS Crni Vrh 152.47 342 *i* PKPbc **PKPbc 19 40 58.5 -0.7**
CRNS *i* 19 54 08.2
FETA Feichten 152.47 347 *e*P **PKPbc 19 40 59.2 -0.1**
comp=Z,4.2nm,0.9s
CEY Cerknica 152.73 341 *i* PKPdf **PKPdf 19 40 51.9 -0.2**
CEY *i* PKPbc **PKPbc 19 40 59.2 -0.5**
CEY *e*PKPab **PKPab 19 41 12.8 -0.2**
CEY *i* 19 54 09.1
CIMO Cimolais 152.75 345 PKPdf **PKPdf 19 40 50.0 -2.1**
CIMO PKPbc **PKPbc 19 40 59.0 -0.7**
CIMO PKPab **PKPab 19 41 12.0 -1.1**
ESDC Sonseca Array 159.95 14 PKP **PKPdf 19 41 03.7 +2.1**
comp=Z,0.4nm,0.9s,baz=8.5,slow=2.6,SNR=4.0
KEST Kesra 163.42 340 PKPab **PKPab 19 41 59.9 +0.2**
comp=Z,1.5nm,0.7s,baz=324,slow=4.7,SNR=4.5
TORD Torodi Ar. Bea 172.87 175 PKPab **PKPab 19 42 42.0 +0.2**
comp=Z,13nm,0.4s,baz=145,slow=5.3,SNR=2.8

NEIC ***27*** *19:34:58.7±1.5, 19.°04S±0.°10×169.°5E±0.°1, h252km±7km, mb4.4/47, Error ellipse: s-maj=15.7km s-min=14.1km az=94.0*
NOU ***27*** *19:34:58.8, 19.°07S×169.°57E, h244km, MLv4.5/16, Vanuatu Islands*
IDC ***27*** *19:34:59.1±1.5, 19.°07S×169.°48E, h260km±14km, mb3.9/16, mbtmp4.4/18, Error ellipse: s-maj=12.4km s-min=11.4km az=77.0*
ISC 27 19:34:58.0±0.4, **19.°07S**±0.°05×**169.°49E**±0.°07, **h246**km, **n141**,σ1$**15**/142, **mb4.3**/38, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.62**	**321**	P		**Pn**	**19 35 38.4 +1.6**
DVP	**Devils Point**	**1.82**	**317**	P		**Pn**	**19 35 40.0 +1.5**
LIFNC	**LIFOU**	**2.71**	**231**	Pn		**Pn**	**19 35 46.8 -0.3**
LIFNC	**LIFOU**	**2.71**	**231**	P		**Pn**	**19 35 46.9 -0.3**
MARNC	**Mare, Loyalty**	**2.77**	**209**	Pn		**Pn**	**19 35 48.3 +0.7**
MARNC	**Mare, Loyalty**	**2.77**	**209**	P		**Pn**	**19 35 48.4 +0.7**
YATNC	**Mamie plateau,**	**3.84**	**219**	P		**Pn**	**19 35 59.9 +0.1**
PINNC	**Pines Island,**	**4.01**	**208**			**Pn**	**19 36 02.3 +0.6**
PINNC	**Pines Island,**	**4.01**	**208**	P		**Pn**	**19 36 03.1 +1.4**
DZM	**Mont Dzumac**	**4.13**	**223**	P		**Pn**	**19 36 04.5 +1.3**
	62nm,0.5s,baz=49,slow=10,SNR=100						
DZM	**Mont Dzumac**	**4.13**	**223**			**Pn**	**19 36 04.2 +1.0**
DZM	**Mont Dzumac**	**4.13**	**223**	P		**Pn**	**19 36 04.8 +1.6**
OUENC	**Ouen Island, N**	**4.15**	**216**	P		**Pn**	**19 36 04.7 +1.3**
OUENC	**Ouen Island, N**	**4.15**	**216**	P		**Pn**	**19 36 05.0 +1.6**
NOUC	**Port Laguerre**	**4.25**	**224**	P		**Pn**	**19 36 06.4 +1.9**
ONTNC	**Ouen Toro**	**4.30**	**221**	Pn		**Pn**	**19 36 06.7 +1.7**
ONTNC	**Ouen Toro**	**4.30**	**221**	P		**Pn**	**19 36 06.8 +1.7**
KOUNC	**Koumac, New Ca**	**5.11**	**252**	Pn		**Pn**	**19 36 17.7 +2.7**
KOUNC	**Koumac, New Ca**	**5.11**	**252**	P		**Pn**	**19 36 17.7 +2.7**
MSVF	**Nonsavu**	**8.24**	**82**	P		**Pn**	**19 36 57.5 +3.1**
	4.5nm,0.5s,baz=286,slow=18,SNR=2.9						
OUZ	**Omahuta**	**16.50**	**168**	P		**Pn**	**19 38 36.1 +0.1**
OUZ	**Omahuta**	**16.50**	**168**	P		**Pn**	**19 38 35.8 -0.2**
WCZ	**Waipu Caves**	**17.35**	**167**	P		**Pn**	**19 38 46.7 +0.8**
GRZ	**Great Barrier**	**17.91**	**164**	P		**Pn**	**19 38 51.8 -0.8**
ABAZ	**Army Bay**	**18.09**	**166**	P		**P**	**19 38 52.8 +1.1**
EIDS	**Eidsvold**	**18.15**	**246**	P		**P**	**19 38 54.0 +1.5**
EIDS				IAmb		IAmb	19 38 57.8
	comp=Z,6.8nm,0.6s						
RVAZ	**Riverhead Bore**	**18.20**	**167**	P		**Pn**	**19 38 57.4 +1.5**
MBAZ	**Motutapu North**	**18.27**	**166**	P		**Pn**	**19 38 55.5 -1.3**
WIAZ	**Waiheke Island**	**18.34**	**165**	P		**P**	**19 38 55.9 +1.5**
WTAZ	**Waiatarua**	**18.35**	**167**	P		**Pn**	**19 38 56.6 -1.2**
KUZ	**Kuaotunu**	**18.45**	**164**	P		**P**	**19 38 57.1 +1.6**
ETAZ	**East Tamaki Re**	**18.45**	**166**	P		**P**	**19 38 57.4 +1.8**
AWAZ	**Awhitu Peninsu**	**18.49**	**167**	P		**P**	**19 38 57.7 +1.6**
MKAZ	**Moumakai**	**18.65**	**166**	P		**P**	**19 38 59.4 +1.7**
TOZ	**Tahuroa Road**	**19.33**	**165**	P		**P**	**19 39 06.4 +1.5**
ARMA	**Armidale**	**19.74**	**232**	P		**P**	**19 39 11.1 +1.5**
MXZ	**Matakaoa Point**	**19.98**	**159**	P		**P**	**19 39 13.5 +1.6**
HAZ	**Te Kaha**	**19.98**	**160**	P		**P**	**19 39 13.6 +1.6**
RUGZ	**Raukumara Rang**	**20.14**	**161**	P		**P**	**19 39 15.2 +1.4**
PKGZ	**Pakihiroa**	**20.20**	**160**	P		**P**	**19 39 15.6 +1.2**
URZ	**Urewera**	**20.25**	**162**	P		**P**	**19 39 15.7 +0.9**
	comp=Z,9.7nm,0.5s,baz=300,slow=20,SNR=12						
	comp=Z,9.7nm,0.5s						
URZ	**Urewera**	**20.25**	**162**	P		**P**	**19 39 15.3 +0.5**
URZ	**Urewera**	**20.25**	**162**	P		**P**	**19 39 16.1 +1.3**
WMGZ	**Waiomatatini S**	**20.25**	**159**	P		**P**	**19 39 17.1 +2.3**
PUZ	**Puketiti**	**20.42**	**160**	P		**P**	**19 39 16.9 +0.2**
TWGZ	**Tauwhareparae**	**20.43**	**161**	P		**P**	**19 39 17.9 +1.0**
MWZ	**Matawai**	**20.44**	**162**	P		**P**	**19 39 18.3 +1.4**
VRZ	**Vera Road**	**20.50**	**168**	P		**P**	**19 39 20.3 +2.7**
RAGZ	**Rawiri**	**20.55**	**162**	P		**P**	**19 39 20.2 +2.0**
TKGZ	**Te Karaka**	**20.63**	**161**	P		**P**	**19 39 19.5 +0.6**
LREZ	**Lake Rotokare**	**20.77**	**169**	P		**P**	**19 39 21.7 +1.5**
SNGZ	**Shannon Statio**	**20.80**	**162**	P		**P**	**19 39 21.8 +1.1**
BKZ	**Black Stump Fm**	**20.93**	**165**	P		**P**	**19 39 21.1 -0.9**
BKZ	**Black Stump Fm**	**20.93**	**165**	P		**P**	**19 39 21.5 -0.6**
QRZ	**Quartz Range**	**21.84**	**174**	P		**P**	**19 39 31.8 +1.1**
CTA	**Charters Tower**	**21.91**	**263**	P		**P**	**19 39 32.6 +0.9**
	comp=Z,3.7nm,0.7s,baz=92,slow=11,SNR=5.6						
	comp=Z,3.7nm,0.7s						
DUWZ	**D'Urville Isla**	**22.00**	**171**	P		**P**	**19 39 32.8 +0.6**
MRZ	**Mangatainoka R**	**22.15**	**168**	P		**P**	**19 39 33.4 -0.1**
BFZ	**Birch Farm**	**22.31**	**166**	P		**P**	**19 39 34.4 -0.7**
NNZ	**Nelson**	**22.33**	**172**	P		**P**	**19 39 35.8 +0.6**
DSZ	**Denniston Nort**	**22.69**	**175**	P		**P**	**19 39 40.3 +1.7**
THZ	**Tophouse**	**22.81**	**173**	P		**P**	**19 39 39.8 +0.1**
KHZ	**Kahutara**	**23.53**	**172**	P		**P**	**19 39 45.1 -0.9**
CAN	**Canberra**	**24.30**	**224**	P		**P**	**19 39 53.6 +0.3**
CAN				IAmb		IAmb	19 40 20.6
	comp=Z,25nm,1.2s						
RPZ	**Rata Peaks**	**24.61**	**177**	P		**P**	**19 39 56.5 +0.6**
	comp=Z,8.1nm,0.8s,baz=328,slow=3.1,SNR=2.7						
	comp=Z,8.1nm,0.8s						
TOO	**Toolangi**	**27.91**	**224**	P		**P**	**19 40 25.7 +0.2**
TOO				IAmb		IAmb	19 40 49.9
	comp=Z,18nm,1.3s						
STKA	**Stephens Creek**	**28.14**	**238**	P		**P**	**19 40 27.8 +0.2**
	comp=Z,9.7nm,0.6s,baz=65,slow=8.6,SNR=34						
	comp=Z,9.7nm,0.6s						
STKA	**Stephens Creek**	**28.14**	**238**	P		**P**	**19 40 27.9 +0.4**
BBOO	**Buckleboo**	**32.88**	**239**	P		**P**	**19 41 09.1 0.0**
BBOO				IAmb		IAmb	19 41 09.5
	comp=Z,10nm,0.9s						
WB0	**Warramunga Arr**	**33.07**	**263**	P		**P**	**19 41 09.7 -1.2**
WB0				IAmb		IAmb	19 41 10.6
	comp=Z,4.8nm,0.6s						
WB2	**Warramunga Arr**	**33.10**	**263**	P		**P**	**19 41 09.8 -1.4**
WRA	**Warramunga Arr**	**33.11**	**263**	P		**P**	**19 41 10.1 -1.2**
	comp=Z,2.2nm,0.5s,baz=97,slow=8.3,SNR=36						
WRA				ScP		**ScP**	**19 47 08.0 -1.2**
	comp=Z,0.7nm,0.8s,baz=89,slow=3.3,SNR=4.7						
	comp=Z,2.2nm,0.5s						
AS31	**Alice Springs**	**33.40**	**256**	P		**P**	**19 41 13.4 -0.3**
ASAR	**Alice Springs**	**33.40**	**256**	P		**P**	**19 41 13.2 -0.5**
	comp=Z,25nm,0.6s,baz=84,slow=9.0,SNR=422						
ASAR				pP		**pP**	**19 42 04.5 +2.9**
	comp=Z,2.9nm,0.8s,baz=84,slow=8.8,SNR=5.6						
ASAR				ScP		**ScP**	**19 47 09.5 -0.7**
	comp=Z,0.9nm,0.7s,baz=96,slow=3.8,SNR=8.6						
	comp=Z,25nm,0.6s						
ASAR	**Alice Springs**	**33.40**	**256**	P		**P**	**19 41 13.1 -0.6**
MTN	**Manton Dam**	**37.34**	**274**	P		**P**	**19 41 46.7 -0.6**
MTN				IAmb		IAmb	19 41 59.5
	comp=Z,21nm,1.4s						
KNRA	**Kununurra**	**38.95**	**268**	P		**P**	**19 42 00.1 -0.6**
KNRA				IAmb		IAmb	19 42 00.8
	comp=Z,5.7nm,0.6s						
FORT	**Forrest**	**39.13**	**244**	P		**P**	**19 42 01.2 -0.8**
FITZ	**Fitzroy Crossi**	**41.49**	**264**	P		**P**	**19 42 21.6 +0.1**
	comp=Z,4.4nm,0.6s,baz=98,slow=8.6,SNR=33						
	comp=Z,4.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**41.49**	**264**	P		**P**	**19 42 21.6 +0.1**
PSA00	**Pilbara Seismi**	**46.47**	**258**	P		**P**	**19 43 00.9 0.0**
PSA00				IAmb		IAmb	19 43 19.9
	comp=Z,21nm,1.4s						
MBWA	**Marble Bar**	**46.62**	**259**	P		**P**	**19 43 01.9 -0.1**
MORW	**Morawa**	**49.45**	**248**	P		**P**	**19 43 23.1 -0.6**
MORW				IAmb		IAmb	19 43 29.5
	comp=Z,15nm,1.1s						
VNDA	**Vanda**	**58.61**	**182**	P		**P**	**19 44 28.0 -0.8**
	comp=Z,1.3nm,0.5s,baz=360,slow=8.3,SNR=19						
	comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**58.61**	**182**	P		**P**	**19 44 28.6 -0.2**
SBA	**Scott Base**	**58.84**	**181**	P		**P**	**19 44 30.6 +0.3**
SBA				IAmb		IAmb	19 44 32.1
	comp=Z,13nm,0.8s						
MJAR	**Matsushiro Arr**	**62.71**	**332**	P		**P**	**19 44 56.3 -0.7**
	comp=Z,2.1nm,0.8s,baz=157,slow=8.4,SNR=7.7						
	comp=Z,2.1nm,0.8s						
MAJO	**Matsushiro**	**62.71**	**332**	P		**P**	**19 44 56.2 -0.7**
MAJO				IAmb		IAmb	19 44 57.6
	comp=Z,8.6nm,1.1s						
TPUB	**Ta-pu**	**63.61**	**309**	P		**P**	**19 45 02.1 -1.0**
SSLB	**Suanglung**	**63.67**	**310**	P		**P**	**19 45 02.2 -1.3**
SSLB				IAmb		IAmb	19 45 22.4
	comp=Z,9.1nm,1.0s						
AMKA	**Amchitka**	**70.67**	**7**	P		**P**	**19 45 46.4 -0.3**
QSPA	**South Pole Qui**	**70.99**	**180**	P		**P**	**19 45 47.9 -0.9**
	comp=Z,6.6nm,0.8s,baz=348,slow=2.7,SNR=44						
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**70.99**	**180**	P		**P**	**19 45 48.0 -0.9**
QSPA				IAmb		IAmb	19 45 49.0
	comp=Z,8.9nm,0.9s						
KIWB	**Kanaga Island**	**71.57**	**9**	P		**P**	**19 45 51.9 -0.3**
SHEM	**Shemya Is, Ala**	**71.60**	**3**	P		**P**	**19 45 51.8 -0.5**
	comp=Z,7.6nm,0.5s,baz=84,slow=9.2,SNR=5.8						
	comp=Z,7.6nm,0.5s						
PEA0B	**Petropavlovsk-**	**72.59**	**353**	P		**P**	**19 45 58.4 +0.2**
PEA0B				IAmb		IAmb	19 46 02.6
	comp=Z,13nm,1.2s						
PETK	**Petropavlovsk-**	**72.59**	**353**	P		**P**	**19 45 58.4 +0.2**
	comp=Z,4.1nm,0.7s,baz=127,slow=7.9,SNR=10						
	comp=Z,4.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**78.65**	**294**	P		**P**	**19 46 34.6 +1.3**
	comp=Z,0.8nm,0.4s,baz=137,slow=5.0,SNR=5.4						
	comp=Z,0.8nm,0.4s						
MAW	**Mawson**	**78.68**	**202**	P		**P**	**19 46 33.5 +1.0**
OHAK	**Old Harbor**	**82.11**	**19**	P		**P**	**19 46 50.7 0.0**
BELA	**Belgrano 2**	**82.25**	**175**	P		**P**	**19 46 49.8 -1.6**
BELA				IAmb		IAmb	19 46 50.5
	comp=Z,7.4nm,0.6s						
P18K	**Big Mountain,**	**83.33**	**17**	P		**P**	**19 46 56.9 -0.2**
Q19K	**Cape Douglas,**	**83.41**	**18**	P		**P**	**19 46 57.4 0.0**
SMAI	**San Martin Ant**	**83.92**	**162**	P		**P**	**19 46 59.6 -0.4**
SMAI				IAmb		IAmb	19 47 00.5
	comp=Z,4.9nm,0.7s						
KMRM	**Mail Ridge**	**85.62**	**45**	P		**P**	**19 47 09.7 +0.7**
KHMM	**Horse Mountain**	**85.92**	**44**	P		**P**	**19 47 11.0 +0.4**
ULN	**Ulaanbaatar**	**86.86**	**323**	P		**P**	**19 47 14.3 -0.7**
CMB	**Columbia Colle**	**86.87**	**48**	P		**P**	**19 47 14.7 -0.3**
CMB				IAmb		IAmb	19 47 16.2
	comp=Z,3.7nm,0.8s						
AFDM	**Forest Hills D**	**86.88**	**47**	P		**P**	**19 47 14.5 -0.5**
AFDM				IAmb		IAmb	19 47 16.3
	comp=Z,4.1nm,1.0s						
ISA	**Isabella, Lake**	**87.19**	**51**	P		**P**	**19 47 16.4 -0.3**
ISA				IAmb		IAmb	19 47 18.2
	comp=Z,4.8nm,0.8s						
SONM	**Songino Array**	**87.22**	**323**	P		**P**	**19 47 16.5 -0.1**
	comp=Z,1.8nm,0.7s,baz=146,slow=6.7,SNR=15						
	comp=Z,1.8nm,0.7s						
SONM	**Songino Array**	**87.22**	**323**	P		**P**	**19 47 16.5 -0.1**
J20K	**Nowinta River**	**87.61**	**15**	P		**P**	**19 47 17.4 -0.5**
DSP	**Deep Springs**

ROCH	**El Roble**	**0.70**	**108**	⇓	*i*P		**Pb**	**19 36 20.6**	**-0.9**
ROCH				⇓	*i*P		**Pb**	**19 36 20.5**	**-0.9**
ROCH					*i* S		**Sb**	**19 36 29.0**	**-1.8**
ROCH					*i* S		**Sb**	**19 36 29.0**	**-1.8**
ROCH					IAML			19 36 30.6	
	comp=N,17μm,0.3s								
MT02	**Curacav**	**0.75**	**132**				**Pb**	**19 36 21.0**	**-1.2**
MT02	**Curacav**	**0.75**	**132**	⇓	*i*P		**Pb**	**19 36 21.3**	**-0.9**
MT02					*i* S		**Sb**	**19 36 30.2**	**-1.9**
MT02	**Curacav**	**0.75**	**132**		*e*P		**Pb**	**19 36 20.9**	**-1.3**
MT02					eS		**Sb**	**19 36 30.5**	**-1.6**
VA05	**Santo Domingo**	**0.91**	**170**				**Pn**	**19 36 24.6**	**+0.1**
VA05	**Santo Domingo**	**0.91**	**170**	⇑	*i*P		**Pn**	**19 36 24.6**	**+0.1**
VA05					*i* S		**Sn**	**19 36 36.0**	**-0.7**
VA05					IAML			19 36 39.9	
	comp=E,10μm,0.5s								
PEL	**Peldehue**	**1.01**	**113**				**Pn**	**19 36 25.6**	**-0.5**
PEL	**Peldehue**	**1.01**	**113**		*e*P		**Pn**	**19 36 25.5**	**-0.5**
PEL					*i* S		**Sn**	**19 36 37.8**	**-1.5**
PEL					IAML			19 36 40.1	
	comp=N,18μm,0.2s								
PEL	**Peldehue**	**1.01**	**113**		*e*P		**Pn**	**19 36 25.4**	**-0.6**
PEL					eS		**Sn**	**19 36 38.8**	**-0.5**
VA03	**San Esteban**	**1.05**	**91**				**Pn**	**19 36 25.7**	**-0.8**
VA03	**San Esteban**	**1.05**	**91**	⇓	*i*P		**Pn**	**19 36 25.9**	**-0.7**
VA03					*i* S		**Sn**	**19 36 36.9**	**-3.4**
VA03					IAML			19 36 39.7	
	comp=E,14μm,0.2s								
MT05	**Renca**	**1.09**	**126**				**Pn**	**19 36 26.7**	**-0.4**
MT05	**Renca**	**1.09**	**126**	⇓	*i*P		**Pn**	**19 36 27.0**	**-0.1**
MT05					*i* S		**Sn**	**19 36 41.0**	**-0.2**
MT05					IAML			19 36 43.7	
	comp=N,13μm,0.4s								
MT05	**Renca**	**1.09**	**126**		*e*P		**Pn**	**19 36 27.0**	**-0.1**
MT05					eS		**Sb**	**19 36 43.4**	**+1.5**
MT05					IAML			19 36 44.1	
	comp=Z,4μm,0.9s								
MT01	**Popeta**	**1.20**	**158**				**Pn**	**19 36 28.6**	**+0.1**
MT01	**Popeta**	**1.20**	**158**	⇓	*i*P		**Pn**	**19 36 28.8**	**+0.3**
MT01					*i* S		**Sn**	**19 36 43.3**	**-0.5**
MT01	**Popeta**	**1.20**	**158**		*e*P		**Pn**	**19 36 28.0**	**-0.5**
MT01					eS		**Sn**	**19 36 43.8**	**0.0**
MT01					IAML			19 36 45.1	
	comp=Z,3μm,0.3s								
MT09	**Talagante**	**1.22**	**147**				**Pn**	**19 36 29.1**	**+0.2**
MT09	**Talagante**	**1.22**	**147**	⇓	*i*P		**Pn**	**19 36 29.3**	**+0.4**
MT09					*i* S		**Sn**	**19 36 44.2**	**-0.4**
MT09					IAML			19 36 50.5	
	comp=N,6μm,0.3s								
MT03	**Universidad Ad**	**1.31**	**125**		Pn		**Pn**	**19 36 30.3**	**+0.3**
MT03	**Universidad Ad**	**1.31**	**125**	⇓	*i*P		**Pn**	**19 36 30.4**	**+0.3**
MT03					*i* S		**Sn**	**19 36 46.9**	**+0.3**
MT03					IAML			19 36 50.7	
	comp=E,14μm,0.3s								
MT03	**Universidad Ad**	**1.31**	**125**		*e*P		**Pn**	**19 36 30.6**	**+0.6**
MT03					eS		**Sb**	**19 36 51.4**	**+3.3**
MT03					IAML			19 36 52.5	
	comp=Z,6μm,1.2s								
FCH	**Farellones**	**1.39**	**115**	⇓	*i*P		**Pn**	**19 36 31.6**	**+0.2**
FCH					*i* S		**Sn**	**19 36 48.8**	**-0.1**
FCH					IAML			19 36 49.3	
	comp=E,7μm,0.2s								
CO02	**Combarbal**	**1.69**	**24**				**Pn**	**19 36 36.4**	**+1.0**
CO02	**Combarbal**	**1.69**	**24**	⇑	*i*P		**Pn**	**19 36 36.6**	**+1.3**
CO02					eS		**Sn**	**19 36 57.2**	**+1.1**
CO02	**Combarbal**	**1.69**	**24**		*e*P		**Pn**	**19 36 36.6**	**+1.3**
CO02					eS		**Sb**	**19 37 00.1**	**+1.0**
CO02					IAML			19 37 01.2	
	comp=Z,4μm,0.3s								
LMEL	**Las Melosas**	**1.72**	**130**				**Pn**	**19 36 36.8**	**+1.0**
LMEL	**Las Melosas**	**1.72**	**130**	⇓	*i*P		**Pn**	**19 36 37.2**	**+1.4**
LMEL					*i* S		**Sb**	**19 36 59.0**	**-1.1**
BO03	**Pichilemu**	**1.74**	**184**	⇑	*i*P		**Pn**	**19 36 36.2**	**+0.3**
BO03					*i* S		**Sb**	**19 37 01.5**	**+1.1**
CO06	**Fray Jorge**	**2.08**	**4**				**Pn**	**19 36 41.0**	**+0.4**
CO06	**Fray Jorge**	**2.08**	**4**	⇑	*i*P		**Pn**	**19 36 41.0**	**+0.4**
CO06					eS		**Sb**	**19 37 13.1**	**+2.9**
CO06					IAML			19 37 19.4	
	comp=N,1μm,0.3s								
CO03	**El Pedregal**	**2.13**	**27**				**Pn**	**19 36 42.5**	**+1.1**
CO03	**El Pedregal**	**2.13**	**27**	⇑	*i*P		**Pn**	**19 36 42.9**	**+1.4**
CO03					*i* S		**Sb**	**19 37 11.1**	**-0.7**
CO03	**El Pedregal**	**2.13**	**27**		*e*P		**Pn**	**19 36 42.9**	**+1.4**
CO03					eS		**Sb**	**19 37 13.2**	**+1.5**
CO03					IAML			19 37 16.6	
	comp=Z,1μm,0.5s								
BO02	**Sierra Bellavi**	**2.20**	**158**				**Pn**	**19 36 43.2**	**+0.9**
BO02	**Sierra Bellavi**	**2.20**	**158**	⇑	*i*P		**Pn**	**19 36 43.3**	**+1.0**
BO02					*i* S		**Sb**	**19 37 11.9**	**-1.8**
BO02					IAML			19 37 18.1	
	comp=E,3μm,0.3s								
BO02	**Sierra Bellavi**	**2.20**	**158**		*e*P		**Pn**	**19 36 43.4**	**+1.0**
BO02					eP		**Pb**	**19 36 43.5**	**-3.4**
BO02					eS		**Sb**	**19 37 14.8**	**+1.1**
BO02					IAML			19 37 19.9	
	comp=Z,2μm,0.9s								
GO05	**Huala**	**2.25**	**183**				**Pn**	**19 36 43.3**	**+0.3**
GO05	**Huala**	**2.25**	**183**		*e*P		**Pn**	**19 36 43.4**	**+0.3**
GO05					IAML			19 37 24.7	
	comp=E,747nm,0.5s								
GO05	**Huala**	**2.25**	**183**		*e*P		**Pn**	**19 36 44.0**	**+1.0**
RTLS	**Leoncito**	**2.32**	**66**		*e*P		**Pb**	**19 36 48.0**	**-1.1**
RTLS					IAML			19 37 28.3	
	comp=Z,968nm,0.5s								
ASAL	**Salagasta**	**2.50**	**87**		*e*P		**Pb**	**19 36 50.8**	**-1.3**
ASAL					eS		**Sb**	**19 37 30.3**	**+7.8**
AAGR	**Agrelo**	**2.52**	**98**		*e*P		**Pb**	**19 36 50.0**	**-2.3**
AAGR					eP		**Pn**	**19 36 50.8**	**+4.0**
AAGR					eP		**Pn**	**19 36 50.8**	**+4.0**
GO04	**Tololo Observa**	**2.71**	**19**				**Pn**	**19 36 50.5**	**+0.9**
GO04	**Tololo Observa**	**2.71**	**19**		*e*P		**Pn**	**19 36 50.0**	**+0.4**
GO04					eP		**Pn**	**19 36 50.8**	**+1.2**
GO04					eS		**Sn**	**19 37 24.2**	**+2.6**
CO05	**La Serena**	**2.87**	**10**				**Pn**	**19 36 52.3**	**+0.9**
CO05	**La Serena**	**2.87**	**10**		*e*P		**Pn**	**19 36 52.4**	**+0.9**
CO05					IAML			19 37 42.6	
	comp=E,955nm,0.3s								
ZON	**Zonda**	**2.91**	**66**		Pn		**Pn**	**19 36 53.0**	**+0.9**
ZON	**Zonda**	**2.91**	**66**		*e*P		**Pb**	**19 36 56.0**	**-2.9**
ZON					eS		**Sb**	**19 37 32.2**	**-1.9**
ZON					IAML			19 37 43.9	
	comp=Z,500nm,0.5s								
ML02	**Panimavida**	**3.02**	**174**				**Pn**	**19 36 53.6**	**+0.1**
CO01	**Juntas del Tor**	**3.13**	**28**				**Pn**	**19 36 56.8**	**+1.5**
CO01	**Juntas del Tor**	**3.13**	**28**		*e*P		**Pn**	**19 36 57.0**	**+1.7**
CO01					eS		**Sb**	**19 37 36.7**	**-3.9**
CO01					IAML			19 37 46.6	
	comp=Z,479nm,1.4s								
RTLL	**Cerro Villicun**	**3.16**	**64**		*e*P		**Pn**	**19 36 58.0**	**+2.5**
RTLL					eS		**Sb**	**19 37 38.7**	**-2.6**
ACCO	**Cerro Coronel**	**3.18**	**48**		*e*P		**Pn**	**19 36 59.0**	**+3.0**
ACCO					eS		**Sb**	**19 37 39.7**	**-2.4**
RFA	**San Rafael**	**3.43**	**127**		*e*P		**Pn**	**19 37 02.2**	**+3.0**
RFA					eS		**Sb**	**19 37 57.1**	**+8.1**
RFA					IAML			19 38 01.0	
	comp=Z,278nm,0.9s								
AC05	**El Transito**	**4.12**	**19**		Pn		**Pn**	**19 37 09.9**	**+1.0**
AC05	**El Transito**	**4.12**	**19**		*e*P		**Pn**	**19 37 10.0**	**+1.2**
AC05					eS		**Sn**	**19 37 59.7**	**+3.5**
AC05					IAML			19 38 21.5	
	comp=Z,489nm,0.9s								
BI05	**Punta Hualpn**	**4.14**	**196**		Pn		**Pn**	**19 37 08.2**	**-0.7**
AVFE	**Valle Fertil**	**4.25**	**62**		*e*P		**Pn**	**19 37 13.0**	**+2.5**
AVFE					eS		**Sb**	**19 38 11.5**	**-1.2**
AVFE					IAML			19 38 12.7	
	comp=Z,346nm,0.4s								
AC04	**Llanos de Chal**	**4.58**	**8**				**Pn**	**19 37 15.1**	**+0.1**
AC04	**Llanos de Chal**	**4.58**	**8**		*e*P		**Pn**	**19 37 16.0**	**+1.0**
AC04					eS		**Sb**	**19 38 22.2**	**+0.1**
ACHE	**Chepes**	**4.64**	**71**		*e*P		**Pn**	**19 37 19.0**	**+3.0**
ACHE					eS		**Sb**	**19 38 17.8**	**-6.2**
VCA	**Vinchina**	**5.06**	**39**		*e*P		**Pn**	**19 37 25.0**	**+3.2**
VCA					eS		**Sb**	**19 38 36.8**	**+0.7**
APLL	**PUNTA DE LOS L**	**5.08**	**64**		*e*P		**Pn**	**19 37 24.0**	**+2.1**
APLL					eS		**Sn**	**19 38 22.2**	**+2.6**
APLL					eS		**Sn**	**19 38 23.7**	**+4.1**
MRA	**San Martin**	**5.14**	**88**		*e*P		**Pn**	**19 37 24.0**	**+1.2**
MRA					eP		**Pn**	**19 37 24.8**	**+1.9**
MRA					eS		**Sn**	**19 38 24.2**	**+2.9**
MRA					eS		**Sn**	**19 38 28.2**	**+6.9**
GO03	**Copiap**	**5.32**	**15**				**Pn**	**19 37 25.3**	**+0.1**
GO03	**Copiap**	**5.32**	**15**		*e*P		**Pn**	**19 37 26.0**	**+0.8**
GO03					eS		**Sb**	**19 38 36.2**	**-7.3**
AC06	**Mina Casimiro**	**5.52**	**13**		Pn		**Pn**	**19 37 27.4**	**-0.6**
VA04	**Juan Fernndez**	**5.96**	**260**		Pn		**Pn**	**19 37 35.0**	**+1.0**
H03N1	**Juan Fernandez**	**6.01**	**262**		P		**Pn**	**19 37 36.6**	**+2.2**
	baz=118,slow=20,SNR=15								
H03N1					T		T	19 44 07.5	
	baz=89,slow=74,SNR=902								
H03N3	**Juan Fernandez**	**6.02**	**261**		P		**Pn**	**19 37 36.9**	**+2.4**
	baz=118,slow=20,SNR=9.3								
H03N3					T		T	19 44 02.7	
	baz=89,slow=74,SNR=1780								
H03N2	**Juan Fernandez**	**6.03**	**262**		P		**Pn**	**19 37 37.1**	**+2.5**
	baz=118,slow=20,SNR=8.8								
H03N2					T		T	19 44 04.0	
	baz=89,slow=74,SNR=1582								
H03S1	**Juan Fernandez**	**6.05**	**258**		P		**Pn**	**19 37 35.5**	**+0.6**
	SNR=16								
H03S1					T		T	19 43 49.1	
	baz=82								
H03S3	**Juan Fernandez**	**6.05**	**258**		P		**Pn**	**19 37 35.8**	**+0.8**
	SNR=18								
H03S3					T		T	19 43 54.9	
	baz=82								
H03S2	**Juan Fernandez**	**6.07**	**258**		P		**Pn**	**19 37 35.6**	**+0.5**
	SNR=20								
H03S2					T		T	19 44 01.5	
	baz=82								
AC02	**Maricunga**	**6.34**	**22**		Pn		**Pn**	**19 37 40.1**	**+0.5**
AC01	**Pan de Azucar**	**6.67**	**9**		Pn		**Pn**	**19 37 42.3**	**-1.4**
LR03	**Panguipulli**	**6.88**	**184**		Pn		**Pn**	**19 37 45.0**	**-1.5**
LR04	**Corral**	**7.23**	**190**		Pn		**Pn**	**19 37 51.0**	**-0.4**
GO02	**Mina Guanaco**	**7.81**	**15**		Pn		**Pn**	**19 37 57.9**	**-1.8**
PLCA	**Paso Flores**	**8.02**	**173**		P		**Pn**	**19 38 03.6**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=336,slow=11,SNR=47								
	comp=Z,2.9nm,0.3s								
PLCA	**Paso Flores**	**8.02**	**173**		Pn		**Pn**	**19 38 03.1**	**+0.7**
LL04	**Puerto Octay**	**8.15**	**183**		Pn		**Pn**	**19 38 02.6**	**-1.4**
PB14	**IPOC Station P**	**8.19**	**9**		Pn		**Pn**	**19 38 03.9**	**-1.0**
TRQA	**Tornquist**	**9.60**	**126**		Pn		**Pn**	**19 38 24.5**	**+0.6**
PB15	**IPOC Station P**	**9.73**	**13**		Pn		**Pn**	**19 38 26.2**	**+0.3**
LVC	**Limon Verde**	**10.43**	**15**		LR		LR	19 42 35.9	
	comp=Z,130nm,21.5s,baz=204,slow=37								
LVC	**Limon Verde**	**10.43**	**15**		Pn		**Pn**	**19 38 36.3**	**+0.7**
ITQB	**Itaqui**	**13.35**	**81**		Pn		**Pn**	**19 39 14.6**	**-0.6**
ITQB	**Itaqui**	**13.35**	**81**		*e*P		**Pn**	**19 39 14.5**	**-0.6**
CPUP	**Villa Florida**	**14.12**	**67**		P		**Pn**	**19 39 25.3**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=236,slow=14,SNR=4.0								
CPUP					S		**Sn**	**19 42 00.7**	**-0.8**
	comp=Z,7.5nm,0.8s,baz=255,slow=11,SNR=2.4								
	comp=Z,1.4nm,0.4s								
CPUP	**Villa Florida**	**14.12**	**67**		Pn		**Pn**	**19 39 22.4**	**-3.4**
CPUP	**Villa Florida**	**14.12**	**67**		*e*P		**Pn**	**19 39 25.0**	**-0.8**
RODS	**Rosario do Sul**	**14.36**	**85**		*e*P		**Pn**	**19 39 28.4**	**-0.6**
UNIS	**Unistalda (Bra**	**14.82**	**80**		*e*P		**Pn**	**19 39 33.7**	**-1.6**
PLTB	**Pedras Altas**	**15.43**	**91**		Pn		**Pn**	**19 39 41.5**	**-1.8**
PLTB					IAmb		IAmb	19 40 14.9	
	comp=Z,25nm,1.4s								
PLTB	**Pedras Altas**	**15.43**	**91**		*e*P		**Pn**	**19 39 41.4**	**-1.8**
CRSM	**Crissiumal (Br**	**16.23**	**76**		*e*P		**Pn**	**19 39 51.9**	**-1.7**
ALGR	**Alto Alegre (B**	**16.60**	**81**		*e*P		**Pn**	**19 39 56.6**	**-1.8**
LPAZ	**La Paz**	**16.73**	**12**		P		**Pn**	**19 40 01.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=204,slow=8.6,SNR=4.8								
	comp=Z,0.9nm,0.6s								
LPAZ	**La Paz**	**16.73**	**12**		Pn		**Pn**	**19 39 59.5**	**-1.1**
LPAZ	**La Paz**	**16.73**	**12**		*e*P		**Pn**	**19 40 01.5**	**+0.9**
ITAB	**Concordia**	**17.89**	**77**		*e*P		**Pn**	**19 40 13.2**	**-1.2**
AQDB	**Aquidauana**	**18.86**	**54**		*e*P		**Pn**	**19 40 26.6**	**+0.4**
PTGB	**Pitanga**	**19.05**	**70**		*e*P		**P**	**19 40 27.7**	**-0.1**
SIV	**San Ignacio**	**19.32**	**33**		P		**P**	**19 40 30.7**	**+0.1**
	baz=237,slow=14,SNR=4.5								
	comp=Z,1.8nm,0.6s								
RVDE	**Rio Verde (Bra**	**20.38**	**52**		*e*P		**P**	**19 40 40.8**	**-1.4**
PTLB	**Pontes e Lacer**	**20.71**	**37**		P		**P**	**19 40 45.0**	**-0.8**
PTLB					IAmb		IAmb	19 40 46.9	
	comp=Z,9.1nm,1.2s								
PTLB	**Pontes e Lacer**	**20.71**	**37**		*e*P		**P**	**19 40 46.1**	**+0.3**
NNA	**Nana**	**21.18**	**346**		LR		LR	19 47 39.7	
	comp=Z,23nm,18.7s,baz=210,slow=32								
PCMB	**Pacaembu**	**21.34**	**64**		*e*P		**P**	**19 40 51.2**	**-1.3**
EFI	**East Falkland**	**21.40**	**156**		P		**P**	**19 40 52.2**	**-0.7**
EFI					IAmb		IAmb	19 41 34.6	
	comp=Z,37nm,1.4s								
SALV	**Santo Antonio**	**22.24**	**45**		*e*P		**P**	**19 41 01.4**	**-0.8**
VILB	**Vilhena**	**22.39**	**31**		P		**P**	**19 41 02.9**	**-1.0**
VILB					IAmb		IAmb	19 41 07.0	
	comp=Z,13nm,1.3s								
ETMB	**Extrema**	**23.40**	**14**		P		**P**	**19 41 14.2**	**-0.1**
ETMB					IAmb		IAmb	19 41 17.4	
	comp=Z,4.2nm,0.8s								
ETMB	**Extrema**	**23.40**	**14**		*e*P		**P**	**19 41 15.5**	**+1.3**
BB19B	**Bebedouro**	**23.74**	**66**		*e*P		**P**	**19 41 16.7**	**-0.9**
VAO	**Valinhos**	**23.95**	**72**		*e*P		**P**	**19 41 18.0**	**-1.7**
SAML	**Samuel**	**25.00**	**20**		P		**P**	**19 41 28.6**	**-0.5**
PDRB	**Porto dos Gac**	**25.19**	**37**		*e*P		**P**	**19 41 30.5**	**-0.3**
IPMB	**Ipameri, GO**	**25.81**	**61**		*e*P		**P**	**19 41 35.3**	**-1.3**
CLDB	**Colider**	**26.29**	**38**		*e*P		**P**	**19 41 41.6**	**+0.8**
MAN01	**Angra dos Reis**	**26.45**	**75**		*e*P		**P**	**19 41 40.9**	**-1.4**
BDFB	**Brasilia**	**27.48**	**57**		P		**P**	**19 41 50.7**	**-1.0**
	comp=Z,3.6nm,0.8s,baz=276,slow=6.1,SNR=4.4								
	comp=Z,3.6nm,0.8s								
BDFB	**Brasilia**	**27.48**	**57**		P		**P**	**19 41 50.2**	**-1.4**
BDFB					IAmb		IAmb	19 41 55.5	
	comp=Z,5.7nm,1.0s								
BDFB	**Brasilia**	**27.48**	**57**		*e*P		**P**	**19 41 51.3**	**-0.4**
SNDB	**Serra Nova Dou**	**27.96**	**47**		*e*P		**P**	**19 41 55.4**	**-0.4**
DIAM	**Diamantina, MG**	**29.07**	**67**		*e*P		**P**	**19 42 04.6**	**-1.2**
NPGB	**Novo Progresso**	**29.80**	**34**		*e*P		**P**	**19 42 11.5**	**-0.7**
SDBA	**SAO DESIDERIO**	**31.88**	**57**		*e*P		**P**	**19 42 29.6**	**-1.1**
PRPB	**Parauapebas**	**33.45**	**42**		*e*P		**P**	**19 42 44.0**	**-0.2**
MALB	**Monte Alegre**	**34.88**	**32**		*e*P		**P**	**19 42 56.1**	**-0.5**
BOAV	**Boa Vista**	**36.55**	**19**		P		**P**	**19 43 10.0**	**-1.0**
BOAV					IAmb		IAmb	19 43 11.6	
	comp=Z,3.7nm,0.7s								
BOAV	**Boa Vista**	**36.55**	**19**		*e*P		**P**	**19 43 10.6**	**-0.4**
ROSB	**Rosario**	**39.44**	**47**		*e*P		**P**	**19 43 36.8**	**+1.4**
SDV	**Santo Domingo**	**41.42**	**2**		LR		LR	20 02 28.0	
	comp=Z,35nm,18.9s,baz=213,slow=38								
MDP	**Montagnes des**	**41.82**	**29**		LR		LR	20 02 28.2	
	comp=Z,44nm,19.4s,baz=148,slow=38								
RCBR	**Riachuelo**	**42.83**	**59**		LR		LR	20 02 30.8	
	comp=Z,71nm,18.8s,baz=326,slow=37								
TOSP	**Speyside**	**45.11**	**16**		P		**P**	**19 44 21.8**	**+0.3**
BELA	**Belgrano 2**	**48.07**	**170**		P		**P**	**19 44 44.6**	**+0.6**
BELA					IAmb		IAmb	19 45 20.6	
	comp=Z,4.4nm,1.4s								
VNA3	**Neumayer Olymp**	**50.43**	**158**		P		**P**	**19 45 02.8**	**+0.6**
VNA2	**Neumayer--Watz**	**51.08**	**158**		P		**P**	**19 45 07.9**	**+0.9**
	baz=284,slow=9.0								
SNAA	**Sanae**	**52.66**	**158**		P		**P**	**19 45 19.5**	**+0.6**
SNAA	**Sanae**	**52.66**	**158**		P		**P**	**19 45 18.9**	**0.0**
SNAA					IAmb		IAmb	19 45 20.1	
	comp=Z,1.9nm,0.8s								
TROLL	**Troll, Antarti**	**54.37**	**158**		P		**P**	**19 45 32.2**	**+0.7**
TEIG	**Tepich**	**54.99**	**341**		P		**P**	**19 45 36.4**	**0.0**
QSPA	**South Pole Qui**	**57.48**	**180**		P		**P**	**19 45 55.1**	**+1.2**
QSPA					IAmb		IAmb	19 45 56.2	
	comp=Z,4.6nm,0.8s								
TXAR	**Lajitas Array**	**68.75**	**330**		P		**P**	**19 47 10.6**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=159,slow=5.8,SNR=2.7								
	comp=Z,0.2nm,0.6s								
TXAR	**Lajitas Array**	**68.75**	**330**		P		**P**	**19 47 09.2**	**+0.2**
LCAR	**Lake Charles**	**70.83**	**343**		P		**P**	**19 47 21.8**	**+0.4**
LCAR					IAmb		IAmb	19 47 22.7	
	comp=Z,2.0nm,0.6s								
KOWA	**Kowa**	**79.94**	**66**		P		**P**	**19 48 14.2**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=226,slow=4.2,SNR=4.3								
	comp=Z,1.5nm,0.5s								
KOWA	**Kowa**	**79.94**	**66**		P		**P**	**19 48 13.9**	**-0.4**
KOWA					IAmb		IAmb	19 48 50.9	
	comp=Z,7.1nm,1.3s								
BOSA	**Boshof**	**80.47**	**118**		P		**P**	**19 48 17.2**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=229,slow=7.5,SNR=5.6								
	comp=Z,2.4nm,0.8s								
BOSA	**Boshof**	**80.47**	**118**		P		**P**	**19 48 17.1**	**-0.1**
LBTB	**Lobatse**	**82.64**	**115**		P		**P**	**19 48 28.8**	**0.0**
	comp=Z,1.5nm,0.4s,baz=250,slow=4.9,SNR=4.9								
	comp=Z,1.5nm,0.4s								
NVAR	**Mina Array Bea**	**82.98**	**325**		P		**P**	**19 48 31.9**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=150,slow=3.8,SNR=4.0								
	comp=Z,0.5nm,0.7s								
TOA0	**Torodi Ar. Sit**	**83.60**	**70**		P		**P**	**19 48 33.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**83.60**	**70**		P		**P**	**19 48 33.1**	**-0.4**
	comp=Z,3.1nm,0.3s,baz=263,slow=4.8,SNR=2.1								
SCHQ	**Schefferville**	**87.34**	**3**		LR		LR	20 31 59.7	
	comp=Z,14nm,18.1s,baz=70,slow=38								
MATP	**Matopo**	**87.39**	**113**		P		**P**	**19 48 52.6**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=314,slow=4.8,SNR=4.7								
	comp=Z,1.0nm,0.5s								
ASAR	**Alice Springs**	**118.77**	**207**		PKP		**PKPdf**	**19 54 52.0**	**-1.6**
	comp=Z,0.1nm,0.6s,baz=132,slow=1.4,SNR=1.4								
WRA	**Warramunga Arr**	**121.94**	**209**		PKP		**PKPdf**	**19 54 59.5**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=159,slow=1.8,SNR=5.3								
H11S2	**WAKE ISLAND Hyl**	**25.98**	**270**		T		T	22 14 03.4	
	baz=117,slow=75,SNR=476								
H11S1	**WAKE ISLAND Hyl**	**26.00**	**270**		T		T	22 14 04.6	
	baz=117,slow=75,SNR=450								
H11S3	**WAKE ISLAND Hyl**	**26.00**	**270**		T		T	22 14 04.7	
	baz=117,slow=75,SNR=435								
H11N3	**WAKE ISLAND Hyl**	**26.36**	**271**		T		T	22 14 30.4	
	baz=118,slow=76,SNR=83								
H11N1	**WAKE ISLAND Hyl**	**26.38**	**271**		T		T	22 14 32.5	
	baz=118,slow=76,SNR=46								
H11N2	**WAKE ISLAND Hyl**	**26.38**	**271**		T		T	22 14 31.7	
	baz=118,slow=76,SNR=238								
ZALV	**Zalesovo Beam**	**153.06**	**31**		PKPbc		**PKiKP**	**19 56 02.2**	**+0.2**
	comp=Z,4.2nm,0.6s,baz=292,slow=3.6,SNR=20								
MKAR	**Makanchi Array**	**155.78**	**47**		PKPab		**PKPab**	**19 56 25.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=300,slow=4.1,SNR=7.4								

ROM 27 19:39:05.3±0.0, 42°807N±0'003×13°243E±0'005, h10km, ML1.3/4, 1C-1D, Error ellipse: s-maj=0.5km s-min=0.2km az=72.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.10**	**286**		P	Pg	19 39 08.1	+0.2
NRCA					AML	AML		
	comp=N,1515μm,0.1s							
NRCA					AML	AML		
	comp=E,1635μm,0.1s							
MMO1	**Montemonaco**	**0.11**	**34**		P	Pg	19 39 08.6	+0.4
MMO1					S	Sg	19 39 10.8	+0.6
MMO1					AML	AML		
	comp=E,392μm,0.3s							
MMO1					AML	AML		
	comp=N,444μm,0.1s							
MC2	**Monte Cornacci**	**0.11**	**340**		P	Pg	19 39 08.5	+0.3
T1243	**Rocca Santa Ma**	**0.19**	**126**		P	Pg	19 39 09.9	+0.6
T1243					S	Sg	19 39 13.2	+1.1

YSS *eP* **Pb** **19 45 24.6 +0.7**
YSS P **Pg** **19 45 26.8 -1.4**
comp=Z,150nm,0.7s
YSS *ePg* Pg 19 45 31.8 +3.6
YSS AMB AMB 19 45 32.3
comp=Z,210nm,1.1s
YSS *eS* **Sn** **19 45 57.0 -1.2**
YSS *eSg* **Sg** **19 46 18.7 +5.9**
YSS A A 19 46 22.2
comp=Z,410nm,0.9s
YSS A A 19 46 22.2
comp=Z,330nm,0.9s
GRNR Gornyy 3.90 278 *ePN* **Pn** **19 45 20.7 -2.4**
GRNR *e* 19 46 07.9
GRNR pmax pmax
comp=N,10.0nm,0.3s
GRNR pmax pmax
comp=E,70nm,0.3s
GRNR pmax pmax
comp=Z,40nm,0.3s
GRNR smax smax
comp=N,250nm,0.3s
GRNR MLR MLR
comp=E,1µm,13.0s
GRNR MLR MLR
comp=N,910nm,14.0s
GRNR MLR MLR
comp=Z,2µm,13.0s
GRNR Gornyy 3.90 278 *eS* **Sn** **19 46 07.9 -1.5**
KUR Kuril'sk 6.29 143⇑ *ePN* **Pn** **19 45 53.9 -2.1**
KLR Kul'dur 7.06 265 Pn **Pn** **19 46 05.5 -1.0**
comp=Z,1.6nm,0.3s,baz=72,slow=16,SNR=19
KLR Sn Sn 19 47 12.2 -15
comp=Z,2.3nm,0.3s,baz=24,slow=11,SNR=1.8
KLR Lg Lg 19 47 58.9
comp=Z,3.9nm,0.3s,baz=347,slow=19,SNR=4.2
comp=Z,5.2nm,0.3s
KLR Kul'dur 7.06 265 *d i* PN **Pn** **19 46 05.0 -1.5**
KLR pmax pmax
comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra 9.45 233 Pn **Pn** **19 46 38.4 -0.9**
USA0B Ussuriysk Arra 9.45 233 PN **Pn** **19 46 38.4 -0.9**
USRK Ussuriysk Ar. 9.45 233 Pn **Pn** **19 46 38.2 -1.1**
comp=Z,1.7nm,0.3s,baz=43,slow=15,SNR=20
USRK Lg Lg 19 49 11.6
comp=Z,0.4nm,0.3s,baz=36,slow=30,SNR=4.2
USRK LR LR 19 49 48.0
comp=Z,285nm,21.7s,baz=68,slow=35
comp=Z,6.9nm,0.5s
USRK Ussuriysk Ar. 9.45 233 Pn **Pn** **19 46 38.1 -1.2**
PEA0B Petropavlovsk- 9.81 68 Pn **Pn** **19 46 45.9 +1.8**
PEA0B Petropavlovsk- 9.81 68 PN **Pn** **19 46 45.9 +1.8**
PETK Petropavlovsk- 9.81 68 Pn **Pn** **19 46 45.1 +0.9**
comp=Z,0.5nm,0.3s,baz=232,slow=10,SNR=6.8
PETK LR LR 19 50 55.4
comp=Z,258nm,18.5s,baz=259,slow=40
comp=Z,1.0nm,0.6s
PETK Petropavlovsk- 9.81 68 Pn **Pn** **19 46 46.1 +1.9**
PETK Petropavlovsk- 9.81 68 PN **Pn** **19 46 46.1 +1.9**
ZEA Zeya 9.97 296 *ePN* Pn 19 46 52.3 +5.8
ZEA *eS* **Sn** **19 48 45.3 +6.5**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA smax smax
comp=E,10.0nm,0.6s
ZEA MLR MLR
comp=E,700nm,13.0s
ZEA MLR MLR
comp=Z,600nm,11.0s
MA2 Magadan 10.35 24 LR LR 19 51 26.8
comp=Z,108nm,20.0s,baz=276,slow=41
MA2 Magadan 10.35 24 Pn **Pn** **19 46 51.8 +0.3**
MA2 Magadan 10.35 24 PN **Pn** **19 46 51.8 +0.3**
MDJ Mudanjiang 10.47 241 P **Pn** **19 46 56.5 +3.3**
MDJ sP 19 47 02.0
MDJ S **Sn** **19 48 53.8 +2.8**
MDJ sS 19 49 00.0
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ LR LR
comp=Z,740nm,9.5s
MDJ LR LR
comp=Z,550nm,15.7s
MDJ LR LR
comp=Z,1µm,14.3s
BNX BinXian 11.12 251 ⇑P **Pn** **19 47 02.0 -0.2**
BNX S **Sn** **19 49 07.0 0.0**
BNX LR LR
comp=Z,1µm,9.3s
BNX LR LR
comp=Z,1µm,11.1s
BNX LR LR
comp=Z,1µm,11.3s
CN2 Changchun 13.35 247 *eP* **Pn** **19 47 32.8 +0.2**
CN2 *eS* **Sn** **19 50 03.3 +1.9**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 pmax pmax
comp=Z,100nm,4.2s
CN2 LR LR
comp=Z,700nm,12.0s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,800nm,14.0s
YAK Yakutsk 13.64 334 Pn **Pn** **19 47 36.9 +0.5**
baz=153,slow=4.5,SNR=2.2
YAK Lg Lg 19 51 27.6
comp=Z,0.1nm,0.3s,baz=225,slow=17,SNR=1.3
YAK LR LR 19 53 24.9
comp=Z,65nm,21.5s,baz=62,slow=40
comp=Z,2.1nm,0.5s
YAK Yakutsk 13.64 334 Pn **Pn** **19 47 36.3 -0.1**
YAK Yakutsk 13.64 334 *eP* **Pn** **19 47 36.9 +0.5**
YAK *eS* **Sn** **19 50 08.9 +0.5**
YAK pmax pmax
comp=Z,5.0nm,0.7s
YAK pmax pmax
comp=N,2.0nm,0.7s
YAK smax smax
comp=N,53nm,2.9s
YAK smax smax
comp=E,41nm,2.1s
YAK MLR MLR
comp=Z,148nm,13.0s
YAK MLR MLR
comp=N,144nm,15.0s
YAK MLR MLR
comp=E,61nm,13.0s
MAJO Matsushiro 14.19 194⇑ *eP* **Pn** **19 47 43.8 -0.3**
MAJO pmax pmax
comp=Z,4.0nm,0.9s
MJAR Matsushiro Arr 14.19 194 Pn **Pn** **19 47 43.2 -0.9**
comp=Z,1.7nm,0.9s,baz=13,slow=12,SNR=3.8
MJAR LR LR 19 52 22.9
comp=Z,79nm,21.0s,baz=30,slow=34
HIA Hailar 14.73 274 Pn **Pn** **19 47 51.4 -0.1**
HIA Hailar 14.73 274 *c i* P **Pn** **19 47 51.5 0.0**
HIA pmax pmax
comp=Z,26nm,1.7s
INU Inuyama 15.55 197 Pn **Pn** **19 48 04.0 +1.5**
KSRS Korea Array 16.62 224 Pn **Pn** **19 48 15.4 -0.8**
comp=Z,0.1nm,0.3s,baz=34,slow=12,SNR=1.7
KSRS LR LR 19 54 07.8
comp=Z,90nm,20.7s,baz=55,slow=35
comp=Z,0.8nm,0.7s
KSAR Wonju Array Be 16.65 225 **Pn** **19 48 17.4 +0.8**
KSAR Wonju Array Be 16.65 225 P **Pn** **19 48 17.4 +0.8**
JHJ Hachijo jima 2 17.38 188 LR LR 19 55 25.8
comp=Z,92nm,18.1s,baz=42,slow=38
SHEM Shemya Is, Ala 19.70 71 P **Pn** **19 48 54.9 +1.0**
comp=Z,0.9nm,0.3s,baz=301,slow=4.2,SNR=6.2
SHEM LR LR 19 55 50.6
comp=Z,88nm,21.6s,baz=281,slow=35
comp=Z,24nm,0.8s
SMY Shemya 19.70 71 **P** **19 48 52.5 0.0**
SMY IAmb IAmb 19 48 55.8
comp=Z,25nm,0.8s
SMY Shemya 19.70 71 P **P** **19 48 52.5 0.0**
SMY pmax pmax
comp=Z,25nm,0.8s
TIXI Tiksi 22.22 349 LR LR 19 59 18.6
comp=Z,20nm,21.3s,baz=338,slow=40
AMKA Amchitka 23.08 73 P **P** **19 49 28.7 -0.2**
ULN Ulaanbaatar 23.20 278 P **P** **19 49 29.3 -1.1**
ULN Ulaanbaatar 23.20 278⇑ *eP* **P** **19 49 29.0 -1.4**
ULN pmax pmax
comp=Z,9.0nm,1.2s
HHC Hu-ho-hao-te 23.50 258 *eP* **P** **19 49 32.5 -0.9**
HHC S **S** **19 53 41.0 -6.9**
HHC pmax pmax
comp=Z,52nm,0.8s
HHC pmax pmax
comp=Z,170nm,6.1s
HHC LR LR
comp=Z,740nm,10.8s
HHC LR LR
comp=Z,690nm,9.8s
HHC LR LR
comp=Z,970nm,11.1s
SONM Songino Array 23.63 278 P **P** **19 49 33.0 -1.7**
comp=Z,1.2nm,0.7s,baz=59,slow=7.5,SNR=11
SONM Lg Lg 19 56 44.1
baz=74,slow=30
SONM LR LR 19 59 49.6
comp=Z,199nm,19.0s,baz=77,slow=39
comp=Z,1.2nm,0.7s
SONM Songino Array 23.63 278 P **P** **19 49 32.9 -1.8**
SONM Songino Array 23.63 278 P **P** **19 49 32.9 -1.8**
SONM pmax pmax
comp=Z,3.0nm,1.0s
ZAK Zakamensk 24.82 285 *eP* **P** **19 49 45.2 -0.4**
ZAK *e* 19 50 23.5
ZAK pmax pmax
comp=Z,13nm,1.4s
ZAK pmax pmax
comp=Z,6.0nm,1.4s
KIWB Kanaga Island 25.14 71 P **P** **19 49 47.5 -0.9**
LZH Lanzhou 31.20 258 *eP* **P** **19 50 42.0 -0.9**
LZH pP sP 19 50 49.5 +5.5
LZH pmax pmax
comp=Z,14nm,1.2s
LZH LR LR
comp=Z,280nm,14.9s
LZH LR LR
comp=Z,350nm,15.8s
LZH LR LR
comp=Z,450nm,16.1s
GTA Gaotai 31.76 266 *eP* **P** **19 50 47.3 -0.4**
GTA pP sP 19 50 51.3 +2.4
GTA sP pP 19 50 54.5 +5.9
GTA pmax pmax
comp=Z,2.0nm,1.7s
GTA pmax pmax
comp=Z,82nm,4.7s
GTA LR LR
comp=Z,120nm,17.8s
GTA LR LR
comp=Z,170nm,17.8s
GTA LR LR
comp=Z,180nm,18.2s
NRIK Noril'sk 31.93 327 LR LR 20 04 06.5
comp=Z,79nm,18.7s,baz=78,slow=37
N16K Nishlik Lake 33.69 50 P **P** **19 51 04.4 +0.1**
baz=280
O16K Kokwok River B 34.19 51 P **P** **19 51 08.5 -0.1**
baz=281
CHNA Chernabura Isl 34.57 60 P **P** **19 51 12.2 +0.2**
baz=287
CNBA Chernabura Isl 34.57 60 P **P** **19 51 11.3 -0.7**
TTA Tatalina 34.61 45 P **P** **19 51 12.4 +0.1**
baz=278
O17K Koliganek Bris 34.65 51 P **P** **19 51 13.0 +0.5**
baz=282,SNR=6.2
DGZ Jazzator, Alta 34.69 291⇑ *eP* **P** **19 51 13.2 -0.1**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
ZAA0 Zalesovo Array 34.72 299 P **P** **19 51 13.9 +0.6**
ZALV Zalesovo Beam 34.72 299 P **P** **19 51 11.7 -1.5**
comp=Z,1.7nm,0.7s,baz=69,slow=7.9,SNR=4.0
ZALV PcP **PcP** **19 53 47.1 +0.2**
comp=Z,1.5nm,0.7s,baz=71,slow=2.2,SNR=5.8
ZALV LR LR 20 06 23.5
comp=Z,207nm,18.8s,baz=54,slow=38
comp=Z,1.7nm,0.7s
ZALV Zalesovo Beam 34.72 299 P **P** **19 51 11.2 -2.1**
N18K Kilae Creek 35.05 49 P **P** **19 51 16.5 +0.4**
baz=281
P17K Kvichak River 35.10 52 P **P** **19 51 17.1 +0.7**
baz=283
IMAR Indian Mountai 35.23 40 P **P** **19 51 17.4 -0.1**
F21K Alatna River 35.23 37 P **P** **19 51 17.0 -0.6**
baz=274,SNR=5.3
L19K White Mountain 35.26 46 P **P** **19 51 18.1 +0.2**
baz=280
J20K Nowinta River 35.27 43 P **P** **19 51 17.9 0.0**
J20K IAmb IAmb 19 51 19.4
comp=Z,10.0nm,1.0s
J20K Nowinta River 35.27 43 P **P** **19 51 18.4 +0.5**
baz=278,SNR=7.8
G21K Allakaket 35.27 39 P **P** **19 51 18.1 +0.2**
baz=275,SNR=8.6
K20K Telida 35.42 44 P **P** **19 51 20.0 +0.7**
baz=279
R17K Ugashik Creek 35.51 54 P **P** **19 51 21.0 +1.0**
baz=285
M19K Big River Lodg 35.53 47 P **P** **19 51 20.5 +0.3**
baz=281
O18K Koktuh Hills 35.56 50 P **P** **19 51 21.2 +0.7**
baz=283
H21K Melozitna Rive 35.65 40 P **P** **19 51 21.0 -0.1**
baz=277
P18K Big Mountain, 35.66 51 P **P** **19 51 21.4 +0.1**
baz=284
L20K Farewell, AK 35.66 46 P **P** **19 51 21.6 +0.3**
baz=280
N19K Bonanza Creek 35.70 48 P **P** **19 51 22.2 +0.4**
baz=282
F22K John River 35.71 37 P **P** **19 51 21.7 0.0**
baz=275
E22K Anaktuvuk Pass 35.80 36 P **P** **19 51 22.4 0.0**
baz=274
G22K Bettles 36.02 38 P **P** **19 51 24.0 -0.3**
baz=276
I21K Tanana 36.05 41 P **P** **19 51 25.3 +0.7**
baz=278
CHUM Lake Minchumin 36.11 43 P **P** **19 51 25.8 +0.7**
baz=280
M20K Styx River 36.12 46 P **P** **19 51 25.9 +0.6**
baz=282
C23K Itkillik River 36.12 33 P **P** **19 51 25.3 +0.2**
baz=273
D23K Nanushuk River 36.15 34 P **P** **19 51 25.6 +0.2**
baz=274
H22K Ishtalitna Cre 36.20 39 P **P** **19 51 26.3 +0.4**
baz=278
CAST Castle Rocks 36.29 44 P **P** **19 51 27.6 +0.9**
CAST Castle Rocks 36.29 44 P **P** **19 51 27.0 +0.3**
baz=280,SNR=6.2
PPLA Purkeypile 36.34 45 P **P** **19 51 28.0 +0.7**
baz=281
TOLK Toolik Lake Re 36.58 35 P **P** **19 51 29.7 +0.5**
TOLK Toolik Lake Re 36.58 35 P **P** **19 51 29.2 +0.1**
baz=276
MLY Manley 36.59 41 P **P** **19 51 29.0 -0.3**
MLY Manley 36.59 41 P **P** **19 51 29.5 +0.2**
baz=279
G23K Bananza Creek 36.63 38 P **P** **19 51 29.9 +0.3**
baz=278,SNR=5.5
BPAW Bear Paw Mtn. 36.65 42 P **P** **19 51 30.1 +0.3**
baz=280
O20K Slope Mountain 36.77 49 P **P** **19 51 30.9 +0.1**
baz=284
C24K Franklin Bluff 36.79 33 P **P** **19 51 30.7 -0.1**
baz=275
D24K Happy Valley 36.80 34 P **P** **19 51 30.8 -0.1**
baz=276
GOMU GeErMu 36.85 266 P **P** **19 51 32.0 -0.1**
GOMU pP sP 19 51 35.0 +1.7
GOMU sP pP 19 51 37.0 +4.0
GOMU SS SS 19 59 38.8 -19
GOMU pmax pmax
comp=Z,4.0nm,0.5s
GOMU pmax pmax
comp=Z,87nm,5.5s
GOMU LR LR
comp=Z,130nm,12.6s
GOMU LR LR
comp=Z,240nm,13.3s
GOMU LR LR
comp=Z,230nm,13.4s
H23K Yukon River 36.96 39 P **P** **19 51 32.9 +0.6**
H23K IAmb IAmb 19 51 34.1
comp=Z,9.8nm,1.1s
H23K Yukon River 36.96 39 P **P** **19 51 33.0 +0.7**
baz=279,SNR=8.8
E24K Your Creek 37.04 36 P **P** **19 51 33.4 +0.3**
baz=277,SNR=7.9
TRF Thorofare Moun 37.08 43 P **P** **19 51 34.2 +0.6**
TRF IAmb IAmb 19 51 35.4
comp=Z,6.6nm,0.9s
TRF Thorofare Moun 37.08 43 P **P** **19 51 34.2 +0.6**
baz=282
WMQ Urumqi 37.15 282 *eP* **P** **19 51 37.5 +3.2**
WMQ LR LR
comp=Z,230nm,9.5s
WMQ LR LR
comp=Z,240nm,9.9s
WMQ LR LR
comp=Z,130nm,13.3s
I23K Minto, Yukon-K 37.15 41 P **P** **19 51 34.0 +0.1**
baz=280
F24K Squaw Lake 37.34 36 P **P** **19 51 35.5 -0.1**
baz=278
NEA2 Nenana 37.38 41 P **P** **19 51 35.4 -0.5**
NEA2 Nenana 37.38 41 P **P** **19 51 35.6 -0.3**
baz=281
MCK McKinley 37.61 43 P **P** **19 51 38.4 +0.5**
MCK IAmb IAmb 19 51 39.8
comp=Z,12nm,1.0s
MCK McKinley 37.61 43 P **P** **19 51 38.4 +0.5**
MCK pmax pmax
comp=Z,12nm,1.0s
MCK McKinley 37.61 43 P **P** **19 51 38.5 +0.5**
baz=283
H24K Noodor Dome 37.63 39 P **P** **19 51 38.4 +0.4**
H24K Noodor Dome 37.63 39 P **P** **19 51 38.5 +0.4**
baz=281
G24K Hadweenzic Riv 37.64 38 P **P** **19 51 38.5 +0.4**
baz=280,SNR=5.7
D25K Kavik River 37.65 33 P **P** **19 51 38.0 -0.2**
baz=278,SNR=5.3
MDM Murphy Dome 37.66 41 P **P** **19 51 38.8 +0.6**
WRH Wood River Hil 37.81 41 P **P** **19 51 39.5 -0.1**
WRH IAmb IAmb 19 51 40.7
comp=Z,11nm,1.0s
COLA College 37.83 41 *c e* P **P** **19 51 39.8 +0.1**
COLA pmax pmax
comp=Z,6.0nm,1.0s
RC01 Rabbit Creek A 37.89 47 P **P** **19 51 40.1 -0.1**
baz=285
CCB Clear Creek Bu 37.90 41 P **P** **19 51 40.5 +0.3**
POKR Poker Plat Res 37.95 40 P **P** **19 51 40.7 -0.1**
baz=282
WAT1 Susitna Watana 37.99 44 P **P** **19 51 41.5 +0.4**
baz=284
C26K Camden Bay 38.08 32 P **P** **19 51 41.5 -0.2**
baz=278
E25K Arctic Village 38.12 35 P **P** **19 51 41.7 -0.5**
baz=280
F25K Christian Rive 38.18 36 P **P** **19 51 43.0 +0.2**
baz=280
IL31 38.26 41 P **P** **19 51 42.5 -0.8**
IL31 IAmb IAmb 19 51 44.5
comp=Z,4.4nm,0.6s
ILAR Eielson Array 38.26 41 P **P** **19 51 43.3 0.0**
comp=Z,3.6nm,0.7s,baz=278,slow=8.5,SNR=35
comp=Z,3.6nm,0.7s
ILAR Eielson Array 38.26 41 P **P** **19 51 42.7 -0.7**
HDA Harding Lake 38.31 41 P **P** **19 51 43.7 -0.1**
HDA Harding Lake 38.31 41 P **P** **19 51 43.7 -0.1**
baz=283
SML Sawmill 38.35 46 P **P** **19 51 44.4 +0.2**
baz=285
H25K Birch Creek 38.37 38 P **P** **19 51 44.5 +0.2**
baz=282
KNK Knik Glacier 38.39 46 P **P** **19 51 45.1 +0.5**
baz=286
DHY Denali Highway 38.45 44 P **P** **19 51 45.1 -0.1**
baz=285
C27K Jago River 38.53 33 P **P** **19 51 46.0 +0.4**
baz=279,SNR=7.3
PWL Port Wells 38.61 47 P **P** **19 51 47.4 +1.0**
baz=287
BMAR Burnt Mountain 38.62 36 P **P** **19 51 46.8 +0.5**
PRP Porcupine Dome 38.65 39 P **P** **19 51 46.8 0.0**
PRP IAmb IAmb 19 51 48.3
comp=Z,12nm,0.8s
PRP Porcupine Dome 38.65 39 P **P** **19 51 47.0 +0.2**
baz=283,SNR=12
F26K Sheenjek River 38.73 36 P **P** **19 51 47.4 +0.1**
baz=281,SNR=5.2
SCM Sheep Creek Mo 38.80 45 P **P** **19 51 48.0 0.0**
baz=286
J25K Salcha River, 38.93 41 P **P** **19 51 49.1 0.0**
baz=284
G26K Porcupine Rive 39.02 37 P **P** **19 51 50.0 +0.3**
baz=283,SNR=7.2
MK31 Makanchi Array 39.04 289 P **P** **19 51 49.2 -0.9**
MK31 IAmb IAmb 19 51 54.0
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 39.04 289 *d i* P **P** **19 51 49.0 -1.2**
MKAR Makanchi Array 39.04 289 P **P** **19 51 49.1 -1.0**
comp=Z,7.3nm,0.7s,baz=72,slow=8.2,SNR=28
MKAR LR LR 20 07 50.0
comp=Z,25nm,21.0s,baz=80,slow=36
comp=Z,7.3nm,0.7s
MKAR Makanchi Array 39.04 289 P **P** **19 51 49.4 -0.8**
MKAR Makanchi Array 39.04 289 *i* P **P** **19 51 49.4 -0.8**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
PZH PanZhiHua 39.16 248 P **P** **19 51 53.3 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,5.8s
GLI Glacier Island 39.18 47 P **P** **19 51 51.0 -0.1**
baz=287
MAKZ Makanchi 39.23 289 P **P** **19 51 51.2 -0.5**
MAKZ Makanchi 39.23 289 P **P** **19 51 51.2 -0.5**
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
M24K Tolsona, Glenn 39.24 45 P **P** **19 51 51.3 -0.4**
baz=287
RIDG Independent Ri 39.37 42 P **P** **19 51 52.6 -0.2**
baz=286
KURK Kurchatov 39.45 296 P **P** **19 51 52.3 -1.2**
KURK IAmb IAmb 19 51 57.1
comp=Z,16nm,0.8s
KURK Kurchatov 39.45 296 *d i* P **P** **19 51 52.2 -1.2**
KURK pmax pmax
comp=Z,4.0nm,0.8s
KLU Klutina 39.54 46 P **P** **19 51 54.6 +0.4**
baz=288
E27K Coleen River 39.56 35 P **P** **19 51 54.1 -0.2**
baz=283
KMI Kunming 39.61 245⇑ P **P** **19 51 58.3 +3.0**
KMI pmax pmax
comp=Z,10.0nm,0.5s
SCRK Sand Creek 39.68 41 P **P** **19 51 54.4 -1.0**
SCRK Sand Creek 39.68 41 P **P** **19 51 55.2 -0.2**
baz=286
J26L Joseph Creek 39.71 41 P **P** **19 51 55.3 -0.3**
baz=286
G27K Doyon Strip 39.87 37 P **P** **19 51 57.4 +0.6**
baz=284,SNR=8.2
H27K Steamboat Moun 40.07 38 P **P** **19 51 59.2 +0.7**
baz=285,SNR=9.4
N25K Chitina, Valde 40.11 45 P **P** **19 51 59.5 +0.6**
baz=288
I27K Kandik River 40.20 39 P **P** **19 52 00.2 +0.5**
baz=286,SNR=7.0
BMRM Bremner River 40.31 46 P **P** **19 52 01.1 +0.6**
baz=289
K27K Chicken 40.47 41 P **P** **19 52 01.6 -0.2**
K27K Chicken 40.47 41 P **P** **19 52 01.9 +0.1**
baz=287
M26K Nabesna, AK 40.57 44 P **P** **19 52 02.6 -0.1**
M26K Nabesna, AK 40.57 44 P **P** **19 52 03.5 +0.8**
baz=288
EGAK Eagle 40.62 40 P **P** **19 52 02.4 -0.6**
EGAK IAmb IAmb 19 52 03.5
comp=Z,9.3nm,0.8s
EGAK Eagle 40.62 40 P **P** **19 52 02.4 -0.6**
baz=287,SNR=12
L27K Beaver Creek, 40.87 42 P **P** **19 52 04.6 -0.6**
L27K IAmb IAmb 19 52 14.7
comp=Z,4.9nm,0.5s
L27K Beaver Creek, 40.87 42 P **P** **19 52 05.6 +0.4**

baz=289,SNR=6.6
BCAR Beaver Creek A 40.89 42 P **P** **19 52 05.4 +0.1**
M27K Edge Creek, AK 41.08 43 P **P** **19 52 07.7 +0.7**
baz=289,SNR=5.7
I29M Ogilvie Camp, 41.59 38 P **P** **19 52 10.5 -0.6**
baz=289
CTG Chitna Glacier 41.81 45 P **P** **19 52 13.6 +0.6**
baz=291
EPYK Eagle Plains 41.88 37 P **P** **19 52 13.8 +0.4**
baz=289
O28M Mount Upton 42.40 45 P **P** **19 52 18.5 +0.5**
baz=292
INK Inuvik 42.42 33 P **P** **19 52 17.6 -0.1**
comp=Z,4.2nm,0.8s,baz=324,slow=11,SNR=7.3
comp=Z,4.2nm,0.8s
INK Inuvik 42.42 33 P **P** **19 52 17.5 -0.2**
INK IAmb IAmb 19 52 22.1
comp=Z,9.5nm,1.2s
INK Inuvik 42.42 33 P **P** **19 52 17.4 -0.2**
baz=289
K29M Barlow Dome 42.43 40 P **P** **19 52 18.2 +0.1**
baz=291
M29M Somme Creek 42.54 42 P **P** **19 52 19.7 +0.8**
baz=292
F31M Tsiigehtchic 42.63 34 P **P** **19 52 19.3 -0.2**
baz=290
BVAR Borovoye Array 43.03 303 LR LR 20 11 43.2
comp=Z,91nm,18.0s,baz=62,slow=38
BRVK Borovoye 43.07 303 P **P** **19 52 23.5 +0.3**
BRVK Borovoye 43.07 303ñ *e*P **P** **19 52 22.5 -0.7**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
M30M Minto, Yukon 43.21 42 P **P** **19 52 24.9 +0.7**
baz=293
LSA Lhasa 43.41 261 P **P** **19 52 26.2 -0.6**
LSA IAmb IAmb 19 52 31.5
comp=Z,10nm,1.0s
LSA Lhasa 43.41 261 P **P** **19 52 27.0 +0.3**
LSA Lhasa 43.41 261 P **P** **19 52 26.2 -0.6**
LSA pmax pmax
comp=Z,10.0nm,1.0s
N30M Aishikik Lake 43.52 43 P **P** **19 52 27.3 +0.5**
baz=294
HYT Haines Junctio 43.59 44 P **P** **19 52 28.0 +0.5**
HYT Haines Junctio 43.59 44 P **P** **19 52 28.3 +0.8**
baz=294
P29M Windy Craggy 43.98 46 P **P** **19 52 31.7 +1.2**
baz=295
N31M Braeburn, Yuko 44.08 43 P **P** **19 52 32.0 +0.7**
baz=294
P30M Million Dollar 44.13 45 P **P** **19 52 32.1 +0.4**
baz=295
O30N Mendenhall 44.24 44 P **P** **19 52 33.0 +0.4**
baz=295
M31M Drury Creek, Y 44.38 42 P **P** **19 52 34.4 +0.8**
baz=295
PLBC Pleasant Camp 44.69 46 P **P** **19 52 37.1 +1.0**
baz=296
C36M Paulatuk 45.19 30 P **P** **19 52 38.9 -1.0**
baz=296
MMPY Sheldon Lake, 45.52 40 P **P** **19 52 43.0 +0.2**
baz=296
P32M Atlin 45.83 45 P **P** **19 52 45.7 +0.4**
baz=298
SHL Shillong 45.85 257 P **P** **19 52 45.0 -1.0**
SHL Shillong 45.85 257 P **P** **19 52 45.0 -1.0**
SHL pmax pmax
comp=Z,12nm,1.0s
AAK Ala-Archa 45.95 288 P **P** **19 52 46.8 +0.3**
AAK IAmb IAmb 19 52 50.7
comp=Z,4.7nm,0.8s
AAK Ala-Archa 45.95 288ñ *e*P **P** **19 52 47.4 +0.9**
AAK pmax pmax
comp=Z,4.0nm,0.9s
P33M Teslin, Yukon 45.95 44 P **P** **19 52 46.7 +0.5**
baz=298
KSH Kashi 46.84 283 P P 19 53 00.5 +7.0
KSH pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 47.00 243 P **P** **19 52 54.3 -0.5**
comp=Z,1.8nm,1.0s,baz=24,slow=6.9,SNR=3.0
CMAR LR LR 20 14 13.7
comp=Z,38nm,20.1s,baz=40,slow=38
comp=Z,1.8nm,1.0s
CMAR Chiang Mai Arr 47.00 243 P **P** **19 52 54.4 -0.4**
R33M Jennings River 47.16 44 P **P** **19 52 56.9 +1.1**
baz=299
ARU Arti 47.44 311 LR LR 20 15 17.6
comp=Z,55nm,20.1s,baz=58,slow=39
ARU Arti 47.44 311 P **P** **19 52 58.1 +0.2**
ARU IAmb IAmb 19 53 01.1
comp=Z,5.4nm,0.9s
ARU Arti 47.44 311*d i* P **P** **19 52 58.2 +0.4**
ARU 19 54 44.5
ARU S **S** **19 59 55.9 +3.3**
ARU pmax pmax
comp=Z,6.0nm,0.9s
ARU MLR MLR
comp=Z,123nm,17.0s
S34M Telegraph Cree 47.83 46 P **P** **19 53 01.7 +0.9**
baz=300
JIRN Jiri 47.96 264 *e*P **P** **19 53 05.4 +2.7**
GUN Gumba 47.98 264 *e*P **P** **19 53 04.8 +2.0**
WRAK Wrangell Islan 48.02 48 P **P** **19 53 03.6 +1.3**
baz=301
DLBC Dease Lake 48.06 45 LR LR 20 16 37.4
comp=Z,55nm,18.1s,baz=294,slow=40
DLBC Dease Lake 48.06 45 P **P** **19 53 03.1 +0.3**
baz=301
KK31 Karatay Array 48.09 291 P **P** **19 53 03.5 +0.4**
KK31 Karatay Array 48.09 291 P **P** **19 53 03.5 +0.4**
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 48.09 291 P **P** **19 53 03.8 +0.7**
KKAR Karatay Array 48.09 291 P **P** **19 53 03.8 +0.7**
CRAG Craig 48.14 50 P **P** **19 53 03.7 +0.5**
baz=301
RAMN Ramite 48.19 263 *e*P **P** **19 53 06.1 +1.8**
comp=Z,27nm,0.6s
PKI Pulchoki 48.52 264 *e*P **P** **19 53 09.5 +2.6**
comp=Z,7.5nm,0.7s
PKIN Phulchoki 48.52 264 *e*P **P** **19 53 09.4 +2.5**
comp=Z,8.0nm,0.6s
GKN Gorkha 48.71 265 *e*P **P** **19 53 10.6 +2.4**
comp=Z,28nm,1.0s
DANN Dangsing 49.03 266 *e*P **P** **19 53 13.9 +3.1**
BTK Batken 49.70 287 P **P** **19 53 15.4 -0.1**
BTK IAmb IAmb 19 53 19.4
comp=Z,5.8nm,0.8s
BTK Batken 49.70 287 P **P** **19 53 15.4 -0.1**
BTK pmax pmax
comp=Z,6.0nm,0.9s
LVZ Lovozero 50.44 332 P **P** **19 53 22.2 +1.4**
LVZ Lovozero 50.44 332 P **P** **19 53 22.2 +1.4**
LVZ pmax pmax
comp=Z,74nm,1.5s
ABKAR Akbulak array 50.60 303 P **P** **19 53 21.3 -0.9**
ABKAR IAmb IAmb 19 53 25.9
comp=Z,6.6nm,0.8s
ABKAR Akbulak array 50.60 303 P **P** **19 53 21.1 -1.1**
GAR Garm 50.65 286 P **P** **19 53 21.8 -1.1**
AKTO Aktyubinsk 50.95 305 LR LR 20 17 01.1
comp=Z,109nm,19.5s,baz=47,slow=38
CHGR Chuyangaron 51.57 287 P **P** **19 53 28.6 -1.1**
CHGR Chuyangaron 51.57 287 P **P** **19 53 28.6 -1.1**
CHGR pmax pmax
comp=Z,19nm,0.7s
ARCES ARCESS Array B 51.90 337 LR LR 20 18 51.0
comp=Z,36nm,19.1s,baz=260,slow=40
KMSI Cibinong 52.08 204 P **P** **19 53 34.0 +0.5**
comp=Z,656nmcomp=Z,30nm,0.7s
NIL Nilore 52.20 279 P **P** **19 53 34.8 +0.4**
NIL Nilore 52.20 279 P **P** **19 53 34.8 +0.4**
NIL pmax pmax
comp=Z,18nm,0.9s
KBL Kabul 54.27 283 P **P** **19 53 50.0 +0.2**
KBL IAmb IAmb 19 53 52.9
comp=Z,13nm,1.4s
KBL Kabul 54.27 283 P **P** **19 53 50.0 +0.2**
KBL pmax pmax
comp=Z,13nm,1.4s
SUMG Summit 57.33 0 P **P** **19 54 11.4 -0.1**
SUMG IAmb IAmb 19 54 18.7
comp=Z,8.9nm,1.2s
SUMG Summit 57.33 0 P **P** **19 54 11.4 -0.1**
SUMG pmax pmax
comp=Z,9.0nm,1.2s
SUMG Summit 57.33 0 *i* P **P** **19 54 12.0 +0.5**
FINES FINESS Array B 57.53 329 P **P** **19 54 11.9 -0.6**
comp=Z,4.7nm,0.8s,baz=37,slow=5.8,SNR=3.9
comp=Z,4.7nm,0.8s
OBN Obninsk 58.14 319 *i* P **P** **19 54 14.2 -2.7**
OBN *i* 19 55 05.5
OBN *i* 19 56 23.6
OBN pmax pmax
comp=Z,3.0nm,0.7s
OBN MLR MLR
comp=Z,76nm,14.0s
GEYT Alibeck 58.68 293 P **P** **19 54 21.8 +0.7**
GEYT IAmb IAmb 19 54 25.1
comp=Z,4.5nm,0.7s
H04D Lebanon 60.07 55 P **P** **19 54 30.6 +0.1**
baz=313
I03D Drain, OR 60.31 56 P **P** **19 54 33.1 +1.1**
baz=313
NEW Newport 60.35 49 P **P** **19 54 32.1 -0.3**
baz=314
J01E Myrtle Point 60.36 57 P **P** **19 54 33.6 +1.2**
baz=313
I04A Tendick Farm, 60.74 56 P **P** **19 54 35.5 +0.4**
baz=313
K02D Willamette Mer 60.82 57 P **P** **19 54 36.1 +0.4**
baz=313
I05D Terrebonne, OR 60.93 55 P **P** **19 54 36.7 +0.3**
baz=313
L02F Cave Junction 61.26 58 P **P** **19 54 39.4 +0.7**
baz=313
J04D Umpqua Nationa 61.28 56 P **P** **19 54 39.5 +0.5**
baz=314
PINE Pine Mountain 61.51 55 P **P** **19 54 41.2 +0.6**
J05D Fort Rock, OR 61.71 56 P **P** **19 54 42.4 +0.6**
baz=314,SNR=5.7
L04D Klamath Falls 61.88 57 P **P** **19 54 43.4 +0.4**
baz=314
YBH Yreka Blue Hor 61.99 58 LR LR 20 21 04.4
comp=Z,18nm,18.4s,baz=308,slow=36
YBH Yreka Blue Hor 61.99 58 P **P** **19 54 44.8 +1.1**
YBH Yreka Blue Hor 61.99 58 P **P** **19 54 44.8 +1.1**
YBH pmax pmax
comp=Z,12nm,1.5s
NB2 NORSAR Subarra 62.25 336 P **P** **19 54 44.7 -0.4**
comp=Z,3.9nm,1.0s,baz=32,slow=6.9
NOA NORSAR Array B 62.25 336 P **P** **19 54 44.2 -0.8**
comp=Z,1.8nm,0.8s,baz=33,slow=6.7,SNR=6.1
NOA LR LR 20 24 35.7
comp=Z,13nm,18.8s,baz=45,slow=39
comp=Z,1.8nm,0.8s
K05A Summer Lake 62.28 56 P **P** **19 54 45.8 +0.1**
HFS Hagfors 62.33 334 LR LR 20 24 25.2
comp=Z,29nm,19.6s,baz=34,slow=39
MSO Missoula 62.90 49 P **P** **19 54 49.7 0.0**
MSO IAmb IAmb 19 54 50.6
comp=Z,5.5nm,1.0s
MSO Missoula 62.90 49 P **P** **19 54 49.9 +0.2**
baz=316
KIV Kislovodsk 63.09 307 P **P** **19 54 49.8 -1.2**
KIV Kislovodsk 63.09 307 *e*P **P** **19 54 49.4 -1.6**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,102nm,17.0s
PLID Pearl Lake 63.13 51 P **P** **19 54 51.1 -0.3**
PLID IAmb IAmb 19 54 52.3
comp=Z,5.7nm,0.9s
KBZ Khabaz 63.14 307 LR LR 20 26 37.2
comp=Z,137nm,18.4s,baz=40,slow=40
LRM Limekiln Ridge 64.34 49 P **P** **19 54 59.0 -0.4**
AKASG Malin Array Be 64.40 320 P **P** **19 54 57.6 -1.8**
comp=Z,2.7nm,0.6s,baz=38,slow=7.6,SNR=8.6
AKASG LR LR 20 26 03.1
comp=Z,27nm,18.1s,baz=340,slow=39
comp=Z,2.7nm,0.6s
AKASG Malin Array Be 64.40 320 *i* P **P** **19 54 59.2 -0.2**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 64.40 320 P **P** **19 54 58.0 -1.3**
AKBB IAmb IAmb 19 55 01.9
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 64.40 320ñ *e*P **P** **19 54 57.7 -1.7**
BEKR Beckworth 64.57 58 P **P** **19 54 59.8 -1.2**
BEKR IAmb IAmb 19 55 02.1
comp=Z,4.7nm,0.9s
GNI Garni 64.71 303 LR LR 20 24 59.3
comp=Z,35nm,20.3s,baz=105,slow=38
BOZ Bozeman (W) 64.90 48 P **P** **19 55 01.9 -1.0**
BOZ IAmb IAmb 19 55 04.1
comp=Z,4.8nm,1.0s
BOZ Bozeman (W) 64.90 48 P **P** **19 55 01.9 -1.0**
BOZ pmax pmax
comp=Z,5.0nm,1.0s
BOZ Bozeman (W) 64.90 48 P **P** **19 55 02.9 0.0**
baz=317,SNR=5.3
HLID Hailey 65.02 51 P **P** **19 55 04.3 +0.5**
baz=317
PAHR Pah Rah Range 65.21 57 P **P** **19 55 04.3 -0.8**
YERR Yerington 65.81 58 P **P** **19 55 09.0 0.0**
RLMT Red Lodge 66.37 47 P **P** **19 55 12.7 +0.3**
RLMT IAmb IAmb 19 55 14.6
comp=Z,5.6nm,1.0s
RLMT Red Lodge 66.37 47 P **P** **19 55 12.8 +0.3**
baz=318,SNR=7.1
KVN Kaiserville 66.38 57 P **P** **19 55 13.1 +0.4**
KVN Kaiserville 66.38 57 P **P** **19 55 13.1 +0.4**
KVN pmax pmax
comp=Z,7.0nm,0.9s
ELK Elko 66.65 54 P **P** **19 55 14.8 +0.4**
ELK IAmb IAmb 19 55 16.0
comp=Z,3.5nm,1.0s
ELK Elko 66.65 54 P **P** **19 55 14.8 +0.4**
ELK pmax pmax
comp=Z,3.0nm,1.0s
NVAR Mina Array Bea 66.72 58 P **P** **19 55 15.2 +0.3**
comp=Z,3.2nm,0.8s,baz=296,slow=5.7,SNR=23
NVAR LR LR 20 22 49.1
comp=Z,40nm,18.3s,baz=100,slow=34
comp=Z,3.2nm,0.8s
NV11 Mina Array Sit 66.79 57 P **P** **19 55 15.4 +0.1**
NV11 IAmb IAmb 19 55 21.5
comp=Z,7.5nm,1.4s
GURO Guroymak-BITLI 67.32 303 P **P** **19 55 19.2 +0.7**
GURO IAmb IAmb 19 55 23.6
comp=Z,4.8nm,1.0s
DSP Deep Springs 67.67 58 P **P** **19 55 21.1 +0.5**
DSP IAmb IAmb 19 55 22.6
comp=Z,3.6nm,1.0s
HWUT Hardware Ranch 67.88 51 P **P** **19 55 22.4 +0.2**
BW06 Boulder Array 68.00 49 P **P** **19 55 22.5 -0.4**
baz=319,SNR=7.1
PD31 Pinedale Array 68.00 49 P **P** **19 55 22.5 -0.4**
PD31 IAmb IAmb 19 55 23.6
comp=Z,6.8nm,1.2s
PDAR Pinedale Array 68.00 49 P **P** **19 55 22.6 -0.3**
comp=Z,3.6nm,0.9s,baz=345,slow=2.1,SNR=22
comp=Z,3.6nm,0.9s
PDAR Pinedale Array 68.00 49 P **P** **19 55 22.3 -0.6**
ULM Lac du Bonnet 68.06 36 P **P** **19 55 21.8 -1.2**
comp=Z,5.9nm,0.7s,baz=312,slow=9.0
comp=Z,5.9nm,0.7s
ULM Lac du Bonnet 68.06 36 P **P** **19 55 21.7 -1.2**
ULM Lac du Bonnet 68.06 36*de*P **P** **19 55 22.0 -0.9**
R11A Troy Canyon, C 68.23 56 P **P** **19 55 24.4 0.0**
baz=318
CWC Cottonwood Cre 68.29 59 P **P** **19 55 24.8 +0.1**
baz=317
DUG Dugway, Tooele 68.31 53 P **P** **19 55 24.3 -0.5**
DUG IAmb IAmb 19 55 26.2
comp=Z,4.0nm,0.9s
DUG Dugway, Tooele 68.31 53 P **P** **19 55 24.3 -0.5**
DUG pmax pmax
comp=Z,4.0nm,1.0s
DUG Dugway, Tooele 68.31 53 P **P** **19 55 25.1 +0.3**
baz=318,SNR=5.6
BUR08 Bucovina Ar. S 68.44 320 P **P** **19 55 24.7 -0.8**
PKM Mcpherson Peak 68.46 61 P **P** **19 55 25.9 0.0**
baz=317
NLU North Lily Min 68.86 53 P **P** **19 55 28.4 0.0**
NLU IAmb IAmb 19 55 33.6
comp=Z,6.5nm,1.4s
MPMC Manual Prospec 68.89 59 P **P** **19 55 28.6 0.0**
baz=318,SNR=5.4
TPNV Topopah Spring 68.91 57 P **P** **19 55 28.4 -0.2**
TPNV Topopah Spring 68.91 57 P **P** **19 55 28.4 -0.2**
TPNV pmax pmax
comp=Z,7.0nm,1.0s
TPNV Topopah Spring 68.91 57 P **P** **19 55 28.8 +0.1**
baz=318,SNR=7.7
LRMC Laurel Mtn Rad 69.21 59 P **P** **19 55 30.8 +0.3**
baz=318
EDW2 Edwards Air Fo 69.48 60 P **P** **19 55 32.5 +0.5**
baz=318
RSSD Black Hills 69.54 45 P **P** **19 55 32.2 -0.3**
RSSD IAmb IAmb 19 55 33.0
comp=Z,5.4nm,0.9s
RSSD Black Hills 69.54 45 P **P** **19 55 32.2 -0.3**
RSSD pmax pmax
comp=Z,5.0nm,1.0s
RSSD Black Hills 69.54 45 P **P** **19 55 31.7 -0.8**
baz=321
AGMN Agassiz Nation 69.65 37 P **P** **19 55 32.0 -0.8**
baz=324
FITZ Fitzroy Crossi 69.79 197 P **P** **19 55 33.9 +0.1**
FITZ IAmb IAmb 19 55 50.7
comp=Z,10nm,1.4s
GSC Goldstone, Bar 69.82 59 P **P** **19 55 34.6 +0.4**
baz=318
CLL Collm 69.97 329 *i* P **P** **19 55 37.3 +2.6**
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 69.97 329 *i* Px Px 19 55 37.3
comp=Z,6.0nm,1.1s
BFSC Mount Baldy Ra 70.14 60 P **P** **19 55 36.2 -0.1**
baz=318
TUQ Turquoise Moun 70.21 58 P **P** **19 55 36.7 +0.1**
baz=318
WB0 Warramunga Arr 70.21 188 P **P** **19 55 35.6 -0.8**
WB0 IAmb IAmb 19 55 55.6
comp=Z,3.9nm,0.9s
VYHS Vyhne 70.27 324 *e*P **P** **19 55 39.4 +2.8**
VYHS Vyhne 70.27 324 *e*P **P** **19 55 39.4 +2.8**
WRA Warramunga Arr 70.39 188 P **P** **19 55 35.4 -2.1**
comp=Z,1.3nm,0.8s,baz=1.4,slow=6.9,SNR=3.2
comp=Z,1.3nm,0.8s
WRA Warramunga Arr 70.39 188 P **P** **19 55 36.6 -1.0**
WRA Warramunga Arr 70.39 188 P **P** **19 55 36.6 -1.0**
VRAC Vranov 70.42 326 LR LR 20 28 44.2
comp=Z,32nm,18.5s,baz=48,slow=38
HEC Hector,Ludlow 70.43 59 P **P** **19 55 38.2 +0.3**
baz=318
O20A White River Ci 70.64 50 P **P** **19 55 39.1 -0.2**
baz=320
BRTR Keskin Array B 70.77 309 P **P** **19 55 40.6 +0.6**
BRTR Keskin Array B 70.77 309 P **P** **19 55 40.6 +0.6**
GMRC Granite Mounta 70.83 59 P **P** **19 55 40.2 -0.3**
baz=319
N23A Red Feather La 71.17 48 P **P** **19 55 42.6 +0.1**
baz=321
BELC Belle Mtn. Jos 71.23 59 P **P** **19 55 42.9 0.0**
baz=319
PFO Pinyon Flats O 71.27 60 P **P** **19 55 43.5 +0.4**
baz=319
TPFO Pinon Flats 71.28 60 P **P** **19 55 43.1 -0.1**
baz=319
U15A North Rim 71.41 55 P **P** **19 55 44.2 +0.1**
U15A IAmb IAmb 19 55 49.9
comp=Z,6.8nm,1.1s
SUSD Miller 71.51 42 P **P** **19 55 43.3 -1.0**
baz=324
IRM Iron Mountain 71.59 59 P **P** **19 55 45.5 +0.6**
baz=319
EYMN Ely 71.59 35 P **P** **19 55 43.5 -1.2**
EYMN Ely 71.59 35 P **P** **19 55 43.3 -1.4**
baz=327
BC3 Big Chuckawall 71.79 59 P **P** **19 55 47.0 +0.7**
baz=319
MONP2 Monument Peak 71.83 60 P **P** **19 55 46.7 +0.1**
baz=319
PDMCI Parker Dam,Lak 72.02 58 P **P** **19 55 47.9 +0.4**
baz=319
SWSC Sam W. Stewart 72.14 60 P **P** **19 55 48.0 -0.1**
baz=319
ISCO Idaho Springs 72.18 49 P **P** **19 55 48.4 -0.3**
baz=322
IKP In-Ko-Pah, Jac 72.18 60 P **P** **19 55 48.7 +0.1**
baz=319
WUAZ Wupatki 72.58 55 P **P** **19 55 51.6 +0.6**
baz=320
MVCO Mesa Verde 72.76 52 P **P** **19 55 52.0 -0.2**
baz=321
ECSD EROS Data Cent 73.07 41 P **P** **19 55 52.7 -0.9**
ECSD IAmb IAmb 19 55 53.6
comp=Z,7.0nm,0.9s
ECSD EROS Data Cent 73.07 41 P **P** **19 55 52.5 -1.2**
baz=325,SNR=8.1
S22A 4UR Ranch, Cre 73.18 51 P **P** **19 55 54.8 +0.1**
baz=321,SNR=5.9
VTS Vitosha 73.30 318 P **P** **19 55 55.4 +0.2**
VTS IAmb IAmb 19 55 59.6
comp=Z,6.3nm,1.0s
VTS Vitosha 73.30 318 P **P** **19 55 55.4 +0.2**
VTS pmax pmax
comp=Z,6.0nm,1.0s
X16A Lo Mia Camp, P 73.38 56 P **P** **19 55 55.3 -0.5**
X16A IAmb IAmb 19 55 57.5
comp=Z,3.8nm,1.0s
SDCO Great Sand Dun 73.84 50 P **P** **19 55 58.4 -0.2**
baz=322
PRED Cave del Predi 73.93 326 P **P** **19 55 58.7 0.0**
ASAR Alice Springs 74.12 188 P **P** **19 55 58.4 -1.4**
comp=Z,0.8nm,0.8s,baz=360,slow=5.3,SNR=18
comp=Z,0.8nm,0.8s
ASAR Alice Springs 74.12 188 P **P** **19 55 58.6 -1.2**
ASAR Alice Springs 74.12 188 P **P** **19 55 58.6 -1.2**
I37A Lemond, Waseca 74.15 38 P **P** **19 55 59.5 -0.4**
T25A Trinidad 74.85 50 P **P** **19 56 04.1 -0.3**
baz=322
ANMO Albuquerque 75.56 52 P **P** **19 56 08.6 +0.1**
baz=322
VLDQ Val d'Or 76.03 26 P **P** **19 56 09.1 -1.6**
121A Cookes Peak, D 76.77 55 P **P** **19 56 15.7 +0.4**
121A IAmb IAmb 19 56 17.1
comp=Z,8.2nm,1.1s
121A Cookes Peak, D 76.77 55 P **P** **19 56 15.8 +0.4**
baz=322
AMTX Amarillo 77.98 49 P **P** **19 56 21.9 -0.1**
baz=324
MSTX Muleshoe 78.18 50 P **P** **19 56 22.6 -0.6**
baz=324
LMQ La Malbaie 78.42 22 P **P** **19 56 23.0 -1.1**
LMQ IAmb IAmb 19 56 28.2
comp=Z,8.1nm,0.9s
MNTX Cornudas Mount 78.67 54 P **P** **19 56 25.5 -0.3**
MNTX IAmb IAmb 19 56 27.2
comp=Z,6.0nm,1.1s
MNTX Cornudas Mount 78.67 54 P **P** **19 56 26.1 +0.2**
baz=323,SNR=6.5
LBNH Lisbon 81.10 24 P **P** **19 56 37.7 -1.1**
baz=339
LMN Caledonia Moun 81.26 19 P **P** **19 56 38.9 -0.6**
TX31 Lajitas Ar. Si 81.45 54 P **P** **19 56 40.6 -0.3**
TXAR Lajitas Array 81.45 54 P **P** **19 56 41.0 +0.1**
comp=Z,2.4nm,1.0s,baz=289,slow=3.2,SNR=17
comp=Z,2.4nm,1.0s
TXAR Lajitas Array 81.45 54 P **P** **19 56 40.4 -0.6**
WCI Wyandotte Cave 81.87 37 P **P** **19 56 41.3 -1.6**
baz=331
L59A Walton 82.13 27 P **P** **19 56 42.9 -1.3**
L59A IAmb IAmb 19 56 48.3
comp=Z,6.8nm,0.8s
JCT Junction City 82.47 50 P **P** **19 56 45.9 -0.4**
baz=325
SSPA Standing Stone 82.68 30 P **P** **19 56 45.7 -1.4**
baz=335
ESDC Sonseca Array 85.60 335 P **P** **19 57 01.9 -0.2**
comp=Z,1.4nm,0.9s,baz=14,slow=4.3,SNR=10.0
comp=Z,1.4nm,0.9s
ESDC Sonseca Array 85.60 335 P **P** **19 57 03.0 +0.9**

IDC ***27*** *19:57:19.7±2.2, 17.60S×178.78W, h508km±27km, mb3.4/8, mbtmp4.4/9, Error ellipse: s-maj=27.3km s-min=17.8km az=147.0*
NEIC ***27*** *19:57:21.0±1.2, 17.6S±0.1×178.6W±0.1, h538km±14km, mb4.3/18, Error ellipse: s-maj=19.5km s-min=14.3km az=68.0*
ISC 27 19:57:21.2±0.7, 17.6S±0.1×178.6W±0.1, h547km, n38, s0°s83/40, mb4.2/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.17**	**267**	P	**P**	**19 58 36.2**	**-1.0**
AFI	**Afiamalu**	**7.55**	**62**	P	**P**	**19 59 13.6**	**-1.0**
	16nm,0.4s,baz=294,slow=12,SNR=1.9						
AFI	**Afiamalu**	**7.55**	**62**	P	**P**	**19 59 12.8**	**-1.8**
NIUE	**Niue**	**8.39**	**101**	P	**P**	**19 59 22.5**	**-0.2**
MARNC	**Mare, Loyalty**	**13.15**	**251**	P	**P**	**20 00 10.6**	**-1.0**
DZM	**Mont Dzumac**	**14.73**	**250**	P	**P**	**20 00 28.0**	**-0.1**
URZ	**Urewera**	**20.90**	**189**	P	**P**	**20 01 25.4**	**0.0**
	3.4nm,0.3s,baz=24,slow=19,SNR=7.6 3.4nm,0.3s						
URZ	**Urewera**	**20.90**	**189**	P	**P**	**20 01 25.2**	**-0.2**
URZ				IAmb	IAmb	20 01 26.2	
	comp=Z,27nm,1.3s						
TUWZ	**Tuamarina**	**24.57**	**194**	P	**P**	**20 01 57.6**	**-0.6**
EIDS	**Eidsvold**	**29.17**	**249**	P	**P**	**20 02 38.4**	**-0.3**
EIDS				IAmb	IAmb	20 02 59.1	
	comp=Z,12nm,1.3s						
CTA	**Charters Tower**	**33.29**	**260**	P	**P**	**20 03 13.2**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=82,slow=12,SNR=1.9 comp=Z,3.5nm,0.8s						
CTAO	**Charters Tower**	**33.29**	**260**	P	**P**	**20 03 13.2**	**-0.9**
CTAO				IAmb	IAmb	20 03 36.9	
	comp=Z,29nm,1.5s						
COEN	**Coen**	**36.90**	**270**	P	**P**	**20 03 43.8**	**-0.3**
COEN				IAmb	IAmb	20 04 07.8	
	comp=Z,6.3nm,0.9s						
STKA	**Stephens Creek**	**38.59**	**241**	P	**P**	**20 03 58.5**	**+0.8**
	comp=Z,2.8nm,0.4s,baz=87,slow=9.7,SNR=15 comp=Z,2.8nm,0.4s						
STKA	**Stephens Creek**	**38.59**	**241**	P	**P**	**20 03 58.5**	**+0.8**
BBOO	**Buckleboo**	**43.37**	**241**	P	**P**	**20 04 36.1**	**+0.5**
BBOO				IAmb	IAmb	20 04 47.5	
	comp=Z,22nm,1.4s						
WR0	**Warramunga Arr**	**44.29**	**259**	P	**P**	**20 04 42.0**	**-0.9**
WR0				IAmb	IAmb	20 05 03.4	
	comp=Z,5.5nm,1.2s						
WRA	**Warramunga Arr**	**44.48**	**259**	P	**P**	**20 04 43.4**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=92,slow=7.7,SNR=30						
WRA				PcP	**PcP**	**20 06 17.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=93,slow=3.6,SNR=1.3 comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**44.48**	**259**	P	**P**	**20 04 43.3**	**-1.1**
AS31	**Alice Springs**	**44.67**	**254**	P	**P**	**20 04 45.8**	**-0.1**
AS31				IAmb	IAmb	20 04 46.4	
	comp=Z,3.4nm,0.7s						
ASAR	**Alice Springs**	**44.67**	**254**	P	**P**	**20 04 45.9**	**0.0**
	comp=Z,10nm,0.5s,baz=88,slow=8.1,SNR=183						
ASAR				PcP	**PcP**	**20 06 18.3**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=104,slow=3.9,SNR=4.1 comp=Z,10nm,0.5s						
ASAR	**Alice Springs**	**44.67**	**254**	P	**P**	**20 04 45.2**	**-0.6**
MTN	**Manton Dam**	**48.60**	**268**	P	**P**	**20 05 15.0**	**-0.6**
MTN				IAmb	IAmb	20 05 15.8	
	comp=Z,7.4nm,0.8s						
FORT	**Forrest**	**49.94**	**244**	P	**P**	**20 05 24.9**	**-0.4**
KNRA	**Kununurra**	**50.31**	**264**	P	**P**	**20 05 28.2**	**+0.1**
KNRA				IAmb	IAmb	20 05 28.7	
	comp=Z,10nm,0.7s						
FAKI	**Fak Fak**	**50.32**	**281**	P	**P**	**20 05 28.5**	**+0.2**
SIJI	**Sorong**	**51.97**	**283**	P	**P**	**20 05 40.7**	**+0.4**
	comp=Z,9.7nm,0.6s,baz=85,slow=5.8,SNR=5.8 comp=Z,9.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.87**	**260**	P	**P**	**20 05 47.0**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=102,slow=7.8,SNR=16 comp=Z,0.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**52.87**	**260**	P	**P**	**20 05 47.0**	**+0.4**
PSA00	**Pilbara Seismi**	**57.78**	**255**	P	**P**	**20 06 20.7**	**0.0**
MBWA	**Marble Bar**	**57.94**	**256**	P	**P**	**20 06 21.6**	**-0.3**
MBWA				IAmb	IAmb	20 06 48.7	
	comp=Z,15nm,1.3s						
JAGI	**Jajag, Banyuwa**	**65.84**	**268**	P	**P**	**20 07 12.7**	**-0.6**
UGM	**Wanagama**	**69.45**	**268**	P	**P**	**20 07 35.7**	**+0.3**
IMAR	**Indian Mountai**	**85.43**	**10**	P	**P**	**20 09 02.2**	**+1.6**
ILAR	**Eielson Array**	**85.65**	**13**	P	**P**	**20 09 02.7**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=222,slow=5.7,SNR=2.4 comp=Z,0.2nm,0.4s						
BRTR	**Keskin Array B**	**144.43**	**315**	PKP	**PKPab**	**20 15 57.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=84,slow=3.1,SNR=5.5						
CLL	**Collm**	**145.13**	**347**	*i* PKPbc	**PKiKP**	**20 15 59.3**	**-1.2**
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	**PKiKP**	**20 16 05.5**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=35,slow=3.6,SNR=8.5						

IDC 27 20:10:54.1±1.3, **55.20**S×**30.83**W, **h0**km, **mb3.5/1, mbtmp3.5/1, Error ellipse: s-maj=91.0km s-min=34.6km az=98.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**35.06**	**180**	P	P	20 17 48.6	+0.2
	0.4nm,0.6s,baz=108,slow=18 0.4nm,0.6s						
H10S2	**ASCENSION HYDR**	**47.87**	**22**	T	T	21 11 25.4	
	baz=193						
H10S3	**ASCENSION HYDR**	**47.88**	**22**	T	T	21 11 25.1	
	baz=27						
H10N1	**ASCENSION HYDR**	**48.99**	**22**	T	T	21 12 49.1	
	baz=192,slow=75,SNR=3.8						
H10N3	**ASCENSION HYDR**	**48.99**	**22**	T	T	21 12 45.9	
	baz=192,slow=75,SNR=6.6						
H10N2	**ASCENSION HYDR**	**49.01**	**22**	T	T	21 12 50.2	
	baz=192,slow=75,SNR=6.2						
TORD	**Torodi Ar. Bea**	**73.40**	**33**	P	P	20 22 28.3	+0.5
	12nm,0.3s,baz=196,slow=6.3,SNR=2.7						
ILAR	**Eielson Array**	**148.02**	**313**	PKPbc	PKPbc	20 30 39.1	-0.8
	0.8nm,0.8s,baz=118,slow=1.4,SNR=7.4						
SONM	**Songino Array**	**152.74**	**88**	PKPbc	PKPbc	20 30 51.2	-0.7
	0.9nm,0.8s,baz=212,slow=3.8,SNR=5.4						

*VAO **27** 20:14:04.0±0.4, 38°.13S×74°.22W, h10km, mb4.9*
*GUC **27** 20:14:10.9±0.7, 38°.15S×73°.39W, h29km±5km, ML4.9*
*NEIC **27** 20:14:10.8, 38°.09S×73°.41W, h31km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_n3.65; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-3.94; $M_{r\theta}$0.55; $M_{r\phi}$-1.21; $M_{\theta\phi}$-7.19; Fault plane solution: M_o8.25000×10^{15} NP1:ϕ_s177.85000°, δ76.29000°, λ80.25000°. NP2:ϕ_s33.77000°, δ16.77000°, λ124.75000°. Principal axes: T 8.1413, Plg58.0000°, Azm75.0000°; N 0.2048, Plg9.0000°, Azm180.0000°; P -8.3461, Plg31.0000°, Azm276.0000°;*
*NEIC **27** 20:14:11.0±1.9, 38°.07S±0°.03×73°.35W±0°.09, h24km±4km, mb4.7/48, Mwr4.5/27, Mwr4.9(GUC) Error ellipse: s-maj=10.6km s-min=4.7km az=88.0*
*IDC **27** 20:14:15.9±2.8, 38°.01S×73°.06W, h55km±23km, mb4.1/12, mbtmp4.3/15, ML4.1/3, MS3.9/21, Error ellipse: s-maj=26.0km s-min=12.3km az=84.0*

ISC 27 20:14:09.0±2.4, **38°.11S**±0°.03×**73°.47W**±0°.06, **h14**km±14km, **n208**, σ**1$32**/204, **mb4.7**/30, **MS4.0**/22, **5C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.29**	**13**	*eP*	**Pb**	**20 14 33.3**	**+0.2**
CCSP				*eS*	**Sb**	**20 14 49.7**	**+0.2**
CCSP				IAML		20 14 54.9	
	comp=E,48μm,0.5s						
BI05	**Punta Hualpn**	**1.37**	**10**		**Pb**	**20 14 34.6**	**+0.1**
BI05				Sn	**Sn**	**20 14 51.1**	**-0.5**
BI05	**Punta Hualpn**	**1.37**	**10**	*eP*	**Pb**	**20 14 34.7**	**+0.3**
BI05				*eS*	**Sb**	**20 14 52.1**	**+0.3**
BI05				IAML		20 14 58.6	
	comp=E,28μm,0.4s						
LR02	**Universidad Au**	**1.71**	**174**	*eP*	**Pn**	**20 14 38.5**	**+0.1**
LR02				*eS*	**Sn**	**20 14 58.1**	**-1.8**
LR02				IAML		20 15 14.2	
	comp=E,20μm,0.7s						
LR03	**Panguipulli**	**1.76**	**150**		**Pn**	**20 14 40.3**	**+1.2**
LR03				Sn	**Sb**	**20 15 02.8**	**-0.3**
LR03	**Panguipulli**	**1.76**	**150**	*eP*	**Pn**	**20 14 39.3**	**+0.2**
LR03				*eS*	**Sn**	**20 14 60.0**	**-1.3**
LR03				IAML		20 15 15.2	
	comp=E,27μm,0.3s						
LR04	**Corral**	**1.77**	**179**		**Pn**	**20 14 39.9**	**+0.6**
LR04				Sn	**Sn**	**20 15 00.8**	**-0.8**
LR04	**Corral**	**1.77**	**179**	*eP*	**Pn**	**20 14 39.5**	**+0.2**
LR04				*eS*	**Sn**	**20 15 00.8**	**-0.8**
LR04				IAML		20 15 11.0	
	comp=E,15μm,0.2s						
ML02	**Panimavida**	**2.86**	**36**		**Pn**	**20 14 54.9**	**+0.7**
ML02	**Panimavida**	**2.86**	**36**	*eP*	**Pn**	**20 14 55.1**	**+0.9**
ML02				*eS*	**Sn**	**20 15 29.3**	**+1.0**
LL04	**Puerto Octay**	**2.92**	**164**	Pn	**Pn**	**20 14 55.5**	**+0.5**
LL04	**Puerto Octay**	**2.92**	**164**	*eP*	**Pn**	**20 14 55.7**	**+0.7**
LL04				IAML		20 15 44.0	
	comp=E,2μm,0.2s						
LL03	**Petrohue**	**3.14**	**165**		**Pn**	**20 15 00.2**	**+2.2**
LL03	**Petrohue**	**3.14**	**165**	*eP*	**Pn**	**20 15 00.1**	**+2.0**
LL03				IAML		20 16 09.4	
	comp=N,3μm,0.6s						
LL05	**Los Muermos**	**3.30**	**180**		**Pn**	**20 15 00.6**	**+0.4**
LL05	**Los Muermos**	**3.30**	**180**	*eP*	**Pn**	**20 15 00.6**	**+0.4**
LL05				IAML		20 16 05.1	
	comp=E,2μm,0.7s						
GO05	**Huala**	**3.33**	**22**	Pn	**Pn**	**20 15 00.9**	**+0.3**
GO05	**Huala**	**3.33**	**22**	*eP*	**Pn**	**20 15 01.0**	**+0.3**
GO05				*eS*	**Sn**	**20 15 39.6**	**-0.4**
GO05				IAML		20 15 58.0	
	comp=E,4μm,0.7s						
PLCA	**Paso Flores**	**3.46**	**140**	P	**Pn**	**20 15 04.7**	**+2.1**
	comp=E,4.5nm,0.3s,baz=306,slow=9.9,SNR=145						
PLCA				S	**Sn**	**20 15 45.3**	**+1.9**
	comp=E,139nm,0.7s,baz=53,slow=11,SNR=4.4						
PLCA				LR	LR	20 16 35.7	
	comp=E,2μm,18.1s,baz=304,slow=42 comp=E,20nm,0.3s						
PLCA	**Paso Flores**	**3.46**	**140**	Pn	**Pn**	**20 15 04.2**	**+1.6**
PLCA	**Paso Flores**	**3.46**	**140**	*eP*	**Pn**	**20 15 04.7**	**+2.1**
PLCA	**Paso Flores**	**3.46**	**140**	*eP*	**Pn**	**20 15 04.6**	**+2.1**
BO03	**Pichilemu**	**3.80**	**19**	*eP*	**Pn**	**20 15 07.3**	**+0.1**
BO02	**Sierra Bellavi**	**3.95**	**34**		**Pn**	**20 15 09.8**	**+0.5**
BO02	**Sierra Bellavi**	**3.95**	**34**	*eP*	**Pn**	**20 15 10.0**	**+0.7**
LL01	**San Ignacio de**	**4.34**	**170**		**Pn**	**20 15 16.3**	**+1.7**
LL01	**San Ignacio de**	**4.34**	**170**	*eP*	**Pn**	**20 15 16.8**	**+2.2**
MT01	**Popeta**	**4.60**	**24**		**Pn**	**20 15 18.0**	**-0.1**
MT01	**Popeta**	**4.60**	**24**	*eP*	**Pn**	**20 15 18.1**	**0.0**
VA05	**Santo Domingo**	**4.69**	**19**		**Pn**	**20 15 18.6**	**-0.7**
VA05	**Santo Domingo**	**4.69**	**19**	*eP*	**Pn**	**20 15 18.6**	**-0.7**
LL07	**Hotel Espejo d**	**4.72**	**180**	Pn	**Pn**	**20 15 22.8**	**+3.0**
MT09	**Talagante**	**4.77**	**26**		**Pn**	**20 15 20.3**	**-0.2**
MT09	**Talagante**	**4.77**	**26**	*eP*	**Pn**	**20 15 20.4**	**-0.2**
GO07	**Milladeo Hill,**	**5.01**	**182**	Pn	**Pn**	**20 15 26.1**	**+2.5**
LMEL	**Las Melosas**	**5.01**	**33**		**Pn**	**20 15 24.9**	**+1.1**
LMEL	**Las Melosas**	**5.01**	**33**	*eP*	**Pn**	**20 15 24.9**	**+1.1**
LMEL				*eS*	**Sn**	**20 16 21.4**	**-0.2**
MT03	**Universidad Ad**	**5.19**	**29**	Pn	**Pn**	**20 15 26.4**	**0.0**
MT02	**Curacav**	**5.20**	**22**		**Pn**	**20 15 25.9**	**-0.4**
MT02	**Curacav**	**5.20**	**22**	*eP*	**Pn**	**20 15 25.8**	**-0.5**
MT05	**Renca**	**5.20**	**26**	Pn	**Pn**	**20 15 25.2**	**-1.2**
MT05	**Renca**	**5.20**	**26**	*eP*	**Pn**	**20 15 25.2**	**-1.2**
LL02	**Futaleuf**	**5.23**	**167**	Pn	**Pn**	**20 15 27.5**	**+0.8**
VA01	**Torpederas**	**5.29**	**17**		**Pn**	**20 15 26.9**	**-0.6**
FCH	**Farellones**	**5.42**	**29**	*eP*	**Pn**	**20 15 29.8**	**+0.1**
PEL	**Peldehue**	**5.45**	**25**	Pn	**Pn**	**20 15 30.0**	**+0.2**
ROC1	**El Roble**	**5.50**	**22**		**Pn**	**20 15 30.6**	**-0.1**
VA06	**Catapilco**	**5.81**	**18**	Pn	**Pn**	**20 15 34.3**	**-0.4**
VA03	**San Esteban**	**5.84**	**25**		**Pn**	**20 15 35.2**	**-0.1**
H03S1	**Juan Fernandez**	**6.12**	**312**	T	T	20 21 45.0	
	SNR=2182						
H03S3	**Juan Fernandez**	**6.14**	**312**	T	T	20 21 45.8	
	SNR=2559						
H03S2	**Juan Fernandez**	**6.14**	**312**	P	**Pn**	**20 15 40.8**	**+1.8**
	SNR=144						
H03S2				T	T	20 21 44.7	
	SNR=2099						
VA04	**Juan Fernndez**	**6.22**	**314**	Pn	**Pn**	**20 15 41.5**	**+1.1**
VA04	**Juan Fernndez**	**6.22**	**314**	*eP*	**Pn**	**20 15 41.5**	**+1.1**
AY01	**Puyuhuapi**	**6.34**	**175**	Pn	**Pn**	**20 15 41.9**	**0.0**
H03N1	**Juan Fernandez**	**6.42**	**315**	P	**Pn**	**20 15 44.9**	**+2.1**
CO02	**Combarbal**	**7.18**	**17**		**Pn**	**20 15 53.2**	**-0.5**
CO06	**Fray Jorge**	**7.57**	**12**		**Pn**	**20 15 57.4**	**-1.5**
CO03	**El Pedregal**	**7.60**	**18**	Pn	**Pn**	**20 15 59.2**	**-0.3**
ZON	**Zonda**	**7.64**	**32**	Pn	**Pn**	**20 15 59.8**	**-0.2**
GO04	**Tololo Observa**	**8.22**	**16**		**Pn**	**20 16 07.1**	**-0.9**
CO05	**La Serena**	**8.37**	**13**	Pn	**Pn**	**20 16 08.7**	**-1.2**
CO01	**Juntas del Tor**	**8.58**	**20**		**Pn**	**20 16 12.7**	**-0.3**
LCO	**Las Campanas**	**9.36**	**15**	Pn	**Pn**	**20 16 22.7**	**-1.0**
AC05	**El Transito**	**9.62**	**17**	Pn	**Pn**	**20 16 26.4**	**-0.8**
AC04	**Llanos de Chal**	**10.07**	**12**	Pn	**Pn**	**20 16 32.8**	**-0.5**
GO03	**Copiap**	**10.83**	**15**	Pn	**Pn**	**20 16 42.1**	**-1.5**
AC06	**Mina Casimiro**	**11.03**	**15**	Pn	**Pn**	**20 16 44.6**	**-1.8**
AC02	**Maricunga**	**11.82**	**19**	Pn	**Pn**	**20 16 54.7**	**-2.9**
AC01	**Pan de Azucar**	**12.17**	**12**	Pn	**Pn**	**20 16 59.3**	**-2.7**
GO02	**Mina Guanaco**	**13.32**	**15**	Pn	**Pn**	**20 17 14.8**	**-3.1**
LVC	**Limon Verde**	**15.93**	**16**	P	**Pn**	**20 17 54.6**	**+1.4**
	comp=E,0.2nm,0.3s,baz=96,slow=5.2,SNR=3.0						
LVC				LR	LR	20 24 58.5	
	comp=E,194nm,19.6s,baz=198,slow=41 comp=E,4.2nm,0.7s						
LVC	**Limon Verde**	**15.93**	**16**	*eP*	**Pn**	**20 17 49.6**	**-3.6**
PB04	**IPOC Station P**	**15.98**	**11**	P	**Pn**	**20 17 55.0**	**+1.5**
PB04				IAmb	IAmb	20 18 02.2	
	comp=Z,104nm,1.4s						
PB07	**IPOC Station P**	**16.61**	**12**	P	**Pn**	**20 18 00.9**	**-0.8**
PB09	**IPOC Station P**	**16.66**	**14**	P	**Pn**	**20 18 02.8**	**+0.6**
PB01	**IPOC Station P**	**17.35**	**13**	P	**Pn**	**20 18 10.3**	**-0.5**
EFI	**East Falkland**	**17.36**	**146**	P	**Pn**	**20 18 10.9**	**+0.2**
EFI				IAmb	IAmb	20 18 25.6	
	comp=Z,57nm,1.2s						
PLTB	**Pedras Altas**	**17.46**	**75**		**Pn**	**20 18 10.5**	**-1.7**
CPUP	**Villa Florida**	**17.98**	**54**	P	**Pn**	**20 18 17.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=229,slow=10,SNR=9.7 comp=Z,8.5nm,0.9s						
CPUP	**Villa Florida**	**17.98**	**54**	P	**Pn**	**20 18 17.4**	**-1.2**
CPSB	**Cacapava Do Su**	**18.23**	**71**	*eP*	**P**	**20 18 23.6**	**+1.9**
GO01	**Chusmiza**	**18.74**	**13**	P	**Pn**	**20 18 28.6**	**+0.3**
PB12	**IPOC Station P**	**19.61**	**9**	P	**P**	**20 18 37.7**	**+0.7**
PB16	**IPOC Station P**	**20.00**	**11**	P	**Pn**	**20 18 42.9**	**-0.7**
ITAB	**Concordia**	**20.93**	**65**	P	**P**	**20 18 48.6**	**-2.7**
ITAB				IAmb	IAmb	20 19 08.3	
	comp=Z,35nm,1.2s						
LPAZ	**La Paz**	**22.24**	**14**	P	**P**	**20 19 07.1**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=138,slow=13,SNR=24						
LPAZ				LR	LR	20 28 41.3	
	comp=Z,87nm,19.3s,baz=153,slow=39 comp=Z,2.7nm,0.8s						
LPAZ	**La Paz**	**22.24**	**14**	P	**P**	**20 19 07.2**	**+1.2**
TER01	**Tubaro-SC**	**22.42**	**72**	*eP*	**P**	**20 19 08.3**	**+1.1**
AQDB	**Aquidauana**	**23.36**	**46**	P	**P**	**20 19 14.9**	**-2.1**
AQDB				IAmb	IAmb	20 19 22.9	
	comp=Z,18nm,0.9s						
AQDB	**Aquidauana**	**23.36**	**46**	*eP*	**P**	**20 19 17.1**	**+0.1**
TRCB	**Terra Rica**	**23.49**	**55**	P	**P**	**20 19 16.7**	**-1.7**
TRCB	**Terra Rica**	**23.49**	**55**	*eP*	**P**	**20 19 17.3**	**-1.1**
SIV	**San Ignacio**	**24.59**	**30**	P	**P**	**20 19 28.2**	**-0.6**
	comp=Z,12nm,0.9s,baz=212,slow=8.7,SNR=38 comp=Z,12nm,0.9s						
PCMB	**Pacaembu**	**25.23**	**56**	*eP*	**P**	**20 19 33.2**	**-1.2**
PTLB	**Pontes e Lacer**	**25.88**	**33**	P	**P**	**20 19 39.5**	**-0.8**
PTLB				IAmb	IAmb	20 19 52.2	
	comp=Z,19nm,1.0s						
PTLB	**Pontes e Lacer**	**25.88**	**33**	*eP*	**P**	**20 19 40.2**	**-0.1**
NNA	**Nana**	**26.18**	**353**	LR	LR	20 27 53.0	
	comp=Z,126nm,18.4s,baz=182,slow=31						
NNA	**Nana**	**26.18**	**353**	P	**P**	**20 19 42.9**	**-0.3**
PET01	**Itanhaem-SP**	**26.19**	**66**	*eP*	**P**	**20 19 42.8**	**-0.4**
C2SB	**Chapadao do Su**	**26.36**	**49**	*eP*	**P**	**20 19 44.6**	**-0.1**
SALV	**Santo Antonio**	**27.11**	**40**	*eP*	**P**	**20 19 50.7**	**-0.8**
ITRB	**Iturama**	**27.18**	**54**	*eP*	**P**	**20 19 52.4**	**+0.2**
RCLB	**Rio Claro- Sao**	**27.20**	**62**	*eP*	**P**	**20 19 52.3**	**-0.1**
VAO	**Valimbos**	**27.22**	**64**	*eP*	**P**	**20 19 52.2**	**-0.4**
PMSA	**Palmer Station**	**27.28**	**171**	LR	LR	20 30 25.9	
	comp=Z,240nm,18.5s,baz=356,slow=36						
PMSA	**Palmer Station**	**27.28**	**171**	*eP*	**P**	**20 19 48.2**	**-4.4**
BB19B	**Bebedouro**	**27.42**	**59**	*eP*	**P**	**20 19 53.6**	**-0.8**
VILB	**Vilhena**	**27.70**	**29**	P	**P**	**20 19 55.8**	**-1.1**
VILB				IAmb	IAmb	20 19 56.5	
	comp=Z,10nm,0.6s						
VILB	**Vilhena**	**27.70**	**29**	*eP*	**P**	**20 19 55.1**	**-1.8**
PARB	**Paraibuna**	**27.97**	**66**	*eP*	**P**	**20 20 00.2**	**+0.9**
ETMB	**Extrema**	**28.91**	**15**	P	**P**	**20 20 08.2**	**+0.6**
ETMB				IAmb	IAmb	20 20 09.4	
	comp=Z,11nm,0.9s						
ETMB	**Extrema**	**28.91**	**15**	*eP*	**P**	**20 20 08.6**	**+1.0**
MAN01	**Angra dos Reis**	**29.46**	**67**	*eP*	**P**	**20 20 14.2**	**+1.6**
IPMB	**Ipameri, GO**	**29.82**	**55**	*eP*	**P**	**20 20 16.0**	**+0.3**
VAS01	**Vassouras-RJ**	**30.20**	**67**	*eP*	**P**	**20 20 20.4**	**+1.4**
PDRB	**Porto dos Gac**	**30.34**	**34**	*eP*	**P**	**20 20 19.1**	**-1.1**
SAML	**Samuel**	**30.48**	**20**	P	**P**	**20 20 21.1**	**-0.3**
PMNB	**Patos De Minas**	**30.59**	**58**	*eP*	**P**	**20 20 22.0**	**-0.6**
DUB01	**Friburgo-RJ**	**31.10**	**68**	*eP*	**P**	**20 20 26.8**	**-0.2**
ATAH	**Atahualpa**	**31.15**	**351**	LR	LR	20 30 54.4	
	comp=Z,104nm,20.3s,baz=177,slow=32						
CLDB	**Colider**	**31.41**	**35**	*eP*	**P**	**20 20 29.6**	**-0.1**
BDFB	**Brasilia**	**31.69**	**52**	P	**P**	**20 20 30.7**	**-1.6**
	comp=Z,5.9nm,1.0s,baz=216,slow=12,SNR=3.5						
BDFB				LR	LR	20 34 49.3	
	comp=Z,390nm,20.4s,baz=212,slow=39 comp=Z,5.9nm,1.0s						
BDFB	**Brasilia**	**31.69**	**52**	P	**P**	**20 20 31.1**	**-1.2**
BDFB				IAmb	IAmb	20 20 36.8	
	comp=Z,5.9nm,0.9s						
BDFB	**Brasilia**	**31.69**	**52**	*eP*	**P**	**20 20 31.5**	**-0.8**
RPN	**Rapa Nui**	**31.95**	**279**	LR	LR	20 29 48.5	
	comp=Z,332nm,20.1s,baz=352,slow=29						
DIAM	**Diamantina, MG**	**32.63**	**61**	*eP*	**P**	**20 20 41.2**	**+0.6**
SNDB	**Serra Nova Dou**	**32.70**	**43**	*eP*	**P**	**20 20 40.3**	**-0.8**
ALF01	**Guarapari-ES**	**33.21**	**68**	*eP*	**P**	**20 20 46.7**	**+1.2**
MC01	**Montes Claros**	**33.55**	**59**	*eP*	**P**	**20 20 49.2**	**+0.6**
TBTG	**Tabatinga, AM**	**33.92**	**6**	*eP*	**P**	**20 20 47.3**	**-4.3**
SJMB	**Sao Joao De Ma**	**34.11**	**65**	*eP*	**P**	**20 20 53.2**	**-0.1**
RIB01	**Linhares ES**	**34.28**	**66**	*eP*	**P**	**20 20 55.1**	**+0.3**
JANB	**Januaria**	**34.49**	**56**	*eP*	**P**	**20 20 55.7**	**-1.1**
NPGB	**Novo Progresso**	**35.01**	**33**	*eP*	**P**	**20 20 59.7**	**-1.5**
SDBA	**SAO DESIDERIO**	**36.09**	**52**	*eP*	**P**	**20 21 09.6**	**-0.9**
GUA01	**Guaratinga, BA**	**36.49**	**63**	*eP*	**P**	**20 21 14.4**	**+0.6**
ITTB	**Itaituba**	**37.28**	**30**	*eP*	**P**	**20 21 19.5**	**-1.0**
SMTB	**Santa Maria do**	**37.30**	**45**	*eP*	**P**	**20 21 20.3**	**-0.5**
CMC01	**Camacan, BA**	**37.53**	**62**	*eP*	**P**	**20 21 23.3**	**+0.6**
PRPB	**Parauapebas**	**38.36**	**40**	*eP*	**P**	**20 21 27.9**	**-1.9**
VNA3	**Neumayer Olymp**	**46.04**	**156**	P	**P**	**20 22 33.3**	**+1.6**
VNA1	**Neumayer--Stat**	**46.40**	**155**	P	**P**	**20 22 36.3**	**+1.8**
VNA2	**Neumayer--Watz**	**46.72**	**156**	P	**P**	**20 22 38.4**	**+1.4**
	baz=294,slow=10.0						
SDV	**Santo Domingo**	**46.82**	**4**	P	**P**	**20 22 39.1**	**+0.5**
	comp=Z,4.0nm,0.3s,baz=282,slow=8.6,SNR=3.4 comp=Z,4.0nm,0.3s						
BAUV	**El Baul**	**47.08**	**7**	P	**P**	**20 22 40.3**	**-0.1**
MDP	**Montagnes des**	**47.14**	**29**	P	**P**	**20 22 40.8**	**-0.2**
	comp=Z,13nm,0.7s,baz=206,slow=7.8,SNR=7.4						
MDP				LR	LR	20 44 07.0	
	comp=Z,134nm,19.4s,baz=198,slow=38 comp=Z,13nm,0.7s						
SNAA	**Sanae**	**48.26**	**156**	P	**P**	**20 22 50.7**	**+1.6**
SNAA	**Sanae**	**48.26**	**156**	LR	LR	20 42 11.4	
	comp=Z,106nm,19.5s,baz=206,slow=35						
SNAA	**Sanae**	**48.26**	**156**	P	**P**	**20 22 49.9**	**+0.8**
TROLL	**Troll, Antarti**	**49.95**	**157**	P	**P**	**20 23 03.3**	**+1.2**
QSPA	**South Pole Qui**	**52.14**	**180**	P	**P**	**20 23 20.7**	**+2.0**
	comp=Z,5.0nm,1.0s,baz=140,slow=3.0,SNR=8.3						
QSPA				LR	LR	20 45 42.0	
	comp=Z,68nm,18.5s,baz=216,slow=36 comp=Z,5.0nm,1.0s						
QSPA	**South Pole Qui**	**52.14**	**180**	P	**P**	**20 23 19.9**	**+1.2**
QSPA				IAmb	IAmb	20 23 21.9	
	comp=Z,14nm,1.2s						
DLPL	**La Plaine**	**54.38**	**15**	P	**P**	**20 23 34.2**	**-1.2**
TBI	**Tubuai**	**65.31**	**259**	*e*LR	LR	20 44 25.0	
	comp=Z,243nm,25.2s						
PPT2	**Papeete2**	**68.57**	**264**	*eS*	**S**	**20 34 13.6**	**-0.3**
	comp=E,65nm,23.8s		

comp=Z,2.0nm,0.8s,baz=291,slow=4.5,SNR=4.7
MKAR Makanchi Array 160.18 56 PKP **PKPdf 20 34 07.6 +0.1**
comp=Z,0.5nm,0.8s,baz=236,slow=1.3,SNR=5.2
MKAR PKPab **PKPab 20 34 47.9 +0.1**
comp=Z,1.1nm,0.7s,baz=283,slow=4.5,SNR=8.6
PZH PanZhiHua 167.75 159 PKP **PKPdf 20 34 14.5 -0.7**
SONM Songino Array 170.28 1 PKP **PKPdf 20 34 15.6 -0.5**
comp=Z,0.1nm,0.4s,baz=97,slow=3.0,SNR=3.1
SONM PKPab **PKPab 20 35 33.9 +1.7**
comp=Z,0.8nm,0.8s,baz=341,slow=4.6,SNR=7.0
LZH Lanzhou 177.06 132 PKP **PKPdf 20 34 11.5 -7.5**
LZH pPKP pPKPdf 20 34 21.5 -2.5
LZH sPKP 20 34 26.8

WEL 27 20:17:22.5±1.0, 45°S±6°×16°7E±°, h46km±9km, M3.8/6, ML4.1/6, MLv3.8/6, Error ellipse: s-maj=0.0km s-min=0.0km az=115.8, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.14**	**95**	P	Pn	20 17 31.4	+1.3
DCZ				S	Sn	20 17 37.7	+2.4
PYZ	**Puysegur Point**	**0.74**	**195**	P	Pn	20 17 37.5	+0.9
PYZ				S	Sn	20 17 48.4	+1.5
WHZ	**Wether Hill Ro**	**0.82**	**123**	P	Pn	20 17 38.2	+0.4
MLZ	**Mavora Lakes**	**0.83**	**84**	P	Pn	20 17 38.0	+0.2
MLZ				S	Sn	20 17 49.9	+0.9
MSZ	**Milford Sound**	**1.04**	**42**	P	Pn	20 17 40.6	-0.1
MSZ				S	Sn	20 17 54.4	+0.3
APZ	**The Paps**	**1.56**	**153**	P	Pn	20 17 48.0	+0.2
APZ				S	Sn	20 18 07.0	+0.2
WKZ	**Wanaka**	**1.59**	**68**	P	Pn	20 17 48.6	+0.4
EAZ	**Earnscleugh**	**1.68**	**83**	P	Pn	20 17 49.6	+0.2
SYZ	**Scrubby Hill**	**1.87**	**126**	P	Pn	20 17 52.0	0.0
JCZ	**Jackson Bay**	**1.90**	**44**	P	Pn	20 17 51.8	-0.7
TUZ	**Tuapeka**	**1.94**	**106**	P	Pn	20 17 53.0	0.0
LBZ	**Lake Benmore**	**2.53**	**66**	P	Pn	20 17 59.9	-1.2
HHSZ	**Highcliff Hill**	**2.59**	**101**	P	Pn	20 18 01.7	-0.2
ODZ	**Otahua Downs**	**2.64**	**82**	P	Pn	20 18 01.5	-1.1
FOZ	**Fox Glacier**	**2.81**	**48**	P	Pn	20 18 03.4	-1.5
TMZ	**Timaru**	**3.07**	**71**	P	Pn	20 18 06.8	-1.8
GCSZ	**Gaunt Creek Bo**	**3.23**	**50**	P	Pn	20 18 08.8	-1.8
ARCZ	**Arundel**	**3.37**	**65**	P	Pn	20 18 10.3	-2.3
RPZ	**Rata Peaks**	**3.41**	**61**	P	Pn	20 18 11.0	-2.1
WVZ	**Waitaha Valley**	**3.61**	**50**	P	Pn	20 18 14.4	-1.5
WACZ	**Wakanui South**	**3.80**	**68**	P	Pn	20 18 16.2	-2.3
RACZ	**Rakaia**	**4.09**	**67**	P	Pn	20 18 20.0	-2.5
OXZ	**Oxford**	**4.22**	**62**	P	Pn	20 18 21.2	-3.1
INZ	**Inchbonnie**	**4.23**	**51**	P	Pn	20 18 22.6	-1.9
MQZ	**McQueen's Vall**	**4.43**	**69**	P	Pn	20 18 24.5	-2.7
AKCZ	**Akaroa Harbour**	**4.53**	**72**	P	Pn	20 18 26.5	-2.1
LTZ	**Lake Taylor**	**4.67**	**57**	P	Pn	20 18 27.5	-3.0
AMCZ	**Amberley**	**4.68**	**63**	P	Pn	20 18 28.0	-2.5
GVZ	**Greta Valley S**	**5.03**	**63**	P	Pn	20 18 32.4	-3.0
DSZ	**Dennistoun Nort**	**5.11**	**45**	P	Pn	20 18 34.5	-2.1
KHZ	**Kahutara**	**5.64**	**60**	P	Pn	20 18 41.8	-2.0
THZ	**Tophouse**	**5.68**	**52**	P	Pn	20 18 42.7	-1.7
MRNZ	**Matariki Terra**	**5.85**	**48**	P	Pn	20 18 45.3	-1.4
QRZ	**Quartz Range**	**6.17**	**43**	P	Pn	20 18 49.0	-2.0
TKNZ	**Takaka Hill**	**6.22**	**47**	P	Pn	20 18 50.3	-1.5
NNZ	**Nelson**	**6.31**	**50**	P	Pn	20 18 53.3	+0.3
TUWZ	**Tuamarina**	**6.48**	**54**	P	Pn	20 18 56.2	+0.8
DUWZ	**D'Urville Isla**	**6.90**	**50**	P	Pn	20 19 02.1	+1.1

*ARE **27** 20:19:13±2.3, 8°22S±0.07°×76°27W±0.07, h160km±5km, Error ellipse: s-maj=10.7km s-min=8.7km az=225.0*
*IDC **27** 20:19:14.5±1.6, 8°28S×76°19W, h120km±15km, mb3.8/11, mbtmp4.3/15, Error ellipse: s-maj=17.8km s-min=11.3km az=64.0*
*NEIC **27** 20:19:15.8±1.5, 8°25S±0.07°×76°21W±0.08, h122km±6km, mb4.5/71, ML4.8(ARE), Error ellipse: s-maj=11.7km s-min=9.6km az=77.0*
*VAO **27** 20:19:17.7±0.6, 8°15S×76°00W, h123km, mb4.4*
ISC 27 20:19:12.9±0.3, 8°22S±0°05×76°18W±0°05, h100km, n164, σ1°43/169, mb4.6/54, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.44**	**296**	P	**Pn**	**20 19 56.0**	**+4.4**
	703nm,0.3s,baz=103,slow=1.9,SNR=1319						
ATAH				S	**Sn**	**20 20 22.8**	**+1.5**
	368nm,0.5s,baz=293,slow=20,SNR=3.5						
CZSB	**Cruzeiro do Su**	**3.48**	**82**		**Pn**	**20 20 08.7**	**+3.7**
CZSB	**Cruzeiro do Su**	**3.48**	**82**	*eP*	**Pn**	**20 20 08.8**	**+3.7**
NNA	**Nana**	**3.80**	**190**	P	**Pn**	**20 20 11.6**	**+2.2**
	108nm,0.3s,baz=1.8,slow=7.9,SNR=75						
NNA				S	**Sn**	**20 20 53.4**	**+0.1**
	544nm,0.4s,baz=345,slow=12,SNR=12						
NNA	**Nana**	**3.80**	**190**	Pn	**Pn**	**20 20 12.2**	**+2.7**
BOSC	**San Juan Bosco**	**5.53**	**335**		**Pn**	**20 20 33.5**	**+0.5**
ARNL	**Arenillas**	**6.04**	**320**	Pn	**Pn**	**20 20 40.5**	**+0.7**
PORT	**Chimborazo Vol**	**7.19**	**339**		**Pn**	**20 21 00.0**	**+4.1**
CHSH	**Refugio Sur-Vo**	**7.20**	**338**		**Pn**	**20 20 59.4**	**+3.4**
TBTG	**Tabatinga, AM**	**7.41**	**58**	Pn	**Pn**	**20 21 00.2**	**+1.8**
TBTG	**Tabatinga, AM**	**7.41**	**58**	*eP*	**Pn**	**20 21 00.9**	**+2.5**
SLOR	**San Lorenzo -**	**7.79**	**343**		**Pn**	**20 21 07.1**	**+3.2**
PULU	**Pululahua**	**8.50**	**344**		**Pn**	**20 21 17.0**	**+3.3**
IMBA	**Imbabura, San**	**8.67**	**347**		**Pn**	**20 21 20.2**	**+4.2**
OTAV	**Otavalo**	**8.70**	**345**	Pn	**Pn**	**20 21 19.7**	**+3.4**
OTAV	**Otavalo**	**8.70**	**345**	*eP*	**Pn**	**20 21 20.6**	**+4.2**
ETMB	**Extrema**	**9.97**	**100**	Pn	**Pn**	**20 21 32.1**	**-1.2**
LPAZ	**La Paz**	**11.23**	**136**	P	**Pn**	**20 21 50.7**	**-0.3**
	3.4nm,0.5s,baz=334,slow=5.5,SNR=12						
LPAZ	**La Paz**	**11.23**	**136**	Pn	**Pn**	**20 21 50.9**	**-0.1**
LPAZ	**La Paz**	**11.23**	**136**	*eP*	**Pn**	**20 21 54.5**	**+3.6**
PB12	**IPOC Station P**	**11.80**	**152**	Pn	**Pn**	**20 21 57.7**	**-0.3**
PB16	**IPOC Station P**	**11.97**	**148**		**Pn**	**20 22 02.8**	**+2.1**
SAML	**Samuel**	**12.88**	**94**	Pn	**Pn**	**20 22 10.1**	**-2.1**
PAYG	**Puerto Ayora**	**15.92**	**297**		**P**	**20 22 53.8**	**+0.8**
PAYG				IAmb	IAmb	20 22 57.6	
	comp=Z,22nm,0.9s						
MACA	**Manacapuru-AM**	**16.22**	**73**	P	**P**	**20 22 56.5**	**+0.2**
MACA				IAmb	IAmb	20 23 00.2	
	comp=Z,58nm,0.5s						
MACA	**Manacapuru-AM**	**16.22**	**73**	*eP*	**P**	**20 22 56.8**	**+0.6**
VILB	**Vilhena**	**16.40**	**108**	P	**Pn**	**20 22 58.0**	**+0.8**
VILB				IAmb	IAmb	20 23 04.4	
	comp=Z,35nm,0.8s						
VILB	**Vilhena**	**16.40**	**108**	*eP*	**P**	**20 22 58.5**	**+0.2**
SIV	**San Ignacio**	**16.66**	**119**	P	**Pn**	**20 22 59.7**	**-0.8**
	comp=Z,28nm,0.8s,baz=297,slow=11,SNR=32						
PTLB	**Pontes e Lacer**	**18.16**	**115**	P	**Pn**	**20 23 19.3**	**+0.7**
PTLB				IAmb	IAmb	20 23 22.4	
	comp=Z,17nm,0.7s						
PTLB	**Pontes e Lacer**	**18.16**	**115**	*eP*	**Pn**	**20 23 18.6**	**0.0**
BOAV	**Boa Vista**	**18.84**	**57**	P	**Pn**	**20 23 26.9**	**+0.1**
BOAV				IAmb	IAmb	20 23 28.5	
	comp=Z,3.7nm,0.8s						
BOAV	**Boa Vista**	**18.84**	**57**	*eP*	**Pn**	**20 23 26.2**	**-0.6**
BAUV	**El Baul**	**18.88**	**26**	P	**Pn**	**20 23 27.2**	**0.0**
PDRB	**Porto dos Gac**	**19.46**	**102**	*eP*	**Pn**	**20 23 33.4**	**-0.7**
ITTB	**Itaituba**	**20.68**	**81**	*eP*	**P**	**20 23 45.5**	**+0.5**
BIRV	**Birongo**	**21.03**	**28**	P	**P**	**20 23 51.1**	**+2.3**
BIRV				IAmb	IAmb	20 23 58.4	
	comp=Z,15nm,0.9s						
AC05	**El Transito**	**21.25**	**166**	P	**P**	**20 23 51.6**	**+0.4**
SALV	**Santo Antonio**	**21.43**	**113**	*eP*	**P**	**20 23 55.3**	**+2.2**
MALB	**Monte Alegre**	**22.72**	**75**	*eP*	**P**	**20 24 06.7**	**+0.1**
RVDE	**Rio Verde (Bra**	**23.25**	**125**	*eP*	**P**	**20 24 13.1**	**+1.4**
AQDB	**Aquidauana**	**23.25**	**124**	*eP*	**P**	**20 24 12.9**	**+1.2**
CO02	**Combarbal**	**23.38**	**169**	P	**P**	**20 24 13.4**	**+0.6**
CO02				IAmb	IAmb	20 24 40.1	
	comp=Z,38nm,1.4s						
SNDB	**Serra Nova Dou**	**24.78**	**101**	*eP*	**P**	**20 24 26.0**	**+0.4**
MT02	**Curacav**	**25.35**	**170**	P	**P**	**20 24 31.1**	**+0.4**
MT02				IAmb	IAmb	20 24 47.0	
	comp=Z,36nm,1.5s						
CPUP	**Villa Florida**	**25.40**	**137**	P	**P**	**20 24 32.2**	**+1.0**
	comp=Z,1.9nm,0.5s,baz=2.4,slow=17,SNR=1.3						
	comp=Z,1.9nm,0.5s						
PCMB	**Pacaembu**	**27.46**	**122**	*eP*	**P**	**20 24 51.5**	**+1.7**
ITRB	**Iturama**	**27.49**	**117**	*eP*	**P**	**20 24 52.2**	**+2.1**
AOPR	**Arecibo Observ**	**27.99**	**19**	P	**P**	**20 24 55.5**	**+1.1**
PTGB	**Pitanga**	**28.27**	**128**	*eP*	**P**	**20 24 59.6**	**+2.5**
SMTB	**Santa Maria do**	**28.28**	**93**	*eP*	**P**	**20 24 59.3**	**+2.1**
CRSM	**Crissiumal (Br**	**28.39**	**135**	*eP*	**P**	**20 25 00.1**	**+2.1**
BDFB	**Brasilia**	**28.51**	**108**	P	P	20 25 05.2	+5.9
	comp=Z,2.3nm,0.3s,baz=273,slow=7.3,SNR=5.1						
BDFB				pP	sP	20 25 33.7	+0.4
	comp=Z,5.1nm,0.6s,baz=273,slow=14,SNR=5.0						
BDFB	**Brasilia**	**28.51**	**108**	*eP*	**P**	**20 25 01.1**	**+1.8**
IPMB	**Ipameri, GO**	**28.88**	**112**	*eP*	**P**	**20 25 03.3**	**+0.8**
SMRT	**St. Maarten**	**29.13**	**26**	P	**P**	**20 25 04.8**	**+0.2**
PMNB	**Patos De Minas**	**30.65**	**113**	*eP*	**P**	**20 25 18.9**	**+0.7**
TEIG	**Tepich**	**30.67**	**337**	P	**P**	**20 25 19.1**	**+1.0**
TEIG				IAmb	IAmb	20 25 41.2	
	comp=Z,9.8nm,1.2s						
JANB	**Januaria**	**31.92**	**105**	*eP*	**P**	**20 25 30.6**	**+1.3**
MC01	**Montes Claros**	**32.55**	**108**	*eP*	**P**	**20 25 37.6**	**+2.8**
LL04	**Puerto Octay**	**32.73**	**175**	P	**P**	**20 25 35.2**	**-0.8**
LL04				IAmb	IAmb	20 25 36.8	
	comp=Z,5.9nm,0.9s						
PLCA	**Paso Flores**	**32.77**	**172**	P	**P**	**20 25 36.5**	**0.0**
	comp=Z,1.8nm,0.7s,baz=348,slow=8.7,SNR=5.3						
PLCA				PcP	**PcP**	**20 28 18.9**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=271,slow=3.0,SNR=4.0						
	comp=Z,1.8nm,0.7s						
PLCA	**Paso Flores**	**32.77**	**172**	P	**P**	**20 25 36.7**	**+0.2**
DIAM	**Diamantina, MG**	**33.14**	**111**	*eP*	**P**	**20 25 40.4**	**+0.3**
GDU01	**Guandu, BA**	**36.32**	**102**	*eP*	**P**	**20 26 07.3**	**0.0**
RPN	**Rapa Nui**	**36.58**	**235**	P	**P**	**20 26 08.9**	**-0.5**
	comp=Z,21nm,0.3s,baz=80,slow=11,SNR=2.4						
NBLA	**Lagarto - SE**	**37.94**	**97**	*eP*	**P**	**20 26 22.1**	**+1.1**
NBAN	**Anadia - AL**	**39.44**	**95**	*eP*	**P**	**20 26 34.9**	**+1.3**
T59A	**Double "B" Far**	**44.97**	**358**	P	**P**	**20 27 18.8**	**+0.7**
T59A				IAmb	IAmb	20 27 20.7	
	comp=Z,11nm,1.4s						
TX32	**Lajitas Array**	**45.77**	**326**	P	**P**	**20 27 24.8**	**+0.1**
TXAR	**Lajitas Array**	**45.77**	**326**	P	**P**	**20 27 25.3**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=152,slow=8.3,SNR=12						
TXAR				PcP	**PcP**	**20 29 00.0**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=153,slow=6.8,SNR=5.1						
	comp=Z,1.1nm,0.6s						
TXAR	**Lajitas Array**	**45.77**	**326**	P	**P**	**20 27 24.5**	**-0.2**
WHAR	**Wooly Hollow**	**45.87**	**342**	P	**P**	**20 27 24.9**	**-0.4**
WHAR				IAmb	IAmb	20 27 25.5	
	comp=Z,6.3nm,1.0s						
FCAR	**Ozark Folk Cen**	**46.37**	**342**	P	**P**	**20 27 28.7**	**-0.4**
HHAR	**Hobbs**	**47.31**	**340**	P	**P**	**20 27 36.2**	**-0.3**
RLO	**Rose Lookout**	**47.57**	**339**	P	**P**	**20 27 37.7**	**-0.9**
RLO				IAmb	IAmb	20 27 40.0	
	comp=Z,12nm,1.1s						
MGMO	**Mountain Grove**	**47.58**	**343**	P	**P**	**20 27 37.6**	**-1.0**
MGMO				IAmb	IAmb	20 27 38.8	
	comp=Z,8.4nm,0.8s						
SSPA	**Standing Stone**	**48.63**	**358**	P	**P**	**20 27 46.9**	**+0.3**
SSPA				IAmb	IAmb	20 27 50.7	
	comp=Z,11nm,1.3s						
M57A	**Sunshine Farm,**	**49.32**	**359**	P	**P**	**20 27 52.5**	**+0.7**
M57A				IAmb	IAmb	20 27 53.0	
	comp=Z,4.1nm,0.6s						
HDIL	**Hopedale**	**50.02**	**347**	P	**P**	**20 27 55.8**	**-1.3**
BINY	**Binghamton**	**50.17**	**0**	P	**P**	**20 27 59.0**	**+0.7**
BINY				IAmb	IAmb	20 28 09.3	
	comp=Z,12nm,1.4s						
J59A	**Piesco**	**51.46**	**2**	P	**P**	**20 28 08.5**	**+0.6**
PECO	**Prince Edward**	**51.91**	**359**	P	**P**	**20 28 10.5**	**-0.7**
PECO				IAmb	IAmb	20 28 28.9	
	comp=Z,8.2nm,1.0s						
NCB	**Newcomb**	**51.97**	**2**	P	**P**	**20 28 12.1**	**+0.3**
NCB				IAmb	IAmb	20 28 27.4	
	comp=Z,14nm,1.4s						
DELO	**Deloro Mine**	**52.50**	**359**	P	**P**	**20 28 15.1**	**-0.6**
DELO				IAmb	IAmb	20 28 15.8	
	comp=Z,5.0nm,1.0s						
H62A	**Milan**	**52.74**	**5**	P	**P**	**20 28 17.9**	**+0.5**
H62A				IAmb	IAmb	20 28 22.0	
	comp=Z,8.5nm,1.1s						
EMMW	**East Machias**	**53.26**	**8**	P	**P**	**20 28 21.5**	**+0.3**
SDCO	**Great Sand Dun**	**53.30**	**331**		**P**	**20 28 22.2**	**+0.2**
SDCO				IAmb	IAmb	20 28 23.3	
	comp=Z,5.1nm,0.8s						
PKME	**Peaks-Kenny Pk**	**53.59**	**6**	P	**P**	**20 28 24.1**	**+0.5**
GGN	**Saint George**	**53.75**	**8**	P	**P**	**20 28 25.4**	**+0.6**
F64A	**Sherman**	**54.29**	**7**	P	**P**	**20 28 29.5**	**+0.8**
F64A				IAmb	IAmb	20 28 30.7	
	comp=Z,5.8nm,0.9s						
LMN	**Caledonia Moun**	**54.78**	**10**	P	**P**	**20 28 32.7**	**+0.4**
ECSD	**EROS Data Cent**	**54.93**	**342**	P	**P**	**20 28 32.9**	**-0.5**
ECSD				IAmb	IAmb	20 28 33.1	
	comp=Z,4.7nm,0.6s						
PV13	**Radium Mtn., P**	**55.27**	**329**	P	**P**	**20 28 36.4**	**+0.2**
PV13				IAmb	IAmb	20 28 37.0	
	comp=Z,3.9nm,0.7s						
BATG	**Bathurst New B**	**55.98**	**8**	P	**P**	**20 28 41.2**	**+0.4**
BATG				IAmb	IAmb	20 28 42.6	
	comp=Z,6.3nm,0.9s						
MTPU	**Mount Pierson**	**56.96**	**326**	P	**P**	**20 28 48.7**	**+0.3**
SPR3	**Spring Creek 3**	**58.83**	**326**	P	**P**	**20 29 01.6**	**+0.1**
SPR3				IAmb	IAmb	20 29 02.4	
	comp=Z,2.0nm,0.7s						
DUG	**Dugway, Tooele**	**58.85**	**328**	P	**P**	**20 29 01.8**	**+0.5**
DUG				IAmb	IAmb	20 29 02.4	
	comp=Z,2.5nm,0.7s						
AGMN	**Agassiz Nation**	**58.89**	**345**	P	**P**	**20 29 00.7**	**-0.6**
PDAR	**Pinedale Array**	**59.16**	**332**	P	**P**	**20 29 03.0**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=126,slow=6.0,SNR=3.5						
PDAR				PcP	**PcP**	**20 29 49.7**	**-1.4**
	comp=Z,0.4nm,0.3s						
HWUT	**Hardware Ranch**	**59.25**	**330**	P	**P**	**20 29 03.8**	**-0.4**
HWUT				IAmb	IAmb	20 29 04.3	
	comp=Z,3.5nm,0.7s						
GMN	**Gold Mountain**	**59.38**	**322**	P	**P**	**20 29 05.7**	**+0.6**
ULM	**Lac du Bonnet**	**60.70**	**346**	P	**P**	**20 29 11.6**	**-1.9**
	comp=Z,11nm,0.7s,baz=169,slow=6.5,SNR=15						
	comp=Z,11nm,0.7s						
ULM	**Lac du Bonnet**	**60.70**	**346**	P	**P**	**20 29 12.6**	**-1.0**
NVAR	**Mina Array Bea**	**60.74**	**323**	P	**P**	**20 29 15.0**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=150,slow=7.2,SNR=7.1						
	comp=Z,1.3nm,0.8s						
KVN	**Kaiserville**	**61.02**	**324**	P	**P**	**20 29 16.5**	**+0.2**
BMN	**Battle Mountai**	**61.43**	**325**	P	**P**	**20 29 19.5**	**+0.5**
MFID	**Camas Ranch**	**62.73**	**328**		**P**	**20 29 27.6**	**+0.1**
MFID				IAmb	IAmb	20 29 28.9	
	comp=Z,7.4nm,1.0s						
BEKR	**Beckworth**	**62.89**	**323**	P	**P**	**20 29 28.7**	**-0.1**
SCHQ	**Schefferville**	**63.30**	**6**	P	**P**	**20 29 30.7**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=249,slow=14,SNR=5.6						
	comp=Z,2.5nm,0.3s						
MOD	**Modoc Plateau**	**64.15**	**325**	P	**P**	**20 29 37.3**	**+0.3**
MOD				IAmb	IAmb	20 29 38.0	
	comp=Z,3.1nm,0.7s						
I07A	**Izee**	**65.13**	**327**	P	**P**	**20 29 43.5**	**+0.3**
I07A				IAmb	IAmb	20 29 44.7	
	comp=Z,4.2nm,0.8s						
WALA	**Waterton Lakes**	**65.92**	**334**	P	**P**	**20 29 47.5**	**-0.7**
WALA				IAmb	IAmb	20 29 48.9	
	comp=Z,3.7nm,0.7s						
KSXB	**Camp Six Broad**	**66.20**	**323**	P	**P**	**20 29 50.3**	**+0.1**
KSXB				IAmb	IAmb	20 30 08.8	
	comp=Z,10nm,1.3s						
DBO	**Dodson Butte**	**66.61**	**324**	P	**P**	**20 29 52.3**	**-0.4**
DBO				IAmb	IAmb	20 30 05.0	
	comp=Z,9.2nm,1.4s						
FCC	**Fort Churchill**	**68.30**	**350**	P	**P**	**20 30 02.1**	**-0.8**
PPT	**Papeete**	**71.79**	**254**	P	**P**	**20 30 24.1**	**-1.1**
	comp=Z,13nm,0.4s,baz=49,slow=19,SNR=1.6						
IVI	**Ivigtut**	**72.61**	**14**	P	**P**	**20 30 28.7**	**-0.4**
DBIC	**Dimbokro**	**72.64**	**80**	P	**P**	**20 30 30.0**	**-0.2**
	comp=Z,3.1nm,0.5s,baz=252,slow=3.7,SNR=7.5						
	comp=Z,3.1nm,0.5s						
DBIC	**Dimbokro**	**72.64**	**80**	P	**P**	**20 30 29.8**	**-0.5**
DBIC				IAmb	IAmb	20 30 30.1	
	comp=Z,6.7nm,1.0s						
NRS	**Narsarsuaq**	**73.25**	**15**	*i* P	**P**	**20 30 34.8**	**+1.9**
NRS				IAmb	IAmb	20 30 39.0	
	comp=Z,34nm,0.8s						
KOWA	**Kowa**	**75.03**	**73**	P	**P**	**20 30 44.0**	**-0.2**
KOWA				IAmb	IAmb	20 30 44.9	
	comp=Z,5.1nm,0.7s						
VNA1	**Neumayer--Stat**	**75.06**	**161**	P	**P**	**20 30 43.3**	**0.0**
VNA2	**Neumayer--Watz**	**75.41**	**162**	P	**P**	**20 30 45.0**	**-0.4**
	baz=281,slow=7.0						
YKA	**Yellowknife Ar**	**76.45**	**343**	P	**P**	**20 30 50.5**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=138,slow=6.3,SNR=6.2						
	comp=Z,1.1nm,0.5s						
SNAA	**Sanae**	**77.03**	**162**	P	**P**	**20 30 54.3**	**-0.3**
SNAA	**Sanae**	**77.03**	**162**	P	**P**	**20 30 54.3**	**-0.3**
DY2G	**Dye2**	**77.62**	**12**	*i* P	**P**	**20 30 57.1**	**-1.0**
DY2G				IAmb	IAmb	20 30 58.0	
	comp=Z,11nm,0.8s						
TROLL	**Troll, Antarti**	**78.75**	**162**	P	**P**	**20 31 04.1**	**-0.1**
ILULI	**Ilulissat**	**79.20**	**9**	P	**P**	**20 31 04.8**	**-1.6**
ILULI				IAmb	IAmb	20 31 30.6	
	comp=Z,8.0nm,0.7s						
ILULI	**Ilulissat**	**79.20**	**9**	*i* P	**P**	**20 31 04.0**	**-2.4**
ILULI				IAmb	IAmb	20 31 06.6	
	comp=Z,8.3nm,0.5s						
TOA0	**Torodi Ar. Sit**	**80.19**	**75**	P	**P**	**20 31 12.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**80.19**	**75**	P	**P**	**20 31 11.9**	**-1.0**
	comp=Z,59nm,0.5s,baz=274,slow=5.2,SNR=5.0						
NUUG	**Nuugaatsiaq**	**81.04**	**7**	*i* P	**P**	**20 31 19.4**	**+3.1**
ICESG	**Greenland Ices**	**81.20**	**12**	*i* P	**P**	**20 31 16.1**	**-1.5**
ICESG				IAmb	IAmb	20 31 18.3	
	comp=Z,6.5nm,0.9s						
ESDC	**Sonseca Array**	**81.78**	**48**	P	**P**	**20 31 21.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=254,slow=4.5,SNR=9.1						
ESDC				pP	**sP**	**20 31 54.2**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=286,slow=5.2,SNR=3.7						
	comp=Z,0.7nm,0.7s						
ESDC	**Sonseca Array**	**81.78**	**48**	P	**P**	**20 31 21.5**	**+0.5**
QSPA	**South Pole Qui**	**81.89**	**180**	P	**P**	**20 31 21.4**	**+0.2**
QSPA				IAmb	IAmb	20 31 22.3	
	comp=Z,7.4nm,1.1s						
SUMG	**Summit**	**84.23**	**11**	P	**P**	**20 31 33.5**	**+0.2**
SUMG	**Summit**	**84.23**	**11**	*i* P	**P**	**20 31 33.0**	**-0.3**
SUMG				IAmb	IAmb	20 31 33.8	
	comp=Z,8.7nm,0.8s						
M30M	**Minto, Yukon**	**84.31**	**336**	P	**P**	**20 31 33.2**	**-0.3**
NEEM	**North Greenlan**	**86.70**	**5**	*i* P	**P**	**20 31 45.0**	**-0.4**
NEEM				IAmb	IAmb	20 31 46.1	
	comp=Z,27nm,1.5s						
EGAK	**Eagle**	**87.07**	**337**	P	**P**	**20 31 46.8**	**-0.2**
EGAK				IAmb	IAmb	20 31 47.5	
	comp=Z,5.8nm,0.9s						
J26L	**Joseph Creek**	**87.89**	**336**	P	**P**	**20 31 50.9**	**-0.2**
PRP	**Porcupine Dome**	**89.06**	**337**	P	**P**	**20 31 56.5**	**-0.1**
PRP				IAmb	IAmb	20 31 57.0	
	comp=Z,4.1nm,0.9s						
ILAR	**Eielson Array**	**89.32**	**336**	P	**P**	**20 31 56.0**	**-1.7**
	comp=Z,1.2nm,0.9s,baz=152,slow=3.3,SNR=7.6						
	comp=Z,1.2nm,0.9s						
BMAR	**Burnt Mountain**	**89.44**	**339**	P	**P**	**20 31 58.1**	**-0.1**
STKA	**Stephens Creek**	**126.23**	**220**	PKP	**PKPdf**	**20 38 03.5**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=158,slow=2.6,SNR=5.3						
ZAA0	**Zalesovo Array**	**131.90**	**15**	PKPdf	**PKPdf**	**20 38 14.0**	**-0.5**
ZALV	**Zalesovo Beam**	**131.90**	**15**	PKP	**PKPdf**	**20 38 13.2**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=250,slow=2.1,SNR=11						
ZALV	**Zalesovo Beam**	**131.90**	**15**	PKPdf	**PKPdf**	**20 38 13.6**	**-0.8**
KLR	**Kul'dur**	**132.88**	**335**	PKP	**PKPdf**	**20 38 15.0**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=92,slow=3.1,SNR=5.3						
ASAR	**Alice Springs**	**136.77**	**222**	PKP	**PKPdf**	**20 38 22.9**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=101,slow=1.5,SNR=6.4						
MK31	**Makanchi Array**	**137.38**	**22**	PKPdf	**PKPdf**	**20 38 24.0**	**-1.0**
MKAR	**Makanchi Array**	**137.38**	**22**	PKP	**PKPdf**	**20 38 23.8**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=322,slow=2.2,SNR=9.5						
MKAR	**Makanchi Array**	**137.38**	**22**	PKPdf	**PKPdf**	**20 38 23.9**	**-1.1**
WB2	**Warramunga Arr**	**138.93**	**227**	PKPdf	**PKPdf**	**20 38 27.6**	**-1.1

K20K	**Telida**	**62.05**	**26**	P	**P**	**20 40 44.5**	**+1.3**
K20K				IAmb	IAmb	20 40 55.0	
	comp=Z,6.7nm,1.4s						
J20K	**Nowinta River**	**62.30**	**25**	P	**P**	**20 40 45.9**	**+1.1**
J20K				IAmb	IAmb	20 41 04.3	
	comp=Z,3.6nm,1.2s						
IMAR	**Indian Mountai**	**63.11**	**23**	P	**P**	**20 40 50.8**	**+0.7**
H21K	**Melozitna Rive**	**63.35**	**24**	P	**P**	**20 40 52.1**	**+0.2**
FID	**Port Fidalgo**	**64.78**	**30**	P	**P**	**20 41 01.6**	**+0.3**
FID				IAmb	IAmb	20 41 45.6	
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	**65.48**	**26**	P	**P**	**20 41 04.1**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=250,slow=5.8,SNR=7.5						
	comp=Z,0.4nm,0.4s						
TOLK	**Toolik Lake Re**	**65.53**	**21**	P	**P**	**20 41 06.7**	**+0.7**
TOLK				IAmb	IAmb	20 41 44.7	
	comp=Z,4.6nm,1.2s						
J26L	**Joseph Creek**	**66.83**	**26**	P	**P**	**20 41 14.1**	**-0.3**
BMAR	**Burnt Mountain**	**67.01**	**23**	P	**P**	**20 41 16.1**	**+0.7**
BCAR	**Beaver Creek A**	**67.37**	**28**	P	**P**	**20 41 17.8**	**0.0**
KK31	**Karatay Array**	**68.47 310**		P	**P**	**20 41 25.2**	**+0.1**
KKAR	**Karatay Array**	**68.47 310**		P	**P**	**20 41 25.2**	**+0.2**
BRVK	**Borovoye**	**68.49 321**		P	**P**	**20 41 25.5**	**+0.6**
GAR	**Garm**	**68.87 306**		P	**P**	**20 41 27.4**	**-0.4**
GAR				IAmb	IAmb	20 41 29.6	
	comp=Z,5.2nm,0.5s						
HYT	**Haines Junctio**	**69.15**	**31**	P	**P**	**20 41 29.9**	**+0.9**
HYT				IAmb	IAmb	20 41 34.4	
	comp=Z,5.5nm,1.3s						
ABKAR	**Akbulak array**	**75.21 317**		P	**P**	**20 42 03.4**	**-1.8**
ABKAR	**Akbulak array**	**75.21 317**		P	**P**	**20 42 03.5**	**-1.8**
YKA	**Yellowknife Ar**	**79.78**	**28**	P	**P**	**20 42 27.8**	**-2.6**
	comp=Z,1.4nm,0.8s,baz=228,slow=9.2,SNR=2.5						
	comp=Z,1.4nm,0.8s						
NVAR	**Mina Array Bea**	**84.23**	**52**	P	**P**	**20 42 54.1**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=265,slow=4.5,SNR=2.6						
	comp=Z,0.3nm,0.5s						
NVAR	**Mina Array Bea**	**84.23**	**52**	P	**P**	**20 42 55.0**	**+0.5**
ARCES	**ARCESS Array B**	**84.72 342**		P	**P**	**20 42 54.3**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=54,slow=6.3,SNR=1.4						
	comp=Z,1.4nm,0.8s						
LRM	**Limekiln Ridge**	**86.11**	**43**	P	**P**	**20 43 03.9**	**+0.1**
KBZ	**Khabaz**	**87.97 315**		P	**P**	**20 43 14.5**	**+2.1**
	comp=Z,0.9nm,0.5s,baz=62,slow=9.6,SNR=2.0						
	comp=Z,0.9nm,0.5s						
ULM	**Lac du Bonnet**	**94.22**	**35**	P	**P**	**20 43 41.8**	**+0.5**
	comp=Z,3.2nm,1.0s,baz=325,slow=12,SNR=3.2						
ULM				LR	LR	21 23 04.2	
	comp=Z,46nm,18.8s,baz=290,slow=34						
	comp=Z,3.2nm,1.0s						
BRTR	**Keskin Array B**	**95.92 314**		P	**P**	**20 43 49.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=64,slow=6.6,SNR=2.7						
	comp=Z,0.4nm,0.6s						
H03S2	**Juan Fernandez**	**136.12 122**		T	T	23 21 08.0	
	baz=260						
H03S1	**Juan Fernandez**	**136.14 122**		T	T	23 21 07.3	
	baz=260						
H03S3	**Juan Fernandez**	**136.14 122**		T	T	23 21 03.2	
	baz=260						
LPAZ	**La Paz**	**147.20**	**95**	PKPbc	**PKPbc**	**20 50 07.7**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=359,slow=4.9,SNR=5.0						

*IDC **27** 20:44:35.0±2.0,34˚.30N×139˚.70E,h0km,mb3.7/5, mbtmp3.7/6,ML3.2/1,MS3.5/2,Error ellipse: s-maj=85.5km s-min=14.7km az=74.0*

*NEIC **27** 20:44:36.9±1.1,34˚.16N±0˚.05×139˚.23E±0˚.06,h10km±1km, mb4.1/7,Error ellipse: s-maj=9.0km s-min=6.7km az=226.0*

*NIED **27** 20:44:37.0,34˚.23N×139˚.15E,h10km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.98; $M_{\theta\theta}$0.16; $M_{\phi\phi}$4.82; $M_{r\theta}$1.41; $M_{\theta\phi}$-1.97; $M_{\phi r}$1.74; Fault plane solution: $M_0$5.74000×10^{14} NP1: ϕ_s321.00000˚,δ42.00000˚,λ-120.00000˚. NP2: ϕ_s179.00000˚,δ54.00000˚,λ-66.00000˚.*

*JMA **27** 20:44:37.0±0.1,34˚.2N±0˚.3×139˚.2E±0˚.5,h10km,MV3.5/33, NEAR NIIJIMA ISLAND*

JMA Felt III J1 at NEAR NIIJIMA ISLAND .

ISC 27 20:44:36.9±1.0,34˚21N±0˚.04×139˚20E±0˚.06,h9km±6km, n44,σ0s74/41,mb3.9/10,5D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSKK	**Shikinejimakit**	**0.12**	**3**	⇓*i*P	**Pg**	**20 44 39.7**	**0.0**
JSKK				⇓S	**Sg**	**20 44 41.9**	**+0.2**
JNIO	**Niijimaoohara**	**0.15**	**23**	*i* P	**Pg**	**20 44 40.5**	**+0.2**
JNIO				S	**Sg**	**20 44 43.2**	**+0.6**
JTHY	**Toshimahigashi**	**0.32**	**13**	P	**Pb**	**20 44 40.0**	**-0.9**
JMKN	**Mikurajimanish**	**0.45**	**135**	*i* P	**Pb**	**20 44 46.7**	**-0.4**
JIM2	**Oshima 3**	**0.54**	**20**	*i* P	**Pg**	**20 44 47.3**	**0.0**
JIZS	**Izushimoda**	**0.57**	**332**	⇓*i*P	**Pg**	**20 44 47.5**	**-0.4**
JIZS				⇓S	**Sg**	**20 44 55.2**	**-0.3**
KTJ3	**Kamata3**	**0.73**	**351**	⇓*i*P	**Pg**	**20 44 50.2**	**-0.8**
JHJ	**Hachijo jima 2**	**1.19**	**156**	Pn	**Pb**	**20 44 58.9**	**-0.8**
	109nm,0.3s,baz=328,slow=17,SNR=28						
JHJ				Sn	**Sn**	**20 45 16.0**	**-0.2**
	140nm,0.3s,baz=82,slow=23,SNR=6.3						
JHJ2	**Mitsune**	**1.21**	**155**		**Pn**	**20 44 58.8**	**-1.2**
JHJ2				Sn	**Sg**	**20 45 16.2**	**+0.3**
JGF	**Kuroka**	**2.05**	**313**	Pn	**Pn**	**20 45 11.7**	**-0.1**
INU	**Inuyama**	**2.13**	**303**	Pn	**Pn**	**20 45 12.4**	**-0.2**
JYT	**Yasato**	**2.17**	**22**	Pn	**Pn**	**20 45 12.7**	**-0.5**
MJAR	**Matsushiro Arr**	**2.46**	**341**	Pn	**Pn**	**20 45 17.0**	**-0.3**
	4.5nm,0.3s,baz=173,slow=15,SNR=183						
MJAR				Sn	**Sb**	**20 45 50.3**	**-1.6**
	baz=154,slow=13						
	51nm,0.5s						
MAJO	**Matsushiro**	**2.46**	**341**	Pn	**Pn**	**20 45 18.6**	**+1.3**
JMM	**Marumori**	**3.87**	**19**	Pn	**Pn**	**20 45 37.0**	**+0.4**
JSD	**Sado**	**3.89**	**349**		**Pn**	**20 45 37.2**	**+0.3**
JMN	**Monobe**	**4.45**	**265**	Pn	**Pn**	**20 45 44.3**	**-0.4**
JHS	**Saijyo**	**5.08**	**281**	Pn	**Pn**	**20 45 53.2**	**-0.1**
JSU	**Suzuyama**	**7.84**	**252**	Pn	**Pn**	**20 46 30.5**	**-0.7**
ERM	**Erimo**	**8.39**	**21**	Pn	**Pn**	**20 46 38.3**	**-0.3**
KSRS	**Korea Array**	**9.71**	**293**	LR	LR	20 51 06.8	
	comp=Z,32nm,18.1s,baz=105,slow=39						
MA2	**Magadan**	**26.49**	**13**	P	**P**	**20 50 13.1**	**-1.3**
SONM	**Songino Array**	**28.01 309**		P	**P**	**20 50 30.5**	**+2.2**
	0.2nm,0.7s,baz=107,slow=9.2,SNR=1.6						
	0.2nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.47 113**		T	T	21 20 15.8	
	baz=307,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.48 113**		T	T	21 20 09.0	
	baz=307,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy**	**28.49 113**		T	T	21 20 09.9	
	baz=307,slow=75,SNR=25						
CMAR	**Chiang Mai Arr**	**39.07 257**		LR	LR	21 09 02.2	
	comp=Z,18nm,18.6s,baz=265,slow=37						
MK31	**Makanchi Array**	**44.15 304**		P	**P**	**20 52 46.6**	**+0.7**
MK31				IAmb	IAmb	20 52 52.0	
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**44.15 304**		P	**P**	**20 52 47.2**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=96,slow=8.7,SNR=7.2						
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**44.15 304**		P	**P**	**20 52 45.9**	**+0.1**
MLY	**Manley**	**51.19**	**31**	P	**P**	**20 53 40.4**	**+0.1**
MLY				IAmb	IAmb	20 53 48.1	
	comp=Z,1.7nm,1.0s						
KKAR	**Karatay Array**	**53.01 301**		P	**P**	**20 53 54.0**	**-0.2**
KKAR	**Karatay Array**	**53.01 301**		P	**P**	**20 53 53.7**	**-0.5**
KKAR				IAmb	IAmb	20 54 07.5	
	comp=Z,2.2nm,1.2s						
WB0	**Warramunga Arr**	**53.88 186**		P	**P**	**20 53 59.6**	**-0.9**
WB0				IAmb	IAmb	20 54 04.9	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**54.05 186**		P	**P**	**20 54 02.4**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=358,slow=7.5,SNR=1.9						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**54.05 186**		P	**P**	**20 54 02.3**	**+0.5**
WR0	**Warramunga Arr**	**54.05 185**		P	**P**	**20 54 02.3**	**+0.5**
WR0				IAmb	IAmb	20 54 16.5	
	comp=Z,6.7nm,1.4s						
ABKAR	**Akbulak array**	**58.40 311**		P	**P**	**20 54 32.8**	**+0.1**
FINES	**FINESS Array B**	**70.46 332**		P	**P**	**20 55 51.4**	**0.0**
	comp=Z,4.5nm,1.1s,baz=57,slow=8.4,SNR=1.8						
	comp=Z,4.5nm,1.1s						
NOA	**NORSAR Array B**	**76.07 337**		P	**P**	**20 56 24.7**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=44,slow=5.6,SNR=2.8						
	comp=Z,0.7nm,0.8s						
IDI	**Anoyia**	**87.55 312**		LR	LR	21 44 00.1	
	comp=Z,88nm,18.4s,baz=300,slow=41						
H03N2	**Juan Fernandez**	**148.43 100**		T	T	23 50 16.0	
	baz=286,slow=75,SNR=12						
H03N3	**Juan Fernandez**	**148.44 100**		T	T	23 50 16.7	
	baz=286,slow=75,SNR=12						
H03N1	**Juan Fernandez**	**148.45 99**		T	T	23 50 16.2	
	baz=286,slow=75,SNR=11						

*NEIC **27** 20:46:04.8±1.4,18˚.60N±0˚.09×145˚.7E±0˚.2,h196km±10km, mb4.3/18,Error ellipse: s-maj=25.6km s-min=13.0km az=99.0*

*IDC **27** 20:46:12.0±5.9,18˚.61N×145˚.59E,h274km±60km,mb3.2/8, mbtmp3.8/9,Error ellipse: s-maj=31.7km s-min=13.7km az=95.0*

ISC 27 20:46:04.7±0.6,18˚62N±0˚.08×145˚6E±0˚.1,h200km,n29, σ0s83/30,mb4.1/18,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.05 188**		Pn	**Pn**	**20 47 21.1**	**+1.3**
MJAR	**Matsushiro Arr**	**19.01 341**		P	**Pn**	**20 50 13.6**	**-0.9**
	1.0nm,0.8s,baz=167,slow=11,SNR=3.0						
KSBUS	**Busan**	**22.10 322**		P	**P**	**20 50 44.2**	**+0.5**
KSBUS				IAmb	IAmb	20 51 12.6	
	comp=Z,47nm,1.2s						
SSLB	**Suanglung**	**23.54 287**		P	**P**	**20 50 58.1**	**+1.0**
SSLB				IAmb	IAmb	20 51 02.9	
	comp=Z,18nm,1.3s						
COEN	**Coen**	**32.46 184**		P	**P**	**20 52 15.6**	**-0.8**
COEN				IAmb	IAmb	20 52 39.3	
	comp=Z,21nm,1.2s						
MTN	**Manton Dam**	**34.37 206**		P	**P**	**20 52 32.3**	**-0.6**
MTN				IAmb	IAmb	20 52 42.2	
	comp=Z,16nm,1.4s						
PEA0B	**Petropavlovsk-**	**35.69**	**13**	P	**P**	**20 52 44.8**	**+1.0**
PETK	**Petropavlovsk-**	**35.69**	**13**	P	**P**	**20 52 45.3**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=245,slow=9.4,SNR=2.0						
	comp=Z,1.0nm,0.7s						
KNRA	**Kununurra**	**37.90 207**		P	**P**	**20 53 02.9**	**+0.1**
KNRA				IAmb	IAmb	20 53 03.0	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**39.70 197**		P	**P**	**20 53 17.8**	**+0.1**
WB0				IAmb	IAmb	20 53 19.3	
	comp=Z,9.5nm,1.1s						
WRA	**Warramunga Arr**	**39.88 197**		P	**P**	**20 53 19.5**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=21,slow=8.8,SNR=48						
WRA				PcP	**PcP**	**20 55 19.8**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=14,slow=3.6,SNR=1.9						
	comp=Z,1.3nm,0.4s						
WRA	**Warramunga Arr**	**39.88 197**		P	**P**	**20 53 18.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**41.43 209**		P	**P**	**20 53 32.1**	**+0.2**
FITZ				IAmb	IAmb	20 53 39.7	
	comp=Z,9.1nm,1.4s						
SONM	**Songino Array**	**43.15 321**		P	**P**	**20 53 45.9**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=138,slow=9.0,SNR=3.0						
	comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**43.15 321**		P	**P**	**20 53 46.3**	**+0.6**
ASAR	**Alice Springs**	**43.55 196**		P	**P**	**20 53 49.0**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=19,slow=5.8,SNR=7.5						
	comp=Z,0.3nm,0.4s						
MBWA	**Marble Bar**	**46.96 214**		P	**P**	**20 54 15.7**	**0.0**
MBWA				IAmb	IAmb	20 54 42.7	
	comp=Z,11nm,1.2s						
GSI	**Gunungsitoli**	**50.12 256**		P	**P**	**20 54 40.8**	**+0.8**
GSI				IAmb	IAmb	20 54 43.2	
	comp=Z,21nm,1.1s						
SDPT	**Sand Point**	**54.59**	**34**	P	**P**	**20 55 12.3**	**+0.2**
MORW	**Morawa**	**55.34 212**		P	**P**	**20 55 17.3**	**-0.6**
MK31	**Makanchi Array**	**58.45 314**		P	**P**	**20 55 39.7**	**0.0**
MKAR	**Makanchi Array**	**58.45 314**		P	**P**	**20 55 39.8**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=95,slow=8.3,SNR=8.4						
	comp=Z,0.4nm,0.5s						
N18K	**Kilae Creek**	**58.66**	**29**	P	**P**	**20 55 41.6**	**+0.8**
N18K				IAmb	IAmb	20 55 42.3	
	comp=Z,5.9nm,0.9s						
MAKZ	**Makanchi**	**58.67 314**		P	**P**	**20 55 41.3**	**+0.1**
MAKZ				IAmb	IAmb	20 55 59.6	
	comp=Z,3.4nm,1.5s						
IMAR	**Indian Mountai**	**61.33**	**24**	P	**P**	**20 55 59.0**	**+0.2**
ILAR	**Eielson Array**	**63.76**	**26**	P	**P**	**20 56 13.7**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=247,slow=5.4,SNR=5.8						
	comp=Z,0.5nm,0.5s						
ABKAR	**Akbulak array**	**73.34 317**		P	**P**	**20 57 13.5**	**-1.0**
NVAR	**Mina Array Bea**	**83.26**	**52**	P	**P**	**20 58 09.7**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=264,slow=5.2,SNR=4.2						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**86.92 335**		P	**P**	**20 58 24.9**	**-1.8**
	comp=Z,4.8nm,1.0s,baz=64,slow=4.4,SNR=3.0						
	comp=Z,4.8nm,1.0s						

*BJI **27** 20:47:44.0±0.0,43˚.20N×110˚.30W,h10km,mb4.8/20, mB5.3/9,Ms5.1/9,Ms7 4.5/8*

*IDC **27** 20:47:45.1±0.3,43˚.26N×110˚.35W,h0km,mb4.5/25, mbtmp4.5/33,ML3.9/8,MS4.2/55,Error ellipse: s-maj=6.8km s-min=4.2km az=42.0*

*MOS **27** 20:47:45.2±0.9,43˚.20N×110˚.20W,h12km,mb5.0/26, MS4.5/12,Error ellipse: s-maj=5.9km s-min=3.8km az=89.8*

*NEIC **27** 20:47:46.7,43˚.24N×110˚.25W,h14km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92; $M_{\theta\theta}$-0.89; $M_{\phi\phi}$ 1.81; $M_{r\theta}$0.83; $M_{\theta\phi}$0.50; $M_{\phi r}$-0.70; Fault plane solution: $M_0$1.97000×10^{16} NP1:ϕ_s226.15000˚, δ50.05000˚,λ-27.79000˚. NP2:ϕ_s334.84000˚,δ69.06000˚, λ-136.57000˚. Principal axes: T 2.0123, Plg12.0000˚, Azm96.0000˚; N -0.0787, Plg43.0000˚, Azm356.0000˚; P -1.9337, Plg45.0000˚, Azm198.0000˚;*

*BUT **27** 20:47:46.7±1.7,43˚.23N±0˚.04×110˚.26W±0˚.05,h5km±4km Error ellipse: s-maj=6.3km s-min=4.4km az=54.0*

*NEIC **27** 20:47:47.2±2.3,43˚.22N±0˚.04×110˚.36W±0˚.06,h12km±3km, mb4.9/232,ML5.0/75,Mwr4.8/78,ML5.2/23(BUT),Error ellipse: s-maj=6.4km s-min=4.5km az=59.0*

*GCMT **27** 20:47:50.2±0.2,43˚.23N±0˚.02×110˚.02W±0˚.02,h26km, MW5.0/102,Moment Tensor Solution. s58,c63; s102,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.93±.15; $M_{\theta\theta}$-2.48±.12; $M_{\phi\phi}$4.40±.12; $M_{r\theta}$1.14±.27; $M_{\theta\phi}$0.65±.09; $M_{\phi r}$-0.54±.19; Best double couple: M_o3.98000×10^{16} NP1:ϕ_s328.00000˚,δ67.00000˚, λ-148.00000˚. NP2:ϕ_s224.00000˚,δ61.00000˚, λ-26.00000˚. Principal axes: T 4.4910, Plg4.0000˚, Azm95.0000˚; N -1.0320, Plg52.0000˚, Azm360.0000˚; P -3.4680, Plg38.0000˚, Azm188.0000˚; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 20:47:45.9±0.5,43˚20N±0˚.02×110˚16W±0˚.02,h5km±2km, h6km:pP-P,n1086,σ1s29/1098,mb4.9/185,MS4.4/69, 18C-10D,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNOW	**Snow King Moun**	**0.51 301**			**Pg**	**20 47 55.1**	**-0.7**
SNOW				Sg	**Sg**	**20 48 01.4**	**-1.1**
SNOW				IAML		20 48 07.1	
	196μm,0.9s						
SNOW				IAML		20 48 07.5	
	271μm,0.5s						
LOHW	**Long Hollow**	**0.53 322**			**Pg**	**20 47 55.4**	**-0.6**
LOHW				Sg	**Sg**	**20 48 01.5**	**-1.5**
REDW	**Red Top Meadow**	**0.53 288**			**Pg**	**20 47 55.5**	**-0.7**
REDW				Sg	**Sg**	**20 48 02.1**	**-1.1**
REDW				IAML		20 48 07.7	
	154μm,0.5s						
BW06	**Boulder Array**	**0.62 134**		P	**Pb**	**20 47 59.6**	**+0.4**
	baz=310,SNR=1000						
BW06				S	**Sb**	**20 48 09.0**	**+0.7**
	baz=310						
PD31	**Pinedale Array**	**0.62 134**			**Pb**	**20 47 59.6**	**+0.4**
PDAR	**Pinedale Array**	**0.62 134**		Pg	**Pb**	**20 47 59.5**	**+0.2**
	2μm,0.3s,baz=329,slow=19						
PDAR				Lg	Lg	20 48 10.5	
	3μm,0.3s,baz=341,slow=31,SNR=21						
TPAW	**Teton Pass**	**0.65 297**			**Pg**	**20 47 56.7**	**-1.7**
TPAW				IAML		20 48 05.8	
	87μm,0.7s						
TPAW				IAML		20 48 13.5	
	144μm,0.6s						
MOOW	**Moose Ponds**	**0.70 322**		Pg	**Pg**	**20 47 58.2**	**-1.1**
MOOW				Sg	**Sg**	**20 48 06.5**	**-1.9**
MOOW				IAML		20 48 06.9	
	67μm,0.7s						
MOOW				IAML		20 48 06.9	
	74μm,0.4s						
FXWY	**Fox Creek**	**0.77 305**		Pg	**Pg**	**20 47 59.6**	**-1.1**
FXWY				Sg	**Sg**	**20 48 08.8**	**-2.0**
FXWY				IAML		20 48 09.5	
	61μm,0.7s						
FXWY				IAML		20 48 09.6	
	108μm,0.6s						
AHID	**Auburn Hatcher**	**0.82 238**		Pg	**Pg**	**20 48 01.0**	**-0.6**
AHID				IAML		20 48 15.3	
	56μm,0.4s						
IMW	**Indian Meadow**	**0.90 321**		Pg	**Pg**	**20 48 02.0**	**-1.2**
IMW				Sg	**Sg**	**20 48 12.6**	**-2.4**
ECR	**Eagle Creek**	**0.90 261**			**Pg**	**20 48 02.5**	**-0.7**
FLWY	**Flagg Ranch**	**0.97 336**			**Pg**	**20 48 03.5**	**-1.0**
FLWY					**Sg**	**20 48 15.5**	**-1.6**
FLWY				IAML		20 48 18.7	
	36μm,0.9s						
FLWY				IAML		20 48 20.5	
	32μm,0.7s						
YPP	**Pitchstone Pla**	**1.17 337**			**Pg**	**20 48 07.4**	**-0.9**
YPP				IAML		20 48 23.1	
	comp=E,49μm,0.4s						
YPP				IAML		20 48 23.5	
	comp=N,28μm,0.2s						
H17A	**Grant Village**	**1.23 346**			**Pg**	**20 48 08.8**	**-0.8**
H17A				IAML		20 48 26.3	
	comp=N,29μm,0.2s						
H17A				IAML		20 48 28.5	
	comp=E,21μm,0.5s						
H17A	**Grant Village**	**1.23 346**		P	**Pg**	**20 48 08.8**	**-0.8**
	baz=171,SNR=1000						
H17A				S	**Sg**	**20 48 24.0**	**-1.6**
	baz=171						
LKWY	**Lake**	**1.38 353**			**Pn**	**20 48 11.5**	**-0.5**
LKWY				IAML		20 48 35.4	
	comp=E,21μm,0.6s						
LKWY	**Lake**	**1.38 353**		P	**Pn**	**20 48 11.5**	**-0.5**
YUF	**Upper Falls**	**1.54 350**			**Pn**	**20 48 13.8**	**-0.3**
YNR	**Norris Junctio**	**1.56 346**			**Pn**	**20 48 14.3**	**-0.2**
YPWB	**West Boundary**	**1.56 334**			**Pn**	**20 48 14.2**	**-0.3**
YMR	**Madison River**	**1.58 339**			**Pn**	**20 48 14.5**	**-0.3**
YMC	**Maple Creek**	**1.68 339**			**Pn**	**20 48 16.0**	**-0.1**
YPSB	**Soda Butte**	**1.68 0**			**Pn**	**20 48 16.3**	**+0.1**
CMI	**Centennial Mou**	**1.70 322**			**Pn**	**20 48 15.8**	**-0.6**
YPDC	**Denny Creek**	**1.70 333**			**Pn**	**20 48 16.1**	**-0.3**
YHB	**Horse Butte**	**1.72 335**			**Pn**	**20 48 16.5**	**-0.3**
GCR	**Grayling Creek**	**1.74 337**			**Pn**	**20 48 17.1**	**+0.2**
YHL	**Hebgen Lake**	**1.81 336**			**Pn**	**20 48 17.9**	**-0.1**
YHL				IAML		20 48 48.7	
	comp=E,12μm,0.7s						
YMV	**Mammoth Vault**	**1.81 348**			**Pn**	**20 48 18.6**	**+0.6**
QLMT	**Earthquake Lak**	**1.87 331**			**Pn**	**20 48 18.5**	**-0.3**
HWUT	**Hardware Ranch**	**1.90 214**			**Pn**	**20 48 19.3**	**+0.1**
HWUT				IAML		20 48 48.2	
	comp=E,10μm,0.7s						
PZCI	**Patelzick Cree**	**1.94 307**			**Pn**	**20 48 19.6**	**-0.1**
RLMT	**Red Lodge**	**2.03 18**		Pn	**Pn**	**20 48 22.0**	**+1.1**
RLMT				IAML		20 48 49.7	
	comp=E,17μm,0.5s						
RLMT				IAML		20 48 51.6	
	comp=E,15μm,0.5s						
RLMT	**Red Lodge**	**2.03 18**		P	**Pn**	**20 48 21.8**	**+0.9**
	baz=202,SNR=1000						
RLMT				S	**Sb**	**20 48 48.2**	**-0.7**
	baz=202						
EMI	**Eightmile Cany**	**2.19 294**			**Pn**	**20 48 22.5**	**-0.7**
TCUT	**Toone Canyon**	**2.28 205**		Pn	**Pn**	**20 48 24.4**	**0.0**
ICI	**Italian Canyon**	**2.31 300**			**Pn**	**20 48 24.8**	**-0.1**
HVU	**Hansel Valley**	**2.40 235**		Pn	**Pn**	**20 48 25.7**	**-0.3**
HVU				IAML		20 49 02.2	
	comp=E,6μm,0.5s						
HVU				IAML		20 49 02.3	
	comp=N,10μm,0.6s						
HVU	**Hansel Valley**	**2.40 235**		P	**Pn**	**20 48 25.7**	**-0.3**
BCYI	**Bear Canyon**	**2.60 296**			**Pn**	**20 48 29.1**	**+0.3**
GCMT	**Greyclift**	**2.62 8**			**Pn**	**20 48 29.5**	**+0.6**
BOZ	**Bozeman (W)**	**2.62 337**			**Pn**	**20 48 29.8**	**+0.8**
BOZ				IAML		20 49 07.6	
	comp=N,5μm,0.8s						
BOZ	**Bozeman (W)**	**2.62 337**		P	**Pn**	**20 48 29.8**	**+0.8**
BOZ	**Bozeman (W)**	**2.62 337**		P	**Pn**	**20 48 29.8**	**+0.8**
	baz=158,SNR=1000						
BOZ				S	**Sb**	**20 49 04.4**	**-1.6**
	baz=158						
RWWY	**Rawlins**	**2.65 124**			**Pb**	**20 48 32.0**	**-2.0**
RDMU	**Red Mountain**	**2.66 170**			**Pn**	**20 48 30.5**	**+0.9**
RDMU				IAML		20 49 11.6	
	comp=N,11μm,0.6s						
RDMU				IAML		20 49 13.9	
	comp=E,6μm,0.6s						
K22A	**Casper**	**2.72 100**			**Pb**	**20 48 33.2**	**-1.9**
K22A	**Casper**	**2.72 100**		P	**Pb**	**20 48 34.2**	**-1.0**
	baz=283,SNR=1000						
K22A	**Casper**	**2.72 100**		P	**Pb**	**20 48 33.9**	**-1.3**
	baz=283,SNR=1000						
K22A				Sb	**Sg**	**20 49 11.4**	**-1.9**
	baz=283						
JLU	**Jordanelle**	**2.77 201**			**Pn**	**20 48 31.5**	**+0.4**
JLU				IAML		20 49 12.9	
	comp=N,5μm,0.7s						
JLU				I

RSSD Sb Sg 20 50 07.1 -4.4
baz=261
RSSD Black Hills 4.54 76 P Pn 20 48 56.4 +1.1
baz=261
RSSD Sb Sb 20 50 05.4 +4.3
baz=261
PLID Pearl Lake 4.61 296 Pn Pn 20 48 55.1 -1.3
PLID IAML 20 50 09.8
comp=E,1µm,0.7s
PLID IAML 20 50 14.2
comp=E,1µm,0.8s
ISCO Idaho Springs 4.81 133 Pn Pn 20 49 01.2 +2.0
ISCO IAML 20 50 24.7
comp=E,902nm,0.8s
ISCO IAML 20 50 25.1
comp=E,968nm,0.7s
ISCO Idaho Springs 4.81 133 P Pn 20 49 01.3 +2.0
ISCO Idaho Springs 4.81 133 P Pn 20 49 01.5 +2.2
baz=316,SNR=106
ISCO Idaho Springs 4.81 133 P Pn 20 49 01.2 +2.0
baz=316,SNR=106
ISCO Sb Sg 20 50 15.7 -4.7
baz=316
PV23 Carpenter Ridg 4.82 169 Pn Pn 20 49 00.8 +1.4
EGMT Eagleton 4.83 3 Pn 20 48 59.8 +0.5
EGMT IAML 20 50 23.7
comp=E,2µm,0.9s
EGMT IAML 20 50 26.1
comp=E,2µm,0.9s
EGMT Eagleton 4.83 3 Sb Sb 20 50 11.6 +2.1
baz=185
MVU Marysvale 4.94 199 Pn 20 49 01.8 +0.8
PV11 David Mesa, Pa 4.99 168 Pn 20 49 02.8 +1.1
PV15 Paradox Valley 5.02 165 Pn 20 49 03.4 +1.4
MTPU Mount Pierson 5.38 197 Pn 20 49 08.4 +1.3
JTMT Jette 5.39 329 Pn 20 49 08.2 +1.1
BMO Blue Mountains 5.41 290 Pn 20 49 07.7 +0.3
BMO IAML 20 50 44.8
comp=E,795nm,2.1s
BMO Blue Mountains 5.41 290 P Pn 20 49 07.7 +0.3
PSUT Pine Spring 5.44 212 Pn 20 49 09.4 +1.6
Q24A Divide 5.67 137 Pn 20 49 12.9 +1.8
Q24A Divide 5.67 137 P Pn 20 49 12.9 +1.8
baz=319,SNR=20
BMN Battle Mountai 5.96 245 Pn Pn 20 49 14.6 -0.3
BMN Battle Mountai 5.96 245 P Pn 20 49 14.6 -0.3
S22A 4UR Ranch, Cre 6.01 154 Pn Pn 20 49 17.1 +1.4
S22A 4UR Ranch, Cre 6.01 154 P Pn 20 49 17.5 +1.8
baz=335,SNR=61
MVCO Mesa Verde 6.12 167 Pn Pn 20 49 18.4 +1.3
MVCO Mesa Verde 6.12 167 P Pn 20 49 18.2 +1.1
baz=348,SNR=150
CCUT Cedar City 6.15 205 Pn Pn 20 49 18.6 +1.0
R11A Troy Canyon, C 6.36 222 Pn 20 49 22.2 +1.8
R11A Troy Canyon, C 6.36 222 P Pn 20 49 22.4 +2.0
baz=38,SNR=164
WALA Waterton Lakes 6.42 337 Pn Pn 20 49 21.5 +0.4
OGNE Ogallala 6.45 108 Pn Pn 20 49 23.3 +1.7
OGNE Ogallala 6.45 108 P Pn 20 49 23.4 +1.9
baz=293,SNR=55
OGNE Ogallala 6.45 108 P Pn 20 49 23.4 +1.9
baz=293,SNR=55
SDCO Great Sand Dun 6.50 145 Pn Pn 20 49 24.0 +1.5
SDCO Great Sand Dun 6.50 145 P Pn 20 49 25.0 +2.5
baz=328,SNR=42
SDCO Great Sand Dun 6.50 145 P Pn 20 49 24.8 +2.4
baz=328,SNR=42
KNB Kanab 6.50 199 Pn 20 49 22.6 +0.2
KNB Kanab 6.50 199 P Pn 20 49 22.6 +0.2
LCMT Little Creek M 6.62 202 Pn 20 49 25.9 +2.0
G08A Pilot Rock 6.66 291 Pn Pn 20 49 25.4 +0.9
DGMT Dagmar 6.71 36 Pn Pn 20 49 27.4 +2.3
DGMT Dagmar 6.71 36 P Pn 20 49 27.1 +2.0
baz=221,SNR=19
DGMT Sb Sb 20 51 10.9 +7.4
baz=221
DGMT Dagmar 6.71 36 P Pn 20 49 26.9 +1.8
baz=221,SNR=19
Q09A Carvers 6.87 233 Pn Pn 20 49 28.8 +1.3
U15A North Rim 6.96 194 Pn 20 49 30.5 +1.8
NEW Newport 7.03 319 Pn Pn 20 49 29.0 -0.4
comp=E,7.1nm,0.3s,baz=137,slow=11,SNR=53
NEW Sn Sn 20 50 54.1 +4.4
comp=E,14nm,0.3s,baz=255,slow=13,SNR=3.7
NEW Lg Lg 20 51 21.2
comp=E,59nm,0.3s,baz=56,slow=17,SNR=14
NEW LR LR 20 51 52.2
comp=E,695nm,19.4s,baz=148,slow=36
comp=E,32nm,0.6s
NEW Newport 7.03 319 Pn Pn 20 49 30.9 +1.4
NEW Newport 7.03 319 P Pn 20 49 30.9 +1.4
NEW Newport 7.03 319 P Pn 20 49 30.8 +1.4
baz=134,SNR=100
KSCO Kaye Shedlock' 7.06 124 P Pn 20 49 32.2 +2.3
baz=309,SNR=22
KSCO Kaye Shedlock' 7.06 124 P Pn 20 49 31.6 +1.7
baz=309,SNR=22
C09A Chrisman Ranch 7.33 312 Pn 20 49 35.7 +2.2
HAWA Hanford 7.39 299 Pn Pn 20 49 36.4 +2.0
TPH Tonopah 7.42 229 Pn Pn 20 49 36.6 +1.6
TPH Tonopah 7.42 229 P Pn 20 49 36.6 +1.6
T25A Trinidad 7.48 142 Pn 20 49 38.2 +2.3
T25A Trinidad 7.48 142 P Pn 20 49 39.3 +3.4
baz=325,SNR=10
F07A Phinny Hill Vi 7.48 294 Pn Pn 20 49 36.0 +0.3
E28A Huff 7.52 60 Pn Pn 20 49 36.8 +0.6
E28A Huff 7.52 60 P Pn 20 49 37.5 +1.4
baz=247,SNR=13
MOD Modoc Plateau 7.61 264 Pn Pn 20 49 37.8 +0.4
NV11 Mina Array Sit 7.71 235 Pn 20 49 40.1 +1.2
WUAZ Wupatki 7.73 187 Pn Pn 20 49 40.4 +1.2
WUAZ Wupatki 7.73 187 P Pn 20 49 39.9 +0.7
baz=5.7,SNR=72
TPNV Topopah Spring 7.79 219 Pn Pn 20 49 42.2 +2.1
TPNV Topopah Spring 7.79 219 P Pn 20 49 42.2 +2.1
TPNV Topopah Spring 7.79 219 P Pn 20 49 42.7 +2.6
baz=34,SNR=86
NVAR Mina Array Bea 7.80 235 Pn Pn 20 49 40.6 +0.3
comp=E,3.3nm,0.3s,baz=55,slow=10,SNR=77
NVAR Lg Lg 20 51 49.2
comp=E,3.9nm,0.3s,baz=56,slow=36,SNR=1.7
comp=E,8.1nm,0.5s
NVAR Mina Array Bea 7.80 235 Pn 20 49 42.0 +1.7
YERR Yerington 8.05 242 Pn 20 49 42.5 -1.1
W18A Petrified Fore 8.08 178 Pn 20 49 44.6 +0.6
W18A Petrified Fore 8.08 178 P Pn 20 49 45.5 +1.5
baz=357
J05D Fort Rock, OR 8.09 274 P Pn 20 49 44.8 +0.7
baz=87
I05D Terrebonne, OR 8.18 282 Pg Pg 20 50 21.7 -0.7
baz=94
SUSD Miller 8.20 77 Pn 20 49 46.7 +1.3
SUSD Miller 8.20 77 P Pn 20 49 46.8 +1.4
baz=266,SNR=20
SUSD Miller 8.20 77 P Pn 20 49 46.7 +1.3
baz=266,SNR=20
G05D Wamic, OR 8.27 288 P Pn 20 49 48.1 +1.6
baz=100,SNR=6.8
GRAC Grapevine Rang 8.30 224 Pn Pn 20 49 47.1 +0.2
GRAC Grapevine Rang 8.30 224 P Pn 20 49 49.5 +2.6
baz=39
K31A O'Neill 8.39 90 Pn Pn 20 49 49.4 +1.3
K31A O'Neill 8.39 90 P Pn 20 49 50.1 +2.0
baz=278
LTY Liberty 8.46 302 Pn 20 49 49.7 +0.7
FURC Furnace Creek, 8.47 220 P Pn 20 49 52.2 +3.0
baz=35,SNR=12
HOOD Mount Hood Mea 8.52 288 Pn Pn 20 49 49.9 -0.1
K04D Chiloquin, OR 8.53 270 P Pn 20 49 52.9 +2.7
baz=82,SNR=5.9
W13A Hualapai Mount 8.59 201 Pn 20 49 51.5 +0.4
GWY Greenwater Val 8.62 218 Pn Pn 20 49 52.6 +1.3
MLAC Mammoth, Mammo 8.64 233 P Pn 20 49 55.2 +3.4
baz=46
X18A Snowflake 8.66 179 Pn Pn 20 49 51.8 -0.2
ANMO Albuquerque 8.73 160 Pn Pn 20 49 54.0 +1.1
comp=E,1.8nm,0.3s,baz=329,slow=12,SNR=49
ANMO Lg Lg 20 52 10.4
comp=E,4.8nm,0.3s,baz=233,slow=18,SNR=2.0
comp=E,9.3nm,0.5s
ANMO Albuquerque 8.73 160 Pn Pn 20 49 54.3 +1.3
ANMO Albuquerque 8.73 160 *c i* P Pn 20 49 54.7 +1.8
ANMO pmax pmax
comp=E,21nm,1.3s
ANMO Albuquerque 8.73 160 P Pn 20 49 54.2 +1.3
baz=341,SNR=30
ANMO Albuquerque 8.73 160 P Pn 20 49 54.8 +1.8
baz=341
J04D Umppqua Nationa 8.73 274 Pn Pn 20 49 52.7 -0.2
J04D Umppqua Nationa 8.73 274 P Pn 20 49 55.3 +2.4
baz=86
MDND Maddock 8.74 54 Pn Pn 20 49 54.0 +1.1
MDND Maddock 8.74 54 P Pn 20 49 53.2 +0.2
baz=242
OMMB Old Mammoth Mi 8.75 233 Pn 20 49 52.9 -0.4
MDPB Devils Postpil 8.79 234 Pn 20 49 53.1 -0.7
I04A Tendick Farm, 8.93 278 P Pn 20 49 58.5 +2.9
baz=90
TUQ Turquoise Moun 8.95 212 P Pn 20 49 58.2 +2.4
baz=27
L04D Klamath Falls 9.00 268 Pn Pn 20 49 56.5 -0.1
L04D Klamath Falls 9.00 268 P Pn 20 49 58.9 +2.3
baz=79
CBKS Cedar Bluff 9.01 116 Pn Pn 20 49 57.6 +0.9
CBKS Cedar Bluff 9.01 116 P Pn 20 49 57.6 +0.9
CBKS Cedar Bluff 9.01 116 P Pn 20 49 58.0 +1.4
baz=302,SNR=6.0
CBKS Cedar Bluff 9.01 116 P Pn 20 49 57.5 +0.9
baz=302,SNR=6.0
BGNE Belgrade 9.07 97 Pn Pn 20 49 58.8 +1.3
BGNE Belgrade 9.07 97 P Pn 20 49 59.2 +1.7
baz=286,SNR=9.7
BGNE Belgrade 9.07 97 P Pn 20 49 59.0 +1.5
baz=286,SNR=9.7
CWC Cottonwood Cre 9.09 225 P Pn 20 50 01.1 +3.2
baz=39
MPMC Manual Prospec 9.10 221 P Pn 20 50 00.8 +2.8
baz=35,SNR=60
H04D Lebanon 9.19 283 P Pn 20 50 04.9 +5.9
baz=94
CMB Columbia Colle 9.33 240 Pn Pn 20 49 59.2 -1.9
CMB Columbia Colle 9.33 240 P Pn 20 49 59.2 -1.9
YBH Yreka Blue Hor 9.40 265 Lg Lg 20 52 34.4
comp=Z,0.2nm,0.3s,baz=189,slow=23,SNR=1.1
YBH Yreka Blue Hor 9.40 265 Pn Pn 20 50 01.7 -0.2
YBH Yreka Blue Hor 9.40 265 P Pn 20 50 01.7 -0.2
PDMCI Parker Dam,Lak 9.41 201 P Pn 20 50 03.2 +1.1
baz=17
HUMO Hull Mountain 9.42 271 Pn Pn 20 50 00.8 -1.4
GSC Goldstone, Bar 9.42 215 Pn 20 50 03.2 +0.9
GSC Goldstone, Bar 9.42 215 P Pn 20 50 03.2 +0.9
GSC Goldstone, Bar 9.42 215 P Pn 20 50 04.3 +2.0
baz=30
GMRC Granite Mounta 9.43 209 P Pn 20 50 03.6 +1.1
baz=25
BNM Barren Site 9.45 162 Pn Pn 20 50 03.7 +0.9
Y22D IRIS PASSCAL I 9.46 163 Pn Pn 20 50 04.2 +1.4
Y22D IRIS PASSCAL I 9.46 163 P Pn 20 50 09.1 +6.2
baz=345
Y14A Wickenburg 9.51 194 Pn 20 50 04.8 +1.3
DBO Dodson Butte 9.57 274 Pn Pn 20 50 04.1 -0.2
COR Corvallis 9.60 283 Pn Pn 20 50 04.4 -0.2
COR Corvallis 9.60 283 P Pn 20 50 04.4 -0.2
F04D Rainier, OR 9.61 292 P Pn 20 50 04.0 -0.8
baz=103
I03D Drain, OR 9.61 277 P Pn 20 50 08.1 +3.3
baz=88
G03D McMinnville, O 9.63 287 P Pn 20 50 05.6 +0.6
baz=98
HEC Hector,Ludlow 9.64 212 P Pn 20 50 12.6 +7.3
baz=27
LRMC Laurel Mtn Rad 9.66 220 P Pn 20 50 07.0 +1.3
baz=34,SNR=7.7
N33A J Bar K, Exete 9.78 100 Pn Pn 20 50 08.1 +1.0
N33B J Bar K, Exete 9.78 100 P Pn 20 50 08.0 +0.9
baz=289,SNR=24
IRM Iron Mountain 9.83 205 P Pn 20 50 10.1 +2.1
baz=21
ECSD EROS Data Cent 9.86 82 Pn Pn 20 50 08.7 +0.4
ECSD EROS Data Cent 9.86 82 P Pn 20 50 08.7 +0.4
baz=272,SNR=145
ECSD EROS Data Cent 9.86 82 P Pn 20 50 07.9 -0.4
baz=272,SNR=145
ISA Isabella, Lake 9.90 223 Pn Pn 20 50 09.0 +0.2
ISA Isabella, Lake 9.90 223 P Pn 20 50 09.0 +0.2
ISA Isabella, Lake 9.90 223 P Pn 20 50 07.4 -1.5
baz=37,SNR=17
R32A Long Quarter, 9.90 115 P Pn 20 50 09.2 +0.4
baz=302,SNR=14
K02D Willamette Mer 9.92 272 P Pn 20 50 08.5 -0.7
baz=82,SNR=38
L02F Cave Junction 9.94 268 P Pn 20 50 08.3 -1.1
baz=79,SNR=14
I02E Swisshome, OR 9.97 280 Pn Pn 20 50 10.0 +0.3
I02E Swisshome, OR 9.97 280 P Pn 20 50 14.5 +4.8
baz=90
BLYC Blythe 10.03 201 Pn 20 50 11.9 +1.2
J01E Myrtle Point 10.07 274 Pn Pn 20 50 10.8 -0.3
J01E Myrtle Point 10.07 274 P Pn 20 50 11.9 +0.8
baz=85,SNR=13
VES Vestal, Richgr 10.07 226 P Pn 20 50 14.1 +2.9
baz=40
CCAC Calif City Air 10.09 220 Pn 20 50 12.1 +0.7
L34A Svendsen Farm, 10.24 92 P Pn 20 50 14.4 +0.9
baz=282
F33A 5 Mile Ranch, 10.25 70 P Pn 20 50 13.2 -0.3
baz=260,SNR=22
EDM Edmonton 10.25 349 Pn Pn 20 50 13.7 +0.1
EDM Edmonton 10.25 349 P Pn 20 50 13.7 +0.1
BELC Belle Mtn. Jos 10.26 208 P Pn 20 50 15.2 +1.4
baz=24
EDW2 Edwards Air Fo 10.30 219 P Pn 20 50 17.2 +2.9
baz=33
KRMB Red Mountain 10.32 265 Pn Pn 20 50 13.9 -0.8
KHMM Horse Mountain 10.36 262 Pn Pn 20 50 14.5 -0.7
KEBM Edson Butte 10.39 273 Pn Pn 20 50 16.1 +0.5
BC3 Big Chuckawall 10.39 205 P Pn 20 50 18.2 +2.5
baz=21
KBO Bosley Butte 10.41 269 Pn Pn 20 50 15.2 -0.6
ARVC Arvin 10.50 223 P Pn 20 50 19.5 +2.5
baz=36,SNR=14
GDXM Geysers 10.51 250 Pn Pn 20 50 17.5 +0.3
KMRM Mail Ridge 10.56 258 Pn Pn 20 50 16.9 -1.0
AMTX Amarillo 10.60 139 Pn Pn 20 50 21.5 +3.1
AMTX Amarillo 10.60 139 P Pn 20 50 18.6 +0.2
baz=324
AMTX Amarillo 10.60 139 P Pn 20 50 19.9 +1.5
baz=324
HOPS Hopland Field 10.61 251 Pn Pn 20 50 17.1 -1.5
BBGB Big Mountain B 10.65 235 Pn Pn 20 50 19.5 +0.2
KCPM Cahto Peak 10.67 255 Pn Pn 20 50 18.9 -0.5
BFSC Mount Baldy Ra 10.69 216 P Pn 20 50 21.7 +1.9
baz=30
PMD Palm Desert 10.71 209 Pn Pn 20 50 20.8 +0.9
PGC Sidney 10.74 305 Pn Pn 20 50 21.0 +0.7
PMPB Monarch Peak 10.76 233 Pn Pn 20 50 21.4 +0.7
PFO Pinyon Flats O 10.77 209 Pn Pn 20 50 24.2 +3.4
comp=Z,0.2nm,0.3s,baz=21,slow=15,SNR=4.8
PFO Lg Lg 20 53 26.6
comp=Z,0.2nm,0.3s,baz=127,slow=19,SNR=2.1
comp=Z,3.8nm,1.0s
PFO Pinyon Flats O 10.77 209 Pn Pn 20 50 21.6 +0.8
PFO Pinyon Flats O 10.77 209 *i e* P Pn 20 50 23.9 +3.1
PFO pmax pmax
comp=Z,14nm,1.3s
PFO Pinyon Flats O 10.77 209 P Pn 20 50 22.2 +1.4
baz=25
TPFO Pinon Flats 10.77 209 P Pn 20 50 22.3 +1.4
baz=25
GLA Glamis 10.78 201 Pn Pn 20 50 21.5 +0.6
GLA Glamis 10.78 201 P Pn 20 50 21.5 +0.6
GLA Glamis 10.78 201 P Pn 20 50 24.4 +3.5
baz=18
SAO San Andreas Ge 10.78 237 Pn Pn 20 50 20.5 -0.4
SAO San Andreas Ge 10.78 237 P Pn 20 50 20.5 -0.4
PAGB Antelope Grade 10.79 230 Pn Pn 20 50 20.2 -0.8
KMPM Mount Pierce 10.79 260 Pn Pn 20 50 21.3 +0.3
113A Mohawk Valley, 10.79 196 Pn Pn 20 50 21.6 +0.5
121A Cookes Peak, D 10.81 169 Pn Pn 20 50 22.8 +1.3
121A Cookes Peak, D 10.81 169 P Pn 20 50 25.6 +4.1
baz=350
MSTX Muleshoe 10.87 146 Pn Pn 20 50 24.9 +2.7
MSTX Muleshoe 10.87 146 P Pn 20 50 23.8 +1.6
baz=330
TUC Tucson 10.88 183 Pn Pn 20 50 25.0 +2.7
TUC Tucson 10.88 183 P Pn 20 50 25.0 +2.7
TUC Tucson 10.88 183 P Pn 20 50 26.4 +4.0
baz=1.8
MCCM Marconi Confer 10.90 247 Pn Pn 20 50 22.0 -0.4
LLLB Lillooet 10.91 317 Pn Pn 20 50 22.5 -0.2
ELIS Ellis County 10.92 127 Pn Pn 20 50 25.4 +2.6
BCW Bitter Crk WRg 10.94 224 Pn Pn 20 50 23.1 0.0
DECC Green Verdugo 10.97 218 P Pn 20 50 26.4 +2.9
baz=32
PASC Pasadena Art C 10.98 217 Pn Pn 20 50 24.4 +0.8
KAN12 Harper NE Stat 11.00 118 Pn 20 50 23.6 -0.3
KSU1 Kansas State U 11.00 107 Pn Pn 20 50 25.8 +2.0
KSU1 Kansas State U 11.00 107 P Pn 20 50 25.9 +2.0
baz=296,SNR=14
KSU1 Kansas State U 11.00 107 P Pn 20 50 24.9 +1.0
baz=296,SNR=14
N35A Tabor 11.05 97 Pn 20 50 25.1 +0.6
N35A Tabor 11.05 97 P Pn 20 50 26.0 +1.5
baz=287,SNR=16
MURC Murrieta 11.06 212 P Pn 20 50 27.2 +2.5
baz=27
KAN08 Anthony NE Sta 11.06 119 Pn Pn 20 50 25.3 +0.7
ELS Elsinore Mount 11.11 213 Pn 20 50 25.3 -0.1
SWSC Sam W. Stewart 11.16 205 P Pn 20 50 25.9 -0.1
baz=21
PKM Mcpherson Peak 11.19 225 P Pn 20 50 31.0 +4.5
baz=39
AGMN Agassiz Nation 11.21 58 Pn 20 50 25.9 -0.8
AGMN Agassiz Nation 11.21 58 P Pn 20 50 26.6 0.0
baz=249,SNR=39
AGMN Agassiz Nation 11.21 58 P Pn 20 50 25.0 -1.7
baz=249,SNR=39
CLRS Cowichan Lake 11.22 305 Pn Pn 20 50 26.6 -0.3
KS20 Mayfield South 11.32 118 Pn 20 50 30.5 +2.2
GC02 Grant County # 11.35 120 Pn 20 50 30.4 +1.7
214A Organ Pipe Nat 11.42 191 Pn Pn 20 50 28.8 -0.8
YUH Yuha Desert 11.47 205 Pn 20 50 29.1 -1.2
IKP In-Ko-Pah, Jac 11.53 206 P Pn 20 50 34.4 +3.2
baz=22
CSTR Hydro, Custer 11.63 127 Pn Pn 20 50 34.6 +2.1
109C Camp Elliot, M 11.65 210 Pn Pn 20 50 34.0 +1.2
BAR Barrett 11.69 208 Pn Pn 20 50 34.4 +1.1
319A Douglas 11.82 176 Pn Pn 20 50 36.7 +1.4
CLN7 Carlsbad 7 11.88 153 Pn 20 50 38.6 +2.7
HTMS Hat Mesa 11.88 152 Pn Pn 20 50 39.5 +3.5
GDL2 Guadalupe Moun 11.89 155 Pn Pn 20 50 39.7 +3.4
ULM Lac du Bonnet 12.06 49 Pn Pn 20 50 36.4 -1.9
comp=Z,2.1nm,0.3s,baz=239,slow=13,SNR=32
ULM Lg Lg 20 53 53.5
comp=Z,2.2nm,0.3s,baz=310,slow=15,SNR=3.7
comp=Z,38nm,1.0s
ULM Lac du Bonnet 12.06 49 Pn Pn 20 50 36.8 -1.5
MNTX Cornudas Mount 12.09 160 Pn Pn 20 50 40.7 +1.9
MNTX Cornudas Mount 12.09 160 P Pn 20 50 42.5 +3.8
baz=343,SNR=12
MNTX Cornudas Mount 12.09 160 P Pn 20 50 40.8 +2.0
baz=343,SNR=12
F36A Milaca 12.16 72 Pn Pn 20 50 38.5 -1.3
F36A Milaca 12.16 72 P Pn 20 50 39.0 -0.8
baz=264,SNR=52
I37B Waseca 12.18 80 P Pn 20 50 39.2 -0.8
baz=272,SNR=17
T35A Sooner Cattle 12.19 116 Pn Pn 20 50 39.2 -0.9
T35B Sooner Cattle 12.19 116 P Pn 20 50 39.8 -0.3
baz=305,SNR=9.6
WMOK Wichita Mounta 12.23 130 Pn 20 50 41.1 +0.5
WMOK Wichita Mounta 12.23 130 P Pn 20 50 41.2 +0.5
WMOK Wichita Mounta 12.23 130 P Pn 20 50 41.8 +1.2
baz=317,SNR=8.5
WMOK Wichita Mounta 12.23 130 P Pn 20 50 40.7 0.0
baz=317,SNR=8.5
CCX Cicese 12.43 207 Pn Pn 20 50 43.9 +0.5
SCIA State Center 12.56 90 Pn 20 50 45.4 +0.2
SCIA State Center 12.56 90 P Pn 20 50 45.5 +0.3
baz=282,SNR=16
SCIA State Center 12.56 90 P Pn 20 50 45.0 -0.2
baz=282,SNR=16
B35A Bob, Littlefor 12.57 60 Pn Pn 20 50 43.6 -1.6
B35A Bob, Littlefor 12.57 60 P Pn 20 50 44.1 -1.2
baz=252,SNR=20
SPMN Marine on St. 12.62 75 Pn 20 50 44.4 -1.5
SPMN Marine on St. 12.62 75 P Pn 20 50 44.4 -1.5
baz=267,SNR=18
SPMN Marine on St. 12.62 75 P Pn 20 50 43.9 -2.0
baz=267
K38A Parkersburg 12.76 87 P Pn 20 50 47.8 -0.1
baz=279
N38A Joes South For 12.82 95 Pn Pn 20 50 47.8 -0.9
N38A Joes South For 12.82 95 P Pn 20 50 48.2 -0.5
baz=286,SNR=14
P38A Dawn 12.98 100 P Pn 20 50 50.9 0.0
baz=291,SNR=24
TUL1 Leonard 13.25 119 Pn Pn 20 50 54.5 -0.1
TUL1 Leonard 13.25 119 P Pn 20 50 54.2 -0.4
baz=308
TUL1 Leonard 13.25 119 P Pn 20 50 53.7 -0.9
baz=308
ABTX Abilene, Hawle 13.42 138 Pn Pn 20 50 58.9 +2.0
E38A The Farm, Brul 13.62 69 Pn 20 50 58.5 -1.0
E38A The Farm, Brul 13.62 69 P Pn 20 50 58.3 -1.2
baz=262
U38A Gravette 13.86 114 Pn 20 51 02.2 -0.8
U38A Gravette 13.86 114 P Pn 20 51 02.3 -0.7
baz=304,SNR=17
EYMN Ely 13.90 64 Pn Pn 20 51 01.0 -2.4
EYMN Ely 13.90 64 P Pn 20 51 01.0 -2.4
baz=257
EYMN Ely 13.90 64 P Pn 20 50 59.7 -3.7
baz=257
S39A Bolivar 13.94 108 Pn Pn 20 51 03.9 -0.2
L40A Anamosa 13.99 88 P Pn 20 51 02.9 -1.8
baz=281,SNR=13
P40A Paris 14.08 99 P Pn 20 51 05.3 -0.7
baz=291,SNR=27
Z35A Perchaven, San 14.12 130 Pn 20 51 06.4 -0.1
I40A Norwalk 14.19 80 P Pn 20 51 05.1 -2.3
baz=274,SNR=14
X37A Clayton 14.35 122 P Pn 20 51 09.1 -0.6
baz=311,SNR=13
R40A Maddies Statio 14.41 104 Pn 20 51 09.7 -0.8
R40A Maddies Statio 14.41 104 P Pn 20 51 09.9 -0.5
baz=296,SNR=10
G40A Rib Lake 14.46 75 P Pn 20 51 09.4 -1.7
baz=269,SNR=18
JFWS Jewell Farm 14.56 84 Pn Pn 20 51 09.9 -2.6
JFWS Jewell Farm 14.56 84 P Pn 20 51 09.9 -2.6
JFWS Jewell Farm 14.56 84 P Pn 20 51 08.9 -3.6
baz=278
N41A Harden Midland 14.58 93 P Pn 20 51 10.7 -2.0
baz=286,SNR=18
TX31 Lajitas Ar. Si 14.79 157 Pn 20 51 16.0 +0.3
TX31 Lajitas Ar. Si 14.79 157 P Pn 20 51 17.6 +1.8
baz=341,SNR=17
TXAR Lajitas Array 14.79 157 Pn Pn 20 51 17.5 +1.8
comp=Z,0.2nm,0.3s,baz=350,slow=8.3,SNR=16
TXAR Lg Lg 20 55 33.1
comp=Z,0.6nm,0.3s,baz=118,slow=17,SNR=11
TXAR LR LR 20 57 30.2
comp=Z,1µm,20.2s,baz=332,slow=39
comp=Z,1.7nm,0.6s
TXAR Lajitas Array 14.79 157 Pn 20 51 15.9 +0.2
TXAR Lajitas Array 14.79 157 P Pn 20 51 15.9 +0.2
MGMO Mountain Grove 14.94 108 Pn 20 51 17.1 -0.6
WHTX Lake Whitney, 15.03 134 Pn 20 51 19.4 +0.5
WHTX IAmb IAmb 20 51 25.9
comp=Z,43nm,1.1s
WHTX Lake Whitney, 15.03 134 P Pn 20 51 21.0 +2.1
baz=322
WHTX Lake Whitney, 15.03 134 P Pn 20 51 19.8 +0.9
baz=322
BBB Bella Bella 15.03 313 Lg Lg 20 55 36.0
comp=Z,0.2nm,0.3s,baz=327,slow=2.7,SNR=4.5
BBB Bella Bella 15.03 313 Pn 20 51 17.6 -1.2
JCT Junction City 15.14 144 Pn Pn 20 51 21.4 +0.9
JCT Junction City 15.14 144 P Pn 20 51 21.4 +0.9
JCT pmax pmax
comp=Z,14nm,0.8s
JCT Junction City 15.14 144 P Pn 20 51 22.2 +1.8
baz=330
COWI Conover 15.23 72 Pn Pn 20 51 20.2 -1.3
CCM Cathedral Cave 15.24 103 Pn Pn 20 51 20.6 -1.1
CCM IAmb IAmb 20 51 30.3
comp=Z,50nm,1.1s
CCM Cathedral Cave 15.24 103 P Pn 20 51 20.6 -1.1
CCM pmax pmax
comp=Z,50nm,1.1s
CCM Cathedral Cave 15.24 103 P Pn 20 51 20.4 -1.3
baz=296,SNR=22
CCM Cathedral Cave 15.24 103 P Pn 20 51 20.1 -1.6
baz=296

Z38A Mt. Pleasant 15.49 125 Pn 20 51 24.9 -0.1
MIAR Mount Ida 15.52 118 Pn 20 51 25.1 -0.2
MIAR Mount Ida 15.52 118 P Pn 20 51 25.1 -0.2
MIAR pmax pmax
comp=Z,14nm,1.0s
MIAR Mount Ida 15.52 118 P Pn 20 51 24.5 -0.9
baz=309
HDIL Hopedale 15.76 93 Pn Pn 20 51 26.2 -2.2
HDIL Hopedale 15.76 93 P Pn 20 51 25.7 -2.7
baz=287,SNR=24
HDIL Hopedale 15.76 93 P Pn 20 51 25.0 -3.4
baz=287,SNR=24
FVM French Village 15.86 103 P Pn 20 51 29.2 -0.5
baz=296,SNR=85
P43A Skaggs, Pawnee 15.88 96 P Pn 20 51 28.1 -1.9
baz=290,SNR=13
WHAR Wooly Hollow 15.92 114 Pn Pn 20 51 30.4 -0.1
F42A Maple Grove Fa 15.92 73 P Pn 20 51 29.4 -1.1
baz=269
435B Jarrell 15.93 137 Pn 20 51 30.7 0.0
435B Jarrell 15.93 137 P Pn 20 51 30.0 -0.6
baz=324
WLAR White Oak Lake 16.36 120 Pn 20 51 35.5 -0.7
L44A Lake County Fo 16.38 86 Pn Pn 20 51 34.9 -1.6
L44A Lake County Fo 16.38 86 P Pn 20 51 33.9 -2.6
baz=281
O44A Mansfield 16.48 93 P Pn 20 51 35.2 -2.6
baz=288,SNR=6.0
HQIL Hanson Quary C 16.50 87 Pn Pn 20 51 37.3 -0.7
HQIL IAmb IAmb 20 51 48.0
comp=Z,67nm,1.2s
Q44A Meyer Farm, Va 16.50 98 P Pn 20 51 36.0 -2.0
baz=292,SNR=20
CGM3 Cape Girardeau 16.71 104 Pn 20 51 39.2 -1.4
CGM3 IAmb IAmb 20 51 51.0
comp=Z,222nm,1.7s
E43A Lone Tree Farm 16.73 71 P Pn 20 51 39.7 -1.2
baz=268
HG4B Hotspring 16.77 310 Pn Pn 20 51 37.4 -3.9
S44A Carbondale 16.82 102 P Pn 20 51 41.7 -0.3
baz=296
PARMO Parma 16.94 106 Pn Pn 20 51 44.5 +1.0
PARMO IAmb IAmb 20 51 53.9
comp=Z,101nm,1.0s
CCAR Cane Creek 17.08 117 Pn Pn 20 51 46.0 +0.7
833A Chaparral WMA, 17.20 146 P Pn 20 51 46.8 -0.1
833A IAmb IAmb 20 51 53.7
comp=Z,150nm,1.9s
833A Chaparral WMA, 17.20 146 P P 20 51 49.9 +1.4
baz=332
833A Chaparral WMA, 17.20 146 P P 20 51 47.8 -0.7
baz=332
OLIL Olney 17.23 98 P Pn 20 51 45.3 -1.9
baz=292
RUBB Prince Rupert 17.24 317 Pn Pn 20 51 45.3 -1.8
I45A Fountain 17.33 79 Pn 20 51 46.1 -2.4
SFIN Lafayette 17.42 91 Pn 20 51 47.7 -1.8
SFIN IAmb IAmb 20 52 01.5
comp=Z,110nm,1.2s
SFIN Lafayette 17.42 91 P Pn 20 51 47.7 -1.8
baz=287
HKT Hockley 17.49 134 Pn 20 51 50.2 -0.2
HKT Hockley 17.49 134 eP P 20 51 53.9 +2.3
HKT pmax pmax
comp=Z,10.0nm,1.2s
P46A Rosedale 17.57 94 P Pn 20 51 49.6 -1.8
baz=289
G45A Suttons Bay 17.67 76 Pn Pn 20 51 50.8 -1.9
G45A IAmb IAmb 20 51 56.8
comp=Z,229nm,1.6s
G45A Suttons Bay 17.67 76 P Pn 20 51 51.2 -1.5
baz=273
G45A P Pn 20 51 51.2 -1.5
baz=273
UTMT University of 17.72 106 Pn Pn 20 51 52.8 -0.5
UTMT IAmb IAmb 20 52 04.2
comp=Z,175nm,1.3s
OXF Oxford 18.30 111 P P 20 52 00.6 0.0
OXF IAmb IAmb 20 52 12.6
comp=Z,96nm,1.2s
OXF Oxford 18.30 111 P P 20 52 00.6 0.0
OXF pmax pmax
comp=Z,96nm,1.3s
OXF Oxford 18.30 111 P P 20 52 01.0 +0.4
baz=304,SNR=6.6
GLMI Grayling 18.42 76 P Pn 20 52 00.1 -1.8
GLMI IAmb IAmb 20 52 11.3
comp=Z,101nm,0.9s
GLMI Grayling 18.42 76 P P 20 52 02.4 +0.5
baz=274
V35K Ketchikan 18.44 319 P P 20 51 59.9 -2.1
baz=122
J47A Sunmer 18.45 81 P Pn 20 52 02.5 +0.3
baz=279
J47A P Pn 20 52 02.5 +0.3
baz=279
FCC Fort Churchill 18.50 27 P P 20 52 00.8 -1.7
FCC Fort Churchill 18.50 27 P P 20 52 00.8 -1.7
FCC pmax pmax
comp=Z,71nm,1.6s
WVT Waverly 18.55 105 P P 20 52 03.2 -0.2
WVT IAmb IAmb 20 52 10.0
comp=Z,124nm,1.3s
WVT Waverly 18.55 105 P P 20 52 03.2 -0.2
WVT pmax pmax
comp=Z,124nm,1.3s
WVT Waverly 18.55 105 P Pn 20 52 04.6 +1.0
baz=299,SNR=34
WVT Waverly 18.55 105 P P 20 52 02.1 -1.3
baz=299
E46A Sault Ste Mari 18.59 71 P P 20 52 01.8 -1.9
baz=270,SNR=13
T47A Sharon Grove 18.67 102 P Pn 20 52 05.1 +0.2
T47A IAmb IAmb 20 52 14.8
comp=Z,57nm,0.9s
T47A Sharon Grove 18.67 102 P Pn 20 52 05.5 +0.6
baz=297,SNR=28
WCI Wyandotte Cave 18.73 97 P P 20 52 04.0 -1.4
WCI Wyandotte Cave 18.73 97 P P 20 52 04.0 -1.4
WCI pmax pmax
comp=Z,59nm,1.2s
WCI Wyandotte Cave 18.73 97 P P 20 52 04.0 -1.4
baz=293,SNR=7.9
WCI Wyandotte Cave 18.73 97 P P 20 52 03.5 -1.9
baz=293
T35M Bob Quinn 18.78 324 P P 20 52 05.3 -0.4
baz=129
O48B Farmland 18.87 90 P P 20 52 05.5 -1.3
baz=287
P48A Milroy 18.92 93 P P 20 52 06.3 -1.2
baz=290,SNR=9.2
P48A P P 20 52 06.3 -1.2
baz=290,SNR=9.2
L48A N Adams 18.97 85 P P 20 52 07.6 -0.3
baz=283
L48A P P 20 52 07.6 -0.3
baz=283
VBMS Vicksburg 18.97 119 P Pn 20 52 08.9 +0.3
VBMS IAmb IAmb 20 52 18.6
comp=Z,122nm,1.5s
VBMS Vicksburg 18.97 119 P P 20 52 05.4 -2.6
baz=311
LPIG La Paz 19.05 180 LR LR 20 59 26.7
comp=Z,539nm,19.6s,baz=7.0,slow=37
WRAK Wrangell Islan 19.38 321 P Pn 20 52 13.0 -0.3
baz=124
N49A Columbus Grove 19.40 88 P P 20 52 12.8 +0.2
baz=286
N49A P P 20 52 12.8 +0.2
baz=286
P49A Miami Univ. Ec 19.42 92 P P 20 52 12.5 -0.4
baz=289
P49A Miami Univ. Ec 19.42 92 P P 20 52 11.1 -1.8
baz=289
V48A Smith Brothers 19.45 105 P Pn 20 52 15.7 +1.3
baz=300,SNR=13
AAM Ann Arbor 19.46 84 P P 20 52 13.3 0.0
AAM IAmb IAmb 20 52 21.1
comp=Z,39nm,0.8s
AAM Ann Arbor 19.46 84 P P 20 52 13.3 0.0
AAM pmax pmax
comp=Z,39nm,0.8s
AAM Ann Arbor 19.46 84 P P 20 52 11.9 -1.4
baz=282
SLBS Sierra La Lagu 19.46 179 P 20 52 11.8 -1.7
O49A Covington 19.49 90 P P 20 52 13.7 +0.1
baz=288,SNR=8.3
O49A P P 20 52 13.7 +0.1
baz=288,SNR=8.3
YKA Yellowknife Ar 19.50 354 P P 20 52 13.8 +0.2
comp=Z,0.3nm,0.3s,baz=168,slow=11,SNR=24
YKA Lg Lg 20 57 45.0
comp=Z,0.1nm,0.3s,baz=82,slow=29,SNR=2.2
comp=Z,28nm,1.0s
YKA Yellowknife Ar 19.50 354 P P 20 52 13.2 -0.4
YKA Yellowknife Ar 19.50 354 P P 20 52 13.2 -0.4
R49A Shelbyville 19.52 96 P P 20 52 14.2 +0.2
baz=293,SNR=14
R49A P P 20 52 14.2 +0.2
baz=293,SNR=14
DLBC Dease Lake 19.64 328 P Pn 20 52 17.2 +0.7
comp=Z,22nm,1.0s,baz=148,slow=5.7,SNR=16
DLBC LR LR 20 59 07.4
comp=Z,751nm,18.0s,baz=118,slow=35
DLBC Dease Lake 19.64 328 P P 20 52 13.2 -1.9
DLBC IAmb IAmb 20 52 24.3
comp=Z,61nm,1.0s
DLBC Dease Lake 19.64 328 P P 20 52 15.4 +0.2
baz=133,SNR=25
S34M Telegraph Cree 19.74 326 P P 20 52 16.2 +0.1
baz=130
U49A Red Boiling Sp 19.83 101 P Pn 20 52 18.9 0.0
baz=297,SNR=15
X48A Hartselle 19.96 108 P 20 52 19.6 +0.8
X48A Hartselle 19.96 108 P Pn 20 52 20.9 +0.4
baz=303
Z47A Carrollton 19.97 113 P Pn 20 52 20.5 0.0
baz=306
M50A Fremont 20.11 86 P P 20 52 21.0 +0.7
M50A IAmb IAmb 20 52 31.0
comp=Z,77nm,1.1s
R50A Paris 20.14 95 P P 20 52 21.4 +0.7
baz=292,SNR=7.8
R50A P P 20 52 21.4 +0.7
baz=292,SNR=7.8
T50A Nancy 20.28 99 P P 20 52 22.1 -0.2
T50A IAmb IAmb 20 52 30.5
comp=Z,50nm,0.9s
T50A Nancy 20.28 99 P P 20 52 23.0 +0.7
baz=296
T50A P P 20 52 23.0 +0.7
baz=296
SWET Sewanee 20.34 105 P P 20 52 23.1 +0.1
SWET IAmb IAmb 20 52 31.3
comp=Z,40nm,0.6s
Q51A Peebles 20.59 93 P P 20 52 25.9 +0.3
Q51A IAmb IAmb 20 52 33.8
comp=Z,88nm,1.2s
Q51A Peebles 20.59 93 P P 20 52 26.6 +1.0
baz=290,SNR=7.8
Q51A P P 20 52 26.6 +1.0
baz=290,SNR=7.8
P51A Williamsport 20.64 91 P P 20 52 27.1 +0.9
P51A IAmb IAmb 20 52 35.9
comp=Z,45nm,1.0s
R33M Jennings River 20.64 329 P P 20 52 27.0 +0.8
baz=133,SNR=20
N51A Ashland 20.72 87 P P 20 52 27.8 +0.8
Y49A Blount Mountai 20.73 109 P Pn 20 52 29.2 -0.3
baz=304,SNR=9.4
W50A Signal Mountai 20.79 104 P Pn 20 52 29.1 -1.2
baz=300,SNR=12
LRAL Lakeview Retre 20.79 111 P P 20 52 28.1 +0.2
LRAL Lakeview Retre 20.79 111 P Pn 20 52 29.4 -0.9
baz=306,SNR=12
LRAL Lakeview Retre 20.79 111 P Pn 20 52 29.4 -0.9
baz=306,SNR=12
S51A Beattyville 20.93 96 P P 20 52 30.2 +0.9
baz=294,SNR=16
S51A P P 20 52 30.2 +0.9
baz=294,SNR=16
SIT Sitka 21.11 320 P P 20 52 30.9 -0.2
baz=120
V51A Loudon 21.18 102 P P 20 52 33.5 +1.4
baz=298,SNR=26
CPCT Cooper Cave 21.23 103 P P 20 52 33.5 +0.9
P52A Corning 21.27 90 P P 20 52 33.2 +0.2
P52A Corning 21.27 90 P P 20 52 32.4 -0.6
baz=289,SNR=9.0
TGTN Hyland Airport 21.29 336 P P 20 52 32.5 -0.6
baz=142,SNR=18
JIS Juneau Island 21.34 323 P P 20 52 32.4 -1.1
Q52A Bidwell 21.40 92 P P 20 52 36.1 +1.7
baz=290,SNR=16
Q52A P P 20 52 36.1 +1.7
baz=290,SNR=16
TZTN Tazewell 21.42 99 P P 20 52 35.5 +0.9
TZTN Tazewell 21.42 99 P P 20 52 35.9 +1.3
baz=296,SNR=9.5
TZTN Tazewell 21.42 99 P P 20 52 35.7 +1.0
baz=296,SNR=9.5
X51A Calhoun 21.44 105 P P 20 52 36.4 +1.6
baz=301,SNR=12
X51A P P 20 52 36.4 +1.6
baz=301,SNR=12
TKL Tuckaleechee C 21.67 101 P P 20 52 37.8 +0.6
comp=Z,19nm,0.9s,baz=277,slow=4.6,SNR=11
comp=Z,19nm,0.9s
TKL Tuckaleechee C 21.67 101 P P 20 52 37.9 +0.6
TKL Tuckaleechee C 21.67 101 P P 20 52 37.9 +0.6
TKL pmax pmax
comp=Z,116nm,1.4s
TKL Tuckaleechee C 21.67 101 P P 20 52 38.1 +0.8
baz=298,SNR=8.3
BESE Bessie Mountai 21.71 324 P P 20 52 36.9 -0.8
BESE IAmb IAmb 20 52 47.7
comp=Z,71nm,1.2s
O53A New Philadelph 21.75 88 P P 20 52 39.2 +1.1
O53A New Philadelph 21.75 88 P P 20 52 39.5 +1.3
baz=288
M53A WI Miller and 21.82 84 P P 20 52 39.3 +0.4
M53A IAmb IAmb 20 52 45.5
comp=Z,87nm,1.2s
M53A WI Miller and 21.82 84 P P 20 52 38.1 -0.8
baz=285
P32M Atlin 21.84 327 P P 20 52 38.9 -0.1
baz=128,SNR=13
P53A Whipple 21.86 90 P P 20 52 40.3 +0.9
baz=289,SNR=11
P53A P P 20 52 40.3 +0.9
baz=289,SNR=11
Z51A Franklin 21.89 108 P P 20 52 40.4 +0.8
Z51A IAmb IAmb 20 52 52.0
comp=Z,63nm,1.1s
Z51A Franklin 21.89 108 P P 20 52 42.1 +2.5
baz=304
P33M Teslin, Yukon 21.89 329 P P 20 52 39.2 -0.3
P33M IAmb IAmb 20 52 48.9
comp=Z,46nm,1.2s
P33M Teslin, Yukon 21.89 329 P P 20 52 40.6 +1.1
baz=131,SNR=16
BRAL Brewton 21.90 116 P P 20 52 41.9 +2.1
baz=310
ALLY Alegheny Colle 22.16 84 P P 20 52 42.4 -0.1
ALLY Alegheny Colle 22.16 84 P P 20 52 43.2 +0.7
baz=284
ERPA Erie 22.16 82 P P 20 52 44.5 +1.9
ERPA Erie 22.16 82 P P 20 52 41.9 -0.6
baz=283
SADO Sadowa 22.31 75 P P 20 52 44.0 0.0
comp=Z,8.5nm,0.5s,baz=278,slow=10.0,SNR=15
comp=Z,8.5nm,0.5s
SADO Sadowa 22.31 75 P P 20 52 43.8 -0.2
SADO IAmb IAmb 20 52 50.6
comp=Z,66nm,1.1s
V53A Saluda 22.35 100 P P 20 52 45.3 +0.6
baz=298,SNR=6.9
V53A P P 20 52 45.3 +0.6
baz=298,SNR=6.9
SKAG Skagway 22.42 325 P P 20 52 44.0 -1.1
SKAG IAmb IAmb 20 52 59.5
comp=Z,71nm,1.9s
Q54A Coxs Mills 22.44 91 P P 20 52 46.7 +1.1
baz=290,SNR=23
Q54A P P 20 52 46.7 +1.1
baz=290,SNR=23
S54A Dingess, Beckl 22.53 94 P P 20 52 47.1 +0.6
baz=293
S54A P P 20 52 47.1 +0.6
baz=293
UPAO U. Pittsburgh 22.56 87 P P 20 52 47.4 +0.6
baz=287
BG3 Lake Jocassee 22.59 102 P P 20 52 47.8 +0.7
BG3 IAmb IAmb 20 53 01.0
comp=Z,37nm,1.0s
CASEE Lake Jocassee 22.59 102 P P 20 52 49.3 +2.1
baz=300
J54A Appleton 22.90 79 P P 20 52 51.8 +1.5
MCWV Mont Chateau 22.94 88 P P 20 52 51.7 +0.9
MCWV IAmb IAmb 20 52 57.2
comp=Z,56nm,1.1s
MCWV Mont Chateau 22.94 88 P P 20 52 51.7 +0.9
baz=289
MCWV Mont Chateau 22.94 88 P P 20 52 51.9 +1.1
baz=289
WHY Whitehorse 22.96 328 P P 20 52 50.8 -0.2
WHY IAmb IAmb 20 52 57.9
comp=Z,51nm,1.3s
WHY Whitehorse 22.96 328 P P 20 52 50.1 -0.9
baz=129,SNR=20
GOGA Godfrey 23.03 106 P P 20 52 52.4 +0.6
GOGA IAmb IAmb 20 53 13.1
comp=Z,26nm,0.8s
GOGA Godfrey 23.03 106 P P 20 52 52.4 +0.6
GOGA pmax pmax
comp=Z,26nm,0.9s
GOGA Godfrey 23.03 106 P P 20 52 53.0 +1.2
baz=303
MMPY Sheldon Lake, 23.04 335 P P 20 52 50.8 -1.0
baz=138,SNR=16
MEDO Medina 23.05 79 P P 20 52 52.9 +0.9
MEDO IAmb IAmb 20 53 07.2
comp=Z,52nm,1.0s
WVNY West Valley, N 23.10 81 P P 20 52 52.6 +0.1
WVNY IAmb IAmb 20 53 00.3
comp=Z,53nm,1.1s
WVNY West Valley, N 23.10 81 P P 20 52 52.7 +0.3
baz=283
R55A Marlinton 23.21 92 P P 20 52 54.1 +0.3
baz=292,SNR=7.1
R55A P P 20 52 54.1 +0.3
baz=292,SNR=7.1
VLDQ Val d'Or 23.27 66 P P 20 52 52.2 -1.9
BLA Blacksburg 23.41 95 P P 20 52 55.0 -0.6
BLA Blacksburg 23.41 95 P P 20 52 55.1 -0.6
BLA pmax pmax
comp=Z,133nm,1.7s
BLA Blacksburg 23.41 95 P P 20 52 55.6 -0.1
baz=294
DELO Deloro Mine 23.42 75 P P 20 52 55.7 0.0
DELO IAmb IAmb 20 53 01.8
comp=Z,77nm,1.8s
V55A Taylorsville 23.42 98 P P 20 52 55.8 +0.1
baz=297,SNR=8.3
V55A P P 20 52 55.8 +0.1
baz=297,SNR=8.3
FARO Faro, Yukon 23.44 332 P P 20 52 54.6 -1.2
FARO Faro, Yukon 23.44 332 P P 20 52 55.6 -0.1
baz=134
HODGE Hodges 23.45 103 P P 20 52 56.6 +0.6
baz=301,SNR=5.1
PAULI Pauline 23.47 101 P P 20 52 56.4 +0.1
O30N Mendenhall 23.50 327 P P 20 52 55.8 -0.6
baz=127
MMNY Mt. Morris Dam 23.53 80 P P 20 52 57.1 +0.3
P29M Windy Craggy 23.54 324 P P 20 52 55.8 -1.0
P29M IAmb IAmb 20 53 03.8
comp=Z,65nm,1.3s
P29M Windy Craggy 23.54 324 P P 20 52 58.0 +1.3
baz=122
KMSC Kings Mountain 23.66 100 P P 20 52 59.3 +1.1
KMSC IAmb IAmb 20 53 12.2
comp=Z,44nm,1.4s
KMSC Kings Mountain 23.66 100 P P 20 52 59.3 +1.1
baz=299
M31M Drury Creek, Y 23.78 331 P P 20 52 58.5 -0.6
M31M Drury Creek, Y 23.78 331 P P 20 52 59.8 +0.6
baz=132
U56A King 23.80 97 P P 20 52 59.7 +0.2
baz=296
U56A P P 20 52 59.7 +0.2
baz=296
N31M Braeburn, Yuko 23.82 329 P P 20 52 57.8 -1.7
baz=129,SNR=6.4
L56A Greenwood 23.91 81 P P 20 53 00.9 +0.3
baz=284,SNR=12
L56A P P 20 53 00.9 +0.3
baz=284,SNR=12
SSPA Standing Stone 24.07 85 P P 20 53 01.6 -0.4
SSPA IAmb IAmb 20 53 08.9
comp=Z,35nm,0.8s
SSPA Standing Stone 24.07 85 P P 20 53 01.6 -0.4
baz=287,SNR=9.4
SSPA Standing Stone 24.07 85 P P 20 53 00.4 -1.6
baz=287
HYT Haines Junctio 24.10 327 P P 20 53 01.2 -1.1
HYT IAmb IAmb 20 53 11.0
comp=Z,42nm,1.1s
HYT Haines Junctio 24.10 327 P P 20 53 01.8 -0.4
baz=125,SNR=31
JSC Jenkinsville 24.14 102 P P 20 53 03.2 +0.5
baz=300,SNR=7.1
O29M Mount Kennedy 24.25 325 P P 20 53 02.9 -0.8
baz=122
S57A Dark Hollow, R 24.26 92 P P 20 53 05.3 +1.4
baz=293
S57A P P 20 53 05.3 +1.4
baz=293
PNL Peninsula 24.28 323 P P 20 53 05.0 +1.2
baz=120
N30M Aishikik Lake 24.30 328 P P 20 53 04.1 0.0
baz=127,SNR=21
P57A Homestead Farm 24.33 88 P P 20 53 05.0 +0.5
baz=289,SNR=5.5
P57A P P 20 53 05.0 +0.5
baz=289,SNR=5.5
T57A Hurt 24.35 94 P P 20 53 04.9 +0.3
baz=294
T57A P P 20 53 04.9 +0.3
baz=294
M57A Sunshine Farm, 24.43 83 P P 20 53 05.8 +0.4
baz=286,SNR=6.1
M57A P P 20 53 05.8 +0.4
baz=286,SNR=6.1
YUK6 Outpost Mounta 24.51 326 P P 20 53 05.2 -0.9
baz=124,SNR=16
BIRD Birdtown, Kers 24.53 100 P P 20 53 06.6 +0.3
baz=299
J57A Williamstown 24.76 78 P P 20 53 08.4 0.0
baz=282,SNR=6.8
J57A P P 20 53 08.4 0.0
baz=282,SNR=6.8
YUK4 Talbot Arm 24.85 327 P P 20 53 09.3 +0.2
baz=124
N58A Sunbury 24.86 84 P P 20 53 09.8 +0.6
baz=287,SNR=5.1
N58A P P 20 53 09.8 +0.6
baz=287,SNR=5.1
PINM Pinnacle 24.86 323 P P 20 53 10.1 +0.9
baz=120
PCA Pinnacle 24.87 323 P P 20 53 08.1 -1.1
M30M Minto, Yukon 24.88 330 P P 20 53 09.2 -0.1
M30M Minto, Yukon 24.88 330 P P 20 53 08.6 -0.6
baz=129,SNR=19
WCNY West Carthage 24.90 76 P P 20 53 09.8 +0.3
baz=280,SNR=6.1
BINY Binghamton 25.04 80 P P 20 53 10.7 -0.1
BINY Binghamton 25.04 80 P P 20 53 10.7 -0.1
baz=284,SNR=15
BINY Binghamton 25.04 80 P P 20 53 11.2 +0.4
baz=284,SNR=15
PAGS Pennsylvania G 25.04 85 P P 20 53 11.6 +0.8
PAGS IAmb IAmb 20 53 18.4
comp=Z,39nm,1.1s
O28M Mount Upton 25.18 325 P P 20 53 13.8 +1.6
baz=121
CBN Corbin Frederi 25.25 90 P P 20 53 13.3 +0.6
CBN Corbin Frederi 25.25 90 P P 20 53 13.5 +0.8
baz=292
J58A Remsen 25.28 78 P P 20 53 13.9 +0.9
J58A Remsen 25.28 78 P P 20 53 13.9 +0.9
baz=282,SNR=7.5
J58A P P 20 53 13.9 +0.9
baz=282,SNR=7.5
TRQ Mont Tremblant 25.35 71 P P 20 53 14.2 +0.6
KSPA Keystone Colle 25.35 82 P P 20 53 13.5 -0.2
KSPA IAmb IAmb 20 53 22.1
comp=Z,31nm,1.2s
M29M Somme Creek 25.41 329 P P 20 53 14.1 0.0
baz=126,SNR=32

TABL **Table Mountain** 25.42 324 P P 20 53 12.9 -1.4
TABL IAmb IAmb 20 53 22.6
comp=Z,31nm,1.1s
NHSC **New Hope** 25.52 103 P P 20 53 16.3 +1.2
LONY **Lake Ozonia** 25.55 74 P P 20 53 17.1 +1.7
LONY **Lake Ozonia** 25.55 74 P P 20 53 15.9 +0.4
baz=280,SNR=7.3
LOGN **Logan Glacier** 25.55 324 P P 20 53 15.4 0.0
LOGN IAmb IAmb 20 53 22.4
comp=Z,28nm,1.3s
BMNY **Brushton-Moira** 25.57 74 P P 20 53 16.8 +1.2
baz=279,SNR=5.6
YAH **Yahtse** 25.65 323 P P 20 53 16.5 0.0
YAH IAmb IAmb 20 53 25.6
comp=Z,38nm,1.2s
MESA **MESA** 25.65 323 P P 20 53 16.8 +0.3
U59A **Littleton** 25.68 94 P P 20 53 17.5 +0.8
L59A **Walton** 25.72 80 P P 20 53 17.2 +0.2
L59A IAmb IAmb 20 53 30.7
comp=Z,33nm,0.8s
L59A **Walton** 25.72 80 P P 20 53 17.5 +0.5
baz=284,SNR=11
L59A P P 20 53 17.5 +0.5
baz=284,SNR=11
YUK3 **Moose Creek** 25.81 327 P P 20 53 18.9 +1.0
baz=122,SNR=7.8
J59A **Piesco** 25.82 77 P P 20 53 18.2 +0.3
J59A **Piesco** 25.82 77 P P 20 53 18.2 +0.3
baz=282,SNR=14
J59A P P 20 53 18.2 +0.3
baz=282,SNR=14
LUPA **Lehigh Univers** 25.91 84 P P 20 53 19.0 +0.2
LUPA IAmb IAmb 20 53 51.6
comp=Z,44nm,1.3s
NCB **Newcomb** 25.91 76 P P 20 53 19.1 +0.3
NCB IAmb IAmb 20 53 27.9
comp=Z,28nm,0.8s
NCB **Newcomb** 25.91 76 P P 20 53 19.4 +0.6
baz=281,SNR=18
K29M **Barlow Dome** 25.94 332 P P 20 53 18.8 -0.1
baz=130,SNR=15
WUPA **West Chester U** 25.95 85 P P 20 53 19.5 +0.5
ISLE **Juniper Island** 26.02 323 P P 20 53 18.9 -0.9
ISLE IAmb IAmb 20 53 28.8
comp=Z,38nm,1.2s
HCNY **Howe Caverns** 26.06 79 P P 20 53 20.4 +0.3
baz=284
MNTQ **Montreal, Queb** 26.09 72 P P 20 53 21.1 +0.9
MNTQ IAmb IAmb 20 53 58.5
comp=Z,26nm,1.1s
TGL **Tana Glacier** 26.30 323 P P 20 53 21.6 -0.6
TGL IAmb IAmb 20 53 32.2
comp=Z,24nm,1.2s
ODNJ **Ogdensburg** 26.33 82 P P 20 53 22.7 +0.2
baz=287
LATQ **La Tuque** 26.45 68 P P 20 53 24.1 +0.6
LATQ IAmb IAmb 20 53 34.3
comp=Z,55nm,1.5s
BRNJ **Basking Ridge** 26.47 83 P P 20 53 25.2 +1.4
BRNJ IAmb IAmb 20 53 33.4
comp=Z,44nm,1.1s
NPNY **Mohonk Preserv** 26.48 81 P P 20 53 24.3 +0.5
baz=286
TRNY **Table Rock, Ra** 26.59 82 P P 20 53 24.9 +0.1
TRNY IAmb IAmb 20 53 31.5
comp=Z,40nm,1.3s
MCARA **McCarthy VSAT** 26.68 324 P P 20 53 24.4 -1.1
MCARA IAmb IAmb 20 54 03.2
comp=Z,35nm,1.4s
M27K **Edge Creek, AK** 26.69 327 P P 20 53 26.0 +0.2
M27K IAmb IAmb 20 53 32.6
comp=Z,27nm,1.1s
M27K **Edge Creek, AK** 26.69 327 P P 20 53 25.8 +0.1
baz=121,SNR=30
DAWY **Dawson** 26.72 331 P P 20 53 25.0 -0.9
DAWY IAmb IAmb 20 53 32.4
comp=Z,25nm,1.2s
DAWY **Dawson** 26.72 331 P P 20 53 25.6 -0.3
baz=128,SNR=5.6
HMT **Hamilton** 26.76 322 P P 20 53 25.7 -0.6
HMT IAmb IAmb 20 53 57.4
comp=Z,44nm,1.3s
PAL **Palisades** 26.85 82 P P 20 53 28.5 +1.3
PAL **Palisades** 26.85 82 P P 20 53 28.5 +1.3
PAL pmax pmax
comp=Z,16nm,0.9s
PAL **Palisades** 26.85 82 P P 20 53 27.2 0.0
baz=287
VT1 **Waterbury** 26.89 75 P P 20 53 28.2 +0.6
VT1 IAmb IAmb 20 54 08.2
comp=Z,21nm,0.9s
VT1 **Waterbury** 26.89 75 P P 20 53 28.5 +0.9
baz=281
KSCT **Kent School, K** 26.96 80 P P 20 53 28.5 +0.3
KSCT IAmb IAmb 20 54 06.4
comp=Z,42nm,1.4s
RAGM **Ragged Mountai** 26.97 322 P P 20 53 27.7 -0.5
RAGM IAmb IAmb 20 53 36.0
comp=Z,31nm,1.2s
BCAR **Beaver Creek A** 27.02 328 P P 20 53 28.8 +0.1
L27K **Beaver Creek,** 27.04 328 P P 20 53 28.8 +0.1
L27K **Beaver Creek,** 27.04 328 P P 20 53 29.2 +0.4
baz=123,SNR=18
GLB **Gilahina Butte** 27.04 324 P P 20 53 28.9 +0.1
M26K **Nabesna, AK** 27.16 326 P P 20 53 30.5 +0.6
M26K IAmb IAmb 20 53 47.7
comp=Z,30nm,1.1s
M26K **Nabesna, AK** 27.16 326 P P 20 53 31.0 +1.1
baz=120,SNR=9.9
BMRM **Bremner River** 27.18 323 P P 20 53 29.7 -0.4
BMRM **Bremner River** 27.18 323 P P 20 53 30.7 +0.6
baz=115
I29M **Ogilvie Camp,** 27.18 334 P P 20 53 29.6 -0.4
I29M **Ogilvie Camp,** 27.18 334 P P 20 53 31.4 +1.4
baz=131,SNR=8.5
L61B **Northampton** 27.35 79 P P 20 53 33.0 +1.3
baz=285
EPYK **Eagle Plains** 27.39 337 P P 20 53 32.4 +0.5
EPYK IAmb IAmb 20 53 44.5
comp=Z,20nm,1.1s
EPYK **Eagle Plains** 27.39 337 P P 20 53 30.8 -1.1
baz=135,SNR=6.2
N25K **Chitina, Valde** 27.45 324 P P 20 53 31.7 -0.9
baz=116,SNR=5.5
LBNH **Lisbon** 27.49 75 P P 20 53 34.1 +1.2
LBNH IAmb IAmb 20 53 57.4
comp=Z,27nm,1.2s
LBNH **Lisbon** 27.49 75 P P 20 53 34.1 +1.2
LBNH pmax pmax
comp=Z,27nm,1.3s
LBNH **Lisbon** 27.49 75 P P 20 53 34.6 +1.7
baz=282
EYAK **Cordova Ski Ar** 27.52 322 P P 20 53 32.4 -0.7
baz=113
L26K **Log Cabin Wild** 27.61 327 P P 20 53 33.9 0.0
L26K **Log Cabin Wild** 27.61 327 P P 20 53 35.5 +1.6
baz=120
K27K **Chicken** 27.66 330 P P 20 53 34.9 +0.6
MENT **Mentasta** 27.72 327 P P 20 53 35.1 +0.3
EGAK **Eagle** 27.76 332 P P 20 53 33.6 -1.5
EGAK **Eagle** 27.76 332 P P 20 53 34.6 -0.6
baz=126,SNR=8.7
UCCT **U. Connecticut** 27.85 80 P P 20 53 36.6 +0.4
KLU **Klutina** 27.98 323 P P 20 53 36.7 -0.6
baz=114
INK **Inuvik** 28.02 342 P P 20 53 35.6 -1.8
comp=Z,1.2nm,0.3s,baz=90,slow=7.3,SNR=4.7
comp=Z,1.2nm,0.3s
INK **Inuvik** 28.02 342 P P 20 53 36.9 -0.5
INK **Inuvik** 28.02 342 P P 20 53 36.9 -0.5
INK pmax pmax
comp=Z,13nm,1.0s
INK **Inuvik** 28.02 342 P P 20 53 38.0 +0.6
baz=142
HARP **HAARP** 28.04 325 P P 20 53 38.0 +0.2
baz=117
LMQ **La Malbaie** 28.09 67 P P 20 53 38.6 +0.3
LMQ IAmb IAmb 20 54 10.0
comp=Z,29nm,1.2s
G62A **West of Eustis** 28.28 72 P P 20 53 40.2 +0.2
G62A IAmb IAmb 20 53 46.3
comp=Z,61nm,1.9s
M24K **Tolsona, Glenn** 28.34 324 P P 20 53 40.2 -0.3
M24K **Tolsona, Glenn** 28.34 324 P P 20 53 41.5 +1.0
baz=115
SCRK **Sand Creek** 28.34 329 P P 20 53 38.9 -1.7
SCRK IAmb IAmb 20 53 47.6
comp=Z,34nm,1.8s
SCRK **Sand Creek** 28.34 329 P P 20 53 40.4 -0.1
baz=121,SNR=8.3
I27K **Kandik River** 28.41 333 P P 20 53 40.7 -0.3
baz=127,SNR=6.7
PAX **Paxson** 28.43 326 P P 20 53 41.0 -0.3
PAX **Paxson** 28.43 326 P P 20 53 41.0 -0.3
PAX pmax pmax
comp=Z,10.0nm,1.0s
PAX **Paxson** 28.43 326 P P 20 53 39.7 -1.6
baz=118,SNR=9.3
J26L **Joseph Creek** 28.46 330 P P 20 53 41.8 +0.2
J26L **Joseph Creek** 28.46 330 P P 20 53 40.0 -1.5
baz=123,SNR=20
RIDG **Independent Ri** 28.55 328 P P 20 53 42.5 +0.1
RIDG IAmb IAmb 20 53 49.2
comp=Z,26nm,1.3s
RIDG **Independent Ri** 28.55 328 P P 20 53 41.6 -0.8
baz=120,SNR=7.2
SCM **Sheep Creek Mo** 28.73 323 P P 20 53 44.0 +0.1
SCM IAmb IAmb 20 54 08.8
comp=Z,25nm,1.2s
SCM **Sheep Creek Mo** 28.73 323 P P 20 53 44.1 +0.1
SCM pmax pmax
comp=Z,25nm,1.2s
SCM **Sheep Creek Mo** 28.73 323 P P 20 53 45.2 +1.2
baz=113
H27K **Steamboat Moun** 28.76 334 P P 20 53 45.5 +1.3
baz=128
PWL **Port Wells** 28.82 321 P P 20 53 44.8 +0.2
baz=110
M23K **Glacier View** 28.89 323 P P 20 53 47.7 +2.4
baz=113
K24K **Donnelly Dome** 28.95 328 P P 20 53 46.9 +1.1
baz=119
KNK **Knik Glacier** 29.07 322 P P 20 53 48.2 +1.3
baz=111
CMIG **Matias Romero** 29.08 149 P P 20 53 47.6 +0.3
comp=Z,1.9nm,0.6s,baz=334,slow=3.5,SNR=3.0
comp=Z,1.9nm,0.6s
PKME **Peaks-Kenny Pk** 29.13 72 P P 20 53 47.9 +0.3
PKME **Peaks-Kenny Pk** 29.13 72 P P 20 53 48.1 +0.5
baz=281
SML **Sawmill** 29.16 323 P P 20 53 46.3 -1.4
SML IAmb IAmb 20 53 50.6
comp=Z,19nm,1.2s
SML **Sawmill** 29.16 323 P P 20 53 49.7 +1.9
baz=112
G27K **Doyon Strip** 29.16 335 P P 20 53 48.2 +0.5
baz=129,SNR=7.7
J25K **Salcha River,** 29.19 329 P P 20 53 47.1 -0.9
J25K IAmb IAmb 20 53 55.1
comp=Z,24nm,1.4s
J25K **Salcha River,** 29.19 329 P P 20 53 48.8 +0.8
baz=120,SNR=11
WAT6 **Susitna Watana** 29.21 325 P P 20 53 49.4 +1.1
baz=114
DHY **Denali Highway** 29.26 326 P P 20 53 49.1 +0.3
DHY **Denali Highway** 29.26 326 P P 20 53 49.0 +0.2
baz=115
RC01 **Rabbit Creek A** 29.54 321 P P 20 53 50.5 -0.6
RC01 **Rabbit Creek A** 29.54 321 P P 20 53 52.8 +1.8
baz=109
WAT1 **Susitna Watana** 29.65 325 P P 20 53 51.9 -0.1
baz=114
HDA **Harding Lake** 29.69 328 P P 20 53 51.8 -0.6
HDA **Harding Lake** 29.69 328 P P 20 53 53.4 +1.1
baz=118
PRP **Porcupine Dome** 29.71 331 P P 20 53 52.5 -0.1
PRP **Porcupine Dome** 29.71 331 P P 20 53 53.9 +1.2
baz=122
A36M **Sachs Harbour** 29.78 351 P P 20 53 52.7 -0.3
A36M IAmb IAmb 20 54 09.0
comp=Z,19nm,0.9s
A36M **Sachs Harbour** 29.78 351 P P 20 53 54.3 +1.2
baz=158
CNPM **China Poot** 29.80 318 P P 20 53 52.6 -0.7
CNPM IAmb IAmb 20 54 00.1
comp=Z,23nm,0.9s
IL31 29.84 329 P P 20 53 52.9 -0.6
ILAR **Eielson Array** 29.84 329 P P 20 53 53.8 +0.1
comp=Z,4.1nm,1.0s,baz=128,slow=7.6,SNR=36
ILAR PcP PcP 20 56 55.0 -1.5
comp=Z,0.6nm,0.8s,baz=163,slow=2.4,SNR=3.0
comp=Z,4.1nm,1.0s
ILAR **Eielson Array** 29.84 329 P P 20 53 53.4 -0.2
ILAR **Eielson Array** 29.84 329 P P 20 53 53.4 -0.2
G26K **Porcupine Rive** 29.92 334 P P 20 53 54.8 +0.5
baz=126
M22K **Willow** 29.93 322 P P 20 53 55.8 +1.4
baz=110
E27K **Coleen River** 30.02 337 P P 20 53 56.4 +1.1
baz=130
CCB **Clear Creek Bu** 30.13 328 P P 20 53 56.7 +0.5
CCB IAmb IAmb 20 53 59.0
comp=Z,23nm,1.2s
MCK **McKinley** 30.17 326 P P 20 53 57.2 +0.5
MCK IAmb IAmb 20 54 07.9
comp=Z,21nm,1.0s
MCK **McKinley** 30.17 326 P P 20 53 57.2 +0.5
MCK pmax pmax
comp=Z,21nm,1.0s
MCK **McKinley** 30.17 326 P P 20 53 56.9 +0.3
baz=114,SNR=6.3
POKR **Poker Plat Res** 30.21 329 P P 20 53 58.4 +1.5
baz=118
H25K **Birch Creek** 30.21 332 P P 20 53 57.1 +0.2
baz=122
SCHQ **Schefferville** 30.22 52 P P 20 53 57.6 +0.5
comp=Z,7.4nm,0.5s,baz=269,slow=8.6,SNR=13
comp=Z,7.4nm,0.5s
SCHQ **Schefferville** 30.22 52 P P 20 53 57.5 +0.3
SCHQ IAmb IAmb 20 55 00.5
comp=Z,21nm,1.0s
COLA **College** 30.25 329 P P 20 53 58.2 +0.9
COLA **College** 30.25 329 *d* P P 20 53 58.9 +1.7
COLA pmax pmax
comp=Z,27nm,1.1s
COLA **College** 30.25 329 P P 20 53 57.9 +0.7
baz=118
TCOL **CIGO, UAF Yank** 30.25 329 P P 20 53 58.0 +0.8
TCOL **CIGO, UAF Yank** 30.25 329 P P 20 53 58.9 +1.6
baz=118
OHAK **Old Harbor** 30.39 313 P P 20 54 00.0 +1.5
baz=99
BMAR **Burnt Mountain** 30.45 334 P P 20 54 00.5 +1.4
F26K **Sheenjek River** 30.47 335 P P 20 54 00.3 +1.1
baz=126
BWN **Browne** 30.57 327 P P 20 54 00.7 +0.6
O20K **Slope Mountain** 30.62 318 P P 20 54 01.1 +0.5
baz=104
TRF **Thorofare Moun** 30.62 325 P P 20 54 01.8 +1.1
baz=112,SNR=13
H24K **Noodor Dome** 30.71 330 P P 20 54 02.4 +0.9
H24K **Noodor Dome** 30.71 330 P P 20 54 01.4 -0.1
baz=119,SNR=9.3
P19K **Oil Pt** 30.81 317 P P 20 54 04.7 +2.4
baz=103
ILSW **Iliamna Southw** 30.84 318 P P 20 54 02.4 -0.4
ILSW IAmb IAmb 20 54 09.2
comp=Z,32nm,0.9s
GGN **Saint George** 30.86 71 P P 20 54 03.5 +0.6
GGN IAmb IAmb 20 54 09.9
comp=Z,13nm,0.8s
KTH **Kantishna Hill** 30.92 325 P P 20 54 03.2 -0.1
KTH IAmb IAmb 20 54 10.0
comp=Z,20nm,1.1s
I23K **Minto, Yukon-K** 30.95 329 P P 20 54 03.5 +0.1
I23K IAmb IAmb 20 54 27.2
comp=Z,20nm,1.4s
I23K **Minto, Yukon-K** 30.95 329 P P 20 54 03.8 +0.4
baz=116
BATG **Bathurst New B** 31.00 67 P P 20 54 04.8 +0.7
BATG IAmb IAmb 20 54 12.5
comp=Z,24nm,1.2s
G24K **Hadweenzic Riv** 31.00 332 P P 20 54 05.7 +1.7
baz=121
BPAW **Bear Paw Mtn.** 31.15 326 P P 20 54 05.0 -0.3
BPAW **Bear Paw Mtn.** 31.15 326 P P 20 54 05.6 +0.3
baz=113,SNR=7.6
E25K **Arctic Village** 31.16 335 P P 20 54 05.6 +0.3
baz=125,SNR=6.5
PPLA **Purkeypile** 31.23 324 P P 20 54 05.1 -1.0
PPLA IAmb IAmb 20 54 12.6
comp=Z,30nm,1.2s
PPLA **Purkeypile** 31.23 324 P P 20 54 06.5 +0.4
baz=109
H23K **Yukon River** 31.32 330 P P 20 54 05.6 -1.1
H23K IAmb IAmb 20 54 10.1
comp=Z,26nm,1.4s
H23K **Yukon River** 31.32 330 P P 20 54 06.6 -0.1
baz=117,SNR=8.7
M20K **Styx River** 31.33 322 P P 20 54 06.8 -0.2
M20K **Styx River** 31.33 322 P P 20 54 08.6 +1.6
baz=107
FRB **Frobisher Bay** 31.34 35 P P 20 54 07.1 +0.2
comp=Z,12nm,0.9s,baz=227,slow=12,SNR=5.5
FRB LR LR 21 06 01.3
comp=Z,431nm,18.0s,baz=248,slow=35
comp=Z,12nm,0.9s
CAST **Castle Rocks** 31.36 325 P P 20 54 06.3 -0.8
CAST IAmb IAmb 20 54 13.4
comp=Z,25nm,1.2s
CAST **Castle Rocks** 31.36 325 P P 20 54 07.7 +0.6
baz=110,SNR=21
PETF **Flores** 31.37 140 P P 20 54 08.5 +1.0
PETF IAmb IAmb 20 54 15.6
comp=Z,12nm,1.0s
MLY **Manley** 31.42 328 P P 20 54 07.2 -0.5
MLY **Manley** 31.42 328 P P 20 54 08.9 +1.2
baz=114,SNR=11
O19K **Port Alsworth** 31.47 318 P P 20 54 06.7 -1.4
O19K **Port Alsworth** 31.47 318 P P 20 54 09.1 +1.0
baz=103
C27K **Jago River** 31.54 338 P P 20 54 09.9 +1.3
baz=130
F24K **Squaw Lake** 31.56 333 P P 20 54 09.0 +0.1
baz=122
CHUM **Lake Minchumin** 31.62 325 P P 20 54 09.9 +0.6
baz=111
N19K **Bonanza Creek** 31.69 319 P P 20 54 09.2 -0.9
N19K IAmb IAmb 20 54 16.7
comp=Z,26nm,1.1s
N19K **Bonanza Creek** 31.69 319 P P 20 54 10.7 +0.6
baz=104,SNR=11
P18K **Big Mountain,** 31.76 317 P P 20 54 09.9 -0.8
P18K IAmb IAmb 20 54 16.9
comp=Z,24nm,1.1s
L20K **Farewell, AK** 31.84 323 P P 20 54 11.9 +0.5
baz=107,SNR=12
G23K **Bananza Creek** 31.89 331 P P 20 54 13.0 +1.2
baz=118
M19K **Big River Lodg** 31.91 321 P P 20 54 12.0 +0.1
M19K IAmb IAmb 20 54 19.4
comp=Z,16nm,1.1s
M19K **Big River Lodg** 31.91 321 P P 20 54 13.9 +1.9
baz=105
I21K **Tanana** 31.97 328 P P 20 54 12.7 +0.4
I21K IAmb IAmb 20 54 19.3
comp=Z,19nm,1.1s
I21K **Tanana** 31.97 328 P P 20 54 14.8 +2.4
baz=113
H22K **Ishtalitna Cre** 32.02 329 P P 20 54 14.0 +1.0
baz=115,SNR=6.4
C26K **Camden Bay** 32.05 338 P P 20 54 14.6 +1.6
baz=128,SNR=6.8
E24K **Your Creek** 32.05 334 P P 20 54 15.0 +1.9
baz=122
D25K **Kavik River** 32.10 337 P P 20 54 13.8 +0.3
baz=126,SNR=15
K20K **Telida** 32.19 324 P P 20 54 13.8 -0.6
K20K **Telida** 32.19 324 P P 20 54 13.9 -0.4
baz=108
L19K **White Mountain** 32.20 322 P P 20 54 14.3 -0.2
L19K IAmb IAmb 20 54 21.2
comp=Z,19nm,1.1s
L19K **White Mountain** 32.20 322 P P 20 54 14.2 -0.2
baz=105,SNR=14
SVW2 **Sparrevohn** 32.27 320 P P 20 54 13.7 -1.5
RES **Resolute Bay** 32.32 8 LR LR 21 07 35.1
comp=Z,1µm,19.9s,baz=205,slow=37
N18K **Kilae Creek** 32.33 319 P P 20 54 14.2 -1.5
N18K **Kilae Creek** 32.33 319 P P 20 54 16.4 +0.7
baz=102
H21K **Melozitna Rive** 32.47 328 P P 20 54 16.6 -0.2
H21K IAmb IAmb 20 54 24.5
comp=Z,17nm,1.1s
H21K **Melozitna Rive** 32.47 328 P P 20 54 17.1 +0.2
baz=113,SNR=13
J20K **Nowinta River** 32.48 325 P P 20 54 17.1 +0.2
J20K IAmb IAmb 20 54 23.3
comp=Z,21nm,1.1s
J20K **Nowinta River** 32.48 325 P P 20 54 16.5 -0.4
baz=109,SNR=14
G22K **Bettles** 32.51 331 P P 20 54 18.2 +1.0
baz=116
TOLK **Toolik Lake Re** 32.69 334 P P 20 54 19.1 +0.4
TOLK IAmb IAmb 20 54 25.4
comp=Z,16nm,1.1s
TOLK **Toolik Lake Re** 32.69 334 P P 20 54 18.3 -0.4
baz=121,SNR=10.0
O17K **Koliganek Bris** 32.76 317 P P 20 54 19.9 +0.5
baz=99
TTA **Tatalina** 32.91 323 P P 20 54 20.2 -0.6
TTA **Tatalina** 32.91 323 P P 20 54 20.2 -0.6
TTA pmax pmax
comp=Z,38nm,1.0s
TTA **Tatalina** 32.91 323 P P 20 54 20.1 -0.7
baz=105,SNR=26
IMAR **Indian Mountai** 32.95 329 P P 20 54 21.9 +0.9
G21K **Allakaket** 33.07 330 P P 20 54 23.0 +1.0
baz=113
E22K **Anaktuvuk Pass** 33.17 333 P P 20 54 24.1 +1.1
baz=118,SNR=7.6
D23K **Nanushuk River** 33.20 335 P P 20 54 24.4 +1.2
baz=120
HAL **Halifax** 33.22 71 P P 20 54 24.3 +0.7
HAL **Halifax** 33.22 71 P P 20 54 24.3 +0.7
HAL pmax pmax
comp=Z,114nm,1.9s
O16K **Kokwok River B** 33.23 316 P P 20 54 24.7 +1.2
baz=98
F21K **Alatna River** 33.34 331 P P 20 54 24.0 -0.5
baz=114,SNR=7.9
C23K **Itkillik River** 33.62 336 P P 20 54 26.6 -0.2
baz=121,SNR=7.5
N16K **Nishlik Lake** 33.69 318 P P 20 54 27.4 -0.2
baz=99,SNR=13
GCSA **Galena City Sc** 33.78 326 P P 20 54 28.5 +0.3
baz=107,SNR=11
MTO3 **Montecristo** 33.80 142 P P 20 54 29.7 +0.5
MTO3 IAmb IAmb 20 54 37.2
comp=Z,31nm,1.4s
TGUH **Tegucigalpa,Un** 35.07 139 P P 20 54 41.3 +1.3
A21K **Barrow** 36.10 337 P P 20 54 49.7 +1.6
baz=116
MATN **Matagalpa** 36.70 138 P P 20 54 55.0 +1.1
MATN IAmb IAmb 20 55 02.8
comp=Z,30nm,1.2s
BOAB **BOACO BROADBAN** 37.24 138 P P 20 54 59.6 +1.2
ACON **Acoyapa** 37.89 138 P P 20 55 04.5 +0.6
ACON IAmb IAmb 20 55 11.7
comp=Z,52nm,1.6s
NUUK **Nuuk** 38.66 37 *i* P P 20 55 11.3 +1.4
NUUK IAmb IAmb 20 55 17.3
comp=Z,16nm,1.1s
SFJD **Kangerlussuaq** 39.38 32 P P 20 55 17.2 +1.3
comp=Z,16nm,0.9s,baz=297,slow=8.0,SNR=4.5
SFJD LR LR 21 11 23.6
comp=Z,593nm,18.2s,baz=263,slow=36
comp=Z,16nm,0.9s
SFJD **Kangerlussuaq** 39.38 32 *i* P P 20 55 16.2 +0.3
SFJD IAmb IAmb 20 55 23.5
comp=Z,18nm,1.0s
IVI **Ivigtut** 40.26 41 P P 20 55 24.2 +0.9
IVI IAmb IAmb 20 55 34.5
comp=Z,19nm,0.9s
IVI **Ivigtut** 40.26 41 *i* P P 20 55 24.4 +1.1
IVI IAmb IAmb 20 55 34.1
comp=Z,18nm,0.9s
DY2G **Dye2** 41.07 33 *i* P P 20 55 31.8 +1.5
DY2G IAmb IAmb 20 55 35.6
comp=Z,33nm,1.0s
NEEM **North Greenlan** 41.60 16 *i* P P 20 55 35.1 +0.5
NEEM IAmb IAmb 20 55 36.4
comp=Z,38nm,1.1s
ICESG **Greenland Ices** 43.59 29 *i* P P 20 55 51.7 +0.8
ICESG IAmb IAmb 20 55 55.9
comp=Z,17nm,0.8s
SUMG **Summit** 43.98 24 P P 20 55 54.3 +0.3
SUMG IAmb IAmb 20 56 01.2
comp=Z,21nm,0.9s
SUMG **Summit** 43.98 24 P P 20 55 54.3 +0.3

SUMG pmax pmax
comp=Z,21nm,0.9s
SUMG Summit 43.98 24 *i* P **P** **20 55 55.5 +1.4**
SUMG IAmb IAmb 20 55 59.4
comp=Z,20nm,0.9s
ADK Adak 44.29 305 P **P** **20 55 55.1 -1.2**
ADK Adak 44.29 305 P **P** **20 55 55.1 -1.2**
ADK pmax pmax
comp=Z,39nm,1.3s
BILL Bilibino 48.49 330 *i* P **P** **20 56 29.8 +0.8**
BILL *i* 20 57 58.2
BILL pmax pmax
comp=Z,17nm,1.0s
BILL MLR MLR
comp=Z,349nm,16.0s
SDV Santo Domingo 48.54 123 P **P** **20 56 31.4 +1.1**
comp=Z,9.2nm,0.6s,baz=21,slow=11,SNR=5.2
comp=Z,9.2nm,0.6s
ROSC El Rosal 49.62 130 P **P** **20 56 40.6 +1.9**
comp=Z,5.0nm,0.3s,baz=42,slow=11,SNR=3.8
ROSC LR LR 21 20 48.4
comp=Z,62nm,19.5s,baz=44,slow=40
comp=Z,5.0nm,0.3s
ROSC El Rosal 49.62 130 P **P** **20 56 39.5 +0.7**
ROSC El Rosal 49.62 130 P **P** **20 56 39.5 +0.7**
ROSC pmax pmax
comp=Z,38nm,1.5s
BAUV El Baul 50.11 120 P **P** **20 56 41.9 -0.2**
OTAV Otavalo 51.32 138 P **P** **20 56 52.8 +1.1**
OTAV Otavalo 51.32 138 P **P** **20 56 52.8 +1.1**
OTAV pmax pmax
comp=Z,15nm,1.4s
BORG Borgarnes 51.50 33 LR LR 21 17 57.2
comp=Z,334nm,19.3s,baz=286,slow=35
JMIC Jan Mayen 53.41 24 LR LR 21 19 59.4
comp=Z,511nm,18.1s,baz=268,slow=36
BOSC San Juan Bosco 54.25 140 P **P** **20 57 14.1 +1.1**
BOSC IAmb IAmb 20 57 30.0
comp=Z,23nm,1.5s
SEY Seymchan 55.73 327⇑ *e*P **P** **20 57 23.4 +0.4**
SEY pmax pmax
comp=Z,20nm,1.7s
PET Petropavlovsk 57.70 314 *e*P **P** **20 57 37.9 +0.8**
PET *e* 20 58 24.5
PET *e*S S 21 05 47.2 +11
PET pmax pmax
comp=Z,34nm,1.3s
PET MLR MLR
comp=Z,200nm,17.0s
ATAH Atahualpa 57.80 142 LR LR 21 23 04.2
comp=Z,186nm,18.3s,baz=336,slow=37
MA2 Magadan 58.10 324 LR LR 21 23 38.7
comp=Z,203nm,18.2s,baz=60,slow=37
TIXI Tiksi 58.15 341⇓ *e*P **P** **20 57 39.4 -0.6**
TIXI pmax pmax
comp=Z,12nm,1.3s
PEA0B Petropavlovsk- 58.15 315 P **P** **20 57 40.5 +0.1**
PEA0B Petropavlovsk- 58.15 315 *ce*P **P** **20 57 40.9 +0.6**
PETK Petropavlovsk- 58.15 315 P **P** **20 57 40.5 +0.2**
comp=Z,7.6nm,1.0s,baz=67,slow=11,SNR=12
PETK LR LR 21 24 27.8
comp=Z,118nm,18.0s,baz=66,slow=38
comp=Z,7.6nm,1.0s
PETK Petropavlovsk- 58.15 315 P **P** **20 57 40.8 +0.5**
PETK Petropavlovsk- 58.15 315 P **P** **20 57 40.8 +0.5**
NNA Nana 62.79 143 LR LR 21 24 48.2
comp=Z,74nm,21.7s,baz=354,slow=35
ARCES ARCESS Array B 62.96 16 P **P** **20 58 12.3 -0.6**
comp=Z,13nm,1.1s,baz=350,slow=7.3,SNR=5.1
comp=Z,13nm,1.1s
ARCES ARCESS Array B 62.96 16 P **P** **20 58 12.9 0.0**
ARCES ARCESS Array B 62.96 16 P **P** **20 58 12.9 0.0**
ARCES pmax pmax
comp=Z,40nm,1.6s
MDP Montagnes des 63.16 110 LR LR 21 28 31.0
comp=Z,66nm,20.1s,baz=326,slow=39
ESK Eskdalemuir 64.04 37 P **P** **20 58 20.2 0.0**
ESK Eskdalemuir 64.04 37 P **P** **20 58 20.2 0.0**
ESK pmax pmax
comp=Z,13nm,1.0s
EKA Eskdalemuir Ar 64.05 37 LR LR 21 24 07.6
comp=Z,370nm,18.8s,baz=316,slow=34
YAK Yakutsk 64.64 333 LR LR 21 28 46.6
comp=Z,205nm,18.2s,baz=86,slow=38
NC204 NORSAR Array S 65.44 27 P **P** **20 58 29.8 +0.5**
NB2 NORSAR Subarra 65.76 27 P **P** **20 58 31.3 -0.1**
comp=Z,22nm,1.2s,baz=314,slow=6.5
NOA NORSAR Array B 65.76 27 P **P** **20 58 30.8 -0.6**
comp=Z,3.6nm,1.0s,baz=314,slow=6.9,SNR=9.1
comp=Z,3.6nm,1.0s
LVZ Lovozero 66.10 14 *ce*P **P** **20 58 33.8 +0.4**
LVZ pmax pmax
comp=Z,50nm,1.1s
ETMB Extrema 66.21 132 P **P** **20 58 33.4 -1.4**
ETMB IAmb IAmb 20 58 43.3
comp=Z,50nm,1.7s
NRIK Noril'sk 67.02 353 P **P** **20 58 39.6 +0.4**
comp=Z,5.4nm,0.9s,baz=57,slow=7.1,SNR=5.0
NRIK LR LR 21 28 56.7
comp=Z,238nm,19.6s,baz=44,slow=37
comp=Z,5.4nm,0.9s
NRIK Noril'sk 67.02 353 P **P** **20 58 38.1 -1.1**
NRIK Noril'sk 67.02 353 *ce*P **P** **20 58 39.6 +0.4**
NRIK pmax pmax
comp=Z,8.0nm,1.2s
SAML Samuel 67.20 128 P **P** **20 58 40.3 -0.8**
SAML Samuel 67.20 128 P **P** **20 58 40.3 -0.8**
SAML pmax pmax
comp=Z,18nm,1.3s
FINES FINESS Array B 69.85 21 P **P** **20 58 56.8 -0.3**
comp=Z,9.7nm,1.1s,baz=318,slow=1.9,SNR=3.2
comp=Z,9.7nm,1.1s
FINES FINESS Array B 69.85 21 P **P** **20 58 55.7 -1.4**
FINES FINESS Array B 69.85 21 P **P** **20 58 55.7 -1.4**
PGAV Gavieira, Arco 70.00 51 A A 21 27 04.8
comp=Z,171nm,18.0s
PMOZ Porto Moniz, M 70.36 63 A A 21 25 57.3
comp=Z,98nm,20.0s
PPT Papeete 70.47 220 P **P** **20 58 59.5 -1.9**
comp=Z,104nm,1.1s,baz=359,slow=9.6,SNR=3.1
PPT LR LR 21 25 17.5
comp=Z,108nm,18.4s,baz=10.0,slow=32
LPAZ La Paz 70.64 137 P **P** **20 59 02.5 -0.6**
comp=Z,1.0nm,0.5s,baz=311,slow=3.4,SNR=5.6
LPAZ LR LR 21 32 13.3
comp=Z,82nm,20.4s,baz=328,slow=38
comp=Z,1.0nm,0.5s
BMRD Maredsous 70.99 38 *d*P **P** **20 59 04.3 +0.1**
comp=Z,5.8nm,1.0s
MVO Moncorvo 71.22 51 *e*P **P** **20 59 07.0 +1.1**
MVO *ep*P **sP** **20 59 10.4 +1.0**
MVO A A 21 27 42.0
comp=Z,169nm,18.0s
RCHB Rochefort 71.30 38 *d*P **P** **20 59 06.8 +0.7**
comp=Z,6.5nm,1.1s
MEM Membach 71.32 37 *d*P **P** **20 59 06.9 +0.7**
comp=Z,12nm,0.8s
BTNL Ternell 71.39 37 *d*P **P** **20 59 07.6 +0.9**
comp=Z,9.5nm,1.2s
MTE Manteigas 71.43 52 A A 21 26 46.2
comp=Z,134nm,18.0s
CLF Chambon-Foret 71.43 41 P **P** **20 59 06.8 -0.1**
BHOU Houvegnez 71.50 37 *d*P **P** **20 59 08.4 +1.0**
comp=Z,6.4nm,1.0s
ZEA Zeya 71.66 328 *e*P P 20 59 17.5 +9.3
ZEA MLR MLR
comp=N,600nm,15.0s
ZEA MLR MLR
comp=Z,200nm,13.0s
WLF Walferdange 72.07 38 P **P** **20 59 10.3 -0.5**
WLF IAmb IAmb 20 59 19.6
comp=Z,9.5nm,0.8s
WLF Walferdange 72.07 38 P **P** **20 59 10.3 -0.5**
WLF pmax pmax
comp=Z,10.0nm,0.8s
WLF Walferdange 72.07 38 *d*P **P** **20 59 11.2 +0.5**
comp=Z,8.7nm,0.9s
VILB Vilhena 72.14 128 P **P** **20 59 11.4 -0.1**
VILB IAmb IAmb 20 59 18.4
comp=Z,12nm,0.8s
PMRV Marv??o 72.16 53 *e*P **P** **20 59 12.2 +0.7**
PMRV *ep*P **sP** **20 59 15.7 +0.7**
PMRV A A 21 28 39.5
comp=Z,182nm,18.0s
PNCL Nicolau / Gran 72.36 54 *ep*P pP 20 59 17.1 +1.9
PESTR Estremoz 72.42 53 *e*P **P** **20 59 13.2 +0.1**
PESTR *ep*P **sP** **20 59 17.0 +0.5**
MESJ Messejana 72.73 54 *e*P **P** **20 59 15.8 +0.9**
BOD Bodaibo 72.82 337 *e*P **P** **20 59 13.9 -1.2**
BOD pmax pmax
comp=Z,18nm,1.6s
MORF Marmelete 72.82 55 *e*P **P** **20 59 16.2 +0.7**
MORF Marmelete 72.82 55 *e*P **P** **20 59 16.4 +0.9**
KLR Kul'dur 73.18 323 LR LR 21 35 07.9
comp=Z,102nm,18.2s,baz=44,slow=39
KLR Kul'dur 73.18 323⇑ *e*P **P** **20 59 17.7 +0.3**
KLR pmax pmax
comp=Z,9.0nm,2.5s
PVAQ Vaqueiros 73.31 54 A A 21 29 50.2
comp=Z,124nm,20.0s
KLMR Klimovskoe 73.39 15 *e*P **P** **20 59 16.1 -2.3**
KLMR pmax pmax
comp=Z,35nm,1.2s
KLMR Klimovskoe 73.39 15 *e*P **P** **20 59 16.1 -2.3**
KLMR AMP 20 59 23.8
comp=Z,35nm,1.2s
PRGR Permogore 73.69 12 *e*P **P** **20 59 20.0 -0.1**
CLL Collm 73.74 33 P **P** **20 59 20.7 0.0**
CLL Collm 73.74 33 *i* P **P** **20 59 21.6 +0.9**
CLL *i* 20 59 24.6
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 73.74 33 *i* P **P** **20 59 21.6 +0.9**
comp=Z,5.0nm,0.9s
CLL *i* pP **sP** **20 59 24.6 +0.5**
comp=Z,10.0nm,1.2s
CLL *i* x x 20 59 30.1
CLL *e*S **S** **21 08 59.0 +7.1**
CLL LmV 21 33 00.0
comp=Z,100nm,19.3s
ESBB Sonseca Array 73.96 50 P **P** **20 59 22.0 -0.2**
ESDC Sonseca Array 73.96 50 P **P** **20 59 22.4 +0.1**
comp=Z,4.8nm,1.0s,baz=309,slow=5.1,SNR=18
ESDC LR LR 21 29 06.0
comp=Z,217nm,18.4s,baz=308,slow=34
comp=Z,4.8nm,1.0s
ESDC Sonseca Array 73.96 50 P **P** **20 59 21.9 -0.3**
BFO Black Forest 74.02 38 P **P** **20 59 22.0 -0.4**
BFO IAmb IAmb 20 59 28.7
comp=Z,7.7nm,0.8s
BFO Black Forest 74.02 38 P **P** **20 59 22.0 -0.4**
BFO pmax pmax
comp=Z,8.0nm,0.8s
STU Stuttgart 74.08 37 P **P** **20 59 22.8 +0.1**
STU IAmb IAmb 20 59 31.9
comp=Z,8.9nm,0.9s
STU Stuttgart 74.08 37 P **P** **20 59 22.8 +0.1**
STU pmax pmax
comp=Z,9.0nm,0.9s
SIV San Ignacio 74.10 131 LR LR 21 36 58.6
comp=Z,43nm,18.6s,baz=298,slow=40
BRG Berggiesshubel 74.46 33 *e*P **P** **20 59 25.1 +0.3**
BRG Amp 20 59 26.7
comp=Z,16nm,1.7s
BRG Amp 21 31 03.0
comp=E,0.1nm,17.2s
BRG Amp 21 31 34.0
comp=Z,0.2nm,18.1s
BRG Amp 21 31 51.0
comp=N,0.2nm,15.6s
BRG Berggiesshubel 74.46 33 *e*P **P** **20 59 25.1 +0.3**
BRG pmax pmax
comp=Z,16nm,1.7s
BRG MLR MLR
comp=E,124nm,17.2s
BRG MLR MLR
comp=Z,157nm,18.1s
BRG MLR MLR
comp=N,171nm,15.6s
PTLB Pontes e Lacer 74.75 129 P **P** **20 59 26.8 -0.1**
PTLB IAmb IAmb 20 59 33.6
comp=Z,12nm,1.2s
PRU Pruhonice 75.39 33 AMS AMS 21 35 10.0
comp=Z,300nm,14.9s
DAVA Damuels 75.50 38 *e*P **P** **20 59 32.3 +1.1**
comp=Z,4.5nm,1.1s
UPC Upice 75.56 32 AMS AMS 21 35 10.0
comp=Z,300nm,17.4s
OSTC Ostas 75.60 32 AMS AMS 21 35 40.0
comp=Z,300nm,14.3s
KHC Kasperske Hory 75.67 34 P **P** **20 59 32.2 +0.3**
KHC Kasperske Hory 75.67 34 *e*P **P** **20 59 32.4 +0.5**
KHC MLR MLR
comp=Z,600nm,17.5s
KHC Kasperske Hory 75.67 34 *e*P **P** **20 59 32.4 +0.5**
KHC AMS AMS 21 31 50.0
comp=Z,600nm,17.5s
LVC Limon Verde 75.68 141 LR LR 21 35 13.0
comp=Z,76nm,18.0s,baz=352,slow=38
BNI Bardonecchia 75.69 41 P **P** **20 59 31.9 -0.3**
BNI Bardonecchia 75.69 41 P **P** **20 59 31.9 -0.3**
BNI pmax pmax
comp=Z,7.0nm,1.1s
RETA Reutte 75.73 37 *e*P **P** **20 59 33.8 +1.4**
comp=Z,8.8nm,1.1s
DPC Dobruska-Polom 75.80 32 *e*P **P** **20 59 33.9 +1.2**
DPC *e* 20 59 38.1
DPC MLR MLR
comp=Z,300nm,14.9s
DPC Dobruska-Polom 75.80 32 *e*P **P** **20 59 33.9 +1.2**
DPC *ep*P **sP** **20 59 38.1 +1.9**
DPC AMS AMS 21 35 00.0
comp=Z,300nm,14.9s
GEC2 GERESS Array S 75.94 34 P **P** **20 59 33.5 -0.1**
GERES GERESS Array B 75.94 34 P **P** **20 59 34.5 +1.0**
comp=Z,1.4nm,0.8s,baz=292,slow=3.9,SNR=14
GERES LR LR 21 32 30.3
comp=Z,510nm,20.1s,baz=310,slow=35
comp=Z,1.4nm,0.8s
GERES GERESS Array B 75.94 34 P **P** **20 59 33.7 +0.1**
GERES GERESS Array B 75.94 34 P **P** **20 59 33.7 +0.1**
MOTA Moosalm 75.99 37 *i* P **P** **20 59 35.5 +1.5**
comp=Z,19nm,1.4s,SNR=8.5
FETA Feichten 76.08 37 *e*P **P** **20 59 36.4 +2.0**
comp=Z,8.5nm,1.6s
SQTA Sankt Quirin 76.13 37 *i* P **P** **20 59 36.1 +1.4**
comp=Z,17nm,1.7s,SNR=6.4
KRLC Kraliky 76.20 32 *e*P **P** **20 59 36.7 +1.7**
KRLC MLR MLR
comp=Z,300nm,16.4s
KRLC Kraliky 76.20 32 *e*P **P** **20 59 36.7 +1.7**
KRLC AMS AMS 21 35 10.0
comp=Z,300nm,16.4s
WATA Walderalm 76.21 37 *i* P **P** **20 59 36.4 +1.2**
comp=Z,11nm,1.2s,SNR=8.4
CKRC Cesky Krumlov 76.21 34 *e*P **P** **20 59 35.7 +0.7**
CKRC *ep*P **sP** **20 59 39.1 +0.6**
CKRC AMS AMS 21 32 00.0
comp=Z,500nm,18.8s
AVE Averroes 76.25 57 P **P** **20 59 35.3 -0.2**
WTTA Wattenberg 76.29 37 *i* P **P** **20 59 36.8 +1.1**
comp=Z,7.0nm,1.0s,SNR=6.2
MNK Minsk 76.30 24 *i* P **P** **20 59 33.8 -1.5**
MNK *i* S **S** **21 09 19.0 -1.2**
MNK *i* SSS SSS 21 17 36.7
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK MLR MLR
comp=Z,223nm,16.0s
MNK MLR MLR
comp=E,25nm,16.0s
MNK Minsk 76.30 24 *i* P **P** **20 59 33.8 -1.5**
comp=E,1.0nm,0.9s
MNK *i* P **P** **20 59 33.8 -1.5**
MNK *i* P **P** **20 59 33.8 -1.5**
comp=Z,10.0nm,0.9s,baz=330
MNK *i* PcP PcP 20 59 55.8 +8.5
MNK *i* PP PP 21 02 10.5 -15
MNK *i* PPP PPP 21 04 54.4
MNK *i* S **S** **21 09 19.0 -1.2**
MNK *i* SS SS 21 14 38.9 +26
MNK *i* SSS SSS 21 17 36.8
MNK *i* LQ LQ 21 28 07.7
MNK *i* LR LR 21 30 10.7
MNK *i* LRM MLR 21 33 09.5
comp=Z,223nm,15.9s
MNK *i* LRM MLR 21 33 16.1
MNK *i* LRM MLR 21 33 16.4
comp=E,25nm,15.9s

TREC Trest 76.31 33 AMS AMS 21 34 50.0
comp=E,400nm,16.5s
MORC Moravsky Berou 76.74 32 P **P** **20 59 38.6 +0.6**
MORC Moravsky Berou 76.74 32 P **P** **20 59 38.6 +0.6**
MORC pmax pmax
comp=Z,8.0nm,1.4s
MORC Moravsky Berou 76.74 32 *e*P **P** **20 59 38.9 +0.9**
VRAC Vranov 76.74 33 *e*P **P** **20 59 38.9 +0.9**
BIOA Bad Ischl, Aus 76.81 35 *e*P **P** **20 59 39.9 +1.4**
comp=Z,0.2nm,0.2s
KRUC Moravsky 76.86 33 *e*P **P** **20 59 39.3 +0.7**
OKC Ostrava-Krasne 76.92 31 AMS AMS 21 37 50.0
comp=Z,300nm,13.4s
MOA Molln 76.95 35 *e*P **P** **20 59 41.4 +2.2**
comp=Z,4.5nm,1.1s
SALO Salr 77.06 38 P **P** **20 59 40.0 +0.1**
SALO IAmb IAmb 20 59 45.2
comp=Z,9.2nm,0.8s
ABTA Abfaltersbach 77.07 36 *i* P **P** **20 59 41.9 +1.9**
comp=Z,8.8nm,1.3s,SNR=6.0
KIRV Kirov 77.17 11 LR LR 21 35 52.0
comp=Z,193nm,18.3s,baz=325,slow=37
KIRV Kirov 77.17 11 *ce*P **P** **20 59 40.7 +0.6**
KBA Koelnbreinsper 77.17 36 *e*P **P** **20 59 41.6 +1.0**
comp=Z,6.2nm,1.3s
OJC Ojcow 77.23 30 P **P** **20 59 40.2 -0.5**
OJC Ojcow 77.23 30 P **P** **20 59 40.2 -0.5**
OJC pmax pmax
comp=Z,10.0nm,1.3s
CIMO Cimolais 77.38 37 P **P** **20 59 41.1 -0.5**
CIMO IAmb IAmb 20 59 48.6
comp=Z,4.6nm,1.3s
JAVC Velka Javorina 77.53 32 *e*P **P** **20 59 44.3 +1.8**
CONA Conrad Observa 77.55 34 *i* P **P** **20 59 44.1 +1.4**
comp=Z,8.9nm,1.7s,SNR=5.8
MYKA Terra Mystica 77.65 36 *e*P **P** **20 59 44.2 +1.0**
comp=Z,1.9nm,0.4s
MOS Moscow 77.72 18 *e*P **P** **20 59 42.0 -1.3**
MOS *e* 20 59 54.5
MODS Modra-Piesok 77.76 33 *e*P **P** **20 59 45.2 +1.5**
MODS pmax pmax
comp=Z,21nm,1.3s
MODS Modra-Piesok 77.76 33 *e*P **P** **20 59 45.2 +1.5**
TEOL Teolo 77.77 38 P **P** **20 59 43.9 +0.1**
TEOL IAmb IAmb 20 59 52.9
comp=Z,9.9nm,0.9s
RONA Rosalia, Austr 77.91 34 *e*P **P** **20 59 46.3 +1.7**
comp=Z,7.0nm,1.6s
ARSA Arzberg 77.95 34 *e*P **P** **20 59 46.0 +1.1**
comp=Z,5.2nm,1.1s
LANS Liptovska Anna 77.98 31 *e*P **P** **20 59 46.5 +1.5**
LANS Liptovska Anna 77.98 31 *e*P **P** **20 59 46.5 +1.5**
OBN Obninsk 78.05 19 LR LR 21 35 36.6
comp=Z,59nm,18.1s,baz=350,slow=37
OBN Obninsk 78.05 19 P **P** **20 59 44.9 -0.2**
OBN Obninsk 78.05 19 *i* P **P** **20 59 45.0 -0.2**
OBN *i* 20 59 52.7
OBN pmax pmax
comp=Z,11nm,1.1s
OBN MLR MLR
comp=Z,209nm,17.0s
OBKA Obir 78.13 35 *i* P **P** **20 59 46.5 +0.6**
comp=Z,13nm,1.3s,SNR=6.5
SABO M.te Sabotino 78.14 36 P **P** **20 59 46.2 +0.3**
SABO IAmb IAmb 20 59 52.7
comp=Z,19nm,1.1s
SOKA Soboth 78.20 35 *i* P **P** **20 59 47.1 +0.8**
comp=Z,15nm,1.3s,SNR=12
VYHS Vyhne 78.27 32 *e*P **P** **20 59 48.6 +2.0**
VYHS Vyhne 78.27 32 *e*P **P** **20 59 48.6 +2.0**
MDT Midelt 78.30 56 LR LR 21 31 15.1
comp=Z,82nm,20.8s,baz=322,slow=33
SRO Srobarova 78.62 33 *e*P **P** **20 59 50.0 +1.5**
SRO Srobarova 78.62 33 *e*P **P** **20 59 50.0 +1.5**
RAR Rarotonga 78.66 226 LR LR 21 30 11.0
comp=Z,122nm,19.2s,baz=344,slow=32
PSZ Piszkesteto 79.15 32 P **P** **20 59 50.3 -1.2**
PSZ Piszkesteto 79.15 32 P **P** **20 59 50.3 -1.2**
PSZ pmax pmax
comp=Z,10.0nm,1.3s
MJAR Matsushiro Arr 79.21 310 LR LR 21 37 42.1
comp=Z,74nm,18.4s,baz=62,slow=38
UZH Uzhgorod 79.46 30 *e*P **P** **20 59 56.2 +3.2**
UZH *e* 21 00 01.0
LATE Laterza 79.96 39 P **P** **20 59 56.2 +0.3**
LATE IAmb IAmb 21 00 06.8
comp=Z,19nm,1.3s
AKASG Malin Array Be 80.01 25 P **P** **20 59 55.6 -0.4**
comp=Z,0.9nm,0.4s,baz=329,slow=5.3,SNR=12
AKASG LR LR 21 36 35.5
comp=Z,192nm,18.6s,baz=337,slow=37
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 80.01 25 P **P** **20 59 55.9 0.0**
AKASG Malin Array Be 80.01 25 *i* P **P** **20 59 56.0 0.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 80.01 25 P **P** **20 59 55.8 -0.2**
AKBB IAmb IAmb 21 00 02.2
comp=Z,15nm,1.2s
AKBB Malin Array Si 80.01 25 *ce*P **P** **20 59 56.3 +0.3**
ARU Arti 80.28 6 LR LR 21 38 31.3
comp=Z,183nm,18.1s,baz=338,slow=38
ARU Arti 80.28 6 P **P** **20 59 57.1 -0.3**
ARU IAmb IAmb 20 59 58.7
comp=Z,19nm,1.2s
ARU Arti 80.28 6 *c i*P **P** **20 59 57.9 +0.5**
ARU S **S** **21 10 04.4 +1.4**
ARU SS **SS** **21 15 09.1 -3.3**
ARU pmax pmax
comp=Z,20nm,1.2s
ARU MLR MLR
comp=Z,212nm,16.0s
IRK Irkutsk 80.39 339 *e*P **P** **20 59 58.0 0.0**
IRK pmax pmax
comp=Z,34nm,1.5s
JHJ Hachijo jima 2 80.77 307 LR LR 21 31 38.5
comp=Z,19nm,21.7s,baz=144,slow=33
LPSR Galich'ya Gora 80.92 19 *e*P **P** **21 00 00.0 -0.8**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
BUR08 Bucovina Ar. S 81.33 29 P **P** **21 00 02.9 -0.4**
BUR08 IAmb IAmb 21 00 10.3
comp=Z,23nm,1.8s
BURAR Bucovina Array 81.36 29 P **P** **21 00 03.8 +0.3**
BDFB Brasilia 81.58 121 LR LR 21 40 24.9
comp=Z,63nm,18.2s,baz=0.3,slow=39
VORR Voronezh 81.84 19 *e*P **P** **21 00 06.2 +0.4**
VORR pmax pmax
comp=Z,21nm,1.6s
VSR Storozhevoye 82.26 19 *e*P **P** **21 00 06.5 -1.4**
VSR pmax pmax
comp=Z,10.0nm,1.2s
DIVS Divibare 82.34 34 P **P** **21 00 08.9 +0.2**
DIVS IAmb IAmb 21 00 10.6
comp=Z,12nm,1.2s
ZAA0 Zalesovo Array 82.38 351 P **P** **21 00 07.8 -0.8**
ZALV Zalesovo Beam 82.38 351 P **P** **21 00 07.7 -0.8**
comp=Z,3.1nm,0.8s,baz=0.0,slow=4.4,SNR=10
ZALV LR LR 21 39 14.9
comp=Z,80nm,20.0s,baz=56,slow=38
comp=Z,3.1nm,0.8s
ZALV Zalesovo Beam 82.38 351 P **P** **21 00 06.9 -1.6**
ZALV Zalesovo Beam 82.38 351 P **P** **21 00 06.9 -1.6**
RCBR Riachuelo 82.61 105 LR LR 21 35 42.8
comp=Z,66nm,20.0s,baz=134,slow=35
BBTS Babate 82.71 77 LR LR 21 32 36.2
comp=Z,341nm,21.0s,baz=288,slow=32
VRH Novokhopyorsk 82.85 17 *e*P **P** **21 00 09.8 -1.2**
VRH pmax pmax
comp=Z,10.0nm,1.0s
BELG Belogornoye 82.87 14 *ce*P **P** **21 00 11.5 +0.4**
MLR Muntele Rosu 83.44 29 LR LR 21 39 05.3
comp=Z,331nm,18.8s,baz=295,slow=37
KNGR Kungurtug, Tuv 83.51 343⇑ *e*P **P** **21 00 14.5 -0.2**
KNGR pmax pmax
comp=Z,12nm,1.2s
ULN Ulaanbaatar 83.56 336 P **P** **21 00 14.5 -0.6**
ULN Ulaanbaatar 83.56 336 *ce*P **P** **21 00 15.9 +0.9**
ULN pmax pmax
comp=Z,12nm,1.7s
SONM Songino Array 83.79 336 P **P** **21 00 16.4 +0.3**
comp=Z,3.4nm,1.0s,baz=26,slow=3.5,SNR=21
SONM LR LR 21 40 53.8
comp=Z,213nm,19.3s,baz=27,slow=38
comp=Z,3.4nm,1.0s

SONM Songino Array 83.79 336 P P 21 00 16.5 +0.3
SONM IAmb IAmb 21 00 17.9
comp=Z,8.6nm,1.2s
SONM Songino Array 83.79 336 P P 21 00 16.5 +0.3
SONM pmax pmax
comp=Z,9.0nm,1.2s
KSRS Korea Array 83.95 317 P P 21 00 17.0 +0.1
comp=Z,4.2nm,1.1s,baz=27,slow=7.0,SNR=5.3
KSRS LR LR 21 38 24.8
comp=Z,78nm,19.5s,baz=45,slow=36
comp=Z,4.2nm,1.1s
KSAR Wonju Array Be 83.98 317 P P 21 00 16.9 -0.2
KSAR Wonju Array Be 83.98 317 P P 21 00 16.9 -0.2
KEST Kesra 84.05 45 P P 21 00 18.9 +1.2
comp=Z,14nm,1.0s,baz=267,slow=4.6,SNR=11
KEST LR LR 21 34 33.9
comp=Z,117nm,20.1s,baz=280,slow=33
comp=Z,14nm,1.0s
KEST Kesra 84.05 45 P P 21 00 18.0 +0.4
BRVK Borovoye 84.12 360 P P 21 00 17.4 -0.1
BRVK IAmb IAmb 21 00 22.8
comp=Z,4.8nm,0.8s
BRVK Borovoye 84.12 360 *de* **P P 21 00 17.3 -0.2**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BVAR Borovoye Array 84.15 360 LR LR 21 41 51.0
comp=Z,181nm,19.0s,baz=3.2,slow=39
CPUP Villa Florida 84.51 134 P P 21 00 20.2 +0.4
comp=Z,0.8nm,0.4s,baz=280,slow=6.3,SNR=2.0
CPUP LR LR 21 42 51.4
comp=Z,37nm,18.4s,baz=350,slow=39
comp=Z,0.8nm,0.4s
CLTB Caltabellotta 84.57 42 P P 21 00 19.9 -0.3
VTS Vitosha 84.87 33 P P 21 00 21.5 -0.3
VTS IAmb IAmb 21 00 23.1
comp=Z,8.4nm,1.3s
VTS Vitosha 84.87 33 P P 21 00 21.5 -0.3
VTS pmax pmax
comp=Z,8.0nm,1.3s
TIP Timpagrande 84.96 39 P P 21 00 21.9 -0.3
TIP IAmb IAmb 21 00 26.8
comp=Z,14nm,1.4s
KURK Kurchatov 86.15 354 P P 21 00 26.5 -1.3
KURK IAmb IAmb 21 00 32.8
comp=Z,12nm,1.4s
KURK Kurchatov 86.15 354 *ce* **P P 21 00 27.5 -0.3**
KURK pmax pmax
comp=Z,9.0nm,1.3s
AKTO Aktyubinsk 86.18 8 LR LR 21 42 19.6
comp=Z,289nm,18.9s,baz=353,slow=38
DGZ Jazzator, Alta 86.21 349 ⇑ *iP* **P 21 00 28.4 +0.1**
DGZ pmax pmax
comp=Z,4.0nm,1.3s
KURBB Kurchatov Arra 86.25 354 LR LR 21 41 22.7
comp=Z,226nm,21.5s,baz=356,slow=37
SEM Semipalatinsk 86.33 353 *eP* **P 21 00 27.2 -1.7**
SEM Semipalatinsk 86.33 353 *eP* **P 21 00 27.3 -1.7**
baz=353
BRZS Berezniki 87.17 358 *eP* **P 21 00 31.2 -1.6**
BRZS Berezniki 87.17 358 *eP* **P 21 00 31.3 -1.6**
baz=358
ABKAR Akbulak array 87.52 6 P P 21 00 34.7 +0.3
ABKAR Akbulak array 87.52 6 P P 21 00 34.5 0.0
HHC Hu-ho-hao-te 88.26 330 *eP* **P 21 00 37.0 -1.3**
HHC pmax pmax
comp=Z,36nm,0.7s
HHC pmax pmax
comp=Z,140nm,6.2s
HHC LR LR
comp=Z,470nm,20.3s
HHC LR LR
comp=Z,680nm,20.9s
HHC LR LR
comp=Z,540nm,19.0s
ZSN Zaisan 88.76 350 *eP* **P 21 00 38.9 -1.5**
ZSN Zaisan 88.76 350 *eP* **P 21 00 39.0 -1.5**
baz=350
MK31 Makanchi Array 89.72 351 P P 21 00 44.4 -0.6
MK31 IAmb IAmb 21 00 45.5
comp=Z,5.6nm,1.1s
MK31 Makanchi Array 89.72 351 *c iP* **P 21 00 44.5 -0.5**
MKAR Makanchi Array 89.72 351 P P 21 00 44.0 -1.0
comp=Z,0.9nm,0.4s,baz=4.3,slow=4.9,SNR=23
MKAR LR LR 21 43 40.7
comp=Z,137nm,21.6s,baz=13,slow=37
comp=Z,0.9nm,0.4s
MKAR Makanchi Array 89.72 351 P P 21 00 44.4 -0.6
MKAR Makanchi Array 89.72 351 P P 21 00 44.4 -0.6
MAKZ Makanchi 89.73 352 P P 21 00 43.9 -1.2
MAKZ IAmb IAmb 21 00 45.6
comp=Z,6.8nm,1.1s
MAKZ Makanchi 89.73 352 P P 21 00 43.9 -1.2
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
KIV Kislovodsk 89.89 19 *eP* **P 21 00 44.7 -1.2**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,120nm,20.0s
HNS HongShan 90.02 326 ⇑ **P P 21 00 47.5 +1.0**
HNS pmax pmax
comp=Z,12nm,1.7s
KBZ Khabaz 90.16 19 LR LR 21 42 09.3
comp=Z,163nm,19.1s,baz=348,slow=36
PLCA Paso Flores 90.87 151 LR LR 21 37 31.3
comp=Z,174nm,18.1s,baz=330,slow=33
BRTR Keskin Array B 91.20 27 LR LR 21 43 46.8
comp=Z,151nm,19.1s,baz=344,slow=37
GUMO Guam 91.40 290 LR LR 21 34 33.4
comp=Z,39nm,21.8s,baz=58,slow=31
WMQ Urumqi 91.90 347 *eP* **P 21 00 56.5 +1.3**
WMQ LR LR
comp=Z,140nm,19.9s
WMQ LR LR
comp=Z,120nm,23.3s
BTLS Baital 92.06 357 *eP* **P 21 00 55.0 -0.8**
BTLS Baital 92.06 357 *eP* **P 21 00 55.1 -0.8**
baz=357
NJ2 Nanjing 92.70 320 *eP* **P 21 00 57.8 -1.2**
NJ2 pmax pmax
comp=Z,9.0nm,1.2s
CHKK Chushkaly 93.09 355 *eP* **P 21 00 59.7 -1.0**
CHKK Chushkaly 93.09 355 *eP* **P 21 00 59.7 -1.0**
baz=355
SHLS Shalkode 93.60 353 *eP* **P 21 01 01.9 -1.2**
SHLS Shalkode 93.60 353 *eP* **P 21 01 01.9 -1.2**
baz=353
MDOK Medeo 93.78 355 *eP* **P 21 01 02.6 -1.4**
MDOK Medeo 93.78 355 *eP* **P 21 01 02.7 -1.4**
baz=355
GNI Garni 93.98 19 LR LR 21 46 11.2
comp=Z,82nm,19.1s,baz=339,slow=37
AAK Ala-Archa 94.44 357 ⇑ *eP* **P 21 01 08.2 +1.1**
AAK pmax pmax
comp=Z,2.0nm,1.1s
IUG Iuzhnay 95.04 360 *eP* **P 21 01 08.7 -1.0**
IUG Iuzhnay 95.04 360 *eP* **P 21 01 08.8 -1.0**
baz=360
RAO Raoul Island 95.15 234 LR LR 21 43 15.2
comp=Z,62nm,18.6s,baz=96,slow=35
LZH Lanzhou 95.22 333 *eP* **P 21 01 11.0 +0.2**
LZH pP sP 21 01 15.3 +1.0
LZH sP pP 21 01 17.8 +4.4
LZH pmax pmax
comp=Z,13nm,1.3s
LZH LR LR
comp=Z,280nm,17.2s
LZH LR LR
comp=Z,390nm,16.8s
LZH LR LR
comp=Z,170nm,19.2s
HNR Honiara 96.30 263 LR LR 21 38 24.5
comp=Z,47nm,20.7s,baz=342,slow=32
GOMU GeErMu 97.77 340 P Pdif 21 01 25.3 +2.7
GOMU pP sP 21 01 30.0 +3.9
GOMU sP pP 21 01 32.3 +7.1
GOMU pmax pmax
comp=Z,45nm,4.4s
GOMU LR LR
comp=Z,110nm,17.1s
GOMU LR LR
comp=Z,160nm,17.7s
GEYT Alibeck 98.55 9 LR LR 21 50 45.8
comp=Z,235nm,18.2s,baz=11,slow=38
WRA Warramunga Arr 121.84 272 PKP PKPdf 21 06 41.0 -0.3
comp=Z,0.5nm,0.5s,baz=48,slow=2.1,SNR=6.4
WRA PKKPbc **PKKPab 21 16 39.5 -0.1**
comp=Z,0.1nm,0.4s,baz=229,slow=2.8,SNR=4.9
ASAR Alice Springs 124.44 269 PKP PKPdf 21 06 44.1 -2.2
comp=Z,0.2nm,0.3s,baz=83,slow=2.9,SNR=2.7
VNDA Vanda 131.31 197 PKP PKiKP 21 06 58.1 -0.5
comp=Z,3.0nm,1.2s,baz=19,slow=2.1,SNR=5.2

IDC 27 21:27:26.9±4.5, 3°22S×135°86E, h45km±38km, mb3.2/2, mbtmp3.5/4, ML3.4/2, MS2.7/1, Error ellipse: s-maj=46.4km s-min=19.0km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.16**	**297**	P		Pn		21 28 41.8	+0.2
	1.8nm,0.3s,baz=162,slow=6.4,SNR=24			S		Sn		21 29 40.5	+0.6
SIJI									
	8.7nm,0.7s,baz=152,slow=23,SNR=1.9			LR		LR		21 31 16.4	
SIJI									
	comp=Z,76nm,20.9s,baz=64,slow=44								
	4.7nm,0.4s								
WRA	**Warramunga Arr**	**16.68**	**185**	P		Pn		21 31 16.5	-1.1
	0.1nm,0.3s,baz=4.0,slow=13,SNR=13			S		Sn		21 34 18.7	-3.4
WRA									
	2.0nm,0.7s,baz=12,slow=23,SNR=7.5								
	0.6nm,0.5s								
FITZ	**Fitzroy Crossi**	**17.86**	**213**	S		Sn		21 34 46.8	-3.7
	3.2nm,0.8s,baz=171,slow=7.9,SNR=4.2								
ASAR	**Alice Springs**	**20.41**	**185**	P		Pn		21 32 01.7	-1.1
	1.7nm,0.7s,baz=6.0,slow=12,SNR=18			S		S		21 35 46.9	+0.3
ASAR									
	0.7nm,0.8s,baz=6.0,slow=27,SNR=4.7								
	1.7nm,0.7s								
MKAR	**Makanchi Array**	**68.48**	**324**	P		P		21 38 24.1	-0.4
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.5								
	0.2nm,0.6s								

IDC ***27*** *21:31:40.1±2.2, 42.°60N×14.°12E, h0km, mb5.5/1, mbtmp3.5/5, ML3.5/5, MS3.6/1, Error ellipse: s-maj=66.4km s-min=15.0km az=98.0*
ROM ***27*** *21:31:42.6±0.1, 42.°593N×0.°004×13.°264E×0.°005, h11km±1km, ML3.4/64, Error ellipse: s-maj=0.5km s-min=0.2km az=42.0*
PRU ***27*** *21:31:43.0±0.0, 42.°70N×13.°43E, h0km*
BEO ***27*** *21:31:43.6±0.7, 42.°56N×13.°25E, h0km, ML3.4/6*
ISC 27 21:31:43.0±0.8, 42°60N±0°02×13°27E±0°02, h11km±5km, n187, σ1°43/221, 40C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**205**	P		**Pg**		**21 31 45.8**	**0.0**
RM33				S		**Sg**		**21 31 47.9**	**0.0**
RM33				AML		AML			
	comp=N,56450μm,0.8s								
RM33				AML		AML			
	comp=E,57950μm,0.9s								
RM33				AML		AML			
	comp=E,57900μm,0.9s								
RM33				AML		AML			
	comp=E,55500μm,0.9s								
RM33				AML		AML			
	comp=N,58300μm,0.8s								
CAMP	**Campotosto**	**0.12**	**121**	P		**Pg**		**21 31 46.1**	**0.0**
CAMP				S		**Sg**		**21 31 48.5**	**+0.2**
CAMP				AML		AML			
	comp=E,11250μm,1.0s								
CAMP				AML		AML			
	comp=E,11255μm,1.0s								
CAMP				AML		AML			
	comp=N,8305μm,0.7s								
T1243	**Rocca Santa Ma**	**0.17**	**53**	P		**Pg**		**21 31 46.7**	**-0.1**
T1243				AML		AML			
	comp=E,46900μm,0.7s								
T1243				AML		AML			
	comp=N,32100μm,0.3s								
T1243				AML		AML			
	comp=E,46700μm,0.7s								
T1243				AML		AML			
	comp=N,32100μm,0.3s								
T1243				AML		AML			
	comp=N,32700μm,0.3s								
T1243				AML		AML			
	comp=E,46950μm,0.7s								
T1243				AML		AML			
	comp=E,46900μm,0.7s								
T1243				AML		AML			
	comp=N,32150μm,0.3s								
TERO	**Teramo**	**0.25**	**84**	P		**Pg**		**21 31 48.0**	**-0.2**
TERO				S		**Sg**		**21 31 52.0**	**+0.3**
TERO				AML		AML			
	comp=E,6580μm,0.6s								
TERO				AML		AML			
	comp=N,15250μm,0.7s								
TERO				AML		AML			
	comp=N,15950μm,0.7s								
TERO				AML		AML			
	comp=E,6585μm,0.6s								
TERO				AML		AML			
	comp=E,6830μm,0.6s								
NRCA	**Norcia**	**0.26**	**334**	⇑P		**Pg**		**21 31 48.4**	**-0.2**
NRCA				S		**Sg**		**21 31 52.5**	**+0.4**
NRCA				AML		AML			
NRCA				AML		AML			
	comp=N,65250μm,0.1s								
NRCA				AML		AML			
NRCA				AML		AML			
	comp=N,69100μm,0.1s								
NRCA				AML		AML			
GIGS	**Gran Sasso**	**0.27**	**124**	P		**Pg**		**21 31 48.3**	**-0.2**
GIGS				S		**Sg**		**21 31 52.6**	**+0.4**
GIGS				AML		AML			
	comp=E,1470μm,0.9s								
GIGS				AML		AML			
	comp=N,1110μm,0.8s								
MMO1	**Montemonaco**	**0.30**	**8**	P		**Pg**		**21 31 49.1**	**-0.1**
MMO1				S		**Sg**		**21 31 54.0**	**+0.6**
MC2	**Monte Cornacci**	**0.32**	**349**	P		**Pg**		**21 31 49.5**	**-0.1**
MC2				S		**Sb**		**21 31 54.8**	**-1.4**
FIAM	**Fiamignano**	**0.35**	**199**	⇑P		**Pg**		**21 31 49.8**	**-0.2**
FIAM				S		**Sb**		**21 31 55.2**	**-1.6**
FIAM				AML		AML			
	comp=E,6105μm,0.7s								
FIAM				AML		AML			
	comp=N,6420μm,0.8s								
ARRO	**Arrone**	**0.37**	**267**	⇑P		**Pg**		**21 31 50.2**	**-0.3**
ARRO				S		**Sb**		**21 31 56.0**	**-1.5**
ARRO				AML		AML			
	comp=N,6365μm,1.2s								
ARRO				AML		AML			
	comp=E,8100μm,0.2s								
FEMA	**Monte Fema**	**0.40**	**336**	P		**Pg**		**21 31 51.1**	**+0.1**
FEMA				AML		AML			
	comp=N,20300μm,0.4s								
FEMA				AML		AML			
	comp=E,19700μm,0.6s								
FAGN	**Fagnano**	**0.40**	**145**	P		**Pg**		**21 31 51.0**	**-0.1**
FAGN				AML		AML			
	comp=E,7105μm,0.7s								
FAGN				AML		AML			
	comp=N,4570μm,0.6s								
OFFI	**Offida**	**0.46**	**42**	P		**Pb**		**21 31 52.6**	**-0.5**
OFFI				AML		AML			
	comp=E,24200μm,0.6s								
OFFI				AML		AML			
	comp=N,22100μm,0.5s								
FDMO	**Fiordimonte**	**0.46**	**343**	⇑P		**Pg**		**21 31 51.7**	**-0.4**
FDMO				S		**Sb**		**21 31 58.9**	**-1.2**
FDMO				AML		AML			
	comp=N,11700μm,1.5s								
FDMO				AML		AML			
	comp=E,10125μm,0.3s								
VCEL	**Villa Celiera**	**0.47**	**115**	P		**Pb**		**21 31 52.6**	**-0.7**
VCEL				AML		AML			
	comp=E,4000μm,0.7s								
VCEL				AML		AML			
	comp=N,4720μm,1.1s								
CSP1	**Cessapalombo**	**0.50**	**354**	⇑P		**Pg**		**21 31 52.4**	**-0.3**
CSP1				S		**Sb**		**21 32 01.0**	**-0.2**
CSP1				AML		AML			
	comp=E,14450μm,0.9s								
CSP1				AML		AML			
	comp=E,14500μm,0.9s								
CSP1				AML		AML			
	comp=N,15800μm,0.4s								
CESX	**Cesi**	**0.51**	**272**	⇑P		**Pg**		**21 31 52.3**	**-0.7**
CESX				AML		AML			
	comp=E,4550μm,1.1s								
CESX				AML		AML			
	comp=N,6645μm,0.3s								
TRTR	**Tortoreto Alta**	**0.52**	**66**	P		**Pb**		**21 31 53.8**	**-0.3**
TRTR				AML		AML			
	comp=E,12200μm,0.5s								
TRTR				AML		AML			
	comp=N,10155μm,1.5s								
T0110	**Collepietro**	**0.53**	**134**	P		**Pg**		**21 31 52.9**	**-0.4**
T0110				AML		AML			
	comp=N,3140μm,0.5s								
T0110				AML		AML			
	comp=E,3220μm,1.0s								
MNTP	**Montappone**	**0.56**	**15**	⇓P		**Pb**		**21 31 54.4**	**-0.4**
MNTP				AML		AML			
	comp=E,19000μm,0.3s								
MNTP				AML		AML			
	comp=N,10165μm,0.6s								
MNTP				AML		AML			
	comp=E,18950μm,0.3s								
MNTP				AML		AML			
	comp=N,10170μm,0.6s								
PTQR	**Pietraquaria**	**0.58**	**170**	⇑P		**Pg**		**21 31 53.6**	**-0.7**
PTQR				AML		AML			
	comp=E,868μm,1.2s								
PTQR				AML		AML			
	comp=N,618μm,0.7s								
PTQR				AML		AML			
	comp=N,618μm,0.7s								
SEF1	**Sefro**	**0.60**	**337**	S		**Sb**		**21 32 05.0**	**+1.0**
ASSB	**Assisi San Ben**	**0.63**	**315**	P		**Pg**		**21 31 54.9**	**-0.4**
ASSB				AML		AML			
	comp=N,7150μm,0.2s								
ASSB				AML		AML			
	comp=E,5420μm,0.6s								
GAG1	**Gagliole**	**0.66**	**347**	S		**Sb**		**21 32 06.0**	**+0.3**
SRES	**S.Oreste - Sor**	**0.67**	**238**	P		**Pg**		**21 31 55.0**	**-1.0**
SRES				AML		AML			
	comp=N,1470μm,1.1s								
SRES				AML		AML			
	comp=E,1760μm,0.6s								
CERT	**Cerreto**	**0.68**	**198**	⇑P		**Pg**		**21 31 55.3**	**-0.9**
CERT				AML		AML			
	comp=E,2295μm,0.6s								
CERT				AML		AML			
	comp=N,1910μm,0.8s								
MTCE	**Montecelio**	**0.69**	**215**	⇑P		**Pg**		**21 31 56.2**	**-0.3**
MTCE				AML		AML			
	comp=E,2490μm,0.6s								
MTCE				AML		AML			
	comp=N,1550μm,0.8s								
SNTG	**Esanatoglia**	**0.70**	**340**	⇑P		**Pg**		**21 31 55.9**	**-0.8**
SNTG				S		**Sn**		**21 32 08.0**	**-1.8**
SNTG				AML		AML			
	comp=E,382μm,1.6s								
SNTG				AML		AML			
	comp=N,444μm,0.9s								
SNTG				AML		AML			
	comp=N,3695μm,0.9s								
SNTG				AML		AML			
	comp=E,2895μm,0.3s								
SNTG				AML		AML			
	comp=N,443μm,0.9s								
TRE1	**Treia**	**0.71**	**2**	S		**Sn**		**21 32 10.0**	**-0.1**
EL6	**Elcito**	**0.74**	**350**	S		**Sb**		**21 32 09.0**	**+0.8**
ATCC	**AVT- Casa Cast**	**0.75**	**322**	⇑P		**Pg**		**21 31 56.8**	**-0.7**
ATCC				S		**Sn**		**21 32 10.0**	**-0.9**
ATCC				AML		AML			
	comp=N,4085μm,0.5s								
ATCC				AML		AML			
	comp=E,5400μm,0.6s								
ATCC				AML		AML			
	comp=N,4080μm,0.5s								
INTR	**Introdacqua**	**0.75**	**141**	P		**Pg**		**21 31 56.7**	**-0.9**
INTR				AML		AML			
	comp=E,1μm,0.7s								
INTR				AML		AML			
	comp=N,2μm,1.1s								
INTR				AML		AML			
	comp=E,1195μm,0.7s								
INTR				AML		AML			
	comp=N,2465μm,1.1s								
VVLD	**Villa Vallelon**	**0.77**	**160**	⇑P		**Pn**		**21 31 59.8**	**-0.1**
VVLD				AML		AML			
	comp=E,1056μm,0.8s								
VVLD				AML		AML			
	comp=N,920μm,1.2s								
CING	**Cingoli**	**0.78**	**356**	⇑P		**Pg**		**21 31 57.3**	**-0.8**
CING				S		**Sb**		**21 32 10.0**	**+0.7**
CING				AML		AML			
	comp=E,5420μm,0.7s								
CING				AML		AML			
	comp=N,3940μm,0.4s								
RCAV	**Rocca di Cave**	**0.79**	**198**	P		**Pb**		**21 31 58.0**	**-0.8**
RCAV				AML		AML			
	comp=E,2495μm,0.6s								
RCAV				AML		AML			
	comp=N,2575μm,1.0s								
FOSV	**Fossato di Vic**	**0.79**	**332**	⇑P		**Pg**		**21 31 57.5**	**-0.9**
FOSV				AML		AML			
	comp=N,3550μm,0.3s								
FOSV				AML		AML			
	comp=E,2725μm,0.7s								
PP3	**Marolino**	**0.82**	**18**	⇑P		**Pb**		**21 31 59.0**	**-0.2**
PP3				AML		AML			
	comp=E,12800μm,0.6s								
PP3				AML		AML			
	comp=N,7045μm,0.3s								
PP3				AML		AML			
	comp=E,12365μm,0.7s								
PP3				AML		AML			
	comp=E,12800μm,0.7s								
PP3				AML		AML			
	comp=E,12345μm,0.7s								
PP3				AML		AML			
	comp=N,7040μm,0.3s								
PP3				AML		AML			
	comp=N,8335μm,0.4s								
MURB	**Monte Urbino**	**0.86**	**321**	⇑P		**Pb**		**21 32 00.1**	**0.0**
MURB				AML		AML			
	comp=E,6740μm,0.5s								
MURB				AML		AML			
	comp=N,8965μm,0.3s								
LPEL	**Lama dei Pelig**	**0.87**	**129**	S		**Sn**		**21 32 13.0**	**-1.0**
ATTE	**AVT- Monte Tez**	**0.90**	**312**	⇑P		**Pg**		**21 31 60.0**	**-0.5**
ATTE				AML		AML			
	comp=E,1690μm,1.1s								
ATTE				AML		AML			
	comp=N,1695μm,1.6s								
MGAB	**Montegabbione**	**0.91**	**291**	⇑P		**Pg**		**21 31 59.7**	**-0.8**
MGAB				AML		AML			
	comp=E,5625μm,1.6s								
MGAB				AML		AML			
	comp=N,4490μm,0.5s								
MGAB				AML		AML			
	comp=N,4575μm,0.4s								
MGAB				AML		AML			
	comp=E,5110μm,1.6s								
SSFR	**Montelago di S**	**0.91**	**337**	⇑P		**Pg**		**21 31 59.9**	**-0.7**
SSFR				S		**Sn**		**21 32 15.0**	**0.0**
SSFR				AML		AML			
	comp=N,7320μm,0.3s								
SSFR				AML		AML			
	comp=E,7190μm,0.3s								
SSFR				AML		AML			
	comp=E,7155μm,0.2s								
SSFR				AML		AML			
	comp=N,8240μm,0.3s								
VIVA	**Pratoni del Vi**	**0.92**	**204**	S		**Sn**		**21 32 15.0**	**-0.2**
ARVD	**Arcevia**	**0.93**	**345**	⇑P		**Pg**		**21 32 00.0**	**-1.0**
ARVD				S		**Sn**		**21 32 15.0**	**-0.5**
ARVD				AML		AML			
	comp=N,3595μm,0.7s								
ARVD				AML		AML			
	comp=E,2815μm,0.5s								
AOI	**Ancona**	**0.98**	**14**	⇑P		**Pb**		**21 32 01.7**	**-0.4**
AOI				S		**Sn**		**21 32 18.0**	**+1.3**
AOI				AML		AML			
	comp=N,2090μm,1.0s								
AOI				AML		AML			
	comp=E,2835μm,0.4s								
FRON	**Frontone**	**1.00**	**337**	⇑P		**Pg**		**21 32 01.4**	**-0.9**
FRON				S		**Sn**		**21 32 17.0**	**-0.2**
FRON				AML		AML			
	comp=N,3270μm,0.5s								

FRON AML AML
comp=E,2880µm,0.5s
ATVO AVT- Monte Val 1.01 321 ⇓P **Pg 21 32 01.5 -0.9**
ATVO AML AML
comp=E,1870µm,0.8s
ATVO AML AML
comp=N,1510µm,0.4s
SACS San Casciano d 1.03 285 ⇑P **Pg 21 32 02.0 -0.9**
SACS S **Sn 21 32 19.0 +1.0**
GIUL Giuliano Di Ro 1.04 181 ⇓P **Pn 21 32 03.0 -0.5**
GIUL AML AML
comp=E,550µm,1.6s
GIUL AML AML
comp=N,760µm,1.0s
ATMI Monte Miggiano 1.04 315 ⇑P **Pg 21 32 02.6 -0.5**
ATMI S **Sn 21 32 19.0 +0.8**
ATMI AML AML
comp=N,4025µm,1.4s
ATMI AML AML
comp=E,4165µm,0.8s
ATPI Pietralunga - 1.06 324 ⇓P **Pb 21 32 02.6 -0.9**
ATPI AML AML
comp=E,2430µm,0.7s
ATPI AML AML
comp=N,1910µm,0.4s
TOLF Tolfa 1.08 241 ⇓P **Pb 21 32 02.8 -1.0**
TOLF AML AML
comp=E,1020µm,1.0s
TOLF AML AML
comp=N,1580µm,0.8s
PIEI Pieia 1.08 330 ⇓P **Pb 21 32 02.9 -0.9**
PIEI S **Sn 21 32 20.0 +0.8**
PIEI AML AML
comp=E,2180µm,0.4s
PIEI AML AML
comp=N,2365µm,0.4s
MPAG Monte Paganucc 1.10 340 P **Pb 21 32 03.0 -1.1**
MPAG AML AML
comp=N,2000µm,0.8s
MPAG AML AML
comp=E,2590µm,0.6s
NARO Abbazia di Nar 1.13 334 ⇑P **Pb 21 32 03.2 -1.4**
NARO AML AML
comp=E,2225µm,0.9s
NARO AML AML
comp=N,2365µm,0.6s
FSSB Fossombrone 1.15 342 P **Pb 21 32 04.0 -0.9**
FSSB AML AML
comp=N,6835µm,1.4s
FSSB AML AML
comp=E,5460µm,0.4s
BADI Badiali 1.18 321 ⇓P **Pg 21 32 05.3 -0.5**
MCIV Monte Civitell 1.19 279 S **Sn 21 32 24.0 +2.2**
CAFI Castiglion Fio 1.21 308 ⇑P **Pb 21 32 05.4 -0.5**
CAFI AML AML
comp=E,1161µm,0.8s
CAFI AML AML
comp=N,764µm,0.7s
SF04 Casetta 1.21 282 ⇓P **Pb 21 32 05.6 -0.4**
TRIV Trivento 1.26 131 ⇑P **Pg 21 32 08.2 +1.0**
TRIV AML AML
comp=E,566µm,0.9s
TRIV AML AML
comp=N,570µm,1.0s
SF01 Poggio Pratacc 1.28 280 S **Sg 21 32 26.0 +1.8**
SSP9 Sansepolcro 1.28 320 ⇓P **Pg 21 32 08.8 +1.1**
SSP9 AML AML
comp=E,1194µm,1.2s
SSP9 AML AML
comp=N,980µm,0.7s
PARC Parchiule 1.29 325 P **Pb 21 32 07.2 -0.2**
PARC AML AML
comp=E,1705µm,1.2s
PARC AML AML
comp=N,1960µm,0.7s
ARCI Arcidosso 1.35 282 ⇑P **Pg 21 32 08.2 -0.7**
ARCI AML AML
comp=N,254µm,1.3s
ARCI AML AML
comp=E,272µm,0.6s
PESA Pesaro 1.38 347 ⇑P **Pg 21 32 09.2 -0.3**
PESA AML AML
comp=N,2840µm,1.5s
PESA AML AML
comp=E,3220µm,0.3s
CRE Caprese Michel 1.41 317 P **Pb 21 32 08.7 -0.7**
CRE AML AML
comp=N,781µm,0.3s
CRE AML AML
comp=E,676µm,1.6s
MELA Melanico ??? S 1.64 122 ⇓P **Pg 21 32 14.3 -0.3**
MELA AML AML
comp=E,581µm,0.7s
MELA AML AML
comp=N,525µm,0.7s
MELA AML AML
comp=E,558µm,0.8s
MELA AML AML
comp=N,660µm,1.0s
CASP Castiglione de 1.78 277 P **Pn 21 32 13.7 -0.1**
CASP AML AML
comp=N,98µm,1.6s
CASP AML AML
comp=E,108µm,0.9s
RUFI Rufina 1.79 315 ⇓P **Pb 21 32 14.5 -1.3**
RUFI AML AML
comp=N,400µm,0.9s
RUFI AML AML
comp=E,365µm,0.6s
TRIF Trifonti 1.82 287 ⇓P **Pn 21 32 14.7 +0.4**
TRIF AML AML
comp=E,213µm,0.4s
TRIF AML AML
comp=N,184µm,0.7s
DUGI Dugi Otok 1.91 42 *e*Pn **Pn 21 32 15.8 +0.3**
SEI Scarperia 2.02 317 ⇑P **Pb 21 32 19.7 0.0**
SGRT San Giovanni R 2.02 114 ⇑P **Pb 21 32 18.8 -1.0**
SGRT AML AML
comp=N,218µm,0.7s
SGRT AML AML
comp=E,270µm,1.1s
VIRC Vir 2.13 37 *e*Pn **Pn 21 32 18.7 +0.2**
SGTA Sant Agata di 2.14 132 P **Pn 21 32 17.3 -1.4**
SGTA AML AML
comp=N,112µm,1.6s
SGTA AML AML
comp=E,182µm,0.8s
MORI Morici 2.19 54 *e*Pn **Pn 21 32 20.0 +0.7**
MTCR Monte La Croce 2.19 312 P **Pn 21 32 20.0 +0.6**
NVLJ Novalja 2.28 30 *e*Pn **Pn 21 32 20.9 +0.3**
BRJN Brijuni 2.33 8 *e*Pn **Pn 21 32 21.4 +0.1**
BRJN Brijuni 2.33 8 ⇑P **Pn 21 32 21.8 +0.5**
HVAR Hvar 2.41 75 *e*Pn **Pn 21 32 22.8 +0.5**
RABC Rab 2.42 26 *e*Pn **Pn 21 32 22.1 -0.3**
CARD Cardoso 2.49 306 ⇓P **Pb 21 32 27.0 -0.6**
CARD S **Sn 21 32 54.0 +0.2**
SMRN Sveta Marina 2.52 14 *e*Pn **Pn 21 32 23.8 -0.1**
UDBI Udbina 2.65 42 *e*Pn **Pn 21 32 27.0 +1.3**
LSTV Lastovo 2.67 85 *e*Pn **Pn 21 32 26.6 +0.6**
KIJV Kijevo 2.69 57 *e*Pn **Pn 21 32 27.6 +1.4**
A253A Karojba, Istri 2.72 8 *e*Pn **Pn 21 32 25.9 -0.7**
A250A Rusevo Krmpots 2.75 25 *e*Pn **Pn 21 32 27.8 +0.6**
EQUI Equi 2.76 306 S **Sn 21 33 01.0 +0.5**
MAKA Makarska 2.84 75 *e*Pn **Pn 21 32 28.2 0.0**
PLIT Plitvice 2.85 36 *e*Pn **Pn 21 32 29.2 +0.8**
RIY Rijeka 2.87 17 *e*Pn **Pn 21 32 28.9 +0.4**
RICI Ricice 2.97 71 *e*Pn **Pn 21 32 31.4 +1.4**
SKDS Skadanscina 3.00 10 *e*Pn **Pn 21 32 29.8 -0.7**
A050A Klekovaca 3.03 50 *e*Pn **Pn 21 32 33.5 +2.6**
SRKY Kupres RS 3.20 61 *e*Pn **Pn 21 32 33.6 +0.3**
MSSA Maissana 3.23 303 S **Sn 21 33 14.0 +1.9**
BOJS Bojanci 3.24 25 *e*Pn **Pn 21 32 34.6 +0.9**
BOJS Bojanci 3.24 25 ⇑P **Pb 21 32 37.0 -3.5**
STON Ston 3.27 84 *e*Pn **Pn 21 32 32.7 -1.5**
STON Ston 3.27 84 *e*Pn **Pn 21 32 33.9 -0.3**
STON Ston 3.27 84 *e*Pn **Pn 21 32 33.9 -0.3**
STON *e*Sn **Sn 21 33 13.3 +0.2**
MGRS Mrkonjic Grad 3.32 55 *e*Pn **Pn 21 32 36.2 +1.3**
SABO M.te Sabotino 3.39 4 ⇓P **Pn 21 32 35.9 +0.1**
SABO AML AML
comp=N,1040µm,1.1s
SABO AML AML
comp=E,303µm,0.4s
SABO AML AML
comp=E,1290µm,0.4s
SABO AML AML
comp=N,258µm,0.4s
OZLJ Ozalj 3.41 27 *e*Pn **Pn 21 32 36.8 +0.8**
CGRP Cima Grappa 3.45 343 ⇑P **Pn 21 32 37.8 +1.0**
CGRP S **Sn 21 33 19.0 +1.3**
CGRP AML AML
comp=E,370µm,0.5s
CGRP AML AML
comp=N,348µm,0.4s
VARN Col Varnada, M 3.50 347 S **Sn 21 33 20.0 +1.2**
A255A Hotnja, Vukome 3.53 34 *e*Pn **Pn 21 32 38.9 +1.1**
BLY Banja Luka 3.56 52 *e*Pn **Pn 21 32 41.5 +3.3**
BLY Banja Luka 3.56 52 *e*Pn **Pb 21 32 42.0 -4.0**
LJU Ljubljana 3.56 14 ⇑P **Pn 21 32 41.4 +3.2**
A051A Mrakovica 3.57 46 *e*Pn **Pb 21 32 42.2 -4.0**
CRES Cresnjev 3.59 25 *e*Pn **Pn 21 32 41.2 +2.6**
DBRK Dubrovnik 3.60 87 *e*Pn **Pn 21 32 39.0 +0.3**
DOSS Dosso del Somm 3.61 336 ⇑P **Pn 21 32 40.2 +1.2**
DOSS AML AML
comp=E,145µm,0.9s
DOSS AML AML
comp=N,216µm,0.4s
MPRI Monte Prat 3.65 357 ⇑P **Pn 21 32 40.2 +0.7**
MPRI AML AML
comp=E,293µm,1.3s
MPRI AML AML
comp=N,420µm,0.4s
LEOD Capriano del C 3.65 323 S **Sb 21 33 28.0 -3.8**
STAL STALIGIAL 3.69 354 S **Sn 21 33 26.0 +2.7**
MAGA Magasa 3.70 330 S **Sn 21 33 24.0 +0.1**
TREB Trebinje 3.75 86 *e*Pn **Pn 21 32 42.6 +1.9**
TREB Trebinje 3.75 86 *e*Pn **Pn 21 32 42.8 +2.1**
TREB *e*Sn **Sn 21 33 27.5 +2.7**
ZAG Zagreb 3.77 30 S **Sb 21 33 37.0 +1.7**
PTCC Patocco-Chiusa 3.81 1 S **Sn 21 33 26.0 -0.4**
HCY Herceg Novi 3.86 90 *e*Pn **Pn 21 32 42.5 +0.2**
BRY Bratogost 3.89 84 *e*Pn **Pn 21 32 44.2 +1.3**
MOSL Moslavina 3.92 39 *e*Pn **Pn 21 32 43.1 -0.1**
ZOU Zoufplan 3.96 357 ⇑P **Pn 21 32 44.4 +0.5**
ZOU AML AML
comp=E,155µm,0.8s
ZOU AML AML
comp=N,100µm,1.1s
CANO Canova, Maglio 4.01 295 S **Sn 21 33 33.0 +1.7**
OBKA Obir 4.02 13 *e*Pn **Pn 21 32 42.3 -2.2**
OBKA Obir 4.02 13 *e*Pn **Pn 21 32 45.5 +1.0**
comp=N,2.9nm,0.3s
MYKA Terra Mystica 4.04 4 *i* Pn **Pn 21 32 46.1 +1.3**
comp=N,6.2nm,0.5s,SNR=7.1
KOSI Kohlern 4.10 341 P **Pn 21 32 47.0 +1.3**
UPM Unac-Piva 4.18 80 *e*Pn **Pn 21 32 48.0 +1.1**
ABTA Abfaltersbach 4.18 353 *i* Pn **Pn 21 32 47.9 +1.1**
comp=N,11nm,0.4s,SNR=42
SOKA Soboth 4.27 17 *e*Pn **Pn 21 32 49.5 +1.5**
comp=N,1.7nm,0.3s
VSL Villasalto 4.27 225 ⇑P **Pn 21 32 49.8 +1.9**
A252A Venje 4.35 48 *e*Pn **Pn 21 32 48.5 -0.6**
DRME Dracevica, Mon 4.40 93 *e*Pn **Pn 21 32 51.2 +1.5**
KOGS Kog 4.40 28 P **Pn 21 32 52.9 +3.2**
PDG Podgorica 4.43 90 *e*Pn **Pn 21 32 52.0 +1.9**
PDG *e*Sn **Sn 21 33 42.9 +1.4**
KBA Koelnbreinsper 4.48 1 *i* Pn **Pn 21 32 53.6 +2.6**
comp=N,0.1nm,0.1s,SNR=12
MUGIO Muggio 4.50 319 S **Sn 21 33 43.0 -0.5**
RUDO Rudo 4.58 75 *e*Pn **Pn 21 32 52.5 +0.3**
BBLS Lazići 4.66 72 *e*Pn **Pn 21 32 55.6 +2.3**
BBLS *e*Sn **Sn 21 33 49.7 +2.3**
FETA Feichten 4.78 339 *e*Pn **Pn 21 32 57.0 +1.9**
comp=N,2.4nm,0.7s
CRJA Costa Raja 4.79 183 ⇑P **Pn 21 32 59.0 +3.8**
WTTA Wattenberg 4.81 347 *e*Pn **Pn 21 32 57.7 +2.3**
comp=N,6.0nm,0.5s
DAVOX Davos/Dischmat 4.83 331 LR LR 21 33 54.3
comp=N,281nm,18.1s,baz=312,slow=36
DAVOX Davos/Dischmat 4.83 331 Pn **Pn 21 32 57.8 +2.0**
comp=N,1.9nm,0.3s,baz=151,slow=19,SNR=24
DAVOX Sn **Sn 21 33 54.2 +2.4**
comp=N,1.5nm,0.3s,baz=310,slow=22,SNR=2.3
comp=N,6.2nm,0.4s
SQTA Sankt Quirin 4.85 343 *i* Pn **Pn 21 32 58.3 +2.3**
comp=N,5.0nm,0.3s,SNR=9.3
WATA Walderalm 4.89 346 *i* Pn **Pn 21 32 59.2 +2.7**
comp=N,7.6nm,0.5s,SNR=9.7
ARSA Arzberg 4.92 18 *e*Pn **Pn 21 32 57.1 +0.2**
comp=N,2.8nm,0.4s
SJES Sjenica 4.97 80 *e*Pn **Pn 21 32 59.9 +2.3**
SJES *e*Sn **Sn 21 33 57.3 +2.3**
MOTA Moosalm 4.99 343 *e*Pn **Pn 21 33 01.4 +3.5**
comp=N,1.9nm,0.5s
ESLN Serra La Nave 5.07 165 P **Pn 21 33 00.7 +1.7**
BIOA Bad Ischl, Aus 5.10 3 *i* Pn **Pn 21 33 02.4 +3.0**
comp=N,6.2nm,0.4s,SNR=8.2
DIVS Divibare 5.13 71 *e*Pn **Pn 21 32 58.8 -1.0**
DIVS Divibare 5.13 71 *e*Pn **Pn 21 33 00.8 +1.0**
IVAS Ivanjica 5.13 77 *e*Pn **Pn 21 33 01.2 +1.4**
IVAS *e*Sn **Sn 21 33 58.9 -0.2**
RETA Reutte 5.20 341 *e*Pn **Pn 21 33 02.7 +1.9**
comp=N,1.2nm,0.4s
DAVA Damuels 5.27 334 *e*Pn **Pn 21 33 04.0 +2.1**
comp=N,4.1nm,0.5s
MOA Molln 5.30 7 *e*Pn **Pn 21 33 03.3 +1.2**
MOA *e*Sn **Sn 21 34 04.5 +1.4**
MOA Molln 5.30 7 *e*Pn **Pn 21 33 03.8 +1.7**
comp=N,1.1nm,0.4s
FRGS Fruska Gora 5.38 59 *e*Pn **Pn 21 33 04.2 +1.1**
TRUS Trudelj 5.45 70 *e*Pn **Pn 21 33 05.0 +0.9**
RONA Rosalia, Austr 5.53 22 *e*Pn **Pn 21 33 07.2 +1.9**
comp=N,1.5nm,0.3s
GRUS Gruza 5.59 74 *e*Pn **Pn 21 33 08.3 +2.3**
CONA Conrad Observa 5.64 18 *e*Pn **Pn 21 33 07.3 +0.5**
comp=N,0.3nm,0.2s
SELS Selova 5.80 81 *e*Pn **Pn 21 33 10.6 +1.7**
GERES GERESS Array B 6.26 3 Pn **Pn 21 33 15.0 -0.3**
comp=N,0.4nm,0.3s,baz=172,slow=11,SNR=15
GERES Sn **Sn 21 34 25.2 -1.6**
comp=N,3.6nm,0.3s,baz=172,slow=23,SNR=15
comp=N,0.8nm,0.4s
CKRC Cesky Krumlov 6.27 6 *e*PN **Pn 21 33 15.4 +0.1**
CKRC *e*SN **Sn 21 34 23.4 -3.5**
BARS Barje 6.30 85 *e*Pn **Pn 21 33 17.6 +1.8**
PRVS Prvonek 6.50 88 *e*Pn **Pn 21 33 20.2 +1.6**
PRVS *e*Sn **Sn 21 34 33.9 +1.1**
KHC Kasperske Hory 6.54 2 *e*PN **Pn 21 33 19.5 +0.4**
KHC *e*SN **Sn 21 34 29.8 -3.8**
ZAGS Zajecar 6.66 76 *e*Pn **Pn 21 33 22.3 +1.6**
BOSS Bosilegrad 6.80 88 *e*Pn **Pn 21 33 23.6 +0.9**
KRUC Moravsky 6.82 18 *e*PN **Pn 21 33 23.0 0.0**
ZAPS Zavoj 6.91 81 *e*Pn **Pn 21 33 26.8 +2.6**
ZAPS *e*Sn **Sn 21 34 41.9 -0.8**
VYHS Vyhne 7.07 32 *e*PN **Pn 21 33 29.5 +3.1**
KEST Kesra 7.50 205 Pn **Pn 21 33 35.2 +2.9**
comp=N,0.5nm,0.3s,baz=354,slow=4.7,SNR=9.9
comp=N,3.1nm,0.6s
BRG Berggiesshubel 8.29 3 *e*(P) **Pb 21 34 08.0 +1.5**
BRG Amp 21 34 11.2
comp=Z,1.4nm,0.7s
BRG *ex* x 21 35 11.6
BRG *ex* x 21 36 12.5
BRG Amp 21 36 42.9
comp=Z,8.6nm,1.5s
EKA Eskdalemuir Ar 16.64 326 Pn **P 21 35 38.5 +0.1**
baz=131,slow=22
comp=Z,0.3nm,0.5s
HFS Hagfors 17.56 1 P **Pn 21 35 46.1 -1.4**
comp=Z,0.2nm,0.3s,baz=180,slow=40,SNR=2.0
comp=Z,1.6nm,0.9s
TORD Torodi Ar. Bea 31.01 202 P **P 21 38 01.1 +0.5**
comp=Z,23nm,0.3s,baz=27,slow=9.7,SNR=2.6
MBAR Mbarara 45.79 155 LR LR 21 59 59.2
comp=Z,79nm,20.5s,baz=310,slow=37

ROM 27 21:33:47.4±0.1, 42°621N±0'.006×13°268E±0'.006, h8km±1km, ML2.5/9, 8C-2D, Error ellipse: s-maj=0.5km s-min=0.5km az=171.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.12**	**199**	⇑P	Pg	21 33 50.6	+0.5
RM33				S	Sg	21 33 52.6	+0.6
RM33				AML	AML		
	comp=E,672µm,0.8s						
RM33				AML	AML		
	comp=N,510µm,0.3s						
RM33				AML	AML		
	comp=E,640µm,0.3s						
RM33				AML	AML		
	comp=N,484µm,0.8s						
RM33				AML	AML		
	comp=E,10055µm,0.2s						
RM33				AML	AML		
	comp=N,6490µm,0.3s						
RM33				AML	AML		
	comp=E,10295µm,0.2s						
RM33				AML	AML		
	comp=N,6255µm,0.3s						
CAMP	**Campotosto**	**0.13**	**129**	⇑P	Pg	21 33 51.0	+0.7
CAMP				S	Sg	21 33 53.4	+0.9
CAMP				AML	AML		
	comp=E,1210µm,1.1s						
CAMP				AML	AML		
	comp=N,855µm,0.5s						
T1243	**Rocca Santa Ma**	**0.15**	**60**	⇑P	Pg	21 33 51.5	+0.8
T1243				S	Sg	21 33 54.4	+1.4
T1243				AML	AML		
	comp=E,530µm,1.6s						
T1243				AML	AML		
	comp=N,482µm,1.3s						
T1243				AML	AML		
	comp=E,501µm,1.6s						
T1243				AML	AML		
	comp=N,408µm,1.3s						
T1243				AML	AML		
	comp=N,4505µm,0.9s						
T1243				AML	AML		
	comp=E,4370µm,1.4s						
T1243				AML	AML		
	comp=N,4600µm,0.9s						
T1243				AML	AML		
	comp=E,4415µm,1.4s						
LNSS	**Leonessa**	**0.17**	**264**	⇑P	Pg	21 33 51.6	+0.6
LNSS				S	Sg	21 33 54.5	+1.0
LNSS				AML	AML		
	comp=E,206µm,0.7s						
LNSS				AML	AML		
	comp=N,283µm,0.6s						
LNSS				AML	AML		
	comp=E,2860µm,0.4s						
LNSS				AML	AML		
	comp=N,3715µm,0.2s						
NRCA	**Norcia**	**0.24**	**332**	⇓P	Pg	21 33 53.0	+0.8
NRCA				S	Sg	21 33 56.3	+0.8
NRCA				AML	AML		
	comp=N,1800µm,0.2s						
NRCA				AML	AML		
	comp=E,2435µm,0.2s						
TERO	**Teramo**	**0.25**	**89**	⇑P	Pg	21 33 52.9	+0.5
TERO				S	Sg	21 33 56.8	+1.0
TERO				AML	AML		
	comp=E,1490µm,0.2s						
TERO				AML	AML		
	comp=N,1615µm,0.1s						
GIGS	**Gran Sasso**	**0.28**	**127**	P	Pg	21 33 53.3	+0.3
GIGS				AML	AML		
	comp=N,526µm,0.1s						
GIGS				AML	AML		
	comp=E,421µm,0.1s						
MMO1	**Montemonaco**	**0.28**	**9**	⇑P	Pg	21 33 53.9	+0.8
MMO1				AML	AML		
	comp=E,1765µm,0.9s						
MMO1				AML	AML		
	comp=N,840µm,0.4s						
MC2	**Monte Cornacci**	**0.30**	**349**	S	Sb	21 33 60.0	-0.3
ARRO	**Arrone**	**0.37**	**264**	⇑P	Pg	21 33 55.0	+0.3
FDMO	**Fiordimonte**	**0.44**	**342**	⇑P	Pg	21 33 56.6	+0.7
FDMO				S	Sb	21 34 03.5	-0.6
FDMO				AML	AML		
	comp=E,247µm,0.5s						
FDMO				AML	AML		
	comp=N,323µm,1.5s						
CSP1	**Cessapalombo**	**0.47**	**354**	⇓P	Pg	21 33 57.2	+0.6

ROM 27 21:34:29.1±0.1, 42°593N±0'.003×13°272E±0'.004, h11km, ML2.1/22, 9C-6D, Error ellipse: s-maj=0.3km s-min=0.0km az=114.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.09**	**207**	⇑P	Pg	21 34 32.5	+0.6
RM33				S	Sg	21 34 34.4	+0.5
RM33				AML	AML		
	comp=N,6260µm,0.3s						
RM33				AML	AML		
	comp=E,10060µm,0.2s						
RM33				AML	AML		
	comp=E,10310µm,0.2s						
RM33				AML	AML		
	comp=N,6495µm,0.3s						
RM33				AML	AML		
	comp=N,6255µm,0.3s						
RM33				AML	AML		
	comp=N,6490µm,0.3s						
RM33				AML	AML		
	comp=E,10295µm,0.2s						
RM33				AML	AML		
	comp=E,10055µm,0.2s						
CAMP	**Campotosto**	**0.12**	**119**	⇑P	Pg	21 34 32.8	+0.6
CAMP				S	Sg	21 34 35.0	+0.6
CAMP				AML	AML		
	comp=E,1210µm,1.1s						
CAMP				AML	AML		
	comp=N,855µm,0.5s						
T1243	**Rocca Santa Ma**	**0.17**	**51**	P	Pg	21 34 33.3	+0.4
T1243				S	Sg	21 34 36.2	+0.6
T1243				AML	AML		
	comp=N,4505µm,0.9s						
T1243				AML	AML		
	comp=E,4370µm,1.4s						
T1243				AML	AML		
	comp=E,4415µm,1.4s						
T1243				AML	AML		
	comp=N,4600µm,0.9s						
LNSS	**Leonessa**	**0.17**	**273**	⇑P	Pg	21 34 33.5	+0.4
LNSS				S	Sg	21 34 36.5	+0.7
LNSS				AML	AML		
	comp=E,2865µm,0.4s						
LNSS				AML	AML		
	comp=N,3715µm,0.2s						
LNSS				AML	AML		
	comp=E,2860µm,0.4s						
TERO	**Teramo**	**0.25**	**83**	⇑P	Pg	21 34 34.7	+0.4
TERO				S	Sg	21 34 38.5	+0.7
TERO				AML	AML		
	comp=E,1490µm,0.2s						
TERO				AML	AML		
	comp=N,1615µm,0.1s						
GIGS	**Gran Sasso**	**0.26**	**123**	⇓P	Pg	21 34 35.0	+0.4
GIGS				S	Sg	21 34 39.2	+1.0
GIGS				AML	AML		
	comp=E,421µm,0.1s						
GIGS				AML	AML		
	comp=E,422µm,0.1s						
GIGS				AML	AML		
	comp=N,526µm,0.1s						
NRCA	**Norcia**	**0.27**	**334**	P	Pg	21 34 34.9	+0.2
NRCA				S	Sg	21 34 39.0	+0.6
NRCA				AML	AML		
	comp=E,2160µm,0.2s						
NRCA				AML	AML		
	comp=N,1585µm,0.2s						
NRCA				AML	AML		
	comp=E,2435µm,0.2s						
NRCA				AML	AML		
	comp=N,1800µm,0.2s						
NRCA				AML	AML		
	comp=E,4415µm,0.2s						
NRCA				AML	AML		
	comp=E,4840µm,0.2s						
NRCA				AML	AML		
	comp=N,3640µm,0.1s						
NRCA				AML	AML		
	comp=N,3310µm,0.1s						
MMO1	**Montemonaco**	**0.31**	**8**	⇑P	Pg	21 34 35.7	+0.3
MMO1				S	Sg	21 34 40.5	+0.9
MMO1				AML	AML		
	comp=E,1765µm,0.9s						
MMO1				AML	AML		
	comp=N,1305µm,0.2s						
MC2	**Monte Cornacci**	**0.33**	**349**	⇑P	Pg	21 34 36.0	+0.2
MC2				S	Sb	21 34 41.5	-1.0

FIAM	**Fiamignano**	**0.34**	**199**	P	Pg	21 34 36.4	+0.4	
FIAM				S	Sg	21 34 41.7	+1.0	
FIAM				AML	AML			
	comp=E,433µm,0.6s							
FIAM				AML	AML			
	comp=N,346µm,0.5s							
ARRO	**Arrone**	**0.37**	**268**	P	Pg	21 34 36.8	+0.2	
ARRO				S	Sg	21 34 42.2	+0.6	
FAGN	**Fagnano**	**0.40**	**145**	P	Pb	21 34 37.8	-0.4	
FAGN				AML	AML			
	comp=N,448µm,0.7s							
FAGN				AML	AML			
	comp=E,660µm,0.4s							
FAGN				AML	AML			
	comp=N,448µm,0.7s							
OFFI	**Offida**	**0.46**	**42**	⇑P	Pb	21 34 39.2	0.0	
OFFI				AML	AML			
	comp=E,502µm,0.7s							
OFFI				AML	AML			
	comp=N,798µm,0.5s							
FDMO	**Fiordimonte**	**0.46**	**343**	P	Pg	21 34 38.2	0.0	
FDMO				S	Sb	21 34 45.4	-0.9	
FDMO				AML	AML			
	comp=E,247µm,0.5s							
FDMO				AML	AML			
	comp=N,323µm,1.5s							
FDMO				AML	AML			
	comp=N,380µm,0.8s							
FDMO				AML	AML			
	comp=E,256µm,0.5s							
VCEL	**Villa Celiera**	**0.47**	**115**	⇓P	Pb	21 34 38.9	-0.5	
VCEL				AML	AML			
	comp=N,896µm,0.2s							
VCEL				AML	AML			
	comp=E,625µm,0.2s							
VCEL				AML	AML			
	comp=N,897µm,0.2s							
VCEL				AML	AML			
	comp=N,896µm,0.2s							
CSP1	**Cessapalombo**	**0.50**	**354**	⇑P	Pg	21 34 39.0	0.0	
CSP1				S	Sb	21 34 46.6	-0.8	
CESX	**Cesi**	**0.51**	**272**	P	Pg	21 34 39.0	-0.1	
CESX				S	Sg	21 34 46.5	+0.6	
CESX				AML	AML			
	comp=E,235µm,0.2s							
CESX				AML	AML			
	comp=N,296µm,0.2s							
TRTR	**Tortoreto Alta**	**0.52**	**65**	⇓P	Pb	21 34 40.8	+0.5	
TRTR				AML	AML			
	comp=N,454µm,1.4s							
TRTR				AML	AML			
	comp=E,542µm,1.3s							
T0110	**Collepietro**	**0.53**	**134**	⇓P	Pg	21 34 39.8	+0.4	
T0110				AML	AML			
	comp=N,330µm,0.3s							
T0110				AML	AML			
	comp=E,352µm,0.6s							
ASSB	**Assisi San Ben**	**0.64**	**315**	P	Pg	21 34 41.6	+0.1	
ASSB				S	Sb	21 34 50.7	-0.6	
ASSB				AML	AML			
	comp=E,175µm,0.6s							
ASSB				AML	AML			
	comp=N,172µm,1.1s							
CERT	**Cerreto**	**0.68**	**199**	P	Pg	21 34 42.1	-0.2	
CERT				AML	AML			
	comp=N,158µm,0.3s							
CERT				AML	AML			
	comp=E,210µm,0.4s							
SNTG	**Esanatoglia**	**0.70**	**340**	P	Pg	21 34 42.7	-0.2	
SNTG				AML	AML			
	comp=E,90µm,0.5s							
SNTG				AML	AML			
	comp=E,172µm,1.3s							
SNTG				AML	AML			
	comp=E,101µm,0.8s							
SNTG				AML	AML			
	comp=N,123µm,0.3s							
SNTG				AML	AML			
	comp=E,101µm,0.8s							
SNTG				AML	AML			
	comp=N,182µm,0.9s							
EL6	**Elcito**	**0.75**	**350**	P	Pg	21 34 43.2	-0.4	
EL6				S	Sb	21 34 54.1	-0.3	
EL6				AML	AML			
	comp=E,197µm,1.2s							
EL6				AML	AML			
	comp=N,206µm,0.3s							
INTR	**Introdacqua**	**0.75**	**141**	⇑P	Pg	21 34 43.3	-0.3	
INTR				AML	AML			
	comp=E,57µm,0.5s							
INTR				AML	AML			
	comp=N,122µm,0.9s							
INTR				AML	AML			
	comp=E,57µm,0.5s							
ATCC	**AVT- Casa Cast**	**0.75**	**322**	P	Pg	21 34 43.5	-0.2	
ATCC				AML	AML			
	comp=E,127µm,0.8s							
ATCC				AML	AML			
	comp=E,127µm,0.8s							
ATCC				AML	AML			
	comp=N,114µm,0.4s							
CING	**Cingoli**	**0.78**	**356**	P	Pg	21 34 44.2	-0.1	
CING				AML	AML			
	comp=E,156µm,0.7s							
CING				AML	AML			
	comp=N,116µm,0.4s							
FOSV	**Fossato di Vic**	**0.80**	**332**	P	Pg	21 34 44.5	-0.1	
FOSV				S	Sb	21 34 55.4	-0.4	
FOSV				AML	AML			
	comp=E,79µm,0.3s							
FOSV				AML	AML			
	comp=N,110µm,0.2s							
FOSV				AML	AML			
	comp=N,110µm,0.2s							
FOSV				AML	AML			
	comp=E,79µm,0.3s							
PP3	**Marolino**	**0.82**	**17**	⇓P	Pb	21 34 45.8	+0.4	
LPEL	**Lama dei Pelig**	**0.87**	**129**	S	Sn	21 34 60.0	0.0	
MGAB	**Montegabbione**	**0.91**	**291**	⇓P	Pg	21 34 46.6	-0.1	
MGAB				AML	AML			
	comp=N,150µm,0.6s							
MGAB				AML	AML			
	comp=E,150µm,1.3s							
SSFR	**Montelago di S**	**0.92**	**337**	P	Pg	21 34 46.8	-0.1	
SSFR				AML	AML			
	comp=N,247µm,0.3s							
SSFR				AML	AML			
	comp=E,226µm,0.2s							
ARVD	**Arcevia**	**0.94**	**345**	P	Pg	21 34 46.7	-0.5	
ARVD				AML	AML			
	comp=E,78µm,1.0s							
ARVD				AML	AML			
	comp=E,78µm,1.0s							
ARVD				AML	AML			
	comp=N,92µm,0.7s							
ATMI	**Monte Miggiano**	**1.04**	**316**	S	Sn	21 35 06.0	+1.6	
TOLF	**Tolfa**	**1.08**	**241**	P	Pb	21 34 49.3	-0.5	
CRE	**Caprese Michel**	**1.41**	**317**	P	Pg	21 34 56.2	-0.1	

TRN 27 22:12:23.8, 15.15N×60.94W, h148km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DLPL	**La Plaine**	**0.35**	**302**	eP	Pn	22 12 45.3	+1.0
SVN	**Savane Anatole**	**0.38**	**216**	eP	Pn	22 12 46.0	+1.5
ILAM	**Ilet Lapin Mar**	**0.38**	**170**	eP	Pn	22 12 46.0	+1.5
ILAM				eS	Sn	22 13 00.9	+0.8
BAMF	**Morne Balai**	**0.39**	**211**	eP	Pn	22 12 46.0	+1.4
CXM	**Morne La Croix**	**0.40**	**214**	eP	Pn	22 12 46.3	+1.5
GBMF	**Grand Be**	**0.41**	**212**	eP	Pn	22 12 46.0	+1.3
PCM	**Pelee Case Pet**	**0.42**	**218**	eP	Pn	22 12 45.7	+1.0
PML	**Morne Lenard**	**0.43**	**213**	eP	Pn	22 12 46.1	+1.4
FDF	**Fort de France**	**0.46**	**206**	eP	Pn	22 12 46.2	+1.4
FDF				eS	Sn	22 13 01.8	+1.0
MDN	**Morne-Daniel**	**0.47**	**291**	eP	Pn	22 12 46.0	+1.2
DSLB	**Salisbury**	**0.55**	**302**	eP	Pn	22 12 46.6	+1.3
DSLB				eS	Sn	22 13 02.8	+1.2
LPMF	**Morne Lapointe**	**0.57**	**183**	eP	Pn	22 12 46.2	+0.8
ZAM	**Aeronautique**	**0.58**	**189**	eP	Pn	22 12 46.9	+1.4
MVM	**Montagne Vaucl**	**0.59**	**176**	eP	Pn	22 12 46.7	+1.2
TRMF	**Trois Ilets**	**0.62**	**190**	eP	Pn	22 12 47.2	+1.5
BIM	**Bigot**	**0.64**	**191**	eP	Pn	22 12 47.2	+1.4
BIM				eS	Sn	22 13 03.4	+0.8
MDVC	**Dominica, Viel**	**0.65**	**316**	eP	Pn	22 12 47.2	+1.4
MDCT	**Cottage Hill,**	**0.69**	**313**	eP	Pn	22 12 47.6	+1.6
MDCT				eS	Sn	22 13 04.7	+1.7
MPOM	**Morne Pois Mar**	**0.70**	**174**	eP	Pn	22 12 47.3	+1.1
MPOM				eS	Sn	22 13 03.6	+0.4
MAGL	**Barre de l'ile**	**0.86**	**338**	eP	Pn	22 12 48.7	+1.3
MAGL				eS	Sn	22 13 06.1	+0.8
TDBA	**Terre de Bas,**	**0.97**	**316**	eP	Pn	22 12 49.2	+1.0
TDBA				eS	Sn	22 13 07.2	+0.5
TBG	**Guadaloupe-3**	**0.98**	**316**	eP	Pn	22 12 49.2	+1.0
TBG				eS	Sn	22 13 08.1	+1.2
SLBI	**Saint Lucia, B**	**1.12**	**182**	eP	Pn	22 12 50.3	+0.8
SLBI				eS	Sn	22 13 09.1	0.0
ABD	**La Joyeuse, An**	**1.42**	**338**	eP	Pn	22 12 53.6	+1.2
ABD				eS	Sn	22 13 14.7	+0.4
MCLT	**Moule a Chique**	**1.43**	**180**	eP	Pn	22 12 53.5	+0.9
MCLT				eS	Sn	22 13 14.4	-0.1
SVB	**Belmont**	**1.89**	**189**	eP	Pn	22 12 58.5	+0.8
SVB				eS	Sn	22 13 23.8	+0.3
ANBD	**Bethesda, Anti**	**2.05**	**337**	eP	Pn	22 13 00.2	+0.8
ANBD				eS	Sn	22 13 26.2	-0.6
ANDO	**Antigua, Disas**	**2.13**	**336**	eP	Pn	22 13 00.9	+0.5
ANDO				eS	Sn	22 13 28.1	-0.5
BBGH	**Gun Hill**	**2.40**	**146**	eP	Pn	22 13 05.5	+1.8
ANWB	**Willy Bob**	**2.63**	**342**	eP	Pn	22 13 07.2	+0.6
ANWB				eS	Sn	22 13 39.0	-0.6
GCMP	**Grenada, Carri**	**2.69**	**190**	eP	Pn	22 13 07.2	0.0
GCMP				eS	Sn	22 13 41.2	+0.5
SKI	**Saint Kitts**	**2.78**	**322**	eS	Sn	22 13 43.7	+1.0

ROM 27 22:23:41.7±0.1, 42.776N±0.003×13.182E±0.005, h10km, ML1.9/19, 1D, Error ellipse: s-maj=0.4km s-min=0.1km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**319**	P	Pg	22 23 44.5	+0.4
NRCA				S	Sg	22 23 46.1	+0.2
NRCA				AML	AML		
	comp=E,1745µm,0.3s						
NRCA				AML	AML		
	comp=N,1985µm,0.7s						
NRCA				AML	AML		
	comp=E,1965µm,0.3s						
NRCA				AML	AML		
	comp=N,2290µm,0.7s						
NRCA				AML	AML		
	comp=N,7885µm,1.0s						
NRCA				AML	AML		
	comp=N,8725µm,1.1s						
NRCA				AML	AML		
	comp=E,11200µm,0.1s						
NRCA				AML	AML		
	comp=E,13150µm,0.2s						
NRCA	**Norcia**	**0.08**	**319**	S	Sg	22 23 46.1	+0.2
NRCA				AML	AML		
	comp=E,11200µm,0.1s						
NRCA				AML	AML		
	comp=N,7885µm,1.0s						
NRCA				AML	AML		
	comp=E,13150µm,0.2s						
NRCA				AML	AML		
	comp=N,8725µm,1.1s						
NRCA				AML	AML		
	comp=E,11200µm,0.1s						
NRCA				AML	AML		
	comp=E,13150µm,0.2s						
NRCA				AML	AML		
	comp=N,8725µm,1.1s						
NRCA				AML	AML		
	comp=E,11200µm,0.1s						
NRCA				AML	AML		
	comp=E,13150µm,0.2s						
NRCA				AML	AML		
	comp=N,8725µm,1.1s						
NRCA				AML	AML		
	comp=N,7885µm,1.0s						
MC2	**Monte Cornacci**	**0.14**	**3**	P	Pg	22 23 45.4	+0.4
MC2				S	Sg	22 23 48.0	+0.6
MC2	**Monte Cornacci**	**0.14**	**3**	P	Pg	22 23 45.4	+0.3
MC2				S	Sg	22 23 48.1	+0.7
MC2				AML	AML		
	comp=E,812µm,0.9s						
MC2				AML	AML		
	comp=N,824µm,0.2s						
MMO1	**Montemonaco**	**0.16**	**41**	P	Pg	22 23 45.7	+0.4
MMO1				S	Sg	22 23 48.6	+0.7
MMO1				AML	AML		
	comp=E,276µm,0.3s						
MMO1				AML	AML		
	comp=N,342µm,0.2s						
MMO1				AML	AML		
	comp=E,1360µm,1.0s						
MMO1				AML	AML		
	comp=N,1375µm,0.2s						
MMO1	**Montemonaco**	**0.16**	**41**	P	Pg	22 23 45.7	+0.3
MMO1				S	Sg	22 23 48.6	+0.7
MMO1				AML	AML		
	comp=E,1355µm,1.0s						
MMO1				AML	AML		
	comp=N,1375µm,0.2s						
MMO1				AML	AML		
	comp=E,1360µm,1.0s						
MMO1				AML	AML		
	comp=N,1375µm,0.2s						
MMO1				AML	AML		
	comp=N,1375µm,0.2s						
MMO1				AML	AML		
	comp=E,1360µm,1.0s						
LNSS	**Leonessa**	**0.20**	**211**	P	Pg	22 23 46.7	+0.7
LNSS				S	Sg	22 23 50.3	+1.4
LNSS				AML	AML		
	comp=E,303µm,0.8s						
LNSS				AML	AML		
	comp=N,332µm,0.1s						
LNSS				AML	AML		
	comp=E,1800µm,0.2s						
LNSS				AML	AML		
	comp=N,1980µm,0.4s						
LNSS	**Leonessa**	**0.20**	**211**	P	Pg	22 23 46.6	+0.6
LNSS				S	Sg	22 23 50.2	+1.3
LNSS				AML	AML		
	comp=E,1800µm,0.2s						
LNSS				AML	AML		
	comp=N,1980µm,0.4s						
LNSS				AML	AML		
	comp=E,1800µm,0.2s						
LNSS				AML	AML		
	comp=N,1980µm,0.4s						
LNSS				AML	AML		
	comp=E,1800µm,0.2s						
LNSS				AML	AML		
	comp=N,1980µm,0.4s						
T1243	**Rocca Santa Ma**	**0.21**	**112**	P	Pb	22 23 46.9	-0.8
T1243				AML	AML		
	comp=E,2845µm,0.4s						
T1243				AML	AML		
	comp=N,1660µm,0.2s						
T1243				AML	AML		
	comp=E,2800µm,0.4s						
T1243				AML	AML		
	comp=N,1625µm,1.5s						
T1243				AML	AML		
	comp=E,2850µm,0.4s						
T1243				AML	AML		
	comp=N,1660µm,0.2s						
T1243				AML	AML		
	comp=E,2800µm,0.4s						
T1243				AML	AML		
	comp=N,1625µm,1.5s						
T1243				AML	AML		
	comp=N,1660µm,0.2s						
T1243				AML	AML		
	comp=E,2850µm,0.4s						
T1243				AML	AML		
	comp=E,2800µm,0.4s						
T1243				AML	AML		
	comp=N,801µm,0.1s						
RM33	**Pellescritta (**	**0.27**	**175**	P	Pg	22 23 47.7	+0.6
RM33				S	Sb	22 23 52.2	-1.1
RM33				AML	AML		
	comp=N,298µm,0.9s						
RM33				AML	AML		
	comp=N,452µm,0.3s						
RM33				AML	AML		
	comp=E,602µm,0.1s						
RM33	**Pellescritta (**	**0.27**	**175**	P	Pg	22 23 47.7	+0.6
RM33				S	Sb	22 23 52.2	-1.0
FDMO	**Fiordimonte**	**0.27**	**345**	P	Pg	22 23 47.7	+0.5
FDMO				S	Sb	22 23 52.1	-1.2
FDMO				AML	AML		
	comp=E,124µm,1.1s						
FDMO				AML	AML		
	comp=N,133µm,0.2s						
FDMO				AML	AML		
	comp=N,165µm,0.3s						
FDMO				AML	AML		
	comp=E,170µm,0.9s						
FDMO	**Fiordimonte**	**0.27**	**345**	P	Pg	22 23 47.6	+0.5
FDMO				S	Sb	22 23 52.1	-1.2
FDMO				AML	AML		
	comp=E,170µm,0.9s						
FDMO				AML	AML		
	comp=N,165µm,0.3s						
FDMO				AML	AML		
	comp=E,170µm,0.9s						
FDMO				AML	AML		
	comp=N,165µm,0.3s						
FDMO				AML	AML		
	comp=N,165µm,0.3s						
FDMO				AML	AML		
	comp=E,170µm,0.9s						
CAMP	**Campotosto**	**0.29**	**145**	P	Pg	22 23 48.1	+0.5
CAMP				S	Sg	22 23 52.6	+1.0
CAMP				AML	AML		
	comp=E,301µm,0.2s						
CAMP				AML	AML		
	comp=N,260µm,0.2s						
CAMP	**Campotosto**	**0.29**	**145**	P	Pg	22 23 48.0	+0.4
CAMP				S	Sg	22 23 52.7	+1.1
CAMP				AML	AML		
	comp=E,301µm,0.2s						
CAMP				AML	AML		
	comp=N,260µm,0.2s						
CAMP				AML	AML		
	comp=N,260µm,0.2s						
CAMP				AML	AML		
	comp=E,301µm,0.2s						
CSP1	**Cessapalombo**	**0.32**	**3**	P	Pg	22 23 48.5	+0.5
CSP1				S	Sb	22 23 53.7	-1.1
CSP1	**Cessapalombo**	**0.32**	**3**	P	Pg	22 23 48.5	+0.5
CSP1				S	Sb	22 23 53.6	-1.1
TERO	**Teramo**	**0.35**	**116**	P	Pg	22 23 48.7	+0.2
TERO				AML	AML		
	comp=E,331µm,0.7s						
TERO				AML	AML		
	comp=N,261µm,1.2s						
TERO				AML	AML		
	comp=E,331µm,0.7s						
TERO				AML	AML		
	comp=N,166µm,0.1s						
ARRO	**Arrone**	**0.36**	**238**	P	Pb	22 23 49.6	-0.7
ARRO				S	Sb	22 23 55.6	-0.4
ARRO				AML	AML		
	comp=N,210µm,0.2s						
ARRO				AML	AML		
	comp=E,178µm,0.3s						
ARRO	**Arrone**	**0.36**	**238**	P	Pb	22 23 49.7	-0.5
ARRO				AML	AML		
	comp=E,178µm,0.3s						
ARRO				AML	AML		
	comp=N,210µm,0.2s						
ARRO				AML	AML		
	comp=N,210µm,0.2s						
ARRO				AML	AML		
	comp=E,178µm,0.3s						
OFFI	**Offida**	**0.40**	**67**	P	Pb	22 23 50.7	-0.2
OFFI				AML	AML		
	comp=E,238µm,0.5s						
OFFI				AML	AML		
	comp=N,230µm,0.7s						
OFFI				AML	AML		
	comp=E,238µm,0.5s						
OFFI				AML	AML		
	comp=N,175µm,0.1s						
GIGS	**Gran Sasso**	**0.43**	**139**	P	Pg	22 23 50.3	+0.1
GIGS				AML	AML		
	comp=E,67µm,0.1s						
GIGS				AML	AML		
	comp=N,60µm,0.1s						
GIGS				AML	AML		
	comp=E,67µm,0.1s						
GIGS				AML	AML		
	comp=N,60µm,0.1s						
GIGS				AML	AML		
	comp=N,60µm,0.1s						
GIGS				AML	AML		
	comp=E,67µm,0.1s						
ASSB	**Assisi San Ben**	**0.47**	**305**	P	Pg	22 23 51.2	+0.4
ASSB				S	Sb	22 23 58.3	-0.7
ASSB				AML	AML		
	comp=E,158µm,0.2s						
ASSB				AML	AML		
	comp=N,118µm,0.8s						
ASSB	**Assisi San Ben**	**0.47**	**305**	P	Pg	22 23 51.0	+0.1
ASSB				AML	AML		
	comp=E,158µm,0.2s						
ASSB				AML	AML		
	comp=N,118µm,0.8s						
ASSB				AML	AML		
	comp=N,118µm,0.8s						
ASSB				AML	AML		
	comp=E,158µm,0.2s						
CESX	**Cesi**	**0.47**	**250**	P	Pg	22 23 51.3	+0.4
CESX				AML	AML		
	comp=E,124µm,0.9s						
CESX				AML	AML		
	comp=N,118µm,0.8s						
CESX				AML	AML		
	comp=E,124µm,0.9s						
CESX				AML	AML		
	comp=N,118µm,0.8s						
FIAM	**Fiamignano**	**0.51**	**185**	P	Pg	22 23 51.7	+0.1
SNTG	**Esanatoglia**	**0.51**	**340**	P	Pg	22 23 51.9	+0.3
SNTG				AML	AML		
	comp=E,51µm,0.8s						
SNTG				AML	AML		
	comp=N,53µm,0.6s						
SNTG				AML	AML		
	comp=E,51µm,0.8s						
SNTG				AML	AML		
	comp=N,53µm,0.6s						
SNTG	**Esanatoglia**	**0.51**	**340**	AML	AML		
	comp=E,51µm,0.8s						
SNTG				AML	AML		
	comp=N,53µm,0.6s						
EL6	**Elcito**	**0.56**	**354**	P	Pg	22 23 52.7	+0.2
EL6				AML	AML		
	comp=E,125µm,1.3s						
EL6				AML	AML		
	comp=N,107µm,0.3s						
EL6				AML	AML		
	comp=N,107µm,0.3s						
EL6				AML	AML		
	comp=E,125µm,1.3s						
ATCC	**AVT- Casa Cast**	**0.57**	**316**	P	Pg	22 23 52.9	+0.2
ATCC	**AVT- Casa Cast**	**0.57**	**316**	AML	AML		
	comp=E,95µm,0.1s						
ATCC				AML	AML		
	comp=N,71µm,0.7s						
CING	**Cingoli**	**0.60**	**1**	AML	AML		
	comp=N,48µm,1.1s						
CING				AML	AML		
	comp=E,72µm,0.2s						
CING	**Cingoli**	**0.60**	**1**	AML	AML		
	comp=E,72µm,0.2s						
CING				AML	AML		
	comp=E,72µm,0.2s						
CING				AML	AML		
	comp=N,48µm,1.1s						
CING				AML	AML		
	comp=N,48µm,1.1s						
FOSV	**Fossato di Vic**	**0.60**	**329**	P	Pg	22 23 53.5	+0.1
VCEL	**Villa Celiera**	**0.62**	**128**	P	Pb	22 23 54.3	-0.3
VCEL				AML	AML		
	comp=E,114µm,0.7s						
VCEL				AML	AML		
	comp=N,113µm,0.7s						
VCEL				AML	AML		
	comp=E,114µm,0.7s						

VCEL				AML	AML		
	comp=N,113µm,0.7s						
PP3	**Marolino**	**0.68**	**27**	P	Pg	22 23 55.0	+0.2
PP3				AML	AML		
	comp=E,274µm,0.4s						
PP3				AML	AML		
	comp=N,359µm,0.3s						
PP3				AML	AML		
	comp=E,274µm,0.4s						
PP3				AML	AML		
	comp=N,359µm,0.3s						
T0110	**Collepietro**	**0.70**	**141**	P	Pg	22 23 55.5	+0.2
T0110				AML	AML		
	comp=E,82µm,0.3s						
T0110				AML	AML		
	comp=N,89µm,0.4s						
T0110				AML	AML		
	comp=E,82µm,0.3s						
T0110				AML	AML		
	comp=N,89µm,0.4s						
ARVD	**Arcevia**	**0.74**	**346**	P	Pg	22 23 56.3	+0.3
ARVD				AML	AML		
	comp=E,25µm,0.5s						
ARVD				AML	AML		
	comp=N,21µm,0.6s						
ARVD				AML	AML		
	comp=N,21µm,0.6s						
ARVD				AML	AML		
	comp=E,25µm,0.5s						
MGAB	**Montegabbione**	**0.80**	**280**	‖P	Pn	22 23 59.8	+0.8
IOCA	**Ischia Osserva**	**2.10**	**165**	P	Pg	22 24 21.3	-0.5

*NEIC **27** 22:35:02.7±1.4, 19°.21N±0°.09×64°.71W±0°.05, h16km±10km, Error ellipse: s-maj=13.6km s-min=5.3km az=204.0*
*RSPR **27** 22:35:03.8, 19°.23N×64°.64W, h9km±9km, MD3.5/13*

ISC 27 22:35:01.6±1.9, 19°.24N±0°.07×64°.65W±0°.03, h16km±11km, n66, σ1§08/77, 16C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.81**	**178**	*eP*	**Pg**	**22 35 17.3**	**-0.1**
TBVI	**Tortola**	**0.81**	**178**	*eS*	**Sb**	**22 35 29.1**	**+1.0**
TBVI	**Tortola**	**0.81**	**178**		**Pg**	**22 35 17.3**	**-0.1**
TBVI					**Sb**	**22 35 29.1**	**+1.0**
SJVI	**Gifft Hill Sch**	**0.91**	**188**	↑*eP*	**Pg**	**22 35 18.7**	**-0.5**
SJVI	**Gifft Hill Sch**	**0.91**	**188**	*eS*	**Sb**	**22 35 31.4**	**+0.7**
SJVI	**Gifft Hill Sch**	**0.91**	**188**		**Pg**	**22 35 18.7**	**-0.5**
SJVI					**Sb**	**22 35 31.4**	**+0.7**
STVI	**Saint Thomas**	**0.93**	**198**	↑*eP*	**Pb**	**22 35 19.1**	**-0.1**
STVI	**Saint Thomas**	**0.93**	**198**	*eS*	**Sb**	**22 35 31.9**	**+0.6**
STVI	**Saint Thomas**	**0.93**	**198**	Pg	**Pb**	**22 35 18.9**	**-0.4**
STVI				Sg	**Sb**	**22 35 31.7**	**+0.4**
STVI				IAML		22 35 35.8	
	comp=N,617nm,0.5s						
CUPR	**Culebra, Puert**	**1.10**	**213**	↑*eP*	**Pb**	**22 35 21.7**	**-0.5**
CUPR	**Culebra, Puert**	**1.10**	**213**	*eS*	**Sb**	**22 35 36.5**	**+0.1**
CUPR	**Culebra, Puert**	**1.10**	**213**	Pg	**Pb**	**22 35 21.7**	**-0.5**
CUPR				Sg	**Sb**	**22 35 36.9**	**+0.5**
CUPR				IAML		22 35 39.4	
	comp=E,352nm,0.4s						
CUPR				IAML		22 35 40.9	
	comp=N,448nm,0.5s						
MTP	**Monte Pirata**	**1.42**	**217**	↑*eP*	**Pn**	**22 35 26.9**	**+0.1**
MTP	**Monte Pirata**	**1.42**	**217**	*eS*	**Sn**	**22 35 45.3**	**+0.2**
MTP	**Monte Pirata**	**1.42**	**217**	Pn	**Pn**	**22 35 26.9**	**+0.1**
MTP				Sn	**Sn**	**22 35 45.0**	**-0.1**
MTP				IAML		22 35 46.3	
	comp=E,424nm,0.2s						
MTP				IAML		22 35 46.6	
	comp=N,382nm,0.2s						
CDVI	**St. Croix**	**1.48**	**184**	↑*eP*	**Pn**	**22 35 28.3**	**+0.8**
CDVI	**St. Croix**	**1.48**	**184**	*eS*	**Sb**	**22 35 48.3**	**+1.1**
CDVI	**St. Croix**	**1.48**	**184**	Pn	**Pn**	**22 35 28.4**	**+0.9**
CDVI				Sn	**Sb**	**22 35 48.5**	**+1.2**
CBYP	**Canovanas**	**1.50**	**230**	↑*eP*	**Pn**	**22 35 27.6**	**-0.2**
CBYP	**Canovanas**	**1.50**	**230**	*eS*	**Sn**	**22 35 44.9**	**-2.1**
CBYP	**Canovanas**	**1.50**	**230**	Pn	**Pn**	**22 35 27.4**	**-0.4**
CBYP				IAML		22 35 51.1	
	comp=N,856nm,0.2s						
CBYP	**Canovanas**	**1.50**	**230**		**Sn**	**22 35 44.9**	**-2.1**
HUMP	**Col San Antoni**	**1.58**	**227**	↑*eP*	**Pn**	**22 35 28.8**	**-0.1**
HUMP	**Col San Antoni**	**1.58**	**227**	*eS*	**Sn**	**22 35 48.4**	**-0.6**
HUMP	**Col San Antoni**	**1.58**	**227**	Pn	**Pn**	**22 35 28.8**	**-0.1**
HUMP					**Sn**	**22 35 48.1**	**-0.8**
GCPR	**Guaynabo City**	**1.65**	**236**	↑*eP*	**Pn**	**22 35 29.5**	**-0.3**
GCPR	**Guaynabo City**	**1.65**	**236**	*eS*	**Sn**	**22 35 49.5**	**-1.1**
GCPR	**Guaynabo City**	**1.65**	**236**	Pn	**Pn**	**22 35 29.6**	**-0.3**
GCPR	**Guaynabo City**	**1.65**	**236**		**Sn**	**22 35 49.5**	**-1.1**
PDPR	**Patillas Dam,**	**1.78**	**227**	Pn	**Pn**	**22 35 32.3**	**+0.6**
PDPR				IAML		22 35 52.2	
	comp=E,262nm,0.9s						
SJG	**San Juan**	**1.81**	**232**	Pn	**Pn**	**22 35 32.3**	**+0.2**
SJG				IAML		22 36 04.8	
	comp=E,148nm,0.5s						
IGPR	**InterUniversit**	**1.88**	**228**	‖*eP*	**Pn**	**22 35 33.3**	**+0.3**
IGPR	**InterUniversit**	**1.88**	**228**	*eS*	**Sn**	**22 35 55.9**	**-0.4**
SMRT	**St. Maarten**	**1.90**	**128**		**Pn**	**22 35 34.3**	**+1.0**
SMRT				IAML		22 36 03.9	
	comp=E,198nm,0.4s						
SMRT				IAML		22 36 07.2	
	comp=N,190nm,0.6s						
SMRT	**St. Maarten**	**1.90**	**128**	*eP*	**Pb**	**22 35 36.0**	**+0.1**
SMRT				*eS*	**Sn**	**22 35 56.4**	**-0.5**
EMPR	**Esperanza - Ma**	**1.94**	**247**	↑*eP*	**Pn**	**22 35 34.0**	**+0.2**
EMPR	**Esperanza - Ma**	**1.94**	**247**	*eS*	**Sn**	**22 35 58.5**	**+0.7**
EMPR	**Esperanza - Ma**	**1.94**	**247**	Pn	**Pn**	**22 35 34.1**	**+0.2**
EMPR	**Esperanza - Ma**	**1.94**	**247**		**Sn**	**22 35 58.5**	**+0.7**
CELP	**Cerrillos**	**2.17**	**238**	Pn	**Pn**	**22 35 37.1**	**+0.2**
AOPR	**Arecibo Observ**	**2.18**	**246**	↑*eP*	**Pn**	**22 35 37.9**	**+0.6**
AOPR	**Arecibo Observ**	**2.18**	**246**	*eS*	**Sn**	**22 36 03.0**	**-1.0**
AOPR	**Arecibo Observ**	**2.18**	**246**	Pn	**Pn**	**22 35 37.9**	**+0.6**
AOPR				IAML		22 36 31.9	
	comp=N,200nm,0.5s						
AOPR	**Arecibo Observ**	**2.18**	**246**		**Sn**	**22 36 03.0**	**-1.0**
AOPR	**Arecibo Observ**	**2.18**	**246**	*eP*	**Pn**	**22 35 38.3**	**+1.0**
AOPR				*eS*	**Sn**	**22 36 02.0**	**-2.0**
OBIP	**Obispado Ponce**	**2.21**	**238**	↑*eP*	**Pn**	**22 35 37.0**	**-0.5**
OBIP	**Obispado Ponce**	**2.21**	**238**	*eS*	**Sn**	**22 36 04.4**	**0.0**
OBIP	**Obispado Ponce**	**2.21**	**238**	Pn	**Pn**	**22 35 37.0**	**-0.5**
OBIP	**Obispado Ponce**	**2.21**	**238**		**Sn**	**22 36 04.4**	**0.0**
AGPR	**Aguadilla, PR**	**2.46**	**252**	Pn	**Pn**	**22 35 41.7**	**+0.8**
AGPR				IAML		22 36 28.4	
	comp=E,96nm,0.7s						
AGPR				IAML		22 36 36.2	
	comp=N,81nm,1.4s						
LSP	**Las Mesas**	**2.54**	**246**	↑*eP*	**Pn**	**22 35 42.7**	**+0.5**
MLPR	**Magueyes Islan**	**2.60**	**241**	↑*eP*	**Pn**	**22 35 43.0**	**+0.1**
MLPR	**Magueyes Islan**	**2.60**	**241**	*eS*	**Sn**	**22 36 13.4**	**-0.8**
MLPR	**Magueyes Islan**	**2.60**	**241**	Pn	**Pn**	**22 35 42.6**	**-0.3**
SKI	**Saint Kitts**	**2.62**	**136**	*eP*	**Pn**	**22 35 44.1**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.64**	**243**	‖*eP*	**Pn**	**22 35 44.3**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.64**	**243**	*eS*	**Sn**	**22 36 14.6**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.64**	**243**	Pn	**Pn**	**22 35 44.0**	**+0.5**
IDE	**Isla Desecheo**	**2.81**	**253**	‖*eP*	**Pn**	**22 35 46.9**	**+1.1**
ANBD	**Bethesda, Anti**	**3.50**	**128**	*eP*	**Pn**	**22 35 51.8**	**-3.5**
ANBD				*eS*	**Sn**	**22 36 32.2**	**-4.1**
GDHS	**Morne Mazeau,**	**4.03**	**137**	Pn	**Pn**	**22 36 04.4**	**+1.8**
GDHS				IAML		22 37 00.5	
	comp=E,61nm,0.5s						
GDHS				IAML		22 37 23.7	
	comp=N,67nm,0.8s						
ABD	**La Joyeuse, An**	**4.07**	**132**	*eP*	**Pn**	**22 36 05.8**	**+2.6**
CBE	**Ff, Capester**	**4.28**	**137**	Pn	**Pn**	**22 36 07.2**	**+1.1**
DR12	**Loma Pena Alta**	**4.50**	**265**	‖*eP*	**Pn**	**22 36 09.8**	**+0.6**
DR12				*eS*	**Sn**	**22 37 02.3**	**+1.0**
DR12	**Loma Pena Alta**	**4.50**	**265**	Pn	**Pn**	**22 36 09.6**	**+0.5**
DSLB	**Salisbury**	**4.87**	**140**	*eP*	**Pn**	**22 36 16.4**	**+2.2**

*NOU **27** 22:46:57.6, 14°.12S×172°.85W, h83km, MLv3.6/5, Samoa Islands*
*IDC **27** 22:47:04.7±5.1, 15°.17S×173°.96W, h142km±44km, mb3.3/5, mbtmp3.7/6, MS3.6/14, Error ellipse: s-maj=111.7km s-min=24.1km az=151.0*

ISC 27 22:46:59.0±1.9, 15°.75S±0°.7×173°.5W±0°.4, h100km, n30, σ1§69/8, mb3.4/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.41**	**44**	P	Pn	22 47 17.6	-19
MSVF	**Nonsavu**	**8.35**	**254**	P	**Pn**	**22 48 58.7**	**+1.3**
	2.2nm,0.3s,baz=90,slow=20,SNR=2.5						

RAO	**Raoul Island**	**14.14**	**196**	LR	LR	22 55 35.1	
	comp=Z,336nm,19.4s,baz=26,slow=35						
RAR	**Rarotonga**	**14.15**	**115**	LR	LR	22 54 29.8	
	comp=Z,198nm,18.9s,baz=314,slow=30						
DZM	**Mont Dzumac**	**20.01**	**248**	LR	LR	22 57 32.2	
	comp=Z,146nm,21.5s,baz=120,slow=32						
DZM	**Mont Dzumac**	**20.01**	**248**	*e*LR	LR	22 56 35.2	
	comp=Z,330nm,27.9s						
PPT	**Papeete**	**23.01**	**98**	LR	LR	23 00 32.7	
	comp=Z,50nm,18.2s,baz=285,slow=34						
PPT2	**Papeete2**	**23.01**	**98**	*e*LR	LR	22 56 54.1	
	comp=Z,213nm,27.2s						
TBI	**Tubuai**	**23.90**	**112**	*e*LR	LR	22 57 23.3	
	comp=Z,283nm,27.2s						
URZ	**Urewera**	**24.00**	**198**	LR	LR	23 00 30.6	
	comp=Z,266nm,19.2s,baz=31,slow=33						
HNR	**Honiara**	**26.62**	**280**	LR	LR	23 00 57.1	
	comp=Z,132nm,20.0s,baz=142,slow=32						
RPZ	**Rata Peaks**	**30.91**	**202**	LR	LR	23 06 12.8	
	comp=Z,206nm,18.1s,baz=31,slow=37						
CTA	**Charters Tower**	**38.49**	**257**	LR	LR	23 07 36.3	
	comp=Z,63nm,18.4s,baz=83,slow=32						
H11S2	**WAKE ISLAND Hy**	**39.12**	**329**	T	T	23 35 11.3	
	baz=149,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**39.13**	**329**	T	T	23 35 10.8	
	baz=149,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**39.14**	**329**	T	T	23 35 16.0	
	baz=149,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**40.08**	**331**	T	T	23 36 22.9	
	baz=150,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**40.08**	**331**	T	T	23 36 19.2	
	baz=150,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**40.09**	**331**	T	T	23 36 20.8	
	baz=150,slow=76,SNR=13						
STKA	**Stephens Creek**	**43.83**	**240**	LR	LR	23 10 53.7	
	comp=Z,46nm,20.0s,baz=29,slow=33						
WRA	**Warramunga Arr**	**49.69**	**257**	P	**P**	**22 55 41.4**	**+0.2**
	0.6nm,0.9s,baz=97,slow=8.2,SNR=6.1						
WRA				LR	LR	23 15 10.9	
	comp=Z,70nm,18.4s,baz=188,slow=34						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**49.94**	**252**	P	**P**	**22 55 41.8**	**-1.4**
	4.0nm,0.7s,baz=86,slow=8.2,SNR=24						
ASAR				LR	LR	23 16 06.7	
	comp=Z,39nm,18.6s,baz=38,slow=35						
	4.0nm,0.7s						
GUMO	**Guam**	**50.38**	**303**	LR	LR	23 14 39.3	
	comp=Z,58nm,18.8s,baz=98,slow=33						
FITZ	**Fitzroy Crossi**	**58.06**	**258**	LR	LR	23 19 52.7	
	comp=Z,42nm,18.6s,baz=92,slow=34						
NVAR	**Mina Array Bea**	**74.58**	**42**	P	**P**	**22 58 28.8**	**+1.3**
	0.4nm,0.6s,baz=232,slow=8.9,SNR=2.8						
	0.4nm,0.6s						
KSRS	**Korea Array**	**76.26**	**316**	LR	LR	23 26 09.2	
	comp=Z,30nm,21.8s,baz=80,slow=31						
TXAR	**Lajitas Array**	**80.83**	**56**	P	**P**	**22 59 03.6**	**+1.3**
	0.3nm,0.8s,baz=200,slow=11,SNR=4.1						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**82.71**	**11**	P	**P**	**22 59 10.5**	**-0.7**
	0.4nm,0.8s,baz=202,slow=3.9,SNR=1.1						
	0.4nm,0.8s						
BRTR	**Keskin Array B**	**146.28**	**321**	PKPbc	**PKPdf**	**23 06 25.7**	**-1.6**
	0.2nm,0.6s,baz=48,slow=2.1,SNR=2.0						
GERES	**GERESS Array B**	**146.37**	**351**	PKPbc	**PKPdf**	**23 06 24.9**	**-2.1**
	0.2nm,0.5s,baz=352,slow=4.0,SNR=1.7						

*IDC **27** 23:13:46.6±9.1, 11°.60N×85°.89W, h50km±64km, mb3.6/6, mbtmp4.0/7, ML4.6/1, MS3.0/2, Error ellipse: s-maj=70.9km s-min=44.7km az=161.0*
*UCR **27** 23:13:49.5±1.2, 11°.52N×86°.33W, h27km±6km, ML4.3, mb4.3(NEIC)*
*INET **27** 23:13:50.7±1.0, 11°.51N×86°.32W, h66km±5km, MW3.6*
*NEIC **27** 23:13:50.4±1.1, 11°.51N±0°.04×86°.30W±0°.02, h72km±8km, mb4.3/21, Error ellipse: s-maj=5.0km s-min=2.9km az=181.0*
*SNET **27** 23:13:50.4±1.0, 11°.56N×86°.32W, h35km±999km, ML4.5*

ISC 27 23:13:49.7±0.8, 11°.51N±0°.03×86°.31W±0°.04, h74km±7km, n112, σ0§78/136, mb4.2/15, 12D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYN	**Apoyeque**	**0.72**	**357**	*eP*	Pn	**23 14 04.8**	**-0.4**
APYN				*eS*	**Sn**	**23 14 16.5**	**-0.2**
COPN	**Copaltepe**	**0.72**	**337**	*eP*	**Pn**	**23 14 05.0**	**-0.2**
HUEN		**0.83**	**9**	*eP*	**Pn**	**23 14 06.7**	**+0.2**
HUEN				*eS*	**Sn**	**23 14 20.0**	**+1.1**
HZTE	**Horizontes, Gu**	**1.05**	**138**	Pn	**Pn**	**23 14 09.2**	**0.0**
HZTE				Sn	**Sn**	**23 14 24.3**	**+0.7**
HZTE	**Horizontes, Gu**	**1.05**	**138**	*eP*	**Pn**	**23 14 09.2**	**0.0**
HZTE	**Horizontes, Gu**	**1.05**	**138**	*eP*	**Pn**	**23 14 09.4**	**+0.2**
HZTE				*eS*	**Sn**	**23 14 24.8**	**+1.1**
CNGN	**Cerro Negro**	**1.06**	**339**		**Pn**	**23 14 09.2**	**-0.1**
CNGN				Sn	**Sn**	**23 14 23.8**	**+0.1**
CNGN	**Cerro Negro**	**1.06**	**339**	*eP*	**Pn**	**23 14 09.4**	**+0.1**
CNGN				*eS*	**Sn**	**23 14 23.7**	**0.0**
GBS3	**Finca Las Img**	**1.10**	**131**	‖*eP*	**Pn**	**23 14 09.3**	**-0.5**
BOAB	**BOACO BROADBAN**	**1.12**	**34**		**Pn**	**23 14 10.2**	**+0.2**
BOAB				Sn	**Sn**	**23 14 25.3**	**+0.1**
BOAB	**BOACO BROADBAN**	**1.12**	**34**	*eP*	**Pn**	**23 14 10.3**	**+0.3**
BOAB				*eS*	**Sn**	**23 14 25.7**	**+0.5**
GB1A	**Boringuen Arri**	**1.12**	**127**	‖*eP*	**Pn**	**23 14 09.8**	**-0.3**
BUEV	**Buena Vista**	**1.13**	**129**	*eP*	**Pn**	**23 14 09.9**	**-0.3**
LAPC	**Finca la Perla**	**1.13**	**131**	*eP*	**Pn**	**23 14 09.7**	**-0.5**
LAPC				*eS*	**Sn**	**23 14 24.8**	**-0.6**
BUAI	**Buenos Aires**	**1.15**	**123**	‖*iP*	**Pn**	**23 14 10.3**	**0.0**
GPS3	**Bodega del ICE**	**1.19**	**129**	‖*eP*	**Pn**	**23 14 10.7**	**-0.2**
ACON	**Acoyapa**	**1.20**	**68**		**Pn**	**23 14 11.1**	**+0.2**
ACON				Sn	**Sn**	**23 14 27.1**	**+0.2**
ACON	**Acoyapa**	**1.20**	**68**	*eP*	**Pn**	**23 14 11.1**	**+0.2**
ACON				*eS*	**Sn**	**23 14 27.3**	**+0.4**
GPS2	**Hotel Rincn d**	**1.20**	**129**	‖*eP*	**Pn**	**23 14 11.1**	**0.0**
GPS2				*eS*	**Sn**	**23 14 28.9**	**+1.8**
BRAN	**Las Pilas**	**1.20**	**358**	*eP*	Pn	23 14 04.7	-6.3
LIM1	**Limonal**	**1.31**	**128**	‖*iP*	**Pn**	**23 14 12.6**	**+0.2**
LIM1				*eS*	**Sn**	**23 14 30.5**	**+1.0**
GUAB	**Guayabo de Bag**	**1.32**	**127**	‖*iP*	**Pn**	**23 14 12.8**	**+0.2**
VMAR	**Armenia, Volca**	**1.35**	**121**	*eP*	**Pn**	**23 14 13.0**	**0.0**
HORNC	**Hornillas**	**1.36**	**125**	‖*eP*	**Pn**	**23 14 13.1**	**-0.1**
HORNC				*eS*	**Sn**	**23 14 31.4**	**+0.7**
COLC	**Colonia**	**1.37**	**128**	‖*eP*	**Pn**	**23 14 13.3**	**+0.1**
COLC				*eS*	**Sn**	**23 14 32.1**	**+1.3**
CRIN	**San Cristobal**	**1.39**	**329**	Pn	**Pn**	**23 14 13.9**	**+0.4**
CRIN				Sn	**Sn**	**23 14 31.6**	**+0.2**
CRIN	**San Cristobal**	**1.39**	**329**	*eP*	**Pn**	**23 14 13.8**	**+0.4**
CRIN				*eS*	**Sn**	**23 14 31.8**	**+0.4**
CUI	**Cuipilapa**	**1.41**	**127**	‖*iP*	**Pn**	**23 14 14.1**	**+0.4**
ORTG	**Ortega, Santa**	**1.41**	**144**		**Pn**	**23 14 14.1**	**+0.3**
ORTG				Sn	**Sn**	**23 14 31.3**	**-0.6**
MATN	**Matagalpa**	**1.46**	**15**		**Pn**	**23 14 15.0**	**+0.5**
MATN				Sn	**Sn**	**23 14 33.1**	**+0.1**
PTEN	**Parque Tenorio**	**1.52**	**121**	‖*iP*	**Pn**	**23 14 15.3**	**+0.2**
PTEN				*eS*	**Sn**	**23 14 36.1**	**+1.7**
ACAL	**Aguas Claras**	**1.52**	**125**	‖*iP*	**Pn**	**23 14 15.5**	**+0.3**
SAJU	**San Juanillo,**	**1.55**	**158**	*eP*	**Pn**	**23 14 15.0**	**-0.5**
VERA	**Finca Concepci**	**1.56**	**115**	*eP*	**Pn**	**23 14 15.6**	**0.0**
JTS	**Las Juntas de**	**1.80**	**132**	Pn	**Pn**	**23 14 18.8**	**-0.1**
JTS	**Las Juntas de**	**1.80**	**132**	*eP*	**Pn**	**23 14 18.7**	**-0.1**
INDI	**Punta indio, G**	**1.81**	**154**	*eP*	**Pn**	**23 14 18.7**	**-0.4**
CEDE	**Laguna Cedeo**	**1.87**	**123**	*eP*	**Pn**	**23 14 20.2**	**+0.4**
CASO	**Castillo**	**1.88**	**125**	*eP*	**Pn**	**23 14 20.2**	**+0.3**
CSGN	**Cosiguina Volc**	**1.90**	**320**	*eP*	**Pn**	**23 14 20.6**	**+0.4**
FORC	**Fortuna**	**1.91**	**123**	*eP*	**Pn**	**23 14 20.6**	**+0.2**
COVE	**Coope Vega, Sa**	**2.03**	**113**	Pn	**Pn**	**23 14 21.5**	**-0.3**
COVE	**Coope Vega, Sa**	**2.03**	**113**	*eP*	**Pn**	**23 14 21.6**	**-0.3**
ESPN	**Las Esperanzas**	**2.08**	**71**	Pn	**Pn**	**23 14 23.3**	**+0.7**
ESPN	**Las Esperanzas**	**2.08**	**71**	*eP*	**Pn**	**23 14 23.5**	**+0.9**
ESPN				*eS*	**Sn**	**23 14 48.7**	**+1.1**
LAFE	**Finca La Fe, P**	**2.18**	**141**	*eP*	**Pn**	**23 14 23.7**	**-0.2**
CNCH	**Conchagua**	**2.30**	**320**	*eP*	**Pn**	**23 14 25.8**	**+0.1**
CNCH				IAML		23 14 59.6	
	comp=Z,3µm,0.4s						
CNCH	**Conchagua**	**2.30**	**320**	*eP*	**Pn**	**23 14 25.8**	**+0.1**
CNCH				IAML		23 14 59.6	
	comp=Z,3µm,0.4s						
JACO	**JACO, Garabito**	**2.45**	**138**		**Pn**	**23 14 28.4**	**+0.9**
JACO	**JACO, Garabito**	**2.45**	**138**	*eP*	**Pn**	**23 14 28.4**	**+0.9**
JACO	**JACO, Garabito**	**2.45**	**138**	*eP*	**Pn**	**23 14 29.0**	**+1.4**
HDC	**Heredia**	**2.62**	**125**		**Pn**	**23 14 30.9**	**+0.8**
HDC	**Heredia**	**2.62**	**125**	*eP*	**Pn**	**23 14 31.0**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.70**	**340**		**Pn**	**23 14 32.4**	**+1.3**
VSM	**San Miguel**	**2.71**	**315**	*eP*	**Pn**	**23 14 31.3**	**0.0**
VSM	**San Miguel**	**2.71**	**315**	*eP*	**Pn**	**23 14 31.3**	**0.0**

PACA	**Pacayal**	**2.77**	**315**	*eP*	**Pn**	**23 14 32.7**	**+0.7**
PACA				*eS*	**Sn**	**23 15 04.7**	**+0.2**
PACA	**Pacayal**	**2.77**	**315**	*eP*	**Pn**	**23 14 32.7**	**+0.7**
PACA				*eS*	**Sn**	**23 15 04.7**	**+0.2**
LCR2	**La Lucha 2**	**2.87**	**128**	*eP*	**Pn**	**23 14 33.2**	**-0.2**
CVTR	**Volcan Turrial**	**2.91**	**120**	Pn	**Pn**	**23 14 34.5**	**+0.3**
RIMA	**Rio Macho**	**2.96**	**126**		**Pn**	**23 14 35.1**	**+0.4**
RIMA	**Rio Macho**	**2.96**	**126**	*eP*	**Pn**	**23 14 35.5**	**+0.8**
CDM	**Cerro de Muert**	**3.17**	**128**	*eP*	**Pn**	**23 14 38.6**	**+0.9**
BATAN	**Batan**	**3.20**	**116**	Pn	**Pn**	**23 14 38.3**	**+0.5**
PEZE	**Perez Zeledon,**	**3.34**	**129**	Pn	**Pn**	**23 14 41.2**	**+1.5**
LFRS	**El Faro**	**3.41**	**308**	*eP*	**Pn**	**23 14 41.1**	**+0.4**
LFRS	**El Faro**	**3.41**	**308**	*eP*	**Pn**	**23 14 41.1**	**+0.4**
P5NO	**Presa 5 de nov**	**3.43**	**316**	*eP*	**Pn**	**23 14 41.4**	**+0.5**
P5NO				*eS*	**Sn**	**23 15 20.4**	**0.0**
SNET	**Serv Nac Est T**	**3.58**	**307**	Pn	**Pn**	**23 14 43.4**	**+0.4**
SRBA	**San Rafael, Bu**	**3.68**	**128**		**Pn**	**23 14 45.2**	**+0.9**
DRK0	**Durika**	**3.75**	**126**	Pn	**Pn**	**23 14 47.3**	**+1.9**
MTO3	**Montecristo**	**4.14**	**314**		**Pn**	**23 14 51.6**	**+0.9**
MTO3	**Montecristo**	**4.14**	**314**	*eP*	**Pn**	**23 14 51.9**	**+1.2**
MTO3				*eS*	**Sn**	**23 15 40.4**	**+2.4**
MTO3	**Montecristo**	**4.14**	**314**	*eP*	**Pn**	**23 14 51.9**	**+1.2**
MTO3				*eS*	**Sn**	**23 15 40.4**	**+2.4**
ESQI	**Esquipulas**	**4.24**	**316**	Pn	**Pn**	**23 14 53.0**	**+1.1**
BRU2	**Volcan**	**4.47**	**127**	Pn	**Pn**	**23 14 55.6**	**+0.5**
CDITO	**Canoas**	**4.47**	**130**	Pn	**Pn**	**23 14 56.2**	**+1.1**
RTAL	**Retalhuleu**	**6.04**	**300**	Pn	**Pn**	**23 15 17.2**	**+0.6**
BCIP	**Isla Barro Col**	**6.78**	**109**	Pn	**Pn**	**23 15 26.6**	**-0.1**
CMIG	**Matias Romero**	**9.99**	**305**	P	**Pn**	**23 16 11.2**	**+0.7**
	comp=Z,5.2nm,0.3s,baz=139,slow=9.3,SNR=48						
	comp=Z,12nm,0.3s						
SDV	**Santo Domingo**	**15.64**	**98**	LR	LR	23 23 29.1	
	comp=Z,40nm,20.3s,baz=322,slow=38						
BAUV	**El Baul**	**18.16**	**96**	P	**P**	**23 17 56.4**	**0.0**
BIRV	**Birongo**	**19.70**	**91**	P	**P**	**23 18 11.7**	**-1.6**
BIRV				IAmb	IAmb	23 18 25.1	
	comp=Z,23nm,1.3s						
CBYP	**Canovanas**	**20.86**	**69**	P	**P**	**23 18 25.4**	**-0.5**
CBYP				IAmb	IAmb	23 18 27.1	
	comp=Z,18nm,1.4s						
152A	**Waverly Hall**	**21.11**	**4**	P	**P**	**23 18 29.1**	**+0.8**
152A				IAmb	IAmb	23 18 32.9	
	comp=Z,13nm,0.8s						
GOGA	**Godfrey**	**21.95**	**6**	P	**P**	**23 18 38.3**	**+1.0**
GOGA				IAmb	IAmb	23 18 41.7	
	comp=Z,16nm,1.4s						
HODGE	**Hodges**	**22.92**	**9**	P	**P**	**23 18 48.3**	**+0.7**
HODGE				IAmb	IAmb	23 18 49.3	
	comp=Z,4.3nm,0.6s						
CPCT	**Cooper Cave**	**23.89**	**4**	P	**P**	**23 18 57.0**	**+0.5**
TXAR	**Lajitas Array**	**24.01**	**320**	P	**P**	**23 18 58.8**	**+1.0**
	comp=Z,4.3nm,0.6s,baz=139,slow=9.3,SNR=65						
TXAR				PcP	**PcP**	**23 22 39.0**	**+0.9**
	comp=

*NEIC **27** 23:16:48.9±2.4, 27.8°S±0.1°×175.6°W±0.1°, h10^km±1km, mb4.2/7, Error ellipse: s-maj=26.0km s-min=9.5km az=330.0*

*IDC **27** 23:16:59.5±5.6, 27.66°S×176.25°W, h69^km±57^km, mb3.6/3, mbtmp3.9/3, ML4.8/1, MS3.2/5, Error ellipse: s-maj=88.3km s-min=37.9km az=150.0*

ISC 27 23:16:52.8±0.7, 27.8°S±0.1°×175.6°W±0.1°, h35^km, n24, σ1^s44/20, mb4.3/7, MS3.1/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.51**	**235**	**P**	**Pn**	**23 17 32.5**	**+1.5**
	322nm,0.3s,baz=318,slow=8.0,SNR=38						
RAO				S	**Sn**	**23 17 59.9**	**-0.5**
	3µm,0.4s,baz=71,slow=23,SNR=19						
NIUE	**Niue**	**10.12**	**32**	Pn	**Pn**	**23 19 15.2**	**-0.5**
URZ	**Urewera**	**12.08**	**209**	LR	LR	23 24 06.6	
	comp=E,68nm,18.8s,baz=31,slow=36						
RAR	**Rarotonga**	**15.81**	**69**	Pn	**Pn**	**23 20 31.1**	**-1.7**
THZ	**Tophouse**	**16.80**	**211**	Pn	**Pn**	**23 20 42.6**	**-2.8**
THZ				IAmb	IAmb	23 20 49.8	
	comp=Z,11nm,1.0s						
DZM	**Mont Dzumac**	**17.27**	**285**	LR	LR	23 26 05.7	
	comp=Z,115nm,18.3s,baz=181,slow=33						
PPT	**Papeete**	**26.02**	**72**	LR	LR	23 31 58.9	
	comp=Z,14nm,19.7s,baz=116,slow=34						
CTA	**Charters Tower**	**35.60**	**274**	LR	LR	23 35 58.1	
	comp=Z,38nm,20.1s,baz=82,slow=32						
AS31	**Alice Springs**	**45.44**	**263**	P	**P**	**23 25 07.3**	**-1.3**
AS31				IAmb	IAmb	23 25 09.3	
	comp=Z,1.8nm,1.4s						
ASAR	**Alice Springs**	**45.44**	**263**	P	**P**	**23 25 07.2**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=92,slow=6.9,SNR=12						
	comp=Z,0.5nm,0.5s						
WR0	**Warramunga Arr**	**46.02**	**268**	P	**P**	**23 25 11.3**	**-1.8**
WR0				IAmb	IAmb	23 25 15.2	
	comp=Z,4.5nm,1.2s						
WRA	**Warramunga Arr**	**46.20**	**268**	P	**P**	**23 25 12.8**	**-1.8**
	comp=Z,0.8nm,0.4s,baz=110,slow=7.0,SNR=20						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**46.20**	**268**	P	**P**	**23 25 12.5**	**-2.1**
QSPA	**South Pole Qui**	**62.29**	**180**	P	**P**	**23 27 12.6**	**+1.4**
QSPA				IAmb	IAmb	23 27 24.0	
	comp=Z,5.0nm,1.4s						
JHJ	**Hachijo jima 2**	**73.94**	**322**	LR	LR	23 56 23.2	
	comp=Z,35nm,21.6s,baz=18,slow=32						
TROLL	**Troll, Antarti**	**80.44**	**179**	P	**P**	**23 29 01.4**	**+0.8**
SNAA	**Sanae**	**80.66**	**178**	P	**P**	**23 29 02.0**	**+0.3**
SNAA				IAmb	IAmb	23 29 02.7	
	comp=Z,6.6nm,1.5s						
VNA3	**Neumayer Olymp**	**80.72**	**175**	P	**P**	**23 29 02.2**	**+0.2**
VNA2	**Neumayer--Watz**	**81.19**	**176**	P	**P**	**23 29 05.1**	**+0.6**
	baz=163,slow=1.0						
PETK	**Petropavlovsk-**	**83.87**	**344**	P	**P**	**23 29 20.4**	**+1.9**
	comp=Z,1.8nm,0.8s,baz=174,slow=6.6,SNR=3.8						
	comp=Z,1.8nm,0.8s						
NB2	**NORSAR Subarra**	**146.46**	**354**	PKP	**PKPab**	**23 36 31.2**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=10,slow=2.9						
NOA	**NORSAR Array B**	**146.46**	**354**	PKPbc	**PKPab**	**23 36 30.9**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=13,slow=4.4,SNR=5.8						
AKASG	**Malin Array Be**	**150.40**	**327**	PKPbc	**PKiKP**	**23 36 41.4**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=52,slow=6.3						
BRTR	**Keskin Array B**	**153.08**	**304**	PKPbc	**PKiKP**	**23 36 47.4**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=150,slow=4.6,SNR=4.2						

IDC 27 23:26:04.3±5.7, 7.07°S×154.99°E, h0^km, mb3.6/4, mbtmp3.7/4, MS2.7/1, Error ellipse: s-maj=169.1km s-min=31.8km az=113.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.44**	**116**	LR	LR	23 29 07.3	
	comp=Z,68nm,18.6s,baz=269,slow=34						
WRA	**Warramunga Arr**	**23.77**	**235**	P	P	23 31 18.6	-0.2
	0.8nm,0.8s,baz=61,slow=9.9,SNR=12						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**26.12**	**229**	P	P	23 31 40.6	+0.3
	0.3nm,0.4s,baz=64,slow=9.6,SNR=4.3						
	0.3nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.90**	**24**	T	T	00 00 24.3	
	baz=204,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.90**	**24**	T	T	00 00 19.4	
	baz=204,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.91**	**24**	T	T	00 00 19.7	
	baz=204						
SONM	**Songino Array**	**69.39**	**327**	P	P	23 37 14.5	+0.3
	0.4nm,0.3s,baz=127,slow=4.3,SNR=1.9						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**83.46**	**319**	P	P	23 38 33.7	-0.2
	1.0nm,0.7s,baz=105,slow=5.5,SNR=11						
	1.0nm,0.7s						

*IDC **27** 23:32:12.3±7.3, 12.40°S×166.90°E, h209^km±66^km, mb3.6/12, mbtmp4.1/12, Error ellipse: s-maj=26.4km s-min=17.8km az=48.0*

*NEIC **27** 23:32:14.0±1.2, 12.5°S±0.1°×167.1°E±0.1°, h224^km±8^km, mb4.3/29, Error ellipse: s-maj=17.7km s-min=12.8km az=213.0*

ISC 27 23:32:13.1±0.5, 12.45°S±0.08°×167.0°E±0.1°, h220^km, n59, σ0^s70/60, mb4.2/26, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**8.29**	**179**	Pn	**Pn**	**23 34 09.9**	**-0.1**
MARNC	**Mare, Loyalty**	**9.04**	**174**	Pn	**Pn**	**23 34 18.1**	**-1.7**
EIDS	**Eidsvold**	**19.78**	**227**	P	**P**	**23 36 28.3**	**+1.4**
EIDS				IAmb	IAmb	23 36 33.1	
	comp=Z,14nm,1.4s						
ARMA	**Armidale**	**22.86**	**216**	P	**P**	**23 36 58.4**	**+0.7**
ARMA				IAmb	IAmb	23 37 01.5	
	comp=Z,16nm,1.4s						
URZ	**Urewera**	**27.24**	**162**	P	**P**	**23 37 37.6**	**+0.7**
	comp=Z,4.8nm,0.8s,baz=333,slow=14,SNR=2.2						
	comp=Z,4.8nm,0.8s						
BKZ	**Black Stump Fm**	**27.91**	**164**	P	**P**	**23 37 43.3**	**+0.4**
CAN	**Canberra**	**28.01**	**213**	P	**P**	**23 37 43.8**	**-0.1**
TUWZ	**Tuamarina**	**29.50**	**169**	P	**P**	**23 37 56.7**	**-0.2**
STKA	**Stephens Creek**	**30.33**	**226**	P	**P**	**23 38 05.3**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=64,slow=10,SNR=4.5						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**30.33**	**226**	P	**P**	**23 38 05.1**	**+0.7**
RPZ	**Rata Peaks**	**31.35**	**174**	P	**P**	**23 38 13.8**	**+0.7**
	comp=Z,9.2nm,0.6s,baz=336,slow=2.9,SNR=7.2						
	comp=Z,9.2nm,0.6s						
TOO	**Toolangi**	**31.57**	**214**	P	**P**	**23 38 15.6**	**+0.5**
WR0	**Warramunga Arr**	**32.03**	**252**	P	**P**	**23 38 18.6**	**-0.8**
WR0				IAmb	IAmb	23 38 43.8	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**32.13**	**253**	P	**P**	**23 38 19.4**	**-0.9**
WB0				IAmb	IAmb	23 38 43.2	
	comp=Z,8.2nm,1.3s						
WRA	**Warramunga Arr**	**32.21**	**252**	P	**P**	**23 38 20.1**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=84,slow=8.7,SNR=20						
	comp=Z,1.1nm,0.5s						
WRA	**Warramunga Arr**	**32.21**	**252**	P	**P**	**23 38 19.6**	**-1.3**
ASAR	**Alice Springs**	**33.32**	**246**	P	**P**	**23 38 29.9**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=69,slow=9.5,SNR=20						
	comp=Z,1.5nm,0.6s						
BBOO	**Buckleboo**	**34.83**	**229**	P	**P**	**23 38 43.5**	**+0.2**
KNRA	**Kununurra**	**37.21**	**260**	P	**P**	**23 39 04.0**	**+0.2**
KNRA				IAmb	IAmb	23 39 11.3	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.25**	**257**	P	**P**	**23 39 29.3**	**+0.4**
FORT	**Forrest**	**40.29**	**237**	P	**P**	**23 39 29.1**	**0.0**
MJAR	**Matsushiro Arr**	**55.78**	**332**	P	**P**	**23 41 27.1**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=179,slow=8.3,SNR=2.3						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**65.12**	**181**	P	**P**	**23 42 30.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=358,slow=8.3,SNR=5.6						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**65.12**	**181**	P	**P**	**23 42 30.6**	**+0.7**
SBA	**Scott Base**	**65.41**	**180**	P	**P**	**23 42 32.4**	**+0.7**
CASY	**Casey**	**65.54**	**202**	P	**P**	**23 42 32.8**	**0.0**
CASY				IAmb	IAmb	23 42 33.1	
	comp=Z,3.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.81**	**294**	P	**P**	**23 43 22.6**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=120,slow=5.0,SNR=7.1						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**73.81**	**294**	P	**P**	**23 43 23.9**	**-0.2**
QSPA	**South Pole Qui**	**77.57**	**180**	P	**P**	**23 43 45.1**	**+0.5**
QSPA				IAmb	IAmb	23 44 09.0	
	comp=Z,5.8nm,1.4s						
J20K	**Nowinta River**	**81.91**	**16**	P	**P**	**23 44 09.2**	**+1.5**
J20K				IAmb	IAmb	23 44 28.1	
	comp=Z,8.1nm,1.4s						
SCM	**Sheep Creek Mo**	**82.21**	**20**	P	**P**	**23 44 09.9**	**+0.5**
N25K	**Chitina, Valde**	**82.99**	**21**	P	**P**	**23 44 13.3**	**-0.2**
N25K				IAmb	IAmb	23 44 29.0	
	comp=Z,4.9nm,1.1s						
DHY	**Denali Highway**	**83.08**	**19**	P	**P**	**23 44 14.3**	**+0.3**
HG4B	**Hotspring**	**83.42**	**33**	P	**P**	**23 44 15.3**	**-0.4**
IMAR	**Indian Mountai**	**83.44**	**15**	P	**P**	**23 44 16.4**	**+0.9**
MAW	**Mawson**	**83.90**	**202**	P	**P**	**23 44 18.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=81,slow=12,SNR=1.9						
	comp=Z,1.0nm,0.7s						
MAW	**Mawson**	**83.90**	**202**	P	**P**	**23 44 18.5**	**+0.6**
CCB	**Clear Creek Bu**	**84.08**	**18**	P	**P**	**23 44 18.5**	**-0.2**
CCB				IAmb	IAmb	23 44 19.1	
	comp=Z,2.9nm,0.6s						
HDA	**Harding Lake**	**84.17**	**18**	P	**P**	**23 44 19.9**	**+0.7**
MDM	**Murphy Dome**	**84.18**	**18**	P	**P**	**23 44 19.2**	**-0.1**
MDM				IAmb	IAmb	23 44 19.8	
	comp=Z,6.5nm,1.2s						
RIDG	**Independent Ri**	**84.37**	**19**	P	**P**	**23 44 21.0**	**+0.7**
RIDG				IAmb	IAmb	23 44 22.4	
	comp=Z,7.1nm,1.3s						
IL31		**84.44**	**18**	P	**P**	**23 44 20.6**	**+0.1**
IL31				IAmb	IAmb	23 44 21.1	
	comp=Z,2.7nm,0.6s						
ILAR	**Eielson Array**	**84.44**	**18**	P	**P**	**23 44 20.4**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=244,slow=5.0,SNR=26						
	comp=Z,2.6nm,0.6s						
ILAR	**Eielson Array**	**84.44**	**18**	P	**P**	**23 44 20.9**	**+0.3**
J25K	**Salcha River,**	**84.80**	**19**	P	**P**	**23 44 22.9**	**+0.4**
J25K				IAmb	IAmb	23 44 23.7	
	comp=Z,4.0nm,0.6s						
SCRK	**Sand Creek**	**84.81**	**20**	P	**P**	**23 44 23.2**	**+0.6**
BELA	**Belgrano 2**	**89.00**	**176**	P	**P**	**23 44 41.9**	**-0.7**
BELA				IAmb	IAmb	23 44 43.4	
	comp=Z,8.4nm,1.5s						
TROLL	**Troll, Antarti**	**95.10**	**185**	P	**P**	**23 45 10.6**	**-0.4**
MKAR	**Makanchi Array**	**95.39**	**317**	P	**P**	**23 45 12.3**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=93,slow=7.0,SNR=12						
	comp=Z,1.2nm,0.7s						
TXAR	**Lajitas Array**	**95.41**	**61**	P	**P**	**23 45 13.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=210,slow=5.2,SNR=2.3						
	comp=Z,0.2nm,0.7s						
SNAA	**Sanae**	**95.80**	**183**	P	**P**	**23 45 13.2**	**-0.9**
VNA3	**Neumayer Olymp**	**96.48**	**181**	P	**P**	**23 45 16.0**	**-1.0**
VNA2	**Neumayer--Watz**	**96.74**	**182**	P	**P**	**23 45 17.4**	**-0.8**
	baz=195,slow=3.0						
ARCES	**ARCESS Array B**	**117.99**	**346**	PKP	**PKPdf**	**23 50 32.8**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=44,slow=2.6,SNR=26						
FINES	**FINESS Array B**	**123.52**	**339**	PKP	**PKPdf**	**23 50 44.3**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=110,slow=3.9,SNR=5.7						
NOA	**NORSAR Array B**	**128.37**	**345**	PKP	**PKPdf**	**23 50 53.4**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=28,slow=2.0,SNR=1.6						
KEST	**Kesra**	**149.28**	**323**	PKPbc	**PKPbc**	**23 51 36.6**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=113,slow=7.7,SNR=6.2						
ESDC	**Sonseca Array**	**151.73**	**345**	PKPbc	**PKPbc**	**23 51 42.5**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=5.0,slow=3.3,SNR=12						
ESDC				PKPab	**PKPab**	**23 51 52.7**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=12,slow=4.3,SNR=9.6						
TORD	**Torodi Ar. Bea**	**165.67**	**274**	PKPab	**PKPab**	**23 52 51.9**	**-0.9**
	comp=Z,14nm,0.3s,baz=96,slow=4.3,SNR=2.3						

*IDC **27** 23:38:30.5±1.9, 5.91°N×128.94°E, h0^km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=90.3km s-min=26.6km az=65.0*

*MAN **27** 23:38:42, 5.26°N×127.12°E, h15^km, Ms3.3*

ISC 27 23:38:34.0±1.4, 5.04°N±0.08°×127.19°E±0.08°, h10^km, n10, σ1^s35/15, mb4.0/4, 6D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.81**	**306**	**i**/**eP**	**Pg**	**23 39 08.4**	**-0.3**
DDMP				*eS*	**Sb**	**23 39 31.3**	**+1.3**
KCP	**Kidapawan**	**2.86**	**313**	**i**/**P**	**Pg**	**23 39 28.9**	**0.0**
KCP				*i* S	**Sg**	**23 40 06.3**	**+0.4**
SKMP	**Bagumbayan, Su**	**3.01**	**299**	**i**/**eP**	**Pb**	**23 39 26.3**	**-1.5**
SKMP				*eS*	**Sn**	**23 39 59.5**	**+1.5**
BIPH	**Bislig**	**3.23**	**345**	**i**/**eP**	**Pg**	**23 39 36.0**	**0.0**
BIPH				*eS*	**Sb**	**23 40 13.7**	**+2.8**
BUKP	**Musuan**	**3.52**	**323**	**i**/**eP**	**Pb**	**23 39 35.5**	**-1.0**
BUKP				*eS*	**Sb**	**23 40 19.4**	**0.0**
GLSP	**General Luna,**	**4.83**	**348**	**i**/**eP**	**Pn**	**23 39 46.9**	**+0.1**
GLSP				*eS*	**Sn**	**23 40 41.9**	**-0.9**
WRA	**Warramunga Arr**	**25.80**	**164**	P	**P**	**23 44 07.3**	**+1.9**
	0.3nm,0.5s,baz=343,slow=10,SNR=6.6						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.63**	**298**	P	P	23 44 59.1	+10
	1.4nm,0.3s,baz=112,slow=7.1,SNR=4.5						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**56.75**	**325**	P	**P**	**23 48 17.6**	**-0.6**
	0.5nm,0.3s,baz=117,slow=8.0,SNR=17						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**59.64**	**333**	P	**P**	**23 48 36.7**	**-1.5**
	0.4nm,0.3s,baz=129,slow=6.8,SNR=2.1						
	0.4nm,0.3s						

*IDC **27** 23:43:53.4±0.8, 29.2°S×61.15°E, h0^km, mb3.8/9, mbtmp3.8/10, ML4.3/1, MS3.4/14, Error ellipse: s-maj=28.3km s-min=21.9km az=73.0*

*NEIC **27** 23:43:56.0±1.4, 29.07°S±0.07°×60.8°E±0.1°, h10^km±1km, mb4.4/7, Error ellipse: s-maj=21.5km s-min=10.7km az=70.0*

ISC 27 23:43:55.4±0.6, 29.15°S±0.10°×61.0°E±0.1°, h10^km, n41, σ1^s30/25, mb4.1/13, MS3.4/14, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.26**	**328**	Pn	**Pn**	**23 46 07.3**	**-1.9**
ROCAM	**Rodrigues Isla**	**9.60**	**14**	Pn	**Pn**	**23 46 13.2**	**-0.5**
VOI	**Vohitsoka**	**14.70**	**296**	Pn	**Pn**	**23 47 24.2**	**+0.6**
ABPO	**Ambohimpanom**	**16.10**	**306**		**Pn**	**23 47 42.5**	**+0.4**
ABPO				IAmb	IAmb	23 47 53.9	
	comp=Z,35nm,1.4s						
OPO	**Ambohidratompo**	**16.42**	**307**	Pn	**Pn**	**23 47 46.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=74,slow=15,SNR=2.3						
OPO				Sn	Sn	23 50 36.2	-12
	comp=Z,0.2nm,0.3s,baz=236,slow=19,SNR=7.4						
	comp=Z,2.6nm,0.4s						
BOSA	**Boshof**	**31.22**	**262**	LR	LR	00 01 01.3	
	comp=Z,65nm,19.1s,baz=104,slow=33						
LBTB	**Lobatse**	**31.70**	**269**	LR	LR	00 00 48.0	
	comp=Z,46nm,19.6s,baz=102,slow=32						
LSZ	**Lusaka**	**33.23**	**287**	LR	LR	00 01 42.3	
	comp=Z,61nm,20.3s,baz=154,slow=32						
SUR	**Sutherland**	**34.53**	**254**	LR	LR	00 02 23.8	
	comp=Z,78nm,19.4s,baz=146,slow=32						
KMBO	**Kilima Mbogo**	**35.90**	**317**	LR	LR	00 03 01.4	
	comp=Z,67nm,19.3s,baz=118,slow=32						
MAW	**Mawson**	**38.50**	**179**	LR	LR	00 03 26.4	
	comp=Z,58nm,18.1s,baz=12,slow=30						
MBAR	**Mbarara**	**40.48**	**309**	LR	LR	00 06 50.3	
	comp=Z,41nm,19.9s,baz=126,slow=34						
ATD	**Arta Tunnel**	**44.07**	**334**	LR	LR	00 06 31.2	
	comp=Z,50nm,19.4s,baz=188,slow=31						
H01W2	**Cape Leeuwin H**	**44.99**	**112**	T	T	00 39 49.9	
	baz=261,slow=74,SNR=5.7						
H01W3	**Cape Leeuwin H**	**44.99**	**111**	T	T	00 39 47.5	
	baz=261,slow=74,SNR=5.9						
H01W1	**Cape Leeuwin H**	**45.01**	**112**	T	T	00 39 46.9	
	baz=261,slow=74,SNR=5.5						
WSAR	**Wadi Sarin**	**52.14**	**357**	LR	LR	00 11 46.6	
	comp=Z,45nm,18.7s,baz=212,slow=32						
SNAA	**Sanae**	**54.42**	**200**	P	**P**	**23 53 22.2**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=25,slow=14,SNR=2.0						
	comp=Z,0.6nm,0.9s						
SNAA	**Sanae**	**54.42**	**200**	P	**P**	**23 53 23.0**	**+0.6**
SNAA				IAmb	IAmb	23 53 45.3	
	comp=Z,6.6nm,1.4s						
CMAR	**Chiang Mai Arr**	**59.86**	**42**	P	**P**	**23 54 01.9**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=229,slow=6.8,SNR=1.3						
	comp=Z,1.1nm,0.3s						
QSPA	**South Pole Qui**	**61.00**	**180**	P	**P**	**23 54 06.5**	**-2.4**
	comp=Z,1.7nm,1.0s,baz=266,slow=3.9,SNR=3.4						
	comp=Z,1.7nm,1.0s						
QSPA	**South Pole Qui**	**61.00**	**180**	P	**P**	**23 54 09.5**	**+0.6**
VNDA	**Vanda**	**64.08**	**166**	P	**P**	**23 54 29.8**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=191,slow=6.6,SNR=2.1						
VNDA				LR	LR	00 19 14.5	
	comp=Z,45nm,20.4s,baz=260,slow=33						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**64.59**	**104**	P	**P**	**23 54 31.4**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=239,slow=6.6,SNR=6.6						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**64.59**	**104**	P	**P**	**23 54 36.4**	**+3.0**
WRA	**Warramunga Arr**	**66.42**	**100**	P	**P**	**23 54 42.9**	**-2.3**
	comp=Z,1.0nm,0.9s,baz=250,slow=6.0,SNR=3.5						
	comp=Z,1.0nm,0.9s						
GURO	**Guroymak-BITLI**	**69.64**	**344**	P	**P**	**23 55 05.7**	**+0.6**
GURO				IAmb	IAmb	23 55 10.1	
	comp=Z,3.2nm,1.1s						
GNI	**Garni**	**70.58**	**347**	LR	LR	00 23 16.5	
	comp=Z,35nm,21.4s,baz=172,slow=33						
TOA0	**Torodi Ar. Sit**	**71.00**	**298**	P	**P**	**23 55 11.4**	**-2.3**
TOA0				IAmb	IAmb	23 55 21.6	
	comp=Z,3.7nm,1.2s						
TORD	**Torodi Ar. Bea**	**71.00**	**298**	P	**P**	**23 55 14.4**	**+0.7**
	comp=Z,14nm,0.3s,baz=108,slow=4.3,SNR=2.6						
KK31	**Karatay Array**	**72.43**	**7**	P	**P**	**23 55 21.9**	**+0.2**
KK31				IAmb	IAmb	23 55 25.5	
	comp=Z,2.4nm,1.2s						
KKAR	**Karatay Array**	**72.43**	**7**	P	**P**	**23 55 22.1**	**+0.4**
BRTR	**Keskin Array B**	**73.10**	**338**	P	**P**	**23 55 26.0**	**0.0**
	comp=Z,0.6nm,0.9s,baz=104,slow=6.1,SNR=4.3						
	comp=Z,0.6nm,0.9s						
KBZ	**Khabaz**	**74.40**	**346**	LR	LR	00 26 18.6	
	comp=Z,23nm,21.6s,baz=155,slow=34						
MK31	**Makanchi Array**	**78.01**	**15**	P	**P**	**23 55 54.8**	**+1.0**
MKAR	**Makanchi Array**	**78.01**	**15**	P	**P**	**23 55 53.9**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=197,slow=3.8,SNR=4.5						
	comp=Z,0.5nm,0.8s						
ABKAR	**Akbulak array**	**78.06**	**359**	P	**P**	**23 55 54.0**	**+0.1**
AKTO	**Aktyubinsk**	**79.28**	**358**	LR	LR	00 26 53.8	
	comp=Z,19nm,20.9s,baz=199,slow=32						
BELG	**Belogornoye**	**82.04**	**352**	LR	LR	00 33 09.8	
	comp=Z,13nm,18.8s,baz=154,slow=36						
ZALV	**Zalesovo Beam**	**85.29**	**14**	P	**P**	**23 56 32.5**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=254,slow=5.2,SNR=1.8						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**85.29**	**14**	P	**P**	**23 56 31.9**	**-0.1**

*ISK **27** 23:50:57.2, 39.48°N×26.05°E, h8^km±1km, ML1.6/4*

*DDA **27** 23:50:58.2±0.0, 39.52°N×26.08°E, h2^km, ML1.1*

ISC 27 23:50:58.0±1.1, 39.49°N±0.03°×26.05°E±0.04°, h7^km±7^km, n9, σ0^s68/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.07**	**79**	P	**Pg**	**23 50 59.7**	**-0.1**
KOCA				S	**Sg**	**23 51 00.9**	**-0.2**
KOCA				*i* AML	AML	23 51 01.0	
	comp=E,314nm,0.2s						
KOCA				*i* AML	AML	23 51 01.0	
	comp=N,368nm,0.6s						
GPNR	**Gulpinar-Canak**	**0.07**	**116**	PG	**Pg**	**23 50 59.6**	**-0.2**
GPNR				SG	**Sg**	**23 51 01.1**	**0.0**
SIGR	**SIGRI**	**0.31**	**208**	PG	**Pg**	**23 51 03.9**	**-0.2**
SIGR				SG	**Sg**	**23 51 08.3**	**0.0**
BOZC	**Bozcaada**	**0.35**	**1**	PG	**Pg**	**23 51 04.9**	**0.0**
BOZC				SG	**Sg**	**23 51 10.3**	**+0.7**
BOZC	**Bozcaada**	**0.35**	**1**	P	**Pg**	**23 51 04.9**	**0.0**
BOZC				*i* AML	AML	23 51 10.0	
	comp=E,28nm,0.4s						
BOZC				*i* AML	AML	23 51 10.0	
	comp=N,21nm,0.3s						
BOZC				S	**Sg**	**23 51 10.4**	**+0.8**
EZN	**Ezine**	**0.40**	**32**	PG	**Pg**	**23 51 05.7**	**-0.1**
EZN				SG	**Sb**	**23 51 11.8**	**-2.0**
BAYC	**CANAKKALE_Bayr**	**0.46**	**57**	P	**Pg**	**23 51 06.8**	**-0.1**
BAYC				*i* AML	AML	23 51 13.0	
	comp=N,13nm,0.2s						
BAYC				S	**Sg**	**23 51 13.2**	**+0.3**
BAYC				*i* AML	AML	23 51 18.0	
	comp=E,11nm,0.1s						
BUHA	**Balikesir, Bur**	**0.80**	**89**	P	**Pg**	**23 51 13.6**	**+0.4**
BUHA				S	**Sn**	**23 51 27.3**	**-0.6**
BUHA				*i* AML	AML	23 51 28.0	
	comp=N,16nm,0.9s						
BUHA				*i* AML	AML	23 51 28.0	
	comp=E,9.2nm,0.4s						
ZEDA	**zmir-Bergama**	**0.95**	**123**	P	**Pb**	**23 51 17.6**	**+0.8**
ZEDA				S	**Sb**	**23 51 29.8**	**+0.1**
ZEDA				*i* AML	AML	23 51 32.0	
	comp=E,11nm,0.4s						
ZEDA				*i* AML	AML	23 51 32.

RM33					AML	AML			
	comp=E,24750µm,0.4s								
RM33					AML	AML			
	comp=N,19500µm,1.3s								
RM33					AML	AML			
	comp=E,24800µm,0.4s								
RM33					AML	AML			
	comp=E,25150µm,0.4s								
ARRO	**Arrone**	**0.36**	**231**		P	Pg	23 53 02.9	+0.4	
ARRO					S	Sb	23 53 09.1	-0.7	
TERO	**Teramo**	**0.39**	**118**	⇑	P	Pg	23 53 03.4	+0.4	
TERO					AML	AML			
	comp=E,7980µm,0.8s								
TERO					AML	AML			
	comp=N,10315µm,0.7s								
TERO					AML	AML			
	comp=N,12250µm,0.7s								
TERO					AML	AML			
	comp=E,8980µm,0.7s								
TERO					AML	AML			
	comp=E,7975µm,0.8s								
TERO					AML	AML			
	comp=N,10330µm,0.7s								
OFFI	**Offida**	**0.42**	**72**	⇑	P	Pb	23 53 05.0	0.0	
OFFI					AML	AML			
	comp=E,7535µm,0.6s								
OFFI					AML	AML			
	comp=N,8170µm,0.5s								
ASSB	**Assisi San Ben**	**0.43**	**304**	⇑	P	Pg	23 53 04.2	+0.4	
ASSB					S	Sb	23 53 10.9	-0.9	
ASSB					AML	AML			
	comp=N,1084µm,0.8s								
ASSB					AML	AML			
	comp=E,1290µm,1.6s								
SNTG	**Esanatoglia**	**0.47**	**342**		P	Pg	23 53 05.0	+0.3	
SNTG					S	Sb	23 53 12.4	-0.7	
SNTG					AML	AML			
	comp=E,84µm,1.2s								
SNTG					AML	AML			
	comp=N,131µm,1.5s								
SNTG					AML	AML			
	comp=E,368µm,0.4s								
SNTG					AML	AML			
	comp=N,488µm,1.1s								
EL6	**Elcito**	**0.52**	**357**		P	Pg	23 53 05.9	+0.3	
EL6					S	Sb	23 53 14.5	-0.1	
ATCC	**AVT- Casa Cast**	**0.53**	**316**	⇓	P	Pg	23 53 05.5	-0.2	
ATCC					AML	AML			
	comp=E,135µm,0.4s								
ATCC					AML	AML			
	comp=N,150µm,1.2s								
ATCC					AML	AML			
	comp=N,958µm,0.5s								
ATCC					AML	AML			
	comp=E,1510µm,0.5s								
FIAM	**Fiamignano**	**0.54**	**182**	⇓	P	Pg	23 53 06.5	+0.6	
FIAM					AML	AML			
	comp=E,1980µm,1.0s								
FIAM					AML	AML			
	comp=N,1350µm,0.9s								
FOSV	**Fossato di Vic**	**0.56**	**330**		P	Pg	23 53 06.6	+0.3	
FOSV					S	Sb	23 53 15.4	-0.3	
CING	**Cingoli**	**0.57**	**4**		P	Pg	23 53 07.0	+0.5	
CING					AML	AML			
	comp=N,902µm,0.4s								
CING					AML	AML			
	comp=E,1006µm,0.5s								
PP3	**Marolino**	**0.67**	**31**	⇓	P	Pb	23 53 09.0	-0.2	
PP3					AML	AML			
	comp=N,1610µm,0.8s								
PP3					AML	AML			
	comp=N,1710µm,0.4s								
PP3					AML	AML			
	comp=E,2925µm,0.6s								
PP3					AML	AML			
	comp=E,2985µm,0.6s								
SSFR	**Montelago di S**	**0.68**	**337**		P	Pg	23 53 09.0	+0.4	
SSFR					S	Sb	23 53 19.3	+0.1	
SSFR					AML	AML			
	comp=E,732µm,1.1s								
SSFR					AML	AML			
	comp=N,746µm,1.3s								
SSFR					AML	AML			
	comp=E,797µm,0.2s								
SSFR					AML	AML			
	comp=N,658µm,0.3s								
ARVD	**Arcevia**	**0.71**	**348**	⇓	P	Pg	23 53 09.3	+0.3	
ARVD					S	Sb	23 53 21.0	+1.2	
ARVD					AML	AML			
	comp=E,526µm,0.7s								
ARVD					AML	AML			
	comp=N,448µm,0.8s								
PIEI	**Pieia**	**0.85**	**329**		P	Pb	23 53 12.3	-0.2	
PIEI					S	Sn	23 53 26.0	-0.4	
PIEI					AML	AML			
	comp=E,402µm,0.4s								
PIEI					AML	AML			
	comp=N,441µm,1.4s								
FSSB	**Fossombrone**	**0.93**	**343**	⇓	P	Pg	23 53 13.4	+0.1	
FSSB					AML	AML			
	comp=E,1285µm,0.4s								
FSSB					AML	AML			
	comp=N,1235µm,0.4s								
GIUL	**Giuliano Di Ro**	**1.25**	**176**		S	Sn	23 53 38.0	+1.9	

*ROM **27** 23:53:20.5±0.1, 42°.620N±0°.001×13°.304E±0°.002, h11km, ML2.9/40, Error ellipse: s-maj=0.7km s-min=0.2km az=345.0*
*BEO **27** 23:53:23.8±0.8, 42°.66N×13°.48E, h0km, ML3.0/6*
*IDC **27** 23:53:24.6±2.6, 43°.17N×10°.66E, h0km, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=150.8km s-min=21.5km az=106.0*
*PDG **27** 23:53:24.2±0.1, 42°.38N×13°.61E, h11km±11km, ML3.2/10, Error ellipse: s-maj=4.5km s-min=71.3km az=0.0*
*PRU **27** 23:53:25.3±0.0, 42°.79N×13°.85E, h0km*
ISC 27 23:53:21.0±0.8, 42°.63N±0°.02×13°.29E±0°.02, h10km±5km, n156, σ1§45/213, 38C-31D, Central Italy

Code	Station Name	Δ°	AZ°		Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.12**	**136**		**P**	**Pg**	**23 53 23.9**	**-0.1**
CAMP					S	**Sg**	**23 53 26.1**	**0.0**
CAMP					AML	AML		
	comp=E,14700µm,0.7s							
CAMP					AML	AML		
	comp=N,8080µm,0.3s							
RM33	**Pellescritta (**	**0.13**	**206**	⇑	**P**	**Pg**	**23 53 24.2**	**+0.1**
RM33					S	**Sg**	**23 53 26.6**	**+0.4**
RM33					AML	AML		
	comp=N,19850µm,1.3s							
RM33					AML	AML		
	comp=E,24800µm,0.4s							
RM33					AML	AML		
	comp=N,19500µm,1.3s							
RM33					AML	AML		
	comp=N,19850µm,1.3s							
RM33					AML	AML		
	comp=E,24750µm,0.4s							
RM33					AML	AML		
	comp=N,19800µm,1.3s							
RM33					AML	AML		
	comp=E,25150µm,0.4s							
T1243	**Rocca Santa Ma**	**0.14**	**58**	⇑	**P**	**Pg**	**23 53 24.1**	**-0.1**
T1243					S	**Sg**	**23 53 26.5**	**+0.1**
T1243					AML	AML		
	comp=N,22550µm,0.3s							
T1243					AML	AML		
	comp=N,22550µm,0.3s							
T1243					AML	AML		
	comp=N,22500µm,0.3s							
T1243					AML	AML		
	comp=N,22500µm,0.3s							
T1243					AML	AML		
	comp=E,26700µm,0.3s							
T1243					AML	AML		
	comp=E,27050µm,0.3s							
LNSS	**Leonessa**	**0.19**	**263**		**P**	**Pg**	**23 53 25.2**	**+0.2**
LNSS					S	**Sg**	**23 53 28.5**	**+0.8**
LNSS					AML	AML		
	comp=E,9140µm,0.4s							
LNSS					AML	AML		
	comp=N,7095µm,0.3s							
TERO	**Teramo**	**0.23**	**90**		**P**	**Pg**	**23 53 25.6**	**-0.2**
TERO					S	**Sg**	**23 53 29.2**	**+0.3**
TERO					AML	AML		
	comp=N,10340µm,0.7s							
TERO					AML	AML		
	comp=E,8975µm,0.7s							
TERO					AML	AML		
	comp=N,10345µm,0.7s							
TERO					AML	AML		
	comp=E,8980µm,0.7s							
TERO					AML	AML		
	comp=N,12250µm,0.7s							
TERO					AML	AML		
	comp=E,7980µm,0.8s							
TERO					AML	AML		
	comp=N,10315µm,0.7s							
TERO					AML	AML		
	comp=N,10330µm,0.7s							
TERO					AML	AML		
	comp=E,7975µm,0.8s							
NRCA	**Norcia**	**0.25**	**328**		**P**	**Pg**	**23 53 26.2**	**+0.2**
NRCA					S	**Sg**	**23 53 29.9**	**+0.5**
NRCA					AML	AML		
	comp=E,12100µm,0.1s							
NRCA					AML	AML		
	comp=E,13800µm,0.1s							
NRCA					AML	AML		
	comp=N,8035µm,0.1s							
NRCA					AML	AML		
	comp=N,7375µm,0.1s							
GIGS	**Gran Sasso**	**0.27**	**130**	⇑	**P**	**Pg**	**23 53 26.1**	**-0.3**
GIGS					S	**Sg**	**23 53 29.9**	**-0.2**
GIGS					AML	AML		
	comp=N,1465µm,1.2s							
GIGS					AML	AML		
	comp=E,1805µm,0.7s							
MMO1	**Montemonaco**	**0.28**	**5**	⇑	**P**	**Pg**	**23 53 26.7**	**+0.1**
MMO1					S	**Sg**	**23 53 31.1**	**+0.8**
MMO1					AML	AML		
	comp=E,5140µm,0.7s							
MMO1					AML	AML		
	comp=E,5145µm,0.7s							
MMO1					AML	AML		
	comp=N,4310µm,0.3s							
MC2	**Monte Cornacci**	**0.30**	**346**		**P**	**Pg**	**23 53 27.2**	**+0.2**
MC2					S	**Sb**	**23 53 32.3**	**-1.3**
MC2					AML	AML		
	comp=E,1625µm,1.5s							
MC2					AML	AML		
	comp=N,1580µm,0.6s							
FIAM	**Fiamignano**	**0.38**	**200**	⇑	**P**	**Pg**	**23 53 28.3**	**-0.2**
FIAM					S	**Sg**	**23 53 33.5**	**0.0**
FIAM					AML	AML		
	comp=E,1980µm,1.0s							
FIAM					AML	AML		
	comp=N,1350µm,0.9s							
ARRO	**Arrone**	**0.39**	**263**	⇑	**P**	**Pg**	**23 53 28.6**	**0.0**
ARRO					AML	AML		
	comp=E,1230µm,1.2s							
ARRO					AML	AML		
	comp=N,1305µm,0.7s							
FAGN	**Fagnano**	**0.42**	**149**		**P**	**Pg**	**23 53 29.0**	**-0.2**
FAGN					S	**Sb**	**23 53 35.6**	**-1.4**
FAGN					AML	AML		
	comp=E,5495µm,1.0s							
FAGN					AML	AML		
	comp=N,5155µm,0.3s							
OFFI	**Offida**	**0.42**	**43**	⇑	**P**	**Pb**	**23 53 30.1**	**-0.5**
OFFI					AML	AML		
	comp=E,7535µm,0.6s							
OFFI					AML	AML		
	comp=N,8170µm,0.5s							
FDMO	**Fiordimonte**	**0.44**	**340**		**P**	**Pg**	**23 53 29.7**	**+0.2**
FDMO					S	**Sb**	**23 53 36.4**	**-1.1**
FDMO					AML	AML		
	comp=E,1056µm,0.9s							
FDMO					AML	AML		
	comp=N,1166µm,0.2s							
FDMO					AML	AML		
	comp=E,1056µm,0.9s							
FDMO					AML	AML		
	comp=N,1166µm,0.2s							
VCEL	**Villa Celiera**	**0.47**	**119**		**P**	**Pb**	**23 53 30.1**	**-1.3**
VCEL					S	**Sb**	**23 53 39.0**	**+0.6**
VCEL					AML	AML		
	comp=E,8505µm,0.9s							
VCEL					AML	AML		
	comp=N,8270µm,0.3s							
VCEL					AML	AML		
	comp=E,8510µm,0.9s							
CSP1	**Cessapalombo**	**0.47**	**352**		**P**	**Pg**	**23 53 30.1**	**-0.1**
CSP1					S	**Sb**	**23 53 37.5**	**-1.1**
CSP1					AML	AML		
	comp=E,1654µm,0.4s							
CSP1					AML	AML		
	comp=N,2050µm,0.3s							
CSP1					AML	AML		
	comp=E,1653µm,0.4s							
CSP1					AML	AML		
	comp=N,2045µm,0.3s							
TRTR	**Tortoreto Alta**	**0.49**	**68**	⇑	**P**	**Pb**	**23 53 31.6**	**-0.1**
TRTR					S	**Sb**	**23 53 42.0**	**+2.9**
TRTR					AML	AML		
	comp=E,6095µm,0.4s							
TRTR					AML	AML		
	comp=N,3840µm,0.3s							
CESX	**Cesi**	**0.53**	**269**	⇑	**P**	**Pg**	**23 53 30.8**	**-0.4**
CESX					AML	AML		
	comp=N,1545µm,0.4s							
CESX					AML	AML		
	comp=E,1365µm,0.2s							
MNTP	**Montappone**	**0.53**	**14**		**P**	**Pb**	**23 53 31.8**	**-0.6**
MNTP					AML	AML		
	comp=E,7555µm,0.3s							
MNTP					AML	AML		
	comp=N,4225µm,0.2s							
MNTP					AML	AML		
	comp=E,7555µm,0.3s							
MNTP					AML	AML		
	comp=N,4230µm,0.2s							
T0110	**Collepietro**	**0.54**	**138**	⇓	**P**	**Pg**	**23 53 30.9**	**-0.5**
T0110					S	**Sb**	**23 53 40.0**	**-0.4**
T0110					AML	AML		
	comp=E,3525µm,1.0s							
T0110					AML	AML		
	comp=N,3090µm,1.6s							
PTQR	**Pietraquaria**	**0.61**	**172**	⇑	**P**	**Pg**	**23 53 32.0**	**-0.8**
PTQR					AML	AML		
	comp=E,439µm,0.8s							
PTQR					AML	AML		
	comp=N,371µm,0.3s							
ASSB	**Assisi San Ben**	**0.62**	**312**	⇓	**P**	**Pg**	**23 53 32.9**	**-0.2**
ASSB					S	**Sb**	**23 53 44.0**	**+1.1**
ASSB					AML	AML		
	comp=N,1084µm,0.8s							
ASSB					AML	AML		
	comp=E,1290µm,1.6s							
SNTG	**Esanatoglia**	**0.68**	**338**		**P**	**Pg**	**23 53 33.8**	**-0.4**
SNTG					AML	AML		
	comp=N,488µm,1.1s							
SNTG					AML	AML		
	comp=E,368µm,0.4s							
SRES	**S.Oreste - Sor**	**0.70**	**236**	⇓	**P**	**Pg**	**23 53 34.1**	**-0.3**
SRES					AML	AML		
	comp=E,512µm,0.4s							
SRES					AML	AML		
	comp=N,499µm,0.4s							
CERT	**Cerreto**	**0.71**	**199**	⇓	**P**	**Pg**	**23 53 34.0**	**-0.7**
CERT					AML	AML		
	comp=N,913µm,0.4s							
CERT					AML	AML		
	comp=N,912µm,0.4s							
CERT					AML	AML		
	comp=E,1570µm,0.5s							
EL6	**Elcito**	**0.72**	**349**	⇑	**P**	**Pg**	**23 53 34.5**	**-0.3**
EL6					S	**Sn**	**23 53 47.0**	**-1.5**
EL6					AML	AML		
	comp=E,1200µm,0.4s							
EL6					AML	AML		
	comp=N,1250µm,0.3s							
MTCE	**Montecelio**	**0.73**	**214**	⇑	**P**	**Pg**	**23 53 34.0**	**-0.9**
MTCE					AML	AML		
	comp=N,743µm,0.5s							
MTCE					AML	AML		
	comp=E,1820µm,0.5s							
ATCC	**AVT- Casa Cast**	**0.74**	**320**	⇑	**P**	**Pg**	**23 53 34.9**	**-0.3**
ATCC					AML	AML		
	comp=N,958µm,0.5s							
ATCC					AML	AML		
	comp=E,1510µm,0.5s							
ATCC					AML	AML		
	comp=N,958µm,0.5s							
CING	**Cingoli**	**0.75**	**355**	⇑	**P**	**Pg**	**23 53 35.1**	**-0.4**
CING					AML	AML		
	comp=E,1006µm,0.5s							
CING					AML	AML		
	comp=N,902µm,0.4s							
INTR	**Introdacqua**	**0.76**	**143**	⇓	**P**	**Pg**	**23 53 34.7**	**-1.0**
INTR					AML	AML		
	comp=E,573nm,0.6s							
INTR					AML	AML		
	comp=N,716nm,0.5s							
INTR					AML	AML		
	comp=E,564µm,0.6s							
INTR					AML	AML		
	comp=N,1058µm,0.5s							
FOSV	**Fossato di Vic**	**0.77**	**330**	⇓	**P**	**Pg**	**23 53 35.7**	**-0.2**
FOSV					S	**Sn**	**23 53 49.0**	**-0.8**
PP3	**Marolino**	**0.79**	**17**	⇑	**P**	**Pb**	**23 53 36.7**	**-0.1**
PP3					S	**Sn**	**23 53 50.0**	**0.0**
PP3					AML	AML		
	comp=E,2985µm,0.6s							
PP3					AML	AML		
	comp=N,1705µm,0.4s							
PP3					AML	AML		
	comp=N,1610µm,0.8s							
PP3					AML	AML		
	comp=E,2925µm,0.6s							
PP3					AML	AML		
	comp=N,1710µm,0.4s							
VVLD	**Villa Vallelon**	**0.79**	**162**	⇓	**P**	**Pb**	**23 53 36.0**	**-0.9**
VVLD					AML	AML		
	comp=E,348µm,0.4s							
VVLD					AML	AML		
	comp=N,548µm,0.4s							
VVLD					AML	AML		
	comp=E,348µm,0.4s							
LPEL	**Lama dei Pelig**	**0.88**	**131**		**P**	**Pg**	**23 53 37.2**	**-0.6**
LPEL					S	**Sn**	**23 53 51.0**	**-1.3**
LPEL					AML	AML		
	comp=N,1048µm,1.6s							
LPEL					AML	AML		
	comp=E,1098µm,0.4s							
SSFR	**Montelago di S**	**0.89**	**335**	⇑	**P**	**Pb**	**23 53 38.1**	**-0.5**
SSFR					AML	AML		
	comp=E,732µm,1.1s							
SSFR					AML	AML		
	comp=N,746µm,1.3s							
SSFR					AML	AML		
	comp=E,797µm,0.2s							
SSFR					AML	AML		
	comp=N,658µm,0.3s							
ATTE	**AVT- Monte Tez**	**0.90**	**310**	⇓	**P**	**Pg**	**23 53 37.9**	**-0.3**
ATTE					AML	AML		
	comp=N,424µm,0.6s							
ATTE					AML	AML		
	comp=E,578µm,0.7s							
ATTE					AML	AML		
	comp=N,424µm,0.6s							
ARVD	**Arcevia**	**0.91**	**344**	⇓	**P**	**Pg**	**23 53 35.7**	**-2.8**
ARVD					AML	AML		
	comp=N,448µm,0.8s							
ARVD					AML	AML		
	comp=E,526µm,0.7s							
MGAB	**Montegabbione**	**0.92**	**289**	⇓	**P**	**Pg**	**23 53 38.4**	**-0.2**
MGAB					AML	AML		
	comp=E,1470µm,0.5s							
MGAB					AML	AML		
	comp=N,1080µm,0.6s							
MGAB					AML	AML		
	comp=N,1115µm,0.6s							
MGAB					AML	AML		
	comp=E,1230µm,0.5s							
RMP	**Rome, Mte Porz**	**0.92**	**208**	⇓	**P**	**Pn**	**23 53 40.6**	**+0.5**
RMP					AML	AML		
	comp=N,1042µm,0.7s							
RMP					AML	AML		
	comp=E,1080µm,0.9s							
VIVA	**Pratoni del Vi**	**0.96**	**204**	⇑	**P**	**Pn**	**23 53 41.2**	**+0.7**
VIVA					AML	AML		
	comp=E,2125µm,0.5s							
VIVA					AML	AML		
	comp=N,1720µm,0.4s							
MA9	**Marino**	**0.97**	**209**	⇓	**P**	**Pn**	**23 53 40.0**	**-0.7**
MA9					AML	AML		
	comp=E,1395µm,0.5s							
MA9					AML	AML		
	comp=N,1250µm,0.6s							
FRON	**Frontone**	**0.98**	**335**	⇑	**P**	**Pb**	**23 53 39.7**	**-0.4**
FRON					AML	AML		
	comp=N,640µm,1.0s							
FRON					AML	AML		
	comp=E,446µm,0.8s							
ATVO	**AVT- Monte Val**	**1.00**	**320**	⇑	**P**	**Pg**	**23 53 39.8**	**-0.4**
ATVO					AML	AML		
	comp=E,492µm,0.5s							
ATVO					AML	AML		
	comp=N,340µm,0.8s							
COR1	**Corinaldo**	**1.03**	**348**	⇓	**P**	**Pn**	**23 53 41.2**	**-0.3**
COR1					AML	AML		
	comp=E,582µm,1.6s							
COR1					AML	AML		
	comp=N,735µm,0.7s							
ATMI	**Monte Miggiano**	**1.03**	**314**	⇓	**P**	**Pn**	**23 53 41.5**	**-0.1**
ATMI					AML	AML		
	comp=E,1190µm,0.4s							
ATMI					AML	AML		
	comp=N,1134µm,0.9s							
SACS	**San Casciano d**	**1.04**	**283**		**P**	**Pg**	**23 53 40.4**	**-0.6**
SACS					AML	AML		
	comp=E,404µm,0.5s							
SACS					AML	AML		
	comp=N,492µm,0.8s							
ATPI	**Pietralunga -**	**1.05**	**322**	⇑	**P**	**Pg**	**23 53 41.1**	**-0.1**
ATPI					AML	AML		
	comp=E,416µm,0.7s							
ATPI					AML	AML		
	comp=N,377µm,0.5s							
PIEI	**Pieia**	**1.07**	**329**	⇑	**P**	**Pn**	**23 53 41.4**	**-0.6**
PIEI					AML	AML		
	comp=E,402µm,0.4s							
PIEI					AML	AML		
	comp=N,441µm,1.4s							
MPAG	**Monte Paganucc**	**1.08**	**339**	⇑	**P**	**Pb**	**23 53 41.2**	**-0.5**
MPAG					AML	AML		
	comp=N,438µm,0.5s							
MPAG					AML	AML		
	comp=E,392µm,0.6s							
TOLF	**Tolfa**	**1.11**	**240**	⇓	**P**	**Pb**	**23 53 41.4**	**-0.8**
TOLF					AML	AML		
	comp=E,386µm,0.4s							
TOLF					AML	AML		
	comp=N,456µm,0.8s							
NARO	**Abbazia di Nar**	**1.11**	**332**	⇑	**P**	**Pn**	**23 53 42.9**	**+0.2**
NARO					AML	AML		
	comp=E,384µm,0.6s							
NARO					AML	AML		
	comp=N,242µm,0.6s							
FSSB	**Fossombrone**	**1.13**	**341**	⇑	**P**	**Pb**	**23 53 42.3**	**-0.4**
FSSB					AML	AML		
	comp=N,1235µm,0.4s							
FSSB					AML	AML		
	comp=E,1285µm,0.4s							
CERA	**Filignano**	**1.16**	**152**	⇓	**P**	**Pg**	**23 53 45.5**	**+2.2**
CERA					AML	AML		
	comp=N,318µm,0.5s							
CERA					AML	AML		
	comp=E,458µm,0.8s							
SF04	**Casetta**	**1.22**	**280**	⇑	**P**	**Pg**	**23 53 44.2**	**-0.2**
TRIV	**Trivento**	**1.27**	**132**	⇓	**P**	**Pg**	**23 53 46.7**	**+1.4**
TRIV					AML	AML		
	comp=N,262µm,1.0s							
TRIV					AML	AML		
	comp=E,186µm,0.6s							
ARCI	**Arcidosso**	**1.36**	**280**	⇓	**P**	**Pg**	**23 53 47.0**	**-0.1**
ARCI					AML	AML		
	comp=E,79µm,0.8s							
ARCI					AML	AML		
	comp=N,61µm,1.6s							
CRE	**Caprese Michel**	**1.40**	**316**	⇓	**P**	**Pb**	**23 53 47.1**	**-0.2**
CRE					AML	AML		
	comp=N,227µm,0.6s							
CRE					AML	AML		
	comp=E,169µm,1.0s							
VAGA	**Valle Agricola**	**1.40**	**150**	⇑	**P**	**Pg**	**23 53 48.9**	**+1.1**

VAGA AML AML
comp=E,126μm,1.0s
VAGA AML AML
comp=N,196μm,1.6s
MELA Melanico ??? S 1.65 123 ⇑P **Pg 23 53 52.4 -0.1**
MELA AML AML
comp=N,272μm,0.7s
MELA AML AML
comp=E,246μm,0.9s
TREM Isole Tremiti 1.72 106 ⇓P **Pg 23 53 54.7 +0.8**
TREM S **Sg 23 54 19.0 +2.8**
RUFI Rufina 1.78 314 ⇓P **Pb 23 53 53.7 0.0**
CASP Castiglione de 1.80 276 P **Pn 23 53 52.1 +0.1**
CASP AML AML
comp=E,32μm,0.5s
CASP AML AML
comp=N,22μm,1.1s
TRIF Trifonti 1.82 286 P **Pn 23 53 52.9 +0.5**
TRIF AML AML
comp=N,71μm,0.8s
TRIF AML AML
comp=E,68μm,0.8s
DUGI Dugi Otok 1.88 43 *e*Pn **Pn 23 53 53.4 +0.2**
APRC Apricena 1.89 117 ⇓P **Pb 23 53 55.3 -0.2**
APRC AML AML
comp=E,128μm,0.5s
APRC AML AML
comp=N,145μm,0.6s
VIRC Vir 2.10 37 *e*Pn **Pn 23 53 56.5 +0.3**
MSAG Monte S. Angel 2.15 114 ⇓P **Pb 23 54 00.3 +0.2**
MORI Morici 2.16 54 *e*Pn **Pn 23 53 57.6 +0.6**
NVLJ Novalja 2.25 30 *e*Pn **Pn 23 53 58.5 +0.2**
BRJN Brijuni 2.30 8 *e*Pn **Pn 23 53 59.0 0.0**
RABC Rab 2.38 26 *e*Pn **Pn 23 54 00.0 -0.1**
HVAR Hvar 2.38 76 *e*Pn **Pn 23 54 00.5 +0.4**
HVAR Hvar 2.38 76 ⇑P **Pn 23 54 01.1 +1.0**
MAIM Mastiano 2.42 303 S **Sn 23 54 31.0 +0.8**
SMRN Sveta Marina 2.49 14 *e*Pn **Pn 23 54 01.2 -0.4**
GSCL Gusciola 2.62 312 P **Pb 23 54 05.2 -2.8**
GSCL AML AML
comp=E,64μm,1.3s
GSCL AML AML
comp=N,47μm,1.0s
UDBI Udbina 2.62 43 *e*Pn **Pn 23 54 04.5 +1.2**
KIJV Kijevo 2.66 58 *e*Pn **Pn 23 54 05.4 +1.5**
LSTV Lastovo 2.66 86 *e*Pn **Pn 23 54 04.4 +0.5**
A253A Karojba, Istri 2.69 8 *e*Pn **Pn 23 54 04.0 -0.4**
A250A Rusevo Krmpots 2.72 25 *e*Pn **Pn 23 54 04.4 -0.4**
MAKA Makarska 2.82 75 *e*Pn **Pn 23 54 06.7 +0.7**
PLIT Plitvice 2.82 36 *e*Pn **Pn 23 54 06.9 +0.8**
RICI Ricice 2.95 72 *e*Pn **Pn 23 54 09.1 +1.3**
SKDS Skadanscina 2.97 10 *e*Pn **Pn 23 54 07.7 -0.5**
A050A Klekovaca 3.00 51 *e*Pn **Pn 23 54 10.2 +1.6**
SRKY Kupres RS 3.17 62 *e*Pn **Pn 23 54 12.9 +1.8**
BOJS Bojanci 3.21 25 *e*Pn **Pn 23 54 12.3 +0.9**
BOJS Bojanci 3.21 25 ⇑P **Pn 23 54 11.7 +0.2**
BOJS AML AML
comp=N,75μm,0.6s
BOJS AML AML
comp=E,82μm,0.5s
STON Ston 3.26 84 *e*Pn **Pn 23 54 11.2 -0.9**
STON Ston 3.26 84 *e*Pn **Pn 23 54 11.8 -0.2**
STON Ston 3.26 84 *e*Pn **Pn 23 54 11.9 -0.2**
STON *e*Sn **Sn 23 54 50.2 -0.7**
STON Ston 3.26 84 P **Pn 23 54 11.6 -0.5**
STON AML AML
comp=E,30μm,0.3s
STON AML AML
comp=N,32μm,1.2s
MGRS Mrkonjic Grad 3.29 56 *e*Pn **Pn 23 54 14.7 +2.1**
OZLJ Ozalj 3.38 27 *e*Pn **Pn 23 54 14.9 +1.2**
BLY Banja Luka 3.53 52 *e*Pn **Pb 23 54 19.9 -3.7**
BLK Banja Luka 3.53 52 *e*Pn **Pn 23 54 17.3 +1.4**
A051A Mrakovica 3.54 46 *e*Pn **Pn 23 54 17.6 +1.5**
CRES Cresnjev 3.56 25 *e*Pn **Pb 23 54 20.0 -4.0**
DBRK Dubrovnik 3.58 88 *e*Pn **Pn 23 54 17.0 +0.4**
MAGA Magasa 3.69 330 ⇓P **Pn 23 54 19.9 +1.8**
MAGA S **Sn 23 54 60.0 -1.7**
MAGA AML AML
comp=N,72μm,1.3s
MAGA AML AML
comp=E,128μm,0.7s
TREB Trebinje 3.73 87 *e*Pn **Pn 23 54 20.9 +2.3**
TREB Trebinje 3.73 87 *e*Pn **Pn 23 54 20.7 +2.1**
TREB *e*Sn **Sn 23 55 02.2 -0.5**
LUSI Trento, Gardas 3.74 334 ⇑P **Pn 23 54 20.6 +1.8**
LUSI AML AML
comp=E,31μm,1.5s
LUSI AML AML
comp=N,45μm,0.5s
HCY Herceg Novi 3.85 91 *e*Pn **Pn 23 54 20.5 +0.2**
HCY Herceg Novi 3.85 91 ⇓*i*Pn **Pn 23 54 21.4 +1.1**
HCY *i* Sn **Sn 23 55 05.3 -0.3**
BRY Bratogost 3.87 84 *e*Pn **Pn 23 54 22.0 +1.3**
BRY Bratogost 3.87 84 ⇓*i*Pn **Pn 23 54 22.2 +1.5**
BRY *i* Sn **Sn 23 55 06.6 +0.2**
MOSL Moslavina 3.89 39 *e*Pn **Pn 23 54 20.4 -0.5**
OBKA Obir 3.99 13 *e*Pn **Pn 23 54 24.4 +2.2**
OBKA Obir 3.99 13 *i* Pn **Pn 23 54 22.1 -0.1**
OBKA comp=N,0.2nm,0.2s *e*Sn **Sn 23 55 07.3 -1.8**
comp=N,4.0nm,0.4s
MYKA Terra Mystica 4.01 3 *i* Sn **Sn 23 55 10.7 +1.0**
KOSI Kohlern 4.07 341 ⇑P **Pn 23 54 25.2 +1.7**
MILN Milano 4.09 316 S **Sn 23 55 15.0 +3.6**
CEME Cevo 4.16 89 ⇑*i*Pn **Pn 23 54 25.8 +1.3**
CEME *i* Sn **Sn 23 55 12.8 -0.4**
BUM Brajici-Budva 4.16 93 ⇑*i*Pn **Pn 23 54 25.8 +1.2**
BUM *i* Sn **Sn 23 55 12.6 -0.7**
ABTA Abfaltersbach 4.16 353 *i* Pn **Pn 23 54 26.6 +2.0**
ABTA comp=N,8.1nm,0.5s *i* Sn **Sn 23 55 16.6 +3.2**
comp=N,1.6nm,0.4s
UPM Unac-Piva 4.16 80 *e*Pn **Pn 23 54 26.1 +1.3**
UPM Unac-Piva 4.16 80 ⇓*i*Pn **Pn 23 54 26.6 +1.8**
UPM *i* Sn **Sn 23 55 13.7 +0.1**
NKME Niksic 4.18 86 ⇓*i*Pn **Pn 23 54 26.5 +1.7**
NKME *i* Sn **Sn 23 55 13.6 -0.1**
NKY Niksic 4.21 86 ⇑*i*Pn **Pn 23 54 26.8 +1.5**
NKY *i* Sn **Sn 23 55 14.2 -0.3**
ROTM Rocchetta Tana 4.21 304 ⇑P **Pg 23 54 41.1 -0.5**
DRME Dracevica, Mon 4.39 94 *e*Pn **Pn 23 54 28.9 +1.3**
DRME Dracevica, Mon 4.39 94 ⇓*i*Pn **Pn 23 54 29.0 +1.3**
DRME *i* Sn **Sn 23 55 17.7 -1.1**
PDG Podgorica 4.41 91 *e*Pn **Pn 23 54 30.0 +2.0**
PDG *e*Sn **Sn 23 55 20.2 +0.8**
TTG Podgorica 4.41 91 ⇑*i*Pn **Pn 23 54 29.2 +1.2**
TTG *i* Sn **Sn 23 55 18.6 -0.8**
KBA Koelnbreinsper 4.45 0 *e*Sn **Sn 23 55 20.2 -0.5**
comp=N,0.4nm,0.1s
RUDO Rudo 4.56 75 *e*Pn **Pn 23 54 30.5 +0.5**
KOME Kolasin 4.59 85 ⇑*i*Pn **Pn 23 54 32.1 +1.6**
KOME *i* Sn **Sn 23 55 23.3 -0.7**
BBLS Lazići 4.63 72 *e*Pn **Pn 23 54 32.9 +1.8**
BBLS *e*Sn **Sn 23 55 24.6 -0.4**
PLLN Pollina 4.67 172 ⇑P **Pn 23 54 33.1 +1.4**
FETA Feichten 4.76 338 *i* Pn **Pn 23 54 35.8 +2.9**
FETA comp=N,0.6nm,0.5s *i* Sn **Sn 23 55 30.7 +2.5**
comp=N,0.7nm,0.4s
WTTA Wattenberg 4.79 346 *i* Pn **Pn 23 54 36.3 +3.1**
WTTA comp=N,0.3nm,0.2s *i* Sn **Sn 23 55 32.7 +3.8**
comp=N,1.4nm,0.3s
SQTA Sankt Quirin 4.83 343 *i* Pn **Pn 23 54 37.3 +3.5**
SQTA comp=N,1.2nm,0.3s *i* Sn **Sn 23 55 34.5 +4.7**
comp=N,2.1nm,0.3s
WATA Walderalm 4.87 346 *i* Pn **Pn 23 54 38.5 +4.1**
WATA comp=N,0.7nm,0.2s *i* Sn **Sn 23 55 31.4 +0.6**
comp=N,1.7nm,0.3s
IVA Berane 4.87 85 ⇓*i*Pn **Pn 23 54 35.8 +1.5**
IVA *i* Sn **Sn 23 55 30.2 -0.6**
ARSA Arzberg 4.89 18 *e*Pn **Pn 23 54 38.1 +3.6**
ARSA comp=N,0.3nm,0.4s *i* Sn **Sn 23 55 31.2 0.0**
comp=N,0.8nm,0.3s
PVY Plav 4.92 88 ⇓*i*Pn **Pn 23 54 36.6 +1.5**
PVY *i* Sn **Sn 23 55 31.3 -0.9**
SJES Sjenica 4.95 80 *e*Pn **Pn 23 54 37.8 +2.4**
MOTA Moosalm 4.97 343 *e*Pn **Pn 23 54 38.6 +2.8**
comp=N,0.2nm,0.2s
MOTA *i* Sn **Sn 23 55 32.1 -1.3**
comp=N,1.5nm,0.4s
BIOA Bad Ischl, Aus 5.07 3 *i* Pn **Pn 23 54 38.2 +1.1**
comp=N,0.6nm,0.3s
BIOA *i* Sn **Sn 23 55 38.4 +2.6**
comp=N,2.1nm,0.4s
IVAS Ivanjica 5.11 77 *e*Pn **Pn 23 54 39.0 +1.3**
IVAS *e*Sn **Sn 23 55 35.7 -1.1**
RETA Reutte 5.18 341 *i* Pn **Pn 23 54 41.2 +2.6**
RETA comp=N,0.3nm,0.2s *i* Sn **Sn 23 55 40.4 +1.9**
comp=N,0.7nm,0.4s
DAVA Damuels 5.25 334 *i* Pn **Pn 23 54 42.5 +2.8**
DAVA comp=N,0.6nm,0.2s *i* Sn **Sn 23 55 42.2 +1.9**
comp=N,1.9nm,0.4s
MOA Mollin 5.27 7 *i* Pn **Pn 23 54 42.8 +3.0**
MOA comp=N,0.4nm,0.2s *i* Sn **Sn 23 55 42.8 +2.2**
comp=N,1.1nm,0.3s
GRUS Gruza 5.57 74 *e*Pn **Pn 23 54 46.0 +2.1**
GRUS *e*Sn **Sn 23 55 47.4 -0.5**
CONA Conrad Observa 5.61 18 *i* Pn **Pn 23 54 45.2 +0.7**
CONA comp=N,0.1nm,0.2s *e*Sn **Sn 23 55 47.2 -1.8**
comp=N,2.7nm,0.7s
SELS Selova 5.78 81 *e*Pn **Pn 23 54 48.0 +1.2**
GERES GERESS Array B 6.23 2 Pn **Pn 23 54 54.4 +1.4**
comp=N,0.1nm,0.3s,baz=180,slow=12,SNR=4.4
GERES Sn **Sn 23 56 04.2 -0.1**
comp=N,0.4nm,0.3s,baz=169,slow=24,SNR=6.9
comp=N,0.2nm,0.5s
CKRC Cesky Krumlov 6.24 6 *e*SN **Sn 23 56 02.5 -1.9**
BARS Barje 6.28 85 *e*Pn **Pn 23 54 55.5 +1.8**
BARS *e*Sn **Sn 23 56 03.6 -1.9**
PRVS Prvonek 6.49 88 *e*Pn **Pn 23 54 57.9 +1.4**
PRVS *e*Sn **Sn 23 56 08.1 -2.5**
KHC Kasperske Hory 6.51 2 *e*PN **Pn 23 54 58.4 +1.6**
KHC *e*SN **Sn 23 56 08.8 -2.4**
ZAPS Zavoj 6.89 81 *e*Sn **Sn 23 56 17.7 -2.7**
KEST Kesra 7.53 205 Pn Pn 23 55 15.7 +4.7
comp=N,0.1nm,0.3s,baz=11,slow=10,SNR=0.9
comp=N,0.5nm,0.5s
NOA NORSAR Array B 18.49 357 P **Pn 23 57 36.5 -0.6**
baz=194,slow=11,SNR=2.5
comp=N,0.3nm,0.8s

*IDC **28** 00:25:10.5±1.7, 40.°09N×144.°12E, h0km, mb3.8/10, mbtmp3.8/13, ML2.7/3, MS3.1/5, Error ellipse: s-maj=40.0km s-min=22.1km az=168.0*
*NIED **28** 00:25:13.9, 40.°28N×144.°00E, h38km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr5.14; Mθθ1.72; Mϕϕ-6.87; Mrθ-0.19; Mθϕ-1.80; Mϕr-0.31; Fault plane solution: Mo6.20000×10¹⁴ NP1:ϕs9.00000°, δ43.00000°, λ87.00000°. NP2:ϕs194.00000°, δ47.00000°, λ93.00000°.*
*JMA **28** 00:25:13.9±0.2, 40.°3N±0.°7×14.°4E±.°, h38km, MV3.6/33, FAR E OFF SANRIKU*

ISC 28 00:25:16.0±0.8, 40.°26N±0.°05×144.°07E±0.°07, h35km, n42, σ1s50/43, mb3.6/10, MS3.2/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.72**	**260**	P	**Pn**	**00 25 41.5**	**-1.9**
JTH				*e*S	**Sn**	**00 26 01.5**	**-2.7**
JKEN	**Kujiedanarisaw**	**1.81**	**269**	P	**Pn**	**00 25 43.0**	**-1.7**
MIYJ	**Miyakonagasawa**	**1.86**	**249**	P	**Pn**	**00 25 44.0**	**-1.4**
JEM	**Erimo**	**1.89**	**339**	P	**Pn**	**00 25 44.3**	**-1.4**
JEM				*e*S	**Sn**	**00 26 06.6**	**-1.7**
JANG	**Nango**	**1.96**	**274**	P	**Pn**	**00 25 45.1**	**-1.6**
JANG				*e*S	**Sn**	**00 26 07.8**	**-2.2**
JNBK	**Urakawa-nobuka**	**2.25**	**334**	P	**Pn**	**00 25 49.8**	**-0.9**
JOM	**Ohasama**	**2.28**	**251**	P	**Pn**	**00 25 50.3**	**-0.8**
JCH	**Churui**	**2.42**	**348**	P	**Pn**	**00 25 52.0**	**-1.0**
JOT	**Ohata**	**2.55**	**297**	P	**Pn**	**00 25 54.2**	**-0.7**
JMK	**Ichinoseki**	**2.56**	**240**	P	**Pn**	**00 25 53.8**	**-1.2**
JMK				*e*S	**Sn**	**00 26 23.6**	**-1.2**
JAK	**Akkeshi**	**2.78**	**10**	P	**Pn**	**00 25 56.2**	**-1.8**
JAK				S	**Sn**	**00 26 29.4**	**-0.9**
JAR	**Ashorobuto**	**3.05**	**356**	P	**Pn**	**00 25 59.6**	**-2.1**
JAR				S	**Sn**	**00 26 35.7**	**-1.2**
JYK	**Kaneyama**	**3.16**	**246**	P	**Pn**	**00 26 03.1**	**-0.2**
JYK				S	**Sn**	**00 26 39.1**	**-0.7**
JEW	**Eniwo**	**3.25**	**324**	*e*P	**Pn**	**00 26 04.8**	**+0.4**
JEW				*e*S	**Sn**	**00 26 42.4**	**+0.7**
NEM2	**Nemuro 2**	**3.35**	**21**	P	**Pn**	**00 26 03.5**	**-2.4**
NEM2				*e*S	**Sn**	**00 26 40.6**	**-3.7**
JTKR	**Abashiri--Toko**	**3.71**	**358**	P	**Pn**	**00 26 09.3**	**-1.5**
JTKR				S	**Sn**	**00 26 52.2**	**-1.1**
JKK2	**Kamakawa 2**	**3.75**	**345**	*e*P	**Pn**	**00 26 10.4**	**-0.9**
JKK2				*e*S	**Sn**	**00 26 51.7**	**-2.5**
JOSM	**Okushiri--Mats**	**3.92**	**299**	P	**Pn**	**00 26 12.6**	**-1.1**
MJAR	**Matsushiro Arr**	**5.91**	**233**	Pn	**Pn**	**00 26 38.3**	**-2.8**
	0.2nm,0.3s,baz=79,slow=12,SNR=12						
	2.1nm,0.4s						
USRK	**Ussuriysk Ar.**	**9.79**	**298**	Pn	**Pn**	**00 27 34.8**	**+0.6**
	0.4nm,0.3s,baz=99,slow=14,SNR=5.3						
	4.3nm,0.9s						
KLR	**Kul'dur**	**12.52**	**320**	Pn	**Pn**	**00 28 11.1**	**-0.4**
	0.1nm,0.3s,baz=105,slow=11,SNR=6.0						
	5.5nm,1.1s						
KSRS	**Korea Array**	**12.89**	**263**	LR	LR	00 33 01.8	
	comp=Z,44nm,19.6s,baz=70,slow=36						
SEY	**Seymchan**	**23.25**	**10**	P	**P**	**00 30 21.6**	**+1.7**
	3.8nm,0.7s,baz=223,slow=19,SNR=5.2						
	3.8nm,0.7s						
YAK	**Yakutsk**	**23.49**	**343**	LR	LR	00 41 11.8	
	comp=Z,41nm,20.7s,baz=221,slow=41						
SONM	**Songino Array**	**27.90**	**298**	P	**P**	**00 31 03.3**	**+0.6**
	0.6nm,0.4s,baz=108,slow=9.5,SNR=4.5						
	0.6nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**28.30**	**130**	T	T	01 00 39.2	
	baz=322,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.31**	**130**	T	T	01 00 46.2	
	baz=322,slow=76,SNR=8.8						
H11N3	**WAKE ISLAND Hy**	**28.32**	**130**	T	T	01 00 41.8	
	baz=322,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.15**	**131**	T	T	01 01 46.6	
	baz=323,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.15**	**131**	T	T	01 01 46.9	
	baz=323,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**29.16**	**131**	T	T	01 01 47.9	
	baz=323,slow=76,SNR=7.2						
TIXI	**Tiksi**	**32.39**	**351**	LR	LR	00 46 09.7	
	comp=Z,48nm,18.9s,baz=188,slow=39						
ZALV	**Zalesovo Beam**	**41.37**	**310**	P	**P**	**00 32 59.2**	**+0.9**
	0.4nm,0.3s,baz=90,slow=7.9,SNR=3.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**44.25**	**300**	P	**P**	**00 33 22.6**	**+0.7**
	0.9nm,0.8s,baz=82,slow=8.7,SNR=8.1						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**45.66**	**34**	P	**P**	**00 33 33.0**	**+0.1**
	0.4nm,0.6s,baz=258,slow=6.9,SNR=4.8						
	0.4nm,0.6s						
ARU	**Arti**	**55.35**	**318**	LR	LR	01 03 08.9	
	comp=Z,16nm,19.2s,baz=53,slow=41						
FINES	**FINESS Array B**	**66.93**	**333**	P	**P**	**00 36 05.1**	**+0.7**
	4.1nm,1.0s,baz=28,slow=4.5,SNR=5.6						
	4.1nm,1.0s						
NB2	**NORSAR Subarra**	**72.00**	**338**	P	**P**	**00 36 36.3**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**72.00**	**338**	P	**P**	**00 36 36.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=36,slow=6.0,SNR=3.4						
	0.4nm,0.5nm,0.6s						
AKASG	**Malin Array Be**	**73.00**	**323**	P	**P**	**00 36 42.5**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=45,slow=5.8,SNR=2.5						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**73.94**	**47**	P	**P**	**00 36 48.7**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=296,slow=2.9,SNR=1.8						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**86.53**	**54**	P	**P**	**00 37 56.1**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=275,slow=4.4,SNR=2.4						
TXAR				LR	LR	01 09 03.8	
	comp=Z,13nm,21.7s,baz=14,slow=30						
	comp=Z,0.2nm,0.6s						

*NEIC **28** 00:26:46.7±0.9, 32.°49S±0.°04×178.°9W±0.°2, h10km±1km, mb4.6/18, Error ellipse: s-maj=26.4km s-min=4.7km az=98.0*
*WEL **28** 00:26:49.1±0.5, 33.°S±4.°×17.°8W±.°, h33km, M5.3/27, mB5.7/19, ML5.3/29, MLv5.3/27, Mw(mB)5.2/19, Error ellipse: s-maj=0.0km s-min=0.0km az=110.5*
*IDC **28** 00:26:50.1±1.8, 32.°41S×178.°97W, h42km±17km, mb4.1/6, mbtmp4.4/6, ML5.4/2, MS3.2/2, Error ellipse: s-maj=24.8km s-min=11.3km az=111.0*
*NOU **28** 00:27:02.7, 33.°48S×179.°09W, h217km, mb4.7/9, South of Kermadec Islands*

ISC 28 00:26:50.7±0.4, 32.°49S±0.°03×178.°88W±0.°06, h61km, n140, σ2s87/124, mb4.6/15, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.33**	**15**	P	**Pn**	**00 27 38.1**	**-2.1**
GLKZ				S	**Sn**	**00 28 15.9**	**-2.6**
RAO	**Raoul Island**	**3.34**	**15**	P	**Pn**	**00 27 38.8**	**-1.6**
	272nm,0.3s,baz=120,slow=10,SNR=16						
RAO				S	**Sn**	**00 28 17.3**	**-1.5**
	964nm,0.3s,baz=66,slow=22,SNR=2.9						
RAO				LR	LR	00 29 00.9	
	comp=Z,190nm,21.5s,baz=292,slow=40						
RAO	**Raoul Island**	**3.34**	**15**	Pn	**Pn**	**00 27 38.9**	**-1.5**
RIZ	**Raoul Island**	**3.34**	**14**	P	**Pn**	**00 27 39.5**	**-1.0**
RIZ				S	**Sn**	**00 28 15.9**	**-3.0**
MXZ	**Matakaoa Point**	**5.56**	**204**	Pn	**Pn**	**00 28 09.1**	**-1.6**
MXZ	**Matakaoa Point**	**5.56**	**204**	P	**Pn**	**00 28 09.0**	**-1.8**
MXZ				S	**Sn**	**00 29 13.6**	**+0.3**
WMGZ	**Waiomatatini S**	**5.76**	**202**	P	**Pn**	**00 28 14.6**	**+1.1**
WMGZ				S	**Sn**	**00 29 21.0**	**+2.8**
HAZ	**Te Kaha**	**5.92**	**207**	P	**Pn**	**00 28 15.9**	**+0.2**
HAZ				S	**Sn**	**00 29 23.3**	**+1.2**
PKGZ	**Pakihiroa**	**5.93**	**204**	P	**Pn**	**00 28 15.9**	**0.0**
PKGZ				S	**Sn**	**00 29 20.0**	**-2.5**
GRZ	**Great Barrier**	**6.00**	**230**	P	**Pn**	**00 28 20.1**	**+3.3**
PUZ	**Puketiti**	**6.04**	**202**	P	**Pn**	**00 28 13.6**	**-3.7**
PUZ				S	**Sn**	**00 29 23.3**	**-1.8**
RUGZ	**Raukumara Rang**	**6.14**	**206**	P	**Pn**	**00 28 19.6**	**+0.7**
RUGZ				S	**Sn**	**00 29 27.0**	**-0.8**
KUZ	**Kuaotunu**	**6.15**	**225**	P	**Pn**	**00 28 21.9**	**+3.1**
TWGZ	**Tauwhareparae**	**6.22**	**203**	P	**Pn**	**00 28 19.6**	**-0.3**
CNGZ	**Carnagh Station**	**6.43**	**201**	P	**Pn**	**00 28 21.9**	**-0.8**
TKGZ	**Te Karaka**	**6.50**	**203**	P	**Pn**	**00 28 21.9**	**-1.8**
MWZ	**Matawai**	**6.52**	**206**	P	**Pn**	**00 28 25.2**	**+1.1**
WIAZ	**Waiheke Island**	**6.54**	**227**	P	Pn	00 28 29.3	+5.2
URZ	**Urewera**	**6.62**	**209**	P	**Pn**	**00 28 24.2**	**-1.0**
	122nm,0.3s,baz=330,slow=2.0,SNR=189						
URZ				S	**Sn**	**00 29 38.2**	**-1.1**
	136nm,0.4s,baz=271,slow=22,SNR=9.1						
URZ	**Urewera**	**6.62**	**209**	Pn	**Pn**	**00 28 23.8**	**-1.5**
URZ	**Urewera**	**6.62**	**209**	P	**Pn**	**00 28 24.2**	**-1.0**
URZ	**Urewera**	**6.62**	**209**	P	**Pn**	**00 28 26.5**	**+1.2**
RAGZ	**Rawiri**	**6.71**	**206**	P	**Pn**	**00 28 23.8**	**-2.8**
MKAZ	**Moumakai**	**6.72**	**225**	P	Pn	00 28 31.6	+4.9
ETAZ	**East Tamaki Re**	**6.76**	**227**	P	Pn	00 28 32.5	+5.2
RIGZ	**Rimuhau**	**6.77**	**203**	P	**Pn**	**00 28 27.5**	**0.0**
MKRZ	**Makatiti**	**6.79**	**213**	P	**Pn**	**00 28 30.7**	**+2.9**
OUZ	**Omahuta**	**6.82**	**244**	P	Pn	00 28 32.8	+4.7
OUZ				S	**Sn**	**00 29 49.5**	**+5.3**
OUZ	**Omahuta**	**6.82**	**244**	P	Pn	00 28 33.7	+5.6
HBAZ	**Herne Bay Bore**	**6.82**	**229**	P	Pn	00 28 33.5	+5.4
TOZ	**Tahuroa Road**	**6.96**	**220**	P	Pn	00 28 33.9	+3.9
WTAZ	**Waiatarua**	**6.97**	**229**	P	Pn	00 28 35.8	+5.6
SNGZ	**Shannon Statio**	**6.99**	**205**	P	**Pn**	**00 28 30.7**	**+0.3**
SNGZ				S	**Sn**	**00 29 47.7**	**-0.7**
AWAZ	**Awhitu Peninsu**	**7.01**	**228**	P	Pn	00 28 36.2	+5.6
KNZ	**Kokohu**	**7.09**	**202**	P	**Pn**	**00 28 28.6**	**-3.1**
BKZ	**Black Stump Fm**	**7.64**	**208**	P	**Pn**	**00 28 39.5**	**+0.1**
HIZ	**Hauiti**	**7.88**	**219**	P	Pn	00 28 46.2	+3.6
KRVZ	**Karewarewa**	**7.95**	**212**	P	**Pn**	**00 28 45.5**	**+2.0**
KRVZ				S	**Sn**	**00 30 12.3**	**+0.2**
NGZ	**Ngauruhoe**	**8.03**	**212**	P	**Pn**	**00 28 45.7**	**+1.0**
NGZ				S	**Sn**	**00 30 12.0**	**-2.2**
TUVZ	**Tukino**	**8.08**	**212**	P	**Pn**	**00 28 45.6**	**+0.1**
TUVZ				S	**Sn**	**00 30 14.4**	**-1.1**
FWVZ	**Far West T-bar**	**8.12**	**212**	P	**Pn**	**00 28 46.3**	**+0.3**
FWVZ				S	**Sn**	**00 30 16.1**	**-0.3**
WHVZ	**Whangaehu Hut**	**8.12**	**212**	P	**Pn**	**00 28 46.2**	**+0.1**
WHVZ				S	**Sn**	**00 30 15.2**	**-1.3**
DRZ	**Dome Shelter**	**8.13**	**212**	P	**Pn**	**00 28 47.9**	**+1.7**
DRZ				S	**Sn**	**00 30 17.9**	**+1.1**
WNVZ	**Wahianoa**	**8.16**	**212**	P	**Pn**	**00 28 45.9**	**-0.6**
WNVZ				S	**Sn**	**00 30 15.8**	**-1.4**
PKVZ	**Pokaka**	**8.24**	**213**	P	**Pn**	**00 28 48.3**	**+0.8**
MTVZ	**Mangateitei**	**8.26**	**212**	P	**Pn**	**00 28 48.2**	**+0.4**
MTVZ				S	**Sn**	**00 30 17.5**	**-2.2**
DVHZ	**Dannevirke**	**8.75**	**206**	P	**Pn**	**00 28 52.4**	**-2.1**
DVHZ				S	**Sn**	**00 30 25.6**	**-6.1**
WAZ	**Wanganui**	**8.78**	**213**	P	**Pn**	**00 28 54.3**	**-0.6**
WAZ				S	**Sn**	**00 30 30.9**	**-1.4**
ANWZ	**Angora Road**	**8.78**	**204**	P	**Pn**	**00 28 52.0**	**-2.9**
ANWZ				S	**Sn**	**00 30 27.7**	**-4.6**
KHEZ	**Kahui Hut**	**8.90**	**218**	P	**Pn**	**00 28 59.2**	**+2.6**
POWZ	**Post Office Ro**	**8.98**	**207**	P	**Pn**	**00 28 56.0**	**-1.6**
POWZ				S	**Sn**	**00 30 31.5**	**-5.8**
PRWZ	**Pori Road**	**9.05**	**206**	P	**Pn**	**00 28 56.5**	**-2.0**
PRWZ				S	**Sn**	**00 30 31.5**	**-7.3**
BFZ	**Birch Farm**	**9.06**	**204**	P	**Pn**	**00 28 55.7**	**-3.0**
BFZ				S	**Sn**	**00 30 33.8**	**-5.4**
BFZ	**Birch Farm**	**9.06**	**204**	P	**Pn**	**00 28 56.5**	**-2.2**
MRZ	**Mangatainoka R**	**9.29**	**207**	P	**Pn**	**00 28 57.6**	**-4.2**
MRZ				S	**Sn**	**00 30 36.5**	**-8.1**
KIW	**Kapiti Island**	**9.72**	**209**	P	**Pn**	**00 29 03.2**	**-4.6**
KIW				S	**Sn**	**00 30 48.6**	**-6.8**
DUWZ	**D'Urville Isla**	**10.10**	**213**	P	**Pn**	**00 29 09.8**	**-3.2**
DUWZ				S	**Sn**	**00 30 58.9**	**-5.9**
WEL	**Wellington**	**10.14**	**208**	P	**Pn**	**00 29 09.9**	**-3.5**
SNZO	**South Karori**	**10.18**	**208**	P	**Pn**	**00 29 10.9**	**-3.1**
PLWZ	**Palliser**	**10.20**	**206**	P	Pn	00 29 09.0	-5.3
PLWZ				S	**Sn**	**00 30 58.5**	**-8.5**
TCW	**Tory Channel**	**10.28**	**210**	P	**Pn**	**00 29 11.1**	**-4.2**
TCW				S	Sn	00 31 00.2	-8.7
TUWZ	**Tuamarina**	**10.60**	**211**	P	Pn	00 29 14.4	-5.3
TUWZ				S	Sn	00 31 08.4	-8.4
NNZ	**Nelson**	**10.68**	**213**	P	**Pn**	**00 29 17.2**	**-3.7**
NNZ				S	**Sn**	**00 31 12.0**	**-6.8**
TKNZ	**Takaka Hill**	**10.74**	**215**	P	**Pn**	**00 29 17.9**	**-3.8**
CMWZ	**Cape Campbell**	**10.75**	**209**	P	**Pn**	**00 29 20.1**	**-1.7**
CMWZ				S	**Sn**	**00 31 14.7**	**-5.8**
QRZ	**Quartz Range**	**10.80**	**217**	P	**Pn**

ASAR	**Alice Springs**	**42.29**	**270**	P	**P**	**00 34 40.0**	**+1.5**
	comp=Z,4.8nm,0.7s,baz=106,slow=7.8,SNR=67						
	comp=Z,4.8nm,0.7s						
ASAR	**Alice Springs**	**42.29**	**270**	P	**P**	**00 34 39.6**	**+1.1**
WR0	**Warramunga Arr**	**43.29**	**275**	P	**P**	**00 34 47.9**	**+1.3**
WR0				IAmb	IAmb	00 34 48.4	
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**43.47**	**275**	P	**P**	**00 34 49.1**	**+1.0**
	comp=Z,3.6nm,0.3s,baz=112,slow=8.1,SNR=187						
	comp=Z,3.6nm,0.3s						
WRA	**Warramunga Arr**	**43.47**	**275**	P	**P**	**00 34 48.5**	**+0.5**
WB0	**Warramunga Arr**	**43.50**	**275**	P	**P**	**00 34 49.7**	**+1.4**
WB0				IAmb	IAmb	00 34 50.3	
	comp=Z,9.9nm,0.8s						
FORT	**Forrest**	**44.82**	**257**	P	**P**	**00 34 59.4**	**+0.7**
SBA	**Scott Base**	**45.90**	**184**	P	P	00 35 10.7	+4.1
SBA				IAmb	IAmb	00 35 14.3	
	comp=Z,8.5nm,1.4s						
VNDA	**Vanda**	**45.94**	**186**	P	**P**	**00 35 09.4**	**+2.4**
MTN	**Manton Dam**	**49.60**	**281**	P	**P**	**00 35 37.1**	**+1.0**
MTN				IAmb	IAmb	00 35 38.7	
	comp=Z,5.9nm,0.7s						
KNRA	**Kununurra**	**50.15**	**277**	P	**P**	**00 35 41.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**51.64**	**272**	P	**P**	**00 35 52.6**	**+1.2**
FITZ				IAmb	IAmb	00 36 10.9	
	comp=Z,3.0nm,1.0s						
CASY	**Casey**	**52.94**	**209**	P	**P**	**00 36 01.4**	**+1.0**
CASY				IAmb	IAmb	00 36 02.6	
	comp=Z,3.7nm,0.7s						
QSPA	**South Pole Qui**	**57.62**	**180**	P	P	00 36 37.8	+3.5
	comp=Z,7.4nm,0.6s,baz=4.7,slow=0.6,SNR=78						
	comp=Z,7.4nm,0.6s						
QSPA	**South Pole Qui**	**57.62**	**180**	P	P	00 36 37.9	+3.6
QSPA				IAmb	IAmb	00 36 39.0	
	comp=Z,8.4nm,0.8s						
BELA	**Belgrano 2**	**67.82**	**172**		**P**	**00 37 43.6**	**+1.9**
BELA				IAmb	IAmb	00 37 44.7	
	comp=Z,6.1nm,0.9s						
MAW	**Mawson**	**70.09**	**201**	P	**P**	**00 37 58.1**	**+2.2**
	comp=Z,1.7nm,0.8s,baz=156,slow=7.6,SNR=2.2						
	comp=Z,1.7nm,0.8s						
MAW	**Mawson**	**70.09**	**201**	P	**P**	**00 37 58.1**	**+2.2**
TROLL	**Troll, Antarti**	**75.78**	**180**	P	**P**	**00 38 32.1**	**+2.4**
SNAA	**Sanae**	**76.09**	**179**	P	**P**	**00 38 33.5**	**+2.1**
SNAA	**Sanae**	**76.09**	**179**	P	**P**	**00 38 33.4**	**+2.1**
SNAA				IAmb	IAmb	00 38 34.4	
	comp=Z,9.6nm,1.3s						
VNA3	**Neumayer Olymp**	**76.27**	**176**	P	**P**	**00 38 34.4**	**+2.0**
VNA2	**Neumayer--Watz**	**76.69**	**177**	P	**P**	**00 38 37.1**	**+2.4**
	baz=175,slow=5.0						
VNA1	**Neumayer--Stat**	**76.93**	**177**	P	**P**	**00 38 38.4**	**+2.4**
H03S2	**Juan Fernandez**	**79.94**	**124**	T	T	02 07 20.9	
	baz=235,SNR=363						
H03S1	**Juan Fernandez**	**79.95**	**124**	T	T	02 07 22.1	
	baz=235,SNR=355						
H03S3	**Juan Fernandez**	**79.96**	**124**	T	T	02 07 31.5	
	baz=235,SNR=336						
H03N3	**Juan Fernandez**	**80.14**	**123**	T	T	02 07 46.6	
	baz=240,slow=72,SNR=239						
H03N2	**Juan Fernandez**	**80.15**	**123**	T	T	02 07 43.3	
	baz=240,slow=72,SNR=230						
H03N1	**Juan Fernandez**	**80.16**	**123**	T	T	02 07 44.6	
	baz=240,slow=72,SNR=585						
PLCA	**Paso Flores**	**81.63**	**133**	P	**P**	**00 39 04.8**	**+2.5**
	comp=Z,1.6nm,0.7s,baz=304,slow=7.3,SNR=3.5						
	comp=Z,1.6nm,0.7s						
PFO	**Pinyon Flats O**	**88.17**	**48**	LR	LR	01 09 23.2	
	comp=Z,24nm,21.5s,baz=194,slow=29						
NVAR	**Mina Array Bea**	**90.28**	**43**	P	**P**	**00 39 45.9**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=224,slow=6.3,SNR=2.3						
	comp=Z,0.6nm,0.9s						
MKAR	**Makanchi Array**	**118.53**	**309**	PKP	**PKiKP**	**00 45 31.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=177,slow=2.5,SNR=2.8						
ARCES	**ARCESS Array B**	**140.46**	**347**	PKhKP	PKPpre	00 46 07.9	
	comp=Z,3.1nm,0.9s,baz=4.4,slow=1.2,SNR=1.6						
FINES	**FINESS Array B**	**146.83**	**338**	PKPbc	**PKPab**	**00 46 25.2**	**-1.3**
	comp=Z,4.0nm,0.5s,baz=46,slow=3.8,SNR=46						
NB2	**NORSAR Subarra**	**150.69**	**350**	PKP	**PKiKP**	**00 46 35.7**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=16,slow=2.6						
NOA	**NORSAR Array B**	**150.69**	**350**	PKPbc	**PKiKP**	**00 46 35.3**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=14,slow=4.1,SNR=8.5						
BRTR	**Keskin Array B**	**152.86**	**295**	PKPbc	**PKiKP**	**00 46 41.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=158,slow=4.0,SNR=7.1						
DBIC	**Dimbokro**	**153.71**	**167**	PKPbc	**PKiKP**	**00 46 45.0**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=203,slow=7.7,SNR=1.6						
TORD	**Torodi Ar. Bea**	**160.74**	**182**	PKPab	**PKPab**	**00 47 27.8**	**+1.5**
	comp=Z,10nm,0.3s,baz=178,slow=4.1,SNR=1.8						

*NOU **28** 00:30:15.9,29˚.86S×173˚.74W,h40km,mb5.1/11, Kermadec Islands Region*
*NEIC **28** 00:31:18.1±1.7,32˚.45S±0˚.07×178˚.9W±0˚.2,h20km±3km, mb4.7/20,Error ellipse: s-maj=21.0km s-min=8.6km az=105.0*
*IDC **28** 00:31:20.4±1.8,32˚.37S×179˚.00W,h43km±16km,mb4.1/7, mbtmp4.4/7,ML5.3/2,MS3.2/10,Error ellipse: s-maj=23.7km s-min=11.2km az=110.0*
*WEL **28** 00:31:21.4±1.3,32˚.S±116˚×17˚.9W±25˚.0,h150km,M5.0/3, mB5.4/1,MLv5.0/3,Mw(mB)4.8/2,Error ellipse: s-maj=0.4km s-min=0.0km az=114.8*

ISC 28 00:31:18.9±0.5,32˚.56S±0˚.05×178˚.59W±0˚.09,h33km, n131,σ1s99/116,mb4.6/18,MS3.3/9,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.34**	**10**	P	**Pn**	**00 32 09.2**	**+0.4**
GLKZ				S	**Sn**	**00 32 46.5**	**-0.8**
RAO	**Raoul Island**	**3.35**	**10**	P	**Pn**	**00 32 08.3**	**-0.6**
	169nm,0.3s,baz=146,slow=15,SNR=7.6						
RAO				S	**Sn**	**00 32 47.1**	**-0.5**
	469nm,0.3s,baz=238,slow=23,SNR=2.9						
RAO	**Raoul Island**	**3.35**	**10**	P	**Pn**	**00 32 09.3**	**+0.4**
RIZ	**Raoul Island**	**3.35**	**10**	P	**Pn**	**00 32 09.3**	**+0.3**
RIZ				S	**Sn**	**00 32 46.6**	**-1.1**
MXZ	**Matakaoa Point**	**5.60**	**206**	Pn	**Pn**	**00 32 40.0**	**+0.1**
HAZ	**Te Kaha**	**5.97**	**209**	P	**Pn**	**00 32 47.6**	**+2.5**
HAZ				S	**Sn**	**00 33 52.7**	**+0.4**
PKGZ	**Pakihiroa**	**5.97**	**206**	P	**Pn**	**00 32 46.1**	**+1.0**
PKGZ				S	**Sn**	**00 33 49.2**	**-3.2**
WSRZ	**White Island S**	**6.04**	**214**	P	**Pn**	**00 32 50.1**	**+4.1**
WIZ	**White Island**	**6.04**	**214**	P	**Pn**	**00 32 49.3**	**+3.3**
RUGZ	**Raukumara Rang**	**6.20**	**208**	P	**Pn**	**00 32 48.7**	**+0.5**
RUGZ				S	**Sn**	**00 33 56.9**	**-1.1**
WHRZ	**Whale Island**	**6.41**	**213**	P	**Pn**	**00 32 54.7**	**+3.7**
TKGZ	**Te Karaka**	**6.54**	**205**	P	**Pn**	**00 32 52.5**	**-0.4**
TKGZ				S	**Sn**	**00 34 03.7**	**-2.6**
MWZ	**Matawai**	**6.57**	**208**	P	**Pn**	**00 32 53.1**	**-0.2**
MWZ				S	**Sn**	**00 34 06.5**	**-0.6**
OPRZ	**Ohinepanea**	**6.60**	**216**	P	**Pn**	**00 32 55.5**	**+1.9**
MARZ	**Manawahe**	**6.65**	**214**	P	**Pn**	**00 32 57.4**	**+3.1**
URZ	**Urewera**	**6.68**	**210**	P	**Pn**	**00 32 54.1**	**-0.6**
	120nm,0.3s,baz=316,slow=2.1,SNR=72						
URZ				S	**Sn**	**00 34 08.6**	**-1.1**
	96nm,0.3s,baz=109,slow=23,SNR=1.4						
URZ				LR	LR	00 35 17.6	
	comp=Z,138nm,21.8s,baz=31,slow=36						
URZ	**Urewera**	**6.68**	**210**	Pn	**Pn**	**00 32 54.4**	**-0.3**
URZ	**Urewera**	**6.68**	**210**	P	**Pn**	**00 32 54.6**	**-0.1**
URZ				S	**Sn**	**00 34 08.2**	**-1.5**
URZ	**Urewera**	**6.68**	**210**	P	**Pn**	**00 32 54.8**	**+0.1**
EDRZ	**Edgecumbe**	**6.72**	**213**	P	**Pn**	**00 32 57.7**	**+2.4**
RAGZ	**Rawiri**	**6.76**	**208**	P	**Pn**	**00 32 55.8**	**-0.1**
RAGZ				S	**Sn**	**00 34 12.4**	**+0.7**
KARZ	**Kaharoa**	**6.89**	**216**	P	**Pn**	**00 33 00.5**	**+2.9**
OMRZ	**Omania**	**6.89**	**215**	P	**Pn**	**00 33 01.8**	**+4.1**
KMRZ	**Kaimai**	**6.92**	**219**	P	**Pn**	**00 33 01.3**	**+3.3**
TARZ	**Mount Tarawera**	**6.93**	**214**	P	**Pn**	**00 33 01.2**	**+2.9**
MUGZ	**Murupara**	**7.01**	**211**	P	**Pn**	**00 32 59.1**	**-0.2**
RRRZ	**Republican Roa**	**7.01**	**213**	P	**Pn**	**00 33 02.1**	**+2.8**
OUZ	**Omahuta**	**7.01**	**246**	P	**Pn**	**00 33 03.4**	**+4.1**
HLRZ	**Highlands Stat**	**7.02**	**215**	P	**Pn**	**00 33 02.7**	**+3.3**
SNGZ	**Shannon Statio**	**7.04**	**207**	P	**Pn**	**00 32 59.5**	**-0.1**
HSRZ	**Hossack Road**	**7.12**	**215**	P	**Pn**	**00 33 04.8**	**+4.1**
KNZ	**Kokohu**	**7.13**	**204**	P	**Pn**	**00 32 59.6**	**-1.2**
HRRZ	**Handcock Road**	**7.16**	**214**	P	**Pn**	**00 33 04.8**	**+3.4**
PRRZ	**Plateau Road**	**7.20**	**213**	P	**Pn**	**00 33 03.5**	**+1.6**
RAHZ	**Arahi**	**7.25**	**208**	P	**Pn**	**00 33 02.5**	**0.0**
ALRZ	**Allen Road**	**7.27**	**213**	P	**Pn**	**00 33 04.5**	**+1.6**
MTHZ	**Maungataniwha**	**7.29**	**209**	P	**Pn**	**00 33 03.6**	**+0.4**
WPRZ	**Whakapapatarin**	**7.32**	**214**	P	**Pn**	**00 33 06.7**	**+3.1**
WHHZ	**Waihua**	**7.33**	**206**	P	**Pn**	**00 33 05.1**	**+1.4**
MRHZ	**Matea Rd**	**7.46**	**212**	P	**Pn**	**00 33 05.6**	**+0.1**
KUTZ	**Kaahu Road**	**7.46**	**216**	P	**Pn**	**00 33 08.1**	**+2.6**
NMHZ	**Naumai**	**7.52**	**208**	P	**Pn**	**00 33 05.6**	**-0.7**
WHTZ	**Whakaora**	**7.54**	**215**	P	**Pn**	**00 33 09.8**	**+3.3**
ARHZ	**Aropaoanui**	**7.58**	**207**	P	**Pn**	**00 33 06.3**	**-0.8**
WATZ	**Wairara**	**7.68**	**215**	P	**Pn**	**00 33 11.2**	**+2.8**
BKZ	**Black Stump Fm**	**7.70**	**210**	P	**Pn**	**00 33 08.4**	**-0.4**
RATZ	**Rangitukua**	**7.78**	**214**	P	**Pn**	**00 33 10.9**	**+1.0**
RITZ	**Rihia Road**	**7.83**	**214**	P	**Pn**	**00 33 12.5**	**+1.9**
CKHZ	**Cape Kidnapper**	**7.90**	**205**	P	**Pn**	**00 33 09.4**	**-2.1**
KATZ	**Kakaramea**	**7.91**	**214**	P	**Pn**	**00 33 14.5**	**+2.8**
KWHZ	**Kaweka Forest**	**7.95**	**209**	P	**Pn**	**00 33 10.7**	**-1.5**
HIZ	**Hauiti**	**7.99**	**220**	P	**Pn**	**00 33 15.9**	**+3.3**
NTVZ	**North Tongarir**	**8.01**	**214**	P	**Pn**	**00 33 13.0**	**-0.1**
TMVZ	**Te Maari**	**8.01**	**214**	P	**Pn**	**00 33 13.3**	**+0.1**
ETVZ	**East Tongariro**	**8.03**	**214**	P	**Pn**	**00 33 13.3**	**0.0**
KAHZ	**Kahuranaki**	**8.10**	**206**	P	**Pn**	**00 33 12.1**	**-2.1**
BHHZ	**Black Hill Sta**	**8.16**	**211**	P	**Pn**	**00 33 14.9**	**-0.2**
KRHZ	**Kereru**	**8.16**	**209**	P	**Pn**	**00 33 13.3**	**-1.7**
BFZ	**Birch Farm**	**9.10**	**206**	P	**Pn**	**00 33 25.8**	**-2.2**
SNZO	**South Karori**	**10.25**	**210**	P	**Pn**	**00 33 40.9**	**-2.7**
KHZ	**Kahutara**	**11.65**	**210**	P	**Pn**	**00 33 59.0**	**-3.8**
RPZ	**Rata Peaks**	**13.79**	**213**	P	Pn	00 34 25.7	-6.3
	11nm,0.4s,baz=44,slow=3.3,SNR=6.7						
RPZ				S	Sn	00 36 49.7	-14
	10nm,0.4s,baz=30,slow=22,SNR=9.1						
RPZ	**Rata Peaks**	**13.79**	**213**	P	Pn	00 34 26.7	-5.3
ODZ	**Otahua Downs**	**15.01**	**211**	P	Pn	00 34 41.3	-7.2
DZM	**Mont Dzumac**	**16.89**	**304**	LR	LR	00 39 56.0	
	comp=Z,112nm,20.9s,baz=82,slow=31						
DZM	**Mont Dzumac**	**16.89**	**304**	*e*LR	LR	00 39 31.0	
	comp=Z,135nm,22.9s						
RAR	**Rarotonga**	**20.20**	**61**	LR	LR	00 45 55.9	
	comp=Z,14nm,18.1s,baz=294,slow=43						
TBI	**Tubuai**	**27.25**	**78**	*e*LR	LR	00 44 33.5	
	comp=Z,31nm,21.5s						
TBI	**Tubuai**	**27.25**	**78**	*e*T	T	01 05 50.0	
	23nm,0.3s						
EIDS	**Eidsvold**	**27.42**	**277**	P	**P**	**00 37 00.7**	**-1.0**
PAE	**Paea**	**30.05**	**67**	*e*T	T	01 09 09.8	
	9.1nm,0.2s						
PPT2	**Papeete2**	**30.09**	**67**	*e*T	T	01 09 08.5	
	7.9nm,0.3s						
PPT	**Papeete**	**30.10**	**67**	LR	LR	00 46 17.4	
	comp=Z,22nm,21.8s,baz=210,slow=30						
PMOR	**Pomariorio Ree**	**32.92**	**65**	*e*T	T	01 12 40.8	
	5.4nm,0.3s						
STKA	**Stephens Creek**	**33.55**	**260**	LR	LR	00 49 50.9	
	comp=Z,70nm,18.5s,baz=50,slow=33						
CTA	**Charters Tower**	**33.71**	**283**	LR	LR	00 49 20.8	
	comp=Z,44nm,19.9s,baz=76,slow=32						
CTAO	**Charters Tower**	**33.71**	**283**	P	**P**	**00 37 56.6**	**-0.7**
BBOO	**Buckleboo**	**37.94**	**257**	P	**P**	**00 38 31.2**	**-2.2**
COEN	**Coen**	**39.43**	**289**	P	**P**	**00 38 45.2**	**-0.8**
COEN				IAmb	IAmb	00 39 07.1	
	comp=Z,24nm,1.4s						
AS31	**Alice Springs**	**42.53**	**270**	P	**P**	**00 39 10.4**	**-1.2**
ASAR	**Alice Springs**	**42.53**	**270**	P	**P**	**00 39 10.3**	**-1.3**
	comp=Z,5.9nm,0.7s,baz=106,slow=7.8,SNR=39						
	comp=Z,5.9nm,0.7s						
ASAR	**Alice Springs**	**42.53**	**270**	P	**P**	**00 39 09.7**	**-2.0**
WR0	**Warramunga Arr**	**43.54**	**275**	P	**P**	**00 39 18.2**	**-1.6**
WR0				IAmb	IAmb	00 39 24.1	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**43.72**	**275**	P	**P**	**00 39 19.5**	**-1.7**
	comp=Z,5.4nm,0.4s,baz=112,slow=8.1,SNR=115						
	comp=Z,5.4nm,0.4s						
WRA	**Warramunga Arr**	**43.72**	**275**	P	**P**	**00 39 18.5**	**-2.7**
WB0	**Warramunga Arr**	**43.75**	**275**	P	**P**	**00 39 19.9**	**-1.6**
WB0				IAmb	IAmb	00 39 20.4	
	comp=Z,13nm,0.8s						
FORT	**Forrest**	**45.04**	**257**	P	**P**	**00 39 29.0**	**-2.7**
SBA	**Scott Base**	**45.85**	**184**	P	**P**	**00 39 39.5**	**+2.1**
VNDA	**Vanda**	**45.90**	**186**	P	**P**	**00 39 40.4**	**+2.5**
	comp=Z,1.1nm,1.0s,baz=2.0,slow=9.4,SNR=3.1						
	comp=Z,1.1nm,1.0s						
VNDA	**Vanda**	**45.90**	**186**	P	**P**	**00 39 39.5**	**+1.7**
KNRA	**Kununurra**	**50.40**	**276**	P	**P**	**00 40 11.5**	**-1.9**
KNRA				IAmb	IAmb	00 40 33.2	
	comp=Z,7.4nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.88**	**272**	P	**P**	**00 40 22.7**	**-1.8**
FITZ				IAmb	IAmb	00 40 50.7	
	comp=Z,6.7nm,1.4s						
CASY	**Casey**	**53.00**	**209**	P	**P**	**00 40 31.2**	**-0.9**
CASY				IAmb	IAmb	00 40 35.7	
	comp=Z,11nm,1.4s						
MBWA	**Marble Bar**	**55.52**	**265**	P	**P**	**00 40 47.5**	**-3.5**
QSPA	**South Pole Qui**	**57.56**	**180**	P	**P**	**00 41 08.1**	**+3.0**
	comp=Z,13nm,0.9s,baz=347,slow=0.7,SNR=29						
	comp=Z,13nm,0.9s						
QSPA	**South Pole Qui**	**57.56**	**180**	P	**P**	**00 41 08.3**	**+3.1**
QSPA				IAmb	IAmb	00 41 13.7	
	comp=Z,9.3nm,0.8s						
KAPI	**Kappang**	**63.52**	**282**	LR	LR	01 08 33.4	
	comp=Z,32nm,18.8s,baz=344,slow=35						
BELA	**Belgrano 2**	**67.72**	**172**	P	**P**	**00 42 13.6**	**+1.0**
BELA				IAmb	IAmb	00 42 14.8	
	comp=Z,4.2nm,0.8s						
MAW	**Mawson**	**70.12**	**201**	P	**P**	**00 42 28.9**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=135,slow=13,SNR=2.8						
	comp=Z,1.9nm,0.8s						
MAW	**Mawson**	**70.12**	**201**	P	**P**	**00 42 27.9**	**+0.5**
TROLL	**Troll, Antarti**	**75.72**	**180**	PcP	**P**	**00 43 02.2**	**+1.3**
SNAA	**Sanae**	**76.02**	**179**	PcP	**P**	**00 43 03.5**	**+1.0**
SNAA	**Sanae**	**76.02**	**179**	LR	LR	01 15 22.9	
	comp=Z,26nm,19.5s,baz=5.0,slow=35						
SNAA	**Sanae**	**76.02**	**179**	P	**P**	**00 43 03.5**	**+1.0**
SNAA				IAmb	IAmb	00 43 08.9	
	comp=Z,8.1nm,1.1s						
VNA3	**Neumayer Olymp**	**76.19**	**176**	PcP	**P**	**00 43 04.4**	**+1.0**
VNA2	**Neumayer--Watz**	**76.62**	**177**	PcP	**P**	**00 43 07.1**	**+1.3**
	baz=175,slow=5.0						
VNA1	**Neumayer--Stat**	**76.85**	**177**	PcP	**P**	**00 43 08.5**	**+1.4**
H03S2	**Juan Fernandez**	**79.70**	**123**	T	T	02 11 48.4	
	baz=236,SNR=47						
H03S1	**Juan Fernandez**	**79.71**	**124**	T	T	02 11 49.5	
	baz=236,SNR=52						
H03S3	**Juan Fernandez**	**79.72**	**123**	T	T	02 12 00.3	
	baz=236,SNR=63						
H03N3	**Juan Fernandez**	**79.90**	**123**	T	T	02 12 14.7	
	baz=240,slow=72,SNR=51						
H03N2	**Juan Fernandez**	**79.91**	**123**	T	T	02 12 18.4	
	baz=240,slow=72,SNR=43						
H03N1	**Juan Fernandez**	**79.92**	**123**	T	T	02 12 13.8	
	baz=240,slow=72,SNR=71						
PLCA	**Paso Flores**	**81.41**	**133**	P	**P**	**00 43 35.4**	**+2.7**
	comp=Z,2.1nm,0.8s,baz=230,slow=8.6,SNR=3.7						
	comp=Z,2.1nm,0.8s						
BO02	**Sierra Bellavi**	**84.74**	**128**	P	**P**	**00 43 51.8**	**+1.8**
BO02				IAmb	IAmb	00 44 02.2	
	comp=Z,9.1nm,1.2s						
MT01	**Popeta**	**84.97**	**127**	P	**P**	**00 43 53.0**	**+1.9**
YBH	**Yreka Blue Hor**	**90.04**	**38**	LR	LR	01 16 58.0	
	comp=Z,12nm,21.3s,baz=296,slow=30						
NVAR	**Mina Array Bea**	**90.16**	**43**	P	**P**	**00 44 17.1**	**+1.1**
	comp=Z,1.2nm,0.9s,baz=223,slow=8.1,SNR=8.7						
	comp=Z,1.2nm,0.9s						
PZH	**PanZhiHua**	**95.85**	**298**	P	**P**	**00 44 44.5**	**+2.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,4.2s						
HHC	**Hu-ho-hao-te**	**97.37**	**314**	*e*P	Pdif	00 44 53.0	+4.0
HHC				pmax	pmax		
	comp=Z,40nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.6s						
NEW	**Newport**	**97.41**	**36**	LR	LR	01 21 25.1	
	comp=Z,18nm,21.6s,baz=297,slow=31						
WMQ	**Urumqi**	**114.15**	**308**	*e*P	**PKiKP**	**00 49 55.8**	**+1.1**
MKAR	**Makanchi Array**	**118.76**	**309**	PKP	**PKPdf**	**00 50 01.1**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=165,slow=1.4,SNR=3.8						
ARCES	**ARCESS Array B**	**140.58**	**347**	PKhKP	PKPpre	00 50 37.6	
	comp=Z,2.6nm,0.9s,baz=35,slow=3.3,SNR=6.3						
FINES	**FINESS Array B**	**146.98**	**338**	PKPbc	**PKPdf**	**00 50 55.4**	**0.0**
	comp=Z,5.1nm,0.4s,baz=54,slow=3.2,SNR=58						
NB2	**NORSAR Subarra**	**150.79**	**350**	PKP	**PKPbc**	**00 51 05.8**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.79**	**350**	PKPbc	**PKPbc**	**00 51 05.7**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=14,slow=4.1,SNR=14						
AKASG	**Malin Array Be**	**152.66**	**320**	PKPbc	**PKPbc**	**00 51 10.1**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=53,slow=2.2,SNR=2.3						
BRTR	**Keskin Array B**	**153.11**	**295**	PKPbc	**PKPbc**	**00 51 10.8**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=137,slow=3.8,SNR=8.7						
DBIC	**Dimbokro**	**153.59**	**166**	PKPbc	**PKiKP**	**00 51 15.2**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=173,slow=3.0,SNR=6.0						
TORD	**Torodi Ar. Bea**	**160.68**	**181**	PKPab	**PKPab**	**00 51 57.5**	**-0.1**
	comp=Z,15nm,0.3s,baz=176,slow=4.3,SNR=4.9						

*JMA **28** 00:35:51.5±0.3,37˚.N±2˚.×13˚.5E±˚,h391km,MV3.1/27,NW OFF KINKI DISTRICT*
*IDC **28** 00:35:53.5±1.3,36˚.80N×135˚.30E,h363km±24km,mb2.9/1, mbtmp3.5/4,Error ellipse: s-maj=45.4km s-min=26.3km az=37.0*

ISC 28 00:35:54.1±1.2,36˚.8N±0˚.1×135˚.28E±0˚.09,h350km,n14, σ1s84/16,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.14**	**187**	P	**Pn**	**00 36 42.3**	**+1.7**
JWT	**Wachi**	**1.48**	**176**	P	**Pn**	**00 36 44.3**	**+2.1**
JNG	**Nsakai**	**2.30**	**98**	*e*P	**Pn**	**00 36 50.2**	**+2.6**
MAT	**Matsushiro**	**2.36**	**94**	*e*P	**Pn**	**00 36 50.5**	**+2.4**
MJAR	**Matsushiro Arr**	**2.37**	**94**	P	**Pn**	**00 36 48.9**	**+0.8**
	7.3nm,0.6s,baz=282,slow=8.6,SNR=17						
JIE	**Ise**	**2.63**	**153**	P	**Pn**	**00 36 52.8**	**+2.5**
JTNC	**Tanabenakahech**	**2.95**	**175**	P	**Pn**	**00 36 54.6**	**+1.5**
JFT	**Otama**	**4.11**	**78**	P	**Pn**	**00 37 06.4**	**+2.2**
JFK	**Kawauchi**	**4.52**	**81**	P	**Pn**	**00 37 09.3**	**+0.9**
JFK				S	**S**	**00 38 07.6**	**-0.9**
JMM	**Marumori**	**4.53**	**74**	P	**Pn**	**00 37 10.3**	**+1.7**
BSO1	**Boso 1**	**5.09**	**113**	*e*P	**Pn**	**00 37 15.0**	**+0.9**
BSO1				*e*S	**S**	**00 38 17.8**	**-1.2**
KSRS	**Korea Array**	**5.92**	**279**	P	**Pn**	**00 37 24.3**	**+0.4**
	2.7nm,0.6s,baz=98,slow=12,SNR=10						
USRK	**Ussuriysk Ar.**	**7.84**	**342**	P	**Pn**	**00 37 45.4**	**-0.8**
	4.1nm,0.6s,baz=162,slow=12,SNR=7.8						
WRA	**Warramunga Arr**	**56.40**	**181**	P	**P**	**00 44 58.7**	**-1.5**
	0.2nm,0.3s,baz=359,slow=7.4,SNR=6.5						
	0.2nm,0.3s						

ROM 28 00:41:27.3±0.0,42˚.601N±0˚.003×13˚.267E±0˚.002, h12km,ML2.1/2,Error ellipse: s-maj=0.3km s-min=0.1km az=350.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.10**	**203**	P	Pg	**00 41 30.6**	**+0.5**
RM33				S	Sg	**00 41 32.6**	**+0.3**
RM33				AML	AML		
	comp=N,5020μm,0.1s						
RM33				AML	AML		
	comp=E,5005μm,1.4s						
RM33				AML	AML		
	comp=N,4985μm,0.1s						
RM33				AML	AML		
	comp=E,4990μm,1.4s						
RM33				AML	AML		
	comp=N,5025μm,0.1s						
RM33				AML	AML		
	comp=E,4995μm,1.4s						
RM33				AML	AML		
	comp=E,5000μm,1.4s						
CAMP	**Campotosto**	**0.12**	**122**	P	Pg	**00 41 31.0**	**+0.5**
CAMP				S	Sg	**00 41 33.4**	**+0.5**
CAMP				AML	AML		
	comp=E,857μm,0.9s						
CAMP				AML	AML		
	comp=N,637μm,0.7s						
T1243	**Rocca Santa Ma**	**0.17**	**54**	P	Pg	**00 41 31.7**	**+0.6**
T1243				S	Sg	**00 41 34.6**	**+0.7

	comp=N,3640µm,0.2s																		
MMO1					AML	AML													
	comp=E,4350µm,0.3s																		
MMO1					AML	AML													
	comp=N,3645µm,0.2s																		
MMO1	**Montemonaco**	**0.16**	**55**		AML	AML													
	comp=N,3640µm,0.2s																		
MMO1					AML	AML													
	comp=N,3645µm,0.2s																		
MMO1					AML	AML													
	comp=E,4350µm,0.3s																		
FEMA	**Monte Fema**	**0.17**	**334**		P	Pg	00 41 50.4	+0.5											
FEMA					S	Sg	00 41 53.6	+1.0											
FEMA	**Monte Fema**	**0.17**	**334**	⇑	P	Pg	00 41 50.5	+0.6											
FEMA					S	Sg	00 41 53.4	+0.8											
LNSS	**Leonessa**	**0.22**	**202**	⇑	P	Pb	00 41 51.5	-0.7											
LNSS					S	Sg	00 41 55.3	+1.5											
LNSS					AML	AML													
	comp=E,7875µm,0.2s																		
LNSS					AML	AML													
	comp=N,8145µm,0.3s																		
LNSS					AML	AML													
	comp=N,8150µm,0.3s																		
LNSS					AML	AML													
	comp=E,7870µm,0.2s																		
FDMO	**Fiordimonte**	**0.23**	**349**		AML	AML													
	comp=E,1900µm,0.2s																		
FDMO					AML	AML													
	comp=N,1595µm,1.4s																		
T1243	**Rocca Santa Ma**	**0.25**	**117**		AML	AML													
	comp=N,4015µm,0.2s																		
T1243					AML	AML													
	comp=E,5025µm,0.8s																		
T1243					AML	AML													
	comp=N,4050µm,0.2s																		
T1243					AML	AML													
	comp=N,4050µm,1.8s																		
T1243					AML	AML													
	comp=E,4955µm,0.8s																		
CSP1	**Cessapalombo**	**0.29**	**8**		P	Pg	00 41 52.5	+0.6											
CSP1					S	Sb	00 41 57.1	-1.1											
CSP1					AML	AML													
	comp=E,2995µm,1.1s																		
CSP1					AML	AML													
	comp=E,3000µm,1.1s																		
CSP1					AML	AML													
	comp=N,3320µm,0.3s																		
CSP1					AML	AML													
	comp=E,2990µm,1.1s																		
CSP1					AML	AML													
	comp=E,2990µm,0.9s																		
CSP1					AML	AML													
	comp=N,3325µm,0.3s																		
CSP1	**Cessapalombo**	**0.29**	**8**		AML	AML													
	comp=N,3320µm,0.3s																		
CSP1					AML	AML													
	comp=E,3000µm,1.1s																		
CSP1					AML	AML													
	comp=N,3325µm,0.3s																		
CSP1					AML	AML													
	comp=E,2990µm,1.1s																		
CAMP	**Campotosto**	**0.33**	**145**	⇑	P	Pg	00 41 53.2	+0.4											
ARRO	**Arrone**	**0.36**	**231**	⇓	P	Pb	00 41 54.0	-0.6											
ARRO					AML	AML													
	comp=E,424µm,0.9s																		
ARRO					AML	AML													
	comp=N,413µm,0.2s																		
ARRO					AML	AML													
	comp=E,424µm,0.9s																		
ARRO					AML	AML													
	comp=N,414µm,0.2s																		
SEF1	**Sefro**	**0.37**	**336**	⇑	P	Pg	00 41 53.9	+0.5											
SEF1					AML	AML													
	comp=E,1915µm,1.6s																		
SEF1					AML	AML													
	comp=N,2525µm,1.4s																		
SEF1					AML	AML													
	comp=E,1910µm,1.6s																		
SEF1					AML	AML													
	comp=N,2530µm,1.4s																		
SEF1					AML	AML													
	comp=E,1910µm,1.6s																		
SEF1					AML	AML													
	comp=N,2530µm,1.4s																		
SEF1					AML	AML													
	comp=N,2530µm,0.6s																		
SEF1					AML	AML													
	comp=E,1910µm,0.4s																		
TERO	**Teramo**	**0.38**	**119**		P	Pg	00 41 53.9	+0.3											
TERO					S	Sb	00 42 00.0	-0.9											
MNTP	**Montappone**	**0.40**	**35**		AML	AML													
	comp=E,1315µm,0.9s																		
MNTP					AML	AML													
	comp=E,1315µm,1.1s																		
MNTP					AML	AML													
	comp=N,1340µm,1.3s																		
MNTP					AML	AML													
	comp=E,1315µm,1.1s																		
MNTP					AML	AML													
	comp=N,1340µm,1.2s																		
OFFI	**Offida**	**0.41**	**72**		AML	AML													
	comp=E,876µm,0.5s																		
OFFI					AML	AML													
	comp=N,1076µm,0.5s																		
OFFI					AML	AML													
	comp=N,1076µm,1.5s																		
SSM1	**San Severino M**	**0.42**	**3**		P	Pg	00 41 54.9	+0.6											
ASSB	**Assisi San Ben**	**0.43**	**303**		P	Pg	00 41 54.8	+0.2											
ASSB					S	Sb	00 42 01.5	-0.8											
ASSB					AML	AML													
	comp=N,711µm,1.1s																		
ASSB					AML	AML													
	comp=E,731µm,0.5s																		
ASSB					AML	AML													
	comp=N,711µm,0.9s																		
SNTG	**Esanatoglia**	**0.47**	**341**	⇓	P	Pg	00 41 55.7	+0.3											
SNTG					AML	AML													
	comp=N,690µm,0.1s																		
SNTG					AML	AML													
	comp=E,520µm,0.3s																		
EL6	**Elcito**	**0.52**	**356**	⇑	P	Pg	00 41 56.6	+0.4											
EL6					S	Sb	00 42 05.0	0.0											
EL6					AML	AML													
	comp=E,1356µm,0.1s																		
EL6					AML	AML													
	comp=N,816µm,0.4s																		
ATCC	**AVT- Casa Cast**	**0.53**	**315**		AML	AML													
	comp=N,458µm,1.0s																		
ATCC					AML	AML													
	comp=E,674µm,0.3s																		
ATCC					AML	AML													
	comp=E,675µm,0.3s																		
TRTR	**Tortoreto Alta**	**0.56**	**90**		AML	AML													
	comp=E,651µm,1.4s																		
TRTR					AML	AML													
	comp=E,651µm,0.6s																		
TRTR					AML	AML													
	comp=N,685µm,1.4s																		
TRTR					AML	AML													
	comp=E,650µm,0.6s																		
TRTR					AML	AML													
	comp=N,684µm,1.4s																		
TRTR					AML	AML													
	comp=N,684µm,0.6s																		
FOSV	**Fossato di Vic**	**0.56**	**330**	⇑	P	Pg	00 41 57.3	+0.2											
FOSV					AML	AML													
	comp=N,428µm,0.2s																		
FOSV					AML	AML													
	comp=E,483µm,1.1s																		
FOSV					AML	AML													
	comp=N,428µm,0.2s																		
FOSV					AML	AML													
	comp=N,428µm,1.8s																		
CING	**Cingoli**	**0.57**	**3**	⇓	P	Pg	00 41 57.0	-0.1											
CING					AML	AML													
	comp=N,826µm,0.2s																		
CING					AML	AML													
	comp=E,982µm,0.1s																		
FAGN	**Fagnano**	**0.63**	**149**	⇑	P	Pb	00 41 59.3	+0.1											
MURB	**Monte Urbino**	**0.65**	**315**	⇓	P	Pg	00 41 58.9	+0.3											
MURB					S	Sb	00 42 10.0	+1.4											
MURB					AML	AML													
	comp=N,1036µm,0.3s																		
MURB					AML	AML													
	comp=E,796µm,0.8s																		
MURB					AML	AML													
	comp=N,1036µm,1.7s																		

PP3	**Marolino**	**0.66**	**30**	⇑	P	Pb	00 42 00.2	+0.5											
PP3					AML	AML													
	comp=N,2105µm,0.3s																		
PP3					AML	AML													
	comp=N,2195µm,0.3s																		
PP3					AML	AML													
	comp=E,1360µm,0.4s																		
PP3					AML	AML													
	comp=E,1515µm,0.3s																		
SSFR	**Montelago di S**	**0.68**	**337**	⇓	P	Pg	00 41 59.6	+0.3											
SSFR					AML	AML													
	comp=E,789µm,0.4s																		
SSFR					AML	AML													
	comp=E,888µm,0.4s																		
SSFR					AML	AML													
	comp=N,1210µm,1.3s																		
SSFR					AML	AML													
	comp=N,1004µm,0.3s																		
ARVD	**Arcevia**	**0.71**	**348**	⇓	P	Pg	00 41 59.9	+0.2											
ARVD					S	Sb	00 42 11.0	+0.7											
ARVD					AML	AML													
	comp=E,286µm,0.7s																		
ARVD					AML	AML													
	comp=N,200µm,0.1s																		
ARVD					AML	AML													
	comp=N,200µm,1.9s																		
ARVD					AML	AML													
	comp=E,286µm,1.3s																		
FRON	**Frontone**	**0.78**	**337**	⇓	P	Pg	00 42 01.0	0.0											
FRON					AML	AML													
	comp=E,210µm,0.2s																		
FRON					AML	AML													
	comp=N,256µm,0.6s																		
ATVO	**AVT- Monte Val**	**0.79**	**317**	⇑	P	Pg	00 42 01.3	-0.1											
ATVO					AML	AML													
	comp=E,107µm,0.7s																		
ATVO					AML	AML													
	comp=N,107µm,0.4s																		
ATVO					AML	AML													
	comp=E,107µm,0.7s																		
ATVO					AML	AML													
	comp=N,107µm,0.4s																		
COR1	**Corinaldo**	**0.83**	**352**	⇓	P	Pb	00 42 03.2	+0.6											
ATPI	**Pietralunga -**	**0.84**	**320**		P	Pg	00 42 02.5	+0.1											
ATPI					AML	AML													
	comp=E,103µm,1.3s																		
ATPI					AML	AML													
	comp=N,109µm,0.3s																		
ATPI					AML	AML													
	comp=N,109µm,0.3s																		
ATPI					AML	AML													
	comp=E,103µm,1.3s																		
PIEI	**Pieia**	**0.86**	**328**		P	Pg	00 42 02.6	0.0											
PIEI					AML	AML													
	comp=N,99µm,0.2s																		
PIEI					AML	AML													
	comp=E,184µm,0.3s																		
CERT	**Cerreto**	**0.87**	**188**	⇓	P	Pn	00 42 03.9	-0.4											
MPAG	**Monte Paganucc**	**0.87**	**341**		P	Pb	00 42 03.1	-0.1											
MPAG					AML	AML													
	comp=N,264µm,0.2s																		
MPAG					AML	AML													
	comp=E,206µm,1.5s																		
MPAG					AML	AML													
	comp=E,206µm,0.5s																		
NARO	**Abbazia di Nar**	**0.90**	**333**	⇓	P	Pg	00 42 03.3	-0.2											
NARO					S	Sn	00 42 18.0	+0.1											
NARO					AML	AML													
	comp=E,108µm,0.1s																		
NARO					AML	AML													
	comp=E,108µm,0.1s																		
NARO					AML	AML													
	comp=N,88µm,1.0s																		
SACS	**San Casciano d**	**0.91**	**273**	⇓	P	Pg	00 42 03.2	-0.5											
SACS					AML	AML													
	comp=E,57µm,0.5s																		
SACS					AML	AML													
	comp=N,68µm,0.8s																		
APEC	**Apecchio**	**0.92**	**325**	⇑	P	Pb	00 42 04.3	+0.2											
APEC					S	Sn	00 42 19.0	+0.6											
FSSB	**Fossombrone**	**0.93**	**343**	⇑	P	Pg	00 42 03.9	0.0											
FSSB					S	Sn	00 42 19.0	+0.5											
FSSB					AML	AML													
	comp=E,514µm,1.2s																		
FSSB					AML	AML													
	comp=N,936µm,0.4s																		
FSSB					AML	AML													
	comp=E,514µm,0.8s																		
BADI	**Badiali**	**0.96**	**317**	⇑	P	Pb	00 42 04.8	-0.1											
CAFI	**Castiglion Fio**	**1.01**	**301**	⇓	P	Pb	00 42 06.0	+0.3											
CAFI					AML	AML													
	comp=N,62µm,1.0s																		
CAFI					AML	AML													
	comp=E,47µm,0.4s																		
LAV9	**Lanuvio**	**1.18**	**197**		S	Sb	00 42 23.0	-0.8											
LIK	**San Giovanni I**	**1.34**	**167**		S	Sb	00 42 28.0	-0.3											
ABTA	**Abfaltersbach**	**3.96**	**354**		*e*Pn	Pn	00 42 48.3	+1.3											
	comp=E,1.0nm,0.3s																		
WTTA	**Wattenberg**	**4.58**	**347**		*e*Pn	Pn	00 42 58.4	+2.8											
	comp=E,0.1nm,0.2s																		
SQTA	**Sankt Quirin**	**4.62**	**343**		*e*Pn	Pn	00 42 58.3	+2.3											
	comp=E,0.3nm,0.2s																		
BIOA	**Bad Ischl, Aus**	**4.90**	**4**		*e*Pn	Pn	00 43 01.2	+1.6											
	comp=E,0.8nm,0.2s																		
MOA	**Molln**	**5.10**	**8**		*e*Pn	Pn	00 43 04.5	+2.0											
	comp=E,0.2nm,0.1s																		

*IDC **28** 01:04:31.7±1.4, 39°.27N×23°.11E, h0km, mb3.5/7, mbtmp3.5/11, ML3.6/5, MS2.7/9, Error ellipse: s-maj=19.9km s-min=18.4km az=36.0*
*ATH **28** 01:04:31.9, 39°.24N×22°.93E, h10km±1km, ML3.6/20, Error ellipse: s-maj=1.4km s-min=0.6km az=352.0*
*ISK **28** 01:04:31.6, 39°.30N×23°.09E, h15km, ML3.7/34*
*THE **28** 01:04:31.9, 39°.26N×22°.94E, h10km±1km, ML3.7/13, Error ellipse: s-maj=1.1km s-min=0.6km az=291.0*
*BEO **28** 01:04:36.1±0.7, 39°.60N×23°.15E, h0km, ML3.4/5*

ISC 28 01:04:32.1±0.8, **39°.26N**±0°.01×**22°.94E**±0°.02, **h11**km±6km, **n205,σ1s39/242, mb3.5**/6, **MS2.5**/5, **27C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.22**	**61**	P		**Pg**	**01 04 36.8**	**0.0**
XOR				S		**Sg**	**01 04 40.3**	**+0.3**
	136µm,0.5s							
XOR	**Xorichti**	**0.22**	**61**	P		**Pg**	**01 04 36.8**	**0.0**
XOR				S		**Sg**	**01 04 39.9**	**-0.1**
XOR				AML		AML	01 04 41.0	
XOR				AML		AML	01 04 41.1	
NEO	**Neokhori**	**0.22**	**77**	P		**Pg**	**01 04 36.8**	**0.0**
NEO				S		**Sg**	**01 04 40.4**	**+0.3**
	208µm,0.3s							
NEO	**Neokhori**	**0.22**	**77**	P		**Pg**	**01 04 36.8**	**0.0**
NEO				S		**Sg**	**01 04 40.3**	**+0.3**
AXAR	**Agios Charalam**	**0.54**	**204**	P		**Pg**	**01 04 41.8**	**-0.8**
AXAR	**Agios Charalam**	**0.54**	**204**	P		**Pg**	**01 04 41.8**	**-0.8**
AXAR				S		**Sg**	**01 04 49.2**	**-0.5**
AXAR				AML		AML	01 04 54.5	
	comp=E,17833µm,0.5s							
AXAR				AML		AML	01 04 56.5	
	comp=N,23841µm,0.8s							
ATAL	**Atalanti**	**0.57**	**174**	P		**Pg**	**01 04 42.6**	**-0.6**
ATAL				S		**Sg**	**01 04 51.0**	**+0.3**
ATAL	**Atalanti**	**0.57**	**174**	P		**Pg**	**01 04 42.5**	**-0.6**
ATAL				S		**Sg**	**01 04 49.6**	**-1.1**
ATAL				AML		AML	01 04 56.1	
	comp=N,11192µm,0.7s							
ATAL				AML		AML	01 04 56.4	
	comp=E,12753µm,0.7s							
LRSO	**Larissa Observ**	**0.59**	**314**	P		**Pg**	**01 04 43.0**	**-0.7**
LRSO				S		**Sg**	**01 04 51.6**	**+0.1**
	comp=E,6µm,0.7s							
LRSO	**Larissa Observ**	**0.59**	**314**	P		**Pg**	**01 04 43.0**	**-0.7**
LKR	**Lokris**	**0.61**	**176**	P		**Pg**	**01 04 42.3**	**-1.6**
LKR				S		**Sg**	**01 04 52.1**	**+0.2**
	comp=E,6µm,0.7s							
LKR	**Lokris**	**0.61**	**176**	P		**Pg**	**01 04 42.8**	**-1.2**
LKR				S		**Sg**	**01 04 51.1**	**-0.8**
LKR				AML		AML	01 04 53.9	
	comp=E,9907µm,0.4s							
LKR				AML		AML	01 04 55.2	
	comp=N,12279µm,0.5s							
MAKR	**Makrakomi, Fth**	**0.68**	**249**	P		**Pg**	**01 04 44.4**	**-0.8**
MAKR				S		**Sg**	**01 04 55.0**	**+0.9**
	comp=N,10µm,1.1s							

MAKR	**Makrakomi, Fth**	**0.68**	**249**		P	**Pg**	**01 04 44.4**	**-0.8**											
MAKR					S	**Sg**	**01 04 53.8**	**-0.3**											
MAKR					AML	AML	01 04 59.7												
	comp=E,17631µm,0.5s																		
MAKR					AML	AML	01 05 04.7												
	comp=N,18796µm,0.6s																		
TYRN	**Tyrnavos**	**0.71**	**310**		P	**Pg**	**01 04 44.9**	**-1.0**											
ALNA	**Alonissos**	**0.73**	**98**		P	**Pg**	**01 04 45.8**	**-0.3**											
ALNA					S	**Sb**	**01 04 56.1**	**-0.6**											
ALNA					AML	AML	01 04 59.4												
	comp=E,58323µm,0.4s																		
ALNA					AML	AML	01 04 59.7												
	comp=N,60230µm,0.6s																		
THL	**Klokotos Trika**	**0.78**	**293**		P	**Pg**	**01 04 45.7**	**-1.5**											
THL					S	**Sg**	**01 04 57.6**	**+0.2**											
	comp=N,2µm,0.7s																		
THL	**Klokotos Trika**	**0.78**	**293**		P	**Pg**	**01 04 45.8**	**-1.4**											
THL					S	**Sg**	**01 04 57.3**	**-0.1**											
THL					AML	AML	01 05 03.8												
	comp=E,4055µm,0.7s																		
THL					AML	AML	01 05 03.9												
	comp=N,2898µm,0.8s																		
DLFA	**Delphi**	**0.85**	**204**		P	**Pg**	**01 04 47.3**	**-1.3**											
DLFA					S	**Sg**	**01 04 59.1**	**-0.6**											
DLFA					AML	AML	01 05 05.0												
	comp=N,6795µm,0.5s																		
DLFA					AML	AML	01 05 06.0												
	comp=E,7755µm,0.6s																		
PAIG	**Paliouri**	**0.88**	**40**		P	**Pg**	**01 04 48.9**	**-0.2**											
PAIG					S	**Sb**	**01 05 01.4**	**+0.3**											
PAIG	**Paliouri**	**0.88**	**40**		P	**Pg**	**01 04 48.9**	**-0.2**											
LIT	**Litokhoron**	**0.91**	**338**		P	**Pg**	**01 04 48.5**	**-1.2**											
LIT					S	**Sn**	**01 05 03.2**	**-0.9**											
	comp=E,3µm,0.8s																		
LIT	**Litokhoron**	**0.91**	**338**		P	**Pg**	**01 04 48.7**	**-1.0**											
LIT					S	**Sg**	**01 05 02.0**	**+0.4**											
LIT					AML	AML	01 05 07.5												
	comp=E,4759µm,0.4s																		
LIT					AML	AML	01 05 08.9												
	comp=N,9015µm,0.6s																		
EVR	**Evrytania**	**0.94**	**249**		P	**Pb**	**01 04 49.5**	**-1.1**											
EVR	**Evrytania**	**0.94**	**249**		P	**Pb**	**01 04 49.5**	**-1.1**											
EVR					S	**Sg**	**01 05 02.5**	**-0.2**											
EVR					AML	AML	01 05 07.7												
	comp=E,3457µm,0.6s																		
EVR					AML	AML	01 05 10.3												
	comp=N,5138µm,1.1s																		
VIL2	**Platees**	**1.07**	**166**		P	**Pb**	**01 04 52.6**	**-0.2**											
VIL2					S	**Sn**	**01 05 08.0**	**0.0**											
VIL2					AML	AML	01 05 15.5												
	comp=E,12154µm,0.8s																		
VIL2					AML	AML	01 05 17.4												
	comp=N,9192µm,0.9s																		
SERG	**Sergoula**	**1.09**	**220**		P	**Pb**	**01 04 51.7**	**-1.3**											
SERG					S	**Sb**	**01 05 06.8**	**-0.5**											
SERG					AML	AML	01 05 10.8												
	comp=E,3674µm,0.6s																		
SERG					AML	AML	01 05 14.3												
	comp=N,4988µm,0.4s																		
KYMI	**Kymi, Euboea I**	**1.10**	**124**		P	**Pb**	**01 04 52.5**	**-0.6**											
KYMI					S	**Sg**	**01 05 07.4**	**-0.1**											
	comp=N,3µm,0.5s																		
KYMI	**Kymi, Euboea I**	**1.10**	**124**		P	**Pb**	**01 04 52.5**	**-0.6**											
KYMI					S	**Sg**	**01 05 07.5**	**-0.1**											
KYMI					AML	AML	01 05 11.8												
	comp=E,6653µm,0.4s																		
KYMI					AML	AML	01 05 14.2												
	comp=N,5439µm,0.6s																		
VILL	**Villia**	**1.13**	**165**		P	**Pb**	**01 04 52.5**	**-1.2**											
VILL					S	**Sb**	**01 05

ALN	Alexandroupoli	2.89	54	PN	Pn	01 05 16.1	-2.0		
SKO	Skopje	2.94	338	eSn	Sg	01 06 06.1	-0.6		
SKO	Skopje	2.94	338	i Pn	Pb	01 05 22.4	-2.2		
GELI	Tayfur-Gelibol	2.95	66	PN	Pn	01 05 17.4	-1.5		
APE	Apeiranthos	2.99	136	⇑P	Pn	01 05 19.8	+0.3		
APE	Apeiranthos	2.99	136	PN	Pn	01 05 19.3	-0.2		
URLA	Izmir	2.99	106	PN	Pn	01 05 18.3	-1.2		
KTHA	Kythira Island	3.00	178	PN	Pn	01 05 20.6	+1.0		
KDZ	Kurdzhali	3.04	38	PN	Pn	01 05 18.4	-1.8		
DKL	Dikili	3.09	92	PN	Pn	01 05 19.9	-0.9		
PLD	Plovdiv	3.14	25	PN	Pn	01 05 21.2	-0.4		
PLD	Plovdiv	3.14	25	ePn	Pn	01 05 22.6	+1.0		
PLD				eSn	Sn	01 05 57.9	-1.2		
TIR	Tirane	3.15	313	ePn	Pb	01 05 27.6	-0.4		
BOSS	Bosilegrad	3.25	354	ePn	Pn	01 05 23.2	+0.1		
BOSS				eSn	Sn	01 06 01.6	-0.2		
PRVS	Prvonek	3.31	349	ePn	Pn	01 05 24.0	+0.1		
BLCB	Balcova	3.32	104	PN	Pn	01 05 23.5	-0.5		
VTS	Vitosha	3.36	4	⇑P	Pn	01 05 25.3	+0.5		
VTS	Vitosha	3.36	4	ePn	Pn	01 05 24.8	0.0		
VTS				eSn	Sn	01 05 59.8	-5.0		
UKOP	Uzunkopru-Edir	3.39	55	PN	Pn	01 05 23.9	-1.0		
SANT	Santorini	3.50	145	PN	Pn	01 05 26.9	+0.3		
RKY	Sarkoy-Tekirda	3.55	65	PN	Pn	01 05 26.3	-1.0		
BARS	Barje	3.66	347	ePn	Pn	01 05 28.8	+0.2		
GCAM	G?zelcaml?	3.71	113	PN	Pn	01 05 28.9	-0.4		
RODP	Rodopos	3.75	170	PN	Pn	01 05 31.0	+1.1		
IMMV	Iera Moni Meta	3.88	167	PN	Pn	01 05 33.1	+1.4		
EDRB	Edirne	3.88	47	PN	Pn	01 05 30.3	-1.4		
EDC	Edincik	3.94	72	PN	Pn	01 05 31.7	-0.9		
ZAPS	Zavoj	4.02	357	ePn	Pn	01 05 35.4	+1.8		
KNDR	Palaiochora Ch	4.06	171	PN	Pn	01 05 35.2	+1.0		
BODT	Bodrum	4.08	321	PN	Pn	01 05 34.3	-0.2		
DRME	Dracevica, Mon	4.09	317	ePn	Pn	01 05 35.6	+1.0		
AYDB	Zeytinkoy-Aydi	4.09	107	PN	Pn	01 05 33.9	-0.8		
SELS	Selova	4.19	341	ePn	Pn	01 05 35.3	-0.7		
PDG	Podgorica	4.23	320	⇑P	Pn	01 05 38.1	+1.7		
PDG	Podgorica	4.23	320	ePn	Pn	01 05 39.5	+3.1		
PDG				eSn	Sn	01 06 29.5	+3.8		
IDI	Anoyia	4.26	158	⇑P	Pn	01 05 38.9	+1.9		
IDI	Anoyia	4.26	158	Pn	Pn	01 05 37.7	+0.8		
	comp=N,1.6nm,0.3s,baz=291,slow=6.8,SNR=22								
	comp=N,12nm,0.5s								
IDI	Anoyia	4.26	158	PN	Pn	01 05 37.5	+0.6		
HRKL	Herakleio	4.30	156	PN	Pn	01 05 38.5	+1.1		
BLKB	Belogradchik	4.37	357	⇑P	Pn	01 05 39.1	+0.7		
DAT	Datca	4.45	123	PN	Pn	01 05 39.3	+0.3		
BOVS	Bovan	4.47	348	⇓P	Pn	01 05 42.1	+2.3		
BOVS	Bovan	4.47	348	ePn	Pn	01 05 41.4	+1.6		
SLVT	Silivri	4.49	62	PN	Pn	01 05 39.3	-0.7		
ZAGS	Zajecar	4.58	354	ePn	Pn	01 05 41.4	+0.1		
SJES	Sjenica	4.58	332	ePn	Pn	01 05 42.3	+0.8		
IVAS	Ivanjica	4.80	335	ePn	Pn	01 05 44.0	-0.4		
TIP	Timpagrande	4.80	271	⇓P	Pn	01 05 45.2	+0.7		
TREB	Trebinje	4.90	316	ePn	Pn	01 05 46.2	+0.5		
TREB	Trebinje	4.90	316	ePn	Pn	01 05 46.4	+0.7		
GRUS	Gruza	4.92	341	ePn	Pn	01 05 48.4	+2.4		
BRY	Bratogost	4.93	319	ePn	Pn	01 05 48.2	+1.9		
MATE	Matera	4.99	288	⇑P	Pn	01 05 48.2	+1.3		
RUDO	Rudo	5.12	330	ePn	Pn	01 05 51.3	+2.6		
KUBS	Kucevo	5.24	350	ePn	Pn	01 05 51.7	+1.4		
TRUS	Trudelj	5.31	340	ePn	Pn	01 05 54.0	+2.6		
BBLS	Lazići	5.31	331	ePn	Pn	01 05 55.1	+3.6		
DIVS	Divibare	5.32	336	ePn	Pn	01 05 52.6	+1.1		
DIVS	Divibare	5.32	336	ePn	Pn	01 05 52.8	+1.3		
STON	Ston	5.36	314	ePn	Pn	01 05 41.8	-10		
STON	Ston	5.36	314	eSn	Sn	01 06 53.0	-0.7		
MDVR	Moldovita	5.59	351	⇑P	Pn	01 05 56.6	+1.3		
HERR	Herculane	5.63	356	⇑P	Pn	01 05 56.2	+0.4		
SULR		5.95	23	⇑P	Pn	01 06 01.7	+1.6		
GZR	Gura Zlata	6.13	359	⇑P	Pn	01 06 05.1	+2.4		
SECR		6.22	21	⇓P	Pn	01 06 06.1	+2.2		
FRGS	Fruska Gora	6.34	340	ePn	Pn	01 06 01.1	-4.4		
FRGS	Fruska Gora	6.34	340	ePn	Pn	01 06 06.0	+0.5		
VOIR		6.37	13	⇓P	Pn	01 06 06.8	+0.9		
BZS	Buzias	6.43	352	⇓P	Pn	01 06 06.9	+0.1		
BZS	Buzias	6.43	352	ePn	Pn	01 06 06.4	-0.3		
SRKY	Kupres RS	6.46	320	ePn	Pn	01 06 08.2	+0.9		
HARR	Harsova	6.58	33	⇑P	Pn	01 06 10.5	+1.8		
MLR	Muntele Rosu	6.61	19	⇑P	Pn	01 06 11.2	+1.8		
MLR	Muntele Rosu	6.61	19	Pn	Pn	01 06 10.9	+1.5		
	comp=N,2.5nm,0.3s,baz=270,slow=7.1,SNR=39								
MLR				Lg	Lg	01 07 57.1			
	comp=N,0.2nm,0.3s,baz=171,slow=19,SNR=3.4								
MLR				LR	LR	01 09 08.4			
	comp=N,146nm,19.8s,baz=259,slow=42								
DEV	Deva	6.62	360	⇑P	Pn	01 06 12.0	+2.7		
NEHR	Nehoiu	6.65	21	⇑P	Pn	01 06 11.5	+1.8		
TPGR	Topolog	6.92	34	⇑P	Pn	01 06 15.7	+2.3		
DOPR	Dopca	6.94	14	⇑P	Pn	01 06 14.9	+1.1		
BLY	Banja Luka	6.96	324	ePn	Pn	01 06 17.4	+3.4		
BLY	Banja Luka	6.96	324	ePn	Pn	01 06 17.6	+3.6		
COVR	Voineasa-Covas	7.01	19	⇑P	Pn	01 06 12.2	+1.5		
CFR	Carcaliu	7.06	19	⇑P	Pn	01 06 16.3	+0.9		
SIRR	Siria	7.07	353	⇑P	Pn	01 06 16.0	+0.5		
A050A	Klekovaca	7.08	320	ePn	Pn	01 06 16.4	+0.7		
PLOR	Plostina	7.13	21	⇑P	Pn	01 06 18.6	+2.2		
OZUR		7.15	16	⇑P	Pn	01 06 18.3	+1.7		
VRI	Vrincioaia	7.17	22	⇑P	Pn	01 06 18.8	+2.0		
A051A	Mrakovica	7.29	324	ePn	Pn	01 06 18.4	-0.2		
TLCR		7.35	34	⇑P	Pn	01 06 19.6	+0.3		
MORH	Mrgy, Hungar	7.64	337	P	Pn	01 06 24.3	+1.0		
KOVH	Kovagotottos	7.70	334	P	Pn	01 06 26.1	+2.0		
TESR	Tescani	7.74	19	⇓P	Pn	01 06 26.9	+2.2		
ARCR	ARCALIA	7.89	7	⇑P	Pn	01 06 29.2	+2.4		
BIZ	Bicaz	8.02	16	⇑P	Pn	01 06 30.7	+2.2		
VASR	Vaslui	8.19	24	⇑P	Pn	01 06 31.6	+0.8		
BRTR	Keskin Array B	8.29	83	Pn	Pn	01 06 33.6	+1.3		
	comp=N,0.3nm,0.3s,baz=266,slow=12,SNR=24								
	comp=N,1.5nm,0.5s								
BOJS	Bojanci	8.44	320	ePn	Pn	01 06 35.2	+0.9		
BURAR	Bucovina Array	8.52	10	⇑P	Pn	01 06 38.0	+2.5		
CRES	Cresnjev	8.58	322	ePn	Pn	01 06 35.2	-1.0		
MPLH	Magyarpolny	8.84	335	P	Pn	01 06 44.2	+4.5		
PURM	Purcari	8.87	33	⇓P	Pn	01 06 41.0	+0.9		
SKDS	Skadanscina	9.11	316	ePn	Pn	01 06 50.7	+7.2		
SOKA	Soboth	9.41	325	ePn	Pn	01 06 48.5	+0.9		
	comp=N,0.8nm,0.4s								
OBKA	Obir	9.51	322	ePn	Pn	01 06 50.8	+1.8		
OBKA	Obir	9.51	322	ePn	Pn	01 06 51.4	+2.4		
	comp=N,0.4nm,0.3s								
ARSA	Arzberg	9.64	328	ePn	Pn	01 06 53.0	+2.2		
	comp=N,0.9nm,0.5s								
VYHS	Vyhne	9.70	344	ePN	Pn	01 06 51.3	-0.2		
SORM	Soroca	9.70	22	⇓P	Pn	01 06 51.7	+0.2		
CONA	Conrad Observa	10.07	332	ePn	Pn	01 06 59.7	+3.1		
	comp=N,0.6nm,0.4s								
MOA	Molln	10.64	327	ePn	Pn	01 07 05.8	+1.4		
	comp=N,0.4nm,0.3s								
ABTA	Abfaltersbach	10.69	318	ePn	Pn	01 07 04.8	-0.4		
	comp=N,0.6nm,0.4s								
VRAC	Vranov	11.03	338	LR	LR	01 11 20.4			
	comp=N,13nm,21.2s,baz=265,slow=37								
WTTA	Wattenberg	11.48	318	ePn	Pn	01 07 16.8	+0.8		
	comp=N,0.6nm,0.3s								
WATA	Walderalm	11.56	318	ePn	Pn	01 07 20.2	+3.1		
	comp=N,1.7nm,0.5s								
GERES	GERESS Array B	11.65	328	Pn	Pn	01 07 21.2	+2.8		
	baz=150,slow=14,SNR=5.2								
	comp=N,0.4nm,0.8s								
MOTA	Moosalm	11.81	317	ePn	Pn	01 07 20.6	0.0		
	comp=N,0.3nm,0.3s								
DAVOX	Davos/Dischmat	12.15	312	LR	LR	01 13 43.1			
	comp=N,26nm,19.1s,baz=122,slow=45								
AKASG	Malin Array Be	12.27	19	Pn	Pn	01 07 26.9	+0.3		
	comp=N,0.5nm,0.3s,baz=204,slow=12,SNR=4.1								
AKASG				LR	LR	01 12 55.7			
	comp=N,50nm,22.0s,baz=173,slow=41								
	comp=N,0.2nm,0.3s								
ESDC	Sonseca Array	20.75	280	P	Pn	01 09 15.6	+0.3		
	comp=N,2.0nm,1.0s,baz=76,slow=10,SNR=12								
	comp=N,2.0nm,1.0s								
BELG	Belogornoye	21.51	44	LR	LR	01 18 31.5			
	comp=N,21nm,20.0s,baz=157,slow=39								
HFS	Hagfors	21.69	347	P	P	01 09 23.2	+0.4		
	comp=N,1.1nm,0.5s,baz=165,slow=12,SNR=6.8								
HFS				LR	LR	01 17 39.2			
	comp=N,15nm,18.1s,baz=172,slow=36								
	comp=N,1.1nm,0.5s								
FINES	FINESS Array B	22.30	4	P	P	01 09 29.2	0.0		
	comp=N,2.3nm,0.8s,baz=179,slow=9.5,SNR=6.6								
FINES				LR	LR	01 19 59.7			
	comp=N,19nm,21.0s,baz=182,slow=42								
	comp=N,2.3nm,0.8s								
NB2	NORSAR Subarra	22.99	345	P	P	01 09 37.7	+1.1		
	comp=Z,3.3nm,1.2s,baz=156,slow=11								
NOA	NORSAR Array B	22.99	345	P	P	01 09 36.4	-0.3		
	comp=Z,0.4nm,0.6s,baz=157,slow=10,SNR=3.0								
NOA				LR	LR	01 19 43.5			
	comp=Z,15nm,19.1s,baz=335,slow=40								
	comp=Z,0.4nm,0.6s								
EKA	Eskdalemuir Ar	23.71	321	P	P	01 09 46.2	+2.4		
	comp=Z,0.7nm,0.6s,baz=124,slow=9.7,SNR=4.5								
	comp=Z,0.7nm,0.6s								
MKAR	Makanchi Array	43.12	60	P	P	01 12 32.1	-0.3		
	comp=Z,0.7nm,0.5s,baz=280,slow=6.0,SNR=6.1								
	comp=Z,0.7nm,0.5s								
ZALV	Zalesovo Beam	43.56	49	P	P	01 12 35.6	-0.1		
	comp=Z,0.7nm,0.7s,baz=268,slow=8.7,SNR=2.1								
	comp=Z,0.7nm,0.7s								
SCHQ	Schefferville	58.95	318	LR	LR	01 38 28.0			
	comp=Z,21nm,19.7s,baz=130,slow=34								

*SOME **28** 01:14:44.3,44.°00N×84.°42E,h10km*
*NNC **28** 01:14:51.0±3.3,43.°63N×83.°98E,h7km±16km, mb3.5, mpv3.4, Error ellipse: s-maj=27.3km s-min=9.4km az=114.0*

ISC 28 01:14:48.9±2.1, 43.°59N±0.°10×84.°11E±0.°09, h10km, n32, σ2s47/46, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DJR	Jarkent	3.21	285	eP	Pb		01 15 45.7	-0.3
	6.0nm,0.2s							
DJR				eS	Sg		01 16 29.8	-2.0
	20nm,0.5s							
DJR	Jarkent	3.21	285	Pg	Pb		01 15 45.7	-0.3
	6.0nm,0.2s							
DJR				Lg	Lg		01 16 29.8	
	20nm,0.5s							
SHLS	Shalkode	3.42	264	eP	Pb		01 15 47.0	-2.5
	6.1nm,0.2s							
SHLS				eS	Sb		01 16 32.4	+1.3
	20nm,0.2s							
SHLS	Shalkode	3.42	264	Pg	Pb		01 15 47.0	-2.5
	6.1nm,0.2s							
SHLS				Lg	Lg		01 16 32.4	
	20nm,0.2s							
MK31	Makanchi Array	3.46	339	Pn	Pn		01 15 44.2	+1.5
	0.1nm,0.2s,baz=146,slow=15,SNR=23							
MK31				Pg	Pb		01 15 52.2	+2.1
	0.8nm,0.3s,baz=151,slow=16,SNR=12							
MK31				⇑Lg	Lg		01 16 39.9	
	1.8nm,0.2s,baz=149,slow=27,SNR=11							
MAKZ	Makanchi	3.56	336	⇑Pn	Pn		01 15 45.6	+1.4
	1.5nm,0.8s							
MAKZ				⇑Pg	Pb		01 15 54.8	+2.9
	2.2nm,0.6s							
MAKZ				⇓Lg	Lg		01 16 43.8	
	6.8nm,0.7s							
UZB	Uzunbulak	3.73	265	eP	Pg		01 15 59.0	-1.4
	1.3nm,0.2s							
UZB				eS	Sg		01 16 52.9	+4.1
	7.2nm,0.3s							
UZB	Uzunbulak	3.73	265	Pg	Pg		01 15 59.0	-1.4
	1.3nm,0.2s							
UZB				Lg	Lg		01 16 52.9	
	7.2nm,0.3s							
ZSN	Zaisan	3.90	8	eP	Pn		01 15 48.1	-0.8
	2.1nm,0.1s							
ZSN				eS	Sn		01 16 34.1	-0.6
	11nm,0.2s							
ZSN	Zaisan	3.90	8	Pg	Pn		01 15 48.1	-0.8
	2.1nm,0.1s							
ZSN				Lg	Lg		01 16 34.1	
	11nm,0.2s							
KPKS	Kokpek	3.95	270	eP	Pg		01 16 02.4	-2.1
	4.1nm,0.2s							
KPKS				eS	Sg		01 16 58.5	+2.9
	11nm,0.4s							
KPKS	Kokpek	3.95	270	Pg	Pg		01 16 02.4	-2.1
	4.1nm,0.2s							
KPKS				Lg	Lg		01 16 58.5	
	11nm,0.4s							
BLB	Baldybastay	4.11	279	eP	Pb		01 16 02.3	+1.0
	5.9nm,0.4s							
BLB				eS	Sg		01 16 58.4	-2.3
	8.4nm,0.4s							
BLB	Baldybastay	4.11	279	Pg	Pb		01 16 02.3	+1.0
	5.9nm,0.4s							
BLB				Lg	Lg		01 16 58.4	
	8.4nm,0.4s							
SATY	Saty	4.20	265	eP	Pg		01 16 06.8	-2.4
	1.1nm,0.1s							
SATY				eS	Sg		01 17 06.3	+2.8
	9.1nm,0.2s							
SATY	Saty	4.20	265	Pg	Pg		01 16 06.8	-2.4
	1.1nm,0.1s							
SATY				Lg	Lg		01 17 06.3	
	9.1nm,0.2s							
KURS	Kuram	4.32	271	eP	Pg		01 16 08.8	-2.8
	2.6nm,0.6s							
KURS				eS	Sg		01 17 09.6	+2.1
	7.1nm,0.4s							
KURS	Kuram	4.32	271	Pg	Pg		01 16 08.8	-2.8
	2.6nm,0.6s							
KURS				Lg	Lg		01 17 09.6	
	7.1nm,0.4s							
TDK	Taldyqorghan	4.33	291	eP	Pb		01 16 05.7	+0.6
	31nm,0.3s							
TDK				eS	Sg		01 17 04.6	-3.3
	22nm,0.5s							
TDK	Taldyqorghan	4.33	291	Pg	Pb		01 16 05.7	+0.6
	31nm,0.3s							
TDK				Lg	Lg		01 17 04.6	
	22nm,0.5s							
ARXS	Arharly	4.58	280	eP	Pb		01 16 11.9	+2.5
	2.3nm,0.2s							
ARXS				eS	Sg		01 17 15.3	-0.7
	9.8nm,0.3s							
ARXS	Arharly	4.58	280	Pg	Pb		01 16 11.9	+2.5
	2.3nm,0.2s							
ARXS				Lg	Lg		01 17 15.3	
	9.8nm,0.3s							
KOTS	Kotyrbulak	5.11	268	eP	Pg		01 16 23.0	-3.7
	1.9nm,0.3s							
KOTS				eS	Sg		01 17 34.2	+1.3
	14nm,0.4s							
KOTS	Kotyrbulak	5.11	268	Pg	Pg		01 16 23.0	-3.7
	1.9nm,0.3s							
KOTS				Lg	Lg		01 17 34.2	
	14nm,0.4s							
MDOK	Medeo	5.17	268	eP	Pg		01 16 25.0	-2.7
	1.2nm,0.2s							
MDOK				eS	Sg		01 17 37.5	+2.8
	5.7nm,0.4s							
MDOK	Medeo	5.17	268	Pg	Pg		01 16 25.0	-2.7
	1.2nm,0.2s							
MDOK				Lg	Lg		01 17 37.5	
	5.7nm,0.4s							
CHKK	Chushkaly	5.17	275	eP	Pb		01 16 22.6	+3.3
	0.9nm,0.0s							
CHKK				eS	Sg		01 17 33.2	-1.5
	6.2nm,0.3s							
CHKK	Chushkaly	5.17	275	Pg	Pb		01 16 22.6	+3.3
	0.9nm,0.0s							
CHKK				Lg	Lg		01 17 33.2	
	6.2nm,0.3s							
KUU	Kurty	5.64	276	eP	Pb		01 16 31.7	+4.4
	1.1nm,0.1s							
KUU				eS	Sg		01 17 48.7	-1.1
	3.1nm,0.1s							
KUU	Kurty	5.64	276	Pg	Pb		01 16 31.7	+4.4
	1.1nm,0.1s							
KUU				Lg	Lg		01 17 48.7	
	3.1nm,0.1s							
KURBB	Kurchatov Arra	8.00	334	⇑Lg	Lg		01 19 05.9	
	9.0nm,0.7s							
KURK	Kurchatov	8.05	334	⇑Lg	Lg		01 19 05.1	
	7.6nm,1.0s							

IDC 28 01:25:47.2±5.9, 10.°58S×165.°68E, h0km, mb3.6/3, mbtmp3.6/3, MS3.0/3, Error ellipse: s-maj=314.1km s-min=33.4km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	Honiara	5.76	281	LR	LR		01 28 47.4	
	comp=Z,57nm,20.0s,baz=342,slow=31							
CTA	Charters Tower	20.97	241	LR	LR		01 37 12.6	
	comp=Z,35nm,19.9s,baz=77,slow=33							
H11S2	WAKE ISLAND Hy	28.90	2	T	T		02 02 16.5	
	baz=181,slow=76,SNR=6.9							
H11S3	WAKE ISLAND Hy	28.90	2	T	T		02 02 16.4	
	baz=181,slow=76,SNR=5.7							
H11S1	WAKE ISLAND Hy	28.92	2	T	T		02 02 17.6	
	baz=181,slow=76,SNR=6.1							
H11N1	WAKE ISLAND Hy	30.12	2	T	T		02 03 46.8	
	baz=182,slow=76,SNR=6.3							
H11N3	WAKE ISLAND Hy	30.13	2	T	T		02 03 48.2	
	baz=182,slow=76,SNR=8.9							
H11N2	WAKE ISLAND Hy	30.14	2	T	T		02 03 49.5	
	baz=182,slow=76,SNR=7.1							
STKA	Stephens Creek	30.74	223	LR	LR		01 43 19.1	
	comp=Z,73nm,18.0s,baz=29,slow=34							
WRA	Warramunga Arr	31.59	249	P	P		01 32 12.1	+0.2
	0.9nm,0.8s,baz=82,slow=8.9,SNR=6.1							
	0.9nm,0.8s							
ASAR	Alice Springs	32.95	243	P	P		01 32 23.6	-0.2
	0.5nm,0.7s,baz=62,slow=10,SNR=7.0							
	0.5nm,0.7s							
ILAR	Eielson Array	83.09	19	P	P		01 38 14.4	0.0
	0.4nm,0.6s,baz=216,slow=7.8,SNR=5.3							
	0.4nm,0.6s							

*NEIC **28** 01:34:25.8±2.1,24.°0N±0.°2×127.°3E±0.°1, h15km±7km, mb4.1/9, Error ellipse: s-maj=26.8km s-min=8.4km az=151.0*
*IDC **28** 01:34:27.1±2.2,24.°16N×127.°00E, h0km, mb3.8/7, mbtmp3.8/7, MS3.0/5, Error ellipse: s-maj=162.9km s-min=19.6km az=68.0*
*NIED **28** 01:34:30.2,24.°47N×127.°09E, h95km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.40; $M_{\theta\theta}$5.45; $M_{\phi\phi}$ -5.86; $M_{r\theta}$-3.49; $M_{\theta\phi}$5.60; $M_{\phi r}$-4.66; Fault plane solution: $M_0$9.82000×10^{14} NP1: ϕ_s295.00000°, δ55.00000°, λ6.00000°. NP2:ϕ_s202.00000°, δ85.00000°, λ145.00000°.*
*JMA **28** 01:34:30.2±0.3,24.°N±1.°×12.°7E±.°, h95km, MV3.5/29, NEAR MIYAKOJIMA ISLAND*

ISC 28 01:34:26.4±0.8, 24.°23N±0.°07×127.°24E±0.°04, h10km, n51, σ2s22/64, mb3.9/12, MS3.1/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOGS	Gusukube	1.75	288	P	Pn		01 34 57.5	+0.7
JOGS				S	Sn		01 35 17.4	-1.8
JMJ2	Miyako jima3	1.81	287	P	Pn		01 34 58.3	+0.5
JMJ2				S	Sn		01 35 18.6	-2.2
JIKM	Ikemajima	1.94	291	P	Pn		01 34 59.8	+0.3
JIKM				S	Sn		01 35 21.5	-2.4
JIRB	Irabujima	1.97	288	P	Pn		01 35 00.2	+0.3
JIRB				S	Sn		01 35 22.3	-2.5
JJT3	Tamagusuku3	1.97	14	P	Pn		01 35 00.2	+0.2
JJT3				S	Sn		01 35 21.9	-2.9
JKE	Kume jima 2	2.13	349	P	Pn		01 35 02.0	-0.1
JKE				eS	Sn		01 35 25.0	-3.7
JTJ	Tarama	2.35	281	P	Pn		01 35 05.2	+0.1
JTJ				S	Sn		01 35 30.6	-3.3
JAGN	Aguni-jima	2.35	0	P	Pn		01 35 05.4	+0.3
JAGN				eS	Sn		01 35 30.9	-3.2
JNTH	Nagotoyohara	2.39	17	P	Pn		01 35 05.3	-0.4
JNTH				eS	Sn		01 35 31.6	-3.4
JISG	Ishigakijimahi	2.69	278	P	Pn		01 35 10.0	+0.2
JISG				S	Sn		01 35 38.6	-3.8
JOW	Kunigami	2.76	20	Pn	Pn		01 35 11.1	+0.3
JOW	Kunigami	2.76	20	P	Pn		01 35 11.0	+0.2
JOW				eS	Sn		01 35 40.2	-4.0
JIJ	Ishigaki jima	2.83	273	P	Pn		01 35 11.8	+0.2
JIJ				S	Sn		01 35 40.9	-4.9
JIH	Iheya	2.87	13	eP	Pn		01 35 12.4	+0.1
JIH				eS	Sn		01 35 43.2	-3.8
JKRS	Kuro-shima	2.95	271	P	Pn		01 35 13.8	+0.4
JKRS				S	Sn		01 35 45.0	-3.8
JYRO	Yoronjima	3.00	21	P	Pn		01 35 13.1	-0.9
JYRO				S	Sn		01 35 45.4	-4.5
HATJ	Hateruma jima	3.14	268	P	Pn		01 35 16.8	+0.8
HATJ				eS	Sn		01 35 49.0	-4.6
IRIF	Iriomote-Funau	3.20	273	P	Pn		01 35 17.1	+0.2
IRIF				S	Sn		01 35 51.9	-3.1
JOKE	Okinoerabujima	3.35	21	S	Sn		01 35 55.4	-3.3
YOJ	Yonaguni jima	3.86	274	Pn	Pn		01 35 24.5	-1.4
YOJ	Yonaguni jima	3.86	274	P	Pn		01 35 25.1	-0.8
YOJ				eS	Sn		01 36 07.7	-3.7
JTK	Tokunoshima	3.87	23	P	Pn		01 35 26.6	+0.6
JTK				S	S

comp=Z,1.7nm,0.1s

VIE 28 01:46:50.5±0.2, 47.53N×15.45E, h8km±2km, mb0.1/1, ml0.5/2, Error ellipse: s-maj=1.5km s-min=1.2km az=100.0 3 km N of Kindberg, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSA	**Arzberg**	**0.29**	**170**	*e*Pg	Pg	01 46 56.4	+0.2
	0.2nm,0.1s						
ARSA				*e*Sg	Sg	01 47 00.4	+0.4
	0.3nm,0.1s						
CONA	**Conrad Observa**	**0.48**	**35**	*e*Pg	Pg	01 46 59.8	0.0
	0.1nm,0.1s						
CONA				*e*Sg	Sg	01 47 06.8	+0.6
	0.3nm,0.1s						

ATH 28 02:38:47.5, 39.17N×20.89E, h13km±2km, ML1.5/4, Error ellipse: s-maj=2.6km s-min=0.8km az=266.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSLK	**Tsoukalades, L**	**0.39**	**208**	P	Pg	02 38 55.3	+0.1
TSLK				S	Sg	02 39 00.7	+0.3
TSLK				AML	AML	02 39 03.3	
	comp=N,181μm,0.6s						
TSLK				AML	AML	02 39 04.5	
	comp=E,155μm,0.4s						
LKD2	**Lefkada island**	**0.42**	**205**	P	Pg	02 38 55.6	-0.2
LKD2				S	Sg	02 39 01.4	0.0
LKD2				AML	AML	02 39 04.4	
	comp=E,131μm,0.2s						
LKD2				AML	AML	02 39 06.2	
	comp=N,136μm,0.3s						
JAN	**Janina**	**0.49**	**357**	P	Pg	02 38 56.4	-0.8
JAN				S	Sb	02 39 04.4	-0.7
JAN				AML	AML	02 39 06.3	
	comp=E,148μm,0.2s						
JAN				AML	AML	02 39 07.7	
	comp=N,153μm,0.2s						
EVGI	**Lefkada island**	**0.57**	**198**	P	Pg	02 38 58.2	-0.5
EVGI				S	Sg	02 39 06.8	+0.4
FSK	**Fiskardo**	**0.75**	**200**	P	Pg	02 39 01.8	-0.3
FSK				S	Sg	02 39 11.8	0.0
EVR	**Evrytania**	**0.76**	**109**	P	Pg	02 39 01.8	-0.5
THL	**Klokotos Trika**	**0.96**	**65**	P	Pb	02 39 05.1	-0.9
KEF4	**Livadi, Kephal**	**0.98**	**202**	P	Pb	02 39 05.8	-0.5
MAKR	**Makrakomi, Fth**	**0.98**	**99**	P	Pb	02 39 06.0	-0.3
MAKR				AML	AML	02 39 26.3	
	comp=N,116μm,0.4s						
MAKR				AML	AML	02 39 26.5	
	comp=E,107μm,0.4s						
KEK	**Kerkira**	**1.00**	**303**	P	Pb	02 39 06.3	-0.4
VLS	**Valsamata**	**1.01**	**193**	P	Pb	02 39 05.5	-1.5
KEF3	**Kipouria, Keph**	**1.05**	**204**	P	Pb	02 39 06.4	-1.2
PSDA	**Pessada-Kefalo**	**1.08**	**193**	P	Pb	02 39 07.8	-0.2
EFP	**Efpalio**	**1.09**	**133**	P	Pb	02 39 07.9	-0.2
NEST	**Nestorio**	**1.25**	**6**	P	Pn	02 39 10.4	-0.4
DRO	**Drossia**	**1.37**	**152**	P	Pb	02 39 12.9	-0.2
KLV	**Kalavryta, Ach**	**1.50**	**138**	P	Pn	02 39 14.2	+0.1

PRU ***28*** *02:40:46.0±0.0, 42.56N×13.85E, h0km*
ROM ***28*** *02:40:49.9±0.1, 42.771N±0.003×13.215E±0.005, h10km, ML2.7/46, Error ellipse: s-maj=0.4km s-min=0.3km az=59.0*

ISC 28 02:40:50.1±0.8, 42.77N±0.02×13.22E±0.02, h13km±5km, n92, σ0.92/107, 22C-22D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**308**	⇑P	**Pg**	**02 40 53.0**	**-0.3**
NRCA				S	**Sg**	**02 40 55.0**	**-0.4**
NRCA				AML	AML		
	comp=E,64450μm,0.7s						
NRCA				AML	AML		
	comp=N,58350μm,0.2s						
NRCA				AML	AML		
	comp=E,73900μm,0.7s						
NRCA				AML	AML		
	comp=N,58400μm,0.2s						
NRCA				AML	AML		
	comp=N,62750μm,0.2s						
NRCA				AML	AML		
	comp=E,64500μm,0.7s						
MC2	**Monte Cornacci**	**0.14**	**350**	⇓P	**Pg**	**02 40 53.7**	**-0.2**
MC2				S	**Sg**	**02 40 56.7**	**+0.2**
MC2				AML	AML		
	comp=E,10405μm,1.6s						
MC2				AML	AML		
	comp=N,10360μm,1.6s						
MC2				AML	AML		
	comp=E,10420μm,1.6s						
MC2				AML	AML		
	comp=E,10400μm,1.6s						
MC2				AML	AML		
	comp=N,10400μm,1.6s						
MC2				AML	AML		
	comp=N,10390μm,1.6s						
MC2				AML	AML		
	comp=N,10390μm,0.4s						
MC2				AML	AML		
	comp=E,10400μm,0.4s						
MMO1	**Montemonaco**	**0.15**	**31**	P	**Pg**	**02 40 53.7**	**-0.1**
MMO1				S	**Sg**	**02 40 56.6**	**+0.1**
MMO1				AML	AML		
	comp=E,1420μm,1.5s						
MMO1				AML	AML		
	comp=E,10175μm,0.4s						
MMO1				AML	AML		
	comp=N,18150μm,0.2s						
MMO1				AML	AML		
	comp=E,10170μm,0.4s						
MMO1				AML	AML		
	comp=N,2710μm,0.2s						
MMO1				AML	AML		
	comp=E,10165μm,0.4s						
MMO1				AML	AML		
	comp=N,18100μm,0.2s						
MMO1				AML	AML		
	comp=E,1420μm,0.5s						
MMO1				AML	AML		
	comp=E,10160μm,0.4s						
MMO1				AML	AML		
	comp=N,2715μm,0.2s						
T1243	**Rocca Santa Ma**	**0.18**	**114**	⇓P	**Pg**	**02 40 54.3**	**-0.1**
T1243				AML	AML		
	comp=E,14400μm,0.2s						
T1243				AML	AML		
	comp=E,14350μm,0.2s						
T1243				AML	AML		
	comp=N,11950μm,0.2s						
T1243				AML	AML		
	comp=E,14350μm,0.3s						
T1243				AML	AML		
	comp=E,14300μm,0.3s						
T1243				AML	AML		
	comp=N,11850μm,0.3s						
T1243				AML	AML		
	comp=N,11900μm,0.2s						
LNSS	**Leonessa**	**0.22**	**219**	⇑P	**Pg**	**02 40 54.9**	**-0.1**
LNSS				S	**Sg**	**02 40 58.7**	**+0.5**
LNSS				AML	AML		
	comp=E,6010μm,0.7s						
LNSS				AML	AML		
	comp=E,6005μm,0.7s						
LNSS				AML	AML		
	comp=N,6250μm,0.1s						
LNSS				AML	AML		
	comp=E,6005μm,1.3s						
FEMA	**Monte Fema**	**0.23**	**326**	⇓P	**Pg**	**02 40 55.1**	**-0.1**
FEMA				S	**Sg**	**02 40 58.9**	**+0.2**
FEMA				AML	AML		
	comp=E,9095μm,0.2s						
FEMA				AML	AML		
	comp=N,6070μm,0.6s						
FEMA				AML	AML		
	comp=E,9105μm,0.2s						
FEMA				AML	AML		
	comp=E,9085μm,0.2s						
FEMA				AML	AML		
	comp=N,6065μm,0.6s						
RM33	**Pellescritta (**	**0.26**	**181**	⇑P	**Pg**	**02 40 55.6**	**-0.1**
RM33				S	**Sg**	**02 41 00.2**	**+0.8**
RM33				AML	AML		
	comp=E,2355μm,1.4s						
RM33				AML	AML		
	comp=N,3205μm,0.3s						
RM33				AML	AML		
	comp=E,2455μm,1.4s						
RM33				AML	AML		
	comp=N,3080μm,0.3s						
RM33				AML	AML		
	comp=E,2360μm,1.4s						
RM33				AML	AML		
	comp=N,3205μm,0.3s						
RM33				AML	AML		
	comp=N,3075μm,0.3s						
RM33				AML	AML		
	comp=E,2455μm,0.6s						
RM33				AML	AML		
	comp=E,2360μm,0.6s						
FDMO	**Fiordimonte**	**0.28**	**339**	⇓P	**Pg**	**02 40 55.9**	**-0.2**
FDMO				S	**Sg**	**02 41 00.5**	**+0.4**
FDMO				AML	AML		
	comp=N,3770μm,0.3s						
FDMO				AML	AML		
	comp=E,2700μm,0.3s						
TERO	**Teramo**	**0.32**	**118**	⇓P	**Pg**	**02 40 56.5**	**-0.2**
TERO				AML	AML		
	comp=E,3055μm,0.7s						
TERO				AML	AML		
	comp=N,2500μm,1.0s						
TERO				AML	AML		
	comp=E,3370μm,0.7s						
TERO				AML	AML		
	comp=N,2275μm,0.3s						
TERO				AML	AML		
	comp=E,3050μm,0.7s						
TERO				AML	AML		
	comp=E,3050μm,1.3s						
TERO				AML	AML		
	comp=N,2500μm,1.0s						
TERO				AML	AML		
	comp=E,3370μm,1.3s						
CSP1	**Cessapalombo**	**0.32**	**358**	⇓P	**Pg**	**02 40 56.6**	**-0.1**
CSP1				S	**Sb**	**02 41 01.8**	**-1.1**
CSP1				AML	AML		
	comp=E,4040μm,0.3s						
CSP1				AML	AML		
	comp=E,4045μm,0.3s						
CSP1				AML	AML		
	comp=N,3460μm,0.8s						
CSP1				AML	AML		
	comp=E,4045μm,1.7s						
ARRO	**Arrone**	**0.39**	**240**	⇑P	**Pg**	**02 40 57.7**	**-0.2**
ARRO				AML	AML		
	comp=E,1595μm,0.2s						
ARRO				AML	AML		
	comp=N,1590μm,0.5s						
GIGS	**Gran Sasso**	**0.41**	**141**	P	**Pg**	**02 40 58.1**	**-0.2**
GIGS				S	**Sb**	**02 41 04.7**	**-0.8**
GIGS				AML	AML		
	comp=E,353μm,0.5s						
GIGS				AML	AML		
	comp=N,302μm,1.0s						
GIGS				AML	AML		
	comp=N,302μm,1.0s						
GIGS				AML	AML		
	comp=N,302μm,1.0s						
GIGS				AML	AML		
	comp=E,354μm,0.5s						
SEF1	**Sefro**	**0.43**	**332**	P	**Pg**	**02 40 58.8**	**+0.2**
SSM1	**San Severino M**	**0.46**	**356**	P	**Pg**	**02 40 59.4**	**+0.1**
ASSB	**Assisi San Ben**	**0.49**	**303**	⇑P	**Pg**	**02 40 59.4**	**-0.5**
ASSB				AML	AML		
	comp=E,1245μm,1.0s						
ASSB				AML	AML		
	comp=N,1530μm,0.8s						
CESX	**Cesi**	**0.50**	**251**	⇑P	**Pg**	**02 40 59.5**	**-0.5**
CESX				S	**Sg**	**02 41 07.3**	**+0.6**
CESX				AML	AML		
	comp=N,1320μm,1.0s						
CESX				AML	AML		
	comp=E,1435μm,0.6s						
CESX				AML	AML		
	comp=E,1435μm,1.4s						
CESX				AML	AML		
	comp=N,1320μm,1.0s						
FIAM	**Fiamignano**	**0.51**	**189**	P	**Pg**	**02 40 59.7**	**-0.4**
FIAM				S	**Sg**	**02 41 07.5**	**+0.6**
FIAM				AML	AML		
	comp=E,700μm,0.3s						
FIAM				AML	AML		
	comp=N,977μm,0.8s						
TRTR	**Tortoreto Alta**	**0.51**	**86**	P	**Pb**	**02 41 00.9**	**0.0**
SNTG	**Esanatoglia**	**0.53**	**337**	P	**Pg**	**02 41 00.2**	**-0.3**
SNTG				S	**Sb**	**02 41 08.4**	**-0.4**
SNTG				AML	AML		
	comp=E,398μm,0.9s						
SNTG				AML	AML		
	comp=E,398μm,1.1s						
SNTG				AML	AML		
	comp=N,457μm,0.6s						
EL6	**Elcito**	**0.56**	**351**	⇓P	**Pg**	**02 41 00.7**	**-0.6**
EL6				S	**Sb**	**02 41 11.0**	**+1.1**
FAGN	**Fagnano**	**0.57**	**152**	P	**Pg**	**02 41 01.5**	**+0.2**
FAGN				AML	AML		
	comp=E,1130μm,0.5s						
FAGN				AML	AML		
	comp=N,1046μm,0.5s						
FAGN				AML	AML		
	comp=N,1045μm,0.5s						
FAGN				AML	AML		
	comp=E,1130μm,1.5s						
VCEL	**Villa Celiera**	**0.59**	**129**	P	**Pb**	**02 41 01.9**	**-0.5**
VCEL				AML	AML		
	comp=E,1070μm,0.4s						
VCEL				AML	AML		
	comp=N,1300μm,0.3s						
VCEL				AML	AML		
	comp=E,1067μm,0.4s						
VCEL				AML	AML		
	comp=N,1305μm,0.3s						
VCEL				AML	AML		
	comp=E,1070μm,1.6s						
ATCC	**AVT- Casa Cast**	**0.59**	**314**	⇑P	**Pg**	**02 41 01.3**	**-0.5**
ATCC				AML	AML		
	comp=E,1000μm,0.7s						
ATCC				AML	AML		
	comp=N,1042μm,0.3s						
ATCC				AML	AML		
	comp=N,1041μm,0.3s						
ATCC				AML	AML		
	comp=E,999μm,0.7s						
CING	**Cingoli**	**0.60**	**358**	⇑P	**Pg**	**02 41 01.7**	**-0.3**
CING				AML	AML		
	comp=E,1100μm,0.5s						
CING				AML	AML		
	comp=N,1116μm,0.3s						
FOSV	**Fossato di Vic**	**0.62**	**327**	P	**Pg**	**02 41 01.9**	**-0.4**
PP3	**Marolino**	**0.67**	**25**	P	**Pb**	**02 41 03.9**	**+0.2**
PP3				S	**Sn**	**02 41 15.0**	**-0.6**
PP3				AML	AML		
	comp=E,3180μm,0.4s						
PP3				AML	AML		
	comp=N,4665μm,0.5s						
PP3				AML	AML		
	comp=E,3140μm,0.4s						
PP3				AML	AML		
	comp=N,4665μm,0.6s						
PP3				AML	AML		
	comp=N,4740μm,0.5s						
PP3				AML	AML		
	comp=E,3175μm,0.4s						
T0110	**Collepietro**	**0.68**	**143**	P	**Pg**	**02 41 03.1**	**-0.3**
T0110				AML	AML		
	comp=N,869μm,0.5s						
T0110				AML	AML		
	comp=E,1045μm,0.5s						
T0110				AML	AML		
	comp=N,868μm,0.5s						
T0110				AML	AML		
	comp=E,1045μm,1.5s						
MURB	**Monte Urbino**	**0.71**	**314**	P	**Pg**	**02 41 03.6**	**-0.3**
MURB				AML	AML		
	comp=E,2050μm,0.4s						
MURB				AML	AML		
	comp=N,2670μm,1.0s						
MURB				AML	AML		
	comp=E,2280μm,0.3s						
MURB				AML	AML		
	comp=N,2495μm,0.3s						
MURB				AML	AML		
	comp=N,2670μm,0.9s						
MURB				AML	AML		
	comp=E,2050μm,0.3s						
MURB				AML	AML		
	comp=N,2670μm,1.1s						
SSFR	**Montelago di S**	**0.74**	**334**	⇓P	**Pg**	**02 41 04.3**	**-0.2**
SSFR				AML	AML		
	comp=E,1072μm,0.2s						
SSFR				AML	AML		
	comp=N,892μm,0.2s						
SSFR				AML	AML		
	comp=N,837μm,0.2s						
SSFR				AML	AML		
	comp=E,1072μm,0.2s						
SRES	**S.Oreste - Sor**	**0.75**	**225**	P	**Pg**	**02 41 04.3**	**-0.4**
SRES				AML	AML		
	comp=E,312μm,0.7s						
SRES				AML	AML		
	comp=E,312μm,1.3s						
SRES				AML	AML		
	comp=N,372μm,0.4s						
ARVD	**Arcevia**	**0.76**	**344**	⇑P	**Pg**	**02 41 04.2**	**-0.6**
ARVD				S	**Sn**	**02 41 17.0**	**-0.8**
ARVD				AML	AML		
	comp=E,320μm,0.6s						
ARVD				AML	AML		
	comp=N,276μm,0.6s						
ARVD				AML	AML		
	comp=E,320μm,1.4s						
ATTE	**AVT- Monte Tez**	**0.77**	**304**	⇓P	**Pg**	**02 41 04.6**	**-0.4**
ATTE				AML	AML		
	comp=E,375μm,1.6s						
ATTE				AML	AML		
	comp=N,466μm,0.5s						
ATTE				AML	AML		
	comp=E,376μm,1.6s						
ATTE				AML	AML		
	comp=N,466μm,0.5s						
ATTE				AML	AML		
	comp=E,376μm,0.4s						
MGAB	**Montegabbione**	**0.83**	**280**	⇓P	**Pg**	**02 41 05.8**	**-0.4**
MGAB				AML	AML		
	comp=E,818μm,1.4s						
MGAB				AML	AML		
	comp=E,836μm,0.8s						
MGAB				AML	AML		
	comp=N,898μm,0.6s						
MGAB				AML	AML		
	comp=N,891μm,0.6s						
MGAB				AML	AML		
	comp=E,818μm,0.6s						
MTCE	**Montecelio**	**0.83**	**206**	P	**Pg**	**02 41 05.1**	**-1.1**
MTCE				AML	AML		
	comp=E,481μm,0.4s						
MTCE				AML	AML		
	comp=E,480μm,0.4s						
MTCE				AML	AML		
	comp=N,294μm,0.5s						
FRON	**Frontone**	**0.83**	**334**	⇑P	**Pg**	**02 41 05.7**	**-0.5**
FRON				AML	AML		
	comp=E,225μm,0.6s						
FRON				AML	AML		
	comp=N,468μm,1.4s						
FRON				AML	AML		
	comp=E,225μm,1.4s						
CERT	**Cerreto**	**0.84**	**192**	P	**Pg**	**02 41 05.5**	**-1.0**
CERT				AML	AML		
	comp=N,365μm,0.4s						
CERT				AML	AML		
	comp=E,521μm,0.5s						
CERT				AML	AML		
	comp=E,521μm,1.5s						
CERT				AML	AML		
	comp=N,365μm,1.6s						
ATVO	**AVT- Monte Val**	**0.85**	**316**	⇑P	**Pg**	**02 41 06.2**	**-0.5**
ATVO				AML	AML		
	comp=N,257μm,0.5s						
ATVO				AML	AML		
	comp=N,256μm,0.5s						
ATVO				AML	AML		
	comp=E,319μm,0.5s						
COR1	**Corinaldo**	**0.88**	**349**	⇓P	**Pn**	**02 41 07.8**	**-0.3**
COR1				AML	AML		
COR1				AML	AML		
	comp=N,591μm,1.0s						
COR1				AML	AML		
	comp=E,1633μm,1.6s						
COR1				AML	AML		
COR1				AML	AML		
	comp=E,1633μm,0.4s						
COR1				AML	AML		
	comp=E,403μm,0.7s						
ATMI	**Monte Miggiano**	**0.90**	**309**	⇑P	**Pg**	**02 41 07.6**	**+0.1**
ATMI				AML	AML		
	comp=N,1010μm,1.2s						
ATMI				AML	AML		
	comp=N,1010μm,1.2s						
ATMI				AML	AML		
	comp=E,1235μm,0.4s						
ATMI				AML	AML		
	comp=N,1010μm,0.8s						
ATPI	**Pietralunga -**	**0.91**	**319**	⇓P	**Pb**	**02 41 07.2**	**-0.5**
ATPI				AML	AML		
	comp=N,241μm,0.4s						
ATPI				AML	AML		
	comp=N,242μm,0.4s						
ATPI				AML	AML		
	comp=E,266μm,0.5s						
INTR	**Introdacqua**	**0.91**	**146**	⇓P	**Pb**	**02 41 06.6**	**-1.2**
INTR				AML	AML		
	comp=E,273μm,0.8s						
INTR				AML	AML		
	comp=N,674μm,0.5s						
PIEI	**Pieia**	**0.92**	**327**	P	**Pb**	**02 41 07.2**	**-0.7**
PIEI				AML	AML		
	comp=N,234μm,0.3s						
PIEI				AML	AML		
	comp=E,259μm,0.2s						
MPAG	**Monte Paganucc**	**0.92**	**339**	⇑P	**Pg**	**02 41 07.9**	**0.0**
MPAG				AML	AML		
	comp=E,77μm,0.3s						
MPAG				AML	AML		
	comp=N,66μm,1.4s						
MPAG				AML	AML		
	comp=N,66μm,0.6s						
RCAV	**Rocca di Cave**	**0.95**	**193**	⇓P	**Pn**	**02 41 10.0**	**+0.8**
NARO	**Abbazia di Nar**	**0.96**	**331**	⇓P	**Pb**	**02 41 07.9**	**-0.7**
NARO				AML	AML		
	comp=N,164μm,0.3s						
NARO				AML	AML		
	comp=E,172μm,1.2s						
NARO				AML	AML		
	comp=E,172μm,0.8s						
SACS	**San Casciano d**	**0.97**	**275**	⇑P	**Pb**	**02 41 08.2**	**-0.6**
SACS				AML	AML		
	comp=N,329μm,0.5s						
SACS				AML	AML		
	comp=E,325μm,1.4s						
SACS				AML	AML		
	comp=E,325μm,0.6s						
SACS				AML	AML		
	comp=N,329μm,1.5s						
FSSB	**Fossombrone**	**0.98**	**341**	⇑P	**Pb**	**02 41 08.5**	**-0.4**
FSSB				AML	AML		
	comp=E,674μm,1.1s						
FSSB				AML	AML		
	comp=N,858μm,0.3s						
FSSB				AML	AML		
	comp=E,674μm,1.1s						
LPEL	**Lama dei Pelig**	**1.01**	**135**	P	**Pb**	**02 41 09.4**	**-0.2**
LPEL				AML	AML		
	comp=E,292μm,1.3s						
LPEL				AML	AML		
	comp=N,222μm,0.8s						
LPEL				AML	AML		
	comp=N,222μm,1.2s						
LATE	**Laterza**	**1.06**	**262**	⇑P	**Pg**	**02 41 11.4**	**+0.9**
CAFI	**Castiglion Fio**	**1.08**	**302**	P	**Pb**	**02 41 10.2**	**-0.4**
CAFI				AML	AML		
	comp=N,217μm,0.5s						
CAFI				AML	AML		
	comp=N,217μm,1.5s						
CAFI				AML	AML		

	comp=E,204µm,0.5s								
PARC	**Parchiule**	**1.13**	**321**	⇓P		**Pb**	**02 41 11.4**	**-0.2**
PARC				AML	AML				
	comp=E,217µm,0.6s								
PARC				AML	AML				
	comp=N,250µm,0.7s								
TOLF	**Tolfa**	**1.15**	**232**	P		**Pn**	**02 41 11.7**	**-0.2**
TOLF				AML	AML				
	comp=E,166µm,1.1s								
TOLF				AML	AML				
	comp=N,211µm,0.4s								
SF04	**Casetta**	**1.15**	**274**	⇑P		**Pb**	**02 41 11.9**	**0.0**
CERA	**Filignano**	**1.31**	**153**	P		**Pg**	**02 41 16.5**	**+1.1**
TRIV	**Trivento**	**1.41**	**135**	⇓P		**Pg**	**02 41 17.8**	**+0.6**
MELA	**Melanico ??? S**	**1.77**	**126**	⇓P		**Pb**	**02 41 21.7**	**-0.7**
TREM	**Isole Tremiti**	**1.81**	**110**	⇓P		**Pb**	**02 41 22.6**	**-0.5**
MORI	**Morici**	**2.12**	**58**	*e*Pn		**Pn**	**02 41 25.4**	**+0.2**
NVLJ	**Novalja**	**2.15**	**33**	*e*Pn		**Pn**	**02 41 25.7**	**0.0**
MSAG	**Monte S. Angel**	**2.26**	**117**	⇑P		**Pb**	**02 41 29.0**	**-1.8**
RABC	**Rab**	**2.28**	**29**	*e*Pn		**Pn**	**02 41 27.7**	**+0.3**
SMRN	**Sveta Marina**	**2.36**	**16**	*e*Pn		**Pn**	**02 41 28.4**	**-0.1**
HVAR	**Hvar**	**2.40**	**79**	*e*Pn		**Pn**	**02 41 29.9**	**+0.8**
UDBI	**Udbina**	**2.55**	**49**	*e*Pn		**Pn**	**02 41 32.4**	**+1.3**
A253A	**Karojba, Istri**	**2.56**	**9**	*e*Pn		**Pn**	**02 41 30.8**	**-0.4**
KIJV	**Kijevo**	**2.63**	**61**	*e*Pn		**Pn**	**02 41 33.4**	**+1.2**
LSTV	**Lastovo**	**2.70**	**89**	*e*Pn		**Pn**	**02 41 33.5**	**+0.3**
PLIT	**Plitvice**	**2.73**	**39**	*e*Pn		**Pn**	**02 41 33.0**	**-0.7**
MAKA	**Makarska**	**2.83**	**78**	*e*Pn		**Pn**	**02 41 35.3**	**+0.3**
PZUN	**Potenza**	**2.87**	**137**	S		**Sn**	**02 42 09.0**	**-0.9**
RICI	**Ricice**	**2.95**	**75**	*e*Pn		**Pn**	**02 41 38.0**	**+1.3**
BOJS	**Bojanci**	**3.10**	**27**	⇓P		**Pn**	**02 41 40.8**	**+2.2**
AMUR	**Altamura**	**3.14**	**125**	⇑P		**Pn**	**02 41 40.5**	**+1.3**
AMUR				AML	AML				
	comp=N,27µm,1.2s								
AMUR				AML	AML				
	comp=E,24µm,1.4s								
CGRP	**Cima Grappa**	**3.27**	**342**	⇓P		**Pn**	**02 41 42.2**	**+1.0**
STON	**Ston**	**3.29**	**87**	*e*Pn		**Pn**	**02 41 41.2**	**-0.2**
STON	**Ston**	**3.29**	**87**	⇑P		**Pn**	**02 41 41.4**	**0.0**
STON				AML	AML				
	comp=E,14µm,1.4s								
STON				AML	AML				
	comp=N,13µm,1.4s								
STON				AML	AML				
	comp=E,14µm,0.6s								
STON				AML	AML				
	comp=N,13µm,0.6s								
LJU	**Ljubljana**	**3.40**	**15**	P		**Pn**	**02 41 46.1**	**+3.2**
OBKA	**Obir**	**3.85**	**14**	*e*Pn		**Pn**	**02 41 49.9**	**+0.8**
	comp=N,0.3nm,0.2s								
KOSI	**Kohlern**	**3.92**	**341**	⇓P		**Pn**	**02 41 51.7**	**+1.6**
ABTA	**Abfaltersbach**	**4.01**	**353**	*e*Pn		**Pn**	**02 41 50.9**	**-0.4**
	comp=N,2.1nm,0.4s								
RISI	**Rein**	**4.25**	**349**	⇑P		**Pn**	**02 41 56.5**	**+1.7**
ROSI	**Rosskopf**	**4.35**	**343**	⇑P		**Pn**	**02 41 58.0**	**+1.9**
FETA	**Feichten**	**4.60**	**338**	*e*Pn		**Pn**	**02 42 01.1**	**+1.6**
	comp=N,0.2nm,0.2s								
WTTA	**Wattenberg**	**4.63**	**346**	*e*Pn		**Pn**	**02 42 00.4**	**+0.5**
	comp=N,0.7nm,0.3s								
SQTA	**Sankt Quirin**	**4.67**	**343**	*e*Pn		**Pn**	**02 42 01.9**	**+1.5**
	comp=N,1.0nm,0.2s								
SOLUN	**Solunto**	**4.68**	**177**	P		**Pn**	**02 42 03.7**	**+3.3**
WATA	**Walderalm**	**4.71**	**346**	*e*Pn		**Pn**	**02 42 02.8**	**+1.8**
	comp=N,0.6nm,0.2s								
MOTA	**Moosalm**	**4.81**	**343**	*e*Pn		**Pn**	**02 42 04.8**	**+2.4**
	comp=N,0.3nm,0.2s								
BIOA	**Bad Ischl, Aus**	**4.93**	**3**	*i* Pn		**Pn**	**02 42 03.5**	**-0.3**
	comp=N,0.6nm,0.2s								
MOA	**Molln**	**5.13**	**8**	*e*Pn		**Pn**	**02 42 08.4**	**+1.7**
	comp=N,0.1nm,0.1s								
CONA	**Conrad Observa**	**5.48**	**19**	*e*Pn		**Pn**	**02 42 11.1**	**-0.4**
	comp=N,0.4nm,0.3s								
KHC	**Kasperske Hory**	**6.37**	**2**	*e*SN		**Sn**	**02 43 35.5**	**-0.6**

*IDC **28** 02:46:18.8±1.1,34°.15N×86°.05E,h0km,mb3.6/5, mbtmp3.6/8,ML2.8/3,MS2.9/2,Error ellipse: s-maj=37.7km s-min=20.3km az=66.0*

ISC 28 02:46:25.1±0.7,34°.40N±0°.08×86°.1E±0°.2,h35km,n17, σ1§19/15,mb3.7/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**6.47**	**182**	*e*P	**Pn**	**02 47 59.8**	**+1.5**
JIRN	**Jiri**	**6.72**	**179**	*e*P	**Pn**	**02 48 03.6**	**+1.9**
PKIN	**Phulchoki**	**6.83**	**185**	*e*P	**Pn**	**02 48 03.2**	**+0.1**
PKI	**Pulchoki**	**6.83**	**185**	*e*P	**Pn**	**02 48 03.8**	**+0.6**
RAMN	**Ramite**	**7.44**	**176**	*e*P	**Pn**	**02 48 10.6**	**-0.9**
MKAR	**Makanchi Array** baz=138,slow=13,SNR=4.2 0.4nm,0.8s	**12.71**	**348**	Pn	**Pn**	**02 49 23.1**	**-0.2**
KURBB	**Kurchatov Arra** baz=162,slow=11,SNR=10 1.9nm,0.8s	**17.13**	**343**	P	**P**	**02 50 24.1**	**+1.1**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=209,slow=12,SNR=4.0 0.8nm,0.4s	**19.56**	**358**	P	**Pn**	**02 50 51.3**	**+0.1**
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,baz=324,slow=11,SNR=7.0	**19.58**	**141**	P	**Pn**	**02 50 52.8**	**+1.0**
SONM	**Songino Array** 0.8nm,0.7s,baz=234,slow=12,SNR=5.1 0.8nm,0.7s	**20.27**	**42**	P	**P**	**02 50 58.5**	**+0.8**
GEYT	**Alibeck** comp=Z,31nm,19.0s,baz=20,slow=42	**22.82**	**287**	LR	LR	03 02 29.6	
KVAR	**Kislovodsk Arr** comp=Z,18nm,20.4s,baz=272,slow=40	**34.62**	**299**	LR	LR	03 09 26.0	
NRIK	**Noril'sk** 4.0nm,0.6s,baz=162,slow=6.2,SNR=4.3 4.0nm,0.6s	**35.00**	**1**	P	**P**	**02 53 14.1**	**+0.3**
NOA	**NORSAR Array B** 0.6nm,0.8s,baz=82,slow=7.2,SNR=1.9 0.6nm,0.8s	**53.39**	**324**	P	**P**	**02 55 40.4**	**-0.6**
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=326,slow=6.6,SNR=7.2 0.3nm,0.8s	**70.89**	**132**	P	**P**	**02 57 36.9**	**-1.9**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=315,slow=6.1,SNR=6.7 0.3nm,0.6s	**73.46**	**135**	P	**P**	**02 57 52.5**	**-1.6**
TORD	**Torodi Ar. Bea** 7.8nm,0.3s,baz=39,slow=5.2,SNR=1.2	**78.12**	**278**	P	**P**	**02 58 20.8**	**-0.3**

*IDC **28** 02:51:38.5±1.0,57°.27N×150°.21W,h0km,mb3.9/13, mbtmp4.0/16,ML4.0/3,MS3.0/8,Error ellipse: s-maj=30.0km s-min=14.5km az=27.0*

*NEIC **28** 02:51:38.8±1.3,57°.06N±0°.05×150°.20W±0°.07,h10km±1km, mb3.9/7,ML4.3/90,ML4.1/206(AEIC),Error ellipse: s-maj=8.6km s-min=6.2km az=176.0*

*AEIC **28** 02:51:42.7±1.5,57°.03N±0°.07×150°.18W±0°.09,h6km±5km, Error ellipse: s-maj=10.0km s-min=7.2km az=166.0*

ISC 28 02:51:38.1±2.4,57°.11N±0°.05×150°.16W±0°.04,h3km±15km, n407,σ1§27/405,mb4.2/19,MS2.8/6,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**1.47**	**298**		**Pn**	**02 52 05.5**	**0.0**
KDAK	**Kodiak Island** baz=119	**1.47**	**298**	P	**Pn**	**02 52 05.4**	**0.0**
KDAK				S	**Sg**	**02 52 22.6**	**-2.8**
	baz=119						
OHAK	**Old Harbor**	**1.71**	**275**		**Pn**	**02 52 07.8**	**-0.8**
OHAK					**Sn**	**02 52 27.6**	**-3.3**
OHAK	**Old Harbor** comp=E,3µm,0.6s	**1.71**	**275**	IAML		02 52 27.8	
OHAK				IAML		02 52 28.2	
	comp=N,2µm,0.7s						
OHAK	**Old Harbor** baz=95,SNR=65	**1.71**	**275**	P	**Pn**	**02 52 07.9**	**-0.7**
OHAK				S	**Sn**	**02 52 27.5**	**-3.5**
	baz=95						
SYI	**Shuyak Island**	**1.92**	**323**		**Pn**	**02 52 11.7**	**+0.1**
SYI					**Sn**	**02 52 34.9**	**-1.3**
Q20K	**Shuyak Island** baz=142,SNR=21	**1.92**	**322**	P	**Pn**	**02 52 11.8**	**+0.2**
Q20K				S	**Sn**	**02 52 34.7**	**-1.5**
	baz=142						
SII	**Sitkinak Islan**	**2.28**	**258**		**Pn**	**02 52 15.4**	**-1.2**
SII					**Sn**	**02 52 41.4**	**-3.7**
SII	**Sitkinak Islan** comp=N,2µm,1.1s	**2.28**	**258**	IAML		02 52 42.5	
SII				IAML		02 52 42.6	
	comp=E,1µm,0.7s						
SII	**Sitkinak Islan** baz=76,SNR=5.2	**2.28**	**258**	P	**Pn**	**02 52 15.3**	**-1.3**
SII				S	**Sn**	**02 52 41.2**	**-3.9**
	baz=76						
CNPM	**China Poot**	**2.49**	**347**		**Pn**	**02 52 19.5**	**0.0**
CNPM					**Sn**	**02 52 48.9**	**-1.4**
CNPM	**China Poot** comp=N,892nm,0.3s	**2.49**	**347**	IAML		02 52 50.0	
CNPM				IAML		02 52 50.6	
	comp=E,709nm,0.4s						
Q19K	**Cape Douglas,**	**2.60**	**316**		**Pn**	**02 52 21.9**	**+0.9**
Q19K	**Cape Douglas,** comp=N,1µm,0.9s	**2.60**	**316**	IAML		02 53 00.7	
Q19K				IAML		02 53 01.6	
	comp=E,2µm,0.8s						
Q19K	**Cape Douglas,** baz=134,SNR=48	**2.60**	**316**	P	**Pn**	**02 52 21.5**	**+0.5**
BRSE	**Bradley Lake S**	**2.66**	**354**		**Pn**	**02 52 21.5**	**-0.3**
BRSE	**Bradley Lake S** baz=174,SNR=52	**2.66**	**354**	P	**Pn**	**02 52 21.5**	**-0.3**
BRSE				S	**Sn**	**02 52 51.3**	**-3.2**
	baz=174						
HOM	**Homer**	**2.67**	**344**		**Pn**	**02 52 22.7**	**+0.7**
HOM	**Homer** comp=E,1µm,0.6s	**2.67**	**344**	IAML		02 52 56.3	
HOM	**Homer** baz=163,SNR=12	**2.67**	**344**	P	**Pn**	**02 52 22.4**	**+0.5**
HOM				S	**Sn**	**02 52 53.5**	**-1.3**
	baz=163						
KAPH	**Katmai Pasha**	**2.69**	**305**		**Pn**	**02 52 23.2**	**+0.9**
KAPH					**Sn**	**02 52 53.4**	**-1.9**
BRLK	**Bradley Lake**	**2.69**	**352**		**Pn**	**02 52 21.8**	**-0.5**
BRLK	**Bradley Lake** comp=E,669nm,0.6s	**2.69**	**352**	IAML		02 52 56.0	
KAHG	**Katmai Hook Gl**	**2.73**	**302**		**Pn**	**02 52 23.9**	**+1.1**
AU22	**Augustine Moun**	**2.83**	**325**		**Pn**	**02 52 25.0**	**+1.0**
AU22					**Sn**	**02 52 58.1**	**-0.5**
AUQ	**Augustine Qik'**	**2.83**	**324**		**Pn**	**02 52 25.1**	**+0.9**
AUCH	**Augustine Cone**	**2.85**	**324**		**Pn**	**02 52 25.3**	**+0.8**
AUH	**Augustine H**	**2.85**	**324**		**Pn**	**02 52 25.5**	**+1.1**
AUL	**Augustine Lava**	**2.86**	**324**		**Pn**	**02 52 25.4**	**+0.9**
KAKN	**Katmai Knife C**	**2.89**	**296**		**Pn**	**02 52 26.0**	**+1.0**
KAKN					**Sn**	**02 52 58.9**	**-1.3**
KCG	**Knife Ck. Glac**	**2.91**	**296**		**Pn**	**02 52 26.7**	**+1.4**
KAHC	**Katmai Hardscr**	**3.01**	**303**		**Pn**	**02 52 27.5**	**+0.8**
OPT	**Oil Point**	**3.02**	**329**		**Pn**	**02 52 27.4**	**+0.7**
P19K	**Oil Pt**	**3.02**	**329**		**Pn**	**02 52 27.4**	**+0.6**
P19K					**Sn**	**02 53 02.8**	**-0.6**
P19K	**Oil Pt** comp=E,1µm,0.4s	**3.02**	**329**	IAML		02 53 05.0	
P19K	**Oil Pt** baz=147,SNR=49	**3.02**	**329**	P	**Pn**	**02 52 27.4**	**+0.6**
P19K				S	**Sn**	**02 53 02.2**	**-1.2**
	baz=147						
Q23K	**Middleton Isla**	**3.08**	**39**		**Pn**	**02 52 27.3**	**-0.2**
Q23K					**Sn**	**02 53 01.8**	**-2.9**
Q23K	**Middleton Isla** baz=222,SNR=20	**3.08**	**39**	P	**Pn**	**02 52 27.3**	**-0.2**
Q23K				S	**Sn**	**02 53 01.7**	**-3.0**
	baz=222						
MID	**Middleton Isla**	**3.08**	**39**		**Pn**	**02 52 27.3**	**-0.2**
ILS	**Iliamna Low So**	**3.24**	**333**		**Pn**	**02 52 29.9**	**+0.1**
O20K	**Slope Mountain**	**3.25**	**338**		**Pn**	**02 52 30.0**	**+0.1**
O20K	**Slope Mountain** baz=156,SNR=40	**3.25**	**338**	P	**Pn**	**02 52 30.0**	**+0.1**
O20K				S	**Sn**	**02 53 08.2**	**-0.8**
	baz=156						
KELA	**Mount Kelaz**	**3.27**	**296**		**Pn**	**02 52 31.2**	**+1.0**
IVE	**Iliamna Volcan**	**3.27**	**334**		**Pn**	**02 52 28.8**	**-1.6**
ILSW	**Iliamna Southw**	**3.28**	**333**		**Pn**	**02 52 30.2**	**-0.2**
ILSW	**Iliamna Southw** comp=N,1µm,0.8s	**3.28**	**333**	IAML		02 53 09.6	
ILSW				IAML		02 53 10.9	
	comp=E,1µm,0.7s						
CHIR	**Chirikof Islan**	**3.29**	**249**		**Pn**	**02 52 29.1**	**-1.4**
CHIR					**Sn**	**02 53 05.4**	**-4.7**
CHIR	**Chirikof Islan** comp=E,860nm,0.5s	**3.29**	**249**	IAML		02 53 07.0	
CHIR	**Chirikof Islan** baz=66	**3.29**	**249**	P	**Pn**	**02 52 29.1**	**-1.4**
CHIR				S	**Sn**	**02 53 04.8**	**-5.3**
	baz=66						
PLK3	**Peulik 3**	**3.35**	**282**		**Pn**	**02 52 31.9**	**+0.6**
O22K	**Cooper Landing**	**3.39**	**4**		**Pn**	**02 52 31.2**	**-0.6**
O22K	**Cooper Landing** baz=184,SNR=6.4	**3.39**	**4**	P	**Pn**	**02 52 31.7**	**-0.1**
O22K				S	**Sn**	**02 53 09.8**	**-2.6**
	baz=184						
SLKM	**Skilak Lake**	**3.41**	**360**		**Pn**	**02 52 31.4**	**-0.7**
R17K	**Ugashik Creek**	**3.41**	**282**		**Pn**	**02 52 32.4**	**+0.2**
R17K	**Ugashik Creek** baz=98,SNR=34	**3.41**	**282**	P	**Pn**	**02 52 32.3**	**+0.2**
R17K				S	**Sn**	**02 53 10.4**	**-2.6**
	baz=98						
P18K	**Big Mountain,**	**3.52**	**313**		**Pn**	**02 52 33.6**	**-0.1**
P18K	**Big Mountain,** baz=129	**3.52**	**313**	P	**Pn**	**02 52 33.6**	**-0.1**
P18K				S	**Sn**	**02 53 13.0**	**-2.8**
	baz=129						
PLK1	**Peulik 1**	**3.55**	**284**		**Pn**	**02 52 34.9**	**+0.8**
RED	**Redoubt Volcan**	**3.58**	**339**		**Pn**	**02 52 34.0**	**-0.6**
RDSO	**Redoubt South**	**3.61**	**339**		**Pn**	**02 52 34.5**	**-0.5**
RDWB	**Redoubt West**	**3.66**	**339**		**Pn**	**02 52 35.2**	**-0.6**
CAPN	**Captain Cook N**	**3.70**	**352**	Pn	**Pn**	**02 52 37.4**	**+1.3**
DFR	**Drift River**	**3.73**	**340**		**Pn**	**02 52 36.0**	**-0.6**
NCT	**North Crescent**	**3.75**	**339**		**Pn**	**02 52 36.3**	**-0.5**
RDJH	**Redoubt Jeurge**	**3.75**	**340**		**Pn**	**02 52 36.4**	**-0.5**
O19K	**Port Alsworth**	**3.78**	**327**		**Pn**	**02 52 37.0**	**-0.1**
O19K	**Port Alsworth** baz=144,SNR=46	**3.78**	**327**	P	**Pn**	**02 52 36.9**	**-0.3**
O19K				S	**Sn**	**02 53 19.4**	**-2.6**
	baz=144						
Q16K	**King Salmon**	**3.81**	**297**		**Pn**	**02 52 38.6**	**+1.1**
Q16K	**King Salmon** baz=113,SNR=29	**3.81**	**297**	P	**Pn**	**02 52 38.4**	**+0.9**
HIN	**Hinchinbrook I**	**3.81**	**29**		**Pn**	**02 52 37.7**	**+0.1**
HIN	**Hinchinbrook I** comp=E,506nm,0.4s	**3.81**	**29**	IAML		02 53 21.4	
HIN				IAML		02 53 24.2	
	comp=N,498nm,0.6s						
O18K	**Koktuh Hills**	**3.82**	**318**		**Pn**	**02 52 37.6**	**-0.1**
O18K	**Koktuh Hills** baz=135	**3.82**	**318**	P	**Pn**	**02 52 37.5**	**-0.2**
O18K				S	**Sn**	**02 53 20.1**	**-3.0**
	baz=135						
PWL	**Port Wells**	**3.88**	**13**		**Pn**	**02 52 38.3**	**-0.2**
PWL	**Port Wells** comp=E,389nm,0.4s	**3.88**	**13**	IAML		02 53 21.6	
PWL				IAML		02 53 22.1	
	comp=N,443nm,0.4s						
PWL	**Port Wells** baz=195,SNR=27	**3.88**	**13**	P	**Pn**	**02 52 38.4**	**-0.2**
PWL				S	**Sn**	**02 53 19.6**	**-4.9**
	baz=195						
P17K	**Kvichak River**	**3.93**	**305**		**Pn**	**02 52 39.7**	**+0.5**
P17K	**Kvichak River** baz=120,SNR=71	**3.93**	**305**	P	**Pn**	**02 52 39.8**	**+0.5**
RC01	**Rabbit Creek A**	**4.00**	**3**		**Pn**	**02 52 40.0**	**-0.2**
RC01	**Rabbit Creek A** comp=E,345nm,0.5s	**4.00**	**3**	IAML		02 53 30.6	
RC01	**Rabbit Creek A** baz=183,SNR=17	**4.00**	**3**	P	**Pn**	**02 52 39.9**	**-0.2**
FIS	**Fire Island**	**4.05**	**360**	Pn	**Pn**	**02 52 41.9**	**+1.0**
FIS				IAML		02 53 32.2	
FIS	comp=N,483nm,0.3s			IAML		02 53 33.4	
	comp=E,425nm,0.7s						
GLI	**Glacier Island**	**4.10**	**21**		**Pn**	**02 52 41.4**	**-0.2**
GLI	**Glacier Island** comp=N,238nm,0.7s	**4.10**	**21**	IAML		02 53 26.1	
GLI				IAML		02 53 29.2	
	comp=E,294nm,0.5s						
GLI	**Glacier Island** baz=204,SNR=15	**4.10**	**21**	P	**Pn**	**02 52 41.2**	**-0.3**
GLI				S	**Sn**	**02 53 25.2**	**-4.8**
	baz=204						
FID	**Port Fidalgo**	**4.12**	**26**		**Pn**	**02 52 41.4**	**-0.5**
FID	**Port Fidalgo** comp=E,318nm,0.3s	**4.12**	**26**	IAML		02 53 27.8	
FID				IAML		02 53 28.4	
	comp=N,355nm,0.3s						
KAIM	**Kayak Island**	**4.13**	**44**		**Pn**	**02 52 42.4**	**+0.5**
KAIM	**Kayak Island** baz=229,SNR=120	**4.13**	**44**	P	**Pn**	**02 52 42.5**	**+0.5**
EYAK	**Cordova Ski Ar**	**4.14**	**32**		**Pn**	**02 52 42.5**	**+0.4**
EYAK	**Cordova Ski Ar** baz=215,SNR=112	**4.14**	**32**	P	**Pn**	**02 52 42.3**	**+0.2**
EYAK				S	**Sn**	**02 53 26.8**	**-4.1**
	baz=215						
SPU	**Mount Spurr**	**4.20**	**347**		**Pn**	**02 52 42.5**	**-0.5**
SPCR	**Spurr Chakacha**	**4.24**	**346**		**Pn**	**02 52 43.2**	**-0.3**
SPCR	**Spurr Chakacha** baz=165,SNR=5.9	**4.24**	**346**	P	**Pn**	**02 52 42.9**	**-0.6**
SPCR				S	**Sn**	**02 53 31.4**	**-2.0**
	baz=165						
CKL	**Chakachamna La**	**4.25**	**346**		**Pn**	**02 52 43.7**	**0.0**
SPCN	**Chakachatna No**	**4.25**	**347**		**Pn**	**02 52 44.4**	**+0.6**
SPCG	**Spurr Cappa Gl**	**4.30**	**348**		**Pn**	**02 52 44.4**	**-0.1**
N19K	**Bonanza Creek**	**4.33**	**331**		**Pn**	**02 52 44.5**	**-0.4**
N19K	**Bonanza Creek** baz=148,SNR=25	**4.33**	**331**	P	**Pn**	**02 52 44.6**	**-0.2**
N19K				S	**Sn**	**02 53 33.2**	**-2.7**
	baz=148						
RAGM	**Ragged Mountai**	**4.35**	**39**		**Pn**	**02 52 45.5**	**+0.4**
JPK	**Jack Peak**	**4.36**	**23**		**Pn**	**02 52 45.5**	**+0.2**
ANPK	**Aniakchak Peak**	**4.37**	**270**		**Pn**	**02 52 44.9**	**-0.5**
ANNW	**Aniakchak Nort**	**4.40**	**271**		**Pn**	**02 52 45.7**	**-0.1**
KNK	**Knik Glacier**	**4.40**	**11**		**Pn**	**02 52 45.6**	**-0.2**
KNK	**Knik Glacier** comp=E,227nm,0.7s	**4.40**	**11**	IAML		02 53 40.6	
KNK				IAML		02 53 44.2	
	comp=N,172nm,0.8s						
KNK	**Knik Glacier** baz=192	**4.40**	**11**	P	**Pn**	**02 52 45.4**	**-0.4**
KNK				S	**Sn**	**02 53 32.3**	**-5.2**
	baz=192						
VMT	**TAPS Tl Valdez**	**4.44**	**25**		**Pn**	**02 52 46.7**	**+0.5**
ANPB	**Aniakchak Plen**	**4.46**	**269**		**Pn**	**02 52 46.1**	**-0.4**
HMT	**Hamilton**	**4.46**	**41**		**Pn**	**02 52 47.3**	**+0.7**
SPNN	**North Nagishla**	**4.46**	**344**		**Pn**	**02 52 46.8**	**+0.1**
SUCK	**Suckling Hills**	**4.47**	**46**		**Pn**	**02 52 47.5**	**+0.8**
SUCK	**Suckling Hills** comp=N,288nm,0.3s	**4.47**	**46**	IAML		02 53 39.1	
SUCK				IAML		02 53 41.7	
	comp=E,272nm,0.5s						
GOAT	**Goat Mountain**	**4.48**	**37**		**Pn**	**02 52 47.6**	**+0.7**
NICHA	**Nichawak Mount**	**4.50**	**43**		**Pn**	**02 52 48.0**	**+0.8**
O17K	**Koliganek Bris**	**4.52**	**309**		**Pn**	**02 52 47.4**	**+0.2**
O17K	**Koliganek Bris** baz=124,SNR=19	**4.52**	**309**	P	**Pn**	**02 52 47.2**	**0.0**
PMR	**Palmer**	**4.53**	**6**		**Pn**	**02 52 47.3**	**-0.1**
PMR	**Palmer** baz=187,SNR=8.0	**4.53**	**6**	P	**Pn**	**02 52 47.2**	**-0.1**
P16K	**Nushagak River**	**4.58**	**298**		**Pn**	**02 52 49.2**	**+1.0**
P16K	**Nushagak River** baz=112,SNR=35	**4.58**	**298**	P	**Pn**	**02 52 49.2**	**+1.0**
CHGN	**Chignik**	**4.62**	**263**		**Pn**	**02 52 48.5**	**-0.1**
CHGN	**Chignik** comp=N,329nm,0.5s	**4.62**	**263**	IAML		02 53 39.1	
CHGN				IAML		02 53 40.6	
	comp=E,244nm,0.4s						
CHGN	**Chignik** baz=77	**4.62**	**263**	P	**Pn**	**02 52 46.0**	**-2.7**
DIV	**Divide**	**4.62**	**27**		**Pn**	**02 52 49.1**	**+0.3**
N18K	**Kilae Creek**	**4.65**	**323**		**Pn**	**02 52 48.9**	**-0.3**
N18K	**Kilae Creek** baz=139,SNR=16	**4.65**	**323**	P	**Pn**	**02 52 48.9**	**-0.3**
M22K	**Willow**	**4.66**	**0**	Pn	**Pn**	**02 52 50.5**	**+1.4**
M22K				IAML		02 53 47.5	
	comp=N,282nm,0.8s						
M22K				IAML		02 53 53.8	
	comp=E,296nm,0.6s						
BGLC	**Bering Glacier**	**4.69**	**47**		**Pn**	**02 52 50.4**	**+0.8**
BGLC	**Bering Glacier** baz=232,SNR=5.9	**4.69**	**47**	P	**Pn**	**02 52 50.6**	**+0.9**
BERG	**Berg Lake**	**4.71**	**43**		**Pn**	**02 52 50.2**	**+0.3**
GHO	**Glory Hole Cre**	**4.72**	**7**		**Pn**	**02 52 50.4**	**+0.3**
GHO	**Glory Hole Cre** comp=E,308nm,0.6s	**4.72**	**7**	IAML		02 53 43.3	
GRIN	**Grindle Hills**	**4.78**	**45**		**Pn**	**02 52 51.9**	**+1.0**
SML	**Sawmill**	**4.80**	**10**		**Pn**	**02 52 51.5**	**+0.2**
SML	**Sawmill** comp=E,172nm,0.7s	**4.80**	**10**	IAML		02 53 43.8	
SML				IAML		02 53 47.3	
	comp=N,184nm,0.7s						
SML	**Sawmill** baz=192,SNR=27	**4.80**	**10**	P	**Pn**	**02 52 51.5**	**+0.2**
BMRM	**Bremner River**	**4.81**	**34**		**Pn**	**02 52 52.0**	**+0.5**
BMRM	**Bremner River** baz=218,SNR=225	**4.81**	**34**	P	**Pn**	**02 52 52.1**	**+0.6**
M23K	**Glacier View**	**4.86**	**14**		**Pn**	**02 52 52.5**	**+0.6**
M23K	**Glacier View** baz=196,SNR=22	**4.86**	**14**	P	**Pn**	**02 52 52.6**	**+0.6**
O16K	**Kokwok River B**	**4.86**	**304**		**Pn**	**02 52 52.5**	**+0.4**
O16K	**Kokwok River B** baz=118,SNR=93	**4.86**	**304**	P	**Pn**	**02 52 52.5**	**+0.4**
SVW2	**Sparrevohn**	**4.88**	**327**		**Pn**	**02 52 51.8**	**-0.5**
SVW2	**Sparrevohn** comp=E,102nm,0.6s	**4.88**	**327**	IAML		02 53 47.9	
KLU	**Klutina**	**4.90**	**25**		**Pn**	**02 52 53.1**	**+0.4**
KLU	**Klutina** comp=E,235nm,0.4s	**4.90**	**25**	IAML		02 53 48.2	
KLU				IAML		02 53 50.3	
	comp=N,198nm,0.6s						
KLU	**Klutina** baz=208,SNR=71	**4.90**	**25**	P	**Pn**	**02 52 53.1**	**+0.4**
KHIT	**Khitrov Hills**	**4.91**	**44**		**Pn**	**02 52 53.3**	**+0.5**
SNH	**Sunshine Point**	**4.91**	**48**		**Pn**	**02 52 53.5**	**+0.7**
SNH				IAML		02 53 48.0	
	comp=E,232nm,0.8s						
SNH				IAML		02 53 48.4	
	comp=N,236nm,0.9s						
SCM	**Sheep Creek Mo**	**4.95**	**16**		**Pn**	**02 52 54.3**	**+0.9**
SCM	**Sheep Creek Mo** comp=E,282nm,0.7s	**4.95**	**16**	IAML		02 53 51.2	
SCM				IAML		02 53 57.8	
	comp=N,175nm,0.8s						
SCM	**She

TABL	Table Mountain	5.76	51			Pn	02 53 05.3 +0.8
SAMH	Samovar Hills	5.76	54			Pn	02 53 05.6 +1.2
CHNA	Chernabura Isl	5.77	251	P		Pn	02 53 02.9 -1.5
	baz=64,SNR=9.3						
CNBA	Chernabura Isl	5.77	251			Pn	02 53 04.8 +0.3
WAT7	Susitna Watana	5.78	6			Pn	02 53 05.6 +0.8
WAT1	Susitna Watana	5.79	7			Pn	02 53 05.7 +0.8
WAT1	Susitna Watana	5.79	7	P		Pn	02 53 05.5 +0.7
	baz=189						
HARP	HAARP	5.88	23			Pn	02 53 06.1 +0.1
HARP	HAARP	5.88	23	P		Pn	02 53 06.0 +0.1
	baz=208,SNR=48						
PPLA	Purkeypile	5.89	351	P		Pn	02 53 06.1 -0.2
	baz=169						
CTG	Chitna Glacier	5.97	46	P		Pn	02 53 08.0 +0.6
	baz=233,SNR=40						
CTGM	Chitina Glacie	5.97	46			Pn	02 53 08.1 +0.6
PCA	Pinnacle	5.98	56			Pn	02 53 08.1 +0.7
PINM	Pinnacle	5.98	56	P		Pn	02 53 08.2 +0.7
	baz=244,SNR=42						
SDPT	Sand Point	6.02	257			Pn	02 53 08.5 +0.6
SDPT	Sand Point	6.02	257	P		Pn	02 53 07.6 -0.3
	baz=69						
LOGN	Logan Glacier	6.02	48			Pn	02 53 08.8 +0.7
YKU2	Yakutat	6.03	62			Pn	02 53 08.8 +0.8
DHY	Denali Highway	6.14	12			Pn	02 53 10.4 +0.6
DHY	Denali Highway	6.14	12	P		Pn	02 53 10.4 +0.6
	baz=194,SNR=21						
BCPM	Bancas Point	6.21	58			Pn	02 53 11.4 +1.0
PNL	Peninsula	6.21	61			Pn	02 53 11.3 +0.7
PNL	Peninsula	6.21	61	P		Pn	02 53 11.4 +0.8
	baz=250,SNR=91						
PAX	Paxson	6.33	20			Pn	02 53 14.2 +1.9
PAX	Paxson	6.33	20	P		Pn	02 53 13.5 +1.2
	baz=204,SNR=29						
O28M	Mount Upton	6.33	50			Pn	02 53 13.2 +0.8
O28M	Mount Upton	6.33	50	P		Pn	02 53 13.3 +0.9
	baz=238,SNR=40						
RND	Reindeer	6.35	5			Pn	02 53 13.5 +1.0
TRF	Thorofare Moun	6.36	359			Pn	02 53 14.5 +1.7
TRF	Thorofare Moun	6.36	359	P		Pn	02 53 13.3 +0.5
	baz=180						
M26K	Nabesna, AK	6.42	31			Pn	02 53 15.0 +1.5
M26K	Nabesna, AK	6.42	31	P		Pn	02 53 14.6 +1.1
	baz=217,SNR=21						
TT01	Tatalina	6.51	336			Pn	02 53 14.2 -0.4
TTA	Tatalina	6.53	336	P		Pn	02 53 14.1 -0.9
	baz=151						
K20K	Telida	6.56	344			Pn	02 53 14.8 -0.6
K20K	Telida	6.56	344	P		Pn	02 53 14.5 -0.9
	baz=161,SNR=21						
MCK	McKinley	6.67	5			Pn	02 53 17.1 +0.2
MCK	McKinley	6.67	5	P		Pn	02 53 17.4 +0.5
	baz=186						
M27K	Edge Creek, AK	6.72	35			Pn	02 53 18.6 +0.9
M27K	Edge Creek, AK	6.72	35	P		Pn	02 53 18.8 +1.1
	baz=222,SNR=32						
YUK3	Moose Creek	6.80	43	P		Pn	02 53 20.0 +1.1
	baz=230,SNR=61						
O29M	Mount Kennedy	6.83	57	P		Pn	02 53 20.3 +1.1
	baz=247,SNR=116						
L26K	Log Cabin Wild	6.84	27	P		Pn	02 53 20.6 +1.4
	baz=213,SNR=29						
CHUM	Lake Minchumin	6.88	352			Pn	02 53 19.6 -0.2
CHUM	Lake Minchumin	6.88	352	P		Pn	02 53 19.5 -0.2
	baz=170						
P29M	Windy Craggy	7.00	64	P		Pn	02 53 22.4 +1.0
	baz=254,SNR=152						
BPAW	Bear Paw Mtn.	7.02	357			Pn	02 53 21.2 -0.5
BPAW	Bear Paw Mtn.	7.02	357	P		Pn	02 53 20.9 -0.8
	baz=176,SNR=7.6						
K24K	Donnelly Dome	7.05	16			Pn	02 53 23.8 +1.6
K24K	Donnelly Dome	7.05	16	P		Pn	02 53 24.0 +1.8
	baz=200,SNR=9.3						
BVCY	Beaver Creek	7.09	38	P		Pn	02 53 24.1 +1.5
	baz=225,SNR=26						
RIDG	Independent Ri	7.15	19			Pn	02 53 24.7 +1.2
RIDG	Independent Ri	7.15	19	P		Pn	02 53 24.3 +0.9
	baz=204,SNR=32						
YUK6	Outpost Mounta	7.20	53	P		Pn	02 53 25.8 +1.5
	baz=242						
YUK4	Talbot Arm	7.27	50	P		Pn	02 53 28.2 +2.9
	baz=239						
L27K	Beaver Creek,	7.27	31			Pn	02 53 25.6 +0.4
L27K	Beaver Creek,	7.27	31	P		Pn	02 53 25.3 +0.2
	baz=218,SNR=14						
BC03		7.29	32			Pn	02 53 25.8 +0.5
J20K	Nowinta River	7.35	346			Pn	02 53 25.9 -0.3
J20K	Nowinta River	7.35	346	P		Pn	02 53 25.4 -0.8
	baz=163,SNR=12						
WRH	Wood River Hil	7.45	7			Pn	02 53 28.1 +0.5
HDA	Harding Lake	7.49	11	Pn		Pn	02 53 30.0 +1.9
HDA	Harding Lake	7.49	11	P		Pn	02 53 29.7 +1.6
	baz=194,SNR=13						
P30M	Million Dollar	7.52	61	P		Pn	02 53 30.0 +1.4
	baz=252						
HYT	Haines Junctio	7.52	55			Pn	02 53 29.5 +0.8
HYT	Haines Junctio	7.52	55	P		Pn	02 53 29.5 +0.8
	baz=245						
NEA2	Nenana	7.53	4			Pn	02 53 29.2 +0.6
NEA2	Nenana	7.53	4	P		Pn	02 53 28.7 +0.1
	baz=185,SNR=12						
SCRK	Sand Creek	7.53	21			Pn	02 53 29.2 +0.5
SCRK	Sand Creek	7.53	21	P		Pn	02 53 29.7 +1.0
	baz=206,SNR=10.0						
PLBC	Pleasant Camp	7.64	66	P		Pn	02 53 31.3 +1.1
	baz=258,SNR=110						
CCB	Clear Creek Bu	7.65	8			Pn	02 53 30.7 +0.5
IL31		7.85	10			Pn	02 53 33.1 +0.1
ILAR	Eielson Array	7.85	10	Pn		Pn	02 53 32.8 -0.3
	comp=E,1.0nm,0.3s,baz=192,slow=13,SNR=34						
ILAR				Sn		Sn	02 54 56.4 -5.8
	comp=E,3.3nm,0.3s,baz=195,slow=21,SNR=16						
TCOL	CIGO, UAF Yank	7.87	7	P		Pn	02 53 34.2 +1.0
	baz=189						
COLA	College	7.87	7			Pn	02 53 34.2 +1.0
COLA	College	7.87	7	P		Pn	02 53 33.8 +0.6
	baz=189						
J25K	Salcha River,	7.88	15			Pn	02 53 33.9 +0.5
J25K	Salcha River,	7.88	15	P		Pn	02 53 34.0 +0.5
	baz=199,SNR=8.2						
MDM	Murphy Dome	7.93	6			Pn	02 53 34.7 +0.6
MLY	Manley	7.95	358			Pn	02 53 34.4 -0.2
MLY	Manley	7.95	358	P		Pn	02 53 34.3 -0.2
	baz=178,SNR=9.0						
M29M	Somme Creek	7.96	43			Pn	02 53 35.6 +1.0
M29M	Somme Creek	7.96	43	P		Pn	02 53 35.6 +1.0
	baz=233,SNR=75						
ISLZ	Isanotski Laza	7.98	258			Pn	02 53 34.5 -0.3
N30M	Aishikik Lake	7.98	51			Pn	02 53 35.6 +0.7
N30M	Aishikik Lake	7.98	51	P		Pn	02 53 35.5 +0.6
	baz=242,SNR=28						
K27K	Chicken	7.99	26			Pn	02 53 35.4 +0.4
K27K	Chicken	7.99	26	P		Pn	02 53 35.4 +0.4
	baz=213						
I23K	Minto, Yukon-K	8.07	2			Pn	02 53 36.5 +0.5
I23K	Minto, Yukon-K	8.07	2	P		Pn	02 53 36.5 +0.5
	baz=183						
J26L	Joseph Creek	8.08	21			Pn	02 53 36.7 +0.5
J26L	Joseph Creek	8.08	21	P		Pn	02 53 37.1 +0.9
	baz=206,SNR=21						
SIT	Sitka	8.09	84			Pn	02 53 34.3 -1.9
SIT	Sitka	8.09	84	P		Pn	02 53 34.2 -2.0
	baz=276,SNR=5.7						
POKR	Poker Plat Res	8.14	8			Pn	02 53 36.8 -0.2
POKR	Poker Plat Res	8.14	8	P		Pn	02 53 37.3 +0.2
	baz=191						
O30N	Mendenhall	8.14	57			Pn	02 53 38.1 +1.0
O30N	Mendenhall	8.14	57	P		Pn	02 53 38.1 +1.0
	baz=249,SNR=46						
I21K	Tanana	8.14	355			Pn	02 53 37.1 +0.1
I21K	Tanana	8.14	355	P		Pn	02 53 36.3 -0.7
	baz=173,SNR=9.8						
SKAG	Skagway	8.16	67	P		Pn	02 53 38.5 +1.2
	baz=259,SNR=57						
BESE	Bessie Mountai	8.30	73			Pn	02 53 39.3 0.0
JIS	Juneau Island	8.53	76			Pn	02 53 42.4 0.0
N31M	Braeburn, Yuko	8.56	53			Pn	02 53 43.9 +1.1
N31M	Braeburn, Yuko	8.56	53	P		Pn	02 53 43.9 +1.1
	baz=245,SNR=32						
M30M	Minto, Yukon	8.67	45			Pn	02 53 44.9 +0.7
M30M	Minto, Yukon	8.67	45	P		Pn	02 53 45.2 +0.9
	baz=236,SNR=49						
H21K	Melozitna Rive	8.67	353			Pn	02 53 43.4 -0.9
H21K	Melozitna Rive	8.67	353	P		Pn	02 53 43.3 -0.9
	baz=170,SNR=13						
WHY	Whitehorse	8.67	59	P		Pn	02 53 45.5 +1.1
	baz=252,SNR=55						
PRP	Porcupine Dome	8.72	13			Pn	02 53 45.6 +0.6
PRP	Porcupine Dome	8.72	13	P		Pn	02 53 45.3 +0.2
	baz=197,SNR=7.8						
DAWY	Dawson	8.75	33			Pn	02 53 46.0 +0.7
DAWY	Dawson	8.75	33	P		Pn	02 53 45.8 +0.4
	baz=222,SNR=39						
H23K	Yukon River	8.75	2			Pn	02 53 45.7 +0.3
H23K	Yukon River	8.75	2	P		Pn	02 53 45.7 +0.3
	baz=182						
H24K	Noodor Dome	8.82	6			Pn	02 53 46.8 +0.4
H24K	Noodor Dome	8.82	6	P		Pn	02 53 46.8 +0.4
	baz=188,SNR=5.7						
H22K	Ishtalitna Cre	8.83	357			Pn	02 53 46.4 -0.1
H22K	Ishtalitna Cre	8.83	357	P		Pn	02 53 46.0 -0.5
	baz=176						
EGAK	Eagle	8.84	26	P		Pn	02 53 47.7 +1.1
	baz=214,SNR=17						
I26K	Coal Creek Min	8.88	19			Pn	02 53 48.4 +1.2
I26K	Coal Creek Min	8.88	19	P		Pn	02 53 48.4 +1.2
	baz=205						
P32M	Atlin	8.99	67			Pn	02 53 49.5 +0.7
P32M	Atlin	8.99	67	P		Pn	02 53 49.4 +0.7
	baz=261,SNR=22						
IM03		9.06	351			Pn	02 53 49.8 +0.2
IMAR	Indian Mountai	9.06	351	Pn		Pn	02 53 51.8 +2.1
K29M	Barlow Dome	9.18	37			Pn	02 53 52.8 +1.4
K29M	Barlow Dome	9.18	37	P		Pn	02 53 52.8 +1.4
	baz=228,SNR=66						
AKSA	Akutan Strait	9.28	258			Pn	02 53 52.9 +0.3
H25K	Birch Creek	9.41	11	P		Pn	02 53 55.9 +1.5
	baz=195						
AKBBA	Akutan Broad B	9.42	258			Pn	02 53 54.1 -0.4
I27K	Kandik River	9.45	22			Pn	02 53 55.6 +0.6
I27K	Kandik River	9.45	22	P		Pn	02 53 55.6 +0.6
	baz=209,SNR=14						
M31M	Drury Creek, Y	9.46	51	P		Pn	02 53 56.2 +1.1
	baz=244,SNR=28						
P33M	Teslin, Yukon	9.55	64			Pn	02 53 56.7 +0.3
P33M	Teslin, Yukon	9.55	64	P		Pn	02 53 56.7 +0.3
	baz=258,SNR=30						
G21K	Allakaket	9.57	352			Pn	02 53 56.3 -0.3
G21K	Allakaket	9.57	352	P		Pn	02 53 56.7 +0.1
	baz=169						
CRAG	Craig	9.62	93			Pn	02 53 55.3 -1.9
CRAG	Craig	9.62	93	P		Pn	02 53 54.2 -3.0
	baz=286						
G23K	Bananza Creek	9.63	0			Pn	02 53 57.5 0.0
G23K	Bananza Creek	9.63	0	P		Pn	02 53 57.2 -0.3
	baz=180,SNR=13						
N32M	Quiet Lake	9.66	58	P		Pn	02 53 59.2 +1.4
	baz=252						
G24K	Hadweenzic Riv	9.71	6			Pn	02 53 58.9 +0.4
G24K	Hadweenzic Riv	9.71	6	P		Pn	02 53 58.4 0.0
	baz=189,SNR=13						
WRAK	Wrangell Islan	9.81	87	P		Pn	02 53 58.7 -1.1
	baz=281						
UNV	Unalaska Valle	9.83	257			Pn	02 53 59.4 -0.8
UNV	Unalaska Valle	9.83	257	P		Pn	02 53 59.7 -0.5
	baz=64						
G22K	Bettles	9.87	357	P		Pn	02 54 00.4 -0.2
	baz=176						
MNAT	Makushin Natee	9.91	258			Pn	02 54 01.0 -0.3
FARO	Faro, Yukon	9.91	52	P		Pn	02 54 02.1 +0.7
	baz=246						
MREP	Makushin Rep't	9.98	258			Pn	02 54 01.3 -0.9
H27K	Steamboat Moun	10.02	20	P		Pn	02 54 03.0 +0.2
	baz=208						
F21K	Alatna River	10.26	353	P		Pn	02 54 06.2 +0.1
	baz=170						
S34M	Telegraph Cree	10.27	78	P		Pn	02 54 06.2 0.0
	baz=273						
G26K	Porcupine Rive	10.31	14	P		Pn	02 54 06.6 0.0
	baz=200						
R33M	Jennings River	10.36	69	P		Pn	02 54 08.1 +0.5
	baz=265,SNR=16						
F22K	John River	10.48	356	P		Pn	02 54 10.2 +1.2
	baz=174						
V35K	Ketchikan	10.48	92	P		Pn	02 54 07.5 -1.5
	baz=287						
F24K	Squaw Lake	10.50	5	P		Pn	02 54 09.3 0.0
	baz=187						
G27K	Doyon Strip	10.51	19	P		Pn	02 54 10.1 +0.7
	baz=206						
DLBC	Dease Lake	10.83	75	Pn		Pn	02 54 14.8 +1.0
	comp=E,1.8nm,0.3s,baz=264,slow=6.3,SNR=20						
DLBC				Sn		Sn	02 56 09.8 -5.7
	comp=E,1.2nm,0.3s,baz=122,slow=19,SNR=4.2						
	comp=E,4.0nm,0.3s						
DLBC	Dease Lake	10.83	75	Pn		Pn	02 54 15.1 +1.2
DLBC	Dease Lake	10.83	75	P		Pn	02 54 14.5 +0.6
	baz=271						
T35M	Bob Quinn	10.85	82	P		Pn	02 54 15.2 +1.1
	baz=279						
MMPY	Sheldon Lake,	10.96	52	P		Pn	02 54 17.0 +1.4
	baz=248						
F26K	Sheenjek River	10.97	12	P		Pn	02 54 14.0 -1.8
	baz=197						
E24K	Your Creek	11.03	3	P		Pn	02 54 16.5 -0.1
	baz=185						
E22K	Anaktuvuk Pass	11.09	357	P		Pn	02 54 18.5 +1.1
	baz=175						
EPYK	Eagle Plains	11.23	29			Pn	02 54 20.4 +1.1
EPYK	Eagle Plains	11.23	29	P		Pn	02 54 18.4 -0.9
	baz=220						
TOLK	Toolik Lake Re	11.58	1	P		Pn	02 54 22.8 -1.2
	baz=182						
D23K	Nanahuk River	11.90	359	P		Pn	02 54 29.6 +1.1
	baz=179						
TGTN	Hyland Airport	11.99	59	P		Pn	02 54 31.6 +1.8
	baz=258						
D25K	Kavik River	12.37	6	P		Pn	02 54 36.1 +1.2
	baz=190						
INK	Inuvik	13.51	27	Pn		Pn	02 54 51.6 +1.3
	comp=E,0.3nm,0.3s,baz=231,slow=16,SNR=7.4						
INK				LR		LR	03 00 18.8
	comp=E,75nm,21.7s,baz=134,slow=39						
	comp=E,1.8nm,0.5s						
INK	Inuvik	13.51	27	Pn		Pn	02 54 53.0 +2.7
INK	Inuvik	13.51	27	P		Pn	02 54 50.7 +0.3
	baz=222						
BBB	Bella Bella	13.66	102	LR		LR	02 59 00.2
	comp=E,56nm,18.5s,baz=318,slow=32						
A36M	Sachs Harbour	18.12	25			Pn	02 55 51.6 +1.2
A36M				IAmb		IAmb	02 56 06.2
	comp=Z,15nm,0.9s						
A36M	Sachs Harbour	18.12	25	P		Pn	02 55 51.0 +0.7
	baz=228						
YKA	Yellowknife Ar	18.50	58	P		P	02 55 55.7 +0.7
	comp=Z,0.2nm,0.3s,baz=269,slow=12,SNR=7.5						
	comp=Z,9.2nm,1.0s						
YKA	Yellowknife Ar	18.50	58			Pn	02 55 56.9 +1.8
AMKA	Amchitka	18.64	265	P		P	02 55 57.0 +0.5
EDM	Edmonton	21.21	85	P		P	02 56 25.4 +0.8
EDM				IAmb		IAmb	02 56 41.3
	comp=Z,4.5nm,0.9s						
NEW	Newport	21.70	100	LR		LR	03 03 32.6
	comp=Z,320nm,19.2s,baz=312,slow=33						
J04D	Umpqua Nationa	22.49	116	P		P	02 56 36.4 -2.3
G08A	Pilot Rock	22.63	108	P		P	02 56 39.7 -0.3
G08A				IAmb		IAmb	02 56 43.8
	comp=Z,3.0nm,1.0s						
YBH	Yreka Blue Hor	23.34	119	P		P	02 56 49.7 +2.3
	comp=Z,0.7nm,0.5s,baz=7.6,slow=15,SNR=2.3						
YBH				LR		LR	03 03 51.7
	comp=Z,36nm,18.7s,baz=306,slow=31						
	comp=Z,0.7nm,0.5s						
BMO	Blue Mountains	23.79	107	P		P	02 56 49.5 -2.3
J08A	Circle Bar Ran	24.23	111	P		P	02 56 55.3 -0.6
J08A				IAmb		IAmb	02 57 08.5
	comp=Z,2.0nm,1.0s						
NVAR	Mina Array Bea	28.03	118	P		P	02 57 32.0 +1.6
	comp=Z,0.5nm,0.7s,baz=301,slow=9.2,SNR=5.3						
	comp=Z,0.5nm,0.7s						
NVAR	Mina Array Bea	28.03	118	P		P	02 57 29.9 -0.5
PDAR	Pinedale Array	29.31	102	P		P	02 57 42.8 +1.0
	comp=Z,0.3nm,0.6s,baz=309,slow=4.7,SNR=4.1						
	comp=Z,0.3nm,0.6s						
PDAR	Pinedale Array	29.31	102	P		P	02 57 40.5 -1.3
PV07	Paradox Valley	32.90	107	P		P	02 58 13.1 -0.3
PV07				IAmb		IAmb	02 58 15.9
	comp=Z,3.2nm,0.8s						
TXAR	Lajitas Array	42.57	111	P		P	02 59 36.8 +1.6
	comp=Z,0.2nm,0.8s,baz=334,slow=10.0,SNR=3.2						
	comp=Z,0.2nm,0.8s						
KLR	Kul'dur	45.03	295	P		P	02 59 54.4 -0.2
	comp=Z,3.8nm,0.8s,baz=295,slow=9.0,SNR=7.9						
	comp=Z,3.8nm,0.8s						
JMIC	Jan Mayen	49.34	16	LR		LR	03 24 35.7
	comp=Z,8.2nm,18.7s,baz=334,slow=40						
H11S1	WAKE ISLAND Hy	50.04	238	T		T	03 54 29.4
	baz=29,slow=76,SNR=5.1						
H11S2	WAKE ISLAND Hy	50.06	238	T		T	03 54 30.6
	baz=29,slow=76,SNR=4.3						
H11S3	WAKE ISLAND Hy	50.06	238	T		T	03 54 30.0
	baz=29,slow=76,SNR=4.3						
KSRS	Korea Array	55.35	287	LR		LR	03 25 11.7
	comp=Z,7.7nm,18.6s,baz=125,slow=36						
SONM	Songino Array	57.73	309	P		P	03 01 30.5 +0.5
	comp=Z,2.5nm,0.9s,baz=41,slow=7.6,SNR=9.6						
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	60.60	326	P		P	03 01 49.7 +0.2
	comp=Z,1.8nm,0.7s,baz=27,slow=7.0,SNR=6.9						
	comp=Z,1.8nm,0.7s						
HHC	Hu-ho-hao-te	60.89	301	eP		P	03 01 55.3 +3.5
HHC				pmax		pmax	
	comp=Z,36nm,1.1s						
HHC				pmax		pmax	
	comp=Z,150nm,5.4s						
FINES	FINESS Array B	61.75	2	P		P	03 01 56.8 -0.4
	comp=Z,1.7nm,0.8s,baz=246,slow=3.3,SNR=5.4						
	comp=Z,1.7nm,0.8s						
ARU	Arti	64.47	343	P		P	03 02 14.9 -0.4
	comp=Z,2.4nm,0.5s,baz=354,slow=7.1,SNR=4.9						
ARU				LR		LR	03 32 03.0
	comp=Z,15nm,19.8s,baz=162,slow=38						
	comp=Z,2.4nm,0.5s						
BVAR	Borovoye Array	65.32	334	P		P	03 02 20.9 0.0
	comp=Z,1.1nm,0.7s,baz=28,slow=6.7,SNR=8.1						
BVAR				LR		LR	03 34 53.8
	comp=Z,22nm,19.6s,baz=12,slow=40						
	comp=Z,1.1nm,0.7s						
MKAR	Makanchi Array	67.64	324	P		P	03 02 35.2 -0.7
	comp=Z,0.9nm,0.5s,baz=38,slow=6.2,SNR=7.5						
	comp=Z,0.9nm,0.5s						
WMQ	Urumqi	68.40	319	eP		P	03 02 45.3 +4.5
AKASG	Malin Array Be	72.55	0	P		P	03 03 05.4 -0.5
	comp=Z,0.7nm,0.5s,baz=359,slow=5.6,SNR=8.8						
	comp=Z,0.7nm,0.5s						
PZH	PanZhiHua	77.28	299	P		P	03 03 35.3 +1.5
PZH				pmax		pmax	
	comp=Z,10.0nm,0.9s						
PZH				pmax		pmax	
	comp=Z,50nm,4.2s						
ESDC	Sonseca Array	79.45	26	P		P	03 03 46.5 +0.9
	comp=Z,0.9nm,1.0s,baz=340,slow=5.5,SNR=5.3						
	comp=Z,0.9nm,1.0s						

NNC 28 02:58:41.0±11.0, 38.31°N×69.29°E, h9km±42km, mb3.6, mpv3.0, 1C-2D, Error ellipse: s-maj=90.2km s-min=56.3km az=159.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.88	11	Pn	Pn	02 59 54.6	+0.1
	0.3nm,0.2s,baz=198,slow=18,SNR=28						
KK31				Pg	Pb	03 00 10.0	+3.4
	2.5nm,0.4s,baz=186,slow=15,SNR=13						
KK31				⇓Lg	Lg	03 01 16.0	
	24nm,0.7s,baz=189,slow=28,SNR=11						
AB31	Akbulak array	12.85	331	⇑Pn	Pn	03 01 42.1	-1.5
	0.5nm,0.6s,baz=159,slow=12						
AKTO	Aktyubinsk	14.54	330	⇓Pn	Pn	03 02 08.2	+1.5
	2.8nm,0.6s						

WEL ***28*** *03:02:00,43.56S×172.50E,h7km,ML3.8,Mw3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}1.03; $M_{\theta\theta}$1.75; $M_{\phi\phi}$-2.78; $M_{r\theta}$0.47; $M_{\theta\phi}$-2.28; $M_{\phi r}$0.15; Fault plane solution: M_o3.27000×10^{14} NP1: ϕ_s158.00000°,δ79.00000°,λ6.00000°. NP2:ϕ_s67.00000°, δ84.00000°,λ169.00000°. Principal axes: T -37.5400, Plg12.0000°, Azm22.0000°; N 27.8500, Plg77.0000°, Azm218.0000°; P 9.6900, Plg4.0000°, Azm113.0000°;*

WEL 28 03:02:29.4±0.6, 44.S±4×17.3E±°, h8km±5km, M3.8/13, ML4.1/13, MLv3.8/13 Error ellipse: s-maj=0.0km s-min=0.0km az=155.5, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MQZ	McQueen's Vall	0.19	144	P	Pg	03 02 34.0	+0.7
MQZ				S	Sg	03 02 37.0	+1.2
RACZ	Rakaia	0.32	237	P	Pb	03 02 36.6	-0.7
RACZ				S	Sb	03 02 41.4	-1.2
AMCZ	Amberley	0.39	16	P	Pg	03 02 37.8	+0.8
OXZ	Oxford	0.41	304	P	Pg	03 02 37.5	+0.1
AKCZ	Akaroa Harbour	0.43	137	P	Pg	03 02 38.6	+0.7
OKCZ	Okains Bay	0.44	113	P	Pb	03 02 38.8	-0.6
WACZ	Wakanui South	0.62	231	P	Pb	03 02 42.4	0.0
WACZ				S	Sb	03 02 51.1	-0.2
MHCZ	Mount Hutt	0.68	272	P	Pb	03 02 43.2	-0.4
GVZ	Greta Valley S	0.70	34	P	Pb	03 02 43.7	-0.2
LTZ	Lake Taylor	0.79	347	P	Pg	03 02 44.9	+0.3
ARCZ	Arundel	1.04	247	P	Pg	03 02 49.1	-0.3
RPZ	Rata Peaks	1.06	261	P	Pg	03 02 49.6	-0.3
INZ	Inchbonnie	1.14	317	P	Pg	03 02 50.2	-1.0
TMZ	Timaru	1.36	232	P	Pn	03 02 53.7	-1.1
KHZ	Kahutara	1.37	34	P	Pn	03 02 46.8	-8.0
WVZ	Waitaha Valley	1.38	290	P	Pn	03 02 54.2	-0.7
THZ	Tophouse	1.82	10	P	Pn	03 02 59.6	-1.4
LBZ	Lake Benmore	1.87	243	P	Pn	03 03 01.2	-0.6
DSZ	Denniston Hort	1.88	344	P	Pn	03 03 00.9	-1.0
FOZ	Fox Glacier	1.96	270

SNAA	Sanae	20.54	155	P		P	03 10 33.8	-0.9
SNAA	Sanae	20.54	155	P		P	03 10 33.8	-0.9
	2.1nm,0.8s,baz=308,slow=8.1,SNR=12							
	2.1nm,0.8s							
SNAA	Sanae	20.54	155	P		P	03 10 35.6	+0.9
TROLL	Troll, Antarti	22.11	153	P		P	03 10 49.7	-1.9
BELA	Belgrano 2	22.90	182	P		P	03 11 00.3	+0.5
BELA				IAmb		IAmb	03 11 17.7	
	comp=Z,3.8nm,1.0s							
CPUP	Villa Florida	34.52	316	P		P	03 12 43.8	-0.9
	comp=Z,2.1nm,0.9s,baz=164,slow=12,SNR=4.9							
	comp=Z,2.1nm,0.9s							
LVC	Limon Verde	42.88	304	LR		LR	03 31 15.1	
	comp=Z,13nm,21.7s,baz=178,slow=35							
PTLB	Pontes e Lacer	45.08	320	P		P	03 14 12.7	+0.2
PTLB				IAmb		IAmb	03 14 13.8	
	comp=Z,3.1nm,0.8s							
VNDA	Vanda	47.39	184	P		P	03 14 30.3	+0.3
	comp=Z,0.5nm,0.7s,baz=275,slow=2.1,SNR=4.4							
	comp=Z,0.5nm,0.7s							
H10S2	ASCENSION HYDR	47.87	22	T		T	04 06 14.8	
H10S3	ASCENSION HYDR	47.87	22	T		T	04 06 11.5	
	SNR=7.5							
BOSA	Boshof	47.99	80	P		P	03 14 36.7	+1.3
	comp=Z,2.4nm,0.9s,baz=229,slow=9.3,SNR=3.2							
	comp=Z,2.4nm,0.9s							
LPAZ	La Paz	48.00	309	P		P	03 14 37.5	+1.3
	comp=Z,2.3nm,0.6s,baz=127,slow=5.9,SNR=18							
	comp=Z,2.3nm,0.6s							
LPAZ	La Paz	48.00	309	P		P	03 14 36.3	+0.1
H10N1	ASCENSION HYDR	48.98	22	T		T	04 07 34.7	
	baz=192,slow=75,SNR=8.2							
H10N3	ASCENSION HYDR	48.98	22	T		T	04 07 35.1	
	baz=192,slow=75,SNR=12							
H10N2	ASCENSION HYDR	49.00	22	T		T	04 07 35.5	
	baz=192,slow=75,SNR=12							
TORD	Torodi Ar. Bea	73.43	33	P		P	03 17 28.5	-0.1
	comp=Z,17nm,0.3s,baz=198,slow=6.5,SNR=2.7							
FINES	FINESS Array B	124.64	29	PKP		PKPdf	03 24 53.8	-0.8
	comp=Z,2.2nm,1.0s,baz=318,slow=2.6,SNR=6.5							
J26L	Joseph Creek	146.36	314	PKPbc		PKPab	03 25 37.5	+0.6
PAX	Paxson	146.72	311	PKPbc		PKPab	03 25 38.9	+0.5
BMAR	Burnt Mountain	147.47	319	PKPbc		PKPbc	03 25 39.1	+0.1
ILAR	Eielson Array	147.81	314	PKPbc		PKPbc	03 25 39.5	-0.4
	comp=Z,1.2nm,0.7s,baz=123,slow=1.7,SNR=23							
ILAR	Eielson Array	147.81	314	PKPbc		PKPbc	03 25 39.4	-0.6

*IDC **28** 03:31:13.8±0.8, 12°.31N×143°.92E, h0km, mb3.9/9, mbtmp3.9/9, MS3.0/4, Error ellipse: s-maj=35.2km s-min=15.5km az=111.0*
*NEIC **28** 03:31:15.1±1.5, 12°.27N±0°.10×144°.0E±0°.1, h10km±1km, mb4.3/11, Error ellipse: s-maj=27.8km s-min=5.6km az=125.0*
ISC 28 03:31:17.2±0.6, 12°.25N±0°.08×144°.0E±0°.1, h26km, n33, σ0s92/25, mb4.2/16, MS3.0/3, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.58	32	Pn	Pn	03 31 43.8	+0.2
	130nm,0.3s,baz=338,slow=7.0,SNR=41						
GUMO				Sn	Sn	03 32 03.2	-0.1
	199nm,0.3s,baz=24,slow=21,SNR=17						
GUMO				LR	LR	03 32 30.4	
	comp=Z,291nm,19.8s,baz=250,slow=49						
MANU	Manus Island	14.58	167	Pn	Pn	03 34 41.4	-0.6
SIJI	Sorong	18.15	225	LR	LR	03 41 37.7	
	comp=Z,26nm,21.3s,baz=137,slow=34						
H11S3	WAKE ISLAND Hy	22.73	71	T		T	03 59 46.7	
	baz=239,slow=78,SNR=12							
H11S1	WAKE ISLAND Hy	22.75	71	T		T	03 59 48.0	
	baz=239,slow=78,SNR=6.6							
H11S2	WAKE ISLAND Hy	22.75	71	T		T	03 59 50.9	
	baz=239,slow=78,SNR=11							
H11N1	WAKE ISLAND Hy	23.21	68	T		T	04 00 23.6	
	baz=255,slow=75,SNR=12							
H11N2	WAKE ISLAND Hy	23.22	68	T		T	04 00 24.0	
	baz=255,slow=75,SNR=12							
H11N3	WAKE ISLAND Hy	23.23	68	T		T	04 00 30.9	
	baz=255,slow=75,SNR=11							
WB0	Warramunga Arr	33.19	197	P		P	03 37 52.1	+0.1
WB0				IAmb		IAmb	03 38 02.5	
	comp=Z,4.5nm,1.1s							
WR0	Warramunga Arr	33.33	196	P		P	03 37 52.3	-0.9
WR0				IAmb		IAmb	03 38 09.8	
	comp=Z,5.3nm,1.2s							
WRA	Warramunga Arr	33.37	197	P		P	03 37 53.8	+0.2
	comp=Z,0.6nm,0.6s,baz=20,slow=9.6,SNR=10							
WRA				LR		LR	03 53 31.6	
	comp=Z,30nm,18.7s,baz=192,slow=40							
	comp=Z,0.6nm,0.6s							
WRA	Warramunga Arr	33.37	197	P		P	03 37 53.2	-0.4
ASAR	Alice Springs	37.03	195	P		P	03 38 26.3	+1.2
	comp=Z,0.6nm,0.7s,baz=18,slow=9.9,SNR=11							
	comp=Z,0.6nm,0.7s							
PETK	Petropavlovsk-	42.21	12	LR		LR	03 54 32.5	
	comp=Z,19nm,22.0s,baz=147,slow=33							
STKA	Stephens Creek	43.93	183	P		P	03 39 22.6	+0.6
	comp=Z,0.8nm,0.5s,baz=355,slow=11,SNR=2.8							
	comp=Z,0.8nm,0.5s							
MKAR	Makanchi Array	61.87	317	P		P	03 41 35.1	+0.6
	comp=Z,0.5nm,0.7s,baz=92,slow=9.6,SNR=2.6							
	comp=Z,0.5nm,0.7s							
MKAR	Makanchi Array	61.87	317	P		P	03 41 33.9	-0.6
ZAA0	Zalesovo Array	62.22	325	P		P	03 41 38.0	+1.4
ZAA0				IAmb		IAmb	03 41 45.9	
	comp=Z,1.3nm,0.6s							
ZALV	Zalesovo Beam	62.22	325	P		P	03 41 37.5	+0.9
	comp=Z,0.7nm,0.5s,baz=95,slow=5.1,SNR=2.3							
	comp=Z,0.7nm,0.5s							
KURK	Kurchatov	65.07	320	P		P	03 41 55.6	+0.2
KURK				IAmb		IAmb	03 41 56.8	
	comp=Z,2.6nm,0.9s							
AAK	Ala-Archa	66.75	311	P		P	03 42 06.4	-0.3
AAK				IAmb		IAmb	03 42 09.3	
	comp=Z,1.6nm,0.8s							
NIL	Nilore	67.35	301	P		P	03 42 10.7	+0.2
ILAR	Eielson Array	70.14	25	P		P	03 42 26.7	-0.5
	comp=Z,0.6nm,0.5s,baz=245,slow=5.8,SNR=4.3							
	comp=Z,0.6nm,0.5s							
J26L	Joseph Creek	71.48	26	P		P	03 42 34.1	-1.4
J26L				IAmb		IAmb	03 42 38.9	
	comp=Z,1.8nm,0.8s							
INK	Inuvik	75.92	22	P		P	03 43 01.9	+0.5
	comp=Z,1.0nm,0.6s,baz=256,slow=8.3,SNR=3.2							
	comp=Z,1.0nm,0.6s							
ABKAR	Akbulak array	76.97	318	P		P	03 43 07.4	-0.3
AKTO	Aktyubinsk	78.12	319	LR		LR	04 19 01.3	
	comp=Z,12nm,19.4s,baz=90,slow=37							
NEW	Newport	86.79	41	P		P	03 43 58.2	-1.2
BMO	Blue Mountains	87.54	45	P		P	03 44 03.4	+0.2
BMO				IAmb		IAmb	03 44 06.9	
	comp=Z,3.1nm,1.1s							
NVAR	Mina Array Bea	88.42	51	P		P	03 44 09.8	+2.1
	comp=Z,1.2nm,0.7s,baz=267,slow=5.4,SNR=14							
	comp=Z,1.2nm,0.7s							
NVAR	Mina Array Bea	88.42	51	P		P	03 44 08.9	+1.2
FINES	FINESS Array B	92.01	335	P		P	03 44 22.6	-1.1
	comp=Z,2.4nm,0.8s,baz=91,slow=7.2,SNR=11							
	comp=Z,2.4nm,0.8s							

*UCR **28** 03:42:58.2±1.6, 9°.63N×84°.04W, h54km±2km, MW3.7*
*INET **28** 03:42:58.1±1.1, 9°.69N×83°.98W, h54km±5km, MW3.1*
*UPA **28** 03:42:59.4±1.0, 9°.60N×83°.94W, h10km±5km, MW3.4*
ISC 28 03:42:59.1±1.2, 9°.67N±0°.04×84°.04W±0°.03, h49km±6km, n58, σ0s87/93, 7C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	La Lucha 2	0.08	24	eP	Pn	03 43 05.8	-1.3
LCR2				eS	Sn	03 43 12.7	0.0
RIMA	Rio Macho	0.20	60	eP	Pn	03 43 07.1	-0.5
RIMA				eS	Sn	03 43 14.0	+0.4
RIMA	Rio Macho	0.20	60	eP	Pn	03 43 07.0	-0.6
RIMA				eS	Sn	03 43 14.1	+0.4
CDM	Cerro de Muert	0.29	112	eP	Pn	03 43 08.1	-0.5
CDM				eS	Sn	03 43 16.1	+0.7
CDM	Cerro de Muert	0.29	112	eP	Pn	03 43 08.1	-0.5
HDC	Heredia	0.34	348	eP	Pn	03 43 08.5	-0.3
HDC				eS	Sn	03 43 16.7	+1.1
HDC	Heredia	0.34	348	iP	Pn	03 43 08.4	-0.3
HDC				eS	Sn	03 43 16.6	+1.0
HDC3	Heredia 3	0.34	348	eP	Pn	03 43 08.3	-0.4
HDC3				eS	Sn	03 43 16.7	+1.1
EDDO	Dominical	0.45	157	eP	Pn	03 43 09.2	-0.5
EDDO				eS	Sn	03 43 18.1	+0.9
PEZE	Perez Zeledon,	0.46	128	eP	Pn	03 43 09.3	-0.6
PEZE	Perez Zeledon,	0.46	128	eP	Pn	03 43 09.3	-0.6
PEZE				eS	Sn	03 43 18.3	+0.7
JACO	JACO, Garabito	0.61	270	eP	Pn	03 43 10.8	-0.8
JACO	JACO, Garabito	0.61	270	eP	Pn	03 43 10.8	-0.8
JACO				eS	Sn	03 43 21.9	+1.2
BATAN	Batan	0.78	57	eP	Pn	03 43 13.6	-0.3
BATAN				eS	Sn	03 43 25.1	+0.4
SRBA	San Rafael, Bu	0.80	123	eP	Pn	03 43 13.3	-0.9
SRBA				eS	Sn	03 43 25.3	+0.1
LAFE	Finca La Fe, P	0.87	279	eP	Pn	03 43 14.6	-0.5
LAFE				eS	Sn	03 43 28.4	+1.7
LAFE	Finca La Fe, P	0.87	279	eP	Pn	03 43 14.6	-0.5
LAFE				eS	Sn	03 43 28.2	+1.4
DRK0	Durika	0.88	117	eP	Pn	03 43 15.3	-0.1
DRK0				eS	Sn	03 43 27.9	+0.6
DRK0	Durika	0.88	117	eP	Pn	03 43 15.2	-0.2
EDBA	Buenos Aires	0.91	123	eP	Pn	03 43 14.4	-1.2
EDBA				eS	Sn	03 43 27.6	-0.1
EDPN	Palmar Norte	0.91	140	eP	Pn	03 43 15.1	-0.5
FORC	Fortuna	1.01	322	eP	Pn	03 43 16.6	-0.4
FORC				eS	Sn	03 43 31.4	+1.2
CASO	Castillo	1.02	318	eP	Pn	03 43 16.8	-0.4
CASO				eS	Sn	03 43 32.1	+1.5
CEDE	Laguna Cedeo	1.05	321	iP	Pn	03 43 17.3	-0.3
CEDE				eS	Sn	03 43 32.5	+1.5
JTS	Las Juntas de	1.09	305	eP	Pn	03 43 17.3	-0.8
JTS	Las Juntas de	1.09	305	eP	Pn	03 43 17.5	-0.6
JTS				eS	Sn	03 43 33.0	+0.8
JTS	Las Juntas de	1.09	305	eP	Pn	03 43 17.4	-0.7
COVE	Coope Vega, Sa	1.11	341	eP	Pn	03 43 17.4	-0.9
EDSV	San Vito	1.35	128	eP	Pn	03 43 21.5	-0.1
ACAL	Aguas Claras	1.37	315	eP	Pn	03 43 21.4	-0.6
ACAL				eS	Sn	03 43 40.5	+1.4
PTEN	Parque Tenorio	1.40	318	eP	Pn	03 43 21.6	-0.7
PTEN				eS	Sn	03 43 41.4	+1.7
VERA	Finca Concepci	1.44	325	eP	Pn	03 43 21.9	-0.8
INDI	Punta indio, G	1.46	278	eP	Pn	03 43 21.1	-1.9
CUI	Cuipilapa	1.48	312	eP	Pn	03 43 22.9	-0.6
CUI				eS	Sn	03 43 42.4	+0.7
COLC	Colonia	1.52	311	eP	Pn	03 43 23.2	-0.7
COLC				eS	Sn	03 43 43.2	+0.7
HORNC	Hornillas	1.53	313	eP	Pn	03 43 23.4	-0.7
HORNC				eS	Sn	03 43 43.1	+0.2
VMAR	Armenia, Volca	1.56	317	eP	Pn	03 43 23.7	-0.8
ORTG	Ortega, Santa	1.56	297	eP	Pn	03 43 23.0	-1.5
GUAB	Guayabo de Bag	1.56	312	eP	Pn	03 43 23.6	-0.9
GUAB				eS	Sn	03 43 44.2	+0.6
CNI2	El Empalme, Bo	1.57	99	eP	Pn	03 43 23.8	-0.8
CNI2				eS	Sn	03 43 42.9	-0.8
LIM1	Limonal	1.57	311	eP	Pn	03 43 23.9	-0.8
CDITO	Canoas	1.58	133	eP	Pn	03 43 25.0	+0.3
CDITO				eS	Sn	03 43 44.6	+0.5
BRU2	Volcan	1.59	123	eP	Pn	03 43 24.7	-0.3
BRU2				eS	Sn	03 43 45.6	+1.1
BC3P	Paso Ancho	1.65	121	eP	Pn	03 43 26.5	+0.7
BC3P				eS	Sn	03 43 46.7	+0.8
GPS2	Hotel Rincn d	1.68	310	eP	Pn	03 43 25.4	-0.8
GPS2				eS	Sn	03 43 46.8	+0.1
SAJU	San Juanillo,	1.69	284	eP	Pn	03 43 24.3	-2.0
BUAI	Buenos Aires	1.75	314	eP	Pn	03 43 26.1	-1.0
BUAI				eS	Sn	03 43 48.7	+0.4
BUEV	Buena Vista	1.75	310	eP	Pn	03 43 26.2	-0.9
LAPC	Finca la Perla	1.75	309	iP	Pn	03 43 25.9	-1.2
GB1A	Borinquen Arri	1.76	311	eP	Pn	03 43 26.0	-1.3
GBS3	Finca Las Img	1.78	309	iP	Pn	03 43 26.4	-1.1
LNBQ3	Los Naranjos,	1.80	119	eP	Pn	03 43 28.1	+0.2
LNBQ3				eS	Sn	03 43 49.4	-0.2
PTAR3	Potrerillos Ar	1.81	122	eP	Pn	03 43 28.3	+0.4
PTAR3				eS	Sn	03 43 50.1	+0.4
HZTE	Horizontes, Gu	1.85	304	eP	Pn	03 43 27.8	-0.6
HZTE	Horizontes, Gu	1.85	304	eP	Pn	03 43 27.8	-0.6
DVD	David	1.99	128	eP	Pn	03 43 30.7	+0.4
DVD				eS	Sn	03 43 54.6	+0.5
ESPN	Las Esperanzas	2.53	354	eP	Pn	03 43 36.4	-1.3
ACON	Acoyapa	2.54	334	eP	Pn	03 43 36.7	-1.2

JMA 28 03:43:59.6±0.2, 38°.0N±0°.8×14°.4E±°, h52km, MV3.7/30, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.13	281	P	Pn	03 44 33.6	+0.9
JIKH				S	Sn	03 44 58.7	+0.8
OFUJ	Ofunato	2.23	301	P	Pn	03 44 35.2	+1.1
OFUJ				S	Sn	03 45 01.7	+1.2
JIO	Ouri	2.25	284	P	Pn	03 44 35.3	+1.0
JIO				S	Sn	03 45 01.9	+1.1
JKMT	Kesennumamotoy	2.26	293	P	Pn	03 44 35.6	+1.2
JKMT				S	Sn	03 45 02.1	+1.0
JMK	Ichinoseki	2.49	295	P	Pn	03 44 39.4	+1.8
JMK				S	Sn	03 45 08.5	+1.6
JOM	Ohasama	2.69	305	P	Pn	03 44 41.8	+1.4
JOM				S	Sn	03 45 13.2	+1.5
JFT	Otama	3.04	263	P	Pn	03 44 46.7	+1.5
JFT				S	Sn	03 45 21.9	+1.7
JYK	Kaneyama	3.11	289	eS	Sn	03 45 24.4	+2.2
JANG	Nango	3.16	321	P	Pn	03 44 47.6	+0.8
BSO1	Boso 1	4.16	219	eP	Pn	03 44 59.5	-0.5
BSO1				eS	Sn	03 45 47.2	+0.2
JRY	Ryogami san	4.61	247	P	Pn	03 45 07.0	+0.4
JCH	Churui	4.70	353	P	Pn	03 45 07.0	-0.9
JCH				eS	Sn	03 45 58.3	-2.7
JTKR	Abashiri--Toko	6.02	358	P	Pn	03 45 24.8	-1.2
JTKR				eS	Sn	03 46 29.2	-4.3

*JMA **28** 03:52:53.5±0.2, 24°.N±1°.×122°.1E±0°.3, h25km, MV2.7/10, TAIWAN REGION*
*TAP **28** 03:52:54.6, 23°.90N×122°.11E, h45km, ML3.0, D*
ISC 28 03:52:54.3±1.0, 23°.85N±0°.03×122°.13E±0°.02, h43km±10km, n60, σ0s83/118, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEYL	Yanliau Villag	0.48	272	iP	Pb	03 53 04.8	+0.3
	baz=267						
TEYL				S	Sn	03 53 13.2	+0.7
	baz=267						
HWA	Hwalien	0.49	285	iP	Pb	03 53 05.1	+0.4
	baz=273						
HWA				S	Sn	03 53 13.6	+0.8
	baz=273						
TWD	Chiawan	0.54	295	P	Pb	03 53 05.1	-0.2
	baz=291						
TWD				eS	Sb	03 53 12.6	-0.3
	baz=291						
ETL	Fush Village	0.55	304	P	Pb	03 53 05.4	-0.3
	baz=300						
ETL				S	Sb	03 53 13.6	+0.1
	baz=300						
TEGC	Jichi Village	0.56	255	P	Pb	03 53 06.0	+0.2
	baz=242						
TEGC				S	Sb	03 53 14.7	+1.2
	baz=242						
NACB	Ninganchiao	0.58	303	P	Pb	03 53 05.6	-0.5
	baz=300						
NACB				eS	Sb	03 53 13.9	-0.3
	baz=300						
ETM	Tongmen	0.59	281	P	Pb	03 53 06.0	-0.3
	baz=269						
ETM				iS	Sb	03 53 14.8	+0.4
	baz=269						
ESL	Shilin	0.64	267	P	Pb	03 53 06.4	-0.6
	baz=257						
ESL				S	Sb	03 53 15.6	-0.1
	baz=257						
EGFH	Guangfu	0.67	254	iP	Pb	03 53 07.3	-0.3
	baz=243						
EGFH				iS	Sb	03 53 16.8	+0.2
	baz=243						
EWUT	Wuta	0.67	332	P	Pb	03 53 06.6	-1.0
	baz=321						
EWUT				S	Sb	03 53 16.6	-0.1
	baz=321						
ENA	Nanau	0.67	328	P	Pb	03 53 07.5	-0.1
	baz=318						
ENA				S	Sb	03 53 17.1	+0.3
	baz=318						
ETLH	Xiulin Townshi	0.69	301	P	Pb	03 53 07.3	-0.6
	baz=298						
ETLH				eS	Sb	03 53 16.5	-0.7
	baz=298						
HGSD	Ruisui	0.74	241	iP	Pb	03 53 08.2	-0.5
	baz=231						
HGSD				eS	Sn	03 53 20.7	+1.9
	baz=231						
TWC	Suao	0.79	341	eP	Pb	03 53 09.8	+0.1
	baz=351						
TWC				eS	Sb	03 53 20.8	+0.6
	baz=351						
EHY	Hungye	0.81	245	P	Pb	03 53 09.3	-0.7
	baz=253						
EHY				S	Sb	03 53 21.1	+0.4
	baz=253						
WHF	Hehuan Shan	0.84	290	P	Pb	03 53 10.1	-0.6
	baz=288						
WHF				iS	Sb	03 53 21.1	-0.7
	baz=288						
NDS	Dongshan	0.86	334	P	Pb	03 53 09.8	-1.1
	baz=334						
NDS				S	Sb	03 53 21.5	-0.6
	baz=334						
LATG	Datong	0.87	321	iP	Pb	03 53 10.4	-0.7
	baz=320						
LATG				iS	Sb	03 53 22.0	-0.5
	baz=320						
OWD	Renai	0.88	277	P	Pb	03 53 10.4	-0.7
	baz=274						
OWD				iS	Sb	03 53 21.7	-0.9
	baz=274						
YULB	Yu-li	0.89	239	iP	Pb	03 53 10.4	-0.8
	baz=248						
YULB				S	Sb	03 53 22.1	-0.7
	baz=248						
NNSB	Datong	0.89	310	P	Pb	03 53 10.9	-0.5
	baz=300						
NNSB				S	Sb	03 53 22.4	-0.6
	baz=300						
NNSH	Datong	0.89	310	P	Pb	03 53 10.6	-0.7
	baz=300						
NNSH				S	Sb	03 53 22.3	-0.6
	baz=300						
CHGB	Renai	0.90	283	P	Pb	03 53 11.0	-0.5
	baz=273						
CHGB				S	Sb	03 53 22.5	-0.8
	baz=273						
EYUL	Yuli	0.90	236	P	Pb	03 53 11.0	-0.3
	baz=226						
EYUL				S	Sb	03 53 23.3	+0.3
	baz=226						
FUSS	Fushou	0.90	296	P	Pb	03 53 10.9	-0.7
	baz=294						
FUSS				iS	Sb	03 53 22.7	-0.6
	baz=294						
NNS	Nan Shan	0.90	310	P	Pb	03 53 10.0	-1.6
	baz=309						
NNS				S	Sb	03 53 21.8	-1.6
	baz=309						
VWDT	VWDT	0.91	264	P	Pn	03 53 11.2	+0.2
	baz=261						
VWDT				eS	Sb	03 53 23.4	+0.1
	baz=261						
TWF1	Yuli	0.91	237	iP	Pn	03 53 11.0	0.0
	baz=227						
TWF1				S	Sb	03 53 23.2	-0.2
	baz=227						
NDT	Datong Townshi	0.93	323	P	Pn	03 53 11.5	+0.1
	baz=322						
NDT				S	Sb	03 53 23.6	-0.4
	baz=322						
WUSB	Renai	0.93	279	P	Pn	03 53 11.6	+0.1
	baz=276						
WUSB				S	Sb	03 53 23.1	-1.1
	baz=276						
ENTT	Nioudou	0.94	327	P	Pn	03 53 10.7	-0.7
	baz=326						
ENTT				S	Sb	03 53 22.9	-1.3
	baz=326						
JYNG	Yonagunijimaku	0.96	51	P	Pn	03 53 12.1	+0.4
JYNG				S	Sb	03 53 24.5	-0.2
FULB	Fuli	1.00	230	P	Pn	03 53 11.9	-0.4
	baz=217						
FULB				S	Sb	03 53 25.3	-0.8
	baz=217						
YOJ	Yonaguni jima	1.01	53	P	Pn	03 53 12.9	+0.4
	baz=55						
YOJ				iS	Sb	03 53 25.9	-0.4
	baz=55						
YOJ	Yonaguni jima	1.01	53	P	Pn	03 53 12.8	+0.4
YOJ				eS	Sb	03 53 25.8	-0.4
SSLB	Suanglung	1.08	267	P	Pn	03 53 13.6	+0.3
	baz=264						
SSLB				S	Sn	03 53 27.4	+0.1
	baz=264						
ECS	Chishang	1.12	228	P	Pn	03 53 14.5	+0.5
	baz=219						
ECS				S	Sn	03 53 29.2	+0.8
	baz=219						
SMLT	Sun Moon Lake	1.12	272	P	Pn	03 53 14.4	+0.4
	baz=264						
SMLT				S	Sn	03 53 28.4	-0.1
	baz=264						
YUS	Yu-Shan	1.14	252	iP	Pn	03 53 15.0	+0.4
	baz=248						
YUS				S	Sn	03 53 29.1	-0.3
	baz=248						
EDH	Donghe	1.16	221	eP	Pn	03 53 13.8	-0.7
	baz=212						
EDH				eS	Sn	03 53 27.4	-1.8
	baz=212						
WHYT	Xinyi Township	1.18	263	eP	Pn	03 53 15.6	+0.9
	baz=252						
WHYT				S	Sn	03 53 29.9	+0.1
	baz=252						
ELDTW	Lidau	1.21	237	eP	Pn	03 53 14.4	-0.9
	baz=226						
ELDTW				iS	Sn	03 53 29.8	-1.0
	baz=226						
ALS	Alishan	1.26	255	P	Pn	03 53 17.1	+1.0
	baz=252						
ALS				S	Sn	03 53 32.8	+0.6
	baz=252						
LONT	Longtian	1.31	224	iP	Pn	03 53 16.3	-0.3
	baz=231						
LONT				S	Sn	03 53 32.2	-0.9
	baz=231						
LDUT	Ludao	1.32	207	P	Pn	03 53 16.3	-0.4
	baz=205						
LDUT				S	Sn	03 53 31.9	-1.4
	baz=205						
TWGBT	Beinan	1.41	223	iP	Pn	03 53 17.4	-0.5
	baz=230						
TWGBT				S	Sn	03 53 34.5	-0.9
	baz=230						
STYH	Taoyuan	1.41	242	eP	Pn	03 53 17.9	0.0
	baz=234						
STYH				S	Sn	03 53 35.6	0.0
	baz=234						
WCKO	Fanlu	1.46	254	iP	Pn	03 53 19.7	+1.1
	baz=251						
WCKO				S	Sn	03 53 38.7	+2.1
	baz=251						
TPUB	Ta-pu	1.48	248	P	Pn	03 53 20.4

PHUB					S		Sn	03 53 59.7	+0.6	
	baz=274									
PNG	**Penghu**	**2.37**	**264**		P		Pn	03 53 32.0	+0.9	
	baz=262									
PNG					S		Sn	03 53 59.9	+0.6	
	baz=262									
JTJ	**Tarama**	**2.48**	**71**		P		Pn	03 53 32.9	+0.3	
JTJ					*e*S		Sn	03 54 02.1	+0.3	
ZPLA	**Ao Xicun**	**4.01**	**272**		*e*P		Pn	03 53 53.8	+0.2	
	baz=270									

IDC 28 04:36:32.8±4.8, 18°96S×177°96W, h592km±30km, mb3.1/3, mbtmp4.0/4, Error ellipse: s-maj=123.1km s-min=35.7km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.98**	**287**	P		P	04 37 57.5	-0.1
	6.4nm,0.5s,baz=229,slow=19,SNR=4.6							
STKA	**Stephens Creek**	**38.51**	**242**	P		P	04 43 05.7	-0.1
	1.2nm,0.4s,baz=92,slow=8.0,SNR=4.4							
	1.2nm,0.4s							
WRA	**Warramunga Arr**	**44.87**	**260**	P		P	04 43 55.9	-0.1
	1.1nm,0.3s,baz=98,slow=7.5,SNR=62							
	1.1nm,0.3s							
ASAR	**Alice Springs**	**44.92**	**255**	P		P	04 43 56.2	-0.1
	1.3nm,0.4s,baz=85,slow=8.3,SNR=55							
ASAR				PcP		PcP	04 45 24.2	-0.7
	0.4nm,0.6s,baz=102,slow=3.9,SNR=5.1							
	1.3nm,0.4s							
GERES	**GERESS Array B**	**148.73**	**345**	PKPbc		PKPbc	04 55 14.0	-0.3
	0.2nm,0.4s,baz=5.2,slow=2.9,SNR=4.6							

JMA 28 04:36:43.2±0.1, 33°3N±0°3×131°3E±0°4, h10km±1km, MV0.6/21, NORTHERN OITA PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JBEP	**Beppuamama**	**0.11**	**49**	P		Pg	04 36 46.0	-0.1
JBEP				*e*S		Sg	04 36 47.8	-0.3
OIT2	**Oita 2**	**0.12**	**82**	*e*P		Pg	04 36 46.2	0.0
OIT2				*e*S		Sg	04 36 47.5	-0.8

JMA 28 04:37:07.4±0.1, 32°7N±0°2×130°8E±0°2, h9km±1km, MV0.1/14, NW KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIU3	**Izumi3**	**0.17**	**169**	*e*S		Pg	04 37 11.0	+0.1
JIU3	**Izumi3**	**0.17**	**169**	P		Pg	04 37 11.0	+0.1
JIU3				*e*S		Sg	04 37 13.8	+0.5
JTA	**Tamana**	**0.32**	**321**	*e*P		Pg	04 37 14.0	+0.3

*IDC **28** 04:50:18.9±1.2, 36°45N×76°92E, h0km, mb4.0/9, mbtmp4.1/15, ML4.0/6, MS2.9/3, Error ellipse: s-maj=24.4km s-min=20.1km az=16.0*
*MOS **28** 04:50:28.4±1.0, 36°80N×76°92E, h76km, mb4.2/8, Error ellipse: s-maj=8.4km s-min=3.9km az=93.8*
*NEIC **28** 04:50:31.1±1.4, 36°77N±0°09×76°9E±0°1, h92km±8km, mb4.2/26, ML4.2(BJI), Error ellipse: s-maj=13.5km s-min=11.9km az=129.0*
*NNC **28** 04:50:38.9±2.6, 37°32N×76°86E, h157km±16km, mb3.7, mpv4.7, Error ellipse: s-maj=27.5km s-min=8.3km az=1.0*

ISC 28 04:50:28.8±0.4, 36°65N±0°04×76°98E±0°05, h77km, n180, σ1§89/203, mb4.1/29, 9C-10D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSH	**Kashi**	**2.97**	**345**	Pn		**Pn**	**04 51 13.3**	**-0.6**
KSH				sP			04 51 18.8	
KSH				Sn		**Sn**	**04 51 45.3**	**-3.2**
KSH				pmax	pmax			
	comp=Z,390nm,0.6s							
KSH				smax	smax			
	comp=N,880nm,0.7s							
KSH				smax	smax			
	comp=E,3µm,0.7s							
CHCP	**Chirah Chowk**	**4.26**	**227**	P		**Pn**	**04 51 35.4**	**+4.1**
NIL	**Nilore**	**4.27**	**227**			**Pn**	**04 51 34.4**	**+2.9**
NIL	**Nilore**	**4.27**	**227**	P		**Pn**	**04 51 34.4**	**+2.9**
JMU	**Jammu**	**4.28**	**204**	*e*PG		**Pn**	**04 51 34.6**	**+3.1**
JMU				*e*SG		**Sn**	**04 52 23.1**	**+2.9**
THN	**Thein Dam**	**4.33**	**194**	*e*PG		**Pn**	**04 51 36.6**	**+4.3**
THN				*e*SG		**Sn**	**04 52 23.8**	**+2.4**
NRN	**Naryn**	**4.84**	**351**	Pn		**Pn**	**04 51 42.0**	**+2.6**
NRN	**Naryn**	**4.84**	**351**	P		**Pn**	**04 51 42.0**	**+2.6**
CEP	**Cherat**	**5.01**	**237**	P		**Pn**	**04 51 44.8**	**+3.1**
BHK	**Bhakra**	**5.24**	**185**	*e*PG		**Pn**	**04 51 48.1**	**+3.5**
BHK				*e*SG		**Sn**	**04 52 44.2**	**+0.4**
SMLA	**Simla**	**5.51**	**178**	*e*PG		**Pn**	**04 51 51.3**	**+3.0**
SMLA				*e*SG		**Sn**	**04 52 48.6**	**-1.6**
SMLA				IAML			04 52 53.2	
	comp=N,348nm,0.2s							
SMLA				IAML			04 52 54.3	
	comp=E,222nm,0.1s							
ULHL	**Ulahol**	**5.62**	**354**	P		**Pn**	**04 51 52.1**	**+2.2**
	SNR=34							
GAR	**Garm**	**5.77**	**296**			**Pn**	**04 51 51.7**	**-0.3**
THW	**Thamme Wali**	**5.78**	**230**	P		**Pn**	**04 51 53.9**	**+1.9**
UCH	**Uchtor**	**5.89**	**342**	P		**Pn**	**04 51 56.8**	**+2.9**
	SNR=8.3							
BTK	**Batken**	**5.92**	**307**	Pn		**Pn**	**04 51 54.8**	**+0.9**
BTK	**Batken**	**5.92**	**307**	P		**Pn**	**04 51 54.8**	**+0.9**
AML	**Almayashu**	**6.04**	**336**	P		**Pn**	**04 51 58.6**	**+2.8**
	SNR=14							
KBK	**Karagaybulak**	**6.20**	**346**	P		**Pn**	**04 52 00.7**	**+2.8**
	SNR=19							
AAK	**Ala-Archa**	**6.28**	**343**	P		**Pn**	**04 52 01.7**	**+2.7**
	SNR=12							
AAK	**Ala-Archa**	**6.28**	**343**	Pn		**Pn**	**04 51 59.5**	**+0.5**
AAK	**Ala-Archa**	**6.28**	**343**	*de*P		**Pn**	**04 51 58.9**	**-0.1**
TKM2	**Tokmak 2**	**6.36**	**351**	P		**Pn**	**04 52 01.8**	**+1.8**
	SNR=56							
TKM2	**Tokmak 2**	**6.36**	**351**	P		**Pn**	**04 52 01.4**	**+1.4**
TKM2	**Tokmak 2**	**6.36**	**351**	⇑P		**Pn**	**04 52 01.4**	**+1.4**
	comp=E,21nm,0.5s							
TNSS	**Tian-Shan**	**6.38**	**360**	P		**Pn**	**04 52 02.9**	**+2.3**
	comp=E,45nm,0.2s							
KST	**Kastek**	**6.43**	**353**	P		**Pn**	**04 52 02.6**	**+1.6**
	comp=E,26nm,0.3s							
MTBS	**Maitube**	**6.49**	**356**	P		**Pn**	**04 52 04.0**	**+2.3**
	comp=E,24nm,0.2s							
EKS2	**Erkin-Say**	**6.49**	**339**	P		**Pn**	**04 52 05.3**	**+3.5**
	SNR=6.6							
SATY	**Saty**	**6.50**	**9**	P		**Pn**	**04 52 04.2**	**+2.3**
	comp=E,69nm,0.5s							
MDOK	**Medeo**	**6.51**	**0**	*e*P		**Pn**	**04 52 00.3**	**-1.7**
MDOK				*e*S		**Sn**	**04 53 15.2**	**+0.4**
MDOK	**Medeo**	**6.51**	**0**	*e*P		**Pn**	**04 52 00.3**	**-1.7**
	baz=360							
MDOK				*e*S		**Sn**	**04 53 15.3**	**+0.4**
	baz=360							
MDOK	**Medeo**	**6.51**	**0**	P		**Pn**	**04 52 02.9**	**+0.8**
	comp=E,36nm,0.9s							
CHGR	**Chuyangaron**	**6.52**	**290**			**Pn**	**04 52 00.9**	**-1.3**
CHGR	**Chuyangaron**	**6.52**	**290**	P		**Pn**	**04 52 00.9**	**-1.3**
AAA	**Alma-Ata**	**6.55**	**360**	*e*P		**Pn**	**04 52 01.6**	**-1.0**
AAA	**Alma-Ata**	**6.55**	**360**	*e*P		**Pn**	**04 52 01.6**	**-1.0**
	baz=359							
CHMS	**Chumysh**	**6.57**	**346**	P		**Pn**	**04 52 05.3**	**+2.5**
	SNR=6.7							
CHMS	**Chumysh**	**6.57**	**346**	⇓P		**Pn**	**04 52 04.0**	**+1.2**
	comp=E,24nm,0.9s							
ZHN	**Zhinishke**	**6.61**	**9**	*e*P		**Pn**	**04 52 02.2**	**-1.2**
ZHN				*e*S		**Sn**	**04 53 17.3**	**0.0**
ZHN	**Zhinishke**	**6.61**	**9**	*e*P		**Pn**	**04 52 02.3**	**-1.2**
	baz=8.9							
ZHN				*e*S		**Sn**	**04 53 17.3**	**0.0**
	baz=8.9							
ZHN	**Zhinishke**	**6.61**	**9**	P		**Pn**	**04 52 05.9**	**+2.5**
	comp=E,22nm,0.1s							
DGS	**Degeres**	**6.65**	**352**	P		**Pn**	**04 52 05.9**	**+2.0**
	comp=E,20nm,0.7s							
UZB	**Uzynbulak**	**6.68**	**13**	*e*P		**Pn**	**04 52 02.9**	**-1.5**
UZB				*e*S		**Sn**	**04 53 19.4**	**+0.4**
UZB	**Uzynbulak**	**6.68**	**13**	*e*P		**Pn**	**04 52 03.0**	**-1.5**
	baz=13							
UZB				*e*S		**Sn**	**04 53 19.4**	**+0.4**
	baz=13							
UZB	**Uzynbulak**	**6.68**	**13**	Pg		**Pn**	**04 52 06.2**	**+1.8**
	comp=E,8.6nm,0.2s							
UZB				Lg		Lg	04 53 18.1	
	comp=E,32nm,0.3s							
SHLS	**Shalkode**	**6.78**	**16**	*e*P		**Pn**	**04 52 05.9**	**+0.2**
SHLS				*e*S		**Sn**	**04 53 23.8**	**+2.5**
SHLS	**Shalkode**	**6.78**	**16**	*e*P		**Pn**	**04 52 05.9**	**+0.2**
	baz=18							
SHLS				*e*S		**Sn**	**04 53 23.9**	**+2.5**
	baz=18							
SHLS	**Shalkode**	**6.78**	**16**	P		**Pn**	**04 52 08.9**	**+3.2**
	comp=E,57nm,0.2s							
KBL	**Kabul**	**6.80**	**254**	Pn		**Pn**	**04 52 05.9**	**-0.2**
KBL	**Kabul**	**6.80**	**254**	P		**Pn**	**04 52 05.9**	**-0.2**
USP	**Ospenovka**	**6.88**	**345**	P		**Pn**	**04 52 09.8**	**+2.7**
	SNR=15							
KURS	**Kuram**	**6.89**	**7**	P		**Pn**	**04 52 08.8**	**+1.6**
	comp=E,58nm,0.6s							
KPKS	**Kokpek**	**6.94**	**10**	*e*P		**Pn**	**04 52 06.4**	**-1.4**
KPKS				*e*S		**Sn**	**04 53 25.5**	**+0.3**
KPKS	**Kokpek**	**6.94**	**10**	*e*P		**Pn**	**04 52 06.4**	**-1.4**
	baz=10.0							
KPKS				*e*S		**Sn**	**04 53 25.5**	**+0.3**
	baz=10.0							
KPKS	**Kokpek**	**6.94**	**10**	P		**Pn**	**04 52 09.9**	**+2.0**
	comp=E,76nm,0.6s							
SGDS	**Sogindy**	**7.03**	**346**	P		**Pn**	**04 52 10.6**	**+1.5**
	comp=E,20nm,0.5s							
KRBS	**Karabastau**	**7.11**	**352**	P		**Pn**	**04 52 11.4**	**+1.2**
	comp=E,27nm,0.5s							
CHKK	**Chushkaly**	**7.20**	**0**	*e*P		**Pn**	**04 52 10.2**	**-1.1**
CHKK	**Chushkaly**	**7.20**	**0**	*e*P		**Pn**	**04 52 10.2**	**-1.1**
	baz=360							
CHKK	**Chushkaly**	**7.20**	**0**	P		**Pn**	**04 52 13.1**	**+1.7**
	comp=E,18nm,0.5s							
KUU	**Kurty**	**7.25**	**356**	*e*P		**Pn**	**04 52 11.3**	**-0.8**
KUU	**Kurty**	**7.25**	**356**	*e*P		**Pn**	**04 52 11.3**	**-0.8**
	baz=356							
KUU	**Kurty**	**7.25**	**356**	P		**Pn**	**04 52 13.3**	**+1.2**
	comp=E,31nm,0.5s							
BLB	**Baldybastay**	**7.53**	**8**	P		**Pn**	**04 52 17.2**	**+1.2**
	comp=E,72nm,0.7s							
ARXS	**Arharly**	**7.58**	**5**	P		**Pn**	**04 52 18.5**	**+1.8**
	comp=E,41nm,0.8s							
TAS	**Tashkent**	**7.59**	**310**	Pn		**Pn**	**04 52 15.9**	**-0.8**
TAS	**Tashkent**	**7.59**	**310**	P		**Pn**	**04 52 15.9**	**-0.8**
DZA	**Taraz**	**7.60**	**327**	*e*P		**Pn**	**04 52 16.4**	**-0.4**
DZA				*e*S		**Sn**	**04 53 42.2**	**+0.8**
DZA	**Taraz**	**7.60**	**327**	*e*P		**Pn**	**04 52 16.5**	**-0.4**
	baz=326							
DZA				*e*S		**Sn**	**04 53 42.3**	**+0.8**
	baz=326							
IUG	**Iuzhnay**	**7.68**	**318**	*e*P		**Pn**	**04 52 18.0**	**-0.1**
IUG	**Iuzhnay**	**7.68**	**318**	*e*P		**Pn**	**04 52 18.0**	**-0.1**
	baz=317							
IUG	**Iuzhnay**	**7.68**	**318**	P		**Pn**	**04 52 20.0**	**+2.0**
LGTI	**Lohaghat**	**7.68**	**158**	*e*P		**Pn**	**04 52 18.6**	**+0.6**
LGTI				*i* x		x	04 52 20.2	
LGTI				*e*S		**Sn**	**04 53 38.4**	**-5.1**
DJR	**Jarkent**	**7.97**	**15**	P		**Pn**	**04 52 22.7**	**+0.8**
	comp=E,42nm,0.2s							
KK31	**Karatay Array**	**8.14**	**324**	Pn		**Pn**	**04 52 24.6**	**+0.4**
KK31	**Karatay Array**	**8.14**	**324**	P		**Pn**	**04 52 24.6**	**+0.4**
KK31	**Karatay Array**	**8.14**	**324**	⇓P		**Pn**	**04 52 25.1**	**+0.9**
	comp=E,4.7nm,0.3s,baz=132,slow=12,SNR=217							
KK31					S	**Sn**	**04 53 50.9**	**-3.7**
	comp=E,14nm,0.3s,baz=121,slow=23,SNR=13							
KKAR	**Karatay Array**	**8.14**	**324**	Pn		**Pn**	**04 52 24.6**	**+0.4**
KKAR	**Karatay Array**	**8.14**	**324**	Pn		**Pn**	**04 52 24.6**	**+0.4**
KKAR	**Karatay Array**	**8.14**	**324**	P		**Pn**	**04 52 24.6**	**+0.4**
SONA	**Sohna**	**8.37**	**179**	*e*P		**Pn**	**04 52 29.1**	**+1.7**
SONA				*i* pPg			04 52 30.1	
SONA				*e*S		**Sn**	**04 53 54.7**	**-5.7**
TDK	**Taldyqorghan**	**8.42**	**7**	*e*P		**Pn**	**04 52 27.7**	**-0.2**
TDK	**Taldyqorghan**	**8.42**	**7**	*e*P		**Pn**	**04 52 27.8**	**-0.2**
	baz=6.6							
TDK	**Taldyqorghan**	**8.42**	**7**	P		**Pn**	**04 52 29.8**	**+1.8**
	comp=E,116nm,0.4s							
KUDL	**Kundal**	**8.49**	**183**	*e*P		**Pn**	**04 52 30.8**	**+1.8**
KUDL				*e*S		**Sn**	**04 53 57.5**	**-5.8**
BTLS	**Baital**	**8.67**	**346**	*e*P		**Pn**	**04 52 31.1**	**-0.3**
BTLS	**Baital**	**8.67**	**346**	*e*P		**Pn**	**04 52 31.2**	**-0.2**
	baz=346							
AJM	**Ajmer**	**10.33**	**192**	*e*P		**Pn**	**04 52 55.7**	**+1.5**
AJM				*e*S		**Sn**	**04 54 43.4**	**-4.9**
MAKZ	**Makanchi**	**10.81**	**19**			**Pn**	**04 53 00.4**	**-0.2**
MAKZ	**Makanchi**	**10.81**	**19**	P		**Pn**	**04 53 00.4**	**-0.2**
MAKZ	**Makanchi**	**10.81**	**19**	⇓P		**Pn**	**04 53 00.5**	**-0.2**
	comp=E,5.6nm,0.3s							
WMQ	**Urumqi**	**10.88**	**46**	*e*P		**Pn**	**04 53 01.5**	**-0.1**
WMQ				pP			04 53 05.5	
WMQ				sP			04 53 08.0	
WMQ				S		**Sn**	**04 54 54.3**	**-7.2**
WMQ				pmax	pmax			
	comp=Z,34nm,0.7s							
WMQ				smax	smax			
	comp=N,59nm,1.3s							
WMQ				smax	smax			
	comp=E,96nm,1.3s							
MK31	**Makanchi Array**	**10.88**	**20**	Pn		**Pn**	**04 53 00.5**	**-1.1**
MK31	**Makanchi Array**	**10.88**	**20**	*de*P		**Pn**	**04 53 01.0**	**-0.6**
MK31	**Makanchi Array**	**10.88**	**20**	⇑P		**Pn**	**04 53 01.7**	**+0.1**
	comp=E,3.5nm,0.3s,baz=199,slow=12,SNR=232							
MKAR	**Makanchi Array**	**10.88**	**20**	Pn		**Pn**	**04 53 01.3**	**-0.3**
	comp=E,6.4nm,0.3s,baz=202,slow=12,SNR=261							
MKAR					Sn	**Sn**	**04 54 55.5**	**-6.0**
	comp=E,4.9nm,0.3s,baz=233,slow=23,SNR=9.7							
	comp=E,8.7nm,0.3s							
MKAR	**Makanchi Array**	**10.88**	**20**	Pn		**Pn**	**04 53 01.1**	**-0.5**
MKAR	**Makanchi Array**	**10.88**	**20**	*i* P		**Pn**	**04 53 01.1**	**-0.5**
MKAR				pmax	pmax			
	comp=Z,9.0nm,0.3s							
JHNI	**Jhansi**	**11.23**	**173**	*e*P		**Pn**	**04 53 05.3**	**-1.1**
JHNI				*i* x		x	04 53 06.4	
ZSN	**Zaisan**	**12.28**	**26**	*e*P		**Pn**	**04 53 19.4**	**-1.1**
ZSN	**Zaisan**	**12.28**	**26**	*e*P		**Pn**	**04 53 19.4**	**-1.1**
	baz=26							
BRZS	**Berezniki**	**13.69**	**348**	*e*P		**Pn**	**04 53 38.1**	**-1.2**
BRZS	**Berezniki**	**13.69**	**348**	*e*P		**Pn**	**04 53 38.2**	**-1.2**
	baz=348							
KURBB	**Kurchatov Arra**	**14.02**	**4**	Pn		**Pn**	**04 53 41.6**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=15							
	comp=Z,1.8nm,0.7s							
KURBB	**Kurchatov Arra**	**14.02**	**4**	P		**Pn**	**04 53 41.2**	**-2.4**
KURBB	**Kurchatov Arra**	**14.02**	**4**	⇑P		**Pn**	**04 53 41.0**	**-2.6**
	comp=Z,7.1nm,1.4s							
KURK	**Kurchatov**	**14.11**	**4**	Pn		**Pn**	**04 53 42.9**	**-2.0**
KURK	**Kurchatov**	**14.11**	**4**	⇓*e*P		**Pn**	**04 53 45.4**	**+0.5**
KURK	**Kurchatov**	**14.11**	**4**	⇑P		Pn	04 53 41.7	-3.2
	comp=Z,6.5nm,0.7s							
GOMU	**GeErMu**	**14.37**	**86**	P		**Pn**	**04 53 49.5**	**+0.7**
GOMU				pP		P	04 53 52.8	-0.8
GOMU				sP			04 53 53.8	
GOMU				pmax	pmax			
	comp=Z,7.0nm,0.6s							
GOMU				pmax	pmax			
	comp=Z,67nm,4.8s							
GEYT	**Alibeck**	**15.07**	**281**	Pn		**Pn**	**04 53 53.3**	**-4.1**
	comp=Z,0.9nm,0.3s,baz=114,slow=6.6,SNR=5.3							
GEYT					Sn	Sn	04 56 32.0	-11
	comp=Z,0.6nm,0.3s,baz=144,slow=12,SNR=1.8							
	comp=Z,1.4nm,0.4s							
DGZ	**Jazzator, Alta**	**15.09**	**27**	⇓*e*P		**Pn**	**04 53 57.8**	**+0.1**
DGZ				pmax	pmax			
	comp=Z,4.0nm,0.5s							
BVA0	**Borovoye Array**	**17.02**	**346**	P		**Pn**	**04 54 18.5**	**-3.2**
BVA0	**Borovoye Array**	**17.02**	**346**	⇑P		**Pn**	**04 54 18.5**	**-3.2**
	comp=Z,7.7nm,1.2s,baz=143,slow=9.2,SNR=16							
BVAR	**Borovoye Array**	**17.02**	**346**	P		**Pn**	**04 54 21.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=167,slow=15,SNR=11							
	comp=Z,1.6nm,0.4s							
BRVK	**Borovoye**	**17.07**	**346**			**Pn**	**04 54 21.4**	**-0.9**
BRVK	**Borovoye**	**17.07**	**346**	*ce*P		**Pn**	**04 54 22.1**	**-0.2**
BRVK				pmax	pmax			
	comp=Z,6.0nm,0.7s							
AB31	**Akbulak array**	**17.68**	**321**	P		**P**	**04 54 28.5**	**-1.1**
AB31				S		Sn	04 57 35.8	-10
AB31	**Akbulak array**	**17.68**	**321**	⇑P		**P**	**04 54 28.5**	**-1.1**
	comp=Z,1.8nm,0.3s,baz=124,slow=14,SNR=89							
ABKAR	**Akbulak array**	**17.68**	**321**			**P**	**04 54 28.2**	**-1.4**
ZAA0	**Zalesovo Array**	**18.14**	**15**			**P**	**04 54 33.0**	**-1.7**
ZALV	**Zalesovo Beam**	**18.14**	**15**	P		**P**	**04 54 33.7**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=209,slow=9.4,SNR=16							
	comp=Z,3.5nm,0.3s							
ZALV	**Zalesovo Beam**	**18.14**	**15**	*i* P		**P**	**04 54 33.2**	**-1.5**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.3s							
GTA	**Gaotai**	**18.20**	**74**	⇑P		**Pn**	**04 54 38.0**	**+1.7**
GTA				pP		P	04 54 44.0	+8.4
GTA				pmax	pmax			
	comp=Z,14nm,1.1s							
HYBB	**Hyderabad (bro**	**19.20**	**175**	*e*P		**Pn**	**04 54 48.7**	**+0.4**
HYBB				*e*S		**Sn**	**04 58 23.7**	**+0.3**
AKTO	**Aktyubinsk**	**19.39**	**321**	P		**P**	**04 54 49.0**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=118,slow=6.7,SNR=19							
AKTO					S	**S**	**04 58 18.8**	**-4.7**
	comp=Z,1.5nm,0.6s,baz=190,slow=18,SNR=1.9							
	comp=Z,7.2nm,0.4s							
AKTO	**Aktyubinsk**	**19.39**	**321**	P		**P**	**04 54 49.0**	**+0.6**
AKTO	**Aktyubinsk**	**19.39**	**321**	⇓P		**P**	**04 54 47.3**	**-1.1**
	comp=Z,4.9nm,0.4s							
KNGR	**Kungurtug, Tuv**	**20.30**	**40**	⇓*e*P		Pn	04 55 01.3	+0.3
KNGR				pmax	pmax			
	comp=Z,9.0nm,0.8s							
LZH	**Lanzhou**	**21.62**	**83**	*e*P		**P**	**04 55 12.3**	**-0.5**
LZH				pP		pP	04 55 18.8	-11
LZH				pmax	pmax			
	comp=Z,25nm,1.1s							
PZH	**PanZhiHua**	**23.34**	**109**	P		**P**	**04 55 31.0**	**+0.4**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PZH				pmax	pmax			
	comp=Z,80nm,5.4s							
ZAK	**Zakamensk**	**23.35**	**46**	*e*P		**P**	**04 55 31.0**	**+0.6**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
ARU	**Arti**	**23.35**	**334**	P		**P**	**04 55 30.5**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=338,slow=11,SNR=3.3							
ARU				LR		LR	05 05 14.2	
	comp=Z,41nm,21.3s,baz=190,slow=38							
	comp=Z,2.4nm,0.3s							
ARU	**Arti**	**23.35**	**334**	P		**P**	**04 55 29.4**	**-0.9**
ARU				lAmb		lAmb	04 55 40.7	
	comp=Z,10nm,1.0s							
ARU	**Arti**	**23.35**	**334**	*c i*P		**P**	**04 55 30.0**	**-0.3**
ARU							04 55 52.7	
ARU				pmax	pmax			
	comp=Z,4.0nm,0.9s							
SONM	**Songino Array**	**24.33**	**53**	P		**P**	**04 55 41.1**	**+1.7**
	comp=Z,3.9nm,0.7s,baz=251,slow=10,SNR=25							
	comp=Z,3.9nm,0.7s							
SONM	**Songino Array**	**24.33**	**53**	P		**P**	**04 55 39.9**	**+0.5**
SONM	**Songino Array**	**24.33**	**53**	P		**P**	**04 55 39.9**	**+0.5**
SONM				pmax	pmax			
	comp=Z,4.0nm,0.9s							
ULN	**Ulaanbaatar**	**24.77**	**54**	P		**P**	**04 55 44.1**	**+0.7**
ULN				lAmb		lAmb	04 55 48.3	
	comp=Z,4.7nm,0.8s							
ULN	**Ulaanbaatar**	**24.77**	**54**	P		**P**	**04 55 44.1**	**+0.7**
ULN				pmax	pmax			
	comp=Z,5.0nm,0.8s							
GNI	**Garni**	**25.43**	**288**	P		**P**	**04 55 49.6**	**+0.2**
GNI				lAmb		lAmb	04 56 10.6	
	comp=Z,4.3nm,0.7s							
GNI	**Garni**	**25.43**	**288**	P		**P**	**04 55 49.7**	**+0.2**
GNI				pmax	pmax			
	comp=Z,4.0nm,0.7s							
BELG	**Belogornoye**	**25.95**	**317**	⇓*e*P		**P**	**04 55 57.6**	**+3.9**
BELG				pmax	pmax			
	comp=Z,2.0nm,1.1s							
CMAR	**Chiang Mai Arr**	**26.49**	**127**	P		**P**	**04 56 01.5**	**+2.4**
	comp=Z,1.7nm,0.4s,baz=308,slow=11,SNR=6.3							
CMAR	**Chiang Mai Arr**	**26.49**	**127**	*i* P		**P**	**04 56 02.7**	**+3.6**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.4s							
KIV	**Kislovodsk**	**27.01**	**296**	*e*P		**P**	**04 56 05.6**	**+2.0**
KIV				pmax	pmax			
	comp=Z,4.0nm,1.1s							
HHC	**Hu-ho-hao-te**	**27.19**	**70**	*e*P		**P**	**04 56 07.3**	**+2.0**
HHC				pmax	pmax			
	comp=Z,15nm,0.8s							
HHC				pmax	pmax			
	comp=Z,170nm,4.9s							
AKASG	**Malin Array Be**	**36.63**	**308**	P		**P**	**04 57 27.9**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=78,slow=9.2,SNR=6.8							
	comp=Z,0.5nm,0.3s							
AK05	**Malin Array Si**	**36.64**	**308**	P		**P**	**04 57 27.3**	**-0.3**
AK05				lAmb		lAmb	04 57 29.8	
	comp=Z,3.8nm,1.0s							
FIA1	**FINESS Array S**	**40.10**	**325**	P		**P**	**04 57 56.4**	**-0.1**
FINES	**FINESS Array B**	**40.10**	**325**	P		**P**	**04 57 56.7**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=112,slow=9.0,SNR=44							
	comp=Z,1.9nm,0.3s							
USA0B	**Ussuriysk Arra**	**41.88**	**62**	P		**P**

CCSP				*i* S		**Sb**	**04 50 51.0**	**-1.5**
CCSP				IAML			04 50 51.7	
	comp=N,60µm,0.4s							
ML02	**Panimavida**	**2.12**	**59**			**Pn**	**04 51 10.6**	**-0.3**
ML02	**Panimavida**	**2.12**	**59**	*e*P		**Pn**	**04 51 11.2**	**+0.4**
ML02				*i* S		**Sn**	**04 51 35.9**	**-0.5**
ML02				IAML			04 51 45.1	
	comp=E,2µm,0.1s							
GO05	**Huala**	**2.33**	**37**	P	n	**Pn**	**04 51 14.1**	**+0.3**
GO05	**Huala**	**2.33**	**37**	*e*P	n	**Pn**	**04 51 14.1**	**+0.3**
GO05				*e*S	n	**Sn**	**04 51 41.6**	**0.0**
GO05				IAML			04 51 56.4	
	comp=N,306nm,0.4s							
BO03	**Pichilemu**	**2.75**	**30⇓**	*i*P		**Pn**	**04 51 19.8**	**+0.2**
BO03				*i* S		**Sn**	**04 51 50.5**	**-1.5**
BO03				IAML			04 52 13.8	
	comp=N,167nm,0.3s							
LR03	**Panguipulli**	**2.93**	**160**	P	n	**Pn**	**04 51 22.2**	**+0.3**
LR03	**Panguipulli**	**2.93**	**160**	*e*P		**Pn**	**04 51 22.3**	**+0.3**
LR03				IAML			04 52 22.8	
	comp=N,603nm,0.5s							
LR04	**Corral**	**3.00**	**177**	P	n	**Pn**	**04 51 22.6**	**-0.3**
BO02	**Sierra Bellavi**	**3.13**	**49**	P	n	**Pn**	**04 51 25.3**	**+0.5**
BO02	**Sierra Bellavi**	**3.13**	**49**	*e*P		**Pn**	**04 51 25.4**	**+0.6**
BO02				*i* S		**Sn**	**04 52 00.5**	**-0.8**
BO02				IAML			04 52 14.5	
	comp=E,504nm,0.4s							
MT01	**Popeta**	**3.59**	**34**	P	n	**Pn**	**04 51 31.7**	**+0.5**
MT01	**Popeta**	**3.59**	**34**	*e*P		**Pn**	**04 51 31.2**	**0.0**
MT01				IAML			04 52 35.5	
	comp=E,119nm,0.2s							
VA05	**Santo Domingo**	**3.62**	**28**	P	n	**Pn**	**04 51 31.4**	**-0.1**
VA05	**Santo Domingo**	**3.62**	**28**	*e*P		**Pn**	**04 51 31.6**	**+0.1**
MT09	**Talagante**	**3.79**	**36**	P	n	**Pn**	**04 51 34.7**	**+0.8**
MT09	**Talagante**	**3.79**	**36⇓**	*i*P		**Pn**	**04 51 34.9**	**+0.9**
LL04	**Puerto Octay**	**4.13**	**167**	P	n	**Pn**	**04 51 37.6**	**-0.9**
LL04	**Puerto Octay**	**4.13**	**167**	*e*P		**Pn**	**04 51 38.2**	**-0.4**
LMEL	**Las Melosas**	**4.14**	**44**	P	n	**Pn**	**04 51 39.6**	**+0.9**
LMEL	**Las Melosas**	**4.14**	**44**	*e*P		**Pn**	**04 51 39.8**	**+1.1**
MT02	**Curacav**	**4.16**	**30**			**Pn**	**04 51 39.1**	**+0.1**
MT02	**Curacav**	**4.16**	**30**	*e*P		**Pn**	**04 51 38.8**	**-0.1**
VA01	**Torpederas**	**4.19**	**24**	P	n	**Pn**	**04 51 38.6**	**-0.7**
MT05	**Renca**	**4.22**	**35**	P	n	**Pn**	**04 51 40.6**	**+0.8**
MT05	**Renca**	**4.22**	**35**	*e*P		**Pn**	**04 51 41.0**	**+1.2**
MT03	**Universidad Ad**	**4.25**	**38**	P	n	**Pn**	**04 51 41.2**	**+0.9**
MT03	**Universidad Ad**	**4.25**	**38**	*e*P		**Pn**	**04 51 41.1**	**+0.9**
PEL	**Peldehue**	**4.45**	**34**	P	n	**Pn**	**04 51 43.8**	**+0.8**
PEL	**Peldehue**	**4.45**	**34**	*e*P		**Pn**	**04 51 44.0**	**+0.9**
ROCH	**El Roble**	**4.46**	**30⇓**	*e*P		**Pn**	**04 51 44.1**	**+0.8**
ROCH				*e*P		**Pn**	**04 51 44.1**	**+0.8**
LL05	**Los Muermos**	**4.52**	**178**	P	n	**Pn**	**04 51 43.5**	**-0.3**
PLCA	**Paso Flores**	**4.54**	**149**	P	n	**Pn**	**04 51 44.7**	**+0.4**
VA06	**Catapilco**	**4.73**	**25**	P	n	**Pn**	**04 51 46.9**	**+0.1**
VA06	**Catapilco**	**4.73**	**25⇑**	*i*P		**Pn**	**04 51 47.0**	**+0.3**
CO02	**Combarbal**	**6.08**	**22**	P	n	**Pn**	**04 52 05.4**	**0.0**
CO06	**Fray Jorge**	**6.42**	**16**	P	n	**Pn**	**04 52 08.4**	**-1.6**
CO03	**El Pedregal**	**6.51**	**23**	P	n	**Pn**	**04 52 11.6**	**+0.2**
GO04	**Tololo Observa**	**7.10**	**20**	P	n	**Pn**	**04 52 19.4**	**-0.2**
CO01	**Juntas del Tor**	**7.50**	**24**	P	n	**Pn**	**04 52 26.5**	**+1.4**
LCO	**Las Campanas**	**8.23**	**18**	P	n	**Pn**	**04 52 34.9**	**-0.2**
AC05	**El Transito**	**8.51**	**20**	P	n	**Pn**	**04 52 38.8**	**0.0**
LPAZ	**La Paz**	**21.09**	**15**	P		**P**	**04 55 20.6**	**+0.3**
LPAZ				IAmb		IAmb	04 55 26.4	
	comp=Z,3.3nm,1.2s							
SNAA	**Sanae**	**49.44**	**157**	P		**P**	**04 59 23.4**	**-1.0**
SNAA				IAmb		IAmb	04 59 42.6	
	comp=Z,3.6nm,1.3s							
QSPA	**South Pole Qui**	**53.36**	**180**	P		**P**	**04 59 55.4**	**+1.3**
QSPA				IAmb		IAmb	05 00 05.6	
	comp=Z,6.5nm,1.4s							

*CNRM **28** 05:34:03.2,36˚.00N×10˚.27W,h0km,ml3.8*
*MDD **28** 05:34:08.9±0.6,36˚.10N×10˚.02W,h0km,mb_Lg3.6/28, Error ellipse: s-maj=4.9km s-min=3.7km az=46.0*
*SFS **28** 05:34:08.0,36˚.00N×10˚.00W,ML3.6, SW. CABO DE SAN VICENTE*
*LDG **28** 05:34:09.2±0.2,36˚.00N×10˚.14W,h10km, Ml3.3/11, Error ellipse: s-maj=3.5km s-min=2.8km az=49.0*
*INMG **28** 05:34:10.5±1.1,35˚.95N×10˚.16W,h34km,ML3.3, Error ellipse: s-maj=3.8km s-min=2.4km az=74.0*
*IGIL **28** 05:34:10.4,35˚.95N×10˚.15W,h30km,ML3.4*

ISC 28 05:34:06.9±1.1,35˚.95N±0˚.04×10˚.16W±0˚.06,h35km,n122,
σ2§30/192,9C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.60**	**42**	P		**Pn**	**05 34 34.6**	**+2.0**
PFVI	**Vila Bisbo**	**1.60**	**42**	P		**Pn**	**05 34 34.6**	**+2.0**
PFVI				S		**Sn**	**05 34 53.4**	**+1.3**
PFVI	**Vila Bisbo**	**1.60**	**42⇑**	*i*P		**Pn**	**05 34 35.2**	**+2.5**
PFVI				S		**Sn**	**05 34 53.1**	**+1.0**
PFVI				A		A	05 34 55.5	
	151nm,0.2s							
MORF	**Marmelete**	**1.82**	**41**	*e*P		**Pn**	**05 34 38.3**	**+2.5**
MORF				*e*S		**Sn**	**05 34 58.5**	**+0.8**
MORF				IAML			05 35 00.4	
	comp=N,282nm,0.1s							
MORF	**Marmelete**	**1.82**	**41⇑**	*e*P		**Pn**	**05 34 38.3**	**+2.5**
MORF				S		**Sn**	**05 34 58.5**	**+0.8**
MORF				A		A	05 35 01.3	
	comp=N,194nm,0.1s							
PTEO	**Sao Teotonio**	**1.97**	**35⇑**	*e*P		**Pn**	**05 34 40.3**	**+2.6**
PTEO				S		**Sn**	**05 35 02.2**	**+1.0**
PTEO				A		A	05 35 04.1	
	comp=N,121nm,0.4s							
PBDV	**Barranco-do-Ve**	**2.21**	**54⇑**	*e*P		**Pn**	**05 34 44.0**	**+2.9**
PBDV				S		**Sn**	**05 35 08.3**	**+1.0**
PBDV				A		A	05 35 15.4	
	comp=N,37nm,0.3s							
PCVE	**Castro Verde**	**2.40**	**45⇑**	*e*P		**Pn**	**05 34 46.4**	**+2.8**
PCVE				S		**Sn**	**05 35 13.1**	**+1.4**
PCVE				A		A	05 35 14.8	
	comp=N,40nm,0.1s							
PVAQ	**Vaqueiros**	**2.44**	**53**	P		**Pn**	**05 34 46.9**	**+2.7**
PVAQ	**Vaqueiros**	**2.44**	**53**	P		**Pn**	**05 34 46.9**	**+2.7**
PVAQ				S		**Sn**	**05 35 14.1**	**+1.2**
PVAQ	**Vaqueiros**	**2.44**	**53⇑**	*e*P		**Pn**	**05 34 47.0**	**+2.7**
PVAQ				S		**Sn**	**05 35 13.5**	**+0.6**
PVAQ				A		A	05 35 16.3	
	comp=N,57nm,0.1s							
MESJ	**Messejana**	**2.45**	**39**	*e*P		**Pn**	**05 34 46.9**	**+2.6**
MESJ				*e*S		**Sn**	**05 35 13.6**	**+0.6**
MESJ				IAML			05 35 16.0	
	comp=N,78nm,0.1s							
MESJ	**Messejana**	**2.45**	**39⇑**	*e*P		**Pn**	**05 34 46.9**	**+2.6**
MESJ				S		**Sn**	**05 35 14.0**	**+1.0**
MESJ				A		A	05 35 17.7	
	comp=N,50nm,0.2s							
PNCL	**Nicolau / Gran**	**2.53**	**31⇑**	*e*P		**Pn**	**05 34 47.7**	**+2.3**
PNCL				S		**Sn**	**05 35 15.7**	**+0.8**
PNCL				A		A	05 35 18.1	
	comp=N,146nm,0.1s							
EGRO	**El Granado**	**2.67**	**53**	P		**Pn**	**05 34 50.0**	**+2.7**
EGRO				S		**Sn**	**05 35 19.9**	**+1.4**
EGRO				*i* Vmb_Lg			05 35 21.0	
PBEJ	**Beja**	**2.77**	**41**	*e*P		**Pn**	**05 34 51.1**	**+2.3**
PBEJ				S		**Sn**	**05 35 21.5**	**+0.5**
PBEJ				A		A	05 35 23.3	
	comp=N,47nm,0.1s							
LIS	**Lisbon**	**2.88**	**16**	*e*P		**Pn**	**05 34 53.0**	**+2.7**
LIS				*e*S		**Sn**	**05 35 23.9**	**+0.2**
LIS				IAML			05 35 27.8	
	comp=N,416nm,0.2s							
PMST	**Lisbon--Monsan**	**2.89**	**15**	*e*P		**Pn**	**05 34 52.3**	**+1.9**
PMST				S		**Sn**	**05 35 24.6**	**+0.6**
PMST				A		A	05 35 27.4	
	comp=N,151nm,0.1s							
PMAFR	**Mafra**	**3.08**	**13**	*e*P		**Pn**	**05 34 55.1**	**+2.0**
PMAFR				S		**Sn**	**05 35 29.1**	**+0.3**
PMAFR				A		A	05 35 32.8	
	comp=N,292nm,0.2s							
EVO	**Evora**	**3.10**	**33**	P		**Pn**	**05 34 55.4**	**+2.1**
EVO				S		**Sn**	**05 35 28.6**	**-0.5**
EVO	**Evora**	**3.10**	**33**	*e*P		**Pn**	**05 34 55.4**	**+2.1**
EVO				S		**Sn**	**05 35 29.1**	**0.0**
EVO				A		A	05 35 31.3	
	comp=N,115nm,0.1s							
EMIN	**Mina Concepcio**	**3.34**	**56**	P		**Pn**	**05 34 58.8**	**+2.3**
EMIN				S		**Sn**	**05 35 35.0**	**+0.1**
EMIN				*i* Vmb_Lg			05 35 37.5	
PBAR	**Barrancos**	**3.34**	**47**	*e*P		**Pn**	**05 34 58.9**	**+2.3**
PBAR				S		**Sn**	**05 35 35.1**	**0.0**
PBAR				A		A	05 35 38.6	
	comp=N,30nm,0.3s							
CNIL	**Conil**	**3.35**	**82**	P		**Pn**	**05 35 01.1**	**+4.4**
CNIL				S		**Sn**	**05 35 38.0**	**+2.8**
PMTG	**Montargil**	**3.48**	**26**	*e*P		**Pn**	**05 35 00.8**	**+2.3**
PMTG				S		**Sn**	**05 35 38.1**	**-0.3**
PMTG				A		A	05 35 40.3	
	comp=N,60nm,0.1s							
AVE	**Averroes**	**3.48**	**139**	P		**Pn**	**05 35 00.2**	**+1.7**
AVE				S		**Sn**	**05 35 37.2**	**-1.3**
AVE	**Averroes**	**3.48**	**139**	P		**Pn**	**05 35 00.9**	**+2.4**
PESTR	**Estremoz**	**3.56**	**34**	P		**Pn**	**05 35 01.4**	**+1.7**
PESTR	**Estremoz**	**3.56**	**34**	P		**Pn**	**05 35 01.4**	**+1.7**
PESTR	**Estremoz**	**3.56**	**34⇑**	*e*P		**Pn**	**05 35 01.5**	**+1.8**
PESTR				S		**Sn**	**05 35 40.3**	**-0.3**
PESTR				A		A	05 35 44.0	
	comp=N,30nm,0.6s							
ESPR	**Espera**	**3.59**	**74**	P		**Pn**	**05 35 02.7**	**+2.6**
ESPR				S		**Sn**	**05 35 41.0**	**-0.2**
ESPR				*i* Vmb_Lg			05 35 43.8	
PSBE	**So Bento**	**3.72**	**16**	*e*P		**Pn**	**05 35 04.2**	**+2.3**
PSBE				S		**Sn**	**05 35 44.8**	**+0.3**
PSBE				A		A	05 35 48.6	
	comp=N,62nm,0.2s							
EBAD	**Badajoz**	**3.76**	**41**	P		**Pn**	**05 35 04.5**	**+2.1**
EBAD				S		**Sn**	**05 35 45.4**	**0.0**
EBAD				*i* Vmb_Lg			05 35 47.1	
ZHG	**ZHG**	**3.82**	**130**	P		**Pn**	**05 35 04.6**	**+1.3**
ZHG	**ZHG**	**3.82**	**130**	P		**Pn**	**05 35 04.6**	**+1.3**
EJIF	**Jimena Fronter**	**3.83**	**81**	P		**Pn**	**05 35 06.6**	**+3.3**
EJIF				S		**Sn**	**05 35 46.7**	**-0.4**
ECEU	**Ceuta**	**3.88**	**89**	P		**Pn**	**05 35 06.7**	**+2.6**
CEU	**Ceuta**	**3.89**	**89**	P		**Pn**	**05 35 07.5**	**+3.5**
CEU				S		**Sn**	**05 35 50.9**	**+2.4**
SRHM	**Skhour des Reh**	**3.94**	**151**	P		**Pn**	**05 35 06.3**	**+1.3**
SRHM	**Skhour des Reh**	**3.94**	**151**	P		**Pn**	**05 35 06.2**	**+1.3**
LIJA	**Lijar**	**3.95**	**75**	P		**Pn**	**05 35 08.9**	**+3.8**
LIJA				S		Sn	05 35 37.2	-13
CHEFC	**Chefchaouen**	**4.02**	**101**	P		**Pn**	**05 35 10.0**	**+4.0**
CHEFC	**Chefchaouen**	**4.02**	**101**	P		**Pn**	**05 35 09.0**	**+3.0**
PMRV	**Marv??o**	**4.11**	**31**	*e*P		**Pn**	**05 35 09.4**	**+2.2**
PMRV				S		**Sn**	**05 35 53.0**	**-1.1**
PMRV				A		A	05 35 56.0	
	comp=N,42nm,0.2s							
PCAS	**Casmilo, Conde**	**4.31**	**17**	*e*P		**Pn**	**05 35 12.4**	**+2.5**
PCAS				S		**Sn**	**05 35 58.2**	**-0.7**
PCAS				A		A	05 36 03.6	
	comp=N,37nm,0.2s							
ECAB	**El Cabril**	**4.35**	**59**	P		**Pn**	**05 35 12.9**	**+2.4**
ECAB				S		**Sn**	**05 35 58.6**	**-1.4**
ECAB				*i* Vmb_Lg			05 36 02.7	
EMIJ	**Mijas**	**4.40**	**80**	P		**Pn**	**05 35 12.6**	**+1.4**
EMIJ				S		**Sn**	**05 36 01.4**	**+0.3**
EMIJ				*i* Vmb_Lg			05 36 03.9	
PCBR	**Castelo Branco**	**4.43**	**28**	*e*P		**Pn**	**05 35 13.8**	**+2.2**
PCBR				S		**Sn**	**05 36 01.2**	**-0.7**
PCBR				A		A	05 36 06.3	
	comp=N,24nm,0.3s							
EMAL	**Malaga-Limoner**	**4.70**	**78**	P		**Pn**	**05 35 17.9**	**+2.6**
EMAL				S		**Sn**	**05 36 08.9**	**+0.4**
IFR	**Ifrane**	**4.80**	**119**	P		**Pn**	**05 35 16.9**	**+0.1**
IFR				S		**Sn**	**05 36 06.5**	**-4.8**
PVLZ	**Peæn de**	**4.84**	**97**	P		**Pn**	**05 35 16.1**	**-1.0**
PVLZ				S		**Sn**	**05 36 08.0**	**-3.9**
MTE	**Manteigas**	**4.90**	**24**	*e*P		**Pn**	**05 35 20.2**	**+2.1**
MTE				S		**Sn**	**05 36 11.9**	**-1.7**
MTE				A		A	05 36 27.8	
	comp=N,28nm,0.5s							
LCRM	**LCR**	**4.91**	**116**	P		**Pn**	**05 35 19.5**	**+1.1**
LCRM	**LCR**	**4.91**	**116**	P		**Pn**	**05 35 19.4**	**+1.1**
EADA	**Adamuz**	**4.99**	**62**	P		**Pn**	**05 35 21.7**	**+2.4**
EADA				S		**Sn**	**05 36 13.2**	**-2.5**
EADA				*i* Vmb_Lg			05 36 17.7	
EGOR	**Sierra Gorda,**	**5.01**	**75**	P		**Pn**	**05 35 22.2**	**+2.6**
EGOR				S		**Sn**	**05 36 15.6**	**-0.8**
EGOR				*i* Vmb_Lg			05 36 20.9	
OUK	**Oukaimeden**	**5.10**	**157**	P		**Pn**	**05 35 21.8**	**+0.7**
PALE	**Palemas**	**5.12**	**96**	P		**Pn**	**05 35 22.3**	**+1.2**
CZD	**Col de Zad**	**5.13**	**123**	P		**Pn**	**05 35 23.0**	**+1.5**
CZD	**Col de Zad**	**5.13**	**123**	P		**Pn**	**05 35 22.9**	**+1.5**
PTO	**Porto**	**5.33**	**13**	*e*P		**Pn**	**05 35 26.4**	**+2.5**
PTO				S		**Sn**	**05 36 21.3**	**-2.7**
PTO				A		A	05 36 24.9	
	comp=N,64nm,0.3s							
AKLM	**AKL**	**5.35**	**104**	P		**Pn**	**05 35 27.1**	**+2.8**
ELGU	**Los Guajares,**	**5.35**	**78**	P		**Pn**	**05 35 27.5**	**+3.2**
ELGU				*i* Vmb_Lg			05 36 30.8	
MD31	**MD31**	**5.42**	**123**	P		**Pn**	**05 35 26.5**	**+1.2**
EQUE	**Quentar**	**5.55**	**75**	P		**Pn**	**05 35 29.9**	**+2.8**
EQUE				S		**Sn**	**05 36 26.2**	**-3.5**
EQUE				*i* Vmb_Lg			05 36 33.6	
MDT	**Midelt**	**5.55**	**123**	P		**Pn**	**05 35 28.3**	**+1.2**
MDT	**Midelt**	**5.55**	**123**	P		**Pn**	**05 35 28.3**	**+1.2**
TTIG	**Tnine Tigouga,**	**5.57**	**165**	P		Pn	05 35 25.0	-2.4
TTIG	**Tnine Tigouga,**	**5.57**	**165**	P		Pn	05 35 25.3	-2.1
PVRL	**Vila Real**	**5.66**	**19**	*e*P		**Pn**	**05 35 30.3**	**+1.9**
PVRL				S		**Sn**	**05 36 29.4**	**-2.8**
PVRL				A		A	05 36 33.8	
	comp=N,46nm,0.3s							
POLO	**Lamas de Olo**	**5.73**	**18**	*e*P		**Pn**	**05 35 31.3**	**+1.8**
POLO				S		**Sn**	**05 36 32.1**	**-1.9**
POLO				A		A	05 36 36.0	
	comp=N,10nm,0.3s							
MVO	**Moncorvo**	**5.76**	**24**	*e*P		**Pn**	**05 35 31.8**	**+1.9**
MVO				S		**Sn**	**05 36 32.5**	**-2.3**
MVO				A		A	05 36 35.5	
	comp=N,24nm,0.4s							
PAB	**San Pablo**	**5.84**	**50**	P		**Pn**	**05 35 32.7**	**+1.7**
PAB				S		**Sn**	**05 36 35.0**	**-1.8**
PAB				*i* Vmb_Lg			05 36 37.8	
PAB	**San Pablo**	**5.84**	**50**	P		**Pn**	**05 35 32.7**	**+1.7**
PMPST	**Porto Santo, M**	**5.84**	**242**	*e*P		**Pn**	**05 35 29.9**	**-1.1**
PMPST				S		Sn	05 36 28.0	-8.7
PMPST				A		A	05 36 46.6	
	comp=N,30nm,0.6s							
PMPS	**Porto Santo**	**5.85**	**242**	*e*P		**Pn**	**05 35 30.1**	**-1.0**
PMPS				S		Sn	05 36 30.4	-6.6
PMPS				A		A	05 36 34.2	
	comp=N,18nm,0.6s							
EBER	**Berja**	**5.94**	**79**	P		**Pn**	**05 35 34.9**	**+2.4**
EBER				*i* Vmb_Lg			05 36 42.9	
EQES	**Quesada**	**5.98**	**70**	P		**Pn**	**05 35 34.8**	**+1.9**
EQES				S		**Sn**	**05 36 36.7**	**-3.5**
EQES				*i* Vmb_Lg			05 36 44.9	
PCAB	**Cabril**	**5.99**	**15**	*e*P		**Pn**	**05 35 34.9**	**+1.8**
PCAB				S		**Sn**	**05 36 36.9**	**-3.5**
PCAB				A		A	05 36 42.6	
	comp=N,18nm,0.1s							
ELOB	**Lobios**	**6.14**	**15**	P		**Pn**	**05 35 36.4**	**+1.4**
ELOB				S		**Sn**	**05 36 42.6**	**-1.4**
ELOB				*i* Vmb_Lg			05 36 46.7	
ESDC	**Sonseca Array**	**6.16**	**51**	P		**Pn**	**05 35 36.9**	**+1.5**
ESDC				S		**Sn**	**05 36 43.2**	**-1.4**
ESDC				*i* Vmb_Lg			05 36 46.5	
PGAV	**Gavieira, Arco**	**6.19**	**13**	*e*P		**Pn**	**05 35 37.5**	**+1.7**
PGAV				S		**Sn**	**05 36 42.3**	**-3.1**
PGAV				A		A	05 36 48.5	
	comp=N,14nm,0.4s							
EZAM	**Zamans**	**6.30**	**10**	P		**Pn**	**05 35 38.1**	**+0.9**
EZAM				S		**Sn**	**05 36 43.8**	**-4.2**
EZAM				*i* Vmb_Lg			05 36 49.1	
CHAS	**Isla Isabel II**	**6.35**	**95**	S		**Sn**	**05 36 44.0**	**-5.1**
JBK	**JBK**	**6.43**	**102**	P		**Pn**	**05 35 41.0**	**+1.8**
JBK	**JBK**	**6.43**	**102**	P		**Pn**	**05 35 40.3**	**+1.1**
TAF	**Taforalt**	**6.43**	**98**	P		**Pn**	**05 35 40.9**	**+1.8**
PBRG	**Braganca**	**6.43**	**23**	*e*P		**Pn**	**05 35 41.1**	**+2.0**
PBRG				S		**Sn**	**05 36 48.6**	**-2.6**
PBRG				A		A	05 36 54.0	
	comp=N,10nm,0.1s							
PMAR	**Madeira**	**6.44**	**242**	P		**Pn**	**05 35 38.6**	**-0.8**
PMAR	**Madeira**	**6.44**	**242**	*e*P		**Pn**	**05 35 38.6**	**-0.8**
PMAR				S		Sn	05 36 45.0	-6.8
FUL	**Funchal**	**6.47**	**241**	*e*P		**Pn**	**05 35 39.2**	**-0.4**
ECAL	**Calabor**	**6.55**	**23**	P		**Pn**	**05 35 42.5**	**+1.7**
ECAL				S		**Sn**	**05 36 52.6**	**-1.8**
ECAL				*i* Vmb_Lg			05 36 57.3	
PMOZ	**Porto Moniz, M**	**6.60**	**244**	P		**Pn**	**05 35 40.8**	**-0.7**
PMOZ	**Porto Moniz, M**	**6.60**	**244**	*e*P		**Pn**	**05 35 41.1**	**-0.4**
GUD	**Guadarrama**	**6.66**	**43**	P		**Pn**	**05 35 43.9**	**+1.6**
GUD				S		**Sn**	**05 36 55.5**	**-1.4**
EAGO	**Agolada(Pontev**	**7.03**	**13**	P		**Pn**	**05 35 48.6**	**+1.2**
EAGO				S		**Sn**	**05 37 02.7**	**-3.4**
EAGO				*i* Vmb_Lg			05 37 07.2	
EZAR	**Zarzadilla de**	**7.05**	**72**	P		**Pn**	**05 35 48.7**	**+1.0**
EZAR				S		**Sn**	**05 37 01.4**	**-5.2**
EMAZ	**Mazaricos**	**7.05**	**7**	P		**Pn**	**05 35 48.5**	**+0.9**
EMAZ				S		**Sn**	**05 37 01.8**	**-4.7**
EMAZ				*i* Vmb_Lg			05 37 04.8	
ETOB	**Tobarra**	**7.38**	**66**	P		**Pn**	**05 35 53.2**	**+1.1**
ETOB				S		**Sn**	**05 37 11.3**	**-3.2**
ETOB				*i* Vmb_Lg			05 37 14.1	
EMUR	**La Murta**	**7.39**	**73**	P		**Pn**	**05 35 53.8**	**+1.5**
EMUR				S		**Sn**	**05 37 11.8**	**-3.2**
CART	**Cartagena**	**7.53**	**75**	P		**Pn**	**05 35 54.8**	**+0.7**
EPON	**Pontenova**	**7.73**	**17**	P		**Pn**	**05 35 58.0**	**+1.2**
EPON				S		**Sn**	**05 37 19.0**	**-4.2**
EPON				*i* Vmb_Lg			05 37 28.2	
ETOR	**Torete**	**8.01**	**50**	P		**Pn**	**05 36 02.2**	**+1.4**
ETOR				S		**Sn**	**05 37 28.4**	**-1.8**
ETOR				*i* Vmb_Lg			05 37 31.1	
AFON	**Font Roja**	**8.13**	**68**	P		**Pn**	**05 36 03.6**	**+1.1**
AFON				*i* Vmb_Lg			05 37 41.9	
ECHE	**Chera**	**8.14**	**61**	P		**Pn**	**05 36 04.7**	**+2.1**
ECHE				S		**Sn**	**05 37 28.7**	**-4.6**
ECHE				*i* Vmb_Lg			05 37 36.4	
EARI	**Arriondas**	**8.28**	**26**	P		**Pn**	**05 36 07.0**	**+2.6**
EARI				S		**Sn**	**05 37 32.5**	**-4.2**
EARI				*i* Vmb_Lg			05 38 05.9	
FIGM	**Figuig**	**8.31**	**115**	P		**Pn**	**05 36 07.6**	**+2.7**
EMOS	**Mosqueruela**	**8.81**	**57**	P		**Pn**	**05 36 15.1**	**+3.2**
EMOS				S		**Sn**	**05 37 45.4**	**-4.7**
EMOS				*i* Vmb_Lg			05 38 08.2	
EORO	**Oroz-Betelu**	**9.74**	**42**	P		**Pn**	**05 36 26.2**	**+1.7**
EORO				S		Sn	05 38 05.3	-7.4
SJPF	**Ste Jean**	**9.94**	**41**	*e*Pn		**Pn**	**05 36 29.4**	**+2.2**
SJPF				*e*Sn		**Sn**	**05 38 14.1**	**-3.3**
	comp=N,4.5nm,0.6s							
ETSF	**Etsaut**	**10.16**	**44**	*e*Pn		**Pn**	**05 36 32.4**	**+2.1**
ETSF				*e*Sn		**Sn**	**05 38 19.6**	**-3.4**
	comp=N,0.9nm,0.3s							
EPF	**Esparros**	**10.76**	**46**	*e*Pn		**Pn**	**05 36 40.9**	**+2.5**
EPF				*e*Sn		**Sn**	**05 38 33.9**	**-3.7**
	comp=N,1.4nm,0.3s							
MTLF	**Montolieu**	**12.06**	**48**	*e*Pn		**Pn**	**05 36 58.1**	**+2.0**
MTLF				*e*Sn		**Sn**	**05 39 04.8**	**-4.5**
	comp=N,0.5nm,0.3s							
LFF	**La Frestale**	**12.22**	**39**	*e*Pn		**Pn**	**05 37 00.1**	**+1.7**
LFF				*e*Sn		Sn	05 39 07.7	-5.6
	comp=N,2.4nm,0.5s							
RJF	**Les Rejaudoux**	**12.87**	**40**	*e*Pn		**Pn**	**05 37 08.2**	**+0.9**
RJF				*e*Sn		Sn	05 39 23.4	-5.8
	comp=N,0.8nm,0.3s							
CAF	**Calviac**	**12.92**	**42**	*e*Pn		**Pn**	**05 37 09.6**	**+1.7**
CAF				*e*Sn		**Sn**	**05 39 25.4**	**-4.9**
	comp=N,1.3nm,0.5s							
MFF	**Saint Martin d**	**13.03**	**32**	*e*Pn		**Pn**	**05 37 10.5**	**+1.1**
MFF				*e*Sn		Sn	05 39 27.1	-5.9
	comp=N,0.3nm,0.3s							
QUIF	**Quistinic**	**13.04**	**21**	*e*Pn		**Pn**	**05 37 11.0**	**+1.5**
QUIF				*e*Sn		**Sn**	**05 39 28.0**	**-5.2**
	comp=N,0.6nm,0.3s							
LASF	**Ste Croix**	**13.46**	**49**	*e*Pn		**Pn**	**05 37 17.1**	**+1.9**
VIVF	**Saint-Julien-l**	**14.37**	**47**	*e*Pn		**Pn**	**05 37 29.4**	**+1.7**
LDF	**La Druitiere**	**14.64**	**27**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**14.77**	**359**	LR	LR	06 33 34.9	
	comp=Z,25nm,19.6s,baz=218,slow=30						
ATD	**Arta Tunnel**	**16.11**	**282**	LR	LR	06 35 29.1	
	comp=Z,29nm,19.0s,baz=220,slow=35						
PALK	**Pallekele**	**21.63**	**91**	LR	LR	06 37 34.7	
	comp=Z,56nm,18.2s,baz=337,slow=32						
KMBO	**Kilima Mbogo**	**23.56**	**247**	LR	LR	06 41 11.7	
	comp=Z,61nm,18.1s,baz=92,slow=38						
BRTR	**Keskin Array B**	**38.52**	**328**	P	P	06 33 31.6	0.0
	0.7nm,0.8s,baz=148,slow=8.5,SNR=3.9						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**43.18**	**23**	LR	LR	06 54 58.5	
	comp=Z,14nm,18.1s,baz=155,slow=40						
LBTB	**Lobatse**	**46.42**	**223**	LR	LR	06 51 39.8	
	comp=Z,50nm,18.6s,baz=57,slow=33						
BOSA	**Boshof**	**49.07**	**220**	LR	LR	06 54 25.2	
	comp=Z,26nm,18.8s,baz=14,slow=35						
TSUM	**Tsumeb**	**49.08**	**236**	LR	LR	06 53 34.9	
	comp=Z,25nm,21.2s,baz=152,slow=34						
SUR	**Sutherland**	**54.43**	**220**	LR	LR	06 57 42.0	
	comp=Z,32nm,18.1s,baz=58,slow=35						
TORD	**Torodi Ar. Bea**	**56.30**	**280**	P	P	06 35 50.2	-0.2
	19nm,0.4s,baz=101,slow=7.8,SNR=2.5						
FINES	**FINESS Array B**	**58.22**	**342**	P	P	06 36 03.0	-0.1
	0.8nm,0.6s,baz=122,slow=13,SNR=4.1						
	0.8nm,0.6s						
ESDC	**Sonseca Array**	**63.86**	**310**	P	P	06 36 42.0	0.0
	1.2nm,1.0s,baz=84,slow=6.4,SNR=8.3						
	1.2nm,1.0s						

PRU ***28*** *06:37:17.0±0.0,42.62N×13.33E,h0km*
LDG ***28*** *06:37:18.9±0.1,42.73N×13.20E,h8km,Ml2.9/21,Error ellipse: s-maj=2.5km s-min=1.7km az=50.0*
ROM ***28*** *06:37:19.8±0.0,42.722N±0.001×13.197E±0.002, h11km,ML3.4/89,Mw3.3,Error ellipse: s-maj=0.2km s-min=0.1km az=53.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.07; Mθθ 0.12; Mϕϕ 0.95; Mrθ 0.35; Mϕθ -0.47; Mϕr -0.31; Fault plane solution: M0 1.21226×10¹⁴ NP1:ϕs 166.00000°,δ35.00000°, λ -73.00000°. NP2:ϕs 326.00000°,δ56.00000°, λ -102.00000°.*
PDG ***28*** *06:37:20.1±0.6,42.73N×13.19E,h12km,ML3.7/12 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
BEO ***28*** *06:37:21.2±0.6,42.74N×13.27E,h0km,ML3.4/12*
IDC ***28*** *06:37:30.9±1.8,43.70N×13.52E,h0km,mbtmp3.4/3, ML2.9/3,Error ellipse: s-maj=63.7km s-min=24.1km az=80.0*

ISC 28 06:37:19.4±0.6,42.73N±0.01×13.16E±0.01,h17km±3km, n319,σ1s93/356,29C-7D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.02**	**269**	⇑P	**Pg**	**06 37 22.4**	**-0.1**
T1213				S	**Sg**	**06 37 24.1**	**-0.6**
T1214	**Arquata del Tr**	**0.05**	**48**	⇓P	**Pg**	**06 37 22.3**	**-0.5**
T1214				S	**Sg**	**06 37 23.8**	**-1.3**
T1202	**Accumoli, Fraz**	**0.06**	**114**	P	**Pg**	**06 37 22.4**	**-0.4**
T1202				S	**Sg**	**06 37 24.1**	**-0.9**
T1218	**Civita (PG)**	**0.06**	**209**	⇑P	**Pg**	**06 37 22.8**	**0.0**
T1218				S	**Sg**	**06 37 24.7**	**-0.4**
T1212	**Cascia, Frazio**	**0.09**	**288**	⇑P	**Pg**	**06 37 23.2**	**+0.2**
T1212				S	**Sg**	**06 37 25.4**	**+0.1**
T1201	**Domo (RI)**	**0.10**	**135**	P	**Pg**	**06 37 23.0**	**-0.1**
T1201				S	**Sg**	**06 37 25.0**	**-0.5**
T1244	**Arquata del Tr**	**0.11**	**73**	⇑P	**Pg**	**06 37 22.8**	**-0.3**
T1244				S	**Sg**	**06 37 24.9**	**-0.8**
T1242	**Castelluccio d**	**0.11**	**19**	P	**Pb**	**06 37 23.1**	**-0.1**
T1242				S	**Sg**	**06 37 25.3**	**-0.6**
NRCA	**Norcia**	**0.11**	**344**	P	**Pb**	**06 37 23.3**	**+0.1**
NRCA				S	**Sb**	**06 37 25.6**	**-0.1**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1204	**Amatrice, Fraz**	**0.13**	**113**	P	**Pg**	**06 37 23.1**	**-0.4**
T1204				S	**Sg**	**06 37 25.2**	**-1.0**
LNSS	**Leonessa**	**0.15**	**215**	P	**Pb**	**06 37 24.1**	**+0.3**
LNSS				S	**Sb**	**06 37 27.2**	**+0.6**
MC2	**Monte Cornacci**	**0.19**	**7**	P	**Pb**	**06 37 24.4**	**-0.2**
MC2				S	**Sb**	**06 37 27.7**	**-0.2**
MC2				AML	AML		
	comp=N,48300μm,0.6s						
MC2				AML	AML		
	comp=E,48050μm,0.6s						
T1216	**Preci, Frazion**	**0.19**	**328**	⇑P	**Pb**	**06 37 24.6**	**+0.1**
T1216				S	**Sb**	**06 37 28.0**	**+0.1**
MMO1	**Montemonaco**	**0.21**	**36**	P	**Pg**	**06 37 24.4**	**-0.1**
MMO1				S	**Sg**	**06 37 27.8**	**-0.3**
MMO1				AML	AML		
	comp=E,3325μm,1.5s						
MMO1				AML	AML		
	comp=N,6645μm,0.6s						
MMO1				AML	AML		
	comp=N,44600μm,0.6s						
MMO1				AML	AML		
	comp=E,47950μm,0.7s						
MMO1				AML	AML		
	comp=E,3320μm,1.5s						
MMO1				AML	AML		
	comp=N,6645μm,0.6s						
T1243	**Rocca Santa Ma**	**0.22**	**98**	P	**Pg**	**06 37 24.2**	**-0.4**
T1243				S	**Sg**	**06 37 27.3**	**-0.8**
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
RM33	**Pellescritta (**	**0.22**	**169**	P	**Pb**	**06 37 24.9**	**-0.1**
RM33				S	**Sb**	**06 37 28.7**	**-0.1**
RM33				AML	AML		
	comp=E,39100μm,1.5s						
RM33				AML	AML		
	comp=E,39050μm,1.5s						
RM33				AML	AML		
	comp=N,24650μm,0.2s						
RM33				AML	AML		
	comp=E,39250μm,1.5s						
RM33				AML	AML		
	comp=E,39050μm,1.5s						
RM33				AML	AML		
	comp=N,23550μm,0.2s						
T1215	**Vallo di Nera,**	**0.23**	**290**	⇑P	**Pb**	**06 37 25.4**	**+0.3**
T1215				S	**Sb**	**06 37 29.6**	**+0.7**
T1241	**Roccafluvione,**	**0.24**	**57**	P	**Pg**	**06 37 24.7**	**-0.2**
T1241				S	**Sg**	**06 37 28.3**	**-0.4**
FEMA	**Monte Fema**	**0.25**	**342**	P	**Pb**	**06 37 25.5**	**0.0**
FEMA				S	**Sb**	**06 37 29.7**	**0.0**
FEMA				AML	AML		
	comp=E,31200μm,0.5s						
FEMA				AML	AML		
	comp=N,26900μm,1.5s						
FEMA				AML	AML		
	comp=E,31250μm,0.5s						
CAMP	**Campotosto**	**0.27**	**135**	P	**Pg**	**06 37 25.2**	**-0.2**
CAMP				S	**Sg**	**06 37 29.2**	**-0.2**
CAMP				AML	AML		
	comp=N,9500μm,0.5s						
CAMP				AML	AML		
	comp=E,17700μm,0.2s						
T1211	**Morro Reatino**	**0.29**	**229**	⇑P	**Pb**	**06 37 26.5**	**+0.2**
T1211				S	**Sb**	**06 37 31.7**	**+0.9**
FDMO	**Fiordimonte**	**0.32**	**351**	⇑P	**Pb**	**06 37 26.5**	**-0.1**
FDMO				S	**Sb**	**06 37 31.6**	**+0.2**
FDMO				AML	AML		
	comp=E,9420μm,0.7s						
FDMO				AML	AML		
	comp=N,10265μm,0.2s						
ARRO	**Arrone**	**0.32**	**243**	P	**Pb**	**06 37 26.9**	**+0.3**
ARRO				S	**Sb**	**06 37 32.6**	**+1.0**
ARRO				AML	AML		
	comp=E,11340μm,0.7s						
ARRO				AML	AML		
	comp=N,9460μm,0.3s						
ARRO				AML	AML		
	comp=E,11330μm,0.7s						
ARRO				AML	AML		
	comp=N,9455μm,0.3s						
TERO	**Teramo**	**0.34**	**107**	P	**Pg**	**06 37 26.3**	**-0.4**
TERO				S	**Sg**	**06 37 31.1**	**-0.5**
TERO				AML	AML		
	comp=E,18750μm,0.7s						
TERO				AML	AML		
	comp=E,18700μm,0.7s						
TERO				AML	AML		
	comp=N,24150μm,0.4s						
TERO				AML	AML		
	comp=E,20400μm,0.7s						
TERO				AML	AML		
	comp=N,22500μm,0.4s						
CSP1	**Cessapalombo**	**0.37**	**5**	P	**Pb**	**06 37 27.3**	**-0.2**
CSP1				S	**Sb**	**06 37 33.1**	**0.0**
GIGS	**Gran Sasso**	**0.41**	**132**	⇑P	**Pg**	**06 37 27.4**	**-0.5**
GIGS				S	**Sg**	**06 37 33.2**	**-0.4**
GIGS				AML	AML		
	comp=E,5375μm,0.1s						
GIGS				AML	AML		
	comp=N,3495μm,0.1s						
CESX	**Cesi**	**0.44**	**255**	P	**Pb**	**06 37 28.9**	**+0.2**
CESX				S	**Sb**	**06 37 36.4**	**+1.4**
CESX				AML	AML		
	comp=E,7050μm,0.5s						
CESX				AML	AML		
	comp=N,6745μm,0.7s						
OFFI	**Offida**	**0.44**	**62**	P	**Pb**	**06 37 29.0**	**+0.3**
OFFI				AML	AML		
	comp=E,13300μm,0.4s						
OFFI				AML	AML		
	comp=N,15200μm,0.4s						
SEF1	**Sefro**	**0.45**	**340**	P	**Pb**	**06 37 28.9**	**+0.1**
SEF1				S	**Sb**	**06 37 35.7**	**+0.4**
FIAM	**Fiamignano**	**0.46**	**184**	P	**Pb**	**06 37 28.9**	**-0.1**
FIAM				S	**Sb**	**06 37 35.8**	**+0.2**
FIAM				AML	AML		
	comp=N,8575μm,0.3s						
FIAM				AML	AML		
	comp=E,11900μm,0.6s						
MDAR	**Monte D'Aria**	**0.47**	**359**	P	**Pb**	**06 37 29.1**	**-0.1**
MDAR				S	**Sb**	**06 37 36.4**	**+0.5**
MDAR				AML	AML		
	comp=E,5240μm,0.7s						
MDAR				AML	AML		
	comp=N,4210μm,0.4s						
MDAR				AML	AML		
	comp=E,5245μm,0.7s						
MDAR				AML	AML		
	comp=N,4210μm,0.4s						
PIO1	**Pioraco**	**0.47**	**344**	P	**Pb**	**06 37 29.2**	**0.0**
PIO1				S	**Sb**	**06 37 36.9**	**+1.0**
PIO1				AML	AML		
	comp=N,4985μm,0.7s						
PIO1				AML	AML		
	comp=E,3445μm,0.5s						
MNTP	**Montappone**	**0.47**	**29**	P	**Pb**	**06 37 29.4**	**+0.2**
MNTP				AML	AML		
	comp=E,12315μm,1.0s						
MNTP				AML	AML		
	comp=N,13800μm,0.2s						
MNTP				AML	AML		
	comp=E,12330μm,1.0s						
ASSB	**Assisi San Ben**	**0.48**	**311**	P	**Pb**	**06 37 29.7**	**+0.2**
ASSB				AML	AML		
	comp=E,6795μm,0.3s						
ASSB				AML	AML		
	comp=N,5650μm,0.6s						
FIU1	**Fiuminata**	**0.49**	**340**	P	**Pb**	**06 37 29.7**	**+0.1**
SSM1	**San Severino M**	**0.50**	**2**	P	**Pb**	**06 37 29.6**	**-0.2**
GAG1	**Gagliole**	**0.52**	**353**	P	**Pb**	**06 37 30.1**	**+0.1**
GAG1				AML	AML		
	comp=E,9865μm,0.3s						
GAG1				AML	AML		
	comp=N,11625μm,0.5s						
GAG1				AML	AML		
	comp=E,9850μm,0.3s						
GAG1				AML	AML		
	comp=N,11630μm,0.5s						
MTL1	**Matelica**	**0.54**	**349**	P	**Pb**	**06 37 30.5**	**+0.1**
SNTG	**Esanatoglia**	**0.55**	**343**	P	**Pb**	**06 37 30.5**	**-0.1**
SNTG				AML	AML		
	comp=E,282μm,1.4s						
SNTG				AML	AML		
	comp=N,388μm,0.7s						
SNTG				AML	AML		
	comp=E,2360μm,0.5s						
SNTG				AML	AML		
	comp=N,2765μm,0.5s						
SNTG				AML	AML		
	comp=N,2770μm,0.5s						
SNTG				AML	AML		
	comp=E,2355μm,0.5s						
FAGN	**Fagnano**	**0.56**	**145**	P	**Pg**	**06 37 30.1**	**-0.4**
FAGN				AML	AML		
	comp=E,12400μm,0.4s						
FAGN				AML	AML		
	comp=N,10785μm,1.6s						
TRTR	**Tortoreto Alta**	**0.56**	**81**	⇑P	**Pb**	**06 37 31.4**	**+0.6**
TRTR				AML	AML		
	comp=E,16700μm,0.4s						
TRTR				AML	AML		
	comp=N,14100μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.60**	**321**	P	**Pb**	**06 37 31.6**	**+0.3**
ATCC				AML	AML		
	comp=N,3450μm,0.8s						
ATCC				AML	AML		
	comp=N,3455μm,0.8s						
ATCC				AML	AML		
	comp=E,4455μm,0.9s						
TRE1	**Treia**	**0.60**	**11**	P	**Pb**	**06 37 31.7**	**+0.3**
TRE1				AML	AML		
	comp=E,10655μm,0.5s						
TRE1				AML	AML		
	comp=N,6860μm,0.9s						
TRE1				AML	AML		
	comp=E,10670μm,0.5s						
VCEL	**Villa Celiera**	**0.60**	**123**	P	**Pg**	**06 37 30.9**	**-0.5**
VCEL				AML	AML		
	comp=E,8150μm,0.5s						
VCEL				AML	AML		
	comp=E,8145μm,0.5s						
VCEL				AML	AML		
	comp=N,15200μm,0.5s						
EL6	**Elcito**	**0.60**	**356**	P	**Pb**	**06 37 31.5**	**-0.1**
EL6				AML	AML		
	comp=E,4540μm,0.2s						
EL6				AML	AML		
	comp=N,5345μm,0.2s						
FOSV	**Fossato di Vic**	**0.64**	**333**	P	**Pb**	**06 37 32.2**	**+0.1**
FOSV				AML	AML		
	comp=E,2035μm,0.8s						
FOSV				AML	AML		
	comp=N,2905μm,0.3s						
CADA	**Capodarco di F**	**0.65**	**43**	P	**Pn**	**06 37 33.2**	**-0.5**
CADA				AML	AML		
	comp=E,11075μm,1.2s						
CADA				AML	AML		
	comp=N,9710μm,0.6s						
CADA				AML	AML		
	comp=N,9680μm,0.6s						
CADA				AML	AML		
	comp=E,11070μm,1.2s						
CING	**Cingoli**	**0.65**	**2**	P	**Pg**	**06 37 32.2**	**-0.1**
T0110	**Collepietro**	**0.68**	**137**	P	**Pg**	**06 37 32.2**	**-0.5**
T0110				AML	AML		
	comp=N,8055μm,0.3s						
T0110				AML	AML		
	comp=E,9435μm,0.5s						
SRES	**S.Oreste - Sor**	**0.68**	**225**	P	**Pb**	**06 37 33.0**	**+0.1**
SRES				AML	AML		
	comp=E,2560μm,0.3s						
SRES				AML	AML		
	comp=N,3380μm,0.4s						
CIMA	**Civitanova Mar**	**0.69**	**33**	P	**Pn**	**06 37 34.0**	**-0.3**
MURB	**Monte Urbino**	**0.71**	**319**	P	**Pb**	**06 37 33.5**	**+0.1**
MURB				AML	AML		
	comp=N,8570μm,0.3s						
MURB				AML	AML		
	comp=N,8570μm,0.3s						
MURB				AML	AML		
	comp=E,7970μm,1.6s						
MURB				AML	AML		
	comp=E,9270μm,1.6s						
MURB				AML	AML		
	comp=N,8565μm,0.3s						
MMUR	**Monte Murano**	**0.73**	**351**	P	**Pb**	**06 37 33.9**	**+0.3**
PTQR	**Pietraquaria**	**0.73**	**166**	P	**Pg**	**06 37 33.0**	**-0.6**
PTQR				AML	AML		
	comp=E,1550μm,1.0s						
PTQR				AML	AML		
	comp=N,1665μm,0.7s						
PP3	**Marolino**	**0.73**	**27**	P	**Pn**	**06 37 34.3**	**-0.6**
PP3				AML	AML		
	comp=E,14900μm,0.5s						
PP3				AML	AML		
	comp=E,15850μm,0.5s						
PP3				AML	AML		
	comp=N,8330μm,0.8s						
PP3				AML	AML		
	comp=E,14900μm,0.5s						
PP3				AML	AML		
	comp=N,8460μm,0.8s						
PP3				AML	AML		
	comp=N,8335μm,0.8s						
ATTE	**AVT- Monte Tez**	**0.76**	**309**	P	**Pb**	**06 37 34.6**	**+0.4**
ATTE				AML	AML		
	comp=N,1660μm,0.6s						
ATTE				AML	AML		
	comp=E,1335μm,1.1s						
SSFR	**Montelago di S**	**0.76**	**339**	P	**Pb**	**06 37 34.4**	**+0.2**
SSFR				AML	AML		
	comp=N,4810μm,1.1s						
SSFR				AML	AML		
	comp=N,5115μm,0.2s						
SSFR				AML	AML		
	comp=E,4700μm,0.2s						
SSFR				AML	AML		
	comp=E,4780μm,0.2s						
MTCE	**Montecelio**	**0.77**	**204**	P	**Pg**	**06 37 34.0**	**-0.3**
MTCE				AML	AML		
	comp=E,4680μm,0.5s						
MTCE				AML	AML		
	comp=N,1850μm,0.3s						
ATSC	**Scheggia e Pas**	**0.78**	**334**	P	**Pb**	**06 37 34.7**	**+0.2**
CERT	**Cerreto**	**0.79**	**190**	P	**Pg**	**06 37 34.2**	**-0.5**
CERT				AML	AML		
	comp=N,5565μm,0.4s						
CERT				AML	AML		
	comp=E,6330μm,0.3s						
ARVD	**Arcevia**	**0.79**	**349**	P	**Pb**	**06 37 34.7**	**+0.1**
ARVD				AML	AML		
	comp=E,1295μm,1.1s						
ARVD				AML	AML		
	comp=N,1040μm,0.9s						
MGAB	**Montegabbione**	**0.79**	**284**	P	**Pg**	**06 37 35.3**	**+0.5**
MGAB				AML	AML		
	comp=N,4535μm,0.4s						
MGAB				AML	AML		
	comp=N,4385μm,0.4s						
MGAB				AML	AML		
	comp=E,5625μm,1.3s						
MGAB				AML	AML		
	comp=E,5040μm,1.0s						
ATLO	**AVT- Montelove**	**0.81**	**317**	P	**Pg**	**06 37 35.1**	**0.0**
ATVA	**AVT- Monte Val**	**0.84**	**311**	P	**Pn**	**06 37 36.5**	**-0.1**
FRON	**Frontone**	**0.85**	**338**	P	**Pb**	**06 37 35.8**	**+0.1**
FRON				AML	AML		
	comp=E,1665μm,0.4s						
FRON				AML	AML		
	comp=N,2215μm,0.4s						
ATVO	**AVT- Monte Val**	**0.86**	**320**	P	**Pg**	**06 37 36.0**	**0.0**
ATVO				AML	AML		
	comp=N,1870μm,0.4s						
ATVO				AML	AML		
	comp=E,1335μm,0.8s						
TB03	**Pietralunga**	**0.87**	**321**	P	**Pg**	**06 37 36.6**	**+0.2**
ATBU	**Serra di Buran**	**0.87**	**329**	P	**Pn**	**06 37 36.8**	**-0.2**
AOI	**Ancona**	**0.89**	**21**	P	**Pg**	**06 37 36.5**	**-0.2**
AOI				AML	AML		
	comp=E,2110μm,0.7s						
AOI				AML	AML		
	comp=N,2215μm,1.1s						
ATMI	**Monte Miggiano**	**0.89**	**313**	P	**Pn**	**06 37 37.6**	**+0.5**
ATMI				AML	AML		
	comp=E,5480μm,0.4s						
ATMI				AML	AML		
	comp=N,5525μm,0.6s						
RCAV	**Rocca di Cave**	**0.89**	**190**	P	**Pb**	**06 37 36.1**	**-0.3**
RCAV				AML	AML		
	comp=E,5585μm,0.6s						
RCAV				AML	AML		
	comp=N,5910μm,1.4s						
INTR	**Introdacqua**	**0.90**	**142**	P	**Pb**	**06 37 35.7**	**-0.9**
INTR				AML	AML		
	comp=N,3μm,0.5s						
INTR				AML	AML		
	comp=N,3μm,0.5s						
INTR				AML	AML		
	comp=E,2795μm,1.6s						
INTR				AML	AML		
	comp=N,4865μm,0.5s						
INTR				AML	AML		
	comp=E,3μm,1.6s						
ATPI	**Pietralunga -**	**0.91**	**323**	P	**Pg**	**06 37 37.0**	**-0.1**
ATPI				AML	AML		
	comp=N,1300μm,0.6s						
ATPI				AML	AML		
	comp=N,1305μm,0.6s						
ATPI				AML	AML		
	comp=E,2405μm,0.6s						
ATPC	**Poggio Castell**	**0.91**	**326**	P	**Pg**	**06 37 37.3**	**+0.1**
COR1	**Corinaldo**	**0.91**	**353**	P	**Pn**	**06 37 38.6**	**+1.2**
COR1				AML	AML		
	comp=N,4540μm,0.7s						
COR1				AML	AML		
	comp=E,5410μm,0.9s						
VVLD	**Villa Vallelon**	**0.92**	**158**	P	**Pb**	**06 37 36.8**	**-0.1**
VVLD				AML	AML		
	comp=N,1730μm,0.6s						
VVLD				AML	AML		
	comp=E,2135μm,0.6s						
VVLD				AML	AML		
	comp=N,1735μm,0.6s						
SACS	**San Casciano d**	**0.93**	**278**	P	**Pn**	**06 37 37.9**	**+0.3**
SACS				AML	AML		
	comp=E,1950μm,0.8s						
SACS				AML	AML		
	comp=E,2000μm,0.8s						
SACS				AML	AML		
	comp=N,1990μm,0.8s						
SACS				AML	AML		
	comp=N,1890μm,0.8s						
PIEI	**Pieia**	**0.93**	**331**	P	**Pg**	**06 37 37.4**	**-0.1**
PIEI				AML	AML		
	comp=N,1098μm,1.6s						
PIEI				AML	AML		
	comp=E,1505μm,0.4s						
GUAR	**Guarcino**	**0.94**	**173**	P	**Pb**	**06 37 37.4**	**+0.2**
GUAR				AML	AML		
	comp=N,3670μm,0.4s						
GUAR				AML	AML		
	comp=E,2595μm,0.7s						
MPAG	**Monte Paganucc**	**0.95**	**342**	P	**Pg**	**06 37 37.7**	**-0.1**
MPAG				AML	AML		
	comp=E,1340μm,1.1s						
MPAG				AML	AML		
	comp=N,1685μm,0.7s						
RMP	**Rome, Mte Porz**	**0.97**	**200**	P	**Pb**	**06 37 37.6**	**-0.2**
RMP				AML	AML		
	comp=N,5030μm,1.0s						
RMP				AML	AML		
	comp=E,4165μm,0.4s						
NARO	**Abbazia di Nar**	**0.98**	**335**	P	**Pg**	**06 37 38.3**	**-0.1**
NARO				AML	AML		
	comp=E,860μm,0.4s						
NARO				AML	AML		
	comp=N,1175μm,0.6s						
SENI	**Senigallia**	**0.98**	**3**	P	**Pg**	**06 37 38.2**	**-0.2**
SENI				AML	AML		
	comp=E,7660μm,0.4s						
SENI				AML	AML		
	comp=N,5835μm,1.6s						
SENI				AML	AML		
	comp=E,7655μm,0.4s						
APEC	**Apecchio**	**0.99**	**327**	P	**Pn**	**06 37 39.3**	**+0.8**
LATE	**Laterza**	**1.00**	**264**	P	**Pn**	**06 37 39.2**	**+0.5**
FSSB	**Fossombrone**	**1.00**	**344**	P	**Pn**	**06 37 38.9**	**+0.2**
FSSB				AML	AML		
	comp=N,4275μm,0.5s						
FSSB				AML	AML		
	comp=E,4640μm,0.4s						

ATMC	**Monte Cedrone**	**1.01**	**316**	P	**Pn**	**06 37 39.8**	**+1.0**
LPEL	**Lama dei Pelig**	**1.02**	**131**	P	**Pb**	**06 37 37.4**	**-1.2**
LPEL				AML	AML		
	comp=E,2470µm,0.3s						
LPEL				AML	AML		
	comp=N,2260µm,0.7s						
RDP	**Rocca di Papa**	**1.02**	**199**	P	**Pg**	**06 37 39.2**	**0.0**
RDP				AML	AML		
	comp=E,7770µm,0.5s						
RDP				AML	AML		
	comp=N,10900µm,0.5s						
MA9	**Marino**	**1.02**	**201**	P	**Pg**	**06 37 39.2**	**-0.1**
BADI	**Badiali**	**1.03**	**320**	P	**Pg**	**06 37 39.4**	**0.0**
BADI				AML	AML		
	comp=E,124µm,0.7s						
BADI				AML	AML		
	comp=N,1355µm,1.2s						
CAFI	**Castiglion Fio**	**1.06**	**305**	P	**Pg**	**06 37 40.1**	**+0.2**
CAFI				AML	AML		
	comp=E,1325µm,1.5s						
CAFI				AML	AML		
	comp=N,1235µm,0.5s						
TOLF	**Tolfa**	**1.08**	**233**	P	**Pg**	**06 37 40.4**	**0.0**
TOLF				AML	AML		
	comp=E,1780µm,0.6s						
TOLF				AML	AML		
	comp=N,953µm,0.5s						
SF03	**Valle Cupa**	**1.09**	**275**	P	**Pg**	**06 37 40.8**	**+0.3**
POFI	**Posta Fibreno**	**1.09**	**158**	P	**Pb**	**06 37 39.3**	**-0.5**
POFI				AML	AML		
	comp=E,1360µm,1.2s						
POFI				AML	AML		
	comp=N,962µm,0.9s						
MCIV	**Monte Civitell**	**1.09**	**273**	P	**Pg**	**06 37 40.7**	**+0.2**
MCIV				AML	AML		
	comp=E,795µm,1.6s						
MCIV				AML	AML		
	comp=N,655µm,0.5s						
SF11	**Podere del Sol**	**1.10**	**278**	P	**Pg**	**06 37 41.5**	**+0.8**
SF04	**Casetta**	**1.11**	**276**	P	**Pg**	**06 37 41.6**	**+0.8**
LRP	**Arpino**	**1.12**	**163**	P	**Pg**	**06 37 41.1**	**-0.1**
LRP				AML	AML		
	comp=N,1090µm,1.6s						
LRP				AML	AML		
	comp=E,866µm,0.7s						
SSP9	**Sansepolcro**	**1.13**	**319**	P	**Pg**	**06 37 42.0**	**+0.7**
SF13	**Bagnolo**	**1.14**	**275**	P	**Pg**	**06 37 42.1**	**+0.7**
SF14	**Selvena**	**1.14**	**272**	P	**Pg**	**06 37 41.4**	**0.0**
PARC	**Parchiule**	**1.14**	**324**	P	**Pg**	**06 37 41.8**	**+0.3**
PARC				AML	AML		
	comp=E,1640µm,0.7s						
PARC				AML	AML		
	comp=N,1355µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.17**	**176**	P	**Pn**	**06 37 40.9**	**-0.1**
GIUL				AML	AML		
	comp=E,1105µm,0.6s						
GIUL				AML	AML		
	comp=N,1530µm,0.6s						
SF01	**Poggio Pratacc**	**1.18**	**275**	P	**Pg**	**06 37 42.5**	**+0.4**
SF01				AML	AML		
	comp=E,1254µm,0.6s						
SF01				AML	AML		
	comp=N,1336µm,0.7s						
PESA	**Pesaro**	**1.24**	**349**	P	**Pg**	**06 37 43.3**	**0.0**
PESA				AML	AML		
	comp=E,2070µm,1.2s						
PESA				AML	AML		
	comp=N,1740µm,1.3s						
LATB	**Latina**	**1.24**	**187**	P	**Pn**	**06 37 41.7**	**-0.1**
LATB				AML	AML		
	comp=E,484µm,0.4s						
LATB				AML	AML		
	comp=N,278µm,0.6s						
ARCI	**Arcidosso**	**1.24**	**276**	P	**Pg**	**06 37 43.8**	**+0.3**
ARCI				AML	AML		
	comp=E,319µm,0.6s						
ARCI				AML	AML		
	comp=N,338µm,0.9s						
CRE	**Caprese Michel**	**1.26**	**316**	P	**Pb**	**06 37 43.1**	**+0.5**
CRE				AML	AML		
	comp=E,872µm,1.5s						
CRE				AML	AML		
	comp=N,706µm,0.4s						
LIK	**San Giovanni I**	**1.26**	**166**	AML	AML		
	comp=E,1890µm,1.3s						
LIK				AML	AML		
	comp=N,1705µm,0.4s						
RNI2	**Rionero Sannit**	**1.26**	**144**	P	**Pb**	**06 37 42.6**	**-0.2**
RNI2				AML	AML		
	comp=N,1118µm,1.4s						
RNI2				AML	AML		
	comp=E,1810µm,1.4s						
RNI2				AML	AML		
	comp=N,1115µm,1.4s						
RNI2				AML	AML		
	comp=E,1885µm,1.4s						
CERA	**Filignano**	**1.30**	**150**	P	**Pb**	**06 37 43.1**	**-0.2**
CERA				AML	AML		
	comp=E,1265µm,1.3s						
CERA				AML	AML		
	comp=N,1130µm,0.6s						
CERA				AML	AML		
	comp=E,1205µm,1.3s						
CERA				AML	AML		
	comp=N,1180µm,0.6s						
RSM	**Repubblica di**	**1.31**	**337**	P	**Pb**	**06 37 43.9**	**+0.4**
FRES	**Fresagrandinar**	**1.35**	**123**	P	**Pb**	**06 37 44.5**	**+0.3**
FRES				AML	AML		
	comp=N,750µm,0.9s						
FRES				AML	AML		
	comp=E,832µm,0.7s						
TRIV	**Trivento**	**1.41**	**132**	P	**Pb**	**06 37 45.7**	**+0.5**
TRIV				AML	AML		
	comp=E,1282µm,1.4s						
TRIV				AML	AML		
	comp=N,844µm,0.7s						
ASQU	**Asqua**	**1.47**	**317**	P	**Pb**	**06 37 46.7**	**+0.5**
ASQU				AML	AML		
	comp=E,424µm,0.9s						
ASQU				AML	AML		
	comp=N,460µm,0.6s						
SFI	**Santa Sofia**	**1.52**	**321**	P	**Pb**	**06 37 47.2**	**+0.1**
VAGA	**Valle Agricola**	**1.54**	**148**	P	**Pb**	**06 37 47.8**	**+0.4**
VAGA				AML	AML		
	comp=E,324µm,0.6s						
VAGA				AML	AML		
	comp=N,646µm,0.3s						
VAGA				AML	AML		
	comp=E,326µm,0.6s						
VAGA				AML	AML		
	comp=N,612µm,0.4s						
CSNT	**Castellina Chi**	**1.56**	**299**	P	**Pb**	**06 37 48.0**	**+0.3**
CSNT				AML	AML		
	comp=E,262µm,0.8s						
CSNT				AML	AML		
	comp=N,268µm,1.0s						
BSSO	**Busso**	**1.59**	**137**	P	**Pb**	**06 37 48.1**	**-0.3**
BSSO				AML	AML		
	comp=E,208µm,0.9s						
BSSO				AML	AML		
	comp=N,226µm,0.9s						
OSSC	**Osservatorio P**	**1.61**	**300**	P	**Pb**	**06 37 49.2**	**+0.5**
RUFI	**Rufina**	**1.64**	**313**	P	**Pb**	**06 37 48.6**	**-0.5**
RUFI				AML	AML		
	comp=N,490µm,0.8s						
RUFI				AML	AML		
	comp=E,464µm,0.5s						
MODR	**Mondragone**	**1.67**	**161**	P	**Pb**	**06 37 49.3**	**-0.3**
CIGN	**Sant'Elia a Pi**	**1.68**	**129**	P	**Pb**	**06 37 49.2**	**-0.7**
CIGN				AML	AML		
	comp=E,440µm,1.0s						
CIGN				AML	AML		
	comp=N,403µm,0.6s						
CASP	**Castiglione de**	**1.69**	**273**	P	**Pb**	**06 37 49.5**	**-0.5**
CASP				AML	AML		
	comp=N,141µm,1.2s						
CASP				AML	AML		
	comp=E,126µm,0.3s						
PTRJ	**Pietraroja**	**1.70**	**143**	P	**Pb**	**06 37 50.1**	**-0.1**
TRIF	**Trifonti**	**1.70**	**284**	P	**Pb**	**06 37 50.0**	**-0.2**
TRIF				AML	AML		
	comp=E,272µm,0.5s						
TRIF				AML	AML		
	comp=N,286µm,0.7s						
PIGN	**Pignataro Magg**	**1.70**	**153**	P	**Pn**	**06 37 49.2**	**+0.9**
MELA	**Melanico ??? S**	**1.78**	**124**	P	**Pn**	**06 37 50.4**	**+1.1**
MELA				AML	AML		
	comp=E,1204µm,1.3s						
MELA				AML	AML		
	comp=N,1200µm,0.4s						
MELA				AML	AML		
	comp=N,1245µm,0.5s						
MELA				AML	AML		
	comp=E,1280µm,1.6s						
TREM	**Isole Tremiti**	**1.84**	**108**	P	**Pn**	**06 37 51.3**	**+1.1**
TREM				AML	AML		
	comp=E,1280µm,0.7s						
TREM				AML	AML		
	comp=N,1335µm,0.6s						
BRIS	**BRISIGHELLA**	**1.86**	**320**	P	**Pn**	**06 37 51.1**	**+0.7**
SEI	**Scarperia**	**1.87**	**316**	P	**Pb**	**06 37 53.0**	**0.0**
DUGI	**Dugi Otok**	**1.88**	**47**	*e*Pn	**Pn**	**06 37 51.6**	**+0.9**
A318A	**Donoratico (LI**	**1.94**	**283**	P	**Pn**	**06 37 52.6**	**+1.1**
PSB1	**Pescosannita**	**1.94**	**140**	P	**Pn**	**06 37 52.5**	**+1.0**
PSB1				AML	AML		
	comp=N,318µm,0.9s						
PSB1				AML	AML		
	comp=E,316µm,1.6s						
MPPT	**Montemurlo**	**1.95**	**310**	P	**Pb**	**06 37 53.5**	**-0.9**
MPPT				AML	AML		
	comp=E,341µm,1.0s						
MPPT				AML	AML		
	comp=N,278µm,1.2s						
MOCO	**Biccari - m.te**	**2.01**	**132**	P	**Pb**	**06 37 54.2**	**-1.4**
MOCO				AML	AML		
	comp=N,160µm,1.2s						
MOCO				AML	AML		
	comp=E,216µm,0.6s						
APRC	**Apricena**	**2.02**	**118**	P	**Pb**	**06 37 54.4**	**-1.2**
APRC				AML	AML		
	comp=E,477µm,0.3s						
APRC				AML	AML		
	comp=N,796µm,0.3s						
MTCR	**Monte La Croce**	**2.04**	**310**	P	**Pb**	**06 37 54.9**	**-1.1**
FNVD	**Fontana Vidola**	**2.07**	**315**	P	**Pb**	**06 37 55.5**	**-1.0**
FNVD				AML	AML		
	comp=N,312µm,0.7s						
FNVD				AML	AML		
	comp=E,382µm,0.9s						
VIRC	**Vir**	**2.09**	**41**	*e*Pn	**Pn**	**06 37 54.7**	**+1.1**
SGRT	**San Giovanni R**	**2.15**	**116**	P	**Pb**	**06 37 56.5**	**-1.5**
SGRT				AML	AML		
	comp=E,776µm,0.4s						
SGRT				AML	AML		
	comp=N,556µm,0.5s						
MORI	**Morici**	**2.18**	**58**	*i* Pn	**Pn**	**06 37 56.4**	**+1.6**
POPM	**Popiglio**	**2.19**	**308**	AML	AML		
	comp=E,150µm,0.7s						
POPM				AML	AML		
	comp=N,122µm,0.7s						
NVLJ	**Novalja**	**2.22**	**34**	*e*Pn	**Pn**	**06 37 56.4**	**+1.1**
BRJN	**Brijuni**	**2.22**	**11**	*e*Pn	**Pn**	**06 37 56.3**	**+0.9**
BRJN	**Brijuni**	**2.22**	**11**	P	**Pn**	**06 37 56.4**	**+1.1**
MAIM	**Mastiano**	**2.28**	**302**	AML	AML		
	comp=N,235µm,0.5s						
MAIM				AML	AML		
	comp=E,143µm,1.0s						
MSAG	**Monte S. Angel**	**2.28**	**115**	AML	AML		
	comp=E,633µm,0.5s						
MSAG				AML	AML		
	comp=N,1525µm,1.4s						
RABC	**Rab**	**2.34**	**30**	*e*Pn	**Pn**	**06 37 58.4**	**+1.4**
CARD	**Cardoso**	**2.34**	**305**	AML	AML		
	comp=N,196µm,0.6s						
CARD				AML	AML		
	comp=E,182µm,0.7s						
SMRN	**Sveta Marina**	**2.42**	**17**	*e*Pn	**Pn**	**06 37 59.5**	**+1.4**
MCRV	**Calabrutti - M**	**2.46**	**142**	P	**Pn**	**06 38 00.5**	**+1.7**
HVAR	**Hvar**	**2.46**	**78**	*e*Pn	**Pn**	**06 37 60.0**	**+1.3**
VULT	**Monte Vulture**	**2.55**	**133**	AML	AML		
	comp=E,291µm,0.5s						
VULT				AML	AML		
	comp=N,402µm,0.5s						
A253A	**Karojba, Istri**	**2.61**	**10**	*e*Pn	**Pn**	**06 38 01.5**	**+0.8**
UDBI	**Udbina**	**2.61**	**46**	*e*Pn	**Pn**	**06 38 03.1**	**+2.3**
A250A	**Rusevo Krmpots**	**2.68**	**28**	*e*Pn	**Pn**	**06 38 03.3**	**+1.6**
KIJV	**Kijevo**	**2.69**	**61**	*e*Pn	**Pn**	**06 38 03.9**	**+2.1**
PALZ	**Palazzo San Ge**	**2.75**	**129**	AML	AML		
	comp=E,450µm,0.8s						
PALZ				AML	AML		
	comp=N,359µm,0.9s						
PLMA	**Palmaria, Port**	**2.75**	**300**	AML	AML		
	comp=N,65µm,0.9s						
PLMA				AML	AML		
	comp=E,73µm,0.7s						
LSTV	**Lastovo**	**2.75**	**88**	*e*Pn	**Pn**	**06 38 04.0**	**+1.4**
RIY	**Rijeka**	**2.77**	**20**	*e*Pn	**Pn**	**06 38 04.5**	**+1.6**
PLIT	**Plitvice**	**2.80**	**39**	*e*Pn	**Pn**	**06 38 05.2**	**+1.9**
MRVN	**Minervino Murg**	**2.81**	**125**	AML	AML		
	comp=N,129µm,1.4s						
MRVN				AML	AML		
	comp=E,126µm,1.2s						
ACER	**Acerenza**	**2.84**	**132**	AML	AML		
	comp=N,179µm,0.9s						
ACER				AML	AML		
	comp=E,270µm,0.5s						
SKDS	**Skadanscina**	**2.89**	**12**	*e*Pn	**Pn**	**06 38 05.2**	**+0.6**
SKDS	**Skadanscina**	**2.89**	**12**	⇑*i* Pn	**Pn**	**06 38 05.6**	**+1.0**
SKDS				*i* Sn	**Sn**	**06 38 40.9**	**+2.0**
SKDS				IAML		06 38 46.4	
	comp=Z,25nm,0.2s						
MAKA	**Makarska**	**2.89**	**77**	*e*Pn	**Pn**	**06 38 06.0**	**+1.4**
RICI	**Ricice**	**3.01**	**74**	*e*Pn	**Pn**	**06 38 08.3**	**+2.0**
A050A	**Klekovaca**	**3.02**	**53**	*e*Pn	**Pn**	**06 38 08.7**	**+2.3**
PGF	**Pioggiola**	**3.07**	**268**	*e*P	**Pn**	**06 38 09.3**	**+2.1**
PGF				*e*Sn	**Sn**	**06 38 41.2**	**-2.4**
	comp=Z,16nm,0.6s						
MSSA	**Maissana**	**3.09**	**302**	AML	AML		
	comp=E,50µm,1.4s						
MSSA				AML	AML		
	comp=N,65µm,0.7s						
BULG	**Bulgheria - Ca**	**3.13**	**147**	AML	AML		
	comp=E,49µm,0.5s						
BULG				AML	AML		
	comp=N,68µm,0.6s						
MTSN	**Montesano sull**	**3.14**	**141**	AML	AML		
	comp=N,52µm,0.6s						
MTSN				AML	AML		
	comp=E,65µm,0.7s						
AMUR	**Altamura**	**3.15**	**124**	AML	AML		
	comp=E,225µm,0.4s						
AMUR				AML	AML		
	comp=N,163µm,1.1s						
BOJS	**Bojanci**	**3.16**	**28**	*e*Pn	**Pn**	**06 38 10.0**	**+1.7**
BOJS	**Bojanci**	**3.16**	**28**	AML	AML		
	comp=N,181µm,0.8s						
BOJS				AML	AML		
	comp=E,294µm,0.6s						
SRKY	**Kupres RS**	**3.21**	**64**	*e*Pn	**Pn**	**06 38 11.3**	**+2.2**
MIGL	**Miglionico**	**3.25**	**130**	AML	AML		
	comp=E,328µm,1.0s						
MIGL				AML	AML		
	comp=N,505µm,0.7s						
SABO	**M.te Sabotino**	**3.27**	**5**	AML	AML		
	comp=E,264µm,0.5s						
SABO				AML	AML		
	comp=E,1175µm,0.6s						
SABO				AML	AML		
	comp=N,1105µm,0.7s						
SABO				AML	AML		
	comp=N,302µm,1.0s						
ROVR	**Rover Verones**	**3.28**	**334**	AML	AML		
	comp=N,103µm,0.7s						
ROVR				AML	AML		
	comp=E,47µm,0.6s						
CGRP	**Cima Grappa**	**3.30**	**343**	AML	AML		
	comp=N,343µm,0.6s						
CGRP				AML	AML		
	comp=E,280µm,0.7s						
MGRS	**Mrkonjic Grad**	**3.32**	**58**	*e*Pn	**Pn**	**06 38 13.1**	**+2.6**
OZLJ	**Ozalj**	**3.33**	**29**	*e*Pn	**Pn**	**06 38 12.6**	**+1.9**
STON	**Ston**	**3.35**	**86**	*e*Pn	**Pn**	**06 38 11.2**	**+0.4**
STON	**Ston**	**3.35**	**86**	*e*Pn	**Pn**	**06 38 11.5**	**+0.7**
STON	**Ston**	**3.35**	**86**	*e*Pn	**Pn**	**06 38 11.6**	**+0.7**
STON				*e*Sn	**Sn**	**06 38 51.8**	**+1.7**
STON	**Ston**	**3.35**	**86**	AML	AML		
	comp=N,83µm,0.4s						
STON				AML	AML		
	comp=E,86µm,0.3s						
MATE	**Matera**	**3.37**	**127**	⇓P	**Pn**	**06 38 13.7**	**+2.6**
MATE				⇑S	**Sn**	**06 38 54.5**	**+3.7**
DOSS	**Dosso del Somm**	**3.46**	**337**	AML	AML		
	comp=E,148µm,0.5s						
DOSS				AML	AML		
	comp=N,135µm,0.5s						
SALO	**Salr**	**3.46**	**328**	AML	AML		
	comp=N,182µm,0.6s						
SALO				AML	AML		
	comp=E,166µm,0.5s						
LJU	**Ljubljana**	**3.46**	**16**	AML	AML		
	comp=E,723µm,0.8s						
LJU				AML	AML		
	comp=N,765µm,0.9s						
CRES	**Cresnjev**	**3.51**	**27**	*e*Pn	**Pn**	**06 38 15.2**	**+2.0**
MPRI	**Monte Prat**	**3.52**	**358**	AML	AML		
	comp=N,230µm,0.4s						
MPRI				AML	AML		
	comp=E,184µm,1.4s						
A051A	**Mrakovica**	**3.55**	**49**	*e*Pn	**Pn**	**06 38 14.7**	**+1.0**
MAGA	**Magasa**	**3.55**	**330**	AML	AML		
	comp=N,239µm,0.4s						
MAGA				AML	AML		
	comp=E,394µm,0.7s						
STAL	**STALIGIAL**	**3.55**	**355**	AML	AML		
	comp=E,196µm,0.8s						
STAL				AML	AML		
	comp=N,134µm,0.9s						
BLY	**Banja Luka**	**3.55**	**54**	*e*Pn	**Pn**	**06 38 15.4**	**+1.7**
BLY	**Banja Luka**	**3.55**	**54**	*e*Pn	**Pn**	**06 38 17.0**	**+3.3**
LUSI	**Trento, Gardas**	**3.60**	**335**	AML	AML		
	comp=N,164µm,0.6s						
LUSI				AML	AML		
	comp=E,112µm,0.7s						
CIMO	**Cimolais**	**3.62**	**352**	AML	AML		
	comp=E,43µm,0.5s						
CIMO				AML	AML		
	comp=N,44µm,0.5s						
DBRK	**Dubrovnik**	**3.68**	**89**	*e*Pn	**Pn**	**06 38 16.0**	**+0.6**
PTCC	**Patocco-Chiusa**	**3.68**	**2**	AML	AML		
	comp=N,76µm,0.7s						
PTCC				AML	AML		
	comp=E,85µm,0.8s						
GAGG	**Gaggia**	**3.71**	**336**	AML	AML		
	comp=E,153µm,0.9s						
GAGG				AML	AML		
	comp=N,125µm,0.8s						
CLUD	**Cludinico**	**3.74**	**357**	AML	AML		
	comp=E,82µm,0.7s						
CLUD				AML	AML		
	comp=N,75µm,0.8s						
ZONE	**Zone**	**3.74**	**325**	AML	AML		
	comp=E,144µm,1.2s						
ZONE				AML	AML		
	comp=N,168µm,0.3s						
PTJ	**Puntijarka**	**3.77**	**31**	*e*Pn	**Pn**	**06 38 18.8**	**+2.1**
TREB	**Trebinje**	**3.83**	**88**	*e*Pn	**Pn**	**06 38 18.9**	**+1.4**
TREB	**Trebinje**	**3.83**	**88**	*e*Pn	**Pn**	**06 38 19.8**	**+2.3**
TREB				*e*Sn	**Sn**	**06 39 03.9**	**+1.9**
ACOM	**Acomizza, Ital**	**3.83**	**4**	AML	AML		
	comp=E,134µm,1.6s						
ACOM				AML	AML		
	comp=N,157µm,0.7s						
ACOM				AML	AML		
	comp=N,139µm,0.7s						
ACOM				AML	AML		
	comp=E,164µm,0.8s						
ZOU	**Zoufplan**	**3.83**	**358**	AML	AML		
	comp=E,100µm,0.9s						
ZOU				AML	AML		
	comp=N,87µm,1.0s						
MOSL	**Moslavina**	**3.88**	**41**	*e*Pn	**Pn**	**06 38 18.6**	**+0.5**
OBKA	**Obir**	**3.91**	**14**	*e*Pn	**Pn**	**06 38 18.3**	**-0.4**
OBKA	**Obir**	**3.91**	**14**	*e*Pn	**Pn**	**06 38 19.9**	**+1.2**
	comp=N,0.9nm,0.1s,SNR=7.6						
MYKA	**Terra Mystica**	**3.92**	**5**	*i* Pn	**Pn**	**06 38 20.9**	**+2.1**
	comp=N,3.0nm,0.2s						
KOSI	**Kohlern**	**3.95**	**342**	AML	AML		
	comp=E,120µm,0.8s						
KOSI				AML	AML		
	comp=N,112µm,0.7s						
HCY	**Herceg Novi**	**3.95**	**92**	*e*Pn	**Pn**	**06 38 20.8**	**+1.6**
HCY	**Herceg Novi**	**3.95**	**92**	⇑*i* Pn	**Pn**	**06 38 21.4**	**+2.2**
HCY				*i* Sn	**Sn**	**06 39 08.4**	**+3.3**
BRY	**Bratogost**	**3.96**	**86**	*e*Pn	**Pn**	**06 38 21.3**	**+1.8**
BRY	**Bratogost**	**3.96**	**86**	⇑*i* Pn	**Pn**	**06 38 21.7**	**+2.2**
BRY				*i* Sn	**Sn**	**06 39 08.5**	**+2.9**
ABTA	**Abfaltersbach**	**4.05**	**354**	*i* Pn	**Pn**	**06 38 23.2**	**+2.6**
	comp=N,23nm,0.6s,SNR=37						
KALN	**Kalnik**	**4.14**	**34**	*e*Pn	**Pn**	**06 38 22.3**	**+0.5**
UPM	**Unac-Piva**	**4.25**	**82**	*e*Pn	**Pn**	**06 38 26.4**	**+3.0**
UPM	**Unac-Piva**	**4.25**	**82**	⇓*i* Pn	**Pn**	**06 38 26.0**	**+2.6**
UPM				*i* Sn	**Sn**	**06 39 15.4**	**+2.8**
CEME	**Cevo**	**4.25**	**90**	⇑*i* Pn	**Pn**	**06 38 25.7**	**+2.3**
CEME				*i* Sn	**Sn**	**06 39 15.3**	**+2.7**
BUM	**Brajici-Budva**	**4.26**	**94**	⇓*i* Pn	**Pn**	**06 38 25.7**	**+2.2**
BUM				*i* Sn	**Sn**	**06 39 15.6**	**+2.8**
NKME	**Niksic**	**4.27**	**87**	⇑*i* Pn	**Pn**	**06 38 26.1**	**+2.5**
NKME				*i* Sn	**Sn**	**06 39 15.9**	**+2.9**
RISI	**Rein**	**4.29**	**350**	AML	AML		
	comp=E,286µm,0.6s						
RISI				AML	AML		
	comp=N,330µm,0.5s						
NKY	**Niksic**	**4.30**	**87**	⇑*i* Pn	**Pn**	**06 38 26.4**	**+2.4**
NKY				*i* Sn	**Sn**	**06 39 16.7**	**+2.9**
SBF	**Sospel**	**4.33**	**287**	*e*P	**Pn**	**06 38 26.9**	**+2.5**
SBF				*e*Sn	**Sn**	**06 39 11.4**	**-3.1**
	comp=N,8.1nm,0.4s						
A252A	**Venje**	**4.33**	**50**	*e*Pn	**Pn**	**06 38 25.5**	**+1.1**
KBA	**Koelnbreinsper**	**4.36**	**2**	*e*Pn	**Pn**	**06 38 27.3**	**+2.4**
	comp=N,3.3nm,0.2s,SNR=12						
ROSI	**Rosskopf**	**4.38**	**344**	AML	AML		
	comp=E,116µm,1.2s						
ROSI				AML	AML		
	comp=N,172µm,0.8s						
DRME	**Dracevica, Mon**	**4.49**	**95**	*e*Pn	**Pn**	**06 38 29.1**	**+2.5**
DRME	**Dracevica, Mon**	**4.49**	**95**	⇑*i* Pn	**Pn**	**06 38 29.2**	**+2.6**
DRME				*i* Sn	**Sn**	**06 39 21.5**	**+3.1**
PDG	**Podgorica**	**4.51**	**92**	⇑P	**Pn**	**06 38 29.4**	**+2.5**
PDG	**Podgorica**	**4.51**	**92**	*e*Pn	**Pn**	**06 38 29.4**	**+2.5**
PDG				*e*Sn	**Sn**	**06 39 20.7**	**+1.8**
TTG	**Podgorica**	**4.51**	**92**	⇓*i* Pn	**Pn**	**06 38 29.2**	**+2.3**
TTG				*i* Sn	**Sn**	**06 39 22.0**	**+3.1**
ULC	**Ulcinj**	**4.58**	**98**	⇑*i* Pn	**Pn**	**06 38 29.9**	**+2.1**
ULC				*i* Sn	**Sn**	**06 39 23.0**	**+2.5**
FETA	**Feichten**	**4.63**	**339**	*e*Pn	**Pn**	**06 38 32.4**	**+3.8**
	comp=N,3.6nm,0.3s,SNR=9.2						
RUDO	**Rudo**	**4.63**	**77**	*e*Pn	**Pn**	**06 38 30.0**	**+1.5**
WTTA	**Wattenberg**	**4.67**	**347**	*i* Pn	**Pn**	**06 38 33.0**	**+3.9**
	comp=N,2.2nm,0.2s,SNR=10						
DAVOX	**Davos/Dischmat**	**4.68**	**331**	Pn	Pn	06 38 33.6	+4.2
	comp=N,1.5nm,0.3s,baz=144,slow=12,SNR=18						
DAVOX				Sn	**Sn**	**06 39 26.6**	**+3.4**
	comp=N,1.5nm,0.3s,baz=296,slow=23,SNR=4.0						
	comp=N,6.0nm,0.4s						
KOME	**Kolasin**	**4.68**	**86**	⇑*i* Pn	**Pn**	**06 38 32.2**	**+2.9**
KOME				*i* Sn	**Sn**	**06 39 26.0**	**+2.8**
BBLS	**Lazići**	**4.70**	**74**	*e*Pn	**Pn**	**06 38 32.4**	**+2.9**
BBLS				*e*Sn	**Sn**	**06 39 23.8**	**+0.1**
SQTA	**Sankt Quirin**	**4.70**	**344**	*i* Pn	**Pn**	**06 38 33.3**	**+3.7**
	comp=N,7.3nm,0.2s,SNR=8.7						
WATA	**Walderalm**	**4.74**	**347**	*e*Pn	Pn	06 38 34.8	+4.6
	comp=N,3.6nm,0.2s,SNR=7.5						
ARSA	**Arzberg**	**4.83**	**20**	*e*Pn	**Pn**	**06 38 32.4**	**+1.2**
	comp=N,3.3nm,0.3s						
MOTA	**Moosalm**	**4.84**	**343**	*e*Pn	**Pn**	**06 38 35.3**	**+3.7**
	comp=N,2.9nm,0.3s,SNR=10						
KOVH	**Kovagotottos**	**4.88**	**45**	P	**Pn**	**06 38 32.4**	**+0.4**
KOVH				S	**Sn**	**06 39 25.1**	**-2.9**
LMR	**La Mourre**	**4.91**	**279**	*e*P	**Pn**	**06 38 34.2**	**+1.9**
LMR				*e*Sn	**Sn**	**06 39 25.1**	**-3.6**
	comp=N,2.4nm,0.5s						
IVA	**Berane**	**4.96**	**86**	⇑*i* Pn	**Pn**	**06 38 35.8**	**+2.7**
IVA				*i* Sn	**Sn**	**06 39 32.7**	**+2.6**
BIOA	**Bad Ischl, Aus**	**4.98**	**4**	*e*Pn	**Pn**	**06 38 34.2**	**+0.9**
	comp=N,1.0nm,0.2s						
PVY	**Plav**	**5.02**	**89**	⇑*i* Pn	**Pn**	**06 38 36.5**	**+2.6**
PVY				*i* Sn	**Sn**	**06 39 33.6**	**+2.0**
MBDF	**Montbardon**	**5.04**	**296**	*e*P	**Pn**	**06 38

TIR	**Tirane**	**5.18**	**103**	⇑P		**Pn**	**06 38 34.4**	**-1.6**
TIR	**Tirane**	**5.18**	**103**	*e*Pn		**Pn**	**06 38 38.1**	**+2.0**
TIR				*e*Sn		**Sn**	**06 39 36.1**	**+0.7**
MOA	**Molln**	**5.18**	**8**	*e*Pn		**Pn**	**06 38 38.3**	**+2.2**
MOA				*e*Sn		**Sn**	**06 39 39.1**	**+3.6**
MOA	**Molln**	**5.18**	**8**	*e*Pn		**Pn**	**06 38 38.0**	**+1.9**
	comp=N,0.4nm,0.1s							
IVAS	**Ivanjica**	**5.19**	**78**	*e*Pn		**Pn**	**06 38 38.2**	**+2.0**
IVAS				*e*Sn		**Sn**	**06 39 36.5**	**+0.8**
MORH	**Mrgy, Hungar**	**5.25**	**46**	⇑P		**Pg**	**06 38 58.1**	**-1.8**
LPG	**La Plagne**	**5.38**	**303**	*e*P		**Pn**	**06 38 42.6**	**+3.5**
LPG				*e*Sn		**Sn**	**06 39 36.9**	**-3.8**
	comp=N,1.9nm,0.3s							
FRGS	**Fruska Gora**	**5.38**	**61**	*e*Pn		**Pn**	**06 38 37.5**	**-1.4**
FRGS	**Fruska Gora**	**5.38**	**61**	*e*Pn		**Pn**	**06 38 40.2**	**+1.3**
LPL	**La Plagne**	**5.40**	**303**	*e*P		**Pn**	**06 38 42.7**	**+3.4**
LPL				*e*Sn		**Sn**	**06 39 37.2**	**-3.9**
	comp=N,3.1nm,0.5s							
RONA	**Rosalia, Austr**	**5.45**	**23**	*i* Pn		**Pn**	**06 38 41.2**	**+1.4**
	comp=N,1.5nm,0.1s							
TRUS	**Trudelj**	**5.48**	**72**	*e*Pn		**Pn**	**06 38 43.3**	**+3.1**
CONA	**Conrad Observa**	**5.54**	**19**	*i* Pn		**Pn**	**06 38 42.8**	**+1.7**
	comp=N,1.6nm,0.2s,SNR=14							
GRUS	**Gruza**	**5.64**	**76**	*e*Pn		**Pn**	**06 38 44.7**	**+2.4**
GRUS				*e*Sn		**Sn**	**06 39 46.7**	**+0.1**
SMRF	**Simiane la Rot**	**5.67**	**285**	*e*P		**Pn**	**06 38 46.3**	**+3.5**
SMRF				*e*Sn		**Sn**	**06 39 43.3**	**-4.2**
	comp=N,1.5nm,0.3s							
ORIF	**Oris-en-Rattie**	**5.70**	**295**	*e*P		Pn	06 38 47.9	+4.6
ORIF				*e*Sn		**Sn**	**06 39 44.3**	**-4.1**
	comp=N,1.6nm,0.3s							
SELS	**Selova**	**5.86**	**82**	*e*Pn		**Pn**	**06 38 47.2**	**+1.7**
OHR	**Ohrid**	**5.92**	**103**	*i* Pn		**Pn**	**06 38 49.6**	**+3.3**
GERES	**GERESS Array B**	**6.13**	**3**	Pn		**Pn**	**06 38 49.9**	**+0.7**
	comp=N,0.3nm,0.3s,baz=168,slow=14,SNR=15							
GERES				Sn		**Sn**	**06 40 00.1**	**+1.1**
	comp=N,1.7nm,0.3s,baz=174,slow=26,SNR=9.2							
	comp=N,0.7nm,0.3s							
CKRC	**Cesky Krumlov**	**6.15**	**7**	*e*PN		**Pn**	**06 38 50.6**	**+1.2**
CKRC				*e*SN		**Sn**	**06 39 59.4**	**+0.2**
BOVS	**Bovan**	**6.32**	**79**	⇑P		**Pn**	**06 38 53.0**	**+1.3**
BOVS	**Bovan**	**6.32**	**79**	*e*Pn		**Pn**	**06 38 53.2**	**+1.6**
BOVS				*e*Sn		**Sn**	**06 40 03.9**	**+0.6**
MODS	**Modra-Piesok**	**6.34**	**26**	*e*PN		**Pn**	**06 38 54.6**	**+2.5**
CABF	**La Chapelle**	**6.36**	**310**	*e*P		**Pn**	**06 38 56.1**	**+3.7**
CABF				*e*Sn		**Sn**	**06 40 00.1**	**-4.5**
	comp=N,2.8nm,0.6s							
BARS	**Barje**	**6.37**	**86**	*e*Pn		**Pn**	**06 38 54.5**	**+2.0**
BARS				*e*Sn		**Sn**	**06 40 05.2**	**+0.4**
KHC	**Kasperske Hory**	**6.41**	**2**	*e*PN		**Pn**	**06 38 54.1**	**+1.1**
KHC				*e*SN		**Sn**	**06 40 05.8**	**0.0**
VIVF	**Saint-Julien-l**	**6.50**	**292**	*e*P		**Pn**	**06 38 57.7**	**+3.5**
VIVF				*e*Sn		**Sn**	**06 40 03.1**	**-4.8**
	comp=N,0.9nm,0.3s							
PRVS	**Prvonek**	**6.58**	**89**	*e*Pn		**Pn**	**06 38 57.7**	**+2.3**
PRVS				*e*Sn		**Sn**	**06 40 09.7**	**-0.3**
ZAGS	**Zajecar**	**6.71**	**78**	*e*Pn		**Pn**	**06 38 59.2**	**+2.1**
KRUC	**Moravsky**	**6.73**	**18**	*e*PN		**Pn**	**06 38 58.7**	**+1.4**
BZS	**Buzias**	**6.73**	**62**	⇑P		Pn	06 39 02.9	+5.5
BZS	**Buzias**	**6.73**	**62**	*e*Pn		**Pn**	**06 38 58.2**	**+0.8**
BZS				*e*Sn		**Sn**	**06 40 11.3**	**-2.3**
HINF	**Hinteralfeld**	**6.76**	**321**	*e*Pn		**Pn**	**06 39 00.2**	**+2.4**
HINF				*e*Sn		**Sn**	**06 40 09.7**	**-4.6**
	comp=N,3.0nm,0.3s							
BOSS	**Bosilegrad**	**6.88**	**89**	*e*Pn		**Pn**	**06 39 01.4**	**+1.9**
BOSS				*e*Sn		**Sn**	**06 40 18.1**	**+0.8**
LASF	**Ste Croix**	**6.91**	**284**	*e*P		**Pn**	**06 39 02.9**	**+3.1**
LASF				*e*Sn		**Sn**	**06 40 12.9**	**-5.1**
	comp=N,0.4nm,0.3s							
ZAPS	**Zavoj**	**6.97**	**82**	*e*Pn		**Pn**	**06 39 03.0**	**+2.3**
ZAPS				*e*Sn		**Sn**	**06 40 19.6**	**+0.1**
VRAC	**Vranov**	**7.00**	**19**	*e*PN		**Pn**	**06 39 02.4**	**+1.3**
VYHS	**Vyhne**	**7.01**	**33**	*e*PN		**Pn**	**06 39 05.0**	**+3.8**
BLKB	**Belogradchik**	**7.02**	**79**	⇓P		**Pn**	**06 39 01.6**	**+0.3**
CDF	**Champ du Feu**	**7.03**	**326**	*e*P		**Pn**	**06 39 03.8**	**+2.4**
CDF				*e*Sn		**Sn**	**06 40 16.0**	**-4.9**
	comp=N,2.1nm,0.3s							
HAU	**Haudompre**	**7.13**	**320**	*e*P		**Pn**	**06 39 05.5**	**+2.7**
HAU				*e*Sn		**Sn**	**06 40 18.4**	**-5.0**
	comp=N,11nm,0.4s							
VAY	**Valandovo**	**7.15**	**98**	*i* Pn		**Pn**	**06 39 05.3**	**+2.2**
GZR	**Gura Zlata**	**7.42**	**66**	⇑P		**Pn**	**06 39 09.2**	**+2.2**
VTS	**Vitosha**	**7.43**	**87**	*e*Pn		**Pn**	**06 39 08.8**	**+1.7**
VTS				*e*Sn		**Sn**	**06 40 28.7**	**-2.3**
PAGF	**Fort de Pagny**	**7.81**	**321**	*e*P		Pn	06 39 16.4	+4.2
SRS	**Serrai**	**7.95**	**98**	*e*Pn		**Pn**	**06 39 16.1**	**+2.1**
LOR	**Lormes**	**8.00**	**308**	*e*P		**Pn**	**06 39 18.4**	**+3.6**
	baz=120							
LOR				*e*Sn		**Sn**	**06 40 39.5**	**-5.3**
	comp=N,2.0nm,0.3s							
MTLF	**Montolieu**	**8.04**	**278**	*e*P		**Pn**	**06 39 19.2**	**+3.9**
MTLF				*e*Sn		**Sn**	**06 40 39.8**	**-6.0**
	comp=N,0.2nm,0.2s							
AVF	**Avril sur Loir**	**8.07**	**304**	*e*P		**Pn**	**06 39 19.7**	**+4.0**
AVF				*e*Sn		**Sn**	**06 40 40.9**	**-5.6**
	comp=N,0.5nm,0.2s							
SSF	**Saint Saulge**	**8.11**	**306**	*e*P		**Pn**	**06 39 20.3**	**+4.1**
SSF				*e*Sn		**Sn**	**06 40 41.8**	**-5.6**
	comp=N,2.3nm,0.5s							
SAVF	**Savonnieres en**	**8.14**	**319**	*e*P		Pn	06 39 20.9	+4.2
BRG	**Berggiesshubel**	**8.17**	**4**	*e*(P)		Pn	06 39 24.9	+7.9
BRG				Amp			06 39 26.0	
	comp=Z,1.0nm,0.4s							
BRG				*ex*	x		06 40 45.7	
BRG				*ex*	x		06 41 52.4	
BRG				Amp			06 42 12.2	
	comp=Z,11nm,1.7s							
CAF	**Calviac**	**8.32**	**289**	*e*P		**Pn**	**06 39 22.8**	**+3.7**
CAF				*e*Sn		**Sn**	**06 40 46.6**	**-6.0**
	comp=Z,0.6nm,0.2s							
CLL	**Collm**	**8.59**	**359**	*e*Sn		Sn	06 40 42.0	-17
CLL				*ex*	x		06 40 55.0	
CLL				*ex*	x		06 41 17.0	
CLL				*e*Sg			06 41 53.0	
	comp=Z,8.0nm,1.2s							
VOIR		**8.98**	**68**	⇑P		**Pn**	**06 39 27.1**	**-1.2**
MLR	**Muntele Rosu**	**9.61**	**69**	⇓P		**Pn**	**06 39 32.4**	**-4.5**
FINES	**FINESS Array B**	**20.29**	**18**	P		Pn	06 41 55.9	0.0
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=4.1							
	comp=Z,1.7nm,0.8s							
WRA	**Warramunga Arr**	**126.03**	**84**	PKP		PKiKP	06 56 34.6	+13
	comp=Z,0.8nm,0.5s,baz=312,slow=1.8,SNR=13							
ASAR	**Alice Springs**	**127.97**	**88**	PKP		PKiKP	06 56 37.7	+13
	comp=Z,0.7nm,0.4s,baz=327,slow=2.2,SNR=6.4							

*KRNET **28** 06:46:03.4±0.1,41.˚12N×76.˚29E,h11km,mb2.2*
*NNC **28** 06:46:04.7±1.4,41.˚13N×76.˚19E,h0km,mb3.1,mpv2.8,*
Error ellipse: s-maj=9.2km s-min=6.1km az=9.0
*SOME **28** 06:46:04.8,41.˚13N×76.˚25E,h5km*
ISC 28 06:46:05.3±2.1,41.˚14N±0.˚09×76.˚17E±0.˚03,h10km,n26,
σ1§14/43,15C,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.32**	**336**	⇑*i*P		**Pg**	**06 46 11.0**	**-0.8**
	baz=21							
NRN				⇑*i*S		**Sg**	**06 46 16.7**	**+0.6**
	baz=21							
ULHL	**Ulahol**	**1.10**	**3**	⇑*i*P		**Pg**	**06 46 25.0**	**-1.5**
	baz=58							
ULHL				⇑*i*S		**Sg**	**06 46 40.5**	**-0.3**
	baz=58							
ARLS	**Aral**	**1.56**	**298**	⇑*i*P		**Pb**	**06 46 34.2**	**-0.2**
	baz=97							
ARLS				⇑*i*S		**Sg**	**06 46 56.8**	**+1.3**
	baz=97							
TKM2	**Tokmak 2**	**1.83**	**347**	⇑Pg		**Pb**	**06 46 38.4**	**-0.5**
	3.0nm,0.6s							
TKM2				⇑Lg		Lg	06 47 04.0	
	3.5nm,0.5s							
KST	**Kastek**	**1.90**	**355**	*e*P		**Pb**	**06 46 40.3**	**+0.1**
	2.1nm,0.4s							
KST				*e*S		**Sg**	**06 47 05.9**	**-0.6**
	2.0nm,0.3s							
KST	**Kastek**	**1.90**	**355**	Pg		**Pb**	**06 46 40.3**	**+0.1**
	2.1nm,0.4s							
KST				Lg		Lg	06 47 06.4	
	2.0nm,0.3s							
AAK	**Ala-Archa**	**1.95**	**321**	⇑*i*P		**Pb**	**06 46 40.8**	**-0.2**
	baz=19							
AAK				⇑*i*S		**Sg**	**06 47 08.1**	**+0.2**
	baz=19							
DGS	**Degeres**	**2.12**	**352**	*e*P		**Pg**	**06 46 45.1**	**-0.8**
	4.1nm,0.5s							
DGS				*e*S		**Sg**	**06 47 14.0**	**+0.7**
	6.2nm,0.5s							
MDOK	**Medeo**	**2.12**	**18**	*e*P		**Pb**	**06 46 44.6**	**+0.7**
	2.3nm,0.3s							
MDOK				*e*S		**Sg**	**06 47 13.4**	**0.0**
	4.6nm,0.4s							
MDOK	**Medeo**	**2.12**	**18**	⇑Pg		**Pb**	**06 46 42.3**	**-1.6**
	1.1nm,0.3s							
MDOK				Pg		**Pb**	**06 46 44.6**	**+0.7**
	2.3nm,0.3s							
MDOK				Lg		Lg	06 47 12.2	
	3.1nm,0.5s							
MDOK				Lg		Lg	06 47 13.4	
	4.6nm,0.4s							
CHMS	**Chumysh**	**2.13**	**331**	⇑Pg		**Pb**	**06 46 43.7**	**-0.4**
	0.9nm,0.2s							
CHMS				⇑Lg		Lg	06 47 11.6	
	3.0nm,0.6s							
EKS2	**Erkin-Say**	**2.34**	**311**	⇑*i*P		**Pb**	**06 46 46.2**	**-1.5**
	baz=10.0							
EKS2				⇑*i*S		**Sb**	**06 47 17.8**	**+1.1**
	baz=10.0							
SATY	**Saty**	**2.54**	**40**	*e*P		**Pb**	**06 46 51.9**	**+1.0**
	1.1nm,0.1s							
SATY				*e*S		**Sg**	**06 47 25.9**	**-0.8**
	7.6nm,0.4s							
SATY	**Saty**	**2.54**	**40**	Pg		**Pb**	**06 46 51.9**	**+1.0**
	1.1nm,0.1s							
SATY				Lg		Lg	06 47 25.9	
	7.6nm,0.4s							
SGDS	**Sogindy**	**2.57**	**334**	*e*P		**Pb**	**06 46 52.5**	**+0.9**
	1.0nm,0.2s							
SGDS				*e*S		**Sg**	**06 47 26.8**	**-1.1**
	2.6nm,0.3s							
SGDS	**Sogindy**	**2.57**	**334**	Pg		**Pb**	**06 46 52.5**	**+0.9**
	1.0nm,0.2s							
SGDS				Lg		Lg	06 47 26.8	
	2.6nm,0.3s							
KRBS	**Karabastau**	**2.58**	**352**	*e*P		**Pb**	**06 46 52.9**	**+1.2**
	1.7nm,0.2s							
KRBS				*e*S		**Sg**	**06 47 27.3**	**-0.8**
	5.7nm,0.5s							
KRBS	**Karabastau**	**2.58**	**352**	Pg		**Pb**	**06 46 52.9**	**+1.2**
	1.7nm,0.2s							
KRBS				Lg		Lg	06 47 28.1	
	5.7nm,0.5s							
KUU	**Kurty**	**2.75**	**3**	*e*P		**Pb**	**06 46 55.6**	**+1.0**
	3.6nm,0.4s							
KUU				*e*S		**Sg**	**06 47 32.2**	**-1.4**
	6.1nm,0.5s							
KUU	**Kurty**	**2.75**	**3**	Pg		**Pb**	**06 46 55.6**	**+1.0**
	3.6nm,0.4s							
KUU				Lg		Lg	06 47 32.2	
	6.1nm,0.5s							
KURS	**Kuram**	**2.77**	**32**	*e*P		**Pb**	**06 46 55.7**	**+0.7**
	2.0nm,0.2s							
KURS				*e*S		**Sg**	**06 47 32.6**	**-1.8**
	3.9nm,0.6s							
KURS	**Kuram**	**2.77**	**32**	Pg		**Pb**	**06 46 55.7**	**+0.7**
	2.0nm,0.2s							
KURS				Lg		Lg	06 47 32.6	
	3.9nm,0.6s							
UZB	**Uzynbulak**	**2.92**	**46**	*e*P		**Pb**	**06 46 57.4**	**-0.1**
	0.6nm,0.1s							
UZB				*e*S		**Sb**	**06 47 35.2**	**+2.0**
	4.6nm,0.6s							
UZB	**Uzynbulak**	**2.92**	**46**	Pg		**Pb**	**06 46 57.4**	**-0.1**
	0.6nm,0.1s							
UZB				Lg		Lg	06 47 35.2	
	4.6nm,0.6s							
KPKS	**Kokpek**	**2.98**	**38**	*e*P		**Pb**	**06 46 58.6**	**+0.2**
	0.7nm,0.2s							
KPKS				*e*S		**Sb**	**06 47 37.3**	**+2.4**
	14nm,0.5s							
ARXS	**Arharly**	**3.30**	**21**	*e*P		**Pb**	**06 47 05.0**	**+1.0**
	2.3nm,1.1s							
ARXS				*e*S		**Sg**	**06 47 48.1**	**-3.2**
	4.0nm,0.6s							

*NEIC **28** 06:47:35.5±1.5,7.˚00S±0.˚05×106.˚73E±0.˚07,h96km±7km,*
mb4.3/20, Error ellipse: s-maj=10.4km s-min=6.2km
az=66.0
*DJA **28** 06:47:37.7±0.2,7.˚3S±4.˚×107.˚7E±.˚,h105km±3km,M4.8/24,*
mB5.5/6,mb4.6/15,MLv4.7/24,Mw(mB)5.0/6
*IDC **28** 06:47:38.0±0.5,6.˚59S×107.˚18E,h121km±3km,mb3.9/12,*
mbtmp4.4/13,Error ellipse: s-maj=23.7km s-min=11.1km
az=41.0
ISC 28 06:47:36.4±0.4,7.˚15S±0.˚05×106.˚82E±0.˚05,h100km,n104,
σ2§05/101,mb4.3/20,Jawa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.30**	**298**	P		**Pn**	**06 47 54.3**	**+3.3**
CNJI	**Cibinong**	**0.35**	**118**	P		**Pn**	**06 47 53.3**	**+2.1**
DBJI	**Dramaga**	**0.59**	**353**	P		**Pn**	**06 47 55.7**	**+2.7**
LEM	**Lembang**	**0.85**	**68**	P		**Pn**	**06 47 56.9**	**+1.5**
	10μm,0.5s,baz=12,slow=2.2,SNR=848							
LEM				LR		LR	06 48 04.4	
	comp=Z,231nm,18.4s,baz=243,slow=53							
LEM				S		**Sn**	**06 48 11.4**	**+1.7**
	3μm,0.7s,baz=167,slow=22,SNR=9.7							
LEM	**Lembang**	**0.85**	**68**	P		**Pn**	**06 47 56.8**	**+1.4**
LEM				S		**Sn**	**06 48 12.3**	**+2.6**
TNG	**Tangerang**	**0.98**	**350**	P		Pn	06 48 02.9	+6.2
TNG				P		**Pn**	**06 47 59.1**	**+2.4**
TNG				S		**Sn**	**06 48 15.4**	**+3.5**
SBJI	**Serang**	**1.23**	**326**	P		**Pn**	**06 48 02.5**	**+3.1**
JCJI	**Jatiwangi**	**1.58**	**66**	P		**Pn**	**06 48 03.1**	**-0.5**
BLSI	**Bandar Lampung**	**2.36**	**318**	P		**Pn**	**06 48 16.7**	**+3.0**
KASI	**Kota Agung**	**2.82**	**305**	P		**Pn**	**06 48 23.2**	**+3.5**
KLI	**Kotabumi**	**2.99**	**319**	P		**Pn**	**06 48 25.1**	**+3.0**
LWLI	**Liwa**	**3.47**	**307**	P		**Pn**	**06 48 32.0**	**+3.5**
XMI	**Christmas Isla**	**3.47**	**199**	P		**Pn**	**06 48 29.1**	**+0.6**
YOGI	**Yogyakarta**	**3.51**	**101**	P		**Pn**	**06 48 29.2**	**+0.2**
XMIS	**Christmas Isla**	**3.51**	**199**	Pn		**Pn**	**06 48 29.3**	**+0.2**
XMIS				Sn		**Sn**	**06 49 08.2**	**-1.6**
XMIS	**Christmas Isla**	**3.51**	**199**	P		**Pn**	**06 48 29.6**	**+0.5**
SMRI	**Semarang**	**3.59**	**89**	Pn		**Pn**	**06 48 29.2**	**-0.9**
SMRI	**Semarang**	**3.59**	**89**	P		**Pn**	**06 48 31.3**	**+1.2**
SMRI	**Semarang**	**3.59**	**89**	P		**Pn**	**06 48 30.2**	**+0.1**
UGM	**Wanagama**	**3.75**	**102**	Pn		**Pn**	**06 48 32.1**	**-0.2**
UGM	**Wanagama**	**3.75**	**102**	P		**Pn**	**06 48 32.5**	**+0.3**
UGM	**Wanagama**	**3.75**	**102**	P		**Pn**	**06 48 33.1**	**+0.9**
PCJI	**Pacitan**	**4.44**	**104**	P		**Pn**	**06 48 42.0**	**+0.4**
NGJI	**Ngawi**	**4.61**	**93**	P		**Pn**	**06 48 45.7**	**+1.9**
PMBI	**Palembang**	**4.66**	**334**	P		Pn	06 48 48.8	+4.2
MNAI	**Manna**	**4.74**	**306**	Pn		**Pn**	**06 48 41.9**	**-3.8**
MNAI	**Manna**	**4.74**	**306**	P		**Pn**	**06 48 48.8**	**+3.2**
PPBI	**Pangkal Pinang**	**5.00**	**352**	P		**Pn**	**06 48 50.7**	**+1.6**
	1.1nm19μm98nm,0.6s							
PWJI	**Pagerwojo**	**5.01**	**100**	P		**Pn**	**06 48 49.9**	**+0.6**
KSI	**Kapahiang**	**5.46**	**309**	P		**Pn**	**06 48 58.4**	**+3.0**
	2.5nm15μm194nm,0.6s							
GMJI	**Gumukmas**	**6.66**	**100**	P		**Pn**	**06 49 14.5**	**+2.8**
	0.2nm54nm,0.8s							
BLJI	**Banyuglugur**	**6.74**	**96**	P		**Pn**	**06 49 17.2**	**+4.4**
DSRI	**Dabo**	**6.99**	**341**	P		**Pn**	**06 49 18.3**	**+2.1**
	0.1nm28nm,0.8s							
KMMI	**Kalianget**	**7.09**	**90**	P		**Pn**	**06 49 16.2**	**-1.4**
	0.3nm60nm,1.8s							
ABJI	**Asem Bagus**	**7.38**	**96**	P		**Pn**	**06 49 25.6**	**+4.1**
	2.3nm6μm688nm,0.7s							
JAGI	**Jajag, Banyuwa**	**7.38**	**101**	Pn		**Pn**	**06 49 22.0**	**+0.5**
JAGI	**Jajag, Banyuwa**	**7.38**	**101**	P		**Pn**	**06 49 22.5**	**+1.0**
	0.5nm3μm98nm,1.0s							
JAGI	**Jajag, Banyuwa**	**7.38**	**101**	P		**Pn**	**06 49 23.3**	**+1.8**
PPSI	**Pulau Pagai**	**8.06**	**302**	P		**Pn**	**06 49 31.2**	**+0.4**
	231nm,0.8s							
SRBI	**Singaraja**	**8.37**	**97**	P		**Pn**	**06 49 36.2**	**+1.2**
	79nm,0.5s							
SISI	**Saibi**	**9.63**	**307**	P		**Pn**	**06 49 50.5**	**-1.7**
	32nm,0.7s							
TWSI	**Taliwang, Sumb**	**10.09**	**100**	P		**Pn**	**06 49 56.3**	**-2.1**
	15nm,0.9s							
PLAI	**Plampang**	**10.98**	**99**	P		**Pn**	**06 50 07.4**	**-3.1**
	31nm,0.8s							
PLAI	**Plampang**	**10.98**	**99**	P		**Pn**	**06 50 08.7**	**-1.8**
GSI	**Gunungsitoli**	**12.47**	**312**	Pn		**Pn**	**06 50 26.1**	**-4.4**
EDFI	**Ende, Flores**	**14.81**	**97**	P		**Pn**	**06 51 00.8**	**-0.2**
	9.3nm,0.7s							
BATI	**Baumata**	**16.92**	**102**	P		**Pn**	**06 51 25.2**	**-2.0**
	36nm,0.5s,baz=205,slow=2.5,SNR=5.0							
GIRL	**Giralia**	**16.98**	**156**			**Pn**	**06 51 29.6**	**+1.7**

SOEI	**Soe**	**17.45**	**100**	P		**P**	**06 51 33.4**	**-0.1**
SOEI				IAmb		IAmb	06 51 47.7	
	comp=Z,41nm,1.0s							
SOEI	**Soe**	**17.45**	**100**	P		**P**	**06 51 33.0**	**-0.5**
	comp=Z,39nm,0.8s							
MBWA	**Marble Bar**	**18.71**	**139**			**P**	**06 51 49.0**	**+1.8**
MBWA				IAmb		IAmb	06 51 57.9	
	comp=Z,11nm,0.8s							
PSA00	**Pilbara Seismi**	**19.08**	**140**	P		**P**	**06 51 52.3**	**+1.1**
PSA00				IAmb		IAmb	06 52 15.4	
	comp=Z,10nm,0.8s							
FITZ	**Fitzroy Crossi**	**21.32**	**122**	P		**P**	**06 52 15.5**	**+0.1**
	comp=Z,4.3nm,0.8s,baz=309,slow=6.6,SNR=9.3							
	comp=Z,4.3nm,0.8s							
FITZ	**Fitzroy Crossi**	**21.32**	**122**	P		**P**	**06 52 16.1**	**+0.7**
KNRA	**Kununurra**	**23.10**	**113**	P		**P**	**06 52 33.5**	**-0.3**
KNRA				IAmb		IAmb	06 52 57.9	
	comp=Z,16nm,1.2s							
MTN	**Manton Dam**	**24.59**	**105**	P		**P**	**06 52 46.5**	**-1.0**
MTN				IAmb		IAmb	06 53 00.7	
	comp=Z,13nm,1.1s							
H01W3	**Cape Leeuwin H**	**28.42**	**167**	T		T	07 23 04.3	
	baz=347,slow=76,SNR=7.8							
H01W1	**Cape Leeuwin H**	**28.43**	**167**	T		T	07 23 08.7	
	baz=347,slow=76,SNR=7.4							
H01W2	**Cape Leeuwin H**	**28.43**	**167**	T		T	07 23 08.3	
	baz=347,slow=76,SNR=9.6							
WB0	**Warramunga Arr**	**29.54**	**118**	P		**P**	**06 53 31.5**	**-0.3**
WB0				IAmb		IAmb	06 53 53.7	
	comp=Z,5.5nm,1.1s							
WRA	**Warramunga Arr**	**29.56**	**118**	P		**P**	**06 53 31.8**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=289,slow=10.0,SNR=27							
	comp=Z,1.3nm,0.8s							
WB2	**Warramunga Arr**	**29.57**	**118**	P		**P**	**06 53 31.6**	**-0.4**
WB2				IAmb		IAmb	06 53 37.9	
	comp=Z,8.8nm,1.3s							
WR0	**Warramunga Arr**	**29.74**	**118**	P		**P**	**06 53 33.7**	**+0.1**
AS31	**Alice Springs**	**30.75**	**125**	P		**P**	**06 53 43.3**	**+0.8**
ASAR	**Alice Springs**	**30.75**	**125**	P		**P**	**06 53 42.8**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=302,slow=8.8,SNR=24							
ASAR				S		**S**	**06 58 36.5**	**-2.1**
	comp=Z,1.9nm,0.8s,baz=293,slow=15,SNR=12							
ASAR				ScP		**ScP**	**07 00 09.5**	**-2.2**
	comp=Z,0.5nm,0.9s,baz=320,slow=3.6,SNR=4.1							
	comp=Z,1.5nm,0.7s							
PZH	**PanZhiHua**	**33.81**	**352**	P		**P**	**06 54 10.0**	**+0.8**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.9s							
PZH				pmax		pmax		
	comp=Z,90nm,4.3s							
H08S2	**Diego Garcia H**	**34.04**	**267**	T		T	07 30 05.5	
	baz=92,slow=75,SNR=13							
H08S3	**Diego Garcia H**	**34.05**	**267**	T		T	07 30 00.9	
	baz=92,slow=75,SNR=11							
H08S1	**Diego Garcia H**	**34.06**	**267**	T		T	07 30 07.7	
	baz=92,slow=75,SNR=13							
STKA	**Stephens Creek**	**40.67**	**132**	P		**P**	**06 55 08.3**	**+1.2**
	comp=Z,4.1nm,0.6s,baz=306,slow=8.5,SNR=13							
	comp=Z,4.1nm,0.6s							
STKA	**Stephens Creek**	**40.67**	**132**	P		**P**	**06 55 08.4**	**+1.2**
HHC	**Hu-ho-hao-te**	**47.95**	**5**	*e*P		**P**	**06 56 07.5**	**+2.4**
HHC				pmax		pmax		
	comp=Z,21nm,0.8s							
HHC				pmax		pmax		
	comp=Z,240nm,5.0s							
WMQ	**Urumqi**	**53.60**	**343**	*e*P		**P**	**06 56 45.0**	**-2.4**
WMQ				pmax		pmax		
	comp=Z,53nm,0.9s							
SONM	**Songino Array**	**54.74**	**360**	ScP		**ScP**	**07 01 41.9**	**-4.6**
	comp=Z,0.7nm,0.6s,baz=170,slow=5.3,SNR=5.1							
MKAR	**Makanchi Array**	**57.96**	**340**	P		**P**	**06 57 15.1**	**-3.3**
	comp=Z,0.3nm,0.4

	comp=N,26408µm,0.2s							
ANKY	**Antikythira Is**	**0.30**	**174**	P	**Pn**	**07 07 26.3**	**-0.1**	
ANKY				S	**Sn**	**07 07 32.6**	**-1.4**	
	comp=N,7µm,0.5s							
ANKY	**Antikythira Is**	**0.30**	**174**	P	**Pn**	**07 07 26.0**	**-0.4**	
ANKY				S	**Sn**	**07 07 33.4**	**-0.6**	
ANKY				AML	AML	07 07 34.6		
	comp=E,14922µm,0.6s							
ANKY				AML	AML	07 07 35.2		
	comp=N,13603µm,0.4s							
MNVA	**Monemvasia**	**0.55**	**341**	P	**Pn**	**07 07 28.4**	**-0.3**	
MNVA				S	**Sn**	**07 07 37.9**	**-0.2**	
MNVA				AML	AML	07 07 38.9		
	comp=E,4765µm,0.3s							
MNVA				AML	AML	07 07 39.4		
	comp=N,3526µm,0.4s							
VLI	**Velíai**	**0.61**	**335**	P	**Pn**	**07 07 29.9**	**+0.4**	
VLI				S	**Sn**	**07 07 39.6**	**+0.3**	
	comp=N,2µm,0.5s							
VLI	**Velíai**	**0.61**	**335**	P	**Pn**	**07 07 29.3**	**-0.1**	
VLI				S	**Sn**	**07 07 38.7**	**-0.6**	
VLI				AML	AML	07 07 39.9		
	comp=N,3547µm,0.5s							
VLI				AML	AML	07 07 41.6		
	comp=E,2963µm,0.4s							
RODP	**Rodopos**	**0.72**	**146**	P	**Pn**	**07 07 30.5**	**-0.2**	
RODP				S	**Sn**	**07 07 40.6**	**-0.9**	
	comp=E,1µm,0.4s							
RODP	**Rodopos**	**0.72**	**146**	PG	**Pn**	**07 07 30.6**	**-0.2**	
CHAN	**Chania**	**0.90**	**135**	P	**Pn**	**07 07 32.2**	**-0.7**	
CHAN				AML	AML	07 07 48.2		
	comp=N,6178µm,0.5s							
CHAN				AML	AML	07 07 51.4		
	comp=E,5218µm,0.4s							
IMMV	**Iera Moni Meta**	**0.91**	**140**	P	**Pn**	**07 07 32.6**	**-0.4**	
IMMV	**Iera Moni Meta**	**0.91**	**140**	PG	**Pn**	**07 07 33.0**	**-0.1**	
IMMV	**Iera Moni Meta**	**0.91**	**140**	P	**Pn**	**07 07 32.6**	**-0.4**	
IMMV				AML	AML	07 07 54.2		
	comp=E,4393µm,0.5s							
IMMV				AML	AML	07 07 54.3		
	comp=N,5898µm,0.3s							
KNDR	**Palaiochora Ch**	**0.99**	**159**	P	**Pn**	**07 07 35.0**	**+1.0**	
KNDR				S	**Sn**	**07 07 49.0**	**+1.7**	
	comp=N,2µm,0.4s							
KNDR	**Palaiochora Ch**	**0.99**	**159**	PG	**Pn**	**07 07 35.3**	**+1.3**	
KNDR				SG	**Sn**	**07 07 49.5**	**+2.2**	
KNDR	**Palaiochora Ch**	**0.99**	**159**	P	**Pn**	**07 07 34.8**	**+0.8**	
KNDR				S	**Sn**	**07 07 49.0**	**+1.7**	
KNDR				AML	AML	07 07 50.2		
	comp=E,17085µm,0.4s							
KNDR				AML	AML	07 07 53.1		
	comp=N,10421µm,0.4s							
MHLO	**Agia Marina, M**	**1.06**	**60**	P	**Pn**	**07 07 34.5**	**-0.4**	
MHLO				S	**Sn**	**07 07 47.8**	**-1.2**	
	comp=N,14µm,0.5s							
MHLO	**Agia Marina, M**	**1.06**	**60**	P	**Pn**	**07 07 33.7**	**-1.3**	
MHLO				S	**Sn**	**07 07 46.1**	**-2.9**	
MHLO				AML	AML	07 07 49.3		
	comp=N,33615µm,0.5s							
MHLO				AML	AML	07 07 49.5		
	comp=E,20375µm,0.4s							
YDRA	**Hydra**	**1.20**	**8**	P	**Pn**	**07 07 36.0**	**-0.7**	
KRND	**KRANIDI**	**1.22**	**356**	P	**Pn**	**07 07 38.1**	**+1.0**	
KRND				S	**Sn**	**07 07 54.5**	**+1.7**	
	comp=E,4µm,0.3s							
KRND	**KRANIDI**	**1.22**	**356**	P	**Pn**	**07 07 37.5**	**+0.5**	
KRND				S	**Sn**	**07 07 53.0**	**+0.2**	
KRND				AML	AML	07 07 56.0		
	comp=E,9094µm,0.4s							
KRND				AML	AML	07 07 57.0		
	comp=N,7155µm,0.3s							
EPID	**Epidavros**	**1.45**	**356**	P	**Pn**	**07 07 41.5**	**+1.3**	
EPID				S	**Sn**	**07 08 00.7**	**+2.3**	
	comp=N,3µm,0.3s							
EPID	**Epidavros**	**1.45**	**356**	P	**Pn**	**07 07 40.9**	**+0.7**	
EPID				S	**Sn**	**07 07 59.4**	**+1.1**	
ITM	**Ithomi**	**1.48**	**314**	P	**Pn**	**07 07 42.6**	**+2.1**	
ITM	**Ithomi**	**1.48**	**314**	PN	**Pn**	**07 07 42.6**	**+2.1**	
ITM	**Ithomi**	**1.48**	**314**	P	**Pn**	**07 07 42.5**	**+2.0**	
GVDS	**Gavdos**	**1.48**	**153**	PN	**Pn**	**07 07 42.0**	**+1.5**	
GVD	**Gavdhos**	**1.48**	**153**	PN	**Pn**	**07 07 42.2**	**+1.7**	
GVD	**Gavdhos**	**1.48**	**153**	P	**Pn**	**07 07 42.5**	**+2.0**	
GVD				AML	AML	07 08 09.5		
	comp=E,2109µm,0.4s							
GVD				AML	AML	07 08 12.6		
	comp=N,1813µm,0.7s							
IDI	**Anoyia**	**1.59**	**123**	P	**Pn**	**07 07 41.1**	**-0.9**	
	comp=N,27nm,0.2s,baz=290,slow=10,SNR=56							
IDI				S	**Sn**	**07 08 01.5**	**-0.1**	
	comp=N,251nm,0.4s,baz=62,slow=19,SNR=16							
IDI	**Anoyia**	**1.59**	**123**	P	**Pn**	**07 07 41.5**	**-0.5**	
IDI				S	**Sn**	**07 08 01.2**	**-0.4**	
	comp=N,642nm,0.4s							
IDI	**Anoyia**	**1.59**	**123**	PN	**Pn**	**07 07 41.7**	**-0.3**	
IDI				SN	**Sn**	**07 08 00.8**	**-0.8**	
IDI	**Anoyia**	**1.59**	**123**	P	**Pn**	**07 07 42.0**	**0.0**	
IDI				AML	AML	07 08 10.9		
	comp=E,1348µm,0.3s							
IDI				AML	AML	07 08 11.3		
	comp=N,1888µm,0.3s							
TMBK	**Timbaki Herakl**	**1.64**	**131**	P	**Pn**	**07 07 43.5**	**+0.9**	
SIVA	**Sivas**	**1.70**	**132**	P	**Pn**	**07 07 45.4**	**+2.0**	
KSTL	**Kastelli Herak**	**1.70**	**120**	P	**Pn**	**07 07 47.4**	**+4.0**	
SAP3	**Santorini-Thir**	**1.71**	**80**	P	**Pn**	**07 07 43.2**	**-0.3**	
THR5	**Thira Island,**	**1.71**	**81**	P	**Pn**	**07 07 43.2**	**-0.4**	
THR5	**Thira Island,**	**1.71**	**81**	P	**Pn**	**07 07 43.1**	**-0.4**	
THR9	**Santorini-Faro**	**1.71**	**83**	P	**Pn**	**07 07 43.0**	**-0.5**	
HRKL	**Herakleio**	**1.72**	**119**	P	**Pn**	**07 07 43.5**	**-0.2**	
HRKL	**Herakleio**	**1.72**	**119**	PN	**Pn**	**07 07 43.5**	**-0.2**	
HRKL	**Herakleio**	**1.72**	**119**	P	**Pn**	**07 07 44.1**	**+0.4**	
HRKL				AML	AML	07 08 14.4		
	comp=E,10279µm,0.5s							
HRKL				AML	AML	07 08 23.0		
	comp=N,9314µm,0.5s							
THR6	**Thira Island,**	**1.74**	**83**	P	**Pn**	**07 07 43.9**	**0.0**	
VLY	**Voula,Athens**	**1.74**	**14**	P	**Pn**	**07 07 44.2**	**+0.2**	
VLY				S	**Sn**	**07 08 05.8**	**+0.6**	
	comp=N,858nm,0.4s							
VLY	**Voula,Athens**	**1.74**	**14**	P	**Pn**	**07 07 44.2**	**+0.2**	
VLY				AML	AML	07 08 07.5		
	comp=N,1858µm,0.5s							
VLY				AML	AML	07 08 08.9		
	comp=E,1560µm,0.3s							
THR3	**Thira Island,**	**1.75**	**81**	P	**Pn**	**07 07 43.5**	**-0.5**	
SANT	**Santorini**	**1.79**	**83**	P	**Pn**	**07 07 44.3**	**-0.4**	
SANT	**Santorini**	**1.79**	**83**	PN	**Pn**	**07 07 43.5**	**-1.2**	
SANT	**Santorini**	**1.79**	**83**	P	**Pn**	**07 07 44.2**	**-0.5**	
SANT				AML	AML	07 08 11.1		
	comp=E,1965µm,0.3s							
SANT				AML	AML	07 08 13.8		
	comp=N,953µm,0.3s							
THR8	**Santorini-Mono**	**1.81**	**82**	P	**Pn**	**07 07 44.6**	**-0.3**	
LOUT	**Loutraki**	**1.84**	**353**	P	**Pn**	**07 07 46.3**	**+1.0**	
ATH	**Athens Observa**	**1.84**	**11**	P	**Pn**	**07 07 45.6**	**+0.2**	
ATH	**Athens Observa**	**1.84**	**11**	P	**Pn**	**07 07 45.9**	**+0.5**	
ATH				S	**Sn**	**07 08 09.0**	**+1.3**	
ATH				AML	AML	07 08 12.6		
	comp=E,2260µm,0.4s							
ATH				AML	AML	07 08 12.8		
	comp=N,1824µm,0.4s							
ATHU	**Athens Univers**	**1.85**	**13**	P	**Pn**	**07 07 45.6**	**+0.1**	
ATHU				S	**Sn**	**07 08 07.5**	**-0.3**	
	comp=N,348nm,0.5s							
ATHU	**Athens Univers**	**1.85**	**13**	P	**Pn**	**07 07 45.5**	**0.0**	
ATHU				S	**Sn**	**07 08 08.3**	**+0.5**	
THAL	**Thalero**	**1.93**	**346**	P	**Pn**	**07 07 48.1**	**+1.5**	
THAL	**Thalero**	**1.93**	**346**	P	**Pn**	**07 07 47.9**	**+1.3**	
THAL				AML	AML	07 08 18.0		
	comp=E,4487µm,0.5s							
THAL				AML	AML	07 08 21.7		
	comp=N,3925µm,0.3s							
DION	**Dionisos Attik**	**1.99**	**16**	P	**Pn**	**07 07 47.8**	**+0.5**	
DION				S	**Sn**	**07 08 11.3**	**+0.1**	
	comp=N,4µm,0.4s							
DION	**Dionisos Attik**	**1.99**	**16**	P	**Pn**	**07 07 47.6**	**+0.3**	
DION				AML	AML	07 08 12.9		
	comp=N,5409µm,0.4s							
DION				AML	AML	07 08 16.6		
	comp=E,2036µm,0.5s							
VILL	**Villia**	**2.00**	**1**	P	**Pn**	**07 07 48.3**	**+0.8**	
VILL				S	**Sn**	**07 08 12.3**	**+0.8**	
	comp=E,1µm,0.6s							
APE	**Apeiranthos**	**2.04**	**63**	P	**Pn**	**07 07 47.5**	**-0.6**	
APE	**Apeiranthos**	**2.04**	**63**	PN	**Pn**	**07 07 46.4**	**-1.7**	
VIL2	**Platees**	**2.05**	**0**	P	**Pn**	**07 07 48.4**	**+0.2**	
VIL2				AML	AML	07 08 18.9		
	comp=E,2184µm,0.5s							
VIL2				AML	AML	07 08 19.8		
	comp=N,1392µm,0.4s							
KLV	**Kalavryta, Ach**	**2.08**	**335**	P	**Pn**	**07 07 50.5**	**+1.9**	
KLV	**Kalavryta, Ach**	**2.08**	**335**	P	**Pn**	**07 07 50.4**	**+1.8**	
KLV				AML	AML	07 08 20.3		
	comp=E,878µm,0.4s							
KLV				AML	AML	07 08 22.1		
	comp=N,906µm,0.5s							
AMGA	**Amorgos Island**	**2.23**	**72**	P	**Pn**	**07 07 50.3**	**-0.3**	
AMGA				S	**Sn**	**07 08 14.9**	**-2.1**	
	comp=N,708nm,0.4s							
LAKA	**Lakka**	**2.31**	**334**	P	**Pn**	**07 07 54.0**	**+2.2**	
LAKA	**Lakka**	**2.31**	**334**	P	**Pn**	**07 07 54.4**	**+2.6**	
LAKA				AML	AML	07 08 30.7		
	comp=E,1901µm,0.5s							
LAKA				AML	AML	07 08 33.2		
	comp=N,1526µm,0.7s							
LKR	**Lokris**	**2.49**	**355**	P	**Pn**	**07 07 54.2**	**0.0**	
ATAL	**Atalanti**	**2.53**	**356**	P	**Pn**	**07 07 56.1**	**+1.3**	
ZKR	**Zakros**	**2.62**	**113**	PN	**Pn**	**07 07 56.2**	**+0.2**	
AXAR	**Agios Charalam**	**2.64**	**350**	P	**Pn**	**07 07 58.2**	**+1.9**	
KOSK	**Kos Island**	**3.06**	**78**	PN	**Pn**	**07 08 01.1**	**-0.7**	
KARP	**Karpathos**	**3.23**	**100**	PN	**Pn**	**07 08 04.3**	**0.0**	
ZEYE	**Izmir, Urla-Ze**	**3.32**	**50**	P	**Pn**	**07 08 04.8**	**-0.6**	
ZEYE				S	**Sn**	**07 08 40.0**	**-3.6**	
ZEYE				*i* AML	AML	07 08 46.0		
	comp=N,18nm,0.7s							
ZEYE				*i* AML	AML	07 08 46.0		
	comp=N,48nm,1.3s							
ZEYE				*i* AML	AML	07 09 04.0		
	comp=N,25nm,0.7s							
BODT	**Bodrum**	**3.38**	**73**	PN	**Pn**	**07 08 05.5**	**-0.8**	
URLA	**Izmir**	**3.45**	**49**	PN	**Pn**	**07 08 05.9**	**-1.4**	
URLA	**Izmir**	**3.45**	**49**	P	**Pn**	**07 08 05.7**	**-1.6**	
URLA				S	**Sn**	**07 08 44.3**	**-2.6**	
URLA				*i* AML	AML	07 08 47.0		
	comp=N,57nm,0.5s							
URLA				*i* AML	AML	07 08 49.0		
	comp=N,25nm,1.0s							
URLA				*i* AML	AML	07 08 54.0		
	comp=N,59nm,1.0s							
DGB	**zmir**	**3.46**	**56**	P	**Pn**	**07 08 06.8**	**-0.5**	
DGB				S	**Sn**	**07 08 43.8**	**-3.2**	
DGB				*i* AML	AML	07 09 04.0		
	comp=N,15nm,1.3s							
DGB				*i* AML	AML	07 09 38.0		
	comp=N,17nm,2.4s							
DGB				*i* AML	AML	07 09 40.0		
	comp=N,16nm,1.8s							
BDRM	**Kayabasi**	**3.48**	**74**	P	**Pn**	**07 08 07.8**	**0.0**	
BDRM				S	**Sn**	**07 08 44.8**	**-2.9**	
BDRM				*i* AML	AML	07 08 51.0		
	comp=N,15nm,1.0s							
BDRM				*i* AML	AML	07 08 53.0		
	comp=N,17nm,1.3s							
BDRM				*i* AML	AML	07 10 02.0		
	comp=N,1.2nm,3.6s							
DAT	**Datca**	**3.53**	**79**	PN	**Pn**	**07 08 07.9**	**-0.5**	
GCAM	**G?zelcaml?**	**3.53**	**63**	PN	**Pn**	**07 08 07.9**	**-0.5**	
SIGR	**SIGRI**	**3.67**	**33**	PN	**Pn**	**07 08 09.6**	**-0.7**	
ARG	**Arkhangelos**	**3.94**	**88**	PN	**Pn**	**07 08 14.2**	**+0.3**	
AYDN	**Tasoluk**	**3.99**	**67**	P	**Pn**	**07 08 15.4**	**+0.7**	
AYDN				S	**Sn**	**07 08 60.0**	**-0.3**	
AYDN				*i* AML	AML	07 09 14.0		
	comp=N,12nm,1.3s							
AYDN				*i* AML	AML	07 09 17.0		
	comp=N,11nm,1.2s							
AYDN				*i* AML	AML	07 09 26.0		
	comp=N,12nm,0.7s							
TURN	**Turunc**	**4.06**	**80**	PN	**Pn**	**07 08 16.2**	**+0.6**	
TURN	**Turunc**	**4.06**	**80**	P	**Pn**	**07 08 17.4**	**+1.8**	
TURN				S	**Sn**	**07 09 05.6**	**+3.7**	
TURN				*i* AML	AML	07 09 09.0		
	comp=N,29nm,0.7s							
TURN				*i* AML	AML	07 09 15.0		
	comp=N,18nm,0.8s							
TURN				*i* AML	AML	07 09 17.0		
	comp=N,18nm,1.1s							
AYDB	**Zeytinkoy-Aydi**	**4.11**	**63**	PN	**Pn**	**07 08 16.5**	**+0.1**	
YER	**Yerkesik**	**4.15**	**75**	PN	**Pn**	**07 08 16.8**	**-0.1**	
EZN	**Ezine**	**4.39**	**33**	PN	**Pn**	**07 08 20.1**	**+0.1**	
HORT	**Hortiatis**	**4.43**	**358**	PN	**Pn**	**07 08 22.3**	**+1.6**	
TAVA	**DENIZLI_Tavas**	**4.72**	**72**	P	**Pn**	**07 08 27.4**	**+2.7**	
TAVA				S	**Sn**	**07 09 20.1**	**+1.9**	
SRS	**Serrai**	**4.96**	**3**	*e*Pn	**Pn**	**07 08 29.2**	**+1.4**	
SRS				*e*Sn	**Sn**	**07 09 22.9**	**-0.9**	
AKAS	**Kas**	**5.13**	**87**	P	**Pn**	**07 08 29.8**	**-0.6**	
AKAS				S	**Sn**	**07 09 26.9**	**-1.4**	
AKAS				*i* AML	AML	07 09 29.0		
	comp=N,31nm,1.6s							
AKAS				*i* AML	AML	07 09 39.0		
	comp=N,43nm,0.8s							
AKAS				*i* AML	AML	07 09 50.0		
	comp=N,16nm,1.3s							
GOLH	**Golhisar**	**5.17**	**76**	P	**Pn**	**07 08 34.0**	**+3.1**	
VAY	**Valandovo**	**5.18**	**354**	*e*Pn	**Pn**	**07 08 33.6**	**+2.7**	
OHR	**Ohrid**	**5.30**	**339**	*e*Pn	**Pn**	**07 08 34.8**	**+2.1**	
PASA	**Karahalli, USA**	**5.42**	**64**	P	**Pn**	**07 08 36.5**	**+2.1**	
PASA				*i* AML	AML	07 09 41.0		
	comp=N,3.9nm,1.2s							
PASA				*i* AML	AML	07 09 55.0		
	comp=N,2.7nm,0.8s							
PASA				*i* AML	AML	07 10 59.0		
	comp=N,1.4nm,1.2s							
SCTE	**Santa Cesarea**	**5.43**	**317**	⇑P	**Pn**	**07 08 34.9**	**+0.5**	
SCTE				S	**Sn**	**07 09 30.9**	**-4.6**	
SCTE				AML	AML			
	comp=E,140µm,1.2s							
SCTE				AML	AML			
	comp=N,128µm,0.4s							
PIPA	**Pietrapaola**	**6.08**	**305**	⇓P	**Pn**	**07 08 43.8**	**+0.4**	
PIPA				S	**Sn**	**07 09 45.6**	**-5.9**	
PIPA				AML	AML			
	comp=E,41µm,0.2s							
PIPA				AML	AML			
	comp=N,35µm,0.5s							
BOSS	**Bosilegrad**	**6.36**	**355**	*e*Pn	**Pn**	**07 08 49.2**	**+2.2**	
PRVS	**Prvonek**	**6.40**	**352**	*e*Pn	**Pn**	**07 08 49.8**	**+2.1**	
SALB	**San Lorenzo Be**	**6.60**	**306**	P	**Pn**	**07 08 50.8**	**+0.3**	
SALB				S	**Sn**	**07 09 57.4**	**-6.9**	
NOCI	**Noci**	**6.70**	**315**	P	**Pn**	**07 08 51.9**	**+0.1**	
NOCI				S	**Sn**	**07 09 59.7**	**-7.0**	
LTRZ	**Laterza**	**6.73**	**313**	⇓P	**Pn**	**07 08 51.8**	**-0.3**	
LTRZ				S	**Sn**	**07 10 00.5**	**-6.8**	
KEPZ	**Antalya-Kepez**	**6.76**	**81**	P	**Pn**	**07 08 53.9**	**+1.4**	
KEPZ				S	**Sn**	**07 10 07.4**	**-0.7**	
KEPZ				*i* AML	AML	07 10 14.0		
	comp=N,8.1nm,1.1s							
KEPZ				*i* AML	AML	07 10 15.0		
	comp=N,9.0nm,1.6s							
KEPZ				*i* AML	AML	07 10 20.0		
	comp=N,2.7nm,0.4s							
MEU	**Monte Lauro**	**6.76**	**280**	S	**Sn**	**07 09 60.0**	**-8.3**	
HLNI	**Lentini**	**6.84**	**282**	S	**Sn**	**07 10 04.0**	**-6.0**	
SCHR	**S. Chirico Rap**	**6.95**	**308**	P	**Pn**	**07 08 56.6**	**+1.4**	
MIGL	**Miglionico**	**6.95**	**312**	⇑P	**Pn**	**07 08 55.6**	**+0.4**	
MIGL				S	**Sn**	**07 10 07.1**	**-5.7**	
PDG	**Podgorica**	**6.99**	**335**	*e*Pn	**Pn**	**07 08 55.9**	**+0.3**	
PDG				*e*Sn	**Sn**	**07 10 09.4**	**-4.2**	
CUC	**Castrocucco**	**7.01**	**305**	⇓P	**Pn**	**07 08 57.3**	**+1.3**	
CUC				AML	AML			
	comp=E,67µm,0.5s							
CUC				AML	AML			
	comp=N,31µm,0.5s							
AMUR	**Altamura**	**7.05**	**314**	⇑P	**Pn**	**07 08 56.6**	**+0.1**	
AMUR				AML	AML			
	comp=E,60µm,1.5s							
AMUR				AML	AML			
	comp=N,51µm,0.6s							
SIRI	**Monte Sirino -**	**7.07**	**307**	⇓P	**Pn**	**07 08 58.1**	**+1.2**	
SIRI				AML	AML			
	comp=E,81µm,0.3s							
SIRI				AML	AML			
	comp=N,65µm,0.5s							
SIRI				AML	AML			
	comp=N,65µm,0.5s							
SIRI				AML	AML			
	comp=E,67µm,0.3s							
PTRP	**Pietrapertosa**	**7.14**	**310**	P	**Pn**	**07 08 58.2**	**+0.4**	
PTRP				AML	AML			
	comp=E,34µm,1.4s							
PTRP				AML	AML			
	comp=N,47µm,0.5s							
MCEL	**Monticello**	**7.19**	**308**	⇓P	**Pn**	**07 08 59.5**	**+1.0**	
MCEL				AML	AML			
	comp=N,32µm,0.4s							
MCEL				AML	AML			
	comp=E,39µm,0.4s							
MTSN	**Montesano sull**	**7.19**	**307**	⇑P	**Pn**	**07 08 59.3**	**+0.8**	
MTSN				AML	AML			
	comp=N,34µm,0.3s							
MTSN				AML	AML			
	comp=E,33µm,1.6s							
MRVN	**Minervino Murg**	**7.38**	**314**	⇓P	**Pn**	**07 09 00.8**	**-0.3**	
MRVN				AML	AML			
	comp=N,33µm,1.3s							
MRVN				AML	AML			
	comp=E,33µm,0.2s							
PALZ	**Palazzo San Ge**	**7.45**	**312**	⇓P	**Pn**	**07 09 02.3**	**+0.3**	
SJES	**Sjenica**	**7.53**	**341**	*e*Pn	**Pn**	**07 09 04.2**	**+1.1**	
SJES				*e*Sn	**Sn**	**07 10 24.9**	**-2.1**	
TREB	**Trebinje**	**7.57**	**331**	*e*Pn	**Pn**	**07 09 02.0**	**-1.6**	
TREB				*e*Sn	**Sn**	**07 10 21.2**	**-6.6**	
IVAS	**Ivanjica**	**7.78**	**343**	*e*Pn	**Pn**	**07 09 04.8**	**-1.7**	
IVAS				*e*Sn	**Sn**	**07 10 28.6**	**-4.5**	
STON	**Ston**	**7.96**	**329**	*e*Pn	**Pn**	**07 09 05.8**	**-3.1**	
STON				*e*Sn	**Sn**	**07 10 28.5**	**-8.9**	
BBLS	**Lazići**	**8.24**	**340**	*e*Pn	**Pn**	**07 09 11.5**	**-1.4**	
BBLS				*e*Sn	**Sn**	**07 10 42.6**	**-1.9**	
BRTR	**Keskin Array B**	**8.94**	**63**	P	**Pn**	**07 09 26.4**	**+3.9**	
	comp=E,4.4nm,0.8s,baz=249,slow=14,SNR=18							
MLR	**Muntele Rosu**	**9.54**	**11**	P	**Pn**	**07 09 34.0**	**+3.4**	
	comp=E,1.0nm,0.5s,baz=197,slow=10,SNR=3.5							
TERO	**Teramo**	**9.87**	**314**	⇑P	Pn	07 09 42.0	+7.0	
VIVA	**Pratoni del Vi**	**9.89**	**308**	⇓P	**Pn**	**07 09 34.8**	**-0.6**	
VIVA				AML	AML			
	comp=E,576µm,0.1s							
VIVA				AML	AML			
	comp=N,650µm,0.1s							
T1243	**Rocca Santa Ma**	**10.01**	**314**	⇓P	**Pn**	**07 09 40.6**	**+3.6**	
T1243				AML	AML			
	comp=E,349µm,0.7s							
T1243				AML	AML			
	comp=N,422µm,0.2s							
RM33	**Pellescritta (**	**10.03**	**312**	⇑P	**Pn**	**07 09 39.9**	**+2.5**	
MMO1	**Montemonaco**	**10.20**	**314**	⇑P	Pn	07 09 45.0	+5.4	
MC2	**Monte Cornacci**	**10.29**	**314**	⇓P	**Pn**	**07 09 45.1**	**+4.1**	
CSP1	**Cessapalombo**	**10.39**	**315**	P	Pn	07 09 48.1	+5.9	
FDMO	**Fiordimonte**	**10.42**	**314**	P	**Pn**	**07 09 46.1**	**+3.5**	
BDI	**Bagni Di Lucca**	**12.49**	**313**	P	**Pn**	**07 10 15.2**	**+4.3**	
GERES	**GERESS Array B**	**14.49**	**334**	P	**Pn**	**07 10 37.8**	**+0.2**	
	comp=N,0.2nm,0.3s,baz=160,slow=15,SNR=4.0							
HFS	**Hagfors**	**24.77**	**349**	P	**P**	**07 12 30.9**	**-0.6**	
	comp=N,0.5nm,0.4s,baz=159,slow=13,SNR=5.6							
	comp=N,0.5nm,0.4s							
NOA	**NORSAR Array B**	**26.05**	**347**	P	**P**	**07 12 42.4**	**-0.8**	
	comp=N,0.2nm,0.6s,baz=149,slow=9.5,SNR=1.8							
	comp=N,0.2nm,0.6s							
EKA	**Eskdalemuir Ar**	**26.33**	**325**	P	**P**	**07 12 46.2**	**+0.5**	
	comp=N,0.5nm,0.4s,baz=122,slow=8.5,SNR=8.9							
	comp=N,0.5nm,0.4s							
MKAR	**Makanchi Array**	**44.52**	**57**	P	**P**	**07 15 20.6**	**-0.7**	
	comp=N,0.9nm,0.7s,baz=279,slow=6.9,SNR=11							
	comp=N,0.9nm,0.7s							

ROM 28 07:07:51.7±0.0, 42°.756N±0°.003×13°.221E±0°.004, h10km, ML1.4/7, 5C-2D, Error ellipse: s-maj=0.4km s-min=0.1km az=246.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.11**	**315**	⇑P	Pg	07 07 54.9	+0.4
NRCA				S	Sg	07 07 56.8	+0.2
NRCA				AML	AML		
	comp=E,1680µm,0.1s						
NRCA				AML	AML		
	comp=N,1215µm,0.7s						
NRCA				AML	AML		
	comp=E,1675µm,0.1s						
NRCA				AML	AML		
	comp=N,1210µm,0.7s						
NRCA				AML	AML		
	comp=N,1209µm,0.7s						
NRCA				AML	AML		
	comp=N,1275µm,0.7s						
NRCA				AML	AML		
	comp=E,1850µm,0.1s						
MC2	**Monte Cornacci**	**0.16**	**352**	⇑P	Pg	07 07 56.0	+0.6
MC2				S	Sg	07 07 59.1	+1.1
MMO1	**Montemonaco**	**0.16**	**29**	AML	AML		
	comp=N,187µm,1.6s						
MMO1				AML	AML		
	comp=E,138µm,0.3s						
T1243	**Rocca Santa Ma**	**0.18**	**109**	⇑P	Pg	07 07 56.3	+0.7
T1243				S	Sg	07 07 59.3	+1.0
T1243				AML	AML		
	comp=E,286µm,0.6s						
T1243				AML	AML		
	comp=E,326µm,0.3s						
T1243				AML	AML		
	comp=N,300µm,0.2s						
LNSS	**Leonessa**	**0.20**	**221**	⇓P	Pg	07 07 56.7	+0.7
LNSS				S	Sg	07 08 00.3	+1.4
LNSS				AML	AML		
	comp=E,172µm,0.2s						
LNSS				AML	AML		
	comp=N,237µm,0.1s						
LNSS				AML	AML		
	comp=E,172µm,0.2s						
RM33	**Pellescritta (**	**0.25**	**181**	P	Pg	07 07 57.6	+0.8
RM33				S	Sg	07 08 01.8	+1.6
RM33				AML	AML		
	comp=E,105µm,1.0s				

0.2nm,0.7s
ASAR Alice Springs 21.15 179 P P 07 14 40.4 +0.7
2.7nm,0.6s,baz=352,slow=11,SNR=52
2.7nm,0.6s
MKAR Makanchi Array 66.45 324 P P 07 20 42.6 -1.5
0.4nm,0.6s,baz=116,slow=6.8,SNR=3.8
0.4nm,0.6s
KURBB Kurchatov Arra 70.55 326 P P 07 21 10.8 +1.2
0.2nm,0.4s,baz=127,slow=5.9,SNR=4.7
0.2nm,0.4s

IDC ***28*** *07:23:45.8±0.3,2.˙78S×138.˙53E, h0km, mb5.3/31, mbtmp5.4/36, ML5.0/6, MS5.0/46, Error ellipse: s-maj=13.7km s-min=9.6km az=86.0*

BJI ***28*** *07:23:48.8±0.0,3.˙03S×138.˙74E, h49km, mb5.3/90, mB5.5/64, Ms5.3/90, Ms7 5.1/88*

MOS ***28*** *07:23:50.2±0.9,2.˙82S×138.˙41E, h45km, mb5.7/56, MS5.0/31, Error ellipse: s-maj=7.8km s-min=4.4km az=109.7*

DJA ***28*** *07:23:52.7±0.2,3.˚S±2.˚×13.˚8E±.˚, h50km±2km, M5.4/105, mB5.9/78, mb5.6/105, MLv5.7/7, Mw(mB)5.5/78, MwMwp5.2/29, Mwp5.5/29*

NEIC ***28*** *07:23:52.4±1.6,2.˚79S±0.˙07×138.˙43E±0.˙06, h42km±3km, mb5.7/284, Ms_20 5.2/363, Mww5.5, Error ellipse: s-maj=10.2km s-min=8.8km az=173.0*

GCMT ***28*** *07:23:52.4±0.1,2.˙81S±0.˙01×138.˙63E±0.˙01, h32km, MW5.4/137, Moment Tensor Solution. s137,c243; s136,c247; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr-1.25±.03; Mθθ0.68±.02; Mϕϕ0.57±.02; Mrθ-0.91±.03; Mθϕ1.10±.01; Mϕr-0.06±.03; Best double couple: Mo1.78200×10¹⁷ NP1:ϕs69.00000°, δ62.00000°, λ-63.00000°. NP2:ϕs201.00000°, δ38.00000°, λ-131.00000°. Principal axes: T 1.8880, Plg13.0000°, Azm140.0000°; N -0.2120, Plg24.0000°, Azm236.0000°; P -1.6750, Plg62.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***28*** *07:23:53,2˙92S×138˙63E, h54km, mb5.8*

NEIC ***28*** *07:23:53,2˙68S×138˙62E, h36km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10¹⁷Nm; Mrr-1.06; Mθθ0.54; Mϕϕ0.52; Mrθ-1.20; Mθϕ1.67; Mϕr-0.16; Fault plane solution: Mo2.25000×10¹⁷ NP1: ϕs188.00000°, δ45.00000°, λ-152.00000°. NP2: ϕs78.00000°, δ71.00000°, λ-48.00000°. Principal axes: T 2.4718, Plg16.0000°, Azm138.0000°; N -0.5272, Plg39.0000°, Azm242.0000°; P -1.9446, Plg47.0000°, Azm31.0000°;*

ISC 28 07:23:51.4±0.2,2˙90S±0˙03×138˙45E±0˙03, h43km±1km, h43km:pP-P,n1508,σ1s52/1377, mb5.6/270, MS5.2/282, 25C-48D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.94**	**16**	P	**Pn**	**07 24 06.7**	**-1.5**
SMPI				S	**Sn**	**07 24 21.6**	**+1.0**
GENI	**Genyem**	**1.75**	**80**	P	**Pn**	**07 24 19.5**	**+0.3**
GENI				S	**Sn**	**07 24 40.7**	**+0.4**
GENI	**Genyem**	**1.75**	**80**	P	**Pn**	**07 24 20.0**	**+0.8**
SRPI	**Serui, Papua**	**2.43**	**295**	P	**Pn**	**07 24 29.3**	**+0.6**
SRPI				S	**Sn**	**07 24 57.3**	**+0.1**
BAKI	**Biak**	**2.89**	**306**	P	**Pn**	**07 24 34.8**	**-0.2**
FAKI	**Fak Fak**	**6.19**	**270**	Pn	**Pn**	**07 25 21.9**	**+1.5**
FAKI	**Fak Fak**	**6.19**	**270**	P	**Pn**	**07 25 22.5**	**+2.2**
2.0nm19µm5µm442nm,0.9s							
FAKI	**Fak Fak**	**6.19**	**270**	P	**Pn**	**07 25 22.6**	**+2.2**
SIJI	**Sorong**	**7.46**	**286**	Pn	**Pn**	**07 25 39.3**	**+1.6**
104nm,0.3s,baz=62,slow=16,SNR=86							
SIJI				Sn	**Sn**	**07 26 59.9**	**-1.2**
baz=90,slow=20							
SWI	**Sorong**	**7.46**	**286**	P	**Pn**	**07 25 39.1**	**+1.3**
3.3nm21µm9µm888nm,0.8s							
BNDI	**Bandanaira**	**8.68**	**259**	P	**Pn**	**07 25 57.6**	**+3.2**
10µm44µm668nm,1.1s							
BNDI	**Bandanaira**	**8.68**	**259**	P	**Pn**	**07 25 57.0**	**+2.6**
SAUI	**Saumlaki**	**8.72**	**234**	Pn	**Pn**	**07 25 57.6**	**+2.6**
SAUI	**Saumlaki**	**8.72**	**234**	P	**Pn**	**07 25 59.7**	**+4.6**
21µm3µm,0.9s							
MANU	**Manus Island**	**8.95**	**85**		**Pn**	**07 25 59.8**	**+1.5**
MSAI	**Masohi**	**9.52**	**267**	P	**Pn**	**07 26 09.0**	**+3.1**
766nm69nm,1.1s							
AAI	**Ambon**	**10.27**	**265**	P	**Pn**	**07 26 19.3**	**+3.1**
9µm4µm433nm,1.1s							
LBMI	**Labuha**	**11.17**	**281**	P	**Pn**	**07 26 30.8**	**+2.2**
6µm4µm461nm,1.0s							
NLAI	**Namlea**	**11.34**	**268**	P	**Pn**	**07 26 33.4**	**+2.5**
3µm311nm,1.1s							
KDU	**Kakadu**	**11.38**	**211**	P	**Pn**	**07 26 32.3**	**+0.9**
baz=12,SNR=438							
KDU	**Kakadu**	**11.38**	**211**	P	**Pn**	**07 26 33.3**	**+1.9**
TNTI	**Ternate**	**11.66**	**288**	Pn	**Pn**	**07 26 35.8**	**+0.5**
TNTI	**Ternate**	**11.66**	**288**	P	**Pn**	**07 26 38.7**	**+3.3**
7µm3µm116nm,0.9s							
TNTI	**Ternate**	**11.66**	**288**	P	**Pn**	**07 26 36.2**	**+0.8**
COEN	**Coen**	**11.94**	**157**	P	**Pn**	**07 26 39.6**	**+0.6**
baz=12,SNR=540							
COEN	**Coen**	**11.94**	**157**	Pn	**Pn**	**07 26 40.5**	**+1.5**
COEN	**Coen**	**11.94**	**157**	P	**Pn**	**07 26 40.6**	**+1.5**
MTN	**Manton Dam**	**12.24**	**216**	P	**Pn**	**07 26 44.3**	**+1.0**
baz=12,SNR=258							
MTN	**Manton Dam**	**12.24**	**216**	Pn	**Pn**	**07 26 44.3**	**+1.0**
MTN	**Manton Dam**	**12.24**	**216**	P	**Pn**	**07 26 45.4**	**+2.1**
SANI	**Sanana**	**12.48**	**274**	P	**Pn**	**07 26 45.7**	**-0.8**
7µm2µm195nm,1.0s							
SANI	**Sanana**	**12.48**	**274**	P	**Pn**	**07 26 48.0**	**+1.5**
KRVT	**Keravat (AS076**	**13.62**	**96**	Pn	**Pn**	**07 27 03.8**	**+1.6**
6.7nm,0.3s,baz=352,slow=21,SNR=7.2							
RABL	**Rabaul**	**13.75**	**96**		**Pn**	**07 27 04.3**	**+0.4**
RABL	**Rabaul**	**13.75**	**96**	P	**Pn**	**07 27 04.7**	**+0.8**
SGSI	**Sangihe**	**14.48**	**297**	P	P	07 27 31.6	+12
KMSI	**Cibinong**	**14.87**	**283**	P	**Pn**	**07 27 20.9**	**+2.0**
6µm549nm,1.0s							
SOEI	**Soe**	**15.64**	**244**	Pn	**Pn**	**07 27 28.2**	**-1.0**
SOEI	**Soe**	**15.64**	**244**	P	**Pn**	**07 27 29.9**	**+0.7**
2µm17µm2µm,1.0s							
SOEI	**Soe**	**15.64**	**244**	P	**Pn**	**07 27 30.7**	**+1.5**
LUWI	**Luwuk**	**15.78**	**276**	Pn	**Pn**	**07 27 30.9**	**+0.2**
LUWI				IAmb	IAmb	07 27 33.4	
comp=Z,1µm,1.3s							
LUWI	**Luwuk**	**15.78**	**276**	P	**Pn**	**07 27 30.7**	**0.0**
comp=Z,4µmcomp=Z,10µmcomp=Z,713nm,1.2s							
LUWI	**Luwuk**	**15.78**	**276**	P	**Pn**	**07 27 31.6**	**+0.9**
GTOI	**Gorontalo**	**15.83**	**283**	P	**P**	**07 27 33.5**	**-1.1**
comp=Z,1µmcomp=Z,126nm,1.0s							
KNRA	**Kununurra**	**15.88**	**216**	P	**Pn**	**07 27 32.1**	**+0.1**
baz=16,SNR=403							
KNRA	**Kununurra**	**15.88**	**216**	Pn	**Pn**	**07 27 31.8**	**-0.2**
KNRA				IAmb	IAmb	07 27 43.7	
comp=Z,583nm,0.7s							
KNRA	**Kununurra**	**15.88**	**216**	P	**Pn**	**07 27 33.2**	**+1.2**
BBSI	**Bau Bau**	**16.04**	**260**	P	**P**	**07 27 37.2**	**+0.2**
comp=Z,627nmcomp=Z,68nm,1.1s							
MTSU	**Mount Surprise**	**16.19**	**160**	P	**Pn**	**07 27 36.1**	**0.0**
baz=16,SNR=262							
MTSU	**Mount Surprise**	**16.19**	**160**	P	**P**	**07 27 37.8**	**-0.9**
DAV	**Davao City (W)**	**16.22**	**308**	LR	LR	07 34 26.0	
comp=Z,4µm,18.0s,baz=94,slow=40							
DAV	**Davao City (W)**	**16.22**	**308**		**Pn**	**07 27 34.0**	**-2.4**
DAV				IAmb	IAmb	07 27 56.8	
comp=Z,770nm,1.4s							
DAV	**Davao City (W)**	**16.22**	**308**	P	**Pn**	**07 27 37.3**	**+0.9**
BATI	**Baumata**	**16.37**	**243**	Pn	**P**	**07 27 40.4**	**-0.3**
comp=Z,9.7nm,0.3s,baz=158,slow=2.0,SNR=12							
BATI	**Baumata**	**16.37**	**243**	P	**Pn**	**07 27 39.1**	**+0.7**
comp=Z,9µmcomp=Z,1µm,0.9s							
MRSI	**Marisa**	**16.84**	**281**	P	**P**	**07 27 46.9**	**+1.1**
comp=Z,4µmcomp=Z,3µmcomp=Z,301nm,0.8s							
APSI	**Ampana**	**16.91**	**276**	P	**P**	**07 27 46.2**	**-0.4**
comp=Z,2µmcomp=Z,9µmcomp=Z,684nm,1.2s							
MMRI	**Maumere**	**17.10**	**250**	P	**Pn**	**07 27 47.1**	**-0.3**
MMRI	**Maumere**	**17.10**	**250**	P	**P**	**07 27 48.5**	**-0.2**
comp=Z,3µmcomp=Z,200nm,0.8s							
MMRI	**Maumere**	**17.10**	**250**	P	**P**	**07 27 49.0**	**+0.3**
WB0	**Warramunga Arr**	**17.22**	**193**	P	**Pn**	**07 27 48.0**	**-1.0**
WR0	**Warramunga Arr**	**17.38**	**192**	P	**Pn**	**07 27 50.0**	**-0.9**
WR0				IAmb	IAmb	07 27 56.8	
comp=Z,812nm,0.9s							
WRAB	**Tennant Creek**	**17.39**	**193**	P	**Pn**	**07 27 49.6**	**-1.5**
WRAB	**Tennant Creek**	**17.39**	**193**	*ce*P	**Pn**	**07 27 50.2**	**-0.9**
WRAB				pmax	pmax		
comp=Z,550nm,0.7s							
WRAB	**Tennant Creek**	**17.39**	**193**	P	**P**	**07 27 52.1**	**+0.2**
WB2	**Warramunga Arr**	**17.40**	**193**		**Pn**	**07 27 50.1**	**-1.1**
WRA	**Warramunga Arr**	**17.40**	**193**	P	**Pn**	**07 27 50.9**	**-0.3**
comp=Z,4.0nm,0.3s,baz=20,slow=13,SNR=164							
WRA				S	**Sn**	**07 30 55.6**	**-8.5**
comp=Z,171nm,1.0s,baz=10,slow=22,SNR=8.3							
comp=Z,253nm,0.7s							
WRA	**Warramunga Arr**	**17.40**	**193**	P	**Pn**	**07 27 49.9**	**-1.3**
WRA	**Warramunga Arr**	**17.40**	**193**	P	**Pn**	**07 27 49.9**	**-1.3**
WRA				pmax	pmax		
comp=Z,138nm,0.9s							
GUMO	**Guam**	**17.58**	**21**	P	**Pn**	**07 27 52.4**	**-1.0**
comp=Z,32nm,0.3s,baz=186,slow=3.9,SNR=14							
GUMO				LR	LR	07 34 43.0	
comp=Z,3µm,18.9s,baz=194,slow=38							
comp=Z,527nm,1.0s							
GUMO	**Guam**	**17.58**	**21**	P	**Pn**	**07 27 52.8**	**-0.6**
GUMO				IAmb	IAmb	07 27 55.4	
comp=Z,767nm,1.2s							
GUMO	**Guam**	**17.58**	**21**	P	**P**	**07 27 53.8**	**-0.2**
QIS	**Mount Isa**	**17.58**	**176**	P	**Pn**	**07 27 52.7**	**-0.7**
baz=18,SNR=216							
QIS	**Mount Isa**	**17.58**	**176**	P	**P**	**07 27 54.0**	**0.0**
EDFI	**Ende, Flores**	**17.65**	**250**	P	**P**	**07 27 55.8**	**+0.9**
comp=Z,780nmcomp=Z,80nm,1.1s							
TOLI2	**Tolitoli**	**18.11**	**282**		**P**	**07 27 59.7**	**-0.2**
TOLI2	**Tolitoli**	**18.11**	**282**	P	**Pn**	**07 28 01.2**	**+1.3**
BSSI	**Bau Bau, Buton**	**18.19**	**259**	P	**Pn**	**07 28 03.7**	**+2.8**
comp=Z,2µmcomp=Z,199nm,1.6s							
BKSI	**Bulukumba**	**18.43**	**262**	P	**Pn**	**07 28 04.9**	**+1.0**
comp=Z,3µmcomp=Z,2µmcomp=Z,90nm,0.9s							
TTSI	**Tana Toraja**	**18.60**	**269**	P	**Pn**	**07 28 09.4**	**+3.5**
comp=Z,6µmcomp=Z,265nm,1.1s							
SPSI	**Sidrap Palu**	**18.67**	**266**	P	**Pn**	**07 28 09.3**	**+2.5**
comp=Z,3µmcomp=Z,95nm,1.2s							
CTA	**Charters Tower**	**18.70**	**157**	P	**Pn**	**07 28 07.5**	**+0.4**
comp=Z,5.9nm,0.3s,baz=333,slow=11,SNR=73							
CTA				LR	LR	07 35 45.8	
comp=Z,12µm,18.2s,baz=335,slow=38							
comp=Z,222nm,0.8s							
CTA	**Charters Tower**	**18.70**	**157**	P	**Pn**	**07 28 07.3**	**+0.2**
CTAO	**Charters Tower**	**18.70**	**157**	P	**Pn**	**07 28 06.9**	**-0.2**
CTAO				IAmb	IAmb	07 28 15.0	
comp=Z,530nm,1.1s							
CTAO	**Charters Tower**	**18.70**	**157**	P	**Pn**	**07 28 06.9**	**-0.2**
CTAO				pmax	pmax		
comp=Z,530nm,1.1s							
CTAO	**Charters Tower**	**18.70**	**157**	P	**Pn**	**07 28 07.4**	**+0.3**
KAPI	**Kappang**	**18.77**	**263**	P	**Pn**	**07 28 09.5**	**+1.5**
comp=Z,1.3nm,0.3s,baz=62,slow=9.2,SNR=5.1							
comp=Z,9.3nm,0.5s							
KAPI	**Kappang**	**18.77**	**263**	P	**Pn**	**07 28 07.6**	**-0.3**
KAPI	**Kappang**	**18.77**	**263**	*i* P	**P**	**07 28 06.6**	**-0.5**
KAPI	**Kappang**	**18.77**	**263**	P	**Pn**	**07 28 09.4**	**+1.5**
KAPI					**Pn**	**07 28 09.4**	**+1.5**
KAPI	**Kappang**	**18.77**	**263**	P	**Pn**	**07 28 10.0**	**+2.1**
MPSI	**Mapaga**	**18.82**	**280**	P	**Pn**	**07 28 09.7**	**+1.2**
comp=Z,4µmcomp=Z,3µmcomp=Z,160nm,1.4s							
BASI	**Baing, Sumba**	**19.17**	**247**	P	**Pn**	**07 28 13.8**	**+1.1**
comp=Z,2µmcomp=Z,284nm,0.7s							
FITZ	**Fitzroy Crossi**	**19.64**	**219**	P	**Pn**	**07 28 18.0**	**-0.3**
comp=Z,2.1nm,0.3s,baz=47,slow=10,SNR=39							
FITZ				S	**S**	**07 31 50.3**	**-5.7**
comp=Z,156nm,1.1s,baz=65,slow=15,SNR=4.3							
FITZ				LR	LR	07 36 49.9	
comp=Z,7µm,18.8s,baz=40,slow=40							
comp=Z,315nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.64**	**219**	P	**Pn**	**07 28 17.6**	**-0.7**
baz=20,SNR=142							
FITZ	**Fitzroy Crossi**	**19.64**	**219**	P	**Pn**	**07 28 17.8**	**-0.5**
FITZ				IAmb	IAmb	07 28 24.8	
comp=Z,347nm,0.9s							
FITZ	**Fitzroy Crossi**	**19.64**	**219**	P	**Pn**	**07 28 18.3**	**0.0**
WBSI	**Waikabubak, Su**	**20.08**	**250**	P	**P**	**07 28 20.8**	**-0.7**
comp=Z,2µmcomp=Z,322nm,0.9s							
SGKI	**Sangatta, Kali**	**20.97**	**276**	P	Pn	07 28 35.7	+1.7
comp=Z,9µmcomp=Z,794nm,1.2s							
AS31	**Alice Springs**	**21.10**	**192**	P	**P**	**07 28 34.1**	**+1.6**
ASAR	**Alice Springs**	**21.10**	**192**	P	**P**	**07 28 33.8**	**+1.3**
comp=Z,489nm,0.7s,baz=22,slow=11,SNR=741							
ASAR				S	**S**	**07 32 27.8**	**+2.6**
comp=Z,156nm,0.9s,baz=9.5,slow=26,SNR=7.6							
ASAR				LR	LR	07 37 51.4	
comp=Z,7µm,19.9s,baz=18,slow=40							
comp=Z,489nm,0.7s							
ASAR	**Alice Springs**	**21.10**	**192**	P	**P**	**07 28 34.4**	**+1.8**
SMKI	**Samarinda**	**21.37**	**276**	P	**P**	**07 28 39.0**	**+3.6**
comp=Z,7µmcomp=Z,645nm,1.5s							
PLAI	**Plampang**	**21.38**	**253**	P	**P**	**07 28 36.6**	**+1.1**
comp=Z,2µmcomp=Z,2µmcomp=Z,173nm,1.1s							
PLAI	**Plampang**	**21.38**	**253**	P	**P**	**07 28 37.1**	**+1.6**
MYLDM	**Lahad Datu**	**21.48**	**292**	P	**P**	**07 28 36.6**	**-0.1**
MYLDM				IAmb	IAmb	07 28 44.0	
comp=Z,682nm,1.3s							
BKB	**Balikpapan**	**21.60**	**274**	P	**P**	**07 28 41.4**	**+3.5**
BKB				IAmb	IAmb	07 28 58.2	
comp=Z,402nm,0.9s							
BKB	**Balikpapan**	**21.60**	**274**	P	**P**	**07 28 41.7**	**+3.8**
comp=Z,7µmcomp=Z,8µmcomp=Z,573nm,1.0s							
BKB	**Balikpapan**	**21.60**	**274**	P	**P**	**07 28 41.6**	**+3.7**
PATS	**Pohnpei**	**22.06**	**64**	P	**P**	**07 28 41.9**	**-0.9**
baz=22,SNR=16							
PATS	**Pohnpei**	**22.06**	**64**	P	**P**	**07 28 41.8**	**-1.1**
PATS				IAmb	IAmb	07 29 13.7	
comp=Z,500nm,1.2s							
PATS	**Pohnpei**	**22.06**	**64**	P	**P**	**07 28 43.5**	**+0.7**
TWSI	**Taliwang, Sumb**	**22.21**	**254**	P	**P**	**07 28 44.0**	**-0.5**
comp=Z,778nmcomp=Z,68nm,0.9s							
HNR	**Honiara**	**22.33**	**108**	P	**P**	**07 28 46.8**	**+1.1**
comp=Z,508nm,0.8s,baz=336,slow=1.3,SNR=6.5							
comp=Z,508nm,0.8s							
HNR	**Honiara**	**22.33**	**108**	P	**P**	**07 28 46.6**	**+0.9**
HNR	**Honiara**	**22.33**	**108**	P	**P**	**07 28 46.6**	**+0.9**
HNR				pmax	pmax		
comp=Z,591nm,0.8s							
HNR				MLR	MLR		
comp=Z,3µm,21.0s							
HNR	**Honiara**	**22.33**	**108**	P	**P**	**07 28 48.0**	**+2.3**
SPMM	**Sapulut**	**23.23**	**289**	P	**P**	**07 28 58.0**	**+2.9**
RK1H	**Rockhampton Ha**	**23.47**	**151**	P	**P**	**07 28 59.2**	**+2.0**
BBKI	**Banjar Baru**	**23.58**	**268**	P	**P**	**07 29 01.0**	**+2.6**
comp=Z,5µmcomp=Z,247nm,1.5s							
MTKI	**Muara Teweh, K**	**23.62**	**274**	P	**P**	**07 29 00.5**	**+1.7**
comp=Z,169nm,1.6s							
SRBI	**Singaraja**	**23.69**	**257**	P	**P**	**07 28 59.1**	**-0.3**
comp=Z,3µmcomp=Z,209nm,1.4s							
DNP	**Denpasar**	**23.81**	**255**	P	**P**	**07 29 00.7**	**+0.1**
comp=Z,36µmcomp=Z,533nm,0.9s							
KKM	**Kota Kinabalu**	**23.91**	**292**	P	**P**	**07 29 02.2**	**+0.5**
KKM	**Kota Kinabalu**	**23.91**	**292**	P	**P**	**07 29 02.7**	**+1.0**
WRKA	**Warakurna**	**24.08**	**203**	P	**P**	**07 29 03.7**	**+0.6**
baz=24,SNR=206							
WRKA	**Warakurna**	**24.08**	**203**	P	**P**	**07 29 04.3**	**+1.2**
QLP	**Quilpie**	**24.19**	**167**	P	**P**	**07 29 05.5**	**+1.5**
baz=24,SNR=28							
QLP	**Quilpie**	**24.19**	**167**	P	**P**	**07 29 06.5**	**+2.5**
TGY	**Tagaytay City**	**24.23**	**315**	P	**P**	**07 29 05.8**	**+1.4**
baz=270,slow=5.4							
TGY				LR	LR	07 39 16.3	
comp=Z,4µm,19.5s,baz=100,slow=38							
ABJI	**Asem Bagus**	**24.59**	**258**	P	**P**	**07 29 08.4**	**+0.7**
comp=Z,3µmcomp=Z,122nm,0.9s							
KMMI	**Kalianget**	**24.73**	**259**	P	**P**	**07 29 10.9**	**+1.9**
comp=Z,8µmcomp=Z,786nm,0.8s							
JAGI	**Jajag, Banyuwa**	**24.79**	**256**	P	**P**	**07 29 08.1**	**-1.5**
JAGI				IAmb	IAmb	07 29 16.7	
comp=Z,124nm,0.8s							
JAGI	**Jajag, Banyuwa**	**24.79**	**256**	P	**P**	**07 29 08.7**	**-0.9**
comp=Z,2µmcomp=Z,165nm,0.8s							
JAGI	**Jajag, Banyuwa**	**24.79**	**256**	P	**P**	**07 29 09.6**	**0.0**
INKA	**Innaminka**	**24.80**	**175**	P	**P**	**07 29 11.2**	**+1.7**
OOD	**Oodnadatta**	**24.89**	**186**	P	**P**	**07 29 11.7**	**+1.4**
EIDS	**Eidsvold**	**25.43**	**153**	P	**P**	**07 29 16.3**	**+1.0**
baz=26,SNR=33							
EIDS	**Eidsvold**	**25.43**	**153**	P	**P**	**07 29 16.7**	**+1.5**
EIDS	**Eidsvold**	**25.43**	**153**	P	**P**	**07 29 17.8**	**+2.5**
GMJI	**Gumukmas**	**25.44**	**257**	P	**P**	**07 29 14.8**	**-0.7**
comp=Z,1µmcomp=Z,90nm,0.9s							
RMQ	**Roma**	**25.45**	**158**	P	**P**	**07 29 17.7**	**+2.3**
baz=26,SNR=11							
RMQ	**Roma**	**25.45**	**158**	P	**P**	**07 29 19.4**	**+4.0**
MBWA	**Marble Bar**	**25.71**	**224**	P	**P**	**07 29 18.7**	**+0.8**
MBWA	**Marble Bar**	**25.71**	**224**	P	**P**	**07 29 19.5**	**+1.6**
MBWA				P	**P**	**07 29 19.5**	**+1.6**
MBWA	**Marble Bar**	**25.71**	**224**	P	**P**	**07 29 19.7**	**+1.8**
PSA00	**Pilbara Seismi**	**25.91**	**223**	P	**P**	**07 29 20.4**	**+0.7**
PSA00				IAmb	IAmb	07 30 14.9	
comp=Z,158nm,0.8s							
PSA00	**Pilbara Seismi**	**25.91**	**223**	P	**P**	**07 29 20.1**	**+0.3**
PSA00				IAmb	IAmb	07 29 40.4	
comp=Z,59nm,1.1s							
PSA00	**Pilbara Seismi**	**25.91**	**223**	P	**P**	**07 29 21.7**	**+2.0**
PBKI	**Pangkalan Bun**	**26.75**	**270**	P	P	07 29 41.1	+14
SBUM	**Sibu**	**26.75**	**281**	P	**P**	**07 29 26.8**	**-0.5**
SBUM	**Sibu**	**26.75**	**281**	P	**P**	**07 29 30.0**	**+2.6**
PWJI	**Pagerwojo**	**27.00**	**258**	P	**P**	**07 29 28.7**	**-0.9**
comp=Z,105nm,0.8s							
STKI	**Sintang**	**27.12**	**276**	P	**P**	**07 29 32.0**	**+1.3**
comp=Z,9µmcomp=Z,40nm,0.5s							
NGJI	**Ngawi**	**27.23**	**260**	P	**P**	**07 29 32.8**	**+1.1**
comp=Z,104nm,0.9s							
LCRK	**Leigh Creek**	**27.40**	**180**	P	**P**	**07 29 35.0**	**+2.1**
MULG	**Mulgathing**	**27.55**	**188**	P	**P**	**07 29 36.6**	**+2.3**
PCJI	**Pacitan**	**27.64**	**258**	P	**P**	**07 29 34.4**	**-0.9**
comp=Z,107nm,0.8s							
STKA	**Stephens Creek**	**28.97**	**174**	P	**P**	**07 29 48.1**	**+1.2**
comp=Z,26nm,0.6s,baz=343,slow=8.6,SNR=33							
STKA				LR	LR	07 42 33.9	
comp=Z,11µm,18.5s,baz=349,slow=39							
comp=Z,26nm,0.6s							
STKA	**Stephens Creek**	**28.97**	**174**	P	**P**	**07 29 47.8**	**+0.8**
baz=29,SNR=46							
STKA	**Stephens Creek**	**28.97**	**174**	P	**P**	**07 29 47.8**	**+0.8**
STKA	**Stephens Creek**	**28.97**	**174**	*i* P	**P**	**07 29 47.4**	**+0.4**
STKA	**Stephens Creek**	**28.97**	**174**	P	**P**	**07 29 48.5**	**+1.5**
CMSA	**Cobar Meteorol**	**29.29**	**167**	P	**P**	**07 29 51.7**	**+1.9**
baz=30,SNR=34							
CMSA	**Cobar Meteorol**	**29.29**	**167**	P	**P**	**07 29 53.2**	**+3.4**
FORT	**Forrest**	**29.41**	**198**	P	**P**	**07 29 52.4**	**+1.5**
baz=30,SNR=14							
FORT	**Forrest**	**29.41**	**198**	P	**P**	**07 29 51.8**	**+0.9**
FORT	**Forrest**	**29.41**	**198**	P	**P**	**07 29 53.0**	**+2.1**
BBOO	**Buckleboo**	**29.84**	**184**	P	**P**	**07 29 55.6**	**+1.0**
baz=30,SNR=22							
BBOO	**Buckleboo**	**29.84**	**184**	P	**P**	**07 29 55.8**	**+1.2**
BBOO				IAmb	IAmb	07 30 49.0	
comp=Z,150nm,0.9s							
BBOO	**Buckleboo**	**29.84**	**184**	P	**P**	**07 29 55.7**	**+1.0**
WHYH	**Whyalla**	**29.98**	**181**	P	**P**	**07 29 57.0**	**+1.1**
JCJ	**Chichijima**	**30.04**	**7**	LR	LR	07 41 06.2	
comp=Z,2µm,19.7s,baz=132,slow=35							
ARMA	**Armidale**	**30.08**	**157**	P	**P**	**07 29 58.9**	**+1.9**
baz=30,SNR=23							
ARMA	**Armidale**	**30.08**	**157**	P	**P**	**07 29 57.9**	**+0.9**
ARMA	**Armidale**	**30.08**	**157**	P	**P**	**07 29 59.4**	**+2.5**
MEEK	**Meekatharra**	**30.31**	**217**	P	**P**	**07 29 59.9**	**+0.9**
baz=30,SNR=6.9							
MEEK	**Meekatharra**	**30.31**	**217**	P	**P**	**07 30 01.2**	**+2.3**
HTT	**Hallett**	**30.37**	**179**	P	**P**	**07 30 00.3**	**+0.9**
baz=31,SNR=35							
HTT	**Hallett**	**30.37**	**179**	P	**P**	**07 30 01.5**	**+2.1**
GIRL	**Giralia**	**30.60**	**228**	P	**P**	**07 30 02.7**	**+1.2**
baz=31,SNR=5.2							
KOUNC	**Koumac, New Ca**	**30.69**	**127**	IAMs_20	IAMs_20	07 41 48.1	
comp=Z,6µm,22.0s							
LEM	**Lembang**	**30.96**	**262**	P	**P**	**07 30 05.4**	**+0.4**
comp=Z,11nm,0.3s,baz=37,slow=3.2,SNR=4.9							
comp=Z,11nm,0.3s							
YULB	**Yu-li**	**31.02**	**328**	P	**P**	**07 30 03.6**	**-1.6**
JOW	**Kunigami**	**31.15**	**342**	IAmb	IAmb	07 30 07.9	
comp=Z,229nm,1.2s							
JOW	**Kunigami**	**31.15**	**342**	P	**P**	**07 30 07.1**	**+0.8**
TPUB	**Ta-pu**	**31.31**	**327**	IAmb	IAmb	07 30 06.5	
comp=Z,118nm,1.2s							
TPUB				IAMs_20	IAMs_20	07 40 12.6	
comp=Z,6µm,21.0s							
TPUB	**Ta-pu**	**31.31**	**327**	P	**P**	**07 30 06.8**	**-0.9**
KWAJ	**Kwajalein Atol**	**31.32**

baz=35,SNR=21
KLBR Kellerberrin 34.56 212 P P 07 30 37.2 +1.1
TARA Tarawa 34.72 83 P P 07 30 37.6 -0.1
TARA Tarawa 34.72 83 IAMs_20 IAMs_20 07 43 16.7
comp=Z,4μm,21.0s
JMBI JAMBI 34.80 271 P P 07 30 41.6 +3.2
comp=Z,3μmcomp=Z,180nm,1.3s
BRAT Ballarat 34.85 172 P P 07 30 40.5 +2.1
MYKOM **Kota Tinggi 34.90 277** IAmb IAmb 07 30 42.0
comp=Z,128nm,1.2s
JSU Suzuyama 35.05 348 P P 07 30 39.1 -1.2
JSU IAmb IAmb 07 30 41.7
comp=Z,197nm,1.2s
TOO Toolangi 35.10 170 P P 07 30 42.6 +1.9
baz=35,SNR=42
TOO Toolangi 35.10 170 P P 07 30 42.3 +1.6
TOO IAmb IAmb 07 30 48.7
comp=Z,86nm,0.9s
TOO Toolangi 35.10 170 P P 07 30 42.3 +1.6
TOO pmax pmax
comp=Z,86nm,0.9s
TOO Toolangi 35.10 170 P P 07 30 43.3 +2.6
MLBS Spotswood, Mel 35.26 171 P P 07 30 44.1 +2.1
MILA Mila 35.39 165 P P 07 30 45.6 +2.4
baz=36,SNR=18
GEXS Deakin Univers 35.53 172 P P 07 30 46.0 +1.7
QIZ Qiongzhong 35.59 309 P P 07 30 44.3 -0.8
QIZ IAmb IAmb 07 31 01.8
comp=Z,147nm,1.4s
QIZ Qiongzhong 35.59 309 ⇓*i* P **P 07 30 44.8 -0.3**
QIZ PP **PP 07 32 08.5 +1.9**
QIZ S **S 07 36 22.3 +3.9**
QIZ ScP **ScP 07 36 58.0 +1.8**
QIZ pmax pmax
comp=Z,40nm,1.2s
QIZ LR LR
comp=Z,2μm,23.5s
QIZ LR LR
comp=Z,2μm,22.1s
QIZ LR LR
comp=Z,3μm,20.4s
QIZ Qiongzhong 35.59 309 P P 07 30 45.6 +0.5
QIZ Qiongzhong 35.59 309 P P 07 30 45.0 -0.1
QIZ pP **sP 07 30 59.9 -2.1**
QIZ sP pP 07 31 06.1 +9.3
MUN Mundaring 35.69 213 P P 07 30 48.9 +3.1
baz=36,SNR=3.5
KSI Kapahiang 35.80 268 P P 07 30 47.2 +0.1
JHJ Hachijo jima 2 35.85 2 LR LR 07 42 23.1
comp=Z,4μm,21.7s,baz=246,slow=31
NWAO Narrogin (SRO) 35.88 211 P P 07 30 49.6 +2.2
MASI Maura Aman, Be 36.16 269 P P 07 30 51.7 +1.6
comp=Z,325nm,1.1s
KRJI Kerinci 36.96 270 P P 07 30 58.1 +1.1
comp=Z,15μmcomp=Z,261nm,1.0s
UBPT Khong Chiam 37.31 300 IAmb IAmb 07 31 13.2
comp=Z,86nm,0.9s
BKNI Bangkinang 37.53 274 P P 07 31 03.0 +1.3
BKNI Bangkinang 37.53 274 P P 07 31 02.7 +0.9
comp=Z,4μmcomp=Z,234nm,1.1s
BKNI Bangkinang 37.53 274 P P 07 31 04.5 +2.7
SSE Sheshan 37.60 335 P P 07 31 02.8 +0.8
SSE S **S 07 36 53.3 +4.6**
SSE pmax pmax
comp=Z,81nm,0.8s
SSE pmax pmax
comp=Z,210nm,3.7s
SSE LR LR
comp=Z,760nm,23.3s
SSE LR LR
comp=Z,810nm,22.8s
JHS Saijyo 38.03 353 IAmb IAmb 07 31 07.0
comp=Z,138nm,1.3s
INU Inuyama 38.08 358 IAMs_20 IAMs_20 07 44 00.6
comp=Z,3μm,21.0s
INU Inuyama 38.08 358 P P 07 31 06.7 +0.7
IPM Ipoh 38.10 281 IAmb IAmb 07 31 09.7
comp=Z,113nm,1.2s
IPM Ipoh 38.10 281 P P 07 31 08.0 +1.4
NFK Norfolk Island 38.23 136 P P 07 31 07.1 -0.4
baz=38,SNR=3.3
KULM Kulim 38.62 282 IAmb IAmb 07 31 13.1
comp=Z,148nm,1.2s
GLAD Gladstone 38.88 168 P P 07 31 14.8 +2.1
JYT Yasato 38.96 2 P P 07 31 11.6 -1.8
GULI GuiLin 39.08 317 ⇓P **P 07 31 14.8 +0.2**
GULI pmax pmax
comp=Z,70nm,1.3s
GULI LR LR
comp=Z,600nm,22.9s
GULI LR LR
comp=Z,1μm,24.9s
GULI LR LR
comp=Z,970nm,28.2s
CORO Coronation Par 39.17 170 P P 07 31 16.8 +1.7
MJAR Matsushiro Arr 39.24 360 P P 07 31 12.9 -2.9
comp=Z,9.6nm,0.8s,baz=172,slow=9.2,SNR=19
MJAR PcP **PcP 07 33 24.4 +0.1**
comp=Z,11nm,0.9s,baz=156,slow=3.4,SNR=9.1
MJAR LR LR 07 45 16.1
comp=Z,2μm,19.8s,baz=164,slow=33
comp=Z,9.6nm,0.8s
MAJO Matsushiro 39.24 360 P P 07 31 14.2 -1.7
MAJO Matsushiro 39.24 360 *i* P **P 07 31 12.5 -3.3**
MAJO pmax pmax
comp=Z,63nm,1.7s
MAJO Matsushiro 39.24 360 P P 07 31 14.5 -1.3
MAJO Matsushiro 39.24 360 P P 07 31 14.9 -0.9
NJ2 Nanjing 39.43 333 ⇓P **P 07 31 18.3 +0.9**
NJ2 pP **pP 07 31 27.8 -1.4**
NJ2 pmax pmax
comp=Z,95nm,0.9s
NJ2 pmax pmax
comp=Z,650nm,4.3s
NJ2 LR LR
comp=Z,3μm,23.2s
NJ2 LR LR
comp=Z,2μm,22.3s
NJ2 LR LR
comp=Z,3μm,20.8s
CNSH ChangSha 39.46 323 ⇓P **P 07 31 19.3 +1.5**
CNSH S **S 07 37 22.0 +5.0**
CNSH pmax pmax
comp=Z,140nm,1.2s
CNSH LR LR
comp=Z,1μm,23.7s
CNSH LR LR
comp=Z,1μm,23.9s
CNSH LR LR
comp=Z,2μm,24.0s
NAWB Namwon 39.51 346 IAmb IAmb 07 31 18.9
comp=Z,131nm,0.9s
RPSI Rantau Prapat 39.90 278 IAmb IAmb 07 31 23.5
comp=Z,198nm,1.2s
PSI Prapat 39.91 278 P P 07 31 22.2 +0.3
comp=Z,80nm,1.0s,baz=113,slow=4.9,SNR=69
PSI PcP **PcP 07 33 27.3 +0.2**
comp=Z,16nm,0.9s,baz=169,slow=5.4,SNR=3.6
comp=Z,80nm,1.0s
PSI Prapat 39.91 278 P P 07 31 21.4 -0.5
MOO Moorlands 40.14 170 P P 07 31 26.0 +2.9
baz=40,SNR=27
MOO Moorlands 40.14 170 P P 07 31 26.6 +3.4
TSI Tuntungan 40.37 279 P P 07 31 26.6 +1.1
comp=Z,202nm,1.0s
SRIT Nakonsritamara 40.38 287 IAmb IAmb 07 31 27.9
comp=Z,183nm,1.1s
TJN Taejon 40.42 346 *ce* P **P 07 31 25.3 -0.3**
TJN Taejon 40.42 346 P P 07 31 26.1 +0.5
WHN Wuhan 40.44 327 ⇓*i* P **P 07 31 27.3 +1.5**
WHN S S 07 37 41.5 +10
WHN pmax pmax
comp=Z,560nm,1.4s
WHN pmax pmax
comp=Z,1μm,3.3s
WHN LR LR
comp=Z,5μm,22.0s
TAU Tasmania Unive 40.61 170 P P 07 31 28.8 +1.7
TAU Tasmania Unive 40.61 170 P P 07 31 28.8 +1.7
TAU pmax pmax
comp=Z,266nm,0.8s
TAU MLR MLR
comp=Z,16μm,22.0s
TAU Tasmania Unive 40.61 170 P P 07 31 29.7 +2.6
TAU Tasmania Unive 40.61 170 P P 07 31 29.9 +2.9
TAU x x 07 31 33.4

TAU pP **pP 07 31 41.4 +2.5**
JMM Marumori 40.62 3 IAmb IAmb 07 31 27.8
comp=Z,318nm,1.2s
JSD Sado 40.73 360 P P 07 31 27.2 -0.9
GSI Gunungsitoli 41.07 275 P P 07 31 31.1 -0.2
GSI IAmb IAmb 07 31 33.0
comp=Z,238nm,1.5s
GSI Gunungsitoli 41.07 275 P P 07 31 31.1 -0.2
comp=Z,83nm,1.1s
GSI Gunungsitoli 41.07 275 P P 07 31 32.8 +1.5
KCSI Kotacane, Aceh 41.15 279 P P 07 31 31.9 -0.1
comp=Z,1μmcomp=Z,104nm,1.1s
KSAR Wonju Array Be 41.32 347 P P 07 31 32.5 -0.5
KSAR Wonju Array Be 41.32 347 P P 07 31 32.5 -0.5
KSRS Korea Array 41.33 347 P P 07 31 32.8 -0.2
comp=Z,45nm,0.9s,baz=166,slow=9.8,SNR=64
KSRS PcP **PcP 07 33 31.9 +1.0**
comp=Z,14nm,1.0s,baz=183,slow=3.8,SNR=8.8
KSRS LR LR 07 46 20.1
comp=Z,3μm,21.5s,baz=160,slow=33
comp=Z,45nm,0.9s
KS19 Wonju Array Si 41.38 347 P P 07 31 33.6 +0.1
MSVF Nonsavu 41.53 114 P P 07 31 36.6 +1.5
MSVF Nonsavu 41.53 114 *i* P **P 07 31 36.1 +1.0**
MSVF pmax pmax
comp=Z,89nm,1.4s
MSVF MLR MLR
comp=Z,2μm,19.0s
MSVF Nonsavu 41.53 114 P P 07 31 37.6 +2.5
MSVF Nonsavu 41.53 114 P P 07 31 37.0 +1.9
MSVF pP **sP 07 31 50.6 -1.5**
INCN Inchon 41.65 346 P P 07 31 35.2 -0.5
INCN IAmb IAmb 07 31 37.4
comp=Z,206nm,1.1s
INCN Inchon 41.65 346 IAMs_20 IAMs_20 07 48 53.2
comp=Z,3μm,19.0s
INCN Inchon 41.65 346 P P 07 31 35.2 -0.5
INCN pmax pmax
comp=Z,206nm,1.1s
INCN MLR MLR
comp=Z,3μm,19.0s
INCN Inchon 41.65 346 P P 07 31 36.5 +0.7
INCN P **P 07 31 36.5 +0.7**
INCN Inchon 41.65 346 P P 07 31 36.7 +1.0
INCN Inchon 41.65 346 P P 07 31 36.0 +0.3
SEHB SEOHWA 42.04 348 IAmb IAmb 07 31 40.9
comp=Z,163nm,1.0s
LHMI Lhok Sumawe 42.24 281 P P 07 31 42.0 +1.2
comp=Z,6μmcomp=Z,304nm,1.1s
LHMI Lhok Sumawe 42.24 281 P P 07 31 42.0 +1.2
GYA Guiyang 42.37 316 ⇑P **P 07 31 43.0 +1.1**
GYA pP pP 07 31 51.3 -2.5
GYA PcP **PcP 07 33 34.8 0.0**
GYA S **S 07 38 03.0 +2.4**
GYA pmax pmax
comp=Z,37nm,1.5s
GYA pmax pmax
comp=Z,600nm,5.6s
GYA LR LR
comp=Z,680nm,19.4s
GYA LR LR
comp=Z,900nm,21.3s
GYA LR LR
comp=Z,1μm,22.8s
ENH Enshi 43.05 322 IAmb IAmb 07 31 48.8
comp=Z,154nm,1.5s
ENH IAMs_20 IAMs_20 07 47 46.1
comp=Z,2μm,21.0s
JTM Tenmabayashi 43.55 3 IAmb IAmb 07 31 51.9
comp=Z,299nm,1.1s
TIA Tai'an 43.71 335 ⇓P **P 07 31 52.0 -0.4**
TIA sP **sP 07 32 12.0 +2.5**
TIA S **S 07 38 23.8 +4.1**
TIA sS **sS 07 38 46.8 +7.2**
TIA pmax pmax
comp=Z,36nm,1.1s
TIA pmax pmax
comp=Z,290nm,4.5s
TIA LR LR
comp=Z,2μm,20.4s
TIA LR LR
comp=Z,840nm,20.4s
TIA LR LR
comp=Z,3μm,22.1s
CM31 Chiang Mai Arr 44.31 300 P P 07 31 58.3 +0.8
CMAR Chiang Mai Arr 44.31 300 P P 07 31 58.6 +1.1
comp=Z,16nm,1.0s,baz=120,slow=6.2,SNR=39
CMAR PcP **PP 07 33 43.2 +1.7**
comp=Z,15nm,0.9s,baz=140,slow=2.7,SNR=6.2
CMAR LR LR 07 50 04.5
comp=Z,992nm,21.4s,baz=115,slow=36
comp=Z,16nm,1.0s
CMAR Chiang Mai Arr 44.31 300 P P 07 31 57.7 +0.2
CMAR Chiang Mai Arr 44.31 300 P P 07 31 57.7 +0.2
KMI Kunming 44.45 311 ⇓P **P 07 31 59.5 +0.7**
KMI pP pP 07 32 11.5 +0.7
KMI sP sP 07 32 15.3 -0.5
KMI PP **PP 07 33 50.5 +7.4**
KMI pmax pmax
comp=Z,30nm,1.7s
KMI LR LR
comp=Z,930nm,22.0s
KMI LR LR
comp=Z,2μm,22.6s
KMI LR LR
comp=Z,3μm,21.5s
CHTO Chiang Mai 44.45 301 P P 07 31 58.5 -0.2
CHTO Chiang Mai 44.45 301 P P 07 31 58.5 -0.2
CHTO pmax pmax
comp=Z,48nm,1.0s
CHTO Chiang Mai 44.45 301 P P 07 31 59.2 +0.6
CHTO P **P 07 31 59.2 +0.6**
CHTO Chiang Mai 44.45 301 P P 07 31 59.6 +0.9
CHTO Chiang Mai 44.45 301 P P 07 31 59.1 +0.5
CHTO pP **pP 07 32 11.9 +1.3**
CHTO PP **PP 07 33 42.8 -0.2**
LKBA Tubou, Lakemba 44.54 113 P P 07 32 00.9 +1.6
LYN LuoYang 44.55 329 ⇓*i* P **P 07 31 58.8 -0.4**
LYN pP pP 07 32 10.0 -1.2
LYN sP sP 07 32 18.0 +1.8
LYN S **S 07 38 32.0 +0.1**
LYN pmax pmax
comp=Z,70nm,1.3s
LYN LR LR
comp=Z,1μm,22.6s
LYN LR LR
comp=Z,2μm,27.0s
MSHR Mys Shultsa 45.75 352 *ce* P **P 07 32 08.2 -0.3**
MSHR pmax pmax
comp=Z,30nm,0.7s
HNS HongShan 45.76 333 ⇓P **P 07 32 08.5 -0.2**
HNS pP **pP 07 32 17.5 -3.3**
HNS eS **S 07 38 49.5 +0.2**
HNS sS **sS 07 39 08.0 -1.3**
HNS pmax pmax
comp=Z,51nm,1.2s
HNS LR LR
comp=Z,2μm,21.4s
HNS LR LR
comp=Z,2μm,20.2s
HNS LR LR
comp=Z,3μm,23.5s
OUZ Omahuta 45.77 139 IAmb IAmb 07 32 13.4
comp=Z,120nm,1.1s
OUZ IAMs_20 IAMs_20 07 50 16.2
comp=Z,3μm,21.0s
PZH PanZhiHua 45.96 312 P **P 07 32 10.8 +0.2**
PZH sP **sP 07 32 26.0 -1.7**
PZH PP **PP 07 34 00.0 +1.0**
PZH S **S 07 38 49.3 -3.5**
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,310nm,6.1s
PZH LR LR
comp=Z,1μm,22.0s
PZH LR LR
comp=Z,2μm,22.2s
PZH LR LR
comp=Z,3μm,22.0s
XAN Xi'an 46.08 325 ⇓*i* P **P 07 32 11.0 -0.4**
XAN pP pP 07 32 21.5 -2.0
XAN S **S 07 38 53.0 -1.2**
XAN pmax pmax
comp=Z,93nm,1.2s

XAN pmax pmax
comp=Z,460nm,7.7s
XAN LR LR
comp=Z,2μm,24.1s
XAN LR LR
comp=Z,1μm,15.8s
XAN LR LR
comp=Z,3μm,23.4s
XAN Xi'an 46.08 325 P **P 07 32 11.4 0.0**
XAN pP **pP 07 32 22.6 -0.9**
SNY Shenyang 46.53 345 ⇓P **P 07 32 15.0 +0.3**
SNY S **S 07 39 02.0 +1.8**
SNY pmax pmax
comp=Z,110nm,0.9s
SNY pmax pmax
comp=Z,890nm,3.5s
SNY LR LR
comp=Z,2μm,22.2s
SNY LR LR
comp=Z,1μm,20.4s
SNY LR LR
comp=Z,4μm,19.8s
TIY Taiyuan 47.06 332 *e* P **P 07 32 18.8 -0.3**
TIY pP **pP 07 32 31.8 +0.6**
TIY S **S 07 39 08.5 +0.3**
TIY pmax pmax
comp=Z,25nm,0.9s
TIY pmax pmax
comp=Z,290nm,4.0s
TIY LR LR
comp=Z,2μm,22.0s
TIY LR LR
comp=Z,1μm,17.9s
TIY LR LR
comp=Z,2μm,22.7s
CD2 Chengdu 47.15 318 P **P 07 32 20.3 +0.5**
CD2 S **S 07 39 11.0 +1.4**
CD2 pmax pmax
comp=Z,70nm,1.7s
CD2 pmax pmax
comp=Z,420nm,6.7s
CD2 LR LR
comp=Z,1μm,21.3s
CD2 LR LR
comp=Z,2μm,19.1s
CD2 LR LR
comp=Z,2μm,21.3s
USRK Ussuriysk Ar. 47.25 354 P **P 07 32 21.1 +0.8**
comp=Z,58nm,0.8s,baz=182,slow=7.6,SNR=62
USRK LR LR 07 48 57.8
comp=Z,3μm,21.1s,baz=251,slow=32
comp=Z,58nm,0.8s
BJT Baijiatuan 47.35 337 IAmb IAmb 07 32 22.5
comp=Z,134nm,1.5s
BJT Baijiatuan 47.35 337 IAMs_20 IAMs_20 07 50 46.5
comp=Z,2μm,20.0s
BJT Baijiatuan 47.35 337 P P 07 32 21.0 -0.2
BJI Beijing 47.37 337 P P 07 32 21.0 -0.2
BJI PcP **PcP 07 33 51.8 +0.3**
BJI S S 07 39 21.3 +9.1
BJI pmax pmax
comp=Z,57nm,1.4s
BJI pmax pmax
comp=Z,520nm,3.5s
BJI LR LR
comp=Z,390nm,21.1s
BJI LR LR
comp=Z,940nm,21.1s
BJI LR LR
comp=Z,3μm,23.6s
TEY Ternei 47.76 358 ⇓*i* P **P 07 32 23.9 -0.3**
TEY pmax pmax
comp=N,100nm,1.5s
TEY pmax pmax
comp=Z,100nm,1.5s
TEY pmax pmax
comp=N,40nm,1.1s
TEY pmax pmax
comp=E,10.0nm,1.2s
TEY pmax pmax
comp=Z,60nm,0.9s
CN2 Changchun 47.94 347 *e* P **P 07 32 25.5 -0.1**
CN2 PcP **PcP 07 33 52.8 -0.7**
CN2 S **S 07 39 20.0 -0.3**
CN2 pmax pmax
comp=Z,90nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,2μm,21.0s
CN2 LR LR
comp=Z,1μm,21.0s
CN2 LR LR
comp=Z,3μm,20.0s
MDJ Mudanjiang 47.97 351 IAMs_20 IAMs_20 07 49 42.6
comp=Z,3μm,21.0s
MDJ Mudanjiang 47.97 351 P P 07 32 26.5 +0.7
MDJ S **S 07 39 28.5 +7.9**
MDJ pmax pmax
comp=Z,170nm,1.1s
MDJ pmax pmax
comp=Z,650nm,3.6s
MDJ LR LR
comp=Z,2μm,19.5s
MDJ LR LR
comp=Z,1μm,21.7s
MDJ LR LR
comp=Z,4μm,21.1s
MDJ Mudanjiang 47.97 351 P P 07 32 26.6 +0.7
MDJ Mudanjiang 47.97 351 P P 07 32 26.3 +0.4
KUR Kuril'sk 48.66 9 *i* P **P 07 32 30.9 -0.2**
QRZ Quartz Range 48.66 146 IAmb IAmb 07 32 50.1
comp=Z,140nm,1.3s
RAO Raoul Island 48.99 127 LR LR 07 51 51.9
comp=Z,2μm,20.8s,baz=317,slow=34
DCZ Deep Cove 49.29 154 P P 07 32 36.9 +0.9
DCZ IAmb IAmb 07 32 45.2
comp=Z,92nm,1.1s
BNX BinXian 49.41 350 ⇓P **P 07 32 37.0 +0.1**
BNX pP **pP 07 32 49.5 +0.4**
BNX S **S 07 39 43.5 +2.5**
BNX sS **sS 07 40 04.3 +3.1**
BNX pmax pmax
comp=Z,270nm,1.0s
BNX pmax pmax
comp=Z,830nm,3.6s
BNX LR LR
comp=Z,1μm,18.9s
BNX LR LR
comp=Z,460nm,18.4s
BNX LR LR
comp=Z,2μm,18.4s
THZ Tophouse 49.50 146 P P 07 32 38.9 +1.1
THZ IAmb IAmb 07 33 03.7
comp=Z,176nm,1.8s
YSS Yuzh-Sakhalins 49.79 4 P **P 07 32 39.3 -0.4**
YSS Yuzh-Sakhalins 49.79 4κ *i* P **P 07 32 39.3 -0.4**
YSS *e**PP **pP 07 32 49.4 -2.5**
YSS *e**SP **sP 07 32 55.2 -1.8**
YSS *e*S **S 07 39 44.4 -1.8**
YSS *e*SS **SS 07 43 11.2 -8.2**
YSS pmax pmax
comp=Z,800nm,5.7s
YSS pmax pmax
comp=N,400nm,3.4s
YSS pmax pmax
comp=Z,280nm,0.8s
YSS pmax pmax
comp=N,130nm,0.9s
YSS Yuzh-Sakhalins 49.79 4 P **P 07 32 39.7 -0.1**
YSS Yuzh-Sakhalins 49.79 4 P **P 07 32 39.4 -0.4**
URZ Urewera 49.84 140 LR LR 07 54 34.1
comp=N,2μm,19.1s,baz=31,slow=37
URZ Urewera 49.84 140 IAmb IAmb 07 32 44.2
comp=Z,84nm,0.9s
URZ IAMs_20 IAMs_20 07 54 22.9
comp=Z,3μm,19.0s
LTZ Lake Taylor 49.84 148 IAmb IAmb 07 33 07.6
comp=Z,149nm,1.6s
RPZ Rata Peaks 49.86 149 LR LR 07 55 16.8
comp=Z,2μm,18.0s,baz=302,slow=38
LBZ Lake Benmore 49.90 150 P P 07 32 42.6 +1.8
LBZ IAmb IAmb 07 33 25.6
comp=Z,56nm,1.1s
WHZ Wether Hill Ro 49.98 153 P P 07 32 44.8 +3.5
WHZ IAmb IAmb 07 33 31.4

comp=Z,267nm,2.0s
BKZ Black Stump Fm 49.98 141 P **P** 07 32 43.7 +2.2
HHC Hu-ho-hao-te 49.99 333 *e*P **P** 07 32 42.0 +0.5
HHC pP pP 07 32 50.5 -3.2
HHC S **S** 07 39 52.3 +2.9
HHC sS sS 07 40 10.0 +0.4
HHC pmax pmax
comp=Z,81nm,1.2s
HHC pmax pmax
comp=Z,460nm,4.5s
HHC LR LR
comp=Z,4μm,19.0s
HHC LR LR
comp=Z,2μm,20.1s
HHC LR LR
comp=Z,6μm,20.8s
OXZ Oxford 50.09 148 IAmb IAmb 07 32 46.1
comp=Z,38nm,0.6s
MXZ Matakaoa Point 50.23 138 IAMs_20 IAMs_20 07 54 49.1
comp=Z,3μm,19.0s
KHZ Kahutara 50.29 146 IAmb IAmb 07 32 45.5
comp=Z,174nm,1.5s
AFI Afiamalu 50.33 106 IAMs_20 IAMs_20 07 52 49.2
comp=Z,3μm,21.0s
LZH Lanzhou 50.48 323 ⇓P **P** **07 32 46.5 +1.1**
LZH S **S** **07 39 56.3 -0.2**
LZH pmax pmax
comp=Z,73nm,1.3s
LZH pmax pmax
comp=Z,470nm,4.4s
LZH LR LR
comp=Z,2μm,18.2s
LZH LR LR
comp=Z,2μm,17.9s
LZH LR LR
comp=Z,4μm,20.3s
BTO Baotou 50.50 332 *e*P **P** **07 32 44.8 -0.6**
MQZ McQueen's Vall 50.68 148 IAmb IAmb 07 32 55.9
comp=Z,66nm,1.0s
XLT XiLinHaoTe 50.74 339 ⇓*i*P **P** **07 32 46.8 -0.3**
XLT SS **SS** **07 43 35.3 +0.5**
XLT pmax pmax
comp=Z,33nm,1.8s
XLT pmax pmax
comp=Z,500nm,7.3s
XLT LR LR
comp=Z,160nm,23.1s
XLT LR LR
comp=Z,1μm,18.8s
XLT LR LR
comp=Z,2μm,22.5s
BFZ Birch Farm 50.74 143 IAmb IAmb 07 32 49.1
comp=Z,97nm,0.7s
BFZ Birch Farm 50.74 143 P **P** **07 32 48.8 +1.6**
MOKO MOKOCHONG 51.44 307 *e*P **P** **07 32 52.5 -0.3**
KOHI KOHIMA 51.49 306 *e*P **P** **07 32 52.8 -0.4**
KOHI IAmb IAmb 07 32 55.3
comp=Z,123nm,1.1s
UGL Uglegorsk 51.87 3 ⇓*i*P **P** **07 32 55.5 +0.2**
UGL *e*S **S** **07 40 18.2 +3.4**
UGL pmax pmax
comp=Z,300nm,1.0s
KLR Kul'dur 52.25 354 P **P** **07 32 58.7 +0.5**
comp=Z,94nm,0.8s,baz=186,slow=4.5,SNR=195
KLR LR LR 07 52 07.6
comp=Z,3μm,21.2s,baz=178,slow=33
comp=Z,94nm,0.8s
KLR Kul'dur 52.25 354*ce*P **P** **07 32 58.4 +0.2**
KLR pmax pmax
comp=Z,293nm,1.7s
ITAN ITANAGAR 52.45 308 *e*P **P** **07 33 01.1 +1.0**
ZIRO ZIRO 52.52 308 *e*P **P** **07 33 01.1 +0.2**
ZIRO IAmb IAmb 07 33 02.0
comp=Z,62nm,0.9s
TEZP TEZPUR 52.94 307 *e*P **P** **07 33 03.4 -0.4**
TEZP *i* x x 07 33 16.4
SHL Shillong 53.23 305 IAmb IAmb 07 33 07.5
comp=Z,92nm,1.1s
SHL Shillong 53.23 305 P **P** **07 33 06.5 +0.4**
SNR=17
SHL Shillong 53.23 305 *e*P **P** **07 33 06.3 +0.2**
SHL *i* pP **pP** **07 33 19.1 +0.8**
GRNR Gornyy 53.49 358 ⇓*i*P **P** **07 33 07.8 +0.4**
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,40nm,1.2s
GUWA GUWAHATI 53.65 306 *e*P **P** **07 33 09.2 +0.2**
GUWA IAmb IAmb 07 33 10.4
comp=Z,87nm,0.9s
GUWA *i* x x 07 33 21.4
TYV Tymovskoe 53.68 3 *e*P **P** **07 33 09.3 +0.6**
TYV *e*S **S** **07 40 43.3 +3.8**
TYV pmax pmax
comp=Z,800nm,2.9s
TYV pmax pmax
comp=Z,86nm,1.1s
TYV smax smax
comp=E,20nm,1.9s
TYV smax smax
comp=N,300nm,8.2s
TYV smax smax
comp=E,400nm,8.2s
HIA Hailar 54.43 345 P **P** **07 33 13.7 -0.6**
HIA IAmb IAmb 07 33 16.9
comp=Z,100nm,1.4s
HIA Hailar 54.43 345 IAMs_20 IAMs_20 07 54 51.8
comp=Z,2μm,21.0s
HIA Hailar 54.43 345 *i* P **P** **07 33 13.2 -1.1**
HIA pmax pmax
comp=Z,88nm,1.4s
GTA Gaotai 55.07 324 ⇓P **P** **07 33 19.8 +0.5**
GTA pP pP 07 33 29.8 -1.7
GTA S **S** **07 41 02.8 +3.8**
GTA sS sS 07 41 18.5 -1.1
GTA pmax pmax
comp=Z,25nm,1.6s
GTA pmax pmax
comp=Z,290nm,5.5s
GTA LR LR
comp=Z,860nm,22.2s
GTA LR LR
comp=Z,1μm,22.9s
GTA LR LR
comp=Z,2μm,22.5s
SKR Severo-Kuril's 55.49 14 *e*P **P** **07 33 21.7 -0.1**
SKR *e*S **S** **07 41 12.7 +8.8**
SKR pmax pmax
comp=Z,100nm,4.0s
SKR pmax pmax
comp=Z,78nm,1.0s
SKR MLR MLR
comp=Z,400nm,15.0s
LSA Lhasa 55.63 309 P **P** **07 33 25.0 +1.1**
LSA Lhasa 55.63 309 P **P** **07 33 23.5 -0.4**
LSA LR LR
comp=Z,650nm,21.8s
LSA LR LR
comp=Z,610nm,22.5s
LSA LR LR
comp=Z,410nm,20.0s
LSA Lhasa 55.63 309 P **P** **07 33 25.0 +1.1**
LSA pmax pmax
comp=Z,50nm,1.1s
LSA MLR MLR
comp=Z,900nm,21.0s
LSA Lhasa 55.63 309 P **P** **07 33 24.5 +0.6**
GOMU GeErMu 56.28 318 P **P** **07 33 29.8 +1.5**
GOMU S **S** **07 41 15.3 -0.5**
GOMU pmax pmax
comp=Z,9.0nm,0.5s
GOMU pmax pmax
comp=Z,170nm,5.7s
GOMU LR LR
comp=Z,330nm,17.0s
GOMU LR LR
comp=Z,750nm,17.9s
GOMU LR LR
comp=Z,1μm,19.8s
BWNR Bhubaneshwar 56.53 297 *e*P **P** **07 33 30.3 +0.5**
ZEA Zeya 57.21 352 *e*P **P** **07 33 34.2 +0.1**
ZEA *e*S **S** **07 41 30.4 +3.8**
ZEA pmax pmax
comp=N,200nm,1.6s
ZEA pmax pmax
comp=Z,200nm,1.5s
ZEA pmax pmax
comp=E,20nm,0.5s
ZEA pmax pmax
comp=N,60nm,1.2s
ZEA pmax pmax
comp=Z,100nm,1.4s
ZEA smax smax
comp=E,200nm,8.6s
ULN Ulaanbaatar 57.53 335 P **P** **07 33 36.7 +0.1**
ULN Ulaanbaatar 57.53 335 IAMs_20 IAMs_20 07 58 26.6
comp=Z,2μm,20.0s
ULN Ulaanbaatar 57.53 335*ce*P **P** **07 33 37.1 +0.4**
ULN pmax pmax
comp=Z,50nm,1.7s
ULN MLR MLR
comp=Z,2μm,19.0s
ULN Ulaanbaatar 57.53 335 P **P** **07 33 37.4 +0.8**
ULN P **P** **07 33 37.4 +0.8**
ULN Ulaanbaatar 57.53 335 P **P** **07 33 37.3 +0.6**
ULN sP **sP** **07 33 54.7 +0.6**
BOK Bokaro 57.59 301 *e*P **P** **07 33 38.0 +0.7**
BOK IAmb IAmb 07 33 40.4
comp=Z,25nm,0.8s
SONM Songino Array 57.78 335 P **P** **07 33 39.0 +0.6**
comp=Z,3.1nm,0.5s,baz=152,slow=7.2,SNR=24
SONM LR LR 07 57 09.7
comp=Z,3μm,21.9s,baz=140,slow=35
SONM PKP2bc 08 03 35.7
comp=Z,3.7nm,1.0s,baz=285,slow=0.9,SNR=14
comp=Z,3.1nm,0.5s
SONM Songino Array 57.78 335 P **P** **07 33 38.4 0.0**
SONM Songino Array 57.78 335 P **P** **07 33 38.4 0.0**
SONM pmax pmax
comp=Z,28nm,1.3s
VIS Vishakhapatnam 58.05 293 *e*P **P** **07 33 36.0 -4.6**
VIS *i* x x 07 33 47.9
PEA0B Petropavlovsk- 58.11 14 P **P** **07 33 40.3 -0.1**
PEA0B Petropavlovsk- 58.11 14*ce*P **P** **07 33 40.8 +0.4**
PETK Petropavlovsk- 58.11 14 P **P** **07 33 40.2 -0.2**
comp=Z,61nm,0.8s,baz=195,slow=11,SNR=113
PETK LR LR 07 54 30.0
comp=Z,2μm,22.0s,baz=199,slow=32
PETK PKP2bc 08 03 39.5
comp=Z,2.1nm,0.9s,baz=167,slow=7.2,SNR=3.9
comp=Z,61nm,0.8s
PETK Petropavlovsk- 58.11 14 P **P** **07 33 40.5 +0.1**
PETK Petropavlovsk- 58.11 14 P **P** **07 33 40.5 +0.1**
PET Petropavlovsk 58.26 14 P **P** **07 33 41.3 -0.2**
PET IAmb IAmb 07 33 42.8
comp=Z,107nm,1.1s
PET Petropavlovsk 58.26 14 *e*P **P** **07 33 41.6 +0.2**
PET *e*S **S** **07 41 42.5 +2.2**
PET pmax pmax
comp=Z,127nm,1.1s
PET pmax pmax
comp=Z,200nm,11.2s
PET pmax pmax
comp=Z,300nm,8.1s
PET MLR MLR
comp=Z,900nm,20.0s
PET MLR MLR
comp=Z,800nm,18.0s
PET Petropavlovsk 58.26 14 P **P** **07 33 42.1 +0.7**
PET Petropavlovsk 58.26 14 P **P** **07 33 41.5 +0.1**
PET pP **pP** **07 33 53.3 -0.5**
RAGD RAYAGADA 58.34 295 *e*P **P** **07 33 43.7 +1.1**
RAGD *i* x x 07 33 56.3
PALK Pallekele 58.50 280 P **P** **07 33 43.9 0.0**
comp=Z,32nm,1.0s,baz=173,slow=9.0,SNR=7.3
PALK LR LR 08 02 18.5
comp=Z,495nm,19.9s,baz=214,slow=40
comp=Z,32nm,1.0s
PALK Pallekele 58.50 280 P **P** **07 33 44.0 0.0**
PALK IAmb IAmb 07 33 45.6
comp=Z,54nm,1.1s
PALK Pallekele 58.50 280 *i* P **P** **07 33 42.9 -1.1**
PALK pmax pmax
comp=Z,64nm,1.1s
PALK Pallekele 58.50 280 P **P** **07 33 44.6 +0.6**
PALK Pallekele 58.50 280 P **P** **07 33 45.0 +1.0**
PALK pP **pP** **07 33 57.2 +0.8**
PALK sP **sP** **07 34 03.9 +2.6**
CIT Chita 58.65 342 *e*P **P** **07 33 45.0 +0.7**
CIT *e* 07 34 02.6
CIT *e* 07 34 33.4
CIT *e* 07 35 50.0
CIT pmax pmax
comp=Z,227nm,2.4s
JIRN Jiri 58.73 305 *e*P **P** **07 33 46.0 +0.3**
comp=Z,79nm,1.0s
GUN Gumba 59.08 305 *e*P **P** **07 33 48.6 +0.5**
comp=Z,140nm,1.1s
PKI Pulchoki 59.34 304 *e*P **P** **07 33 49.9 0.0**
comp=Z,75nm,1.2s
PKIN Phulchoki 59.35 304 *e*P **P** **07 33 49.9 0.0**
KKN Kakani 59.53 305 *e*P **P** **07 33 50.6 -0.5**
DMN Daman 59.60 304 *e*P **P** **07 33 51.8 +0.2**
GKN Gorkha 60.14 305 *e*P **P** **07 33 55.4 +0.2**
comp=Z,238nm,1.2s
VJD Vijayawada 60.24 291 *e*P **P** **07 33 57.0 +1.2**
VJD *i* pP **pP** **07 34 09.4 +1.2**
BLSP Bilaspur 60.35 297 *e*P **P** **07 33 56.8 +0.2**
BLSP *i* x x 07 34 07.6
KOLN Koldanda 60.91 304 *e*P **P** **07 33 59.7 -0.8**
comp=Z,32nm,1.8s
DANN Dangsing 60.98 305 *e*P **P** **07 34 01.2 +0.1**
ZAK Zakamensk 61.05 335 *e*P **P** **07 34 00.8 -0.1**
ZAK pmax pmax
comp=Z,47nm,1.6s
PYUN Piuthan 61.53 304 *e*P **P** **07 34 04.9 +0.2**
comp=Z,301nm,1.1s
SALM Salem 61.61 285 *e*P **P** **07 34 06.3 +1.2**
IRK Irkutsk 62.07 337 *e*P **P** **07 34 05.2 -2.4**
IRK pmax pmax
comp=Z,104nm,2.0s
KOD Kodaikanal 62.09 283 *e*P **P** **07 34 10.1 +1.2**
HYB Hyderabad 62.40 291 *e*P **P** **07 34 10.8 +0.4**
HYB *i* x x 07 34 22.4
HYBB Hyderabad (bro 62.40 291 *e*P **P** **07 34 10.4 -0.1**
HYBB IVmB_BB 07 34 11.1
comp=Z,364nm,2.5s
HYBB *e*pP **pP** **07 34 22.5 -0.5**
HYBB *es*P **sP** **07 34 27.4 -0.5**
HYBB *e*PcP **PcP** **07 34 50.0 +0.3**
HYBB *e*PcS **PcS** **07 38 53.1 -0.3**
HYBB *e*S **S** **07 42 34.3 -0.5**
HYBB IVMs_BB IVMs_BB 07 42 54.8
comp=Z,201nm,5.3s
RAR Rarotonga 62.69 112 LR LR 08 00 16.5
comp=Z,482nm,21.0s,baz=272,slow=35
MOY Mondy 62.97 335 *e*P **P** **07 34 14.6 +0.8**
MOY pmax pmax
comp=Z,94nm,2.7s
SHEM Shemya Is, Ala 63.02 23 LR LR 08 00 29.2
comp=Z,966nm,19.2s,baz=251,slow=35
MA2 Magadan 63.05 7 P **P** **07 34 14.6 +0.7**
comp=Z,75nm,0.9s,baz=180,slow=6.5,SNR=23
MA2 LR LR 07 58 22.0
comp=Z,657nm,22.0s,baz=200,slow=33
comp=Z,75nm,0.9s
MA2 Magadan 63.05 7 P **P** **07 34 13.7 -0.3**
MA2 Magadan 63.05 7*ce*P **P** **07 34 14.1 +0.1**
MA2 pmax pmax
comp=Z,272nm,1.7s
MA2 MLR MLR
comp=Z,726nm,21.0s
MA2 Magadan 63.05 7 P **P** **07 34 14.8 +0.9**
MA2 Magadan 63.05 7 P **P** **07 34 14.1 +0.1**
MA2 pP **pP** **07 34 25.9 -0.5**
PCHI Peechi 63.23 283 ⇓*e*P **P** **07 34 17.3 +1.3**
BOD Bodaibo 63.64 346 *e*P **P** **07 34 16.8 -1.1**
BOD pmax pmax
comp=Z,59nm,1.9s
KNGR Kungurtug, Tuv 63.77 332 *i* P **P** **07 34 18.7 -0.4**
KNGR pmax pmax
comp=Z,23nm,1.2s
KNGR MLR MLR
comp=Z,1μm,18.0s
AMKA Amchitka 64.26 27 P **P** **07 34 22.1 0.0**
JHNI Jhansi 64.46 300 *e*P **P** **07 34 23.0 -1.0**
JHNI *i* x x 07 34 35.0
AKL Akola 64.57 294 *e*P **P** **07 34 24.8 +0.1**
AKL *i* x x 07 34 37.3
BHPL Bhopal 64.83 297 *e*P **P** **07 34 25.4 -1.0**
BHPL *i* x x 07 34 35.8
WMQ Urumqi 65.00 322 ⇓P **P** **07 34 28.0 +0.8**
WMQ pP pP 07 34 38.0 -1.7
WMQ PP **PP** **07 36 56.3 +5.6**
WMQ S **S** **07 43 09.8 +3.5**
WMQ pmax pmax
comp=Z,36nm,1.3s
WMQ pmax pmax
comp=Z,450nm,5.1s
WMQ LR LR
comp=Z,990nm,20.9s
WMQ LR LR
comp=Z,520nm,20.9s
WMQ LR LR
comp=Z,770nm,23.3s
YAK Yakutsk 65.10 355 P **P** **07 34 27.6 +0.3**
comp=Z,56nm,0.7s,baz=162,slow=2.4,SNR=29
YAK LR LR 07 59 52.3
comp=Z,3μm,21.8s,baz=156,slow=33
comp=Z,56nm,0.7s
YAK Yakutsk 65.10 355 P **P** **07 34 27.1 -0.2**
YAK Yakutsk 65.10 355*ce*P **P** **07 34 27.4 +0.1**
YAK pmax pmax
comp=Z,314nm,1.7s
YAK Yakutsk 65.10 355 P **P** **07 34 27.4 +0.1**
CASY Casey 66.23 192 P **P** **07 34 35.6 +1.0**
CASY IAmb IAmb 07 34 42.7
comp=Z,44nm,0.8s
CASY Casey 66.23 192 IAMs_20 IAMs_20 08 07 30.3
comp=Z,2μm,18.0s
CASY Casey 66.23 192 P **P** **07 34 35.8 +1.2**
CASY x x 07 34 42.0
CASY pP **sP** **07 34 51.6 -0.5**
CASY sP **PcP** **07 34 57.1 -7.4**
KAD Karad 66.46 290 *e*P **P** **07 34 36.8 -0.3**
KAD *i* x x 07 34 49.3
ADK Adak 66.47 28 P **P** **07 34 36.3 -0.1**
ADK Adak 66.47 28 P **P** **07 34 36.3 -0.1**
ADK pmax pmax
comp=Z,203nm,1.4s
ADK Adak 66.47 28 P **P** **07 34 36.7 +0.3**
ADK Adak 66.47 28 P **P** **07 34 36.3 -0.1**
ADK x x 07 34 40.5
ADK pP **pP** **07 34 47.7 -1.3**
SEY Seymchan 66.50 7 P **P** **07 34 36.9 +0.6**
comp=Z,15nm,0.7s,baz=256,slow=3.7,SNR=23
comp=Z,15nm,0.7s
SEY Seymchan 66.50 7*ce*P **P** **07 34 37.0 +0.6**
SEY pmax pmax
comp=Z,129nm,2.0s
HON Honolulu 66.64 65 P **P** **07 34 38.9 +0.8**
HON Honolulu 66.64 65 P **P** **07 34 38.9 +0.8**
HON pmax pmax
comp=Z,381nm,0.9s
KIP Kipapa 66.65 65 P **P** **07 34 38.6 +0.5**
KIP Kipapa 66.65 65*ce*P **P** **07 34 38.4 +0.3**
KIP pmax pmax
comp=Z,415nm,2.5s
KIP Kipapa 66.65 65 P **P** **07 34 39.9 +1.8**
KIP Kipapa 66.65 65 P **P** **07 34 39.8 +1.7**
KIP Kipapa 66.65 65 P **P** **07 34 39.0 +0.8**
KUDL Kundal 66.98 302 *e*P **P** **07 34 39.2 -0.9**
ATKA Atka Island 67.87 29 P **P** **07 34 45.4 +0.2**
DGZ Jazzator, Alta 68.30 327*d* *i*P **P** **07 34 48.5 +0.2**
DGZ pmax pmax
comp=Z,24nm,1.0s
ZSN Zaisan 68.56 324*d* *i*P **P** **07 34 50.0 +0.2**
ZSN Zaisan 68.56 324 ⇓*i*P **P** **07 34 50.0 +0.2**
baz=324
POHA Pohakuloa 68.57 68 P **P** **07 34 51.6 +1.0**
POHA Pohakuloa 68.57 68 P **P** **07 34 51.8 +1.2**
POHA Pohakuloa 68.57 68 P **P** **07 34 51.2 +0.6**
MK31 Makanchi Array 69.78 323 P **P** **07 34 57.6 +0.3**
MK31 Makanchi Array 69.78 323 *i* P **P** **07 34 57.4 0.0**
MK31 pmax pmax
comp=Z,49nm,0.9s
MKAR Makanchi Array 69.78 323 P **P** **07 34 58.1 +0.7**
comp=Z,28nm,0.8s,baz=119,slow=8.2,SNR=225
MKAR PKP2bc 08 02 58.8
comp=Z,2.2nm,1.0s,baz=273,slow=4.5,SNR=4.0
MKAR LR LR 08 07 30.7
comp=Z,541nm,20.2s,baz=107,slow=38
comp=Z,28nm,0.8s
MKAR Makanchi Array 69.78 323 P **P** **07 34 57.7 +0.3**
MKAR Makanchi Array 69.78 323*ce*P **P** **07 34 57.7 +0.3**
MKAR pmax pmax
comp=Z,28nm,0.8s
MAKZ Makanchi 69.98 322 P **P** **07 34 58.7 +0.1**
MAKZ IAmb IAmb 07 35 00.2
comp=Z,49nm,0.9s
MAKZ Makanchi 69.98 322 P **P** **07 34 58.6 +0.1**
MAKZ Makanchi 69.98 322 P **P** **07 34 59.0 +0.4**
MAKZ pP **pP** **07 35 11.3 +0.1**
SHLS Shalkode 69.98 318*d* *i*P **P** **07 34 57.7 -1.1**
SHLS Shalkode 69.98 318 ⇓*i*P **P** **07 34 57.8 -1.1**
baz=318
UZB Uzynbulak 70.27 318 *e*P **P** **07 35 01.2 +0.6**
UZB Uzynbulak 70.27 318 *e*P **P** **07 35 01.3 +0.6**
baz=318
CLES Cleveland East 70.37 30 P **P** **07 35 00.2 -0.6**
CLES IAmb IAmb 07 35 01.6
comp=Z,350nm,1.0s
KPKS Kokpek 70.63 318*d* *i*P **P** **07 35 03.1 +0.4**
KPKS pmax pmax
comp=Z,37nm,1.2s
KPKS Kokpek 70.63 318 ⇓*i*P **P** **07 35 03.2 +0.4**
comp=Z,37nm,1.2s,baz=318
SATY Saty 70.65 318*d* *i*P **P** **07 35 03.6 +0.7**
SATY pmax pmax
comp=Z,33nm,1.0s
SATY Saty 70.65 318 ⇓*i*P **P** **07 35 03.7 +0.7**
comp=Z,33nm,1.0s,baz=318
ZHN Zhinishke 70.67 318 *e*P **P** **07 35 03.5 +0.5**
ZHN Zhinishke 70.67 318 *e*P **P** **07 35 03.6 +0.5**
baz=318
NIKH Nikolski High 70.97 31 P **P** **07 35 03.8 -0.6**
baz=237
KSH Kashi 71.03 313 P **P** **07 35 07.0 +1.8**
KSH pmax pmax
comp=Z,41nm,1.2s
KSH LR LR
comp=Z,970nm,21.3s
KSH LR LR
comp=Z,1μm,23.7s
KSH LR LR
comp=Z,2μm,24.0s
NIL Nilore 71.23 307 P **P** **07 35 06.0 -0.5**
NIL Nilore 71.23 307 P **P** **07 35 06.0 -0.5**
NIL pmax pmax
comp=Z,61nm,1.2s
NIL MLR MLR
comp=Z,700nm,22.0s
NIL Nilore 71.23 307 P **P** **07 35 06.8 +0.3**
NIL pP **pP** **07 35 19.8 +0.6**
TDK Taldyqorghan 71.44 320*de*P **P** **07 35 08.2 +0.8**
TDK pmax pmax
comp=Z,35nm,1.0s
TDK MLR MLR
comp=Z,629nm,20.0s
TDK Taldyqorghan 71.44 320 ⇓*e*P **P** **07 35 08.3 +0.8**
comp=Z,35nm,1.0s,baz=319
TDK LR LR 08 02 47.8
comp=Z,630nm,19.5s,baz=319
MDOK Medeo 71.61 317 P **P** **07 35 09.3 +0.6**
MDOK Medeo 71.61 317 *i* P **P** **07 35 09.6 +0.9**
baz=317
MDOK *es* **S** **07 44 32.3 +7.1**
baz=317
MDOK LR LR 08 02 47.8
comp=Z,286nm,18.4s,baz=317
AAA Alma-Ata 71.72 317*de*P **P** **07 35 10.0 +0.8**
AAA pmax pmax
comp=Z,45nm,1.0s
AAA Alma-Ata 71.72 317 ⇓*e*P **P** **07 35 10.0 +0.8**
comp=Z,45nm,1.0s,baz=317
ULHL Ulahol 71.81 316 P **P** **07 35 11.0 +0.9**
SNR=5.7
CHKK Chushkaly 71.91 318 *e*P **P** **07 35 10.5 +0.2**
CHKK Chushkaly 71.91 318 *e*P **P** **07 35 10.6 +0.2**
baz=318
PPT Papeete 71.95 107 LR LR 08 03 54.8
comp=Z,1μm,21.9s,baz=264,slow=34
PPT2 Papeete2 71.95 107 *e*P **P** **07 35 12.9 +1.8**
comp=Z,149nm,26.0s
PPT2 Papeete2 71.95 107 *e*PP **PP** **07 37 50.9 -0.5**
comp=Z,62nm,26.5s

PPT2 eS S 07 44 31.5 +1.7
comp=Z,342nm,25.5s
PPT2 eLQ LQ 07 54 09.5
comp=Z,2µm,35.5s
PPT2 eLR LR 07 57 11.0
comp=Z,2µm,23.2s
ZAA0 Zalesovo Array 71.97 330 P **P 07 35 09.6 -0.8**
ZALV Zalesovo Beam 71.97 330 P **P 07 35 09.8 -0.6**
comp=Z,11nm,0.8s,baz=104,slow=6.3,SNR=39
ZALV PP **PP 07 37 50.7 -0.1**
comp=Z,3.7nm,0.8s,baz=116,slow=6.8,SNR=3.9
ZALV LR LR 08 06 54.6
comp=Z,798nm,20.2s,baz=115,slow=36
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 71.97 330 P **P 07 35 09.5 -1.0**
ZALV Zalesovo Beam 71.97 330 *i* P **P 07 35 09.6 -0.8**
ZALV pmax pmax
comp=Z,11nm,0.8s
KUU Kurty 72.36 318 *d i* P **P 07 35 13.5 +0.5**
KUU pmax pmax
comp=Z,96nm,1.2s
KUU MLR MLR
comp=Z,650nm,22.0s
KUU Kurty 72.36 318 ǁ *i* P **P 07 35 13.5 +0.5**
comp=Z,96nm,1.2s,baz=318
KUU LR LR 08 04 35.0
comp=Z,650nm,21.5s,baz=318
TBI Tubuai 72.42 113 *e* P **P 07 35 15.8 +2.1**
comp=Z,97nm,27.5s
TBI eS S **07 44 35.9 +1.0**
comp=Z,240nm,30.2s
TBI Tubuai 72.42 113 eLR LR 07 57 23.9
comp=Z,3µm,26.2s
TKM2 Tokmak 2 72.50 317 P **P 07 35 14.9 +0.7**
SNR=28
TKM2 Tokmak 2 72.50 317 *i* P **P 07 35 13.9 -0.3**
TKM2 pmax pmax
comp=Z,36nm,0.8s
UNV Unalaska Valle 72.63 31 P **P 07 35 14.3 -0.1**
UNV Unalaska Valle 72.63 31 P **P 07 35 14.0 -0.4**
baz=239,SNR=5.6
UNV Unalaska Valle 72.63 31 P **P 07 35 14.7 +0.4**
SPIA Saint Paul Isl 72.67 26 P **P 07 35 14.1 -0.4**
baz=235
KBK Karagaybulak 72.86 316 P **P 07 35 17.0 +0.8**
SNR=7.5
CHMS Chumysh 73.11 317 P **P 07 35 18.0 +0.5**
SNR=16
CHMS Chumysh 73.11 317 *i* P **P 07 35 17.5 0.0**
CHMS pmax pmax
comp=Z,48nm,1.1s
AAK Ala-Archa 73.16 316 P **P 07 35 18.8 +0.8**
SNR=9.7
AAK Ala-Archa 73.16 316 P **P 07 35 18.8 +0.8**
AAK Ala-Archa 73.16 316 *ce* P **P 07 35 18.7 +0.7**
AAK pmax pmax
comp=Z,45nm,1.7s
AAK Ala-Archa 73.16 316 P **P 07 35 18.2 +0.2**
AAK Ala-Archa 73.16 316 *i* P **P 07 35 18.3 +0.3**
SNR=11
AAK Ala-Archa 73.16 316 *i* P **P 07 35 18.3 +0.3**
SNR=11
SGDS Sogindy 73.36 317 *d i* P **P 07 35 19.2 +0.2**
SGDS Sogindy 73.36 317 ǁ *i* P **P 07 35 19.2 +0.2**
baz=317
USP Ospenovka 73.38 317 P **P 07 35 19.8 +0.7**
SNR=55
BILL Bilibino 73.40 11 P **P 07 35 18.9 +0.3**
BILL Bilibino 73.40 11 *c i* P **P 07 35 18.8 +0.1**
BILL *e* *PP **pP 07 35 30.5 -0.9**
BILL *e* *SP **PcP 07 35 34.0 -0.7**
BILL *e* 07 35 35.5
BILL SSS SSS 07 52 38.0
BILL pmax pmax
comp=Z,22nm,1.0s
BILL MLR MLR
comp=Z,646nm,19.0s
AML Almayashu 73.55 315 P **P 07 35 21.7 +1.1**
SNR=50
EKS2 Erkin-Say 73.67 316 P **P 07 35 22.0 +1.1**
SNR=19
KURK Kurchatov 73.72 325 P **P 07 35 20.9 +0.1**
KURK Kurchatov 73.72 325 *ce* P **P 07 35 20.7 -0.2**
KURK pmax pmax
comp=Z,40nm,1.0s
KURK MLR MLR
comp=Z,685nm,19.0s
KURK Kurchatov 73.72 325 P **P 07 35 21.0 +0.1**
KURBB Kurchatov Arra 73.73 325 P **P 07 35 20.8 -0.1**
comp=Z,25nm,0.9s,baz=113,slow=5.6,SNR=164
comp=Z,25nm,0.9s
KURBB Kurchatov Arra 73.73 325 P **P 07 35 19.8 -1.2**
BTLS Baital 74.31 318 *d i* P **P 07 35 24.8 +0.3**
BTLS pmax pmax
comp=Z,38nm,1.5s
BTLS Baital 74.31 318 ǁ *i* P **P 07 35 24.8 +0.3**
comp=Z,38nm,1.5s,baz=318
TIXI Tiksi 74.68 357 P **P 07 35 25.3 -0.7**
comp=Z,19nm,0.9s,baz=267,slow=18,SNR=7.7
TIXI LR LR 08 06 15.4
comp=Z,2µm,21.1s,baz=180,slow=34
comp=Z,19nm,0.9s
TIXI Tiksi 74.68 357 P **P 07 35 25.1 -0.9**
TIXI Tiksi 74.68 357 *ce* P **P 07 35 25.7 -0.3**
TIXI pmax pmax
comp=Z,25nm,0.8s
FALS False Pass 74.70 31 P **P 07 35 26.2 -0.2**
baz=242
FALS False Pass 74.70 31 P **P 07 35 28.0 +1.5**
KBL Kabul 74.83 307 P **P 07 35 27.4 -0.6**
KBL Kabul 74.83 307 P **P 07 35 27.4 -0.6**
KBL pmax pmax
comp=Z,16nm,0.9s
KBL Kabul 74.83 307 P **P 07 35 27.7 -0.3**
SNR=8.5
BTK Batken 74.96 313 P **P 07 35 28.4 -0.1**
BTK IAmb IAmb 07 35 46.5
comp=Z,172nm,1.8s
BTK Batken 74.96 313 P **P 07 35 28.4 -0.1**
BTK pmax pmax
comp=Z,172nm,1.8s
DZA Taraz 75.45 316 *e* P **P 07 35 31.4 +0.3**
DZA Taraz 75.45 316 *e* P **P 07 35 31.4 +0.3**
baz=316
VNDA Vanda 75.61 175 P **P 07 35 32.8 +1.5**
comp=Z,18nm,0.7s,baz=324,slow=6.6,SNR=122
VNDA LR LR 08 09 10.3
comp=Z,4µm,18.2s,baz=353,slow=36
comp=Z,18nm,0.7s
VNDA Vanda 75.61 175 P **P 07 35 32.9 +1.5**
CHGR Chuyangaron 75.80 311 P **P 07 35 33.5 +0.1**
CHGR IAmb IAmb 07 36 25.8
comp=Z,95nm,0.6s
CHGR Chuyangaron 75.80 311 P **P 07 35 33.5 +0.1**
CHGR pmax pmax
comp=Z,95nm,0.6s
GAMB Gambell 76.05 20 P **P 07 35 34.2 +0.2**
baz=232
KK31 Karatay Array 76.08 316 P **P 07 35 34.6 -0.1**
KK31 Karatay Array 76.08 316 *i* P **P 07 35 34.0 -0.7**
KKAR Karatay Array 76.08 316 P **P 07 35 34.9 +0.2**
KKAR Karatay Array 76.08 316 P **P 07 35 34.9 +0.2**
IUG luzhnay 76.14 315 *d i* P **P 07 35 35.9 +0.7**
IUG luzhnay 76.14 315 ǁ *i* P **P 07 35 35.9 +0.7**
baz=314
SBA Scott Base 76.38 174 P **P 07 35 38.1 +2.4**
SBA Scott Base 76.38 174 P **P 07 35 38.1 +2.4**
SBA pmax pmax
comp=Z,32nm,0.9s
SBA MLR MLR
comp=Z,2µm,18.0s
SDPT Sand Point 76.43 31 P **P 07 35 35.9 -0.5**
baz=244,SNR=8.9
OTUK Ortayu 76.53 321 P **P 07 35 37.1 -0.1**
CNBA Chernabura Isl 76.67 32 P **P 07 35 37.5 -0.2**
CNBA IAmb IAmb 07 35 38.7
comp=Z,65nm,1.0s
CNBA IAMs_20 IAMs_20 08 06 35.9
comp=Z,1µm,22.0s
CHNA Chernabura Isl 76.67 32 P **P 07 35 37.4 -0.4**
baz=245,SNR=7.0
BRZS Berezniki 76.93 323 *d i* P **P 07 35 39.3 0.0**
BRZS Berezniki 76.93 323 ǁ *i* P **P 07 35 39.4 0.0**
baz=323
S14K Fog Glacier 77.31 30 P **P 07 35 41.6 +0.1**
baz=245,SNR=9.7

CHGN Chignik 77.89 31 P **P 07 35 44.1 -0.4**
CHGN IAmb IAmb 07 35 44.8
comp=Z,63nm,1.0s
CHGN Chignik 77.89 31 P **P 07 35 44.2 -0.3**
baz=246,SNR=5.1
TNA Tin City 78.42 20 P **P 07 35 47.7 +0.4**
baz=235
ANM Nome 78.77 21 P **P 07 35 49.8 +0.5**
baz=238
CHIR Chirikof Islan 79.14 32 P **P 07 35 51.6 +0.1**
baz=248
P16K Nushagak River 79.23 28 P **P 07 35 51.6 -0.3**
baz=246
BVA0 Borovoye Array 79.32 325 *i* P **P 07 35 51.8 -0.7**
BVAR Borovoye Array 79.32 325 P **P 07 35 53.0 +0.5**
comp=Z,38nm,0.9s,baz=114,slow=6.6,SNR=130
BVAR LR LR 08 13 19.0
comp=Z,624nm,19.6s,baz=95,slow=38
comp=Z,38nm,0.9s
BRVK Borovoye 79.39 325 P **P 07 35 52.9 0.0**
BRVK Borovoye 79.39 325 IAMs_20 IAMs_20 08 13 16.7
comp=Z,958nm,20.0s
BRVK Borovoye 79.39 325 *i* P **P 07 35 52.3 -0.6**
BRVK pmax pmax
comp=Z,55nm,0.9s
BRVK Borovoye 79.39 325 P **P 07 35 53.5 +0.6**
O16K Kokwok River B 79.42 28 P **P 07 35 53.0 +0.1**
baz=245,SNR=29
R17K Ugashik Creek 79.44 30 P **P 07 35 52.5 -0.6**
baz=247
N16K Nishlik Lake 79.48 27 P **P 07 35 54.2 +0.9**
baz=245,SNR=30
Q16K King Salmon 79.72 29 P **P 07 35 53.3 -1.2**
baz=247
NRIK Noril'sk 79.83 344 P **P 07 35 54.8 -0.1**
comp=Z,36nm,0.9s,baz=124,slow=5.5,SNR=35
NRIK LR LR 08 11 28.3
comp=Z,2µm,20.8s,baz=122,slow=36
comp=Z,36nm,0.9s
NRIK Noril'sk 79.83 344 P **P 07 35 54.8 -0.1**
NRIK IAmb IAmb 07 35 56.1
comp=Z,61nm,1.1s
NRIK Noril'sk 79.83 344 *ce* P **P 07 35 54.6 -0.4**
NRIK pmax pmax
comp=Z,74nm,1.1s
O17K Koliganek Bris 79.95 28 P **P 07 35 56.3 +0.5**
baz=246,SNR=77
P17K Kvichak River 80.03 28 P **P 07 35 55.2 -1.0**
baz=247
SII Sitkinak Islan 80.16 31 IAmb IAmb 07 35 58.6
comp=Z,163nm,1.0s
SII IAMs_20 IAMs_20 08 09 31.2
comp=Z,1µm,21.0s
SII Sitkinak Islan 80.16 31 P **P 07 35 57.2 +0.1**
baz=249,SNR=5.3
SII Sitkinak Islan 80.16 31 P **P 07 35 58.1 +1.1**
HRA Herat 80.29 305 P **P 07 35 58.1 -0.3**
P18K Big Mountain, 80.68 28 IAMs_20 IAMs_20 08 09 35.6
comp=Z,1µm,20.0s
P18K Big Mountain, 80.68 28 P **P 07 35 58.9 -0.9**
baz=248
OHAK Old Harbor 80.85 31 IAmb IAmb 07 36 02.2
comp=Z,211nm,1.4s
OHAK Old Harbor 80.85 31 P **P 07 36 00.8 +0.1**
baz=250,SNR=16
O18K Kokuh Hills 80.86 28 P **P 07 36 00.5 -0.2**
baz=248,SNR=6.2
N18K Kilae Creek 80.86 27 P **P 07 36 01.1 +0.4**
N18K IAmb IAmb 07 36 02.9
comp=Z,94nm,1.2s
N18K IAMs_20 IAMs_20 08 09 32.5
comp=Z,1µm,20.0s
N18K Kilae Creek 80.86 27 P **P 07 36 01.7 +1.0**
baz=247,SNR=23
TAOE Nuku Hiva Isla 81.07 98 *e* LR LR 08 01 23.7
Q19K Cape Douglas, 81.27 29 IAmb IAmb 07 36 22.4
comp=Z,110nm,1.1s
Q19K IAMs_20 IAMs_20 08 15 33.3
comp=Z,920nm,20.0s
Q19K Cape Douglas, 81.27 29 P **P 07 36 02.1 -0.8**
baz=249,SNR=5.7
KDAK Kodiak Island 81.40 30 P **P 07 36 03.9 +0.3**
KDAK IAmb IAmb 07 36 05.0
comp=Z,215nm,1.6s
KDAK Kodiak Island 81.40 30 IAMs_20 IAMs_20 08 09 44.9
comp=Z,2µm,21.0s
KDAK Kodiak Island 81.40 30 P **P 07 36 03.9 +0.3**
KDAK pmax pmax
comp=Z,215nm,1.6s
KDAK Kodiak Island 81.40 30 P **P 07 36 03.8 +0.3**
baz=251
O19K Port Alsworth 81.40 28 IAMs_20 IAMs_20 08 07 31.8
comp=Z,868nm,21.0s
O19K Port Alsworth 81.40 28 P **P 07 36 03.3 -0.2**
baz=249,SNR=5.3
WBK Wadi Bani Khal 81.41 293 P **P 07 36 04.5 0.0**
N19K Bonanza Creek 81.55 27 IAmb IAmb 07 36 06.3
comp=Z,179nm,1.4s
N19K IAMs_20 IAMs_20 08 09 52.7
comp=Z,1µm,20.0s
N19K Bonanza Creek 81.55 27 P **P 07 36 04.8 +0.3**
baz=248,SNR=50
TTA Tatalina 81.69 25 IAmb IAmb 07 36 06.8
comp=Z,76nm,1.3s
TTA Tatalina 81.69 25 P **P 07 36 05.4 +0.2**
baz=247,SNR=16
P19K Oil Pt 81.72 28 IAmb IAmb 07 36 05.8
comp=Z,72nm,1.1s
P19K Oil Pt 81.72 28 P **P 07 36 04.8 -0.5**
baz=250,SNR=6.6
Q20K Shuyak Island 81.77 30 P **P 07 36 05.3 -0.2**
baz=251
WSAR Wai Sarin 81.80 294 LR LR 08 16 13.0
comp=Z,146nm,20.1s,baz=108,slow=38
MAW Mawson 81.85 202 P **P 07 36 08.0 +2.2**
comp=Z,48nm,1.0s,baz=76,slow=5.8,SNR=54
MAW LR LR 08 10 50.6
comp=Z,2µm,19.6s,baz=68,slow=34
comp=Z,48nm,1.0s
MAW Mawson 81.85 202 P **P 07 36 07.5 +1.7**
MAW Mawson 81.85 202 P **P 07 36 07.5 +1.7**
MAW pmax pmax
comp=Z,12nm,1.0s
ILSW Iliamna Southw 81.88 28 IAmb IAmb 07 36 06.3
comp=Z,58nm,1.3s
L19K White Mountain 81.90 26 IAmb IAmb 07 36 24.2
comp=Z,72nm,0.9s
L19K IAMs_20 IAMs_20 08 07 36.8
comp=Z,1µm,22.0s
L19K White Mountain 81.90 26 P **P 07 36 06.8 +0.6**
baz=248,SNR=52
M19K Big River Lodg 82.00 26 IAmb IAmb 07 36 08.7
comp=Z,77nm,1.4s
M19K IAMs_20 IAMs_20 08 07 19.4
comp=Z,1µm,22.0s
M19K Big River Lodg 82.00 26 P **P 07 36 07.4 +0.7**
baz=248,SNR=29
GCSA Galena City Sc 82.08 23 P **P 07 36 07.4 +0.4**
baz=246,SNR=14
O20K Slope Mountain 82.16 28 P **P 07 36 06.6 -1.1**
baz=250
JMDO Jabal Madar 82.18 293 P **P 07 36 08.7 +0.1**
RSO Redoubt South 82.23 28 P **P 07 36 07.0 -1.2**
BIDO Bidbid 82.29 294 P **P 07 36 09.5 +0.5**
SNR=13
SMDO Samad 82.31 294 P **P 07 36 09.8 +0.6**
L20K Farewell, AK 82.43 26 P **P 07 36 09.6 +0.6**
baz=249,SNR=43
HOM Homer 82.48 29 P **P 07 36 09.0 -0.3**
HOM IAMs_20 IAMs_20 08 11 32.3
comp=Z,1µm,20.0s
HOM Homer 82.48 29 P **P 07 36 08.8 -0.4**
baz=251
M20K Styx River 82.55 26 IAmb IAmb 07 36 11.4
comp=Z,161nm,1.4s
M20K IAMs_20 IAMs_20 08 07 47.9
comp=Z,1µm,22.0s
M20K Styx River 82.55 26 P **P 07 36 10.0 +0.3**
baz=250,SNR=49
CNPM China Poot 82.64 29 IAmb IAmb 07 36 27.3
comp=Z,109nm,1.2s
CNPM IAMs_20 IAMs_20 08 08 37.4
comp=Z,1µm,21.0s
K20K Telida 82.67 25 IAmb IAmb 07 36 12.2
comp=Z,108nm,1.4s
K20K Telida 82.67 25 P **P 07 36 10.8 +0.6**
baz=248,SNR=52

SPCR Spurr Chakacha 82.73 27 P **P 07 36 09.5 -1.1**
baz=250
MSEY Mahe Island 82.77 266 P **P 07 36 11.6 -0.1**
MSEY Mahe Island 82.77 266 P **P 07 36 11.6 -0.1**
JASK Jask - Hormozg 82.80 296 P **P 07 36 12.2 +0.6**
BRLK Bradley Lake 82.88 29 IAmb IAmb 07 36 27.4
comp=Z,80nm,1.1s
BRLK IAMs_20 IAMs_20 08 09 05.5
comp=Z,960nm,21.0s
BRSE Bradley Lake S 82.94 29 P **P 07 36 10.9 -0.7**
baz=252,SNR=6.3
J20K Nowinta River 82.94 24 IAmb IAmb 07 36 13.6
comp=Z,123nm,1.4s
J20K Nowinta River 82.94 24 P **P 07 36 12.1 +0.5**
baz=248,SNR=60
HOQ Hoqain 83.04 294 P **P 07 36 14.0 +1.0**
SNR=13
BSY Bisya 83.05 293 P **P 07 36 13.3 +0.3**
CAPN Captain Cook N 83.07 28 IAMs_20 IAMs_20 08 08 23.9
comp=Z,1µm,22.0s
SKT Skwentna 83.29 27 IAMs_20 IAMs_20 08 08 11.8
comp=Z,1µm,22.0s
PPLA Purkeypile 83.31 26 IAmb IAmb 07 36 17.2
comp=Z,140nm,1.6s
PPLA Purkeypile 83.31 26 P **P 07 36 13.3 -0.4**
baz=250,SNR=16
CAST Castle Rocks 83.53 25 IAmb IAmb 07 36 15.6
comp=Z,83nm,1.5s
CAST Castle Rocks 83.53 25 P **P 07 36 14.1 -0.5**
baz=250,SNR=31
CHUM Lake Minchumin 83.59 25 P **P 07 36 15.2 +0.3**
baz=250,SNR=45
FIS Fire Island 83.62 28 IAMs_20 IAMs_20 08 08 53.5
comp=Z,1µm,22.0s
O22K Cooper Landing 83.65 28 IAMs_20 IAMs_20 08 12 18.3
comp=Z,1µm,20.0s
O22K Cooper Landing 83.65 28 P **P 07 36 14.6 -0.7**
baz=253
ARQ Araqi 83.73 294 P **P 07 36 16.9 +0.4**
SNR=6.8
SOHO SOHO 83.81 295 P **P 07 36 17.3 +0.4**
SOHO SOHO 83.81 295 *i* P **P 07 36 16.7 -0.2**
SNR=6.9
SOHO SOHO 83.81 295 *i* P **P 07 36 16.7 -0.2**
SNR=6.9
RC01 Rabbit Creek A 83.83 28 IAmb IAmb 07 36 17.4
comp=Z,79nm,0.9s
RC01 IAMs_20 IAMs_20 08 08 47.9
comp=Z,1µm,22.0s
RC01 Rabbit Creek A 83.83 28 P **P 07 36 15.5 -0.7**
baz=253,SNR=21
M22K Willow 83.86 27 P **P 07 36 15.4 -0.8**
baz=252,SNR=28
CUT Chulitna 83.99 26 IAmb IAmb 07 36 17.1
comp=Z,91nm,1.2s
CUT IAMs_20 IAMs_20 08 08 32.1
comp=Z,1µm,22.0s
CUT Chulitna 83.99 26 P **P 07 36 15.8 -1.1**
baz=252,SNR=5.6
H21K Melozitna Rive 84.02 23 IAMs_20 IAMs_20 08 10 08.5
comp=Z,1µm,20.0s
H21K Melozitna Rive 84.02 23 P **P 07 36 17.4 +0.3**
baz=249,SNR=29
G21K Allakaket 84.06 22 P **P 07 36 17.4 +0.2**
baz=249
KTH Kantishna Hill 84.07 25 P **P 07 36 16.6 -0.8**
KTH IAmb IAmb 07 36 19.3
comp=Z,67nm,1.1s
SHAO Shalim 84.07 288 P **P 07 36 18.5 +0.2**
SHAO Shalim 84.07 288 P **P 07 36 18.5 +0.2**
MDH Madha 84.14 296 P **P 07 36 18.8 +0.2**
MDH Madha 84.14 296 P **P 07 36 18.4 -0.1**
MDH Madha 84.14 296 P **P 07 36 18.4 -0.1**
GEYT Alibeck 84.15 308 P **P 07 36 19.4 +0.9**
comp=Z,13nm,0.9s,baz=170,slow=2.7,SNR=25
GEYT LR LR 08 16 38.6
comp=Z,864nm,21.3s,baz=83,slow=38
comp=Z,13nm,0.9s
GEYT Alibeck 84.15 308 P **P 07 36 19.1 +0.6**
GEYT IAmb IAmb 07 36 20.9
comp=Z,181nm,1.9s
GYA0B ALIBECK ARRAY 84.15 308 P **P 07 36 19.3 +0.9**
GYA0B IAmb IAmb 07 36 20.8
comp=Z,166nm,1.9s
I21K Tanana 84.17 23 P **P 07 36 18.1 +0.3**
I21K IAMs_20 IAMs_20 08 09 11.7
comp=Z,1µm,21.0s
I21K Tanana 84.17 23 P **P 07 36 18.1 +0.3**
baz=250,SNR=16
UOSS Minazif 84.19 295 P **P 07 36 18.1 -0.7**
UOSS Minazif 84.19 295 P **P 07 36 19.0 +0.2**
UOSS Minazif 84.19 295 *i* P **P 07 36 18.6 -0.2**
SNR=7.6
UOSS Minazif 84.19 295 *i* P **P 07 36 18.6 -0.2**
SNR=7.6
BPAW Bear Paw Mtn. 84.22 25 P **P 07 36 17.7 -0.5**
baz=251,SNR=9.8
HATD Hatta, Dubai 84.24 295 P **P 07 36 20.0 +0.9**
SNR=8.5
HATD Hatta, Dubai 84.24 295 *i* P **P 07 36 19.2 +0.1**
SNR=7.1
HATD Hatta, Dubai 84.24 295 *i* P **P 07 36 19.2 +0.1**
SNR=7.1
PMR Palmer 84.26 27 IAmb IAmb 07 36 19.4
comp=Z,79nm,1.1s
PMR Palmer 84.26 27 P **P 07 36 17.7 -0.6**
baz=253,SNR=41
MSFE Esma-Masafi 84.27 296 *i* P **P 07 36 20.0 +0.7**
SNR=14
MSFE Esma-Masafi 84.27 296 *i* P **P 07 36 20.0 +0.7**
SNR=14
MASF Masafi 84.27 296 P **P 07 36 19.7 +0.4**
SNR=14
TRF Thorofare Moun 84.31 25 P **P 07 36 17.7 -1.1**
baz=252,SNR=18
F21K Alatna River 84.32 21 P **P 07 36 18.6 0.0**
baz=249,SNR=6.0
GHO Glory Hole Cre 84.40 27 IAmb IAmb 07 36 19.9
comp=Z,94nm,1.3s
GHO IAMs_20 IAMs_20 08 11 36.2
comp=Z,1µm,20.0s
PWL Port Wells 84.42 28 IAMs_20 IAMs_20 08 13 47.5
comp=Z,1µm,20.0s
PWL Port Wells 84.42 28 P **P 07 36 18.7 -0.5**
baz=254,SNR=53
ALNE Al Ain 84.51 294 P **P 07 36 20.8 +0.3**
SNR=16
ALNE Al Ain 84.51 294 *i* P **P 07 36 20.8 +0.3**
SNR=6.1
ALNE Al Ain 84.51 294 *i* P **P 07 36 20.8 +0.3**
SNR=6.1
KNK Knik Glacier 84.52 28 IAMs_20 IAMs_20 08 10 02.0
comp=Z,1µm,20.0s
KNK Knik Glacier 84.52 28 P **P 07 36 19.6 -0.1**
baz=254,SNR=34
MLY Manley 84.62 24 IAmb IAmb 07 36 23.3
comp=Z,59nm,1.2s
MLY IAMs_20 IAMs_20 08 09 04.5
comp=Z,1µm,22.0s
MLY Manley 84.62 24 P **P 07 36 20.1 -0.1**
baz=251,SNR=58
H22K Ishtalitna Cre 84.65 23 P **P 07 36 20.6 +0.3**
baz=251,SNR=19
NAZ Nazwa, Dubai 84.68 295 P **P 07 36 22.0 +0.7**
SNR=9.9
NAZ Nazwa, Dubai 84.68 295 *i* P **P 07 36 21.4 +0.1**
SNR=5.6
NAZ Nazwa, Dubai 84.68 295 *i* P **P 07 36 21.4 +0.1**
SNR=5.6
SML Sawmill 84.68 27 IAMs_20 IAMs_20 08 11 22.5
comp=Z,1µm,20.0s
SML Sawmill 84.68 27 P **P 07 36 20.3 -0.2**
baz=254,SNR=50
AB31 Akbulak array 84.70 320 *i* P **P 07 36 19.8 -1.0**
ABKAR Akbulak array 84.70 320 P **P 07 36 20.2 -0.6**
ABKAR Akbulak array 84.70 320 IAmb IAmb 07 36 34.7
comp=Z,50nm,0.8s
FAQ Al Faqa, Dubai 84.72 295 P **P 07 36 22.1 +0.6**
SNR=9.0
FAQ Al Faqa, Dubai 84.72 295 *i* P **P 07 36 21.4 -0.1**
SNR=8.7
FAQ Al Faqa, Dubai 84.72 295 *i* P **P 07 36 21.4 -0.1**
SNR=8.7
WAT1 Susitna Watana 84.87 26 P **P 07 36 21.0 -0.5**
baz=254
F22K John River 84.90 21 P **P 07 36 22.1 +0.6**
baz=250

RND	Reindeer	84.91	26	IAMs_20	IAMs_20	08 10 03.2			
	comp=Z,1µm,21.0s								
G22K	Bettles	84.94	22	P	P	07 36 21.9	+0.2		
	baz=250								
ASUD	Al Ashush, Dub	84.95	295	P	P	07 36 24.0	+1.3		
	SNR=8.5								
ASUD	Al Ashush, Dub	84.95	295	*i* P	P	07 36 23.2	+0.5		
	SNR=14								
ASUD	Al Ashush, Dub	84.95	295	*i* P	P	07 36 23.2	+0.5		
	SNR=14								
M23K	Glacier View	84.96	27	P	P	07 36 21.4	-0.5		
	baz=254,SNR=17								
MCK	McKinley	84.97	25	IAmb	IAmb	07 36 22.9			
	comp=Z,87nm,1.1s								
MCK	McKinley	84.97	25	P	P	07 36 20.8	-1.1		
	baz=253,SNR=42								
Q23K	Middleton Isla	85.00	30	P	P	07 36 21.9	-0.2		
	baz=256								
GLI	Glacier Island	85.01	28	IAMs_20	IAMs_20	08 09 02.1			
	comp=Z,1µm,22.0s								
GLI	Glacier Island	85.01	28	P	P	07 36 21.8	-0.4		
	baz=255,SNR=16								
SCM	Sheep Creek Mo	85.15	27	IAMs_20	IAMs_20	08 13 33.8			
	comp=Z,1µm,20.0s								
SCM	Sheep Creek Mo	85.15	27	P	P	07 36 22.9	-0.1		
	baz=255,SNR=48								
WAT6	Susitna Watana	85.16	26	P	P	07 36 22.3	-0.8		
	baz=254,SNR=38								
NEA2	Nenana	85.17	24	IAmb	IAmb	07 36 25.0			
	comp=Z,60nm,1.2s								
NEA2	Nenana	85.17	24	P	P	07 36 22.0	-0.9		
	baz=253,SNR=45								
E22K	Anaktuvuk Pass	85.24	21	P	P	07 36 23.9	+0.6		
	baz=250								
AJN	Ajban	85.25	295	P	P	07 36 24.6	+0.5		
	SNR=5.5								
AJN	Ajban	85.25	295	*i* P	P	07 36 24.2	0.0		
	SNR=5.3								
AJN	Ajban	85.25	295	*i* P	P	07 36 24.2	0.0		
	SNR=5.3								
FID	Port Fidalgo	85.27	28	IAmb	IAmb	07 36 39.1			
	comp=Z,76nm,1.1s								
H23K	Yukon River	85.34	23	IAMs_20	IAMs_20	08 10 58.6			
	comp=Z,1µm,20.0s								
H23K	Yukon River	85.34	23	P	P	07 36 24.1	+0.3		
	baz=252,SNR=29								
G23K	Bananza Creek	85.43	22	P	P	07 36 24.8	+0.6		
	baz=252,SNR=24								
DHY	Denali Highway	85.46	26	IAmb	IAmb	07 36 25.5			
	comp=Z,98nm,1.1s								
DHY	Denali Highway	85.46	26	P	P	07 36 24.3	-0.2		
	baz=255,SNR=75								
WRH	Wood River Hil	85.53	25	IAmb	IAmb	07 36 25.8			
	comp=Z,71nm,0.9s								
EYAK	Cordova Ski Ar	85.57	29	IAmb	IAmb	07 36 26.1			
	comp=Z,51nm,1.4s								
EYAK	Cordova Ski Ar	85.57	29	P	P	07 36 24.8	-0.1		
	baz=256,SNR=6.2								
CCB	Clear Creek Bu	85.70	24	IAmb	IAmb	07 36 26.8			
	comp=Z,77nm,1.0s								
KLU	Klutina	85.71	28	IAmb	IAmb	07 36 27.1			
	comp=Z,79nm,1.3s								
KLU				IAMs_20	IAMs_20	08 14 35.7			
	comp=Z,1µm,20.0s								
KLU	Klutina	85.71	28	P	P	07 36 26.0	+0.2		
	baz=256,SNR=9.1								
TCOL	CIGO, UAF Yank	85.74	24	IAmb	IAmb	07 36 27.1			
	comp=Z,46nm,1.1s								
TCOL	CIGO, UAF Yank	85.74	24	P	P	07 36 24.5	-1.2		
	baz=254,SNR=10								
COLA	College	85.75	24	P	P	07 36 24.6	-1.1		
COLA				IAmb	IAmb	07 36 27.1			
	comp=Z,45nm,1.1s								
COLA	College	85.75	24	*i* P	P	07 36 24.3	-1.4		
COLA				pmax	pmax				
	comp=Z,46nm,1.1s								
COLA	College	85.75	24	P	P	07 36 24.7	-1.1		
	baz=254								
M24K	Tolsona, Glenn	85.75	27	IAmb	IAmb	07 36 27.4			
	comp=Z,103nm,1.2s								
M24K				IAMs_20	IAMs_20	08 13 41.6			
	comp=Z,1µm,20.0s								
M24K	Tolsona, Glenn	85.75	27	P	P	07 36 26.1	+0.2		
	baz=256,SNR=14								
WHFO	Wadi Hawf	85.82	288	P	P	07 36 27.2	0.0		
D23K	Nanushuk River	85.92	20	P	P	07 36 27.8	+1.2		
	baz=251,SNR=61								
POKR	Poker Plat Res	85.98	24	P	P	07 36 25.6	-1.4		
	baz=254								
HDA	Harding Lake	86.00	25	IAmb	IAmb	07 36 28.1			
	comp=Z,62nm,1.0s								
HDA	Harding Lake	86.00	25	P	P	07 36 25.8	-1.2		
	baz=255,SNR=41								
H24K	Noodor Dome	86.00	23	IAmb	IAmb	07 36 29.6			
	comp=Z,84nm,1.3s								
H24K				IAMs_20	IAMs_20	08 10 28.0			
	comp=Z,977nm,21.0s								
H24K	Noodor Dome	86.00	23	P	P	07 36 27.1	0.0		
	baz=254,SNR=41								
RAGM	Ragged Mountai	86.05	29	IAMs_20	IAMs_20	08 08 48.6			
	comp=Z,1µm,22.0s								
KAIM	Kayak Island	86.07	29	IAmb	IAmb	07 36 29.0			
	comp=Z,105nm,1.2s								
KAIM				IAMs_20	IAMs_20	08 18 17.3			
	comp=Z,1µm,18.0s								
KAIM	Kayak Island	86.07	29	P	P	07 36 27.9	+0.4		
	baz=257,SNR=8.7								
IL31		86.12	24	IAmb	IAmb	07 36 27.0			
	comp=Z,28nm,0.8s								
ILAR	Eielson Array	86.12	24	P	P	07 36 26.3	-1.3		
	comp=Z,20nm,0.7s,baz=260,slow=4.8,SNR=183								
ILAR				PKKP	PKKPbc	07 54 27.4	-2.3		
	comp=Z,0.4nm,0.7s,baz=351,slow=1.1,SNR=4.9								
ILAR				LR	LR	08 13 13.9			
	comp=Z,459nm,20.2s,baz=236,slow=34								
	comp=Z,20nm,0.7s								
AKTO	Aktyubinsk	86.13	321	LR	LR	08 17 40.2			
	comp=Z,574nm,19.2s,baz=100,slow=38								
AKTO	Aktyubinsk	86.13	321	P	P	07 36 26.1	-1.9		
TOLK	Toolik Lake Re	86.19	20	P	P	07 36 28.8	+0.8		
	baz=252,SNR=43								
BMRM	Bremner River	86.21	28	P	P	07 36 28.1	-0.1		
	baz=257								
C23K	Itkillik River	86.22	19	P	P	07 36 28.5	+0.5		
	baz=251,SNR=22								
ABTO	Aybut	86.23	288	P	P	07 36 29.4	+0.2		
HMT	Hamilton	86.24	29	IAMs_20	IAMs_20	08 08 52.6			
	comp=Z,937nm,22.0s								
PAX	Paxson	86.27	26	IAmb	IAmb	07 36 48.6			
	comp=Z,52nm,1.5s								
PAX	Paxson	86.27	26	P	P	07 36 28.1	-0.4		
	baz=256,SNR=12								
HARP	HAARP	86.28	27	P	P	07 36 28.3	-0.1		
	baz=257								
K24K	Donnelly Dome	86.34	26	P	P	07 36 28.4	-0.3		
	baz=256,SNR=15								
N25K	Chitina, Valde	86.36	28	IAmb	IAmb	07 36 31.4			
	comp=Z,49nm,1.4s								
N25K				IAMs_20	IAMs_20	08 10 26.7			
	comp=Z,1µm,21.0s								
N25K	Chitina, Valde	86.36	28	P	P	07 36 29.1	+0.1		
	baz=257,SNR=10								
G24K	Hadweenzic Riv	86.40	23	P	P	07 36 29.6	+0.6		
	baz=254,SNR=64								
E24K	Your Creek	86.41	21	P	P	07 36 29.3	+0.2		
	baz=253,SNR=18								
SUCK	Suckling Hills	86.42	29	IAmb	IAmb	07 36 31.1			
	comp=Z,109nm,1.4s								
SUCK				IAMs_20	IAMs_20	08 16 48.4			
	comp=Z,875nm,19.0s								
F24K	Squaw Lake	86.47	22	P	P	07 36 30.3	+1.0		
	baz=254,SNR=53								
MZR	Muzera	86.49	293	P	P	07 36 30.8	+0.4		
	SNR=13								
MZR	Muzera	86.49	293	*i* P	P	07 36 30.7	+0.4		
	SNR=16								
MZR	Muzera	86.49	293	*i* P	P	07 36 30.7	+0.4		
	SNR=16								
BERG	Berg Lake	86.52	29	IAMs_20	IAMs_20	08 08 51.2			
	comp=Z,853nm,22.0s								
D24K	Happy Valley	86.61	20	P	P	07 36 31.0	+1.1		
	baz=253								
BGLC	Bering Glacier	86.67	29	P	P	07 36 31.2	+0.9		
	baz=258								
GLB	Gilahina Butte	86.69	28	IAMs_20	IAMs_20	08 10 56.5			
	comp=Z,824nm,21.0s								
J25K	Salcha River,	86.71	25	IAmb	IAmb	07 36 32.1			
	comp=Z,135nm,1.6s								
J25K	Salcha River,	86.71	25	P	P	07 36 29.6	-1.0		
	baz=256,SNR=44								
RIDG	Independent Ri	86.73	26	IAmb	IAmb	07 36 32.6			
	comp=Z,62nm,1.2s								
RIDG				IAMs_20	IAMs_20	08 10 48.4			
	comp=Z,1µm,22.0s								
RIDG	Independent Ri	86.73	26	P	P	07 36 30.3	-0.4		
	baz=257,SNR=30								
ARU	Arti	86.81	327	P	P	07 36 30.0	-1.2		
ARU				IAMs_20	IAMs_20	08 16 31.8			
	comp=Z,740nm,20.0s								
ARU	Arti	86.81	327	*d i* P	P	07 36 30.0	-1.2		
ARU						07 39 50.6			
ARU				S	SKSac	07 46 53.6	-1.0		
ARU				SS	SS	07 52 41.2	-7.1		
ARU				pmax	pmax				
	comp=Z,26nm,1.0s								
ARU				MLR	MLR				
	comp=Z,744nm,21.0s								
C24K	Franklin Bluff	86.82	19	P	P	07 36 31.0	+0.1		
	baz=253								
PRP	Porcupine Dome	86.86	24	P	P	07 36 32.1	+0.7		
	baz=256								
SNH	Sunshine Point	86.90	29	IAMs_20	IAMs_20	08 19 23.2			
	comp=Z,880nm,20.0s								
H25K	Birch Creek	86.93	23	P	P	07 36 32.0	+0.5		
	baz=256,SNR=58								
WAX	Waxell Ridge	86.94	29	IAMs_20	IAMs_20	08 15 26.4			
	comp=Z,869nm,19.0s								
TGL	Tana Glacier	87.02	29	IAmb	IAmb	07 36 34.4			
	comp=Z,96nm,1.1s								
TGL				IAMs_20	IAMs_20	08 09 08.2			
	comp=Z,935nm,22.0s								
QSPA	South Pole Qui	87.04	180	P	P	07 36 33.9	+1.6		
	comp=Z,32nm,0.7s,baz=321,slow=1.4,SNR=196								
QSPA				LR	LR	08 16 26.8			
	comp=Z,3µm,19.5s,baz=8.0,slow=36								
	comp=Z,32nm,0.7s								
QSPA	South Pole Qui	87.04	180	P	P	07 36 33.4	+1.1		
MCARA	McCarthy VSAT	87.05	28	IAMs_20	IAMs_20	08 13 58.0			
	comp=Z,788nm,20.0s								
MCARA	McCarthy VSAT	87.05	28	P	P	07 36 32.1	-0.1		
	baz=259								
MENT	Mentasta	87.05	27	IAmb	IAmb	07 36 33.7			
	comp=Z,56nm,1.4s								
DOT	Dot Lake	87.05	26	IAmb	IAmb	07 36 33.4			
	comp=Z,156nm,1.8s								
SCRK	Sand Creek	87.15	26	IAmb	IAmb	07 36 34.1			
	comp=Z,38nm,1.2s								
SCRK				IAMs_20	IAMs_20	08 11 00.5			
	comp=Z,955nm,22.0s								
SCRK	Sand Creek	87.15	26	P	P	07 36 32.4	-0.4		
	baz=258,SNR=25								
ISLE	Juniper Island	87.22	29	IAMs_20	IAMs_20	08 17 06.7			
	comp=Z,850nm,20.0s								
FYU	Fort Yukon	87.23	23	IAMs_20	IAMs_20	08 12 57.4			
	comp=Z,928nm,20.0s								
L26K	Log Cabin Wild	87.23	27	IAmb	IAmb	07 36 34.6			
	comp=Z,65nm,1.4s								
L26K	Log Cabin Wild	87.23	27	P	P	07 36 33.1	0.0		
	baz=258,SNR=15								
M26K	Nabesna, AK	87.26	27	P	P	07 36 33.5	+0.2		
	baz=259,SNR=6.9								
F25K	Christian Rive	87.32	22	P	P	07 36 34.2	+0.7		
	baz=256,SNR=44								
MESA	MESA	87.33	29	IAMs_20	IAMs_20	08 14 28.7			
	comp=Z,1µm,20.0s								
MESA	MESA	87.33	29	P	P	07 36 34.2	+0.3		
	baz=260								
J26L	Joseph Creek	87.44	25	P	P	07 36 34.1	0.0		
	baz=258,SNR=86								
YAH	Yahtse	87.47	29	IAMs_20	IAMs_20	08 14 44.1			
	comp=Z,1µm,20.0s								
E25K	Arctic Village	87.48	21	P	P	07 36 35.0	+0.8		
	baz=256,SNR=35								
D25K	Kavik River	87.49	20	P	P	07 36 34.0	-0.3		
	baz=255,SNR=7.4								
M27K	Edge Creek, AK	87.77	27	IAmb	IAmb	07 36 37.6			
	comp=Z,99nm,1.2s								
M27K	Edge Creek, AK	87.77	27	P	P	07 36 36.2	+0.4		
	baz=260,SNR=23								
CTG	Chitna Glacier	87.77	29	P	P	07 36 36.3	+0.4		
	baz=260,SNR=23								
TABL	Tie Mountain	87.78	29	IAMs_20	IAMs_20	08 14 35.4			
	comp=Z,1µm,20.0s								
I26K	Coal Creek Min	87.78	24	IAmb	IAmb	07 36 36.6			
	comp=Z,69nm,1.3s								
I26K	Coal Creek Min	87.78	24	P	P	07 36 35.2	-0.5		
	baz=258								
G26K	Porcupine Rive	87.88	23	P	P	07 36 37.2	+1.1		
	baz=258,SNR=93								
F26K	Sheenjek River	87.90	22	P	P	07 36 37.1	+0.9		
	baz=257,SNR=68								
LOGN	Logan Glacier	87.91	29	IAmb	IAmb	07 36 38.3			
	comp=Z,118nm,1.4s								
LOGN				IAMs_20	IAMs_20	08 17 27.8			
	comp=Z,778nm,20.0s								
L27K	Beaver Creek,	87.92	27	IAmb	IAmb	07 36 38.2			
	comp=Z,67nm,1.1s								
L27K				IAMs_20	IAMs_20	08 14 49.9			
	comp=Z,1µm,20.0s								
L27K	Beaver Creek,	87.92	27	P	P	07 36 37.0	+0.6		
	baz=260,SNR=26								
BCAR	Beaver Creek A	87.94	27	P	P	07 36 36.8	+0.3		
K27K	Chicken	87.99	26	P	P	07 36 37.7	+1.0		
	baz=259								
C26K	Camden Bay	88.14	20	P	P	07 36 37.5	+0.2		
	baz=256								
PINM	Pinnacle	88.16	30	P	P	07 36 37.8	+0.1		
	baz=261,SNR=7.5								
BVCY	Beaver Creek	88.24	27	P	P	07 36 38.5	+0.5		
	baz=260,SNR=12								
O28M	Mount Upton	88.29	29	P	P	07 36 38.8	+0.3		
	baz=261,SNR=12								
YUK3	Moose Creek	88.32	28	P	P	07 36 38.9	+0.3		
	baz=261,SNR=5.5								
BCPM	Bancas Point	88.44	30	IAmb	IAmb	07 36 40.6			
	comp=Z,110nm,1.4s								
I27K	Kandik River	88.47	24	P	P	07 36 39.7	+0.7		
	baz=260,SNR=144								
C27K	Jago River	88.48	20	P	P	07 36 38.9	0.0		
	baz=258,SNR=6.7								
EGAK	Eagle	88.51	25	P	P	07 36 39.3	+0.2		
	baz=260,SNR=99								
PNL	Peninsula	88.52	30	P	P	07 36 39.6	+0.3		
	baz=262,SNR=10.0								
H27K	Steamboat Moun	88.62	24	P	P	07 36 40.6	+0.9		
	baz=260,SNR=121								
G27K	Doyon Strip	88.67	23	P	P	07 36 40.6	+0.7		
	baz=260,SNR=28								
E27K	Colleen River	88.94	22	P	P	07 36 41.5	+0.4		
	baz=260,SNR=21								
O29M	Mount Kennedy	89.02	30	P	P	07 36 42.3	+0.5		
	baz=262,SNR=9.9								
YUK4	Talbot Arm	89.12	29	P	P	07 36 43.1	+0.8		
	baz=262								
DAWY	Dawson	89.16	26	P	P	07 36 42.7	+0.5		
DAWY	Dawson	89.16	26	P	P	07 36 42.8	+0.5		
	baz=262,SNR=108								
YUK6	Outpost Mounta	89.20	29	P	P	07 36 43.2	+0.4		
	baz=263								
M29M	Somme Creek	89.35	27	P	P	07 36 43.8	+0.5		
	baz=263,SNR=22								
P29M	Windy Craggy	89.35	30	IAmb	IAmb	07 36 45.1			
	comp=Z,51nm,1.1s								
P29M	Windy Craggy	89.35	30	P	P	07 36 43.8	+0.5		
	baz=263,SNR=7.9								
HYT	Haines Junctio	89.61	29	P	P	07 36 45.1	+0.6		
	baz=263								
J29M	Klondike Camp	89.72	26	P	P	07 36 45.6	+0.7		
	baz=263								
I29M	Ogilvie Camp,	89.80	25	IAMs_20	IAMs_20	08 12 48.4			
	comp=Z,839nm,21.0s								
I29M	Ogilvie Camp,	89.80	25	P	P	07 36 45.2	+0.1		
	baz=263,SNR=58								
P30M	Million Dollar	89.80	30	P	P	07 36 45.8	+0.5		
	baz=264								
N30M	Aishikik Lake	89.88	29	P	P	07 36 46.0	+0.3		
	baz=264,SNR=11								
K29M	Barlow Dome	89.95	26	P	P	07 36 46.7	+0.6		
	baz=263,SNR=48								
PLBC	Pleasant Camp	90.03	31	P	P	07 36 46.5	+0.1		
	baz=264,SNR=14								
M30M	Minto, Yukon	90.14	27	P	P	07 36 47.2	+0.4		
	baz=264								
ABPO	Ambohimpanom	90.22	251	P	P	07 36 48.0	-0.3		
ABPO				IAmb	IAmb	07 36 51.0			
	comp=Z,30nm,1.0s								
ABPO	Ambohimpanom	90.22	251	P	P	07 36 48.0	-0.3		
ABPO				pmax	pmax				
	comp=Z,30nm,1.0s								
O30N	Mendenhall	90.29	29	P	P	07 36 47.9	+0.3		
	baz=265,SNR=11								
N31M	Braeburn, Yuko	90.50	29	IAmb	IAmb	07 36 50.2			
	comp=Z,47nm,1.0s								
N31M	Braeburn, Yuko	90.50	29	P	P	07 36 49.2	+0.6		
	baz=265,SNR=14								
SKAG	Skagway	90.55	31	IAmb	IAmb	07 36 50.5			
	comp=Z,74nm,1.2s								
SKAG	Skagway	90.55	31	P	P	07 36 49.1	+0.3		
	baz=265								
EPYK	Eagle Plains	90.56	24	IAmb	IAmb	07 36 49.7			
	comp=Z,32nm,1.2s								
EPYK				IAMs_20	IAMs_20	08 20 22.5			
	comp=Z,755nm,19.0s								
EPYK	Eagle Plains	90.56	24	P	P	07 36 48.4	-0.3		
	baz=264,SNR=15								
MAYO	Mayo, Yukon	90.64	26	IAmb	IAmb	07 36 51.0			
	comp=Z,52nm,1.1s								
MAYO	Mayo, Yukon	90.64	26	P	P	07 36 49.6	+0.5		
	baz=265,SNR=5.5								
BESE	Bessie Mountai	90.73	32	IAmb	IAmb	07 36 51.2			
	comp=Z,65nm,1.6s								
G30M	tAoh Zraii Nji	90.82	23	P	P	07 36 49.1	-0.9		
	baz=265								
WHY	Whitehorse	90.87	29	IAmb	IAmb	07 36 51.8			
	comp=Z,35nm,0.9s								
WHY	Whitehorse	90.87	29	P	P	07 36 50.5	+0.1		
	baz=266,SNR=15								
R32K	Eaglecrest	90.88	32	P	P	07 36 50.7	+0.3		
	baz=266								
JIS	Juneau Island	90.95	32	IAMs_20	IAMs_20	08 17 04.6			
	comp=Z,711nm,21.0s								
M31M	Drury Creek, Y	91.22	28	IAMs_20	IAMs_20	08 12 52.3			
	comp=Z,1µm,22.0s								
M31M	Drury Creek, Y	91.22	28	P	P	07 36 51.5	-0.4		
	baz=266,SNR=6.3								
P32M	Atlin	91.38	31	P	P	07 36 52.7	0.0		
	baz=267								
CRAG	Craig	91.48	35	P	P	07 36 53.6	+0.4		
	baz=267								
FARO	Faro, Yukon	91.71	28	IAmb	IAmb	07 36 55.3			
	comp=Z,39nm,1.1s								
FARO	Faro, Yukon	91.71	28	P	P	07 36 54.2	0.0		
	baz=267,SNR=35								
DIB	Dawson Inlet,	91.75	37	IAmb	IAmb	07 36 57.6			
	comp=Z,50nm,1.4s								
N32M	Quiet Lake	91.78	29	P	P	07 36 54.7	+0.1		
	baz=267								
F31M	Tsiigehtchic	91.82	23	P	P	07 36 53.1	-1.4		
	baz=267								
P33M	Teslin, Yukon	91.87	30	IAMs_20	IAMs_20	08 19 57.6			
	comp=Z,700nm,20.0s								
P33M	Teslin, Yukon	91.87	30	P	P	07 36 54.7	-0.3		
	baz=268								
INK	Inuvik	91.94	22	P	P	07 36 54.3	-0.7		
	comp=Z,16nm,1.0s,baz=261,slow=6.1,SNR=32								
INK				PKKP	PKKPdf	07 54 13.6	+1.3		
	comp=Z,2.2nm,0.8s,baz=126,slow=2.3,SNR=4.9								
INK				LR	LR	08 16 17.5			
	comp=Z,542nm,20.8s,baz=230,slow=34								
	comp=Z,16nm,1.0s								
INK	Inuvik	91.94	22	IAmb	IAmb	07 36 55.1			
	comp=Z,27nm,1.1s								
INK	Inuvik	91.94	22	P	P	07 36 53.9	-1.2		
	baz=267,SNR=21								
KIRV	Kirov	91.95	328	LR	LR	08 19 47.1			
	comp=Z,2µm,20.7s,baz=86,slow=37								
KIRV	Kirov	91.95	328	*ce*P	P	07 36 54.3	-0.9		
WRAK	Wrangell Islan	91.96	34	IAmb	IAmb	07 36 56.6			
	comp=Z,30nm,1.2s								
WRAK	Wrangell Islan	91.96	34	P	P	07 36 55.3	0.0		
	baz=268								
V35K	Ketchikan	92.33	35	P	P	07 36 56.7	-0.4		
	baz=268								
MAK	Makhachkala	92.65	313	*e*P	P	07 36 56.6	-2.3		
MAK				*e*		07 40 42.6			
MAK				*e*PPP	PPP	07 42 38.1			
MAK				*e*SS	SS	07 54 11.5	-2.1		
MAK				*e*SSS	SSS	07 57 56.8			
MAK				pmax	pmax				
	comp=Z,18nm,0.3s								
S34M	Telegraph Cree	92.66	32	P	P	07 36 58.5	-0.1		
	baz=269								
MMPY	Sheldon Lake,	92.69	28	P	P	07 36 58.8	+0.1		
	baz=269,SNR=14								
R33M	Jennings River	92.78	31	P	P	07 36 59.4	+0.1		
	baz=269								
BELG	Belogornoye	92.78	322	*i* P	P	07 36 57.6	-1.6		
BELG				pmax	pmax				
	comp=Z,15nm,1.0s								
BELG				MLR	MLR				
	comp=Z,146nm,23.0s								
T35M	Bob Quinn	93.13	33	P	P	07 37 00.8	0.0		
	baz=270								
DLBC	Dease Lake	93.25	32	P	P	07 37 00.9	-0.6		
	comp=Z,6.8nm,1.1s,baz=12,slow=2.8,SNR=9.7								
DLBC				LR	LR	08 15 46.8			
	comp=Z,517nm,20.2s,baz=286,slow=34								
	comp=Z,6.8nm,1.1s								
DLBC	Dease Lake	93.25	32	IAmb	IAmb	07 37 03.7			
	comp=Z,43nm,1.8s								
DLBC	Dease Lake	93.25	32	P	P	07 37 01.4	0.0		
	baz=270								
RAYN	Ar Rayn	93.84	293	P	P	07 37 04.1	-0.8		
RAYN	Ar Rayn	93.84	293	P	P	07 37 04.1	-0.8		
RAYN				pmax	pmax				
	comp=Z,16nm,1.0s								
RAYN				MLR	MLR				
	comp=Z,300nm,20.0s								
RAYN	Ar Rayn	93.84	293	P	P	07 37 04.7	-0.3		
RAYN	Ar Rayn	93.84	293	*i* P	P	07 37 04.4	-0.5		
	SNR=12								
RAYN	Ar Rayn	93.84	293	*i* P	P	07 37 04.4	-0.5		
	SNR=12								
TGTN	Hyland Airport	94.10	29	P	P	07 37 05.1	-0.2		
	baz=272								
BBB	Bella Bella	94.39	38	P	P	07 37 06.8	+0.1

KLMR *e*PP **PP** **07 41 11.2 -2.1**
KLMR LQ LQ 08 14 55.0
KLMR LQ LQ 08 14 55.0
KLMR LR LR 08 15 41.0
KMPM Mount Pierce 97.53 50 IAmb IAmb 07 37 23.3
comp=Z,23nm,0.9s
J01E Myrtle Point 97.54 47 IAMs_20 IAMs_20 08 16 42.5
comp=Z,660nm,19.0s
J01E Myrtle Point 97.54 47 P **P** **07 37 21.1 -0.1**
baz=273
I02E Swisshome, OR 97.55 46 P **P** **07 37 21.2 0.0**
baz=273
K02D Willamette Mer 97.76 47 P **P** **07 37 21.9 -0.5**
baz=273
KHMM Horse Mountain 97.81 49 IAmb IAmb 07 37 24.7
comp=Z,22nm,1.0s
KMRM Mail Ridge 97.86 50 IAmb IAmb 07 37 24.7
comp=Z,22nm,1.1s
L02F Cave Junction 97.86 48 P Pdif 07 37 23.3 +0.5
baz=273
G03D McMinnville, O 97.89 45 IAMs_20 IAMs_20 08 20 04.6
comp=Z,758nm,20.0s
G03D McMinnville, O 97.89 45 P **P** **07 37 22.7 -0.1**
baz=274
COR Corvallis 97.91 46 IAMs_20 IAMs_20 08 14 57.1
comp=Z,712nm,20.0s
I03D Drain, OR 97.93 46 P Pdif 07 37 23.2 +0.2
baz=274
KOPT Kop Dagi 97.95 310 IAmb IAmb 07 37 46.0
comp=Z,29nm,1.2s
KCPM Cahto Peak 97.98 51 P **P** **07 37 23.3 -0.2**
KCPM IAmb IAmb 07 37 25.0
comp=Z,32nm,1.1s
VORR Voronezh 98.00 322 *e*P **P** **07 37 21.8 -1.3**
VORR pmax pmax
comp=Z,20nm,0.3s
VSR Storozhevoye 98.07 321 *e*P **P** **07 37 21.6 -1.8**
VSR *e**PP **pP** **07 37 32.1 -4.4**
VSR pmax pmax
comp=Z,20nm,1.1s
LPSR Galich'ya Gora 98.08 323 *e*P **P** **07 37 21.6 -1.8**
LPSR *e**PP **pP** **07 37 33.9 -2.6**
LPSR pmax pmax
comp=Z,20nm,1.3s
H04D Lebanon 98.32 46 IAmb IAmb 07 37 51.6
comp=Z,58nm,1.5s
H04D IAMs_20 IAMs_20 08 18 08.9
comp=Z,689nm,21.0s
H04D Lebanon 98.32 46 P **P** **07 37 24.4 -0.3**
baz=274
APA Apatity 98.39 338 *i*P **P** **07 37 20.3 -4.2**
APA *i* 07 41 22.0
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,1μm,20.0s
MOS Moscow 98.48 326 *e*P **P** **07 37 21.5 -3.7**
MOS *e* 07 41 20.9
MOS pmax pmax
comp=Z,27nm,1.1s
MOS MLR MLR
comp=Z,1μm,22.0s
YBH Yreka Blue Hor 98.53 48 P Pdif 07 37 26.5 +0.6
comp=Z,5.0nm,0.9s,baz=230,slow=2.4,SNR=21
YBH LR LR 08 13 39.9
comp=Z,587nm,21.8s,baz=293,slow=30
comp=Z,5.0nm,0.9s
YBH Yreka Blue Hor 98.53 48 IAMs_20 IAMs_20 08 22 55.8
comp=Z,746nm,19.0s
I04A Tendick Farm, 98.60 46 P **P** **07 37 26.0 -0.1**
baz=274
MCCM Marconi Confer 98.61 52 IAMs_20 IAMs_20 08 21 58.4
comp=Z,806nm,19.0s
L04D Klamath Falls 98.80 48 IAMs_20 IAMs_20 08 24 16.8
comp=Z,593nm,20.0s
L04D Klamath Falls 98.80 48 P **P** **07 37 26.9 -0.2**
baz=274
J04D Umpqua Nationa 98.86 47 IAmb IAmb 07 37 28.8
comp=Z,17nm,1.1s
J04D IAMs_20 IAMs_20 08 20 09.5
comp=Z,644nm,20.0s
J04D Umpqua Nationa 98.86 47 P **P** **07 37 27.3 -0.1**
baz=274
SPITS Spitsbergen Ar 99.12 350 LR LR 08 21 04.2
comp=Z,1μm,21.9s,baz=22,slow=35
OBN Obninsk 99.17 325 LR LR 08 24 28.5
comp=Z,225nm,20.9s,baz=35,slow=37
OBN Obninsk 99.17 325 *de*P **Pdif** **07 37 26.2 -2.0**
OBN *e**PP **pP** **07 37 40.2 -1.1**
OBN *SP **sP** **07 37 44.0 -2.1**
OBN *i* 07 41 31.1
OBN pmax pmax
comp=Z,24nm,1.3s
OBN MLR MLR
comp=Z,1μm,20.0s
K04D Chiloquin, OR 99.17 47 P **Pdif** **07 37 28.7 -0.1**
baz=275
I05D Terrebonne, OR 99.33 46 P **Pdif** **07 37 29.3 -0.1**
baz=275
KBS Kingsbay 99.45 351 IAMs_20 IAMs_20 08 20 07.6
comp=Z,1μm,22.0s
J05D Fort Rock, OR 99.50 47 P **Pdif** **07 37 30.1 -0.1**
baz=275
SAO San Andreas Ge 99.83 53 IAMs_20 IAMs_20 08 17 25.9
comp=Z,828nm,19.0s
KEV Kevo 100.03 341 IAMs_20 IAMs_20 08 23 09.3
comp=Z,784nm,21.0s
TROLL Troll, Antarti 100.09 193 Pdiff **Pdif** **07 37 34.0 +1.8**
MOD Modoc Plateau 100.31 48 IAMs_20 IAMs_20 08 22 02.9
comp=Z,647nm,20.0s
HAWA Hanford 100.39 43 IAMs_20 IAMs_20 08 19 18.4
comp=Z,610nm,19.0s
CMB Columbia Colle 100.58 52 IAMs_20 IAMs_20 08 21 39.6
comp=Z,722nm,20.0s
ARCES ARCESS Array B 100.60 341 P **Pdif** **07 37 32.9 -1.4**
comp=Z,9.7nm,0.8s,baz=66,slow=7.4,SNR=8.9
SMMC Simmler 101.10 55 P **Pdif** **07 37 37.8 +0.3**
baz=274
SNAA Sanae 101.47 192 Pdiff **Pdif** **07 37 39.9 +1.6**
WVOR Wild Horse Val 101.48 47 IAMs_20 IAMs_20 08 26 24.9
comp=Z,685nm,19.0s
NEW Newport 101.75 41 P **Pdif** **07 37 39.7 -0.3**
comp=Z,1.5nm,0.7s,baz=323,slow=5.1,SNR=2.6
NVAR Mina Array Bea 102.18 51 P **Pdif** **07 37 42.0 -0.4**
comp=Z,4.5nm,0.8s,baz=256,slow=6.5,SNR=42
NVAR PP **PP** **07 41 52.3 -2.3**
comp=Z,1.6nm,1.1s,baz=266,slow=5.2,SNR=7.0
NVAR PKKPbc **PKKPbc** **07 53 47.4 +1.0**
comp=Z,0.8nm,0.8s,baz=127,slow=2.7,SNR=7.1
SIM Simferopol' 102.18 315 *e*P **Pdif** **07 37 48.4 +6.5**
SIM *e* 07 42 02.3
SIM *e*PS **PS** **07 51 05.0 +4.2**
SIM *e*SS SS 07 56 41.1 +13
SIM pmax pmax
comp=Z,16nm,9.0s
SIM pmax pmax
comp=Z,66nm,9.5s
SIM pmax pmax
comp=E,66nm,10.6s
SIM pmax pmax
comp=E,90nm,13.8s
ISA Isabella, Lake 102.31 54 P **Pdif** **07 37 42.7 -0.1**
baz=275
DECC Green Verdugo 102.55 56 P **Pdif** **07 37 44.0 +0.1**
baz=275
CWC Cottonwood Cre 102.56 53 P **Pdif** **07 37 44.2 +0.2**
baz=276
PASC Pasadena Art C 102.68 56 IAMs_20 IAMs_20 08 22 16.8
comp=Z,754nm,21.0s
EDW2 Edwards Air Fo 102.78 55 P **Pdif** **07 37 44.3 -0.6**
baz=276
VNA2 Neumayer--Watz 102.95 191 Pdiff **Pdif** **07 37 46.6 +1.8**
baz=143,slow=4.0
GRAC Grapevine Rang 103.07 53 P **Pdif** **07 37 45.8 -0.4**
baz=276
MPMC Manual Prospec 103.07 54 P **Pdif** **07 37 46.3 0.0**
baz=276
VNA3 Neumayer Olymp 103.11 190 Pdiff **Pdif** **07 37 46.9 +1.4**
FINES FINESS Array B 103.11 333 Pdiff **Pdif** **07 37 44.5 -1.2**
comp=Z,2.2nm,0.7s,baz=77,slow=8.6,SNR=6.0
FINES PKiKP **PKiKP** **07 42 05.1 0.0**
comp=Z,4.4nm,1.1s,baz=22,slow=4.5,SNR=2.3
LODK Lodwar 103.22 273 P **Pdif** **07 37 47.3 -0.1**
BRTR Keskin Array B 103.23 310 Pdiff **Pdif** **07 37 45.0 -1.9**
comp=Z,1.0nm,0.9s,baz=90,slow=2.5,SNR=3.6
VNA1 Neumayer--Stat 103.35 191 Pdiff **Pdif** **07 37 48.3 +1.8**

MFID Camas Ranch 103.40 46 IAMs_20 IAMs_20 08 26 08.4
comp=Z,549nm,20.0s
FURC Furnace Creek, 103.53 53 P **Pdif** **07 37 48.3 +0.2**
baz=277
MURC Murrieta 103.56 56 P **Pdif** **07 37 47.6 -0.7**
baz=276
109C Camp Elliot, M 103.70 57 IAMs_20 IAMs_20 08 21 24.8
comp=Z,624nm,20.0s
109C Camp Elliot, M 103.70 57 P **Pdif** **07 37 48.9 0.0**
baz=276
GSC Goldstone, Bar 103.70 55 P **Pdif** **07 37 49.4 +0.3**
baz=276
TPNV Topopah Spring 103.96 53 IAMs_20 IAMs_20 08 24 52.2
comp=Z,807nm,19.0s
TPNV Topopah Spring 103.96 53 P **Pdif** **07 37 50.4 +0.1**
baz=277
SHOC Shoshone, Teco 104.07 54 P **Pdif** **07 37 50.9 +0.3**
baz=277
MSO Missoula 104.13 42 IAMs_20 IAMs_20 08 21 55.2
comp=Z,634nm,19.0s
PFO Pinyon Flats O 104.17 56 IAMs_20 IAMs_20 08 21 38.2
comp=Z,697nm,20.0s
TPFO Pinon Flats 104.17 56 P **Pdif** **07 37 51.4 +0.2**
baz=276
MNK Minsk 104.21 326 *i* P **Pdif** **07 37 43.2 -7.5**
MNK *i* 07 42 05.6
MNK *i* PPP PPP 07 44 17.7
MNK *i* 07 49 13.5
MNK *i* SS SS 07 56 52.5 -2.4
MNK *i* SSS SSS 08 00 49.2
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK MLR MLR
comp=Z,651nm,20.0s
MNK MLR MLR
comp=E,179nm,24.0s
MNK Minsk 104.21 326 *i* P **Pdif** **07 37 43.2 -7.5**
MNK *i* P **Pdif** **07 37 43.2 -7.5**
MNK *i* P **Pdif** **07 37 43.2 -7.5**
comp=Z,7.0nm,0.9s,baz=75
MNK *i* PP **PKiKP** **07 42 05.7 -1.7**
MNK *i* PPP PPP 07 44 17.8
MNK *i* SKS 07 49 13.5
MNK *i* SS **SS** **07 56 52.5 -2.4**
MNK *i* SSS SSS 08 00 49.2
MNK *i* LQ LQ 08 18 53.6
MNK *i* LR LR 08 26 50.8
MNK *i* LRM MLR 08 27 51.5
comp=Z,651nm,19.8s
MNK *i* LRM MLR 08 27 55.6
comp=E,179nm,24.0s
ELK Elko 104.23 49 IAMs_20 IAMs_20 08 29 46.9
comp=Z,598nm,19.0s
MONP2 Monument Peak 104.27 57 P **Pdif** **07 37 51.9 +0.1**
baz=276
R11A Troy Canyon, C 104.31 51 P **Pdif** **07 37 52.1 +0.3**
baz=278
AKASG Malin Array Be 104.36 322 Pdiff **Pdif** **07 37 49.7 -1.7**
comp=Z,2.4nm,0.9s,baz=67,slow=4.5,SNR=7.5
AKASG PKKPbc **PKKPbc** **07 53 39.4 -0.7**
comp=Z,3.7nm,0.9s,baz=268,slow=2.2,SNR=11
AKASG PKKP **PKKPdf** **07 53 50.5 +1.2**
comp=Z,2.8nm,0.7s,baz=270,slow=3.3,SNR=11
HLID Hailey 104.39 46 IAMs_20 IAMs_20 08 25 03.6
comp=Z,635nm,20.0s
HLID Hailey 104.39 46 P **Pdif** **07 37 52.3 +0.3**
baz=280
BELC Belle Mtn. Jos 104.51 56 P **Pdif** **07 37 53.0 +0.3**
baz=276
GMRC Granite Mounta 104.69 55 P **Pdif** **07 37 53.3 -0.2**
baz=277
NACGM Naroch 104.72 326 *e*PP **PKiKP** **07 42 05.1 -3.2**
BC3 Big Chuckawall 105.00 56 P **Pdif** **07 37 54.4 -0.4**
baz=277
BOZ Bozeman (W) 105.95 43 IAMs_20 IAMs_20 08 23 03.5
comp=Z,591nm,19.0s
DUG Dugway, Tooele 106.15 49 IAMs_20 IAMs_20 08 24 56.6
comp=Z,640nm,20.0s
EGMT Eagleton 106.63 41 IAMs_20 IAMs_20 08 25 36.3
comp=Z,574nm,20.0s
FXWY Fox Creek 106.79 45 IAMs_20 IAMs_20 08 23 03.0
comp=Z,686nm,21.0s
IMW Indian Meadow 106.80 45 IAMs_20 IAMs_20 08 23 03.1
comp=Z,547nm,20.0s
HWUT Hardware Ranch 106.82 47 IAMs_20 IAMs_20 08 24 32.0
comp=Z,706nm,19.0s
TPAW Teton Pass 106.87 45 IAMs_20 IAMs_20 08 23 15.2
comp=Z,536nm,20.0s
MOOW Moose Ponds 106.96 45 IAMs_20 IAMs_20 08 26 39.7
comp=Z,596nm,20.0s
REDW Red Top Meadow 106.97 46 IAMs_20 IAMs_20 08 28 25.9
comp=Z,600nm,20.0s
LOHW Long Hollow 107.09 45 IAMs_20 IAMs_20 08 23 14.1
comp=Z,536nm,20.0s
MBAR Mbarara 107.65 268 *e*P PKiKP 07 42 23.3 +8.2
MBAR *eS* PP 07 42 27.8 -8.2
RLMT Red Lodge 107.68 43 IAMs_20 IAMs_20 08 26 10.3
comp=Z,648nm,20.0s
MLR Muntele Rosu 107.74 317 IAMs_20 IAMs_20 08 35 54.2
BW06 Boulder Array 108.03 46 IAMs_20 IAMs_20 08 23 08.9
comp=Z,555nm,21.0s
BW06 Boulder Array 108.03 46 P **PKiKP** **07 42 15.1 0.0**
baz=283
PDAR Pinedale Array 108.03 46 Pdiff **Pdif** **07 38 08.7 +0.4**
comp=Z,1.1nm,0.7s,baz=233,slow=3.0,SNR=12
PDAR PKiKP **PKiKP** **07 42 15.1 -0.1**
comp=Z,0.8nm,0.8s,baz=245,slow=1.9,SNR=5.3
PDAR PKKPbc **PKKPbc** **07 53 28.2 -0.6**
comp=Z,2.1nm,0.8s,baz=116,slow=4.1,SNR=17
PDAR PKKPab **PKKPab** **07 53 40.4 -1.1**
comp=Z,0.9nm,0.9s,baz=107,slow=5.8,SNR=4.4
WUAZ Wupatki 108.07 54 P **PKiKP** **07 42 15.5 +0.1**
baz=280
TUC Tucson 109.06 57 IAMs_20 IAMs_20 08 18 44.9
comp=Z,665nm,22.0s
TUC Tucson 109.06 57 P **PKiKP** **07 42 17.6 +0.4**
baz=279
LAO LASA Array 109.31 41 IAMs_20 IAMs_20 08 30 55.1
comp=Z,632nm,20.0s
LAO LASA Array 109.31 41 P **PKiKP** **07 42 17.5 +0.3**
baz=287
O20A White River Ci 109.59 48 P **PKiKP** **07 42 18.2 0.0**
baz=283
NB2 NORSAR Subarra1 09.76 336 P **Pdif** **07 38 13.2 -2.1**
comp=Z,0.6nm,0.8s,baz=64,slow=5.1
NOA NORSAR Array B 109.76 336 Pdiff **Pdif** **07 38 13.6 -1.7**
comp=Z,1.1nm,0.9s,baz=61,slow=4.5,SNR=4.2
NOA PKKPbc **PKKPbc** **07 53 22.4 -1.3**
comp=Z,1.1nm,0.8s,baz=56,slow=3.2,SNR=5.6
RWWY Rawlins 109.98 47 IAMs_20 IAMs_20 08 27 51.6
comp=Z,513nm,20.0s
MVCO Mesa Verde 110.03 51 IAMs_20 IAMs_20 08 30 42.9
comp=Z,517nm,19.0s
MVCO Mesa Verde 110.03 51 P **PKiKP** **07 42 19.3 +0.2**
baz=282
DGMT Dagmar 110.06 39 IAMs_20 IAMs_20 08 25 22.7
comp=Z,625nm,20.0s
SLBS Sierra La Lagu 110.93 66 IAMs_20 IAMs_20 08 18 26.5
comp=Z,779nm,21.0s
PSZ Piszkesteto 111.00 321 IAMs_20 IAMs_20 08 33 31.1
comp=Z,768nm,21.0s
S22A 4UR Ranch, Cre 111.21 51 P **PKiKP** **07 42 21.5 +0.1**
baz=284
OKC Ostrava-Krasne 111.38 323 AMS AMS 08 29 50.0
comp=Z,600nm,20.7s
121A Cookes Peak, D 111.53 56 P **PKiKP** **07 42 22.2 +0.2**
baz=281
RSSD Black Hills 111.54 43 IAMs_20 IAMs_20 08 30 44.6
comp=Z,492nm,19.0s
RSSD Black Hills 111.54 43 P **PKiKP** **07 42 21.5 -0.2**
baz=288
ISCO Idaho Springs 111.63 48 P **PKiKP** **07 42 22.4 +0.2**
baz=285
MORC Moravsky Berou 111.77 323 *e*PKIKP **PKiKP** **07 42 22.1 +0.4**
MORC *e*PKKP **PKKPab** **07 53 26.5 +1.9**
Y22A Socorro 111.93 55 P **PKiKP** **07 42 23.3 +0.6**
baz=282
Y22D IRIS PASSCAL I 111.94 54 IAMs_20 IAMs_20 08 31 39.5
comp=Z,602nm,19.0s
JAVC Velka Javorina 112.04 322 *e*PKIKP **PKiKP** **07 42 23.8 +1.5**
KRLC Kraliky 112.10 324 *e*PKIKP **PKiKP** **07 42 21.9 -0.5**
KRLC MLR MLR
comp=Z,700nm,24.7s
KRLC Kraliky 112.10 324 *e*PKP **PKiKP** **07 42 21.9 -0.5**
KRLC *e*PKP **PKKPab** **07 53 25.5 +2.4**
KRLC AMS AMS 08 30 30.0
comp=Z,700nm,24.7s
ANMO Albuquerque 112.13 53 IAMs_20 IAMs_20 08 27 27.5
comp=Z,548nm,21.0s
ANMO Albuquerque 112.13 53 *c* PKIKP **PKiKP** **07 42 24.2 +1.1**
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 112.13 53 P **PKiKP** **07 42 23.9 +0.8**
baz=283,SNR=9.7
ANMO Albuquerque 112.13 53 P **PKiKP** **07 42 23.2 +0.1**
baz=283
SDCO Great Sand Dun 112.23 50 IAMs_20 IAMs_20 08 29 45.8
comp=Z,728nm,19.0s
SDCO Great Sand Dun 112.23 50 P **PKiKP** **07 42 23.6 +0.3**
baz=284
OSTC Ostas 112.24 324 AMS AMS 08 32 40.0
comp=Z,1μm,24.0s
DPC Dobruska-Polom 112.26 324 *e*PKIKP **PKiKP** **07 42 21.5 -1.2**
DPC MLR MLR
comp=Z,1μm,20.8s
DPC Dobruska-Polom 112.26 324 *e*PKP **PKiKP** **07 42 21.5 -1.2**
DPC *e*PKKP **PKKPab** **07 53 24.3 +1.9**
DPC AMS AMS 08 32 50.0
comp=Z,1μm,20.8s
CHVC Chvalec 112.32 324 AMS AMS 08 32 50.0
comp=Z,100nm,22.4s
UPC Upice 112.38 324 AMS AMS 08 32 50.0
comp=Z,1μm,19.9s
VRAC Vranov 112.52 323 *e*PKIKP **PKiKP** **07 42 23.2 +0.1**
VRAC *e*PKKP **PKKPab** **07 53 22.6 +1.4**
EPT El Paso 112.74 57 IAMs_20 IAMs_20 08 20 41.0
comp=Z,648nm,21.0s
KRUC Moravsky 112.74 323 *e*PKIKP **PKiKP** **07 42 23.2 -0.3**
KRUC *e*PKKP **PKKPab** **07 53 22.0 +1.8**
TIR Tirane 113.13 314 IAMs_20 IAMs_20 08 39 14.4
comp=Z,700nm,22.0s
TREC Trest 113.19 323 AMS AMS 08 31 00.0
comp=Z,900nm,22.7s
PVCC Panska Ves 113.21 325 AMS AMS 08 34 10.0
comp=Z,1μm,20.8s
T25A Trinidad 113.22 51 P **PKiKP** **07 42 25.4 +0.3**
baz=285
PDG Podgorica 113.23 315 IAMs_20 IAMs_20 08 34 52.8
comp=Z,547nm,21.0s
PRU Pruhonice 113.45 324 *e*PKKP 07 53 18.4
PRU AMS AMS 08 29 40.0
comp=Z,1μm,24.3s
CONA Conrad Observa 113.51 322 *e*P **PKKPab** **07 53 19.1 +2.2**
comp=Z,4.7nm,1.4s
MNTX Cornudas Mount 113.69 57 IAMs_20 IAMs_20 08 20 26.3
comp=Z,662nm,21.0s
MNTX Cornudas Mount 113.69 57 P **PKiKP** **07 42 26.2 +0.4**
baz=282,SNR=12
MNTX Cornudas Mount 113.69 57 P **PKiKP** **07 42 26.3 +0.4**
baz=282
CLL Collm 113.75 326 *i* PKIKP **PKiKP** **07 42 25.2 -0.2**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL pmax pmax
comp=Z,10.0nm,1.2s
CLL MLR MLR
comp=Z,1μm,19.5s
CLL Collm 113.75 326 *i* PKiKP **PKiKP** **07 42 25.2 -0.2**
comp=Z,5.0nm,0.9s
CLL *e*PP **PP** **07 43 18.0 -0.2**
CLL *e*pPS 07 53 06.0
CLL *i* PKKPbc **PKKPbc** **07 53 10.3 +0.2**
comp=Z,4.0nm,0.9s
CLL *i* PKKPab **PKKPab** **07 53 17.7 +2.0**
comp=Z,10.0nm,1.2s
CLL *i* pPKKPab 07 53 27.4
CLL *e*SS SS 07 59 30.0 +27
CLL *e*SSS SSS 08 03 30.0
CLL *ex* x 08 04 24.0
CLL *e*SSSS 08 06 48.0
CLL *ex* x 08 09 48.0
CLL Lm MLR 08 34 00.0
comp=N,700nm,19.5s
CLL Lm MLR 08 34 00.0
comp=E,700nm,21.3s
CLL Lm MLR 08 34 00.0
comp=Z,1μm,19.5s
OGNE Ogallala 113.93 46 P **PKiKP** **07 42 25.8 -0.4**
baz=288
CKRC Cesky Krumlov 114.09 323 *e*PKP PKPdf 07 42 25.8 -0.4
CKRC *e*PKKP **PKKPab** **07 53 16.2 +1.9**
KHC Kasperske Hory 114.39 324 *e*PKIKP PKPdf 07 42 26.6 -0.2
KHC MLR MLR
comp=Z,900nm,21.4s
KHC Kasperske Hory 114.39 324 *e*PKP PKPdf 07 42 26.6 -0.2
KHC *e*PKKP **PKKPab** **07 53 14.8 +1.8**
KHC AMS AMS 08 33 50.0
comp=Z,900nm,21.4s
GERES GERESS Array B 114.44 323 PKP **PKiKP** **07 42 26.9 -0.1**
comp=Z,1.4nm,0.7s,baz=81,slow=1.8,SNR=17
GERES PKKPbc **PKKPbc** **07 53 05.5 -2.2**
comp=Z,0.7nm,0.9s,baz=194,slow=2.0,SNR=4.6
MOA Molln 114.53 322 *e*P **PKKPab** **07 53 14.4 +2.0**
comp=Z,6.3nm,0.9s
SOKA Soboth 114.53 321 *e*P **PKiKP** **07 42 26.6 -0.5**
comp=Z,1.9nm,0.8s
SOKA Soboth 114.53 321 *e*P **PKKPab** **07 53 16.3 +3.9**
comp=Z,2.5nm,1.1s
OBKA Obir 114.90 321 *e*P **PKKPab** **07 53 14.5 +3.7**
comp=Z,4.9nm,0.9s
KBA Koelnbreinsper 115.42 322 *e*P **PKKPab** **07 53 10.2 +1.6**
comp=Z,2.7nm,0.6s
TX31 Lajitas Ar. Si 115.62 59 **PKiKP** **07 42 29.9 +0.1**
TX31 Lajitas Ar. Si 115.62 59 P **PKiKP** **07 42 29.9 +0.1**
baz=282
TXAR Lajitas Array 115.62 59 PKP **PKiKP** **07 42 29.9 +0.2**
comp=Z,2.0nm,0.8s,baz=245,slow=1.3,SNR=19
TXAR PKKPbc **PKKPbc** **07 53 04.2 +1.1**
comp=Z,1.5nm,0.9s,baz=118,slow=6.6,SNR=15
TXAR Lajitas Array 115.62 59 PKIKP **PKiKP** **07 42 30.0 +0.2**
AMTX Amarillo 115.95 52 IAMs_20 IAMs_20 08 31 21.5
comp=Z,787nm,20.0s
AMTX Amarillo 115.95 52 P **PKiKP** **07 42 30.3 +0.1**
baz=286
F33A 5 Mile Ranch, 116.04 39 P **PKiKP** **07 42 29.6 -0.3**
baz=295
TIP Timpagrande 116.07 313 IAMs_20 IAMs_20 08 36 44.3
comp=Z,638nm,21.0s
ABTA Abfaltersbach 116.08 322 *e*P **PKiKP** **07 42 29.2 -0.9**
comp=Z,3.8nm,0.7s
CBKS Cedar Bluff 116.28 48 IAMs_20 IAMs_20 08 36 54.5
comp=Z,619nm,18.0s
CBKS Cedar Bluff 116.28 48 P **PKPdf** **07 42 30.4 -0.3**
baz=289
WTTA Wattenberg 116.39 323 *e*P **PKPdf** **07 42 30.3 -0.6**
comp=Z,4.3nm,0.7s
WTTA Wattenberg 116.39 323 *e*P **PKKPab** **07 53 06.6 +2.2**
comp=Z,5.8nm,1.1s
WATA Walderalm 116.39 323 *e*P **PKPdf** **07 42 30.4 -0.5**
comp=Z,2.5nm,0.8s
BGNE Belgrade 116.53 45 P **PKPdf** **07 42 31.0 -0.2**
baz=291
SQTA Sankt Quirin 116.67 323 *e*P **PKPdf** **07 42 31.2 -0.1**
comp=Z,8.3nm,1.3s
SQTA Sankt Quirin 116.67 323 *e*P **PKKPab** **07 53 05.4 +2.3**
comp=Z,5.1nm,0.8s
MOTA Moosalm 116.67 323 *e*P **PKPdf** **07 42 31.0 -0.3**
comp=Z,2.3nm,0.6s
MOTA Moosalm 116.67 323 *e*P **PKKPab** **07 53 05.2 +2.1**
comp=Z,3.1nm,0.7s
ECSD EROS Data Cent 116.70 42 **PKPdf** **07 42 30.5 -0.8**
ECSD EROS Data Cent 116.70 42 IAMs_20 IAMs_20 08 29 50.7
comp=Z,710nm,20.0s
ECSD EROS Data Cent 116.70 42 P **PKPdf** **07 42 30.5 -0.8**
baz=294
ECSD EROS Data Cent 116.70 42 P **PKPdf** **07 42 31.2 -0.1**
baz=294
CEL Celeste 117.01 312 IAMs_20 IAMs_20 08 38 27.2
comp=Z,490nm,22.0s
FETA Feichten 117.05 323 *e*P **PKPdf** **07 42 32.0 -0.1**
comp=Z,3.8nm,0.9s
FETA Feichten 117.05 323 *e*P **PKKPab** **07 53 04.0 +2.5**
comp=Z,3.0nm,0.9s
R32A Long Quarter, 117.17 48 P **PKPdf** **07 42 32.0 -0.5**
baz=290
DAVA Damuels 117.44 323 *e*P **PKPdf** **07 42 32.6 -0.2**
comp=Z,9.8nm,0.9s
MURB Monte Urbino 117.54 318 **PKPdf** **07 42 32.1 -0.9**
DAVOX Davos/Dischmat 117.67 323 PKP **PKiKP** **07 42 33.5 +0.1**
comp=Z,4.4nm,0.7s,baz=170,slow=2.2,SNR=12
EYMN Ely 117.99 36 P **PKPdf** **07 42 33.4 -0.3**

	baz=300								
OK032	**Salt Plains WL**	118.07	49		IAMs_20	IAMs_20	08 32 12.3		
	comp=Z,659nm,20.0s								
ZCCA	**Zocca**	118.09	320			PKiKP	07 42 34.5	+0.5	
ABTX	**Abilene, Hawle**	118.19	54		P	PKPdf	07 42 34.4	-0.2	
	baz=286								
WMOK	**Wichita Mounta**	118.28	52		IAMs_20	IAMs_20	08 32 36.1		
	comp=Z,546nm,20.0s								
WMOK	**Wichita Mounta**	118.28	52		P	PKPdf	07 42 34.2	-0.5	
	baz=288								
WLF	**Walferdange**	118.36	327		IAMs_20	IAMs_20	08 40 46.0		
	comp=Z,657nm,20.0s								
KSU1	**Kansas State U**	118.47	47		IAMs_20	IAMs_20	08 32 44.4		
	comp=Z,733nm,20.0s								
KSU1	**Kansas State U**	118.47	47		P	PKiKP	07 42 35.1	+0.1	
	baz=292								
KSU1	**Kansas State U**	118.47	47		P	PKPdf	07 42 34.5	-0.4	
	baz=292								
SPMN	**Marine on St.**	118.51	39		P	PKPdf	07 42 34.5	-0.3	
	baz=298								
JCT	**Junction City**	118.63	57		IAMs_20	IAMs_20	08 31 00.0		
	comp=Z,655nm,20.0s								
JCT	**Junction City**	118.63	57		P	PKiKP	07 42 35.7	+0.1	
	baz=285								
JCT	**Junction City**	118.63	57		P	PKPdf	07 42 35.2	-0.3	
	baz=285								
EKA	**Eskdalemuir Ar**	119.25	336		PKP	PKPdf	07 42 35.7	-0.1	
	comp=Z,0.2nm,0.3s,baz=27,slow=3.3,SNR=5.9								
EKA					PKKPbc	PKKPbc	07 52 49.0	-1.8	
	comp=Z,0.7nm,0.6s,baz=242,slow=1.5,SNR=3.8								
T35B	**Sooner Cattle**	119.32	49		P	PKPdf	07 42 36.5	-0.1	
	baz=290,SNR=10								
833A	**Chaparral WMA,**	119.50	59		P	PKPdf	07 42 36.7	-0.5	
	baz=284								
SCIA	**State Center**	119.73	42		IAMs_20	IAMs_20	08 31 35.1		
	comp=Z,531nm,20.0s								
WHTX	**Lake Whitney,**	120.15	54		P	PKiKP	07 42 39.0	+0.6	
	baz=287								
WHTX	**Lake Whitney,**	120.15	54		P	PKPdf	07 42 37.8	-0.5	
	baz=287								
TUL1	**Leonard**	120.21	50		P	PKiKP	07 42 38.4	0.0	
	baz=290,SNR=7.3								
TUL1	**Leonard**	120.21	50		P	PKPdf	07 42 37.5	-0.8	
	baz=290,SNR=7.3								
435B	**Jarrell**	120.39	56		P	PKPdf	07 42 38.3	-0.5	
	baz=286								
BNI	**Bardonecchia**	120.47	322			PKPdf	07 42 38.4	-0.3	
BNI	**Bardonecchia**	120.47	322		PKIKP	PKPdf	07 42 38.4	-0.3	
P38A	**Dawn**	120.47	45		P	PKPdf	07 42 38.0	-0.7	
	baz=294								
X37A	**Clayton**	120.99	51		P	PKPdf	07 42 39.6	-0.2	
	baz=290								
U38A	**Gravette**	121.08	49		P	PKPdf	07 42 39.4	-0.6	
	baz=292,SNR=13								
JFWS	**Jewell Farm**	121.23	40		P	PKPdf	07 42 39.0	-1.0	
	baz=299								
S39A	**Bolivar**	121.39	47		P	PKPdf	07 42 40.0	-0.6	
	baz=293,SNR=12								
HHAR	**Hobbs**	121.48	49		P	PKPdf	07 42 39.8	-1.0	
	baz=292								
P40A	**Paris**	121.55	44		P	PKPdf	07 42 40.2	-0.6	
	baz=295								
R40A	**Maddies Statio**	121.91	46		P	PKPdf	07 42 40.9	-0.6	
	baz=295,SNR=17								
HKT	**Hockley**	122.08	56		PKPdf	PKiKP	07 42 42.8	+0.7	
HKT	**Hockley**	122.08	56	*i*	PKIKP	PKPdf	07 42 42.0	0.0	
MGMO	**Mountain Grove**	122.38	47			PKPdf	07 42 41.7	-0.8	
MIAR	**Mount Ida**	122.39	50		P	PKPdf	07 42 41.7	-0.9	
	baz=291								
NATX	**Nacogdoches**	122.48	54		IAMs_20	IAMs_20	08 33 50.7		
	comp=Z,507nm,19.0s								
NATX	**Nacogdoches**	122.48	54		P	PKPdf	07 42 42.2	-0.6	
	baz=289								
CCM	**Cathedral Cave**	122.75	46			PKPdf	07 42 42.3	-0.8	
CCM	**Cathedral Cave**	122.75	46		IAMs_20	IAMs_20	08 35 26.4		
	comp=Z,652nm,20.0s								
CCM	**Cathedral Cave**	122.75	46		PKiKP	PKPdf	07 42 42.3	-0.8	
CCM					MLR	MLR			
	comp=Z,700nm,20.0s								
CCM	**Cathedral Cave**	122.75	46		P	PKPdf	07 42 42.4	-0.7	
	baz=295,SNR=15								
CCM	**Cathedral Cave**	122.75	46		P	PKPdf	07 42 42.1	-1.0	
	baz=295								
KEST	**Kesra**	122.80	311		PKP	PKiKP	07 42 43.8	+0.1	
	comp=Z,6.0nm,1.0s,baz=45,slow=4.7,SNR=4.8								
HDIL	**Hopedale**	122.98	42		IAMs_20	IAMs_20	08 30 38.0		
	comp=Z,587nm,22.0s								
HDIL	**Hopedale**	122.98	42		P	PKPdf	07 42 42.9	-0.6	
	baz=298								
HDIL	**Hopedale**	122.98	42		P	PKPdf	07 42 42.6	-0.9	
	baz=298								
L44A	**Lake County Fo**	123.09	40		P	PKPdf	07 42 42.3	-1.3	
	baz=301								
UALR	**University of**	123.25	50			PKPdf	07 42 44.0	-0.1	
P43A	**Skaggs, Pawnee**	123.25	43		P	PKPdf	07 42 43.7	-0.3	
	baz=298,SNR=6.2								
FVM	**French Village**	123.36	45		P	PKPdf	07 42 43.7	-0.6	
	baz=296								
GLMI	**Grayling**	123.68	36		P	PKPdf	07 42 43.9	-0.8	
	baz=305								
EFI	**East Falkland**	123.84	168		PKPdf	PKiKP	07 42 45.9	+0.9	
EFI	**East Falkland**	123.84	168	*i*	PKIKP	PKiKP	07 42 45.1	+0.1	
Q44A	**Meyer Farm, Va**	123.94	44		P	PKPdf	07 42 44.8	-0.5	
	baz=298,SNR=5.3								
SCHQ	**Schefferville**	124.30	17		PKP	PKPdf	07 42 45.5	-0.1	
	comp=Z,5.6nm,0.7s,baz=307,slow=2.2,SNR=7.8								
S44A	**Carbondale**	124.32	45		P	PKPdf	07 42 45.6	-0.5	
	baz=297,SNR=6.2								
J47A	**Sunmer**	124.46	37		P	PKPdf	07 42 45.7	-0.5	
	baz=304								
J47A					P	PKPdf	07 42 45.7	-0.5	
	baz=304								
SFIN	**Lafayette**	124.53	41		P	PKPdf	07 42 45.1	-1.4	
	baz=300								
MAHO	**Mahon**	124.58	318		IAMs_20	IAMs_20	08 42 37.0		
	comp=Z,568nm,21.0s								
OLIL	**Olney**	124.65	44		P	PKPdf	07 42 46.7	0.0	
	baz=298								
143A	**Socs Landing,**	124.75	52		P	PKPdf	07 42 46.9	-0.2	
	baz=292,SNR=6.7								
P46A	**Rosedale**	124.83	42		P	PKPdf	07 42 46.9	-0.2	
	baz=300,SNR=6.2								
N47A	**Urbana**	125.19	40		P	PKPdf	07 42 46.8	-0.9	
	baz=302								
N47A					P	PKPdf	07 42 46.8	-0.9	
	baz=302								
L48A	**N Adams**	125.41	39		P	PKPdf	07 42 47.5	-0.6	
	baz=304								
L48A					P	PKPdf	07 42 47.5	-0.6	
	baz=304								
VLDQ	**Val d'Or**	125.42	29			PKPdf	07 42 46.1	-1.8	
OXF	**Oxford**	125.58	49		IAMs_20	IAMs_20	08 29 59.8		
	comp=Z,465nm,21.0s								
OXF	**Oxford**	125.58	49		P	PKPdf	07 42 47.7	-0.9	
	baz=295								
VBMS	**Vicksburg**	125.62	52		IAMs_20	IAMs_20	08 37 30.6		
	comp=Z,598nm,21.0s								
VBMS	**Vicksburg**	125.62	52		P	PKiKP	07 42 49.5	+0.3	
	baz=292								
VBMS	**Vicksburg**	125.62	52		P	PKPdf	07 42 48.5	-0.3	
	baz=292								
AAM	**Ann Arbor**	125.69	38		P	PKPdf	07 42 47.3	-1.4	
	baz=305								
Y45A	**Yeager Farm, C**	125.74	50		P	PKiKP	07 42 49.2	-0.1	
	baz=294,SNR=7.0								
344A	**Westbrook Farm**	125.74	53		P	PKiKP	07 42 49.4	0.0	
	baz=292								
O48B	**Farmland**	125.86	41		P	PKPdf	07 42 48.6	-0.4	
	baz=302,SNR=6.2								
O48B	**Farmland**	125.86	41		P	PKPdf	07 42 48.1	-1.0	
	baz=302,SNR=6.2								
WVT	**Waverly**	126.04	46			PKPdf	07 42 48.4	-1.1	
WVT	**Waverly**	126.04	46		IAMs_20	IAMs_20	08 36 17.8		
	comp=Z,677nm,20.0s								
WVT	**Waverly**	126.04	46		PKIKP	PKPdf	07 42 48.4	-1.1	
WVT					MLR	MLR			
	comp=Z,700nm,20.0s								
WVT	**Waverly**	126.04	46		P	PKPdf	07 42 48.6	-0.8	
	baz=297								
WVT	**Waverly**	126.04	46		P	PKPdf	07 42 48.3	-1.1	
	baz=297								
P48A	**Milroy**	126.10	42		P	PKPdf	07 42 48.7	-0.8	
	baz=301,SNR=9.1								
P48A					P	PKPdf	07 42 48.7	-0.8	
	baz=301,SNR=9.1								
N49A	**Columbus Grove**	126.13	39		P	PKPdf	07 42 49.3	-0.2	
	baz=303,SNR=5.1								
N49A					P	PKPdf	07 42 49.3	-0.2	
	baz=303,SNR=5.1								
WCI	**Wyandotte Cave**	126.14	43			PKPdf	07 42 49.2	-0.4	
WCI	**Wyandotte Cave**	126.14	43		IAMs_20	IAMs_20	08 35 17.8		
	comp=Z,707nm,21.0s								
WCI	**Wyandotte Cave**	126.14	43		PKIKP	PKPdf	07 42 49.2	-0.4	
WCI					MLR	MLR			
	comp=Z,700nm,21.0s								
WCI	**Wyandotte Cave**	126.14	43		P	PKPdf	07 42 49.2	-0.4	
	baz=300								
WCI	**Wyandotte Cave**	126.14	43		P	PKPdf	07 42 48.8	-0.8	
	baz=300								
T47A	**Sharon Grove**	126.17	45		P	PKPdf	07 42 49.2	-0.5	
	baz=298								
PLAL	**Pickwick Lake**	126.37	48			PKPdf	07 42 48.9	-1.2	
O49A	**Covington**	126.43	40		P	PKPdf	07 42 49.7	-0.4	
	baz=303,SNR=6.2								
O49A					P	PKPdf	07 42 49.7	-0.4	
	baz=303,SNR=6.2								
P49A	**Miami Univ. Ec**	126.53	41		IAMs_20	IAMs_20	08 35 57.9		
	comp=Z,644nm,20.0s								
P49A	**Miami Univ. Ec**	126.53	41		P	PKPdf	07 42 49.7	-0.6	
	baz=302,SNR=9.1								
P49A	**Miami Univ. Ec**	126.53	41		P	PKPdf	07 42 49.7	-0.6	
	baz=302,SNR=9.1								
146A	**Union**	126.60	51		P	PKPdf	07 42 50.9	+0.2	
	baz=294,SNR=5.7								
LL02	**Futaleuf**	126.61	153			PKiKP	07 42 51.2	+0.3	
346A	**Big Creek Wild**	126.77	52		P	PKiKP	07 42 51.7	+0.3	
	baz=292								
V48A	**Smith Brothers**	126.95	46		P	PKPdf	07 42 50.5	-0.8	
	baz=298,SNR=6.7								
ACSO	**Alum Creek Sta**	127.28	40		IAMs_20	IAMs_20	08 36 01.3		
	comp=Z,648nm,20.0s								
ACSO	**Alum Creek Sta**	127.28	40		P	PKPdf	07 42 50.7	-1.0	
	baz=304,SNR=5.3								
U49A	**Red Boiling Sp**	127.33	45		P	PKPdf	07 42 51.6	-0.3	
	baz=299								
X48A	**Hartselle**	127.36	48		P	PKPdf	07 42 50.8	-1.2	
	baz=296,SNR=7.5								
R50A	**Paris**	127.44	42		P	PKPdf	07 42 51.4	-0.7	
	baz=302								
R50A					P	PKPdf	07 42 51.4	-0.7	
	baz=302								
P51A	**Williamsport**	127.64	40		P	PKPdf	07 42 52.0	-0.5	
	baz=304,SNR=6.8								
P51A					P	PKPdf	07 42 52.0	-0.5	
	baz=304,SNR=6.8								
Q51A	**Peebles**	127.70	41		P	PKPdf	07 42 52.2	-0.4	
	baz=303								
Q51A					P	PKPdf	07 42 52.2	-0.4	
	baz=303								
T50A	**Nancy**	127.74	44		P	PKPdf	07 42 52.1	-0.6	
	baz=300								
T50A					P	PKPdf	07 42 52.1	-0.6	
	baz=300								
ERPA	**Erie**	128.00	36		IAMs_20	IAMs_20	08 35 36.0		
	comp=Z,660nm,20.0s								
M53A	**WI Miller and**	128.00	37		P	PKPdf	07 42 52.5	-0.5	
	baz=307								
LRAL	**Lakeview Retre**	128.02	49		IAMs_20	IAMs_20	08 37 23.5		
	comp=Z,572nm,20.0s								
LRAL	**Lakeview Retre**	128.02	49		P	PKPdf	07 42 53.1	-0.3	
	baz=296								
LRAL	**Lakeview Retre**	128.02	49		P	PKPdf	07 42 52.6	-0.8	
	baz=296								
P52A	**Corning**	128.15	40		P	PKPdf	07 42 52.5	-0.9	
	baz=304,SNR=6.3								
S51A	**Beattyville**	128.27	43		P	PKPdf	07 42 53.4	-0.4	
	baz=302								
S51A					P	PKPdf	07 42 53.4	-0.4	
	baz=302								
W50A	**Signal Mountai**	128.29	46		P	PKPdf	07 42 53.7	-0.2	
	baz=299,SNR=5.1								
O53A	**New Philadelph**	128.38	39		IAMs_20	IAMs_20	08 39 08.4		
	comp=Z,602nm,20.0s								
O53A	**New Philadelph**	128.38	39		P	PKPdf	07 42 53.4	-0.5	
	baz=306								
Q52A	**Bidwell**	128.44	40		P	PKPdf	07 42 53.6	-0.4	
	baz=304								
Q52A					P	PKPdf	07 42 53.6	-0.4	
	baz=304								
P53A	**Whipple**	128.71	39		P	PKPdf	07 42 54.8	+0.3	
	baz=305,SNR=5.8								
P53A					P	PKPdf	07 42 54.8	+0.3	
	baz=305,SNR=5.8								
BRAL	**Brewton**	128.75	52		P	PKPdf	07 42 54.4	-0.4	
	baz=294								
TZTN	**Tazewell**	128.87	44		IAMs_20	IAMs_20	08 38 06.2		
	comp=Z,638nm,20.0s								
TZTN	**Tazewell**	128.87	44		P	PKPdf	07 42 54.8	-0.1	
	baz=301								
PLCA	**Paso Flores**	129.13	152		PKP	PKiKP	07 42 57.2	+1.1	
	comp=Z,6.0nm,0.9s,baz=315,slow=3.1,SNR=9.3								
PLCA	**Paso Flores**	129.13	152	*e*	P	PKPdf	07 42 52.8	-2.6	
TKL	**Tuckaleechee C**	129.16	45		P	PKPdf	07 42 55.3	-0.2	
	baz=300								
V52A	**Sevierville**	129.19	45		P	PKPdf	07 42 55.8	+0.2	
	baz=301,SNR=7.7								
LONY	**Lake Ozonia**	129.28	30		IAMs_20	IAMs_20	08 37 52.2		
	comp=Z,582nm,21.0s								
LONY	**Lake Ozonia**	129.28	30		P	PKPdf	07 42 55.3	-0.2	
	baz=316								
CART	**Cartagena**	129.30	318		IAMs_20	IAMs_20	08 47 48.8		
	comp=Z,531nm,21.0s								
W52A	**Murphy**	129.33	46		P	PKPdf	07 42 56.1	+0.2	
	baz=300,SNR=7.6								
PSDB	**Penn State Uni**	129.34	36		P	PKPdf	07 42 55.5	-0.2	
	baz=309								
Q54A	**Coxs Mills**	129.35	40		P	PKPdf	07 42 55.9	+0.2	
	baz=305								
Q54A					P	PKPdf	07 42 55.9	+0.2	
	baz=305								
L56A	**Greenwood**	129.39	34		P	PKPdf	07 42 55.7	-0.1	
	baz=311								
L56A					P	PKPdf	07 42 55.7	-0.1	
	baz=311								
MCWV	**Mont Chateau**	129.57	38		IAMs_20	IAMs_20	08 40 02.0		
	comp=Z,672nm,21.0s								
MCWV	**Mont Chateau**	129.57	38		P	PKPdf	07 42 56.4	+0.3	
	baz=307								
Y52A	**Lilburn**	129.83	47		P	PKiKP	07 42 57.6	0.0	
	baz=299								
Y52A					P	PKiKP	07 42 57.6	0.0	
	baz=299								
V53A	**Saluda**	129.83	44		P	PKPdf	07 42 56.7	-0.1	
	baz=301,SNR=5.7								
V53A					P	PKPdf	07 42 56.7	-0.1	
	baz=301,SNR=5.7								
152A	**Waverly Hall**	129.90	49		P	PKPdf	07 42 56.7	-0.2	
	baz=297								
NCB	**Newcomb**	129.93	31		P	PKiKP	07 42 57.1	-0.4	
	baz=316,SNR=6.3								
ESDC	**Sonseca Array**	130.00	322		PKP	PKPdf	07 42 57.4	+0.3	
	comp=Z,1.2nm,1.0s,baz=13,slow=2.1,SNR=8.5								
E62A	**Clayton Lake**	130.12	25			PKPdf	07 42 56.8	-0.1	
J59A	**Piesco**	130.14	31		P	PKPdf	07 42 57.0	-0.2	
	baz=315,SNR=7.0								
J59A					P	PKPdf	07 42 57.0	-0.2	
	baz=315,SNR=7.0								
SSPA	**Standing Stone**	130.16	36			PKPdf	07 42 57.3	+0.1	
SSPA	**Standing Stone**	130.16	36		P	PKPdf	07 42 57.2	0.0	
	baz=309								
BINY	**Binghamton**	130.22	33		P	PKPdf	07 42 57.4	+0.1	
	baz=312								
GOGA	**Godfrey**	130.48	47		P	PKPdf	07 42 57.9	-0.1	
	baz=299								
BLA	**Blacksburg**	130.62	41		IAMs_20	IAMs_20	08 40 55.3		
	comp=Z,638nm,21.0s								
BLA	**Blacksburg**	130.62	41		P	PKPdf	07 42 58.0	-0.3	
	baz=304								
PQI	**Presque Isle**	130.71	24		IAMs_20	IAMs_20	08 41 59.9		
	comp=Z,441nm,19.0s								
MVO	**Moncorvo**	130.86	326	*e*	PKP	PKiKP	07 43 00.3	+0.8	
MVO	**Moncorvo**	130.86	326	*e*	LR	LR	08 35 40.1		
	comp=Z,1µm,22.0s								
LBNH	**Lisbon**	130.87	29		P	PKPdf	07 42 58.5	0.0	
	baz=318								
HODGE	**Hodges**	130.95	46		P	PKiKP	07 42 59.8	0.0	
	baz=301								
PGAV	**Gavieira, Arco**	131.01	327		A	A	08 44 31.2		
	comp=Z,854nm,20.0s								
KMSC	**Kings Mountain**	131.14	44		P	PKPdf	07 42 59.4	+0.2	
	baz=302								
POLO	**Lamas de Olo**	131.15	326	*e*	PKP	PKiKP	07 42 59.8	-0.3	
PVRL	**Vila Real**	131.17	326	*e*	PKP	PKiKP	07 43 01.0	+0.9	
PKME	**Peaks-Kenny Pk**	131.29	26		P	PKPdf	07 42 59.5	+0.3	
	baz=322								
TIGA	**Tifton**	131.31	50		P	PKPdf	07 42 59.9	+0.3	
	baz=297								
TEIG	**Tepich**	131.32	66		IAMs_20	IAMs_20	08 34 48.5		
	comp=Z,440nm,22.0s								
MTE	**Manteigas**	131.66	325	*e*	PKP	PKPdf	07 42 59.8	-0.4	
MTE	**Manteigas**	131.66	325	*e*	LR	LR	08 35 28.3		
	comp=Z,961nm,22.0s								
L61B	**Northampton**	131.80	31		P	PKPdf	07 42 59.8	-0.5	
	baz=316								
CBN	**Corbin Frederi**	131.99	38		IAMs_20	IAMs_20	08 38 34.9		
	comp=Z,587nm,22.0s								
CBN	**Corbin Frederi**	131.99	38		P	PKPdf	07 43 00.6	-0.1	
	baz=308								
PCBR	**Castelo Branco**	131.99	325	*e*	PKP	PKiKP	07 43 01.8	+0.1	
PAL	**Palisades**	132.18	33		P	PKPdf	07 43 00.8	-0.2	
	baz=314								
PMRV	**Marv??o**	132.21	324	*e*	PKP	PKPdf	07 42 59.2	-2.0	
PMRV	**Marv??o**	132.21	324	*e*	LR	LR	08 35 49.5		
	comp=Z,840nm,24.0s								
HRV	**Adam Dziewonsk**	132.33	30		P	PKPdf	07 43 01.2	0.0	
	baz=318								
YLE	**Yale**	132.48	32		IAMs_20	IAMs_20	08 41 12.1		
	comp=Z,483nm,21.0s								
EMMW	**East Machias**	132.52	25		IAMs_20	IAMs_20	08 42 52.2		
	comp=Z,581nm,21.0s								
PESTR	**Estremoz**	132.70	324	*e*	PKP	PKiKP	07 43 02.8	-0.4	
BRYW	**Bryant College**	132.77	31		IAMs_20	IAMs_20	08 39 37.5		
	comp=Z,650nm,21.0s								
PBAR	**Barrancos**	132.81	323	*e*	PKP	PKiKP	07 43 03.3	-0.1	
PMTG	**Montargil**	132.94	324	*e*	PKP	PKPdf	07 43 02.3	-0.2	
PSBE	**So Bento**	132.97	325	*e*	PKP	PKiKP	07 43 04.2	+0.4	
EVO	**Evora**	133.16	324	*e*	PKP	PKiKP	07 43 04.4	+0.2	
PBEJ	**Beja**	133.41	323	*e*	PKP	PKiKP	07 43 04.8	+0.1	
CNNC	**Cliffs of the**	133.43	42		IAMs_20	IAMs_20	08 38 44.6		
	comp=Z,569nm,20.0s								
CNNC	**Cliffs of the**	133.43	42		P	PKPdf	07 43 03.5	-0.1	
	baz=306								
PVAQ	**Vaqueiros**	133.71	322	*e*	LR	LR	08 35 08.8		
	comp=Z,668nm,20.0s								
MESJ	**Messejana**	133.74	323	*e*	PKP	PKiKP	07 43 05.8	+0.5	
PNCL	**Nicolau / Gran**	133.75	323	*e*	PKP	PKiKP	07 43 05.7	+0.4	
PCVE	**Castro Verde**	133.76	323	*e*	PKP	PKiKP	07 43 06.6	+1.2	
MDT	**Midelt**	134.37	315		PKP	PKiKP	07 43 07.9	+1.0	
	comp=Z,1.5nm,0.9s,baz=56,slow=3.6,SNR=4.5								
DWPF	**Disney Wildern**	134.47	53		P	PKiKP	07 43 06.9	-0.2	
	baz=296								
AVE	**Averroes**	136.04	317		IAMs_20	IAMs_20	08 50 26.2		
	comp=Z,524nm,20.0s								
TOA0	**Torodi Ar. Sit**	136.06	286			PKPdf	07 43 08.9	-0.1	
TORD	**Torodi Ar. Bea**	136.06	286		PKP	PKPdf	07 43 09.3	+0.3	
	comp=Z,16nm,0.3s,baz=57,slow=2.2,SNR=1.7								
JTS	**Las Juntas de**	136.31	78		PKPdf	PKPdf	07 43 09.8	+0.3	
JTS	**Las Juntas de**	136.31	78		PKIKP	PKPdf	07 43 09.8	+0.3	
JTS	**Las Juntas de**	136.31	78	*e*	P	PKPdf	07 43 08.4	-1.1	
PRVC	**Isla de Provid**	139.31	73	*e*	P	PKPdf	07 43 15.3	+0.4	
KOWA	**Kowa**	141.22	290		PKhKP	PKPpre	07 43 12.7		
	comp=Z,6.4nm,0.9s,baz=47,slow=2.3,SNR=10								
KOWA	**Kowa**	141.22	290		IAMs_20	IAMs_20	08 59 36.8		
	comp=Z,516nm,20.0s								
BCIP	**Isla Barro Col**	141.45	79	*e*	P	PKPdf	07 43 13.9	-5.0	
MTDJ	**Mount Denham**	141.61	64		IAMs_20	IAMs_20	08 49 56.9		
	comp=Z,363nm,22.0s								
PMOZ	**Porto Moniz, M**	142.49	325	*e*	LR	LR	08 36 19.3		
	comp=Z,232nm,22.0s								
OTAV	**Otavalo**	143.02	93			PKPbc	07 43 20.2	+1.0	
OTAV	**Otavalo**	143.02	93		IAMs_20	IAMs_20	08 37 15.3		
	comp=Z,546nm,21.0s								
OTAV	**Otavalo**	143.02	93		PKIKP	PKPbc	07 43 20.2	+1.0	
OTAV	**Otavalo**	143.02	93	*e*	P	PKPbc	07 43 18.8	-0.4	
KIC	**Kosan Boka**	143.16	277	⇑*e*	PKIKP	PKPbc	07 43 20.0	+1.0	
	comp=Z,20nm,0.6s								
LVC	**Limon Verde**	143.17	135		PKPdf	PKPdf	07 43 21.2	-1.0	
LVC	**Limon Verde**	143.17	135		PKIKP	PKPdf	07 43 21.2	-1.0	
LVC	**Limon Verde**	143.17	135	*e*	P	PKPbc	07 43 19.0	-0.1	
DBIC	**Dimbokro**	143.25	277		PKhKP	PKPpre	07 43 19.3		
	comp=Z,13nm,0.7s,baz=103,slow=2.6,SNR=27								
DBIC	**Dimbokro**	143.25	277			PKPbc	07 43 19.6	+0.4	
DBIC	**Dimbokro**	143.25	277		PKIKP	PKPbc	07 43 19.6	+0.4	
TIC	**Toumodi**	143.41	277	⇑*i*	PKIKP	PKPbc	07 43 19.9	+0

comp=Z,331nm,21.0s

SJG	**San Juan**	**151.55**	**56**			**PKPdf**	**07 43 35.3**	**-0.4**
SJG				PKPbc		**PKPbc**	**07 43 41.6**	**-0.3**
SJG	**San Juan**	**151.55**	**56**	IAMs_20	IAMs_20		08 46 49.0	
	comp=Z,365nm,22.0s							
SJG	**San Juan**	**151.55**	**56**	PKIKP		**PKPbc**	**07 43 41.6**	**-0.3**
TRCB	**Terra Rica**	**152.26**	**158**	*eP*		**PKPdf**	**07 43 34.2**	**-2.6**
ETMB	**Extrema**	**152.38**	**118**	*eP*		**PKPdf**	**07 43 34.0**	**-3.1**
STVI	**Saint Thomas**	**152.41**	**55**	PKPdf		**PKPdf**	**07 43 36.6**	**-0.3**
STVI						**PKPbc**	**07 43 43.5**	**-0.4**
STVI				PKPab		**PKPab**	**07 43 53.6**	**-0.4**
BBTS	**Babate**	**152.69**	**297**	PKPbc		**PKiKP**	**07 43 46.1**	**+1.3**
	comp=Z,28nm,0.4s,baz=2,9,slow=1.4,SNR=5.9							
CDVI	**St. Croix**	**152.87**	**55**			**PKPdf**	**07 43 37.2**	**-0.5**
CDVI				PKPbc		**PKPbc**	**07 43 44.7**	**-0.2**
CDVI				PKPab		**sPKPdf**	**07 43 55.1**	**-0.8**
AQDB	**Aquidauana**	**152.94**	**150**	*eP*		**PKPdf**	**07 43 34.9**	**-2.8**
PARB	**Paraibuna**	**153.62**	**172**	*eP*		**PKPdf**	**07 43 35.7**	**-3.1**
VAO	**Valinhos**	**153.72**	**169**	*eP*		**PKPdf**	**07 43 36.1**	**-2.9**
PCMB	**Pacaembu**	**153.85**	**159**	*eP*		**PKPdf**	**07 43 36.3**	**-2.7**
PCMB	**Pacaembu**	**153.85**	**159**	*eP*		**PKiKP**	**07 43 48.5**	**+1.4**
PTLB	**Pontes e Lacer**	**154.79**	**137**			**PKiKP**	**07 43 49.4**	**+0.3**
PTLB				PKPab		**PKPab**	**07 44 05.3**	**+1.2**
PTLB	**Pontes e Lacer**	**154.79**	**137**	*eP*		**PKPdf**	**07 43 36.8**	**-3.6**
BB19B	**Bebedouro**	**155.22**	**164**	*eP*		**PKPdf**	**07 43 39.0**	**-2.0**
BB19B	**Bebedouro**	**155.22**	**164**	*eP*		**PKPdf**	**07 43 34.3**	**-6.7**
ANWB	**Willy Bob**	**155.32**	**52**	IAMs_20	IAMs_20		08 50 59.1	
	comp=Z,500nm,21.0s							
CAM01	**Campos-RJ**	**155.42**	**180**	*eP*		**PKPdf**	**07 43 38.6**	**-2.6**
C2SB	**Chapadao do Su**	**155.77**	**153**	*eP*		**PKPab**	**07 44 08.6**	**+0.5**
ITRB	**Iturama**	**155.93**	**159**	*eP*		PKPdf	07 43 50.3	+8.4
ABD	**La Joyeuse, An**	**156.21**	**54**	IAMs_20	IAMs_20		08 45 30.2	
	comp=Z,524nm,22.0s							
SALV	**Santo Antonio**	**156.66**	**144**	*eP*		**PKPdf**	**07 43 40.3**	**-2.7**
FDF	**Fort de France**	**157.38**	**58**	IAMs_20	IAMs_20		09 09 59.9	
	comp=Z,339nm,20.0s							
BIM	**Bigot**	**157.55**	**58**	IAMs_20	IAMs_20		09 09 43.5	
	comp=Z,378nm,21.0s							
MPOM	**Morne Pois Mar**	**157.76**	**58**	IAMs_20	IAMs_20		08 49 23.1	
	comp=Z,340nm,20.0s							
GRGR	**Grenville**	**158.08**	**64**	IAMs_20	IAMs_20		08 51 20.4	
	comp=Z,303nm,21.0s							
IPMB	**Ipameri, GO**	**158.23**	**163**	*eP*		**PKPdf**	**07 43 41.9**	**-3.0**
IPMB	**Ipameri, GO**	**158.23**	**163**	*eP*		**PKPdf**	**07 43 45.4**	**+0.4**
SJMB	**Sao Joao De Ma**	**158.53**	**181**	*eP*		**PKPdf**	**07 43 42.6**	**-2.6**
PDRB	**Porto dos Gac**	**159.13**	**134**	*eP*		**PKPdf**	**07 43 43.1**	**-3.0**
NAN01	**Guarapari, ES**	**159.34**	**184**	*eP*		**PKPdf**	**07 43 42.9**	**-3.3**
TOSP	**Speyside**	**159.41**	**65**	PKPdf		**PKPdf**	**07 43 43.9**	**-2.5**
TOSP						**PKPab**	**07 44 23.6**	**-0.6**
MC01	**Montes Claros**	**160.37**	**173**	*eP*		**PKPdf**	**07 43 45.0**	**-2.5**
BDFB	**Brasilia**	**160.50**	**161**	PKP		**PKPdf**	**07 43 49.4**	**+1.7**
	comp=Z,6.1nm,1.0s,baz=17,slow=0.6,SNR=6.3							
BDFB				PKPab		**PKPab**	**07 44 29.0**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=164,slow=5.2,SNR=5.5							
GUA01	**Guaratinga, BA**	**160.56**	**185**	*eP*		**PKPdf**	**07 43 44.7**	**-2.9**
BOAV	**Boa Vista**	**161.04**	**91**	*eP*		**PKPdf**	**07 43 45.3**	**-3.0**
CMC01	**Camacan, BA**	**161.74**	**186**	*eP*		**PKPdf**	**07 43 44.9**	**-4.0**
JANB	**Januaria**	**161.95**	**171**	*eP*		**PKPdf**	**07 43 46.4**	**-2.8**
SNDB	**Serra Nova Dou**	**162.33**	**147**	*eP*		**PKPdf**	**07 43 46.3**	**-3.3**
SNDB	**Serra Nova Dou**	**162.33**	**147**	*eP*		**PKPab**	**07 44 30.8**	**-5.9**
NPGB	**Novo Progresso**	**163.04**	**126**	*eP*		**PKPdf**	**07 43 47.2**	**-3.1**
GDU01	**Guandu, BA**	**163.37**	**187**	*eP*		**PKPdf**	**07 43 47.8**	**-2.7**
ITTB	**Itaituba**	**164.09**	**117**	*eP*		**PKPdf**	**07 43 48.1**	**-3.2**
SDBA	**SAO DESIDERIO**	**164.43**	**168**	*eP*		**PKPdf**	**07 43 48.2**	**-3.4**
SDBA	**SAO DESIDERIO**	**164.43**	**168**	*eP*		**PKPdf**	**07 43 52.4**	**+0.8**
NBLA	**Lagarto - SE**	**165.70**	**195**	*eP*		**PKPdf**	**07 43 49.9**	**-2.7**
MALB	**Monte Alegre**	**166.44**	**110**	*eP*		**PKPdf**	**07 43 50.2**	**-3.0**
NBRF	**Rio Formoso -**	**166.83**	**209**	*eP*		**PKPdf**	**07 43 50.9**	**-2.6**
SMTB	**Santa Maria do**	**166.85**	**153**	*eP*		**PKPdf**	**07 43 47.9**	**-5.6**
PRPB	**Parauapebas**	**167.78**	**138**	*eP*		**PKPdf**	**07 43 51.5**	**-2.7**
PRPB	**Parauapebas**	**167.78**	**138**	*eP*		PKPab	07 44 48.4	-12
RCBR	**Riachuelo**	**169.65**	**213**	*eP*		**PKPdf**	**07 43 52.4**	**-3.1**
TMAB	**Tom-Au,PA,Br**	**171.62**	**129**	*eP*		**PKPdf**	**07 43 53.6**	**-2.9**

JMA 28 07:26:25.4±0.0, 32°.6N±0°.1×130°.7E±0°.1, h4km, MV-0.2/6, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.11**	**110**	P	Pg	07 26 27.7	+0.1
JIU3				S	Sg	07 26 29.6	+0.4

*IDC **28** 07:43:59.1±3.9, 19°.76S×178°.64W, h664km±49km, mb3.0/7, mbtmp4.0/7, Error ellipse: s-maj=50.4km s-min=15.7km az=151.0*

ISC 28 07:43:53.6±0.9, 19°.9S±0°.2×178°.6W±0°.2, h602km, n12, σ0$88/14, mb3.7/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.16**	**256**	P	**P**	**07 51 12.1**	**+1.4**
	1.9nm,0.6s,baz=88,slow=8.0,SNR=20						
ASAR				PcP	**PcP**	07 52 41.8	-0.3
	0.6nm,0.6s,baz=100,slow=4.3,SNR=5.8						
ASAR				S	**S**	**07 56 59.9**	**-1.6**
	0.4nm,0.7s,baz=92,slow=16,SNR=4.0						
	1.9nm,0.6s						
WRA	**Warramunga Arr**	**44.18**	**261**	P	**P**	**07 51 11.8**	**+1.0**
	0.7nm,0.3s,baz=97,slow=7.7,SNR=16						
	0.7nm,0.3s						
MJAR	**Matsushiro Arr**	**69.38**	**324**	P	**P**	**07 54 02.6**	**+0.2**
	0.8nm,0.6s,baz=158,slow=6.3,SNR=4.1						
	0.8nm,0.6s						
PETK	**Petropavlovsk-**	**75.51**	**345**	P	**P**	**07 54 37.2**	**+0.1**
	2.2nm,0.7s,baz=148,slow=8.5,SNR=5.4						
	2.2nm,0.7s						
NVAR	**Mina Array Bea**	**80.91**	**44**	P	**P**	**07 55 07.3**	**+0.7**
	0.4nm,0.7s,baz=222,slow=9.1,SNR=3.7						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**87.80**	**13**	P	**P**	**07 55 38.4**	**-0.9**
	0.9nm,0.6s,baz=220,slow=5.1,SNR=7.5						
	0.9nm,0.6s						
TROLL	**Troll, Antarti**	**88.38**	**180**	P	**P**	**07 55 42.1**	**-0.1**
SNAA	**Sanae**	**88.67**	**179**	P	**P**	**07 55 44.5**	**+0.9**
VNA3	**Neumayer Olymp**	**88.82**	**176**	P	**P**	**07 55 43.6**	**-0.6**
PDAR	**Pinedale Array**	**88.85**	**43**	P	**P**	**07 55 44.7**	**-0.3**
	0.2nm,0.5s,baz=174,slow=3.5,SNR=3.3						
	0.2nm,0.5s						
VNA2	**Neumayer--Watz**	**89.26**	**177**	P	**P**	**07 55 45.9**	**-0.3**
	baz=192,slow=4.0						
VNA1	**Neumayer--Stat**	**89.49**	**177**	P	**P**	**07 55 46.8**	**-0.4**

*ISK **28** 07:48:56.6, 37°.12N×42°.36E, h5km, ML2.5/5*
*DDA **28** 07:48:59.4±0.0, 37°.18N×42°.39E, h7km±1km, ML2.2*

ISC 28 07:48:59.5±1.9, 37°.15N±0°.08×42°.40E±0°.04, h17km±15km, n9, σ0$70/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.97**	**84**	PG	**Pb**	**07 49 16.8**	**-1.2**
CUKT				SG	**Sb**	**07 49 31.8**	**+1.2**
HAKT	**HAKKARI**	**1.12**	**68**	P	**Pn**	**07 49 20.6**	**-0.1**
HAKT				S	**Sn**	**07 49 36.4**	**+0.6**
HAKT				*i* AML	AML	07 49 40.0	
	comp=E,40nm,0.2s						
BTMN	**Batman**	**1.17**	**310**	P	**Pb**	**07 49 21.6**	**+0.2**
BTMN				S	**Sg**	**07 49 37.2**	**-0.2**
BTMN				*i* AML	AML	07 49 38.0	
	comp=E,53nm,0.4s						
BTMN				*i* AML	AML	07 49 40.0	
	comp=Z,53nm,0.6s						
AKDM	**Akdamar-Van**	**1.27**	**21**	PN	**Pn**	**07 49 22.6**	**-0.1**
AKDM				SN	**Sg**	**07 49 41.4**	**+0.8**
MARD	**Mardin**	**1.31**	**278**	P	**Pb**	**07 49 24.0**	**+0.2**
MARD				S	**Sg**	**07 49 42.6**	**+0.8**
MARD				*i* AML	AML	07 49 43.0	
	comp=Z,32nm,0.3s						
MARD				*i* AML	AML	07 49 43.0	
	comp=E,88nm,0.3s						
MARD				*i* AML	AML	07 49 50.0	
	comp=N,78nm,0.7s						
SVAN	**Silvan-Diyarba**	**1.39**	**317**	PN	**Pn**	**07 49 23.9**	**-0.3**
SVAN				SN	**Sg**	**07 49 43.8**	**-0.6**
GURO	**Guroymak-BITLI**	**1.43**	**348**	PN	**Pn**	**07 49 24.9**	**-0.1**
MAZI	**Mazidag**	**1.59**	**282**	PN	**Pn**	**07 49 26.5**	**-0.6**
MUSM	**Mu-Merkez**	**1.73**	**336**	P	**Pn**	**07 49 28.4**	**-0.6**
MUSM				S	**Sb**	**07 49 52.0**	**-0.4**

WEL 28 07:53:20.0±0.5, 44°S±3°×17°3E±°, h3km±3km, M3.7/11, ML4.0/11, MLv3.7/11, Error ellipse: s-maj=0.0km s-min=0.0km az=176.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.20**	**153**	P	Pg	07 53 24.4	+0.4
RACZ	**Rakaia**	**0.35**	**234**	P	Pg	07 53 27.1	+0.4
RACZ				S	Sg	07 53 32.3	+1.0
AMCZ	**Amberley**	**0.36**	**15**	P	Pb	07 53 28.4	-0.7
OXZ	**Oxford**	**0.41**	**299**	P	Pg	07 53 28.0	+0.2
OXZ				S	Sg	07 53 33.8	+0.6
OKCZ	**Okains Bay**	**0.43**	**118**	P	Pg	07 53 29.3	+0.9
AKCZ	**Akaroa Harbour**	**0.45**	**142**	P	Pg	07 53 29.1	+0.5
WACZ	**Wakanui South**	**0.65**	**230**	P	Pg	07 53 33.0	+0.4
WACZ				S	Sg	07 53 42.1	+1.1
GVZ	**Greta Valley S**	**0.67**	**34**	P	Pb	07 53 34.2	-0.2
GVZ				S	Sb	07 53 44.6	+0.6
MHCZ	**Mount Hutt**	**0.70**	**269**	P	Pg	07 53 33.6	+0.2
LTZ	**Lake Taylor**	**0.77**	**346**	P	Pb	07 53 35.5	-0.5
ARCZ	**Arundel**	**1.07**	**246**	P	Pg	07 53 39.7	-0.8
RPZ	**Rata Peaks**	**1.09**	**259**	P	Pg	07 53 40.1	-0.7
INZ	**Inchbonnie**	**1.12**	**315**	P	Pg	07 53 41.0	-0.6
KHZ	**Kahutara**	**1.33**	**34**	P	Pn	07 53 43.8	-1.7
TMZ	**Timaru**	**1.40**	**231**	P	Pn	07 53 44.2	-2.2
THZ	**Tophouse**	**1.78**	**9**	P	Pn	07 53 50.2	-1.5
DSZ	**Denniston Nort**	**1.85**	**343**	P	Pn	07 53 51.5	-1.3
LBZ	**Lake Benmore**	**1.90**	**242**	P	Pn	07 53 52.4	-0.9
FOZ	**Fox Glacier**	**1.97**	**269**	P	Pn	07 53 54.1	-0.2
ODZ	**Otahua Downs**	**2.03**	**221**	P	Pn	07 53 52.9	-2.3
BSWZ	**Blackbirch Sta**	**2.06**	**29**	P	Pn	07 53 54.3	-1.2
MRNZ	**Matariki Terra**	**2.13**	**5**	P	Pn	07 53 55.7	-0.8
TUWZ	**Tuamarina**	**2.34**	**27**	P	Pn	07 53 58.4	-0.9
NNZ	**Nelson**	**2.39**	**16**	P	Pn	07 53 59.0	-1.0
TKNZ	**Takaka Hill**	**2.51**	**8**	P	Pn	07 54 01.1	-0.6
TCW	**Tory Channel**	**2.65**	**30**	P	Pn	07 54 02.1	-1.5
QRZ	**Quartz Range**	**2.70**	**0**	P	Pn	07 54 02.6	-1.7
HHSZ	**Highcliff Hill**	**2.73**	**210**	P	Pn	07 54 04.0	-0.8
JCZ	**Jackson Bay**	**2.76**	**257**	P	Pn	07 54 03.9	-1.4
PLWZ	**Palliser**	**2.81**	**47**	P	Pn	07 54 03.7	-2.1
WKZ	**Wanaka**	**2.84**	**241**	P	Pn	07 54 05.3	-1.0
EAZ	**Earnscleugh**	**2.87**	**232**	P	Pn	07 54 04.5	-2.2
DUWZ	**D'Urville Isla**	**2.91**	**21**	P	Pn	07 54 08.3	+1.0
CAW	**Cannon Point**	**3.06**	**39**	P	Pn	07 54 06.7	-2.6
TUZ	**Tuapeka**	**3.19**	**219**	P	Pn	07 54 09.1	-1.9
MTW	**Mount Morrison**	**3.23**	**44**	P	Pn	07 54 09.1	-2.6
OGWZ	**Otaki Gorge**	**3.34**	**37**	P	Pn	07 54 11.1	-2.1
MSZ	**Milford Sound**	**3.51**	**249**	P	Pn	07 54 15.1	-0.3
MRZ	**Mangatainoka R**	**3.65**	**39**	P	Pn	07 54 14.5	-2.9
MLZ	**Mavora Lakes**	**3.66**	**238**	P	Pn	07 54 15.4	-2.1
SYZ	**Scrubby Hill**	**3.85**	**217**	P	Pn	07 54 18.6	-1.5
BFZ	**Birch Farm**	**3.96**	**46**	P	Pn	07 54 19.8	-2.0
WHZ	**Wether Hill Ro**	**4.03**	**232**	P	Pn	07 54 20.3	-2.4
WAZ	**Wanganui**	**4.19**	**27**	P	Pn	07 54 27.0	+2.2
NMEZ	**Namu Road**	**4.23**	**14**	P	Pn	07 54 26.2	+0.8
TSZ	**Takapari Road**	**4.31**	**38**	P	Pn	07 54 27.2	+0.7
PREZ	**Palmer Road**	**4.35**	**17**	P	Pn	07 54 27.5	+0.4
NBEZ	**Newall Road No**	**4.37**	**14**	P	Pn	07 54 27.7	+0.4
KHEZ	**Kahui Hut**	**4.37**	**15**	P	Pn	07 54 27.8	+0.4
NEZ	**North Egmont**	**4.41**	**16**	P	Pn	07 54 27.8	-0.1
PKE	**Pukeiti**	**4.46**	**15**	P	Pn	07 54 29.1	+0.5
PRHZ	**Porangahau**	**4.47**	**45**	P	Pn	07 54 27.7	-1.0
DREZ	**Durham Road**	**4.51**	**17**	P	Pn	07 54 30.1	+0.9
WNVZ	**Wahianoa**	**4.79**	**30**	P	Pn	07 54 32.6	-0.5
TUVZ	**Tukino**	**4.86**	**30**	P	Pn	07 54 33.8	-0.3
OTVZ	**Oturere**	**4.96**	**30**	P	Pn	07 54 35.0	-0.5
NNVZ	**North Ngauruho**	**4.96**	**29**	P	Pn	07 54 36.1	+0.5
HIZ	**Hauiti**	**5.31**	**20**	P	Pn	07 54 39.7	-0.5
TLZ	**Tolley Road**	**5.67**	**25**	P	Pn	07 54 44.9	-0.3
MTHZ	**Maungataniwha**	**5.69**	**36**	P	Pn	07 54 44.2	-1.3
MKAZ	**Moumakai**	**6.72**	**18**	P	Pn	07 54 58.5	-1.1

*SKHL **28** 07:56:25.8±0.1, 42°.90N×145°.80E, h37km±3km, mb3.8/3*
*JMA **28** 07:56:25.8±0.1, 43°.0N±0°.5×145°.8E±0°.6, h48km, MV2.5/34, OFF NEMURO PENINSULA*

ISC 28 07:56:26.1±2.3, 43°.0N±0°.1×145°.7E±0°.08, h43km±14km, n13, σ0$47/25, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.41**	**357**	*eP*	**Pn**	**07 56 35.8**	**0.0**
NEM2				*eS*	**Sn**	**07 56 42.9**	**+0.2**
NMR	**Nemuro--Hokkai**	**0.42**	**356**	*eP*	**Pn**	**07 56 35.8**	**-0.1**
NMR				AMB	AMB	07 56 36.1	
	20nm,0.2s						
NMR				*eS*	**Sn**	**07 56 42.9**	**0.0**
NMR				A	A	07 56 43.3	
	510nm,0.2s						
NMR				A	A	07 56 43.3	
	140nm,0.2s						
JKHN	**Kushirohamanak**	**0.47**	**287**	*i* P	**Pn**	**07 56 36.5**	**0.0**
JKHN				*eS*	**Sn**	**07 56 44.3**	**+0.5**
AKK	**Akkeshi**	**0.68**	**276**	*eP*	**Pn**	**07 56 38.9**	**-0.5**
AKK				*eS*	**Sn**	**07 56 48.6**	**-0.3**
JAK	**Akkeshi**	**0.79**	**274**	P	**Pn**	**07 56 40.6**	**-0.2**
JAK				*eS*	**Sn**	**07 56 51.5**	**+0.1**
JNK	**Nakash**	**0.99**	**310**	*eP*	**Pn**	**07 56 43.1**	**-0.5**
JNK				*eS*	**Sn**	**07 56 55.6**	**-0.8**
JNSB	**Nemuroshibetsu**	**0.99**	**326**	P	**Pn**	**07 56 43.5**	**-0.1**
JNSB				*eS*	**Sn**	**07 56 56.2**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**1.08**	**3**	*eP*	**Pn**	**07 56 45.0**	**+0.2**
YUK				AMB	AMB	07 56 45.9	
	20nm,0.2s						
YUK				*eS*	**Sn**	**07 56 58.0**	**-0.7**
YUK				A	A	07 56 59.7	
	50nm,0.4s						
YUK				A	A	07 56 59.7	
	310nm,0.4s						
JRA	**Rausu**	**1.09**	**335**	*eP*	**Pn**	**07 56 44.8**	**-0.1**
JRA				*eS*	**Sn**	**07 56 58.6**	**-0.2**
JOB	**Onbets**	**1.42**	**269**	*eP*	**Pn**	**07 56 49.4**	**0.0**
JOB				*eS*	**Sn**	**07 57 06.8**	**-0.1**
JAR	**Ashorobuto**	**1.50**	**284**	*eP*	**Pn**	**07 56 50.7**	**+0.1**
JAR				*eS*	**Sn**	**07 57 08.9**	**0.0**
JTKR	**Abashiri--Toko**	**1.70**	**308**	*eP*	**Pn**	**07 56 53.7**	**+0.5**
JTKR				*eS*	**Sn**	**07 57 15.1**	**+1.5**
KUR	**Kuril'sk**	**2.74**	**33**	*eP*	**Pn**	**07 57 07.6**	**+0.1**
KUR				AMB	AMB	07 57 09.9	
	40nm,0.6s						

*IDC **28** 07:58:11.6±1.0, 2°.75S×138°.54E, h0km, mb4.0/4, mbtmp4.1/6, ML4.1/2, Error ellipse: s-maj=51.5km s-min=21.7km az=102.0*
*DJA **28** 07:58:17.9±0.4, 3°S±6°×13°9E±°, h58km±10km, M4.4/6, mB4.7/1, mb4.7/6, MLv4.2/6, Mw(mB)3.9/1*
*NEIC **28** 07:58:18.2±1.1, 3°.0S±0°.2×138°.5E±0°.1, h46km±17km, mb4.1/12, Error ellipse: s-maj=27.0km s-min=15.7km az=191.0*

ISC 28 07:58:18.4±0.7, 2°.8S±0°.07×138°.54E±0°.07, h62km, n39, σ1$81/41, mb4.2/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.89**	**11**	P	**Pn**	**07 58 31.9**	**-3.2**
GENI	**Genyem**	**1.65**	**81**	P	**Pn**	**07 58 45.0**	**-0.1**
SRPI	**Serui, Papua**	**2.50**	**293**	P	**Pn**	**07 58 55.3**	**-1.5**
BAKI	**Biak**	**2.95**	**304**	P	**Pn**	**07 59 00.2**	**-2.6**
FAKI	**Fak Fak**	**6.29**	**269**	Pn	**Pn**	**07 59 47.3**	**-1.2**
FAKI	**Fak Fak**	**6.29**	**269**	P	**Pn**	**07 59 49.2**	**+0.6**
	0.1nm23nm,1.1s						
SWI	**Sorong**	**7.55**	**285**	P	**Pn**	**08 00 06.4**	**+0.6**
	0.2nm59nm,0.7s						
KDU	**Kakadu**	**11.46**	**211**	P	**Pn**	**08 00 58.9**	**-0.4**
COEN	**Coen**	**11.93**	**158**	Pn	**Pn**	**08 01 04.7**	**-1.1**
COEN	**Coen**	**11.93**	**158**	P	**Pn**	**08 01 05.9**	**+0.1**
MTN	**Manton Dam**	**12.33**	**216**	Pn	**Pn**	**08 01 09.4**	**-1.9**
MTN	**Manton Dam**	**12.33**	**216**	P	**Pn**	**08 01 10.6**	**-0.6**
KNRA	**Kununurra**	**15.96**	**217**	Pn	**Pn**	**08 01 58.0**	**-1.2**
KNRA				IAmb	IAmb	08 02 04.1	
	comp=Z,13nm,0.8s						
KNRA	**Kununurra**	**15.96**	**217**	P	**Pn**	**08 01 59.2**	**0.0**
MTSU	**Mount Surprise**	**16.20**	**160**	P	**P**	**08 02 04.8**	**+0.5**
WB0	**Warramunga Arr**	**17.28**	**193**	P	**Pn**	**08 02 14.8**	**-0.8**
WB0				IAmb	IAmb	08 02 21.6	
	comp=Z,14nm,0.9s						
WR0	**Warramunga Arr**	**17.43**	**193**	P	**Pn**	**08 02 16.5**	**-1.0**
WRAB	**Tennant Creek**	**17.45**	**193**	P	**Pn**	**08 02 17.1**	**-0.6**
WRAB				IAmb	IAmb	08 02 23.6	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**17.45**	**193**	P	**Pn**	**08 02 17.6**	**-0.1**
WB2	**Warramunga Arr**	**17.46**	**193**	P	**Pn**	**08 02 16.1**	**-1.7**
WB2				IAmb	IAmb	08 02 23.8	
	comp=Z,13nm,0.7s						
WRA	**Warramunga Arr**	**17.46**	**193**	P	**Pn**	**08 02 18.1**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=16,slow=12,SNR=31						
WRA				S	Sn	08 05 21.0	-11
	comp=Z,2.2nm,0.8s,baz=4.5,slow=23,SNR=4.9						
	comp=Z,2.7nm,0.4s						
WRA	**Warramunga Arr**	**17.46**	**193**	P	**Pn**	**08 02 15.8**	**-2.1**
QIS	**Mount Isa**	**17.61**	**177**	P	**Pn**	**08 02 20.7**	**+1.0**
CTA	**Charters Tower**	**18.70**	**157**	P	**Pn**	**08 02 36.8**	**+3.9**
	comp=Z,5.7nm,0.9s,baz=321,slow=8.3,SNR=5.5						
CTAO	**Charters Tower**	**18.70**	**157**	P	**P**	**08 02 30.7**	**-1.1**
CTAO				IAmb	IAmb	08 02 51.7	
	comp=Z,13nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.73**	**219**	P	**P**	**08 02 43.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=51,slow=13,SNR=4.7						
FITZ				S	**S**	**08 06 15.0**	**-7.4**
	comp=Z,2.4nm,0.7s,baz=198,slow=13,SNR=2.7						
	comp=Z,6.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.73**	**219**	P	**P**	**08 02 42.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.73**	**219**	P	**P**	**08 02 44.5**	**+1.4**
AS31	**Alice Springs**	**21.16**	**192**	P	**P**	**08 02 58.0**	**-0.6**
AS31				IAmb	IAmb	08 03 05.0	
	comp=Z,9.5nm,0.8s						
ASAR	**Alice Springs**	**21.16**	**192**	P	**P**	**08 02 59.6**	**+1.0**
	comp=Z,16nm,0.8s,baz=20,slow=9.7,SNR=36						
ASAR				S	**S**	**08 06 52.1**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=12,slow=25,SNR=6.5						
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**21.16**	**192**	P	**P**	**08 02 58.1**	**-0.5**
WRKA	**Warakurna**	**24.15**	**203**	P	**P**	**08 03 29.0**	**+0.1**
EIDS	**Eidsvold**	**25.42**	**153**	P	**P**	**08 03 40.1**	**-0.3**
PETK	**Petropavlovsk-**	**58.05**	**13**	P	**P**	**08 08 06.6**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=164,slow=7.0,SNR=4.7						
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**69.81**	**323**	P	**P**	**08 09 23.7**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=112,slow=7.9,SNR=7.9						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**75.64**	**175**	P	**P**	**08 09 57.3**	**+0.9**
ILAR	**Eielson Array**	**86.04**	**24**	P	**P**	**08 10 51.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=270,slow=5.2,SNR=6.2						
	comp=Z,0.5nm,0.7s						
QSPA	**South Pole Qui**	**87.08**	**180**	P	**P**	**08 10 58.9**	**+1.6**
LPAZ	**La Paz**	**147.49**	**127**	PKPbc	**PKiKP**	**08 17 59.9**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=222,slow=3.1,SNR=7.3						

*ANF **28** 08:10:58.4±0.7, 32°.27N×115°.26W, h15km, ML2.6/12, Error ellipse: s-maj=6.1km s-min=3.1km az=174.0*
*ECX **28** 08:10:59.0±0.5, 32°.29N×115°.28W, h13km±2km, MD2.7, ML2.9*
*NEIC **28** 08:10:59.4±2.6, 32°.26N±0°.03×115°.29W±0°.01, h10km±2km, Error ellipse: s-maj=4.8km s-min=3.0km az=344.0*
*PAS **28** 08:11:00.1±2.1, 32°.26N±0°.01×115°.29W±0°.02, h13km±6km, Error ellipse: s-maj=2.2km s-min=1.1km az=56.0*
*MEX **28** 08:11:01.3±0.3, 32°.35N×115°.15W, h22km±8km, MD2.7*

ISC 28 08:10:59.9±0.9, 32°.27N±0°.02×115°.30W±0°.02, h24km±5km, n74, σ1$05/104, 10C-7D, California-Baja California border region

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

ECBX	**El Chinero**	**0.82**	**165**	*e*P	**Pb**	**08 11 15.0**	**-0.5**
ECBX				*e*S	**Sn**	**08 11 27.1**	**-0.2**
ECBX				⇑*e*		08 11 27.7	
ECBX				IAML		08 11 27.7	
	comp=E,290nm,0.3s						
ECBX				IAML		08 11 28.0	
	comp=N,257nm,0.3s						
ECBX				*e*		08 11 28.0	
CRR	**Carrizo Plain**	**0.84**	**317**		**Pb**	**08 11 15.6**	**-0.2**
CRR					**Sb**	**08 11 27.2**	**+0.5**
CRR	**Carrizo Plain**	**0.84**	**317**	*e*P	**Pb**	**08 11 14.7**	**-1.1**
GLA	**Glamis**	**0.88**	**27**		**Pb**	**08 11 16.2**	**-0.3**
GLA					**Sb**	**08 11 27.8**	**0.0**
GLA	**Glamis**	**0.88**	**27**	Pg	**Pb**	**08 11 15.3**	**-1.1**
GLA	**Glamis**	**0.88**	**27**	IAML		08 11 28.5	
	comp=E,183nm,0.5s						
GLA				IAML		08 11 29.3	
	comp=N,231nm,0.4s						
GLA	**Glamis**	**0.88**	**27**	P	**Pb**	**08 11 15.4**	**-1.1**
	baz=206,SNR=11						
GLA				S	**Sb**	**08 11 26.8**	**-0.9**
	baz=206						
MONP2	**Monument Peak**	**1.14**	**303**	P	**Pn**	**08 11 19.9**	**-0.7**
	baz=123,SNR=31						
MONP2				S	**Sn**	**08 11 35.8**	**+0.3**
	baz=123						
MONP2	**Monument Peak**	**1.14**	**303**	⇓*i*P	**Pb**	**08 11 21.2**	**+0.2**
TKX	**Tecate**	**1.15**	**285**		**Pn**	**08 11 20.6**	**+0.1**
CBX	**Cerro Bola**	**1.16**	**273**		**Pn**	**08 11 21.0**	**+0.2**
CBX				IAML		08 11 40.3	
	comp=E,76nm,0.4s						
CBX				IAML		08 11 42.0	
	comp=N,91nm,0.5s						
CBX	**Cerro Bola**	**1.16**	**273**	*e*P	**Pn**	**08 11 20.9**	**+0.2**
TJIG	**Tijuana**	**1.18**	**278**	*i* P	**Pn**	**08 11 20.9**	**0.0**
TJIG				*i* S	**Sb**	**08 11 36.8**	**+0.3**
SPIG	**San Pedro Mart**	**1.23**	**187**	*i* P	**Pn**	**08 11 21.9**	**0.0**
SPIG				*i* S	**Sb**	**08 11 37.9**	**-0.3**
SPIG	**San Pedro Mart**	**1.23**	**187**	*e*P	**Pn**	**08 11 21.9**	**0.0**
CCX	**Cicese**	**1.23**	**251**		**Pb**	**08 11 22.0**	**-0.4**
BAR	**Barrett**	**1.23**	**290**		**Pn**	**08 11 21.9**	**+0.2**
BAR	**Barrett**	**1.23**	**290**	*e*P	**Pn**	**08 11 21.6**	**0.0**
BAR				*e*S	**Sb**	**08 11 38.5**	**+0.5**
SFX	**San Felipe**	**1.28**	**163**		**Pn**	**08 11 22.9**	**+0.5**
SFX				IAML		08 11 44.9	
	comp=E,53nm,0.6s						
113A	**Mohawk Valley,**	**1.38**	**68**		**Pn**	**08 11 23.4**	**-0.3**
BC3	**Big Chuckawall**	**1.39**	**355**	P	**Pn**	**08 11 23.1**	**-0.8**
	baz=174						
BLYC	**Blythe**	**1.61**	**23**		**Pn**	**08 11 26.8**	**-0.1**
BLYC				IAML		08 11 58.1	
	comp=E,33nm,0.7s						
109C	**Camp Elliot, M**	**1.65**	**293**		**Pn**	**08 11 25.4**	**-2.0**
109C	**Camp Elliot, M**	**1.65**	**293**	P	**Pn**	**08 11 27.5**	**+0.2**
	baz=112,SNR=13						
109C				S	**Sb**	**08 11 50.4**	**+0.5**
	baz=112						
PMD	**Palm Desert**	**1.65**	**327**		**Pn**	**08 11 26.4**	**-1.0**
PMD				IAML		08 11 52.4	
	comp=E,30nm,0.5s						
PMD				IAML		08 11 59.4	
	comp=N,29nm,0.9s						
PFO	**Pinyon Flats O**	**1.66**	**324**		**Pn**	**08 11 26.5**	**-1.1**
PFO	**Pinyon Flats O**	**1.66**	**324**	P	**Pn**	**08 11 26.9**	**-0.7**
	baz=144						
PFO				Sb	**Sb**	**08 11 51.7**	**+1.3**
	baz=144						
IRM	**Iron Mountain**	**1.89**	**4**	Pg	**Pb**	**08 11 35.1**	**+1.3**
	baz=184						
MURC	**Murrieta**	**2.08**	**310**	Pg	**Pb**	**08 11 38.4**	**+1.5**
	baz=129						
MURC				Sb	**Sb**	**08 12 04.4**	**+2.1**
	baz=129						
214A	**Organ Pipe Nat**	**2.13**	**98**		**Pn**	**08 11 34.0**	**-0.1**
214A				IAML		08 12 29.7	
	comp=E,18nm,0.8s						
ELS	**Elsinore Mount**	**2.26**	**308**		**Pn**	**08 11 35.4**	**-0.4**
ELS				IAML		08 12 10.1	
	comp=N,23nm,0.5s						
ELS				IAML		08 12 11.2	
	comp=E,24nm,0.4s						
BBRC	**Big Bear Solar**	**2.41**	**326**	Sb	**Sb**	**08 12 14.9**	**+2.8**
	baz=145						
Y14A	**Wickenburg**	**2.54**	**48**		**Pn**	**08 11 37.4**	**-2.4**
BFSC	**Mount Baldy Ra**	**2.79**	**315**	Sb	**Sb**	**08 12 25.2**	**+2.3**
	baz=134						
CIS	**Catalina Islan**	**2.86**	**294**	Sb	**Sb**	**08 12 27.0**	**+2.2**
	baz=113						
V12A	**Nelson**	**3.47**	**6**		**Pn**	**08 11 51.2**	**-1.4**
CCAC	**Calif City Air**	**3.66**	**322**	Pn	**Pn**	**08 11 54.3**	**-0.9**

IDC 28 08:36:24.2±2.5, 5°02'N×127°17'E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=198.6km s-min=28.5km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.79**	**164**	P	P	08 41 56.5	-0.6
	1.1nm,0.9s,baz=345,slow=10.0,SNR=5.9 1.1nm,0.9s						
ASAR	**Alice Springs**	**29.26**	**167**	P	P	08 42 27.8	-0.4
	0.2nm,0.6s,baz=0.6,slow=8.3,SNR=2.6 0.2nm,0.6s						
STKA	**Stephens Creek**	**39.18**	**160**	P	P	08 43 55.0	+0.9
	0.7nm,0.6s,baz=343,slow=14,SNR=1.2 0.7nm,0.6s						
MKAR	**Makanchi Array**	**56.76**	**325**	P	P	08 46 10.0	-0.1
	0.1nm,0.5s,baz=123,slow=7.9,SNR=2.4 0.1nm,0.5s						

*MAN **28** 08:45:09, 5°46N×126°76'E, h55km, Ms3.1*
*IDC **28** 08:45:12.7±1.8, 5°50N×126°34E, h122km±15km, mb3.4/7, mbtmp3.8/7, Error ellipse: s-maj=119.3km s-min=14.9km az=70.0*

ISC 28 08:45:10.4±1.3, 5°47N±0°08×126°6E±0°1, h98km±12km, n15, σ1§42/23, mb3.5/7, 1C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.10**	**305**	⇓*e*P	**Pn**	**08 45 31.4**	**-0.4**
DDMP				*e*S	**Sn**	**08 45 47.6**	**-0.3**
MATI	**Mati**	**1.51**	**346**	⇓*e*P	**Pn**	**08 45 35.7**	**-1.0**
MATI				*e*S	**Sn**	**08 45 56.5**	**-0.2**
GSPH	**General Santos**	**1.77**	**290**	⇑*i*P	**Pn**	**08 45 39.1**	**-1.0**
GSPH				*i* S	**Sn**	**08 46 01.3**	**-1.4**
DAV	**Davao City (W)**	**1.90**	**327**	P	**Pn**	**08 45 43.0**	**+1.4**
	128nm,0.4s,baz=200,slow=3.8,SNR=2.0						
DAV				S	**Sn**	**08 46 06.3**	**+0.9**
	185nm,0.3s,baz=135,slow=20,SNR=7.9						
KCP	**Kidapawan**	**2.16**	**315**	⇓*e*P	**Pn**	**08 45 44.8**	**-0.2**
KCP				*i* S	**Sn**	**08 46 12.4**	**+0.9**
SKMP	**Bagumbayan, Su**	**2.31**	**297**	⇓*e*P	**Pn**	**08 45 48.0**	**+1.1**
SKMP				*e*S	**Sn**	**08 46 18.4**	**+3.3**
BUKP	**Musuan**	**2.85**	**327**	⇓*e*P	**Pn**	**08 45 54.9**	**+0.7**
BUKP				*e*S	**Sn**	**08 46 29.3**	**+1.4**
MSLP	**Maasin**	**4.95**	**340**	⇓*e*P	**Pn**	**08 46 24.9**	**+2.4**
FITZ	**Fitzroy Crossi**	**23.43**	**182**	P	**P**	**08 50 11.3**	**+0.3**
	1.2nm,0.6s,baz=353,slow=11,SNR=2.2 1.2nm,0.6s						
WRA	**Warramunga Arr**	**26.37**	**163**	P	**P**	**08 50 38.3**	**+0.7**
	1.1nm,0.7s,baz=342,slow=10,SNR=41 1.1nm,0.7s						
ASAR	**Alice Springs**	**29.82**	**166**	P	**P**	**08 51 09.5**	**+1.2**
	0.5nm,0.4s,baz=339,slow=7.3,SNR=16						
ASAR				PcP	**PcP**	**08 54 09.6**	**0.0**
	0.4nm,0.7s,baz=348,slow=2.2,SNR=2.0 0.5nm,0.4s						
STKA	**Stephens Creek**	**39.79**	**160**	P	**P**	**08 52 35.0**	**+1.2**
	1.8nm,0.8s,baz=322,slow=11,SNR=2.1 1.8nm,0.8s						
SONM	**Songino Array**	**45.63**	**341**	P	**P**	**08 53 19.8**	**-1.3**
	0.4nm,0.4s,baz=152,slow=7.6,SNR=2.6 0.4nm,0.4s						
MKAR	**Makanchi Array**	**56.08**	**325**	P	**P**	**08 54 37.9**	**-1.5**
	0.1nm,0.3s,baz=123,slow=6.7,SNR=2.5 0.1nm,0.3s						
FINES	**FINESS Array B**	**90.26**	**332**	P	**P**	**08 57 58.2**	**-1.6**
	2.0nm,0.9s,baz=64,slow=6.3,SNR=4.4 2.0nm,0.9s						

ROM 28 08:49:32.5±0.1, 42°757N±0°004×13°189E±0°006, h9km, ML1.9/6, 5C-4D, Error ellipse: s-maj=0.5km

s-min=0.4km az=303.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**324**	P	Pg	08 49 35.4	+0.4
NRCA				S	Sg	08 49 37.1	+0.3
MC2	**Monte Cornacci**	**0.16**	**0**	P	Pg	08 49 36.5	+0.5
MC2				S	Sg	08 49 39.3	+0.8
MMO1	**Montemonaco**	**0.17**	**35**	P	Pg	08 49 36.8	+0.6
MMO1				S	Sg	08 49 40.1	+1.2
LNSS	**Leonessa**	**0.19**	**216**	P	Pg	08 49 37.1	+0.7
LNSS				S	Sg	08 49 40.6	+1.4
LNSS				AML	AML		
	comp=E,790µm,0.2s						
LNSS				AML	AML		
	comp=N,897µm,0.3s						
LNSS				AML	AML		
	comp=E,790µm,0.2s						
LNSS				AML	AML		
	comp=N,895µm,0.3s						
LNSS				AML	AML		
	comp=N,895µm,0.3s						
LNSS				AML	AML		
	comp=E,790µm,0.2s						
LNSS	**Leonessa**	**0.19**	**216**	S	Sg	08 49 40.0	+0.8
T1243	**Rocca Santa Ma**	**0.20**	**107**	P	Pg	08 49 36.6	-0.1
T1243				S	Sg	08 49 40.9	+1.4
T1243				AML	AML		
	comp=E,860µm,0.4s						
T1243				AML	AML		
	comp=N,1236µm,0.2s						
T1243				AML	AML		
	comp=E,852µm,0.4s						
T1243				AML	AML		
	comp=N,1199µm,0.2s						
T1243				AML	AML		
	comp=E,861µm,0.4s						
T1243				AML	AML		
	comp=N,1238µm,0.2s						
T1243				AML	AML		
	comp=E,852µm,0.4s						
T1243				AML	AML		
	comp=N,1204µm,0.2s						
T1243				AML	AML		
	comp=N,1204µm,0.2s						
T1243				AML	AML		
	comp=N,1238µm,0.2s						
T1243				AML	AML		
	comp=E,852µm,0.4s						
T1243				AML	AML		
	comp=E,861µm,0.4s						
T1243	**Rocca Santa Ma**	**0.20**	**107**	P	Pg	08 49 37.5	+0.8
T1243				S	Sg	08 49 40.9	+1.3
T1243				AML	AML		
	comp=E,861µm,0.4s						
T1243				AML	AML		
	comp=E,852µm,0.4s						
T1243				AML	AML		
	comp=E,861µm,0.4s						
T1243				AML	AML		
	comp=N,1204µm,0.2s						
T1243				AML	AML		
	comp=N,1238µm,0.2s						
T1243				AML	AML		
	comp=E,852µm,0.4s						
RM33	**Pellescritta (**	**0.25**	**176**	P	Pg	08 49 38.2	+0.7
RM33				S	Sg	08 49 42.7	+1.8
RM33	**Pellescritta (**	**0.25**	**176**	P	Pg	08 49 38.0	+0.4
RM33				S	Sg	08 49 42.7	+1.8
FDMO	**Fiordimonte**	**0.29**	**345**	⇑P	Pg	08 49 38.4	+0.1
FDMO				S	Sg	08 49 43.0	+0.8
FDMO				AML	AML		
	comp=N,158µm,0.3s						
FDMO				AML	AML		
	comp=E,160µm,0.2s						
FDMO				AML	AML		
	comp=N,158µm,0.3s						
TERO	**Teramo**	**0.33**	**114**	P	Pg	08 49 39.7	+0.6
TERO				S	Sb	08 49 45.2	-0.9
TERO				AML	AML		
	comp=E,233µm,0.1s						
TERO				AML	AML		
	comp=N,290µm,0.8s						
TERO				AML	AML		
	comp=E,233µm,0.1s						
TERO				AML	AML		
	comp=N,290µm,0.8s						
TERO				AML	AML		
	comp=E,233µm,0.1s						
TERO				AML	AML		
	comp=N,290µm,0.8s						
TERO	**Teramo**	**0.33**	**114**	⇓P	Pg	08 49 39.7	+0.6
TERO				S	Sb	08 49 44.9	-1.2
TERO				AML	AML		
	comp=E,232µm,0.1s						
TERO				AML	AML		
	comp=N,290µm,0.8s						
TERO				AML	AML		
	comp=E,233µm,0.1s						
CSP1	**Cessapalombo**	**0.34**	**2**	⇑P	Pg	08 49 39.4	+0.2
CSP1				S	Sg	08 49 44.5	+0.9
ARRO	**Arrone**	**0.36**	**241**	S	Sg	08 49 40.0	-4.3
ARRO	**Arrone**	**0.36**	**241**	P	Pg	08 49 39.5	-0.1
ARRO				S	Sg	08 49 44.1	-0.2
GIGS	**Gran Sasso**	**0.42**	**137**	P	Pg	08 49 41.2	+0.6
GIGS				S	Sb	08 49 47.9	-0.5
GIGS	**Gran Sasso**	**0.42**	**137**	⇑P	Pg	08 49 41.3	+0.6
GIGS				AML	AML		
	comp=N,22µm,1.0s						
GIGS				AML	AML		
	comp=N,22µm,1.0s						
GIGS				AML	AML		
	comp=E,25µm,0.3s						
CESX	**Cesi**	**0.47**	**252**	P	Pg	08 49 41.3	-0.4
CESX				S	Sg	08 49 48.1	+0.3
CESX				AML	AML		
	comp=N,71µm,0.3s						
CESX				AML	AML		
	comp=E,71µm,0.5s						
ASSB	**Assisi San Ben**	**0.48**	**306**	AML	AML		
	comp=E,92µm,1.5s						
ASSB				AML	AML		
	comp=N,78µm,1.4s						
FIAM	**Fiamignano**	**0.49**	**186**	P	Pg	08 49 42.2	+0.2
FIAM				S	Sb	08 49 49.7	-0.9
FIAM	**Fiamignano**	**0.49**	**186**	P	Pg	08 49 42.4	+0.4
FIAM				S	Sg	08 49 49.4	+0.9
SNTG	**Esanatoglia**	**0.53**	**340**	⇓P	Pg	08 49 42.8	0.0
SNTG				AML	AML		
	comp=E,39µm,0.8s						
SNTG				AML	AML		
	comp=N,43µm,0.3s						
SNTG				AML	AML		
	comp=N,43µm,0.3s						
SNTG				AML	AML		
	comp=E,39µm,0.8s						
FAGN	**Fagnano**	**0.57**	**149**	S	Sg	08 49 45.0	-6.0
EL6	**Elcito**	**0.58**	**354**	⇓P	Pg	08 49 43.5	-0.2
EL6				S	Sb	08 49 53.0	-0.1
T0110	**Collepietro**	**0.69**	**140**	P	Pb	08 49 46.2	-0.4
ARVD	**Arcevia**	**0.76**	**346**	S	Sn	08 49 60.0	-1.1
NARO	**Abbazia di Nar**	**0.96**	**333**	P	Pg	08 49 51.0	0.0
PARC	**Parchiule**	**1.13**	**322**	S	Sg	08 50 06.0	-2.9
LATB	**Latina**	**1.27**	**188**	S	Sb	08 50 10.0	-3.0
ZCCA	**Zocca**	**2.26**	**315**	S	Sb	08 50 42.0	+0.4
MAIM	**Mastiano**	**2.28**	**301**	S	Sb	08 50 43.0	+0.9
OPPE	**Oppeano**	**2.94**	**331**	⇑P	Pn	08 50 21.8	+2.5
SCHR	**S. Chirico Rap**	**3.35**	**139**	⇓P	Pn	08 50 18.8	-6.2
LEOD	**Capriano del C**	**3.49**	**322**	P	Pb	08 50 34.7	+0.4
RNCA	**Ronca, Sant'Ol**	**3.52**	**301**	S	Sb	08 51 15.0	-2.8
ACOM	**Acomizza, Ital**	**3.80**	**3**	P	Pn	08 50 33.8	+2.5
ROTM	**Rocchetta Tana**	**4.08**	**303**	S	Sb	08 51 34.0	+0.3
BURY	**Giardini Botan**	**4.24**	**286**	S	Sn	08 51 16.0	-11
MUGIO	**Muggio**	**4.34**	**318**	S	Sg	08 51 47.0	-4.9
VARE	**Varese**	**4.44**	**316**	P	Pn	08 50 38.2	-1.9
MSRU	**Castanea**	**4.83**	**158**	S	Sb	08 51 49.0	-6.3
ALJA	**Alia**	**5.02**	**175**	S	Sn	08 51 31.0	-15
ALJA				S	Sb	08 51 55.0	-6.0
CLTB	**Caltabellotta**	**5.17**	**180**	⇑P	Pn	08 50 43.8	-6.3
VLO	**Vlora**	**5.25**	**114**	S	Sn	08 51 49.0	-2.7

*ROM **28** 09:18:18.0±0.1, 42°627N±0°004×13°295E±0°006, h8km, ML3.3/50, Error ellipse: s-maj=0.5km s-min=0.3km az=65.0*

*LDG **28** 09:18:17.3±0.1, 42°62N×13°23E, h2km, Md3.3/2, Ml2.8/17, Error ellipse: s-maj=2.6km s-min=1.8km az=43.0*
*PRU **28** 09:18:17.6±0.0, 42°61N×13°39E, h0km*
*BEO **28** 09:18:20.5±0.9, 42°66N×13°42E, h0km, ML3.4/5*
*PDG **28** 09:18:21.9±0.1, 42°51N×13°61E, h10km±11km, ML3.5/13, Error ellipse: s-maj=1.6km s-min=43.0km az=0.0*

ISC 28 09:18:19.1±0.8, 42°62N±0°01×13°31E±0°02, h9km±5km, n185, σ1§27/235, 41C-30D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.11**	**139**	P	**Pg**	**09 18 21.4**	**-0.5**
CAMP				S	**Sg**	**09 18 23.5**	**-0.3**
CAMP				AML	AML		
	comp=N,20750µm,0.3s						
CAMP				AML	AML		
	comp=E,18550µm,0.3s						
T1243	**Rocca Santa Ma**	**0.13**	**52**	⇑P	**Pg**	**09 18 21.4**	**-0.8**
T1243				S	**Sg**	**09 18 23.9**	**-0.3**
T1243				AML	AML		
	comp=N,76500µm,0.3s						
T1243				AML	AML		
	comp=E,77350µm,0.3s						
T1243				AML	AML		
	comp=E,77500µm,0.3s						
T1243				AML	AML		
	comp=N,76450µm,0.3s						
T1243				AML	AML		
	comp=N,76350µm,0.3s						
T1243				AML	AML		
	comp=E,77550µm,0.3s						
RM33	**Pellescritta (**	**0.13**	**213**	⇑P	**Pg**	**09 18 21.8**	**-0.3**
RM33				S	**Sg**	**09 18 24.6**	**+0.3**
RM33				AML	AML		
	comp=E,30450µm,0.2s						
RM33				AML	AML		
	comp=N,27450µm,0.3s						
RM33				AML	AML		
	comp=E,30850µm,0.2s						
RM33				AML	AML		
	comp=N,27450µm,0.3s						
RM33				AML	AML		
	comp=N,27300µm,0.3s						
RM33				AML	AML		
	comp=E,30800µm,0.2s						
GIGS	**Gran Sasso**	**0.25**	**132**	⇓P	**Pg**	**09 18 23.6**	**-0.6**
GIGS				S	**Sg**	**09 18 28.1**	**+0.4**
GIGS				AML	AML		
	comp=E,2115µm,0.7s						
GIGS				AML	AML		
	comp=N,3055µm,1.4s						
NRCA	**Norcia**	**0.26**	**326**	P	**Pg**	**09 18 23.7**	**-0.7**
NRCA				S	**Sg**	**09 18 27.9**	**-0.1**
NRCA				AML	AML		
	comp=N,40100µm,1.2s						
NRCA				AML	AML		
	comp=E,27300µm,1.0s						
NRCA				AML	AML		
	comp=N,40100µm,1.2s						
NRCA				AML	AML		
	comp=E,29500µm,1.0s						
NRCA				AML	AML		
	comp=N,44950µm,1.2s						
NRCA				AML	AML		
	comp=N,40050µm,1.2s						
MMO1	**Montemonaco**	**0.28**	**2**	⇑P	**Pg**	**09 18 24.1**	**-0.7**
MMO1				S	**Sg**	**09 18 28.5**	**-0.1**
MMO1				AML	AML		
	comp=N,16850µm,0.4s						
MMO1				AML	AML		
	comp=E,13800µm,0.6s						
MMO1				AML	AML		
	comp=E,13750µm,0.6s						
MMO1				AML	AML		
	comp=N,16800µm,0.4s						
MC2	**Monte Cornacci**	**0.31**	**343**	⇑P	**Pg**	**09 18 24.6**	**-0.8**
MC2				S	**Sg**	**09 18 29.7**	**+0.2**
MC2				AML	AML		
	comp=E,6880µm,0.4s						
MC2				AML	AML		
	comp=N,6870µm,0.4s						
MC2				AML	AML		
	comp=N,6865µm,0.4s						
MC2				AML	AML		
	comp=E,6870µm,0.4s						
MC2				AML	AML		
	comp=N,6855µm,0.4s						
FIAM	**Fiamignano**	**0.38**	**202**	⇑P	**Pg**	**09 18 25.9**	**-0.7**
FIAM				S	**Sg**	**09 18 32.4**	**+0.8**
FIAM				AML	AML		
	comp=E,4280µm,0.5s						
FIAM				AML	AML		
	comp=N,3075µm,1.3s						
FEMA	**Monte Fema**	**0.39**	**331**	P	**Pg**	**09 18 26.3**	**-0.6**
FEMA				S	**Sg**	**09 18 32.4**	**+0.3**
FEMA				AML	AML		
	comp=E,11150µm,0.4s						
FEMA				AML	AML		
	comp=N,10370µm,0.2s						
FEMA				AML	AML		
	comp=N,10385µm,0.2s						
ARRO	**Arrone**	**0.41**	**265**	P	**Pg**	**09 18 26.2**	**-0.8**
ARRO				S	**Sg**	**09 18 32.9**	**+0.5**
ARRO				AML	AML		
	comp=N,4685µm,1.0s						
ARRO				AML	AML		
	comp=E,3985µm,0.7s						
ARRO				AML	AML		
	comp=N,4690µm,1.0s						
FAGN	**Fagnano**	**0.41**	**150**	P	**Pg**	**09 18 26.5**	**-0.6**
FAGN				S	**Sb**	**09 18 34.6**	**-0.2**
FAGN				AML	AML		
	comp=N,14250µm,0.3s						
FAGN				AML	AML		
	comp=E,14850µm,0.4s						
OFFI	**Offida**	**0.42**	**41**	⇑P	**Pg**	**09 18 27.4**	**+0.1**
OFFI				S	**Sb**	**09 18 35.2**	**+0.1**
FDMO	**Fiordimonte**	**0.45**	**338**	⇑P	**Pg**	**09 18 26.9**	**-1.0**
FDMO				S	**Sg**	**09 18 34.0**	**+0.2**
FDMO				AML	AML		
	comp=N,4310µm,1.3s						
FDMO				AML	AML		
	comp=E,4115µm,0.2s						
VCEL	**Villa Celiera**	**0.45**	**120**	⇓P	**Pg**	**09 18 27.6**	**-0.3**
VCEL				S	**Sb**	**09 18 35.4**	**-0.7**
VCEL				AML	AML		
	comp=E,9270µm,0.4s						
VCEL				AML	AML		
	comp=E,9235µm,0.4s						
VCEL				AML	AML		
	comp=N,11450µm,0.7s						
VCEL				AML	AML		
	comp=E,9275µm,0.4s						
CSP1	**Cessapalombo**	**0.48**	**351**	⇑P	**Pg**	**09 18 27.6**	**-0.9**
CSP1				S	**Sg**	**09 18 35.2**	**+0.3**
CSP1				AML	AML		
	comp=E,5525µm,0.4s						
CSP1				AML	AML		
	comp=N,6120µm,1.6s						
CSP1				AML	AML		
	comp=N,6115µm,1.6s						
TRTR	**Tortoreto Alta**	**0.48**	**67**	⇑P	**Pg**	**09 18 29.0**	**+0.5**
TRTR				AML	AML		
	comp=E,12300µm,0.4s						
TRTR				AML	AML		
	comp=N,13750µm,0.4s						
T0110	**Collepietro**	**0.52**	**138**	⇓P	**Pg**	**09 18 28.6**	**-0.7**
T0110				S	**Sg**	**09 18 37.0**	**+0.9**
T0110				AML	AML		
	comp=N,7845µm,0.5s						
T0110				AML	AML		
	comp=E,7300µm,0.4s						
CESX	**Cesi**	**0.54**	**269**	⇑P	**Pg**	**09 18 28.4**	**-1.2**
CESX				S	**Sg**	**09 18 37.2**	**+0.5**
CESX				AML	AML		
	comp=N,3290µm,1.4s						
CESX				AML	AML		
	comp=E,2530µm,0.6s						
SEF1	**Sefro**	**0.59**	**333**	P	**Pg**	**09 18 29.6**	**-1.0**
SEF1				S	**Sg**	**09 18 39.0**	**+0.6**
PTQR	**Pietraquaria**	**0.60**	**174**	P	**Pg**	**09 18 29.5**	**-1.2**
PTQR				AML	AML		
	comp=N,1260µm,0.5s						
PTQR				AML	AML		
	comp=E,1108µm,0.3s						
ASSB	**Assisi San Ben**	**0.64**	**312**	P	**Pg**	**09 18 30.4**	**-1.1**

ASSB S **Sg** 09 18 41.0 +1.1
GAG1 Gagliole 0.65 344 P **Pg** 09 18 31.0 -0.6
GAG1 AML AML
comp=E,6830µm,0.5s
GAG1 AML AML
comp=N,7645µm,1.1s
SNTG Esanatoglia 0.69 337 P **Pg** 09 18 31.1 -1.4
SNTG AML AML
comp=E,1570µm,0.5s
SNTG AML AML
comp=N,2085µm,0.5s
SRES S.Oreste - Sor 0.71 238 P **Pg** 09 18 31.4 -1.4
SRES S **Sg** 09 18 44.0 +2.0
SRES AML AML
comp=N,1270µm,0.3s
SRES AML AML
comp=E,1224µm,0.8s
CERT Cerreto 0.71 200 ⇑P **Pg** 09 18 31.5 -1.4
CERT AML AML
comp=N,1775µm,0.4s
CERT AML AML
comp=E,3360µm,0.6s
EL6 Elcito 0.73 348 ⇓P **Pg** 09 18 30.9 -2.3
EL6 AML AML
comp=E,3870µm,0.2s
EL6 AML AML
comp=N,4620µm,0.4s
MTCE Montecelio 0.73 216 P **Pg** 09 18 31.7 -1.5
MTCE AML AML
comp=E,4050µm,0.5s
MTCE AML AML
comp=N,1985µm,0.7s
INTR Introdacqua 0.75 144 ⇓P **Pg** 09 18 32.2 -1.3
INTR AML AML
comp=E,2µm,0.7s
INTR AML AML
comp=N,2µm,0.8s
INTR AML AML
comp=E,1600µm,0.7s
INTR AML AML
comp=N,2980µm,0.8s
ATCC AVT- Casa Cast 0.75 319 P **Pg** 09 18 32.3 -1.3
ATCC AML AML
comp=E,2575µm,1.4s
ATCC AML AML
comp=N,2185µm,1.6s
ATCC AML AML
comp=E,2580µm,1.4s
ATCC AML AML
comp=N,2190µm,1.6s
CING Cingoli 0.76 354 ⇓P **Pg** 09 18 32.3 -1.5
CING AML AML
comp=E,3150µm,0.5s
CING AML AML
comp=N,2375µm,1.3s
FOSV Fossato di Vic 0.79 329 P **Pg** 09 18 32.8 -1.5
FOSV AML AML
comp=E,1335µm,1.4s
FOSV AML AML
comp=N,1625µm,0.3s
FOSV AML AML
comp=E,1330µm,1.4s
PP3 Marolino 0.79 16 P **Pg** 09 18 34.0 -0.3
PP3 AML AML
comp=E,4385µm,0.5s
PP3 AML AML
comp=E,4605µm,0.5s
PP3 AML AML
comp=N,4370µm,0.2s
PP3 AML AML
comp=N,4375µm,0.2s
GUAR Guarcino 0.82 180 ⇓P **Pg** 09 18 35.1 +0.1
GUAR AML AML
comp=N,1845µm,1.2s
GUAR AML AML
comp=E,1745µm,1.3s
LPEL Lama dei Pelig 0.86 131 ⇑P **Pg** 09 18 34.0 -1.7
LPEL S **Sb** 09 18 48.0 +0.1
LPEL AML AML
comp=E,1850µm,0.4s
LPEL AML AML
comp=N,1202µm,0.4s
MURB Monte Urbino 0.87 318 P **Pg** 09 18 34.5 -1.3
MURB S **Sb** 09 18 49.0 +0.9
MURB AML AML
comp=E,4595µm,0.3s
MURB AML AML
comp=N,5070µm,0.3s
MURB AML AML
comp=E,4600µm,0.3s
MURB AML AML
comp=N,5340µm,0.3s
MURB AML AML
comp=E,5225µm,0.3s
SSFR Montelago di S 0.91 335 ⇑P **Pg** 09 18 35.5 -1.1
SSFR AML AML
comp=E,3510µm,0.2s
SSFR AML AML
comp=E,3325µm,0.2s
SSFR AML AML
comp=N,3390µm,0.2s
SSFR AML AML
comp=N,3445µm,1.4s
ATTE AVT- Monte Tez 0.91 310 ⇑P **Pg** 09 18 37.5 +0.8
ATTE AML AML
comp=E,998µm,0.6s
ATTE AML AML
comp=N,948µm,0.6s
ARVD Arcevia 0.92 343 ⇓P **Pg** 09 18 35.4 -1.4
ARVD S **Sb** 09 18 51.0 +1.4
ARVD AML AML
comp=E,1145µm,0.4s
ARVD AML AML
comp=N,970µm,0.6s
MGAB Montegabbione 0.93 289 ⇑P **Pg** 09 18 35.9 -1.1
MGAB AML AML
comp=E,2625µm,0.6s
MGAB AML AML
comp=E,2975µm,0.6s
MGAB AML AML
comp=N,2910µm,0.5s
MGAB AML AML
comp=N,2905µm,0.5s
POFI Posta Fibreno 0.95 162 ⇑P **Pg** 09 18 36.2 -1.2
POFI AML AML
comp=E,1261µm,0.7s
POFI AML AML
comp=N,741µm,0.5s
AOI Ancona 0.95 13 S **Sn** 09 18 53.0 +0.5
ATVO AVT- Monte Val 1.01 319 ⇑P **Pg** 09 18 37.3 -1.3
ATVO AML AML
comp=E,862µm,1.1s
ATVO AML AML
comp=N,1026µm,0.9s
COR1 Corinaldo 1.04 347 ⇓P **Pg** 09 18 38.4 -0.7
COR1 AML AML
comp=E,1520µm,1.2s
COR1 AML AML
comp=N,2690µm,0.5s
ATMI Monte Miggiano 1.05 313 ⇑P **Pg** 09 18 39.0 -0.3
ATMI S **Sn** 09 18 57.0 +2.2
ATMI AML AML
comp=E,2585µm,0.7s
ATMI AML AML
comp=N,2940µm,1.5s
SACS San Casciano d 1.06 283 ⇓P **Pg** 09 18 38.2 -1.2
SACS AML AML
comp=E,750µm,0.6s
SACS AML AML
comp=N,898µm,0.6s
SACS AML AML
comp=E,782µm,0.6s
SACS AML AML
comp=N,854µm,0.6s
GIUL Giuliano Di Ro 1.06 182 ⇓P **Pb** 09 18 40.5 +0.9
GIUL AML AML
comp=E,625µm,1.0s
GIUL AML AML
comp=N,730µm,0.7s
ATPI Pietralunga - 1.07 322 P **Pg** 09 18 38.5 -1.1
ATPI AML AML
comp=N,1090µm,0.6s
ATPI AML AML
comp=E,1295µm,0.6s
PIEI Pieia 1.08 328 ⇓P **Pg** 09 18 38.4 -1.5
PIEI AML AML
comp=E,1014µm,0.4s
PIEI AML AML
comp=N,688µm,1.4s
MPAG Monte Paganucc 1.09 338 ⇓P **Pg** 09 18 38.6 -1.4
MPAG S **Sb** 09 18 56.0 +1.5
MPAG AML AML
comp=E,1335µm,0.8s
MPAG AML AML
comp=N,1064µm,0.4s
TOLF Tolfa 1.12 241 P **Pg** 09 18 38.9 -1.7
TOLF AML AML
comp=N,1010µm,0.7s
TOLF AML AML
comp=E,829µm,0.7s
FSSB Fossombrone 1.14 340 ⇑P **Pg** 09 18 40.3 -0.7
FSSB S **Sn** 09 18 59.0 +1.9
FSSB AML AML
comp=E,3030µm,0.3s
FSSB AML AML
comp=N,3370µm,0.7s
APEC Apecchio 1.14 325 ⇓P **Pb** 09 18 41.3 +0.2
FRES Fresagrandinar 1.20 122 ⇑P **Pg** 09 18 42.6 +0.5
FRES AML AML
comp=N,214µm,1.2s
FRES AML AML
comp=E,372µm,0.6s
CAFI Castiglion Fio 1.22 306 ⇓P **Pn** 09 18 41.1 -1.2
CAFI AML AML
comp=E,723µm,0.6s
CAFI AML AML
comp=N,634µm,1.2s
TRIV Trivento 1.25 132 ⇑P **Pg** 09 18 43.9 +0.8
TRIV AML AML
comp=E,548µm,0.6s
TRIV AML AML
comp=N,580µm,0.7s
PARC Parchiule 1.29 323 P **Pn** 09 18 43.5 +0.1
PARC AML AML
comp=N,770µm,1.1s
PARC AML AML
comp=E,810µm,1.6s
SF01 Poggio Pratacc 1.30 279 ⇓P **Pn** 09 18 43.7 +0.1
PESA Pesaro 1.37 346 ⇓P **Pn** 09 18 44.6 +0.3
PESA AML AML
comp=N,1640µm,0.3s
PESA AML AML
comp=E,1725µm,1.1s
ARCI Arcidosso 1.37 280 ⇓P **Pn** 09 18 44.6 +0.1
ARCI AML AML
comp=E,134µm,1.4s
ARCI AML AML
comp=N,170µm,0.5s
VAGA Valle Agricola 1.39 150 ⇑P **Pn** 09 18 45.4 +0.8
VAGA AML AML
comp=N,424µm,0.7s
VAGA AML AML
comp=E,284µm,1.1s
CRE Caprese Michel 1.41 316 ⇑P **Pb** 09 18 46.8 +1.1
CRE AML AML
comp=E,378µm,1.2s
CRE AML AML
comp=N,564µm,0.3s
MELA Melanico ??? S 1.63 123 ⇑P **Pn** 09 18 49.2 +1.3
MELA AML AML
comp=E,548µm,0.7s
MELA AML AML
comp=N,684µm,0.6s
MELA AML AML
comp=E,582µm,0.9s
MELA AML AML
comp=N,684µm,0.5s
TREM Isole Tremiti 1.70 106 ⇑P **Pb** 09 18 50.3 -0.2
TREM AML AML
comp=E,688µm,0.6s
TREM AML AML
comp=N,658µm,0.6s
RUFI Rufina 1.80 313 ⇓P **Pn** 09 18 51.6 +1.4
CASP Castiglione de 1.81 276 ⇓P **Pn** 09 18 49.8 -0.7
CASP AML AML
comp=E,51µm,1.5s
CASP AML AML
comp=N,70µm,0.5s
APRC Apricena 1.87 117 P **Pn** 09 18 52.5 +1.2
APRC AML AML
comp=E,358µm,0.5s
APRC AML AML
comp=N,378µm,0.4s
DUGI Dugi Otok 1.87 42 *e*Pn **Pn** 09 18 50.8 -0.5
SGRT San Giovanni R 2.00 115 P **Pn** 09 18 53.9 +0.7
SGRT AML AML
comp=N,212µm,0.4s
SGRT AML AML
comp=E,346µm,0.8s
VIRC Vir 2.10 37 *e*Pn **Pn** 09 18 53.9 -0.5
MSAG Monte S. Angel 2.13 114 ⇑P **Pn** 09 18 56.0 +1.1
MSAG AML AML
comp=E,357µm,0.5s
MSAG AML AML
comp=N,546µm,1.5s
MORI Morici 2.15 54 *e*Pn **Pn** 09 18 55.7 +0.6
NVLJ Novalja 2.25 30 *e*Pn **Pn** 09 18 56.1 -0.4
BRJN Brijuni 2.31 8 ⇓P **Pn** 09 18 57.5 +0.2
HVAR Hvar 2.37 75 *e*Pn **Pn** 09 18 58.2 +0.1
HVAR Hvar 2.37 75 ⇓P **Pn** 09 18 58.5 +0.4
RABC Rab 2.38 26 *e*Pn **Pn** 09 18 58.0 -0.3
MAIM Mastiano 2.43 303 S **Sn** 09 19 29.0 +0.1
SMRN Sveta Marina 2.49 14 *e*Pn **Pn** 09 18 57.6 -2.2
UDBI Udbina 2.61 42 *e*Pn **Pn** 09 19 02.2 +0.7
LSTV Lastovo 2.64 86 *e*Pn **Pn** 09 19 01.9 +0.1
KIJV Kijevo 2.65 57 *e*Pn **Pn** 09 19 02.8 +0.9
MRVN Minervino Murg 2.66 125 P **Pn** 09 19 03.3 +1.1
MRVN AML AML
comp=E,49µm,0.5s
MRVN AML AML
comp=N,55µm,0.8s
A253A Karojba, Istri 2.70 8 *e*Pn **Pn** 09 19 01.2 -1.5
A250A Rusevo Krmpots 2.72 25 *e*Pn **Pn** 09 19 02.8 -0.2
MAKA Makarska 2.80 75 *e*Pn **Pn** 09 19 03.9 -0.1
RIY Rijeka 2.83 17 *e*Pn **Pn** 09 19 04.5 0.0
RICI Ricice 2.93 71 *e*Pn **Pn** 09 19 06.6 +0.7
SKDS Skadanscina 2.97 10 *e*Pn **Pn** 09 19 05.3 -1.1
SKDS Skadanscina 2.97 10 *i* Pn **Pn** 09 19 06.0 -0.4
SKDS *i* Sn **Sn** 09 19 42.2 +0.1
SKDS IAML 09 19 46.1
comp=Z,22nm,0.3s
A050A Klekovaca 2.99 50 *e*Pn **Pn** 09 19 07.6 +0.9
AMUR Altamura 3.00 124 ⇑P **Pn** 09 19 08.0 +1.2
AMUR AML AML
comp=N,70µm,0.8s
AMUR AML AML
comp=E,81µm,0.5s
SMPL Sampolo 3.03 261 ⇓P **Pn** 09 19 08.2 +1.0
MIGL Miglionico 3.09 130 ⇓P **Pn** 09 19 09.9 +1.8
MIGL AML AML
comp=N,206µm,0.6s
MIGL AML AML
comp=E,202µm,1.0s
PGF Pioggiola 3.19 270 *e*P **Pn** 09 19 09.4 -0.1
PGF *e*Sn **Sn** 09 19 40.8 -6.8
comp=E,9.2nm,0.6s
BOJS Bojanci 3.21 25 *e*Pn **Pn** 09 19 10.0 +0.4
BOJS Bojanci 3.21 25 ⇑P **Pn** 09 19 08.9 -0.7
BOJS AML AML
comp=E,212µm,0.6s
BOJS AML AML
comp=N,152µm,1.2s
STON Ston 3.24 84 *e*Pn **Pn** 09 19 09.2 -0.9
STON Ston 3.24 84 *e*Pn **Pn** 09 19 09.2 -0.9
STON Ston 3.24 84 *e*Pn **Pn** 09 19 09.5 -0.5
STON *e*Sn **Sn** 09 19 47.7 -1.1
STON Ston 3.24 84 P **Pn** 09 19 09.6 -0.5
STON AML AML
comp=N,63µm,0.5s
STON AML AML
comp=E,58µm,0.5s
CGRP Cima Grappa 3.44 342 ⇑P **Pn** 09 19 09.7 -3.3
CGRP AML AML
comp=N,126µm,0.5s
CGRP AML AML
comp=E,146µm,0.5s
BLY Banja Luka 3.52 52 *e*Pn **Pn** 09 19 18.1 +4.1
BLY Banja Luka 3.52 52 *e*Pn **Pn** 09 19 15.8 +1.8
A051A Mrakovica 3.54 46 *e*Pn **Pn** 09 19 14.3 +0.1
CRES Cresnjev 3.56 25 *e*Pn **Pn** 09 19 15.6 +1.1
TREB Trebinje 3.72 87 *e*Pn **Pn** 09 19 17.3 +0.7
TREB Trebinje 3.72 87 *e*Pn **Pn** 09 19 17.9 +1.3
TREB *e*Sn **Sn** 09 20 01.5 +1.0
CIMO Cimolais 3.74 351 S **Sn** 09 19 56.0 -5.2
HCY Herceg Novi 3.83 91 *e*Pn **Pn** 09 19 18.5 +0.2
HCY Herceg Novi 3.83 91 ⇑*i*Pn **Pn** 09 19 18.9 +0.6
HCY *i* Sn **Sn** 09 20 01.8 -1.6
BRY Bratogost 3.86 84 *e*Pn **Pn** 09 19 19.0 +0.3
BRY Bratogost 3.86 84 ⇓*i*Pn **Pn** 09 19 19.6 +0.9
BRY *i* Sn **Sn** 09 20 03.8 -0.4
SARZ Sarezzano 3.90 307 S **Sn** 09 20 09.0 +3.9
ACOM Acomizza, Ital 3.93 2 ⇑P **Pn** 09 19 21.2 +1.5
ACOM AML AML
comp=E,96µm,0.8s
ACOM AML AML
comp=N,98µm,0.7s
OBKA Obir 3.99 12 *e*Pn **Pn** 09 19 20.7 +0.2
OBKA Obir 3.99 12 *e*Pn **Pn** 09 19 20.1 -0.4
comp=N,1.3nm,0.2s,SNR=6.4
MYKA Terra Mystica 4.02 3 *e*Pn **Pn** 09 19 20.6 -0.3
comp=N,4.7nm,0.6s
CANO Canova, Maglio 4.02 295 ⇓P **Pn** 09 19 21.4 +0.5
KOSI Kohlern 4.08 341 ⇑P **Pn** 09 19 22.4 +0.6
CEME Cevo 4.14 89 ⇑*i*Pn **Pn** 09 19 23.4 +0.9
CEME *i* Sn **Sn** 09 20 10.3 -0.8
BUM Brajici-Budva 4.14 93 ⇑*i*Pn **Pn** 09 19 23.4 +0.8
BUM *i* Sn **Sn** 09 20 10.3 -0.8
UPM Unac-Piva 4.15 80 *e*Pn **Pn** 09 19 23.6 +0.8
UPM Unac-Piva 4.15 80 ⇑*i*Pn **Pn** 09 19 23.9 +1.1
UPM *i* Sn **Sn** 09 20 11.1 -0.4
NKME Niksic 4.16 86 ⇑*i*Pn **Pn** 09 19 23.9 +1.1
NKME *i* Sn **Sn** 09 20 11.1 -0.4
ABTA Abfaltersbach 4.17 352 *e*Pn **Pn** 09 19 23.1 +0.1
comp=N,2.2nm,0.2s,SNR=13
NKY Niksic 4.19 85 ⇑*i*Pn **Pn** 09 19 24.4 +1.1
NKY *i* Sn **Sn** 09 20 11.9 -0.5
VSL Villasalto 4.31 225 ⇓P **Pn** 09 19 25.1 +0.3
VSL S **Sn** 09 20 15.0 -0.2
LLI Lipari 4.35 163 S **Sn** 09 20 14.0 -2.2
DRME Dracevica, Mon 4.37 94 *e*Pn **Pn** 09 19 26.6 +1.0
DRME Dracevica, Mon 4.37 94 ⇓*i*Pn **Pn** 09 19 26.6 +1.0
DRME *i* Sn **Sn** 09 20 15.8 -0.8
PDG Podgorica 4.40 90 *e*Pn **Pn** 09 19 27.1 +1.1
PDG *e*Sn **Sn** 09 20 18.0 +0.7
TTG Podgorica 4.40 90 ⇓*i*Pn **Pn** 09 19 27.1 +1.1
TTG *i* Sn **Sn** 09 20 16.5 -0.8
RISI Rein 4.42 349 P **Pn** 09 19 26.6 +0.1
RISI AML AML
comp=E,102µm,0.4s
RISI AML AML
comp=N,111µm,0.4s
ULC Ulcinj 4.45 96 ⇑*i*Pn **Pn** 09 19 27.6 +0.9
ULC *i* Sn **Sn** 09 20 17.2 -1.4
KBA Koelnbreinsper 4.46 0 *e*Pn **Pn** 09 19 27.5 +0.4
comp=N,7.7nm,0.7s,SNR=4.7
RUDO Rudo 4.55 75 *e*Pn **Pn** 09 19 28.1 +0.1
KOME Kolasin 4.58 85 ⇓*i*Pn **Pn** 09 19 29.8 +1.3
KOME *i* Sn **Sn** 09 20 20.9 -0.9
MONC Moncucco Torin 4.60 304 P **Pb** 09 19 38.9 -1.1
FETA Feichten 4.77 338 *e*Pn **Pn** 09 19 33.1 +1.8
comp=N,3.1nm,0.3s
WTTA Wattenberg 4.79 346 *e*Pn **Pn** 09 19 33.2 +1.6
comp=N,1.8nm,0.2s,SNR=9.1
SQTA Sankt Quirin 4.84 343 *e*Pn **Pn** 09 19 34.2 +2.0
comp=N,2.0nm,0.2s,SNR=7.8
IVA Berane 4.85 85 ⇑*i*Pn **Pn** 09 19 33.6 +1.3
IVA *i* Sn **Sn** 09 20 27.7 -1.0
WATA Walderalm 4.88 346 *e*Pn **Pn** 09 19 34.9 +2.3
comp=N,3.8nm,0.2s,SNR=5.8
ARSA Arzberg 4.89 18 *e*Pn **Pn** 09 19 32.2 -0.6
comp=N,1.9nm,0.3s
PVY Plav 4.91 88 ⇑*i*Pn **Pn** 09 19 34.1 +1.0
PVY *i* Sn **Sn** 09 20 28.8 -1.2
EPZF Pizzo Felice 4.93 166 P **Pb** 09 19 47.2 +1.5
MOTA Moosalm 4.98 342 *e*Pn **Pn** 09 19 36.2 +2.1
comp=N,2.7nm,0.3s,SNR=5.7
LMR La Mourre 5.04 280 *e*P **Pn** 09 19 34.8 -0.1
LMR *e*Sn **Sn** 09 20 25.2 -8.0
comp=N,5.5nm,0.8s
BIOA Bad Ischl, Aus 5.08 2 *e*Pn **Pn** 09 19 35.8 +0.5
comp=N,3.4nm,0.3s
IVAS Ivanjica 5.10 77 *e*Pn **Pn** 09 19 36.5 +0.8
IVAS *e*Sn **Sn** 09 20 33.6 -1.1
MBDF Montbardon 5.19 296 *e*P **Pn** 09 19 37.4 +0.4
MBDF *e*Sn Sn 09 20 29.1 -8.0
comp=N,3.6nm,0.6s
RETA Reutte 5.19 341 *e*Pn **Pn** 09 19 39.0 +2.0
comp=N,1.8nm,0.3s
DAVA Damuels 5.26 334 *e*Pn **Pn** 09 19 40.1 +2.1
comp=N,3.3nm,0.3s
MOA Molln 5.27 7 *e*Pn **Pn** 09 19 39.9 +1.8
MOA *e*Sn **Sn** 09 20 38.3 -0.6
MOA Molln 5.27 7 *e*Pn **Pn** 09 19 39.0 +0.9
comp=N,1.4nm,0.2s
BNI Bardonecchia 5.38 299 P **Pn** 09 19 38.9 -0.8
BNALP Bannalp 5.49 322 ⇑P **Pn** 09 19 42.7 +1.5
RONA Rosalia, Austr 5.50 22 *e*Pn **Pn** 09 19 38.6 -2.6
comp=N,0.7nm,0.2s
LPG La Plagne 5.53 304 *e*P **Pn** 09 19 42.7 +0.8
LPG *e*Sn Sn 09 20 37.5 -8.2
comp=N,1.0nm,0.2s
CONA Conrad Observa 5.61 18 *e*Pn **Pn** 09 19 42.5 -0.2
comp=N,0.8nm,0.2s
SELS Selova 5.76 81 *e*Pn **Pn** 09 19 45.4 +0.6
SMRF Simiane la Rot 5.81 286 *e*P **Pn** 09 19 46.0 +0.6
SMRF *e*Sn Sn 09 20 43.5 -8.6
comp=N,0.6nm,0.4s
ORIF Oris-en-Rattie 5.85 296 *e*P **Pn** 09 19 47.4 +1.3
ORIF *e*Sn Sn 09 20 44.8 -8.5
comp=N,3.0nm,0.7s
BOVS Bovan 6.23 78 *e*Pn **Pn** 09 19 51.5 +0.4
CKRC Cesky Krumlov 6.24 6 *e*SN **Sn** 09 20 59.9 -2.9
BARS Barje 6.27 85 *e*Pn **Pn** 09 19 52.4 +0.7
BARS *e*Sn **Sn** 09 21 01.4 -2.0
PRVS Prvonek 6.47 88 *e*Pn **Pn** 09 19 55.4 +0.9
PRVS *e*Sn **Sn** 09 21 06.3 -2.2
KHC Kasperske Hory 6.52 2 *e*PN **Pn** 09 19 55.1 0.0
KHC *e*SN **Sn** 09 21 07.5 -2.0
CABF La Chapelle 6.52 310 *e*P **Pn** 09 19 56.0 +0.8
CABF *e*Sn Sn 09 21 01.2 -8.5
comp=N,0.4nm,0.2s
ZAGS Zajecar 6.63 77 *e*Pn **Pn** 09 19 57.2 +0.6
ZAPS Zavoj 6.87 81 *e*Pn **Pn** 09 20 01.1 +1.1
ZAPS *e*Sn **Sn** 09 21 16.5 -1.8
HINF Hinteralfeld 6.91 321 *e*P **Pn** 09 20 01.7 +1.1
HINF *e*Sn Sn 09 21 10.8 -8.5
comp=N,5.2nm,0.4s
LASF Ste Croix 7.05 285 *e*P **Pn** 09 20 03.2 +0.8
LASF *e*Sn Sn 09 21 13.2 -9.4
comp=N,0.4nm,0.3s
CDF Champ du Feu 7.18 326 *e*P **Pn** 09 20 04.4 +0.2
CDF *e*Sn Sn 09 21 17.1 -8.8
comp=N,3.1nm,0.4s
HAU Haudompre 7.29 320 *e*P **Pn** 09 20 06.6 +0.9
HAU *e*Sn Sn 09 21 19.6 -8.9
comp=N,6.0nm,0.4s
SMF Signal de Mont 7.86 304 *e*P **Pn** 09 20 14.7 +1.1
SMF *e*Sn Sn 09 21 32.9 -10
comp=N,6.4nm,0.7s
LOR Lormes 8.16 308 *e*P **Pn** 09 20 19.0 +1.4
baz=123
LOR *e*Sn Sn 09 21 40.3 -10
comp=N,0.6nm,0.3s
MTLF Montolieu 8.17 279 *e*P **Pn** 09 20 18.8 +1.0
AVF Avril sur Loir 8.23 304 *e*P **Pn** 09 20 19.8 +1.2
AVF *e*Sn Sn 09 21 41.6 -10
comp=N,0.4nm,0.3s
MEZF Maizieres J'vi 8.26 318 *e*P **Pn** 09 20 20.4 +1.5
SSF Saint Saulge 8.26 306 *e*P **Pn** 09 20 19.9 +0.9
SSF *e*Sn Sn 09 21 42.5 -10
comp=N,1.9nm,0.4s
SAVF Savonnieres en 8.30 319 *e*P **Pn** 09 20 21.0 +1.5
CAF Calviac 8.46 290 *e*P **Pn** 09 20 22.8 +1.0
CLL Collm 8.70 359 *e*(Sg) Sg 09 22 45.0 -13
RJF Les Rejaudoux 8.92 292 *e*P **Pn** 09 20 29.3 +1.2

*IDC **28** 09:18:46.1±0.9, 32°.66N×75°.99E, h0km, mb3.8/13, mbtmp3.9/14, ML4.6/1, MS3.3/3, Error ellipse: s-maj=21.9km s-min=19.5km az=27.0*
*NDI **28** 09:18:48.0±2.0, 32°.79N×76°.29E, h10km, ML3.9*
*NNC **28** 09:19:09.0±2.9, 34°.04N×75°.96E, h99km±21km, mb3.8, mpv4.1, Error ellipse: s-maj=41.4km s-min=24.5km az=49.0*

ISC 28 09:18:48.6±0.5, 32°.71N±0°.04×76°.14E±0°.05, h20km, n46, σ2§17/60, mb3.8/13, 2C-5D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**0.46**	**232**	*i* Pg	**Pn**	**09 18 58.6**	**-1.4**
THN				*i* Sg	**Sn**	**09 19 06.6**	**-1.0**
JMU	**Jammu**	**1.05**	**270**	*i* Pg	Pn	09 19 11.1	+2.9
JMU				*i* Sg	Sn	09 19 30.1	+7.9
BHK	**Bhakra**	**1.31**	**170**	*i* Pg	**Pb**	**09 19 15.1**	**+2.4**
BHK				*i* Sg	**Sb**	**09 19 33.8**	**+4.8**
SMLA	**Simla**	**1.81**	**151**	*i* Pg	**Pb**	**09 19 22.1**	**+1.2**
SMLA				*e*S	**Sb**	**09 19 44.7**	**+1.6**
SMLA				IAML		09 19 47.8	
	comp=N,2μm,0.2s						
SMLA				IAML		09 19 48.1	
	comp=E,1μm,0.2s						
NDI	**New Delhi**	**4.12**	**167**	*e*P	**Pb**	**09 19 57.0**	**-3.5**
NDI				*e*S	**Sb**	**09 20 45.0**	**-4.9**
LGTI	**Lohaghat**	**4.79**	**132**	*e*P	Pb	09 20 18.2	+6.3
LGTI				*e*S	**Sb**	**09 21 13.6**	**+4.4**
KSH	**Kashi**	**6.79**	**359**	Pn	**Pn**	**09 20 27.8**	**+0.6**
KSH				Sn	Sn	09 21 34.8	-9.2
KSH				smax	smax		
	comp=E,41nm,0.7s						
KSH				smax	smax		
	comp=E,75nm,0.8s						
PYUN	**Piuthan**	**7.49**	**126**	*e*Pn	**Pn**	**09 20 38.3**	**+1.4**
PYUN				*e*Sn	**Sn**	**09 22 00.0**	**-1.4**
	comp=E,88nm,0.6s						
DANN	**Dangsing**	**7.88**	**122**	*e*Pn	**Pn**	**09 20 43.9**	**+1.6**
DANN				*e*Sn	**Sn**	**09 22 10.1**	**-1.0**
	comp=E,57nm,0.5s						
GKN	**Gorkha**	**8.71**	**120**	*e*Pn	**Pn**	**09 20 54.1**	**+0.5**
GKN				*e*Sn	**Sn**	**09 22 29.6**	**-1.7**
	comp=E,70nm,0.5s						
DMN	**Daman**	**9.28**	**121**	*e*Pn	**Pn**	**09 21 03.0**	**+1.5**
DMN				*e*Sn	**Sn**	**09 22 43.0**	**-2.4**
	comp=E,18nm,0.4s						
PKIN	**Phulchoki**	**9.50**	**120**	*e*Pn	**Pn**	**09 21 05.6**	**+1.0**
PKIN				*e*Sn	**Sn**	**09 22 47.8**	**-3.2**
	comp=E,77nm,0.6s						
BHPL	**Bhopal**	**9.51**	**173**	*e*P	**Pn**	**09 21 03.8**	**-0.7**
BHPL				*e*S	**Sn**	**09 22 46.0**	**-4.7**
PKI	**Pulchoki**	**9.52**	**120**	*e*Pn	**Pn**	**09 21 05.4**	**+0.5**
PKI				*e*Sn	**Sn**	**09 22 47.9**	**-3.5**
	comp=E,55nm,0.4s						
GUN	**Gumba**	**9.68**	**117**	*e*Pn	**Pn**	**09 21 08.2**	**+1.1**
GUN				*e*Sn	**Sn**	**09 22 52.6**	**-2.8**
	comp=E,32nm,0.5s						
JIRN	**Jiri**	**10.04**	**117**	*e*Pn	**Pn**	**09 21 12.5**	**+0.4**
JIRN				*e*Sn	**Sn**	**09 23 00.9**	**-3.5**
	comp=E,40nm,0.4s						
TKM2	**Tokmak 2**	**10.20**	**358**	⇑P	**Pn**	**09 21 15.2**	**+1.2**
	comp=E,3.8nm,0.5s						
CHMS	**Chumysh**	**10.33**	**354**	⇓P	**Pn**	**09 21 16.5**	**+0.9**
	comp=E,5.1nm,0.7s						
RAMN	**Ramite**	**10.74**	**120**	*e*Pn	**Pn**	**09 21 21.5**	**0.0**
RAMN				*e*Sn	**Sn**	**09 23 17.9**	**-3.4**
	comp=E,38nm,0.3s						
KK31	**Karatay Array**	**11.28**	**338**	⇑P	**Pn**	**09 21 28.1**	**-0.6**
	comp=E,2.1nm,0.5s,baz=149,slow=12,SNR=32						
KK31				S	Sn	09 23 21.6	-13
	comp=E,14nm,0.6s,baz=148,slow=21,SNR=19						
TAPN	**Taplejung**	**11.36**	**115**	*e*Pn	**Pn**	**09 21 30.2**	**+0.2**
TAPN				*e*Sn	**Sn**	**09 23 32.7**	**-3.8**
	comp=E,45nm,0.8s						
MAKZ	**Makanchi**	**14.77**	**16**	⇓P	**Pn**	**09 22 15.8**	**-0.4**
	comp=E,3.6nm,0.4s						
MK31	**Makanchi Array**	**14.83**	**17**	⇓P	**Pn**	**09 22 16.4**	**-0.7**
	comp=E,1.8nm,0.3s,baz=194,slow=12,SNR=81						
MKAR	**Makanchi Array**	**14.83**	**17**	Pn	**Pn**	**09 22 15.9**	**-1.2**
	comp=E,2.4nm,0.3s,baz=195,slow=12,SNR=41						
MKAR				Sn	**Sn**	**09 24 56.5**	**-4.2**
	comp=E,0.5nm,0.3s,baz=198,slow=23,SNR=9.2						
MKAR				LR	LR	09 28 22.8	
	comp=E,37nm,19.1s,baz=304,slow=39						
	comp=E,3.3nm,0.3s						
OTUK	**Ortayu**	**15.78**	**351**	⇓P	**Pn**	**09 22 27.0**	**-2.6**
	comp=E,3.2nm,0.6s						
KURBB	**Kurchatov Arra**	**17.98**	**5**	P	**Pn**	**09 22 55.0**	**-2.3**
	comp=E,4.1nm,0.7s,baz=191,slow=12,SNR=32						
GTA	**Gaotai**	**20.24**	**64**	*e*P	**P**	**09 23 24.5**	**+1.8**
GTA				pP	pP	09 23 30.8	+1.5
GTA				sP	sP	09 23 33.5	+1.2
GTA				pmax	pmax		
	comp=E,7.0nm,0.9s						
AB31	**Akbulak array**	**20.49**	**329**	P	**P**	**09 23 25.8**	**+0.7**
	comp=E,1.1nm,0.5s,baz=132,slow=9.3,SNR=27						
AB31				S	S	09 26 59.1	-14
	comp=E,1.6nm,0.7s,baz=148,slow=22,SNR=4.6						
BVA0	**Borovoye Array**	**20.72**	**350**	P	**P**	**09 23 28.2**	**+0.6**
	comp=E,7.3nm,0.7s,baz=157,slow=12,SNR=28						
BVAR	**Borovoye Array**	**20.72**	**350**	P	**P**	**09 23 28.4**	**+0.8**
	comp=E,5.6nm,0.6s,baz=153,slow=10.0,SNR=31						
	comp=E,5.6nm,0.6s						
ZALV	**Zalesovo Beam**	**22.11**	**14**	P	**P**	**09 23 42.1**	**-0.4**
	comp=E,4.2nm,0.6s,baz=214,slow=11,SNR=12						
	comp=E,4.2nm,0.6s						
AKTO	**Aktyubinsk**	**22.20**	**328**	P	**P**	**09 23 44.6**	**+1.0**
	comp=E,3.5nm,0.6s,baz=138,slow=11,SNR=10.0						
	comp=E,3.5nm,0.6s						
AKTO	**Aktyubinsk**	**22.20**	**328**	⇓P	**P**	**09 23 44.3**	**+0.7**
	comp=E,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**24.91**	**119**	P	**P**	**09 24 12.2**	**+1.7**
	comp=E,0.9nm,0.3s,baz=305,slow=9.4,SNR=10						
	comp=E,0.9nm,0.3s						
PALK	**Pallekele**	**25.67**	**170**	LR	LR	09 34 17.3	
	comp=E,114nm,19.6s,baz=51,slow=36						
SONM	**Songino Array**	**27.36**	**48**	P	**P**	**09 24 34.9**	**+2.4**
	comp=E,1.2nm,0.5s,baz=242,slow=9.8,SNR=8.6						
	comp=E,1.2nm,0.5s						
BRTR	**Keskin Array B**	**34.74**	**294**	P	**P**	**09 25 38.1**	**+0.5**
	comp=E,0.8nm,1.0s,baz=116,slow=14,SNR=3.6						
BRTR				LR	LR	09 42 24.7	
	comp=E,111nm,19.9s,baz=248,slow=41						
	comp=E,0.8nm,1.0s						
AKASG	**Malin Array Be**	**38.62**	**312**	P	**P**	**09 26 10.3**	**0.0**
	comp=E,0.9nm,0.7s,baz=79,slow=7.2,SNR=4.7						
	comp=E,0.9nm,0.7s						
FINES	**FINESS Array B**	**42.97**	**327**	P	**P**	**09 26 47.6**	**+1.6**
	comp=E,1.2nm,0.7s,baz=111,slow=10,SNR=5.9						
	comp=E,1.2nm,0.7s						
NB2	**NORSAR Subarra**	**49.93**	**325**	P	**P**	**09 27 38.1**	**-2.6**
	comp=Z,2.9nm,1.4s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**49.93**	**325**	P	**P**	**09 27 41.6**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=95,slow=7.4,SNR=2.3						
	comp=Z,0.6nm,0.8s						
EKA	**Eskdalemuir Ar**	**57.94**	**319**	P	**P**	**09 28 39.4**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=95,slow=6.5,SNR=4.4						
	comp=Z,0.4nm,0.6s						
ESDC	**Sonseca Array**	**63.01**	**301**	P	**P**	**09 29 13.1**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=65,slow=7.2,SNR=2.3						
	comp=Z,0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**70.02**	**273**	P	**P**	**09 29 58.7**	**-0.6**
	comp=Z,20nm,0.4s,baz=37,slow=5.0,SNR=1.3						
ILAR	**Eielson Array**	**77.18**	**17**	P	**P**	**09 30 41.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=309,slow=6.2,SNR=2.0						
	comp=Z,0.3nm,0.7s						
BOSA	**Boshof**	**77.80**	**224**	P	**P**	**09 30 44.5**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=21,slow=3.7,SNR=4.8						
	comp=Z,2.1nm,0.7s						

*NEIC **28** 09:21:37.0±2.5, 30°.0S±0°.1×176°.4W±0°.2, h33km±11km, mb4.9/22, Error ellipse: s-maj=27.5km s-min=14.3km az=55.0*

*IDC **28** 09:21:40.3±0.8, 30°.30S×177°.82W, h0km, mb4.4/6, mbtmp4.4/7, ML3.7/1, MS3.6/5, Error ellipse: s-maj=31.8km s-min=18.4km az=105.0*

ISC 28 09:21:45.5±0.6, 30°.48S±0°.05×177°.8W±0°.1, h46km, n97, σ3§11/102, mb4.8/21, MS3.5/6, 1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.22**	**355**	P	**Pn**	**09 22 02.2**	**-3.9**
GLKZ				S	**Sn**	**09 22 13.5**	**-8.0**
RAO	**Raoul Island**	**1.23**	**355**	LR	LR	09 21 59.3	
	comp=Z,64nm,19.8s,baz=219,slow=18						
RAO				Pn	**Pn**	**09 22 03.0**	**-3.3**
	440nm,0.3s,baz=30,slow=21,SNR=37						
RAO				Sn	**Sn**	**09 22 14.9**	**-6.9**
	5μm,0.3s,baz=169,slow=23,SNR=31						
RAO	**Raoul Island**	**1.23**	**355**	Pn	**Pn**	**09 22 03.0**	**-3.3**
RIZ	**Raoul Island**	**1.24**	**355**	P	**Pn**	**09 22 02.7**	**-3.7**
RIZ				S	**Sn**	**09 22 14.7**	**-7.2**
MXZ	**Matakaoa Point**	**7.76**	**204**	P	**Pn**	**09 23 36.1**	**+0.2**
MXZ				S	**Sn**	**09 25 06.7**	**+4.3**
WMGZ	**Waiomatatini S**	**7.96**	**202**	P	**Pn**	**09 23 39.7**	**+1.2**
WMGZ				S	**Sn**	**09 25 11.2**	**+3.9**
HAZ	**Te Kaha**	**8.12**	**206**	P	**Pn**	**09 23 42.4**	**+1.6**
HAZ				S	**Sn**	**09 25 18.2**	**+6.9**
PKGZ	**Pakihiroa**	**8.14**	**204**	P	**Pn**	**09 23 40.7**	**-0.3**
PKGZ				S	**Sn**	**09 25 12.6**	**+1.0**
PUZ	**Puketiti**	**8.24**	**202**	P	**Pn**	**09 23 41.8**	**-0.7**
PUZ				S	**Sn**	**09 25 16.3**	**+2.1**
RUGZ	**Raukumara Rang**	**8.35**	**205**	P	**Pn**	**09 23 43.6**	**-0.4**
RUGZ				S	**Sn**	**09 25 19.4**	**+2.4**
TWGZ	**Tauwhareparae**	**8.43**	**203**	P	**Pn**	**09 23 45.1**	**+0.1**
TWGZ				S	**Sn**	**09 25 20.4**	**+1.6**
CNGZ	**Carnagh Statio**	**8.63**	**201**	P	**Pn**	**09 23 48.5**	**+0.7**
CNGZ				S	**Sn**	**09 25 21.2**	**-2.5**
OUZ	**Omahuta**	**8.64**	**235**	Pn	Pn	09 23 58.5	+11
TKGZ	**Te Karaka**	**8.71**	**203**	P	**Pn**	**09 23 48.7**	**-0.1**
TKGZ				S	**Sn**	**09 25 30.6**	**+4.9**
MWZ	**Matawai**	**8.73**	**205**	P	**Pn**	**09 23 49.1**	**0.0**
MWZ				S	**Sn**	**09 25 30.6**	**+4.4**
URZ	**Urewera**	**8.82**	**207**	Pn	**Pn**	**09 23 50.4**	**+0.1**
	0.9nm,0.3s,baz=121,slow=24,SNR=18						
URZ				Sn	**Sn**	**09 25 31.1**	**+2.7**
	6.1nm,0.3s,baz=288,slow=20,SNR=4.0						
	3.4nm,0.3s						
RAGZ	**Rawiri**	**8.91**	**205**	P	**Pn**	**09 23 51.5**	**-0.2**
RAGZ				S	**Sn**	**09 25 34.3**	**+3.5**
KNZ	**Kokohu**	**9.29**	**202**	P	**Pn**	**09 23 55.6**	**-1.2**
KNZ				S	**Sn**	**09 25 43.5**	**+3.6**
MHGZ	**Mahia Peninsul**	**9.34**	**201**	P	**Pn**	**09 23 56.4**	**-1.1**
MHGZ				S	**Sn**	**09 25 39.1**	**-2.0**
DVHZ	**Dannevirke**	**10.96**	**205**	P	**Pn**	**09 24 16.2**	**-3.4**
DVHZ				S	**Sn**	**09 26 18.8**	**-2.0**
ANWZ	**Angora Road**	**10.99**	**204**	P	**Pn**	**09 24 18.8**	**-1.2**
ANWZ				S	**Sn**	**09 26 19.7**	**-1.8**
POWZ	**Post Office Ro**	**11.19**	**206**	P	Pn	09 24 27.6	+4.9
POWZ				S	**Sn**	**09 26 25.9**	**-0.4**
PRWZ	**Pori Road**	**11.25**	**205**	P	Pn	09 24 16.6	-7.0
PRWZ				S	**Sn**	**09 26 26.9**	**-1.1**
BFZ	**Birch Farm**	**11.27**	**204**	P	Pn	09 24 18.6	-5.3
BFZ				S	**Sn**	**09 26 24.6**	**-3.7**
MRZ	**Mangatainoka R**	**11.49**	**206**	P	Pn	09 24 22.1	-4.8
MRZ				S	**Sn**	**09 26 30.3**	**-3.5**
HOWZ	**Holdsworth Sta**	**11.72**	**206**	P	Pn	09 24 26.2	-3.8
HOWZ				S	**Sn**	**09 26 34.0**	**-5.5**
TMWZ	**Te Maipa**	**11.77**	**204**	P	Pn	09 24 25.8	-4.9
TMWZ				S	**Sn**	**09 26 35.2**	**-5.4**
KIW	**Kapiti Island**	**11.93**	**208**	P	Pn	09 24 28.5	-4.4
KIW				S	**Sn**	**09 26 41.3**	**-3.1**
MTW	**Mount Morrison**	**11.95**	**205**	P	**Pn**	**09 24 30.0**	**-3.2**
MTW				S	**Sn**	**09 26 41.4**	**-3.7**
TRWZ	**Traveller**	**12.10**	**204**	S	**Sn**	**09 26 43.7**	**-4.9**
PAWZ	**Paruwai Farm**	**12.18**	**205**	P	**Pn**	**09 24 37.7**	**+1.4**
PAWZ				S	**Sn**	**09 26 47.1**	**-3.5**
MSWZ	**Moikau Station**	**12.27**	**205**	P	**Pn**	**09 24 37.3**	**-0.2**
MSWZ				S	**Sn**	**09 26 48.5**	**-4.4**
PLWZ	**Palliser**	**12.40**	**205**	P	**Pn**	**09 24 41.7**	**+2.3**
PLWZ				S	**Sn**	**09 26 52.8**	**-3.3**
THZ	**Tophouse**	**13.52**	**211**	Pn	**P**	**09 24 59.9**	**-2.7**
RPZ	**Rata Peaks**	**15.90**	**211**		**P**	**09 25 30.9**	**+1.9**
DZM	**Mont Dzumac**	**16.41**	**297**	LR	LR	09 30 40.3	
	comp=Z,126nm,19.1s,baz=192,slow=33						
DZM	**Mont Dzumac**	**16.41**	**297**	*e*LR	LR	09 29 42.1	
	comp=Z,183nm,23.2s						
TBI	**Tubuai**	**26.20**	**81**	*e*LR	LR	09 32 57.3	
	comp=Z,122nm,29.5s						
TBI	**Tubuai**	**26.20**	**81**	*e*T	T	09 54 42.5	
	24nm,0.3s						
ARMA	**Armidale**	**26.32**	**262**	P	**P**	**09 27 22.6**	**+5.5**
EIDS	**Eidsvold**	**27.91**	**273**	P	**P**	**09 27 34.5**	**+3.2**
CAN	**Canberra**	**28.21**	**251**	P	**P**	**09 27 38.7**	**+4.7**
CAN					IAmb	IAmb	09 27 43.6
	comp=Z,18nm,1.2s						
CAN	**Canberra**	**28.21**	**251**	P	**P**	**09 27 38.6**	**+4.7**
PAE	**Paea**	**28.66**	**70**	*e*T	T	09 58 09.3	
	comp=Z,6.3nm,0.3s						
PPT2	**Papeete2**	**28.71**	**70**	*e*LR	LR	09 34 06.0	
	comp=Z,105nm,24.2s						
PPT2	**Papeete2**	**28.71**	**70**	*e*T	T	09 57 38.3	
	comp=Z,4.5nm,0.2s						
TOO	**Toolangi**	**31.09**	**247**	P	**P**	**09 28 03.5**	**+4.1**
TOO					IAmb	IAmb	09 28 41.1
	comp=Z,33nm,1.6s						
VAH	**Vaihoa**	**31.55**	**68**	*e*T	T	10 01 33.2	
	comp=Z,32nm,0.2s						
CTA	**Charters Tower**	**33.98**	**279**	LR	LR	09 40 02.2	
	comp=Z,78nm,19.4s,baz=81,slow=32						
CTAO	**Charters Tower**	**33.98**	**279**	P	**P**	**09 28 28.2**	**+3.4**
CTAO	**Charters Tower**	**33.98**	**279**	P	**P**	**09 28 28.3**	**+3.4**
STKA	**Stephens Creek**	**34.62**	**257**	P	**P**	**09 28 34.4**	**+4.1**
	comp=Z,26nm,1.0s,baz=100,slow=11,SNR=38						
STKA					LR	LR	09 41 10.3
	comp=Z,79nm,18.6s,baz=201,slow=34						
STKA	**Stephens Creek**	**34.62**	**257**	P	**P**	**09 28 34.5**	**+4.1**
COEN	**Coen**	**39.46**	**286**	P	**P**	**09 29 14.1**	**+2.5**
COEN					IAmb	IAmb	09 30 19.6
	comp=Z,55nm,1.7s						
AS31	**Alice Springs**	**43.27**	**267**	P	**P**	**09 29 44.7**	**+1.8**
AS31					IAmb	IAmb	09 29 45.4
	comp=Z,3.9nm,0.4s						
ASAR	**Alice Springs**	**43.27**	**267**	P	**P**	**09 29 44.2**	**+1.4**
	comp=Z,6.1nm,0.4s,baz=104,slow=7.5,SNR=149						
ASAR					LR	LR	09 47 20.7
	comp=Z,62nm,18.1s,baz=88,slow=36						
	comp=Z,6.1nm,0.4s						
WR0	**Warramunga Arr**	**44.09**	**272**	P	**P**	**09 29 50.9**	**+1.5**
WR0					IAmb	IAmb	09 29 52.0
	comp=Z,19nm,1.1s						
DRV	**Dumont d'Urvil**	**44.13**	**203**	P	**P**	**09 29 52.8**	**+3.8**
WB2	**Warramunga Arr**	**44.26**	**272**	P	**P**	**09 29 52.3**	**+1.6**
WRAB	**Tennant Creek**	**44.27**	**272**	P	**P**	**09 29 52.0**	**+1.2**
WRAB					IAmb	IAmb	09 29 53.3
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**44.27**	**272**	P	**P**	**09 29 52.8**	**+2.0**
WRA	**Warramunga Arr**	**44.27**	**272**	P	**P**	**09 29 52.1**	**+1.2**
	comp=Z,11nm,0.3s,baz=110,slow=8.2,SNR=678						
	comp=Z,11nm,0.3s						
WRA	**Warramunga Arr**	**44.27**	**272**	P	**P**	**09 29 51.7**	**+0.9**
WB0	**Warramunga Arr**	**44.29**	**272**	P	**P**	**09 29 52.4**	**+1.3**
FORT	**Forrest**	**46.19**	**255**	P	**P**	**09 30 07.4**	**+1.5**
SBA	**Scott Base**	**47.97**	**184**	P	**P**	**09 30 15.3**	**-3.8**
SBA					IAmb	IAmb	09 30 55.1
	comp=Z,3.6nm,0.6s						
VNDA	**Vanda**	**48.03**	**186**	P	**P**	**09 30 22.7**	**+3.1**
	comp=Z,0.4nm,0.3s,baz=346,slow=10,SNR=3.7						
	comp=Z,0.4nm,0.3s						
KNRA	**Kununurra**	**50.88**	**274**	P	**P**	**09 30 43.1**	**+0.9**
KNRA					IAmb	IAmb	09 32 05.1
	comp=Z,29nm,1.6s						
FITZ	**Fitzroy Crossi**	**52.53**	**270**	P	**P**	**09 30 54.6**	**+0.2**
FITZ					IAmb	IAmb	09 31 59.4
	comp=Z,32nm,2.0s						
CCD	**Concordia, Ant**	**52.92**	**196**	P	**P**	**09 31 01.2**	**+4.2**
CASY	**Casey**	**55.15**	**208**	P	**P**	**09 31 15.6**	**+2.8**
CASY					IAmb	IAmb	09 31 16.6
	comp=Z,6.8nm,0.7s						
CASY	**Casey**	**55.15**	**208**	P	**P**	**09 31 15.6**	**+2.8**
MBWA	**Marble Bar**	**56.38**	**264**	P	**P**	**09 31 24.2**	**+1.8**
BATI	**Baumata**	**57.83**	**277**	LR	LR	09 56 39.6	
	comp=Z,102nm,18.2s,baz=178,slow=36						
QSPA	**South Pole Qui**	**59.63**	**180**	P	**P**	**09 31 43.5**	**-1.2**
QSPA					IAmb	IAmb	09 31 57.2
	comp=Z,13nm,0.8s						
MAW	**Mawson**	**72.29**	**201**	P	**P**	**09 33 09.4**	**+3.7**
	comp=Z,2.0nm,0.7s,baz=140,slow=5.2,SNR=4.8						
	comp=Z,2.0nm,0.7s						
SNAA	**Sanae**	**78.07**	**178**	P	**P**	**09 33 34.7**	**-4.3**
SNAA					IAmb	IAmb	09 34 05.5
	comp=Z,9.7nm,1.6s						
H03S2	**Juan Fernandez**	**80.28**	**123**	T	T	11 03 05.1	
	baz=241,SNR=265						
H03S1	**Juan Fernandez**	**80.29**	**123**	T	T	11 03 06.3	
	baz=241,SNR=212						
H03S3	**Juan Fernandez**	**80.29**	**123**	T	T	11 03 07.9	
	baz=241,SNR=232						
H03N3	**Juan Fernandez**	**80.47**	**123**	T	T	11 03 20.9	
	baz=242,slow=72,SNR=52						
H03N2	**Juan Fernandez**	**80.47**	**123**	T	T	11 03 21.3	
	baz=242,slow=72,SNR=59						
H03N1	**Juan Fernandez**	**80.48**	**123**	T	T	11 03 20.0	
	baz=242,slow=72,SNR=100						
PETK	**Petropavlovsk-**	**85.94**	**345**	P	**P**	**09 34 21.8**	**+1.6**
	comp=Z,1.3nm,0.5s,baz=156,slow=8.8,SNR=5.8						
	comp=Z,1.3nm,0.5s						
NVAR	**Mina Array Bea**	**88.18**	**43**	P	**P**	**09 34 34.0**	**+2.3**
	comp=Z,0.7nm,0.7s,baz=218,slow=7.6,SNR=9.5						
	comp=Z,0.7nm,0.7s						
PZH	**PanZhiHua**	**95.50**	**297**	P	**P**	**09 35 02.5**	**-3.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,50nm,5.2s						
HHC	**Hu-ho-hao-te**	**96.41**	**314**	*e*P	**P**	**09 35 05.8**	**-3.8**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,4.5s						
MKAR	**Makanchi Array**	**117.96**	**310**	PKP	**PKPdf**	**09 40 26.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=156,slow=0.6,SNR=4.3						
KURBB	**Kurchatov Arra**	**121.27**	**314**	PKP	**PKiKP**	**09 40 33.3**	**+0.2**
	comp=Z,2.5nm,0.2s,baz=109,slow=1.9,SNR=9.7						
BVAR	**Borovoye Array**	**126.58**	**316**	PKP	**PKiKP**	**09 40 44.3**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=64,slow=3.4,SNR=10.0						
ARCES	**ARCESS Array B**	**138.71**	**348**	PKhKP	PKPpre	09 41 04.0	
	comp=Z,4.4nm,0.9s,baz=19,slow=1.1,SNR=6.7						
FINES	**FINESS Array B**	**145.28**	**340**	PKPbc	**PKPdf**	**09 41 17.3**	**-0.1**
	comp=Z,9.6nm,0.5s,baz=64,slow=3.6,SNR=95						
NB2	**NORSAR Subarra**	**148.86**	**352**	PKP	**PKPbc**	**09 41 27.9**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=15,slow=2.9						
NOA	**NORSAR Array B**	**148.86**	**352**	PKPbc	**PKPbc**	**09 41 27.9**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=16,slow=4.3,SNR=9.6						
NACGM	**Naroch**	**149.93**	**331**	*e*PKP	**PKiKP**	**09 41 31.8**	**+0.7**
	baz=43						
AKASG	**Malin Array Be**	**151.47**	**323**	PKPbc	**PKPbc**	**09 41 34.2**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=48,slow=3.4,SNR=15						
BRTR	**Keskin Array B**	**152.79**	**298**	PKPbc	**PKiKP**	**09 41 38.6**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=104,slow=4.0,SNR=6.0						

*IDC **28** 09:52:55.2±7.2, 17°.80S×178°.19W, h462km±79km, mb3.2/6, mbtmp4.0/6, Error ellipse: s-maj=35.3km s-min=25.5km az=44.0*

*NEIC **28** 09:53:06.1±1.0, 18°.4S±0°.2×178°.7W±0°.2, h545km±16km, mb4.4/13, Error ellipse: s-maj=37.1km s-min=25.4km az=222.0*

ISC 28 09:53:05.1±0.9, 17°.9S±0°.1×178°.5W±0°.2, h579km, n29, σ1§21/29, mb4.2/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.33**	**273**	P	**P**	**09 54 21.7**	**-2.9**
OUZ	**Omahuta**	**18.60**	**201**	P	**P**	**09 56 48.0**	**+1.1**
URZ	**Urewera**	**20.61**	**190**	P	**P**	**09 57 02.9**	**-2.2**
	4.9nm,0.3s,baz=120,slow=23,SNR=13						
	4.9nm,0.3s						
URZ	**Urewera**	**20.61**	**190**	P	**P**	**09 57 02.2**	**-2.9**
THZ	**Tophouse**	**24.86**	**195**	P	**P**	**09 57 40.9**	**-2.1**
FOZ	**Fox Glacier**	**27.37**	**199**	P	**P**	**09 58 03.4**	**-1.4**
CTAO	**Charters Tower**	**33.39**	**261**	P	**P**	**09 58 56.6**	**-3.2**
COEN	**Coen**	**37.05**	**270**	P	**P**	**09 59 28.0**	**+0.7**
STKA	**Stephens Creek**	**38.57**	**241**	P	**P**	**09 59 40.3**	**+0.9**
	1.0nm,0.8s,baz=83,slow=16,SNR=1.4						
	1.0nm,0.8s						
WR0	**Warramunga Arr**	**44.38**	**260**	P	**P**	**10 00 25.2**	**-0.2**
WR0					IAmb	IAmb	10 02 10.8
	comp=Z,25nm,1.8s						
WB0	**Warramunga Arr**	**44.54**	**260**	P	**P**	**10 00 26.4**	**-0.1**
WB0					IAmb	IAmb	10 00 44.7
	comp=Z,18nm,1.6s						
WB2	**Warramunga Arr**	**44.56**	**260**	P	**P**	**10 00 26.6**	**-0.1**
WB2					IAmb	IAmb	10 00 30.2
	comp=Z,9.8nm,1.2s						
WRAB	**Tennant Creek**	**44.56**	**260**	P	**P**	**10 00 26.8**	**0.0**
WRAB					IAmb	IAmb	10 00 56.9
	comp=Z,29nm,1.9s						
WRA	**Warramunga Arr**	**44.57**	**260**	P	**P**	**10 00 26.8**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=92,slow=6.9,SNR=144		

PCAB Cabril 20.81 73 *e-* 09 59 51.6
PMTG Montargil 20.82 80 *e*P Pn 09 59 42.9 -0.9
PMTG *ep*P pwP 09 59 48.8 -0.6
GBN Guysborough 20.88 298 P **P** **09 59 41.9 0.0**
GBN IAmb IAmb 09 59 53.1
comp=Z,77nm,1.1s
POLO Lamas de Olo 20.99 73 *e-* 09 59 54.1
MESJ Messejana 21.00 83 *e*P **P** **09 59 44.7 +1.4**
MESJ IAmb IAmb 09 59 52.0
comp=Z,61nm,1.2s
MESJ Messejana 21.00 83 *e*P **P** **09 59 45.3 +1.9**
MESJ *ep*P **pwP** **09 59 51.5 +0.1**
PVRL Vila Real 21.05 74 *e-* 09 59 55.5
EVO Evora 21.06 81 *ep*P pP 09 59 52.1 +4.6
PCVE Castro Verde 21.18 84 *e*P **P** **09 59 46.8 +1.5**
PCVE *ep*P **pwP** **09 59 53.3 -0.1**
MTE Manteigas 21.22 76 P **P** **09 59 46.7 +0.9**
MTE Manteigas 21.22 76 *e*LR LR 10 05 04.9
comp=Z,262nm,20.0s
PBEJ Beja 21.25 83 *e*P **P** **09 59 47.4 +1.4**
PBEJ *ep*P **pwP** **09 59 54.1 0.0**
PCBR Castelo Branco 21.32 78 *e*P **P** **09 59 48.0 +1.3**
PCBR *ep*P **pwP** **09 59 54.3 -0.5**
PESTR Estremoz 21.34 80 P **P** **09 59 46.4 -0.6**
PESTR Estremoz 21.34 80 *e*P **P** **09 59 48.7 +1.7**
PESTR *ep*P **pwP** **09 59 54.6 -0.5**
PBDV Barranco-do-Ve 21.34 85 *e*P **P** **09 59 49.7 +2.7**
PMRV Marv??o 21.42 79 *ep*P **pP** **09 59 55.1 +3.6**
PMRV *e*LR LR 10 04 55.1
comp=Z,317nm,18.0s
PVAQ Vaqueiros 21.48 84 P **P** **09 59 49.3 +0.9**
PVAQ IAmb IAmb 09 59 59.1
comp=Z,95nm,1.7s
PVAQ Vaqueiros 21.48 84 *e*P **P** **09 59 50.7 +2.3**
PVAQ *ep*P **pwP** **09 59 55.8 -0.7**
PVAQ *e*LR LR 10 05 01.5
comp=Z,247nm,18.0s
MVO Moncorvo 21.57 74 *e*LR LR 10 05 07.6
comp=Z,297nm,18.0s
HAL Halifax 22.23 295 **P** **09 59 58.1 +1.6**
HAL IAmb IAmb 10 00 10.4
comp=Z,100nm,1.6s
HAL Halifax 22.23 295 P **P** **09 59 58.1 +1.6**
HAL pmax pmax
comp=Z,100nm,1.6s
LMN Caledonia Moun 23.23 298 P **P** **10 00 06.0 -1.0**
LMN IAmb IAmb 10 00 25.8
comp=Z,74nm,1.5s
NRS Narsarsuaq 23.63 347 P **P** **10 00 11.4 +0.7**
NRS IAmb IAmb 10 00 20.4
comp=Z,55nm,0.7s
NRS Narsarsuaq 23.63 347 P **P** **10 00 11.4 +0.7**
NRS pmax pmax
comp=Z,55nm,0.7s
PAB San Pablo 23.75 78 P **P** **10 00 13.3 +1.1**
PAB San Pablo 23.75 78 P **P** **10 00 13.3 +1.1**
PAB pmax pmax
comp=Z,33nm,1.3s
ESDC Sonseca Array 24.03 77 P **P** **10 00 14.4 -0.4**
comp=Z,6.3nm,0.9s,baz=282,slow=9.2,SNR=41
ESDC LR LR 10 08 04.6
comp=Z,328nm,18.0s,baz=290,slow=33
comp=Z,6.3nm,0.9s
ESDC Sonseca Array 24.03 77 P **P** **10 00 15.2 +0.3**
ESBB Sonseca Array 24.03 77 P **P** **10 00 15.3 +0.4**
BATG Bathurst New B 24.31 301 P **P** **10 00 16.2 -1.0**
BATG IAmb IAmb 10 00 40.0
comp=Z,33nm,1.1s
GGN Saint George 24.58 296 P **P** **10 00 18.8 -0.9**
GGN IAmb IAmb 10 00 27.4
comp=Z,31nm,1.1s
EMMW East Machias 24.99 295 P **P** **10 00 24.3 +0.8**
EMMW IAmb IAmb 10 00 51.2
comp=Z,39nm,1.3s
G65A Princeton 25.09 296 P **P** **10 00 23.7 -0.7**
G65A IAmb IAmb 10 00 31.2
comp=Z,35nm,1.2s
MDT Midelt 25.23 94 P **P** **10 00 27.4 +1.6**
comp=Z,2.4nm,0.9s,baz=296,slow=8.9,SNR=4.7
MDT LR LR 10 08 39.4
comp=Z,343nm,18.6s,baz=311,slow=32
comp=Z,2.4nm,0.9s
SACV Santiago Islan 25.47 154 P **P** **10 00 26.9 -1.1**
SACV IAmb IAmb 10 00 37.7
comp=Z,35nm,0.9s
PQI Presque Isle 25.55 299 P **P** **10 00 27.8 -0.7**
PQI IAmb IAmb 10 00 58.3
comp=Z,34nm,1.0s
F64A Sherman 25.70 297 P **P** **10 00 29.8 0.0**
F64A IAmb IAmb 10 00 37.4
comp=Z,58nm,1.2s
F64A Sherman 25.70 297 P **P** **10 00 29.1 -0.7**
baz=95
F64A P **P** **10 00 29.1 -0.7**
baz=95
E63A Oxbow 25.80 299 P **P** **10 00 30.5 -0.2**
baz=96
E63A P **P** **10 00 30.5 -0.2**
baz=96
F63A Nahmakanta, Br 26.21 297 P **P** **10 00 34.7 +0.1**
F63A IAmb IAmb 10 00 43.5
comp=Z,78nm,1.6s
F63A Nahmakanta, Br 26.21 297 P **P** **10 00 34.7 +0.1**
baz=94
F63A P **P** **10 00 34.7 +0.1**
baz=94
D62A Allapoint, All 26.30 300 P **P** **10 00 35.2 -0.1**
D62A IAmb IAmb 10 00 43.9
comp=Z,39nm,1.1s
D62A Allapoint, All 26.30 300 P **P** **10 00 35.4 +0.1**
baz=97
D62A P **P** **10 00 35.4 +0.1**
baz=97
PKME Peaks-Kenny Pk 26.32 296 P **P** **10 00 36.2 +0.7**
baz=93
E62A Clayton Lake 26.57 299 P **P** **10 00 37.8 0.0**
E62A IAmb IAmb 10 01 11.9
comp=Z,41nm,1.4s
SCHQ Schefferville 27.00 318 P **P** **10 00 40.0 -1.7**
comp=Z,2.1nm,0.8s,baz=54,slow=14,SNR=2.0
comp=Z,2.1nm,0.8s
SCHQ Schefferville 27.00 318 P **P** **10 00 38.9 -2.8**
EKA Eskdalemuir Ar 27.16 41 P **P** **10 00 43.6 +0.6**
comp=Z,2.8nm,0.9s,baz=248,slow=6.8,SNR=5.5
EKA LR LR 10 09 05.1
comp=Z,163nm,19.3s,baz=199,slow=31
comp=Z,2.8nm,0.9s
G62A West of Eustis 27.19 296 P **P** **10 00 42.5 -0.9**
I63A Otisfield 27.21 293 P **P** **10 00 44.4 +0.8**
BORG Borgarnes 27.51 13 LR LR 10 08 30.4
comp=Z,45nm,20.3s,baz=212,slow=29
HRV Adam Dziewonsk 27.99 290 P **P** **10 00 51.1 +0.5**
baz=86
LBNH Lisbon 28.18 294 P **P** **10 00 52.9 +0.6**
baz=89
BBTS Babate 28.76 141 LR LR 10 10 28.2
comp=Z,131nm,18.4s,baz=344,slow=32
L61B Northampton 28.82 290 P **P** **10 00 58.3 +0.3**
baz=85
LATQ La Tuque 28.86 300 P **P** **10 00 58.5 +0.2**
PAL Palisades 29.90 287 P **P** **10 01 07.3 -0.2**
baz=82
SFJD Kangerlussuaq 29.91 348 LR LR 10 10 28.8
comp=Z,77nm,21.1s,baz=170,slow=31
TRQ Mont Tremblant 30.03 298 P **P** **10 01 08.3 -0.4**
TRQ IAmb IAmb 10 01 15.7
comp=Z,22nm,1.3s
LONY Lake Ozonia 30.07 295 P **P** **10 01 08.8 -0.2**
baz=88
ODNJ Ogdensburg 30.41 288 P **P** **10 01 12.7 +0.6**
ICESG Greenland Ices 30.78 357 *i* P **P** **10 01 15.3 -0.1**
ICESG IAmb IAmb 10 01 22.4
comp=Z,20nm,1.0s
BINY Binghamton 31.29 290 P **P** **10 01 19.9 0.0**
baz=83
WUPA West Chester U 31.35 286 P **P** **10 01 22.7 +2.3**
ECH Echery 31.77 58 P **P** **10 01 25.5 +1.5**
ECH Echery 31.77 58 P **P** **10 01 25.5 +1.5**
ECH pmax pmax
comp=Z,15nm,1.2s
SMRT St. Maarten 31.86 238 P P 10 01 31.0 +6.0
FRB Frobisher Bay 32.25 333 P **P** **10 01 28.4 +0.4**
comp=Z,8.2nm,0.9s,baz=144,slow=7.1,SNR=8.1
FRB LR LR 10 12 51.4
comp=Z,37nm,18.6s,baz=186,slow=33
comp=Z,8.2nm,0.9s

SDMD Soldier's Deli 32.39 285 P **P** **10 01 30.6 +1.1**
BFO Black Forest 32.56 58 P **P** **10 01 31.5 +0.6**
BFO Black Forest 32.56 58 P **P** **10 01 31.5 +0.6**
BFO pmax pmax
comp=Z,14nm,1.2s
MMNY Mt. Morris Dam 32.63 291 P **P** **10 01 32.4 +0.8**
MMNY IAmb IAmb 10 01 38.6
comp=Z,23nm,1.0s
SSPA Standing Stone 32.94 288 P **P** **10 01 34.5 +0.1**
baz=80
CBN Corbin Frederi 33.06 283 P **P** **10 01 35.6 +0.2**
baz=76
SADO Sadowa 33.31 295 LR LR 10 15 25.5
comp=Z,153nm,18.3s,baz=84,slow=37
MTP Monte Pirata 33.50 241 P **P** **10 01 40.0 +0.6**
JSRW J. Sargeant Re 33.58 282 P **P** **10 01 40.9 +1.0**
CBYP Canovanas 33.59 242 P **P** **10 01 39.8 -0.5**
DAVA Damuels 33.61 60 *e*P **P** **10 01 42.1 +1.8**
comp=Z,17nm,0.9s,SNR=5.3
DAVOX Davos/Dischmat 33.62 61 LR LR 10 13 40.9
comp=Z,136nm,18.6s,baz=263,slow=33
HUMP Col San Antoni 33.68 242 P **P** **10 01 43.1 +2.1**
GCPR Guaynabo City 33.73 242 P **P** **10 01 41.1 -0.2**
GCPR IAmb IAmb 10 01 47.8
comp=Z,26nm,0.9s
SJG San Juan 33.91 242 LR LR 10 11 51.5
comp=Z,112nm,21.6s,baz=70,slow=30
SJG San Juan 33.91 242 P **P** **10 01 43.2 +0.3**
SJG IAmb IAmb 10 01 49.6
comp=Z,19nm,0.9s
SJG San Juan 33.91 242 P **P** **10 01 43.2 +0.3**
SJG pmax pmax
comp=Z,19nm,1.0s
FETA Feichten 34.20 61 *e*P **P** **10 01 47.0 +1.6**
comp=Z,16nm,1.1s
RETA Reutte 34.20 60 *e*P **P** **10 01 46.5 +1.2**
comp=Z,4.0nm,0.9s
SUMG Summit 34.22 358 P **P** **10 01 46.0 +0.4**
SUMG IAmb IAmb 10 01 53.3
comp=Z,15nm,1.0s
SUMG Summit 34.22 358 P **P** **10 01 46.0 +0.4**
SUMG pmax pmax
comp=Z,15nm,1.0s
SUMG Summit 34.22 358 *i* P **P** **10 01 45.7 +0.1**
SUMG IAmb IAmb 10 01 53.0
comp=Z,14nm,1.0s
CELP Cerrillos 34.23 242 P **P** **10 01 46.5 +0.7**
CELP IAmb IAmb 10 01 52.5
comp=Z,23nm,0.9s
ERPA Erie 34.24 291 P **P** **10 01 45.7 +0.1**
baz=81
OBIP Obispado Ponce 34.27 242 P **P** **10 01 45.9 -0.2**
OBIP IAmb IAmb 10 01 53.3
comp=Z,31nm,1.0s
MOTA Moosalm 34.44 60 *e*P **P** **10 01 48.2 +0.7**
comp=Z,14nm,1.2s,SNR=9.6
GRFO Grafenberg 34.49 56 P **P** **10 01 50.3 +2.6**
GRFO IAmb IAmb 10 02 19.4
comp=Z,27nm,1.3s
GRFO Grafenberg 34.49 56 P **P** **10 01 50.3 +2.6**
GRFO pmax pmax
comp=Z,27nm,1.3s
SQTA Sankt Quirin 34.51 60 *e*P **P** **10 01 49.3 +1.2**
comp=Z,12nm,1.1s,SNR=11
ZCCA Zocca 34.58 65 P **P** **10 01 50.6 +2.0**
ZCCA IAmb IAmb 10 01 58.2
comp=Z,42nm,1.3s
MCWV Mont Chateau 34.61 286 P **P** **10 01 48.8 -0.1**
baz=77
MLPR Magueyes Islan 34.63 243 P **P** **10 01 49.3 +0.2**
CRPR Cabo Rojo, PR 34.65 243 P **P** **10 01 50.0 +0.7**
WATA Walderalm 34.76 60 *e*P **P** **10 01 51.0 +0.8**
comp=Z,4.9nm,0.8s
WTTA Wattenberg 34.80 60 *e*P **P** **10 01 51.5 +0.9**
comp=Z,13nm,1.1s,SNR=9.3
M53A WI Miller and 34.87 290 P **P** **10 01 51.1 0.0**
baz=79
OSSC Osservatorio P 34.87 67 P **P** **10 01 52.3 +1.2**
R55A Marlinton 35.14 284 P **P** **10 01 54.3 +0.8**
KEST Kesra 35.18 80 P **P** **10 01 54.8 +0.8**
comp=Z,1.4nm,0.7s,baz=247,slow=7.7,SNR=2.2
comp=Z,1.4nm,0.7s
KEST Kesra 35.18 80 P **P** **10 01 55.3 +1.4**
KEST IAmb IAmb 10 02 01.8
comp=Z,32nm,1.9s
JMIC Jan Mayen 35.34 15 LR LR 10 12 54.3
comp=Z,47nm,18.2s,baz=260,slow=30
CIMO Cimolais 35.41 62 P **P** **10 01 56.8 +1.0**
CIMO IAmb IAmb 10 02 03.4
comp=Z,8.8nm,1.0s
ABTA Abfaltersbach 35.43 61 *e*P **P** **10 01 56.7 +0.7**
comp=Z,34nm,1.1s,SNR=8.9
O53A New Philadelph 35.50 288 P **P** **10 01 57.8 +1.2**
O53A New Philadelph 35.50 288 P **P** **10 01 56.9 +0.4**
baz=78
STAL STALIGIAL 35.60 62 P **P** **10 01 58.3 +0.9**
BLA Blacksburg 35.66 282 P **P** **10 01 58.1 +0.1**
baz=74
CLL Collm 35.67 53 P **P** **10 01 58.9 +1.0**
CLL Collm 35.67 53 *i* P **P** **10 01 58.4 +0.5**
CLL *i* 10 02 04.7
CLL pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 35.67 53 *i* P **P** **10 01 58.4 +0.5**
comp=Z,8.0nm,1.2s
CLL *i* sP **pwP** **10 02 04.7 -1.7**
comp=Z,14nm,1.0s
CLL *i* x x 10 02 09.4
CLL Collm 35.67 53 *i* PKPbc **PKiKP** **10 11 40.0 -6.2**
comp=Z,3.0nm,0.9s
CLUD Cludinico 35.71 61 P **P** **10 01 59.2 +0.9**
P53A Whipple 35.81 287 P **P** **10 02 00.6 +1.4**
KBA Koelnbreinsper 35.98 60 *e*P **P** **10 02 01.4 +0.6**
comp=Z,50nm,0.9s,SNR=19
O52A Adamsville 36.00 288 P **P** **10 02 01.7 +0.9**
O52A IAmb IAmb 10 02 08.8
comp=Z,33nm,1.1s
O52A Adamsville 36.00 288 P **P** **10 02 02.0 +1.1**
baz=77
O52A P **P** **10 02 02.0 +1.1**
baz=77
KHC Kasperske Hory 36.03 57 P **P** **10 02 02.1 +1.1**
KHC Kasperske Hory 36.03 57 *e*P **P** **10 02 01.5 +0.4**
KHC *e* 10 02 07.9
KHC MLR MLR
comp=Z,200nm,16.1s
KHC Kasperske Hory 36.03 57 *e*P **P** **10 02 01.5 +0.4**
KHC *ep*P **pwP** **10 02 07.9 -1.7**
KHC AMS AMS 10 14 10.0
comp=Z,200nm,16.1s
NBO00 NORSAR Array S 36.10 36 P **P** **10 02 02.9 +1.5**
GEC2 GERESS Array S 36.12 57 P **P** **10 02 02.8 +0.9**
GEC2 IAmb IAmb 10 02 10.1
comp=Z,29nm,1.8s
GERES GERESS Array B 36.12 57 P **P** **10 02 02.7 +0.9**
comp=Z,0.6nm,0.8s,baz=289,slow=9.2,SNR=7.9
comp=Z,0.6nm,0.8s
BIOA Bad Ischl, Aus 36.13 59 *e*P **P** **10 02 02.8 +0.9**
comp=Z,16nm,1.2s,SNR=9.3
ROBS Robic 36.16 62 *e*P **P** **10 02 02.1 0.0**
PRED Cave del Predi 36.18 61 P **P** **10 02 03.0 +0.6**
PRED IAmb IAmb 10 02 10.1
comp=Z,23nm,1.1s
MYKA Terra Mystica 36.22 61 *e*P **P** **10 02 03.1 +0.5**
comp=Z,9.5nm,1.0s
BRG Berggiesshubel 36.26 54 *e*P **P** **10 02 03.8 +0.9**
BRG Amp 10 02 05.5
comp=Z,8.3nm,1.3s
BRG *ex* x 10 02 10.3
BRG Amp 10 02 11.3
comp=Z,15nm,1.3s
BRG Amp 10 14 35.0
comp=Z,0.2nm,19.1s
BRG Amp 10 14 40.0
comp=E,0.1nm,19.5s
BRG Amp 10 14 43.0
comp=N,0.1nm,15.3s
BRG Berggiesshubel 36.26 54 *e*P **P** **10 02 03.7 +0.9**
BRG *e* 10 02 10.3
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG pmax pmax
comp=Z,15nm,1.3s
KOWA Kowa 36.27 123 P **P** **10 02 03.3 0.0**
comp=Z,7.9nm,0.9s,baz=342,slow=6.7,SNR=9.0
KOWA LR LR 10 15 39.0
comp=Z,216nm,19.1s,baz=258,slow=34
comp=Z,7.9nm,0.9s
KOWA Kowa 36.27 123 P **P** **10 02 03.5 +0.1**
NB2 NORSAR Subarra 36.30 36 P **P** **10 02 03.7 +0.5**
comp=Z,19nm,1.0s,baz=255,slow=9.3
NOA NORSAR Array B 36.30 36 P **P** **10 02 04.5 +1.3**
comp=Z,4.8nm,1.0s,baz=254,slow=8.8,SNR=17
NOA LR LR 10 14 37.9
comp=Z,42nm,18.7s,baz=245,slow=32
comp=Z,4.8nm,1.0s
P52A Corning 36.33 287 P **P** **10 02 04.6 +0.9**
P52A IAmb IAmb 10 02 10.6
comp=Z,17nm,0.9s
P52A Corning 36.33 287 P **P** **10 02 03.8 +0.1**
baz=76,SNR=6.1
R53A Hurricane 36.52 285 P **P** **10 02 05.7 +0.5**
R53A IAmb IAmb 10 02 12.5
comp=Z,19nm,0.9s
CKRC Cesky Krumlov 36.52 57 *e*P P 10 02 10.9 +5.7
CKRC *ex* x 10 02 18.4
MOA Molln 36.55 59 *e*P **P** **10 02 05.4 0.0**
comp=Z,8.8nm,1.2s
PRU Pruhonice 36.64 55 *e*P **P** **10 02 07.9 +1.7**
PRU *e* 10 02 13.9
PRU MLR MLR
comp=Z,300nm,15.7s
PRU Pruhonice 36.64 55 *e*P **P** **10 02 07.9 +1.7**
PRU *ep*P **pwP** **10 02 13.9 -0.8**
PRU AMS AMS 10 15 00.0
comp=Z,300nm,15.7s
PVCC Panska Ves 36.65 54 AMS AMS 10 15 30.0
comp=Z,300nm,15.5s
ACSO Alum Creek Sta 36.83 288 P **P** **10 02 08.3 +0.4**
ACSO IAmb IAmb 10 02 15.5
comp=Z,19nm,0.9s
ACSO Alum Creek Sta 36.83 288 P **P** **10 02 08.0 +0.1**
baz=77,SNR=7.3
ACSO Alum Creek Sta 36.83 288 P **P** **10 02 08.0 +0.1**
baz=77,SNR=7.3
OBKA Obir 36.85 61 *e*P **P** **10 02 08.5 +0.4**
comp=Z,24nm,0.8s,SNR=23
MDP Montagnes des 36.91 210 LR LR 10 13 27.4
comp=Z,92nm,19.9s,baz=24,slow=30
U54A Nelsons Funny 36.93 282 P **P** **10 02 10.3 +1.4**
U54A IAmb IAmb 10 02 16.6
comp=Z,27nm,0.9s
U54A Nelsons Funny 36.93 282 P **P** **10 02 10.4 +1.5**
baz=72
U54A P **P** **10 02 10.4 +1.5**
baz=72
P51A Williamsport 37.06 287 P **P** **10 02 10.6 +0.7**
P51A IAmb IAmb 10 02 16.7
comp=Z,27nm,1.1s
P51A Williamsport 37.06 287 P **P** **10 02 10.0 +0.1**
baz=76,SNR=8.5
P51A P **P** **10 02 10.0 +0.1**
baz=76,SNR=8.5
SOKA Soboth 37.16 61 *e*P **P** **10 02 10.6 -0.2**
comp=Z,4.2nm,1.0s
PDKS Podkum 37.21 62 *i* P **P** **10 02 11.2 +0.1**
HFS Hagfors 37.25 38 LR LR 10 14 49.8
comp=Z,76nm,21.1s,baz=250,slow=32
TREC Trest 37.28 56 *e*P **P** **10 02 12.0 +0.4**
TREC *e* 10 02 18.4
TREC MLR MLR
comp=Z,100nm,21.2s
TREC Trest 37.28 56 *e*P **P** **10 02 12.0 +0.4**
TREC *ex* x 10 02 18.4
TREC AMS AMS 10 16 10.0
comp=Z,100nm,21.2s
Q51A Peebles 37.39 286 P **P** **10 02 13.2 +0.5**
Q51A Peebles 37.39 286 P **P** **10 02 13.0 +0.3**
baz=75,SNR=6.1
Q51A P **P** **10 02 13.0 +0.3**
baz=75,SNR=6.1
ARSA Arzberg 37.44 60 *e*P **P** **10 02 12.9 -0.1**
comp=Z,5.7nm,1.3s
BOJS Bojanci 37.45 63 *i* P **P** **10 02 13.9 +0.8**
UPC Upice 37.58 54 *e*P **P** **10 02 15.5 +1.4**
UPC *e* 10 02 20.8
UPC MLR MLR
comp=Z,300nm,18.2s
UPC Upice 37.58 54 *e*P **P** **10 02 15.5 +1.4**
UPC *ep*P **sP** **10 02 20.8 +1.2**
UPC AMS AMS 10 16 20.0
comp=Z,300nm,18.2s
CHVC Chvalec 37.60 54 AMS AMS 10 16 10.0
CONA Conrad Observa 37.61 59 *e*P **P** **10 02 15.7 +1.1**
comp=Z,5.6nm,1.5s
OSTC Ostas 37.70 54 AMS AMS 10 16 10.0
comp=Z,300nm,17.7s
KSP Ksiaz 37.75 54 *e*P **P** **10 02 15.8 +0.2**
DPC Dobruska-Polom 37.78 55 *e*P **P** **10 02 16.1 +0.2**
DPC *e* 10 02 22.9
DPC MLR MLR
comp=Z,300nm,16.5s
DPC Dobruska-Polom 37.78 55 *e*P **P** **10 02 16.1 +0.2**
DPC *ep*P **pwP** **10 02 22.9 -1.5**
DPC AMS AMS 10 16 20.0
comp=Z,300nm,16.5s
O49A Covington 37.85 289 P **P** **10 02 17.0 +0.4**
O49A IAmb IAmb 10 02 23.8
comp=Z,32nm,1.1s
KRUC Moravsky 37.89 57 *e*P **P** **10 02 15.9 -0.9**
V53A Saluda 37.96 281 P **P** **10 02 17.8 +0.2**
V53A Saluda 37.96 281 P **P** **10 02 17.6 0.0**
baz=71,SNR=8.2
V53A P **P** **10 02 17.6 0.0**
baz=71,SNR=8.2
VRAC Vranov 38.00 56 ⇑P **P** **10 02 19.0 +1.3**
VRAC Vranov 38.00 56 LR LR 10 15 34.5
comp=Z,98nm,20.8s,baz=262,slow=32
VRAC Vranov 38.00 56 *e*P **P** **10 02 18.7 +1.0**
KRLC Kraliky 38.08 55 *e*P **P** **10 02 19.5 +1.0**
KRLC *e* 10 02 25.5
KRLC MLR MLR
comp=Z,300nm,18.1s
KRLC Kraliky 38.08 55 *e*P **P** **10 02 19.5 +1.0**
KRLC *ep*P **pwP** **10 02 25.5 -1.5**
KRLC AMS AMS 10 16 30.0
comp=Z,300nm,18.1s
TZTN Tazewell 38.25 283 P **P** **10 02 19.9 0.0**
baz=72
P49A Miami Univ. Ec 38.29 288 P **P** **10 02 19.9 -0.4**
baz=75
GKP Gorka Klasztor 38.33 50 *e*P P 10 02 27.7 +7.4
GKP Gorka Klasztor 38.33 50 *e*P **P** **10 02 21.6 +1.2**
R50A Paris 38.33 286 P **P** **10 02 21.5 +0.9**
O48B Farmland 38.44 289 P **P** **10 02 21.1 -0.4**
baz=76
MODS Modra-Piesok 38.52 58 *e*P **P** **10 02 22.3 +0.2**
MODS *e* 10 02 28.5
MODS pmax pmax
comp=Z,37nm,1.3s
MODS Modra-Piesok 38.52 58 *e*P **P** **10 02 22.3 +0.2**
MODS *e* 10 02 28.5
VAE Valguarnera 38.54 76 LR LR 10 16 57.5
comp=Z,367nm,19.2s,baz=350,slow=34
MORC Moravsky Berou 38.59 56 ⇑P **P** **10 02 24.1 +1.4**
MORC Moravsky Berou 38.59 56 P **P** **10 02 23.7 +1.0**
MORC Moravsky Berou 38.59 56 P **P** **10 02 23.7 +1.0**
MORC pmax pmax
comp=Z,13nm,1.1s
MORC Moravsky Berou 38.59 56 *e*P **P** **10 02 23.4 +0.7**
TKL Tuckaleechee C 38.70 281 P **P** **10 02 24.6 +0.8**
comp=Z,5.2nm,0.8s,baz=75,slow=10,SNR=7.8
TKL LR LR 10 15 26.2
comp=Z,136nm,21.7s,baz=66,slow=32
comp=Z,5.2nm,0.8s
TKL Tuckaleechee C 38.70 281 P **P** **10 02 24.2 +0.4**
TKL IAmb IAmb 10 02 31.4
comp=Z,34nm,1.4s
TKL Tuckaleechee C 38.70 281 P **P** **10 02 24.2 +0.4**
TKL pmax pmax
comp=Z,34nm,1.4s
TKL Tuckaleechee C 38.70 281 P **P** **10 02 24.6 +0.8**
baz=71
PCRV Puerto La Cruz 38.74 231 LR LR 10 18 18.1
comp=Z,56nm,18.1s,slow=36
MPLH Magyarpolny 38.82 60 P **P** **10 02 24.8 +0.2**
P48A Milroy 38.84 288 P **P** **10 02 24.5 -0.4**
L46A Eue Claire 38.88 292 P **P** **10 02 26.1 +0.9**
L46A IAmb IAmb 10 02 32.7
comp=Z,40nm,1.1s
CUC Castrocucco 38.91 71 P **P** **10 02 26.8 +1.2**

CUC IAmb IAmb 10 02 33.4
comp=Z,51nm,1.0s
OKC Ostrava-Krasne 38.98 55 AMS AMS 10 16 30.0
comp=Z,200nm,16.2s
T50A Nancy 39.09 284 P **P 10 02 27.6 +0.6**
GOGA Godfrey 39.25 278 P **P 10 02 28.7 +0.4**
baz=68
KOVH Kovagotottos 39.34 61 P **P 10 02 30.0 +1.0**
VYHS Vyhne 39.54 57 *e*P **P 10 02 31.5 +0.8**
VYHS *e* 10 02 37.0
VYHS pmax pmax
comp=Z,6.0nm,0.9s
VYHS Vyhne 39.54 57 *e*P **P 10 02 31.5 +0.8**
VYHS *e* 10 02 36.9
NEEM North Greenlan 39.68 355 *i*P **P 10 02 32.3 +0.4**
NEEM IAmb IAmb 10 02 39.4
comp=Z,9.6nm,0.7s
MORH Mrgy, Hungar 39.70 61 ⇑P **P 10 02 32.4 +0.4**
MORH Mrgy, Hungar 39.70 61 P **P 10 02 31.9 -0.1**
BLO Bloomington 39.74 288 P **P 10 02 33.2 +0.9**
BLO Bloomington 39.74 288 P **P 10 02 33.3 +0.9**
BLO pmax pmax
comp=Z,24nm,1.1s
BUD Budapest 39.78 59 P **P 10 02 33.8 +1.2**
TIP Timpagrande 39.83 72 P **P 10 02 34.1 +0.8**
WCI Wyandotte Cave 39.83 286 P **P 10 02 34.2 +1.0**
WCI Wyandotte Cave 39.83 286 P **P 10 02 34.2 +1.0**
WCI pmax pmax
comp=Z,17nm,1.0s
WCI Wyandotte Cave 39.83 286 P **P 10 02 33.8 +0.6**
baz=73
WCI Wyandotte Cave 39.83 286 P **P 10 02 33.5 +0.3**
baz=73
SFIN Lafayette 39.85 290 P **P 10 02 33.3 0.0**
SFIN Lafayette 39.85 290 P **P 10 02 33.7 +0.4**
baz=75
SFIN Lafayette 39.85 290 P **P 10 02 33.7 +0.4**
baz=75
LANS Liptovska Anna 39.89 56 *e*P **P 10 02 36.2 +2.6**
LANS pmax pmax
comp=Z,7.0nm,1.3s
LANS Liptovska Anna 39.89 56 *e*P **P 10 02 36.2 +2.6**
U49A Red Boiling Sp 39.96 283 P **P 10 02 34.7 +0.3**
U49A Red Boiling Sp 39.96 283 P **P 10 02 34.6 +0.3**
baz=71
OJC Ojcow 40.01 55 *e*P **P 10 02 33.7 -0.8**
OJC Ojcow 40.01 55 P **P 10 02 34.8 +0.3**
OJC IAmb IAmb 10 02 42.1
comp=Z,27nm,1.0s
OJC Ojcow 40.01 55 P **P 10 02 34.8 +0.3**
OJC pmax pmax
comp=Z,27nm,1.0s
L44A Lake County Fo 40.01 293 P **P 10 02 34.6 -0.1**
baz=77
W50A Signal Mountai 40.04 281 P **P 10 02 35.5 +0.5**
PSZ Piszkesteto 40.31 58 ⇑P **P 10 02 37.8 +0.6**
PSZ Piszkesteto 40.31 58 P **P 10 02 37.9 +0.8**
PSZ Piszkesteto 40.31 58 P **P 10 02 37.9 +0.8**
PSZ pmax pmax
comp=Z,16nm,1.0s
PSZ Piszkesteto 40.31 58 P **P 10 02 38.1 +1.0**
NIE Niedzica 40.41 56 *e*P **P 10 02 40.0 +2.2**
CLTN Cedars of Leba 40.52 283 P **P 10 02 39.5 +0.6**
BEL Belsk 40.52 52 *e*P **P 10 02 40.3 +1.6**
FRGS Fruska Gora 40.68 62 ⇓P **P 10 02 40.7 +0.6**
USIN University of 40.94 286 P **P 10 02 43.0 +0.6**
USIN IAmb IAmb 10 02 49.1
comp=Z,25nm,0.9s
DIVS Divibare 41.01 64 P **P 10 02 43.3 +0.3**
PBUR Paburge 41.10 46 *e*P **P 10 02 44.5 +1.1**
TORD Torodi Ar. Bea 41.10 118 P **P 10 02 43.8 -0.1**
comp=Z,15nm,0.3s,baz=319,slow=6.9,SNR=2.1
HDIL Hopedale 41.42 291 P **P 10 02 46.4 +0.1**
baz=74
EYMN Ely 41.45 302 P **P 10 02 46.3 -0.1**
baz=82
JFWS Jewell Farm 41.53 294 P **P 10 02 47.8 +0.7**
baz=77
I40A Norwalk 41.57 296 P **P 10 02 48.2 +0.7**
WVT Waverly 41.65 284 P **P 10 02 47.9 -0.3**
baz=70
TIC Toumodi 41.67 132 ⇓*i*P **P 10 02 48.7 +0.1**
comp=Z,3.2nm,0.2s
LTVH Ltavrtes, Hu 41.73 59 P **P 10 02 49.5 +0.8**
DBIC Dimbokro 41.75 132 P **P 10 02 49.5 +0.3**
comp=Z,20nm,1.1s,baz=314,slow=6.7,SNR=13
DBIC LR LR 10 18 51.7
comp=Z,177nm,18.2s,baz=336,slow=34
comp=Z,20nm,1.1s
DBIC Dimbokro 41.75 132 P **P 10 02 49.5 +0.3**
DBIC IAmb IAmb 10 02 56.5
comp=Z,31nm,1.1s
DBIC Dimbokro 41.75 132 P **P 10 02 49.5 +0.3**
DBIC pmax pmax
comp=Z,31nm,1.1s
KOLS Kolonicke sedl 41.75 56 *e*P **P 10 02 50.2 +1.3**
KOLS *e* 10 02 56.9
KOLS pmax pmax
comp=Z,21nm,1.1s
KOLS Kolonicke sedl 41.75 56 *e*P **P 10 02 50.2 +1.3**
KOLS *e* 10 02 56.9
SIRR Siria 41.76 60 ⇑P **P 10 02 50.1 +1.1**
UZH Uzhgorod 41.80 57 *e*P **P 10 02 48.6 -0.7**
UZH *i* 10 02 54.8
BAUV El Baul 41.81 234 P **P 10 02 49.5 -0.2**
P43A Skaggs, Pawnee 41.84 289 P **P 10 02 50.5 +0.7**
BZS Buzias 41.85 61 ⇑P **P 10 02 49.5 -0.2**
LIC Lamto 42.01 132 ⇓*e*P **P 10 02 50.7 -0.6**
comp=Z,5.6nm,0.3s
ROSB Rosrio 42.03 194 *e*P **P 10 02 51.2 -0.3**
KIC Kosan Boka 42.06 132 ⇑*i*P **P 10 02 51.6 -0.2**
comp=Z,7.2nm,0.7s
MDVR Moldovita 42.08 63 ⇑P **P 10 02 53.0 +1.4**
LRAL Lakeview Retre 42.13 279 P **P 10 02 52.6 +0.4**
baz=67
MTSE Matsula 42.18 42 *e*P **P 10 02 53.6 +1.4**
SIUC Southern Illin 42.19 287 P **P 10 02 53.6 +1.0**
SIUC IAmb IAmb 10 02 59.5
comp=Z,26nm,1.1s
VSVD Vaisvydziai 42.22 46 *e*P **P 10 02 53.8 +1.2**
S44A Carbondale 42.22 287 P **P 10 02 53.8 +0.9**
S44A IAmb IAmb 10 02 59.7
comp=Z,20nm,0.8s
PABE Paberze 42.26 46 P **P 10 02 53.7 +0.9**
PABE Paberze 42.26 46 *e*P **P 10 02 54.0 +1.1**
BOVS Bovan 42.32 64 ⇓P **P 10 02 54.3 +0.6**
DRGR 42.38 59 ⇓P **P 10 02 54.7 +0.6**
TMAB Tom-Au,PA,Br 42.42 200 *e*P **P 10 02 54.8 +0.1**
L40A Anamosa 42.43 293 P **P 10 02 55.0 +0.4**
L40A Anamosa 42.43 293 P **P 10 02 54.3 -0.2**
baz=75
N41A Harden Midland 42.52 291 P **P 10 02 55.9 +0.6**
N41A IAmb IAmb 10 03 02.7
comp=Z,43nm,1.1s
MEF Metsahovi 42.55 39 *e*P **P 10 02 56.5 +1.3**
HICK Hickman 42.58 285 P **P 10 02 56.4 +0.6**
HICK IAmb IAmb 10 03 03.0
comp=Z,55nm,1.3s
GZR Gura Zlata 42.69 61 ⇑P **P 10 02 57.3 +0.6**
LVV L'vov 42.77 55 *e*P **P 10 02 58.1 +0.9**
SPMN Marine on St. 42.82 298 P **P 10 02 57.5 -0.1**
baz=78
BOAV Boa Vista 42.85 219 *e*P **P 10 02 57.5 -0.7**
Z47A Carrollton 42.90 280 P **P 10 02 58.8 +0.4**
baz=67
BLKB Belogradchik 43.01 64 ⇑P **P 10 03 00.5 +1.3**
W45A Hickory Valley 43.03 283 P **P 10 03 00.2 +0.7**
W45A Hickory Valley 43.03 283 P **P 10 03 00.2 +0.7**
baz=69,SNR=11
LOT Lotru 43.36 61 ⇑P **P 10 03 03.1 +0.9**
K38A Parkersburg 43.40 295 P **P 10 03 02.7 +0.3**
K38A IAmb IAmb 10 03 09.1
comp=Z,27nm,1.2s
K38A Parkersburg 43.40 295 P **P 10 03 02.5 +0.2**
baz=75
OXF Oxford 43.43 282 P **P 10 03 02.6 -0.2**
baz=68
OXF Oxford 43.43 282 P **P 10 03 02.5 -0.2**
baz=68
FINES FINESS Array B 43.44 38 P **P 10 03 02.6 +0.2**
comp=Z,2.1nm,0.9s,baz=267,slow=7.6,SNR=6.1
FINES LR LR 10 19 11.6
comp=Z,35nm,18.0s,baz=258,slow=33
comp=Z,2.1nm,0.9s

SDV Santo Domingo 43.53 237 P **P 10 03 04.5 +0.7**
comp=Z,8.3nm,0.4s,baz=36,slow=7.1,SNR=8.6
SDV LR LR 10 17 41.9
comp=Z,68nm,21.9s,baz=72,slow=31
comp=Z,8.3nm,0.4s
SDV Santo Domingo 43.53 237 P **P 10 03 04.6 +0.7**
SDV IAmb IAmb 10 03 11.6
comp=Z,34nm,0.9s
SDV Santo Domingo 43.53 237 *e*P **P 10 03 05.3 +1.4**
CCM Cathedral Cave 43.60 288 P **P 10 03 04.0 0.0**
baz=71
CCM Cathedral Cave 43.60 288 P **P 10 03 03.7 -0.4**
baz=71
VSU Vasula 43.71 42 *i*P **P 10 03 04.2 -0.4**
VSU pmax pmax
comp=Z,34nm,1.0s
VSU Vasula 43.71 42 *e*P **P 10 03 05.7 +1.1**
P40A Paris 43.74 290 P **P 10 03 05.5 +0.4**
P40A IAmb IAmb 10 03 11.7
comp=Z,15nm,0.8s
P40A Paris 43.74 290 P **P 10 03 04.9 -0.3**
baz=72,SNR=12
Y45A Yeager Farm, C 43.78 281 P **P 10 03 05.4 -0.1**
Y45A IAmb IAmb 10 03 18.2
comp=Z,48nm,1.2s
Y45A Yeager Farm, C 43.78 281 P **P 10 03 06.1 +0.6**
baz=68
BUR08 Bucovina Ar. S 43.89 58 P **P 10 03 07.6 +1.3**
BUR08 IAmb IAmb 10 03 15.2
comp=Z,21nm,1.1s
NACGM Naroch 43.90 47 ⇑*e*P P 10 03 13.1 +6.9
baz=275
BURAR Bucovina Array 43.90 58 ⇓P **P 10 03 08.3 +1.8**
SCIA State Center 43.91 294 P **P 10 03 06.5 +0.1**
baz=74
MALB Monte Alegre 43.91 208 *e*P **P 10 03 05.8 -0.9**
ULM Lac du Bonnet 43.95 306 P **P 10 03 06.3 -0.4**
comp=Z,2.9nm,0.8s,baz=60,slow=10,SNR=3.8
ULM LR LR 10 21 14.5
comp=Z,160nm,18.9s,baz=220,slow=36
comp=Z,2.9nm,0.8s
RCBR Riachuelo 44.09 181 *e*P **P 10 03 08.9 +0.8**
SOCV Socops 44.12 236 *e*P **P 10 03 08.7 +0.2**
N38A Joes South For 44.23 292 P **P 10 03 09.3 +0.2**
N38A IAmb IAmb 10 03 15.5
comp=Z,19nm,1.1s
VOIR 44.24 61 ⇑P **P 10 03 10.6 +1.4**
ARCES ARCESS Array B 44.26 26 P **P 10 03 09.6 +0.6**
comp=Z,7.1nm,1.0s,baz=230,slow=11,SNR=5.7
ARCES LR LR 10 20 29.1
comp=Z,30nm,18.2s,baz=278,slow=34
comp=Z,7.1nm,1.0s
AGMN Agassiz Nation 44.27 303 P **P 10 03 09.4 +0.1**
AGMN Agassiz Nation 44.27 303 P **P 10 03 08.0 -1.3**
baz=79
R40A Maddies Statio 44.29 288 P **P 10 03 09.3 -0.2**
R40A IAmb IAmb 10 03 16.4
comp=Z,21nm,1.1s
R40A Maddies Statio 44.29 288 P **P 10 03 09.0 -0.6**
baz=71,SNR=10
DOPR Dopca 44.36 60 ⇓P **P 10 03 11.0 +1.0**
MNK Minsk 44.57 48 *i*P **P 10 03 09.7 -1.8**
MNK *i* 10 04 53.4
MNK *i* PPP PPP 10 05 29.9
MNK *i* S **S 10 09 45.0 -1.4**
MNK *i* SS **SS 10 13 05.7 -0.3**
MNK pmax pmax
comp=Z,16nm,1.1s
MNK pmax pmax
comp=E,3.0nm,1.0s
MNK MLR MLR
comp=Z,52nm,12.0s
MNK MLR MLR
comp=E,8.0nm,11.0s
MNK Minsk 44.57 48 *i*P **P 10 03 09.8 -1.8**
comp=E,3.0nm,1.0s
MNK *i* P **P 10 03 09.8 -1.8**
MNK *i* P **P 10 03 09.8 -1.8**
comp=Z,16nm,1.1s,baz=276
MNK *i* PP **PcP 10 04 53.5 -0.9**
MNK *i* PPP PPP 10 05 30.0
MNK *i* S **S 10 09 45.1 -1.4**
MNK *i* SS **SS 10 13 05.7 -0.3**
MNK *i* SSS SSS 10 13 46.9
MNK *i* LQ LQ 10 18 25.1
MNK *i* LR LR 10 20 44.0
MNK *i* LRM MLR 10 22 14.1
comp=Z,52nm,11.5s
MNK *i* LRM MLR 10 22 17.3
comp=E,8.0nm,10.9s
OZUR 44.60 60 P **P 10 03 13.4 +1.3**
BIZ Bicaz 44.63 59 ⇑P **P 10 03 14.0 +1.8**
P38A Dawn 44.80 291 P **P 10 03 13.8 +0.1**
P38A IAmb IAmb 10 03 20.2
comp=Z,15nm,0.9s
P38A Dawn 44.80 291 P **P 10 03 13.8 +0.1**
baz=72,SNR=7.5
MLR Muntele Rosu 44.84 61 ⇑P **P 10 03 14.5 +0.4**
MLR Muntele Rosu 44.84 61 LR LR 10 20 40.5
comp=Z,105nm,20.6s,baz=277,slow=34
MLR Muntele Rosu 44.84 61 P **P 10 03 15.1 +1.0**
MLR IAmb IAmb 10 03 24.1
comp=Z,25nm,1.1s
MLR Muntele Rosu 44.84 61 P **P 10 03 15.1 +1.0**
MLR pmax pmax
comp=Z,25nm,1.1s
COVR Voineasa-Covas 44.94 60 ⇑P **P 10 03 16.1 +1.4**
VBMS Vicksburg 45.18 280 P **P 10 03 16.1 -0.6**
baz=66
PLOR Plostina 45.24 60 ⇑P **P 10 03 17.3 +0.2**
S39A Bolivar 45.27 288 P **P 10 03 17.6 +0.2**
S39A IAmb IAmb 10 03 23.6
comp=Z,12nm,0.8s
S39A Bolivar 45.27 288 P **P 10 03 17.6 +0.2**
baz=70,SNR=7.1
VRI Vrincioaia 45.29 60 ⇑P **P 10 03 18.4 +0.9**
CCAR Cane Creek 45.47 282 P **P 10 03 18.5 -0.5**
RDO Rodhopi 45.72 67 P **P 10 03 21.9 +1.0**
RDO IAmb IAmb 10 03 35.5
comp=Z,14nm,0.9s
OCAC Ocana 45.79 239 *e*P **P 10 03 20.5 -1.4**
ECSD EROS Data Cent 45.82 297 P **P 10 03 21.6 -0.1**
ECSD IAmb IAmb 10 03 28.1
comp=Z,11nm,0.8s
ECSD EROS Data Cent 45.82 297 P **P 10 03 21.2 -0.5**
baz=74,SNR=10
ECSD EROS Data Cent 45.82 297 P **P 10 03 21.1 -0.7**
baz=74,SNR=10
SJCC San Jacinto, C 45.88 242 *e*P **P 10 03 24.2 +1.7**
AKASG Malin Array Be 45.92 53 P **P 10 03 22.6 +0.3**
comp=Z,10nm,0.9s,baz=278,slow=7.6,SNR=34
AKASG LR LR 10 21 47.0
comp=Z,158nm,18.4s,baz=290,slow=35
comp=Z,10nm,0.9s
AKBB Malin Array Si 45.92 53 P **P 10 03 22.5 +0.2**
AKBB Malin Array Si 45.92 53 *de*P **P 10 03 22.1 -0.2**
AKBB pmax pmax
comp=Z,22nm,1.1s
N35A Tabor 45.96 293 P **P 10 03 22.9 +0.1**
N35A IAmb IAmb 10 03 29.5
comp=Z,15nm,1.0s
N35A Tabor 45.96 293 P **P 10 03 23.1 +0.3**
baz=72
PAMC Pamplona, Colo 46.04 238 *e*P P 10 03 29.9 +5.6
L34A Svendsen Farm, 46.15 295 P **P 10 03 24.0 -0.3**
L34A IAmb IAmb 10 03 31.1
comp=Z,30nm,1.1s
HHAR Hobbs 46.23 286 P **P 10 03 24.9 -0.1**
CFR Carcaliu 46.42 61 ⇑P **P 10 03 25.9 -0.4**
U38A Gravette 46.51 287 P **P 10 03 26.5 -0.7**
baz=69
PRPB Parauapebas 46.52 201 *e*P **P 10 03 27.3 -0.1**
TLBR Topalu 46.52 61 ⇑P **P 10 03 27.9 +0.7**
MIAR Mount Ida 46.60 284 P **P 10 03 27.3 -0.6**
MIAR IAmb IAmb 10 03 34.3
comp=Z,10nm,0.9s
MIAR Mount Ida 46.60 284 P **P 10 03 27.3 -0.6**
MIAR pmax pmax
comp=Z,10.0nm,1.0s
MIAR Mount Ida 46.60 284 P **P 10 03 27.9 -0.1**
baz=67,SNR=8.4
MIAR Mount Ida 46.60 284 P **P 10 03 27.2 -0.8**
baz=67,SNR=8.4
ITTB Itaituba 46.78 209 *e*P **P 10 03 28.5 -0.9**
TIRR Tirgusor 46.80 61 ⇑P **P 10 03 29.6 +0.3**

MDND Maddock 46.82 303 P **P 10 03 29.7 +0.2**
MDND Maddock 46.82 303 P **P 10 03 28.8 -0.7**
baz=76
NBRF Rio Formoso - 46.91 180 *e*P **P 10 03 31.4 +1.0**
RLO Rose Lookout 47.09 287 P **P 10 03 31.4 -0.4**
RLO IAmb IAmb 10 03 38.2
comp=Z,29nm,1.2s
KSU1 Kansas State U 47.23 291 P **P 10 03 32.5 -0.3**
KSU1 Kansas State U 47.23 291 P **P 10 03 32.3 -0.5**
baz=70,SNR=8.5
KSU1 Kansas State U 47.23 291 P **P 10 03 32.0 -0.8**
baz=70,SNR=8.5
IDI Anoyia 47.23 74 LR LR 10 20 56.7
comp=Z,41nm,21.6s,baz=278,slow=33
SUSD Miller 47.25 299 P **P 10 03 32.0 -0.9**
baz=74
RUSC La Rusia 47.37 237 *e*P **P 10 03 34.2 -0.4**
ZARC Zaragoza, Cauc 47.37 240 *e*P **P 10 03 34.0 -0.2**
BGNE Belgrade 47.59 295 P **P 10 03 35.8 +0.2**
BGNE Belgrade 47.59 295 P **P 10 03 35.9 +0.2**
baz=72
BGNE Belgrade 47.59 295 P **P 10 03 34.4 -1.2**
baz=72
TUL1 Leonard 47.76 287 P **P 10 03 35.9 -1.1**
baz=68
PTBC PUERTO BERRIO, 47.80 239 *e*P **P 10 03 36.5 -1.0**
X37A Clayton 47.95 285 P **P 10 03 37.5 -1.0**
baz=67,SNR=5.1
SMTB Santa Maria do 48.55 197 *e*P **P 10 03 43.0 -0.2**
NATX Nacogdoches 48.57 281 P **P 10 03 41.9 -1.3**
baz=65
HELC Santa Helena 48.77 239 *e*P **P 10 03 45.2 -0.1**
NORC Norcasia 48.79 238 *e*P **P 10 03 45.0 -0.2**
ROSC El Rosal 48.96 237 P **P 10 03 47.4 +0.5**
comp=Z,12nm,0.9s,baz=47,slow=1.9,SNR=7.1
ROSC LR LR 10 23 00.1
comp=Z,150nm,20.5s,baz=56,slow=34
comp=Z,12nm,0.9s
ROSC El Rosal 48.96 237 P **P 10 03 47.2 +0.3**
ROSC El Rosal 48.96 237 P **P 10 03 47.2 +0.3**
ROSC pmax pmax
comp=Z,33nm,1.3s
NPGB Novo Progresso 49.11 207 *e*P **P 10 03 46.6 -0.9**
CROK Carrier 49.17 288 P **P 10 03 47.9 0.0**
CROK IAmb IAmb 10 03 53.9
comp=Z,28nm,1.1s
NBLA Lagarto - SE 49.28 184 *e*P **P 10 03 49.0 +0.2**
CBOC Ciudad Bolivar 49.34 239 *e*P **P 10 03 50.0 +0.5**
CBOC *e* **sP 10 03 54.9 -0.2**
GUY2C Guyana, Caldas 49.37 238 *e*P **P 10 03 50.4 +0.3**
OBN Obninsk 49.45 46 *de*P **P 10 03 50.2 +0.6**
OBN *i* 10 03 56.2
OBN 10 05 18.0
OBN PPP PPP 10 06 44.0
OBN pmax pmax
comp=Z,63nm,1.7s
OBN MLR MLR
comp=Z,97nm,16.0s
CBKS Cedar Bluff 49.61 292 P **P 10 03 49.7 -1.5**
baz=69
DGMT Dagmar 49.64 305 P **P 10 03 49.9 -1.4**
baz=74
MOS Moscow 49.91 45 *e*P **P 10 03 51.1 -2.1**
MOS pmax pmax
comp=Z,44nm,1.2s
KLMR Klimovskoe 49.97 38 *e*P **P 10 03 51.9 -1.6**
KLMR pmax pmax
comp=Z,26nm,1.2s
KLMR Klimovskoe 49.97 38 *e*P **P 10 03 52.0 -1.6**
KLMR AMP 10 04 01.7
comp=Z,26nm,1.2s
PLMC San Jos del P 50.22 239 *e*P **P 10 03 56.4 +0.3**
WMOK Wichita Mounta 50.47 287 P **P 10 03 55.8 -1.9**
baz=66
OGNE Ogallala 50.51 295 P **P 10 03 55.7 -2.3**
baz=69
SIM Simferopol' 50.55 59 *e*P P 10 04 05.3 +7.1
SIM pmax pmax
comp=Z,33nm,1.2s
SIM MLR MLR
comp=Z,75nm,19.3s
WHTX Lake Whitney, 50.61 283 P **P 10 03 58.6 -0.2**
WHTX IAmb IAmb 10 04 11.8
comp=Z,22nm,1.2s
WHTX Lake Whitney, 50.61 283 P **P 10 03 57.5 -1.4**
baz=64
MACC Macaena, Meta 50.70 234 *e*P **P 10 04 04.4 +4.8**
435B Jarrell 51.24 281 P **P 10 04 03.1 -0.6**
baz=63
LPSR Galich'ya Gora 51.39 49 *e*P **P 10 04 04.4 0.0**
LPSR *e**SP **sP 10 04 10.6 +0.7**
LPSR pmax pmax
comp=Z,40nm,1.1s
SDBA SAO DESIDERIO 51.47 192 *e*P **P 10 04 04.5 -0.9**
LAO LASA Array 51.47 304 P **P 10 04 06.1 +0.9**
LAO IAmb IAmb 10 04 12.8
comp=Z,34nm,1.1s
LAO LASA Array 51.47 304 P **P 10 04 05.9 +0.7**
baz=72,SNR=20
LAO LASA Array 51.47 304 P **P 10 04 05.1 -0.1**
baz=72,SNR=20
VORR Voronezh 51.81 50 *e*P **P 10 04 08.2 +0.7**
VORR pmax pmax
comp=Z,50nm,0.4s
BOAB BOACO BROADBAN 51.82 254 P **P 10 04 09.0 +0.9**
VSR Storozhevoye 51.91 50 *e*P **P 10 04 07.1 -1.2**
VSR *e**SP **sP 10 04 13.3 -0.5**
VSR pmax pmax
comp=Z,20nm,1.2s
ABTX Abilene, Hawle 52.01 285 P **P 10 04 08.0 -1.3**
baz=64
BR131 Keskin Array S 52.02 66 P **P 10 04 10.5 +1.1**
BR131 Keskin Array S 52.02 66 *i*P **P 10 04 07.8 -1.6**
BRTR Keskin Array B 52.02 66 P **P 10 04 10.7 +1.2**
comp=Z,2.5nm,0.9s,baz=289,slow=7.6,SNR=11
BRTR PcP **PcP 10 05 21.8 +0.1**
comp=Z,1.3nm,0.9s,baz=248,slow=1.6,SNR=2.3
BRTR LR LR 10 24 29.4
comp=Z,36nm,20.6s,baz=300,slow=34
comp=Z,2.5nm,0.9s
BRTR Keskin Array B 52.02 66 P **P 10 04 10.4 +1.0**
BRTR Keskin Array B 52.02 66 P **P 10 04 10.4 +1.0**
GDU01 Guandu, BA 52.10 186 *e*P **P 10 04 10.8 +0.8**
YKA Yellowknife Ar 52.10 325 LR LR 10 25 24.2
comp=Z,59nm,20.3s,baz=298,slow=35
POPC Popayan, Colom 52.23 237 *e*P **P 10 04 09.8 -1.6**
SNDB Serra Nova Dou 52.47 200 *e*P **P 10 04 12.2 -0.6**
AMTX Amarillo 52.58 288 P **P 10 04 13.6 -0.1**
AMTX IAmb IAmb 10 04 20.3
comp=Z,14nm,1.0s
AMTX Amarillo 52.58 288 P **P 10 04 12.1 -1.6**
baz=65
JTS Las Juntas de 52.67 251 *i*P **P 10 04 17.1 +2.7**
JTS pmax pmax
comp=Z,14nm,1.5s
PRGR Permogore 52.71 36 *e*P P 10 04 19.8 +5.7
PTLC Puerto Leguiza 52.81 234 *e*P **P 10 04 16.4 +0.9**
CLDB Colider 52.82 206 *e*P **P 10 04 14.7 -0.7**
BBAC Balboa, Cauca 53.00 237 *e*P **P 10 04 16.5 -0.5**
K22A Casper 53.04 299 P **P 10 04 16.3 -0.7**
baz=69
JCT Junction City 53.09 282 P **P 10 04 17.3 0.0**
baz=63
JCT Junction City 53.09 282 P **P 10 04 16.3 -1.1**
baz=63
N23A Red Feather La 53.28 297 P **P 10 04 19.4 +0.4**
N23A IAmb IAmb 10 04 26.7
comp=Z,23nm,1.1s
N23A Red Feather La 53.28 297 P **P 10 04 18.4 -0.6**
baz=68,SNR=12
EGMT Eagleton 53.32 306 P **P 10 04 19.5 +0.6**
EGMT IAmb IAmb 10 04 26.7
comp=Z,35nm,1.1s
EGMT Eagleton 53.32 306 P **P 10 04 18.6 -0.3**
baz=71,SNR=12
TBTG Tabatinga, AM 53.37 225 P **P 10 04 18.9 -0.6**
TBTG IAmb IAmb 10 04 26.0
comp=Z,60nm,1.1s
TBTG Tabatinga, AM 53.37 225 *e*P **P 10 04 18.6 -0.9**
VRH Novokhopyorsk 53.45 50 *e*P **P 10 04 20.7 +1.0**
VRH *e**SP **sP 10 04 26.2 +1.0**
VRH pmax pmax
comp=Z,10.0nm,0.7s
Q24A Divide 53.47 294 P **P 10 04 19.2 -1.2**
baz=67

ISCO	Idaho Springs	53.47	295	P		P		10 04 18.3	-2.1
	baz=67								
T25A	Trinidad	53.66	292	P		P		10 04 20.8	-1.0
	baz=66								
CMC01	Camacan, BA	53.72	185	*e*P		P		10 04 21.3	-0.6
833A	Chaparral WMA,	53.78	280	P		P		10 04 21.0	-1.4
	baz=61								
MSTX	Muleshoe	53.78	287	P		P		10 04 21.1	-1.5
	baz=64								
PDRB	Porto dos Gac	53.83	207	*e*P		P		10 04 22.5	-0.3
EDM	Edmonton	53.84	313	P		P		10 04 23.6	+1.0
EDM				IAmb		IAmb		10 04 30.5	
	comp=Z,34nm,1.4s								
EDM	Edmonton	53.84	313	P		P		10 04 23.6	+1.0
EDM				pmax		pmax			
	comp=Z,35nm,1.4s								
JANB	Januaria	53.97	191	*e*P		P		10 04 23.2	-0.7
RLMT	Red Lodge	54.00	303	P		P		10 04 23.3	-0.8
	baz=69								
A36M	Sachs Harbour	54.01	337	P		P		10 04 24.4	+0.9
A36M				IAmb		IAmb		10 04 31.1	
	comp=Z,16nm,1.1s								
A36M	Sachs Harbour	54.01	337	P		P		10 04 22.3	-1.2
	baz=76								
GCMT	Greycliff	54.03	303	P		P		10 04 25.0	+0.8
SDCO	Great Sand Dun	54.21	293	P		P		10 04 25.0	-0.8
	baz=66								
SMCO	Snowmass	54.68	295	P		P		10 04 30.2	+0.8
SOC	Sochi	54.79	59	*e*P		P		10 04 22.6	-7.0
SOC				*e*				10 06 28.9	
SOC				*e*PPP		PPP		10 07 40.0	
SOC				*e*SSS		SSS		10 18 00.2	
SOC				pmax		pmax			
	comp=Z,5.0nm,0.4s								
SOC				MLR		MLR			
	comp=Z,28nm,12.0s								
BW06	Boulder Array	55.07	300	P		P		10 04 31.5	-0.5
BW06				IAmb		IAmb		10 04 38.9	
	comp=Z,13nm,1.1s								
BW06	Boulder Array	55.07	300	P		P		10 04 30.8	-1.2
	baz=67,SNR=9.4								
PD31	Pinedale Array	55.07	300	P		P		10 04 31.1	-0.8
PDAR	Pinedale Array	55.07	300	P		P		10 04 31.4	-0.5
	comp=Z,1.9nm,0.9s,baz=64,slow=6.8,SNR=18								
PDAR				LR		LR		10 27 18.8	
	comp=Z,146nm,21.9s,baz=84,slow=35								
	comp=Z,1.9nm,0.9s								
HRY	Holter Researc	55.10	305	P		P		10 04 32.0	0.0
OTAV	Otavalo	55.12	237	*e*P		P		10 04 32.3	-0.5
S22A	4UR Ranch, Cre	55.17	293	P		P		10 04 32.5	-0.3
	baz=65,SNR=7.0								
O20A	White River Ci	55.19	297	P		P		10 04 32.2	-0.7
	baz=66,SNR=11								
BDFB	Brasilia	55.21	195	P		P		10 04 32.0	-0.9
	comp=Z,6.4nm,0.8s,baz=215,slow=3.6,SNR=6.9								
	comp=Z,6.4nm,0.8s								
BDFB	Brasilia	55.21	195	P		P		10 04 32.4	-0.5
BDFB				IAmb		IAmb		10 04 39.5	
	comp=Z,12nm,1.0s								
BDFB	Brasilia	55.21	195	P		P		10 04 32.4	-0.5
BDFB				pmax		pmax			
	comp=Z,12nm,1.0s								
BDFB	Brasilia	55.21	195	*e*P		P		10 04 32.2	-0.7
YMR	Madison River	55.29	303	P		P		10 04 34.8	+1.3
KIRV	Kirov	55.37	39	*ce*P		P		10 04 33.8	+0.3
BOZ	Bozeman (W)	55.38	304	P		P		10 04 34.3	+0.3
BOZ	Bozeman (W)	55.38	304	P		P		10 04 34.3	+0.3
BOZ				pmax		pmax			
	comp=Z,11nm,1.1s								
BOZ	Bozeman (W)	55.38	304	P		P		10 04 33.5	-0.5
	baz=68,SNR=16								
LOHW	Long Hollow	55.45	301	P		P		10 04 34.9	+0.3
MC01	Montes Claros	55.54	190	*e*P		P		10 04 34.5	-0.7
WALA	Waterton Lakes	55.56	308	P		P		10 04 35.4	+0.1
REDW	Red Top Meadow	55.71	301	P		P		10 04 36.6	+0.1
REDW				IAmb		IAmb		10 04 44.1	
	comp=Z,14nm,1.2s								
RDMU	Red Mountain	55.95	298	P		P		10 04 38.0	-0.3
RDMU				IAmb		IAmb		10 04 45.1	
	comp=Z,11nm,1.0s								
ANMO	Albuquerque	56.10	290	LR		LR		10 26 56.9	
	comp=Z,222nm,21.2s,baz=74,slow=34								
ANMO	Albuquerque	56.10	290	P		P		10 04 40.3	+0.9
ANMO	Albuquerque	56.10	290	*ce*P		P		10 04 39.0	-0.4
ANMO				pmax		pmax			
	comp=Z,8.0nm,2.5s								
ANMO	Albuquerque	56.10	290	P		P		10 04 39.5	+0.1
	baz=64								
AHID	Auburn Hatcher	56.12	301	P		P		10 04 39.6	+0.2
CMIG	Matias Romero	56.15	265	LR		LR		10 25 39.1	
	comp=Z,110nm,21.7s,baz=54,slow=33								
ETMB	Extrema	56.20	218	P		P		10 04 38.6	-1.4
ETMB				IAmb		IAmb		10 04 44.8	
	comp=Z,8.8nm,1.0s								
ETMB	Extrema	56.20	218	*e*P		P		10 04 38.0	-2.0
NAN01	Guarapari, ES	56.23	186	*e*P		P		10 04 39.4	-0.7
JTMT	Jette	56.27	307	P		P		10 04 40.6	+0.2
JTMT				IAmb		IAmb		10 04 46.8	
	comp=Z,12nm,1.0s								
VILB	Vilhena	56.36	210	P		P		10 04 41.3	+0.3
VILB				IAmb		IAmb		10 04 47.8	
	comp=Z,30nm,0.8s								
VILB	Vilhena	56.36	210	*e*P		P		10 04 40.9	-0.2
MSO	Missoula	56.40	306	P		P		10 04 41.5	+0.2
MSO				IAmb		IAmb		10 04 48.6	
	comp=Z,16nm,1.2s								
MSO	Missoula	56.40	306	P		P		10 04 40.8	-0.5
	baz=68,SNR=9.3								
BELG	Belogornoye	56.51	47	LR		LR		10 27 49.8	
	comp=Z,102nm,19.4s,baz=139,slow=35								
BELG	Belogornoye	56.51	47	*i* P		P		10 04 41.6	-0.1
BELG				pmax		pmax			
	comp=Z,10.0nm,1.1s								
BNM	Barren Site	56.58	289	P		P		10 04 43.8	+0.9
TX31	Lajitas Ar. Si	56.58	283	P		P		10 04 42.8	0.0
TX31				IAmb		IAmb		10 04 52.0	
	comp=Z,15nm,1.0s								
TX31	Lajitas Ar. Si	56.58	283	P		P		10 04 41.8	-1.0
	baz=61								
TXAR	Lajitas Array	56.58	283	P		P		10 04 42.0	-0.8
	comp=Z,1.4nm,0.9s,baz=78,slow=5.8,SNR=12								
TXAR				LR		LR		10 27 29.2	
	comp=Z,115nm,20.4s,baz=72,slow=34								
	comp=Z,1.4nm,0.9s								
TXAR	Lajitas Array	56.58	283	P		P		10 04 42.6	-0.1
TXAR	Lajitas Array	56.58	283	P		P		10 04 42.7	-0.1
MVCO	Mesa Verde	56.59	293	P		P		10 04 44.1	+1.1
MVCO				IAmb		IAmb		10 04 52.2	
	comp=Z,17nm,1.1s								
MVCO	Mesa Verde	56.59	293	P		P		10 04 43.0	0.0
	baz=64,SNR=10								
KIV	Kislovodsk	56.63	58	*e*P		P		10 04 44.1	+1.2
KIV				pmax		pmax			
	comp=Z,11nm,1.0s								
KIV				MLR		MLR			
	comp=Z,37nm,17.0s								
SHA1	Shidzhatmaz	56.70	58	*i* P		P		10 04 42.4	-1.2
MNTX	Cornudas Mount	56.77	286	P		P		10 04 43.4	-0.5
	baz=62								
P18A	Preston Nutter	56.81	297	P		P		10 04 44.8	+0.2
Y22D	IRIS PASSCAL I	56.83	289	P		P		10 04 43.1	-1.4
	baz=63								
KBZ	Khabaz	56.86	58	P		P		10 04 46.6	+2.2
	comp=Z,6.7nm,0.9s,baz=303,slow=5.2,SNR=14								
KBZ				LR		LR		10 28 27.7	
	comp=Z,50nm,21.3s,baz=17,slow=35								
	comp=Z,6.7nm,0.9s								
KBZ	Khabaz	56.86	58	*ce*P		P		10 04 45.5	+1.1
KBZ				pmax		pmax			
	comp=Z,11nm,1.0s								
Y22A	Socorro	56.92	289	P		P		10 04 45.4	+0.1
	baz=63,SNR=5.6								
DIAM	Diamantina, MG	57.06	190	*e*P		P		10 04 45.5	-0.6
SBM	South Baldy	57.06	289	P		P		10 04 46.9	+0.4
SJMB	Sao Joao De Ma	57.18	187	*e*P		P		10 04 47.9	+1.1
JLU	Jordanelle	57.24	298	P		P		10 04 48.0	+0.5
JLU				IAmb		IAmb		10 04 54.5	
	comp=Z,16nm,1.1s								
EIL	Elat	57.32	76	LR		LR		10 31 52.5	
	comp=Z,25nm,18.0s,baz=269,slow=39								
NCK	Nalchik	57.42	58	*i* P		P		10 04 49.5	+1.1
NCK				pmax		pmax			
	comp=Z,13nm,0.5s								
SALV	Santo Antonio	57.48	204	*e*P		P		10 04 48.8	-0.2
IPMB	Ipameri, GO	57.52	195	*e*P		P		10 04 48.4	-0.9
HVU	Hansel Valley	57.65	300	P		P		10 04 50.5	+0.2
HVU				IAmb		IAmb		10 04 57.2	
	comp=Z,17nm,1.2s								
HVU	Hansel Valley	57.65	300	P		P		10 04 50.5	+0.2
HVU				pmax		pmax			
	comp=Z,17nm,1.2s								
BOSC	San Juan Bosco	57.71	234	P		P		10 04 50.1	-0.8
BOSC				IAmb		IAmb		10 04 56.6	
	comp=Z,17nm,0.9s								
RIB01	Linhares ES	57.71	186	*e*P		P		10 04 50.6	+0.1
PMNB	Patos De Minas	57.73	193	*e*P		P		10 04 51.6	+0.8
NEW	Newport	57.83	309	LR		LR		10 29 50.5	
	comp=Z,146nm,18.8s,baz=75,slow=36								
NEW	Newport	57.83	309	P		P		10 04 51.7	+0.4
NEW	Newport	57.83	309	P		P		10 04 51.7	+0.4
NEW				pmax		pmax			
	comp=Z,26nm,1.0s								
NEW	Newport	57.83	309	P		P		10 04 50.8	-0.5
	baz=67,SNR=14								
CZSB	Cruzeiro do Su	57.85	226	P		P		10 04 50.1	-1.6
CZSB				IAmb		IAmb		10 04 57.3	
	comp=Z,48nm,1.0s								
CZSB	Cruzeiro do Su	57.85	226	*e*P		P		10 04 49.4	-2.2
INK	Inuvik	57.88	334	P		P		10 04 51.8	+0.6
	comp=Z,5.1nm,1.0s,baz=40,slow=7.8,SNR=6.4								
INK				LR		LR		10 27 06.3	
	comp=Z,59nm,18.5s,baz=76,slow=33								
	comp=Z,5.1nm,1.0s								
INK	Inuvik	57.88	334	P		P		10 04 51.6	+0.5
INK				IAmb		IAmb		10 04 58.4	
	comp=Z,14nm,1.1s								
INK	Inuvik	57.88	334	P		P		10 04 51.7	+0.5
INK				pmax		pmax			
	comp=Z,14nm,1.1s								
INK	Inuvik	57.88	334	P		P		10 04 50.9	-0.3
	baz=66,SNR=9.2								
ZEI	Tsey	57.92	58	*e*P		P		10 04 53.2	+1.0
ZEI				pmax		pmax			
	comp=Z,22nm,1.0s								
NLU	North Lily Min	57.94	298	P		P		10 04 53.1	+0.6
HLID	Hailey	58.01	303	P		P		10 04 53.6	+0.8
HLID	Hailey	58.01	303	P		P		10 04 52.7	-0.1
	baz=65,SNR=12								
121A	Cookes Peak, D	58.18	288	P		P		10 04 55.1	+1.0
	baz=62								
121A	Cookes Peak, D	58.18	288	P		P		10 04 53.2	-0.9
	baz=62								
BGU	Big Grassy Mou	58.19	299	P		P		10 04 54.4	+0.3
BGU				IAmb		IAmb		10 05 01.0	
	comp=Z,17nm,1.2s								
PTLB	Pontes e Lacer	58.24	208	*e*P		P		10 04 53.5	-0.8
F31M	Tsiigehtchic	58.31	333	P		P		10 04 53.6	-0.6
	baz=66								
DUG	Dugway, Tooele	58.35	298	P		P		10 04 55.2	0.0
DUG				IAmb		IAmb		10 05 03.3	
	comp=Z,14nm,1.1s								
DUG	Dugway, Tooele	58.35	298	P		P		10 04 55.2	0.0
DUG				pmax		pmax			
	comp=Z,14nm,1.1s								
DUG	Dugway, Tooele	58.35	298	P		P		10 04 54.8	-0.4
	baz=64,SNR=7.4								
PLID	Pearl Lake	58.41	305	P		P		10 04 56.0	+0.4
TGTN	Hyland Airport	58.53	326	P		P		10 04 55.0	-1.0
	baz=67								
GROC	Groznyy	59.00	57	*e*P		P		10 05 01.3	+1.8
GROC				*e*				10 05 52.7	
GROC				pmax		pmax			
	comp=Z,50nm,0.6s								
ALF01	Guarapari-ES	59.03	186	*e*P		P		10 04 59.8	0.0
MMPY	Sheldon Lake,	59.37	328	P		P		10 05 00.5	-1.3
	baz=65								
G30M	tAoh Zraii Nji	59.38	333	P		P		10 05 00.8	-1.0
	baz=63								
WUAZ	Wupatki	59.43	293	P		P		10 05 03.7	+1.0
WUAZ				IAmb		IAmb		10 05 11.4	
	comp=Z,12nm,1.1s								
WUAZ	Wupatki	59.43	293	P		P		10 05 02.6	-0.1
	baz=62								
SIV	San Ignacio	59.46	209	LR		LR		10 26 43.3	
	comp=Z,42nm,20.9s,baz=106,slow=32								
GNI	Garni	59.62	61	LR		LR		10 31 32.1	
	comp=Z,34nm,18.9s,baz=312,slow=37								
GNI	Garni	59.62	61	*ce*P		P		10 05 05.0	+1.0
GNI				pmax		pmax			
	comp=Z,15nm,1.7s								
ITRB	Iturama	59.66	197	*e*P		P		10 05 03.8	-0.3
U15A	North Rim	59.67	294	P		P		10 05 05.5	+0.9
LLLB	Lillooet	59.71	313	P		P		10 05 04.6	+0.3
ELK	Elko	59.77	300	LR		LR		10 29 58.9	
	comp=Z,155nm,21.8s,baz=72,slow=35								
PSUT	Pine Spring	59.81	297	P		P		10 05 06.4	+1.0
PSUT				IAmb		IAmb		10 05 13.2	
	comp=Z,18nm,1.1s								
EPYK	Eagle Plains	59.83	333	P		P		10 05 06.0	+1.1
EPYK				IAmb		IAmb		10 05 12.7	
	comp=Z,28nm,1.5s								
EPYK	Eagle Plains	59.83	333	P		P		10 05 04.0	-0.9
	baz=63								
CCUT	Cedar City	59.91	296	P		P		10 05 08.0	+1.8
CCUT				IAmb		IAmb		10 05 14.5	
	comp=Z,11nm,1.1s								
SPR3	Spring Creek 3	59.93	298	P		P		10 05 07.8	+1.4
SPR3				IAmb		IAmb		10 05 15.1	
	comp=Z,9.9nm,1.1s								
X16A	Lo Mia Camp, P	59.99	292	P		P		10 05 08.5	+1.8
HAWA	Hanford	60.10	307	P		P		10 05 07.9	+0.9
CAM01	Campos-RJ	60.31	187	*e*P		P		10 05 09.3	+0.8
FARO	Faro, Yukon	60.41	328	P		P		10 05 09.2	+0.2
	baz=63								
LTY	Liberty	60.43	309	P		P		10 05 08.8	-0.5
LTY				IAmb		IAmb		10 05 15.4	
	comp=Z,13nm,1.0s								
TUC	Tucson	60.51	289	P		P		10 05 10.5	+0.4
	baz=61								
C27K	Jago River	60.53	338	P		P		10 05 09.9	+0.3
	baz=59,SNR=8.5								
F07A	Phinny Hill Vi	60.56	307	P		P		10 05 11.1	+1.0
E27K	Coleen River	60.61	336	P		P		10 05 09.2	-1.0
	baz=60,SNR=6.4								
DLBC	Dease Lake	60.63	323	LR		LR		10 30 50.8	
	comp=Z,118nm,18.7s,baz=108,slow=36								
DLBC	Dease Lake	60.63	323	P		P		10 05 10.5	-0.1
	baz=64								
DUB01	Friburgo-RJ	60.64	188	*e*P		P		10 05 10.9	+0.1
R33M	Jennings River	60.64	324	P		P		10 05 10.0	-0.7
	baz=64,SNR=8.9								
ATAH	Atahualpa	60.73	231	LR		LR		10 30 22.6	
	comp=Z,79nm,20.8s,baz=30,slow=35								
ARU	Arti	60.76	39	LR		LR		10 31 05.7	
	comp=Z,63nm,18.4s,baz=193,slow=36								
ARU	Arti	60.76	39	P		P		10 05 11.3	0.0
ARU	Arti	60.76	39	*c i* P		P		10 05 11.7	+0.4
ARU								10 05 50.8	
ARU								10 07 28.5	
ARU				PPP		PPP		10 08 49.3	
ARU				S		S		10 13 30.2	+2.8
ARU				SS		SS		10 17 21.8	-3.7
ARU				pmax		pmax			
	comp=Z,17nm,1.2s								
J08A	Circle Bar Ran	60.76	304	P		P		10 05 13.1	+1.3
J08A				IAmb		IAmb		10 05 25.1	
	comp=Z,26nm,1.4s								
N32M	Quiet Lake	60.79	327	P		P		10 05 11.4	-0.1
	baz=63								
MAYO	Mayo, Yukon	60.81	330	P		P		10 05 11.4	-0.2
	baz=62								
M31M	Drury Creek, Y	60.86	328	P		P		10 05 12.1	+0.1
	baz=62								
I29M	Ogilvie Camp,	60.89	332	P		P		10 05 12.7	+0.6
I29M				IAmb		IAmb		10 05 20.6	
	comp=Z,22nm,1.1s								
I29M	Ogilvie Camp,	60.89	332	P		P		10 05 11.9	-0.2
	baz=61,SNR=12								
R11A	Troy Canyon, C	61.10	298	P		P		10 05 14.4	+0.2
R11A				IAmb		IAmb		10 05 21.3	
	comp=Z,13nm,1.4s								
R11A	Troy Canyon, C	61.10	298	P		P		10 05 13.7	-0.5
	baz=62,SNR=9.5								
P33M	Teslin, Yukon	61.10	326	P		P		10 05 14.2	+0.5
	baz=63								
WVOR	Wild Horse Val	61.29	303	P		P		10 05 16.3	+1.0
WVOR				IAmb		IAmb		10 05 24.0	
	comp=Z,18nm,1.2s								
WVOR	Wild Horse Val	61.29	303	P		P		10 05 16.3	+1.0
WVOR				pmax		pmax			
	comp=Z,18nm,1.3s								
K29M	Barlow Dome	61.33	330	P		P		10 05 15.5	+0.2
	baz=61,SNR=8.0								
G27K	Doyon Strip	61.34	334	P		P		10 05 15.4	+0.3
	baz=59,SNR=9.5								
S34M	Telegraph Cree	61.39	323	P		P		10 05 15.6	0.0
	baz=63								
T35M	Bob Quinn	61.39	322	P		P		10 05 16.4	+0.8
	baz=63								
W13A	Hualapai Mount	61.44	294	P		P		10 05 18.3	+1.8
W13A				IAmb		IAmb		10 05 25.5	
	comp=Z,13nm,1.2s								
D25K	Kavik River	61.48	338	P		P		10 05 16.5	+0.4
	baz=56								
H27K	Steamboat Moun	61.60	334	P		P		10 05 16.7	-0.2
	baz=59,SNR=8.3								
MAN01	Angra dos Reis	61.60	189	*e*P		P		10 05 17.8	+0.4
M30M	Minto, Yukon	61.67	329	P		P		10 05 18.1	+0.7
	baz=61,SNR=6.4								
F26K	Sheenjek River	61.69	336	P		P		10 05 18.4	+0.8
	baz=57,SNR=8.0								
PCMB	Pacaembu	61.70	197	*e*P		P		10 05 17.2	-0.8
G05D	Wamic, OR	61.73	307	P		P		10 05 18.9	+0.8
	baz=63								
N31M	Braeburn, Yuko	61.78	328	P		P		10 05 18.8	+0.6
	baz=61								
AQDB	Aquidauana	61.79	202	P		P		10 05 18.9	+0.3
AQDB				IAmb		IAmb		10 05 26.1	
	comp=Z,13nm,1.1s								
AQDB	Aquidauana	61.79	202	*e*P		P		10 05 18.2	-0.4
WHY	Whitehorse	61.80	327	P		P		10 05 18.9	+0.5
	baz=61								
V12A	Nelson	61.83	295	P		P		10 05 20.8	+1.7
V12A				IAmb		IAmb		10 05 27.6	
	comp=Z,12nm,1.2s								
E25K	Arctic Village	61.91	337	P		P		10 05 18.9	-0.1
	baz=56,SNR=7.7								
C24K	Franklin Bluff	61.93	339	P		P		10 05 18.9	-0.1
	baz=54								
DAWY	Dawson	61.94	331	P		P		10 05 20.9	+1.7
DAWY				IAmb		IAmb		10 05 28.5	
	comp=Z,19nm,1.2s								
DAWY	Dawson	61.94	331	P		P		10 05 18.6	-0.7
	baz=59,SNR=14								
I27K	Kandik River	61.96	333	P		P		10 05 18.6	-0.8
	baz=58								
BMAR	Burnt Mountain	61.98	336	P		P		10 05 20.0	+0.6
G26K	Porcupine Rive	61.98	335	P		P		10 05 19.5	+0.1
	baz=57,SNR=7.4								
PDMCI	Parker Dam,Lak	62.00	293	P		P		10 05 20.6	+0.5
	baz=61,SNR=8.4								
PINE	Pine Mountain	62.16	305	P		P		10 05 22.6	+1.3
214A	Organ Pipe Nat	62.19	290	P		P		10 05 22.1	+0.7
	baz=60								
VAO	Valinhos	62.19	193	*e*P		P		10 05 20.6	-0.7
EGAK	Eagle	62.23	332	P		P		10 05 22.1	+1.1
EGAK				IAmb		IAmb		10 05 28.9	
	comp=Z,11nm,1.1s								
EGAK	Eagle	62.23	332	P		P		10 05 21.6	+0.5
	baz=58,SNR=8.5								
F25K	Christian Rive	62.23	336	P		P		10 05 20.9	-0.2
	baz=56,SNR=8.3								
TPNV	Topopah Spring	62.23	296	P		P		10 05 22.8	+1.0
TPNV	Topopah Spring	62.23	296	P		P		10 05 22.8	+1.0
TPNV				pmax		pmax			
	comp=Z,6.0nm,1.1s								
TPNV	Topopah Spring	62.23	296	P		P		10 05 21.7	-0.1
	baz=61								
O30N	Mendenhall	62.26	327	P		P		10 05 22.1	+0.7
	baz=60,SNR=9.6								
D24K	Happy Valley	62.30	338	P		P		10 05 22.0	+0.5
	baz=54								
PARB	Paraibuna	62.30	191	*e*P		P		10 05 22.8	+0.7
N30M	Aishikik Lake	62.34	328	P		P		10 05 22.5	+0.5
	baz=60,SNR=7.6								
TPH	Tonopah	62.37	298	P		P		10 05 22.7	-0.1
TPH	Tonopah	62.37	298	P		P		10 05 22.7	-0.1
TPH				pmax		pmax			
	comp=Z,74nm,1.1s								
C23K	Itkillik River	62.40	339	P		P		10 05 22.6	+0.5
	baz=53,SNR=7.8								
M29M	Somme Creek	62.40	329	P		P		10 05 23.4	+0.9
	baz=59,SNR=12								
113A	Mohawk Valley,	62.48	291	P		P		10 05 24.3	+1.0
113A				IAmb		IAmb		10 05 32.0	
	comp=Z,14nm,1.3s								
KVN	Kaiserville	62.51	299	P		P		10 05 24.1	+0.4
KVN	Kaiserville	62.51	299	P		P		10 05 24.1	+0.4
KVN				pmax		pmax			
	comp=Z,27nm,1.0s								
BBB	Bella Bella	62.51	316	LR		LR		10 32 16.4	
	comp=Z,94nm,19.6s,baz=90,slow=36								
H04A	Detroit Lake	62.53	307	P		P		10 05 23.5	0.0
H04A				IAmb		IAmb		10 05 30.2	
	comp=Z,9.0nm,1.0s								
BLYC	Blythe	62.55	293	P		P		10 05 25.4	+1.6
BLYC				IAmb		IAmb		10 05 32.6	
	comp=Z,23nm,1.3s								
WCT	Wildcat Mounta	62.57	297	P		P		10 05 24.5	+0.5
SKAG	Skagway	62.58	326	P		P		10 05 23.9	+0.4
	baz=60								
J05D	Fort Rock, OR	62.59	305	P		P		10 05 24.2	+0.2
	baz=62,SNR=21								
K05A	Summer Lake	62.63	304	P		P		10 05 25.8	+1.4
I26K	Coal Creek Min	62.66	333	P		P		10 05 24.6	+0.6
I26K				IAmb		IAmb		10 05 32.5	
	comp=Z,11nm,1.0s								
I26K	Coal Creek Min	62.66	333	P		P		10 05 24.5	+0.6
	baz=57								
MZP	Montezuma Peak	62.66	298	P		P		10 05 25.2	+0.4
WRAK	Wrangell Islan	62.68	322	P		P		10 05 24.3	+0.1
	baz=61								
TUQ	Turquoise Moun	62.73	295	P		P		10 05 25.3	+0.1
	baz=61								
LPAZ	La Paz	62.73

F24K **Squaw Lake** 62.98 337 P P 10 05 26.8 +0.7
baz=54,SNR=9.4
GRAC **Grapevine Rang** 62.99 297 P P 10 05 26.9 +0.2
baz=61
A21K **Barrow** 63.01 342 P P 10 05 26.7 +0.5
baz=48
H25K **Birch Creek** 63.04 335 P P 10 05 27.4 +0.9
baz=55,SNR=6.4
PLBC **Pleasant Camp** 63.04 326 P P 10 05 27.3 +0.7
baz=60
YUK4 **Talbot Arm** 63.04 328 P P 10 05 25.6 -1.3
baz=59
PAHR **Pah Rah Range** 63.07 301 P P
PAHR IAmb IAmb 10 05 34.5
comp=Z,13nm,1.1s
I04A **Tendick Farm,** 63.10 306 P P 10 05 28.0 +0.6
baz=62
GLA **Glamis** 63.12 292 P P 10 05 28.3 +0.6
baz=60
YUK6 **Outpost Mounta** 63.13 328 P P 10 05 28.2 +0.6
baz=59
J04D **Umpqua Nationa** 63.17 305 P P 10 05 28.1 +0.1
baz=61,SNR=8.7
TRCB **Terra Rica** 63.17 198 eP P 10 05 27.8 -0.1
AKTO **Aktyubinsk** 63.23 46 LR LR 10 31 07.8
comp=Z,61nm,21.9s,baz=301,slow=34
K04D **Chiloquin, OR** 63.23 304 P P 10 05 29.0 +0.7
baz=61
J26L **Joseph Creek** 63.25 333 P P 10 05 28.7 +0.6
baz=56
BC3 **Big Chuckawall** 63.27 293 P P 10 05 29.4 +0.7
baz=60
ANTJ **Antonio Joao (** 63.32 202 eP P 10 05 28.3 -0.6
HEC **Hector,Ludlow** 63.32 294 P P 10 05 28.7 -0.3
baz=60
G24K **Hadweenzic Riv** 63.33 336 P P 10 05 28.9 +0.5
baz=54,SNR=13
PRP **Porcupine Dome** 63.37 334 P P 10 05 30.5 +1.7
PRP IAmb IAmb 10 05 37.7
comp=Z,18nm,1.0s
PRP **Porcupine Dome** 63.37 334 P P 10 05 29.1 +0.2
baz=55,SNR=8.7
BVCY **Beaver Creek** 63.37 330 P P 10 05 28.9 +0.1
baz=58,SNR=8.8
BCAR **Beaver Creek A** 63.38 331 P P 10 05 30.1 +1.2
L27K **Beaver Creek,** 63.40 331 P P 10 05 30.8 +1.8
L27K IAmb IAmb 10 05 45.9
comp=Z,16nm,1.6s
L27K **Beaver Creek,** 63.40 331 P P 10 05 28.6 -0.4
baz=57
GSC **Goldstone, Bar** 63.42 295 P P 10 05 31.2 +1.5
GSC IAmb IAmb 10 05 37.8
comp=Z,13nm,1.1s
GSC **Goldstone, Bar** 63.42 295 P P 10 05 31.2 +1.5
GSC pmax pmax
comp=Z,13nm,1.2s
GSC **Goldstone, Bar** 63.42 295 P P 10 05 29.7 0.0
baz=60
VCNR **Virginia City** 63.44 300 P P 10 05 30.5 +0.6
VCNR IAmb IAmb 10 05 37.5
comp=Z,20nm,1.2s
BELC **Belle Mtn. Jos** 63.49 293 P P 10 05 30.5 +0.3
baz=60,SNR=10
PET01 **Itanhaem-SP** 63.50 193 eP P 10 05 30.7 +0.7
CRAG **Craig** 63.52 321 P P 10 05 29.5 -0.4
baz=60
MPMC **Manual Prospec** 63.53 296 P P 10 05 30.5 -0.1
baz=60,SNR=15
P29M **Windy Craggy** 63.55 326 P P 10 05 30.3 +0.2
baz=59
YUK3 **Moose Creek** 63.55 329 P P 10 05 29.8 -0.5
baz=58,SNR=14
O29M **Mount Kennedy** 63.56 327 P P 10 05 29.5 -0.7
baz=58
TIN **Tinemaha, Big** 63.56 297 P P 10 05 30.8 +0.1
baz=60
NNA **Nana** 63.66 227 LR LR 10 31 51.9
comp=Z,40nm,21.9s,baz=360,slow=35
SCRK **Sand Creek** 63.70 332 P P 10 05 32.0 +0.9
SCRK IAmb IAmb 10 05 40.0
comp=Z,13nm,1.2s
SCRK **Sand Creek** 63.70 332 P P 10 05 31.9 +0.8
baz=56,SNR=11
MLAC **Mammoth, Mammo** 63.70 298 P P 10 05 32.0 +0.3
baz=60
I03D **Drain, OR** 63.74 306 P P 10 05 32.1 +0.6
baz=61
CWC **Cottonwood Cre** 63.76 297 P P 10 05 31.3 -0.7
baz=60
RRX **Edison Barstow** 63.77 295 P P 10 05 31.9 0.0
baz=60
SIT **Sitka** 63.79 323 P P 10 05 31.0 -0.5
baz=59
L04D **Klamath Falls** 63.79 304 P P 10 05 32.3 +0.3
L04D **Klamath Falls** 63.79 304 P P 10 05 31.1 -1.0
baz=61,SNR=8.9
E22K **Anaktuvuk Pass** 63.79 338 P P 10 05 31.9 +0.4
baz=51
M27K **Edge Creek, AK** 63.80 330 P P 10 05 33.3 +1.5
M27K **Edge Creek, AK** 63.80 330 P P 10 05 32.8 +1.0
baz=57,SNR=16
OMMB **Old Mammoth Mi** 63.82 298 P P 10 05 33.4 +0.8
J25K **Salcha River,** 63.83 333 P P 10 05 33.0 +1.2
J25K IAmb IAmb 10 05 40.4
comp=Z,10nm,1.0s
J25K **Salcha River,** 63.83 333 P P 10 05 31.7 -0.1
baz=55,SNR=8.1
I02E **Swisshome, OR** 63.86 307 P P 10 05 32.2 -0.1
baz=61
SWSC **Sam W. Stewart** 63.88 292 P P 10 05 32.7 +0.1
baz=60
LRMC **Laurel Mtn Rad** 63.96 296 P P 10 05 32.9 -0.3
baz=60
H24K **Noodor Dome** 63.97 335 P P 10 05 34.0 +1.2
H24K IAmb IAmb 10 05 41.6
comp=Z,15nm,1.0s
H24K **Noodor Dome** 63.97 335 P P 10 05 32.2 -0.6
baz=54,SNR=12
O28M **Mount Upton** 63.99 328 P P 10 05 33.4 +0.2
baz=57,SNR=7.2
L26K **Log Cabin Wild** 63.99 331 P P 10 05 33.5 +0.6
baz=56,SNR=8.2
TPFO **Pinon Flats** 64.02 293 P P 10 05 33.3 -0.4
baz=60,SNR=7.6
PFO **Pinyon Flats O** 64.02 293 LR LR 10 32 10.6
comp=Z,112nm,21.1s,baz=86,slow=35
PFO **Pinyon Flats O** 64.02 293 P P 10 05 34.8 +1.2
PFO **Pinyon Flats O** 64.02 293 *i* P P 10 05 33.9 +0.2
PFO pmax pmax
comp=Z,19nm,1.0s
PFO **Pinyon Flats O** 64.02 293 P P 10 05 33.4 -0.3
baz=60,SNR=7.5
BBRC **Big Bear Solar** 64.02 294 P P 10 05 33.6 -0.2
baz=60
G23K **Bananza Creek** 64.13 336 P P 10 05 34.1 +0.4
baz=52,SNR=9.3
RIDG **Independent Ri** 64.14 332 P P 10 05 35.6 +1.7
RIDG IAmb IAmb 10 05 43.0
comp=Z,17nm,1.1s
RIDG **Independent Ri** 64.14 332 P P 10 05 34.0 +0.1
baz=55,SNR=9.9
MENT **Mentasta** 64.18 331 P P 10 05 35.5 +1.4
M26K **Nabesna, AK** 64.21 331 P P 10 05 34.9 +0.5
baz=56
PNL **Peninsula** 64.25 327 P P 10 05 34.5 -0.1
baz=58
IKP **In-Ko-Pah, Jac** 64.25 292 P P 10 05 35.2 0.0
baz=59
POKR **Poker Plat Res** 64.25 334 P P 10 05 34.2 -0.3
baz=54
IL31 64.27 334 P P 10 05 36.1 +1.5
ILAR **Eielson Array** 64.27 334 P P 10 05 35.5 +0.9
comp=Z,2.0nm,0.9s,baz=50,slow=5.6,SNR=16
ILAR LR LR 10 30 46.8
comp=Z,39nm,20.5s,baz=352,slow=33
comp=Z,2.0nm,0.9s
ILAR **Eielson Array** 64.27 334 P P 10 05 35.0 +0.4
ILAR **Eielson Array** 64.27 334 P P 10 05 35.0 +0.4
YBH **Yreka Blue Hor** 64.29 304 LR LR 10 34 01.1
comp=Z,165nm,18.9s,baz=70,slow=36
F22K **John River** 64.29 338 P P 10 05 34.8 0.0
baz=51,SNR=9.0
CTGM **Chitina Glacie** 64.35 329 P P 10 05 37.0 +1.6
LPIG **La Paz** 64.35 281 LR LR 10 32 50.7
comp=Z,54nm,19.4s,baz=38,slow=35
CTG **Chitna Glacier** 64.35 329 P P 10 05 36.1 +0.6
baz=57

MONP2 **Monument Peak** 64.36 293 P P 10 05 36.1 +0.1
baz=59
J01E **Myrtle Point** 64.37 306 P P 10 05 35.8 +0.2
baz=60
ISA **Isabella, Lake** 64.42 296 P P 10 05 37.4 +1.2
ISA IAmb IAmb 10 05 44.4
comp=Z,14nm,1.3s
ISA **Isabella, Lake** 64.42 296 P P 10 05 37.4 +1.2
ISA pmax pmax
comp=Z,14nm,1.3s
ISA **Isabella, Lake** 64.42 296 P P 10 05 36.8 +0.6
baz=60,SNR=7.9
K02D **Willamette Mer** 64.43 305 P P 10 05 35.9 -0.3
baz=60,SNR=8.7
K24K **Donnelly Dome** 64.44 333 P P 10 05 36.3 +0.4
baz=54
G22K **Bettles** 64.46 337 P P 10 05 36.3 +0.4
baz=51
EDW2 **Edwards Air Fo** 64.48 295 P P 10 05 36.4 -0.2
baz=60
HDA **Harding Lake** 64.50 334 P P 10 05 37.3 +1.1
HDA IAmb IAmb 10 05 44.6
comp=Z,15nm,1.0s
HDA **Harding Lake** 64.50 334 P P 10 05 36.8 +0.6
baz=54,SNR=7.3
H23K **Yukon River** 64.53 335 P P 10 05 37.3 +0.9
H23K **Yukon River** 64.53 335 P P 10 05 36.8 +0.5
baz=52,SNR=14
COLA **College** 64.54 334 *i* P P 10 05 36.6 +0.2
COLA pmax pmax
comp=Z,4.0nm,0.9s
MURC **Murrieta** 64.55 294 P P 10 05 37.7 +0.6
baz=59
BFSC **Mount Baldy Ra** 64.56 294 P P 10 05 37.9 +0.7
baz=59,SNR=8.5
L02F **Cave Junction** 64.66 305 P P 10 05 38.0 +0.5
baz=60
CCB **Clear Creek Bu** 64.66 334 P P 10 05 38.2 +1.0
CCB IAmb IAmb 10 05 45.4
comp=Z,17nm,1.0s
VOG **Valley Oaks Go** 64.73 297 P P 10 05 39.0 +0.9
baz=60
MCARA **McCarthy VSAT** 64.80 330 P P 10 05 38.8 +0.7
baz=56
PAX **Paxson** 64.82 332 P P 10 05 38.3 -0.1
baz=54,SNR=5.7
TIJ01 **Guaruva-PR** 64.82 194 eP P 10 05 38.4 -0.4
109C **Camp Elliot, M** 64.85 293 P P 10 05 39.9 +0.9
baz=59
WRH **Wood River Hil** 64.86 334 P P 10 05 39.6 +1.1
WRH IAmb IAmb 10 05 46.9
comp=Z,16nm,1.0s
F21K **Alatna River** 64.87 338 P P 10 05 39.1 +0.6
baz=50,SNR=7.1
PTGB **Pitanga** 64.88 197 eP P 10 05 38.4 -0.7
ABKAR **Akbulak array** 64.89 46 P P 10 05 39.5 +0.5
ABKAR IAmb IAmb 10 05 47.1
comp=Z,14nm,1.0s
ABKAR **Akbulak array** 64.89 46 P P 10 05 39.2 +0.3
ARVC **Arvin** 64.95 296 P P 10 05 40.3 +0.8
baz=59
ISLE **Juniper Island** 64.96 329 P P 10 05 41.3 +1.9
KSXB **Camp Six Broad** 65.00 304 P P 10 05 40.6 +0.7
MESA **MESA** 65.04 328 P P 10 05 40.6 +0.6
baz=56
H22K **Ishtalitna Cre** 65.07 336 P P 10 05 40.6 +0.7
baz=51,SNR=7.5
TGL **Tana Glacier** 65.07 329 P P 10 05 40.8 +0.7
MCR1 **Marechal Candi** 65.11 199 eP P 10 05 40.3 -0.3
NEA2 **Nenana** 65.13 334 P P 10 05 40.8 +0.5
NEA2 **Nenana** 65.13 334 P P 10 05 40.0 -0.2
baz=52,SNR=19
OSI **Osito Audit: C** 65.13 295 P P 10 05 40.7 -0.1
baz=59
WAX **Waxell Ridge** 65.26 329 P P 10 05 42.4 +1.1
FMP **Fort Macarthur** 65.28 294 P P 10 05 42.0 +0.3
baz=59
N25K **Chitina, Valde** 65.29 330 P P 10 05 42.9 +1.5
N25K IAmb IAmb 10 05 50.2
comp=Z,15nm,1.3s
N25K **Chitina, Valde** 65.29 330 P P 10 05 40.9 -0.5
baz=54
G21K **Allakaket** 65.33 337 P P 10 05 41.4 -0.2
baz=49
MLY **Manley** 65.41 335 P P 10 05 43.4 +1.3
MLY IAmb IAmb 10 05 50.6
comp=Z,15nm,1.0s
MLY **Manley** 65.41 335 P P 10 05 41.5 -0.7
baz=51,SNR=11
DHY **Denali Highway** 65.46 332 P P 10 05 41.9 -0.7
baz=53,SNR=6.2
CIS **Catalina Islan** 65.53 294 P P 10 05 43.8 +0.4
baz=59
M24K **Tolsona, Glenn** 65.59 331 P P 10 05 42.9 -0.5
baz=53
MCK **McKinley** 65.61 333 P P 10 05 44.9 +1.5
MCK IAmb IAmb 10 05 54.4
comp=Z,9.4nm,1.0s
MCK **McKinley** 65.61 333 P P 10 05 44.9 +1.5
MCK pmax pmax
comp=Z,9.0nm,1.0s
MCK **McKinley** 65.61 333 P P 10 05 43.0 -0.4
baz=52
BMRM **Bremner River** 65.66 330 P P 10 05 45.4 +1.6
BMRM **Bremner River** 65.66 330 P P 10 05 43.7 -0.2
baz=54,SNR=8.8
H21K **Melozitna Rive** 65.68 336 P P 10 05 45.1 +1.3
H21K IAmb IAmb 10 05 52.5
comp=Z,14nm,1.1s
H21K **Melozitna Rive** 65.68 336 P P 10 05 43.7 -0.1
baz=50,SNR=8.4
I21K **Tanana** 65.72 336 P P 10 05 43.9 -0.2
baz=50,SNR=8.2
IMAR **Indian Mountai** 65.76 337 P P 10 05 44.9 +0.6
PKM **Mcpherson Peak** 65.76 296 P P 10 05 45.6 +0.5
baz=59
KLU **Klutina** 65.87 331 P P 10 05 45.3 +0.1
baz=53,SNR=6.1
WAT6 **Susitna Watana** 65.89 332 P P 10 05 45.7 +0.3
baz=52,SNR=16
SBC **Santa Barbara** 65.92 296 P P 10 05 46.7 +0.8
baz=59
SAO **San Andreas Ge** 65.94 299 P P 10 05 47.3 +1.3
SAO IAmb IAmb 10 05 54.6
comp=Z,15nm,1.1s
SAO **San Andreas Ge** 65.94 299 P P 10 05 47.3 +1.3
SAO pmax pmax
comp=Z,15nm,1.1s
DIV **Divide** 66.02 330 P P 10 05 47.2 +1.0
WAT1 **Susitna Watana** 66.03 333 P P 10 05 46.4 +0.2
baz=52
BPAW **Bear Paw Mtn.** 66.09 334 P P 10 05 47.0 +0.6
BPAW **Bear Paw Mtn.** 66.09 334 P P 10 05 46.5 0.0
baz=50,SNR=7.7
SCM **Sheep Creek Mo** 66.19 331 P P 10 05 47.9 +0.6
baz=52
KAIM **Kayak Island** 66.20 329 P P 10 05 47.9 +0.7
baz=54
TRF **Thorofare Moun** 66.26 334 P P 10 05 48.7 +0.9
TRF **Thorofare Moun** 66.26 334 P P 10 05 48.1 +0.3
baz=51,SNR=7.4
FRBT **Francisco Belt** 66.33 198 eP P 10 05 48.4 0.0
EYAK **Cordova Ski Ar** 66.36 330 P P 10 05 49.5 +1.3
EYAK IAmb IAmb 10 05 56.4
comp=Z,14nm,1.1s
EYAK **Cordova Ski Ar** 66.36 330 P P 10 05 49.1 +0.8
baz=53
M23K **Glacier View** 66.37 331 P P 10 05 48.2 -0.1
baz=52
KTH **Kantishna Hill** 66.41 334 P P 10 05 49.5 +0.9
SML **Sawmill** 66.59 332 P P 10 05 50.7 +0.9
SML IAmb IAmb 10 05 52.1
comp=Z,20nm,1.2s
SML **Sawmill** 66.59 332 P P 10 05 50.0 +0.3
baz=52
CHUM **Lake Minchumin** 66.67 335 P P 10 05 50.2 +0.1
baz=49,SNR=9.0
KNK **Knik Glacier** 66.88 331 P P 10 05 53.3 +1.7
KNK **Knik Glacier** 66.88 331 P P 10 05 52.1 +0.5
baz=52,SNR=6.8
CAST **Castle Rocks** 66.90 334 P P 10 05 52.1 +0.4
baz=49,SNR=5.8
CUT **Chulitna** 66.92 333 P P 10 05 52.0 +0.3
baz=50
PMR **Palmer** 67.02 332 P P 10 05 53.5 +1.1
PMR **Palmer** 67.02 332 P P 10 05 53.5 +1.1

PMR pmax pmax
comp=Z,21nm,0.9s
PMR **Palmer** 67.02 332 P P 10 05 52.9 +0.5
baz=51,SNR=8.0
J20K **Nowinta River** 67.09 335 P P 10 05 53.2 +0.4
J20K **Nowinta River** 67.09 335 P P 10 05 53.3 +0.4
baz=48,SNR=32
PWL **Port Wells** 67.18 331 P P 10 05 55.3 +1.8
PWL **Port Wells** 67.18 331 P P 10 05 53.9 +0.4
baz=51,SNR=10
PPLA **Purkeypile** 67.28 334 P P 10 05 54.2 -0.1
baz=49
M22K **Willow** 67.28 332 P P 10 05 53.9 -0.2
baz=50
Q23K **Middleton Isla** 67.28 329 P P 10 05 54.9 +0.8
baz=52
ITAB **Concordia** 67.32 197 eP P 10 05 54.9 +0.2
K20K **Telida** 67.61 335 P P 10 05 56.5 +0.3
baz=48,SNR=5.9
SKT **Skwentna** 67.65 333 P P 10 05 56.9 +0.4
baz=49
CPUP **Villa Florida** 67.79 202 P P 10 05 55.6 -2.0
comp=Z,4.2nm,0.9s,baz=30,slow=3.2,SNR=4.8
comp=Z,4.2nm,0.9s
L20K **Farewell, AK** 68.14 334 P P 10 05 59.5 0.0
baz=48,SNR=16
M20K **Styx River** 68.28 333 P P 10 06 00.7 +0.1
M20K **Styx River** 68.28 333 P P 10 06 00.6 +0.1
baz=48,SNR=24
BRVK **Borovoye** 68.31 39 P P 10 06 01.7 +1.0
BRVK IAmb IAmb 10 06 08.9
comp=Z,18nm,0.9s
BRVK **Borovoye** 68.31 39 ceP P 10 06 01.0 +0.3
BRVK pmax pmax
comp=Z,17nm,1.7s
BVAR **Borovoye Array** 68.38 39 LR LR 10 33 38.9
comp=Z,51nm,20.7s,baz=319,slow=34
TTA **Tatalina** 68.55 335 P P 10 06 02.2 0.0
baz=46
LVC **Limon Verde** 68.61 214 LR LR 10 33 55.4
comp=Z,58nm,20.0s,baz=358,slow=34
LVC **Limon Verde** 68.61 214 eP P 10 06 03.0 -0.3
L19K **White Mountain** 68.68 334 P P 10 06 03.3 +0.4
L19K **White Mountain** 68.68 334 P P 10 06 02.3 -0.6
baz=47,SNR=9.9
M19K **Big River Lodg** 68.71 334 P P 10 06 02.9 -0.1
baz=47
BRSE **Bradley Lake S** 68.82 331 P P 10 06 04.3 +0.5
baz=49
ALGR **Alto Alegre (B** 69.03 197 eP P 10 06 05.0 -0.5
CNPM **China Poot** 69.15 331 P P 10 06 07.1 +1.2
N19K **Bonanza Creek** 69.49 333 P P 10 06 08.1 +0.1
baz=47
SVW2 **Sparrevohn** 69.68 334 P P 10 06 09.9 +0.8
SVW2 IAmb IAmb 10 06 17.1
comp=Z,19nm,1.0s
GEYT **Alibeck** 69.75 57 P P 10 06 10.9 +0.9
comp=Z,10nm,1.2s,baz=246,slow=13,SNR=6.6
comp=Z,10nm,1.2s
GEYT **Alibeck** 69.75 57 P P 10 06 11.2 +1.2
GEYT IAmb IAmb 10 06 18.1
comp=Z,14nm,1.1s
UNIS **Unistalda (Bra** 69.78 199 eP P 10 06 09.7 -0.3
O19K **Port Alsworth** 69.85 332 P P 10 06 10.2 +0.1
O19K **Port Alsworth** 69.85 332 P P 10 06 10.0 -0.1
baz=47
ANM **Nome** 70.18 340 P P 10 06 12.1 0.0
baz=39
O18K **Koktuh Hills** 70.41 332 P P 10 06 13.1 -0.5
baz=46
Q19K **Cape Douglas,** 70.47 331 P P 10 06 13.7 -0.3
baz=47
RODS **Rosario do Sul** 71.03 198 eP P 10 06 17.7 +0.1
O17K **Koliganek Bris** 71.14 333 P P 10 06 18.1 0.0
baz=44,SNR=8.5
N16K **Nishlik Lake** 71.22 334 P P 10 06 19.5 +1.0
baz=44,SNR=10
MBAR **Mbarara** 71.54 106 *c i* P P 10 06 20.6 -0.7
MBAR pmax pmax
comp=Z,13nm,1.5s
R17K **Ugashik Creek** 72.41 331 P P 10 06 27.2 +1.5
baz=45,SNR=5.4
GAMB **Gambell** 72.47 341 P P 10 06 26.7 +0.7
baz=34
LODK **Lodwar** 72.50 100 P P 10 06 29.0 +2.0
LODK IAmb IAmb 10 06 30.5
comp=Z,25nm,1.5s
BILL **Bilibino** 72.61 352 ‖ eP P 10 06 24.6 -2.1
BILL *i* *PP pP 10 06 28.2 -2.6
BILL 10 06 43.0
BILL *e* 10 09 09.4
BILL SS SS 10 20 38.0 +10
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,47nm,15.0s
ATD **Arta Tunnel** 73.40 88 LR LR 10 38 30.1
comp=Z,53nm,18.2s,baz=34,slow=36
KURK **Kurchatov** 73.81 37 P P 10 06 33.9 -0.2
KURK IAmb IAmb 10 06 42.2
comp=Z,20nm,1.1s
KURK **Kurchatov** 73.81 37 ceP P 10 06 33.8 -0.3
KURK pmax pmax
comp=Z,11nm,1.3s
ZALV **Zalesovo Beam** 74.37 32 P P 10 06 38.5 +1.2
comp=Z,1.5nm,0.7s,baz=286,slow=7.2,SNR=5.7
ZALV LR LR 10 39 00.3
comp=Z,22nm,18.2s,baz=19,slow=36
comp=Z,1.5nm,0.7s
ZALV **Zalesovo Beam** 74.37 32 P P 10 06 38.0 +0.7
ZALV **Zalesovo Beam** 74.37 32 P P 10 06 38.0 +0.7
KK31 **Karatay Array** 74.41 47 P P 10 06 38.1 +0.3
KK31 **Karatay Array** 74.41 47 P P 10 06 38.1 +0.3
KK31 pmax pmax
comp=Z,9.0nm,1.3s
KKAR **Karatay Array** 74.41 47 P P 10 06 38.2 +0.4
KKAR **Karatay Array** 74.41 47 P P 10 06 38.2 +0.4
UOSS **Minazif** 75.78 69 P P 10 06 45.1 -0.9
CHGR **Chuyangaron** 76.36 51 P P 10 06 50.6 +1.4
CHGR **Chuyangaron** 76.36 51 P P 10 06 50.6 +1.4
CHGR pmax pmax
comp=Z,23nm,0.8s
KMBO **Kilima Mbogo** 76.83 102 LR LR 10 40 11.3
comp=Z,1nm,18.1s,baz=88,slow=35
KMBO **Kilima Mbogo** 76.83 102 *i* P P 10 06 51.7 -0.6
GAR **Garm** 76.86 51 P P 10 06 53.4 +1.3
AAK **Ala-Archa** 76.97 46 ceP P 10 06 53.1 +0.4
AAK pmax pmax
comp=Z,11nm,2.5s
KIBK **Kibwezi** 78.21 103 P P 10 07 01.2 +1.3
KIBK IAmb IAmb 10 07 09.7
comp=Z,18nm,1.3s
MK31 **Makanchi Array** 78.26 39 P P 10 06 59.7 +0.1
MK31 **Makanchi Array** 78.26 39 *i* P P 10 06 58.9 -0.7
MKAR **Makanchi Array** 78.26 39 P P 10 06 59.9 +0.3
comp=Z,6.2nm,1.1s,baz=319,slow=4.8,SNR=22
MKAR LR LR 10 41 10.8
comp=Z,64nm,19.6s,baz=266,slow=35
comp=Z,6.2nm,1.1s
MKAR **Makanchi Array** 78.26 39 P P 10 06 58.9 -0.7
MKAR **Makanchi Array** 78.26 39 P P 10 06 58.9 -0.7
DGZ **Jazzator, Alta** 78.56 34 *i* P P 10 07 01.5 +0.1
DGZ pmax pmax
comp=Z,7.0nm,1.3s
NRN **Naryn** 78.61 46 P P 10 07 03.7 +1.7
NRN IAmb IAmb 10 07 10.9
comp=Z,17nm,1.1s
NRN **Naryn** 78.61 46 P P 10 07 03.7 +1.7
NRN pmax pmax
comp=Z,17nm,1.1s
MT03 **Universidad Ad** 78.86 210 P P 10 07 03.7 +0.8
KBL **Kabul** 78.87 55 P P 10 07 03.8 +0.4
KBL **Kabul** 78.87 55 P P 10 07 03.8 +0.4
KBL pmax pmax
comp=Z,10.0nm,1.0s
YAK **Yakutsk** 79.07 7 ceP P 10 07 02.9 -0.8
YAK pmax pmax
comp=Z,21nm,1.7s
LSZ **Lusaka** 79.63 119 LR LR 10 40 31.7
comp=Z,110nm,19.7s,baz=180,slow=34
KSH **Kashi** 79.87 47 P P 10 07 10.5 +1.8
KSH PcP PcP 10 07 16.5 +0.2
KSH pmax pmax
comp=Z,14nm,0.9s
KNGR **Kungurtug, Tuv** 81.96 28 *i* P P 10 07 19.8 +0.2
KNGR pmax pmax

comp=Z,5.0nm,1.1s
MA2 **Magadan** **82.19** **357** *i* P **P** **10 07 20.3 -0.2**
MA2 pmax pmax
comp=Z,17nm,1.3s
MOY **Mondy** **82.33** **26** *eP* P **P** 10 07 28.3 +6.8
WMQ **Urumqi** **83.04** **38** *eP* **P** **P** **10 07 27.8 +2.5**
LBTB **Lobatse** **84.86** **128** LR LR 10 40 46.9
comp=Z,38nm,22.0s,baz=360,slow=32
PLCA **Paso Flores** **85.29** **206** P **P** **10 07 36.1 -0.3**
comp=Z,8.3nm,1.0s,baz=28,slow=8.3,SNR=11
comp=Z,8.3nm,1.0s
PLCA **Paso Flores** **85.29** **206** P **P** **10 07 36.6 +0.1**
PLCA **Paso Flores** **85.29** **206** P **P** **10 07 36.6 +0.1**
PLCA pmax pmax
comp=Z,18nm,1.0s
PLCA **Paso Flores** **85.29** **206** *eP* **P** **10 07 36.4 -0.1**
BOSA **Boshof** **87.27** **130** LR LR 10 42 34.5
comp=Z,33nm,20.4s,baz=8.0,slow=33
SONM **Songino Array** **87.42** **25** P **P** **10 07 47.7 +0.5**
comp=Z,0.9nm,1.0s,baz=341,slow=7.0,SNR=4.4
comp=Z,0.9nm,1.0s
ULN **Ulaanbaatar** **87.61** **25** *i* P **P** **10 07 48.4 +0.2**
ULN pmax pmax
comp=Z,11nm,2.0s
GTA **Gaotai** **92.08** **33** *eP* **P** **10 08 10.0 +0.7**
GTA pP sP 10 08 16.0 +1.1
GTA pmax pmax
comp=Z,4.0nm,1.3s
HHC **Hu-ho-hao-te** **95.33** **25** *eP* **P** **10 08 24.3 +0.2**
LZH **Lanzhou** **96.60** **32** *eP* **P** **10 08 25.5 -4.6**
LZH pP pP 10 08 33.0 -1.3
LZH sP sP 10 08 36.5 +0.7
LZH pmax pmax
comp=Z,17nm,0.9s
GYA **Guiyang** **106.07** **35** ⇑P **PKiKP** **10 13 26.0 +1.6**
GYA pmax pmax
comp=Z,16nm,0.7s
QSPA **South Pole Qui** **128.36** **180** PKP **PKPdf** **10 14 05.2 -0.2**
comp=Z,6.6nm,1.0s,baz=246,slow=0.6,SNR=12
QSPA **South Pole Qui** **128.36** **180** **PKPdf** **10 14 05.7 +0.2**
VNDA **Vanda** **140.20** **186** PKP **PKPdf** **10 14 27.1 -0.1**
comp=Z,2.9nm,1.0s,baz=256,slow=3.1,SNR=8.9
VNDA **Vanda** **140.20** **186** **PKiKP** **10 14 28.9 -0.8**
VNDA **Vanda** **140.20** **186** PKIKP **PKiKP** **10 14 28.9 -0.8**
WRA **Warramunga Arr** **159.33** **30** PKPab **PKPab** **10 15 35.1 -0.9**
comp=Z,1.9nm,0.9s,baz=341,slow=4.3,SNR=6.0
ASAR **Alice Springs** **162.44** **36** PKP **PKPdf** **10 15 01.1 -0.8**
comp=Z,0.6nm,1.0s,baz=318,slow=1.2,SNR=3.4
ASAR PKPab **PKPab** **10 15 49.4 -0.1**
comp=Z,1.3nm,0.9s,baz=338,slow=3.9,SNR=6.5

*NEIC **28** 10:07:55.3±1.2, 55.98°S±0.06°×26.9°W±0.2, h35km±2km, mb4.5/18, Error ellipse: s-maj=17.3km s-min=3.1km az=237.0*
*IDC **28** 10:08:03.4±5.3, 56.07°S×26.98°W, h116km±49km, mb4.0/9, mbtmp4.4/11, Error ellipse: s-maj=18.5km s-min=16.3km az=122.0*
ISC 28 10:07:57.7±0.5, **56.01°S**±0.08°×**26.99°W**±0.08°, **h63**km, **n45, σ1§13/41, mb4.5/16, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.71**	**284**	Pn	**Pn**	**10 09 23.1**	**+3.3**
HOPE				Sn	**Sn**	**10 10 21.0**	**-3.0**
ORCD	**Orcadas**	**10.44**	**236**		**Pn**	**10 10 25.9**	**+1.7**
VNA1	**Neumayer--Stat**	**16.79**	**158**	P	**P**	**10 11 52.2**	**+2.8**
VNA3	**Neumayer Olymp**	**16.99**	**161**	P	**P**	**10 11 52.0**	**+0.2**
VNA2	**Neumayer--Watz**	**17.18**	**158**	P	**P**	**10 11 54.0**	**+0.1**
	baz=321,slow=12						
SNAA	**Sanae**	**18.73**	**156**	P	**P**	**10 12 10.6**	**-0.3**
SNAA	**Sanae**	**18.73**	**156**	P	**P**	**10 12 10.6**	**-0.3**
	6.7nm,0.5s,baz=303,slow=9.2,SNR=62						
SNAA	**Sanae**	**18.73**	**156**	P	**P**	**10 12 10.7**	**-0.3**
PMSA	**Palmer Station**	**20.01**	**229**	P	Pn	10 12 26.7	-0.2
	15nm,0.7s,baz=42,slow=14,SNR=5.3						
TROLL	**Troll, Antarti**	**20.23**	**154**	P	**P**	**10 12 26.9**	**-0.4**
BELA	**Belgrano 2**	**22.12**	**184**	P	**P**	**10 12 45.9**	**-1.5**
BELA				IAmb	IAmb	10 12 48.9	
	comp=Z,11nm,0.5s						
QSPA	**South Pole Qui**	**34.24**	**180**	P	**P**	**10 14 37.0**	**-0.2**
	comp=Z,4.4nm,0.5s,baz=158,slow=2.1,SNR=52						
	comp=Z,4.4nm,0.5s						
QSPA	**South Pole Qui**	**34.24**	**180**	P	**P**	**10 14 37.4**	**+0.2**
QSPA				IAmb	IAmb	10 15 01.3	
	comp=Z,4.3nm,0.7s						
MT09	**Talagante**	**37.40**	**288**	P	**P**	**10 15 03.1**	**-1.4**
CO01	**Juntas del Tor**	**39.90**	**292**	P	**P**	**10 15 26.3**	**+0.7**
CO01				IAmb	IAmb	10 16 09.8	
	comp=Z,8.8nm,1.4s						
MAW	**Mawson**	**40.11**	**144**	P	**P**	**10 15 26.7**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=233,slow=8.5,SNR=4.0						
	comp=Z,0.7nm,0.3s						
MAW	**Mawson**	**40.11**	**144**	P	**P**	**10 15 26.5**	**0.0**
SUR	**Sutherland**	**40.52**	**75**	P	**P**	**10 15 31.3**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=206,slow=13,SNR=5.0						
	comp=Z,2.4nm,0.7s						
AC05	**El Transito**	**40.91**	**293**	P	**P**	**10 15 33.3**	**-0.5**
GO02	**Mina Guanaco**	**43.57**	**297**	P	**P**	**10 15 55.9**	**+0.2**
GO02				IAmb	IAmb	10 15 56.4	
	comp=Z,12nm,0.8s						
LVC	**Limon Verde**	**45.38**	**300**	P	**P**	**10 16 10.2**	**0.0**
LVC				IAmb	IAmb	10 16 49.7	
	comp=Z,10nm,1.2s						
BOSA	**Boshof**	**45.85**	**76**	P	**P**	**10 16 13.6**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=208,slow=8.7,SNR=3.8						
	comp=Z,1.7nm,0.8s						
SBA	**Scott Base**	**46.12**	**184**	P	**P**	**10 16 15.8**	**+0.9**
PB07	**IPOC Station P**	**46.60**	**299**	P	**P**	**10 16 19.6**	**0.0**
VNDA	**Vanda**	**46.62**	**183**	P	**P**	**10 16 18.8**	**0.0**
	comp=Z,4.9nm,0.6s,baz=184,slow=6.6,SNR=33						
	comp=Z,4.9nm,0.6s						
VNDA	**Vanda**	**46.62**	**183**	P	**P**	**10 16 20.0**	**+1.3**
VNDA				IAmb	IAmb	10 16 20.9	
	comp=Z,5.5nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.93**	**17**	T	T	11 08 44.5	
	baz=31,slow=74,SNR=6.0						
H10S3	**ASCENSION HYDR**	**47.94**	**17**	T	T	11 08 44.2	
	baz=189,slow=74,SNR=9.2						
LBTB	**Lobatse**	**48.89**	**73**	P	**P**	**10 16 37.4**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=211,slow=6.8,SNR=7.3						
	comp=Z,3.2nm,0.7s						
LBTB	**Lobatse**	**48.89**	**73**	P	**P**	**10 16 36.8**	**-0.3**
LBTB				IAmb	IAmb	10 16 38.3	
	comp=Z,4.2nm,0.7s						
H10N1	**ASCENSION HYDR**	**49.05**	**17**	T	T	11 10 08.2	
	baz=189,slow=76,SNR=5.3						
H10N3	**ASCENSION HYDR**	**49.05**	**16**	T	T	11 10 07.8	
	baz=189,slow=76,SNR=6.1						
H10N2	**ASCENSION HYDR**	**49.07**	**16**	T	T	11 10 11.6	
	baz=189,slow=76,SNR=4.3						
LPAZ	**La Paz**	**50.45**	**305**	P	**P**	**10 16 49.7**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=131,slow=4.7,SNR=20						
	comp=Z,2.2nm,0.4s						
LPAZ	**La Paz**	**50.45**	**305**	P	**P**	**10 16 50.5**	**+0.9**
BOAV	**Boa Vista**	**64.32**	**322**	P	**P**	**10 18 26.1**	**-0.4**
BOAV				IAmb	IAmb	10 18 59.2	
	comp=Z,5.3nm,1.3s						
DBIC	**Dimbokro**	**65.09**	**24**	P	**P**	**10 18 31.9**	**+0.4**
	comp=Z,2.8nm,0.5s,baz=205,slow=7.3,SNR=8.9						
	comp=Z,2.8nm,0.5s						
DBIC	**Dimbokro**	**65.09**	**24**	P	**P**	**10 18 31.5**	**+0.1**
TOA0	**Torodi Ar. Sit**	**72.97**	**29**	P	**P**	**10 19 20.5**	**+0.2**
TOA0				IAmb	IAmb	10 19 21.3	
	comp=Z,4.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.97**	**29**	P	**P**	**10 19 20.6**	**+0.3**
	comp=Z,11nm,0.3s,baz=201,slow=6.7,SNR=2.3						
ASAR	**Alice Springs**	**98.99**	**162**	P	**P**	**10 21 30.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=191,slow=4.4,SNR=10						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**102.71**	**162**	P	**Pdif**	**10 21 46.6**	**-1.3**
	comp=Z,0.2nm,0.8s,baz=196,slow=4.4,SNR=1.1						
WRA				PKKPbc	**PKKPbc**	**10 37 44.9**	**+0.9**
	comp=Z,0.8nm,1.2s,baz=352,slow=2.7,SNR=6.5						
FINES	**FINESS Array B**	**124.30**	**28**	PKP	**PKPdf**	**10 26 46.3**	**-1.4**
	comp=Z,2.0nm,0.8s,baz=207,slow=0.9,SNR=7.3						
ILAR	**Eielson Array**	**150.17**	**312**	PKPbc	**PKPbc**	**10 27 38.6**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=108,slow=2.9,SNR=28						
SONM	**Songino Array**	**150.62**	**86**	PKPbc	**PKPbc**	**10 27 39.9**	**-1.6**
	comp=Z,1.7nm,0.5s,baz=244,slow=2.9,SNR=11						

*JMA **28** 10:26:03.3±0.1, 39.1°N±0.2°×142.4°E±0.5, h43km, MV3.5/31, E OFF IWATE PREF*
*IDC **28** 10:26:07.0±4.8, 39.05°N×142.34°E, h82km±44km, mb3.0/4, mbtmp3.3/5, ML2.2/1, Error ellipse: s-maj=47.0km s-min=26.3km az=97.0*
ISC 28 10:26:03.1±2.3, **39.12°N**±0.06°×**142.5°E**±0.2°, **h43**km±21km, **n19, σ0§75/21, mb3.3/4, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.61**	**267**	*i* P	**Pn**	**10 26 15.5**	**0.0**
OFUJ				S	**Sn**	**10 26 24.1**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.67**	**313**	⇓*i* P	**Pn**	**10 26 16.2**	**-0.1**
MIYJ				⇓S	**Sn**	**10 26 25.4**	**-0.4**
JKMT	**Kesennumamotoy**	**0.82**	**249**	*i* P	**Pn**	**10 26 18.3**	**0.0**
JKMT				S	**Sn**	**10 26 28.9**	**-0.4**
JTH	**Tanohata**	**0.94**	**331**	⇓*i* P	**Pn**	**10 26 20.1**	**+0.2**
JTH				⇓*e*S	**Sn**	**10 26 32.4**	**+0.2**
JOM	**Ohasama**	**0.97**	**292**	⇓*i* P	**Pn**	**10 26 20.6**	**+0.3**
JOM				⇓S	**Sn**	**10 26 32.7**	**-0.2**
JMK	**Ichinoseki**	**0.97**	**261**	*i* P	**Pn**	**10 26 20.6**	**+0.3**
JMK				S	**Sn**	**10 26 33.1**	**+0.1**
JIO	**Ouri**	**1.09**	**233**	*i* P	**Pn**	**10 26 21.9**	**0.0**
JIO				S	**Sn**	**10 26 35.1**	**-0.7**
JKZ	**Kuzumaki**	**1.23**	**315**	⇓P	**Pn**	**10 26 24.5**	**+0.6**
JKZ				⇓*e*S	**Sn**	**10 26 39.9**	**+0.6**
MJAR	**Matsushiro Arr**	**4.23**	**234**	P	**Pn**	**10 27 07.5**	**+2.4**
	0.1nm,0.3s,baz=42,slow=12,SNR=13						
	3.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.60**	**125**	T	T	11 02 27.5	
	baz=318,slow=75,SNR=48						
H11N1	**WAKE ISLAND Hy**	**28.61**	**126**	T	T	11 02 28.6	
	baz=318,slow=75,SNR=37						
H11N3	**WAKE ISLAND Hy**	**28.61**	**125**	T	T	11 02 30.1	
	baz=318,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**29.39**	**127**	T	T	11 03 23.9	
	baz=319,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**29.39**	**127**	T	T	11 03 28.6	
	baz=319,slow=76,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**29.40**	**127**	T	T	11 03 25.7	
	baz=319,slow=76,SNR=6.4						
MKAR	**Makanchi Array**	**43.74**	**300**	P	**P**	**10 34 03.8**	**-0.3**
	0.3nm,0.6s,baz=86,slow=7.9,SNR=2.6						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**47.30**	**33**	P	**P**	**10 34 32.5**	**+0.5**
	0.3nm,0.8s,baz=268,slow=5.4,SNR=2.8						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**59.24**	**189**	P	**P**	**10 35 58.9**	**-1.1**
	0.7nm,0.8s,baz=6.0,slow=7.0,SNR=13						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**62.96**	**189**	P	**P**	**10 36 24.8**	**-0.5**
	0.2nm,0.9s,baz=18,slow=6.4,SNR=1.3						
	0.2nm,0.9s						

IDC 28 10:31:44.1±2.9, **30.50S×177.35W, h0**km, **mb3.5**/2, **mbtmp3.5/2, Error ellipse: s-maj=64.2km s-min=37.1km az=106.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.33**	**338**	Pn	Pb	10 32 10.2	+0.2
	111nm,0.3s,baz=90,slow=20,SNR=9.6						
RAO				Sn	Sg	10 32 25.2	-1.8
	73nm,0.3s,baz=76,slow=22,SNR=2.1						
ASAR	**Alice Springs**	**43.66**	**267**	P	P	10 39 51.5	+0.7
	0.3nm,0.6s,baz=102,slow=7.9,SNR=5.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**44.66**	**272**	P	P	10 39 57.6	-1.3
	0.5nm,0.5s,baz=112,slow=7.6,SNR=3.0						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**145.43**	**340**	PKPbc	PKPbc	10 51 22.2	-1.0
	0.9nm,0.6s,baz=30,slow=3.9,SNR=6.9						
AKASG	**Malin Array Be**	**151.72**	**323**	PKPab	PKPab	10 51 48.7	-0.3
	0.5nm,0.5s,baz=48,slow=3.6,SNR=1.8						

*IDC **28** 10:40:02.6±4.2, 18.76°N×145.67°E, h200km±27km, mb3.3/5, mbtmp3.9/6, Error ellipse: s-maj=86.8km s-min=22.7km az=84.0*
*NEIC **28** 10:40:03.2±0.7, 18.7°N±0.1°×145.7°E±0.3°, h197km±12km, mb4.2/9, Error ellipse: s-maj=38.7km s-min=17.3km az=85.0*
ISC 28 10:40:02.6±1.2, **18.7°N**±0.1°×**145.7°E**±0.3°, **h200**km, **n17, σ0§66/19, mb4.0/10, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.15**	**188**	P	**Pn**	**10 41 20.3**	**+1.2**
	38nm,0.3s,baz=29,slow=19,SNR=1.6						
GUMO				S	**Sn**	**10 42 18.1**	**-1.3**
	39nm,0.4s,baz=54,slow=23,SNR=1.2						
MTN	**Manton Dam**	**34.47**	**206**	P	**P**	**10 46 30.6**	**-1.1**
MTN				IAmb	IAmb	10 46 43.3	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**38.01**	**207**	P	**P**	**10 47 01.6**	**0.0**
WB0	**Warramunga Arr**	**39.81**	**197**	P	**P**	**10 47 16.9**	**+0.4**
WB0				IAmb	IAmb	10 47 29.4	
	comp=Z,7.3nm,1.4s						
WR0	**Warramunga Arr**	**39.95**	**196**	P	**P**	**10 47 17.4**	**-0.3**
WR0				IAmb	IAmb	10 47 21.6	
	comp=Z,11nm,1.5s						
WRAB	**Tennant Creek**	**39.98**	**197**	P	**P**	**10 47 18.2**	**+0.3**
WRAB				IAmb	IAmb	10 47 35.0	
	comp=Z,15nm,1.5s						
WB2	**Warramunga Arr**	**39.99**	**197**	P	**P**	**10 47 17.9**	**-0.1**
WB2				IAmb	IAmb	10 47 50.0	
	comp=Z,9.9nm,1.4s						
WRA	**Warramunga Arr**	**39.99**	**197**	P	**P**	**10 47 17.5**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=16,slow=8.4,SNR=41						
WRA				PcP	**PcP**	**10 49 18.7**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=18,slow=3.7,SNR=1.4						
	comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**39.99**	**197**	P	**P**	**10 47 17.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**41.53**	**209**	P	**P**	**10 47 30.9**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=39,slow=9.7,SNR=14						
	comp=Z,1.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.53**	**209**	P	**P**	**10 47 30.6**	**0.0**
AS31	**Alice Springs**	**43.66**	**196**	P	**P**	**10 47 48.2**	**+0.5**
ASAR	**Alice Springs**	**43.66**	**196**	P	**P**	**10 47 47.4**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=14,slow=6.2,SNR=12						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**43.66**	**196**	P	**P**	**10 47 48.0**	**+0.3**
DZM	**Mont Dzumac**	**45.36**	**152**	P	**P**	**10 48 01.3**	**+0.1**
MKAR	**Makanchi Array**	**58.42**	**314**	P	**P**	**10 49 37.8**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=99,slow=7.1,SNR=3.6						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**86.85**	**335**	P	**P**	**10 52 23.5**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=76,slow=5.9,SNR=2.0						
	comp=Z,1.7nm,0.9s						

IDC 28 11:00:37.9±2.0, **0.49S×125.14E, h0**km, **mb3.0**/3, **mbtmp3.1/3, Error ellipse: s-maj=186.6km s-min=29.0km az=64.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.33**	**156**	P	P	11 05 26.0	-0.7
	0.6nm,0.9s,baz=334,slow=11,SNR=6.0						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**24.56**	**160**	P	P	11 06 00.2	+0.5
	0.3nm,0.8s,baz=345,slow=8.3,SNR=5.4						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**60.16**	**327**	P	P	11 10 47.5	-0.1
	0.1nm,0.3s,baz=142,slow=7.3,SNR=1.6						
	0.1nm,0.3s						

IDC 28 11:17:20.0±1.8, **29.73S×60.84E, h0**km, **mb3.4**/3, **mbtmp3.6/4, ML3.9/1, MS3.2/2, Error ellipse: s-maj=92.7km s-min=28.5km az=27.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.68**	**309**	Pn	Pn	11 21 13.8	-1.6
	baz=116,slow=16,SNR=1.6						
OPO				Sn	Sn	11 24 04.0	-17
	baz=99,slow=22,SNR=2.1						
	3.4nm,0.6s						
H08S1	**Diego Garcia H**	**24.54**	**29**	T	T	11 47 20.3	
	baz=204,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**24.55**	**29**	T	T	11 47 20.6	
	baz=204,slow=76,SNR=3.3						
H08S3	**Diego Garcia H**	**24.56**	**29**	T	T	11 47 22.2	
	baz=204,slow=76,SNR=10						
KMBO	**Kilima Mbogo**	**36.23**	**317**	LR	LR	11 36 29.4	
	comp=Z,30nm,19.6s,baz=92,slow=32						
H01W2	**Cape Leeuwin H**	**44.90**	**111**	T	T	12 13 15.2	
	baz=261,slow=75,SNR=9.6						
H01W3	**Cape Leeuwin H**	**44.90**	**111**	T	T	12 13 15.5	
	baz=261,slow=75,SNR=8.1						
H01W1	**Cape Leeuwin H**	**44.91**	**111**	T	T	12 13 16.5	
	baz=261,slow=75,SNR=8.5						
EIL	**Elat**	**64.02**	**335**	LR	LR	11 52 30.9	
	comp=Z,26nm,19.6s,baz=310,slow=33						
ASAR	**Alice Springs**	**64.58**	**104**	P	P	11 27 59.2	-0.4
	0.4nm,0.8s,baz=240,slow=6.7,SNR=5.1						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**66.44**	**100**	P	P	11 28 11.8	+0.2
	0.5nm,0.8s,baz=246,slow=6.0,SNR=5.2						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.16**	**298**	P	P	11 28 41.4	+0.5
	15nm,0.2s,baz=146,slow=4.1,SNR=2.3						
MKAR	**Makanchi Array**	**78.60**	**15**	P	P	11 29 23.4	+0.1
	0.1nm,0.4s,baz=191,slow=7.0,SNR=2.0						
	0.1nm,0.4s						

IDC 28 11:41:32.5±3.7, **30.55S×177.71W, h0**km, **mb3.3**/2, **mbtmp3.3/2, Error ellipse: s-maj=78.2km s-min=27.3km az=107.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.31**	**352**	Pn	Pb	11 41 58.0	0.0
	78nm,0.3s,baz=275,slow=23,SNR=2.9						
RAO				Sn	Sn	11 42 17.3	+1.1
	70nm,0.3s,baz=108,slow=22,SNR=2.6						
ASAR	**Alice Springs**	**43.35**	**267**	P	P	11 49 36.1	-0.6
	0.6nm,1.1s,baz=108,slow=7.7,SNR=1.8						
	0.6nm,1.1s						
WRA	**Warramunga Arr**	**44.35**	**272**	P	P	11 49 45.1	+0.3
	0.4nm,0.8s,baz=110,slow=8.2,SNR=5.7						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**145.38**	**340**	PKPbc	PKPbc	12 01 10.7	-0.8
	1.8nm,0.9s,baz=8.7,slow=3.7,SNR=1.6						

*SJA **28** 11:43:41.3±0.7, 35.85S×74.58W, h10km, ML4.0, MW3.9*
*IDC **28** 11:43:53.4±1.2, 35.80S×73.35W, h0km, mb3.8/3, mbtmp3.7/5, ML4.0/2, MS3.3/9, Error ellipse: s-maj=41.1km s-min=22.4km az=51.0*
*NEIC **28** 11:43:54.8±2.3, 35.69S±0.03°×73.4W±0.2°, h20km±7km, mb4.4/7, ML4.2(GUC), Error ellipse: s-maj=19.0km s-min=2.5km az=98.0*
*GUC **28** 11:43:55.1±0.6, 35.67S×73.31W, h16km±3km, ML4.2*
ISC 28 11:43:53.9±3.1, **35.71S**±0.03°×**73.45W**±0.03°, **h14**km±20km, **n76, σ1§76/86, mb4.2/6, MS3.3/7, 3C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI05	**Punta Hualpn**	**1.06**	**169**		**Pb**	**11 44 13.3**	**-0.7**
BI05	**Punta Hualpn**	**1.06**	**169**	⇑*i* P	**Pb**	**11 44 13.2**	**-0.8**
BI05				*e*S	**Sb**	**11 44 27.7**	**+0.1**
BI05				IAML		11 44 31.0	
	comp=N,11μm,0.5s						
CCSP	**San Pedro de C**	**1.17**	**167**	*e*P	**Pn**	**11 44 14.9**	**-0.9**
CCSP				*e*S	**Sb**	**11 44 30.2**	**-0.6**
CCSP				IAML		11 44 35.9	
	comp=E,13μm,0.3s						
GO05	**Huala**	**1.42**	**61**	P	**Pn**	**11 44 17.3**	**-2.0**
GO05	**Huala**	**1.42**	**61**	⇓*i* P	**Pn**	**11 44 17.2**	**-2.1**
GO05				*e*S	**Sn**	**11 44 34.0**	**-3.8**
ML02	**Panimavida**	**1.65**	**92**		**Pn**	**11 44 21.0**	**-1.4**
ML02	**Panimavida**	**1.65**	**92**	⇓*i* P	**Pn**	**11 44 21.0**	**-1.4**
ML02				*i* S	**Sn**	**11 44 40.2**	**-3.2**
BO03	**Pichilemu**	**1.72**	**46**	*e*P	**Pn**	**11 44 21.8**	**-1.5**
BO03				*e*S	**Sn**	**11 44 42.6**	**-2.4**
BO02	**Sierra Bellavi**	**2.36**	**68**		**Pn**	**11 44 32.1**	**-0.2**
BO02	**Sierra Bellavi**	**2.36**	**68**	*e*P	**Pn**	**11 44 31.9**	**-0.4**
BO02				*e*S	**Sn**	**11 45 00.5**	**-0.7**
BO02				IAML		11 45 10.1	
	comp=E,2μm,0.4s						
VA05	**Santo Domingo**	**2.54**	**37**		**Pn**	**11 44 34.2**	**-0.5**
VA05	**Santo Domingo**	**2.54**	**37**	*e*P	**Pn**	**11 44 33.9**	**-0.8**
VA05				*e*S	**Sb**	**11 45 08.2**	**-2.3**
VA05				IAML		11 45 18.0	
	comp=E,768nm,0.4s						
MT01	**Popeta**	**2.58**	**45**		**Pn**	**11 44 35.1**	**-0.1**
MT01	**Popeta**	**2.58**	**45**	*e*P	**Pn**	**11 44 34.0**	**-1.2**
MT01				*e*S	**Sn**	**11 45 07.1**	**+0.7**
MT09	**Talagante**	**2.79**	**47**	*e*P	**Pn**	**11 44 37.9**	**-0.4**
MT09				*e*S	**Sn**	**11 45 11.4**	**-0.5**
MT02	**Curacav**	**3.10**	**39**	*e*P	**Pn**	**11 44 41.1**	**-1.3**
MT02				*e*S	**Sn**	**11 45 18.6**	**-0.7**
MT05	**Renca**	**3.21**	**45**	*e*P	**Pn**	**11 44 44.5**	**+0.4**
MT05				*e*S	**Sn**	**11 45 25.1**	**+2.9**
MT05				IAML		11 45 47.1	
	comp=E,789nm,0.5s						
LMEL	**Las Melosas**	**3.25**	**56**		**Pn**	**11 44 45.6**	**+1.0**
LMEL	**Las Melosas**	**3.25**	**56**	*e*P	**Pn**	**11 44 45.8**	**+1.2**
LMEL				*e*S	**Sn**	**11 45 22.0**	**-1.2**
LMEL				IAML		11 45 38.6	
	comp=N,455nm,0.4s						
ROC1	**El Roble**	**3.39**	**37**		**Pn**	**11 44 46.5**	**-0.1**
ROCH	**El Roble**	**3.39**	**37**	*e*P	**Pn**	**11 44 46.4**	**-0.3**
ROCH				*e*S	**Sn**	**11 45 26.9**	**+0.1**
ROCH				IAML		11 45 47.7	
	comp=N,526nm,0.5s						
PEL	**Peldehue**	**3.43**	**42**	Pn	**Pn**	**11 44 46.7**	**-0.3**
VA06	**Catapilco**	**3.61**	**30**	Pn	**Pn**	**11 44 49.0**	**-0.4**
LR03	**Panguipulli**	**4.01**	**168**		**Pn**	**11 44 55.0**	**0.0**

LCO	Las Campanas	7.07	20	Pn	Pn	11 45 35.7	-1.5
MRA	San Martin	7.20	65	*i* P	Pn	11 45 40.5	+1.6
ACHE	Chepes	7.26	53	*i* P	Pn	11 45 37.7	-2.0
AC05	El Transito	7.36	22	Pn	Pn	11 45 40.5	-0.6
VCA	Vinchina	8.25	34	*i* P	Pn	11 45 54.1	+0.9
TCA	Tanti	8.58	62	*i* P	Pn	11 45 56.7	-1.0
LVC	Limon Verde	13.64	18	LR	LR	11 52 57.6	
	comp=Z,91nm,18.1s,baz=202,slow=40						
CPUP	Villa Florida	16.66	60	LR	LR	11 55 29.2	
	comp=Z,55nm,20.1s,baz=234,slow=42						
EFI	East Falkland	19.39	150	P	P	11 48 19.1	-0.1
EFI				IAmb	IAmb	11 48 53.1	
	comp=Z,38nm,1.2s						
LPAZ	La Paz	19.92	15	P	Pn	11 48 28.4	+0.9
	comp=Z,0.2nm,0.3s,baz=164,slow=10,SNR=2.6						
	comp=Z,0.5nm,0.5s						
LPAZ	La Paz	19.92	15	P	P	11 48 23.5	-2.3
LPAZ				IAmb	IAmb	11 48 40.0	
	comp=Z,5.1nm,0.9s						
AQDB	Aquidauana	21.75	50	P	P	11 48 46.2	+1.2
AQDB				IAmb	IAmb	11 48 51.0	
	comp=Z,16nm,1.0s						
NNA	Nana	23.82	352	LR	LR	11 56 24.9	
	comp=Z,30nm,18.8s,baz=162,slow=31						
ATAH	Atahualpa	28.80	350	LR	LR	11 59 07.6	
	comp=Z,52nm,19.5s,baz=179,slow=32						
PMSA	Palmer Station	29.64	172	LR	LR	12 00 39.2	
	comp=Z,66nm,18.0s,baz=43,slow=34						
ORCD	Orcadas	31.04	153	P	P	11 50 09.3	-1.6
ORCD				IAmb	IAmb	11 50 13.8	
	comp=Z,6.9nm,1.3s						
MDP	Montagnes des	45.05	30	LR	LR	12 12 26.9	
	comp=Z,62nm,18.3s,baz=144,slow=38						
PCRV	Puerto La Cruz	46.39	12	LR	LR	12 14 31.7	
	comp=Z,72nm,18.3s,slow=40						
VNA3	Neumayer Olymp	48.23	157	P	P	11 52 34.9	+1.2
VNA1	Neumayer--Stat	48.57	156	P	P	11 52 34.0	-2.3
VNA2	Neumayer--Watz	48.90	157	P	P	11 52 40.0	+1.2
	baz=288,slow=10.0						
SNAA	Sanae	50.45	157	P	P	11 52 51.9	+1.1
SNAA	Sanae	50.45	157	PcP	PcP	11 53 03.4	-5.4
SNAA	Sanae	50.45	157	P	P	11 52 52.1	+1.3
SNAA				IAmb	IAmb	11 52 58.9	
	comp=Z,5.2nm,1.0s						
TROLL	Troll, Antarti	52.15	158	P	P	11 53 04.8	+1.2
QSPA	South Pole Qui	54.53	180	LR	LR	12 16 32.4	
	comp=Z,20nm,18.8s,baz=292,slow=36						
QSPA	South Pole Qui	54.53	180	P	P	11 53 22.0	+0.9
TXAR	Lajitas Array	70.68	332	P	P	11 55 12.3	+3.0
	comp=Z,0.2nm,0.7s,baz=150,slow=7.3,SNR=2.2						
TXAR				LR	LR	12 20 51.7	
	comp=Z,26nm,20.6s,baz=150,slow=31						
	comp=Z,0.2nm,0.7s						
MAW	Mawson	71.87	164	P	P	11 55 17.3	+1.4
	comp=Z,1.2nm,0.8s,baz=185,slow=12,SNR=2.1						
	comp=Z,1.2nm,0.8s						
MAW	Mawson	71.87	164	P	P	11 55 17.2	+1.3
BOSA	Boshof	80.29	118	P	P	11 56 05.1	+0.3
	comp=Z,1.7nm,0.8s,baz=209,slow=5.2,SNR=1.8						
	comp=Z,1.7nm,0.8s						
H11N3	WAKE ISLAND Hyl	25.04	270	T	T	14 20 31.5	
	baz=123						
H11N1	WAKE ISLAND Hyl	25.05	270	T	T	14 20 32.3	
	baz=123,slow=74,SNR=5.1						
H11N2	WAKE ISLAND Hyl	25.06	270	T	T	14 20 34.0	
	baz=123,slow=74,SNR=6.0						

IDC ***28*** *11:51:23.0±2.1, 18°.37S×174°.81W, h0km, mb3.8/4, mbtmp3.8/4, MS3.4/1, Error ellipse: s-maj=62.8km s-min=34.9km az=125.0*

NEIC ***28*** *11:51:32.8±0.4, 18°.7S±0°.1×174°.82W±0°.09, h71km±12km, mb4.3/9, Error ellipse: s-maj=18.8km s-min=4.2km az=143.0*

ISC 28 11:51:34.5±0.9, 18°.6S±0°.1×174°.7W±0°.1, h100km, n16, σ0°72/16, mb4.1/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.55	97		Pn	11 52 40.2	-1.0
AFI	Afiamalu	5.45	32	Pn	Pn	11 52 52.8	-0.6
URZ	Urewera	20.85	198	P	P	11 56 08.3	0.0
	6.2nm,0.8s,baz=301,slow=23,SNR=1.9						
	6.2nm,0.8s						
URZ	Urewera	20.85	198	P	P	11 56 07.7	-0.5
URZ				IAmb	IAmb	11 56 18.0	
	comp=Z,20nm,1.3s						
WR0	Warramunga Arr	47.78	260	P	P	12 00 02.1	+0.1
WR0				IAmb	IAmb	12 00 06.7	
	comp=Z,9.6nm,1.4s						
WB0	Warramunga Arr	47.94	260	P	P	12 00 02.5	-0.8
WB0				IAmb	IAmb	12 00 28.1	
	comp=Z,6.7nm,1.3s						
WB2	Warramunga Arr	47.96	260	P	P	12 00 03.1	-0.3
WRAB	Tennant Creek	47.96	260	P	P	12 00 02.6	-0.8
WRAB				IAmb	IAmb	12 00 43.0	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	47.97	260	P	P	12 00 03.2	-0.4
	comp=Z,0.7nm,0.5s,baz=97,slow=7.3,SNR=42						
WRA				LR	LR	12 20 57.3	
	comp=Z,34nm,18.1s,baz=244,slow=37						
	comp=Z,0.7nm,0.5s						
WRA	Warramunga Arr	47.97	260	P	P	12 00 02.8	-0.8
AS31	Alice Springs	47.99	255	P	P	12 00 03.1	-0.6
ASAR	Alice Springs	47.99	255	P	P	12 00 04.1	+0.3
	comp=Z,0.9nm,0.7s,baz=85,slow=8.1,SNR=26						
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	47.99	255	P	P	12 00 03.0	-0.8
VNDA	Vanda	60.09	186	P	P	12 01 31.2	+0.5
VNDA				IAmb	IAmb	12 01 40.6	
	comp=Z,2.0nm,1.4s						
VA02	Isla de Pascua	60.17	111	P	P	12 01 33.2	+1.1
ILAR	Eielson Array	85.81	12	P	P	12 04 02.9	+0.5
	comp=Z,0.2nm,0.5s,baz=217,slow=5.3,SNR=5.0						
	comp=Z,0.2nm,0.5s						

NOU 28 12:07:55.0, 16°.17S×166°.81E, h19km, MLv3.9/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	2.03	140	P	Pn	12 08 27.8	-0.4
RTV	Rentapao	2.23	136	P	Pn	12 08 31.3	+0.3
KOUNC	Koumac, New Ca	4.97	208	P	Pn	12 09 08.7	0.0
DZM	Mont Dzumac	5.88	183	P	Pn	12 09 20.5	-0.8
OUENC	Ouen Island, N	6.22	180	P	Pn	12 09 26.1	+0.3
	24nm,1.6s						
PINNC	Pines Island,	6.44	175	P	Pn	12 09 29.6	+0.8

NEIC ***28*** *12:23:30.8±2.2, 7°.31N±0°.06×73°.01W±0°.06, h20km±3km, mb4.5/98, Error ellipse: s-maj=9.9km s-min=8.3km az=137.0*

RSNC ***28*** *12:23:32.0±1.4, 7°.41N×73°.13W, h0km±4km, ML4.1, Mw4.3, Fault plane solution: NP1φs=44.00000°, δ61.00000°, λ-163.00000°.*

VAO ***28*** *12:23:34.7±0.3, 7°.27N×72°.81W, h10km, mb4.5*

IDC ***28*** *12:23:35.5±1.7, 7°.34N×72°.97W, h66km±15km, mb3.8/23, mbtmp4.1/24, MS3.3/21, Error ellipse: s-maj=14.8km s-min=12.3km az=53.0*

ISC 28 12:23:29.7±0.8, 7°.50N±0°.02×73°.16W±0°.02, h10km±5km, n256, σ1§83/299, mb4.5/70, MS3.3/17, 7C-10D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAMC	Pamplona, Colo	0.48	110	*i* P	Pg	12 23 39.9	+0.7
PAMC				*e* S	Sg	12 23 47.0	+1.3
PAMC				*i*		12 23 48.5	
	comp=Z,11μm,0.4s						
BRRC	Barranca, Sant	0.68	234	*i* P	Pg	12 23 43.0	+0.2
BRRC				*e* S	Sg	12 23 52.1	+0.5
BRRC				*i*		12 23 54.1	
	comp=Z,3μm,0.2s						
OCAC	Ocana	0.75	348	*i* P	Pn	12 23 46.6	+0.2
OCAC				*e* S	Sn	12 23 59.8	+1.8
BARC	Barichara	0.91	181	*i* P	Pg	12 23 45.0	-2.1
BARC				*e* S	Sg	12 23 55.5	-3.4
BARC				*i*		12 23 57.5	
	comp=Z,6μm,0.5s						
RUSC	La Rusia	1.60	177	*i* P	Pn	12 23 57.3	-1.2
RUSC				*e* S	Sn	12 24 16.9	-2.6
RUSC				*i*		12 24 24.7	
	comp=Z,1μm,0.4s						
PTBC	PUERTO BERRIO,	1.60	233	*i* P	Pn	12 23 57.8	-0.4
PTBC				*e* S	Sn	12 24 17.5	-1.4
PTBC				*i*		12 24 20.0	
	comp=Z,5μm,0.6s						
ZARC	Zaragoza, Cauc	1.68	270	*i* P	Pb	12 24 00.5	-0.3
ZARC				*e* S	Sg	12 24 23.4	-0.5
TAMC	Tame, Arauca	1.72	128	*i* P	Pn	12 24 01.6	+1.8
TAMC				*e* S	Sb	12 24 25.1	+1.9
TAMC				*i*		12 24 32.5	
	comp=Z,2μm,0.6s						
SPBC	San Pablo de B	2.05	206	*e* P	Pn	12 24 04.6	+0.3
SPBC				*e* S	Sn	12 24 32.2	+2.2
SPBC				*i*		12 24 34.0	
	comp=Z,2μm,0.6s						
LL1C	La Loma 1 Cana	2.06	349	*e* P	Pg	12 24 09.5	+0.3
LL1C				*e* S	Sg	12 24 38.2	+2.2
LL6C	La Loma 6 Bece	2.22	357	*e* P	Pb	12 24 09.3	-0.6
LL6C				*e* S	Sg	12 24 40.2	-0.9
LL6C				*i*		12 24 46.5	
	comp=Z,2μm,0.3s						
LL5C	La Loma 5 El P	2.30	346	*e* P	Pb	12 24 11.7	+0.4
LL5C				*e* S	Sg	12 24 42.1	-1.5
LL5C				*i*		12 24 51.8	
	comp=Z,2μm,0.5s						
UREC	San Jos de Ur	2.37	276	*i* P	Pb	12 24 10.9	-1.5
UREC				*e* S	Sb	12 24 41.8	+0.1
UREC				*i*		12 24 48.5	
	comp=Z,639nm,0.3s						
SOCV	Socops	2.41	71	*i* P	Pb	12 24 12.3	-0.8
SOCV				*e* S	Sb	12 24 44.0	+1.0
NORC	Norcasia	2.57	221	*e* P	Pn	12 24 12.2	+0.8
NORC				*e* S	Sn	12 24 44.9	+2.1
NORC				*i*		12 24 59.1	
	comp=Z,453nm,0.5s						
ARGC	Ariguani, Magd	2.58	335	*e* P	Pb	12 24 15.2	-0.8
ARGC				*e* S	Sb	12 24 49.1	+1.4
ARGC				*i*		12 25 03.5	
	comp=Z,602nm,0.4s						
HELC	Santa Helena	2.69	241	*i* P	Pn	12 24 13.9	+0.5
HELC				*e* S	Sb	12 24 49.9	-1.5
HELC				*i*		12 24 55.6	
	comp=Z,709nm,0.5s						
SDV	Santo Domingo	2.85	61	P	Pn	12 24 18.8	+3.3
	comp=Z,377nm,0.4s,baz=194,slow=5.1,SNR=109						
SDV				S	Sb	12 24 58.3	+2.4
	comp=Z,3μm,0.5s,baz=88,slow=13,SNR=21						
SDV				LR	LR	12 25 43.4	
	comp=Z,950nm,20.6s,baz=260,slow=46						
SDV	Santo Domingo	2.85	61		Pn	12 24 18.9	+3.5
SDV					Sn	12 24 54.5	+4.5
SDV	Santo Domingo	2.85	61	*e* P	Pn	12 24 18.6	+3.1
ROSC	El Rosal	2.89	204	P	Pn	12 24 18.0	+1.9
	comp=Z,154nm,0.3s,baz=25,slow=23,SNR=31						
ROSC				S	Sb	12 24 59.3	+2.3
	comp=Z,845nm,0.5s,baz=65,slow=23,SNR=6.1						
ROSC	El Rosal	2.89	204	Pn	Pn	12 24 17.6	+1.5
ROSC					Sn	12 24 52.9	+1.8
ROSC	El Rosal	2.89	204	*e* P	Pn	12 24 17.3	+1.2
ROSC				*e* S	Sn	12 24 53.8	+2.7
ROSC				*i*		12 25 08.5	
	comp=Z,857nm,0.6s						
CHIC	Chingaza	2.91	191	*e* P	Pn	12 24 17.3	+0.8
CHIC				*e* S	Sn	12 24 52.7	+1.0
CHIC				*i*		12 25 20.4	
	comp=Z,415nm,0.6s						
DBBC	Dabeiba	3.06	261	*e* P	Pn	12 24 20.6	+2.4
DBBC				*e* S	Sn	12 24 58.8	+3.8
DBBC				*i*		12 25 17.4	
	comp=Z,607nm,0.7s						
SJCC	San Jacinto, C	3.10	320	*e* P	Pb	12 24 23.4	-1.6
SJCC				*e* S	Sb	12 25 02.7	-0.4
SJCC				*i*		12 25 23.3	
	comp=Z,561nm,0.5s						
GUY2C	Guyana, Caldas	3.15	224	*e* P	Pn	12 24 20.8	+1.0
GUY2C				*e* S	Sn	12 25 00.3	+2.6
GUY2C				*i*		12 25 17.2	
	comp=Z,516nm,0.6s						
CBOC	Ciudad Bolivar	3.27	240	*i* P	Pn	12 24 23.4	+2.3
CBOC				*e* S	Sn	12 25 02.8	+2.6
CBOC				*i*		12 25 14.5	
	comp=Z,598nm,0.6s						
VILC	Villavicencio,	3.41	189	*e* P	Pn	12 24 24.1	+1.0
VILC				*e* S	Sn	12 25 03.8	+0.1
PTGC	Puerto Gaitan,	3.44	163	*e* P	Pn	12 24 24.8	+1.4
PTGC				*e* S	Sn	12 25 06.5	+2.3
PTGC				*i*		12 25 25.2	
	comp=Z,571nm,0.5s						
LCBC	Los crdobas,	3.45	293	*e* P	Pn	12 24 27.1	+3.6
LCBC				*e* S	Sb	12 25 11.1	-1.8
LCBC				*i*		12 25 29.4	
	comp=Z,302nm,0.6s						
CRJC	Cerrejon, Guaj	3.50	4	*e* P	Pn	12 24 26.5	+2.1
CRJC				*e* S	Sb	12 25 11.9	-2.7
CRJC				*i*		12 25 29.1	
	comp=Z,1μm,0.3s						
ANIL	Santa Ana	3.73	217	*e* P	Pn	12 24 29.3	+1.6
ANIL				*e* S	Sn	12 25 14.4	+2.5
ANIL				*i*		12 25 40.1	
	comp=Z,702nm,0.4s						
SMRC	Santa Marta, M	3.79	344	*e* P	Pn	12 24 31.9	+3.7
SMRC				*e* S	Sb	12 25 18.5	-4.1
SMRC				*i*		12 25 35.6	
	comp=Z,449nm,0.5s						
PLMC	San Jos del P	4.04	230	*e* P	Pn	12 24 33.5	+1.9
PLMC				*i*		12 25 40.8	
	comp=Z,213nm,0.6s						
DABV	Dabajuro	4.21	36	*e* P	Pn	12 24 37.1	+3.1
CAPC	Capurgana	4.30	285	*e* P	Pn	12 24 35.9	+0.7
CAPC				*e* S	Sn	12 25 27.0	+1.6
CAPC				*i*		12 25 31.0	
	comp=Z,109nm,0.6s						
URIC	Uribia, Colomb	4.33	15	*e* P	Pn	12 24 37.6	+2.0
URIC				*e* S	Sn	12 25 30.7	+4.6
URIC				*i*		12 25 51.8	
	comp=Z,262nm,0.5s						
SOLC	Bahia Solano	4.41	254	*e* P	Pn	12 24 40.6	+4.0
SOLC				*e* S	Sn	12 25 33.1	+5.0
SOLC				*i*		12 25 57.4	
	comp=Z,63nm,0.6s						
PTAC	Punta Ardita,	4.62	266	*e* P	Pn	12 24 41.7	+2.1
PTAC				*e* S	Sn	12 25 39.5	+6.0
PTAC				*i*		12 25 57.7	
	comp=Z,87nm,0.7s						
YOTC	Yotoco, Valle	4.72	222	*e* P	Pn	12 24 43.9	+2.8
YOTC				*e* S	Sn	12 25 39.3	+3.3
PIZC	Pizarro, Choco	4.88	239	*e* P	Pn	12 24 47.6	+4.5
UPD2	Meteti	4.92	283	*e* P	Pn	12 24 45.6	+1.9
GUVC	San Jose del G	4.95	174	*e* P	Pn	12 24 44.8	+0.6
GUVC				*e* S	Sn	12 25 41.5	-0.1
GUVC				*i*		12 25 46.2	
	comp=Z,71nm,0.3s						
BAUV	El Baul	5.26	74	Pn	Pn	12 24 49.4	+1.0
BETC	Betania	5.30	205	*e* P	Pn	12 24 49.6	+0.6
BETC				*i*		12 26 23.1	
	comp=Z,188nm,0.7s						
MACC	Macarena, Meta	5.37	187	*e* P	Pn	12 24 51.6	+1.7
MACC				*e* S	Sn	12 25 52.7	+0.8
MACC				*i*		12 26 22.7	
	comp=Z,172nm,0.7s						
MALC	Bahia Malaga	5.41	230	*e* P	Pn	12 24 53.1	+2.6
MALC				*e* S	Sn	12 25 54.2	+1.4
GARC	Garzon, Huila	5.77	204	*e* P	Pn	12 24 56.9	+1.3
GARC				*e* S	Sn	12 26 02.9	+0.8
GARC				*i*		12 26 32.9	
	comp=Z,71nm,0.4s						
POPC	Popayan, Colom	6.05	216	*e* P	Pn	12 25 00.2	+0.8
POPC				*e* S	Sn	12 26 16.5	+7.6
HATO	Hato, Curacao	6.22	41	Pn	Pn	12 25 05.0	+3.4
FLOC	Florencia	6.38	203	*e* P	Pn	12 25 04.0	+0.1
FLOC				*e* S	Sn	12 26 17.7	+0.8
FLOC				*i*		12 27 03.3	
	comp=Z,46nm,0.7s						
UPA	Univ. de Panam	6.48	284	*e* P	Pn	12 25 06.3	+1.1
UPA				*e* S	Sn	12 26 17.0	-2.1
BBAC	Balboa, Cauca	6.80	217	*e* P	Pn	12 25 11.0	+1.2
BBAC				*e* S	Sn	12 26 28.6	+1.2
BCIP	Isla Barro Col	6.81	285	Pn	Pn	12 25 11.2	+1.4
BCIP	Isla Barro Col	6.81	285	*e* P	Pn	12 25 11.0	+1.3
BCIP				*e* S	Sn	12 26 28.1	+0.7
BIRV	Birongo	7.42	66	Pn	Pn	12 25 19.5	+1.4
PTLC	Puerto Leguiza	7.46	193	*e* P	Pn	12 25 22.1	+3.4
PTLC				*e* S	Sg	12 27 28.7	-0.7
PTLC				*i*		12 27 47.4	
	comp=Z,57nm,0.7s						
GCUF	Volcan Galeras	7.50	214	*e* P	Pn	12 25 21.3	+1.6
GCUF				*e* S	Sb	12 27 11.6	+1.5
PCRV	Puerto La Cruz	8.83	72	P	Pn	12 25 38.8	+1.3
PCRV				S	Sn	12 27 16.9	-0.3
OTAV	Otavalo	8.94	216	Pn	Pn	12 25 37.1	-2.3
OTAV	Otavalo	8.94	216	*e* P	Pn	12 25 42.5	+3.2
DRK0	Durika	10.13	281		Pn	12 25 55.0	-0.5
BANI	BANI	11.16	14	Pn	Pn	12 26 10.4	+0.9
MTDJ	Mount Denham	11.48	339	Pn	Pn	12 26 14.5	+0.7
SDDR	Presa de Saban	11.55	9	Pn	Pn	12 26 15.6	+0.7
DR12	Loma Pena Alta	11.80	18		Pn	12 26 18.1	-0.1
CRPR	Cabo Rojo, PR	11.99	29		Pn	12 26 20.6	-0.1
TBTG	Tabatinga, AM	12.06	164	*e* P	Pn	12 26 23.1	+1.4
OBIP	Obispado Ponce	12.27	31		Pn	12 26 22.9	-1.6
CELP	Cerrillos	12.31	31		Pn	12 26 24.2	-0.9
AGPR	Aguadilla, PR	12.39	28	Pn	Pn	12 26 25.7	-0.5
AOPR	Arecibo Observ	12.45	29		Pn	12 26 26.4	-0.8
AOPR	Arecibo Observ	12.45	29	*e* P	Pn	12 26 24.9	-2.2
SJG	San Juan	12.56	32	P	Pn	12 26 27.3	-1.3
	comp=Z,17nm,0.4s,baz=221,slow=13,SNR=25						
SJG				S	Sn	12 28 37.8	-11
	comp=Z,2.3nm,0.3s,baz=11,slow=20,SNR=1.0						
SJG				LR	LR	12 31 56.3	
	comp=Z,112nm,19.0s,baz=262,slow=40						
SJG	San Juan	12.56	32		Pn	12 26 27.7	-0.9
EMPR	Esperanza - Ma	12.67	30	Pn	Pn	12 26 29.9	-0.2
HUMP	Col San Antoni	12.75	33	Pn	Pn	12 26 29.9	-1.2
GCPR	Guaynabo City	12.76	32		Pn	12 26 30.5	-0.8
CBYP	Canovanas	12.85	33		Pn	12 26 31.5	-1.1
MTP	Monte Pirata	12.88	34		Pn	12 26 31.9	-0.9
TOSP	Speyside	13.01	72	Pn	Pn	12 26 32.1	-2.6
SVB	Belmont	13.04	63	Pn	Pn	12 26 33.7	-1.4
CDVI	St. Croix	13.06	38	Pn	Pn	12 26 35.1	-0.3
CUPR	Culebra, Puert	13.20	35	Pn	Pn	12 26 36.3	-0.9
STVI	Saint Thomas	13.42	36	Pn	Pn	12 26 38.7	-1.6
BOAV	Boa Vista	13.57	111	Pn	Pn	12 26 37.5	-4.9
BOAV	Boa Vista	13.57	111	*e* P	Pn	12 26 40.9	-1.5
FDF	Fort de France	13.80	58		Pn	12 26 45.2	-0.3
SMRT	St. Maarten	14.37	42	P	P	12 26 59.6	-0.7
GDSD	La Dsirade Is	14.71	52	P	Pn	12 26 59.0	+1.0
CZSB	Cruzeiro do Su	15.14	178		Pn	12 27 00.5	-3.3
CZSB	Cruzeiro do Su	15.14	178	*e* P	Pn	12 27 06.1	+2.3
ATAH	Atahualpa	15.45	200	P	P	12 27 16.1	+3.2
	comp=Z,5.0nm,0.8s,baz=291,slow=21,SNR=2.9						
ATAH				LR	LR	12 34 14.0	
	comp=Z,331nm,19.4s,baz=12,slow=42						
MACA	Manacapuru-AM	16.35	130	*e* P	Pn	12 27 19.8	+0.4
ETMB	Extrema	18.55	158	*e* P	P	12 27 47.5	+0.8
NNA	Nana	19.71	191	LR	LR	12 36 57.4	
	comp=Z,119nm,21.3s,baz=354,slow=41						
MDP	Montagnes des	20.53	95	P	P	12 28 06.7	-1.8
	comp=Z,9.3nm,1.0s,baz=31,slow=13,SNR=1.8						
MDP				LR	LR	12 37 05.6	
	comp=Z,46nm,19.0s,baz=286,slow=40						
	comp=Z,9.3nm,1.0s						
ITTB	Itaituba	21.01	124	*e* P	P	12 28 13.5	-0.1
MALB	Monte Alegre	21.02	116	*e* P	P	12 28 14.0	+0.3
NPGB	Novo Progresso	22.89	129	*e* P	P	12 28 33.4	-0.4
CMIG	Matias Romero	23.24	296	LR	LR	12 39 50.1	
	comp=Z,55nm,18.5s,baz=123,slow=42						
LPAZ	La Paz	24.16	168	P	P	12 28 44.8	-2.1
	comp=Z,0.6nm,0.4s,baz=282,slow=3.3,SNR=0.7						
	comp=Z,0.6nm,0.4s						
LPAZ	La Paz	24.16	168	*e* P	P	12 28 49.0	+2.1
SIV	San Ignacio	26.23	153	P	P	12 29 01.9	-3.2
	comp=Z,0.3nm,0.3s,baz=219,slow=21,SNR=1.9						
	comp=Z,0.3nm,0.3s						
PTLB	Pontes e Lacer	26.70	149	*e* P	P	12 29 11.8	+2.5
TMAB	Tom-Au,PA,Br	26.86	110	*e* P	P	12 29 13.5	+2.6
PRPB	Parauapebas	26.96	120	*e* P	P	12 29 13.0	+1.3
SALV	Santo Antonio	28.98	143	*e* P	P	12 29 32.0	+2.3
T59A	Double "B" Far	29.61	353	P	P	12 29 35.6	+0.5
T59A				IAmb	IAmb	12 29 36.8	
	comp=Z,14nm,1.2s						
TKL	Tuckaleechee C	29.66	342	P	P	12 29 37.2	+1.5
	comp=Z,1.3nm,0.6s,baz=180,slow=12,SNR=1.7						
TKL				LR	LR	12 42 11.2	
	comp=Z,50nm,19.8s,baz=165,slow=37						
	comp=Z,1.3nm,0.6s						
X48A	Hartselle	29.72	336	P	P	12 29 37.6	+1.5
V51A	Loudon	29.98	342	P	P	12 29 40.1	+1.7
V51A				IAmb	IAmb	12 29 42.0	
	comp=Z,9.1nm,1.1s						
SMTB	Santa Maria do	30.23	122	*e* P	P	12 29 40.9	0.0
S57A	Dark Hollow, R	30.58	351	P	P	12 29 45.2	+1.6
S57A				IAmb	IAmb	12 29 45.9	
	comp=Z,4.2nm,0.6s						
PLAL	Pickwick Lake	30.59	335	P	P	12 29 45.0	+1.2
PLAL				IAmb	IAmb	12 29 55.1	
	comp=Z,6.7nm,1.1s						
ROSB	Rosrio	30.76	109	*e* P	P	12 29 46.1	+0.5
S54A	Dingess, Beckl	31.05	347	P	P	12 29 49.9	+2.0
S54A				IAmb	IAmb	12 29 52.4	
	comp=Z,12nm,1.4s						
R55A	Marlinton	31.28	349	P	P	12 29 51.6	+1.6
WVT	Waverly	31.49	337	P	P	12 29 53.0	+1.2
WVT				IAmb	IAmb	12 29 54.1	
	comp=Z,6.9nm,1.0s						
T47A	Sharon Grove	31.98	339	P	P	12 29 57.5	+1.5
T47A				IAmb	IAmb	12 29 58.5	
	comp=Z,7.5nm,0.9s						
AQDB	Aquidauana	32.68	149	*e* P	P	12 30 04.0	+1.7
WHAR	Wooly Hollow	32.76	330	P	P	12 30 03.5	+0.7
WHAR				IAmb	IAmb	12 30 07.0	
	comp=Z,7.4nm,1.2s						
P52A	Corning	32.99	347	P	P	12 30 06.3

SADO Sadowa 37.49 353 P P 12 30 44.9 +1.4
G62A West of Eustis 37.64 3 P P 12 30 46.0 +1.2
G62A IAmb IAmb 12 30 47.9
comp=Z,15nm,1.4s
MNTX Cornudas Mount 38.48 313 P P 12 30 53.5 +1.3
H43A Windswept, Lux 38.97 343 P P 12 30 56.8 +0.8
H43A IAmb IAmb 12 31 13.5
comp=Z,11nm,0.9s
E62A Clayton Lake 39.10 4 P P 12 30 58.4 +1.3
E62A IAmb IAmb 12 31 32.5
comp=Z,9.4nm,1.3s
GDU01 Guandu, BA 39.45 122 eP P 12 31 02.1 +1.7
RCBR Riachuelo 39.46 109 eP P 12 31 02.0 +1.4
D62A Allapoint, All 39.59 4 P P 12 31 02.5 +1.3
E46A Sault Ste Mari 39.89 348 P P 12 31 04.9 +1.2
LMQ La Malbaie 39.98 3 P P 12 31 05.2 +0.8
LMQ IAmb IAmb 12 31 07.2
comp=Z,15nm,1.2s
ITQB Itaqui 40.24 157 eP P 12 31 10.1 +3.3
E43A Lone Tree Farm 40.52 345 P P 12 31 09.8 +0.9
COWI Conover 40.85 343 P P 12 31 13.1 +1.5
COWI IAmb IAmb 12 31 24.4
comp=Z,9.2nm,1.1s
ANMO Albuquerque 40.99 317 P P 12 31 13.5 +0.3
comp=Z,0.4nm,0.5s,baz=290,slow=1.2,SNR=1.9
comp=Z,0.4nm,0.5s
ECSD EROS Data Cent 41.52 334 P P 12 31 16.8 -0.4
D41A Chassel 41.56 344 P P 12 31 18.6 +1.1
SDCO Great Sand Dun 42.00 321 P P 12 31 22.9 +1.3
EYMN Ely 43.21 342 P P 12 31 31.6 +0.6
EYMN IAmb IAmb 12 31 32.0
comp=Z,6.7nm,0.6s
PV13 Radium Mtn., P 44.37 319 P P 12 31 42.8 +2.2
RDMU Red Mountain 46.22 321 P P 12 31 56.5 +1.2
MTPU Mount Pierson 46.54 317 P P 12 31 59.7 +1.6
ULM Lac du Bonnet 46.63 340 P P 12 31 58.5 +0.3
comp=Z,2.4nm,0.4s,baz=138,slow=8.6,SNR=5.2
comp=Z,2.4nm,0.4s
ULM Lac du Bonnet 46.63 340 P P 12 31 58.4 +0.3
ULM IAmb IAmb 12 31 59.4
comp=Z,6.6nm,1.0s
SCHQ Schefferville 47.47 5 P P 12 32 04.8 +0.2
comp=Z,6.9nm,0.5s,baz=186,slow=6.5,SNR=16
SCHQ LR LR 12 53 56.7
comp=Z,18nm,18.2s,baz=124,slow=38
comp=Z,6.9nm,0.5s
SCHQ Schefferville 47.47 5 P P 12 32 04.8 +0.2
BW06 Boulder Array 47.51 324 P P 12 32 05.7 +0.3
BW06 IAmb IAmb 12 32 16.9
comp=Z,5.3nm,1.4s
PDAR Pinedale Array 47.51 324 P P 12 32 05.9 +0.5
comp=Z,0.3nm,0.5s,baz=129,slow=8.6,SNR=5.0
PDAR PcP PcP 12 33 34.5 -1.1
comp=Z,0.4nm,0.5s,baz=124,slow=5.8,SNR=2.1
comp=Z,0.3nm,0.5s
PFO Pinyon Flats O 47.65 309 LR LR 12 56 53.5
comp=Z,31nm,18.0s,baz=187,slow=42
BGU Big Grassy Mou 48.60 320 P P 12 32 15.2 +1.4
BGU IAmb IAmb 12 32 15.8
comp=Z,2.4nm,0.6s
R11A Troy Canyon, C 49.03 315 P P 12 32 18.6 +1.5
NVAR Mina Array Bea 50.98 314 P P 12 32 33.0 +0.9
comp=Z,0.4nm,0.6s,baz=118,slow=6.9,SNR=6.4
NVAR PcP PcP 12 33 47.0 -1.2
comp=Z,0.6nm,0.7s,baz=137,slow=4.9,SNR=4.3
comp=Z,0.4nm,0.6s
WVOR Wild Horse Val 52.99 319 P P 12 32 48.0 +1.2
I07A Izee 54.32 320 P P 12 32 57.1 +0.6
NEW Newport 55.01 326 P P 12 33 01.3 -0.1
comp=Z,0.7nm,0.4s,baz=103,slow=9.8,SNR=2.6
comp=Z,0.7nm,0.4s
NEW Newport 55.01 326 P 12 33 01.6 +0.2
PINE Pine Mountain 55.11 319 P P 12 33 04.2 +1.8
PINE IAmb IAmb 12 33 05.2
comp=Z,3.7nm,1.0s
YBH Yreka Blue Hor 55.42 316 LR LR 12 59 15.9
comp=Z,30nm,20.6s,baz=178,slow=38
KMRM Mail Ridge 55.54 314 P P 12 33 06.5 +1.2
KMRM IAmb IAmb 12 33 38.7
comp=Z,7.4nm,1.4s
FRB Frobisher Bay 56.24 2 P P 12 33 08.9 -0.9
comp=Z,2.4nm,0.5s,baz=173,slow=9.2,SNR=4.2
comp=Z,2.4nm,0.5s
B08A Colville Reser 56.32 325 P P 12 33 10.9 +0.2
B08A IAmb IAmb 12 33 16.5
comp=Z,4.6nm,1.3s
KBO Bosley Butte 56.65 316 P P 12 33 14.1 +0.8
KEBM Edson Butte 56.98 317 P P 12 33 17.4 +1.7
RADR Rader Ridge 58.08 321 P P 12 33 24.4 +1.1
RADR IAmb IAmb 12 33 43.5
comp=Z,85nm,1.4s
YKA Yellowknife Ar 62.61 340 P P 12 33 53.8 -0.1
comp=Z,6.2nm,0.5s,baz=129,slow=6.8,SNR=31
comp=Z,6.2nm,0.5s
YKA Yellowknife Ar 62.61 340 P P 12 33 53.5 -0.4
DLBC Dease Lake 66.71 331 P P 12 34 21.9 +1.0
comp=Z,3.5nm,0.9s,baz=115,slow=6.3,SNR=7.4
comp=Z,3.5nm,0.9s
DLBC Dease Lake 66.71 331 P P 12 34 22.0 +1.1
DLBC IAmb IAmb 12 34 22.7
comp=Z,3.3nm,0.9s
BORG Borgarnes 67.67 21 LR LR 12 59 44.0
comp=Z,11nm,21.2s,baz=264,slow=32
DBIC Dimbokro 67.72 86 P P 12 34 25.9 -2.2
comp=Z,1.3nm,0.7s,baz=276,slow=9.2,SNR=1.5
comp=Z,1.3nm,0.7s
KOWA Kowa 68.03 77 LR LR 13 04 04.8
comp=Z,28nm,18.4s,baz=228,slow=36
SUMG Summit 68.33 11 P P 12 34 31.0 -0.3
SUMG Summit 68.33 11 *i* P P 12 34 30.0 -1.3
P33M Teslin, Yukon 68.75 332 P P 12 34 35.4 +1.7
P33M IAmb IAmb 12 35 05.4
comp=Z,3.5nm,1.3s
ESDC Sonseca Array 69.25 50 P P 12 34 35.1 -2.1
comp=Z,0.3nm,0.7s,baz=269,slow=5.6,SNR=2.5
comp=Z,0.3nm,0.7s
FARO Faro, Yukon 69.79 334 P P 12 34 40.0 -0.1
N31M Braeburn, Yuko 70.57 333 P P 12 34 46.3 +1.4
N31M IAmb IAmb 12 34 47.3
comp=Z,5.0nm,0.9s
M30M Minto, Yukon 71.41 334 P P 12 34 50.6 +0.7
A36M Sachs Harbour 71.77 345 P P 12 34 51.5 -0.4
INK Inuvik 72.38 340 P P 12 34 55.5 0.0
comp=Z,1.3nm,0.6s,baz=101,slow=3.7,SNR=7.3
INK LR LR 13 08 34.3
comp=Z,34nm,18.4s,baz=126,slow=37
comp=Z,1.3nm,0.6s
INK Inuvik 72.38 340 P P 12 34 55.6 0.0
EPYK Eagle Plains 72.74 338 P P 12 34 58.3 +0.4
EPYK IAmb IAmb 12 35 07.8
comp=Z,10nm,1.5s
M27K Edge Creek, AK 73.58 333 P P 12 35 04.4 +1.4
M27K IAmb IAmb 12 35 05.1
comp=Z,4.2nm,0.7s
TORD Torodi Ar. Bea 73.64 79 P P 12 35 01.0 -3.1
comp=Z,10nm,0.3s,baz=274,slow=9.1,SNR=2.1
BCAR Beaver Creek A 73.74 334 P P 12 35 04.9 +1.1
L27K Beaver Creek, 73.75 334 P P 12 35 05.2 +1.3
L26K Log Cabin Wild 74.41 334 P P 12 35 09.2 +1.4
L26K IAmb IAmb 12 35 09.7
comp=Z,4.8nm,0.7s
MENT Mentasta 74.56 333 P P 12 35 10.1 +1.5
MENT IAmb IAmb 12 35 11.1
comp=Z,2.3nm,0.6s
DOT Dot Lake 74.88 334 P P 12 35 11.6 +1.2
I26K Coal Creek Min 74.92 336 P P 12 35 10.6 0.0
SCRK Sand Creek 74.93 334 P P 12 35 11.9 +1.0
SCRK IAmb IAmb 12 35 12.5
comp=Z,3.2nm,0.9s
RIDG Independent Ri 75.24 334 P P 12 35 13.7 +1.1
RIDG IAmb IAmb 12 35 14.6
comp=Z,5.9nm,1.0s
J25K Salcha River, 75.66 335 P P 12 35 15.3 +0.3
SCM Sheep Creek Mo 75.96 332 P P 12 35 17.6 +0.8
BMAR Burnt Mountain 76.02 338 P P 12 35 17.0 +0.1
PWL Port Wells 76.27 331 P P 12 35 19.1 +0.6
IL31 76.33 335 P P 12 35 18.5 -0.2
IL31 IAmb IAmb 12 35 31.0
comp=Z,5.3nm,1.4s
ILAR Eielson Array 76.33 335 P P 12 35 18.5 -0.2
comp=Z,0.9nm,0.6s,baz=94,slow=4.5,SNR=11
ILAR LR LR 13 10 10.1
comp=Z,25nm,18.7s,baz=32,slow=36
comp=Z,0.9nm,0.6s
CCB Clear Creek Bu 76.70 335 P P 12 35 20.6 -0.2
H24K Noodor Dome 76.95 336 P P 12 35 22.1 -0.1
H24K IAmb IAmb 12 35 27.3
comp=Z,5.1nm,1.5s
NEA2 Nenana 77.22 335 P P 12 35 24.0 +0.3
NEA2 IAmb IAmb 12 35 24.2
comp=Z,3.7nm,0.8s
TRF Thorofare Moun 77.58 333 P P 12 35 26.5 +0.5
TRF IAmb IAmb 12 35 26.7
comp=Z,7.3nm,1.2s
H23K Yukon River 77.62 336 P P 12 35 26.2 +0.2
BPAW Bear Paw Mtn. 77.97 334 P P 12 35 28.0 0.0
BPAW IAmb IAmb 12 35 28.5
comp=Z,2.7nm,0.6s
MLY Manley 78.00 335 P P 12 35 27.8 -0.3
PPLA Purkeypile 78.36 333 P P 12 35 29.9 -0.4
OHAK Old Harbor 78.39 327 P P 12 35 28.9 -1.5
ILSW Iliamna Southw 78.53 330 P P 12 35 30.6 -0.7
ILSW IAmb IAmb 12 35 31.2
comp=Z,14nm,1.3s
I21K Tanana 78.54 335 P P 12 35 31.1 0.0
M20K Styx River 78.69 332 P P 12 35 32.2 +0.1
M20K IAmb IAmb 12 35 32.8
comp=Z,3.8nm,0.7s
K20K Telida 79.26 333 P P 12 35 34.7 -0.3
K20K IAmb IAmb 12 35 59.1
comp=Z,5.8nm,1.4s
IMAR Indian Mountai 79.36 336 P P 12 35 35.1 -0.4
J20K Nowinta River 79.36 334 P P 12 35 35.1 -0.4
SVW2 Sparrevohn 79.81 331 P P 12 35 37.2 -0.9
SVW2 IAmb IAmb 12 35 38.1
comp=Z,3.5nm,0.6s
N18K Kilae Creek 79.94 330 P P 12 35 38.6 -0.3
N18K IAmb IAmb 12 35 39.1
comp=Z,4.1nm,0.7s
NB2 NORSAR Subarra 80.76 29 P P 12 35 42.7 -0.6
comp=Z,0.9nm,0.7s,baz=270,slow=5.6
NOA NORSAR Array B 80.76 29 P P 12 35 41.7 -1.6
comp=Z,1.4nm,0.9s,baz=268,slow=5.4,SNR=4.4
NOA LR LR 13 07 39.5
comp=Z,10nm,21.3s,baz=115,slow=33
comp=Z,1.4nm,0.9s
HFS Hagfors 81.98 30 LR LR 13 07 22.6
comp=Z,20nm,21.8s,baz=286,slow=32
VRAC Vranov 84.21 41 LR LR 13 06 18.1
comp=Z,14nm,21.6s,baz=44,slow=30
ARCES ARCESS Array B 86.05 20 P P 12 36 08.4 -1.9
comp=Z,3.3nm,1.0s,baz=324,slow=4.5,SNR=1.3
comp=Z,3.3nm,1.0s
FINES FINESS Array B 87.86 28 P P 12 36 17.7 -1.5
comp=Z,1.4nm,0.9s,baz=282,slow=6.5,SNR=1.4
FINES LR LR 13 10 58.9
comp=Z,17nm,21.7s,baz=28,slow=32
comp=Z,1.4nm,0.9s
SNAA Sanae 91.00 163 LR LR 13 18 05.2
comp=Z,60nm,20.6s,baz=245,slow=36
AKASG Malin Array Be 92.01 38 LR LR 13 18 01.6
comp=Z,25nm,18.0s,baz=232,slow=36
OBN Obninsk 94.94 33 LR LR 13 16 11.9
comp=Z,9.0nm,21.6s,baz=322,slow=33
SONM Songino Array 124.90 0 PKP PKPdf 12 42 28.3 -2.1
comp=Z,0.3nm,0.4s,baz=352,slow=1.5,SNR=2.4
STKA Stephens Creek 139.57 228 PKP PKPdf 12 42 55.5 -2.7
comp=Z,1.0nm,0.8s,baz=133,slow=18,SNR=3.5
ASAR Alice Springs 149.47 235 PKP PKPdf 12 43 12.8 -2.9
comp=Z,1.6nm,0.6s,baz=117,slow=3.6,SNR=20
ASAR PKPbc pPKPdf 12 43 18.1 -1.6
comp=Z,1.6nm,0.6s,baz=117,slow=3.6,SNR=15
WRA Warramunga Arr 150.62 242 PKPbc PKPdf 12 43 21.2 +3.6
comp=Z,2.2nm,0.5s,baz=105,slow=2.9,SNR=59
CMAR Chiang Mai Arr 153.05 17 PKPbc PKPdf 12 43 26.0 +4.8
comp=Z,0.6nm,0.4s,baz=329,slow=2.9,SNR=6.5

BJI ***28*** *12:42:48.7±0.0,9.2°±0.2°×119.4°±0.4°E,h70km,mb4.9/38, mB4.9/17,Ms4.5/1*
NEIC ***28*** *12:42:51.3±2.3,9.1°±0.7°×119.4°±0.7°E,h64km±5km, mb4.7/47,Error ellipse: s-maj=10.6km s-min=9.7km az=220.0*
IDC ***28*** *12:42:53.0±1.1,8.9°±0.5°×119.4°±0.2°E,h94km±8km,mb4.3/21, mbtmp4.6/25,MS3.3/14,Error ellipse: s-maj=15.2km s-min=9.9km az=56.0*
DJA ***28*** *12:42:53.2±0.1,9.5°±0.2°×119.9°±0.1°E, h96km±2km,M4.9/68, mb5.0/68,mB5.4/27,MLv5.2/23,Mw(mB)4.8/27, MwMwp5.2/2,Mwp5.4/2*

ISC 28 12:42:52.8±0.3,9.1°±0.04°×119.8°±0.04°,h94km,n260, σ1°56/267,mb4.7/48,3D,Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.55	189	P		Pn	12 43 08.0	-0.4
BASI	Baing, Sumba	1.56	136	P		Pn	12 43 20.2	+0.8
PLAI	Plampang	1.70	279	P		Pn	12 43 22.3	+1.0
PLAI	Plampang	1.70	279	P		Pn	12 43 22.5	+1.2
EDFI	Ende, Flores	2.21	81	P		Pn	12 43 29.3	+1.3
TWSI	Taliwang, Sumb	2.59	278	P		Pn	12 43 34.3	+1.4
MMRI	Maumere	2.77	81	Pn		Pn	12 43 37.5	+2.2
MMRI	Maumere	2.77	81	P		Pn	12 43 37.4	+2.2
MMRI	Maumere	2.77	81	P		Pn	12 43 37.7	+2.4
BSSI	Bau Bau, Buton	3.10	19	P		Pn	12 43 41.0	+1.2
BKSI	Bulukumba	3.81	10	P		Pn	12 43 51.1	+1.8
KAPI	Kappang	4.07	4	P		Pn	12 43 54.4	+1.6
	198nm,0.3s,baz=170,slow=9.0,SNR=127							
KAPI				S		Sn	12 44 39.3	0.0
	368nm,0.3s,baz=322,slow=23,SNR=20							
KAPI				LR		LR	12 45 14.8	
	comp=Z,220nm,19.1s,baz=194,slow=37							
KAPI	Kappang	4.07	4	Pn		Pn	12 43 54.7	+1.9
KAPI	Kappang	4.07	4	P		Pn	12 43 55.0	+2.2
DNP	Denpasar	4.24	275	P		Pn	12 43 58.0	+2.9
BATI	Baumata	4.27	105	P		Pn	12 43 57.4	+1.7
	578nm,0.4s,baz=278,slow=2.5,SNR=216							
BATI				S		Sn	12 44 40.5	-3.9
	688nm,0.3s,baz=46,slow=2.9,SNR=5.1							
BATI	Baumata	4.27	105	P		Pn	12 43 56.9	+1.3
SRBI	Singaraja	4.33	283	P		Pn	12 43 56.9	+0.5
BBSI	Bau Bau	4.72	41	P		Pn	12 44 03.9	+2.2
SPSI	Sidrap Palu	5.11	3	P		Pn	12 44 09.2	+2.3
	1.1nm3μm218nm,0.6s							
JAGI	Jajag, Banyuwa	5.30	276	Pn		Pn	12 44 08.2	-1.3
JAGI	Jajag, Banyuwa	5.30	276	P		Pn	12 44 08.1	-1.4
	4.5nm11μm706nm,0.7s							
JAGI	Jajag, Banyuwa	5.30	276	P		Pn	12 44 08.6	-0.9
ABJI	Asem Bagus	5.34	284	P		Pn	12 44 11.7	+1.6
	2.2nm5μm304nm,0.6s							
KMMI	Kalianget	5.82	290	P		Pn	12 44 18.4	+1.8
	0.6nm141nm,1.0s							
BLJI	Banyuglugur	5.97	283	P		Pn	12 44 19.0	+0.3
	1.3nm5μm207nm,0.5s							
GMJI	Gumukmas	6.02	277	P		Pn	12 44 17.7	-1.6
	1.8nm4μm313nm,1.0s							
TTSI	Tana Toraja	6.02	3	P		Pn	12 44 23.2	+3.8
	1.0nm3μm219nm,0.7s							
BBKI	Banjar Baru	7.25	320	P		Pn	12 44 38.4	+2.3
	0.3nm83nm,1.1s							
PWJI	Pagerwojo	7.66	277	P		Pn	12 44 41.9	+0.2
	1.7nm3μm188nm,0.5s							
NGJI	Ngawi	8.12	282	P		Pn	12 44 52.5	+4.6
	143nm,0.5s							
PCJI	Pacitan	8.26	276	P		Pn	12 44 47.3	-2.5
	187nm,0.6s							
APSI	Ampana	8.41	15	P		Pn	12 44 54.9	+2.9
	699nm70nm,0.9s							
LUWI	Luwuk	8.65	22	P		Pn	12 44 58.2	+3.0
	4μm4μm139nm,0.4s							
UGM	Wanagama	8.93	277	Pn		Pn	12 44 57.4	-1.7
UGM	Wanagama	8.93	277	P		Pn	12 44 58.3	-0.8
	258nm,2.0s							
UGM	Wanagama	8.93	277	P		Pn	12 44 58.3	-0.8
MPSI	Mapaga	9.38	3	P		Pn	12 45 10.1	+5.0
	10nm,0.9s							
SANI	Sanana	9.54	43	P		Pn	12 45 08.9	+1.6
	858nm40nm,1.5s							
SANI	Sanana	9.54	43	P		Pn	12 45 10.5	+3.2
NLAI	Namlea	9.55	53	P		Pn	12 45 11.0	+3.5
	2μm121nm,0.8s							
MRSI	Marisa	9.82	15	P		Pn	12 45 13.8	+2.6
	1μm132nm,1.1s							
TOLI2	Tolitoli	10.22	7	P		Pn	12 45 18.9	+2.3
GTOI	Gorontalo	10.29	20	P		Pn	12 45 21.1	+3.6
	15nm,0.8s							
FITZ	Fitzroy Crossi	10.77	147	P		Pn	12 45 22.2	-1.7
	14nm,0.7s,baz=342,slow=12,SNR=31							
FITZ				S		Sn	12 47 13.1	-9.5
	56nm,0.4s,baz=176,slow=19,SNR=12							
FITZ				LR		LR	12 49 55.2	
	comp=Z,81nm,18.2s,baz=327,slow=39							
FITZ	Fitzroy Crossi	10.77	147	Pn		Pn	12 45 21.5	-2.5
FITZ	Fitzroy Crossi	10.77	147	P		Pn	12 45 22.4	-1.6
KNRA	Kununurra	11.18	127	Pn		Pn	12 45 28.0	-1.6
KNRA	Kununurra	11.18	127	P		Pn	12 45 28.2	-1.4
BNDI	Bandanaira	11.31	67	P		Pn	12 45 32.3	+1.0
LBMI	Labuha	11.59	44	P		Pn	12 45 39.8	+4.6
	1μm118nm,0.6s							
SAUI	Saumlaki	11.74	85	P		Pn	12 45 36.0	-1.2
	520nm,0.9s							
SAUI	Saumlaki	11.74	85	P		Pn	12 45 37.6	+0.4
LEM	Lembang	11.96	280	P		Pn	12 45 38.8	-1.5
	45nm,0.5s,baz=33,slow=11,SNR=9.4							
LEM				S		Sn	12 47 48.4	-3.6
	31nm,0.7s,baz=165,slow=23,SNR=1.9							
LEM				LR		LR	12 51 38.2	
	comp=Z,130nm,18.5s,baz=74,slow=44							
LEM	Lembang	11.96	280	P		Pn	12 45 39.7	-0.6
	43nm,0.7s							
MBWA	Marble Bar	11.99	179			Pn	12 45 38.4	-2.2
MBWA	Marble Bar	11.99	179	P		Pn	12 45 37.9	-2.6
MTN	Manton Dam	12.03	109	Pn		Pn	12 45 39.6	-1.5
MTN	Manton Dam	12.03	109	P		Pn	12 45 39.3	-1.8
CNJI	Cibinong	12.35	277	P		Pn	12 45 42.7	-2.6
	2μm94nm,0.5s							
PSA00	Pilbara Seismi	12.41	178	Pn		Pn	12 45 43.6	-2.5
PSA00	Pilbara Seismi	12.41	178			Pn	12 45 43.8	-2.3
PSA00	Pilbara Seismi	12.41	178	P		Pn	12 45 43.6	-2.5
CBJI	Citeko	12.79	281	P		Pn	12 45 48.4	-2.8
	518nm,0.7s							
DBJI	Dramaga	12.86	280	P		Pn	12 45 50.8	-1.3
	9μm10μm180nm,0.9s							
KDU	Kakadu	13.25	107	P		Pn	12 45 55.3	-2.0
XMI	Christmas Isla	13.65	263	P		Pn	12 46 00.9	-1.7
FAKI	Fak Fak	14.10	65	Pn		Pn	12 46 07.1	-1.3
FAKI	Fak Fak	14.10	65	P		Pn	12 46 06.7	-1.7
	2μm163nm,0.8s							
FAKI	Fak Fak	14.10	65	P		Pn	12 46 07.4	-1.0
SWI	Sorong	14.30	56	P		Pn	12 46 10.9	0.0
	1μm92nm,0.8s							
SIJI	Sorong	14.30	56	P		Pn	12 46 10.5	-0.4
	46nm,0.6s,baz=222,slow=7.0,SNR=43							
SIJI				S		Sn	12 48 46.5	-2.1
	2.8nm,0.4s,baz=269,slow=22,SNR=1.7							
SIJI				LR		LR	12 51 44.0	
	comp=Z,164nm,22.0s,baz=190,slow=37							
GIRL	Giralia	14.38	200			Pn	12 46 10.9	-0.9
GIRL	Giralia	14.38	200	P		Pn	12 46 10.8	-1.1
KASI	Kota Agung	15.28	282	P		Pn	12 46 23.6	+0.2
	3μm116nm,0.5s							
KKM	Kota Kinabalu	15.39	348	P		P	12 46 27.5	0.0
KKM	Kota Kinabalu	15.39	348	P		P	12 46 27.6	+0.1
LWLI	Liwa	15.83	284	P		Pn	12 46 31.3	+0.9
	3μm101nm,0.6s							
MNAI	Manna	17.07	285	P		Pn	12 46 44.8	-0.9
MNAI	Manna	17.07	285	P		Pn	12 46 44.2	-1.5
	213nm,1.4s							
MNAI	Manna	17.07	285	P		Pn	12 46 43.1	-2.6
DSRI	Dabo	17.13	299	P		P	12 46 46.7	+0.1
	13nm,0.9s							
DAV	Davao City (W)	17.17	21	LR		LR	12 54 05.4	
	comp=Z,71nm,18.9s,baz=204,slow=40							
KSI	Kapahiang	17.62	287	P		P	12 46 51.3	-0.9
	8μm116nm,0.7s							
WB0	Warramunga Arr	17.91	128	P		P	12 46 54.8	-0.4
WRKA	Warakurna	17.94	153	P		Pn	12 46 57.9	+1.7
WRA	Warramunga Arr	17.96	129	P		P	12 46 56.0	+0.2
	2.8nm,0.4s,baz=304,slow=13,SNR=98							
WRA				S		Sn	12 50 03.5	-13
	16nm,0.7s,baz=309,slow=23,SNR=9.2							
WRA				LR		LR	12 54 51.6	
	comp=Z,109nm,18.2s,baz=230,slow=40							
WRA				ScP		ScP	12 54 54.3	+0.1
	0.9nm,0.4s,baz=322,slow=1.9,SNR=3.7							
WRA	Warramunga Arr	17.96	129	P		P	12 46 56.1	+0.3
WRAB	Tennant Creek	17.96	128	P		P	12 46 55.7	-0.1
WRAB				IAmb		IAmb	12 47 22.8	
	comp=Z,18nm,0.6s							
WRAB	Tennant Creek	17.96	128	P		P	12 46 56.2	+0.4
WB2	Warramunga Arr	17.97	128	P		P	12 46 56.1	+0.2
WR0	Warramunga Arr	18.13	128	P		P	12 46 57.5	-0.2
BAKI	Biak	18.32	66	P		Pn	12 47 00.5	-0.3
	comp=Z,3μmcomp=Z,124nm,0.7s							
KRJI	Kerinci	19.22	290	P		Pn	12 47 12.2	+0.5
	comp=Z,276nm,0.6s							
WAMI	Wamena	19.79	76	P		Pn	12 47 18.0	-0.2
	comp=Z,3μmcomp=Z,80nm,0.6s							
AS31	Alice Springs	20.01	138	P		Pn	12 47 19.6	-1.1
AS31				IAmb		IAmb	12 47 48.1	
	comp=Z,15nm,0.5s							
ASAR	Alice Springs	20.01	138	P		P	12 47 19.2	+1.1
	comp=Z,12nm,0.4s,baz=317,slow=11,SNR=78							
ASAR				S		S	12 50 54.6	-3.5
	comp=Z,6.1nm,0.8s,baz=314,slow=23,SNR=7.1							
ASAR				ScP		ScP	12 54 58.6	-0.2
	comp=Z,5.9nm,0.7s,baz=340,slow=2.3,SNR=9.6							
ASAR				LR		LR	12 55 59.8	
	comp=Z,62nm,20.3s,baz=265,slow=39							
	comp=Z,12nm,0.4s							
ASAR	Alice Springs	20.01	138	P		P	12 47 19.1	+1.0
MORW	Morawa	20.13	189	P		P	12 47 20.0	+0.7
MORW				IAmb		IAmb	12 47 23.3	
	comp=Z,61nm,1.4s							
MORW	Morawa	20.13	189	P		P	12 47 19.5	+0.2
PPSI	Pulau Pagai	20.35	287	P		P	12 47 21.8	-0.1
	comp=Z,152nm,1.0s							
SMPI	Sarmi	20.39	71	P		P	12 47 21.6	-0.7
	comp=Z,23nm,1.0s							
GENI	Genyem	21.56	74	P		P	12 47 33.3	-1.6
	comp=Z,60nm,0.6s							
BLDU	Ballidu	21.57	187	P		P	12 47 35.3	+0.6
KLBR	Kellerberrin	22.44	184	P		P	12 47 44.4	+0.4
QIS	Mount Isa	22.52	123	P		P	12 47 45.7	+0.7
IPM	Ipoh	22.81	306	P		P	12 47 47.1	-0.8
IPM	Ipoh	22.81	306	P		P	12 47 47.1	-0.8
MUN	Mundaring	22.97	187	P		P	12 47 49.6	+0.2
FORT	Forrest	23.01	161	P		P	12 47 50.2	+0.5
FORT				IAmb		IAmb	12 47 51.9	
	comp=Z,34nm,0.7s							
FORT	Forrest	23.01	161	P		P	12 47 50.7	+0.9
KULM	Kulim	23.59	307	P		P	12 47 54.2	-1.1
KULM				IAmb		IAmb	12 48 35.4	
	comp=Z,26nm,1.4s							
RPSI	Rantau Prapat	23.60	299	P		P	12 47 54.3	-1.0
RPSI				IAmb		IAmb	12 47 55.0	
	comp=Z,15nm,0.7s							
PSI	Prapat	23.65	299	P		P	12 47 53.1	-2.9
	comp=Z,15nm,0.6s,baz=153,slow=9.1,SNR=14							
	comp=Z,15nm,0.6s							
COEN	Coen	23.71	104	P		P	12 47 57.4	+1.0
COEN	Coen	23.71	104	P		P	12 47 57.0	+0.6
NWAO	Narrogin (SRO)	23.80	185	P		P	12 47 57.6	+0.6
NWAO	Narrogin (SRO)	23.80	185	P		P	12 47 58.2	+1.2
OOD	Oodnadatta	24.08	143	P		P	12 48 00.3	+0.8
GSI	Gunungsitoli	24.14	294	P		P	12 48 00.9	+0.6
GSI				IAmb		IAmb	12 48 26.4	
	comp=Z,45nm,1.5s							
GSI	Gunungsitoli	24.14	294	P		P	12 48 01.1	+0.8
	comp=Z,18nm,0.6s							
MULG	Mulgathing	25.10	149	P		P	12 48 10.0	+1.2
MTSU	Mount Surprise	25.73	113	P		P	12 48 16.1	+1.4
INKA	Innaminka	27.32	136	P		P	12 48 30.9	+2.0
LCRK	Leigh Creek	27.52	143	P		P	12 48 32.0	+1.4
CTA	Charters Tower	28.07	116	P		P	12 48 37.0	+1.3
	comp=Z,7.4nm,0.8s,baz=295,slow=8.9,SNR=6.5							
CTA				LR		LR	13 01 00.1	
	comp=Z,51nm,18.3s,baz=292,slow=39							
	comp=Z,7.4nm,0.8s							
CTA	Charters Tower	28.07	116	P		P	12 48 37.0	+1.3
CTAO	Charters Tower	28.07	116	P		P	12 48 37.3	+1.6
CTAO				IAmb		IAmb	12 48 38.0	
	comp=Z,12nm,0.9s							
BBOO	Buckleboo	28.14	149	P		P	12 48 37.2	+1.1
BBOO	

KRVT	**Keravat (AS076**	**32.66**	**84**	LR	LR	13 03 51.4	
	comp=Z,59nm,19.3s,baz=65,slow=38						
CMSA	**Cobar Meteorol**	**33.04**	**136**	P	**P**	**12 49 21.5**	**+2.2**
YHNB	**Yeheng**	**33.61**	**3**	P	**P**	**12 49 26.0**	**+1.6**
CM31	**Chiang Mai Arr**	**34.06**	**324**	P	**P**	**12 49 29.1**	**+0.8**
CM31				IAmb	IAmb	12 49 29.6	
	comp=Z,16nm,1.1s						
CMAR	**Chiang Mai Arr**	**34.06**	**324**	P	**P**	**12 49 28.3**	**0.0**
	comp=Z,5.7nm,0.7s,baz=154,slow=6.7,SNR=50						
CMAR				PcP	**PcP**	**12 52 05.0**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=184,slow=1.6,SNR=2.8						
CMAR				ScP	**ScP**	**12 55 40.7**	**0.0**
	comp=Z,1.4nm,0.6s,baz=173,slow=3.1,SNR=11						
CMAR				LR	LR	13 04 23.2	
	comp=Z,27nm,20.4s,baz=175,slow=38						
	comp=Z,5.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**34.06**	**324**	P	**P**	**12 49 29.6**	**+1.2**
EIDS	**Eidsvold**	**34.12**	**122**	P	**P**	**12 49 30.4**	**+1.6**
EIDS				IAmb	IAmb	12 50 07.8	
	comp=Z,16nm,1.4s						
ARPS	**Mount Arapiles**	**34.21**	**147**	P	**P**	**12 49 31.7**	**+2.3**
CHTO	**Chiang Mai**	**34.34**	**324**	P	**P**	**12 49 31.7**	**+1.0**
CHTO				IAmb	IAmb	12 49 32.5	
	comp=Z,12nm,0.9s						
CRAI	**Chiangrai**	**34.68**	**327**	P	**P**	**12 49 35.2**	**+1.6**
CRAI				IAmb	IAmb	12 49 35.4	
	comp=Z,14nm,0.7s						
ARMA	**Armidale**	**36.74**	**130**	P	**P**	**12 49 53.2**	**+1.9**
ARMA				IAmb	IAmb	12 49 55.5	
	comp=Z,6.9nm,0.8s						
ARMA	**Armidale**	**36.74**	**130**	P	**P**	**12 49 54.7**	**+3.4**
CAN	**Canberra**	**37.52**	**139**	P	**P**	**12 49 59.4**	**+1.6**
CAN				IAmb	IAmb	12 50 05.4	
	comp=Z,12nm,1.2s						
CAN	**Canberra**	**37.52**	**139**	P	**P**	**12 50 00.7**	**+2.9**
PZH	**PanZhiHua**	**39.36**	**335**	P	**P**	**12 50 16.0**	**+2.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,60nm,5.0s						
NJ2	**Nanjing**	**40.92**	**359**	*e*P	**P**	**12 50 28.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PALK	**Pallekele**	**41.92**	**292**	P	**P**	**12 50 33.3**	**-1.2**
	comp=Z,4.9nm,0.7s,baz=188,slow=10,SNR=1.8						
PALK				LR	LR	13 09 14.6	
	comp=Z,51nm,18.1s,baz=229,slow=38						
	comp=Z,4.9nm,0.7s						
CD2	**Chengdu**	**42.54**	**340**	P	**P**	**12 50 40.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
H08S2	**Diego Garcia H**	**46.48**	**268**	T	T	13 40 45.2	
	baz=96,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**46.49**	**268**	T	T	13 40 44.1	
	baz=96,slow=76,SNR=9.0						
H08S1	**Diego Carcia H**	**46.50**	**268**	T	T	13 40 42.1	
	baz=96,slow=76,SNR=19						
DZM	**Mont Dzumac**	**46.86**	**112**	LR	LR	13 13 11.4	
	comp=Z,80nm,18.0s,baz=13,slow=39						
KSRS	**Korea Array**	**46.98**	**9**	P	**P**	**12 51 13.9**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=183,slow=7.4,SNR=4.9						
	comp=Z,1.3nm,0.7s						
LZH	**Lanzhou**	**47.29**	**343**	*e*P	**P**	**12 51 16.8**	**-0.3**
LZH				pP	pP	12 51 35.5	-4.0
LZH				sP	sP	12 51 45.3	-4.8
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
ODAN	**Odare**	**47.40**	**320**	*e*P	**P**	**12 51 17.1**	**-1.0**
	comp=Z,9.8nm,1.0s						
TAPN	**Taplejung**	**47.54**	**321**	*e*P	**P**	**12 51 18.7**	**-0.6**
	comp=Z,71nm,0.6s						
RAMN	**Ramite**	**47.97**	**319**	*e*P	**P**	**12 51 21.5**	**-1.1**
	comp=Z,80nm,1.1s						
MJAR	**Matsushiro Arr**	**48.69**	**20**	P	**P**	**12 51 24.1**	**-3.6**
	comp=Z,1.4nm,0.5s,baz=165,slow=6.6,SNR=8.4						
JIRN	**Jiri**	**48.72**	**320**	*e*P	**P**	**12 51 27.3**	**-1.2**
	comp=Z,60nm,0.7s						
GUN	**Gumba**	**49.09**	**320**	*e*P	**P**	**12 51 30.4**	**-0.9**
	comp=Z,110nm,0.8s						
PKI	**Pulchoki**	**49.16**	**319**	*e*P	**P**	**12 51 30.2**	**-1.6**
PKIN	**Phulchoki**	**49.17**	**319**	*e*P	**P**	**12 51 30.3**	**-1.5**
DMN	**Daman**	**49.39**	**319**	*e*P	**P**	**12 51 32.3**	**-1.1**
KKN	**Kakani**	**49.40**	**319**	*e*P	**P**	**12 51 32.0**	**-1.4**
GKN	**Gorkha**	**49.96**	**319**	*e*P	**P**	**12 51 36.2**	**-1.4**
HHC	**Hu-ho-hao-te**	**50.23**	**352**	*e*P	**P**	**12 51 42.8**	**+3.4**
HHC				pmax	pmax		
	comp=Z,48nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.7s						
KOLN	**Koldanda**	**50.48**	**318**	*e*P	**P**	**12 51 40.0**	**-1.7**
GOMU	**GeErMu**	**50.68**	**334**	P	**P**	**12 51 41.5**	**-1.7**
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,58nm,4.9s						
DANN	**Dangsing**	**50.76**	**318**	*e*P	**P**	**12 51 42.3**	**-1.6**
	comp=Z,168nm,0.8s						
PYUN	**Piuthan**	**51.11**	**318**	*e*P	**P**	**12 51 44.6**	**-1.8**
	comp=Z,72nm,0.6s						
GTA	**Gaotai**	**51.60**	**341**	*e*P	**P**	**12 51 50.3**	**+0.6**
GTA				sP	pP	12 52 14.5	+2.0
GTA				ScP	**ScP**	**12 56 50.3**	**-0.4**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**54.24**	**11**	P	**P**	**12 52 07.4**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=183,slow=8.0,SNR=6.6						
	comp=Z,2.3nm,0.5s						
SONM	**Songino Array**	**57.86**	**350**	P	**P**	**12 52 34.0**	**-0.7**
	comp=Z,4.0nm,0.5s,baz=166,slow=8.6,SNR=35						
SONM				ScP	**ScP**	**12 57 16.0**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=157,slow=4.4,SNR=2.5						
	comp=Z,4.0nm,0.5s						
SONM	**Songino Array**	**57.86**	**350**	P	**P**	**12 52 35.5**	**+0.8**
SONM				IAmb	IAmb	12 52 59.7	
	comp=Z,4.0nm,0.8s						
WMQ	**Urumqi**	**60.05**	**334**	*e*P	**P**	**12 52 53.0**	**+3.1**
WMQ				pP	pP	12 53 10.8	-2.5
WMQ				pmax	pmax		
	comp=Z,45nm,0.7s						
KSH	**Kashi**	**62.96**	**323**	P	**P**	**12 53 08.8**	**-0.9**
KSH				pmax	pmax		
	comp=Z,13nm,0.5s						
KBL	**Kabul**	**64.49**	**315**	P	**P**	**12 53 18.9**	**-1.1**
MK31	**Makanchi Array**	**64.76**	**333**	P	**P**	**12 53 20.7**	**-0.5**
MK31				IAmb	IAmb	12 53 21.1	
	comp=Z,7.0nm,0.9s						
MKAR	**Makanchi Array**	**64.76**	**333**	P	**P**	**12 53 20.2**	**-1.0**
	comp=Z,4.5nm,0.4s,baz=139,slow=5.6,SNR=69						
	comp=Z,4.5nm,0.4s						
MKAR	**Makanchi Array**	**64.76**	**333**	P	**P**	**12 53 20.7**	**-0.6**
MAKZ	**Makanchi**	**64.91**	**333**	P	**P**	**12 53 21.4**	**-0.8**
MAKZ				IAmb	IAmb	12 53 21.9	
	comp=Z,9.1nm,1.2s						
BOOM	**Boomskoye usch**	**64.92**	**326**	P	**P**	**12 53 22.4**	**-0.2**
BOOM				IAmb	IAmb	12 53 22.4	
	comp=Z,11nm,1.5s						
GAR	**Garm**	**66.12**	**320**	P	**P**	**12 53 29.9**	**-0.4**
CHGR	**Chuyangaron**	**66.67**	**319**	P	**P**	**12 53 31.8**	**-2.0**
WSAR	**Wadi Sarin**	**67.61**	**300**	LR	LR	13 24 57.4	
	comp=Z,19nm,18.5s,baz=132,slow=37						
KK31	**Karatay Array**	**68.41**	**324**	P	**P**	**12 53 43.9**	**-0.7**
KKAR	**Karatay Array**	**68.41**	**324**	P	**P**	**12 53 43.8**	**-0.8**
KKAR	**Karatay Array**	**68.41**	**324**	P	**P**	**12 53 43.7**	**-0.9**
ZAA0	**Zalesovo Array**	**69.30**	**339**	P	**P**	**12 53 48.4**	**-1.4**
ZALV	**Zalesovo Beam**	**69.30**	**339**	P	**P**	**12 53 48.1**	**-1.6**
	comp=Z,8.9nm,0.3s,baz=143,slow=5.2,SNR=53						
	comp=Z,8.9nm,0.3s						
ZALV	**Zalesovo Beam**	**69.30**	**339**	P	**P**	**12 53 48.7**	**-1.1**
MAW	**Mawson**	**69.31**	**200**	P	**P**	**12 53 51.5**	**+1.8**
	comp=Z,4.2nm,0.6s,baz=73,slow=6.0,SNR=17						
	comp=Z,4.2nm,0.6s						
MAW	**Mawson**	**69.31**	**200**	P	**P**	**12 53 51.9**	**+2.2**
SOHO	**SOHO**	**69.72**	**300**	P	**P**	**12 53 51.1**	**-1.9**
PEA0B	**Petropavlovsk-**	**69.97**	**23**	P	**P**	**12 53 53.9**	**-0.1**
PETK	**Petropavlovsk-**	**69.97**	**23**	P	**P**	**12 53 53.3**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=212,slow=4.0,SNR=31						
	comp=Z,1.5nm,0.5s						
PETK	**Petropavlovsk-**	**69.97**	**23**	P	**P**	**12 53 54.1**	**+0.2**
UOSS	**Minazif**	**70.29**	**301**	P	**P**	**12 53 54.6**	**-1.9**
HATD	**Hatta, Dubai**	**70.31**	**300**	P	**P**	**12 53 55.6**	**-1.0**
MSFE	**Esma-Masafi**	**70.47**	**301**	P	**P**	**12 53 56.0**	**-1.7**
VOI	**Vohitsoka**	**70.66**	**250**	P	**P**	**12 54 00.5**	**+1.5**
SHME	**Shamm**	**70.73**	**302**	P	**P**	**12 53 58.4**	**-0.7**
ASUD	**Al Ashush, Dub**	**70.92**	**300**	P	**P**	**12 53 59.2**	**-1.1**
VNDA	**Vanda**	**71.82**	**171**	P	**P**	**12 54 06.3**	**+1.5**
	comp=Z,2.9nm,0.7s,baz=314,slow=7.1,SNR=27						
	comp=Z,2.9nm,0.7s						
VNDA	**Vanda**	**71.82**	**171**	P	**P**	**12 54 07.0**	**+2.1**
VNDA				IAmb	IAmb	12 54 07.7	
	comp=Z,12nm,1.4s						
SBA	**Scott Base**	**72.82**	**171**	P	**P**	**12 54 12.8**	**+2.1**
GEYT	**Alibeck**	**73.85**	**314**	P	**P**	**12 54 16.6**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=152,slow=4.2,SNR=10.0						
	comp=Z,5.7nm,0.8s						
ABKAR	**Akbulak array**	**77.91**	**325**	P	**P**	**12 54 39.4**	**-0.9**
ABKAR				IAmb	IAmb	12 54 39.7	
	comp=Z,5.9nm,0.6s						
ABKAR	**Akbulak array**	**77.91**	**325**	P	**P**	**12 54 39.0**	**-1.4**
RAYN	**Ar Rayn**	**79.17**	**296**	P	**P**	**12 54 47.8**	**-0.1**
RAYN				IAmb	IAmb	12 54 48.0	
	comp=Z,11nm,0.8s						
RAYN	**Ar Rayn**	**79.17**	**296**	P	**P**	**12 54 47.1**	**-0.8**
QSPA	**South Pole Qui**	**80.90**	**180**	P	**P**	**12 54 58.0**	**+1.5**
QSPA				IAmb	IAmb	12 54 58.7	
	comp=Z,12nm,1.4s						
KMBO	**Kilima Mbogo**	**82.15**	**270**	P	**P**	**12 55 05.2**	**+0.9**
	comp=Z,3.3nm,0.6s,baz=59,slow=8.1,SNR=7.3						
	comp=Z,3.3nm,0.6s						
MARD	**Mardin**	**86.59**	**308**	P	**P**	**12 55 26.4**	**+0.3**
KBZ	**Khabaz**	**86.68**	**315**	P	**P**	**12 55 24.9**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=90,slow=3.7,SNR=5.1						
	comp=Z,2.1nm,0.7s						
BOSA	**Boshof**	**89.37**	**241**	P	**P**	**12 55 40.1**	**+0.6**
	comp=Z,8.7nm,0.8s,baz=107,slow=3.5,SNR=19						
	comp=Z,8.7nm,0.8s						
BOSA	**Boshof**	**89.37**	**241**	P	**P**	**12 55 40.6**	**+1.1**
TROLL	**Troll, Antarti**	**89.42**	**196**	PcP	**PcP**	**12 55 40.7**	**+0.5**
LBTB	**Lobatse**	**89.69**	**245**	P	**P**	**12 55 41.9**	**+0.8**
LBTB				IAmb	IAmb	12 56 01.2	
	comp=Z,9.6nm,1.4s						
SNAA	**Sanae**	**91.03**	**196**	PcP	**PcP**	**12 55 48.0**	**+0.7**
SNAA	**Sanae**	**91.03**	**196**	P	**P**	**12 55 48.1**	**+1.8**
SNAA				IAmb	IAmb	12 55 48.5	
	comp=Z,4.9nm,0.7s						
BRTR	**Keskin Array B**	**92.56**	**310**	P	**P**	**12 55 52.5**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=117,slow=5.5,SNR=7.5						
	comp=Z,1.4nm,0.8s						
VNA2	**Neumayer--Watz**	**92.66**	**195**	PcP	**PcP**	**12 55 55.4**	**+1.0**
VNA3	**Neumayer Olymp**	**93.04**	**195**	PcP	**PcP**	**12 55 56.9**	**+0.7**
VNA1	**Neumayer--Stat**	**93.06**	**195**	PcP	**PcP**	**12 55 57.2**	**+1.0**
FINES	**FINESS Array B**	**99.55**	**331**	P	**Pdif**	**12 56 23.2**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=122,slow=2.5,SNR=6.2						
FINES				PKiKP	**PKiKP**	**13 00 53.5**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=117,slow=4.8,SNR=3.8						
	comp=Z,1.2nm,0.7s						
ILAR	**Eiison Array**	**99.72**	**26**	P	**Pdif**	**12 56 23.6**	**-2.2**
	comp=Z,0.2nm,0.6s,baz=249,slow=3.8,SNR=2.5						
	comp=Z,0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**118.94**	**280**	PKP	**PKPdf**	**13 01 31.1**	**-0.4**
	comp=Z,10nm,0.3s,baz=119,slow=1.8,SNR=1.8						
TORD				SKP		13 04 57.8	
	comp=Z,14nm,0.3s,baz=100,slow=1.6,SNR=1.8						
NVAR	**Mina Array Bea**	**120.72**	**51**	PKP	**PKiKP**	**13 01 35.0**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=324,slow=1.2,SNR=5.0						
NVAR				SKP		13 05 01.9	
	comp=Z,0.1nm,0.5s,baz=300,slow=2.0,SNR=2.2						
NVAR				PKKPab	**PKKPab**	**13 11 42.7**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=125,slow=5.1,SNR=4.2						
ESDC	**Sonseca Array**	**121.33**	**311**	PKP	**PKiKP**	**13 01 35.6**	**+0.1**
	comp=Z,0.8nm,1.1s,baz=33,slow=2.7,SNR=5.2						
KIC	**Kosan Boka**	**124.70**	**271**	∥*i*PKIKP	**PKiKP**	**13 01 42.8**	**-0.1**
	comp=Z,3.5nm,0.4s						
DBIC	**Dimbokro**	**124.85**	**272**	PKP	**PKiKP**	**13 01 43.2**	**+0.1**
	comp=Z,3.6nm,0.4s,baz=94,slow=2.5,SNR=9.7						
LIC	**Lamto**	**124.97**	**271**	∥*i*PKIKP	**PKiKP**	**13 01 43.3**	**-0.1**
	comp=Z,13nm,0.3s						
TIC	**Toumodi**	**125.01**	**272**	∥*i*PKIKP	**PKiKP**	**13 01 43.4**	**-0.1**
	comp=Z,8.8nm,0.2s						
PDAR	**Pinedale Array**	**125.67**	**43**	PKP	**PKPdf**	**13 01 43.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=298,slow=1.9,SNR=3.6						
PLCA	**Paso Flores**	**129.56**	**170**	PKP	**PKPdf**	**13 01 51.6**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=254,slow=7.4,SNR=2.3						
SCHQ	**Schefferville**	**134.11**	**5**	PKP	**PKPdf**	**13 01 59.3**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=270,slow=6.1,SNR=2.0						
SCHQ				SKPbc	**SKPbc**	**13 05 17.3**	**-3.0**
	comp=Z,3.6nm,0.8s,baz=353,slow=5.1,SNR=5.1						
TXAR	**Lajitas Array**	**134.89**	**57**	PKP	**PKPdf**	**13 02 01.3**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=240,slow=1.8,SNR=2.5						
TXAR				SKPbc	**SKPbc**	**13 05 22.6**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=233,slow=1.2,SNR=8.1						
CLTN	**Cedars of Leba**	**144.31**	**37**		**PKPdf**	**13 02 18.4**	**0.0**
CPUP	**Villa Florida**	**144.65**	**185**	PKPdf	**PKPdf**	**13 02 19.2**	**0.0**
	comp=Z,14nm,0.7s,baz=190,slow=1.3,SNR=27						
CPUP				SKPbc	**SKiKP**	**13 05 50.7**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=98,slow=5.4,SNR=3.1						
CPUP	**Villa Florida**	**144.65**	**185**	PKPdf	**PKPdf**	**13 02 19.8**	**+0.5**
M57A	**Sunshine Farm,**	**144.69**	**22**		PKPbc	13 02 18.1	+0.2
GO02	**Mina Guanaco**	**144.82**	**166**	PKPdf	**PKPdf**	**13 02 21.1**	**+1.1**
X48A	**Hartselle**	**144.95**	**40**		PKPbc	13 02 18.2	-0.8
SSPA	**Standing Stone**	**145.01**	**23**		**PKPbc**	**13 02 18.7**	**-0.3**
TZTN	**Tazewell**	**145.60**	**34**		**PKPab**	**13 02 21.8**	**+0.5**
Y49A	**Blount Mountai**	**145.74**	**40**		**PKPdf**	**13 02 21.1**	**+0.2**
S54A	**Dingess, Beckl**	**145.82**	**30**		**PKPbc**	**13 02 21.6**	**0.0**
CPCT	**Cooper Cave**	**145.82**	**36**		**PKPbc**	**13 02 21.8**	**+0.1**
LRAL	**Lakeview Retre**	**145.87**	**42**		**PKPdf**	**13 02 21.2**	**+0.1**
R55A	**Malden**	**146.01**	**28**		**PKPab**	**13 02 23.0**	**+0.2**
V52A	**Sevierville**	**146.08**	**35**		**PKPab**	**13 02 23.5**	**+0.4**
BG3	**Lake Jocassee**	**147.06**	**35**	PKPab	**PKPab**	**13 02 27.3**	**+0.3**
T59A	**Double "B" Far**	**148.25**	**26**		**PKPbc**	**13 02 28.6**	**+0.2**
BDFB	**Brasilia**	**152.47**	**207**	PKPbc	**PKiKP**	**13 02 40.1**	**+0.6**
	comp=Z,4.0nm,0.5s,baz=159,slow=3.5,SNR=6.5						
LPAZ	**La Paz**	**153.68**	**163**	PKPbc	**PKiKP**	**13 02 43.4**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=184,slow=4.8,SNR=5.4						
LPAZ				PKPab	**PKPab**	**13 02 56.1**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=174,slow=4.9,SNR=11						

*NOU **28** 12:43:46.0,40.°24S×178.°92E,h105km, MLv3.9/6, Off E. Coast of N. Island, N.Z.*
*WEL **28** 12:43:47.3±0.6,40.°3S±3.°×17.°9E±.°, h33km, M2.9/21, ML3.2/25, MLv2.9/21, Error ellipse: s-maj=0.0km s-min=0.0km az=128.9*
ISC 28 12:43:44.6±1.3,40.°32S±0.°04×178.°95E±0.°05,h35km,n73, σ1°31/71,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**1.42**	**325**	P	**Pn**	**12 44 08.7**	**+0.8**
MHGZ				S	**Sn**	**12 44 24.4**	**-1.0**
CKHZ	**Cape Kidnapper**	**1.58**	**294**	P	**Pn**	**12 44 11.6**	**+1.5**
CKHZ				S	**Sn**	**12 44 29.6**	**+0.2**
PRGZ	**Paritu Road**	**1.62**	**329**	P	**Pn**	**12 44 11.3**	**+0.6**
PXZ	**Pawanui**	**1.62**	**280**	P	**Pn**	**12 44 11.9**	**+1.2**
PXZ				S	**Sn**	**12 44 28.8**	**-1.6**
KNZ	**Kokohu**	**1.63**	**322**	P	**Pn**	**12 44 11.6**	**+0.8**
KNZ				S	**Sn**	**12 44 29.5**	**-1.1**
KAHZ	**Kahuranaki**	**1.67**	**288**	P	**Pn**	**12 44 12.8**	**+1.3**
KAHZ				S	**Sn**	**12 44 31.5**	**-0.2**
PRHZ	**Porangahau**	**1.77**	**271**	P	**Pn**	**12 44 14.0**	**+1.2**
PRHZ				S	**Sn**	**12 44 32.4**	**-1.6**
WHHZ	**Waihua**	**1.81**	**313**	P	**Pn**	**12 44 14.7**	**+1.3**
ARHZ	**Aropaoanui**	**1.84**	**305**	P	**Pn**	**12 44 15.3**	**+1.6**
RIGZ	**Rimuhau**	**1.86**	**330**	P	**Pn**	**12 44 15.0**	**+1.0**
RIGZ				S	**Sn**	**12 44 35.8**	**-0.4**
CNGZ	**Carnagh Statio**	**1.92**	**342**	P	**Pn**	**12 44 15.1**	**+0.2**
WPHZ	**Waipukurau**	**1.94**	**277**	P	**Pn**	**12 44 16.1**	**+1.1**
WPHZ				S	**Sn**	**12 44 36.5**	**-1.7**
SNGZ	**Shannon Statio**	**1.98**	**321**	P	**Pn**	**12 44 16.9**	**+1.2**
SNGZ				S	**Sn**	**12 44 38.3**	**-0.9**
RAHZ	**Arahi**	**2.01**	**314**	P	**Pn**	**12 44 17.4**	**+1.3**
RAHZ				S	**Sn**	**12 44 39.5**	**-0.5**
NMHZ	**Naumai**	**2.06**	**306**	P	**Pn**	**12 44 18.4**	**+1.7**
NMHZ				S	**Sn**	**12 44 41.1**	**-0.1**
TKGZ	**Te Karaka**	**2.06**	**335**	P	**Pn**	**12 44 17.5**	**+0.7**
TKGZ				S	**Sn**	**12 44 39.9**	**-1.4**
BFZ	**Birch Farm**	**2.09**	**259**	P	Pn	12 44 20.1	+2.9
KRHZ	**Kereru**	**2.09**	**288**	P	**Pn**	**12 44 18.4**	**+1.2**
KRHZ				S	**Sn**	**12 44 41.1**	**-0.9**
PNHZ	**Pukenui**	**2.15**	**280**	P	**Pn**	**12 44 19.0**	**+1.0**
PNHZ				S	**Sn**	**12 44 41.8**	**-1.5**
RAGZ	**Rawiri**	**2.18**	**326**	P	**Pn**	**12 44 19.4**	**+1.0**
MTHZ	**Maungataniwha**	**2.19**	**311**	P	**Pn**	**12 44 19.7**	**+1.1**
MTHZ				S	**Sn**	**12 44 43.4**	**-1.1**
BKZ	**Black Stump Fm**	**2.22**	**301**	P	**Pn**	**12 44 20.3**	**+1.4**
BKZ				S	**Sn**	**12 44 44.6**	**-0.6**
BKZ	**Black Stump Fm**	**2.22**	**301**	P	**Pn**	**12 44 20.3**	**+1.4**
MWZ	**Matawai**	**2.27**	**331**	P	**Pn**	**12 44 20.5**	**+0.8**
MWZ				S	**Sn**	**12 44 43.9**	**-2.5**
TWGZ	**Tauwhareparae**	**2.27**	**340**	P	**Pn**	**12 44 20.4**	**+0.7**
TWGZ				S	**Sn**	**12 44 45.0**	**-1.4**
PRWZ	**Pori Road**	**2.28**	**263**	P	**Pn**	**12 44 21.1**	**+1.3**
PRWZ				S	**Sn**	**12 44 45.0**	**-1.7**
TSZ	**Takapari Road**	**2.30**	**276**	P	**Pn**	**12 44 21.0**	**+0.9**
TSZ				S	**Sn**	**12 44 44.8**	**-2.4**
PUZ	**Puketiti**	**2.31**	**346**	P	**Pn**	**12 44 20.1**	**-0.1**
BHHZ	**Black Hill Sta**	**2.37**	**290**	P	**Pn**	**12 44 22.3**	**+1.3**
MRHZ	**Matea Rd**	**2.46**	**306**	P	Pn	12 44 24.1	+1.8
MUGZ	**Murupara**	**2.50**	**317**	P	**Pn**	**12 44 24.3**	**+1.5**
URZ	**Urewera**	**2.50**	**325**	P	**Pn**	**12 44 24.0**	**+1.2**
URZ	**Urewera**	**2.50**	**325**	P	**Pn**	**12 44 24.1**	**+1.2**
PKGZ	**Pakihiroa**	**2.52**	**344**	P	**Pn**	**12 44 23.7**	**+0.5**
WMGZ	**Waiomatatini S**	**2.53**	**350**	P	**Pn**	**12 44 24.3**	**+1.0**
RUGZ	**Raukumara Rang**	**2.55**	**337**	P	**Pn**	**12 44 23.9**	**+0.3**
MRZ	**Mangatainoka R**	**2.59**	**261**	P	**Pn**	**12 44 24.0**	**0.0**
MOVZ	**Moawhango**	**2.62**	**289**	P	Pn	12 44 26.5	+2.0
HOWZ	**Holdsworth Sta**	**2.67**	**256**	P	Pn	12 44 28.1	+2.9
HAZ	**Te Kaha**	**2.72**	**340**	P	**Pn**	**12 44 26.2**	**+0.5**
TUVZ	**Tukino**	**2.75**	**291**	P	Pn	12 44 28.9	+2.6
MTW	**Mount Morrison**	**2.75**	**251**	P	**Pn**	**12 44 26.6**	**+0.5**
WNVZ	**Wahianoa**	**2.76**	**290**	P	Pn	12 44 28.8	+2.2
TMVZ	**Te Maari**	**2.78**	**295**	P	Pn	12 44 28.9	+2.2
OTVZ	**Oturere**	**2.78**	**294**	P	Pn	12 44 28.9	+2.1
WHVZ	**Whangaehu Hut**	**2.79**	**291**	P	Pn	12 44 29.0	+2.1
SNVZ	**South Ngauruho**	**2.79**	**293**	P	Pn	12 44 29.1	+2.2
MXZ	**Matakaoa Point**	**2.80**	**350**	P	**Pn**	**12 44 27.9**	**+1.0**
NTVZ	**North Tongarir**	**2.80**	**295**	P	Pn	12 44 29.2	+2.1
TRVZ	**Turoa**	**2.81**	**290**	P	Pn	12 44 29.3	+2.0
TARZ	**Mount Tarawera**	**2.82**	**317**	P	Pn	12 44 29.0	+1.8
NGZ	**Ngauruhoe**	**2.82**	**293**	P	Pn	12 44 29.4	+2.1
FWVZ	**Far West T-bar**	**2.82**	**291**	P	**Pn**	**12 44 29.3**	**+1.8**
KRVZ	**Karewarewa**	**2.83**	**295**	P	Pn	12 44 29.6	+2.2
NNVZ	**North Ngauruho**	**2.83**	**294**	P	Pn	12 44 29.7	+2.2
MTVZ	**Mangateitei**	**2.83**	**288**	P	Pn	12 44 30.1	+2.6
PKVZ	**Pokaka**	**2.96**	**289**	P	**Pn**	**12 44 31.0**	**+1.9**
KUTZ	**Kaahu Road**	**3.03**	**306**	P	**Pn**	**12 44 31.7**	**+1.6**
CAW	**Cannon Point**	**3.05**	**254**	P	**Pn**	**12 44 30.0**	**-0.4**
PLWZ	**Palliser**	**3.06**	**245**	P	**Pn**	**12 44 29.2**	**-1.3**
WAZ	**Wanganui**	**3.09**	**279**	P	Pn	12 44 33.8	+2.8
OPRZ	**Ohinepanea**	**3.10**	**322**	P	**Pn**	**12 44 31.6**	**+0.6**
TLZ	**Tolley Road**	**3.31**	**306**	P	**Pn**	**12 44 35.1**	**+1.2**
HIZ	**Hauiti**	**3.65**	**298**	P	Pn	12 44 40.6	+2.0
TCW	**Tory Channel**	**3.66**	**254**	P	**Pn**	**12 44 40.1**	**+1.4**
NEZ	**North Egmont

*NEIC **28** 13:01:52.7±2.5,55.1°S±0.1°×31.2°W±0.2,h10km±1km, mb4.6/27,Error ellipse: s-maj=22.8km s-min=15.8km az=27.0°*

ISC 28 13:01:52.5±0.5,55°01S±0.09×31°25W±0.10,h10km,n69, σ0.85/48,mb4.5/20,MS3.8/18,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**3.13**	**281**		**Pn**	**13 02 40.6**	**-1.2**
EFI	**East Falkland**	**16.31**	**271**	Pn	**Pn**	**13 05 41.5**	**+0.1**
EFI				IAmb	IAmb	13 05 54.5	
	comp=Z,33nm,1.2s						
VNA1	**Neumayer--Stat**	**18.66**	**156**	P	**Pn**	**13 06 10.6**	**+0.2**
VNA3	**Neumayer Olymp**	**18.78**	**158**	P	**Pn**	**13 06 11.7**	**-0.1**
PMSA	**Palmer Station**	**18.90**	**226**	LR	LR	13 12 55.4	
	comp=Z,107nm,18.0s,baz=22,slow=35						
VNA2	**Neumayer--Watz**	**19.06**	**156**	P	**Pn**	**13 06 14.6**	**-0.6**
	baz=314,slow=12						
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**13 06 31.9**	**+0.1**
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**13 06 32.0**	**+0.1**
	comp=Z,7.2nm,0.7s,baz=308,slow=9.6,SNR=32						
	comp=Z,7.2nm,0.7s						
SNAA	**Sanae**	**20.65**	**155**	P	**P**	**13 06 32.1**	**+0.2**
SMAI	**San Martin Ant**	**21.12**	**218**	P	**P**	**13 06 37.6**	**+0.8**
TROLL	**Troll, Antarti**	**22.22**	**153**	P	**P**	**13 06 49.1**	**+0.2**
BELA	**Belgrano 2**	**23.00**	**182**	P	**P**	**13 06 56.2**	**-0.7**
MG05	**Puerto Natales**	**24.59**	**261**	P	**P**	**13 07 11.5**	**-0.8**
TRQA	**Tornquist**	**26.79**	**297**	P	**P**	**13 07 33.0**	**+0.6**
TRQA				IAmb	IAmb	13 08 00.9	
	comp=Z,11nm,1.1s						
PLTB	**Pedras Altas**	**28.12**	**317**	P	**P**	**13 07 46.4**	**+2.0**
PLTB				IAmb	IAmb	13 07 53.9	
	comp=Z,8.5nm,1.1s						
PLCA	**Paso Flores**	**29.53**	**282**	LR	LR	13 19 32.1	
	comp=Z,62nm,18.3s,baz=152,slow=36						
PLCA	**Paso Flores**	**29.53**	**282**	P	**P**	**13 07 56.9**	**-0.1**
PLCA				IAmb	IAmb	13 08 29.3	
	comp=Z,12nm,1.5s						
CPUP	**Villa Florida**	**34.42**	**316**	P	**P**	**13 08 38.1**	**-1.7**
	comp=Z,5.0nm,1.0s,baz=122,slow=2.7,SNR=5.7						
CPUP				LR	LR	13 24 18.3	
	comp=Z,49nm,18.1s,baz=198,slow=39						
	comp=Z,5.0nm,1.0s						
CPUP	**Villa Florida**	**34.42**	**316**	P	**P**	**13 08 40.9**	**+1.1**
CPUP				IAmb	IAmb	13 08 41.8	
	comp=Z,14nm,1.4s						
MT09	**Talagante**	**34.79**	**291**	P	**P**	**13 08 43.7**	**+0.5**
MT09				IAmb	IAmb	13 09 12.6	
	comp=Z,22nm,1.5s						
MT01	**Popeta**	**34.86**	**291**	P	**P**	**13 08 43.7**	**0.0**
MT01				IAmb	IAmb	13 08 52.8	
	comp=Z,21nm,1.5s						
QSPA	**South Pole Qui**	**35.24**	**180**	P	**P**	**13 08 47.1**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=246,slow=5.2,SNR=5.1						
QSPA				LR	LR	13 22 38.8	
	comp=Z,73nm,18.2s,baz=188,slow=35						
	comp=Z,2.2nm,0.6s						
QSPA	**South Pole Qui**	**35.24**	**180**	P	**P**	**13 08 47.3**	**+0.5**
MT02	**Curacav**	**35.26**	**291**	P	**P**	**13 08 46.0**	**-1.0**
MT02				IAmb	IAmb	13 09 24.2	
	comp=Z,17nm,1.2s						
ZON	**Zonda**	**35.30**	**296**	P	**P**	**13 08 47.4**	**-0.1**
ZON				IAmb	IAmb	13 09 12.4	
	comp=Z,14nm,1.5s						
VA06	**Catapilco**	**35.88**	**292**	P	**P**	**13 08 51.1**	**-1.3**
CO01	**Juntas del Tor**	**37.28**	**296**	P	**P**	**13 09 04.6**	**0.0**
AC05	**El Transito**	**38.29**	**297**	P	**P**	**13 09 11.5**	**-1.6**
AC05				IAmb	IAmb	13 09 50.8	
	comp=Z,33nm,1.4s						
MAW	**Mawson**	**42.34**	**145**	P	**P**	**13 09 46.1**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=209,slow=9.9,SNR=3.5						
	comp=Z,2.1nm,0.9s						
LVC	**Limon Verde**	**42.79**	**304**	P	**P**	**13 09 51.6**	**+1.0**
	comp=Z,3.0nm,0.6s,baz=214,slow=12,SNR=2.3						
LVC				LR	LR	13 30 17.4	
	comp=Z,33nm,18.3s,baz=175,slow=40						
	comp=Z,3.0nm,0.6s						
PB01	**IPOC Station P**	**44.40**	**304**	P	**P**	**13 10 04.7**	**+1.4**
PTLB	**Pontes e Lacer**	**44.98**	**320**	P	**P**	**13 10 07.5**	**-0.3**
PTLB				IAmb	IAmb	13 10 09.9	
	comp=Z,4.2nm,0.8s						
SOE	**Somerset East**	**45.13**	**85**	P	**P**	**13 10 07.8**	**-1.2**
GO01	**Chusmiza**	**45.45**	**306**	P	**P**	**13 10 13.4**	**+1.3**
GO01				IAmb	IAmb	13 10 36.8	
	comp=Z,9.9nm,1.1s						
PB16	**IPOC Station P**	**46.75**	**306**	P	**P**	**13 10 23.9**	**+1.5**
PB16				IAmb	IAmb	13 10 29.9	
	comp=Z,8.5nm,1.3s						
VNDA	**Vanda**	**47.48**	**184**	P	**P**	**13 10 27.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=171,slow=6.4,SNR=4.8						
VNDA				LR	LR	13 29 53.9	
	comp=Z,35nm,18.2s,baz=230,slow=35						
	comp=Z,0.9nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.80**	**22**	T	T	14 02 08.6	
	baz=27,slow=74,SNR=6.6						
H10S3	**ASCENSION HYDR**	**47.80**	**22**	T	T	14 02 05.3	
	baz=193,slow=74,SNR=12						
LPAZ	**La Paz**	**47.91**	**309**	P	**P**	**13 10 32.4**	**+0.9**
	comp=Z,5.7nm,0.5s,baz=129,slow=4.6,SNR=34						
	comp=Z,5.7nm,0.5s						
LPAZ	**La Paz**	**47.91**	**309**	P	**P**	**13 10 32.4**	**+0.9**
H10N1	**ASCENSION HYDR**	**48.91**	**22**	T	T	14 03 29.0	
	baz=192,slow=75,SNR=13						
H10N3	**ASCENSION HYDR**	**48.91**	**22**	T	T	14 03 27.9	
	baz=192,slow=75,SNR=14						
H10N2	**ASCENSION HYDR**	**48.93**	**22**	T	T	14 03 29.1	
	baz=192,slow=75,SNR=13						
RCBR	**Riachuelo**	**49.19**	**354**	LR	LR	13 29 28.6	
	comp=Z,44nm,18.1s,baz=319,slow=34						
LBTB	**Lobatse**	**50.98**	**78**	P	**P**	**13 10 55.1**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=216,slow=9.3,SNR=4.8						
	comp=Z,2.6nm,0.8s						
ETMB	**Extrema**	**52.87**	**315**	P	**P**	**13 11 09.2**	**+0.9**
ETMB				IAmb	IAmb	13 11 09.4	
	comp=Z,6.6nm,1.4s						
LSZ	**Lusaka**	**60.22**	**73**	LR	LR	13 36 29.3	
	comp=Z,93nm,18.1s,baz=168,slow=34						
BOAV	**Boa Vista**	**62.09**	**326**	P	**P**	**13 12 12.2**	**-1.1**
BOAV				IAmb	IAmb	13 12 14.1	
	comp=Z,5.7nm,1.1s						
MDP	**Montagnes des**	**62.48**	**336**	LR	LR	13 37 55.7	
	comp=Z,28nm,20.0s,baz=102,slow=35						
DBIC	**Dimbokro**	**65.28**	**29**	LR	LR	13 36 28.5	
	comp=Z,49nm,18.1s,baz=151,slow=32						
BBTS	**Babate**	**70.52**	**15**	LR	LR	13 39 39.3	
	comp=Z,31nm,18.2s,baz=156,slow=32						
SDV	**Santo Domingo**	**71.67**	**319**	LR	LR	13 48 36.5	
	comp=Z,64nm,18.1s,baz=98,slow=39						
KOWA	**Kowa**	**72.98**	**28**	LR	LR	13 38 25.9	
	comp=Z,60nm,20.8s,baz=222,slow=30						
KMBO	**Kilima Mbogo**	**76.88**	**73**	LR	LR	13 46 54.9	
	comp=Z,127nm,18.0s,baz=94,slow=35						
TEIG	**Tepich**	**89.23**	**308**	P	**P**	**13 14 49.0**	**+0.8**
MDT	**Midelt**	**90.42**	**22**	LR	LR	13 50 23.4	
	comp=Z,52nm,19.3s,baz=172,slow=32						
ATD	**Arta Tunnel**	**90.44**	**70**	LR	LR	13 54 39.8	
	comp=Z,57nm,18.2s,baz=115,slow=35						
STKA	**Stephens Creek**	**93.25**	**174**	LR	LR	13 54 53.9	
	comp=Z,58nm,18.5s,baz=204,slow=34						
KEST	**Kesra**	**96.86**	**32**	LR	LR	13 53 00.1	
	comp=Z,56nm,20.9s,baz=281,slow=32						
ESDC	**Sonseca Array**	**97.17**	**21**	LR	LR	13 55 11.9	
	comp=Z,46nm,18.6s,baz=198,slow=33						
ASAR	**Alice Springs**	**100.61**	**166**	P	**Pdif**	**13 15 40.5**	**-0.1**
	comp=Z,1.2nm,1.2s,baz=179,slow=3.8,SNR=2.0						
FINES	**FINESS Array B**	**124.58**	**29**	PKP	**PKPdf**	**13 20 49.9**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=246,slow=1.4,SNR=2.4						
CMAR	**Chiang Mai Arr**	**127.60**	**114**	PKP	**PKPdf**	**13 20 57.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=232,slow=3.0,SNR=1.5						
YKA	**Yellowknife Ar**	**133.87**	**320**	PKP	**PKPdf**	**13 21 08.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=117,slow=2.3,SNR=2.0						
MKAR	**Makanchi Array**	**138.77**	**73**	PKP	**PKPdf**	**13 21 16.8**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=267,slow=2.9,SNR=2.2						
KURBB	**Kurchatov Arra**	**138.97**	**66**	PKP	**PKPdf**	**13 21 18.3**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=228,slow=2.4,SNR=1.1						
ZALV	**Zalesovo Beam**	**144.00**	**65**	PKhKP	PKPpre	13 21 24.7	
	comp=Z,1.1nm,0.6s,baz=224,slow=4.3,SNR=5.3						
ILAR	**Eielson Array**	**147.71**	**314**	PKPbc	**PKPbc**	**13 21 35.6**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=124,slow=1.4,SNR=22						
SONM	**Songino Array**	**152.98**	**88**	PKPbc	**PKPbc**	**13 21 49.1**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=215,slow=3.0,SNR=7.5						

*PRU **28** 13:07:30.9±0.0,42.4°41N×13.4°44E,h0km,M4.3*
*LDG **28** 13:07:32.7±0.1,42.6°62N×13.2°26E,h5km,Md3.4/2,Ml3.3/27,*

Error ellipse: s-maj=2.5km s-min=1.6km az=39.0
*ROM **28** 13:07:33.0±0.1,42.5°599N×0.0°003×13.2°87E±0.0°004, h9km,ML3.7/110,Mw3.5,Error ellipse: s-maj=0.3km s-min=0.2km az=56.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.93; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$1.98; $M_{r\theta}$-0.67; $M_{\theta\phi}$-0.55; $M_{\phi r}$1.08; Fault plane solution: M_o2.39408×10^{14} NP1:ϕ_s356.00000°,δ30.00000°, λ-72.00000°. NP2:ϕ_s156.00000°,δ61.00000°, λ-100.00000°.*
*IDC **28** 13:07:32.4±1.1,42.6°68N×13.7°17E,h0km,mb3.7/10, mbtmp3.6/18,ML3.5/8,MS3.0/1 Error ellipse: s-maj=18.3km s-min=12.2km az=74.0*
*PDG **28** 13:07:33.6±1.1,42.6°62N×13.3°31E,h11km±1km,ML3.8/13, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*
*BEO **28** 13:07:34.8±0.5,42.6°61N×13.3°34E,h0km,ML3.7/11*
*NEIC **28** 13:07:34.5±1.1,42.6°67N±0.0°04×13.2°25E±0.0°06,h12km±5km, mb4.3/3,ML3.7(ROM),Error ellipse: s-maj=8.0km s-min=4.5km az=48.0*

ISC 28 13:07:33.6±0.6,42.6°61N±0.0°02×13.2°26E±0.0°01,h13km±3km, n410,σ1.95/504,mb3.9/12,71C-34D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1201	**Domo (RI)**	**0.05**	**352**	⇓P	**Pg**	**13 07 35.6**	**-0.6**
T1201				S	**Sg**	**13 07 37.0**	**-1.0**
T1204	**Amatrice, Fraz**	**0.08**	**31**	⇑P	**Pg**	**13 07 35.6**	**-0.9**
T1204				S	**Sg**	**13 07 37.2**	**-1.4**
T1202	**Accumoli, Fraz**	**0.10**	**345**	⇓P	**Pg**	**13 07 36.5**	**-0.2**
T1202				S	**Sg**	**13 07 38.7**	**-0.2**
RM33	**Pellescritta (**	**0.10**	**199**	⇑P	**Pg**	**13 07 36.3**	**-0.4**
RM33				S	**Sg**	**13 07 38.4**	**-0.5**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
T1218	**Civita (PG)**	**0.12**	**300**	⇑*i*P	**Pg**	**13 07 36.8**	**-0.2**
T1218				S	**Sg**	**13 07 39.5**	**+0.1**
CAMP	**Campotosto**	**0.13**	**123**	⇑P	**Pg**	**13 07 36.1**	**-1.0**
CAMP				S	**Sg**	**13 07 38.1**	**-1.4**
CAMP				AML	AML		
CAMP				AML	AML		
T1244	**Arquata del Tr**	**0.15**	**10**	⇓*e*P	**Pg**	**13 07 37.0**	**-0.4**
T1244				S	**Sg**	**13 07 39.8**	**-0.3**
T1213	**Norcia, Frazio**	**0.15**	**320**	⇑*i*P	**Pg**	**13 07 37.3**	**-0.1**
T1213				S	**Sg**	**13 07 40.1**	**+0.1**
T1214	**Arquata del Tr**	**0.16**	**346**	⇓*e*P	**Pg**	**13 07 37.3**	**-0.2**
T1214				S	**Sg**	**13 07 40.4**	**+0.2**
LNSS	**Leonessa**	**0.16**	**269**	⇑P	**Pg**	**13 07 37.6**	**+0.1**
LNSS				S	**Sg**	**13 07 41.0**	**+0.7**
LNSS				AML	AML		
	comp=E,67650μm,1.3s						
LNSS				AML	AML		
	comp=N,54650μm,0.6s						
T1243	**Rocca Santa Ma**	**0.17**	**57**	⇑P	**Pg**	**13 07 36.7**	**-0.9**
T1243				S	**Sg**	**13 07 39.1**	**-1.2**
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1212	**Cascia, Frazio**	**0.21**	**312**	⇑*i*P	**Pg**	**13 07 38.3**	**-0.1**
T1212				S	**Sg**	**13 07 42.4**	**+0.8**
T1242	**Castelluccio d**	**0.23**	**350**	⇓P	**Pg**	**13 07 38.5**	**-0.1**
NRCA	**Norcia**	**0.25**	**335**		**Pg**	**13 07 38.7**	**-0.2**
NRCA				Sg	**Sg**	**13 07 42.7**	**+0.1**
NRCA	**Norcia**	**0.25**	**335**	⇑P	**Pg**	**13 07 38.9**	**-0.1**
NRCA				S	**Sg**	**13 07 43.2**	**+0.6**
NRCA				AML	AML		
	comp=E,31400μm,0.2s						
NRCA				AML	AML		
	comp=N,26200μm,0.4s						
NRCA				AML	AML		
	comp=N,29500μm,0.1s						
NRCA				AML	AML		
	comp=E,34550μm,0.1s						
NRCA				AML	AML		
	comp=N,26200μm,0.4s						
TERO	**Teramo**	**0.25**	**86**	⇑P	**Pg**	**13 07 38.1**	**-0.9**
TERO				S	**Sg**	**13 07 41.7**	**-0.9**
TERO				AML	AML		
	comp=E,96550μm,0.7s						
TERO				AML	AML		
	comp=N,92050μm,0.5s						
TERO				AML	AML		
TERO				AML	AML		
	comp=E,96150μm,0.7s						
TERO				AML	AML		
	comp=N,92100μm,0.5s						
TERO				AML	AML		
	comp=N,96600μm,0.5s						
GIGS	**Gran Sasso**	**0.28**	**124**	⇓P	**Pg**	**13 07 38.4**	**-1.0**
GIGS				S	**Sg**	**13 07 42.5**	**-0.8**
GIGS				AML	AML		
	comp=E,13050μm,0.4s						
GIGS				AML	AML		
	comp=N,12300μm,0.8s						
T1241	**Roccafluvione,**	**0.28**	**27**	⇑P	**Pg**	**13 07 38.9**	**-0.5**
T1241				S	**Sg**	**13 07 43.2**	**-0.2**
MMO1	**Montemonaco**	**0.30**	**10**	⇓P	**Pg**	**13 07 39.5**	**-0.3**
MMO1				S	**Sg**	**13 07 44.3**	**+0.4**
MMO1				AML	AML		
	comp=N,31500μm,0.9s						
MMO1				AML	AML		
	comp=N,4635μm,0.9s						
MMO1				AML	AML		
	comp=E,32450μm,1.6s						
MMO1				AML	AML		
	comp=E,3270μm,1.6s						
T1211	**Morro Reatino**	**0.31**	**256**	⇑*i*P	**Pg**	**13 07 40.0**	**0.0**
T1211				S	**Sg**	**13 07 45.4**	**+1.2**
MC2	**Monte Cornacci**	**0.31**	**350**	⇓P	**Pg**	**13 07 39.9**	**-0.1**
MC2				S	**Sb**	**13 07 45.5**	**-0.7**
MC2				AML	AML		
	comp=E,19550μm,0.6s						
MC2				AML	AML		
	comp=E,19600μm,0.6s						
MC2				AML	AML		
	comp=N,19600μm,0.6s						
MC2				AML	AML		
	comp=N,19550μm,0.6s						
MC2				AML	AML		
	comp=E,19540μm,0.6s						
T1216	**Preci, Frazion**	**0.34**	**328**	⇑*i*P	**Pg**	**13 07 40.3**	**-0.1**
T1216				S	**Sb**	**13 07 46.3**	**-0.5**
T1215	**Vallo di Nera,**	**0.35**	**304**	⇑*i*P	**Pg**	**13 07 40.6**	**-0.1**
T1215				S	**Sb**	**13 07 46.5**	**-0.6**
FIAM	**Fiamignano**	**0.35**	**197**	⇑P	**Pg**	**13 07 40.4**	**-0.4**
FIAM				S	**Sg**	**13 07 45.9**	**+0.3**
FIAM				AML	AML		
	comp=E,12175μm,0.5s						
FIAM				AML	AML		
	comp=N,14150μm,0.5s						
ARRO	**Arrone**	**0.37**	**266**	⇑P	**Pg**	**13 07 41.0**	**0.0**
ARRO				AML	AML		
	comp=N,9570μm,0.3s						
ARRO				AML	AML		
	comp=N,9565μm,0.3s						
ARRO				AML	AML		
	comp=E,7470μm,0.7s						
FEMA	**Monte Fema**	**0.39**	**336**	⇑P	**Pg**	**13 07 41.4**	**0.0**
FEMA				S	**Sb**	**13 07 47.6**	**-0.8**
FEMA				AML	AML		
	comp=E,19600μm,0.4s						
FEMA				AML	AML		
	comp=N,14000μm,1.2s						
FEMA				AML	AML		
	comp=N,14000μm,1.2s						
FAGN	**Fagnano**	**0.42**	**145**	⇑P	**Pg**	**13 07 41.2**	**-0.7**
FAGN				AML	AML		
	comp=N,39150μm,0.3s						
FAGN				AML	AML		
	comp=E,40350μm,1.0s						
FDMO	**Fiordimonte**	**0.45**	**344**	⇓P	**Pg**	**13 07 42.2**	**-0.3**
FDMO				S	**Sb**	**13 07 49.9**	**-0.1**
FDMO				AML	AML		
	comp=N,8140μm,0.3s						
FDMO				AML	AML		
	comp=E,7215μm,1.3s						
OFFI	**Offida**	**0.45**	**44**	⇓P	**Pg**	**13 07 42.8**	**+0.2**
OFFI				S	**Sb**	**13 07 50.7**	**+0.6**
OFFI				AML	AML		
	comp=N,42350μm,0.6s						
OFFI				AML	AML		
	comp=E,45250μm,0.4s						
VCEL	**Villa Celiera**	**0.48**	**116**	P	**Pg**	**13 07 42.1**	**-0.9**
VCEL				S	**Sb**	**13 07 50.4**	**-0.6**
VCEL				AML	AML		
	comp=E,56250μm,0.4s						
VCEL				AML	AML		
	comp=E,56200μm,0.4s						
VCEL				AML	AML		
	comp=N,39450μm,0.5s						
CSP1	**Cessapalombo**	**0.49**	**355**	⇓P	**Pg**	**13 07 42.9**	**-0.3**
CSP1				S	**Sb**	**13 07 50.8**	**-0.4**
CSP1				AML	AML		
	comp=E,10800μm,0.3s						
CSP1				AML	AML		
	comp=N,14250μm,0.5s						
CSP1				AML	AML		
	comp=E,10850μm,0.3s						
CESX	**Cesi**	**0.50**	**271**	⇑P	**Pg**	**13 07 43.1**	**-0.3**
CESX				AML	AML		
	comp=N,5710μm,0.4s						
CESX				AML	AML		
	comp=E,6960μm,0.7s						
TRTR	**Tortoreto Alta**	**0.52**	**67**	⇓P	**Pb**	**13 07 44.3**	**-0.3**
TRTR				AML	AML		
	comp=N,41850μm,0.6s						
TRTR				AML	AML		
	comp=E,46650μm,0.3s						
T0110	**Collepietro**	**0.54**	**135**	⇑P	**Pg**	**13 07 43.1**	**-1.1**
T0110				S	**Sg**	**13 07 51.6**	**+0.2**
T0110				AML	AML		
	comp=E,29900μm,0.4s						
T0110				AML	AML		
	comp=N,36300μm,0.5s						
MNTP	**Montappone**	**0.55**	**16**	P	**Pg**	**13 07 44.5**	**+0.1**
MNTP				AML	AML		
	comp=E,36950μm,0.3s						
MNTP				AML	AML		
	comp=N,35300μm,1.0s						
MNTP				AML	AML		
	comp=E,37000μm,0.3s						
SEF1	**Sefro**	**0.59**	**337**	P	**Pg**	**13 07 44.4**	**-0.7**
MDAR	**Monte D'Aria**	**0.59**	**352**	P	**Pg**	**13 07 44.6**	**-0.5**
PTQR	**Pietraquaria**	**0.59**	**170**	⇑P	**Pg**	**13 07 44.1**	**-1.1**
PTQR				AML	AML		
	comp=N,2825μm,0.7s						
PTQR				AML	AML		
	comp=E,3100μm,0.4s						
ASSB	**Assisi San Ben**	**0.62**	**315**	⇑P	**Pg**	**13 07 45.3**	**-0.4**
ASSB				S	**Sb**	**13 07 55.2**	**+0.2**
ASSB				AML	AML		
	comp=E,7520μm,1.4s						
ASSB				AML	AML		
	comp=N,5890μm,0.5s						
SSM1	**San Severino M**	**0.62**	**354**	P	**Pg**	**13 07 45.4**	**-0.4**
FIU1	**Fiuminata**	**0.63**	**338**	P	**Pg**	**13 07 45.5**	**-0.3**
GAG1	**Gagliole**	**0.65**	**347**	P	**Pg**	**13 07 45.9**	**-0.4**
GAG1				AML	AML		
	comp=E,11850μm,0.3s						
GAG1				AML	AML		
	comp=N,16200μm,0.4s						
GAG1				AML	AML		
	comp=E,11800μm,0.3s						
SRES	**S.Oreste - Sor**	**0.67**	**237**	⇑P	**Pg**	**13 07 45.9**	**-0.7**
SRES				AML	AML		
	comp=E,3545μm,0.8s						
SRES				AML	AML		
	comp=N,3530μm,1.0s						
CERT	**Cerreto**	**0.69**	**198**	⇑P	**Pg**	**13 07 45.9**	**-1.1**
CERT				AML	AML		
	comp=N,6285μm,0.5s						
CERT				AML	AML		
	comp=E,7140μm,0.5s						
SNTG	**Esanatoglia**	**0.69**	**340**	⇓P	**Pg**	**13 07 46.4**	**-0.6**
SNTG				AML	AML		
	comp=N,586μm,0.5s						
SNTG				AML	AML		
	comp=N,586μm,0.5s						
SNTG				AML	AML		
	comp=N,4165μm,0.5s						
SNTG				AML	AML		
	comp=E,3190μm,1.2s						
SNTG				AML	AML		
	comp=E,380μm,0.5s						
CADA	**Capodarco di F**	**0.69**	**32**	P	**Pb**	**13 07 47.9**	**+0.4**
MTCE	**Montecelio**	**0.70**	**214**	⇑P	**Pg**	**13 07 46.2**	**-1.0**
MTCE				AML	AML		
	comp=E,5375μm,1.4s						
MTCE				AML	AML		
	comp=N,3270μm,0.7s						
TRE1	**Treia**	**0.70**	**3**	P	**Pg**	**13 07 47.2**	**-0.1**
TRE1				AML	AML		
	comp=E,31950μm,0.4s						
TRE1				AML	AML		
	comp=N,18400μm,0.3s						
TRE1				AML	AML		
	comp=E,31900μm,0.4s						
EL6	**Elcito**	**0.73**	**351**	⇓P	**Pg**	**13 07 47.2**	**-0.6**
EL6				AML	AML		
	comp=E,8215μm,1.6s						
EL6				AML	AML		
	comp=N,10550μm,1.3s						
EL6				AML	AML		
	comp=E,8230μm,1.6s						
EL6				AML	AML		
	comp=N,10600μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.74**	**322**	⇑P	**Pg**	**13 07 47.4**	**-0.5**
ATCC				AML	AML		
	comp=E,7330μm,0.4s						
ATCC				AML	AML		
	comp=N,8675μm,0.5s						
CIMA	**Civitanova Mar**	**0.76**	**23**	P	**Pb**	**13 07 49.1**	**+0.4**
INTR	**Introdacqua**	**0.76**	**141**	⇓P	**Pg**	**13 07 46.9**	**-1.5**
CING	**Cingoli**	**0.77**	**356**	P	**Pg**	**13 07 47.9**	**-0.6**
CING				AML	AML		
	comp=E,7935μm,0.4s						
CING				AML	AML		
	comp=N,6005μm,0.6s						
FOSV	**Fossato di Vic**	**0.78**	**332**	P	**Pg**	**13 07 48.1**	**-0.6**
FOSV				AML	AML		
	comp=N,4230μm,0.7s						
FOSV				AML	AML		
	comp=E,4135μm,0.7s						
VVLD	**Villa Vallelon**	**0.78**	**160**	P	**Pg**	**13 07 47.6**	**-1.2**
VVLD				AML	AML		
	comp=N,4655μm,0.5s						
VVLD				AML	AML		
	comp=E,3385μm,0.5s						
RCAV	**Rocca di Cave**	**0.80**	**197**	P	**Pg**	**13 07 47.9**	**-1.1**
RCAV				AML	AML		
	comp=E,7075μm,0.4s						
RCAV				AML	AML		
	comp=N,7770μm,0.4s						
PP3	**Marolino**	**0.81**	**18**	⇓P	**Pg**	**13 07 49.2**	**-0.1**
PP3				AML	AML		
	comp=E,15300μm,0.5s						
PP3				AML	AML		
	comp=N,15600μm,0.5s						
PP3				AML	AML		
	comp=E,14100μm,0.5s						
PP3				AML	AML		
	comp=N,16450μm,0.5s						
PP3				AML	AML		
	comp=E,15300μm,0.5s						
PP3				AML	AML		
	comp=N,15600μm,0.5s						
PP3				AML	AML		
	comp=E,14150μm,0.5s						
GUAR	**Guarcino**	**0.81**	**177**	P	**Pg**	**13 07 48.6**	**-0.7**
GUAR				AML	AML		

MURB AML AML
comp=N,10430µm,1.0s
LPEL Lama dei Pelig 0.88 129 ⇓P **Pg 13 07 48.6 -2.1**
LPEL AML AML
comp=N,6550µm,0.3s
LPEL AML AML
comp=E,5780µm,0.5s
ATTE AVT- Monte Tez 0.89 312 P **Pg 13 07 50.1 -0.8**
ATTE AML AML
comp=N,2460µm,1.0s
ATTE AML AML
comp=E,3355µm,0.5s
RMP Rome, Mte Porz 0.90 208 P **Pb 13 07 51.3 +0.3**
RMP AML AML
comp=E,6165µm,0.5s
RMP AML AML
comp=N,6475µm,1.3s
MGAB Montegabbione 0.90 290 ⇑P **Pg 13 07 50.5 -0.5**
MGAB AML AML
comp=E,7860µm,1.3s
MGAB AML AML
comp=N,8110µm,1.1s
MGAB AML AML
comp=E,7460µm,1.3s
MGAB AML AML
comp=N,8150µm,1.1s
SSFR Montelago di S 0.90 337 P **Pg 13 07 50.4 -0.6**
SSFR AML AML
comp=E,6635µm,0.3s
SSFR AML AML
comp=N,6550µm,1.2s
SSFR AML AML
comp=E,6505µm,0.3s
SSFR AML AML
comp=N,8040µm,0.8s
ATSC Scheggia e Pas 0.92 333 P **Pg 13 07 50.6 -0.8**
ARVD Arcevia 0.92 345 ⇓P **Pg 13 07 50.5 -0.9**
ARVD AML AML
comp=E,4155µm,0.7s
ARVD AML AML
comp=N,2230µm,0.5s
ATLO AVT- Montelove 0.94 319 ⇑P **Pg 13 07 51.0 -0.9**
MA9 Marino 0.95 208 P **Pb 13 07 52.2 +0.4**
MA9 AML AML
comp=E,11100µm,0.6s
MA9 AML AML
comp=N,8795µm,0.6s
POFI Posta Fibreno 0.95 159 P **Pg 13 07 50.5 -1.5**
POFI AML AML
comp=E,4750µm,0.8s
POFI AML AML
comp=N,2185µm,0.6s
AOI Ancona 0.97 15 P **Pg 13 07 51.6 -0.8**
AOI AML AML
comp=E,3625µm,0.4s
AOI AML AML
comp=N,3035µm,0.4s
ATVA AVT- Monte Val 0.98 313 P **Pg 13 07 51.6 -0.9**
LRP Arpino 0.99 166 AML AML
comp=E,1775µm,0.8s
LRP AML AML
comp=N,2970µm,0.9s
FRON Frontone 0.99 337 P **Pg 13 07 51.7 -1.0**
FRON AML AML
comp=E,3365µm,1.3s
FRON AML AML
comp=N,3530µm,0.5s
ATVO AVT- Monte Val 1.00 321 ⇑P **Pg 13 07 51.8 -1.1**
ATVO AML AML
comp=E,2500µm,0.7s
ATVO AML AML
comp=N,2710µm,1.0s
TB03 Pietralunga 1.01 322 P **Pg 13 07 52.0 -1.1**
ATBU Serra di Buran 1.01 329 P **Pg 13 07 52.7 -0.4**
LAV9 Lanuvio 1.02 204 P **Pb 13 07 53.7 +0.6**
LAV9 AML AML
comp=E,7455µm,0.7s
LAV9 AML AML
comp=E,7845µm,0.7s
LAV9 AML AML
comp=N,7800µm,0.7s
LAV9 AML AML
comp=N,7800µm,0.7s
SACS San Casciano d 1.02 284 ⇑P **Pg 13 07 52.7 -0.6**
SACS AML AML
comp=N,2895µm,0.6s
SACS AML AML
comp=E,2175µm,0.6s
SACS AML AML
comp=E,2045µm,0.6s
SACS AML AML
comp=N,2865µm,0.6s
ATMI Monte Miggiano 1.03 315 P **Pg 13 07 53.3 -0.1**
ATMI AML AML
comp=N,6465µm,0.5s
ATMI AML AML
comp=E,5415µm,0.7s
COR1 Corinaldo 1.04 350 P **Pg 13 07 53.6 -0.1**
COR1 AML AML
comp=E,8370µm,0.8s
COR1 AML AML
comp=E,4755µm,0.8s
COR1 AML AML
comp=N,6665µm,0.5s
COR1 AML AML
comp=N,7005µm,0.5s
GIUL Giuliano Di Ro 1.05 180 P **Pg 13 07 53.0 -0.8**
GIUL AML AML
comp=N,2120µm,0.7s
GIUL AML AML
comp=E,2045µm,1.3s
ATPC Poggio Castell 1.05 326 P **Pg 13 07 53.1 -0.8**
LATE Laterza 1.07 271 **Pg 13 07 53.4 -0.9**
LATE Laterza 1.07 271 P **Pg 13 07 53.5 -0.8**
TOLF Tolfa 1.08 240 ⇑P **Pg 13 07 53.2 -1.2**
TOLF AML AML
comp=E,2120µm,0.7s
TOLF AML AML
comp=N,2645µm,1.1s
MPAG Monte Paganucc 1.08 340 P **Pg 13 07 53.5 -1.0**
MPAG AML AML
comp=N,3640µm,0.4s
MPAG AML AML
comp=N,3665µm,0.4s
MPAG AML AML
comp=E,3585µm,0.9s
MPAG AML AML
comp=E,3475µm,0.9s
SENI Senigallia 1.10 359 P **Pn 13 07 55.1 +0.5**
SENI AML AML
comp=E,18200µm,0.4s
SENI AML AML
comp=N,13300µm,1.1s
RNI2 Rionero Sannit 1.12 143 P **Pb 13 07 53.3 -1.6**
RNI2 AML AML
comp=E,3990µm,0.6s
RNI2 AML AML
comp=N,2555µm,0.8s
RNI2 AML AML
comp=N,2650µm,0.8s
RNI2 AML AML
comp=E,3880µm,0.6s
LATB Latina 1.13 191 P **Pb 13 07 54.3 -0.8**
LATB AML AML
comp=E,756µm,0.9s
LATB AML AML
comp=N,684µm,0.6s
FSSB Fossombrone 1.14 342 P **Pb 13 07 54.8 -0.5**
FSSB AML AML
comp=E,7950µm,0.4s
FSSB AML AML
comp=N,8435µm,0.4s
CERA Filignano 1.16 151 P **Pb 13 07 53.4 -2.1**
CERA AML AML
comp=N,3660µm,0.9s
CERA AML AML
comp=E,3480µm,0.6s
CERA AML AML
comp=E,3645µm,0.6s
CERA AML AML
comp=N,3495µm,0.9s
MCIV Monte Civitell 1.18 279 P **Pb 13 07 55.2 -0.7**
MCIV AML AML
comp=E,954µm,1.3s
MCIV AML AML
comp=N,866µm,0.9s
CAFI Castiglion Fio 1.19 308 ⇑P **Pb 13 07 55.6 -0.5**
CAFI AML AML
comp=N,1335µm,0.7s
CAFI AML AML
comp=E,1525µm,0.5s
SF04 Casetta 1.20 282 P **Pb 13 07 56.4 +0.2**
FRES Fresagrandinar 1.22 121 AML AML
comp=E,1164µm,0.6s
FRES AML AML
comp=N,821µm,1.1s
PE3 Peglio 1.22 333 P **Pn 13 07 56.6 +0.2**
PE3 AML AML
comp=N,13µm,0.7s
PE3 AML AML
comp=E,14µm,0.6s
SF01 Poggio Pratacc 1.27 280 P **Pn 13 07 57.4 +0.3**
SF01 AML AML
comp=E,1495µm,0.6s
SF01 AML AML
comp=N,1406µm,1.0s
TRIV Trivento 1.27 131 AML AML
comp=N,2055µm,0.9s
TRIV AML AML
comp=E,2155µm,0.6s
TRIV AML AML
comp=E,2220µm,0.6s
TRIV AML AML
comp=N,2050µm,0.9s
PARC Parchiule 1.28 325 P **Pn 13 07 57.5 +0.3**
PARC AML AML
comp=E,2980µm,0.7s
PARC AML AML
comp=N,1950µm,1.0s
ARCI Arcidosso 1.34 281 P **Pn 13 07 58.6 +0.5**
ARCI AML AML
comp=N,361µm,0.6s
ARCI AML AML
comp=E,424µm,0.5s
PESA Pesaro 1.37 347 P **Pn 13 07 59.0 +0.6**
PESA AML AML
comp=E,3645µm,1.1s
PESA AML AML
comp=N,3135µm,0.5s
CRE Caprese Michel 1.39 317 P **Pn 13 07 58.7 -0.1**
CRE AML AML
comp=N,998µm,0.6s
CRE AML AML
comp=E,1045µm,0.4s
VAGA Valle Agricola 1.40 148 AML AML
comp=N,1695µm,0.9s
VAGA AML AML
comp=E,1100µm,0.9s
BSSO Busso 1.45 136 P **Pn 13 07 59.6 -0.1**
MODR Mondragone 1.53 162 P **Pn 13 08 01.4 +0.8**
MODR AML AML
comp=E,595µm,0.6s
MODR AML AML
comp=N,576µm,0.7s
CIGN Sant'Elia a Pi 1.55 127 AML AML
comp=E,800µm,0.7s
CIGN AML AML
comp=N,720µm,0.6s
PIGN Pignataro Magg 1.56 154 P **Pb 13 08 02.4 0.0**
PIGN AML AML
comp=N,420µm,0.6s
PIGN AML AML
comp=E,454µm,0.7s
PIGN AML AML
comp=N,488µm,0.6s
PIGN AML AML
comp=E,435µm,1.6s
ASQU Asqua 1.60 318 P **Pn 13 08 01.9 +0.2**
ASQU AML AML
comp=N,1152µm,1.4s
ASQU AML AML
comp=E,790µm,0.6s
GATE Gambatesa 1.65 131 P **Pg 13 08 04.6 -0.5**
MELA Melanico ??? S 1.66 122 P **Pb 13 08 03.5 -0.4**
MELA AML AML
comp=E,1975µm,0.7s
MELA AML AML
comp=N,2705µm,0.5s
MELA AML AML
comp=N,2560µm,0.5s
MELA AML AML
comp=E,2005µm,0.7s
SFI Santa Sofia 1.66 322 P **Pn 13 08 02.7 +0.3**
SFI AML AML
comp=N,742µm,1.4s
SFI AML AML
comp=E,802µm,1.1s
FROS Frosini 1.66 292 P **Pn 13 08 03.2 +0.8**
CSNT Castellina Chi 1.68 302 P **Pn 13 08 03.4 +0.6**
CSNT AML AML
comp=N,418µm,0.6s
CSNT AML AML
comp=E,364µm,0.7s
TREM Isole Tremiti 1.74 105 AML AML
comp=E,2485µm,0.6s
TREM AML AML
comp=N,2090µm,0.8s
OSSC Osservatorio P 1.74 303 **Pn 13 08 04.0 +0.5**
OSSC Osservatorio P 1.74 303 P **Pn 13 08 04.7 +1.2**
OSSC AML AML
comp=N,458µm,0.7s
OSSC AML AML
comp=E,340µm,0.6s
VITU Vitulano (BN) 1.75 144 AML AML
comp=E,664µm,0.7s
VITU AML AML
comp=N,923µm,0.5s
CASP Castiglione de 1.77 277 **Pn 13 08 04.4 +0.3**
CASP Castiglione de 1.77 277 ⇑P **Pn 13 08 04.3 +0.3**
CASP AML AML
comp=N,198µm,0.7s
CASP AML AML
comp=E,148µm,0.9s
PSB1 Pescosannita 1.80 140 P **Pb 13 08 06.6 +0.1**
TRIF Trifonti 1.81 287 ⇑P **Pn 13 08 05.2 +0.8**
TRIF AML AML
comp=N,404µm,0.4s
TRIF AML AML
comp=E,449µm,0.6s
PAOL Paolisi 1.85 148 **Pn 13 08 05.9 +0.8**
PAOL Paolisi 1.85 148 P **Pn 13 08 06.2 +1.1**
MOCO Biccari - m.te 1.88 131 P **Pb 13 08 07.5 -0.3**
MOCO AML AML
comp=N,257µm,0.9s
MOCO AML AML
comp=E,598µm,1.2s
APRC Apricena 1.90 116 AML AML
comp=N,1620µm,0.4s
APRC AML AML
comp=E,1012µm,0.5s
DUGI Dugi Otok 1.91 43 *e*Pn **Pn 13 08 05.8 0.0**
MRB1 Monte Rocchett 1.96 139 P **Pn 13 08 08.0 +1.5**
SEI Scarperia 2.01 317 P **Pb 13 08 09.2 -0.8**
SEI AML AML
comp=N,1350µm,0.6s
SEI AML AML
comp=E,937µm,0.6s
SGRT San Giovanni R 2.03 114 Pn **Pn 13 08 08.1 +0.5**
SGRT San Giovanni R 2.03 114 P **Pn 13 08 08.1 +0.5**
SGRT AML AML
comp=E,1068µm,0.8s
SGRT AML AML
comp=N,983µm,0.7s
MPPT Montemurlo 2.08 311 P **Pn 13 08 09.0 +0.8**
MPPT AML AML
comp=E,392µm,0.8s
MPPT AML AML
comp=N,376µm,0.5s
VIRC Vir 2.13 37 *e*Pn **Pn 13 08 09.0 +0.2**
SGTA Sant Agata di 2.15 132 P **Pb 13 08 11.7 -0.8**
SGTA AML AML
comp=E,583µm,0.7s
SGTA AML AML
comp=N,384µm,0.4s
CAFE Carife 2.16 136 P **Pb 13 08 11.6 -1.0**
MSAG Monte S. Angel 2.16 114 P **Pn 13 08 10.0 +0.6**
MSAG AML AML
comp=N,1965µm,0.5s
MSAG AML AML
comp=E,958µm,0.5s
MTCR Monte La Croce 2.18 311 P **Pn 13 08 10.2 +0.6**
MORI Morici 2.19 54 *e*Pn **Pn 13 08 09.9 +0.3**
SNAL S. Angelo Dei 2.23 138 AML AML
comp=N,603µm,1.0s
SNAL AML AML
comp=E,600µm,1.1s
NVLJ Novalja 2.28 30 *e*Pn **Pn 13 08 11.0 +0.1**
BRJN Brijuni 2.33 9 *e*Pn **Pn 13 08 11.0 -0.5**
BRJN Brijuni 2.33 9 P **Pn 13 08 11.7 +0.2**
CAPA Cerignola FG 2.40 126 AML AML
comp=N,942µm,1.0s
CAPA AML AML
comp=E,661µm,0.8s
MAIM Mastiano 2.41 304 P **Pn 13 08 14.1 +1.4**
MAIM AML AML
comp=E,278µm,1.0s
MAIM AML AML
comp=N,268µm,0.8s
ZCCA Zocca 2.41 317 Pn **Pn 13 08 13.1 +0.3**
RABC Rab 2.41 27 *e*Pn **Pn 13 08 12.8 +0.1**
HVAR Hvar 2.41 75 *e*Pn **Pn 13 08 13.3 +0.6**
VULT Monte Vulture 2.41 132 P **Pn 13 08 14.5 +1.6**
VULT AML AML
comp=E,512µm,0.7s
VULT AML AML
comp=N,747µm,0.8s
CARD Cardoso 2.47 306 P **Pn 13 08 14.6 +0.9**
CARD AML AML
comp=N,321µm,0.4s
CARD AML AML
comp=E,344µm,0.9s
SMRN Sveta Marina 2.51 15 *e*Pn **Pn 13 08 13.8 -0.3**
VLC Villacollemand 2.61 307 Pn **Pn 13 08 15.4 0.0**
CDRU Civita di Ruta 2.61 143 P **Pn 13 08 16.9 +1.3**
CDRU AML AML
comp=N,79µm,0.8s
CDRU AML AML
comp=E,105µm,0.7s
PALZ Palazzo San Ge 2.62 129 P **Pn 13 08 16.0 +0.5**
PALZ AML AML
comp=N,633µm,1.3s
PALZ AML AML
comp=E,638µm,1.0s
UDBI Udbina 2.65 43 *e*Pn **Pn 13 08 17.6 +1.5**
LSTV Lastovo 2.68 85 *e*Pn **Pn 13 08 16.4 -0.1**
MRVN Minervino Murg 2.68 124 AML AML
comp=N,154µm,0.5s
MRVN AML AML
comp=E,192µm,1.0s
KIJV Kijevo 2.69 58 *e*Pn **Pn 13 08 17.8 +1.3**
A253A Karojba, Istri 2.71 8 *e*Pn **Pn 13 08 16.5 -0.4**
A250A Rusevo Krmpots 2.75 25 *e*Pn **Pn 13 08 17.9 +0.5**
EQUI Equi 2.75 306 P **Pn 13 08 18.4 +1.0**
EQUI AML AML
comp=N,168µm,1.2s
EQUI AML AML
comp=E,134µm,0.8s
MAKA Makarska 2.84 75 *e*Pn **Pn 13 08 19.4 +0.8**
PLIT Plitvice 2.84 36 *e*Pn **Pn 13 08 19.5 +0.8**
RIY Rijeka 2.86 18 *e*Pn **Pn 13 08 19.1 +0.2**
RICI Ricice 2.97 71 *e*Pn **Pn 13 08 21.7 +1.2**
TEOL Teolo 2.98 338 Pn **Pn 13 08 21.1 +0.5**
SKDS Skadanscina 2.99 10 *e*Pn **Pn 13 08 20.3 -0.4**
SKDS Skadanscina 2.99 10 ⇓*i*Pn **Pn 13 08 20.8 +0.1**
SKDS *i* Sn **Sn 13 08 57.0 +0.6**
SKDS IAML 13 09 01.7
comp=Z,136nm,0.4s
SMPL Sampolo 2.99 261 P **Pn 13 08 20.9 +0.2**
SMPL AML AML
comp=E,31µm,0.4s
SMPL AML AML
comp=N,26µm,0.9s
AMUR Altamura 3.02 123 P **Pn 13 08 22.1 +0.9**
AMUR AML AML
comp=N,400µm,0.4s
AMUR AML AML
comp=E,367µm,0.3s
A050A Klekovaca 3.03 51 *e*Pn **Pn 13 08 23.0 +1.7**
PRMA PARMA 3.04 316 Pn **Pn 13 08 21.2 -0.1**
MIGL Miglionico 3.11 129 AML AML
comp=E,824µm,1.0s
MIGL AML AML
comp=N,802µm,0.6s
PGF Pioggiola 3.15 270 *e*P **Pn 13 08 24.5 +1.5**
PGF *e*Sn **Sn 13 08 56.7 -3.7**
comp=N,13nm,0.5s
MSSA Maissana 3.22 303 **Pn 13 08 25.0 +1.1**
BOJS Bojanci 3.23 26 *e*Pn **Pn 13 08 24.6 +0.6**
BOJS Bojanci 3.23 26 P **Pn 13 08 24.9 +0.9**
BOJS AML AML
comp=N,376µm,0.4s
BOJS AML AML
comp=E,631µm,0.5s
MATE Matera 3.24 126 ⇑P **Pn 13 08 25.9 +1.8**
MATE ⇑S **Sn 13 09 03.1 +0.6**
CUC Castrocucco 3.24 143 **Pn 13 08 25.9 +1.7**
STON Ston 3.28 84 *e*Pn **Pn 13 08 24.3 -0.4**
STON Ston 3.28 84 *e*Pn **Pn 13 08 24.2 -0.4**
STON Ston 3.28 84 *e*Pn **Pn 13 08 24.5 -0.2**
STON *e*Sn **Sn 13 09 03.0 -0.5**
STON Ston 3.28 84 AML AML
comp=N,151µm,0.9s
STON AML AML
comp=E,173µm,0.4s
MGRS Mrkonjic Grad 3.32 56 *e*Pn **Pn 13 08 27.5 +2.3**
LTRZ Laterza 3.34 126 P **Pn 13 08 26.6 +1.1**
NOCI Noci 3.38 121 P **Pn 13 08 27.2 +1.1**
NOCI AML AML
comp=E,234µm,0.5s
NOCI AML AML
comp=N,251µm,1.0s
SABO M.te Sabotino 3.38 4 **Pn 13 08 25.8 -0.3**
SABO M.te Sabotino 3.38 4 P **Pn 13 08 26.3 +0.2**
SABO AML AML
comp=E,550µm,0.5s
SABO AML AML
comp=E,2360µm,0.6s
SABO AML AML
comp=N,522µm,0.6s
SABO AML AML
comp=N,2190µm,0.6s
OZLJ Ozalj 3.40 27 *e*Pn **Pn 13 08 27.3 +1.0**
AJAC Base Areonaval 3.41 260 P **Pn 13 08 27.7 +1.3**
AJAC AML AML
comp=E,248µm,0.3s
AJAC AML AML
comp=N,110µm,0.4s
ROVR Rover Verones 3.42 333 P **Pn 13 08 28.1 +1.4**
ROVR AML AML
comp=N,136µm,0.3s
ROVR AML AML
comp=E,92µm,1.0s
CGRP Cima Grappa 3.44 343 P **Pn 13 08 28.4 +1.4**
CGRP AML AML
comp=E,492µm,0.5s
CGRP AML AML
comp=N,602µm,0.6s
CGRP AML AML
comp=E,522µm,0.5s
CGRP AML AML
comp=N,594µm,0.7s
PRIJ Prijedor 3.44 45 *e*Pn **Pg 13 08 37.8 -1.8**
VARN Col Varnada, M 3.49 347 P **Pn 13 08 28.5 +0.9**
VARN AML AML
comp=N,400µm,1.5s
VARN AML AML
comp=E,490µm,0.5s
LJU Ljubljana 3.55 14 P **Pn 13 08 29.6 +1.1**
LJU AML AML
comp=E,1835µm,0.7s
LJU AML AML
comp=N,2700µm,0.4s
BLY Banja Luka 3.56 52 *e*Pn **Pn 13 08 30.3 +1.8**
BLY Banja Luka 3.56 52 *e*Pn **Pn 13 08 30.3 +1.8**
A051A Mrakovica 3.57 46 *e*Pn **Pn 13 08 29.9 +1.2**
CRES Cresnjev 3.58 25 *e*Pn **Pn 13 08 29.7 +0.8**
DOSS Dosso del Somm 3.60 336 P **Pn 13 08 30.8 +1.6**
DOSS AML AML
comp=E,290µm,0.7s
DOSS AML AML
comp=E,264µm,0.5s
DOSS AML AML
comp=N,276µm,0.7s
DOSS AML AML
comp=N,280µm,0.5s
SALO Salr 3.60 328 P **Pn 13 08 31.1 +2.1**
SALO AML AML
comp=E,515µm,0.6s

SALO AML AML
comp=N,538µm,0.9s
DBRK Dubrovnik 3.61 87 *e*Pn **Pn 13 08 29.2 0.0**
MPRI Monte Prat 3.64 357 ⇓P **Pn 13 08 30.4 +0.8**
MPRI AML AML
comp=N,505µm,0.5s
MPRI AML AML
comp=E,326µm,0.4s
TAR1 Taranto 3.67 123 AML AML
comp=E,167µm,1.1s
TAR1 AML AML
comp=N,198µm,0.6s
STAL STALIGIAL 3.67 354 **Pn 13 08 30.2 0.0**
STAL STALIGIAL 3.67 354 ⇓P **Pn 13 08 30.5 +0.4**
STAL AML AML
comp=E,334µm,0.4s
STAL AML AML
comp=N,378µm,1.3s
STAL AML AML
comp=E,476µm,0.4s
STAL AML AML
comp=N,336µm,0.6s
MAGA Magasa 3.69 330 P **Pn 13 08 31.8 +1.4**
MAGA AML AML
comp=N,594µm,0.5s
MAGA AML AML
comp=E,960µm,0.5s
LUSI Trento, Gardas 3.74 334 P **Pn 13 08 32.4 +1.3**
LUSI AML AML
comp=N,374µm,1.5s
LUSI AML AML
comp=E,218µm,0.6s
CIMO Cimolais 3.75 351 Pn **Pn 13 08 31.1 -0.1**
CIMO Cimolais 3.75 351 P **Pn 13 08 31.6 +0.4**
CIMO AML AML
comp=E,112µm,0.4s
CIMO AML AML
comp=E,121µm,0.4s
CIMO AML AML
comp=N,99µm,0.4s
CIMO AML AML
comp=N,95µm,0.4s
TREB Trebinje 3.75 87 *e*Pn **Pn 13 08 32.1 +0.9**
TREB Trebinje 3.75 87 *e*Pn **Pn 13 08 32.8 +1.6**
TREB *e*Sn **Sn 13 09 16.8 +1.5**
PTCC Patocco-Chiusa 3.80 1 P **Pn 13 08 31.8 0.0**
PTCC AML AML
comp=N,139µm,0.4s
PTCC AML AML
comp=E,150µm,0.3s
PTJ Puntijarka 3.83 30 *e*Pn **Pn 13 08 33.0 +0.7**
PRED Cave del Predi 3.84 3 Pn **Pn 13 08 32.3 -0.2**
GAGG Gaggia 3.85 335 P **Pn 13 08 34.2 +1.5**
GAGG AML AML
comp=N,199µm,1.3s
GAGG AML AML
comp=E,292µm,0.8s
CLUD Cludinico 3.86 356 Pn **Pn 13 08 32.6 -0.1**
CLUD Cludinico 3.86 356 ⇓P **Pn 13 08 33.0 +0.4**
CLUD AML AML
comp=E,227µm,0.9s
CLUD AML AML
comp=N,120µm,0.9s
HCY Herceg Novi 3.87 91 *e*Pn **Pn 13 08 33.7 +0.9**
HCY Herceg Novi 3.87 91⇑*i*Pn **Pn 13 08 33.9 +1.1**
HCY *i* Sn **Sn 13 09 19.3 +1.1**
HCY Herceg Novi 3.87 91⇑*i*Pn **Pn 13 08 33.9 +1.1**
HCY *i* Sn **Sn 13 09 19.8 +1.6**
BRY Bratogost 3.90 84 *e*Pn **Pn 13 08 34.5 +1.1**
BRY Bratogost 3.90 84⇑*i*Pn **Pn 13 08 34.3 +1.0**
BRY *i* Sn **Sn 13 09 20.4 +1.4**
BRY Bratogost 3.90 84⇑*i*Pn **Pn 13 08 34.4 +1.1**
BRY *i* Sn **Sn 13 09 20.6 +1.6**
ZOU Zoufplan 3.95 357 ⇓P **Pn 13 08 34.7 +0.5**
ZOU AML AML
comp=E,278µm,0.8s
ZOU AML AML
comp=N,172µm,0.6s
ZOU AML AML
comp=N,170µm,1.6s
ZOU AML AML
comp=E,319µm,0.8s
A052A Srbac 3.96 50 *e*Pn **Pn 13 08 32.2 -1.8**
MABI Malga Bissina 3.97 331 AML AML
comp=N,106µm,0.7s
MABI AML AML
comp=E,116µm,1.0s
OBKA Obir 4.01 13 *e*Pn **Pn 13 08 35.4 +0.6**
OBKA Obir 4.01 13 *e*Pn **Pn 13 08 35.7 +0.9**
comp=E,7.0nm,0.4s,SNR=7.5
MYKA Terra Mystica 4.03 4 *e*Pn **Pn 13 08 35.7 +0.6**
comp=E,8.6nm,0.4s
LOBO Lobor 4.08 29 *e*Pn **Pn 13 08 35.9 +0.2**
KOSI Kohlern 4.08 341 ⇓P **Pn 13 08 37.4 +1.6**
KOSI AML AML
comp=E,270µm,0.8s
KOSI AML AML
comp=N,252µm,0.4s
ABTA Abfaltersbach 4.17 353 *e*Pn **Pn 13 08 38.3 +1.3**
comp=N,44nm,0.4s,SNR=94
CEME Cevo 4.18 89⇑*i*Pn **Pn 13 08 38.2 +1.2**
CEME *i* Sn **Sn 13 09 27.2 +1.4**
CEME Cevo 4.18 89⇑*i*Pn **Pn 13 08 38.3 +1.2**
CEME *i* Sn **Sn 13 09 27.5 +1.7**
BUM Brajici-Budva 4.18 92⇑*i*Pn **Pn 13 08 38.2 +1.1**
BUM *i* Sn **Sn 13 09 27.2 +1.4**
BUM Brajici-Budva 4.18 92⇓*i*Pn **Pn 13 08 38.4 +1.3**
BUM *i* Sn **Sn 13 09 27.1 +1.3**
UPM Unac-Piva 4.19 80 *e*Pn **Pn 13 08 39.3 +1.9**
UPM Unac-Piva 4.19 80⇑*i*Pn **Pn 13 08 38.4 +1.0**
UPM *i* Sn **Sn 13 09 27.6 +1.3**
UPM Unac-Piva 4.19 80⇓*i*Pn **Pn 13 08 38.6 +1.2**
UPM *i* Sn **Sn 13 09 27.7 +1.4**
NKME Niksic 4.20 86⇓*i*Pn **Pn 13 08 38.6 +1.2**
NKME *i* Sn **Sn 13 09 27.7 +1.4**
NKME Niksic 4.20 86⇑*i*Pn **Pn 13 08 38.4 +1.0**
NKME *i* Sn **Sn 13 09 28.0 +1.7**
KALN Kalnik 4.20 32 *e*Pn **Pn 13 08 37.2 -0.2**
NKY Niksic 4.23 85⇑*i*Pn **Pn 13 08 39.0 +1.2**
NKY *i* Sn **Sn 13 09 28.3 +1.2**
NKY Niksic 4.23 85⇑*i*Pn **Pn 13 08 39.1 +1.2**
NKY *i* Sn **Sn 13 09 28.6 +1.5**
SOKA Soboth 4.26 17 *e*Pn **Pn 13 08 40.3 +2.1**
comp=N,3.6nm,0.2s
VSL Villasalto 4.28 225 P **Pn 13 08 39.3 +0.9**
VSL AML AML
VSL AML AML
TIP Timpagrande 4.33 141⇑P **Pn 13 08 41.3 +2.1**
TIP Timpagrande 4.33 141 **Pn 13 08 41.1 +1.9**
A252A Venje 4.35 48 *e*Pn **Pn 13 08 39.4 0.0**
KOGS Kog 4.39 28 AML AML
comp=N,706µm,1.4s
KOGS AML AML
comp=E,894µm,1.0s
DRME Dracevica, Mon 4.41 93 *e*Pn **Pn 13 08 41.4 +1.2**
DRME Dracevica, Mon 4.41 93⇓*i*Pn **Pn 13 08 41.4 +1.2**
DRME *i* Sn **Sn 13 09 30.2 -1.2**
DRME Dracevica, Mon 4.41 93⇓*i*Pn **Pn 13 08 41.4 +1.2**
DRME *i* Sn **Sn 13 09 33.2 +1.8**
PDG Podgorica 4.43 90⇑P **Pn 13 08 42.3 +1.7**
PDG ⇑S **Sn 13 09 31.9 -0.1**
PDG Podgorica 4.43 90 Pn **Pn 13 08 42.0 +1.4**
PDG Podgorica 4.43 90 *e*Pn **Pn 13 08 42.6 +2.1**
PDG *e*Sn **Sn 13 09 31.8 -0.2**
PDG Podgorica 4.43 90 AML AML
comp=N,186µm,0.9s
PDG AML AML
comp=E,148µm,1.1s
PDG AML AML
comp=E,206µm,1.3s
PDG AML AML
comp=N,151µm,0.5s
TTG Podgorica 4.43 90⇑*i*Pn **Pn 13 08 41.9 +1.4**
TTG *i* Sn **Sn 13 09 33.6 +1.6**
TTG Podgorica 4.43 90⇑*i*Pn **Pn 13 08 41.8 +1.3**
TTG *i* Sn **Sn 13 09 33.9 +1.9**
KBA Koelnbreinsper 4.47 1 *e*Pn **Pn 13 08 42.3 +1.1**
comp=N,14nm,0.5s
ULC Ulcinj 4.49 96⇑*i*Pn **Pn 13 08 42.5 +1.2**
ULC *i* Sn **Sn 13 09 34.8 +1.5**
ULC Ulcinj 4.49 96⇑*i*Pn **Pn 13 08 42.4 +1.2**
ULC *i* Sn **Sn 13 09 34.9 +1.6**
ROSI Rosskopf 4.52 344 AML AML
comp=E,436µm,0.4s
ROSI AML AML
comp=N,368µm,0.8s
PLE Pljevlja 4.55 79⇓*i*Pn **Pn 13 08 43.5 +1.2**
PLE *i* Sn **Sn 13 09 36.2 +1.0**
PLE Pljevlja 4.55 79⇓*i*Pn **Pn 13 08 43.3 +1.0**
PLE *i* Sn **Sn 13 09 36.6 +1.4**
RUDO Rudo 4.59 75 *e*Pn **Pn 13 08 44.0 +1.4**
KOME Kolasin 4.61 85⇓*i*Pn **Pn 13 08 44.3 +1.2**
KOME *i* Sn **Sn 13 09 37.8 +1.2**
KOME Kolasin 4.61 85⇑*i*Pn **Pn 13 08 44.1 +1.0**
KOME *i* Sn **Sn 13 09 38.1 +1.5**
BBLS Lazići 4.66 72 *e*Pn **Pn 13 08 45.4 +1.7**
BBLS *e*Sn **Sn 13 09 39.5 +1.7**
SCTE Santa Cesarea 4.67 121 Pn **Pn 13 08 44.8 +1.1**
SCTE Santa Cesarea 4.67 121 AML AML
comp=N,114µm,1.1s
SCTE AML AML
comp=E,140µm,0.7s
FETA Feichten 4.77 339 *e*Pn **Pn 13 08 47.4 +2.2**
comp=E,6.3nm,0.4s,SNR=13
WTTA Wattenberg 4.80 347 *e*Pn **Pn 13 08 48.0 +2.3**
comp=E,14nm,0.5s,SNR=6.7
DAVOX Davos/Dischmat 4.82 331 Pn **Pn 13 08 48.8 +2.8**
comp=E,3.4nm,0.3s,baz=154,slow=12,SNR=28
DAVOX Sn **Sn 13 09 44.6 +2.8**
comp=E,2.9nm,0.3s,baz=225,slow=20,SNR=2.8
SQTA Sankt Quirin 4.84 343 *e*Pn **Pn 13 08 48.6 +2.4**
comp=E,9.5nm,0.2s,SNR=18
WATA Walderalm 4.88 346 *e*Pn **Pn 13 08 49.4 +2.6**
comp=E,10nm,0.4s,SNR=17
IVA Berane 4.89 85⇑*i*Pn **Pn 13 08 48.1 +1.2**
IVA *i* Sn **Sn 13 09 44.2 +0.8**
IVA Berane 4.89 85⇑*i*Pn **Pn 13 08 48.1 +1.2**
IVA *i* Sn **Sn 13 09 44.2 +0.8**
ARSA Arzberg 4.91 18 *i* Pn **Pn 13 08 47.6 +0.4**
comp=E,2.9nm,0.3s,SNR=10
KOVH Kovagotottos 4.92 43 P **Pn 13 08 47.2 0.0**
PVY Plav 4.95 88⇑*i*Pn **Pn 13 08 48.8 +1.1**
PVY *i* Sn **Sn 13 09 45.9 +1.1**
PVY Plav 4.95 88⇓*i*Pn **Pn 13 08 48.9 +1.2**
PVY *i* Sn **Sn 13 09 45.7 +0.9**
SJES Sjenica 4.97 80 *e*Pn **Pn 13 08 50.5 +2.5**
SJES *e*Sn **Sn 13 09 46.8 +1.4**
MOTA Moosalm 4.98 343 *e*Pn **Pn 13 08 50.6 +2.4**
comp=E,5.1nm,0.3s,SNR=10
LMR La Mourre 5.01 281 *e*P **Pn 13 08 49.4 +1.0**
LMR *e*Sn **Sn 13 09 41.0 -5.1**
comp=E,28nm,1.0s
CLTB Caltabellotta 5.02 180 Pn **Pn 13 08 51.0 +2.2**
TIR Tirane 5.08 102⇑P **Pn 13 08 51.0 +1.6**
TIR ⇑S **Sn 13 09 47.1 -0.8**
TIR Tirane 5.08 102 Pn **Pn 13 08 50.6 +1.2**
TIR Tirane 5.08 102 *e*Pn **Pn 13 08 51.0 +1.6**
TIR *e*Sn **Sn 13 09 48.5 +0.5**
BIOA Bad Ischl, Aus 5.09 3 *e*Pn **Pn 13 08 50.8 +1.2**
comp=E,3.7nm,0.3s
DIVS Divibare 5.13 71 Pn **Pn 13 08 50.9 +0.7**
DIVS Divibare 5.13 71 *e*Pn **Pn 13 08 51.1 +0.9**
DIVS Divibare 5.13 71 *e*Pn **Pn 13 08 51.4 +1.2**
DIVS *e*Sn **Sn 13 09 50.5 +1.2**
IVAS Ivanjica 5.14 77 *e*Pn **Pn 13 08 51.5 +1.2**
IVAS *e*Sn **Sn 13 09 49.1 -0.4**
VLO Vlora 5.14 112 Pn **Pn 13 08 52.0 +1.7**
MBDF Montbardon 5.16 296 *e*P **Pn 13 08 52.9 +2.2**
MBDF *e*Sn **Sn 13 09 45.0 -5.2**
comp=E,8.6nm,0.6s
RETA Reutte 5.19 341 *e*Pn **Pn 13 08 52.5 +1.5**
comp=E,7.3nm,0.5s
DAVA Damuels 5.26 334 *e*Pn **Pn 13 08 54.6 +2.6**
comp=E,11nm,0.5s,SNR=8.5
MORH Mrgy, Hungar 5.28 45 P **Pn 13 08 53.3 +1.2**
MOA Molln 5.29 7 *e*Pn **Pn 13 08 54.5 +2.2**
MOA *e*Sn **Sn 13 09 54.1 +1.0**
MOA Molln 5.29 7 *e*Pn **Pn 13 08 54.1 +1.8**
comp=E,3.6nm,0.4s,SNR=10
FRGS Fruska Gora 5.38 59⇑P **Pn 13 08 55.0 +1.5**
FRGS Fruska Gora 5.38 59 *e*Pn **Pn 13 08 53.9 +0.4**
FRGS Fruska Gora 5.38 59 *e*Pn **Pn 13 08 53.9 +0.4**
TRUS Trudelj 5.45 70 *e*Pn **Pn 13 08 55.7 +1.2**
LPG La Plagne 5.51 304 *e*P **Pn 13 08 57.8 +2.2**
LPG *e*Sn **Sn 13 09 53.3 -5.6**
comp=E,6.2nm,0.6s
RONA Rosalia, Austr 5.53 22 *e*Pn **Pn 13 08 56.4 +0.8**
comp=E,2.2nm,0.2s
LPL La Plagne 5.53 304 *e*P **Pn 13 08 58.1 +2.3**
LPL *e*Sn **Sn 13 09 53.8 -5.5**
comp=E,9.4nm,0.5s
GRUS Gruza 5.59 74 *e*Pn **Pn 13 08 57.8 +1.3**
GRUS *e*Sn **Sn 13 09 59.7 -0.9**
CONA Conrad Observa 5.63 18 *i* Pn **Pn 13 08 57.7 +0.7**
comp=E,4.6nm,0.3s,SNR=7.0
KEK Kerkira 5.72 118 Pn **Pn 13 08 59.7 +1.5**
SMRF Simiane la Rot 5.77 286 *e*P **Pn 13 09 01.5 +2.5**
SMRF *e*Sn **Sn 13 09 59.3 -5.8**
comp=E,4.7nm,0.7s
SELS Selova 5.80 81 *e*Pn **Pn 13 09 00.6 +1.2**
SELS *e*Sn **Sn 13 10 04.0 -1.8**
ORIF Oris-en-Rattie 5.82 296 *e*P **Pn 13 09 03.6 +3.9**
ORIF *e*Sn **Sn 13 10 00.6 -5.8**
comp=E,11nm,0.6s
OHR Ohrid 5.82 102 *i* Pn **Pn 13 09 02.0 +2.3**
KBN Korca 5.98 107 **Pn 13 09 03.4 +1.5**
GEC2 GERESS Array S 6.25 3 Pn **Pn 13 09 05.8 +0.2**
GERES GERESS Array B 6.25 3 Pn **Pn 13 09 05.3 -0.2**
comp=E,0.5nm,0.3s,baz=176,slow=12,SNR=17
GERES Sn **Sn 13 10 16.4 -0.4**
comp=E,4.1nm,0.3s,baz=166,slow=25,SNR=7.1
GERES Lg Lg 13 10 49.9
baz=192,slow=28
comp=E,1.1nm,0.3s
GERES GERESS Array B 6.25 3 Pn **Pn 13 09 05.1 -0.4**
CKRC Cesky Krumlov 6.26 6 *e*PN **Pn 13 09 05.7 +0.1**
CKRC *e*SN **Sn 13 10 18.1 +1.2**
BOVS Bovan 6.27 78⇑P **Pn 13 09 06.4 +0.7**
BOVS Bovan 6.27 78 *e*Pn **Pn 13 09 06.4 +0.7**
BOVS *e*Sn **Sn 13 10 16.1 -1.0**
BARS Barje 6.31 85 *e*Pn **Pn 13 09 07.7 +1.4**
MODS Modra-Piesok 6.42 25 *e*PN **Pn 13 09 10.0 +2.2**
MODS *e*SN **Sn 13 10 23.1 +2.2**
CABF La Chapelle 6.50 310 *e*P **Pn 13 09 11.6 +2.6**
CABF *e*Sn **Sn 13 10 16.6 -6.4**
comp=E,13nm,0.7s
MDVR Moldovita 6.50 68⇑P **Pn 13 09 10.0 +1.0**
PRVS Prvonek 6.51 88 *e*Pn **Pn 13 09 10.4 +1.3**
PRVS *e*Sn **Sn 13 10 20.7 -2.6**
KHC Kasperske Hory 6.53 2 **Pn 13 09 08.5 -0.8**
KHC Kasperske Hory 6.53 2 *e*PN **Pn 13 09 09.0 -0.3**
KHC *e*SN **Sn 13 10 24.1 +0.4**
VIVF Saint-Julien-l 6.62 293 *e*P **Pn 13 09 13.2 +2.7**
VIVF *e*Sn **Sn 13 10 19.5 -6.3**
comp=E,6.1nm,0.8s
ZAGS Zajecar 6.67 77 *e*Pn **Pn 13 09 11.9 +0.7**
ZAGS *e*Sn **Sn 13 10 26.7 -0.3**
BFO Black Forest 6.69 331 **Pn 13 09 12.7 +1.2**
BZS Buzias 6.72 61⇑P **Pn 13 09 14.3 +2.3**
BOSS Bosilegrad 6.81 88 *e*Pn **Pn 13 09 14.4 +1.2**
BOSS *e*Sn **Sn 13 10 27.7 -2.9**
KRUC Moravsky 6.82 18 *e*SN **Sn 13 10 31.3 +0.6**
KRUC Moravsky 6.82 18 *e*PG **Pn 13 09 13.5 +0.3**
HINF Hinteralfeld 6.90 321 *e*P **Pn 13 09 16.4 +2.0**
HINF *e*Sn **Sn 13 10 26.3 -6.5**
comp=E,31nm,0.7s
ZAPS Zavoj 6.91 81 *e*Pn **Pn 13 09 16.3 +1.7**
ZAPS *e*Sn **Sn 13 10 32.5 -0.6**
BLKB Belogradchik 6.96 78⇑P **Pn 13 09 16.8 +1.4**
LASF Ste Croix 7.01 285 *e*P **Pn 13 09 17.6 +1.6**
LASF *e*Sn **Sn 13 10 29.0 -6.5**
comp=E,2.7nm,0.7s
SIRR Siria 7.04 56 ⇓P **Pn 13 09 19.1 +2.8**
ECH Echery 7.06 325 Pn **Pn 13 09 17.2 +0.6**
VYHS Vyhne 7.07 32 *e*PN **Pn 13 09 17.5 +0.8**
VYHS *e*SN **Sn 13 10 33.1 -3.8**
VRAC Vranov 7.09 18 Pn **Pn 13 09 16.9 -0.1**
comp=E,0.6nm,0.3s,baz=259,slow=12,SNR=3.8
VRAC Sn **Sn 13 10 32.6 -4.8**
comp=E,1.2nm,0.3s,baz=160,slow=8.8,SNR=2.0
VRAC Lg Lg 13 11 25.2
baz=305,slow=19
comp=E,1.7nm,0.4s
VRAC Vranov 7.09 18 *e*PG **Pn 13 09 17.2 +0.2**
CDF Champ du Feu 7.17 326 *e*P **Pn 13 09 19.2 +1.1**
CDF *e*Sn **Sn 13 10 32.7 -6.7**
comp=E,28nm,0.8s
HAU Haudompre 7.27 320 *e*P **Pn 13 09 20.9 +1.4**
HAU *e*Sn **Sn 13 10 35.1 -6.8**
comp=E,39nm,0.6s
MAHO Mahon 7.30 251 Pn **Pn 13 09 22.3 +2.5**
KKB Krupnik 7.33 92 P **Pn 13 09 21.9 +1.6**
VTS Vitosha 7.36 87⇑P **Pn 13 09 22.5 +1.6**
VTS ⇑S **Sn 13 10 43.9 -0.4**
VTS Vitosha 7.36 87 Pn **Pn 13 09 22.5 +1.6**
VTS Vitosha 7.36 87 *e*Pn **Pn 13 09 22.4 +1.6**
VTS *e*Sn **Sn 13 10 41.9 -2.4**
VTS Vitosha 7.36 87 P **Pn 13 09 22.2 +1.3**
LIT Litokhoron 7.38 107 Pn **Pn 13 09 21.8 +0.8**
GZR Gura Zlata 7.41 65⇑P **Pn 13 09 22.9 +1.5**
PRU Pruhonice 7.44 6 *e*PN **Pn 13 09 22.0 +0.3**
PRU *e*SN **Sn 13 10 45.3 -0.6**
KEST Kesra 7.51 205 Pn **Pn** 13 09 27.8 +4.9
comp=E,2.0nm,0.3s,baz=303,slow=3.8,SNR=23
KEST Sn **Sn 13 10 47.8 -0.1**
baz=327,slow=23
MORC Moravsky Berou 7.76 21⇑P **Pn 13 09 30.6 +4.4**
SMF Signal de Mont 7.84 304 *e*P **Pn 13 09 28.9 +1.6**
SMF *e*Sn **Sn 13 10 48.6 -7.2**
comp=E,13nm,0.6s
MMB Musomiste 7.85 94 P **Pn 13 09 28.6 +1.1**
SRS Serrai 7.86 97 *e*Pn **Pn 13 09 28.7 +1.2**
PAGF Fort de Pagny 7.95 321 *e*P **Pn 13 09 31.9 +3.0**
PAGF *e*Sn **Sn 13 10 51.3 -7.4**
comp=E,34nm,0.9s
DPC Dobruska-Polom 8.03 14 *e*PN **Pn 13 09 29.1 -0.8**
SFTF Sexfontaines 8.05 317 *e*P **Pn 13 09 33.0 +2.9**
SFTF *e*Sn **Sn 13 10 53.7 -7.2**
comp=E,5.1nm,0.4s
MTLF Montolieu 8.13 279 *e*P **Pn 13 09 34.4 +3.1**
MTLF *e*Sn **Sn 13 10 55.8 -7.3**
comp=E,0.6nm,0.3s
LOR Lormes 8.13 308 *e*P **Pn 13 09 34.3 +3.0**
baz=124
LOR *e*Sn **Sn 13 10 56.0 -7.1**
comp=E,7.7nm,0.5s
AVF Avril sur Loir 8.20 304 *e*P **Pn 13 09 34.9 +2.7**
AVF *e*Sn **Sn 13 10 57.3 -7.4**
comp=E,4.3nm,0.7s
OSTC Ostas 8.21 13 *e*PN **Pn 13 09 33.0 +0.7**
SSF Saint Saulge 8.24 306 *e*P **Pn 13 09 35.0 +2.3**
SSF *e*Sn **Sn 13 10 58.2 -7.4**
comp=E,4.3nm,0.5s
MEZF Maizieres J'vi 8.24 318 *e*P **Pn 13 09 35.8 +3.1**
MEZF *e*Sn **Sn 13 10 58.1 -7.5**
comp=E,9.3nm,0.6s
BRG Berggiesshubel 8.28 3 *e*P Pn 13 09 44.5 +11
BRG Amp 13 09 45.9
comp=Z,2.8nm,0.8s
BRG *ex* x 13 11 04.5
BRG *ex* x 13 12 10.7
BRG Amp 13 12 46.0
comp=Z,7.8nm,1.2s
BGF Bois d'Agland 8.42 302 *e*P **Pn 13 09 37.1 +1.9**
BGF *e*Sn **Sn 13 11 02.5 -7.5**
comp=Z,4.8nm,0.4s
CAF Calviac 8.43 290 *e*P **Pn 13 09 38.5 +3.1**
CAF *e*Sn **Sn 13 11 02.8 -7.6**
comp=Z,0.5nm,0.2s
RZN Rozhen 8.56 92 P **Pn 13 09 38.8 +1.4**
ITM Ithomi 8.59 126 Pn **Pn 13 09 40.6 +3.1**
CLL Collm 8.71 359 Pn **Pn 13 09 38.8 -0.4**
CLL Collm 8.71 359 *e*Pn **Pn 13 09 35.0 -4.1**
CLL *ex* x 13 09 42.0
CLL *e*Pg **Pg 13 10 16.0 -4.1**
CLL *e*Sn Sn 13 10 57.0 -20
CLL *ex* x 13 11 03.0
CLL *ex* x 13 11 18.0
CLL *ex* x 13 11 50.0
CLL *e*Sg **Sg 13 12 08.0 -4.7**
comp=Z,11nm,1.0s
RJF Les Rejaudoux 8.89 292 *e*P **Pn 13 09 44.7 +3.0**
RJF *e*Sn **Sn 13 11 13.8 -7.9**
comp=Z,0.6nm,0.3s
VOIR 8.95 68⇑P **Pn 13 09 44.8 +2.2**
RDO Rodhopi 9.28 95 Pn **Pn 13 09 48.1 +1.1**
MLR Muntele Rosu 9.58 68⇑P **Pn 13 09 54.0 +2.7**
MLR Muntele Rosu 9.58 68 Pn **Pn 13 09 54.0 +2.7**
comp=Z,0.3nm,0.3s,baz=106,slow=9.9,SNR=4.6
MLR LR LR 13 14 24.3
comp=Z,98nm,19.9s,baz=242,slow=43
comp=Z,2.5nm,0.6s
MLR Muntele Rosu 9.58 68 Pn **Pn 13 09 51.5 +0.3**
ALN Alexandroupoli 9.71 96 Pn **Pn 13 09 54.0 +1.1**
MFF Saint Martin d 10.36 297 *e*P **Pn 13 10 05.2 +3.4**
KARP Karpathos 12.89 119 Pn **Pn 13 10 37.9 +1.5**
ESDC Sonseca Array 13.31 263 Pn **Pn 13 10 41.2 -1.0**
comp=Z,0.1nm,0.3s,baz=81,slow=14,SNR=2.0
comp=Z,0.3nm,0.7s
AKASG Malin Array Be 13.61 48 Pn **P 13 10 54.8 -0.4**
comp=Z,0.3nm,0.3s,baz=240,slow=10,SNR=4.5
BRTR Keskin Array B 15.61 94 Pn **Pn 13 11 14.9 +1.4**
comp=Z,0.1nm,0.3s,baz=296,slow=7.9,SNR=1.8
comp=Z,0.2nm,0.4s
EKA Eskdalemuir Ar 16.63 326 Pn **Pn 13 11 27.0 +0.8**
baz=141,slow=14
comp=Z,0.5nm,0.5s
HFS Hagfors 17.55 1 P **Pn 13 11 38.0 +0.2**
comp=Z,0.1nm,0.3s,baz=170,slow=10,SNR=1.3
comp=Z,0.7nm,0.5s
NOA NORSAR Array B 18.50 357 P **Pn 13 11 50.0 +0.5**
baz=175,slow=11,SNR=3.3
comp=Z,0.5nm,0.7s
FINES FINESS Array B 20.37 18 P **P 13 12 10.3 +0.6**
comp=Z,2.0nm,0.7s,baz=208,slow=8.9,SNR=9.7
comp=Z,2.0nm,0.7s
FINES FINESS Array B 20.37 18 P **P 13 12 09.9 +0.2**
FIA1 FINESS Array S 20.38 18 P **P 13 12 09.7 0.0**
FIA1 IAmb IAmb 13 12 31.5
comp=Z,12nm,1.2s
ASF Jabal al Asfar 21.41 111 P **P 13 12 24.0 +2.7**
comp=Z,0.9nm,0.4s,baz=310,slow=7.9,SNR=1.8
comp=Z,0.9nm,0.4s
KBZ Khabaz 21.60 77 P **P 13 12 24.9 +1.9**
comp=Z,2.4nm,0.8s,baz=275,slow=8.7,SNR=5.4
comp=Z,2.4nm,0.8s
BELG Belogornoye 24.98 55 P **P 13 12 56.9 +0.2**
comp=Z,8.8nm,0.7s,baz=297,slow=4.5,SNR=2.6
comp=Z,8.8nm,0.7s
TORD Torodi Ar. Bea 31.02 202 P **P 13 13 52.2 +1.2**
comp=Z,13nm,0.4s,baz=23,slow=8.6,SNR=1.7
ARU Arti 31.86 48 P **P 13 13 57.8 -0.3**
ARU IAmb IAmb 13 13 59.6
comp=Z,6.9nm,0.7s
ABKAR Akbulak array 32.71 62 P **P 13 14 06.1 +0.5**
KURBB Kurchatov Arra 44.22 56 P **P 13 15 42.9 +0.7**
comp=Z,0.2nm,0.2s,baz=292,slow=7.9,SNR=1.9
comp=Z,0.2nm,0.2s
ZALV Zalesovo Beam 46.99 50 P **P 13 16 05.4 +1.3**
comp=Z,0.6nm,0.5s,baz=309,slow=9.4,SNR=3.6
comp=Z,0.6nm,0.5s
MKAR Makanchi Array 47.81 60 P **P 13 16 11.8 +1.1**
comp=Z,0.6nm,0.6s,baz=285,slow=6.5,SNR=8.5
comp=Z,0.6nm,0.6s
SONM Songino Array 61.89 50 P **P 13 17 53.6 +0.9**
comp=Z,0.7nm,0.8s,baz=316,slow=6.2,SNR=4.3
comp=Z,0.7nm,0.8s
INK Inuvik 66.64 347 P **P 13 18 24.6 +1.3**
comp=Z,0.5nm,0.6s,baz=326,slow=14,SNR=1.5
comp=Z,0.5nm,0.6s
IMAR Indian Mountai 71.28 354 P **P 13 18 54.3 +2.1**
BPAW Bear Paw Mtn. 72.91 353 P **P 13 19 03.5 +1.4**
BPAW IAmb IAmb 13 19 24.7
comp=Z,2.9nm,1.4s
CMAR Chiang Mai Arr 74.63 79 P **P 13 19 13.3 +0.5**
comp=Z,0.6nm,0.8s,baz=318,slow=5.3,SNR=2.0
comp=Z,0.6nm,0.8s
ASAR Alice Springs 127.90 89 PKP **PKPdf 13 26 39.3 +0.1**
comp=Z,0.4nm,0.9s,baz=312,slow=1.5,SNR=2.6

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*ISK **28** 13:21:37.4, 41˚.21N×34˚.95E, h5km, ML3.2/30*
*DDA **28** 13:21:38.3±0.0, 41˚.18N×34˚.91E, h14km±1km, MW3.4*
*CFUSG **28** 13:21:39.1, 41˚.22N×34˚.86E, h5km, mb2.8/6, MD2.8/5,*
Northern Turkey Magtype MSH 3.2 from 6 stations
ISC 28 13:21:38.5±1.1, 41˚21N±0˚.02×34˚.95E±0˚.02, h5km±10km, n80, σ1°s13/122, 8C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAGI	**orum-Kargı**	**0.36**	**259**	P	**Pg**	**13 21 45.6**	**+0.1**
KAGI				S	**Sg**	**13 21 50.8**	**+0.4**
KAGI				*i* AML	AML	13 21 52.0	

comp=Z,1µm,0.2s
KAGI *i* AML AML 13 21 52.0
comp=N,4µm,0.5s
KAGI *i* AML AML 13 21 52.0
comp=E,2µm,0.3s
DIKM Dikmen 0.50 28 ⇑P **Pb 13 21 48.7 -1.1**
DIKM ⇑S **Sb 13 21 56.2 -1.2**
DIKM Dikmen 0.50 28 PG **Pg 13 21 48.4 +0.3**
DIKM SG **Sb 13 21 56.4 -1.0**
HAVZ Havza 0.59 103 P **Pb 13 21 50.5 -1.0**
HAVZ S **Sb 13 21 59.6 -0.6**
TOS Tosya 0.72 256 PG **Pg 13 21 52.5 +0.1**
YARM Yarimca-Ladik(0.72 113 PG **Pg 13 21 52.6 +0.2**
YARM SG **Sb 13 22 03.0 -0.9**
KIZO Buyukkizoglu-L 0.81 112 PG **Pg 13 21 54.1 +0.1**
KAST KASTAMONU 0.82 290 P **Pg 13 21 54.0 -0.2**
SINO SINOP_Merkez 0.83 13 P **Pb 13 21 55.0 -0.5**
SINO *i* AML AML 13 22 07.0
comp=N,312nm,0.3s
SINO S **Sb 13 22 07.4 +0.4**
SINO *i* AML AML 13 22 08.0
comp=E,572nm,0.3s
SINO *i* AML AML 13 22 09.0
comp=Z,343nm,0.3s
KVT Kavak 0.84 98 PG **Pb 13 21 54.8 -0.8**
KVT SG **Sb 13 22 07.1 -0.1**
AMSY Amasya-Merkez 0.88 130 P **Pb 13 21 56.3 -0.1**
AMSY S **Sb 13 22 08.1 -0.3**
AMSY *i* AML AML 13 22 10.0
comp=Z,671nm,0.4s
AMSY *i* AML AML 13 22 12.0
comp=E,1µm,0.4s
AMSY *i* AML AML 13 22 15.0
comp=N,1µm,0.6s
KMON Kastamonu 0.89 281 PG **Pg 13 21 55.6 -0.1**
SAMS Samsun-Alacam 0.94 80 P **Pb 13 21 57.0 -0.4**
SAMS S **Sn 13 22 11.2 -1.2**
ILGA Ilgaz 0.94 261 P **Pg 13 21 56.4 -0.3**
ILGA S **Sb 13 22 11.2 +0.8**
COAL Corum-Alaca 0.95 178 P **Pg 13 21 56.1 -0.7**
BZK Bozkurt 1.03 317 ⇑P **Pg 13 21 57.8 -0.6**
BZK ⇑S **Sb 13 22 12.9 +0.1**
BZK Bozkurt 1.03 317 PG **Pg 13 21 57.8 -0.6**
CORM Corum 1.06 193 PG **Pg 13 21 57.6 -1.2**
CANT Cankiri 1.18 240 PN **Pg 13 22 00.5 -0.5**
CKRK Yozgat, Cekere 1.21 160 P **Pg 13 22 00.6 -1.1**
CKRK S **Sb 13 22 17.9 0.0**
CKRK *i* AML AML 13 22 22.0
comp=Z,119nm,0.5s
CKRK *i* AML AML 13 22 23.0
comp=N,202nm,0.3s
CKRK *i* AML AML 13 22 23.0
comp=E,141nm,0.5s
PELI Kastamonı-Ara 1.24 275 P **Pg 13 22 01.2 -1.1**
PELI S **Sg 13 22 18.3 0.0**
PELI *i* AML AML 13 22 21.0
comp=Z,259nm,0.5s
PELI *i* AML AML 13 22 21.0
comp=E,283nm,0.3s
PELI *i* AML AML 13 22 27.0
comp=N,284nm,0.5s
ELDT Eldivan 1.36 239 P **Pn 13 22 04.1 -0.3**
ELDT S **Sb 13 22 22.3 -0.1**
ELDT *i* AML AML 13 22 25.0
comp=N,492nm,0.6s
ELDT *i* AML AML 13 22 26.0
comp=Z,275nm,0.5s
ELDT *i* AML AML 13 22 27.0
comp=E,478nm,0.5s
DELI KIRIKKALE 1.44 213 P **Pn 13 22 04.4 -1.0**
DELI S **Sb 13 22 22.7 -2.0**
TOKA Tokat 1.46 127 P **Pg 13 22 06.2 -0.3**
TOKA S **Sb 13 22 24.7 -0.4**
ERBA Erbaa 1.47 110 P **Pg 13 22 06.2 -0.5**
ERBA S **Sb 13 22 25.0 -0.2**
TOKT Tokat 1.50 126 PN **Pg 13 22 06.8 -0.5**
YOZ Yozgat 1.59 170 PN **Pb 13 22 08.0 -0.5**
HACI Hacifakili, Ak 1.62 158 P **Pb 13 22 08.4 -0.5**
HACI S **Sg 13 22 30.9 +0.4**
CDAG Cicekdag 1.64 196 P **Pn 13 22 08.1 -0.1**
CDAG S **Sb 13 22 30.5 +0.1**
CDAG *i* AML AML 13 22 32.0
comp=Z,140nm,0.4s
CDAG *i* AML AML 13 22 32.0
comp=E,393nm,0.5s
CDAG *i* AML AML 13 22 33.0
comp=N,257nm,0.5s
SAFT Safranbolu 1.71 272 PN **Pn 13 22 09.5 +0.5**
KBUK KARABUK-Merkez 1.75 272 P **Pn 13 22 10.0 +0.4**
KBUK S **Sg 13 22 36.5 +1.6**
KURC Kurucasile-Bar 1.77 292 PN **Pb 13 22 10.7 -0.9**
SIRC Yozgat 1.88 175 P **Pn 13 22 11.9 +0.5**
SIRC S **Sb 13 22 37.4 +0.3**
SIRC *i* AML AML 13 22 41.0
comp=N,110nm,0.4s
SIRC *i* AML AML 13 22 41.0
comp=E,132nm,0.5s
SIRC *i* AML AML 13 22 47.0
comp=Z,84nm,0.6s
KOZK Kozakli-Nevseh 2.00 182 PN **Pn 13 22 13.9 +0.8**
CMDR Camlidere-ANKA 2.01 250 P **Pn 13 22 13.1 -0.1**
CMDR S **Sg 13 22 42.7 -0.4**
SVSK Karacayir 2.02 129 PN **Pn 13 22 13.9 +0.6**
CUSAR Sarkisla-SIVAS 2.04 151 P **Pn 13 22 14.3 +0.6**
CUSAR *i* AML AML 13 22 49.0
comp=Z,146nm,0.9s
KAMT Kaman 2.07 208 PN **Pn 13 22 14.7 +0.7**
BTIN Bartın 2.08 283 P **Pb 13 22 16.3 -0.4**
BTIN S **Sg 13 22 45.2 0.0**
BTIN *i* AML AML 13 22 49.0
comp=N,293nm,1.0s
BTIN *i* AML AML 13 22 50.0
comp=Z,84nm,0.4s
BTIN *i* AML AML 13 22 52.0
comp=E,184nm,0.8s
ANTO Ankara 2.12 232 ⇑P **Pn 13 22 10.8 -3.9**
ANTO Ankara 2.12 232 PN **Pn 13 22 15.3 +0.6**
LOD Lodumlu 2.12 232 PN **Pn 13 22 15.7 +0.9**
BBAL Bala 2.17 221 P **Pn 13 22 15.9 +0.4**
BBAL S **Sg 13 22 47.6 -0.7**
ORDU Ordu-Boztepe 2.21 95 P **Pb 13 22 18.1 -0.9**
ORDU S **Sb 13 22 47.0 +0.4**
BCAM Yenicaga 2.22 261 P **Pb 13 22 19.4 +0.2**
BCAM S **Sg 13 22 54.1 +4.4**
KIRS Kirsehir-Merke 2.22 201 P **Pn 13 22 17.2 +1.1**
KIRS S **Sb 13 22 47.4 +0.4**
DEVR Zonguldak/Devr 2.25 269 P **Pb 13 22 19.5 -0.1**
DEVR S **Sg 13 22 49.8 -1.0**
GUNE Kayseri 2.36 167 P **Pn 13 22 19.5 +1.4**
GUNE S **Sg 13 22 55.2 +0.9**
GUNE *i* AML AML 13 23 00.0
comp=E,318nm,0.5s
GUNE *i* AML AML 13 23 08.0
comp=N,230nm,0.7s
GUNE *i* AML AML 13 23 10.0
comp=Z,116nm,0.8s
CUAYA Sivas-Altinyay 2.38 144 P **Pn 13 22 19.7 +1.4**
CUAYA S **Sg 13 22 55.2 +0.3**
AVNS Nevsehir-Avano 2.40 182 P **Pb 13 22 22.1 -0.2**
AVNS S **Sg 13 22 55.3 -0.4**
YAYX Yaylak 2.43 201 PN **Pn 13 22 19.7 +0.7**
BNN Bunyan 2.45 163 PN **Pn 13 22 19.2 -0.1**
KIBS BOLU 2.48 252 P **Pg 13 22 24.7 -1.4**
KIBS S **Sg 13 22 58.2 +0.1**
KIBS *i* AML AML 13 23 05.0
comp=N,60nm,0.8s
KIBS *i* AML AML 13 23 05.0
comp=E,89nm,0.9s
KIBS *i* AML AML 13 23 08.0
comp=Z,32nm,0.9s
SERE Sereflikochisa 2.50 206 PN **Pn 13 22 20.7 +0.8**
YUVA Yuva-Kibriscik 2.61 253 PN **Pn 13 22 22.1 +0.6**
KULU Kulu 2.63 215 PN **Pn 13 22 22.8 +1.1**
KDZE Karadeniz Ereo 2.65 273 PN **Pn 13 22 23.1 +1.2**
YIGI Dzce 2.66 266 P **Pb 13 22 27.2 +0.6**
YIGI S **Sg 13 23 06.2 +2.2**
YIGI *i* AML AML 13 23 13.0
comp=E,24nm,1.0s
YIGI *i* AML AML 13 23 14.0
comp=N,31nm,1.4s
YIGI *i* AML AML 13 23 14.0
comp=Z,18nm,0.5s
AKSY AKSARAY - Alti 2.71 200 P **Pn 13 22 24.2 +1.3**
AKSY S **Sb 13 23 03.1 +1.8**
GULA Gulagac 2.91 191 PN **Pn 13 22 26.8 +1.1**
AUMIH MIHALICIK 2.96 244 PN **Pn 13 22 27.8 +1.4**
SARI SarD1z-Kayseri 3.02 158 PN **Pn 13 22 27.8 +0.6**
CHBY Cihanbeyli 3.06 212 PN **Pn 13 22 28.8 +1.1**
AUSIV SIVRIHISAR 3.15 237 PN **Pn 13 22 30.2 +1.3**
SVRH Sivrihisar-ESK 3.16 237 PN **Pn 13 22 30.4 +1.4**
SULT Sultanhani-AKS 3.20 201 PN **Pn 13 22 31.0 +1.4**
KIZT Kizilcal 3.31 226 PN **Pn 13 22 32.5 +1.4**
YAL Yalta 3.33 350 *e*P **Pn 13 22 30.5 -0.7**
YAL Pm 13 22 31.5
comp=Z,17nm,0.2s
YAL *e*S **Sn 13 23 09.2 -1.9**
YAL Sm 13 23 12.4
comp=N,36nm,0.4s
YAL Sm 13 23 12.4
comp=E,21nm,0.2s
SEV Sevastopol' 3.46 345 *e*P **Pn 13 22 33.4 +0.3**
SEV Pm 13 22 35.2
comp=Z,5.0nm,0.4s
SEV *e*S **Sn 13 23 14.6 +0.1**
SEV Sm 13 23 16.0
comp=N,5.0nm,0.3s
SEV Sm 13 23 16.0
comp=E,5.0nm,0.4s
ALU Alushta 3.50 354 *e*P **Pn 13 22 34.3 +0.8**
ALU Pm 13 22 34.9
comp=Z,11nm,0.2s
ALU *e*S **Sn 13 23 17.2 +2.0**
ALU Sm 13 23 17.5
comp=N,66nm,0.2s
ALU Sm 13 23 17.5
comp=E,8.0nm,0.3s
CMRD Camardi-Nigde 3.54 179 PN **Pn 13 22 35.6 +1.3**
YESY Yesilyurt 3.55 196 PN **Pn 13 22 35.8 +1.4**
SUDU Sudak 3.68 1 *e*P **Pn 13 22 37.5 +1.4**
SUDU Pm 13 22 39.2
comp=Z,15nm,0.3s
SUDU *e*S **Sn 13 23 21.0 +1.2**
SUDU Sm 13 23 23.7
comp=N,96nm,0.5s
SUDU Sm 13 23 23.7
comp=E,20nm,0.4s
SIM Simferopol' 3.79 351 *e*P **Pn 13 22 38.6 +1.0**
SIM Pm 13 22 39.4
comp=Z,15nm,0.2s
SIM *e*S **Sn 13 23 24.0 +1.5**
SIM Sm 13 23 24.6
comp=N,18nm,0.4s
SIM Sm 13 23 24.6
comp=E,9.0nm,0.4s
FEO Feodosiya 3.82 5 *e*P **Pn 13 22 41.2 +3.2**
FEO Pm 13 22 41.7
comp=Z,41nm,0.3s
FEO *e*S **Sn 13 23 25.6 +2.3**
FEO Sm 13 23 27.4
comp=N,25nm,0.2s
FEO Sm 13 23 27.4
comp=E,23nm,0.2s
TIRR Tirgusor 5.80 306 ⇑P **Pn 13 23 03.8 -1.4**
TIRR ⇓S **Sn 13 24 11.5 -0.5**
TLCR 5.99 314 ⇑P **Pn 13 23 05.9 -1.9**
TPGR Topolog 6.01 309 ⇓P **Pn 13 23 06.3 -1.9**
TPGR ⇓S **Sn 13 24 16.4 -1.1**
CFR Carcaliu 6.37 311 ⇑P **Pn 13 23 11.6 -1.4**
BURAR Bucovina Array 9.46 316 ⇓P **Pn 13 23 53.7 -1.8**

IDC ***28*** *13:32:37.3±2.1, 16°.96S×168°.70E, h237km±18km, mb3.5/14, mbtmp4.1/15, Error ellipse: s-maj=17.9km s-min=13.9km az=66.0*
NEIC ***28*** *13:32:38.6±0.8, 17°.1S±0°.1×168°.5E±0°.1, h225km±11km, mb4.3/20, Error ellipse: s-maj=18.7km s-min=15.1km az=96.0*
ISC 28 13:32:35.0±0.7, 16°.88S±0°.08×168°.6E±0°.1, h200km, n56, σ2s10/50, mb4.2/24, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**4.08**	**198**	Pn	**Pn**	**13 33 38.8**	**+0.9**
LIFNC				Sn	**Sn**	**13 34 26.7**	**-0.6**
MARNC	**Mare, Loyalty**	**4.61**	**187**	Pn	**Pn**	**13 33 45.7**	**+1.3**
DZM	**Mont Dzumac**	**5.55**	**201**	P	**Pn**	**13 33 59.8**	**+3.2**
	23nm,0.6s,baz=55,slow=18,SNR=46						
DZM				S	**Sn**	**13 35 05.0**	**+4.0**
	7.3nm,0.3s,baz=118,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**5.55**	**201**	Pn	**Pn**	**13 33 58.9**	**+2.4**
OUENC	**Ouen Island, N**	**5.75**	**197**	Pn	**Pn**	**13 34 02.2**	**+3.1**
ONTNC	**Ouen Toro**	**5.77**	**200**	Pn	**Pn**	**13 34 02.0**	**+2.8**
PINNC	**Pines Island,**	**5.80**	**191**	Pn	**Pn**	**13 34 02.0**	**+2.4**
KRVT	**Keravat (AS076**	**20.52**	**306**	P	**P**	**13 36 58.2**	**+0.1**
	26nm,1.0s,baz=60,slow=20,SNR=2.0						
	26nm,1.0s						
NIUE	**Niue**	**20.53**	**99**	P	**P**	**13 37 02.2**	**+4.1**
CTA	**Charters Tower**	**21.44**	**258**	P	**P**	**13 37 08.6**	**+0.9**
	3.5nm,0.9s,baz=359,slow=11,SNR=2.0						
	3.5nm,0.9s						
URZ	**Urewera**	**22.56**	**162**	P	**P**	**13 37 16.4**	**-1.9**
	9.4nm,0.8s,baz=303,slow=23,SNR=5.5						
	9.4nm,0.8s						
URZ	**Urewera**	**22.56**	**162**	P	**P**	**13 37 17.7**	**-0.6**
URZ				IAmb	IAmb	13 37 28.8	
	comp=Z,17nm,1.0s						
BFZ	**Birch Farm**	**24.62**	**166**	P	**P**	**13 37 35.0**	**-1.9**
CAN	**Canberra**	**25.36**	**220**	P	**P**	**13 37 41.2**	**-2.6**
CAN				IAmb	IAmb	13 38 05.5	
	comp=Z,18nm,1.4s						
LTZ	**Lake Taylor**	**26.00**	**174**	P	**P**	**13 37 48.2**	**-1.2**
RPZ	**Rata Peaks**	**26.82**	**176**	P	**P**	**13 37 54.7**	**-2.0**
	comp=Z,2.3nm,0.5s,baz=174,slow=23,SNR=1.1						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**28.68**	**234**	P	**P**	**13 38 13.0**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=46,slow=9.8,SNR=7.0						
	comp=Z,2.8nm,0.4s						
STKA	**Stephens Creek**	**28.68**	**234**	P	**P**	**13 38 13.5**	**+0.1**
TOO	**Toolangi**	**28.97**	**220**	P	**P**	**13 38 15.6**	**-0.3**
TOO				IAmb	IAmb	13 38 53.1	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**32.44**	**259**	P	**P**	**13 38 45.6**	**-0.9**
WR0				IAmb	IAmb	13 38 55.5	
	comp=Z,7.6nm,1.4s						
WB0	**Warramunga Arr**	**32.58**	**260**	P	**P**	**13 38 47.0**	**-0.8**
WB0				IAmb	IAmb	13 39 18.7	
	comp=Z,7.4nm,1.3s						
WB2	**Warramunga Arr**	**32.62**	**259**	P	**P**	**13 38 47.6**	**-0.5**
WB2				IAmb	IAmb	13 38 48.3	
	comp=Z,9.7nm,1.4s						
WRAB	**Tennant Creek**	**32.62**	**259**	P	**P**	**13 38 47.2**	**-1.0**
WRA	**Warramunga Arr**	**32.63**	**259**	P	**P**	**13 38 46.6**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=80,slow=6.0,SNR=5.9						
	comp=Z,0.5nm,0.9s						
AS31	**Alice Springs**	**33.19**	**253**	P	**P**	**13 38 52.3**	**-0.8**
ASAR	**Alice Springs**	**33.19**	**253**	P	**P**	**13 38 52.2**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=80,slow=9.1,SNR=53						
ASAR				ScP	**ScP**	**13 44 50.3**	**-6.2**
	comp=Z,0.5nm,0.7s,baz=83,slow=3.7,SNR=7.0						
	comp=Z,2.6nm,0.6s						
BBOO	**Buckleboo**	**33.36**	**236**	P	**P**	**13 38 53.2**	**-1.2**
MTN	**Manton Dam**	**36.41**	**271**	P	**P**	**13 39 20.6**	**-0.1**
MTN				IAmb	IAmb	13 39 27.5	
	comp=Z,15nm,1.2s						
KNRA	**Kununurra**	**38.23**	**266**	P	**P**	**13 39 35.2**	**-0.7**
KNRA				IAmb	IAmb	13 39 43.7	
	comp=Z,18nm,1.4s						
FORT	**Forrest**	**39.37**	**242**	P	**P**	**13 39 44.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**40.94**	**262**	P	**P**	**13 39 58.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=97,slow=7.0,SNR=7.1						
	comp=Z,0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**40.94**	**262**	P	**P**	**13 39 58.2**	**-0.1**
MBWA	**Marble Bar**	**46.27**	**257**	P	**P**	**13 40 40.4**	**-0.4**
MBWA				IAmb	IAmb	13 40 52.6	
	comp=Z,11nm,1.4s						
SBA	**Scott Base**	**61.00**	**180**	P	**P**	**13 42 26.0**	**-0.8**
CASY	**Casey**	**62.05**	**203**	P	**P**	**13 42 32.7**	**-1.2**
CASY				IAmb	IAmb	13 43 02.7	
	comp=Z,6.4nm,1.3s						
PETK	**Petropavlovsk-**	**70.34**	**353**	P	**P**	13 43 25.7	-1.0
	comp=Z,1.2nm,0.6s,baz=132,slow=8.2,SNR=4.1						
	comp=Z,1.2nm,0.6s						
QSPA	**South Pole Qui**	**73.16**	**180**	P	**P**	**13 43 41.7**	**-1.9**
	comp=Z,3.1nm,0.5s,baz=282,slow=0.2,SNR=37						
	comp=Z,3.1nm,0.5s						
KLR	**Kul'dur**	**73.49**	**336**	P	P	13 43 45.2	-0.2
	comp=Z,1.3nm,0.7s,baz=212,slow=3.2,SNR=4.2						
	comp=Z,1.3nm,0.7s						
CMAR Chiang Mai Arr 77.00 294 P **P 13 44 06.0 -0.2**
comp=Z,0.8nm,0.6s,baz=125,slow=3.6,SNR=5.5
comp=Z,0.8nm,0.6s
PZH PanZhiHua 77.94 303 P **P 13 44 12.5 +1.1**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,130nm,4.8s
HHC Hu-ho-hao-te 78.06 319 *e*P **P 13 44 16.5 +4.8**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,210nm,5.0s
NVAR Mina Array Bea 87.70 49 P P 13 44 59.7 -1.7
comp=Z,0.2nm,0.6s,baz=233,slow=8.9,SNR=2.5
comp=Z,0.2nm,0.6s
ILAR Eielson Array 88.17 17 P P 13 44 59.8 -3.0
comp=Z,0.6nm,0.8s,baz=222,slow=4.7,SNR=5.1
comp=Z,0.6nm,0.8s
TROLL Troll, Antarti 90.83 184 P P 13 45 13.0 -2.4
SNAA Sanae 91.47 183 P P 13 45 15.1 -3.2
VNA3 Neumayer Olymp 92.09 181 P P 13 45 18.1 -3.0
VNA2 Neumayer--Watz 92.37 181 P P 13 45 19.7 -2.7
baz=181,slow=4.0
WMQ Urumqi 95.15 314 *e*P **P 13 45 38.8 +3.2**
ARCES ARCESS Array B 122.65 345 PKP **PKPdf 13 51 03.5 -2.7**
comp=Z,4.6nm,1.0s,baz=48,slow=1.8,SNR=4.8
FINES FINESS Array B 128.19 338 PKP **PKPdf 13 51 14.7 -2.3**
comp=Z,0.7nm,0.6s,baz=41,slow=4.6,SNR=1.5
ABTA Abfaltersbach 144.24 332 *e*P **PKPab 13 51 43.7 -1.9**
comp=Z,3.6nm,0.6s
MOTA Moosalm 144.41 333 *i* P **PKPab 13 51 44.9 -1.3**
comp=Z,4.2nm,0.8s
RETA Reutte 144.44 334 *e*P **PKPab 13 51 45.0 -1.3**
comp=Z,3.3nm,0.5s
SQTA Sankt Quirin 144.46 333 *i* P **PKPab 13 51 45.1 -1.3**
comp=Z,4.7nm,0.6s
FETA Feichten 144.82 333 *e*P PKPbc 13 51 46.7 -1.1
comp=Z,4.0nm,0.6s
DAVOX Davos/Dischmat 145.37 334 PKPbc **PKPdf 13 51 48.0 -1.3**
comp=Z,2.0nm,0.5s,baz=288,slow=1.8,SNR=7.3

ATH 28 13:53:00.2, 36°.18N×21°.80E, h8km±5km, ML2.7/3, Error ellipse: s-maj=6.2km s-min=1.4km az=47.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHR	**Kythira**	**0.98**	**85**	P	Pg	13 53 18.5	-0.6
KTHR				AML	AML	13 53 40.0	
	comp=N,1548µm,0.4s						
KTHR				AML	AML	13 53 40.8	
	comp=E,1446µm,0.5s						
ITM	**Ithomi**	**1.00**	**6**	P	Pg	13 53 18.9	-0.5
ITM				S	Sg	13 53 32.2	-0.2
ITM				AML	AML	13 53 36.4	
	comp=E,552µm,0.3s						
ITM				AML	AML	13 53 41.4	
	comp=N,662µm,0.3s						
KTHA	**Kythira Island**	**1.03**	**85**	P	Pg	13 53 19.4	-0.5
VLI	**Veliai**	**1.06**	**59**	P	Pg	13 53 19.8	-0.8
VLI				S	Sb	13 53 35.0	+0.1
VLI				AML	AML	13 53 44.5	
	comp=N,1087µm,0.5s						
VLI				AML	AML	13 53 47.3	
	comp=E,494µm,0.8s						
ANKY	**Antikythira Is**	**1.26**	**104**	P	Pn	13 53 23.4	-0.7
DRO	**Drossia**	**1.77**	**358**	P	Pb	13 53 32.9	0.0
KLV	**Kalavryta, Ach**	**1.88**	**9**	P	Pb	13 53 34.2	-0.6

NEIC ***28*** *13:55:09.3±1.0, 15°.47N±0°.07×95°.79W±0°.05, h15km±5km, mb4.2/9, Md4.4/64(MEX), Error ellipse: s-maj=11.0km s-min=4.7km az=210.0*
MEX ***28*** *13:55:12.2±0.8, 15°.59N×95°.86W, h16km±33km, MD4.4*
ISC 28 13:55:08.3±0.8, 15°.44N±0°.05×95°.85W±0°.03, h19km, n58, σ2s40/98, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.41**	**323**		**Pg**	**13 55 17.5**	**+0.6**
HUIG					**Sg**	**13 55 21.8**	**-0.9**
HUIG	**Huatulco**	**0.41**	**323**	*i* P	**Pg**	**13 55 17.5**	**+0.6**
HUIG				*i* S	**Sg**	**13 55 21.8**	**-0.9**
PANG	**Puerto Angel**	**0.64**	**291**		**Pb**	**13 55 22.9**	**+2.1**
PANG					**Sb**	**13 55 29.1**	**-0.3**
PANG	**Puerto Angel**	**0.64**	**291**	*e*P	**Pb**	**13 55 22.9**	**+2.1**
PANG				*e*S	**Sb**	**13 55 29.1**	**-0.3**
PEIG	**Puerto Escondi**	**1.37**	**294**	*e*P	**Pn**	**13 55 31.9**	**-0.6**
PEIG				*e*S	**Sn**	**13 55 47.6**	**-2.5**
NILT	**Santiago Nilte**	**1.64**	**46**	*e*P	**Pn**	**13 55 35.8**	**-0.4**
OXLC	**Oaxaca**	**1.81**	**333**	*e*P	**Pn**	**13 55 39.8**	**+1.0**
OXLC				*e*S	**Sn**	**13 55 58.9**	**-2.5**
OXBJ	**Oaxaca**	**1.83**	**333**		**Pn**	**13 55 37.2**	**-1.7**
OXBJ					**Sn**	**13 56 00.2**	**-1.5**
OXBJ	**Oaxaca**	**1.83**	**333**	*e*P	**Pn**	**13 55 37.2**	**-1.7**
OXBJ				*e*S	**Sn**	**13 56 00.2**	**-1.5**
VHO	**Vista Hermosa**	**1.83**	**333**	*e*P	**Pn**	**13 55 40.1**	**+1.1**
VHO				*e*S	**Sn**	**13 55 59.2**	**-2.3**
CMIG	**Matias Romero**	**1.89**	**29**		**Pn**	**13 55 38.8**	**-0.9**
CMIG					**Sn**	**13 55 59.1**	**-3.9**
CMIG	**Matias Romero**	**1.89**	**29**	*e*P	**Pn**	**13 55 38.8**	**-0.9**
CMIG				*i* S	**Sn**	**13 55 59.1**	**-3.9**
CARR	**Arriaga**	**2.04**	**66**	*e*P	**Pn**	**13 55 41.5**	**-0.1**
YOIG	**Yosondua**	**2.15**	**311**	*e*P	**Pn**	**13 55 46.0**	**+2.5**
YOIG				*e*S	**Sn**	**13 56 07.6**	**-2.3**
NEUV	**Arroyo Zacate**	**2.27**	**1**	*e*P	**Pn**	**13 55 45.1**	**+0.3**
NEUV				*e*S	**Sn**	**13 56 08.4**	**-3.8**
PNIG	**Pinotepa**	**2.39**	**294**		**Pn**	**13 55 48.0**	**+1.6**
PNIG					**Sn**	**13 56 13.1**	**-2.1**
PNIG	**Pinotepa**	**2.39**	**294**	*e*P	**Pn**	**13 55 48.0**	**+1.6**
PNIG				*e*S	**Sn**	**13 56 13.1**	**-2.1**
PCIG		**2.55**	**84**		**Pn**	**13 55 48.4**	**-0.3**
PCIG					**Sn**	**13 56 16.9**	**-2.4**
PCIG		**2.55**	**84**	*e*P	**Pn**	**13 55 48.4**	**-0.3**
PCIG				*e*S	**Sn**	**13 56 16.9**	**-2.4**
TXIG	**Tlaxiaco**	**2.58**	**315**	*e*P	**Pn**	**13 55 52.6**	**+3.3**
TXIG				*e*S	**Sn**	**13 56 22.1**	**+1.8**
TOIG	**Toxpalan**	**2.89**	**336**	*e*P	**Pn**	**13 55 57.3**	**+3.8**
TOIG				*e*S	**Sn**	**13 56 25.1**	**-2.7**
TGIG		**2.94**	**63**		**Pn**	**13 55 54.1**	**-0.1**
TGIG					**Sn**	**13 56 28.4**	**-0.7**
TGIG		**2.94**	**63**	*e*P	**Pn**	**13 55 54.1**	**-0.1**
TGIG				*e*S	**Sn**	**13 56 28.4**	**-0.7**
HLIG	**Huajuapan de L**	**3.03**	**322**	*e*P	**Pn**	**13 55 59.7**	**+4.2**
HLIG				*e*S	**Sn**	**13 56 32.3**	**+0.9**
MGIG	**Malinaltepec**	**3.21**	**304**	*e*P	**Pn**	**13 56 01.2**	**+3.2**
MGIG				*e*S	**Sn**	**13 56 35.9**	**0.0**
TLIG	**Tlapa**	**3.35**	**309**	*e*P	Pn	13 56 04.6	+4.7
TLIG				*e*S	**Sn**	**13 56 39.9**	**+0.6**
CRIG	**Cruz Grande**	**3.41**	**293**		**Pn**	**13 56 02.6**	**+2.1**
CRIG					**Sn**	**13 56 37.1**	**-3.3**
CRIG	**Cruz Grande**	**3.41**	**293**	*e*P	**Pn**	**13 56 02.6**	**+2.1**
CRIG				*e*S	**Sn**	**13 56 37.1**	**-3.3**
PATR	**El Naranjo**	**3.51**	**95**	*e*P	**Pn**	**13 56 04.3**	**+2.2**
PATR				*e*S	**Sn**	**13 56 42.0**	**-1.2**
PAVE	**Pavencul**	**3.56**	**93**	*e*P	**Pn**	**13 56 05.3**	**+2.5**
PAVE				*e*S	**Sn**	**13 56 42.9**	**-1.5**
CHUJ	**Union Juarez**	**3.63**	**95**	*e*P	**Pn**	**13 56 06.2**	**+2.4**
CHUJ				*e*S	**Sn**	**13 56 45.4**	**-0.9**
CCIG	**Comitan**	**3.67**	**76**	*e*P	**Pn**	**13 56 06.6**	**+2.2**
CCIG				*e*S	**Sn**	**13 56 48.4**	**+1.2**
DAIG	**Los Arroyos**	**3.97**	**294**		**Pn**	**13 56 11.5**	**+3.2**
DAIG					**Sn**	**13 56 51.4**	**-3.0**
DAIG	**Los Arroyos**	**3.97**	**294**	*e*P	**Pn**	**13 56 11.5**	**+3.2**
DAIG				*e*S	**Sn**	**13 56 51.4**	**-3.0**
JAUV	**Jalcomulco**	**4.01**	**347**	*e*P	**Pn**	**13 56 09.4**	**+0.5**
JAUV				*e*S	**Sn**	**13 56 52.0**	**-3.5**
MEIG	**Mezcala**	**4.38**	**305**		Pn	13 56 19.5	+5.6
MEIG					**Sn**	**13 57 04.1**	**-0.4**
MEIG	**Mezcala**	**4.38**	**305**	*e*P	Pn	13 56 19.5	+5.6
MEIG				*e*S	**Sn**	**13 57 04.1**	**-0.4**
CAIG	**El Cayaco**	**4.53**	**291**		**Pn**	**13 56 17.6**	**+1.7**
CAIG					**Sn**	**13 57 03.3**	**-4.9**
CAIG	**El Cayaco**	**4.53**	**291**	*e*P	**Pn**	**13 56 17.6**	**+1.7**
CAIG				*e*S	**Sn**	**13 57 03.3**	**-4.9**
PLIG	**Platanillo**	**4.57**	**311**		**Pn**	**13 56 18.1**	**+1.5**
PLIG					**Sn**	**13 57 07.0**	**-2.2**
PLIG	**Platanillo**	**4.57**	**311**	*e*P	**Pn**	**13 56 18.1**	**+1.5**
PLIG				*e*S	**Sn**	**13 57 07.0**	**-2.2**
CXUV Coxquihui 4.99 341 *e*P **Pn 13 56 26.0 +3.7**

CXUV					*e*S		**Sn**	**13 57 18.4**	**-1.2**
ARIG	**Puente Sto Nin**	**5.15**	**304**				**Pn**	**13 56 27.9**	**+3.4**
ARIG							**Sn**	**13 57 17.8**	**-5.7**
ARIG	**Puente Sto Nin**	**5.15**	**304**		*e*P		**Pn**	**13 56 27.9**	**+3.4**
ARIG					*e*S		**Sn**	**13 57 17.8**	**-5.7**
ZIIG	**Zihuatanejo**	**5.80**	**293**				**Pn**	**13 56 37.3**	**+3.9**
ZIIG							**Sn**	**13 57 35.2**	**-4.2**
ZIIG	**Zihuatanejo**	**5.80**	**293**		*e*P		**Pn**	**13 56 37.3**	**+3.9**
ZIIG					*e*S		**Sn**	**13 57 35.2**	**-4.2**
SNET	**Serv Nac Est T**	**6.64**	**104**		Pn		**Pn**	**13 56 43.4**	**-1.7**
TEIG	**Tepich**	**8.64**	**55**				**Pn**	**13 57 12.1**	**-0.4**
MIAR	**Mount Ida**	**19.14**	**6**		P		**P**	**13 59 30.8**	**+0.3**
OK034	**N. Norfolk Rd.**	**20.50**	**358**		P		**P**	**13 59 46.1**	**+0.8**
OK034					IAmb		IAmb	13 59 53.4	
	comp=Z,10nm,0.9s								
HHAR	**Hobbs**	**20.83**	**4**		P		**P**	**13 59 49.5**	**+0.6**
U38A	**Gravette**	**20.96**	**3**		P		**P**	**13 59 50.9**	**+0.6**
U38A					IAmb		IAmb	13 59 55.5	
	comp=Z,5.1nm,0.9s								
BNM	**Barren Site**	**21.02**	**334**					13 59 54.8	
SBM	**South Baldy**	**21.10**	**333**		P		**P**	**13 59 53.2**	**+0.9**
LENM	**Lemitar**	**21.18**	**334**		P		**P**	**13 59 55.3**	**+2.5**
T35A	**Sooner Cattle**	**21.40**	**359**		P		**P**	**13 59 55.0**	**0.0**
T35A					IAmb		IAmb	13 59 59.7	
	comp=Z,7.6nm,0.7s								
N38A	**Joes South For**	**25.37**	**5**		P		**P**	**14 00 35.1**	**+0.8**
INK	**Inuvik**	**58.04**	**344**		P		**P**	**14 04 59.2**	**-0.5**
INK					IAmb		IAmb	14 05 23.4	
	comp=Z,2.0nm,1.0s								

*IDC **28** 14:11:30.9±3.7,30˙.91S×138˙.44E, h0km, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=69.3km s-min=15.3km az=38.0*
*AUST **28** 14:11:30.1±2.6,31˙.29S×138˙.27E, h3km±21km, Error ellipse: s-maj=12.2km s-min=10.0km az=170.0*
*NOU **28** 14:11:31.3,31˙.29S×138˙.29E, h0km, MLv3.2/8, South Australia*

ISC 28 14:11:30.2±1.4,31°29S±0˙.03×138°26E±0˙.04,h18km±7km, n20,σ2≥64°/33, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**0.84**	**357**	P		**Pg**	**14 11 46.2**	**-0.4**
	baz=0.8,SNR=39							
LCRK				S		**Sg**	**14 11 57.8**	**+0.2**
	baz=0.8							
LCRK	**Leigh Creek**	**0.84**	**357**	P		**Pb**	**14 11 46.9**	**+0.7**
WHYH	**Whyalla**	**1.84**	**198**	P		**Pb**	**14 12 04.0**	**+0.7**
HTT	**Hallett**	**2.21**	**166**	P		**Pn**	**14 12 08.1**	**+2.1**
	baz=2.2							
HTT				S		**Sn**	**14 12 36.2**	**+3.2**
	baz=2.2							
HTT	**Hallett**	**2.21**	**166**	P		**Pn**	**14 12 08.8**	**+2.7**
BBOO	**Buckleboo**	**2.41**	**230**	P		**Pn**	**14 12 10.6**	**+1.8**
	baz=2.4,SNR=26							
BBOO				S		**Sn**	**14 12 41.8**	**+3.9**
	baz=2.4							
BBOO	**Buckleboo**	**2.41**	**230**	P		**Pb**	**14 12 12.5**	**-0.6**
STKA	**Stephens Creek**	**2.90**	**103**	Pn		**Pn**	**14 12 17.9**	**+2.3**
	0.3nm,0.3s,baz=290,slow=14,SNR=3.1							
STKA					Pg	**Pg**	**14 12 24.2**	**-1.7**
	2.4nm,0.3s,baz=287,slow=14,SNR=19							
STKA					Sn	**Sn**	**14 12 53.3**	**+3.2**
	1.6nm,0.3s,baz=360,slow=12,SNR=5.2							
STKA					Lg	Lg	14 13 00.5	
	2.7nm,0.3s,baz=24,slow=21,SNR=13							
	0.8nm,0.3s							
STKA	**Stephens Creek**	**2.90**	**103**	P		**Pn**	**14 12 17.3**	**+1.7**
	baz=2.9,SNR=12							
STKA				S		**Sn**	**14 12 53.6**	**+3.5**
	baz=2.9							
STKA	**Stephens Creek**	**2.90**	**103**	P		**Pn**	**14 12 18.0**	**+2.4**
MULG	**Mulgathing**	**3.75**	**284**	P		**Pn**	**14 12 29.1**	**+1.8**
	baz=3.8,SNR=15							
MULG				S		**Sn**	**14 13 13.6**	**+2.6**
	baz=3.8							
MULG	**Mulgathing**	**3.75**	**284**	P		**Pn**	**14 12 29.9**	**+2.6**
OOD	**Oodnadatta**	**4.14**	**327**	P		**Pn**	**14 12 35.4**	**+2.8**
	baz=4.2							
OOD				S		**Sn**	**14 13 22.8**	**+2.3**
	baz=4.2							
OOD	**Oodnadatta**	**4.14**	**327**	P		**Pn**	**14 12 36.6**	**+4.0**
INKA	**Innaminka**	**4.14**	**32**	P		**Pn**	**14 12 34.6**	**+2.1**
	baz=4.2							
INKA				S		**Sn**	**14 13 20.8**	**+0.2**
	baz=4.2							
INKA	**Innaminka**	**4.14**	**32**	P		**Pn**	**14 12 36.3**	**+3.7**
ARPS	**Mount Arapiles**	**6.22**	**152**	P		**Pn**	**14 13 02.2**	**+1.0**
	baz=6.2							
ARPS				S		**Sn**	**14 14 09.9**	**-1.9**
	baz=6.2							
ASAR	**Alice Springs**	**8.52**	**332**	Pn		**Pn**	**14 13 33.3**	**+0.5**
	0.2nm,0.3s,baz=152,slow=13,SNR=7.4							
ASAR					Sn	**Sn**	**14 15 05.6**	**-2.9**
	0.2nm,0.3s,baz=154,slow=23,SNR=5.6							
	0.4nm,0.4s							
FORT	**Forrest**	**8.77**	**271**	P		**Pn**	**14 13 35.9**	**-0.3**
	baz=8.8							
FORT				S		**Sn**	**14 15 09.8**	**-4.8**
	baz=8.8							
WRA	**Warramunga Arr**	**11.84**	**342**	Pn		**Pn**	**14 14 16.6**	**-1.6**
	0.1nm,0.3s,baz=160,slow=12,SNR=5.6							
WRA					Sn	**Sn**	**14 16 25.8**	**-4.1**
	0.1nm,0.3s,baz=164,slow=24,SNR=1.5							
	0.1nm,0.3s							

*JMA **28** 14:15:33.6±0.1,27˙.4N±0˙.6×129˙.0E±0˙.9, h28km±1km, MV3.5/18, NEAR OKINAWAJIMA ISLAND*
JMA Felt I J1 at NEAR OKINAWAJIMA ISLAND .
*IDC **28** 14:15:45.0±4.7,27˙.45N×129˙.03E, h145km±42km, mb3.2/8, mbtmp3.6/9, MS3.2/4, Error ellipse: s-maj=33.3km s-min=24.6km az=90.0*

ISC 28 14:15:32.4±1.2,27°35N±0˙.04×129°08E±0˙.04,h31km±9km, n31,σ1≥92°/30, mb3.7/8, MS2.9/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.45**	**345**	*i* P		**Pn**	**14 15 42.5**	**-0.1**
JTK				S		**Sn**	**14 15 48.7**	**-1.0**
JOKE	**Okinoerabujima**	**0.45**	**271**	*i* P		**Pn**	**14 15 42.4**	**-0.3**
JOKE				S		**Sn**	**14 15 48.7**	**-1.1**
JYRO	**Yoronjima**	**0.65**	**240**	P		**Pn**	**14 15 45.7**	**+0.3**
JYRO				S		**Sb**	**14 15 53.8**	**-0.3**
JOW	**Kunigami**	**0.89**	**234**	*i* P		**Pn**	**14 15 49.9**	**+1.2**
JOW				S		**Sn**	**14 16 01.0**	**+0.6**
JAMN	**Amaminishikomi**	**0.89**	**5**	*i* P		**Pn**	**14 15 49.6**	**+0.9**
JIH	**Iheya**	**1.04**	**253**	*i* P		**Pb**	**14 15 52.0**	**+0.2**
JIH				S		**Sn**	**14 16 05.6**	**+1.3**
JAM	**Amami Oshima**	**1.15**	**24**	*i* P		**Pb**	**14 15 53.8**	**0.0**
JZK	**Kikaishima**	**1.24**	**39**	P		**Pb**	**14 15 55.6**	**+0.4**
JNTH	**Nagotoyohara**	**1.26**	**229**	P		**Pb**	**14 15 55.3**	**-0.2**
JNTH				S		**Sb**	**14 16 11.1**	**-0.3**
JJT3	**Tamagusuku3**	**1.67**	**224**	P		**Pb**	**14 16 01.3**	**-1.2**
JKDJ	**Kitadaitoujima**	**2.43**	**125**	P		**Pn**	**14 16 10.6**	**+0.7**
JKDJ				S		**Sn**	**14 16 37.8**	**-0.7**
JMZ	**Minamidaito 2**	**2.45**	**128**	P		**Pn**	**14 16 10.4**	**+0.2**
JMZ				S		**Sn**	**14 16 37.4**	**-1.7**
JYAK	**Yakushimahirau**	**3.14**	**23**	*e*P		**Pn**	**14 16 20.6**	**+1.0**
KSRS	**Korea Array**	**10.12**	**355**	P		Pn	14 18 05.6	+10
	1.4nm,1.0s,baz=176,slow=13,SNR=2.1							
KSRS					LR	LR	14 22 06.0	
	comp=Z,121nm,18.7s,baz=165,slow=38							
GUMO	**Guam**	**20.12**	**130**	LR		LR	14 26 40.6	
	comp=Z,46nm,18.7s,baz=335,slow=32							
CMAR	**Chiang Mai Arr**	**29.08**	**259**	P		**P**	**14 21 31.3**	**+1.1**
	0.4nm,0.3s,baz=62,slow=7.6,SNR=1.4							
CMAR					LR	LR	14 33 59.9	
	comp=Z,24nm,18.4s,baz=85,slow=38							
	0.4nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**35.38**	**94**	T		T	14 59 59.5	
	baz=290,slow=74,SNR=13							
H11N1	**WAKE ISLAND Hy**	**35.39**	**94**	T		T	14 59 59.0	
	baz=290,slow=74,SNR=5.1							
H11N3	**WAKE ISLAND Hy**	**35.40**	**94**	T		T	15 00 00.7	
	baz=290,slow=74,SNR=8.6							
H11S3	**WAKE ISLAND Hy**	**35.63**	**96**	T		T	15 00 24.5	
	baz=292							
H11S1	**WAKE ISLAND Hy**	**35.64**	**96**	T		T	15 00 24.4	
	baz=292							
H11S2	**WAKE ISLAND Hy**	**35.65**	**96**	T		T	15 00 25.2	
	baz=292,SNR=4.7							
MKAR	**Makanchi Array**	**41.37**	**311**	P		**P**	**14 23 15.2**	**-0.4**
	0.5nm,0.7s,baz=100,slow=11,SNR=5.8							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**47.29**	**173**	P		**P**	**14 24 04.8**	**+1.7**
	0.5nm,1.0s,baz=353,slow=8.4,SNR=2.0							
	0.5nm,1.0s							
BVAR	**Borovoye Array**	**49.95**	**318**	LR		LR	14 47 33.2	
	comp=Z,65nm,18.2s,baz=121,slow=38							
ILAR	**Eielson Array**	**63.09**	**29**	P		**P**	**14 25 55.9**	**-0.6**
	0.3nm,0.8s,baz=288,slow=6.6,SNR=2.8							
	0.3nm,0.8s							
FINES	**FINESS Array B**	**72.26**	**331**	P		**P**	**14 26 54.4**	**0.0**
	0.5nm,0.4s,baz=54,slow=5.0,SNR=6.7							
	0.5nm,0.4s							
AKASG	**Malin Array Be**	**75.17**	**320**	P		**P**	**14 27 11.3**	**-0.3**
	0.6nm,0.5s,baz=56,slow=7.0,SNR=4.2							
	0.6nm,0.5s							
BRTR	**Keskin Array B**	**76.94**	**308**	P		**P**	**14 27 22.6**	**+0.4**
	0.6nm,0.6s,baz=83,slow=5.1,SNR=3.7							
	0.6nm,0.6s							
NB2	**NORSAR Subarra**	**78.64**	**334**	P		**P**	**14 27 29.7**	**-1.4**
	comp=Z,3.4nm,1.1s,baz=54,slow=5.3							
NOA	**NORSAR Array B**	**78.64**	**334**	P		**P**	**14 27 28.4**	**-2.7**
	comp=Z,0.7nm,0.7s,baz=52,slow=5.5,SNR=5.1							
	comp=Z,0.7nm,0.7s							

*IDC **28** 14:26:03.9±0.5,55˙.07S×31˙.42W, h0km, mb4.4/14, mbtmp4.4/15, ML3.8/1, MS4.5/37, Error ellipse: s-maj=17.9km s-min=14.8km az=55.0*
*NEIC **28** 14:26:05.2±1.4,55˙.08S±0˙.08×31˙.4W±0˙.2, h10km±1km, mb5.1/65, Error ellipse: s-maj=16.7km s-min=12.1km az=57.0*
*GCMT **28** 14:26:12.2±0.2,55˙.04S±0˙.01×31˙.19W±0˙.02, h12km, MW5.2/116, Moment Tensor Solution. s70,c87; s116,c179; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr4.45±.10; Mθθ-2.85±.10; Mφφ-1.60±.10; Mrθ-5.76±.32; Mθφ3.43±.09; Mφr3.98±.33; Best double couple: Mo8.65500×10^16 NP1:φ≡305.00000°, δ72.00000°, λ86.00000°. NP2:φ≡137.00000°, δ18.00000°, λ101.00000°. Principal axes: T 8.0440, Plg63.0000°, Azm209.0000°; N 1.2220, Plg4.0000°, Azm306.0000°; P -9.2660, Plg27.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 14:26:05.1±0.3,55°17S±0˙.06×31°32W±0˙.07,h10km,n364, σ1≥91°/322,mb5.0/45,MS4.5/42,4C-1D, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.12**	**284**	Pn		**Pn**	**14 26 53.2**	**-1.0**
EFI	**East Falkland**	**16.27**	**271**	P		**P**	**14 29 56.2**	**-0.3**
VNA1	**Neumayer--Stat**	**18.53**	**156**	P		**Pn**	**14 30 23.0**	**+1.6**
VNA1	**Neumayer--Stat**	**18.53**	**156**	PcP		**PcP**	**14 34 45.7**	**-4.5**
VNA3	**Neumayer Olymp**	**18.65**	**158**	P		**P**	**14 30 24.0**	**+1.4**
VNA3	**Neumayer Olymp**	**18.65**	**158**	PcP		**PcP**	**14 34 45.9**	**-4.6**
PMSA	**Palmer Station**	**18.76**	**226**	P		**Pn**	**14 30 25.7**	**+1.5**
	0.3nm,0.3s,baz=35,slow=9.4,SNR=1.7							
PMSA					LR	LR	14 36 57.5	
	comp=Z,1μm,18.6s,baz=58,slow=35							
	16nm,1.1s							
PMSA	**Palmer Station**	**18.76**	**226**	P		**Pn**	**14 30 24.9**	**+0.7**
PMSA					IAmb	IAmb	14 30 33.1	
	comp=Z,278nm,1.9s							
VNA2	**Neumayer--Watz**	**18.93**	**156**	P		**P**	**14 30 26.8**	**+1.1**
	baz=310,slow=12							
VNA2	**Neumayer--Watz**	**18.93**	**156**	PcP		**PcP**	**14 34 50.0**	**-0.9**
	baz=321,slow=7.0							
SNAA	**Sanae**	**20.52**	**155**	P		**P**	**14 30 43.5**	**+0.4**
SNAA	**Sanae**	**20.52**	**155**	PcP		PcP	14 35 04.2	+10
SNAA	**Sanae**	**20.52**	**155**	P		**P**	**14 30 44.3**	**+1.1**
	comp=Z,22nm,0.8s,baz=302,slow=10,SNR=79							
SNAA					S	**S**	**14 34 25.5**	**-6.9**
	comp=Z,0.9nm,1.0s,baz=307,slow=24,SNR=1.2							
	comp=Z,22nm,0.8s							
SNAA	**Sanae**	**20.52**	**155**	P		**P**	**14 30 44.3**	**+1.1**
MG01	**Puerto William**	**20.66**	**256**	P		**P**	**14 30 43.8**	**-0.8**
MG01					IAmb	IAmb	14 30 50.0	
	comp=Z,65nm,0.8s							
SMAI	**San Martin Ant**	**20.97**	**218**	P		**P**	**14 30 48.9**	**+1.0**
USHA	**Ushuaia**	**21.13**	**256**	P		**P**	**14 30 50.0**	**+0.3**
	comp=Z,16nm,0.8s,baz=91,slow=10,SNR=5.0							
	comp=Z,16nm,0.8s							
TROLL	**Troll, Antarti**	**22.09**	**153**	P		**P**	**14 31 01.0**	**+0.9**
MG02	**Cerro Sombrero**	**22.24**	**260**	P		**P**	**14 31 01.0**	**-0.6**
BELA	**Belgrano 2**	**22.84**	**182**	P		**P**	**14 31 08.3**	**+0.5**
GO10	**Punta Arenas**	**23.13**	**258**	P		**P**	**14 31 10.8**	**-0.3**
MG04	**Isla Riesco**	**23.53**	**259**	P		**P**	**14 31 14.9**	**-0.1**
MG05	**Puerto Natales**	**24.53**	**261**	P		**P**	**14 31 23.9**	**-0.5**
GO09	**Cerro Castillo**	**24.60**	**262**	P		**P**	**14 31 25.0**	**-0.1**
GO09					IAmb	IAmb	14 31 43.4	
	comp=Z,134nm,1.7s							
PLTB	**Pedras Altas**	**28.20**	**317**	P		**P**	**14 31 57.2**	**-0.5**
PLTB					IAmb	IAmb	14 32 08.2	
	comp=Z,58nm,1.6s							
AY01	**Puyuhuapi**	**28.35**	**275**	P		**P**	**14 31 58.6**	**-0.3**
AY01					IAmb	IAmb	14 32 08.2	
	comp=Z,34nm,1.1s							
PLCA	**Paso Flores**	**29.53**	**283**	P		**P**	**14 32 08.1**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=171,slow=12,SNR=6.9							
PLCA					LR	LR	14 43 53.7	
	comp=Z,614nm,20.5s,baz=138,slow=36							
	comp=Z,2.5nm,0.8s							
PLCA	**Paso Flores**	**29.53**	**283**	P		**P**	**14 32 08.7**	**-0.8**
PLCA					IAmb	IAmb	14 32 32.1	
	comp=Z,42nm,1.7s							
PLCA	**Paso Flores**	**29.53**	**283**	*e*P		P	14 32 14.2	+4.7
BO02	**Sierra Bellavi**	**33.92**	**290**	P		**P**	**14 32 47.6**	**-0.6**
BO02					IAmb	IAmb	14 33 28.6	
	comp=Z,40nm,1.8s							
PTGB	**Pitanga**	**34.05**	**325**	*e*P		**P**	**14 32 51.3**	**+1.9**
DUB01	**Friburgo-RJ**	**34.06**	**341**	*e*P		**P**	**14 32 50.5**	**+1.1**
VAO	**Valinhos**	**34.18**	**334**	*e*P		**P**	**14 32 51.6**	**+1.2**
GO05	**Huala**	**34.38**	**289**	P		**P**	**14 32 50.2**	**-1.9**
CPUP	**Villa Florida**	**34.51**	**316**	P		**P**	**14 32 52.3**	**-0.9**
	comp=Z,6.9nm,0.9s,baz=151,slow=6.9,SNR=9.9							
CPUP					LR	LR	14 48 49.5	
	comp=Z,666nm,18.1s,baz=166,slow=40							
	comp=Z,6.9nm,0.9s							
CPUP	**Villa Florida**	**34.51**	**316**	P		**P**	**14 32 51.0**	**-2.2**
MT09	**Talagante**	**34.80**	**291**	P		**P**	**14 32 54.0**	**-1.9**
MT09					IAmb	IAmb	14 32 56.5	
	comp=Z,21nm,0.8s							
MT01	**Popeta**	**34.88**	**291**	P		**P**	**14 32 54.7**	**-1.6**
MT01					IAmb	IAmb	14 33 01.1	
	comp=Z,16nm,0.8s							
RCLB	**Rio Claro- Sao**	**34.88**	**333**	*e*P		**P**	**14 32 57.7**	**+1.2**
QSPA	**South Pole Qui**	**35.08**	**180**	P		**P**	**14 32 59.6**	**+1.5**
	comp=Z,3.8nm,0.6s,baz=200,slow=3.6,SNR=23							
QSPA					LR	LR	14 46 41.0	
	comp=Z,1μm,18.4s,baz=186,slow=35							
	comp=Z,3.8nm,0.6s							
QSPA	**South Pole Qui**	**35.08**	**180**	P		**P**	**14 32 59.5**	**+1.5**
QSPA					IAmb	IAmb	14 33 11.0	
	comp=Z,20nm,0.9s							
PEL	**Peldehue**	**35.13**	**292**	P		**P**	**14 32 58.0**	**-0.6**
PEL					IAmb	IAmb	14 33 01.9	
	comp=Z,37nm,0.9s							
ALF01	**Guarapari-ES**	**35.22**	**345**	*e*P		**P**	**14 32 59.9**	**+0.5**
VA05	**Santo Domingo**	**35.23**	**291**	P		**P**	**14 32 58.7**	**-0.7**
MT02	**Curacav**	**35.28**	**292**	P		**P**	**14 32 59.2**	**-0.7**
MT02					IAmb	IAmb	14 33 02.8	
	comp=Z,18nm,0.9s							
ZON	**Zonda**	**35.34**	**296**	P		**P**	**14 32 59.3**	**-1.1**
ZON					IAmb	IAmb	14 33 02.4	
	comp=Z,18nm,0.7s							
VA03	**San Esteban**	**35.35**	**293**	P		**P**	**14 32 59.5**	**-1.1**
VA03					IAmb	IAmb	14 33 13.4	
	comp=Z,33nm,1.0s							
ROC1	**El Roble**	**35.44**	**292**	P		**P**	**14 33 01.3**	**-0.1**
ROC1					IAmb	IAmb	14 33 18.2	
	comp=Z,26nm,0.7s							
VA06	**Catapilco**	**35.91**	**292**	P		**P**	**14 33 03.9**	**-1.3**
BB19B	**Bebedouro**	**36.43**	**332**	*e*P		**P**	**14 33 11.1**	**+1.2**
CO02	**Combarbal**	**36.81**	**294**	P		**P**	**14 33 10.5**	**-2.6**
CO02					IAmb	IAmb	14 33 18.7	
	comp=Z,25nm,0.8s							
DIAM	**Diamantina, MG**	**38.00**	**341**	*e*P		**P**	**14 33 25.0**	**+1.7**
AC05	**El Transito**	**38.33**	**297**	P		**P**	**14 33 25.5**	**-0.5**
PMNB	**Patos De Minas**	**38.34**	**336**	*e*P		**P**	**14 33 26.3**	**+0.2**
LCO	**Las Campanas**	**38.41**	**297**	P		**P**	**14 33 25.7**	**-1.1**
LCO					IAmb	IAmb	14 33 27.6	
	comp=Z,36nm,1.3s							

AQDB	**Aquidauana**	**39.21**	**322**	P		**P**	**14 33 31.8**	**-1.5**
AQDB	**Aquidauana**	**39.21**	**322**	*e*P		**P**	**14 33 32.9**	**-0.4**
AC04	**Llanos de Chal**	**39.25**	**297**	P		**P**	**14 33 32.0**	**-1.5**
AC04					IAmb	IAmb	14 33 49.0	
	comp=Z,31nm,0.9s							
C2SB	**Chapadao do Su**	**39.85**	**327**	*e*P		**P**	**14 33 39.9**	**+1.2**
GO02	**Mina Guanaco**	**41.02**	**301**	P		**P**	**14 33 49.0**	**+0.4**
GO02					IAmb	IAmb	14 33 58.6	
	comp=Z,75nm,1.5s							
JANB	**Januaria**	**41.27**	**341**	*e*P		**P**	**14 33 51.1**	**+0.7**
BDFB	**Brasilia**	**41.50**	**335**	P		**P**	**14 33 51.6**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=161,slow=11,SNR=2.8							
BDFB					LR	LR	14 49 16.5	
	comp=Z,204nm,19.2s,baz=151,slow=34							
	comp=Z,2.0nm,0.5s							
BDFB	**Brasilia**	**41.50**	**335**	*e*P		**P**	**14 33 53.2**	**+0.8**
MAW	**Mawson**	**42.23**	**145**	P		**P**	**14 33 57.8**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=227,slow=6.4,SNR=7.0							
MAW					LR	LR	14 50 16.2	
	comp=Z,346nm,18.1s,baz=252,slow=34							
	comp=Z,2.4nm,0.8s							
MAW	**Mawson**	**42.23**	**145**	P		**P**	**14 33 57.4**	**-0.3**
SUR	**Sutherland**	**42.73**	**80**	P		**P**	**14 34 04.6**	**+2.1**
	comp=Z,2.3nm,0.9s,baz=215,slow=12,SNR=1.5							
SUR					LR	LR	14 50 20.0	
	comp=Z,490nm,18.0s,baz=206,slow=34							
	comp=Z,2.3nm,0.9s							
LVC	**Limon Verde**	**42.84**	**304**	LR		LR	14 51 31.5	
	comp=Z,206nm,20.7s,baz=168,slow=36							
LVC	**Limon Verde**	**42.84**	**304**	*e*P		**P**	**14 34 05.3**	**+1.7**
SALV	**Santo Antonio**	**43.46**	**325**	*e*P		**P**	**14 34 09.1**	**+0.9**
PB07	**IPOC Station P**	**44.06**	**304**	P		**P**	**14 34 13.6**	**+0.3**
PB07					IAmb	IAmb	14 35 16.9	
	comp=Z,66nm,1.5s							
PB01	**IPOC Station P**	**44.46**	**305**	P		**P**	**14 34 15.7**	**-0.6**
PB01					IAmb	IAmb	14 34 29.5	
	comp=Z,19nm,0.8s							
PTLB	**Pontes e Lacer**	**45.08**	**321**	P		**P**	**14 34 19.9**	**-1.2**
PTLB					IAmb	IAmb	14 34 26.1	
	comp=Z,43nm,1.6s							
SIV	**San Ignacio**	**45.31**	**318**	LR		LR	14 53 50.3	
	comp=Z,299nm,19.1s,baz=120,slow=37							
GO01	**Chusmiza**	**45.51**	**306**	P		**P**	**14 34 24.2**	**-0.9**
NBAN	**Anadia - AL**	**45.55**	**353**	*e*P		**P**	**14 34 25.3**	**+0.4**
SNDB	**Serra Nova Dou**	**45.85**	**332**	*e*P		**P**	**14 34 28.6**	**+1.3**
SBA	**Scott Base**	**46.77**	**185**	P		**P**	**14 34 33.7**	**-0.1**
SBA					IAmb	IAmb	14 35 50.0	
	comp=Z,30nm,1.9s							
VNDA	**Vanda**	**47.32**	**184**	P		**P**	**14 34 39.7**	**+1.6**
	comp=Z,3.1nm,0.8s,baz=181,slow=5.2,SNR=16							
VNDA					LR	LR	14 52 45.3	
	comp=Z,219nm,18.1s,baz=167,slow=34							
	comp=Z,3.1nm,0.8s							
VNDA	**Vanda**	**47.32**	**184**	P		**P**	**14 34 39.0**	**+0.9**
VILB	**Vilhena**	**47.76**	**321**	P		**P**	**14 34 41.2**	**-1.0**
VILB					IAmb	IAmb	14 35 09.1	
	comp=Z,18nm,0.9s							
VILB	**Vilhena**	**47.76**	**321**	*e*P		**P**	**14 34 42.5**	**+0.2**
PDRB	**Porto dos Gac**	**47.81**	**325**	*e*P		**P**	**14 34 41.4**	**-1.2**
H10S2	**ASCENSION HYDR**	**47.96**	**22**	T		T	15 26 13.2	
	baz=193,slow=74,SNR=30							
H10S3	**ASCENSION HYDR**	**47.96**	**22**	T		T	15 26 16.4	
	baz=27,slow=74,SNR=46							
SMTB	**Santa Maria do**	**47.96**	**338**	*e*P		**P**	**14 34 44.8**	**+1.0**
LPAZ	**La Paz**	**47.98**	**309**	P		**P**	**14 34 44.7**	**+0.1**
	comp=Z,17nm,0.6s,baz=167,slow=6.8,SNR=42							
LPAZ					LR	LR	14 57 17.2	
	comp=Z,254nm,18.6s,baz=192,slow=39							
	comp=Z,17nm,0.6s							
LPAZ	**La Paz**	**47.98**	**309**	P		**P**	**14 34 43.5**	**-1.1**
LPAZ	**La Paz**	**47.98**	**309**	*e*P		**P**	**14 34 44.8**	**+0.2**
BOSA	**Boshof**	**48.08**	**80**	P		**P**	**14 34 45.2**	**+0.4**
	comp=Z,13nm,1.3s,baz=173,slow=5.8,SNR=4.8							
BOSA					LR	LR	14 53 18.9	
	comp=Z,551nm,18.1s,baz=218,slow=34							
	comp=Z,13nm,1.3s							
BOSA	**Boshof**	**48.08**	**80**	P		**P**	**14 34 44.6**	**-0.2**
BOSA					IAmb	IAmb	14 34 46.8	
	comp=Z,33nm,1.6s							
H10N1	**ASCENSION HYDR**	**49.07**	**22**	T		T	15 27 37.3	
	baz=192,slow=75,SNR=

comp=Z,1µm,18.1s,baz=264,slow=35
MTP Monte Pirata 78.56 327 P P 14 38 05.5 -1.0
SJG San Juan 78.77 326 LR LR 15 13 38.7
comp=Z,77nm,20.7s,baz=172,slow=36
LBZ Lake Benmore 79.15 196 P P 14 38 10.6 +1.0
MQZ McQueen's Vall 79.41 197 P P 14 38 11.1 +0.1
RPZ Rata Peaks 79.67 196 LR LR 15 08 59.6
comp=Z,301nm,21.1s,baz=134,slow=32
LTZ Lake Taylor 80.37 197 P P 14 38 16.6 +0.3
BOAB BOACO BROADBAN 80.30 307 P P 14 38 21.0 -0.4
BOAB IAmb IAmb 14 38 22.2
comp=Z,28nm,1.0s
TUWZ Tuamarina 81.39 199 P P 14 38 21.6 -0.1
MATN Matagalpa 81.84 307 P P 14 38 23.9 -0.5
TAU Tasmania Unive 82.29 179 P P 14 38 26.4 0.0
URZ Urewera 83.81 202 LR LR 15 12 11.1
comp=Z,189nm,19.3s,baz=211,slow=33
TBI Tubuai 85.75 234 eP P 14 38 45.7 +1.4
comp=Z,33nm,41.8s
TBI Tubuai 85.75 234 eS S 14 49 18.3 +1.3
comp=Z,87nm,26.5s
TBI Tubuai 85.75 234 eLR LR 15 05 53.4
comp=Z,330nm,30.2s
TEIG Tepich 89.30 308 P P 14 39 00.6 -0.6
CMIG Matias Romero 89.71 301 P P 14 39 03.4 +0.2
comp=Z,3.5nm,0.8s,baz=136,slow=4.3,SNR=4.4
comp=Z,3.5nm,0.8s
CAN Canberra 89.87 180 P P 14 39 04.2 +0.1
ATD Arta Tunnel 90.53 71 LR LR 15 19 10.2
comp=Z,848nm,18.3s,baz=184,slow=35
MDT Midelt 90.58 22 LR LR 15 13 33.8
comp=Z,601nm,21.4s,baz=190,slow=32
PPT2 Papeete2 90.75 237 eP P 14 39 08.7 +0.3
PPT2 Papeete2 90.75 237 eLR LR 15 08 12.7
comp=Z,186nm,21.5s
PPT Papeete 90.77 237 LR LR 15 11 17.7
comp=Z,145nm,19.8s,baz=152,slow=30
RAR Rarotonga 92.19 227 LR LR 15 13 53.1
comp=Z,76nm,19.9s,baz=153,slow=31
STKA Stephens Creek 92.30 174 LR LR 15 18 45.3
comp=Z,625nm,19.8s,baz=196,slow=34
TAOE Nuku Hiva Isla 93.31 250 eLR LR 15 09 24.4
comp=Z,262nm,27.9s
KEST Kesra 97.02 32 LR LR 15 19 05.9
comp=Z,670nm,20.1s,baz=175,slow=33
ESDC Sonseca Array 97.33 21 P P 14 39 37.4 -0.4
comp=Z,0.4nm,0.8s,baz=217,slow=1.3,SNR=2.4
ESDC LR LR 15 18 54.3
comp=Z,444nm,20.4s,baz=170,slow=33
comp=Z,0.4nm,0.8s
ASAR Alice Springs 100.47 166 Pdiff Pdif 14 39 50.4 -2.1
comp=Z,0.2nm,0.4s,baz=188,slow=3.5,SNR=2.2
ASAR PP PP 14 43 54.9 -3.1
comp=Z,0.2nm,0.4s,baz=169,slow=5.4,SNR=2.9
DZM Mont Dzumac 101.58 197 eLR LR 15 13 15.5
comp=Z,590nm,24.4s
CLL Collm 112.33 28 ePS PS 14 55 07.0 +7.9
CLL ePPS PPS 14 56 12.0
CLL eSS SS 15 01 12.0 +6.2
CLL eSSS SSS 15 05 06.0
CLL e(SSSS) 15 09 12.0
CLL Lm MLR 15 26 00.0
comp=Z,200nm,21.8s
NRS Narsarsuaq 116.52 352 PKPdf 14 44 46.9 -0.7
DUG Dugway, Tooele 117.48 301 P PKiKP 14 44 51.0 +0.6
baz=140
NVAR Mina Array Bea 118.90 296 PKP PKiKP 14 44 54.3 +1.0
comp=Z,0.1nm,0.4s,baz=113,slow=1.4,SNR=3.8
FRB Frobisher Bay 122.03 341 PKP PKPdf 14 44 57.6 -0.5
comp=Z,1.3nm,0.5s,baz=201,slow=5.6,SNR=3.2
MSO Missoula 123.01 306 P PKiKP 14 45 01.4 +0.4
baz=137
BMO Blue Mountains 123.17 302 PKPdf 14 45 01.1 0.0
J05D Fort Rock, OR 123.98 298 P PKiKP 14 45 03.9 +0.8
baz=136
G08A Pilot Rock 124.29 301 PKPdf 14 45 03.3 0.0
L02F Cave Junction 124.34 296 P PKiKP 14 45 03.8 +0.2
baz=136
J04D Umpqua Nationa 124.39 298 P PKiKP 14 45 04.0 +0.1
baz=136
FINES FINESS Array B 124.73 30 PKP PKPdf 14 45 03.1 -0.3
comp=Z,2.8nm,0.9s,baz=170,slow=2.3,SNR=11
I05D Terrebonne, OR 124.79 299 P PKiKP 14 45 05.5 +1.0
baz=136
K02D Willamette Mer 124.80 296 P PKiKP 14 45 06.1 +1.5
baz=136
CMAR Chiang Mai Arr 127.57 114 PKP PKPdf 14 45 10.4 +0.2
comp=Z,2.1nm,0.9s,baz=228,slow=3.6,SNR=11
ABKAR Akbulak array 128.83 57 PKPdf 14 45 11.4 -0.2
ARCES ARCESS Array B 131.02 23 PKP PKPdf 14 45 15.5 +0.3
comp=Z,3.2nm,0.8s,baz=112,slow=1.5,SNR=5.2
YKA Yellowknife Ar 133.97 320 PKP PKPdf 14 45 20.5 -0.4
comp=Z,1.2nm,0.6s,baz=137,slow=2.0,SNR=5.6
PZH PanZhiHua 135.61 111 PKP PKiKP 14 45 26.8 -0.1
BVAR Borovoye Array 136.31 59 PKP PKiKP 14 45 27.8 +0.5
comp=Z,1.1nm,0.8s,baz=237,slow=5.1,SNR=5.1
DLBC Dease Lake 137.92 309 P PKiKP 14 45 30.4 -0.1
baz=122
MKAR Makanchi Array 138.85 73 PKhKP PKPpre 14 45 24.3
comp=Z,0.5nm,0.7s,baz=265,slow=1.8,SNR=4.2
MKAR PKP PKPdf 14 45 30.1 -0.5
comp=Z,0.7nm,0.8s,baz=235,slow=1.9,SNR=4.7
KURBB Kurchatov Arra 139.07 66 PKhKP PKPpre 14 45 24.7
comp=Z,0.4nm,0.3s,baz=274,slow=30,SNR=2.8
KURBB PKP pPKPdf 14 45 32.3 -0.7
comp=Z,0.5nm,0.5s,baz=220,slow=2.2,SNR=4.0
WMQ Urumqi 140.05 80 ePKP PKPdf 14 45 33.0 +0.1
WMQ LR LR
comp=Z,170nm,23.5s
WMQ LR LR
comp=Z,120nm,21.5s
P33M Teslin, Yukon 140.06 310 P PKiKP 14 45 36.2 +1.3
baz=119
C36M Paulatuk 140.85 326 P PKiKP 14 45 37.8 +1.8
baz=115
WHY Whitehorse 141.18 310 P PKiKP 14 45 38.9 +1.7
baz=117
FARO Faro, Yukon 141.23 313 P PKiKP 14 45 38.9 +1.8
baz=116
M31M Drury Creek, Y 141.65 313 P PKiKP 14 45 38.9 +0.9
baz=116
N31M Braeburn, Yuko 141.94 311 P PKiKP 14 45 39.6 +1.0
baz=116
P29M Windy Craggy 141.98 308 P PKPdf 14 45 36.7 +0.9
baz=117
A36M Sachs Harbour 142.24 330 PKPdf 14 45 36.1 +0.3
A36M Sachs Harbour 142.24 330 P PKPdf 14 45 36.5 +0.7
baz=111
HYT Haines Junctio 142.40 310 P PKPdf 14 45 36.8 +0.1
baz=115
N30M Aishikik Lake 142.49 311 P PKPdf 14 45 36.5 -0.2
baz=115
O29M Mount Kennedy 142.66 308 P PKPdf 14 45 36.8 -0.3
baz=115
M30M Minto, Yukon 142.83 312 P PKPdf 14 45 37.4 +0.2
baz=114
M29M Somme Creek 143.49 312 P PKPdf 14 45 38.0 -0.5
baz=113
O28M Mount Upton 143.58 309 P PKPdf 14 45 37.8 -1.1
baz=114
INK Inuvik 143.65 322 PKPpre PKPpre 14 45 35.1
LOGN Logan Glacier 143.97 308 PKPpre PKPpre 14 45 37.5
LZH Lanzhou 144.08 103 ePKP PKPbc 14 45 39.5 +1.0
LZH pPKP PKiKP 14 45 47.5 +3.5
ZAA0 Zalesovo Array 144.10 65 PKPdf PKPbc 14 45 38.7 +0.9
ZALV Zalesovo Beam 144.10 65 PKP PKPab 14 45 37.4 +0.1
comp=Z,3.4nm,0.5s,baz=231,slow=3.4,SNR=16
ZALV Zalesovo Beam 144.10 65 PKPdf PKPbc 14 45 37.9 +0.1
GTA Gaotai 144.13 95 ePKP PKPdf 14 45 39.8 -0.6
CTGM Chitina Glacie 144.17 308 PKPdf 14 45 39.1 -0.7
DAWY Dawson 144.47 314 PKPdf PKPab 14 45 38.1 -0.4
ISLE Juniper Island 144.48 308 PKPbc 14 45 38.9 -0.1
BVCY Beaver Creek 144.51 311 P PKPab 14 45 38.4 -0.3
baz=111
SNH Sunshine Point 144.54 307 PKPbc 14 45 39.4 +0.3
M27K Edge Creek, AK 144.93 311 PKPab 14 45 39.9 -0.5
M27K Edge Creek, AK 144.93 311 P PKPab 14 45 40.0 -0.3
baz=111
MCARA McCarthy VSAT 145.09 309 P PKPbc 14 45 40.4 -0.3
baz=111
BCAR Beaver Creek A 145.14 312 PKPbc 14 45 40.4 -0.5
L27K Beaver Creek, 145.15 312 PKPbc 14 45 40.1 -0.8
L27K Beaver Creek, 145.15 312 P PKPbc 14 45 40.6 -0.3
baz=110
KAIM Kayak Island 145.18 306 P PKPbc 14 45 40.7 -0.3
baz=112
HMT Hamilton 145.26 306 PKPdf 14 45 41.7 +0.1
XAN Xi'an 145.35 111 PKPbc PKPbc 14 45 42.5 0.0
XAN pPKP PKiKP 14 45 51.0 +4.5
M26K Nabesna, AK 145.44 310 P PKPbc 14 45 41.1 -0.8
baz=110
K27K Chicken 145.58 313 P PKPdf 14 45 41.8 -0.1
baz=108
BMRM Bremner River 145.65 307 PKPdf PKPdf 14 45 42.3 +0.1
BMRM Bremner River 145.65 307 P PKPdf 14 45 42.4 +0.1
baz=111
L26K Log Cabin Wild 145.80 311 P PKPdf 14 45 42.2 -0.2
baz=109
I27K Kandik River 145.86 316 P PKPdf 14 45 42.5 0.0
baz=106,SNR=14
N25K Chitina, Valde 145.87 308 PKPdf PKPab 14 45 43.6 -0.2
N25K Chitina, Valde 145.87 308 P PKPbc 14 45 43.0 -0.3
baz=110
H27K Steamboat Moun 146.00 317 P PKPdf 14 45 43.0 +0.3
baz=106,SNR=10
EYAK Cordova Ski Ar 146.03 306 PKPdf PKPbc 14 45 43.2 -0.5
EYAK Cordova Ski Ar 146.03 306 P PKPbc 14 45 43.2 -0.5
baz=111
G27K Doyon Strip 146.20 318 P PKPdf 14 45 43.0 0.0
baz=105,SNR=7.2
DOT Dot Lake 146.30 312 PKPdf PKPdf 14 45 43.1 -0.1
HIN Hinchinbrook I 146.32 306 PKPdf PKPdf 14 45 43.6 +0.2
J26L Joseph Creek 146.34 314 PKPdf 14 45 43.4 0.0
J26L Joseph Creek 146.34 314 P PKPdf 14 45 43.6 +0.3
baz=107,SNR=8.2
SCRK Sand Creek 146.36 313 P PKPdf 14 45 43.8 +0.3
baz=107
I26K Coal Creek Min 146.40 315 P PKPbc 14 45 44.1 -0.6
baz=106
KLU Klutina 146.43 308 PKPdf 14 45 44.1 +0.5
KLU Klutina 146.43 308 P PKPbc 14 45 44.5 -0.5
baz=109
FID Port Fidalgo 146.43 306 PKPdf PKPdf 14 45 44.0 +0.5
E27K Coleen River 146.51 321 P PKPbc 14 45 44.3 -0.7
baz=103
RIDG Independent Ri 146.66 312 PKPdf 14 45 44.6 +0.7
RIDG Independent Ri 146.66 312 P PKPbc 14 45 45.2 -0.4
baz=107,SNR=14
PAX Paxson 146.70 311 PKPbc 14 45 45.6 -0.2
PAX Paxson 146.70 311 P PKPbc 14 45 44.9 -0.8
baz=108
M24K Tolsona, Glenn 146.74 309 P PKPbc 14 45 45.8 -0.1
baz=108
G26K Porcupine Rive 147.06 318 P PKPbc 14 45 46.4 -0.1
baz=103
K24K Donnelly Dome 147.07 312 P PKPbc 14 45 46.7 0.0
baz=106
J25K Salcha River, 147.12 314 PKPbc 14 45 47.3 +0.4
J25K Salcha River, 147.12 314 P PKPbc 14 45 46.1 -0.7
baz=105
SCM Sheep Creek Mo 147.18 308 PKPbc 14 45 47.5 +0.4
SCM Sheep Creek Mo 147.18 308 P PKPbc 14 45 47.0 -0.1
baz=108
PWL Port Wells 147.33 306 PKPbc 14 45 47.8 +0.3
PWL Port Wells 147.33 306 P PKPbc 14 45 46.9 -0.6
baz=109
M23K Glacier View 147.34 308 P PKPbc 14 45 46.7 -0.8
baz=108
F26K Sheenjek River 147.35 319 P PKPbc 14 45 47.0 -0.4
baz=101,SNR=8.5
PRP Porcupine Dome 147.41 315 PKPbc 14 45 48.2 +0.5
PRP Porcupine Dome 147.41 315 P PKPbc 14 45 47.1 -0.7
baz=104
BMAR Burnt Mountain 147.46 319 PKPbc 14 45 47.6 -0.1
C27K Jago River 147.53 323 P PKPbc 14 45 47.3 -0.5
baz=99
DHY Denali Highway 147.56 310 PKPbc 14 45 48.5 +0.3
DHY Denali Highway 147.56 310 P PKPbc 14 45 47.7 -0.5
baz=106,SNR=12
WAT6 Susitna Watana 147.58 309 P PKPbc 14 45 47.4 -0.9
baz=106
LYN LuoYang 147.62 114 ⇑PKPbc PKPbc 14 45 49.0 -0.1
SML Sawmill 147.62 308 PKPbc 14 45 48.6 +0.3
SML Sawmill 147.62 308 P PKPbc 14 45 47.6 -0.7
baz=107
H25K Birch Creek 147.70 316 P PKPbc 14 45 48.0 -0.2
baz=102
HDA Harding Lake 147.73 313 P PKPbc 14 45 49.0 +0.6
baz=104
IL31 147.79 314 PKPdf PKPdf 14 45 46.8 +1.2
ILAR Eielson Array 147.79 314 PKPbc PKPbc 14 45 47.6 -1.0
comp=Z,6.7nm,0.7s,baz=128,slow=1.9,SNR=39
ILAR Eielson Array 147.79 314 PKPdf 14 45 46.6 +0.9
F25K Christian Rive 147.89 319 P PKPbc 14 45 49.4 +0.6
baz=100,SNR=8.2
E25K Arctic Village 147.96 320 P PKPbc 14 45 48.6 -0.4
baz=100,SNR=12
WAT1 Susitna Watana 148.01 310 P PKPbc 14 45 50.1 +0.8
baz=106
POKR Poker Plat Res 148.10 314 P PKPbc 14 45 50.2 +0.8
baz=103
BRSE Bradley Lake S 148.10 303 P PKiKP 14 45 50.6 -0.7
baz=109
BRLK Bradley Lake 148.18 303 PKPbc 14 45 49.9 +0.1
COLA College 148.22 314 P PKPbc 14 45 50.2 +0.5
baz=103
TCOL CIGO, UAF Yank 148.22 314 P PKPbc 14 45 50.4 +0.7
baz=103
CNPM China Poot 148.27 303 PKPbc 14 45 50.2 +0.2
RND Reindeer 148.29 311 PKPbc 14 45 50.2 +0.1
MDM Murphy Dome 148.39 314 PKPbc 14 45 49.7 -0.5
MCK McKinley 148.41 311 PKPbc 14 45 50.1 -0.2
MCK McKinley 148.41 311 P PKPbc 14 45 50.3 0.0
baz=104,SNR=7.3
M22K Willow 148.42 307 PKPbc 14 45 50.1 -0.2
M22K Willow 148.42 307 P PKPbc 14 45 49.9 -0.4
baz=106
D25K Kavik River 148.42 322 P PKPbc 14 45 50.0 -0.2
baz=97
H24K Noodor Dome 148.43 315 PKPbc 14 45 49.7 -0.7
H24K Noodor Dome 148.43 315 P PKPbc 14 45 50.2 -0.1
baz=101
G24K Hadweenzic Riv 148.44 317 P PKPbc 14 45 50.1 -0.1
baz=100
OHAK Old Harbor 148.48 298 P PKPbc 14 45 50.5 -0.1
baz=111
HOM Homer 148.50 303 P PKPbc 14 45 50.7 +0.1
baz=108
Q20K Shuyak Island 148.53 301 P PKPbc 14 45 50.9 +0.2
baz=110
SUA Susitna One 148.62 307 P PKPbc 14 45 50.9 -0.1
baz=106
CUT Chulitna 148.66 308 PKiKP 14 45 51.9 -0.5
CUT Chulitna 148.66 308 P PKPbc 14 45 50.8 -0.1
baz=105
NEA2 Nenana 148.66 313 PKPbc 14 45 49.9 -1.0
NEA2 Nenana 148.66 313 P PKPbc 14 45 51.0 +0.1
baz=102
F24K Squaw Lake 148.73 318 P PKPbc 14 45 51.3 +0.3
baz=99,SNR=8.0
TRF Thorofare Moun 148.93 310 P PKPbc 14 45 51.5 -0.3
baz=103,SNR=5.2
E24K Your Creek 149.03 320 P PKPbc 14 45 51.8 0.0
baz=97,SNR=10
H23K Yukon River 149.10 315 PKPbc 14 45 52.0 0.0
H23K Yukon River 149.10 315 P PKPbc 14 45 51.8 -0.2
baz=100
CHIR Chirikof Islan 149.16 295 P PKPbc 14 45 52.3 0.0
baz=112
KTH Kantishna Hill 149.23 310 PKPbc 14 45 51.9 -0.6
P19K Oil Pt 149.27 302 P PKiKP 14 45 53.7 -0.1
baz=108
D24K Happy Valley 149.27 322 P PKPbc 14 45 52.0 -0.2
baz=95
C24K Franklin Bluff 149.28 323 P PKPbc 14 45 52.1 -0.1
baz=94
ILSW Iliamna Southw 149.33 303 PKPdf PKPdf 14 45 49.7 +1.2
BPAW Bear Paw Mtn. 149.38 311 PKPbc 14 45 52.2 -0.5
BPAW Bear Paw Mtn. 149.38 311 P PKPbc 14 45 51.9 -0.9
baz=102,SNR=24
G23K Bananza Creek 149.44 317 P PKPbc 14 45 52.4 -0.4
baz=98
MLY Manley 149.45 313 PKPbc 14 45 52.4 -0.6
MLY Manley 149.45 313 P PKPbc 14 45 52.3 -0.6
baz=100
TOLK Toolik Lake Re 149.50 321 PKPbc 14 45 52.7 -0.2
TOLK Toolik Lake Re 149.50 321 P PKPbc 14 45 52.3 -0.6
baz=95,SNR=20
PPLA Purkeypile 149.64 309 P PKPbc 14 45 53.1 -0.5
baz=103
CAST Castle Rocks 149.71 310 PKPbc 14 45 53.8 +0.2
CAST Castle Rocks 149.71 310 P PKPbc 14 45 52.8 -0.7
baz=102
M20K Styx River 149.83 307 P PKPbc 14 45 53.3 -0.7
baz=104
H22K Ishtalitna Cre 149.86 315 P PKPbc 14 45 53.1 -0.8
baz=98,SNR=11
CHUM Lake Minchumin 149.91 311 P PKPbc 14 45 53.1 -0.8
baz=101
D23K Nanushuk River 149.92 321 P PKPbc 14 45 53.4 -0.5
baz=94
C23K Itkillik River 149.95 323 P PKPbc 14 45 53.4 -0.5
baz=92
O19K Port Alsworth 149.95 303 P PKPbc 14 45 53.9 -0.2
baz=106
I21K Tanana 150.00 313 PKPbc 14 45 53.9 -0.2
I21K Tanana 150.00 313 P PKPbc 14 45 53.6 -0.5
baz=99
G22K Bettles 150.05 317 P PKPbc 14 45 53.8 -0.4
baz=96,SNR=7.7
P18K Big Mountain, 150.16 301 P PKPbc 14 45 53.6 -1.2
baz=107
N19K Bonanza Creek 150.20 304 PKPbc 14 45 54.4 -0.5
N19K Bonanza Creek 150.20 304 P PKPbc 14 45 53.9 -0.9
baz=105
R17K Ugashik Creek 150.20 298 P PKPbc 14 45 54.3 -0.6
baz=109
E22K Anaktuvuk Pass 150.28 319 P PKPbc 14 45 54.4 -0.4
baz=94,SNR=8.6
O18K Koktuh Hills 150.29 302 P PKPbc 14 45 54.1 -1.0
baz=106
L20K Farewell, AK 150.31 308 P PKPbc 14 45 54.2 -0.8
baz=102
F22K John River 150.37 318 P PKPbc 14 45 54.9 -0.1
baz=95,SNR=14
H21K Melozitna Rive 150.41 314 P PKPbc 14 45 54.6 -0.6
baz=98,SNR=11
M19K Big River Lodg 150.42 307 PKiKP 14 45 55.6 -0.4
M19K Big River Lodg 150.42 307 P PKPbc 14 45 54.6 -0.7
baz=103
K20K Telida 150.57 309 PKPbc 14 45 55.2 -0.4
K20K Telida 150.57 309 P PKPbc 14 45 54.9 -0.8
baz=101
Q16K King Salmon 150.66 300 P PKPbc 14 45 55.3 -0.5
baz=107
P17K Kvichak River 150.70 301 P PKPbc 14 45 55.3 -0.7
baz=106
J20K Nowinta River 150.75 311 P PKPbc 14 45 55.5 -0.5
baz=99
G21K Allakaket 150.79 316 P PKPbc 14 45 55.4 -0.6
baz=96,SNR=9.1
N18K Kilae Creek 150.83 304 P PKPbc 14 45 55.5 -0.8
baz=104
IMAR Indian Mountai 150.83 315 PKPbc 14 45 56.2 +0.1
F21K Alatna River 150.85 317 P PKPbc 14 45 55.7 -0.4
baz=94,SNR=8.8
CNBA Chernabura Isl 150.88 291 PKPbc 14 45 56.2 -0.3
CHNA Chernabura Isl 150.88 291 P PKPbc 14 45 55.9 -0.6
baz=112
HNS HongShan 150.96 114 ⇑PKPbc PKPbc 14 45 57.0 -0.3
O17K Koliganek Bris 151.18 302 P PKPbc 14 45 56.4 -0.7
baz=105
TTA Tatalina 151.36 308 P PKPbc 14 45 56.9 -0.7
baz=100
SDPT Sand Point 151.55 292 P PKPbc 14 45 57.5 -0.6
baz=111
O16K Kokwok River B 151.63 301 P PKPbc 14 45 57.6 -0.5
baz=105
HHC Hu-ho-hao-te 151.73 105 ePKPbc PKPdf 14 45 49.5 -3.3
GCSA Galena City Sc 152.00 312 P PKiKP 14 46 00.6 +1.5
baz=96
N16K Nishlik Lake 152.16 303 P PKiKP 14 46 01.0 +1.3
baz=103
SONM Songino Array 153.03 88 PKPbc PKPbc 14 46 01.5 -0.4
comp=Z,2.6nm,0.6s,baz=219,slow=3.2,SNR=11
SONM Songino Array 153.03 88 PKPbc 14 46 01.7 -0.2

*IDC **28** 14:30:25.2±1.2,54°.97S×31°.24W,h0km,mb4.0/2, mbtmp4.1/2,Error ellipse: s-maj=58.3km s-min=31.4km az=52.0*

ISC 28 14:30:26.3±1.1,**55°.0S**±0°.3×**31°.4W**±0°.3,**h10**km,**n11,** σ0°**56**/6,**South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	20.69	155	P	P	14 35 06.3	+0.2
	2.8nm,0.8s,baz=305,slow=5.9,SNR=5.1						
	2.8nm,0.8s						
H10S2	ASCENSION HYDR	47.83	23	T	T	15 30 37.7	
	baz=190						
H10S3	ASCENSION HYDR	47.83	23	T	T	15 30 37.4	
	baz=30						
LPAZ	La Paz	47.84	309	P	P	14 39 05.1	+0.3
	2.0nm,0.5s,baz=160,slow=5.7,SNR=9.4						
	2.0nm,0.5s						
H10N1	ASCENSION HYDR	48.94	22	T	T	15 32 01.1	
	baz=192						
H10N3	ASCENSION HYDR	48.94	22	T	T	15 31 58.3	
	baz=192						
H10N2	ASCENSION HYDR	48.96	22	T	T	15 31 59.5	
	baz=192						
TORD	Torodi Ar. Bea	73.42	34	P	P	14 41 58.6	+0.1
	6.1nm,0.3s,baz=197,slow=4.5,SNR=1.2						
ZALV	Zalesovo Beam	144.08	65	PKP	PKPdf	14 50 01.0	+0.1
	0.7nm,0.5s,baz=241,slow=2.6,SNR=2.9						
ILAR	Eielson Array	147.65	314	PKPbc	PKiKP	14 50 10.6	-0.9
	0.9nm,0.8s,baz=113,slow=1.4,SNR=4.9						
SONM	Songino Array	153.07	88	PKPbc	PKPbc	14 50 23.0	-0.2
	0.3nm,0.3s,baz=243,slow=6.3,SNR=1.5						

*DJA **28** 14:32:06.4±0.7,6°.S±9°.×15°.1E±1°.2,h46km±13km,M4.9/5, mB4.2/1,mb4.3/5,MLv5.1/1,Mw(mB)3.2/1*
*IDC **28** 14:32:08.7±1.4,5°.56S×151°.04E,h75km±15km,mb3.7/12, mbtmp4.0/13,MS3.2/7,Error ellipse: s-maj=31.8km s-min=11.9km az=120.0*
*NEIC **28** 14:32:08.4±1.3,5°.6S±0°.1×151°.11E±0°.07,h71km±10km, mb4.4/26,Error ellipse: s-maj=15.8km s-min=8.0km az=159.0*

ISC 28 14:32:07.5±0.5,**5°.63S**±0°.07×**151°.06E**±0°.09,**h65**km,**n51,** σ0°**88**/49,**mb4.2**/25,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.63	36	P	Pn	14 32 34.8	+0.7
	2µm,0.4s,baz=299,slow=0.4,SNR=534						
KRVT				S	Sn	14 32 54.8	+0.6
	2µm,0.5s,baz=184,slow=22,SNR=11						
KRVT				LR	LR	14 33 25.0	
	comp=Z,1µm,18.3s,baz=340,slow=48						
RABL	Rabaul	1.80	37	Pn	Pn	14 32 36.5	0.0
HNR	Honiara	9.58	114	Pn	Pn	14 34 22.4	-0.4
COEN	Coen	11.35	223	Pn	Pn	14 34 46.0	-0.9
CTA	Charters Tower	15.11	198	P	Pn	14 35 37.4	0.0
	2.7nm,0.7s,baz=356,slow=15,SNR=1.8						
CTA				LR	LR	14 41 18.0	
	comp=Z,83nm,19.8s,baz=50,slow=36						
CTAO	Charters Tower	15.11	198	P	P	14 35 42.0	+0.9
GUMO	Guam	20.06	342	LR	LR	14 42 51.5	
	comp=Z,46nm,20.9s,baz=166,slow=32						
WB0	Warramunga Arr	21.46	228	P	P	14 36 50.8	0.0
WB0				IAmb	IAmb	14 37 00.2	
	comp=Z,21nm,0.7s						
WR0	Warramunga Arr	21.47	227	P	P	14 36 50.9	0.0
WR0				IAmb	IAmb	14 37 00.8	
	comp=Z,17nm,0.8s						
WRAB	Tennant Creek	21.59	227	P	P	14 36 52.0	-0.1
WRAB				IAmb	IAmb	14 37 01.5	
	comp=Z,18nm,0.6s						
WB2	Warramunga Arr	21.60	227	P	P	14 36 52.1	-0.1
WRA	Warramunga Arr	21.61	227	P	P	14 36 52.2	-0.1
	comp=Z,3.4nm,0.5s,baz=54,slow=10,SNR=86						
WRA				PcP	PcP	14 40 52.8	+0.5
	comp=Z,1.5nm,1.1s,baz=48,slow=1.7,SNR=5.0						
WRA				LR	LR	14 44 18.9	
	comp=Z,83nm,20.9s,baz=7.5,slow=34						
	comp=Z,3.4nm,0.5s						
DZM	Mont Dzumac	22.10	139	P	P	14 36 59.7	+2.1
DZM				IAmb	IAmb	14 37 35.7	
	comp=Z,46nm,1.4s						
PINNC	Pines Island,	23.14	138	P	P	14 37 08.0	-0.5
KNRA	Kununurra	24.05	244	P	P	14 37 17.4	+0.5
KNRA				IAmb	IAmb	14 37 29.0	
	comp=Z,39nm,1.4s						
AS31	Alice Springs	24.38	221	P	P	14 37 20.2	+0.3
ASAR	Alice Springs	24.38	221	P	P	14 37 20.6	+0.7
	comp=Z,2.4nm,0.5s,baz=55,slow=8.9,SNR=33						

	comp=Z,2.4nm,0.5s							
ASAR	**Alice Springs**	**24.38**	**221**	P		**P**	**14 37 20.9**	**+1.0**
BATI	**Baumata**	**27.51**	**259**	LR		LR	14 50 07.9	
	comp=Z,86nm,20.1s,baz=157,slow=39							
STKA	**Stephens Creek**	**27.57**	**198**	P		**P**	**14 37 50.3**	**+1.7**
	comp=Z,3.2nm,1.1s,baz=12,slow=14,SNR=1.9							
STKA				LR		LR	14 48 57.7	
	comp=Z,84nm,18.4s,baz=30,slow=36							
	comp=Z,3.2nm,1.1s							
FITZ	**Fitzroy Crossi**	**27.74**	**241**	P		**P**	**14 37 50.6**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=55,slow=9.3,SNR=13							
FITZ				LR		LR	14 49 42.8	
	comp=Z,42nm,19.7s,baz=35,slow=38							
	comp=Z,1.5nm,0.4s							
FITZ	**Fitzroy Crossi**	**27.74**	**241**	P		**P**	**14 37 50.4**	**+0.1**
FITZ				IAmb		IAmb	14 38 03.8	
	comp=Z,11nm,1.2s							
CAN	**Canberra**	**29.61**	**183**	P		**P**	**14 38 04.5**	**-2.1**
CAN				IAmb		IAmb	14 38 06.9	
	comp=Z,24nm,1.4s							
KAPI	**Kappang**	**31.18**	**270**	LR		LR	14 52 33.6	
	comp=Z,27nm,18.2s,baz=95,slow=39							
PEA0B	**Petropavlovsk-**	**58.79**	**5**	P		**P**	**14 41 58.5**	**-0.4**
PETK	**Petropavlovsk-**	**58.79**	**5**	P		**P**	**14 41 58.8**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=173,slow=7.8,SNR=6.5							
	comp=Z,0.9nm,0.5s							
PETK	**Petropavlovsk-**	**58.79**	**5**	P		**P**	**14 41 58.5**	**-0.4**
SONM	**Songino Array**	**66.12**	**329**	P		**P**	**14 42 49.2**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=103,slow=4.6,SNR=2.2							
	comp=Z,0.3nm,0.5s							
VNDA	**Vanda**	**72.07**	**178**	P		**P**	**14 43 24.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=357,slow=7.1,SNR=2.3							
	comp=Z,0.4nm,0.8s							
Q19K	**Cape Douglas,**	**77.85**	**26**	P		**P**	**14 43 56.1**	**-1.9**
P19K	**Oil Pt**	**78.42**	**25**	P		**P**	**14 44 00.0**	**-1.1**
L19K	**White Mountain**	**79.18**	**23**	P		**P**	**14 44 06.0**	**+0.8**
L19K				IAmb		IAmb	14 44 09.5	
	comp=Z,2.3nm,0.8s							
M19K	**Big River Lodg**	**79.20**	**23**	P		**P**	**14 44 06.3**	**+1.0**
M19K				IAmb		IAmb	14 44 10.2	
	comp=Z,3.9nm,1.2s							
CNPM	**China Poot**	**79.21**	**26**	P		**P**	**14 44 05.9**	**+0.5**
MKAR	**Makanchi Array**	**79.82**	**319**	P		**P**	**14 44 08.0**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=105,slow=4.8,SNR=4.1							
	comp=Z,0.2nm,0.5s							
K20K	**Telida**	**80.14**	**22**	P		**P**	**14 44 11.1**	**+0.7**
ZALV	**Zalesovo Beam**	**80.89**	**327**	P		**P**	**14 44 13.1**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=116,slow=6.7,SNR=2.4							
	comp=Z,0.7nm,0.5s							
IMAR	**Indian Mountai**	**81.75**	**20**	P		**P**	**14 44 19.0**	**+0.2**
H21K	**Melozitna Rive**	**81.89**	**20**	P		**P**	**14 44 19.0**	**-0.7**
H21K				IAmb		IAmb	14 44 49.3	
	comp=Z,5.1nm,1.5s							
FID	**Port Fidalgo**	**81.89**	**26**	P		**P**	**14 44 18.7**	**-1.0**
FID				IAmb		IAmb	14 44 32.0	
	comp=Z,8.3nm,1.0s							
MLY	**Manley**	**82.28**	**21**	P		**P**	**14 44 21.8**	**0.0**
MLY				IAmb		IAmb	14 44 22.2	
	comp=Z,1.4nm,0.5s							
NEA2	**Nenana**	**82.67**	**22**	P		**P**	**14 44 22.7**	**-1.0**
CCB	**Clear Creek Bu**	**83.17**	**22**	P		**P**	**14 44 25.2**	**-1.1**
HDA	**Harding Lake**	**83.39**	**23**	P		**P**	**14 44 26.8**	**-0.7**
KURBB	**Kurchatov Arra**	**83.39**	**322**	P		**P**	**14 44 27.1**	**-0.6**
	comp=Z,0.7nm,0.2s,baz=122,slow=4.3,SNR=1.1							
	comp=Z,0.7nm,0.2s							
ILAR	**Eielson Array**	**83.58**	**22**	P		**P**	**14 44 27.2**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=250,slow=4.9,SNR=9.6							
	comp=Z,0.8nm,0.6s							
J25K	**Salcha River,**	**84.09**	**23**	P		**P**	**14 44 30.6**	**-0.5**
J25K				IAmb		IAmb	14 44 31.4	
	comp=Z,2.0nm,0.5s							
M27K	**Edge Creek, AK**	**84.57**	**26**	P		**P**	**14 44 33.8**	**+0.2**
M27K				IAmb		IAmb	14 44 45.4	
	comp=Z,1.9nm,1.0s							
NVAR	**Mina Array Bea**	**93.96**	**52**	P		**P**	**14 45 18.1**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=250,slow=6.5,SNR=11							
	comp=Z,1.7nm,0.8s							
WSAR	**Wadi Sarin**	**94.42**	**293**	LR		LR	15 32 48.6	
	comp=Z,212nm,18.1s,baz=230,slow=39							
TORD	**Torodi Ar. Bea**	**148.90**	**286**	PKPbc		**PKPbc**	**14 51 49.3**	**+0.3**
	comp=Z,11nm,0.3s,baz=63,slow=2.7,SNR=2.2							

*IDC **28** 14:32:35.4±1.1,28.56N×61.93E,h0km,mb3.7/7, mbtmp3.7/8,ML3.4/1,Error ellipse: s-maj=30.3km s-min=22.4km az=101.0*
*TEH **28** 14:32:37.8,28.57N×62.05E,h19km,ML3.7*
*OMAN **28** 14:32:43.9±0.1,28.18N×61.74E,h8km,mb4.8/9,Error ellipse: s-maj=2.5km s-min=2.3km az=359.0*
*DSN **28** 14:32:44.9±2.1,27.33N×62.10E,h8km,ML3.3/5,Error ellipse: s-maj=60.1km s-min=19.5km az=162.0*

ISC 28 14:32:40.5±0.8,28.52N±0.05×62.03E±0.07,h35km,n47, σ1°53/55,mb3.8/8,Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SRVN	**Saravan**	**1.15**	**164**	*e*Pg		**Pn**	**14 32 59.8**	**-0.5**
SRVN				*e*Sg		**Sn**	**14 33 15.9**	**+1.0**
SRVN				*e*			14 33 27.0	
	comp=N,18μm,0.6s							
ZHDN	**Zahedan**	**1.39**	**310**	*e*Pg		**Pn**	**14 33 02.2**	**-1.3**
ZHDN				*e*			14 33 31.9	
	comp=Z,10μm,0.7s							
ZHSF	**Zahedan**	**1.55**	**315**	*e*Pg		**Pn**	**14 33 05.1**	**-0.7**
KBAM	**BAM**	**3.20**	**282**	*e*Pn		**Pn**	**14 33 30.4**	**+2.0**
KBAM				*e*			14 34 29.3	
	comp=E,2μm,0.6s							
CHBR	**Chabahar**	**3.22**	**206**	*e*Pn		**Pn**	**14 33 30.3**	**+1.7**
CHBR				*e*			14 34 15.4	
	comp=Z,99nm,0.8s							
NGCH	**Negor - Chabah**	**3.24**	**194**	*e*Pn		**Pn**	**14 33 30.4**	**+1.5**
NGCH	**Negor - Chabah**	**3.24**	**194**	P		**Pn**	**14 33 30.5**	**+1.6**
	SNR=7.3							
NHDN	**Nehbandan**	**3.34**	**330**	*e*Pn		**Pn**	**14 33 31.5**	**+1.1**
KHNJ	**Kahnooj**	**3.86**	**263**	*e*Pn		**Pn**	**14 33 39.3**	**+1.9**
BSRN	**Basiran**	**4.26**	**325**	*e*Pn		**Pn**	**14 33 43.2**	**+0.2**
JASK	**Jask - Hormozg**	**4.55**	**236**	*e*Pn		**Pn**	**14 33 49.3**	**+2.4**
IDAH	**Dahanechah**	**4.61**	**337**	*e*Pn		**Pn**	**14 33 49.1**	**+1.2**
IDAH				*e*			14 35 30.5	
	comp=Z,369nm,0.6s							
SHRT	**Shahrakht**	**5.33**	**344**	*e*Pn		**Pn**	**14 33 57.5**	**-0.1**
AFRZ	**Afriz**	**5.54**	**333**	*e*Pn		**Pn**	**14 34 01.7**	**+1.1**
SHME	**Shamm**	**5.79**	**246**	P		**Pn**	**14 34 06.3**	**+2.4**
MDH	**Madha**	**6.04**	**239**	P		**Pn**	**14 34 07.8**	**+0.4**
MDH				S		**Sn**	**14 35 14.9**	**-0.3**
MDH	**Madha**	**6.04**	**239**	P		**Pn**	**14 34 07.4**	**+0.1**
MDH				S		**Sn**	**14 35 13.7**	**-1.6**
WSAR	**Wadi Sarin**	**6.08**	**211**	Pn		**Pn**	**14 34 07.8**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=60,slow=9.6,SNR=10							
WSAR				Sn		**Sn**	**14 35 14.2**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=348,slow=23,SNR=3.3							
	comp=Z,3.5nm,0.4s							
MASF	**Masafi**	**6.10**	**240**	P		**Pn**	**14 34 10.8**	**+2.5**
MASF				S		**Sn**	**14 35 17.1**	**+0.1**
MSFE	**Esma-Masafi**	**6.11**	**240**	P		**Pn**	**14 34 10.3**	**+2.0**
UOSS	**Minazif**	**6.31**	**237**	P		**Pn**	**14 34 11.3**	**+0.3**
UOSS				S		**Sn**	**14 35 19.0**	**-3.0**
UOSS	**Minazif**	**6.31**	**237**	P		**Pn**	**14 34 11.0**	**0.0**
HATD	**Hatta, Dubai**	**6.43**	**237**	P		**Pn**	**14 34 13.8**	**+1.1**
HATD	**Hatta, Dubai**	**6.43**	**237**	P		**Pn**	**14 34 12.0**	**-0.8**
HOQ	**Hoqain**	**6.49**	**222**	P		**Pn**	**14 34 13.3**	**-0.3**
WBK	**Wadi Bani Khal**	**6.50**	**206**	P		**Pn**	**14 34 12.5**	**-1.2**
	SNR=7.3							
WBK				S		**Sn**	**14 35 25.9**	**-0.8**
SMDO	**Samad**	**6.51**	**214**	P		**Pn**	**14 34 15.4**	**+1.4**
SMDO				S		**Sn**	**14 35 25.2**	**-1.9**
SOHO	**SOHO**	**6.58**	**230**	P		**Pn**	**14 34 14.6**	**-0.3**
SOHO	**SOHO**	**6.58**	**230**	P		**Pn**	**14 34 12.8**	**-2.0**
TKDS	**Koohdasht(Taba**	**6.60**	**322**	*e*Pn		**Pn**	**14 34 16.3**	**+1.2**
TABS	**Tabas**	**6.63**	**322**	*e*Pn		**Pn**	**14 34 15.7**	**+0.2**
TBJM	**Torbat-e-JAM**	**6.89**	**348**	*e*Pn		**Pn**	**14 34 20.6**	**+1.5**
JMDO	**Jabal Madar**	**7.07**	**211**	P		**Pn**	**14 34 21.8**	**+0.2**
ASUD	**Al Ashush, Dub**	**7.14**	**239**	P		**Pn**	**14 34 25.4**	**+2.9**
ASUD	**Al Ashush, Dub**	**7.14**	**239**	P		**Pn**	**14 34 25.2**	**+2.7**
ARQ	**Araqi**	**7.15**	**225**	P		**Pn**	**14 34 25.6**	**+2.9**
	SNR=15							
BSY	**Bisya**	**7.21**	**218**	P		**Pn**	**14 34 26.4**	**+2.9**
YZKH	**Yazd**	**7.49**	**303**	*e*Pn		**Pn**	**14 34 28.3**	**+0.9**
SHRO	**Shahrood**	**9.03**	**327**	*e*Pn		**Pn**	**14 34 49.1**	**+0.6**
AKTO	**Aktyubinsk**	**22.10**	**353**	P		**P**	**14 37 33.4**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=133,slow=8.8,SNR=2.8							
	comp=Z,0.8nm,0.4s							
MKAR	**Makanchi Array**	**24.17**	**36**	P		**P**	**14 37 54.7**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=210,slow=8.3,SNR=3.7							
	comp=Z,0.2nm,0.6s							
BVAR	**Borovoye Array**	**25.25**	**12**	P		**P**	**14 38 02.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=200,slow=7.7,SNR=3.9							
	comp=Z,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**25.37**	**25**	P		**P**	**14 38 02.4**	**-1.8**
	comp=Z,2.1nm,0.2s,baz=222,slow=8.6,SNR=2.4							
	comp=Z,2.1nm,0.2s							
FINES	**FINESS Array B**	**40.64**	**334**	P		**P**	**14 40 16.1**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=128,slow=9.0,SNR=4.1							
	comp=Z,1.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**57.89**	**268**	P		**P**	**14 42 28.2**	**-1.1**
	comp=Z,11nm,0.3s,baz=58,slow=7.2,SNR=3.0							
WRA	**Warramunga Arr**	**84.80**	**116**	P		**P**	**14 45 13.2**	**+1.6**
	comp=Z,1.4nm,1.0s,baz=319,slow=4.2,SNR=6.8							
	comp=Z,1.4nm,1.0s							
ASAR	**Alice Springs**	**86.47**	**119**	P		**P**	**14 45 20.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=302,slow=4.9,SNR=4.6							
	comp=Z,0.5nm,0.8s							

*KRSC **28** 14:33:01.3±1.8,48.97N×156.71E,h50km±36km,ML3.9*
*IDC **28** 14:33:04.9±3.5,49.67N×154.29E,h144km±28km,mb3.1/7, mbtmp3.5/8,Error ellipse: s-maj=31.8km s-min=21.2km az=177.0*

ISC 28 14:33:00.1±1.1,49.2N±0.1×155.0E±0.1,h100km,n32, σ2°20/34,mb3.4/8,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.67**	**25**	*e*P		**Pn**	**14 33 31.0**	**+2.5**
SKR				*e*S		**Sn**	**14 33 51.6**	**+1.6**
PAU	**Pauzhetka**	**2.57**	**26**	*e*P		**Pn**	**14 33 41.7**	**+1.6**
PAU				*e*S		**Sn**	**14 34 11.7**	**+0.9**
KDTR	**Khodutka, Kamc**	**3.28**	**35**	*e*P		**Pn**	**14 33 50.8**	**+1.2**
KDTR				*e*S		**Sn**	**14 34 25.3**	**-2.5**
MTVR	**Mutnovka**	**3.88**	**30**	*e*P		**Pn**	**14 34 00.1**	**+2.4**
MTVR				*e*S		**Sn**	**14 34 41.3**	**-0.9**
GRL	**Gorelyy**	**3.90**	**29**	*e*P		**Pn**	**14 34 00.3**	**+2.3**
GRL				*e*S		**Sn**	**14 34 42.4**	**-0.4**
RUS	**Russkaya**	**3.95**	**33**	*e*P		**Pn**	**14 33 59.3**	**+0.8**
RUS				*e*S		**Sn**	**14 34 40.6**	**-3.1**
KRMR	**Karymshinskiy**	**4.16**	**27**	*e*P		**Pn**	**14 34 01.9**	**+0.6**
PETK	**Petropavlovsk-**	**4.29**	**22**	P		**Pn**	**14 34 03.8**	**+0.6**
	4.6nm,0.8s,baz=208,slow=10,SNR=17							
PETK				S		**Sn**	**14 34 54.3**	**+2.3**
	0.9nm,0.5s,baz=169,slow=18,SNR=1.2							
PET	**Petropavlovsk**	**4.49**	**29**	*e*P		**Pn**	**14 34 07.7**	**+1.9**
PET				*e*S		**Sn**	**14 34 56.2**	**-0.5**
DALK	**Dalny**	**4.53**	**30**	*e*P		**Pn**	**14 34 08.0**	**+1.7**
DALK				*e*S		**Sn**	**14 34 56.6**	**-1.1**
UGLR	**Uglovaya**	**4.70**	**29**	*e*P		**Pn**	**14 34 10.6**	**+1.9**
KOK	**Koryaka**	**4.71**	**27**	*e*P		**Pn**	**14 34 10.9**	**+2.0**
KRX	**Arik**	**4.77**	**27**	*e*P		**Pn**	**14 34 11.5**	**+1.7**
GNL	**Ganaly**	**4.89**	**21**	*e*P		**Pn**	**14 34 13.3**	**+2.0**
SPN	**Mys Shipunski**	**5.04**	**37**	*e*P		**Pn**	**14 34 12.2**	**-1.0**
SPN				*e*S		**Sn**	**14 35 04.9**	**-5.2**
MKZ	**Mys Kozlova**	**6.81**	**35**	*e*P		**Pn**	**14 34 36.2**	**-1.0**
TUMR	**Tumrok**	**6.88**	**25**	*e*P		**Pn**	**14 34 41.6**	**+3.2**
KBTR	**Krutoberegovo**	**8.49**	**31**	*e*P		**Pn**	**14 34 59.9**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**30.88**	**158**	T		T	15 11 33.4	
	baz=344							
H11N1	**WAKE ISLAND Hy**	**30.89**	**158**	T		T	15 11 31.6	
	baz=344							
H11N3	**WAKE ISLAND Hy**	**30.89**	**158**	T		T	15 11 33.1	
	baz=344							
H11S1	**WAKE ISLAND Hy**	**32.01**	**159**	T		T	15 13 52.5	
	baz=346,slow=76							
H11S3	**WAKE ISLAND Hy**	**32.02**	**159**	T		T	15 13 49.5	
	baz=346,slow=76,SNR=9.1							
H11S2	**WAKE ISLAND Hy**	**32.02**	**159**	T		T	15 13 51.9	
	baz=346,slow=76,SNR=4.3							
MKAR	**Makanchi Array**	**47.00**	**296**	P		**P**	**14 41 17.7**	**-3.3**
	0.3nm,0.7s,baz=69,slow=9.1,SNR=2.8							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**47.22**	**302**	P		**P**	**14 41 17.9**	**-4.6**
	1.5nm,0.2s,baz=62,slow=8.5,SNR=1.8							
	1.5nm,0.2s							
ARCES	**ARCESS Array B**	**55.99**	**341**	P		P	14 42 21.6	-5.9
	12nm,1.1s,baz=36,slow=9.3,SNR=2.1							
NVAR	**Mina Array Bea**	**60.20**	**65**	P		**P**	**14 42 59.0**	**+1.3**
	0.1nm,0.5s,baz=293,slow=3.5,SNR=2.4							
	0.1nm,0.5s							
PDAR	**Pinedale Array**	**62.30**	**56**	P		**P**	**14 43 13.0**	**+1.2**
	0.2nm,0.5s,baz=0.0,slow=1.1,SNR=2.1							
	0.2nm,0.5s							
FINES	**FINESS Array B**	**62.39**	**335**	P		P	14 43 06.2	-5.5
	1.0nm,0.8s,baz=42,slow=8.8,SNR=3.5							
	1.0nm,0.8s							
WRA	**Warramunga Arr**	**71.22**	**201**	P		**P**	**14 44 09.7**	**+1.4**
	0.2nm,0.6s,baz=21,slow=7.0,SNR=1.8							
	0.2nm,0.6s							
TXAR	**Lajitas Array**	**75.21**	**62**	P		**P**	**14 44 33.0**	**+1.2**
	0.3nm,0.6s,baz=287,slow=3.0,SNR=7.6							
	0.3nm,0.6s							

*IDC **28** 14:49:28.8±0.8,29.13S×61.18E,h0km,mb3.8/8, mbtmp3.9/9,ML4.2/1,Error ellipse: s-maj=32.2km s-min=19.4km az=26.0*
*NEIC **28** 14:49:30.1±1.1,29.25S±0.05×61.1E±0.2,h10km±1km, mb4.7/9,Error ellipse: s-maj=26.8km s-min=9.0km az=268.0*

ISC 28 14:49:29.8±0.6,29.2S±0.1×61.2E±0.1,h10km,n32, σ1°02/25,mb4.2/14,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.36**	**327**	Pn		**Pn**	**14 51 42.8**	**-2.1**
FOMA	**Nahampoana Res**	**13.31**	**285**	Pn		**Pn**	**14 52 37.9**	**-0.9**
VOI	**Vohitsoka**	**14.84**	**296**	Pn		**Pn**	**14 52 58.7**	**-1.2**
ABPO	**Ambohimpanom**	**16.23**	**305**	Pn		**Pn**	**14 53 17.7**	**-0.5**
OPO	**Ambohidratompo**	**16.55**	**307**	Pn		**Pn**	**14 53 22.0**	**-0.4**
	0.1nm,0.3s,baz=128,slow=15,SNR=1.9							
	2.3nm,0.3s							
H08S1	**Diego Carcia H**	**23.92**	**29**	T		T	15 19 28.5	
	baz=202,slow=75,SNR=4.5							
H08S2	**Diego Garcia H**	**23.93**	**29**	T		T	15 19 29.7	
	baz=202,slow=75,SNR=5.3							
H08S3	**Diego Garcia H**	**23.94**	**29**	T		T	15 19 34.5	
	baz=202,slow=75,SNR=5.9							
BOSA	**Boshof**	**31.37**	**262**	P		**P**	**14 55 52.5**	**+1.5**
	2.2nm,0.8s,baz=131,slow=9.3,SNR=2.8							
	2.2nm,0.8s							
KMBO	**Kilima Mbogo**	**36.02**	**316**	P		**P**	**14 56 32.8**	**+1.1**
	0.6nm,0.3s,baz=61,slow=22,SNR=2.1							
	0.6nm,0.3s							
H01W2	**Cape Leeuwin H**	**44.84**	**111**	T		T	15 45 22.4	
	baz=261,slow=75,SNR=7.0							
H01W3	**Cape Leeuwin H**	**44.85**	**111**	T		T	15 45 24.9	
	baz=261,slow=75,SNR=8.3							
H01W1	**Cape Leeuwin H**	**44.86**	**111**	T		T	15 45 25.9	
	baz=261,slow=75,SNR=7.1							
CMAR	**Chiang Mai Arr**	**59.77**	**42**	P		**P**	**14 59 36.9**	**+1.7**
	0.6nm,0.8s,baz=228,slow=8.1,SNR=1.9							
	0.6nm,0.8s							
QSPA	**South Pole Qui**	**60.98**	**180**	P		**P**	**14 59 41.7**	**-1.4**
QSPA				IAmb		IAmb	15 00 11.4	
	comp=Z,4.0nm,1.2s							
VNDA	**Vanda**	**64.02**	**166**	P		**P**	**15 00 04.2**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=274,slow=5.8,SNR=1.6							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**64.44**	**104**	P		**P**	**15 00 07.2**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=243,slow=6.4,SNR=18							
	comp=Z,1.3nm,0.8s							
ASAR	**Alice Springs**	**64.44**	**104**	P		**P**	**15 00 04.9**	**-1.9**
WRA	**Warramunga Arr**	**66.27**	**100**	P		**P**	**15 00 19.0**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=246,slow=5.9,SNR=16							
	comp=Z,1.5nm,0.9s							
WRA	**Warramunga Arr**	**66.27**	**100**	P		**P**	**15 00 18.7**	**+0.1**
WB2	**Warramunga Arr**	**66.28**	**100**	P		**P**	**15 00 18.8**	**+0.1**
WB2				IAmb		IAmb	15 00 38.5	
	comp=Z,6.8nm,1.3s							
WRAB	**Tennant Creek**	**66.28**	**100**	P		**P**	**15 00 18.6**	**0.0**
WB0	**Warramunga Arr**	**66.38**	**100**	P		**P**	**15 00 19.7**	**+0.3**
WB0				IAmb		IAmb	15 00 27.1	
	comp=Z,8.1nm,1.2s							
WR0	**Warramunga Arr**	**66.43**	**100**	P		**P**	**15 00 20.0**	**+0.3**
WR0				IAmb		IAmb	15 00 53.0	
	comp=Z,7.2nm,1.2s							
TORD	**Torodi Ar. Bea**	**71.14**	**298**	P		**P**	**15 00 48.6**	**-0.4**
	comp=Z,8.9nm,0.3s,baz=123,slow=5.3,SNR=2.4							
CAN	**Canberra**	**72.18**	**121**	P		**P**	**15 00 53.9**	**-1.2**
BRTR	**Keskin Array B**	**73.17**	**338**	P		**P**	**15 01 00.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=145,slow=4.5,SNR=3.6							
	comp=Z,0.5nm,0.7s							
SMAI	**San Martin Ant**	**75.72**	**198**	P		**P**	**15 01 14.8**	**-0.3**
SMAI				IAmb		IAmb	15 01 28.9	
	comp=Z,11nm,1.5s							
MKAR	**Makanchi Array**	**77.99**	**15**	P		**P**	**15 01 28.1**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=197,slow=4.5,SNR=4.2							
	comp=Z,0.4nm,0.7s							
ABKAR	**Akbulak array**	**78.08**	**359**	P		**P**	**15 01 29.0**	**+0.6**
ILAR	**Eielson Array**	**140.26**	**18**	PKhKP	PKPpre		15 08 54.8	
	comp=Z,0.4nm,1.0s,baz=298,slow=1.9,SNR=3.4							
TXAR	**Lajitas Array**	**166.75**	**274**	PKP		**PKPdf**	**15 09 36.0**	**-0.1**
	comp=Z,0.1nm,0.6s,baz=123,slow=3.3,SNR=3.5							

NOU 28 15:00:58.1,16.66S×167.45E,h76km,mb3.9/8,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.27**	**146**	P		Pn	15 01 19.8	-0.5
RTV	**Rentapao**	**1.46**	**141**	P		Pn	15 01 23.6	+0.8
KOUNC	**Koumac, New Ca**	**4.90**	**217**	P		Pn	15 02 09.3	+0.1
DZM	**Mont Dzumac**	**5.47**	**190**	P		Pn	15 02 16.7	-0.4

ROM 28 15:34:05.8±0.1,42.806N±0.004×13.148E±0.007, h10km,ML2.4/23,10C-11D,Error ellipse: s-maj=0.6km s-min=0.3km az=275.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.04**	**318**	P		Pg	15 34 08.0	+0.2
NRCA				S		Sg	15 34 09.1	-0.2
NRCA				AML		AML		
	comp=N,34300μm,1.3s							
NRCA				AML		AML		
	comp=E,74650μm,0.2s							
NRCA				AML		AML		
	comp=E,80450μm,0.2s							
NRCA				AML		AML		
	comp=N,40050μm,1.3s							
MC2	**Monte Cornacci**	**0.11**	**16**	P		Pg	15 34 09.2	+0.5
MC2				S		Sg	15 34 11.5	+0.6
MC2				AML		AML		
	comp=E,4255μm,0.3s							
MC2				AML		AML		
	comp=N,4290μm,0.2s							
MC2				AML		AML		
	comp=E,4250μm,0.3s							
MMO1	**Montemonaco**	**0.16**	**55**	P		Pg	15 34 09.9	+0.5
MMO1				S		Sg	15 34 12.7	+0.8
MMO1				AML		AML		
	comp=E,7920μm,0.3s							
MMO1				AML		AML		
	comp=N,6300μm,0.6s							
FEMA	**Monte Fema**	**0.17**	**335**	P		Pg	15 34 10.2	+0.6
FEMA				S		Sg	15 34 13.2	+0.9
FEMA				AML		AML		
	comp=E,4925μm,0.2s							
FEMA				AML		AML		
	comp=N,3780μm,0.2s							
FEMA				AML		AML		
	comp=E,4920μm,0.2s							
LNSS	**Leonessa**	**0.22**	**201**	P		Pg	15 34 11.1	+0.8
LNSS				S		Sg	15 34 15.1	+1.6
LNSS				AML		AML		
	comp=E,4815μm,0.2s							
LNSS				AML		AML		
	comp=N,3830μm,0.3s							
FDMO	**Fiordimonte**	**0.23**	**349**	P		Pg	15 34 11.2	+0.6
FDMO				S		Sg	15 34 15.2	+1.3
FDMO				AML		AML		
	comp=E,1285μm,0.4s							
FDMO				AML		AML		
	comp=N,1665μm,0.7s							
T1243	**Rocca Santa Ma**	**0.25**	**116**	P		Pg	15 34 11.4	+0.6
T1243				S		Sg	15 34 15.4	+1.1
T1243				AML		AML		
	comp=E,3590μm,1.6s							
T1243				AML		AML		
	comp=E,3485μm,1.6s							
T1243

VCEL				AML	AML			
	comp=N,411µm,0.7s							
SSFR	**Montelago di S**	**0.68**	**337**	⇑P	Pb	15 34 19.8	-0.1	
SSFR				AML	AML			
	comp=N,1050µm,0.7s							
SSFR				AML	AML			
	comp=E,964µm,0.2s							
SSFR				AML	AML			
	comp=E,1070µm,0.2s							
SSFR				AML	AML			
	comp=N,982µm,0.2s							
ATTE	**AVT- Monte Tez**	**0.70**	**304**	⇓P	Pg	15 34 19.6	+0.2	
ATTE				AML	AML			
	comp=E,254µm,0.3s							
ATTE				AML	AML			
	comp=N,205µm,1.4s							
ARVD	**Arcevia**	**0.71**	**348**	⇓P	Pg	15 34 19.6	+0.1	
ARVD				S	Sn	15 34 32.0	-0.9	
ARVD				AML	AML			
	comp=N,198µm,0.5s							
ARVD				AML	AML			
	comp=E,238µm,0.5s							
T0110	**Collepietro**	**0.74**	**141**	P	Pg	15 34 20.0	-0.1	
T0110				S	Sb	15 34 31.8	+0.7	
T0110				AML	AML			
	comp=E,362µm,0.3s							
T0110				AML	AML			
	comp=N,379µm,0.3s							
MGAB	**Montegabbione**	**0.77**	**278**	⇓P	Pn	15 34 23.2	+0.5	
MGAB				AML	AML			
	comp=E,450µm,0.4s							
MGAB				AML	AML			
	comp=E,538µm,0.4s							
MGAB				AML	AML			
	comp=E,538µm,0.4s							
MGAB				AML	AML			
	comp=N,524µm,1.4s							
MGAB				AML	AML			
	comp=N,509µm,1.4s							
FRON	**Frontone**	**0.78**	**337**	⇓P	Pg	15 34 20.7	0.0	
FRON				AML	AML			
	comp=N,262µm,0.7s							
FRON				AML	AML			
	comp=E,180µm,0.4s							
ATVO	**AVT- Monte Val**	**0.79**	**317**	⇑P	Pg	15 34 20.9	-0.1	
ATVO				S	Sn	15 34 34.0	-1.0	
ATVO				AML	AML			
	comp=E,194µm,1.3s							
ATVO				AML	AML			
	comp=N,218µm,0.4s							
COR1	**Corinaldo**	**0.83**	**353**	⇑P	Pn	15 34 23.0	-0.6	
COR1				AML	AML			
	comp=E,1452µm,1.4s							
COR1				AML	AML			
	comp=N,1246µm,1.4s							
ATMI	**Monte Miggiano**	**0.83**	**310**	S	Sn	15 34 36.0	0.0	
ATPI	**Pietralunga -**	**0.84**	**320**	⇓P	Pg	15 34 22.1	0.0	
ATPI				S	Sn	15 34 36.0	-0.3	
ATPI				AML	AML			
	comp=E,174µm,1.0s							
ATPI				AML	AML			
	comp=N,178µm,1.1s							
PIEI	**Pieia**	**0.86**	**329**	⇓P	Pb	15 34 22.9	+0.1	
PIEI				AML	AML			
	comp=E,215µm,0.3s							
PIEI				AML	AML			
	comp=N,166µm,0.3s							
CERT	**Cerreto**	**0.86**	**188**	S	Sg	15 34 26.0	-7.7	
MPAG	**Monte Paganucc**	**0.87**	**341**	⇑P	Pg	15 34 22.5	-0.1	
MPAG				S	Sn	15 34 37.0	0.0	
MPAG				AML	AML			
	comp=E,212µm,0.6s							
MPAG				AML	AML			
	comp=N,196µm,1.5s							
FSSB	**Fossombrone**	**0.93**	**343**	⇑P	Pg	15 34 23.6	0.0	
FSSB				AML	AML			
	comp=N,652µm,0.3s							
FSSB				AML	AML			
	comp=E,542µm,0.3s							
BADI	**Badiali**	**0.96**	**317**	P	Pg	15 34 24.3	-0.1	
CAFI	**Castiglion Fio**	**1.01**	**302**	⇓P	Pb	15 34 25.6	+0.2	
CAFI				AML	AML			
	comp=E,104µm,0.8s							
CAFI				AML	AML			
	comp=E,104µm,0.8s							
CAFI				AML	AML			
	comp=N,128µm,0.4s							
VIVA	**Pratoni del Vi**	**1.09**	**195**	S	Sg	15 34 36.0	-4.9	
CSNT	**Castellina Chi**	**1.51**	**297**	S	Sg	15 35 02.0	+7.5	
CASP	**Castiglione de**	**1.68**	**270**	S	Sb	15 34 58.0	0.0	
NDIM	**Novi di Modena**	**2.64**	**323**	⇓P	Pb	15 34 54.6	+1.4	
OPPE	**Oppeano**	**2.88**	**331**	⇑P	Pn	15 34 50.0	-1.7	
OPPE				S	Sg	15 35 43.0	+4.8	
MNTV	**Mantova**	**2.90**	**325**	S	Sb	15 35 35.0	+2.1	
PZUN	**Potenza**	**2.94**	**136**	S	Sn	15 35 26.0	-1.7	
STON	**Ston**	**3.35**	**87**	S	Sn	15 35 38.0	+0.1	
VOBA	**Vobarno**	**3.41**	**327**	S	Sg	15 35 55.0	-0.4	
LEOD	**Capriano del C**	**3.43**	**322**	S	Sb	15 35 45.0	-3.3	
ZOU	**Zoufplan**	**3.75**	**358**	S	Sn	15 35 53.0	+4.8	
EUCT	**Pavia**	**3.76**	**311**	⇓P	Pg	15 35 17.1	-0.7	
QLNO	**Quiliano**	**3.81**	**295**	S	Sb	15 35 57.0	-2.2	
TDS	**Terranova Siba**	**3.96**	**142**	P	Pn	15 35 03.7	-2.9	
IMI	**Imperia**	**3.99**	**288**	S	Sg	15 36 20.0	+6.2	
SPS2	**Spezzano della**	**4.26**	**144**	S	Sn	15 35 52.0	-8.5	
DIVS	**Divibare**	**5.15**	**73**	P	Pb	15 35 36.3	+0.4	

*LDG **28** 15:37:37.7±0.1, 42°.76N×13°.12E, h10km, Md3.6/2, Ml3.2/27, Error ellipse: s-maj=1.8km s-min=1.1km az=47.0*
*IDC **28** 15:37:38.4±1.2, 42°.87N×13°.56E, h0km, mb3.6/3, mbtmp3.6/8, ML3.5/5, Error ellipse: s-maj=30.8km s-min=13.2km az=98.0*
*ROM **28** 15:37:39.0±0.0, 42°.772N±0°.002×13°.120E±0°.003, h12km, ML3.6/112, Mw3.5, Error ellipse: s-maj=0.2km s-min=0.1km az=246.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-1.59; Mθθ-0.04; Mφφ 1.63; Mrθ 0.05; Mθφ-0.88; Mφr-0.44; Fault plane solution: M0 1.85912×10¹⁴ NP1:φs 150.00000°, δ 39.00000°, λ -99.00000°. NP2:φs 342.00000°, δ 52.00000°, λ -83.00000°.*
*PRU **28** 15:37:39.6±0.0, 42°.80N×13°.47E, h0km*
*PDG **28** 15:37:39.3±0.6, 42°.78N×13°.11E, h14km, ML3.7/9, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*BEO **28** 15:37:41.5±0.6, 42°.72N×13°.07E, h21km±5km, ML3.6/10*

ISC 28 15:37:38.7±0.6, **42.77N**±0'.01×**13.10E**±0'.01, **h16**km±3km, **n326,** σ **2s13**/452, **mb3.9**/3, **94C-44D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.04**	**249**	⇓P			**Pg**	**15 37 41.7**	**0.0**
T1212				S			**Sg**	**15 37 43.4**	**-0.3**
T1213	**Norcia, Frazio**	**0.05**	**156**	⇓P			**Pg**	**15 37 41.6**	**-0.2**
T1213				S			**Sg**	**15 37 43.3**	**-0.4**
NRCA	**Norcia**	**0.07**	**9**	⇓P			**Pg**	**15 37 41.6**	**-0.4**
NRCA				S			**Sg**	**15 37 43.2**	**-0.9**
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
NRCA				AML	AML				
T1214	**Arquata del Tr**	**0.08**	**96**	⇓P			**Pg**	**15 37 41.9**	**-0.3**
T1214				S			**Sg**	**15 37 43.7**	**-0.7**
T1218	**Civita (PG)**	**0.10**	**173**	⇓P			**Pg**	**15 37 42.3**	**+0.1**
T1218				S			**Sg**	**15 37 44.6**	**0.0**
T1242	**Castelluccio d**	**0.10**	**51**	⇓P			**Pg**	**15 37 42.0**	**-0.3**
T1242				S			**Sg**	**15 37 43.9**	**-0.8**
T1202	**Accumoli, Fraz**	**0.11**	**125**	⇓P			**Pg**	**15 37 42.4**	**0.0**
T1202				S			**Sg**	**15 37 44.8**	**0.0**
T1216	**Preci, Frazion**	**0.14**	**334**	⇓P			**Pg**	**15 37 42.6**	**0.0**
T1216				S			**Sg**	**15 37 45.1**	**-0.1**
T1244	**Arquata del Tr**	**0.15**	**94**	⇑P			**Pg**	**15 37 42.8**	**0.0**
T1244				S			**Sg**	**15 37 45.5**	**+0.1**
T1201	**Domo (RI)**	**0.16**	**135**	P			**Pg**	**15 37 43.2**	**+0.3**
MC2	**Monte Cornacci**	**0.16**	**25**	⇓P			**Pg**	**15 37 42.9**	**-0.2**
MC2				S			**Sg**	**15 37 45.7**	**-0.3**
MC2				AML	AML				
MC2				AML	AML				
LNSS	**Leonessa**	**0.17**	**195**	⇑P			**Pg**	**15 37 43.4**	**+0.3**
LNSS				S			**Sg**	**15 37 46.7**	**+0.6**
LNSS				AML	AML				
	comp=N,73650µm,1.3s								
LNSS				AML	AML				
	comp=E,69300µm,0.8s								
T1215	**Vallo di Nera,**	**0.17**	**281**	⇑P			**Pg**	**15 37 43.4**	**+0.3**
T1215				S			**Sg**	**15 37 46.6**	**+0.5**
T1204	**Amatrice, Fraz**	**0.18**	**120**	⇑P			**Pg**	**15 37 43.4**	**+0.1**
T1204				S			**Sg**	**15 37 46.6**	**+0.2**
FEMA	**Monte Fema**	**0.20**	**349**	⇓P			**Pg**	**15 37 43.5**	**0.0**
FEMA				S			**Sg**	**15 37 46.9**	**+0.1**
FEMA				AML	AML				
FEMA				AML	AML				
	comp=E,82050µm,0.5s								
FEMA				AML	AML				
FEMA				AML	AML				
	comp=E,82000µm,0.5s								
FEMA				AML	AML				
MMO1	**Montemonaco**	**0.21**	**52**	⇑P			**Pg**	**15 37 43.5**	**-0.2**
MMO1				S			**Sg**	**15 37 47.0**	**-0.1**
MMO1				AML	AML				
	comp=N,10500µm,0.6s								
MMO1				AML	AML				
	comp=E,89400µm,0.8s								
MMO1				AML	AML				
	comp=N,71200µm,0.6s								
MMO1				AML	AML				
	comp=E,6860µm,0.4s								
MMO1				AML	AML				
	comp=N,10505µm,0.6s								
MMO1				AML	AML				
	comp=E,89350µm,0.8s								
MMO1				AML	AML				
	comp=N,71250µm,0.6s								
T1241	**Roccafluvione,**	**0.26**	**70**	⇑P			**Pg**	**15 37 44.3**	**-0.1**
T1241				S			**Sg**	**15 37 48.5**	**+0.1**
T1243	**Rocca Santa Ma**	**0.27**	**105**	⇑P			**Pg**	**15 37 44.4**	**-0.2**
T1243				S			**Sg**	**15 37 48.8**	**+0.2**
T1243				AML	AML				
	comp=E,45600µm,0.2s								
T1243				AML	AML				
	comp=N,32100µm,0.1s								
T1243				AML	AML				
	comp=E,45650µm,0.2s								
T1243				AML	AML				
	comp=N,32150µm,0.1s								
T1243				AML	AML				
	comp=N,32150µm,0.1s								
T1243				AML	AML				
	comp=N,32450µm,0.1s								
T1243				AML	AML				
	comp=E,45650µm,0.2s								
T1243				AML	AML				
	comp=E,45050µm,0.2s								
FDMO	**Fiordimonte**	**0.27**	**358**	⇓P			**Pg**	**15 37 44.6**	**0.0**
FDMO				S			**Sg**	**15 37 48.9**	**+0.3**
FDMO				AML	AML				
	comp=E,35400µm,0.3s								
FDMO				AML	AML				
	comp=N,36050µm,0.5s								
RM33	**Pellescritta (**	**0.27**	**162**	⇓P			**Pg**	**15 37 44.9**	**+0.2**
RM33				S			**Sb**	**15 37 49.8**	**+0.1**
RM33				AML	AML				
	comp=E,12300µm,0.8s								
RM33				AML	AML				
	comp=N,10475µm,1.1s								
RM33				AML	AML				
	comp=E,12350µm,0.8s								
RM33				AML	AML				
	comp=N,10235µm,0.3s								
RM33				AML	AML				
	comp=E,12350µm,0.8s								
RM33				AML	AML				
	comp=N,10480µm,1.1s								
RM33				AML	AML				
	comp=N,10245µm,0.3s								
T1211	**Morro Reatino**	**0.30**	**218**	⇑P			**Pg**	**15 37 45.5**	**+0.4**
T1211				S			**Sb**	**15 37 50.5**	**+0.1**
ARRO	**Arrone**	**0.31**	**233**	⇑P			**Pg**	**15 37 45.8**	**+0.5**
ARRO				S			**Sb**	**15 37 51.0**	**+0.3**
ARRO				AML	AML				
	comp=E,12200µm,0.2s								
ARRO				AML	AML				
	comp=N,13150µm,0.8s								
CAMP	**Campotosto**	**0.33**	**135**	⇑P			**Pg**	**15 37 45.6**	**0.0**
CAMP				S			**Sg**	**15 37 50.6**	**+0.3**
CAMP				AML	AML				
	comp=N,5770µm,0.4s								
CAMP				AML	AML				
	comp=E,5100µm,0.8s								
CSP1	**Cessapalombo**	**0.33**	**13**	⇑P			**Pg**	**15 37 45.7**	**0.0**
CSP1				S			**Sg**	**15 37 50.9**	**+0.3**
CSP1				AML	AML				
	comp=N,47200µm,0.4s								
CSP1				AML	AML				
	comp=E,32400µm,0.6s								
CSP1				AML	AML				
	comp=N,47250µm,0.4s								
SEF1	**Sefro**	**0.40**	**344**	⇓P			**Pg**	**15 37 46.8**	**0.0**
SEF1				S			**Sb**	**15 37 53.1**	**-0.2**
SEF1				AML	AML				
	comp=E,22300µm,0.3s								
SEF1				AML	AML				
	comp=N,24650µm,0.2s								
SEF1				AML	AML				
	comp=N,24700µm,0.2s								
SEF1				AML	AML				
	comp=E,22350µm,0.3s								
TERO	**Teramo**	**0.40**	**111**	⇑P			**Pg**	**15 37 46.6**	**-0.2**
TERO				S			**Sg**	**15 37 52.8**	**+0.4**
TERO				AML	AML				
	comp=E,11665µm,0.1s								
TERO				AML	AML				
	comp=E,11675µm,0.1s								
TERO				AML	AML				
	comp=N,12350µm,0.5s								
TERO				AML	AML				
	comp=E,13950µm,0.5s								
TERO				AML	AML				
	comp=N,13350µm,0.5s								
CESX	**Cesi**	**0.41**	**248**	⇑P			**Pg**	**15 37 47.4**	**+0.3**
CESX				S			**Sb**	**15 37 54.0**	**+0.3**
CESX				AML	AML				
	comp=E,9945µm,0.6s								
CESX				AML	AML				
	comp=N,8965µm,1.1s								
PIO1	**Pioraco**	**0.42**	**348**	P			**Pg**	**15 37 47.3**	**0.0**
PIO1				S			**Sb**	**15 37 54.0**	**0.0**
PIO1				AML	AML				
	comp=E,8405µm,0.7s								
PIO1				AML	AML				
	comp=N,9850µm,1.2s								
PIO1				AML	AML				
	comp=E,8425µm,0.7s								
PIO1				AML	AML				
	comp=N,9845µm,1.2s								
ASSB	**Assisi San Ben**	**0.42**	**310**	⇑P			**Pg**	**15 37 47.5**	**+0.1**
ASSB				S			**Sb**	**15 37 54.2**	**+0.1**
ASSB				AML	AML				
	comp=N,14750µm,0.4s								
ASSB				AML	AML				
	comp=E,22200µm,1.5s								
MDAR	**Monte D'Aria**	**0.43**	**4**	P			**Pg**	**15 37 47.4**	**0.0**
MDAR				S			**Sb**	**15 37 53.9**	**-0.3**
MDAR				AML	AML				
	comp=E,17600µm,0.4s								
MDAR				AML	AML				
	comp=N,23050µm,0.3s								
FIU1	**Fiuminata**	**0.44**	**344**	P			**Pg**	**15 37 47.5**	**0.0**
FIU1				S			**Sb**	**15 37 54.4**	**-0.1**
MNTP	**Montappone**	**0.46**	**36**	P			**Pg**	**15 37 48.3**	**+0.4**
MNTP				AML	AML				
	comp=E,34500µm,1.1s								
MNTP				AML	AML				
	comp=E,34500µm,1.1s								
MNTP				AML	AML				
	comp=N,39000µm,0.4s								
OFFI	**Offida**	**0.46**	**69**	⇑P			**Pb**	**15 37 48.6**	**+0.1**
OFFI				AML	AML				
	comp=E,26500µm,0.4s								
OFFI				AML	AML				
	comp=N,45150µm,0.5s								
SSM1	**San Severino M**	**0.46**	**7**	P			**Pg**	**15 37 48.0**	**-0.1**
SSM1				S			**Sb**	**15 37 55.0**	**-0.2**
GIGS	**Gran Sasso**	**0.47**	**132**	⇑P			**Pg**	**15 37 47.8**	**-0.4**
GIGS				S			**Sg**	**15 37 55.0**	**+0.4**
GIGS				AML	AML				
	comp=E,2120µm,0.9s								
GIGS				AML	AML				
	comp=N,1565µm,0.8s								
GAG1	**Gagliole**	**0.47**	**357**	P			**Pg**	**15 37 48.2**	**+0.1**
GAG1				S			**Sb**	**15 37 55.2**	**-0.2**
MTL1	**Matelica**	**0.49**	**352**	P			**Pg**	**15 37 48.6**	**+0.1**
MTL1				S			**Sb**	**15 37 56.1**	**+0.1**
MTL1				AML	AML				
	comp=E,20150µm,0.6s								
MTL1				AML	AML				
	comp=N,27900µm,0.4s								
MTL1				AML	AML				
	comp=N,27850µm,0.4s								
MTL1				AML	AML				
	comp=E,20150µm,0.6s								
FIAM	**Fiamignano**	**0.50**	**179**	⇑P			**Pg**	**15 37 48.8**	**+0.1**
FIAM				S			**Sb**	**15 37 56.5**	**+0.2**
FIAM				AML	AML				
	comp=E,3720µm,1.2s								
FIAM				AML	AML				
	comp=N,3460µm,0.7s								
SNTG	**Esanatoglia**	**0.50**	**347**	P			**Pg**	**15 37 48.6**	**-0.1**
SNTG				S			**Sb**	**15 37 56.2**	**-0.1**
SNTG				AML	AML				
	comp=E,945µm,0.5s								
SNTG				AML	AML				
	comp=N,876µm,0.2s								
SNTG				AML	AML				
	comp=E,7100µm,0.4s								
SNTG				AML	AML				
	comp=N,7265µm,0.2s								
SNTG				AML	AML				
	comp=E,946µm,0.5s								
SNTG				AML	AML				
	comp=N,875µm,0.2s								
ATCC	**AVT- Casa Cast**	**0.54**	**321**	⇑P			**Pg**	**15 37 49.5**	**+0.1**
ATCC				S			**Sb**	**15 37 57.7**	**+0.4**
EL6	**Elcito**	**0.56**	**0**	⇑P			**Pg**	**15 37 49.7**	**-0.2**
EL6				S			**Sb**	**15 37 57.9**	**-0.2**
EL6				AML	AML				
	comp=E,21750µm,0.2s								
EL6				AML	AML				
	comp=N,14200µm,1.0s								
TRE1	**Treia**	**0.56**	**16**	P			**Pb**	**15 37 50.4**	**+0.1**
TRE1				AML	AML				
	comp=E,30850µm,0.5s								
TRE1				AML	AML				
	comp=N,21100µm,0.7s								
TRE1				AML	AML				
	comp=E,30900µm,0.5s								
FOSV	**Fossato di Vic**	**0.58**	**335**	⇑P			**Pg**	**15 37 50.1**	**-0.2**
FOSV				S			**Sb**	**15 37 59.0**	**+0.3**
FOSV				AML	AML				
	comp=E,5345µm,0.4s								
FOSV				AML	AML				
	comp=N,6410µm,0.6s								
FOSV				AML	AML				
	comp=N,6415µm,0.6s								
TRTR	**Tortoreto Alta**	**0.60**	**86**	⇑P			**Pb**	**15 37 51.3**	**+0.5**
TRTR				AML	AML				
	comp=N,22050µm,0.8s								
TRTR				AML	AML				
	comp=E,23650µm,0.8s								
CING	**Cingoli**	**0.61**	**7**	⇑P			**Pg**	**15 37 50.5**	**-0.3**
CING				S			**Sb**	**15 37 59.7**	**+0.2**
CING				AML	AML				
	comp=E,7335µm,0.2s								
CING				AML	AML				
	comp=N,8075µm,0.6s								
FAGN	**Fagnano**	**0.62**	**144**	⇑P			**Pg**	**15 37 50.5**	**-0.4**
FAGN				S			**Sb**	**15 37 59.8**	**+0.3**
FAGN				AML	AML				
	comp=N,4555µm,1.3s								
FAGN				AML	AML				
	comp=E,6275µm,0.5s								
CADA	**Capodarco di F**	**0.65**	**48**	AML	AML				
	comp=N,21200µm,0.6s								
CADA				AML	AML				
	comp=E,21100µm,0.3s								
MURB	**Monte Urbino**	**0.65**	**320**	⇑P			**Pg**	**15 37 51.5**	**0.0**
MURB				S			**Sb**	**15 38 00.8**	**+0.2**
MURB				AML	AML				
	comp=E,18700µm,0.4s								
MURB				AML	AML				
	comp=N,17700µm,0.3s								
MURB				AML	AML				
	comp=E,20650µm,0.4s								
MURB				AML	AML				
	comp=N,17900µm,0.3s								
MURB				AML	AML				
	comp=N,17700µm,0.3s								
MURB				AML	AML				
	comp=E,18750µm,0.4s								
VCEL	**Villa Celiera**	**0.66**	**124**	⇑P			**Pg**	**15 37 51.4**	**-0.4**
VCEL				S			**Sb**	**15 38 01.1**	**+0.2**
VCEL				AML	AML				
	comp=E,5115µm,1.1s								
VCEL				AML	AML				
	comp=N,6465µm,0.9s								
VCEL				AML	AML				
	comp=E,5110µm,1.1s								
MMUR	**Monte Murano**	**0.68**	**354**	P			**Pg**	**15 37 51.9**	**-0.1**
SRES	**S.Oreste - Sor**	**0.69**	**220**	⇑P			**Pg**	**15 37 52.1**	**0.0**
SRES				S			**Sb**	**15 38 02.1**	**+0.5**
SRES				AML	AML				
	comp=E,1870µm,1.2s								
SRES				AML	AML				
	comp=N,2090µm,1.1s								
ATTE	**AVT- Monte Tez**	**0.70**	**308**	⇑P			**Pg**	**15 37 52.3**	**-0.1**
ATTE				S			**Sb**	**15 38 02.8**	**+0.8**
ATTE				AML	AML				
	comp=E,3330µm,0.4s								
ATTE				AML	AML				
	comp=N,3715µm,0.4s								
SSFR	**Montelago di S**	**0.71**	**341**	P			**Pg**	**15 37 52.4**	**-0.2**
SSFR				S			**Sb**	**15 38 02.8**	**+0.5**
SSFR				AML	AML				
	comp=N,11650µm,0.3s								
SSFR				AML	AML				
	comp=N,11045µm,0.7s								
SSFR				AML	AML				
	comp=E,10510µm,0.7s								
SSFR				AML	AML				
	comp=E,10715µm,0.7s								
PP3	**Marolino**	**0.71**	**31**	⇑P			**Pb**	**15 37 53.1**	**+0.3**
PP3				AML	AML				
	comp=E,64450µm,0.4s								
PP3				AML	AML				
	comp=N,32150µm,0.5s								
PP3				AML	AML				
	comp=E,68550µm,0.4s								
PP3				AML	AML				
	comp=E,68500µm,0.4s								
PP3				AML	AML				
	comp=N,25550µm,0.5s								
PP3				AML	AML				
	comp=N,32200µm,0.5s								
ATSC	**Scheggia e Pas**	**0.72**	**335**	P			**Pg**	**15 37 52.5**	**-0.4**
ATSC				S			**Sb**	**15 38 03.1**	**+0.4**
T0110	**Collepietro**	**0.74**	**137**	⇑P			**Pg**	**15 37 52.4**	**-0.7**
T0110				S			**Sb**	**15 38 03.4**	**+0.3**
T0110				AML	AML				
	comp=N,4445µm,0.4s								
T0110				AML	AML				
	comp=E,5345µm,0.5s								
ARVD	**Arcevia**	**0.74**	**351**	P			**Pg**	**15 37 52.9**	**-0.3**
ARVD				S			**Sb**	**15 38 03.7**	**+0.6**
ARVD				AML	AML				
	comp=E,4600µm,0.5s								
ARVD				AML	AML				
	comp=N,3000µm,1.0s								
MGAB	**Montegabbione**	**0.74**	**282**	⇑P			**Pg**	**15 37 53.3**	**+0.1**
MGAB				AML	AML				
	comp=E,7520µm,1.2s								
MGAB				AML	AML				
	comp=N,5730µm,0.6s								
MGAB				AML	AML				
	comp=N,6970µm,0.6s								
MGAB				AML	AML				
	comp=N,5735µm,0.6s								
MGAB				AML	AML				
	comp=E,7515µm,1.2s								
MGAB				AML	AML				
	comp=E,7890µm,1.2s								
ATLO	**AVT- Montelove**	**0.75**	**317**	⇑P			**Pg**	**15 37 53.0**	**-0.3**
ATLO				S			**Sb**	**15 38 04.2**	**+0.8**
PTQR	**Pietraquaria**	**0.78**	**163**	P			**Pg**	**15 37 53.4**	**-0.5**
PTQR				AML	AML				

	comp=E,1220µm,1.4s							
PTQR					AML	AML		
	comp=N,1075µm,1.5s							
ATVA	**AVT- Monte Val**	**0.79**	**311**	⇑P		**Pg**	**15 37 53.9**	**-0.2**
ATVA				S		**Sb**	**15 38 05.3**	**+0.8**
MTCE	**Montecelio**	**0.79**	**200**	⇑P		**Pg**	**15 37 53.8**	**-0.3**
MTCE				S		**Sb**	**15 38 05.1**	**+0.6**
MTCE					AML	AML		
	comp=N,1545µm,1.2s							
MTCE					AML	AML		
	comp=E,2380µm,1.2s							
ATVO	**AVT- Monte Val**	**0.80**	**321**	⇑P		**Pg**	**15 37 53.9**	**-0.4**
ATVO				S		**Sb**	**15 38 05.7**	**+0.9**
ATVO					AML	AML		
	comp=E,3575µm,0.4s							
ATVO					AML	AML		
	comp=N,5295µm,0.5s							
FRON	**Frontone**	**0.80**	**340**	⇑P		**Pg**	**15 37 53.7**	**-0.6**
FRON				S		**Sb**	**15 38 05.4**	**+0.5**
FRON					AML	AML		
	comp=E,3170µm,0.7s							
FRON					AML	AML		
	comp=N,5140µm,0.6s							
TB03	**Pietralunga**	**0.81**	**322**	⇑P		**Pg**	**15 37 54.1**	**-0.4**
ATBU	**Serra di Buran**	**0.81**	**330**	⇑P		**Pg**	**15 37 54.4**	**-0.2**
CERT	**Cerreto**	**0.82**	**186**	⇑P		**Pg**	**15 37 54.2**	**-0.5**
CERT					AML	AML		
	comp=N,2150µm,1.0s							
CERT					AML	AML		
	comp=E,4580µm,0.4s							
ATMI	**Monte Miggiano**	**0.83**	**313**	⇑P		**Pg**	**15 37 54.9**	**-0.1**
ATMI					AML	AML		
	comp=E,10800µm,0.7s							
ATMI					AML	AML		
	comp=N,10215µm,1.0s							
ATPI	**Pietralunga -**	**0.85**	**323**	⇑P		**Pg**	**15 37 54.9**	**-0.4**
ATPI				S		**Sb**	**15 38 06.9**	**+0.5**
ATPI					AML	AML		
	comp=N,3270µm,0.9s							
ATPI					AML	AML		
	comp=E,4010µm,0.7s							
ATPI					AML	AML		
	comp=N,3275µm,0.9s							
ATPC	**Poggio Castell**	**0.85**	**327**	⇑P		**Pg**	**15 37 55.0**	**-0.3**
ATPC				S		**Sb**	**15 38 06.9**	**+0.5**
AOI	**Ancona**	**0.86**	**25**	⇑P		**Pg**	**15 37 55.1**	**-0.4**
AOI					AML	AML		
	comp=E,5945µm,0.4s							
AOI					AML	AML		
	comp=N,5740µm,0.4s							
AOI					AML	AML		
	comp=N,5745µm,0.4s							
COR1	**Corinaldo**	**0.87**	**355**	⇑P		**Pb**	**15 37 56.0**	**+0.5**
COR1					AML	AML		
	comp=E,10210µm,0.4s							
COR1					AML	AML		
	comp=N,10815µm,0.5s							
COR1					AML	AML		
	comp=E,5450µm,0.4s							
COR1					AML	AML		
	comp=N,10350µm,0.5s							
COR1					AML	AML		
	comp=N,10860µm,0.5s							
COR1					AML	AML		
	comp=E,10195µm,0.4s							
PIEI	**Pieia**	**0.87**	**332**	P		**Pg**	**15 37 54.9**	**-0.8**
PIEI				S		**Sb**	**15 38 07.5**	**+0.5**
PIEI					AML	AML		
	comp=E,3490µm,1.2s							
PIEI					AML	AML		
	comp=N,2425µm,0.6s							
SACS	**San Casciano d**	**0.88**	**276**	⇑P		**Pg**	**15 37 56.0**	**+0.1**
SACS					AML	AML		
	comp=N,2290µm,1.1s							
SACS					AML	AML		
	comp=N,2240µm,1.1s							
SACS					AML	AML		
	comp=E,3940µm,1.1s							
SACS					AML	AML		
	comp=E,3935µm,1.0s							
MPAG	**Monte Paganucc**	**0.90**	**344**	⇑P		**Pb**	**15 37 55.5**	**-0.4**
MPAG					AML	AML		
	comp=E,3950µm,0.4s							
MPAG					AML	AML		
	comp=N,3040µm,0.3s							
MPAG					AML	AML		
	comp=E,3955µm,0.4s							
MPAG					AML	AML		
	comp=N,3045µm,0.3s							
RCAV	**Rocca di Cave**	**0.93**	**187**	P		**Pb**	**15 37 56.4**	**-0.1**
APEC	**Apecchio**	**0.93**	**328**	P		**Pg**	**15 37 57.1**	**+0.2**
SENI	**Senigallia**	**0.94**	**6**	P		**Pg**	**15 37 57.2**	**+0.2**
ATMC	**Monte Cedrone**	**0.95**	**316**	P		**Pb**	**15 37 56.8**	**-0.1**
ATMC				S		**Sg**	**15 38 10.2**	**+0.6**
FSSB	**Fossombrone**	**0.95**	**346**	⇑P		**Pb**	**15 37 56.8**	**-0.1**
FSSB					AML	AML		
	comp=N,12000µm,0.5s							
FSSB					AML	AML		
	comp=E,13300µm,0.3s							
INTR	**Introdacqua**	**0.96**	**141**	⇑P		**Pb**	**15 37 56.1**	**-1.0**
INTR					AML	AML		
	comp=E,2415µm,0.8s							
INTR					AML	AML		
	comp=E,2µm,0.8s							
INTR					AML	AML		
	comp=N,3µm,1.3s							
INTR					AML	AML		
	comp=N,5070µm,1.3s							
LATE	**Laterza**	**0.97**	**261**	⇑P		**Pb**	**15 37 57.5**	**+0.4**
BADI	**Badiali**	**0.97**	**320**	⇓P		**Pb**	**15 37 57.4**	**+0.2**
VVLD	**Villa Vallelon**	**0.98**	**156**	P		**Pb**	**15 37 57.1**	**-0.2**
VVLD					AML	AML		
	comp=E,1235µm,1.3s							
VVLD					AML	AML		
	comp=N,1370µm,0.7s							
GUAR	**Guarcino**	**0.98**	**171**	P		**Pb**	**15 37 57.8**	**+0.3**
GUAR					AML	AML		
	comp=E,2375µm,1.1s							
GUAR					AML	AML		
	comp=N,2230µm,0.8s							
RMP	**Rome, Mte Porz**	**1.00**	**197**	P		**Pb**	**15 37 57.4**	**-0.3**
CAFI	**Castiglion Fio**	**1.00**	**304**	⇑P		**Pb**	**15 37 57.9**	**+0.2**
CAFI					AML	AML		
	comp=E,2940µm,0.7s							
CAFI					AML	AML		
	comp=N,2510µm,0.8s							
CAFI					AML	AML		
	comp=E,3035µm,0.7s							
CAFI					AML	AML		
	comp=N,2645µm,0.8s							
PE3	**Peglio**	**1.03**	**335**	⇓P		**Pb**	**15 37 58.4**	**+0.2**
PE3					AML	AML		
	comp=N,20µm,0.5s							
PE3					AML	AML		
	comp=E,22µm,0.4s							
SF03	**Valle Cupa**	**1.04**	**272**	P		**Pb**	**15 37 58.5**	**0.0**
MCIV	**Monte Civitell**	**1.05**	**271**	P		**Pb**	**15 37 58.9**	**+0.4**
MCIV					AML	AML		
	comp=E,1030µm,0.3s							
MCIV					AML	AML		
	comp=N,1014µm,0.6s							
RDP	**Rocca di Papa**	**1.05**	**196**	P		**Pb**	**15 37 58.8**	**+0.3**
RDP					AML	AML		
	comp=N,3965µm,0.4s							
RDP					AML	AML		
	comp=E,5675µm,0.5s							
SF11	**Podere del Sol**	**1.05**	**276**	P		**Pb**	**15 37 58.7**	**+0.1**
SAMA	**S.Maria delle**	**1.06**	**201**	P		**Pb**	**15 37 58.8**	**+0.2**
SF04	**Casetta**	**1.06**	**274**	P		**Pn**	**15 37 59.3**	**+0.3**
CAFR	**Castel Frentan**	**1.07**	**120**	P		**Pb**	**15 37 58.4**	**-0.5**
SSP9	**Sansepolcro**	**1.07**	**319**	P		**Pn**	**15 37 59.5**	**+0.3**
SSP9					AML	AML		
	comp=E,2155µm,1.1s							
SSP9					AML	AML		
	comp=N,1822µm,1.3s							
TOLF	**Tolfa**	**1.08**	**230**	⇑P		**Pb**	**15 37 59.1**	**+0.1**
TOLF					AML	AML		
	comp=E,1405µm,0.9s							
TOLF					AML	AML		
	comp=N,960µm,1.5s							
LPEL	**Lama dei Pelig**	**1.08**	**132**	P		**Pb**	**15 37 58.4**	**-0.7**
LPEL					AML	AML		
	comp=E,2660µm,1.0s							
LPEL					AML	AML		
	comp=N,2495µm,1.1s							
PARC	**Parchiule**	**1.08**	**325**	⇑P		**Pb**	**15 37 59.2**	**+0.1**
PARC					AML	AML		
	comp=E,2060µm,1.2s							
PARC					AML	AML		
	comp=N,1795µm,0.4s							
SF13	**Bagnolo**	**1.09**	**273**	P		**Pb**	**15 37 59.6**	**+0.4**
SF14	**Selvena**	**1.09**	**270**	⇑P		**Pb**	**15 37 59.5**	**+0.2**
LAV9	**Lanuvio**	**1.13**	**195**	P		**Pb**	**15 38 00.0**	**+0.1**
LAV9					AML	AML		
	comp=E,3720µm,1.2s							
LAV9					AML	AML		
	comp=N,3260µm,0.4s							
LAV9					AML	AML		
	comp=N,3095µm,0.3s							
LAV9					AML	AML		
	comp=E,3935µm,1.2s							
SF01	**Poggio Pratacc**	**1.13**	**273**	P		**Pb**	**15 38 00.2**	**+0.2**
SF01					AML	AML		
	comp=N,1506µm,0.5s							
SF01					AML	AML		
	comp=E,2424µm,0.7s							
POFI	**Posta Fibreno**	**1.14**	**156**	P		**Pb**	**15 37 59.9**	**-0.3**
POFI					AML	AML		
	comp=N,1120µm,0.9s							
POFI					AML	AML		
	comp=E,1445µm,1.1s							
PESA	**Pesaro**	**1.19**	**351**	P		**Pb**	**15 38 01.4**	**+0.5**
PESA					AML	AML		
	comp=E,5935µm,0.5s							
PESA					AML	AML		
	comp=N,5575µm,0.4s							
CRE	**Caprese Michel**	**1.20**	**316**	P		**Pn**	**15 38 01.2**	**+0.3**
CRE				S		**Sn**	**15 38 17.1**	**+0.2**
CRE					AML	AML		
	comp=E,1284µm,1.6s							
CRE					AML	AML		
	comp=N,1790µm,0.5s							
ARCI	**Arcidosso**	**1.20**	**275**	P		**Pb**	**15 38 01.5**	**+0.4**
ARCI					AML	AML		
	comp=N,428µm,1.6s							
ARCI					AML	AML		
	comp=E,498µm,1.5s							
GIUL	**Giuliano Di Ro**	**1.21**	**175**	P		**Pn**	**15 38 01.2**	**+0.2**
GIUL					AML	AML		
	comp=E,680µm,1.0s							
GIUL					AML	AML		
	comp=N,778µm,1.0s							
LATB	**Latina**	**1.28**	**185**	P		**Pn**	**15 38 02.2**	**+0.3**
LATB					AML	AML		
	comp=E,361µm,1.6s							
LATB					AML	AML		
	comp=N,366µm,0.8s							
RNI2	**Rionero Sannit**	**1.32**	**143**	P		**Pb**	**15 38 03.4**	**+0.2**
CERA	**Filignano**	**1.35**	**149**	P		**Pn**	**15 38 03.4**	**+0.4**
CERA					AML	AML		
	comp=N,1131µm,1.1s							
CERA					AML	AML		
	comp=E,1135µm,0.7s							
CERA					AML	AML		
	comp=N,1074µm,1.1s							
CERA					AML	AML		
	comp=E,1100µm,0.7s							
ASQU	**Asqua**	**1.41**	**318**	P		**Pn**	**15 38 04.1**	**+0.3**
ASQU					AML	AML		
	comp=E,1158µm,0.5s							
ASQU					AML	AML		
	comp=N,1171µm,0.9s							
FRES	**Fresagrandinar**	**1.41**	**124**	AML		AML		
	comp=N,588µm,0.8s							
FRES					AML	AML		
	comp=E,807µm,0.8s							
SFI	**Santa Sofia**	**1.46**	**322**	P		**Pb**	**15 38 05.3**	**-0.2**
TRIV	**Trivento**	**1.47**	**132**	⇑P		**Pg**	**15 38 07.3**	**+0.3**
TRIV					AML	AML		
	comp=E,1725µm,0.7s							
TRIV					AML	AML		
	comp=E,1650µm,0.7s							
TRIV					AML	AML		
	comp=N,1039µm,0.8s							
TRIV					AML	AML		
	comp=N,1125µm,0.8s							
FROS	**Frosini**	**1.49**	**288**	P		**Pn**	**15 38 05.8**	**+0.9**
CSNT	**Castellina Chi**	**1.50**	**299**	⇑P		**Pb**	**15 38 06.2**	**0.0**
CSNT					AML	AML		
	comp=N,550µm,0.8s							
CSNT					AML	AML		
	comp=E,508µm,0.6s							
OSSC	**Osservatorio P**	**1.55**	**300**	P		**Pb**	**15 38 07.0**	**-0.1**
OSSC					AML	AML		
	comp=E,655µm,1.2s							
OSSC					AML	AML		
	comp=N,576µm,0.6s							
RUFI	**Rufina**	**1.58**	**313**	P		**Pb**	**15 38 07.3**	**-0.3**
RUFI					AML	AML		
	comp=E,941µm,0.5s							
RUFI					AML	AML		
	comp=N,1074µm,1.6s							
VAGA	**Valle Agricola**	**1.59**	**148**	AML		AML		
	comp=N,738µm,0.8s							
VAGA					AML	AML		
	comp=E,462µm,1.5s							
CASP	**Castiglione de**	**1.65**	**272**	⇑P		**Pn**	**15 38 07.6**	**+0.6**
CASP					AML	AML		
	comp=E,192µm,1.0s							
CASP					AML	AML		
	comp=N,223µm,0.9s							
BSSO	**Busso**	**1.65**	**137**	P		**Pb**	**15 38 08.9**	**+0.1**
TRIF	**Trifonti**	**1.65**	**283**	⇑P		**Pn**	**15 38 08.0**	**+0.9**
TRIF					AML	AML		
	comp=E,383µm,0.6s							
TRIF					AML	AML		
	comp=N,530µm,0.7s							
LMD	**Lutirano**	**1.66**	**323**	P		**Pb**	**15 38 08.6**	**-0.3**
SEI	**Scarperia**	**1.81**	**316**	P		**Pn**	**15 38 10.7**	**+1.4**
SEI					AML	AML		
	comp=N,1114µm,0.6s							
SEI					AML	AML		
	comp=E,808µm,0.5s							
SACR	**S. Croce Del S**	**1.82**	**138**	P		**Pn**	**15 38 10.3**	**+0.9**
MELA	**Melanico ??? S**	**1.84**	**124**	⇓P		**Pb**	**15 38 12.3**	**+0.3**
MELA					AML	AML		
	comp=N,1615µm,1.1s							
MELA					AML	AML		
	comp=E,1315µm,0.8s							
MELA					AML	AML		
	comp=N,1615µm,1.1s							
MELA					AML	AML		
	comp=E,1450µm,0.8s							
DUGI	**Dugi Otok**	**1.88**	**49**	*e*Pn		**Pn**	**15 38 11.0**	**+0.8**
MPPT	**Montemurlo**	**1.89**	**310**	P		**Pn**	**15 38 11.4**	**+1.0**
TREM	**Isole Tremiti**	**1.90**	**109**	S		**Sg**	**15 38 40.0**	**+0.2**
FNVD	**Fontana Vidola**	**2.01**	**315**	P		**Pn**	**15 38 13.5**	**+1.4**
APRC	**Apricena**	**2.08**	**118**	⇓P		**Pb**	**15 38 14.9**	**-1.1**
APRC					AML	AML		
	comp=E,537µm,0.3s							
APRC					AML	AML		
	comp=N,719µm,0.8s							
VIRC	**Vir**	**2.08**	**42**	*e*Pn		**Pn**	**15 38 13.7**	**+0.7**
PII	**Pisa**	**2.11**	**298**	⇓P		**Pb**	**15 38 16.3**	**-0.2**
PII					AML	AML		
	comp=E,342µm,0.6s							
PII					AML	AML		
	comp=N,348µm,0.5s							
BRJN	**Brijuni**	**2.19**	**12**	*e*Pn		**Pn**	**15 38 15.1**	**+0.7**
BRJN	**Brijuni**	**2.19**	**12**	⇓P		**Pn**	**15 38 15.5**	**+1.1**
MORI	**Morici**	**2.20**	**59**	*e*Pn		**Pn**	**15 38 15.7**	**+1.2**
NVLJ	**Novalja**	**2.21**	**35**	*e*Pn		**Pn**	**15 38 15.4**	**+0.7**
SGRT	**San Giovanni R**	**2.21**	**116**	⇑P		**Pn**	**15 38 16.4**	**+1.6**
SGRT					AML	AML		
	comp=N,644µm,1.5s							
SGRT					AML	AML		
	comp=E,782µm,0.9s							
MAIM	**Mastiano**	**2.22**	**302**	⇑P		**Pn**	**15 38 16.3**	**+1.4**
MAIM					AML	AML		
	comp=N,307µm,0.7s							
MAIM					AML	AML		
	comp=E,269µm,0.5s							
CARD	**Cardoso**	**2.29**	**304**	⇑P		**Pn**	**15 38 17.2**	**+1.4**
CARD					AML	AML		
	comp=N,332µm,0.7s							
CARD					AML	AML		
	comp=E,290µm,0.5s							
RABC	**Rab**	**2.33**	**31**	*e*Pn		**Pn**	**15 38 17.1**	**+0.8**
MSAG	**Monte S. Angel**	**2.34**	**116**	P		**Pn**	**15 38 18.6**	**+2.0**
MSAG					AML	AML		
	comp=N,1515µm,0.9s							
MSAG					AML	AML		
	comp=E,928µm,0.8s							
MSAG					AML	AML		
	comp=N,1545µm,0.9s							
MSAG					AML	AML		
	comp=E,841µm,0.8s							
HVAR	**Hvar**	**2.49**	**79**	*e*Pn		**Pn**	**15 38 19.9**	**+1.3**
HVAR	**Hvar**	**2.49**	**79**	⇓P		**Pn**	**15 38 20.1**	**+1.5**
EQUI	**Equi**	**2.56**	**304**	⇑P		**Pn**	**15 38 20.8**	**+1.2**
EQUI					AML	AML		
	comp=E,131µm,1.1s							
EQUI					AML	AML		
	comp=N,166µm,1.1s							
A253A	**Karojba, Istri**	**2.58**	**11**	*e*Pn		**Pn**	**15 38 20.4**	**+0.6**
VULT	**Monte Vulture**	**2.61**	**133**	⇓P		**Pb**	**15 38 23.2**	**-1.9**
VULT					AML	AML		
	comp=E,340µm,0.8s							
VULT					AML	AML		
	comp=N,449µm,0.9s							
UDBI	**Udbina**	**2.62**	**47**	*e*Pn		**Pn**	**15 38 22.1**	**+1.8**
A250A	**Rusevo Krmpots**	**2.66**	**29**	*e*Pn		**Pn**	**15 38 22.1**	**+1.2**
KIJV	**Kijevo**	**2.71**	**62**	*e*Pn		**Pn**	**15 38 23.1**	**+1.5**
PLIT	**Plitvice**	**2.79**	**40**	*e*Pn		**Pn**	**15 38 24.1**	**+1.4**
LSTV	**Lastovo**	**2.79**	**89**	*e*Pn		**Pn**	**15 38 23.3**	**+0.5**
PALZ	**Palazzo San Ge**	**2.81**	**129**	⇓P		**Pn**	**15 38 25.4**	**+2.5**
PALZ					AML	AML		
	comp=N,738µm,0.9s							
PALZ					AML	AML		
	comp=E,668µm,1.0s							
SKDS	**Skadanscina**	**2.85**	**13**	*e*Pn		**Pn**	**15 38 24.0**	**+0.4**
SKDS	**Skadanscina**	**2.85**	**13**	*i*Pn		**Pn**	**15 38 24.3**	**+0.6**
SKDS				*i* Sn		**Sn**	**15 38 58.8**	**+1.1**
SKDS				IAML			15 39 26.8	
	comp=Z,126nm,0.6s							
SMPL	**Sampolo**	**2.90**	**258**	⇑P		**Pn**	**15 38 26.7**	**+2.4**
SMPL					AML	AML		
	comp=E,23µm,1.1s							
SMPL					AML	AML		
	comp=N,20µm,0.9s							
A050A	**Klekovaca**	**3.02**	**54**	*e*Pn		**Pn**	**15 38 28.1**	**+2.1**
PGF	**Pioggiola**	**3.03**	**267**	*e*P		**Pn**	**15 38 28.0**	**+1.9**
PGF				*e*Sn		**Sn**	**15 38 58.7**	**-3.5**
	comp=N,8.5nm,0.3s							
RICI	**Ricice**	**3.04**	**75**	*e*Pn		**Pn**	**15 38 27.9**	**+1.7**
BOJS	**Bojanci**	**3.14**	**29**	*e*Pn		**Pn**	**15 38 29.0**	**+1.4**
BOJS	**Bojanci**	**3.14**	**29**	P		**Pn**	**15 38 29.9**	**+2.3**
BOJS					AML	AML		
	comp=E,864µm,1.5s							
BOJS					AML	AML		
	comp=N,548µm,0.6s							
AMUR	**Altamura**	**3.21**	**124**	P		**Pn**	**15 38 30.4**	**+1.9**
AMUR				S		**Sn**	**15 39 10.0**	**+3.5**
AMUR					AML	AML		
	comp=N,164µm,1.1s							
AMUR					AML	AML		
	comp=E,229µm,0.8s							
ROVR	**Rover Verones**	**3.23**	**334**	⇑P		**Pn**	**15 38 30.8**	**+2.0**
ROVR					AML	AML		
	comp=E,81µm,0.5s							
ROVR					AML	AML		
	comp=N,151µm,0.4s							
SABO	**M.te Sabotino**	**3.23**	**6**	⇑P		**Pn**	**15 38 29.8**	**+1.0**
SABO					AML	AML		
	comp=E,432µm,0.5s							
SABO					AML	AML		
	comp=N,689µm,0.7s							
SABO					AML	AML		
	comp=N,2625µm,0.7s							
SABO					AML	AML		
	comp=E,1875µm,1.4s							
VARN	**Col Varnada, M**	**3.30**	**348**	P		**Pn**	**15 38 32.6**	**+2.8**
VARN					AML	AML		
	comp=E,529µm,0.5s							
VARN					AML	AML		
	comp=N,506µm,0.6s							
MIGL	**Miglionico**	**3.31**	**130**	⇑P		**Pn**	**15 38 33.2**	**+3.4**
GORR	**Gorreto**	**3.32**	**305**	⇑P		**Pn**	**15 38 30.4**	**+0.4**
GORR					AML	AML		
	comp=E,192µm,0.7s							
GORR					AML	AML		
	comp=N,99µm,0.6s							
OZLJ	**Ozalj**	**3.32**	**30**	*e*Pn		**Pn**	**15 38 31.5**	**+1.6**
MGRS	**Mrkonjic Grad**	**3.33**	**59**	*e*Pn		**Pn**	**15 38 32.7**	**+2.5**
STON	**Ston**	**3.39**	**87**	*e*Pn		**Pn**	**15 38 30.9**	**0.0**
STON	**Ston**	**3.39**	**87**	*e*Pn		**Pn**	**15 38 31.0**	**+0.1**
STON	**Ston**	**3.39**	**87**	*e*Pn		**Pn**	**15 38 31.4**	**+0.5**
STON				*e*Sn		**Sn**	**15 39 10.8**	**+0.1**
STON	**Ston**	**3.39**	**87**	P		**Pn**	**15 38 30.8**	**-0.1**
STON					AML	AML		
	comp=E,88µm,0.8s							
STON					AML	AML		
	comp=N,107µm,0.7s							
DOSS	**Dosso del Somm**	**3.40**	**337**	⇑P		**Pn**	**15 38 33.8**	**+2.5**
DOSS					AML	AML		
	comp=E,315µm,0.5s							
DOSS					AML	AML		
	comp=E,309µm,0.6s							
DOSS					AML	AML		
	comp=N,298µm,0.5s							
DOSS					AML	AML		
	comp=N,280µm,0.6s							
MATE	**Matera**	**3.43**	**127**	⇓P		Pn	15 38 25.3	-6.2
LJU	**Ljubljana**	**3.43**	**17**	⇓P		**Pn**	**15 38 33.5**	**+1.9**
LJU				S		**Sn**	**15 39 15.0**	**+3.1**
LJU					AML	AML		
	comp=E,1560µm,1.3s							
LJU					AML	AML		
	comp=N,2155µm,0.6s							
RNCA	**Ronca, Sant'Ol**	**3.46**	**301**	S		**Sb**	**15 39 20.0**	**-1.4**
MAGA	**Magasa**	**3.49**	**330**	P		**Pn**	**15 38 34.5**	**+2.0**
MAGA					AML	AML		
	comp=N,530µm,0.5s							
MAGA					AML	AML		
	comp=E,816µm,0.6s							
CRES	**Cresnjev**	**3.50**	**28**	*e*Pn		**Pn**	**15 38 32.5**	**+0.1**
STAL	**STALIGIAL**	**3.50**	**356**	⇑P		**Pn**	**15 38 34.1**	**+1.5**
STAL					AML	AML		
	comp=N,328µm,1.6s							
STAL					AML	AML		
	comp=E,390µm,0.2s							
STAL					AML	AML		
	comp=N,284µm,1.6s							
STAL					AML	AML		
	comp=E,308µm,0.8s							
LTRZ	**Laterza**	**3.53**	**127**	⇓P		**Pn**	**15 38 35.5**	**+2.6**
A051A	**Mrakovica**	**3.55**	**50**	*e*Pn		**Pn**	**15 38 34.8**	**+1.6**
BLY	**Banja Luka**	**3.56**	**55**	*e*Pn		**Pb**	**15 38 38.7**	**-2.6**
BLY	**Banja Luka**	**3.56**	**55**	*e*Pn		**Pb**	**15 38 37.8**	**-3.5**
NOCI	**Noci**	**3.56**	**122**	⇑P		**Pn**	**15 38 36.0**	**+2.6**
NOCI					AML	AML		
	comp=N,178µm,0.7s							
NOCI					AML	AML		
	comp=E,162µm,0.6s							
CIMO	**Cimolais**	**3.57**	**353**	P		**Pn**	**15 38 34.9**	**+1.4**
CIMO					AML	AML		
	comp=N,108µm,0.8s							
CIMO					AML	AML		
	comp=E,96µm,0.6s							
CIMO					AML	AML		
	comp=E,96µm,0.8s							
CIMO					AML	AML		
	comp=N,103µm,0.7s							
PTCC	**Patocco-Chiusa**	**3.64**	**3**	⇑P		**Pn**	**15 38 35.8**	**+1.4**
PTCC					AML	AML		
	comp=N,141µm,0.8s							
PTCC					AML	AML		
	comp=E,183µm,1.2s							
GAGG	**Gaggia**	**3.65**	**336**	P		**Pn**	**15 38 37.4**	**+2.7**
GAGG					AML	AML		
	comp=E,264µm,1.2s							
GAGG					AML	AML		
	comp=N,202µm,0.9s							
DBRK	**Dubrovnik**	**3.72**	**90**	*e*Pn		**Pn**	**15 38 36.6**	**+1.1**
EUCT	**Pavia**	**3.76**	**312**	⇓P		**Pn**	**15 38 36.7**	**+0.7**
MABI	**Malga Bissina**	**3.77**	**331**	⇓P		**Pn**	**15 38 39.5**	**+3.1**
ZOU	**Zoufplan**	**3.79**	**359**	⇑P		**Pn**	**15 38 38.2**	**+1.5**
ZOU					AML	AML		
	comp=N,263µm,1.5s							
ZOU					AML	AML		
	comp=E,252µm,1.1s							
ZOU					AML	AML		
	comp=E,254µm,1.2s							
ZOU					AML	AML		
	comp=N,276µm,1.5s							
ACOM	**Acomizza, Ital**	**3.79**	**4**	⇓P		**Pn**	**15 38 39.0**	**+2.4**
ACOM					AML	AML		

comp=E,284µm,0.4s
ACOM AML AML
comp=N,263µm,0.7s
ACOM AML AML
comp=E,314µm,0.5s
ACOM AML AML
comp=N,230µm,0.6s
TREB Trebinje 3.87 89 *e*Pn **Pn 15 38 38.6 +1.1**
TREB Trebinje 3.87 89 *e*Pn **Pn 15 38 39.5 +2.0**
TREB *e*Sn **Sn 15 39 23.5 +0.9**
MOSL Moslavina 3.87 41 *e*Pn **Pn 15 38 38.1 +0.5**
MYKA Terra Mystica 3.88 6 *e*Pn **Pn 15 38 39.8 +2.1**
comp=N,3.1nm,0.2s,SNR=6.8
OBKA Obir 3.88 15 *e*Pn **Pn 15 38 39.4 +1.6**
OBKA Obir 3.88 15 *e*Pn **Pn 15 38 39.5 +1.6**
comp=N,1.4nm,0.1s
KOSI Kohlern 3.89 342 ⇑P **Pn 15 38 40.5 +2.5**
KOSI S **Sn 15 39 29.0 +5.5**
KOSI AML AML
comp=E,253µm,0.8s
KOSI AML AML
comp=N,214µm,0.6s
IMI Imperia 3.97 289 S **Sb 15 39 36.0 0.0**
HCY Herceg Novi 3.99 93 *e*Pn **Pn 15 38 41.5 +2.2**
HCY Herceg Novi 3.99 93⇑*i*Pn **Pn 15 38 41.5 +2.2**
HCY *i* Sn **Sn 15 39 27.5 +1.8**
HCY Herceg Novi 3.99 93⇑*i*Pn **Pn 15 38 41.5 +2.2**
HCY *i* Sn **Sn 15 39 28.3 +2.6**
ABTA Abfaltersbach 4.00 354 *e*Pn **Pn 15 38 41.7 +2.3**
comp=N,21nm,0.5s,SNR=40
BRY Bratogost 4.00 86 *e*Pn **Pn 15 38 41.5 +2.0**
BRY Bratogost 4.00 86⇑*i*Pn **Pn 15 38 41.5 +2.0**
BRY *i* Sn **Sn 15 39 27.8 +1.7**
BRY Bratogost 4.00 86⇓*i*Pn **Pn 15 38 41.6 +2.0**
BRY *i* Sn **Sn 15 39 28.8 +2.7**
SOKA Soboth 4.14 19 *e*Pn **Pn 15 38 43.2 +1.7**
comp=N,1.2nm,0.2s,SNR=6.2
BURY Giardini Botan 4.17 286 S **Sg 15 39 54.0 +1.3**
SBF Sospel 4.28 287 *e*P **Pn 15 38 44.8 +1.6**
SBF *e*Sn **Sn 15 39 28.4 -4.4**
comp=N,23nm,0.6s
UPM Unac-Piva 4.28 82 *e*Pn **Pn 15 38 46.2 +2.8**
UPM Unac-Piva 4.28 82⇓*i*Pn **Pn 15 38 45.3 +1.9**
UPM *i* Sn **Sn 15 39 35.3 +2.2**
UPM Unac-Piva 4.28 82⇑*i*Pn **Pn 15 38 45.3 +1.9**
UPM *i* Sn **Sn 15 39 35.4 +2.3**
ISTR Stromboli Gino 4.28 158 P **Pn 15 38 43.6 +0.4**
ISTR AML AML
comp=N,632µm,0.6s
ISTR AML AML
comp=E,572µm,0.7s
MUGIO Muggio 4.29 319 ⇑P **Pn 15 38 45.6 +2.2**
MUGIO AML AML
comp=E,65µm,0.6s
MUGIO AML AML
comp=N,56µm,0.8s
CEME Cevo 4.30 91⇑*i*Pn **Pn 15 38 45.5 +2.1**
CEME *i* Sn **Sn 15 39 35.9 +2.6**
CEME Cevo 4.30 91⇑*i*Pn **Pn 15 38 45.6 +2.1**
CEME *i* Sn **Sn 15 39 35.8 +2.5**
BUM Brajici-Budva 4.31 94⇓*i*Pn **Pn 15 38 45.8 +2.1**
BUM *i* Sn **Sn 15 39 36.1 +2.6**
BUM Brajici-Budva 4.31 94⇑*i*Pn **Pn 15 38 45.7 +2.1**
BUM *i* Sn **Sn 15 39 36.1 +2.6**
NKME Niksic 4.31 88⇑*i*Pn **Pn 15 38 45.8 +2.1**
NKME *i* Sn **Sn 15 39 36.1 +2.5**
NKME Niksic 4.31 88⇓*i*Pn **Pn 15 38 45.7 +2.1**
NKME *i* Sn **Sn 15 39 36.0 +2.5**
VSL Villasalto 4.31 222 ⇑P **Pn 15 38 45.8 +2.2**
KBA Koelnbreinsper 4.31 2 *e*Pn **Pn 15 38 46.0 +2.2**
comp=N,19nm,0.5s,SNR=16
ROSI Rosskopf 4.33 344 ⇑P **Pn 15 38 48.1 +4.1**
TIP Timpagrande 4.53 141 ⇑P **Pb 15 38 53.6 -4.2**
DRME Dracevica, Mon 4.54 95 *e*Pn **Pn 15 38 48.9 +2.2**
DRME Dracevica, Mon 4.54 95⇑*i*Pn **Pn 15 38 49.0 +2.2**
DRME *i* Sn **Sn 15 39 41.6 +2.5**
DRME Dracevica, Mon 4.54 95⇓*i*Pn **Pn 15 38 49.3 +2.6**
DRME *i* Sn **Sn 15 39 41.4 +2.3**
LLI Lipari 4.54 161 ⇑P **Pb 15 38 55.8 -2.3**
PDG Podgorica 4.56 92 ⇑P **Pn 15 38 49.2 +2.2**
PDG Podgorica 4.56 92 *e*Pn **Pn 15 38 49.5 +2.5**
PDG *e*Sn **Sn 15 39 42.2 +2.6**
TTG Podgorica 4.56 92⇑*i*Pn **Pn 15 38 49.1 +2.2**
TTG *i* Sn **Sn 15 39 41.9 +2.3**
TTG Podgorica 4.56 92⇑*i*Pn **Pn 15 38 49.1 +2.2**
TTG *i* Sn **Sn 15 39 41.9 +2.3**
FETA Feichten 4.57 339 *e*Pn **Pn 15 38 50.5 +3.1**
comp=N,4.0nm,0.3s,SNR=14
WTTA Wattenberg 4.61 348 *e*Pn **Pn 15 38 50.4 +2.5**
comp=N,3.5nm,0.2s,SNR=13
DAVOX Davos/Dischmat 4.62 331 Pn **Pn 15 38 51.5 +3.5**
comp=N,4.3nm,0.3s,baz=143,slow=13,SNR=30
DAVOX Sn **Sn 15 39 43.1 +1.6**
comp=N,0.8nm,0.3s,baz=300,slow=21,SNR=1.7
comp=N,22nm,0.5s
ULC Ulcinj 4.62 98⇓*i*Pn **Pn 15 38 50.0 +2.1**
ULC *i* Sn **Sn 15 39 40.8 -0.5**
ULC Ulcinj 4.62 98⇓*i*Pn **Pn 15 38 50.1 +2.1**
ULC *i* Sn **Sn 15 39 42.9 +1.6**
PLE Pljevlja 4.64 81⇓*i*Pn **Pn 15 38 50.4 +2.1**
PLE *i* Sn **Sn 15 39 44.0 +2.1**
PLE Pljevlja 4.64 81⇓*i*Pn **Pn 15 38 50.4 +2.1**
PLE *i* Sn **Sn 15 39 44.0 +2.1**
SQTA Sankt Quirin 4.65 344 *e*Pn **Pn 15 38 51.5 +3.1**
comp=N,3.7nm,0.1s,SNR=14
RUDO Rudo 4.66 77 *e*Pn **Pn 15 38 50.5 +2.0**
WATA Walderalm 4.69 347 *e*Pn **Pn 15 38 52.7 +3.6**
comp=N,4.5nm,0.3s,SNR=15
KOME Kolasin 4.72 87⇑*i*Pn **Pn 15 38 51.5 +2.1**
KOME *i* Sn **Sn 15 39 46.1 +2.3**
KOME Kolasin 4.72 87⇑*i*Pn **Pn 15 38 51.4 +2.1**
KOME *i* Sn **Sn 15 39 46.3 +2.5**
BBLS Lazići 4.73 74 *e*Pn **Pn 15 38 52.2 +2.8**
BBLS *e*Sn **Sn 15 39 45.8 +1.8**
MILZ Milazzo 4.78 159 P **Pn 15 38 49.7 -0.3**
MILZ S **Sn 15 39 45.0 0.0**
MOTA Moosalm 4.79 344 *e*Pn **Pn 15 38 53.6 +3.2**
comp=N,3.9nm,0.4s,SNR=9.0
ARSA Arzberg 4.80 20 *e*Pn **Pn 15 38 51.7 +1.3**
comp=N,2.6nm,0.3s
ARSA Arzberg 4.80 20 ⇓P **Pn 15 38 51.6 +1.3**
LMR La Mourre 4.86 279 *e*P **Pn 15 38 52.2 +1.0**
LMR *e*Sn **Sn 15 39 42.1 -5.0**
comp=N,23nm,0.9s
BIOA Bad Ischl, Aus 4.94 4 *i* Pn **Pn 15 38 54.3 +2.0**
comp=N,10nm,0.3s,SNR=19
MBDF Montbardon 4.99 295 *e*P **Pn 15 38 54.8 +1.8**
MBDF *e*Sn **Sn 15 39 45.6 -4.8**
comp=N,17nm,0.7s
IVA Berane 5.00 87⇓*i*Pn **Pn 15 38 55.3 +2.1**
IVA *i* Sn **Sn 15 39 52.8 +2.2**
IVA Berane 5.00 87⇓*i*Pn **Pn 15 38 55.2 +2.1**
IVA *i* Sn **Sn 15 39 52.9 +2.3**
RETA Reutte 5.00 341 *e*Pn **Pn 15 38 56.5 +3.3**
comp=N,1.5nm,0.3s
DAVA Damuels 5.06 334 *e*Pn **Pn 15 38 57.5 +3.4**
comp=N,9.5nm,0.6s,SNR=9.3
SJES Sjenica 5.06 82 *e*Pn **Pn 15 38 57.6 +3.5**
SJES *e*Sn **Sn 15 39 53.1 +0.8**
MOA Molln 5.15 9 *e*Pn **Pn 15 38 57.0 +1.9**
MOA *e*Sn **Sn 15 39 55.4 +1.2**
MOA Molln 5.15 9 *e*Pn **Pn 15 38 57.1 +2.0**
comp=N,1.2nm,0.1s
DIVS Divibare 5.19 73 *e*Pn **Pn 15 38 55.8 0.0**
DIVS Divibare 5.19 73 *e*Pn **Pn 15 38 58.4 +2.6**
IVAS Ivanjica 5.22 79 *e*Pn **Pn 15 38 58.0 +1.8**
IVAS *e*Sn **Sn 15 39 56.4 +0.3**
MORH Mrgy, Hungar 5.25 47 ⇓P Pn 15 39 03.5 +6.9
VLO Vlora 5.32 113 S **Sn 15 39 59.0 +0.7**
LPG La Plagne 5.32 303 *e*P **Pn 15 39 01.0 +3.2**
LPG *e*Sn **Sn 15 39 53.7 -5.2**
comp=N,26nm,0.9s
LPL La Plagne 5.34 303 *e*P **Pn 15 39 00.6 +2.6**
LPL *e*Sn **Sn 15 39 54.0 -5.3**
comp=N,12nm,0.5s
FRGS Fruska Gora 5.40 61 *e*Pn **Pn 15 38 58.4 -0.2**
RONA Rosalia, Austr 5.42 23 *e*Pn **Pn 15 39 00.2 +1.2**
comp=N,1.5nm,0.2s
TRUS Trudelj 5.51 72 *e*Pn **Pn 15 39 03.2 +3.1**
CONA Conrad Observa 5.51 20 *e*Pn **Pn 15 39 01.5 +1.2**
comp=N,6.7nm,0.4s
SMRF Simiane la Rot 5.62 285 *e*P **Pn 15 39 04.8 +3.2**
SMRF *e*Sn **Sn 15 40 00.4 -5.4**
comp=N,6.7nm,0.8s
ORIF Oris-en-Rattie 5.65 295 *e*P **Pn 15 39 06.2 +4.1**
ORIF *e*Sn **Sn 15 40 01.2 -5.4**
comp=N,7.9nm,0.5s
GRUS Gruza 5.67 76 *e*Pn **Pn 15 39 03.9 +1.7**
SELS Selova 5.90 83 *e*Pn **Pn 15 39 08.0 +2.5**
GERES GERESS Array B 6.09 4 Pn **Pn 15 39 08.8 +0.6**
comp=N,0.5nm,0.3s,baz=182,slow=13,SNR=14
GERES Sn **Sn 15 40 17.8 +0.2**
comp=N,3.6nm,0.3s,baz=176,slow=24,SNR=11
GERES Lg Lg 15 40 54.6
baz=173,slow=26
comp=N,0.8nm,0.3s
CKRC Cesky Krumlov 6.11 8 *e*PN **Pn 15 39 08.6 +0.2**
CKRC *e*SN **Sn 15 40 16.9 -1.0**
CABF La Chapelle 6.30 310 *e*P **Pn 15 39 13.2 +2.1**
CABF *e*Sn **Sn 15 40 16.8 -6.0**
comp=N,5.9nm,0.6s
MODS Modra-Piesok 6.33 26 *e*PN **Pn 15 39 15.5 +4.2**
MODS *e*SN **Sn 15 40 24.6 +1.4**
BOVS Bovan 6.35 79 ⇓P **Pn 15 39 12.9 +1.3**
BOVS Bovan 6.35 79 *e*Pn **Pn 15 39 12.6 +1.0**
BOVS *e*Sn **Sn 15 40 21.7 -2.1**
KHC Kasperske Hory 6.37 3 *e*PN **Pn 15 39 12.5 +0.5**
KHC *e*SN **Sn 15 40 24.2 -0.2**
BARS Barje 6.41 87 *e*Pn **Pn 15 39 14.2 +1.7**
BARS *e*Sn **Sn 15 40 26.2 +0.8**
VIVF Saint-Julien-l 6.44 292 *e*P **Pn 15 39 15.7 +2.7**
VIVF *e*Sn **Sn 15 40 20.2 -6.0**
comp=N,2.2nm,0.6s
MDVR Moldovita 6.55 69 ⇓P **Pn 15 39 16.7 +2.2**
PRVS Prvonek 6.62 89 *e*Pn **Pn 15 39 17.3 +1.9**
PRVS *e*Sn **Sn 15 40 30.9 +0.3**
HINF Hinteralfeld 6.70 321 *e*P **Pn 15 39 17.6 +1.2**
HINF *e*Sn **Sn 15 40 26.3 -6.1**
comp=N,18nm,0.5s
KRUC Moravsky 6.70 19 *e*PN **Pn 15 39 17.5 +1.1**
KRUC *e*SN **Sn 15 40 29.8 -2.6**
ZAGS Zajecar 6.75 78 *e*Pn **Pn 15 39 18.4 +1.3**
BZS Buzias 6.75 62 ⇓P **Pn 15 39 20.2 +3.1**
BZS Buzias 6.75 62 *e*Pn **Pn 15 39 19.9 +2.8**
LASF Ste Croix 6.86 284 *e*P **Pn 15 39 20.5 +1.9**
LASF *e*Sn **Sn 15 40 30.1 -6.2**
comp=N,0.7nm,0.3s
BOSS Bosilegrad 6.92 89 *e*Pn **Pn 15 39 22.0 +2.5**
BOSS *e*Sn **Sn 15 40 35.8 -2.2**
CDF Champ du Feu 6.97 326 *e*P **Pn 15 39 21.6 +1.4**
CDF *e*Sn **Sn 15 40 33.1 -6.0**
comp=N,9.4nm,0.4s
VRAC Vranov 6.98 19 Pn **Pn 15 39 19.8 -0.4**
comp=N,0.3nm,0.3s,baz=184,slow=13,SNR=2.0
VRAC Sn **Sn 15 40 34.9 -4.4**
comp=N,0.7nm,0.3s,baz=285,slow=22,SNR=2.4
VRAC Lg Lg 15 41 22.4
baz=319,slow=20
comp=N,1.1nm,0.5s
VYHS Vyhne 7.00 33 *e*PN Pn 15 39 26.3 +5.8
ZAPS Zavoj 7.01 83 *e*Pn **Pn 15 39 23.0 +2.3**
ZAPS *e*Sn **Sn 15 40 39.0 -1.0**
BLKB Belogradchik 7.05 80 ⇑P **Pn 15 39 21.5 +0.2**
HAU Haudompre 7.07 320 *e*P **Pn 15 39 23.2 +1.7**
HAU *e*Sn **Sn 15 40 35.1 -6.5**
comp=N,16nm,0.3s
PRU Pruhonice 7.29 7 *e*PN **Pn 15 39 25.3 +0.8**
PRU *e*SN **Sn 15 40 45.2 -1.7**
GZR Gura Zlata 7.45 66 ⇑P **Pn 15 39 27.8 +1.1**
VTS Vitosha 7.47 88 ⇑P **Pn 15 39 22.7 -4.4**
VTS Vitosha 7.47 88 *e*Pn **Pn 15 39 29.3 +2.2**
VTS *e*Sn **Sn 15 40 49.2 -2.4**
KEST Kesra 7.61 204 Pn Pn 15 39 35.5 +6.5
comp=N,0.2nm,0.3s,baz=306,slow=6.0,SNR=2.5
comp=N,1.4nm,0.5s
SMF Signal de Mont 7.65 304 *e*Pn **Pn 15 39 27.0 -2.5**
SMF *e*Sn **Sn 15 40 49.3 -6.5**
comp=N,7.6nm,0.6s
PAGF Fort de Pagny 7.75 321 *e*P **Pn 15 39 34.1 +3.2**
PAGF *e*Sn **Sn 15 40 51.8 -6.5**
comp=N,15nm,0.6s
SFTF Sexfontaines 7.85 317 *e*P **Pn 15 39 35.3 +3.1**
SFTF *e*Sn **Sn 15 40 53.6 -7.0**
comp=N,5.9nm,0.4s
LOR Lormes 7.94 308 *e*P **Pn 15 39 36.1 +2.6**
baz=121
LOR *e*Sn **Sn 15 40 56.3 -6.7**
comp=N,5.7nm,0.4s
MTLF Montolieu 7.99 278 *e*P **Pn 15 39 37.3 +3.1**
MTLF *e*Sn **Sn 15 40 57.1 -7.1**
comp=N,0.6nm,0.4s
SRS Serrai 7.99 98 *e*Pn **Pn 15 39 36.8 +2.6**
AVF Avril sur Loir 8.02 303 *e*P **Pn 15 39 37.0 +2.6**
AVF *e*Sn **Sn 15 40 57.6 -7.1**
comp=N,2.0nm,0.5s
MEZF Maizieres J'vi 8.04 318 *e*P **Pn 15 39 37.7 +2.9**
MEZF *e*Sn **Sn 15 40 58.2 -7.1**
comp=N,4.0nm,0.5s
SSF Saint Saulge 8.05 306 *e*P **Pn 15 39 37.0 +2.1**
SSF *e*Sn **Sn 15 40 58.5 -7.0**
comp=N,5.3nm,0.6s
SAVF Savonnieres en 8.08 319 *e*P **Pn 15 39 38.5 +3.1**
BRG Berggiesshubel 8.13 4 *e*P **Pn 15 39 39.0 +3.0**
BRG Amp 15 39 42.4
comp=Z,1.1nm,0.4s
BRG *ex* x 15 41 03.1
BRG *ex* x 15 42 12.8
BRG Amp 15 42 22.2
comp=Z,14nm,1.2s
BGF Bois d'Agland 8.23 301 *e*P **Pn 15 39 40.2 +2.8**
BGF *e*Sn **Sn 15 41 02.9 -7.2**
comp=Z,3.8nm,0.4s
CAF Calviac 8.26 289 *e*P **Pn 15 39 40.8 +2.9**
CAF *e*Sn **Sn 15 41 03.7 -7.2**
comp=Z,1.4nm,0.4s
MLR Muntele Rosu 9.63 69 Pn **Pn 15 39 58.2 +1.4**
comp=Z,0.2nm,0.3s,baz=204,slow=20,SNR=1.3
QUIF Quistinic 12.54 300 *e*P **Pn 15 40 39.5 +3.1**
EKA Eskdalemuir Ar 16.43 326 Pn **P 15 41 31.3 +0.2**
baz=134,slow=14
comp=Z,1.0nm,0.8s
FINES FINESS Array B 20.26 18 P **P 15 42 11.8 -1.3**
comp=Z,1.8nm,1.0s,baz=202,slow=10,SNR=1.9
comp=Z,1.8nm,1.0s
TORD Torodi Ar. Bea 31.12 202 P **P 15 43 58.5 +2.0**
comp=Z,8.3nm,0.4s,baz=2.9,slow=8.7,SNR=1.7
MKAR Makanchi Array 47.83 60 P **P 15 46 15.1 -0.4**
comp=Z,0.7nm,0.8s,baz=284,slow=6.1,SNR=6.9
comp=Z,0.7nm,0.8s
SONM Songino Array 61.87 50 P **P 15 47 58.8 +1.6**
comp=Z,0.8nm,0.9s,baz=292,slow=7.6,SNR=2.5
comp=Z,0.8nm,0.9s

ROM 28 15:39:15.0±0.0, 42°.778N±0°.002×13°.131E±0°.003, h12km, ML2.6/3, 8C-4D, Error ellipse: s-maj=0.2km s-min=0.0km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.06**	**348**	P	Pg	15 39 17.7	+0.3
MC2	**Monte Cornacci**	**0.14**	**18**	S	Sg	15 39 20.0	-1.2
LNSS	**Leonessa**	**0.19**	**201**	⇑P	Pg	15 39 19.7	+0.5
LNSS				AML	AML		
	comp=E,4625µm,0.2s						
LNSS				AML	AML		
	comp=E,4620µm,0.2s						
LNSS				AML	AML		
	comp=N,4885µm,1.1s						
MMO1	**Montemonaco**	**0.19**	**50**	⇑P	Pg	15 39 19.8	+0.5
MMO1				S	Sg	15 39 23.1	+1.0
T1243	**Rocca Santa Ma**	**0.25**	**109**	⇓P	Pg	15 39 20.7	+0.4
T1243				S	Sg	15 39 24.6	+0.9
FDMO	**Fiordimonte**	**0.26**	**353**	⇓P	Pb	15 39 21.1	-0.6
FDMO				S	Sg	15 39 25.1	+1.0
RM33	**Pellescritta (**	**0.28**	**167**	⇑P	Pg	15 39 21.2	+0.5
RM33				S	Sg	15 39 25.5	+1.0
RM33				AML	AML		
	comp=E,1325µm,0.9s						
RM33				AML	AML		
	comp=N,1240µm,0.3s						
CAMP	**Campotosto**	**0.32**	**140**	⇑P	Pg	15 39 21.8	+0.3
CSP1	**Cessapalombo**	**0.32**	**10**	⇑P	Pg	15 39 21.9	+0.4
ARRO	**Arrone**	**0.34**	**234**	⇓P	Pg	15 39 22.1	+0.3
ARRO				AML	AML		
	comp=E,1085µm,0.2s						
ARRO				AML	AML		
	comp=N,916µm,1.2s						
ARRO				AML	AML		
	comp=E,1080µm,0.2s						
TERO	**Teramo**	**0.38**	**114**	P	Pg	15 39 23.0	+0.3
TERO				S	Sb	15 39 28.8	-0.9
ASSB	**Assisi San Ben**	**0.44**	**307**	⇑P	Pg	15 39 23.9	+0.3
ASSB				S	Sg	15 39 30.3	+0.8
CESX	**Cesi**	**0.44**	**248**	⇑P	Pg	15 39 23.8	+0.1
GIGS	**Gran Sasso**	**0.46**	**135**	⇑P	Pg	15 39 24.3	+0.3
GIGS				S	Sg	15 39 31.1	+0.8
FIAM	**Fiamignano**	**0.51**	**181**	S	Sb	15 39 33.0	-0.4
ARVD	**Arcevia**	**0.73**	**349**	S	Sn	15 39 42.0	-0.4
LIK	**San Giovanni I**	**1.31**	**166**	⇓P	Pn	15 39 38.4	-0.8

ROM 28 15:40:09.4±0.0, 42°.781N±0°.002×13°.124E±0°.003, h12km, ML2.0/12, 2C, Error ellipse: s-maj=0.2km s-min=0.0km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.05**	**352**	P	Pg	15 40 12.1	+0.2
NRCA				S	Sg	15 40 13.8	+0.1
NRCA				AML	AML		
	comp=E,14150µm,0.6s						
NRCA				AML	AML		
	comp=E,14150µm,0.6s						
NRCA				AML	AML		
	comp=N,24200µm,0.1s						
NRCA				AML	AML		
	comp=N,28700µm,0.1s						
NRCA				AML	AML		
	comp=E,17300µm,0.6s						
NRCA				AML	AML		
	comp=N,24200µm,0.1s						
MC2	**Monte Cornacci**	**0.14**	**20**	⇑P	Pg	15 40 13.4	+0.4
MC2				S	Sg	15 40 16.5	+0.9
FEMA	**Monte Fema**	**0.19**	**343**	P	Pg	15 40 14.1	+0.3
FEMA				S	Sg	15 40 17.4	+0.6
LNSS	**Leonessa**	**0.19**	**199**	P	Pg	15 40 14.2	+0.5
LNSS				S	Sg	15 40 17.5	+0.8
LNSS				AML	AML		
	comp=E,3280µm,1.1s						
LNSS				AML	AML		
	comp=N,3045µm,0.1s						
MMO1	**Montemonaco**	**0.19**	**52**	P	Pg	15 40 14.1	+0.4
MMO1				S	Sg	15 40 17.6	+1.0
MMO1				AML	AML		
	comp=E,1075µm,1.5s						
MMO1				AML	AML		
	comp=N,1115µm,1.5s						
MMO1				AML	AML		
	comp=E,1080µm,1.5s						
MMO1				AML	AML		
	comp=N,1120µm,1.5s						
T1243	**Rocca Santa Ma**	**0.25**	**109**	P	Pg	15 40 15.1	+0.3
T1243				S	Sg	15 40 19.2	+0.8
T1243				AML	AML		
	comp=E,1500µm,0.1s						
T1243				AML	AML		
	comp=N,2030µm,1.3s						
T1243				AML	AML		
	comp=E,1505µm,0.1s						
T1243				AML	AML		
	comp=N,2030µm,1.2s						
T1243				AML	AML		
	comp=E,1505µm,0.1s						
T1243				AML	AML		
	comp=N,2125µm,1.2s						
FDMO	**Fiordimonte**	**0.26**	**354**	⇑P	Pg	15 40 15.2	+0.3
FDMO				S	Sg	15 40 19.4	+0.9
FDMO				AML	AML		
	comp=E,761µm,0.8s						
FDMO				AML	AML		
	comp=N,870µm,0.9s						
RM33	**Pellescritta (**	**0.28**	**166**	P	Pg	15 40 15.6	+0.3
RM33				S	Sb	15 40 20.4	-0.8
RM33				AML	AML		
	comp=E,591µm,0.3s						
RM33				AML	AML		
	comp=N,667µm,0.2s						
RM33				AML	AML		
	comp=N,666µm,0.2s						
RM33				AML	AML		
	comp=E,585µm,0.3s						
RM33				AML	AML		
	comp=N,654µm,0.2s						
RM33				AML	AML		
	comp=E,592µm,0.3s						
RM33				AML	AML		
	comp=E,584µm,0.3s						
CSP1	**Cessapalombo**	**0.32**	**11**	P	Pg	15 40 16.3	+0.3
CSP1				S	Sb	15 40 21.5	-0.8
CAMP	**Campotosto**	**0.32**	**139**	P	Pg	15 40 16.3	+0.3
CAMP				S	Sb	15 40 21.5	-0.9
CAMP				AML	AML		
	comp=N,262µm,1.3s						
CAMP				AML	AML		
	comp=E,220µm,1.2s						
ARRO	**Arrone**	**0.33**	**233**	P	Pg	15 40 16.6	+0.4
ARRO				S	Sb	15 40 22.0	-0.6
ARRO				AML	AML		
	comp=E,324µm,1.1s						
ARRO				AML	AML		
	comp=E,325µm,1.1s						
ARRO				AML	AML		
	comp=N,348µm,0.6s						
TERO	**Teramo**	**0.39**	**114**	P	Pg	15 40 17.4	+0.2
TERO				S	Sb	15 40 23.4	-0.8
TERO				AML	AML		
	comp=N,460µm,0.5s						
TERO				AML	AML		
	comp=E,496µm,0.5s						
ASSB	**Assisi San Ben**	**0.43**	**308**	P	Pg	15 40 18.0	+0.1
ASSB				S	Sg	15 40 24.4	+0.7
ASSB				AML	AML		
	comp=N,204µm,0.9s						
ASSB				AML	AML		
	comp=E,233µm,1.4s						
CESX	**Cesi**	**0.44**	**247**	P	Pg	15 40 18.1	+0.1
CESX				AML	AML		
	comp=N,196µm,0.2s						
CESX				AML	AML		
	comp=E,217µm,1.1s						
GIGS	**Gran Sasso**	**0.47**	**135**	P	Pg	15 40 18.8	+0.1
GIGS				AML	AML		
	comp=E,81µm,1.6s						
GIGS				AML	AML		
	comp=N,76µm,0.1s						
GIGS				AML	AML		
	comp=E,82µm,1.6s						
SNTG	**Esanatoglia**	**0.49**	**344**	P	Pg	15 40 19.3	+0.2
SNTG				AML	AML		
	comp=N,148µm,1.0s						
SNTG				AML	AML		
	comp=N,149µm,1.0s						
SNTG				AML	AML		
	comp=E,153µm,0.2s						
FIAM	**Fiamignano**	**0.51**	**181**	P	Pg	15 40 19.4	-0.1
ATCC	**AVT- Casa Cast**	**0.54**	**319**	P	Pg	15 40 20.1	+0.1
EL6	**Elcito**	**0.55**	**358**	P	Pg	15 40 20.1	-0.1
EL6				AML	AML		
	comp=E,439µm,0.2s						
EL6				AML	AML		
	comp=N,342µm,1.5s						
EL6				AML	AML		
	comp=N,342µm,1.5s						
EL6				AML	AML		
	comp=E,440µm,0.2s						
CING	**Cingoli**	**0.60**	**5**	AML	AML		
	comp=E,259µm,0.2s						
CING				AML	AML		
	comp=N,166µm,0.7s						
SSFR	**Montelago di S**	**0.70**	**339**	AML	AML		
	comp=N,326µm,1.4s						
SSFR				AML	AML		
	comp=E,412µm,0.0s						
SSFR				AML	AML		
	comp=E,231µm,0.2s						
SSFR				AML	AML		
	comp=N,272µm,0.2s						
ARVD	**Arcevia**	**0.73**	**349**	AML	AML		
	comp=N,77µm,1.5s						
ARVD				AML	AML		
	comp=E,122µm,0.9s						

*NEIC **28** 15:43:22.9±1.1,24°.2S±0°.2×179°.3W±0°.2,h399km±12km, mb4.1/11,Error ellipse: s-maj=26.0km s-min=21.5km az=185.0*

*IDC **28** 15:43:31.4±7.1,23°.44S×179°.92E,h452km±71km,mb3.0/4, mbtmp3.9/4,Error ellipse: s-maj=124.5km s-min=26.1km az=153.0*

ISC 28 15:43:23.6±0.8,24°.2S±0°.1×179°.4W±0°.1,h400km,n19, σ1ᵖ39/19,mb4.0/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.83**	**339**	P	**Pn**	**15 45 05.4**	**-0.2**
	baz=150,slow=20						
MSVF	**Nonsavu**	**6.83**	**339**		**Pn**	**15 45 05.5**	**0.0**
NIUE	**Niue**	**10.18**	**62**	P	**P**	**15 45 41.3**	**-1.9**
CTAO	**Charters Tower**	**32.01**	**270**	P	**P**	**15 49 15.8**	**+0.9**
CTAO				IAmb	IAmb	15 49 40.4	
	comp=Z,18nm,1.2s						
STKA	**Stephens Creek**	**35.11**	**249**	P	**P**	**15 49 43.1**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=96,slow=19,SNR=2.8						
	comp=Z,1.5nm,0.8s						
AS31	**Alice Springs**	**42.51**	**261**	P	**P**	**15 50 42.0**	**+0.1**
ASAR	**Alice Springs**	**42.51**	**261**	P	**P**	**15 50 42.0**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=100,slow=7.4,SNR=15						
	comp=Z,1.6nm,0.9s						
ASAR	**Alice Springs**	**42.51**	**261**	P	**P**	**15 50 41.9**	**-0.1**
WR0	**Warramunga Arr**	**42.73**	**266**	P	**P**	**15 50 42.8**	**-0.9**
WR0				IAmb	IAmb	15 50 46.1	
	comp=Z,12nm,1.5s						
WB2	**Warramunga Arr**	**42.91**	**266**	P	**P**	**15 50 44.1**	**-1.0**
WB2				IAmb	IAmb	15 51 14.0	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**42.91**	**266**	P	**P**	**15 50 44.2**	**-0.9**
WRAB				IAmb	IAmb	15 50 45.5	
	comp=Z,13nm,1.5s						
WB0	**Warramunga Arr**	**42.91**	**267**	P	**P**	**15 50 44.3**	**-0.8**
WB0				IAmb	IAmb	15 51 19.4	
	comp=Z,9.2nm,1.5s						
WRA	**Warramunga Arr**	**42.92**	**266**	P	**P**	**15 50 44.5**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=103,slow=8.1,SNR=28						
	comp=Z,1.1nm,0.4s						
FORT	**Forrest**	**46.71**	**250**	P	**P**	**15 51 14.6**	**0.0**
KNRA	**Kununurra**	**49.22**	**270**	P	**P**	**15 51 32.9**	**-0.7**
KNRA				IAmb	IAmb	15 51 53.8	
	comp=Z,24nm,1.4s						
VNDA	**Vanda**	**54.15**	**185**	P	**P**	**15 52 08.1**	**-0.6**
PSA00	**Pilbara Seismi**	**55.64**	**260**	P	**P**	**15 52 17.5**	**-2.6**
PSA00				IAmb	IAmb	15 52 23.2	
	comp=Z,14nm,1.4s						
SUA	**Susitna One**	**88.42**	**13**	P	**P**	**15 55 31.4**	**+0.3**
TXAR	**Lajitas Array**	**90.13**	**58**	P	**P**	**15 55 43.1**	**+3.3**
	comp=Z,0.2nm,0.7s,baz=232,slow=4.4,SNR=3.6						
	comp=Z,0.2nm,0.7s						

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*TIR **28** 15:55:36.0,42°.69N×13°.43E,h11km±4km,Ml4.7*

*ROM **28** 15:55:35.4±0.0,42°.823N±0°.002×13°.232E±0°.004, h9km,ML4.4/103,Mw4.2,Error ellipse: s-maj=0.3km s-min=0.1km az=248.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=2.36; Mθθ0.54; Mϕϕ1.83; Mrθ0.44; Mθϕ0.71; Mϕr0.72; Fault plane solution: M₀2.40266×10¹⁵ NP1:φs22.00000°,δ35.00000°, λ-94.00000°. NP2:φs206.00000°,δ55.00000°, λ-87.00000°.*

*PDG **28** 15:55:35.7±0.7,42°.85N×13°.25E,h10km,ML4.4/13 Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*NEIC **28** 15:55:35.7±1.8,42°.80N±0°.04×13°.17E±0°.04,h2km±3km, mb4.6/53,Mwr4.2/52,ML4.4(ROM),Mwr4.2(VIE),Error ellipse: s-maj=5.9km s-min=3.9km az=192.0*

*MED_RC **28** 15:55:35.0±0.4,42°.82N×13°.24E,h10km,MW4.3/15, Moment Tensor Solution.Mantle waves: s15,c18; Duration: 1ᵖ0 Moment tensor: Scale 10¹⁵Nm; Mrr=4.11±.24; Mθθ0.97±.29; Mϕϕ3.14±.20; Mrθ-0.09±.77; Mθϕ0.87±.22; Mϕr-0.34±.67; Best double couple: M₀3.79000×10¹⁵ NP1:φs19.00000°,δ48.00000°, λ-90.00000°. NP2:φs200.00000°,δ42.00000°, λ-90.00000°. Principal axes: T 3.4600, Plg3.0000°, Azm109.0000°; N 0.6700, Plg0.0000°, Azm19.0000°; P -4.1300, Plg87.0000°, Azm283.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MOS **28** 15:55:35.5±1.1,42°.94N×13°.35E,h10km,mb4.6/27 Error ellipse: s-maj=6.1km s-min=3.5km az=81.3*

*IDC **28** 15:55:35.3±0.5,42°.88N×13°.19E,h0km,mb4.3/30, mbtmp4.2/44,ML3.8/13,MS3.5/46,Error ellipse: s-maj=9.7km s-min=8.2km az=104.0*

*PRU **28** 15:55:36.5±0.0,42°.88N×13°.42E,h0km,M4.6*

*LDG **28** 15:55:36.0,42°.70N×13°.28E,h30km*

*NEIC **28** 15:55:36,42°.79N×13°.15E,h5km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=2.60; Mθθ0.83; Mϕϕ1.77; Mrθ0.20; Mθϕ0.81; Mϕr0.72; Fault plane solution: M₀2.55000×10¹⁵ NP1:φs206.21000°,δ53.49000°, λ-94.07000°. NP2:φs33.04000°,δ36.71000°,λ-84.52000°. Principal axes: T 2.3453, Plg8.0000°, Azm299.0000°; N 0.3734, Plg3.0000°, Azm209.0000°; P -2.7187, Plg81.0000°, Azm98.0000°;*

*BEO **28** 15:55:37.6±0.6,42°.90N×13°.34E,h0km,ML4.2/9*

ISC 28 15:55:36.2±0.6,42°.83N±0°.01×13°.21E±0°.02,h8km±3km, n712,σ1ᵖ58/788,mb4.5/77,MS3.5/35,133C-44D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1242	**Castelluccio d**	**0.00**	**270**	⇓P	**Pg**	**15 55 37.2**	**-0.7**
T1242				S	**Sg**	**15 55 38.1**	**-0.9**
NRCA	**Norcia**	**0.07**	**273**		**Pg**	**15 55 37.8**	**-0.5**
NRCA				Sg	**Sg**	**15 55 39.7**	**-0.1**
NRCA	**Norcia**	**0.07**	**273**	⇑P	**Pg**	**15 55 38.2**	**-0.1**
NRCA				S	**Sg**	**15 55 39.7**	**-0.1**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1214	**Arquata del Tr**	**0.07**	**181**	⇑P	**Pg**	**15 55 37.9**	**-0.5**
T1214				S	**Sg**	**15 55 39.5**	**-0.4**
MC2	**Monte Cornacci**	**0.09**	**350**	⇑P	**Pg**	**15 55 38.3**	**-0.3**
MC2				S	**Sg**	**15 55 40.1**	**-0.2**
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
T1244	**Arquata del Tr**	**0.10**	**138**	⇑P	**Pg**	**15 55 38.1**	**-0.5**
T1244				S	**Sg**	**15 55 39.9**	**-0.4**
MMO1	**Montemonaco**	**0.11**	**51**	⇑P	**Pg**	**15 55 38.2**	**-0.7**
MMO1				S	**Sg**	**15 55 40.0**	**-0.7**
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
T1213	**Norcia, Frazio**	**0.12**	**211**	P	**Pg**	**15 55 38.8**	**-0.1**
T1213				S	**Sg**	**15 55 41.3**	**+0.4**
T1202	**Accumoli, Fraz**	**0.13**	**175**	⇑P	**Pg**	**15 55 38.9**	**-0.2**
T1202				S	**Sg**	**15 55 41.7**	**+0.6**
T1212	**Cascia, Frazio**	**0.14**	**237**	⇑P	**Pg**	**15 55 39.5**	**+0.2**
T1212				S	**Sg**	**15 55 42.0**	**+0.5**
T1216	**Preci, Frazion**	**0.15**	**294**	⇑P	**Pg**	**15 55 39.6**	**+0.1**
T1216				S	**Sg**	**15 55 42.2**	**+0.5**
T1204	**Amatrice, Fraz**	**0.17**	**153**	⇑P	**Pg**	**15 55 39.5**	**-0.4**
T1204				S	**Sg**	**15 55 42.8**	**+0.4**
T1218	**Civita (PG)**	**0.17**	**204**	P	**Pg**	**15 55 39.9**	**+0.1**
T1218				S	**Sg**	**15 55 42.5**	**+0.1**
T1201	**Domo (RI)**	**0.17**	**170**	⇑P	**Pg**	**15 55 39.8**	**0.0**
T1201				S	**Sg**	**15 55 43.2**	**+0.9**
FEMA	**Monte Fema**	**0.18**	**319**	⇑P	**Pg**	**15 55 40.0**	**+0.1**
FEMA				S	**Sg**	**15 55 43.6**	**+1.1**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1243	**Rocca Santa Ma**	**0.22**	**127**	⇑P	**Pg**	**15 55 40.0**	**-0.7**
T1243				S	**Sg**	**15 55 43.7**	**0.0**
T1243					AML	AML	
T1243					AML	AML	
T1243					AML	AML	
T1243					AML	AML	
T1243					AML	AML	
T1243					AML	AML	
FDMO	**Fiordimonte**	**0.23**	**337**	⇑P	**Pg**	**15 55 40.7**	**-0.1**
FDMO				S	**Sg**	**15 55 44.8**	**+0.9**
FDMO					AML	AML	
FDMO					AML	AML	
T1215	**Vallo di Nera,**	**0.25**	**264**	⇑P	**Pg**	**15 55 41.4**	**+0.1**
T1215				S	**Sg**	**15 55 45.8**	**+1.1**
LNSS	**Leonessa**	**0.26**	**209**	⇑P	**Pg**	**15 55 41.5**	**+0.1**
LNSS				S	**Sg**	**15 55 46.0**	**+1.1**
LNSS				AML	AML		
LNSS				AML	AML		
CSP1	**Cessapalombo**	**0.26**	**359**	⇑P	**Pg**	**15 55 41.2**	**-0.3**
CSP1				S	**Sg**	**15 55 45.8**	**+0.7**
CSP1				AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
RM33	**Pellescritta (**	**0.32**	**179**	⇑P	**Pg**	**15 55 42.2**	**-0.3**
RM33				S	**Sg**	**15 55 47.5**	**+0.7**
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
RM33				AML	AML		
CAMP	**Campotosto**	**0.33**	**153**	⇑P	**Pg**	**15 55 42.0**	**-0.8**
CAMP				S	**Sg**	**15 55 47.2**	**+0.1**
CAMP				AML	AML		
CAMP				AML	AML		
TERO	**Teramo**	**0.36**	**125**	⇑P	**Pg**	**15 55 42.3**	**-0.9**
TERO				S	**Sg**	**15 55 47.9**	**0.0**
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
TERO				AML	AML		
MNTP	**Montappone**	**0.36**	**32**	⇑P	**Pg**	**15 55 43.5**	**+0.1**
MDAR	**Monte D'Aria**	**0.37**	**352**	⇑P	**Pg**	**15 55 43.1**	**-0.3**
MDAR				S	**Sg**	**15 55 49.4**	**+1.1**
MDAR				AML	AML		
	comp=E,86600μm,1.2s						
MDAR				AML	AML		
	comp=N,95950μm,0.7s						
MDAR				AML	AML		
	comp=N,96050μm,0.7s						
MDAR				AML	AML		
	comp=E,86600μm,1.2s						
OFFI	**Offida**	**0.37**	**73**	⇑P	**Pg**	**15 55 43.5**	**+0.1**
OFFI				AML	AML		
OFFI				AML	AML		
SEF1	**Sefro**	**0.37**	**329**	⇑P	**Pg**	**15 55 43.4**	**-0.2**
SEF1				S	**Sb**	**15 55 49.7**	**-1.3**
SEF1				AML	AML		
SEF1				AML	AML		
SEF1				AML	AML		
PIO1	**Pioraco**	**0.39**	**335**	⇑P	**Pg**	**15 55 43.5**	**-0.3**
PIO1				S	**Sb**	**15 55 50.2**	**-1.2**
PIO1				AML	AML		
PIO1				AML	AML		
PIO1				AML	AML		
	comp=E,67550μm,0.7s						
T1211	**Morro Reatino**	**0.40**	**222**	⇑P	**Pg**	**15 55 43.8**	**-0.1**
T1211				S	**Sb**	**15 55 50.5**	**-1.3**
SSM1	**San Severino M**	**0.40**	**357**	⇑P	**Pg**	**15 55 43.7**	**-0.4**
ARRO	**Arrone**	**0.41**	**233**	⇑P	**Pg**	**15 55 44.1**	**-0.1**
ARRO				S	**Sb**	**15 55 51.0**	**-1.1**
ARRO				AML	AML		
	comp=E,35500μm,0.3s						
ARRO				AML	AML		
	comp=N,36150μm,0.7s						
FIU1	**Fiuminata**	**0.41**	**331**	⇑P	**Pg**	**15 55 44.0**	**-0.3**
FIU1				S	**Sb**	**15 55 51.2**	**-1.0**
FIU1				AML	AML		
	comp=N,49800μm,0.9s						
FIU1				AML	AML		
	comp=E,48400μm,1.5s						
FIU1				AML	AML		
	comp=N,49800μm,0.9s						
GAG1	**Gagliole**	**0.42**	**346**	⇑P	**Pg**	**15 55 44.2**	**-0.2**
GAG1				S	**Sb**	**15 55 51.6**	**-0.9**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
MTL1	**Matelica**	**0.45**	**341**	⇑P	**Pg**	**15 55 44.8**	**-0.2**
MTL1				AML	AML		
MTL1				AML	AML		
ASSB	**Assisi San Ben**	**0.46**	**298**	⇑P	**Pg**	**15 55 44.9**	**-0.2**
ASSB				S	**Sb**	**15 55 52.6**	**-0.9**
ASSB				AML	AML		
	comp=N,80550μm,0.8s						
ASSB				AML	AML		
	comp=E,64250μm,1.1s						
GIGS	**Gran Sasso**	**0.46**	**145**	⇑P	**Pg**	**15 55 44.0**	**-1.2**
GIGS				S	**Sg**	**15 55 51.5**	**+0.2**
GIGS				AML	AML		
	comp=E,25000μm,0.6s						
GIGS				AML	AML		
	comp=N,26000μm,1.2s						
SNTG	**Esanatoglia**	**0.47**	**335**	⇑P	**Pg**	**15 55 45.0**	**-0.3**
SNTG				S	**Sb**	**15 55 52.9**	**-0.9**
SNTG				AML	AML		
	comp=N,52300μm,0.9s						
SNTG				AML	AML		
	comp=E,37550μm,1.0s						
TRE1	**Treia**	**0.49**	**9**	⇑P	**Pg**	**15 55 45.6**	**0.0**
TRE1				AML	AML		
	comp=N,82200μm,0.3s						
TRE1				AML	AML		
	comp=E,99050μm,0.8s						
EL6	**Elcito**	**0.51**	**351**	⇑P	**Pg**	**15 55 45.6**	**-0.4**
EL6				AML	AML		
	comp=N,86550μm,0.9s						
EL6				AML	AML		
	comp=E,60600μm,0.8s						
CESX	**Cesi**	**0.51**	**245**	⇑P	**Pg**	**15 55 45.8**	**-0.4**
CESX				S	**Sb**	**15 55 54.0**	**-1.0**
CESX				AML	AML		
	comp=N,54100μm,0.5s						
CESX				AML	AML		
	comp=E,54250μm,1.4s						
TRTR	**Tortoreto Alta**	**0.52**	**92**	⇑P	**Pg**	**15 55 46.6**	**+0.4**
TRTR				AML	AML		
TRTR				AML	AML		
CADA	**Capodarco di F**	**0.55**	**48**	P	**Pb**	**15 55 47.4**	**-0.6**
CADA				AML	AML		
CADA				AML	AML		
CING	**Cingoli**	**0.55**	**359**	⇑P	**Pg**	**15 55 46.2**	**-0.6**
CING				S	**Sb**	**15 55 55.3**	**-0.8**
CING				AML	AML		
	comp=N,25800μm,0.2s						
CING				AML	AML		
	comp=E,42050μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.55**	**311**	⇑P	**Pg**	**15 55 46.6**	**-0.2**
ATCC				S	**Sb**	**15 55 55.9**	**-0.2**
ATCC				AML	AML		
	comp=N,77650μm,0.4s						
ATCC				AML	AML		
	comp=E,81000μm,1.1s						
FIAM	**Fiamignano**	**0.56**	**187**	⇑P	**Pg**	**15 55 46.5**	**-0.7**
FIAM				S	**Sg**	**15 55 55.2**	**+0.6**
FIAM				AML	AML		
	comp=N,45600μm,0.4s						
FIAM				AML	AML		
	comp=E,36450μm,0.4s						
FOSV	**Fossato di Vic**	**0.57**	**325**	⇑P	**Pg**	**15 55 46.9**	**-0.3**
FOSV				S	**Sb**	**15 55 56.2**	**-0.5**
FOSV				AML	AML		
	comp=N,67150μm,0.3s						
FOSV				AML	AML		
	comp=E,40600μm,0.7s						
CIMA	**Civitanova Mar**	**0.58**	**35**	P	**Pb**	**15 55 48.1**	**-0.6**
PP3	**Marolino**	**0.62**	**28**	⇑P	**Pg**	**15 55 48.5**	**+0.2**
PP3				AML	AML		
	comp=N,86150μm,0.3s						
PP3				AML	AML		
	comp=E,92900μm,0.5s						
PP3				AML	AML		
	comp=N,82000μm,0.3s						
PP3				AML	AML		
	comp=E,90850μm,0.5s						
PP3				AML	AML		
	comp=N,86150μm,0.3s						
PP3				AML	AML		
	comp=N,81950μm,0.3s						
PP3				AML	AML		
	comp=E,92800μm,0.5s						
FAGN	**Fagnano**	**0.63**	**154**	P	**Pg**	**15 55 47.1**	**-1.2**
FAGN				AML	AML		
FAGN				AML	AML		
MMUR	**Monte Murano**	**0.63**	**346**	P	**Pg**	**15 55 47.8**	**-0.6**
MMUR				AML	AML		
	comp=E,58200μm,1.1s						
MMUR				AML	AML		
	comp=E,58250μm,1.1s						
MMUR				AML	AML		
	comp=N,47250μm,1.2s						
VCEL	**Villa Celiera**	**0.64**	**133**	⇑P	**Pg**	**15 55 47.6**	**-0.9**
VCEL				AML	AML		
	comp=E,76450μm,1.0s						
VCEL				AML	AML		
VCEL				AML	AML		
	comp=E,76500μm,1.0s						
MURB	**Monte Urbino**	**0.66**	**311**		**Pg**	**15 55 48.6**	**-0.5**
MURB				Sg	**Sg**	**15 55 55.8**	**-1.9**
MURB	**Monte Urbino**	**0.66**	**311**	⇑P	**Pg**	**15 55 48.7**	**-0.3**
MURB				AML	AML		
	comp=E,62800μm,0.3s						
MURB				AML	AML		
	comp=E,75200μm,0.3s						
MURB				AML	AML		
	comp=N,79100μm,0.2s						
MURB				AML	AML		
	comp=N,76050μm,0.8s						
SSFR	**Montelago di S**	**0.68**	**333**	⇑P	**Pg**	**15 55 48.8**	**-0.6**
SSFR				AML	AML		
	comp=N,75600μm,0.7s						
SSFR				AML	AML		
	comp=N,64050μm,0.7s						
SSFR				AML	AML		
SSFR				AML	AML		
ARVD	**Arcevia**	**0.70**	**344**	⇑P	**Pg**	**15 55 49.0**	**-0.7**
ARVD				AML	AML		
	comp=E,24800μm,0.7s						
ARVD				AML	AML		
	comp=N,21250μm,1.4s						
ATTE	**AVT- Monte Tez**	**0.73**	**301**	⇑P	**Pg**	**15 55 49.7**	**-0.5**
ATTE				AML	AML		
	comp=E,20300μm,0.8s						
ATTE				AML	AML		
	comp=N,20950μm,0.7s						
T0110	**Collepietro**	**0.73**	**145**	⇑P	**Pg**	**15 55 48.9**	**-1.4**
T0110				S	**Sg**	**15 56 00.1**	**+0.2**
T0110				AML	AML		
T0110				AML	AML		
ATLO	**AVT- Montelove**	**0.76**	**310**	⇑P	**Pg**	**15 55 50.3**	**-0.6**
FRON	**Frontone**	**0.77**	**333**	⇑P	**Pg**	**15 55 50.3**	**-0.8**
FRON				AML	AML		
	comp=E,22500μm,0.9s						
FRON				AML	AML		
	comp=N,35600μm,0.6s						
AOI	**Ancona**	**0.78**	**22**	⇑P	**Pg**	**15 55 50.6**	**-0.6**
AOI				AML	AML		
	comp=N,26050μm,0.3s						
AOI				AML	AML		
	comp=E,23400μm,1.2s						
SRES	**S.Oreste - Sor**	**0.79**	**221**	⇑P	**Pg**	**15 55 50.5**	**-0.8**
SRES				AML	AML		
	comp=E,12110μm,0.4s						
SRES				AML	AML		
	comp=N,16350μm,0.5s						
ATVO	**AVT- Monte Val**	**0.81**	**313**	⇑P	**Pg**	**15 55 51.1**	**-0.7**
ATVO				AML	AML		
	comp=E,19800μm,1.0s						
ATVO				AML	AML		
	comp=N,24450μm,0.9s						
MGAB	**Montegabbione**	**0.81**	**276**	⇑P	**Pg**	**15 55 51.4**	**-0.4**
MGAB				AML	AML		
	comp=E,38150μm,0.5s						
MGAB				AML	AML		
	comp=N,54450μm,0.6s						
MGAB				AML	AML		
	comp=N,57250μm,0.6s						
MGAB				AML	AML		
	comp=E,39600μm,0.5s						
ATVA	**AVT- Monte Val**	**0.81**	**304**	⇑P	**Pg**	**15 55 51.1**	**-0.7**
COR1	**Corinaldo**	**0.82**	**349**	⇑P	**Pg**	**15 55 52.0**	**0.0**
COR1				AML	AML		
	comp=E,57700μm,0.8s						
COR1				AML	AML		
COR1				AML	AML		
	comp=N,62250μm,1.2s						
COR1				AML	AML		
COR1				AML	AML		
	comp=E,32200μm,0.8s						
PTQR	**Pietraquaria**	**0.82**	**170**	⇑P	**Pg**	**15 55 50.2**	**-1.7**
PTQR				AML	AML		
	comp=N,12500μm,0.5s						
PTQR				AML	AML		
	comp=E,14650μm,1.6s						
ATMI	**Monte Miggiano**	**0.85**	**307**	⇑P	**Pg**	**15 55 52.1**	**-0.5**
ATMI				AML	AML		
	comp=N,52700μm,0.6s						
ATMI				AML	AML		
	comp=E,53400μm,0.7s						
ATPI	**Pietralunga -**	**0.86**	**317**	⇑P	**Pg**	**15 55 52.0**	**-0.7**
ATPI				AML	AML		
	comp=N,20250μm,0.7s						
ATPI				AML	AML		
	comp=N,20300μm,0.7s						
ATPI				AML	AML		
	comp=E,23650μm,0.6s						
PIEI	**Pieia**	**0.86**	**325**	⇑P	**Pg**	**15 55 51.8**	**-1.0**
PIEI				AML	AML		
	comp=N,12000μm,0.4s						
PIEI				AML	AML		
	comp=E,15500μm,0.3s						
MPAG	**Monte Paganucc**	**0.86**	**338**	⇑P	**Pg**	**15 55 52.1**	**-0.8**
MPAG				AML	AML		
	comp=E,27200μm,0.7s						
MPAG				AML	AML		
	comp=E,27800μm,0.7s						
MPAG				AML	AML		
	comp=N,23000μm,0.5s						
MPAG				AML	AML		
	comp=N,21950μm,0.5s						
MPAG				AML	AML		
	comp=E,27200μm,0.7s						
SENI	**Senigallia**	**0.88**	**1**	P	**Pg**	**15 55 53.1**	**+0.1**
SENI				AML	AML		
	comp=N,18150μm,0.7s						
SENI				AML	AML		
	comp=E,23100μm,0.8s						
SENI				AML	AML		
	comp=N,18215μm,0.7s						
SENI				AML	AML		
	comp=E,23150μm,0.8s						
SENI				AML	AML		
	comp=N,18200μm,0.7s						
MTCE	**Montecelio**	**0.88**	**203**	P	**Pg**	**15 55 51.6**	**-1.5**
MTCE				AML	AML		
	comp=E,17750μm,0.5s						
MTCE				AML	AML		
	comp=N,11550μm,0.9s						
CERT	**Cerreto**	**0.90**	**191**	P	**Pg**	**15 55 52.0**	**-1.5**
CERT				AML	AML		
	comp=N,21800μm,0.8s						
CERT				AML	AML		
	comp=E,32300μm,1.3s						
FSSB	**Fossombrone**	**0.92**	**340**	⇑P	**Pg**	**15 55 53.1**	**-0.8**
FSSB				AML	AML		
	comp=N,87300μm,0.3s						
FSSB				AML	AML		
	comp=E,57850μm,0.4s						
APEC	**Apecchio**	**0.93**	**322**	P	**Pg**	**15 55 53.6**	**-0.4**
APEC				AML	AML		
	comp=N,5340μm,0.9s						
APEC				AML	AML		
	comp=E,6725μm,0.7s						
SACS	**San Casciano d**	**0.96**	**272**	⇑P	**Pg**	**15 55 54.1**	**-0.5**
SACS				AML	AML		
	comp=E,23600μm,1.1s						
SACS				AML	AML		
	comp=N,27900μm,0.8s						
SACS				AML	AML		
	comp=E,23550μm,1.1s						

SACS AML AML
comp=N,30300µm,0.8s
SACS AML AML
comp=N,27850µm,0.8s
SACS AML AML
comp=E,23950µm,1.1s
INTR Introdacqua 0.97 148 ⇑P **Pg 15 55 52.6 -2.1**
INTR AML AML
comp=E,25µm,0.8s
INTR AML AML
comp=N,41µm,0.7s
INTR AML AML
comp=E,25800µm,0.8s
INTR AML AML
comp=N,62200µm,0.7s
INTR AML AML
comp=N,41µm,0.7s
VVLD Villa Vallelon 1.00 162 P **Pg 15 55 53.7 -1.8**
VVLD AML AML
comp=E,19300µm,0.8s
VVLD AML AML
comp=N,26650µm,0.6s
GUAR Guarcino 1.04 176 P **Pg 15 55 54.2 -1.9**
GUAR AML AML
comp=N,22650µm,1.4s
GUAR AML AML
comp=E,25750µm,0.8s
CAFI Castiglion Fio 1.04 299 ⇑P **Pg 15 55 55.4 -0.8**
CAFI AML AML
comp=N,11300µm,0.8s
CAFI AML AML
comp=N,11350µm,0.8s
CAFI AML AML
comp=E,11100µm,0.7s
CAFI AML AML
comp=E,11500µm,0.7s
CAFI AML AML
comp=N,11800µm,0.8s
LATE Laterza 1.06 259 Pg **Pg 15 55 55.5 -1.1**
LATE Laterza 1.06 259 ⇑P **Pg 15 55 55.7 -0.8**
LPEL Lama dei Pelig 1.06 137 P **Pg 15 55 54.7 -2.0**
LPEL AML AML
comp=E,24300µm,0.7s
LPEL AML AML
comp=N,22800µm,0.6s
PARC Parchiule 1.08 319 ⇑P **Pg 15 55 56.1 -0.9**
PARC AML AML
comp=N,17400µm,0.8s
PARC AML AML
comp=E,20150µm,0.7s
SSP9 Sansepolcro 1.08 314 ⇑P **Pg 15 55 56.2 -0.8**
SSP9 AML AML
comp=E,14750µm,1.5s
SSP9 AML AML
comp=N,19500µm,0.8s
RMP Rome, Mte Porz 1.08 200 P **Pg 15 55 56.1 -1.0**
RMP AML AML
comp=E,18900µm,0.8s
RMP AML AML
comp=N,22900µm,0.7s
MCIV Monte Civitell 1.13 268 ⇑P **Pg 15 55 56.9 -1.0**
MCIV AML AML
comp=E,6625µm,0.5s
MCIV AML AML
comp=N,9600µm,0.8s
RDP Rocca di Papa 1.13 199 P **Pg 15 55 57.0 -0.9**
RDP AML AML
comp=E,38850µm,0.5s
RDP AML AML
comp=N,35350µm,0.4s
SF04 Casetta 1.14 271 P **Pg 15 55 57.2 -0.9**
SF04 AML AML
comp=E,9520µm,0.4s
SF04 AML AML
comp=N,6895µm,0.7s
PESA Pesaro 1.14 347 ⇑P **Pg 15 55 57.4 -0.8**
PESA AML AML
comp=N,29700µm,1.2s
PESA AML AML
comp=E,23550µm,1.3s
CPGN Carpegna, Ital 1.17 327 ⇑P **Pg 15 55 58.2 -0.5**
CPGN AML AML
CPGN AML AML
POFI Posta Fibreno 1.17 161 ⇑P **Pg 15 55 56.4 -2.3**
POFI AML AML
comp=N,11005µm,0.6s
POFI AML AML
comp=E,14050µm,0.7s
TOLF Tolfa 1.18 230 ⇑P **Pg 15 55 57.6 -1.2**
TOLF AML AML
comp=E,11400µm,0.7s
TOLF AML AML
comp=N,7920µm,0.6s
SF01 Poggio Pratacc 1.21 270 P **Pg 15 55 58.7 -0.8**
SF01 AML AML
comp=N,13220µm,0.7s
SF01 AML AML
comp=E,12800µm,0.6s
CRE Caprese Michel 1.21 311 ⇑P **Pg 15 55 58.4 -1.1**
CRE AML AML
comp=E,8240µm,0.9s
CRE AML AML
comp=N,10000µm,0.6s
RSM Repubblica di 1.23 334 ⇑P **Pg 15 55 59.5 -0.4**
RSM AML AML
comp=E,25900µm,1.0s
RSM AML AML
comp=N,26950µm,1.0s
GIUL Giuliano Di Ro 1.27 178 P **Pn 15 55 59.3 -0.9**
GIUL AML AML
comp=N,10235µm,1.0s
GIUL AML AML
comp=E,8715µm,0.6s
ARCI Arcidosso 1.28 272 ⇑P **Pn 15 55 59.7 -0.7**
ARCI AML AML
comp=E,2525µm,0.9s
ARCI AML AML
comp=N,2460µm,1.5s
RNI2 Rionero Sannit 1.33 148 P **Pn 15 55 59.9 -1.2**
RNI2 AML AML
comp=E,21200µm,0.9s
RNI2 AML AML
comp=E,22000µm,0.9s
RNI2 AML AML
comp=N,19150µm,1.0s
RNI2 AML AML
comp=N,18900µm,1.1s
LATB Latina 1.35 188 P **Pn 15 55 59.3 -2.0**
LATB AML AML
comp=E,2875µm,0.7s
LATB AML AML
comp=N,3250µm,0.8s
LIK San Giovanni I 1.35 169 P **Pb 15 56 01.8 +0.1**
LIK AML AML
comp=E,19900µm,0.6s
LIK AML AML
comp=N,21200µm,0.7s
CERA Filignano 1.37 154 P **Pn 15 55 59.3 -2.3**
CERA AML AML
comp=E,14450µm,0.6s
CERA AML AML
comp=N,18250µm,1.0s
CERA AML AML
comp=N,19150µm,0.8s
CERA AML AML
comp=E,15100µm,0.6s
FRES Fresagrandinar 1.38 128 P **Pn 15 55 59.5 -2.2**
FRES AML AML
comp=E,13600µm,0.8s
FRES AML AML
comp=N,9380µm,0.9s
ASQU Asqua 1.42 313 ⇑P **Pn 15 56 01.5 -0.9**
ASQU AML AML
comp=N,9930µm,0.8s
ASQU AML AML
comp=E,7115µm,0.6s
TRIV Trivento 1.46 136 AML AML
comp=E,19150µm,0.8s
TRIV AML AML
comp=N,14450µm,1.2s
TRIV AML AML
comp=E,21150µm,0.8s
TRIV AML AML
comp=N,14210µm,0.7s
SFI Santa Sofia 1.46 318 P **Pn 15 56 02.8 -0.2**
SFI AML AML
comp=N,8955µm,1.5s
SFI AML AML
comp=N,9260µm,1.5s
SFI AML AML
comp=E,6995µm,1.4s
SFI AML AML
comp=E,6915µm,1.4s
CSNT Castellina Chi 1.54 295 ⇑P **Pn 15 56 03.6 -0.4**
CSNT AML AML
comp=E,2410µm,1.2s
CSNT AML AML
comp=N,4330µm,0.8s
FROS Frosini 1.55 285 ⇑P **Pn 15 56 03.7 -0.5**
FROS AML AML
comp=N,6185µm,1.1s
FROS AML AML
comp=E,5880µm,1.6s
OSSC Osservatorio P 1.59 296 **Pn 15 56 03.6 -1.1**
OSSC Osservatorio P 1.59 296 ⇑P **Pn 15 56 04.4 -0.3**
OSSC AML AML
comp=E,3760µm,1.0s
OSSC AML AML
comp=N,3750µm,1.0s
OSSC AML AML
comp=E,3810µm,1.0s
OSSC AML AML
comp=N,3765µm,1.0s
RUFI Rufina 1.60 310 P **Pn 15 56 04.7 -0.1**
RUFI AML AML
comp=E,6100µm,1.0s
RUFI AML AML
comp=N,7655µm,1.0s
VAGA Valle Agricola 1.60 151 P **Pn 15 56 04.2 -0.7**
VAGA AML AML
comp=E,5100µm,0.8s
VAGA AML AML
comp=N,6540µm,1.3s
VAGA AML AML
comp=N,6250µm,1.3s
VAGA AML AML
comp=E,5290µm,0.7s
BSSO Busso 1.64 141 P **Pn 15 56 05.2 -0.2**
BSSO AML AML
comp=N,8965µm,1.5s
BSSO AML AML
comp=N,3550µm,1.5s
BSSO AML AML
comp=E,7590µm,1.3s
BSSO AML AML
comp=E,3125µm,1.3s
LMD Lutirano 1.66 319 P **Pn 15 56 05.5 -0.1**
LMD AML AML
comp=N,6615µm,0.7s
LMD AML AML
comp=E,6450µm,1.6s
TRIF Trifonti 1.72 280 ⇑P **Pn 15 56 05.9 -0.5**
TRIF AML AML
comp=E,2595µm,0.6s
TRIF AML AML
comp=N,2280µm,0.8s
CIGN Sant'Elia a Pi 1.72 132 P **Pn 15 56 06.0 -0.4**
CIGN AML AML
comp=N,7085µm,0.7s
CIGN AML AML
comp=E,5815µm,0.6s
CASP Castiglione de 1.73 270 Pn **Pn 15 56 05.2 -1.3**
CASP Castiglione de 1.73 270 ⇑P **Pn 15 56 05.9 -0.6**
CASP AML AML
comp=N,1305µm,1.0s
CASP AML AML
comp=E,1205µm,0.7s
MODR Mondragone 1.75 163 P **Pn 15 56 06.9 0.0**
MODR AML AML
comp=N,3290µm,0.7s
MODR AML AML
comp=E,3680µm,1.5s
DUGI Dugi Otok 1.78 49 *e*Pn **Pn 15 56 06.4 -0.9**
PIGN Pignataro Magg 1.78 156 ⇓P **Pn 15 56 07.4 +0.1**
PIGN AML AML
comp=N,2825µm,0.7s
PIGN AML AML
comp=E,2525µm,0.8s
PIGN AML AML
comp=N,3055µm,0.8s
PIGN AML AML
comp=E,2720µm,0.9s
BRIS BRISIGHELLA 1.81 317 P **Pn 15 56 06.4 -1.2**
BRIS AML AML
comp=E,4855µm,1.0s
BRIS AML AML
comp=N,12550µm,0.8s
MELA Melanico ??? S 1.81 128 P **Pn 15 56 07.7 +0.1**
MELA AML AML
comp=N,14500µm,0.5s
MELA AML AML
comp=N,15200µm,0.5s
MELA AML AML
comp=E,19550µm,0.6s
MELA AML AML
comp=E,18650µm,0.6s
SACR S. Croce Del S 1.81 142 P **Pn 15 56 07.7 0.0**
SACR AML AML
comp=E,5585µm,0.8s
SACR AML AML
comp=N,4200µm,1.3s
SEI Scarperia 1.82 313 P **Pn 15 56 07.7 -0.1**
SEI AML AML
comp=N,11550µm,0.5s
SEI AML AML
comp=E,6590µm,0.5s
GATE Gambatesa 1.82 136 P **Pn 15 56 08.3 +0.5**
GATE AML AML
comp=N,4690µm,0.7s
GATE AML AML
comp=E,5345µm,0.9s
GATE AML AML
comp=E,3445µm,1.2s
GATE AML AML
comp=N,4760µm,0.7s
TREM Isole Tremiti 1.84 112 AML AML
comp=N,15500µm,1.0s
TREM AML AML
comp=E,17700µm,0.6s
IMOL Imola, Italy 1.86 326 P **Pg 15 56 11.7 -0.2**
MPPT Montemurlo 1.91 307 P **Pn 15 56 08.5 -0.6**
MPPT AML AML
comp=E,3425µm,0.9s
MPPT AML AML
comp=N,3655µm,0.9s
VIRC Vir 1.98 42 *e*Pn **Pn 15 56 09.3 -0.7**
MTRZ Monterenzio 2.00 321 P **Pb 15 56 12.3 -0.5**
APRC Apricena 2.04 121 ⇓P **Pn 15 56 10.8 0.0**
APRC AML AML
comp=E,7475µm,0.7s
APRC AML AML
comp=N,9850µm,0.5s
MOCO Biccari - m.te 2.06 135 ⇓P **Pn 15 56 12.3 +1.2**
MOCO AML AML
comp=E,4075µm,0.7s
MOCO AML AML
comp=E,3935µm,0.7s
MOCO AML AML
comp=N,2105µm,1.2s
MOCO AML AML
comp=N,2275µm,1.2s
PAOL Paolisi 2.06 150 Pn **Pn 15 56 10.5 -0.7**
MORI Morici 2.10 60 *e*Pn **Pn 15 56 11.0 -0.6**
NVLJ Novalja 2.11 34 *e*Pn **Pn 15 56 11.0 -0.7**
BRJN Brijuni 2.11 10 *e*Pn **Pn 15 56 11.0 -0.8**
BRJN Brijuni 2.11 10 ⇑P **Pn 15 56 10.8 -1.0**
PII Pisa 2.15 295 AML AML
comp=E,2265µm,0.7s
PII AML AML
comp=N,4225µm,0.7s
POPM Popiglio 2.16 305 P **Pn 15 56 12.5 0.0**
SGRT San Giovanni R 2.17 119 Pn **Pn 15 56 12.8 +0.2**
SGRT San Giovanni R 2.17 119 P **Pn 15 56 12.9 +0.3**
baz=117
SGRT S **Sn 15 56 36.0 -3.7**
baz=117
SGRT AMP
comp=N,24nm,0.7s,baz=117
SGRT San Giovanni R 2.17 119 ⇓P **Pn 15 56 12.8 +0.2**
SGRT AML AML
comp=E,7920µm,0.5s
SGRT AML AML
comp=N,7430µm,0.7s
CELB S.Piero in Cam 2.21 269 ⇑P **Pn 15 56 12.5 -0.7**
CELB AML AML
comp=E,468µm,1.6s
CELB AML AML
comp=N,513µm,0.7s
ZCCA Zocca 2.22 314 P **Pb 15 56 16.1 -0.5**
ZCCA AML AML
comp=N,3135µm,1.6s
ZCCA AML AML
comp=E,3475µm,0.8s
ZCCA AML AML
comp=E,3465µm,0.8s
ZCCA AML AML
comp=N,3210µm,1.6s
RABC Rab 2.23 30 *e*Pn **Pn 15 56 13.1 -0.4**
MAIM Mastiano 2.26 300 ⇑P **Pn 15 56 13.3 -0.5**
MAIM AML AML
comp=E,2290µm,0.7s
MAIM AML AML
comp=N,2295µm,0.7s
MSAG Monte S. Angel 2.29 118 P **Pn 15 56 14.5 +0.1**
MSAG AML AML
comp=E,8485µm,0.7s
MSAG AML AML
comp=N,11200µm,0.6s
MSAG AML AML
comp=N,10970µm,0.6s
MSAG AML AML
comp=E,8110µm,0.7s
SMRN Sveta Marina 2.31 17 *e*Pn **Pn 15 56 13.7 -0.8**
CARD Cardoso 2.32 302 P **Pn 15 56 13.9 -0.7**
CARD AML AML
comp=N,2125µm,0.7s
CARD AML AML
comp=E,2185µm,0.5s
SGTA Sant Agata di 2.33 136 P **Pn 15 56 13.8 -1.1**
SGTA AML AML
comp=N,3500µm,0.9s
SGTA AML AML
comp=N,3665µm,0.9s
SGTA AML AML
comp=E,4250µm,0.7s
SGTA AML AML
comp=E,4030µm,0.7s
CAFE Carife 2.35 139 ⇓P **Pn 15 56 16.7 +1.5**
CAFE AML AML
comp=E,2915µm,1.6s
CAFE AML AML
comp=N,2245µm,0.8s
CAFE AML AML
comp=E,2940µm,1.6s
CAFE AML AML
comp=N,2210µm,0.8s
HVAR Hvar 2.40 81 *e*Pn **Pn 15 56 15.3 -0.4**
SNAL S. Angelo Dei 2.42 141 P **Pn 15 56 17.8 +1.7**
SNAL AML AML
comp=N,3085µm,1.2s
SNAL AML AML
comp=E,4065µm,0.9s
SNAL AML AML
comp=E,4060µm,0.9s
SNAL AML AML
comp=N,3025µm,1.2s
VLC Villacollemand 2.45 304 Pn **Pn 15 56 15.4 -1.0**
VLC Villacollemand 2.45 304 P **Pn 15 56 15.6 -0.9**
VLC AML AML
comp=N,1625µm,0.9s
VLC AML AML
comp=E,1640µm,1.1s
VLC AML AML
comp=N,1630µm,0.9s
VLC AML AML
comp=E,1690µm,1.2s
A253A Karojba, Istri 2.50 10 *e*Pn **Pn 15 56 16.3 -0.9**
UDBI Udbina 2.51 47 *e*Pn **Pn 15 56 17.9 +0.5**
MCRV Calabrutti - M 2.52 144 AML AML
comp=N,1226µm,1.6s
MCRV AML AML
comp=E,1480µm,0.6s
CAPA Cerignola FG 2.56 130 AML AML
comp=E,7890µm,0.8s
CAPA AML AML
comp=N,7825µm,1.3s
A250A Rusevo Krmpots 2.57 28 *e*Pn **Pn 15 56 17.9 -0.2**
SERM Sermide 2.58 328 AML AML
comp=N,2510µm,1.1s
SERM AML AML
comp=E,1975µm,1.6s
SERM AML AML
comp=N,4725µm,0.9s
SERM AML AML
comp=E,3800µm,0.8s
EQUI Equi 2.59 302 P **Pn 15 56 17.6 -0.8**
EQUI AML AML
comp=E,962µm,1.2s
EQUI AML AML
comp=N,1450µm,1.0s
VULT Monte Vulture 2.59 135 P **Pn 15 56 18.5 -0.1**
VULT AML AML
comp=N,5175µm,0.7s
VULT AML AML
comp=N,5425µm,0.7s
VULT AML AML
comp=E,3505µm,0.7s
VULT AML AML
comp=E,3610µm,0.7s
KIJV Kijevo 2.61 62 *e*Pn **Pn 15 56 18.9 +0.3**
RIY Rijeka 2.66 20 *e*Pn **Pn 15 56 19.0 -0.3**
PLIT Plitvice 2.69 40 *e*Pn **Pn 15 56 19.9 +0.1**
LSTV Lastovo 2.71 90 *e*Pn **Pn 15 56 19.5 -0.5**
TEOL Teolo 2.76 337 **Pn 15 56 20.8 +0.1**
SKDS Skadanscina 2.78 12 *e*Pn **Pn 15 56 20.2 -0.8**
SKDS Skadanscina 2.78 12 ⇑/Pn **Pn 15 56 20.3 -0.7**
SKDS *e*Sn **Sn 15 56 54.3 -0.4**
SKDS IAML 15 57 29.3
comp=Z,408nm,0.5s
PALZ Palazzo San Ge 2.79 132 P **Pn 15 56 21.6 +0.5**
PALZ AML AML
comp=E,5990µm,0.8s
PALZ AML AML
comp=N,4920µm,0.8s
CDRU Civita di Ruta 2.82 145 P **Pn 15 56 21.0 -0.6**
CDRU AML AML
comp=E,620µm,0.7s
CDRU AML AML
comp=N,448µm,0.8s
MAKA Makarska 2.83 79 *e*Pn **Pn 15 56 22.1 +0.4**
MRVN Minervino Murg 2.84 127 AML AML
comp=N,1845µm,0.6s
MRVN AML AML
comp=E,1540µm,1.0s
PRMA PARMA 2.85 314 **Pn 15 56 21.5 -0.5**
OPPE Oppeano 2.88 330 AML AML
comp=E,5630µm,1.1s
OPPE AML AML
comp=N,5930µm,0.9s
ACER Acerenza 2.89 134 P **Pn 15 56 22.0 -0.5**
A050A Klekovaca 2.92 54 *e*Pn **Pn 15 56 23.5 +0.5**
RICI Ricice 2.95 76 *e*Pn **Pn 15 56 23.0 -0.3**
CMPR Campora 2.96 147 P **Pn 15 56 24.2 +0.6**
CMPR AML AML
comp=N,506µm,0.9s
CMPR AML AML
comp=E,738µm,0.7s
SMPL Sampolo 3.00 257 ⇑P **Pn 15 56 23.4 -0.5**
SMPL AML AML
comp=N,154µm,1.6s
SMPL AML AML
comp=E,224µm,0.7s
BOJS Bojanci 3.05 28 *e*Pn **Pn 15 56 24.5 -0.2**
BOJS Bojanci 3.05 28 P **Pn 15 56 25.0 +0.3**
BOJS AML AML
comp=E,4115µm,1.0s
BOJS AML AML
comp=N,3665µm,1.2s
MSSA Maissana 3.07 300 **Pn 15 56 24.4 -0.6**
MSSA Maissana 3.07 300 ⇑P **Pn 15 56 24.9 -0.1**
MSSA AML AML
comp=N,1315µm,0.8s
MSSA AML AML
comp=E,959µm,1.1s
PGF Pioggiola 3.12 266 *e*P **Pn 15 56 25.8 +0.1**
PGF *e*Sn **Sn 15 56 57.4 -5.8**
comp=E,120nm,0.6s
SRKY Kupres RS 3.13 65 *e*Pn **Pn 15 56 27.2 +1.2**
SABO M.te Sabotino 3.16 5 **Pn 15 56 25.6 -0.6**

SABO M.te Sabotino 3.16 5 ⇑P Pn 15 56 25.9 -0.4
SABO AML AML
comp=N,13450µm,0.7s
SABO AML AML
comp=N,3605µm,0.7s
SABO AML AML
comp=E,11850µm,0.7s
SABO AML AML
comp=E,2780µm,0.7s
MCEL Monticello 3.17 141 P Pn 15 56 27.9 +1.4
MCEL AML AML
comp=E,658µm,1.2s
MCEL AML AML
comp=N,1160µm,0.8s
MCEL AML AML
comp=E,658µm,1.2s
MCEL AML AML
comp=N,1205µm,0.8s
AMUR Altamura 3.18 126 P Pn 15 56 26.6 +0.1
AMUR AML AML
comp=E,1860µm,0.6s
AMUR AML AML
comp=N,1650µm,0.6s
MTSN Montesano sull 3.19 142 ⇓P Pn 15 56 28.2 +1.5
MTSN AML AML
comp=E,794µm,1.4s
MTSN AML AML
comp=N,822µm,1.0s
ROVR Rover Verones 3.21 332 ⇑P Pn 15 56 27.2 +0.2
ROVR AML AML
comp=E,3345µm,1.6s
ROVR AML AML
comp=E,752µm,0.6s
ROVR AML AML
comp=N,776µm,0.9s
ROVR AML AML
comp=N,1945µm,0.9s
CGRP Cima Grappa 3.21 342 ⇑P Pn 15 56 27.1 -0.1
CGRP AML AML
comp=N,4260µm,0.6s
CGRP AML AML
comp=E,3495µm,0.8s
CGRP AML AML
comp=E,3630µm,0.8s
CGRP AML AML
comp=N,4295µm,0.6s
OZLJ Ozalj 3.22 29 ePn Pn 15 56 26.9 -0.1
MGRS Mrkonjic Grad 3.23 59 ePn Pn 15 56 28.1 +0.9
VARN Col Varnada, M 3.26 346 ⇑P Pn 15 56 27.6 -0.1
VARN AML AML
comp=E,3585µm,0.8s
VARN AML AML
comp=N,3255µm,1.0s
VARN AML AML
comp=E,3640µm,0.8s
VARN AML AML
comp=N,3240µm,1.0s
MIGL Miglionico 3.29 132 P Pn 15 56 27.6 -0.3
MIGL AML AML
comp=N,6935µm,0.8s
MIGL AML AML
comp=E,7785µm,0.8s
STON Ston 3.30 88 ePn Pn 15 56 27.1 -1.0
STON Ston 3.30 88 ePn Pn 15 56 26.8 -1.4
STON Ston 3.30 88 ePn Pn 15 56 27.1 -1.0
STON eSn Sn 15 57 07.0 -0.5
STON Ston 3.30 88 AML AML
STON AML AML
comp=E,576µm,0.8s
STON AML AML
comp=N,614µm,1.2s
SIRI Monte Sirino - 3.31 142 P Pn 15 56 30.0 +1.6
SIRI AML AML
comp=E,632µm,0.6s
SIRI AML AML
comp=E,654µm,0.6s
SIRI AML AML
comp=N,904µm,0.9s
SIRI AML AML
comp=N,886µm,0.9s
PRIJ Prijedor 3.32 49 ePn Pb 15 56 32.8 -2.5
LJU Ljubljana 3.35 16 i Pn Pn 15 56 29.3 +0.5
LJU i Sn Sn 15 57 09.3 +0.6
LJU IAML 15 57 51.4
comp=Z,685nm,0.8s
LJU Ljubljana 3.35 16 ⇑P Pn 15 56 29.2 +0.5
LJU AML AML
comp=N,10295µm,0.6s
LJU AML AML
comp=E,7995µm,0.5s
DOSS Dosso del Somm 3.38 335 P Pn 15 56 29.9 +0.6
DOSS AML AML
comp=N,1915µm,0.8s
DOSS AML AML
comp=E,1885µm,0.7s
DOSS AML AML
comp=N,1850µm,0.7s
DOSS AML AML
comp=E,1890µm,0.8s
SALO Salr 3.39 326 Pn 15 56 29.8 +0.4
SALO Salr 3.39 326 P Pn 15 56 29.5 +0.1
SALO AML AML
comp=E,2970µm,1.1s
SALO AML AML
comp=N,2360µm,0.9s
SALO AML AML
comp=N,2495µm,1.3s
SALO AML AML
comp=E,3125µm,1.1s
CRES Cresnjev 3.40 28 ePn Pn 15 56 29.7 +0.2
MATE Matera 3.40 129 ⇑P Pn 15 56 30.4 +0.9
MATE ⇓S Sn 15 57 11.9 +1.9
MATE Matera 3.40 129 P Pn 15 56 30.3 +0.8
MATE AML AML
comp=E,1860µm,0.7s
MATE AML AML
comp=N,1660µm,1.6s
AJAC Base Areonaval 3.42 256 ⇑P Pn 15 56 30.6 +0.9
AJAC AML AML
comp=N,340µm,0.6s
AJAC AML AML
comp=E,370µm,0.6s
MPRI Monte Prat 3.42 357 P Pn 15 56 29.9 +0.1
MPRI AML AML
comp=N,2435µm,0.7s
MPRI AML AML
comp=N,3205µm,0.7s
MPRI AML AML
comp=E,2820µm,1.0s
MPRI AML AML
comp=E,2085µm,1.0s
CUC Castrocucco 3.44 144 Pn Pn 15 56 30.2 0.0
CUC Castrocucco 3.44 144 AML AML
comp=N,575µm,0.8s
CUC AML AML
comp=E,648µm,1.0s
CUC AML AML
comp=N,696µm,0.8s
CUC AML AML
comp=E,538µm,1.0s
A051A Mrakovica 3.45 49 ePn Pn 15 56 30.5 +0.3
STAL STALIGIAL 3.45 354 Pn 15 56 29.9 -0.4
STAL STALIGIAL 3.45 354 ⇑P Pn 15 56 30.0 -0.2
STAL AML AML
comp=E,1485µm,0.7s
STAL AML AML
comp=N,1500µm,0.9s
STAL AML AML
comp=E,1970µm,0.6s
STAL AML AML
comp=N,1445µm,0.9s
CRAC Craco 3.45 134 AML AML
comp=N,2575µm,1.0s
CRAC AML AML
comp=E,2985µm,0.8s
BLY Banja Luka 3.46 55 ePn Pn 15 56 30.5 +0.2
BLY Banja Luka 3.46 55 ePn Pn 15 56 31.7 +1.4
MAGA Magasa 3.48 329 ⇑P Pn 15 56 31.1 +0.4
MAGA AML AML
comp=E,5795µm,0.8s
MAGA AML AML
comp=N,2825µm,0.6s
CIMO Cimolais 3.52 351 Pn 15 56 30.8 -0.4
CIMO Cimolais 3.52 351 ⇑P Pn 15 56 30.9 -0.3
CIMO AML AML
comp=N,506µm,0.8s
CIMO AML AML
comp=E,660µm,0.8s
CIMO AML AML
comp=N,502µm,0.8s
CIMO AML AML
comp=E,666µm,0.8s
LUSI Trento, Gardas 3.53 333 P Pn 15 56 31.5 +0.2
LUSI AML AML
comp=N,1630µm,1.2s
LUSI AML AML
comp=E,1670µm,0.9s
NOCI Noci 3.53 124 P Pn 15 56 31.7 +0.4
baz=123
NOCI S Sn 15 57 10.8 -2.4
baz=123
NOCI AMP
comp=N,5.1nm,0.5s,baz=123
NOCI Noci 3.53 124 ⇓P Pn 15 56 31.7 +0.4
NOCI AML AML
comp=N,1690µm,0.9s
NOCI AML AML
comp=E,1240µm,0.5s
AGOR Agordo 3.55 347 ⇑P Pn 15 56 31.8 +0.1
AGOR AML AML
comp=E,1305µm,1.3s
AGOR AML AML
comp=E,1048µm,1.3s
AGOR AML AML
comp=N,702µm,1.4s
AGOR AML AML
comp=N,877µm,1.4s
PTCC Patocco-Chiusa 3.58 2 ⇑P Pn 15 56 31.4 -0.6
PTCC AML AML
comp=E,954µm,1.0s
PTCC AML AML
comp=N,776µm,0.7s
PRED Cave del Predi 3.62 4 Pn Pn 15 56 32.0 -0.6
GAGG Gaggia 3.63 334 AML AML
comp=N,1885µm,1.0s
GAGG AML AML
comp=E,2485µm,0.9s
GAGG AML AML
comp=N,2445µm,0.9s
GAGG AML AML
comp=E,1770µm,1.0s
CLUD Cludinico 3.63 356 Pn Pn 15 56 32.3 -0.4
CLUD Cludinico 3.63 356 ⇑P Pn 15 56 32.6 -0.2
CLUD AML AML
comp=E,1770µm,1.1s
CLUD AML AML
comp=N,1445µm,0.8s
CLUD AML AML
comp=N,1432µm,0.8s
CLUD AML AML
comp=E,1765µm,1.1s
DBRK Dubrovnik 3.64 91 ePn Pn 15 56 31.5 -1.3
PTJ Puntijarka 3.66 32 ePn Pn 15 56 32.9 -0.3
ZONE Zone 3.68 324 AML AML
comp=E,244µm,0.6s
ZONE AML AML
comp=N,477µm,0.7s
ZONE AML AML
comp=E,1014µm,1.0s
ZONE AML AML
comp=N,1925µm,0.7s
DGI Dorgali Grotta 3.69 228 ⇓P Pn 15 56 33.7 +0.3
ACOM Acomizza, Ital 3.73 3 P Pn 15 56 33.9 -0.2
ACOM AML AML
comp=N,2130µm,0.7s
ACOM AML AML
comp=E,2200µm,0.8s
ACOM AML AML
comp=E,2270µm,1.4s
ACOM AML AML
comp=N,2055µm,0.7s
ZOU Zoufplan 3.73 357 ⇑P Pn 15 56 34.2 0.0
ZOU AML AML
comp=E,1335µm,1.3s
ZOU AML AML
comp=N,1395µm,1.0s
ZOU AML AML
comp=N,1420µm,1.0s
ZOU AML AML
comp=E,1335µm,1.3s
MABI Malga Bissina 3.76 330 AML AML
comp=E,524µm,0.6s
MABI AML AML
comp=N,516µm,0.8s
MOSL Moslavina 3.77 41 ePn Pn 15 56 33.5 -1.1
SALB San Lorenzo Be 3.78 140 AML AML
comp=E,444µm,1.4s
SALB AML AML
comp=E,470µm,1.6s
SALB AML AML
comp=N,383µm,0.8s
SALB AML AML
comp=N,400µm,0.8s
TREB Trebinje 3.79 90 ePn Pn 15 56 34.8 0.0
TREB Trebinje 3.79 90 ePn Pn 15 56 35.4 +0.6
TREB eSn Sn 15 57 17.2 -2.3
OBKA Obir 3.80 14 ePn Pn 15 56 34.7 -0.4
OBKA Obir 3.80 14 ePn Pn 15 56 34.9 -0.2
comp=N,11nm,0.2s,SNR=24
MYKA Terra Mystica 3.81 4 i Pn Pn 15 56 35.5 +0.2
comp=N,36nm,0.4s,SNR=42
TAR1 Taranto 3.82 126 AML AML
comp=N,1930µm,0.7s
TAR1 AML AML
comp=E,1540µm,0.9s
KOSI Kohlern 3.86 341 ⇑P Pn 15 56 36.7 +0.7
KOSI AML AML
comp=E,2420µm,1.4s
KOSI AML AML
comp=N,1790µm,1.3s
LOBO Lobor 3.90 31 ePn Pn 15 56 35.7 -0.8
HCY Herceg Novi 3.92 94 ePn Pn 15 56 37.0 +0.4
HCY Herceg Novi 3.92 94 ⇓i Pn Pn 15 56 36.7 +0.1
HCY i Sn Sn 15 57 23.3 +0.5
BRY Bratogost 3.92 87 ePn Pn 15 56 37.2 +0.4
BRY Bratogost 3.92 87 ⇓i Pn Pn 15 56 36.9 +0.1
BRY i Sn Sn 15 57 23.4 +0.4
ABTA Abfaltersbach 3.95 353 i Pn Pn 15 56 37.8 +0.7
comp=N,440nm,0.5s,SNR=383
DOB Doboj 4.02 60 ePn Pn 15 56 30.9 -7.1
KALN Kalnik 4.04 34 ePn Pn 15 56 37.1 -1.1
SOKA Soboth 4.06 18 i Pn Pn 15 56 38.1 -0.6
comp=N,17nm,0.4s,SNR=31
BRMO Bormio 4.17 332 AML AML
comp=N,430µm,0.8s
BRMO AML AML
comp=E,468µm,0.7s
UPM Unac-Piva 4.19 83 ePn Pn 15 56 41.8 +1.2
UPM Unac-Piva 4.19 83 ⇓i Pn Pn 15 56 40.8 +0.2
UPM i Sn Sn 15 57 30.4 +0.6
RISI Rein 4.20 349 P Pn 15 56 40.7 +0.1
RISI AML AML
comp=E,2870µm,0.7s
RISI AML AML
comp=N,2170µm,0.5s
CEME Cevo 4.22 92 ⇓i Pn Pn 15 56 41.1 +0.3
CEME i Sn Sn 15 57 30.8 +0.6
KOGS Kog 4.22 30 AML AML
comp=N,6020µm,0.8s
KOGS AML AML
comp=E,6230µm,1.2s
NKME Niksic 4.23 89 ⇓i Pn Pn 15 56 41.3 +0.4
NKME i Sn Sn 15 57 31.1 +0.6
BUM Brajici-Budva 4.23 95 ⇓i Pn Pn 15 56 41.3 +0.3
BUM i Sn Sn 15 57 31.0 +0.4
A252A Venje 4.24 50 ePn Pn 15 56 40.4 -0.6
KBA Koelnbreinsper 4.25 1 i Pn Pn 15 56 41.9 +0.5
comp=E,72nm,0.4s,SNR=143
NKY Niksic 4.25 88 ⇑i Pn Pn 15 56 41.5 +0.2
NKY i Sn Sn 15 57 31.8 +0.6
ROSI Rosskopf 4.29 343 P Pn 15 56 42.2 +0.3
ROSI AML AML
comp=E,2530µm,1.0s
ROSI AML AML
comp=N,2400µm,1.0s
MUGIO Muggio 4.30 317 ⇑P Pn 15 56 41.8 -0.1
MUGIO AML AML
comp=N,422µm,1.4s
MUGIO AML AML
comp=E,446µm,0.7s
FUORN Ofenpass-Fuorn 4.33 332 Pn Pn 15 56 42.5 -0.1
SBF Sospel 4.34 286 eP Pn 15 56 43.0 +0.6
SBF eSn Sn 15 57 26.6 -6.6
comp=E,263nm,0.6s
VSL Villasalto 4.41 222 ⇓P Pn 15 56 43.8 +0.4
VSL AML AML
VSL AML AML
DRME Dracevica, Mon 4.46 96 ePn Pn 15 56 44.8 +0.7
DRME Dracevica, Mon 4.46 96 ⇑i Pn Pn 15 56 44.4 +0.3
DRME i Sn Sn 15 57 36.6 +0.4
PDG Podgorica 4.48 93 ⇓P Pn 15 56 44.9 +0.6
PDG Podgorica 4.48 93 Pn Pn 15 56 44.6 +0.3
PDG Podgorica 4.48 93 ePn Pn 15 56 45.0 +0.7
PDG eSn Sn 15 57 36.3 -0.3
PDG Podgorica 4.48 93 P Pn 15 56 44.9 +0.6
PDG AML AML
comp=E,636µm,0.7s
PDG AML AML
comp=N,602µm,1.6s
PDG AML AML
comp=N,804µm,1.6s
PDG AML AML
comp=E,818µm,0.7s
TTG Podgorica 4.48 93 ⇓i Pn Pn 15 56 44.9 +0.6
TTG i Sn Sn 15 57 36.9 +0.3
TIP Timpagrande 4.53 142 ⇑P Pn 15 56 47.6 +2.5
FETA Feichten 4.55 338 i Pn Pn 15 56 46.6 +1.2
comp=E,64nm,0.5s,SNR=100
ULC Ulcinj 4.55 99 ⇓i Pn Pn 15 56 45.8 +0.4
ULC i Sn Sn 15 57 39.0 +0.6
PLE Pljevlja 4.55 82 ⇓i Pn Pn 15 56 45.6 +0.1
PLE i Sn Sn 15 57 38.8 +0.2
RUDO Rudo 4.57 78 ePn Pn 15 56 45.8 +0.2
WTTA Wattenberg 4.57 346 ePn Pn 15 56 47.2 +1.4
comp=E,178nm,0.7s,SNR=95
DAVOX Davos/Dischmat 4.61 330 Pn Pn 15 56 47.4 +1.1
comp=E,36nm,0.3s,baz=147,slow=16,SNR=158
DAVOX Sn Sn 15 57 41.5 +1.5
comp=E,3.4nm,0.3s,baz=293,slow=22,SNR=4.0
DAVOX LR LR 15 58 23.3
comp=E,184nm,21.5s,baz=225,slow=37
comp=E,141nm,0.5s
SQTA Sankt Quirin 4.61 343 Pn 15 56 47.8 +1.5
SQTA Sankt Quirin 4.61 343 P Pn 15 56 47.8 +1.5
SQTA Sankt Quirin 4.61 343 ePn Pn 15 56 47.8 +1.5
comp=E,104nm,0.4s,SNR=121
BBLS Lazići 4.64 75 ePn Pn 15 56 47.1 +0.5
KOME Kolasin 4.64 88 ⇓i Pn Pn 15 56 47.9 +1.3
KOME i Sn Sn 15 57 40.9 +0.3
WATA Walderalm 4.65 346 Pn 15 56 48.7 +1.9
WATA Walderalm 4.65 346 P Pn 15 56 48.7 +1.9
WATA Walderalm 4.65 346 ePn Pn 15 56 48.7 +1.9
comp=E,53nm,0.3s,SNR=93
ARSA Arzberg 4.71 20 ePn Pn 15 56 47.2 -0.4
comp=E,13nm,0.3s,SNR=24
MOTA Moosalm 4.75 342 Pn 15 56 50.0 +1.8
MOTA Moosalm 4.75 342 P Pn 15 56 50.0 +1.8
MOTA Moosalm 4.75 342 i Pn Pn 15 56 50.0 +1.8
comp=E,193nm,0.7s,SNR=123
BLJ Bijeljina 4.80 64 ePn Pn 15 56 47.1 -1.6
SCTE Santa Cesarea 4.82 123 Pn Pn 15 56 49.2 +0.3
SCTE Santa Cesarea 4.82 123 P Pn 15 56 49.6 +0.7
baz=122
SCTE S Sn 15 57 44.3 -0.6
baz=122
SCTE AMP
comp=N,1.0nm,0.9s,baz=122
SCTE Santa Cesarea 4.82 123 AML AML
comp=N,957µm,0.9s
SCTE AML AML
comp=E,1290µm,0.9s
BIOA Bad Ischl, Aus 4.87 3 Pn 15 56 50.1 +0.4
BIOA Bad Ischl, Aus 4.87 3 i Pn Pn 15 56 50.1 +0.4
comp=E,41nm,0.3s,SNR=105
IVA Berane 4.91 87 ⇓i Pn Pn 15 56 50.8 +0.4
IVA i Sn Sn 15 57 47.5 +0.1
LMR La Mourre 4.93 278 eP Pn 15 56 50.5 -0.1
LMR eSn Sn 15 57 40.7 -7.1
comp=E,52nm,0.7s
RETA Reutte 4.97 340 i Pn Pn 15 56 53.0 +1.9
comp=E,38nm,0.5s,SNR=45
SJES Sjenica 4.98 83 ePn Pn 15 56 52.5 +1.2
SJES eSn Sn 15 57 46.6 -2.4
PVY Plav 4.98 90 ⇑i Pn Pn 15 56 51.6 +0.3
PVY i Sn Sn 15 57 49.1 0.0
CEL Celeste 5.00 155 Pn 15 56 50.4 -1.2
MBDF Montbardon 5.03 294 eP Pn 15 56 52.6 +0.5
MBDF eSn Sn 15 57 43.3 -7.2
comp=E,228nm,0.8s
DAVA Damuels 5.04 333 ePn Pn 15 56 54.1 +1.9
comp=E,144nm,0.6s,SNR=110
MOA Molln 5.08 8 ePn Pn 15 56 52.8 +0.2
MOA eSn Sn 15 57 51.1 -0.2
MOA Molln 5.08 8 ePn Pn 15 56 52.7 +0.2
comp=E,35nm,0.5s,SNR=30
BCI Bajram Curri 5.08 93 P Pn 15 56 54.2 +1.5
baz=91
BCI S Sn 15 57 52.1 +0.6
baz=91
BCI AMP
comp=N,3.0nm,0.7s,baz=91
DIVS Divibare 5.10 73 Pn Pn 15 56 52.9 0.0
DIVS Divibare 5.10 73 ePn Pn 15 56 52.2 -0.7
DIVS Divibare 5.10 73 ePn Pn 15 56 53.0 +0.1
IVAS Ivanjica 5.13 79 ePn Pn 15 56 53.4 +0.1
IVAS eSn Sn 15 57 52.1 -0.6
MORH Mrgy, Hungar 5.15 47 ⇑P Pn 15 56 55.0 +1.5
TIR Tirane 5.17 104 ⇑P Pn 15 56 54.2 +0.4
TIR Tirane 5.17 104 P Pn 15 56 54.4 +0.6
TIR S Sn 15 57 52.2 -1.4
TIR Tirane 5.17 104 Pn Pn 15 56 53.9 +0.1
TIR Tirane 5.17 104 P Pn 15 56 53.9 +0.1
TIR Tirane 5.17 104 ePn Pn 15 56 54.2 +0.4
TIR eSn Sn 15 57 51.9 -1.7
TIR Tirane 5.17 104 P Pn 15 56 54.4 +0.6
baz=103
TIR S Sn 15 57 53.1 -0.5
baz=103
TIR AMP
comp=E,1.1nm,0.6s,baz=103
VLO Vlora 5.27 114 Pn 15 56 55.8 +0.7
VLO Vlora 5.27 114 P Pn 15 56 55.8 +0.7
VLO Vlora 5.27 114 P Pn 15 56 56.3 +1.2
baz=114
FRGS Fruska Gora 5.30 62 ePn Pn 15 56 54.6 -1.0
FRGS Fruska Gora 5.30 62 ePn Pn 15 56 55.7 +0.1
RONA Rosalia, Austr 5.33 23 Pn 15 56 55.8 -0.4
RONA Rosalia, Austr 5.33 23 i Pn Pn 15 56 55.8 -0.4
comp=E,15nm,0.5s,SNR=25
LPG La Plagne 5.36 302 eP Pn 15 56 58.9 +2.2
LPG eSn Sn 15 57 51.2 -7.4
comp=E,148nm,0.8s
LPL La Plagne 5.38 302 eP Pn 15 56 57.9 +1.0
LPL eSn Sn 15 57 51.7 -7.3
comp=E,86nm,0.7s
TRUS Trudelj 5.42 73 ePn Pn 15 56 57.3 +0.1
VAE Valguarnera 5.42 170 Pn Pn 15 56 58.2 +0.8
comp=E,4.9nm,0.4s,baz=356,slow=13,SNR=2.1
VAE LR LR 15 59 12.9
comp=E,411nm,19.6s,baz=156,slow=40
CONA Conrad Observa 5.43 19 i Pn Pn 15 56 57.2 -0.3
comp=E,8.4nm,0.2s,SNR=33
PHP Peshkopia 5.49 100 P Pn 15 56 59.9 +1.7
PHP S Sn 15 58 00.8 -0.7
PHP Peshkopia 5.49 100 P Pn 15 56 59.6 +1.4
baz=98
PHP S Sn 15 58 02.4 +0.9
baz=98
PHP AMP
comp=N,2.0nm,0.9s,baz=98
GRUS Gruza 5.57 76 ePn Pn 15 56 59.4 0.0
GRUS eSn Sn 15 58 00.4 -3.2
RAFF Raffo Rosso 5.67 171 Pn Pn 15 56 59.5 -1.2
SMRF Simiane la Rot 5.68 284 eP Pn 15 57 02.7 +1.8
SMRF eSn Sn 15 57 58.6 -7.6
comp=N,42nm,0.9s
ORIF Oris-en-Rattie 5.70 294 eP Pn 15 57 03.4 +2.3
ORIF eSn Sn 15 57 59.1 -7.6
comp=N,30nm,0.7s
SELS Selova 5.81 83 ePn Pn 15 57 02.6 -0.1
SELS eSn Sn 15 58 07.7 -1.8
KEK Kerkira 5.86 120 P Pn 15 57 04.2 +0.9
KEK S Sn 15 58 08.5 -2.1
KEK Kerkira 5.86 120 Pn Pn 15 57 04.1 +0.8
SRN Sarande 5.90 118 P Pn 15 57 04.7 +0.9
SRN Sarande 5.90 118 P Pn 15 57 04.7 +0.9
baz=117

SRN AMP
comp=E,0.5nm,0.6s,baz=117
ZST Bratislava 6.02 26 *e*P **Pn** **15 57 04.7 -0.8**
ZST *e* 15 58 12.5
ZST MLR MLR
comp=Z,1μm,3.3s
ZST Bratislava 6.02 26 *e*PN **Pn** **15 57 04.7 -0.8**
ZST *e*SN **Sn** **15 58 12.5 -2.1**
ZST *e*Lg Lg 15 59 13.0
GEC2 GERESS Array S 6.03 3 Pn **Pn** **15 57 05.0 -0.7**
GERES GERESS Array B 6.03 3 Pn **Pn** **15 57 04.9 -0.7**
comp=Z,5.6nm,0.3s,baz=169,slow=13,SNR=109
GERES Sn **Sn** **15 58 13.4 -1.4**
comp=Z,11nm,0.3s,baz=188,slow=27,SNR=10
GERES Lg Lg 15 58 52.8
baz=206,slow=33
comp=Z,9.0nm,0.3s
GERES GERESS Array B 6.03 3 Pn **Pn** **15 57 04.8 -0.9**
CKRC Cesky Krumlov 6.04 7 *e*PN **Pn** **15 57 04.8 -1.0**
CKRC *e*SN **Sn** **15 58 11.9 -3.2**
KBN Korca 6.08 109 P **Pn** **15 57 07.4 +1.0**
KBN Korca 6.08 109 **Pn** **15 57 06.7 +0.3**
KBN Korca 6.08 109 P **Pn** **15 57 06.7 +0.3**
KBN Korca 6.08 109 P **Pn** **15 57 07.1 +0.7**
baz=108
LSK Leskovik 6.16 113 P **Pn** **15 57 08.5 +1.0**
LSK S **Sn** **15 58 17.3 -0.9**
LSK Leskovik 6.16 113 P **Pn** **15 57 08.5 +1.0**
baz=112
MODS Modra-Piesok 6.24 26 *e*P **Pn** **15 57 07.6 -0.9**
MODS *e* 15 58 17.4
MODS MLR MLR
comp=Z,800nm,2.9s
MODS Modra-Piesok 6.24 26 *e*PN **Pn** **15 57 07.6 -0.9**
MODS *e*SN **Sn** **15 58 17.4 -2.5**
MODS *e*LG Lg 15 59 15.4
BOVS Bovan 6.26 80 ⇑P **Pn** **15 57 08.7 -0.1**
BOVS Bovan 6.26 80 *e*Pn **Pn** **15 57 08.5 -0.3**
BOVS *e*Sn **Sn** **15 58 17.6 -2.8**
KHC Kasperske Hory 6.31 2 **Pn** **15 57 08.5 -0.9**
KHC Kasperske Hory 6.31 2 *e*P **Pn** **15 57 08.7 -0.8**
KHC *e* 15 58 19.6
KHC Kasperske Hory 6.31 2 *e*PN **Pn** **15 57 08.7 -0.8**
KHC *e*SN **Sn** **15 58 19.6 -2.1**
CABF La Chapelle 6.33 309 *e*P **Pn** **15 57 10.8 +1.0**
CABF *e*Sn **Sn** **15 58 14.1 -8.1**
comp=Z,87nm,0.7s
BARS Barje 6.33 87 *e*Pn **Pn** **15 57 10.1 +0.3**
NEST Nestorio 6.35 110 P **Pn** **15 57 11.8 +1.7**
NEST S **Sn** **15 58 21.8 -1.1**
SMOL Smolenice 6.41 26 *e*P **Pn** **15 57 10.3 -0.5**
MDVR Moldovita 6.46 70 ⇓P **Pn** **15 57 11.7 +0.2**
BFO Black Forest 6.48 330 Pn **Pn** **15 57 11.3 -0.4**
BFO Black Forest 6.48 330 P **Pn** **15 57 11.4 -0.4**
VIVF Saint-Julien-l 6.50 291 *e*P **Pn** **15 57 13.2 +1.1**
VIVF *e*Sn **Sn** **15 58 18.2 -8.2**
comp=Z,42nm,0.9s
PRVS Prvonek 6.54 90 *e*Pn **Pn** **15 57 13.0 +0.3**
PRVS *e*Sn **Sn** **15 58 25.5 -2.0**
JAN Janina 6.57 116 P **Pn** **15 57 13.6 +0.5**
KRUC Moravsky 6.62 18 *e*PN **Pn** **15 57 12.5 -1.2**
KRUC *e*SN **Sn** **15 58 24.3 -4.9**
BZS Buzias 6.65 62 ⇑P **Pn** **15 57 14.2 +0.1**
BZS Buzias 6.65 62 *e*Pn **Pn** **15 57 14.0 -0.2**
ZAGS Zajecar 6.66 78 *e*Pn **Pn** **15 57 14.0 -0.2**
TREC Trest 6.66 13 *e*SN **Sn** **15 58 27.2 -3.1**
HINF Hinteralfeld 6.70 320 *e*P **Pn** **15 57 15.5 +0.6**
HINF *e*Sn **Sn** **15 58 23.1 -8.3**
comp=Z,146nm,0.6s
JAVC Velka Javorina 6.79 26 *e*PN **Pn** **15 57 15.6 -0.5**
BOSS Bosilegrad 6.84 90 *e*Pn **Pn** **15 57 17.1 +0.3**
BOSS *e*Sn **Sn** **15 58 32.7 -2.2**
ECH Echery 6.86 324 Pn **Pn** **15 57 16.6 -0.4**
ECH Echery 6.86 324 P **Pn** **15 57 16.7 -0.4**
VRAC Vranov 6.89 19 ⇑P **Pn** **15 57 18.6 +1.1**
VRAC Vranov 6.89 19 Pn **Pn** **15 57 17.0 -0.4**
comp=Z,0.9nm,0.3s,baz=205,slow=13,SNR=5.8
VRAC Sn **Sn** **15 58 30.8 -5.2**
comp=Z,1.0nm,0.3s,baz=228,slow=14,SNR=3.0
VRAC Lg Lg 15 59 16.0
comp=Z,0.5nm,0.3s,baz=196,slow=21,SNR=1.3
VRAC LR LR 15 59 52.9
comp=Z,63nm,20.4s,baz=200,slow=38
comp=Z,2.4nm,0.3s
VRAC Vranov 6.89 19 *e*PN **Pn** **15 57 16.3 -1.2**
VRAC *e*SN **Sn** **15 58 31.8 -4.3**
VYHS Vyhne 6.90 33 *e*P **Pn** **15 57 17.6 0.0**
VYHS *e* 15 58 35.0
VYHS MLR MLR
comp=Z,100nm,1.2s
VYHS Vyhne 6.90 33 *e*PN **Pn** **15 57 17.6 0.0**
VYHS *e*SN **Sn** **15 58 35.0 -1.2**
VYHS *e*LG Lg 15 59 42.4
ZAPS Zavoj 6.92 83 *e*Pn **Pn** **15 57 18.4 +0.5**
ZAPS *e*Sn **Sn** **15 58 34.3 -2.5**
LASF Ste Croix 6.92 284 *e*P **Pn** **15 57 18.1 +0.2**
LASF *e*Sn **Sn** **15 58 28.2 -8.6**
comp=Z,41nm,0.9s
LKD2 Lefkada island 6.94 123 P **Pn** **15 57 19.3 +1.1**
SIRR Siria 6.95 57 ⇑P **Pn** **15 57 19.1 +0.9**
BLKB Belogradchik 6.96 80 ⇓P **Pn** **15 57 19.0 +0.6**
CDF Champ du Feu 6.96 325 *e*P **Pn** **15 57 19.0 +0.5**
CDF *e*Sn **Sn** **15 58 29.3 -8.5**
comp=Z,99nm,0.6s
HERR Herculane 6.96 70 ⇑P **Pn** **15 57 19.0 +0.6**
GRFO Grafenberg 7.00 349 Pn **Pn** **15 57 18.4 -0.5**
GRFO Grafenberg 7.00 349 P **Pn** **15 57 18.4 -0.5**
GRA1 Grafenberg Arr 7.00 349 **Pn** **15 57 18.6 -0.4**
GRF Grafenberg Arr 7.00 349 P **Pn** **15 57 18.6 -0.4**
NYDR Nydri-Lefkada 7.01 123 P **Pn** **15 57 20.4 +1.3**
EVGI Lefkada island 7.04 124 P **Pn** **15 57 20.8 +1.2**
HAU Haudompre 7.08 319 *e*P **Pn** **15 57 20.5 +0.5**
HAU *e*Sn **Sn** **15 58 32.0 -8.6**
comp=Z,133nm,0.4s
PRU Pruhonice 7.22 7 *e*P **Pn** **15 57 20.8 -1.1**
PRU *e* 15 58 40.2
PRU Pruhonice 7.22 7 *e*PN **Pn** **15 57 20.8 -1.1**
PRU *e*SN **Sn** **15 58 40.2 -3.9**
PSDA Pessada-Kefalo 7.33 128 P **Pn** **15 57 24.6 +1.1**
GZR Gura Zlata 7.35 66 ⇑P **Pn** **15 57 24.4 +0.6**
KKB Krupnik 7.38 94 *e*P **Pn** **15 57 25.7 +1.5**
VTS Vitosha 7.39 88 ⇑P **Pn** **15 57 25.3 +0.9**
VTS Vitosha 7.39 88 Pn **Pn** **15 57 25.0 +0.6**
VTS Vitosha 7.39 88 P **Pn** **15 57 25.0 +0.6**
VTS Vitosha 7.39 88 *e*Pn **Pn** **15 57 25.2 +0.8**
VTS *e*Sn **Sn** **15 58 44.5 -3.9**
VTS Vitosha 7.39 88 *e*P **Pn** **15 57 25.3 +0.9**
THL Klokotos Trika 7.40 113 P **Pn** **15 57 25.7 +1.3**
KNT Kendrikon 7.41 100 P **Pn** **15 57 25.1 +0.5**
LIT Litokhoron 7.48 108 P **Pn** **15 57 24.9 -0.7**
LIT Litokhoron 7.48 108 Pn **Pn** **15 57 24.8 -0.8**
LIT Litokhoron 7.48 108 P **Pn** **15 57 24.8 -0.8**
MORC Moravsky Berou 7.57 22 ⇓P **Pn** **15 57 28.1 +1.3**
MORC Moravsky Berou 7.57 22 **Pn** **15 57 26.8 0.0**
MORC Moravsky Berou 7.57 22 P **Pn** **15 57 26.8 0.0**
MORC Moravsky Berou 7.57 22 *e*PN **Pn** **15 57 26.4 -0.4**
EVR Evrytania 7.60 118 P **Pn** **15 57 28.9 +1.7**
KRLC Kraliky 7.66 18 *e*P **Pn** **15 57 27.8 -0.2**
KRLC Kraliky 7.66 18 *e*PN **Pn** **15 57 27.8 -0.2**
LANS Liptovska Anna 7.68 32 *e*P Pn 15 57 33.5 +5.2
LANS Liptovska Anna 7.68 32 *e*PN Pn 15 57 33.5 +5.2
SMF Signal de Mont 7.68 303 *e*P **Pn** **15 57 28.3 0.0**
SMF *e*Sn Sn 15 58 46.5 -9.0
comp=Z,90nm,0.7s
KEST Kesra 7.69 204 Pn **Pn** **15 57 31.1 +2.6**
comp=Z,1.6nm,0.3s,baz=322,slow=4.7,SNR=16
KEST Sn **Sn** **15 59 01.3 +5.4**
baz=329,slow=18
comp=Z,6.8nm,0.5s
KEST Kesra 7.69 204 Pn **Pn** **15 57 26.2 -2.4**
PVCC Panska Ves 7.76 6 *e*P **Pn** **15 57 29.4 +0.1**
PVCC Panska Ves 7.76 6 *e*PN **Pn** **15 57 29.4 +0.1**
PAGF Fort de Pagny 7.76 320 *e*P **Pn** **15 57 30.5 +1.2**
PAGF *e*Sn Sn 15 58 48.3 -9.0
comp=Z,161nm,0.8s
OKC Ostrava-Krasne 7.80 24 *e*SN **Sn** **15 58 53.2 -5.0**
DPC Dobruska-Polom 7.82 15 *e*P **Pn** **15 57 28.7 -1.6**
DPC Dobruska-Polom 7.82 15 *e*PN **Pn** **15 57 28.7 -1.6**
DRGR 7.83 56 ⇓P **Pn** **15 57 31.9 +1.5**
SFTF Sexfontaines 7.86 316 *e*P **Pn** **15 57 31.8 +1.1**
SFTF *e*Sn Sn 15 58 50.8 -9.0
comp=Z,79nm,0.8s

RLS Riolos of Patr 7.89 124 P **Pn** **15 57 33.2 +2.0**
MMB Musomiste 7.91 95 *e*P **Pn** **15 57 31.9 +0.5**
UPC Upice 7.92 13 *e*P **Pn** **15 57 30.6 -0.9**
UPC Upice 7.92 13 *e*PN **Pn** **15 57 30.6 -0.9**
SRS Serrai 7.92 99 *e*Pn **Pn** **15 57 32.4 +0.8**
SRS *e*Sn **Sn** **15 58 58.3 -3.1**
LOR Lormes 7.97 307 *e*P **Pn** **15 57 32.7 +0.4**
baz=118
LOR *e*Sn Sn 15 58 53.4 -9.1
comp=Z,54nm,0.6s
OSTC Ostas 8.00 14 *e*PN **Pn** **15 57 32.0 -0.7**
LOT Lotru 8.03 67 ⇓P **Pn** **15 57 33.6 +0.4**
MEZF Maizieres J'vi 8.05 318 *e*P **Pn** **15 57 34.6 +1.3**
MEZF *e*Sn Sn 15 58 55.2 -9.2
comp=Z,85nm,0.7s
AVF Avril sur Loir 8.05 303 *e*P **Pn** **15 57 34.6 +1.3**
AVF *e*Sn Sn 15 58 55.2 -9.2
comp=Z,29nm,0.9s
NVR Nevrokopi 8.06 97 P **Pn** **15 57 34.2 +0.7**
BRG Berggiesshubel 8.06 3 *e*P **Pn** **15 57 33.1 -0.5**
BRG Amp 15 57 35.4
comp=Z,5.3nm,0.6s
BRG *ex* x 15 57 44.2
BRG Amp 15 57 47.1
comp=Z,13nm,0.7s
BRG *ex* x 15 58 54.7
BRG *ex* x 16 00 04.3
BRG Amp 16 00 16.6
comp=Z,117nm,1.5s
BRG Berggiesshubel 8.06 3 *e*P **Pn** **15 57 33.0 -0.5**
BRG pmax pmax
comp=Z,5.0nm,0.6s
BRG pmax pmax
comp=Z,13nm,0.7s
BRG pmax pmax
comp=Z,117nm,1.5s
MTLF Montolieu 8.06 277 *e*P **Pn** **15 57 33.7 +0.2**
MTLF *e*Sn Sn 15 58 55.4 -9.5
comp=Z,21nm,1.0s
SSF Saint Saulge 8.08 305 *e*P **Pn** **15 57 34.1 +0.4**
SSF *e*Sn Sn 15 58 56.0 -9.2
comp=Z,51nm,0.8s
SAVF Savonnieres en 8.09 318 *e*P **Pn** **15 57 35.5 +1.6**
SAVF *e*Sn Sn 15 58 56.1 -9.3
comp=Z,54nm,0.7s
BGF Bois d'Agland 8.27 300 *e*P **Pn** **15 57 37.2 +0.8**
BGF *e*Sn Sn 15 59 00.5 -9.4
comp=Z,62nm,0.7s
XOR Xorichti 8.29 111 P **Pn** **15 57 36.1 -0.6**
CAF Calviac 8.32 288 *e*P **Pn** **15 57 38.8 +1.7**
CAF *e*Sn Sn 15 59 01.8 -9.4
comp=Z,9.0nm,0.7s
KLV Kalavryta, Ach 8.32 122 P **Pn** **15 57 39.1 +1.9**
WLF Walferdange 8.40 327 Pn **Pn** **15 57 39.0 +0.8**
WLF Walferdange 8.40 327 P **Pn** **15 57 39.0 +0.8**
WLF Walferdange 8.40 327 *d*P **Pn** **15 57 41.2 +3.0**
CLL Collm 8.48 359 Pn **Pn** **15 57 38.6 -0.7**
CLL Collm 8.48 359 *e*P **Pn** **15 57 39.0 -0.3**
CLL Collm 8.48 359 *e*Pn **Pn** **15 57 39.0 -0.3**
CLL *ex* x 15 57 40.0
CLL *ex* x 15 57 50.0
CLL *ex* x 15 57 59.0
CLL *e*Pg **Pg** **15 58 15.0 -3.5**
CLL *e*Sn Sn 15 58 56.0 -19
CLL *ex* x 15 59 12.0
CLL *ex* x 15 59 22.0
CLL *ex* x 15 59 34.0
CLL *ex* x 16 00 00.0
CLL LmH 16 00 00.0
comp=N,100nm,20.5s
CLL LmH 16 00 00.0
comp=E,300nm,21.6s
CLL Lmax 16 00 00.0
CLL *e*Sg **Sg** **16 00 06.0 -2.3**
comp=Z,138nm,1.4s
PLD Plovdiv 8.53 91 *e*Pn **Pn** **15 57 41.0 +1.1**
TCF Toulx Ste Croi 8.58 298 *e*P **Pn** **15 57 42.0 +1.3**
TCF *e*Sn Sn 15 59 08.0 -10
comp=Z,20nm,0.7s
UZH Uzhgorod 8.60 44 *e*P **Pn** **15 57 45.2 +4.3**
UZH *e*S **Sn** **15 59 24.2 +6.2**
UZH MLR MLR
comp=Z,40nm,10.0s
RZN Rozhen 8.61 94 *e*P **Pn** **15 57 42.1 +0.9**
KAVA Kavala 8.63 98 P **Pn** **15 57 42.0 +0.7**
OJC Ojcow 8.67 29 Pn **Pn** **15 57 43.4 +1.5**
OJC Ojcow 8.67 29 P **Pn** **15 57 43.4 +1.5**
HYF Humbligny 8.70 304 *e*P **Pn** **15 57 43.6 +1.4**
RJF Les Rejaudoux 8.78 290 *e*P **Pn** **15 57 45.9 +2.6**
RJF *e*Sn Sn 15 59 12.7 -10
comp=Z,21nm,1.0s
KOLS Kolonicke sedl 8.78 43 *e*P Pn 15 57 51.0 +7.6
KOLS Kolonicke sedl 8.78 43 *e*PN Pn 15 57 51.0 +7.6
VOIR 8.91 69 ⇓P **Pn** **15 57 46.4 +1.2**
KDZ Kurdzhali 9.13 93 *e*P **Pn** **15 57 48.2 0.0**
DIM Dimitrovgrad 9.15 91 *e*P **Pn** **15 57 49.4 +1.0**
BTNL Ternell 9.15 330 *d*P **Pn** **15 57 50.9 +2.4**
BTNL *d*S **Sn** **15 59 29.0 -2.7**
RCHB Rochefort 9.16 326 *d*P **Pn** **15 57 50.8 +2.2**
RCHB *d*S **Sn** **15 59 27.3 -4.4**
MEM Membach 9.22 330 *d*P **Pn** **15 57 51.3 +2.0**
LFF La Frestale 9.25 287 *e*P **Pn** **15 57 51.3 +1.5**
LFF *e*Sn Sn 15 59 24.0 -10
comp=Z,7.0nm,0.4s
GIVF Givet 9.29 324 *e*P **Pn** **15 57 51.8 +1.5**
GIVF *e*Sn Sn 15 59 24.8 -10
comp=Z,51nm,0.7s
RDO Rodhopi 9.33 96 Pn **Pn** **15 57 51.3 +0.4**
BCLA Clavier 9.34 327 *d*P **Pn** **15 57 53.1 +2.2**
BCLA *d*S **Sn** **15 59 32.2 -3.8**
DOU Dourbes 9.38 324 *d*P **Pn** **15 57 55.0 +3.4**
DOU *d*PP **PnPn** **15 58 03.5 +4.3**
EPF Esparros 9.45 276 *e*P **Pn** **15 57 54.0 +1.5**
EPF *e*Sn Sn 15 59 28.6 -10
comp=Z,3.2nm,0.7s
BMRD Maredsous 9.46 325 *d*P **Pn** **15 57 55.7 +3.0**
BMRD *d*S **Sn** **15 59 35.8 -3.4**
MLR Muntele Rosu 9.53 69 ⇑P **Pn** **15 57 55.2 +1.4**
MLR Muntele Rosu 9.53 69 Pn **Pn** **15 57 55.3 +1.4**
comp=Z,0.3nm,0.3s,baz=160,slow=14,SNR=11
MLR Lg Lg 16 00 41.5
comp=Z,0.1nm,0.3s,baz=183,slow=18,SNR=1.7
MLR LR LR 16 02 25.4
comp=Z,840nm,19.1s,baz=260,slow=43
comp=Z,4.7nm,0.7s
MLR Muntele Rosu 9.53 69 Pn **Pn** **15 57 55.4 +1.6**
MLR Muntele Rosu 9.53 69 P **Pn** **15 57 55.4 +1.6**
RAZG Razgrad 9.74 81 ⇑P **Pn** **15 57 57.0 +0.4**
ALN Alexandroupoli 9.77 97 P **Pn** **15 57 57.0 +0.1**
ALN Alexandroupoli 9.77 97 **Pn** **15 57 58.0 +1.1**
ALN Alexandroupoli 9.77 97 P **Pn** **15 57 58.0 +1.1**
COVR Voineasa-Covas 9.79 68 ⇓P **Pn** **15 57 57.9 +0.8**
ISR Istrita 9.88 72 ⇓P **Pn** **15 57 58.9 +0.4**
ETSF Etsaut 10.11 275 *e*P **Pn** **15 58 05.4 +3.7**
ETSF *e*Sn Sn 15 59 44.5 -11
comp=Z,1.8nm,0.5s
MFF Saint Martin d 10.23 296 *e*P **Pn** **15 58 04.6 +1.4**
MFF *e*Sn Sn 15 59 47.2 -11
comp=Z,7.4nm,0.7s
LVV L'vov 10.23 43 *e*P **Pn** **15 58 07.8 +4.5**
SJPF Ste Jean 10.59 276 *e*P **Pn** **15 58 09.7 +1.6**
SJPF *e*Sn Sn 15 59 55.8 -11
comp=Z,1.2nm,0.5s
LDF La Druitiere 10.95 306 *e*P **Pn** **15 58 14.7 +1.6**
LDF *e*Sn Sn 16 00 04.6 -11
comp=Z,10nm,0.7s
APE Apeiranthos 11.06 117 *i*P **Pn** **15 58 14.1 -0.6**
FLN La Foliniere 11.24 307 *e*P **Pn** **15 58 18.6 +1.5**
baz=119
FLN *e*Sn Sn 16 00 11.6 -11
comp=Z,8.3nm,0.6s
GRR Gorron 11.31 304 *e*P **Pn** **15 58 19.6 +1.7**
GRR *e*Sn Sn 16 00 13.1 -11
comp=Z,3.8nm,0.4s
IDI Anoyia 11.79 126 Pn **Pn** **15 58 24.3 -0.3**
comp=Z,0.7nm,0.3s,baz=305,slow=16,SNR=2.0
IDI Sn Sn 16 00 26.4 -10
comp=Z,0.6nm,0.3s,baz=286,slow=4.6,SNR=3.1
IDI LR LR 16 03 32.6
comp=Z,63nm,18.4s,baz=275,slow=40
comp=Z,7.6nm,0.6s
IDI Anoyia 11.79 126 Pn **Pn** **15 58 23.0 -1.6**
ESDC Sonseca Array 13.30 262 Pn **Pn** **15 58 45.0 -0.3**
comp=Z,0.1nm,0.3s,baz=70,slow=14,SNR=14

ESDC LR LR 16 03 58.5
comp=Z,212nm,18.6s,baz=78,slow=38
comp=Z,1.5nm,0.7s
AKASG Malin Array Be 13.49 49 Pn **Pn** **15 58 48.7 +1.0**
comp=Z,0.3nm,0.3s,baz=241,slow=12,SNR=4.6
AKASG LR LR 16 04 43.0
comp=Z,92nm,18.1s,baz=228,slow=41
comp=Z,0.7nm,0.6s
AKASG Malin Array Be 13.49 49*c*e**P** **Pn** **15 58 50.5 +2.8**
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKBB Malin Array Si 13.49 49*c*e**P** **Pn** **15 58 47.7 0.0**
MDUB Mudurnu 13.66 94 Pn **Pn** **15 58 51.2 +1.1**
ELL Elmali 14.20 110 **P** **15 59 06.0 +0.8**
ELL Elmali 14.20 110 P **P** **15 59 06.0 +0.8**
NACGM Naroch 14.99 32 *e*P **P** **15 59 13.8 +0.1**
baz=220
MNK Minsk 15.14 34 *i*P **Pn** **15 59 07.9 -2.3**
MNK *i*S **Sn** **16 01 56.0 -1.9**
MNK pmax pmax
comp=Z,8.0nm,1.1s
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK MLR MLR
comp=Z,112nm,12.0s
MNK MLR MLR
comp=E,20nm,13.0s
MNK Minsk 15.14 34 *i*P **Pn** **15 59 07.9 -2.3**
comp=E,2.0nm,1.1s
MNK *i*P **Pn** **15 59 07.9 -2.3**
MNK *i*P **Pn** **15 59 07.9 -2.3**
comp=Z,8.0nm,1.1s,baz=225
MNK *i*PP **P** **15 59 15.7 +0.3**
MNK *i*PPP PPP 15 59 24.0
MNK *i*S **Sn** **16 01 56.0 -1.9**
MNK *i*SS **SnSn** **16 02 10.3 -0.1**
MNK *i*SSS SSS 16 02 23.1
MNK *i*LQ LQ 16 03 35.5
MNK *i*PcP **PcP** **16 04 14.8 -2.0**
MNK *i*LR LR 16 04 49.6
MNK *i*LRM MLR 16 05 55.0
comp=Z,112nm,12.0s
MNK *i*LRM MLR 16 05 59.2
comp=E,20nm,13.0s
MVO Moncorvo 15.14 271 *e*LR LR 16 03 29.9
comp=E,106nm,20.0s
BR131 Keskin Array S 15.67 95 *i*P **Pn** **15 59 17.9 +0.6**
BRTR Keskin Array B 15.67 95 Pn **Pn** **15 59 17.6 +0.2**
comp=E,0.1nm,0.3s,baz=289,slow=11,SNR=4.9
BRTR LR LR 16 06 32.9
comp=E,300nm,19.0s,baz=302,slow=42
comp=E,0.8nm,0.7s
BRTR Keskin Array B 15.67 95 Pn **Pn** **15 59 18.3 +1.0**
BRTR Keskin Array B 15.67 95 P **Pn** **15 59 18.3 +1.0**
MTE Manteigas 15.71 268 *e*- 15 59 17.9
MTE *e*LR LR 16 03 45.4
comp=E,210nm,18.0s
PCBR Castelo Branco 15.82 266 *e*- 15 59 26.2
PMRV Marv??o 15.89 265 *e*- 15 59 20.7
PMRV *e*LR LR 16 02 38.8
comp=E,170nm,18.0s
PGAV Gavieira, Arco 15.89 274 *e*LR LR 16 03 55.4
comp=E,152nm,20.0s
PBAR Barrancos 16.08 260 *e*- 15 59 28.6
EKA Eskdalemuir Ar 16.42 325 Pn **Pn** **15 59 26.0 -0.8**
baz=137,slow=14
EKA LR LR 16 06 38.9
comp=E,149nm,20.6s,baz=129,slow=40
comp=E,1.0nm,0.4s
EKA Eskdalemuir Ar 16.42 325 P **Pn** **15 59 26.0 -0.8**
PMTG Montargil 16.62 264 *e*- 15 59 34.3
MDT Midelt 17.23 240 P **P** **15 59 38.6 -0.2**
comp=E,0.1nm,0.3s,baz=95,slow=15,SNR=2.1
MDT LR LR 16 05 18.1
comp=E,47nm,18.5s,baz=34,slow=34
comp=E,1.4nm,0.8s
HFS Hagfors 17.33 1 P **Pn** **15 59 37.3 -1.0**
comp=E,0.3nm,0.3s,baz=185,slow=15,SNR=8.5
HFS LR LR 16 06 40.9
comp=E,68nm,20.4s,baz=178,slow=38
comp=E,2.6nm,0.8s
VSU Vasula 17.79 24 *i*P **P** **15 59 44.5 -0.1**
NC602 NORSAR Array S 17.96 357 **Pn** **15 59 45.8 -0.2**
NAO01 NORSAR Array S 18.10 356 **Pn** **15 59 48.0 +0.3**
NB2 NORSAR Subarra 18.28 357 P **Pn** **15 59 49.7 -0.3**
comp=Z,2.9nm,0.7s,baz=175,slow=11
NOA NORSAR Array B 18.28 357 P **Pn** **15 59 49.5 -0.5**
baz=175,slow=11,SNR=7.8
NOA LR LR 16 07 51.1
comp=Z,65nm,19.1s,baz=175,slow=40
comp=Z,1.1nm,0.8s
NB201 NORSAR Array S 18.29 357 **Pn** **15 59 49.7 -0.3**
NB201 IAmb IAmb 16 00 08.1
comp=Z,49nm,1.4s
NC405 NORSAR Array S 18.33 358 P **P** **15 59 51.4 +0.7**
NC303 NORSAR Array S 18.46 357 P **Pn** **15 59 53.1 +1.0**
SOC Sochi 19.32 79 *e*P **P** **16 00 00.2 -1.4**
SOC *e* 16 03 36.7
SOC MLR MLR
comp=Z,30nm,12.0s
VSR Storozhevoye 19.50 56 *e*P **P** **16 00 01.4 -2.2**
VSR pmax pmax
comp=Z,10.0nm,0.5s
OBN Obninsk 19.54 43⇑*e*P **P** **16 00 02.8 -1.1**
OBN S **S** **16 03 46.0 +1.5**
OBN pmax pmax
comp=Z,10.0nm,0.5s
OBN MLR MLR
comp=Z,59nm,17.0s
VORR Voronezh 19.65 54 *e*P **P** **16 00 03.7 -1.5**
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 19.78 51 *e*P **P** **16 00 06.1 -0.4**
LPSR pmax pmax
comp=Z,8.0nm,0.8s
MMAI Mount Meron Ar 20.01 112 P Pn 16 00 10.6 -0.5
comp=Z,12nm,0.6s,baz=320,slow=9.9,SNR=19
MMAI LR LR 16 09 55.3
comp=Z,102nm,20.1s,baz=72,slow=43
comp=Z,12nm,0.6s
FINES FINESS Array B 20.18 18 P **P** **16 00 10.2 -0.5**
comp=Z,10nm,0.8s,baz=202,slow=9.7,SNR=25
FINES LR LR 16 07 31.3
comp=Z,41nm,19.6s,baz=226,slow=36
comp=Z,10nm,0.8s
FINES FINESS Array B 20.18 18 P **P** **16 00 09.3 -1.5**
FIA1 FINESS Array S 20.18 18 P **P** **16 00 09.5 -1.3**
MOS Moscow 20.37 42 *e*P **P** **16 00 10.7 -2.2**
MOS pmax pmax
comp=Z,39nm,0.8s
VRH Novokhopyorsk 21.06 57 *e*P **P** **16 00 19.6 -0.9**
VRH pmax pmax
comp=Z,10.0nm,0.6s
KIV Kislovodsk 21.40 77 P **P** **16 00 22.3 -2.1**
KIV IAmb IAmb 16 00 32.5
comp=Z,44nm,1.3s
KIV Kislovodsk 21.40 77 *e*P **P** **16 00 23.0 -1.4**
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,18nm,14.0s
KVAR Kislovodsk Arr 21.41 77 P **P** **16 00 25.7 +1.3**
comp=Z,1.3nm,0.4s,baz=288,slow=19,SNR=1.5
comp=Z,1.3nm,0.4s
SHA1 Shidzhatmaz 21.41 77 *i*P **P** **16 00 25.4 +0.8**
ASF Jabal al Asfar 21.53 112 P **P** **16 00 27.9 +2.1**
comp=Z,13nm,0.8s,baz=318,slow=5.2,SNR=16
comp=Z,13nm,0.8s
KBZ Khabaz 21.59 77 P **P** **16 00 27.2 +1.1**
comp=Z,8.3nm,0.9s,baz=278,slow=8.5,SNR=14
KBZ LR LR 16 10 21.1
comp=Z,98nm,20.4s,baz=288,slow=41
comp=Z,8.3nm,0.9s
KBZ Khabaz 21.59 77*c*e**P** **16 00 27.3 +1.1**
KBZ pmax pmax
comp=Z,11nm,0.9s
EIL Elat 21.83 120 P **P** **16 00 30.4 +1.4**
comp=Z,5.2nm,0.8s,baz=333,slow=9.0,SNR=2.6
EIL LR LR 16 11 00.2
comp=Z,56nm,19.6s,baz=271,slow=42
comp=Z,5.2nm,0.8s
ZEI Tsey 22.46 80 *e*P **P** **16 00 36.5 +0.7**
ZEI pmax pmax
comp=Z,24nm,1.7s
GNI Garni 23.70 86 LR LR 16 13 18.6
comp=Z,57nm,18.1s,baz=270,slow=45

BELG	**Belogornoye**	**24.88**	**55**	P		**P**		**16 00 59.5**	**+0.4**
	comp=Z,20nm,0.8s,baz=246,slow=4.4,SNR=6.5								
BELG				LR		LR		16 11 49.6	
	comp=Z,146nm,19.6s,baz=231,slow=39								
	comp=Z,20nm,0.8s								
BELG	**Belogornoye**	**24.88**	**55**	*i* P		**P**		**16 00 58.0**	**-1.1**
BELG				pmax		pmax			
	comp=Z,7.0nm,1.1s								
PRGR	**Permogore**	**26.91**	**34**	P		**P**		**16 01 16.2**	**-1.2**
ARCES	**ARCESS Array B**	**27.52**	**9**	P		**P**		**16 01 24.3**	**+1.5**
	comp=Z,4.7nm,0.9s,baz=202,slow=8.8,SNR=4.0								
	comp=Z,4.7nm,0.9s								
BORG	**Borgarnes**	**29.33**	**330**	LR		LR		16 14 04.0	
	comp=Z,82nm,18.1s,baz=132,slow=38								
JMIC	**Jan Mayen**	**30.24**	**346**	LR		LR		16 14 59.3	
	comp=Z,39nm,18.2s,baz=93,slow=39								
TOA0	**Torodi Ar. Sit**	**31.21**	**202**	P		**P**		**16 01 55.0**	**-0.9**
TOA0				IAmb		IAmb		16 02 01.9	
	comp=Z,11nm,1.1s								
TORD	**Torodi Ar. Bea**	**31.21**	**202**	P		**P**		**16 01 56.1**	**+0.1**
	comp=Z,18nm,0.4s,baz=19,slow=8.4,SNR=1.7								
ARU	**Arti**	**31.74**	**49**	P		**P**		**16 01 59.9**	**-0.5**
	comp=Z,16nm,0.8s,baz=252,slow=7.3,SNR=15								
	comp=Z,16nm,0.8s								
ARU	**Arti**	**31.74**	**49**	P		**P**		**16 02 00.1**	**-0.2**
ARU	**Arti**	**31.74**	**49***c*	*i* P		**P**		**16 01 59.6**	**-0.7**
ARU								16 03 01.0	
ARU								16 04 51.0	
ARU				S		**S**		**16 07 09.9**	**-0.2**
ARU				SS		**SnSn**		**16 08 54.3**	**-2.2**
ARU				pmax		pmax			
	comp=Z,20nm,0.8s								
KOWA	**Kowa**	**31.89**	**213**	P		**P**		**16 02 02.2**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=19,slow=7.5,SNR=4.8								
KOWA				LR		LR		16 14 29.2	
	comp=Z,34nm,19.4s,baz=77,slow=36								
	comp=Z,5.3nm,0.9s								
ABKAR	**Akbulak array**	**32.64**	**62**	P		**P**		**16 02 08.1**	**-0.2**
GEYT	**Alibeck**	**34.25**	**83**	P		**P**		**16 02 23.2**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=243,slow=13,SNR=5.2								
	comp=Z,2.5nm,0.6s								
GEYT	**Alibeck**	**34.25**	**83**	P		**P**		**16 02 24.2**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**34.25**	**83**	P		**P**		**16 02 24.2**	**+1.7**
GYA0B				IAmb		IAmb		16 03 07.6	
	comp=Z,4.5nm,0.7s								
SPITS	**Spitsbergen Ar**	**35.49**	**1**	P		**P**		**16 02 34.2**	**+1.5**
	comp=Z,44nm,1.2s,baz=140,slow=9.1,SNR=2.0								
	comp=Z,44nm,1.2s								
BBTS	**Babate**	**37.95**	**231**	LR		LR		16 17 42.3	
	comp=Z,63nm,21.5s,baz=68,slow=35								
BRVK	**Borovoye**	**38.61**	**54**	P		**P**		**16 03 00.2**	**+0.7**
BRVK				IAmb		IAmb		16 03 04.4	
	comp=Z,14nm,0.7s								
BRVK	**Borovoye**	**38.61**	**54***ce*	P		**P**		**16 03 00.2**	**+0.7**
BRVK				pmax		pmax			
	comp=Z,18nm,1.0s								
BVAR	**Borovoye Array**	**38.68**	**54**	LR		LR		16 20 13.1	
	comp=Z,137nm,19.1s,baz=14,slow=38								
DBIC	**Dimbokro**	**39.39**	**209**	P		**P**		**16 03 07.1**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=38,slow=8.9,SNR=4.4								
	comp=Z,3.1nm,0.8s								
UOSS	**Minazif**	**39.42**	**103**	P		**P**		**16 03 06.5**	**-0.1**
UOSS				IAmb		IAmb		16 03 09.9	
	comp=Z,8.5nm,0.7s								
TIC	**Toumodi**	**39.47**	**209**⇓	*i* P		**P**		**16 03 09.5**	**+2.4**
	comp=Z,3.1nm,0.3s								
KIC	**Kosan Boka**	**39.63**	**209**⇑	*i* P		**P**		**16 03 09.5**	**+1.1**
	comp=Z,3.4nm,0.5s								
LIC	**Lamto**	**39.86**	**209**⇑	*e*P		**P**		**16 03 11.4**	**+1.1**
	comp=Z,14nm,0.6s								
KK31	**Karatay Array**	**41.21**	**69**	P		**P**		**16 03 21.9**	**+0.6**
KK31	**Karatay Array**	**41.21**	**69**	P		**P**		**16 03 21.9**	**+0.6**
KK31				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KKAR	**Karatay Array**	**41.21**	**69**	P		**P**		**16 03 21.6**	**+0.2**
KKAR	**Karatay Array**	**41.21**	**69**	P		**P**		**16 03 21.5**	**+0.2**
KKAR				IAmb		IAmb		16 03 26.6	
	comp=Z,4.6nm,0.8s								
KKAR	**Karatay Array**	**41.21**	**69**	P		**P**		**16 03 21.6**	**+0.2**
SFJD	**Kangerlussuaq**	**41.38**	**328**	LR		LR		16 21 25.1	
	comp=Z,53nm,18.4s,baz=64,slow=38								
WSAR	**Wadi Sarin**	**42.21**	**103**	LR		LR		16 25 51.8	
	comp=Z,48nm,18.8s,baz=340,slow=43								
AAK	**Ala-Archa**	**44.11**	**68***ce*	P		**P**		**16 03 46.2**	**+1.1**
AAK				pmax		pmax			
	comp=Z,9.0nm,1.7s								
KURK	**Kurchatov**	**44.15**	**56**	P		**P**		**16 03 44.9**	**-0.1**
KURK	**Kurchatov**	**44.15**	**56***ce*	P		**P**		**16 03 44.7**	**-0.3**
KURK				pmax		pmax			
	comp=Z,6.0nm,1.0s								
BOOM	**Boomskoye usch**	**45.16**	**68**	P		**P**		**16 03 54.5**	**+1.1**
BOOM	**Boomskoye usch**	**45.16**	**68**	P		**P**		**16 03 54.5**	**+1.1**
BOOM				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KSH	**Kashi**	**46.39**	**72**	P		**P**		**16 04 04.0**	**+0.9**
KSH				pmax		pmax			
	comp=Z,8.0nm,1.1s								
ZAA0	**Zalesovo Array**	**46.88**	**50**	P		**P**		**16 04 05.9**	**-0.7**
ZAA0				IAmb		IAmb		16 04 09.9	
	comp=Z,4.1nm,1.1s								
ZALV	**Zalesovo Beam**	**46.88**	**50**	P		**P**		**16 04 06.2**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=289,slow=8.6,SNR=6.9								
ZALV				PP		**PP**		**16 05 57.0**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=282,slow=7.2,SNR=3.8								
ZALV				LR		LR		16 25 31.6	
	comp=Z,59nm,20.5s,baz=22,slow=38								
	comp=Z,1.6nm,0.5s								
ZALV	**Zalesovo Beam**	**46.88**	**50**	P		**P**		**16 04 06.1**	**-0.5**
MAKZ	**Makanchi**	**47.52**	**60**	P		**P**		**16 04 11.5**	**-0.3**
MAKZ				IAmb		IAmb		16 04 15.2	
	comp=Z,3.7nm,1.0s								
MAKZ	**Makanchi**	**47.52**	**60**	P		**P**		**16 04 11.5**	**-0.3**
MAKZ				pmax		pmax			
	comp=Z,4.0nm,1.0s								
MK31	**Makanchi Array**	**47.73**	**60**	P		**P**		**16 04 13.0**	**-0.3**
MK31				IAmb		IAmb		16 04 17.1	
	comp=Z,4.1nm,0.9s								
MK31	**Makanchi Array**	**47.73**	**60**	*i* P		**P**		**16 04 13.4**	**0.0**
MKAR	**Makanchi Array**	**47.73**	**60**	P		**P**		**16 04 13.4**	**0.0**
	comp=Z,3.9nm,0.7s,baz=288,slow=6.3,SNR=33								
MKAR				LR		LR		16 27 40.4	
	comp=Z,74nm,19.4s,baz=284,slow=40								
	comp=Z,3.9nm,0.7s								
MKAR	**Makanchi Array**	**47.73**	**60**	P		**P**		**16 04 13.2**	**-0.2**
MKAR	**Makanchi Array**	**47.73**	**60**	P		**P**		**16 04 13.2**	**-0.2**
FRB	**Frobisher Bay**	**49.19**	**324**	LR		LR		16 24 57.2	
	comp=Z,97nm,18.3s,baz=218,slow=36								
DGZ	**Jazzator, Alta**	**49.83**	**55**	*i* P		**P**		**16 04 29.7**	**+0.1**
DGZ				pmax		pmax			
	comp=Z,3.0nm,0.6s								
SCHQ	**Schefferville**	**51.24**	**313**	P		**P**		**16 04 39.4**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=52,slow=10,SNR=3.9								
SCHQ				LR		LR		16 23 48.6	
	comp=Z,86nm,21.3s,baz=10.0,slow=33								
	comp=Z,4.3nm,0.8s								
WMQ	**Urumqi**	**52.42**	**62**	*e*P		**P**		**16 04 52.0**	**+2.9**
RES	**Resolute Bay**	**53.68**	**342**	LR		LR		16 29 22.3	
	comp=Z,63nm,18.6s,baz=14,slow=38								
GOMU	**GeErMu**	**60.98**	**66**	P		P		16 05 42.5	-7.8
GOMU				pP		pP		16 05 46.8	-6.6
GOMU				sP		sP		16 05 48.5	-6.1
GOMU				pmax		pmax			
	comp=Z,3.0nm,0.7s								
GOMU				pmax		pmax			
	comp=Z,52nm,3.9s								
SONM	**Songino Array**	**61.77**	**50**	P		**P**		**16 05 55.8**	**+0.6**
	comp=Z,5.8nm,1.1s,baz=279,slow=7.1,SNR=16								
	comp=Z,5.8nm,1.1s								
SONM	**Songino Array**	**61.77**	**50**	P		**P**		**16 05 54.9**	**-0.3**
SONM				IAmb		IAmb		16 05 59.3	
	comp=Z,8.0nm,1.2s								
A36M	**Sachs Harbour**	**61.81**	**346**	P		**P**		**16 05 55.8**	**+0.9**
TSUM	**Tsumeb**	**61.85**	**175**	LR		LR		16 33 00.8	
	comp=Z,31nm,19.0s,baz=154,slow=36								
ULN	**Ulaanbaatar**	**62.12**	**49***ce*	P		**P**		**16 05 58.4**	**+0.8**
ULN				pmax		pmax			
	comp=Z,5.0nm,1.3s								
INK	**Inuvik**	**66.42**	**347**	P		**P**		**16 06 25.4**	**+0.2**
	comp=Z,3.7nm,1.0s,baz=40,slow=7.9,SNR=5.0								
	comp=Z,3.7nm,1.0s								
INK	**Inuvik**	**66.42**	**347**	P		**P**		**16 06 26.3**	**+1.1**
INK				IAmb		IAmb		16 06 28.4	
	comp=Z,5.6nm,1.2s								
INK	**Inuvik**	**66.42**	**347**	P		**P**		**16 06 26.3**	**+1.1**
INK				pmax		pmax			
	comp=Z,6.0nm,1.3s								
LZH	**Lanzhou**	**67.01**	**62**	*e*P		**P**		**16 06 32.0**	**+2.2**
LZH				pP		sP		16 06 39.8	+5.7
LZH				pmax		pmax			
	comp=Z,23nm,0.9s								
YKA	**Yellowknife Ar**	**67.01**	**337**	P		**P**		**16 06 30.2**	**+1.0**
	comp=Z,6.5nm,0.9s,baz=36,slow=5.5,SNR=7.8								
YKA				LR		LR		16 36 41.3	
	comp=Z,51nm,18.3s,baz=326,slow=37								
	comp=Z,6.5nm,0.9s								
YKA	**Yellowknife Ar**	**67.01**	**337**	P		**P**		**16 06 30.0**	**+0.9**
YKA	**Yellowknife Ar**	**67.01**	**337**	*i* P		**P**		**16 06 32.0**	**+2.9**
YKA				pmax		pmax			
	comp=Z,6.0nm,0.9s								
LBTB	**Lobatse**	**68.47**	**168**	P		**P**		**16 06 38.3**	**-0.4**
LBTB				IAmb		IAmb		16 06 51.2	
	comp=Z,6.4nm,1.1s								
LBTB	**Lobatse**	**68.47**	**168**	P		**P**		**16 06 38.3**	**-0.4**
LBTB				pmax		pmax			
	comp=Z,6.0nm,1.1s								
ULM	**Lac du Bonnet**	**68.60**	**319**	LR		LR		16 35 39.8	
	comp=Z,84nm,19.2s,baz=56,slow=35								
PALK	**Pallekele**	**68.62**	**100**	LR		LR		16 39 04.0	
	comp=Z,30nm,21.7s,baz=30,slow=38								
EPYK	**Eagle Plains**	**68.70**	**347**	P		**P**		**16 06 40.2**	**+0.5**
EPYK				IAmb		IAmb		16 06 43.1	
	comp=Z,3.5nm,0.8s								
HHC	**Hu-ho-hao-te**	**68.88**	**54**	*e*P		**P**		**16 06 41.3**	**-0.1**
HHC				pmax		pmax			
	comp=Z,15nm,0.9s								
HHC				pmax		pmax			
	comp=Z,220nm,5.8s								
SEY	**Seymchan**	**69.66**	**19***ce*	P		**P**		**16 06 45.6**	**-0.1**
SEY				pmax		pmax			
	comp=Z,16nm,2.5s								
H23K	**Yukon River**	**70.86**	**353**	P		**P**		**16 06 54.6**	**+1.6**
H23K				IAmb		IAmb		16 07 04.6	
	comp=Z,5.6nm,1.2s								
IMAR	**Indian Mountai**	**71.05**	**354**	P		**P**		**16 06 55.7**	**+1.5**
DAWY	**Dawson**	**71.27**	**348**	P		**P**		**16 06 56.8**	**+1.2**
DAWY				IAmb		IAmb		16 06 59.9	
	comp=Z,4.4nm,0.9s								
H21K	**Melozitna Rive**	**71.30**	**354**	P		**P**		**16 06 57.7**	**+2.0**
TKL	**Tuckaleechee C**	**71.32**	**301**	LR		LR		16 38 41.5	
	comp=Z,34nm,18.2s,baz=46,slow=36								
J26L	**Joseph Creek**	**71.46**	**350**	P		**P**		**16 06 57.9**	**+1.1**
J26L				IAmb		IAmb		16 07 02.3	
	comp=Z,4.1nm,0.7s								
PZH	**PanZhiHua**	**71.49**	**71**	P		**P**		**16 06 57.8**	**+0.2**
PZH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
PZH				pmax		pmax			
	comp=Z,150nm,4.9s								
XAN	**Xi'an**	**71.54**	**61**	P		**P**		**16 06 58.5**	**+0.8**
XAN				pP		sP		16 07 03.5	+1.4
XAN				pmax		pmax			
	comp=Z,12nm,0.7s								
ILAR	**Eielson Array**	**71.61**	**351**	P		**P**		**16 06 58.9**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=8.5,slow=5.3,SNR=8.5								
	comp=Z,1.3nm,0.7s								
ILAR	**Eielson Array**	**71.61**	**351**	P		**P**		**16 06 58.7**	**+1.2**
ILAR	**Eielson Array**	**71.61**	**351**	P		**P**		**16 06 58.7**	**+1.2**
MLY	**Manley**	**71.75**	**353**	P		**P**		**16 06 59.5**	**+1.1**
BOSA	**Boshof**	**71.95**	**169**	P		**P**		**16 06 59.5**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=344,slow=8.3,SNR=5.8								
BOSA				LR		LR		16 40 03.0	
	comp=Z,46nm,19.3s,baz=20,slow=37								
	comp=Z,3.5nm,0.8s								
BOSA	**Boshof**	**71.95**	**169**	P		**P**		**16 06 59.5**	**-0.6**
HDA	**Harding Lake**	**71.96**	**351**	P		**P**		**16 07 00.5**	**+0.8**
HDA				IAmb		IAmb		16 07 02.4	
	comp=Z,3.6nm,0.8s								
SCRK	**Sand Creek**	**72.02**	**350**	P		**P**		**16 07 01.0**	**+0.8**
SCRK				IAmb		IAmb		16 07 06.0	
	comp=Z,2.9nm,0.9s								
RIDG	**Independent Ri**	**72.36**	**350**	P		**P**		**16 07 03.2**	**+1.1**
T47A	**Sharon Grove**	**72.52**	**304**	P		**P**		**16 07 03.3**	**-0.2**
T47A				IAmb		IAmb		16 07 05.8	
	comp=Z,8.0nm,1.1s								
BCAR	**Beaver Creek A**	**72.58**	**348**	P		**P**		**16 07 04.7**	**+1.2**
L27K	**Beaver Creek,**	**72.59**	**348**	P		**P**		**16 07 04.2**	**+0.7**
J20K	**Nowinta River**	**72.87**	**354**	P		**P**		**16 07 06.1**	**+1.0**
J20K				IAmb		IAmb		16 07 46.1	
	comp=Z,6.0nm,1.3s								
DHY	**Denali Highway**	**73.31**	**351**	P		**P**		**16 07 08.4**	**+0.5**
ECSD	**EROS Data Cent**	**73.39**	**315**	P		**P**		**16 07 08.5**	**-0.1**
ECSD				IAmb		IAmb		16 07 12.7	
	comp=Z,8.1nm,1.4s								
KLR	**Kul'dur**	**73.67**	**37**	*i* P		**P**		**16 07 11.8**	**+1.7**
KLR				pmax		pmax			
	comp=Z,4.0nm,1.1s								
CHTO	**Chiang Mai**	**74.40**	**79**	P		**P**		**16 07 14.2**	**-0.6**
CHTO				IAmb		IAmb		16 07 17.4	
	comp=Z,6.1nm,1.1s								
CHTO	**Chiang Mai**	**74.40**	**79**	P		**P**		**16 07 14.2**	**-0.6**
CHTO				pmax		pmax			
	comp=Z,6.0nm,1.2s								
CN2	**Changchun**	**74.60**	**44**	*e*P		**P**		**16 07 18.3**	**+2.7**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CMAR	**Chiang Mai Arr**	**74.63**	**79**	P		**P**		**16 07 15.7**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=307,slow=7.2,SNR=30								
CMAR				LR		LR		16 47 04.9	
	comp=Z,15nm,19.8s,baz=225,slow=41								
	comp=Z,3.1nm,0.7s								
CMAR	**Chiang Mai Arr**	**74.63**	**79**	*i* P		**P**		**16 07 16.1**	**-0.1**
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.7s								
SUR	**Sutherland**	**75.17**	**173**	LR		LR		16 41 41.3	
	comp=Z,47nm,18.0s,baz=59,slow=37								
EGMT	**Eagleton**	**76.51**	**325**	P		**P**		**16 07 27.9**	**+1.3**
WALA	**Waterton Lakes**	**77.40**	**327**	P		**P**		**16 07 32.3**	**+0.7**
USRK	**Ussuriysk Ar.**	**77.53**	**40**	P		**P**		**16 07 33.0**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=304,slow=6.8,SNR=4.2								
	comp=Z,2.2nm,0.8s								
USRK	**Ussuriysk Ar.**	**77.53**	**40**	P		**P**		**16 07 33.0**	**+0.7**
T35A	**Sooner Cattle**	**78.10**	**310**	P		**P**		**16 07 35.9**	**+0.3**
BOZ	**Bozeman (W)**	**79.21**	**324**	P		**P**		**16 07 43.2**	**+1.4**
BOZ				IAmb		IAmb		16 07 45.8	
	comp=Z,5.2nm,0.9s								
BOZ	**Bozeman (W)**	**79.21**	**324**	P		**P**		**16 07 43.2**	**+1.4**
BOZ				pmax		pmax			
	comp=Z,5.0nm,1.0s								
NEW	**Newport**	**79.29**	**329**	LR		LR		16 43 04.8	
	comp=Z,48nm,18.6s,baz=356,slow=36								
LRM	**Limekiln Ridge**	**79.38**	**325**	P		**P**		**16 07 43.9**	**+1.0**
BBB	**Bella Bella**	**79.62**	**337**	LR		LR		16 43 37.9	
	comp=Z,15nm,18.2s,baz=288,slow=36								
PEA0B	**Petropavlovsk-**	**79.67**	**21**	P		**P**		**16 07 44.3**	**+0.4**
PEA0B	**Petropavlovsk-**	**79.67**	**21**	P		**P**		**16 07 44.3**	**+0.4**
PEA0B				pmax		pmax			
	comp=Z,19nm,1.4s								
PETK	**Petropavlovsk-**	**79.67**	**21**	P		**P**		**16 07 43.7**	**-0.2**
	comp=Z,2.8nm,1.0s,baz=276,slow=4.2,SNR=4.3								
	comp=Z,2.8nm,1.0s								
YSS	**Yuzh-Sakhalins**	**80.06**	**32**	P		**P**		**16 07 46.9**	**+0.8**
YSS	**Yuzh-Sakhalins**	**80.06**	**32***ce*	P		**P**		**16 07 46.9**	**+0.8**
YSS				pmax		pmax			
	comp=Z,28nm,1.0s								
KSRS	**Korea Array**	**80.48**	**47**	P		**P**		**16 07 49.2**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=302,slow=4.1,SNR=3.4								
	comp=Z,2.3nm,0.9s								
PDAR	**Pinedale Array**	**80.50**	**321**	P		**P**		**16 07 49.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=68,slow=4.4,SNR=8.4								
PDAR				LR		LR		16 43 13.3	
	comp=Z,63nm,18.2s,baz=46,slow=36								
	comp=Z,0.8nm,0.7s								
PDAR	**Pinedale Array**	**80.50**	**321**	P		**P**		**16 07 49.1**	**+0.2**
BDFB	**Brasilia**	**80.81**	**239**	P		**P**		**16 07 51.9**	**+1.3**
	comp=Z,5.3nm,0.7s,baz=43,slow=7.1,SNR=8.7								
	comp=Z,5.3nm,0.7s								
O20A	**White River Ci**	**81.92**	**319**	P		**P**		**16 07 57.1**	**+0.6**
O20A				IAmb		IAmb		16 07 59.7	
	comp=Z,4.1nm,0.7s								
BMO	**Blue Mountains**	**82.17**	**327**	P		**P**		**16 07 58.0**	**+0.4**
BMO	**Blue Mountains**	**82.17**	**327**	P		**P**		**16 07 58.0**	**+0.4**
BMO				pmax		pmax			
	comp=Z,7.0nm,0.9s								
PV07	**Paradox Valley**	**83.43**	**318**	P		**P**		**16 08 05.2**	**+0.8**
PV07				IAmb		IAmb		16 08 06.1	
	comp=Z,3.7nm,0.8s								
PV23	**Carpenter Ridg**	**83.60**	**318**	P		**P**		**16 08 05.9**	**+0.6**
PV13	**Radium Mtn., P**	**83.73**	**318**	P		**P**		**16 08 06.5**	**+0.5**
PV13				IAmb		IAmb		16 08 10.1	
	comp=Z,2.9nm,0.7s								
SRU	**San Rafael Swe**	**83.82**	**319**	P		**P**		**16 08 06.1**	**-0.2**
SRU				IAmb		IAmb		16 08 07.5	
	comp=Z,3.7nm,0.7s								
SRU	**San Rafael Swe**	**83.82**	**319**	P		**P**		**16 08 06.1**	**-0.2**
SRU				pmax		pmax			
	comp=Z,4.0nm,0.7s								
DUG	**Dugway, Tooele**	**84.03**	**321**	P		**P**		**16 08 07.4**	**+0.1**
DUG	**Dugway, Tooele**	**84.03**	**321**	P		**P**		**16 08 07.4**	**+0.1**
DUG				pmax		pmax			
	comp=Z,2.0nm,0.8s								
ELK	**Elko**	**84.67**	**323**	LR		LR		16 46 36.0	
	comp=Z,21nm,20.0s,baz=66,slow=36								
ANMO	**Albuquerque**	**85.00**	**314**	LR		LR		16 44 49.4	
	comp=Z,70nm,20.5s,baz=28,slow=35								
ANMO	**Albuquerque**	**85.00**	**314***ce*	P		**P**		**16 08 12.3**	**-0.1**
ANMO				pmax		pmax			
	comp=Z,2.0nm,1.0s								
MJAR	**Matsushiro Arr**	**86.46**	**41**	P		**P**		**16 08 19.3**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=303,slow=3.9,SNR=2.3								
	comp=Z,0.6nm,0.6s								
TXAR	**Lajitas Array**	**87.72**	**309**	P		**P**		**16 08 25.7**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=65,slow=6.5,SNR=4.2								
TXAR				LR		LR		16 47 06.5	
	comp=Z,30nm,18.0s,baz=22,slow=35								
	comp=Z,0.4nm,0.8s								
NVAR	**Mina Array Bea**	**87.92**	**324**	P		**P**		**16 08 27.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=64,slow=6.3,SNR=2.9								
NVAR				LR		LR		16 50 27.4	
	comp=Z,49nm,19.5s,baz=346,slow=38								
	comp=Z,0.1nm,0.3s								
NVAR	**Mina Array Bea**	**87.92**	**324**	P		**P**		**16 08 26.8**	**+0.1**
PFO	**Pinyon Flats O**	**91.07**	**320**	LR		LR		16 50 06.8	
	comp=Z,77nm,18.3s,baz=28,slow=36								
ASAR	**Alice Springs**	**127.93**	**88**	PKP		**PKPdf**		**16 14 41.1**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=317,slow=1.0,SNR=7.4								

JMA ***28*** *16:01:52.4±0.4, 43˚N±2˚×14˚8E±˚, h50km, MV3.2/19, FAR SE OFF HOKKAIDO*

SKHL ***28*** *16:01:58.8±0.3, 43˚.00N×148˚.00E, h39km±9km, mb3.8/2*

ISC 28 16:01:53.3±2.5, 42˚.73N±0˚.09×148˚.4E±0˚.1, h35km, n13, σ1°83/21, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.05**	**289**	*e*P		**Pn**	**16 02 25.3**	**+0.1**
NEM2				*e*S		**Sn**	**16 02 49.5**	**+0.1**
NMR	**Nemuro--Hokkai**	**2.06**	**289**	*e*P		**Pn**	**16 02 26.0**	**+0.7**
NMR				*e*S		**Sn**	**16 02 46.2**	**-3.5**
YUK	**Yuzh-Kuril'sk**	**2.26**	**306**	*e*P		**Pn**	**16 02 29.3**	**+1.2**
YUK				AMB		AMB	16 02 30.9	
	70nm,0.8s							
YUK				*e*S		**Sn**	**16 02 52.4**	**-2.4**
YUK				A		A	16 02 54.9	
	150nm,0.7s							
YUK				A		A	16 02 54.9	
	190nm,0.7s							
JKHN	**Kushirohamanak**	**2.41**	**279**	*e*S		**Sn**	**16 02 59.8**	**+1.5**
KUR	**Kuril'sk**	**2.53**	**351**	*e*P		**Pn**	**16 02 33.1**	**+1.3**
KUR				AMB		AMB	16 02 37.2	
	30nm,0.7s							
KUR				*e*S		**Sn**	**16 02 59.3**	**-2.0**
KUR				A		A	16 03 02.3	
	40nm,0.4s							
KUR				A		A	16 03 02.3	
	30nm,0.4s							
AKK	**Akkeshi**	**2.63**	**277**	*e*P		**Pn**	**16 02 33.9**	**+0.7**
AKK				*e*S		**Sn**	**16 03 01.2**	**-2.7**
JAK	**Akkeshi**	**2.73**	**277**	*e*P		**Pn**	**16 02 35.3**	**+0.7**
JAK				*e*S		**Sn**	**16 03 06.9**	**+0.5**
JAR	**Ashorobuto**	**3.44**	**281**	*e*P		**Pn**	**16 02 45.3**	**+1.0**
JAR				*e*S		**Sn**	**16 03 24.7**	**+0.8**
JCH	**Churui**	**3.72**	**270**	*e*P		**Pn**	**16 02 49.9**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.20**	**266**	*e*P		**Pn**	**16 02 56.0**	**+1.2**
JNBK		

KIWB	**Kanaga Island**	**8.81**	**264**	Pn		**Pn**		**16 15 11.6**	**+0.9**
L19K	**White Mountain**	**9.58**	**23**	Pn		**Pn**		**16 15 22.7**	**+1.5**
SKT	**Skwentna**	**10.33**	**31**	Pn		**Pn**		**16 15 31.4**	**0.0**
K20K	**Telida**	**10.79**	**22**	Pn		**Pn**		**16 15 38.1**	**+0.4**
AMKA	**Amchitka**	**11.06**	**265**	Pn		**Pn**		**16 15 41.1**	**-0.3**
HIN	**Hinchinbrook I**	**11.21**	**46**	Pn		**Pn**		**16 15 42.2**	**-1.3**
J20K	**Nowinta River**	**11.50**	**20**	Pn		**Pn**		**16 15 47.1**	**-0.2**
KLU	**Klutina**	**12.03**	**42**	Pn		**Pn**		**16 15 53.7**	**-1.0**
ILAR	**Eielson Array**	**13.81**	**30**	P		**P**		**16 16 24.9**	**-2.4**
	comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=2.6								
	comp=N,0.3nm,0.6s								
TOLK	**Toolik Lake Re**	**16.32**	**18**	P		**P**		**16 16 54.7**	**-0.3**
TOLK				IAmb		IAmb		16 17 00.7	
	comp=Z,7.6nm,1.1s								
M30M	**Minto, Yukon**	**16.35**	**46**	P		**P**		**16 16 55.4**	**0.0**
M30M				IAmb		IAmb		16 17 17.3	
	comp=Z,3.6nm,1.3s								
INK	**Inuvik**	**20.18**	**32**	P		Pn		16 17 40.4	+1.0
	comp=Z,2.1nm,1.0s,baz=225,slow=14,SNR=2.6								
	comp=Z,2.1nm,1.0s								
PEA0B	**Petropavlovsk-**	**23.30**	**285**	P		**P**		**16 18 10.6**	**-0.2**
PEA0B				IAmb		IAmb		16 18 24.8	
	comp=Z,26nm,1.5s								
PETK	**Petropavlovsk-**	**23.30**	**285**	P		**P**		**16 18 10.0**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=89,slow=12,SNR=13								
	comp=Z,0.5nm,0.5s								
PETK	**Petropavlovsk-**	**23.30**	**285**	P		**P**		**16 18 10.8**	**+0.1**
YKA	**Yellowknife Ar**	**26.45**	**51**	P		**P**		**16 18 43.9**	**+4.2**
	comp=Z,1.1nm,0.8s,baz=279,slow=10,SNR=2.7								
	comp=Z,1.1nm,0.8s								
NVAR	**Mina Array Bea**	**33.89**	**98**	P		**P**		**16 19 47.4**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=305,slow=6.4,SNR=4.2								
	comp=Z,0.3nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**41.01**	**226**	T		T		17 04 55.8	
	baz=26,slow=76,SNR=38								
H11N3	**WAKE ISLAND Hy**	**41.01**	**226**	T		T		17 04 44.8	
	baz=26,slow=76,SNR=62								
H11N1	**WAKE ISLAND Hy**	**41.02**	**226**	T		T		17 04 52.4	
	baz=26,slow=76,SNR=62								
H11S1	**WAKE ISLAND Hy**	**42.18**	**226**	T		T		17 06 09.9	
	baz=26,slow=76,SNR=62								
H11S2	**WAKE ISLAND Hy**	**42.19**	**226**	T		T		17 06 07.6	
	baz=26,slow=76,SNR=38								
H11S3	**WAKE ISLAND Hy**	**42.19**	**226**	T		T		17 06 11.4	
	baz=26,slow=76,SNR=51								
TXAR	**Lajitas Array**	**48.90**	**95**	P		**P**		**16 21 49.8**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=292,slow=5.5,SNR=9.9								
	comp=Z,0.5nm,0.5s								
SONM	**Songino Array**	**53.92**	**304**	P		**P**		**16 22 24.6**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=50,slow=4.5,SNR=1.6								
	comp=Z,0.2nm,0.4s								
FINES	**FINESS Array B**	**65.05**	**355**	P		**P**		**16 23 41.8**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=31,slow=8.3,SNR=1.1								
	comp=Z,0.8nm,0.7s								
MKAR	**Makanchi Array**	**65.66**	**317**	P		**P**		**16 23 46.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=44,slow=6.4,SNR=2.1								
	comp=Z,0.1nm,0.3s								
AKASG	**Malin Array Be**	**75.54**	**352**	P		**P**		**16 24 45.9**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=12,slow=6.6,SNR=3.3								
	comp=Z,0.4nm,0.4s								
H03N2	**Juan Fernandez**	**112.86**	**116**	T		T		18 34 56.4	
	baz=323,slow=77,SNR=5.3								
H03N1	**Juan Fernandez**	**112.87**	**116**	T		T		18 34 59.8	
	baz=323,slow=77,SNR=4.0								
H03N3	**Juan Fernandez**	**112.88**	**116**	T		T		18 34 59.1	
	baz=323,slow=77,SNR=4.1								

TAP 28 16:30:32.1, 23.60N×120.83E, h6km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALS	**Alishan**	**0.09**	**195**	*i* P	Pg	16 30 35.0	+0.5
	baz=189						
ALS				*i* S	Sg	16 30 37.0	+1.0
	baz=189						
WHYT	**Xinyi Township**	**0.10**	**12**	*i* P	Pg	16 30 34.8	+0.4
	baz=13						
WHYT				*i* S	Sg	16 30 36.5	+0.6
	baz=13						
YUS	**Yu-Shan**	**0.16**	**134**	S	Sg	16 30 39.3	+1.5
	baz=134						
SSLB	**Suanglung**	**0.22**	**31**	*i* P	Pg	16 30 37.0	+0.5
	baz=43						
SSLB				S	Sg	16 30 40.1	+0.7
	baz=43						
WJS	**Zhushan**	**0.24**	**337**	P	Pg	16 30 38.1	+1.2
	baz=337						
WJS				*i* S	Sg	16 30 43.0	+2.9
	baz=337						
WCKO	**Fanlu**	**0.26**	**232**	P	Pg	16 30 37.9	+0.7
	baz=231						
WCKO				S	Sg	16 30 41.6	+0.8
	baz=231						
WGK	**Gukeng**	**0.26**	**289**	*i* P	Pb	16 30 38.7	-0.5
	baz=288						
WGK				*i* S	Sb	16 30 44.0	+0.1
	baz=288						
WDLH	**Douliu**	**0.28**	**289**	*i* P	Pb	16 30 39.1	-0.5
	baz=287						
WDLH				*i* S	Sb	16 30 44.8	+0.2
	baz=287						
SMLT	**Sun Moon Lake**	**0.29**	**13**	*i* P	Pb	16 30 38.9	-0.9
	baz=25						
SMLT				*i* S	Sb	16 30 43.9	-1.0
	baz=25						
TYC	**Yuchr**	**0.30**	**5**	*i* P	Pb	16 30 39.2	-0.8
	baz=17						
TYC				S	Sb	16 30 45.2	0.0
	baz=17						
WNT	**Mingjian**	**0.31**	**334**	*i* P	Pb	16 30 39.9	-0.1
	baz=336						
WNT				*i* S	Sb	16 30 45.5	+0.1
	baz=336						
VWDT	**VWDT**	**0.32**	**62**	P	Pb	16 30 39.5	-0.8
	baz=72						
VWDT				S	Sg	16 30 44.2	+1.4
	baz=72						
CHN4	**Tsaushan**	**0.33**	**221**	*i* P	Pg	16 30 38.8	+0.2
	baz=212						
CHN4				*i* S	Sb	16 30 44.6	-1.3
	baz=212						
CHN2	**Minshiung**	**0.33**	**258**	P	Pb	16 30 40.1	-0.3
	baz=257						
CHN2				S	Sb	16 30 47.2	+1.3
	baz=257						
WNT1	**Nantou City**	**0.34**	**336**	P	Pb	16 30 40.7	+0.2
	baz=336						
WNT1				S	Sb	16 30 46.8	+0.7
	baz=336						
TPUB	**Ta-pu**	**0.35**	**212**	P	Pg	16 30 39.8	+0.8
	baz=203						
TPUB				S	Sb	16 30 45.5	-1.0
	baz=203						
CHY	**Chiayi**	**0.39**	**255**	P	Pb	16 30 41.1	-0.2
	baz=253						
CHY				*i* S	Sb	16 30 48.3	+0.8
	baz=253						
WTP	**Ta-pu**	**0.40**	**209**	*i* P	Pg	16 30 40.6	+0.6
	baz=200						
WTP				S	Sb	16 30 47.7	-0.4
	baz=200						
WTK	**Tuku**	**0.41**	**282**	S	Sb	16 30 48.6	+0.2
	baz=281						
STYH	**Taoyuan**	**0.43**	**187**	P	Pg	16 30 39.9	-0.5
	baz=186						
STYH				S	Sg	16 30 45.7	-0.4
	baz=186						
STYT	**Tauyuan**	**0.44**	**189**	*i* P	Pg	16 30 41.4	+0.7
	baz=187						
STYT				*i* S	Sg	16 30 47.7	+1.3
	baz=187						
ELDTW	**Lidau**	**0.44**	**157**	*i* P	Pg	16 30 41.3	+0.6
	baz=150						
ELDTW				*i* S	Sg	16 30 47.4	+0.9
	baz=150						
TWK	**Hsinying**	**0.46**	**224**	*i* P	Pb	16 30 42.1	-0.5
	baz=220						
TWK				*i* S	Sb	16 30 49.7	+0.1
	baz=220						
EHY	**Hungye**	**0.46**	**101**	*i* P	Pb	16 30 41.9	-0.7
	baz=109						
EHY				*i* S	Sb	16 30 48.9	-0.8
	baz=109						
WCS	**Beigang Elemen**	**0.46**	**9**	P	Pg	16 30 41.1	0.0
	baz=23						
WCS				S	Sg	16 30 48.4	+1.3
	baz=23						
OWD	**Renai**	**0.47**	**42**	*i* P	Pg	16 30 41.9	+0.5
	baz=43						
OWD				*i* S	Sg	16 30 48.0	+0.4
	baz=43						
SNST	**Tainan City**	**0.49**	**219**	P	Pb	16 30 43.4	+0.3
	baz=217						
SNST				S	Sb	16 30 52.3	+1.9
	baz=217						
CHN1	**Nanshi**	**0.50**	**214**	*i* P	Pb	16 30 42.9	-0.4
	baz=212						
CHN1				*i* S	Sb	16 30 51.3	+0.5
	baz=212						
EYUL	**Yuli**	**0.51**	**119**	P	Pb	16 30 43.0	-0.6
	baz=126						
EYUL				S	Sb	16 30 50.2	-1.0
	baz=126						
HGSD	**Ruisui**	**0.56**	**101**	P	Pb	16 30 43.8	-0.4
	baz=103						
HGSD				S	Sb	16 30 52.8	+0.4
	baz=103						
CHGB	**Renai**	**0.56**	**34**	P	Pb	16 30 44.1	-0.3
	baz=47						
CHGB				S	Sg	16 30 51.1	+0.9
	baz=47						
WSL	**Shuilin Townsh**	**0.56**	**262**	*e*P	Pg	16 30 43.1	+0.2
	baz=260						
SGST	**Jiashian**	**0.56**	**204**	S	Sb	16 30 52.9	+0.2
	baz=194						
FULB	**Fuli**	**0.58**	**133**	*i* P	Pb	16 30 44.5	-0.2
	baz=133						
FULB				S	Sb	16 30 53.8	+0.6
	baz=133						
WHF	**Hehuan Shan**	**0.67**	**36**	*i* P	Pb	16 30 46.1	-0.4
	baz=47						
WHF				S	Sg	16 30 54.7	+0.6
	baz=47						
LIOB	**Emei**	**1.06**	**9**	P	Pn	16 30 53.7	+0.2
	baz=11						
NFF	**Wufeng Townshi**	**1.06**	**14**	P	Pg	16 30 52.6	+0.1
	baz=16						
LATG	**Datong**	**1.13**	**34**	P	Pn	16 30 55.2	+0.7
	baz=37						
LATG				S	Sn	16 31 10.9	+0.5
	baz=37						
YHNB	**Yeheng**	**1.18**	**25**	*e*P	Pn	16 30 55.4	+0.2
	baz=27						
YHNB				S	Sn	16 31 11.7	+0.2
	baz=27						
NDT	**Datong Townshi**	**1.18**	**32**	P	Pn	16 30 55.1	-0.1
	baz=33						
FUSB	**Fushanzhiwuyua**	**1.35**	**31**	P	Pg	16 30 59.1	+1.1
	baz=24						
FUSB				S	Sn	16 31 17.5	+1.7
	baz=24						

JMA 28 16:31:18.6±0.2, 24°N±1°×122°8E±0°6, h15km±3km, MV2.0/9, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**33**	P	Pg	16 31 26.1	0.0
YOJ				S	Sg	16 31 31.5	+0.3
IRIF	**Iriomote-Funau**	**0.88**	**78**	P	Pb	16 31 35.1	-0.4
IRIF				S	Sb	16 31 46.2	-0.8
HATJ	**Hateruma jima**	**0.93**	**96**	P	Pb	16 31 36.3	-0.2
JKRS	**Kuro-shima**	**1.12**	**86**	P	Pb	16 31 39.6	0.0
JKRS				*e*S	Sg	16 31 54.9	+0.2
JIJ	**Ishigaki jima**	**1.25**	**80**	P	Pn	16 31 41.1	-0.5
JIJ				S	Sb	16 31 57.2	-0.7
JISG	**Ishigakijimahi**	**1.45**	**72**	P	Pn	16 31 43.3	-1.0
JISG				*e*S	Sn	16 32 02.5	-0.6

*IDC **28** 16:31:58.2±0.6, 27.7°S×71.1°W, h0km, mb4.3/7, mbtmp4.2/10, ML4.3/3, MS3.6/30, Error ellipse: s-maj=27.0km s-min=17.2km az=105.0*
*SJA **28** 16:31:58.0±2.4, 27.4°S×71.5°W, h15km, ML4.8, MW4.5*
*VAO **28** 16:31:58.4±0.3, 27.7°S×71.5°W, h10km, mb4.5*
*NEIC **28** 16:32:03.8±1.9, 27.6°S±0.0°×71.3°W±0.0°, h38km±5km, Error ellipse: s-maj=12.2km s-min=7.0km az=100.0*
*GUC **28** 16:32:04.5±0.8, 27.6°S×71.2°W, h35km±6km, ML4.6*
*NEIC **28** 16:32:04, 27.68S×71.23W, h46km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=4.20; Mθθ=3.71; Mϕϕ=0.49; Mrθ=-2.49; Mrϕ=0.65; Mθϕ=-4.64; Fault plane solution: M0=6.63000×10^15^ NP1:ϕ=232.38000°, δ=72.28000°, λ=68.00000°. NP2:ϕ=105.39000°, δ=27.97000°, λ=139.54000°. Principal axes: T 7.5944, Plg57.0000°, Azm113.0000°; N -2.9348, Plg21.0000°, Azm239.0000°; P -4.6596, Plg24.0000°, Azm339.0000°;*
ISC 28 16:31:58.5±2.4, 27.59S±0.02×71.48W±0.04, h4km±15km, n227, σ1=31/237, mb4.8/23, MS3.7/24, 4C-12D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.71**	**150**		**Pn**	**16 32 15.7**	**+0.5**
AC04	**Llanos de Chal**	**0.71**	**150**	||*i*P	**Pn**	**16 32 15.8**	**+0.5**
AC04				*i* S	**Sb**	**16 32 23.9**	**+0.5**
AC04				IAML		16 32 24.6	
	comp=E,115μm,0.1s						
AC04	**Llanos de Chal**	**0.71**	**150**	*e*P	**Pn**	**16 32 16.5**	**+1.2**
AC04				*e*S	**Sb**	**16 32 23.8**	**+0.4**
AC04				IAML		16 32 24.7	
	comp=Z,20μm,0.2s						
AC06	**Mina Casimiro**	**1.03**	**77**		**Pb**	**16 32 19.8**	**+1.0**
AC06	**Mina Casimiro**	**1.03**	**77**	||*e*P	**Pb**	**16 32 20.0**	**+1.2**
AC06				*e*S	**Sb**	**16 32 31.6**	**-1.0**
AC06				IAML		16 32 33.9	
	comp=E,14μm,0.2s						
GO03	**Copiap**	**1.10**	**90**		**Pb**	**16 32 21.2**	**+1.0**
GO03	**Copiap**	**1.10**	**90**	||*i*P	**Pn**	**16 32 21.4**	**+0.6**
GO03				*e*S	**Sb**	**16 32 33.5**	**-1.4**
GO03				IAML		16 32 35.5	
	comp=E,24μm,0.4s						
GO03	**Copiap**	**1.10**	**90**	*e*P	**Pn**	**16 32 21.6**	**+0.8**
GO03				*e*S	**Sb**	**16 32 34.6**	**-0.3**
LCO	**Las Campanas**	**1.57**	**154**		**Pn**	**16 32 28.8**	**+1.4**
LCO	**Las Campanas**	**1.57**	**154**	*e*P	**Pn**	**16 32 28.8**	**+1.4**
LCO				*e*S	**Sn**	**16 32 46.2**	**-2.0**
LCO	**Las Campanas**	**1.57**	**154**	*e*P	**Pn**	**16 32 28.8**	**+1.4**
LCO				*e*S	**Sn**	**16 32 46.5**	**-1.8**
AC05	**El Transito**	**1.63**	**140**		**Pn**	**16 32 29.4**	**+1.3**
AC05	**El Transito**	**1.63**	**140**	⇑*i*P	**Pn**	**16 32 29.6**	**+1.5**
AC05				*i* S	**Sn**	**16 32 47.5**	**-2.1**
AC05				IAML		16 32 51.7	
	comp=N,8μm,0.4s						
AC05	**El Transito**	**1.63**	**140**	*e*P	**Pn**	**16 32 29.6**	**+1.5**
AC05				*e*S	**Sn**	**16 32 48.2**	**-1.4**
AC05				IAML		16 32 53.0	
	comp=Z,10μm,0.6s						
AC01	**Pan de Azucar**	**1.64**	**29**	Pn	**Pn**	**16 32 29.4**	**+1.2**
AC01	**Pan de Azucar**	**1.64**	**29**	||*i*P	**Pb**	**16 32 29.5**	**+0.2**
AC01				*e*S	**Sn**	**16 32 48.4**	**-1.3**
AC01	**Pan de Azucar**	**1.64**	**29**	*e*P	**Pb**	**16 32 29.5**	**+0.2**
AC01				*e*S	**Sn**	**16 32 49.8**	**+0.1**
AC02	**Maricunga**	**2.23**	**71**	||*e*P	**Pb**	**16 32 39.0**	**-0.5**
AC02				*e*S	**Sn**	**16 33 04.3**	**-0.5**
AC02				IAML		16 33 05.8	
	comp=E,16μm,0.3s						
AC02	**Maricunga**	**2.23**	**71**	*e*P	**Pb**	**16 32 39.0**	**-0.5**
AC02				*e*S	**Sn**	**16 33 04.7**	**-0.1**
AC02				IAML		16 33 05.6	
	comp=Z,6μm,0.3s						
CO05	**La Serena**	**2.33**	**175**		**Pn**	**16 32 38.6**	**+1.2**
CO05	**La Serena**	**2.33**	**175**	*e*P	**Pn**	**16 32 38.9**	**+1.4**
CO05				*e*S	**Sn**	**16 33 05.6**	**-1.0**
CO05				IAML		16 33 13.7	
	comp=N,5μm,0.5s						
GO04	**Tololo Observa**	**2.64**	**167**		**Pn**	**16 32 43.4**	**+1.4**
GO04	**Tololo Observa**	**2.64**	**167**	||*i*P	**Pn**	**16 32 43.7**	**+1.7**
GO04				*e*S	**Sn**	**16 33 13.7**	**-0.9**
GO04	**Tololo Observa**	**2.64**	**167**	*e*P	**Pn**	**16 32 43.7**	**+1.7**
GO04				*e*S	**Sn**	**16 33 15.7**	**+1.1**
CO01	**Juntas del Tor**	**2.67**	**153**	||*i*P	**Pn**	**16 32 44.7**	**+2.3**
CO01				*e*S	**Sn**	**16 33 14.5**	**-0.9**
CO01				IAML		16 33 17.8	
	comp=N,2μm,0.2s						
CO01	**Juntas del Tor**	**2.67**	**153**	*e*P	**Pn**	**16 32 44.8**	**+2.3**
CO01				*e*S	**Sn**	**16 33 15.2**	**-0.2**
CO01				IAML		16 33 16.9	
	comp=Z,4μm,0.5s						
GO02	**Mina Guanaco**	**2.96**	**35**	Pn	**Pn**	**16 32 47.9**	**+1.4**
GO02	**Mina Guanaco**	**2.96**	**35**	||*i*P	**Pn**	**16 32 48.2**	**+1.8**
GO02				*e*S	**Sn**	**16 33 22.1**	**-0.4**
GO02				IAML		16 33 25.4	
	comp=E,3μm,0.1s						
GO02	**Mina Guanaco**	**2.96**	**35**	*e*P	**Pn**	**16 32 48.3**	**+1.8**
GO02				*e*S	**Sn**	**16 33 23.0**	**+0.5**
CO06	**Fray Jorge**	**3.07**	**183**		**Pn**	**16 32 48.4**	**+0.6**
CO06	**Fray Jorge**	**3.07**	**183**	||*i*P	**Pn**	**16 32 48.5**	**+0.7**
CO06				IAML		16 33 25.8	
	comp=E,964nm,0.2s						
VCA	**Vinchina**	**3.11**	**112**	*e*P	Pn	16 32 33.5	-15
VCA				*e*S	**Sb**	**16 33 30.0**	**-2.7**
AROD	**Rodeo**	**3.11**	**146**	*e*P	**Pb**	**16 32 52.7**	**-1.8**
AROD				*e*S	**Sn**	**16 33 28.5**	**+2.2**
PB14	**IPOC Station P**	**3.11**	**18**	Pn	**Pn**	**16 32 49.0**	**+0.4**
PB14	**IPOC Station P**	**3.11**	**18**	*e*P	**Pn**	**16 32 49.4**	**+0.8**
PB14	**IPOC Station P**	**3.11**	**18**	*e*P	**Pn**	**16 32 49.6**	**+1.1**
PB14				*e*S	**Sn**	**16 33 25.3**	**-1.1**
ACDV	**Cuesta del Vie**	**3.30**	**142**	*e*P	**Pn**	**16 32 54.2**	**+3.2**
ACDV				*e*S	**Sb**	**16 33 38.7**	**+0.5**
CO03	**El Pedregal**	**3.31**	**168**	Pn	**Pn**	**16 32 52.4**	**+1.3**
CO03	**El Pedregal**	**3.31**	**168**	||*i*P	**Pn**	**16 32 52.7**	**+1.6**
CO03				IAML		16 33 49.6	
	comp=N,2μm,0.4s						
CO02	**Combarbal**	**3.62**	**173**		**Pn**	**16 32 56.4**	**+1.0**
CO02	**Combarbal**	**3.62**	**173**	||*i*P	**Pn**	**16 32 56.6**	**+1.2**
CO02	**Combarbal**	**3.62**	**173**	*e*P	**Pn**	**16 32 56.6**	**+1.2**
CO02				*e*S	**Sn**	**16 33 38.6**	**-0.1**
CO02				IAML		16 33 52.1	
	comp=Z,2μm,0.4s						
ACCO	**Cerro Coronel**	**3.66**	**145**	*e*P	**Pn**	**16 33 00.3**	**+4.2**
ACCO				*e*S	**Sn**	**16 33 43.1**	**+3.2**
PB10	**IPOC Station P**	**4.15**	**12**	Pn	**Pn**	**16 33 02.5**	**0.0**
PB10	**IPOC Station P**	**4.15**	**12**	*i* P	**Pn**	**16 33 02.6**	**0.0**
PB10	**IPOC Station P**	**4.15**	**12**	*e*P	**Pn**	**16 33 03.0**	**+0.4**
PB10				*e*S	**Sn**	**16 33 48.3**	**-3.2**
ACLC	**CERRO LA CRUZ**	**4.38**	**116**	*e*P	**Pn**	**16 33 08.6**	**+2.7**
ACLC				*e*S	**Sn**	**16 33 57.2**	**-0.3**
RTLL	**Cerro Villicun**	**4.55**	**146**	*e*P	**Pn**	**16 33 12.0**	**+3.8**
RTLL				*e*S	**Sn**	**16 34 01.8**	**+0.2**
RTLS	**Leoncito**	**4.60**	**156**	*e*P	**Pn**	**16 33 13.3**	**+4.2**
RTLS				*e*S	**Sn**	**16 34 06.1**	**+3.0**
RTLS				IAML		16 34 28.7	
	comp=Z,639nm,1.0s						
ZON	**Zonda**	**4.63**	**149**		**Pn**	**16 33 11.9**	**+2.7**
AVFE	**Valle Fertil**	**4.66**	**132**	*e*P	**Pn**	**16 33 12.2**	**+2.5**
AVFE				*e*S	**Sn**	**16 34 03.6**	**-0.7**
AVFE				IAML		16 34 04.3	
	comp=Z,759nm,0.6s						
PB15	**IPOC Station P**	**4.73**	**23**		**Pn**	**16 33 11.9**	**+1.1**
PB15	**IPOC Station P**	**4.73**	**23**	*e*P	**Pn**	**16 33 11.9**	**+1.1**
PB15	**IPOC Station P**	**4.73**	**23**	*e*P	**Pn**	**16 33 12.5**	**+1.7**
PB15				*e*S	**Sb**	**16 34 17.0**	**-2.5**
PB15				IAML		16 34 32.7	
	comp=Z,896nm,0.2s						
VA06	**Catapilco**	**4.95**	**178**	Pn	**Pn**	**16 33 14.0**	**+0.4**
APLL	**PUNTA DE LOS L**	**5.16**	**124**	*e*P	**Pn**	**16 33 18.7**	**+2.2**
APLL				*e*S	**Sn**	**16 34 11.9**	**-4.6**
PB06	**IPOC Station P**	**5.17**	**20**	Pn	**Pn**	**16 33 16.7**	**0.0**
PB06	**IPOC Station P**	**5.17**	**20**	||*i*P	**Pn**	**16 33 16.8**	**+0.1**
PB06	**IPOC Station P**	**5.17**	**20**	*e*P	**Pn**	**16 33 17.3**	**+0.6**
PB06				*e*S	**Sn**	**16 34 14.9**	**-1.9**
PB06				IAML		16 34 58.1	
	comp=Z,307nm,0.8s						
VA03	**San Esteban**	**5.21**	**171**		**Pn**	**16 33 18.5**	**+1.2**
VA03	**San Esteban**	**5.21**	**171**	*e*P	**Pn**	**16 33 18.9**	**+1.6**
VA03	**San Esteban**	**5.21**	**171**	*e*P	**Pn**	**16 33 19.0**	**+1.6**
VA03				*e*S	**Sn**	**16 34 16.5**	**-1.5**
VA03				IAML		16 34 45.4	
	comp=Z,492nm,0.6s						
PB04	**IPOC Station P**	**5.38**	**13**		**Pn**	**16 33 19.1**	**-0.6**
ROC1	**El Roble**	**5.38**	**176**		**Pn**	**16 33 20.1**	**+0.4**
VA01	**Torpederas**	**5.41**	**182**		**Pn**	**16 33 19.7**	**-0.2**
LVC	**Limon Verde**	**5.48**	**26**	Pn	**Pn**	**16 33 22.3**	**+1.0**
	comp=Z,20nm,0.3s,baz=194,slow=9.5,SNR=359						
LVC				Sn	**Sn**	**16 34 22.6**	**-2.4**
	comp=Z,22nm,0.3s,baz=163,slow=0.2,SNR=4.1						
LVC				LR	LR	16 35 47.1	
	comp=Z,758nm,19.6s,baz=214,slow=42						
	comp=Z,40nm,0.3s						
LVC	**Limon Verde**	**5.48**	**26**	Pn	**Pn**	**16 33 22.1**	**+0.8**
LVC	**Limon Verde**	**5.48**	**26**	*i* P	**Pn**	**16 33 22.2**	**+1.0**
LVC	**Limon Verde**	**5.48**	**26**	*e*P	**Pn**	**16 33 22.3**	**+1.0**
AF01	**San Pedro de A**	**5.50**	**34**		**Pn**	**16 33 21.6**	**+0.1**
PEL	**Peldehue**	**5.57**	**173**	Pn	**Pn**	**16 33 22.6**	**+0.4**
MT02	**Curacav**	**5.65**	**177**		**Pn**	**16 33 23.2**	**-0.1**
MT05	**Renca**	**5.81**	**174**	Pn	**Pn**	**16 33 26.0**	**+0.5**
MT03	**Universidad Ad**	**5.94**	**172**	Pn	**Pn**	**16 33 27.9**	**+0.6**
PB07	**IPOC Station P**	**6.02**	**14**		**Pn**	**16 33 27.8**	**-0.6**
VA05	**Santo Domingo**	**6.04**	**181**		**Pn**	**16 33 28.1**	**-0.5**
PB09	**IPOC Station P**	**6.12**	**20**		**Pn**	**16 33 30.7**	**+0.8**
MT09	**Talagante**	**6.18**	**176**		**Pn**	**16 33 31.0**	**+0.4**
MT01	**Popeta**	**6.25**	**178**		**Pn**	**16 33 31.3**	**-0.2**
PB02	**IPOC Station P**	**6.41**	**13**		**Pn**	**16 33 32.7**	**-1.1**
PB01	**IPOC Station P**	**6.77**	**16**		**Pn**	**16 33 37.9**	**-0.8**
BO02	**Sierra Bellavi**	**7.20**	**175**		**Pn**	**16 33 44.5**	**0.0**
GO05	**Huala**	**7.40**	**183**	Pn	**Pn**	**16 33 45.8**	**-1.5**
ML02	**Panimavida**	**8.14**	**180**		**Pn**	**16 33 56.0**	**-1.5**
GO01	**Chusmiza**	**8.16**	**15**	Pn	**Pn**	**16 33 57.5**	**-0.7**
H03N1	**Juan Fernandez**	**8.66**	**226**	T	T	16 43 50.3	
	baz=50,slow=74						
H03N2	**Juan Fernandez**	**8.67**	**226**	T	T	16 43 50.5	
	baz=50,slow=74						

TER01	**Tubaro-SC**	**19.75**	**98**	*eP*		**P**		**16 36 29.2**	**-0.2**
CZSB	**Cruzeiro do Su**	**19.79**	**356**	P		**Pn**		**16 36 31.8**	**+0.4**
CZSB				IAmb		IAmb		16 36 35.0	
	comp=Z,51nm,1.3s								
CZSB	**Cruzeiro do Su**	**19.79**	**356**	*eP*		**Pn**		**16 36 31.4**	**0.0**
SAML	**Samuel**	**20.13**	**24**	P		**P**		**16 36 33.2**	**-0.4**
ITRB	**Iturama**	**20.86**	**72**	*eP*		**P**		**16 36 41.0**	**-0.5**
PDRB	**Porto dos Gac**	**21.08**	**44**	*eP*		**P**		**16 36 44.1**	**+0.2**
BB19B	**Bebedouro**	**21.88**	**78**	*eP*		**P**		**16 36 51.3**	**-1.3**
PET01	**Itanhaem-SP**	**22.00**	**87**	*eP*		**P**		**16 36 54.2**	**+0.4**
CLDB	**Colider**	**22.23**	**45**	*eP*		**P**		**16 36 56.2**	**0.0**
VAO	**Valinhos**	**22.61**	**84**	*eP*		**P**		**16 36 59.2**	**-1.3**
TBTG	**Tabatinga, AM**	**23.33**	**4**	*eP*		**P**		**16 37 09.1**	**+1.4**
MG05	**Puerto Natales**	**24.07**	**182**	P		**P**		**16 37 14.8**	**+0.1**
MG05				IAmb		IAmb		16 37 44.1	
	comp=Z,50nm,1.4s								
SNDB	**Serra Nova Dou**	**24.48**	**55**	*eP*		**P**		**16 37 18.8**	**-0.1**
PMNB	**Patos De Minas**	**24.70**	**74**	*eP*		**P**		**16 37 19.8**	**-1.2**
BDFB	**Brasilia**	**24.80**	**66**	P		**P**		**16 37 20.2**	**-1.6**
	comp=Z,11nm,0.7s,baz=241,slow=8.8,SNR=17								
BDFB				LR		LR		16 48 21.9	
	comp=Z,303nm,19.6s,baz=277,slow=40								
	comp=Z,11nm,0.7s								
BDFB	**Brasilia**	**24.80**	**66**	P		**P**		**16 37 20.2**	**-1.6**
BDFB				IAmb		IAmb		16 37 21.8	
	comp=Z,11nm,0.7s								
BDFB	**Brasilia**	**24.80**	**66**	*eP*		**P**		**16 37 20.7**	**-1.1**
NPGB	**Novo Progresso**	**25.52**	**40**	*eP*		**P**		**16 37 28.6**	**+0.3**
DUB01	**Friburgo-RJ**	**26.94**	**85**	*eP*		**P**		**16 37 41.7**	**+0.6**
USHA	**Ushuaia**	**27.30**	**176**	LR		LR		16 48 58.1	
	comp=Z,264nm,18.2s,baz=22,slow=38								
ITTB	**Itaituba**	**27.55**	**36**	*eP*		**P**		**16 37 47.2**	**+0.7**
MC01	**Montes Claros**	**27.65**	**73**	*eP*		**P**		**16 37 46.6**	**-0.9**
JANB	**Januaria**	**28.14**	**69**	*eP*		**P**		**16 37 51.1**	**-0.8**
SDBA	**SAO DESIDERIO**	**29.09**	**64**	*eP*		**P**		**16 38 01.6**	**+1.1**
SJMB	**Sao Joao De Ma**	**29.16**	**79**	*eP*		**P**		**16 38 00.1**	**-0.8**
SMTB	**Santa Maria do**	**29.26**	**55**	*eP*		**P**		**16 38 01.0**	**-0.9**
PRPB	**Parauapebas**	**29.62**	**48**	*eP*		**P**		**16 38 05.5**	**+0.4**
RIB01	**Linhares ES**	**29.62**	**81**	*eP*		**P**		**16 38 05.1**	**0.0**
MALB	**Monte Alegre**	**30.44**	**36**	*eP*		**P**		**16 38 13.5**	**+1.2**
BOAV	**Boa Vista**	**31.63**	**21**	*eP*		**P**		**16 38 21.9**	**-0.8**
ROSC	**El Rosal**	**32.36**	**355**	LR		LR		16 52 12.0	
	comp=Z,97nm,19.2s,baz=239,slow=37								
GDU01	**Guandu, BA**	**32.77**	**72**	*eP*		**P**		**16 38 31.5**	**-1.4**
RPN	**Rapa Nui**	**33.54**	**262**	LR		LR		16 48 52.1	
	comp=Z,152nm,18.8s,baz=348,slow=30								
BAUV	**El Baul**	**36.47**	**6**	P		**P**		**16 39 05.1**	**+0.3**
MDP	**Montagnes des**	**37.25**	**32**	LR		LR		16 55 40.1	
	comp=Z,107nm,20.0s,baz=190,slow=38								
PMSA	**Palmer Station**	**37.49**	**175**	LR		LR		16 54 18.0	
	comp=Z,82nm,18.9s,baz=45,slow=36								
PMSA	**Palmer Station**	**37.49**	**175**	P		**P**		**16 39 11.0**	**-1.9**
NBAN	**Anadia - AL**	**37.64**	**69**	*eP*		**P**		**16 39 14.1**	**-0.7**
NBRF	**Rio Formoso -**	**39.12**	**68**	*eP*		**P**		**16 39 28.0**	**+0.8**
RCBR	**Riachuelo**	**40.12**	**64**	LR		LR		16 58 37.8	
	comp=Z,54nm,20.6s,baz=324,slow=40								
SMAI	**San Martin Ant**	**40.65**	**177**	P		**P**		**16 39 37.0**	**-2.3**
SMAI				IAmb		IAmb		16 39 43.1	
	comp=Z,19nm,0.9s								
TEIG	**Tepich**	**50.24**	**339**	P		**P**		**16 40 57.0**	**+1.1**
TEIG				IAmb		IAmb		16 41 30.6	
	comp=Z,12nm,1.3s								
BELA	**Belgrano 2**	**53.09**	**171**	P		**P**		**16 41 16.6**	**+0.1**
BELA				IAmb		IAmb		16 41 17.3	
	comp=Z,4.0nm,0.7s								
VNA3	**Neumayer Olymp**	**55.14**	**160**	P		**P**		**16 41 31.4**	**-0.1**
VNA1	**Neumayer--Stat**	**55.41**	**159**	P		**P**		**16 41 33.7**	**+0.3**
VNA2	**Neumayer--Watz**	**55.76**	**159**	P		**P**		**16 41 35.8**	**-0.2**
	baz=288,slow=8.0								
SNAA	**Sanae**	**57.36**	**160**	P		**P**		**16 41 47.2**	**-0.3**
SNAA	**Sanae**	**57.36**	**160**	LR		LR		17 06 56.0	
	comp=Z,24nm,18.9s,baz=325,slow=37								
SNAA	**Sanae**	**57.36**	**160**	P		**P**		**16 41 46.8**	**-0.7**
TROLL	**Troll, Antarti**	**59.07**	**160**	P		**P**		**16 41 59.4**	**-0.2**
H06E1	**SOCORRO T-PHAS**	**59.88**	**316**	T		T		17 47 28.0	
	SNR=10								
QSPA	**South Pole Qui**	**62.62**	**180**	P		**P**		**16 42 24.0**	**+0.2**
QSPA				IAmb		IAmb		16 42 25.4	
	comp=Z,11nm,1.0s								
LPIG	**La Paz**	**63.59**	**320**	LR		LR		17 05 02.1	
	comp=Z,40nm,20.2s,baz=192,slow=31								
TXAR	**Lajitas Array**	**64.45**	**329**	P		**P**		**16 42 38.9**	**+2.7**
	comp=Z,2.2nm,0.7s,baz=144,slow=7.8,SNR=4.3								
	comp=Z,0.2nm,0.7s								
LENM	**Lemitar**	**70.03**	**329**	P		**P**		**16 43 12.0**	**+0.3**
VNDA	**Vanda**	**70.46**	**191**	P		**P**		**16 43 14.1**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=135,slow=4.3,SNR=5.6								
	comp=Z,1.0nm,0.9s								
LIC	**Lamto**	**72.37**	**73⇑**	*iP*		**P**		**16 43 25.2**	**-0.9**
	comp=Z,6.9nm,0.3s								
G62A	**West of Eustis**	**72.47**	**1**	P		**P**		**16 43 27.6**	**+1.7**
G62A				IAmb		IAmb		16 43 55.3	
	comp=Z,6.6nm,1.1s								
TIC	**Toumodi**	**72.59**	**73⇑**	*iP*		**P**		**16 43 26.5**	**-0.9**
	comp=Z,4.7nm,0.3s								
KIC	**Kosan Boka**	**72.68**	**73⇑**	*iP*		**P**		**16 43 27.1**	**-0.8**
	comp=Z,11nm,0.4s								
DBIC	**Dimbokro**	**72.74**	**73**	P		**P**		**16 43 26.8**	**-1.5**
	comp=Z,14nm,0.6s,baz=246,slow=5.1,SNR=23								
DBIC				LR		LR		17 12 41.0	
	comp=Z,70nm,21.7s,baz=290,slow=34								
	comp=Z,14nm,0.6s								
DBIC	**Dimbokro**	**72.74**	**73**	P		**P**		**16 43 27.6**	**-0.7**
F64A	**Sherman**	**73.16**	**2**	P		**P**		**16 43 31.1**	**+1.1**
F64A				IAmb		IAmb		16 43 45.4	
	comp=Z,11nm,1.4s								
E62A	**Clayton Lake**	**73.89**	**1**	P		**P**		**16 43 35.8**	**+1.5**
E62A				IAmb		IAmb		16 43 44.8	
	comp=Z,11nm,1.5s								
D62A	**Allapoint, All**	**74.36**	**2**	P		**P**		**16 43 37.5**	**+0.6**
D62A				IAmb		IAmb		16 44 18.0	
	comp=Z,7.4nm,1.2s								
ECSD	**EROS Data Cent**	**74.63**	**341**	P		**P**		**16 43 40.0**	**+1.3**
SUR	**Sutherland**	**77.55**	**120**	LR		LR		17 12 56.7	
	comp=Z,62nm,21.4s,baz=294,slow=32								
SUR	**Sutherland**	**77.55**	**120**	P		**P**		**16 43 55.8**	**-0.3**
SUR				IAmb		IAmb		16 44 31.9	
	comp=Z,13nm,1.4s								
KOWA	**Kowa**	**77.59**	**66**	P		**P**		**16 43 55.5**	**-0.7**
PDAR	**Pinedale Array**	**78.30**	**332**	P		**P**		**16 44 01.1**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=138,slow=7.2,SNR=2.3								
PDAR				LR		LR		17 16 17.2	
	comp=Z,15nm,19.7s,baz=116,slow=34								
	comp=Z,0.2nm,0.5s								
HVU	**Hansel Valley**	**78.88**	**330**	P		**P**		**16 44 04.6**	**+1.6**
RAR	**Rarotonga**	**79.02**	**252**	LR		LR		17 09 34.7	
	comp=Z,57nm,21.2s,baz=122,slow=28								
MAW	**Mawson**	**79.17**	**164**	P		**P**		**16 44 03.2**	**-0.9**
	comp=Z,8.8nm,0.9s,baz=221,slow=10,SNR=9.7								
MAW				LR		LR		17 18 30.0	
	comp=Z,34nm,20.2s,baz=225,slow=35								
	comp=Z,8.8nm,0.9s								
MAW	**Mawson**	**79.17**	**164**	P		**P**		**16 44 04.1**	**0.0**
ELK	**Elko**	**79.20**	**328**	LR		LR		17 14 46.0	
	comp=Z,50nm,20.3s,baz=132,slow=32								
TSUM	**Tsumeb**	**80.54**	**107**	LR		LR		17 16 51.9	
	comp=Z,56nm,18.5s,baz=269,slow=34								
TSUM	**Tsumeb**	**80.54**	**107**	P		**P**		**16 44 11.8**	**-0.8**
TSUM				IAmb		IAmb		16 44 14.4	
	comp=Z,6.1nm,0.8s								
MCMT	**McKenzie Canyo**	**81.36**	**332**	P		**P**		**16 44 18.0**	**+1.6**
TOA0	**Torodi Ar. Sit**	**81.60**	**70**	P		**P**		**16 44 17.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**81.60**	**70**	P		**P**		**16 44 17.3**	**-0.7**
	comp=Z,11nm,0.3s,baz=258,slow=4.9,SNR=2.4								
SCHQ	**Schefferville**	**82.19**	**3**	LR		LR		17 21 20.2	
	comp=Z,12nm,18.4s,baz=120,slow=36								
BOSA	**Boshof**	**82.65**	**118**	P		**P**		**16 44 21.5**	**-2.1**
	comp=Z,6.6nm,1.0s,baz=248,slow=10,SNR=7.8								
BOSA				LR		LR		17 16 43.9	
	comp=Z,44nm,18.2s,baz=198,slow=33								
	comp=Z,6.6nm,1.0s								
BOSA	**Boshof**	**82.65**	**118**	P		**P**		**16 44 22.1**	**-1.5**
BOSA				IAmb		IAmb		16 44 22.9	
	comp=Z,6.0nm,0.8s								
YBH	**Yreka Blue Hor**	**83.66**	**324**	LR		LR		17 18 32.5	
	comp=Z,16nm,18.6s,baz=282,slow=33								
LBTB	**Lobatse**	**84.57**	**115**	LR		LR		17 18 18.5	
	comp=Z,31nm,20.1s,baz=180,slow=33								
LBTB	**Lobatse**	**84.57**	**115**	P		**P**		**16 44 32.4**	**-1.1**
LBTB				IAmb		IAmb		16 44 32.8	
	comp=Z,4.3nm,0.7s								
NEW	**Newport**	**85.88**	**331**	LR		LR		17 20 39.2	
	comp=Z,27nm,19.2s,baz=165,slow=34								
CASY	**Casey**	**86.41**	**181**	P		**P**		**16 44 42.5**	**+0.7**
MDT	**Midelt**	**87.42**	**51**	LR		LR		17 24 24.4	
	comp=Z,33nm,18.4s,baz=162,slow=36								
LTZ	**Lake Taylor**	**88.69**	**221**	P		**P**		**16 44 53.5**	**+0.3**
LSZ	**Lusaka**	**91.33**	**108**	LR		LR		17 22 01.9	
	comp=Z,97nm,19.3s,baz=160,slow=33								
ESDC	**Sonseca Array**	**91.78**	**46**	LR		LR		17 22 58.7	
	comp=Z,18nm,18.1s,baz=150,slow=33								
ASAR	**Alice Springs**	**123.45**	**208**	PKP		**PKPdf**		**16 50 56.9**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=136,slow=2.0,SNR=18								
WRA	**Warramunga Arr**	**126.54**	**211**	PKP		**PKPdf**		**16 51 03.5**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=162,slow=1.8,SNR=37								
SIJI	**Sorong**	**144.24**	**221**	PKP		PKPbc		16 51 35.4	+0.7
	comp=Z,13nm,0.8s,baz=21,slow=4.6,SNR=18								
LEM	**Lembang**	**145.77**	**178**	PKPbc		**PKPab**		**16 51 40.4**	**+0.3**
	comp=Z,28nm,0.7s,baz=172,slow=22,SNR=9.3								
KAPI	**Kappang**	**145.82**	**200**	PKPbc		**PKPbc**		**16 51 39.6**	**0.0**
	comp=Z,11nm,0.4s,baz=152,slow=4.4,SNR=5.7								
ZALV	**Zalesovo Beam**	**148.43**	**27**	PKP		**PKPdf**		**16 51 43.0**	**+0.7**
	comp=Z,17nm,0.7s,baz=298,slow=3.1,SNR=40								
ZALV				PKPbc		**PKPbc**		**16 51 46.3**	**+0.4**
	comp=Z,17nm,0.7s,baz=305,slow=3.6,SNR=47								
MKAR	**Makanchi Array**	**151.86**	**40**	PKP		**PKPdf**		**16 51 47.3**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=298,slow=3.1,SNR=2.4								
MKAR				PKPbc		**PKPbc**		**16 51 53.9**	**-0.5**
	comp=Z,8.6nm,0.8s,baz=321,slow=2.0,SNR=42								
PSI	**Prapat**	**153.69**	**158**	PKPab		**PKPab**		**16 52 11.4**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=156,slow=19,SNR=4.6								
LZH	**Lanzhou**	**170.65**	**24**	ePKP		**PKPdf**		**16 52 08.5**	**+0.3**
PZH	**PanZhiHua**	**173.86**	**99**	PKP		**PKPdf**		**16 52 10.3**	**+0.4**

DJA 28 16:37:32.2±1.3, 4˚N±10˚×12˚E±˚, h143km±12km, M3.6/10, mb3.8/2, mB5.1/2, MLv3.6/10, Mw(mB)4.4/2, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.27**	**314**	P	Pn	16 37 52.9	+1.1
SGSI				S	Sn	16 38 07.8	+1.1
TNTI	**Ternate**	**3.17**	**149**	P	Pn	16 38 22.3	+0.8
KMSI	**Cibinong**	**3.39**	**211**	P	Pn	16 38 22.9	-1.4
GTOI	**Gorontalo**	**3.93**	**224**	P	Pn	16 38 32.7	+1.4
LBMI	**Labuha**	**4.48**	**157**	P	Pn	16 38 38.7	+0.1
SANI	**Sanana**	**5.52**	**177**	P	Pn	16 38 51.2	-1.3
NLAI	**Namlea**	**6.83**	**168**	P	Pn	16 39 09.8	-0.3

*LDG **28** 16:42:00.9±0.1, 42˚.81N×13˚.15E, h10km, Md3.8/2, Ml3.5/27, Error ellipse: s-maj=2.2km s-min=1.5km az=46.0*
*ROM **28** 16:42:01.7±0.0, 42˚.818N±0˚.002×13˚.139E±0˚.004, h9km, ML3.8/114, Mw3.7, Mw3.7, Error ellipse: s-maj=0.3km s-min=0.1km az=71.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=4.64; $M_{\theta\theta}$0.53; $M_{\phi\phi}$=4.11; $M_{r\theta}$0.17; $M_{\theta\phi}$=1.82; $M_{\phi r}$=1.04; Fault plane solution: M_{ij} 4.87430×10^{14} NP1:ϕ_s154.00000°, δ39.00000°, λ-95.00000°. NP2:ϕ_s340.00000°, δ51.00000°, λ-86.00000°.*
*PRU **28** 16:42:02.0±0.0, 42˚.81N×13˚.32E, h0km, M4.3*
*PDG **28** 16:42:02.5±0.9, 42˚.84N×13˚.16E, h11km, ML3.8/12, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*NEIC **28** 16:42:02.3±1.3, 42˚.88N±0˚.06×13˚.10E±0˚.03, h4km±5km, mb4.3/2, ML3.8(ROM), Error ellipse: s-maj=8.3km s-min=3.6km az=178.0*
*IDC **28** 16:42:03.1±1.1, 43˚.01N×13˚.26E, h0km, mb3.9/7, mbtmp3.7/16, ML3.5/8, MS2.9/12, Error ellipse: s-maj=15.8km s-min=11.7km az=73.0*
*MOS **28** 16:42:03.7±1.7, 43˚.01N×13˚.16E, h18km, mb4.3/7, Error ellipse: s-maj=7.7km s-min=4.4km az=78.9*
*BEO **28** 16:42:03.5±0.6, 42˚.82N×13˚.17E, h0km, ML3.8/8*
*STR **28** 16:42:06.5±1.3, 43˚.N±6˚×1˚.3E±1˚.2, h10km, mb4.1/14, Error ellipse: s-maj=0.0km s-min=0.0km az=86.1, preliminary*

ISC 28 16:42:02.8±0.6, 42˚.82N±0˚.01×13˚.12E±0˚.02, h8km±3km, n487, σ1s77/570, mb4.2/11, MS2.8/4, 82C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.01**	**356**	Pg	**Pg**	**16 42 03.5**	**-0.9**
NRCA	**Norcia**	**0.01**	**356**	⇓P	**Pg**	**16 42 03.7**	**-0.8**
NRCA				S	**Sg**	**16 42 04.6**	**-1.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1242	**Castelluccio d**	**0.07**	**84**	⇓P	**Pg**	**16 42 04.0**	**-0.9**
T1242				S	**Sg**	**16 42 05.1**	**-1.4**
T1212	**Cascia, Frazio**	**0.09**	**216**	⇑P	**Pg**	**16 42 04.9**	**-0.2**
T1212				S	**Sg**	**16 42 06.8**	**0.0**
T1214	**Arquata del Tr**	**0.09**	**133**	P	**Pg**	**16 42 04.5**	**-0.7**
T1214				S	**Sg**	**16 42 06.1**	**-0.9**
T1213	**Norcia, Frazio**	**0.10**	**175**	⇑P	**Pg**	**16 42 04.8**	**-0.5**
T1213				S	**Sg**	**16 42 06.6**	**-0.4**
T1216	**Preci, Frazion**	**0.10**	**314**	⇑P	**Pg**	**16 42 04.9**	**-0.3**
T1216				S	**Sg**	**16 42 06.9**	**-0.1**
MC2	**Monte Cornacci**	**0.11**	**32**	⇑P	**Pg**	**16 42 04.8**	**-0.7**
MC2				S	**Sg**	**16 42 06.6**	**-0.8**
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
MC2				AML	AML		
T1202	**Accumoli, Fraz**	**0.14**	**146**	⇓P	**Pg**	**16 42 05.5**	**-0.5**
T1202				S	**Sg**	**16 42 07.9**	**-0.3**
FEMA	**Monte Fema**	**0.15**	**341**	P	**Pg**	**16 42 05.8**	**-0.3**
FEMA				S	**Sg**	**16 42 08.3**	**-0.1**
T1244	**Arquata del Tr**	**0.15**	**116**	⇑P	**Pg**	**16 42 05.5**	**-0.6**
T1244				S	**Sg**	**16 42 08.1**	**-0.2**
T1218	**Civita (PG)**	**0.15**	**180**	⇑P	**Pg**	**16 42 05.7**	**-0.4**
T1218				S	**Sg**	**16 42 08.4**	**0.0**
MMO1	**Montemonaco**	**0.17**	**64**	⇑P	**Pg**	**16 42 05.7**	**-0.8**
MMO1				S	**Sg**	**16 42 08.4**	**-0.6**
MMO1				AML	AML		
MMO1				AML	AML		
MMO1				AML	AML		
	comp=N,31500μm,0.3s						
MMO1				AML	AML		
	comp=E,23300μm,0.2s						
T1215	**Vallo di Nera,**	**0.18**	**264**	⇑P	**Pg**	**16 42 06.5**	**-0.1**
T1215				S	**Sg**	**16 42 09.9**	**+0.7**
T1201	**Domo (RI)**	**0.19**	**149**	⇓P	**Pg**	**16 42 06.5**	**-0.3**
T1201				S	**Sg**	**16 42 10.1**	**+0.6**
T1204	**Amatrice, Fraz**	**0.21**	**135**	⇑P	**Pg**	**16 42 06.6**	**-0.6**
T1204				S	**Sg**	**16 42 10.0**	**0.0**
FDMO	**Fiordimonte**	**0.21**	**355**	⇑P	**Pg**	**16 42 06.7**	**-0.5**
FDMO				S	**Sg**	**16 42 10.4**	**+0.2**
FDMO				AML	AML		
	comp=E,57400μm,1.1s						
FDMO				AML	AML		
	comp=N,60450μm,0.7s						
LNSS	**Leonessa**	**0.23**	**194**	⇑P	**Pg**	**16 42 07.1**	**-0.3**
LNSS				S	**Sg**	**16 42 11.2**	**+0.7**
LNSS				AML	AML		
	comp=E,44450μm,0.2s						
LNSS				AML	AML		
	comp=N,55750μm,0.7s						
T1241	**Roccafluvione,**	**0.23**	**82**	⇑P	**Pg**	**16 42 06.8**	**-0.8**
T1241				S	**Sg**	**16 42 10.6**	**-0.2**
T1243	**Rocca Santa Ma**	**0.28**	**117**	⇑P	**Pg**	**16 42 07.4**	**-0.9**
T1243				S	**Sg**	**16 42 11.7**	**-0.4**
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
CSP1	**Cessapalombo**	**0.28**	**14**	⇑P	**Pg**	**16 42 07.7**	**-0.7**
CSP1				S	**Sg**	**16 42 12.2**	**+0.1**
CSP1				AML	AML		
CSP1				AML	AML		
RM33	**Pellescritta (**	**0.32**	**167**	⇑P	**Pg**	**16 42 08.5**	**-0.7**
RM33				S	**Sg**	**16 42 13.9**	**+0.4**
RM33				AML	AML		
	comp=E,16300μm,1.6s						
RM33				AML	AML		
	comp=N,11350μm,1.5s						
RM33				AML	AML		
	comp=E,16250μm,1.6s						
RM33				AML	AML		
	comp=E,16250μm,1.6s						
RM33				AML	AML		
	comp=N,11300μm,1.5s						
RM33				AML	AML		
	comp=N,11200μm,1.5s						
RM33				AML	AML		
	comp=N,11300μm,1.5s						
RM33				AML	AML		
	comp=E,16300μm,1.6s						
RM33				AML	AML		
	comp=N,11350μm,1.5s						
RM33				AML	AML		
	comp=N,11150μm,1.5s						
SEF1	**Sefro**	**0.35**	**339**	⇑P	**Pg**	**16 42 09.2**	**-0.5**
SEF1				S	**Sg**	**16 42 14.9**	**+0.6**
SEF1				AML	AML		
	comp=N,45000μm,0.3s						
SEF1				AML	AML		
	comp=E,40600μm,0.2s						
T1211	**Morro Reatino**	**0.35**	**214**	⇑P	**Pg**	**16 42 09.2**	**-0.5**
T1211				S	**Sg**	**16 42 15.3**	**+1.1**
ARRO	**Arrone**	**0.35**	**227**	⇑P	**Pg**	**16 42 09.4**	**-0.3**
ARRO				AML	AML		
	comp=E,11070μm,0.8s						
ARRO				AML	AML		
	comp=E,11030μm,0.8s						
ARRO				AML	AML		
	comp=N,6655μm,1.4s						
CAMP	**Campotosto**	**0.36**	**143**	⇑P	**Pg**	**16 42 09.0**	**-0.9**
CAMP				S	**Sg**	**16 42 14.5**	**-0.2**
CAMP				AML	AML		
	comp=E,8765μm,0.4s						
CAMP				AML	AML		
	comp=N,10850μm,0.6s						
PIO1	**Pioraco**	**0.37**	**345**	P	**Pg**	**16 42 09.6**	**-0.5**
PIO1				AML	AML		
	comp=E,27400μm,0.4s						
PIO1				AML	AML		
	comp=N,39500μm,0.7s						
MDAR	**Monte D'Aria**	**0.37**	**3**	P	**Pg**	**16 42 09.5**	**-0.6**
MDAR				AML	AML		
	comp=E,28550μm,0.5s						
MDAR				AML	AML		
	comp=N,29900μm,0.6s						
MDAR				AML	AML		
	comp=N,29950μm,0.6s						
FIU1	**Fiuminata**	**0.39**	**340**	P	**Pg**	**16 42 10.0**	**-0.5**
FIU1				AML	AML		
	comp=E,24000μm,0.5s						
FIU1				AML	AML		
	comp=N,16250μm,1.1s						
FIU1				AML	AML		
	comp=N,16250μm,1.0s						
FIU1				AML	AML		
	comp=E,24050μm,0.4s						
ASSB	**Assisi San Ben**	**0.40**	**303**	⇑P	**Pg**	**16 42 10.2**	**-0.5**
ASSB				S	**Sg**	**16 42 16.7**	**+0.7**
ASSB				AML	AML		
	comp=E,37750μm,0.3s						
ASSB				AML	AML		
	comp=N,25850μm,1.5s						
MNTP	**Montappone**	**0.41**	**39**	⇑P	**Pg**	**16 42 10.5**	**-0.3**
MNTP				AML	AML		
	comp=E,62200μm,1.2s						
MNTP				AML	AML		
	comp=E,62250μm,1.2s						
MNTP				AML	AML		
	comp=N,52550μm,1.4s						
SSM1	**San Severino M**	**0.41**	**6**	P	**Pg**	**16 42 10.1**	**-0.7**
TERO	**Teramo**	**0.41**	**119**	⇑P	**Pg**	**16 42 09.7**	**-1.2**
TERO				S	**Sg**	**16 42 15.8**	**-0.5**
TERO				AML	AML		
	comp=N,42450μm,0.3s						
TERO				AML	AML		
	comp=E,22850μm,1.3s						
TERO				AML	AML		
	comp=N,38550μm,0.3s						
TERO				AML	AML		
	comp=E,25350μm,1.3s						
GAG1	**Gagliole**	**0.42**	**355**	P	**Pg**	**16 42 10.4**	**-0.5**
GAG1				AML	AML		
	comp=E,60700μm,0.7s						
GAG1				AML	AML		
	comp=N,76000μm,0.4s						
GAG1				AML	AML		
	comp=E,60750μm,0.7s						
GAG1				AML	AML		
	comp=N,76000μm,0.4s						
OFFI	**Offida**	**0.43**	**75**	⇑P	**Pg**	**16 42 11.1**	**-0.2**
OFFI				AML	AML		
	comp=E,36100μm,0.6s						
OFFI				AML	AML		
	comp=N,46600μm,0.6s						
MTL1	**Matelica**	**0.44**	**350**	P	**Pg**	**16 42 10.9**	**-0.5**
MTL1				AML	AML		
	comp=E,54300μm,0.4s						
MTL1				AML	AML		
	comp=N,54900μm,0.4s						
MTL1				AML	AML		
	comp=E,54300μm,0.4s						
MTL1				AML	AML		
	comp=N,54950μm,0.4s						
CESX	**Cesi**	**0.45**	**242**	⇑P	**Pg**	**16 42 10.9**	**-0.6**
CESX				AML	AML		
	comp=N,11750μm,0.9s						
CESX				AML	AML		
	comp=E,10895μm,0.6s						
SNTG	**Esanatoglia**	**0.45**	**344**	⇑P	**Pg**	**16 42 10.9**	**-0.7**
SNTG

comp=N,10580µm,1.5s
TRTR Tortoreto Alta 0.59 91 ⇑P **Pg 16 42 14.2 0.0**
TRTR AML AML
comp=E,40700µm,1.3s
TRTR AML AML
comp=N,37750µm,1.0s
TRTR AML AML
comp=E,40750µm,1.3s
CADA Capodarco di F 0.60 52 P **Pb 16 42 14.7 -0.9**
CADA AML AML
comp=E,47500µm,0.7s
CADA AML AML
comp=N,46350µm,1.1s
CADA AML AML
comp=N,46300µm,1.1s
MURB Monte Urbino 0.62 316 Pg 16 42 13.8 -0.9
MURB Monte Urbino 0.62 316 ⇑P **Pg 16 42 14.1 -0.7**
MURB S **Sb 16 42 24.4 -0.3**
MURB AML AML
comp=N,38000µm,0.3s
MURB AML AML
comp=N,39150µm,0.3s
MURB AML AML
comp=N,38050µm,0.3s
MURB AML AML
comp=E,30650µm,1.1s
MURB AML AML
comp=E,31500µm,0.2s
MMUR Monte Murano 0.62 352 P **Pg 16 42 14.1 -0.8**
MMUR S **Sb 16 42 23.8 -1.1**
CIMA Civitanova Mar 0.63 40 P **Pg 16 42 14.8 -0.2**
FAGN Fagnano 0.66 148 P **Pg 16 42 14.0 -1.5**
FAGN AML AML
comp=E,9360µm,0.4s
FAGN AML AML
comp=N,12100µm,0.6s
SSFR Montelago di S 0.66 338 P **Pg 16 42 14.8 -0.8**
SSFR S **Sb 16 42 25.2 -0.7**
SSFR AML AML
comp=E,22900µm,0.5s
SSFR AML AML
comp=N,26400µm,0.2s
SSFR AML AML
comp=E,20400µm,0.2s
SSFR AML AML
comp=N,28100µm,0.2s
PP3 Marolino 0.66 33 ⇑P **Pg 16 42 15.4 -0.2**
PP3 AML AML
comp=E,81400µm,0.5s
PP3 AML AML
comp=N,42850µm,0.5s
PP3 AML AML
comp=E,79450µm,0.5s
PP3 AML AML
comp=E,81350µm,0.5s
PP3 AML AML
comp=N,42600µm,0.5s
PP3 AML AML
comp=N,42800µm,0.5s
ATTE AVT- Monte Tez 0.67 304 ⇑P **Pg 16 42 15.0 -0.8**
ATTE AML AML
comp=N,6375µm,0.6s
ATTE AML AML
comp=E,8430µm,0.4s
ATSC Scheggia e Pas 0.68 333 ⇑P **Pg 16 42 14.9 -1.0**
VCEL Villa Celiera 0.69 128 ⇑P **Pg 16 42 14.8 -1.3**
VCEL AML AML
comp=E,9125µm,0.5s
VCEL AML AML
comp=E,9110µm,0.5s
VCEL AML AML
comp=N,10800µm,0.9s
ARVD Arcevia 0.69 349 P **Pg 16 42 15.1 -1.0**
ARVD S **Sb 16 42 26.0 -0.7**
ARVD AML AML
comp=E,7505µm,0.2s
ARVD AML AML
comp=N,6450µm,0.5s
ATLO AVT- Montelove 0.71 314 ⇑P **Pg 16 42 15.6 -1.0**
SRES S.Oreste - Sor 0.74 218 ⇑P **Pg 16 42 15.8 -1.2**
SRES AML AML
comp=N,2290µm,0.7s
SRES AML AML
comp=E,2255µm,1.4s
MGAB Montegabbione 0.74 277 ⇑P **Pg 16 42 16.4 -0.7**
MGAB AML AML
comp=E,15250µm,0.6s
MGAB AML AML
comp=N,9645µm,1.6s
MGAB AML AML
comp=E,15050µm,0.6s
MGAB AML AML
comp=N,10795µm,0.7s
MGAB AML AML
comp=N,9600µm,1.6s
MGAB AML AML
comp=E,15200µm,0.6s
FRON Frontone 0.75 338 ⇑P **Pg 16 42 16.2 -1.1**
FRON S **Sb 16 42 27.9 -0.6**
FRON AML AML
comp=N,9320µm,1.5s
FRON AML AML
comp=E,5265µm,0.1s
FRON AML AML
comp=N,9350µm,1.5s
ATVA AVT- Monte Val 0.76 307 ⇑P **Pg 16 42 16.4 -1.1**
ATVO AVT- Monte Val 0.76 317 ⇑P **Pg 16 42 16.5 -1.0**
ATVO S **Sg 16 42 28.1 +0.6**
ATVO AML AML
comp=E,7140µm,1.2s
ATVO AML AML
comp=N,7115µm,1.3s
T0110 Collepietro 0.77 140 ⇑P **Pg 16 42 16.0 -1.7**
T0110 AML AML
comp=N,7715µm,1.3s
T0110 AML AML
comp=E,8485µm,1.3s
ATBU Serra di Buran 0.77 328 ⇑P **Pg 16 42 16.9 -0.8**
TB03 Pietralunga 0.78 318 ⇑P **Pg 16 42 16.7 -1.1**
ATMI Monte Miggiano 0.80 310 ⇑P **Pg 16 42 17.4 -0.9**
ATMI AML AML
comp=E,25500µm,0.7s
ATMI AML AML
comp=N,22150µm,1.1s
AOI Ancona 0.81 26 ⇑P **Pg 16 42 17.3 -1.1**
AOI AML AML
comp=E,12750µm,0.3s
AOI AML AML
comp=N,9970µm,0.4s
COR1 Corinaldo 0.81 354 P **Pg 16 42 18.0 -0.4**
COR1 AML AML
comp=E,12850µm,1.0s
COR1 AML AML
comp=N,13750µm,0.6s
COR1 AML AML
comp=E,6620µm,0.9s
COR1 AML AML
comp=N,13490µm,1.1s
COR1 AML AML
comp=E,6605µm,0.9s
COR1 AML AML
comp=N,13500µm,1.1s
COR1 AML AML
comp=E,12800µm,1.0s
COR1 AML AML
comp=N,13800µm,0.6s
ATPC Poggio Castell 0.81 324 ⇑P **Pg 16 42 17.5 -1.0**
ATPI Pietralunga - 0.82 320 ⇑P **Pg 16 42 17.5 -1.0**
ATPI AML AML
comp=N,6240µm,1.2s
ATPI AML AML
comp=E,6845µm,1.3s
ATPI AML AML
comp=N,6235µm,1.2s
PTQR Pietraquaria 0.83 165 P **Pg 16 42 17.0 -1.7**
PTQR AML AML
comp=E,1780µm,0.8s
PTQR AML AML
comp=N,1221µm,1.2s
PIEI Pieia 0.83 329 P **Pg 16 42 17.7 -1.1**
PIEI AML AML
comp=E,4425µm,0.5s
PIEI AML AML
comp=N,4025µm,1.3s
MTCE Montecelio 0.85 199 ⇑P **Pg 16 42 17.2 -1.8**
MTCE AML AML
comp=N,2065µm,1.2s
MTCE AML AML
comp=E,2215µm,1.2s
MPAG Monte Paganucc 0.85 342 ⇓P **Pg 16 42 18.0 -1.1**
CERT Cerreto 0.88 186 P **Pg 16 42 17.7 -2.0**
CERT AML AML
comp=E,4030µm,0.7s
CERT AML AML
comp=N,2965µm,1.0s
SENI Senigallia 0.89 6 P **Pg 16 42 18.8 -1.1**
SACS San Casciano d 0.89 272 ⇑P **Pg 16 42 19.1 -0.8**
SACS AML AML
comp=N,5045µm,0.9s
SACS AML AML
comp=E,6775µm,1.4s
SACS AML AML
comp=N,5130µm,0.9s
SACS AML AML
comp=E,7110µm,1.4s
APEC Apecchio 0.89 326 P **Pg 16 42 18.4 -1.6**
FSSB Fossombrone 0.90 344 P **Pg 16 42 19.0 -1.2**
FSSB AML AML
comp=E,20100µm,0.4s
FSSB AML AML
comp=N,17000µm,0.4s
ATMC Monte Cedrone 0.92 313 P **Pg 16 42 19.3 -1.2**
BADI Badiali 0.94 317 AML AML
comp=E,579µm,0.7s
BADI AML AML
comp=N,4300µm,0.6s
CAFI Castiglion Fio 0.98 301 ⇑P **Pg 16 42 20.6 -1.1**
CAFI AML AML
comp=N,6095µm,0.6s
CAFI AML AML
comp=E,5385µm,0.7s
CAFI AML AML
comp=N,5675µm,0.6s
CAFI AML AML
comp=E,5305µm,0.7s
PE3 Peglio 0.98 333 P **Pg 16 42 20.9 -0.9**
PE3 AML AML
comp=E,33µm,0.4s
PE3 AML AML
comp=N,39µm,0.4s
RCAV Rocca di Cave 0.98 187 P **Pg 16 42 20.2 -1.5**
RCAV AML AML
comp=E,3340µm,0.5s
RCAV AML AML
comp=N,3230µm,1.0s
LATE Laterza 0.99 258 Pg **Pg 16 42 20.9 -0.9**
LATE Laterza 0.99 258 ⇑P **Pg 16 42 20.8 -1.0**
INTR Introdacqua 1.00 144 P **Pg 16 42 19.3 -2.7**
INTR AML AML
comp=E,3µm,0.8s
INTR AML AML
comp=N,6325µm,1.1s
INTR AML AML
comp=N,4µm,1.1s
INTR AML AML
comp=E,3270µm,0.8s
VVLD Villa Vallelon 1.02 158 P **Pg 16 42 21.0 -1.5**
VVLD AML AML
comp=E,2195µm,1.5s
VVLD AML AML
comp=N,2620µm,0.9s
GUAR Guarcino 1.04 172 P **Pg 16 42 21.6 -1.2**
GUAR AML AML
comp=E,2775µm,0.8s
GUAR AML AML
comp=N,2695µm,1.6s
SSP9 Sansepolcro 1.04 317 P **Pg 16 42 21.8 -1.0**
SSP9 AML AML
comp=E,5260µm,1.6s
SSP9 AML AML
comp=N,4235µm,0.9s
PARC Parchiule 1.04 322 ⇑P **Pg 16 42 21.6 -1.3**
PARC AML AML
comp=E,5045µm,0.5s
PARC AML AML
comp=N,5260µm,1.1s
MCIV Monte Civitell 1.06 268 P **Pg 16 42 22.2 -1.0**
MCIV AML AML
comp=E,2970µm,0.8s
MCIV AML AML
comp=N,2320µm,0.8s
SF04 Casetta 1.07 271 P **Pg 16 42 22.7 -0.6**
SF04 AML AML
comp=E,2205µm,1.3s
SF04 AML AML
comp=N,2250µm,1.5s
LPEL Lama dei Pelig 1.11 134 P **Pg 16 42 21.4 -2.6**
LPEL AML AML
comp=N,2470µm,1.2s
LPEL AML AML
comp=E,2950µm,0.4s
TOLF Tolfa 1.12 228 ⇑P **Pg 16 42 22.8 -1.5**
TOLF AML AML
comp=E,1915µm,1.3s
TOLF AML AML
comp=N,1460µm,1.5s
PESA Pesaro 1.14 350 P **Pg 16 42 23.6 -1.0**
PESA AML AML
comp=E,9825µm,1.1s
PESA AML AML
comp=N,9885µm,1.2s
CPGN Carpegna, Ital 1.14 330 P **Pg 16 42 24.3 -0.3**
CPGN AML AML
CPGN AML AML
SF01 Poggio Pratacc 1.14 270 P **Pg 16 42 23.5 -1.2**
SF01 AML AML
comp=N,2775µm,0.8s
SF01 AML AML
comp=E,2485µm,0.8s
CRE Caprese Michel 1.17 314 P **Pg 16 42 24.2 -1.0**
CRE AML AML
comp=E,2200µm,1.3s
CRE AML AML
comp=N,2645µm,0.5s
POFI Posta Fibreno 1.19 158 P **Pg 16 42 23.5 -2.2**
POFI AML AML
comp=N,1220µm,1.0s
POFI AML AML
comp=E,1885µm,0.6s
ARCI Arcidosso 1.21 272 P **Pg 16 42 24.7 -1.2**
ARCI AML AML
comp=E,846µm,1.2s
ARCI AML AML
comp=N,1084µm,1.1s
LRP Arpino 1.23 163 AML AML
comp=N,1555µm,1.2s
LRP AML AML
comp=E,1133µm,0.6s
GIUL Giuliano Di Ro 1.27 175 P **Pn 16 42 25.1 -1.7**
GIUL AML AML
comp=N,1270µm,1.3s
GIUL AML AML
comp=E,1220µm,1.2s
LATB Latina 1.33 185 P **Pn 16 42 25.8 -1.8**
LATB AML AML
comp=N,489µm,1.5s
LATB AML AML
comp=E,460µm,1.5s
RNI2 Rionero Sannit 1.36 145 P **Pn 16 42 28.1 0.0**
ASQU Asqua 1.37 316 P **Pn 16 42 27.5 -0.8**
ASQU AML AML
comp=E,1760µm,1.0s
ASQU AML AML
comp=N,2760µm,1.3s
CERA Filignano 1.40 151 P **Pn 16 42 26.9 -1.7**
CERA AML AML
comp=N,1625µm,1.0s
CERA AML AML
comp=N,1655µm,1.0s
CERA AML AML
comp=E,2585µm,1.0s
CERA AML AML
comp=E,2510µm,1.0s
SFI Santa Sofia 1.42 320 P **Pn 16 42 28.3 -0.6**
FRES Fresagrandinar 1.43 126 P **Pn 16 42 26.7 -2.3**
FRES AML AML
comp=E,1680µm,1.2s
FRES AML AML
comp=N,1393µm,0.6s
CSNT Castellina Chi 1.48 297 P **Pn 16 42 29.1 -0.6**
CSNT AML AML
comp=E,1012µm,1.2s
CSNT AML AML
comp=N,1117µm,0.6s
FROS Frosini 1.49 286 P **Pn 16 42 29.1 -0.7**
TRIV Trivento 1.50 134 AML AML
comp=E,2275µm,0.7s
TRIV AML AML
comp=N,2035µm,1.0s
TRIV AML AML
comp=E,2365µm,1.1s
TRIV AML AML
comp=N,1975µm,1.4s
OSSC Osservatorio P 1.54 298 Pn 16 42 30.2 -0.3
OSSC Osservatorio P 1.54 298 P **Pn 16 42 30.1 -0.3**
OSSC AML AML
comp=E,1012µm,0.7s
OSSC AML AML
comp=N,1550µm,0.8s
OSSC AML AML
comp=E,1565µm,0.8s
OSSC AML AML
comp=N,1020µm,0.7s
RUFI Rufina 1.55 312 P **Pn 16 42 29.8 -0.8**
RUFI AML AML
comp=N,1460µm,1.6s
RUFI AML AML
comp=E,1515µm,0.7s
VAGA Valle Agricola 1.63 149 P **Pn 16 42 31.4 -0.5**
VAGA AML AML
comp=E,698µm,0.8s
VAGA AML AML
comp=N,1002µm,1.4s
TRIF Trifonti 1.65 281 P **Pn 16 42 31.3 -0.8**
CASP Castiglione de 1.66 270 Pn **Pn 16 42 31.1 -1.0**
CASP Castiglione de 1.66 270 P **Pn 16 42 31.3 -0.8**
CASP AML AML
comp=N,326µm,0.9s
CASP AML AML
comp=E,542µm,0.9s
BSSO Busso 1.68 139 P **Pn 16 42 31.6 -1.0**
BSSO AML AML
comp=N,854µm,1.0s
BSSO AML AML
comp=N,356µm,1.0s
BSSO AML AML
comp=E,1059µm,1.1s
BSSO AML AML
comp=E,430µm,1.1s
CIGN Sant'Elia a Pi 1.77 131 P **Pn 16 42 34.3 +0.6**
CIGN AML AML
comp=E,838µm,0.8s
CIGN AML AML
comp=N,800µm,0.7s
SEI Scarperia 1.78 314 P **Pn 16 42 34.1 +0.3**
SEI AML AML
comp=N,3075µm,0.6s
SEI AML AML
comp=E,1690µm,0.5s
DUGI Dugi Otok 1.84 50 *e*Pn **Pn 16 42 33.4 -1.2**
SACR S. Croce Del S 1.85 140 P **Pb 16 42 36.9 0.0**
MELA Melanico ??? S 1.86 126 P **Pn 16 42 34.1 -0.8**
MELA AML AML
comp=N,2115µm,1.2s
MELA AML AML
comp=E,2610µm,1.1s
MELA AML AML
comp=E,2520µm,1.0s
MELA AML AML
comp=N,2310µm,1.2s
GATE Gambatesa 1.87 134 P **Pb 16 42 36.5 -0.7**
TREM Isole Tremiti 1.91 111 AML AML
comp=E,1775µm,1.6s
TREM AML AML
comp=N,2365µm,0.8s
VIRC Vir 2.04 43 *i* Pn **Pn 16 42 36.4 -0.9**
APRC Apricena 2.09 120 P **Pn 16 42 37.0 -1.2**
APRC AML AML
comp=N,1245µm,0.8s
APRC AML AML
comp=E,992µm,0.8s
PAOL Paolisi 2.09 148 Pn **Pn 16 42 38.9 +0.8**
BRJN Brijuni 2.13 12 *e*Pn **Pn 16 42 37.3 -1.3**
BRJN Brijuni 2.13 12 P **Pn 16 42 37.7 -1.0**
NVLJ Novalja 2.16 36 *e*Pn **Pn 16 42 38.0 -1.0**
MORI Morici 2.16 60 *e*Pn **Pn 16 42 38.2 -0.8**
ZCCA Zocca 2.18 315 Pn 16 42 40.2 +0.8
MRB1 Monte Rocchett 2.19 140 AML AML
comp=E,952µm,1.2s
MRB1 AML AML
comp=E,914µm,1.2s
MRB1 AML AML
comp=N,1245µm,1.6s
MRB1 AML AML
comp=N,1205µm,1.6s
MAIM Mastiano 2.20 301 P **Pn 16 42 39.3 -0.3**
MAIM AML AML
comp=N,554µm,0.5s
MAIM AML AML
comp=E,605µm,0.7s
SGRT San Giovanni R 2.22 118 Pn **Pn 16 42 40.0 0.0**
SGRT San Giovanni R 2.22 118 ⇑P **Pn 16 42 39.8 -0.2**
SGRT AML AML
comp=N,1105µm,0.7s
SGRT AML AML
comp=E,882µm,0.4s
RABC Rab 2.27 31 *e*Pn **Pn 16 42 39.7 -0.9**
SMRN Sveta Marina 2.34 18 *e*Pn **Pn 16 42 40.3 -1.2**
MSAG Monte S. Angel 2.35 117 P **Pn 16 42 41.9 +0.2**
MSAG AML AML
comp=N,1970µm,0.3s
MSAG AML AML
comp=N,2060µm,0.4s
MSAG AML AML
comp=E,1285µm,0.5s
MSAG AML AML
comp=E,1160µm,0.5s
VLC Villacollemand 2.39 305 Pn 16 42 41.0 -1.3
VLC Villacollemand 2.39 305 P **Pn 16 42 41.7 -0.6**
VLC AML AML
comp=E,260µm,1.5s
VLC AML AML
comp=N,378µm,1.4s
VLC AML AML
comp=N,354µm,1.4s
VLC AML AML
comp=E,264µm,1.6s
GROG Isola di Gorgo 2.44 285 AML AML
comp=N,128µm,0.8s
GROG AML AML
comp=E,131µm,0.8s
HVAR Hvar 2.47 81 *i* Pn **Pn 16 42 42.8 -0.5**
EQUI Equi 2.54 303 P **Pn 16 42 43.9 -0.4**
EQUI AML AML
comp=N,338µm,0.7s
EQUI AML AML
comp=E,238µm,1.4s
UDBI Udbina 2.57 48 *e*Pn **Pn 16 42 44.9 +0.2**
A250A Rusevo Krmpots 2.61 29 *e*Pn **Pn 16 42 44.5 -0.7**
VULT Monte Vulture 2.64 134 P **Pn 16 42 46.6 +0.8**
VULT AML AML
comp=E,736µm,0.5s
VULT AML AML
comp=E,639µm,1.0s
VULT AML AML
comp=N,713µm,0.5s
VULT AML AML
comp=N,700µm,1.3s
KIJV Kijevo 2.67 63 *e*Pn **Pn 16 42 46.2 +0.1**
MRLC Muro Lucano 2.72 139 AML AML
comp=E,174µm,1.4s
MRLC AML AML
comp=N,260µm,0.9s
PLIT Plitvice 2.74 41 *e*Pn **Pn 16 42 46.7 -0.4**
TEOL Teolo 2.74 338 Pn 16 42 45.2 -1.8
LSTV Lastovo 2.78 90 *e*Pn **Pn 16 42 47.1 -0.4**
SKDS Skadanscina 2.80 13 *e*Pn **Pn 16 42 46.4 -1.4**
SKDS Skadanscina 2.80 13 *i*Pn **Pn 16 42 46.7 -1.1**
SKDS *e*Sn **Sn 16 43 21.1 -0.7**
SKDS IAML 16 43 22.9
comp=Z,162nm,0.3s
PRMA PARMA 2.81 315 Pn **Pn 16 42 48.3 +0.4**
PALZ Palazzo San Ge 2.83 131 AML AML
comp=N,1036µm,1.3s
PALZ AML AML
comp=E,1075µm,0.8s
CDRU Civita di Ruta 2.85 144 P **Pn 16 42 49.8 +1.2**
MAKA Makarska 2.90 79 *e*Pn **Pn 16 42 49.6 +0.4**

SMPL	**Sampolo**	**2.93**	**257**	P		**Pn**	**16 42 50.0**	**+0.5**
A050A	**Klekovaca**	**2.98**	**55**	*e*Pn		**Pn**	**16 42 50.8**	**+0.4**
CMPR	**Campora**	**2.99**	**146**	P		**Pn**	**16 42 52.4**	**+1.8**
MSSA	**Maissana**	**3.01**	**301**	Pn		**Pn**	**16 42 50.7**	**-0.1**
MSSA	**Maissana**	**3.01**	**301**	P		**Pn**	**16 42 50.5**	**-0.3**
MSSA				AML	AML			
	comp=E,201µm,0.8s							
MSSA				AML	AML			
	comp=N,210µm,0.8s							
RICI	**Ricice**	**3.02**	**76**	*e*Pn		**Pn**	**16 42 51.3**	**+0.5**
PGF	**Pioggiola**	**3.05**	**266**	*e*P		**Pn**	**16 42 51.0**	**-0.3**
PGF				*e*Sn		**Sn**	**16 43 22.6**	**-5.4**
	comp=N,16nm,0.4s							
PGF	**Pioggiola**	**3.05**	**266**	P		**Pn**	**16 42 51.8**	**+0.5**
BOJS	**Bojanci**	**3.09**	**29**	*e*Pn		**Pn**	**16 42 51.3**	**-0.5**
BOJS	**Bojanci**	**3.09**	**29**	P		**Pn**	**16 42 52.2**	**+0.4**
BOJS				AML	AML			
	comp=N,1125µm,1.5s							
BOJS				AML	AML			
	comp=E,1625µm,0.9s							
SABO	**M.te Sabotino**	**3.18**	**6**			**Pn**	**16 42 52.2**	**-0.8**
SABO	**M.te Sabotino**	**3.18**	**6**	P		**Pn**	**16 42 52.2**	**-0.8**
SABO				AML	AML			
	comp=N,1157µm,1.0s							
SABO				AML	AML			
	comp=E,3605µm,0.8s							
SABO				AML	AML			
	comp=N,4460µm,1.0s							
SABO				AML	AML			
	comp=E,826µm,0.8s							
ROVR	**Rover Verones**	**3.18**	**333**	P		**Pn**	**16 42 53.7**	**+0.5**
ROVR				AML	AML			
	comp=N,252µm,0.4s							
ROVR				AML	AML			
	comp=E,167µm,0.4s							
CGRP	**Cima Grappa**	**3.20**	**343**	P		**Pn**	**16 42 53.7**	**+0.2**
CGRP				AML	AML			
	comp=E,762µm,0.4s							
CGRP				AML	AML			
	comp=N,1031µm,0.7s							
CGRP				AML	AML			
	comp=N,1009µm,0.7s							
CGRP				AML	AML			
	comp=E,784µm,0.4s							
SRKY	**Kupres RS**	**3.20**	**66**	*e*Pn		**Pn**	**16 42 53.7**	**+0.3**
AMUR	**Altamura**	**3.23**	**125**	P		**Pn**	**16 42 53.8**	**0.0**
AMUR				AML	AML			
	comp=N,243µm,0.4s							
AMUR				AML	AML			
	comp=E,286µm,0.7s							
OZLJ	**Ozalj**	**3.26**	**30**	*e*Pn		**Pn**	**16 42 53.8**	**-0.3**
BOB	**Bobbio (Coli)**	**3.29**	**307**	P		**Pn**	**16 42 57.5**	**+2.8**
MGRS	**Mrkonjic Grad**	**3.29**	**60**	*e*Pn		**Pn**	**16 42 55.3**	**+0.7**
GORR	**Gorreto**	**3.29**	**304**	P		**Pn**	**16 42 56.4**	**+1.7**
MIGL	**Miglionico**	**3.33**	**131**	AML	AML			
	comp=N,1122µm,1.0s							
MIGL				AML	AML			
	comp=E,1015µm,1.6s							
AJAC	**Base Areonaval**	**3.35**	**256**	P		**Pn**	**16 42 56.0**	**+0.7**
DOSS	**Dosso del Somm**	**3.35**	**336**	P		**Pn**	**16 42 55.4**	**-0.2**
DOSS				AML	AML			
	comp=E,466µm,0.5s							
DOSS				AML	AML			
	comp=E,466µm,0.6s							
DOSS				AML	AML			
	comp=N,451µm,0.6s							
DOSS				AML	AML			
	comp=N,458µm,0.5s							
SALO	**Salr**	**3.36**	**327**			**Pn**	**16 42 56.0**	**+0.4**
SALO	**Salr**	**3.36**	**327**	P		**Pn**	**16 42 56.6**	**+1.1**
SALO				AML	AML			
	comp=E,510µm,1.3s							
SALO				AML	AML			
	comp=N,826µm,1.0s							
SALO				AML	AML			
	comp=E,493µm,1.3s							
SALO				AML	AML			
	comp=N,830µm,1.0s							
STON	**Ston**	**3.37**	**88**	*e*Pn		**Pn**	**16 42 54.0**	**-1.6**
STON	**Ston**	**3.37**	**88**	*e*Pn		**Pn**	**16 42 54.1**	**-1.6**
STON	**Ston**	**3.37**	**88**	*e*Pn		**Pn**	**16 42 54.2**	**-1.5**
STON				*e*Sn		**Sn**	**16 43 33.6**	**-2.2**
STON	**Ston**	**3.37**	**88**	AML	AML			
	comp=E,138µm,0.6s							
STON				AML	AML			
	comp=N,200µm,1.3s							
LJU	**Ljubljana**	**3.38**	**17**	P		**Pn**	**16 42 55.2**	**-0.5**
LJU				AML	AML			
	comp=E,3560µm,0.8s							
LJU				AML	AML			
	comp=N,4530µm,0.6s							
PRIJ	**Prijedor**	**3.38**	**49**	*e*Pn		**Pn**	**16 42 58.7**	**+3.0**
MPRI	**Monte Prat**	**3.42**	**359**	P		**Pn**	**16 42 55.7**	**-0.7**
MPRI				AML	AML			
	comp=E,552µm,0.9s							
MPRI				AML	AML			
	comp=N,810µm,0.9s							
MPRI				AML	AML			
	comp=E,724µm,1.0s							
MPRI				AML	AML			
	comp=N,1052µm,0.9s							
CRES	**Cresnjev**	**3.44**	**28**	*e*Pn		**Pn**	**16 42 56.4**	**-0.2**
STAL	**STALIGIAL**	**3.45**	**355**			**Pn**	**16 42 56.2**	**-0.6**
STAL	**STALIGIAL**	**3.45**	**355**	P		**Pn**	**16 42 56.2**	**-0.6**
STAL				AML	AML			
	comp=N,481µm,0.8s							
STAL				AML	AML			
	comp=E,730µm,0.4s							
STAL				AML	AML			
	comp=N,452µm,1.5s							
STAL				AML	AML			
	comp=E,555µm,0.3s							
MAGA	**Magasa**	**3.45**	**330**	P		**Pn**	**16 42 57.0**	**+0.1**
MAGA				AML	AML			
	comp=E,1230µm,0.6s							
MAGA				AML	AML			
	comp=N,800µm,0.5s							
MATE	**Matera**	**3.45**	**128**	⇑S		**Sn**	**16 43 39.4**	**+1.5**
CUC	**Castrocucco**	**3.48**	**143**	Pn		**Pn**	**16 42 58.4**	**+1.2**
LUSI	**Trento, Gardas**	**3.50**	**334**	P		**Pn**	**16 42 57.8**	**+0.2**
LUSI				AML	AML			
	comp=N,472µm,0.7s							
LUSI				AML	AML			
	comp=E,399µm,0.6s							
A051A	**Mrakovica**	**3.51**	**50**	*e*Pn		**Pn**	**16 42 57.6**	**0.0**
BLY	**Banja Luka**	**3.52**	**55**	*e*Pn		**Pn**	**16 42 57.8**	**+0.1**
BLY	**Banja Luka**	**3.52**	**55**	*e*Pn		**Pn**	**16 42 58.1**	**+0.4**
CIMO	**Cimolais**	**3.52**	**352**			**Pn**	**16 42 57.2**	**-0.6**
CIMO	**Cimolais**	**3.52**	**352**	P		**Pn**	**16 42 57.2**	**-0.6**
CIMO				AML	AML			
	comp=E,158µm,1.0s							
CIMO				AML	AML			
	comp=N,231µm,0.6s							
CIMO				AML	AML			
	comp=E,156µm,1.0s							
CIMO				AML	AML			
	comp=N,236µm,0.6s							
AGOR	**Agordo**	**3.54**	**348**	P		**Pn**	**16 42 58.1**	**+0.1**
LTRZ	**Laterza**	**3.55**	**127**	P		**Pn**	**16 42 58.7**	**+0.6**
NOCI	**Noci**	**3.58**	**123**	P		**Pn**	**16 42 58.6**	**0.0**
NOCI				AML	AML			
	comp=E,230µm,0.7s							
NOCI				AML	AML			
	comp=N,325µm,1.2s							
PTCC	**Patocco-Chiusa**	**3.59**	**3**	P		**Pn**	**16 42 57.8**	**-0.9**
PTCC				AML	AML			
	comp=E,308µm,1.1s							
PTCC				AML	AML			
	comp=N,257µm,1.1s							
GAGG	**Gaggia**	**3.61**	**335**	P		**Pn**	**16 42 59.5**	**+0.4**
GAGG				AML	AML			
	comp=E,593µm,0.8s							
GAGG				AML	AML			
	comp=E,679µm,1.1s							
GAGG				AML	AML			
	comp=N,674µm,1.1s							
GAGG				AML	AML			
	comp=N,592µm,0.8s							
PRED	**Cave del Predi**	**3.63**	**5**	Pn		**Pn**	**16 42 58.5**	**-0.8**
CLUD	**Cludinico**	**3.64**	**357**	Pn		**Pn**	**16 42 58.7**	**-0.7**
CLUD	**Cludinico**	**3.64**	**357**	⇑P		**Pn**	**16 42 58.9**	**-0.5**
CLUD				AML	AML			
	comp=E,482µm,1.5s							
CLUD				AML	AML			
	comp=N,438µm,0.8s							
CLUD				AML	AML			
	comp=N,425µm,0.8s							
CLUD				AML	AML			
	comp=E,478µm,1.5s							
DBRK	**Dubrovnik**	**3.71**	**91**	*e*Pn		**Pn**	**16 42 59.5**	**-0.8**
MABI	**Malga Bissina**	**3.73**	**331**	P		**Pn**	**16 43 01.8**	**+1.0**
MABI				AML	AML			
	comp=E,130µm,0.4s							
MABI				AML	AML			
	comp=N,145µm,0.5s							
ZOU	**Zoufplan**	**3.73**	**358**	P		**Pn**	**16 43 00.6**	**-0.2**
ZOU				AML	AML			
	comp=E,593µm,1.0s							
ZOU				AML	AML			
	comp=N,514µm,1.2s							
ZOU				AML	AML			
	comp=E,622µm,1.0s							
ZOU				AML	AML			
	comp=N,538µm,1.2s							
ACOM	**Acomizza, Ital**	**3.74**	**4**	P		**Pn**	**16 43 00.5**	**-0.4**
ACOM				AML	AML			
	comp=E,772µm,1.0s							
ACOM				AML	AML			
	comp=N,672µm,0.7s							
ACOM				AML	AML			
	comp=E,810µm,1.0s							
ACOM				AML	AML			
	comp=N,650µm,0.7s							
MOSL	**Moslavina**	**3.82**	**42**	*e*Pn		**Pn**	**16 43 00.6**	**-1.3**
MYKA	**Terra Mystica**	**3.83**	**5**	*e*Pn		**Pn**	**16 43 02.3**	**+0.3**
	comp=N,34nm,0.4s,SNR=24							
OBKA	**Obir**	**3.83**	**15**	*e*Pn		**Pn**	**16 43 01.3**	**-0.7**
OBKA	**Obir**	**3.83**	**15**	*i* Pn		**Pn**	**16 43 01.6**	**-0.4**
	comp=N,5.5nm,0.2s,SNR=5.6							
KOSI	**Kohlern**	**3.84**	**342**	P		**Pn**	**16 43 03.0**	**+0.6**
KOSI				AML	AML			
	comp=E,631µm,0.9s							
KOSI				AML	AML			
	comp=N,439µm,0.8s							
TREB	**Trebinje**	**3.86**	**90**	*e*Pn		**Pn**	**16 43 02.1**	**-0.2**
TREB	**Trebinje**	**3.86**	**90**	*e*Pn		**Pn**	**16 43 02.4**	**+0.1**
TREB				*e*Sn		**Sn**	**16 43 46.8**	**-1.0**
TAR1	**Taranto**	**3.88**	**125**	AML	AML			
	comp=N,242µm,1.5s							
TAR1				AML	AML			
	comp=E,210µm,0.7s							
ABTA	**Abfaltersbach**	**3.95**	**354**	*e*Pn		**Pn**	**16 43 04.1**	**+0.4**
	comp=E,106nm,0.5s,SNR=114							
HCY	**Herceg Novi**	**3.99**	**94**	*e*Pn		**Pn**	**16 43 03.3**	**-0.8**
HCY	**Herceg Novi**	**3.99**	**94**	⇑*i* Pn		**Pn**	**16 43 04.5**	**+0.4**
HCY				*i* Sn		**Sn**	**16 43 51.6**	**+0.6**
BRY	**Bratogost**	**3.99**	**87**	*e*Pn		**Pn**	**16 43 03.9**	**-0.4**
BRY	**Bratogost**	**3.99**	**87**	⇓*i* Pn		**Pn**	**16 43 04.7**	**+0.4**
BRY				*i* Sn		**Sn**	**16 43 51.9**	**+0.6**
DOB	**Doboj**	**4.08**	**60**	*e*Pn		**Pn**	**16 43 05.2**	**-0.3**
SOKA	**Soboth**	**4.09**	**19**	*e*Pn		**Pn**	**16 43 05.1**	**-0.5**
	comp=E,1.0nm,0.2s							
RISI	**Rein**	**4.19**	**350**	P		**Pn**	**16 43 07.3**	**+0.2**
MUGIO	**Muggio**	**4.26**	**318**	AML	AML			
	comp=N,96µm,0.5s							
MUGIO				AML	AML			
	comp=E,90µm,1.0s							
KBA	**Koelnbreinsper**	**4.26**	**2**	*i* Pn		**Pn**	**16 43 08.5**	**+0.4**
	comp=E,38nm,0.4s,SNR=53							
UPM	**Unac-Piva**	**4.26**	**83**	*e*Pn		**Pn**	**16 43 09.1**	**+1.0**
UPM	**Unac-Piva**	**4.26**	**83**	⇑*i* Pn		**Pn**	**16 43 08.4**	**+0.3**
UPM				*i* Sn		**Sn**	**16 43 58.7**	**+0.6**
ROSI	**Rosskopf**	**4.28**	**344**	P		**Pn**	**16 43 09.3**	**+0.9**
ROSI				AML	AML			
	comp=N,442µm,1.4s							
ROSI				AML	AML			
	comp=E,440µm,0.4s							
CEME	**Cevo**	**4.29**	**92**	⇑*i* Pn		**Pn**	**16 43 08.4**	**+0.1**
CEME				*i* Sn		**Sn**	**16 43 59.1**	**+0.6**
NKME	**Niksic**	**4.30**	**89**	⇑*i* Pn		**Pn**	**16 43 08.9**	**+0.5**
NKME				*i* Sn		**Sn**	**16 43 59.2**	**+0.5**
BUM	**Brajici-Budva**	**4.30**	**95**	⇑*i* Pn		**Pn**	**16 43 08.8**	**+0.3**
BUM				*i* Sn		**Sn**	**16 43 59.6**	**+0.8**
FUORN	**Ofenpass-Fuorn**	**4.31**	**333**	Pn		**Pn**	**16 43 09.2**	**+0.4**
ESCA	**l'Escarene**	**4.31**	**285**	P		**Pn**	**16 43 08.9**	**+0.3**
TURF	**col de Turini**	**4.33**	**287**	P		**Pn**	**16 43 09.9**	**+1.0**
VARE	**Varese**	**4.36**	**316**	AML	AML			
	comp=N,209µm,0.5s							
VARE				AML	AML			
	comp=E,170µm,0.9s							
VSL	**Villasalto**	**4.36**	**222**	P		**Pn**	**16 43 10.0**	**+0.7**
VSL				AML	AML			
VSL				AML	AML			
FETA	**Feichten**	**4.53**	**339**	*i* Pn		**Pn**	**16 43 13.6**	**+1.8**
	comp=E,13nm,0.5s,SNR=15							
DRME	**Dracevica, Mon**	**4.53**	**96**	*e*Pn		**Pn**	**16 43 11.9**	**+0.3**
DRME	**Dracevica, Mon**	**4.53**	**96**	⇑*i* Pn		**Pn**	**16 43 12.0**	**+0.3**
DRME				*i* Sn		**Sn**	**16 44 04.8**	**+0.3**
PDG	**Podgorica**	**4.55**	**93**	⇓P		**Pn**	**16 43 12.8**	**+1.0**
PDG	**Podgorica**	**4.55**	**93**	Pn		**Pn**	**16 43 12.7**	**+0.9**
PDG	**Podgorica**	**4.55**	**93**	*e*Pn		**Pn**	**16 43 13.0**	**+1.2**
PDG				*e*Sn		**Sn**	**16 44 04.2**	**-0.6**
PDG	**Podgorica**	**4.55**	**93**	P		**Pn**	**16 43 12.5**	**+0.7**
TTG	**Podgorica**	**4.55**	**93**	⇑*i* Pn		**Pn**	**16 43 12.4**	**+0.6**
TTG				*i* Sn		**Sn**	**16 44 05.4**	**+0.6**
WTTA	**Wattenberg**	**4.56**	**347**	*e*Pn		**Pn**	**16 43 14.1**	**+1.8**
	comp=E,16nm,0.3s,SNR=23							
WTTA	**Wattenberg**	**4.56**	**347**	P		**Pn**	**16 43 13.9**	**+1.7**
TIP	**Timpagrade**	**4.57**	**142**	Pn		**Pn**	**16 43 14.1**	**+2.0**
DAVOX	**Davos/Dischmat**	**4.58**	**331**	Pn		**Pn**	**16 43 14.1**	**+1.7**
	comp=E,4.3nm,0.3s,baz=142,slow=13,SNR=39							
DAVOX				Sn		**Sn**	**16 44 07.5**	**+1.6**
	comp=E,2.3nm,0.3s,baz=143,slow=20,SNR=2.3							
DAVOX				LR		LR	16 45 30.8	
	comp=E,97nm,21.1s,baz=83,slow=46							
	comp=E,76nm,0.8s							
DAVOX	**Davos/Dischmat**	**4.58**	**331**	P		**Pn**	**16 43 14.8**	**+2.3**
SQTA	**Sankt Quirin**	**4.60**	**344**	*e*Pn		**Pn**	**16 43 14.3**	**+1.6**
	comp=E,11nm,0.3s,SNR=17							
CALF	**Calern**	**4.62**	**284**	P		**Pn**	**16 43 13.8**	**+0.9**
ISO	**Isola**	**4.62**	**289**	P		**Pn**	**16 43 15.3**	**+2.4**
ULC	**Ulcinj**	**4.62**	**99**	⇑*i* Pn		**Pn**	**16 43 12.7**	**-0.2**
ULC				*i* Sn		**Sn**	**16 44 06.7**	**0.0**
RUDO	**Rudo**	**4.64**	**78**	*e*Pn		**Pn**	**16 43 12.9**	**-0.2**
WATA	**Walderalm**	**4.64**	**347**	*e*Pn		**Pn**	**16 43 15.2**	**+1.9**
	comp=E,31nm,0.5s,SNR=28							
SERS	**Sersale**	**4.65**	**143**	AML	AML			
	comp=N,30µm,1.2s							
SERS				AML	AML			
	comp=E,27µm,1.1s							
BBLS	**Lazići**	**4.70**	**75**	*e*Pn		**Pn**	**16 43 15.7**	**+1.6**
KOME	**Kolasin**	**4.71**	**87**	⇓*i* Pn		**Pn**	**16 43 14.8**	**+0.7**
KOME				*i* Sn		**Sn**	**16 44 08.9**	**0.0**
MOTA	**Moosalm**	**4.74**	**343**	*e*Pn		**Pn**	**16 43 16.2**	**+1.5**
	comp=E,5.9nm,0.4s,SNR=16							
ARSA	**Arzberg**	**4.75**	**20**	*e*Pn		**Pn**	**16 43 13.9**	**-0.7**
	comp=E,8.6nm,0.4s							
ARSA	**Arzberg**	**4.75**	**20**	P		**Pn**	**16 43 13.9**	**-0.7**
FUSIO	**Fusio**	**4.83**	**320**	P		**Pn**	**16 43 16.2**	**+0.5**
SURF	**Saint Ours**	**4.86**	**292**	P		**Pn**	**16 43 17.1**	**+0.7**
LMR	**La Mourre**	**4.87**	**278**	*e*P		**Pn**	**16 43 15.7**	**-0.5**
LMR				*e*Sn		**Sn**	**16 44 05.9**	**-6.8**
	comp=E,26nm,0.9s							
SCTE	**Santa Cesarea**	**4.87**	**123**	Pn		**Pn**	**16 43 17.1**	**+0.8**
SCTE	**Santa Cesarea**	**4.87**	**123**	P		**Pn**	**16 43 16.6**	**+0.3**
BIOA	**Bad Ischl, Aus**	**4.88**	**4**	*e*Pn		**Pn**	**16 43 16.8**	**+0.3**
	comp=E,46nm,0.3s,SNR=60							
RETA	**Reutte**	**4.95**	**341**	*e*Pn		**Pn**	**16 43 19.2**	**+1.7**
	comp=E,14nm,0.3s,SNR=14							
MBDF	**Montbardon**	**4.97**	**295**	*e*P		**Pn**	**16 43 19.2**	**+1.4**
MBDF				*e*Sn		**Sn**	**16 44 08.7**	**-6.8**
	comp=E,51nm,0.9s							
TRIGF	**Trigance**	**4.98**	**283**	P		**Pn**	**16 43 19.2**	**+1.2**
IVA	**Berane**	**4.98**	**87**	⇓*i* Pn		**Pn**	**16 43 18.4**	**+0.5**
IVA				*i* Sn		**Sn**	**16 44 16.0**	**+0.3**
DAVA	**Damuels**	**5.02**	**334**	*e*Pn		**Pn**	**16 43 20.4**	**+1.9**
	comp=E,12nm,0.4s,SNR=22							
OGAG	**Argentiere**	**5.04**	**291**	P		**Pn**	**16 43 23.2**	**+4.4**
SJES	**Sjenica**	**5.05**	**83**	*e*Pn		**Pn**	**16 43 20.3**	**+1.5**
SJES				*e*Sn		**Sn**	**16 44 17.7**	**+0.4**
PVY	**Plav**	**5.05**	**90**	⇓*i* Pn		**Pn**	**16 43 19.3**	**+0.5**
PVY				*i* Sn		**Sn**	**16 44 17.3**	**-0.1**
FLAF	**Flassans-sur-I**	**5.05**	**279**	P		**Pn**	**16 43 19.6**	**+0.8**
EMBD	**Embd, Matterta**	**5.08**	**314**	P		**Pn**	**16 43 21.8**	**+2.6**
MOA	**Molln**	**5.09**	**9**	*e*Pn		**Pn**	**16 43 19.7**	**+0.4**
MOA				*e*Sn		**Sn**	**16 44 18.5**	**+0.2**
MOA	**Molln**	**5.09**	**9**	*e*Pn		**Pn**	**16 43 19.5**	**+0.2**
	comp=E,18nm,0.4s,SNR=25							
BNI	**Bardonecchia**	**5.16**	**298**	Pn		**Pn**	**16 43 20.6**	**+0.3**
BNI	**Bardonecchia**	**5.16**	**298**	P		**Pn**	**16 43 20.6**	**+0.3**
DIVS	**Divibare**	**5.17**	**73**	Pn		**Pn**	**16 43 20.6**	**+0.2**
DIVS	**Divibare**	**5.17**	**73**	*e*Pn		**Pn**	**16 43 21.2**	**+0.8**
DIVS	**Divibare**	**5.17**	**73**	*e*Pn		**Pn**	**16 43 22.5**	**+2.1**
IVAS	**Ivanjica**	**5.20**	**79**	*e*Pn		**Pn**	**16 43 20.8**	**-0.1**
IVAS				*e*Sn		**Sn**	**16 44 19.4**	**-1.6**
DIX	**Grande Dixence**	**5.22**	**311**	P		**Pn**	**16 43 23.7**	**+2.3**
TIR	**Tirane**	**5.23**	**104**	⇑P		**Pn**	**16 43 21.4**	**+0.2**
TIR	**Tirane**	**5.23**	**104**	Pn		**Pn**	**16 43 19.8**	**-1.5**
TIR	**Tirane**	**5.23**	**104**	P		**Pn**	**16 43 19.8**	**-1.5**
TIR	**Tirane**	**5.23**	**104**	*e*Pn		**Pn**	**16 43 21.5**	**+0.2**
TIR				*e*Sn		**Sn**	**16 44 20.9**	**-0.9**
LPG	**La Plagne**	**5.30**	**302**	*e*P		**Pn**	**16 43 24.1**	**+1.6**
LPG				*e*Sn		**Sn**	**16 44 16.7**	**-7.1**
	comp=E,34nm,0.7s							
LPL	**La Plagne**	**5.32**	**303**	*e*P		**Pn**	**16 43 24.7**	**+2.0**
LPL				*e*Sn		**Sn**	**16 44 17.2**	**-7.0**
	comp=E,24nm,0.6s							
FRGS	**Fruska Gora**	**5.36**	**62**	*e*Pn		**Pn**	**16 43 22.6**	**-0.5**
FRGS	**Fruska Gora**	**5.36**	**62**	*e*Pn		**Pn**	**16 43 23.1**	**0.0**
RONA	**Rosalia, Austr**	**5.37**	**24**	*e*Pn		**Pn**	**16 43 22.6**	**-0.5**
	comp=E,4.7nm,0.3s							
ARTF	**Artigues**	**5.40**	**281**	P		**Pn**	**16 43 24.8**	**+1.3**
CONA	**Conrad Observa**	**5.46**	**20**	*e*Pn		**Pn**	**16 43 24.0**	**-0.5**
	comp=E,5.0nm,0.2s,SNR=10							
RSL	**Roselend**	**5.47**	**304**	P		**Pn**	**16 43 26.2**	**+1.5**
TRUS	**Trudelj**	**5.48**	**73**	*e*Pn		**Pn**	**16 43 25.2**	**+0.5**
GDM	**Grand'Maison**	**5.58**	**298**	P		**Pn**	**16 43 28.8**	**+2.6**
SMRF	**Simiane la Rot**	**5.61**	**284**	*e*P		**Pn**	**16 43 28.6**	**+2.1**
SMRF				*e*Sn		**Sn**	**16 44 23.9**	**-7.3**
	comp=E,16nm,0.9s							
AIGLE	**Aigle**	**5.63**	**311**	P		**Pn**	**16 43 28.3**	**+1.4**
ORIF	**Oris-en-Rattie**	**5.63**	**294**	*e*P		**Pn**	**16 43 30.6**	**+3.7**
ORIF				*e*Sn		**Sn**	**16 44 24.5**	**-7.3**
	comp=E,18nm,0.6s							
SELS	**Selova**	**5.88**	**83**	*e*Pn		**Pn**	**16 43 30.5**	**+0.3**
SELS				*e*Sn		**Sn**	**16 44 37.4**	**-0.3**
KEK	**Kerkira**	**5.92**	**119**	Pn		**Pn**	**16 43 31.1**	**+0.4**
BALST	**Balsthal**	**5.92**	**321**	S		**Pn**	**16 44 38.4**	**-0.4**
BALST	**Balsthal**	**5.92**	**321**	P		**Pn**	**16 43 31.5**	**+0.7**
OHR	**Ohrid**	**5.98**	**104**	*i* Pn		**Pn**	**16 43 33.3**	**+1.8**
GEC2	**GERESS Array S**	**6.04**	**4**	Pn		**Pn**	**16 43 31.2**	**-1.2**
GERES	**GERESS Array B**	**6.04**	**4**	Pn		**Pn**	**16 43 31.4**	**-1.0**
	comp=E,2.5nm,0.3s,baz=191,slow=13,SNR=37							
GERES				Sn		**Sn**	**16 44 38.7**	**-3.0**
	comp=E,4.3nm,0.3s,baz=167,slow=23,SNR=3.6							
GERES				Lg		Lg	16 45 11.6	
	baz=193,slow=34							
	comp=E,3.7nm,0.4s							
GERES	**GERESS Array B**	**6.04**	**4**	Pn		**Pn**	**16 43 30.8**	**-1.6**
CKRC	**Cesky Krumlov**	**6.06**	**8**	*e*PN		**Pn**	**16 43 31.6**	**-1.0**
CKRC				*e*SN		**Sn**	**16 44 39.9**	**-2.1**
ZST	**Bratislava**	**6.06**	**26**	*e*P		**Pn**	**16 43 34.7**	**+2.1**
ZST	**Bratislava**	**6.06**	**26**	*e*PN		**Pn**	**16 43 34.7**	**+2.1**
GIMEL	**St. Georges /**	**6.13**	**310**	P		**Pn**	**16 43 35.0**	**+1.3**
KBN	**Korca**	**6.15**	**108**			**Pn**	**16 43 34.0**	**+0.1**
KBN	**Korca**	**6.15**	**108**	P		**Pn**	**16 43 34.0**	**+0.1**
BOURR	**Bourrignon**	**6.18**	**320**	P		**Pn**	**16 43 35.2**	**+0.9**
BOURR	**Bourrignon**	**6.18**	**320**	S		**Sn**	**16 44 46.6**	**+1.4**
FELD	**Feldberg im Sc**	**6.20**	**326**	S		**Sn**	**16 44 44.9**	**-0.9**
FELD	**Feldberg im Sc**	**6.20**	**326**	P		**Pn**	**16 43 35.1**	**+0.4**
BRANT	**Les Verrieres**	**6.26**	**313**	P		**Pn**	**16 43 36.9**	**+1.5**
MODS	**Modra-Piesok**	**6.27**	**26**	*e*P		**Pn**	**16 43 35.6**	**+0.1**
MODS				*e*			16 44 48.7	
MODS	**Modra-Piesok**	**6.27**	**26**	*e*PN		**Pn**	**16 43 35.6**	**+0.1**
MODS				*e*SN		**Sn**	**16 44 48.7**	**+1.4**
CABF	**La Chapelle**	**6.28**	**310**	*e*P		**Pn**	**16 43 36.9**	**+1.2**
CABF				*e*Sn		**Sn**	**16 44 39.7**	**-7.9**
	comp=E,26nm,0.7s							
OG35	**Corcelles**	**6.29**	**303**	P		**Pn**	**16 43 37.6**	**+1.8**
KIZ	**Kirchzarten**	**6.30**	**326**	S		**Sn**	**16 44 47.8**	**-0.3**
KIZ	**Kirchzarten**	**6.30**	**326**	P		**Pn**	**16 43 36.4**	**+0.4**
KHC	**Kasperske Hory**	**6.32**	**3**			**Pn**	**16 43 34.4**	**-1.8**
KHC	**Kasperske Hory**	**6.32**	**3**	*e*P		**Pn**	**16 43 34.9**	**-1.3**
KHC				*e*			16 44 45.2	
KHC	**Kasperske Hory**	**6.32**	**3**	*e*PN		**Pn**	**16 43 34.9**	**-1.3**
KHC				*e*SN		**Sn**	**16 44 45.2**	**-3.3**
BOVS	**Bovan**	**6.33**	**80**	⇑P		**Pn**	**16 43 35.7**	**-0.6**
BOVS	**Bovan**	**6.33**	**80**	*e*Pn		**Pn**	**16 43 35.4**	**-0.9**
BOVS				*e*Sn		**Sn**	**16 44 45.6**	**-3.1**
CHMF	**Charmoille**	**6.37**	**316**	P		**Pn**	**

MORC	**Moravsky Berou**	**7.60**	**22**	⇑P		**Pn**	**16 43 53.0**	**-0.7**
MORC	**Moravsky Berou**	**7.60**	**22**	Pn		**Pn**	**16 43 52.9**	**-0.9**
MORC	**Moravsky Berou**	**7.60**	**22**	P		**Pn**	**16 43 52.9**	**-0.9**
MORC	**Moravsky Berou**	**7.60**	**22**	*e*PN		**Pn**	**16 43 53.4**	**-0.4**
SMF	**Signal de Mont**	**7.63**	**303**	*e*P		**Pn**	**16 43 54.3**	**+0.2**
SMF				*e*Sn		**Sn**	**16 45 12.3**	**-8.4**
	comp=E,14nm,0.6s							
DEV	**Deva**	**7.65**	**63**	⇑P		**Pn**	**16 43 54.9**	**+0.5**
KEST	**Kesra**	**7.66**	**204**	Pn		**Pn**	**16 43 59.1**	**+4.4**
	comp=E,0.2nm,0.3s,baz=11,slow=5.2,SNR=4.5							
	comp=E,1.5nm,0.6s							
KRLC	**Kraliky**	**7.68**	**18**	*e*P		**Pn**	**16 43 53.5**	**-1.4**
KRLC	**Kraliky**	**7.68**	**18**	*e*PN		**Pn**	**16 43 53.5**	**-1.4**
LANS	**Liptovska Anna**	**7.72**	**33**	*e*P		**Pn**	**16 43 56.2**	**+0.8**
LANS	**Liptovska Anna**	**7.72**	**33**	*e*PN		**Pn**	**16 43 56.2**	**+0.8**
PAGF	**Fort de Pagny**	**7.72**	**320**	*e*P		**Pn**	**16 43 57.8**	**+2.4**
PAGF				*e*Sn		**Sn**	**16 45 14.1**	**-8.8**
	comp=E,22nm,0.5s							
SFTF	**Sexfontaines**	**7.82**	**316**	*e*P		**Pn**	**16 43 58.0**	**+1.3**
SFTF				*e*Sn		Sn	16 45 16.5	-8.8
	comp=E,9.4nm,0.5s							
DPC	**Dobruska-Polom**	**7.85**	**15**	*e*P		**Pn**	**16 43 55.2**	**-2.0**
DPC	**Dobruska-Polom**	**7.85**	**15**	*e*PN		**Pn**	**16 43 55.2**	**-2.0**
LOR	**Lormes**	**7.92**	**307**	*e*P		**Pn**	**16 44 00.5**	**+2.4**
	baz=123							
LOR				*e*Sn		Sn	16 45 18.9	-8.9
	comp=E,18nm,0.6s							
LOR	**Lormes**	**7.92**	**307**	P		**Pn**	**16 44 00.1**	**+1.9**
MMB	**Musomiste**	**7.97**	**95**	*e*P		**Pn**	**16 43 59.7**	**+0.8**
SRS	**Serrai**	**7.99**	**99**	*e*Pn		**Pn**	**16 44 00.1**	**+1.0**
AVF	**Avril sur Loir**	**7.99**	**303**	*e*P		**Pn**	**16 44 00.9**	**+1.8**
AVF				*e*Sn		Sn	16 45 20.7	-9.0
	comp=E,7.8nm,0.6s							
MTLF	**Montolieu**	**8.00**	**277**	*e*P		**Pn**	**16 44 01.0**	**+1.8**
MTLF				*e*Sn		Sn	16 45 20.7	-9.1
	comp=E,4.6nm,0.8s							
MEZF	**Maizieres J'vi**	**8.01**	**318**	*e*P		**Pn**	**16 44 00.8**	**+1.5**
MEZF				*e*Sn		Sn	16 45 21.0	-9.0
	comp=E,5.6nm,0.4s							
SSF	**Saint Saulge**	**8.03**	**305**	*e*P		**Pn**	**16 44 00.4**	**+0.8**
SSF				*e*Sn		Sn	16 45 21.5	-8.9
	comp=E,6.7nm,0.6s							
SAVF	**Savonnieres en**	**8.05**	**319**	*e*P		**Pn**	**16 44 01.3**	**+1.4**
SAVF				*e*Sn		Sn	16 45 21.9	-9.1
	comp=E,6.2nm,0.5s							
BRG	**Berggiesshubel**	**8.07**	**4**	*e*P		**Pn**	**16 44 01.2**	**+0.9**
BRG				Amp			16 44 04.3	
	comp=Z,1.9nm,0.4s							
BRG				*ex*		x	16 45 25.1	
BRG				*ex*		x	16 46 24.7	
BRG				Amp			16 46 51.6	
	comp=Z,19nm,1.2s							
BRG	**Berggiesshubel**	**8.07**	**4**	*e*P		**Pn**	**16 44 01.1**	**+0.9**
BRG				*e*			16 45 25.0	
BRG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
BRG				pmax	pmax			
	comp=Z,19nm,1.2s							
BGF	**Bois d'Agland**	**8.21**	**301**	*e*P		**Pn**	**16 44 03.6**	**+1.4**
CAF	**Calviac**	**8.26**	**289**	*e*P		**Pn**	**16 44 04.2**	**+1.4**
CAF				*e*Sn		Sn	16 45 27.0	-9.2
	comp=Z,1.4nm,0.4s							
WLF	**Walferdange**	**8.37**	**327**	*d*P		**Pn**	**16 44 01.7**	**-2.6**
WLF				*d*S		**Sn**	**16 45 39.4**	**+0.5**
CLL	**Collm**	**8.49**	**360**	Pn		**Pn**	**16 44 04.8**	**-1.1**
CLL	**Collm**	**8.49**	**360**	*e*P		**Pn**	**16 44 05.0**	**-0.9**
CLL	**Collm**	**8.49**	**360**	*e*Pn		**Pn**	**16 44 05.0**	**-0.9**
CLL				*ex*		x	16 44 09.0	
CLL				*e*Sn		Sn	16 45 20.0	-22
CLL				*ex*		x	16 45 34.0	
CLL				*ex*		x	16 45 59.0	
CLL				*e*Sg		**Sg**	**16 46 30.0**	**-5.1**
	comp=Z,39nm,1.1s							
CLL				Lmax			16 48 00.0	
TCF	**Toulx Ste Croi**	**8.52**	**298**	*e*P		**Pn**	**16 44 08.0**	**+1.6**
TCF				*e*Sn		Sn	16 45 33.4	-9.3
	comp=Z,4.9nm,0.7s							
OJC	**Ojcow**	**8.71**	**30**	Pn		**Pn**	**16 44 07.2**	**-1.8**
OJC	**Ojcow**	**8.71**	**30**	P		**Pn**	**16 44 07.2**	**-1.8**
ITM	**Ithomi**	**8.80**	**127**	Pn		**Pn**	**16 44 11.5**	**+1.2**
VOIR		**8.97**	**69**	⇑P		**Pn**	**16 44 13.8**	**+1.2**
RCHB	**Rochefort**	**9.13**	**326**	P		**Pn**	**16 44 16.4**	**+1.7**
RCHB	**Rochefort**	**9.13**	**326**	*d*P		**Pn**	**16 44 16.2**	**+1.6**
RCHB				*d*S		**Sn**	**16 45 52.1**	**-5.4**
LFF	**La Frestale**	**9.19**	**288**	*e*P		**Pn**	**16 44 17.1**	**+1.6**
BCLA	**Clavier**	**9.30**	**327**	*d*P		**Pn**	**16 44 17.8**	**+0.8**
BCLA				*d*S		**Sn**	**16 45 57.6**	**-4.1**
EPF	**Esparros**	**9.38**	**276**	*e*P		**Pn**	**16 44 19.8**	**+1.6**
RDO	**Rodhopi**	**9.40**	**96**	Pn		**Pn**	**16 44 19.2**	**+0.8**
MLR	**Muntele Rosu**	**9.60**	**69**	⇑P		**Pn**	**16 44 22.1**	**+0.8**
MLR	**Muntele Rosu**	**9.60**	**69**	Pn		**Pn**	**16 44 21.4**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=184,slow=13							
MLR				LR		LR	16 48 55.5	
	comp=Z,165nm,20.6s,baz=248,slow=44							
ALN	**Alexandroupoli**	**9.84**	**97**	Pn		**Pn**	**16 44 25.7**	**+1.3**
ALN	**Alexandroupoli**	**9.84**	**97**	P		**Pn**	**16 44 25.7**	**+1.3**
IDI	**Anoyia**	**11.84**	**126**	LR		LR	16 51 37.4	
	comp=Z,36nm,18.8s,baz=268,slow=48							
ESDC	**Sonseca Array**	**13.23**	**262**	Pn		**Pn**	**16 45 12.8**	**+1.9**
	baz=72,slow=14,SNR=4.5							
ESDC				LR		LR	16 50 10.9	
	comp=Z,48nm,21.5s,baz=88,slow=36							
	comp=Z,0.5nm,0.8s							
AKASG	**Malin Array Be**	**13.55**	**49**	LR		LR	16 51 59.8	
	comp=Z,36nm,18.4s,baz=274,slow=45							
AKBB	**Malin Array Si**	**13.55**	**49**	*i* P		**Pn**	**16 45 17.0**	**+1.9**
AKAS	**Kas**	**14.32**	**112**	Pn		**Pn**	**16 45 25.6**	**-0.2**
MNK	**Minsk**	**15.19**	**35**	*i* P		**Pn**	**16 45 35.9**	**-1.4**
MNK				*i* S		**Sn**	**16 48 23.1**	**-2.4**
MNK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
MNK				pmax	pmax			
	comp=E,3.0nm,0.9s							
MNK				MLR	MLR			
	comp=E,6.0nm,12.0s							
MNK				MLR	MLR			
	comp=Z,26nm,11.0s							
MNK	**Minsk**	**15.19**	**35**	*i* P		**Pn**	**16 45 35.9**	**-1.4**
	comp=E,3.0nm,0.9s							
MNK				*i* P		**Pn**	**16 45 35.9**	**-1.4**
MNK				*i* P		**Pn**	**16 45 35.9**	**-1.4**
	comp=Z,5.0nm,0.9s,baz=226							
MNK				*i* PP		**P**	**16 45 42.6**	**+0.2**
MNK				*i* PPP		PPP	16 45 50.5	
MNK				*i* S		**Sn**	**16 48 23.1**	**-2.4**
MNK				*i* SS		**SnSn**	**16 48 34.7**	**-3.4**
MNK				*i* SSS		SSS	16 48 47.6	
MNK				*i* LQ		LQ	16 49 57.5	
MNK				*i* PcP		**PcP**	**16 50 42.6**	**-0.9**
MNK				*i* LR		LR	16 51 07.1	
MNK				*i* LRM		MLR	16 52 20.1	
	comp=E,6.0nm,12.3s							
MNK				*i* LRM		MLR	16 52 21.0	
	comp=Z,26nm,10.6s							
BR131	**Keskin Array S**	**15.73**	**94**	*i* P		**P**	**16 45 49.0**	**+0.2**
BRTR	**Keskin Array B**	**15.73**	**94**	Pn		**Pn**	**16 45 45.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=304,slow=10,SNR=1.3							
	comp=Z,0.1nm,0.3s							
EKA	**Eskdalemuir Ar**	**16.39**	**325**	Pn		**P**	**16 45 54.5**	**-1.3**
	baz=135,slow=14							
	comp=Z,1.1nm,0.8s							
HFS	**Hagfors**	**17.34**	**1**	LR		LR	16 53 29.5	
	comp=Z,30nm,21.0s,baz=146,slow=40							
NOA	**NORSAR Array B**	**18.28**	**357**	LR		LR	16 54 14.9	
	comp=Z,27nm,18.4s,baz=170,slow=40							
OBN	**Obninsk**	**19.59**	**43**	⇓*e*P		**Pn**	**16 46 33.4**	**+1.1**
OBN				S		**S**	**16 50 13.0**	**+0.9**
OBN				pmax	pmax			
	comp=Z,30nm,2.5s							
OBN				MLR	MLR			
	comp=Z,44nm,16.0s							
MMAI	**Mount Meron Ar**	**20.07**	**112**	P		Pn	16 46 38.4	+0.1
	comp=Z,8.9nm,1.0s,baz=312,slow=11,SNR=6.1							
	comp=Z,8.9nm,1.0s							
FINES	**FINESS Array B**	**20.20**	**18**	P		**P**	**16 46 36.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=207,slow=8.9,SNR=4.3							
	comp=Z,1.9nm,0.6s							
FINES	**FINESS Array B**	**20.20**	**18**	P		**P**	**16 46 37.2**	**-0.4**
FINES	**FINESS Array B**	**20.20**	**18**	P		**P**	**16 46 37.2**	**-0.4**
FIA1	**FINESS Array S**	**20.20**	**18**	P		**P**	**16 46 37.1**	**-0.6**
FIA1				IAmb		IAmb	16 46 46.4	
	comp=Z,12nm,0.9s							
KIV	**Kislovodsk**	**21.47**	**77**	*e*P		**P**	**16 46 54.3**	**+2.6**
KIV				pmax	pmax			
	comp=Z,11nm,1.1s							
SHA1	**Shidzhatmaz**	**21.48**	**77**	*i* P		**P**	**16 46 52.5**	**+0.6**
KBZ	**Khabaz**	**21.65**	**77**	P		**P**	**16 46 53.4**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=280,slow=6.1,SNR=4.7							
KBZ				LR		LR	16 58 03.4	
	comp=Z,34nm,19.2s,baz=314,slow=45							
	comp=Z,3.0nm,0.9s							
KBZ	**Khabaz**	**21.65**	**77**	*ce*P		**P**	**16 46 55.7**	**+2.2**
KBZ				pmax	pmax			
	comp=Z,5.0nm,1.1s							
GNI	**Garni**	**23.77**	**86**	LR		LR	16 58 50.3	
	comp=Z,34nm,18.4s,baz=120,slow=43							
GNI	**Garni**	**23.77**	**86**	*ce*P		**P**	**16 47 18.5**	**+2.7**
GNI				pmax	pmax			
	comp=Z,7.0nm,1.3s							
BELG	**Belogornoye**	**24.94**	**55**	P		**P**	**16 47 27.6**	**+1.3**
	comp=Z,16nm,0.8s,baz=271,slow=1.1,SNR=6.4							
	comp=Z,16nm,0.8s							
BELG	**Belogornoye**	**24.94**	**55**	*i* P		**P**	**16 47 28.1**	**+1.9**
BELG				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BORG	**Borgarnes**	**29.30**	**330**	LR		LR	16 59 45.1	
	comp=Z,17nm,18.9s,baz=323,slow=36							
ARU	**Arti**	**31.80**	**49**	*d* P		**P**	**16 48 27.0**	**-0.4**
ARU							16 49 28.1	
ARU				S		**S**	**16 53 35.3**	**-2.2**
ARU				pmax	pmax			
	comp=Z,5.0nm,0.7s							
ABKAR	**Akbulak array**	**32.70**	**62**	P		**P**	**16 48 35.9**	**+0.5**
BRVK	**Borovoye**	**38.67**	**54**	*ce*P		**P**	**16 49 27.6**	**+1.0**
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
BVAR	**Borovoye Array**	**38.74**	**54**	LR		LR	17 06 21.0	
	comp=Z,33nm,21.0s,baz=238,slow=38							
MKAR	**Makanchi Array**	**47.79**	**60**	P		**P**	**16 50 41.4**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=286,slow=6.2,SNR=13							
	comp=Z,1.1nm,0.7s							
MKAR	**Makanchi Array**	**47.79**	**60**	P		**P**	**16 50 40.2**	**-0.2**
MKAR	**Makanchi Array**	**47.79**	**60**	P		**P**	**16 50 40.2**	**-0.2**
WMQ	**Urumqi**	**52.49**	**62**	*e*P		**P**	**16 51 18.5**	**+2.4**
GOMU	**GeErMu**	**61.04**	**66**	P		**P**	**16 52 20.3**	**+2.9**
GOMU				pP		sP	16 52 25.5	+3.9
GOMU				sP		pP	16 52 26.5	+6.1
GOMU				pmax	pmax			
	comp=Z,2.0nm,0.5s							
GOMU				pmax	pmax			
	comp=Z,51nm,4.2s							
SONM	**Songino Array**	**61.83**	**50**	P		**P**	**16 52 22.2**	**0.0**
	comp=Z,2.3nm,0.9s,baz=299,slow=8.7,SNR=8.6							
	comp=Z,2.3nm,0.9s							
IMAR	**Indian Mountai**	**71.05**	**354**	P		**P**	**16 53 21.9**	**+1.1**
ILAR	**Eielson Array**	**71.60**	**351**	P		**P**	**16 53 24.8**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=2.8,slow=6.4,SNR=5.2							
	comp=Z,0.6nm,0.9s							
CMAR	**Chiang Mai Arr**	**74.70**	**79**	*ce*P		**P**	**16 53 45.7**	**+2.6**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BMO	**Blue Mountains**	**82.14**	**327**	P		**P**	**16 54 24.1**	**+0.1**
BMO				IAmb		IAmb	16 54 27.2	
	comp=Z,3.2nm,1.0s							
BMO	**Blue Mountains**	**82.14**	**327**	P		**P**	**16 54 24.1**	**+0.1**
BMO				pmax	pmax			
	comp=Z,3.0nm,1.0s							
TXAR	**Lajitas Array**	**87.67**	**309**	P		**P**	**16 54 52.1**	**0.0**
	comp=Z,0.3nm,0.9s,baz=57,slow=3.3,SNR=2.7							
	comp=Z,0.3nm,0.9s							

TAP 28 16:42:46.9,24.24N×121.84E,h18km±1km,ML1.7,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.11**	**308**	*e*P		Pg	16 42 51.1	+0.3
	baz=309							
ENA	**Nanau**	**0.21**	**334**	P		Pg	16 42 52.8	+0.8
	baz=335							
ENA				*e*S		Sg	16 42 57.0	+1.6
	baz=335							
EWUT	**Wuta**	**0.21**	**345**	*e*P		Pb	16 42 51.8	-0.2
	baz=344							
EWUT				*e*S		Sg	16 42 56.0	+0.5
	baz=344							
ETL	**Fush Village**	**0.21**	**248**	P		Pg	16 42 52.8	+0.6
	baz=247							
ETL				S		Sg	16 42 57.0	+1.3
	baz=247							
NACB	**Ninganchiao**	**0.23**	**254**	P		Pb	16 42 52.8	+0.4
	baz=253							
NACB				S		Sg	16 42 57.2	+1.1
	baz=253							
TWD	**Chiawan**	**0.27**	**234**	*i* P		Pb	16 42 53.6	+0.3
	baz=233							
TWD				S		Sb	16 42 58.5	+1.1
	baz=233							
ETLH	**Xiulin Townshi**	**0.33**	**264**	*i* P		Pb	16 42 54.5	+0.2
	baz=264							
ETLH				S		Sb	16 42 59.8	+0.5
	baz=264							
TWC	**Suao**	**0.37**	**1**	*i* P		Pb	16 42 55.2	+0.2
	baz=2.0							
TWC				*i* S		Sb	16 43 01.2	+0.8
	baz=2.0							
NDS	**Dongshan**	**0.41**	**344**	*e*P		Pg	16 42 55.4	0.0
	baz=344							
NDS				*e*S		Sb	16 43 01.7	+0.1
	baz=344							
LATG	**Datong**	**0.41**	**316**	P		Pb	16 42 56.4	+0.6
	baz=315							
LATG				S		Sb	16 43 02.8	+1.1
	baz=315							
ETM	**Tongmen**	**0.42**	**229**	P		Pb	16 42 55.9	+0.1
	baz=229							
ETM				S		Sb	16 43 02.6	+0.8
	baz=229							
NNSB	**Datong**	**0.46**	**294**	P		Pb	16 42 57.1	+0.5
	baz=294							
NNSB				S		Sb	16 43 04.0	+0.9
	baz=294							
NNSH	**Datong**	**0.46**	**294**	P		Pb	16 42 57.0	+0.4
	baz=294							
NNSH				S		Sb	16 43 03.9	+0.8
	baz=294							
NDT	**Datong Townshi**	**0.47**	**320**	*e*P		Pb	16 42 57.5	+0.9
	baz=320							
NDT				*e*S		Sn	16 43 05.0	-1.6
	baz=320							
ENTT	**Nioudou**	**0.47**	**328**	P		Pb	16 42 56.6	-0.1
	baz=328							
ENTT				*e*S		Sb	16 43 03.6	+0.3
	baz=328							
FUSB	**Fushanzhiwuyua**	**0.57**	**336**	*i* S		Sb	16 43 07.3	+1.3
	baz=336							
YHNB	**Yeheng**	**0.60**	**315**	*e*P		Pn	16 42 59.9	-0.7
	baz=315							
YHNB				S		Sn	16 43 08.5	-1.4
	baz=315							
CHGB	**Renai**	**0.63**	**254**	P		Pg	16 43 00.1	+0.5
	baz=253							
CHGB				*i* S		Sb	16 43 09.3	+1.2
	baz=253							
OWD	**Renai**	**0.67**	**245**	P		Pg	16 43 00.4	+0.2
	baz=244							
OWD				*i* S		Sg	16 43 10.4	+1.2
	baz=244							
WUSB	**Renai**	**0.70**	**250**	P		Pg	16 43 01.4	+0.6
	baz=249							
WUSB				S		Sg	16 43 11.3	+1.1
	baz=249							
YOJ	**Yonaguni jima**	**1.09**	**78**	*e*S		Sg	16 43 22.3	0.0
	baz=77							

TAP 28 16:43:03.8,23.60N×120.87E,h8km,ML0.7,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHYT	**Xinyi Township**	**0.10**	**352**	P		Pg	16 43 06.9	+0.7
	baz=239							
WHYT	**Xinyi Township**	**0.10**	**352**	P		Pg	16 43 06.9	+0.7
	baz=351							
WHYT				S		Sg	16 43 08.8	+0.9
	baz=351							
ALS	**Alishan**	**0.11**	**213**	*e*P		Pg	16 43 07.1	+0.6
	baz=208							
ALS				*i* S		Sg	16 43 09.2	+0.7
	baz=208							
YUS	**Yu-Shan**	**0.13**	**145**	*e*P		Pg	16 43 08.6	+1.6
	baz=143							
YUS				*e*S		Sg	16 43 11.7	+2.4
	baz=143							
SSLB	**Suanglung**	**0.20**	**23**	*e*P		Pg	16 43 09.4	+1.5
	baz=22							
SSLB				*i* S		Sg	16 43 12.6	+1.8
	baz=22							
WCKO	**Fanlu**	**0.29**	**236**	*i* P		Pb	16 43 10.6	-0.6
	baz=236							
WCKO				*e*S		Sb	16 43 15.1	-1.1
	baz=236							
VWDT	**VWDT**	**0.29**	**59**	P		Pb	16 43 10.6	-0.7
	baz=58							
VWDT				*e*S		Sg	16 43 14.8	+1.3
	baz=58							

DJA 28 16:46:58.1±0.2,8°S±3°×117°6E±°,h10km,M3.8/16,mb4.0/4, MLv3.6/16,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.83**	**284**	P		Pg	16 47 13.5	-0.7
DNP	**Denpasar**	**0.90**	**245**	P		Pb	16 47 16.1	+0.3
TWSI	**Taliwang, Sumb**	**0.95**	**118**	P		Pg	16 47 15.8	-0.7
PLAI	**Plampang**	**1.81**	**107**	P		Pn	16 47 29.9	+0.6
ABJI	**Asem Bagus**	**1.84**	**285**	P		Pb	16 47 32.1	+0.2
JAGI	**Jajag, Banyuwa**	**1.87**	**264**	P		Pn	16 47 28.9	-1.3
KMMI	**Kalianget**	**2.39**	**301**	P		Pn	16 47 38.0	+0.7
BLJI	**Banyuglugur**	**2.47**	**282**	P		Pn	16 47 38.6	+0.1
GMJI	**Gumukmas**	**2.56**	**270**	P		Pn	16 47 39.2	-0.5
WBSI	**Waikabubak, Su**	**3.58**	**112**	P		Pn	16 47 54.0	+0.2
NGJI	**Ngawi**	**4.62**	**281**	P		Pn	16 48 07.4	-0.6
PCJI	**Pacitan**	**4.80**	**271**	P		Pn	16 48 10.2	-0.4
BSSI	**Bau Bau, Buton**	**4.91**	**65**	P		Pn	16 48 11.6	-0.5
BKSI	**Bulukumba**	**5.02**	**54**	P		Pn	16 48 13.5	0.0
	0.1nm11nm,1.2s							
UGM	**Wanagama**	**5.47**	**274**	P		Pn	16 48 19.7	0.0
	0.8nm196nm,1.8s							
EDFI	**Ende, Flores**	**5.62**	**95**	P		Pn	16 48 21.9	0.0

WEL 28 16:47:16.0±0.8,35°S±7°×118°0W±1°3,h128km±24km, M3.8/11,ML4.0/9,MLv3.8/11,Error ellipse: s-maj=0.0km s-min=0.0km az=113.8,East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.87**	**214**	P		Pn	16 48 01.3	+0.5
MXZ				S		Sn	16 48 35.0	-0.3
WMGZ	**Waiomatatini S**	**3.04**	**210**	P		Pn	16 48 04.9	+1.9
WMGZ				S		Sn	16 48 41.8	+2.5
PKGZ	**Pakihiroa**	**3.24**	**213**	P		Pn	16 48 07.0	+1.3
PKGZ				S		Sn	16 48 44.8	+0.7
HAZ	**Te Kaha**	**3.27**	**218**	P		Pn	16 48 07.5	+1.4
HAZ				S		Sn	16 48 46.3	+1.5
PUZ	**Puketiti**	**3.32**	**209**	P		Pn	16 48 08.0	+1.4
PUZ				S		Sn	16 48 45.9	0.0
RUGZ	**Raukumara Rang**	**3.49**	**217**	P		Pn	16 48 09.5	+0.5
RUGZ				S		Sn	16 48 49.3	-0.7
TWGZ	**Tauwhareparae**	**3.52**	**211**	P		Pn	16 48 10.8	+1.4
TWGZ				S		Sn	16 48 51.9	+1.2
CNGZ	**Carnagh Statio**	**3.70**	**206**	P		Pn	16 48 13.3	+1.7
CNGZ				S		Sn	16 48 54.9	+0.1
TKGZ	**Te Karaka**	**3.80**	**211**	P		Pn	16 48 13.6	+0.6
TKGZ				S		Sn	16 48 56.7	-0.4
MWZ	**Matawai**	**3.85**	**215**	P		Pn	16 48 14.3	+0.5
MWZ				S		Sn	16 48 58.5	-0.1
URZ	**Urewera**	**4.00**	**219**	P		Pn	16 48 15.6	0.0
URZ				S		Sn	16 49 00.8	-1.1
KUZ	**Kuaotunu**	**4.03**	**246**	P		Pn	16 48 15.6	-0.5
SNGZ	**Shannon Statio**	**4.30**	**213**	P		Pn	16 48 19.9	+0.2
SNGZ				S		Sn	16 49 09.7	+0.5
MUGZ	**Murupara**	**4.34**	**220**	P		Pn	16 48 19.8	-0.4
MUGZ				S		Sn	16 49 08.6	-1.5
KNZ	**Kokohu**	**4.37**	**208**	P		Pn	16 48 18.2	-2.4
KNZ				S		Sn	16 49 07.1	-3.6
MTHZ	**Maungataniwha**	**4.59**	**216**	P		Pn	16 48 23.6	+0.1
MTHZ				S		Sn	16 49 15.8	-0.3
TOZ	**Tahuroa Road**	**4.63**	**235**	P		Pn	16 48 25.7	+1.6
NMHZ	**Naumai**	**4.80**	**215**	P		Pn	16 48 26.5	+0.1
NMHZ				S		Sn	16 49 21.5	+0.3
RVAZ	**Riverhead Bore**	**4.91**	**250**	P		Pn	16 48 30.3	+2.5
KAHZ	**Kahuranaki**	**5.35**	**210**	P		Pn	16 48 33.0	-0.7
KAHZ				S		Sn	16 49 33.4	-0.9
GLKZ	**Green Lake**	**6.10**	**15**	S		Sn	16 49 49.9	-2.4

IDC 28 16:56:48.5±78.0,47.90S×126.82E,h0km,mb3.4/2, mbtmp3.5/3,ML3.6/1,Error ellipse: s-maj=1280.0km s-min=16.7km az=6.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**19.56**	**40**	P	P	17 01 16.5	-1.2
	0.1nm,0.3s,baz=209,slow=11,SNR=2.5						
	1.9nm,0.8s						
ASAR	**Alice Springs**	**24.83**	**16**	P	P	17 02 12.9	+0.4
	0.8nm,0.6s,baz=192,slow=8.9,SNR=16						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**28.55**	**15**	P	P	17 02 46.2	+0.2
	0.4nm,0.9s,baz=191,slow=8.8,SNR=1.6						
	0.4nm,0.9s						

*BJI **28** 16:57:32.9±0.0,36°36N×70°80E,h121km,mb4.4/19, mB4.8/10*

*IDC **28** 16:57:33.6±2.2,36°32N×71°06E,h111km±20km,mb3.9/29, mbtmp4.3/35,MS

THN *e*P Pn 16 58 58.0 -0.5
THN *e*S Sn 16 59 57.5 -4.7
THN *e*S Sn 16 59 58.0 -4.2
IUG Iuzhnay 5.78 354 *e*PN Pn 16 58 58.8 -1.7
IUG Iuzhnay 5.78 354 *e*P Pn 16 58 58.9 -1.7
baz=352
IUG *e*S Sn 17 00 01.9 -4.2
baz=352
AML Almayashu 6.12 20 P Pn 16 59 03.6 -1.8
SNR=1146
NRN Naryn 6.41 37 Pn Pn 16 59 06.3 -2.9
NRN Naryn 6.41 37 PN Pn 16 59 06.3 -2.9
UCH Uchtor 6.46 25 P Pn 16 59 08.5 -1.5
SNR=16
DZA Taraz 6.49 3 *e*PN Pn 16 59 08.3 -1.7
DZA Taraz 6.49 3 *e*P Pn 16 59 08.4 -1.7
baz=2.1
DZA *e*S Sn 17 00 19.4 -3.6
baz=2.1
EKS2 Erkin-Say 6.64 19 P Pn 16 59 10.8 -1.3
SNR=70
KK31 Karatay Array 6.70 358 Pn Pn 16 59 11.0 -1.8
KK31 Karatay Array 6.70 358 *e*PN Pn 16 59 11.2 -1.6
KK31 Karatay Array 6.70 358 ⇑P Pn 16 59 10.3 -2.5
81nm,0.4s,baz=185,slow=13,SNR=1599
KK31 ⇓S Sn 17 00 23.8 -4.2
51nm,0.5s,baz=182,slow=21,SNR=7.0
KKAR Karatay Array 6.70 358 Pn Pn 16 59 11.1 -1.7
KKAR Karatay Array 6.70 358 PN Pn 16 59 11.1 -1.7
BHK Bhakra 6.77 136 *e*P Pn 16 59 10.9 -2.9
BHK *e*S Sn 17 00 22.6 -7.2
AAK Ala-Archa 6.82 23 P Pn 16 59 13.2 -1.3
SNR=97
AAK Ala-Archa 6.82 23 Pn Pn 16 59 12.8 -1.8
AAK Ala-Archa 6.82 23*ce*PN Pn 16 59 13.0 -1.6
AAK pmax pmax
comp=Z,58nm,0.5s
KBK Karagaybulak 6.99 25 P Pn 16 59 16.1 -0.7
SNR=84
ULHL Ulahol 7.16 34 P Pn 16 59 17.6 -1.5
SNR=14
BOOM Boomskoye usch 7.23 31 Pn 16 59 17.9 -2.1
BOOM Boomskoye usch 7.23 31 PN Pn 16 59 17.9 -2.1
CHMS Chumysh 7.23 23 P Pn 16 59 19.8 -0.1
SNR=31
CHMS Chumysh 7.23 23 *i* PN Pn 16 59 17.9 -2.0
CHMS pmax pmax
comp=Z,86nm,0.6s
CHMS Chumysh 7.23 23 ⇑P Pn 16 59 17.9 -2.0
comp=Z,86nm,0.6s
CHMS ⇓S Sn 17 00 37.5 -3.3
comp=Z,85nm,0.8s
HRA Herat 7.34 257 Pn Pn 16 59 20.3 -1.3
USP Ospenovka 7.40 21 P Pn 16 59 21.0 -1.1
SNR=50
TKM2 Tokmak 2 7.45 28 P Pn 16 59 22.1 -0.9
SNR=7.2
TKM2 Tokmak 2 7.45 28 *i* PN Pn 16 59 21.0 -2.0
TKM2 pmax pmax
comp=Z,68nm,0.7s
TKM2 Tokmak 2 7.45 28 ⇓P Pn 16 59 21.1 -2.0
comp=Z,68nm,0.7s
TKM2 ⇑S Sn 17 00 43.5 -2.9
comp=Z,39nm,0.7s
SGDS Sogindy 7.61 21*d i*PN Pn 16 59 22.4 -2.5
SGDS pmax pmax
comp=Z,5.0nm,0.5s
SGDS Sogindy 7.61 21 ⇓*i*P Pn 16 59 22.5 -2.5
comp=Z,5.0nm,0.5s,baz=21
SGDS *e*S Sn 17 00 46.0 -3.8
baz=21
AAA Alma-Ata 8.23 32 *e*PN Pn 16 59 31.3 -1.9
AAA Alma-Ata 8.23 32 *e*P Pn 16 59 31.4 -1.9
baz=33
MDOK Medeo 8.25 33 *e*PN Pn 16 59 31.9 -1.6
MDOK Medeo 8.25 33 *e*P Pn 16 59 32.0 -1.6
baz=34
MDOK Medeo 8.25 33 ⇑P Pn 16 59 31.8 -1.8
comp=Z,51nm,0.7s
KNDC Almaty 8.26 33 ⇑P Pn 16 59 32.1 -1.5
comp=Z,188nm,0.7s
KUU Kurty 8.56 27 *e*PN Pn 16 59 35.3 -2.4
KUU pmax pmax
comp=Z,8.0nm,0.6s
KUU Kurty 8.56 27 *e*P Pn 16 59 35.3 -2.4
comp=Z,8.1nm,0.6s,baz=28
CHKK Chushkaly 8.79 30 *e*PN Pn 16 59 38.3 -2.3
CHKK Chushkaly 8.79 30 *e*P Pn 16 59 38.4 -2.3
baz=31
SATY Saty 8.81 39 *e*PN Pn 16 59 39.1 -2.0
SATY pmax pmax
comp=Z,6.0nm,0.8s
SATY Saty 8.81 39 *e*P Pn 16 59 39.2 -2.0
comp=Z,5.8nm,0.8s,baz=39
ZHN Zhinishke 8.91 38 *e*PN Pn 16 59 39.4 -2.9
ZHN Zhinishke 8.91 38 *e*P Pn 16 59 39.4 -2.9
baz=39
BTLS Baital 8.96 15*d i*PN Pn 16 59 40.3 -2.5
BTLS Baital 8.96 15 ⇓*i*P Pn 16 59 40.4 -2.5
baz=14
KPKS Kokpek 9.25 38*d i*P Pn 16 59 44.7 -2.1
KPKS pmax pmax
comp=Z,11nm,0.7s
KPKS Kokpek 9.25 38 ⇓*i*P Pn 16 59 44.8 -2.1
comp=Z,12nm,0.7s,baz=38
KHET Khetri 9.29 152 *e*P Pn 16 59 43.2 -4.2
NDI New Delhi 9.37 143 *e*P Pn 16 59 50.0 +1.6
NDI *e*S Sn 17 01 24.0 -8.3
SHLS Shalkode 9.43 42 *e*P Pn 16 59 50.1 +0.8
SHLS pmax pmax
comp=Z,5.0nm,0.6s
SHLS Shalkode 9.43 42 *e*P Pn 16 59 50.1 +0.8
comp=Z,4.5nm,0.6s,baz=44
JASL Jaisalmer 9.45 180 *e*P Pn 16 59 42.1 -7.4
JASL *i* x Pn 16 59 45.8 -3.8
KUDL Kundal 9.50 149 *e*P Pn 16 59 46.2 -4.0
KUDL *e*S Sn 17 01 24.3 -11
PDGK Podgornoye 9.57 41 P Pn 16 59 47.9 -3.2
PDGK S Sn 17 01 35.3 -1.8
GEYT Alibeck 10.31 282 P Pn 16 59 58.6 -2.3
comp=Z,7.0nm,0.4s,baz=102,slow=11,SNR=20
GEYT S Sn 17 01 48.3 -6.6
comp=Z,15nm,0.7s,baz=90,slow=24,SNR=2.7
GEYT Alibeck 10.31 282 Pn Pn 16 59 58.0 -2.9
GYA0 ALIBECK ARRAY 10.31 282 P Pn 16 59 58.3 -2.6
GYA0 S Sn 17 01 48.8 -6.1
GYA0B ALIBECK ARRAY 10.31 282 Pn Pn 16 59 58.0 -2.9
GYA0B ALIBECK ARRAY 10.31 282 ⇑P Pn 16 59 58.3 -2.5
GYA0B ⇓S Sn 17 01 51.6 -3.3
TDK Taldyqorghan 10.31 31 *e*P Pn 16 59 58.2 -2.6
TDK Taldyqorghan 10.31 31 *e*P Pn 16 59 58.2 -2.6
baz=32
PTH Pithoragarh 10.39 128 *e*P Pn 16 59 57.5 -4.7
AJM Ajmer 10.40 161 *e*P Pn 16 59 59.7 -2.5
AJM *i* x Pn 17 00 09.5 +7.3
LGTI Lohaghat 10.48 129 *e*P Pn 16 59 58.3 -4.8
OTUK Ortayu 11.88 5 P Pn 17 00 18.7 -2.7
OTUK Ortayu 11.88 5 ⇑P Pn 17 00 18.7 -2.7
comp=Z,19nm,0.9s
JHNI Jhansi 12.72 147 *e*P Pn 17 00 28.6 -3.8
PYUN Piuthan 13.16 126 *e*P Pn 17 00 33.4 -4.9
comp=Z,20nm,0.3s
MAKZ Makanchi 13.29 35 Pn Pn 17 00 36.3 -3.2
MAKZ Makanchi 13.29 35 P Pn 17 00 36.3 -3.2
MAKZ Makanchi 13.29 35 ⇑P Pn 17 00 39.4 -0.2
comp=Z,18nm,0.7s
MK31 Makanchi Array 13.42 36 Pn Pn 17 00 38.5 -2.8
MK31 Makanchi Array 13.42 36 *i* P Pn 17 00 38.9 -2.4
MK31 Makanchi Array 13.42 36 P Pn 17 00 40.5 -0.8
comp=Z,7.1nm,0.6s,baz=224,slow=12,SNR=76
MKAR Makanchi Array 13.42 36 P Pn 17 00 38.5 -2.8
comp=Z,9.8nm,0.7s,baz=220,slow=15,SNR=42
MKAR Makanchi Array 13.42 36 Pn Pn 17 00 38.2 -3.1
MKAR Makanchi Array 13.42 36 *i* P Pn 17 00 40.0 -1.3
MKAR pmax pmax
comp=Z,10.0nm,0.7s
DANN Dangsing 13.51 123 *e*P Pn 17 00 38.4 -4.4
comp=Z,12nm,0.3s
BRZS Berezniki 13.64 5*c i*P Pn 17 00 42.2 -1.7
BRZS Berezniki 13.64 5 ⇑*i*P Pn 17 00 42.3 -1.7
baz=4.6
KOLN Koldanda 13.78 125 *e*P Pn 17 00 42.2 -4.0
comp=Z,1.7nm,0.4s
BHPL Bhopal 14.28 155 *e*P Pn 17 00 46.5 -5.8
GKN Gorkha 14.33 122 *e*P Pn 17 00 48.8 -4.2

WMQ Urumqi 14.83 55 *e*P P 17 01 00.8 -0.3
DMN Daman 14.90 122 *e*P Pn 17 00 57.1 -3.1
KKN Kakani 14.90 121 *e*P Pn 17 00 56.3 -4.0
PKIN Phulchoki 15.12 121 *e*P Pn 17 00 59.7 -3.3
AB31 Akbulak array 15.13 332 *e*P Pn 17 01 01.3 -1.3
AB31 *e*S Sn 17 03 40.4 -10
AB31 Akbulak array 15.13 332 ⇑P Pn 17 01 01.4 -1.3
comp=Z,15nm,0.6s,baz=143,slow=12,SNR=312
AB31 ⇓S Sn 17 03 40.5 -10
comp=Z,13nm,0.7s,baz=148,slow=24,SNR=7.0
ABKAR Akbulak array 15.13 332 Pn 17 01 01.0 -1.6
ABKAR IAmb IAmb 17 01 04.5
comp=Z,22nm,0.7s
PKI Pulchoki 15.13 121 *e*P Pn 17 00 59.9 -3.3
comp=Z,42nm,0.4s
ZSN Zaisan 15.14 39 *e*P Pn 17 01 02.9 +0.1
ZSN Zaisan 15.14 39 *e*P Pn 17 01 02.9 +0.1
baz=39
KURBB Kurchatov Arra 15.24 19 P Pn 17 01 01.4 -2.7
comp=Z,4.7nm,0.8s,baz=212,slow=12,SNR=22
GUN Gumba 15.25 119 *e*P Pn 17 01 02.0 -2.7
comp=Z,18nm,0.3s
KURK Kurchatov 15.35 19 P P 17 01 07.3 +0.7
KURK IAmb IAmb 17 01 09.1
comp=Z,21nm,0.8s
KURK Kurchatov 15.35 19*ce*P Pn 17 01 05.6 +0.2
KURK pmax pmax
comp=Z,24nm,0.8s
KURK Kurchatov 15.35 19 ⇓P Pn 17 01 03.6 -1.8
comp=Z,23nm,0.9s
SEM Semipalatinsk 15.55 23 *e*P Pn 17 01 06.5 -1.5
SEM Semipalatinsk 15.55 23 *e*P Pn 17 01 06.6 -1.5
baz=23
JIRN Jiri 15.62 120 *e*P Pn 17 01 06.5 -2.7
comp=Z,30nm,0.3s
SHME Shamm 16.28 235 P Pn 17 01 17.1 +0.2
RAMN Ramite 16.34 121 *e*P Pn 17 01 15.2 -2.8
comp=Z,17nm,0.3s
BVA0 Borovoye Array 16.62 359 ⇑P P 17 01 20.5 -0.3
comp=Z,20nm,0.9s,baz=183,slow=8.0,SNR=80
BVAR Borovoye Array 16.62 359 P P 17 01 19.6 -1.2
comp=Z,7.3nm,0.6s,baz=170,slow=13,SNR=56
BVAR S S 17 04 21.4 -4.2
comp=Z,1.9nm,0.5s,baz=165,slow=24,SNR=4.1
BRVK Borovoye 16.66 359 P 17 01 20.3 -0.8
BRVK IAmb IAmb 17 01 24.7
comp=Z,22nm,0.7s
BRVK Borovoye 16.66 359*ce*P P 17 01 20.3 -0.8
BRVK pmax pmax
comp=Z,21nm,0.6s
MDH Madha 16.69 233 P P 17 01 21.0 -0.8
AKTO Aktyubinsk 16.82 331 P Pn 17 01 24.1 +0.8
comp=Z,73nm,0.7s,baz=132,slow=12,SNR=141
AKTO S S 17 04 22.5 -7.7
comp=Z,2.9nm,0.5s,baz=173,slow=20,SNR=2.1
AKTO Aktyubinsk 16.82 331 ⇑P P 17 01 23.1 +0.2
comp=Z,68nm,0.8s
WSAR Wadi Sarin 16.87 222 P P 17 01 23.9 +0.2
comp=Z,7.6nm,0.7s,baz=37,slow=17,SNR=7.4
TAPN Taplejung 16.88 118 *e*P P 17 01 22.9 -1.2
comp=Z,68nm,0.5s
ODAN Odare 16.95 119 *e*P P 17 01 23.3 -1.5
UOSS Minazif 17.00 232 P P 17 01 24.4 -0.7
UOSS IAmb IAmb 17 01 29.0
comp=Z,8.8nm,0.7s
UOSS Minazif 17.00 232 P Pn 17 01 27.5 +1.7
HATD Hatta, Dubai 17.14 232 P Pn 17 01 29.1 +1.8
BLSP Bilaspur 17.26 142 *e*P P 17 01 28.1 +0.1
ASUD Al Ashush, Dub 17.79 233 P Pn 17 01 35.3 +0.1
DGZ Jazzator, Alta 17.91 37 *i* P P 17 01 35.1 0.0
ALNE Al Ain 17.93 231 P Pn 17 01 36.4 -0.4
GOMU GeErMu 19.28 83 P P 17 01 51.3 +1.0
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,110nm,6.2s
ZAA0 Zalesovo Array 20.04 25 P P 17 01 58.0 +0.1
ZAA0 Zalesovo Array 20.04 25 ⇓P P 17 01 58.3 +0.4
comp=Z,3.7nm,0.7s
ZALV Zalesovo Beam 20.04 25 P P 17 01 58.2 +0.3
comp=Z,26nm,0.6s,baz=217,slow=11,SNR=65
ZALV S S 17 05 34.3 -0.5
comp=Z,0.7nm,0.5s,baz=213,slow=21,SNR=1.5
comp=Z,26nm,0.6s
HYBB Hyderabad (bro 20.09 158 *e*P P 17 01 59.3 +0.4
HYBB *e*S S 17 05 37.4 +1.0
HYBB IVMs_BB IVMs_BB 17 05 52.5
comp=Z,173nm,3.8s
MZR Muzera 20.13 233 P P 17 01 58.8 -0.4
GROC Groznyy 20.40 297 *e*P P 17 02 03.0 +1.2
GROC *e**PP pP 17 02 25.9 -2.5
GROC S S 17 05 44.5 +2.5
GROC *e* 17 06 10.9
GROC *e**SS sS 17 06 23.1 -5.0
GROC pmax pmax
comp=Z,65nm,0.6s
GNI Garni 20.84 288 P P 17 02 09.2 +2.4
comp=Z,6.4nm,0.6s,baz=104,slow=8.3,SNR=3.5
comp=Z,6.4nm,0.6s
SHL Shillong 20.95 115 P P 17 02 07.9 -0.2
SHL IAmb IAmb 17 02 20.0
comp=Z,10nm,0.8s
SHL Shillong 20.95 115 P P 17 02 07.9 -0.2
SHL pmax pmax
comp=Z,10.0nm,0.8s
TEZP TEZPUR 21.03 111 *e*P P 17 02 09.1 +0.3
TEZP IAmb IAmb 17 02 13.4
comp=Z,7.8nm,0.3s
ZIRO ZIRO 21.36 108 *e*P P 17 02 12.7 +0.2
ZIRO IAmb IAmb 17 02 15.6
comp=Z,14nm,0.5s
ARU Arti 21.70 341 P P 17 02 17.2 +1.6
comp=Z,16nm,0.5s,baz=146,slow=11,SNR=36
ARU S S 17 06 14.0 +8.3
comp=Z,3.5nm,0.4s,baz=163,slow=19,SNR=3.7
comp=Z,16nm,0.5s
ARU Arti 21.70 341 P P 17 02 16.5 +0.9
ARU Arti 21.70 341*d i*P P 17 02 16.7 +1.1
ARU 17 02 46.3
ARU S S 17 06 08.8 +3.1
ARU SS 17 06 53.7
ARU pmax pmax
comp=Z,61nm,1.0s
KOHI KOHIMA 22.51 112 *e*P P 17 02 24.8 +0.6
KBZ Khabaz 22.57 298 P P 17 02 25.0 +0.7
comp=Z,0.6nm,0.4s,baz=135,slow=4.3,SNR=2.6
KBZ S S 17 06 40.1 +20
comp=Z,2.8nm,0.8s,baz=104,slow=4.2,SNR=2.0
comp=Z,0.6nm,0.4s
KBZ Khabaz 22.57 298 *i* P P 17 02 28.5 +4.2
KBZ pmax pmax
comp=Z,6.0nm,1.0s
KVAR Kislovodsk Arr 22.75 298 S S 17 06 41.7 +18
comp=Z,2.9nm,0.7s,baz=72,slow=20,SNR=1.5
KIV Kislovodsk 22.75 298 P P 17 02 26.4 +0.1
KIV Kislovodsk 22.75 298 *e*P P 17 02 28.4 +2.2
KIV *e*S S 17 06 28.5 +4.9
KIV pmax pmax
comp=Z,6.0nm,1.1s
BELG Belogornoye 22.91 322 P P 17 02 29.1 +1.6
comp=Z,30nm,0.8s,baz=127,slow=20,SNR=13
BELG S S 17 06 39.2 +14
comp=Z,5.7nm,0.9s,baz=150,slow=20,SNR=1.2
comp=Z,30nm,0.8s
BELG Belogornoye 22.91 322 *i* P P 17 02 28.7 +1.3
BELG pmax pmax
comp=Z,9.0nm,0.9s
GTA Gaotai 22.98 74 ⇓P P 17 02 30.8 +2.4
LKP Lekhapani 22.99 106 IAmb IAmb 17 02 30.3
comp=Z,9.5nm,0.7s
KNGR Kungurtug, Tuv 23.80 45 *i* P P 17 02 37.1 +1.3
KNGR pmax pmax
comp=Z,12nm,0.8s
RAYN Ar Rayn 25.38 247 P P 17 02 50.1 -0.1
RAYN Ar Rayn 25.38 247 P P 17 02 50.1 -0.1
RAYN pmax pmax
comp=Z,4.0nm,0.7s
KIRV Kirov 26.29 334 P P 17 03 00.1 +2.1
comp=Z,18nm,0.5s,baz=146,slow=11,SNR=7.1
comp=Z,18nm,0.5s
KIRV Kirov 26.29 334*ce*P P 17 03 00.6 +2.6
PZH PanZhiHua 28.01 102 P P 17 03 15.3 +1.4
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,110nm,4.8s

SONM Songino Array 28.46 55 P P 17 03 18.7 +1.0
comp=Z,1.1nm,0.8s,baz=260,slow=12,SNR=6.1
comp=Z,1.1nm,0.8s
ULN Ulaanbaatar 28.91 55*ce*P P 17 03 24.5 +2.8
ULN pmax pmax
comp=Z,9.0nm,2.5s
BRTR Keskin Array B 29.38 288 P P 17 03 32.0 +6.1
comp=Z,0.8nm,0.7s,baz=93,slow=9.2,SNR=5.5
PRGR Permogore 29.82 336 *e*P P 17 03 28.9 -0.5
CMAR Chiang Mai Arr 30.49 118 P P 17 03 35.7 0.0
comp=Z,0.5nm,0.6s,baz=294,slow=9.0,SNR=4.5
comp=Z,0.5nm,0.6s
KLMR Klimovskoe 31.52 331 *e*P P 17 03 44.9 +0.6
KLMR pmax pmax
comp=Z,4.0nm,0.5s
KLMR Klimovskoe 31.52 331 *e*P P 17 03 45.0 +0.6
KLMR AMP 17 03 46.4
comp=Z,4.0nm,0.5s
HHC Hu-ho-hao-te 31.88 69 *e*P P 17 03 49.0 +1.1
HHC pmax pmax
comp=Z,25nm,1.0s
HHC pmax pmax
comp=Z,250nm,4.1s
AKASG Malin Array Be 32.94 309 P P 17 03 58.2 +1.5
comp=Z,1.8nm,0.5s,baz=80,slow=7.5,SNR=11
comp=Z,1.8nm,0.5s
AKASG Malin Array Be 32.94 309 *i* P P 17 03 58.7 +1.9
AKASG pmax pmax
comp=Z,2.0nm,0.4s
IIGN Ignalina 35.64 316 *e*P P 17 04 21.4 +1.4
VSU Vasula 36.20 322 *e*P P 17 04 26.6 +1.9
FIA1 FINESS Array S 37.51 326 P P 17 04 37.6 +1.8
FIA1 IAmb IAmb 17 04 42.4
comp=Z,8.5nm,1.1s
FINES FINESS Array B 37.51 326 P P 17 04 38.0 +2.2
comp=Z,5.2nm,0.4s,baz=114,slow=9.5,SNR=75
FINES PP PP 17 06 05.2 +0.8
comp=Z,2.9nm,0.7s,baz=99,slow=16,SNR=3.0
comp=Z,5.2nm,0.4s
FINES FINESS Array B 37.51 326 P P 17 04 37.8 +2.0
FINES FINESS Array B 37.51 326 P P 17 04 38.0 +2.2
LVZ Lovozero 37.52 338 P P 17 04 37.7 +1.9
LVZ Lovozero 37.52 338 P P 17 04 37.7 +1.9
LVZ pmax pmax
comp=Z,79nm,1.5s
MTSE Matsula 37.74 321 *e*P P 17 04 40.0 +2.3
MEF Metsahovi 37.88 324 *e*P P 17 04 41.1 +2.2
SLIT Slitere, Latvi 38.27 319 *e*P P 17 04 43.8 +1.7
RAF Rauma 39.36 325 *e*P P 17 04 52.9 +1.7
KEV Kevo 40.86 338 P P 17 05 05.4 +2.0
KEV Kevo 40.86 338 P P 17 05 05.4 +2.0
KEV pmax pmax
comp=Z,62nm,1.5s
ARA0 ARCESS Array S 41.20 338 *e*P P 17 05 08.9 +2.6
ARCES ARCESS Array B 41.20 338 P P 17 05 08.6 +2.3
comp=Z,11nm,0.5s,baz=113,slow=8.3,SNR=106
comp=Z,11nm,0.5s
ARCES ARCESS Array B 41.20 338 P P 17 05 08.3 +2.1
KTK1 Kautokeino 41.67 336 *e*P P 17 05 12.3 +2.2
KTK1 IAmb IAmb 17 05 12.8
comp=Z,30nm,0.4s
HAMF Hammerfest 42.28 339 *e*P P 17 05 17.8 +2.8
HAMF IAmb IAmb 17 05 18.5
comp=Z,46nm,0.6s
GSI Gunungsitoli 42.78 139 P P 17 05 21.2 +1.5
GSI IAmb IAmb 17 05 52.5
comp=Z,8.7nm,0.9s
JETT Jettan, Norway 42.81 336 *e*P P 17 05 22.1 +2.8
JETT IAmb IAmb 17 05 23.0
comp=Z,24nm,0.9s
GERES GERESS Array B 42.91 305 P P 17 05 23.1 +2.6
comp=Z,0.2nm,0.5s,baz=68,slow=11,SNR=2.2
comp=Z,0.2nm,0.5s
TRO Tromso 43.32 336 *e*P P 17 05 25.7 +2.3
TRO IAmb IAmb 17 05 26.2
comp=Z,11nm,0.6s
FAUS Fauske 43.85 333 *e*P P 17 05 30.0 +2.4
FAUS IAmb IAmb 17 05 30.8
comp=Z,19nm,1.0s
MOR8 Moi Rana 43.86 331 *e*P P 17 05 29.5 +1.8
MOR8 IAmb IAmb 17 05 29.7
comp=Z,30nm,0.5s
STEI Steigen 44.02 333 *e*P P 17 05 31.4 +2.4
STEI IAmb IAmb 17 05 31.6
comp=Z,13nm,0.8s
YAK Yakutsk 44.10 35 P P 17 05 29.9 +0.2
comp=Z,2.8nm,0.5s,baz=333,slow=6.8,SNR=4.2
comp=Z,2.8nm,0.5s
NC405 NORSAR Array S 44.17 323 P P 17 05 31.9 +1.6
NC602 NORSAR Array S 44.22 323 P P 17 05 32.1 +1.5
NC602 NORSAR Array S 44.22 323 *e*P P 17 05 32.3 +1.7
NC303 NORSAR Array S 44.35 323 P P 17 05 33.2 +1.5
NC303 IAmb IAmb 17 05 34.7
comp=Z,14nm,0.8s
NB201 NORSAR Array S 44.37 323 P P 17 05 33.5 +1.6
NB2 NORSAR Subarra 44.40 323 P P 17 05 33.4 +1.2
comp=Z,9.6nm,0.9s,baz=97,slow=7.9
NB2 NORSAR Subarra 44.40 323 P P 17 05 33.4 +1.2
baz=97,slow=7.9
NOA NORSAR Array B 44.40 323 P P 17 05 33.5 +1.2
comp=Z,5.2nm,0.7s,baz=97,slow=7.8,SNR=39
comp=Z,5.2nm,0.7s
KONS Konsvik 44.45 331 *e*P P 17 05 34.7 +2.3
KONS IAmb IAmb 17 05 36.1
comp=Z,8.2nm,0.7s
NAO01 NORSAR Array S 44.55 323 P P 17 05 34.5 +1.3
NBO00 NORSAR Array S 44.62 323 P P 17 05 35.2 +1.4
NC204 NORSAR Array S 44.65 323 P P 17 05 35.2 +1.1
NC204 IAmb IAmb 17 05 36.1
comp=Z,13nm,0.8s
LOF Lofoten 44.69 333 *e*P P 17 05 35.5 +1.2
LOF IAmb IAmb 17 05 36.7
comp=Z,11nm,0.7s
TJN Taejon 44.89 72 P P 17 05 37.4 +1.1
TJN Taejon 44.89 72 P P 17 05 37.4 +1.1
TJN pmax pmax
comp=Z,140nm,1.3s
KS19 Wonju Array Si 44.94 71 P P 17 05 37.9 +1.1
KSAR Wonju Array Be 44.97 71 P P 17 05 38.3 +1.4
KSAR Wonju Array Be 44.97 71 P P 17 05 38.3 +1.4
KSRS Korea Array 45.00 71 P P 17 05 38.4 +1.3
comp=Z,1.0nm,0.4s,baz=282,slow=6.8,SNR=10.0
comp=Z,1.0nm,0.4s
KONO Kongsberg 45.10 321 *e*P P 17 05 37.3 -0.3
KLR Kul'dur 45.27 54 P P 17 05 40.9 +1.7
comp=Z,7nm,0.5s,baz=312,slow=14,SNR=2.4
comp=Z,0.7nm,0.5s
TIXI Tiksi 45.90 22 P P 17 05 44.9 +1.2
TIXI IAmb IAmb 17 05 49.6
comp=Z,21nm,1.5s
TIXI Tiksi 45.90 22 P P 17 05 44.9 +1.2
TIXI pmax pmax
comp=Z,21nm,1.5s
USRK Ussuriysk Ar. 46.30 61 P P 17 05 48.8 +1.5
comp=Z,1.1nm,0.7s,baz=269,slow=6.5,SNR=2.3
comp=Z,1.1nm,0.7s
SPB2 Spitsbergen Ar 47.56 347 P P 17 05 59.3 +2.6
SPA0 Spitsbergen Ar 47.57 347 *e*P P 17 05 59.1 +2.4
SPA0 IAmb IAmb 17 05 59.6
comp=Z,71nm,1.4s
SPITS Spitsbergen Ar 47.57 347 P P 17 05 59.4 +2.7
SPITS pmax pmax
comp=Z,63nm,1.3s
KMBO Kilima Mbogo 48.70 227 P P 17 06 08.3 +1.9
comp=Z,0.6nm,0.3s,baz=45,slow=16,SNR=2.2
comp=Z,0.6nm,0.3s
MJAR Matsushiro Ar 53.07 68 P P 17 06 38.2 -0.5
comp=Z,3.6nm,1.1s,baz=292,slow=9.3,SNR=5.2
comp=Z,3.6nm,1.1s
LEM Lembang 55.09 134 LR LR 17 32 43.7
comp=Z,233nm,21.6s,baz=6.0,slow=38
ESDC Sonseca Array 57.42 298 P P 17 07 11.1 +1.3
comp=Z,0.3nm,0.6s,baz=56,slow=7.8,SNR=5.9
comp=Z,0.3nm,0.6s
PETK Petropavlovsk- 60.10 44 P P 17 07 27.3 -0.7
comp=Z,0.9nm,0.9s,baz=268,slow=14,SNR=1.9
comp=Z,0.9nm,0.9s
SUMG Summit 61.12 341 P P 17 07 37.1 +2.0
SUMG IAmb IAmb 17 07 40.1
comp=Z,5.7nm,0.8s
SUMG Summit 61.12 341 P P 17 07 37.1 +2.0
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 61.12 341 *i* P P 17 07 37.0 +1.9
TOA0 Torodi Ar. Sit 65.62 269 P P 17 08 04.8 -0.3
TOA0 IAmb IAmb 17 08 10.7

comp=Z,4.6nm,1.2s
TORD Torodi Ar. Bea 65.62 269 P **P** **17 08 06.0 +1.0**
comp=Z,5.2nm,0.3s,baz=52,slow=5.5,SNR=1.1
MATP Matopo 69.28 223 P **P** **17 08 29.1 +1.2**
comp=Z,3.6nm,0.5s,baz=11,slow=6.6,SNR=19
comp=Z,3.6nm,0.5s
KOWA Kowa 69.48 273 P **P** **17 08 29.2 -0.1**
KOWA IAmb IAmb 17 09 01.9
comp=Z,6.5nm,1.2s
TOLK Toolik Lake Re 71.04 15 P **P** **17 08 38.8 +0.8**
TOLK IAmb IAmb 17 08 40.4
comp=Z,5.1nm,0.9s
A36M Sachs Harbour 71.31 5 P **P** **17 08 40.2 +0.7**
A36M IAmb IAmb 17 08 46.8
comp=Z,9.4nm,0.8s
IMAR Indian Mountai 72.29 18 P **P** **17 08 46.2 +0.8**
BMAR Burnt Mountain 73.06 14 P **P** **17 08 52.2 +2.2**
J20K Nowinta River 73.65 19 P **P** **17 08 54.9 +1.5**
H24K Noodor Dome 73.77 16 P **P** **17 08 55.5 +1.3**
C36M Paulatuk 73.98 5 P **P** **17 08 56.5 +1.3**
C36M IAmb IAmb 17 08 57.6
comp=Z,8.7nm,0.8s
INK Inuvik 74.02 9 P **P** **17 08 57.5 +2.0**
comp=Z,3.1nm,0.5s,baz=342,slow=7.8,SNR=7.6
comp=Z,3.1nm,0.5s
INK Inuvik 74.02 9 P **P** **17 08 57.1 +1.6**
INK IAmb IAmb 17 08 58.2
comp=Z,3.5nm,0.7s
K20K Telida 74.33 19 P **P** **17 08 58.9 +1.4**
K20K IAmb IAmb 17 09 02.9
comp=Z,4.9nm,1.1s
MDM Murphy Dome 74.44 16 P **P** **17 08 59.2 +1.1**
BPAW Bear Paw Mtn. 74.51 18 P **P** **17 08 58.3 -0.2**
LBTB Lobatse 74.55 222 P **P** **17 09 01.1 +1.9**
comp=Z,1.4nm,0.6s,baz=22,slow=12,SNR=1.9
comp=Z,1.4nm,0.6s
LBTB Lobatse 74.55 222 P **P** **17 09 00.5 +1.3**
LBTB IAmb IAmb 17 09 33.3
comp=Z,12nm,1.4s
NEA2 Nenana 74.56 17 P **P** **17 09 00.1 +1.4**
NEA2 IAmb IAmb 17 09 05.8
comp=Z,5.9nm,1.2s
CAST Castle Rocks 74.80 19 P **P** **17 09 01.5 +1.3**
CAST IAmb IAmb 17 09 07.7
comp=Z,5.9nm,0.9s
ILAR Eielson Array 74.90 16 P **P** **17 09 00.8 +0.1**
comp=Z,1.2nm,1.0s,baz=315,slow=3.8,SNR=7.1
comp=Z,1.2nm,1.0s
ILAR Eielson Array 74.90 16 P **P** **17 09 01.4 +0.7**
ILAR Eielson Array 74.90 16 P **P** **17 09 01.4 +0.7**
FITZ Fitzroy Crossi 74.91 126 P **P** **17 09 01.8 +0.5**
FITZ IAmb IAmb 17 09 06.6
comp=Z,9.8nm,1.5s
MTN Manton Dam 74.93 119 P **P** **17 09 01.8 +0.3**
MTN IAmb IAmb 17 09 14.2
comp=Z,18nm,1.4s
KNRA Kununurra 75.25 122 P **P** **17 09 03.8 +0.5**
KNRA IAmb IAmb 17 09 47.3
comp=Z,9.8nm,1.1s
J25K Salcha River, 75.36 15 P **P** **17 09 04.2 +0.8**
SCRK Sand Creek 76.21 15 P **P** **17 09 09.3 +1.0**
PAX Paxson 76.78 16 P **P** **17 09 12.5 +1.0**
PAX IAmb IAmb 17 09 12.9
comp=Z,6.9nm,1.4s
PAX Paxson 76.78 16 P **P** **17 09 12.5 +1.0**
PAX pmax pmax
comp=Z,7.0nm,1.4s
DAWY Dawson 77.04 13 P **P** **17 09 14.2 +1.4**
L27K Beaver Creek, 77.47 15 P **P** **17 09 17.1 +1.8**
BCAR Beaver Creek A 77.48 15 P **P** **17 09 17.2 +1.9**
BOSA Boshof 77.61 220 P **P** **17 09 17.8 +1.2**
comp=Z,2.2nm,0.9s,baz=33,slow=5.8,SNR=4.2
comp=Z,2.2nm,0.9s
BOSA Boshof 77.61 220 P **P** **17 09 17.9 +1.3**
BOSA IAmb IAmb 17 09 30.0
comp=Z,13nm,1.5s
BOSA Boshof 77.61 220 P **P** **17 09 17.9 +1.3**
BOSA pmax pmax
comp=Z,13nm,1.5s
MORW Morawa 77.73 141 P **P** **17 09 16.9 -0.1**
M27K Edge Creek, AK 78.10 15 P **P** **17 09 20.6 +1.7**
M27K IAmb IAmb 17 09 26.6
comp=Z,5.8nm,1.1s
M30M Minto, Yukon 78.88 13 P **P** **17 09 24.4 +1.4**
FARO Faro, Yukon 79.78 11 P **P** **17 09 29.6 +1.8**
YKA Yellowknife Ar 81.35 3 P **P** **17 09 37.6 +1.5**
comp=Z,2.8nm,0.8s,baz=351,slow=5.4,SNR=10
comp=Z,2.8nm,0.8s
YKA Yellowknife Ar 81.35 3 P **P** **17 09 38.3 +2.1**
YKA Yellowknife Ar 81.35 3 *i* P **P** **17 09 37.7 +1.5**
YKA pmax pmax
comp=Z,2.0nm,0.5s
P33M Teslin, Yukon 81.77 12 P **P** **17 09 39.8 +1.2**
P33M IAmb IAmb 17 09 40.7
comp=Z,6.1nm,1.1s
WB0 Warramunga Arr 81.93 122 P **P** **17 09 39.4 -0.4**
WRA Warramunga Arr 82.02 122 P **P** **17 09 39.9 -0.5**
comp=Z,1.5nm,0.5s,baz=326,slow=4.8,SNR=61
comp=Z,1.5nm,0.5s
WRA Warramunga Arr 82.02 122 P **P** **17 09 39.8 -0.5**
WRAB Tennant Creek 82.02 122 P **P** **17 09 39.7 -0.6**
WRAB IAmb IAmb 17 10 16.1
comp=Z,9.0nm,1.4s
WRAB Tennant Creek 82.02 122 P **P** **17 09 39.7 -0.6**
WRAB pmax pmax
comp=Z,9.0nm,1.4s
WR0 Warramunga Arr 82.17 122 P **P** **17 09 40.4 -0.7**
WR0 IAmb IAmb 17 09 47.2
comp=Z,12nm,1.4s
AS31 Alice Springs 84.27 125 P **P** **17 09 51.1 -0.7**
ASAR Alice Springs 84.27 125 P **P** **17 09 51.4 -0.5**
comp=Z,1.8nm,0.6s,baz=310,slow=5.1,SNR=37
comp=Z,1.8nm,0.6s
ASAR Alice Springs 84.27 125 P **P** **17 09 51.3 -0.6**
PLCA Paso Flores 149.71 250 PKPbc **PKiKP** **17 17 09.8 +0.1**
comp=Z,1.3nm,0.8s,baz=31,slow=11,SNR=4.1

*IDC **28** 16:58:44.6±0.8,23°.87S×82°.47E, h0km, mb4.0/11, mbtmp4.0/11, MS4.1/1, Error ellipse: s-maj=27.9km s-min=20.4km az=39.0*
*NEIC **28** 16:58:47.0±1.5,23°.8S±0°.2×82°.41E±0°.09, h10km±1km, mb4.5/8, Error ellipse: s-maj=28.1km s-min=14.4km az=178.0*
ISC 28 16:58:46.2±0.6, 23°.90S±0°.10×82°.5E±0°.1, h10km, n36, σ0s76/30, mb4.2/14, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**14.48**	**196**	Pn	**Pn**	**17 02 10.7**	**-0.6**
H08S2	**Diego Garcia H**	**18.79**	**328**	T	T	17 22 21.7	
	baz=151,slow=74,SNR=62						
H08S1	**Diego Garcia H**	**18.80**	**328**	T	T	17 22 24.8	
	baz=151,slow=74,SNR=59						
H08S3	**Diego Garcia H**	**18.81**	**328**	T	T	17 22 24.2	
	baz=151,slow=74,SNR=86						
H01W3	**Cape Leeuwin H**	**29.54**	**119**	T	T	17 35 37.6	
	baz=284,slow=75,SNR=5.3						
H01W2	**Cape Leeuwin H**	**29.55**	**119**	T	T	17 35 37.8	
	baz=284,slow=75,SNR=6.8						
H01W1	**Cape Leeuwin H**	**29.56**	**119**	T	T	17 35 39.1	
	baz=284,slow=75,SNR=6.9						
ASAR	**Alice Springs**	**46.82**	**101**	P	**P**	**17 07 16.6**	**+0.1**
	2.3nm,0.8s,baz=264,slow=7.5,SNR=37						
ASAR				PcP	**PcP**	**17 08 49.1**	**-0.6**
	0.2nm,0.6s,baz=242,slow=3.3,SNR=2.0						
	2.3nm,0.8s						
AS31	**Alice Springs**	**46.82**	**101**	P	**P**	**17 07 16.4**	**-0.1**
AS31				IAmb	IAmb	17 07 16.8	
	comp=Z,1.4nm,1.1s						
WRA	**Warramunga Arr**	**48.04**	**96**	P	**P**	**17 07 26.4**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=260,slow=8.2,SNR=20						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**48.04**	**96**	P	**P**	**17 07 26.7**	**+0.7**
WB2	**Warramunga Arr**	**48.05**	**96**	P	**P**	**17 07 26.7**	**+0.5**
WB2				IAmb	IAmb	17 07 53.5	
	comp=Z,6.7nm,1.3s						
WB0	**Warramunga Arr**	**48.13**	**96**	P	**P**	**17 07 27.1**	**+0.3**
WB0				IAmb	IAmb	17 07 58.3	
	comp=Z,4.3nm,1.1s						
SOE	**Somerset East**	**50.39**	**247**	P	**P**	**17 07 44.8**	**+0.9**
BOSA	**Boshof**	**51.15**	**252**	P	**P**	**17 07 49.6**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=104,slow=9.9,SNR=3.8						
	comp=Z,1.7nm,0.7s						
BOSA	**Boshof**	**51.15**	**252**	P	**P**	**17 07 49.9**	**+0.1**
	comp=Z,8.6nm,1.4s						
DAV	**Davao City (W)**	**52.10**	**59**	LR	LR	17 25 59.7	
	comp=Z,196nm,21.8s,baz=183,slow=31						
STKA	**Stephens Creek**	**52.29**	**113**	P	**P**	**17 07 58.2**	**0.0**
	comp=Z,2.1nm,0.9s,baz=248,slow=16,SNR=2.3						
	comp=Z,2.1nm,0.9s						
TROLL	**Troll, Antarti**	**64.38**	**200**	P	**P**	**17 09 23.0**	**+0.9**
SNAA	**Sanae**	**66.07**	**200**	P	**P**	**17 09 34.8**	**+1.8**
SNAA	**Sanae**	**66.07**	**200**	P	**P**	**17 09 33.5**	**+0.5**
QSPA	**South Pole Qui**	**66.21**	**180**	P	**P**	**17 09 34.2**	**+0.1**
	comp=Z,3.3nm,1.2s,baz=303,slow=4.4,SNR=3.8						
	comp=Z,3.3nm,1.2s						
QSPA	**South Pole Qui**	**66.21**	**180**	P	**P**	**17 09 32.9**	**-1.2**
QSPA				IAmb	IAmb	17 09 55.1	
	comp=Z,12nm,1.5s						
KKAR	**Karatay Array**	**67.58**	**351**	P	**P**	**17 09 43.9**	**+1.1**
VNA2	**Neumayer--Watz**	**67.61**	**201**	P	**P**	**17 09 42.6**	**-0.1**
	baz=87,slow=5.0						
VNA3	**Neumayer Olymp**	**68.29**	**200**	P	**P**	**17 09 47.9**	**+0.9**
MKAR	**Makanchi Array**	**70.36**	**360**	P	**P**	**17 10 00.4**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=199,slow=7.7,SNR=2.8						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**70.36**	**360**	P	**P**	**17 10 00.6**	**+0.6**
KURBB	**Kurchatov Arra**	**74.27**	**357**	P	**P**	**17 10 22.6**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=191,slow=5.9,SNR=4.6						
	comp=Z,0.7nm,0.9s						
SONM	**Songino Array**	**74.56**	**16**	P	**P**	**17 10 25.4**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=190,slow=7.3,SNR=2.1						
	comp=Z,0.3nm,0.7s						
ABKAR	**Akbulak array**	**75.55**	**345**	P	**P**	**17 10 29.1**	**-1.6**
ZALV	**Zalesovo Beam**	**77.55**	**1**	P	**P**	**17 10 41.2**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=172,slow=2.9,SNR=6.1						
	comp=Z,2.2nm,0.8s						
BRTR	**Keskin Array B**	**78.00**	**324**	P	**P**	**17 10 45.5**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=139,slow=4.7,SNR=4.6						
	comp=Z,1.1nm,0.9s						
AKASG	**Malin Array Be**	**87.87**	**329**	P	**P**	**17 11 35.2**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=129,slow=4.0,SNR=4.8						
	comp=Z,0.4nm,0.4s						
NVAR	**Mina Array Bea**	**157.12**	**46**	PKPab	**PKPab**	**17 19 13.9**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=284,slow=3.6,SNR=5.8						
PDAR	**Pinedale Array**	**158.69**	**25**	PKPab	**PKPab**	**17 19 19.0**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=336,slow=2.0,SNR=2.6						

*JMA **28** 17:15:31.4±0.1,39°.2N±0°.2×141°.2E±0°.3, h89km, MV3.1/40, SOUTHERN IWATE PREF*
*IDC **28** 17:15:40.6±8.9,38°.81N×139°.97E, h141km±39km, mb2.8/1, mbtmp3.2/3, Error ellipse: s-maj=159.1km s-min=39.0km az=76.0*
ISC 28 17:15:31.0±1.4, 39°.14N±0°.04×141°.23E±0°.07, h92km±9km, n15, σ0s72/27, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.18**	**182**	*i* P	**Pn**	**17 15 44.1**	**-0.1**
JMK				S	**Sn**	**17 15 53.5**	**-0.4**
JOM	**Ohasama**	**0.34**	**8**	*i* P	**Pn**	**17 15 45.0**	**+0.1**
JOM				S	**Sn**	**17 15 55.0**	**-0.2**
JRG	**Rokugo**	**0.53**	**300**	*i* P	**Pn**	**17 15 46.1**	**-0.1**
JRG				S	**Sn**	**17 15 57.4**	**-0.2**
JIO	**Ouri**	**0.69**	**172**	*i* P	**Pn**	**17 15 47.9**	**+0.3**
JIO				S	**Sn**	**17 16 00.0**	**+0.1**
JYK	**Kaneyama**	**0.71**	**252**	*i* P	**Pn**	**17 15 47.8**	**-0.1**
JYK				S	**Sn**	**17 16 00.0**	**-0.4**
JOU	**Okura**	**0.89**	**210**	*i* P	**Pn**	**17 15 50.1**	**+0.4**
JOU				S	**Sn**	**17 16 04.7**	**+1.1**
JAH	**Hinai**	**1.15**	**337**	P	**Pn**	**17 15 52.9**	**+0.4**
JAH				S	**Sn**	**17 16 09.1**	**+0.4**
JANG	**Nango**	**1.25**	**10**	P	**Pn**	**17 15 54.3**	**+0.5**
JANG				S	**Sn**	**17 16 11.1**	**+0.1**
JYS	**Shirataka**	**1.29**	**225**	*i* P	**Pn**	**17 15 54.8**	**+0.5**
JYS				S	**Sn**	**17 16 12.2**	**+0.4**
JYA	**Atsumi**	**1.30**	**246**	*i* P	**Pn**	**17 15 54.5**	**+0.1**
JYA				S	**Sn**	**17 16 11.6**	**-0.4**
JMM	**Marumori**	**1.31**	**195**	P	**Pn**	**17 15 54.9**	**+0.4**
JMM				S	**Sn**	**17 16 13.0**	**+0.7**
JAW	**Awa shima**	**1.69**	**247**	*i* P	**Pn**	**17 15 59.5**	**+0.3**
JAW				S	**Sn**	**17 16 20.8**	**+0.1**
MJAR	**Matsushiro Arr**	**3.52**	**224**	P	**Pn**	**17 16 23.4**	**-0.3**
	1.3nm,0.4s,baz=29,slow=14,SNR=13						
USRK	**Ussuriysk Ar.**	**8.57**	**309**	P	**Pn**	**17 17 34.8**	**+2.6**
	3.0nm,0.7s,baz=126,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	**42.91**	**300**	P	**P**	**17 23 19.4**	**-1.0**
	0.2nm,0.6s,baz=81,slow=9.2,SNR=4.0						
	0.2nm,0.6s						

*DJA **28** 17:19:52.8±0.2,0°.S±2°×12°.6E±°, h10km, M4.2/21, mb4.4/9, mB4.7/5, MLv4.3/21, Mw(mB)3.9/5*
*IDC **28** 17:19:55.8±2.7,0°.26S×125°.64E, h55km±27km, mb4.0/13, mbtmp4.2/17, ML3.9/4, MS3.4/7, Error ellipse: s-maj=21.0km s-min=12.8km az=75.0*
*NEIC **28** 17:19:56.6±1.7,0°.28S±0°.08×125°.81E±0°.05, h74km±10km, mb4.3/18, Error ellipse: s-maj=13.6km s-min=4.3km az=151.0*
ISC 28 17:19:54.5±0.4, 0°.25S±0°.05×125°.75E±0°.06, h49km, n81, σ1s85/87, mb4.3/27, MS3.5/8, 1C, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.80**	**103**	P	**Pn**	**17 20 23.8**	**+0.7**
SANI	**Sanana**	**1.81**	**172**	P	**Pn**	**17 20 21.6**	**-1.6**
SANI	**Sanana**	**1.81**	**172**	P	**Pn**	**17 20 25.7**	**+2.5**
TNTI	**Ternate**	**1.91**	**58**	Pn	**Pn**	**17 20 26.1**	**+1.5**
TNTI	**Ternate**	**1.91**	**58**	P	**Pn**	**17 20 26.2**	**+1.6**
TNTI	**Ternate**	**1.91**	**58**	P	**Pn**	**17 20 28.1**	**+3.5**
KMSI	**Cibinong**	**1.94**	**295**	P	**Pn**	**17 20 23.5**	**-1.5**
GTOI	**Gorontalo**	**2.87**	**288**	P	**Pn**	**17 20 40.3**	**+2.5**
LUWI	**Luwuk**	**3.08**	**255**	Pn	**Pn**	**17 20 43.2**	**+2.6**
LUWI	**Luwuk**	**3.08**	**255**	P	**Pn**	**17 20 43.5**	**+2.9**
LUWI	**Luwuk**	**3.08**	**255**	P	**Pn**	**17 20 45.4**	**+4.8**
NLAI	**Namlea**	**3.27**	**156**	P	**Pn**	**17 20 43.0**	**-0.2**
MRSI	**Marisa**	**3.87**	**281**	P	**Pn**	**17 20 51.2**	**-0.3**
SGSI	**Sangihe**	**3.91**	**357**	P	**Pn**	**17 20 53.7**	**+1.6**
APSI	**Ampana**	**4.15**	**261**	P	**Pn**	**17 20 55.3**	**0.0**
AAI	**Ambon**	**4.20**	**144**	P	**Pn**	**17 20 57.1**	**+1.0**
MSAI	**Masohi**	**4.43**	**134**	P	**Pn**	**17 21 00.5**	**+1.3**
SWI	**Sorong**	**5.55**	**96**	P	**Pn**	**17 21 16.1**	**+1.6**
	0.1nm16nm,1.0s						
SIJI	**Sorong**	**5.55**	**96**	P	**Pn**	**17 21 17.3**	**+2.6**
	1.7nm,0.3s,baz=265,slow=21,SNR=12						
	3.9nm,0.3s						
MPSI	**Mapaga**	**5.88**	**276**	P	**Pn**	**17 21 20.7**	**+1.7**
	0.3nm737nm666nm,0.9s						
BBSI	**Bau Bau**	**6.10**	**211**	P	**Pn**	**17 21 24.5**	**+2.4**
	0.0nm89nm10nm,0.8s						
TTSI	**Tana Toraja**	**6.54**	**245**	P	**Pn**	**17 21 28.1**	**-0.1**
	0.4nm740nm80nm,0.7s						
FAKI	**Fak Fak**	**7.02**	**112**	Pn	**Pn**	**17 21 34.4**	**-0.4**
FAKI	**Fak Fak**	**7.02**	**112**	P	**Pn**	**17 21 35.2**	**+0.4**
SPSI	**Sidrap Palu**	**7.02**	**238**	P	**Pn**	**17 21 36.3**	**+1.5**
	0.3nm705nm60nm,0.8s						
BKSI	**Bulukumba**	**7.55**	**228**	P	**Pn**	**17 21 43.3**	**+1.3**
	0.1nm308nm22nm,0.7s						
CTBH	**Cotabato--PC H**	**7.57**	**349**	⇑*i* P	**Pn**	**17 21 45.2**	**+3.0**
KAPI	**Kappang**	**7.63**	**232**	P	**Pn**	**17 21 43.8**	**+0.7**
	1.6nm,0.3s,baz=105,slow=12,SNR=4.2						
	4.7nm,0.3s						
MYLDM	**Lahad Datu**	**9.02**	**307**	Pn	**Pn**	**17 22 05.8**	**+3.6**
EDFI	**Ende, Flores**	**9.37**	**205**	P	**Pn**	**17 22 08.1**	**+1.1**
MTN	**Manton Dam**	**13.61**	**157**	Pn	**Pn**	**17 23 05.1**	**+0.1**
KNRA	**Kununurra**	**15.62**	**169**	P	**Pn**	**17 23 31.7**	**+0.2**
KNRA				IAmb	IAmb	17 23 35.2	
	comp=Z,25nm,1.1s						
KNRA	**Kununurra**	**15.62**	**169**	P	**Pn**	**17 23 31.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**17.74**	**180**	P	**P**	**17 23 58.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=10,slow=9.4,SNR=13						
	comp=Z,3.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.74**	**180**	P	**Pn**	**17 23 58.0**	**0.0**
FITZ	**Fitzroy Crossi**	**17.74**	**180**	P	**P**	**17 23 58.4**	**0.0**
LEM	**Lembang**	**19.23**	**250**	P	**P**	**17 24 14.1**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=134,slow=22,SNR=2.0						
	comp=Z,8.0nm,0.6s						
WB0	**Warramunga Arr**	**21.17**	**157**		**P**	**17 24 35.5**	**-0.4**
WB0				IAmb	IAmb	17 24 58.0	
	comp=Z,13nm,0.9s						
WRAB	**Tennant Creek**	**21.30**	**157**	P	**P**	**17 24 36.7**	**-0.5**
WRAB				IAmb	IAmb	17 24 42.0	
	comp=Z,13nm,0.9s						
WRAB	**Tennant Creek**	**21.30**	**157**	P	**P**	**17 24 36.7**	**-0.5**
WRA	**Warramunga Arr**	**21.31**	**157**	P	**P**	**17 24 37.0**	**-0.3**
	comp=Z,8.1nm,0.6s,baz=334,slow=11,SNR=74						
	comp=Z,8.1nm,0.6s						
WRA	**Warramunga Arr**	**21.31**	**157**	P	**P**	**17 24 35.9**	**-1.4**
WB2	**Warramunga Arr**	**21.31**	**157**		**P**	**17 24 36.8**	**-0.5**
WB2				IAmb	IAmb	17 24 42.1	
	comp=Z,16nm,0.9s						
WR0	**Warramunga Arr**	**21.40**	**157**	P	**P**	**17 24 37.7**	**-0.6**
WR0				IAmb	IAmb	17 24 43.1	
	comp=Z,9.8nm,0.9s						
MBWA	**Marble Bar**	**21.60**	**195**	P	**P**	**17 24 40.3**	**0.0**
MBWA				IAmb	IAmb	17 25 10.0	
	comp=Z,20nm,1.3s						
COEN	**Coen**	**21.98**	**129**	P	**P**	**17 24 45.0**	**+0.4**
COEN	**Coen**	**21.98**	**129**	P	**P**	**17 24 44.9**	**+0.4**
TPUB	**Ta-pu**	**23.93**	**348**	P	**P**	**17 25 03.1**	**-1.0**
QIS	**Mount Isa**	**24.32**	**147**	P	**P**	**17 25 09.0**	**+1.3**
SSLB	**Suanglung**	**24.34**	**349**	P	**P**	**17 25 05.9**	**-1.9**
AS31	**Alice Springs**	**24.59**	**162**	P	**P**	**17 25 11.0**	**+0.8**
ASAR	**Alice Springs**	**24.59**	**162**	P	**P**	**17 25 11.2**	**+1.0**
	comp=Z,6.8nm,0.8s,baz=344,slow=8.3,SNR=91						
ASAR				PcP	**PcP**	**17 28 48.2**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=354,slow=2.7,SNR=4.2						
ASAR				LR	LR	17 36 25.6	
	comp=Z,90nm,18.1s,baz=354,slow=40						
	comp=Z,6.8nm,0.8s						
ASAR	**Alice Springs**	**24.59**	**162**	P	**P**	**17 25 10.9**	**+0.7**
WRKA	**Warakurna**	**24.77**	**174**	P	**P**	**17 25 12.8**	**+1.0**
CTA	**Charters Tower**	**28.14**	**136**	LR	LR	17 38 47.0	
	comp=Z,124nm,19.2s,baz=307,slow=40						
CMAR	**Chiang Mai Arr**	**32.23**	**307**	P	**P**	**17 26 19.7**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=132,slow=8.8,SNR=6.6						
CMAR				LR	LR	17 39 20.3	
	comp=Z,20nm,22.0s,baz=125,slow=36						
	comp=Z,0.5nm,0.5s						
STKA	**Stephens Creek**	**34.85**	**156**	P	**P**	**17 26 42.4**	**+1.4**
	comp=Z,7.4nm,0.8s,baz=335,slow=10,SNR=12						
STKA				LR	LR	17 42 50.3	
	comp=Z,85nm,18.3s,baz=21,slow=39						
	comp=Z,7.4nm,0.8s						
STKA	**Stephens Creek**	**34.85**	**156**	P	**P**	**17 26 41.3**	**+0.3**
PZH	**PanZhiHua**	**35.24**	**321**	P	**P**	**17 26 45.3**	**+0.6**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,5.0s						
KSRS	**Korea Array**	**37.57**	**3**	P	**P**	**17 27 06.2**	**+2.0**
	comp=Z,2.5nm,0.6s,baz=183,slow=9.5,SNR=12						
	comp=Z,2.5nm,0.6s						
CAN	**Canberra**	**41.08**	**151**	P	**P**	**17 27 32.1**	**-1.5**
HHC	**Hu-ho-hao-te**	**42.89**	**344**	*e*P	**P**	**17 27 50.5**	**+2.2**
HHC				pmax	pmax		
	comp=Z,28nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,4.1s						
USRK	**Ussuriysk Ar.**	**44.60**	**6**	P	**P**	**17 28 02.8**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=178,slow=6.6,SNR=4.5						
	comp=Z,1.5nm,0.6s						
GTA	**Gaotai**	**46.05**	**332**	*e*P	**P**	**17 28 14.5**	**+0.9**
GTA				pP	pP	17 28 20.5	-5.7
GTA				sP	pwP	17 28 23.5	-5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GOMU	**GeErMu**	**46.27**	**325**	P	P	17 28 25.8	+10
GOMU				pP	pwP	17 28 30.5	-0.6
GOMU				sP	sP	17 28 31.3	-2.4
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,57nm,6.6s						
SONM	**Songino Array**	**50.76**	**343**	P	**P**	**17 28 50.3**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=159,slow=9.1,SNR=11						
	comp=Z,2.4nm,0.8s						
MSVF	**Nonsavu**	**54.26**	**112**	LR	LR	17 52 38.8	
	comp=Z,56nm,19.0s,baz=255,slow=36						
WMQ	**Urumqi**	**55.45**	**327**	*e*P	**P**	**17 29 27.0**	**+2.7**
PETK	**Petropavlovsk-**	**59.46**	**22**	P	**P**	**17 29 52.9**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=198,slow=6.2,SNR=11						
	comp=Z,4.1nm,0.9s						
MK31	**Makanchi Array**	**60.29**	**327**	P	**P**	**17 29 57.3**	**-0.8**
MK31				IAmb	IAmb	17 30 02.7	
	comp=Z,4.4nm,1.3s						
MKAR	**Makanchi Array**	**60.29**	**327**	P	**P**	**17 29 57.2**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=119,slow=8.9,SNR=23						
MKAR				LR	LR	17 57 22.4	
	comp=Z,54nm,21.5s,baz=162,slow=37						
	comp=Z,1.9nm,0.5s						
MKAR	**Makanchi Array**	**60.29**	**327**	P	**P**	**17 29 57.0**	**-1.1**
MAKZ	**Makanchi**	**60.47**	**327**	P	**P**	**17 29 57.1**	**-2.2**
MAKZ				IAmb	IAmb	17 30 03.3	
	comp=Z,2.6nm,0.9s						
YAK	**Yakutsk**	**62.19**	**2**	P	**P**	**17 30 10.9**	**+0.3**
	comp=Z,3.5nm,0.4s,baz=14,slow=2.7,SNR=8.4						
YAK				LR	LR	17 57 34.0	
	comp=Z,32nm,21.4s,baz=78,slow=36						
	comp=Z,3.5nm,0.4s						
ZALV	**Zalesovo Beam**	**63.69**	**334**	P	**P**	**17 30 19.9**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=116,slow=6.8,SNR=8.6						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**64.58**	**329**	P	**P**	**17 30 25.5**	**-1.1**
KURK				IAmb	IAmb	17 30 35.1	
	comp=Z,4.0nm,0.7s						
VNDA	**Vanda**	**79.64**	**173**	P	**P**	**17 31 57.4**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=338,slow=8.8,SNR=3.6						
	comp=Z,0.6nm,0.9s						
VNDA	**Vanda**	**79.64**	**173**	P	**P**	**17 31 55.7**	**-0.5**
KBZ	**Khabaz**	**84.99**	**314**	P	**P**	**17 32 25.4**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=104,slow=3.8,SNR=5.0						
	comp=Z,2.0nm,0.8s						
QSPA	**South Pole Qui**	**89.69**	**180**	P	**P**	**17 32 46.0**	**-1.1**
QSPA				IAmb	IAmb	17 33 05.1	
	comp=Z,4.6nm,1.1s						
MNK	**Minsk**	**94.78**	**325**	*i* P	**P**	**17 33 07.9**	**-2.9**
	comp=E,1.0nm,0.8s

JAB	**Ashibetsu**	**1.35**	**312**	*e*P		**Pn**	**17 28 06.7**	**+0.5**
JAB				*e*S		**Sn**	**17 28 24.6**	**+0.2**
JTKR	**Abashiri--Toko**	**1.38**	**9**	⇓P		**Pn**	**17 28 07.2**	**+0.6**
JTKR				⇓*e*S		**Sn**	**17 28 25.8**	**+0.8**
JKK2	**Kamakawa 2**	**1.41**	**334**	⇓P		**Pn**	**17 28 07.4**	**+0.4**
JMP	**Maruseppu**	**1.41**	**353**	⇓P		**Pn**	**17 28 07.4**	**+0.4**
JMP				⇓*e*S		**Sn**	**17 28 25.9**	**+0.1**
JEW	**Eniwo**	**1.60**	**279**	⇓*e*P		**Pn**	**17 28 10.3**	**+0.9**
JEW				⇓*e*S		**Sn**	**17 28 30.6**	**+0.6**
NMR	**Nemuro--Hokkai**	**1.74**	**63**	*e*P		**Pn**	**17 28 11.3**	**+0.3**
NMR				*e*S		**Sn**	**17 28 32.4**	**-0.6**
JISS	**Ishikarishitsu**	**1.74**	**293**	*e*P		**Pn**	**17 28 11.9**	**+0.8**
JISS				*e*S		**Sn**	**17 28 34.0**	**+0.9**
JHR	**Hokuryu**	**1.79**	**310**	*e*P		**Pn**	**17 28 12.6**	**+0.9**
JHR				*e*S		**Sn**	**17 28 35.3**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**2.18**	**48**	*e*P		**Pn**	**17 28 17.8**	**+1.0**
YUK				AMB	AMB		17 28 20.6	
	140nm,0.4s							
YUK				*e*S		**Sn**	**17 28 43.2**	**-0.1**
YUK				A	A		17 28 47.4	
	540nm,0.4s							
YUK				A	A		17 28 47.4	
	470nm,0.4s							
KUR	**Kuril'sk**	**4.05**	**48**	*e*P		**Pn**	**17 28 44.0**	**+2.2**
KUR				AMB	AMB		17 28 47.5	
	20nm,0.5s							
KUR				*e*S		**Sn**	**17 29 28.6**	**+0.5**
KUR				A	A		17 29 32.8	
	30nm,0.4s							
KUR				A	A		17 29 32.8	
	60nm,0.4s							
PETK	**Petropavlovsk-**	**14.11**	**37**	P		**Pn**	**17 30 56.2**	**-1.4**
	0.1nm,0.3s,baz=217,slow=11,SNR=4.4							
	0.4nm,0.4s							
SEY	**Seymchan**	**21.01**	**11**	P		**P**	**17 32 16.1**	**-1.6**
	2.8nm,0.6s,baz=171,slow=13,SNR=4.5							
	2.8nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**30.10**	**132**	T		T	18 05 20.8	
	baz=325,slow=75,SNR=30							
H11N1	**WAKE ISLAND Hy**	**30.11**	**132**	T		T	18 05 21.0	
	baz=325,slow=75,SNR=28							
H11N3	**WAKE ISLAND Hy**	**30.12**	**132**	T		T	18 05 16.2	
	baz=325,slow=75,SNR=26							
H11S1	**WAKE ISLAND Hy**	**30.99**	**134**	T		T	18 06 21.7	
	baz=326,slow=76,SNR=22							
H11S3	**WAKE ISLAND Hy**	**31.00**	**134**	T		T	18 06 22.7	
	baz=326,slow=76,SNR=15							
H11S2	**WAKE ISLAND Hy**	**31.01**	**134**	T		T	18 06 22.1	
	baz=326,slow=76,SNR=15							
MKAR	**Makanchi Array**	**42.81**	**298**	P		**P**	**17 35 29.9**	**-0.7**
	0.2nm,0.5s,baz=88,slow=9.0,SNR=2.4							
	0.2nm,0.5s							
ILAR	**Eielson Array**	**43.93**	**35**	P		**P**	**17 35 39.9**	**+0.6**
	0.4nm,0.7s,baz=252,slow=5.1,SNR=6.4							
	0.4nm,0.7s							
FINES	**FINESS Array B**	**64.69**	**332**	P		**P**	**17 38 09.1**	**-0.6**
	1.6nm,0.8s,baz=52,slow=9.0,SNR=9.8							
	1.6nm,0.8s							
TXAR	**Lajitas Array**	**85.43**	**54**	P		**P**	**17 40 10.7**	**+1.1**
	0.2nm,0.5s,baz=298,slow=3.8,SNR=3.7							
	0.2nm,0.5s							

ROM 28 17:32:25.2±0.1,42°780N±0°004×13°149E±0°007, h10km,ML2.5/7,2C-2D,Error ellipse: s-maj=0.6km s-min=0.3km az=76.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.14**	**13**	P	Pg	17 32 28.9	+0.3
MC2				S	Sg	17 32 31.8	+0.8
MC2				AML	AML		
	comp=E,1665μm,1.2s						
MC2				AML	AML		
	comp=N,1696μm,1.2s						
MMO1	**Montemonaco**	**0.18**	**48**	P	Pg	17 32 29.5	+0.4
MMO1				S	Sg	17 32 33.0	+1.2
MMO1				AML	AML		
	comp=E,411μm,0.7s						
MMO1				AML	AML		
	comp=N,460μm,0.4s						
LNSS	**Leonessa**	**0.20**	**204**	P	Pg	17 32 29.5	+0.1
LNSS				S	Sg	17 32 34.1	+1.8
LNSS				AML	AML		
	comp=E,495μm,0.4s						
LNSS				AML	AML		
	comp=N,549μm,0.2s						
LNSS				AML	AML		
	comp=E,11020μm,0.8s						
LNSS				AML	AML		
	comp=N,10130μm,0.1s						
T1243	**Rocca Santa Ma**	**0.24**	**111**	P	Pg	17 32 30.8	+0.6
T1243				S	Sg	17 32 34.8	+1.3
T1243				AML	AML		
	comp=E,424μm,0.3s						
T1243				AML	AML		
	comp=N,642μm,0.3s						
T1243				AML	AML		
	comp=E,18150μm,0.7s						
T1243				AML	AML		
	comp=N,14450μm,0.3s						
T1243				AML	AML		
	comp=E,18150μm,0.7s						
T1243				AML	AML		
	comp=N,14450μm,0.2s						
T1243				AML	AML		
	comp=N,14500μm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**350**	⇑P	Pg	17 32 31.2	+0.7
FDMO				S	Sb	17 32 35.4	-1.2
FDMO				AML	AML		
	comp=E,326μm,0.2s						
FDMO				AML	AML		
	comp=N,310μm,0.2s						
FDMO				AML	AML		
	comp=N,902μm,0.3s						
FDMO				AML	AML		
	comp=E,825μm,1.0s						
RM33	**Pellescritta (**	**0.28**	**170**	P	Pg	17 32 31.2	+0.4
RM33				S	Sb	17 32 36.2	-0.8
RM33				AML	AML		
	comp=E,343μm,0.2s						
RM33				AML	AML		
	comp=N,452μm,1.5s						
RM33				AML	AML		
	comp=E,350μm,0.2s						
RM33				AML	AML		
	comp=N,402μm,0.3s						
RM33				AML	AML		
	comp=E,7215μm,1.2s						
RM33				AML	AML		
	comp=N,5450μm,0.9s						
RM33				AML	AML		
	comp=E,7260μm,1.2s						
RM33				AML	AML		
	comp=N,5340μm,0.9s						
RM33				AML	AML		
	comp=N,5455μm,0.9s						
CAMP	**Campotosto**	**0.31**	**142**	P	Pg	17 32 31.5	0.0
CAMP				S	Sb	17 32 37.5	-0.6
CAMP				AML	AML		
	comp=E,2110μm,0.6s						
CAMP				AML	AML		
	comp=N,1495μm,0.6s						
ARRO	**Arrone**	**0.35**	**235**	P	Pg	17 32 32.7	+0.6
TERO	**Teramo**	**0.37**	**115**	P	Pg	17 32 32.3	-0.3
TERO				S	Sb	17 32 39.5	-0.2
TERO				AML	AML		
	comp=E,2125μm,0.2s						
TERO				AML	AML		
	comp=N,2465μm,0.2s						
TERO				AML	AML		
	comp=E,2375μm,0.2s						
TERO				AML	AML		
	comp=N,2790μm,0.1s						
TERO				AML	AML		
	comp=N,2470μm,0.2s						
ASSB	**Assisi San Ben**	**0.45**	**306**	P	Pg	17 32 34.1	+0.1
ASSB				S	Sb	17 32 41.1	-0.8
ASSB				AML	AML		
	comp=N,120μm,0.3s						
ASSB				AML	AML		
	comp=E,138μm,0.5s						
GIGS	**Gran Sasso**	**0.45**	**137**	P	Pg	17 32 34.6	+0.5
GIGS				AML	AML		
	comp=E,662μm,0.3s						
GIGS				AML	AML		
	comp=N,478μm,0.3s						
GIGS				AML	AML		
	comp=E,662μm,0.3s						
SNTG	**Esanatoglia**	**0.50**	**342**	P	Pg	17 32 35.5	+0.5
SNTG				S	Sb	17 32 43.0	-0.4
SNTG				AML	AML		
	comp=E,60μm,1.2s						
SNTG				AML	AML		
	comp=N,69μm,0.7s						
SNTG				AML	AML		
	comp=N,196μm,1.1s						
SNTG				AML	AML		
	comp=E,224μm,1.2s						
SNTG				AML	AML		
	comp=N,196μm,1.1s						
FIAM	**Fiamignano**	**0.51**	**183**	P	Pg	17 32 35.1	-0.1
FIAM				S	Sb	17 32 43.5	-0.3
FIAM				AML	AML		
	comp=E,1215μm,0.4s						
FIAM				AML	AML		
	comp=N,706μm,0.3s						
EL6	**Elcito**	**0.55**	**356**	⇑P	Pg	17 32 36.2	+0.2
EL6				S	Sb	17 32 45.9	+0.9
ATCC	**AVT- Casa Cast**	**0.55**	**317**	⇓P	Pg	17 32 36.1	+0.2
ATCC				AML	AML		
	comp=N,397μm,0.7s						
ATCC				AML	AML		
	comp=E,424μm,1.1s						
CING	**Cingoli**	**0.60**	**3**	⇓P	Pg	17 32 37.3	+0.4
CING				AML	AML		
	comp=N,392μm,0.1s						
CING				AML	AML		
	comp=E,382μm,0.2s						
VCEL	**Villa Celiera**	**0.64**	**127**	AML	AML		
	comp=N,1204μm,0.2s						
VCEL				AML	AML		
	comp=E,1058μm,0.4s						
VCEL				AML	AML		
	comp=N,1209μm,0.2s						
VCEL				AML	AML		
	comp=E,1060μm,0.4s						
MURB	**Monte Urbino**	**0.67**	**317**	AML	AML		
	comp=N,934μm,1.1s						
MURB				AML	AML		
	comp=E,644μm,0.4s						
MURB				AML	AML		
	comp=N,1113μm,1.0s						
MURB				AML	AML		
	comp=E,652μm,0.2s						
MURB				AML	AML		
	comp=N,933μm,1.1s						
ATVO	**AVT- Monte Val**	**0.81**	**318**	AML	AML		
	comp=N,72μm,0.9s						
ATVO				AML	AML		
	comp=E,98μm,1.1s						
PIEI	**Pieia**	**0.88**	**329**	AML	AML		
	comp=E,91μm,0.7s						
PIEI				AML	AML		
	comp=N,72μm,0.3s						

ROM 28 17:33:20.6±0.1,42°637N±0°004×13°252E±0°006, h11km,ML2.6/39,15C-14D,Error ellipse: s-maj=0.5km s-min=0.4km az=79.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.13**	**192**	⇑P	Pg	17 33 24.4	+0.6
RM33				S	Sg	17 33 26.9	+0.9
RM33				AML	AML		
	comp=E,7215μm,1.2s						
RM33				AML	AML		
	comp=N,5450μm,0.9s						
RM33				AML	AML		
	comp=E,7265μm,1.2s						
RM33				AML	AML		
	comp=N,5345μm,0.9s						
RM33				AML	AML		
	comp=E,7215μm,1.2s						
RM33				AML	AML		
	comp=N,5340μm,0.9s						
RM33				AML	AML		
	comp=E,7260μm,1.2s						
RM33				AML	AML		
	comp=N,5455μm,0.9s						
CAMP	**Campotosto**	**0.15**	**131**	⇑P	Pg	17 33 24.7	+0.5
CAMP				S	Sg	17 33 27.4	+0.7
CAMP				AML	AML		
	comp=E,2110μm,0.6s						
CAMP				AML	AML		
	comp=N,1495μm,0.6s						
T1243	**Rocca Santa Ma**	**0.16**	**68**	⇑P	Pg	17 33 24.6	+0.4
T1243				S	Sg	17 33 27.4	+0.6
T1243				AML	AML		
	comp=E,18150μm,0.7s						
T1243				AML	AML		
	comp=E,18200μm,0.7s						
T1243				AML	AML		
	comp=N,14450μm,0.3s						
T1243				AML	AML		
	comp=E,18150μm,0.7s						
T1243				AML	AML		
	comp=E,18200μm,0.7s						
T1243				AML	AML		
	comp=N,14500μm,0.2s						
T1243				AML	AML		
	comp=N,14450μm,0.2s						
LNSS	**Leonessa**	**0.16**	**258**	P	Pg	17 33 24.8	+0.6
LNSS				S	Sg	17 33 27.8	+1.0
NRCA	**Norcia**	**0.22**	**333**	⇓P	Pg	17 33 25.7	+0.4
NRCA				S	Sg	17 33 29.3	+0.8
NRCA				AML	AML		
	comp=E,16300μm,0.1s						
NRCA				AML	AML		
	comp=E,16350μm,0.1s						
NRCA				AML	AML		
	comp=E,17800μm,0.7s						
NRCA				AML	AML		
	comp=N,17900μm,1.0s						
NRCA				AML	AML		
	comp=E,16350μm,0.1s						
NRCA				AML	AML		
	comp=N,20350μm,1.0s						
TERO	**Teramo**	**0.26**	**93**	⇑P	Pg	17 33 26.2	+0.2
TERO				S	Sg	17 33 30.2	+0.6
TERO				AML	AML		
	comp=E,2130μm,0.2s						
TERO				AML	AML		
	comp=N,2470μm,0.2s						
TERO				AML	AML		
	comp=N,2790μm,0.1s						
TERO				AML	AML		
	comp=E,2375μm,0.2s						
TERO				AML	AML		
	comp=E,2125μm,0.2s						
TERO				AML	AML		
	comp=N,2465μm,0.2s						
MMO1	**Montemonaco**	**0.27**	**12**	P	Pg	17 33 26.5	+0.4
MMO1				S	Sg	17 33 30.9	+1.0
MC2	**Monte Cornacci**	**0.28**	**351**	P	Pg	17 33 26.2	-0.2
GIGS	**Gran Sasso**	**0.30**	**129**	⇑P	Pg	17 33 26.9	+0.1
GIGS				S	Sg	17 33 31.4	+0.7
GIGS				AML	AML		
	comp=N,478μm,0.3s						
GIGS				AML	AML		
	comp=E,662μm,0.3s						
GIGS				AML	AML		
	comp=E,662μm,0.3s						
FEMA	**Monte Fema**	**0.36**	**335**	P	Pg	17 33 28.1	+0.3
ARRO	**Arrone**	**0.36**	**261**	P	Pg	17 33 28.1	+0.3
FIAM	**Fiamignano**	**0.38**	**195**	⇑P	Pg	17 33 28.4	+0.2
FIAM				S	Sb	17 33 34.4	-1.0
FIAM				AML	AML		
	comp=E,1215μm,0.4s						
FIAM				AML	AML		
	comp=N,706μm,0.3s						
FDMO	**Fiordimonte**	**0.42**	**343**	P	Pg	17 33 29.1	+0.3
FDMO				S	Sb	17 33 35.8	-0.7
FDMO				AML	AML		
	comp=E,825μm,1.0s						
FDMO				AML	AML		
	comp=N,902μm,0.3s						
OFFI	**Offida**	**0.44**	**47**	⇑P	Pb	17 33 30.3	-0.1
OFFI				AML	AML		
	comp=E,2140μm,0.5s						
OFFI				AML	AML		
	comp=N,3075μm,0.5s						
FAGN	**Fagnano**	**0.45**	**146**	P	Pg	17 33 29.7	+0.3
FAGN				AML	AML		
	comp=E,1195μm,0.3s						
FAGN				AML	AML		
	comp=N,893μm,0.3s						
CSP1	**Cessapalombo**	**0.46**	**356**	P	Pg	17 33 29.8	+0.2
CSP1				S	Sb	17 33 36.9	-0.8
CESX	**Cesi**	**0.50**	**267**	P	Pg	17 33 30.2	-0.1
CESX				AML	AML		
	comp=N,958μm,0.2s						
CESX				AML	AML		
	comp=E,565μm,1.0s						
VCEL	**Villa Celiera**	**0.50**	**119**	P	Pg	17 33 30.8	+0.4
VCEL				S	Sb	17 33 39.0	+0.2
VCEL				AML	AML		
	comp=E,1055μm,0.4s						
VCEL				AML	AML		
	comp=N,1208μm,0.2s						
VCEL				AML	AML		
	comp=E,1058μm,0.4s						
VCEL				AML	AML		
	comp=N,1204μm,0.2s						
VCEL				AML	AML		
	comp=E,1060μm,0.4s						
VCEL				AML	AML		
	comp=N,1209μm,0.2s						
TRTR	**Tortoreto Alta**	**0.52**	**70**	⇑P	Pb	17 33 32.0	+0.3
TRTR				AML	AML		
	comp=E,1180μm,0.3s						
TRTR				AML	AML		
	comp=N,950μm,1.2s						
MNTP	**Montappone**	**0.53**	**18**	P	Pb	17 33 31.5	-0.4
MNTP				AML	AML		
	comp=N,2275μm,0.2s						
MNTP				AML	AML		
	comp=N,2280μm,0.2s						
MNTP				AML	AML		
	comp=E,2455μm,0.6s						
T0110	**Collepietro**	**0.57**	**136**	P	Pg	17 33 31.6	0.0
T0110				AML	AML		
	comp=N,814μm,0.4s						
T0110				AML	AML		
	comp=E,908μm,0.4s						
T0110				AML	AML		
	comp=N,814μm,0.4s						
SNTG	**Esanatoglia**	**0.66**	**340**	⇑P	Pg	17 33 33.1	-0.3
SNTG				AML	AML		
	comp=E,224μm,1.2s						
SNTG				AML	AML		
	comp=N,196μm,1.1s						
SNTG				AML	AML		
	comp=N,196μm,1.1s						
SRES	**S.Oreste - Sor**	**0.68**	**234**	P	Pg	17 33 33.8	0.0
SRES				AML	AML		
	comp=E,212μm,0.7s						
SRES				AML	AML		
	comp=N,174μm,0.4s						
SRES				AML	AML		
	comp=N,173μm,0.4s						
EL6	**Elcito**	**0.70**	**351**	⇑P	Pg	17 33 34.1	-0.2
ATCC	**AVT- Casa Cast**	**0.71**	**321**	P	Pg	17 33 34.3	0.0
ATCC				AML	AML		
	comp=E,476μm,0.6s						
ATCC				AML	AML		
	comp=N,397μm,0.7s						
CERT	**Certeto**	**0.72**	**196**	P	Pg	17 33 34.0	-0.5
CERT				AML	AML		
	comp=E,374μm,0.4s						
CERT				AML	AML		
	comp=N,308μm,0.4s						
MTCE	**Montecelio**	**0.72**	**212**	P	Pg	17 33 34.0	-0.6
MTCE				AML	AML		
	comp=E,308μm,0.5s						
MTCE				AML	AML		
	comp=N,204μm,1.3s						
CING	**Cingoli**	**0.74**	**357**	P	Pg	17 33 34.8	-0.1
CING				AML	AML		
	comp=N,392μm,0.1s						
CING				AML	AML		
	comp=E,382μm,0.2s						
PP3	**Marolino**	**0.79**	**19**	⇓P	Pb	17 33 36.7	+0.4
PP3				AML	AML		
	comp=E,1094μm,0.6s						
PP3				AML	AML		
	comp=N,1030μm,0.4s						
PP3				AML	AML		
	comp=N,1018μm,0.4s						
PP3				AML	AML		
	comp=E,1094μm,0.6s						
PP3				AML	AML		
	comp=N,1035μm,0.4s						
PP3				AML	AML		
	comp=E,1120μm,0.6s						
PP3				AML	AML		
	comp=N,1016μm,0.4s						
INTR	**Introdacqua**	**0.79**	**142**	⇑P	Pg	17 33 35.3	-0.6
INTR				AML	AML		
	comp=E,179μm,0.9s						
INTR				AML	AML		
	comp=N,333μm,0.6s						
MURB	**Monte Urbino**	**0.82**	**320**	⇓P	Pg	17 33 36.4	-0.1
MURB				AML	AML		
	comp=N,933μm,1.1s						
MURB				AML	AML		
	comp=E,748μm,0.4s						
MURB				AML	AML		
	comp=N,934μm,1.1s						
RCAV	**Rocca di Cave**	**0.82**	**196**	P	Pb	17 33 37.5	+0.6
RCAV				AML	AML		
	comp=E,499μm,0.4s						
RCAV				AML	AML		
	comp=N,714μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.87**	**311**	P	Pg	17 33 37.1	-0.3
ATTE				AML	AML		
	comp=E,178μm,0.9s						
ATTE				AML	AML		
	comp=N,171μm,0.7s						
SSFR	**Montelago di S**	**0.87**	**337**	⇓P	Pg	17 33 37.6	+0.2
SSFR				AML	AML		
	comp=N,664μm,0.2s						
SSFR				AML	AML		
	comp=E,486μm,0.2s						
SSFR				AML	AML		
	comp=N,567μm,0.2s						
SSFR				AML	AML		
	comp=E,486μm,0.7s						
MGAB	**Montegabbione**	**0.88**	**289**	P	Pg	17 33 37.6	-0.1
MGAB				AML	AML		
	comp=E,470μm,0.7s						
MGAB				AML	AML		
	comp=E,535μm,0.4s						
MGAB				AML	AML		
	comp=N,508μm,0.3s						
MGAB				AML	AML		
	comp=N,446μm,0.3s						
ARVD	**Arcevia**	**0.89**	**345**	P	Pb	17 33 38.3	+0.2
ARVD				S	Sn	17 33 52.0	-0.1
ARVD				AML	AML		
	comp=E,162μm,0.8s						
ARVD				AML	AML		
	comp=N,104μm,1.0s						
ATMI	**Monte Miggiano**	**1.00**	**314**	⇓P	Pn	17 33 42.5	+1.8
ATMI				AML	AML		
	comp=N,383μm,0.9s						
ATMI				AML	AML		
	comp=E,452μm,1.2s						
COR1	**Corinaldo**	**1.01**	**350**	⇓P	Pn	17 33 40.9	+0.1
SACS	**San Casciano d**	**1.01**	**283**	P	Pg	17 33 40.1	0.0
SACS				AML	AML		
	comp=N,230μm,0.4s						
SACS				AML	AML		
	comp=E,129μm,0.7s						
PIEI	**Pieia**	**1.04**	**330**	⇑P	Pn	17 33 41.2	-0.1
PIEI				AML	AML		
	comp=E,136μm,0.3s						
PIEI				AML	AML		
	comp=N,149μm,1.0s						
MPAG	**Monte Paganucc**	**1.05**	**340**	⇓P	Pn	17 33 41.5	0.0
GIUL	**Giuliano Di Ro**	**1.08**	**180**	⇓P	Pn	17 33 43.2	+1.4
GIUL				AML	AML		
	comp=N,115μm,0.8s						
GIUL				AML	AML		
	comp=E,100μm,1.6s						
NARO	**Abbazia di Nar**	**1.09**	**333**	⇓P	Pn	17 33 44.2	+2.3
NARO				AML	AML		
	comp=N,76μm,0.8s						
NARO				AML	AML		
	comp=E,93μm,0.6s						

TOLF	**Tolfa**	**1.09**	**239**	⇓P	Pb	17 33 40.6	-1.0
TOLF				AML	AML		
	comp=N,106μm,0.8s						
TOLF				AML	AML		
	comp=E,107μm,1.3s						
FSSB	**Fossombrone**	**1.11**	**342**	⇑P	Pn	17 33 43.2	+1.0
FSSB				AML	AML		
	comp=E,255μm,0.5s						
FSSB				AML	AML		
	comp=N,332μm,0.4s						
PE3	**Peglio**	**1.19**	**333**	⇓P	Pg	17 33 45.2	+1.6
SF01	**Poggio Pratacc**	**1.26**	**279**	P	Pb	17 33 44.5	+0.1
CRE	**Caprese Michel**	**1.37**	**316**	⇓P	Pg	17 33 47.3	+0.4
CRE				S	Sn	17 34 04.0	0.0
CRE				AML	AML		
	comp=N,81μm,0.2s						
CRE				AML	AML		
	comp=E,45μm,0.4s						
TREM	**Isole Tremiti**	**1.75**	**106**	⇑P	Pb	17 33 53.1	+0.3
TREM				AML	AML		
	comp=E,116μm,0.7s						
TREM				AML	AML		
	comp=N,130μm,0.7s						
LMD	**Lutirano**	**1.83**	**322**	S	Sg	17 34 23.0	+3.6
DUGI	**Dugi Otok**	**1.89**	**44**	*e*Pn	Pn	17 33 53.2	+0.3
SGRT	**San Giovanni R**	**2.05**	**115**	⇓P	Pb	17 33 57.0	-0.9
SGRT				AML	AML		
	comp=E,69μm,0.8s						
SGRT				AML	AML		
	comp=N,46μm,1.1s						
VIRC	**Vir**	**2.11**	**38**	*e*Pn	Pn	17 33 56.2	+0.3
MORI	**Morici**	**2.17**	**55**	*e*Pn	Pn	17 33 57.7	+0.9
NVLJ	**Novalja**	**2.26**	**31**	*e*Pn	Pn	17 33 58.3	+0.4
BRJN	**Brijuni**	**2.30**	**9**	*e*Pn	Pn	17 33 58.8	+0.4
ZCCA	**Zocca**	**2.38**	**317**	S	Sb	17 34 31.0	-2.0
BDI	**Bagni Di Lucca**	**2.40**	**307**	S	Sn	17 34 29.0	-0.5
HVAR	**Hvar**	**2.41**	**76**	*e*Pn	Pn	17 34 00.4	+0.3
SMRN	**Sveta Marina**	**2.48**	**15**	*e*Pn	Pn	17 34 01.1	+0.1
UDBI	**Udbina**	**2.63**	**43**	*e*Pn	Pn	17 34 04.7	+1.6
KIJV	**Kijevo**	**2.68**	**58**	*e*Pn	Pn	17 34 05.2	+1.5
LSTV	**Lastovo**	**2.69**	**86**	*e*Pn	Pn	17 34 04.2	+0.4
A250A	**Rusevo Krmpots**	**2.72**	**26**	*e*Pn	Pn	17 34 05.2	+0.8
CAVE	**Cavezzo**	**2.76**	**325**	S	Sb	17 34 46.0	+2.2
NDIM	**Novi di Modena**	**2.82**	**324**	⇓P	Pb	17 34 08.9	-2.2
BOJS	**Bojanci**	**3.21**	**26**	P	Pb	17 34 16.9	-0.8
STON	**Ston**	**3.28**	**84**	*e*Pn	Pn	17 34 11.3	-0.7
RNCA	**Ronca, Sant'Ol**	**3.62**	**302**	S	Sb	17 35 08.0	-0.7
MAGA	**Magasa**	**3.66**	**330**	⇑P	Pn	17 34 18.7	+1.4
PTCC	**Patocco-Chiusa**	**3.77**	**1**	S	Sb	17 35 12.0	-0.9
TDS	**Terranova Siba**	**3.78**	**141**	S	Sn	17 35 05.0	+1.7
ZONE	**Zone**	**3.85**	**325**	P	Pg	17 34 34.5	+0.1
MOSL	**Moslavina**	**3.90**	**39**	*e*Pn	Pn	17 34 20.5	0.0

*IDC **28** 17:33:49.0±3.6,5.°90S×154.°07E,h51km±30km,mb3.6/9, mbtmp3.9/10,ML3.7/1,MS3.2/2,Error ellipse: s-maj=34.4km s-min=19.3km az=66.0*

ISC 28 17:33:48.6±1.2,5.°9S±0.°2×154.°1E±0.°2,h48km,n13, σ0.°79/12,mb3.7/8,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.59**	**306**	P	**Pn**	**17 34 28.6**	**+0.5**
	15nm,0.3s,baz=315,slow=3.5,SNR=28						
KRVT				S	Sn	17 35 10.7	+12
	398nm,0.5s,baz=128,slow=18,SNR=8.1						
	28nm,0.3s						
DZM	**Mont Dzumac**	**20.04**	**145**	P	**P**	**17 38 18.0**	**+0.1**
	4.2nm,0.5s,baz=305,slow=10,SNR=7.7						
	4.2nm,0.5s						
SIJI	**Sorong**	**23.34**	**281**	P	**P**	**17 38 51.8**	**-1.1**
	2.6nm,0.6s,baz=65,slow=11,SNR=4.1						
	2.6nm,0.6s						
WRA	**Warramunga Arr**	**23.78**	**232**	P	**P**	**17 38 56.6**	**-0.4**
	1.1nm,0.5s,baz=58,slow=9.4,SNR=34						
WRA				PcP	**PcP**	**17 42 39.5**	**-0.3**
	1.3nm,0.7s,baz=59,slow=2.3,SNR=5.8						
WRA				LR	LR	17 48 02.9	
	comp=Z,81nm,18.4s,baz=234,slow=36						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.30**	**226**	P	**P**	**17 39 18.8**	**-1.2**
	0.6nm,0.4s,baz=55,slow=9.1,SNR=39						
ASAR				PcP	**PcP**	**17 42 45.1**	**-0.3**
	1.4nm,0.6s,baz=59,slow=2.4,SNR=23						
	0.6nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.19**	**27**	T	T	18 07 46.5	
	baz=208,slow=76,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**27.20**	**27**	T	T	18 07 50.8	
	baz=208,slow=76,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**27.21**	**27**	T	T	18 07 46.1	
	baz=208,slow=76,SNR=8.4						
STKA	**Stephens Creek**	**28.41**	**203**	P	**P**	**17 39 40.0**	**+1.3**
	1.6nm,0.9s,baz=33,slow=14,SNR=3.1						
	1.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.52**	**295**	P	**P**	**17 43 48.1**	**+0.7**
	0.7nm,0.5s,baz=112,slow=5.1,SNR=7.8						
CMAR				LR	LR	18 10 21.9	
	comp=Z,13nm,18.5s,baz=220,slow=37						
	0.7nm,0.5s						
SONM	**Songino Array**	**67.92**	**327**	P	**P**	**17 44 42.3**	**-0.2**
	0.3nm,0.4s,baz=135,slow=9.7,SNR=2.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**81.98**	**319**	P	**P**	**17 46 03.4**	**-0.1**
	0.3nm,0.5s,baz=125,slow=6.4,SNR=2.9						
	0.3nm,0.5s						
QSPA	**South Pole Qui**	**84.11**	**180**	P	**P**	**17 46 13.8**	**-0.5**
	2.3nm,0.7s,baz=312,slow=0.7,SNR=28						
	2.3nm,0.7s						

*WEL **28** 17:43:22.4±1.2,47.°5±5.°×16.°7E±.°,h50km±10km,M4.0/8, ML4.2/8,MLv4.0/8,Error ellipse: s-maj=0.0km s-min=0.0km az=66.4*

*NOU **28** 17:43:42.5,45.°25S×168.°62E,h0km,mb4.7/7,South Island, New Zealand*

ISC 28 17:43:20.6±3.3,46.°6S±0.°1×166.°5E±0.°1,h82km±15km,n43, σ1.°17/60,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	**0.41**	**15**	P	**Pn**	**17 43 33.7**	**-0.2**
PYZ				S	**Sn**	**17 43 42.5**	**-1.2**
APZ	**The Paps**	**1.04**	**106**	P	**Pn**	**17 43 41.2**	**+0.9**
APZ				S	**Sn**	**17 43 54.9**	**-0.2**
DCZ	**Deep Cove**	**1.18**	**22**	P	**Pn**	**17 43 42.4**	**+0.4**
DCZ				S	**Sn**	**17 43 58.1**	**+0.1**
WHZ	**Wether Hill Ro**	**1.19**	**56**	P	**Pn**	**17 43 42.8**	**+0.7**
WHZ				S	**Sn**	**17 43 59.0**	**+0.7**
MLZ	**Mavora Lakes**	**1.63**	**44**	P	**Pn**	**17 43 49.1**	**+1.3**
MLZ				S	**Sn**	**17 44 09.9**	**+1.6**
SYZ	**Scrubby Hill**	**1.80**	**90**	P	**Pn**	**17 43 51.3**	**+1.4**
SYZ				S	**Sn**	**17 44 13.5**	**+1.3**
MSZ	**Milford Sound**	**2.13**	**28**	P	**Pn**	**17 43 55.1**	**+0.8**
MSZ				S	**Sn**	**17 44 20.9**	**+1.0**
TUZ	**Tuapeka**	**2.24**	**75**	P	**Pn**	**17 43 56.8**	**+1.1**
TUZ				S	**Sn**	**17 44 22.8**	**+0.2**
EAZ	**Earnscleugh**	**2.35**	**57**	P	**Pn**	**17 43 58.2**	**+0.9**
EAZ				S	**Sn**	**17 44 25.6**	**+0.3**
WKZ	**Wanaka**	**2.46**	**46**	P	**Pn**	**17 44 00.5**	**+1.7**
WKZ				S	**Sn**	**17 44 30.0**	**+2.1**
HHSZ	**Highcliff Hill**	**2.91**	**78**	P	**Pn**	**17 44 06.2**	**+1.4**
HHSZ				S	**Sn**	**17 44 38.2**	**-0.5**
JCZ	**Jackson Bay**	**2.95**	**33**	P	**Pn**	**17 44 07.0**	**+1.6**
JCZ				S	**Sn**	**17 44 42.1**	**+2.1**
ODZ	**Otahua Downs**	**3.26**	**64**	P	**Pn**	**17 44 09.0**	**-0.5**
ODZ				S	**Sn**	**17 44 45.6**	**-1.6**
ODZ	**Otahua Downs**	**3.26**	**64**	P	**Pn**	**17 44 09.0**	**-0.5**
LBZ	**Lake Benmore**	**3.37**	**51**	P	**Pn**	**17 44 10.4**	**-0.6**
FOZ	**Fox Glacier**	**3.82**	**39**	P	**Pn**	**17 44 17.4**	**+0.3**
FOZ				S	**Sn**	**17 45 00.9**	**+0.1**
TMZ	**Timaru**	**3.83**	**57**	P	**Pn**	**17 44 16.2**	**-1.1**
ARCZ	**Arundel**	**4.20**	**53**	P	**Pn**	**17 44 20.7**	**-1.6**
ARCZ				S	**Sn**	**17 45 07.8**	**-2.3**
GCSZ	**Gaunt Creek Bo**	**4.22**	**41**	P	**Pn**	**17 44 22.4**	**-0.1**
GCSZ				S	**Sn**	**17 45 08.9**	**-1.7**
RPZ	**Rata Peaks**	**4.29**	**50**	P	**Pn**	**17 44 21.8**	**-1.6**
RPZ				S	**Sn**	**17 45 10.7**	**-1.5**
RPZ	**Rata Peaks**	**4.29**	**50**	P	**Pn**	**17 44 22.0**	**-1.4**
WACZ	**Wakanui South**	**4.58**	**57**	P	**Pn**	**17 44 26.4**	**-0.9**
WVZ	**Waitaha Valley**	**4.60**	**42**	P	**Pn**	**17 44 27.5**	**-0.1**
RACZ	**Rakaia**	**4.88**	**57**	P	**Pn**	**17 44 30.4**	**-1.1**
OXZ	**Oxford**	**5.08**	**52**	P	**Pn**	**17 44 32.8**	**-1.4**
MQZ	**McQueen's Vall**	**5.19**	**59**	P	**Pn**	**17 44 34.5**	**-1.3**
INZ	**Inchbonnie**	**5.20**	**44**	P	**Pn**	**17 44 35.1**	**-0.7**
OKCZ	**Okains Bay**	**5.42**	**61**	P	**Pn**	**17 44 39.7**	**+0.8**
AMCZ	**Amberley**	**5.51**	**54**	P	**Pn**	**17 44 41.0**	**+0.9**
LTZ	**Lake Taylor**	**5.57**	**49**	P	**Pn**	**17 44 39.5**	**-1.5**
GVZ	**Greta Valley S**	**5.86**	**55**	P	**Pn**	**17 44 43.3**	**-1.7**
DSZ	**Denniston Nort**	**6.13**	**40**	P	**Pn**	**17 44 47.6**	**-1.0**
KHZ	**Kahutara**	**6.50**	**53**	P	**Pn**	**17 44 52.9**	**-0.8**
KHZ	**Kahutara**	**6.50**	**53**	P	**Pn**	**17 44 52.7**	**-0.9**
THZ	**Tophouse**	**6.64**	**46**	P	**Pn**	**17 44 54.3**	**-1.2**
MRNZ	**Matariki Terra**	**6.84**	**43**	P	**Pn**	**17 44 57.9**	**-0.4**
QRZ	**Quartz Range**	**7.20**	**39**	P	**Pn**	**17 45 02.6**	**-0.4**
QRZ	**Quartz Range**	**7.20**	**39**	P	**Pn**	**17 45 02.7**	**-0.4**
NNZ	**Nelson**	**7.28**	**45**	P	**Pn**	**17 45 05.6**	**+1.3**
TCW	**Tory Channel**	**7.74**	**49**	P	**Pn**	**17 45 11.3**	**+0.7**
HIZ	**Hauiti**	**10.12**	**40**	P	**Pn**	**17 45 42.2**	**-0.7**
URZ	**Urewera**	**11.39**	**47**	P	**Pn**	**17 45 59.1**	**-1.2**
OUZ	**Omahuta**	**12.52**	**28**	P	**Pn**	**17 46 17.0**	**+1.4**

*KRNET **28** 17:53:30.3±0.1,39.°42N×73.°80E,mb3.4*
*SOME **28** 17:53:37.7,39.°88N×73.°20E,h0km*
*NNC **28** 17:53:38.7±1.7,39.°84N×73.°23E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=15.4km s-min=8.0km az=175.0*

ISC 28 17:53:36.5±1.3,39.°77N±0.°07×73.°33E±0.°04,h10km,n21, σ2.°25/37,16C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.86**	**331**	⇑*i*P	**Pn**	**17 53 55.5**	**+0.7**
	baz=25						
OHH				⇑*i*S	**Sn**	**17 54 13.8**	**+6.3**
	baz=25						
BTK	**Batken**	**1.95**	**279**	⇑*i*P	**Pb**	**17 54 11.9**	**-0.3**
	baz=86						
BTK				⇑*i*S	**Sg**	**17 54 42.2**	**+2.9**
	baz=86						
ARLS	**Aral**	**2.22**	**20**	⇓*i*P	**Pn**	**17 54 12.8**	**-0.7**
	baz=9.0						
ARLS				⇓*i*S	**Sb**	**17 54 43.9**	**-0.5**
	baz=9.0						
TRKS	**Terek-Say**	**2.42**	**317**	⇑*i*P	**Pb**	**17 54 18.6**	**-1.7**
	baz=16						
TRKS				⇑*i*S	**Sg**	**17 54 53.7**	**-0.6**
	baz=16						
GAR	**Garm**	**2.46**	**253**	⇑*i*P	**Pn**	**17 54 16.8**	**0.0**
	baz=62						
GAR				⇑*i*S	**Sb**	**17 54 50.7**	**-0.6**
	baz=62						
CHMS	**Chumysh**	**3.40**	**18**	⇓Pn	**Pn**	**17 54 32.4**	**+2.8**
	2.0nm,0.4s						
CHMS				⇑Lg	Lg	17 55 26.4	
	7.7nm,0.6s						
IUG	**Iuzhnay**	**3.45**	**315**	*e*P	**Pb**	**17 54 38.1**	**+0.4**
	124nm,0.5s						
IUG				*e*S	**Sg**	**17 55 22.2**	**-5.0**
	16nm,0.4s						
IUG	**Iuzhnay**	**3.45**	**315**	Pg	**Pb**	**17 54 38.1**	**+0.4**
	124nm,0.5s						
IUG				Lg	Lg	17 55 22.2	
	16nm,0.4s						
TKM2	**Tokmak 2**	**3.58**	**28**	⇑Pn	**Pn**	**17 54 34.5**	**+2.2**
	3.0nm,0.9s						
TKM2				⇑Pg	**Pg**	**17 54 44.1**	**-0.9**
	2.4nm,0.7s						
TKM2				⇑Lg	Lg	17 55 31.5	
	5.8nm,0.8s						
SGDS	**Sogindy**	**3.81**	**14**	*e*P	**Pg**	**17 54 48.5**	**-0.9**
	1.8nm,0.3s						
SGDS				*e*S	**Sg**	**17 55 39.5**	**+0.8**
	6.0nm,0.6s						
KST	**Kastek**	**3.82**	**30**	*e*P	**Pg**	**17 54 47.9**	**-1.8**
	2.8nm,0.8s						
KST				*e*S	**Sg**	**17 55 38.6**	**-0.6**
	5.0nm,0.5s						
KST	**Kastek**	**3.82**	**30**	Pg	**Pg**	**17 54 47.9**	**-1.8**
	2.8nm,0.8s						
KST				Lg	Lg	17 55 38.6	
	5.0nm,0.5s						
DGS	**Degeres**	**3.92**	**27**	*e*P	**Pg**	**17 54 50.5**	**-1.2**
	5.4nm,0.4s						
DGS				*e*S	**Sg**	**17 55 42.7**	**+0.2**
	9.1nm,0.5s						
KK31	**Karatay Array**	**3.95**	**328**	⇓Pn	Pb	17 54 41.1	-5.1
	1.2nm,0.5s,baz=132,slow=12,SNR=29						
KK31				⇑Pg	**Pg**	**17 54 49.5**	**-2.6**
	1.8nm,0.5s,baz=134,slow=13,SNR=7.0						
KK31				⇓Lg	Lg	17 55 42.0	
	1.6nm,0.3s,baz=142,slow=14,SNR=7.9						
MTBS	**Maitube**	**4.08**	**34**	*e*P	**Pg**	**17 54 54.1**	**-0.7**
	4.7nm,0.4s						
MTBS				*e*S	**Sg**	**17 55 48.7**	**+1.1**
	4.5nm,0.1s						
KRBS	**Karabastau**	**4.30**	**23**	*e*P	**Pg**	**17 54 57.1**	**-1.7**
	2.6nm,0.4s						
KRBS				*e*S	**Sg**	**17 55 54.8**	**+0.4**
	4.0nm,0.6s						
KRBS	**Karabastau**	**4.30**	**23**	Pg	**Pg**	**17 54 57.1**	**-1.7**
	2.6nm,0.4s						
KRBS				Lg	Lg	17 55 54.8	
	4.0nm,0.6s						
MDOK	**Medeo**	**4.39**	**38**	*e*P	**Pg**	**17 54 58.0**	**-2.6**
	3.1nm,0.7s						
MDOK				*e*S	**Sg**	**17 55 55.6**	**-1.8**
	5.6nm,0.9s						
MDOK	**Medeo**	**4.39**	**38**	⇑Pn	**Pn**	**17 54 46.7**	**+3.3**
	2.9nm,0.9s						
MDOK				⇑Pg	**Pg**	**17 54 58.8**	**-1.8**
	2.9nm,0.6s						
MDOK				⇑Lg	Lg	17 55 57.3	
	11nm,1.1s						
KUU	**Kurty**	**4.69**	**28**	*e*P	**Pg**	**17 55 03.4**	**-3.0**
	1.9nm,0.2s						
KUU				*e*S	**Sg**	**17 56 04.7**	**-2.4**
	7.7nm,0.7s						
ARXS	**Arharly**	**5.56**	**36**	*e*P	**Pg**	**17 55 19.6**	**-3.4**
	2.3nm,0.4s						
ARXS				*e*S	**Sg**	**17 56 32.4**	**-2.5**
	4.8nm,0.6s						

*IDC **28** 18:03:45.6±1.8,44.°11N×105.°81W,h0km,mb3.7/1, mbtmp3.2/4,ML3.5/3,MS2.8/2,Error ellipse: s-maj=31.0km s-min=15.3km az=159.0*

*NEIC **28** 18:03:45.5±1.2,43.°79N±0.°05×105.°33W±0.°05,h0km±2km, ML3.3/45,Error ellipse: s-maj=9.5km s-min=6.0km az=340.0*

ISC 28 18:03:44.9±1.0,43.°77N±0.°06×105.°33W±0.°06,h0km,n41, σ1.°15/40,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.00**	**69**	Pg	**Pb**	**18 04 04.0**	**-1.2**
K22A	**Casper**	**1.42**	**218**		**Pn**	**18 04 10.5**	**-1.7**
K22A				IAML		18 04 34.6	
	comp=N,495nm,0.5s						
PHWY	**Pilot Hill**	**2.47**	**182**	Pn	**Pn**	**18 04 26.8**	**+0.1**
PHWY				IAML		18 05 03.5	
	comp=N,113nm,0.4s						
PHWY				IAML		18 05 06.4	
	comp=N,129nm,0.4s						
RWWY	**Rawlins**	**2.50**	**214**		**Pn**	**18 04 27.8**	**+0.7**
N23A	**Red Feather La**	**2.91**	**189**	Pn	**Pn**	**18 04 33.1**	**+0.3**
N23A				IAML		18 05 14.3	
	comp=N,109nm,0.6s						
N23A				IAML		18 05 22.4	
	comp=E,140nm,0.8s						
LAO	**LASA Array**	**2.98**	**348**	Pn	**Pn**	**18 04 33.8**	**+0.2**
LAO				IAML		18 05 25.2	
	comp=E,149nm,0.8s						
RLMT	**Red Lodge**	**3.13**	**297**	Pn	**Pn**	**18 04 36.0**	**+0.3**
RLMT				IAML		18 05 26.7	
	comp=E,69nm,0.7s						
RLMT				IAML		18 05 31.4	
	comp=E,66nm,0.6s						
BW06	**Boulder Array**	**3.25**	**253**		**Pn**	**18 04 37.8**	**+0.4**
BW06				IAML		18 05 27.1	
	comp=E,63nm,0.7s						
BW06				IAML		18 05 29.1	
	comp=E,56nm,0.8s						
PD31	**Pinedale Array**	**3.25**	**253**	Pn	**Pn**	**18 04 37.2**	**-0.1**
PDAR	**Pinedale Array**	**3.25**	**253**	Pn	**Pn**	**18 04 37.8**	**+0.5**
	comp=E,1.8nm,0.3s,baz=73,slow=17,SNR=35						
PDAR				Lg	Lg	18 05 20.8	
	comp=E,2.1nm,0.3s,baz=76,slow=22,SNR=6.6						
PDAR				LR	LR	18 05 59.2	
	comp=E,63nm,18.4s,baz=94,slow=44						
	comp=E,3.3nm,0.3s						

PDAR	**Pinedale Array**	**3.25**	**253**	Pn	**Pn**	**18 04 37.5**	**+0.2**
GCMT	**Greycliff**	**3.69**	**305**		**Pn**	**18 04 43.9**	**+0.6**
OGNE	**Ogallala**	**3.73**	**138**	Pn	**Pn**	**18 04 44.2**	**+0.4**
LOHW	**Long Hollow**	**3.83**	**269**		**Pn**	**18 04 45.8**	**+0.5**
FLWY	**Flagg Ranch**	**3.89**	**276**		**Pn**	**18 04 47.1**	**+0.9**
FLWY				IAML		18 05 56.5	
	comp=E,51nm,1.8s						
FLWY				IAML		18 06 01.7	
	comp=E,54nm,1.5s						
MOOW	**Moose Ponds**	**3.92**	**272**	Pn	**Pn**	**18 04 48.6**	**+2.0**
ISCO	**Idaho Springs**	**3.98**	**183**	Pn	**Pn**	**18 04 47.9**	**+0.5**
ISCO				IAML		18 05 52.5	
	comp=E,35nm,1.1s						
REDW	**Red Top Meadow**	**4.04**	**266**		**Pn**	**18 04 49.1**	**+0.9**
REDW				IAML		18 06 13.8	
	comp=E,46nm,0.8s						
REDW				IAML		18 06 14.8	
	comp=E,54nm,0.9s						
IMW	**Indian Meadow**	**4.06**	**274**		**Pn**	**18 04 49.3**	**+0.7**
IMW				IAML		18 05 57.6	
	comp=E,28nm,1.2s						
IMW				IAML		18 06 03.9	
	comp=E,38nm,0.7s						
TPAW	**Teton Pass**	**4.09**	**268**		**Pn**	**18 04 49.7**	**+0.8**
TPAW				IAML		18 06 05.0	
	comp=E,38nm,1.1s						
TPAW				IAML		18 06 17.9	
	comp=E,24nm,1.2s						
FXWY	**Fox Creek**	**4.13**	**270**	Pn	**Pn**	**18 04 51.3**	**+1.8**
O20A	**White River Ci**	**4.23**	**212**		**Pn**	**18 04 51.5**	**+0.7**
YHL	**Hebgen Lake**	**4.34**	**286**	Pn	**Pn**	**18 04 55.8**	**+3.4**
YHL				IAML		18 06 21.1	
	comp=N,36nm,1.1s						
YHL				IAML		18 06 35.2	
	comp=E,40nm,1.2s						
ECR	**Eagle Creek**	**4.46**	**263**		**Pn**	**18 04 53.5**	**-0.5**
RDMU	**Red Mountain**	**4.49**	**226**		**Pn**	**18 04 54.8**	**+0.4**
SMCO	**Snowmass**	**4.75**	**196**		**Pn**	**18 05 01.6**	**+3.4**
SMCO				IAML		18 06 20.8	
	comp=E,26nm,1.1s						
BOZ	**Bozeman (W)**	**4.85**	**294**	Pn	**Pn**	**18 04 59.1**	**-0.2**
BOZ				IAML		18 06 17.6	
	comp=E,25nm,1.3s						
HWUT	**Hardware Ranch**	**5.08**	**247**	Pn	**Pn**	**18 05 02.6**	**+0.1**
P18A	**Preston Nutter**	**5.54**	**223**		**Pn**	**18 05 08.9**	**0.0**
PV07	**Paradox Valley**	**5.89**	**206**		**Pn**	**18 05 14.5**	**+0.9**
P17A	**Butcher Ranch,**	**5.91**	**225**		**Pn**	**18 05 14.9**	**+1.1**
PV15	**Paradox Valley**	**5.92**	**205**		**Pn**	**18 05 15.8**	**+1.6**
PV23	**Carpenter Ridg**	**6.00**	**209**		**Pn**	**18 05 16.0**	**+0.8**
SRU	**San Rafael Swe**	**6.08**	**222**		**Pn**	**18 05 16.6**	**+0.5**
Q16A	**Castle Valley**	**6.54**	**224**		**Pn**	**18 05 22.6**	**0.0**
DUG	**Dugway, Tooele**	**6.62**	**240**		**Pn**	**18 05 23.5**	**-0.1**
MTPU	**Mount Pierson**	**7.73**	**225**		**Pn**	**18 05 38.8**	**-0.2**
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**18 06 27.2**	**+1.5**
	comp=E,0.1nm,0.3s,baz=54,slow=11,SNR=5.6						
	comp=E,0.4nm,0.6s						
TXAR	**Lajitas Array**	**14.47**	**174**	Pn	**P**	**18 07 18.2**	**+0.1**
	baz=351,slow=11,SNR=3.0						
	comp=E,0.2nm,0.7s						
OBN	**Obninsk**	**76.31**	**21**	LR	LR	18 50 23.5	
	comp=E,12nm,21.9s,baz=186,slow=37						
MKAR	**Makanchi Array**	**89.57**	**355**	P	**P**	**18 16 43.6**	**-0.5**
	comp=E,0.3nm,0.8s,baz=23,slow=5.7,SNR=3.3						
	comp=E,0.3nm,0.8s						

*NOU **28** 18:14:03.1,28.°65S×175.°06W,h0km,mb5.0/54, Kermadec Islands Region*

*MOS **28** 18:14:10.2±1.4,28.°25S×176.°45W,h11km,mb5.2/14, MS4.7/6,Error ellipse: s-maj=10.7km s-min=10.3km az=71.8*

*IDC **28** 18:14:10.1±0.5,28.°26S×176.°38W,h0km,mb4.6/18, mbtmp4.6/18,MS4.7/47,Error ellipse: s-maj=17.1km s-min=13.7km az=153.0*

*BJI **28** 18:14:10.1±0.0,27.°70S×175.°73W,h9km,mb5.2/33, mB5.6/20,Ms5.2/14,Ms7 4.9/14*

*NEIC **28** 18:14:11.3±2.1,28.°38S±0.°10×176.°3W±0.°1,h10km±1km, mb5.2/152,Error ellipse: s-maj=18.1km s-min=14.6km az=128.0*

*GCMT **28** 18:14:15.3±0.2,28.°19S±0.°02×176.°15W±0.°01,h12km, MW5.1/117,Moment Tensor Solution. s59,c85; s117,c164; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-2.91±.09; Mθθ-0.01±.10; Mϕϕ2.92±.07; Mrθ2.65±.29; Mθϕ1.00±.07; Mrϕ-4.91±.24; Best double couple: Mo6.37100×10^16 NP1:ϕs207.00000°,δ76.00000°, λ-84.00000°. NP2:ϕs6.00000°,δ15.00000°,λ-111.00000°. Principal axes: T 6.4790, Plg31.0000°, Azm293.0000°; N -0.2160, Plg5.0000°, Azm26.0000°; P -6.2630, Plg59.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 18:14:14.8±0.3,28.°61S±0.°03×176.°17W±0.°04,h36km, n596,σ1.°62/512,mb5.2/125,MS4.8/60,40C-7D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.66**	**247**	Pn	**Pn**	**18 14 42.7**	**+1.4**
	1μm,0.3s,baz=259,slow=3.9,SNR=35						
RAO				Sn	**Sn**	**18 15 06.8**	**+5.5**
	3μm,0.3s,baz=287,slow=19,SNR=7.5						
RAO	**Raoul Island**	**1.66**	**247**	Pn	**Pn**	**18 14 41.6**	**+0.3**
RAO	**Raoul Island**	**1.66**	**247**	P	**Pn**	**18 14 41.6**	**+0.3**
RAO	**Raoul Island**	**1.66**	**247**	P	Pn	18 14 45.8	+4.5
GLKZ	**Green Lake**	**1.66**	**247**	P	**Pn**	**18 14 42.9**	**+1.5**
GLKZ				S

PLWZ **Palliser** 14.70 206 Pn **Pn** 18 17 36.9 -3.2
SNZO **South Karori** 14.70 208 P **Pn** 18 17 38.2 -1.8
TUWZ **Tuamarina** 15.12 210 **Pn** 18 17 40.1 -5.5
QRZ **Quartz Range** 15.30 214 P **Pn** 18 17 47.0 -1.1
MARNC **Mare, Loyalty** 15.97 293 P **P** 18 17 58.7 -1.3
MARNC **Mare, Loyalty** 15.97 293 P **P** 18 18 00.5 +0.5
KHZ **Kahutara** 16.10 208 P **Pn** 18 17 57.2 -1.1
OUENC **Ouen Island, N** 16.52 288 P **P** 18 18 07.8 +1.7
RAR **Rarotonga** 16.59 67 Pn Pn 18 17 56.6 -8.1
3.1nm,0.3s,baz=245,slow=8.8,SNR=8.6
RAR **Rarotonga** 16.59 67 Pn Pn 18 17 56.8 -7.9
RAR **Rarotonga** 16.59 67 P Pn 18 17 56.8 -7.9
RAR pmax pmax
comp=Z,79nm,1.0s
ONTNC **Ouen Toro** 16.89 288 IAmb IAmb 18 18 14.0
comp=Z,257nm,1.5s
LTZ **Lake Taylor** 16.94 210 Pn **Pn** 18 18 04.3 -4.7
LIFNC **LIFOU** 16.96 294 P **P** 18 18 13.1 +2.1
DZM **Mont Dzumac** 17.00 289 LR LR 18 23 45.2
comp=Z,4µm,18.8s,baz=122,slow=34
DZM **Mont Dzumac** 17.00 289 *e*P **Pn** 18 18 07.9 -2.1
comp=Z,285nm,1.4s
DZM *e*LR LR 18 21 58.8
comp=Z,6µm,24.2s
DZM **Mont Dzumac** 17.00 289 IAmb IAmb 18 18 15.4
comp=Z,272nm,1.6s
NOUC **Port Laguerre** 17.11 288 P **P** 18 18 16.5 +3.9
OXZ **Oxford** 17.48 210 P Pn 18 18 08.2 -7.5
MQZ **McQueen's Vall** 17.53 208 P **P** 18 18 17.6 +0.5
RTV **Rentapao** 17.77 304 P **Pn** 18 18 19.5 +0.1
RTV **Rentapao** 17.77 304 P **P** 18 18 21.8 +1.9
DVP **Devils Point** 17.98 304 P **P** 18 18 22.5 +0.2
DVP **Devils Point** 17.98 304 P **P** 18 18 23.9 +1.6
RPZ **Rata Peaks** 18.23 211 P **P** 18 18 21.9 -2.9
comp=Z,15nm,0.4s,baz=26,slow=2.8,SNR=20
RPZ S Sn 18 21 32.1 -15
comp=Z,9.7nm,0.6s,baz=311,slow=20,SNR=4.3
RPZ LR LR 18 25 43.9
comp=Z,2µm,18.4s,baz=28,slow=38
RPZ **Rata Peaks** 18.23 211 P **Pn** 18 18 26.0 +1.1
RPZ **Rata Peaks** 18.23 211 P **P** 18 18 22.8 -2.0
ODZ **Otahua Downs** 19.46 209 P **Pn** 18 18 43.5 +3.8
ODZ **Otahua Downs** 19.46 209 P **P** 18 18 37.2 -1.1
KOUNC **Koumac, New Ca** 19.48 290 **P** 18 18 39.4 +0.7
KOUNC IAmb IAmb 18 18 43.5
comp=Z,280nm,1.2s
KOUNC **Koumac, New Ca** 19.48 290 P **Pn** 18 18 41.4 +1.2
TBI **Tubuai** 24.55 84 *e*P **P** 18 19 32.5 +1.2
comp=Z,157nm,22.2s
TBI *e*S **S** 18 23 51.5 +1.7
comp=Z,205nm,33.0s
TBI *e*LR LR 18 25 36.1
comp=Z,2µm,24.0s
TBI **Tubuai** 24.55 84 *e*T T 18 44 47.2
comp=Z,8.4nm,0.3s
PAE **Paea** 26.71 72 *e*T T 18 47 21.3
comp=Z,5.2nm,0.3s
PPT2 **Papeete2** 26.75 72 *e*P **P** 18 19 52.7 +1.4
comp=Z,86nm,21.8s
PPT2 *e*S **S** 18 24 27.2 +2.3
comp=Z,170nm,24.5s
PPT2 *e*LR LR 18 26 35.5
comp=Z,1µm,22.2s
PPT2 **Papeete2** 26.75 72 *e*T T 18 47 27.3
comp=Z,2.8nm,0.2s
PPT **Papeete** 26.76 72 LR LR 18 26 58.2
comp=Z,794nm,21.5s,baz=250,slow=29
ARMA **Armidale** 28.03 258 P **P** 18 20 04.3 +1.5
baz=28,SNR=5.8
ARMA **Armidale** 28.03 258 P **P** 18 20 05.8 +3.0
EIDS **Eidsvold** 29.31 269 P **P** 18 20 14.9 +0.9
baz=30,SNR=4.6
EIDS **Eidsvold** 29.31 269 P **P** 18 20 12.5 -1.6
EIDS **Eidsvold** 29.31 269 P **P** 18 20 14.7 +0.6
HNR **Honiara** 29.45 306 LR LR 18 30 43.0
comp=Z,1µm,18.1s,baz=172,slow=34
VAH **Vaihoa** 29.55 69 *e*T T 18 50 56.9
comp=Z,13nm,0.2s
CNB **Canberra Magne** 29.89 248 P **P** 18 20 20.8 +1.6
CAN **Canberra** 30.18 248 P **P** 18 20 21.7 -0.1
CAN **Canberra** 30.18 248 P **P** 18 20 21.7 -0.1
CAN pmax pmax
comp=Z,18nm,1.0s
RK1H **Rockhampton Ha** 30.35 272 P **P** 18 20 24.0 +0.7
RMQ **Roma** 31.10 266 P **P** 18 20 30.7 +0.8
baz=31,SNR=12
RMQ **Roma** 31.10 266 P **P** 18 20 32.0 +2.1
comp=Z,9.3nm,0.7s
GLAD **Gladstone** 31.68 238 P **P** 18 20 35.5 +0.7
CMSA **Cobar Meteorol** 33.02 255 P **P** 18 20 47.8 +1.0
baz=33,SNR=20
CMSA **Cobar Meteorol** 33.02 255 P **P** 18 20 48.0 +1.3
comp=Z,18nm,0.9s
TOO **Toolangi** 33.15 244 P **P** 18 20 50.1 +2.3
baz=34,SNR=5.2
TOO **Toolangi** 33.15 244 P **P** 18 20 48.5 +0.7
TOO **Toolangi** 33.15 244 P **P** 18 20 48.5 +0.7
TOO pmax pmax
comp=Z,17nm,1.1s
TOO **Toolangi** 33.15 244 P **P** 18 20 49.0 +1.2
BRAT **Ballarat** 34.38 245 P **P** 18 20 59.8 +1.3
CTA **Charters Tower** 35.15 275 P **P** 18 21 05.0 -0.3
comp=Z,6.9nm,0.4s,baz=96,slow=10,SNR=13
CTA LR LR 18 34 26.3
comp=Z,3µm,18.3s,baz=112,slow=35
comp=Z,6.9nm,0.4s
CTAO **Charters Tower** 35.15 275 P **P** 18 21 03.9 -1.4
CTAO **Charters Tower** 35.15 275 P **P** 18 21 03.9 -1.4
CTAO pmax pmax
comp=Z,17nm,0.9s
CTAO **Charters Tower** 35.15 275 P **P** 18 21 07.3 +2.0
ARPS **Mount Arapiles** 36.03 246 P **P** 18 21 12.9 +0.2
baz=36,SNR=11
ARPS **Mount Arapiles** 36.03 246 P **P** 18 21 13.1 +0.4
STKA **Stephens Creek** 36.46 254 P **P** 18 21 16.1 -0.4
comp=Z,8.3nm,0.9s,baz=107,slow=12,SNR=9.5
STKA LR LR 18 35 05.9
comp=Z,1µm,18.3s,baz=87,slow=34
comp=Z,8.3nm,0.9s
STKA **Stephens Creek** 36.46 254 P **P** 18 21 16.6 +0.1
baz=37,SNR=12
STKA **Stephens Creek** 36.46 254 P **P** 18 21 14.9 -1.6
STKA **Stephens Creek** 36.46 254 *i* P **P** 18 21 13.8 -2.7
STKA **Stephens Creek** 36.46 254 P **P** 18 21 17.5 +1.0
MTSU **Mount Surprise** 37.59 277 P **P** 18 21 24.9 -1.2
baz=38,SNR=3.8
MTSU **Mount Surprise** 37.59 277 P **P** 18 21 28.0 +1.8
HTT **Hallett** 38.55 251 P **P** 18 21 32.3 -1.9
baz=39,SNR=5.1
HTT **Hallett** 38.55 251 P **P** 18 21 35.1 +0.9
TAOE **Nuku Hiva Isla** 39.14 67 *e*S **S** 18 27 40.2 +3.1
comp=Z,194nm,31.8s
TAOE *e*LR LR 18 32 19.8
comp=Z,672nm,22.9s
LCRK **Leigh Creek** 39.52 256 P **P** 18 21 43.4 +1.1
COEN **Coen** 40.38 282 P **P** 18 21 51.0 +1.5
QIS **Mount Isa** 40.82 271 P **P** 18 21 52.0 -1.2
baz=41,SNR=3.8
QIS **Mount Isa** 40.82 271 P **P** 18 21 54.6 +1.4
BBOO **Buckleboo** 41.01 252 P **P** 18 21 54.3 -0.3
BBOO IAmb IAmb 18 23 04.3
comp=Z,102nm,1.8s
BBOO **Buckleboo** 41.01 252 P **P** 18 21 55.0 +0.4
OOD **Oodnadatta** 42.20 259 P **P** 18 22 04.5 +0.1
MULG **Mulgathing** 43.09 255 P **P** 18 22 12.0 +0.4
AS31 **Alice Springs** 44.83 264 P **P** 18 22 23.8 -1.9
ASAR **Alice Springs** 44.83 264 P **P** 18 22 23.7 -2.0
comp=Z,8.9nm,0.9s,baz=99,slow=7.2,SNR=70
ASAR S **S** 18 29 03.9 +3.0
comp=Z,1.0nm,1.0s,baz=97,slow=16,SNR=4.2
ASAR LR LR 18 40 35.2
comp=Z,1µm,18.3s,baz=116,slow=36
comp=Z,8.9nm,0.9s
ASAR **Alice Springs** 44.83 264 P **P** 18 22 23.4 -2.3
WR0 **Warramunga Arr** 45.48 270 P **P** 18 22 28.7 -2.2
WR0 IAmb IAmb 18 22 56.0
comp=Z,36nm,1.4s
WB2 **Warramunga Arr** 45.65 269 P **P** 18 22 29.4 -2.8
WB2 IAmb IAmb 18 22 31.8
comp=Z,28nm,1.1s
WRAB **Tennant Creek** 45.66 269 P **P** 18 22 29.4 -2.9
WRAB IAmb IAmb 18 22 31.8
comp=Z,26nm,1.1s
WRAB **Tennant Creek** 45.66 269 *i* P **P** 18 22 29.2 -3.0
WRAB pmax pmax
comp=Z,27nm,1.2s
WRAB **Tennant Creek** 45.66 269 P **P** 18 22 31.5 -0.7
WRA **Warramunga Arr** 45.66 269 P **P** 18 22 29.7 -2.6
comp=Z,5.5nm,0.4s,baz=110,slow=6.5,SNR=109
WRA S **S** 18 29 08.3 -4.6
comp=Z,0.6nm,0.9s,baz=130,slow=10.0,SNR=2.4
WRA LR LR 18 41 12.6
comp=Z,757nm,19.5s,baz=64,slow=36
comp=Z,5.5nm,0.4s
WRA **Warramunga Arr** 45.66 269 P **P** 18 22 28.7 -3.6
WB0 **Warramunga Arr** 45.68 270 P **P** 18 22 29.8 -2.6
FORT **Forrest** 48.07 253 P **P** 18 22 50.6 -0.3
baz=48,SNR=8.1
FORT **Forrest** 48.07 253 P **P** 18 22 49.4 -1.5
FORT **Forrest** 48.07 253 P **P** 18 22 51.3 +0.4
WRKA **Warakurna** 49.31 260 P **P** 18 22 58.5 -2.2
baz=50,SNR=8.7
WRKA **Warakurna** 49.31 260 P **P** 18 23 02.8 +2.1
VNDA **Vanda** 50.03 186 P **P** 18 23 10.1 +4.8
comp=Z,1.2nm,0.7s,baz=13,slow=3.0,SNR=6.9
VNDA LR LR 18 40 47.2
comp=Z,419nm,20.3s,baz=26,slow=32
comp=Z,1.2nm,0.7s
VNDA **Vanda** 50.03 186 P P 18 23 10.5 +5.2
KDU **Kakadu** 50.22 277 P **P** 18 23 05.8 -1.8
baz=50,SNR=9.9
KDU **Kakadu** 50.22 277 P **P** 18 23 08.4 +0.8
MTN **Manton Dam** 51.32 276 P **P** 18 23 14.9 -1.0
baz=52,SNR=5.6
MTN **Manton Dam** 51.32 276 P **P** 18 23 14.2 -1.7
MTN **Manton Dam** 51.32 276 P **P** 18 23 17.1 +1.2
KNRA **Kununurra** 52.20 272 P **P** 18 23 21.0 -1.4
baz=52,SNR=13
KNRA **Kununurra** 52.20 272 P **P** 18 23 22.7 +0.3
SRPI **Serui, Papua** 52.55 292 P **P** 18 23 22.2 -2.8
comp=Z,40nm,0.8s
FITZ **Fitzroy Crossi** 53.99 268 LR LR 18 46 02.3
comp=Z,2µm,18.0s,baz=109,slow=36
FITZ **Fitzroy Crossi** 53.99 268 P **P** 18 23 35.0 -0.6
baz=54,SNR=16
FITZ **Fitzroy Crossi** 53.99 268 P **P** 18 23 35.4 -0.2
KLBR **Kellerberrin** 56.45 249 P **P** 18 23 52.5 -0.7
SIJI **Sorong** 57.21 289 LR LR 18 47 21.7
comp=Z,506nm,20.2s,baz=90,slow=35
SWI **Sorong** 57.22 289 P P 18 23 52.5 -6.3
comp=Z,646nmcomp=Z,78nm,0.6s
CASY **Casey** 57.45 207 P **P** 18 24 01.6 +1.9
BLDU **Ballidu** 57.58 250 P **P** 18 24 00.8 -0.4
RPN **Rapa Nui** 58.38 106 LR LR 18 42 52.7
comp=Z,419nm,20.4s,baz=256,slow=29
MORW **Morawa** 58.58 252 P **P** 18 24 07.7 -0.6
baz=59,SNR=3.7
MORW **Morawa** 58.58 252 P **P** 18 24 08.2 -0.1
comp=Z,29nm,1.9s
BATI **Baumata** 59.04 275 LR LR 18 50 40.7
comp=Z,3µm,18.3s,baz=138,slow=37
EDFI **Ende, Flores** 61.43 276 P **P** 18 24 25.2 -2.9
comp=Z,7.7nm,1.3s
QSPA **South Pole Qui** 61.49 180 P **P** 18 24 30.5 +2.7
comp=Z,8.5nm,0.9s,baz=349,slow=0.7,SNR=29
QSPA LR LR 18 50 42.4
comp=Z,649nm,18.0s,baz=46,slow=35
comp=Z,8.5nm,0.9s
QSPA **South Pole Qui** 61.49 180 P **P** 18 24 29.4 +1.7
GIRL **Giralia** 62.25 258 P **P** 18 24 34.7 +1.3
BKSI **Bulukumba** 64.42 278 P **P** 18 24 45.7 -2.1
comp=Z,18nm,0.8s
PLAI **Plampang** 64.83 274 P **P** 18 24 48.3 -2.2
comp=Z,32nm,0.8s
PLAI **Plampang** 64.83 274 P **P** 18 24 50.7 +0.2
comp=Z,33nm,0.8s
KAPI **Kappang** 64.89 278 LR LR 18 54 45.7
comp=Z,594nm,18.1s,baz=125,slow=38
TWSI **Taliwang, Sumb** 65.65 273 P **P** 18 24 54.8 -1.0
comp=Z,9.8nm,1.2s
DAV **Davao City (W)** 66.36 293 LR LR 18 53 09.6
comp=Z,229nm,18.5s,baz=107,slow=35
PCJI **Pacitan** 70.91 271 P **P** 18 25 27.8 -1.0
comp=Z,63nm,1.2s
BELA **Belgrano 2** 71.33 172 P **P** 18 25 31.5 +1.2
PMSA **Palmer Station** 73.23 156 LR LR 18 54 23.4
comp=Z,410nm,18.2s,baz=216,slow=33
MAW **Mawson** 74.53 200 P **P** 18 25 50.6 +1.3
comp=Z,2.7nm,0.7s,baz=130,slow=8.9,SNR=12
MAW LR LR 18 57 40.3
comp=Z,651nm,19.1s,baz=121,slow=35
comp=Z,2.7nm,0.7s
LEM **Lembang** 74.67 271 LR LR 18 59 08.4
comp=Z,620nm,18.7s,baz=136,slow=36
LEM **Lembang** 74.67 271 P **P** 18 25 50.6 -0.7
comp=Z,19nm,1.3s
SBUM **Sibu** 75.11 281 P **P** 18 25 52.6 -1.1
SBUM IAmb IAmb 18 25 54.7
comp=Z,44nm,1.6s
USHA **Ushuaia** 76.49 145 LR LR 18 52 14.1
comp=Z,410nm,19.1s,baz=209,slow=30
INU **Inuyama** 77.44 322 P **P** 18 26 05.0 -1.3
INU IAmb IAmb 18 26 07.5
comp=Z,32nm,1.1s
MJAR **Matsushiro Arr** 77.71 324 P **P** 18 26 06.0 -1.9
comp=Z,6.0nm,0.8s,baz=103,slow=13,SNR=14
MJAR LR LR 18 53 46.5
comp=Z,260nm,21.6s,baz=147,slow=31
comp=Z,6.0nm,0.8s
MJAR **Matsushiro Arr** 77.71 324 P **P** 18 26 06.0 -1.9
MAJO **Matsushiro** 77.71 324 P **P** 18 26 05.5 -2.3
MAJO **Matsushiro** 77.71 324 *i* P **P** 18 26 06.3 -1.6
MAJO pmax pmax
comp=Z,16nm,0.9s
KASI **Kota Agung** 78.02 270 P **P** 18 26 08.1 -2.0
comp=Z,26nm,1.0s
PPBI **Pangkal Pinang** 78.16 274 P **P** 18 26 08.3 -2.6
comp=Z,22nm,1.3s
TROLL **Troll, Antarti** 79.65 180 P **P** 18 26 20.6 +2.3
SNAA **Sanae** 79.88 178 P **P** 18 26 21.6 +2.2
SNAA **Sanae** 79.88 178 LR LR 19 01 29.1
comp=Z,531nm,18.0s,baz=160,slow=35
SNAA **Sanae** 79.88 178 P **P** 18 26 20.9 +1.5
SNAA IAmb IAmb 18 26 23.1
comp=Z,26nm,1.3s
SNAA **Sanae** 79.88 178 *ce*P **P** 18 26 21.0 +1.5
SNAA pmax pmax
comp=Z,32nm,1.7s
VNA3 **Neumayer Olymp** 79.97 176 P **P** 18 26 21.7 +1.9
H03S2 **Juan Fernandez** 80.11 123 T T 19 55 00.4
SNR=3.8
H03S1 **Juan Fernandez** 80.12 123 T T 19 54 55.3
SNR=3.3
H03S3 **Juan Fernandez** 80.13 123 T T 19 54 54.6
SNR=3.2
VNA2 **Neumayer--Watz** 80.42 176 P **P** 18 26 25.4 +3.1
baz=159,slow=3.0
VNA1 **Neumayer--Stat** 80.64 176 P **P** 18 26 25.9 +2.5
SHEM **Shemya Is, Ala** 81.44 354 LR LR 18 56 24.0
comp=Z,358nm,20.7s,baz=134,slow=31
NIKH **Nikolski High** 81.49 4 P **P** 18 26 27.6 -0.4
baz=187
MYKOM **Kota Tinggi** 82.06 276 IAmb IAmb 18 26 33.2
comp=Z,45nm,1.5s
LPIG **La Paz** 82.24 57 LR LR 18 56 38.9
comp=Z,520nm,18.3s,baz=232,slow=31
CIS **Catalina Islan** 82.45 46 P **P** 18 26 33.0 -0.6
baz=229
UNV **Unalaska Valle** 82.54 6 P **P** 18 26 33.3 -0.1
baz=189
PLCA **Paso Flores** 82.55 132 P **P** 18 26 37.2 +3.0
comp=Z,13nm,1.1s,baz=238,slow=8.1,SNR=12
PLCA LR LR 18 54 57.8
comp=Z,342nm,21.0s,baz=253,slow=30
comp=Z,13nm,1.1s
PLCA **Paso Flores** 82.55 132 P **P** 18 26 36.1 +1.9
PLCA **Paso Flores** 82.55 132 P **P** 18 26 36.1 +1.9
PLCA pmax pmax
comp=Z,83nm,1.6s
PKM **Mcpherson Peak** 82.58 44 P **P** 18 26 34.3 -0.1
baz=228
SKR **Severo-Kuril's** 82.67 343 *e*P **P** 18 26 32.2 -2.0
SKR *e*S **S** 18 36 48.5 -0.3
SKR pmax pmax
comp=Z,100nm,4.5s
SKR MLR MLR
comp=Z,200nm,19.0s
BCW **Bitter Crk WRg** 82.86 44 IAmb IAmb 18 27 02.1
comp=Z,42nm,1.4s
SAO **San Andreas Ge** 82.89 41 IAmb IAmb 18 26 59.1
comp=Z,18nm,1.4s
ELS **Elsinore Mount** 83.24 46 IAmb IAmb 18 26 40.1
comp=Z,42nm,1.9s
MURC **Murrieta** 83.35 46 P **P** 18 26 37.9 -0.3
baz=229
MONP2 **Monument Peak** 83.39 47 P **P** 18 26 38.5 -0.2
baz=230
EFI **East Falkland** 83.41 146 P **P** 18 26 41.0 +2.8
EFI **East Falkland** 83.41 146 P **P** 18 26 41.1 +2.8
EFI pmax pmax
comp=Z,76nm,1.2s
IKP **In-Ko-Pah, Jac** 83.44 47 P **P** 18 26 39.2 +0.4
baz=230
BFSC **Mount Baldy Ra** 83.48 45 P **P** 18 26 39.3 +0.3
baz=229
HOPS **Hopland Field** 83.52 39 IAmb IAmb 18 26 41.5
comp=Z,47nm,1.7s
GDXM **Geysers** 83.55 39 IAmb IAmb 18 26 57.7
comp=Z,16nm,1.4s
VES **Vestal, Richgr** 83.66 43 P **P** 18 26 40.1 +0.4
baz=228
EDW2 **Edwards Air Fo** 83.69 45 P **P** 18 26 39.8 -0.2
baz=229,SNR=6.9
SWSC **Sam W. Stewart** 83.82 47 P **P** 18 26 41.3 +0.7
baz=230
PFO **Pinyon Flats O** 83.83 46 LR LR 18 58 48.7
comp=Z,814nm,18.2s,baz=221,slow=32
PFO **Pinyon Flats O** 83.83 46 *i* P **P** 18 26 39.4 -1.4
PFO **Pinyon Flats O** 83.83 46 P **P** 18 26 40.6 -0.2
baz=230
TPFO **Pinon Flats** 83.83 46 P **P** 18 26 41.0 +0.3
baz=230
YSS **Yuzh-Sakhalins** 83.86 333 *e*P **P** 18 26 39.7 -0.7
YSS *e* 18 29 51.5
YSS *e*S **S** 18 37 02.0 +1.0
YSS pmax pmax
comp=Z,300nm,4.4s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,400nm,16.0s
PMD **Palm Desert** 83.90 46 IAmb IAmb 18 26 43.4
comp=Z,43nm,1.9s
ISA **Isabella, Lake** 83.91 44 IAmb IAmb 18 26 43.8
comp=Z,25nm,1.4s
ISA **Isabella, Lake** 83.91 44 P **P** 18 26 40.8 -0.3
baz=228,SNR=7.1
KSRS **Korea Array** 84.05 319 P **P** 18 26 41.6 +0.1
comp=Z,6.1nm,1.0s,baz=135,slow=5.4,SNR=13
KSRS LR LR 19 03 06.1
comp=Z,138nm,18.1s,baz=145,slow=35
comp=Z,6.1nm,1.0s
KSAR **Wonju Array Be** 84.06 318 P **P** 18 26 40.7 -1.0
KSAR **Wonju Array Be** 84.06 318 P **P** 18 26 40.7 -1.0
PET **Petropavlovsk** 84.20 345 *e*P **P** 18 26 43.0 +1.0
PET *e*S **S** 18 37 05.8 +1.6
PET *e*SS **SS** 18 42 37.0 +2.2
PET pmax pmax
comp=Z,100nm,13.1s
PET MLR MLR
comp=Z,300nm,18.0s
PET MLR MLR
comp=Z,400nm,19.0s
LRMC **Laurel Mtn Rad** 84.28 44 P **P** 18 26 43.0 0.0
baz=229,SNR=5.5
BELC **Belle Mtn. Jos** 84.37 46 P **P** 18 26 43.4 -0.2
baz=230,SNR=7.8
BC3 **Big Chuckawall** 84.50 47 P **P** 18 26 44.3 +0.2
baz=230,SNR=7.9
PEA0B **Petropavlovsk-** 84.50 345 *ce*P **P** 18 26 41.4 -2.2
PETK **Petropavlovsk-** 84.50 345 P **P** 18 26 42.6 -1.0
comp=Z,2.4nm,0.6s,baz=116,slow=6.9,SNR=16
PETK LR LR 19 02 02.3
comp=Z,270nm,18.3s,baz=163,slow=34
comp=Z,2.4nm,0.6s
PETK **Petropavlovsk-** 84.50 345 P **P** 18 26 41.5 -2.0
GLA **Glamis** 84.52 48 P **P** 18 26 44.5 +0.2
baz=231
GO05 **Huala** 84.58 127 P **P** 18 26 44.9 +0.3
AFDM **Forest Hills D** 84.66 40 IAmb IAmb 18 26 49.5
comp=Z,16nm,1.3s
CWC **Cottonwood Cre** 84.67 43 P **P** 18 26 44.6 -0.4
baz=229
HEC **Hector,Ludlow** 84.69 46 P **P** 18 26 45.0 -0.1
baz=230
SDPT **Sand Point** 84.70 9 P **P** 18 26 44.6 +0.1
baz=194
GSC **Goldstone, Bar** 84.70 45 IAmb IAmb 18 26 47.7
comp=Z,32nm,1.5s
GSC **Goldstone, Bar** 84.70 45 P **P** 18 26 44.9 -0.2
baz=230,SNR=7.8
MPMC **Manual Prospec** 84.77 44 P **P** 18 26 45.6 0.0
baz=229,SNR=12
MDPB **Devils Postpil** 84.86 42 IAmb IAmb 18 26 48.5
comp=Z,26nm,1.8s
KRMB **Red Mountain** 84.87 37 IAmb IAmb 18 27 01.2
comp=Z,39nm,1.6s
OMMB **Old Mammoth Mi** 84.90 42 IAmb IAmb 18 26 49.6
comp=Z,25nm,1.7s
TIN **Tinemaha, Big** 84.98 43 P **P** 18 26 46.5 0.0
baz=228
IRM **Iron Mountain** 85.02 47 P **P** 18 26 46.5 -0.2
baz=231,SNR=12
GMRC **Granite Mounta** 85.09 46 P **P** 18 26 46.8 -0.3
baz=230,SNR=6.6
QSM **Queen of Sheba** 85.09 44 P **P** 18 26 46.2 -0.8
KSXB **Camp Six Broad** 85.11 36 P **P** 18 26 46.9 -0.1
KSXB IAmb IAmb 18 26 52.3
comp=Z,19nm,1.3s
214A **Organ Pipe Nat** 85.17 50 P **P** 18 26 47.6 +0.1
baz=232
TUQ **Turquoise Moun** 85.34 45 P **P** 18 26 48.4 0.0
baz=230
FURC **Furnace Creek,** 85.42 44 P **P** 18 26 49.1 +0.5
baz=229
GRAC **Grapevine Rang** 85.46 43 P **P** 18 26 48.8 0.0
baz=229,SNR=6.9
L02F **Cave Junction** 85.47 36 P **P** 18 26 48.5 -0.2
baz=225,SNR=7.4
PNTR **Pine Nut** 85.54 41 IAmb IAmb 18 27 08.0
comp=Z,14nm,1.0s
YBH **Yreka Blue Hor** 85.65 37 LR LR 19 00 16.0
comp=Z,211nm,18.6s,baz=233,slow=32
YBH **Yreka Blue Hor** 85.65 37 P **P** 18 26 49.1 -0.6
YBH IAmb IAmb 18 26 52.2
comp=Z,28nm,1.7s
YBH **Yreka Blue Hor** 85.65 37 P **P** 18 26 49.1 -0.6
YBH pmax pmax
comp=Z,29nm,1.7s
QIZ **Qiongzhong** 85.69 294 P **P** 18 26 49.5 -0.8
QIZ S **S** 18 37 22.5 +2.0
PDMCI **Parker Dam,Lak** 85.75 47 P **P** 18 26 50.4 +0.1
baz=231
IPM **Ipoh** 85.82 277 P **P** 18 26 49.4 -1.8
IPM IAmb IAmb 18 27 30.4
comp=Z,13nm,1.0s
K02D **Willamette Mer** 85.83 36 P **P** 18 26 50.9 +0.3
baz=224
NVAR **Mina Array Bea** 85.85 42 P **P** 18 26 51.0 0.0
comp=Z,4.6nm,0.9s,baz=221,slow=6.7,SNR=30
NVAR LR LR 19 00 18.9
comp=Z,979nm,18.4s,baz=256,slow=32
comp=Z,4.6nm,0.9s
TPNV **Topopah Spring** 86.11 44 P **P** 18 26 51.9 -0.3
baz=230,SNR=11
HUMO **Hull Mountain** 86.14 36 P **P** 18 26 52.4 +0.4
HUMO IAmb IAmb 18 26 54.8
comp=Z,29nm,1.6s
V12A **Nelson** 86.20 46 P **P** 18 26 52.2 -0.4
L04D **Klamath Falls** 86.21 37 P **P** 18 26 52.8 +0.3
baz=226
NJ2 **Nanjing** 86.32 310 *e*P **P** 18 26 53.5 +0.4
NJ2 pmax pmax
comp=Z,7.0nm,0.7s
KVN **Kaiserville** 86.38 41 P **P** 18 26 52.9 -0.6
KVN **Kaiserville** 86.38 41 P **P** 18 26 52.9 -0.6
KVN pmax pmax
comp=Z,11nm,1.1s
USRK **Ussuriysk Ar.** 86.58 325 P **P** 18 26 54.2 +0.2
comp=Z,8.2nm,1.0s,baz=114,slow=4.6,SNR=7.7
USRK LR LR 18 59 48.8
comp=Z,200nm,20.8s,baz=234,slow=32
comp=Z,8.2nm,1.0s
I03D **Drain, OR** 86.71 35 P **P** 18 26 55.3 +0.5
baz=225
I02E **Swisshome, OR** 86.75 35 P **P** 18 26 54.9 0.0
baz=224
TUC **Tucson** 86.75 50 P **P** 18 26 55.5 +0.1
TUC **Tucson** 86.75 50 P **P** 18 26 55.5 +0.1

TUC pmax pmax
comp=Z,48nm,1.7s
TUC Tucson 86.75 50 P **P** **18 26 55.4 +0.1**
baz=233
RPSI Rantau Prapat 86.80 275 P **P** **18 26 53.6 -2.4**
RPSI IAmb IAmb 18 27 00.3
comp=Z,17nm,1.1s
PSI Prapat 86.85 275 LR LR 19 09 14.6
comp=Z,514nm,18.6s,baz=132,slow=38
PSI Prapat 86.85 275 P **P** **18 26 53.6 -2.8**
PSI pmax pmax
comp=Z,17nm,1.1s
MOD Modoc Plateau 87.06 38 IAmb IAmb 18 27 19.5
comp=Z,24nm,1.7s
I04A Tendick Farm, 87.26 36 P **P** **18 26 56.9 -0.6**
baz=225
R16K Pilot Point 87.27 10 P **P** **18 26 57.8 +0.7**
baz=196
K05A Summer Lake 87.31 37 IAmb IAmb 18 27 48.5
comp=Z,32nm,1.6s
GSI Gunungsitoli 87.32 273 P **P** **18 26 57.8 -0.7**
GSI Gunungsitoli 87.32 273 P **P** **18 26 58.1 -0.4**
comp=Z,43nm,1.0s
R11A Troy Canyon, C 87.41 43 P **P** **18 26 58.1 -0.5**
baz=230,SNR=5.4
J05D Fort Rock, OR 87.52 37 P **P** **18 26 58.9 0.0**
baz=226
BMN Battle Mountai 87.80 41 IAmb IAmb 18 27 05.1
comp=Z,15nm,1.3s
H04A Detroit Lake 88.00 35 IAmb IAmb 18 27 05.5
comp=Z,27nm,1.5s
LCMT Little Creek M 88.01 45 IAmb IAmb 18 27 07.0
comp=Z,10nm,1.1s
PINE Pine Mountain 88.02 37 IAmb IAmb 18 27 03.8
comp=Z,34nm,1.8s
CCUT Cedar City 88.27 45 IAmb IAmb 18 27 05.7
comp=Z,34nm,1.8s
WUAZ Wupatki 88.29 48 P **P** **18 27 02.8 0.0**
baz=233
WVOR Wild Horse Val 88.33 39 IAmb IAmb 18 27 04.8
comp=Z,12nm,1.4s
SZCU Shurtz Canyon 88.47 45 IAmb IAmb 18 27 06.6
comp=Z,35nm,1.8s
PSUT Pine Spring 88.58 44 IAmb IAmb 18 27 07.6
comp=Z,16nm,1.6s
SPR3 Spring Creek 3 88.58 43 IAmb IAmb 18 27 07.0
comp=Z,18nm,1.6s
G05D Wamic, OR 88.83 35 P **P** **18 27 05.5 +0.5**
baz=226
121A Cookes Peak, D 88.94 52 P **P** **18 27 07.4 +1.4**
baz=235
121A Cookes Peak, D 88.94 52 P **P** **18 27 06.2 +0.3**
baz=235
J08A Circle Bar Ran 89.04 38 IAmb IAmb 18 27 08.1
comp=Z,19nm,1.5s
ELK Elko 89.15 42 LR LR 19 02 40.8
comp=Z,1µm,18.4s,baz=226,slow=33
MTPU Mount Pierson 89.31 45 IAmb IAmb 18 27 33.0
comp=Z,23nm,1.4s
CN2 Changchun 89.70 322 *e*P **P** **18 27 09.0 0.0**
CN2 S **S** **18 37 54.5 -3.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,200nm,17.0s
CN2 LR LR
comp=Z,200nm,17.0s
B04A Port Angeles 89.75 32 IAmb IAmb 18 27 11.1
comp=Z,27nm,1.4s
O18K Koktuh Hills 89.82 10 IAmb IAmb 18 27 09.9
comp=Z,23nm,1.1s
O18K Koktuh Hills 89.82 10 P **P** **18 27 08.7 -0.5**
baz=198
N16K Nishlik Lake 89.90 9 P **P** **18 27 09.0 -0.5**
baz=195
TIA Tai'an 89.94 312 ⇑P **P** **18 27 11.0 +0.7**
TIA pmax pmax
comp=Z,18nm,0.9s
TIA pmax pmax
comp=Z,240nm,5.5s
TIA LR LR
comp=Z,210nm,11.6s
TIA LR LR
comp=Z,280nm,11.9s
BNX BinXian 89.97 324 ⇑P **P** **18 27 09.5 -0.7**
BNX pP **PcP** **18 27 13.0 +1.6**
BNX pmax pmax
comp=Z,9.0nm,1.1s
BNX pmax pmax
comp=Z,190nm,5.5s
G08A Pilot Rock 90.08 36 IAmb IAmb 18 27 12.9
comp=Z,23nm,1.3s
TX31 Lajitas Ar. Si 90.08 56 P **P** **18 27 12.1 +0.9**
baz=237
TX32 Lajitas Array 90.08 56 IAmb IAmb 18 27 25.8
comp=Z,21nm,1.4s
TXAR Lajitas Array 90.08 56 P **P** **18 27 12.7 +1.4**
comp=Z,4.5nm,1.2s,baz=207,slow=5.2,SNR=20
TXAR LR LR 19 01 25.8
comp=Z,314nm,18.4s,baz=238,slow=32
comp=Z,4.5nm,1.2s
MNTX Cornudas Mount 90.15 54 IAmb IAmb 18 27 14.0
comp=Z,18nm,1.6s
MNTX Cornudas Mount 90.15 54 P **P** **18 27 12.4 +1.0**
baz=236
MNTX Cornudas Mount 90.15 54 P **P** **18 27 11.3 -0.1**
baz=236
DUG Dugway, Tooele 90.25 43 P **P** **18 27 11.5 -0.3**
baz=232
ILSW Iliamna Southw 90.29 11 IAmb IAmb 18 27 24.5
comp=Z,45nm,1.4s
Y22A Socorro 90.30 51 P **P** **18 27 14.2 +1.9**
baz=235
KLR Kul'dur 90.32 329 LR LR 19 07 01.9
KLR Kul'dur 90.32 329 *ce*P **P** **18 27 09.0 -2.7**
KLR pmax pmax
comp=Z,15nm,1.7s
BRSE Bradley Lake S 90.50 13 P **P** **18 27 12.2 -0.2**
baz=202
HAWA Hanford 90.53 35 IAmb IAmb 18 27 15.0
comp=Z,21nm,1.4s
LTY Liberty 90.55 34 IAmb IAmb 18 27 15.0
comp=Z,23nm,1.7s
BMO Blue Mountains 90.66 38 IAmb IAmb 18 27 16.2
comp=Z,23nm,1.8s
CMIG Matias Romero 90.68 71 LR LR 19 00 05.2
comp=Z,115nm,19.3s,baz=221,slow=30
TMUT Trail Mountain 90.68 45 IAmb IAmb 18 27 28.5
comp=Z,13nm,1.1s
BBB Bella Bella 90.78 27 LR LR 19 00 46.5
comp=Z,346nm,20.6s,baz=238,slow=31
SRU San Rafael Swe 90.99 45 IAmb IAmb 18 27 17.7
comp=Z,15nm,1.3s
P17A Butcher Ranch, 91.07 45 IAmb IAmb 18 27 18.3
comp=Z,18nm,1.4s
ANMO Albuquerque 91.22 50 LR LR 19 00 54.2
comp=Z,372nm,20.0s,baz=236,slow=31
ANMO Albuquerque 91.22 50 P **P** **18 27 16.4 -0.2**
ANMO IAmb IAmb 18 27 21.9
comp=Z,10nm,1.2s
ANMO Albuquerque 91.22 50 *i* P **P** **18 27 16.5 -0.1**
ANMO pmax pmax
comp=Z,10.0nm,1.2s
ANMO Albuquerque 91.22 50 P **P** **18 27 17.6 +1.0**
baz=236
ANMO Albuquerque 91.22 50 P **P** **18 27 16.1 -0.5**
baz=236
HVU Hansel Valley 91.25 42 IAmb IAmb 18 27 18.7
comp=Z,34nm,1.6s
HLID Hailey 91.42 40 P **P** **18 27 16.5 -0.8**
baz=231
PV13 Radium Mtn., P 91.50 47 IAmb IAmb 18 27 21.9
comp=Z,14nm,1.5s
PLID Pearl Lake 91.52 38 IAmb IAmb 18 27 19.4
comp=Z,23nm,1.4s
M19K Big River Lodg 91.90 10 P **P** **18 27 18.0 -0.8**
baz=199
RC01 Rabbit Creek A 91.94 13 P **P** **18 27 19.0 0.0**
baz=203
PWL Port Wells 92.00 13 P **P** **18 27 19.0 -0.3**
baz=204
GYA Guiyang 92.06 299 ⇓P **P** **18 27 21.5 +0.9**
GYA pmax pmax
comp=Z,13nm,1.6s
L19K White Mountain 92.09 10 IAmb IAmb 18 27 30.0
comp=Z,14nm,1.3s
L19K White Mountain 92.09 10 P **P** **18 27 19.5 -0.2**
baz=199
SUA Susitna One 92.10 12 P **P** **18 27 19.4 -0.4**
baz=202
LYN LuoYang 92.12 308 *e*P **P** **18 27 20.5 0.0**
LYN S **S** **18 38 21.0 +0.7**
LYN LR LR
comp=Z,270nm,21.1s
LYN LR LR
comp=Z,320nm,24.0s
GAMB Gambell 92.14 2 P **P** **18 27 20.3 +0.5**
baz=184
HNS HongShan 92.21 312 ⇓P **P** **18 27 21.0 +0.2**
HNS pmax pmax
comp=Z,12nm,1.0s
EYAK Cordova Ski Ar 92.26 15 P **P** **18 27 20.3 -0.1**
baz=207
GLI Glacier Island 92.27 14 P **P** **18 27 20.3 -0.2**
baz=205
NNA Nana 92.36 105 LR LR 19 00 11.3
comp=Z,141nm,20.9s,baz=233,slow=30
KNK Knik Glacier 92.48 13 P **P** **18 27 21.8 +0.2**
baz=204
L20K Farewell, AK 92.52 10 P **P** **18 27 21.5 -0.2**
baz=200
S22A 4UR Ranch, Cre 92.55 48 P **P** **18 27 22.4 -0.4**
baz=236
TTA Tatalina 92.64 9 P **P** **18 27 22.3 0.0**
baz=198
BJI Beijing 92.79 315 P **P** **18 27 22.5 -0.9**
BJI S **S** **18 38 29.5 +3.5**
BJI SS **SS** **18 44 41.0 +0.6**
BJI pmax pmax
comp=Z,4.0nm,0.8s
BJI pmax pmax
comp=Z,110nm,3.5s
BMRM Bremner River 92.89 15 P **P** **18 27 23.5 +0.1**
baz=208
NEW Newport 93.00 35 LR LR 19 05 36.2
comp=Z,618nm,18.3s,baz=200,slow=33
O20A White River Ci 93.02 45 P **P** **18 27 24.3 -0.4**
baz=235
PNL Peninsula 93.04 18 P **P** **18 27 25.0 +0.9**
baz=212
KLU Klutina 93.08 14 P **P** **18 27 24.8 +0.5**
baz=206
SCM Sheep Creek Mo 93.09 13 P **P** **18 27 24.4 0.0**
baz=205
MSTX Muleshoe 93.22 53 IAmb IAmb 18 27 30.4
comp=Z,16nm,1.4s
MSTX Muleshoe 93.22 53 P **P** **18 27 26.3 +0.5**
baz=238
MSTX Muleshoe 93.22 53 P **P** **18 27 25.3 -0.5**
baz=238
K20K Telida 93.33 10 P **P** **18 27 25.5 +0.1**
baz=200
REDW Red Top Meadow 93.34 42 IAmb IAmb 18 27 28.3
comp=Z,24nm,1.4s
TPAW Teton Pass 93.36 41 IAmb IAmb 18 27 27.5
comp=Z,29nm,1.7s
LVC Limon Verde 93.38 118 LR LR 19 00 31.7
comp=Z,327nm,21.1s,baz=246,slow=30
ATAH Atahualpa 93.40 100 LR LR 18 59 49.2
comp=Z,416nm,20.6s,baz=231,slow=29
FXWY Fox Creek 93.40 41 IAmb IAmb 18 27 28.7
comp=Z,13nm,1.4s
SDCO Great Sand Dun 93.42 49 P **P** **18 27 27.5 +0.7**
baz=236
SDCO Great Sand Dun 93.42 49 P **P** **18 27 26.0 -0.8**
baz=236
SNOW Snow King Moun 93.45 42 IAmb IAmb 18 27 28.9
comp=Z,9.8nm,1.0s
P29M Windy Craggy 93.46 18 P **P** **18 27 25.8 -0.3**
baz=213
N25K Chitina, Valde 93.46 15 IAmb IAmb 18 27 27.9
comp=Z,19nm,1.6s
N25K Chitina, Valde 93.46 15 P **P** **18 27 26.0 -0.1**
baz=208
IMW Indian Meadow 93.61 41 IAmb IAmb 18 27 29.6
comp=Z,12nm,1.3s
MOOW Moose Ponds 93.63 41 IAmb IAmb 18 27 32.2
comp=Z,12nm,1.6s
LOHW Long Hollow 93.63 42 IAmb IAmb 18 27 29.6
comp=Z,18nm,1.5s
WAT6 Susitna Watana 93.69 13 P **P** **18 27 26.7 -0.5**
baz=205
MSO Missoula 93.73 38 P **P** **18 27 27.6 -0.2**
baz=231
BW06 Boulder Array 93.75 43 P **P** **18 27 27.2 -0.9**
BW06 Boulder Array 93.75 43 P **P** **18 27 27.8 -0.3**
baz=234
PDAR Pinedale Array 93.75 43 P **P** **18 27 28.2 +0.1**
comp=Z,1.8nm,1.0s,baz=224,slow=4.1,SNR=12
PDAR PP **PP** **18 31 10.5 -3.6**
comp=Z,0.7nm,1.1s,baz=239,slow=12,SNR=3.9
PDAR LR LR 19 05 50.5
comp=Z,596nm,18.2s,baz=249,slow=33
comp=Z,1.8nm,1.0s
T25A Trinidad 93.81 50 P **P** **18 27 28.1 -0.4**
baz=237
FLWY Flagg Ranch 93.86 41 IAmb IAmb 18 27 34.3
comp=Z,16nm,1.2s
CRAI Chiangrai 93.99 291 P **P** **18 27 29.6 +0.2**
CRAI IAmb IAmb 18 27 35.9
comp=Z,9.7nm,1.1s
YHL Hebgen Lake 94.04 40 IAmb IAmb 18 27 32.9
comp=Z,11nm,1.1s
S34M Telegraph Cree 94.09 22 P **P** **18 27 29.3 +0.3**
baz=219
J20K Nowinta River 94.09 9 P **P** **18 27 28.8 0.0**
baz=199
P30M Million Dollar 94.09 19 P **P** **18 27 29.0 0.0**
baz=214
BOZ Bozeman (W) 94.24 39 IAmb IAmb 18 27 32.2
comp=Z,27nm,1.8s
BOZ Bozeman (W) 94.24 39 P **P** **18 27 29.9 -0.3**
baz=233
CMAR Chiang Mai Arr 94.33 289 P **P** **18 27 32.1 +1.1**
comp=Z,2.1nm,0.9s,baz=140,slow=3.3,SNR=13
CMAR PP **PP** **18 31 17.7 -1.1**
comp=Z,0.3nm,0.4s,baz=135,slow=8.0,SNR=4.0
CMAR LR LR 19 12 14.7
comp=Z,62nm,18.8s,baz=120,slow=37
comp=Z,2.1nm,0.9s
YUK6 Outpost Mounta 94.40 17 P **P** **18 27 30.0 -0.7**
baz=213
KMI Kunming 94.45 296 ⇑P **P** **18 27 33.3 +1.5**
KMI pmax pmax
comp=Z,7.0nm,1.3s
ISCO Idaho Springs 94.49 47 P **P** **18 27 31.5 -0.2**
baz=236
PAX Paxson 94.50 14 P **P** **18 27 30.8 0.0**
baz=207
MCK McKinley 94.52 12 P **P** **18 27 31.0 +0.2**
baz=204
M26K Nabesna, AK 94.52 15 P **P** **18 27 31.1 +0.1**
baz=209
HYT Haines Junctio 94.53 18 P **P** **18 27 31.1 0.0**
baz=214
YUK3 Moose Creek 94.58 16 P **P** **18 27 31.8 +0.4**
baz=211
P32M Atlin 94.60 20 P **P** **18 27 31.4 0.0**
baz=217
SEY Seymchan 94.62 346 *ce*P **P** **18 27 27.3 -4.0**
SEY pmax pmax
comp=Z,18nm,2.5s
M27K Edge Creek, AK 94.74 15 P **P** **18 27 32.4 +0.4**
baz=210
O30N Mendenhall 94.87 18 P **P** **18 27 32.9 +0.4**
baz=215
N23A Red Feather La 94.89 46 P **P** **18 27 32.9 -0.6**
baz=236
L26K Log Cabin Wild 95.00 14 P **P** **18 27 32.9 -0.2**
baz=209
N30M Aishikik Lake 95.17 18 P **P** **18 27 34.3 +0.3**
baz=214
K24K Donnelly Dome 95.18 13 P **P** **18 27 34.5 +0.6**
baz=207
RLMT Red Lodge 95.30 41 P **P** **18 27 34.8 -0.3**
baz=234
R33M Jennings River 95.30 21 P **P** **18 27 34.4 -0.2**
baz=219
RIDG Independent Ri 95.31 13 P **P** **18 27 34.7 +0.1**
baz=207
WRH Wood River Hil 95.35 12 IAmb IAmb 18 27 36.0
comp=Z,8.8nm,1.1s
I21K Tanana 95.36 10 P **P** **18 27 34.8 +0.2**
baz=201
L27K Beaver Creek, 95.37 15 P **P** **18 27 34.9 +0.1**
baz=210
P33M Teslin, Yukon 95.37 20 P **P** **18 27 34.9 0.0**
baz=217
MLY Manley 95.41 11 P **P** **18 27 34.6 -0.3**
baz=202
ZEA Zeya 95.48 330 *e*P **P** **18 27 32.1 -3.3**
ZEA *e* 18 40 08.8
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA MLR MLR
comp=Z,200nm,20.0s
HDA Harding Lake 95.50 12 P **P** **18 27 34.8 -0.5**
baz=206
K22A Casper 95.51 44 IAmb IAmb 18 27 50.1
comp=Z,10nm,1.2s
K22A Casper 95.51 44 P **P** **18 27 35.1 -1.0**
baz=236
M29M Somme Creek 95.64 17 P **P** **18 27 35.8 -0.3**
baz=213
I23K Minto, Yukon-K 95.75 11 P **P** **18 27 36.5 +0.1**
baz=204
COLA College 95.76 12 *i* P **P** **18 27 34.4 -2.0**
COLA pmax pmax
comp=Z,6.0nm,0.9s
ILAR Eielson Array 95.84 12 P **P** **18 27 35.9 -1.0**
comp=Z,0.9nm,0.6s,baz=220,slow=5.4,SNR=9.3
comp=Z,0.9nm,0.6s
PZH PanZhiHua 95.91 297 P **P** **18 27 40.8 +2.5**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.6s
J25K Salcha River, 95.99 13 P **P** **18 27 37.2 -0.4**
baz=207
H22K Ishtalitna Cre 96.12 10 P **P** **18 27 37.3 -0.8**
baz=202
K27K Chicken 96.15 14 P **P** **18 27 38.0 -0.3**
baz=210
HHC Hu-ho-hao-te 96.16 313 *e*P **P** **18 27 39.5 +0.5**
HHC sP pP 18 27 48.3 -0.2
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,380nm,6.0s
HHC LR LR
comp=Z,310nm,14.7s
HHC LR LR
comp=Z,340nm,18.0s
HHC LR LR
comp=Z,470nm,18.0s
M30M Minto, Yukon 96.18 17 P **P** **18 27 38.9 +0.4**
baz=214
J26L Joseph Creek 96.25 14 P **P** **18 27 39.3 +0.5**
baz=209
EGAK Eagle 97.00 14 P Pdif 18 27 42.5 +0.3
baz=211
LPAZ La Paz 97.40 113 P Pdif 18 27 48.7 +2.7
comp=Z,1.2nm,0.6s,baz=6.0,slow=5.0,SNR=5.5
LPAZ LR LR 19 02 50.2
comp=Z,142nm,20.4s,baz=231,slow=30
comp=Z,1.2nm,0.6s
RSSD Black Hills 97.83 44 P **P** **18 27 46.2 -0.5**
RSSD IAmb IAmb 18 27 48.1
comp=Z,8.5nm,0.9s
RSSD Black Hills 97.83 44 P **P** **18 27 46.2 -0.5**
RSSD pmax pmax
comp=Z,9.0nm,1.0s
RSSD Black Hills 97.83 44 P Pdif 18 27 47.2 +0.5
baz=238
LZH Lanzhou 98.95 306 *e*P Pdif 18 28 02.3 +11
LZH pP pwP 18 28 08.0 -1.0
LZH Lanzhou 98.95 306 S S 18 39 33.3 +13
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,150nm,5.7s
LZH LR LR
comp=N,240nm,16.1s
LZH LR LR
comp=E,280nm,15.8s
LZH LR LR
comp=Z,350nm,17.5s
YAK Yakutsk 100.22 337 LR LR 19 14 43.6
comp=Z,201nm,18.1s,baz=89,slow=36
SONM Songino Array 102.89 318 PKKPbc PKKPbc 18 44 09.9 +2.2
comp=Z,0.7nm,0.9s,baz=219,slow=3.7,SNR=5.2
GOMU GeErMu 105.54 303 Pdif **Pdif** **18 28 19.8 -1.6**
GOMU PP **PP** **18 32 48.8 +4.7**
GOMU AMB AMB
comp=Z,47nm,6.5s
GOMU LR LR
comp=Z,110nm,17.2s
GOMU LR LR
comp=Z,110nm,17.6s
GOMU LR LR
comp=Z,180nm,16.5s
PCHI Peechi 110.26 271 *e*P **PKiKP** **18 32 43.8 +0.2**
WMQ Urumqi 113.37 308 *e*PKP **PKiKP** **18 32 49.8 +1.0**
WMQ LR LR
comp=Z,140nm,21.5s
DGZ Jazzator, Alta 115.21 315 *i* PKIKP **PKPdf** **18 32 48.1 -4.1**
ZALV Zalesovo Beam 117.75 319 PKP **PKPdf** **18 32 55.6 -1.2**
comp=Z,1.2nm,0.5s,baz=154,slow=1.4,SNR=6.6
ZALV Zalesovo Beam 117.75 319 PKPdf **PKPdf** **18 32 55.9 -0.9**
MK31 Makanchi Array 117.84 310 *i* PKIKP **PKPdf** **18 32 55.8 -1.4**
MKAR Makanchi Array 117.84 310 PKP **PKPdf** **18 32 55.5 -1.7**
comp=Z,2.0nm,0.7s,baz=107,slow=0.7,SNR=18
MKAR PKKPbc **PKKPab** **18 43 19.7 +0.1**
comp=Z,0.2nm,0.5s,baz=269,slow=5.7,SNR=4.2
MKAR Makanchi Array 117.84 310 **PKPdf** **18 32 56.6 -0.6**
MKAR Makanchi Array 117.84 310 PKIKP **PKPdf** **18 32 56.6 -0.6**
MAKZ Makanchi 118.05 310 **PKPdf** **18 32 56.9 -0.7**
MAKZ Makanchi 118.05 310 PKIKP **PKPdf** **18 32 56.9 -0.7**
KURK Kurchatov 120.95 314 **PKPdf** **18 33 02.6 -0.4**
KURK Kurchatov 120.95 314 PKIKP **PKPdf** **18 33 02.6 -0.4**
BRVK Borovoye 126.29 317 PKPdf **PKPdf** **18 33 13.1 -0.1**
BRVK Borovoye 126.29 317 *i* PKIKP **PKPdf** **18 33 11.9 -1.3**
ARU Arti 132.70 322 PKPdf **PKiKP** **18 33 26.6 +0.2**
ARU Arti 132.70 322 *i* PKIKP **PKPdf** **18 33 23.7 -1.6**
ARU 18 35 44.9
ARU MLR MLR
comp=Z,271nm,20.0s
ARCES ARCESS Array B 137.17 349 PKhKP PKPpre 18 33 30.3
comp=Z,3.8nm,0.6s,baz=19,slow=3.1,SNR=12
ARCES PKP **PKiKP** **18 33 35.5 +0.4**
comp=Z,3.8nm,0.6s,baz=54,slow=1.6,SNR=14
KLMR Klimovskoe 139.91 334 *e*PKIKP **PKiKP** **18 33 40.4 -0.5**
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 139.91 334 *e*PKPdf **PKiKP** **18 33 40.4 -0.5**
KLMR AMP 18 33 56.0
comp=Z,14nm,1.3s
RAYN Ar Rayn 142.36 272 ⇓PKIKP **PKPdf** **18 33 41.7 -2.5**
GROC Groznyy 143.42 305 *e*PKIKP PKiKP 18 33 57.2 +8.5
GROC *e* 18 36 57.9
VRH Novokhopyorsk 143.79 319 *e*PKHKP PKPpre 18 33 36.4
VRH pmax pmax
comp=Z,7.0nm,0.6s
FIA1 FINESS Array S 143.98 342 PKPdf PKPbc 18 33 43.5 -0.2
FINES FINESS Array B 143.98 342 PKhKP PKPpre 18 33 42.4
comp=Z,2.9nm,0.4s,baz=49,slow=3.8,SNR=52
FINES FINESS Array B 143.98 342 **PKPab** **18 33 42.9 -0.2**
FINES FINESS Array B 143.98 342 PKIKP **PKPab** **18 33 42.9 -0.2**
OBN Obninsk 144.57 328 ⇓*e*PKIKP **PKPab** **18 33 45.2 -0.3**
OBN *i* 18 33 49.1
OBN *e*SS SS 18 55 53.1 +5.2
OBN pmax pmax
comp=Z,27nm,1.2s
OBN pmax pmax
comp=Z,12nm,1.1s
LPSR Galich'ya Gora 144.71 323 *e*PKIKP **PKPdf** **18 33 48.0 +0.7**
LPSR pmax pmax
comp=Z,20nm,1.5s
ZEI Tsey 144.86 305 *i* PKIKP **PKPab** **18 33 46.0 -1.3**
ZEI pmax pmax
comp=Z,10.0nm,1.1s
VORR Voronezh 145.00 321 *e*PKIKP **PKPbc** **18 33 46.7 -0.5**
VORR pmax pmax
comp=Z,38nm,0.5s
TBLU Trondheim 145.10 355 *e* **PKPbc** **18 33 46.0 -1.2**
VSR Storozhevoye 145.23 320 *e*PKIKP **PKPbc** **18 33 46.3 -1.7**
VSR pmax pmax
comp=Z,20nm,1.4s
KBZ Khabaz 145.39 306 PKPbc **PKPab** **18 33 49.0 +0.1**
comp=Z,6.4nm,1.0s,baz=98,slow=4.9,SNR=6.8
RAF Rauma 145.43 345 *e*P **PKPdf** **18 33 47.0 -1.3**

MEF	**Metsahovi**	**145.46**	**342**	*e*P	**PKPdf**	**18 33 47.6**	**-0.7**
KIV	**Kislovodsk**	**145.49**	**307**	⇓P	**PKPdf**	**18 33 48.8**	**-0.3**
KIV	**Kislovodsk**	**145.49**	**307**		**PKPdf**	**18 33 48.9**	**-0.3**
KIV	**Kislovodsk**	**145.49**	**307**	*i* PKP2	**PKPdf**	**18 33 46.9**	**-2.2**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
SHA1	**Shidzhatmaz**	**145.56**	**307**	*i* PKIKP	**PKPdf**	**18 33 48.4**	**-1.0**
MOL	**Molde**	**145.95**	**357**	*e*	**PKPbc**	**18 33 49.3**	**-0.6**
VSU	**Vasula**	**146.20**	**338**	*e*P	**PKPbc**	**18 33 50.5**	**-0.2**
AKN	**Aaknes**	**146.37**	**357**	*e*P	**PKPbc**	**18 33 50.4**	**-0.8**
AKN				IAmb	IAmb	18 33 54.2	
	comp=Z,32nm,1.0s						
DOMB	**Dombas**	**146.39**	**356**	*e*	**PKPbc**	**18 33 51.5**	**+0.2**
DOMB				IAmb	IAmb	18 33 53.6	
	comp=Z,64nm,1.5s						
BCA	**Borcka**	**146.77**	**303**	⇑P	**PKPab**	**18 33 54.6**	**+0.2**
MTSE	**Matsula**	**146.89**	**341**	*e*P	**PKPbc**	**18 33 52.7**	**-0.1**
FOO	**Floro**	**147.00**	**359**	*e*P	**PKPbc**	**18 33 52.7**	**-0.2**
FOO				IAmb	IAmb	18 33 56.3	
	comp=Z,31nm,1.1s						
NB2	**NORSAR Subarra**	**147.20**	**353**	PKP	**PKPbc**	**18 33 52.5**	**-1.1**
	comp=Z,26nm,1.2s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**147.20**	**353**	PKPbc	**PKPbc**	**18 33 52.5**	**-1.1**
	comp=Z,15nm,0.8s,baz=14,slow=4.4,SNR=42						
HYA	**Hoyanger**	**147.41**	**358**	*e*P	**PKPbc**	**18 33 53.4**	**-0.7**
NAO01	**NORSAR Array S**	**147.42**	**354**	*e*P	**PKPbc**	**18 33 54.0**	**-0.2**
NAO01				IAmb	IAmb	18 33 54.9	
	comp=Z,39nm,1.1s						
NC602	**NORSAR Array S**	**147.46**	**353**	*e*P	**PKPbc**	**18 33 53.0**	**-1.4**
SUE	**Sulen**	**147.55**	**359**	*e*P	**PKPbc**	**18 33 54.9**	**+0.4**
SUE				IAmb	IAmb	18 33 55.4	
	comp=Z,24nm,0.8s						
SOC	**Sochi**	**147.66**	**307**	*i* PKP2	**PKPbc**	**18 33 54.8**	**-0.6**
SOC				*e*		18 37 16.8	
SOC				*e*SS	SS	18 56 22.8	-1.5
SOC				*e*SSS	SSS	19 01 56.9	
SOC				MLR	MLR		
	comp=Z,264nm,20.0s						
SKAR	**Skarslia**	**147.79**	**356**	*e*P	**PKPbc**	**18 33 55.5**	**+0.2**
ASK	**Askoy**	**148.12**	**359**	*e*P	**PKPbc**	**18 33 56.5**	**+0.5**
ASK				IAmb	IAmb	18 33 57.0	
	comp=Z,48nm,1.0s						
BER	**Bergen**	**148.22**	**359**	*e*P	**PKPbc**	**18 33 56.0**	**-0.3**
OSL	**Oslo**	**148.33**	**353**	*e*P	**PKiKP**	**18 33 57.2**	**-1.0**
ODD1	**Odda**	**148.65**	**357**	*e*P	**PKPbc**	**18 33 57.6**	**0.0**
ISAL	**Salakas**	**148.66**	**336**	*e*P	**PKiKP**	**18 33 58.3**	**-0.7**
KONO	**Kongsberg**	**148.72**	**354**		**PKPbc**	**18 33 57.2**	**-0.5**
KONO	**Kongsberg**	**148.72**	**354**	PKP2	**PKPbc**	**18 33 57.2**	**-0.5**
KONO	**Kongsberg**	**148.72**	**354**	*e*P	**PKPbc**	**18 33 57.8**	**+0.1**
KONO				IAmb	IAmb	18 33 58.4	
	comp=Z,27nm,0.9s						
IIGN	**Ignalina**	**148.80**	**335**	*e*P	**PKiKP**	**18 33 58.5**	**-0.9**
ANN	**Anapa**	**148.86**	**310**	*i* PKP2	**PKPbc**	**18 33 57.7**	**-0.8**
ANN				pmax	pmax		
	comp=Z,48nm,1.1s						
NACGM	**Naroch**	**148.93**	**334**	⇓*i* PKP	**PKPbc**	**18 33 57.9**	**-0.4**
	baz=42						
VSVD	**Vaisvydziai**	**149.10**	**338**	*e*P	**PKiKP**	**18 33 59.4**	**-0.5**
BLS5	**Blasjo**	**149.15**	**357**	*e*P	**PKiKP**	**18 33 59.7**	**-0.3**
BLS5				IAmb	IAmb	18 34 06.8	
	comp=Z,143nm,2.1s						
STRU	**Stroemstad**	**149.17**	**353**	*e*P	**PKPbc**	**18 33 58.3**	**-0.5**
PABE	**Paberze**	**149.48**	**337**	*e*P	**PKPbc**	**18 33 59.6**	**-0.1**
PBUR	**Paburge**	**149.71**	**340**	*e*P	**PKPbc**	**18 33 59.7**	**-0.5**
HOMB	**Homborsund**	**150.18**	**355**	*e*P	**PKiKP**	**18 34 02.1**	**+0.1**
SNART	**Snartemo**	**150.19**	**356**	*e*P	**PKPbc**	**18 34 01.2**	**-0.1**
AKASG	**Malin Array Be**	**150.78**	**326**	PKPbc	**PKPbc**	**18 34 02.0**	**-1.0**
	comp=Z,6.6nm,0.5s,baz=45,slow=3.5,SNR=60						
AKASG	**Malin Array Be**	**150.78**	**326**	PKIKP	**PKPbc**	**18 34 02.0**	**-1.0**
SIM	**Simferopol'**	**150.99**	**312**	*i* PKIKP	**PKPbc**	**18 34 02.0**	**-1.7**
SIM				*e*		18 37 40.4	
SIM				pmax	pmax		
	comp=Z,110nm,5.6s						
SIM				pmax	pmax		
	comp=Z,44nm,16.5s						
SORM	**Soroca**	**152.82**	**323**	⇑P	**PKPbc**	**18 34 06.8**	**-0.9**
SORM	**Soroca**	**152.82**	**323**	⇑PKIKP	**PKPbc**	**18 34 06.8**	**-0.9**
BRTR	**Keskin Array B**	**153.08**	**302**	PKPbc	**PKPbc**	**18 34 08.2**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=143,slow=4.1,SNR=13						
BRTR	**Keskin Array B**	**153.08**	**302**		**PKPbc**	**18 34 08.6**	**-0.2**
MILM	**Milestii Mici**	**153.27**	**320**	⇑P	**PKiKP**	**18 34 08.7**	**-0.2**
MILM	**Milestii Mici**	**153.27**	**320**	⇑PKIKP	**PKiKP**	**18 34 08.7**	**-0.2**
LVV	**L'vov**	**153.82**	**330**	*e*PKIKP	**PKiKP**	**18 34 09.9**	**0.0**
TPGR	**Topolog**	**154.62**	**316**	⇑P	**PKPab**	**18 34 25.2**	**-1.3**
CFR	**Carcaliu**	**154.62**	**317**	⇓P	**PKiKP**	**18 34 12.3**	**+0.6**
CFR	**Carcaliu**	**154.62**	**317**	⇓PKIKP	**PKiKP**	**18 34 12.3**	**+0.6**
TESR	**Tescani**	**154.72**	**321**	⇑P	**PKPab**	**18 34 24.7**	**-2.2**
BIZ	**Bicaz**	**154.75**	**322**	⇑P	**PKiKP**	**18 34 12.2**	**+0.2**
BURAR	**Bucovina Array**	**154.78**	**325**	⇑P	**PKiKP**	**18 34 13.7**	**+1.5**
BURAR	**Bucovina Array**	**154.78**	**325**	⇑PKIKP	**PKiKP**	**18 34 13.7**	**+1.5**
VRI	**Vrincioaia**	**155.06**	**320**	⇑P	**PKPab**	**18 34 29.1**	**+0.7**
VRI	**Vrincioaia**	**155.06**	**320**	⇑PKP2	**PKPab**	**18 34 29.1**	**+0.7**
PLOR	**Plostina**	**155.11**	**320**	⇑P	**PKPab**	**18 34 28.5**	**-0.2**
PLOR	**Plostina**	**155.11**	**320**	⇑PKP2	**PKPab**	**18 34 28.5**	**-0.2**
KOLS	**Kolonicke sedl**	**155.25**	**330**	*e*PKP2	**PKPab**	**18 34 29.6**	**+0.5**
COVR	**Voineasa-Covas**	**155.37**	**320**	⇑P	**PKPab**	**18 34 26.6**	**-3.1**
OZUR		**155.45**	**321**	⇑P	**PKPab**	**18 34 29.0**	**-1.1**
UZH	**Uzhgorod**	**155.47**	**330**	*e*PKIKP	PKPab	18 34 19.2	-11
MLR	**Muntele Rosu**	**155.72**	**320**	⇑P	**PKPab**	**18 34 30.3**	**-1.1**
MLR	**Muntele Rosu**	**155.72**	**320**	⇑PKP2	**PKPab**	**18 34 30.3**	**-1.1**
DOPR	**Dopca**	**155.75**	**321**	⇑P	**PKPab**	**18 34 30.5**	**-0.8**
OSTC	**Ostas**	**156.16**	**340**	*e*PKPAB	**PKPab**	**18 34 30.1**	**-2.8**
OSTC				*ex*	x	18 34 49.5	
LIC	**Lamto**	**156.21**	**158**	⇓*e*P	**PKPab**	**18 34 34.8**	**+0.8**
	comp=Z,20nm,0.8s						
VOIR		**156.26**	**321**	⇑P	**PKPab**	**18 34 27.9**	**-5.7**
VOIR		**156.26**	**321**	⇑PKP2	**PKPab**	**18 34 27.9**	**-5.7**
CLL	**Collm**	**156.30**	**346**	*e*PKIKP	**PKPdf**	**18 34 07.0**	**+1.7**
CLL				*e*		18 34 33.0	
CLL				pmax	pmax		
	comp=Z,14nm,1.2s						
CLL	**Collm**	**156.30**	**346**	*e*PKPdf	**PKPdf**	**18 34 07.0**	**+1.7**
CLL				*e*PKPdif	**pPKPdf**	**18 34 16.0**	**+0.9**
CLL				*e*PKPab	**PKPab**	**18 34 33.0**	**-0.4**
	comp=Z,14nm,1.2s						
CLL				*e*SKSP		18 48 30.0	
CLL				*e*(SKKSdf)		18 49 42.0	
CLL				*e*PPS	PPS	18 51 18.0	
CLL				*e*SS	SS	18 57 48.0	-9.5
CLL				*e*SSS	SSS	19 03 48.0	
CLL				*e*SSSS		19 07 42.0	
CLL				LmV		19 53 00.0	
	comp=Z,300nm,19.4s						
DPC	**Dobruska-Polom**	**156.31**	**340**	*e*PKIKP	PKPdf	18 34 18.1	+13
DPC	**Dobruska-Polom**	**156.31**	**340**	⇑*e*PKP	PKPdf	18 34 18.1	+13
DPC				*e*PKPAB	**PKPab**	**18 34 33.7**	**+0.1**
KRLC	**Kraliky**	**156.41**	**339**	*e*PKP2	**PKPab**	**18 34 29.3**	**-4.7**
KRLC	**Kraliky**	**156.41**	**339**	*e*PKPAB	**PKPab**	**18 34 29.3**	**-4.7**
KRLC				*ex*	x	18 34 46.2	
MORC	**Moravsky Berou**	**156.42**	**337**	⇑P	**PKPab**	**18 34 31.7**	**-2.4**
MORC	**Moravsky Berou**	**156.42**	**337**	⇑PKP2	**PKPab**	**18 34 31.7**	**-2.4**
KIC	**Kosan Boka**	**156.43**	**158**	⇓*i*P	**PKPab**	**18 34 37.9**	**+3.0**
	comp=Z,4.5nm,0.6s						
BRG	**Berggiesshubel**	**156.49**	**344**	*e*PKP2	**PKPab**	**18 34 33.7**	**-0.6**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIC	**Toumodi**	**156.60**	**157**	⇑*i*P	**PKPab**	**18 34 35.6**	**-0.1**
	comp=Z,12nm,0.8s						
VYHS	**Vyhne**	**157.02**	**334**	*e*PKP2	**PKPab**	**18 34 35.9**	**-0.8**
VRAC	**Vranov**	**157.14**	**338**	⇑P	**PKPab**	**18 34 37.1**	**0.0**
VRAC	**Vranov**	**157.14**	**338**	⇑PKP2	**PKPab**	**18 34 37.1**	**0.0**
PRU	**Pruhonice**	**157.15**	**342**	*e*PKP2	**PKPab**	**18 34 36.3**	**-0.8**
PRU	**Pruhonice**	**157.15**	**342**	*e*PKPAB	**PKPab**	**18 34 36.3**	**-0.8**
GZR	**Gura Zlata**	**157.52**	**323**	⇑P	PKPdf	18 34 17.2	+10
GZR	**Gura Zlata**	**157.52**	**323**	⇑PKIKP	PKPdf	18 34 17.2	+10
MODS	**Modra-Piesok**	**157.70**	**336**	*e*PKP2	**PKPab**	**18 34 39.8**	**+0.2**
MODS	**Modra-Piesok**	**157.70**	**336**	*e*PKP	**PKPab**	**18 34 39.8**	**+0.2**
KHC	**Kasperske Hory**	**158.19**	**343**	*e*PKP2	**PKPab**	**18 34 41.3**	**-0.4**
KHC	**Kasperske Hory**	**158.19**	**343**	*e*PKPAB	**PKPab**	**18 34 41.3**	**-0.4**
KHC				*ex*	x	18 34 48.6	
CKRC	**Cesky Krumlov**	**158.27**	**341**	*e*PKPDF	**PKPdf**	**18 34 11.7**	**+3.8**
CKRC				*e*PKPAB	**PKPab**	**18 34 41.8**	**-0.2**
GERES	**GERESS Array B**	**158.41**	**342**	PKP	**PKPdf**	**18 34 08.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=343,slow=3.1,SNR=2.7						
GERES				PKPab	**PKPab**	**18 34 42.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=42,slow=3.1,SNR=6.8						
CONA	**Conrad Observa**	**158.57**	**337**	*e*P	**PKPab**	**18 34 43.4**	**-0.1**
	comp=Z,10nm,1.6s						
RONA	**Rosalia, Austr**	**158.62**	**336**	*e*P	**PKPab**	**18 34 43.7**	**+0.1**
	comp=Z,5.9nm,0.9s						
VTS	**Vitosha**	**158.99**	**317**	⇑P	**PKPab**	**18 34 45.7**	**+0.1**
VTS	**Vitosha**	**158.99**	**317**	PKPab	**PKPab**	**18 34 45.4**	**-0.2**
VTS	**Vitosha**	**158.99**	**317**	PKP2	**PKPab**	**18 34 45.4**	**-0.2**
MOA	**Molln**	**159.15**	**340**	*e*P	**PKPab**	**18 34 46.2**	**+0.3**
	comp=Z,6.2nm,1.2s						
BIOA	**Bad Ischl, Aus**	**159.48**	**341**	*e*P	**PKPab**	**18 34 47.4**	**+0.1**
	comp=Z,7.5nm,1.0s						
SOKA	**Soboth**	**159.94**	**337**	*e*P	**PKPab**	**18 34 49.1**	**-0.4**
	comp=Z,6.2nm,1.4s						
KBA	**Koelnbreinsper**	**160.12**	**341**	*e*P	**PKPab**	**18 34 50.0**	**-0.4**
	comp=Z,4.3nm,0.9s						
WATA	**Walderalm**	**160.35**	**344**	*e*P	**PKPab**	**18 34 50.5**	**-0.8**
	comp=Z,7.1nm,1.2s						
RETA	**Reutte**	**160.40**	**346**	*e*P	**PKPab**	**18 34 50.9**	**-0.5**
	comp=Z,3.3nm,0.9s						
WTTA	**Wattenberg**	**160.41**	**344**	*e*P	**PKPab**	**18 34 51.0**	**-0.5**
	comp=Z,6.3nm,1.0s						
MOTA	**Moosalm**	**160.46**	**345**	*e*P	**PKPab**	**18 34 51.1**	**-0.6**
	comp=Z,4.8nm,0.8s						
ABTA	**Abfaltersbach**	**160.66**	**342**	*e*P	**PKPab**	**18 34 51.5**	**-1.1**
	comp=Z,4.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**164.48**	**172**	PKP	**PKPdf**	**18 34 15.8**	**+0.4**
	comp=Z,22nm,0.3s,baz=303,slow=0.9,SNR=3.8						
ESDC	**Sonseca Array**	**167.23**	**28**	PKP	**PKPdf**	**18 34 18.6**	**+1.6**
	comp=Z,1.0nm,1.0s,baz=356,slow=2.4,SNR=7.1						
ESDC				PKPab	**PKPab**	**18 35 21.4**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=321,slow=3.7,SNR=6.3						

*TAP **28** 18:24:31.4,24°.76N×122°.95E,h23km±1km,ML2.6,D*
*JMA **28** 18:24:31.3±0.2,24°.8N±0°.7×122°.9E±0°.8,h7km±3km,*
MV2.1/9,NW OFF ISHIGAKIJIMA IS

ISC 28 18:24:31.3±1.2,24°.78N±0°.05×122°.90E±0°.04,h15km±9km,
n47,σ0s51/68,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.33**	**172**	P	**Pg**	**18 24 38.1**	**0.0**
JYNG				S	**Sg**	**18 24 42.9**	**+0.1**
YOJ	**Yonaguni jima**	**0.33**	**162**	P	**Pg**	**18 24 38.3**	**+0.1**
	baz=170						
YOJ				S	**Sg**	**18 24 42.9**	**+0.1**
	baz=170						
YOJ	**Yonaguni jima**	**0.33**	**162**	P	**Pg**	**18 24 38.1**	**0.0**
YOJ				*e*S	**Sg**	**18 24 42.8**	**0.0**
TWB1	**Santiao Chiao**	**0.86**	**286**	P	**Pb**	**18 24 47.0**	**-0.8**
	baz=286						
TWB1				*e*S	**Sn**	**18 25 01.1**	**+0.2**
	baz=286						
IRIF	**Iriomote-Funau**	**0.88**	**120**	*e*P	**Pg**	**18 24 48.5**	**+0.2**
IRIF				*e*S	**Sn**	**18 25 00.9**	**-0.5**
TWC	**Suao**	**0.97**	**260**	P	**Pb**	**18 24 49.2**	**-0.5**
	baz=261						
TWC				S	**Sg**	**18 25 02.9**	**+0.2**
	baz=261						
NTC	**Toucheng**	**0.97**	**275**	*e*P	**Pn**	**18 24 50.5**	**+0.2**
	baz=289						
SXI1	**Grass Mountain**	**0.98**	**289**	P	**Pb**	**18 24 49.3**	**-0.7**
	baz=289						
TIPB	**Shuangxi**	**0.99**	**281**	P	**Pb**	**18 24 49.5**	**-0.7**
	baz=281						
TIPB				*e*S	**Sn**	**18 25 04.6**	**+0.2**
	baz=281						
EWUT	**Wuta**	**1.07**	**252**	*e*P	**Pb**	**18 24 49.9**	**-1.6**
	baz=254						
EWUT				*e*S	**Sb**	**18 25 05.2**	**-0.1**
	baz=254						
NDS	**Dongshan**	**1.08**	**263**	*e*S	**Sb**	**18 25 06.0**	**+0.4**
	baz=264						
HATJ	**Hateruma jima**	**1.10**	**131**	*e*P	**Pg**	**18 24 53.1**	**+0.6**
ENA	**Nanau**	**1.11**	**252**	*i* P	**Pb**	**18 24 51.7**	**-0.4**
	baz=253						
ENA				S	**Sb**	**18 25 05.5**	**-0.8**
	baz=253						
TWE	**Neicheng**	**1.12**	**267**	P	**Pb**	**18 24 51.5**	**-0.8**
	baz=268						
TWE				S	**Sn**	**18 25 08.2**	**+0.8**
	baz=268						
JKRS	**Kuro-shima**	**1.15**	**118**	P	**Pg**	**18 24 53.6**	**+0.1**
FUSB	**Fushanzhiwuyua**	**1.19**	**269**	P	**Pn**	**18 24 52.6**	**-0.8**
	baz=282						
FUSB				*e*S	**Sb**	**18 25 08.7**	**-0.1**
	baz=282						
JIJ	**Ishigaki jima**	**1.21**	**110**	P	**Pg**	**18 24 54.6**	**0.0**
ENTT	**Nioudou**	**1.22**	**264**	P	**Pn**	**18 24 53.1**	**-0.7**
	baz=264						
ENTT				*e*S	**Sn**	**18 25 10.6**	**+0.7**
	baz=264						
YM01	**YM01**	**1.26**	**287**	*e*P	**Pb**	**18 24 54.9**	**+0.2**
	baz=287						
LATG	**Datong**	**1.27**	**259**	P	**Pn**	**18 24 54.4**	**-0.1**
	baz=260						
LATG				*e*S	**Sb**	**18 25 11.0**	**-0.1**
	baz=260						
NDT	**Datong Townshi**	**1.27**	**262**	P	**Pb**	**18 24 55.1**	**+0.2**
	baz=263						
NDT				*e*S	**Sg**	**18 25 12.2**	**-0.2**
	baz=263						
JISG	**Ishigakijimahi**	**1.30**	**98**	*e*P	**Pg**	**18 24 56.3**	**0.0**
NACB	**Ninganchiao**	**1.33**	**243**	P	**Pn**	**18 24 55.2**	**0.0**
	baz=253						
NACB				S	**Sb**	**18 25 13.1**	**+0.4**
	baz=253						
NTST	**Danshui**	**1.37**	**287**	*e*P	**Pn**	**18 24 56.5**	**+0.7**
	baz=287						
TWS1	**Kuangyinshan**	**1.38**	**284**	*e*P	**Pn**	**18 24 56.2**	**+0.3**
	baz=284						
YHNB	**Yeheng**	**1.39**	**266**	P	**Pn**	**18 24 56.1**	**0.0**
	baz=267						
NSK	**Sanguang**	**1.40**	**266**	P	**Pn**	**18 24 55.4**	**-0.9**
	baz=267						
NSK				S	**Sb**	**18 25 15.2**	**+0.3**
	baz=267						
ETLH	**Xiulin Townshi**	**1.41**	**246**	*e*P	**Pn**	**18 24 57.0**	**+0.6**
	baz=248						
ETLH				*e*S	**Sn**	**18 25 14.6**	**-0.1**
	baz=248						
NNSB	**Datong**	**1.42**	**256**	P	**Pn**	**18 24 56.9**	**+0.3**
	baz=257						
NNSB				*e*S	**Sg**	**18 25 16.8**	**-0.4**
	baz=257						
NNS	**Nan Shan**	**1.43**	**257**	P	**Pn**	**18 24 56.5**	**-0.2**
	baz=258						
FUSS	**Fushou**	**1.59**	**251**	*e*P	**Pb**	**18 25 00.2**	**-0.3**
	baz=253						
WHF	**Hehuan Shan**	**1.61**	**247**	P	**Pb**	**18 25 00.6**	**-0.4**
	baz=249						
NFF	**Wufeng Townshi**	**1.62**	**265**	*e*P	**Pn**	**18 24 59.2**	**-0.1**
	baz=266						
TWT	**Tachien**	**1.65**	**252**	*e*P	**Pn**	**18 25 00.5**	**+0.6**
	baz=253						
TWT				*e*S	**Sn**	**18 25 21.6**	**+0.7**
	baz=253						
LIOB	**Emei**	**1.71**	**266**	*e*P	**Pb**	**18 25 02.9**	**+0.4**
	baz=267						
CHGB	**Renai**	**1.73**	**246**	*e*P	**Pn**	**18 25 00.9**	**0.0**
	baz=247						
CHGB				*e*S	**Sn**	**18 25 22.0**	**-0.8**
	baz=247						
NSTT	**Nanjuang**	**1.73**	**266**	*e*P	**Pb**	**18 25 02.7**	**0.0**
	baz=266						
OWD	**Renai**	**1.77**	**243**	*e*P	**Pn**	**18 25 01.3**	**-0.2**
	baz=244						
OWD				*e*S	**Sn**	**18 25 23.1**	**-0.6**
	baz=244						
WUSB	**Renai**	**1.80**	**245**	*e*P	**Pb**	**18 25 03.9**	**-0.1**
	baz=233						
WHP	**Taichung City**	**1.84**	**255**	*e*P	**Pn**	**18 25 02.8**	**+0.4**
	baz=244						
VWDT	**VWDT**	**1.90**	**238**	*e*P	**Pn**	**18 25 03.2**	**+0.2**
	baz=240						
WCS	**Beigang Elemen**	**1.95**	**249**	*e*P	**Pn**	**18 25 04.2**	**+0.4**
	baz=238						
SMLT	**Sun Moon Lake**	**2.03**	**244**	*e*P	**Pn**	**18 25 05.1**	**+0.1**
	baz=233						
SSLB	**Suanglung**	**2.03**	**241**	*e*P	**Pn**	**18 25 05.1**	**+0.2**
	baz=243						
TYC	**Yuchr**	**2.05**	**245**	*e*P	**Pn**	**18 25 06.0**	**+0.8**
	baz=233						
YUS	**Yu-Shan**	**2.19**	**235**	*e*P	**Pn**	**18 25 09.0**	**+1.4**
	baz=236						
ALS	**Alishan**	**2.29**	**237**	*e*P	**Pn**	**18 25 08.7**	**-0.1**
	baz=238						

*NNC **28** 18:31:28.9±6.5,37°.52N×71°.63E,h142km±133km,mb3.1,*
mpv3.9,Error ellipse: s-maj=64.1km s-min=43.8km
az=12.0

ISC 28 18:31:20.8±1.6,37°.1N±0°.1×71°.6E±0°.2,h106km,n8,
σ1s73/10,4C,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.10**	**352**	⇑P	**Pn**	**18 32 51.5**	**+3.1**
	12nm,0.4s,baz=176,slow=12,SNR=145						
KK31				⇑S	**Sn**	**18 33 54.8**	**-1.9**
	4.3nm,0.3s,baz=177,slow=23,SNR=11						
CHMS	**Chumysh**	**6.40**	**21**	⇑P	**Pn**	**18 32 54.1**	**+1.5**
	1.8nm,0.4s						
CHMS				⇑S	**Sn**	**18 34 03.3**	**-1.0**
	5.1nm,0.8s						
GKN	**Gorkha**	**14.21**	**126**	*e*P	**Pn**	**18 34 37.5**	**+0.1**
AB31	**Akbulak array**	**14.85**	**329**	P	**P**	**18 34 46.7**	**-1.5**
	0.6nm,0.4s,baz=134,slow=14,SNR=24						
PKIN	**Phulchoki**	**14.99**	**125**	*e*P	**Pn**	**18 34 47.6**	**+0.1**
PKI	**Pulchoki**	**15.01**	**125**	*e*P	**Pn**	**18 34 47.7**	**0.0**
JIRN	**Jiri**	**15.46**	**123**	*e*P	**Pn**	**18 34 52.9**	**-0.6**
RAMN	**Ramite**	**16.20**	**124**	*e*P	**Pn**	**18 35 01.4**	**-1.2**

ROM 28 18:33:11.6±0.1,42°.773N±0°.004×13°.167E±0°.006,
h9km,ML1.2/6,3C-5D,Error ellipse: s-maj=0.5km
s-min=0.2km az=271.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.07**	**327**	⇑P	Pg	18 33 14.1	+0.2
NRCA				S	Sg	18 33 15.3	-0.2
NRCA				AML	AML		
	comp=E,2335μm,0.5s						
NRCA				AML	AML		
	comp=N,2120μm,1.0s						
MC2	**Monte Cornacci**	**0.14**	**7**	P	Pg	18 33 15.5	+0.7
MC2				S	Sg	18 33 18.0	+0.8
MMO1	**Montemonaco**	**0.17**	**43**	⇓P	Pg	18 33 16.0	+0.7
MMO1				S	Sg	18 33 18.9	+1.0
MMO1				AML	AML		
	comp=N,122μm,1.5s						
MMO1				AML	AML		
	comp=E,176μm,0.2s						
LNSS	**Leonessa**	**0.19**	**209**	⇓P	Pg	18 33 16.5	+0.9
LNSS				S	Sg	18 33 20.0	+1.6
LNSS				AML	AML		
	comp=E,208μm,0.4s						
LNSS				AML	AML		
	comp=N,276μm,0.1s						
T1243	**Rocca Santa Ma**	**0.22**	**110**	⇑P	Pg	18 33 16.8	+0.7
T1243				AML	AML		
	comp=E,104μm,1.3s						
T1243				AML	AML		
	comp=N,133μm,0.3s						
T1243				AML	AML		
	comp=E,406μm,0.2s						
T1243				AML	AML		
	comp=N,284μm,0.9s						
FDMO	**Fiordimonte**	**0.27**	**347**	P	Pg	18 33 17.7	+0.6
CAMP	**Campotosto**	**0.30**	**143**	⇓P	Pg	18 33 18.3	+0.8
CAMP				S	Sb	18 33 22.9	-1.2
CAMP				AML	AML		
	comp=N,15μm,0.5s						
CAMP				AML	AML		
	comp=E,22μm,0.7s						
CSP1	**Cessapalombo**	**0.32**	**5**	⇑P	Pg	18 33 18.6	+0.6
CSP1				S	Sb	18 33 24.0	-0.9
TERO	**Teramo**	**0.35**	**115**	⇓P	Pg	18 33 19.1	+0.5
TERO				AML	AML		
	comp=E,25μm,0.5s						
TERO				AML	AML		
	comp=N,35μm,1.3s						
TERO				AML	AML		
	comp=E,32μm,1.6s						
TERO				AML	AML		
	comp=N,35μm,1.3s						
ASSB	**Assisi San Ben**	**0.46**	**306**	⇓P	Pg	18 33 20.8	+0.2
ASSB				S	Sb	18 33 27.9	-0.9
ASSB				AML	AML		
	comp=E,29μm,1.3s						
ASSB				AML	AML		
	comp=N,31μm,0.2s						
EL6	**Elcito**	**0.56**	**355**	P	Pg	18 33 22.5	0.0
EL6				S	Sb	18 33 31.3	-0.4
NARO	**Abbazia di Nar**	**0.94**	**333**	S	Sb	18 33 43.0	+0.4

*DJA **28** 18:41:38.1±0.3,3°.N±3°×12°.7E±°,h10km,M4.4/16,mb4.5/9,*
mB4.9/5,MLv4.4/16,Mw(mB)4.2/5
*NEIC **28** 18:41:39.7±1.9,3°.31N±0°.09×127°.1E±0°.1,h58km±10km,*
*m

FITZ	**Fitzroy Crossi**	**21.22**	**183**	P	**P**	**18 46 20.5**	**-0.3**
FITZ				IAmb	IAmb	18 46 25.3	
	comp=Z,8.3nm,0.8s						
WB0	**Warramunga Arr**	**24.07**	**162**	P	**P**	**18 46 49.3**	**-0.4**
WB0				IAmb	IAmb	18 46 57.9	
	comp=Z,14nm,0.7s						
WRAB	**Tennant Creek**	**24.21**	**162**	P	**P**	**18 46 46.9**	**-4.1**
WRAB				IAmb	IAmb	18 46 59.5	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**24.22**	**162**	P	**P**	**18 46 50.6**	**-0.4**
	comp=Z,4.2nm,0.5s,baz=332,slow=11,SNR=23						
	comp=Z,4.2nm,0.5s						
WRA	**Warramunga Arr**	**24.22**	**162**	P	**P**	**18 46 50.1**	**-1.0**
WB2	**Warramunga Arr**	**24.22**	**162**	P	**P**	**18 46 50.6**	**-0.5**
WB2				IAmb	IAmb	18 46 59.6	
	comp=Z,16nm,0.8s						
WR0	**Warramunga Arr**	**24.30**	**162**	P	**P**	**18 46 51.2**	**-0.6**
WR0				IAmb	IAmb	18 46 52.6	
	comp=Z,11nm,0.9s						
PSA00	**Pilbara Seismi**	**25.55**	**195**	P	**P**	**18 47 04.1**	**+1.0**
PSA00				IAmb	IAmb	18 47 33.4	
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**27.64**	**166**	P	**P**	**18 47 22.1**	**+0.1**
ASAR	**Alice Springs**	**27.64**	**166**	P	**P**	**18 47 21.6**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=350,slow=7.1,SNR=22						
ASAR				PcP	**PcP**	**18 50 39.7**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=353,slow=2.6,SNR=4.1						
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**27.64**	**166**	P	**P**	**18 47 21.9**	**-0.1**
CTA	**Charters Tower**	**30.09**	**141**	LR	LR	19 00 22.5	
	comp=Z,209nm,18.6s,baz=2.5,slow=37						
CMAR	**Chiang Mai Arr**	**31.11**	**301**	P	**P**	**18 47 53.8**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=117,slow=7.8,SNR=4.4						
	comp=Z,0.5nm,0.7s						
PZH	**PanZhiHua**	**33.28**	**316**	P	P	18 48 17.8	+5.9
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,4.8s						
KSRS	**Korea Array**	**34.08**	**2**	P	**P**	**18 48 20.1**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=178,slow=10.0,SNR=5.4						
	comp=Z,2.3nm,0.8s						
JMM	**Marumori**	**36.81**	**19**	P	**P**	**18 48 41.7**	**-0.2**
BBOO	**Buckleboo**	**36.92**	**167**	P	**P**	**18 48 42.5**	**-0.5**
BBOO				IAmb	IAmb	18 48 43.0	
	comp=Z,8.9nm,1.2s						
EIDS	**Eidsvold**	**36.98**	**142**	P	**P**	**18 48 42.1**	**-1.4**
STKA	**Stephens Creek**	**37.67**	**159**	P	**P**	**18 48 50.0**	**+0.6**
	comp=Z,6.0nm,0.8s,baz=337,slow=7.1,SNR=8.3						
STKA				PcP	**PcP**	**18 51 06.6**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=324,slow=9.1,SNR=3.1						
	comp=Z,6.0nm,0.8s						
STKA	**Stephens Creek**	**37.67**	**159**	P	**P**	**18 48 47.7**	**-1.7**
HHC	**Hu-ho-hao-te**	**39.86**	**342**	*e*P	**P**	**18 49 07.5**	**-0.2**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,4.6s						
KOUNC	**Koumac, New Ca**	**43.78**	**124**	P	**P**	**18 49 36.5**	**-3.3**
SONM	**Songino Array**	**47.76**	**342**	P	**P**	**18 50 11.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=161,slow=7.8,SNR=7.0						
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**47.76**	**342**	P	**P**	**18 50 10.5**	**-0.5**
WMQ	**Urumqi**	**53.12**	**325**	*e*P	**P**	**18 50 52.5**	**+1.1**
WMQ				pP	pP	18 51 06.3	-0.9
WMQ				pmax	pmax		
	comp=Z,39nm,0.7s						
WMQ				LR	LR		
	comp=Z,150nm,20.7s						
PETK	**Petropavlovsk-**	**55.90**	**22**	P	**P**	**18 51 12.7**	**+1.4**
	comp=Z,3.1nm,0.6s,baz=186,slow=4.5,SNR=25						
	comp=Z,3.1nm,0.6s						
PETK	**Petropavlovsk-**	**55.90**	**22**	P	**P**	**18 51 10.4**	**-0.9**
MK31	**Makanchi Array**	**57.95**	**325**	P	**P**	**18 51 25.7**	**-0.3**
MKAR	**Makanchi Array**	**57.95**	**325**	P	**P**	**18 51 26.0**	**0.0**
	comp=Z,0.9nm,0.4s,baz=118,slow=7.5,SNR=21						
MKAR				LR	LR	19 19 18.2	
	comp=Z,67nm,20.0s,baz=117,slow=39						
	comp=Z,0.9nm,0.4s						
MKAR	**Makanchi Array**	**57.95**	**325**	P	**P**	**18 51 25.8**	**-0.2**
MAKZ	**Makanchi**	**58.14**	**325**	P	**P**	**18 51 27.0**	**-0.3**
MAKZ				IAmb	IAmb	18 52 05.3	
	comp=Z,3.5nm,1.2s						
ZALV	**Zalesovo Beam**	**61.02**	**333**	P	**P**	**18 51 46.5**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=118,slow=7.5,SNR=4.5						
ZALV				LR	LR	19 21 57.8	
	comp=Z,111nm,19.6s,baz=77,slow=40						
	comp=Z,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**62.15**	**328**	LR	LR	19 22 40.6	
	comp=Z,105nm,18.8s,baz=71,slow=40						
KURK	**Kurchatov**	**62.15**	**328**	P	**P**	**18 51 54.4**	**-0.2**
BVAR	**Borovoye Array**	**67.72**	**327**	LR	LR	19 24 18.0	
	comp=Z,160nm,21.9s,baz=107,slow=38						
ARU	**Arti**	**75.34**	**328**	LR	LR	19 30 01.0	
	comp=Z,218nm,20.7s,baz=64,slow=38						
KIRV	**Kirov**	**80.63**	**329**	LR	LR	19 33 51.4	
	comp=Z,153nm,19.0s,baz=74,slow=39						
BELG	**Belogornoye**	**80.79**	**322**	LR	LR	19 33 30.0	
	comp=Z,155nm,21.9s,baz=51,slow=38						
VNDA	**Vanda**	**82.94**	**173**	P	**P**	**18 53 59.2**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=338,slow=3.6,SNR=3.8						
	comp=Z,1.0nm,0.9s						
ATD	**Arta Tunnel**	**83.35**	**281**	LR	LR	19 32 50.6	
	comp=Z,203nm,18.6s,baz=132,slow=37						
EIL	**Elat**	**89.95**	**300**	LR	LR	19 40 03.7	
	comp=Z,176nm,20.2s,baz=90,slow=39						
BRTR	**Keskin Array B**	**90.32**	**310**	P	**P**	**18 54 33.8**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=107,slow=4.5,SNR=2.6						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**92.26**	**332**	P	**P**	**18 54 42.2**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=31,slow=12,SNR=3.2						
	comp=Z,1.3nm,0.9s						
AKASG	**Malin Array Be**	**92.26**	**321**	LR	LR	19 40 37.2	
	comp=Z,109nm,21.4s,baz=28,slow=38						
TXAR	**Lajitas Array**	**121.92**	**52**	PKP	**PKiKP**	**19 00 30.1**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=338,slow=1.3,SNR=4.9						

*IDC **28** 18:50:39.0±0.8, 47.°97S×85.°21E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=26.6km s-min=18.8km az=134.0*

ISC 28 18:50:40.5±0.8,**48.°0S**±0.°1×**85.°2E**±0.°2,**h10**km,**n10, σ0.°97/11, mb3.8/9, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**22.73**	**202**	P	**P**	**18 55 41.9**	**-0.4**
	1.6nm,0.8s,baz=29,slow=12,SNR=2.8						
	1.6nm,0.8s						
VNDA	**Vanda**	**40.84**	**161**	P	**P**	**18 58 22.1**	**+0.3**
	0.4nm,0.7s,baz=16,slow=3.8,SNR=2.2						
	0.4nm,0.7s						
QSPA	**South Pole Qui**	**42.18**	**180**	P	**P**	**18 58 33.0**	**-0.1**
	1.6nm,0.8s,baz=210,slow=2.3,SNR=8.1						
	1.6nm,0.8s						
SNAA	**Sanae**	**44.77**	**207**	P	**P**	**18 58 53.8**	**0.0**
	1.0nm,0.8s,baz=151,slow=10,SNR=6.8						
	1.0nm,0.8s						
STKA	**Stephens Creek**	**45.14**	**90**	P	**P**	**18 58 58.6**	**+1.4**
	1.8nm,0.9s,baz=248,slow=11,SNR=3.4						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**45.41**	**75**	P	**P**	**18 58 59.0**	**-0.5**
	0.9nm,0.7s,baz=223,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**19 00 37.4**	**-1.2**
	0.3nm,0.5s,baz=214,slow=2.3,SNR=7.3						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**48.36**	**72**	P	**P**	**18 59 22.0**	**-0.5**
	0.5nm,0.7s,baz=225,slow=7.6,SNR=7.9						
	0.5nm,0.7s						
LSZ	**Lusaka**	**56.82**	**285**	P	**P**	**19 00 26.0**	**+0.7**
	3.7nm,0.6s,baz=146,slow=8.2,SNR=9.0						
	3.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**67.27**	**14**	P	**P**	**19 01 35.5**	**+0.4**
	0.3nm,0.4s,baz=207,slow=5.7,SNR=2.5						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**147.80**	**39**	PKPbc	**PKPbc**	**19 10 22.7**	**-1.6**
	0.5nm,0.9s,baz=306,slow=4.4,SNR=3.6						

*MOS **28** 19:11:13.7±1.1, 47.°82N×153.°08E, h138km, mb4.6/29, MS4.4/8, Error ellipse: s-maj=6.9km s-min=5.0km az=85.7*
*BJI **28** 19:11:13.0±0.0, 47.°80N×153.°00E, h123km, mb4.8/54, mB4.9/29*
*SKHL **28** 19:11:13.1±0.0, 47.°60N×153.°40E, h132km±9km, mb5.4/7, mbv5.0/2, msha5.8/7*
*IDC **28** 19:11:14.2±0.6, 47.°87N×152.°97E, h120km±5km, mb4.3/30, mbtmp4.6/35, MS3.5/6, Error ellipse: s-maj=12.9km s-min=9.0km az=157.0*
*NEIC **28** 19:11:15.4±2.0, 47.°86N±0.°09×153.°00E±0.°09, h134km±4km, mb4.6/133, Error ellipse: s-maj=12.8km s-min=8.8km az=171.0*
*JMA **28** 19:11:16.6±0.7, 47.°N±4.°×15.°4E±.°, h132km, MV4.6/16, KURILE ISLANDS REGION*

ISC 28 19:11:14.1±0.5,**47.72N**±0.°05×**153.°17E**±0.°04,**h132**km±4km, **h131km:pP-P,n699,σ1.9/39/717,mb4.7/174,66C-25D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.54**	**32**	*e*PN	**Pn**	**19 12 07.3**	**-0.4**
SKR				*e*S	**Sn**	**19 12 45.8**	**-3.4**
SKR				pmax	pmax		
	comp=Z,455nm,0.6s						
SKR				smax	smax		
	comp=N,340nm,0.8s						
SKR				smax	smax		
	comp=E,328nm,0.7s						
SKR				MLR	MLR		
	comp=Z,200nm,12.0s						
SKR	**Severo-Kuril's**	**3.54**	**32**	*e*P	**Pn**	**19 12 07.3**	**-0.4**
SKR				AMB	AMB	19 12 09.7	
	comp=Z,450nm,0.5s						
SKR				*e*S	**Sn**	**19 12 48.0**	**-1.2**
SKR				A	A	19 12 51.6	
	comp=Z,740nm,0.3s						
SKR				A	A	19 12 51.6	
	comp=Z,970nm,0.3s						
KUR	**Kuril'sk**	**4.43**	**238**	*c i*PN	**Pn**	**19 12 21.2**	**+1.7**
KUR				*e*S	**Sn**	**19 13 13.5**	**+3.2**
KUR				pmax	pmax		
	comp=Z,428nm,0.4s						
KUR				pmax	pmax		
	comp=E,43nm,0.2s						
KUR				pmax	pmax		
	comp=N,148nm,0.3s						
KUR				smax	smax		
	comp=N,852nm,0.7s						
KUR				smax	smax		
	comp=E,562nm,0.7s						
KUR	**Kuril'sk**	**4.43**	**238**	*i*P	**Pn**	**19 12 21.1**	**+1.6**
KUR				AMB	AMB	19 12 22.9	
	comp=E,580nm,0.7s						
KUR				*e*S	**Sn**	**19 13 12.6**	**+2.3**
KUR				A	A	19 13 15.3	
	comp=E,920nm,0.6s						
KUR				A	A	19 13 15.3	
	comp=E,850nm,0.6s						
PAU	**Pauzhetka**	**4.44**	**31**	*e*P	**Pn**	**19 12 18.8**	**-0.8**
PAU				AMB	AMB	19 12 21.8	
	comp=E,150nm,0.3s						
PAU				*e*S	**Sn**	**19 13 08.1**	**-2.4**
PAU				A	A	19 13 10.9	
	comp=E,800nm,0.4s						
PAU				A	A	19 13 10.9	
	comp=E,700nm,0.4s						
PEA0B	**Petropavlovsk-**	**6.12**	**27**	Pn	**Pn**	**19 12 42.1**	**0.0**
PEA0B	**Petropavlovsk-**	**6.12**	**27**	*ce*PN	**Pn**	**19 12 41.7**	**-0.4**
PETK	**Petropavlovsk-**	**6.12**	**27**	P	**Pn**	**19 12 41.5**	**-0.6**
	comp=E,20nm,0.6s,baz=181,slow=10,SNR=49						
PETK	**Petropavlovsk-**	**6.12**	**27**	Pn	**Pn**	**19 12 41.3**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**6.29**	**237**	*e*PN	**Pn**	**19 12 45.0**	**+0.5**
YUK				*e*S	**Sn**	**19 13 53.8**	**-1.3**
YUK				pmax	pmax		
	comp=Z,2μm,0.5s						
YUK				pmax	pmax		
	comp=Z,994nm,0.2s						
YUK				pmax	pmax		
	comp=N,1μm,0.3s						
YUK				pmax	pmax		
	comp=E,1μm,0.3s						
YUK				smax	smax		
	comp=E,396nm,0.4s						
YUK				smax	smax		
	comp=N,203nm,0.2s						
YUK				smax	smax		
	comp=E,609nm,0.6s						
YUK				smax	smax		
	comp=N,553nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**6.29**	**237**	*e*P	**Pn**	**19 12 44.8**	**+0.3**
YUK				AMB	AMB	19 12 45.4	
	comp=N,3μm,0.4s						
YUK				*e*S	**Sn**	**19 13 54.5**	**-0.6**
YUK				A	A	19 13 57.2	
	comp=N,220nm,0.4s						
YUK				A	A	19 13 57.2	
	comp=N,330nm,0.4s						
PET	**Petropavlovsk**	**6.36**	**31**		**Pn**	**19 12 44.2**	**-1.1**
PET	**Petropavlovsk**	**6.36**	**31**	*e*PN	**Pn**	**19 12 45.1**	**-0.2**
PET				*e*S	**Sn**	**19 13 52.4**	**-4.2**
PET				pmax	pmax		
	comp=Z,58nm,0.6s						
PET				smax	smax		
	comp=N,103nm,0.5s						
PET				smax	smax		
	comp=E,102nm,0.5s						
PET	**Petropavlovsk**	**6.36**	**31**	P	**Pn**	**19 12 45.8**	**+0.5**
PET	**Petropavlovsk**	**6.36**	**31**	*e*P	**Pn**	**19 12 45.1**	**-0.2**
PET				AMB	AMB	19 12 59.6	
	comp=E,60nm,0.6s						
PET				*e*S	**Sn**	**19 13 52.4**	**-4.2**
PET				A	A	19 14 06.9	
	comp=E,100nm,0.5s						
PET				A	A	19 14 06.9	
	comp=E,100nm,0.5s						
RUSJ	**Misakicho**	**6.60**	**240**	*e*PN	**Pn**	**19 12 49.6**	**+1.0**
RUSJ				*e*S	**Sn**	**19 14 02.3**	**-0.3**
JRA	**Rausu**	**6.77**	**239**	P	**Pn**	**19 12 51.5**	**+0.6**
NEM2	**Nemuro 2**	**6.79**	**233**	P	**Pn**	**19 12 49.2**	**-2.0**
NEM2				*e*S	**Sn**	**19 14 01.0**	**-6.1**
NMR	**Nemuro--Hokkai**	**6.80**	**233**	*e*PN	**Pn**	**19 12 49.4**	**-1.9**
NMR	**Nemuro--Hokkai**	**6.80**	**233**	*e*P	**Pn**	**19 12 49.4**	**-1.9**
YSS	**Yuzh-Sakhalins**	**7.12**	**268**	Pn	**Pn**	**19 12 56.9**	**+1.3**
YSS	**Yuzh-Sakhalins**	**7.12**	**268**	*e*PN	**Pn**	**19 12 57.5**	**+1.9**
YSS				*e*S	**Sn**	**19 14 16.5**	**+1.5**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,3.0s						
YSS				smax	smax		
	comp=N,50nm,1.1s						
YSS	**Yuzh-Sakhalins**	**7.12**	**268**	P	**Pn**	**19 12 58.7**	**+3.1**
YSS	**Yuzh-Sakhalins**	**7.12**	**268**	*e*P	**Pn**	**19 12 57.2**	**+1.6**
YSS				AMB	AMB	19 13 02.7	
	comp=N,200nm,3.0s						
YSS				AMB	AMB	19 13 02.7	
	comp=N,30nm,0.5s						
YSS				*e*S	**Sn**	**19 14 16.5**	**+1.5**
YSS				A	A	19 14 25.0	
	comp=N,30nm,0.8s						
YSS				A	A	19 14 25.0	
	comp=N,30nm,0.8s						
JNK	**Nakash**	**7.22**	**238**	P	**Pn**	**19 12 56.6**	**-0.3**
JNK				*e*S	**Sn**	**19 14 16.2**	**-1.3**
JTKR	**Abashiri--Toko**	**7.47**	**243**	P	**Pn**	**19 13 01.2**	**+0.9**
UGL	**Uglegorsk**	**7.52**	**285**	*e*PN	Pn	19 13 15.3	+14
UGL				pmax	pmax		
	comp=Z,81nm,1.0s						
UGL	**Uglegorsk**	**7.52**	**285**	*e*P	**Pn**	**19 13 01.8**	**+0.9**
TYV	**Tymovskoe**	**7.56**	**298**	*e*PN	**Pn**	**19 13 03.7**	**+2.2**
TYV				*e*S	**Sn**	**19 14 25.6**	**0.0**
TYV				pmax	pmax		
	comp=Z,28nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				smax	smax		
	comp=N,23nm,1.2s						
TYV				smax	smax		
	comp=E,16nm,1.2s						
TYV				smax	smax		
	comp=N,400nm,4.5s						
TYV	**Tymovskoe**	**7.56**	**298**	*e*P	**Pn**	**19 13 03.3**	**+1.9**
TYV				AMB	AMB	19 13 04.6	
	comp=N,200nm,3.4s						
TYV				AMB	AMB	19 13 05.5	
	comp=N,10.0nm,0.8s						
TYV				*e*S	**Sn**	**19 14 26.1**	**+0.5**
TYV				A	A	19 14 27.0	
	comp=N,10.0nm,0.8s						
TYV				A	A	19 14 27.0	
	comp=N,10.0nm,0.8s						
JAK	**Akkeshi**	**7.61**	**235**	*e*P	**Pn**	**19 13 00.1**	**-2.1**
JAK				*e*S	**Sn**	**19 14 20.5**	**-6.4**
JAR	**Ashorobuto**	**7.94**	**240**	*e*P	**Pn**	**19 13 07.0**	**+0.3**
JAR				*e*S	**Sn**	**19 14 33.4**	**-1.6**
JWK2	**Keihoku**	**8.14**	**257**	*e*P	**Pn**	**19 13 13.5**	**+4.2**
JOB	**Onbets**	**8.15**	**237**	*e*P	**Pn**	**19 13 08.2**	**-1.3**
JOB				*e*S	**Sn**	**19 14 34.9**	**-5.0**
JKK2	**Kamakawa 2**	**8.23**	**246**	P	**Pn**	**19 13 12.2**	**+1.5**
JCH	**Churui**	**8.60**	**237**	*e*P	**Pn**	**19 13 14.0**	**-1.6**
JCH				*e*S	**Sn**	**19 14 44.4**	**-6.5**
OKH	**Okha**	**8.73**	**316**	*e*P	Pn	19 13 21.3	+4.1
JAB	**Ashibetsu**	**8.75**	**245**	*e*P	**Pn**	**19 13 19.6**	**+2.0**
ERM	**Erimo**	**9.11**	**235**	Pn	**Pn**	**19 13 20.9**	**-1.4**
ERM	**Erimo**	**9.11**	**235**	*i* PN	**Pn**	**19 13 20.7**	**-1.7**
ERM	**Erimo**	**9.11**	**235**	P	**Pn**	**19 13 22.8**	**+0.4**
JNBK	**Urakawa-nobuka**	**9.16**	**237**	*e*P	**Pn**	**19 13 19.9**	**-3.2**
JEW	**Eniwo**	**9.59**	**244**		**Pn**	**19 13 27.6**	**-1.2**
KBG	**Krutoberegovo**	**10.37**	**31**	*e*P	**Pn**	**19 13 36.9**	**-2.1**
JTM	**Tenmabayashi**	**11.10**	**236**		**Pn**	**19 13 44.4**	**-4.6**
JANG	**Nango**	**11.14**	**233**	*e*P	Pn	19 13 44.6	-4.9
JANG				*e*S	Sn	19 15 39.6	-13
JTH	**Tanohata**	**11.27**	**230**	*e*P	Pn	19 13 46.0	-5.2
JMM	**Marumori**	**13.38**	**227**	Pn	**Pn**	**19 14 15.4**	**-3.3**
KLR	**Kul'dur**	**14.29**	**284**	P	**P**	**19 14 31.8**	**-1.7**
	comp=N,14nm,0.7s,baz=95,slow=10,SNR=24						
KLR	**Kul'dur**	**14.29**	**284**	*ce*P	**P**	**19 14 31.5**	**-1.9**
KLR				pmax	pmax		
	comp=Z,33nm,1.3s						
KLR	**Kul'dur**	**14.29**	**284**	*e*P	**P**	**19 14 31.5**	**-1.9**
SHEM	**Shemya Is, Ala**	**14.29**	**62**	P	**P**	**19 14 33.0**	**-0.4**
	comp=Z,20nm,0.5s,baz=267,slow=2.2,SNR=6.4						
SMY	**Shemya**	**14.29**	**62**	Pn	**Pn**	**19 14 30.4**	**+0.3**
SMY	**Shemya**	**14.29**	**62**	P	**Pn**	**19 14 30.4**	**+0.3**
JSD	**Sado**	**14.57**	**234**	Pn	**Pn**	**19 14 31.0**	**-2.9**
JYT	**Yasato**	**14.97**	**225**	Pn	**Pn**	**19 14 36.8**	**-2.2**
USRK	**Ussuriysk Ar.**	**15.14**	**264**	P	**P**	**19 14 41.6**	**-1.3**
	comp=Z,17nm,0.6s,baz=67,slow=12,SNR=22						
SEY	**Seymchan**	**15.26**	**359**	P	**P**	**19 14 42.2**	**-1.9**
	comp=Z,4.3nm,0.7s,baz=172,slow=8.4,SNR=9.1						
MAJO	**Matsushiro**	**15.71**	**230**	Pn	**Pn**	**19 14 47.5**	**-0.6**
MAJO				IAmb	IAmb	19 14 52.3	
	comp=Z,43nm,1.1s						
MAJO	**Matsushiro**	**15.71**	**230**	*i* P	**Pn**	**19 14 47.3**	**-0.8**
MAJO	**Matsushiro**	**15.71**	**230**	P	**Pn**	**19 14 48.0**	**-0.1**
MJAR	**Matsushiro Arr**	**15.71**	**230**	P	**Pn**	**19 14 45.8**	**-2.3**
	comp=Z,2.9nm,0.6s,baz=25,slow=13,SNR=17						
MJAR				LR	LR	19 20 51.1	
	comp=Z,118nm,20.5s,baz=164,slow=37						
MDJ	**Mudanjiang**	**16.61**	**268**	P	**P**	**19 14 59.5**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,25nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,250nm,6.7s						
MDJ	**Mudanjiang**	**16.61**	**268**	P	**P**	**19 15 00.3**	**+1.1**
INU	**Inuyama**	**17.25**	**230**	P	**P**	**19 15 06.8**	**+0.5**
INU				IAmb	IAmb	19 15 10.9	
	comp=Z,38nm,0.9s						
INU	**Inuyama**	**17.25**	**230**	P	**Pn**	**19 15 06.9**	**+0.1**
ZEA	**Zeya**	**17.42**	**300**	*e*P	**Pn**	**19 15 08.5**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	**Zeya**	**17.42**	**300**	*e*P	**P**	**19 15 04.8**	**-3.2**
YAK	**Yakutsk**	**19.53**	**326**	P	**Pn**	**19 15 31.1**	**-2.4**
	comp=Z,5.0nm,0.3s,baz=117,slow=4.0,SNR=10						
YAK				LR	LR	19 23 41.6	
	comp=Z,101nm,18.0s,baz=90,slow=39						
YAK	**Yakutsk**	**19.53**	**326**	P	**P**	**19 15 30.1**	**-0.9**
YAK				IAmb	IAmb	19 15 33.3	
	comp=Z,17nm,0.6s						
YAK	**Yakutsk**	**19.53**	**326**	*ce*P	**P**	**19 15 28.9**	**-2.0**
YAK				pmax	pmax		
	comp=Z,17nm,0.7s						
JHS	**Saijyo**	**19.63**	**237**	P	**P**	**19 15 31.8**	**-0.5**
JHS				IAmb	IAmb	19 15 38.1	
	comp=Z,44nm,1.1s						
JMN	**Monobe**	**20.15**	**233**	P	**P**	**19 15 37.5**	**-0.4**
JMN				IAmb	IAmb	19 15 48.9	
	comp=Z,24nm,0.7s						
SEHB	**SEOHWA**	**20.45**	**252**	P	**P**	**19 15 42.1**	**+1.0**
KSRS	**Korea Array**	**21.14**	**250**	P	**P**	**19 15 49.9**	**+1.5**
	comp=Z,25nm,0.6s,baz=54,slow=10,SNR=58						
KSRS				LR	LR	19 22 20.0	
	comp=Z,74nm,21.0s,baz=75,slow=32						
	comp=Z,25nm,0.6s						
KS19	**Wonju Array Si**	**21.15**	**250**	P	**P**	**19 15 49.5**	**+1.0**
KS19				IAmb	IAmb	19 16 07.7	
	comp=Z,28nm,0.9s						
KSAR	**Wonju Array Be**	**21.17**	**250**	P	**P**	**19 15 49.3**	**+0.5**
KSAR	**Wonju Array Be**	**21.17**	**250**	P	**P**	**19 15 49.3**	**+0.5**
BILL	**Bilibino**	**21.44**	**13**	‖*e*P	**P**	**19 15 50.0**	**-1.4**
BILL				*e**PP	**pwP**	**19 16 17.5**	**-0.2**
BILL				*i* S	**S**	**19 19 41.6**	**+0.6**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,164nm,19.0s						
BILL	**Bilibino**	**21.44**	**13**	*e*P	**P**	**19 15 50.0**	**-1.4**
KSCHJ	**Chungju**	**21.46**	**249**	P	**P**	**19 15 52.8**	**+0.9**
KSBUS	**Busan**	**21.81**	**244**	P	**P**	**19 15 57.7**	**+2.1**
KSBUS				IAmb	IAmb	19 16 01.1	
	comp=Z,50nm,1.0s						
JTU	**Tsushima**	**22.13**	**242**	P	**P**	**19 15 57.0**	**-1.8**
TJN	**Taejon**	**22.16**	**249**	*ce*P	**P**	**19 16 01.0**	**+1.9**
TJN	**Taejon**	**22.16**	**249**	P	**P**	**19 16 00.8**	**+1.7**
NAWB	**Namwon**	**22.75**	**247**	P	**P**	**19 16 06.0**	**+1.0**
NAWB				IAmb	IAmb	19 16 15.8	
	comp=Z,20nm,0.7s						
JSU	**Suzuyama**	**23.71**	**235**	P	**P**	**19 16 15.2**	**+1.3**
JSU				IAmb	IAmb	19 16 17.1	
	comp=Z,35nm,1.1s						
SPIA	**Saint Paul Isl**	**23.95**	**53**	P	**P**	**19 16 17.4**	**+1.7**
GAMB	**Gambell**	**25.02**	**37**	P	**P**	**19 16 26.3**	**+0.9**
GAMB				IAmb	IAmb

comp=Z,9.1nm,0.6s
TTA Tatalina 31.67 42 P P 19 17 24.7 0.0
TTA pmax pmax
comp=Z,9.0nm,0.6s
TTA Tatalina 31.67 42 P P 19 17 26.1 +1.5
baz=266,SNR=8.2
O18K Koktuh Hills 31.97 48 P P 19 17 26.8 -0.4
O18K Koktuh Hills 31.97 48 P P 19 17 28.7 +1.5
baz=272
P18K Big Mountain, 31.97 49 P P 19 17 27.5 +0.3
P18K IAmb IAmb 19 17 29.6
comp=Z,9.3nm,0.8s
P18K Big Mountain, 31.97 49 P P 19 17 28.3 +1.1
baz=272
L19K White Mountain 32.16 44 P P 19 17 30.1 +1.2
baz=268
ZAK Zakamensk 32.31 294 *e*P **P 19 17 29.4 -1.0**
ZAK pmax pmax
comp=Z,4.0nm,1.4s
N19K Bonanza Creek 32.32 47 P P 19 17 31.8 +1.5
baz=271
M19K Big River Lodg 32.37 44 P P 19 17 29.8 -0.9
M19K Big River Lodg 32.37 44 P P 19 17 32.2 +1.5
baz=269
K20K Telida 32.58 42 P P 19 17 34.0 +1.5
K20K Telida 32.58 42 P P 19 17 34.3 +1.8
baz=267,SNR=6.1
J20K Nowinta River 32.61 40 P P 19 17 34.1 +1.4
J20K PcP **PcP 19 20 17.1 +1.6**
J20K Nowinta River 32.61 40 P P 19 17 33.8 +1.1
baz=266,SNR=8.0
L20K Farewell, AK 32.63 43 P P 19 17 34.0 +1.0
baz=268
Q19K Cape Douglas, 32.81 50 PcP **PcP 19 20 16.5 +0.3**
IMAR Indian Mountai 32.97 37 P **P 19 17 36.7 +0.9**
IMAR PcP **PcP 19 20 18.0 +1.5**
M20K Styx River 32.97 45 P **P 19 17 37.4 +1.4**
M20K IAmb IAmb 19 17 38.9
comp=Z,6.1nm,0.7s
M20K Styx River 32.97 45 P **P 19 17 37.5 +1.4**
baz=270,SNR=6.6
LYN LuoYang 32.97 262⇑ *i*P **P 19 17 36.5 +0.3**
LYN pmax pmax
comp=Z,20nm,0.5s
G21K Allakaket 33.13 36 P P 19 17 38.8 +1.6
baz=262,SNR=14
OHAK Old Harbor 33.16 53 P **P 19 17 37.8 +0.2**
F21K Alatna River 33.24 35 P **P 19 17 39.2 +1.0**
baz=262
H21K Melozitna Rive 33.31 38 P **P 19 17 40.1 +1.2**
H21K IAmb IAmb 19 17 41.4
comp=Z,9.5nm,0.9s
H21K Melozitna Rive 33.31 38 P P 19 17 40.3 +1.4
baz=264,SNR=13
CHUM Lake Minchumin 33.39 41 P P 19 17 41.2 +1.7
baz=268
PPLA Purkeypile 33.42 43 P **P 19 17 41.1 +1.1**
PPLA Purkeypile 33.42 43 P **P 19 17 42.0 +2.1**
baz=269
KDAK Kodiak Island 33.47 52 P P 19 17 40.2 0.0
KDAK IAmb IAmb 19 17 40.6
comp=Z,9.6nm,1.1s
KDAK Kodiak Island 33.47 52 P P 19 17 40.2 0.0
KDAK pmax pmax
comp=Z,10.0nm,1.1s
KDAK Kodiak Island 33.47 52 P P 19 17 42.0 +1.8
baz=277
CAST Castle Rocks 33.48 42 P P 19 17 41.5 +1.2
baz=269
I21K Tanana 33.62 39 P P 19 17 42.8 +1.4
I21K IAmb IAmb 19 17 44.2
comp=Z,9.4nm,1.1s
I21K Tanana 33.62 39 P P 19 17 43.0 +1.6
baz=266,SNR=6.9
F22K John River 33.78 34 P P 19 17 44.1 +1.1
baz=262
H22K Ishtalitna Cre 33.92 37 P P 19 17 45.6 +1.5
baz=266,SNR=7.5
G22K Bettles 33.97 35 P P 19 17 45.5 +1.0
baz=264
BPAW Bear Paw Mtn. 33.99 41 P P 19 17 46.2 +1.5
BPAW PcP **PcP 19 20 20.9 +1.4**
BPAW Bear Paw Mtn. 33.99 41 P P 19 17 46.1 +1.5
baz=269,SNR=7.9
CNPM China Poot 34.00 49 P P 19 17 44.5 -0.3
CNPM IAmb IAmb 19 17 46.9
comp=Z,8.0nm,0.5s
KTH Kantishna Hill 34.00 42 P P 19 17 44.1 -0.8
KTH IAmb IAmb 19 17 47.8
comp=Z,17nm,1.0s
E22K Anaktuvuk Pass 34.01 33 P P 19 17 46.3 +1.4
baz=262,SNR=18
MLY Manley 34.13 39 P P 19 17 46.7 +0.7
MLY IAmb IAmb 19 17 48.8
comp=Z,10nm,1.2s
MLY PcP **PcP 19 20 20.8 +0.9**
MLY Manley 34.13 39 P P 19 17 47.3 +1.4
baz=267,SNR=8.0
TRF Thorofare Moun 34.29 42 P P 19 17 45.9 -1.6
TRF IAmb IAmb 19 17 50.9
comp=Z,6.6nm,0.6s
TRF Thorofare Moun 34.29 42 P P 19 17 48.6 +1.1
baz=270,SNR=5.1
G23K Bananza Creek 34.53 36 P P 19 17 50.8 +1.4
baz=266,SNR=11
D23K Nanushuk River 34.55 32 P P 19 17 51.1 +1.7
baz=262,SNR=5.2
BWN Browne 34.66 40 P P 19 17 51.6 +1.2
H23K Yukon River 34.67 38 P P 19 17 52.4 +1.8
H23K IAmb IAmb 19 17 53.5
comp=Z,12nm,1.0s
H23K Yukon River 34.67 38 P P 19 17 52.6 +2.1
baz=267,SNR=11
O22K Cooper Landing 34.67 47 P P 19 17 53.4 +2.9
C23K Itkillik River 34.71 30 P P 19 17 52.2 +1.4
baz=261,SNR=6.0
I23K Minto, Yukon-K 34.72 39 P P 19 17 52.5 +1.6
baz=269
NEA2 Nenana 34.83 40 P P 19 17 53.2 +1.3
NEA2 IAmb IAmb 19 17 54.3
comp=Z,11nm,1.1s
NEA2 Nenana 34.83 40 P P 19 17 53.3 +1.3
baz=270,SNR=16
PMR Palmer 34.88 45 P P 19 17 53.6 +1.2
baz=274
MCK McKinley 34.89 41 P P 19 17 53.3 +0.8
baz=271
TOLK Toolik Lake Re 34.90 33 P P 19 17 53.8 +1.2
TOLK IAmb IAmb 19 17 54.5
comp=Z,9.8nm,0.6s
TOLK PcP **PcP 19 20 24.1 +2.0**
TOLK Toolik Lake Re 34.90 33 P P 19 17 53.8 +1.2
baz=263,SNR=6.3
WAT1 Susitna Watana 35.09 43 P P 19 17 55.1 +0.9
baz=273
MDM Murphy Dome 35.20 39 P P 19 17 56.4 +1.3
MDM IAmb IAmb 19 17 57.7
comp=Z,10.0nm,0.8s
KNK Knik Glacier 35.22 45 P P 19 17 56.3 +1.0
baz=275
D24K Happy Valley 35.23 32 P P 19 17 56.8 +1.4
baz=263
E24K Your Creek 35.24 34 P P 19 17 57.2 +1.7
baz=265,SNR=14
SML Sawmill 35.25 45 P P 19 17 55.7 +0.1
SML Sawmill 35.25 45 P P 19 17 56.7 +1.1
baz=274,SNR=18
WRH Wood River Hil 35.26 40 P P 19 17 55.8 +0.2
WRH IAmb IAmb 19 17 59.0
comp=Z,8.6nm,1.0s
PWL Port Wells 35.32 46 P P 19 17 56.8 +0.6
PWL IAmb IAmb 19 17 59.4
comp=Z,5.3nm,0.6s
PWL Port Wells 35.32 46 P P 19 17 56.5 +0.3
baz=276
C24K Franklin Bluff 35.35 31 P P 19 17 57.4 +1.2
baz=263
TCOL CIGO, UAF Yank 35.35 39 P P 19 17 58.0 +1.7
baz=270
COLA College 35.36 39 *i*P **P 19 17 57.0 +0.6**
COLA pmax pmax
comp=Z,27nm,1.3s
COLA College 35.36 39 P P 19 17 57.8 +1.4
baz=270
H24K Noodor Dome 35.36 38 P P 19 17 58.5 +2.0
H24K Noodor Dome 35.36 38 P P 19 17 58.1 +1.6
baz=269,SNR=11
CCB Clear Creek Bu 35.38 40 P P 19 17 57.8 +1.3
F24K Squaw Lake 35.43 35 P P 19 17 58.4 +1.3
baz=267,SNR=5.7
WAT6 Susitna Watana 35.47 43 P P 19 17 58.3 +0.7
baz=274
POKR Poker Plat Res 35.53 39 P P 19 17 59.9 +2.0
baz=270,SNR=6.7
M23K Glacier View 35.53 45 P P 19 17 59.5 +1.5
baz=275
G24K Hadweenzic Riv 35.55 36 P P 19 18 00.0 +2.0
baz=268,SNR=17
TPUB Ta-pu 35.56 238 P P 19 17 59.3 +0.6
DHY Denali Highway 35.61 42 P P 19 17 59.5 +0.7
baz=273,SNR=6.4
XAN Xi'an 35.65 264⇓ *i*P **P 19 18 00.0 +0.7**
XAN pmax pmax
comp=Z,17nm,0.6s
SCM Sheep Creek Mo 35.72 44 P P 19 18 01.2 +1.6
SCM IAmb IAmb 19 18 03.5
comp=Z,7.5nm,0.6s
SCM Sheep Creek Mo 35.72 44 P P 19 18 01.2 +1.6
SCM pmax pmax
comp=Z,7.0nm,0.6s
HDA Harding Lake 35.75 40 P P 19 18 00.6 +0.8
HDA IAmb IAmb 19 18 01.6
comp=Z,10nm,0.6s
HDA Harding Lake 35.75 40 P P 19 18 00.7 +0.9
baz=272,SNR=7.4
IL31 35.77 39 P P 19 18 01.1 +1.2
IL31 IAmb IAmb 19 18 02.6
comp=Z,9.2nm,1.1s
ILAR Eielson Array 35.77 39 P P 19 18 01.0 +1.0
comp=Z,3.1nm,0.5s,baz=260,slow=7.2,SNR=47
ILAR pP **pP 19 18 27.1 -1.2**
comp=Z,1.0nm,0.7s,baz=265,slow=9.8,SNR=2.7
comp=Z,3.1nm,0.5s
ILAR Eielson Array 35.77 39 P P 19 18 00.6 +0.7
ILAR Eielson Array 35.77 39 P P 19 18 00.6 +0.7
KNGR Kungurtug, Tuv 35.78 296 *i* P **P 19 17 59.8 -0.6**
KNGR pmax pmax
comp=Z,4.0nm,0.8s
D25K Kavik River 36.12 32 P P 19 18 04.0 +1.1
baz=266,SNR=13
H25K Birch Creek 36.20 37 P P 19 18 05.6 +2.0
baz=270,SNR=6.6
FID Port Fidalgo 36.24 46 P P 19 18 03.8 -0.2
FID IAmb IAmb 19 18 05.0
comp=Z,6.1nm,0.5s
M24K Tolsona, Glenn 36.24 44 P P 19 18 05.1 +1.0
baz=276
K24K Donnelly Dome 36.29 41 P P 19 18 05.2 +0.8
baz=274
F25K Christian River 36.29 35 P P 19 18 06.0 +1.6
baz=269,SNR=5.0
PRP Porcupine Dome 36.33 38 P P 19 18 06.5 +1.6
baz=272,SNR=6.0
E25K Arctic Village 36.34 34 P P 19 18 06.6 +1.8
baz=268,SNR=7.4
KLU Klutina 36.42 45 P P 19 18 07.0 +1.4
baz=277
J25K Salcha River, 36.43 40 P P 19 18 05.7 +0.1
J25K Salcha River, 36.43 40 P P 19 18 05.7 +0.1
baz=273,SNR=6.8
PAX Paxson 36.49 42 P P 19 18 05.2 -1.0
PAX Paxson 36.49 42 P P 19 18 05.2 -1.0
PAX pmax pmax
comp=Z,3.0nm,0.4s
PAX Paxson 36.49 42 P P 19 18 05.9 -0.3
baz=275
DIV Divide 36.53 46 P P 19 18 07.2 +0.7
DIV IAmb IAmb 19 18 08.4
comp=Z,10nm,0.5s
EYAK Cordova Ski Ar 36.62 46 P P 19 18 08.6 +1.4
baz=278
BMAR Burnt Mountain 36.70 35 P P 19 18 10.1 +2.2
RIDG Independent Ri 36.71 41 P P 19 18 08.0 0.0
RIDG Independent Ri 36.71 41 P P 19 18 08.7 +0.7
baz=274
F26K Sheenjek River 36.87 34 P P 19 18 11.1 +1.8
baz=270
G26K Porcupine Rive 37.01 36 P P 19 18 12.6 +2.2
baz=271,SNR=18
N25K Chitina, Valde 37.04 45 P P 19 18 11.8 +1.0
N25K Chitina, Valde 37.04 45 P P 19 18 12.4 +1.6
baz=278
DOT Dot Lake 37.06 41 P P 19 18 11.2 +0.2
SCRK Sand Creek 37.07 41 P P 19 18 11.1 0.0
SCRK Sand Creek 37.07 41 P P 19 18 11.6 +0.5
baz=275,SNR=7.4
C27K Jago River 37.08 31 P P 19 18 12.7 +1.7
baz=268,SNR=10
BMRM Bremner River 37.12 46 P P 19 18 11.4 -0.1
BMRM Bremner River 37.12 46 P P 19 18 13.0 +1.5
baz=278
RAGM Ragged Mountai 37.17 47 P P 19 18 13.3 +1.4
RAGM IAmb IAmb 19 18 16.6
comp=Z,9.3nm,1.0s
J26L Joseph Creek 37.21 40 P P 19 18 12.9 +0.7
J26L Joseph Creek 37.21 40 P P 19 18 13.5 +1.2
baz=275,SNR=6.0
I26K Coal Creek Min 37.33 38 P P 19 18 14.7 +1.6
baz=274
KAIM Kayak Island 37.37 47 P P 19 18 15.0 +1.4
KAIM IAmb IAmb 19 18 16.6
comp=Z,16nm,0.8s
KAIM Kayak Island 37.37 47 P P 19 18 15.5 +1.9
baz=280
HMT Hamilton 37.38 47 P P 19 18 15.4 +1.7
HMT IAmb IAmb 19 18 15.9
comp=Z,6.0nm,0.5s
GLB Gilahina Butte 37.43 45 P P 19 18 14.3 +0.1
L26K Log Cabin Wild 37.45 42 P P 19 18 15.9 +1.7
L26K IAmb IAmb 19 18 17.2
comp=Z,5.5nm,0.7s
L26K Log Cabin Wild 37.45 42 P P 19 18 16.3 +2.1
baz=277,SNR=7.4
ENH Enshi 37.59 258 P P 19 18 15.9 +0.1
M26K Nabesna, AK 37.68 43 P P 19 18 18.6 +2.4
M26K IAmb IAmb 19 18 19.5
comp=Z,7.8nm,0.9s
M26K Nabesna, AK 37.68 43 P P 19 18 18.4 +2.2
baz=278,SNR=8.9
E27K Coleen River 37.83 34 P P 19 18 19.2 +1.9
baz=272
G27K Doyon Strip 37.85 36 P P 19 18 20.8 +3.1
baz=273,SNR=5.5
K27K Chicken 37.90 40 P P 19 18 19.8 +1.8
baz=276
LZH Lanzhou 37.91 271 *e*P **P 19 18 19.5 +0.9**
LZH pP pwP 19 18 52.0 +1.0
LZH sP sP 19 19 02.0 +0.9
LZH pmax pmax
comp=Z,26nm,1.0s
LZH LR LR
comp=Z,260nm,14.6s
LZH LR LR
comp=Z,250nm,16.0s
LZH LR LR
comp=Z,260nm,16.3s
H27K Steamboat Moun 37.94 37 P P 19 18 20.5 +2.1
baz=274,SNR=10
I27K Kandik River 37.95 38 P P 19 18 20.0 +1.6
baz=275
L27K Beaver Creek, 38.13 42 P P 19 18 22.1 +2.2
L27K IAmb IAmb 19 18 22.7
comp=Z,7.6nm,0.6s
L27K Beaver Creek, 38.13 42 P P 19 18 22.0 +2.1
baz=278,SNR=23
BCAR Beaver Creek A 38.15 42 P P 19 18 21.9 +1.8
M27K Edge Creek, AK 38.20 43 P P 19 18 22.8 +2.0
baz=279,SNR=7.1
EGAK Eagle 38.22 39 P P 19 18 21.1 +0.5
EGAK IAmb IAmb 19 18 22.0
comp=Z,7.8nm,0.7s
EGAK Eagle 38.22 39 P P 19 18 21.5 +0.9
baz=276,SNR=12
ISLE Juniper Island 38.27 46 P P 19 18 22.5 +1.2
ISLE IAmb IAmb 19 18 24.0
comp=Z,9.9nm,0.5s
MESA MESA 38.54 47 P P 19 18 24.5 +0.9
MESA IAmb IAmb 19 18 28.7
comp=Z,18nm,1.0s
MESA MESA 38.54 47 P P 19 18 25.4 +1.8
baz=281
YAH Yahtse 38.61 46 P P 19 18 25.4 +1.2
YAH IAmb IAmb 19 18 27.2
comp=Z,12nm,0.7s
BVCY Beaver Creek 38.66 43 P P 19 18 26.1 +1.7
baz=280
CTG Chitna Glacier 38.69 45 P P 19 18 26.6 +1.8
baz=281,SNR=8.4
CTGM Chitina Glacie 38.69 45 P P 19 18 26.6 +1.8
GTA Gaotai 38.87 278⇑P **P 19 18 26.5 0.0**
GTA sP sP 19 19 04.5 -4.7
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,65nm,5.8s
GTA LR LR
comp=Z,150nm,17.1s
GTA LR LR
comp=Z,130nm,17.8s
GTA LR LR
comp=Z,140nm,17.8s
LOGN Logan Glacier 38.88 45 P P 19 18 27.9 +1.5
LOGN IAmb IAmb 19 18 28.6
comp=Z,6.8nm,0.4s
YUK3 Moose Creek 38.96 44 P P 19 18 28.6 +1.5
baz=281
DAWY Dawson 39.07 40 P P 19 18 28.4 +0.6
DAWY Dawson 39.07 40 P P 19 18 28.9 +1.1
baz=279
O28M Mount Upton 39.28 45 P P 19 18 31.4 +1.5
baz=282,SNR=5.5
I29M Ogilvie Camp, 39.35 38 P P 19 18 31.7 +1.6
I29M IAmb IAmb 19 18 32.6
comp=Z,7.1nm,0.8s
I29M Ogilvie Camp, 39.35 38 P P 19 18 31.6 +1.6
baz=278,SNR=8.8
PCA Pinnacle 39.39 46 P P 19 18 30.8 +0.3
PINM Pinnacle 39.39 46 P P 19 18 32.3 +1.7
baz=283
M29M Somme Creek 39.76 43 P P 19 18 35.6 +2.0
baz=281,SNR=9.3
EPYK Eagle Plains 39.86 36 P P 19 18 35.9 +1.6
EPYK IAmb IAmb 19 18 37.2
comp=Z,16nm,1.1s
EPYK Eagle Plains 39.86 36 P P 19 18 36.4 +2.1
baz=278,SNR=7.3
YUK4 Talbot Arm 39.90 44 P P 19 18 36.4 +1.6
baz=282
K29M Barlow Dome 39.92 40 P P 19 18 36.8 +1.8
baz=280,SNR=6.0
G30M tAoh Zrail Nji 39.97 35 P P 19 18 36.7 +1.5
baz=278
YUK6 Outpost Mounta 40.12 45 P P 19 18 38.6 +1.9
baz=283
M30M Minto, Yukon 40.49 42 P P 19 18 39.6 0.0
M30M Minto, Yukon 40.49 42 P P 19 18 41.8 +2.3
baz=282
HYT Haines Junctio 40.55 45 P P 19 18 42.2 +2.0
HYT Haines Junctio 40.55 45 P P 19 18 42.5 +2.3
baz=284,SNR=6.7
N30M Aishikik Lake 40.60 44 P P 19 18 42.4 +1.9
baz=284
P29M Windy Craggy 40.73 47 P P 19 18 44.0 +2.4
baz=285
INK Inuvik 40.81 33 P P 19 18 43.8 +1.8
comp=Z,5.8nm,0.5s,baz=296,slow=7.3,SNR=36
comp=Z,5.8nm,0.5s
INK Inuvik 40.81 33 P P 19 18 43.8 +1.8
INK IAmb IAmb 19 18 44.3
comp=Z,7.9nm,0.7s
INK Inuvik 40.81 33 P P 19 18 43.8 +1.8
baz=279,SNR=13
F31M Tsiigehtchic 40.86 34 P P 19 18 44.3 +1.9
baz=279
P30M Million Dollar 40.99 46 P P 19 18 46.4 +2.8
baz=285
CD2 Chengdu 41.01 264 P P 19 18 45.0 +0.8
CD2 pmax pmax
comp=Z,50nm,0.7s
N31M Braeburn, Yuko 41.20 44 P P 19 18 47.0 +1.6
N31M IAmb IAmb 19 18 49.1
comp=Z,7.9nm,0.7s
N31M Braeburn, Yuko 41.20 44 P P 19 18 48.1 +2.7
baz=284
O30N Mendenhall 41.24 45 P P 19 18 48.1 +2.4
baz=285,SNR=8.0
PLBC Pleasant Camp 41.46 47 P P 19 18 49.9 +2.5
baz=286,SNR=6.6
M31M Drury Creek, Y 41.67 42 P P 19 18 51.4 +2.3
baz=285
WHY Whitehorse 41.84 45 P P 19 18 53.0 +2.3
baz=286
ZAA0 Zalesovo Array 42.08 305 P P 19 18 51.3 -1.2
ZAA0 IAmb IAmb 19 18 52.5
comp=Z,13nm,0.6s
ZALV Zalesovo Beam 42.08 305 P **P 19 18 51.6 -1.0**
comp=Z,14nm,0.6s,baz=65,slow=6.9,SNR=70
ZALV PcP **PcP 19 20 45.2 +0.5**
comp=Z,4.0nm,0.7s,baz=72,slow=3.2,SNR=8.6
comp=Z,14nm,0.6s
ZALV Zalesovo Beam 42.08 305 *i*P **P 19 18 51.1 -1.4**
ZALV Zalesovo Beam 42.08 305 *i*P **P 19 18 51.7 -0.8**
ZALV pmax pmax
comp=Z,15nm,0.6s
FARO Faro, Yukon 42.13 42 P P 19 18 53.8 +0.9
FARO Faro, Yukon 42.13 42 P P 19 18 55.0 +2.1
baz=286,SNR=5.7
DGZ Jazzator, Alta 42.17 298 *i*P **P 19 18 52.8 -0.8**
DGZ pmax pmax
comp=Z,9.0nm,1.2s
P32M Atlin 42.71 46 P P 19 18 59.9 +2.2
baz=288
R32K Eaglecrest 42.72 48 P P 19 19 00.1 +2.4
baz=289
P33M Teslin, Yukon 42.95 45 P P 19 19 00.5 +0.8
P33M Teslin, Yukon 42.95 45 P P 19 19 02.0 +2.3
baz=288,SNR=6.8
MMPY Sheldon Lake, 42.96 41 P P 19 19 02.0 +2.4
baz=287
A36M Sachs Harbour 42.97 27 P P 19 19 01.0 +1.6
A36M Sachs Harbour 42.97 27 P P 19 19 01.2 +1.7
baz=282,SNR=10
GOMU GeErMu 43.92 277 P P 19 19 06.3 -1.8
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU pmax pmax
comp=Z,70nm,5.6s
C36M Paulatuk 43.96 30 P P 19 19 07.3 -0.1
C36M IAmb IAmb 19 19 09.4
comp=Z,10nm,0.6s
C36M Paulatuk 43.96 30 P P 19 19 08.9 +1.5
baz=286
R33M Jennings River 44.10 45 P P 19 19 11.3 +2.4
baz=290,SNR=8.2
S34M Telegraph Cree 44.54 48 P P 19 19 14.7 +2.4
baz=291
WMQ Urumqi 44.62 290 *e*P **P 19 19 15.3 +2.2**
TGTN Hyland Airport 44.64 42 P P 19 19 15.4 +2.4
baz=290
DLBC Dease Lake 44.89 47 P P 19 19 17.1 +1.9
comp=Z,3.9nm,0.5s,baz=292,slow=7.1,SNR=10.0
comp=Z,3.9nm,0.5s
DLBC Dease Lake 44.89 47 P P 19 19 18.1 +3.0
DLBC Dease Lake 44.89 47 P P 19 19 18.1 +3.0
baz=292,SNR=5.3
PZH PanZhiHua 45.20 261 P P 19 19 18.5 +0.5
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,120nm,5.2s
T35M Bob Quinn 45.33 48 P P 19 19 21.5 +3.0
baz=293
KMI Kunming 45.46 259⇑P **P 19 19 21.3 +1.1**
KMI pmax pmax
comp=Z,16nm,0.8s
MK31 Makanchi Array 46.53 297 P P 19 19 27.1 -1.0
MK31 IAmb IAmb 19 19 28.2
comp=Z,12nm,0.8s
MK31 Makanchi Array 46.53 297 *i*P **P 19 19 26.3 -1.8**
MKAR Makanchi Array 46.53 297 P P 19 19 27.5 -0.6
comp=Z,13nm,0.8s,baz=66,slow=8.0,SNR=126
MKAR PcP **PcP 19 21 00.3 +0.1**
comp=Z,1.3nm,0.8s,baz=59,slow=5.3,SNR=2.7
comp=Z,13nm,0.8s
MKAR Makanchi Array 46.53 297 P P 19 19 27.3 -0.8
MAKZ Makanchi 46.72 297 P P 19 19 28.7 -0.8
MAKZ IAmb IAmb 19 19 30.2
comp=Z,9.8nm,1.0s
MAKZ Makanchi 46.72 297 P P 19 19 28.7 -0.8

MAKZ pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 46.86 303 P **P** **19 19 29.5 -1.1**
KURK Kurchatov 46.86 303*ce*P **P** **19 19 29.2 -1.4**
KURK pmax pmax
comp=Z,40nm,0.8s
KURK Kurchatov 46.86 303 *e*P **P** **19 19 29.2 -1.4**
KURBB Kurchatov Arra 46.96 303 P **P** **19 19 30.7 -0.6**
comp=Z,28nm,0.7s,baz=67,slow=8.4,SNR=134
comp=Z,28nm,0.7s
YKA Yellowknife Ar 50.12 37 P **P** **19 19 56.8 +1.5**
comp=Z,3.7nm,0.6s,baz=299,slow=7.0,SNR=19
comp=Z,3.7nm,0.6s
YKA Yellowknife Ar 50.12 37 *i* P **P** **19 19 56.7 +1.4**
YKA pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 50.27 272 P **P** **19 19 59.5 +2.1**
LSA Lhasa 50.27 272 *i* P **P** **19 19 59.7 +2.2**
SNR=6.8
BVAR Borovoye Array 50.27 309 LR LR 19 42 47.2
comp=Z,140nm,18.3s,baz=125,slow=38
BRVK Borovoye 50.31 309 P **P** **19 19 56.1 -0.8**
BRVK IAmb IAmb 19 19 57.7
comp=Z,10nm,0.7s
BRVK Borovoye 50.31 309*ce*P **P** **19 19 55.9 -1.0**
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK Borovoye 50.31 309 *e*P **P** **19 19 55.9 -1.0**
CRAI Chiangrai 50.44 256 P **P** **19 19 59.1 +0.9**
CHTO Chiang Mai 52.38 256 P **P** **19 20 14.1 +1.3**
CHTO Chiang Mai 52.38 256 P **P** **19 20 14.1 +1.3**
CHTO pmax pmax
comp=Z,21nm,0.9s
CHTO Chiang Mai 52.38 256 P **P** **19 20 14.4 +1.6**
SHL Shillong 52.44 268 P **P** **19 20 12.9 -0.4**
SHL Shillong 52.44 268 P **P** **19 20 12.9 -0.4**
SHL pmax pmax
comp=Z,41nm,0.6s
CMAR Chiang Mai Arr 52.64 256 P **P** **19 20 16.7 +2.0**
comp=Z,11nm,0.9s,baz=34,slow=7.2,SNR=87
CMAR PcP **PcP** **19 21 24.7 +1.8**
comp=Z,1.3nm,0.8s,baz=13,slow=3.3,SNR=5.3
CMAR LR LR 19 44 50.0
comp=Z,21nm,18.6s,baz=115,slow=38
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 52.64 256 P **P** **19 20 14.8 +0.1**
CMAR Chiang Mai Arr 52.64 256 *i* P **P** **19 20 16.5 +1.8**
CMAR pmax pmax
comp=Z,11nm,0.9s
AAK Ala-Archa 53.44 296*ce*P **P** **19 20 19.9 -0.5**
AAK pmax pmax
comp=Z,7.0nm,0.7s
AAK Ala-Archa 53.44 296 *e*P **P** **19 20 19.9 -0.5**
AAK Ala-Archa 53.44 296 P **P** **19 20 20.2 -0.2**
TAPN Taplejung 54.09 273 *e*P **P** **19 20 25.2 -0.3**
NEEM North Greenlan 54.19 6 *i* P **P** **19 20 25.1 -0.5**
NEEM IAmb IAmb 19 20 25.6
comp=Z,18nm,1.1s
KSH Kashi 54.32 292 P **P** **19 20 31.0 +4.1**
ARU Arti 54.33 317 P **P** **19 20 25.6 -0.9**
ARU Arti 54.33 317*d i* P **P** **19 20 25.1 -1.4**
ARU *PP **pwP** **19 20 59.9 -0.7**
ARU 19 21 26.9
ARU S **S** **19 27 52.6 -1.2**
ARU pmax pmax
comp=Z,34nm,1.4s
ARU Arti 54.33 317 *e*P **P** **19 20 25.0 -1.4**
JIRN Jiri 54.91 274 *e*P **P** **19 20 32.4 +0.9**
comp=Z,54nm,0.7s
GUN Gumba 54.96 274 *e*P **P** **19 20 32.6 +0.7**
comp=Z,32nm,0.5s
RAMN Ramite 55.10 273 *e*P **P** **19 20 33.4 +0.7**
comp=Z,86nm,0.8s
KKN Kakani 55.44 275 *e*P **P** **19 20 36.1 +0.9**
PKI Pulchoki 55.50 274 *e*P **P** **19 20 36.2 +0.5**
comp=Z,18nm,0.6s
PKIN Phulchoki 55.50 274 *e*P **P** **19 20 36.1 +0.5**
comp=Z,17nm,0.5s
KKAR Karatay Array 55.57 298 P **P** **19 20 35.0 -0.6**
KKAR Karatay Array 55.57 298 P **P** **19 20 35.0 -0.6**
EDM Edmonton 55.62 47 P **P** **19 20 35.1 -0.7**
EDM IAmb IAmb 19 20 38.1
comp=Z,9.7nm,0.7s
EDM Edmonton 55.62 47 P **P** **19 20 35.1 -0.7**
EDM pmax pmax
comp=Z,10.0nm,0.7s
APSI Ampana 55.67 219 P **P** **19 20 38.0 +1.4**
comp=Z,14nm,0.8s
DMN Daman 55.67 275 *e*P **P** **19 20 37.9 +1.0**
comp=Z,68nm,0.8s
DAG Danmarks Havn 55.68 358 *i* P P 19 20 45.1 +9.2
GKN Gorkha 55.73 275 *e*P **P** **19 20 38.0 +0.8**
comp=Z,56nm,0.5s
DANN Dangsing 56.10 276 *e*P **P** **19 20 41.1 +1.2**
comp=Z,87nm,0.5s
PRGR Permogore 56.57 327 *e*P **P** **19 20 41.0 -1.4**
KOLN Koldanda 56.58 276 *e*P **P** **19 20 44.2 +0.9**
PYUN Piuthan 56.78 277 *e*P **P** **19 20 45.3 +0.7**
ARCES ARCESS Array B 56.95 341 P **P** **19 20 44.4 -0.6**
comp=Z,10nm,1.1s,baz=28,slow=8.0,SNR=16
comp=Z,10nm,1.1s
KIRV Kirov 57.03 323*ce*P **P** **19 20 45.3 -0.3**
SBUM Sibu 57.26 231 P **P** **19 20 48.2 +0.4**
SBUM IAmb IAmb 19 20 51.0
comp=Z,7.1nm,1.0s
ABKAR Akbulak array 57.84 309 P **P** **19 20 50.6 -0.9**
ABKAR IAmb IAmb 19 20 52.5
comp=Z,6.0nm,0.8s
KTK1 Kautokeino 57.86 341 *e*P **P** **19 20 50.8 -0.6**
JETT Jettan, Norway 58.03 342 *e*P **P** **19 20 51.9 -0.6**
JETT IAmb IAmb 19 20 54.6
comp=Z,349nm,2.3s
CHGR Chuyangaron 59.07 295 P **P** **19 20 59.1 -1.2**
CHGR Chuyangaron 59.07 295 P **P** **19 20 59.1 -1.2**
CHGR pmax pmax
comp=Z,17nm,0.8s
KLMR Klimovskoe 59.30 329 *i* P **P** **19 20 57.2 -4.2**
KLMR pmax pmax
comp=Z,16nm,1.4s
KLMR Klimovskoe 59.30 329 *i* P **P** **19 20 57.2 -4.2**
KLMR AMP 19 20 58.5
comp=Z,16nm,1.4s
SUMG Summit 59.73 4 P **P** **19 21 04.8 +0.2**
SUMG Summit 59.73 4 P **P** **19 21 04.9 +0.2**
SUMG pmax pmax
comp=Z,34nm,0.9s
SUMG Summit 59.73 4 *i* P **P** **19 21 04.9 +0.2**
SUMG IAmb IAmb 19 21 06.1
comp=Z,35nm,0.9s
LOF Lofoten 60.58 344 *e*P **P** **19 21 09.3 -0.7**
LOF IAmb IAmb 19 21 11.5
comp=Z,68nm,1.3s
FAUS Fauske 60.89 343 *e*P **P** **19 21 11.8 -0.4**
FAUS IAmb IAmb 19 21 13.5
comp=Z,7.2nm,0.6s
BOZ Bozeman (W) 61.17 53 P **P** **19 21 16.2 +1.6**
baz=310
KVN Kaiserville 61.68 62 P **P** **19 21 18.5 +0.3**
KVN Kaiserville 61.68 62 P **P** **19 21 18.5 +0.3**
KVN pmax pmax
comp=Z,1.0nm,0.7s
BELG Belogornoye 61.84 318 *i* P **P** **19 21 17.8 -0.9**
BELG pmax pmax
comp=Z,2.0nm,0.8s
NVAR Mina Array Bea 61.95 63 P **P** **19 21 22.1 +2.1**
comp=Z,1.0nm,0.4s,baz=297,slow=7.3,SNR=12
NVAR pP **pP** **19 21 50.3 -0.7**
comp=Z,1.5nm,0.8s,baz=290,slow=6.2,SNR=3.8
comp=Z,1.0nm,0.4s
MOR8 Moi Rana 62.11 342 *e*P **P** **19 21 18.8 -1.6**
MOR8 IAmb IAmb 19 21 19.7
comp=Z,7.8nm,0.5s
DSP Deep Springs 62.84 64 P **P** **19 21 26.4 +0.8**
ICESG Greenland Ices 63.12 5 *i* P **P** **19 21 28.0 +0.5**
ICESG IAmb IAmb 19 21 28.7
comp=Z,30nm,0.8s
FINES FINESS Array B 63.18 335 P **P** **19 21 27.2 -0.3**
comp=Z,8.1nm,0.4s,baz=34,slow=7.7,SNR=194
comp=Z,8.1nm,0.4s
R11A Troy Canyon, C 63.63 61 P **P** **19 21 31.9 +0.8**
baz=311
MPMC Manual Prospec 63.99 64 P **P** **19 21 34.9 +1.4**
baz=312
FURC Furnace Creek, 64.10 64 P **P** **19 21 35.6 +1.7**
baz=312

FRB Frobisher Bay 64.12 19 P **P** **19 21 33.4 -0.2**
comp=Z,4.7nm,0.5s,baz=342,slow=8.0,SNR=4.5
comp=Z,4.7nm,0.5s
PDAR Pinedale Array 64.15 54 P **P** **19 21 36.5 +2.0**
comp=Z,0.5nm,0.5s,baz=243,slow=1.0,SNR=4.1
PDAR pP **pP** **19 22 05.3 -0.3**
comp=Z,2.2nm,0.9s,baz=316,slow=4.1,SNR=6.5
comp=Z,0.5nm,0.5s
TPNV Topopah Spring 64.15 63 P **P** **19 21 35.9 +1.4**
baz=312
LRMC Laurel Mtn Rad 64.25 65 P **P** **19 21 36.4 +1.2**
baz=312
OBN Obninsk 64.53 325*de*P **P** **19 21 35.5 -0.9**
OBN 19 22 10.0
OBN *i* *SP **sP** **19 22 26.4 +5.3**
OBN *e* 19 23 58.4
OBN *e* 19 31 17.2
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 64.53 325 *e*P **P** **19 21 35.5 -0.9**
PSI Prapat 64.54 244 P **P** **19 21 38.1 +0.9**
PSI pmax pmax
comp=Z,9.0nm,0.8s
PSI Prapat 64.54 244 P **P** **19 21 39.0 +1.8**
RPSI Rantau Prapat 64.62 244 P **P** **19 21 38.1 +0.5**
RPSI IAmb IAmb 19 21 40.4
comp=Z,8.9nm,0.8s
MEF Metsahovi 64.66 334 *e*P **P** **19 21 36.7 -0.5**
RAF Rauma 64.74 336 *e*P **P** **19 21 36.8 -0.8**
TUQ Turquoise Moun 65.35 64 P **P** **19 21 43.9 +1.6**
baz=312
VSU Vasula 65.37 332 *e*P **P** **19 21 41.2 -0.6**
ULM Lac du Bonnet 65.76 41 P **P** **19 21 45.1 +0.6**
comp=Z,3.4nm,0.6s,baz=317,slow=8.7,SNR=3.1
comp=Z,3.4nm,0.6s
VORR Voronezh 66.02 321 *e*P **P** **19 21 45.6 -0.5**
VORR pmax pmax
comp=Z,10.0nm,0.3s
MTSE Matsula 66.06 334 *e*P **P** **19 21 46.0 -0.2**
GEYT Alibeck 66.14 301 P **P** **19 21 47.3 +0.1**
comp=Z,3.9nm,0.6s,baz=18,slow=2.3,SNR=10
comp=Z,3.9nm,0.6s
GEYT Alibeck 66.14 301 P **P** **19 21 46.0 -1.2**
GEYT IAmb IAmb 19 21 48.1
comp=Z,4.0nm,0.7s
RSSD Black Hills 66.17 50 P **P** **19 21 48.4 +0.9**
baz=314
PWJI Pagerwojo 66.45 226 P **P** **19 21 49.7 +0.5**
comp=Z,50nm,0.9s
GSI Gunungsitoli 66.54 244 P **P** **19 21 51.2 +1.3**
GSI Gunungsitoli 66.54 244 P **P** **19 21 51.0 +1.1**
GSI Gunungsitoli 66.54 244 P **P** **19 21 51.3 +1.3**
DOMB Dombas 66.87 343 *e*P **P** **19 21 51.4 0.0**
DOMB IAmb IAmb 19 21 51.9
comp=Z,15nm,1.1s
AKN Aaknes 67.16 344 *e*P **P** **19 21 53.9 +0.7**
AKN IAmb IAmb 19 21 54.8
comp=Z,30nm,1.2s
AGMN Agassiz Nation 67.19 43 P **P** **19 21 54.1 +0.5**
baz=317
NC204 NORSAR Array S 67.21 341 P **P** **19 21 53.7 +0.1**
NC204 NORSAR Array S 67.21 341 *e*P **P** **19 21 54.1 +0.5**
NC204 IAmb IAmb 19 21 54.4
comp=Z,22nm,1.2s
NB201 NORSAR Array S 67.30 341 P **P** **19 21 53.9 -0.2**
NB2 NORSAR Subarra 67.32 341 P **P** **19 21 54.4 +0.1**
comp=Z,2.3nm,0.6s,baz=26,slow=6.5
NB2 NORSAR Subarra 67.32 341 P **P** **19 21 54.4 +0.1**
baz=26,slow=6.5
NOA NORSAR Array B 67.32 341 P **P** **19 21 54.5 +0.1**
comp=Z,3.8nm,0.6s,baz=28,slow=6.5,SNR=30
comp=Z,3.8nm,0.6s
SLIT Slitere, Latvi 67.42 334 *e*P **P** **19 21 54.3 -0.6**
BORG Borgarnes 67.79 357 P **P** **19 21 59.0 +1.9**
comp=Z,12nm,0.9s,baz=310,slow=2.9,SNR=6.4
comp=Z,12nm,0.9s
HYA Hoyanger 68.24 343 *e*P **P** **19 22 00.2 +0.3**
HYA IAmb IAmb 19 22 00.6
comp=Z,15nm,0.8s
VSVD Vaisvydziai 68.28 332 *e*P **P** **19 22 00.2 -0.1**
MVCO Mesa Verde 68.53 58 P **P** **19 22 03.5 +1.0**
baz=314
SUE Sulen 68.61 344 *e*P **P** **19 22 03.0 +0.7**
SUE IAmb IAmb 19 22 03.4
comp=Z,29nm,0.7s
PABE Paberze 68.67 332 *e*P **P** **19 22 02.5 -0.2**
ASK Askoy 69.06 344 *e*P **P** **19 22 05.8 +0.8**
ASK IAmb IAmb 19 22 06.3
comp=Z,54nm,0.9s
BER Bergen 69.13 344 *e*P **P** **19 22 06.4 +1.0**
BER IAmb IAmb 19 22 06.6
comp=Z,25nm,0.8s
EYMN Ely 69.40 40 P **P** **19 22 07.8 +0.4**
baz=320
WRAB Tennant Creek 69.43 199*ce*P **P** **19 22 08.4 +0.6**
WRAB pmax pmax
comp=Z,7.0nm,1.7s
WRA Warramunga Arr 69.44 199 P **P** **19 22 09.4 +1.6**
comp=Z,1.8nm,0.8s,baz=13,slow=6.3,SNR=11
comp=Z,1.8nm,0.8s
WRA Warramunga Arr 69.44 199 *i* P **P** **19 22 09.3 +1.4**
WRA pmax pmax
comp=Z,2.0nm,0.8s
BLS5 Blasjo 69.80 343 *e*P **P** **19 22 10.4 +0.8**
BLS5 IAmb IAmb 19 22 11.2
comp=Z,13nm,0.7s
KIV Kislovodsk 70.15 314 P **P** **19 22 10.2 -1.9**
KIV IAmb IAmb 19 22 16.8
comp=Z,16nm,0.9s
KIV Kislovodsk 70.15 314 *e*P **P** **19 22 12.4 +0.2**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 70.15 314 *e*P **P** **19 22 12.4 +0.2**
KIV Kislovodsk 70.15 314 P **P** **19 22 13.0 +0.8**
ECSD EROS Data Cent 70.19 46 P **P** **19 22 12.1 -0.2**
ECSD EROS Data Cent 70.19 46 P **P** **19 22 13.0 +0.7**
baz=318
KBZ Khabaz 70.22 314 P **P** **19 22 13.3 +0.9**
comp=Z,14nm,0.9s,baz=66,slow=3.4,SNR=21
comp=Z,14nm,0.9s
KBZ Khabaz 70.22 314*ce*P **P** **19 22 12.4 0.0**
KBZ pmax pmax
comp=Z,14nm,0.9s
KBZ Khabaz 70.22 314 *e*P **P** **19 22 12.4 0.0**
SHA1 Shidzhatmaz 70.33 314*c i*P **P** **19 22 13.7 +0.3**
ZEI Tsey 70.41 312 *e*P **P** **19 22 12.9 -1.0**
ZEI pmax pmax
comp=Z,9.0nm,0.9s
SNART Snartemo 70.64 342 *e*P **P** **19 22 15.5 +0.8**
SNART IAmb IAmb 19 22 16.4
comp=Z,63nm,1.1s
AKASG Malin Array Be 70.76 326 P **P** **19 22 14.7 -0.9**
comp=Z,3.4nm,0.4s,baz=34,slow=6.3,SNR=30
comp=Z,3.4nm,0.4s
AKASG Malin Array Be 70.76 326 P **P** **19 22 15.5 -0.1**
AKASG Malin Array Be 70.76 326 *i* P **P** **19 22 14.6 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 70.76 326 P **P** **19 22 14.6 -1.1**
AKBB IAmb IAmb 19 22 16.0
comp=Z,6.7nm,0.7s
AKBB Malin Array Si 70.76 326*ce*P **P** **19 22 12.3 -3.3**
AKBB pmax pmax
comp=Z,18nm,1.6s
BSD Bornholm Skovb 71.68 336 *e*P **P** **19 22 21.0 0.0**
GNI Garni 71.93 310*ce*P **P** **19 22 22.9 -0.2**
GNI pmax pmax
comp=Z,8.0nm,1.0s
SCHQ Schefferville 72.40 23 P **P** **19 22 26.0 +0.6**
comp=Z,5.7nm,0.7s,baz=318,slow=5.7,SNR=5.9
comp=Z,5.7nm,0.7s
GKP Gorka Klasztor 72.64 334 *e*P **P** **19 22 27.2 +0.4**
AS31 Alice Springs 73.14 198 P **P** **19 22 31.8 +1.7**
ASAR Alice Springs 73.14 198 P **P** **19 22 32.2 +2.2**
comp=Z,3.2nm,0.6s,baz=9.2,slow=5.3,SNR=55
comp=Z,3.2nm,0.6s
SORM Soroca 73.18 325 ⇑P **P** **19 22 28.4 -1.6**
SCIA State Center 73.21 46 P **P** **19 22 31.4 +1.1**
baz=320
OJC Ojcow 74.49 331 *e*P **P** **19 22 37.3 -0.4**
OJC Ojcow 74.49 331 P **P** **19 22 36.3 -1.4**
OJC IAmb IAmb 19 22 37.8
comp=Z,10.0nm,0.7s
OJC Ojcow 74.49 331 P **P** **19 22 36.3 -1.4**
OJC pmax pmax
comp=Z,10.0nm,0.7s

VASR Vaslui 74.62 324 ⇑P **P** **19 22 38.7 +0.2**
KOLS Kolonicke sedl 74.75 329 *e*P **P** **19 22 39.1 -0.1**
KOLS pmax pmax
comp=Z,10.0nm,0.9s
KOLS Kolonicke sedl 74.75 329 *e*P **P** **19 22 39.1 -0.1**
BUR08 Bucovina Ar. S 74.78 326 P **P** **19 22 39.8 +0.2**
BURAR Bucovina Array 74.80 326 ⇑P **P** **19 22 39.8 +0.1**
BURAR Bucovina Array 74.80 326 P **P** **19 22 39.7 +0.1**
BURAR IAmb IAmb 19 22 41.0
comp=Z,9.1nm,0.9s
GLMI Grayling 74.81 39 P **P** **19 22 40.3 +0.6**
baz=324
UZH Uzhgorod 75.00 329 *e*P **P** **19 22 38.4 -2.2**
UZH *e* 19 22 51.0
UZH *e* 19 23 15.8
NIE Niedzica 75.01 330 *e*P **P** **19 22 41.7 +1.0**
BIZ Bicaz 75.03 326 ⇑P **P** **19 22 41.1 +0.3**
KSP Ksiaz 75.05 333 *e*P **P** **19 22 41.6 +0.7**
VLDR Vladesti 75.16 324 ⇑P **P** **19 22 42.6 +1.0**
TESR Tescani 75.17 325 ⇓P **P** **19 22 41.6 0.0**
VARL Varlezi 75.20 324 ⇓P **P** **19 22 42.5 +0.6**
GHRR 75.25 324 ⇓P **P** **19 22 43.2 +1.1**
OSTC Ostas 75.33 333 *e*P **P** **19 22 42.4 -0.1**
OSTC AMS AMS 19 54 50.0
comp=Z,200nm,15.6s
SCTR Scanteiesti 75.33 324 ⇑P **P** **19 22 42.6 0.0**
OKC Ostrava-Krasne 75.35 332 AMS AMS 19 48 00.0
comp=Z,300nm,22.5s
TLCR 75.40 323 ⇑P **P** **19 22 43.1 +0.1**
UPC Upice 75.43 333 *e*P **P** **19 22 43.3 +0.2**
UPC MLR MLR
comp=Z,200nm,15.9s
UPC Upice 75.43 333 *e*P **P** **19 22 43.3 +0.2**
UPC AMS AMS 19 50 40.0
comp=Z,200nm,15.9s
DPC Dobruska-Polom 75.47 333 *e*P **P** **19 22 44.0 +0.6**
DPC MLR MLR
comp=Z,200nm,29.0s
DPC Dobruska-Polom 75.47 333 *e*P **P** **19 22 44.0 +0.6**
DPC AMS AMS 19 54 00.0
comp=Z,200nm,29.0s
L44A Lake County Fo 75.48 42 P **P** **19 22 44.2 +0.7**
baz=323
LANS Liptovska Anna 75.52 331 *e*P **P** **19 22 44.8 +1.1**
LANS pmax pmax
comp=Z,11nm,0.8s
LANS Liptovska Anna 75.52 331 *e*P **P** **19 22 44.8 +1.1**
ARCR ARCALIA 75.56 327 ⇓P **P** **19 22 45.1 +1.2**
KRLC Kraliky 75.58 333 *e*P **P** **19 22 44.0 0.0**
KRLC MLR MLR
comp=Z,200nm,19.0s
KRLC Kraliky 75.58 333 *e*P **P** **19 22 44.0 0.0**
KRLC AMS AMS 19 49 30.0
comp=Z,200nm,19.0s
CLL Collm 75.60 335 P **P** **19 22 43.6 -0.4**
CLL Collm 75.60 335 ⇑*i*P **P** **19 22 44.1 +0.1**
CLL pmax pmax
comp=Z,37nm,0.8s
CLL Collm 75.60 335 ⇑*i*P **P** **19 22 44.1 +0.1**
comp=Z,37nm,0.8s
MORC Moravsky Berou 75.60 332 ⇓P **P** **19 22 44.6 +0.5**
MORC Moravsky Berou 75.60 332 *e*P **P** **19 22 44.6 +0.5**
SHME Shamm 75.65 293 P **P** **19 22 44.8 +0.1**
VRI Vrincioaia 75.68 325 ⇓P **P** **19 22 45.2 +0.6**
CFR Carcaliu 75.68 323 ⇑P **P** **19 22 44.7 +0.1**
BRG Berggiesshubel 75.72 335 *i* P **P** **19 22 44.9 +0.1**
BRG Amp 19 22 46.6
comp=Z,9.5nm,0.8s
BRG Amp 19 53 07.0
comp=E,0.0nm,15.3s
BRG Amp 19 53 09.0
comp=Z,0.2nm,16.7s
BRG Amp 19 53 13.0
comp=N,0.1nm,19.7s
BRG Berggiesshubel 75.72 335 *i* P **P** **19 22 44.8 +0.1**
BRG pmax pmax
comp=Z,10.0nm,0.8s
BRG MLR MLR
comp=E,32nm,15.3s
BRG MLR MLR
comp=Z,249nm,16.7s
BRG MLR MLR
comp=N,138nm,19.7s
PLOR Plostina 75.72 325 ⇓P **P** **19 22 45.3 +0.5**
TPGR Topolog 75.83 323 ⇑P **P** **19 22 45.6 +0.1**
PVCC Panska Ves 75.84 334 *e*P **P** **19 22 45.9 +0.5**
PVCC MLR MLR
comp=Z,200nm,21.2s
PVCC Panska Ves 75.84 334 *e*P **P** **19 22 45.9 +0.5**
PVCC AMS AMS 19 49 00.0
comp=Z,200nm,21.2s
OZUR 75.85 325 ⇑P **P** **19 22 46.6 +0.9**
COVR Voineasa-Covas 75.90 325 ⇑P **P** **19 22 46.3 +0.5**
TIRR Tirgusor 76.16 323 ⇑P **P** **19 22 46.0 -1.3**
TIRR Tirgusor 76.16 323 ⇑P **P** **19 22 46.0 -1.3**
HARR Harsova 76.17 323 ⇓P **P** **19 22 48.0 +0.6**
MLR Muntele Rosu 76.29 325 ⇑P **P** **19 22 48.7 +0.4**
MLR Muntele Rosu 76.29 325 P **P** **19 22 48.5 +0.2**
MLR IAmb IAmb 19 22 50.3
comp=Z,20nm,0.9s
MLR Muntele Rosu 76.29 325 P **P** **19 22 48.5 +0.2**
MLR pmax pmax
comp=Z,20nm,0.9s
VYHS Vyhne 76.30 331 *e*P **P** **19 22 48.7 +0.6**
VYHS pmax pmax
comp=Z,11nm,0.8s
VYHS Vyhne 76.30 331 *e*P **P** **19 22 48.7 +0.6**
VRAC Vranov 76.31 332 ⇑P **P** **19 22 48.9 +0.7**
VRAC Vranov 76.31 332 *e*P **P** **19 22 48.8 +0.7**
PRU Pruhonice 76.33 334 *e*P **P** **19 22 48.1 -0.1**
PRU MLR MLR
comp=Z,200nm,16.5s
PRU Pruhonice 76.33 334 *e*P **P** **19 22 48.1 -0.1**
PRU AMS AMS 19 48 50.0
comp=Z,200nm,16.5s
JAVC Velka Javorina 76.36 332 *e*P **P** **19 22 50.0 +1.5**
ISR Istrita 76.37 324 ⇑P **P** **19 22 47.9 -0.6**
UOSS Minazif 76.41 292 P **P** **19 22 48.1 -0.9**
UOSS Minazif 76.41 292 P **P** **19 22 49.4 +0.3**
PSZ Piszkesteto 76.44 330 ⇑P **P** **19 22 49.4 +0.4**
HATD Hatta, Dubai 76.54 292 *i* P **P** **19 22 50.2 +0.4**
SNR=8.8
KRUC Moravsky 76.59 332 *e*P **P** **19 22 50.2 +0.5**
TREC Trest 76.66 333 AMS AMS 19 51 10.0
comp=Z,200nm,16.6s
VOIR 76.68 325 ⇑P **P** **19 22 51.1 +0.7**
SMOL Smolenice 76.74 332 *e*P **P** **19 22 51.5 +1.0**
SMOL pmax pmax
comp=Z,6.0nm,0.8s
SULR 76.85 324 ⇓P **P** **19 22 51.9 +0.7**
MODS Modra-Piesok 76.91 332 *e*P **P** **19 22 52.4 +0.9**
MODS pmax pmax
comp=Z,27nm,1.0s
MODS Modra-Piesok 76.91 332 *e*P **P** **19 22 52.4 +0.9**
TXAR Lajitas Array 76.98 61 P **P** **19 22 54.0 +1.6**
comp=Z,1.5nm,0.5s,baz=296,slow=4.8,SNR=41
TXAR pP **pP** **19 23 24.9 +0.4**
comp=Z,5.7nm,0.8s,baz=294,slow=4.3,SNR=13
comp=Z,1.5nm,0.5s
TXAR Lajitas Array 76.98 61 P **P** **19 22 53.5 +1.1**
TXAR Lajitas Array 76.98 61 P **P** **19 22 53.5 +1.1**
ZST Bratislava 77.12 332 *e*P **P** **19 22 54.0 +1.3**
ZST pmax pmax
comp=Z,33nm,0.8s
ZST Bratislava 77.12 332 *e*P **P** **19 22 54.0 +1.3**
LOT Lotru 77.16 326 ⇓P **P** **19 22 53.2 +0.1**
ASUD Al Ashush, Dub 77.18 292 *i* P **P** **19 22 54.3 +0.9**
SNR=6.8
SIRR Siria 77.24 328 ⇓P **P** **19 22 54.0 +0.6**
AAM Ann Arbor 77.26 40 P **P** **19 22 54.5 +1.0**
baz=325
ALNE Al Ain 77.33 292 *i* P **P** **19 22 54.9 +0.7**
SNR=8.2
KHC Kasperske Hory 77.38 334 *e*P **P** **19 22 54.4 +0.2**
KHC MLR MLR
comp=Z,300nm,22.1s
KHC Kasperske Hory 77.38 334 *e*P **P** **19 22 54.4 +0.2**
KHC AMS AMS 19 49 50.0
comp=Z,300nm,22.1s
CKRC Cesky Krumlov 77.44 334 *e*P **P** **19 22 54.7 +0.2**
GRFO Grafenberg 77.55 336 P **P** **19 22 55.5 +0.4**
GRFO Grafenberg 77.55 336 P **P** **19 22 55.5 +0.4**
GRFO pmax pmax
comp=Z,35nm,0.7s

GZR	**Gura Zlata**		**77.58**	**327**	⇑P		**P**	**19 22 55.5**	**+0.2**
GERES	**GERESS Array B**		**77.60**	**334**	P		**P**	**19 22 55.5**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=38,slow=5.6,SNR=60								
	comp=Z,6.1nm,0.7s								
RAZG	**Razgrad**		**77.67**	**323**	⇑P		**P**	**19 22 56.1**	**+0.3**
BR131	**Keskin Array S**		**77.71**	**317**	*c* P		**P**	**19 22 56.5**	**+0.2**
BRTR	**Keskin Array B**		**77.71**	**317**	P		**P**	**19 22 56.9**	**+0.6**
	comp=Z,8.7nm,0.9s,baz=59,slow=3.8,SNR=46								
	comp=Z,8.7nm,0.9s								
BRTR	**Keskin Array B**		**77.71**	**317**	P		**P**	**19 22 56.1**	**-0.1**
COPA	**Copaceanca**		**77.71**	**324**	⇓P		**P**	**19 22 56.2**	**+0.2**
CONA	**Conrad Observa**		**77.75**	**332**	*e*P		**P**	**19 22 57.1**	**+0.8**
	comp=Z,13nm,0.7s,SNR=8.9								
BZS	**Buzias**		**77.81**	**327**	⇑P		**P**	**19 22 56.6**	**0.0**
RONA	**Rosalia, Austr**		**77.82**	**332**	*e*P		**P**	**19 22 57.7**	**+1.1**
	comp=Z,16nm,0.9s,SNR=7.4								
ANTO	**Ankara**		**77.98**	**317**	⇑P		**P**	**19 22 57.2**	**-0.5**
BTNL	**Ternell**		**78.04**	**339**	*d*P		**P**	**19 22 57.1**	**-0.7**
	comp=Z,18nm,1.0s								
MEM	**Membach**		**78.05**	**339**	*d*P		**P**	**19 22 58.5**	**+0.7**
	comp=Z,25nm,0.9s								
HERR	**Herculane**		**78.15**	**327**	⇑P		**P**	**19 22 58.2**	**-0.2**
SZH	**Strazhica**		**78.15**	**324**	*e*P		**P**	**19 22 58.5**	**0.0**
BSTI	**Sart Tilman**		**78.18**	**340**	*d*P		**P**	**19 22 58.9**	**+0.4**
O48B	**Farmland**		**78.26**	**42**	P		**P**	**19 22 59.2**	**+0.1**
	baz=324								
MOA	**Molln**		**78.32**	**333**	*i* P		**P**	**19 22 59.9**	**+0.5**
	comp=Z,4.3nm,0.8s,SNR=5.9								
MORH	**Mrgy, Hungar**		**78.34**	**330**	⇑P		**P**	**19 22 58.9**	**-0.6**
BCLA	**Clavier**		**78.39**	**340**	*d*P		**P**	**19 23 00.2**	**+0.5**
	comp=Z,12nm,0.9s								
ARSA	**Arzberg**		**78.46**	**332**	*e*P		**P**	**19 23 00.7**	**+0.6**
	comp=Z,4.7nm,0.7s								
MDVR	**Moldovita**		**78.50**	**327**	⇓P		**P**	**19 23 00.3**	**-0.2**
BMRD	**Maredsous**		**78.63**	**340**	*d*P		**P**	**19 23 01.4**	**+0.4**
	comp=Z,13nm,1.0s								
BIOA	**Bad Ischl, Aus**		**78.65**	**333**	*e*P		**P**	**19 23 01.7**	**+0.5**
	comp=Z,10nm,0.8s,SNR=7.0								
RCHB	**Rochefort**		**78.66**	**340**	*d*P		**P**	**19 23 01.2**	**+0.1**
	comp=Z,10.0nm,1.0s								
FRGS	**Fruska Gora**		**78.86**	**328**	⇑P		**P**	**19 23 02.6**	**+0.3**
FRGS	**Fruska Gora**		**78.86**	**328**	⇑*i*P		**P**	**19 23 02.3**	**-0.1**
P49A	**Miami Univ. Ec**		**79.05**	**42**	P		**P**	**19 23 03.8**	**+0.3**
	baz=325								
SOKA	**Soboth**		**79.12**	**332**	*e*P		**P**	**19 23 04.3**	**+0.4**
	comp=Z,12nm,0.7s,SNR=16								
PERS	**Pernice**		**79.14**	**332**	*e*P		**P**	**19 23 04.2**	**+0.3**
GROS	**Grobnik**		**79.17**	**332**	*i* P		**P**	**19 23 04.1**	**0.0**
M53A	**WI Miller and**		**79.23**	**38**	P		**P**	**19 23 04.9**	**+0.5**
	baz=327								
ACSO	**Alum Creek Sta**		**79.25**	**40**	P		**P**	**19 23 04.9**	**+0.4**
	baz=326								
KBA	**Koelnbreinsper**		**79.29**	**333**	*i* P		**P**	**19 23 05.4**	**+0.5**
	comp=Z,20nm,0.8s,SNR=23								
DIM	**Dimitrovgrad**		**79.33**	**323**	*e*P		**P**	**19 23 05.6**	**+0.7**
WCI	**Wyandotte Cave**		**79.38**	**44**	P		**P**	**19 23 05.8**	**+0.6**
	baz=324								
OBKA	**Obir**		**79.43**	**332**	⇑*i*P		**P**	**19 23 05.5**	**0.0**
OBKA	**Obir**		**79.43**	**332**	*e*P		**P**	**19 23 05.7**	**+0.2**
	comp=Z,5.1nm,0.8s								
BOVS	**Bovan**		**79.48**	**326**	⇑P		**P**	**19 23 04.8**	**-0.9**
MZR	**Muzera**		**79.52**	**293**	*i* P		**P**	**19 23 06.9**	**+0.6**
	SNR=35								
BFO	**Black Forest**		**79.57**	**337**	P		**P**	**19 23 05.0**	**-1.2**
BFO					lAmb	lAmb		19 23 07.6	
	comp=Z,12nm,0.8s								
BFO	**Black Forest**		**79.57**	**337**	P		**P**	**19 23 05.0**	**-1.2**
BFO					pmax	pmax			
	comp=Z,12nm,0.8s								
WATA	**Walderalm**		**79.58**	**335**	*i* P		**P**	**19 23 07.1**	**+0.7**
	comp=Z,14nm,0.7s,SNR=12								
MYKA	**Terra Mystica**		**79.60**	**333**	*i* P		**P**	**19 23 06.4**	**0.0**
	comp=Z,5.9nm,1.0s								
WTTA	**Wattenberg**		**79.63**	**334**	*e*P		**P**	**19 23 07.6**	**+0.9**
	comp=Z,20nm,0.7s,SNR=14								
RETA	**Reutte**		**79.68**	**335**	*i* P		**P**	**19 23 07.5**	**+0.7**
	comp=Z,8.7nm,0.8s,SNR=5.5								
DIVS	**Divibare**		**79.71**	**328**	P		**P**	**19 23 06.6**	**-0.5**
DIVS					lAmb	lAmb		19 23 07.8	
	comp=Z,14nm,1.0s								
DIVS	**Divibare**		**79.71**	**328**	⇑*i*P		**P**	**19 23 06.8**	**-0.3**
MOTA	**Moosalm**		**79.71**	**335**	*i* P		**P**	**19 23 07.7**	**+0.6**
	comp=Z,19nm,0.9s,SNR=14								
CRES	**Cresnjev**		**79.75**	**331**	⇑*i*P		**P**	**19 23 07.0**	**-0.1**
VTS	**Vitosha**		**79.77**	**325**	⇑P		**P**	**19 23 07.6**	**+0.1**
VTS	**Vitosha**		**79.77**	**325**	P		**P**	**19 23 08.1**	**+0.6**
VTS	**Vitosha**		**79.77**	**325**	P		**P**	**19 23 08.1**	**+0.6**
VTS					pmax	pmax			
	comp=Z,26nm,0.7s								
VTS	**Vitosha**		**79.77**	**325**	*e*P		**P**	**19 23 07.7**	**+0.2**
SQTA	**Sankt Quirin**		**79.79**	**335**	*e*P		**P**	**19 23 08.1**	**+0.6**
	comp=Z,15nm,0.9s,SNR=9.9								
ABTA	**Abfaltersbach**		**79.84**	**334**	*e*P		**P**	**19 23 07.5**	**-0.2**
	comp=Z,6.3nm,0.9s								
A051A	**Mrakovica**		**79.99**	**330**	⇑*i*P		**P**	**19 23 08.0**	**-0.5**
O53A	**New Philadelph**		**80.00**	**39**	P		**P**	**19 23 08.9**	**+0.3**
	baz=326								
ALN	**Alexandroupoli**		**80.09**	**322**	P		**P**	**19 23 08.8**	**-0.2**
ALN	**Alexandroupoli**		**80.09**	**322**	P		**P**	**19 23 08.8**	**-0.2**
ALN					pmax	pmax			
	comp=Z,23nm,1.0s								
BOJS	**Bojanci**		**80.10**	**331**	⇑*i*P		**P**	**19 23 08.5**	**-0.5**
P52A	**Corning**		**80.11**	**40**	P		**P**	**19 23 09.4**	**+0.2**
	baz=326								
DAVA	**Damuels**		**80.11**	**336**	*e*P		**P**	**19 23 09.7**	**+0.5**
	comp=Z,10nm,0.8s,SNR=5.3								
FETA	**Feichten**		**80.11**	**335**	*i* P		**P**	**19 23 10.0**	**+0.7**
	comp=Z,7.8nm,0.9s								
BLY	**Banja Luka**		**80.12**	**330**	⇑*i*P		**P**	**19 23 08.7**	**-0.5**
GBRS	**Gornja Briga**		**80.22**	**332**	*e*P		**P**	**19 23 09.5**	**-0.2**
WVT	**Waverly**		**80.33**	**46**	P		**P**	**19 23 11.2**	**+0.8**
	baz=324								
RUDO	**Rudo**		**80.35**	**328**	⇑*i*P		**P**	**19 23 10.1**	**-0.3**
MMB	**Musomiste**		**80.44**	**324**	*e*P		**P**	**19 23 11.5**	**+0.5**
MGRS	**Mrkonjic Grad**		**80.45**	**330**	*e*P		**P**	**19 23 11.3**	**+0.3**
SKDS	**Skadanscina**		**80.45**	**332**	⇑*i*P		**P**	**19 23 10.0**	**-1.0**
KKB	**Krupnik**		**80.46**	**325**	*e*P		**P**	**19 23 11.2**	**+0.1**
A050A	**Klekovaca**		**80.58**	**330**	⇑*i*P		**P**	**19 23 10.9**	**-0.8**
SRKY	**Kupres RS**		**80.73**	**330**	⇑*i*P		**P**	**19 23 11.6**	**-1.0**
UPM	**Unac-Piva**		**80.88**	**328**	⇑*i*P		**P**	**19 23 12.6**	**-0.9**
SSPA	**Standing Stone**		**81.05**	**37**	P		**P**	**19 23 14.7**	**+0.4**
	baz=328								
BRY	**Bratogost**		**81.27**	**328**	⇑*i*P		**P**	**19 23 14.3**	**-1.2**
PDG	**Podgorica**		**81.42**	**327**	⇑P		**P**	**19 23 15.6**	**-0.5**
PDG	**Podgorica**		**81.42**	**327**	P		**P**	**19 23 16.0**	**-0.1**
STON	**Ston**		**81.59**	**329**	⇑*i*P		**P**	**19 23 13.9**	**-3.1**
SENIN	**Lac Senin/Sane**		**81.66**	**337**	P		**P**	**19 23 16.0**	**-1.6**
DRME	**Dracevica, Mon**		**81.66**	**327**	⇑*i*P		**P**	**19 23 17.1**	**-0.3**
CSS	**Mathiatis**		**81.67**	**314**	P		**P**	**19 23 17.7**	**+0.1**
HCY	**Herceg Novi**		**81.69**	**328**	⇑*i*P		**P**	**19 23 16.3**	**-1.2**
ELL	**Elmali**		**81.84**	**317**	P		**P**	**19 23 18.7**	**+0.1**
ELL	**Elmali**		**81.84**	**317**	P		**P**	**19 23 18.7**	**+0.1**
ELL					pmax	pmax			
	comp=Z,52nm,0.8s								
TIR	**Tirane**		**82.14**	**326**	⇑P		**P**	**19 23 20.0**	**+0.1**
TKL	**Tuckaleechee C**		**82.64**	**43**	P		**P**	**19 23 22.7**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=254,slow=7.4,SNR=2.0								
	comp=Z,1.8nm,0.6s								
PPT	**Papeete**		**82.70**	**126**	LR		LR	19 51 43.4	
	comp=Z,55nm,20.9s,baz=182,slow=29								
Y49A	**Blount Mountai**		**82.84**	**46**	P		**P**	**19 23 23.6**	**-0.1**
BLA	**Blacksburg**		**82.87**	**40**	P		**P**	**19 23 24.4**	**+0.6**
	baz=327								
SSB	**Saint Sauveur**		**83.38**	**338**	P		**P**	**19 23 26.8**	**+0.5**
SSB					lAmb	lAmb		19 23 28.1	
	comp=Z,8.2nm,0.7s								
SSB	**Saint Sauveur**		**83.38**	**338**	P		**P**	**19 23 26.8**	**+0.5**
SSB					pmax	pmax			
	comp=Z,8.0nm,0.7s								
SCTE	**Santa Cesarea**		**83.77**	**327**	P		**P**	**19 23 26.8**	**-1.5**
RAYN	**Ar Rayn**		**83.99**	**298**	P		**P**	**19 23 30.4**	**+0.6**
RAYN					lAmb	lAmb		19 23 31.0	
	comp=Z,6.9nm,0.7s								
RAYN	**Ar Rayn**		**83.99**	**298**	P		**P**	**19 23 30.4**	**+0.6**
RAYN					pmax	pmax			
	comp=Z,7.0nm,0.7s								
RAYN	**Ar Rayn**		**83.99**	**298**	*i* P		**P**	**19 23 30.6**	**+0.8**
	SNR=9.7								
KMSC	**Kings Mountain**		**84.18**	**42**	P		**P**	**19 23 31.1**	**+0.6**
	baz=327								
TIP	**Timpagrande**		**85.18**	**327**	⇓P		**P**	**19 23 35.9**	**+0.3**
TIGA	**Tifton**		**86.19**	**46**	P		**P**	**19 23 41.7**	**+1.2**
	baz=326								
DWPF	**Disney Wildern**		**89.99**	**46**	P		**P**	**19 23 58.3**	**-0.3**
	baz=327								

ESDC	**Sonseca Array**		**90.64**	**343**	P		**P**	**19 24 01.1**	**-0.5**
	comp=Z,2.1nm,1.3s,baz=351,slow=5.2,SNR=3.4								
	comp=Z,2.1nm,1.3s								
KEST	**Kesra**		**90.84**	**331**	P		**P**	**19 24 03.4**	**+0.9**
	comp=Z,3.8nm,0.8s,baz=298,slow=6.4,SNR=5.4								
	comp=Z,3.8nm,0.8s								
MSEY	**Mahe Island**		**98.61**	**273**	P		Pdif	19 24 44.0	+5.7
BOAV	**Boa Vista**		**122.05**	**41**	*e*P		**PKPdf**	**19 29 52.2**	**-1.1**
DBIC	**Dimbokro**		**122.47**	**334**	PKP		**PKPdf**	**19 29 53.4**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=305,slow=3.9,SNR=4.0								
TBTG	**Tabatinga, AM**		**123.05**	**54**	*e*P		**PKPdf**	**19 29 54.3**	**-0.8**
MALB	**Monte Alegre**		**128.51**	**36**	*e*P		**PKPdf**	**19 30 04.7**	**-0.9**
NPGB	**Novo Progresso**		**132.74**	**40**	*e*P		**PKPdf**	**19 30 12.9**	**-0.8**
ROSB	**Rosrio**		**132.91**	**24**	*e*P		**PKPdf**	**19 30 13.1**	**-0.9**
LPAZ	**La Paz**		**133.85**	**62**	*e*P		**PKPdf**	**19 30 14.2**	**-2.2**
PDRB	**Porto dos Gac**		**136.14**	**45**	*e*P		**PKPdf**	**19 30 18.6**	**-1.3**
H03N2	**Juan Fernandez**		**138.71**	**89**	T		T	22 05 34.7	
	baz=309,slow=77,SNR=6.0								
H03N1	**Juan Fernandez**		**138.72**	**89**	T		T	22 05 36.3	
	baz=309,slow=77,SNR=5.2								
H03N3	**Juan Fernandez**		**138.72**	**89**	T		T	22 05 32.6	
	baz=309,slow=77,SNR=11								
SALV	**Santo Antonio**		**140.34**	**47**	*e*P		**PKPdf**	**19 30 26.5**	**-1.1**
NBRF	**Rio Formoso -**		**140.46**	**13**	*e*P		**PKPdf**	**19 30 26.5**	**-1.4**
NBAN	**Anadia - AL**		**141.24**	**15**	*e*P		**PKPdf**	**19 30 26.9**	**-2.4**
BDFB	**Brasilia**		**143.53**	**36**	PKhKP		PKPpre	19 30 31.3	
	comp=Z,1.9nm,0.4s,baz=338,slow=2.7,SNR=5.5								
BDFB	**Brasilia**		**143.53**	**36**	*e*P		**PKPdf**	**19 30 32.3**	**-1.1**
AQDB	**Aquidauana**		**144.19**	**51**	*e*P		**PKPab**	**19 30 31.8**	**-0.5**
JANB	**Januaria**		**144.35**	**30**	*e*P		**PKPab**	**19 30 32.2**	**-0.9**
GDU01	**Guandu, BA**		**144.48**	**22**	*e*P		**PKPab**	**19 30 32.4**	**-1.1**
CMC01	**Camacan, BA**		**146.06**	**22**	*e*P		**PKPdf**	**19 30 36.5**	**-1.2**
CPUP	**Villa Florida**		**147.94**	**59**	PKPbc		**PKPbc**	**19 30 44.3**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=320,slow=2.5,SNR=4.6								
PLCA	**Paso Flores**		**148.25**	**94**	PKPbc		**PKPbc**	**19 30 45.0**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=313,slow=5.8,SNR=3.0								
PLCA					pPKPbc		**pPKPdf**	**19 31 16.6**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=281,slow=5.2,SNR=1.3								
RIB01	**Linhares ES**		**149.59**	**26**	*e*P		**PKPdf**	**19 30 41.5**	**-1.9**
PET01	**Itanhaem-SP**		**151.53**	**42**	*e*P		**PKPdf**	**19 30 44.7**	**-1.5**
TROLL	**Troll, Antarti**		**152.12**	**199**	PKPbc		**PKiKP**	**19 30 53.2**	**+0.3**
SNAA	**Sanae**		**153.50**	**197**	PKPbc		**PKPbc**	**19 30 55.5**	**-0.1**
VNA2	**Neumayer--Watz**		**154.95**	**195**	PKPbc		PKPdf	19 30 59.0	+9.2
	baz=218,slow=2.0								

*IDC **28** 19:13:33.7±5.3,23.˚97S×67.˚62W,h0km,mb5.6/1, mbtmp4.7/2, ML3.6/1, Error ellipse: s-maj=160.5km s-min=54.6km az=63.0*
*GUC **28** 19:14:00.1±0.8,22.˚31S×67.˚61W,h183km±7km,ML3.8*
*SCB **28** 19:14:01.2±0.8,22.˚28S×67.˚58W,h174km±9km,ML3.4/4, MW2.6, Error ellipse: s-maj=3.3km s-min=2.6km az=2.0*
ISC 28 19:13:58.7±1.0,22.˚30S±0.˚05×67.˚59W±0.˚05,h182km±9km, n27,σ1§31/42,6C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.26**	**256**	⇑*i*P		**Pn**	**19 14 29.9**	**+0.8**
LVC				*e*S		**Sn**	**19 14 52.5**	**0.0**
LVC	**Limon Verde**	**1.26**	**256**	P		**Pn**	**19 14 30.1**	**+1.0**
PB09	**IPOC Station P**	**1.61**	**288**	⇑*i*P		**Pn**	**19 14 33.4**	**+1.3**
PB09				*e*S		**Sn**	**19 14 58.9**	**+1.0**
PB06	**IPOC Station P**	**1.88**	**257**	*e*P		**Pn**	**19 14 35.5**	**+0.7**
PB06				*e*S		**Sn**	**19 15 03.1**	**+0.3**
PB06				lAML			19 15 06.1	
	comp=E,408nm,0.2s							
PB06	**IPOC Station P**	**1.88**	**257**	P		**Pn**	**19 14 35.5**	**+0.7**
PB06				S		**Sn**	**19 15 00.2**	**-2.5**
PB06				lAML			19 15 05.2	
	comp=E,161nm,0.3s							
YJA	**Yavi**	**1.93**	**87**	P		**Pn**	**19 14 35.7**	**+0.1**
PB15	**IPOC Station P**	**1.96**	**242**	*e*P		**Pn**	**19 14 36.5**	**+0.8**
PB15				*e*S		**Sn**	**19 15 05.0**	**+0.6**
PB15	**IPOC Station P**	**1.96**	**242**	P		**Pn**	**19 14 36.4**	**+0.7**
MOCB	**Mochara**	**2.09**	**60**	P		**Pn**	**19 14 37.5**	**+0.1**
MOCB				lAML			19 15 28.5	
	comp=E,32nm,0.9s							
PB01	**IPOC Station P**	**2.16**	**305**	⇑*i*P		**Pn**	**19 14 38.3**	**+0.5**
PB01				*e*S		**Sn**	**19 15 08.0**	**-0.2**
PB01				lAML			19 15 08.4	
	comp=N,219nm,0.2s							
PB07	**IPOC Station P**	**2.21**	**285**	⇑*i*P		**Pn**	**19 14 39.1**	**+0.7**
PB07				*e*S		**Sn**	**19 15 08.3**	**-0.8**
PB07				lAML			19 15 10.1	
	comp=E,406nm,0.2s							
PB02	**IPOC Station P**	**2.35**	**294**	*i* P		**Pn**	**19 14 40.4**	**+0.4**
PB02				*e*S		**Sn**	**19 15 11.1**	**-0.9**
PB02				lAML			19 15 12.8	
	comp=E,484nm,0.3s							
PB02	**IPOC Station P**	**2.35**	**294**	P		**Pn**	**19 14 40.7**	**+0.7**
PB02				S		**Sn**	**19 15 08.7**	**-3.3**
PB02				lAML			19 15 13.4	
	comp=E,212nm,0.2s							
PB04	**IPOC Station P**	**2.37**	**269**	⇑*i*P		**Pn**	**19 14 40.8**	**+0.5**
PB04				*e*S		**Sn**	**19 15 11.8**	**-0.6**
PB04				lAML			19 15 14.1	
	comp=N,460nm,0.2s							
PB04	**IPOC Station P**	**2.37**	**269**	P		**Pn**	**19 14 41.2**	**+1.0**
PB04				S		**Sn**	**19 15 09.1**	**-3.3**
PB04				lAML			19 15 14.3	
	comp=N,318nm,0.2s							
AOVT	**TarijaAcel**	**2.78**	**75**	P		**Pn**	**19 14 45.2**	**+0.1**
TA01	**Diego Aracena**	**2.97**	**305**	*e*P		**Pn**	**19 14 46.8**	**-0.3**
TA01				*e*S		**Sn**	**19 15 23.0**	**-1.8**
TA01	**Diego Aracena**	**2.97**	**305**	P		**Pn**	**19 14 47.3**	**+0.2**
PB10	**IPOC Station P**	**2.99**	**246**	*e*P		**Pn**	**19 14 47.7**	**+0.4**
PB10				*e*S		**Sn**	**19 15 23.9**	**-1.4**
PB10				lAML			19 15 25.6	
	comp=N,132nm,0.3s							
GO01	**Chusmiza**	**3.02**	**330**	⇓*e*P		**Pn**	**19 14 48.9**	**+0.7**
GO01				lAML			19 15 31.5	
	comp=E,236nm,0.2s							
GO01	**Chusmiza**	**3.02**	**330**	P		**Pn**	**19 14 48.3**	**+0.1**
GO02	**Mina Guanaco**	**3.39**	**212**	⇑*i*P		**Pn**	**19 14 53.4**	**+0.8**
GO02				*e*S		**Sn**	**19 15 33.7**	**-0.9**
GO02	**Mina Guanaco**	**3.39**	**212**	P		**Pn**	**19 14 53.1**	**+0.6**
GO02				S		**Sn**	**19 15 30.7**	**-3.9**
LPAZ	**La Paz**	**6.00**	**355**	Pn		**Pn**	**19 15 27.2**	**+0.8**
	comp=E,0.4nm,0.3s,baz=198,slow=3.7,SNR=6.6							
	comp=E,1.0nm,0.3s							
LPAZ	**La Paz**	**6.00**	**355**	P		**Pn**	**19 15 26.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**76.47**	**70**	P		**P**	**19 25 29.4**	**+0.5**
	comp=E,18nm,0.3s,baz=254,slow=5.6,SNR=2.6							
	comp=E,18nm,0.3s							
MKAR	**Makanchi Array**	**145.54**	**38**	PKPbc		**PKPab**	**19 33 17.1**	**+1.0**
	comp=E,0.3nm,0.6s,baz=308,slow=3.5,SNR=4.6							

*IDC **28** 19:27:06.4±3.4,5.˚95S×154.˚04E,h56km±28km,mb3.6/9, mbtmp3.9/10,ML3.6/1,MS3.2/4,Error ellipse: s-maj=29.9km s-min=19.0km az=74.0*
ISC 28 19:27:05.4±0.9,6.0S±0.1×154.1E±0.2,h48km,n18, σ0§60/14,mb3.8/8,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.62**	**309**	P		**Pn**	**19 27 45.7**	**+0.5**
	12nm,0.3s,baz=218,slow=3.4,SNR=13							
KRVT				S		Sn	19 28 27.1	+11
	337nm,0.5s,baz=114,slow=15,SNR=5.3							
KRVT				LR		LR	19 29 13.2	
	comp=Z,303nm,18.1s,baz=261,slow=49							
	35nm,0.4s							
HNR	**Honiara**	**6.77**	**121**	LR		LR	19 31 33.0	
	comp=Z,113nm,18.2s,baz=120,slow=39							
DZM	**Mont Dzumac**	**20.00**	**144**	P		**P**	**19 31 35.1**	**+0.9**
	4.7nm,0.6s,baz=188,slow=14,SNR=7.9							
	4.7nm,0.6s							
SIJI	**Sorong**	**23.32**	**282**	P		**P**	**19 32 09.6**	**+0.1**
	4.5nm,1.0s,baz=58,slow=5.1,SNR=3.6							
	4.5nm,1.0s							
WRA	**Warramunga Arr**	**23.69**	**232**	P		**P**	**19 32 13.1**	**+0.1**
	0.4nm,0.4s,baz=57,slow=9.5,SNR=4.9							
WRA				PcP		**PcP**	**19 35 56.2**	**-0.2**
	1.0nm,0.5s,baz=55,slow=2.5,SNR=14							
	0.4nm,0.4s							
ASAR	**Alice Springs**	**26.21**	**226**	P		**P**	**19 32 35.9**	**0.0**
	1.2nm,0.8s,baz=56,slow=9.1,SNR=13							
ASAR				PcP		**PcP**	**19 36 01.9**	**0.0**
	1.5nm,0.6s,baz=59,slow=2.6,SNR=22							
	1.2nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**27.29**	**27**	T		T	20 01 09.4	
	baz=208,slow=76,SNR=30							
H11S2	**WAKE ISLAND Hy**	**27.29**	**27**	T		T	20 01 06.5	
	baz=208,slow=76,SNR=40							
H11S1	**WAKE ISLAND Hy**	**27.31**	**27**	T		T	20 01 07.4	
	baz=208,slow=76,SNR=46							
STKA	**Stephens Creek**	**28.31**	**203**	PcP		**PcP**	**19 36 06.5**	**-0.3**
	1.9nm,0.8s,baz=45,slow=4.3,SNR=3.2							
FITZ	**Fitzroy Crossi**	**30.26**	**244**	LR		LR	19 44 52.8	
	comp=Z,40nm,21.4s,baz=171,slow=35							
LEM	**Lemberg**	**46.17**	**266**	LR		LR	19 57 48.9	
	comp=Z,59nm,19.7s,baz=176,slow=40							
PETK	**Petropavlovsk-**	**58.91**	**3**	P		**P**	**19 36 60.0**	**+0.6**
	0.5nm,0.6s,baz=165,slow=6.2,SNR=4.1							
	0.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**59.51**	**295**	P		**P**	**19 37 04.8**	**+0.6**
	1.1nm,0.8s,baz=114,slow=5.1,SNR=9.3							
	1.1nm,0.8s							
SONM	**Songino Array**	**67.97**	**327**	P		**P**	**19 37 59.3**	**-0.3**
	0.6nm,0.6s,baz=150,slow=5.1,SNR=4.4							
	0.6nm,0.6s							
MKAR	**Makanchi Array**	**82.02**	**319**	P		**P**	**19 39 19.5**	**-1.0**
	0.4nm,0.5s,baz=97,slow=7.7,SNR=2.9							
	0.4nm,0.5s							
QSPA	**South Pole Qui**	**84.02**	**180**	P		**P**	**19 39 30.4**	**-0.2**
	1.8nm,0.6s,baz=301,slow=1.1,SNR=22							
	1.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**151.86**	**287**	PKPbc		**PKPbc**	**19 46 55.1**	**-0.9**
	14nm,0.4s,baz=93,slow=2.9,SNR=0.7							

ROM 28 19:27:09.2±0.0,42.˚745N±0.˚002×13.˚176E±0.˚004,h11km, ML1.5/10,Error ellipse: s-maj=0.3km s-min=0.2km az=296.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.10**	**333**	P		**Pg**	**19 27 12.3**	**+0.3**
NRCA				S		Sg	19 27 14.3	+0.2
NRCA				AML		AML		
	comp=N,1022μm,0.4s							
NRCA				AML		AML		
	comp=E,1850μm,0.1s							
MC2	**Monte Cornacci**	**0.17**	**4**	P		**Pg**	**19 27 13.6**	**+0.5**
MC2				S		Sg	19 27 17.1	+1.2
MC2				AML		AML		
	comp=E,515μm,0.7s							
MC2				AML		AML		
	comp=N,515μm,0.2s							
LNSS	**Leonessa**	**0.17**	**215**	P		**Pg**	**19 27 13.7**	**+0.5**
LNSS				S		Sg	19 27 16.9	+1.0
LNSS				AML		AML		
	comp=E,762μm,0.2s							
LNSS				AML		AML		
	comp=N,561μm,0.2s							
LNSS				AML		AML		
	comp=N,562μm,0.2s							
MMO1	**Montemonaco**	**0.19**	**36**	P		**Pg**	**19 27 13.9**	**+0.5**
MMO1				S		Sg	19 27 17.3	+1.0
MMO1				AML		AML		
	comp=E,462μm,0.7s							
MMO1				AML		AML		
	comp=N,394μm,0.5s							
MMO1				AML		AML		
	comp=E,462μm,0.7s							
T1243	**Rocca Santa Ma**	**0.21**	**104**	P		**Pg**	**19 27 14.2

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.63**	**231**	Pn	**Pn**	**19 38 53.1**	**+1.5**
	244nm,0.3s,baz=69,slow=12,SNR=11						
RAO				Sn	**Sn**	**19 39 15.2**	**+3.9**
	375nm,0.3s,baz=78,slow=22,SNR=10						
RAO	**Raoul Island**	**1.63**	**231**		**Pn**	**19 38 53.0**	**+1.4**
NIUE	**Niue**	**10.90**	**35**	Pn	Pn	19 40 49.9	-9.1
URZ	**Urewera**	**11.35**	**207**	Pn	Pn	19 40 57.5	-7.6
	0.5nm,0.3s,baz=119,slow=23,SNR=1.7						
URZ				Sn	**Sn**	**19 43 03.6**	**-7.0**
	1.6nm,0.3s,baz=25,slow=19,SNR=3.4						
MSVF	**Nonsavu**	**11.59**	**333**	Pn	**Pn**	**19 41 04.7**	**-3.8**
PLWZ	**Palliser**	**14.93**	**205**	Pn	**P**	**19 41 57.1**	**-1.9**
DZM	**Mont Dzumac**	**16.62**	**288**	LR	LR	19 47 10.5	
	comp=Z,205nm,20.2s,baz=202,slow=32						
DZM	**Mont Dzumac**	**16.62**	**288**	*e*LR	LR	19 45 57.6	
RAR	**Rarotonga**	**16.70**	**69**	Pn	Pn	19 42 08.2	-8.5
	1.3nm,0.3s,baz=130,slow=17,SNR=1.7						
TBI	**Tubuai**	**24.78**	**85**	*e*LR	LR	19 49 34.0	
	comp=Z,148nm,24.8s						
PAE	**Paea**	**26.85**	**73**	*e*T	T	20 11 39.5	
	1.7nm,0.3s						
PPT2	**Papeete2**	**26.89**	**73**	*e*LR	LR	19 50 16.7	
	comp=Z,130nm,24.0s						
HNR	**Honiara**	**29.00**	**306**	LR	LR	19 53 50.8	
	comp=Z,81nm,19.9s,baz=234,slow=32						
CTA	**Charters Tower**	**34.85**	**275**	LR	LR	19 58 44.7	
	comp=Z,150nm,18.4s,baz=80,slow=35						
STKA	**Stephens Creek**	**36.31**	**254**	P	**P**	**19 45 26.5**	**+0.7**
	1.5nm,0.7s,baz=101,slow=11,SNR=4.1						
STKA				LR	LR	19 58 23.5	
	comp=Z,92nm,19.3s,baz=28,slow=33						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**36.31**	**254**	P	**P**	**19 45 26.5**	**+0.7**
AS31	**Alice Springs**	**44.60**	**264**	P	**P**	**19 46 34.0**	**-0.5**
AS31				IAmb	IAmb	19 46 49.4	
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**44.60**	**264**	P	**P**	**19 46 34.0**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=105,slow=6.6,SNR=21						
ASAR				LR	LR	20 04 53.9	
	comp=Z,61nm,18.2s,baz=128,slow=36						
	2.1nm,0.8s						
ASAR	**Alice Springs**	**44.60**	**264**	P	**P**	**19 46 34.7**	**+0.3**
WR0	**Warramunga Arr**	**45.22**	**269**	P	**P**	**19 46 38.5**	**-0.8**
WR0				IAmb	IAmb	19 47 13.1	
	comp=Z,13nm,1.4s						
WB2	**Warramunga Arr**	**45.39**	**269**	P	**P**	**19 46 40.2**	**-0.5**
WB2				IAmb	IAmb	19 46 40.8	
	comp=Z,8.1nm,1.1s						
WRAB	**Tennant Creek**	**45.39**	**269**	P	**P**	**19 46 39.8**	**-0.9**
WRAB				IAmb	IAmb	19 46 49.0	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**45.40**	**269**	P	**P**	**19 46 40.2**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=110,slow=6.5,SNR=30						
WRA				LR	LR	20 04 27.1	
	comp=Z,68nm,18.1s,baz=20,slow=34						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**45.40**	**269**	P	**P**	**19 46 40.1**	**-0.7**
WB0	**Warramunga Arr**	**45.41**	**269**	P	**P**	**19 46 39.9**	**-1.0**
WB0				IAmb	IAmb	19 47 00.5	
	comp=Z,13nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.73**	**268**	P	**P**	**19 47 44.1**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=72,slow=7.4,SNR=6.1						
FITZ				LR	LR	20 09 49.5	
	comp=Z,48nm,19.0s,baz=128,slow=35						
	comp=Z,1.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.73**	**268**	P	**P**	**19 47 44.1**	**-0.2**
FITZ				IAmb	IAmb	19 47 50.3	
	comp=Z,4.3nm,1.0s						
GUMO	**Guam**	**55.92**	**313**	LR	LR	20 11 03.8	
	comp=Z,43nm,18.1s,baz=174,slow=35						
SIJI	**Sorong**	**56.82**	**289**	P	**P**	**19 48 06.8**	**+0.2**
	comp=Z,9.5nm,0.6s,baz=77,slow=4.3,SNR=12						
	comp=Z,9.5nm,0.6s						
CASY	**Casey**	**57.68**	**207**	P	**P**	**19 48 12.5**	**+0.6**
BATI	**Baumata**	**58.73**	**275**	LR	LR	20 12 32.9	
	comp=Z,153nm,19.7s,baz=180,slow=35						
QSPA	**South Pole Qui**	**61.88**	**180**	P	**P**	**19 48 41.1**	**+0.2**
LEM	**Lembang**	**74.40**	**271**	LR	LR	20 22 54.5	
	comp=Z,34nm,18.0s,baz=214,slow=36						
MAW	**Mawson**	**74.81**	**200**	P	**P**	**19 50 02.1**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=0.2,slow=1.5,SNR=3.6						
	comp=Z,1.3nm,0.8s						
MJAR	**Matsushiro Arr**	**77.24**	**324**	P	**P**	**19 50 15.7**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=161,slow=6.3,SNR=6.2						
	comp=Z,2.7nm,0.8s						
TROLL	**Troll, Antarti**	**80.04**	**180**	P	**P**	**19 50 31.9**	**+0.9**
SNAA	**Sanae**	**80.28**	**178**	P	**P**	**19 50 32.4**	**+0.2**
VNA3	**Neumayer Olymp**	**80.38**	**176**	P	**P**	**19 50 32.5**	**-0.1**
VNA2	**Neumayer--Watz**	**80.83**	**176**	P	**P**	**19 50 35.4**	**+0.4**
	baz=167,slow=4.0						
VNA1	**Neumayer--Stat**	**81.05**	**176**	P	**P**	**19 50 36.5**	**+0.4**
PLCA	**Paso Flores**	**83.01**	**133**	P	**P**	**19 50 48.0**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=226,slow=4.3,SNR=5.2						
	comp=Z,2.0nm,0.8s						
PETK	**Petropavlovsk-**	**84.05**	**345**	P	**P**	**19 50 53.0**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=161,slow=9.4,SNR=8.2						
	comp=Z,2.8nm,0.8s						
NVAR	**Mina Array Bea**	**85.74**	**42**	P	**P**	**19 51 01.1**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=216,slow=8.4,SNR=11						
	comp=Z,2.0nm,0.9s						
KLR	**Kul'dur**	**89.84**	**329**	P	**P**	**19 51 20.9**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=297,slow=4.1,SNR=4.3						
	comp=Z,1.8nm,0.9s						
TXAR	**Lajitas Array**	**90.09**	**57**	P	**P**	**19 51 22.3**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=212,slow=6.8,SNR=4.5						
	comp=Z,0.7nm,1.0s						
PDAR	**Pinedale Array**	**93.64**	**43**	P	**P**	**19 51 36.8**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=183,slow=3.0,SNR=4.4						
	comp=Z,0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.95**	**289**	P	**P**	**19 51 41.5**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=167,slow=3.0,SNR=4.4						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**95.52**	**12**	P	**P**	**19 51 44.9**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=210,slow=6.4,SNR=5.2						
	comp=Z,0.4nm,0.7s						
YAK	**Yakutsk**	**99.75**	**337**	LR	LR	20 37 30.8	
	comp=Z,34nm,18.3s,baz=257,slow=36						
MKAR	**Makanchi Array**	**117.38**	**311**	PKP	**PKPdf**	**19 57 06.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=135,slow=1.1,SNR=6.2						
KURBB	**Kurchatov Arra**	**120.53**	**314**	PKP	**PKPdf**	**19 57 12.0**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=101,slow=2.0,SNR=16						
BVAR	**Borovoye Array**	**125.75**	**317**	PKP	**PKPdf**	**19 57 22.4**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=144,slow=1.3,SNR=4.4						
AKTO	**Aktyubinsk**	**133.58**	**314**	PKhKP	**PKPdf**	**19 57 37.6**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=198,slow=5.1,SNR=4.8						
FINES	**FINESS Array B**	**143.53**	**342**	PKhKP	PKPpre	19 57 52.0	
	comp=Z,2.0nm,0.7s,baz=44,slow=4.5,SNR=10						
KBZ	**Khabaz**	**144.94**	**307**	PKPbc	**PKPdf**	**19 57 58.8**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=322,slow=2.9,SNR=3.7						
VSU	**Vasula**	**145.74**	**338**	*e*P	**PKPab**	**19 58 00.5**	**+0.2**
MTSE	**Matsula**	**146.43**	**341**	*e*P	**PKPab**	**19 58 02.9**	**0.0**
NB2	**NORSAR Subarra**	**146.78**	**353**	PKP	**PKPbc**	**19 58 02.7**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**146.78**	**353**	PKPbc	**PKPbc**	**19 58 03.4**	**+0.4**
	comp=Z,6.1nm,0.9s,baz=14,slow=4.4,SNR=20						
IIGN	**Ignalina**	**148.33**	**335**	*e*P	**PKiKP**	**19 58 09.1**	**+0.1**
VSVD	**Vaisvydziai**	**148.64**	**338**	*e*P	**PKiKP**	**19 58 09.1**	**-0.5**
PABE	**Paberze**	**149.01**	**337**	*e*P	**PKiKP**	**19 58 10.1**	**-0.3**
AKASG	**Malin Array Be**	**150.31**	**326**	PKPbc	**PKPbc**	**19 58 12.6**	**+0.2**
	comp=Z,6.4nm,0.8s,baz=46,slow=3.4,SNR=25						
BRTR	**Keskin Array B**	**152.64**	**303**	PKPbc	**PKPbc**	**19 58 18.1**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=151,slow=3.9,SNR=5.4						
DPC	**Dobruska-Polom**	**155.85**	**340**	*e*PKP	**PKPab**	**19 58 43.5**	**+1.3**
CLL	**Collm**	**155.86**	**345**	*e*(PKPab)	**PKPab**	**19 58 43.0**	**+0.9**
KRLC	**Kraliky**	**155.95**	**339**	*e*PKP	**PKPab**	**19 58 43.5**	**+0.9**
KRLC				*ex*	x	19 58 57.0	
KHC	**Kasperske Hory**	**157.73**	**342**	*e*PKP	**PKPab**	**19 58 51.4**	**+1.1**
KHC				*ex*	x	19 59 04.5	
GERES	**GERESS Array B**	**157.96**	**342**	PKPab	**PKPab**	**19 58 52.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=347,slow=4.0,SNR=3.7						

*IDC **28** 20:02:31.2±4.5, 12.°04S×166.°74E, h231km±42km, mb3.4/7, mbtmp3.9/8, MS3.3/1, Error ellipse: s-maj=35.8km s-min=23.2km az=81.0*

ISC 28 20:02:28.2±1.0, 11.°9S±0.°1×166.°7E±0.°3, h200km, n11, σ1°14/11, mb3.5/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.12**	**181**	P	**Pn**	**20 04 50.6**	**+1.5**
	3.1nm,0.3s,baz=39,slow=6.8,SNR=12						
ASAR	**Alice Springs**	**33.24**	**245**	P	**P**	**20 08 45.3**	**-1.4**
	0.1nm,0.6s,baz=66,slow=9.9,SNR=1.6						
ASAR				PcP	**PcP**	**20 11 24.8**	**+0.2**
	2.0nm,1.3s,baz=76,slow=2.5,SNR=5.0						
	0.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.05**	**256**	LR	LR	20 25 26.6	
	comp=Z,38nm,18.6s,baz=222,slow=34						
VNDA	**Vanda**	**65.67**	**181**	P	**P**	**20 12 49.1**	**-1.5**
	0.8nm,0.8s,baz=96,slow=6.9,SNR=5.1						
	0.8nm,0.8s						
KLR	**Kul'dur**	**68.20**	**336**	P	**P**	**20 13 07.6**	**+0.7**
	1.8nm,0.7s,baz=158,slow=5.4,SNR=5.0						
	1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.29**	**293**	P	**P**	**20 13 39.5**	**+1.3**
	0.6nm,0.6s,baz=116,slow=4.3,SNR=4.6						
	0.6nm,0.6s						
SONM	**Songino Array**	**79.89**	**324**	P	**P**	**20 14 14.9**	**+0.1**
	0.4nm,0.4s,baz=140,slow=6.0,SNR=5.1						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**84.03**	**18**	P	**P**	**20 14 35.4**	**-0.5**
	0.9nm,0.6s,baz=244,slow=5.3,SNR=9.2						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**94.76**	**317**	P	**P**	**20 15 27.4**	**+0.4**
	1.3nm,0.7s,baz=85,slow=7.1,SNR=9.6						
	1.3nm,0.7s						
ARCES	**ARCESS Array B**	**117.38**	**346**	PKP	**PKPdf**	**20 20 48.4**	**-1.0**
	3.3nm,0.9s,baz=66,slow=2.2,SNR=6.4						
FINES	**FINESS Array B**	**122.89**	**339**	PKP	**PKPdf**	**20 20 59.5**	**-0.6**
	1.0nm,0.9s,baz=56,slow=5.2,SNR=5.0						

*IDC **28** 20:04:48.2±3.9, 46.°07N×96.°74E, h0km, mb4.0/3, mbtmp3.8/7, ML3.3/3, MS3.4/3, Error ellipse: s-maj=90.8km s-min=23.2km az=2.0*
*ASRS **28** 20:04:54.6±0.5, 47.°N±3.°×97.°E±.°, h5km, MLh4.9/6, Error ellipse: s-maj=6.1km s-min=3.7km az=173.1, confirmed*
*NNC **28** 20:04:57.9±4.0, 45.°78N×96.°11E, h0km, mb3.8, Error ellipse: s-maj=111.7km s-min=33.6km az=17.0*

ISC 28 20:04:53.8±0.9, 46.°52N±0.°06×96.°71E±0.°03, h10km, n33, σ2°40/43, mb4.1/3, 2C-4D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERNS	**Erzin**	**3.88**	**345**	Pn	Pb	20 05 57.4	-5.1
ERNS				Pg	**Pg**	**20 06 06.5**	**-1.7**
ERNS				Sg	Sg	20 07 04.0	+5.5
KNGR	**Kungurtug, Tuv**	**4.12**	**7**	Pn	**Pn**	**20 05 59.9**	**+3.0**
KNGR				Pg	**Pg**	**20 06 11.7**	**-1.1**
KNGR				Sg	Sg	20 07 11.6	+5.5
KZLR	**Kyzyl**	**5.39**	**345**	Pn	Pn	20 06 18.3	+4.0
KZLR				Pg	**Pg**	**20 06 34.5**	**-2.6**
KZLR				Sg	**Sg**	**20 07 50.4**	**+3.5**
ZAK	**Zakamensk**	**5.83**	**46**	Pn	**Pn**	**20 06 21.4**	**+1.0**
ZAK				Pg	**Pb**	**20 06 36.4**	**+0.8**
ZAK				Sg	**Sg**	**20 07 57.7**	**-3.3**
MOY	**Mondy**	**5.87**	**27**	Pn	**Pn**	**20 06 23.1**	**+2.2**
MOY				Pg	20 06 40.0	-6.1	
MOY				Sg	**Sg**	**20 08 02.7**	**+0.7**
SLNR	**Muhor-Tarhata,**	**6.40**	**304**	Pn	**Pn**	**20 06 32.1**	**+3.7**
SLNR				Pg	**Pg**	**20 06 55.5**	**-0.9**
SLNR				Sg	**Sg**	**20 08 20.4**	**+1.1**
ARDR	**Aradan**	**6.43**	**342**	Pn	**Pn**	**20 06 31.8**	**+3.3**
ARDR				Pg	**Pg**	**20 06 53.5**	**-3.3**
ARDR				Sg	**Sg**	**20 08 18.6**	**-1.4**
CUR	**Chagan-Uzun**	**6.62**	**306**	Pn	**Pn**	**20 06 32.1**	**+0.8**
CUR				Pg	20 06 55.7	-4.9	
CUR				Sg	**Sg**	**20 08 26.2**	**-0.1**
SONM	**Songino Array**	**6.73**	**75**	Pn	Pn	20 06 28.4	-4.4
	1.0nm,0.3s,baz=254,slow=14,SNR=22						
SONM				Lg	Lg	20 08 16.2	
	13nm,0.3s,baz=256,slow=31,SNR=12						
	2.3nm,0.4s						
DGZ	**Jazzator, Alta**	**6.98**	**300**	Pg	**Pg**	**20 07 05.3**	**-2.0**
DGZ				Sg	**Sg**	**20 08 37.0**	**-0.6**
ULGR	**Ulagan, Altay**	**7.11**	**308**	Pg	**Pg**	**20 07 08.9**	**-0.9**
ULGR				Sg	**Sg**	**20 08 45.5**	**+3.8**
AKAR	**Aktash**	**7.14**	**305**	Pg	**Pg**	**20 07 06.2**	**-4.3**
AKAR				Sg	**Sg**	**20 08 43.2**	**+0.3**
DJOS	**Djoyskaya Sosn**	**7.16**	**333**	Sg	**Sg**	**20 08 45.5**	**+2.1**
ULN	**Ulaanbaatar**	**7.17**	**75**	Pn	**Pn**	**20 06 37.3**	**-1.7**
ULN				Pg	**Pb**	**20 06 58.9**	**+0.4**
ULN				Sg	**Sb**	**20 08 31.7**	**+7.5**
CHBI	**Chibit, Altay**	**7.20**	**305**	Pg	Pg	20 07 06.0	-5.7
CHBI				Sg	**Sg**	**20 08 46.1**	**+1.2**
CERR	**Cheremushki**	**7.21**	**334**	Sg	**Sg**	**20 08 45.5**	**+0.6**
DJO	**Djoy, Khakassi**	**7.21**	**332**	Sg	**Sg**	**20 08 43.7**	**-1.3**
IRK	**Irkutsk**	**7.55**	**38**	Sg	**Sg**	**20 08 52.6**	**-3.6**
ARTR	**Artybash**	**8.12**	**314**	Sg	**Sg**	**20 09 15.1**	**+0.8**
TASR	**Tashtagol**	**8.47**	**321**	Sg	**Sg**	**20 09 24.8**	**-0.7**
MK31	**Makanchi Array**	**9.92**	**277**	Pn	**Pn**	**20 07 18.6**	**+2.2**
	0.6nm,0.6s,baz=92,slow=15,SNR=7.1						
MK31				⇑Pg		20 07 54.3	
	1.2nm,0.6s,baz=94,slow=18,SNR=5.0						
MK31				⇓Lg	Lg	20 10 05.5	
	6.7nm,0.7s,baz=89,slow=29,SNR=5.2						
MKAR	**Makanchi Array**	**9.92**	**277**	Pn	**Pn**	**20 07 14.1**	**-2.4**
	0.1nm,0.3s,baz=84,slow=16,SNR=3.6						
MKAR				Lg	Lg	20 10 02.8	
	0.4nm,0.3s,baz=93,slow=26,SNR=3.7						
	0.4nm,0.6s						
MAKZ	**Makanchi**	**10.13**	**277**	⇓Pn	**Pn**	**20 07 19.6**	**+0.2**
	3.7nm,1.2s						
MAKZ				⇓Pg		20 07 55.2	
	2.8nm,1.0s						
MAKZ				⇑Lg	Lg	20 10 10.4	
	24nm,1.5s						
ZALV	**Zalesovo Beam**	**10.63**	**319**	Lg	Lg	20 10 33.5	
	0.1nm,0.3s,baz=129,slow=24,SNR=5.4						
KURK	**Kurchatov**	**12.68**	**296**	⇓Lg	Lg	20 11 38.5	
	24nm,1.0s						
KURBB	**Kurchatov Arra**	**12.71**	**295**	Pn	**Pn**	**20 07 52.7**	**-1.8**
	1.0nm,0.3s,baz=100,slow=14,SNR=2.5						
KURBB				Lg	Lg	20 11 36.6	
	baz=101,slow=31,SNR=6.1						
BVAR	**Borovoye Array**	**18.14**	**301**	P	**Pn**	**20 09 05.7**	**+0.1**
	0.3nm,0.3s,baz=96,slow=12,SNR=13						
	2.6nm,0.7s						
ARCES	**ARCESS Array B**	**40.94**	**329**	P	**P**	**20 12 35.5**	**-0.5**
	8.1nm,1.0s,baz=75,slow=10,SNR=2.4						
	8.1nm,1.0s						
FINES	**FINESS Array B**	**41.89**	**317**	P	**P**	**20 12 43.1**	**-0.7**
	1.9nm,0.8s,baz=44,slow=8.2,SNR=2.8						
	1.9nm,0.8s						
NB2	**NORSAR Subarra**	**48.83**	**320**	P	**P**	**20 13 36.7**	**-2.3**
	comp=Z,3.0nm,0.5s,baz=66,slow=7.9						
NOA	**NORSAR Array B**	**48.83**	**320**	P	**P**	**20 13 37.3**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=74,slow=8.3,SNR=4.2						
	comp=Z,0.4nm,0.5s						
DAVOX	**Davos/Dischmat**	**56.52**	**305**	LR	LR	20 38 07.3	
	comp=Z,28nm,18.9s,baz=292,slow=35						
ILAR	**Eielson Array**	**58.54**	**27**	LR	LR	20 43 39.0	
	comp=Z,44nm,20.0s,baz=82,slow=40						

IDC 28 20:09:53.8±2.0, 7.°29S×128.°66E, h0km, mb3.5/1, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=114.1km s-min=31.4km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.73**	**157**	Pn	Pn	20 13 09.7	-0.2
	0.6nm,0.3s,baz=335,slow=14,SNR=17						
WRA				Sn	Sn	20 15 31.9	-11
	0.5nm,0.3s,baz=331,slow=22,SNR=9.1						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**17.04**	**163**	P	Pn	20 13 54.0	+0.2
	0.1nm,0.3s,baz=348,slow=14,SNR=13						
ASAR				S	Sn	20 16 53.7	-10
	0.2nm,0.6s,baz=344,slow=26,SNR=2.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**67.75**	**328**	P	P	20 20 53.3	0.0
	0.2nm,0.4s,baz=122,slow=8.3,SNR=7.8						
	0.2nm,0.4s						

PRU 28 20:20:32.4±0.0, 49.°81N×18.°50E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**277**	*e*PG	Pg	20 20 37.1	+0.3
OKC				*e*SG	Sg	20 20 40.0	+0.2
	comp=Z,9.4nm,0.3s						
MORC	**Moravsky Berou**	**0.62**	**267**	*e*PG	Pg	20 20 44.7	+0.4
MORC				*e*SG	Sg	20 20 52.0	-0.3
KRLC	**Kraliky**	**1.14**	**284**	*e*SG	Sg	20 21 08.6	-0.4
	comp=Z,3.1nm,0.7s						
VRAC	**Vranov**	**1.34**	**249**	*e*PG	Pg	20 20 57.6	-0.4
VRAC				*e*SG	Sg	20 21 15.1	-0.3
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*PG	Pn	20 21 00.5	-0.2
DPC				*e*SG	Sg	20 21 19.7	-1.0
KRUC	**Moravsky**	**1.56**	**242**	*e*PG	Pn	20 21 01.2	-0.2
KRUC				*e*SG	Sn	20 21 21.7	-0.7
OSTC	**Ostas**	**1.65**	**298**	*e*PG	Pn	20 21 02.8	+0.2
OSTC				*e*SG	Sn	20 21 24.7	+0.2

DDA 28 20:21:05.1±0.0, 39.°11N×29.°06E, h7km±3km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.28**	**257**	P	Pg	20 21 11.4	+0.8
DEMI				*i* AML	AML	20 21 15.0	
	comp=E,120nm,0.2s						
DEMI				S	Sg	20 21 15.4	+1.1
DEMI				*i* AML	AML	20 21 16.0	
	comp=N,71nm,0.1s						
GDZ	**Gediz**	**0.33**	**93**	P	Pg	20 21 11.6	0.0
GDZ				*i* AML	AML	20 21 16.0	
	comp=E,66nm,0.2s						
GDZ				S	Sg	20 21 16.2	+0.4
USAK	**Uak-Merkez**	**0.40**	**185**	P	Pb	20 21 14.1	-0.3
USAK				S	Sb	20 21 19.8	-1.0
USAK				*i* AML	AML	20 21 20.0	
	comp=E,47nm,0.3s						
USAK				*i* AML	AML	20 21 20.0	
	comp=N,28nm,0.3s						
DURS	**Dursunbey**	**0.67**	**317**	P	Pg	20 21 18.4	+0.4
DURS				S	Sg	20 21 26.6	-0.3
MANT	**Manisa**	**0.73**	**213**	P	Pb	20 21 19.8	-0.5
MANT				S	Sg	20 21 29.5	+0.7
ANDZ	**Kutahya, Merke**	**0.76**	**58**	P	Pn	20 21 22.3	-0.1
ANDZ				S	Sg	20 21 30.2	+0.5
PASA	**Karahalli, USA**	**0.83**	**156**	P	Pb	20 21 22.1	+0.2
PASA				S	Sb	20 21 33.3	0.0

*IDC **28** 20:21:50.6±0.9, 22.°70S×173.°21E, h0km, mb4.2/8, mbtmp4.2/9, ML3.6/1, MS3.5/12, Error ellipse: s-maj=33.5km s-min=24.9km az=149.0*
*NEIC **28** 20:21:53.6±1.1, 22.°91S±0.°07×173.°2E±0.°1, h10km±2km, mb4.5/4, Error ellipse: s-maj=16.0km s-min=12.4km az=92.0*

ISC 28 20:21:52.4±0.6, 22.°9S±0.°1×173.°13E±0.°08, h10km, n51, σ1°78/41, mb4.2/8, MS3.6/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.93**	**285**	Pn	**Pn**	**20 23 07.8**	**+1.2**
PINNC	**Pines Island,**	**5.26**	**272**		**Pn**	**20 23 12.9**	**+1.9**
LIFNC	**LIFOU**	**5.86**	**290**	Pn	**Pn**	**20 23 20.1**	**+0.8**
DZM	**Mont Dzumac**	**6.24**	**276**	Pn	**Pn**	**20 23 25.6**	**+1.0**
	1.2nm,0.3s,baz=125,slow=11,SNR=26						
DZM				Sn	**Sn**	**20 24 33.8**	**-2.4**
	1.7nm,0.3s,baz=95,slow=16,SNR=2.4						
	9.9nm,0.7s						
RTV	**Rentapao**	**6.71**	**318**	P	Pn	20 23 39.1	+8.0
MSVF	**Nonsavu**	**6.89**	**43**		**Pn**	**20 23 34.6**	**+1.0**
DVP	**Devils Point**	**6.91**	**317**	P	Pn	20 23 41.6	+7.8
URZ	**Urewera**	**15.71**	**168**	LR	LR	20 30 20.0	
	comp=Z,53nm,20.1s,baz=31,slow=32						
HNR	**Honiara**	**18.39**	**314**	LR	LR	20 32 10.2	
	comp=Z,108nm,21.1s,baz=161,slow=34						
TUWZ	**Tuamarina**	**18.51**	**178**	P	**P**	**20 26 09.7**	**+0.9**
MSWZ	**Moikau Station**	**18.57**	**175**	P	**P**	**20 26 09.0**	**-0.6**
LTZ	**Lake Taylor**	**19.86**	**182**	P	**P**	**20 26 24.3**	**+0.6**
RPZ	**Rata Peaks**	**20.86**	**184**	P	**P**	**20 26 36.1**	**+1.6**
	11nm,0.8s,baz=308,slow=5.0,SNR=4.3						
RPZ				LR	LR	20 34 04.8	
	comp=Z,233nm,18.5s,baz=320,slow=35						
	11nm,0.8s						
RPZ	**Rata Peaks**	**20.86**	**184**	P	**P**	**20 26 34.8**	**+0.3**
RPZ				IAmb	IAmb	20 26 47.8	
	comp=Z,29nm,0.9s						
AS31	**Alice Springs**	**35.97**	**261**	P	**P**	**20 28 54.9**	**+1.2**
AS31				IAmb	IAmb	20 29 05.5	
	comp=Z,4.7nm,1.0s						
ASAR	**Alice Springs**	**35.97**	**261**

comp=Z,1.2nm,0.8s,baz=50,slow=2.3,SNR=11
MOA Molln 149.90 331 *e*P **PKPdf 20 41 41.4 +3.3**
comp=Z,2.3nm,1.2s
ABTA Abfaltersbach 151.51 331 *e*P **PKPdf 20 41 44.3 +3.6**
comp=Z,1.2nm,0.6s
FETA Feichten 152.05 334 *e*P **PKPbc 20 41 46.4 -1.8**
comp=Z,3.8nm,1.2s

IDC ***28*** *20:22:13.6±0.8, 7°.41S × 125°.41E, h405km±10km, mb3.5/12, mbtmp4.5/18, Error ellipse: s-maj=16.6km s-min=10.0km az=72.0*
NEIC ***28*** *20:22:13.4±2.2, 7°.45S±0°.09 × 125°.43E±0°.10, h404km±4km, mb4.3/20, Error ellipse: s-maj=14.2km s-min=12.0km az=60.0*
DJA ***28*** *20:22:13.7±0.1, 8°S±2° × 12°5E±°, h408km±3km, M4.3/47, mB4.9/20, mb4.5/47, MLv4.7/19, Mw(mB)4.1/20*
ISC 28 20:22:13.0±0.4, **7°.48S**±0°.04 × **125°.42E**±0°.05, **h400**km, **n130,** σ**1**§**43**/135, **mb4.0**/22, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.22**	**212**	P	**Pn**	**20 23 20.1**	**+2.1**
	820nm,0.4s,baz=30,slow=0.9,SNR=310						
BATI				S	**S**	**20 24 12.8**	**+2.1**
	359nm,0.6s,baz=145,slow=4.1,SNR=5.5						
BATI	**Baumata**	**3.22**	**212**	P	**Pn**	**20 23 20.0**	**+1.9**
MMRI	**Maumere**	**3.35**	**250**	Pn	**Pn**	**20 23 19.9**	**+0.6**
MMRI	**Maumere**	**3.35**	**250**	P	**Pn**	**20 23 19.8**	**+0.6**
BBSI	**Bau Bau**	**3.45**	**305**	P	**Pn**	**20 23 22.7**	**+2.6**
EDFI	**Ende, Flores**	**3.90**	**251**	P	**Pn**	**20 23 24.0**	**-0.3**
NLAI	**Namlea**	**4.53**	**22**	P	**Pn**	**20 23 33.2**	**+2.9**
BSSI	**Bau Bau, Buton**	**5.07**	**285**	P	**Pn**	**20 23 37.4**	**+1.6**
	0.6nm2μm171nm,0.7s						
BNDI	**Bandanaira**	**5.34**	**57**	P	**Pn**	**20 23 40.6**	**+1.9**
	1.4nm330nm,0.7s						
BNDI	**Bandanaira**	**5.34**	**57**	P	**Pn**	**20 23 40.6**	**+1.9**
SANI	**Sanana**	**5.42**	**6**	P	**Pn**	**20 23 40.9**	**+1.4**
BKSI	**Bulukumba**	**5.68**	**292**	P	**Pn**	**20 23 43.6**	**+1.4**
	1.0nm2μm275nm,0.8s						
SAUI	**Saumlaki**	**5.85**	**95**	Pn	**Pn**	**20 23 44.3**	**+0.2**
SAUI	**Saumlaki**	**5.85**	**95**	P	**Pn**	**20 23 45.4**	**+1.3**
	7.6nm28μm2μm,0.7s						
SAUI	**Saumlaki**	**5.85**	**95**	P	**Pn**	**20 23 45.7**	**+1.6**
KAPI	**Kappang**	**6.14**	**293**	P	**Pn**	**20 23 48.9**	**+1.7**
	98nm,0.8s,baz=134,slow=6.1,SNR=49						
KAPI	**Kappang**	**6.14**	**293**	P	**Pn**	**20 23 49.4**	**+2.2**
WBSI	**Waikabubak, Su**	**6.33**	**250**	P	**Pn**	**20 23 48.3**	**-1.0**
	1.4nm2μm47nm,0.5s						
SPSI	**Sidrap Palu**	**6.61**	**302**	P	**P**	**20 23 53.1**	**+0.1**
	0.2nm66nm,0.8s						
LUWI	**Luwuk**	**6.92**	**337**	Pn	**P**	**20 23 57.2**	**+0.8**
LUWI	**Luwuk**	**6.92**	**337**	P	**P**	**20 23 57.4**	**+1.0**
	0.5nm2μm185nm,1.1s						
LUWI	**Luwuk**	**6.92**	**337**	P	**P**	**20 23 57.5**	**+1.0**
TTSI	**Tana Toraja**	**7.10**	**308**	P	**P**	**20 23 59.7**	**+1.2**
	0.2nm642nm68nm,1.0s						
LBMI	**Labuha**	**7.11**	**17**	P	**P**	**20 23 59.5**	**+1.0**
	0.1nm24nm,1.0s						
APSI	**Ampana**	**7.53**	**330**	P	**P**	**20 24 04.2**	**+1.0**
	0.2nm51nm,0.9s						
PLAI	**Plampang**	**7.68**	**259**	P	**Pn**	**20 24 02.9**	**-1.5**
	1.0nm2μm161nm,0.8s						
PLAI	**Plampang**	**7.68**	**259**	P	**Pn**	**20 24 03.5**	**-0.9**
MTN	**Manton Dam**	**7.75**	**134**		**P**	**20 24 06.4**	**+0.8**
MTN	**Manton Dam**	**7.75**	**134**	P	**P**	**20 24 06.8**	**+1.1**
KMSI	**Cibinong**	**8.13**	**350**	P	**P**	**20 24 11.5**	**+1.6**
	4μm397nm,0.6s						
FAKI	**Fak Fak**	**8.17**	**57**		**Pn**	**20 24 08.3**	**-1.8**
FAKI	**Fak Fak**	**8.17**	**57**	P	**Pn**	**20 24 08.0**	**-2.1**
	2μm207nm,0.7s						
FAKI	**Fak Fak**	**8.17**	**57**	P	**P**	**20 24 11.2**	**+0.8**
GTOI	**Gorontalo**	**8.41**	**343**	P	**P**	**20 24 16.5**	**+3.5**
	2μm200nm,0.8s						
TNTI	**Ternate**	**8.42**	**13**		**Pn**	**20 24 12.3**	**-0.6**
TNTI	**Ternate**	**8.42**	**13**	P	**P**	**20 24 13.9**	**+0.7**
	45nm,0.8s						
TWSI	**Taliwang, Sumb**	**8.54**	**261**	P	**Pn**	**20 24 12.1**	**-2.1**
	25nm,0.6s						
MRSI	**Marisa**	**8.63**	**336**	P	**P**	**20 24 16.9**	**+1.4**
	3μm308nm,0.9s						
KDU	**Kakadu**	**8.66**	**127**	P	**P**	**20 24 16.1**	**+0.3**
KNRA	**Kununurra**	**8.78**	**158**		**P**	**20 24 18.2**	**+1.1**
KNRA	**Kununurra**	**8.78**	**158**	P	**P**	**20 24 18.3**	**+1.2**
SIJI	**Sorong**	**8.78**	**42**	P	**Pn**	**20 24 16.6**	**-0.4**
	9.9nm,0.3s,baz=204,slow=22,SNR=22						
SIJI				S	**S**	**20 25 53.4**	**-5.5**
	13nm,0.3s,baz=36,slow=18,SNR=12						
SWI	**Sorong**	**8.78**	**42**	P	**Pn**	**20 24 15.9**	**-1.1**
	22nm,0.6s						
MPSI	**Mapaga**	**9.52**	**324**	P	**Pn**	**20 24 28.1**	**+2.6**
	42nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.56**	**179**	P	**Pn**	**20 24 38.0**	**+0.5**
	15nm,0.5s,baz=17,slow=9.9,SNR=134						
FITZ				S	**S**	**20 26 33.8**	**-1.6**
	9.7nm,0.9s,baz=338,slow=21,SNR=6.0						
FITZ	**Fitzroy Crossi**	**10.56**	**179**	P	**Pn**	**20 24 38.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**10.56**	**179**	P	**Pn**	**20 24 38.0**	**+0.5**
JAGI	**Jajag, Banyuwa**	**11.20**	**264**	P	**P**	**20 24 42.5**	**-1.5**
JAGI	**Jajag, Banyuwa**	**11.20**	**264**	P	**P**	**20 24 42.4**	**-1.5**
	50nm,0.8s						
JAGI	**Jajag, Banyuwa**	**11.20**	**264**	P	**Pn**	**20 24 45.3**	**+0.3**
BBKI	**Banjar Baru**	**11.26**	**290**	P	**Pn**	**20 24 47.4**	**+1.7**
	36nm,0.7s						
BLJI	**Banyuglugur**	**11.72**	**268**	P	**Pn**	**20 24 51.0**	**0.0**
	2μm177nm,0.8s						
GMJI	**Gumukmas**	**11.88**	**265**	P	**P**	**20 24 51.0**	**-0.5**
	23nm,1.0s						
MTKI	**Muara Teweh, K**	**12.33**	**301**	P	**Pn**	**20 24 58.2**	**0.0**
	55nm,0.9s						
BAKI	**Biak**	**12.35**	**60**	P	**Pn**	**20 24 59.4**	**+1.0**
	1μm29nm,0.6s						
PCJI	**Pacitan**	**14.12**	**266**	P	**P**	**20 25 15.1**	**-1.0**
	51nm,0.9s						
SMPI	**Sarmi**	**14.32**	**68**	P	**P**	**20 25 20.2**	**+1.9**
	20nm,0.8s						
MYLDM	**Lahad Datu**	**14.34**	**331**		**P**	**20 25 18.7**	**+0.2**
PBKI	**Pangkalan Bun**	**14.49**	**288**	P	**P**	**20 25 19.9**	**-0.1**
	15μm409nm,0.6s						
MBWA	**Marble Bar**	**14.67**	**201**	P	**P**	**20 25 21.3**	**-0.6**
UGM	**Wanagama**	**14.77**	**267**	P	**P**	**20 25 24.5**	**+1.4**
WB0	**Warramunga Arr**	**15.00**	**145**	P	**P**	**20 25 25.9**	**+0.4**
WRAB	**Tennant Creek**	**15.11**	**146**	P	**P**	**20 25 25.8**	**-1.0**
WRAB	**Tennant Creek**	**15.11**	**146**	P	**P**	**20 25 27.5**	**+0.7**
WRA	**Warramunga Arr**	**15.11**	**146**	P	**P**	**20 25 27.1**	**+0.3**
	15nm,0.3s,baz=322,slow=11,SNR=391						
WRA				S	**S**	**20 28 01.7**	**-5.5**
	4.4nm,0.9s,baz=314,slow=18,SNR=4.7						
WRA	**Warramunga Arr**	**15.11**	**146**	P	**P**	**20 25 25.9**	**-0.9**
WB2	**Warramunga Arr**	**15.12**	**146**	P	**P**	**20 25 27.1**	**+0.3**
WR0	**Warramunga Arr**	**15.24**	**145**	P	**P**	**20 25 28.5**	**+0.4**
STKI	**Sintang**	**15.79**	**298**	P	**P**	**20 25 35.0**	**+0.8**
	7.0nm,0.7s						
KKM	**Kota Kinabalu**	**16.27**	**325**		**P**	**20 25 38.0**	**-1.4**
KKM				IAmb	IAmb	20 25 47.5	
	comp=Z,22nm,0.9s						
SBUM	**Sibu**	**16.45**	**306**	P	**P**	**20 25 39.9**	**-1.3**
SBUM				IAmb	IAmb	20 25 44.4	
	comp=Z,12nm,0.7s						
LEM	**Lembang**	**17.67**	**271**	P	**P**	**20 25 52.7**	**-1.6**
	comp=Z,12nm,0.6s,baz=140,slow=24,SNR=5.1						
WRKA	**Warakurna**	**17.68**	**171**	P	**P**	**20 25 54.9**	**+0.7**
AS31	**Alice Springs**	**18.04**	**154**	P	**P**	**20 25 59.1**	**+1.1**
AS31				IAmb	IAmb	20 26 01.8	
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	**18.04**	**154**	P	**P**	**20 25 59.0**	**+0.9**
	comp=Z,23nm,0.5s,baz=330,slow=9.9,SNR=217						
ASAR	**Alice Springs**	**18.04**	**154**	P	**P**	**20 25 58.6**	**+0.6**
CNJI	**Cibinong**	**18.13**	**269**	P	**P**	**20 25 56.8**	**-2.3**
	comp=Z,77nm,1.0s						
TPI	**Tanjungpandan**	**18.30**	**284**	P	**P**	**20 26 01.7**	**+0.8**
	comp=Z,19nm,0.9s						
COEN	**Coen**	**18.59**	**112**	P	**P**	**20 26 03.1**	**-0.9**
COEN				IAmb	IAmb	20 26 04.2	
	comp=Z,31nm,0.8s						
COEN	**Coen**	**18.59**	**112**	P	**P**	**20 26 03.9**	**-0.1**
QIS	**Mount Isa**	**18.91**	**135**	P	**P**	**20 26 07.6**	**+0.4**
PPBI	**Pangkal Pinang**	**19.92**	**284**	P	**P**	**20 26 17.8**	**+0.9**
	comp=Z,824nmcomp=Z,12nm,0.7s						
MTSU	**Mount Surprise**	**21.23**	**122**	P	**P**	**20 26 30.9**	**+2.0**
OOD	**Oodnadatta**	**22.43**	**156**	P	**P**	**20 26 40.8**	**+1.3**
FORT	**Forrest**	**23.31**	**174**	P	**P**	**20 26 46.1**	**-1.4**
FORT				IAmb	IAmb	20 26 48.9	
	comp=Z,20nm,0.8s						
FORT	**Forrest**	**23.31**	**174**	P	**P**	**20 26 48.1**	**+0.6**
MULG	**Mulgathing**	**24.09**	**161**	P	**P**	**20 26 55.4**	**+0.9**
INKA	**Innaminka**	**24.84**	**146**	P	**P**	**20 27 02.7**	**+1.5**
LCRK	**Leigh Creek**	**25.81**	**154**	P	**P**	**20 27 11.3**	**+1.4**
QLP	**Quilpie**	**26.10**	**139**	P	**P**	**20 27 13.6**	**+1.1**
	comp=Z,36nm,0.6s						
BBOO	**Buckleboo**	**27.07**	**160**	P	**P**	**20 27 21.5**	**+0.5**
BBOO				IAmb	IAmb	20 27 22.1	
	comp=Z,8.7nm,0.6s						
BBOO	**Buckleboo**	**27.07**	**160**	P	**P**	**20 27 21.8**	**+0.8**
KULM	**Kulim**	**27.77**	**296**	P	**P**	**20 27 26.3**	**-1.1**
KULM				IAmb	IAmb	20 27 31.9	
	comp=Z,4.8nm,0.9s						
GUMO	**Guam**	**28.48**	**43**	P	**P**	**20 27 36.3**	**+2.7**
STKA	**Stephens Creek**	**28.58**	**150**	P	**P**	**20 27 35.3**	**+1.0**
	comp=Z,6.8nm,0.6s,baz=321,slow=9.6,SNR=18						
	comp=Z,6.8nm,0.6s						
STKA	**Stephens Creek**	**28.58**	**150**	P	**P**	**20 27 35.3**	**+1.0**
STKA	**Stephens Creek**	**28.58**	**150**	P	**P**	**20 27 35.6**	**+1.3**
HTT	**Hallett**	**28.69**	**156**	P	**P**	**20 27 37.1**	**+1.7**
CMSA	**Cobar Meteorol**	**30.51**	**144**	P	**P**	**20 27 52.3**	**+1.1**
ARPS	**Mount Arapiles**	**32.77**	**155**	P	**P**	**20 28 12.5**	**+1.8**
ARMA	**Armidale**	**33.53**	**136**	P	**P**	**20 28 18.9**	**+1.5**
CMAR	**Chiang Mai Arr**	**36.69**	**315**	P	**P**	**20 28 44.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=144,slow=6.6,SNR=12						
CMAR				PcP	**PcP**	**20 30 57.6**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=173,slow=2.3,SNR=9.1						
	comp=Z,0.9nm,0.7s						
JNU	**Nakatsue**	**40.71**	**7**	P	**P**	**20 29 16.7**	**-0.1**
PZH	**PanZhiHua**	**40.85**	**327**	P	**P**	**20 29 19.3**	**+1.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,7.1s						
KSRS	**Korea Array**	**44.76**	**3**	P	**P**	**20 29 48.9**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=178,slow=9.0,SNR=11						
	comp=Z,3.3nm,0.6s						
MJAR	**Matsushiro Arr**	**45.41**	**15**	P	**P**	**20 29 52.8**	**-1.0**
	comp=Z,4.9nm,0.6s,baz=185,slow=9.2,SNR=19						
	comp=Z,4.9nm,0.6s						
HHC	**Hu-ho-hao-te**	**49.75**	**346**	*e*P	**P**	**20 30 29.0**	**+2.2**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
USRK	**Ussuriysk Ar.**	**51.78**	**6**	P	**P**	**20 30 41.3**	**-0.2**
	comp=Z,5.9nm,0.6s,baz=192,slow=6.5,SNR=11						
	comp=Z,5.9nm,0.6s						
GTA	**Gaotai**	**52.34**	**335**	*e*P	**P**	**20 30 45.5**	**-0.4**
GTA				pP	PcP	20 30 51.0	-60
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**57.45**	**345**	P	**P**	**20 31 20.9**	**-0.9**
ULN				IAmb	IAmb	20 31 22.4	
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**57.58**	**345**	P	**P**	**20 31 22.7**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=164,slow=7.4,SNR=16						
	comp=Z,1.2nm,0.5s						
SONM	**Songino Array**	**57.58**	**345**	P	**P**	**20 31 22.4**	**-0.4**
WMQ	**Urumqi**	**61.41**	**330**	*e*P	**P**	**20 31 50.0**	**+1.4**
MK31	**Makanchi Array**	**66.22**	**329**	P	**P**	**20 32 18.7**	**-0.8**
MK31				IAmb	IAmb	20 32 19.7	
	comp=Z,4.1nm,1.1s						
MKAR	**Makanchi Array**	**66.22**	**329**	P	**P**	**20 32 19.1**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=124,slow=7.3,SNR=57						
	comp=Z,1.8nm,0.4s						
MKAR	**Makanchi Array**	**66.22**	**329**	P	**P**	**20 32 18.6**	**-0.8**
PETK	**Petropavlovsk-**	**66.28**	**21**	P	**P**	**20 32 19.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=261,slow=1.0,SNR=4.9						
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**70.08**	**336**	P	**P**	**20 32 41.6**	**-1.3**
	comp=Z,1.8nm,0.5s,baz=130,slow=4.6,SNR=9.1						
	comp=Z,1.8nm,0.5s						
KURK	**Kurchatov**	**70.62**	**331**	P	**P**	**20 32 45.1**	**-1.1**
KURK				IAmb	IAmb	20 32 47.1	
	comp=Z,4.6nm,1.1s						
VNDA	**Vanda**	**72.56**	**172**	P	**P**	**20 32 57.8**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=331,slow=8.8,SNR=2.2						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**72.56**	**172**	P	**P**	**20 32 56.7**	**-0.6**
SEY	**Seymchan**	**73.18**	**13**	P	**P**	**20 33 01.1**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=212,slow=6.2,SNR=9.8						
	comp=Z,3.5nm,0.6s						
QSPA	**South Pole Qui**	**82.50**	**180**	P	**P**	**20 33 51.3**	**-0.7**
ILAR	**Eielson Array**	**95.73**	**25**	P	**P**	**20 34 52.2**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=248,slow=4.8,SNR=3.0						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**120.44**	**44**	PKP	**PKPdf**	**20 40 16.9**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=321,slow=1.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**124.43**	**281**	PKP	**PKPdf**	**20 40 25.6**	**-0.7**
	comp=Z,21nm,0.4s,baz=92,slow=1.6,SNR=2.3						
TXAR	**Lajitas Array**	**129.06**	**58**	PKP	**PKiKP**	**20 40 35.4**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=331,slow=1.1,SNR=3.2						
DBIC	**Dimbokro**	**130.66**	**272**	PKP	**PKPdf**	**20 40 38.7**	**+0.5**
	comp=Z,2.0nm,0.4s,baz=342,slow=3.5,SNR=6.3						
SCHQ	**Schefferville**	**131.77**	**9**	PKP	**PKPdf**	**20 40 38.6**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=342,slow=3.5,SNR=6.3						
CPUP	**Villa Florida**	**146.29**	**176**	PKPbc	**PKPbc**	**20 41 08.5**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=180,slow=2.0,SNR=3.3						

PRU ***28*** *20:22:31.1±0.0, 42°.67N × 13°.70E, h0km*
BEO ***28*** *20:22:32.4±0.8, 42°.73N × 13°.23E, h0km, ML3.2/5*
PDG ***28*** *20:22:34.7±0.1, 42°.45N × 13°.52E, h11km±20km, ML3.3/12, Error ellipse: s-maj=1.5km s-min=33.5km az=0.0*
STR ***28*** *20:22:34.7±2.0, 43°.N±9° × 1°.3E±1°.4, h10km, MLv3.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=114.9, preliminary*
ROM 28 20:22:30.7±0.1, **42°.740N**±0°.004 × **13°.203E**±0°.006, **h9**km, **ML3.1**/77, **47C-29D, Error ellipse: s-maj=0.5km s-min=0.2km az=68.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.11**	**325**	P	Pg	20 22 34.0	+0.5
NRCA				S	Sg	20 22 35.9	+0.4
SMA1	**SAN MARTINO**	**0.15**	**138**	P	Pg	20 22 34.7	+0.7
SMA1				S	Sg	20 22 37.5	+1.2
SMA1				AML	AML		
	comp=E,21050μm,0.5s						
SMA1				AML	AML		
	comp=N,19200μm,0.5s						
MC2	**Monte Cornacci**	**0.17**	**357**	P	Pg	20 22 35.1	+0.6
MC2				S	Sg	20 22 38.4	+1.2
MC2				AML	AML		
	comp=E,26100μm,0.2s						
MC2				AML	AML		
	comp=N,26150μm,0.2s						
LNSS	**Leonessa**	**0.18**	**221**	P	Pg	20 22 35.3	+0.7
LNSS				S	Sg	20 22 38.7	+1.4
MMO1	**Montemonaco**	**0.18**	**30**	⇑P	Pg	20 22 35.1	+0.5
MMO1				S	Sg	20 22 38.3	+1.0
MMO1				AML	AML		
	comp=E,2290μm,1.5s						
MMO1				AML	AML		
	comp=N,20000μm,1.2s						
MMO1				AML	AML		
	comp=E,25400μm,0.3s						
MMO1				AML	AML		
	comp=N,2915μm,1.1s						
MMO1				AML	AML		
	comp=E,25350μm,0.3s						
MMO1				AML	AML		
	comp=N,20050μm,1.2s						
T1243	**Rocca Santa Ma**	**0.19**	**103**	P	Pg	20 22 35.1	+0.6
T1243				S	Sg	20 22 38.3	+0.9
T1243				AML	AML		
	comp=E,60750μm,0.3s						
T1243				AML	AML		
	comp=E,60750μm,0.3s						
T1243				AML	AML		
	comp=N,80550μm,0.3s						
T1243				AML	AML		
	comp=N,80650μm,0.3s						
T1243				AML	AML		
	comp=E,60800μm,0.3s						
T1243				AML	AML		
	comp=N,80600μm,0.3s						
T1243				AML	AML		
	comp=N,80500μm,0.3s						
RM33	**Pellescritta (**	**0.23**	**178**	P	Pg	20 22 36.1	+0.6
RM33				S	Sg	20 22 40.1	+1.5
RM33				AML	AML		
	comp=E,10225μm,0.9s						
RM33				AML	AML		
	comp=N,10195μm,0.3s						
RM33				AML	AML		
	comp=E,10225μm,0.9s						
RM33				AML	AML		
	comp=E,10245μm,0.9s						
RM33				AML	AML		
	comp=N,10300μm,0.3s						
RM33				AML	AML		
	comp=N,10185μm,0.3s						
RM33				AML	AML		
	comp=N,10350μm,0.3s						
RM33				AML	AML		
	comp=E,10200μm,0.9s						
RM33				AML	AML		
	comp=E,10215μm,0.9s						
FEMA	**Monte Fema**	**0.25**	**333**	P	Pg	20 22 36.4	+0.5
FEMA				S	Sg	20 22 40.3	+1.1
FEMA				AML	AML		
	comp=E,12500μm,1.2s						
FEMA				AML	AML		
	comp=N,11100μm,0.4s						
FEMA				AML	AML		
	comp=N,11090μm,0.4s						
FEMA				AML	AML		
	comp=N,11080μm,0.4s						
FEMA				AML	AML		
	comp=E,12450μm,1.2s						
CAMP	**Campotosto**	**0.25**	**143**	P	Pg	20 22 36.4	+0.6
CAMP				S	Sg	20 22 40.7	+1.3
CAMP				AML	AML		
	comp=E,3015μm,0.5s						
CAMP				AML	AML		
	comp=N,5320μm,0.4s						
FDMO	**Fiordimonte**	**0.31**	**344**	P	Pg	20 22 37.3	+0.4
FDMO				S	Sb	20 22 42.5	-1.2
FDMO				AML	AML		
	comp=N,9140μm,0.2s						
FDMO				AML	AML		
	comp=E,5300μm,0.3s						
TERO	**Teramo**	**0.32**	**111**	⇑P	Pg	20 22 37.4	+0.3
TERO				S	Sg	20 22 42.4	+1.2
TERO				AML	AML		
	comp=N,7445μm,0.5s						
TERO				AML	AML		
	comp=E,5300μm,0.5s						
TERO				AML	AML		
	comp=N,7440μm,0.5s						
TERO				AML	AML		
	comp=E,5995μm,0.3s						
TERO				AML	AML		
	comp=N,8030μm,0.5s						
TERO				AML	AML		
	comp=E,5305μm,0.5s						
CSP1	**Cessapalombo**	**0.35**	**0**	⇑P	Pg	20 22 38.2	+0.4
CSP1				AML	AML		
	comp=E,10005μm,0.4s						
CSP1				AML	AML		
	comp=N,9260μm,0.6s						
CSP1				AML	AML		
	comp=E,10040μm,0.4s						
ARRO	**Arrone**	**0.36**	**244**	⇑P	Pg	20 22 38.3	+0.5
ARRO				AML	AML		
	comp=E,3270μm,0.2s						
ARRO				AML	AML		
	comp=E,3265μm,0.2s						
ARRO				AML	AML		
	comp=N,3775μm,0.3s						
GIGS	**Gran Sasso**	**0.40**	**137**	P	Pg	20 22 38.8	+0.3
GIGS				AML	AML		
	comp=E,1255μm,1.4s						
GIGS				AML	AML		
	comp=N,1142μm,0.4s						
OFFI	**Offida**	**0.41**	**61**	⇑P	Pb	20 22 40.0	-0.1
OFFI				AML	AML		
	comp=N,8580μm,0.4s						
OFFI				AML	AML		
	comp=E,10300μm,0.6s						
MNTP	**Montappone**	**0.44**	**26**	P	Pb	20 22 40.4	-0.3
MNTP				AML	AML		
	comp=E,11100μm,0.3s						
MNTP				AML	AML		
	comp=N,9270μm,0.6s						
SEF1	**Sefro**	**0.45**	**335**	P	Pg	20 22 39.9	+0.5
SEF1				AML	AML		
	comp=E,6735μm,1.0s						
SEF1				AML	AML		
	comp=N,6375μm,1.1s						
FIAM	**Fiamignano**	**0.48**	**188**	⇑P	Pg	20 22 40.3	+0.3
FIAM				AML	AML		
	comp=N,2305μm,0.4s						
FIAM				AML	AML		
	comp=E,2670μm,0.8s						
CESX	**Cesi**	**0.48**	**254**	⇑P	Pg	20 22 40.2	+0.2
CESX				AML	AML		
	comp=N,2680μm,0.3s						
CESX				AML	AML		
	comp=E,2905μm,1.4s						
SSM1	**San Severino M**	**0.49**	**358**	⇓P	Pb	20 22 40.9	-0.6
ASSB	**Assisi San Ben**	**0.50**	**307**	⇑P	Pg	20 22 40.6	+0.1
ASSB				AML	AML		
	comp=E,4095μm,0.3s						
ASSB				AML	AML		
	comp=N,3480μm,0.2s						
GAG1	**Gagliole**	**0.51**	**349**	⇑P	Pb	20 22 41.2	-0.6
GAG1				S	Sb	20 22 50.0	+0.6
GAG1				AML	AML		
	comp=N,7720μm,0.4s						
GAG1				AML	AML		
	comp=E,7610μm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**82**	⇑P	Pb	20 22 42.6	+0.4
TRTR				AML	AML		
	comp=E,7855μm,1.1s						
TRTR				AML	AML		
	comp=N,8010μm,0.4s						
SNTG	**Esanatoglia**	**0.55**	**340**	⇑P	Pg	20 22 41.6	+0.2
SNTG				S	Sb	20 22 51.0	+0.4
SNTG				AML	AML		
	comp=E,1725μm,0.8s						
SNTG				AML	AML		
	comp=N,1760μm,0.7s						
FAGN	**Fagnano**	**0.55**	**149**	P	Pg	20 22 41.6	+0.2
FAGN				AML	AML		
	comp=N,5610μm,0.5s						
FAGN				AML	AML		
	comp=E,4940μm,0.3s						
VCEL	**Villa Celiera**	**0.58**	**126**	P	Pb	20 22 42.6	-0.5
VCEL				AML	AML		
	comp=E,4190μm,0.6s						
VCEL				AML	AML		
	comp=E,4185μm,0.6s						
VCEL				AML	AML		
	comp=N,4010μm,0.8s					

	comp=E,4015µm,0.4s								
PP3	**Marolino**	**0.70**	**25**	⇑P		Pb	20 22 45.3	+0.2	
PP3				AML		AML			
	comp=E,9025µm,0.4s								
PP3				AML		AML			
	comp=N,3870µm,0.4s								
PP3				AML		AML			
	comp=N,4275µm,0.4s								
PP3				AML		AML			
	comp=N,3875µm,0.4s								
PP3				AML		AML			
	comp=E,8700µm,0.5s								
PP3				AML		AML			
	comp=E,9025µm,0.5s								
PP3				AML		AML			
	comp=E,8705µm,0.5s								
PP3				AML		AML			
	comp=N,4280µm,0.4s								
SRES	**S.Oreste - Sor**	**0.72**	**226**	P		Pg	20 22 44.9	+0.3	
SRES				AML		AML			
	comp=E,882µm,0.6s								
SRES				AML		AML			
	comp=N,830µm,0.6s								
SSFR	**Montelago di S**	**0.76**	**336**	⇑P		Pb	20 22 45.8	-0.4	
SSFR				S		Sb	20 22 58.0	+1.3	
SSFR				AML		AML			
	comp=E,5485µm,0.2s								
SSFR				AML		AML			
	comp=N,3660µm,0.8s								
SSFR				AML		AML			
	comp=E,4920µm,0.2s								
SSFR				AML		AML			
	comp=N,3505µm,0.2s								
ATTE	**AVT- Monte Tez**	**0.77**	**307**	P		Pb	20 22 46.4	0.0	
ATTE				AML		AML			
	comp=N,1019µm,0.6s								
ATTE				AML		AML			
	comp=E,948µm,0.3s								
ARVD	**Arcevia**	**0.78**	**346**	⇓P		Pg	20 22 45.8	0.0	
ARVD				S		Sn	20 22 59.0	-0.8	
ARVD				AML		AML			
	comp=N,632µm,0.6s								
ARVD				AML		AML			
	comp=E,1056µm,0.6s								
MTCE	**Montecelio**	**0.79**	**206**	⇑P		Pg	20 22 45.2	-0.8	
MTCE				AML		AML			
	comp=E,928µm,0.8s								
MTCE				AML		AML			
	comp=N,683µm,1.2s								
MTCE				AML		AML			
	comp=E,927µm,0.8s								
CERT	**Cerreto**	**0.81**	**192**	P		Pg	20 22 46.1	-0.1	
CERT				AML		AML			
	comp=N,1215µm,0.4s								
CERT				AML		AML			
	comp=N,1220µm,0.4s								
CERT				AML		AML			
	comp=E,1705µm,0.5s								
MGAB	**Montegabbione**	**0.82**	**283**	P		Pg	20 22 46.7	+0.2	
MGAB				AML		AML			
	comp=E,3505µm,0.5s								
MGAB				AML		AML			
	comp=E,4245µm,0.5s								
MGAB				AML		AML			
	comp=N,2675µm,1.3s								
MGAB				AML		AML			
	comp=N,2605µm,0.3s								
FRON	**Frontone**	**0.85**	**336**	⇓P		Pg	20 22 47.0	-0.2	
FRON				S		Sn	20 23 01.0	-0.6	
FRON				AML		AML			
	comp=N,1162µm,0.6s								
FRON				AML		AML			
	comp=E,724µm,1.2s								
FRON				AML		AML			
	comp=N,1164µm,0.6s								
AOI	**Ancona**	**0.86**	**20**	⇓P		Pb	20 22 47.8	-0.1	
AOI				S		Sn	20 23 03.0	+1.2	
AOI				AML		AML			
	comp=E,1190µm,0.8s								
AOI				AML		AML			
	comp=N,1012µm,1.5s								
ATVO	**AVT- Monte Val**	**0.87**	**318**	⇑P		Pg	20 22 47.4	-0.1	
ATVO				AML		AML			
	comp=E,588µm,1.1s								
ATVO				AML		AML			
	comp=N,722µm,0.6s								
ATVO				AML		AML			
	comp=N,722µm,0.6s								
INTR	**Introdacqua**	**0.89**	**144**	P		Pg	20 22 47.5	-0.5	
INTR				AML		AML			
	comp=E,719nm,0.8s								
INTR				AML		AML			
	comp=N,906nm,0.9s								
INTR				AML		AML			
	comp=E,728µm,1.1s								
INTR				AML		AML			
	comp=N,1415µm,0.9s								
COR1	**Corinaldo**	**0.90**	**351**	⇓P		Pn	20 22 49.2	-0.3	
ATMI	**Monte Miggiano**	**0.91**	**311**	S		Sn	20 23 03.0	+0.1	
ATPI	**Pietralunga -**	**0.92**	**321**	⇑P		Pg	20 22 48.2	-0.3	
ATPI				AML		AML			
	comp=E,714µm,0.4s								
ATPI				AML		AML			
	comp=N,726µm,0.5s								
ATPI				AML		AML			
	comp=E,714µm,0.4s								
PIEI	**Pieia**	**0.93**	**329**	⇑P		Pg	20 22 48.7	0.0	
PIEI				S		Sn	20 23 04.0	+0.4	
PIEI				AML		AML			
	comp=E,800µm,1.5s								
PIEI				AML		AML			
	comp=N,684µm,0.8s								
MPAG	**Monte Paganucc**	**0.95**	**340**	P		Pg	20 22 48.9	0.0	
MPAG				AML		AML			
	comp=E,900µm,0.7s								
MPAG				AML		AML			
	comp=N,775µm,0.5s								
MPAG				AML		AML			
	comp=E,900µm,0.7s								
MPAG				AML		AML			
	comp=N,772µm,0.5s								
MPAG				AML		AML			
	comp=E,901µm,0.7s								
MPAG				AML		AML			
	comp=N,774µm,0.5s								
GUAR	**Guarcino**	**0.95**	**175**	⇑P		Pn	20 22 52.1	+1.8	
GUAR				AML		AML			
	comp=N,1320µm,0.5s								
GUAR				AML		AML			
	comp=E,728µm,0.8s								
SACS	**San Casciano d**	**0.96**	**277**	P		Pg	20 22 49.2	0.0	
SACS				AML		AML			
	comp=E,880µm,0.5s								
SACS				AML		AML			
	comp=E,896µm,0.5s								
SACS				AML		AML			
	comp=N,824µm,1.2s								
SACS				AML		AML			
	comp=N,805µm,1.2s								
NARO	**Abbazia di Nar**	**0.98**	**333**	S		Sn	20 23 06.0	+1.3	
APEC	**Apecchio**	**1.00**	**325**	S		Sn	20 23 07.0	+1.8	
FSSB	**Fossombrone**	**1.00**	**342**	⇓P		Pg	20 22 49.9	-0.1	
FSSB				S		Sn	20 23 07.0	+1.8	
FSSB				AML		AML			
	comp=N,2335µm,0.4s								
FSSB				AML		AML			
	comp=E,2375µm,0.3s								
LPEL	**Lama dei Pelig**	**1.00**	**133**	⇑P		Pg	20 22 49.6	-0.4	
LPEL				AML		AML			
	comp=N,556µm,0.6s								
LPEL				AML		AML			
	comp=E,766µm,1.4s								
LATE	**Laterza**	**1.04**	**264**	P		Pb	20 22 50.8	-0.1	
BADI	**Badiali**	**1.04**	**318**	P		Pg	20 22 50.7	0.0	
CAFI	**Castiglion Fio**	**1.08**	**303**	⇓P		Pb	20 22 51.8	+0.2	
CAFI				AML		AML			
	comp=E,919µm,0.6s								
CAFI				AML		AML			
	comp=N,682µm,0.5s								
POFI	**Posta Fibreno**	**1.09**	**160**	⇓P		Pn	20 22 54.9	+2.6	
POFI				AML		AML			
	comp=E,421µm,1.2s								
POFI				AML		AML			
	comp=N,406µm,0.5s								
TOLF	**Tolfa**	**1.12**	**233**	⇓P		Pg	20 22 51.8	-0.4	
TOLF				AML		AML			
	comp=E,428µm,0.5s								
TOLF				AML		AML			
	comp=N,480µm,0.5s								
LAV9	**Lanuvio**	**1.12**	**200**	⇑P		Pn	20 22 53.1	+0.5	
LAV9				AML		AML			
	comp=E,1635µm,0.6s								
LAV9				AML		AML			
	comp=N,1496µm,1.4s								
LAV9				AML		AML			
	comp=N,1650µm,1.4s								
LAV9				AML		AML			
	comp=E,1630µm,0.6s								
LAV9				AML		AML			
	comp=E,1660µm,0.6s								
LRP	**Arpino**	**1.13**	**165**	⇑P		Pn	20 22 55.0	+2.4	
LRP				AML		AML			
	comp=N,586µm,0.9s								
LRP				AML		AML			
	comp=E,292µm,1.0s								
SF04	**Casetta**	**1.14**	**275**	⇓P		Pn	20 22 54.2	+1.3	
SF04				AML		AML			
	comp=N,410µm,0.3s								
SF04				AML		AML			
	comp=E,830µm,0.4s								
SSP9	**Sansepolcro**	**1.15**	**317**	⇑P		Pn	20 22 55.1	+2.2	
GIUL	**Giuliano Di Ro**	**1.18**	**178**	⇓P		Pn	20 22 55.7	+2.3	
GIUL				AML		AML			
	comp=E,356µm,0.8s								
GIUL				AML		AML			
	comp=N,660µm,0.6s								
LATB	**Latina**	**1.26**	**188**	⇑P		Pg	20 22 55.3	+0.5	
LATB				AML		AML			
	comp=E,172µm,0.8s								
LATB				AML		AML			
	comp=N,111µm,0.8s								
CRE	**Caprese Michel**	**1.27**	**314**	⇓P		Pg	20 22 55.5	+0.4	
CRE				AML		AML			
	comp=N,398µm,0.3s								
CRE				AML		AML			
	comp=E,327µm,0.4s								
ARCI	**Arcidosso**	**1.28**	**276**	⇑P		Pg	20 22 56.5	+1.3	
ARCI				AML		AML			
	comp=E,134µm,0.6s								
ARCI				AML		AML			
	comp=N,120µm,0.9s								
CERA	**Filignano**	**1.29**	**152**	⇑P		Pg	20 22 56.7	+1.2	
CERA				AML		AML			
	comp=E,446µm,0.8s								
CERA				AML		AML			
	comp=N,468µm,0.5s								
TRIV	**Trivento**	**1.40**	**134**	⇑P		Pg	20 22 59.2	+1.7	
TRIV				AML		AML			
	comp=N,534µm,0.8s								
TRIV				AML		AML			
	comp=E,630µm,0.6s								
VAGA	**Valle Agricola**	**1.53**	**150**	⇓P		Pg	20 23 02.4	+2.4	
VAGA				AML		AML			
	comp=N,238µm,0.9s								
VAGA				AML		AML			
	comp=E,171µm,0.7s								
OSSC	**Osservatorio P**	**1.63**	**299**	⇑P		Pg	20 23 01.9	-0.2	
OSSC				AML		AML			
	comp=N,148µm,0.8s								
OSSC				AML		AML			
	comp=E,107µm,1.6s								
CASP	**Castiglione de**	**1.72**	**272**	⇓P		Pn	20 23 01.2	+0.4	
CASP				AML		AML			
	comp=N,74µm,0.9s								
CASP				AML		AML			
	comp=E,76µm,0.4s								
MELA	**Melanico ??? S**	**1.76**	**125**	⇓P		Pb	20 23 03.7	+0.5	
MELA				AML		AML			
	comp=E,578µm,1.4s								
MELA				AML		AML			
	comp=N,540µm,1.6s								
MELA				AML		AML			
	comp=N,572µm,0.5s								
MELA				AML		AML			
	comp=E,554µm,0.7s								
DUGI	**Dugi Otok**	**1.84**	**47**	*e*Pn		Pn	20 23 03.4	+0.8	
APRC	**Apricena**	**2.00**	**119**	⇓P		Pb	20 23 06.6	-0.6	
APRC				AML		AML			
	comp=N,312µm,0.7s								
APRC				AML		AML			
	comp=E,320µm,0.4s								
VIRC	**Vir**	**2.06**	**40**	*e*Pn		Pn	20 23 05.9	+0.5	
SGRT	**San Giovanni R**	**2.13**	**117**	⇓P		Pb	20 23 08.4	-1.1	
SGRT				AML		AML			
	comp=N,236µm,0.5s								
SGRT				AML		AML			
	comp=E,261µm,0.4s								
MORI	**Morici**	**2.15**	**58**	*e*Pn		Pn	20 23 07.5	+0.8	
NVLJ	**Novalja**	**2.19**	**33**	*e*Pn		Pn	20 23 08.1	+0.8	
BRJN	**Brijuni**	**2.20**	**10**	*e*Pn		Pn	20 23 08.0	+0.6	
BRJN	**Brijuni**	**2.20**	**10**	P		Pn	20 23 08.4	+1.0	
MSAG	**Monte S. Angel**	**2.26**	**116**	⇓P		Pb	20 23 10.6	-1.1	
MSAG				AML		AML			
	comp=N,514µm,0.3s								
MSAG				AML		AML			
	comp=E,307µm,0.5s								
ZCCA	**Zocca**	**2.28**	**316**	P		Pb	20 23 10.5	-1.6	
ZCCA				AML		AML			
	comp=E,73µm,0.5s								
ZCCA				AML		AML			
	comp=N,82µm,1.2s								
RABC	**Rab**	**2.31**	**29**	*e*Pn		Pn	20 23 09.0	+0.1	
SMRN	**Sveta Marina**	**2.40**	**16**	*e*Pn		Pn	20 23 10.3	+0.2	
HVAR	**Hvar**	**2.42**	**78**	*e*Pn		Pn	20 23 11.5	+1.1	
HVAR	**Hvar**	**2.42**	**78**	⇓P		Pn	20 23 11.8	+1.4	
UDBI	**Udbina**	**2.58**	**45**	*e*Pn		Pn	20 23 14.7	+2.0	
A253A	**Karojba, Istri**	**2.59**	**10**	*e*Pn		Pn	20 23 13.6	+0.8	
A250A	**Rusevo Krmpots**	**2.65**	**27**	*e*Pn		Pn	20 23 14.8	+1.2	
KIJV	**Kijevo**	**2.66**	**60**	*e*Pn		Pn	20 23 15.1	+1.4	
LSTV	**Lastovo**	**2.72**	**88**	*e*Pn		Pn	20 23 15.7	+1.2	
NDIM	**Novi di Modena**	**2.72**	**323**	⇑P		Pn	20 23 13.8	-0.7	
RIY	**Rijeka**	**2.74**	**19**	*e*Pn		Pn	20 23 15.9	+1.0	
PLIT	**Plitvice**	**2.76**	**39**	*e*Pn		Pn	20 23 16.7	+1.5	
MAKA	**Makarska**	**2.85**	**78**	*e*Pn		Pn	20 23 17.7	+1.4	
SKDS	**Skadanscina**	**2.87**	**11**	*e*Pn		Pn	20 23 16.7	+0.1	
RICI	**Ricice**	**2.97**	**74**	*e*Pn		Pn	20 23 20.1	+2.0	
A050A	**Klekovaca**	**2.98**	**53**	*e*Pn		Pn	20 23 20.1	+1.9	
PGF	**Pioggiola**	**3.11**	**268**	P		Pn	20 23 21.3	+1.3	
PGF				S		Sn	20 23 59.1	+1.8	
BOJS	**Bojanci**	**3.13**	**27**	*e*Pn		Pn	20 23 21.8	+1.6	
BOJS	**Bojanci**	**3.13**	**27**	⇑P		Pn	20 23 21.2	+1.0	
BOJS				AML		AML			
	comp=E,194µm,0.4s								
BOJS				AML		AML			
	comp=N,154µm,0.8s								
SRKY	**Kupres RS**	**3.18**	**64**	*e*Pn		Pn	20 23 23.9	+3.0	
SABO	**M.te Sabotino**	**3.25**	**5**	⇑P		Pn	20 23 22.6	+0.7	
SABO				AML		AML			
	comp=N,132µm,0.8s								
SABO				AML		AML			
	comp=E,110µm,0.6s								
MGRS	**Mrkonjic Grad**	**3.28**	**58**	*e*Pn		Pn	20 23 24.9	+2.6	
CGRP	**Cima Grappa**	**3.30**	**343**	⇑P		Pn	20 23 24.3	+1.6	
CGRP				S		Sn	20 24 03.0	+0.9	
CGRP				AML		AML			
	comp=E,108µm,0.4s								
CGRP				AML		AML			
	comp=N,111µm,0.6s								
OZLJ	**Ozalj**	**3.30**	**29**	*e*Pn		Pn	20 23 24.0	+1.4	
STON	**Ston**	**3.31**	**86**	*e*Pn		Pn	20 23 22.7	0.0	
STON	**Ston**	**3.31**	**86**	*e*Pn		Pn	20 23 23.0	+0.3	
STON	**Ston**	**3.31**	**86**	*e*Pn		Pn	20 23 23.0	+0.3	
STON				*e*Sn		Sn	20 24 01.9	-0.2	
STON	**Ston**	**3.31**	**86**	P		Pn	20 23 22.7	0.0	
STON				AML		AML			
	comp=E,40µm,0.4s								
STON				AML		AML			
	comp=N,42µm,0.6s								
AJAC	**Base Areonaval**	**3.39**	**258**	P		Pn	20 23 26.0	+2.3	
DOSS	**Dosso del Somm**	**3.46**	**336**	⇓P		Pn	20 23 27.4	+2.6	
DOSS				AML		AML			
	comp=N,70µm,0.6s								
DOSS				AML		AML			
	comp=E,62µm,0.8s								
CRES	**Cresnjev**	**3.48**	**27**	*e*Pn		Pn	20 23 25.4	+0.3	
MPRI	**Monte Prat**	**3.50**	**358**	⇑P		Pn	20 23 27.2	+1.8	
MPRI				AML		AML			
	comp=N,138µm,0.5s								
MPRI				AML		AML			
	comp=E,93µm,0.4s								
A051A	**Mrakovica**	**3.51**	**48**	*e*Pn		Pn	20 23 27.0	+1.5	
BLY	**Banja Luka**	**3.52**	**54**	*e*Pn		Pn	20 23 27.3	+1.8	
LUSI	**Trento, Gardas**	**3.60**	**334**	⇑P		Pn	20 23 29.2	+2.4	
LUSI				AML		AML			
	comp=N,82µm,0.9s								
LUSI				AML		AML			
	comp=E,60µm,1.6s								
DBRK	**Dubrovnik**	**3.64**	**89**	*e*Pn		Pn	20 23 27.8	+0.6	
GAGG	**Gaggia**	**3.71**	**335**	⇑P		Pn	20 23 31.1	+2.8	
GAGG				AML		AML			
	comp=N,50µm,1.1s								
GAGG				AML		AML			
	comp=E,72µm,0.9s								
ZONE	**Zone**	**3.75**	**325**	P		Pn	20 23 30.6	+1.9	
ZONE				AML		AML			
	comp=E,73µm,0.2s								
ZONE				AML		AML			
	comp=N,95µm,0.2s								
TREB	**Trebinje**	**3.79**	**89**	*e*Pn		Pn	20 23 30.4	+1.1	
TREB	**Trebinje**	**3.79**	**89**	*e*Pn		Pn	20 23 31.1	+1.8	
TREB				*e*Sn		Sn	20 24 14.7	+0.7	
ZOU	**Zoufplan**	**3.82**	**358**	⇓P		Pn	20 23 31.6	+1.7	
ZOU				AML		AML			
	comp=N,56µm,1.1s								
ZOU				AML		AML			
	comp=E,47µm,1.0s								
MOSL	**Moslavina**	**3.84**	**40**	*e*Pn		Pn	20 23 30.2	+0.2	
OBKA	**Obir**	**3.89**	**14**	*e*Pn		Pn	20 23 33.0	+2.3	
OBKA	**Obir**	**3.89**	**14**	*e*Pn		Pn	20 23 32.4	+1.7	
	comp=E,1.4nm,0.2s								
MYKA	**Terra Mystica**	**3.90**	**4**	*e*Pn		Pn	20 23 32.2	+1.3	
	comp=E,1.9nm,0.2s								
HCY	**Herceg Novi**	**3.92**	**92**	*e*Pn		Pn	20 23 32.2	+1.2	
HCY	**Herceg Novi**	**3.92**	**92**	⇓*i*Pn		Pn	20 23 32.7	+1.7	
HCY				*i* Sn		Sn	20 24 17.2	+0.1	
BRY	**Bratogost**	**3.93**	**86**	*e*Pn		Pn	20 23 32.5	+1.2	
BRY	**Bratogost**	**3.93**	**86**	⇓*i*Pn		Pn	20 23 33.1	+1.8	
BRY				*i* Sn		Sn	20 24 18.6	+1.0	
KOSI	**Kohlern**	**3.94**	**341**	⇑P		Pn	20 23 33.8	+2.2	
KOSI				AML		AML			
	comp=N,60µm,0.8s								
KOSI				AML		AML			
	comp=E,63µm,0.7s								
LOBO	**Lobor**	**3.98**	**30**	*e*Pn		Pn	20 23 32.2	+0.3	
ABTA	**Abfaltersbach**	**4.04**	**353**	*e*Pn		Pn	20 23 34.1	+1.4	
	comp=E,5.0nm,0.4s,SNR=17								
KALN	**Kalnik**	**4.11**	**33**	*e*Pn		Pn	20 23 33.2	-0.6	
SOKA	**Soboth**	**4.15**	**18**	*e*Pn		Pn	20 23 37.5	+3.2	
	comp=E,0.6nm,0.2s								
SPS2	**Spezzano della**	**4.18**	**144**	P		Pg	20 23 49.4	-1.4	
UPM	**Unac-Piva**	**4.21**	**82**	*e*Pn		Pn	20 23 37.4	+2.2	
UPM	**Unac-Piva**	**4.21**	**82**	⇑*i*Pn		Pn	20 23 37.7	+2.5	
UPM				*i* Sn		Sn	20 24 25.6	+1.0	
CEME	**Cevo**	**4.22**	**91**	⇓*i*Pn		Pn	20 23 37.1	+1.9	
CEME				*i* Sn		Sn	20 24 24.8	+0.1	
BUM	**Brajici-Budva**	**4.23**	**94**	⇑*i*Pn		Pn	20 23 37.1	+1.7	
BUM				*i* Sn		Sn	20 24 24.6	-0.3	
NKME	**Niksic**	**4.23**	**88**	⇑*i*Pn		Pn	20 23 37.7	+2.3	
NKME				*i* Sn		Sn	20 24 25.5	+0.5	
NKY	**Niksic**	**4.26**	**87**	⇓*i*Pn		Pn	20 23 38.1	+2.2	
NKY				*i* Sn		Sn	20 24 26.3	+0.5	
A252A	**Venje**	**4.30**	**50**	*e*Pn		Pn	20 23 36.8	+0.6	
VSL	**Villasalto**	**4.34**	**223**	⇑P		Pn	20 23 38.4	+1.5	
MUGIO	**Muggio**	**4.36**	**318**	⇑P		Pn	20 23 39.5	+2.3	
MUGIO				AML		AML			
	comp=E,17µm,0.3s								
MUGIO				AML		AML			
	comp=N,17µm,1.3s								
DRME	**Dracevica, Mon**	**4.46**	**95**	*e*Pn		Pn	20 23 40.5	+2.0	
DRME	**Dracevica, Mon**	**4.46**	**95**	⇑*i*Pn		Pn	20 23 40.3	+1.8	
DRME				*i* Sn		Sn	20 24 29.9	-0.6	
PDG	**Podgorica**	**4.48**	**92**	*e*Pn		Pn	20 23 41.8	+3.1	
PDG				*e*Sn		Sn	20 24 31.9	+1.0	
TTG	**Podgorica**	**4.48**	**92**	⇑*i*Pn		Pn	20 23 40.8	+2.1	
TTG				*i* Sn		Sn	20 24 30.8	-0.1	
ULC	**Ulcinj**	**4.54**	**98**	⇓*i*Pn		Pn	20 23 41.1	+1.4	
ULC				*i* Sn		Sn	20 24 31.6	-1.0	
RUDO	**Rudo**	**4.59**	**77**	*e*Pn		Pn	20 23 39.7	-0.6	
FETA	**Feichten**	**4.63**	**339**	*e*Pn		Pn	20 23 44.8	+3.8	
	comp=N,1.8nm,0.4s								
KOME	**Kolasin**	**4.65**	**86**	⇑*i*Pn		Pn	20 23 43.4	+2.3	
KOME				*i* Sn		Sn	20 24 35.6	+0.4	
WTTA	**Wattenberg**	**4.66**	**347**	*i* Pn		Pn	20 23 43.7	+2.4	
	comp=N,1.7nm,0.2s,SNR=5.6								
BBLS	**Lazići**	**4.66**	**74**	*e*Pn		Pn	20 23 44.0	+2.7	
BBLS				*e*Sn		Sn	20 24 38.3	+2.7	
SQTA	**Sankt Quirin**	**4.70**	**343**	*e*Pn		Pn	20 23 45.4	+3.5	
	comp=N,1.0nm,0.2s								
CALF	**Calern**	**4.70**	**285**	P		Pn	20 23 43.1	+1.2	
WATA	**Walderalm**	**4.74**	**346**	*e*Pn		Pn	20 23 45.1	+2.6	
	comp=N,1.2nm,0.2s								
ARSA	**Arzberg**	**4.80**	**19**	*e*Pn		Pn	20 23 46.7	+3.5	
	comp=N,0.8nm,0.2s								
MOTA	**Moosalm**	**4.84**	**343**	*e*Pn		Pn	20 23 47.2	+3.4	
	comp=N,2.0nm,0.3s								
IVA	**Berane**	**4.92**	**86**	⇑*i*Pn		Pn	20 23 47.3	+2.4	
IVA				*i* Sn		Sn	20 24 42.2	+0.2	
BIOA	**Bad Ischl, Aus**	**4.96**	**3**	*e*Pn		Pn	20 23 47.1	+1.7	
	comp=N,2.9nm,0.3s								
PVY	**Plav**	**4.98**	**89**	⇓*i*Pn		Pn	20 23 47.9	+2.1	
PVY				*i* Sn		Sn	20 24 43.3	-0.3	
SJES	**Sjenica**	**4.99**	**82**	*e*Pn		Pn	20 23 48.8	+2.9	
RETA	**Reutte**	**5.05**	**341**	*e*Pn		Pn	20 23 50.9	+4.3	
	comp=N,4.0nm,0.2s								
TRIGF	**Trigance**	**5.07**	**284**	P		Pn	20 23 49.2	+2.3	
EPZF	**Pizzo Felice**	**5.07**	**165**	⇓P		Pb	20 23 53.5	-6.1	
DAVA	**Damuels**	**5.12**	**334**	*e*Pn		Pn	20 23 50.9	+3.2	
	comp=N,4.3nm,0.5s								
IVAS	**Ivanjica**	**5.15**	**78**	*e*Pn		Pn	20 23 49.6	+1.6	
IVAS				*e*Sn		Sn	20 24 47.8	+0.2	
MOA	**Molln**	**5.17**	**8**	*e*Pn		Pn	20 23 50.2	+2.2	
MOA				*e*Sn		Sn	20 24 48.9	+1.0	
MOA	**Molln**	**5.17**	**8**	*e*Pn		Pn	20 23 50.5	+2.3	
	comp=N,0.7nm,0.2s								
RONA	**Rosalia, Austr**	**5.42**	**23**	*i* Pn		Pn	20 23 52.9	+1.2	
	comp=N,0.5nm,0.2s								
TRUS	**Trudelj**	**5.45**	**72**	*e*Pn		Pn	20 23 54.4	+2.4	
CONA	**Conrad Observa**	**5.52**	**19**	*e*Pn		Pn	20 23 53.7	+0.7	
	comp=N,1.2nm,0.2s,SNR=4.4								
GRUS	**Gruza**	**5.60**	**76**	*e*Pn		Pn	20 23 55.3	+1.2	
SELS	**Selova**	**5.83**	**83**	*e*Pn		Pn	20 23 57.9	+0.6	
CKRC	**Cesky Krumlov**	**6.13**	**7**	*e*SN		Sn	20 25 11.2	-0.4	
FELD	**Feldberg im Sc**	**6.31**	**326**	S		Sn	20 25 16.2	0.0	
BARS	**Barje**	**6.34**	**86**	*e*Pn		Pn	20 24 06.2	+1.9	
BARS				*e*Sn		Sn	20 25 16.8	0.0	
BARS				*e*Sn		Sn	20 25 17.4	+0.6	
KHC	**Kasperske Hory**	**6.40**	**2**	*e*PN		Pn	20 24 05.5	+0.4	
KHC				*e*SN		Sn	20 25 18.3	+0.1	
KIZ	**Kirchzarten**	**6.41**	**326**	P		Pn	20 24 06.6	+1.4	
PRVS	**Prvonek**	**6.55**	**89**	*e*Pn		Pn	20 24 10

	12nm,0.6s							
USP	**Ospenovka**	**5.38**	**32**	P		**Pn**	**20 31 20.8**	**+0.3**
	SNR=7.9							
TKM2	**Tokmak 2**	**5.63**	**41**	P		**Pn**	**20 31 24.2**	**+0.2**
	SNR=9.7							
TKM2	**Tokmak 2**	**5.63**	**41**	⇑Pn		**Pn**	**20 31 23.7**	**-0.3**
	4.4nm,0.6s							
TKM2				⇑Sn		**Sn**	**20 32 27.3**	**-1.0**
	5.3nm,0.7s							
AB31	**Akbulak array**	**12.96**	**327**	⇑P		**Pn**	**20 33 04.1**	**-0.1**
	0.4nm,0.5s,baz=149,slow=12,SNR=15							
AB31				⇑S		**Sn**	**20 35 27.5**	**-0.4**
	1.3nm,0.6s,baz=157,slow=22,SNR=5.9							

*IDC **28** 20:37:11.5±1.4,34˚.12N×141˚.71E,h0km,mb3.8/6, mbtmp3.7/7,ML2.7/1,Error ellipse: s-maj=34.4km s-min=19.2km az=76.0*
*JMA **28** 20:37:16.8±0.8,34˚N±2˚×14˚1E±˚,h17km,MV3.1/30,FAR SE OFF BOSO PEN*
*NEIC **28** 20:37:16.2±0.7,34˚.23N±0˚.07×141˚.7E±0˚.1,h33km±8km, mb4.4/7,Error ellipse: s-maj=19.5km s-min=5.7km az=117.0*

ISC 28 20:37:15.3±1.0,34˚.14N±0˚.06×141˚.52E±0˚.09,h24km,n38, σ0§87/34,mb3.8/11,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.68**	**319**	P	**Pb**	**20 37 27.6**	**-0.7**
BSO1				*eX*		20 37 34.2	
BSO3	**Boso 3**	**1.06**	**309**	P	**Pn**	**20 37 34.3**	**-0.2**
BSO4	**Boso 4**	**1.29**	**311**	P	**Pn**	**20 37 38.0**	**+0.2**
JKUC	**kamogawauchiur**	**1.49**	**313**	P	**Pn**	**20 37 41.0**	**+0.3**
JMKN	**Mikurajimanish**	**1.62**	**262**	*eP*	**Pb**	**20 37 42.8**	**-1.8**
JHJ2	**Mitsune**	**1.75**	**235**	Pn	**Pb**	**20 37 45.9**	**-0.9**
JHJ2	**Mitsune**	**1.75**	**235**	P	**Pb**	**20 37 45.7**	**-1.1**
JHJ	**Hachijo jima 2**	**1.77**	**235**	Pn	**Pb**	**20 37 45.7**	**-1.4**
	42nm,0.3s,baz=1.5,slow=21,SNR=8.0						
JHJ				Sn	**Sb**	**20 38 08.7**	**-0.2**
	92nm,0.3s,baz=52,slow=19,SNR=3.9						
JIM2	**Oshima 3**	**1.82**	**289**	*eP*	**Pn**	**20 37 45.1**	**-0.1**
KTJ3	**Kamata3**	**2.17**	**292**	P	**Pn**	**20 37 49.7**	**-0.3**
KTJ3				*eS*	**Sn**	**20 38 15.1**	**-1.1**
JIZS	**Izushimoda**	**2.26**	**286**	*eP*	**Pn**	**20 37 51.5**	**+0.4**
JYT	**Yasato**	**2.35**	**333**		**Pn**	**20 37 51.7**	**-0.7**
MJAR	**Matsushiro Arr**	**3.62**	**312**	Pn	**Pn**	**20 38 08.8**	**-1.1**
	0.6nm,0.3s,baz=285,slow=33,SNR=34						
	5.1nm,0.5s						
MAJO	**Matsushiro**	**3.62**	**312**		**Pn**	**20 38 11.3**	**+1.4**
JMM	**Marumori**	**3.77**	**351**		**Pn**	**20 38 11.0**	**-0.9**
INU	**Inuyama**	**3.90**	**289**	Pn	**Pn**	**20 38 15.7**	**+2.0**
JSD	**Sado**	**4.70**	**327**		**Pn**	**20 38 24.5**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**26.70**	**116**	T	T	21 10 47.1	
	baz=308,slow=75,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**26.70**	**116**	T	T	21 10 47.9	
	baz=308,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**26.71**	**116**	T	T	21 10 50.4	
	baz=308,slow=75,SNR=3.6						
H11S3	**WAKE ISLAND Hy**	**27.31**	**118**	T	T	21 11 33.8	
	baz=312						
H11S1	**WAKE ISLAND Hy**	**27.31**	**118**	T	T	21 11 35.5	
	baz=312						
H11S2	**WAKE ISLAND Hy**	**27.33**	**118**	T	T	21 11 36.1	
	baz=312						
SONM	**Songino Array**	**29.56**	**308**	P	**P**	**20 43 19.9**	**+1.6**
	1.1nm,0.7s,baz=112,slow=8.5,SNR=7.0						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**43.97**	**315**	P	**P**	**20 45 21.2**	**+0.9**
	1.1nm,0.7s,baz=90,slow=8.9,SNR=4.1						
	1.1nm,0.7s						
MK31	**Makanchi Array**	**45.78**	**305**	P	**P**	**20 45 35.4**	**+0.5**
MK31				IAmb	IAmb	20 45 50.1	
	comp=Z,0.9nm,1.0s						
MKAR	**Makanchi Array**	**45.78**	**305**	P	**P**	**20 45 35.7**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=90,slow=9.8,SNR=8.9						
	comp=Z,0.5nm,0.7s						
KURK	**Kurchatov**	**47.82**	**310**	P	**P**	**20 45 49.9**	**-1.0**
KURK				IAmb	IAmb	20 45 52.4	
	comp=Z,2.3nm,0.8s						
WB0	**Warramunga Arr**	**54.03**	**188**	P	**P**	**20 46 37.4**	**-0.3**
WB0				IAmb	IAmb	20 46 42.4	
	comp=Z,8.2nm,1.3s						
FITZ	**Fitzroy Crossi**	**54.10**	**199**	P	**P**	**20 46 38.6**	**+0.3**
FITZ				IAmb	IAmb	20 47 21.2	
	comp=Z,4.9nm,1.1s						
WB2	**Warramunga Arr**	**54.21**	**188**	P	**P**	**20 46 38.9**	**-0.2**
WB2				IAmb	IAmb	20 46 42.2	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**54.21**	**188**	P	**P**	**20 46 38.9**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=4.4,slow=7.6,SNR=30						
	comp=Z,0.6nm,0.4s						
WRA	**Warramunga Arr**	**54.21**	**188**	P	**P**	**20 46 39.0**	**-0.2**
ASAR	**Alice Springs**	**57.94**	**188**	P	**P**	**20 47 05.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=11,slow=8.0,SNR=9.4						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**57.94**	**188**	P	**P**	**20 47 05.3**	**-0.4**
PSA00	**Pilbara Seismi**	**59.12**	**204**	P	**P**	**20 47 14.1**	**+0.1**
ABKAR	**Akbulak array**	**59.89**	**311**	P	**P**	**20 47 19.0**	**0.0**
AKASG	**Malin Array Be**	**76.64**	**323**	P	**P**	**20 49 04.5**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=48,slow=6.5,SNR=3.3						
	comp=Z,0.5nm,0.5s						

*NEIC **28** 20:40:51.9±2.2,55˚.40N±0˚.03×158˚.46W±0˚.06,h34km±8km, mb4.1/6,ML3.8(AEIC),Error ellipse: s-maj=4.9km s-min=4.2km az=124.0*
*IDC **28** 20:40:52.6±6.5,55˚.65N×158˚.50W,h45km±55km,mb3.5/8, mbtmp3.7/10,ML3.8/2,MS3.2/1,Error ellipse: s-maj=50.3km s-min=24.2km az=29.0*
*AEIC **28** 20:40:52±2.3,55˚.37N±0˚.04×158˚.40W±0˚.08,h21km±7km, Error ellipse: s-maj=7.8km s-min=3.8km az=124.0*

ISC 28 20:40:52.0±1.0,55˚.37N±0˚.06×158˚.41W±0˚.05, h48km±10km,n188,σ0§93/187,mb3.8/9,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNSG	**Veniaminof 6**	**0.84**	**334**		**Pn**	**20 41 06.9**	**-0.7**
CHNA	**Chernabura Isl**	**0.87**	**232**	P	**Pn**	**20 41 07.0**	**-0.8**
	baz=51						
CHNA				S	**Sn**	**20 41 19.0**	**-0.4**
	baz=51						
CNBA	**Chernabura Isl**	**0.87**	**231**		**Pn**	**20 41 07.0**	**-0.9**
CNBA	**Chernabura Isl**	**0.87**	**231**		**Sn**	**20 41 19.0**	**-0.6**
CHGN	**Chignik**	**0.93**	**360**		**Pn**	**20 41 08.0**	**-0.6**
CHGN					**Sn**	**20 41 20.4**	**-0.5**
CHGN	**Chignik**	**0.93**	**360**	P	**Pn**	**20 41 08.0**	**-0.6**
	baz=179						
CHGN				S	**Sn**	**20 41 20.4**	**-0.5**
	baz=179						
VNHG	**Veniaminof 1**	**0.95**	**334**		**Pn**	**20 41 08.7**	**-0.3**
VNFG	**Fog Glacier, M**	**1.12**	**325**		**Pn**	**20 41 11.4**	**+0.1**
VNFG					**Sn**	**20 41 26.7**	**+1.1**
SDPT	**Sand Point**	**1.18**	**270**		**Pn**	**20 41 11.2**	**-0.8**
SDPT	**Sand Point**	**1.18**	**270**		**Sn**	**20 41 27.4**	**+0.5**
SDPT	**Sand Point**	**1.18**	**270**	P	**Pn**	**20 41 11.4**	**-0.6**
	baz=88						
SDPT				S	**Sn**	**20 41 27.4**	**+0.5**
	baz=88						
ANPB	**Aniakchak Plen**	**1.44**	**3**		**Pn**	**20 41 16.4**	**+0.8**
ANPK	**Aniakchak Peak**	**1.48**	**6**		**Pn**	**20 41 17.3**	**+1.1**
AZAC	**Aniakchak**	**1.53**	**4**		**Pn**	**20 41 18.1**	**+1.1**
ANNW	**Aniakchak Nort**	**1.60**	**4**		**Pn**	**20 41 16.7**	**-1.2**
CHIR	**Chirikof Islan**	**1.65**	**73**		**Pn**	**20 41 19.0**	**+0.6**
CHIR	**Chirikof Islan**	**1.65**	**73**	P	**Pn**	**20 41 19.0**	**+0.6**
	baz=255						
PVV	**Pavlof Volcano**	**1.93**	**271**		**Sn**	**20 41 46.7**	**+1.4**
PS4A	**Pavlof South-4**	**1.97**	**271**		**Pn**	**20 41 22.7**	**-0.1**
HAG	**Hague Volcano**	**2.00**	**270**		**Pn**	**20 41 24.6**	**+1.4**
PN7A	**Pavlof North-7**	**2.05**	**273**		**Pn**	**20 41 25.1**	**+1.2**
PN7A					**Sn**	**20 41 51.2**	**+3.0**
DT1	**Dutton Round H**	**2.23**	**265**		**Pn**	**20 41 26.9**	**+0.5**
R16K	**Pilot Point**	**2.25**	**12**		**Pn**	**20 41 27.2**	**+0.6**
R17K	**Ugashik Creek**	**2.54**	**25**		**Pn**	**20 41 31.8**	**+1.2**
PLK3	**Peulik 3**	**2.61**	**26**		**Pn**	**20 41 33.1**	**+1.5**
PLK1	**Peulik 1**	**2.63**	**22**		**Pn**	**20 41 32.9**	**+1.1**
SII	**Sitkinak Islan**	**2.66**	**62**		**Pn**	**20 41 32.6**	**+0.3**
SII	**Sitkinak Islan**	**2.66**	**62**	P	**Pn**	**20 41 32.6**	**+0.3**
	baz=245						
PLK5	**Peulik 5**	**2.76**	**17**		**Pn**	**20 41 34.7**	**+1.0**
FALS	**False Pass**	**2.92**	**262**		**Pn**	**20 41 36.7**	**+0.9**
FALS	**False Pass**	**2.92**	**262**	P	**Pn**	**20 41 36.7**	**+0.9**
	baz=78						
ISLZ	**Isanotski Laza**	**3.12**	**260**		**Pn**	**20 41 38.9**	**+0.3**
ISNN	**Isanotski Nort**	**3.13**	**262**		**Pn**	**20 41 39.8**	**+1.1**
SSLN	**Shishaldin Nor**	**3.26**	**262**		**Pn**	**20 41 41.6**	**+1.1**
SSLS	**Shishaldin Sou**	**3.28**	**261**		**Pn**	**20 41 41.7**	**+0.9**
SSBA	**Shishaldin**	**3.34**	**262**		**Pn**	**20 41 42.0**	**+0.3**
OHAK	**Old Harbor**	**3.40**	**55**	Pn	**Pn**	**20 41 42.1**	**-0.3**
OHAK	**Old Harbor**	**3.40**	**55**	P	**Pn**	**20 41 42.2**	**-0.2**
	baz=239						
KELA	**Mount Kelaz**	**3.41**	**24**		**Pn**	**20 41 43.3**	**+0.7**
Q16K	**King Salmon**	**3.45**	**15**		**Pn**	**20 41 43.8**	**+0.7**
KAKN	**Katmai Knife C**	**3.46**	**31**		**Pn**	**20 41 44.2**	**+0.8**
WESN	**West Dahl Nort**	**3.65**	**260**		**Pn**	**20 41 46.6**	**+0.8**
P16K	**Nushagak River**	**3.68**	**3**		**Pn**	**20 41 47.1**	**+0.9**
WESP	**Westdahl Peak**	**3.75**	**259**		**Pn**	**20 41 48.0**	**+0.7**
WECS	**Westdahl Cape**	**3.77**	**260**		**Pn**	**20 41 48.3**	**+0.8**
KAHC	**Katmai Hardscr**	**3.77**	**28**		**Pn**	**20 41 48.5**	**+0.9**
KAHC	**Katmai Hardscr**	**3.77**	**28**	P	**Pn**	**20 41 48.5**	**+0.9**
	baz=211						
P17K	**Kvichak River**	**3.98**	**15**		**Pn**	**20 41 50.6**	**+0.3**
KDAK	**Kodiak Island**	**4.03**	**51**	Pn	**Pn**	**20 41 50.5**	**-0.5**
O16K	**Kokwok River B**	**4.24**	**2**		**Pn**	**20 41 54.3**	**+0.4**
P18K	**Big Mountain,**	**4.38**	**22**		**Pn**	**20 41 56.5**	**+0.6**
P18K	**Big Mountain,**	**4.38**	**22**	P	**Pn**	**20 41 56.5**	**+0.6**
	baz=204						
AKSA	**Akutan Strait**	**4.40**	**257**		**Pn**	**20 41 56.4**	**+0.3**
Q19K	**Cape Douglas,**	**4.41**	**34**	Pn	**Pn**	**20 41 56.9**	**+0.6**
Q19K	**Cape Douglas,**	**4.41**	**34**	P	**Pn**	**20 41 56.7**	**+0.5**
	baz=218						
AKUT	**Akutan**	**4.44**	**257**	Pn	**Pn**	**20 41 57.1**	**+0.4**
O17K	**Koliganek Bris**	**4.47**	**9**		**Pn**	**20 41 57.6**	**+0.6**
AKLV	**Akutan Long Va**	**4.53**	**258**		**Pn**	**20 41 58.0**	**0.0**
AKBBA	**Akutan Broad B**	**4.54**	**257**		**Pn**	**20 41 58.3**	**+0.2**
SYI	**Shuyak Island**	**4.62**	**43**		**Pn**	**20 41 59.3**	**+0.1**
O18K	**Koktuh Hills**	**4.81**	**20**		**Pn**	**20 42 02.5**	**+0.8**
O18K	**Koktuh Hills**	**4.81**	**20**	P	**Pn**	**20 42 02.5**	**+0.8**
	baz=202						
AUQ	**Augustine Qik'**	**4.82**	**32**		**Pn**	**20 42 02.7**	**+0.8**
UNV	**Unalaska Valle**	**4.95**	**255**	Pn	**Pn**	**20 42 03.3**	**-0.3**
UNV	**Unalaska Valle**	**4.95**	**255**	P	**Pn**	**20 42 03.2**	**-0.4**
	baz=69						
MTBL	**Makushin Table**	**5.00**	**257**		**Pn**	**20 42 04.6**	**+0.2**
MNAT	**Makushin Natee**	**5.03**	**256**		**Pn**	**20 42 04.5**	**-0.3**
MSW	**Makushin Switc**	**5.08**	**257**		**Pn**	**20 42 05.2**	**-0.2**
MREP	**Makushin Rep't**	**5.09**	**256**		**Pn**	**20 42 05.5**	**-0.2**
P19K	**Oil Pt**	**5.12**	**31**		**Pn**	**20 42 06.9**	**+0.9**
P19K	**Oil Pt**	**5.12**	**31**	P	**Pn**	**20 42 06.5**	**+0.5**
	baz=215						
OPT	**Oil Point**	**5.12**	**31**		**Pn**	**20 42 06.9**	**+0.9**
OPT	**Oil Point**	**5.12**	**31**	P	**Pn**	**20 42 06.9**	**+0.9**
	baz=215						
N16K	**Nishlik Lake**	**5.12**	**358**		**Pn**	**20 42 06.4**	**+0.4**
MGOD	**Makushin Gods**	**5.17**	**256**		**Pn**	**20 42 06.6**	**-0.1**
MAPS	**Pakushin South**	**5.20**	**256**		**Pn**	**20 42 06.9**	**-0.3**
ILS	**Iliamna Low So**	**5.42**	**30**		**Pn**	**20 42 10.6**	**+0.5**
ILSW	**Iliamna Southw**	**5.42**	**29**		**Pn**	**20 42 10.5**	**+0.3**
IVE	**Iliamna Volcan**	**5.48**	**30**		**Pn**	**20 42 11.3**	**+0.3**
N18K	**Kilae Creek**	**5.49**	**13**	Pn	**Pn**	**20 42 12.2**	**+1.1**
N18K	**Kilae Creek**	**5.49**	**13**	P	**Pn**	**20 42 11.7**	**+0.6**
	baz=195						
O20K	**Slope Mountain**	**5.65**	**31**		**Pn**	**20 42 13.4**	**+0.1**
O20K	**Slope Mountain**	**5.65**	**31**	P	**Pn**	**20 42 13.4**	**+0.1**
	baz=216						
CNPM	**China Poot**	**5.69**	**40**	Pn	**Pn**	**20 42 13.4**	**-0.4**
N19K	**Bonanza Creek**	**5.84**	**19**	Pn	**Pn**	**20 42 17.0**	**+1.0**
N19K	**Bonanza Creek**	**5.84**	**19**	P	**Pn**	**20 42 16.6**	**+0.7**
	baz=202						
SVW2	**Sprevoloh**	**5.93**	**13**		**Pn**	**20 42 18.0**	**+0.8**
OKNC	**Okmok New Cone**	**5.99**	**255**		**Pn**	**20 42 17.4**	**-0.4**
BRSE	**Bradley Lake S**	**6.02**	**40**		**Pn**	**20 42 17.4**	**-0.9**
BRSE	**Bradley Lake S**	**6.02**	**40**	P	**Pn**	**20 42 17.4**	**-0.9**
	baz=226						
NIKH	**Nikolski High**	**6.59**	**253**		**Pn**	**20 42 26.0**	**-0.1**
NIKH	**Nikolski High**	**6.59**	**253**	P	**Pn**	**20 42 26.0**	**-0.1**
	baz=64						
SLKM	**Skilak Lake**	**6.74**	**37**		**Pn**	**20 42 28.0**	**-0.3**
SPIA	**Saint Paul Isl**	**6.83**	**290**	Pn	**Pn**	**20 42 28.7**	**-0.8**
M19K	**Big River Lodg**	**6.88**	**16**		**Pn**	**20 42 31.0**	**+1.0**
M19K	**Big River Lodg**	**6.88**	**16**	P	**Pn**	**20 42 30.9**	**+0.9**
	baz=199						
L19K	**White Mountain**	**7.07**	**14**	Pn	**Pn**	**20 42 33.4**	**+0.6**
L19K	**White Mountain**	**7.07**	**14**	P	**Pn**	**20 42 33.1**	**+0.4**
	baz=197						
M20K	**Styx River**	**7.08**	**21**		**Pn**	**20 42 34.5**	**+1.5**
M20K	**Styx River**	**7.08**	**21**	P	**Pn**	**20 42 33.7**	**+0.7**
	baz=205						
RC01	**Rabbit Creek A**	**7.33**	**35**	Pn	**Pn**	**20 42 35.8**	**-0.5**
L20K	**Farewell, AK**	**7.50**	**16**		**Pn**	**20 42 39.1**	**+0.5**
L20K	**Farewell, AK**	**7.50**	**16**	P	**Pn**	**20 42 39.1**	**+0.5**
	baz=200						
TT01	**Tatalina**	**7.66**	**8**		**Pn**	**20 42 41.1**	**+0.4**
PWL	**Port Wells**	**7.66**	**40**		**Pn**	**20 42 39.5**	**-1.3**
Q23K	**Middleton Isla**	**7.68**	**53**	Pn	**Pn**	**20 42 40.7**	**-0.3**
MID	**Middleton Isla**	**7.68**	**53**	Pn	**Pn**	**20 42 40.9**	**-0.1**
TTA	**Tatalina**	**7.68**	**8**		**Pn**	**20 42 40.2**	**-0.9**
HIN	**Hinchinbrook I**	**8.10**	**47**	Pn	**Pn**	**20 42 46.2**	**-0.5**
GHO	**Glory Hole Cre**	**8.10**	**34**	Pn	**Pn**	**20 42 44.9**	**-2.0**
GLI	**Glacier Island**	**8.14**	**43**	Pn	**Pn**	**20 42 47.1**	**-0.3**
PPLA	**Purkeypile**	**8.19**	**20**	Pn	**Pn**	**20 42 48.4**	**+0.2**
FID	**Port Fidalgo**	**8.30**	**45**	Pn	**Pn**	**20 42 48.6**	**-1.0**
K20K	**Telida**	**8.31**	**14**	Pn	**Pn**	**20 42 50.1**	**+0.4**
K20K	**Telida**	**8.31**	**14**	P	**Pn**	**20 42 49.2**	**-0.5**
	baz=197						
SML	**Sawmill**	**8.32**	**35**		**Pn**	**20 42 50.1**	**+0.3**
EYAK	**Cordova Ski Ar**	**8.49**	**47**		**Pn**	**20 42 51.7**	**-0.4**
SCM	**Sheep Creek Mo**	**8.68**	**37**	Pn	**Pn**	**20 42 53.9**	**-0.9**
KAIM	**Kayak Island**	**8.78**	**53**	Pn	**Pn**	**20 42 56.6**	**+0.6**
RAGM	**Ragged Mountai**	**8.87**	**50**	Pn	**Pn**	**20 42 57.1**	**-0.3**
KLU	**Klutina**	**8.96**	**42**		**Pn**	**20 42 57.8**	**-0.9**
KLU	**Klutina**	**8.96**	**42**	P	**Pn**	**20 42 58.5**	**-0.2**
	baz=232						
HMT	**Hamilton**	**9.03**	**51**		**Pn**	**20 42 58.9**	**-0.6**
J20K	**Nowinta River**	**9.09**	**12**	Pn	**Pn**	**20 43 01.6**	**+1.3**
SUCK	**Suckling Hills**	**9.13**	**53**	Pn	**Pn**	**20 43 01.8**	**+0.9**
M24K	**Tolsona, Glenn**	**9.26**	**38**	Pn	**Pn**	**20 43 04.2**	**+1.5**
BERG	**Berg Lake**	**9.30**	**51**	Pn	**Pn**	**20 43 02.5**	**-0.8**
BPAW	**Bear Paw Mtn.**	**9.51**	**20**	Pn	**Pn**	**20 43 07.3**	**+1.2**
N25K	**Chitina, Valde**	**9.54**	**44**	Pn	**Pn**	**20 43 06.5**	**-0.1**
DHY	**Denali Highway**	**9.56**	**32**	Pn	**Pn**	**20 43 08.1**	**+1.2**
DHY	**Denali Highway**	**9.56**	**32**	P	**Pn**	**20 43 05.9**	**-1.0**
	baz=221						
SNH	**Sunshine Point**	**9.60**	**54**	Pn	**Pn**	**20 43 07.4**	**0.0**
WAX	**Waxell Ridge**	**9.71**	**52**	Pn	**Pn**	**20 43 09.0**	**+0.1**
ANM	**Nome**	**9.85**	**342**	Pn	**Pn**	**20 43 11.0**	**+0.3**
BARK	**Barkley Ridge**	**9.85**	**53**		**Pn**	**20 43 10.2**	**-0.7**
PAX	**Paxson**	**10.09**	**36**	Pn	**Pn**	**20 43 14.0**	**0.0**
YAH	**Yahtse**	**10.18**	**54**	Pn	**Pn**	**20 43 15.3**	**-0.1**
I21K	**Tanana**	**10.34**	**15**	Pn	**Pn**	**20 43 18.3**	**+1.0**
NEA2	**Nenana**	**10.35**	**23**	Pn	**Pn**	**20 43 16.1**	**-1.5**
MLY	**Manley**	**10.40**	**18**	Pn	**Pn**	**20 43 18.6**	**+0.2**
WRH	**Wood River Hil**	**10.48**	**25**	Pn	**Pn**	**20 43 16.8**	**-2.5**
TABL	**Table Mountain**	**10.48**	**54**	Pn	**Pn**	**20 43 20.3**	**+0.7**
CTGM	**Chitina Glacie**	**10.60**	**51**	Pn	**Pn**	**20 43 22.3**	**+1.1**
H21K	**Melozitna Rive**	**10.68**	**13**	Pn	**Pn**	**20 43 22.4**	**+0.4**
CCB	**Clear Creek Bu**	**10.69**	**25**	Pn	**Pn**	**20 43 20.6**	**-1.6**
RIDG	**Independent Ri**	**10.83**	**34**	Pn	**Pn**	**20 43 22.6**	**-1.5**
MDM	**Murphy Dome**	**10.85**	**24**	Pn	**Pn**	**20 43 22.6**	**-1.8**
IMAR	**Indian Mountai**	**10.88**	**10**	Pn	**Pn**	**20 43 25.8**	**+1.0**
IL31		**11.02**	**27**	Pn	**Pn**	**20 43 24.3**	**-2.4**
ILAR	**Eielson Array**	**11.02**	**27**	P	**Pn**	**20 43 23.9**	**-2.8**
	0.3nm,0.3s,baz=217,slow=14,SNR=12						
ILAR				S	Sn	20 45 18.0	-10
	0.2nm,0.3s,baz=186,slow=7.3,SNR=1.7						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**11.02**	**27**	Pn	**Pn**	**20 43 26.6**	**-0.1**
M27K	**Edge Creek, AK**	**11.03**	**44**	Pn	**Pn**	**20 43 27.3**	**+0.3**
TNA	**Tin City**	**11.23**	**339**	Pn	**Pn**	**20 43 30.3**	**+0.9**
SCRK	**Sand Creek**	**11.27**	**34**	Pn	**Pn**	**20 43 29.4**	**-0.7**
J25K	**Salcha River,**	**11.31**	**30**	Pn	**Pn**	**20 43 29.3**	**-1.4**
H23K	**Yukon River**	**11.34**	**19**	Pn	**Pn**	**20 43 32.1**	**+1.0**
ADK		**11.39**	**260**	Pn	**Pn**	**20 43 33.5**	**+1.7**
L27K	**Beaver Creek,**	**11.44**	**41**	Pn	**Pn**	**20 43 32.1**	**-0.4**
BCAR	**Beaver Creek A**	**11.46**	**41**	Pn	**Pn**	**20 43 31.9**	**-0.8**
J26L	**Joseph Creek**	**11.76**	**33**	Pn	**Pn**	**20 43 36.6**	**-0.4**
I26K	**Coal Creek Min**	**12.46**	**31**	Pn	**Pn**	**20 43 45.4**	**-0.9**
EGAK	**Eagle**	**12.72**	**35**	Pn	**Pn**	**20 43 48.7**	**-1.1**
SIT	**Sitka**	**12.95**	**73**	Pn	**Pn**	**20 43 52.0**	**-0.9**
WHY	**Whitehorse**	**13.51**	**57**	Pn	**Pn**	**20 44 02.2**	**+1.5**
AMKA	**Amchitka**	**13.87**	**262**	Pn	**Pn**	**20 44 03.3**	**-2.3**
I29M	**Ogilvie Camp,**	**14.03**	**36**	P	**P**	**20 44 16.2**	**+1.8**
EPYK	**Eagle Plains**	**15.16**	**35**	P	**P**	**20 44 28.2**	**+1.3**
EPYK				IAmb	IAmb	20 44 28.6	
	comp=Z,15nm,0.7s						
DLBC	**Dease Lake**	**15.75**	**67**	P	**P**	**20 44 34.3**	**+0.8**
DLBC				IAmb	IAmb	20 45 12.3	
	comp=Z,6.5nm,1.4s						
INK	**Inuvik**	**17.30**	**32**	P	**Pn**	**20 44 47.7**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=218,slow=14,SNR=14						
	comp=Z,1.7nm,0.5s						
INK	**Inuvik**	**17.30**	**32**	Pn	**Pn**	**20 44 48.5**	**-1.1**
C36M	**Paulatuk**	**20.79**	**34**	P	**P**	**20 45 28.1**	**-0.5**
C36M				IAmb	IAmb	20 46 01.1	
	comp=Z,18nm,1.4s						
A36M	**Sachs Harbour**	**21.72**	**27**	P	**P**	**20 45 37.1**	**-1.4**
A36M				IAmb	IAmb	20 46 08.7	
	comp=Z,9.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**25.43**	**283**	P	**P**	**20 46 14.1**	**-0.8**
PDAR	**Pinedale Array**	**33.69**	**91**	P	**P**	**20 47 29.9**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=319,slow=6.3,SNR=4.8						
	comp=Z,0.4nm,0.7s						
PFO	**Pinyon Flats O**	**36.23**	**109**	LR	LR	21 00 13.8	
	comp=Z,37nm,18.6s,baz=114,slow=32						
H11N2	**WAKE ISLAND Hy**	**44.14**	**230**	T	T	21 35 16.3	
	baz=28,slow=76,SNR=3.0						
H11N3	**WAKE ISLAND Hy**	**44.14**	**230**	T	T	21 35 17.8	
	baz=28,slow=76,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**44.16**	**230**	T	T	21 35 17.6	
	baz=28,slow=76,SNR=2.2						
H11S1	**WAKE ISLAND Hy**	**45.30**	**230**	T	T	21 37 25.7	
	baz=28,slow=74,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**45.31**	**230**	T	T	21 37 27.4	
	baz=28,slow=74,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**45.32**	**230**	T	T	21 37 30.2	
	baz=28						
TXAR	**Lajitas Array**	**46.54**	**101**	P	**P**	**20 49 16.3**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=316,slow=2.5,SNR=2.2						
	comp=Z,0.2nm,0.7s						
SONM	**Songino Array**	**55.11**	**305**	P	**P**	**20 50 19.0**	**0.0**
	comp=Z,0.3nm,0.5s,baz=43,slow=5.8,SNR=2.3						
	comp=Z,0.3nm,0.5s						
ARCES	**ARCESS Array B**	**55.37**	**358**	P	**P**	**20 50 19.8**	**-0.5**
	comp=Z,8.2nm,1.1s,baz=34,slow=8.8,SNR=3.7						
	comp=Z,8.2nm,1.1s						
FINES	**FINESS Array B**	**63.47**	**358**	P	**P**	**20 51 15.4**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=12,slow=9.8,SNR=7.6						
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	**66.13**	**319**	P	**P**	**20 51 33.0**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=53,slow=4.7,SNR=4.0						
	com

comp=Z,0.5nm,0.4s,baz=65,slow=1.0,SNR=5.6

BRTR Keskin Array B 151.55 297 PKPbc **PKPbc 21 03 44.5 -0.1**
comp=Z,0.3nm,0.5s,baz=146,slow=6.0,SNR=3.3

IDC ***28*** *20:56:41.1±1.2, 19°.21N×145°.26E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=76.3km s-min=26.9km az=109.0*

NEIC ***28*** *20:56:51.3±2.0, 18°.58N±0°.03×146°.4E±0°.4, h75km±18km, mb4.5/10, Error ellipse: s-maj=53.5km s-min=3.0km az=87.0*

ISC 28 20:56:53.2±1.0, **18°.53N**±0°.10×**145°.9E**±0°.3, **h100**km, **n17**, σ**2s34/17**, **mb4.3**/10, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.00**	**191**	Pn	**Pn**	**20 58 04.3**	**-1.8**
JCJ	**Chichijima**	**9.18**	**339**	Pn	**Pn**	**20 59 03.4**	**+0.7**
MTN	**Manton Dam**	**34.39**	**206**	P	**P**	**21 03 33.1**	**+2.1**
KNRA	**Kununurra**	**37.93**	**207**	P	**P**	**21 04 03.0**	**+1.9**
KNRA				IAmb	IAmb	21 04 38.5	
	comp=Z,12nm,1.2s						
CTAO	**Charters Tower**	**38.38**	**179**	P	**P**	**21 04 03.7**	**-1.2**
WB0	**Warramunga Arr**	**39.69**	**197**	P	**P**	**21 04 18.8**	**+3.0**
WB0				IAmb	IAmb	21 04 24.4	
	comp=Z,6.4nm,1.2s						
WR0	**Warramunga Arr**	**39.83**	**197**	P	**P**	**21 04 18.9**	**+1.9**
WR0				IAmb	IAmb	21 04 29.3	
	comp=Z,6.0nm,1.3s						
WRAB	**Tennant Creek**	**39.86**	**197**	P	**P**	**21 04 17.8**	**+0.6**
WRAB				IAmb	IAmb	21 04 24.0	
	comp=Z,13nm,1.5s						
WB2	**Warramunga Arr**	**39.87**	**197**	P	**P**	**21 04 18.1**	**+0.8**
WB2				IAmb	IAmb	21 04 21.7	
	comp=Z,3.6nm,0.8s						
WRA	**Warramunga Arr**	**39.87**	**197**	P	**P**	**21 04 21.0**	**+3.7**
	comp=Z,2.2nm,0.8s,baz=18,slow=9.2,SNR=19						
	comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**39.87**	**197**	P	**P**	**21 04 19.3**	**+2.0**
FITZ	**Fitzroy Crossi**	**41.47**	**210**	P	**P**	**21 04 32.5**	**+2.0**
FITZ				IAmb	IAmb	21 04 43.4	
	comp=Z,10.0nm,1.5s						
AS31	**Alice Springs**	**43.53**	**196**	P	**P**	**21 04 49.7**	**+2.5**
ASAR	**Alice Springs**	**43.53**	**196**	P	**P**	**21 04 50.2**	**+3.1**
	comp=Z,0.5nm,0.5s,baz=11,slow=7.4,SNR=12						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**43.53**	**196**	P	**P**	**21 04 48.6**	**+1.4**
NVAR	**Mina Array Bea**	**83.12**	**52**	P	**P**	**21 09 09.6**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=265,slow=5.8,SNR=8.8						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**87.11**	**335**	P	**P**	**21 09 24.7**	**-3.0**
	comp=Z,0.4nm,0.5s,baz=45,slow=8.4,SNR=3.4						
	comp=Z,0.4nm,0.5s						

JMA ***28*** *21:09:32.6±0.4, 23°N±1°×12°2E±°, h14km, MV3.5/13, TAIWAN REGION*

TAP ***28*** *21:09:34.9, 23°.10N×121°.52E, h45km, ML3.7, C*

ISC 28 21:09:35.0±1.0, **23°.08N**±0°.02×**121°.56E**±0°.02, **h33**km±2km, **n135**, σ**0s99/237**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.18**	**277**	*e*P	**Pb**	**21 09 41.8**	**+0.3**
CHKT	baz=270			*e*S	**Sb**	**21 09 47.1**	**+1.2**
EDH	**Donghe**	**0.26**	**247**	*i* P	**Pb**	**21 09 43.0**	**+0.7**
EDH	baz=232			S	**Sb**	**21 09 49.0**	**+1.8**
ECBN	**Changbin**	**0.26**	**337**	*e*P	**Pb**	**21 09 42.8**	**+0.5**
ECBN	baz=351			*e*S	**Sb**	**21 09 48.5**	**+1.2**
FULB	**Fuli**	**0.28**	**296**	*e*P	**Pn**	**21 09 42.7**	**+0.2**
FULB	baz=295			*e*S	**Sb**	**21 09 48.5**	**+0.9**
ECS	**Chishang**	**0.32**	**274**	*i* P	**Pb**	**21 09 43.4**	**+0.4**
EYUL	baz=270 **Yuli**	**0.35**	**320**	*i* P	**Pb**	**21 09 43.8**	**+0.3**
EYUL	baz=309			*e*S	**Sn**	**21 09 51.0**	**+1.6**
TWF1	**Yuli**	**0.37**	**319**	*e*P	**Pb**	**21 09 43.4**	**-0.3**
TWF1	baz=310			S	**Sb**	**21 09 50.3**	**+0.7**
YULB	**Yu-li**	**0.40**	**322**	P	**Pb**	**21 09 43.5**	**-0.6**
YULB	baz=313			*e*S	**Sb**	**21 09 49.7**	**-0.7**
LDUT	**Ludao**	**0.41**	**192**	*i* P	**Pb**	**21 09 44.6**	**+0.3**
LDUT	baz=186			S	**Sn**	**21 09 51.9**	**+0.9**
LONT	**Longtian**	**0.43**	**247**	P	**Pb**	**21 09 44.1**	**-0.5**
LONT	baz=251			*e*S	**Sb**	**21 09 51.2**	**0.0**
HGSD	**Ruisui**	**0.43**	**343**	*e*P	**Pb**	**21 09 44.3**	**-0.4**
EHY	baz=352 **Hungye**	**0.48**	**333**	*e*P	**Pb**	**21 09 44.5**	**-0.9**
EHY	baz=326			*e*S	**Sb**	**21 09 51.2**	**-1.3**
TTN	**Taitung**	**0.50**	**230**	*e*P	**Pn**	**21 09 46.4**	**+0.6**
TTN	baz=234			S	**Sn**	**21 09 54.8**	**+1.5**
TWGBT	**Beinan**	**0.51**	**240**	*i* P	**Pb**	**21 09 44.9**	**-0.9**
TWGBT	baz=245			*e*S	**Sb**	**21 09 52.3**	**-1.0**
ELDTW	baz=245 **Lidau**	**0.51**	**283**	P	**Pb**	**21 09 44.9**	**-1.0**
EGFH	baz=281 **Guangfu**	**0.60**	**348**	P	**Pn**	**21 09 46.5**	**-0.7**
TEGC	baz=341 **Jichi Village**	**0.63**	**358**	*e*P	**Pn**	**21 09 47.1**	**-0.5**
YUS	baz=12 **Yu-Shan**	**0.69**	**306**	*e*P	**Pn**	**21 09 48.2**	**-0.7**
STYH	baz=307 **Taoyuan**	**0.73**	**278**	P	**Pn**	**21 09 47.7**	**-1.3**
STYH	baz=272			*e*S	**Sn**	**21 09 57.2**	**-1.7**
ECL	**Taimali**	**0.74**	**230**	*e*P	**Pn**	**21 09 48.2**	**-0.8**
ECL	baz=226			*e*S	**Sn**	**21 09 56.8**	**-2.3**
ESL	**Shilin**	**0.74**	**351**	*i* P	**Pn**	**21 09 48.3**	**-0.9**
ESL	baz=346			S	**Sn**	**21 09 58.0**	**-1.3**
STYT	**Tauyuan**	**0.75**	**277**	*e*P	**Pn**	**21 09 48.7**	**-0.5**
STYT	baz=275			S	**Sn**	**21 09 58.8**	**-0.7**
VWDT	**VWDT**	**0.78**	**330**	P	**Pn**	**21 09 49.1**	**-0.5**
VWDT	baz=337			S	**Sn**	**21 09 58.8**	**-1.3**
TEYL	**Yanliau Villag**	**0.79**	**2**	*e*P	**Pb**	**21 09 50.8**	**+0.4**
TEYL	baz=15			*e*S	**Sb**	**21 10 02.2**	**+1.4**
ALS	**Alishan**	**0.82**	**302**	*i* P	**Pn**	**21 09 50.5**	**0.0**
ALS	baz=305			S	**Sn**	**21 10 01.0**	**-0.6**
SLGT	**Liugui**	**0.85**	**265**	*e*P	**Pn**	**21 09 50.8**	**+0.2**
SLGT	baz=263			*e*S	**Sn**	**21 10 01.6**	**-0.3**
TPUB	**Ta-pu**	**0.89**	**285**	P	**Pn**	**21 09 51.5**	**+0.4**
TPUB	baz=284			*e*S	**Sn**	**21 10 03.7**	**+0.9**
ETM	**Tongmen**	**0.89**	**356**	*e*P	**Pn**	**21 09 50.2**	**-0.9**
ETM	baz=350			*e*S	**Sn**	**21 10 02.8**	**-0.1**
WTP	**Ta-pu**	**0.89**	**281**	*i* P	**Pn**	**21 09 51.5**	**+0.2**
WTP	baz=280			*e*S	**Sn**	**21 10 03.9**	**+0.9**
WHYT	**Xinyi Township**	**0.90**	**314**	P	**Pn**	**21 09 51.4**	**0.0**
WHYT	baz=315			*e*S	**Sn**	**21 10 02.4**	**-0.8**
HWA	**Hwalien**	**0.90**	**3**	*e*P	**Pn**	**21 09 51.3**	**+0.1**
HWA	baz=15			*e*S	**Sb**	**21 10 04.5**	**+0.6**
SGST	**Jiashian**	**0.90**	**271**	*e*P	**Pn**	**21 09 50.8**	**-0.6**
SGST	baz=269			*e*S	**Sn**	**21 10 03.4**	**+0.2**
SSLB	**Suanglung**	**0.90**	**322**	P	**Pn**	**21 09 51.0**	**-0.4**
SSLB	baz=325			*e*S	**Sn**	**21 10 01.7**	**-1.6**
SSD	**Sandimen**	**0.92**	**249**	*e*P	**Pn**	**21 09 51.0**	**-0.6**
TSMG	baz=243 **Majia**	**0.92**	**247**	*e*P	**Pn**	**21 09 50.8**	**-0.8**
TSMG	baz=245			*e*S	**Sn**	**21 10 01.8**	**-1.9**
OWD	**Renai**	**0.94**	**338**	P	**Pn**	**21 09 51.4**	**-0.6**
TAW	baz=347 **Tawu**	**0.94**	**221**	*e*P	**Pn**	**21 09 51.5**	**-0.4**
TAW	baz=223			*e*S	**Sn**	**21 10 02.5**	**-1.7**
WCKO	**Fanlu**	**0.95**	**292**	*e*P	**Pn**	**21 09 51.6**	**-0.4**
WCKO	baz=292			*e*S	**Sn**	**21 10 04.6**	**+0.1**
EAST	**Anshuo**	**0.95**	**224**	P	**Pn**	**21 09 51.2**	**-0.9**
EAST	baz=225			*e*S	**Sn**	**21 10 03.1**	**-1.4**
CHN1	**Nanshi**	**0.96**	**277**	P	**Pn**	**21 09 53.0**	**+0.9**
CHN1	baz=277			*e*S	**Sb**	**21 10 06.2**	**+0.6**
TAWH	**Dawu Township**	**0.96**	**220**	*e*P	**Pn**	**21 09 50.4**	**-1.7**
TAWH	baz=222			*e*S	**Sn**	**21 10 02.2**	**-2.5**
MASBT	**Mashibuluo**	**0.97**	**242**	*e*P	**Pn**	**21 09 51.8**	**-0.5**
SNST	baz=238 **Tainan City**	**0.99**	**279**	P	**Pn**	**21 09 53.2**	**+0.6**
SNST	baz=278			*e*S	**Sb**	**21 10 07.0**	**+0.5**
WUSB	**Renai**	**1.00**	**336**	P	**Pn**	**21 09 52.2**	**-0.6**
WUSB	baz=336			*e*S	**Sn**	**21 10 04.1**	**-1.8**
TWD	**Chiawan**	**1.00**	**2**	*e*P	**Pn**	**21 09 51.9**	**-0.8**
TWD	baz=352			*e*S	**Sn**	**21 10 04.3**	**-1.4**
SCST	baz=352 **Cishan**	**1.00**	**259**	*e*P	**Pb**	**21 09 53.9**	**0.0**
SCST	baz=258			*e*S	**Sb**	**21 10 08.2**	**+1.4**
TWK	baz=258 **Hsinying**	**1.01**	**281**	P	**Pn**	**21 09 53.4**	**+0.5**
TWK	baz=280			*e*S	**Sb**	**21 10 08.3**	**+1.3**
SMLT	**Sun Moon Lake**	**1.01**	**323**	P	**Pn**	**21 09 53.0**	**+0.1**
SMLT	baz=324			*e*S	**Sn**	**21 10 04.8**	**-1.2**
LAY	**Lan-yu**	**1.03**	**181**	*e*P	**Pn**	**21 09 52.8**	**-0.4**
LAY	baz=173			*e*S	**Sn**	**21 10 06.5**	**0.0**
CHGB	**Renai**	**1.04**	**340**	*e*P	**Pn**	**21 09 53.2**	**-0.3**
CHGB	baz=340			*e*S	**Sn**	**21 10 05.2**	**-1.9**
SGLT	**Jiouru**	**1.05**	**251**	*e*S	**Sb**	**21 10 09.8**	**+1.7**
WJS	baz=250 **Zhushan**	**1.07**	**314**	*e*P	**Pn**	**21 09 54.1**	**+0.5**
WJS	baz=313			*e*S	**Sn**	**21 10 07.9**	**+0.6**
LYUB	**Lan-yu**	**1.07**	**179**	P	**Pn**	**21 09 52.3**	**-1.3**
ETL	baz=171 **Fush Village**	**1.08**	**3**	P	**Pn**	**21 09 53.2**	**-0.6**
TWM1	baz=354 **Shoushan**	**1.08**	**257**	*e*P	**Pb**	**21 09 56.2**	**+1.0**
TWM1	baz=256			*e*S	**Sb**	**21 10 12.0**	**+2.9**
WPL	baz=256 **Puli Township**	**1.08**	**329**	P	**Pn**	**21 09 53.9**	**0.0**
SSPT	baz=336 **Xinbi**	**1.09**	**237**	*e*P	**Pn**	**21 09 54.8**	**+0.9**
SSPT	baz=229			*e*S	**Sb**	**21 10 09.9**	**+0.6**
NACB	baz=229 **Ninganchiao**	**1.09**	**2**	*e*P	**Pn**	**21 09 53.4**	**-0.6**
NACB	baz=352			*e*S	**Sn**	**21 10 07.2**	**-0.7**
WHF	baz=352 **Hehuan Shan**	**1.10**	**346**	P	**Pn**	**21 09 53.8**	**-0.6**
WGK	baz=353 **Gukeng**	**1.10**	**304**	P	**Pn**	**21 09 54.9**	**+0.8**
WGK	baz=303			*e*S	**Sn**	**21 10 09.6**	**+1.4**
CHN3	**Shinhua**	**1.10**	**270**	*e*P	**Pb**	**21 09 56.0**	**+0.5**
CHN3	baz=270			S	**Sb**	**21 10 12.0**	**+2.4**
SLIU	baz=270 **Shizi**	**1.11**	**220**	*e*P	**Pn**	**21 09 53.4**	**-0.8**
SCZT	baz=206 **Fangliau**	**1.12**	**231**	*e*P	**Pn**	**21 09 55.1**	**+0.8**
SHHT	baz=228 **Tainan City**	**1.12**	**267**	*e*P	**Pb**	**21 09 55.7**	**-0.1**
SHHT	baz=267			*e*S	**Sb**	**21 10 11.8**	**+1.7**
WDLH	**Douliu**	**1.12**	**303**	*e*P	**Pn**	**21 09 55.3**	**+1.0**
WDLH	baz=302			*e*S	**Sb**	**21 10 10.2**	**0.0**
CHY	**Chiayi**	**1.13**	**292**	*e*P	**Pn**	**21 09 55.0**	**+0.6**
CHY	baz=291			*e*S	**Sn**	**21 10 09.9**	**+1.2**
ETLH	baz=291 **Xiulin Townshi**	**1.13**	**356**	*e*P	**Pn**	**21 09 53.5**	**-1.0**
ETLH	baz=357			*e*S	**Sn**	**21 10 08.1**	**-0.9**
WNT	baz=357 **Mingjian**	**1.13**	**315**	*e*P	**Pn**	**21 09 55.6**	**+1.1**
WNT	baz=314			*e*S	**Sn**	**21 10 10.4**	**+1.4**
WCS	baz=314 **Beigang Elemen**	**1.14**	**329**	*e*P	**Pn**	**21 09 54.1**	**-0.5**
ICHU	baz=335 **Yijhu**	**1.21**	**284**	*e*P	**Pn**	**21 09 56.1**	**+0.5**
ICHU	baz=283			*e*S	**Sn**	**21 10 12.2**	**+1.3**
TWT	**Tachien**	**1.22**	**343**	*e*P	**Pn**	**21 09 56.5**	**+0.5**
TWT	baz=342			*e*S	**Sn**	**21 10 10.5**	**-0.9**
TDCB	baz=342 **Techi**	**1.23**	**343**	*e*P	**Pn**	**21 09 56.6**	**+0.6**
WTK	baz=335 **Tuku**	**1.24**	**300**	*e*P	**Pn**	**21 09 56.1**	**+0.1**
WTK	baz=299			*e*S	**Sn**	**21 10 11.3**	**-0.2**
SMST	baz=299 **Manzhou Townsh**	**1.25**	**213**	*e*P	**Pn**	**21 09 55.2**	**-0.9**
SMST	baz=201			*e*S	**Sn**	**21 10 10.5**	**-1.2**
WWF	baz=201 **Wufeng**	**1.25**	**321**	*e*P	**Pn**	**21 09 56.1**	**0.0**
WWF	baz=309			*e*S	**Sn**	**21 10 12.6**	**+0.9**
WYL	baz=309 **Yuanlin Townsh**	**1.26**	**315**	*e*P	**Pn**	**21 09 57.1**	**+0.8**
WYL	baz=313			*e*S	**Sn**	**21 10 13.4**	**+1.3**
WSSB	baz=313 **Gushan**	**1.27**	**250**	*e*P	**Pb**	**21 09 58.0**	**-0.5**
WSSB	baz=265			*e*S	**Sb**	**21 10 16.6**	**+2.0**
	baz=265						
WSL	**Shuilin Townsh**	**1.30**	**290**	*e*P	**Pn**	**21 09 56.4**	**-0.5**
WSL	baz=290			*e*S	**Sn**	**21 10 12.9**	**-0.3**
WLCH	baz=290 **Liuqiu**	**1.31**	**237**	*e*P	**Pb**	**21 09 59.0**	**-0.1**
HEN	baz=235 **Hengchun**	**1.31**	**216**	*e*P	**Pn**	**21 09 57.1**	**+0.1**
HEN	baz=204			*e*S	**Sn**	**21 10 13.8**	**+0.5**
TSEB	baz=204 **Hengchuen, Pin**	**1.32**	**208**	*e*S	**Sn**	**21 10 14.0**	**+0.5**
WHP	baz=199 **Taichung City**	**1.32**	**335**	*e*P	**Pn**	**21 09 58.7**	**+1.5**
TWKBT	baz=340 **Hengchun**	**1.33**	**212**	*e*P	**Pn**	**21 09 56.7**	**-0.5**
TWKBT	baz=201			*e*S	**Sn**	**21 10 13.6**	**-0.1**
TWK1	baz=201 **Hengchun**	**1.33**	**212**	*e*P	**Pn**	**21 09 56.7**	**-0.5**
TWK1	baz=200			*e*S	**Sn**	**21 10 13.2**	**-0.5**
TCU	baz=200 **Taichung**	**1.34**	**323**	*e*P	**Pb**	**21 09 59.0**	**-0.6**
TCU	baz=311			*e*S	**Sb**	**21 10 16.0**	**-0.4**
WSF	baz=311 **Szhu**	**1.35**	**295**	*e*P	**Pn**	**21 09 58.2**	**+0.6**
WSF	baz=294			*e*S	**Sn**	**21 10 14.7**	**+0.3**
ENA	baz=294 **Nanau**	**1.36**	**7**	*e*P	**Pn**	**21 09 57.3**	**-0.3**
ENA	baz=356			*e*S	**Sn**	**21 10 14.2**	**-0.2**
NNSB	baz=356 **Datong**	**1.36**	**353**	*e*P	**Pn**	**21 09 57.4**	**-0.4**
NNSB	baz=2.0			*e*S	**Sn**	**21 10 14.2**	**-0.4**
WCHH	baz=2.0 **Zhanghua**	**1.36**	**318**	*e*P	**Pn**	**21 09 58.3**	**+0.7**
WCHH	baz=316			*e*S	**Sn**	**21 10 16.0**	**+1.5**
TSCK	baz=316 **Chigu Township**	**1.36**	**273**	*e*P	**Pn**	**21 09 57.2**	**-0.4**
TSCK	baz=273			*e*S	**Sn**	**21 10 14.4**	**-0.1**
WRL	baz=273 **Guolierlin Hig**	**1.36**	**307**	*e*P	**Pn**	**21 09 56.9**	**-0.8**
WRL	baz=306			*e*S	**Sn**	**21 10 13.9**	**-0.7**
NNS	baz=306 **Nan Shan**	**1.37**	**353**	*e*P	**Pn**	**21 09 56.9**	**-1.0**
NNS	baz=2.0			*e*S	**Sn**	**21 10 13.6**	**-1.3**
EWUT	baz=2.0 **Wuta**	**1.38**	**8**	*e*P	**Pn**	**21 09 56.7**	**-1.2**
EWUT	baz=20			*e*S	**Sn**	**21 10 13.4**	**-1.6**
LATG	baz=20 **Datong**	**1.45**	**359**	*e*P	**Pn**	**21 09 58.6**	**-0.4**
LATG	baz=359			*e*S	**Sn**	**21 10 17.1**	**+0.1**
TWQ1	**Liyutan**	**1.46**	**330**	*e*P	**Pn**	**21 10 00.4**	**+1.4**
TWQ1	baz=329			*e*S	**Sb**	**21 10 19.9**	**+0.1**
NDT	baz=329 **Datong Townshi**	**1.52**	**358**	*e*P	**Pn**	**21 10 00.0**	**+0.1**
NSY	baz=360 **Sanyi**	**1.52**	**331**	*e*P	**Pn**	**21 10 01.7**	**+1.8**
NSY	baz=330			*e*S	**Sb**	**21 10 21.3**	**-0.4**
WDJ	baz=330 **Dajia District**	**1.52**	**326**	*e*P	**Pn**	**21 10 01.6**	**+1.8**
WDJ	baz=325			*e*S	**Sb**	**21 10 21.4**	**-0.2**
TWC	baz=325 **Suao**	**1.55**	**10**	*e*P	**Pn**	**21 10 00.8**	**+0.5**
TWC	baz=22			*e*S	**Sn**	**21 10 19.6**	**+0.4**
ENTT	baz=22 **Nioudou**	**1.56**	**0**	*e*P	**Pn**	**21 09 59.3**	**-1.1**
ENTT	baz=1.0			*e*S	**Sn**	**21 10 18.9**	**-0.5**
NDS	baz=1.0 **Dongshan**	**1.56**	**5**	*e*P	**Pn**	**21 09 59.6**	**-0.8**
NDS	baz=354			*e*S	**Sn**	**21 10 18.9**	**-0.5**
YHNB	baz=354 **Yeheng**	**1.59**	**354**	*e*P	**Pn**	**21 10 01.2**	**+0.3**
YHNB	baz=353			*e*S	**Sn**	**21 10 20.6**	**+0.1**
NFF	baz=353 **Wufeng Townshi**	**1.60**	**345**	*e*P	**Pn**	**21 10 01.2**	**+0.2**
NFF	baz=348			*e*S	**Sn**	**21 10 21.5**	**+0.9**
NSK	baz=348 **Sanguang**	**1.60**	**353**	*e*P	**Pn**	**21 10 00.5**	**-0.6**
NSK	baz=352			*e*S	**Sn**	**21 10 20.0**	**-0.7**
NMLH	baz=352 **Miaoli**	**1.62**	**334**	*e*P	**Pn**	**21 10 02.4**	**+1.2**
NMLH	baz=333			*e*S	**Sb**	**21 10 24.0**	**-0.3**
NSTT	baz=333 **Nanjuang**	**1.63**	**342**	*e*P	**Pn**	**21 10 02.9**	**+1.5**
NSTT	baz=340			*e*S	**Sn**	**21 10 23.4**	**+2.2**
LIOB	baz=340 **Emei**	**1.64**	**342**	*e*P	**Pn**	**21 10 03.0**	**+1.5**
LIOB	baz=341			*e*S	**Sb**	**21 10 24.1**	**-1.0**
TWE	baz=341 **Neicheng**	**1.64**	**3**	*e*P	**Pn**	**21 10 02.5**	**+1.0**
FUSB	baz=5.0 **Fushanzhiwuyua**	**1.68**	**1**	*e*P	**Pn**	**21 10 02.3**	**+0.2**
FUSB	baz=1.0			*e*S	**Sn**	**21 10 22.7**	**+0.2**
NTC	baz=1.0 **Toucheng**	**1.79**	**8**	*e*P	**Pn**	**21 10 05.0**	**+1.4**
PHUB	baz=358 **P'eng-hu**	**1.88**	**284**	P	**Pn**	**21 10 04.3**	**-0.5**
PHUB	baz=284			S	**Sn**	**21 10 25.5**	**-1.9**
TIPB	baz=284 **Shuangxi**	**1.90**	**7**	*e*P	**Pn**	**21 10 06.2**	**+1.0**
TIPB	baz=357			*e*S	**Sn**	**21 10 29.0**	**+1.0**
PNG	baz=357 **Penghu**	**1.91**	**285**	*e*P	**Pn**	**21 10 04.8**	**-0.4**
PNG	baz=285			*e*S	**Sn**	**21 10 26.5**	**-1.6**
YOJ	**Yonaguni jima**	**1.91**	**44**	*e*P	**Pn**	**21 10 06.2**	**+1.0**
YOJ				*e*S	**Sn**	**21 10 29.1**	**+0.8**
VCHM	**Qimei**	**1.97**	**274**	P	**Pn**	**21 10 05.5**	**-0.5**
VCHM	baz=265			*e*S	**Sn**	**21 10 28.2**	**-1.3**
NWF	baz=265 **Wu-fen Shan**	**2.00**	**6**	*e*P	**Pn**	**21 10 08.0**	**+1.5**
NWF	baz=353			*e*S	**Sn**	**21 10 31.8**	**+1.4**
TWS1	baz=353 **Kuangyinshan**	**2.02**	**356**	*e*P	**Pn**	**21 10 09.0**	**+2.3**
TWS1	baz=6.0			*e*S	**Sb**	**21 10 34.2**	**-1.7**
SXI1	baz=6.0 **Grass Mountain**	**2.03**	**8**	*e*P	**Pn**	**21 10 08.3**	**+1.4**
SXI1	baz=358			*e*S	**Sn**	**21 10 33.5**	**+2.3**
YM01	baz=358 **YM01**	**2.06**	**0**	*e*P	**Pn**	**21 10 08.5**	**+1.1**
ANP	**Anpu**	**2.10**	**359**	*e*P	**Pn**	**21 10 09.8**	**+1.9**
HATJ	baz=359 **Hateruma jima**	**2.28**	**64**	P	**Pn**	**21 10 10.5**	**+0.3**
HATJ				S	**Sn**	**21 10 37.0**	**-0.1**
IRIF	**Iriomote-Funau**	**2.35**	**57**	P	**Pn**	**21 10 12.1**	**+0.9**
IRIF				*e*S	**Sn**	**21 10 39.1**	**+0.1**
JKRS	**Kuro-shima**	**2.52**	**62**	P	**Pn**	**21 10 14.6**	**+0.9**
JKRS				S	**Sn**	**21 10 43.6**	**+0.4**
JIJ	**Ishigaki jima**	**2.69**	**61**	P	**Pn**	**21 10 16.3**	**+0.3**
JIJ				S	**Sn**	**21 10 46.7**	**-0.7**
JISG	**Ishigakijimahi**	**2.93**	**59**	P	**Pn**	**21 10 19.0**	**-0.3**
JISG				*e*S	**Sn**	**21 10 52.3**	**-1.1**
KNM	**Kinmen**	**3.16**	**296**	*e*P	**Pn**	**21 10 22.3**	**-0.1**
KNMB	baz=294 **Chin-men Tao**	**3.22**	**296**	*e*P	**Pn**	**21 10 22.2**	**-1.1**
JTJ	baz=295 **Tarama**	**3.27**	**61**	P	**Pn**	**21 10 24.5**	**+0.6**

JTJ				S	Sn	21 11 00.9	-0.8		
MATB	**Ma-tsu**	**3.40**	**335**	*eP*	Pn	21 10 25.2	-0.5		
	baz=335								
JIRB	**Irabujima**	**3.74**	**61**	P	Pn	21 10 30.6	+0.3		
JIRB				*eS*	Sn	21 11 12.3	-0.9		
AXDP	**Jialang**	**3.75**	**300**	*eP*	Pn	21 10 29.4	-1.1		
	baz=299								
MHZQ	**Yeshan**	**3.79**	**323**	*eP*	Pn	21 10 29.9	-1.2		
	baz=323								
JMJ2	**Miyako jima3**	**3.82**	**64**	*eP*	Pn	21 10 32.2	+0.6		
JMJ2				*eS*	Sn	21 11 15.0	-0.3		
DSXP	**Dongshan**	**3.85**	**280**	*eP*	Pn	21 10 31.2	-0.7		
	baz=280								
XPSS	**Dashiqiu**	**4.03**	**342**	*eP*	Pn	21 10 33.6	-0.8		
	baz=343								

IDC 28 21:18:57.3±2.6, 3°39S×135°51E, h0km, mb3.2/2, mbtmp3.7/5, ML3.7/3, Error ellipse: s-maj=69.6km s-min=26.8km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.93**	**300**	Pn	Pn	21 20 12.9	+0.3
	6.8nm,0.3s,baz=231,slow=22,SNR=112						
SIJI				Sn	Sn	21 21 03.4	-7.1
	11nm,0.3s,baz=267,slow=23,SNR=16						
	22nm,0.2s						
WRA	**Warramunga Arr**	**16.49**	**184**	Pn	Pn	21 22 48.5	-1.7
	0.2nm,0.3s,baz=1.9,slow=13,SNR=12						
WRA				Sn	Sn	21 25 41.3	-13
	0.3nm,0.3s,baz=354,slow=24,SNR=6.2						
	1.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**17.52**	**213**	P	P	21 23 04.0	-0.4
	0.3nm,0.3s,baz=24,slow=8.5,SNR=18						
FITZ				S	Sn	21 26 04.2	-15
	2.3nm,0.5s,baz=190,slow=13,SNR=7.2						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**20.21**	**184**	P	P	21 23 34.4	+0.4
	0.4nm,0.4s,baz=5.3,slow=12,SNR=4.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**68.41**	**324**	P	P	21 30 00.9	-0.1
	0.2nm,0.5s,baz=112,slow=7.6,SNR=5.3						
	0.2nm,0.5s						

*IDC **28** 21:20:47.0±0.8, 40°.43N×123°.59W, h0km, mb4.0/9, mbtmp4.0/15, ML3.8/6, MS3.5/41, Error ellipse: s-maj=15.6km s-min=9.7km az=46.0*

*NEIC **28** 21:20:51.8±1.0, 40°.44N±0°.02×123°.43W±0°.03, h39km±3km, Error ellipse: s-maj=3.8km s-min=3.3km az=108.0*

*NCEDC **28** 21:20:52.1±1.0, 40°.44N±0°.02×123°.41W±0°.03, h36km±4km, Mwr4.5/3, mb4.4/40(NEIC), ML4.0/120(NEIC), Error ellipse: s-maj=3.7km s-min=3.1km az=105.0*

*NEIC **28** 21:20:52.1, 40°.44N×123°.41W, h36km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=5.28; Mθθ=0.39; Mφφ=4.89; Mrθ=-0.29; Mθφ=1.81; Mφr=-3.89; Fault plane solution: M=6.67000×10^15^ NP1:φ=208.63000°, δ=28.18000°, λ=-73.90000°. NP2:φ=10.50000°, δ=63.02000°, λ=-98.45000°. Principal axes: T 6.7215, Plg18.0000°, Azm107.0000°; N -0.1078, Plg8.0000°, Azm14.0000°; P -6.6137, Plg71.0000°, Azm262.0000°;*

*ANF **28** 21:20:53.0±0.3, 40°.45N×123°.52W, h35km, ML4.3/16 Error ellipse: s-maj=4.7km s-min=1.9km az=66.0*

ISC 28 21:20:52.0±0.5, 40°42N±0°04×123°41W±0°04, h36km±1km, n358, σ1°43/291, mb4.2/19, MS3.5/32, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPPM	**Pickett Peak**	**0.08**	**152**		Pn	21 20 58.6	+0.2
KHBM	**Hayfork Bally**	**0.28**	**31**		Pn	21 20 59.5	-0.8
KHBM					Sn	21 21 05.5	-1.7
KMRM	**Mail Ridge**	**0.30**	**229**		Pn	21 21 00.4	+0.1
KMRM					Sn	21 21 06.9	+0.1
KMRM	**Mail Ridge**	**0.30**	**229**	IAML		21 21 07.7	
	comp=N,81μm,0.8s						
KMRM				IAML		21 21 08.8	
	comp=E,57μm,0.5s						
KCRM	**Chalk Rock**	**0.31**	**271**		Pn	21 21 00.2	-0.1
LBPM	**Beegum Peak**	**0.42**	**104**		Pn	21 21 01.3	-0.2
KHMM	**Horse Mountain**	**0.52**	**332**		Pn	21 21 02.5	-0.6
KHMM					Sn	21 21 10.7	0.0
KHMM	**Horse Mountain**	**0.52**	**332**	IAML		21 21 11.0	
	comp=N,62μm,0.5s						
KHMM				IAML		21 21 11.5	
	comp=E,68μm,0.5s						
KMPM	**Mount Pierce**	**0.54**	**270**		Pn	21 21 02.9	-0.5
KMPM					Sn	21 21 11.8	+0.6
KMPM	**Mount Pierce**	**0.54**	**270**	IAML		21 21 11.9	
	comp=E,33μm,0.6s						
KMPM				IAML		21 21 12.3	
	comp=N,56μm,0.8s						
KBNM	**Bluenose Ridge**	**0.55**	**162**		Pn	21 21 03.8	+0.1
KIPM	**Iron Peak**	**0.61**	**185**		Pn	21 21 04.4	-0.1
JCC	**Jacoby Creek,**	**0.61**	**310**		Pn	21 21 03.4	-1.0
JCC					Sn	21 21 12.5	-0.5
JCC	**Jacoby Creek,**	**0.61**	**310**	IAML		21 21 17.2	
	comp=E,6μm,0.7s						
JCC				IAML		21 21 18.5	
	comp=N,6μm,0.8s						
KSMM	**Slide Mountain**	**0.63**	**248**		Pn	21 21 04.0	-0.6
LGPM	**Granite Peak**	**0.66**	**42**		Pn	21 21 04.3	-0.8
KCTM	**Capetown**	**0.71**	**275**		Pn	21 21 05.3	-0.2
KCPM	**Cahto Peak**	**0.74**	**190**		Pn	21 21 06.1	-0.1
KCPM	**Cahto Peak**	**0.74**	**190**	IAML		21 21 25.8	
	comp=N,8μm,0.6s						
GROM	**Round Mountain**	**0.76**	**131**		Pn	21 21 06.2	-0.1
KFPM	**Farley Peak**	**0.78**	**181**		Pn	21 21 06.4	-0.2
GVV	**Valley View**	**0.86**	**138**		Pn	21 21 07.8	+0.1
KOMM	**Orleans Mounta**	**0.86**	**358**		Pn	21 21 06.8	-0.9
KRPM	**Rodgers**	**0.87**	**328**		Pn	21 21 07.0	-0.9
KRKM	**Rackout Spring**	**0.87**	**168**		Pn	21 21 08.2	+0.2
LBKM	**Bonanza King**	**0.87**	**40**		Pn	21 21 07.3	-0.6
GHMM	**Hull Mountain**	**0.99**	**158**		Pn	21 21 09.6	0.0
LTCM	**Tuscan Springs**	**1.01**	**102**		Pn	21 21 09.4	-0.2
GTC	**Three Chop Rid**	**1.02**	**186**		Pn	21 21 09.4	-0.5
GCK	**Clark Valley**	**1.15**	**139**		Pn	21 21 12.6	+0.9
KRMB	**Red Mountain**	**1.17**	**341**		Pn	21 21 11.1	-0.8
GWRM	**Wonder Ranch**	**1.21**	**176**		Pn	21 21 12.2	-0.4
GNAM	**Navarro Ridge**	**1.23**	**188**		Pn	21 21 12.1	-0.6
LCSM	**College of the**	**1.26**	**37**		Pn	21 21 12.9	-0.3
GTSM	**Trough Springs**	**1.27**	**150**		Pn	21 21 13.8	+0.3
M03C	**McCloud**	**1.30**	**48**		Pn	21 21 13.7	0.0
LAMM	**Antelope Mount**	**1.33**	**26**		Pn	21 21 14.2	0.0
GHOM	**Hamilton Openi**	**1.38**	**184**		Pn	21 21 14.0	-0.7
GFC	**Funks Creek**	**1.39**	**141**		Pn	21 21 15.4	+0.5
GHLM	**Highland Sprin**	**1.41**	**167**		Pn	21 21 14.8	-0.4
LMEM	**Manzanita Entr**	**1.41**	**85**		Pn	21 21 14.9	-0.5
YBH	**Yreka Blue Hor**	**1.42**	**22**	Pn	Pn	21 21 15.6	+0.2
	comp=N,116nm,0.3s,baz=224,slow=7.6,SNR=848						
YBH				Sn	Sn	21 21 32.0	-0.8
	comp=N,226nm,0.3s,baz=101,slow=18,SNR=9.1						
YBH	**Yreka Blue Hor**	**1.42**	**22**		Pn	21 21 15.3	-0.1
YBH	**Yreka Blue Hor**	**1.42**	**22**	IAML		21 21 43.5	
	comp=N,1μm,0.7s						
YBH				IAML		21 21 50.3	
	comp=E,2μm,0.8s						
LMPM	**Military Pass**	**1.43**	**41**		Pn	21 21 16.3	+0.7
HOPS	**Hopland Field**	**1.45**	**169**		Pn	21 21 15.4	-0.3
KSXB	**Camp Six Broad**	**1.45**	**346**		Pn	21 21 15.0	-0.9
KSXB	**Camp Six Broad**	**1.45**	**346**	IAML		21 21 33.9	
	comp=E,2μm,0.7s						
KSXB				IAML		21 21 48.2	
	comp=N,2μm,0.7s						
GBMM	**Baldy Mountain**	**1.46**	**151**		Pn	21 21 15.8	-0.2
LCMM	**Colby Mountain**	**1.47**	**100**		Pn	21 21 15.8	-0.4
LBFM	**Black Fox Moun**	**1.48**	**51**		Pn	21 21 16.7	+0.3
KTRM	**Thompson Ridge**	**1.49**	**1**		Pn	21 21 16.1	-0.3
LRDM	**Redding Peak**	**1.49**	**88**		Pn	21 21 16.2	-0.1
LHEM	**Herd Peak**	**1.51**	**36**		Pn	21 21 17.4	+0.6
HATC	**Hat Creek Radi**	**1.54**	**74**		Pn	21 21 17.4	+0.4
GGUM	**Gualala**	**1.56**	**182**		Pn	21 21 16.6	-0.7
OGOM	**Van Goodin Ran**	**1.58**	**118**		Pn	21 21 16.4	-1.1
GRTM	**Round Top Moun**	**1.59**	**159**		Pn	21 21 17.5	-0.1
GPMM	**Pine Mountain**	**1.61**	**167**		Pn	21 21 18.0	0.0
GSGM	**Seigler Mounta**	**1.64**	**160**		Pn	21 21 18.8	+0.4
LTIM	**Timbered Crate**	**1.65**	**62**		Pn	21 21 18.6	0.0
OSUM	**Sutter Buttes**	**1.66**	**133**		Pn	21 21 18.0	-0.6
GCVM	**Cloverdale**	**1.68**	**169**		Pn	21 21 18.5	-0.4
LGMM	**Garner Mountai**	**1.68**	**45**		Pn	21 21 19.4	+0.4
GDXM	**Geysers**	**1.68**	**163**		Pn	21 21 18.8	-0.1
GBGM	**Boggs Mountain**	**1.70**	**160**		Pn	21 21 19.5	+0.2
L02F	**Cave Junction**	**1.70**	**356**	P	Pn	21 21 18.7	-0.5
	baz=176						
L02F				S	Sn	21 21 39.2	-0.7
	baz=176						
ORV	**Oroville**	**1.70**	**120**		Pn	21 21 18.2	-1.0
MNRC	**McLaughlin Min**	**1.71**	**154**		Pn	21 21 19.3	0.0
SUTB	**Sutter Butte**	**1.73**	**133**		Pn	21 21 18.4	-1.1
GCRM	**Castle Rock Sp**	**1.73**	**162**		Pn	21 21 19.3	-0.4
GSSM	**Skaggs Springs**	**1.74**	**170**		Pn	21 21 19.4	-0.3
PAM	**Palermo**	**1.75**	**123**		Pn	21 21 18.9	-0.9
OWYM	**Wyandotte**	**1.77**	**122**		Pn	21 21 19.2	-0.9
NMTM	**Middletown**	**1.78**	**155**		Pn	21 21 19.8	-0.5
GAXM	**Alexander Vall**	**1.78**	**163**		Pn	21 21 19.9	-0.4
GHCM	**House Creek**	**1.82**	**175**		Pn	21 21 20.3	-0.5
KPK	**Kanaka Peak**	**1.82**	**117**		Pn	21 21 20.5	-0.4
OHCM	**Honcut**	**1.84**	**125**		Pn	21 21 20.2	-0.8
NHSM	**Mount Saint He**	**1.86**	**160**		Pn	21 21 21.2	-0.3
KBO	**Bosley Butte**	**1.89**	**341**		Pn	21 21 21.0	-0.9
MAC	**Mark West Spri**	**1.94**	**164**		Pn	21 21 22.1	-0.3
L04D	**Klamath Falls**	**1.98**	**25**		Pn	21 21 23.9	+0.7
L04D	**Klamath Falls**	**1.98**	**25**	IAML		21 22 07.3	
	comp=E,2μm,0.8s						
L04D				IAML		21 22 15.2	
	comp=N,1μm,0.8s						
L04D	**Klamath Falls**	**1.98**	**25**	P	Pn	21 21 23.9	+0.7
	baz=205,SNR=324						
NBPM	**Berryessa Peak**	**1.99**	**151**		Pn	21 21 23.1	+0.1
NDHM	**Dunnigan Hills**	**2.02**	**144**		Pn	21 21 22.7	-0.8
NTYM	**Taylor**	**2.11**	**164**		Pn	21 21 25.0	+0.2
NAPC	**Atlas Peak**	**2.17**	**155**		Pn	21 21 25.2	-0.5
CVS	**Carmenet Viney**	**2.20**	**160**		Pn	21 21 25.8	-0.3
HUMO	**Hull Mountain**	**2.21**	**9**		Pn	21 21 26.4	+0.2
HOG	**Hogback Mounta**	**2.23**	**35**		Pn	21 21 26.9	+0.3
NBRB	**Beebe Ranch Br**	**2.26**	**163**		Pn	21 21 26.9	+0.1
K02D	**Willamette Mer**	**2.28**	**355**	P	Pn	21 21 27.4	+0.1
	baz=175,SNR=571						
K02D				S	Sn	21 21 53.0	-1.1
	baz=175						
MCCM	**Marconi Confer**	**2.31**	**170**		Pn	21 21 27.3	-0.2
SNT	**Sears Point**	**2.35**	**161**		Pn	21 21 27.4	-0.7
AFDM	**Forest Hills D**	**2.39**	**127**		Pn	21 21 28.7	0.0
AFDM	**Forest Hills D**	**2.39**	**127**	IAML		21 22 18.2	
	comp=E,621nm,0.8s						
BEKR	**Beckworth**	**2.41**	**102**		Pn	21 21 29.3	+0.3
BEKR	**Beckworth**	**2.41**	**102**	IAML		21 21 49.0	
	comp=E,574nm,1.1s						
BEKR				IAML		21 22 26.6	
	comp=N,563nm,0.8s						
BMRR	**Black Mountain**	**2.41**	**96**		Pn	21 21 29.0	-0.1
NOLM	**Olema**	**2.42**	**168**		Pn	21 21 29.2	+0.1
NPRM	**Point Reyes**	**2.44**	**173**		Pn	21 21 29.1	-0.2
K04D	**Chiloquin, OR**	**2.53**	**29**		Pn	21 21 31.0	+0.3
K04D	**Chiloquin, OR**	**2.53**	**29**	P	Pn	21 21 31.2	+0.4
	baz=210,SNR=26						
KEBM	**Edson Butte**	**2.55**	**345**		Pn	21 21 30.5	-0.3
KEBM	**Edson Butte**	**2.55**	**345**	IAML		21 22 01.3	
	comp=E,973nm,1.1s						
KEBM				IAML		21 22 03.3	
	comp=N,1μm,0.6s						
LOY	**Loyalton**	**2.55**	**106**		Pn	21 21 31.6	+0.5
CPMM	**Point Molate**	**2.59**	**162**		Pn	21 21 31.8	+0.5
CPIM	**Pinole Ridge**	**2.60**	**159**		Pn	21 21 31.1	-0.4
DONR	**Donner Summit**	**2.61**	**113**		Pn	21 21 32.9	+1.0
CTAM	**Taylor**	**2.62**	**155**		Pn	21 21 32.7	+0.8
BABR	**Babbit Peak**	**2.67**	**107**		Pn	21 21 33.4	+0.6
DBO	**Dodson Butte**	**2.70**	**3**		Pn	21 21 33.8	+0.8
J01E	**Myrtle Point**	**2.77**	**352**	IAML		21 22 06.5	
	comp=N,674nm,0.6s						
J01E				IAML		21 22 07.7	
	comp=E,626nm,0.6s						
J01E	**Myrtle Point**	**2.77**	**352**	P	Pn	21 21 33.9	0.0
	baz=172,SNR=32						
J01E				S	Sn	21 22 05.4	-0.6
	baz=172						
MOD	**Modoc Plateau**	**2.78**	**57**		Pn	21 21 33.5	-0.6
MOD				IAML		21 22 23.4	
	comp=N,438nm,1.1s						
MOD				IAML		21 22 24.7	
	comp=E,542nm,1.0s						
MPK	**Martis Peak**	**2.83**	**112**		Pn	21 21 36.1	+1.1
EMB	**Emerald Bay**	**2.93**	**118**	IAML		21 22 37.1	
	comp=E,768nm,0.9s						
K05A	**Summer Lake**	**2.98**	**39**	Pn	Pn	21 21 37.5	+0.5
K05A				IAML		21 22 37.9	
	comp=N,418nm,1.4s						
K05A				IAML		21 22 40.4	
	comp=E,383nm,1.2s						
J04D	**Umpqua Nationa**	**2.98**	**19**	P	Pn	21 21 37.9	+0.9
	baz=200						
PLTX	**Planet X, Gerl**	**3.02**	**83**	IAML		21 22 47.2	
	comp=N,3μm,1.1s						
PLTX				IAML		21 22 52.0	
	comp=E,2μm,1.1s						
VCNR	**Virginia City**	**3.11**	**110**	IAML		21 22 41.5	
	comp=N,461nm,1.1s						
VCNR				IAML		21 22 44.0	
	comp=E,461nm,1.0s						
JRSC	**Jasper Ridge**	**3.15**	**163**		Pn	21 21 39.3	+0.3
PNTR	**Pine Nut**	**3.23**	**113**		Pn	21 21 41.2	+0.8
I03D	**Drain, OR**	**3.28**	**1**	P	Pn	21 21 41.6	+0.8
	baz=181,SNR=44						
J05D	**Fort Rock, OR**	**3.29**	**29**	P	Pn	21 21 42.3	+1.1
	baz=210,SNR=33						
CMB	**Columbia Colle**	**3.35**	**134**		Pn	21 21 42.6	+0.7
I04A	**Tendick Farm,**	**3.45**	**12**	P	Pn	21 21 44.1	+0.8
	baz=193,SNR=11						
I04A				S	Sn	21 22 22.1	-0.9
	baz=193						
YERR	**Yerington**	**3.52**	**113**	IAML		21 22 34.5	
	comp=N,390nm,1.0s						
YERR				IAML		21 22 40.7	
	comp=E,458nm,0.8s						
I02E	**Swisshome, OR**	**3.70**	**355**		Pn	21 21 47.3	+0.7
I02E				IAML		21 22 29.7	
	comp=N,179nm,0.7s						
I02E				IAML		21 22 30.6	
	comp=E,202nm,0.8s						
I02E	**Swisshome, OR**	**3.70**	**355**	P	Pn	21 21 47.6	+1.0
	baz=175,SNR=68						
I02E				S	Sn	21 22 28.7	-0.3
	baz=175						
BUCK	**Buck Mountain**	**3.79**	**5**	IAML		21 23 10.4	
	comp=E,244nm,1.1s						
BUCK				IAML		21 23 10.6	
	comp=N,207nm,1.8s						
PINE	**Pine Mountain**	**3.84**	**28**	IAML		21 23 17.2	
	comp=E,168nm,1.4s						
PINE				IAML		21 23 20.0	
	comp=N,166nm,1.2s						
SAO	**San Andreas Ge**	**3.96**	**156**	Pn	Pn	21 21 50.5	+0.2
WVOR	**Wild Horse Val**	**4.12**	**59**	IAML		21 23 08.7	
	comp=N,142nm,1.5s						
H04D	**Lebanon**	**4.13**	**7**	IAML		21 23 16.7	
	comp=N,234nm,1.1s						
H04D				IAML		21 23 23.7	
	comp=E,178nm,1.4s						
H04D	**Lebanon**	**4.13**	**7**	P	Pn	21 21 54.0	+1.5
	baz=187,SNR=28						
COR	**Corvallis**	**4.17**	**1**	Pn	Pn	21 21 53.0	0.0
COR				IAML		21 22 46.3	
	comp=E,168nm,1.1s						
COR				IAML		21 23 28.7	
	comp=E,169nm,1.4s						
RYN	**Ryan**	**4.18**	**114**	IAML		21 23 20.9	
	comp=E,123nm,2.1s						
I05D	**Terrebonne, OR**	**4.21**	**21**	P	Pn	21 21 55.4	+1.8
	baz=202						
KVN	**Kaiserville**	**4.32**	**107**	IAML		21 23 22.9	
	comp=N,118nm,1.5s						
LHV	**Little Huntoon**	**4.38**	**118**	IAML		21 23 35.1	
	comp=E,243nm,1.1s						
NVAR	**Mina Array Bea**	**4.43**	**115**	Pn	Pn	21 21 58.1	+1.2
	comp=E,11nm,0.3s,baz=293,slow=14,SNR=186						
NVAR				LR	LR	21 24 01.7	
	comp=E,846nm,21.4s,baz=269,slow=42						
	comp=E,24nm,0.5s						
OMMB	**Old Mammoth Mi**	**4.43**	**128**	IAML		21 23 20.3	
	comp=N,126nm,1.1s						
MLAC	**Mammoth, Mammo**	**4.52**	**127**	P	Pn	21 22 01.2	+3.0
	baz=310						
NV11	**Mina Array Sit**	**4.53**	**114**	IAML		21 23 23.4	
	comp=E,134nm,2.0s						
NV11				IAML		21 23 27.3	
	comp=N,114nm,2.1s						
PMPB	**Monarch Peak**	**4.67**	**153**	IAML		21 23 55.2	
	comp=E,106nm,1.1s						
PMPB				IAML		21 24 07.4	
	comp=N,122nm,1.2s						
J08A	**Circle Bar Ran**	**4.71**	**50**	IAML		21 22 47.8	
	comp=E,78nm,0.9s						
J08A				IAML		21 23 52.7	
	comp=N,82nm,1.3s						
G03D	**McMinnville, O**	**4.79**	**1**	IAML		21 23 37.2	
	comp=N,112nm,1.3s						
G03D				IAML		21 23 55.1	
	comp=E,105nm,1.4s						
G03D	**McMinnville, O**	**4.79**	**1**	P	Pn	21 22 02.8	+1.2
	baz=181,SNR=14						
G05D	**Wamic, OR**	**5.06**	**17**	P	Pn	21 22 06.8	+1.4
	baz=198						
TIN	**Tinemaha, Big**	**5.26**	**128**	P	Pn	21 22 11.4	+3.2
	baz=312						
PAGB	**Antelope Grade**	**5.30**	**151**	IAML		21 24 07.6	
	comp=N,60nm,1.4s						
PAGB				IAML		21 24 25.0	
	comp=E,55nm,1.2s						
VES	**Vestal, Richgr**	**5.70**	**142**	P	Pn	21 22 15.6	+1.4
	baz=325						
SMMC	**Simmler**	**5.77**	**151**	P	Pn	21 22 16.6	+1.5
	baz=333						
CWC	**Cottonwood Cre**	**5.77**	**132**	P	Pn	21 22 16.5	+1.2
	baz=315						
ISA	**Isabella, Lake**	**6.14**	**139**	P	Pn	21 22 22.9	+2.6
	baz=322						
PKM	**Mcpherson Peak**	**6.21**	**152**	P	Pn	21 22 22.7	+1.3
	baz=334						
ELK	**Elko**	**6.23**	**84**	Pn	Pn	21 22 24.3	+2.7
	comp=E,0.4nm,0.3s,baz=267,slow=14,SNR=34						
ELK				LR	LR	21 25 16.2	
	comp=E,528nm,20.2s,baz=265,slow=42						
	comp=E,7.1nm,0.8s						
MPMC	**Manual Prospec**	**6.38**	**131**	P	Pn	21 22 26.1	+2.4
	baz=315						
MFID	**Camas Ranch**	**6.40**	**60**	Pn	Pn	21 22 23.5	-0.3
R11A	**Troy Canyon, C**	**6.41**	**106**	P	Pn	21 22 24.9	+0.9
	baz=292						
ARVC	**Arvin**	**6.41**	**144**	P	Pn	21 22 25.3	+1.4
	baz=327						
FURC	**Furnace Creek,**	**6.48**	**125**	P	Pn	21 22 26.9	+2.1
	baz=310						
TPNV	**Topopah Spring**	**6.59**	**119**	P	Pn	21 22 27.7	+1.2
	baz=304						
LRMC	**Laurel Mtn Rad**	**6.69**	**136**	P	Pn	21 22 30.0	+2.1
	baz=319						
OSI	**Osito Audit: C**	**6.89**	**146**	P	Pn	21 22 33.0	+2.4
	baz=329						
EDW2	**Edwards Air Fo**	**7.00**	**140**	P	Pn	21 22 35.0	+2.9
	baz=324						
SCZ2	**Santa Cruz Isl**	**7.08**	**154**	P	Pn	21 22 35.9	+2.7
	baz=336						
SHOC	**Shoshone, Teco**	**7.21**	**126**	P	Pn	21 22 37.3	+2.4
	baz=311						
GSC	**Goldstone, Bar**	**7.31**	**132**	P	Pn	21 22 39.0	+2.7
	baz=317						
DECC	**Green Verdugo**	**7.36**	**145**	P	Pn	21 22 39.9	+2.9
	baz=328						
HLID	**Hailey**	**7.40**	**62**	P	Pn	21 22 38.8	+1.1
	baz=248						
BFSC	**Mount Baldy Ra**	**7.68**	**142**	P	Pn	21 22 43.3	+1.8
	baz=325						
TUQ	**Turquoise Moun**	**7.73**	**128**	P	Pn	21 22 42.5	+0.4
	baz=312						
HEC	**Hector,Ludlow**	**7.91**	**133**	P	Pn	21 22 47.7	+3.1
	baz=317						
DUG	**Dugway, Tooele**	**8.10**	**88**	P	Pn	21 22 49.1	+1.9
	baz=275						
GMRC	**Granite Mounta**	**8.33**	**130**	P	Pn	21 22 52.5	+2.1
	baz=315						
MURC	**Murrieta**	**8.43**	**142**	P	Pn	21 22 53.7	+2.0
	baz=326						
PFO	**Pinyon Flats O**	**8.78**	**139**	Pn	Pn	21 22 58.9	+2.4
	comp=E,0.5nm,0.3s,baz=309,slow=7.7,SNR=9.2						
PFO				LR	LR	21 26 39.9	
	comp=E,239nm,18.3s,baz=347,slow=40						
	comp=E,5.5nm,0.6s						
PFO	**Pinyon Flats O**	**8.78**	**139**	P	Pn	21 22 58.5	+2.0
	baz=323						
TPFO	**Pinon Flats**	**8.78**	**139**	P	Pn	21 22 58.4	+1.8
	baz=323						
NEW	**Newport**	**9.04**	**28**	LR	LR	21 27 04.8	
	comp=E,152nm,20.8s,baz=200,slow=42						
NEW	**Newport**	**9.04**	**28**	P	Pn	21 23 02.0	+2.0
	baz=212						
IRM	**Iron Mountain**	**9.08**	**131**	P	Pn	21 23 03.4	+2.8
	baz=316						
MONP2	**Monument Peak**	**9.38**	**141**	P	Pn	21 23 07.5	+2.7
	baz=325						
MSO	**Missoula**	**9.39**	**44**	P	Pn	21 23 07.2	+2.4
	baz=230						
PDMCI	**Parker Dam,Lak**	**9.57**	**127**	P	Pn	21 23 10.4	+3.1
	baz=312						
IKP	**In-Ko-Pah, Jac**	**9.72**	**141**	P	Pn	21 23 12.4	+2.9
	baz=325						
IMW	**Indian Meadow**	**9.89**	**65**		Pn	21 23 11.4	-0.5
BOZ	**Bozeman (W)**	**10.06**	**55**	P	Pn	21 23 15.9	+1.9
	baz=243						
BW06	**Boulder Array**	**10.64**	**73**	P	Pn	21 23 24.2	+2.1
	baz=262						
PDAR	**Pinedale Array**	**10.64**	**73**	Pn	Pn	21 23 26.4	+4.3
	comp=E,0.1nm,0.3s,baz=269,slow=15,SNR=24						
PDAR				LR	LR	21 27 50.0	
	comp=E,250nm,21.5s,baz=258,slow=39						
	comp=E,5.1nm,0.9s						
WUAZ	**Wupatki**	**10.69**	**113**	P	Pn	21 23 25.2	+2.5
	baz=301						
RLMT	**Red Lodge**	**11.41**	**61**	P	Pn	21 23 35.3	+2.8
	baz=251					

baz=282
MNTX Cornudas Mount 16.96 115 P P 21 24 48.6 +0.5
baz=306,SNR=6.0
MNTX Cornudas Mount 16.96 115 P P 21 24 48.3 +0.2
baz=306
MSTX Muleshoe 17.64 105 P Pn 21 24 55.3 +0.2
baz=298
MSTX Muleshoe 17.64 105 P Pn 21 24 55.4 +0.3
baz=298
CBKS Cedar Bluff 18.30 87 P P 21 25 02.9 -0.1
baz=283,SNR=8.0
CBKS Cedar Bluff 18.30 87 P Pn 21 25 03.4 +0.3
baz=283
SIT Sitka 18.36 339 P Pn 21 25 03.9 +0.4
baz=150
DLBC Dease Lake 18.52 349 LR LR 21 32 04.6
comp=Z,109nm,20.8s,baz=113,slow=37
R32A Long Quarter, 19.18 88 P Pn 21 25 13.2 -0.3
baz=284,SNR=13
ELIS Ellis County 19.32 95 IAmb IAmb 21 25 16.4
comp=Z,32nm,0.9s
NOKA Waynoka 19.50 93 IAmb IAmb 21 25 17.6
comp=Z,20nm,0.8s
U32A Winter Ranch, 19.53 94 IAmb IAmb 21 25 18.8
comp=Z,15nm,0.8s
TX31 Lajitas Ar. Si 19.57 118 IAmb IAmb 21 25 23.5
comp=Z,18nm,1.1s
TX31 Lajitas Ar. Si 19.57 118 P P 21 25 17.2 +0.3
baz=310,SNR=12
TXAR Lajitas Array 19.57 118 P P 21 25 17.1 +0.1
comp=Z,0.2nm,0.3s,baz=296,slow=9.1,SNR=35
TXAR LR LR 21 33 38.5
comp=Z,179nm,19.8s,baz=296,slow=39
comp=Z,1.5nm,0.6s
R33M Jennings River 19.58 348 P P 21 25 11.2 -5.7
baz=163
LPIG La Paz 19.65 142 LR LR 21 32 57.7
comp=Z,280nm,18.6s,baz=9.5,slow=37
OK038 West end E0370 19.70 94 IAmb IAmb 21 25 19.0
comp=Z,14nm,0.6s
OK032 Salt Plains WL 20.00 92 IAmb IAmb 21 25 23.8
comp=Z,30nm,0.9s
ECSD EROS Data Cent 20.13 72 P P 21 25 18.7 -4.2
baz=270,SNR=6.9
ECSD EROS Data Cent 20.13 72 P P 21 25 18.5 -4.4
baz=270
FFC Flin Flon 20.23 38 P P 21 25 23.5 -0.3
KS20 Mayfield South 20.37 91 P 21 25 22.6 -2.9
KSU1 Kansas State U 20.62 85 P P 21 25 27.4 -0.8
KSU1 Kansas State U 20.62 85 P Pn 21 25 30.5 -0.1
baz=282,SNR=24
KSU1 Kansas State U 20.62 85 P Pn 21 25 30.0 -0.7
baz=282
P33M Teslin, Yukon 20.66 347 P P 21 25 29.3 +0.7
baz=159
PLBC Pleasant Camp 20.73 341 P P 21 25 30.3 +1.1
baz=151
BLOK Blackwell 20.77 92 P 21 25 27.6 -2.3
BLOK IAmb IAmb 21 25 32.1
comp=Z,14nm,0.8s
AGMN Agassiz Nation 21.13 59 P P 21 25 30.2 -3.4
baz=258
T35A Sooner Cattle 21.26 91 IAmb IAmb 21 25 38.3
comp=Z,12nm,0.8s
P30M Million Dollar 21.46 341 P P 21 25 38.8 +1.7
baz=151
WHY Whitehorse 21.47 344 P P 21 25 39.3 +2.0
baz=156
JCT Junction City 21.58 110 IAmb IAmb 21 25 37.6
comp=Z,20nm,1.4s
JCT Junction City 21.58 110 P P 21 25 36.7 -1.9
baz=304
ULM Lac du Bonnet 21.60 54 LR LR 21 34 51.8
comp=Z,197nm,18.7s,baz=210,slow=39
O30N Mendenhall 21.83 343 P P 21 25 42.4 +1.3
baz=153
HYT Haines Junctio 22.21 342 P P 21 25 47.9 +2.7
baz=151
FARO Faro, Yukon 22.65 348 P P 21 25 50.7 +0.9
baz=160
MMPY Sheldon Lake, 22.73 351 P P 21 25 49.9 -0.7
baz=164
YKA Yellowknife Ar 22.73 11 P P 21 25 51.0 +0.4
comp=Z,1.1nm,0.8s,baz=198,slow=8.1,SNR=6.1
YKA LR LR 21 35 55.7
comp=Z,98nm,19.2s,baz=246,slow=40
comp=Z,1.1nm,0.8s
P40A Paris 23.99 82 IAmb IAmb 21 26 32.4
comp=Z,6.1nm,0.9s
M27K Edge Creek, AK 24.63 339 P P 21 26 08.2 -0.7
M27K Edge Creek, AK 24.63 339 P P 21 26 10.6 +1.6
baz=144
K29M Barlow Dome 24.89 345 P P 21 26 09.8 -1.5
baz=154
CCM Cathedral Cave 24.96 85 P P 21 26 09.9 -2.1
CCM IAmb IAmb 21 26 10.4
comp=Z,4.5nm,0.8s
CCM Cathedral Cave 24.96 85 P P 21 26 09.6 -2.4
baz=286
WHAR Wooly Hollow 25.03 92 IAmb IAmb 21 26 10.8
comp=Z,6.1nm,0.7s
L27K Beaver Creek, 25.19 340 P P 21 26 15.8 +1.9
baz=146
DAWY Dawson 25.47 344 P P 21 26 17.5 +1.1
baz=151
D41A Chassel 25.88 63 P P 21 26 19.1 -1.3
D41A IAmb IAmb 21 26 35.2
comp=Z,12nm,0.8s
SCM Sheep Creek Mo 25.88 334 P P 21 26 22.2 +2.0
baz=135
I29M Ogilvie Camp, 26.41 346 P P 21 26 25.1 +0.2
baz=154
EGAK Eagle 26.48 343 P P 21 26 26.3 +0.8
baz=149
SCRK Sand Creek 26.50 340 P P 21 26 27.0 +1.1
baz=143
DHY Denali Highway 26.79 336 P P 21 26 29.2 +0.6
baz=137
J26L Joseph Creek 26.82 341 P P 21 26 30.1 +1.4
baz=144
EPYK Eagle Plains 27.06 348 P P 21 26 33.2 +2.5
baz=157
J25K Salcha River, 27.38 339 P P 21 26 35.2 +1.6
baz=142
I26K Coal Creek Min 27.38 342 P P 21 26 35.3 +1.7
baz=146
ILAR Eielson Array 27.91 339 P P 21 26 39.7 +1.3
comp=Z,1.5nm,1.0s,baz=155,slow=8.1,SNR=11
ILAR PcP PcP 21 29 53.5 +0.5
comp=Z,0.8nm,0.7s,baz=178,slow=3.2,SNR=6.8
comp=Z,1.5nm,1.0s
NEA2 Nenana 28.41 337 P P 21 26 42.4 -0.5
baz=136
INK Inuvik 28.48 352 P P 21 26 43.7 +0.3
comp=Z,4.3nm,1.1s,baz=146,slow=7.5,SNR=4.7
INK LR LR 21 39 08.5
comp=Z,86nm,18.9s,baz=129,slow=39
comp=Z,4.3nm,1.1s
INK Inuvik 28.48 352 P P 21 26 43.5 +0.1
INK IAmb IAmb 21 26 55.9
comp=Z,10nm,1.4s
INK Inuvik 28.48 352 P P 21 26 43.3 0.0
baz=164
BPAW Bear Paw Mtn. 28.66 335 P P 21 26 45.4 +0.3
baz=133
MLY Manley 29.23 336 P P 21 26 50.9 +0.8
baz=134
K20K Telida 29.24 332 P P 21 26 51.4 +1.2
baz=127
H23K Yukon River 29.45 338 P P 21 26 53.4 +1.3
baz=137
G24K Hadweenzic Riv 29.56 341 P P 21 26 53.9 +0.9
baz=141
I21K Tanana 29.71 336 P P 21 26 55.7 +1.4
baz=133
J20K Nowinta River 29.77 333 P P 21 26 55.5 +0.6
baz=128
F25K Christian Rive 29.84 343 P P 21 26 54.7 -0.8
baz=144
H22K Ishtalitna Cre 30.02 337 P P 21 26 57.1 -0.1
baz=134
H21K Melozitna Rive 30.29 336 P P 21 26 58.9 -0.6
H21K IAmb IAmb 21 27 02.9
comp=Z,5.4nm,1.1s
H21K Melozitna Rive 30.29 336 P P 21 27 01.3 +1.8
baz=132
E24K Your Creek 30.88 342 P P 21 27 04.3 -0.4
baz=141
G21K Allakaket 31.08 337 P P 21 27 08.4 +2.0
baz=132
TKL Tuckaleechee C 31.39 86 LR LR 21 40 56.1
comp=Z,107nm,20.1s,baz=286,slow=38
D25K Kavik River 31.41 345 P P 21 27 10.6 +1.2
baz=145
E22K Anaktuvuk Pass 31.75 340 P P 21 27 14.2 +1.9
baz=136
SADO Sadowa 32.57 67 LR LR 21 40 51.7
comp=Z,106nm,20.9s,baz=187,slow=37
CMIG Matias Romero 33.88 125 LR LR 21 42 18.3
comp=Z,98nm,20.4s,baz=304,slow=38
SSPA Standing Stone 34.31 74 P P 21 27 36.8 +1.9
baz=285
RDOG Red Dog Mine 34.92 335 P P 21 27 41.1 +1.1
baz=122
RES Resolute Bay 36.78 12 LR LR 21 44 47.2
comp=Z,64nm,18.4s,baz=24,slow=39
FRB Frobisher Bay 39.30 35 LR LR 21 45 15.1
comp=Z,139nm,18.9s,baz=222,slow=37
SCHQ Schefferville 39.64 49 LR LR 21 45 16.2
comp=Z,98nm,20.1s,baz=259,slow=37
SHEM Shemya Is, Ala 43.35 308 LR LR 21 43 55.5
comp=Z,20nm,21.2s,baz=142,slow=32
SFJD Kangerlussuaq 46.95 31 LR LR 21 49 52.9
comp=Z,54nm,18.1s,baz=302,slow=37
SUMG Summit 50.50 23 P P 21 29 46.0 -0.5
SUMG Summit 50.50 23 *i* P P 21 29 45.0 -1.5
PETK Petropavlovsk- 52.84 312 P P 21 30 03.7 -0.1
comp=Z,2.3nm,0.8s,baz=79,slow=11,SNR=4.9
comp=Z,2.3nm,0.8s
SJG San Juan 53.69 97 LR LR 21 55 36.5
comp=Z,41nm,21.4s,baz=274,slow=39
MTP Monte Pirata 54.15 96 P P 21 30 12.9 -0.8
MA2 Magadan 54.25 321 LR LR 21 52 31.4
comp=Z,51nm,18.5s,baz=110,slow=35
SDV Santo Domingo 56.26 109 LR LR 21 57 59.8
comp=Z,29nm,18.1s,baz=294,slow=40
IMBA Imbabura, San 57.25 122 P P 21 30 35.3 -1.3
BORG Borgarnes 59.01 29 LR LR 21 56 49.6
comp=Z,39nm,19.0s,baz=300,slow=37
SPITS Spitsbergen Ar 59.22 9 LR LR 21 57 13.7
comp=Z,44nm,20.0s,baz=272,slow=37
JMIC Jan Mayen 59.68 20 LR LR 21 57 03.8
comp=Z,32nm,19.3s,baz=286,slow=36
H11N3 WAKE ISLAND Hy 62.20 273 T T 22 38 27.9
baz=54,slow=76,SNR=16
H11N2 WAKE ISLAND Hy 62.20 273 T T 22 38 18.1
baz=54,slow=76,SNR=17
H11N1 WAKE ISLAND Hy 62.22 273 T T 22 38 19.1
baz=54,slow=76,SNR=8.1
YAK Yakutsk 62.30 329 P P 21 31 10.4 +0.3
PPT Papeete 62.62 208 LR LR 21 53 55.8
comp=Z,36nm,18.6s,baz=0.5,slow=32
H11S1 WAKE ISLAND Hy 63.07 272 T T 22 39 29.2
baz=54,slow=75,SNR=48
H11S2 WAKE ISLAND Hy 63.08 272 T T 22 39 27.3
baz=54,slow=75,SNR=99
H11S3 WAKE ISLAND Hy 63.09 272 T T 22 39 28.5
baz=54,slow=75,SNR=39
ARCES ARCESS Array B 68.00 11 LR LR 22 02 01.9
comp=Z,50nm,20.9s,baz=8.0,slow=36
BOAV Boa Vista 68.01 106 P P 21 31 47.5 -0.4
BOAV IAmb IAmb 21 31 49.1
comp=Z,8.3nm,1.2s
NOA NORSAR Array B 72.35 21 LR LR 22 04 19.0
comp=Z,16nm,19.6s,baz=15,slow=36
ETMB Extrema 72.65 120 P P 21 32 15.4 -0.8
ETMB IAmb IAmb 21 32 16.6
comp=Z,4.1nm,0.9s
HFS Hagfors 73.79 21 LR LR 22 03 30.8
comp=Z,36nm,19.0s,baz=322,slow=35
FINES FINESS Array B 75.50 15 P P 21 32 31.7 -0.5
comp=Z,2.2nm,0.9s,baz=7.0,slow=7.9,SNR=9.8
FINES LR LR 22 06 38.0
comp=Z,46nm,19.9s,baz=8.5,slow=36
comp=Z,2.2nm,0.9s
LPAZ La Paz 76.26 126 P P 21 32 39.2 +1.4
comp=Z,1.4nm,0.7s,baz=13,slow=4.8,SNR=5.2
LPAZ LR LR 22 05 58.5
comp=Z,25nm,18.9s,baz=322,slow=36
comp=Z,1.4nm,0.7s
KSRS Korea Array 78.66 310 LR LR 22 02 26.5
comp=Z,15nm,21.7s,baz=100,slow=32
SONM Songino Array 81.64 329 P P 21 33 06.9 +0.5
comp=Z,1.0nm,0.9s,baz=29,slow=3.4,SNR=4.7
comp=Z,1.0nm,0.9s
GUMO Guam 82.62 281 LR LR 22 01 00.9
comp=Z,41nm,21.6s,baz=102,slow=29
ZALV Zalesovo Beam 82.92 344 P P 21 33 13.0 +0.2
comp=Z,0.9nm,0.6s,baz=33,slow=5.7,SNR=4.7
comp=Z,0.9nm,0.6s
ESDC Sonseca Array 83.05 43 LR LR 22 07 51.9
comp=Z,40nm,19.2s,baz=334,slow=34
DAVOX Davos/Dischmat 83.72 30 LR LR 22 14 30.0
comp=Z,22nm,18.1s,baz=265,slow=38
HHC Hu-ho-hao-te 84.93 321 *eP* P 21 33 23.5 0.0
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,190nm,5.8s
BELG Belogornoye 87.24 5 LR LR 22 17 45.6
comp=Z,13nm,18.4s,baz=143,slow=39
AKTO Aktyubinsk 89.52 359 LR LR 22 18 38.5
comp=Z,17nm,18.5s,baz=32,slow=39
MLR Muntele Rosu 90.17 21 LR LR 22 16 28.6
comp=Z,37nm,18.9s,baz=50,slow=37
MKAR Makanchi Array 90.19 343 P P 21 33 46.9 -1.7
comp=Z,0.6nm,0.8s,baz=8.6,slow=4.0,SNR=6.0
comp=Z,0.6nm,0.8s
WMQ Urumqi 91.58 338 *eP* P 21 33 56.5 +1.4
BBTS Babate 92.99 68 LR LR 22 13 58.0
comp=Z,44nm,20.0s,baz=17,slow=34
BRTR Keskin Array B 97.53 18 LR LR 22 19 21.2
comp=Z,27nm,18.1s,baz=108,slow=36
BOSA Boshof 151.77 75 PKPbc PKPbc 21 40 42.8 -0.2
comp=Z,1.5nm,0.6s,baz=304,slow=1.5,SNR=5.1

IDC 28 21:45:35.1±2.7, 6.71S×130.00E, h129km±37km, mb3.4/1, mbtmp3.5/5, Error ellipse: s-maj=69.0km s-min=20.9km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.94**	**12**	P	Pn	21 47 01.1	+0.2
SIJI	2.2nm,0.3s,baz=85,slow=23,SNR=11			S	Sn	21 48 01.5	-6.3
	22nm,0.2s,baz=235,slow=22,SNR=12						
FITZ	**Fitzroy Crossi**	**12.09**	**200**	P	Pn	21 48 23.0	-0.2
FITZ	0.7nm,0.4s,baz=36,slow=9.5,SNR=11			S	Sn	21 50 29.0	-7.5
	2.8nm,0.4s,baz=126,slow=23,SNR=8.0						
WRA	**Warramunga Arr**	**13.81**	**163**	P	Pn	21 48 44.1	-1.4
WRA	0.3nm,0.3s,baz=346,slow=13,SNR=22			S	Sn	21 51 10.2	-7.9
	1.0nm,0.5s,baz=332,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**17.27**	**168**	P	Pn	21 49 29.6	+1.1
	0.3nm,0.5s,baz=340,slow=8.7,SNR=8.2						
MKAR	**Makanchi Array**	**67.98**	**327**	P	P	21 56 20.1	-0.2
	0.7nm,0.7s,baz=120,slow=8.2,SNR=6.5						
	0.7nm,0.7s						

*JMA **28** 21:57:00.1±0.2, 24.2N±0.6×122.7E±0.9, h25km, MV2.2/9, NW OFF ISHIGAKIJIMA IS*
*TAP **28** 21:57:00.5, 24.19N×122.81E, h26km±1km, ML2.6, D*
ISC 28 21:57:00.4±1.1, 24.16N±0.03×122.81E±0.02, h22km±3km, n68, σ0.87/126, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.32**	**22**	*eP*	**Pb**	**21 57 06.9**	**-0.4**
JYNG				*eS*	**Sb**	**21 57 12.2**	**+0.1**
YOJ	**Yonaguni jima**	**0.35**	**31**	P	**Pb**	**21 57 08.1**	**+0.2**
YOJ	baz=36			S	**Sb**	**21 57 13.5**	**+0.5**
	baz=36						
YOJ	**Yonaguni jima**	**0.35**	**31**	P	**Pb**	**21 57 07.9**	**0.0**
YOJ				*eS*	**Sb**	**21 57 12.9**	**-0.1**
IRIF	**Iriomote-Funau**	**0.85**	**78**	P	**Pn**	**21 57 16.9**	**-0.3**
IRIF				S	**Sn**	**21 57 28.6**	**-0.4**
HATJ	**Hateruma jima**	**0.91**	**96**	P	**Pb**	**21 57 17.9**	**+0.4**
HATJ				S	**Sn**	**21 57 30.5**	**+0.1**
EWUT	**Wuta**	**0.99**	**287**	*eP*	**Pn**	**21 57 17.1**	**-1.8**
	baz=285						
EWUT				S	**Sn**	**21 57 31.5**	**-0.8**
	baz=285						
TWC Suao 0.99 297 P Pb 21 57 18.8 0.0
baz=311
TWC S Sb 21 57 30.8 -0.6
baz=311
ENA Nanau 1.01 286 *i* P Pn 21 57 19.0 -0.3
baz=284
ENA S Sb 21 57 31.5 -0.7
baz=284
ETL Fush Village 1.09 270 P Pn 21 57 18.8 -1.6
baz=251
ETL S Sb 21 57 36.9 +2.6
baz=251
JKRS Kuro-shima 1.09 86 P Pn 21 57 20.4 0.0
JKRS S Sb 21 57 36.4 +1.9
NDS Dongshan 1.11 296 P Pn 21 57 19.3 -1.4
baz=307
NDS S Sb 21 57 35.7 +0.8
baz=307
NACB Ninganchiao 1.11 271 P Pb 21 57 21.1 +0.1
baz=254
NACB S Sb 21 57 36.0 +1.0
baz=254
TWD Chiawan 1.11 266 P Pb 21 57 22.1 +1.2
baz=265
TWD *i* S Sb 21 57 35.3 +0.3
baz=265
TWB1 Santiao Chiao 1.13 319 S Sb 21 57 36.1 +0.6
baz=332
NTC Toucheng 1.13 308 *eP* Pb 21 57 21.6 +0.4
baz=322
NTC *eS* Sb 21 57 36.1 +0.6
baz=322
TWE Neicheng 1.19 298 *i* P Pb 21 57 22.1 0.0
baz=309
TWE *i* S Sb 21 57 37.5 +0.4
baz=309
TIPB Shuangxi 1.21 312 *i* P Pb 21 57 23.1 +0.5
baz=311
TIPB S Sn 21 57 36.9 -1.0
baz=311
ETLH Xiulin Townshi 1.22 273 P Pb 21 57 22.7 0.0
baz=271
ETLH S Sb 21 57 39.7 +1.6
baz=271
JIJ Ishigaki jima 1.23 80 P Pb 21 57 22.7 -0.3
JIJ *eS* Sb 21 57 38.6 +0.2
LATG Datong 1.23 288 P Pb 21 57 22.6 -0.4
baz=271
LATG S Sb 21 57 38.8 +0.2
baz=271
ENTT Nioudou 1.23 293 *i* P Pn 21 57 22.1 -0.3
baz=302
ENTT S Sb 21 57 38.4 -0.1
baz=302
SXI1 Grass Mountain 1.26 318 *eP* Pn 21 57 22.4 -0.5
baz=330
SXI1 *eS* Sb 21 57 38.9 -0.5
baz=330
NDT Datong Townshi 1.27 291 P Pb 21 57 24.2 +0.6
baz=289
NDT S Sb 21 57 39.8 +0.4
baz=289
FUSB Fushanzhiwuyua 1.27 298 P Pb 21 57 23.6 0.0
baz=310
FUSB *eS* Sb 21 57 38.9 -0.6
baz=310
ESL Shilin 1.31 255 P Pn 21 57 23.2 -0.2
baz=254
ESL S Sn 21 57 40.4 +0.2
baz=254
NNSB Datong 1.33 282 P Pb 21 57 24.8 0.0
baz=280
NNSB S Sb 21 57 40.9 -0.5
baz=280
NNS Nan Shan 1.34 282 *i* P Pn 21 57 23.8 -0.2
baz=267
NNS S Sn 21 57 40.6 -0.7
baz=267
EGFH Guangfu 1.36 249 *eS* Sb 21 57 42.2 +0.2
baz=248
TWA Mucha 1.39 306 *i* P Pn 21 57 24.5 0.0
baz=319
TWA S Sb 21 57 42.2 -0.7
baz=319
YHNB Yeheng 1.41 292 P Pb 21 57 26.4 +0.5
baz=273
YHNB S Sb 21 57 44.0 +0.5
baz=273
WHF Hehuan Shan 1.41 270 P Pb 21 57 26.0 -0.4
baz=268
WHF S Sb 21 57 44.4 +0.3
baz=268
NSK Sanguang 1.42 292 *i* P Pn 21 57 25.2 +0.2
baz=273
NSK S Sn 21 57 43.1 -0.1
baz=273
JISG Ishigakijimahi 1.43 72 *eP* Pn 21 57 25.2 +0.2
HGSD Ruisui 1.44 243 *eP* Pn 21 57 24.9 -0.2
baz=242
HGSD *eS* Sn 21 57 42.1 -1.2
baz=242
FUSS Fushou 1.44 274 *eP* Pb 21 57 26.1 -0.5
baz=273
FUSS *eS* Sb 21 57 45.4 +0.8
baz=273
YM01 YM01 1.50 311 P Pn 21 57 26.0 -0.1
baz=310
YM01 S Sn 21 57 44.5 -0.5
baz=310
CHGB Renai 1.50 267 P Pn 21 57 26.8 +0.6
baz=265
CHGB S Sn 21 57 45.7 +0.4
baz=265
OWD Renai 1.51 263 P Pn 21 57 27.0 +0.7
baz=261
OWD S Sn 21 57 45.2 -0.2
baz=261
EHY Hungye 1.51 245 *i* P Pn 21 57 25.7 -0.5
baz=259
EHY *i* S Sn 21 57 45.1 -0.2
baz=259
WUSB Renai 1.56 264 P Pn 21 57 27.8 +0.8
baz=263
WUSB S Sb 21 57 47.3 -0.7
baz=263
VWDT VWDT 1.58 256 P Pn 21 57 27.5 +0.4
baz=254
VWDT S Sn 21 57 47.3 +0.3
baz=254
YULB Yu-li 1.58 242 P Pn 21 57 26.7 -0.5
baz=229
YULB S Sn 21 57 46.8 -0.3
baz=229
EYUL Yuli 1.59 240 *eP* Pn 21 57 26.8 -0.5
baz=239
EYUL *eS* Sn 21 57 47.3 +0.1
baz=239
PCYT Pengchaiyu 1.61 335 P Pn 21 57 27.2 -0.4
baz=335
PCYT S Sn 21 57 47.5 -0.2
baz=335
NFF Wufeng Townshi 1.62 287 *eP* Pb 21 57 29.4 -0.1
baz=274
NFF *eS* Sb 21 57 50.1 +0.6
baz=274
FULB Fuli 1.69 236 *eS* Sn 21 57 49.8 +0.1
baz=224
LIOB Emei 1.71 287 *eP* Pb 21 57 31.5 +0.3
baz=286
LIOB *eS* Sb 21 57 54.1 +1.9
baz=286
WHP Taichung City 1.71 274 P Pb 21 57 31.9 +0.8
baz=260
WHP S Sb 21 57 53.2 +1.0
baz=260
NSTT Nanjuang 1.72 286 *eP* Pn 21 57 28.9 -0.1
baz=286
SSLB Suanglung 1.74 258 P Pb 21 57 30.8 -0.9
baz=257
SSLB *eS* Sn 21 57 51.5 +0.5
baz=257
WCS Beigang Elemen 1.74 267 *eP* Pn 21 57 29.7 +0.3
baz=266
WCS *eS* Sb 21 57 52.6 -0.4
baz=266
SMLT Sun Moon Lake 1.77 261 P Pn 21 57 30.3 +0.4
baz=260
SMLT S Sn 21 57 51.8 0.0

baz=260
JTJ Tarama 1.79 74 P **Pb** **21 57 31.4 -1.0**
JTJ eS **Sb** **21 57 54.5 +0.1**
TYC Yuchr 1.81 262 P **Pn** **21 57 30.8 +0.5**
baz=261
TYC S **Sn** **21 57 53.5 +1.0**
baz=261
EDH Donghe 1.82 230 eS **Sn** **21 57 50.7 -2.1**
baz=218
YUS Yu-Shan 1.83 249 P **Pn** **21 57 31.5 +0.5**
baz=248
YUS S **Sn** **21 57 53.0 -0.8**
baz=248
WHYT Xinyi Township 1.85 256 eS **Sn** **21 57 55.0 +1.3**
baz=243
ELDTW Lidau 1.91 240 P **Pn** **21 57 30.5 -1.3**
baz=239
ELDTW S **Sn** **21 57 54.4 -0.8**
baz=239
ALS Alishan 1.95 251 P **Pn** **21 57 33.3 +0.8**
baz=251
STYH Taoyuan 2.11 243 eP **Pn** **21 57 34.0 -0.4**
baz=233
STYH eS **Sn** **21 58 00.3 +0.3**
baz=233
WDLH Douliu 2.13 258 eP **Pb** **21 57 37.7 -0.7**
baz=258
WCKO Fanlu 2.15 251 eP **Pn** **21 57 36.6 +1.7**
baz=250
WCKO eS **Sn** **21 58 02.3 +1.4**
baz=250
TPUB Ta-pu 2.18 247 P **Pb** **21 57 37.7 -1.4**
baz=247
TPUB eS **Sb** **21 58 04.2 -1.4**
baz=247
CHN4 Tsaushan 2.19 249 eP **Pn** **21 57 37.0 +1.5**
baz=248
CHN4 eS **Sn** **21 58 03.4 +1.5**
baz=248
WTP Ta-pu 2.21 246 P **Pb** **21 57 37.9 -1.8**
baz=245
WTP eS **Sn** **21 58 04.8 +2.3**
baz=245
SGST Jiashian 2.31 243 eP **Pn** **21 57 39.0 +1.8**
baz=233
TWK Hsinying 2.31 248 eP **Pn** **21 57 39.0 +1.8**
baz=247
TWK eS **Sb** **21 58 08.6 -0.9**
baz=247
SNST Tainan City 2.32 247 eP **Pn** **21 57 39.5 +2.2**
baz=246
SNST eS **Sb** **21 58 08.8 -0.9**
baz=246

IDC 28 22:02:44.1±8.5, 7°.01S×129°.82E, h140km±88km, mb2.8/1, mbtmp3.6/5, Error ellipse: s-maj=75.0km s-min=28.6km az=38.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.87**	**242**	P	Pn	22 04 24.2	+1.8
	18nm,0.4s,baz=115,slow=5.5,SNR=4.9						
BATI				S	Sn	22 05 38.5	-1.0
	8.6nm,0.3s,baz=36,slow=19,SNR=1.5						
FITZ	**Fitzroy Crossi**	**11.75**	**200**	P	Pn	22 05 27.5	-0.1
	1.5nm,1.0s,baz=24,slow=13,SNR=1.5						
FITZ				S	Sn	22 07 28.9	-8.4
	0.8nm,0.5s,baz=233,slow=20,SNR=1.8						
WRA	**Warramunga Arr**	**13.58**	**162**	P	Pn	22 05 49.4	-1.8
	0.2nm,0.3s,baz=346,slow=13,SNR=2.7						
WRA				S	Sn	22 08 13.0	-8.5
	0.4nm,0.4s,baz=348,slow=21,SNR=6.9						
ASAR	**Alice Springs**	**17.02**	**167**	P	Pn	22 06 34.8	+0.9
	0.9nm,0.5s,baz=350,slow=11,SNR=13						
MKAR	**Makanchi Array**	**68.14**	**327**	P	P	22 13 28.9	-0.2
	0.1nm,0.4s,baz=118,slow=8.8,SNR=2.2						
	0.1nm,0.4s						

*DDA **28** 22:13:06.8±0.0, 35°.68N×27°.97E, h8km±1km, ML2.9*
*ATH **28** 22:13:09.7, 35°.96N×28°.33E, h37km±5km, ML2.8/3, Error ellipse: s-maj=12.4km s-min=2.6km az=290.0*
*ISK **28** 22:13:10.2, 35°.87N×28°.21E, h10km, ML3.1/19*
*NIC **28** 22:13:11.2±0.0, 35°.90N×28°.23E, h15km±1km, Ml3.5/6*
ISC 28 22:13:10.8±1.2, 35°.84N±0°.03×28°.18E±0°.02, h8km±10km, n55, σ1§02/75, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.38**	**354**	PG	**Pg**	**22 13 17.6**	**-0.6**
ARG	**Arkhangelos**	**0.38**	**354**	P	**Pg**	**22 13 17.8**	**-0.4**
ARG				S	**Sg**	**22 13 23.7**	**+0.5**
ARG	**Arkhangelos**	**0.38**	**354**	P	**Pg**	**22 13 17.8**	**-0.4**
ARG				S	**Sg**	**22 13 23.8**	**+0.6**
ARG				AML	AML	22 13 27.9	
	comp=N,2264μm,0.4s						
ARG				AML	AML	22 13 28.1	
	comp=E,2518μm,0.3s						
KARP	**Karpathos**	**0.88**	**251**	PG	**Pb**	**22 13 28.3**	**0.0**
KARP				SG	**Sn**	**22 13 41.4**	**-1.1**
KARP	**Karpathos**	**0.88**	**251**	P	**Pb**	**22 13 28.3**	**0.0**
KARP				S	**Sn**	**22 13 43.1**	**+0.6**
KARP				AML	AML	22 13 49.7	
	comp=E,1.7nm,0.6s						
KARP				AML	AML	22 13 49.7	
	comp=E,1.7nm,0.6s						
KARP	**Karpathos**	**0.88**	**251**	P	**Pb**	**22 13 28.4**	**0.0**
TURN	**Turunc**	**0.93**	**3**	PG	**Pg**	**22 13 28.2**	**-0.6**
TURN				SG	**Sb**	**22 13 41.2**	**-0.6**
TURN	**Turunc**	**0.93**	**3**	P	**Pg**	**22 13 28.4**	**-0.3**
TURN				S	**Sn**	**22 13 43.9**	**+0.1**
TURN				*i* AML	AML	22 13 48.0	
	comp=E,225nm,0.9s						
TURN				*i* AML	AML	22 13 48.0	
	comp=E,262nm,0.7s						
DAT	**Datca**	**1.01**	**332**	PG	**Pb**	**22 13 30.3**	**-0.3**
DALY	**Dalyan (Mula)**	**1.05**	**22**	PG	**Pg**	**22 13 29.9**	**-1.0**
FETY	**Fethiye**	**1.08**	**43**	PG	**Pg**	**22 13 29.8**	**-1.8**
FETY				SG	**Sg**	**22 13 45.0**	**-0.6**
AKAS	**Kas**	**1.22**	**71**	PN	**Pb**	**22 13 33.6**	**-0.7**
AKAS	**Kas**	**1.22**	**71**	P	**Pb**	**22 13 33.4**	**-0.9**
AKAS				S	**Sn**	**22 13 53.9**	**+2.7**
YER	**Yerkesik**	**1.29**	**4**	PN	**Pn**	**22 13 34.5**	**-0.8**
KOSK	**Kos Island**	**1.33**	**314**	PN	**Pn**	**22 13 35.2**	**-0.5**
BDRM	**Kayabasi**	**1.35**	**334**	P	**Pb**	**22 13 36.2**	**-0.2**
BDRM				S	**Sg**	**22 13 54.2**	**-0.2**
BODT	**Bodrum**	**1.40**	**330**	PN	**Pn**	**22 13 35.8**	**-1.0**
MULA	**Mugla, Merkez-**	**1.42**	**5**	P	**Pb**	**22 13 37.1**	**-0.5**
MULA				S	**Sg**	**22 13 58.8**	**+2.4**
CAME	**Cameli-Denizli**	**1.43**	**39**	PN	**Pn**	**22 13 36.2**	**-1.0**
CAEL	**Denizli, Camel**	**1.58**	**35**	P	**Pg**	**22 13 42.2**	**+1.1**
CAEL				S	**Sg**	**22 14 04.1**	**+2.6**
ELL	**Elmali**	**1.67**	**57**	PN	**Pn**	**22 13 39.9**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.73**	**20**	P	**Pb**	**22 13 42.6**	**-0.3**
TAVA				S	**Sg**	**22 14 09.4**	**+3.1**
TAVA				*i* AML	AML	22 14 16.0	
	comp=E,138nm,0.8s						
TAVA				*i* AML	AML	22 14 16.0	
	comp=E,100nm,0.5s						
ZKR	**Zakros**	**1.75**	**246**	PN	**Pn**	**22 13 41.6**	**+0.1**
ZKR	**Zakros**	**1.75**	**246**	P	**Pn**	**22 13 41.7**	**+0.1**
ZKR				S	**Sb**	**22 14 05.9**	**+0.5**
ZKR	**Zakros**	**1.75**	**246**	P	**Pg**	**22 13 44.2**	**-0.3**
ZKR				AML	AML	22 14 15.7	
	comp=E,499μm,0.6s						
ZKR				AML	AML	22 14 19.2	
	comp=N,230μm,0.6s						
DDIM	**Aydin, Didim**	**1.78**	**335**	P	**Pn**	**22 13 41.9**	**+0.1**
DDIM				S	**Sg**	**22 14 07.4**	**-0.6**
DDIM				*i* AML	AML	22 14 14.0	
	comp=N,257nm,0.7s						
DDIM				*i* AML	AML	22 14 15.0	
	comp=N,216nm,0.7s						
GOLH	**Golhisar**	**1.79**	**38**	P	**Pb**	**22 13 43.8**	**-0.1**
GOLH				S	**Sg**	**22 14 10.9**	**+2.8**
GOLH				*i* AML	AML	22 14 20.0	
	comp=N,92nm,0.8s						
AYDN	**Tasoluk**	**1.83**	**353**	P	**Pn**	**22 13 43.1**	**+0.4**
AYDN				S	**Sb**	**22 14 07.8**	**0.0**
AYDN				*i* AML	AML	22 14 15.0	
	comp=N,110nm,0.5s						
AYDN				*i* AML	AML	22 14 19.0	
	comp=N,82nm,0.5s						
APMY	**Acipayam-Deniz**	**1.86**	**29**	PN	**Pn**	**22 13 42.3**	**-0.8**
GCAM	**G?zelcaml?**	**2.00**	**338**	PN	**Pn**	**22 13 44.8**	**-0.2**
GCAM	**G?zelcaml?**	**2.00**	**338**	P	**Pn**	**22 13 45.8**	**+0.8**
GCAM				S	**Sb**	**22 14 11.7**	**-0.9**
KORT	**Korkueli**	**2.10**	**56**	PN	**Pn**	**22 13 46.0**	**-0.5**
KORT	**Korkueli**	**2.10**	**56**	P	**Pb**	**22 13 47.9**	**-1.4**
KORT				S	**Sb**	**22 14 14.6**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**2.11**	**354**	PN	**Pn**	**22 13 46.2**	**-0.4**
SMG	**Samos**	**2.15**	**330**	P	**Pn**	**22 13 46.8**	**-0.2**
SMG				AML	AML	22 14 24.2	
	comp=E,439μm,0.5s						
SMG				AML	AML	22 14 25.5	
	comp=N,376μm,0.4s						
SANT	**Santorini**	**2.26**	**284**	PN	**Pn**	**22 13 48.7**	**+0.1**
BRDR	**BURDUR-Merkez**	**2.39**	**39**	P	**Pb**	**22 13 54.4**	**+0.2**
DGB	**zmir**	**2.44**	**335**	P	**Pn**	**22 13 51.0**	**0.0**
APE	**Apeiranthos**	**2.46**	**301**	PN	**Pn**	**22 13 51.2**	**-0.1**
BASM	**Basmaki-Afyon**	**2.56**	**35**	PN	**Pn**	**22 13 52.4**	**-0.3**
MANT	**Manisa**	**2.66**	**6**	P	**Pb**	**22 13 56.6**	**-2.2**
MANT				S	**Sn**	**22 14 27.7**	**+0.8**
BLCB	**Balcova**	**2.69**	**341**	PN	**Pn**	**22 13 54.5**	**0.0**
PASA	**Karahalli, USA**	**2.71**	**22**	P	**Pn**	**22 13 56.3**	**+1.5**
ZEYE	**Izmir, Urla-Ze**	**2.74**	**331**	P	**Pn**	**22 13 55.1**	**0.0**
ZEYE				*i* AML	AML	22 14 33.0	
	comp=N,36nm,0.8s						
URLA	**Izmir**	**2.81**	**334**	P	**Pn**	**22 13 54.7**	**-1.4**
USAK	**Uak-Merkez**	**2.94**	**13**	P	**Pn**	**22 14 00.1**	**+2.0**
SHUT	**Suhut-Afyon**	**3.31**	**34**	PN	**Pn**	**22 14 03.1**	**+0.1**
OSC1	**CSNet OBS 1**	**3.46**	**132**	P	**Pn**	**22 14 04.9**	**-0.1**
OSC1				S	**Sn**	**22 14 46.7**	**+0.4**
AKMS	**Akamas**	**3.50**	**102**	P	**Pn**	**22 14 05.0**	**-0.5**
AKMS				AML	AML	22 14 48.8	
	comp=N,0.3nm,1.0s						
AKMS				AML	AML	22 14 52.1	
	comp=N,0.3nm,0.8s						
ALFC	**Alefka**	**3.67**	**99**	P	**Pn**	**22 14 07.2**	**-0.8**
ALFC				AML	AML	22 14 54.4	
	comp=N,0.2nm,0.5s						
ALFC				AML	AML	22 14 54.6	
	comp=N,0.2nm,0.6s						
NATA	**Nata**	**3.75**	**105**	P	**Pn**	**22 14 08.7**	**-0.3**
NATA				AML	AML	22 14 55.5	
	comp=N,0.6nm,0.5s						
NATA				AML	AML	22 14 55.9	
	comp=N,0.4nm,0.4s						
SZAC	**Souni**	**4.00**	**104**	P	**Pn**	**22 14 12.2**	**-0.3**
SZAC				AML	AML	22 15 01.1	
	comp=N,0.2nm,0.5s						
SZAC				AML	AML	22 15 05.8	
	comp=N,0.2nm,0.5s						
ASGA	**Asgata**	**4.28**	**103**	P	**Pn**	**22 14 15.9**	**-0.4**
ASGA				AML	AML	22 15 10.8	
	comp=N,0.1nm,0.4s						
ASGA				AML	AML	22 15 14.6	
	comp=N,0.1nm,0.7s						
CSS	**Mathiatis**	**4.30**	**100**	P	**Pn**	**22 14 16.2**	**-0.5**
MVOU	**Mavrovouni**	**4.53**	**99**	P	**Pn**	**22 14 18.9**	**-0.8**

ROM 28 22:15:16.5±0.1, 42°.595N±0°.009×13°.260E±0°.009, h11km, ML1.8/8, 6C-2D, Error ellipse: s-maj=1.0km s-min=0.6km az=173.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.09**	**202**	⇑P	Pg	22 15 19.7	+0.6
RM33				S	Sg	22 15 21.4	+0.3
RM33				AML	AML		
	comp=E,1031μm,0.6s						
RM33				AML	AML		
	comp=N,840μm,1.3s						
RM33				AML	AML		
	comp=N,830μm,0.2s						
RM33				AML	AML		
	comp=E,1030μm,0.6s						
RM33				AML	AML		
	comp=N,841μm,1.3s						
RM33				AML	AML		
	comp=N,830μm,0.2s						
RM33				AML	AML		
	comp=E,1030μm,0.6s						
RM33				AML	AML		
	comp=E,1050μm,0.6s						
RM33				AML	AML		
	comp=N,840μm,1.3s						
CAMP	**Campotosto**	**0.12**	**118**	⇑P	Pg	22 15 20.3	+0.7
CAMP				S	Sg	22 15 22.6	+0.8
CAMP				AML	AML		
	comp=N,349μm,0.7s						
CAMP				AML	AML		
	comp=E,342μm,0.9s						
LNSS	**Leonessa**	**0.16**	**273**	⇑P	Pg	22 15 20.6	+0.5
LNSS				S	Sg	22 15 23.4	+0.7
LNSS				AML	AML		
	comp=E,681μm,0.5s						
LNSS				AML	AML		
	comp=N,757μm,0.1s						
LNSS				AML	AML		
	comp=N,3160μm,0.5s						
LNSS				AML	AML		
	comp=E,3575μm,0.5s						
T1243	**Rocca Santa Ma**	**0.17**	**54**	P	Pg	22 15 20.8	+0.5
T1243				S	Sg	22 15 23.7	+0.7
TERO	**Teramo**	**0.26**	**84**	⇑P	Pg	22 15 22.2	+0.5
TERO				S	Sg	22 15 26.2	+1.0
TERO				AML	AML		
	comp=E,376μm,0.6s						
TERO				AML	AML		
	comp=N,450μm,0.4s						
NRCA	**Norcia**	**0.26**	**336**	AML	AML		
	comp=E,54200μm,0.1s						
NRCA				AML	AML		
	comp=N,45150μm,0.1s						
NRCA				AML	AML		
	comp=E,61950μm,0.1s						
NRCA				AML	AML		
	comp=N,49550μm,0.1s						
GIGS	**Gran Sasso**	**0.27**	**122**	P	Pg	22 15 22.6	+0.6
GIGS				S	Sg	22 15 26.8	+1.1
GIGS				AML	AML		
	comp=N,67μm,0.8s						
GIGS				AML	AML		
	comp=E,47μm,0.2s						
FIAM	**Fiamignano**	**0.34**	**198**	⇓P	Pg	22 15 24.0	+0.6
FIAM				AML	AML		
	comp=N,70μm,0.9s						
FIAM				AML	AML		
	comp=E,112μm,0.5s						
ARRO	**Arrone**	**0.37**	**268**	⇑P	Pg	22 15 24.0	+0.3
ARRO				AML	AML		
	comp=E,216μm,0.2s						
ARRO				AML	AML		
	comp=N,221μm,1.4s						
FAGN	**Fagnano**	**0.41**	**144**	P	Pb	22 15 25.6	-0.1
FAGN				AML	AML		
	comp=E,180μm,0.5s						
FAGN				AML	AML		
	comp=N,190μm,1.4s						
FAGN				AML	AML		
	comp=E,306μm,0.3s						
FAGN				AML	AML		
	comp=N,238μm,1.1s						
FDMO	**Fiordimonte**	**0.46**	**344**	AML	AML		
	comp=N,53μm,0.2s						
FDMO				AML	AML		
	comp=E,53μm,1.3s						
FDMO				AML	AML		
	comp=E,489μm,0.2s						
FDMO				AML	AML		
	comp=N,640μm,0.2s						
OFFI	**Offida**	**0.46**	**43**	P	Pb	22 15 26.8	+0.1
VCEL	**Villa Celiera**	**0.47**	**115**	P	Pb	22 15 26.7	-0.2
VCEL				S	Sb	22 15 36.0	+2.0
VCEL				AML	AML		
	comp=N,148μm,0.9s						
VCEL				AML	AML		
	comp=E,181μm,0.7s						
CSP1	**Cessapalombo**	**0.50**	**355**	S	Sg	22 15 24.0	-8.9
CESX	**Cesi**	**0.50**	**272**	⇓P	Pg	22 15 26.4	+0.1
CESX				AML	AML		
	comp=E,104μm,0.6s						
CESX				AML	AML		
	comp=N,106μm,0.5s						
T0110	**Collepietro**	**0.53**	**134**	⇑P	Pg	22 15 27.3	+0.5
T0110				AML	AML		
	comp=E,153μm,0.7s						
T0110				AML	AML		
	comp=N,199μm,1.2s						
SNTG	**Esanatoglia**	**0.70**	**341**	S	Sg	22 15 32.0	-7.2
INTR	**Introdacqua**	**0.75**	**140**	P	Pg	22 15 30.9	-0.1
INTR				AML	AML		
	comp=N,50μm,0.5s						
INTR				AML	AML		
	comp=E,38μm,1.3s						
CING	**Cingoli**	**0.78**	**357**	S	Sg	22 15 32.0	-10

ROM 28 22:16:21.8±0.1, 42°.781N±0°.003×13°.190E±0°.007, h10km, ML2.4/42, 12C-15D, Error ellipse: s-maj=0.6km s-min=0.1km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.08**	**314**	P	Pg	22 16 24.4	+0.3
NRCA				S	Sg	22 16 25.8	0.0
MC2	**Monte Cornacci**	**0.13**	**0**	P	Pg	22 16 25.5	+0.5
MC2				S	Sg	22 16 28.1	+0.9
MC2				AML	AML		
	comp=E,6100μm,0.2s						
MC2				AML	AML		
	comp=N,5975μm,0.2s						
MMO1	**Montemonaco**	**0.16**	**40**	P	Pg	22 16 25.9	+0.6
MMO1				S	Sg	22 16 28.7	+1.0
MMO1				AML	AML		
	comp=N,2510μm,0.6s						
MMO1				AML	AML		
	comp=E,2565μm,0.7s						
FEMA	**Monte Fema**	**0.21**	**330**	⇓P	Pg	22 16 26.8	+0.6
FEMA				AML	AML		
	comp=N,2865μm,0.4s						
FEMA				AML	AML		
	comp=E,3210μm,0.4s						
T1243	**Rocca Santa Ma**	**0.21**	**114**	⇓P	Pg	22 16 26.9	+0.7
T1243				AML	AML		
	comp=E,3835μm,0.4s						
T1243				AML	AML		
	comp=N,5335μm,0.3s						
T1243				AML	AML		
	comp=E,3835μm,0.3s						
T1243				AML	AML		
	comp=N,5340μm,0.3s						
T1243				AML	AML		
	comp=E,3765μm,0.3s						
T1243				AML	AML		
	comp=N,5360μm,0.3s						
LNSS	**Leonessa**	**0.21**	**212**	P	Pg	22 16 26.2	+0.1
LNSS				S	Sg	22 16 30.8	+1.7
LNSS				AML	AML		
	comp=N,3175μm,1.0s						
LNSS				AML	AML		
	comp=N,3160μm,0.5s						
LNSS				AML	AML		
	comp=E,3905μm,0.2s						
FDMO	**Fiordimonte**	**0.27**	**344**	P	Pg	22 16 27.7	+0.5
FDMO				S	Sg	22 16 32.0	+1.2
FDMO				AML	AML		
	comp=E,1475μm,0.7s						
FDMO				AML	AML		
	comp=N,1420μm,1.0s						
RM33	**Pellescritta (**	**0.27**	**176**	P	Pb	22 16 28.1	-0.8
RM33				S	Sb	22 16 32.8	-0.8
RM33				AML	AML		
	comp=E,2100μm,0.4s						
RM33				AML	AML		
	comp=N,1930μm,0.2s						
RM33				AML	AML		
	comp=N,1940μm,0.2s						
RM33				AML	AML		
	comp=E,2095μm,0.1s						
CAMP	**Campotosto**	**0.29**	**146**	P	Pg	22 16 28.3	+0.6
CAMP				S	Sb	22 16 33.2	-1.1
CAMP				AML	AML		
	comp=E,392μm,0.5s						
CAMP				AML	AML		
	comp=N,541μm,0.5s						
CSP1	**Cessapalombo**	**0.31**	**2**	P	Pg	22 16 28.5	+0.5
CSP1				S	Sb	22 16 33.7	-1.1
CSP1				AML	AML		
	comp=N,2165μm,1.3s						
CSP1				AML	AML		
	comp=E,2085μm,0.7s						
TERO	**Teramo**	**0.34**	**117**	P	Pg	22 16 29.1	+0.5
TERO				AML	AML		
	comp=N,960μm,0.5s						
TERO				AML	AML		
	comp=E,849μm,0.5s						
TERO				AML	AML		
	comp=N,959μm,0.5s						
OFFI	**Offida**	**0.40**	**67**	AML	AML		
	comp=E,1340μm,0.6s						
OFFI				AML	AML		
	comp=N,2495μm,0.7s						
OFFI	**Offida**	**0.40**	**67**	⇑P	Pg	22 16 27.8	-1.8
SEF1	**Sefro**	**0.41**	**334**	P	Pg	22 16 30.2	+0.4
GIGS	**Gran Sasso**	**0.43**	**140**	⇓P	Pg	22 16 30.6	+0.3
GIGS				AML	AML		
	comp=E,133μm,0.8s						
GIGS				AML	AML		
	comp=N,124μm,0.2s						
GIGS				AML	AML		
	comp=E,133μm,0.8s						
GIGS				AML	AML		
	comp=N,124μm,0.2s						
GIGS				AML	AML		
	comp=N,124μm,0.2s						
GIGS				AML	AML		
	comp=E,133μm,0.8s						
GAG1	**Gagliole**	**0.47**	**349**	P	Pb	22 16 31.7	-0.5
CESX	**Cesi**	**0.48**	**249**	P	Pg	22 16 31.7	+0.6
CESX				AML	AML		
	comp=E,291μm,0.5s						
CESX				AML	AML		
	comp=N,382μm,0.5s						
SNTG	**Esanatoglia**	**0.51**	**339**	P	Pg	22 16 31.9	+0.2
SNTG				S	Sb	22 16 40.1	-0.3
SNTG				AML	AML		
	comp=E,353μm,0.5s						
SNTG				AML	AML		
	comp=N,402μm,0.7s						
FIAM	**Fiamignano**	**0.52**	**186**	S	Sb	22 16 40.0	-0.6
TRTR	**Tortoreto Alta**	**0.53**	**87**	⇓P	Pb	22 16 33.9	+0.7
TRTR				AML	AML		
	comp=N,962μm,0.4s						
TRTR				AML	AML		
	comp=N,962μm,0.4s						
TRTR				AML	AML		
	comp=E,977μm,0.6s						
EL6	**Elcito**	**0.55**	**353**	P	Pg	22 16 32.8	+0.2
FAGN	**Fagnano**	**0.59**	**150**	⇓P	Pg	22 16 33.4	+0.2
FAGN				AML	AML		
	comp=E,580μm,0.3s						
FAGN				AML	AML		
	comp=N,718μm,0.3s						
CING	**Cingoli**	**0.59**	**0**	AML	AML		
	comp=N,296μm,0.4s						
CING				AML	AML		
	comp=E,326μm,0.4s						
FOSV	**Fossato di Vic**	**0.60**	**329**	⇑P	Pg	22 16 33.6	+0.2
FOSV				S	Sb	22 16 43.0	-0.1
FOSV				AML	AML		
	comp=E,464μm,0.4s						
FOSV				AML	AML		
	comp=N,488μm,0.9s						
FOSV				AML	AML		
	comp=E,464μm,0.4s						
VCEL	**Villa Celiera**	**0.62**	**129**	⇑P	Pb	22 16 34.3	-0.4
VCEL				AML	AML		
	comp=E,384μm,0.2s						
VCEL				AML	AML		
	comp=N,526μm,0.5s						
VCEL				AML	AML		
	comp=N,526μm,0.5s						
VCEL				AML	AML		
	comp=E,384μm,0.2s						
PP3	**Marolino**	**0.67**	**27**	AML	AML		
	comp=E,810μm,0.3s						
PP3				AML	AML		
	comp=N,1164μm,0.4s						
PP3				AML	AML		
	comp=N,1156μm,0.4s						
PP3				AML	AML		
	comp=E,809μm,0.3s						

PP3				AML	AML		
	comp=E,900μm,0.3s						
PP3				AML	AML		
	comp=N,1160μm,0.4s						
PP3				AML	AML		
	comp=N,1154μm,0.4s						
PP3	**Marolino**	**0.67**	**27**	P	Pg	22 16 33.0	-1.8
T0110	**Collepietro**	**0.70**	**142**	⇑P	Pg	22 16 35.4	0.0
T0110				AML	AML		
	comp=E,426μm,0.4s						
T0110				AML	AML		
	comp=N,396μm,0.3s						
SSFR	**Montelago di S**	**0.72**	**336**	⇓P	Pg	22 16 35.8	+0.1
SSFR				AML	AML		
	comp=E,606μm,0.7s						
SSFR				AML	AML		
	comp=N,568μm,0.1s						
SSFR				AML	AML		
	comp=E,572μm,0.2s						
SSFR				AML	AML		
	comp=N,588μm,0.2s						
ARVD	**Arcevia**	**0.74**	**346**	⇓P	Pg	22 16 36.1	+0.1
ARVD				S	Sn	22 16 49.0	-0.8
ARVD				AML	AML		
	comp=E,218μm,0.2s						
ARVD				AML	AML		
	comp=N,138μm,1.0s						
SRES	**S.Oreste - Sor**	**0.74**	**223**	⇑P	Pn	22 16 38.1	-0.3
SRES				AML	AML		
	comp=N,72μm,0.3s						
SRES				AML	AML		
	comp=E,65μm,0.8s						
MGAB	**Montegabbione**	**0.80**	**280**	⇑P	Pn	22 16 39.8	+0.5
MGAB				AML	AML		
	comp=E,395μm,0.3s						
MGAB				AML	AML		
	comp=N,304μm,0.4s						
MGAB				AML	AML		
	comp=E,395μm,0.3s						
MGAB				AML	AML		
	comp=N,285μm,1.4s						
FRON	**Frontone**	**0.81**	**335**	⇓P	Pg	22 16 37.3	-0.1
FRON				AML	AML		
	comp=E,169μm,0.4s						
FRON				AML	AML		
	comp=N,252μm,0.4s						
ATVO	**AVT- Monte Val**	**0.83**	**317**	⇑P	Pg	22 16 37.6	-0.2
ATVO				S	Sn	22 16 52.0	0.0
ATVO				AML	AML		
	comp=E,120μm,0.7s						
ATVO				AML	AML		
	comp=N,142μm,0.7s						
CERT	**Cerreto**	**0.84**	**191**	⇑P	Pg	22 16 37.9	-0.2
CERT				AML	AML		
	comp=N,156μm,1.2s						
CERT				AML	AML		
	comp=E,187μm,0.4s						
COR1	**Corinaldo**	**0.86**	**351**	⇑P	Pn	22 16 39.6	-0.4
COR1				AML	AML		
	comp=E,192μm,1.4s						
COR1				AML	AML		
	comp=N,280μm,0.4s						
COR1				AML	AML		
	comp=N,281μm,0.4s						
COR1				AML	AML		
	comp=E,185μm,1.4s						
ATMI	**Monte Miggiano**	**0.87**	**310**	⇓P	Pg	22 16 38.8	+0.2
ATMI				AML	AML		
	comp=E,331μm,0.3s						
ATMI				AML	AML		
	comp=N,364μm,0.8s						
ATPI	**Pietralunga -**	**0.88**	**320**	⇓P	Pg	22 16 37.8	-1.0
ATPI				AML	AML		
	comp=E,107μm,0.6s						
ATPI				AML	AML		
	comp=N,102μm,0.5s						
ATPI				AML	AML		
	comp=E,107μm,0.6s						
ATPI				AML	AML		
	comp=N,101μm,0.5s						
PIEI	**Pieia**	**0.89**	**328**	⇑P	Pg	22 16 38.5	-0.5
PIEI				AML	AML		
	comp=E,138μm,0.2s						
PIEI				AML	AML		
	comp=N,97μm,0.6s						
INTR	**Introdacqua**	**0.93**	**145**	P	Pg	22 16 39.0	-0.8
INTR				AML	AML		
	comp=E,132μm,0.7s						
INTR				AML	AML		
	comp=N,228μm,1.1s						
NARO	**Abbazia di Nar**	**0.94**	**332**	⇓P	Pg	22 16 39.5	-0.4
NARO				AML	AML		
	comp=E,105μm,1.2s						
NARO				AML	AML		
	comp=N,98μm,1.4s						
SACS	**San Casciano d**	**0.94**	**275**	⇓P	Pn	22 16 41.8	+0.5
SACS				AML	AML		
	comp=E,81μm,1.6s						
SACS				AML	AML		
	comp=N,107μm,0.5s						
RCAV	**Rocca di Cave**	**0.95**	**191**	⇓P	Pn	22 16 41.6	+0.3
APEC	**Apecchio**	**0.96**	**324**	⇓P	Pg	22 16 39.1	-1.2
FSSB	**Fossombrone**	**0.96**	**342**	⇑P	Pg	22 16 40.0	-0.2
FSSB				AML	AML		
	comp=N,558μm,0.3s						
FSSB				AML	AML		
	comp=E,427μm,0.3s						
PE3	**Peglio**	**1.05**	**331**	⇑P	Pg	22 16 41.3	-0.6
PE3				AML	AML		
	comp=N,3μm,1.6s						
PE3				AML	AML		
	comp=E,3μm,1.5s						
CAFI	**Castiglion Fio**	**1.05**	**302**	P	Pb	22 16 42.3	+0.2
CAFI				AML	AML		
	comp=E,67μm,1.1s						
CAFI				AML	AML		
	comp=N,77μm,0.9s						
PARC	**Parchiule**	**1.11**	**322**	⇓P	Pg	22 16 42.9	-0.2
PARC				AML	AML		
	comp=E,107μm,0.8s						
PARC				AML	AML		
	comp=N,69μm,0.6s						
GIUL	**Giuliano Di Ro**	**1.22**	**178**	P	Pg	22 16 46.9	+1.7
GIUL				AML	AML		
	comp=E,54μm,0.5s						
GIUL				AML	AML		
	comp=N,75μm,0.8s						
CRE	**Caprese Michel**	**1.23**	**313**	P	Pg	22 16 45.4	-0.1
CRE				AML	AML		
	comp=N,67μm,0.5s						
CRE				AML	AML		
	comp=E,58μm,1.3s						
SGG	**Gregorio Mates**	**1.65**	**147**	P	Pg	22 16 53.2	-0.2
PTRJ	**Pietraroja**	**1.73**	**144**	P	Pg	22 16 54.7	-0.3
PTRJ				AML	AML		
	comp=N,120μm,0.8s						
PTRJ				AML	AML		
	comp=E,108μm,0.6s						
MELA	**Melanico ??? S**	**1.79**	**126**	P	Pb	22 16 54.9	+0.2
MELA				AML	AML		
	comp=E,85μm,1.0s						
MELA				AML	AML		
	comp=N,83μm,0.5s						
VBKN	**Vesuvio Bunker**	**2.16**	**154**	S	Sn	22 17 23.0	-1.8
MSAG	**Monte S. Angel**	**2.28**	**117**	S	Sb	22 17 31.0	-0.5
MIGL	**Miglionico**	**3.26**	**131**	P	Pg	22 17 25.9	+1.6
OBKA	**Obir**	**3.85**	**14**	*e*Pn	Pn	22 17 22.7	+1.5
	comp=N,0.2nm,0.2s						
ABTA	**Abfaltersbach**	**4.00**	**353**	*e*Pn	Pn	22 17 25.0	+1.9
	comp=N,1.0nm,0.3s						

ROM 28 22:17:13.2±0.1, 40°.895N±0°.006×15°.689E±0°.006, h14km±1km, ML1.6/10, 1C-1D, Error ellipse: s-maj=0.6km s-min=0.2km az=178.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VULT	**Monte Vulture**	**0.08**	**317**	P	Pg	22 17 16.2	-0.1
VULT				S	Sg	22 17 18.4	0.0
VULT				AML	AML		
	comp=E,1465μm,0.1s						
VULT				AML	AML		
	comp=N,1368μm,0.1s						
VULT				AML	AML		
	comp=E,1650μm,0.8s						
VULT				AML	AML		
	comp=N,1635μm,0.1s						
VULT				AML	AML		
	comp=E,1460μm,0.1s						
VULT				AML	AML		
	comp=N,1370μm,0.1s						
RDM3	**Ruvo Del Monte**	**0.12**	**260**	P	Pb	22 17 17.3	+0.1
RDM3				S	Sg	22 17 19.0	+0.1
MRLC	**Muro Lucano**	**0.21**	**228**	P	Pg	22 17 18.2	+0.3
MRLC				S	Sb	22 17 22.2	-0.2
MRLC				AML	AML		
	comp=E,264μm,1.1s						
MRLC				AML	AML		
	comp=N,298μm,0.4s						
MRLC				AML	AML		
	comp=E,264μm,1.1s						
MRLC				AML	AML		
	comp=N,298μm,0.4s						
PALZ	**Palazzo San Ge**	**0.21**	**77**	P	Pg	22 17 18.1	+0.1
PALZ				S	Sb	22 17 22.2	-0.4
PALZ				AML	AML		
	comp=E,228μm,1.3s						
PALZ				AML	AML		
	comp=N,172μm,1.5s						
ACER	**Acerenza**	**0.22**	**119**	⇑P	Pg	22 17 18.4	+1.7
ACER	**Acerenza**	**0.22**	**119**	P	Pg	22 17 18.4	+0.2
ACER				S	Sb	22 17 22.6	-0.3
CAPA	**Cerignola FG**	**0.28**	**20**	P	Pg	22 17 19.0	-0.1
CAPA				S	Sb	22 17 24.8	+0.2
CAPA				AML	AML		
	comp=E,164μm,0.9s						
CAPA				AML	AML		
	comp=N,119μm,1.0s						
SGTA	**Sant Agata di**	**0.34**	**314**	P	Pg	22 17 20.6	+0.4
SNAL	**S. Angelo Dei**	**0.36**	**275**	P	Pg	22 17 20.7	+0.1
SNAL				S	Sb	22 17 27.2	+0.1
SNAL				AML	AML		
	comp=E,58μm,1.5s						
SNAL				AML	AML		
	comp=N,99μm,1.0s						
SNAL				AML	AML		
	comp=E,58μm,1.5s						
CAFE	**Carife**	**0.37**	**291**	P	Pg	22 17 20.8	+0.1
CAFE				S	Sb	22 17 27.2	0.0
MCRV	**Calabrutti - M**	**0.41**	**254**	P	Pg	22 17 21.1	-0.3
MCRV				AML	AML		
	comp=E,80μm,1.2s						
MCRV				AML	AML		
	comp=N,106μm,1.3s						
MCRV				AML	AML		
	comp=E,80μm,1.2s						
MRVN	**Minervino Murg**	**0.42**	**66**	P	Pg	22 17 21.7	+0.2
MRVN				S	Sb	22 17 28.3	-0.2
MRVN				AML	AML		
	comp=N,69μm,0.5s						
MRVN				AML	AML		
	comp=E,89μm,0.3s						
MRVN				AML	AML		
	comp=N,69μm,0.5s						
CDRU	**Civita di Ruta**	**0.50**	**216**	P	Pg	22 17 22.5	-0.6
CDRU				S	Sb	22 17 30.7	-0.3
CDRU				AML	AML		
	comp=E,66μm,1.1s						
CDRU				AML	AML		
	comp=N,31μm,0.3s						
MCEL	**Monticello**	**0.58**	**171**	P	Pg	22 17 24.4	-0.2
MCEL				AML	AML		
	comp=N,42μm,0.3s						
MCEL				AML	AML		
	comp=E,41μm,0.2s						
AMUR	**Altamura**	**0.69**	**89**	AML	AML		
	comp=E,89μm,0.5s						
AMUR				AML	AML		
	comp=N,116μm,0.3s						
SGRT	**San Giovanni R**	**0.86**	**3**	P	Pg	22 17 29.0	-0.9
NOCI	**Noci**	**1.05**	**95**	⇓P	Pn	22 17 33.6	+0.2
NOCI				S	Sn	22 17 49.0	+1.1
NOCI				AML	AML		
	comp=E,64μm,0.3s						
NOCI				AML	AML		
	comp=N,76μm,0.2s						
T1243	**Rocca Santa Ma**	**2.46**	**318**	S	Sg	22 18 31.0	-1.2
MMO1	**Montemonaco**	**2.67**	**319**	S	Sb	22 18 35.0	+1.6
GMB	**Gambarie**	**2.73**	**178**	S	Sb	22 18 33.0	-2.1
MC2	**Monte Cornacci**	**2.75**	**318**	S	Sb	22 18 35.0	-0.7
FDMO	**Fiordimonte**	**2.89**	**319**	S	Sb	22 18 37.0	-2.7
VLO	**Viora**	**2.93**	**97**	P	Pb	22 18 04.3	-0.8
MDAR	**Monte D'Aria**	**2.98**	**321**	S	Sb	22 18 40.0	-2.3
MPAG	**Monte Paganucc**	**3.49**	**322**	S	Sn	22 18 46.0	-2.2
NARO	**Abbazia di Nar**	**3.56**	**321**	S	Sb	22 19 03.0	+4.0

*IDC **28** 23:20:19.6±4.1, 18°.06S×173°.46W, h0km, mb4.2/3, mbtmp4.2/3, MS3.0/1, Error ellipse: s-maj=263.1km s-min=28.8km az=151.0*

*NEIC **28** 23:20:28.5±1.5, 17°.20S±0°.07×173°.03W±0°.05, h108km±11km, mb4.3/10, Error ellipse: s-maj=10.5km s-min=7.0km az=163.0*

ISC 28 23:20:27.9±0.7, 17°.21S±0°.07×173°.07W±0°.07, h100km±22km, σ1s29/21, mb4.2/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.51**	**21**		**Pn**	**23 21 20.5**	**-0.1**
AFI				Sn	**Sn**	**23 21 59.8**	**-1.5**
NIUE	**Niue**	**3.52**	**122**		**Pn**	**23 21 20.0**	**-0.5**
NIUE				Sn	**Sn**	**23 21 59.3**	**-2.0**
MSVF	**Nonsavu**	**8.49**	**265**		**Pn**	**23 22 28.9**	**+0.7**
RAR	**Rarotonga**	**13.18**	**110**	LR	LR	23 27 24.2	
	comp=Z,71nm,20.6s,baz=230,slow=32						
RAR	**Rarotonga**	**13.18**	**110**		**Pn**	**23 23 33.3**	**+2.2**
URZ	**Urewera**	**22.67**	**200**	P	**P**	**23 25 20.5**	**-0.4**
URZ				IAmb	IAmb	23 25 33.9	
	comp=Z,11nm,0.8s						
KHZ	**Kahutara**	**27.61**	**202**	P	**P**	**23 26 06.5**	**+0.7**
KHZ				IAmb	IAmb	23 26 21.6	
	comp=Z,13nm,1.1s						
ARMA	**Armidale**	**34.72**	**241**	P	P	23 27 04.1	-4.5
ARMA				IAmb	IAmb	23 27 05.6	
	comp=Z,3.4nm,0.9s						
CTAO	**Charters Tower**	**38.58**	**259**	P	**P**	**23 27 40.5**	**-0.8**
BBOO	**Buckleboo**	**48.20**	**241**	P	**P**	**23 28 58.6**	**+0.1**
BBOO				IAmb	IAmb	23 29 03.9	
	comp=Z,5.5nm,1.1s						
WB0	**Warramunga Arr**	**49.73**	**258**	P	**P**	**23 29 10.2**	**-0.2**
WB0				IAmb	IAmb	23 29 27.3	
	comp=Z,2.8nm,1.1s						
WB2	**Warramunga Arr**	**49.75**	**258**	P	**P**	**23 29 09.4**	**-1.1**
WRA	**Warramunga Ar**	**49.76**	**258**	P	**P**	**23 29 09.4**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=98,slow=6.7,SNR=20						
	comp=Z,0.7nm,0.4s						
WRA	**Warramunga Arr**	**49.76**	**258**	P	**P**	**23 29 10.0**	**-0.6**
AS31	**Alice Springs**	**49.87**	**253**	P	**P**	**23 29 11.2**	**-0.2**
AS31				IAmb	IAmb	23 29 11.9	
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**49.87**	**253**	P	**P**	**23 29 11.1**	**-0.4**
	comp=Z,9.5nm,0.7s,baz=87,slow=8.5,SNR=94						
	comp=Z,9.5nm,0.7s						
ASAR	**Alice Springs**	**49.87**	**253**	P	**P**	**23 29 10.7**	**-0.7**
LUWI	**Luwuk**	**65.05**	**277**	P	**P**	**23 30 57.1**	**-1.0**
GSTR	**Great Sitkin T**	**69.06**	**358**	P	**P**	**23 31 22.2**	**-0.4**
NVAR	**Mina Array Bea**	**75.46**	**42**	P	P	23 32 10.9	+10
	comp=Z,0.7nm,0.7s,baz=226,slow=8.6,SNR=6.9						
	comp=Z,0.7nm,0.7s						
CLL	**Collm**	**145.64**	**353**	*e*PKPbc	**PKiKP**	**23 39 58.0**	**-0.5**
BRTR	**Keskin Array B**	**147.74**	**319**	PKPbc	**PKPab**	**23 40 07.4**	**+3.4**
	comp=Z,1.1nm,0.8s,baz=124,slow=2.1,SNR=6.4						

*NOU **28** 23:29:19.2, 23°.17S×173°.22E, h0km, mb5.1/29, Southeast of Loyalty Islands*

*NEIC **28** 23:29:19.1±1.7, 22°.99S±0°.06×173°.17E±0°.06, h10km±1km, mb5.2/134, Error ellipse: s-maj=12.6km s-min=7.1km az=140.0*

*MOS **28** 23:29:20.8±1.8, 22°.83S×173°.02E, h32km, mb5.1/12, Error ellipse: s-maj=11.7km s-min=9.4km az=63.5*

*IDC **28** 23:29:23.7±3.4, 22°.83S×173°.09E, h48km±31km, mb4.3/16, mbtmp4.5/18, ML4.1/2, MS4.3/32, Error ellipse: s-maj=21.4km s-min=15.5km az=68.0*

*GCMT **28** 23:29:24.1±0.1, 23°.04S±0°.01×173°.22E±0°.01, h14km, MW5.2/145, Moment Tensor Solution. s111,c174; s145,c243; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.85±.02; Mθθ=0.76±.01; Mφφ=0.09±.01; Mrθ=-0.27±.03; Mrφ=0.32±.01; Mθφ=-0.14±.03; Best double couple: M=0.92200×10^17 NP1:ϕs66.00000°, δ54.00000°, λ-92.00000°. NP2:ϕs250.00000°, δ36.00000°, λ-87.00000°. Principal axes: T 0.9390, Plg9.0000°, Azm158.0000°; N -0.0350, Plg2.0000°, Azm67.0000°; P -0.9050, Plg80.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 23:29:18.3±0.3, 22°.96S±0°.05×173°.15E±0°.05, h10km, n456, σ1s64/424, mb5.2/91, MS4.4/40, 37C-19D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.97**	**286**	Pn	**Pn**	**23 30 34.7**	**+1.7**
MARNC	**Mare, Loyalty**	**4.97**	**286**	P	**Pn**	**23 30 34.9**	**+1.9**
MARNC	**Mare, Loyalty**	**4.97**	**286**	P	**Pn**	**23 30 34.8**	**+1.8**
PINNC	**Pines Island,**	**5.27**	**273**	Pn	**Pn**	**23 30 39.1**	**+1.9**
OUENC	**Ouen Island, N**	**5.85**	**274**		**Pn**	**23 30 47.2**	**+2.0**
OUENC	**Ouen Island, N**	**5.85**	**274**	P	**Pn**	**23 30 47.7**	**+2.6**
OUENC	**Ouen Island, N**	**5.85**	**274**	P	**Pn**	**23 30 47.7**	**+2.6**
YATNC	**Mamie plateau,**	**5.86**	**278**	P	**Pn**	**23 30 48.4**	**+3.2**
YATNC	**Mamie plateau,**	**5.86**	**278**	P	**Pn**	**23 30 46.3**	**+1.1**
LIFNC	**LIFOU**	**5.90**	**291**	Pn	**Pn**	**23 30 46.6**	**+0.8**
LIFNC	**LIFOU**	**5.90**	**291**	P	**Pn**	**23 30 46.5**	**+0.7**
ONTNC	**Ouen Toro**	**6.22**	**275**		**Pn**	**23 30 52.5**	**+2.3**
ONTNC	**Ouen Toro**	**6.22**	**275**	P	**Pn**	**23 30 53.4**	**+3.2**
DZM	**Mont Dzumac**	**6.26**	**277**	P	**Pn**	**23 30 52.0**	**+1.1**
	8.7nm,0.3s,baz=184,slow=9.9,SNR=18						
DZM				S	**Sn**	**23 32 02.4**	**-0.2**
	94nm,0.8s,baz=113,slow=18,SNR=4.1						
	19nm,0.4s						
DZM	**Mont Dzumac**	**6.26**	**277**	*e*Pn	**Pn**	**23 30 49.8**	**-1.1**
	246nm,1.1s						
DZM				*e*Sn	**Sn**	**23 31 58.4**	**-4.2**
	324nm,1.4s						
DZM				*e*LR	LR	23 32 14.3	
	comp=Z,3μm,32.6s						
DZM	**Mont Dzumac**	**6.26**	**277**		**Pn**	**23 30 53.6**	**+2.7**
DZM	**Mont Dzumac**	**6.26**	**277**	P	**Pn**	**23 30 53.9**	**+3.0**
NOUC	**Port Laguerre**	**6.39**	**276**	P	**Pn**	**23 30 55.8**	**+3.3**
NOUC	**Port Laguerre**	**6.39**	**276**	P	**Pn**	**23 30 55.6**	**+3.1**
RTV	**Rentapao**	**6.79**	**318**	P	**Pn**	23 31 05.0	+7.0
MSVF	**Nonsavu**	**6.94**	**42**	Pn	**Pn**	**23 31 02.1**	**+1.9**
MSVF				Sn	**Sn**	**23 32 21.9**	**+2.5**
MSVF	**Nonsavu**	**6.94**	**42**	*i* P	**Pn**	**23 31 00.9**	**+0.7**
MSVF	**Nonsavu**	**6.94**	**42**	P	**Pn**	**23 31 04.2**	**+4.0**
DVP	**Devils Point**	**6.99**	**317**	P	Pn	23 31 07.0	+6.3
NFK	**Norfolk Island**	**7.66**	**217**	P	**Pn**	**23 31 10.5**	**+0.6**
KOUNC	**Koumac, New Ca**	**8.58**	**285**	Pn	**Pn**	**23 31 25.7**	**+3.1**
KOUNC	**Koumac, New Ca**	**8.58**	**285**	P	**Pn**	**23 31 26.9**	**+4.3**
LKBA	**Tubou, Lakemba**	**8.88**	**59**	P	**Pn**	**23 31 27.1**	**+0.4**
TAVE	**Taveuni**	**9.02**	**48**	P	**Pn**	**23 31 31.6**	**+2.9**
OUZ	**Omahuta**	**12.22**	**178**	Pn	**Pn**	**23 32 12.2**	**-0.2**
HIZ	**Hauiti**	**15.57**	**175**	Pn	**Pn**	**23 32 57.8**	**-0.1**
HIZ				IAmb	IAmb	23 33 02.3	
	comp=Z,126nm,1.3s						
URZ	**Urewera**	**15.62**	**168**	P	**P**	**23 33 03.3**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=298,slow=22,SNR=8.7						
	comp=Z,56nm,1.0s						
URZ	**Urewera**	**15.62**	**168**		**Pn**	**23 32 59.2**	**+0.7**
BKZ	**Black Stump Fm**	**16.40**	**171**		**Pn**	**23 33 08.9**	**+0.2**
QRZ	**Quartz Range**	**17.82**	**182**	P	**P**	**23 33 28.2**	**+1.1**
QRZ				IAmb	IAmb	23 33 32.9	
	comp=Z,239nm,1.5s						
BFZ	**Birch Farm**	**17.86**	**172**	P	**Pn**	**23 33 26.9**	**+0.1**
BFZ	**Birch Farm**	**17.86**	**172**	P	**Pn**	**23 33 27.7**	**+0.8**
NNZ	**Nelson**	**18.20**	**179**	P	**Pn**	**23 33 30.2**	**-0.9**
NNZ				IAmb	IAmb	23 33 35.9	
	comp=Z,294nm,1.7s						
TUWZ	**Tuamarina**	**18.43**	**178**	P	**Pn**	**23 33 34.6**	**+0.8**
HNR	**Honiara**	**18.46**	**315**	LR	LR	23 39 35.4	
	comp=Z,1μm,21.1s,baz=150,slow=33						
MSWZ	**Moikau Station**	**18.48**	**175**	P	**P**	**23 33 34.4**	**0.0**
PLWZ	**Palliser**	**18.64**	**175**		**P**	**23 33 36.7**	**+0.5**
BSWZ	**Blackbirch Sta**	**18.71**	**178**	P	**Pn**	**23 33 38.1**	**+0.9**
THZ	**Tophouse**	**18.75**	**181**		**Pn**	**23 33 38.4**	**+0.6**
CMWZ	**Cape Campbell**	**18.75**	**178**	P	**P**	**23 33 36.7**	**-0.7**
KHZ	**Kahutara**	**19.40**	**179**		**P**	**23 33 45.5**	**+1.0**
KHZ				IAmb	IAmb	23 33 57.4	
	comp=Z,236nm,1.5s						
KHZ	**Kahutara**	**19.40**	**179**	P	**P**	**23 33 44.6**	**+0.1**
LTZ	**Lake Taylor**	**19.78**	**182**		**Pn**	**23 33 50.3**	**+0.1**
LTZ				IAmb	IAmb	23 33 54.8	
	comp=Z,179nm,1.3s						
EIDS	**Eidsvold**	**20.27**	**259**		Pn	23 33 56.2	+0.1
EIDS				IAmb	IAmb	23 34 11.4	
	comp=Z,232nm,1.2s						
EIDS	**Eidsvold**	**20.27**	**259**	P	Pn	23 33 56.7	+0.6
OXZ	**Oxford**	**20.33**	**182**	P	**P**	**23 33 56.0**	**+1.4**
OXZ				IAmb	IAmb	23 34 08.7	
	comp=Z,105nm,0.9s						
ARMA	**Armidale**	**20.59**	**244**	P	**P**	**23 33 59.5**	**+1.8**
ARMA	**Armidale**	**20.59**	**244**	P	**P**	**23 33 59.4**	**+1.7**
MQZ	**McQueen's Vall**	**20.69**	**181**	P	**P**	**23 33 58.1**	**-0.4**
FOZ	**Fox Glacier**	**20.70**	**187**		**P**	**23 34 00.1**	**+1.5**
FOZ				IAmb	IAmb	23 34 06.0	
	comp=Z,180nm,1.3s						
RPZ	**Rata Peaks**	**20.77**	**184**	P	Pn	23 34 02.2	+0.4
	comp=Z,58nm,0.9s,baz=292,slow=2.8,SNR=12						
RPZ				LR	LR	23 41 30.2	
	comp=Z,3μm,18.6s,baz=356,slow=35						
	comp=Z,58nm,0.9s						
RPZ	**Rata Peaks**	**20.77**	**184**	P	Pn	23 34 01.2	-0.6
RPZ				IAmb	IAmb	23 34 06.6	
	comp=Z,119nm,1.1s						
RPZ	**Rata Peaks**	**20.77**	**184**	P	**P**	**23 34 00.2**	**+0.8**
LBZ	**Lake Benmore**	**21.51**	**186**	P	**P**	**23 34 08.8**	**+1.4**
LBZ				IAmb	IAmb	23 34 25.2	
	comp=Z,208nm,1.4s						
WKZ	**Wanaka**	**22.07**	**188**	P	**P**	**23 34 15.2**	**+1.8**
ODZ	**Otahua Downs**	**22.12**	**185**	P	**P**	**23 34 14.7**	**+0.7**
RMQ	**Roma**	**22.42**	**256**	P	**P**	**23 34 19.7**	**+2.4**
MLZ	**Mavora Lakes**	**22.72**	**189**	P	**P**	**23 34 21.4**	**+1.0**
DCZ	**Deep Cove**	**22.97**	**191**	P	**P**	**23 34 22.5**	**-0.4**
WHZ	**Wether Hill Ro**	**23.26**	**189**	P	**P**	**23 34 27.1**	**+1.1**
CNB	**Canberra Magne**	**24.08**	**234**	P	**P**	**23 34 36.5**	**+2.4**
TARA	**Tarawa**	**24.17**	**359**	P	**P**	**23 34 35.4**	**+0.5**
CAN	**Canberra**	**24.35**	**234**	P	**P**	**23 34 37.7**	**+1.1**
CAN				IAmb	IAmb	23 34 51.6	
	comp=Z,100nm,1.2s						
CAN	**Canberra**	**24.35**	**234**	P	**P**	**23 34 37.7**	**+1.1**
CAN				pmax	pmax		
	comp=Z,100nm,1.2s						
RAR	**Rarotonga**	**25.14**	**91**	LR	LR	23 45 31.4	
	comp=Z,126nm,18.0s,baz=264,slow=38						
CTA	**Charters Tower**	**25.17**	**271**	P	**P**	**23 34 45.8**	**+1.8**
	comp=Z,12nm,0.8s,baz=106,slow=9.7,SNR=11						
CTA				LR	LR	23 44 17.9	
	comp=Z,1μm,18.2s,baz=90,slow=36						
	comp=Z,12nm,0.8s						
CTAO	**Charters Tower**	**25.17**	**271**	P	**P**	**23 34 42.8**	**-1.2**
CTAO				IAmb	IAmb	23 34 46.5	
	comp=Z,117nm,1.8s						
CTAO	**Charters Tower**	**25.17**	**271**	P	**P**	**23 34 42.8**	**-1.2**
CTAO				pmax	pmax		
	comp=Z,117nm,1.8s						
CTAO	**Charters Tower**	**25.17**	**271**	P	**P**	**23 34 45.7**	**+1.7**
CMSA	**Cobar Meteorol**	**25.81**	**245**	P	**P**	**23 34 51.7**	**+2.0**
TOO	**Toolangi**	**27.85**	**232**	P	**P**	**23 35 09.1**	**+1.1**
TOO	**Toolangi**	**27.85**	**232**	P	**P**	**23 35 09.2**	**+1.1**
TOO				pmax	pmax		
	comp=Z,38nm,1.3s						
STKA	**Stephens Creek**	**29.30**	**245**	P	**P**	**23 35 22.4**	**+1.4**
	comp=Z,7.5nm,1.0s,baz=79,slow=7.8,SNR=6.0						
	comp=Z,7.5nm,1.0s						
STKA	**Stephens Creek**	**29.30**	**245**	P	**P**	**23 35 21.6**	**+0.5**
STKA	**Stephens Cre

TBI eLQ LQ 23 43 45.4
TBI eLR LR 23 45 12.0
comp=Z,1µm,31.5s
PPT2 Papeete2 35.31 88 eS **S** **23 41 49.4 +1.2**
comp=Z,357nm,37.0s
PPT2 eLQ LQ 23 44 10.9
PPT2 eLR LR 23 45 40.0
comp=Z,974nm,26.5s
PPT Papeete 35.31 88 LR LR 23 47 47.1
comp=Z,97nm,19.9s,baz=198,slow=31
MULG Mulgathing 35.56 250 P **P** **23 36 16.6 +0.7**
AS31 Alice Springs 35.97 261 P **P** **23 36 19.9 +0.3**
ASAR Alice Springs 35.97 261 P **P** **23 36 19.6 0.0**
comp=Z,14nm,0.9s,baz=88,slow=8.4,SNR=30
ASAR LR LR 23 52 07.8
comp=Z,274nm,19.6s,baz=100,slow=38
comp=Z,14nm,0.9s
ASAR Alice Springs 35.97 261 P **P** **23 36 20.4 +0.8**
ASAR Alice Springs 35.97 261 P **P** **23 36 20.4 +0.8**
WR0 Warramunga Arr 35.99 267 IAmb IAmb 23 36 46.5
comp=Z,49nm,1.6s
WB0 Warramunga Arr 36.16 268 P **P** **23 36 20.3 -0.9**
WB0 IAmb IAmb 23 36 48.7
comp=Z,101nm,1.9s
WB2 Warramunga Arr 36.16 267 IAmb IAmb 23 36 32.4
comp=Z,60nm,1.6s
WRAB Tennant Creek 36.17 267 P **P** **23 36 20.0 -1.2**
WRAB IAmb IAmb 23 36 48.0
comp=Z,46nm,1.4s
WRAB Tennant Creek 36.17 267 *i* P **P** **23 36 19.5 -1.7**
WRAB pmax pmax
comp=Z,30nm,1.3s
WRA Warramunga Arr 36.18 267 P **P** **23 36 20.6 -0.7**
comp=Z,18nm,1.2s,baz=97,slow=8.2,SNR=46
WRA LR LR 23 51 21.6
comp=Z,1µm,18.9s,baz=100,slow=36
comp=Z,18nm,1.2s
XMAS Kiritimati 37.94 53 P **P** **23 36 36.2 0.0**
XMAS IAmb IAmb 23 37 15.1
comp=Z,70nm,1.1s
FORT Forrest 40.75 249 P **P** **23 37 00.1 +0.5**
FORT IAmb IAmb 23 37 11.6
comp=Z,64nm,1.0s
MTN Manton Dam 41.10 277 P **P** **23 37 03.2 +0.6**
H11S2 WAKE ISLAND Hy 41.68 351 T T 00 21 40.8
baz=171,slow=76,SNR=8.7
H11S3 WAKE ISLAND Hy 41.69 351 T T 00 21 41.9
baz=171,slow=76,SNR=14
H11S1 WAKE ISLAND Hy 41.70 351 T T 00 21 44.2
baz=171,slow=76,SNR=15
KNRA Kununurra 42.38 272 P **P** **23 37 13.3 +0.1**
KNRA IAmb IAmb 23 37 14.3
comp=Z,93nm,1.6s
H11N1 WAKE ISLAND Hy 42.85 351 T T 00 23 21.4
baz=173,slow=76,SNR=12
H11N3 WAKE ISLAND Hy 42.86 351 T T 00 23 21.3
baz=173,slow=76,SNR=3.3
H11N2 WAKE ISLAND Hy 42.87 351 T T 00 23 22.0
baz=173,slow=76,SNR=3.7
FAKI Fak Fak 44.32 291 P **P** **23 37 29.7 +0.8**
FAKI IAmb IAmb 23 37 35.1
comp=Z,46nm,1.3s
FITZ Fitzroy Crossi 44.61 267 LR LR 23 57 14.1
comp=Z,501nm,18.1s,baz=104,slow=38
FITZ Fitzroy Crossi 44.61 267 P **P** **23 37 31.7 +0.6**
GUMO Guam 45.68 320 LR LR 23 53 45.0
comp=Z,606nm,20.8s,baz=133,slow=32
SIJI Sorong 46.21 292 LR LR 23 56 18.2
comp=Z,412nm,21.9s,baz=84,slow=35
TAOE Nuku Hiva Isla 46.85 80 eLR LR 23 51 01.0
comp=Z,442nm,30.0s
SOEI Soe 48.49 277 P **P** **23 38 03.0 +1.3**
BATI Baumata 48.87 277 LR LR 00 00 29.3
comp=Z,739nm,18.3s,baz=124,slow=38
PSA00 Pilbara Seismi 49.12 261 P **P** **23 38 05.7 -0.7**
PSA00 Pilbara Seismi 49.12 261 IAmb IAmb 23 38 18.2
comp=Z,47nm,1.2s
MBWA Marble Bar 49.31 261 P **P** **23 38 08.3 +0.4**
LUWI Luwuk 53.51 287 P **P** **23 38 39.4 -0.1**
KAPI Kappang 54.47 281 LR LR 00 02 32.1
comp=Z,344nm,18.9s,baz=115,slow=37
KAPI Kappang 54.47 281 P **P** **23 38 46.3 -0.1**
KAPI Kappang 54.47 281 *i* P **P** **23 38 46.4 -0.1**
KAPI pmax pmax
comp=Z,25nm,1.3s
VNDA Vanda 54.88 183 P **P** **23 38 49.7 +1.1**
comp=Z,4.5nm,1.1s,baz=359,slow=7.1,SNR=9.6
comp=Z,4.5nm,1.1s
VNDA Vanda 54.88 183 P **P** **23 38 48.9 +0.4**
VNDA IAmb IAmb 23 39 01.3
comp=Z,43nm,1.8s
VNDA Vanda 54.88 183 P **P** **23 38 48.9 +0.4**
VNDA pmax pmax
comp=Z,43nm,1.8s
SBA Scott Base 55.03 182 P **P** **23 38 50.8 +1.2**
SBA Scott Base 55.03 182 P **P** **23 38 50.8 +1.2**
SBA pmax pmax
comp=Z,82nm,1.4s
JAGI Jajag, Banyuwa 58.24 274 P **P** **23 39 13.0 -0.4**
JAGI IAmb IAmb 23 39 32.6
comp=Z,50nm,1.3s
CASY Casey 58.24 205 P **P** **23 39 13.8 +1.2**
CASY IAmb IAmb 23 39 33.4
comp=Z,44nm,1.5s
JHJ Hachijo jima 2 64.21 329 LR LR 00 08 25.5
comp=Z,136nm,18.5s,baz=308,slow=37
QSPA South Pole Qui 67.11 180 P **P** **23 40 12.5 +0.6**
comp=Z,25nm,1.1s,baz=3.3,slow=1.7,SNR=15
QSPA LR LR 00 06 42.7
comp=Z,362nm,18.9s,baz=42,slow=33
comp=Z,25nm,1.1s
QSPA South Pole Qui 67.11 180 P **P** **23 40 12.3 +0.3**
MJAR Matsushiro Arr 67.76 330 P **P** **23 40 15.9 -0.3**
comp=Z,2.3nm,0.8s,baz=181,slow=7.8,SNR=4.1
MJAR LR LR 00 07 16.2
comp=Z,108nm,20.8s,baz=138,slow=34
comp=Z,2.3nm,0.8s
MAJO Matsushiro 67.76 330 P **P** **23 40 16.6 +0.4**
MAJO Matsushiro 67.76 330 P **P** **23 40 16.6 +0.4**
MAJO pmax pmax
comp=Z,72nm,1.9s
KSI Kapahiang 70.69 274 P **P** **23 40 35.2 +0.2**
KNMB Chin-men Tao 71.04 308 P **P** **23 40 35.9 -0.9**
KSRS Korea Array 73.64 324 LR LR 00 10 44.1
comp=Z,68nm,19.3s,baz=130,slow=34
KSAR Wonju Array Be 73.65 324 P **P** **23 40 49.7 -2.4**
KSAR Wonju Array Be 73.65 324 P **P** **23 40 49.7 -2.4**
BKNI Bangkinang 73.68 277 P **P** **23 40 52.6 -0.2**
AMKA Amchitka 74.21 4 P **P** **23 40 54.0 -1.1**
YSS Yuzh-Sakhalins 74.81 339 P **P** **23 40 59.4 +0.9**
YSS Yuzh-Sakhalins 74.81 339 eP **P** **23 40 59.5 +0.9**
YSS eS **S** **23 50 33.1 -2.1**
YSS ePPS PPS 23 51 13.3
YSS pmax pmax
comp=Z,40nm,1.0s
YSS pmax pmax
comp=Z,500nm,7.3s
YSS MLR MLR
comp=Z,300nm,19.0s
SISI Saibi 74.81 275 P **P** **23 41 00.4 +1.0**
comp=Z,18nm,2.1s
SKR Severo-Kuril's 74.85 349 eP P 23 40 53.3 -5.4
SKR pmax pmax
comp=Z,100nm,4.4s
IPM Ipoh 75.41 281 P **P** **23 41 02.9 +0.1**
IPM IAmb IAmb 23 41 06.7
comp=Z,47nm,1.5s
NJ2 Nanjing 75.41 315 eP **P** **23 41 03.8 +1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KULM Kulim 76.08 282 P **P** **23 41 06.7 -0.1**
MAW Mawson 76.36 202 P **P** **23 41 08.6 +1.3**
comp=Z,8.9nm,1.1s,baz=109,slow=9.6,SNR=8.8
comp=Z,8.9nm,1.1s
MAW Mawson 76.36 202 P **P** **23 41 08.0 +0.7**
MAW Mawson 76.36 202 P **P** **23 41 08.0 +0.7**
MAW pmax pmax
comp=Z,5.0nm,1.4s
RPSI Rantau Prapat 76.57 279 P **P** **23 41 08.7 -0.8**
RPSI IAmb IAmb 23 41 12.6
comp=Z,34nm,1.4s
PSI Prapat 76.62 279 P **P** **23 41 08.7 -1.2**
PSI pmax pmax
comp=Z,34nm,1.4s
PET Petropavlovsk 76.71 351 eP **P** **23 41 11.2 +1.9**
PET eS **S** **23 50 56.3 +0.3**
PET ePS **PnS** **23 51 40.7 +6.3**
PET pmax pmax
comp=Z,100nm,12.6s
USRK Ussuriysk Ar. 76.73 331 LR LR 00 10 39.8
comp=Z,117nm,20.8s,baz=233,slow=32
USRK Ussuriysk Ar. 76.73 331 P **P** **23 41 08.9 -0.7**
USRK Ussuriysk Ar. 76.73 351 P **P** **23 41 08.9 -0.7**
PEA0B Petropavlovsk- 76.93 351 P **P** **23 41 11.2 +0.6**
PEA0B Petropavlovsk- 76.93 351 *i* P **P** **23 41 07.9 -2.7**
PETK Petropavlovsk- 76.93 351 P **P** **23 41 11.3 +0.7**
comp=Z,1.8nm,0.6s,baz=177,slow=10,SNR=3.2
PETK LR LR 00 11 07.7
comp=Z,318nm,19.3s,baz=150,slow=33
comp=Z,1.8nm,0.6s
NIKH Nikolski High 77.22 11 P **P** **23 41 12.5 +0.3**
NIKH IAmb IAmb 23 41 24.6
comp=Z,28nm,0.8s
GSI Gunungsitoli 77.24 277 P **P** **23 41 13.1 -0.2**
GSI Gunungsitoli 77.24 277 P **P** **23 41 14.2 +0.9**
comp=Z,3µmcomp=Z,26nm,1.6s
BELA Belgrano 2 78.07 174 P **P** **23 41 16.5 -0.3**
BELA IAmb IAmb 23 41 19.3
comp=Z,50nm,1.5s
SRIT Nakonsritamara 78.43 285 P **P** **23 41 20.4 +0.5**
SMAI San Martin Ant 79.14 161 P **P** **23 41 25.9 +3.1**
KLR Kul'dur 80.78 334 LR LR 00 12 57.6
comp=Z,51nm,19.6s,baz=142,slow=32
KLR Kul'dur 80.78 334 *i* P **P** **23 41 30.5 -1.3**
KLR pmax pmax
comp=Z,14nm,1.6s
GYA Guiyang 80.92 304 ⇑P **P** **23 41 37.0 +3.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s
BJT Baijiatuan 82.11 319 P **P** **23 41 38.8 -0.3**
BJT Baijiatuan 82.11 319 P **P** **23 41 38.8 -0.3**
BJT pmax pmax
comp=Z,10.0nm,1.2s
CRAI Chiangrai 82.94 295 P **P** **23 41 44.3 +0.4**
CMAR Chiang Mai Arr 83.33 293 P **P** **23 41 45.8 -0.2**
comp=Z,1.3nm,0.7s,baz=135,slow=4.0,SNR=6.9
CMAR LR LR 00 18 50.5
comp=Z,72nm,21.2s,baz=115,slow=36
comp=Z,1.3nm,0.7s
MA2 Magadan 84.27 349 LR LR 00 15 25.7
comp=Z,175nm,19.0s,baz=127,slow=33
OHAK Old Harbor 84.71 18 P **P** **23 41 52.0 0.0**
PZH PanZhiHua 84.77 301 P **P** **23 41 55.5 +2.2**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,80nm,4.5s
TROLL Troll, Antarti 85.06 183 P **P** **23 41 53.3 -0.7**
HHC Hu-ho-hao-te 85.41 318 eP **P** **23 41 58.3 +2.1**
HHC S **S** **23 52 30.5 +3.1**
HHC sS ScS 23 52 38.3 +0.8
HHC pmax pmax
comp=Z,34nm,0.9s
HHC pmax pmax
comp=Z,300nm,5.6s
HHC LR LR
comp=Z,340nm,13.1s
HHC LR LR
comp=Z,470nm,15.3s
SNAA Sanae 85.58 181 P **P** **23 41 54.9 -1.6**
SNAA Sanae 85.58 181 P **P** **23 41 55.5 -1.1**
SNAA IAmb IAmb 23 41 58.9
comp=Z,20nm,1.2s
SNAA Sanae 85.58 181 *i* P **P** **23 41 54.2 -2.4**
SNAA pmax pmax
comp=Z,23nm,1.3s
KCPM Cahto Peak 85.80 44 P **P** **23 41 58.5 +0.3**
KCPM IAmb IAmb 23 42 11.8
comp=Z,54nm,1.8s
KMPM Mont Pierce 85.88 43 P **P** **23 41 59.1 +0.6**
KMRM Mail Ridge 86.03 43 P **P** **23 41 59.8 +0.6**
VNA3 Neumayer Olymp 86.03 179 P **P** **23 41 57.4 -1.3**
ZEA Zeya 86.04 335 eP **P** **23 41 59.2 +0.4**
HIA Hailar 86.17 328 *i* P **P** **23 41 57.2 -2.4**
HIA pmax pmax
comp=Z,4.0nm,0.5s
VNA2 Neumayer--Watz 86.37 180 P **P** **23 41 59.1 -1.3**
baz=197,slow=4.0
VNA1 Neumayer--Stat 86.64 180 P **P** **23 42 00.6 -1.1**
CMB Columbia Colle 86.98 46 P **P** **23 42 03.6 -0.3**
CMB Columbia Colle 86.98 46 P **P** **23 42 03.7 -0.3**
CMB pmax pmax
comp=Z,6.0nm,1.1s
ISA Isabella, Lake 87.05 49 P **P** **23 42 03.6 -0.8**
ISA IAmb IAmb 23 42 16.9
comp=Z,12nm,1.1s
ISA Isabella, Lake 87.05 49 P **P** **23 42 03.6 -0.8**
ISA pmax pmax
comp=Z,12nm,1.2s
AFDM Forest Hills D 87.09 45 P **P** **23 42 04.6 +0.2**
SEY Seymchan 87.17 351 eP **P** **23 42 01.3 -2.8**
SEY pmax pmax
comp=Z,14nm,1.2s
PFO Pinyon Flats O 87.46 52 LR LR 00 15 07.5
comp=Z,133nm,18.0s,baz=220,slow=31
YBH Yreka Blue Hor 87.50 42 LR LR 00 17 21.7
comp=Z,166nm,18.1s,baz=234,slow=33
MDPB Devils Postpil 87.65 47 P **P** **23 42 07.6 +0.1**
MDPB IAmb IAmb 23 44 31.2
comp=Z,15nm,1.2s
OMMB Old Mammoth Mi 87.70 47 P **P** **23 42 08.1 +0.3**
OMMB IAmb IAmb 23 42 21.1
comp=Z,23nm,1.7s
HUMO Hull Mountain 87.84 42 P **P** **23 42 07.8 -0.1**
LZH Lanzhou 87.92 311 eP **P** **23 42 09.3 +0.7**
LZH sP pwP 23 42 17.0 -0.6
LZH PP **PP** **23 45 34.0 -1.1**
LZH S **S** **23 52 49.8 -2.3**
LZH sS ScS 23 53 04.5 +6.0
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,190nm,4.4s
BEKR Beckworth 87.98 45 P **P** **23 42 08.9 +0.1**
BEKR IAmb IAmb 23 42 10.4
comp=Z,30nm,1.8s
PNTR Pine Nut 88.06 46 P **P** **23 42 10.1 +0.8**
YERR Yerington 88.25 46 P **P** **23 42 10.3 +0.2**
YERR IAmb IAmb 23 42 23.5
comp=Z,35nm,1.8s
DSP Deep Springs 88.27 48 P **P** **23 42 10.3 +0.3**
DSP IAmb IAmb 23 42 12.1
comp=Z,13nm,1.4s
LHV Little Huntoon 88.36 47 P **P** **23 42 11.1 +0.7**
LHV IAmb IAmb 23 42 24.1
comp=Z,38nm,1.7s
LCH Last Change Ra 88.43 48 P **P** **23 42 11.2 +0.2**
LCH IAmb IAmb 23 42 24.0
comp=Z,20nm,1.6s
PAHR Pah Rah Range 88.53 45 P **P** **23 42 11.3 -0.2**
PAHR IAmb IAmb 23 42 23.9
comp=Z,26nm,1.4s
NVAR Mina Array Bea 88.59 47 P **P** **23 42 12.1 +0.2**
comp=Z,1.3nm,0.8s,baz=223,slow=6.6,SNR=13
NVAR LR LR 00 15 13.9
comp=Z,81nm,18.8s,baz=246,slow=31
comp=Z,1.3nm,0.8s
NVAR Mina Array Bea 88.59 47 P **P** **23 42 12.3 +0.5**
KVN Kaiserville 89.04 47 P **P** **23 42 13.9 0.0**
KVN IAmb IAmb 23 42 27.0
comp=Z,26nm,1.7s
KVN Kaiserville 89.04 47 P **P** **23 42 13.9 0.0**
KVN pmax pmax
comp=Z,26nm,1.7s
MOD Modoc Plateau 89.10 43 P **P** **23 42 13.8 -0.3**
MOD IAmb IAmb 23 42 26.3
comp=Z,16nm,1.4s
TPH Tonopah 89.14 48 P **P** **23 42 14.8 +0.4**
TPH Tonopah 89.14 48 P **P** **23 42 14.8 +0.4**
TPH pmax pmax
comp=Z,55nm,1.3s
K05A Summer Lake 89.17 42 P **P** **23 42 15.0 +0.5**
K05A IAmb IAmb 23 42 23.0
comp=Z,41nm,1.7s
TPNV Topopah Spring 89.25 49 P **P** **23 42 15.1 +0.2**
TPNV IAmb IAmb 23 42 26.8
comp=Z,16nm,1.6s
TPNV Topopah Spring 89.25 49 P **P** **23 42 15.1 +0.2**
TPNV pmax pmax
comp=Z,16nm,1.6s
PINE Pine Mountain 89.72 41 P **P** **23 42 17.3 +0.3**
SHPR Sheep Range 89.80 50 P **P** **23 42 17.1 -0.4**
W13A Hualapai Mount 90.04 52 P **P** **23 42 18.9 +0.1**
PRN Pahroc Range 90.31 49 P **P** **23 42 19.6 -0.2**
PRN IAmb IAmb 23 42 33.4
comp=Z,35nm,1.9s
BMN Battle Mountai 90.33 46 P **P** **23 42 19.9 +0.1**
BMN IAmb IAmb 23 42 32.3
comp=Z,16nm,1.1s
BMN Battle Mountai 90.33 46 P **P** **23 42 20.0 +0.1**
BMN pmax pmax
comp=Z,16nm,1.1s
R11A Troy Canyon, C 90.40 48 P **P** **23 42 19.9 -0.4**
WVOR Wild Horse Val 90.43 43 P **P** **23 42 20.4 +0.2**
WVOR IAmb IAmb 23 42 32.7
comp=Z,23nm,1.4s
WVOR Wild Horse Val 90.43 43 P **P** **23 42 20.5 +0.2**
WVOR pmax pmax
comp=Z,23nm,1.5s
BBB Bella Bella 90.64 32 LR LR 00 15 58.5
comp=Z,107nm,20.7s,baz=256,slow=31
I07A Izee 90.75 42 P **P** **23 42 21.6 0.0**
TUC Tucson 91.06 55 P **P** **23 42 23.3 0.0**
TUC IAmb IAmb 23 42 37.0
comp=Z,15nm,1.8s
TUC Tucson 91.06 55 P **P** **23 42 23.3 0.0**
TUC pmax pmax
comp=Z,15nm,1.8s
ORCD Orcadas 91.12 162 P **P** **23 42 22.5 -0.5**
LL02 Futaleuf 91.17 138 P **P** **23 42 23.3 -0.5**
DHY Denali Highway 91.23 17 IAmb IAmb 23 42 53.4
comp=Z,14nm,1.6s
LCMT Little Creek M 91.39 50 P **P** **23 42 25.0 +0.2**
YAK Yakutsk 91.53 341 LR LR 00 19 34.5
comp=Z,106nm,21.1s,baz=89,slow=33
SPR3 Spring Creek 3 91.57 48 P **P** **23 42 25.9 0.0**
SPR3 IAmb IAmb 23 42 38.6
comp=Z,28nm,1.8s
KNB Kanab 91.69 50 P **P** **23 42 26.3 0.0**
KNB IAmb IAmb 23 42 40.0
comp=Z,24nm,1.6s
KNB Kanab 91.69 50 P **P** **23 42 26.3 0.0**
KNB pmax pmax
comp=Z,24nm,1.6s
G08A Pilot Rock 91.71 41 P **P** **23 42 25.4 -0.7**
U15A North Rim 91.80 51 P **P** **23 42 27.3 +0.4**
U15A IAmb IAmb 23 42 29.2
comp=Z,7.4nm,0.9s
M26K Nabesna, AK 91.93 19 P **P** **23 42 26.5 -0.1**
M26K IAmb IAmb 23 43 04.0
comp=Z,14nm,1.6s
ULN Ulaanbaatar 92.02 322 P **P** **23 42 27.5 -0.1**
ULN IAmb IAmb 23 42 29.4
comp=Z,12nm,1.6s
ULN Ulaanbaatar 92.02 322 *i* P **P** **23 42 24.8 -2.7**
ULN pmax pmax
comp=Z,7.0nm,1.5s
WUAZ Wupatki 92.05 52 P **P** **23 42 28.4 +0.4**
WUAZ IAmb IAmb 23 42 40.6
comp=Z,23nm,1.7s
WRH Wood River Hil 92.19 16 P **P** **23 42 26.9 -0.8**
WRH IAmb IAmb 23 43 04.3
comp=Z,21nm,1.9s
M27K Edge Creek, AK 92.24 19 IAmb IAmb 23 42 45.9
comp=Z,14nm,1.6s
PKCU Pink Cliffs 92.25 50 P **P** **23 42 29.3 +0.2**
PKCU IAmb IAmb 23 42 42.4
comp=Z,15nm,1.2s
GTA Gaotai 92.32 312 eP **P** **23 42 30.5 +1.4**
GTA pP pwP 23 42 41.5 +3.4
GTA sP sP 23 42 45.0 +14
GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA pmax pmax
comp=Z,79nm,7.1s
GTA LR LR
comp=Z,110nm,19.6s
GTA LR LR
comp=Z,80nm,20.0s
SONM Songino Array 92.38 322 P **P** **23 42 27.8 -1.4**
comp=Z,2.0nm,1.0s,baz=121,slow=3.9,SNR=9.8
SONM LR LR 00 24 26.8
comp=Z,71nm,18.9s,baz=100,slow=36
comp=Z,2.0nm,1.0s
SONM Songino Array 92.38 322 P **P** **23 42 28.6 -0.6**
SONM Songino Array 92.38 322 P **P** **23 42 28.6 -0.6**
SONM pmax pmax
comp=Z,8.0nm,1.5s
RIDG Independent Ri 92.45 17 IAmb IAmb 23 42 51.3
comp=Z,31nm,2.0s
BMO Blue Mountains 92.50 42 P **P** **23 42 29.6 -0.1**
BMO Blue Mountains 92.50 42 P **P** **23 42 29.6 -0.1**
BMO pmax pmax
comp=Z,9.0nm,1.8s
MDM Murphy Dome 92.55 15 IAmb IAmb 23 42 39.2
comp=Z,8.6nm,1.2s
COLA College 92.58 16 *i* P **P** **23 42 27.8 -1.6**
COLA pmax pmax
comp=Z,8.0nm,1.2s
MTPU Mount Pierson 92.61 50 P **P** **23 42 30.5 -0.2**
MTPU IAmb IAmb 23 42 44.0
comp=Z,8.7nm,1.2s
ILAR Eielson Array 92.74 16 P **P** **23 42 28.3 -1.9**
comp=Z,1.9nm,0.6s,baz=226,slow=4.9,SNR=27
ILAR LR LR 00 17 36.7
comp=Z,217nm,20.8s,baz=222,slow=31
comp=Z,1.9nm,0.6s
L27K Beaver Creek, 92.79 19 P **P** **23 42 31.4 +0.9**
SCRK Sand Creek 92.87 17 P **P** **23 42 30.0 -1.0**
SCRK IAmb IAmb 23 42 31.2
comp=Z,14nm,1.6s
J26L Joseph Creek 93.40 17 IAmb IAmb 23 42 51.2
comp=Z,12nm,1.4s
K27K Chicken 93.45 18 P **P** **23 42 33.4 -0.1**
K27K IAmb IAmb 23 43 08.7
comp=Z,21nm,1.9s
DLBC Dease Lake 93.71 26 LR LR 00 21 20.7
comp=Z,172nm,18.1s,baz=272,slow=33
Q16A Castle Valley 93.72 49 P **P** **23 42 35.1 -0.6**
Q16A IAmb IAmb 23 43 15.0
comp=Z,14nm,1.6s
I26K Coal Creek Min 94.13 17 IAmb IAmb 23 42 44.9
comp=Z,11nm,1.4s
EGAK Eagle 94.28 18 P **P** **23 42 36.8 -0.5**
PALK Pallekele 95.04 276 LR LR 00 28 09.0
comp=Z,216nm,18.5s,baz=220,slow=37
TXAR Lajitas Array 95.37 61 P **P** **23 42 43.5 +0.2**
comp=Z,0.6nm,0.8s,baz=264,slow=4.2,SNR=5.3
TXAR PKKPbc **PKKPbc** **23 59 37.4 +1.2**
comp=Z,0.4nm,0.6s,baz=97,slow=4.6,SNR=7.0
comp=Z,0.6nm,0.8s
ANMO Albuquerque 95.44 54 eP **P** **23 42 40.7 -3.0**
ANMO pmax pmax
comp=Z,6.0nm,1.9s
PDAR Pinedale Array 96.50 46 P **P** **23 42 47.4 -1.0**
comp=Z,0.3nm,0.7s,baz=260,slow=2.8,SNR=3.5
comp=Z,0.3nm,0.7s
INK Inuvik 98.94 18 LR LR 00 21 44.0
comp=Z,135nm,20.7s,baz=208,slow=32
TIXI Tiksi 99.14 347 LR LR 00 25 26.3
comp=Z,98nm,19.6s,baz=180,slow=34
WMQ Urumqi 102.40 312 eP **Pdif** **23 43 18.0 +3.5**
WMQ LR LR
comp=Z,130nm,23.1s
MKAR Makanchi Array 106.94 314 PKKPbc PKKPbc 23 59 00.9 -2.2
comp=Z,0.4nm,0.7s,baz=317,slow=4.2,SNR=4.7
BOSA Boshof 120.11 213 PKP **PKPdf** **23 48 10.4 +0.2**
comp=Z,3.3nm,0.9s,baz=176,slow=3.0,SNR=7.0
ARU Arti 122.38 323 *i* PKIKP **PKPdf** **23 48 11.7 -1.7**
ARU 23 49 51.8
ARU 23 55 23.0
ARU SS SS 00 06 30.1 0.0
HUMP Col San Antoni 124.85 83 **PKPdf** **23 48 18.5 -0.8**
E62A Clayton Lake 124.94 48 PKPdf **PKPdf** **23 48 17.2 -1.4**
G65A Princeton 126.38 50 PKPdf **PKPdf** **23 48 20.3 -1.1**
ARCES ARCESS Array B 129.57 346 PKP **PKPdf** **23 48 25.3 -1.5**
comp=Z,4.9nm,0.7s,baz=1.9,slow=3.6,SNR=8.5
GBN Guysborough 130.61 49 **PKPdf** **23 48 29.1 -0.3**
KIV Kislovodsk 134.45 310 *i* PKIKP **PKPdf** **23 48 34.1 -2.8**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,38nm,23.0s
FINES FINESS Array B 135.39 338 PKP **PKPdf** **23 48 37.9 0.0**
comp=Z,7.9nm,1.3s,baz=64,slow=3.2,SNR=6.1
MNK Minsk 139.19 329 *i* PKIKP **PKPdf** **23 48 40.7 -4.5**
MNK *i* 23 51 35.1

MNK *i* 23 55 48.4
MNK *i* SS SS 00 09 55.8 +0.4
MNK *i* SSS SSS 00 15 04.9
MNK pmax pmax
comp=Z,6.0nm,1.1s
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK Minsk 139.19 329 *i* PKP **PKPdf 23 48 40.7 -4.5**
comp=E,2.0nm,1.1s
MNK *i* PKP **PKPdf 23 48 40.7 -4.5**
MNK *i* PKP **PKPdf 23 48 40.7 -4.5**
comp=Z,6.0nm,1.1s,baz=53
MNK *i* PP **PP 23 51 35.1 -3.1**
MNK *i* SKP 23 52 15.4
MNK *i* PKS **PKSdf 23 52 16.7 -4.2**
MNK *i* PPP PPP 23 54 35.3
MNK *i* SKS **SKSdf 23 55 48.4 -7.1**
MNK *i* SKKS **SKKSdf 00 05 17.5 -10**
MNK *i* SS **SS 00 09 55.8 +0.4**
MNK *i* SSS SSS 00 15 04.9
MNK *i* LQ LQ 00 42 49.9
MNK *i* LR LR 00 48 31.8
MNK *i* LRM MLR 00 52 58.9
comp=E,10.0nm,17.2s
MNK *i* LRM MLR 00 52 58.9
comp=Z,112nm,19.7s
NB2 NORSAR Subarra139.94 346 PKP PKPdf 23 48 39.3 -7.1
comp=Z,0.5nm,0.7s,baz=31,slow=2.2
NOA NORSAR Array B 139.94 346 PKhKP PKPpre 23 48 39.0
comp=Z,0.3nm,0.5s,baz=13,slow=4.1,SNR=1.8
NOA PKP **PKPdf 23 48 46.7 +0.2**
comp=Z,0.7nm,0.7s,baz=37,slow=2.1,SNR=4.0
AKASG Malin Array Be 140.63 324 *i* PKIKP **PKPdf 23 48 49.0 +1.1**
BRTR Keskin Array B 141.96 306 PKhKP PKPpre 23 48 46.0
comp=Z,0.3nm,0.5s,baz=339,slow=3.2,SNR=4.4
VASR Vaslui 143.48 319 ↑P PKPbc 23 48 51.0 +0.6
SCTR Scanteiesti 143.80 317 ↓P PKPab 23 48 50.9 +0.3
TPGR Topolog 143.89 316 ↑P PKPab 23 48 51.0 -0.1
CFR Carcaliu 143.93 316 ↑P PKPab 23 48 48.8 -2.3
CFR Carcaliu 143.93 316 ↑PKHKP PKPpre 23 48 48.8
BEL Belsk 144.18 331 *e*PKP **PKPab 23 48 51.9 0.0**
TESR Tescani 144.23 319 ↑P **PKPab 23 48 52.1 -0.2**
PANC Panciu 144.23 318 ↑P **PKPab 23 48 52.7 +0.4**
HARR Harsova 144.28 316 ↑P **PKPab 23 48 51.3 -1.2**
HARR Harsova 144.28 316 ↑PKIKP **PKPab 23 48 51.3 -1.2**
BIZ Bicaz 144.34 320 ↑P **PKPab 23 48 52.8 +0.1**
VRI Vrincioaia 144.49 318 ↓P **PKPab 23 48 52.5 -0.8**
VRI Vrincioaia 144.49 318 ↓PKIKP **PKPab 23 48 52.5 -0.8**
BURAR Bucovina Array 144.50 322 ↑P **PKPab 23 48 54.1 +0.7**
BURAR Bucovina Array 144.50 322 ↑PKIKP **PKPab 23 48 54.1 +0.7**
PLOR Plostina 144.55 318 ↑P **PKPab 23 48 52.8 -0.7**
PLOR Plostina 144.55 318 ↑PKIKP **PKPab 23 48 52.8 -0.7**
GKP Gorka Klasztor 144.64 335 *e*PKP **PKPab 23 48 53.1 -0.5**
COVR Voineasa-Covas 144.82 319 ↑P **PKPab 23 48 53.1 -1.5**
LINV Loch Inver, As 144.83 358 *e*P **PKPab 23 48 52.6 -1.4**
OZUR 144.95 319 ↑P **PKPab 23 48 54.7 -0.3**
MLR Muntele Rosu 145.16 318 ↑P **PKPbc 23 48 54.7 -1.1**
MLR Muntele Rosu 145.16 318 **PKPbc 23 48 54.9 -1.0**
MLR Muntele Rosu 145.16 318 ↑PKIKP **PKPbc 23 48 54.7 -1.1**
PRD Provadia 145.26 314 *e*P **PKPbc 23 48 55.1 -0.9**
DOPR Dopca 145.26 319 ↑P **PKPbc 23 48 55.4 -0.6**
ARCR ARCALIA 145.28 322 ↑P **PKPbc 23 48 56.1 +0.1**
SECR 145.30 317 ↑P **PKPbc 23 48 55.8 -0.4**
MCD Coleburn Disti 145.32 357 *e*P **PKPbc 23 48 54.0 -1.7**
KOLS Kolonicke sedl 145.34 326 *e*PKIKP **PKPbc 23 48 55.6 -0.6**
KOLS Kolonicke sedl 145.34 326 *e*PKP **PKPbc 23 48 55.6 -0.6**
BMR Baia Mare 145.43 323 ↑P **PKPdf 23 48 56.2 -0.3**
BMR Baia Mare 145.43 323 ↑PKIKP **PKPdf 23 48 56.2 -0.3**
KAC Achnashellach 145.48 359 *e*P **PKPdf 23 48 55.0 -1.3**
ELL Elmali 145.50 302 **PKPdf 23 48 56.6 -0.6**
ELL Elmali 145.50 302 PKIKP **PKPdf 23 48 56.6 -0.6**
UZH Uzhgorod 145.52 325 *e*PKP2 **PKPdf 23 48 53.4 -3.2**
KPL Plockton 145.65 359 *e*P **PKPdf 23 48 55.2 -1.3**
VOIR 145.73 319 ↓P **PKPdf 23 48 57.4 +0.2**
VOIR 145.73 319 ↓PKP2 **PKPdf 23 48 57.4 +0.2**
OJC Ojcow 145.74 329 *e*PKP **PKPdf 23 48 55.5 -1.5**
CBBR Cluj-Babes-Bol 145.91 322 ↑P **PKPdf 23 48 57.4 +0.1**
CJR Cluj-Napoca 145.92 322 ↑P **PKPdf 23 48 54.9 -2.5**
CJR Cluj-Napoca 145.92 322 ↑PKIKP **PKPdf 23 48 54.9 -2.5**
DRUM Mains of Drumt 145.94 356 *e*P **PKPdf 23 48 55.9 -1.1**
NIE Niedzica 146.03 328 *e*PKP **PKPdf 23 48 58.4 +0.9**
SZH Strazhica 146.20 315 *e*P **PKPdf 23 48 57.7 -0.3**
DRGR 146.38 322 ↑P **PKPdf 23 48 58.7 +0.4**
DRGR 146.38 322 ↑PKP2 **PKPdf 23 48 58.7 +0.4**
LOT Lotru 146.50 319 ↑P **PKPdf 23 48 58.3 -0.3**
INVG Invergeldie, C 146.51 357 *e*P **PKPdf 23 48 58.1 0.0**
LANS Liptovska Anna 146.62 328 *e*PKP2 **PKPdf 23 49 00.2 +1.6**
LANS Liptovska Anna 146.62 328 *e*PKP **PKPdf 23 49 00.2 +1.6**
LAWE Loch Awe, Argy 146.73 359 *e*P **PKPdf 23 48 58.5 +0.1**
VLAD Vladila 146.84 317 ↓P **PKPdf 23 49 00.6 +1.6**
KSP Ksiaz 146.86 333 *e*PKP **PKPdf 23 48 59.6 +0.8**
ESY Stoneypath 146.94 356 *e*P **PKPdf 23 48 59.0 +0.2**
MORC Moravsky Berou 147.09 330 ↓P **PKPdf 23 49 00.1 +0.8**
MORC Moravsky Berou 147.09 330 ↓PKP2 **PKPdf 23 49 00.1 +0.8**
MORC Moravsky Berou 147.09 330 *e*PKP **PKPdf 23 49 00.3 +1.0**
OSTC Ostas 147.10 333 *e*PKP **PKPdf 23 48 58.1 -1.2**
EBL Broad Law 147.11 356 *e*P **PKPdf 23 48 59.2 +0.1**
GZR Gura Zlata 147.12 320 ↑P **PKPdf 23 48 59.4 -0.1**
GZR Gura Zlata 147.12 320 ↑PKHKP PKPpre 23 48 59.4
PGBU Glenifferbraes 147.15 358 *e*P **PKPdf 23 48 59.2 +0.1**
DPC Dobruska-Polom 147.21 332 *e*PKP2 **PKPdf 23 49 00.0 +0.5**
DPC Dobruska-Polom 147.21 332 *e*PKP **PKPdf 23 49 00.0 +0.5**
PSZ Piszkesteto 147.21 326 ↓P **PKPdf 23 49 00.6 +1.0**
PSZ Piszkesteto 147.21 326 **PKPdf 23 49 00.3 +0.7**
PSZ Piszkesteto 147.21 326 ↓PKP2 **PKPdf 23 49 00.6 +1.0**
VYHS Vyhne 147.37 328 *e*PKP2 **PKPdf 23 49 01.4 +1.6**
VYHS Vyhne 147.37 328 *e*PKP **PKPdf 23 49 01.4 +1.6**
ESK Eskdalemuir 147.57 356 *e*P **PKPdf 23 49 00.9 +1.0**
ESK Eskdalemuir 147.57 356 **PKPdf 23 49 01.1 +1.2**
ESK Eskdalemuir 147.57 356 PKP2 **PKPdf 23 49 01.1 +1.2**
MPEP Malo Peshtene 147.57 316 *e*P **PKPdf 23 49 01.6 +1.3**
HERR Herculane 147.61 320 ↑P **PKPdf 23 49 00.7 +0.4**
BZS Buzias 147.67 321 ↑P **PKPdf 23 49 01.3 +1.0**
BZS Buzias 147.67 321 ↑PKP2 **PKPdf 23 49 01.3 +1.0**
JAVC Velka Javorina 147.68 329 *e*PKP **PKPbc 23 49 03.0 -0.1**
BRG Berggiesshubel 147.78 335 *e*PKP **PKPdf 23 49 02.5 +2.1**
BRG Amp 23 49 05.9
comp=Z,22nm,1.4s
BRG *ex* x 23 49 13.5
BRG Amp 23 49 15.2
comp=Z,21nm,1.3s
BRG *ex* x 23 49 38.8
BRG Amp 23 49 39.8
comp=Z,19nm,1.4s
BRG Berggiesshubel 147.78 335 *e*PKP2 **PKPdf 23 49 02.4 +2.1**
BRG pmax pmax
comp=Z,22nm,1.4s
BRG pmax pmax
comp=Z,21nm,1.3s
BRG pmax pmax
comp=Z,19nm,1.4s
CLL Collm 147.79 336 *i* PKP2 **PKPdf 23 49 02.0 +1.6**
CLL pmax pmax
comp=Z,19nm,1.1s
CLL pmax pmax
comp=Z,14nm,0.7s
CLL Collm 147.79 336 *i* PKPbc **PKPdf 23 49 01.7 +1.3**
comp=Z,19nm,1.1s
CLL *e*PKPab **pPKPbc 23 49 05.0 +0.3**
comp=Z,14nm,0.7s
CLL *e*PKPlp 23 49 07.0
comp=Z,100nm,21.7s
CLL *ex* x 23 49 13.0
CLL *ex* x 23 49 37.0
CLL *e*PP **PP 23 52 31.0 +1.2**
CLL *e*PPP PPP 23 55 42.0
CLL *e*(SSS) 00 16 42.0
PVCC Panska Ves 147.81 334 *e*PKP2 **PKPdf 23 49 02.1 +1.7**
PVCC Panska Ves 147.81 334 *e*PKP **PKPdf 23 49 02.1 +1.7**
NEWG New Galloway 147.83 357 *e*P **PKPdf 23 49 00.8 +0.5**
VRAC Vranov 147.86 331 ↓P **PKPbc 23 49 03.1 -0.4**
VRAC Vranov 147.86 331 ↓PKP2 **PKPbc 23 49 03.1 -0.4**
VRAC Vranov 147.86 331 *e*PKP **PKPdf 23 49 02.1 +1.5**
EDMD Edmundbyers 147.97 355 *e*P **PKPdf 23 49 01.7 +1.2**
SMOL Smolenice 148.04 329 *e*PKP2 **PKPbc 23 49 03.6 -0.4**
MDVR Moldovita 148.08 320 ↑P **PKPdf 23 49 03.1 +1.9**
BLKB Belogradchik 148.11 317 ↑P **PKPdf 23 49 03.0 +1.8**
KRUC Moravsky 148.13 331 *e*PKP **PKPdf 23 49 03.0 +2.0**
MODS Modra-Piesok 148.21 329 *e*PKP2 **PKPdf 23 49 03.2 +2.0**
MODS Modra-Piesok 148.21 329 *e*PKP **PKPdf 23 49 03.2 +2.0**
PRU Pruhonice 148.24 333 *e*PKP2 **PKPdf 23 49 02.7 +1.6**
PRU Pruhonice 148.24 333 *e*PKP **PKPdf 23 49 02.7 +1.6**
VTS Vitosha 148.25 315 *e*P **PKPdf 23 49 01.9 +0.3**
TREC Trest 148.36 332 *e*PKP2 **PKPdf 23 49 03.5 +2.1**
TREC Trest 148.36 332 *e*PKP **PKPdf 23 49 03.5 +2.1**
MMB Musomiste 148.40 313 *e*P **PKPdf 23 49 02.4 +0.6**
ZST Bratislava 148.41 329 *e*PKP2 **PKPbc 23 49 05.3 +0.3**
ZST Bratislava 148.41 329 *e*PKP **PKPbc 23 49 05.3 +0.3**
KKB Krupnik 148.71 314 *e*P **PKPdf 23 49 04.9 +2.7**
BOVS Bovan 148.71 318 ↑P **PKPdf 23 49 03.9 +1.8**
RONA Rosalia, Austr 149.15 329 *e*P **PKPdf 23 49 05.7 +2.9**
comp=Z,12nm,1.4s,SNR=8.3
CONA Conrad Observa 149.19 330 *e*P **PKPdf 23 49 05.7 +2.8**
comp=Z,22nm,1.7s,SNR=8.1
CKRC Cesky Krumlov 149.23 332 *e*PKP **PKPdf 23 49 05.6 +2.8**
KHC Kasperske Hory 149.30 333 *e*PKP2 **PKPbc 23 49 06.2 -1.1**
KHC Kasperske Hory 149.30 333 *e*PKP **PKPbc 23 49 06.2 -1.1**
KHC *ex* x 23 49 16.5
GERES GERESS Array B 149.47 333 PKPbc **PKPdf 23 49 05.3 +2.0**
comp=Z,2.7nm,1.0s,baz=274,slow=6.6,SNR=16
GERES GERESS Array B 149.47 333 **PKPbc 23 49 06.9 -0.9**
GERES GERESS Array B 149.47 333 PKP2 **PKPbc 23 49 06.9 -0.9**
DIVS Divibare 149.49 320 **PKPbc 23 49 07.0 -1.0**
DIVS Divibare 149.49 320 *e*P **PKPdf 23 49 05.9 +2.4**
MOA Molln 149.98 331 *e*P **PKPdf 23 49 07.2 +3.2**
comp=Z,18nm,1.8s
FOEL Foel Wyfa 149.99 356 *e*P **PKPdf 23 49 06.7 +2.8**
HLM1 Long Mynd 150.34 355 *e*P **PKPdf 23 49 07.4 +2.9**
BIOA Bad Ischl, Aus 150.38 331 P **PKPdf 23 49 07.9 +3.2**
comp=Z,15nm,1.6s
SOKA Soboth 150.48 329 *e*P **PKPdf 23 49 08.1 +3.1**
comp=Z,13nm,1.5s,SNR=9.9
BTNL Ternell 150.62 343 *d*PKP **PKPbc 23 49 09.4 -1.0**
MEM Membach 150.63 343 *d*PKP **PKPbc 23 49 08.8 -1.6**
A051A Mrakovica 150.67 324 *e*P **PKPbc 23 49 09.4 -1.4**
BLY Banja Luka 150.69 324 *e*P **PKPbc 23 49 08.9 -1.8**
BSTI Sart Tilman 150.77 344 *d*PKP **PKPbc 23 49 09.9 -0.8**
OBKA Obir 150.84 329 *e*P **PKPdf 23 49 09.0 +3.4**
comp=Z,3.7nm,1.1s
MCH1 Michaelchurch 150.86 355 *e*P **PKPbc 23 49 09.4 -1.5**
BHOU Houvegnez 150.87 343 *d*PKP **PKPbc 23 49 12.0 +1.0**
PDG Podgorica 150.87 318 PKPab **PKPab 23 49 19.3 +0.9**
CRES Cresnjev 150.88 327 *e*P **PKPbc 23 49 09.3 -1.9**
MONM Monmouth 151.00 355 *e*P **PKPbc 23 49 09.6 -1.7**
LJU Ljubljana 151.18 328 *i* PKPbc **PKPbc 23 49 10.4 -1.4**
LJU *e* 23 49 47.3
BOJS Bojanci 151.20 327 *e*P **PKPbc 23 49 10.4 -1.5**
A050A Klekovaca 151.22 324 *e*P **PKPdf 23 49 08.9 +2.7**
BMRD Maredsous 151.24 344 *d*PKP **PKPbc 23 49 10.4 -1.4**
RCHB Rochefort 151.25 344 *d*PKP **PKPbc 23 49 11.4 -0.4**
TREB Trebinje 151.26 319 *e*P **PKPdf 23 49 10.0 +3.8**
PRED Cave del Predi 151.35 330 PKPab **PKPab 23 49 21.4 +1.0**
WLF Walferdange 151.45 342 **PKPab 23 49 21.5 +1.0**
WLF Walferdange 151.45 342 *d*PKP **PKPbc 23 49 12.0 -0.4**
ROBS Robic 151.52 330 *i* PKPbc **PKPdf 23 49 12.0 +3.7**
WATA Walderalm 151.54 333 *e*P **PKPdf 23 49 10.5 +3.9**
comp=Z,8.8nm,1.2s
STON Ston 151.56 320 *e*P **PKPdf 23 49 09.1 +2.5**
WTTA Wattenberg 151.57 333 *e*P **PKPbc 23 49 11.2 -1.7**
comp=Z,29nm,1.7s,SNR=7.6
ABTA Abfaltersbach 151.59 331 *e*P **PKPdf 23 49 10.4 +3.7**
comp=Z,3.4nm,0.6s,SNR=7.4
CLUD Cludinico 151.65 331 PKPab **PKPab 23 49 21.4 -0.2**
SABO M.te Sabotino 151.67 329 PKPab **PKPab 23 49 21.7 0.0**
MOTA Moosalm 151.72 334 *e*P **PKPbc 23 49 11.2 -2.0**
comp=Z,16nm,1.7s
RETA Retute 151.75 334 *e*P **PKPbc 23 49 11.5 -1.7**
comp=Z,3.9nm,0.8s
SQTA Sankt Quirin 151.78 333 *e*P **PKPbc 23 49 11.5 -1.8**
comp=Z,5.4nm,0.7s,SNR=6.0
BFO Black Forest 151.95 338 PKPdf **PKPdf 23 49 08.9 +1.8**
BFO PKPab **PKPab 23 49 22.5 -0.3**
BFO Black Forest 151.95 338 PKIKP **PKPab 23 49 22.5 -0.3**
CIMO Cimolais 151.96 331 PKPdf **PKPdf 23 49 05.9 -1.3**
FETA Feichten 152.14 334 *e*P **PKPbc 23 49 12.4 -1.8**
comp=Z,2.7nm,0.8s
DAVA Damuels 152.26 335 *e*P **PKPbc 23 49 12.6 -1.9**
comp=Z,9.2nm,1.1s
ESDC Sonseca Array 163.16 352 PKPab **PKPab 23 50 11.3 +0.1**
comp=Z,1.5nm,1.2s,baz=349,slow=1.3,SNR=4.4
ESDC Sonseca Array 163.16 352 PKPdf **PKPdf 23 49 21.9 +0.5**
KOWA Kowa 171.16 198 PKPdf **PKPdf 23 49 27.0 -0.8**
KOWA **PKPab 23 50 47.6 +0.6**

*NEIC **28** 23:59:09.9±2.6, 28.°52S±0.°07×175.°69W±0.°08, h10km±1km, mb4.6/38, Error ellipse: s-maj=13.4km s-min=11.4km az=139.0*
*IDC **28** 23:59:13.3±0.8, 28.°13S×176.°45W, h0km, mb4.2/10, mbtmp4.2/11, ML3.8/1, MS3.6/13, Error ellipse: s-maj=32.8km s-min=18.3km az=158.0*
ISC 28 23:59:15.9±0.7, 28.°66S±0.°06×176.°00W±0.°08, h36km, n107, σ1§69/110, mb4.4/17, MS3.6/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.78**	**250**	Pn	**Pn**	**23 59 45.9**	**+1.8**
	504nm,0.3s,baz=64,slow=14,SNR=12						
RAO	**Raoul Island**	**1.78**	**250**		**Pn**	**23 59 46.0**	**+1.9**
RAO				Sn	**Sn**	**00 00 09.4**	**+3.9**
GLKZ	**Green Lake**	**1.78**	**250**	P	**Pn**	**23 59 46.1**	**+2.0**
GLKZ				S	**Sn**	**00 00 08.7**	**+3.1**
RIZ	**Raoul Island**	**1.79**	**251**	P	**Pn**	**23 59 45.9**	**+1.8**
RIZ				S	**Sn**	**00 00 10.0**	**+4.4**
MXZ	**Matakaoa Point**	**10.07**	**207**	Pn	**Pn**	**00 01 37.3**	**-0.6**
MXZ	**Matakaoa Point**	**10.07**	**207**	P	**Pn**	**00 01 36.7**	**-1.2**
MXZ				S	**Sn**	**00 03 31.4**	**+1.7**
WMGZ	**Waiomatatini S**	**10.26**	**206**	S	**Sn**	**00 03 34.9**	**+0.8**
PKGZ	**Pakihiroa**	**10.45**	**207**	P	**Pn**	**00 01 41.7**	**-1.4**
PKGZ				S	**Sn**	**00 03 35.8**	**-3.1**
HAZ	**Te Kaha**	**10.45**	**208**	P	**Pn**	**00 01 41.8**	**-1.4**
HAZ				S	**Sn**	**00 03 41.5**	**+2.6**
PUZ	**Puketiti**	**10.54**	**206**	P	**Pn**	**00 01 40.2**	**-4.1**
PUZ				S	**Sn**	**00 03 41.1**	**+0.1**
RUGZ	**Raukumara Rang**	**10.67**	**208**	P	**Pn**	**00 01 45.1**	**-1.2**
RUGZ				S	**Sn**	**00 03 46.6**	**+2.0**
TWGZ	**Tauwhareparae**	**10.73**	**206**	P	**Pn**	**00 01 46.6**	**-0.5**
TWGZ				S	**Sn**	**00 03 48.9**	**+3.0**
CNGZ	**Carnagh Statio**	**10.92**	**205**	P	**Pn**	**00 01 48.3**	**-1.2**
CNGZ				S	**Sn**	**00 03 52.0**	**+1.7**
TKGZ	**Te Karaka**	**11.01**	**206**	P	**Pn**	**00 01 49.0**	**-1.8**
TKGZ				S	**Sn**	**00 03 53.0**	**+0.4**
NIUE	**Niue**	**11.04**	**32**	Pn	Pn	00 01 44.4	-6.9
MWZ	**Matawai**	**11.05**	**208**	P	**Pn**	**00 01 50.6**	**-0.8**
MWZ				S	**Sn**	**00 03 53.8**	**+0.2**
URZ	**Urewera**	**11.16**	**209**	Pn	**Pn**	**00 01 50.1**	**-2.7**
	1.7nm,0.3s,baz=271,slow=4.4,SNR=9.7						
URZ				Sn	**Sn**	**00 03 55.7**	**-0.6**
	8.0nm,0.3s,baz=185,slow=20,SNR=11						
URZ	**Urewera**	**11.16**	**209**	Pn	**Pn**	**00 01 51.1**	**-1.7**
URZ					**Sn**	**00 03 58.4**	**+2.1**
URZ	**Urewera**	**11.16**	**209**	P	**Pn**	**00 01 51.4**	**-1.5**
URZ				S	**Sn**	**00 03 54.6**	**-1.7**
RAGZ	**Rawiri**	**11.23**	**207**	P	**Pn**	**00 01 52.5**	**-1.4**
RAGZ				S	**Sn**	**00 03 57.5**	**-0.7**
ETAZ	**East Tamaki Re**	**11.24**	**220**	P	Pn	00 01 46.4	-7.6
MUGZ	**Murupara**	**11.49**	**210**	P	**Pn**	**00 01 55.0**	**-2.3**
MUGZ				S	**Sn**	**00 04 03.5**	**-0.9**
MSVF	**Nonsavu**	**12.17**	**332**	Pn	**Pn**	**00 02 04.5**	**-2.4**
BKZ	**Black Stump Fm**	**12.18**	**209**	Pn	**Pn**	**00 02 05.8**	**-1.1**
BKZ					**Sn**	**00 04 20.4**	**-1.0**
HIZ	**Hauiti**	**12.43**	**215**	Pn	**Pn**	**00 02 10.6**	**+0.5**
KWHZ	**Kaweka Forest**	**12.43**	**208**	P	**Pn**	**00 02 07.5**	**-2.8**
KWHZ				S	**Sn**	**00 04 26.4**	**-1.1**
OTVZ	**Oturere**	**12.54**	**211**	P	**Pn**	**00 02 13.0**	**+1.0**
OTVZ				S	**Sn**	**00 04 29.2**	**-1.2**
KAHZ	**Kahuranaki**	**12.56**	**206**	P	**Pn**	**00 02 10.2**	**-1.8**
KAHZ				S	**Sn**	**00 04 30.4**	**-0.3**
BHHZ	**Black Hill Sta**	**12.64**	**209**	P	**Pn**	**00 02 12.6**	**-0.4**
BHHZ				S	**Sn**	**00 04 29.4**	**-3.2**
BFZ	**Birch Farm**	**13.57**	**206**	Pn	**Pn**	**00 02 23.8**	**-2.0**
MSWZ	**Moikau Station**	**14.59**	**207**	Pn	**Pn**	**00 02 38.7**	**-1.0**
PLWZ	**Palliser**	**14.72**	**207**	Pn	**Pn**	**00 02 39.7**	**-1.7**
SNZO	**South Karori**	**14.72**	**209**	Pn	**Pn**	**00 02 40.1**	**-1.3**
TUWZ	**Tuamarina**	**15.15**	**210**	Pn	**Pn**	**00 02 45.7**	**-1.4**
AFI	**Afiamalu**	**15.20**	**16**	Pn	Pn	00 02 39.6	-8.3
NNZ	**Nelson**	**15.24**	**212**	Pn	**Pn**	**00 02 48.6**	**+0.3**
NNZ				IAmb	IAmb	00 03 03.5	
	comp=Z,30nm,1.2s						
CMWZ	**Cape Campbell**	**15.29**	**209**	Pn	**Pn**	**00 02 49.2**	**+0.2**
QRZ	**Quartz Range**	**15.35**	**215**		**Pn**	**00 02 50.1**	**+0.4**
QRZ				IAmb	IAmb	00 03 00.0	
	comp=Z,59nm,1.3s						
BSWZ	**Blackbirch Sta**	**15.41**	**210**	P	**P**	**00 02 54.6**	**-0.2**
THZ	**Tophouse**	**15.89**	**212**		**Pn**	**00 02 57.5**	**+0.8**
PINNC	**Pines Island,**	**16.09**	**288**	P	**P**	**00 03 01.3**	**-1.0**
PINNC				IAmb	IAmb	00 03 39.0	
	comp=Z,103nm,1.3s						
MARNC	**Mare, Loyalty**	**16.13**	**293**	P	**P**	**00 03 03.5**	**+0.7**
KHZ	**Kahutara**	**16.13**	**209**	Pn	**Pn**	**00 02 56.2**	**-3.5**
KHZ				P	**P**	**00 03 01.6**	**-1.0**
RAR	**Rarotonga**	**16.47**	**67**	LR	LR	00 07 14.9	
	comp=Z,106nm,20.7s,baz=244,slow=29						
RAR	**Rarotonga**	**16.47**	**67**		Pn	00 02 56.3	-7.9
RAR				IAmb	IAmb	00 03 36.9	
	comp=Z,103nm,1.5s						
OUENC	**Ouen Island, N**	**16.68**	**288**	Pn	**Pn**	**00 03 02.8**	**-4.0**
OUENC				IAmb	IAmb	00 03 45.4	
	comp=Z,60nm,1.5s						
LTZ	**Lake Taylor**	**16.98**	**211**		**Pn**	**00 03 09.4**	**-1.1**
LIFNC	**LIFOU**	**17.12**	**294**	P	**Pn**	**00 03 12.3**	**0.0**
DZM	**Mont Dzumac**	**17.16**	**289**	Pn	**Pn**	**00 03 09.1**	**-3.9**
	comp=Z,0.4nm,0.3s,baz=150,slow=20,SNR=1.5						
DZM				LR	LR	00 08 17.6	
	comp=Z,214nm,21.8s,baz=30,slow=33						
	comp=Z,3.1nm,0.6s						
DZM	**Mont Dzumac**	**17.16**	**289**		**Pn**	**00 03 10.7**	**-2.3**
OXZ	**Oxford**	**17.51**	**210**		**Pn**	**00 03 16.3**	**-0.9**
OXZ				IAmb	IAmb	00 03 41.5	
	comp=Z,18nm,0.5s						
MQZ	**McQueen's Vall**	**17.56**	**208**	Pn	**Pn**	**00 03 16.6**	**-1.0**
RPZ	**Rata Peaks**	**18.26**	**211**	P	**Pn**	**00 03 26.8**	**+0.4**
	comp=Z,7.7nm,0.5s,baz=354,slow=2.4,SNR=5.2						
RPZ	**Rata Peaks**	**18.26**	**211**	P	**Pn**	**00 03 26.4**	**+0.1**
RPZ				IAmb	IAmb	00 03 43.7	
	comp=Z,44nm,1.4s						
FOZ	**Fox Glacier**	**18.71**	**214**	P	**P**	**00 03 30.2**	**-0.9**
FOZ				IAmb	IAmb	00 04 16.1	
	comp=Z,65nm,1.4s						
LBZ	**Lake Benmore**	**19.18**	**211**	P	**Pn**	**00 03 37.4**	**0.0**
LBZ				IAmb	IAmb	00 04 19.7	
	comp=Z,34nm,1.4s						
ODZ	**Otahua Downs**	**19.49**	**209**	Pn	**Pn**	**00 03 41.8**	**+0.7**
ODZ				IAmb	IAmb	00 03 48.6	
	comp=Z,33nm,1.5s						
WKZ	**Wanaka**	**20.05**	**212**	P	**P**	**00 03 46.3**	**+0.4**
MLZ	**Mavora Lakes**	**20.88**	**213**	P	**P**	**00 03 54.7**	**-0.2**
MLZ				IAmb	IAmb	00 04 19.5	
	comp=Z,58nm,1.5s						
DCZ	**Deep Cove**	**21.42**	**214**	P	**P**	**00 03 59.9**	**-0.7**
PPT	**Papeete**	**26.63**	**71**	LR	LR	00 12 47.6	
	comp=Z,34nm,21.7s,baz=186,slow=30						
ARMA	**Armidale**	**28.17**	**258**	P	**P**	**00 05 05.5**	**+0.4**
ARMA				IAmb	IAmb	00 05 43.2	
	comp=Z,22nm,1.4s						
EIDS	**Eidsvold**	**29.46**	**269**	P	**P**	**00 05 17.0**	**+0.6**
MCQ	**Macquarie Isla**	**31.57**	**208**	P	**P**	**00 05 33.1**	**-1.6**
TOO	**Toolangi**	**33.26**	**244**	P	**P**	**00 05 48.2**	**-1.7**
TOO				IAmb	IAmb	00 06 26.6	
	comp=Z,7.3nm,1.1s						
CTA	**Charters Tower**	**35.30**	**275**	P	**P**	**00 06 06.4**	**-1.3**
	comp=Z,2.3nm,0.5s,baz=103,slow=11,SNR=1.7						
CTA				LR	LR	00 18 09.4	
	comp=Z,158nm,19.2s,baz=80,slow=33						
	comp=Z,2.3nm,0.5s						
CTAO	**Charters Tower**	**35.30**	**275**	P	**P**	**00 06 06.9**	**-0.8**
STKA	**Stephens Creek**	**36.59**	**254**	P	**P**	**00 06 20.1**	**+1.5**
	comp=Z,1.2nm,0.4s,baz=78,slow=9.3,SNR=4.1						
STKA				LR	LR	00 19 16.5	
	comp=Z,80nm,18.5s,baz=42,slow=33						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**36.59**	**254**	P	**P**	**00 06 18.8**	**+0.2**
BBOO	**Buckleboo**	**41.14**	**252**	P	**P**	**00 06 56.6**	**-0.1**
BBOO				IAmb	IAmb	00 07 05.9	
	comp=Z,22nm,1.3s						
ASAR	**Alice Springs**	**44.98**	**264**	P	**P**	**00 07 27.0**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=93,slow=7.0,SNR=25						
ASAR				LR	LR	00 24 58.7	
	comp=Z,130nm,18.4s,baz=120,slow=35						
	comp=Z,1.3nm,0.6s						
ASAR	**Alice Springs**	**44.98**	**264**	P	**P**	**00 07 27.8**	**-0.1**
WR0	**Warramunga Arr**	**45.63**	**269**	P	**P**	**00 07 32.1**	**-1.0**
WR0				IAmb	IAmb	00 07 34.5	
	comp=Z,10nm,1.2s						
WB2	**Warramunga Arr**	**45.80**	**269**	P	**P**	**00 07 33.1**	**-1.3**
WRAB	**Tennant Creek**	**45.81**	**269**	P	**P**	**00 07 33.5**	**-1.0**
WRAB				IAmb	IAmb	00 08 08.2	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**45.81**	**269**	P	**P**	**00 07 33.2**	**-1.3**
	comp=Z,1.5nm,0.3s,baz=108,slow=6.4,SNR=56						
	comp=Z,1.5nm,0.3s						
WRA	**Warramunga Arr**	**45.81**	**269**	P	**P**	**00 07 32.6**	**-1.9**
WB0	**Warramunga Arr**	**45.83**	**270**	P	**P**	**00 07 33.5**	**-1.1**
WB0				IAmb	IAmb	00 07 35.0	
	comp=Z,4.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**54.14**	**268**	P	**P**	**00 08 38.0**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=137,slow=11,SNR=4.4						
FITZ				LR	LR	00 31 42.7	
	comp=Z,92nm,18.5s,baz=192,slow=36						
	comp=Z,1.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**54.14**	**268**	P	**P**	**00 08 37.4**	**-0.3**
FITZ				IAmb	IAmb

mb4.2/11, Error ellipse: s-maj=13.4km s-min=8.6km az=61.0
*SKHL **29** 00:34:45.7±0.5, 42°.20N×143°.10E, h70km±5km, mb4.1/2*
*JMA **29** 00:34:46.2±0.1, 42°.3N±0°.5×143°.0E±0°.6, h51km±1km, MV3.8/36, HIDAKA MOUNTAINS REGION*
JMA Felt I J1 at HIDAKA MOUNTAINS REGION .

ISC 29 00:34:45.4±0.7, **42°.24N**±0°.04×**143°.10E**±0°.04, **h59**km±5km, **n70**, σ1^{s}17/72, **mb4.1**/16, **5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTHR	**Tokachihiroo**	**0.15**	**72**	P			**Pn**	**00 34 54.6**	**0.0**
JTHR				eS			**Sn**	**00 35 01.0**	**-0.1**
JEM	**Erimo**	**0.23**	**170**	P			**Pn**	**00 34 55.6**	**+0.6**
ERM	**Erimo**	**0.23**	**170**	Pn			**Pn**	**00 34 55.8**	**+0.8**
ERM	**Erimo**	**0.23**	**170**	PN			**Pn**	**00 34 55.8**	**+0.8**
JNBK	**Urakawa-nobuka**	**0.26**	**278**	⇓P			**Pn**	**00 34 54.6**	**-0.5**
JNBK				⇓eS			**Sn**	**00 35 01.5**	**-0.7**
JCH	**Churui**	**0.42**	**28**	P			**Pn**	**00 34 56.2**	**-0.3**
JCH				eS			**Sn**	**00 35 03.9**	**-0.6**
JSHD	**Hidakashinhida**	**0.50**	**290**	⇓P			**Pn**	**00 34 57.1**	**-0.2**
JSHD				⇓eS			**Sn**	**00 35 06.7**	**+0.8**
JOB	**Onbets**	**0.85**	**39**	P			**Pn**	**00 35 02.3**	**+0.8**
JOB				eS			**Sn**	**00 35 14.8**	**+1.4**
JIAM	**Iburiatsuma**	**0.95**	**294**	eP			**Pn**	**00 35 03.8**	**+1.0**
JFR	**Furan**	**0.99**	**338**	eP			**Pn**	**00 35 02.0**	**-1.4**
JAR	**Ashorobuto**	**1.16**	**25**	P			**Pn**	**00 35 05.3**	**-0.2**
JEW	**Eniwo**	**1.36**	**297**	Pn			**Pn**	**00 35 08.7**	**+0.5**
JEW				Sn			**Sn**	**00 35 26.6**	**+1.4**
JEW	**Eniwo**	**1.36**	**297**	eP			**Pn**	**00 35 08.5**	**+0.4**
JAB	**Ashibetsu**	**1.42**	**333**	⇓eP			**Pn**	**00 35 09.5**	**+0.5**
AKK	**Akkeshi**	**1.50**	**58**	eP			**Pn**	**00 35 10.2**	**+0.1**
AKK				eS			**Sn**	**00 35 29.0**	**+0.4**
JTM	**Tenmabayashi**	**2.11**	**227**	Pn			**Pn**	**00 35 19.3**	**+1.0**
NMR	**Nemuro--Hokkai**	**2.24**	**59**	ePN			**Pn**	**00 35 19.8**	**-0.2**
NMR				eS			**Sn**	**00 35 45.6**	**-0.9**
NMR	**Nemuro--Hokkai**	**2.24**	**59**	eP			**Pn**	**00 35 19.8**	**-0.2**
NMR				AMB			AMB	00 35 20.7	
	20nm,0.2s								
NMR				eS			**Sn**	**00 35 45.6**	**-0.9**
NMR				A			A	00 35 46.4	
	190nm,0.2s								
NMR				A			A	00 35 46.4	
	150nm,0.2s								
RUSJ	**Misakicho**	**2.43**	**39**	ePN			**Pn**	**00 35 25.0**	**+2.3**
RUSJ				eS			**Sn**	**00 35 55.9**	**+4.6**
YUK	**Yuzh-Kuril'sk**	**2.70**	**48**	ePN			**Pn**	**00 35 27.9**	**+1.5**
YUK				eS			**Sn**	**00 35 59.9**	**+2.1**
YUK				pmax			pmax		
	comp=Z,149nm,0.2s								
YUK				pmax			pmax		
	comp=N,44nm,0.1s								
YUK				pmax			pmax		
	comp=E,45nm,0.1s								
YUK				smax			smax		
	comp=E,533nm,0.4s								
YUK				smax			smax		
	comp=N,489nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**2.70**	**48**	eP			**Pn**	**00 35 27.9**	**+1.5**
YUK				AMB			AMB	00 35 32.5	
	comp=N,10.0nm,0.2s								
YUK				eS			**Sn**	**00 35 59.0**	**+1.2**
YUK				A			A	00 36 03.7	
	comp=N,50nm,0.3s								
YUK				A			A	00 36 03.7	
	comp=N,50nm,0.3s								
JMM	**Marumori**	**4.72**	**203**	Pn			**Pn**	**00 35 54.4**	**+0.4**
JMM				Sn			**Sn**	**00 36 45.1**	**-2.3**
JSD	**Sado**	**5.60**	**223**	Pn			**Pn**	**00 36 07.3**	**+1.1**
MJAR	**Matsushiro Arr**	**6.84**	**215**	Pn			**Pn**	**00 36 20.4**	**-2.7**
	baz=30,slow=14,SNR=1.6								
	comp=N,0.5nm,0.3s								
MAJO	**Matsushiro**	**6.84**	**215**	Pn			**Pn**	**00 36 24.2**	**+1.1**
MAJO	**Matsushiro**	**6.84**	**215**	PN			**Pn**	**00 36 24.2**	**+1.1**
INU	**Inuyama**	**8.36**	**217**	Pn			**Pn**	**00 36 45.6**	**+1.6**
MA2	**Magadan**	**17.99**	**13**	LR			LR	00 45 12.0	
	comp=N,54nm,18.6s,baz=274,slow=36								
YOJ	**Yonaguni jima**	**24.32**	**229**	P			**P**	**00 40 00.1**	**+2.7**
YOJ	**Yonaguni jima**	**24.32**	**229**	P			**P**	**00 40 00.1**	**+2.7**
YOJ				pmax			pmax		
	comp=Z,230nm,1.2s								
SONM	**Songino Array**	**26.36**	**295**	P			**P**	**00 40 15.2**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=86,slow=8.6,SNR=5.4								
	comp=Z,1.7nm,0.9s								
SONM	**Songino Array**	**26.36**	**295**	P			**P**	**00 40 15.4**	**-0.5**
SONM	**Songino Array**	**26.36**	**295**	P			**P**	**00 40 15.4**	**-0.5**
SONM				pmax			pmax		
	comp=Z,3.0nm,1.3s								
H11N2	**WAKE ISLAND Hy**	**30.14**	**131**	T			T	01 12 24.8	
	baz=324,slow=75,SNR=63								
H11N1	**WAKE ISLAND Hy**	**30.15**	**131**	T			T	01 12 21.4	
	baz=324,slow=75,SNR=62								
H11N3	**WAKE ISLAND Hy**	**30.16**	**131**	T			T	01 12 21.9	
	baz=324,slow=75,SNR=52								
H11S1	**WAKE ISLAND Hy**	**31.02**	**133**	T			T	01 13 25.5	
	baz=326,slow=75,SNR=76								
H11S3	**WAKE ISLAND Hy**	**31.02**	**133**	T			T	01 13 27.1	
	baz=326,slow=75,SNR=56								
H11S2	**WAKE ISLAND Hy**	**31.03**	**133**	T			T	01 13 31.5	
	baz=326,slow=75,SNR=50								
DAV	**Davao City (W)**	**38.31**	**209**	LR			LR	00 59 35.0	
	comp=Z,17nm,18.1s,baz=172,slow=39								
ZAA0	**Zalesovo Array**	**39.55**	**308**	P			**P**	**00 42 09.9**	**-0.5**
ZAA0				IAmb			IAmb	00 42 11.1	
	comp=Z,1.8nm,0.9s								
ZALV	**Zalesovo Beam**	**39.55**	**308**	P			**P**	**00 42 10.3**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=86,slow=8.9,SNR=13								
	comp=Z,0.9nm,0.3s								
ZALV	**Zalesovo Beam**	**39.55**	**308**	P			**P**	**00 42 09.7**	**-0.7**
MK31	**Makanchi Array**	**42.65**	**298**	P			**P**	**00 42 36.1**	**+0.1**
MK31	**Makanchi Array**	**42.65**	**298**	P			**P**	**00 42 36.1**	**+0.1**
MK31				pmax			pmax		
	comp=Z,2.0nm,0.7s								
MKAR	**Makanchi Array**	**42.65**	**298**	P			**P**	**00 42 35.9**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=81,slow=11,SNR=11								
	comp=Z,0.8nm,0.6s								
MKAR	**Makanchi Array**	**42.65**	**298**	P			**P**	**00 42 35.4**	**-0.5**
MCK	**McKinley**	**43.63**	**37**	P			**P**	**00 42 43.8**	**+0.2**
MCK				IAmb			IAmb	00 43 06.0	
	comp=Z,2.9nm,0.6s								
MCK	**McKinley**	**43.63**	**37**	P			**P**	**00 42 43.8**	**+0.2**
MCK				pmax			pmax		
	comp=Z,3.0nm,0.6s								
KURK	**Kurchatov**	**43.91**	**304**	P			**P**	**00 42 45.8**	**-0.2**
KURK				IAmb			IAmb	00 42 46.4	
	comp=Z,3.2nm,0.9s								
KURK	**Kurchatov**	**43.91**	**304**	P			**P**	**00 42 45.8**	**-0.2**
KURK				pmax			pmax		
	comp=Z,3.0nm,1.0s								
KURK	**Kurchatov**	**43.91**	**304**	eP			**P**	**00 42 45.8**	**-0.2**
INK	**Inuvik**	**49.18**	**29**	P			**P**	**00 43 27.1**	**+0.2**
INK				IAmb			IAmb	00 43 34.8	
	comp=Z,3.1nm,1.2s								
INK	**Inuvik**	**49.18**	**29**	P			**P**	**00 43 27.1**	**+0.2**
INK				pmax			pmax		
	comp=Z,3.0nm,1.2s								
ABKAR	**Akbulak array**	**55.67**	**308**	P			**P**	**00 44 15.0**	**-0.2**
GEYT	**Alibeck**	**62.53**	**297**	P			**P**	**00 45 01.9**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=22,slow=4.8,SNR=3.6								
	comp=Z,0.9nm,0.5s								
GEYT	**Alibeck**	**62.53**	**297**	P			**P**	**00 45 02.7**	**-0.3**
GEYT				IAmb			IAmb	00 45 03.3	
	comp=Z,1.3nm,0.6s								
GYA0B	**ALIBECK ARRAY**	**62.53**	**297**	P			**P**	**00 45 02.5**	**-0.5**
GYA0B				IAmb			IAmb	00 45 35.5	
	comp=Z,1.8nm,0.8s								
FIA1	**FINESS Array S**	**64.83**	**332**	P			**P**	**00 45 16.9**	**-0.7**
FINES	**FINESS Array B**	**64.83**	**332**	P			**P**	**00 45 16.6**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=52,slow=6.9,SNR=28								
	comp=Z,0.9nm,0.3s								
FINES	**FINESS Array B**	**64.83**	**332**	P			**P**	**00 45 17.1**	**-0.5**
FINES	**FINESS Array B**	**64.83**	**332**	P			**P**	**00 45 17.1**	**-0.5**
NOA	**NORSAR Array B**	**69.89**	**337**	P			**P**	**00 45 48.8**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=34,slow=6.4,SNR=1.8								
	comp=Z,0.2nm,0.5s								
BRTR	**Keskin Array B**	**76.37**	**312**	P			**P**	**00 46 28.4**	**0.0**
	comp=Z,0.2nm,0.5s,baz=28,slow=6.5,SNR=1.6								
	comp=Z,0.2nm,0.5s								
CLL	**Collm**	**77.22**	**331**	eP			**P**	**00 46 33.0**	**+0.2**
GERES	**GERESS Array B**	**78.96**	**329**	P			**P**	**00 46 42.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=45,slow=11,SNR=2.0								
	comp=Z,0.1nm,0.3s								
319A	**Douglas**	**81.09**	**56**	P			**P**	**00 46 53.1**	**-1.3**
319A				IAmb			IAmb	00 47 06.1	
	comp=Z,3.6nm,0.6s								
H03N2	**Juan Fernandez**	**145.95**	**89**	T			T	03 37 17.3	
	baz=300,slow=77,SNR=3.2								
H03N3	**Juan Fernandez**	**145.96**	**89**	T			T	03 37 14.6	
	baz=300,slow=77,SNR=3.6								
H03N1	**Juan Fernandez**	**145.97**	**89**	T			T	03 37 15.1	
	baz=300,slow=77,SNR=4.4								

TAP 29 00:43:35.5, 23°.74N×122°.01E, h32km±1km, **ML2.0, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.51**	**312**	eP			Pn	00 43 46.8	+0.3
	baz=312								
EGFH	**Guangfu**	**0.54**	**263**	eP			Pb	00 43 46.5	-0.1
	baz=263								
EGFH				eS			Sb	00 43 54.4	+0.1
	baz=263								
ETL	**Fush Village**	**0.55**	**320**	eP			Pb	00 43 45.7	-1.1
	baz=312								
NACB	**Ninganchiao**	**0.58**	**319**	eP			Pb	00 43 47.3	0.0
	baz=313								
HGSD	**Ruisui**	**0.59**	**246**	P			Pb	00 43 46.5	-1.0
	baz=246								
HGSD				S			Sb	00 43 55.4	-0.3
	baz=246								
ETLH	**Xiulin Townshi**	**0.67**	**314**	P			Pb	00 43 47.6	-1.3
	baz=314								
ETLH				S			Sb	00 43 58.1	0.0
	baz=314								
EHY	**Hungye**	**0.68**	**250**	*i* P			Pn	00 43 48.1	-0.7
	baz=266								
EHY				eS			Sb	00 43 58.0	0.0
	baz=266								
ENA	**Nanau**	**0.73**	**340**	P			Pn	00 43 49.1	-0.5
	baz=331								
ENA				S			Sn	00 43 59.8	+0.1
	baz=331								
YULB	**Yu-li**	**0.74**	**243**	P			Pn	00 43 49.2	-0.5
	baz=257								
YULB				S			Sb	00 43 59.3	-0.5
	baz=257								
WHF	**Hehuan Shan**	**0.80**	**301**	*i* P			Pn	00 43 50.0	-0.9
	baz=301								
WHF				eS			Sb	00 44 01.2	-0.6
	baz=301								
OWD	**Renai**	**0.80**	**286**	*i* P			Pn	00 43 49.9	-0.7
	baz=293								
OWD				eS			Sn	00 44 01.2	-0.3
	baz=293								
VWDT	**VWDT**	**0.80**	**271**	P			Pn	00 43 50.1	-0.4
	baz=271								
VWDT				S			Sn	00 44 00.5	-0.8
	baz=271								
CHGB	**Renai**	**0.83**	**293**	P			Pn	00 43 50.5	-0.7
	baz=293								
FULB	**Fuli**	**0.85**	**231**	P			Pn	00 43 50.5	-0.8
	baz=220								
FULB				S			Sn	00 44 01.8	-0.9
	baz=220								
WUSB	**Renai**	**0.86**	**287**	P			Pn	00 43 51.1	-0.4
	baz=294								
FUSS	**Fushou**	**0.87**	**306**	*i* P			Pn	00 43 51.2	-0.5
	baz=306								
NNSB	**Datong**	**0.90**	**320**	P			Pn	00 43 51.7	-0.3
	baz=320								
LATG	**Datong**	**0.91**	**331**	P			Pn	00 43 52.0	-0.1
	baz=331								
LATG				S			Sn	00 44 03.6	-0.7
	baz=331								
TWT	**Tachien**	**0.92**	**304**	P			Pn	00 43 52.3	-0.1
	baz=303								
SSLB	**Suanglung**	**0.97**	**273**	eP			Pn	00 43 52.8	-0.2
	baz=273								
EDH	**Donghe**	**1.00**	**221**	*i* P			Pn	00 43 52.2	-1.1
	baz=213								
EDH				S			Sn	00 44 04.7	-1.7
	baz=213								
YUS	**Yu-Shan**	**1.00**	**256**	*i* P			Pn	00 43 53.9	+0.1
	baz=256								
YUS				*i* S			Sn	00 44 06.5	-0.6
	baz=256								
FUSB	**Fushanzhiwuyua**	**1.09**	**339**	P			Pb	00 43 55.6	-0.3
	baz=339								
YHNB	**Yeheng**	**1.09**	**328**	P			Pn	00 43 55.1	+0.4
	baz=328								

TAP 29 00:43:49.7, 23°.99N×120°.97E, h11km±1km, **ML0.9, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WCS	**Beigang Elemen**	**0.08**	**322**	P			Pg	00 43 52.1	0.0
	baz=323								
WCS				S			Sg	00 43 54.4	+0.4
	baz=323								
SMLT	**Sun Moon Lake**	**0.12**	**210**	P			Pg	00 43 53.3	+0.5
	baz=271								
SMLT	**Sun Moon Lake**	**0.12**	**210**	P			Pg	00 43 53.3	+0.5
	baz=198								
SMLT				S			Sg	00 43 56.3	+1.4
	baz=198								
WUSB	**Renai**	**0.14**	**90**	S			Sg	00 43 55.5	+0.2
	baz=90								
OWD	**Renai**	**0.20**	**101**	*i* P			Pg	00 43 54.5	+0.5
	baz=101								
OWD				*i* S			Sg	00 43 57.4	+0.5
	baz=101								
CHGB	**Renai**	**0.20**	**70**	S			Sg	00 43 57.7	+0.6
	baz=70								
SSLB	**Suanglung**	**0.20**	**183**	P			Pg	00 43 54.1	+0.1
	baz=177								
SSLB				S			Sg	00 43 56.8	-0.1
	baz=177								

*JMA **29** 00:58:24.5±0.3, 33°.N×13°.8E±°, h390km, MV3.4/53, FAR S OFF TOKAI DISTRICT*
*IDC **29** 00:58:28.1±1.9, 32°.97N×137°.63E, h338km±20km, mb2.9/5, mbtmp3.6/8, Error ellipse: s-maj=29.7km s-min=19.6km az=69.0*

ISC 29 00:58:29.5±1.0, **33°.2N**±0°.1×**137°.75E**±0°.09, **h350**km, **n25**, σ1^{s}44/30, **mb3.1**/5, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**0.92**	**299**	eP			**Pn**	**00 59 16.0**	**+1.4**
JIE	**Ise**	**1.48**	**325**	P			**Pn**	**00 59 18.7**	**+1.2**
JKN2	**Miekihoku**	**1.62**	**311**	P			**Pn**	**00 59 19.0**	**+0.8**
HMMJ	**Hamamatsu 2**	**1.67**	**359**	eP			**Pn**	**00 59 20.5**	**+1.9**
JTNC	**Tanabenakahech**	**1.89**	**290**	P			**Pn**	**00 59 20.4**	**+0.3**
JAO	**Obara**	**2.12**	**349**	P			**Pn**	**00 59 23.4**	**+1.8**
JNY	**Yasuok**	**2.17**	**3**	P			**Pn**	**00 59 24.1**	**+2.0**
JOD2	**Odawara 2**	**2.36**	**28**	P			**Pn**	**00 59 26.0**	**+2.6**
BSO4	**Boso 4**	**2.81**	**49**	eP			**Pn**	**00 59 27.6**	**+0.7**
BSO4				S			**S**	**01 00 14.9**	**+1.6**
BSO3	**Boso 3**	**2.81**	**54**	P			**Pn**	**00 59 27.1**	**+0.3**
JWT	**Wachi**	**2.86**	**318**	P			**Pn**	**00 59 28.4**	**+0.9**
JHU	**Hanno**	**2.95**	**25**	eP			**Pn**	**00 59 29.6**	**+1.3**
BSO1	**Boso 1**	**3.06**	**60**	P			**Pn**	**00 59 28.7**	**0.0**
BSO1				S			**S**	**01 00 17.3**	**+0.8**
MJAR	**Matsushiro Arr**	**3.37**	**6**	P			**Pn**	**00 59 31.9**	**-0.4**
	2.7nm,0.6s,baz=147,slow=11,SNR=7.3								
JAG	**Ashikaga**	**3.53**	**23**	P			**Pn**	**00 59 33.8**	**+0.1**
JAG				S			**S**	**01 00 24.7**	**-0.7**
JYT	**Yasato**	**3.65**	**33**	S			**S**	**01 00 25.4**	**-2.1**
JHO	**Hitachi**	**4.13**	**33**	P			**Pn**	**00 59 39.7**	**-0.1**
JHO				S			**S**	**01 00 34.1**	**-2.4**
JFK	**Kawauchi**	**4.90**	**31**	P			**Pn**	**00 59 48.2**	**+0.3**
JFK				eS			**S**	**01 00 48.7**	**-2.7**
KSRS	**Korea Array**	**9.09**	**301**	P			**Pn**	**01 00 35.3**	**-1.1**
	4.2nm,0.8s,baz=115,slow=11,SNR=8.0								
USRK	**Ussuriysk Ar.**	**11.88**	**339**	P			**Pn**	**01 01 11.0**	**+1.4**
	2.2nm,0.5s,baz=148,slow=11,SNR=6.7								
SONM	**Songino Array**	**27.74**	**311**	P			**P**	**01 03 47.7**	**+0.5**
	0.7nm,0.6s,baz=116,slow=6.9,SNR=4.6								
	0.7nm,0.6s								
MKAR	**Makanchi Array**	**43.74**	**305**	P			**P**	**01 06 01.0**	**-0.3**
	0.6nm,0.5s,baz=87,slow=9.6,SNR=7.7								
	0.6nm,0.5s								
WRA	**Warramunga Arr**	**52.92**	**184**	P			**P**	**01 07 09.0**	**-2.0**
	0.5nm,0.6s,baz=355,slow=7.4,SNR=9.0								
	0.5nm,0.6s								
ILAR	**Eielson Array**	**54.34**	**31**	P			**P**	**01 07 21.8**	**+1.2**
	0.4nm,0.6s,baz=279,slow=7.2,SNR=2.8								
	0.4nm,0.6s								
BRTR	**Keskin Array B**	**79.10**	**310**	P			**P**	**01 09 55.9**	**-0.3**
	0.3nm,0.7s,baz=87,slow=5.6,SNR=2.0								
	0.3nm,0.7s								

*ISK **29** 01:25:22.9, 34°.79N×24°.54E, h29km, ML3.4/22*
*IDC **29** 01:25:23.4±2.4, 34°.72N×24°.59E, h35km±17km, mb3.5/2, mbtmp3.6/9, ML3.5/7, Error ellipse: s-maj=24.7km s-min=22.7km az=23.0*
*ATH **29** 01:25:24.1, 34°.84N×24°.45E, h37km±3km, ML3.4/10, Error ellipse: s-maj=3.2km s-min=1.2km az=178.0*
*GII **29** 01:25:24.9±0.0, 34°.59N×24°.73E, h30km*
*HLW **29** 01:25:24.0, 34°.79N×24°.62E, h20km±19km, Md3.7*
*THE **29** 01:25:25.4, 34°.86N×24°.45E, h23km±1km, ML3.3/11, Error ellipse: s-maj=1.9km s-min=0.7km az=168.0*

ISC 29 01:25:23.4±1.1, **34°.73N**±0°.04×**24°.51E**±0°.04, **h36**km±1km, **n100**, σ1^{s}**44**/130, **mb3.9**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GVDS	**Gavdos**	**0.36**	**288**	P			**Pn**	**01 25 32.1**	**+0.2**
GVDS				S			**Sn**	**01 25 38.7**	**+0.1**
	11μm,0.3s								
GVDS	**Gavdos**	**0.36**	**288**	PG			**Pn**	**01 25 32.3**	**+0.4**
GVD	**Gavdhos**	**0.37**	**287**	P			**Pn**	**01 25 31.9**	**0.0**
GVD				S			**Sn**	**01 25 38.1**	**-0.5**
	13μm,0.5s								
GVD	**Gavdhos**	**0.37**	**287**	PG			**Pn**	**01 25 32.1**	**+0.2**
GVD				SG			**Sn**	**01 25 38.4**	**-0.3**
GVD	**Gavdhos**	**0.37**	**287**	P			**Pn**	**01 25 31.9**	**0.0**
GVD				S			**Sn**	**01 25 38.4**	**-0.3**
GVD				AML			AML	01 25 41.3	
	comp=N,24905μm,0.3s								
GVD				AML			AML	01 25 42.6	
	comp=E,27087μm,0.6s								
SIVA	**Sivas**	**0.37**	**41**	P			**Pn**	**01 25 32.3**	**+0.3**
SIVA				S			**Sn**	**01 25 39.1**	**+0.4**
	comp=E,19μm,0.3s								
SIVA	**Sivas**	**0.37**	**41**	P			**Pn**	**01 25 32.1**	**+0.1**
SIVA				S			**Sn**	**01 25 39.0**	**+0.3**
SIVA				AML			AML	01 25 39.9	
	comp=E,38952μm,0.4s								
SIVA				AML			AML	01 25 40.3	
	comp=N,37941μm,0.3s								
TMBK	**Timbaki Herakl**	**0.40**	**32**	P			**Pn**	**01 25 32.0**	**-0.3**
TMBK				S			**Sn**	**01 25 38.9**	**-0.1**
	comp=N,8μm,0.3s								
TMBK	**Timbaki Herakl**	**0.40**	**32**	P			**Pn**	**01 25 32.1**	**-0.2**
TMBK				S			**Sn**	**01 25 39.2**	**+0.1**
TMBK				AML			AML	01 25 40.6	
	comp=N,41347μm,0.4s								
TMBK				AML			AML	01 25 40.7	
	comp=E,48816μm,0.3s								
PRNS	**Prines Rethymn**	**0.63**	**359**	P			**Pn**	**01 25 34.0**	**-1.9**
PRNS				S			**Sn**	**01 25 42.9**	**-1.8**
IDI	**Anoyia**	**0.63**	**29**	Pg			**Pn**	**01 25 35.8**	**-0.3**
	comp=E,135nm,0.3s,baz=241,slow=12,SNR=987								
IDI				Lg			Lg	01 25 45.9	
	comp=E,117nm,0.3s,baz=47,slow=17,SNR=12								
IDI	**Anoyia**	**0.63**	**29**	P			**Pn**	**01 25 35.3**	**-0.7**
IDI				S			**Sn**	**01 25 45.6**	**+0.7**
	comp=E,2μm,0.5s								
IDI	**Anoyia**	**0.63**	**29**	PG			**Pn**	**01 25 35.3**	**-0.7**
IDI				SG			**Sn**	**01 25 44.7**	**-0.2**
IDI	**Anoyia**	**0.63**	**29**	P			**Pn**	**01 25 35.3**	**-0.7**
IDI				S			**Sn**	**01 25 43.9**	**-1.0**
IDI				AML			AML	01 25 48.0	
	comp=E,4020μm,0.6s								
IDI				AML			AML	01 25 50.8	
	comp=N,3994μm,0.4s								
KSTL	**Kastelli Herak**	**0.73**	**39**	P			**Pn**	**01 25 39.9**	**+2.8**
KSTL				S			**Sn**	**01 25 51.6**	**+4.5**
KSTL				AML			AML	01 25 57.6	
	comp=E,1643μm,0.5s								
KSTL				AML			AML	01 25 59.1	
	comp=N,3582μm,0.4s								
IACM	**Heraklion**	**0.73**	**39**	P			**Pn**	**01 25 37.5**	**+0.4**
IACM				S			**Sn**	**01 25 47.9**	**+0.9**
IACM	**Heraklion**	**0.73**	**39**	P			**Pn**	**01 25 37.7**	**+0.5**
HRKL	**Herakleio**	**0.75**	**40**	P			**Pn**	**01 25 38.3**	**+0.9**
HRKL				S			**Sn**	**01 25 48.9**	**+1.4**
	comp=N,3μm,0.6s								
HRKL	**Herakleio**	**0.75**	**40**	PG			**Pn**	**01 25 36.9**	**-0.5**
HRKL	**Herakleio**	**0.75**	**40**	P			**Pn**	**01 25 38.2**	**+0.9**
HRKL				AML			AML	01 25 56.7	
	comp=E,22423μm,0.5s								
HRKL				AML			AML	01 25 57.3	
	comp=N,17168μm,0.4s								
KNDR	**Palaiochora Ch**	**0.84**	**307**	P			**Pn**	**01 25 39.3**	**+0.6**
KNDR				S			**Sn**	**01 25 50.5**	**+0.6**
	comp=N,732nm,0.4s								
KNDR	**Palaiochora Ch**	**0.84**	**307**	PG			**Pn**	**01 25 39.5**	**+0.8**
KNDR	**Palaiochora Ch**	**0.84**	**307**	P			**Pn**	**01 25 39.1**	**+0.4**
KNDR				AML			AML	01 25 58.4	
	comp=E,4105μm,0.4s								
KNDR				AML			AML	01 25 59.3	
	comp=N,3835μm,0.4s								
IMMV	**Iera Moni Meta**	**0.85**	**329**	P			**Pn**	**01 25 37.4**	**-1.4**
IMMV				S			**Sn**	**01 25 49.4**	**-0.6**
	comp=N,2μm,0.4s								

YER	Yerkesik	3.88	51	P		Pn	01 26 23.0	+2.4	
YER	Yerkesik	3.88	51	PN		Pn	01 26 21.8	+1.2	
DALY	Dalyan (Mula)	3.96	57	PN		Pn	01 26 22.9	+1.5	
LKR	Lokris	4.09	343	P		Pn	01 26 22.1	-1.3	
FETY	Fethiye	4.18	62	PN		Pn	01 26 25.1	+0.6	
AYDB	Zeytinkoy-Aydi	4.21	39	PN		Pn	01 26 26.2	+1.1	
AXAR	Agios Charalam	4.29	340	P		Pn	01 26 26.9	+0.8	
AKAS	Kas	4.42	69	PN		Pn	01 26 28.7	+0.8	
CAME	Cameli-Denizli	4.47	59	PN		Pn	01 26 30.1	+1.4	
EVR	Evrytania	4.70	333	P		Pn	01 26 32.5	+0.7	
APMY	Acipayam-Deniz	4.74	53	PN		Pn	01 26 33.6	+1.2	
XOR	Xorichti	4.74	348	P		Pn	01 26 32.9	+0.6	
ELL	Elmali	4.83	64	PN		Pn	01 26 35.1	+1.6	
EVGI	Lefkada island	4.96	322	P		Pn	01 26 36.3	+1.0	
SWA2		5.53	171	P		Pn	01 26 45.6	+2.4	
	baz=172								
SWA2				S		Sn	01 27 45.6	+0.1	
	baz=172								
RYAN	Fayoum	7.47	137	P		Pn	01 27 11.2	+1.5	
	baz=138								
RYAN				S		Sn	01 28 30.9	-2.2	
	baz=138								
NBNS	Bani Suef	8.39	135	P		Pn	01 27 23.2	+0.7	
	baz=135								
BRTR	Keskin Array B	8.82	53	Pn		Pn	01 27 29.5	+1.2	
	comp=N,0.1nm,0.3s,baz=238,slow=14,SNR=4.4								
	comp=N,0.3nm,0.5s								
KZIT	Kziot	9.15	112	Pn		Pn	01 27 32.4	-0.4	
KZIT				Sn		Sn	01 29 11.0	-3.5	
MMA0B	Mount Meron ar	9.22	98	Pn		Pn	01 27 32.5	-1.3	
MMAI	Mount Meron Ar	9.22	98	Pn		Pn	01 27 33.0	-0.7	
	comp=N,1.0nm,0.3s,baz=301,slow=11,SNR=9.2								
MMAI				Sn		Sn	01 29 14.3	-1.9	
	comp=N,1.1nm,0.3s,baz=270,slow=24,SNR=6.1								
	comp=N,0.5nm,0.3s								
HMDT	Nahal Hemdat	9.52	102	Pn		Pn	01 27 37.0	-0.9	
HMDT				Sn		Sn	01 29 23.6	-0.1	
DSI	Dead Sea	9.64	106	Pn		Pn	01 27 39.5	0.0	
KRMI	Paran Flat	9.78	115	Pn		Pn	01 27 40.9	-0.6	
PRNI	Paran	9.87	113	Pn		Pn	01 27 42.8	+0.1	
PRNI				Sn		Sn	01 29 27.8	-4.5	
GHAJ	Ghor Haditha	9.89	107	Pn		Pn	01 27 41.3	-1.6	
HRFI	Mount Harif	10.05	115	Pn		Pn	01 27 45.8	+0.6	
HRFI				Sn		Sn	01 29 33.0	-3.7	
MBRI	Mt Berech	10.09	116	Pn		Pn	01 27 45.3	-0.4	
EIL	Elat	10.18	117	Pn		Pn	01 27 46.5	-0.4	
	comp=N,0.5nm,0.3s,baz=326,slow=6.5,SNR=5.6								
	comp=N,1.3nm,0.3s								
ASF	Jabal al Asfar	10.66	100	Pn		Pn	01 27 53.4	-0.1	
	comp=N,0.2nm,0.3s,baz=329,slow=5.9,SNR=2.3								
	comp=N,1.6nm,0.6s								
GERES	GERESS Array B	16.22	334	Pn		Pn	01 29 09.2	+0.9	
	comp=N,0.1nm,0.3s,baz=150,slow=11,SNR=4.8								
	comp=N,0.4nm,0.7s								
AKASG	Malin Array Be	16.32	11	Pn		Pn	01 29 09.6	0.0	
	comp=N,1.4nm,0.3s,baz=197,slow=9.0,SNR=6.6								
	comp=N,0.4nm,0.2s								
KBZ	Khabaz	16.81	52	Pn		P	01 29 18.5	+0.9	
	comp=N,0.1nm,0.3s,baz=221,slow=13,SNR=4.7								
	comp=N,2.0nm,0.8s								
TORD	Torodi Ar. Bea	29.81	229	P		P	01 31 28.0	+1.1	
	comp=N,12nm,0.3s,baz=36,slow=9.0,SNR=1.7								
MKAR	Makanchi Array	44.45	56	P		P	01 33 30.3	-0.4	
	comp=N,0.4nm,0.4s,baz=284,slow=6.8,SNR=7.2								
	comp=N,0.4nm,0.4s								
ZALV	Zalesovo Beam	45.68	46	P		P	01 33 39.8	-0.6	
	comp=N,0.5nm,0.3s,baz=260,slow=4.4,SNR=2.7								
	comp=N,0.5nm,0.3s								

IDC ***29*** *01:27:20.0±0.6, 18°.44S×69°.61W, h117km±5km, mb4.1/17, mbtmp4.4/21, MS3.0/1, Error ellipse: s-maj=12.4km s-min=8.3km az=97.0*

NEIC ***29*** *01:27:20.1±2.1, 18°.42S±0°.03×69°.83W±0°.07, h121km±4km, mb4.6/86, ML4.4(GUC), Error ellipse: s-maj=10.3km s-min=4.2km az=84.0*

VAO ***29*** *01:27:20.1±0.3, 18°.26S×69°.62W, h122km, mb4.7*

GUC ***29*** *01:27:21.0±0.8, 18°.40S×69°.70W, h112km±3km, ML4.4*

ISC 29 01:27:19.2±0.4, 18°41S±0°.03×69°.77W±0°.05, h117km±3km, h117km:pP-P,n233,○1°40/255,mb4.6/57,7C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PB16	IPOC Station P	0.26	72	Pn		Pn	01 27 37.6	+1.3
PB16				Sn		Sn	01 27 50.3	+1.2
PB16	IPOC Station P	0.26	72	*e*P		Pn	01 27 37.4	+1.1
PB16				*i* S		Sn	01 27 50.2	+1.1
PB16				IAML			01 27 50.7	
	comp=N,36μm,0.3s							
AP01	Chacalluta	0.55	274	Pn		Pn	01 27 38.2	+1.3
AP01				Sn		Sn	01 27 51.8	+1.2
AP01	Chacalluta	0.55	274	↑*i*P		Pn	01 27 38.3	+1.3
AP01				*e*S		Sn	01 27 51.7	+1.2
PB12	IPOC Station P	0.57	249	Pn		Pn	01 27 38.0	+0.7
PB12				Sn		Sn	01 27 51.7	+0.7
PB12	IPOC Station P	0.57	249	↑*i*P		Pn	01 27 38.3	+1.0
PB12				*i* S		Sn	01 27 52.1	+1.1
PB12				IAML			01 27 53.3	
	comp=N,19μm,0.2s							
GO01	Chusmiza	1.36	157	Pn		Pn	01 27 47.3	+2.1
GO01				Sn		Sn	01 28 07.3	+2.2
GO01	Chusmiza	1.36	157	‖*i*P		Pn	01 27 47.5	+2.2
GO01				*e*S		Sn	01 28 07.1	+2.1
GO01				IAML			01 28 13.4	
	comp=N,4μm,0.1s							
TA02	Huaiquique	1.88	190			Pn	01 27 51.8	+0.9
TA02				Sn		Sn	01 28 14.7	-0.5
TA02	Huaiquique	1.88	190	↑*i*P		Pn	01 27 51.8	+0.9
TA02				*e*S		Sn	01 28 14.7	-0.5
TA02				IAML			01 28 17.8	
	comp=N,4μm,0.1s							
TA01	Diego Aracena	2.17	190	Pn		Pn	01 27 55.1	+0.5
TA01	Diego Aracena	2.17	190	↑*i*P		Pn	01 27 55.4	+0.7
TA01				*e*S		Sn	01 28 20.2	-1.7
TA01				IAML			01 28 28.9	
	comp=N,1μm,0.3s							
PB01	IPOC Station P	2.63	174			Pn	01 28 01.9	+1.3
PB01	IPOC Station P	2.63	174	*e*P		Pn	01 28 01.9	+1.3
PB01				*e*S		Sn	01 28 31.7	-0.8
PB01				IAML			01 28 35.3	
	comp=E,991nm,0.3s							
LPAZ	La Paz	2.63	37	P		Pn	01 28 02.9	+1.7
	comp=E,213nm,0.3s,baz=229,slow=5.5,SNR=905							
LPAZ				S		Sn	01 28 34.2	+1.0
	comp=E,145nm,0.5s,baz=107,slow=20,SNR=7.2							
LPAZ	La Paz	2.63	37	Pn		Pn	01 28 03.2	+2.1
LPAZ				Sn		Sn	01 28 34.3	+1.0
LPAZ	La Paz	2.63	37	‖*i*P		Pn	01 28 03.4	+2.3
LPAZ				*e*S		Sn	01 28 33.8	+0.5
PB02	IPOC Station P	2.89	182	Pn		Pn	01 28 05.0	+0.9
PB02	IPOC Station P	2.89	182	*e*P		Pn	01 28 05.5	+1.4
PB02				*e*S		Sn	01 28 36.9	-1.8
PB02				IAML			01 28 39.9	
	comp=E,2μm,0.4s							
PB07	IPOC Station P	3.30	182	Pn		Pn	01 28 10.8	+1.4
PB07	IPOC Station P	3.30	182	*e*P		Pn	01 28 10.5	+1.0
PB07				*e*S		Sn	01 28 47.1	-1.2
PB09	IPOC Station P	3.40	172	Pn		Pn	01 28 12.2	+1.4
PB09	IPOC Station P	3.40	172	*e*P		Pn	01 28 12.6	+1.8
PB04	IPOC Station P	3.92	185	Pn		Pn	01 28 18.4	+0.7
PB04	IPOC Station P	3.92	185	*e*P		Pn	01 28 18.3	+0.6
PB04				*e*S		Sn	01 29 00.2	-2.8
LVC	Limon Verde	4.25	169	P		Pn	01 28 24.4	+2.0
	comp=E,16nm,0.4s,baz=360,slow=8.5,SNR=142							
LVC				S		Sn	01 29 11.2	-0.1
	comp=E,240nm,0.4s,baz=243,slow=22,SNR=19							
LVC	Limon Verde	4.25	169	Pn		Pn	01 28 24.0	+1.7
LVC	Limon Verde	4.25	169	*e*P		Pn	01 28 24.0	+1.7
LVC				*e*S		Sn	01 29 11.5	+0.2
LVC	Limon Verde	4.25	169	*e*P		Pn	01 28 24.4	+2.0
PB06	IPOC Station P	4.27	178	Pn		Pn	01 28 23.0	+0.5
PB06	IPOC Station P	4.27	178	*e*P		Pn	01 28 22.8	+0.3
PB15	IPOC Station P	4.78	177	Pn		Pn	01 28 30.1	+0.8
PB14	IPOC Station P	6.21	185	Pn		Pn	01 28 47.6	-1.1
GO02	Mina Guanaco	6.72	179	Pn		Pn	01 28 55.1	-0.4
AC01	Pan de Azucar	7.74	186	Pn		Pn	01 29 07.1	-1.9
AC02	Maricunga	8.40	176	Pn		Pn	01 29 18.2	-0.3
SIV	San Ignacio	8.65	75	P		Pn	01 29 19.1	-2.4
	comp=E,40nm,0.4s,baz=267,slow=9.1,SNR=183							
SIV				LR		LR	01 33 39.5	
	comp=E,104nm,20.2s,baz=284,slow=45							
ETMB	Extrema	9.21	22	Pn		Pn	01 29 26.7	-2.5
ETMB	Extrema	9.21	22	*e*P		Pn	01 29 27.2	-1.9
NNA	Nana	9.35	312	P		Pn	01 29 30.0	-1.0
	comp=E,12nm,0.3s,baz=129,slow=9.8,SNR=12							
NNA				S		Sn	01 31 07.9	-6.6
	comp=E,11nm,0.3s,baz=233,slow=20,SNR=2.0							
NNA	Nana	9.35	312	Pn		Pn	01 29 30.2	-0.8
AC05	El Transito	10.38	182	Pn		Pn	01 29 42.5	-2.5
LCO	Las Campanas	10.58	184	Pn		Pn	01 29 43.0	-4.8
PTLB	Pontes e Lacer	10.59	75			Pn	01 29 44.4	-3.3
PTLB	Pontes e Lacer	10.59	75	*e*P		Pn	01 29 45.6	-2.1
VILB	Vilhena	10.69	61	Pn		Pn	01 29 46.3	-2.8
VILB	Vilhena	10.69	61	*e*P		Pn	01 29 46.6	-2.6
CZSB	Cruzeiro do Su	11.00	345	*e*P		Pn	01 29 54.0	+0.7
CO06	Fray Jorge	12.32	188	Pn		Pn	01 30 10.2	-0.5
CO03	El Pedregal	12.40	184	Pn		Pn	01 30 12.6	+0.9
CO02	Combarbal	12.78	185	Pn		Pn	01 30 18.4	+1.6
ANTJ	Antonio Joao (	13.40	108	*e*P		Pn	01 30 24.4	-0.4
AQDB	Aquidauana	13.43	101	Pn		Pn	01 30 23.6	-1.5
AQDB	Aquidauana	13.43	101	*e*P		Pn	01 30 23.7	-1.5
SALV	Santo Antonio	13.68	82	*e*P		Pn	01 30 25.6	-2.8
CPUP	Villa Florida	13.94	127	P		Pn	01 30 30.1	-1.5
	comp=E,1.9nm,0.5s,baz=286,slow=11,SNR=12							
CPUP	Villa Florida	13.94	127	Pn		Pn	01 30 29.8	-1.8
CPUP	Villa Florida	13.94	127	*e*P		Pn	01 30 32.7	+1.0
VA03	San Esteban	14.31	183	P		P	01 30 38.6	-1.5
ROC1	El Roble	14.54	184	P		Pn	01 30 40.9	+1.3
MT02	Curacav	14.83	184	P		Pn	01 30 43.9	+0.9
MT09	Talagante	15.34	184	P		Pn	01 30 49.8	+0.3
MT09				IAmb		IAmb	01 30 55.4	
	comp=Z,24nm,0.9s							
LMEL	Las Melosas	15.38	181	P		P	01 30 51.8	-0.2
MT01	Popeta	15.44	185	P		P	01 30 52.0	-0.6
MT01				IAmb		IAmb	01 30 56.9	
	comp=Z,20nm,0.7s							
CLDB	Colider	15.45	63	*e*P		Pn	01 30 48.1	-2.8
MCR1	Marechal Candi	15.83	115	*e*P		Pn	01 30 55.3	-0.2
C2SB	Chapadao do Su	16.05	94	*e*P		P	01 30 59.3	-0.1
BO02	Sierra Bellavi	16.34	183	P		P	01 31 03.8	+1.2
ITQB	Itaqui	16.41	136	P		Pn	01 31 01.5	-1.1
ITQB	Itaqui	16.41	136	*e*P		Pn	01 31 02.0	-0.6
TRCB	Terra Rica	16.62	108	P		Pn	01 31 05.2	-0.1
TRCB				IAmb		IAmb	01 31 08.1	
	comp=Z,64nm,1.0s							
TRCB	Terra Rica	16.62	108	*e*P		P	01 31 05.5	-0.3
CRSM	Crissiumal (Br	17.05	125	*e*P		Pn	01 31 11.0	+0.5
UNIS	Unistalda (Bra	17.11	131	*e*P		Pn	01 31 12.3	+1.0
FRBT	Francisco Belt	17.19	119	*e*P		P	01 31 10.6	-1.4
ML02	Panimavida	17.34	185	P		Pn	01 31 15.6	+1.7
ML02				IAmb		IAmb	01 31 17.4	
	comp=Z,20nm,0.7s							
BOSC	San Juan Bosco	17.41	330	P		P	01 31 14.5	-0.1
BOSC				IAmb		IAmb	01 31 39.5	
	comp=Z,34nm,1.2s							
MACA	Manacapuru-AM	17.58	31	P		P	01 31 14.7	-1.6
MACA				IAmb		IAmb	01 31 17.8	
	comp=Z,44nm,0.6s							
MACA	Manacapuru-AM	17.58	31	*e*P		P	01 31 14.8	-1.4
PTGB	Pitanga	17.61	114	*e*P		Pn	01 31 17.3	-0.1
PCMB	Pacaembu	17.68	103	*e*P		P	01 31 17.3	-0.1
RODS	Rosario do Sul	17.79	135	*e*P		Pn	01 31 18.9	-0.5
NPGB	Novo Progresso	18.02	53	*e*P		P	01 31 19.7	-1.4
ITRB	Iturama	18.39	97	*e*P		P	01 31 25.0	-0.2
ITAB	Concordia	18.46	122	*e*P		Pn	01 31 26.7	-0.7
ALGR	Alto Alegre (B	18.48	127	*e*P		P	01 31 26.5	+0.4
SNDB	Serra Nova Dou	18.93	73	*e*P		P	01 31 30.3	-0.9
CPSB	Cacapava Do Su	19.04	132	*e*P		P	01 31 32.5	+0.3
ITTB	Itaituba	19.57	46	*e*P		P	01 31 36.5	-1.6
PLTB	Pedras Altas	19.74	135	P		P	01 31 38.9	-0.9
PLTB	Pedras Altas	19.74	135	*e*P		P	01 31 39.5	-0.3
BB19B	Bebedouro	20.16	101	*e*P		P	01 31 43.2	-1.3
CNLB	Canela	20.39	126	*e*P		P	01 31 47.7	+0.8
OTAV	Otavalo	20.41	334	*e*P		P	01 31 45.8	-1.8
TIJ01	Guaruva-PR	20.45	113	*e*P		P	01 31 48.8	+1.2
IPMB	Ipameri, GO	20.48	92	*e*P		P	01 31 46.6	-1.4
TRQA	Tornquist	20.72	162	P		P	01 31 50.9	+0.6
BDFB	Brasilia	20.98	86	P		P	01 31 51.8	-1.6
	comp=Z,14nm,0.6s,baz=262,slow=11,SNR=21							
	comp=Z,14nm,0.6s							
BDFB	Brasilia	20.98	86	P		P	01 31 51.3	-2.1
BDFB				IAmb		IAmb	01 31 56.3	
	comp=Z,15nm,0.7s							
BDFB	Brasilia	20.98	86	*e*P		P	01 31 52.1	-1.2
RCLB	Rio Claro- Sao	21.21	105	*e*P		P	01 31 54.6	-1.2
PET01	Itanhaem-SP	21.74	110	*e*P		P	01 32 00.3	-1.0
VAO	Valinhos	21.80	106	*e*P		P	01 32 00.5	-1.6
PMNB	Patos De Minas	22.13	94	*e*P		P	01 32 03.9	-1.6
PLCA	Paso Flores	22.25	182	P		P	01 32 07.2	+0.7
	comp=Z,11nm,1.0s,baz=2.0,slow=11,SNR=14							
	comp=Z,11nm,1.0s							
PLCA	Paso Flores	22.25	182	P		P	01 32 08.3	+1.8
PLCA	Paso Flores	22.25	182	*e*P		P	01 32 09.1	+2.5
MALB	Monte Alegre	22.41	44	*e*P		P	01 32 06.2	-2.0
BOAV	Boa Vista	22.59	25	P		P	01 32 08.2	-2.0
BOAV				IAmb		IAmb	01 32 11.7	
	comp=Z,23nm,1.0s							
BOAV	Boa Vista	22.59	25	*e*P		P	01 32 09.2	-0.9
PRPB	Parauapebas	22.95	60	*e*P		P	01 32 11.5	-2.1
PARB	Paraibuna	23.07	106	*e*P		P	01 32 13.8	-1.0
SMTB	Santa Maria do	23.53	69	*e*P		P	01 32 18.2	-0.8
MAN01	Angra dos Reis	24.54	105	*e*P		P	01 32 28.5	+0.4
JANB	Januaria	24.60	86	*e*P		P	01 32 27.5	-1.2
MC01	Montes Claros	24.68	90	*e*P		P	01 32 29.6	+0.1
SDBA	SAO DESIDERIO	24.69	80	*e*P		P	01 32 27.9	-1.6
DIAM	Diamantina, MG	24.76	94	*e*P		P	01 32 29.3	-1.0
DUB01	Friburgo-RJ	25.94	103	*e*P		P	01 32 41.1	+0.2
AY01	Puyuhuapi	26.04	185	P		P	01 32 42.5	+1.1
AY01				IAmb		IAmb	01 32 44.0	
	comp=Z,12nm,0.9s							
TMAB	Tom-Au,PA,Br	26.56	56	*e*P		P	01 32 45.3	-1.1
CAM01	Campos-RJ	26.60	102	*e*P		P	01 32 47.6	+0.9
SJMB	Sao Joao De Ma	27.09	95	*e*P		P	01 32 50.5	-0.7
BAUV	El Baul	27.24	4	P		P	01 32 52.0	-0.5
RIB01	Linhares ES	27.80	97	*e*P		P	01 32 56.4	-1.0
NAN01	Guarapari, ES	28.16	94	*e*P		P	01 32 59.7	-1.1
GUA01	Guaratinga, BA	28.62	91	*e*P		P	01 33 04.4	-0.4
MDP	Montagnes des	28.83	37	P		P	01 33 05.0	-1.6
	comp=Z,4.1nm,0.5s,baz=214,slow=9.3,SNR=12							
	comp=Z,4.1nm,0.5s							
PCRV	Puerto La Cruz	28.86	11	P		P	01 33 06.2	-0.7
	comp=Z,12nm,1.1s							
	comp=Z,12nm,1.1s							
CMC01	Camacan, BA	29.09	89	*e*P		P	01 33 09.0	+0.1
GDU01	Guandu, BA	29.36	85	*e*P		P	01 33 09.6	-1.8
ROSB	Rosrio	29.47	61	*e*P		P	01 33 12.6	+0.2
TOSP	Speyside	30.90	18	P		P	01 33 25.0	+0.2
NBLA	Lagarto - SE	31.76	81	*e*P		P	01 33 30.3	-2.2
SVB	Belmont	32.59	16	P		P	01 33 39.6	0.0
NBAN	Anadia - AL	33.59	80	*e*P		P	01 33 46.6	-1.9
FDF	Fort de France	34.02	15	P		P	01 33 49.8	-2.3
RCBR	Riachuelo	35.31	74	P		P	01 34 02.8	-0.6
RCBR				IAmb		IAmb	01 34 05.3	
	comp=Z,9.1nm,0.8s							
RCBR	Riachuelo	35.31	74	*e*P		P	01 34 03.1	-0.3
GDSD	La Dsirade Is	35.56	14	P		P	01 34 02.4	-2.9
CRPR	Cabo Rojo, PR	36.29	4	P		P	01 34 09.7	-1.8
CRPR				IAmb		IAmb	01 34 10.8	
	comp=Z,14nm,0.8s							
OBIP	Obispado Ponce	36.36	5	P		P	01 34 10.9	-1.3
PDPR	Patillas Dam,	36.39	6	P		P	01 34 10.2	-2.2
PDPR				IAmb		IAmb	01 34 11.2	
	comp=Z,12nm,1.0s							
CELP	Cerrillos	36.40	5	P		P	01 34 11.3	-1.1
MTP	Monte Pirata	36.52	7	P		P	01 34 11.0	-2.5
MTP				IAmb		IAmb	01 34 50.1	
	comp=Z,7.0nm,0.8s							
HUMP	Col San Antoni	36.53	6	P		P	01 34 13.4	-0.2
HUMP				IAmb		IAmb	01 34 27.4	
	comp=Z,17nm,1.1s							
AOPR	Arecibo Observ	36.65	5	P		P	01 34 12.3	-2.3
GCPR	Guaynabo City	36.67	6	P		P	01 34 12.4	-2.4
GCPR				IAmb		IAmb	01 34 14.7	
	comp=Z,10nm,0.7s							
PCDR	Punta Cana, DR	36.72	2	P		P	01 34 14.5	-0.6
CUPR	Culebra, Puert	36.76	7	P		P	01 34 13.3	-2.1
CUPR				IAmb		IAmb	01 34 29.6	
	comp=Z,6.9nm,0.8s							
DR12	Loma Pena Alta	36.97	1	P		P	01 34 15.1	-2.2
ASCN	Ascension	54.76	87	P		P	01 36 37.1	-0.1
V55A	Taylorsville	55.05	349	P		P	01 36 39.8	+1.0
V55A				IAmb		IAmb	01 36 57.6	
	comp=Z,15nm,1.4s							
V55A				pP		pP	01 37 08.0	0.0
T59A	Double "B" Far	55.58	352	P		P	01 36 41.4	-1.1
T59A				IAmb		IAmb	01 37 01.7	
	comp=Z,12nm,1.4s							
U54A	Nelsons Funny	55.81	348	P		P	01 36 44.3	0.0
U54A				IAmb		IAmb	01 37 18.8	
	comp=Z,5.3nm,0.7s							
WVT	Waverly	56.88	343	P		P	01 36 51.6	-0.1
WVT				IAmb		IAmb	01 36 58.2	
	comp=Z,3.5nm,0.7s							
S54A	Dingess, Beckl	56.96	349	P		P	01 36 53.2	+0.8
S54A				pP		pP	01 37 21.3	-0.4
S54A				IAmb		IAmb	01 37 26.7	
	comp=Z,6.5nm,1.0s							
R55A	Marlinton	57.23	350	P		P	01 36 54.8	+0.5
R55A				IAmb		IAmb	01 37 22.8	
	comp=Z,15nm,1.4s							
MIAR	Mount Ida	57.33	337	P		P	01 36 55.5	+0.4
MIAR				pP		pP	01 37 24.2	+0.6
MIAR				IAmb		IAmb	01 37 25.2	
	comp=Z,3.6nm,0.6s							
TXAR	Lajitas Array	57.65	325	P		P	01 36 59.0	+1.5
	comp=Z,0.4nm,0.3s,baz=141,slow=8.1,SNR=5.3							
TXAR				pP		pP	01 37 26.4	+0.4
	comp=Z,0.3nm,0.3s,baz=150,slow=7.3,SNR=1.7							
	comp=Z,0.4nm,0.3s							
X37A	Clayton	58.07	335	P		P	01 37 00.8	+0.6
X37A				pP		pP	01 37 30.1	+1.3
X37A				IAmb		IAmb	01 37 33.0	
	comp=Z,8.5nm,1.1s							
P53A	Whipple	58.61	349	P		P	01 37 04.7	+0.9
P53A				IAmb		IAmb	01 37 05.4	
	comp=Z,6.5nm,0.7s							
P53A				pP		pP	01 37 32.6	-0.6
S44A	Carbondale	58.75	342	P		P	01 37 05.2	+0.5
SIUC	Southern Illin	58.75	342	P		P	01 37 05.3	+0.5
SSPA	Standing Stone	59.23	353	P		P	01 37 08.8	+0.7
SSPA				IAmb		IAmb	01 37 42.0	
	comp=Z,10nm,1.4s							
O53A	New Philadelph	59.33	350	P		P	01 37 08.7	0.0
O53A				IAmb		IAmb	01 37 17.3	
	comp=Z,9.4nm,1.3s							
ODNJ	Ogdensburg	59.36	356	P		P	01 37 09.3	+0.3
ODNJ				IAmb		IAmb	01 37 18.0	
	comp=Z,9.2nm,1.4s							
FVM	French Village	59.37	341	P		P	01 37 09.2	+0.1
FVM				pP		pP	01 37 38.2	-0.1
OK031	S. Brethren Rd	59.84	335	P		P	01 37 12.6	+0.2
OK031				pP		pP	01 37 42.0	+0.7
BRYW	Bryant College	60.05	358	P		P	01 37 14.1	+0.4
L64A	Middleborough	60.05	359	P		P	01 37 13.2	-0.5
R40A	Maddies Statio	60.23	340	P		P	01 37 15.4	+0.4
R40A				IAmb		IAmb	01 37 44.4	
	comp=Z,3.7nm,0.8s							
M53A	WI Miller and	60.40	351	P		P	01 37 16.9	+0.8
M53A				IAmb		IAmb	01 37 21.4	
	comp=Z,8.6nm,1.0s							
BINY	Binghamton	60.58	355	P		P	01 37 17.7	+0.4
BINY				IAmb		IAmb	01 37 18.8	
	comp=Z,5.7nm,0.8s							
HRV	Adam Dziewonsk	60.64	358	P		P	01 37 18.1	+0.5
HRV				IAmb		IAmb	01 37 41.5	
	comp=Z,11nm,1.1s							
WVNY	West Valley, N	61.06	353	P		P	01 37 21.4	+0.8
WVNY				IAmb		IAmb	01 37 42.2	
	comp=Z,16nm,1.2s							
NCB	Newcomb	62.21	356	P		P	01 37 28.6	+0.3
NCB				IAmb		IAmb	01 37 30.8	
	comp=Z,11nm,1.4s							
319A	Douglas	62.37	322	IAm

H11N3 **WAKE ISLAND Hy** 26.63 281 T T 04 05 33.8
baz=100,slow=74,SNR=29
H11S1 **WAKE ISLAND Hy** 26.64 280 T T 04 05 33.9
baz=100,slow=74,SNR=58
H11N2 **WAKE ISLAND Hy** 26.65 281 T T 04 05 50.5
baz=100,slow=74,SNR=15
H11S3 **WAKE ISLAND Hy** 26.65 280 T T 04 05 33.3
baz=100,slow=74,SNR=48
H11N1 **WAKE ISLAND Hy** 26.65 281 T T 04 05 34.7
baz=100,slow=74,SNR=6.9
ASAR Alice Springs 132.22 210 PKP **PKiKP** **01 46 21.6 +0.4**
comp=Z,0.5nm,0.5s,baz=145,slow=2.3,SNR=2.6
WRA Warramunga Arr 135.14 213 PKP **PKiKP** **01 46 26.8 -0.5**
comp=Z,1.2nm,0.8s,baz=168,slow=1.7,SNR=5.5
MKAR Makanchi Array 143.55 33 PKP **PKPdf** **01 46 41.4 +1.2**
comp=Z,0.3nm,0.6s,baz=0.0,slow=1.4,SNR=2.5
KLR Kul'dur 144.70 335 PKP **PKPdf** **01 46 42.5 +0.4**
comp=Z,2.0nm,0.6s,baz=75,slow=5.3,SNR=5.2
USRK Ussuriysk Ar. 148.47 329 PKPbc **PKiKP** **01 46 53.9 +0.1**
comp=Z,1.7nm,0.7s,baz=260,slow=4.2,SNR=2.3
MJAR Matsushiro Arr 149.47 312 PKPbc **PKiKP** **01 46 56.2 +0.1**
comp=Z,1.6nm,0.5s,baz=66,slow=1.6,SNR=2.6
SONM Songino Array 150.49 5 PKPbc **PKiKP** **01 46 58.6 +0.6**
comp=Z,1.0nm,0.6s,baz=5.7,slow=1.5,SNR=3.9
PZH PanZhiHua 168.76 43 PKP **PKPdf** **01 47 11.8 -1.3**

NOU ***29*** *01:36:30.8, 10.72S × 166.22E, h141km, mb4.9/33, Santa Cruz Islands*
IDC ***29*** *01:36:32.8±2.7, 10.90S × 166.21E, h158km±24km, mb4.0/20, mbtmp4.5/22, Error ellipse: s-maj=15.4km s-min=12.9km az=94.0*
NEIC ***29*** *01:36:33.2±1.7, 10.82S±0.10× 166.2E±0.1, h159km±7km, mb4.5/61, Error ellipse: s-maj=15.8km s-min=14.0km az=77.0*
ISC 29 01:36:31.9±0.4, 10.86S±0.06× 166.23E±0.07, h150km, n269, σ0.95/265, mb4.4/53, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.35**	**282**	P	**Pn**	**01 38 03.4**	**+0.1**
	474nm,0.8s,baz=200,slow=3.3,SNR=6.5						
HNR	**Honiara**	**6.35**	**282**	Pn	**Pn**	**01 38 04.2**	**+0.8**
DVP	**Devils Point**	**7.08**	**165**	P	**Pn**	**01 38 13.0**	**-0.1**
RTV	**Rentapao**	**7.21**	**163**	P	**Pn**	**01 38 15.8**	**+1.0**
KOUNC	**Koumac, New Ca**	**9.81**	**191**	Pn	**Pn**	**01 38 51.8**	**+2.3**
KOUNC	**Koumac, New Ca**	**9.81**	**191**	P	**Pn**	**01 38 51.6**	**+2.1**
LIFNC	**LIFOU**	**9.91**	**175**	Pn	**Pn**	**01 38 48.3**	**-2.4**
LIFNC	**LIFOU**	**9.91**	**175**	P	**Pn**	**01 38 49.5**	**-1.2**
MARNC	**Mare, Loyalty**	**10.70**	**171**	Pn	**Pn**	**01 38 59.7**	**-1.5**
MARNC	**Mare, Loyalty**	**10.70**	**171**	P	**Pn**	**01 39 00.9**	**-0.3**
DZM	**Mont Dzumac**	**11.15**	**179**	P	**Pn**	**01 39 08.2**	**+1.0**
	56nm,0.5s,baz=304,slow=19,SNR=108						
DZM				S	**Sn**	**01 41 07.4**	**-3.1**
	36nm,0.5s,baz=324,slow=24,SNR=16						
DZM	**Mont Dzumac**	**11.15**	**179**		**Pn**	**01 39 09.2**	**+2.0**
DZM	**Mont Dzumac**	**11.15**	**179**	P	**Pn**	**01 39 08.8**	**+1.6**
DZM	**Mont Dzumac**	**11.15**	**179**	P	**Pn**	**01 39 09.7**	**+2.5**
YATNC	**Mamie plateau,**	**11.15**	**177**	P	**Pn**	**01 39 08.5**	**+1.3**
YATNC	**Mamie plateau,**	**11.15**	**177**	P	**Pn**	**01 39 07.7**	**+0.5**
NOUC	**Port Laguerre**	**11.18**	**180**	P	**Pn**	**01 39 10.1**	**+2.6**
NOUC	**Port Laguerre**	**11.18**	**180**	P	**Pn**	**01 39 10.8**	**+3.3**
ONTNC	**Ouen Toro**	**11.38**	**179**	Pn	**Pn**	**01 39 11.7**	**+1.5**
ONTNC	**Ouen Toro**	**11.38**	**179**	P	**Pn**	**01 39 11.6**	**+1.5**
ONTNC	**Ouen Toro**	**11.38**	**179**	P	**Pn**	**01 39 13.7**	**+3.5**
OUENC	**Ouen Island, N**	**11.51**	**177**	Pn	**Pn**	**01 39 12.8**	**+1.0**
OUENC	**Ouen Island, N**	**11.51**	**177**	P	**Pn**	**01 39 12.9**	**+1.1**
PINNC	**Pines Island,**	**11.74**	**174**	Pn	**Pn**	**01 39 16.3**	**+1.5**
MSVF	**Nonsavu**	**13.33**	**122**	P	**P**	**01 39 42.6**	**+2.8**
MSVF	**Nonsavu**	**13.33**	**122**	P	**Pn**	**01 39 35.7**	**+0.2**
TAVE	**Taveuni**	**14.66**	**115**	P	**Pn**	**01 39 52.2**	**0.0**
EIDS	**Eidsvold**	**20.35**	**223**	P	**P**	**01 40 57.8**	**+1.0**
EIDS				IAmb	IAmb	01 40 58.7	
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**21.31**	**242**	P	**P**	**01 41 07.2**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=80,slow=9.4,SNR=7.2						
	comp=Z,9.0nm,0.8s						
CTAO	**Charters Tower**	**21.31**	**242**	P	**P**	**01 41 07.0**	**0.0**
CTAO				IAmb	IAmb	01 41 15.4	
	comp=Z,13nm,0.9s						
CTAO	**Charters Tower**	**21.31**	**242**	P	**P**	**01 41 07.9**	**+0.8**
COEN	**Coen**	**22.73**	**260**	P	**P**	**01 41 22.1**	**+0.7**
COEN				IAmb	IAmb	01 41 23.4	
	comp=Z,26nm,0.9s						
ARMA	**Armidale**	**23.73**	**213**	P	**P**	**01 41 31.9**	**+1.3**
ARMA				IAmb	IAmb	01 42 12.5	
	comp=Z,14nm,1.3s						
OUZ	**Omahuta**	**25.16**	**166**	P	**P**	**01 41 44.5**	**+1.3**
HIZ	**Hauiti**	**28.59**	**166**	P	**P**	**01 42 15.4**	**+1.4**
URZ	**Urewera**	**28.97**	**162**	P	**P**	**01 42 17.4**	**+0.1**
	comp=Z,14nm,0.5s,baz=248,slow=1.9,SNR=14						
	comp=Z,14nm,0.5s						
URZ	**Urewera**	**28.97**	**162**	P	**P**	**01 42 17.4**	**+0.1**
URZ	**Urewera**	**28.97**	**162**	P	**P**	**01 42 16.8**	**-0.5**
	comp=Z,152nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**29.17**	**1**	T	T	02 13 06.9	
	baz=181,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**29.17**	**1**	T	T	02 13 07.0	
	baz=181,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**29.19**	**1**	T	T	02 13 11.2	
	baz=181,slow=76,SNR=23						
BKZ	**Black Stump Fm**	**29.63**	**164**	P	**P**	**01 42 23.5**	**+0.2**
BKZ	**Black Stump Fm**	**29.63**	**164**	P	**P**	**01 42 23.7**	**+0.4**
QRZ	**Quartz Range**	**30.36**	**171**	P	**P**	**01 42 31.7**	**+2.1**
H11N1	**WAKE ISLAND Hy**	**30.39**	**1**	T	T	02 14 38.0	
	baz=182,slow=76,SNR=26						
H11N3	**WAKE ISLAND Hy**	**30.39**	**1**	T	T	02 14 37.1	
	baz=182,slow=76,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**30.41**	**1**	T	T	02 14 38.1	
	baz=182,slow=76,SNR=8.4						
STKA	**Stephens Creek**	**30.90**	**224**	P	**P**	**01 42 34.6**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=31,slow=8.5,SNR=4.5						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**30.90**	**224**	P	**P**	**01 42 35.0**	**+0.5**
BFZ	**Birch Farm**	**30.99**	**165**	P	**P**	**01 42 33.9**	**-1.2**
BFZ	**Birch Farm**	**30.99**	**165**	P	**P**	**01 42 34.8**	**-0.3**
SNZO	**South Karori**	**31.23**	**168**	P	**P**	**01 42 37.4**	**+0.2**
MSWZ	**Moikau Station**	**31.45**	**167**	P	**P**	**01 42 37.8**	**-1.4**
WR0	**Warramunga Arr**	**31.81**	**250**	P	**P**	**01 42 42.2**	**-0.4**
WR0				IAmb	IAmb	01 42 43.1	
	comp=Z,5.4nm,1.1s						
WB0	**Warramunga Arr**	**31.91**	**250**	P	**P**	**01 42 43.4**	**-0.1**
WB2	**Warramunga Arr**	**31.98**	**250**	P	**P**	**01 42 43.8**	**-0.4**
WB2				IAmb	IAmb	01 42 44.7	
	comp=Z,15nm,1.1s						
WRAB	**Tennant Creek**	**31.98**	**250**	P	**P**	**01 42 44.1**	**0.0**
WRA	**Warramunga Arr**	**32.00**	**250**	P	**P**	**01 42 43.8**	**-0.4**
	comp=Z,8.3nm,0.8s,baz=83,slow=9.0,SNR=96						
WRA				PcP	**PcP**	**01 45 30.9**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=81,slow=3.6,SNR=4.6						
	comp=Z,8.3nm,0.8s						
WRA	**Warramunga Arr**	**32.00**	**250**	P	**P**	**01 42 42.4**	**-1.8**
KHZ	**Kahutara**	**32.08**	**170**	P	**P**	**01 42 46.0**	**+1.4**
LTZ	**Lake Taylor**	**32.23**	**172**	P	**P**	**01 42 45.6**	**-0.4**
FOZ	**Fox Glacier**	**32.70**	**175**	P	**P**	**01 42 49.9**	**-0.1**
RPZ	**Rata Peaks**	**33.00**	**174**	P	**P**	**01 42 51.6**	**-1.1**
	comp=Z,18nm,0.8s,baz=11,slow=2.1,SNR=9.6						
	comp=Z,18nm,0.8s						
RPZ	**Rata Peaks**	**33.00**	**174**	P	**P**	**01 42 54.8**	**+2.1**
MQZ	**McQueen's Vall**	**33.19**	**171**	P	**P**	**01 42 53.8**	**-0.5**
OOD	**Oodnadatta**	**33.25**	**235**	P	**P**	**01 42 55.7**	**+0.7**
ASAR	**Alice Springs**	**33.30**	**243**	P	**P**	**01 42 54.5**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=73,slow=9.6,SNR=15						
	comp=Z,2.2nm,0.7s						
LBZ	**Lake Benmore**	**33.58**	**175**	P	**P**	**01 42 57.5**	**-0.1**
LBZ				IAmb	IAmb	01 43 02.3	
	comp=Z,17nm,1.2s						
HTT	**Hallett**	**33.64**	**224**	P	**P**	**01 42 59.4**	**+1.0**
	comp=Z,15nm,0.9s						
ODZ	**Otahua Downs**	**34.27**	**174**	P	**P**	**01 43 03.6**	**-0.1**
ODZ				IAmb	IAmb	01 43 09.3	
	comp=Z,14nm,1.1s						
BBOO	**Buckleboo**	**35.30**	**227**	P	**P**	**01 43 13.2**	**+0.5**
BBOO				IAmb	IAmb	01 43 36.3	
	comp=Z,29nm,1.4s						
BBOO	**Buckleboo**	**35.30**	**227**	P	**P**	**01 43 12.5**	**-0.2**
	comp=Z,21nm,2.8s						
MULG	**Mulgathing**	**35.59**	**232**	P	**P**	**01 43 14.4**	**-0.8**
	comp=Z,20nm,2.6s						
KNRA	**Kununurra**	**36.75**	**258**	P	**P**	**01 43 23.5**	**-1.7**
KNRA	**Kununurra**	**36.75**	**258**	P	**P**	**01 43 23.5**	**-1.7**
WRKA	**Warakurna**	**38.59**	**243**	P	**P**	**01 43 40.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**39.89**	**255**	P	**P**	**01 43 51.5**	**+0.1**
	comp=Z,17nm,0.7s,baz=81,slow=6.5,SNR=51						
	comp=Z,17nm,0.7s						
FITZ	**Fitzroy Crossi**	**39.89**	**255**	P	**P**	**01 43 51.0**	**-0.5**
FITZ	**Fitzroy Crossi**	**39.89**	**255**	P	**P**	**01 43 51.6**	**+0.1**
PSA00	**Pilbara Seismi**	**45.64**	**250**	P	**P**	**01 44 36.2**	**-1.6**
MBWA	**Marble Bar**	**45.71**	**251**	P	**P**	**01 44 38.5**	**+0.2**
MBWA				IAmb	IAmb	01 45 05.3	
	comp=Z,22nm,1.3s						
MORW	**Morawa**	**50.13**	**241**	P	**P**	**01 45 13.0**	**+0.7**
MORW				IAmb	IAmb	01 45 20.4	
	comp=Z,24nm,1.3s						
JHJ2	**Mitsune**	**50.46**	**331**	P	**P**	**01 45 12.5**	**-2.0**
SHEM	**Shemya Is, Ala**	**63.70**	**5**	P	**P**	**01 46 48.7**	**+1.6**
	comp=Z,21nm,0.8s,baz=252,slow=1.6,SNR=5.0						
	comp=Z,21nm,0.8s						
SMY	**Shemya**	**63.70**	**5**	P	**P**	**01 46 48.3**	**+1.2**
PETK	**Petropavlovsk-**	**64.13**	**354**	P	**P**	**01 46 50.1**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=156,slow=11,SNR=2.9						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**66.68**	**181**	P	**P**	**01 47 05.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=340,slow=7.0,SNR=8.4						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**66.68**	**181**	P	**P**	**01 47 06.3**	**+0.1**
CASY	**Casey**	**66.72**	**201**	P	**P**	**01 47 06.6**	**+0.1**
CASY				IAmb	IAmb	01 47 08.2	
	comp=Z,6.4nm,1.3s						
SBA	**Scott Base**	**66.98**	**180**	P	**P**	**01 47 08.7**	**+0.7**
SBA				IAmb	IAmb	01 47 09.9	
	comp=Z,5.8nm,0.9s						
NIKH	**Nikolski High**	**67.06**	**16**	P	**P**	**01 47 07.9**	**-0.9**
HHC	**Hu-ho-hao-te**	**72.00**	**319**	eP	**P**	**01 47 41.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.5s						
CMAR	**Chiang Mai Arr**	**72.48**	**293**	P	**P**	**01 47 41.4**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=132,slow=8.6,SNR=4.2						
	comp=Z,0.8nm,0.4s						
PZH	**PanZhiHua**	**72.78**	**302**	P	**P**	**01 47 45.3**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
N16K	**Nishlik Lake**	**76.35**	**17**	P	**P**	**01 48 04.4**	**+0.2**
	baz=215						
P18K	**Big Mountain,**	**76.57**	**19**	P	**P**	**01 48 04.5**	**-1.0**
P18K				IAmb	IAmb	01 48 06.0	
	comp=Z,12nm,0.9s						
P18K	**Big Mountain,**	**76.57**	**19**	P	**P**	**01 48 05.7**	**+0.3**
	baz=219						
O18K	**Koktuh Hills**	**76.93**	**19**	P	**P**	**01 48 07.0**	**-0.6**
O18K				IAmb	IAmb	01 48 48.5	
	comp=Z,10nm,1.2s						
O18K	**Koktuh Hills**	**76.93**	**19**	P	**P**	**01 48 07.1**	**-0.4**
	baz=219						
N18K	**Kilae Creek**	**77.37**	**18**	P	**P**	**01 48 09.9**	**-0.1**
	baz=218						
P19K	**Oil Pt**	**77.42**	**20**	P	**P**	**01 48 09.7**	**-0.6**
P19K				IAmb	IAmb	01 48 11.4	
	comp=Z,10nm,0.8s						
P19K	**Oil Pt**	**77.42**	**20**	P	**P**	**01 48 10.0**	**-0.2**
	baz=221						
BRSE	**Bradley Lake S**	**78.33**	**21**	P	**P**	**01 48 15.5**	**+0.2**
	baz=223						
M19K	**Big River Lodg**	**78.78**	**18**	P	**P**	**01 48 18.5**	**+0.8**
	baz=219						
SONM	**Songino Array**	**78.80**	**324**	P	**P**	**01 48 18.6**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=106,slow=5.1,SNR=1.8						
	comp=Z,0.5nm,0.4s						
L19K	**White Mountain**	**78.86**	**17**	P	**P**	**01 48 18.7**	**+0.6**
L19K				IAmb	IAmb	01 48 20.0	
	comp=Z,4.7nm,0.8s						
L19K	**White Mountain**	**78.86**	**17**	P	**P**	**01 48 18.7**	**+0.6**
	baz=219						
TTA	**Tatalina**	**79.11**	**17**	P	**P**	**01 48 20.0**	**+0.4**
	baz=218						
QSPA	**South Pole Qui**	**79.14**	**180**	P	**P**	**01 48 18.6**	**-1.2**
QSPA				IAmb	IAmb	01 48 21.1	
	comp=Z,5.1nm,0.8s						
M20K	**Styx River**	**79.15**	**18**	P	**P**	**01 48 20.0**	**+0.2**
	baz=221						
L20K	**Farewell, AK**	**79.38**	**18**	P	**P**	**01 48 21.3**	**+0.3**
	baz=220						
RC01	**Rabbit Creek A**	**79.66**	**20**	P	**P**	**01 48 22.5**	**+0.1**
	baz=224						
PWL	**Port Wells**	**79.97**	**21**	P	**P**	**01 48 24.6**	**+0.5**
	baz=225						
K20K	**Telida**	**80.00**	**17**	P	**P**	**01 48 24.9**	**+0.7**
	baz=220						
PMR	**Palmer**	**80.22**	**20**	P	**P**	**01 48 25.9**	**+0.5**
	baz=224						
J20K	**Nowinta River**	**80.61**	**16**	P	**P**	**01 48 28.2**	**+0.8**
J20K	**Nowinta River**	**80.61**	**16**	P	**P**	**01 48 28.1**	**+0.6**
	baz=219						
SML	**Sawmill**	**80.64**	**20**	P	**P**	**01 48 29.9**	**+2.1**
SML	**Sawmill**	**80.64**	**20**	P	**P**	**01 48 27.5**	**-0.2**
	baz=225						
EYAK	**Cordova Ski Ar**	**80.68**	**22**	P	**P**	**01 48 27.8**	**-0.1**
	baz=228						
KAIM	**Kayak Island**	**80.76**	**23**	P	**P**	**01 48 28.8**	**+0.5**
	baz=229						
SCM	**Sheep Creek Mo**	**81.00**	**20**	P	**P**	**01 48 29.7**	**0.0**
SCM				IAmb	IAmb	01 48 31.0	
	comp=Z,6.6nm,0.9s						
SCM	**Sheep Creek Mo**	**81.00**	**20**	P	**P**	**01 48 29.8**	**0.0**
	baz=226						
KLU	**Klutina**	**81.26**	**21**	P	**P**	**01 48 31.8**	**+0.7**
	baz=227						
WAT1	**Susitna Watana**	**81.30**	**19**	P	**P**	**01 48 31.6**	**+0.5**
	baz=225						
BMRM	**Bremner River**	**81.38**	**22**	P	**P**	**01 48 31.7**	**0.0**
	baz=229						
WAT6	**Susitna Watana**	**81.39**	**20**	P	**P**	**01 48 31.9**	**+0.1**
	baz=226						
BPAW	**Bear Paw Mtn.**	**81.46**	**18**	P	**P**	**01 48 32.3**	**+0.3**
	baz=222						
M24K	**Tolsona, Glenn**	**81.59**	**21**	P	**P**	**01 48 33.7**	**+1.0**
M24K				IAmb	IAmb	01 48 34.7	
	comp=Z,13nm,0.8s						
M24K	**Tolsona, Glenn**	**81.59**	**21**	P	**P**	**01 48 33.0**	**+0.3**
	baz=227						
N25K	**Chitina, Valde**	**81.80**	**21**	P	**P**	**01 48 33.8**	**-0.2**
N25K				IAmb	IAmb	01 48 35.4	
	comp=Z,6.3nm,0.8s						
N25K	**Chitina, Valde**	**81.80**	**21**	P	**P**	**01 48 34.2**	**+0.2**
	baz=229,SNR=6.0						
MCK	**McKinley**	**81.82**	**18**	P	**P**	**01 48 34.3**	**+0.4**
	baz=224						
DHY	**Denali Highway**	**81.85**	**19**	P	**P**	**01 48 35.0**	**+0.7**
	baz=226						
MESA	**MESA**	**81.87**	**23**	P	**P**	**01 48 34.7**	**+0.3**
	baz=231						
I21K	**Tanana**	**81.98**	**17**	P	**P**	**01 48 35.0**	**+0.3**
I21K	**Tanana**	**81.98**	**17**	P	**P**	**01 48 35.7**	**+1.0**
	baz=221						
KCPM	**Cahto Peak**	**82.08**	**47**	P	**P**	**01 48 36.6**	**+0.7**
KCPM				IAmb	IAmb	01 48 37.6	
	comp=Z,5.1nm,0.8s						
H21K	**Melozitna Rive**	**82.12**	**16**	P	**P**	**01 48 35.8**	**+0.4**
	baz=220						
IMAR	**Indian Mountai**	**82.12**	**15**	P	**P**	**01 48 35.9**	**+0.5**
MLY	**Manley**	**82.22**	**17**	P	**P**	**01 48 36.1**	**+0.1**
MLY	**Manley**	**82.22**	**17**	P	**P**	**01 48 36.7**	**+0.7**
	baz=223						
NEA2	**Nenana**	**82.40**	**18**	P	**P**	**01 48 37.5**	**+0.6**
	baz=224						
PINM	**Pinnacle**	**82.49**	**24**	P	**P**	**01 48 37.8**	**+0.3**
	baz=233						
G21K	**Allakaket**	**82.59**	**15**	P	**P**	**01 48 39.1**	**+1.2**
	baz=220						
CTG	**Chitna Glacier**	**82.60**	**23**	P	**P**	**01 48 38.4**	**+0.2**
	baz=232						
WRH	**Wood River Hil**	**82.61**	**18**	P	**P**	**01 48 37.7**	**-0.2**
WRH				IAmb	IAmb	01 48 39.4	
	comp=Z,5.9nm,0.8s						
H22K	**Ishtalitna Cre**	**82.69**	**16**	P	**P**	**01 48 39.1**	**+0.7**
	baz=222						
CCB	**Clear Creek Bu**	**82.82**	**18**	P	**P**	**01 48 38.5**	**-0.5**
CCB				IAmb	IAmb	01 48 40.1	
	comp=Z,3.3nm,0.7s						
SIT	**Sitka**	**82.87**	**28**	P	**P**	**01 48 40.2**	**+0.8**
	baz=238						
K24K	**Donnelly Dome**	**82.88**	**19**	P	**P**	**01 48 39.7**	**+0.3**
	baz=227						
M26K	**Nabesna, AK**	**82.90**	**21**	P	**P**	**01 48 40.3**	**+0.8**
M26K				IAmb	IAmb	01 48 41.5	
	comp=Z,9.2nm,1.0s						
M26K	**Nabesna, AK**	**82.90**	**21**	P	**P**	**01 48 39.8**	**+0.2**
	baz=230,SNR=9.6						
HDA	**Harding Lake**	**82.92**	**19**	P	**P**	**01 48 39.8**	**+0.2**
HDA	**Harding Lake**	**82.92**	**19**	P	**P**	**01 48 39.5**	**-0.1**
	baz=226,SNR=10						
O28M	**Mount Upton**	**82.93**	**23**	P	**P**	**01 48 40.5**	**+0.5**
	baz=233						
J01E	**Myrtle Point**	**83.10**	**44**	P	**P**	**01 48 40.5**	**-0.4**
	baz=248						
K02D	**Willamette Mer**	**83.11**	**44**	P	**P**	**01 48 41.0**	**-0.1**
	baz=248						
RIDG	**Independent Ri**	**83.14**	**20**	P	**P**	**01 48 40.4**	**-0.4**
RIDG				IAmb	IAmb	01 48 42.8	
	comp=Z,7.8nm,1.0s						
RIDG	**Independent Ri**	**83.14**	**20**	P	**P**	**01 48 41.1**	**+0.4**
	baz=228,SNR=6.0						
H23K	**Yukon River**	**83.15**	**17**	P	**P**	**01 48 40.8**	**0.0**
H23K	**Yukon River**	**83.15**	**17**	P	**P**	**01 48 41.7**	**+0.9**
	baz=224						
L26K	**Log Cabin Wild**	**83.18**	**21**	P	**P**	**01 48 41.6**	**+0.6**
	baz=230						
IL31		**83.19**	**18**	P	**P**	**01 48 40.5**	**-0.4**
ILAR	**Eielson Array**	**83.19**	**18**	P	**P**	**01 48 41.1**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=238,slow=5.1,SNR=29						
	comp=Z,2.0nm,0.5s						
ILAR	**Eielson Array**	**83.19**	**18**	P	**P**	**01 48 40.5**	**-0.4**
M27K	**Edge Creek, AK**	**83.27**	**22**	P	**P**	**01 48 41.5**	**-0.1**
M27K				IAmb	IAmb	01 48 44.0	
	comp=Z,8.7nm,1.0s						
M27K	**Edge Creek, AK**	**83.27**	**22**	P	**P**	**01 48 42.5**	**+0.9**
	baz=231,SNR=6.8						
G22K	**Bettles**	**83.42**	**15**	P	**P**	**01 48 43.1**	**+1.0**
	baz=222						
YUK3	**Moose Creek**	**83.44**	**23**	P	**P**	**01 48 42.6**	**+0.1**
	baz=232						
J25K	**Salcha River,**	**83.56**	**19**	P	**P**	**01 48 43.1**	**+0.2**
J25K				IAmb	IAmb	01 48 44.1	
	comp=Z,6.6nm,0.8s						
J25K	**Salcha River,**	**83.56**	**19**	P	**P**	**01 48 43.2**	**+0.3**
	baz=228,SNR=11						
SCRK	**Sand Creek**	**83.58**	**20**	P	**P**	**01 48 42.7**	**-0.4**
SCRK				IAmb	IAmb	01 48 44.7	
	comp=Z,9.4nm,1.0s						
SCRK	**Sand Creek**	**83.58**	**20**	P	**P**	**01 48 43.8**	**+0.7**
	baz=229,SNR=14						
G23K	**Bananza Creek**	**83.66**	**16**	P	**P**	**01 48 44.1**	**+0.8**
	baz=223						
BVCY	**Beaver Creek**	**83.68**	**22**	P	**P**	**01 48 44.5**	**+1.0**
	baz=232						
I03D	**Drain, OR**	**83.69**	**43**	P	**P**	**01 48 44.6**	**+0.6**
	baz=249						
F22K	**John River**	**83.69**	**15**	P	**P**	**01 48 44.5**	**+1.0**
	baz=221						
PLBC	**Pleasant Camp**	**83.72**	**26**	P	**P**	**01 48 44.4**	**+0.6**
	baz=236						
L27K	**Beaver Creek,**	**83.73**	**21**	P	**P**	**01 48 44.6**	**+0.8**
	baz=231						
BCAR	**Beaver Creek A**	**83.75**	**21**	P	**P**	**01 48 44.0**	**+0.1**
P30M	**Million Dollar**	**83.85**	**25**	P	**P**	**01 48 45.0**	**+0.6**
	baz=236						
HYT	**Haines Junctio**	**84.03**	**24**	P	**P**	**01 48 46.2**	**+0.7**
	baz=235						
J26L	**Joseph Creek**	**84.07**	**20**	P	**P**	**01 48 46.5**	**+1.0**
	baz=229						
VES	**Vestal, Richgr**	**84.16**	**52**	P	**P**	**01 48 47.1**	**+0.6**
	baz=252						
E22K	**Anaktuvuk Pass**	**84.26**	**15**	P	**P**	**01 48 47.9**	**+1.6**
	baz=221						
K27K	**Chicken**	**84.26**	**20**	P	**P**	**01 48 47.8**	**+1.4**
	baz=231						
I04A	**Tendick Farm,**	**84.36**	**44**	P	**P**	**01 48 47.8**	**+0.4**
	baz=249						
G24K	**Hadweenzic Riv**	**84.36**	**17**	P	**P**	**01 48 47.5**	**+0.7**
	baz=226						
J04D	**Umpqua Nationa**	**84.37**	**44**	P	**P**	**01 48 47.6**	**-0.1**
	baz=250						
BEKR	**Beckworth**	**84.47**	**48**	P	**P**	**01 48 48.5**	**+0.2**
ISA	**Isabella, Lake**	**84.58**	**52**	P	**P**	**01 48 49.3**	**+0.5**
	baz=253						
I26K	**Coal Creek Min**	**84.72**	**19**	P	**P**	**01 48 49.7**	**+1.0**
	baz=230						
EDW2	**Edwards Air Fo**	**84.73**	**53**	P	**P**	**01 48 50.0**	**+0.5**
	baz=253						
BFSC	**Mount Baldy Ra**	**84.81**	**54**	P	**P**	**01 48 50.6**	**+0.6**
	baz=253						
F24K	**Squaw Lake**	**84.83**	**16**	P	**P**	**01 48 51.0**	**+1.8**
	baz=225						
CBB	**Campbell River**	**84.83**	**37**	P	**P**	**01 48 50.2**	**+0.7**
J05D	**Fort Rock, OR**	**84.98**	**44**	P	**P**	**01 48 51.4**	**+0.7**
	baz=250						
MURC	**Murrieta**	**84.99**	**55**	P	**P**	**01 48 51.5**	**+0.6**
	baz=254						
EGAK	**Eagle**	**85.04**	**20**	P	**P**	**01 48 50.7**	**+0.5**
EGAK				IAmb	IAmb	01 48 52.1	
	comp=Z,7.7nm,0.7s						
EGAK

baz=229
EPYK **Eagle Plains** 87.48 20 P P 01 49 02.9 +0.7
baz=236
R11A **Troy Canyon, C** 87.56 50 P P 01 49 04.2 +0.7
baz=254
PDMCI **Parker Dam,Lak** 87.63 55 P P 01 49 04.0 +0.4
baz=255
214A **Organ Pipe Nat** 88.13 57 P P 01 49 06.2 +0.1
baz=256
NEW **Newport** 89.29 41 P P 01 49 11.3 +0.1
comp=Z,1.1nm,0.7s,baz=236,slow=4.8,SNR=3.2
comp=Z,1.1nm,0.7s
HLID **Hailey** 89.81 46 P P 01 49 14.1 +0.2
baz=255
TUC **Tucson** 89.88 57 P P 01 49 14.1 -0.3
TUC **Tucson** 89.88 57 P P 01 49 14.8 +0.4
baz=257
DUG **Dugway, Tooele** 90.12 49 P P 01 49 15.4 +0.1
baz=256
WUAZ **Wupatki** 90.13 54 P P 01 49 16.0 +0.5
baz=257
BOZ **Bozeman (W)** 92.23 44 P P 01 49 25.0 -0.1
BOZ **Bozeman (W)** 92.23 44 P P 01 49 25.3 +0.2
baz=257
121A **Cookes Peak, D** 92.41 58 P P 01 49 26.1 -0.2
baz=259
BW06 **Boulder Array** 93.08 47 P P 01 49 28.9 -0.2
baz=258
PDAR **Pinedale Array** 93.08 47 P P 01 49 28.7 -0.4
comp=Z,0.8nm,0.8s,baz=248,slow=1.6,SNR=6.0
comp=Z,0.8nm,0.8s
MKAR **Makanchi Array** 93.72 317 P P 01 49 31.5 -0.2
comp=Z,1.1nm,0.6s,baz=90,slow=6.8,SNR=9.0
comp=Z,1.1nm,0.6s
EGMT **Eagleton** 94.01 42 P P 01 49 33.0 -0.1
baz=259
S22A **4UR Ranch, Cre** 94.16 53 P P 01 49 34.7 +0.3
baz=260
MNTX **Cornudas Mount** 94.26 59 P P 01 49 34.4 -0.1
baz=260
YKA **Yellowknife Ar** 94.59 27 P P 01 49 33.8 -1.5
comp=Z,0.9nm,0.6s,baz=262,slow=4.4,SNR=5.7
comp=Z,0.9nm,0.6s
TXAR **Lajitas Array** 95.32 61 P P 01 49 39.1 -0.5
comp=Z,0.3nm,0.3s,baz=260,slow=5.4,SNR=1.6
comp=Z,0.3nm,0.3s
TROLL **Troll, Antarti** 96.61 185 P P 01 49 43.7 -0.9
SNAA **Sanae** 97.33 183 P P 01 49 46.4 -1.3
VNA3 **Neumayer Olymp** 98.04 181 P P 01 49 49.8 -1.1
VNA2 **Neumayer--Watz** 98.29 182 P P 01 49 50.5 -1.5
baz=170,slow=4.0
ARCES **ARCESS Array B** 116.28 346 PKP PKPdf 01 54 56.0 -1.1
comp=Z,6.7nm,0.9s,baz=64,slow=2.8,SNR=6.6
FINES **FINESS Array B** 121.78 339 PKP PKPdf 01 55 07.0 -0.7
comp=Z,1.7nm,0.9s,baz=45,slow=3.0,SNR=4.1
CPUP **Villa Florida** 123.79 132 PKP PKPdf 01 55 12.6 -0.1
comp=Z,1.0nm,0.6s,baz=233,slow=5.4,SNR=3.1
BOSA **Boshof** 125.58 223 PKP PKPdf 01 55 15.6 -0.7
comp=Z,1.8nm,0.8s,baz=41,slow=3.5,SNR=4.1
NOA **NORSAR Array B** 126.65 345 PKP PKPdf 01 55 16.4 -0.8
comp=Z,0.5nm,0.7s,baz=18,slow=1.9,SNR=2.1
KEST **Kesra** 147.56 323 PKPbc PKPbc 01 55 59.5 +0.4
comp=Z,4.0nm,0.8s,baz=241,slow=1.3,SNR=5.2
ESDC **Sonseca Array** 150.01 345 PKPbc PKPbc 01 56 04.6 -0.5
comp=Z,1.3nm,0.8s,baz=1.3,slow=2.0,SNR=7.2

IDC 29 01:40:34.8±1.6, 15°44N×146°67E, h0km, mb3.8/4, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=51.1km s-min=26.1km az=109.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.54**	**224**	Pn	Pn	01 41 18.5	+1.3
	18nm,0.3s,baz=24,slow=23,SNR=1.9						
GUMO				Sn	Sn	01 41 44.1	-4.7
	74nm,0.3s,baz=25,slow=23,SNR=7.5						
	49nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**19.39**	**78**	T	T	02 05 53.6	
	baz=259,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**19.40**	**78**	T	T	02 05 55.2	
	baz=259						
H11S2	**WAKE ISLAND Hy**	**19.40**	**78**	T	T	02 05 54.8	
	baz=259,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	**19.74**	**75**	T	T	02 06 15.2	
	baz=263,slow=75,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**19.75**	**75**	T	T	02 06 16.7	
	baz=263,slow=75,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**19.76**	**75**	T	T	02 06 21.8	
	baz=263,slow=75,SNR=3.6						
WRA	**Warramunga Arr**	**37.19**	**199**	P	P	01 47 47.2	-0.7
	0.7nm,0.8s,baz=26,slow=8.8,SNR=2.7						
	0.7nm,0.8s						
MKAR	**Makanchi Array**	**61.40**	**315**	P	P	01 50 53.1	+0.3
	0.2nm,0.3s,baz=94,slow=7.9,SNR=1.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**64.36**	**319**	P	P	01 51 11.9	-0.5
	1.2nm,0.4s,baz=96,slow=7.3,SNR=14						
	1.2nm,0.4s						
ILAR	**Eielson Array**	**66.16**	**25**	P	P	01 51 24.3	+0.4
	0.3nm,0.3s,baz=253,slow=5.7,SNR=5.8						
	0.3nm,0.3s						

IDC 29 01:41:04.9±2.4, 6°83S×130°72E, h0km, mb3.6/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=86.2km s-min=30.9km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.25**	**203**	Pn	Pn	01 44 02.3	+1.6
	0.2nm,0.3s,baz=21,slow=8.6,SNR=1.7						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**13.50**	**165**	Pn	Pn	01 44 16.2	-1.6
	0.4nm,0.3s,baz=346,slow=13,SNR=9.1						
WRA				Sn	Sn	01 46 44.4	-4.3
	0.2nm,0.3s,baz=348,slow=22,SNR=2.3						
	1.7nm,0.5s						
ASAR	**Alice Springs**	**17.02**	**170**	P	Pn	01 45 04.6	+0.1
	0.3nm,0.3s,baz=356,slow=11,SNR=11						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**68.48**	**326**	P	P	01 52 09.0	0.0
	0.3nm,0.4s,baz=130,slow=7.1,SNR=2.8						
	0.3nm,0.4s						

*IDC **29** 01:42:12.6±1.6, 24°.94N×125°.24E, h0km, mb4.0/12, mbtmp4.0/12, Error ellipse: s-maj=106.0km s-min=27.5km az=64.0*
*JMA **29** 01:42:16.9±0.1, 24°.6N±0°.8×125°.0E±0°.3, h33km±1km, MV3.9/10, NEAR MIYAKOJIMA ISLAND*
JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .
*NEIC **29** 01:42:18.7±1.3, 24°.6N±0°.2×125°.0E±0°.1, h39km±11km, mb4.3/11, Error ellipse: s-maj=26.0km s-min=3.3km az=149.0*

ISC 29 01:42:17.1±0.9, 24°63N±0°.08×124°95E±0°.04, h29km±5km, n53, σ0s78/59, mb4.0/18, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.22**	**273**	*i* P	**Pb**	**01 42 23.6**	**+0.2**
JTJ				S	**Sb**	**01 42 28.3**	**+0.6**
JIRB	**Irabujima**	**0.28**	**46**	*i* P	**Pb**	**01 42 23.8**	**-0.4**
JIRB				S	**Sb**	**01 42 28.6**	**-0.4**
JMJ2	**Miyako jima3**	**0.36**	**72**	*i* P	**Pb**	**01 42 24.9**	**-0.4**
JMJ2				S	**Sb**	**01 42 30.9**	**0.0**
JIKM	**Ikemajima**	**0.40**	**43**	*i* P	**Pb**	**01 42 25.6**	**-0.3**
JIKM				S	**Sb**	**01 42 31.7**	**-0.1**
JOGS	**Gusukube**	**0.44**	**73**	P	**Pb**	**01 42 26.1**	**-0.4**
JOGS				S	**Sb**	**01 42 32.8**	**-0.1**
JIJ	**Ishigaki jima**	**0.78**	**250**	P	**Pn**	**01 42 31.1**	**-1.1**
JIJ				S	**Sb**	**01 42 41.8**	**-0.6**
JKRS	**Kuro-shima**	**0.94**	**246**	P	**Pn**	**01 42 34.3**	**-0.1**
JKRS				S	**Sb**	**01 42 47.4**	**+0.4**
IRIF	**Iriomote-Funau**	**1.15**	**255**	P	**Pn**	**01 42 37.3**	**0.0**
IRIF				S	**Sb**	**01 42 52.8**	**0.0**
HATJ	**Hateruma jima**	**1.19**	**242**	P	**Pb**	**01 42 38.4**	**-0.6**
HATJ				*e*S	**Sb**	**01 42 53.9**	**-0.1**
YOJ	**Yonaguni jima**	**1.77**	**265**		**Pn**	**01 42 45.8**	**0.0**
NACB	**Ninganchiao**	**3.09**	**262**	Pn	**Pn**	**01 43 04.7**	**+0.7**
YHNB	**Yeheng**	**3.25**	**271**	Pn	**Pn**	**01 43 07.5**	**+1.3**
YULB	**Yu-li**	**3.56**	**250**		**Pn**	**01 43 09.9**	**-0.5**
JOW	**Kunigami**	**3.72**	**53**	Pn	**Pn**	**01 43 13.2**	**+0.6**
SSLB	**Suanglung**	**3.74**	**258**		**Pn**	**01 43 14.0**	**+1.0**
TWG	**Pinlang**	**3.98**	**244**	Pn	**Pn**	**01 43 15.2**	**-1.1**
TPUB	**Ta-pu**	**4.17**	**252**		**Pn**	**01 43 20.5**	**+1.7**
WMQ	**Urumqi**	**35.88**	**312**	*e*P	**P**	**01 49 12.8**	**-1.8**
PEA0B	**Petropavlovsk-**	**37.62**	**32**	P	**P**	**01 49 29.2**	**-0.1**
PEA0B				IAmb	IAmb	01 50 04.4	
	comp=Z,24nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**39.04**	**89**	T	T	02 31 30.9	
	baz=283,slow=74,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**39.04**	**89**	T	T	02 31 22.2	
	baz=283,slow=74,SNR=5.1						
H11N3	**WAKE ISLAND Hy**	**39.06**	**89**	T	T	02 31 31.9	
	baz=283,slow=74,SNR=5.2						
MK31	**Makanchi Array**	**40.45**	**314**	P	**P**	**01 49 52.5**	**-0.5**
MKAR	**Makanchi Array**	**40.45**	**314**	P	**P**	**01 49 52.2**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=99,slow=9.9,SNR=12						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**40.45**	**314**	P	**P**	**01 49 52.6**	**-0.5**
MAKZ	**Makanchi**	**40.66**	**314**	P	**P**	**01 49 54.7**	**-0.1**
ZAA0	**Zalesovo Array**	**41.79**	**325**	P	**P**	**01 50 02.7**	**-1.2**
ZAA0				IAmb	IAmb	01 50 03.6	
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**41.79**	**325**	P	**P**	**01 50 02.7**	**-1.2**
	comp=Z,1.8nm,0.5s,baz=116,slow=9.0,SNR=8.3						
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**41.79**	**325**	P	**P**	**01 50 02.5**	**-1.4**
KURK	**Kurchatov**	**43.99**	**319**	P	**P**	**01 50 21.0**	**-0.8**
KURK				IAmb	IAmb	01 51 04.1	
	comp=Z,3.5nm,0.6s						
KURBB	**Kurchatov Arra**	**44.02**	**318**	P	**P**	**01 50 21.6**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=121,slow=3.5,SNR=14						
	comp=Z,1.2nm,0.6s						
WRA	**Warramunga Arr**	**45.24**	**168**	P	**P**	**01 50 33.6**	**+1.6**
	comp=Z,0.8nm,1.0s,baz=345,slow=8.6,SNR=3.3						
	comp=Z,0.8nm,1.0s						
KKAR	**Karatay Array**	**47.94**	**307**	P	**P**	**01 50 54.3**	**+1.2**
BVAR	**Borovoye Array**	**49.53**	**320**	P	**P**	**01 51 04.2**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=99,slow=8.9,SNR=5.0						
	comp=Z,0.6nm,0.4s						
ABKAR	**Akbulak array**	**55.59**	**314**	P	**P**	**01 51 49.9**	**-0.2**
BELG	**Belogornoye**	**63.26**	**318**	P	**P**	**01 52 42.7**	**-0.2**
	comp=Z,7.4nm,0.9s,baz=23,slow=7.0,SNR=1.8						
	comp=Z,7.4nm,0.9s						
BMAR	**Burnt Mountain**	**67.70**	**25**	P	**P**	**01 53 13.4**	**+1.9**
FINES	**FINESS Array B**	**72.78**	**330**	P	**P**	**01 53 41.5**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=68,slow=4.8,SNR=6.3						
	comp=Z,0.6nm,0.4s						
FINES	**FINESS Array B**	**72.78**	**330**	P	**P**	**01 53 42.3**	**-0.3**
WHY	**Whitehorse**	**73.65**	**30**	P	**P**	**01 53 48.1**	**+0.3**
WHY				IAmb	IAmb	01 54 04.8	
	comp=Z,2.9nm,1.0s						
AKASG	**Malin Array Be**	**74.80**	**319**	P	**P**	**01 53 53.5**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=69,slow=6.0,SNR=3.4						
	comp=Z,0.5nm,0.4s						
BR131	**Keskin Array S**	**75.65**	**307**	P	**P**	**01 53 59.7**	**-0.3**
BR131				IAmb	IAmb	01 54 32.9	
	comp=Z,3.9nm,0.8s						
BRTR	**Keskin Array B**	**75.65**	**307**	P	**P**	**01 54 00.5**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=87,slow=5.2,SNR=13						
	comp=Z,1.3nm,0.6s						
BRTR	**Keskin Array B**	**75.65**	**307**	P	**P**	**01 54 00.2**	**+0.3**
BORA	**Eskisehir**	**77.89**	**308**	P	**P**	**01 54 12.8**	**+0.3**
BORA				IAmb	IAmb	01 54 13.0	
	comp=Z,2.6nm,0.7s						
BUR08	**Bucovina Ar. S**	**78.40**	**317**	P	**P**	**01 54 15.4**	**+0.2**
BUR08				IAmb	IAmb	01 54 40.0	
	comp=Z,4.4nm,1.4s						
BURAR	**Bucovina Array**	**78.40**	**317**	P	**P**	**01 54 15.3**	**+0.1**
HFS	**Hagfors**	**78.83**	**332**	P	**P**	**01 54 16.3**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=103,slow=4.7,SNR=5.0						
	comp=Z,0.8nm,0.5s						
NC405	**NORSAR Array S**	**79.16**	**333**	P	**P**	**01 54 19.1**	**+0.1**
NB2	**NORSAR Subarra**	**79.41**	**333**	P	**P**	**01 54 20.3**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=54,slow=5.9						
NOA	**NORSAR Array B**	**79.41**	**333**	P	**P**	**01 54 20.2**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=56,slow=5.1,SNR=3.8						
	comp=Z,0.6nm,0.7s						
ELL	**Elmali**	**79.47**	**306**	P	**P**	**01 54 21.4**	**+0.1**
GERES	**GERESS Array B**	**84.65**	**322**	P	**P**	**01 54 48.6**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=58,slow=3.3,SNR=5.2						
	comp=Z,0.5nm,0.6s						

*STR **29** 01:44:22.3±1.1, 43°N±6°×1°4E±°, h19km±10km, MLv3.9/25, Error ellipse: s-maj=0.0km s-min=0.0km az=122.1, preliminary*
*LDG **29** 01:44:25.9±0.2, 42°.73N×13°.08E, h2km, Ml3.2/26, Error ellipse: s-maj=5.9km s-min=3.7km az=43.0*
*ROM **29** 01:44:25.7±0.0, 42°.764N±0°.002×13°.194E±0°.004, h10km, ML3.5/89, Mw3.4, Error ellipse: s-maj=0.3km s-min=0.1km az=75.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr-1.26; Mθθ 0.39; Mφφ 0.87; Mrθ-0.40; Mθφ-0.64; Mφr-0.15; Fault plane solution: M0 1.35530×10^14 NP1:φs 342.00000°, δ 45.00000°, λ-66.00000°. NP2:φs 129.00000°, δ 50.00000°, λ-113.00000°.*
*NEIC **29** 01:44:26.7±2.2, 42°.84N±0°.06×13°.14E±0°.06, h7km±8km Error ellipse: s-maj=8.5km s-min=6.0km az=200.0*
*PDG **29** 01:44:26.2±0.6, 42°.78N×13°.18E, h12km, ML3.6/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*IDC **29** 01:44:27.3±1.8, 42°.94N×13°.44E, h0km, mb3.3/4, mbtmp3.5/7, ML3.4/3, MS2.9/1, Error ellipse: s-maj=30.2km s-min=17.7km az=74.0*
*BEO **29** 01:44:28.0±0.5, 42°.85N×13°.28E, h0km, ML3.6/10*

ISC 29 01:44:25.9±0.6, 42°77N±0°.01×13°17E±0°.02, h15km±3km, n436, σ2s17/504, mb3.6/3, 52C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.07**	**23**	⇓P	**Pg**	**01 44 28.3**	**-0.8**
T1242				S	**Sg**	**01 44 29.9**	**-1.3**
T1202	**Accumoli, Fraz**	**0.07**	**145**	⇓P	**Pg**	**01 44 28.5**	**-0.6**
T1202				S	**Sg**	**01 44 30.5**	**-0.7**
NRCA	**Norcia**	**0.08**	**330**	Pg	**Pg**	**01 44 28.0**	**-1.1**
NRCA	**Norcia**	**0.08**	**330**	⇑P	**Pg**	**01 44 28.5**	**-0.6**
NRCA				S	**Sg**	**01 44 30.2**	**-1.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1201	**Domo (RI)**	**0.12**	**150**	⇓P	**Pg**	**01 44 29.4**	**-0.1**
T1201				S	**Sg**	**01 44 32.1**	**+0.1**
T1204	**Amatrice, Fraz**	**0.14**	**129**	⇑P	**Pg**	**01 44 29.4**	**-0.5**
T1204				S	**Sg**	**01 44 32.0**	**-0.4**
MC2	**Monte Cornacci**	**0.15**	**7**	⇑P	**Pg**	**01 44 29.6**	**-0.4**
MC2				S	**Sg**	**01 44 32.6**	**-0.1**
MC2				AML	AML		
	comp=N,62100μm,0.3s						
MC2				AML	AML		
	comp=E,62700μm,0.3s						
MC2				AML	AML		
	comp=N,62050μm,0.3s						
MMO1	**Montemonaco**	**0.18**	**41**	⇑P	**Pg**	**01 44 29.8**	**-0.5**
MMO1				S	**Sg**	**01 44 32.8**	**-0.5**
MMO1				AML	AML		
	comp=E,7075μm,0.7s						
MMO1				AML	AML		
	comp=N,9525μm,0.4s						
MMO1				AML	AML		
	comp=N,65400μm,0.4s						
MMO1				AML	AML		
	comp=E,89200μm,0.8s						
MMO1				AML	AML		
	comp=E,7070μm,0.7s						
MMO1				AML	AML		
	comp=N,9510μm,0.4s						
MMO1				AML	AML		
	comp=N,9520μm,0.4s						
MMO1				AML	AML		
	comp=E,7075μm,0.7s						
LNSS	**Leonessa**	**0.19**	**210**	⇑P	**Pg**	**01 44 30.5**	**0.0**
LNSS				S	**Sg**	**01 44 34.1**	**+0.6**
LNSS				AML	AML		
LNSS				AML	AML		
FEMA	**Monte Fema**	**0.21**	**336**	P	**Pg**	**01 44 30.8**	**-0.2**
FEMA				S	**Sg**	**01 44 34.5**	**+0.2**
FEMA				AML	AML		
	comp=E,61650μm,0.4s						
FEMA				AML	AML		
	comp=N,60500μm,0.4s						
FEMA				AML	AML		
	comp=N,60550μm,0.4s						
FEMA				AML	AML		
	comp=E,61600μm,0.4s						
FEMA				AML	AML		
	comp=N,60550μm,0.4s						
T1241	**Roccafluvione,**	**0.21**	**65**	⇑P	**Pg**	**01 44 30.4**	**-0.5**
T1241				S	**Sg**	**01 44 33.8**	**-0.4**
T1243	**Rocca Santa Ma**	**0.22**	**108**	⇑P	**Pg**	**01 44 30.3**	**-0.6**
T1243				S	**Sg**	**01 44 33.7**	**-0.6**
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
T1243				AML	AML		
RM33	**Pellescritta (**	**0.26**	**172**	⇑P	**Pg**	**01 44 31.5**	**-0.1**
RM33				S	**Sg**	**01 44 35.9**	**+0.5**
RM33				AML	AML		
	comp=N,21150μm,1.0s						
RM33				AML	AML		
	comp=E,26100μm,0.3s						
RM33				AML	AML		
	comp=N,20450μm,1.0s						
RM33				AML	AML		
	comp=E,27100μm,0.3s						
RM33				AML	AML		
	comp=N,20400μm,1.0s						
RM33				AML	AML		
	comp=N,21100μm,1.0s						
RM33				AML	AML		
	comp=E,26050μm,0.3s						
FDMO	**Fiordimonte**	**0.28**	**348**	⇓P	**Pg**	**01 44 31.7**	**-0.2**
FDMO				S	**Sg**	**01 44 36.2**	**+0.3**
FDMO				AML	AML		
	comp=E,14550μm,1.0s						
FDMO				AML	AML		
	comp=N,15650μm,1.5s						
CAMP	**Campotosto**	**0.29**	**142**	⇑P	**Pg**	**01 44 31.8**	**-0.4**
CAMP				S	**Sg**	**01 44 36.4**	**0.0**
CAMP				AML	AML		
	comp=E,12150μm,0.2s						
CAMP				AML	AML		
	comp=N,11445μm,0.6s						
CSP1	**Cessapalombo**	**0.33**	**5**	⇑P	**Pg**	**01 44 32.6**	**-0.2**
CSP1				S	**Sg**	**01 44 37.9**	**+0.4**
CSP1				AML	AML		
	comp=N,31950μm,0.4s						
CSP1				AML	AML		
	comp=E,19550μm,1.2s						
CSP1				AML	AML		
	comp=E,19600μm,1.2s						
CSP1				AML	AML		
	comp=N,32000μm,0.4s						
ARRO	**Arrone**	**0.35**	**238**	⇑P	**Pg**	**01 44 33.3**	**+0.2**
ARRO				S	**Sb**	**01 44 39.2**	**0.0**
ARRO				AML	AML		
	comp=N,9465μm,0.4s						
ARRO				AML	AML		
	comp=E,14100μm,0.2s						
ARRO				AML	AML		
	comp=N,9420μm,0.4s						
ARRO				AML	AML		
	comp=N,9430μm,0.4s						
ARRO				AML	AML		
	comp=E,14050μm,0.2s						
TERO	**Teramo**	**0.35**	**114**	⇑P	**Pg**	**01 44 32.6**	**-0.6**
TERO				S	**Sg**	**01 44 38.1**	**0.0**
TERO				AML	AML		
	comp=E,14350μm,0.6s						
TERO				AML	AML		
	comp=N,18700μm,0.5s						
TERO				AML	AML		
	comp=E,13200μm,0.6s						
TERO				AML	AML		
	comp=N,17300μm,0.5s						
TERO				AML	AML		
	comp=N,17350μm,0.5s						
SEF1	**Sefro**	**0.41**	**337**	P	**Pg**	**01 44 34.2**	**-0.1**
SEF1				S	**Sb**	**01 44 40.9**	**-0.2**
SEF1				AML	AML		
	comp=E,21100μm,0.3s						
SEF1				AML	AML		
	comp=N,21850μm,1.0s						
OFFI	**Offida**	**0.42**	**66**	⇑P	**Pg**	**01 44 34.8**	**+0.4**
OFFI				AML	AML		
	comp=E,28300μm,0.7s						
OFFI				AML	AML		
	comp=N,25350μm,0.5s						
MDAR	**Monte D'Aria**	**0.43**	**358**	P	**Pg**	**01 44 34.4**	**-0.1**
MDAR				S	**Sg**	**01 44 41.2**	**+0.8**
GIGS	**Gran Sasso**	**0.43**	**137**	⇑P	**Pg**	**01 44 33.9**	**-0.7**
GIGS				S	**Sg**	**01 44 40.5**	**0.0**
GIGS				AML	AML		
	comp=N,1910μm,0.6s						
GIGS				AML	AML		
	comp=E,2650μm,0.5s						
MNTP	**Montappone**	**0.43**	**31**	⇑P	**Pg**	**01 44 34.9**	**+0.3**
PIO1	**Pioraco**	**0.43**	**342**	P	**Pg**	**01 44 35.0**	**+0.3**
PIO1				S	**Sb**	**01 44 41.7**	**0.0**
FIU1	**Fiuminata**	**0.46**	**338**	P	**Pg**	**01 44 35.1**	**+0.1**
FIU1				S	**Sb**	**01 44 42.3**	**0.0**
FIU1				AML	AML		
	comp=E,9960μm,1.5s						
FIU1				AML	AML		
	comp=N,6755μm,1.1s						
FIU1				AML	AML		
	comp=N,6750μm,1.1s						
FIU1				AML	AML		
	comp=E,9940μm,1.5s						
CESX	**Cesi**	**0.46**	**250**	⇑P	**Pg**	**01 44 35.1**	**0.0**
CESX				S	**Sb**	**01 44 42.9**	**+0.5**
CESX				AML	AML		
	comp=E,9735μm,0.3s						
CESX				AML	AML		
	comp=N,6920μm,0.5s						
SSM1	**San Severino M**	**0.46**	**1**	P	**Pg**	**01 44 35.1**	**-0.1**
ASSB	**Assisi San Ben**	**0.47**	**307**	⇑P	**Pg**	**01 44 35.1**	**-0.1**
ASSB				S	**Sb**	**01 44 42.4**	**-0.2**
ASSB				AML	AML		
	comp=E,11400μm,0.8s						
ASSB				AML	AML		
	comp=N,10350μm,0.2s						
GAG1	**Gagliole**	**0.48**	**351**	P	**Pg**	**01 44 35.5**	**0.0**
GAG1				S	**Sb**	**01 44 43.1**	**+0.2**
GAG1				AML	AML		
	comp=E,13650μm,0.3s						
GAG1				AML	AML		
	comp=N,20100μm,0.3s						
GAG1				AML	AML		
	comp=N,20050μm,0.3s						
FIAM	**Fiamignano**	**0.50**	**184**	⇑P	**Pg**	**01 44 35.5**	**-0.3**
FIAM				S	**Sg**	**01 44 43.2**	**+0.7**
FIAM				AML	AML		
	comp=E,7250μm,0.4s						
FIAM				AML	AML		
	comp=N,5975μm,0.7s						
FIAM				AML	AML		
	comp=E,7245μm,0.4s						
MTL1	**Matelica**	**0.50**	**347**	P	**Pg**	**01 44 35.8**	**-0.1**
SNTG	**Esanatoglia**	**0.52**	**341**	P	**Pg**	**01 44 35.9**	**-0.3**
SNTG				S	**Sb**	**01 44 44.2**	**+0.1**
SNTG				AML	AML		
	comp=E,510μm,0.6s						
SNTG				AML	AML		
	comp=N,685μm,0.4s						
SNTG				AML	AML		
	comp=E,3840μm,1.5s						
SNTG				AML	AML		
	comp=E,510μm,0.6s						
SNTG				AML	AML		
	comp=N,5500μm,0.4s						
TRTR	**Tortoreto Alta**	**0.55**	**85**	⇑P	**Pb**	**01 44 37.5**	**+0.2**
TRTR				AML	AML		
	comp=E,23900μm,0.5s						
TRTR				AML	AML		
	comp=N,23000μm,1.0s						
TRE1	**Treia**	**0.56**	**11**	P	**Pg**	**01 44 37.2**	**+0.3**
TRE1				AML	AML		
	comp=E,18200μm,0.5s						
TRE1				AML	AML		
	comp=N,13900μm,1.6s						
EL6	**Elcito**	**0.57**	**355**	⇑P	**Pg**	**01 44 36.8**	**-0.3**
EL6				AML	AML		
	comp=E,10200μm,0.4s						
EL6				AML	AML		
	comp=N,10260μm,0.3s						

EL6 AML AML
comp=N,10255µm,0.3s
EL6 AML AML
comp=E,10230µm,0.4s
FAGN Fagnano 0.59 148 P **Pg 01 44 36.8 -0.7**
FAGN AML AML
comp=N,9875µm,0.4s
FAGN AML AML
comp=E,10155µm,0.4s
FOSV Fossato di Vic 0.61 331 P **Pg 01 44 37.6 -0.3**
FOSV S **Sb 01 44 47.0 +0.4**
FOSV AML AML
comp=E,5020µm,0.4s
FOSV AML AML
comp=N,4455µm,0.6s
FOSV AML AML
comp=N,4460µm,0.6s
FOSV AML AML
comp=E,5025µm,0.4s
CING Cingoli 0.61 2 ⇑P **Pg 01 44 37.5 -0.4**
CADA Capodarco di F 0.61 45 P **Pb 01 44 39.0 +0.7**
CADA AML AML
comp=N,22000µm,0.4s
CADA AML AML
comp=E,29400µm,0.4s
VCEL Villa Celiera 0.62 126 ⇑P **Pg 01 44 37.5 -0.6**
VCEL AML AML
comp=E,6460µm,0.4s
VCEL AML AML
comp=N,6845µm,0.9s
VCEL AML AML
comp=E,6455µm,0.4s
VCEL AML AML
comp=N,6850µm,0.9s
PP3 Marolino 0.69 28 ⇑P **Pg 01 44 39.8 +0.3**
PP3 AML AML
comp=E,40600µm,0.5s
PP3 AML AML
comp=N,39300µm,0.4s
PP3 AML AML
comp=E,37900µm,0.6s
PP3 AML AML
comp=N,39350µm,0.4s
PP3 AML AML
comp=N,41700µm,0.4s
PP3 AML AML
comp=E,40600µm,0.5s
PP3 AML AML
comp=E,37950µm,0.6s
T0110 Collepietro 0.70 140 ⇑P **Pg 01 44 38.7 -1.0**
T0110 AML AML
comp=E,8005µm,0.5s
T0110 AML AML
comp=N,6380µm,0.4s
SRES S.Oreste - Sor 0.72 223 ⇑P **Pg 01 44 39.4 -0.5**
SRES AML AML
comp=N,2995µm,1.3s
SRES AML AML
comp=E,2700µm,0.4s
SSFR Montelago di S 0.73 337 P **Pg 01 44 39.8 -0.4**
SSFR AML AML
comp=E,7080µm,0.1s
SSFR AML AML
comp=N,6675µm,1.2s
ATSC Scheggia e Pas 0.75 332 P **Pg 01 44 39.8 -0.7**
ARVD Arcevia 0.75 347 P **Pg 01 44 40.1 -0.4**
ARVD AML AML
comp=E,2240µm,0.8s
ARVD AML AML
comp=N,2525µm,0.6s
PTQR Pietraquaria 0.76 167 P **Pg 01 44 39.8 -1.0**
PTQR AML AML
comp=N,1655µm,0.6s
PTQR AML AML
comp=E,1700µm,0.5s
ATLO AVT- Montelove 0.78 315 P **Pg 01 44 40.7 -0.4**
MGAB Montegabbione 0.79 281 P **Pg 01 44 41.0 -0.3**
MGAB AML AML
comp=E,9235µm,0.5s
MGAB AML AML
comp=N,5985µm,0.3s
MGAB AML AML
comp=N,7385µm,0.5s
MGAB AML AML
comp=E,11240µm,0.5s
MTCE Montecelio 0.81 203 P **Pg 01 44 40.6 -1.0**
MTCE AML AML
comp=E,4585µm,0.5s
MTCE AML AML
comp=N,2000µm,1.0s
FRON Frontone 0.82 337 ⇑P **Pg 01 44 41.1 -0.7**
FRON AML AML
comp=N,4335µm,0.6s
FRON AML AML
comp=E,2865µm,0.6s
ATVA AVT- Monte Val 0.82 309 P **Pg 01 44 41.7 -0.3**
CERT Cerreto 0.83 190 P **Pg 01 44 40.9 -1.1**
CERT AML AML
comp=E,5060µm,0.4s
CERT AML AML
comp=N,3670µm,0.4s
ATVO AVT- Monte Val 0.83 318 P **Pg 01 44 41.5 -0.6**
ATVO AML AML
comp=N,2745µm,0.5s
ATVO AML AML
comp=E,3290µm,0.6s
ATBU Serra di Buran 0.84 328 P **Pg 01 44 41.9 -0.4**
TB03 Pietralunga 0.84 319 P **Pg 01 44 41.9 -0.4**
AOI Ancona 0.85 22 ⇑P **Pg 01 44 41.9 -0.5**
AOI AML AML
comp=E,4375µm,0.4s
AOI AML AML
comp=N,3505µm,1.1s
ATMI Monte Miggiano 0.87 311 P **Pg 01 44 42.8 0.0**
ATMI AML AML
comp=E,7485µm,0.5s
ATMI AML AML
comp=N,6270µm,0.7s
COR1 Corinaldo 0.87 352 P **Pg 01 44 43.1 +0.2**
COR1 AML AML
comp=N,8100µm,0.5s
COR1 AML AML
comp=N,7685µm,0.4s
COR1 AML AML
comp=E,5960µm,0.4s
COR1 AML AML
comp=E,11350µm,0.4s
ATPC Poggio Castell 0.88 324 P **Pg 01 44 42.1 -0.9**
ATPI Pietralunga - 0.89 321 P **Pg 01 44 42.6 -0.5**
ATPI AML AML
comp=E,2835µm,0.6s
ATPI AML AML
comp=N,1975µm,1.2s
PIEI Pieia 0.90 329 P **Pg 01 44 42.6 -0.7**
PIEI AML AML
comp=N,2255µm,0.3s
PIEI AML AML
comp=E,2050µm,0.4s
MPAG Monte Paganucc 0.91 341 ⇑P **Pg 01 44 43.1 -0.6**
MPAG AML AML
comp=N,2895µm,0.7s
MPAG AML AML
comp=E,2760µm,0.9s
SACS San Casciano d 0.93 276 ⇑P **Pg 01 44 43.7 -0.2**
SACS AML AML
comp=N,2985µm,0.7s
SACS AML AML
comp=N,3015µm,0.6s
SACS AML AML
comp=E,2705µm,0.7s
SACS AML AML
comp=E,2790µm,1.6s
INTR Introdacqua 0.93 144 P **Pg 01 44 42.3 -1.6**
INTR AML AML
comp=E,3µm,0.7s
INTR AML AML
comp=E,2890µm,0.7s
INTR AML AML
comp=N,3180µm,1.1s
INTR AML AML
comp=N,2µm,1.1s
RCAV Rocca di Cave 0.93 190 P **Pg 01 44 43.2 -0.8**
RCAV AML AML
comp=E,3870µm,1.5s
RCAV AML AML
comp=N,4630µm,1.5s
SENI Senigallia 0.94 3 P **Pg 01 44 43.4 -0.7**

NARO Abbazia di Nar 0.95 333 P **Pg 01 44 43.4 -0.8**
NARO AML AML
comp=N,1755µm,0.4s
NARO AML AML
comp=E,2240µm,0.6s
VVLD Villa Vallelon 0.96 159 P **Pg 01 44 43.5 -0.9**
VVLD AML AML
comp=N,2170µm,1.3s
VVLD AML AML
comp=E,1580µm,0.9s
APEC Apecchio 0.96 326 P **Pg 01 44 44.2 -0.4**
FSSB Fossombrone 0.97 343 P **Pg 01 44 44.0 -0.7**
FSSB AML AML
comp=N,14200µm,0.4s
FSSB AML AML
comp=E,9200µm,0.4s
GUAR Guarcino 0.98 174 P **Pg 01 44 43.9 -0.9**
GUAR AML AML
comp=N,5225µm,0.7s
GUAR AML AML
comp=E,3305µm,0.8s
ATMC Monte Cedrone 0.99 314 P **Pg 01 44 44.9 -0.1**
BADI Badiali 1.00 318 P **Pb 01 44 44.9 -0.2**
RMP Rome, Mte Porz 1.01 200 P **Pb 01 44 44.5 -0.7**
RMP AML AML
comp=N,4145µm,0.5s
RMP AML AML
comp=E,2735µm,0.4s
LATE Laterza 1.02 262 Pg **Pb 01 44 45.0 -0.2**
LATE Laterza 1.02 262 P **Pb 01 44 45.2 0.0**
LPEL Lama dei Pelig 1.04 133 P **Pb 01 44 44.5 -1.2**
LPEL AML AML
comp=E,2150µm,1.1s
LPEL AML AML
comp=N,1590µm,0.5s
CAFI Castiglion Fio 1.04 303 P **Pb 01 44 45.8 +0.1**
CAFI AML AML
comp=E,2020µm,0.6s
CAFI AML AML
comp=N,1925µm,1.3s
CAFI AML AML
comp=E,2015µm,0.6s
PE3 Peglio 1.05 332 P **Pb 01 44 46.0 +0.1**
VIVA Pratoni del Vi 1.06 196 P **Pb 01 44 45.4 -0.5**
VIVA AML AML
comp=N,6985µm,0.4s
VIVA AML AML
comp=E,6425µm,0.4s
RDP Rocca di Papa 1.06 199 P **Pb 01 44 45.4 -0.6**
RDP AML AML
comp=E,5230µm,0.4s
RDP AML AML
comp=N,6870µm,0.5s
MA9 Marino 1.06 201 P **Pb 01 44 46.1 +0.1**
MA9 AML AML
comp=N,3940µm,0.5s
MA9 AML AML
comp=E,3665µm,0.5s
SAMA S.Maria delle 1.07 204 P **Pb 01 44 45.6 -0.5**
SAMA AML AML
comp=E,1715µm,0.8s
SAMA AML AML
comp=N,1430µm,1.2s
SF03 Valle Cupa 1.09 272 P **Pb 01 44 46.4 -0.1**
MCIV Monte Civitell 1.10 271 P **Pb 01 44 46.4 -0.3**
MCIV AML AML
comp=N,1130µm,0.4s
MCIV AML AML
comp=E,1700µm,0.4s
SF11 Podere del Sol 1.10 276 P **Pb 01 44 46.7 0.0**
SSP9 Sansepolcro 1.11 317 P **Pb 01 44 46.8 0.0**
SF04 Casetta 1.11 274 P **Pb 01 44 46.6 -0.3**
TOLF Tolfa 1.11 231 ⇑P **Pb 01 44 46.4 -0.4**
PARC Parchiule 1.11 323 P **Pb 01 44 46.8 -0.1**
PARC AML AML
comp=E,1960µm,0.6s
PARC AML AML
comp=N,1840µm,0.8s
POFI Posta Fibreno 1.12 159 P **Pb 01 44 46.3 -0.7**
POFI AML AML
comp=N,768µm,0.4s
POFI AML AML
comp=E,1790µm,0.8s
SF13 Bagnolo 1.14 273 P **Pb 01 44 47.4 0.0**
LAV9 Lanuvio 1.14 198 P **Pb 01 44 47.2 -0.2**
SF14 Selvena 1.14 270 P **Pb 01 44 47.3 -0.1**
LRP Arpino 1.16 164 P **Pb 01 44 47.3 -0.3**
LRP AML AML
comp=E,1126µm,0.7s
LRP AML AML
comp=N,1205µm,1.6s
SF01 Poggio Pratacc 1.18 273 P **Pb 01 44 48.2 +0.1**
SF01 AML AML
comp=N,1964µm,0.5s
SF01 AML AML
comp=E,2525µm,0.8s
PESA Pesaro 1.20 349 P **Pn 01 44 48.2 0.0**
PESA AML AML
comp=E,3580µm,0.6s
PESA AML AML
comp=N,4000µm,0.8s
GIUL Giuliano Di Ro 1.21 177 P **Pn 01 44 47.9 -0.4**
GIUL AML AML
comp=E,1015µm,0.6s
GIUL AML AML
comp=N,1370µm,1.1s
CRE Caprese Michel 1.23 314 P **Pn 01 44 48.9 +0.1**
CRE AML AML
comp=E,956µm,0.7s
CRE AML AML
comp=N,1305µm,1.2s
ARCI Arcidosso 1.25 275 P **Pn 01 44 49.3 +0.4**
LATB Latina 1.28 187 P **Pn 01 44 48.8 -0.5**
LATB AML AML
comp=N,280µm,0.7s
LATB AML AML
comp=E,404µm,1.4s
RNI2 Rionero Sannit 1.29 145 P **Pn 01 44 48.7 -0.8**
LIK San Giovanni I 1.29 167 P **Pn 01 44 50.1 +0.6**
LIK AML AML
comp=E,1607µm,0.4s
LIK AML AML
comp=N,1995µm,1.5s
CERA Filignano 1.33 151 P **Pn 01 44 49.2 -0.7**
CERA AML AML
comp=N,1086µm,0.6s
CERA AML AML
comp=E,1460µm,0.7s
CERA AML AML
comp=E,1510µm,0.7s
CERA AML AML
comp=N,1148µm,0.7s
FRES Fresagrandinar 1.37 125 P **Pn 01 44 50.1 -0.4**
FRES AML AML
comp=E,1020µm,0.5s
FRES AML AML
comp=N,663µm,0.6s
TRIV Trivento 1.43 134 P **Pn 01 44 51.1 -0.3**
TRIV AML AML
comp=N,1070µm,0.8s
TRIV AML AML
comp=E,1105µm,1.3s
ASQU Asqua 1.44 316 P **Pn 01 44 52.0 +0.5**
ASQU AML AML
comp=N,727µm,0.7s
ASQU AML AML
comp=E,714µm,0.6s
SFI Santa Sofia 1.49 320 P **Pn 01 44 53.0 +0.8**
SFI AML AML
comp=E,533µm,0.8s
SFI AML AML
comp=N,604µm,0.6s
FROS Frosini 1.54 287 P **Pn 01 44 53.6 +0.7**
CSNT Castellina Chi 1.54 298 P **Pn 01 44 53.7 +0.8**
CSNT AML AML
comp=N,371µm,0.5s
CSNT AML AML
comp=E,356µm,0.5s
VAGA Valle Agricola 1.57 149 P **Pn 01 44 54.2 +1.0**
VAGA AML AML
comp=N,550µm,1.5s
VAGA AML AML
comp=E,422µm,0.7s
OSSC Osservatorio P 1.60 299 Pn **Pn 01 44 54.5 +0.9**
OSSC Osservatorio P 1.60 299 P **Pn 01 44 54.6 +1.0**
OSSC AML AML
comp=E,484µm,1.6s
OSSC AML AML
comp=E,344µm,0.7s
OSSC AML AML
comp=N,364µm,1.0s
OSSC AML AML
comp=N,440µm,1.6s
BSSO Busso 1.62 138 P **Pn 01 44 55.2 +1.3**
RUFI Rufina 1.62 312 P **Pn 01 44 54.6 +0.7**
LMD Lutirano 1.69 321 P **Pb 01 44 56.8 +0.1**
LMD AML AML
comp=E,715µm,0.7s
LMD AML AML
comp=N,657µm,1.4s
CASP Castiglione de 1.69 272 Pn **Pn 01 44 55.2 +0.2**
CASP Castiglione de 1.69 272 P **Pn 01 44 55.6 +0.7**
CASP AML AML
comp=E,158µm,1.4s
CASP AML AML
comp=N,225µm,0.5s
TRIF Trifonti 1.70 283 P **Pn 01 44 55.9 +0.8**
TRIF AML AML
comp=N,344µm,0.7s
TRIF AML AML
comp=E,372µm,1.6s
CIGN Sant'Elia a Pi 1.70 130 P **Pn 01 44 56.3 +1.2**
CIGN AML AML
comp=N,448µm,1.2s
CIGN AML AML
comp=E,530µm,1.6s
MODR Mondragone 1.70 162 P **Pn 01 44 55.7 +0.6**
PIGN Pignataro Magg 1.74 154 P **Pn 01 44 57.0 +1.5**
MELA Melanico ??? S 1.80 125 P **Pn 01 44 57.7 +1.3**
MELA AML AML
comp=E,1535µm,0.8s
MELA AML AML
comp=E,1605µm,0.8s
MELA AML AML
comp=N,1645µm,0.5s
MELA AML AML
comp=N,1655µm,0.5s
SEI Scarperia 1.84 315 P **Pn 01 44 58.3 +1.2**
SEI AML AML
comp=E,754µm,0.5s
SEI AML AML
comp=N,993µm,0.5s
DUGI Dugi Otok 1.84 48 *e*Pn **Pn 01 44 57.8 +0.7**
TREM Isole Tremiti 1.85 109 P **Pn 01 44 58.1 +1.0**
TREM AML AML
comp=E,1460µm,0.6s
TREM AML AML
comp=N,1370µm,0.7s
VITU Vitulano (BN) 1.92 145 P **Pn 01 44 58.4 +0.2**
MPPT Montemurlo 1.93 309 P **Pn 01 44 59.3 +1.1**
MPPT AML AML
comp=N,444µm,0.5s
MPPT AML AML
comp=E,382µm,0.8s
PSB1 Pescosannita 1.97 141 P **Pn 01 44 59.8 +1.1**
MTCR Monte La Croce 2.02 309 P **Pn 01 45 00.1 +0.5**
MTCR AML AML
comp=E,381µm,0.5s
MTCR AML AML
comp=N,346µm,0.7s
PAOL Paolisi 2.02 148 Pn **Pn 01 45 00.8 +1.3**
PAOL Paolisi 2.02 148 P **Pn 01 45 01.0 +1.4**
APRC Apricena 2.03 119 AML AML
comp=E,605µm,0.5s
APRC AML AML
comp=N,747µm,0.8s
VIRC Vir 2.05 41 *e*Pn **Pn 01 45 00.5 +0.6**
MORI Morici 2.16 58 *i* Pn **Pn 01 45 02.5 +1.2**
SGRT San Giovanni R 2.16 117 Pn **Pn 01 45 02.5 +1.0**
SGRT San Giovanni R 2.16 117 P **Pn 01 45 02.5 +1.0**
SGRT AML AML
comp=N,523µm,0.6s
SGRT AML AML
comp=E,678µm,0.5s
POPM Popiglio 2.17 307 P **Pn 01 45 02.3 +0.7**
POPM AML AML
comp=N,268µm,0.4s
POPM AML AML
comp=E,184µm,0.6s
CELB S.Piero in Cam 2.18 271 AML AML
comp=N,122µm,1.1s
CELB AML AML
comp=E,101µm,0.6s
BRJN Brijuni 2.18 11 *e*Pn **Pn 01 45 02.2 +0.5**
BRJN Brijuni 2.18 11 P **Pn 01 45 02.4 +0.7**
NVLJ Novalja 2.18 34 *e*Pn **Pn 01 45 02.2 +0.6**
ZCCA Zocca 2.25 316 Pn **Pn 01 45 03.3 +0.7**
BDI Bagni Di Lucca 2.28 306 AML AML
comp=N,105µm,0.6s
BDI AML AML
comp=E,126µm,0.4s
MSAG Monte S. Angel 2.29 116 P **Pn 01 45 04.7 +1.5**
MSAG AML AML
comp=E,832µm,0.6s
MSAG AML AML
comp=N,1580µm,0.5s
MSAG AML AML
comp=N,1635µm,0.5s
MSAG AML AML
comp=E,872µm,0.6s
RABC Rab 2.30 30 *e*Pn **Pn 01 45 04.0 +0.7**
CARD Cardoso 2.33 304 AML AML
comp=N,254µm,0.4s
CARD AML AML
comp=E,256µm,0.3s
SMRN Sveta Marina 2.38 17 *e*Pn **Pn 01 45 04.9 +0.5**
HVAR Hvar 2.44 79 *e*Pn **Pn 01 45 06.3 +1.0**
VLC Villacollemand 2.46 305 Pn **Pn 01 45 05.7 +0.2**
A253A Karojba, Istri 2.57 10 *e*Pn **Pn 01 45 07.5 +0.5**
UDBI Udbina 2.58 46 *i* Pn **Pn 01 45 09.1 +1.9**
EQUI Equi 2.60 304 AML AML
comp=E,88µm,0.9s
EQUI AML AML
comp=N,104µm,0.8s
A250A Rusevo Krmpots 2.64 28 *e*Pn **Pn 01 45 09.1 +1.1**
KIJV Kijevo 2.67 61 *e*Pn **Pn 01 45 10.3 +1.9**
RIY Rijeka 2.73 20 *e*Pn **Pn 01 45 09.5 +0.3**
PLMA Palmaria, Port 2.74 299 AML AML
comp=N,110µm,0.4s
PLMA AML AML
comp=E,72µm,0.4s
LSTV Lastovo 2.74 89 *e*Pn **Pn 01 45 10.1 +0.7**
PLIT Pitvice 2.76 39 *e*Pn **Pn 01 45 11.1 +1.4**
PALZ Palazzo San Ge 2.77 130 AML AML
comp=E,426µm,1.3s
PALZ AML AML
comp=N,440µm,0.9s
TEOL Teolo 2.81 338 Pn **Pn 01 45 11.2 +0.9**
SKDS Skadanscina 2.85 12 *e*Pn **Pn 01 45 11.0 +0.2**
MAKA Makarska 2.87 78 *e*Pn **Pn 01 45 12.2 +1.1**
SMPL Sampolo 2.95 258 P **Pn 01 45 13.7 +1.4**
SMPL Sampolo 2.95 258 AML AML
comp=N,25µm,0.5s
SMPL AML AML
comp=E,27µm,0.7s
TRI Trieste 2.97 8 **Pn 01 45 14.4 +1.8**
A050A Klekovaca 2.98 54 *e*Pn **Pn 01 45 14.6 +1.8**
RICI Ricice 2.99 75 *e*Pn **Pn 01 45 14.5 +1.7**
MSSA Maissana 3.07 302 Pn **Pn 01 45 14.7 +0.7**
MSSA Maissana 3.07 302 AML AML
comp=E,82µm,0.7s
MSSA AML AML
comp=N,97µm,0.5s
PGF Pioggiola 3.08 267 *e*P **Pn 01 45 15.6 +1.5**
PGF *e*Sn **Sn 01 45 47.5 -3.3**
comp=N,18nm,0.4s
PGF Pioggiola 3.08 267 P **Pn 01 45 15.7 +1.5**
PGF Pioggiola 3.08 267 S **Sn 01 45 53.4 +2.7**
BOJS Bojanci 3.12 28 *e*Pn **Pn 01 45 15.7 +1.1**
BOJS Bojanci 3.12 28 AML AML
comp=N,374µm,0.8s
BOJS AML AML
comp=E,504µm,1.0s
SRKY Kupres RS 3.19 65 *e*Pn **Pn 01 45 18.3 +2.7**
SABO M.te Sabotino 3.23 5 **Pn 01 45 16.9 +0.8**
CGRP Cima Grappa 3.27 343 AML AML
comp=E,296µm,1.0s
CGRP AML AML
comp=N,352µm,0.5s
MGRS Mrkonjic Grad 3.29 59 *e*Pn **Pn 01 45 19.6 +2.7**
OZLJ Ozalj 3.29 29 *e*Pn **Pn 01 45 18.1 +1.2**

STON	**Ston**	3.34	87	*e*Pn		Pn	01 45 17.4	-0.1
STON	**Ston**	3.34	87	*e*Pn		Pn	01 45 17.7	+0.2
STON	**Ston**	3.34	87	*e*Pn		Pn	01 45 17.5	-0.1
STON				*e*Sn		Sn	01 45 56.8	-0.1
STON	**Ston**	3.34	87	AML	AML			
	comp=N,114µm,0.4s							
STON				AML	AML			
	comp=E,74µm,0.7s							
AJAC	**Base Areonaval**	3.37	257	P		Pn	01 45 20.0	+2.0
AJAC				S		Sn	01 46 00.8	+3.2
MATE	**Matera**	3.39	127	⇑P		Pn	01 45 20.5	+2.3
MATE				⇑S		Sn	01 45 57.3	-0.8
CUC	**Castrocucco**	3.41	143	Pn		Pb	01 45 23.8	-2.3
LJU	**Ljubljana**	3.42	16	AML	AML			
	comp=N,1565µm,0.6s							
LJU				AML	AML			
	comp=E,1350µm,0.6s							
SALO	**Salr**	3.43	327	Pn		Pn	01 45 21.3	+2.5
CRES	**Cresnjev**	3.47	27	*e*Pn		Pn	01 45 20.5	+1.1
MPRI	**Monte Prat**	3.48	358	AML	AML			
	comp=E,292µm,0.6s							
MPRI				AML	AML			
	comp=N,382µm,0.6s							
STAL	**STALIGIAL**	3.51	355	Pn		Pn	01 45 21.1	+1.2
STAL	**STALIGIAL**	3.51	355	AML	AML			
	comp=E,232µm,0.7s							
STAL				AML	AML			
	comp=N,280µm,0.8s							
STAL				AML	AML			
	comp=N,197µm,0.6s							
STAL				AML	AML			
	comp=E,275µm,1.3s							
A051A	**Mrakovica**	3.52	49	*e*Pn		Pn	01 45 22.5	+2.4
MAGA	**Magasa**	3.52	330	AML	AML			
	comp=E,532µm,0.4s							
MAGA				AML	AML			
	comp=N,354µm,0.4s							
BLY	**Banja Luka**	3.52	54	*e*Pn		Pn	01 45 21.9	+1.8
BLY	**Banja Luka**	3.52	54	*e*Pn		Pn	01 45 23.0	+2.9
NOCI	**Noci**	3.52	123	AML	AML			
	comp=N,140µm,0.5s							
NOCI				AML	AML			
	comp=E,150µm,0.5s							
CIMO	**Cimolais**	3.58	352	Pn		Pn	01 45 22.1	+1.1
CIMO	**Cimolais**	3.58	352	AML	AML			
	comp=N,59µm,0.7s							
CIMO				AML	AML			
	comp=E,81µm,0.7s							
CIMO				AML	AML			
	comp=E,82µm,0.6s							
CIMO				AML	AML			
	comp=N,68µm,0.7s							
PTCC	**Patocco-Chiusa**	3.64	2	AML	AML			
	comp=E,128µm,0.5s							
PTCC				AML	AML			
	comp=N,114µm,0.6s							
DBRK	**Dubrovnik**	3.67	90	*e*Pn		Pn	01 45 22.5	+0.4
GAGG	**Gaggia**	3.67	335	AML	AML			
	comp=N,168µm,1.0s							
GAGG				AML	AML			
	comp=E,264µm,0.8s							
PRED	**Cave del Predi**	3.69	4	Pn		Pn	01 45 23.5	+1.0
CLUD	**Cludinico**	3.70	357	Pn		Pn	01 45 23.6	+1.1
CLUD	**Cludinico**	3.70	357	AML	AML			
	comp=N,149µm,0.8s							
CLUD				AML	AML			
	comp=E,186µm,1.3s							
ZONE	**Zone**	3.71	325	AML	AML			
	comp=N,170µm,0.8s							
ZONE				AML	AML			
	comp=E,122µm,0.5s							
ACOM	**Acomizza, Ital**	3.79	4	AML	AML			
	comp=E,257µm,0.7s							
ACOM				AML	AML			
	comp=E,247µm,0.7s							
ACOM				AML	AML			
	comp=N,278µm,0.6s							
ACOM				AML	AML			
	comp=N,268µm,0.6s							
ZOU	**Zoufplan**	3.79	358	AML	AML			
	comp=N,148µm,1.1s							
ZOU				AML	AML			
	comp=E,162µm,1.0s							
TREB	**Trebinje**	3.82	89	*e*Pn		Pn	01 45 26.2	+2.1
TREB	**Trebinje**	3.82	89	*e*Pn		Pn	01 45 26.3	+2.1
TREB				*e*Sn		Sn	01 46 09.0	+0.2
MOSL	**Moslavina**	3.84	41	*e*Pn		Pn	01 45 24.7	+0.2
OBKA	**Obir**	3.87	14	*e*Pn		Pn	01 45 25.6	+0.6
OBKA	**Obir**	3.87	14	*e*Pn		Pn	01 45 26.1	+1.1
	comp=E,1.7nm,0.3s							
MYKA	**Terra Mystica**	3.88	5	*e*Pn		Pn	01 45 25.8	+0.7
	comp=E,4.0nm,0.2s							
KOSI	**Kohlern**	3.91	342	AML	AML			
	comp=E,194µm,1.4s							
KOSI				AML	AML			
	comp=N,170µm,0.7s							
A052A	**Srbac**	3.91	52	*e*Pn		Pb	01 45 31.1	-3.5
HCY	**Herceg Novi**	3.94	93	*e*Pn		Pn	01 45 27.1	+1.2
HCY	**Herceg Novi**	3.94	93	⇑*i*Pn		Pn	01 45 27.3	+1.4
HCY				*i* Sn		Sn	01 46 12.3	+0.4
HCY	**Herceg Novi**	3.94	93	⇑*i*Pn		Pn	01 45 27.6	+1.7
HCY				*i* Sn		Sn	01 46 14.8	+2.9
BRY	**Bratogost**	3.95	86	*e*Pn		Pn	01 45 27.5	+1.3
BRY	**Bratogost**	3.95	86	⇓*i*Pn		Pn	01 45 27.9	+1.7
BRY				*i* Sn		Sn	01 46 13.6	+1.3
BRY	**Bratogost**	3.95	86	⇓*i*Pn		Pn	01 45 27.8	+1.6
BRY				*i* Sn		Sn	01 46 14.7	+2.4
APPI	**Appiano**	3.96	340	AML	AML			
	comp=N,160µm,0.4s							
APPI				AML	AML			
	comp=E,127µm,0.7s							
LOBO	**Lobor**	3.98	31	*e*Pn		Pn	01 45 26.8	+0.5
ABTA	**Abfaltersbach**	4.01	354	*i* Pn		Pn	01 45 28.9	+2.0
	comp=E,21nm,0.5s,SNR=27							
DOB	**Doboj**	4.08	59	*e*Pn		Pn	01 45 29.6	+1.9
KALN	**Kalnik**	4.11	34	*e*Pn		Pn	01 45 28.2	+0.1
SOKA	**Soboth**	4.13	18	*i* Pn		Pn	01 45 30.2	+1.6
	comp=E,1.2nm,0.2s							
UPM	**Unac-Piva**	4.23	82	*e*Pn		Pn	01 45 32.6	+2.5
UPM	**Unac-Piva**	4.23	82	⇓*i*Pn		Pn	01 45 32.5	+2.5
UPM				*i* Sn		Sn	01 46 21.1	+1.8
UPM	**Unac-Piva**	4.23	82	⇑*i*Pn		Pn	01 45 32.1	+2.1
UPM				*i* Sn		Sn	01 46 21.7	+2.4
CEME	**Cevo**	4.25	91	⇑*i*Pn		Pn	01 45 31.8	+1.7
CEME				*i* Sn		Sn	01 46 19.9	+0.4
CEME	**Cevo**	4.25	91	⇑*i*Pn		Pn	01 45 31.8	+1.7
CEME				*i* Sn		Sn	01 46 21.5	+2.0
RISI	**Rein**	4.25	350	AML	AML			
	comp=E,360µm,0.5s							
RISI				AML	AML			
	comp=N,374µm,0.5s							
BUM	**Brajici-Budva**	4.26	94	⇓*i*Pn		Pn	01 45 31.6	+1.3
BUM				*i* Sn		Sn	01 46 19.7	0.0
BUM	**Brajici-Budva**	4.26	94	⇑*i*Pn		Pn	01 45 32.0	+1.7
BUM				*i* Sn		Sn	01 46 22.0	+2.3
NKME	**Niksic**	4.26	88	⇑*i*Pn		Pn	01 45 32.3	+2.0
NKME				*i* Sn		Sn	01 46 20.8	+1.0
NKME	**Niksic**	4.26	88	⇓*i*Pn		Pn	01 45 32.4	+2.1
NKME				*i* Sn		Sn	01 46 22.2	+2.4
NKY	**Niksic**	4.29	87	⇑*i*Pn		Pn	01 45 32.9	+2.2
NKY				*i* Sn		Sn	01 46 21.4	+0.9
NKY	**Niksic**	4.29	87	⇓*i*Pn		Pn	01 45 32.6	+1.9
NKY				*i* Sn		Sn	01 46 23.1	+2.6
A252A	**Venje**	4.30	50	*e*Pn		Pn	01 45 31.5	+0.7
KBA	**Koelnbreinsper**	4.32	2	*e*Pn		Pn	01 45 33.5	+2.3
	SNR=10							
SBF	**Sospel**	4.32	287	*e*P		Pn	01 45 33.0	+1.8
SBF				*e*Sn		Sn	01 46 18.0	-3.3
	comp=N,24nm,0.5s							
VSL	**Villasalto**	4.34	222	AML	AML			
VSL				AML	AML			
ROSI	**Rosskopf**	4.34	344	AML	AML			
	comp=E,184µm,1.3s							
ROSI				AML	AML			
	comp=N,254µm,0.6s							
ESCA	**l'Escarene**	4.36	286	P		Pn	01 45 34.1	+2.4
FUORN	**Ofenpass-Fuorn**	4.38	333	Pn		Pn	01 45 35.1	+3.1
TURF	**col de Turini**	4.38	288	P		Pn	01 45 33.8	+1.8
TURF				S		Sn	01 46 27.2	+4.3
VARE	**Varese**	4.42	316	AML	AML			
	comp=E,61µm,0.8s							
VARE				AML	AML			
	comp=N,65µm,0.4s							
DRME	**Dracevica, Mon**	4.49	95	*e*Pn		Pn	01 45 34.8	+1.4
DRME	**Dracevica, Mon**	4.49	95	⇓*i*Pn		Pn	01 45 34.9	+1.5
DRME				*i* Sn		Sn	01 46 25.0	-0.3
DRME	**Dracevica, Mon**	4.49	95	⇑*i*Pn		Pn	01 45 35.5	+2.1
DRME				*i* Sn		Sn	01 46 27.4	+2.1
TIP	**Timpagrande**	4.50	142	Pn		Pn	01 45 35.4	+1.8
PDG	**Podgorica**	4.51	92	⇓P		Pn	01 45 35.9	+2.3
PDG				⇑S		Sn	01 46 25.2	-0.5
PDG	**Podgorica**	4.51	92	Pn		Pn	01 45 35.6	+1.9
PDG	**Podgorica**	4.51	92	*e*Pn		Pn	01 45 35.5	+1.9
PDG				*e*Sn		Sn	01 46 27.8	+2.1
TTG	**Podgorica**	4.51	92	⇑*i*Pn		Pn	01 45 35.3	+1.7
TTG				*i* Sn		Sn	01 46 26.0	+0.3
TTG	**Podgorica**	4.51	92	⇑*i*Pn		Pn	01 45 35.5	+1.9
TTG				*i* Sn		Sn	01 46 28.0	+2.3
SPIF	**crte de Spivo**	4.51	289	P		Pn	01 45 36.5	+2.8
ULC	**Ulcinj**	4.57	98	⇑*i*Pn		Pn	01 45 35.8	+1.2
ULC				*i* Sn		Sn	01 46 26.7	-0.8
ULC	**Ulcinj**	4.57	98	⇓*i*Pn		Pn	01 45 36.5	+1.9
ULC				*i* Sn		Sn	01 46 29.5	+2.0
FETA	**Feichten**	4.59	339	*e*Pn		Pn	01 45 37.8	+2.9
	comp=N,3.7nm,0.3s							
RUDO	**Rudo**	4.62	77	*e*Pn		Pn	01 45 36.5	+1.4
WTTA	**Wattenberg**	4.63	347	*e*Pn		Pn	01 45 37.6	+2.2
	comp=N,4.3nm,0.3s,SNR=9.3							
DAVOX	**Davos/Dischmat**	4.65	331	Pn		Pn	01 45 39.5	+3.8
	comp=N,5.4nm,0.3s,baz=137,slow=13,SNR=36							
DAVOX				Sn		Sn	01 46 32.4	+3.0
	comp=N,1.3nm,0.3s,baz=123,slow=22,SNR=3.4							
	comp=N,17nm,0.4s							
CALF	**Calern**	4.67	284	P		Pn	01 45 37.7	+1.8
SQTA	**Sankt Quirin**	4.67	343	*e*Pn		Pn	01 45 38.7	+2.8
	SNR=10							
ISO	**Isola**	4.67	290	P		Pn	01 45 39.6	+3.7
KOME	**Kolasin**	4.67	87	⇓*i*Pn		Pn	01 45 38.2	+2.2
KOME				*i* Sn		Sn	01 46 30.7	+0.7
KOME	**Kolasin**	4.67	87	⇓*i*Pn		Pn	01 45 38.2	+2.2
KOME				*i* Sn		Sn	01 46 32.3	+2.3
BBLS	**Lazići**	4.68	74	*e*Pn		Pn	01 45 39.0	+2.9
BBLS				*e*Sn		Sn	01 46 31.9	+1.7
WATA	**Walderalm**	4.71	347	*e*Pn		Pn	01 45 39.4	+2.9
	comp=N,13nm,0.5s,SNR=14							
ARSA	**Arzberg**	4.79	20	*e*Pn		Pn	01 45 39.9	+2.5
	comp=N,3.0nm,0.3s							
MOTA	**Moosalm**	4.81	343	*e*Pn		Pn	01 45 41.1	+3.2
	comp=N,4.6nm,0.4s							
SCTE	**Santa Cesarea**	4.81	122	Pn		Pn	01 45 38.3	+0.6
BLJ	**Bijeljina**	4.86	63	*e*Pn		Pn	01 45 38.5	+0.1
LMR	**La Mourre**	4.91	279	*e*P		Pn	01 45 39.8	+0.6
LMR				*e*Sn		Sn	01 46 30.5	-5.2
	comp=N,4.4nm,0.5s							
SURF	**Saint Ours**	4.92	293	P		Pn	01 45 41.9	+2.4
BIOA	**Bad Ischl, Aus**	4.94	4	*e*Pn		Pn	01 45 41.0	+1.5
	comp=N,8.1nm,0.3s,SNR=16							
IVA	**Berane**	4.95	86	⇓*i*Pn		Pn	01 45 42.0	+2.2
IVA				*i* Sn		Sn	01 46 37.5	+0.7
IVA	**Berane**	4.95	86	⇓*i*Pn		Pn	01 45 41.8	+2.0
IVA				*i* Sn		Sn	01 46 38.7	+1.9
PVY	**Plav**	5.01	90	⇓*i*Pn		Pn	01 45 42.6	+1.9
PVY				*i* Sn		Sn	01 46 38.4	0.0
PVY	**Plav**	5.01	90	⇓*i*Pn		Pn	01 45 42.6	+1.9
PVY				*i* Sn		Sn	01 46 40.3	+1.9
SJES	**Sjenica**	5.02	82	*e*Pn		Pn	01 45 43.7	+3.0
SJES				*e*Sn		Sn	01 46 40.3	+1.8
RETA	**Reutte**	5.02	341	*i* Pn		Pn	01 45 44.3	+3.5
	comp=N,3.8nm,0.3s							
MBDF	**Montbardon**	5.03	295	*e*P		Pn	01 45 43.1	+2.1
MBDF				*e*Sn		Sn	01 46 35.3	-3.6
	comp=N,9.7nm,0.6s							
TRIGF	**Trigance**	5.03	284	P		Pn	01 45 43.4	+2.4
DAVA	**Damuels**	5.08	334	*e*Pn		Pn	01 45 45.1	+3.3
	comp=N,8.9nm,0.4s,SNR=11							
OGAG	**Argentiere**	5.10	292	P		Pn	01 45 47.2	+5.4
FLAF	**Flassans-sur-I**	5.10	279	P		Pn	01 45 43.7	+1.9
MOA	**Molln**	5.14	8	*e*Pn		Pn	01 45 43.9	+1.5
MOA	**Molln**	5.14	8	*e*Pn		Pn	01 45 43.9	+1.5
	comp=N,2.9nm,0.4s							
DIVS	**Divibare**	5.15	73	Pn		Pn	01 45 42.1	-0.3
DIVS	**Divibare**	5.15	73	*e*Pn		Pn	01 45 42.6	+0.1
DIVS	**Divibare**	5.15	73	*e*Pn		Pn	01 45 46.3	+3.8
DIVS				*e*Sn		Sn	01 46 41.1	-0.5
IVAS	**Ivanjica**	5.17	79	*e*Pn		Pn	01 45 44.4	+1.6
IVAS				*e*Sn		Sn	01 46 42.0	-0.3
CLTB	**Caltabellotta**	5.18	180	Pn		Pn	01 45 46.8	+3.8
TIR	**Tirane**	5.18	104	⇑P		Pn	01 45 44.3	+1.4
TIR	**Tirane**	5.18	104	P		Pn	01 45 44.8	+1.9
TIR	**Tirane**	5.18	104	Pn		Pn	01 45 44.1	+1.2
TIR	**Tirane**	5.18	104	*e*Pn		Pn	01 45 44.8	+1.9
TIR				*e*Sn		Sn	01 46 44.3	+1.9
BNI	**Bardonecchia**	5.21	298	Pn		Pn	01 45 45.7	+2.2
MORH	**Mrgy, Hungar**	5.22	47	⇓P		Pn	01 45 45.9	+2.5
VLO	**Vlora**	5.27	114	Pn		Pn	01 45 48.4	+4.3
DIX	**Grande Dixence**	5.29	311	P		Pn	01 45 47.1	+2.5
DIX	**Grande Dixence**	5.29	311	S		Sn	01 46 48.4	+3.0
BLAF	**les Blancs**	5.33	285	P		Pn	01 45 48.0	+3.1
FRGS	**Fruska Gora**	5.36	61	*e*Pn		Pn	01 45 46.3	+1.0
FRGS	**Fruska Gora**	5.36	61	*e*Pn		Pn	01 45 46.4	+1.1
LPG	**La Plagne**	5.36	303	*e*P		Pn	01 45 48.4	+2.7
LPG				*e*Sn		Sn	01 46 41.5	-5.8
	comp=N,11nm,0.6s							
LPL	**La Plagne**	5.38	303	*e*P		Pn	01 45 48.7	+2.8
LPL				*e*Sn		Sn	01 46 42.5	-5.2
	comp=N,12nm,0.6s							
RONA	**Rosalia, Austr**	5.41	23	*e*Pn		Pn	01 45 46.6	+0.6
	comp=N,2.9nm,0.3s							
ARTF	**Artigues**	5.45	281	P		Pn	01 45 49.2	+2.6
TRUS	**Trudelj**	5.46	72	*e*Pn		Pn	01 45 48.8	+2.0
CONA	**Conrad Observa**	5.50	19	*e*Pn		Pn	01 45 48.7	+1.4
	comp=N,2.5nm,0.2s							
PHP	**Peshkopia**	5.51	99	P		Pn	01 45 50.3	+2.9
SENIN	**Lac Senin/Sane**	5.52	313	Pn		Pn	01 45 50.6	+2.8
MLYF	**Mely**	5.53	285	P		Pn	01 45 50.0	+2.3
RSL	**Roselend**	5.53	304	P		Pn	01 45 50.6	+2.7
BSTF	**la Bastide-des**	5.60	284	P		Pn	01 45 51.2	+2.6
GRUS	**Gruza**	5.62	76	*e*Pn		Pn	01 45 50.7	+1.8
GRUS				*e*Sn		Sn	01 46 52.8	-0.4
ZUR	**Degenried**	5.63	326	P		Pn	01 45 49.9	+0.8
OGSI	**Sixt**	5.66	308	P		Pn	01 45 52.7	+3.2
SMRF	**Simiane la Rot**	5.67	285	*e*P		Pn	01 45 53.7	+4.1
SMRF				*e*Sn		Sn	01 46 48.8	-5.5
	comp=N,3.6nm,0.6s							
ORIF	**Oris-en-Rattie**	5.69	295	*e*P		Pn	01 45 53.9	+3.9
ORIF				*e*Sn		Sn	01 46 49.0	-6.1
	comp=N,11nm,0.7s							
ORIF	**Oris-en-Rattie**	5.69	295	P		Pn	01 45 55.0	+5.0
AIGLE	**Aigle**	5.70	311	P		Pn	01 45 53.0	+2.9
RUSF	**Rustrel**	5.72	284	P		Pn	01 45 53.4	+3.0
SELS	**Selova**	5.85	83	*e*Pn		Pn	01 45 54.0	+1.9
SELS				*e*Sn		Sn	01 46 59.0	+0.1
KEK	**Kerkira**	5.86	119	P		Pn	01 45 54.1	+1.9
KEK	**Kerkira**	5.86	119	Pn		Pn	01 45 54.4	+2.3
GRN	**Grenoble**	5.90	297	P		Pn	01 45 56.5	+3.7
SRN	**Sarande**	5.90	117	P		Pn	01 45 54.5	+1.8
TORNY	**Torny/Romont**	5.96	314	P		Pn	01 45 56.9	+3.2
SLE	**Schleitheim**	5.99	328	P		Pn	01 45 55.7	+1.7
SLE	**Schleitheim**	5.99	328	S		Sn	01 47 02.6	+0.3
BALST	**Balsthal**	5.99	322	P		Pn	01 45 54.9	+0.9
SAUF	**chteau de Sau**	5.99	284	P		Pn	01 45 57.1	+3.1
GUT	**Gutenstein**	6.02	333	P		Pn	01 45 56.2	+1.7
GEC2	**GERESS Array S**	6.09	3	Pn		Pn	01 45 56.8	+1.3
GERES	**GERESS Array B**	6.09	3	Pn		Pn	01 45 56.2	+0.7
	comp=N,0.6nm,0.3s,baz=172,slow=14,SNR=16							
GERES				Sn		Sn	01 47 04.9	-0.1
	comp=N,1.9nm,0.3s,baz=175,slow=22,SNR=2.9							
	comp=N,1.0nm,0.3s							
GERES	**GERESS Array B**	6.09	3	Pn		Pn	01 45 55.5	+0.1
KBN	**Korca**	6.09	108	P		Pn	01 45 57.4	+1.9
KBN	**Korca**	6.09	108	Pn		Pn	01 45 58.9	+3.4
ZST	**Bratislava**	6.09	26	*e*PN		Pn	01 45 59.4	+4.0
CKRC	**Cesky Krumlov**	6.11	7	*e*SN		Sn	01 47 02.4	-2.8
CKRC	**Cesky Krumlov**	6.11	7	*e*PN		Pn	01 45 56.0	+0.4
LSK	**Leskovik**	6.17	113	P		Pn	01 45 59.4	+2.9
GIMEL	**St. Georges /**	6.20	310	P		Pn	01 45 59.1	+2.1
BOURR	**Bourrignon**	6.25	320	P		Pn	01 46 00.0	+2.4
BOURR	**Bourrignon**	6.25	320	S		Sn	01 47 12.4	+3.6
FELD	**Feldberg im Sc**	6.27	326	P		Pn	01 45 59.7	+1.7
BOVS	**Bovan**	6.30	79	⇑P		Pn	01 45 59.7	+1.4
BOVS	**Bovan**	6.30	79	*e*Pn		Pn	01 45 58.8	+0.5
BOVS				*e*Sn		Sn	01 47 08.4	-1.6
MODS	**Modra-Piesok**	6.31	26	*e*PN		Pn	01 46 01.6	+3.3
MODS				*e*SN		Sn	01 47 09.1	-1.0
BRANT	**Les Verrieres**	6.33	314	P		Pn	01 46 01.4	+2.7
CABF	**La Chapelle**	6.34	310	*e*P		Pn	01 46 00.7	+1.8
CABF				*e*Sn		Sn	01 47 04.9	-6.2
	comp=N,7.9nm,0.6s							
OG35	**Corcelles**	6.35	304	P		Pn	01 46 00.7	+1.7
NEST	**Nestorio**	6.36	109	P		Pn	01 46 02.2	+3.0
BARS	**Barje**	6.36	87	*e*Pn		Pn	01 46 01.1	+2.0
BARS				*e*Sn		Sn	01 47 11.4	-0.1
KIZ	**Kirchzarten**	6.37	326	P		Pn	01 46 00.7	+1.4
KHC	**Kasperske Hory**	6.37	2	Pn		Pn	01 46 00.1	+0.8
KHC	**Kasperske Hory**	6.37	2	*e*SN		Sn	01 47 09.1	-2.7
KHC	**Kasperske Hory**	6.37	2	*e*PN		Pn	01 45 59.5	+0.2
CHMF	**Charmoille**	6.43	316	P		Pn	01 46 02.3	+2.2
VIVF	**Saint-Julien-l**	6.49	292	*e*P		Pn	01 46 04.7	+3.8
VIVF				*e*Sn		Sn	01 47 08.2	-6.5
	comp=N,0.8nm,0.3s							
BFO	**Black Forest**	6.52	330	Pn		Pn	01 46 03.2	+1.9
RIVEL	**MONT RIVEL**	6.52	310	P		Pn	01 46 03.8	+2.4
JAN	**Janina**	6.57	116	P		Pn	01 46 02.8	+0.7
VOGT	**Vogtsburg - To**	6.57	326	P		Pn	01 46 03.5	+1.5
PRVS	**Prvonek**	6.58	89	*e*Pn		Pn	01 46 04.1	+2.0
PRVS				*e*Sn		Sn	01 47 17.0	+0.2
MOF	**Molkenrain**	6.63	322	P		Pn	01 46 04.0	+1.1
BOUC	**Bouclans**	6.64	315	P		Pn	01 46 00.2	-2.7
KRUC	**Moravsky**	6.69	19	*e*PN		Pn	01 46 04.5	+0.9
KRUC				*e*SN		Sn	01 47 17.2	-2.2
ZAGS	**Zajecar**	6.70	78	*e*Pn		Pn	01 46 05.3	+1.6
BZS	**Buzias**	6.71	62	⇑P		Pn	01 46 06.7	+2.8
BZS	**Buzias**	6.71	62	*e*Pn		Pn	01 46 06.9	+3.0
BZS				*e*Sn		Sn	01 47 18.3	-1.7
OPP	**Oppenau**	6.71	330	P		Pn	01 46 05.6	+1.7
HINF	**Hinteralfeld**	6.73	321	*e*P		Pn	01 46 05.7	+1.5
HINF				*e*Sn		Sn	01 47 17.3	-3.3
	comp=N,16nm,0.5s							
RONF	**Ronchamp**	6.75	319	P		Pn	01 46 05.6	+1.1
RONF				S		Sn	01 47 19.9	-1.2
BOSS	**Bosilegrad**	6.88	89	*e*Pn		Pn	01 46 08.1	+1.9
BOSS				*e*Sn		Sn	01 47 23.7	-0.4
ECH	**Echery**	6.89	324	Pn		Pn	01 46 07.9	+1.5
ECH	**Echery**	6.89	324	P		Pn	01 46 07.7	+1.3
ECH	**Echery**	6.89	324	P		Pn	01 46 07.4	+1.0
LASF	**Ste Croix**	6.91	284	*e*P		Pn	01 46 08.8	+2.2
LASF				*e*Sn		Sn	01 47 18.7	-6.2
	comp=N,25nm,1.3s							
TSLK	**Tsoukalades, L**	6.91	122	P		Pn	01 46 09.1	+2.5
LKD2	**Lefkada island**	6.93	122	P		Pn	01 46 09.0	+2.0
ZAPS	**Zavoj**	6.96	83	*e*Pn		Pn	01 46 09.2	+1.9
ZAPS				*e*Sn		Sn	01 47 25.0	-1.2
WLS	**Welschbruch**	6.96	326	P		Pn	01 46 08.2	+0.8
VYHS	**Vyhne**	6.97	33	*e*PN		Pn	01 46 10.8	+3.3
CDF	**Champ du Feu**	7.00	326	*e*P		Pn	01 46 08.7	+0.8
BLKB	**Belogradchik**	7.00	80	⇑P		Pn	01 46 09.4	+1.5
NYDR	**Nydri-Lefkada**	7.00	123	P		Pn	01 46 10.9	+3.0
HERR	**Herculane**	7.02	69	⇑P		Pn	01 46 10.4	+2.3
EVGI	**Lefkada island**	7.04	124	P		Pn	01 46 11.1	+2.7
HAU	**Haudompre**	7.10	320	*e*P		Pn	01 46 10.3	+1.0
HAU				*e*Sn		Sn	01 47 22.9	-6.9
	comp=N,24nm,0.5s							
GZR	**Gura Zlata**	7.40	66	⇑P		Pn	01 46 16.2	+2.7
VTS	**Vitosha**	7.42	88	⇓P		Pn	01 46 15.6	+1.8
VTS	**Vitosha**	7.42	88	Pn		Pn	01 46 15.2	+1.4
VTS	**Vitosha**	7.42	88	*e*Pn		Pn	01 46 15.6	+1.8
VTS				*e*Sn		Sn	01 47 36.0	-1.7
LIT	**Litokhoron**	7.49	108	Pn		Pn	01 46 16.1	+1.4

AB31 Akbulak array 14.88 332 P **Pn 01 48 00.8 -1.1**
1.6nm,0.8s,baz=147,slow=12,SNR=23

ROM 29 01:46:44.7±0.0, 42°800N±0′002×13°157E±0′005, h10km, ML1.9/9, 11C-9D, Error ellipse: s-maj=0.4km s-min=0.2km az=271.0, Central Italy

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.05 317**	P	Pg	01 46 47.0	+0.2
NRCA			S	Sg	01 46 48.2	-0.1
MC2	**Monte Cornacci**	**0.12 12**	P	Pg	01 46 48.2	+0.5
MC2			S	Sg	01 46 50.4	+0.6
MMO1	**Montemonaco**	**0.16 52**	⇑P	Pg	01 46 48.8	+0.6
MMO1			S	Sg	01 46 51.5	+0.8
MMO1			AML	AML		
	comp=E,1570μm,0.5s					
MMO1			AML	AML		
	comp=N,2230μm,0.6s					
MMO1			AML	AML		
	comp=N,2225μm,0.6s					
MMO1			AML	AML		
	comp=E,1565μm,0.5s					
FEMA	**Monte Fema**	**0.18 334**	P	Pg	01 46 49.3	+0.7
FEMA			S	Sg	01 46 52.3	+0.9
LNSS	**Leonessa**	**0.21 204**	⇑P	Pg	01 46 49.9	+0.7
LNSS			S	Sg	01 46 53.7	+1.5
LNSS			AML	AML		
	comp=E,1415μm,0.5s					
LNSS			AML	AML		
	comp=N,1820μm,0.2s					
T1243	**Rocca Santa Ma**	**0.24 116**	P	Pg	01 46 50.2	+0.6
T1243			S	Sg	01 46 54.3	+1.4
T1243			AML	AML		
	comp=E,1350μm,0.2s					
T1243			AML	AML		
	comp=N,1225μm,0.3s					
T1243			AML	AML		
	comp=E,1335μm,0.2s					
T1243			AML	AML		
	comp=N,1280μm,0.8s					
T1243			AML	AML		
	comp=N,1230μm,0.3s					
FDMO	**Fiordimonte**	**0.24 348**	⇑P	Pg	01 46 50.2	+0.6
FDMO			S	Sg	01 46 54.3	+1.3
FDMO			AML	AML		
	comp=N,489μm,0.2s					
FDMO			AML	AML		
	comp=E,421μm,0.3s					
CSP1	**Cessapalombo**	**0.29 7**	⇑P	Pg	01 46 51.3	+0.6
CSP1			S	Sb	01 46 56.2	-0.9
RM33	**Pellescritta (**	**0.29 172**	P	Pg	01 46 51.3	+0.6
RM33			S	Sb	01 46 56.1	-1.0
RM33			AML	AML		
	comp=E,287μm,1.5s					
RM33			AML	AML		
	comp=N,359μm,0.4s					
CAMP	**Campotosto**	**0.32 145**	P	Pg	01 46 51.8	+0.6
CAMP			S	Sb	01 46 56.8	-1.1
ARRO	**Arrone**	**0.36 233**	⇓P	Pb	01 46 52.5	-0.7
ARRO			AML	AML		
	comp=N,199μm,0.2s					
ARRO			AML	AML		
	comp=E,230μm,1.1s					
ARRO			AML	AML		
	comp=E,230μm,1.1s					
TERO	**Teramo**	**0.37 118**	⇑P	Pg	01 46 52.5	+0.4
TERO			AML	AML		
	comp=E,930μm,1.6s					
TERO			AML	AML		
	comp=N,268μm,0.1s					
TERO			AML	AML		
	comp=E,302μm,0.1s					
TERO			AML	AML		
	comp=N,334μm,0.1s					
TERO			AML	AML		
	comp=N,268μm,0.1s					
TERO			AML	AML		
	comp=E,928μm,1.6s					
OFFI	**Offida**	**0.41 71**	⇓P	Pb	01 46 54.3	+0.3
ASSB	**Assisi San Ben**	**0.44 304**	⇓P	Pg	01 46 53.7	+0.4
ASSB			AML	AML		
	comp=N,293μm,0.1s					
ASSB			AML	AML		
	comp=E,274μm,0.1s					
CESX	**Cesi**	**0.47 246**	⇓P	Pb	01 46 54.7	-0.2
CESX			AML	AML		
	comp=E,123μm,1.5s					
CESX			AML	AML		
	comp=N,160μm,0.3s					
SNTG	**Esanatoglia**	**0.48 341**	⇓P	Pg	01 46 54.6	+0.5
SNTG			AML	AML		
	comp=E,146μm,1.6s					
SNTG			AML	AML		
	comp=N,140μm,0.1s					
EL6	**Elcito**	**0.53 356**	P	Pg	01 46 54.3	-0.7
EL6			S	Sb	01 47 05.0	+1.1
FIAM	**Fiamignano**	**0.53 183**	⇓P	Pg	01 46 55.3	+0.3
FIAM			S	Sb	01 47 04.0	+0.1
FOSV	**Fossato di Vic**	**0.57 330**	P	Pg	01 46 55.4	-0.4
FOSV			S	Sb	01 47 06.0	+0.9
CING	**Cingoli**	**0.58 3**	⇑P	Pg	01 46 56.2	+0.3
CING			AML	AML		
	comp=E,116μm,0.3s					
CING			AML	AML		
	comp=N,126μm,0.2s					
FAGN	**Fagnano**	**0.62 149**	⇑P	Pb	01 46 57.9	+0.2
VCEL	**Villa Celiera**	**0.65 129**	P	Pb	01 46 58.0	-0.1
PP3	**Marolino**	**0.67 30**	⇓P	Pb	01 46 58.5	+0.1
SSFR	**Montelago di S**	**0.69 337**	⇓P	Pb	01 46 58.7	-0.1
SSFR			AML	AML		
	comp=N,216μm,0.2s					
SSFR			AML	AML		
	comp=E,212μm,0.2s					
ARVD	**Arcevia**	**0.71 347**	⇑P	Pg	01 46 58.7	+0.2
ARVD			S	Sn	01 47 11.0	-0.9
T010	**Collepietro**	**0.73 141**	⇑P	Pb	01 46 59.4	-0.2
FRON	**Frontone**	**0.78 336**	P	Pg	01 47 00.0	+0.2
PIEI	**Pieia**	**0.86 328**	⇓P	Pb	01 47 01.7	-0.1
NARO	**Abbazia di Nar**	**0.91 333**	⇑P	Pg	01 47 02.3	0.0
NARO			S	Sn	01 47 17.0	+0.2
FSSB	**Fossombrone**	**0.93 343**	⇑P	Pb	01 47 03.0	0.0

*REY **29** 01:47:02.6, 63°.65N×19°.09W, h1km*
*NEIC **29** 01:47:02.8±1.9, 63°.69N±0°.08×19°.2W±0°.1, h10km±4km, Error ellipse: s-maj=11.4km s-min=7.1km az=179.0*
*IDC **29** 01:47:03.6±0.5, 63°.55N× 19.07W, h0km, mb4.0/23, mbtmp4.0/26, ML2.8/3, MS3.4/30, Error ellipse: s-maj=21.7km s-min=9.7km az=22.0*
ISC 29 01:47:03.9±0.3, 63°.68N±0°.02×19°.10W±0°.02, h10km, n341, σ1§55/342, mb4.4/68, MS3.5/35, Iceland

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGOD	**Go??abunga**	**0.10 258**		**Pg**	**01 47 05.2**	**-1.4**
IGOD	**Go??abunga**	**0.10 258**	P	**Pg**	**01 47 05.1**	**-1.4**
	baz=273					
ISLY	**Slysaalda**	**0.14 357**		**Pg**	**01 47 06.6**	**-0.6**
ISLY	**Slysaalda**	**0.14 357**	P	**Pg**	**01 47 06.6**	**-0.6**
	baz=356					
IHVO	**Lagu-Hvolar**	**0.19 144**		**Pg**	**01 47 06.9**	**-1.0**
IHVO	**Lagu-Hvolar**	**0.19 144**	P	**Pg**	**01 47 06.6**	**-1.3**
	baz=139					
IHVO			S	**Sg**	**01 47 09.7**	**-0.9**
	baz=139					
IALF	**Alftagrof**	**0.19 191**		**Pg**	**01 47 06.5**	**-1.4**
IALF	**Alftagrof**	**0.19 191**	P	**Pg**	**01 47 06.5**	**-1.4**
	baz=194					
IRJU	**Rjupnafell**	**0.20 108**		**Pg**	**01 47 07.1**	**-0.9**
IRJU	**Rjupnafell**	**0.20 108**	P	**Pg**	**01 47 06.8**	**-1.3**
	baz=101					
IRJU			S	**Sg**	**01 47 10.1**	**-0.8**
	baz=101					
ISNB	**Snabyli**	**0.22 75**		**Pg**	**01 47 07.1**	**-1.2**
ISNB	**Snabyli**	**0.22 75**	P	**Pg**	**01 47 07.2**	**-1.2**
	baz=68					
IESK	**Eystri-Skogar**	**0.22 225**		**Pg**	**01 47 07.0**	**-1.5**
IESK	**Eystri-Skogar**	**0.22 225**	P	**Pg**	**01 47 07.1**	**-1.3**
	baz=231					
IMID	**Miomork**	**0.35 267**		**Pg**	**01 47 09.7**	**-1.1**
IMID	**Miomork**	**0.35 267**	P	**Pg**	**01 47 09.6**	**-1.1**
	baz=271					
IMID			S	**Sb**	**01 47 15.1**	**-2.6**
	baz=271					
IFED	**Fedgar**	**0.43 323**		**Pb**	**01 47 11.6**	**-2.0**
IFED	**Fedgar**	**0.43 323**	P	**Pb**	**01 47 11.6**	**-2.0**
	baz=325					
IFED			S	**Sb**	**01 47 17.8**	**-2.4**
	baz=325					
IHAU	**Haukadalur**	**0.48 307**		**Pg**	**01 47 12.0**	**-1.2**
IHAU	**Haukadalur**	**0.48 307**	P	**Pg**	**01 47 12.1**	**-1.2**
	baz=310					
IHAU			S	**Sb**	**01 47 19.1**	**-2.4**
	baz=310					
IVME	**Vestmannaeyjar**	**0.59 245**	P	**Pg**	**01 47 14.0**	**-1.3**
	baz=248					
IIEY	**Innrieyrar**	**0.60 46**	P	**Pg**	**01 47 14.2**	**-1.3**
	baz=44					
IIEY			S	**Sg**	**01 47 22.6**	**-0.8**
	baz=44					
ISAU	**Saurbar**	**0.66 299**	P	**Pg**	**01 47 15.0**	**-1.6**
	baz=300					
ISAU			S	**Sb**	**01 47 24.6**	**-2.0**
	baz=300					
IKAL	**Kalfafell**	**0.68 66**	P	**Pg**	**01 47 15.6**	**-1.4**
	baz=64					
IKAL			S	**Sg**	**01 47 25.7**	**-0.2**
	baz=64					
IASM	**Asmuli**	**0.69 284**	P	**Pg**	**01 47 15.4**	**-1.8**
	baz=286					
IASM			S	**Sb**	**01 47 25.6**	**-2.0**
	baz=286					
IJOK	**Jokulheimar**	**0.74 31**	P	**Pg**	**01 47 16.7**	**-1.5**
	baz=30					
IJOK			S	**Sg**	**01 47 27.7**	**-0.3**
	baz=30					
IGYG	**Gygjarholskot**	**0.78 321**	P	**Pg**	**01 47 17.1**	**-1.8**
	baz=322					
ISOL	**Solvholt**	**0.86 288**	P	**Pg**	**01 47 18.1**	**-2.2**
	baz=289					
ISOL			S	**Sb**	**01 47 30.1**	**-2.2**
	baz=289					
IHUS	**Husbondi**	**0.89 45**	P	**Pg**	**01 47 19.1**	**-1.8**
	baz=44					
IHUS			S	**Sg**	**01 47 31.3**	**-1.1**
	baz=44					
ISKR	**Skrokkalda**	**0.94 19**	P	**Pg**	**01 47 20.1**	**-1.8**
	baz=18					
IKRO	**Krokur**	**0.99 296**	P	**Pg**	**01 47 20.3**	**-2.5**
	baz=297					
IKRO			S	**Sb**	**01 47 34.4**	**-1.6**
	baz=297					
IBJA	**Bjarnastaoir**	**1.01 286**	P	**Pg**	**01 47 20.9**	**-2.5**
	baz=288					
IBJA			S	**Sb**	**01 47 35.3**	**-1.5**
	baz=288					
IVOT	**Vottur**	**1.03 54**	P	**Pg**	**01 47 21.4**	**-2.3**
	baz=53					
IVOT			S	**Sg**	**01 47 35.3**	**-1.8**
	baz=53					
IHEI	**Heioarbar**	**1.08 300**	P	**Pg**	**01 47 21.8**	**-2.7**
	baz=301					
IHEI			S	**Sb**	**01 47 36.9**	**-1.8**
	baz=301					
IGRF	**Grimsfjall**	**1.09 47**	P	**Pg**	**01 47 22.4**	**-2.3**
	baz=46					
IGRF			S	**Sg**	**01 47 37.3**	**-1.6**
	baz=46					
IFAG	**Fagurholsmyri**	**1.10 79**	P	**Pb**	**01 47 22.0**	**-3.0**
	baz=77					
IFAG			S	**Sb**	**01 47 37.3**	**-2.1**
	baz=77					
ISAN	**Sandskeio**	**1.16 290**	P	**Pb**	**01 47 23.0**	**-2.9**
	baz=291					
ISAN			S	**Sn**	**01 47 39.5**	**-2.4**
	baz=291					
IVON	**Vonarskard**	**1.16 30**	P	**Pb**	**01 47 23.5**	**-2.5**
	baz=29					
IDJK	**Dyngjujokull**	**1.16 44**	P	**Pb**	**01 47 23.8**	**-2.4**
	baz=43					
ISTE	**Stelbrattur**	**1.20 349**	P	**Pb**	**01 47 24.1**	**-2.6**
	baz=349					
IKIS	**Kista**	**1.20 33**	P	**Pb**	**01 47 24.6**	**-2.2**
	baz=33					
IKAS	**Kald??rsel**	**1.27 287**	P	**Pn**	**01 47 24.8**	**-2.7**
	baz=288					
IKAS			S	**Sn**	**01 47 42.5**	**-2.1**
	baz=288					
IDYN	**Dyngjuhals**	**1.35 33**	P	**Pn**	**01 47 26.6**	**-2.2**
	baz=33					
IURH	**Urdarhals**	**1.43 36**	P	**Pn**	**01 47 27.8**	**-2.1**
	baz=35					
BORG	**Borgarnes**	**1.45 319**	Pn	**Pn**	**01 47 27.7**	**-2.4**
	64nm,0.3s,baz=117,slow=6.8,SNR=57					
BORG			Sn	**Sg**	**01 47 53.5**	**+3.1**
	51nm,0.3s,baz=122,slow=11,SNR=11					
IASB	**`sbjarnarst**	**1.45 319**	P	**Pn**	**01 47 27.5**	**-2.5**
	baz=319					
IGRV	**Grindav??k**	**1.50 278**	P	**Pn**	**01 47 28.3**	**-2.5**
	baz=279					
IKRE	**Kreppuhraun**	**1.62 46**	P	**Pn**	**01 47 30.8**	**-1.8**
	baz=45					
IKRE			S	**Sn**	**01 47 52.6**	**-0.9**
	baz=45					
THOR	**Thorvaldshraun**	**1.64 39**	P	**Pn**	**01 47 31.2**	**-1.6**
	baz=38					
THOR			S	**Sn**	**01 47 52.2**	**-1.8**
	baz=38					
IASK	**Askja**	**1.74 37**	P	**Pn**	**01 47 32.6**	**-1.6**
	baz=36					
IMKO	**Mokollar**	**1.77 41**	P	**Pn**	**01 47 33.3**	**-1.3**
	baz=41					
ISVA	**Svartarkot**	**1.84 25**	P	**Pn**	**01 47 34.1**	**-1.4**
	baz=24					
IVSH	**V-Sauoahnukur**	**1.86 51**	P	**Pn**	**01 47 34.2**	**-1.6**
	baz=50					
IADA	**Aoalbol**	**2.04 47**	P	**Pn**	**01 47 37.1**	**-1.2**
	baz=47					
IMEL	**Melhnausar**	**2.17 28**	P	**Pn**	**01 47 38.9**	**-1.1**
	baz=28					
IREN	**Reynihlio**	**2.19 25**	P	**Pn**	**01 47 39.7**	**-0.6**
	baz=24					
IKVO	**Krokottuvotn**	**2.25 24**	P	**Pn**	**01 47 40.6**	**-0.5**
	baz=24					
IHLA	**Hella**	**2.29 7**	P	**Pn**	**01 47 40.6**	**-1.1**
	baz=7.2					
IHRN	**Hraun**	**2.48 350**	P	**Pn**	**01 47 43.1**	**-1.1**
	baz=350					
IHED	**Heoinshofoi**	**2.53 17**	P	**Pn**	**01 47 45.4**	**+0.5**
	baz=17					
IGIL	**Gilhagi**	**2.68 25**	P	**Pn**	**01 47 46.3**	**-0.6**
	baz=24					
SCO	**Scoresbysund**	**6.92 352**	Pn	**Pn**	**01 48 43.9**	**-1.3**
JMIC	**Jan Mayen**	**8.38 24**	LR	LR	01 51 36.2	
	comp=Z,148nm,20.0s,baz=242,slow=32					
EKA	**Eskdalemuir Ar**	**11.61 129**	Pn	**Pn**	**01 49 47.1**	**-2.3**
	baz=317,slow=13					
	5.0nm,0.8s					
SFJD	**Kangerlussuaq**	**13.48 298**	LR	LR	01 54 55.2	
	comp=Z,149nm,18.2s,baz=102,slow=35					
NOA	**NORSAR Array B**	**14.24 87**	Pn	**Pn**	**01 50 26.0**	**+0.7**
	baz=292,slow=12,SNR=5.6					
	0.7nm,0.8s					
HFS	**Hagfors**	**15.74 88**	Pn	**P**	**01 50 46.9**	**-2.4**
	baz=289,slow=8.8,SNR=2.1					
	2.4nm,1.0s					
ARCES	**ARCESS Array B**	**18.27 52**	LR	LR	01 57 18.6	
	comp=Z,118nm,18.4s,baz=76,slow=34					
FINES	**FINESS Array B**	**20.61 76**	P	Pn	01 51 43.4	-1.6
	15nm,0.9s,baz=300,slow=8.4,SNR=19					
	15nm,0.9s					
FINES	**FINESS Array B**	**20.61 76**	P	**P**	**01 51 41.1**	**-1.6**
FIA1	**FINESS Array S**	**20.61 76**	P	**P**	**01 51 39.9**	**-2.8**
FIA1			IAmb	IAmb	01 51 48.1	
	comp=Z,38nm,1.1s					
CLL	**Collm**	**20.95 111**	P	**P**	**01 51 45.1**	**-1.4**
CLL	**Collm**	**20.95 111**	*e*P	**P**	**01 51 47.0**	**+0.4**
	comp=Z,12nm,1.3s					
CLL			*e*PPP	PPP	01 52 12.0	
CLL			*ex*	x	01 52 22.0	
ECH	**Echery**	**21.12 125**	P	**P**	**01 51 47.4**	**-1.0**
BFO	**Black Forest**	**21.45 123**	P	**P**	**01 51 50.1**	**-2.0**
BFO			IAmb	IAmb	01 51 55.5	
	comp=Z,20nm,1.0s					
FRB	**Frobisher Bay**	**21.46 293**	LR	LR	01 59 19.4	
	comp=Z,64nm,20.5s,baz=38,slow=34					
GRA1	**Grafenberg Arr**	**21.47 116**	P	**P**	**01 51 52.5**	**+0.3**
BRG	**Berggiesshubel**	**21.67 111**	*e*P	**P**	**01 51 55.5**	**+1.2**
BRG			Amp		01 51 56.9	
	comp=Z,9.4nm,0.9s					
BRG			Amp		02 02 30.0	
	comp=N,0.2nm,11.9s					
BRG			Amp		02 02 33.0	
	comp=Z,0.4nm,12.3s					
BRG			Amp		02 02 41.0	
	comp=E,0.2nm,10.5s					
PVCC	**Panska Ves**	**22.20 111**	AMS	AMS	02 02 30.0	
	comp=E,400nm,15.5s					
PRU	**Pruhonice**	**22.60 111**	AMS	AMS	02 03 40.0	
	comp=E,300nm,11.1s					
CHVC	**Chvalec**	**22.77 109**	*e*P	**P**	**01 52 07.2**	**+1.1**
CHVC			AMS	AMS	02 04 20.0	
UPC	**Upice**	**22.82 109**	AMS	AMS	02 04 30.0	
	comp=E,300nm,16.2s					
PABE	**Paberze**	**22.86 91**		**P**	**01 52 06.3**	**-0.6**
KHC	**Kasperske Hory**	**22.86 114**	P	**P**	**01 52 06.7**	**-0.4**
KHC	**Kasperske Hory**	**22.86 114**	*e*P	**P**	**01 52 07.0**	**-0.1**
KHC			AMS	AMS	02 03 20.0	
	comp=E,300nm,15.1s					
OSTC	**Ostas**	**22.87 108**	*e*P	**P**	**01 52 07.9**	**+0.8**
OSTC			AMS	AMS	02 03 20.0	
	comp=E,300nm,15.2s					
DAVA	**Damuels**	**22.91 122**	*e*P	**P**	**01 52 11.2**	**+3.6**
	comp=E,7.6nm,1.4s					
DPC	**Dobruska-Polom**	**23.07 109**	*e*P	**P**	**01 52 08.5**	**-0.7**
DPC			AMS	AMS	02 04 20.0	
	comp=E,400nm,7.3s					
RETA	**Reutte**	**23.07 120**	*e*P	**P**	**01 52 11.3**	**+2.0**
	comp=E,7.7nm,1.1s					
GEC2	**GERESS Array S**	**23.14 114**	P	**P**	**01 52 09.5**	**-0.5**
GERES	**GERESS Array B**	**23.14 114**	P	**P**	**01 52 10.1**	**+0.1**
	comp=E,2.0nm,0.9s,baz=298,slow=8.6,SNR=13					
	comp=E,2.0nm,0.9s					
GERES	**GERESS Array B**	**23.14 114**	P	**P**	**01 52 08.8**	**-1.3**
MOTA	**Moosalm**	**23.32 120**	*e*P	**P**	**01 52 14.3**	**+2.4**
	comp=E,8.1nm,1.2s					
DAVOX	**Davos/Dischmat**	**23.33 123**	P	**P**	**01 52 12.5**	**+0.5**
	comp=E,3.0nm,0.9s,baz=325,slow=5.7,SNR=4.1					
DAVOX			LR	LR	02 01 03.1	
	comp=E,53nm,18.5s,baz=266,slow=36					
	comp=E,3.0nm,0.9s					
CKRC	**Cesky Krumlov**	**23.41 114**	*e*P	**P**	**01 52 12.7**	**+0.1**
CKRC			AMS	AMS	02 04 10.0	
	comp=E,400nm,13.4s					
SQTA	**Sankt Quirin**	**23.47 120**	*e*P	**P**	**01 52 15.9**	**+2.5**
	comp=E,4.8nm,0.9s					
KRLC	**Kraliky**	**23.47 109**	*e*P	**P**	**01 52 15.2**	**+1.9**
KRLC			AMS	AMS	02 04 40.0	
	comp=E,400nm,8.7s					
WATA	**Walderalm**	**23.51 120**	*e*P	**P**	**01 52 15.5**	**+1.6**
	comp=E,5.5nm,0.9s					
TREC	**Trest**	**23.52 111**	*e*P	**P**	**01 52 14.7**	**+0.9**
TREC			AMS	AMS	02 03 30.0	
	comp=E,200nm,13.6s					
WTTA	**Wattenberg**	**23.60 120**	*e*P	**P**	**01 52 16.4**	**+1.7**
	comp=E,7.0nm,1.0s					
VRAC	**Vranov**	**23.97 110**	P	**P**	**01 52 18.5**	**+0.4**
	comp=E,4.6nm,0.8s,baz=310,slow=3.4,SNR=4.7					
	comp=E,4.6nm,0.8s					
VRAC	**Vranov**	**23.97 110**	*e*P	**P**	**01 52 19.5**	**+1.4**
MORC	**Moravsky Berou**	**24.02 108**	P	**P**	**01 52 15.9**	**-2.6**
MORC	**Moravsky Berou**	**24.02 108**	*e*P	**P**	**01 52 19.6**	**+1.1**
BIOA	**Bad Ischl, Aus**	**24.04 116**	*e*P	**P**	**01 52 20.5**	**+1.8**
	comp=E,7.5nm,1.3s					
KRUC	**Moravsky**	**24.08 111**	*e*P	**P**	**01 52 20.0**	**+0.9**
MOA	**Molln**	**24.16 115**	*e*P	**P**	**01 52 21.7**	**+1.8**
	comp=E,4.3nm,1.2s					
OKC	**Ostrava-Krasne**	**24.23 107**	AMS	AMS	02 03 40.0	
	comp=E,200nm,12.2s					
CIMO	**Cimolais**	**24.70 120**	P	**P**	**01 52 23.0**	**-1.7**
CIMO			IAmb	IAmb	01 52 27.9	
	comp=Z,4.4nm,1.0s					
CONA	**Conrad Observa**	**24.75 113**	*e*P	**P**	**01 52 25.5**	**+0.2**
	comp=Z,3.6nm,1.1s					
MYKA	**Terra Mystica**	**24.90 118**	*e*P	**P**	**01 52 29.8**	**+3.2**
	comp=Z,5.1nm,0.9s					
ZST	**Bratislava**	**25.05 111**	*e*P	**P**	**01 52 29.7**	**+1.8**
RONA	**Rosalia, Austr**	**25.11 113**	*e*P	**P**	**01 52 30.3**	**+1.8**
	comp=Z,12nm,1.1s					
ARSA	**Arzberg**	**25.15 114**	*e*P	**P**	**01 52 30.8**	**+1.9**
	comp=Z,3.1nm,0.8s					
LANS	**Liptovska Anna**	**25.31 107**	*e*P	**P**	**01 52 32.3**	**+2.0**
OBKA	**Obir**	**25.36 117**	*e*P	**P**	**01 52 32.6**	**+1.7**
	comp=Z,8.0nm,1.4s					
SCHQ	**Schefferville**	**25.37 272**	P	**P**	**01 52 32.1**	**+1.4**
	comp=Z,5.8nm,1.1s,baz=91,slow=5.4,SNR=4.0					
	comp=Z,5.8nm,1.1s					
SOKA	**Soboth**	**25.41 116**	*e*P	**P**	**01 52 32.8**	**+1.5**
	comp=Z,3.2nm,1.3s					
SABO	**M.te Sabotino**	**25.42 119**	P	**P**	**01 52 31.1**	**-0.3**
SABO			IAmb	IAmb	01 52 35.7	
	comp=Z,12nm,1.1s					
VYHS	**Vyhne**	**25.55 108**	*e*P	**P**	**01 52 33.6**	**+1.2**
ESBB	**Sonseca Array**	**25.67 152**	P	**P**	**01 52 32.5**	**-1.2**
ESBB			IAmb	IAmb	01 52 38.8	
	comp=Z,10nm,1.1s					
ESDC	**Sonseca Array**	**25.67 152**	P	**P**	**01 52 33.4**	**-0.3**
	comp=Z,4.7nm,1.0s,baz=347,slow=9.6,SNR=17					
ESDC			LR	LR	02 01 28.0	
	comp=Z,42nm,20.2s,baz=314,slow=34					
	comp=Z,4.7nm,1.0s					
ESDC	**Sonseca Array**	**25.67 152**	P	**P**	**01 52 31.3**	**-2.3**
PSZ	**Piszkesteto**	**26.44 108**	P	**P**	**01 52 38.5**	**-2.1**
PSZ			IAmb	IAmb	01 52 43.9	
	comp=Z,14nm,1.0s					
OSSC	**Osservatorio P**	**26.61 125**	P	**P**	**01 52 39.8**	**-2.3**
OSSC			IAmb	IAmb	01 52 47.3	
	comp=Z,10nm,0.9s					
KOLS	**Kolonicke sedl**	**26.68 104**	*e*P	**P**	**01 52 45.2**	**+2.5**
AKASG	**Malin Array Be**	**28.44 94**	P	**P**	**01 52 59.0**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=316,slow=9.5,SNR=4.8					
AKASG			LR	LR	02 04 48.0	
	comp=Z,101nm,19.4s,baz=286,slow=38					
	comp=Z,0.4nm,0.5s					
BURAR	**Bucovina Array**	**28.96 103**	P	**P**	**01 53 02.3**	**-0.9**
DIVS	**Divibare**	**29.54 113**	P	**P**	**01 53 08.1**	**-0.2**
SGRT	**San Giovanni R**	**29.82 121**	P	**P**	**01 53 10.2**	**-0.6**
CUC	**Castrocucco**	**31.37 122**	P	**P**	**01 53 22.5**	**-1.9**
CUC			IAmb	IAmb	01 53 27.3	
	comp=Z,8.0nm,1.2s					
CLTB	**Caltabellotta**	**32.55 128**	P	**P**	**01 53 33.3**	**-1.6**
KBN	**Korca**	**32.76 116**	P	**P**	**01 53 35.7**	**-1.1**
KEST	**Kesra**	**32.93 135**	P	**P**	**01 53 39.1**	**+0.9**
	comp=Z,8.1nm,1.0s,baz=282,slow=2.7,SNR=13					
	comp=Z,8.1nm,1.0s					
KEST	**Kesra**	**32.93 135**	P	**P**	**01 53 37.6**	**-0.6**
RDO	**Rodhopi**	**34.28 110**	P	**P**	**01 53 49.0**	**-0.8**
RDO			IAmb	IAmb	01 53 52.5	
	comp=Z,8.0nm,1.0s					
BELG	**Belogornoye**	**35.38 76**	LR	LR	02 08 39.3	
	comp=Z,42nm,19.9s,baz=186,slow=37					
A36M	**Sachs Harbour**	**35.69 329**	P	**P**	**01 54 03.4**	**+1.8**
	baz=47					
LONY	**Lake Ozonia**	**36.20 265**	P	**P**	**01 54 08.7**	**+2.4**
	baz=38					
ARU	**Arti**	**37.13 64**	LR	LR	02 08 58.4	
	comp=Z,70nm,18.9s,baz=310,slow=35					
SADO	**Sadowa**	**38.11 269**	LR	LR	02 08 43.9	
	comp=Z,125nm,18.3s,baz=20,slow=34					
BR131	**Keskin Array S**	**38.92 102**	P	**P**	**01 54 29.4**	**-0.2**
BRTR	**Keskin Array B**	**38.93 102**	P	**P**	**01 54 30.6**	**+1.0**
	comp=Z,2.3nm,0.9s,baz=341,slow=6.6,SNR=11					
	comp=Z,2.3nm,0.9s					
BRTR	**Keskin Array B**	**38.93 102**	P	**P**	**01 54 28.8**	**-0.8**
YKA	**Yellowknife Ar**	**39.38 313**	P	**P**	**01 54 34.4**	**+1.4**
	comp=Z,1.5nm,1.0s,baz=42,slow=8.5,SNR=4.4					
	comp=Z,1.5nm,1.0s					
KBZ	**Khabaz**	**39.80 90**	P	**P**	**01 54 38.6**	**+2.0**
	comp=Z,2.9nm,0.9s,baz=306,slow=9.6,SNR=6.2					
KBZ			LR	LR	02 11 43.6	
	comp=Z,67nm,18.5s,baz=120,slow=37					
	comp=Z,2.9nm,0.9s					
INK	**Inuvik**	**40.32 328

baz=34
C24K **Franklin Bluff** 42.28 336 P P 01 54 57.4 +0.6
baz=31
CBN **Corbin Frederi** 42.61 262 P P 01 55 01.5 +1.7
baz=34
EPYK **Eagle Plains** 42.62 328 P P 01 54 59.4 -0.3
baz=36
O53A **New Philadelph** 42.63 267 P P 01 55 01.5 +1.4
baz=36
D24K **Happy Valley** 42.79 336 P P 01 55 01.4 +0.5
baz=30
E25K **Arctic Village** 43.06 334 P P 01 55 03.4 +0.1
baz=32
F26K **Sheenjek River** 43.14 333 P P 01 55 04.3 +0.5
baz=32
D23K **Nanushuk River** 43.28 337 P P 01 55 04.5 -0.5
baz=29
P53A **Whipple** 43.34 267 P P 01 55 05.4 -0.3
P53A IAmb IAmb 01 55 10.8
comp=Z,11nm,1.1s
G27K **Doyon Strip** 43.37 331 P P 01 55 05.4 -0.3
baz=33
TOLK **Toolik Lake Re** 43.37 336 P P 01 55 05.3 -0.4
baz=30
BMAR **Burnt Mountain** 43.46 333 P P 01 55 05.2 -1.2
GNI **Garni** 43.49 91 P P 01 55 08.3 +1.2
comp=Z,6.8nm,0.9s,baz=122,slow=9.8,SNR=3.9
GNI LR LR 02 14 33.6
comp=Z,32nm,18.1s,baz=5.5,slow=38
comp=Z,6.8nm,0.9s
GNI **Garni** 43.49 91 P P 01 55 07.4 +0.2
GNI IAmb IAmb 01 55 10.9
comp=Z,9.0nm,1.0s
F25K **Christian Rive** 43.53 333 P P 01 55 07.5 +0.4
baz=31
P52A **Corning** 43.55 267 P P 01 55 08.8 +1.4
baz=35
F36A **Milaca** 43.62 283 P P 01 55 07.1 -0.9
E24K **Your Creek** 43.66 335 P P 01 55 07.9 -0.2
baz=30
G26K **Porcupine Rive** 43.70 332 P P 01 55 08.6 +0.3
baz=32
H27K **Steamboat Moun** 43.83 330 P P 01 55 09.1 -0.3
baz=33
F24K **Squaw Lake** 44.03 334 P P 01 55 10.0 -1.1
baz=30
MARD **Mardin** 44.05 97 P P 01 55 10.7 -1.0
MMPY **Sheldon Lake,** 44.28 322 P P 01 55 13.1 0.0
baz=36
I27K **Kandik River** 44.38 330 P P 01 55 13.9 +0.1
baz=32
G24K **Hadweenzic Riv** 44.67 334 P P 01 55 15.5 -0.6
baz=30
H25K **Birch Creek** 44.71 333 P P 01 55 16.7 +0.3
baz=31
F22K **John River** 44.84 337 P P 01 55 17.5 +0.1
baz=28
K29M **Barlow Dome** 44.90 326 P P 01 55 17.8 -0.3
baz=34
I26K **Coal Creek Min** 44.97 330 P P 01 55 18.4 -0.1
baz=32
EGAK **Eagle** 44.97 329 P P 01 55 17.1 -1.5
EGAK IAmb IAmb 01 55 28.9
comp=Z,9.9nm,1.5s
EGAK **Eagle** 44.97 329 P P 01 55 19.2 +0.6
baz=32
G23K **Bananza Creek** 45.15 335 P P 01 55 21.2 +1.2
baz=28
FARO **Faro, Yukon** 45.16 323 P P 01 55 21.1 +1.0
baz=35
G22K **Bettles** 45.24 336 P P 01 55 21.5 +0.9
baz=28
PRP **Porcupine Dome** 45.30 332 P P 01 55 22.5 +1.2
baz=30
F21K **Alatna River** 45.32 337 P P 01 55 22.1 +0.7
baz=27
M31M **Drury Creek, Y** 45.46 324 P P 01 55 23.9 +1.5
baz=34
H24K **Noodor Dome** 45.50 333 P P 01 55 23.4 +0.6
baz=29
J26L **Joseph Creek** 45.75 330 P P 01 55 25.3 +0.5
baz=31
M30M **Minto, Yukon** 45.77 325 P P 01 55 25.8 +0.8
baz=33,SNR=8.0
K27K **Chicken** 45.82 329 P P 01 55 24.7 -0.6
baz=31
H23K **Yukon River** 45.84 334 P P 01 55 25.7 +0.3
H23K IAmb IAmb 01 55 32.0
comp=Z,10nm,1.4s
H23K **Yukon River** 45.84 334 P P 01 55 25.9 +0.5
baz=28
EDM **Edmonton** 45.94 303 P P 01 55 26.3 -0.1
G21K **Allakaket** 45.96 337 P P 01 55 26.7 +0.3
baz=26
J25K **Salcha River,** 46.05 331 P P 01 55 25.6 -1.6
J25K IAmb IAmb 01 55 31.3
comp=Z,4.3nm,1.1s
J25K **Salcha River,** 46.05 331 P P 01 55 26.4 -0.7
baz=30
H22K **Ishtalitna Cre** 46.13 335 P P 01 55 26.4 -1.3
baz=27
ILAR **Eielson Array** 46.23 332 P P 01 55 30.3 +1.8
comp=Z,2.6nm,1.1s,baz=26,slow=6.1,SNR=12
ILAR PcP PcP 01 57 05.4 +1.6
comp=Z,0.8nm,1.0s,baz=355,slow=2.2,SNR=4.8
ILAR LR LR 02 17 14.1
comp=Z,28nm,19.2s,baz=60,slow=39
comp=Z,2.6nm,1.1s
ILAR **Eielson Array** 46.23 332 P P 01 55 27.7 -0.8
M29M **Somme Creek** 46.31 326 P P 01 55 29.5 +0.3
baz=32,SNR=6.0
MDM **Murphy Dome** 46.35 333 P P 01 55 28.1 -1.4
MDM IAmb IAmb 01 55 41.8
comp=Z,8.9nm,1.3s
N31M **Braeburn, Yuko** 46.42 324 P P 01 55 28.2 -1.8
N31M **Braeburn, Yuko** 46.42 324 P P 01 55 30.5 +0.4
baz=33
IMAR **Indian Mountai** 46.49 336 P P 01 55 30.8 +0.3
HDA **Harding Lake** 46.56 332 P P 01 55 31.3 +0.1
baz=29
BCAR **Beaver Creek A** 46.58 328 P P 01 55 30.9 -0.5
L27K **Beaver Creek,** 46.59 328 P P 01 55 31.1 -0.3
L27K IAmb IAmb 01 55 40.0
comp=Z,6.8nm,1.2s
L27K **Beaver Creek,** 46.59 328 P P 01 55 32.0 +0.5
baz=31
H21K **Melozitna Rive** 46.61 336 P P 01 55 31.3 -0.1
baz=26,SNR=10
ECSD **EROS Data Cent** 46.65 283 P P 01 55 33.4 +1.4
baz=37
P33M **Teslin, Yukon** 46.68 321 P P 01 55 33.2 +1.0
baz=34
RIDG **Independent Ri** 46.70 330 P P 01 55 31.6 -0.6
RIDG IAmb IAmb 01 55 37.0
comp=Z,4.3nm,1.0s
RIDG **Independent Ri** 46.70 330 P P 01 55 33.1 +0.9
baz=30
TZTN **Tazewell** 46.72 266 P P 01 55 34.5 +1.8
baz=33
MLY **Manley** 46.78 334 P P 01 55 32.9 0.0
MLY IAmb IAmb 01 55 37.5
comp=Z,3.5nm,1.0s
MLY **Manley** 46.78 334 P P 01 55 33.3 +0.5
baz=27,SNR=5.7
N30M **Aishikik Lake** 46.79 324 P P 01 55 33.3 +0.4
baz=33
R33M **Jennings River** 46.83 319 P P 01 55 33.2 -0.2
baz=35
NEA2 **Nenana** 46.84 333 P P 01 55 34.0 +0.7
baz=28
WHY **Whitehorse** 46.88 323 P P 01 55 34.7 +0.9
baz=33
I21K **Tanana** 46.89 335 P P 01 55 33.7 +0.1
baz=27
KMSC **Kings Mountain** 46.91 263 P P 01 55 36.2 +2.1
baz=33
O30N **Mendenhall** 47.11 323 P P 01 55 36.7 +1.2
baz=33
M27K **Edge Creek, AK** 47.21 328 P P 01 55 36.8 +0.4
baz=31
DLBC **Dease Lake** 47.35 318 P P 01 55 40.8 +3.5
comp=Z,1.0nm,0.3s,baz=43,slow=12,SNR=3.7
comp=Z,1.0nm,0.3s
DLBC **Dease Lake** 47.35 318 P P 01 55 38.6 +1.2
baz=34
HYT **Haines Junctio** 47.44 324 P P 01 55 39.2 +1.1
baz=32
M26K **Nabesna, AK** 47.44 328 P P 01 55 39.1 +1.1
baz=30
TKL **Tuckaleechee C** 47.56 266 LR LR 02 14 09.6
comp=Z,94nm,21.1s,baz=18,slow=34
T47A **Sharon Grove** 47.94 270 P P 01 55 41.3 -0.9
J20K **Nowinta River** 48.20 335 P P 01 55 45.5 +1.7
baz=25
LAO **LASA Array** 48.34 293 P P 01 55 47.5 +2.3
baz=36
N25K **Chitina, Valde** 48.51 329 P P 01 55 45.3 -1.1
N25K IAmb IAmb 01 55 50.4
comp=Z,4.1nm,1.0s
N25K **Chitina, Valde** 48.51 329 P P 01 55 47.6 +1.3
baz=29
P29M **Windy Craggy** 48.52 323 P P 01 55 47.8 +1.4
baz=32
EGMT **Eagleton** 48.70 297 P P 01 55 49.8 +1.8
baz=36
ZALV **Zalesovo Beam** 48.80 50 PcP PcP 01 57 16.4 +3.2
comp=Z,0.6nm,0.5s,baz=338,slow=3.4,SNR=3.6
ZALV LR LR 02 16 45.8
comp=Z,19nm,18.3s,baz=297,slow=36
K20K **Telida** 48.93 335 P P 01 55 50.7 +1.3
baz=25,SNR=6.2
WALA **Waterton Lakes** 49.49 300 P P 01 55 53.4 -0.6
WALA IAmb IAmb 01 56 00.4
comp=Z,7.4nm,1.1s
L20K **Farewell, AK** 49.70 334 P P 01 55 56.0 +0.7
baz=24
M20K **Styx River** 50.09 334 P P 01 55 57.4 -1.0
M20K IAmb IAmb 01 56 10.3
comp=Z,7.6nm,1.4s
M20K **Styx River** 50.09 334 P P 01 55 59.8 +1.3
baz=25
CRAG **Craig** 50.77 318 P P 01 56 04.8 +1.4
baz=32
Q23K **Middleton Isla** 50.84 328 P P 01 56 05.4 +1.4
baz=27
RLMT **Red Lodge** 50.86 294 P P 01 56 06.3 +1.7
baz=35
OXF **Oxford** 51.03 270 P P 01 56 05.7 0.0
baz=33
OGNE **Ogallala** 51.25 285 P P 01 56 08.7 +1.2
baz=34
MSO **Missoula** 51.32 299 P P 01 56 09.9 +1.9
baz=35
N19K **Bonanza Creek** 51.34 334 P P 01 56 09.0 +1.2
baz=24
NEW **Newport** 51.36 302 P P 01 56 10.9 +2.7
comp=Z,1.8nm,0.9s,baz=350,slow=6.1,SNR=4.8
NEW LR LR 02 18 29.4
comp=Z,70nm,18.2s,baz=36,slow=37
comp=Z,1.8nm,0.9s
NEW **Newport** 51.36 302 P P 01 56 06.5 -1.6
NEW IAmb IAmb 01 56 12.0
comp=Z,7.2nm,1.4s
NEW **Newport** 51.36 302 P P 01 56 09.5 +1.3
baz=34
BOZ **Bozeman (W)** 51.42 296 P P 01 56 10.5 +1.7
baz=35,SNR=7.2
N18K **Kilae Creek** 51.73 335 P P 01 56 11.8 +1.1
baz=23
BBB **Bella Bella** 51.98 312 LR LR 02 17 39.0
comp=Z,23nm,19.0s,baz=100,slow=35
B08A **Colville Reser** 52.11 304 P P 01 56 11.7 -2.0
B08A IAmb IAmb 01 56 18.7
comp=Z,6.8nm,1.4s
PHWY **Pilot Hill** 52.42 288 P P 01 56 14.9 -1.5
PHWY IAmb IAmb 01 56 20.7
comp=Z,6.6nm,1.0s
TOA0 **Torodi Ar. Sit** 52.54 154 P P 01 56 17.8 +0.7
TOA0 IAmb IAmb 01 56 26.5
comp=Z,9.3nm,1.4s
P18K **Big Mountain,** 52.80 334 P P 01 56 19.3 +0.6
baz=23
O17K **Koliganek Bris** 52.80 335 P P 01 56 19.7 +1.1
baz=22
MIAR **Mount Ida** 52.86 274 P P 01 56 17.1 -2.2
MIAR IAmb IAmb 01 56 23.6
comp=Z,11nm,1.2s
MIAR **Mount Ida** 52.86 274 P P 01 56 20.7 +1.3
baz=32
BW06 **Boulder Array** 52.92 293 P P 01 56 17.1 -2.9
BW06 **Boulder Array** 52.92 293 P P 01 56 22.1 +2.1
baz=34
PD31 **Pinedale Array** 52.92 293 P P 01 56 17.9 -2.1
PDAR **Pinedale Array** 52.92 293 P P 01 56 21.1 +1.1
comp=Z,2.7nm,1.0s,baz=54,slow=7.5,SNR=13
PDAR LR LR 02 16 38.8
comp=Z,28nm,21.1s,baz=29,slow=34
comp=Z,2.7nm,1.0s
PDAR **Pinedale Array** 52.92 293 P P 01 56 18.1 -1.9
N23A **Red Feather La** 52.96 289 P P 01 56 18.4 -2.0
N23A **Red Feather La** 52.96 289 P P 01 56 22.0 +1.6
baz=34,SNR=7.5
O16K **Kokwok River B** 53.16 335 P P 01 56 23.6 +2.3
baz=22
PLID **Pearl Lake** 53.57 299 P P 01 56 26.1 +1.4
PLID IAmb IAmb 01 56 29.5
comp=Z,8.5nm,1.1s
ISCO **Idaho Springs** 53.73 287 P P 01 56 29.1 +3.0
baz=33
MKAR **Makanchi Array** 53.85 57 P P 01 56 28.6 +2.1
comp=Z,1.3nm,1.0s,baz=316,slow=3.3,SNR=6.3
comp=Z,1.3nm,1.0s
MKAR **Makanchi Array** 53.85 57 P P 01 56 25.6 -1.0
HLID **Hailey** 54.22 297 P P 01 56 32.6 +3.2
baz=33
BMO **Blue Mountains** 54.27 300 P P 01 56 29.2 -0.5
BMO IAmb IAmb 01 56 37.2
comp=Z,8.0nm,1.1s
O20A **White River Ci** 54.56 290 P P 01 56 35.3 +3.3
baz=33
WMOK **Wichita Mounta** 55.00 278 P P 01 56 33.0 -2.1
WMOK IAmb IAmb 01 56 39.2
comp=Z,6.4nm,1.1s
WMOK **Wichita Mounta** 55.00 278 P P 01 56 38.0 +3.0
baz=32
SII **Sitkinak Islan** 55.20 332 P P 01 56 38.1 +1.9
baz=23
SDCO **Great Sand Dun** 55.40 286 P P 01 56 41.2 +3.0
baz=33
T25A **Trinidad** 55.44 285 P P 01 56 40.6 +2.2
baz=33,SNR=7.9
SJG **San Juan** 55.57 238 LR LR 02 19 23.4
comp=Z,15nm,18.5s,baz=24,slow=35
S22A **4UR Ranch, Cre** 55.97 287 P P 01 56 44.3 +2.0
baz=32
DUG **Dugway, Tooele** 56.40 293 P P 01 56 47.3 +2.0
baz=32
H04D **Lebanon** 56.61 304 P P 01 56 47.6 +1.2
baz=31
J05D **Fort Rock, OR** 57.10 302 P P 01 56 50.4 +0.2
baz=31,SNR=11
I04A **Tendick Farm,** 57.11 303 P P 01 56 51.6 +1.6
baz=31
MSTX **Muleshoe** 57.41 281 P P 01 56 49.9 -2.5
MSTX **Muleshoe** 57.41 281 P P 01 56 54.8 +2.4
baz=32
I03D **Drain, OR** 57.54 304 P P 01 56 55.5 +2.4
baz=31
CHNA **Chernabura Isl** 57.92 334 P P 01 56 57.0 +1.5
baz=20
SPR3 **Spring Creek 3** 58.04 294 P P 01 56 55.9 -1.1
SPR3 IAmb IAmb 01 57 05.4
comp=Z,5.6nm,1.2s
ANMO **Albuquerque** 58.18 285 P P 01 56 59.6 +1.7
comp=Z,1.5nm,0.8s,baz=37,slow=6.2,SNR=5.3
ANMO LR LR 02 21 08.3
comp=Z,28nm,18.2s,baz=56,slow=35
comp=Z,1.5nm,0.8s
ANMO **Albuquerque** 58.18 285 P P 01 56 56.4 -1.5
ANMO IAmb IAmb 01 57 05.1
comp=Z,5.1nm,1.4s
ANMO **Albuquerque** 58.18 285 P P 01 56 59.9 +2.0
baz=32
J01E **Myrtle Point** 58.22 304 P P 01 56 59.8 +2.1
baz=30
WMQ **Urumqi** 58.37 54 eP P 01 57 00.0 +1.0
WMQ pmax pmax
comp=Z,26nm,0.7s
L04D **Klamath Falls** 58.42 302 P P 01 57 00.3 +0.9
baz=31
K02D **Willamette Mer** 58.52 303 P P 01 57 01.4 +1.3
baz=30,SNR=6.2
L02F **Cave Junction** 58.98 303 P P 01 57 04.2 +1.0
baz=30
JCT **Junction City** 59.07 277 P P 01 57 06.2 +2.3
baz=31
R11A **Troy Canyon, C** 59.10 294 P P 01 57 05.9 +1.6
baz=31
WUAZ **Wupatki** 59.78 289 P P 01 57 11.5 +2.5
baz=31
UNV **Unalaska Valle** 60.10 338 P P 01 57 10.9 +0.3
baz=16
KHMM **Horse Mountain** 60.12 302 P P 01 57 09.9 -1.3
NVAR **Mina Array Bea** 60.13 297 P P 01 57 12.6 +1.2
comp=Z,0.6nm,0.9s,baz=53,slow=7.6,SNR=5.0
NVAR LR LR 02 22 24.8
comp=Z,68nm,19.2s,baz=63,slow=35
comp=Z,0.6nm,0.9s
MNTX **Cornudas Mount** 60.48 282 P P 01 57 12.7 -0.9
MNTX IAmb IAmb 01 57 18.7
comp=Z,4.1nm,1.1s
MNTX **Cornudas Mount** 60.48 282 P P 01 57 15.8 +2.2
baz=31,SNR=7.3
KMRM **Mail Ridge** 60.68 302 P P 01 57 13.9 -1.1
SONM **Songino Array** 60.85 39 P P 01 57 16.7 +0.7
comp=Z,0.5nm,0.3s,baz=345,slow=17,SNR=4.0
comp=Z,0.5nm,0.3s
GWY **Greenwater Val** 61.40 294 P P 01 57 19.8 -0.2
GWY IAmb IAmb 01 57 24.4
comp=Z,4.1nm,1.1s
TX31 **Lajitas Ar. Si** 61.76 279 P P 01 57 22.0 -0.5
TX32 **Lajitas Array** 61.76 279 P P 01 57 21.3 -1.1
TXAR **Lajitas Array** 61.76 279 P P 01 57 24.1 +1.6
comp=Z,3.1nm,0.9s,baz=46,slow=5.4,SNR=14
comp=Z,3.1nm,0.9s
TXAR **Lajitas Array** 61.76 279 P P 01 57 22.1 -0.3
GMRC **Granite Mounta** 62.20 292 P P 01 57 26.9 +1.6
baz=30
TUC **Tucson** 62.29 287 P P 01 57 27.9 +2.0
baz=30
IRM **Iron Mountain** 62.52 292 P P 01 57 29.1 +1.7
baz=30
BC3 **Big Chuckawall** 63.09 292 P P 01 57 32.1 +0.8
baz=30
BBRC **Big Bear Solar** 63.17 293 P P 01 57 33.0 +1.1
baz=30
MDP **Montagnes des** 63.31 218 LR LR 02 18 42.0
comp=Z,21nm,21.4s,baz=286,slow=30
PFO **Pinyon Flats O** 63.54 292 LR LR 02 25 52.6
comp=Z,55nm,18.8s,baz=9.0,slow=37
PKM **Mcpherson Peak** 63.80 296 P P 01 57 36.5 +0.5
baz=29
MURC **Murrieta** 63.85 293 P P 01 57 37.2 +1.0
baz=29
MONP2 **Monument Peak** 64.15 292 P P 01 57 39.1 +0.7
baz=29
SCI2 **San Clemente I** 64.95 294 P P 01 57 45.6 +2.3
baz=29
SDV **Santo Domingo** 65.71 238 LR LR 02 24 10.3
comp=Z,12nm,19.7s,baz=84,slow=34
XLT **XiLinHaoTe** 67.05 34 eP P 01 57 56.0 -0.8
XLT pP sP 01 58 01.3 -0.4
XLT sP pP 01 58 03.5 +3.1
XLT pmax pmax
comp=Z,12nm,0.8s
XLT pmax pmax
comp=Z,130nm,5.2s
CMIG **Matias Romero** 68.52 265 LR LR 02 28 11.3
comp=Z,38nm,18.3s,baz=38,slow=36
HHC **Hu-ho-hao-te** 68.72 38 eP P 01 58 08.3 +0.9
HHC pmax pmax
comp=Z,23nm,0.9s
HHC pmax pmax
comp=Z,110nm,6.4s
LPIG **La Paz** 69.21 282 LR LR 02 27 49.8
comp=Z,56nm,19.1s,baz=28,slow=35
ROSC **El Rosal** 70.83 240 P P 01 58 19.5 -1.4
KSRS **Korea Array** 75.85 27 LR LR 02 35 14.8
comp=Z,27nm,18.9s,baz=320,slow=38
PZH **PanZhiHua** 78.90 52 P P 01 59 08.8 +1.5
PZH pmax pmax
comp=Z,8.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,5.1s
ATAH **Atahualpa** 83.37 239 LR LR 02 34 42.3
comp=Z,17nm,21.7s,baz=7.6,slow=34
CMAR **Chiang Mai Arr** 85.25 57 LR LR 02 41 17.6
comp=Z,15nm,18.7s,baz=145,slow=38
ASAR **Alice Springs** 136.18 37 PKP PKiKP 02 06 27.5 +0.9
comp=Z,0.2nm,0.3s,baz=298,slow=2.7,SNR=4.3

ROM 29 01:57:10.8±0.1, 42°.766N±0°.003×13°.196E±0°.005, h10km, ML1.9/8, 10C-6D, Error ellipse: s-maj=0.5km s-min=0.2km az=250.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**318**	⇑P		Pg		01 57 13.8	+0.3
NRCA				S		Sg		01 57 15.5	+0.1
NRCA					AML	AML			
	comp=E,14200μm,0.7s								
NRCA					AML	AML			
	comp=E,14175μm,0.7s								
NRCA					AML	AML			
	comp=N,11400μm,1.0s								
NRCA					AML	AML			
	comp=N,13150μm,0.1s								
NRCA					AML	AML			
	comp=N,11450μm,1.0s								
NRCA					AML	AML			
	comp=E,17350μm,0.1s								
MC2	**Monte Cornacci**	**0.15**	**358**	⇑P		Pg		01 57 14.8	+0.5
MC2				S		Sg		01 57 17.9	+1.0
MC2					AML	AML			
	comp=E,1300μm,0.2s								
MC2					AML	AML			
	comp=N,1301μm,0.2s								
MC2					AML	AML			
	comp=E,1298μm,0.2s								
MC2					AML	AML			
	comp=N,1300μm,0.2s								
MMO1	**Montemonaco**	**0.16**	**36**	P		Pg		01 57 15.1	+0.6
MMO1				S		Sg		01 57 18.0	+0.9
MMO1					AML	AML			
	comp=E,2970μm,0.3s								
MMO1					AML	AML			
	comp=N,2825μm,0.1s								
MMO1					AML	AML			
	comp=E,2965μm,0.3s								
T1243	**Rocca Santa Ma**	**0.20**	**110**	P		Pg		01 57 15.6	+0.6
T1243				S		Sg		01 57 19.0	+1.0
T1243					AML	AML			
	comp=E,2010μm,0.3s								
T1243					AML	AML			
	comp=E,2070μm,0.2s								
T1243					AML	AML			
	comp=E,2005μm,0.3s								
T1243					AML	AML			
	comp=N,2610μm,0.3s								
T1243					AML	AML			
	comp=N,2650μm,0.2s								
LNSS	**Leonessa**	**0.20**	**215**	P		Pg		01 57 15.8	+0.7
LNSS				S		Sg		01 57 19.4	+1.3
FEMA	**Monte Fema**	**0.22**	**331**	P		Pg		01 57 16.1	+0.5
FEMA				S		Sg		01 57 19.8	+1.0
RM33	**Pellescritta (**	**0.26**	**177**	P		Pb		01 57 16.9	-0.7
RM33				S		Sb		01 57 21.0	-1.0
CAMP	**Campotosto**	**0.28**	**146**	P		Pg		01 57 17.0	+0.5
CAMP				S		Sb		01 57 21.5	-1.2
FDMO	**Fiordimonte**	**0.28**	**344**	P		Pg		01 57 17.1	+0.5
FDMO				S		Sb		01 57 21.6	-1.2
FDMO					AML	AML			
	comp=E,350μm,0.1s								
FDMO					AML	AML			
	comp=N,433μm,1.0s								
CSP1	**Cessapalombo**	**0.33**	**1**	⇓P		Pg		01 57 17.9	+0.5
TERO	**Teramo**	**0.33**	**115**	P		Pg		01 57 17.8	+0.4
TERO				S		Sb		01 57 23.2	-1.0
TERO					AML	AML			
	comp=E,392μm,0.9s								
TERO					AML	AML			
	comp=N,456μm,0.5s								
OFFI	**Offida**	**0.40**	**65**	⇑P		Pb		01 57 20.0	+0.1
OFFI					AML	AML			
	comp=E,540μm,0.8s								
OFFI					AML	AML			
	comp=N,399μm,0.5s								
GIGS	**Gran Sasso**	**0.42**	**139**	P		Pg		01 57 19.2	+0.1
GIGS				S		Sg		01 57 25.6	+0.9
ASSB	**Assisi San Ben**	**0.48**	**305**	⇑P		Pg		01 57 20.4	+0.1
ASSB					AML	AML			

	comp=N,292μm,0.8s							
ASSB				AML	AML			
	comp=E,310μm,1.0s							
SNTG	**Esanatoglia**	**0.52**	**339**	P	Pg	01 57 20.9	-0.2	
SNTG				AML	AML			
	comp=E,132μm,0.8s							
SNTG				AML	AML			
	comp=N,148μm,0.1s							
TRTR	**Tortoreto Alta**	**0.53**	**85**	⇑P	Pb	01 57 22.8	+0.6	
TRTR				AML	AML			
	comp=N,388μm,0.4s							
TRTR				AML	AML			
	comp=E,418μm,0.3s							
EL6	**Elcito**	**0.57**	**353**	⇓P	Pg	01 57 22.2	+0.3	
EL6				S	Sb	01 57 32.0	+1.0	
FAGN	**Fagnano**	**0.58**	**150**	P	Pg	01 57 22.5	+0.5	
FAGN				S	Sb	01 57 30.7	-0.5	
CING	**Cingoli**	**0.61**	**360**	P	Pg	01 57 22.8	+0.2	
CING				AML	AML			
	comp=N,147μm,1.2s							
CING				AML	AML			
	comp=E,121μm,1.3s							
FOSV	**Fossato di Vic**	**0.62**	**329**	⇓P	Pg	01 57 22.9	+0.1	
FOSV				AML	AML			
	comp=E,96μm,0.4s							
FOSV				AML	AML			
	comp=N,97μm,0.3s							
FOSV				AML	AML			
	comp=N,97μm,0.3s							
FOSV				AML	AML			
	comp=E,96μm,0.4s							
PP3	**Marolino**	**0.68**	**26**	P	Pb	01 57 24.5	-0.3	
PP3				S	Sn	01 57 37.0	-0.1	
PP3				AML	AML			
	comp=N,519μm,0.4s							
PP3				AML	AML			
	comp=E,436μm,0.6s							
SSFR	**Montelago di S**	**0.73**	**336**	⇑P	Pb	01 57 25.5	-0.2	
SSFR				AML	AML			
	comp=N,201μm,0.2s							
SSFR				AML	AML			
	comp=E,158μm,0.9s							
ARVD	**Arcevia**	**0.76**	**346**	⇓P	Pg	01 57 25.4	0.0	
ARVD				S	Sn	01 57 38.0	-1.0	
ARVD				AML	AML			
	comp=E,61μm,0.5s							
ARVD				AML	AML			
	comp=N,35μm,0.6s							
FRON	**Frontone**	**0.83**	**336**	⇑P	Pg	01 57 26.6	-0.1	
ATVO	**AVT- Monte Val**	**0.84**	**317**	⇓P	Pg	01 57 27.0	-0.1	
ATVO				AML	AML			
	comp=N,39μm,0.9s							
ATVO				AML	AML			
	comp=E,48μm,0.5s							
PIEI	**Pieia**	**0.91**	**328**	S	Sn	01 57 44.0	+1.2	
MPAG	**Monte Paganucc**	**0.92**	**340**	⇑P	Pb	01 57 28.9	0.0	
NARO	**Abbazia di Nar**	**0.96**	**332**	⇑P	Pg	01 57 29.0	-0.3	
NARO				S	Sn	01 57 45.0	+1.1	
NARO				AML	AML			
	comp=N,25μm,1.4s							
NARO				AML	AML			
	comp=E,25μm,0.3s							
NARO				AML	AML			
	comp=N,24μm,1.4s							
FSSB	**Fossombrone**	**0.97**	**342**	⇓P	Pg	01 57 29.6	0.0	
FSSB				S	Sn	01 57 47.0	+2.6	
FSSB				AML	AML			
	comp=N,162μm,0.3s							
FSSB				AML	AML			
	comp=E,144μm,0.3s							
CAFI	**Castiglion Fio**	**1.06**	**302**	⇑P	Pn	01 57 31.6	-0.1	
CAFI				AML	AML			
	comp=E,29μm,0.6s							
CAFI				AML	AML			
	comp=N,26μm,0.8s							

*IDC **29** 02:15:28.5±1.4,6˚.82S×130˚.74E,h0km,mb4.1/2, mbtmp4.3/6,ML4.2/4,MS3.1/3,Error ellipse: s-maj=59.4km s-min=21.5km az=78.0*
*DJA **29** 02:15:33.9±0.3,7˚S±2˚×13˚1E±˚,h92km±13km,M4.3/9, mb4.3/8,mB5.2/4,MLv4.2/9,Mw(mB)4.6/4*
ISC 29 02:15:32.1±0.8,**6.76S**±0.05×**131.10E**±0.09,**h35**km,**n17,** σ**2s75**/19,**Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.23**	**171**	P	Pn	02 15 58.5	+5.7
BNDI	**Bandanaira**	**2.52**	**332**	P	**Pn**	**02 16 10.4**	**-0.2**
FAKI	**Fak Fak**	**3.99**	**17**	P	**Pn**	**02 16 32.0**	**+1.3**
FAKI				S	**Sn**	**02 17 15.9**	**-0.4**
MSAI	**Masohi**	**4.03**	**327**	P	**Pn**	**02 16 31.5**	**+0.3**
MSAI				S	**Sn**	**02 17 15.4**	**-1.8**
NLAI	**Namlea**	**5.30**	**311**	P	**Pn**	**02 16 50.3**	**+1.5**
	0.3nm3μm58nm,0.7s						
SIJI	**Sorong**	**5.86**	**2**	Pn	**Pn**	**02 16 55.9**	**-0.6**
	3.7nm,0.3s,baz=168,slow=20,SNR=2.9						
SIJI				Sn	**Sn**	**02 17 57.1**	**-5.3**
	3.7nm,0.3s,baz=78,slow=23,SNR=9.5						
	11nm,0.5s						
SOEI	**Soe**	**7.39**	**246**	P	**Pn**	**02 17 19.9**	**+2.3**
	0.2nm54nm,0.9s						
WAMI	**Wamena**	**8.10**	**70**	P	**Pn**	**02 17 30.8**	**+3.6**
	14μm400nm,0.6s						
BATI	**Baumata**	**8.11**	**245**	P	**Pn**	**02 17 30.3**	**+2.8**
	19nm,0.5s						
BBSI	**Bau Bau**	**8.57**	**278**	P	**Pn**	**02 17 34.9**	**+1.1**
	9.3nm,0.9s						
KAPI	**Kappang**	**11.42**	**278**	LR	LR	02 22 06.6	
	comp=Z,82nm,21.5s,baz=100,slow=36						
FITZ	**Fitzroy Crossi**	**12.46**	**205**	Pn	**Pn**	**02 18 22.9**	**-4.1**
	1.2nm,0.3s,baz=33,slow=10.0,SNR=8.3						
FITZ				Sn	Sn	02 20 32.4	-12
	0.4nm,0.3s,baz=116,slow=7.4,SNR=1.9						
	4.1nm,0.4s						
WRA	**Warramunga Arr**	**13.47**	**167**	Pn	**Pn**	**02 18 40.1**	**-0.8**
	1.8nm,0.3s,baz=346,slow=13,SNR=46						
WRA				Sn	**Sn**	**02 21 08.2**	**-1.2**
	0.6nm,0.3s,baz=323,slow=22,SNR=4.6						
	8.8nm,0.5s						
DAV	**Davao City (W)**	**14.80**	**338**	LR	LR	02 25 14.1	
	comp=Z,43nm,21.1s,baz=169,slow=40						
ASAR	**Alice Springs**	**17.02**	**171**	P	**Pn**	**02 19 27.6**	**0.0**
	1.1nm,0.3s,baz=11,slow=13,SNR=66						
ASAR				S	**Sn**	**02 22 30.7**	**-5.1**
	1.0nm,0.7s,baz=355,slow=26,SNR=3.7						
	5.2nm,0.6s						
STKA	**Stephens Creek**	**26.84**	**160**	P	**P**	**02 21 12.7**	**+3.4**
	0.7nm,0.3s,baz=329,slow=12,SNR=3.3						
STKA				LR	LR	02 33 36.7	
	comp=Z,119nm,18.6s,baz=206,slow=40						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**68.63**	**326**	P	**P**	**02 26 33.0**	**+1.2**
	1.4nm,0.5s,baz=119,slow=7.9,SNR=15						
	1.4nm,0.5s						

*ISK **29** 02:40:47.9,38˚.01N×42˚.99E,h5km,ML3.0/17*
*DDA **29** 02:40:49.0±0.0,38˚.03N×42˚.98E,h11km±2km,ML3.0*
ISC 29 02:40:49.1±1.1,**h8˚.03N**±0˚.03×**43˚.00E**±0˚.02,**h9**km±10km, **n31,**σ1**s28**/44,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.29**	**10**	P	**Pg**	**02 40 54.8**	**-0.1**
GEVA				S	**Sg**	**02 40 59.6**	**+0.7**
AKDM	**Akdamar-Van**	**0.30**	**358**	PG	**Pg**	**02 40 55.4**	**+0.2**
AKDM				SG	**Sb**	**02 41 00.9**	**-1.0**
PERV	**Siirt/Pervari-**	**0.37**	**257**	P	**Pb**	**02 40 56.4**	**-1.5**
PERV				S	**Sb**	**02 41 02.3**	**-1.5**
VANB	**Van**	**0.65**	**28**	PG	**Pg**	**02 41 00.6**	**-1.0**
VANB				SG	**Sg**	**02 41 10.1**	**0.0**
HAKT	**HAKKARI**	**0.73**	**130**	P	**Pb**	**02 41 03.2**	**-0.9**
HAKT				S	**Sb**	**02 41 14.7**	**+0.3**
BLIS	**Bitlis-Merkez**	**0.79**	**299**	P	**Pg**	**02 41 03.8**	**-0.6**
BLIS				S	**Sn**	**02 41 17.2**	**-1.6**
ADCV	**BITLIS_Adilcev**	**0.81**	**345**	P	**Pb**	**02 41 04.9**	**-0.6**
ADCV				S	**Sb**	**02 41 16.9**	**+0.4**
CUKT	**Cukurca**	**0.92**	**148**	PG	**Pb**	**02 41 06.5**	**-0.8**
GURO	**Guroymak-BITLI**	**0.92**	**305**	PG	**Pb**	**02 41 06.7**	**-0.6**
OZAP	**Van, Ozalp-Mer**	**1.01**	**51**	P	**Pg**	**02 41 08.2**	**-0.2**
MLAZ	**Malazgirt-MUS**	**1.17**	**343**	PN	**Pn**	**02 41 11.5**	**-0.2**
CLDR	**Caldiran**	**1.33**	**33**	PN	**Pn**	**02 41 13.7**	**-0.3**
MUSM	**Mu-Merkez**	**1.36**	**301**	P	**Pg**	**02 41 14.4**	**-0.7**
MUSM				S	**Sn**	**02 41 35.7**	**+3.2**
BTMN	**Batman**	**1.37**	**265**	P	**Pg**	**02 41 15.5**	**+0.1**
BTMN				S	**Sg**	**02 41 34.8**	**+1.6**
BTMN				*i* AML	AML	02 41 37.0	
	comp=E,424nm,0.8s						
BTMN				*i* AML	AML	02 41 38.0	
	comp=N,254nm,1.0s						
MIDY	**Mardin/Midyat-**	**1.41**	**244**	P	**Pg**	**02 41 16.1**	**-0.1**
MIDY				*i* AML	AML	02 41 38.0	
	comp=N,238nm,0.4s						
MIDY				*i* AML	AML	02 41 40.0	
	comp=E,201nm,0.6s						
SVAN	**Silvan-Diyarba**	**1.42**	**275**	PN	**Pg**	**02 41 16.1**	**-0.3**
SVAN				SN	**Sg**	**02 41 36.3**	**+1.4**
AGRB	**Hanur-Agry**	**1.54**	**360**	PN	**Pg**	**02 41 18.1**	**-0.6**
VRTB	**Varto-Mus**	**1.65**	**314**	PN	**Pb**	**02 41 19.4**	**-0.4**
KOTA	**Agri, Merkez-K**	**1.78**	**5**	P	**Pg**	**02 41 22.8**	**-0.4**
SLHN	**Bingol, Solhan**	**1.81**	**302**	P	**Pg**	**02 41 23.2**	**-0.5**
SLHN				S	**Sg**	**02 41 49.9**	**+2.8**
SLHN				*i* AML	AML	02 41 56.0	
	comp=N,89nm,0.8s						
EATA	**Eleskirt**	**1.87**	**348**	P	**Pg**	**02 41 25.1**	**+0.1**
MARD	**Mardin**	**1.90**	**249**	P	**Pb**	**02 41 22.9**	**-1.1**
MARD				S	**Sg**	**02 41 49.9**	**-0.2**
MARD				*i* AML	AML	02 41 56.0	
	comp=E,200nm,0.4s						
KARO	**Karliova-Bingo**	**1.99**	**311**	PN	**Pb**	**02 41 24.2**	**-1.4**
BNGB	**Bingl**	**2.06**	**299**	PN	**Pb**	**02 41 25.0**	**-1.7**
MAZI	**Mazidag**	**2.10**	**255**	PN	**Pb**	**02 41 25.5**	**-1.9**
KOPR	**Koprukoy-ERZUR**	**2.15**	**336**	PN	**Pb**	**02 41 26.5**	**-1.9**
DYBB	**Diyarbakir**	**2.26**	**269**	PN	**Pb**	**02 41 27.7**	**-2.4**
DYBB				SN	**Sb**	**02 41 56.9**	**-1.3**
YEDI	**Yedisu-Bingol**	**2.38**	**307**	PN	**Pn**	**02 41 29.7**	**+1.3**
GNI	**Garni**	**2.52**	**32**	PN	**Pn**	**02 41 31.9**	**+1.6**
PTK	**Pertek**	**2.96**	**288**	PN	**Pn**	**02 41 37.8**	**+1.4**
URFA	**Urfa**	**3.36**	**261**	PN	**Pn**	**02 41 43.5**	**+1.6**

*TIR **29** 02:46:12.3,39˚.20N×22˚.36E,h3km±2km,Ml3.9*
*ATH **29** 02:46:16.2,39˚.24N×22˚.19E,h15km±1km,ML3.5/5,Error ellipse: s-maj=1.9km s-min=0.9km az=253.0*
*THE **29** 02:46:16.4,39˚.26N×22˚.21E,h0km±1km,ML3.3/26,Error ellipse: s-maj=1.3km s-min=0.5km az=48.0*
*ISK **29** 02:46:16.3,39˚.29N×22˚.39E,h5km,ML3.2/25*
*BEO **29** 02:46:17.3±0.6,39˚.30N×22˚.21E,h0km,ML3.3/7*
*IDC **29** 02:46:17.1±2.5,39˚.26N×22˚.36E,h0km,mb3.3/2, mbtmp3.3/5,ML3.2/3,Error ellipse: s-maj=46.6km s-min=24.9km az=17.0*
ISC 29 02:46:16.2±1.1,**39˚.27N**±0˚.01×**22˚.20E**±0˚.02,**h1**km±9km, **n218,**σ**1s13**/276,**16C-10D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKR	**Makrakomi, Fth**	**0.26**	**192**	P	**Pg**	**02 46 21.2**	**0.0**
MAKR				S	**Sg**	**02 46 25.7**	**+1.1**
MAKR	**Makrakomi, Fth**	**0.26**	**192**	P	**Pg**	**02 46 21.4**	**+0.2**
MAKR				S	**Sg**	**02 46 25.3**	**+0.7**
MAKR				AML	AML	02 46 26.4	
MAKR				AML	AML	02 46 26.6	
THL	**Klokotos Trika**	**0.33**	**334**	P	**Pg**	**02 46 23.0**	**+0.5**
THL				S	**Sb**	**02 46 28.8**	**-1.8**
	5μm,0.3s						
THL	**Klokotos Trika**	**0.33**	**334**	P	**Pg**	**02 46 22.9**	**+0.5**
THL				S	**Sb**	**02 46 28.6**	**-2.0**
THL				AML	AML	02 46 30.5	
	comp=E,11720μm,0.4s						
THL				AML	AML	02 46 33.6	
	comp=N,9032μm,0.3s						
LRSO	**Larissa Observ**	**0.43**	**20**	P	**Pg**	**02 46 25.3**	**+0.9**
LRSO	**Larissa Observ**	**0.43**	**20**	P	**Pg**	**02 46 25.3**	**+0.9**
LRSO				AML	AML	02 46 37.5	
	comp=N,12638μm,0.5s						
LRSO				AML	AML	02 46 38.6	
	comp=E,8264μm,0.3s						
TYRN	**Tyrnavos**	**0.44**	**3**	P	**Pg**	**02 46 25.2**	**+0.5**
EVR	**Evrytania**	**0.47**	**221**	P	**Pg**	**02 46 24.4**	**-0.7**
EVR				S	**Sg**	**02 46 31.6**	**+0.4**
	comp=E,9μm,0.5s						
EVR	**Evrytania**	**0.47**	**221**	P	**Pg**	**02 46 24.5**	**-0.7**
EVR				S	**Sg**	**02 46 30.7**	**-0.4**
EVR				AML	AML	02 46 31.9	
	comp=N,9756μm,0.5s						
EVR				AML	AML	02 46 32.0	
	comp=E,19558μm,0.3s						
AXAR	**Agios Charalam**	**0.62**	**145**	P	**Pg**	**02 46 27.6**	**-0.4**
AXAR				S	**Sb**	**02 46 37.9**	**-1.0**
	comp=E,5μm,0.5s						
AXAR	**Agios Charalam**	**0.62**	**145**	P	**Pg**	**02 46 27.8**	**-0.2**
AXAR				S	**Sg**	**02 46 36.3**	**+0.4**
AXAR				AML	AML	02 46 41.8	
	comp=E,8712μm,0.4s						
AXAR				AML	AML	02 46 43.8	
	comp=N,8304μm,0.4s						
XOR	**Xorichti**	**0.77**	**83**	P	**Pg**	**02 46 31.6**	**+0.6**
XOR				S	**Sb**	**02 46 43.2**	**-0.3**
	comp=N,5μm,0.7s						
XOR	**Xorichti**	**0.77**	**83**	P	**Pg**	**02 46 31.4**	**+0.4**
NEO	**Neokhori**	**0.79**	**87**	P	**Pg**	**02 46 31.9**	**+0.5**
NEO	**Neokhori**	**0.79**	**87**	P	**Pg**	**02 46 31.9**	**+0.5**
DLFA	**Delphi**	**0.82**	**164**	P	**Pg**	**02 46 31.1**	**-0.9**
LIT	**Litokhoron**	**0.86**	**15**	P	**Pg**	**02 46 32.5**	**-0.2**
LIT				S	**Sb**	**02 46 44.9**	**-1.1**
	comp=N,2μm,0.4s						
LIT	**Litokhoron**	**0.86**	**15**	P	**Pg**	**02 46 32.7**	**0.0**
ATAL	**Atalanti**	**0.86**	**132**	P	**Pg**	**02 46 32.3**	**-0.4**
ATAL				S	**Sb**	**02 46 45.2**	**-0.7**
	comp=N,958nm,0.7s						
ATAL	**Atalanti**	**0.86**	**132**	P	**Pg**	**02 46 32.3**	**-0.4**
LKR	**Lokris**	**0.88**	**135**	P	**Pg**	**02 46 31.7**	**-1.3**
LKR				S	**Sg**	**02 46 45.5**	**+1.2**
	comp=N,622nm,0.6s						
LKR	**Lokris**	**0.88**	**135**	P	**Pg**	**02 46 31.9**	**-1.1**
ALIK	**Aliki, Aigiali**	**1.01**	**184**	P	**Pg**	**02 46 35.0**	**-0.5**
ALIK				S	**Sb**	**02 46 49.9**	**-0.3**
LAKA	**Lakka**	**1.04**	**190**	P	**Pg**	**02 46 34.5**	**-1.7**
LAKA				S	**Sb**	**02 46 51.4**	**+0.2**
	comp=N,2μm,1.1s						
LAKA	**Lakka**	**1.04**	**190**	P	**Pg**	**02 46 34.5**	**-1.7**
KZN	**Kozani**	**1.09**	**342**	P	**Pg**	**02 46 36.6**	**-0.5**
KZN				S	**Sb**	**02 46 53.1**	**+0.5**
	comp=N,2μm,0.7s						
KZN	**Kozani**	**1.09**	**342**	P	**Pg**	**02 46 37.0**	**-0.1**
JAN	**Janina**	**1.11**	**291**	P	**Pg**	**02 46 36.2**	**-1.4**
JAN				S	**Sn**	**02 46 54.1**	**-0.9**
	comp=N,1μm,0.7s						
JAN	**Janina**	**1.11**	**291**	P	**Pg**	**02 46 36.2**	**-1.4**
KTI	**Kastanea**	**1.12**	**357**	P	**Pg**	**02 46 37.8**	**+0.1**
KLV	**Kalavryta, Ach**	**1.23**	**182**	P	**Pg**	**02 46 38.2**	**-1.5**
KLV				S	**Sb**	**02 46 57.0**	**+0.5**
	comp=N,635nm,0.7s						
KLV	**Kalavryta, Ach**	**1.23**	**182**	P	**Pg**	**02 46 38.2**	**-1.5**
PENT	**Pentalofos**	**1.24**	**319**	P	**Pg**	**02 46 39.5**	**-0.4**
PENT	**Pentalofos**	**1.24**	**319**	P	**Pg**	**02 46 39.7**	**-0.2**
THAL	**Thalero**	**1.28**	**164**	P	**Pg**	**02 46 40.1**	**-0.7**
THAL				S	**Sn**	**02 46 58.9**	**-0.1**
	comp=N,2μm,0.5s						
THAL	**Thalero**	**1.28**	**164**	P	**Pg**	**02 46 40.1**	**-0.7**
TSLK	**Tsoukalades, L**	**1.28**	**250**	P	**Pg**	**02 46 39.9**	**-0.9**
TSLK				S	**Sn**	**02 47 00.1**	**+1.0**
	comp=N,1μm,0.6s						
LKD2	**Lefkada island**	**1.29**	**249**	P	**Pg**	**02 46 39.8**	**-1.2**
LKD2				S	**Sn**	**02 47 01.2**	**+1.8**
	comp=N,2μm,0.8s						
LKD2	**Lefkada island**	**1.29**	**249**	P	**Pg**	**02 46 39.9**	**-1.1**
	baz=254						
LKD2				S	**Sn**	**02 46 60.0**	**+0.6**
	baz=254						
LKD2	**Lefkada island**	**1.29**	**249**	P	**Pg**	**02 46 39.8**	**-1.2**
NYDR	**Nydri-Lefkada**	**1.30**	**245**	P	**Pg**	**02 46 39.9**	**-1.1**
NYDR				S	**Sn**	**02 46 59.2**	**-0.1**
	comp=N,2μm,0.5s						
ALNA	**Alonissos**	**1.30**	**95**	P	**Pg**	**02 46 39.5**	**-1.6**
PAIG	**Paliouri**	**1.32**	**60**	P	**Pg**	**02 46 40.6**	**-0.8**
RLS	**Riolos of Patr**	**1.34**	**206**	P	**Pg**	**02 46 40.5**	**-1.3**
RLS				S	**Sn**	**02 47 01.8**	**+1.4**
	comp=N,530nm,0.7s						
RLS	**Riolos of Patr**	**1.34**	**206**	P	**Pg**	**02 46 40.5**	**-1.3**
VIL2	**Platees**	**1.35**	**141**	P	**Pg**	**02 46 42.0**	**+0.1**
EVGI	**Lefkada island**	**1.37**	**242**	P	**Pg**	**02 46 41.1**	**-1.3**
EVGI				S	**Sn**	**02 47 03.1**	**+1.9**
	comp=N,2μm,1.0s						
EVGI	**Lefkada island**	**1.37**	**242**	P	**Pg**	**02 46 41.1**	**-1.3**
DRAG	**Dragano-Lefkad**	**1.40**	**246**	P	**Pn**	**02 46 42.0**	**-0.8**
DRAG				S	**Sn**	**02 47 02.8**	**+0.9**
VILL	**Villia**	**1.40**	**141**	P	**Pn**	**02 46 42.1**	**-0.8**
VILL				S	**Sn**	**02 47 03.1**	**+1.0**
	comp=N,675nm,0.6s						
LOUT	**Loutraki**	**1.42**	**154**	P	**Pn**	**02 46 42.3**	**-0.8**
LOUT				S	**Sn**	**02 47 03.3**	**+1.0**
	comp=N,492nm,0.6s						
LOUT	**Loutraki**	**1.42**	**154**	P	**Pn**	**02 46 42.2**	**-0.8**
NEST	**Nestorio**	**1.45**	**323**	P	**Pb**	**02 46 44.2**	**+0.2**
NEST				S	**Sn**	**02 47 03.7**	**+0.4**
	comp=N,975nm,0.8s						
THE	**Thessaloniki**	**1.48**	**23**	P	**Pn**	**02 46 42.7**	**-1.3**
THE	**Thessaloniki**	**1.48**	**23**	P	**Pn**	**02 46 43.0**	**-1.0**
	baz=17						
THE				S	**Sb**	**02 47 03.7**	**-0.2**
	baz=17						
HORT	**Hortiatis**	**1.50**	**27**	P	**Pn**	**02 46 43.1**	**-1.1**
HORT				S	**Sg**	**02 47 03.8**	**-0.5**
HORT	**Hortiatis**	**1.50**	**27**	PN	**Pn**	**02 46 43.3**	**-0.9**
HORT				SN	**Sg**	**02 47 02.9**	**-1.4**
HORT	**Hortiatis**	**1.50**	**27**	P	**Pn**	**02 46 43.2**	**-1.1**
LSK	**Leskovik**	**1.52**	**306**	P	**Pn**	**02 46 44.2**	**-0.3**
LSK				S	**Sn**	**02 47 06.4**	**+1.4**
	comp=N,1μm,0.6s						
LSK	**Leskovik**	**1.52**	**306**	P	**Pn**	**02 46 43.9**	**-0.7**
	baz=306						
LSK				S	**Sn**	**02 47 08.8**	**+3.8**
	baz=306						
LSK				AMP			
	comp=N,5.8nm,0.6s,baz=306						
KYMI	**Kymi, Euboea I**	**1.61**	**113**	P	**Pn**	**02 46 45.1**	**-0.6**
KYMI				S	**Sg**	**02 47 08.2**	**+0.3**
	comp=N,378nm,0.6s						
VLS	**Valsamata**	**1.67**	**230**	P	**Pn**	**02 46 45.7**	**-0.8**
VLS				S	**Sn**	**02 47 08.7**	**+0.1**
	comp=N,562nm,0.8s						
VLS	**Valsamata**	**1.67**	**230**	P	**Pn**	**02 46 45.1**	**-1.4**
PSDA	**Pessada-Kefalo**	**1.71**	**228**	P	**Pn**	**02 46 45.9**	**-1.2**
PSDA				S	**Sg**	**02 47 11.1**	**-0.1**
KEF4	**Livadi, Kephal**	**1.72**	**235**	P	**Pn**	**02 46 46.4**	**-0.8**
KEF4				S	**Sg**	**02 47 11.7**	**+0.3**
KEF4	**Livadi, Kephal**	**1.72**	**235**	P	**Pn**	**02 46 46.1**	**-1.0**
KBN	**Korca**	**1.73**	**322**	P	**Pn**	**02 46 47.7**	**+0.2**
KBN				S	**Sg**	**02 47 12.2**	**+0.2**
	comp=N,615nm,0.8s						
KBN	**Korca**	**1.73**	**322**	P	**Pn**	**02 46 47.7**	**+0.2**
	baz=321						
KBN				S	**Sg**	**02 47 14.9**	**+2.9**
	baz=321						
KBN				AMP			
	comp=N,3.0nm,0.7s,baz=321						
OUR	**Ouranopolis**	**1.73**	**52**	P	**Pn**	**02 46 46.9**	**-0.5**
OUR	**Ouranopolis**	**1.73**	**52**	PN	**Pn**	**02 46 45.9**	**-1.5**
ATH	**Athens Observa**	**1.76**	**137**	P	**Pn**	**02 46 47.2**	**-0.5**
DMLN	**Damoulianata-K**	**1.76**	**235**	P	**Pn**	**02 46 47.3**	**-0.5**
PTL	**Penteli**	**1.78**	**133**	P	**Pn**	**02 46 47.7**	**-0.4**
SOK	**Sokhos**	**1.79**	**29**	P	**Pn**	**02 46 47.8**	**-0.4**
ATHU	**Athens Univers**	**1.80**	**136**	P	**Pn**	**02 46 47.7**	**-0.6**
ATHU	**Athens Univers**	**1.80**	**136**	P	**Pn**	**02 46 47.7**	**-0.6**
KEF3	**Kipouria, Keph**	**1.80**	**234**	P	**Pn**	**02 46 47.4**	**-0.9**
KEF3				S	**Sb**	**02 47 13.0**	**+0.1**
KEF3	**Kipouria, Keph**	**1.80**	**234**	P	**Pn**	**02 46 46.9**	**-1.4**
DION	**Dionisos Attik**	**1.80**	**131**	P	**Pn**	**02 46 47.9**	**-0.5**
DION	**Dionisos Attik**	**1.80**	**131**	P	**Pn**	**02 46 47.9**	**-0.5**
EPID	**Epidavros**	**1.80**	**156**	P	**Pn**	**02 46 47.5**	**-0.9**
EPID	**Epidavros**	**1.80**	**156**	P	**Pn**	**02 46 47.6**	**-0.9**
SRN	**Sarande**	**1.81**	**290**	P	**Pb**	**02 46 49.8**	**-0.2**
SRN	**Sarande**	**1.81**	**290**	P	**Pb**	**02 46 50.0**	**0.0**
	baz=292						
SRN				S	**Sg**	**02 47 17.4**	**+3.1**
	baz=292						
SRN				AMP			
	comp=E,1.3nm,0.8s,baz=292						
VLY	**Voula,Athens**	**1.89**	**138**	P	**Pn**	**02 46 49.2**	**-0.4**
VLY				S	**Sn**	**02 47 14.2**	**+0.3**
	comp=E,358nm,0.6s						
VLY	**Voula,Athens**	**1.89**	**138**	P	**Pn**	**02 46 49.1**	**-0.4**
KEK	**Kerkira**	**1.91**	**284**	P	**Pb**	**02 46 51.0**	**-0.8**
KEK	**Kerkira**	**1.91**	**284**	P	**Pn**	**02 46 50.2**	**+0.3**
KNT	**Kendrikon**	**1.96**	**16**	P	**Pn**	**02 46 50.7**	**+0.1**
KNT	**Kendrikon**	**1.96**	**16**	PN	**Pn**	**02 46 50.4**	**-0.2**
KNT	**Kendrikon**	**1.96**	**16**	P	**Pn**	**02 46 50.5**	**-0.2**
KRND	**KRANIDI**	**2.03**	**158**	P	**Pn**	**02 46 50.8**	**-0.6**
KRND				S	**Sn**	**02 47 17.4**	**0.0**
	comp=E,300nm,1.1s						
KRND	**KRANIDI**	**2.03**	**158**	P	**Pn**	**02 46 50.8**	**-0.6**
KOKK	**Kokkinochori,**	**2.07**	**41**	P	**Pn**	**02 46 51.6**	**-0.5**
ITM	**Ithomi**	**2.10**	**186**	P	**Pn**	**02 46 53.1**	**+0.7**
ITM	**Ithomi**	**2.10**	**186**	PN	**Pn**	**02 46 53.6**	**+1.2**
ITM	**Ithomi**	**2.10**	**186**	P	**Pn**	**02 46 53.8**	**+1.3**
SRS	**Serrai**	**2.13**	**30**	P	**Pn**	**02 46 52.5**	**-0.4**
SRS				S	**Sn**	**02 47 19.4**	**-0.6**
SRS	**Serrai**	**2.13**	**30**	*e*Pn	**Pn**	**02 46 52.6**	**-0.4**
THAS	**Thassos island**	**2.35**	**55**	P	**Pn**	**02 46 55.0**	**-0.9**
NVR	**Nevrokopi**	**2.44**	**31**	P	**Pn**	**02 46 56.3**	**-0.8**
KAVA	**Kavala**	**2.47**	**45**	P	**Pn**	**02 46 56.1**	**-1.5**
MMB	**Musomiste**	**2.59**	**26**	*e*P	**Pn**	**02 46 58.8**	**-0.5**
VLI	**Veliai**	**2.61**	**167**	P	**Pn**	**02 46 58.3**	**-1.2**
KKB	**

TREB	**Trebinje**	**4.51**	**321**	*e*Pn		**Pn**	02 47 25.6	**0.0**
TREB				*e*Sn		**Sn**	02 48 17.9	**-0.8**
IDI	**Anoyia**	**4.51**	**151**	⇑P		**Pn**	02 47 27.8	**+2.1**
IDI	**Anoyia**	**4.51**	**151**	PN		**Pn**	02 47 26.7	**+1.0**
ZAGS	**Zajecar**	**4.54**	**0**	*e*Pn		**Pn**	02 47 25.6	**-0.4**
BRY	**Bratogost**	**4.56**	**324**	*e*Pn		**Pn**	02 47 27.7	**+1.2**
IVAS	**Ivanjica**	**4.57**	**341**	*e*Pn		**Pn**	02 47 26.2	**-0.3**
IVAS				*e*Sn		**Sn**	02 48 17.7	**-2.5**
DBRK	**Dubrovnik**	**4.58**	**319**	*e*Pn		**Pn**	02 47 25.2	**-1.3**
BODT	**Bodrum**	**4.59**	**117**	PN		**Pn**	02 47 26.7	**0.0**
AYDB	**Zeytinkoy-Aydi**	**4.65**	**105**	PN		**Pn**	02 47 27.4	**-0.2**
UPM	**Unac-Piva**	**4.65**	**329**	*e*Pn		**Pn**	02 47 28.5	**+0.8**
GRUS	**Gruza**	**4.75**	**347**	*e*Pn		**Pn**	02 47 30.3	**+1.4**
RUDO	**Rudo**	**4.84**	**335**	*e*Pn		**Pn**	02 47 30.7	**+0.6**
STON	**Ston**	**4.95**	**318**	*e*Pn		**Pn**	02 47 29.9	**-1.7**
STON	**Ston**	**4.95**	**318**	*e*Pn		**Pn**	02 47 30.6	**-1.1**
STON	**Ston**	**4.95**	**318**	*e*Pn		**Pn**	02 47 30.1	**-1.5**
STON				*e*Sn		**Sn**	02 48 28.2	**-1.3**
BBLS	**Lazići**	**5.05**	**336**	*e*Pn		**Pn**	02 47 34.7	**+1.6**
BBLS				*e*Sn		**Sn**	02 48 32.6	**+0.6**
DIVS	**Divibare**	**5.10**	**342**	*e*Pn		**Pn**	02 47 33.9	**+0.1**
DIVS	**Divibare**	**5.10**	**342**	*e*Pn		**Pn**	02 47 35.0	**+1.2**
DIVS				*e*Sn		**Sn**	02 48 30.9	**-2.4**
TRUS	**Trudelj**	**5.13**	**345**	*e*Pn		**Pn**	02 47 34.9	**+0.8**
LSTV	**Lastovo**	**5.32**	**313**	*e*Pn		**Pn**	02 47 35.6	**-1.2**
MDVR	**Moldovita**	**5.52**	**356**	⇓P		**Pn**	02 47 39.6	**+0.1**
MAKA	**Makarska**	**5.60**	**317**	*e*Pn		**Pn**	02 47 39.7	**-0.8**
HERR	**Herculane**	**5.61**	**2**	⇓P		**Pn**	02 47 40.4	**-0.3**
RICI	**Ricice**	**5.69**	**320**	*e*Pn		**Pn**	02 47 41.1	**-0.6**
SRKY	**Kupres RS**	**6.10**	**323**	*e*Pn		**Pn**	02 47 46.3	**-1.2**
GZR	**Gura Zlata**	**6.13**	**4**	⇑P		**Pn**	02 47 47.5	**-0.5**
FRGS	**Fruska Gora**	**6.15**	**344**	⇑P		**Pn**	02 47 49.2	**+1.1**
FRGS	**Fruska Gora**	**6.15**	**344**	*e*Pn		**Pn**	02 47 48.0	**-0.1**
FRGS	**Fruska Gora**	**6.15**	**344**	*e*Pn		**Pn**	02 47 48.8	**+0.7**
FRGS				*e*Sn		**Sn**	02 48 56.5	**-2.5**
DOB	**Doboj**	**6.25**	**332**	*e*Pn		**Pn**	02 47 49.5	**0.0**
LOT	**Lotru**	**6.28**	**10**	⇑P		**Pn**	02 47 50.0	**-0.1**
MTUR	**Matau**	**6.32**	**19**	⇑P		**Pn**	02 47 50.7	**+0.2**
BZS	**Buzias**	**6.36**	**356**	⇓P		**Pn**	02 47 51.2	**+0.2**
BZS	**Buzias**	**6.36**	**356**	*e*Pn		**Pn**	02 47 51.0	**0.0**
BZS				*e*Sn		**Sn**	02 49 00.6	**-3.6**
MGRS	**Mrkonjic Grad**	**6.41**	**325**	*e*Pn		**Pn**	02 47 50.6	**-1.1**
KIJV	**Kijevo**	**6.42**	**319**	*e*Pn		**Pn**	02 47 51.0	**-0.8**
VOIR		**6.51**	**18**	⇑P		**Pn**	02 47 53.7	**+0.6**
BLY	**Banja Luka**	**6.63**	**327**	*e*Pn		**Pn**	02 47 53.1	**-1.6**
BLY	**Banja Luka**	**6.63**	**327**	*e*Pn		**Pn**	02 47 55.5	**+0.8**
MORI	**Morici**	**6.69**	**315**	*e*Pn		**Pn**	02 47 55.2	**-0.3**
A050A	**Klekovaca**	**6.71**	**323**	*e*Pn		**Pn**	02 47 56.0	**+0.1**
MLR	**Muntele Rosu**	**6.81**	**23**	⇑P		**Pn**	02 47 57.9	**+0.7**
A252A	**Venje**	**6.95**	**334**	*e*Pn		**Pn**	02 47 59.4	**+0.2**
A051A	**Mrakovica**	**6.96**	**327**	*e*Pn		**Pn**	02 47 59.1	**-0.2**
UDBI	**Udbina**	**7.12**	**320**	*e*Pn		**Pn**	02 48 01.6	**+0.2**
DUGI	**Dugi Otok**	**7.13**	**314**	*e*Pn		**Pn**	02 48 01.2	**-0.4**
COVR	**Voineasa-Covas**	**7.20**	**23**	⇑P		**Pn**	02 48 03.3	**+0.7**
PLOR	**Plostina**	**7.35**	**25**	⇑P		**Pn**	02 48 05.5	**+0.9**
VRI	**Vrincioaia**	**7.39**	**25**	⇓P		**Pn**	02 48 05.9	**+0.7**
NVLJ	**Novalja**	**7.61**	**316**	*e*Pn		**Pn**	02 48 05.9	**-2.1**
BOJS	**Bojanci**	**8.08**	**323**	*e*Pn		**Pn**	02 48 12.3	**-2.2**
CRES	**Cresnjev**	**8.23**	**325**	*e*Pn		**Pn**	02 48 14.6	**-2.0**
BURAR	**Bucovina Array**	**8.62**	**14**	⇑P		**Pn**	02 48 23.0	**+0.9**
SKDS	**Skadanscina**	**8.72**	**319**	*e*Pn		**Pn**	02 48 21.1	**-2.2**
PSZ	**Piszkesteto**	**8.81**	**350**	⇑P		**Pn**	02 48 25.5	**+0.9**
BRTR	**Keskin Array B**	**8.86**	**83**	Pn		**Pn**	02 48 26.1	**+0.7**
	comp=E,0.2nm,0.3s,baz=269,slow=11,SNR=8.3							
	comp=E,0.5nm,0.4s							
SOKA	**Soboth**	**9.07**	**327**	*e*Pn		**Pn**	02 48 25.8	**-2.5**
	comp=E,1.0nm,0.4s							
VYHS	**Vyhne**	**9.54**	**346**	*e*PN		**Pn**	02 48 36.9	**+2.3**
VYHS				*e*SN		**Sn**	02 50 16.9	**-5.4**
MOA	**Molln**	**10.32**	**329**	*e*Pn		**Pn**	02 48 45.1	**-0.3**
	comp=E,0.6nm,0.4s							
KEST	**Kesra**	**10.81**	**255**	Pn		**Pn**	02 48 54.5	**+2.5**
	comp=E,0.1nm,0.3s,baz=48,slow=14,SNR=4.1							
	comp=E,1.3nm,0.7s							
GERES	**GERESS Array B**	**11.35**	**330**	Pn		**Pn**	02 49 02.5	**+3.0**
	comp=E,0.1nm,0.3s,baz=143,slow=15,SNR=1.9							
	comp=E,0.3nm,0.5s							
MOTA	**Moosalm**	**11.41**	**319**	Pg		**Pn**	02 48 57.7	**-2.8**
	comp=E,0.3nm,0.2s							
NOA	**NORSAR Array B**	**22.84**	**346**	P		**P**	02 51 21.3	**+0.8**
	comp=E,0.7nm,0.8s,baz=157,slow=11,SNR=2.7							
	comp=E,0.7nm,0.8s							
MKAR	**Makanchi Array**	**43.61**	**60**	P		**P**	02 54 23.0	**+1.1**
	comp=E,0.3nm,0.5s,baz=265,slow=7.5,SNR=2.7							
	comp=E,0.3nm,0.5s							

ROM 29 02:46:51.3±0.1, 42.792N±0.003×12.951E±0.005, h10km, ML1.4/8, 1D, Error ellipse: s-maj=0.3km s-min=0.2km az=123.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LNSS	**Leonessa**	**0.20**	**161**	P		Pg	02 46 56.2	+0.7
LNSS				S		Sg	02 46 59.6	+1.2
LNSS				AML		AML		
	comp=E,140μm,0.3s							
LNSS				AML		AML		
	comp=N,154μm,0.4s							
LNSS				AML		AML		
	comp=N,199μm,1.3s							
LNSS				AML		AML		
	comp=E,212μm,0.4s							
MC2	**Monte Cornacci**	**0.21**	**56**	P		Pg	02 46 56.5	+0.6
MC2				S		Sg	02 47 00.1	+1.1
ARRO	**Arrone**	**0.25**	**213**	P		Pb	02 46 57.2	-0.7
ARRO				AML		AML		
	comp=E,46μm,0.8s							
ARRO				AML		AML		
	comp=N,49μm,0.7s							
ARRO				AML		AML		
	comp=N,49μm,0.7s							
ARRO				AML		AML		
	comp=E,46μm,0.8s							
FDMO	**Fiordimonte**	**0.26**	**22**	P		Pg	02 46 57.2	+0.5
FDMO				S		Sg	02 47 01.5	+1.2
FDMO				AML		AML		
	comp=N,408μm,0.3s							
FDMO				AML		AML		
	comp=E,444μm,0.8s							
MMO1	**Montemonaco**	**0.30**	**69**	P		Pg	02 46 57.8	+0.5
MMO1				S		Sb	02 47 02.6	-1.1
MMO1				AML		AML		
	comp=E,101μm,1.4s							
MMO1				AML		AML		
	comp=N,130μm,1.2s							
MMO1				AML		AML		
	comp=N,130μm,1.2s							
MMO1				AML		AML		
	comp=E,176μm,0.8s							
CESX	**Cesi**	**0.33**	**236**	P		Pg	02 46 58.3	+0.5
CESX				S		Sb	02 47 03.6	-1.0
CESX				AML		AML		
	comp=E,37μm,0.4s							
CESX				AML		AML		
	comp=N,44μm,1.1s							
ASSB	**Assisi San Ben**	**0.33**	**320**	⇓P		Pg	02 46 58.5	+0.6
ASSB				S		Sg	02 47 03.5	+1.1
ASSB				AML		AML		
	comp=E,80μm,1.3s							
ASSB				AML		AML		
	comp=N,105μm,0.3s							
ASSB				AML		AML		
	comp=N,105μm,0.3s							
RM33	**Pellescritta (**	**0.34**	**145**	P		Pg	02 46 58.8	+0.6
RM33				AML		AML		
	comp=E,209μm,0.3s							
RM33				AML		AML		
	comp=N,136μm,0.1s							
CSP1	**Cessapalombo**	**0.35**	**32**	P		Pg	02 46 58.8	+0.4
CSP1				S		Sb	02 47 04.6	-0.9
SNTG	**Esanatoglia**	**0.46**	**359**	P		Pg	02 47 00.7	+0.3
SNTG				S		Sb	02 47 07.9	-0.6
SNTG				AML		AML		
	comp=E,36μm,0.8s							
SNTG				AML		AML		
	comp=N,34μm,1.0s							
FOSV	**Fossato di Vic**	**0.52**	**345**	S		Sb	02 47 11.0	+0.8
EL6	**Elcito**	**0.55**	**12**	P		Pg	02 47 02.2	+0.2
EL6				S		Sb	02 47 10.7	-0.3
ARVD	**Arcevia**	**0.71**	**359**	P		Pg	02 47 05.0	0.0

ROM 29 02:47:23.5±0.1, 42.635N±0.002×13.322E±0.002, h14km, ML1.5/8, 2C-7D, Error ellipse: s-maj=0.2km s-min=0.1km az=213.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
T1243	**Rocca Santa Ma**	**0.11**	**56**	⇓P		Pg	02 47 27.2	+0.3
T1243				S		Sg	02 47 29.7	+0.4
T1243				AML		AML		
	comp=E,1160μm,0.4s							
T1243				AML		AML		
	comp=N,766μm,0.3s							
T1243				AML		AML		
	comp=E,1110μm,0.4s							
T1243				AML		AML		
	comp=N,782μm,0.3s							
T1243				AML		AML		
	comp=E,1115μm,0.4s							
CAMP	**Campotosto**	**0.12**	**147**	P		Pg	02 47 27.3	+0.3
CAMP				S		Sg	02 47 29.8	+0.4
CAMP				AML		AML		
	comp=N,250μm,0.2s							
CAMP				AML		AML		
	comp=E,252μm,0.1s							
RM33	**Pellescritta (**	**0.15**	**212**	⇓P		Pb	02 47 27.8	-0.3
RM33				S		Sg	02 47 30.5	+0.6
RM33				AML		AML		
	comp=E,209μm,0.3s							
RM33				AML		AML		
	comp=N,136μm,0.1s							
RM33				AML		AML		
	comp=N,136μm,0.1s							
TERO	**Teramo**	**0.21**	**93**	P		Pg	02 47 28.6	+0.3
TERO				S		Sg	02 47 32.0	+0.6
TERO				AML		AML		
	comp=E,317μm,0.1s							
TERO				AML		AML		
	comp=N,254μm,0.6s							
LNSS	**Leonessa**	**0.21**	**261**	P		Pg	02 47 28.5	+0.2
LNSS				S		Sg	02 47 32.2	+0.6
LNSS				AML		AML		
	comp=E,212μm,0.4s							
LNSS				AML		AML		
	comp=N,199μm,1.3s							
NRCA	**Norcia**	**0.25**	**323**	⇑P		Pg	02 47 29.2	+0.2
NRCA				AML		AML		
	comp=E,353μm,0.1s							
NRCA				AML		AML		
	comp=N,454μm,0.1s							
GIGS	**Gran Sasso**	**0.26**	**135**	P		Pg	02 47 29.5	+0.4
GIGS				S		Sg	02 47 33.6	+0.7
GIGS				AML		AML		
	comp=E,27μm,0.2s							
GIGS				AML		AML		
	comp=N,41μm,0.3s							
GIGS				AML		AML		
	comp=N,41μm,0.3s							
MMO1	**Montemonaco**	**0.27**	**1**	P		Pg	02 47 29.6	+0.3
MMO1				S		Sg	02 47 33.8	+0.7
MMO1				AML		AML		
	comp=E,177μm,0.8s							
MMO1				AML		AML		
	comp=N,112μm,0.2s							
MMO1				AML		AML		
	comp=E,176μm,0.8s							
MMO1				AML		AML		
	comp=N,112μm,0.2s							
MC2	**Monte Cornacci**	**0.29**	**341**	P		Pg	02 47 30.0	+0.2
MC2				S		Sb	02 47 34.8	-0.8
ARRO	**Arrone**	**0.41**	**263**	⇓P		Pg	02 47 31.9	+0.1
FDMO	**Fiordimonte**	**0.44**	**337**	⇓P		Pg	02 47 32.4	+0.1
CSP1	**Cessapalombo**	**0.47**	**349**	⇑P		Pg	02 47 32.9	+0.1
T0110	**Collepietro**	**0.53**	**140**	⇓P		Pg	02 47 34.1	+0.1
T0110				AML		AML		
	comp=N,34μm,0.5s							
T0110				AML		AML		
	comp=E,46μm,0.3s							
T0110				AML		AML		
	comp=N,34μm,0.5s							
ASSB	**Assisi San Ben**	**0.64**	**310**	⇓P		Pg	02 47 35.9	-0.1
MMUR	**Monte Murano**	**0.84**	**344**	⇓P		Pg	02 47 39.8	-0.1
RNI2	**Rionero Sannit**	**1.12**	**146**	S		Sb	02 47 58.0	-1.1

NOU 29 02:52:45.9, 14.81S×167.43E, h119km, MLv4.6/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**2.99**	**166**	P		Pn	02 53 32.7	+0.7
YATNC	**Mamie plateau,**	**7.23**	**184**	P		Pn	02 54 27.9	-1.1
DZM	**Mont Dzumac**	**7.28**	**187**	P		Pn	02 54 30.5	+0.7

*KRNET **29** 02:57:46.9±0.1, 39.26N×73.77E, mb3.2*
*SOME **29** 02:57:48.0, 39.73N×73.02E, h5km*
*NNC **29** 02:57:51.6±1.3, 39.60N×73.59E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=9.9km s-min=4.4km az=171.0*
ISC 29 02:57:52.7±1.6, 39.59N±0.07×73.56E±0.05, h10km, n28, σ2.205/46, 8C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.11**	**328**	⇑*i*P		**Pn**	**02 58 14.6**	**+0.2**
OHH	baz=29			⇑*i*S		**Sn**	**02 58 34.5**	**+4.7**
BTK	**Batken**	**2.16**	**283**	⇓*i*P		**Pn**	**02 58 29.3**	**+0.4**
BTK	baz=90			⇓*i*S		**Sg**	**02 59 00.0**	**-2.2**
ARLS	**Aral**	**2.34**	**14**	⇑*i*P		**Pn**	**02 58 32.2**	**+0.8**
ARLS	baz=9.0			⇑*i*S		**Sb**	**02 59 05.1**	**+0.9**
GAR	**Garm**	**2.58**	**258**	⇓*i*P		**Pn**	**02 58 33.3**	**-1.4**
GAR	baz=66			⇓*i*S		**Sn**	**02 59 07.2**	**+1.0**
TRKS	**Terek-Say**	**2.68**	**317**	⇓*i*P		**Pn**	**02 58 36.7**	**+0.7**
TRKS	baz=19			⇓*i*S		**Sb**	**02 59 13.4**	**-0.4**
UCH	**Uchtor**	**2.73**	**15**	⇑*e*P		**Pn**	**02 58 37.6**	**+0.5**
UCH	baz=11			⇑*i*S		**Sb**	**02 59 15.3**	**-0.4**
IUG	**Iuzhnay**	**3.70**	**315**	*e*P		**Pn**	**02 58 48.8**	**-1.2**
IUG	3.0nm,0.2s			*e*S		**Sn**	**02 59 31.9**	**-1.9**
IUG	**Iuzhnay**	**3.70**	**315**	Pg		**Pb**	**02 58 58.5**	**+0.2**
IUG	164nm,0.4s			Lg		Lg	02 59 48.8	
KST	**Kastek**	**3.90**	**27**	*e*P		**Pb**	**02 59 02.5**	**+0.9**
KST	25nm,0.7s 2.3nm,0.3s			*e*S		**Sg**	**02 59 56.0**	**-1.8**
KST	**Kastek**	**3.90**	**27**	Pg		**Pb**	**02 59 02.5**	**+0.9**
KST	12nm,0.6s 2.3nm,0.3s			Lg		Lg	02 59 56.0	
SGDS	**Sogindy**	**3.94**	**11**	*e*P		**Pb**	**02 59 02.7**	**+0.4**
SGDS	12nm,0.6s 1.5nm,0.4s			*e*S		**Sg**	**02 59 56.4**	**-2.9**
SGDS	**Sogindy**	**3.94**	**11**	Pg		**Pb**	**02 59 02.7**	**+0.4**
SGDS	4.7nm,0.6s 1.5nm,0.4s			Lg		Lg	02 59 56.4	
DGS	**Degeres**	**4.01**	**24**	*e*P		**Pb**	**02 59 03.6**	**+0.1**
DGS	4.7nm,0.6s 2.8nm,0.4s			*e*S		**Sg**	**02 59 58.3**	**-3.2**
DGS	**Degeres**	**4.01**	**24**	Pg		**Pb**	**02 59 03.6**	**+0.1**
DGS	8.8nm,0.6s 2.8nm,0.4s			Lg		Lg	02 59 58.3	
KK31	**Karatay Array**	**4.20**	**328**	⇑Pn		**Pn**	**02 58 57.7**	**+1.0**
KK31	0.8nm,0.7s,baz=172,slow=15,SNR=8.1			Pg		**Pb**	**02 59 08.7**	**+2.1**
KK31	0.2nm,0.2s,baz=162,slow=15,SNR=5.0			⇑Sn		**Sn**	**02 59 48.4**	**+2.6**
KK31	3.0nm,0.6s,baz=146,slow=23,SNR=4.8			Lg		Lg	03 00 02.3	
	5.9nm,0.8s,baz=151,slow=30,SNR=4.6							

TNSS	**Tian-Shan**	**4.29**	**35**	Pg		**Pb**	**02 59 09.8**	**+1.5**
TNSS	1.7nm,0.1s			Lg		Lg	03 00 08.6	
KRBS	**Karabastau**	**4.40**	**20**	*e*P		**Pb**	**02 59 10.3**	**+0.2**
KRBS	1.4nm,0.7s 5.8nm,0.5s			*e*S		**Sg**	**03 00 10.2**	**-3.7**
KRBS	**Karabastau**	**4.40**	**20**	Pg		**Pb**	**02 59 10.3**	**+0.2**
KRBS	1.4nm,0.7s 5.8nm,0.5s			Lg		Lg	03 00 10.2	
MDOK	**Medeo**	**4.43**	**35**	*e*P		**Pb**	**02 59 11.5**	**+0.9**
MDOK	1.3nm,0.1s 6.2nm,0.7s			*e*S		**Sg**	**03 00 11.5**	**-3.5**
MDOK	**Medeo**	**4.43**	**35**	Pg		**Pb**	**02 59 11.5**	**+0.9**
MDOK	1.3nm,0.1s 6.2nm,0.7s			Lg		Lg	03 00 11.5	
KTBS	**Karatobe**	**4.74**	**29**	*e*P		**Pb**	**02 59 18.6**	**+2.8**
KTBS	1.4nm,0.5s 6.7nm,0.6s			*e*S		**Sg**	**03 00 23.6**	**-1.1**
KTBS	**Karatobe**	**4.74**	**29**	Pg		**Pb**	**02 59 18.6**	**+2.8**
KTBS	1.4nm,0.5s 6.7nm,0.6s			Lg		Lg	03 00 23.7	
KUU	**Kurty**	**4.78**	**25**	*e*P		**Pb**	**02 59 18.1**	**+1.7**
KUU	1.4nm,0.4s 6.0nm,0.8s			*e*S		**Sg**	**03 00 22.8**	**-3.2**
KUU	**Kurty**	**4.78**	**25**	Pg		**Pb**	**02 59 18.1**	**+1.7**
KUU	1.4nm,0.4s 6.0nm,0.8s			Lg		Lg	03 00 22.8	
CHKK	**Chushkaly**	**4.97**	**30**	*e*P		**Pb**	**02 59 21.8**	**+2.0**
CHKK	0.9nm,0.1s 5.0nm,0.6s			*e*S		**Sg**	**03 00 29.5**	**-2.8**
CHKK	**Chushkaly**	**4.97**	**30**	Pg		**Pb**	**02 59 21.8**	**+2.0**
CHKK	0.9nm,0.1s 5.0nm,0.6s			Lg		Lg	03 00 29.5	
ARXS	**Arharly**	**5.61**	**33**	*e*P		**Pb**	**02 59 32.8**	**+2.1**
ARXS	2.3nm,0.7s 5.4nm,0.9s			*e*S		**Sg**	**03 00 48.4**	**-4.4**
ARXS	**Arharly**	**5.61**	**33**	Pg		**Pb**	**02 59 32.8**	**+2.1**
ARXS	2.3nm,0.7s 5.4nm,0.9s			Lg		Lg	03 00 48.4	

*IDC **29** 03:00:42.7±3.3, 33.90N×140.46E, h78km±22km, mb3.4/4, mbtmp3.7/5, Error ellipse: s-maj=67.3km s-min=17.4km az=82.0*
*JMA **29** 03:00:44.0±0.2, 33.9N±0.4×140.3E±0.8, h75km±2km, MV3.3/33, FAR S OFF BOSO PENINSULA*
ISC 29 03:00:43.8±0.9, 33.88N±0.04×140.28E±0.06, h83km±8km, n18, σ0.994/29, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.57**	**272**	P		**Pn**	**03 00 57.8**	**-0.6**
JMKN				S		**Sn**	**03 01 08.6**	**-0.7**
JHJ2	**Mitsune**	**0.86**	**207**	P		**Pn**	**03 01 01.5**	**+0.1**
JHJ	**Hachijo jima 2**	**0.86**	**209**	P		**Pn**	**03 01 01.7**	**+0.3**
	398nm,0.3s,baz=67,slow=23,SNR=13							
JHJ				S		**Sn**	**03 01 14.9**	**+0.3**
	912nm,0.3s,baz=276,slow=22,SNR=5.3							
JHCJ	**Hachijojimakas**	**0.90**	**207**	S		**Sn**	**03 01 16.3**	**+1.1**
BSO3	**Boso 3**	**0.94**	**12**	P		**Pn**	**03 01 01.9**	**-0.1**
BSO3				S		**Sn**	**03 01 16.5**	**+0.8**
BSO1	**Boso 1**	**0.97**	**37**	P		**Pn**	**03 01 01.7**	**-0.3**
BSO1				*e*S		**Sn**	**03 01 16.3**	**+0.6**
JTHY	**Toshimahigashi**	**1.04**	**308**	P		**Pn**	**03 01 03.8**	**+0.3**
JTHY				*e*S		**Sn**	**03 01 18.8**	**+0.5**
JIM2	**Oshima 3**	**1.09**	**320**	P		**Pn**	**03 01 03.6**	**-0.5**
JIM2				S		**Sn**	**03 01 18.2**	**-1.1**
BSO4	**Boso 4**	**1.11**	**3**	P		**Pn**	**03 01 04.4**	**+0.2**
BSO4				*e*S		**Sn**	**03 01 21.0**	**+1.4**
JIZS	**Izushimoda**	**1.43**	**306**	P		**Pn**	**03 01 08.5**	**+0.2**
JIZS				S		**Sn**	**03 01 26.9**	**+0.2**
KTJ3	**Kamata3**	**1.45**	**317**	P		**Pn**	**03 01 08.4**	**-0.2**
KTJ3				S		**Sn**	**03 01 26.8**	**-0.5**
JOD2	**Odawara 2**	**1.69**	**325**	P		**Pn**	**03 01 11.7**	**-0.1**
JOD2				S		**Sn**	**03 01 32.4**	**-0.5**
JFNN	**Fujinakano**	**1.86**	**315**	P		**Pn**	**03 01 14.8**	**+1.0**
JFNN				*e*S		**Sn**	**03 01 38.9**	**+2.2**
MJAR	**Matsushiro Arr**	**3.15**	**328**	P		**Pn**	**03 01 31.7**	**+0.5**
	7.1nm,0.3s,baz=156,slow=12,SNR=30							
MKAR	**Makanchi Array**	**45.08**	**305**	P		**P**	**03 08 53.1**	**+1.6**
	0.2nm,0.4s,baz=78,slow=12,SNR=2.7							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**53.82**	**187**	P		**P**	**03 09 57.6**	**-0.5**
	0.5nm,0.3s,baz=4.6,slow=7.8,SNR=29							
	0.5nm,0.3s							
ASAR	**Alice Springs**	**57.55**	**187**	P		**P**	**03 10 25.1**	**+0.3**
	0.1nm,0.4s,baz=21,slow=12,SNR=5.4							
	0.1nm,0.4s							
ARCES	**ARCESS Array B**	**66.62**	**340**	P		**P**	**03 11 22.7**	**-2.3**
	3.2nm,0.8s,baz=57,slow=4.5,SNR=5.1							
	3.2nm,0.8s							

*TUL **29** 03:16:16.3±0.7, 35.68N±0.01×97.07W±0.01, h6km±3km, ML2.2, mb_Lg2.2/10(NEIC), Error ellipse: s-maj=1.9km s-min=1.1km az=149.0*
NEIC 29 03:16:16.9±0.7, 35.680N±0.010×97.07W±0.01, h5km±2km, Error ellipse: s-maj=1.6km s-min=1.3km az=153.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.10**	**255**	Pg		Pg	03 16 18.8	-0.2
OK005				Sg		Sg	03 16 20.6	+0.1
OK025	**Westminster Rd**	**0.24**	**245**	Pg		Pg	03 16 21.4	-0.1
OK025				Sg		Sg	03 16 25.1	+0.5
OK029	**Liberty Lake**	**0.33**	**291**	Pg		Pg	03 16 23.1	-0.3
OK029				Sg		Sg	03 16 27.9	+0.3
OK031	**S. Brethren Rd**	**0.33**	**35**	Pg		Pg	03 16 23.2	-0.2
OK031				Sg		Sg	03 16 28.1	+0.3
OK030	**Cody Creek RV**	**0.34**	**44**	Pg		Pg	03 16 23.4	-0.1
OK030				Sg		Sg	03 16 28.3	+0.3
OKCSW	**OKLAHOMA CITY**	**0.40**	**227**	Pg		Pg	03 16 24.4	-0.3
OKCSW				Sg		Sg	03 16 30.4	+0.4
BCOK	**Bluff Creek, N**	**0.44**	**267**	Pg		Pg	03 16 25.0	-0.3
BCOK				Sg		Sg	03 16 31.3	+0.3
OK034	**N. Norfolk Rd.**	**0.44**	**42**	Pg		Pg	03 16 25.2	-0.2
OK034				Sg		Sg	03 16 31.3	+0.1
DEOK	**Depew**	**0.49**	**71**	Pg		Pg	03 16 26.2	-0.2
DEOK				Sg		Sg	03 16 33.1	+0.3

HHAR	**Hobbs**	**2.61**	**76**	Pn	Pn	03 16 60.0	+0.2	
S39A	**Bolivar**	**3.62**	**55**	Pn	Pn	03 17 13.1	-0.5	
S39A				lAmb_Lg		03 18 14.7		
	comp=Z,8.9nm,0.8s							
AMTX	**Amarillo**	**3.85**	**259**	Pn	Pn	03 17 14.4	-2.4	
AMTX				lAmb_Lg		03 18 27.9		
	comp=Z,4.0nm,0.9s							
WHAR	**Wooly Hollow**	**3.92**	**94**	Pn	Pn	03 17 17.5	-0.2	
MGMO	**Mountain Grove**	**4.14**	**68**	lAmb_Lg		03 18 36.7		
	comp=Z,6.2nm,0.8s							
R40A	**Maddies Statio**	**4.65**	**54**	Pn	Pn	03 17 28.4	+0.7	
P40A	**Paris**	**5.54**	**45**	lAmb_Lg		03 19 17.5		
	comp=Z,4.3nm,0.7s							
CGM3	**Cape Girardeau**	**6.19**	**73**	lAmb_Lg		03 19 37.6		
	comp=Z,4.0nm,0.8s							

IDC ***29*** *03:42:06.5±0.8,53˚.73S×134˚.07W,h0km,mb4.2/8, mbtmp4.2/8,MS3.7/9,Error ellipse: s-maj=33.0km s-min=19.7km az=172.0*

NEIC ***29*** *03:42:07.7±2.4,53˚.75S±0˚.2×133˚.9W±0˚.1,h10km±2km, mb4.6/11,Error ellipse: s-maj=29.8km s-min=7.2km az=19.0*

ISC 29 03:42:07.6±0.7,53˚.7S±0˚.2×134˚.0W±0˚.1,h10km,n56, σ1§07/29,mb4.4/14,MS3.7/12,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**32.22**	**44**	LR		LR		03 58 17.2	
	comp=Z,142nm,19.6s,baz=258,slow=30								
TBI	**Tubuai**	**32.51**	**333**	*e*LR		LR		03 56 51.5	
	comp=Z,310nm,28.2s								
TBI	**Tubuai**	**32.51**	**333**	*e*T		T		04 23 00.8	
	78nm,0.3s								
PMSA	**Palmer Station**	**35.50**	**136**	LR		LR		03 59 27.1	
	comp=Z,114nm,18.8s,baz=234,slow=29								
OXZ	**Oxford**	**36.39**	**264**	P		**P**		**03 49 10.6**	**-1.2**
OXZ				lAmb		lAmb		03 49 35.9	
	comp=Z,24nm,1.4s								
QSPA	**South Pole Qui**	**36.44**	**180**	P		**P**		**03 49 13.4**	**+1.2**
	comp=Z,1.9nm,1.1s,baz=160,slow=1.3,SNR=8.8								
QSPA				LR		LR		04 01 56.3	
	comp=Z,79nm,18.4s,baz=75,slow=33								
	comp=Z,1.9nm,1.1s								
QSPA	**South Pole Qui**	**36.44**	**180**	P		**P**		**03 49 13.7**	**+1.5**
QSPA				lAmb		lAmb		03 49 29.7	
	comp=Z,8.5nm,1.4s								
URZ	**Urewera**	**36.53**	**275**	LR		LR		04 00 55.7	
	comp=Z,134nm,18.8s,baz=122,slow=31								
RAR	**Rarotonga**	**37.95**	**319**	LR		LR		04 02 23.3	
	comp=Z,119nm,19.1s,baz=150,slow=32								
PPT2	**Papeete2**	**38.05**	**335**	*e*LR		LR		03 59 24.8	
	comp=Z,293nm,25.5s								
PPT	**Papeete**	**38.07**	**335**	LR		LR		04 00 37.2	
	comp=Z,184nm,18.4s,baz=147,slow=29								
VAH	**Vaihoa**	**39.88**	**339**	*e*T		T		04 32 17.8	
	comp=Z,27nm,0.3s								
BELA	**Belgrano 2**	**40.02**	**161**	P		**P**		**03 49 41.7**	**-0.3**
BELA				lAmb		lAmb		03 49 45.3	
	comp=Z,7.2nm,1.3s								
H03S2	**Juan Fernandez**	**43.20**	**85**	T		T		04 36 14.5	
	baz=222,SNR=125								
H03S1	**Juan Fernandez**	**43.21**	**85**	T		T		04 36 18.3	
	baz=222,SNR=111								
H03S3	**Juan Fernandez**	**43.22**	**85**	T		T		04 36 18.9	
	baz=222,SNR=134								
H03N3	**Juan Fernandez**	**43.47**	**85**	T		T		04 36 32.0	
	baz=226,slow=72,SNR=1055								
H03N2	**Juan Fernandez**	**43.48**	**85**	T		T		04 36 32.2	
	baz=226,slow=72,SNR=1188								
H03N1	**Juan Fernandez**	**43.49**	**85**	T		T		04 36 36.9	
	baz=226,slow=72,SNR=780								
PLCA	**Paso Flores**	**43.56**	**99**	LR		LR		04 04 27.1	
	comp=Z,39nm,19.6s,baz=226,slow=31								
TAOE	**Nuku Hiva Isla**	**45.03**	**351**	*e*LR		LR		04 02 38.3	
	comp=Z,169nm,24.7s								
BO02	**Sierra Bellavi**	**47.37**	**93**	P		**P**		**03 50 41.8**	**+0.1**
BO02				lAmb		lAmb		03 50 58.8	
	comp=Z,16nm,1.4s								
VNA3	**Neumayer Olymp**	**49.25**	**159**	P		**P**		**03 50 54.3**	**-1.4**
CO02	**Combarbal**	**49.77**	**90**	P		**P**		**03 50 58.1**	**-2.2**
VNA2	**Neumayer--Watz**	**49.97**	**160**	P		**P**		**03 51 00.3**	**-0.9**
	baz=215,slow=9.0								
VNA1	**Neumayer--Stat**	**50.00**	**159**	P		**P**		**03 51 00.6**	**-0.7**
SNAA	**Sanae**	**50.26**	**162**	P		**P**		**03 51 02.1**	**-1.3**
SNAA	**Sanae**	**50.26**	**162**	P		**P**		**03 51 01.5**	**-1.9**
SNAA				lAmb		lAmb		03 51 03.6	
	comp=Z,6.6nm,1.3s								
TROLL	**Troll, Antarti**	**50.91**	**164**	P		**P**		**03 51 07.6**	**-0.8**
LVC	**Limon Verde**	**57.40**	**84**	LR		LR		04 10 40.1	
	comp=Z,34nm,21.1s,baz=209,slow=30								
MAW	**Mawson**	**58.32**	**188**	P		**P**		**03 52 01.9**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=164,slow=16,SNR=6.3								
MAW				LR		LR		04 15 06.7	
	comp=Z,53nm,18.6s,baz=91,slow=34								
	comp=Z,2.2nm,0.8s								
MAW	**Mawson**	**58.32**	**188**	P		**P**		**03 52 03.2**	**+1.2**
CPUP	**Villa Florida**	**61.46**	**96**	P		**P**		**03 52 23.2**	**-0.9**
	comp=Z,3.9nm,1.1s,baz=222,slow=11,SNR=3.7								
	comp=Z,3.9nm,1.1s								
LPAZ	**La Paz**	**62.78**	**80**	P		**P**		**03 52 35.2**	**+1.4**
	comp=Z,7.1nm,1.0s,baz=211,slow=3.3,SNR=10								
	comp=Z,7.1nm,1.0s								
LPAZ	**La Paz**	**62.78**	**80**	P		**P**		**03 52 33.8**	**0.0**
ASAR	**Alice Springs**	**72.47**	**254**	P		**P**		**03 53 34.9**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=144,slow=6.6,SNR=14								
	comp=Z,1.6nm,0.8s								
H01W1	**Cape Leeuwin H**	**73.96**	**233**	T		T		05 15 16.7	
	baz=144,slow=76,SNR=40								
H01W2	**Cape Leeuwin H**	**73.96**	**233**	T		T		05 15 30.0	
	baz=144,slow=76,SNR=50								
H01W3	**Cape Leeuwin H**	**73.97**	**233**	T		T		05 15 18.8	
	baz=144,slow=76,SNR=36								
WB2	**Warramunga Arr**	**75.13**	**257**	P		**P**		**03 53 50.0**	**+0.1**
WB2				lAmb		lAmb		03 54 07.3	
	comp=Z,13nm,1.4s								
WRA	**Warramunga Arr**	**75.14**	**257**	P		**P**		**03 53 49.9**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=146,slow=5.1,SNR=17								
	comp=Z,1.6nm,0.8s								
WRA	**Warramunga Arr**	**75.14**	**257**	P		**P**		**03 53 50.5**	**+0.5**
BDFB	**Brasilia**	**75.19**	**96**	P		**P**		**03 53 50.7**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=222,slow=6.7,SNR=3.7								
	comp=Z,2.4nm,0.7s								
WB0	**Warramunga Arr**	**75.24**	**257**	P		**P**		**03 53 50.4**	**-0.2**
WB0				lAmb		lAmb		03 54 01.9	
	comp=Z,6.9nm,1.1s								
FITZ	**Fitzroy Crossi**	**81.56**	**251**	P		**P**		**03 54 26.1**	**+0.7**
	comp=Z,1.9nm,1.0s,baz=190,slow=5.0,SNR=5.8								
	comp=Z,1.9nm,1.0s								
H11S2	**WAKE ISLAND Hy**	**88.03**	**305**	T		T		05 32 54.3	
	baz=148,slow=75,SNR=42								
H11S3	**WAKE ISLAND Hy**	**88.05**	**305**	T		T		05 32 40.9	
	baz=148,slow=75,SNR=26								
H11S1	**WAKE ISLAND Hy**	**88.05**	**305**	T		T		05 32 50.1	
	baz=148,slow=75,SNR=29								
H11N3	**WAKE ISLAND Hy**	**88.98**	**306**	T		T		05 33 50.8	
	baz=148,slow=76,SNR=18								
H11N1	**WAKE ISLAND Hy**	**88.99**	**306**	T		T		05 33 50.5	
	baz=148,slow=76,SNR=21								
H11N2	**WAKE ISLAND Hy**	**89.00**	**306**	T		T		05 33 52.1	
	baz=148,slow=76,SNR=17								
ILAR	**Eielson Array**	**118.59**	**354**	PKP		**PKiKP**		**04 00 55.0**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=218,slow=2.1,SNR=1.4								
KEST	**Kesra**	**148.81**	**110**	PKPbc		**PKiKP**		**04 01 56.7**	**+0.5**
	comp=Z,2.8nm,0.9s,baz=287,slow=6.3,SNR=4.1								
MKAR	**Makanchi Array**	**155.99**	**268**	PKPab		**PKPab**		**04 02 27.6**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=184,slow=3.4,SNR=8.1								
ZALV	**Zalesovo Beam**	**157.28**	**286**	PKPab		**PKPab**		**04 02 34.2**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=123,slow=5.5,SNR=4.9								
CLL	**Collm**	**159.88**	**83**	*e*PKPab		**PKPab**		**04 02 47.0**	**+1.9**

GUC ***29*** *04:04:37.0±0.7,30˚.68S×71˚.25W,h52km±2km,ML4.0*

NEIC ***29*** *04:04:38.2±2.1,30˚.66S±0˚.03×71˚.39W±0˚.06,h49km±7km, mb4.3/3,ML4.0(GUC),Error ellipse: s-maj=8.1km s-min=4.4km az=83.0*

ISC 29 04:04:38.2±0.8,30˚.65S±0˚.03×71˚.31W±0˚.04,h49km±7km, n57,σ0§90/78,mb4.4/3,1C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.28**	**265**				**Pn**	**04 04 47.2**	**+0.1**
CO06					Sn		**Sn**	**04 04 54.7**	**+1.2**
CO06	**Fray Jorge**	**0.28**	**265**	⇑*i*P			**Pn**	**04 04 47.2**	**+0.1**
CO06				*e*S			**Sn**	**04 04 54.8**	**+1.4**
CO06						IAML		04 04 57.3	
	comp=N,14μm,0.2s								
CO03	**El Pedregal**	**0.57**	**110**				**Pn**	**04 04 50.1**	**-0.3**
CO03					Sn		**Sn**	**04 04 59.0**	**-0.2**
CO03	**El Pedregal**	**0.57**	**110**	⇓*i*P			**Pn**	**04 04 50.1**	**-0.3**
CO03				*e*S			**Sn**	**04 04 59.1**	**0.0**
CO03						IAML		04 04 59.6	
	comp=E,14μm,0.1s								
CO02	**Combarbal**	**0.61**	**154**				**Pn**	**04 04 50.8**	**-0.2**
CO02					Sn		**Sn**	**04 05 00.0**	**-0.1**
CO02	**Combarbal**	**0.61**	**154**	*i*P			**Pn**	**04 04 50.8**	**-0.2**
CO02				*e*S			**Sn**	**04 05 00.1**	**-0.1**
GO04	**Tololo Observa**	**0.65**	**43**				**Pn**	**04 04 51.1**	**-0.4**
GO04					Sn		**Sn**	**04 05 01.3**	**+0.2**
GO04	**Tololo Observa**	**0.65**	**43**	*e*P			**Pn**	**04 04 51.2**	**-0.4**
GO04				*e*S			**Sn**	**04 05 01.5**	**+0.4**
GO04						IAML		04 05 03.3	
	comp=E,15μm,0.4s								
CO05	**La Serena**	**0.73**	**5**				**Pn**	**04 04 52.3**	**-0.1**
CO05					Sn		**Sn**	**04 05 02.8**	**+0.2**
CO05	**La Serena**	**0.73**	**5**	⇓*i*P			**Pn**	**04 04 52.4**	**+0.1**
CO05				*e*S			**Sn**	**04 05 02.8**	**+0.2**
CO01	**Juntas del Tor**	**1.25**	**58**				**Pn**	**04 05 00.1**	**+0.6**
CO01					Sn		**Sn**	**04 05 16.4**	**+1.0**
CO01	**Juntas del Tor**	**1.25**	**58**	⇓*i*P			**Pn**	**04 05 00.2**	**+0.7**
CO01				*e*S			**Sn**	**04 05 15.9**	**+0.6**
LCO	**Las Campanas**	**1.72**	**18**				**Pn**	**04 05 05.8**	**-0.1**
LCO	**Las Campanas**	**1.72**	**18**	⇓*i*P			**Pn**	**04 05 06.1**	**+0.1**
LCO				*e*S			**Sn**	**04 05 27.4**	**+0.6**
VA06	**Catapilco**	**1.91**	**180**	Pn			**Pn**	**04 05 08.9**	**+0.6**
VA06	**Catapilco**	**1.91**	**180**	*e*P			**Pn**	**04 05 08.6**	**+0.4**
VA06				*e*S			**Sn**	**04 05 31.4**	**+0.3**
VA06						IAML		04 05 38.8	
	comp=E,1μm,0.4s								
AC05	**El Transito**	**2.02**	**27**	Pn			**Pn**	**04 05 10.7**	**+0.8**
AC05	**El Transito**	**2.02**	**27**	*e*P			**Pn**	**04 05 10.9**	**+0.9**
AC05				*e*S			**Sn**	**04 05 35.8**	**+1.7**
VA03	**San Esteban**	**2.21**	**163**	Pn			**Pn**	**04 05 13.0**	**+0.5**
VA03	**San Esteban**	**2.21**	**163**	*e*P			**Pn**	**04 05 13.1**	**+0.5**
VA03				*e*S			**Sn**	**04 05 40.0**	**+1.3**
VA03						IAML		04 05 47.7	
	comp=E,1μm,0.1s								
ROCH	**El Roble**	**2.33**	**174**	*e*P			**Pn**	**04 05 14.9**	**+0.6**
ROCH				*e*S			**Sn**	**04 05 43.7**	**+1.8**
ROCH						IAML		04 05 55.0	
	comp=N,802nm,0.5s								
ROC1	**El Roble**	**2.33**	**174**	Pn			**Pn**	**04 05 14.5**	**+0.1**
VA01	**Torpederas**	**2.38**	**187**	Pn			**Pn**	**04 05 14.2**	**-0.6**
VA01	**Torpederas**	**2.38**	**187**	*e*P			**Pn**	**04 05 14.4**	**-0.4**
VA01				*e*S			**Sn**	**04 05 46.1**	**+3.3**
ZON	**Zonda**	**2.43**	**112**	Pn			**Pn**	**04 05 16.2**	**+0.7**
AC04	**Llanos de Chal**	**2.44**	**5**	Pn			**Pn**	**04 05 16.1**	**+0.4**
AC04	**Llanos de Chal**	**2.44**	**5**	*e*P			**Pn**	**04 05 16.2**	**+0.5**
PEL	**Peldehue**	**2.54**	**168**	Pn			**Pn**	**04 05 18.4**	**+1.3**
MT02	**Curacav**	**2.61**	**177**	Pn			**Pn**	**04 05 18.1**	**+0.2**
MT02	**Curacav**	**2.61**	**177**	*e*P			**Pn**	**04 05 17.8**	**-0.1**
MT02				*e*S			**Sn**	**04 05 47.8**	**-0.6**
MT05	**Renca**	**2.78**	**170**	Pn			**Pn**	**04 05 20.8**	**+0.5**
MT05	**Renca**	**2.78**	**170**	*e*P			**Pn**	**04 05 21.5**	**+1.2**
MT03	**Universidad Ad**	**2.92**	**167**	Pn			**Pn**	**04 05 23.4**	**+1.1**
MT03	**Universidad Ad**	**2.92**	**167**	*e*P			**Pn**	**04 05 23.0**	**+0.7**
VA05	**Santo Domingo**	**3.01**	**185**	Pn			**Pn**	**04 05 22.6**	**-0.8**
VA05	**Santo Domingo**	**3.01**	**185**	*e*P			**Pn**	**04 05 23.0**	**-0.4**
VA05				*e*S			**Sn**	**04 05 57.6**	**-0.6**
VA05						IAML		04 06 16.4	
	comp=E,680nm,0.4s								
MT09	**Talagante**	**3.13**	**175**	Pn			**Pn**	**04 05 25.9**	**+0.7**
MT09	**Talagante**	**3.13**	**175**	*e*P			**Pn**	**04 05 25.8**	**+0.6**
MT09				*e*S			**Sn**	**04 06 02.9**	**+1.5**
MT09						IAML		04 06 16.5	
	comp=N,469nm,0.3s								
GO03	**Copiap**	**3.19**	**17**	Pn			**Pn**	**04 05 26.7**	**+0.8**
MT01	**Popeta**	**3.21**	**179**				**Pn**	**04 05 26.3**	**+0.1**
LMEL	**Las Melosas**	**3.33**	**164**	Pn			**Pn**	**04 05 29.6**	**+1.7**
AC06	**Mina Casimiro**	**3.38**	**15**	Pn			**Pn**	**04 05 28.9**	**+0.3**
AC06	**Mina Casimiro**	**3.38**	**15**	*e*P			**Pn**	**04 05 29.1**	**+0.4**
BO02	**Sierra Bellavi**	**4.16**	**174**	Pn			**Pn**	**04 05 39.7**	**+0.5**
AC02	**Maricunga**	**4.25**	**27**	Pn			**Pn**	**04 05 42.2**	**+1.2**
GO05	**Huala**	**4.38**	**187**	Pn			**Pn**	**04 05 40.7**	**-1.5**
AC01	**Pan de Azucar**	**4.53**	**8**	Pn			**Pn**	**04 05 42.8**	**-1.5**
GO02	**Mina Guanaco**	**5.67**	**16**	Pn			**Pn**	**04 06 00.7**	**+0.4**
PB14	**IPOC Station P**	**6.05**	**8**	Pn			**Pn**	**04 06 04.6**	**-0.9**
VA04	**Juan Fernndez**	**7.04**	**243**	Pn			**Pn**	**04 06 17.0**	**-1.7**
TA01	**Diego Aracena**	**10.09**	**6**	Pn			**Pn**	**04 06 59.5**	**-1.1**
TRQA	**Tornquist**	**10.68**	**136**	Pn			**Pn**	**04 07 07.4**	**-1.1**
LL05	**Los Muermos**	**10.88**	**189**	Pn			**Pn**	**04 07 11.1**	**0.0**
LPAZ	**La Paz**	**14.59**	**12**	P			**P**	**04 08 09.0**	**+1.2**
BDFB	**Brasilia**	**26.04**	**60**	P			**P**	**04 10 06.2**	**-1.1**
BDFB				lAmb			lAmb	04 10 06.8	
	comp=Z,2.8nm,0.8s								
SNAA	**Sanae**	**54.46**	**159**	P			**P**	**04 13 59.4**	**-0.9**
SNAA				lAmb			lAmb	04 14 06.2	
	comp=Z,6.2nm,1.5s								
QSPA	**South Pole Qui**	**59.58**	**180**	P			**P**	**04 14 36.3**	**-0.3**
QSPA				lAmb			lAmb	04 15 09.8	
	comp=Z,5.3nm,1.4s								

NEIC ***29*** *04:04:42.7±2.3,6˚.13S±0˚.07×127˚.96E±0˚.07,h378km±6km, mb4.6/53,Error ellipse: s-maj=11.2km s-min=9.5km az=136.0*

DJA ***29*** *04:04:42.8±0.2,6˚.2S×127˚.8E±˚,h380km±3km,M4.3/32, mB4.8/19,mb4.7/32,MLv4.9/20,Mw(mB)4.1/19*

IDC ***29*** *04:04:43.2±1.2,6˚.16S×128˚.10E,h393km±14km,mb4.1/18, mbtmp4.9/23,Error ellipse: s-maj=14.1km s-min=10.8km az=84.0*

ISC 29 04:04:43.3±0.3,6˚.16S±0˚.04×127˚.98E±0˚.05,h400km,n183, σ1§33/188,mb4.5/42,1C-1D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.47**	**5**	P			**Pn**	**04 05 41.0**	**-1.5**
BNDI	**Bandanaira**	**2.52**	**50**	P			**Pn**	**04 05 41.4**	**-1.4**
BNDI				S			**S**	**04 06 27.8**	**-3.0**
BNDI	**Bandanaira**	**2.52**	**50**	P			**Pn**	**04 05 41.8**	**-1.0**
MSAI	**Masohi**	**2.95**	**19**	P			**Pn**	**04 05 43.9**	**-2.3**
MSAI				S			**S**	**04 06 30.6**	**-6.4**
NLAI	**Namlea**	**3.03**	**343**	P			**Pn**	**04 05 45.6**	**-1.3**
NLAI				S			**S**	**04 06 35.2**	**-3.0**
SAUI	**Saumlaki**	**3.76**	**119**				**Pn**	**04 05 52.8**	**-0.4**
SAUI	**Saumlaki**	**3.76**	**119**	P			**Pn**	**04 05 52.4**	**-0.7**
SAUI	**Saumlaki**	**3.76**	**119**	P			**Pn**	**04 05 52.8**	**-0.4**
SANI	**Sanana**	**4.54**	**334**	P			**Pn**	**04 05 58.7**	**-2.1**
SANI	**Sanana**	**4.54**	**334**	P			**Pn**	**04 05 58.9**	**-1.9**
SOEI	**Soe**	**5.12**	**226**	Pn			**Pn**	**04 06 05.3**	**-1.5**
SOEI	**Soe**	**5.12**	**226**	P			**Pn**	**04 06 05.5**	**-1.3**
	3.1nm9μm714nm,0.7s								
SOEI	**Soe**	**5.12**	**226**	P			**Pn**	**04 06 06.0**	**-0.8**
FAKI	**Fak Fak**	**5.34**	**53**	Pn			**Pn**	**04 06 07.5**	**-1.4**
FAKI	**Fak Fak**	**5.34**	**53**	P			**Pn**	**04 06 07.5**	**-1.4**
	2.5nm8μm732nm,0.5s								
FAKI	**Fak Fak**	**5.34**	**53**	P			**Pn**	**04 06 07.7**	**-1.2**
BBSI	**Bau Bau**	**5.42**	**277**	P			**Pn**	**04 06 09.2**	**-0.6**
	0.1nm514nm37nm,1.0s								
LBMI	**Labuha**	**5.51**	**355**	P			**Pn**	**04 06 09.7**	**-1.0**
	0.8nm2μm200nm,0.6s								
BATI	**Baumata**	**5.87**	**226**	P			**Pn**	**04 06 14.2**	**-0.3**
	778nm,0.4s,baz=97,slow=1.8,SNR=82								
BATI				S			**S**	**04 07 25.1**	**-3.8**
	400nm,0.7s,baz=273,slow=23,SNR=13								
BATI	**Baumata**	**5.87**	**226**	P			**Pn**	**04 06 13.9**	**-0.6**
	2.8nm7μm670nm,0.5s								
SIJI	**Sorong**	**6.20**	**32**	P			**Pn**	**04 06 16.4**	**-1.8**
	39nm,0.3s,baz=279,slow=23,SNR=34								
SIJI				S			**S**	**04 07 28.4**	**-7.0**
	60nm,0.5s,baz=204,slow=16,SNR=4.2								
SWI	**Sorong**	**6.20**	**32**	P			**Pn**	**04 06 16.8**	**-1.4**
EDFI	**Ende, Flores**	**6.75**	**247**	P			**Pn**	**04 06 23.1**	**-1.2**
	0.1nm353nm13nm,0.4s								
LUWI	**Luwuk**	**7.27**	**314**	Pn			**P**	**04 06 29.6**	**-1.1**
LUWI	**Luwuk**	**7.27**	**314**	P			**P**	**04 06 29.4**	**-1.3**
	0.4nm4μm120nm,0.7s								
MTN	**Manton Dam**	**7.33**	**155**	Pn			**Pn**	**04 06 30.5**	**-0.2**
MTN	**Manton Dam**	**7.33**	**155**	P			**Pn**	**04 06 30.8**	**+0.1**
BSSI	**Bau Bau, Buton**	**7.45**	**270**	P			**P**	**04 06 32.0**	**-0.6**
	0.6nm2μm164nm,0.5s								
KMSI	**Cibinong**	**7.79**	**329**	P			**Pn**	**04 06 35.1**	**-0.9**
	0.9nm174nm,0.4s								
KDU	**Kakadu**	**7.85**	**146**	P			**Pn**	**04 06 36.7**	**+0.1**
BKSI	**Bulukumba**	**7.86**	**276**	P			**Pn**	**04 06 36.0**	**-0.8**
	0.4nm1μm122nm,1.0s								
KAPI	**Kappang**	**8.27**	**278**	P			**P**	**04 06 41.7**	**0.0**
	42nm,0.6s,baz=119,slow=5.6,SNR=20								
KAPI	**Kappang**	**8.27**	**278**				**P**	**04 06 41.6**	**-0.1**
KAPI	**Kappang**	**8.27**	**278**	P			**P**	**04 06 41.8**	**0.0**
BASI	**Baing, Sumba**	**8.36**	**241**	P			**Pn**	**04 06 41.1**	**-1.4**
	42nm,0.5s								
SPSI	**Sidrap Palu**	**8.47**	**285**	P			**P**	**04 06 43.0**	**-0.9**
	6μm167nm,0.7s								
TTSI	**Tana Toraja**	**8.71**	**290**	P			**P**	**04 06 46.3**	**-0.3**
	80nm,0.9s								
MRSI	**Marisa**	**8.94**	**317**	P			**P**	**04 06 48.4**	**-0.8**
	2μm84nm,0.8s								
SRPI	**Serui, Papua**	**9.28**	**63**	P			**Pn**	**04 06 54.2**	**+1.1**
KNRA	**Kununurra**	**9.49**	**175**				**P**	**04 06 55.1**	**-0.2**
KNRA	**Kununurra**	**9.49**	**175**	P			**Pn**	**04 06 55.4**	**0.0**
SGSI	**Sangihe**	**10.09**	**346**	P			**P**	**04 07 01.0**	**-0.9**
TOLI2	**Tolitoli**	**10.19**	**315**	P			**Pn**	**04 07 02.9**	**-0.8**
TOLI2	**Tolitoli**	**10.19**	**315**	P			**Pn**	**04 07 03.7**	**0.0**
MPSI	**Mapaga**	**10.33**	**308**	P			**Pn**	**04 07 06.0**	**+0.7**
	1μm114nm,0.5s								
PLAI	**Plampang**	**10.46**	**255**	P			**P**	**04 07 02.8**	**-3.3**
	753nm54nm,1.1s								
SMPI	**Sarmi**	**11.47**	**69**	P			**Pn**	**04 07 19.0**	**+0.5**
	84nm,1.0s								
FITZ	**Fitzroy Crossi**	**12.08**	**191**	P			**P**	**04 07 24.1**	**+0.1**
	24nm,0.6s,baz=19,slow=9.5,SNR=92								
FITZ	**Fitzroy Crossi**	**12.08**	**191**	P			**P**	**04 07 24.0**	**+0.1**
GENI	**Genyem**	**12.66**	**74**	P			**Pn**	**04 07 34.6**	**+2.4**
BBKI	**Banjar Baru**	**13.37**	**281**	P			**Pn**	**04 07 39.0**	**-1.4**
	130nm,0.9s								
JAGI	**Jajag, Banyuwa**	**13.91**	**260**	P			**P**	**04 07 42.2**	**-1.8**
MYLDM	**Lahad Datu**	**14.72**	**320**	P			**P**	**04 07 54.0**	**+1.2**
WB0	**Warramunga Arr**	**14.89**	**156**	P			**P**	**04 07 54.6**	**-0.1**
WRAB	**Tennant Creek**	**15.02**	**156**	P			**P**	**04 07 56.1**	**0.0**
WRAB	**Tennant Creek**	**15.02**	**156**	P			**P**	**04 07 56.2**	**+0.1**
WRA	**Warramunga Arr**	**15.03**	**156**	P			**P**	**04 07 56.2**	**0.0**
	11nm,0.3s,baz=333,slow=12,SNR=242								
WRA					S		**S**	**04 10 33.7**	**-2.1**
	19nm,0.9s,baz=331,slow=21,SNR=9.0								
WRA	**Warramunga Arr**	**15.03**	**156**	P			**P**	**04 07 54.9**	**-1.3**
WB2	**Warramunga Arr**	**15.03**	**156**	P			**P**	**04 07 56.1**	**-0.1**
WB2				lAmb		lAmb		04 07 57.1	
	comp=Z,23nm,0.7s								
WR0	**Warramunga Arr**	**15.12**	**156**	P			**P**	**04 07 57.3**	**+0.1**
WR0				lAmb		lAmb		04 07 58.0	
	comp=Z,18nm,0.7s								
COEN	**Coen**	**16.84**	**119**	P			**P**	**04 08 15.9**	**+0.2**
COEN				lAmb		lAmb		04 08 16.8	
	comp=Z,20nm,0.6s								
COEN	**Coen**	**16.84**	**119**	P			**P**	**04 08 16.1**	**+0.4**
MBWA	**Marble Bar**	**16.91**	**207**	P			**P**	**04 08 15.9**	**-0.5**

	comp=Z,16nm,0.7s								
USRK	**Ussuriysk Ar.**	**50.26**	**4**	P		**P**	**04 13 01.6**	**+0.9**	
TAPN	**Taplejung**	**51.24**	**312**	*eP*		**P**	**04 13 08.7**	**+0.1**	
	comp=Z,8.8nm,0.4s								
RAMN	**Ramite**	**51.84**	**311**	*eP*		**P**	**04 13 13.2**	**+0.2**	
	comp=Z,15nm,0.6s								
GTA	**Gaotai**	**52.29**	**332**	*eP*		**P**	**04 13 16.8**	**+0.9**	
GTA				pmax	pmax				
	comp=Z,9.0nm,1.0s								
GOMU	**GeErMu**	**52.37**	**326**	P	P		04 13 21.0	+4.2	
GOMU				pmax	pmax				
	comp=Z,3.0nm,0.4s								
GOMU				pmax	pmax				
	comp=Z,52nm,6.7s								
JIRN	**Jiri**	**52.53**	**312**	*eP*		**P**	**04 13 17.9**	**-0.2**	
	comp=Z,24nm,0.4s								
GUN	**Gumba**	**52.90**	**312**	*eP*		**P**	**04 13 21.0**	**+0.2**	
	comp=Z,13nm,0.5s								
PKI	**Pulchoki**	**53.06**	**311**	*eP*		**P**	**04 13 21.6**	**-0.3**	
PKIN	**Phulchoki**	**53.08**	**311**	*eP*		**P**	**04 13 21.2**	**-0.8**	
DMN	**Daman**	**53.31**	**311**	*eP*		**P**	**04 13 23.2**	**-0.4**	
GKN	**Gorkha**	**53.87**	**311**	*eP*		**P**	**04 13 27.6**	**+0.1**	
	comp=Z,8.5nm,0.3s								
KOLN	**Koldanda**	**54.53**	**310**	*eP*		**P**	**04 13 32.1**	**-0.2**	
DANN	**Dangsing**	**54.71**	**311**	*eP*		**P**	**04 13 33.6**	**-0.1**	
PYUN	**Piuthan**	**55.16**	**310**	*eP*		**P**	**04 13 36.9**	**+0.2**	
KLR	**Kul'dur**	**55.26**	**3**	P		**P**	**04 13 37.8**	**+1.0**	
	comp=Z,2.4nm,0.7s,baz=143,slow=13,SNR=3.9								
	comp=Z,2.4nm,0.7s								
SONM	**Songino Array**	**57.04**	**343**	P		**P**	**04 13 50.4**	**+1.1**	
	comp=Z,8.2nm,0.8s,baz=160,slow=6.8,SNR=12								
	comp=Z,8.2nm,0.8s								
SONM	**Songino Array**	**57.04**	**343**	P		**P**	**04 13 51.2**	**+1.9**	
WMQ	**Urumqi**	**61.61**	**328**	*eP*		**P**	**04 14 21.3**	**+1.0**	
WMQ				pmax	pmax				
	comp=Z,17nm,0.9s								
PEA0B	**Petropavlovsk-**	**64.18**	**19**	P		**P**	**04 14 37.5**	**+0.8**	
PEA0B				IAmb	IAmb		04 14 38.5		
	comp=Z,15nm,0.7s								
PETK	**Petropavlovsk-**	**64.18**	**19**	P		**P**	**04 14 37.2**	**+0.5**	
	comp=Z,10nm,0.6s,baz=189,slow=5.3,SNR=5.0								
	comp=Z,10nm,0.6s								
PETK	**Petropavlovsk-**	**64.18**	**19**	P		**P**	**04 14 37.1**	**+0.4**	
MK31	**Makanchi Array**	**66.44**	**328**			**P**	**04 14 52.0**	**+0.8**	
MK31				IAmb	IAmb		04 14 52.6		
	comp=Z,6.7nm,1.1s								
MKAR	**Makanchi Array**	**66.44**	**328**	P		**P**	**04 14 51.9**	**+0.7**	
	comp=Z,5.8nm,0.4s,baz=117,slow=8.4,SNR=94								
	comp=Z,5.8nm,0.4s								
MAKZ	**Makanchi**	**66.62**	**327**	P		**P**	**04 14 53.0**	**+0.7**	
MAKZ				IAmb	IAmb		04 14 53.2		
	comp=Z,4.6nm,0.5s								
BOOM	**Boomskoye usch**	**67.63**	**321**	P		**P**	**04 14 59.6**	**+0.7**	
YAK	**Yakutsk**	**68.01**	**1**	P		**P**	**04 15 00.8**	**+0.3**	
	comp=Z,19nm,0.4s,baz=14,slow=1.5,SNR=5.9								
	comp=Z,19nm,0.4s								
KBL	**Kabul**	**68.70**	**311**	P		**P**	**04 15 04.3**	**-1.3**	
KBL				IAmb	IAmb		04 15 04.5		
	comp=Z,5.6nm,0.4s								
ZAA0	**Zalesovo Array**	**69.96**	**335**	P		**P**	**04 15 12.5**	**0.0**	
ZAA0				IAmb	IAmb		04 15 13.3		
	comp=Z,8.4nm,0.8s								
ZALV	**Zalesovo Beam**	**69.96**	**335**	P		**P**	**04 15 12.4**	**-0.2**	
	comp=Z,7.3nm,0.6s,baz=130,slow=5.0,SNR=29								
	comp=Z,7.3nm,0.6s								
ZALV	**Zalesovo Beam**	**69.96**	**335**	P		**P**	**04 15 12.7**	**+0.1**	
SMY	**Shemya**	**70.46**	**28**	P		**P**	**04 15 17.6**	**+2.1**	
KURK	**Kurchatov**	**70.77**	**329**			**P**	**04 15 18.3**	**+0.8**	
KURK				IAmb	IAmb		04 15 19.0		
	comp=Z,16nm,1.0s								
SEY	**Seymchan**	**71.37**	**12**	P		**P**	**04 15 22.1**	**+1.3**	
	comp=Z,10nm,0.5s,baz=203,slow=4.6,SNR=21								
	comp=Z,10nm,0.5s								
AMKA	**Amchitka**	**72.16**	**31**	P		**P**	**04 15 27.1**	**+1.4**	
VNDA	**Vanda**	**73.52**	**173**	P		**P**	**04 15 33.8**	**+0.6**	
BRVK	**Borovoye**	**76.37**	**328**	P		**P**	**04 15 50.3**	**+0.7**	
TIXI	**Tiksi**	**77.66**	**0**	P		**P**	**04 15 56.6**	**+0.2**	
	comp=Z,8.3nm,0.5s,baz=264,slow=22,SNR=6.4								
	comp=Z,8.3nm,0.5s								
TIXI	**Tiksi**	**77.66**	**0**	P		**P**	**04 15 56.6**	**+0.2**	
TIXI				IAmb	IAmb		04 15 57.4		
	comp=Z,8.8nm,0.6s								
ABKAR	**Akbulak array**	**80.61**	**322**	P		**P**	**04 16 12.9**	**+0.2**	
UNV	**Unalaska Valle**	**80.89**	**33**	P		**P**	**04 16 14.2**	**+0.2**	
AKTO	**Aktyubinsk**	**82.19**	**323**	P		**P**	**04 16 21.0**	**+0.1**	
	comp=Z,2.3nm,0.6s,baz=117,slow=6.8,SNR=6.3								
	comp=Z,2.3nm,0.6s								
QSPA	**South Pole Qui**	**83.81**	**180**	P		**P**	**04 16 28.0**	**-0.9**	
ARU	**Arti**	**83.94**	**328**	P		**P**	**04 16 29.2**	**-0.3**	
	comp=Z,2.1nm,0.3s,baz=115,slow=19,SNR=4.0								
	comp=Z,2.1nm,0.3s								
SML	**Sawmill**	**92.40**	**28**	P		**P**	**04 17 09.7**	**+0.2**	
SML				IAmb	IAmb		04 17 10.3		
	comp=Z,7.2nm,0.7s								
RND	**Reindeer**	**92.41**	**27**	P		**P**	**04 17 09.2**	**-0.3**	
RND				IAmb	IAmb		04 17 10.1		
	comp=Z,6.6nm,1.1s								
DHY	**Denali Highway**	**93.02**	**27**	P		**P**	**04 17 12.9**	**+0.5**	
ILAR	**Eielson Array**	**93.45**	**25**	P		**P**	**04 17 13.2**	**-1.0**	
	comp=Z,0.6nm,0.8s,baz=237,slow=5.4,SNR=5.6								
	comp=Z,0.6nm,0.8s								
EKA	**Eskdalemuir Ar**	**117.47**	**331**	PKP		**PKPdf**	**04 22 41.2**	**-0.9**	
	comp=Z,0.3nm,0.3s,baz=35,slow=3.4,SNR=5.3								
PDAR	**Pinedale Array**	**117.72**	**45**	PKP		**PKiKP**	**04 22 43.0**	**-0.4**	
	comp=Z,0.3nm,0.6s,baz=101,slow=1.5,SNR=3.8								
PDAR	**Pinedale Array**	**117.72**	**45**	PKPdf		**PKiKP**	**04 22 43.6**	**+0.2**	
R40A	**Maddies Statio**	**131.53**	**43**	PKPdf		**PKiKP**	**04 23 10.8**	**+0.2**	
KOWA	**Kowa**	**132.14**	**284**	PKPdf		**PKiKP**	**04 23 12.3**	**-0.1**	
LRAL	**Lakeview Retre**	**137.92**	**46**	PKPdf		**PKiKP**	**04 23 22.7**	**-1.1**	
ITQB	**Itaqui**	**144.10**	**173**	PKPdf		**PKPdf**	**04 23 32.9**	**0.0**	
HZTE	**Horizontes, Gu**	**146.50**	**80**	PKPbc		**PKPab**	**04 23 41.0**	**-0.5**	
JTS	**Las Juntas de**	**147.16**	**81**	PKPbc		**PKiKP**	**04 23 41.9**	**-1.3**	
PB07	**IPOC Station P**	**147.21**	**148**	PKPbc		**PKiKP**	**04 23 42.4**	**-1.0**	
CPUP	**Villa Florida**	**147.29**	**171**	PKPbc		**PKPbc**	**04 23 41.6**	**+0.3**	
	comp=Z,0.8nm,0.4s,baz=356,slow=0.3,SNR=5.9								
CPUP	**Villa Florida**	**147.29**	**171**	PKPbc		**PKiKP**	**04 23 42.2**	**-1.0**	
LPAZ	**La Paz**	**152.58**	**145**	PKPbc		**PKiKP**	**04 23 55.5**	**+0.4**	
	comp=Z,1.1nm,0.4s,baz=14,slow=8.3,SNR=5.6								

*KRSC **29** 04:08:47.8±0.8,53˚.13N×160˚.03E, h58km±6km, ML4.6*
*MOS **29** 04:08:48.3±0.8, 53˚.07N×160˚.00E, h60km, mb4.5/6, Error ellipse: s-maj=8.6km s-min=4.8km az=78.4*
*NEIC **29** 04:08:49.9±1.7,53˚.2N±0˚.1×159˚.90E±0˚.09, h56km±7km, mb4.2/28, Error ellipse: s-maj=19.4km s-min=4.4km az=160.0*
*IDC **29** 04:08:50.0±0.7,53˚.30N×159˚.86E, h57km±6km, mb3.6/14, mbtmp3.9/14, MS2.8/4, Error ellipse: s-maj=24.9km s-min=6.8km az=166.0*

ISC 29 04:08:49.2±0.5, 53˚.12N±0˚.03×159˚.97E±0˚.03, h57km±4km, n138, σ1§08/177, mb4.1/30, 3C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s	ISC
SPN	**Mys Shipunski**	**0.04**	**124**	PN		**Pn**	**04 08 57.8**		**+0.1**
SPN				S		**Sn**	**04 09 03.9**		**+0.1**
SPN	**Mys Shipunski**	**0.04**	**124**	P		**Pn**	**04 08 57.8**		**+0.1**
SPN				S		**Sn**	**04 09 03.9**		**+0.1**
NLC	**Nalytchevo**	**0.38**	**278**	PN		**Pn**	**04 08 59.8**		**+0.1**
NLC				S		**Sn**	**04 09 07.6**		**+0.4**
NLC	**Nalytchevo**	**0.38**	**278**	P		**Pn**	**04 08 59.8**		**+0.1**
NLC				S		**Sn**	**04 09 07.6**		**+0.4**
SDLR	**Sedlovina**	**0.67**	**284**	PN		**Pn**	**04 09 03.3**		**+0.2**
SDLR	**Sedlovina**	**0.67**	**284**	P		**Pn**	**04 09 03.3**		**+0.2**
UGLR	**Uglovaya**	**0.70**	**278**	PN		**Pn**	**04 09 04.0**		**+0.7**
UGLR				S		**Sn**	**04 09 14.6**		**+1.0**
UGLR	**Uglovaya**	**0.70**	**278**	P		**Pn**	**04 09 04.0**		**+0.7**
UGLR				S		**Sn**	**04 09 14.6**		**+1.0**
SMAR	**Somma**	**0.72**	**282**	PN		**Pn**	**04 09 03.7**		**0.0**
SMAR				S		**Sn**	**04 09 14.7**		**+0.4**
SMAR	**Somma**	**0.72**	**282**	P		**Pn**	**04 09 03.7**		**0.0**
SMAR				S		**Sn**	**04 09 14.7**		**+0.4**
DALK	**Dalny**	**0.74**	**264**	PN		**Pn**	**04 09 03.8**		**+0.1**
DALK				S		**Sn**	**04 09 14.4**		**+0.1**
DALK	**Dalny**	**0.74**	**264**	P		**Pn**	**04 09 03.8**		**+0.1**
DALK				S		**Sn**	**04 09 14.4**		**+0.1**
AVH	**Avacha**	**0.76**	**282**	PN		**Pn**	**04 09 04.7**		**+0.7**
AVH				S		**Sn**	**04 09 15.8**		**+0.9**
AVH	**Avacha**	**0.76**	**282**	*eP*		**Pn**	**04 09 04.7**		**+0.7**
AVH				*eS*		**Sn**	**04 09 15.8**		**+0.9**
KRER	**Koryakskii**	**0.76**	**285**	PN		**Pn**	**04 09 04.6**		**+0.4**
KRER				S		**Sn**	**04 09 15.8**		**+0.7**
KRER	**Koryakskii**	**0.76**	**285**	P		**Pn**	**04 09 04.6**		**+0.4**
KRER				S		**Sn**	**04 09 15.8**		**+0.7**
PET	**Petropavlovsk**	**0.80**	**264**	P		**Pn**	**04 09 04.5**		**+0.1**
PET				Sn		**Sn**	**04 09 15.6**		**-0.1**
PET	**Petropavlovsk**	**0.80**	**264**	*i* PN		**Pn**	**04 09 04.6**		**+0.1**
PET				*eS*		**Sn**	**04 09 15.7**		**0.0**
PET				pmax	pmax				
	comp=Z,858nm,0.4s								
PET				smax	smax				
	comp=N,5μm,0.7s								
PET				smax	smax				
	comp=E,4μm,0.7s								
PET	**Petropavlovsk**	**0.80**	**264**	P		**Pn**	**04 09 04.7**		**+0.2**
PET				S		**Sn**	**04 09 15.9**		**+0.2**
KOK	**Koryaka**	**0.82**	**283**	PN		**Pn**	**04 09 05.2**		**+0.3**
KOK	**Koryaka**	**0.82**	**283**	P		**Pn**	**04 09 05.2**		**+0.3**
KRX	**Arik**	**0.83**	**287**	PN		**Pn**	**04 09 05.1**		**+0.1**
KRX				S		**Sn**	**04 09 16.6**		**-0.1**
KRX	**Arik**	**0.83**	**287**	P		**Pn**	**04 09 05.1**		**+0.1**
KRX				S		**Sn**	**04 09 16.6**		**-0.1**
KII	**Karymskiy**	**0.97**	**341**	PN		**Pn**	**04 09 07.1**		**+0.3**
KII	**Karymskiy**	**0.97**	**341**	P		**Pn**	**04 09 07.1**		**+0.3**
RUS	**Russkaya**	**1.12**	**233**	PN		**Pn**	**04 09 08.7**		**0.0**
RUS				S		**Sn**	**04 09 23.3**		**+0.1**
RUS	**Russkaya**	**1.12**	**233**	P		**Pn**	**04 09 08.7**		**0.0**
RUS				S		**Sn**	**04 09 23.3**		**+0.1**
KRMR	**Karymshinskiy**	**1.15**	**256**	PN		**Pn**	**04 09 09.6**		**+0.5**
KRMR				S		**Sn**	**04 09 24.5**		**+0.6**
KRMR	**Karymshinskiy**	**1.15**	**256**	P		**Pn**	**04 09 09.6**		**+0.5**
KRMR				S		**Sn**	**04 09 24.5**		**+0.6**
MTVR	**Mutnovka**	**1.26**	**240**	PN		**Pn**	**04 09 11.3**		**+0.6**
MTVR				S		**Sn**	**04 09 27.3**		**+0.6**
MTVR	**Mutnovka**	**1.26**	**240**	P		**Pn**	**04 09 11.3**		**+0.6**
MTVR				S		**Sn**	**04 09 27.3**		**+0.6**
GRL	**Gorelyy**	**1.28**	**245**	PN		**Pn**	**04 09 12.1**		**+1.1**
GRL				S		**Sn**	**04 09 28.8**		**+1.5**
GRL	**Gorelyy**	**1.28**	**245**	P		**Pn**	**04 09 12.1**		**+1.1**
GRL				S		**Sn**	**04 09 28.8**		**+1.5**
GNL	**Ganaly**	**1.34**	**296**	PN		**Pn**	**04 09 12.5**		**+0.7**
GNL				S		**Sn**	**04 09 29.3**		**+0.6**
GNL	**Ganaly**	**1.34**	**296**	P		**Pn**	**04 09 12.5**		**+0.7**
GNL				S		**Sn**	**04 09 29.3**		**+0.6**
PEA0B	**Petropavlovsk-**	**1.37**	**270**			**Pn**	**04 09 12.9**		**+0.9**
PEA0B				Sn		**Sn**	**04 09 29.9**		**+0.8**
PEA0B	**Petropavlovsk-**	**1.37**	**270**	*c* PN		**Pn**	**04 09 12.7**		**+0.6**
PETK	**Petropavlovsk-**	**1.37**	**270**	P		**Pn**	**04 09 11.9**		**-0.2**
	comp=E,541nm,0.5s,baz=94,slow=18,SNR=672								
PETK				S		**Sn**	**04 09 29.1**		**-0.1**
	comp=E,378nm,0.4s,baz=82,slow=40,SNR=9.9								
PETK	**Petropavlovsk-**	**1.37**	**270**			**Pn**	**04 09 12.0**		**-0.1**
APC	**Apacha**	**1.71**	**265**	PN		**Pn**	**04 09 17.9**		**+1.3**
APC				S		**Sn**	**04 09 39.0**		**+1.6**
APC	**Apacha**	**1.71**	**265**	*eP*		**Pn**	**04 09 17.9**		**+1.3**
APC				S		**Sn**	**04 09 39.0**		**+1.6**
KDTR	**Khodutka, Kamc**	**1.75**	**222**	PN		**Pn**	**04 09 17.6**		**+0.4**
KDTR				S		**Sn**	**04 09 40.6**		**+2.3**
KDTR	**Khodutka, Kamc**	**1.75**	**222**	P		**Pn**	**04 09 17.6**		**+0.4**
KDTR				S		**Sn**	**04 09 40.6**		**+2.3**
MKZ	**Mys Kozlova**	**1.78**	**35**	PN		**Pn**	**04 09 17.0**		**-0.5**
MKZ				S		**Sn**	**04 09 37.3**		**-1.7**
MKZ	**Mys Kozlova**	**1.78**	**35**	P		**Pn**	**04 09 17.0**		**-0.5**
MKZ				S		**Sn**	**04 09 37.3**		**-1.7**
TUMR	**Tumrok**	**2.17**	**3**	PN		**Pn**	**04 09 24.4**		**+1.4**
TUMR				S		**Sn**	**04 09 50.2**		**+1.4**
TUMR	**Tumrok**	**2.17**	**3**	P		**Pn**	**04 09 24.4**		**+1.4**
TUMR				S		**Sn**	**04 09 50.2**		**+1.4**
KMNR	**Kamenistaya**	**2.65**	**3**	PN		**Pn**	**04 09 31.2**		**+1.7**
KMNR	**Kamenistaya**	**2.65**	**3**	P		**Pn**	**04 09 31.2**		**+1.7**
BZMR	**Bezymyannaya**	**2.84**	**6**	PN		**Pn**	**04 09 33.8**		**+1.6**
BZMR	**Bezymyannaya**	**2.84**	**6**	P		**Pn**	**04 09 33.8**		**+1.6**
KPT	**Kopyto**	**2.86**	**3**	PN		**Pn**	**04 09 33.9**		**+1.5**
KPT	**Kopyto**	**2.86**	**3**	P		**Pn**	**04 09 33.9**		**+1.5**
BZGR	**Bezymyannyi-Gr**	**2.86**	**8**	PN		**Pn**	**04 09 34.6**		**+2.2**
BZGR	**Bezymyannyi-Gr**	**2.86**	**8**	P		**Pn**	**04 09 34.6**		**+2.2**
ESO	**Esso**	**2.91**	**346**	PN		**Pn**	**04 09 35.5**		**+2.5**
ESO	**Esso**	**2.91**	**346**	P		**Pn**	**04 09 35.5**		**+2.5**
KOZ	**Kozyrevsk**	**2.95**	**359**	PN		**Pn**	**04 09 34.6**		**+1.1**
KOZ	**Kozyrevsk**	**2.95**	**359**	P		**Pn**	**04 09 34.6**		**+1.1**
KLY	**Klyuchi**	**3.23**	**7**	PN		**Pn**	**04 09 39.4**		**+2.1**
KLY	**Klyuchi**	**3.23**	**7**	P		**Pn**	**04 09 39.4**		**+2.1**
SKR	**Severo-Kuril's**	**3.41**	**226**	*eP*		**Pn**	**04 09 41.0**		**+1.1**
SKR				*eS*		**Sn**	**04 10 20.3**		**+1.2**
SKR				pmax	pmax				
	comp=Z,22nm,0.3s								
SKR				smax	smax				
	comp=E,258nm,0.7s								
SKR				smax	smax				
	comp=N,325nm,0.6s								
KBTR	**Krutoberegovo**	**3.51**	**27**	PN		**Pn**	**04 09 42.2**		**+1.0**
KBTR				S		**Sn**	**04 10 21.6**		**+0.2**
KBTR	**Krutoberegovo**	**3.51**	**27**	P		**Pn**	**04 09 42.2**		**+1.0**
KBTR				S		**Sn**	**04 10 21.6**		**+0.2**
KBG	**Krutoberegovo**	**3.52**	**26**	PN		**Pn**	**04 09 43.1**		**+1.8**
KBG				S		**Sn**	**04 10 23.2**		**+1.6**
KBG	**Krutoberegovo**	**3.52**	**26**	P		**Pn**	**04 09 43.1**		**+1.8**
KBG				S		**Sn**	**04 10 23.2**		**+1.6**
BDR	**Baidarnaya**	**3.53**	**11**	PN		**Pn**	**04 09 44.0**		**+2.4**
BDR	**Baidarnaya**	**3.53**	**11**	*eP*		**Pn**	**04 09 44.0**		**+2.4**
SMKR	**Semkarok**	**3.58**	**13**	PN		**Pn**	**04 09 44.0**		**+1.8**
SMKR	**Semkarok**	**3.58**	**13**	P		**Pn**	**04 09 44.0**		**+1.8**
BKI	**Bering**	**4.10**	**57**	PN		**Pn**	**04 09 49.5**		**+0.3**
BKI	**Bering**	**4.10**	**57**	P		**Pn**	**04 09 49.5**		**+0.3**
MA2	**Magadan**	**8.24**	**325**	LR		LR	04 14 32.8		
	comp=N,59nm,19.3s,baz=190,slow=42								
SHEM	**Shemya Is, Ala**	**8.55**	**87**	LR		LR	04 13 58.0		
	comp=N,51nm,21.7s,baz=36,slow=36								
SMY	**Shemya**	**8.55**	**87**	Pn		**Pn**	**04 10 51.0**		**+0.9**
SMY	**Shemya**	**8.55**	**87**	PN		**Pn**	**04 10 51.0**		**+0.9**
BILL	**Bilibino**	**15.27**	**9**	*eP*		**Pn**	**04 12 18.8**		**-2.1**
BILL				pmax	pmax				
	comp=Z,9.0nm,0.5s								
ERM	**Erimo**	**15.83**	**232**	Pn		**Pn**	**04 12 28.7**		**+0.4**
ERM				IAmb	IAmb		04 12 56.2		
	comp=Z,35nm,0.9s								
ERM	**Erimo**	**15.83**	**232**	P		**Pn**	**04 12 28.7**		**+0.4**
ERM				pmax	pmax				
	comp=Z,35nm,0.9s								
KLR	**Kul'dur**	**18.06**	**269**	*i* P		**P**	**04 12 55.7**		**0.0**
YAK	**Yakutsk**	**18.37**	**311**	LR		LR	04 19 38.4		
	comp=Z,37nm,18.5s,baz=90,slow=36								
JSD	**Sado**	**21.29**	**234**	P		**P**	**04 13 31.2**		**+0.4**
MAJO	**Matsushiro**	**22.50**	**231**	P		**P**	**04 13 44.3**		**+0.4**
MAJO	**Matsushiro**	**22.50**	**231**	P		**P**	**04 13 44.3**		**+0.4**
MAJO				pmax	pmax				
	comp=Z,17nm,0.8s								
MJAR	**Matsushiro Arr**	**22.50**	**231**	P		**P**	**04 13 43.9**		**0.0**
	comp=Z,5.3nm,0.7s,baz=25,slow=11,SNR=9.3								
	comp=Z,5.3nm,0.7s								
TIXI	**Tiksi**	**23.03**	**335**	LR		LR	04 23 37.6		
	comp=Z,38nm,21.9s,baz=183,slow=39								
CNBA	**Chernabura Isl**	**23.62**	**70**	P		**P**	**04 13 55.0**		**+0.2**
CNBA				IAmb	IAmb		04 14 34.4		
	comp=Z,21nm,1.1s								
N18K	**Kilae Creek**	**24.84**	**55**	P		**P**	**04 14 08.4**		**+2.6**
K20K	**Telida**	**25.69**	**48**	P		**P**	**04 14 14.6**		**+1.0**
J20K	**Nowinta River**	**25.70**	**46**	P		**P**	**04 14 13.7**		**+0.1**
J20K				IAmb	IAmb		04 14 44.7		
	comp=Z,6.4nm,1.2s								
IMAR	**Indian Mountai**	**26.03**	**42**	P		**P**	**04 14 16.9**		**+0.2**
I21K	**Tanana**	**26.69**	**44**	P		**P**	**04 14 22.3**		**-0.2**
BPAW	**Bear Paw Mtn.**	**27.08**	**47**	P		**P**	**04 14 26.7**		**+0.6**
WRH	**Wood River Hil**	**28.34**	**46**	P		**P**	**04 14 38.7**		**+1.4**
ILAR	**Eielson Array**	**28.85**	**45**	P		**P**	**04 14 41.6**		**-0.2**
	comp=Z,0.6nm,0.7s,baz=263,slow=8.3,SNR=8.2								
	comp=Z,0.6nm,0.7s								
SCM	**Sheep Creek Mo**	**28.87**	**51**	P		**P**	**04 14 43.3**		**+1.1**
SCM				IAmb	IAmb		04 15 03.8		
	comp=Z,5.7nm,1.2s								
SCM	**Sheep Creek Mo**	**28.87**	**51**	P		**P**	**04 14 43.3**		**+1.1**
SCM				pmax	pmax				
	comp=Z,6.0nm,1.2s								
DOT	**Dot Lake**	**30.16**	**47**	P		**P**	**04 14 52.5**		**-1.0**
K27K	**Chicken**	**30.99**	**46**	P		**P**	**04 15 01.7**		**+1.0**
K27K				IAmb	IAmb		04 15 33.5		
	comp=Z,6.2nm,1.4s								
L27K	**Beaver Creek,**	**31.24**	**48**	P		**P**	**04 15 04.0**		**+1.0**
L27K				IAmb	IAmb		04 15 19.4		
	comp=Z,4.3nm,1.3s								
BCAR	**Beaver Creek A**	**31.25**	**48**	P		**P**	**04 15 04.3**		**+1.1**
EGAK	**Eagle**	**31.30**	**45**	P		**P**	**04 15 02.7**		**-0.7**
EGAK				IAmb	IAmb		04 15 43.8		
	comp=Z,6.8nm,1.4s								
H11N2	**WAKE ISLAND Hy**	**33.75**	**168**	T		T	04 51 02.4		
	baz=353,slow=76,SNR=297								
H11N3	**WAKE ISLAND Hy**	**33.77**	**168**	T		T	04 51 14.4		
	baz=353,slow=76,SNR=370								
H11N1	**WAKE ISLAND Hy**	**33.77**	**168**	T		T	04 51 07.0		
	baz=353,slow=76,SNR=490								
INK	**Inuvik**	**33.89**	**38**	P		**P**	**04 15 26.4**		**+0.4**
	comp=Z,1.1nm,0.6s,baz=244,slow=9.3,SNR=4.2								
	comp=Z,1.1nm,0.6s								
INK	**Inuvik**	**33.89**	**38**	P		**P**	**04 15 26.8**		**+0.8**
INK				IAmb	IAmb		04 15 34.5		
	comp=Z,2.5nm,1.1s								
H11S1	**WAKE ISLAND Hy**	**34.94**	**169**	T		T	04 52 43.9		
	baz=352,slow=76,SNR=57								
H11S3	**WAKE ISLAND Hy**	**34.95**	**169**	T		T	04 52 44.8		
	baz=352,slow=76,SNR=76								
H11S2	**WAKE ISLAND Hy**	**34.95**	**169**	T		T	04 52 45.3		
	baz=352,slow=76,SNR=29								
EUNU	**Eureka**	**41.94**	**14**	P		**P**	**04 16 33.0**		**-0.7**
YKA	**Yellowknife Ar**	**43.19**	**43**	P		**P**	**04 16 44.2**		**+0.2**
	comp=Z,0.5nm,0.5s,baz=300,slow=8.0,SNR=4.0								
	comp=Z,0.5nm,0.5s								
KURK	**Kurchatov**	**47.66**	**302**	P		**P**	**04 17 19.1**		**-0.3**
KURK				IAmb	IAmb		04 17 32.1		
	comp=Z,1.9nm,0.7s								
KURK	**Kurchatov**	**47.66**	**302**	P		**P**	**04 17 19.1**		**-0.3**
KURK				pmax	pmax				
	comp=Z,2.0nm,0.7s								
MKAR	**Makanchi Array**	**48.08**	**296**	P		**P**	**04 17 20.6**		**-2.2**
	comp=Z,0.5nm,0.5s,baz=94,slow=6.1,SNR=2.5								
	comp=Z,0.5nm,0.5s								
B08A	**Colville Reser**	**48.73**	**61**	P		**P**	**04 17 30.1**		**+2.2**
B08A				IAmb	IAmb		04 17 30.3		
	comp=Z,1.8nm,0.8s								
BRVK	**Borovoye**	**50.34**	**308**	*i* P		**P**	**04 17 39.3**		**-0.6**
BRVK				pmax	pmax				
	comp=Z,1.0nm,1.1s								
WALA	**Waterton Lakes**	**51.11**	**57**	P		**P**	**04 17 46.9**		**+0.9**
WALA				IAmb	IAmb		04 17 47.9		
	comp=Z,7.4nm,1.5s								
ARU	**Arti**	**53.33**	**317**	*c i* P		**P**	**04 18 00.7**		**-1.4**
ARU							04 19 58.9		
ARU				S		**S**	**04 25 29.2**		**0.0**
ARU				SS		**SS**	**04 29 06.7**		**-2.2**
ARU				pmax	pmax				
	comp=Z,8.0nm,2.0s								
NVAR	**Mina Array Bea**	**55.

KHC					*e*SG	**Sg**	**04 13 51.8**	**-0.7**
	comp=Z,5.5nm,0.3s							
CKRC	**Cesky Krumlov**	**2.94**	**206**	*e*PG		**Pb**	**04 13 14.0**	**+1.5**
CKRC					*e*SG	**Sg**	**04 13 51.6**	**-2.0**
	comp=Z,7.5nm,0.6s							
GERES	**GERESS Array B**	**3.10**	**213**	Pn		**Pn**	**04 13 10.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=31,slow=14,SNR=5.8							
GERES				Pg		**Pb**	**04 13 16.3**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=29,slow=17,SNR=43							
GERES				Lg		Lg	04 13 56.1	
	comp=Z,2.8nm,0.3s,baz=33,slow=27,SNR=8.8							
LANS	**Liptovska Anna**	**3.13**	**137**	*e*PG		**Pg**	**04 13 19.2**	**+0.1**
LANS					*e*SG	**Sg**	**04 13 59.2**	**-0.4**
MODS	**Modra-Piesok**	**3.19**	**167**	*e*PG		**Pg**	**04 13 20.2**	**-0.1**
MODS					*e*SG	**Sg**	**04 14 00.8**	**-0.8**
VYHS	**Vyhne**	**3.43**	**150**	*e*PG		**Pg**	**04 13 25.4**	**+0.4**
VYHS					*e*SG	**Sg**	**04 14 08.8**	**-0.7**
HFS	**Hagfors**	**8.79**	**352**	Pn		**Pn**	**04 14 26.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=173,slow=13,SNR=1.9							
	comp=Z,2.5nm,0.8s							
FINES	**FINESS Array B**	**11.35**	**25**	Pn		**Pn**	**04 15 01.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=2.2							
	comp=Z,2.9nm,1.0s							
ARCES	**ARCESS Array B**	**18.63**	**10**	Pn		**Pn**	**04 16 38.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=199,slow=11,SNR=4.7							
	comp=Z,4.2nm,1.0s							

BEO ***29*** *04:12:06.2±0.9, 38.74N×26.74E, h0km, ML3.9/7*
ISK ***29*** *04:12:28.9, 40.33N×25.79E, h14km, ML3.3/37*
DDA ***29*** *04:12:29.9±0.0, 40.31N×25.84E, h12km, ML3.2*
THE ***29*** *04:12:29.2, 40.33N×25.85E, h11km±1km, ML3.0/12, Error ellipse: s-maj=1.3km s-min=0.7km az=41.0*
SOF ***29*** *04:12:29.9, 40.37N×25.55E, h10km, MD3.1*
ATH ***29*** *04:12:29.4, 40.36N×25.74E, h34km±3km, ML3.0/11, Error ellipse: s-maj=3.6km s-min=1.1km az=49.0*

ISC 29 04:12:29.6±0.8, 40.33N±0.01×25.83E±0.02, h17km±6km, n123, σ0.91/171, 11C-3D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.15**	**159**	PG	**Pb**	**04 12 33.6**	**-0.3**
GOKA	**anakkale-Gk**	**0.15**	**157**	P	**Pb**	**04 12 33.7**	**-0.3**
GOKA				S	**Sg**	**04 12 36.7**	**+0.1**
SMTH	**Samothraki Isl**	**0.27**	**301**	P	**Pg**	**04 12 35.6**	**+0.1**
SMTH				S	**Sg**	**04 12 39.6**	**0.0**
SMTH	**Samothraki Isl**	**0.27**	**301**	P	**Pg**	**04 12 35.7**	**+0.1**
SMTH				S	**Sg**	**04 12 39.8**	**+0.2**
SMTH				AML	AML	04 12 40.0	
	comp=N,27095μm,0.1s						
SMTH				AML	AML	04 12 40.0	
	comp=E,15806μm,0.1s						
ECEA	**Canakkale, Ece**	**0.39**	**137**	P	**Pg**	**04 12 37.2**	**-0.4**
ECEA				S	**Sg**	**04 12 42.5**	**-0.6**
ECEA				*i* AML	AML	04 12 43.0	
	comp=E,3μm,0.4s						
CAVK	**Edirne/Enez-Ca**	**0.44**	**36**	P	**Pg**	**04 12 38.3**	**-0.3**
CAVK				S	**Sb**	**04 12 44.9**	**-0.3**
ENEZ	**Enez**	**0.47**	**31**	P	**Pg**	**04 12 38.9**	**-0.3**
ENEZ				S	**Sg**	**04 12 44.6**	**-1.0**
	comp=E,2μm,0.6s						
ENEZ	**Enez**	**0.47**	**31**	PG	**Pg**	**04 12 38.9**	**-0.3**
ENEZ				SG	**Sg**	**04 12 46.5**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.50**	**82**	PG	**Pg**	**04 12 38.9**	**-0.7**
BOZC	**Bozcaada**	**0.52**	**161**	PG	**Pg**	**04 12 39.6**	**-0.4**
BOZC				SG	**Sg**	**04 12 46.9**	**0.0**
BOZC	**Bozcaada**	**0.52**	**161**	P	**Pg**	**04 12 39.6**	**-0.4**
BOZC				S	**Sg**	**04 12 46.5**	**-0.5**
BOZC				*i* AML	AML	04 12 47.0	
	comp=E,1μm,0.2s						
BOZC				*i* AML	AML	04 12 47.0	
	comp=E,2μm,0.2s						
ALN	**Alexandroupoli**	**0.59**	**16**	P	**Pg**	**04 12 40.8**	**-0.4**
ALN				S	**Sg**	**04 12 48.5**	**-0.7**
	comp=E,1μm,0.4s						
ALN	**Alexandroupoli**	**0.59**	**16**	PG	**Pg**	**04 12 40.9**	**-0.4**
ALN	**Alexandroupoli**	**0.59**	**16**	P	**Pg**	**04 12 40.8**	**-0.4**
ALN				S	**Sb**	**04 12 49.2**	**-0.2**
ALN				AML	AML	04 12 49.5	
	comp=N,2951μm,0.4s						
ALN				AML	AML	04 12 51.3	
	comp=E,2230μm,0.4s						
EZN	**Ezine**	**0.63**	**143**	P	**Pg**	**04 12 41.2**	**-0.8**
EZN				S	**Sg**	**04 12 49.4**	**-1.1**
EZN	**Ezine**	**0.63**	**143**	PG	**Pg**	**04 12 41.3**	**-0.8**
LIA	**Limnos Island**	**0.66**	**229**	P	**Pg**	**04 12 42.3**	**-0.2**
LIA				S	**Sg**	**04 12 51.4**	**+0.1**
	comp=E,2μm,0.5s						
LIA	**Limnos Island**	**0.66**	**229**	P	**Pg**	**04 12 42.4**	**-0.2**
LIA				S	**Sb**	**04 12 51.7**	**+0.3**
LIA				AML	AML	04 12 53.2	
	comp=E,3238μm,0.3s						
LIA				AML	AML	04 12 54.5	
	comp=N,3972μm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.81**	**137**	P	**Pg**	**04 12 44.5**	**-0.9**
BAYC				S	**Sg**	**04 12 55.2**	**-0.8**
KESN	**Edirne-Kesan**	**0.81**	**52**	P	**Pg**	**04 12 44.3**	**-1.3**
KESN				S	**Sg**	**04 12 55.3**	**-1.1**
KESN				*i* AML	AML	04 12 57.0	
	comp=N,937nm,0.5s						
KESN				*i* AML	AML	04 13 01.0	
	comp=N,801nm,0.6s						
RDO	**Rodhopi**	**0.84**	**345**	P	**Pg**	**04 12 45.6**	**-0.4**
RDO				S	**Sg**	**04 12 56.8**	**-0.4**
	comp=N,938nm,0.6s						
RDO	**Rodhopi**	**0.84**	**345**	PG	**Pb**	**04 12 45.9**	**+0.1**
RDO	**Rodhopi**	**0.84**	**345**	P	**Pg**	**04 12 45.2**	**-0.9**
RDO				S	**Sg**	**04 12 55.9**	**-1.3**
RDO				AML	AML	04 12 57.5	
	comp=N,1936μm,0.3s						
RDO				AML	AML	04 12 58.2	
	comp=E,1633μm,0.4s						
KOCA	**Canakkale, Ayv**	**0.86**	**164**	P	**Pg**	**04 12 45.5**	**-0.9**
KOCA				S	**Sg**	**04 12 56.6**	**-1.2**
THAS	**Thassos island**	**0.89**	**288**	P	**Pg**	**04 12 46.2**	**-0.7**
THAS				S	**Sg**	**04 12 58.5**	**-0.1**
	comp=E,2μm,0.3s						
THAS	**Thassos island**	**0.89**	**288**	P	**Pg**	**04 12 45.6**	**-1.3**
THAS				S	**Sg**	**04 12 56.4**	**-2.3**
THAS				AML	AML	04 12 59.4	
	comp=N,2821μm,0.3s						
THAS				AML	AML	04 13 01.3	
	comp=E,3319μm,0.4s						
GPNR	**Gulpinar-Canak**	**0.91**	**165**	PG	**Pg**	**04 12 45.9**	**-1.3**
UKOP	**Uzunkopru-Edir**	**1.00**	**37**	PG	**Pg**	**04 12 48.2**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.09**	**70**	PN	**Pg**	**04 12 50.2**	**-0.5**
SART	**Tekirdag**	**1.09**	**70**	P	**Pb**	**04 12 49.1**	**-0.9**
SART				S	**Sb**	**04 13 04.2**	**+0.2**
SIGR	**SIGRI**	**1.12**	**179**	P	**Pb**	**04 12 50.1**	**-0.4**
SIGR				S	**Sg**	**04 13 05.7**	**-0.2**
	comp=E,1μm,0.8s						
SIGR	**SIGRI**	**1.12**	**179**	PN	**Pb**	**04 12 50.2**	**-0.2**
SIGR	**SIGRI**	**1.12**	**179**	P	**Pb**	**04 12 50.0**	**-0.4**
SIGR				S	**Sg**	**04 13 05.5**	**-0.4**
SIGR				AML	AML	04 13 07.2	
	comp=N,2278μm,0.7s						
SIGR				AML	AML	04 13 08.2	
	comp=E,2219μm,0.3s						
PRK	**Paraskevi**	**1.14**	**162**	P	**Pg**	**04 12 51.3**	**-0.3**
PRK				S	**Sn**	**04 13 06.5**	**+0.7**
	comp=E,995nm,0.7s						
PRK	**Paraskevi**	**1.14**	**162**	P	**Pg**	**04 12 51.3**	**-0.3**
PRK				S	**Sn**	**04 13 06.9**	**+1.1**
PRK				AML	AML	04 13 09.0	
	comp=N,1427μm,0.4s						
PRK				AML	AML	04 13 09.5	
	comp=E,2307μm,0.7s						
KAVA	**Kavala**	**1.20**	**304**	P	**Pn**	**04 12 51.1**	**-0.5**
KAVA				S	**Sb**	**04 13 07.2**	**+0.1**
	comp=E,700nm,0.3s						
KAVA	**Kavala**	**1.20**	**304**	P	**Pn**	**04 12 50.5**	**-1.1**
KAVA				S	**Sb**	**04 13 05.8**	**-1.3**
AYVA	**Ayvalik**	**1.22**	**147**	P	**Pn**	**04 12 52.2**	**+0.4**
AYVA				S	**Sb**	**04 13 08.1**	**+0.6**
AYVA				*i* AML	AML	04 13 10.0	
	comp=E,847nm,0.6s						
AYVA				*i* AML	AML	04 13 11.0	
	comp=E,470nm,0.4s						
BUHA	**Balikesir, Bur**	**1.27**	**130**	P	**Pn**	**04 12 52.5**	**0.0**
BUHA				S	**Sb**	**04 13 09.1**	**+0.1**
BUHA				*i* AML	AML	04 13 11.0	
	comp=E,355nm,0.4s						
KNL	**Balıkesir**	**1.30**	**92**	P	**Pn**	**04 12 52.5**	**-0.4**
KNL				S	**Sn**	**04 13 10.4**	**+0.5**
KNL				*i* AML	AML	04 13 12.0	
	comp=E,890nm,0.5s						
KNL				*i* AML	AML	04 13 13.0	
	comp=E,501nm,0.5s						
KDZ	**Kurdzhali**	**1.35**	**347**	PN	**Pn**	**04 12 53.5**	**-0.2**
KDZ	**Kurdzhali**	**1.35**	**347**	*i* P	**Pn**	**04 12 54.4**	**+0.7**
MRMT	**Marmara Adasi**	**1.38**	**78**	PN	**Pn**	**04 12 53.7**	**-0.3**
OUR	**Ouranopolis**	**1.41**	**271**	P	**Pn**	**04 12 53.7**	**-0.7**
OUR				S	**Sg**	**04 13 14.6**	**-0.6**
	comp=E,790nm,0.3s						
OUR	**Ouranopolis**	**1.41**	**271**	PN	**Pn**	**04 12 53.5**	**-0.9**
OUR	**Ouranopolis**	**1.41**	**271**	P	**Pn**	**04 12 53.8**	**-0.7**
GONE	**Gonen-Balikesi**	**1.45**	**101**	PN	**Pb**	**04 12 56.5**	**+0.4**
KOKK	**Kokkinochori,**	**1.48**	**290**	P	**Pn**	**04 12 54.6**	**-0.7**
KOKK				S	**Sb**	**04 13 15.7**	**+0.7**
	comp=E,200nm,0.5s						
KOKK	**Kokkinochori,**	**1.48**	**290**	P	**Pn**	**04 12 54.7**	**-0.7**
KOKK				S	**Sn**	**04 13 12.9**	**-1.4**
BALY	**Balya**	**1.50**	**113**	P	**Pn**	**04 12 56.1**	**+0.5**
BALY				S	**Sn**	**04 13 15.1**	**+0.3**
DKL	**Dikili**	**1.51**	**146**	PN	**Pn**	**04 12 56.1**	**+0.3**
EDC	**Edincik**	**1.56**	**89**	PN	**Pb**	**04 12 57.5**	**-0.4**
RZN	**Rozhen**	**1.59**	**328**	*i* P	**Pn**	**04 12 57.4**	**+0.2**
CRLT	**Corlu**	**1.65**	**61**	PN	**Pn**	**04 12 58.1**	**+0.3**
EDRB	**Edirne**	**1.66**	**24**	P	**Pn**	**04 12 56.9**	**-1.0**
EDRB				S	**Sn**	**04 13 19.4**	**+0.5**
	comp=E,298nm,0.8s						
EDRB	**Edirne**	**1.66**	**24**	PN	**Pn**	**04 12 58.6**	**+0.7**
ZEDA	**zmir-Bergama**	**1.67**	**144**	P	**Pn**	**04 12 58.8**	**+0.8**
ZEDA				S	**Sb**	**04 13 21.4**	**+0.8**
PAIG	**Paliouri**	**1.70**	**257**	P	**Pn**	**04 12 57.5**	**-0.9**
PAIG	**Paliouri**	**1.70**	**257**	P	**Pn**	**04 12 57.4**	**-1.0**
KIRK	**Kırklareli**	**1.74**	**33**	P	**Pn**	**04 12 59.7**	**+0.8**
KIRK				S	**Sb**	**04 13 22.6**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.74**	**123**	P	**Pb**	**04 13 00.8**	**-0.3**
STEP				S	**Sb**	**04 13 23.0**	**+0.4**
STEP				*i* AML	AML	04 13 35.0	
	comp=E,171nm,0.9s						
SKY	**Skiros Island**	**1.76**	**215**	P	**Pb**	**04 13 00.8**	**-0.5**
FOCM	**Foa**	**1.76**	**156**	PN	**Pn**	**04 13 00.3**	**+1.1**
NVR	**Nevrokopi**	**1.81**	**305**	P	**Pn**	**04 12 59.7**	**-0.2**
NVR				S	**Sn**	**04 13 23.4**	**+1.0**
	comp=E,145nm,0.3s						
NVR	**Nevrokopi**	**1.81**	**305**	P	**Pn**	**04 12 59.9**	**0.0**
NVR				S	**Sn**	**04 13 23.3**	**+0.8**
NVR				AML	AML	04 13 29.3	
	comp=E,299μm,0.3s						
NVR				AML	AML	04 13 29.9	
	comp=N,282μm,0.3s						
PHSR	**Pinarhisar**	**1.82**	**44**	PN	**Pn**	**04 13 01.4**	**+1.3**
SRS	**Serrai**	**1.87**	**296**	P	**Pn**	**04 13 00.3**	**-0.5**
SRS	**Serrai**	**1.87**	**296**	*e*Pn	**Pn**	**04 13 00.5**	**-0.3**
SRS	**Serrai**	**1.87**	**296**	P	**Pn**	**04 13 00.5**	**-0.3**
SRS				AML	AML	04 13 34.4	
	comp=E,471μm,0.3s						
SRS				AML	AML	04 13 36.1	
	comp=N,281μm,0.5s						
SOH	**Sokhos**	**1.95**	**285**	P	**Pn**	**04 13 01.6**	**-0.3**
SOH				AML	AML	04 13 34.0	
	comp=N,694μm,0.3s						
SOH				AML	AML	04 13 34.8	
	comp=E,1007μm,0.5s						
CHOS	**Chios island**	**1.95**	**175**	PN	**Pn**	**04 13 02.7**	**+0.8**
ARMN	**Kirklareli, Me**	**1.95**	**38**	P	**Pn**	**04 13 02.0**	**+0.1**
PLD	**Plovdiv**	**1.96**	**335**	PN	**Pn**	**04 13 02.9**	**+0.8**
PLD	**Plovdiv**	**1.96**	**335**	*e*Pn	**Pg**	**04 13 06.4**	**-0.9**
VIZE	**Kirklareli, Vi**	**1.97**	**50**	P	**Pn**	**04 13 01.6**	**-0.5**
SLVT	**Silivri**	**2.02**	**63**	PN	**Pn**	**04 13 03.8**	**+1.0**
MMB	**Musomiste**	**2.03**	**309**	*i* P	**Pn**	**04 13 02.6**	**-0.4**
URLA	**Izmir**	**2.06**	**163**	PN	**Pn**	**04 13 03.2**	**-0.2**
URLA	**Izmir**	**2.06**	**163**	P	**Pn**	**04 13 02.3**	**-1.1**
URLA				*i* AML	AML	04 13 35.0	
	comp=E,190nm,0.9s						
HORT	**Hortiatis**	**2.10**	**278**	PN	**Pn**	**04 13 04.9**	**+0.9**
HORT	**Hortiatis**	**2.10**	**278**	P	**Pn**	**04 13 03.7**	**-0.3**
HORT				AML	AML	04 13 38.9	
	comp=N,344μm,0.4s						
HORT				AML	AML	04 13 45.3	
	comp=E,184μm,0.5s						
ZEYE	**Izmir, Urla-Ze**	**2.15**	**166**	P	**Pn**	**04 13 04.6**	**0.0**
BLCB	**Balcova**	**2.16**	**154**	PN	**Pb**	**04 13 07.0**	**-1.2**
DURS	**Dursunbey**	**2.16**	**109**	P	**Pn**	**04 13 06.1**	**+1.3**
CTYL	**Yalikoy Yolu**	**2.19**	**58**	PN	**Pn**	**04 13 05.9**	**+0.8**
CTKS	**Kestanelik-??a**	**2.23**	**65**	PN	**Pn**	**04 13 07.0**	**+1.4**
DST	**Dursunbey**	**2.26**	**108**	PN	**Pn**	**04 13 07.2**	**+1.0**
ARMT	**Armutlu**	**2.33**	**83**	PN	**Pn**	**04 13 08.3**	**+1.3**
MDNY	**Mudanya-Bursa**	**2.33**	**88**	PN	**Pn**	**04 13 08.1**	**+1.0**
KNT	**Kendrikon**	**2.38**	**291**	P	**Pn**	**04 13 07.8**	**+0.1**
KNT	**Kendrikon**	**2.38**	**291**	PN	**Pn**	**04 13 09.8**	**+2.1**
KNT	**Kendrikon**	**2.38**	**291**	P	**Pn**	**04 13 08.8**	**+0.3**
DGB	**zmir**	**2.42**	**160**	P	**Pn**	**04 13 08.8**	**+0.5**
ISK	**Istanbul-Kandi**	**2.56**	**72**	PN	**Pn**	**04 13 11.9**	**+1.6**
KAVV	**Kandilli-Istan**	**2.56**	**72**	PN	**Pn**	**04 13 11.6**	**+1.3**
KKB	**Krupnik**	**2.58**	**307**	*e*P	**Pb**	**04 13 16.2**	**+0.8**
KLYT	**Kilyos**	**2.61**	**68**	PN	**Pn**	**04 13 11.9**	**+1.0**
YLV	**Yalova**	**2.71**	**84**	PN	**Pn**	**04 13 13.9**	**+1.5**
GCAM	**G?zelcaml?**	**2.85**	**157**	PN	**Pn**	**04 13 15.6**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**2.87**	**145**	PN	**Pn**	**04 13 15.3**	**+0.7**
TVSB	**Tavsanli**	**2.93**	**106**	PN	**Pn**	**04 13 16.4**	**+1.0**
VTS	**Vitosha**	**3.00**	**320**	*i* P	**Pn**	**04 13 17.2**	**+0.7**
RAZG	**Razgrad**	**3.27**	**9**	⇑P	**Pn**	**04 13 20.7**	**+0.6**
RAZG				⇑S	**Sg**	**04 14 13.4**	**-1.3**
BOSS	**Bosilegrad**	**3.32**	**312**	*e*Pn	**Pn**	**04 13 22.1**	**+1.4**
BOSS				*e*Sn	**Sg**	**04 14 17.5**	**+1.3**
PRVS	**Prvonek**	**3.56**	**309**	*e*Pn	**Pn**	**04 13 25.1**	**+1.0**
PRVS				*e*Sn	**Sg**	**04 14 23.9**	**-0.1**
ZAPS	**Zavoj**	**3.79**	**322**	*e*Pn	**Pn**	**04 13 28.8**	**+1.6**
ZAPS				*e*Sn	**Sg**	**04 14 32.6**	**+1.4**
BARS	**Barje**	**3.90**	**311**	*e*Pn	**Pn**	**04 13 29.5**	**+0.8**
BLKB	**Belogradchik**	**4.04**	**325**	⇑P	**Pn**	**04 13 31.2**	**+0.6**
BLKB				⇑S	**Sg**	**04 14 34.8**	**-4.6**
ZAGS	**Zajecar**	**4.39**	**324**	*e*Pn	**Pn**	**04 13 34.9**	**-0.5**
BOVS	**Bovan**	**4.51**	**318**	⇑P	**Pn**	**04 13 36.8**	**-0.2**
BOVS				⇑S	**Sb**	**04 14 45.4**	**+3.1**
BOVS	**Bovan**	**4.51**	**318**	*e*Pn	**Pn**	**04 13 37.3**	**+0.3**
BOVS				*e*Sn	**Sb**	**04 14 45.3**	**+3.1**
SELS	**Selova**	**4.55**	**311**	*e*Pn	**Pn**	**04 13 37.4**	**-0.3**
VOIR		**5.13**	**354**	⇓P	**Pn**	**04 13 46.5**	**+0.8**
MLR	**Muntele Rosu**	**5.16**	**1**	⇑P	**Pn**	**04 13 47.5**	**+1.5**
HERR	**Herculane**	**5.20**	**332**	⇑P	**Pn**	**04 13 46.4**	**-0.1**
GRUS	**Gruza**	**5.21**	**315**	*e*Pn	**Pn**	**04 13 46.7**	**+0.1**
IVAS	**Ivanjica**	**5.33**	**309**	*e*Pn	**Pn**	**04 13 48.7**	**+0.3**
LOT	**Lotru**	**5.33**	**344**	⇑P	**Pn**	**04 13 48.7**	**+0.2**
MDVR	**Moldovita**	**5.39**	**327**	⇓P	**Pn**	**04 13 49.3**	**+0.1**
GZR	**Gura Zlata**	**5.53**	**337**	⇑P	**Pn**	**04 13 51.7**	**+0.5**
VRI	**Vrincioaia**	**5.57**	**6**	⇑P	**Pn**	**04 13 51.1**	**-0.5**
BZS	**Buzias**	**6.12**	**331**	⇓P	**Pn**	**04 13 59.5**	**+0.3**
BZS	**Buzias**	**6.12**	**331**	*e*Pn	**Pn**	**04 13 59.3**	**+0.2**

DDA 29 04:13:30.4±0.0, 40.30N×25.95E, h7km±5km, ML2.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKA	**anakkale-Gk**	**0.11**	**198**	P	Pg	04 13 33.4	+0.6
GOKA				S	Sg	04 13 36.2	+1.7
ECEA	**Canakkale, Ece**	**0.30**	**146**	P	Pb	04 13 37.8	-0.3
ECEA				S	Sb	04 13 42.6	-0.7
ECEA				*i* AML	AML	04 13 44.0	
	comp=E,166nm,0.3s						
ECEA				*i* AML	AML	04 13 45.0	
	comp=N,188nm,0.5s						
BOZC	**Bozcaada**	**0.46**	**170**	P	Pg	04 13 39.4	+0.1
BOZC				S	Sg	04 13 46.2	+0.9
BOZC				*i* AML	AML	04 13 47.0	
	comp=N,180nm,0.2s						
BOZC				*i* AML	AML	04 13 47.0	
	comp=E,185nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.72**	**140**	P	Pb	04 13 45.6	+0.4
BAYC				S	Sb	04 13 54.5	-0.8
KOCA	**Canakkale, Ayv**	**0.81**	**170**	P	Pg	04 13 45.5	-0.4
KOCA				S	Sg	04 13 56.7	+0.3
SART	**Tekirdag**	**1.02**	**67**	P	Pg	04 13 49.7	-0.2
SART				S	Sb	04 14 04.0	+0.1
SART				*i* AML	AML	04 14 08.0	
	comp=N,25nm,0.4s						
SART				*i* AML	AML	04 14 09.0	
	comp=E,37nm,0.8s						

ATH 29 04:13:42.0, 36.38N×23.10E, h16km±6km, ML1.5/1, Error ellipse: s-maj=9.2km s-min=1.2km az=255.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHA	**Kythira Island**	**0.13**	**193**	P	Pg	04 13 45.9	+0.1
KTHA				S	Sb	04 13 48.5	-0.2
KTHR	**Kythira**	**0.14**	**212**	P	Pg	04 13 46.0	0.0
KTHR				S	Sb	04 13 49.0	-0.2
KTHR				AML	AML	04 13 51.8	
	comp=N,419μm,0.3s						
KTHR				AML	AML	04 13 52.6	
	comp=E,406μm,0.2s						
VLI	**Velíai**	**0.36**	**339**	P	Pg	04 13 49.3	-0.1
VLI				S	Sg	04 13 54.3	-0.2
ANKY	**Antikythira Is**	**0.54**	**162**	P	Pg	04 13 52.8	0.0
ANKY				S	Sg	04 13 59.7	-0.2

RHSSO ***29*** *04:15:13.3±0.2, 44.04N×18.14E, h5km±1km, ML2.2/12*

ISC 29 04:15:12.3±1.1, 44.03N±0.02×18.15E±0.02, h6km±10km, n39, σ0.89/61, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOB	**Doboj**	**0.70**	**357**	*e*Pg	**Pg**	**04 15 25.4**	**-0.4**
DOB				*e*Sg	**Sg**	**04 15 35.5**	**+0.5**
SRKY	**Kupres RS**	**0.71**	**273**	*e*Pg	**Pg**	**04 15 25.6**	**-0.3**
SRKY				*e*Sg	**Sg**	**04 15 35.2**	**+0.1**
MGRS	**Mrkonjic Grad**	**0.86**	**297**	*e*Pg	**Pg**	**04 15 29.2**	**+0.5**
MGRS				*e*Sg	**Sb**	**04 15 41.0**	**-0.4**
RICI	**Ricice**	**0.91**	**234**	*e*Pg	**Pg**	**04 15 29.6**	**-0.2**
RICI				Sg	**Sg**	**04 15 40.8**	**-0.7**
BBLS	**Lazići**	**0.92**	**100**	*e*Pg	**Pg**	**04 15 30.4**	**+0.4**
BBLS				*e*Sg	**Sg**	**04 15 43.0**	**+1.0**
RUDO	**Rudo**	**0.98**	**115**	*e*Pg	**Pb**	**04 15 31.9**	**+0.2**
RUDO				*e*Sg	**Sg**	**04 15 44.6**	**+0.9**
UPM	**Unac-Piva**	**0.99**	**146**	⇑*i*Pg	**Pg**	**04 15 31.3**	**-0.1**
BLY	**Banja Luka**	**1.00**	**316**	⇑*i*Pg	**Pg**	**04 15 31.2**	**-0.2**
BLY				*e*Sg	**Sg**	**04 15 44.9**	**+0.6**
BLJ	**Bijeljina**	**1.10**	**46**	*e*Pg	**Pb**	**04 15 31.9**	**-1.9**
BLJ				*e*Sg	**Sg**	**04 15 46.5**	**-1.2**
MAKA	**Makarska**	**1.10**	**228**	*e*Pg	**Pb**	**04 15 32.6**	**-1.2**
A052A	**Srbac**	**1.16**	**337**	*e*Pg	**Pb**	**04 15 34.1**	**-0.8**
A052A				*e*Sg	**Sb**	**04 15 49.8**	**-0.4**
BRY	**Bratogost**	**1.16**	**166**	*e*Pg	**Pb**	**04 15 34.8**	**-0.2**
BRY				*e*Sg	**Sg**	**04 15 51.0**	**+1.3**
STON	**Ston**	**1.20**	**196**	⇑*i*Pg	**Pn**	**04 15 34.2**	**-1.5**
STON				*e*Sg	**Sb**	**04 15 51.4**	**+0.1**
STON	**Ston**	**1.20**	**196**	*e*Pg	**Pn**	**04 15 33.7**	**-2.0**
A050A	**Klekovaca**	**1.25**	**292**	*e*Pg	**Pn**	**04 15 35.1**	**-1.3**
A050A				*e*Sg	**Sg**	**04 15 52.7**	**+0.4**
KIJV	**Kijevo**	**1.26**	**269**	*e*Pg	**Pn**	**04 15 36.1**	**-0.4**
TREB	**Trebinje**	**1.32**	**173**	*e*Pg	**Pn**	**04 15 37.4**	**0.0**
TREB				*e*Sg	**Sg**	**04 15 56.8**	**+2.0**
A051A	**Mrakovica**	**1.32**	**318**	*e*Pg	**Pn**	**04 15 36.7**	**-0.8**
A051A				*e*Sg	**Sn**	**04 15 55.1**	**-0.4**
DIVS	**Divibare**	**1.33**	**86**	*e*Pg	**Pn**	**04 15 37.3**	**-0.3**
DIVS				*e*Sg	**Sg**	**04 15 55.9**	**+0.8**
DBRK	**Dubrovnik**	**1.36**	**180**	*e*Pg	**Pn**	**04 15 36.5**	**-1.4**
A252A	**Venje**	**1.42**	**352**	*e*Pn	**Pn**	**04 15 38.8**	**+0.1**
HVAR	**Hvar**	**1.50**	**236**	*e*Pg	**Pn**	**04 15 40.8**	**+0.5**
LSTV	**Lastovo**	**1.56**	**216**	*e*Pg	**Pn**	**04 15 40.8**	**+0.2**
HCY	**Herceg Novi**	**1.60**	**171**	*e*Pn	**Pb**	**04 15 42.3**	**-0.1**
HCY				*e*Sn	**Sg**	**04 16 04.2**	**+0.4**
FRGS	**Fruska Gora**	**1.64**	**46**	*e*Pn	**Pn**	**04 15 42.1**	**+0.3**
FRGS				*e*Sn	**Sb**	**04 16 04.0**	**+0.1**
MORI	**Morici**	**1.77**	**266**	*e*Pn	**Pb**	**04 15 45.9**	**+0.7**
UDBI	**Udbina**	**1.78**	**287**	*e*Pn	**Pg**	**04 15 46.6**	**+0.1**
PDG	**Podgorica**	**1.79**	**153**	*e*Pn	**Pb**	**04 15 45.0**	**-0.6**
PDG				*e*Sn	**Sb**	**04 16 08.0**	**

comp=N,3µm,0.7s
BPAW Bear Paw Mtn. 1.12 13 P **Pb** **04 26 14.0 -0.6**
baz=194,SNR=1000
BPAW S **Sb** **04 26 28.8 -0.6**
baz=194
K20K Telida 1.18 288 **Pb** **04 26 15.2 -0.4**
K20K Sg **Sb** **04 26 30.4 -0.7**
K20K IAML 04 26 32.6
comp=E,3µm,0.6s
K20K IAML 04 26 32.7
comp=N,2µm,0.7s
K20K Telida 1.18 288 P **Pb** **04 26 15.4 -0.3**
baz=104,SNR=1000
K20K S **Sb** **04 26 30.6 -0.5**
baz=104
L20K Farewell, AK 1.19 244 **Pb** **04 26 14.8 -1.0**
L20K **Sg** **04 26 31.7 +0.6**
L20K Farewell, AK 1.19 244 P **Pb** **04 26 14.7 -1.0**
baz=61,SNR=144
L20K S **Sb** **04 26 30.8 -0.5**
baz=61
WAT7 Susitna Watana 1.26 97 **Pn** **04 26 16.5 -0.5**
WAT7 **Sb** **04 26 32.6 -0.9**
RND Reindeer 1.30 71 **Pn** **04 26 16.8 -0.6**
RND IAML 04 26 39.2
comp=N,2µm,0.6s
M20K Styx River 1.35 213 Pn **Pn** **04 26 17.3 -0.8**
M20K IAML 04 26 36.6
comp=E,2µm,0.5s
M20K Styx River 1.35 213 P **Pn** **04 26 17.1 -1.0**
baz=31
M20K S **Sb** **04 26 34.7 -1.2**
baz=31
MCK McKinley 1.39 58 Pn **Pn** **04 26 18.6 -0.1**
MCK IAML 04 26 43.3
comp=N,2µm,0.4s
MCK IAML 04 26 45.1
comp=E,2µm,0.9s
MCK McKinley 1.39 58 P **Pn** **04 26 18.6 -0.1**
baz=241
MCK S **Sg** **04 26 37.5 -0.2**
baz=241
WAT1 Susitna Watana 1.40 96 **Pn** **04 26 18.6 -0.2**
WAT1 **Sb** **04 26 37.0 -0.3**
WAT1 Susitna Watana 1.40 96 P **Pn** **04 26 18.6 -0.2**
baz=280
WAT1 S **Sb** **04 26 36.8 -0.5**
baz=280
M22K Willow 1.44 151 Pn **Pn** **04 26 19.0 -0.3**
M22K Willow 1.44 151 P **Pn** **04 26 18.7 -0.5**
baz=333,SNR=419
M22K S **Sn** **04 26 37.8 -0.4**
baz=333
BWN Browne 1.50 38 Pn **Pn** **04 26 19.8 -0.3**
BWN IAML 04 26 43.5
comp=E,3µm,0.8s
STLK Strandline Lak 1.53 185 **Pn** **04 26 20.5 -0.1**
J20K Nowinta River 1.64 317 **Pn** **04 26 21.5 -0.6**
J20K Nowinta River 1.64 317 **Sb** **04 26 44.9 +0.8**
J20K Nowinta River 1.64 317 IAML 04 26 47.0
comp=N,2µm,0.5s
J20K IAML 04 26 48.2
comp=E,1µm,0.5s
J20K Nowinta River 1.64 317 P **Pn** **04 26 21.7 -0.4**
baz=133,SNR=571
J20K Sb **Sb** **04 26 45.0 +0.8**
baz=133
M19K Big River Lodg 1.72 231 Pn **Pn** **04 26 23.0 -0.2**
M19K IAML 04 26 48.7
comp=E,1µm,0.7s
M19K IAML 04 26 49.4
comp=N,1µm,0.7s
M19K Big River Lodg 1.72 231 P **Pn** **04 26 22.7 -0.5**
baz=48,SNR=248
M19K Sb **Sb** **04 26 46.4 -0.1**
baz=48
L19K White Mountain 1.73 243 **Pn** **04 26 22.1 -1.2**
L19K IAML 04 26 48.8
comp=N,933nm,1.1s
L19K White Mountain 1.73 243 P **Pn** **04 26 22.6 -0.7**
baz=59,SNR=252
L19K Sb **Sb** **04 26 47.2 +0.3**
baz=59
SPNN North Nagishla 1.73 198 **Pn** **04 26 23.7 +0.2**
SPCG Spurr Capps Gl 1.74 187 **Pb** **04 26 24.8 -0.4**
SPCG **Sb** **04 26 46.9 -0.4**
GHO Glory Hole Cre 1.75 134 Pn **Pn** **04 26 23.6 -0.2**
GHO Glory Hole Cre 1.75 134 **Sb** **04 26 47.0 -0.6**
GHO Glory Hole Cre 1.75 134 IAML 04 26 47.8
comp=N,3µm,0.6s
GHO IAML 04 26 48.8
comp=E,3µm,0.5s
WAT6 Susitna Watana 1.82 102 **Pn** **04 26 23.5 -1.1**
WAT6 Susitna Watana 1.82 102 P **Pn** **04 26 23.3 -1.3**
baz=286
WAT6 S **Sn** **04 26 48.2 +0.3**
baz=286
SPCN Chakachatna No 1.82 189 **Pn** **04 26 25.4 +0.9**
PMR Palmer 1.83 140 Pn **Pn** **04 26 24.2 -0.4**
PMR IAML 04 26 52.6
comp=E,2µm,0.5s
PMR IAML 04 26 54.4
comp=N,1µm,0.8s
PMR Palmer 1.83 140 P **Pn** **04 26 24.8 +0.2**
baz=323,SNR=582
PMR S **Sn** **04 26 47.7 -0.2**
baz=323
SPCR Spurr Chakacha 1.84 190 **Pn** **04 26 25.5 +0.5**
SPCR Spurr Chakacha 1.84 190 P **Pn** **04 26 24.9 -0.1**
baz=9.1,SNR=30
SPCR Sb **Sb** **04 26 49.9 -0.3**
baz=9.1
SPU Mount Spurr 1.85 187 Pn **Pn** **04 26 25.0 0.0**
CKL Chakachamna La 1.86 191 **Pn** **04 26 25.4 +0.2**
DHY Denali Highway 1.92 86 **Pn** **04 26 25.5 -0.5**
DHY IAML 04 26 54.8
comp=E,2µm,0.5s
DHY Denali Highway 1.92 86 P **Pn** **04 26 25.8 -0.2**
baz=271,SNR=208
DHY S **Sb** **04 26 51.1 -1.2**
baz=271
NEA2 Nenana 1.94 34 **Pn** **04 26 24.8 -1.3**
NEA2 Nenana 1.94 34 P **Pn** **04 26 24.9 -1.3**
baz=216,SNR=427
SML Sawmill 1.94 127 **Pn** **04 26 26.0 -0.2**
SML Sawmill 1.94 127 P **Pn** **04 26 26.1 -0.1**
baz=311,SNR=516
SML S **Sn** **04 26 51.2 +0.5**
baz=311
FIS Fire Island 1.98 161 Pn **Pn** **04 26 27.4 +0.7**
TTA Tatalina 2.03 270 Pn **Pn** **04 26 26.4 -1.1**
TTA IAML 04 27 00.4
comp=N,678nm,0.5s
TTA IAML 04 27 01.2
comp=E,870nm,0.9s
TTA Tatalina 2.03 270 P **Pn** **04 26 26.4 -1.1**
baz=85
TT01 Tatalina 2.03 269 **Pn** **04 26 26.7 -0.8**
MLY Manley 2.06 10 **Pn** **04 26 27.3 -0.7**
MLY IAML 04 26 58.7
comp=E,1µm,0.7s
MLY IAML 04 27 02.3
comp=N,910nm,0.7s
MLY Manley 2.06 10 P **Pn** **04 26 27.2 -0.7**
baz=190,SNR=545
RC01 Rabbit Creek A 2.12 155 Pn **Pn** **04 26 28.5 -0.1**
RC01 IAML 04 26 57.9
comp=E,744nm,0.5s
RC01 IAML 04 27 03.5
comp=N,716nm,0.4s
RC01 Rabbit Creek A 2.12 155 P **Pn** **04 26 28.3 -0.4**
baz=337,SNR=311
WRH Wood River Hil 2.13 45 Pn **Pn** **04 26 27.6 -1.2**
KNK Knik Glacier 2.17 136 Pn **Pn** **04 26 29.6 +0.2**
KNK IAML 04 27 02.7
comp=N,827nm,0.5s
KNK Knik Glacier 2.17 136 P **Pn** **04 26 29.7 +0.2**
baz=320,SNR=164
M23K Glacier View 2.17 123 **Pn** **04 26 30.3 +0.9**
M23K Glacier View 2.17 123 P **Pn** **04 26 29.3 -0.1**
baz=307,SNR=388
I21K Tanana 2.18 356 Pn **Pn** **04 26 28.9 -0.6**
I21K IAML 04 27 04.6
comp=N,964nm,0.7s
I21K IAML 04 27 09.7
comp=E,847nm,0.7s
I21K Tanana 2.18 356 P **Pn** **04 26 29.2 -0.4**
baz=175,SNR=346
I21K Sb **Sb** **04 27 00.9 +1.1**
baz=175
SCM Sheep Creek Mo 2.31 119 Pn **Pn** **04 26 31.2 -0.1**
SCM IAML 04 27 05.4
comp=E,1µm,0.6s
SCM IAML 04 27 07.6
comp=N,1µm,0.5s
SCM Sheep Creek Mo 2.31 119 P **Pn** **04 26 30.9 -0.4**
baz=304,SNR=358
SCM Sb **Sb** **04 27 03.8 +0.4**
baz=304
CCB Clear Creek Bu 2.34 44 **Pn** **04 26 30.5 -1.2**
CCB IAML 04 27 06.3
comp=E,631nm,0.5s
CCB IAML 04 27 07.6
comp=N,636nm,0.4s
I23K Minto, Yukon-K 2.35 23 Pn **Pn** **04 26 31.1 -0.8**
I23K IAML 04 27 08.7
comp=E,709nm,0.5s
I23K IAML 04 27 08.7
comp=N,795nm,0.6s
I23K Minto, Yukon-K 2.35 23 P **Pn** **04 26 31.1 -0.8**
baz=206,SNR=153
I23K Sb **Sb** **04 27 06.0 +1.3**
baz=206
MDM Murphy Dome 2.45 36 **Pn** **04 26 32.0 -1.2**
TCOL CIGO, UAF Yank 2.48 40 Pn **Pn** **04 26 32.7 -1.0**
TCOL CIGO, UAF Yank 2.48 40 P **Pn** **04 26 32.6 -1.0**
baz=223,SNR=30
TCOL Sb **Sg** **04 27 10.7 -2.0**
baz=223
DFR Drift River 2.49 193 **Pn** **04 26 35.9 +2.1**
I53US FAIRBANKS INFR 2.49 40 *i* 04 39 50.0
baz=219,slow=328,SNR=2.8
COLA College 2.49 40 P **Pn** **04 26 32.6 -1.1**
baz=223
HDA Harding Lake 2.49 54 P **Pn** **04 26 32.9 -0.9**
baz=238,SNR=152
HDA Sb **Sg** **04 27 10.9 -2.1**
baz=238
HDA Sb **Sg** **04 27 10.9 -2.1**
baz=238
RDJH Redoubt Jeurge 2.50 194 **Pn** **04 26 35.7 +1.7**
NCT North Crescent 2.54 195 **Pn** **04 26 36.2 +1.6**
SLKM Skilak Lake 2.60 165 **Pn** **04 26 36.0 +0.8**
N19K Bonanza Creek 2.60 213 Pn **Pn** **04 26 35.6 +0.3**
N19K IAML 04 27 16.2
comp=E,574nm,0.8s
N19K Bonanza Creek 2.60 213 P **Pn** **04 26 36.6 +1.2**
baz=30,SNR=74
RDWB Redoubt West 2.60 194 **Pn** **04 26 37.0 +1.5**
PS08 TAPS Pump Stn8 2.61 52 **Pn** **04 26 35.3 -0.1**
PWL Port Wells 2.65 143 Pn **Pn** **04 26 36.9 +0.9**
PWL IAML 04 27 19.8
comp=E,805nm,0.8s
PWL IAML 04 27 22.0
comp=N,697nm,0.9s
PWL Port Wells 2.65 143 P **Pn** **04 26 37.1 +1.1**
baz=327,SNR=147
M24K Tolsona, Glenn 2.66 108 Pn **Pn** **04 26 36.5 +0.3**
M24K Tolsona, Glenn 2.66 108 P **Pn** **04 26 36.6 +0.5**
baz=293,SNR=165
M24K Sb **Sb** **04 27 15.4 +1.7**
baz=293
PS10 TAPS Pump St10 2.66 79 **Pn** **04 26 37.9 +1.8**
O22K Cooper Landing 2.69 160 Pn **Pn** **04 26 37.0 +0.6**
O22K Cooper Landing 2.69 160 P **Pn** **04 26 38.0 +1.5**
baz=342,SNR=28
O22K Sb **Sb** **04 27 14.5 +0.1**
baz=342
SVW2 Sparrevohn 2.69 226 Pn **Pn** **04 26 36.6 +0.1**
SVW2 IAML 04 27 20.8
comp=E,514nm,0.5s
SVW2 IAML 04 27 21.2
comp=N,422nm,0.5s
H21K Melozitna Rive 2.71 349 Pn **Pn** **04 26 36.3 -0.4**
H21K Melozitna Rive 2.71 349 P **Pn** **04 26 36.5 -0.3**
baz=168,SNR=53
PS07 TAPS Pump Stn7 2.72 31 **Pn** **04 26 36.1 -0.8**
IL31 2.72 48 Pn **Pn** **04 26 35.9 -1.1**
ILAR Eielson Array 2.72 48 Pn **Pn** **04 26 35.6 -1.3**
comp=N,5.5nm,0.3s,baz=236,slow=14,SNR=157
ILAR Pg **Pb** **04 26 41.5 -0.3**
comp=N,18nm,0.3s,baz=236,slow=18,SNR=38
ILAR Lg Lg 04 27 17.2
comp=N,63nm,0.3s,baz=234,slow=29,SNR=22
comp=N,14nm,0.4s
K24K Donnelly Dome 2.73 71 **Pn** **04 26 38.1 +1.0**
K24K Donnelly Dome 2.73 71 P **Pn** **04 26 37.7 +0.6**
baz=256,SNR=72
PAX Paxson 2.79 88 Pn **Pn** **04 26 38.0 +0.1**
PAX Paxson 2.79 88 P **Pn** **04 26 38.3 +0.3**
baz=274,SNR=271
POKR Poker Plat Res 2.79 39 Pn **Pn** **04 26 36.7 -1.2**
POKR Poker Plat Res 2.79 39 P **Pn** **04 26 37.0 -0.9**
baz=223
H22K Ishtalitna Cre 2.89 2 **Pn** **04 26 39.1 -0.2**
H22K Ishtalitna Cre 2.89 2 P **Pn** **04 26 39.1 -0.2**
baz=182,SNR=79
GCSA Galena City Sc 2.92 309 **Pn** **04 26 40.0 +0.3**
GCSA Galena City Sc 2.92 309 P **Pn** **04 26 41.1 +1.5**
baz=124
H23K Yukon River 2.96 16 P **Pn** **04 26 40.0 -0.2**
baz=198,SNR=66
PS06 TAPS Pump Stn6 2.96 15 **Pn** **04 26 40.6 +0.4**
PS11 TAPS Pump St11 2.98 106 **Pn** **04 26 41.3 +0.8**
O20K Slope Mountain 2.98 190 **Pn** **04 26 42.1 +1.5**
O20K Slope Mountain 2.98 190 P **Pn** **04 26 42.7 +2.1**
baz=9.3,SNR=14
GLI Glacier Island 3.01 133 Pn **Pn** **04 26 41.4 +0.5**
GLI IAML 04 27 25.9
comp=N,580nm,0.7s
GLI Glacier Island 3.01 133 P **Pn** **04 26 41.9 +1.0**
baz=318,SNR=39
HARP HAARP 3.02 99 **Pn** **04 26 42.7 +1.6**
HARP HAARP 3.02 99 P **Pn** **04 26 43.3 +2.2**
baz=285,SNR=88
KLU Klutina 3.05 117 Pn **Pn** **04 26 42.3 +0.7**
KLU IAML 04 27 27.3
comp=E,316nm,0.5s
KLU IAML 04 27 34.9
comp=N,393nm,0.5s
KLU Klutina 3.05 117 P **Pn** **04 26 42.9 +1.3**
baz=303,SNR=159
JPK Jack Peak 3.06 128 **Pn** **04 26 43.0 +1.3**
IVE Iliamna Volcan 3.09 194 **Pn** **04 26 43.8 +1.7**
N18K Kilae Creek 3.11 223 Pn **Pn** **04 26 42.3 0.0**
N18K IAML 04 27 31.9
comp=E,308nm,0.8s
N18K IAML 04 27 31.9
comp=N,283nm,0.7s
N18K Kilae Creek 3.11 223 P **Pn** **04 26 42.4 +0.1**
baz=39,SNR=29
O19K Port Alsworth 3.12 206 Pn **Pn** **04 26 42.1 -0.3**
O19K IAML 04 27 39.2
comp=N,535nm,0.4s
RIDG Independent Ri 3.12 73 Pn **Pn** **04 26 42.7 +0.3**
RIDG IAML 04 27 39.0
comp=E,586nm,0.8s
RIDG Independent Ri 3.12 73 P **Pn** **04 26 43.0 +0.5**
baz=260,SNR=70
IM03 3.13 343 **Pn** **04 26 42.5 0.0**
IMAR Indian Mountai 3.13 343 Pn **Pn** **04 26 42.2 -0.3**
ILSW Iliamna Southw 3.13 195 Pn **Pn** **04 26 42.8 +0.1**
ILSW IAML 04 27 32.5
comp=E,137nm,0.6s
ILSW IAML 04 27 33.0
comp=N,93nm,0.5s
J25K Salcha River, 3.19 57 P **Pn** **04 26 42.9 -0.5**
baz=243,SNR=68
H24K Noodor Dome 3.26 28 Pn **Pn** **04 26 42.9 -1.4**
H24K Noodor Dome 3.26 28 P **Pn** **04 26 43.2 -1.2**
baz=211,SNR=14
BRLK Bradley Lake 3.28 174 Pn **Pn** **04 26 46.3 +1.7**
BRSE Bradley Lake S 3.31 173 **Pn** **04 26 45.3 +0.2**
BRSE Bradley Lake S 3.31 173 P **Pn** **04 26 47.3 +2.3**
baz=354,SNR=35
FID Port Fidalgo 3.31 131 Pn **Pn** **04 26 45.8 +0.7**
FID IAML 04 27 42.3
comp=N,384nm,0.7s
DIV Divide 3.32 122 Pn **Pn** **04 26 46.1 +0.9**
HOM Homer 3.37 181 Pn **Pn** **04 26 45.5 -0.3**
DOT Dot Lake 3.45 76 Pn **Pn** **04 26 46.9 -0.1**
P19K Oil Pt 3.47 194 Pn **Pn** **04 26 48.4 +1.2**
P19K IAML 04 27 50.3
comp=E,226nm,0.8s
P19K IAML 04 28 06.8
comp=N,191nm,0.7s
P19K Oil Pt 3.47 194 P **Pn** **04 26 49.2 +2.0**
baz=13
CNPM China Poot 3.50 177 Pn **Pn** **04 26 48.7 +1.0**
CNPM IAML 04 27 50.5
comp=E,182nm,0.7s
WACK Wrangell Chich 3.52 104 **Pn** **04 26 49.7 +1.6**
SCRK Sand Creek 3.54 71 Pn **Pn** **04 26 48.1 -0.2**
SCRK IAML 04 27 47.3
comp=E,245nm,0.8s
SCRK IAML 04 27 48.1
comp=N,290nm,0.9s
SCRK Sand Creek 3.54 71 P **Pn** **04 26 48.3 0.0**
baz=258,SNR=90
N25K Chitina, Valde 3.55 110 Pn **Pn** **04 26 48.9 +0.5**
N25K Chitina, Valde 3.55 110 P **Pn** **04 26 49.7 +1.3**
baz=297,SNR=33
HIN Hinchinbrook I 3.57 135 Pn **Pn** **04 26 48.8 +0.2**
HIN IAML 04 27 49.9
comp=E,408nm,0.9s
WASW Wrangell South 3.61 104 **Pn** **04 26 51.4 +2.1**
G21K Allakaket 3.61 348 **Pn** **04 26 49.3 +0.1**
G21K Allakaket 3.61 348 P **Pn** **04 26 49.1 0.0**
baz=166,SNR=48
O18K Koktuh Hills 3.62 210 Pn **Pn** **04 26 49.8 +0.5**
O18K IAML 04 27 47.7
comp=N,193nm,1.0s
O18K IAML 04 27 54.5
comp=E,165nm,0.9s
O18K Koktuh Hills 3.62 210 P **Pn** **04 26 50.7 +1.4**
baz=27,SNR=7.2
PRP Porcupine Dome 3.65 44 Pn **Pn** **04 26 49.0 -0.8**
PRP IAML 04 27 50.8
comp=N,213nm,0.4s
PRP IAML 04 27 52.4
comp=E,187nm,0.7s
PRP Porcupine Dome 3.65 44 P **Pn** **04 26 49.2 -0.5**
baz=229,SNR=24
EYAK Cordova Ski Ar 3.71 129 Pn **Pn** **04 26 51.7 +1.2**
EYAK Cordova Ski Ar 3.71 129 P **Pn** **04 26 51.7 +1.2**
baz=315
L26K Log Cabin Wild 3.75 86 Pn **Pn** **04 26 52.9 +1.8**
L26K Log Cabin Wild 3.75 86 P **Pn** **04 26 53.3 +2.2**
baz=274,SNR=255
AU22 Augustine Moun 3.76 194 **Pn** **04 26 52.9 +1.8**
G23K Bananza Creek 3.77 9 **Pn** **04 26 51.4 0.0**
G23K Bananza Creek 3.77 9 P **Pn** **04 26 51.5 +0.1**
baz=191,SNR=83
PS05 TAPS Pump Stn5 3.83 5 **Pn** **04 26 53.0 +0.9**
J26L Joseph Creek 3.86 64 Pn **Pn** **04 26 52.0 -0.6**
J26L IAML 04 27 58.2
comp=E,156nm,0.5s
J26L IAML 04 28 01.4
comp=N,238nm,0.5s
J26L Joseph Creek 3.86 64 P **Pn** **04 26 52.7 0.0**
baz=251,SNR=50
BMRM Bremner River 3.88 119 Pn **Pn** **04 26 53.6 +0.7**
BMRM Bremner River 3.88 119 P **Pn** **04 26 53.5 +0.7**
baz=306,SNR=20
G22K Bettles 3.92 0 **Pn** **04 26 54.1 +0.7**
G22K Bettles 3.92 0 P **Pn** **04 26 53.8 +0.3**
baz=180
GLB Gilahina Butte 3.96 110 Pn **Pn** **04 26 55.4 +1.3**
GLB IAML 04 27 59.6
comp=N,208nm,0.9s
GLB IAML 04 28 00.3
comp=E,174nm,0.9s
M26K Nabesna, AK 4.00 95 Pn **Pn** **04 26 56.1 +1.6**
M26K IAML 04 28 01.9
comp=E,235nm,0.6s
M26K Nabesna, AK 4.00 95 P **Pn** **04 26 56.0 +1.4**
baz=283,SNR=23
P18K Big Mountain, 4.04 208 Pn **Pn** **04 26 55.8 +0.8**
P18K Big Mountain, 4.04 208 P **Pn** **04 26 55.6 +0.5**
baz=24
G24K Hadweenzic Riv 4.09 23 **Pn** **04 26 55.0 -0.8**
G24K Hadweenzic Riv 4.09 23 P **Pn** **04 26 55.0 -0.8**
baz=207,SNR=21
H25K Birch Creek 4.10 35 **Pn** **04 26 55.3 -0.5**
H25K Birch Creek 4.10 35 P **Pn** **04 26 55.4 -0.5**
baz=220,SNR=11
O17K Koliganek Bris 4.20 222 **Pn** **04 26 57.4 +0.2**
O17K Koliganek Bris 4.20 222 P **Pn** **04 26 56.9 -0.2**
baz=37
RAGM Ragged Mountai 4.21 126 Pn **Pn** **04 26 59.1 +1.6**
Q19K Cape Douglas, 4.22 195 Pn **Pn** **04 26 59.3 +1.8**
Q19K IAML 04 28 36.2
comp=N,222nm,0.9s
Q19K Cape Douglas, 4.22 195 P **Pn** **04 26 59.4 +1.8**
baz=13
N16K Nishlik Lake 4.26 237 P **Pn** **04 26 59.6 +1.5**
baz=50
F21K Alatna River 4.30 350 **Pn** **04 26 59.5 +0.9**
F21K Alatna River 4.30 350 P **Pn** **04 26 59.2 +0.5**
baz=168,SNR=25
MCARA McCarthy VSAT 4.33 108 Pn **Pn** **04 27 00.1 +1.1**
MCARA McCarthy VSAT 4.33 108 P **Pn** **04 27 00.5 +1.5**
baz=296
I26K Coal Creek Min 4.35 54 **Pn** **04 26 58.9 -0.3**
I26K IAML 04 28 20.9
comp=N,218nm,0.8s
I26K Coal Creek Min 4.35 54 P **Pn** **04 26 59.1 -0.2**
baz=242
K27K Chicken 4.38 72 Pn **Pn** **04 26 59.3 -0.3**
K27K IAML 04 28 14.3
comp=N,178nm,0.7s
K27K Chicken 4.38 72 P **Pn** **04 26 59.7 0.0**
baz=261
Q23K Middleton Isla 4.39 143 Pn **Pn** **04 27 01.4 +1.5**
Q23K IAML 04 28 20.7
comp=N,110nm,0.9s
Q23K IAML 04 28 26.4
comp=E,93nm,1.1s
Q23K Middleton Isla 4.39 143 P **Pn** **04 27 01.6 +1.7**
baz=328
MID Middleton Isla 4.40 143 **Pn** **04 27 01.7 +1.8**
MID Middleton Isla 4.40 143 IAML 04 28 20.6
comp=N,103nm,0.9s
MID IAML 04 28 26.4
comp=E,92nm,1.1s
HMT Hamilton 4.40 124 Pn **Pn** **04 27 00.6 +0.5**
SYI Shuyak Island 4.44 186 **Pn** **04 27 01.9 +1.5**
Q20K Shuyak Island 4.44 186 P **Pn** **04 27 02.1 +1.6**
baz=4.9
L27K Beaver Creek, 4.44 85 **Pn** **04 27 02.0 +1.3**
L27K Beaver Creek, 4.44 85 P **Pn** **04 27 01.9 +1.3**
baz=274,SNR=145
BC03 4.46 85 **Pn** **04 27 02.0 +1.3**
BCAR Beaver Creek A 4.46 85 Pn **Pn** **04 27 02.5 +1.7**
FYU Fort Yukon 4.48 34 Pn **Pn** **04 26 60.0 -1.1**
FYU IAML 04 28 24.1
comp=N,140nm,0.9s
FYU IAML 04 28 28.1
comp=E,104nm,0.8s
P17K Kvichak River 4.50 214 **Pn** **04 27 02.9 +1.6**
P17K Kvichak River 4.50 214 P **Pn** **04 27 02.4 +1.1**
baz=29
M27K Edge Creek, AK 4.52 94 **Pn** **04 27 04.4 +2.6**
M27K IAML 04 28 23.8
comp=N,141nm,1.1s
M27K Edge Creek, AK 4.52 94 P **Pn** **04 27 04.3 +2.5**
baz=283,SNR=66
F22K John River 4.52 357 **Pn** **04 27 02.7 +1.0**
F22K John River 4.52 357 P **Pn** **04 27 02.4 +0.7**
baz=176
BERG Berg Lake 4.58 122 Pn **Pn** **04 27 04.5 +2.0**
KAIM Kayak Island 4.62 129 Pn **Pn** **04 27 04.1 +1.0**
KAIM IAML 04 28 41.0
comp=N,91nm,1.1s
KAIM Kayak Island 4.62 129 P **Pn** **04 27 04.2 +1.2**
baz=316
O16K Kokwok River B 4.65 225 **Pn** **04 27 04.8 +1.4**
PTPK Patty Peak 4.66 109 **Pn** **04 27 05.3 +1.6**
KHIT Khitrov Hills 4.73 119 **Pn** **04 27 05.6 +1.0**
SUCK Suckling Hills 4.76 125 Pn **Pn** **04 27 06.4 +1.5**
SUCK IAML 04 28 21.6
comp=N,122nm,0.5s
SUCK IAML 04 28 30.2
comp=E,99nm,1.4s
F24K Squaw Lake 4.78 17 **Pn** **04 27 05.1 -0.1**
F24K Squaw Lake 4.78 17 P **Pn** **04 27 05.3 0.0**
baz=201,SNR=16
GRIN Grindle Hills 4.80 121 **Pn** **04 27 06.9 +1.5**

EGAK	Eagle	4.93	64	Pn		Pn	04 27 08.0	+0.7
BVCY	Beaver Creek	4.97	92			Pn	04 27 09.5	+1.7
BVCY	Beaver Creek	4.97	92	P		Pn	04 27 09.6	+1.8
	baz=282,SNR=28							
ISLE	Juniper Island	5.00	115	Pn		Pn	04 27 09.6	+1.2
ISLE				IAML			04 28 32.4	
	comp=E,91nm,1.1s							
KAKN	Katmai Knife C	5.03	201			Pn	04 27 10.2	+1.4
SNH	Sunshine Point	5.05	120	Pn		Pn	04 27 09.7	+0.8
SNH				IAML			04 28 29.1	
	comp=E,67nm,0.9s							
SNH				IAML			04 28 29.6	
	comp=N,70nm,1.4s							
I27K	Kandik River	5.05	55			Pn	04 27 09.5	+0.5
I27K	Kandik River	5.05	55	P		Pn	04 27 09.2	+0.2
	baz=244,SNR=18							
YUK2	White River	5.14	99			Pn	04 27 11.9	+1.6
E22K	Anaktuvuk Pass	5.14	359			Pn	04 27 10.3	+0.1
E22K	Anaktuvuk Pass	5.14	359	P		Pn	04 27 10.8	+0.6
	baz=179							
G26K	Porcupine Rive	5.15	36			Pn	04 27 09.5	-0.8
G26K	Porcupine Rive	5.15	36	P		Pn	04 27 09.2	-1.0
	baz=224,SNR=12							
F25K	Christian Rive	5.23	26			Pn	04 27 10.6	-0.8
F25K	Christian Rive	5.23	26	P		Pn	04 27 10.9	-0.5
	baz=211,SNR=13							
E24K	Your Creek	5.24	13			Pn	04 27 11.7	+0.1
E24K	Your Creek	5.24	13	P		Pn	04 27 12.0	+0.4
	baz=196							
CTG	Chitna Glacier	5.25	108	P		Pn	04 27 12.1	+0.3
	baz=298							
CTGM	Chitina Glacie	5.25	108	Pn		Pn	04 27 12.8	+1.1
KDAK	Kodiak Island	5.27	186	Pn		Pn	04 27 13.5	+1.5
BM03	Burnt Mountain	5.30	30			Pn	04 27 11.3	-1.1
BMAR	Burnt Mountain	5.32	30	Pn		Pn	04 27 11.8	-0.8
YUK3	Moose Creek	5.32	99			Pn	04 27 14.6	+1.8
YUK3	Moose Creek	5.32	99	P		Pn	04 27 13.1	+0.3
	baz=289,SNR=9.3							
BM01	Burnt Mountain	5.35	31			Pn	04 27 11.9	-1.0
YAH	Yahtse	5.38	115	Pn		Pn	04 27 13.2	-0.5
YAH				IAML			04 28 44.0	
	comp=E,76nm,0.9s							
YAH				IAML			04 28 48.6	
	comp=N,62nm,1.6s							
H27K	Steamboat Moun	5.39	49			Pn	04 27 13.1	-0.6
H27K	Steamboat Moun	5.39	49	P		Pn	04 27 13.0	-0.6
	baz=238,SNR=12							
MESA	MESA	5.40	117	Pn		Pn	04 27 13.1	-0.9
MESA	MESA	5.40	117	P		Pn	04 27 13.2	-0.7
	baz=306							
DAWY	Dawson	5.55	74			Pn	04 27 15.9	+0.1
DAWY	Dawson	5.55	74	P		Pn	04 27 15.9	+0.1
	baz=265,SNR=31							
F26K	Sheenjek River	5.63	30			Pn	04 27 16.4	-0.5
F26K	Sheenjek River	5.63	30	P		Pn	04 27 15.9	-1.0
	baz=217,SNR=7.3							
G27K	Doyon Strip	5.68	44			Pn	04 27 16.7	-1.0
G27K	Doyon Strip	5.68	44	P		Pn	04 27 16.6	-1.0
	baz=233,SNR=19							
E25K	Arctic Village	5.70	23			Pn	04 27 17.3	-0.5
E25K	Arctic Village	5.70	23	P		Pn	04 27 17.0	-0.9
	baz=209,SNR=8.9							
TOLK	Toolik Lake Re	5.71	7	Pn		Pn	04 27 19.1	+1.1
TOLK	Toolik Lake Re	5.71	7	P		Pn	04 27 18.6	+0.6
	baz=189,SNR=10							
OHAK	Old Harbor	5.87	189	Pn		Pn	04 27 21.7	+1.5
D23K	Nanushuk River	5.99	3			Pn	04 27 22.3	+0.5
D23K	Nanushuk River	5.99	3	P		Pn	04 27 23.2	+1.4
	baz=184							
M29M	Somme Creek	6.06	90			Pn	04 27 24.2	+1.4
M29M	Somme Creek	6.06	90	P		Pn	04 27 24.1	+1.2
	baz=282,SNR=20							
PCA	Pinnacle	6.15	113			Pn	04 27 25.7	+1.7
PINM	Pinnacle	6.15	113	P		Pn	04 27 26.3	+2.2
	baz=304							
I29M	Ogilvie Camp,	6.25	62			Pn	04 27 25.4	-0.1
I29M	Ogilvie Camp,	6.25	62	P		Pn	04 27 25.8	+0.3
	baz=254,SNR=28							
D24K	Happy Valley	6.27	9	P		Pn	04 27 26.9	+1.3
	baz=192							
ANM	Nome	6.31	290	Pn		Pn	04 27 25.7	-0.4
ANM	Nome	6.31	290	P		Pn	04 27 26.9	+0.8
	baz=98							
K29M	Barlow Dome	6.36	76			Pn	04 27 28.0	+1.0
K29M	Barlow Dome	6.36	76	P		Pn	04 27 27.4	+0.3
	baz=269,SNR=13							
BCPM	Bancas Point	6.49	113	Pn		Pn	04 27 30.4	+1.7
E27K	Coleen River	6.63	34			Pn	04 27 29.9	-0.7
E27K	Coleen River	6.63	34	P		Pn	04 27 29.8	-0.7
	baz=223,SNR=6.7							
D25K	Kavik River	6.67	16			Pn	04 27 32.1	+0.9
D25K	Kavik River	6.67	16	P		Pn	04 27 32.3	+1.0
	baz=201							
M30M	Minto, Yukon	6.79	87	Pn		Pn	04 27 32.4	-0.5
M30M	Minto, Yukon	6.79	87	P		Pn	04 27 33.6	+0.7
	baz=280,SNR=8.8							
C23K	Itkillik River	6.86	3			Pn	04 27 34.5	+0.7
EPYK	Eagle Plains	7.20	56	P		Pn	04 27 38.0	-0.4
	baz=249,SNR=12							
C27K	Jago River	7.35	22			Pn	04 27 40.7	+0.3
C27K	Jago River	7.35	22	P		Pn	04 27 41.0	+0.6
	baz=209							
C26K	Camden Bay	7.42	18			Pn	04 27 42.1	+0.7
C26K	Camden Bay	7.42	18	P		Pn	04 27 42.2	+0.7
	baz=204							
TNA	Tin City	7.55	297	Pn		Pn	04 27 44.0	+0.8
P30M	Million Dollar	7.55	106			Pn	04 27 44.4	+1.0
G30M	tAoh Zraii Nji	7.62	52			Pn	04 27 43.2	-0.9
M31M	Drury Creek, Y	7.97	88	Pn		Pn	04 27 50.3	+1.4
FARO	Faro, Yukon	8.44	87	Pn		Pn	04 27 56.6	+1.2
FARO	Faro, Yukon	8.44	87	P		Pn	04 27 56.4	+1.0
	baz=284,SNR=5.5							
INK	Inuvik	9.12	47	Pn		Pn	04 28 04.2	-0.5
	comp=N,0.8nm,0.3s,baz=229,slow=14,SNR=12							
INK				LR		LR	04 31 59.5	
	comp=N,35nm,20.5s,baz=226,slow=40							
	comp=N,4.2nm,0.5s							
INK	Inuvik	9.12	47	Pn		Pn	04 28 03.6	-1.0
INK	Inuvik	9.12	47	P		Pn	04 28 04.5	-0.2
	baz=243							
BESE	Bessie Mountai	9.29	111	Pn		Pn	04 28 08.0	+0.9
MMPY	Sheldon Lake,	9.30	83	P		Pn	04 28 08.9	+1.7
	baz=282							
JIS	Juneau Island	9.67	112	Pn		Pn	04 28 12.8	+0.6
SIT	Sitka	10.07	119	Pn		Pn	04 28 18.4	+0.8
DLBC	Dease Lake	11.47	104	Pn		Pn	04 28 37.8	+0.8
	comp=N,0.2nm,0.3s,baz=297,slow=9.0,SNR=2.0							
DLBC				Lg		Lg	04 32 04.3	
	comp=N,0.1nm,0.3s,baz=150,slow=17,SNR=3.2							
	comp=N,1.2nm,0.6s							
WRAK	Wrangell Islan	11.71	116	Pn		Pn	04 28 42.8	+2.7
C36M	Paulatuk	12.70	48	Pn		Pn	04 28 49.7	-3.8
A36M	Sachs Harbour	13.36	37	Pn		Pn	04 29 01.3	-1.3
YKA	Yellowknife Ar	16.79	75	Pn		Pn	04 29 48.8	+0.7
	comp=N,0.2nm,0.3s,baz=285,slow=8.9,SNR=6.3							
	comp=N,1.2nm,0.8s							
EDM	Edmonton	22.10	99	P		P	04 30 48.3	-0.1
EDM				IAmb		IAmb	04 30 53.1	
	comp=Z,7.8nm,0.8s							
B08A	Colville Reser	23.02	114	P		P	04 30 59.5	+1.4
WALA	Waterton Lakes	24.80	107	P		P	04 31 15.7	+0.5
WALA				IAmb		IAmb	04 31 17.5	
	comp=Z,7.1nm,1.2s							
KEBM	Edson Butte	25.65	129	P		P	04 31 23.4	+0.5
LRM	Limekiln Ridge	27.92	110	P		P	04 31 44.8	+1.2
RLMT	Red Lodge	29.85	107	P		P	04 32 00.3	-0.4
PDAR	Pinedale Array	31.61	110	P		P	04 32 15.6	-0.7
	comp=Z,0.3nm,0.7s,baz=321,slow=1.9,SNR=4.4							
	comp=Z,0.3nm,0.7s							
NVAR	Mina Array Bea	31.75	125	P		P	04 32 17.6	+0.2
	comp=Z,0.4nm,0.7s,baz=320,slow=6.9,SNR=4.7							
NVAR				PcP		PcP	04 35 08.8	+0.2
	comp=Z,0.3nm,0.5s,baz=306,slow=2.8,SNR=4.2							
	comp=Z,0.4nm,0.7s							
R11A	Troy Canyon, C	32.85	122	P		P	04 32 27.5	+0.4
	baz=330							
RSSD	Black Hills	32.95	102	P		P	04 32 28.6	+0.7
RSSD				IAmb		IAmb	04 32 29.2	
	comp=Z,2.5nm,0.7s							
RSSD	Black Hills	32.95	102	P		P	04 32 28.3	+0.4
	baz=322							
N23A	Red Feather La	34.70	108	P		P	04 32 45.4	+2.2
EYMN	Ely	35.74	86	P		P	04 32 52.8	+1.1
EYMN				IAmb		IAmb	04 33 16.8	
	comp=Z,12nm,1.4s							

ECSD	EROS Data Cent	36.60	95	P		P	04 32 59.3	+0.2
ECSD				IAmb		IAmb	04 33 10.3	
	comp=Z,7.6nm,1.5s							
WUAZ	Wupatki	36.97	119	P		P	04 33 03.6	+0.9
	baz=331							
G40A	Rib Lake	38.34	88	P		P	04 33 15.2	+1.3
E46A	Sault Ste Mari	40.18	82	P		P	04 33 29.4	+0.2
SCHQ	Schefferville	41.41	61	P		P	04 33 39.0	-0.3
	comp=Z,1.2nm,0.7s,baz=320,slow=17,SNR=1.6							
	comp=Z,1.2nm,0.7s							
L44A	Lake County Fo	41.78	89	P		P	04 33 42.1	-0.4
	baz=322							
MNTX	Cornudas Mount	42.74	115	P		P	04 33 51.2	+0.8
	baz=331							
ABTX	Abilene, Hawle	44.37	108	P		P	04 34 02.7	-0.8
	baz=329							
O48B	Farmland	44.57	88	P		P	04 34 03.4	-1.6
	baz=324							
TXAR	Lajitas Array	45.52	115	P		P	04 34 13.7	+0.9
	comp=Z,0.3nm,0.5s,baz=335,slow=5.5,SNR=5.4							
	comp=Z,0.3nm,0.5s							
TXAR	Lajitas Array	45.52	115	P		P	04 34 14.3	+1.5
LONY	Lake Ozonia	45.88	76	P		P	04 34 14.6	-0.8
LONY				IAmb		IAmb	04 34 20.2	
	comp=Z,6.7nm,1.2s							
D62A	Allapoint, All	46.35	69	P		P	04 34 18.9	-0.2
D62A				IAmb		IAmb	04 34 25.6	
	comp=Z,6.5nm,1.2s							
E62A	Clayton Lake	46.51	70	P		P	04 34 20.3	-0.1
E62A				IAmb		IAmb	04 34 46.0	
	comp=Z,9.9nm,1.3s							
OXF	Oxford	47.33	97	P		P	04 34 27.4	+0.5
BATG	Bathurst New B	47.47	67	P		P	04 34 27.4	-0.4
BATG				IAmb		IAmb	04 34 57.1	
	comp=Z,6.0nm,1.1s							
F64A	Sherman	47.61	70	P		P	04 34 28.5	-0.4
PKME	Peaks-Kenny Pk	47.68	71	P		P	04 34 28.9	-0.5
PKME	Peaks-Kenny Pk	47.68	71	P		P	04 34 28.7	-0.8
	baz=322							
L61B	Northampton	48.44	76	P		P	04 34 35.3	-0.1
	baz=323							
G65A	Princeton	48.47	70	P		P	04 34 35.2	-0.4
LMN	Caledonia Moun	49.13	67	P		P	04 34 40.4	-0.2
LMN				IAmb		IAmb	04 35 01.8	
	comp=Z,12nm,1.4s							
HODGE	Hodges	50.82	90	P		P	04 34 53.4	-0.2
HODGE				IAmb		IAmb	04 35 18.0	
	comp=Z,10nm,1.4s							
JSC	Jenkinsville	51.23	89	P		P	04 34 56.2	-0.5
JSC				IAmb		IAmb	04 34 58.8	
	comp=Z,14nm,1.4s							
MKAR	Makanchi Array	62.50	321	P		P	04 36 15.7	-0.8
	comp=Z,0.2nm,0.6s,baz=44,slow=6.6,SNR=2.6							
	comp=Z,0.2nm,0.6s							
MKAR	Makanchi Array	62.50	321	P		P	04 36 15.4	-1.1
ABKAR	Akbulak array	65.33	338	P		P	04 36 34.6	-0.4
AKASG	Malin Array Be	66.63	359	P		P	04 36 42.8	-0.6
	comp=Z,0.5nm,0.4s,baz=4.5,slow=6.4,SNR=5.1							
	comp=Z,0.5nm,0.4s							

IDC 29 04:27:49.6±2.9, 3°47S×136°43E, h0km, mb3.3/2, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=106.0km s-min=32.2km az=80.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.50	187	Pn		P	04 31 44.1	-1.3
	0.2nm,0.3s,baz=8.6,slow=12,SNR=13							
	1.2nm,0.5s							
ASAR	Alice Springs	20.22	187	P		P	04 32 25.8	-0.7
	0.5nm,0.5s,baz=13,slow=11,SNR=6.6							
	0.5nm,0.5s							
MKAR	Makanchi Array	69.02	323	P		P	04 38 57.2	+0.1
	0.3nm,0.5s,baz=113,slow=7.1,SNR=4.1							
	0.3nm,0.5s							

MOS ***29*** *04:29:55.7±1.0, 0°01S×17°79W, h10km, mb6.4/41, MS6.8/39, Error ellipse: s-maj=7.6km s-min=4.2km az=54.5*

IDC ***29*** *04:29:56.1±0.4, 0°03S×17°80W, h0km, mb5.2/52, mbtmp5.2/53, ML6.5/4, MS6.7/85, Error ellipse: s-maj=14.7km s-min=8.3km az=150.0*

NEIC ***29*** *04:29:57.9±1.8, 0°05S±0°07×17°83W±0°08, h10km±1km, mb6.5/670, Ms_20 7.0/452, Mwc7.1/142, Mww7.1, Error ellipse: s-maj=14.0km s-min=11.6km az=86.0*

BJI ***29*** *04:29:59.6±0.0, 0°10N×17°95W, h10km, mb5.9/5, mB7.0/40, Ms7.1/42, Ms7 6.8/41*

NEIC ***29*** *04:30:16, 0°03N×17°81W, h20km, Moment Tensor Solution. Duration: 36s0 Moment tensor: Scale 10^19Nm; Mrr-0.45; Mθθ2.20; Mφφ-1.75; Mrθ1.30; Mθφ-5.26; Mφr-0.50; Fault plane solution: M0 5.80000×10^19 NP1: φs170.00000°, δ79.00000°, λ5.00000°. NP2: φs79.00000°, δ85.00000°, λ169.00000°. Principal axes: T 6.1245, Plg12.0000°, Azm34.0000°; N -0.7084, Plg78.0000°, Azm234.0000°; P -5.4161, Plg4.0000°, Azm125.0000°;*

GCMT ***29*** *04:30:17.9±0.1, 0°13N×17°72W, h27km, MW7.1/174, Moment Tensor Solution. s173,c440; s174,c849; Duration: 8s7 Moment tensor: Scale 10^19Nm; Mrr-0.42±.02; Mθθ2.25±.02; Mφφ-1.83±.02; Mrθ0.86±.08; Mθφ-5.13±.01; Mφr-1.20±.08; Best double couple: M0 5.69700×10^19 NP1: φs170.00000°, δ86.00000°, λ13.00000°. NP2: φs79.00000°, δ77.00000°, λ176.00000°. Principal axes: T 6.0290, Plg12.0000°, Azm35.0000°; N -0.6650, Plg76.0000°, Azm187.0000°; P -5.3660, Plg6.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *04:30:19.9, 0°08N×17°56W, h35km, Moment Tensor Solution. Duration: 20s2 Moment tensor: Scale 10^19Nm; Mrr-0.52; Mθθ2.29; Mφφ-1.76; Mrθ0.18; Mθφ-5.58; Mφr-1.34; Fault plane solution: M0 6.09000×10^19 NP1: φs349.69000°, δ87.95000°, λ-13.11000°. NP2: φs80.17000°, δ76.90000°, λ-177.89000°. Principal axes: T 6.3199, Plg8.0000°, Azm36.0000°; N -0.4616, Plg77.0000°, Azm161.0000°; P -5.8582, Plg11.0000°, Azm304.0000°;*

ISC 29 04:30:00.4±0.2, 0°23S±0°03×17°85W±0°03, h23km, n2432, σ2°53/2319, mb6.4/513, MS6.9/408, 212C-80D, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.26	156	T		T	04 41 24.2	
	baz=340,slow=74,SNR=4031							
H10N3	ASCENSION HYDR	8.26	156	T		T	04 41 16.3	
	baz=340,slow=74,SNR=3671							
H10N1	ASCENSION HYDR	8.28	156	T		T	04 41 25.0	
	baz=340,slow=74,SNR=4680							
I50GB	ASCENSION ISLA	8.40	156	Pn		Pn	04 31 59.7	-1.2
	baz=315,slow=39							
ASCN	Ascension	8.40	156	Pn		Pn	04 32 00.6	-0.3
H10S3	ASCENSION HYDR	9.23	160	T		T	04 42 37.3	
	baz=238,slow=74,SNR=6785							
H10S2	ASCENSION HYDR	9.24	160	T		T	04 42 34.6	
	baz=342,slow=74,SNR=7129							
LIC	Lamto	14.31	63	eP		Pn	04 33 17.1	-4.7
	1μm,0.7s							
TIC	Toumodi	14.51	62	eP		Pn	04 33 17.8	-6.7
	397nm,0.5s							
MBO	M'Bour	14.55	3	Pn		Pn	04 33 18.7	-6.4
MBO	M'Bour	14.55	3	⇑P		Pn	04 33 17.9	-7.2
KIC	Kosan Boka	14.63	63	eP		Pn	04 33 20.7	-5.5
	377nm,0.3s							
I17CI	DIMBOKRO INFRA	14.66	62	Pn		Pn	04 33 21.5	-5.2
	baz=246,slow=20							
DBIC	Dimbokro	14.66	62	Pn		Pn	04 33 21.4	-5.3
	383nm,0.3s,baz=258,slow=13,SNR=1494							
DBIC				Sn		Sn	04 35 55.3	-13
	276nm,0.3s,baz=11,slow=5.6,SNR=5.0							
DBIC				LR		LR	04 37 27.5	
	comp=Z,335μm,19.8s,baz=242,slow=31							
DBIC	Dimbokro	14.66	62	Pn		Pn	04 33 21.6	-5.1
DBIC	Dimbokro	14.66	62	P		Pn	04 33 21.6	-5.0
DBIC	Dimbokro	14.66	62	eP		Pn	04 33 21.8	-4.9
DBIC	Dimbokro	14.66	62	⇑P		Pn	04 33 20.7	-5.9
BBTS	Babate	14.85	5	Pn		Pn	04 33 23.6	-5.6
	120nm,0.3s,baz=344,slow=22,SNR=117							
BBTS				Sn		Sn	04 35 57.8	-15
	206nm,0.3s,baz=328,slow=24,SNR=7.5							
BBTS				LR		LR	04 38 15.7	

	comp=Z,468μm,20.9s,baz=342,slow=34							
SACV	Santiago Islan	16.14	340	Pn		Pn	04 33 40.2	-5.8
RCBR	Riachuelo	18.86	253	P		P	04 34 18.7	-0.6
	69nm,0.3s,baz=230,slow=11,SNR=210							
RCBR				S		Sn	04 37 31.9	-19
	40nm,0.4s,baz=134,slow=22,SNR=2.7							
RCBR				LR		LR	04 39 53.8	
	comp=Z,584μm,20.2s,baz=220,slow=32							
	216nm,0.4s							
RCBR	Riachuelo	18.86	253	P		P	04 34 18.2	-1.0
RCBR	Riachuelo	18.86	253	⇓P		P	04 34 18.5	-0.8
RCBR	Riachuelo	18.86	253	eP		P	04 34 19.0	-0.3
NBRF	Rio Formoso -	19.15	244	eP		P	04 34 21.2	-1.2
SHEL	Horse Pasture	19.67	143	P		P	04 34 28.8	+0.7
SHEL	Horse Pasture	19.67	143	eP		P	04 34 28.8	+0.7
SHEL	Horse Pasture	19.67	143	⇓P		Pn	04 34 29.7	+0.1
KOWA	Kowa	20.04	43	P		P	04 34 27.8	-4.2
	191nm,0.3s,baz=311,slow=0.6,SNR=2507							
KOWA				LR		LR	04 41 41.6	
	comp=Z,427μm,20.1s,baz=308,slow=36							
KOWA	Kowa	20.04	43	P		P	04 34 28.5	-3.6
KOWA	Kowa	20.04	43	P		P	04 34 28.0	-4.0
KOWA	Kowa	20.04	43	⇑P		P	04 34 27.7	-4.3
NBAN	Anadia - AL	20.60	242	eP		P	04 34 37.4	-0.7
NBLA	Lagarto - SE	22.52	241	eP		P	04 34 57.2	-1.6
TOA0	Torodi Ar. Sit	23.49	55	P		P	04 35 04.6	-4.2
TORD	Torodi Ar. Bea	23.49	55	P		P	04 35 05.2	-3.6
	514nm,0.9s,baz=253,slow=9.1,SNR=16							
TORD				LR		LR	04 43 25.9	
	comp=Z,354μm,20.1s,baz=242,slow=35							
	514nm,0.9s							
TORD	Torodi Ar. Bea	23.49	55	P		P	04 35 05.2	-3.6
GDU01	Guandu, BA	25.35	237	eP		P	04 35 25.0	-1.0
CMC01	Camacan, BA	26.16	234	eP		P	04 35 34.1	+0.8
ROSB	Rosrio	26.40	264	eP		P	04 35 33.5	-2.0
GUA01	Guaratinga, BA	27.07	232	eP		P	04 35 41.8	+0.3
EKNA	AfricaArray -	27.51	80	⇑eP		P	04 35 45.8	+0.2
NAN01	Guarapari, ES	28.04	230	eP		P	04 35 50.2	0.0
MACI	Morro de la Ar	28.35	2	P		P	04 35 50.7	-2.4
MACI				IAmb		IAmb	04 36 30.0	
	comp=Z,713nm,1.1s							
RIB01	Linhares ES	29.13	228	eP		P	04 36 01.3	+1.4
TANT	Tantan	29.17	12	P		P	04 35 59.0	-1.1
SJMB	Sao Joao De Ma	29.36	230	eP		P	04 36 01.9	0.0
SDBA	SAO DESIDERIO	29.44	245	eP		P	04 36 02.1	-0.6
JANB	Januaria	30.02	239	eP		P	04 36 05.5	-2.4
ALF01	Guarapari-ES	30.18	226	eP		P	04 36 11.0	+1.8
SFNM	Sidi Ifni	30.30	13	P		P	04 36 10.0	-0.1
TMAB	Tom-Au,PA,Br	30.31	266	eP		P	04 36 09.8	-0.7
MC01	Montes Claros	30.48	236	eP		P	04 36 11.4	-0.6
SMTB	Santa Maria do	30.84	253	eP		P	04 36 15.0	-0.1
DIAM	Diamantina, MG	31.08	233	eP		P	04 36 17.4	0.0
CGR	Cap Guir	31.61	13	P		P	04 36 22.0	+0.3
CAM01	Campos-RJ	31.62	226	eP		P	04 36 22.8	+1.0
TTIG	Tnine Tigouga,	31.89	15	P		P	04 36 24.2	-0.1
TAM	Tamanrasset	32.27	43	P		P	04 36 19.8	-7.9
TAM				IAMs_20		IAMs_20	04 48 37.1	
	comp=Z,297μm,20.0s							
TAM	Tamanrasset	32.27	43	P		P	04 36 19.8	-7.9
TAM				pmax		pmax		
	comp=Z,2μm,1.3s							
TAM				MLR		MLR		
	comp=Z,297μm,20.0s							
TAM	Tamanrasset	32.27	43	⇑P		P	04 36 19.3	-8.4
DUB01	Friburgo-RJ	32.29	226	eP		P	04 36 29.7	+1.8
PRPB	Parauapebas	32.44	259	eP		P	04 36 29.0	-0.3
OUK	Oukaimeden	32.67	16	P		P	04 36 30.3	-1.1
FUL	Funchal	32.71	1	eP		P	04 36 29.8	-1.5
	comp=Z,617nm,1.5s							
FUL				*i -*			04 36 46.3	
FUL	Funchal	32.71	1	eT		T	05 10 29.0	
PMAR	Madeira	32.79	1	eP		P	04 36 29.4	-2.8
	comp=Z,848nm,1.5s							
PMAR				*i -*			04 36 46.5	
PMAR	Madeira	32.79	1	eT		T	05 10 40.0	
PMOZ	Porto Moniz, M	32.88	1	P		P	04 36 30.3	-2.7
PMOZ	Porto Moniz, M	32.88	1	P		P	04 36 33.2	+0.3
PMOZ	Porto Moniz, M	32.88	1	⇑P		P	04 36 32.1	-0.8
PMOZ	Porto Moniz, M	32.88	1	eP		P	04 36 31.3	-1.6
	comp=Z,922nm,1.4s							
PMOZ				*i -*			04 36 47.8	
PMOZ				eLQ		LQ	04 44 10.0	
PMOZ				eLR		LR	04 45 05.5	
	comp=Z,35μm,20.0s							
PMOZ	Porto Moniz, M	32.88	1	eT		T	05 10 42.3	
PMPS	Porto Santo	33.14	2	eP		P	04 36 33.2	-1.9
	comp=Z,764nm,1.5s							
PMPS				*i -*			04 36 49.5	
PMPST	Porto Santo, M	33.16	2	eP		P	04 36 33.5	-1.8
	comp=Z,1μm,1.7s							
PMPST				*i -*			04 36 49.7	
BSCB	Bom Sucesso	33.44	230	eP		P	04 36 37.5	-0.4
PMNB	Patos De Minas	33.45	235	⇓P		P	04 36 38.1	-0.1
PMNB	Patos De Minas	33.45	235	eP		P	04 36 38.2	+0.1
BDFB	Brasilia	33.49	241	P		P	04 36 38.2	-0.2
	comp=Z,56nm,0.8s,baz=65,slow=9.2,SNR=43							
BDFB				LR		LR	04 49 06.0	
	comp=Z,371μm,18.7s,baz=70,slow=34							
	comp=Z,56nm,0.8s							

comp=Z,197µm,19.0s
SFS San Fernando 38.08 15 P **P** **04 37 14.2 -3.2**
SFS pmax pmax
comp=Z,878nm,1.2s
SFS MLR MLR
comp=Z,197µm,19.0s
PFVI Vila Bisbo 38.10 12 P **P** **04 37 15.7 -2.0**
PFVI Vila Bisbo 38.10 12 *eP* **P** **04 37 15.3 -2.3**
comp=Z,421nm,1.1s
PFVI *i -* 04 37 31.2
MORF Marmelete 38.31 12 *eP* **P** **04 37 17.8 -1.7**
MORF *eS* **S** **04 43 12.0 -0.5**
MORF IAMs_20 IAMs_20 04 46 54.0
comp=E,400µm,57.2s
MORF Marmelete 38.31 12 *eP* **P** **04 37 17.7 -1.7**
MORF *eS* **S** **04 43 12.0 -0.5**
MORF Marmelete 38.31 12 ⇑P **P** **04 37 18.0 -1.4**
MORF Marmelete 38.31 12 *eP* **P** **04 37 17.4 -2.0**
comp=E,19µm,3.0s
MORF *i -* 04 37 33.5
OMUT Andoni 38.38 120 *i* P **P** **04 37 21.8 +1.4**
PBDV Barranco-do-Ve 38.40 13 *eP* **P** **04 37 18.7 -1.5**
comp=E,1µm,1.7s
PBDV *i -* 04 37 34.5
BART Pico Bartolome 38.42 351 *eP* **P** **04 37 19.4 -1.0**
comp=E,110nm,1.0s
BART Pico Bartolome 38.42 351 *eT* T 05 17 18.8
PGRON Lagoa das Cont 38.45 350 *eP* P 04 37 36.5 +16
PGRON Lagoa das Cont 38.45 350 *eT* T 05 17 19.3
CMLA Cha da Macela 38.47 350 *eP* P 04 37 26.4 +5.7
comp=E,264nm,0.9s
CMLA Cha da Macela 38.47 350 *eT* T 05 17 18.8
PDA Ponta Delgada 38.47 350 *eP* P 04 37 27.0 +6.3
comp=E,36nm,0.4s
PDA Ponta Delgada 38.47 350 *eT* T 05 17 17.9
PCALD Caldeiras da R 38.49 350 *eP* P 04 37 36.5 +16
comp=E,353nm,1.2s
PCALD Caldeiras da R 38.49 350 *eT* T 05 17 17.4
OTJO Outjo 38.51 123 *i* P **P** **04 37 21.4 -0.1**
PTEO Sao Teotonio 38.52 12 *eP* **P** **04 37 20.1 -1.1**
comp=E,2µm,1.7s
PTEO *i -* 04 37 34.8
PSET Sete Cidades 38.56 350 *eP* P 04 37 34.2 +13
comp=E,616nm,1.4s
PSET Sete Cidades 38.56 350 *eT* T 05 17 17.9
PVAQ Vaqueiros 38.60 13 P **P** **04 37 20.0 -1.8**
PVAQ Vaqueiros 38.60 13 P **P** **04 37 21.2 -0.6**
PVAQ Vaqueiros 38.60 13 ⇑P **P** **04 37 20.6 -1.2**
PVAQ Vaqueiros 38.60 13 *eP* **P** **04 37 20.5 -1.3**
comp=E,1µm,1.4s
PVAQ *i -* 04 37 36.5
PVAQ Vaqueiros 38.60 13 *e*PcP **PcP** **04 39 33.8 -0.2**
PVAQ *e*LR LR 04 47 31.1
comp=E,57µm,18.0s
WP01 e3381 38.68 125 *i* P **P** **04 37 22.7 -0.2**
PCVE Castro Verde 38.75 12 *eP* **P** **04 37 21.8 -1.3**
comp=E,756nm,1.7s
PCVE *i -* 04 37 36.8
EMAL Malaga-Limoner 38.85 17 P P 04 37 33.9 +10
EMAL S S 04 43 34.3 +14
PCMB Pacaembu 38.90 235 *eP* **P** **04 37 25.6 +1.0**
MESJ Messejana 38.91 12 *eP* **P** **04 37 22.8 -1.6**
MESJ *eS* **S** **04 43 20.9 -0.6**
MESJ IAMs_20 IAMs_20 04 46 43.8
comp=E,114µm,24.5s
MESJ Messejana 38.91 12 *eP* **P** **04 37 22.8 -1.6**
MESJ *eS* **S** **04 43 20.9 -0.6**
MESJ Messejana 38.91 12 ⇑P **P** **04 37 23.2 -1.2**
MESJ Messejana 38.91 12 *eP* **P** **04 37 22.7 -1.7**
comp=E,892nm,1.7s
MESJ *i -* 04 37 38.7
C2SB Chapadao do Su 38.97 240 *eP* **P** **04 37 26.4 +1.2**
TIJ01 Guaruva-PR 39.09 228 *eP* **P** **04 37 27.9 +1.6**
PNCL Nicolau / Gran 39.11 12 *eP* **P** **04 37 24.8 -1.3**
comp=E,488nm,1.3s
PNCL *i -* 04 37 40.4
CLDB Colider 39.16 253 *eP* **P** **04 37 25.9 -1.0**
PBEJ Beja 39.16 13 *eP* **P** **04 37 24.8 -1.8**
comp=E,637nm,1.7s
PBEJ *i -* 04 37 41.1
PBAR Barrancos 39.49 13 *eP* **P** **04 37 26.8 -2.5**
comp=E,542nm,1.5s
PBAR *i -* 04 37 43.4
TSUM Tsumeb 39.53 121 LR LR 04 50 40.4
comp=E,159µm,21.5s,baz=318,slow=31
TSUM Tsumeb 39.53 121 P **P** **04 37 29.7 -0.3**
TSUM Tsumeb 39.53 121 IAMs_20 IAMs_20 04 50 28.0
comp=Z,148µm,21.0s
TSUM Tsumeb 39.53 121 *eP* **P** **04 37 30.6 +0.6**
TSUM IAmb IAmb 04 37 49.4
comp=Z,1µm,1.7s
TSUM IAMs_20 IAMs_20 04 49 56.7
comp=Z,174µm,22.7s
TSUM Tsumeb 39.53 121 ⇑P **P** **04 37 30.2 +0.1**
LIS Lisbon 39.57 11 *eP* **P** **04 37 28.3 -1.7**
LIS *eS* **S** **04 43 30.9 -0.6**
LIS *e*SS **SS** **04 46 25.3 -1.6**
LIS IAMs_20 IAMs_20 04 46 58.0
comp=E,366µm,40.8s
LIS Lisbon 39.57 11 *eP* **P** **04 37 28.2 -1.7**
LIS *eS* **S** **04 43 30.8 -0.6**
PMST Lisbon--Monsan 39.59 11 *eP* **P** **04 37 28.8 -1.3**
comp=E,1µm,1.6s
PMST *i -* 04 37 44.8
EVO Evora 39.62 12 P P 04 37 40.9 +11
EVO S S 04 43 47.5 +15
PID Ribeirinha 39.63 347 *eP* P 04 37 38.9 +8.5
comp=E,517nm,1.6s
PID Ribeirinha 39.63 347 *eT* T 05 18 45.0
ADH Angra Heroismo 39.65 348 *eP* P 04 37 37.3 +6.8
ADH Angra Heroismo 39.65 348 *eT* T 05 18 44.1
PSCM Serra do Cume 39.67 349 *eP* P 04 37 39.9 +9.1
comp=E,243nm,1.2s
PSCM Serra do Cume 39.67 349 *eT* T 05 18 45.5
PPNO Prainha do Nor 39.69 347 *eP* P 04 37 42.7 +12
PPNO Prainha do Nor 39.69 347 *eT* T 05 18 46.0
PCAN Candelaria 39.73 347 *eT* T 05 18 55.9
WEWE WEWE 39.74 124 *i* P 04 37 38.9 +7.1
PAGU Agualva, Azore 39.74 349 *eP* P 04 37 40.7 +9.3
comp=E,472nm,1.4s
PAGU Agualva, Azore 39.74 349 *eT* T 05 18 46.0
PICO Pico 39.75 347 *eT* T 05 18 56.9
PMAFR Mafra 39.78 10 *eP* **P** **04 37 30.0 -1.7**
comp=E,1µm,1.8s
PMAFR *i -* 04 37 46.5
PMAFR Mafra 39.78 10 *e*PcP **PcP** **04 39 31.8 -6.0**
PMAN Manadas 39.80 347 *eP* P 04 37 42.1 +10
comp=E,195nm,1.1s
PMAN Manadas 39.80 347 *eT* T 05 19 00.2
HOR Horta 39.82 347 *eT* T 05 18 57.8
PFCBR Castelo Branco 39.84 347 *eT* T 05 18 55.9
CALA Caldeira 39.89 347 *eT* T 05 18 59.2
ROSA Rosais 39.92 347 *eP* P 04 37 41.2 +8.3
comp=E,533nm,1.5s
ROSA Rosais 39.92 347 *eT* T 05 18 56.4
PCED Cedros 39.94 347 *eT* T 05 19 00.6
PESTR Estremoz 40.03 12 P **P** **04 37 31.6 -2.2**
PESTR IAmb IAmb 04 37 51.3
comp=Z,2µm,2.6s
PESTR Estremoz 40.03 12 P **P** **04 37 33.1 -0.7**
PESTR Estremoz 40.03 12 ⇑P **P** **04 37 32.5 -1.3**
PESTR Estremoz 40.03 12 *eP* **P** **04 37 31.8 -2.0**
comp=Z,398nm,1.3s
PESTR *i -* 04 37 48.0
PESTR Estremoz 40.03 12 *e*PcP **PcP** **04 39 32.5 -6.1**
EANR 'Ain N'Sour 40.08 24 P **P** **04 37 33.3 -1.0**
PMTG Montargil 40.09 12 *eP* **P** **04 37 32.7 -1.6**
comp=Z,717nm,1.7s
PMTG *i -* 04 37 47.8
PMTG Montargil 40.09 12 *e*PcP **PcP** **04 39 32.8 -5.9**
PGRA Graciosa 40.16 348 *eP* P 04 37 42.5 +7.7
comp=Z,311nm,1.7s
PGRA Graciosa 40.16 348 *eT* T 05 19 00.2
SRBC Serra Branca 40.18 348 *eT* T 05 19 00.2
PDRB Porto dos Gac 40.23 252 *eP* **P** **04 37 35.3 -0.5**
ECHA Ech Chlef 40.37 24 P **P** **04 37 38.1 +1.6**
PSBE So Bento 40.41 11 *eP* **P** **04 37 35.7 -1.3**
comp=Z,732nm,2.1s
PSBE *i -* 04 37 51.7
PSBE So Bento 40.41 11 *e*PcP **PcP** **04 39 38.7 -1.1**
SALV Santo Antonio 40.46 245 *eP* **P** **04 37 37.7 0.0**
TRCB Terra Rica 40.59 234 P **P** **04 37 38.9 +0.2**
TRCB IAmb IAmb 04 38 12.1
comp=Z,1µm,2.0s
TRCB Terra Rica 40.59 234 *eP* **P** **04 37 39.4 +0.7**
WIN Windhoek 40.61 126 *eP* **P** **04 37 40.0 +0.9**
WIN IAmb IAmb 04 38 05.8
comp=Z,94nm,1.0s
WIN IAMs_20 IAMs_20 05 01 46.5
comp=Z,54µm,14.9s
WIN Windhoek 40.61 126 ⇓P **P** **04 37 39.5 +0.4**
PMRV Marv??o 40.61 12 *eP* **P** **04 37 36.3 -2.3**
comp=Z,744nm,1.6s
PMRV *i -* 04 37 53.8
PMRV Marv??o 40.61 12 *e*PcP **PcP** **04 39 40.1 -0.3**
PMRV *e*S S 04 43 58.3 +11
PMRV *e*LQ LQ 04 46 43.0
PMRV *e*LR LR 04 48 57.2
comp=Z,59µm,18.0s
CART Cartagena 40.72 21 P P 04 37 49.2 +10
CART S S 04 44 03.0 +14
CART Cartagena 40.72 21 P **P** **04 37 36.8 -2.7**
CART Cartagena 40.72 21 P **P** **04 37 38.2 -1.3**
HOCHN Hochfeld 40.73 124 *i* P **P** **04 37 41.4 +1.3**
RUDU RUNDU 40.90 118 *eP* **P** **04 37 43.7 +2.4**
RUDU IAmb IAmb 04 38 15.4
comp=Z,467nm,1.2s
RUDU IAMs_20 IAMs_20 04 51 38.2
comp=Z,85µm,19.2s
PCAS Casmilo, Conde 40.99 11 *eP* **P** **04 37 40.6 -1.1**
comp=Z,2µm,1.7s
PCAS *i -* 04 37 56.1
PCAS Casmilo, Conde 40.99 11 *e*PcP **PcP** **04 39 37.0 -4.6**
PCBR Castelo Branco 40.99 12 *eP* **P** **04 37 39.9 -1.8**
comp=Z,262nm,1.7s
PCBR *i -* 04 37 56.2
PCBR Castelo Branco 40.99 12 *e*PcP **PcP** **04 39 41.0 -0.6**
TER01 Tubaro-SC 41.07 224 *eP* **P** **04 37 45.0 +2.5**
PTGB Pitanga 41.09 231 *eP* **P** **04 37 43.3 +0.4**
KANON KANO 41.13 119 *i* P P 04 37 48.3 +5.0
COI Coimbra 41.16 11 P **P** **04 37 41.3 -1.7**
COI IAmb IAmb 04 38 01.8
comp=Z,699nm,0.9s
COI Coimbra 41.16 11 P **P** **04 37 41.3 -1.7**
COI pmax pmax
comp=Z,699nm,1.0s
COI MLR MLR
comp=Z,81µm,20.0s
COI Coimbra 41.16 11 ⇑P **P** **04 37 42.1 -1.0**
COI Coimbra 41.16 11 *eP* **P** **04 37 40.6 -2.4**
comp=Z,1µm,1.6s
PAB San Pablo 41.47 16 P **P** **04 37 43.9 -1.9**
PAB IAmb IAmb 04 38 10.2
comp=Z,872nm,1.4s
PAB San Pablo 41.47 16 P **P** **04 37 43.9 -1.9**
PAB pmax pmax
comp=Z,872nm,1.4s
PAB San Pablo 41.47 16 P **P** **04 37 44.7 -1.1**
PAB San Pablo 41.47 16 ⇑P **P** **04 37 44.2 -1.6**
MTE Manteigas 41.51 12 *eP* **P** **04 37 44.6 -1.5**
comp=Z,721nm,1.1s
MTE *i -* 04 38 00.5
MTE *eS* **S** **04 44 06.7 +6.2**
MTE *e*LR LR 04 47 05.3
comp=Z,75µm,18.0s
ESDC Sonseca Array 41.70 16 P **P** **04 37 44.6 -3.0**
comp=Z,31nm,1.2s,baz=204,slow=8.3,SNR=70
ESDC PP **PP** **04 39 26.1 +1.9**
comp=Z,40nm,1.1s,baz=184,slow=11,SNR=1.8
ESDC LR LR 04 55 50.2
comp=Z,54µm,19.9s,baz=201,slow=38
ESDC PKPPKP **P'P'df** **05 09 54.2 -1.1**
comp=Z,0.8nm,0.9s,baz=73,slow=4.3,SNR=4.0
comp=Z,31nm,1.2s
AUSN Aus 42.04 131 *eP* **P** **04 37 51.5 +0.7**
AUSN IAMs_20 IAMs_20 04 50 12.1
comp=Z,471µm,78.4s
AQDB Aquidauana 42.12 239 P **P** **04 37 50.8 -0.5**
AQDB Aquidauana 42.12 239 *eP* **P** **04 37 51.5 +0.2**
SET Setif 42.20 28 P **P** **04 37 50.0 -1.8**
PVRL Vila Real 42.32 11 P **P** **04 37 50.8 -1.8**
PVRL *i -* 04 38 06.8
PVRL Vila Real 42.32 11 *e*PcP **PcP** **04 39 43.4 -2.6**
MVO Moncorvo 42.36 12 *eP* **P** **04 37 50.9 -2.0**
comp=Z,1µm,1.8s
MVO *i -* 04 38 07.7
MVO Moncorvo 42.36 12 *e*PcP **PcP** **04 39 44.0 -2.2**
MVO Moncorvo 42.36 12 *e*PcP **PcP** **04 39 44.2 -2.0**
MVO *e*S S 04 44 25.8 +13
MVO *e*LQ LQ 04 47 20.8
MVO *e*LR LR 04 50 09.0
POLO Lamas de Olo 42.40 11 *eP* **P** **04 37 49.3 -4.0**
POLO *i -* 04 38 07.4
POLO Lamas de Olo 42.40 11 *e*PcP **PcP** **04 39 45.1 -1.3**
ITAB Concordia 42.48 228 *eP* **P** **04 37 55.7 +1.6**
PCAB Cabril 42.68 11 *eP* **P** **04 37 52.9 -2.6**
comp=Z,719nm,1.7s
PCAB *i -* 04 38 09.2
PCAB Cabril 42.68 11 *e*PcP **PcP** **04 39 45.5 -1.7**
DFRA Djebel Bou Aff 42.70 29 P P 04 38 01.0 +5.1
GAMM Gam 42.74 120 *i* P **P** **04 37 57.8 +1.4**
BOAV Boa Vista 42.74 274 P **P** **04 37 55.0 -1.4**
BOAV IAmb IAmb 04 38 15.1
comp=Z,4µm,2.3s
BOAV Boa Vista 42.74 274 *eP* **P** **04 37 55.4 -1.1**
CNLB Canela 42.75 224 *eP* **P** **04 37 58.3 +2.0**
CASM Ain Smara 42.77 29 P **P** **04 37 55.0 -1.4**
PGAV Gavieira, Arco 42.88 11 *eP* **P** **04 37 54.9 -2.4**
comp=Z,507nm,1.4s
PGAV *i -* 04 38 11.3
PGAV Gavieira, Arco 42.88 11 *e*PcP **PcP** **04 39 46.4 -1.6**
PGAV *e*S S 04 44 29.9 +9.1
PGAV *e*LQ LQ 04 47 28.6
PGAV *e*LR LR 04 49 51.7
comp=Z,80µm,18.0s
MACA Manacapuru-AM 42.91 266 IAmb IAmb 04 38 22.9
comp=Z,740nm,1.2s
MACA Manacapuru-AM 42.91 266 *eP* **P** **04 37 57.2 -0.6**
CKFL Kef-Lekhel 43.00 29 P **P** **04 37 55.0 -3.3**
PBRG Braganca 43.03 12 *eP* **P** **04 37 56.4 -2.0**
PBRG *i -* 04 38 12.5
PBRG Braganca 43.03 12 *e*PcP **PcP** **04 39 46.9 -1.5**
BBSP Saint Philip 43.32 289 *eP* P 04 38 08.4 +7.3
BBGH Gun Hill 43.42 289 IAMs_20 IAMs_20 04 54 48.3
comp=Z,151µm,19.0s
BBGH Gun Hill 43.42 289 *eP* **P** **04 38 04.1 +2.2**
BBGH Gun Hill 43.42 289 *eP* P 04 38 07.5 +5.6
PTLB Pontes e Lacer 43.48 248 P **P** **04 38 01.9 -0.4**
PTLB IAmb IAmb 04 38 20.7
comp=Z,250nm,1.1s
PTLB Pontes e Lacer 43.48 248 *eP* **P** **04 38 02.5 +0.1**
KEST Kesra 43.83 32 P **P** **04 38 03.8 -1.3**
comp=Z,115nm,0.9s,baz=182,slow=3.6,SNR=110
KEST LR LR 04 57 54.7
comp=Z,293µm,19.4s,baz=185,slow=38
comp=Z,115nm,0.9s
KEST Kesra 43.83 32 IAmb IAmb 04 38 22.2
comp=Z,1µm,1.1s
VILB Vilhena 43.84 251 P **P** **04 38 05.9 +0.6**
VILB IAmb IAmb 04 38 33.6
comp=Z,3µm,2.4s
VILB Vilhena 43.84 251 *eP* **P** **04 38 06.1 +0.8**
TOSP Speyside 43.93 287 *eP* **P** **04 38 09.0 +3.1**
TRN Trinidad (W) 44.63 285 *eP* **P** **04 38 09.9 -1.7**
KOMG Komaggas 44.68 134 *eP* **P** **04 38 11.5 -0.3**
KOMG IAmb IAmb 04 38 29.6
comp=Z,50nm,1.1s
MAHO Mahon 44.75 24 P P 04 38 21.9 +10
MAHO S S 04 44 58.8 +11
MAHO Mahon 44.75 24 P **P** **04 38 10.9 -1.2**
MAHO IAmb IAmb 04 38 29.3
comp=Z,2µm,1.6s
MCLT Moule a Chique 44.87 290 *eP* **P** **04 38 16.0 +2.5**
H05S1 Guadeloupe/Mar 44.95 291 T T 05 26 13.3
SNR=55
SLBI Saint Lucia, B 44.98 290 *eP* **P** **04 38 17.2 +2.9**
MPOM Morne Pois Mar 44.98 291 P **P** **04 38 12.6 -1.8**
MPOM IAmb IAmb 04 38 34.0
comp=Z,797nm,1.2s
MPOM Morne Pois Mar 44.98 291 *eP* **P** **04 38 16.6 +2.3**
GCMP Grenada, Carri 45.04 288 *eP* **P** **04 38 17.1 +2.2**
SVB Belmont 45.05 289 IAmb IAmb 04 38 39.2
comp=Z,685nm,1.5s
SVB Belmont 45.05 289 *eP* **P** **04 38 17.1 +2.1**
ILAM Ilet Lapin Mar 45.08 291 P **P** **04 38 13.5 -1.7**
ILAM IAmb IAmb 04 38 34.7
comp=Z,733nm,1.0s
ILAM Ilet Lapin Mar 45.08 291 *eP* **P** **04 38 17.9 +2.8**
GRGR Grenville 45.18 287 P **P** **04 38 13.9 -2.0**
GRGR IAmb IAmb 04 38 43.1
comp=Z,942nm,1.1s
GRGR Grenville 45.18 287 *eP* **P** **04 38 18.9 +2.9**
GRGR Grenville 45.18 287 ⇓P **P** **04 38 15.4 -0.6**
BIM Bigot 45.19 291 IAmb IAmb 04 38 37.2
comp=Z,458nm,0.9s
BIM Bigot 45.19 291 *eP* **P** **04 38 18.8 +2.7**
CPSB Cacapava Do Su 45.21 225 *eP* **P** **04 38 16.9 +0.9**
GRFF Grenada Fort F 45.24 287 *eP* **P** **04 38 18.9 +2.4**
FDF Fort de France 45.32 291 IAmb IAmb 04 38 38.5
comp=Z,886nm,1.2s
FDF Fort de France 45.32 291 *eP* **P** **04 38 20.4 +3.2**
FDF Fort de France 45.32 291 ⇓P **P** **04 38 16.6 -0.6**
SVN Savane Anatole 45.37 291 P **P** **04 38 16.1 -1.5**
ARMS Ukamas 45.39 131 *eP* **P** **04 38 17.8 +0.2**
ARMS IAmb IAmb 04 38 35.1
comp=Z,210nm,1.1s
ARMS IAMs_20 IAMs_20 04 52 57.1
comp=Z,68µm,18.0s
SIV San Ignacio 45.42 248 P **P** **04 38 18.1 +0.2**
comp=Z,33nm,0.9s,baz=91,slow=9.3,SNR=67
SIV LR LR 04 57 01.2
comp=Z,310µm,18.8s,baz=95,slow=36
comp=Z,33nm,0.9s
DLPL La Plaine 45.57 292 *eP* P 04 38 32.1 +13
H05N1 Guadeloupe/Mar 45.67 293 T T 05 27 35.0
SNR=22
GDSD La Dsirade Is 45.68 293 IAmb IAmb 04 38 39.1
comp=Z,491nm,1.0s
GDSD IAMs_20 IAMs_20 04 52 15.7
comp=Z,180µm,21.0s
MDN Morne-Daniel 45.70 292 *eP* **P** **04 38 22.7 +2.6**
DSLB Salisbury 45.76 292 *eP* **P** **04 38 22.3 +1.7**
MAGL Barre de l'ile 45.78 293 P **P** **04 38 20.6 -0.1**
MAGL IAmb IAmb 04 38 51.2
comp=Z,1µm,1.5s
MAGL Barre de l'ile 45.78 293 *eP* **P** **04 38 22.8 +2.1**
MDVC Dominica, Viel 45.80 292 *eP* **P** **04 38 23.3 +2.5**
CPUP Villa Florida 46.02 232 P **P** **04 38 22.8 +0.3**
comp=Z,38nm,0.9s,baz=75,slow=6.9,SNR=22
CPUP LR LR 04 56 43.2
comp=Z,201µm,18.1s,baz=68,slow=35
comp=Z,38nm,0.9s
CPUP Villa Florida 46.02 232 ⇓P **P** **04 38 22.3 -0.2**
CPUP Villa Florida 46.02 232 *eP* **P** **04 38 22.2 -0.3**
TDBA Terre de Bas, 46.08 292 P **P** **04 38 22.3 -0.7**
TDBA Terre de Bas, 46.08 292 *eP* **P** **04 38 24.7 +1.6**
TBG Guadaloupe-3 46.09 292 *eP* **P** **04 38 23.9 +0.8**
PLTB Pedras Altas 46.11 224 P **P** **04 38 23.5 +0.4**
PLTB IAmb IAmb 04 38 53.1
comp=Z,522nm,1.3s
PLTB Pedras Altas 46.11 224 *eP* **P** **04 38 24.5 +1.4**
CBE Ff, Capester 46.11 293 *eP* **P** **04 38 26.2 +2.8**
ABD La Joyeuse, An 46.11 293 IAMs_20 IAMs_20 04 52 29.2
comp=Z,138µm,22.0s
ABD La Joyeuse, An 46.11 293 *eP* **P** **04 38 26.9 +3.5**
AUGR Augrabies 46.12 131 *eP* **P** **04 38 20.1 -3.2**
AUGR IAmb IAmb 04 38 48.6
comp=Z,228nm,1.2s
AUGR IAMs_20 IAMs_20 04 52 07.0
comp=Z,137µm,32.9s
GDHS Morne Mazeau, 46.31 293 IAmb IAmb 04 38 46.0
comp=Z,764nm,1.1s
GDHS IAMs_20 IAMs_20 04 52 38.5
comp=Z,126µm,22.0s
KEIM Keimoes 46.66 131 *eP* **P** **04 38 27.2 -0.3**
KEIM IAmb IAmb 04 38 45.5
comp=Z,241nm,1.0s
KEIM IAMs_20 IAMs_20 04 56 53.1
comp=Z,547nm,10.6s
UPI Upington 46.70 130 *eP* **P** **04 38 27.8 -0.1**
UPI IAmb IAmb 04 38 45.1
comp=Z,101nm,1.1s
UPI IAMs_20 IAMs_20 04 52 21.6
comp=Z,70µm,37.8s
ANWB Willy Bob 46.74 295 P **P** **04 38 26.6 -1.6**
ANWB Willy Bob 46.74 295 *eP* **P** **04 38 27.7 -0.6**
ANWB Willy Bob 46.74 295 ⇓P **P** **04 38 27.1 -1.2**
ITQB Itaqui 47.12 228 P **P** **04 38 31.5 +0.4**
ITQB IAmb IAmb 04 38 54.2
comp=Z,785nm,1.3s
ITQB Itaqui 47.12 228 *eP* **P** **04 38 31.8 +0.7**
CVNA Calvinia 47.24 135 *eP* **P** **04 38 31.2 -1.0**
CVNA IAmb IAmb 04 39 05.3
comp=Z,276nm,1.2s
CVNA IAMs_20 IAMs_20 04 52 40.1
comp=Z,146µm,32.5s
CLTB Caltabellotta 47.30 34 ⇑P **P** **04 38 31.6 -0.8**
SKI Saint Kitts 47.51 294 *eP* P 04 38 39.6 +5.3
LSZ Lusaka 47.85 110 LR LR 04 56 26.4
comp=Z,72µm,19.5s,baz=294,slow=33
VAE Valguarnera 47.91 35 LR LR 05 00 21.5
comp=Z,225µm,18.4s,baz=148,slow=38
CER Ceres 47.99 137 *eP* P 04 38 23.4 -14
CER IAmb IAmb 04 38 46.4
comp=Z,1µm,2.1s
CER IAMs_20 IAMs_20 04 52 39.1
comp=Z,196µm,39.0s
SMRT St. Maarten 48.02 295 IAmb IAmb 04 38 57.8
comp=Z,426nm,1.1s
SMRT St. Maarten 48.02 295 *eP* **P** **04 38 39.3 +1.0**
SUR Sutherland 48.48 135 LR LR 04 55 10.2
comp=Z,59µm,20.2s,baz=296,slow=31
SUR Sutherland 48.48 135 P **P** **04 38 41.5 -0.4**
SUR Sutherland 48.48 135 P **P** **04 38 42.5 +0.7**
SUR P **P** **04 38 42.5 +0.7**
SUR S S 04 45 53.6 +12
SUR S S 04 45 53.6 +12
SUR Sutherland 48.48 135 ⇑P **P** **04 38 41.9 +0.1**
PKA Prieska 48.49 131 *eP* **P** **04 38 42.2 +0.4**
PKA IAmb IAmb 04 39 06.5
comp=Z,50nm,0.8s
PKA IAMs_20 IAMs_20 04 46 17.4
comp=Z,66µm,21.3s
MBAR Mbarara 48.59 91 LR LR 04 57 42.1
comp=Z,252µm,18.2s,baz=259,slow=34
MBAR Mbarara 48.59 91 P **P** **04 38 42.4 -0.5**
MBAR Mbarara 48.59 91 *i* P **P** **04 38 42.4 -0.5**
MBAR pmax pmax
comp=Z,280nm,1.1s
MBAR Mbarara 48.59 91 P **P** **04 38 44.1 +1.2**
MBAR P **P** **04 38 44.1 +1.2**
MBAR P **P** **04 38 44.1 +1.2**
MBAR S **S** **04 45 47.2 +3.3**
MBAR S **S** **04 45 47.2 +3.3**
MBAR S **S** **04 45 47.2 +3.3**
MBAR Mbarara 48.59 91 *eP* P 04 38 47.8 +4.9
MBAR Mbarara 48.59 91 ⇑P **P** **04 38 43.5 +0.6**
RUSF Rustrel 48.66 22 ⇑P **P** **04 38 44.2 +1.4**
FRAZ Fraserburg 48.66 134 *eP* **P** **04 38 47.1 +3.9**
FRAZ IAmb IAmb 04 39 09.0
comp=Z,482nm,1.5s
FRAZ IAMs_20 IAMs_20 05 12 52.0
comp=Z,478nm,12.1s
LBTB Lobatse 48.67 124 LR LR 04 56 03.4
comp=Z,78µm,21.0s,baz=294,slow=32
LBTB Lobatse 48.67 124 P **P** **04 38 41.7 -1.6**
LBTB IAmb IAmb 04 39 29.3
comp=Z,408nm,1.3s
LBTB Lobatse 48.67 124 P **P** **04 38 41.7 -1.6**
LBTB pmax pmax
comp=Z,408nm,1.3s
LBTB Lobatse 48.67 124 *eP* **P** **04 38 42.9 -0.4**
LBTB IAmb IAmb 04 39 28.7
comp=Z,357nm,1.2s
LBTB IAMs_20 IAMs_20 05 06 11.0
comp=Z,726nm,15.9s
LBTB Lobatse 48.67 124 *i* P **P** **04 38 43.1 -0.2**
LBTB Lobatse 48.67 124 *i* P **P** **04 38 43.1 -0.2**
LBTB Lobatse 48.67 124 ⇑P **P** **04 38 42.5 -0.7**
MATJ Matjiesfontein 48.81 136 *eP* **P** **04 38 45.1 +0.9**
MATJ IAmb IAmb 04 39 02.0
comp=Z,389nm,1.2s
MATJ IAMs_20 IAMs_20 04 53 22.9
comp=Z,154µm,32.5s
ELIM Elim 49.01 138 *eP* **P** **04 38 44.9 -0.8**
ELIM IAmb IAmb 04 39 13.8
comp=Z,312nm,1.7s
ELIM IAMs_20 IAMs_20 04 58 23.4
comp=Z,344nm,10.8s
ETMB Extrema 49.05 257 IAmb IAmb 04 39 03.7
comp=Z,315nm,1.1s
ETMB Extrema 49.05 257 *eP* **P** **04 38 45.2 -1.0**

MERW Merweville 49.15 135 *e*P P **04 38 46.1 -0.8**
MERW IAmb IAmb 04 39 13.8
comp=Z,783nm,1.8s
CEL Celeste 49.30 35 ⇑P P **04 38 46.4 -1.4**
BIRV Birongo 49.31 284 IAmb IAmb 04 39 18.1
comp=Z,529nm,1.0s
SWZ Schweizer 49.35 127 *e*P P **04 38 47.4 -1.2**
SWZ IAmb IAmb 04 39 15.7
comp=Z,420nm,1.0s
SWZ IAMs_20 IAMs_20 04 55 45.0
comp=Z,95µm,18.3s
GRAN Grantham 49.41 134 *e*P P **04 38 47.5 -1.3**
GRAN IAmb IAmb 04 39 21.9
comp=Z,93nm,0.9s
SSB Saint Sauveur 49.46 21 IAmb IAmb 04 39 07.6
comp=Z,520nm,1.5s
SSB Saint Sauveur 49.46 21 ⇑P P **04 38 47.4 -1.5**
MATP Matopo 49.55 117 LR LR 04 57 15.5
comp=Z,159µm,19.4s,baz=294,slow=33
MATP Matopo 49.55 117 *e*P P **04 38 47.8 -2.3**
MATP IAmb IAmb 04 39 16.9
comp=Z,1µm,1.4s
MATP IAMs_20 IAMs_20 04 56 41.0
comp=Z,1µm,15.4s
MATP Matopo 49.55 117 *i*P P **04 38 49.7 -0.4**
MATP Matopo 49.55 117 *i*P P **04 38 49.7 -0.4**
BLWY Bulawayo 49.56 117 *e*P P **04 38 49.5 -0.8**
BLWY IAmb IAmb 04 39 05.9
comp=Z,2µm,1.6s
BLWY IAMs_20 IAMs_20 04 56 57.9
comp=Z,551µm,18.8s
BLWY Bulawayo 49.56 117 *i*P P **04 38 49.8 -0.4**
BLWY Bulawayo 49.56 117 *i*P P **04 38 49.8 -0.4**
BRAK Brakfontein 49.66 133 *e*P P **04 38 51.6 +0.8**
BRAK IAmb IAmb 04 39 24.2
comp=Z,3µm,2.8s
BRAK IAMs_20 IAMs_20 04 53 39.2
comp=Z,171µm,38.4s
STVI Saint Thomas 49.82 294 IAmb IAmb 04 39 11.0
comp=Z,743nm,1.3s
BOSA Boshof 49.92 128 P P **04 38 51.8 -1.0**
comp=Z,14nm,0.8s,baz=310,slow=7.2,SNR=37
BOSA LR LR 04 56 06.3
comp=Z,45µm,21.0s,baz=294,slow=31
comp=Z,14nm,0.8s
BOSA Boshof 49.92 128 P P **04 38 51.5 -1.4**
BOSA Boshof 49.92 128 *e*P P **04 38 52.5 -0.4**
BOSA IAmb IAmb 04 39 20.1
comp=Z,351nm,1.2s
BOSA IAMs_20 IAMs_20 04 53 50.6
comp=Z,152µm,45.3s
BOSA Boshof 49.92 128 *i*P P **04 38 52.6 -0.2**
BOSA Boshof 49.92 128 *i*P P **04 38 52.6 -0.2**
BOSA Boshof 49.92 128 ⇑P P **04 38 51.7 -1.2**
CASP Castiglione de 49.99 27 IAmb IAmb 04 39 09.5
comp=Z,831nm,1.0s
BNI Bardonecchia 50.05 23 IAmb IAmb 04 39 11.6
comp=Z,684nm,1.2s
BNI Bardonecchia 50.05 23 ⇑P P **04 38 51.9 -1.7**
KSR Koster 50.08 124 *e*P P **04 38 58.4 +4.3**
KSR IAmb IAmb 04 39 36.2
comp=Z,326nm,1.4s
KSR IAMs_20 IAMs_20 04 54 17.4
comp=Z,295µm,35.9s
LEPH Lephalale, Lim 50.08 121 *e*P P **04 38 53.2 -0.9**
LEPH IAmb IAmb 04 39 10.8
comp=Z,564nm,1.4s
LEPH IAMs_20 IAMs_20 04 56 20.3
comp=Z,250µm,19.9s
BFON Badsfontein, M 50.25 133 *e*P P **04 38 56.0 +0.7**
BFON IAmb IAmb 04 39 12.4
comp=Z,140nm,0.9s
BFON IAMs_20 IAMs_20 04 53 59.2
comp=Z,157µm,40.1s
MTP Monte Pirata 50.30 294 IAmb IAmb 04 39 15.8
comp=Z,364nm,0.9s
TIP Timpagrande 50.41 35 ⇑P P **04 38 54.4 -1.9**
TIP Timpagrande 50.41 35 IAMs_20 IAMs_20 05 02 46.0
comp=Z,132µm,19.0s
TIP Timpagrande 50.41 35 ⇑P P **04 38 54.1 -2.2**
CUC Castrocucco 50.44 34 IAmb IAmb 04 39 13.0
comp=Z,699nm,1.2s
PAOL Paolisi 50.50 32 IAmb IAmb 04 39 14.2
comp=Z,414nm,1.0s
ROOI Rooidraai Farm 50.50 134 *e*P P **04 38 56.3 -0.9**
ROOI IAmb IAmb 04 39 20.7
comp=Z,784nm,1.8s
ROOI IAMs_20 IAMs_20 04 54 09.0
comp=Z,175µm,42.4s
MONC Moncucco Torin 50.56 24 ⇑P P **04 38 56.1 -1.1**
MGAB Montegabbione 50.67 28 ⇑P P **04 38 56.2 -1.9**
PDPR Patillas Dam, 50.70 294 IAmb IAmb 04 39 18.2
comp=Z,416nm,0.9s
OSSC Osservatorio P 50.74 27 IAmb IAmb 04 39 19.2
comp=Z,454nm,1.2s
WDLM Western Deep L 50.74 125 *e*P P **04 39 03.2 +4.0**
WDLM IAmb IAmb 04 39 26.0
comp=Z,174nm,1.3s
WDLM IAMs_20 IAMs_20 04 54 14.6
comp=Z,88µm,40.7s
HRAO HartRAO 50.75 124 *e*P P **04 39 00.8 +1.6**
GCPR Guaynabo City 50.84 294 P P **04 38 58.1 -1.6**
SJG San Juan 50.85 294 LR LR 04 55 35.6
comp=Z,142µm,21.8s,baz=108,slow=30
SJG San Juan 50.85 294 P P **04 38 57.8 -2.0**
SJG San Juan 50.85 294 IAMs_20 IAMs_20 04 55 23.5
comp=Z,144µm,22.0s
SJG San Juan 50.85 294 P P **04 38 57.8 -2.0**
SJG pmax pmax
comp=Z,3µm,2.4s
SJG San Juan 50.85 294 *e*P P **04 39 01.6 +1.8**
SJG San Juan 50.85 294 ⇓P P **04 38 58.3 -1.5**
VLC Villacollemand 50.85 26 IAmb IAmb 04 39 16.2
comp=Z,994nm,1.3s
VLC Villacollemand 50.85 26 ⇑P P **04 38 57.5 -1.9**
LPA La Plata 50.87 223 *i*P P 04 39 13.2 +13
LPA pP pwP 04 39 27.0 +16
LPA sP sP 04 39 36.7 +29
LPA PCP **PcP** **04 40 15.7 -0.5**
LPA PP **PP** **04 40 53.1 -3.1**
LPA pPP 04 41 05.0
LPA PPP PPP 04 41 43.1
LPA S S 04 46 36.2 +21
LPA sS sS 04 46 52.0 +27
LPA PKIKP **PKiKP** **04 47 01.1 +1.0**
LPA SCS **ScS** **04 48 44.7 -4.7**
LPA SS **SS** **04 49 44.0 -6.0**
LPA SKIKP 04 50 36.5
LPA PKIKS 04 50 46.9
LPA SSS SSS 04 51 59.4
LPA SKIKS 04 53 56.2
PRYS Parys 50.89 125 *e*P P **04 38 58.2 -2.0**
PRYS IAmb IAmb 04 39 21.0
comp=Z,972nm,2.1s
PRYS IAMs_20 IAMs_20 04 56 45.0
comp=Z,103µm,19.8s
HVD Gariep Dam 51.02 130 *e*P P **04 39 00.5 -0.7**
HVD IAmb IAmb 04 39 37.5
comp=Z,364nm,1.2s
HVD IAMs_20 IAMs_20 04 54 21.6
comp=Z,155µm,46.5s
JSA Saint Aubin 51.05 13 *e*P P **04 38 58.6 -2.1**
JSA IAMs_20 IAMs_20 05 03 07.0
comp=Z,54µm,14.2s
GRAF Camdeboo Natio 51.08 133 *e*P P **04 39 01.4 0.0**
GRAF IAmb IAmb 04 39 30.6
comp=Z,234nm,1.0s
GRAF IAMs_20 IAMs_20 04 54 26.8
comp=Z,142µm,36.0s
CLF Chambon-Foret 51.14 17 IAmb IAmb 04 39 34.1
comp=Z,736nm,1.2s
CLF IAMs_20 IAMs_20 05 02 31.7
comp=Z,111µm,18.0s
CLF Chambon-Foret 51.14 17 ⇑P P **04 39 00.3 -1.1**
SLR Silverton 51.19 123 *e*P P **04 39 02.3 -0.1**
SLR IAmb IAmb 04 39 32.4
comp=Z,295nm,1.0s
SLR IAMs_20 IAMs_20 05 07 08.7
comp=Z,101µm,15.1s
CELP Cerrillos 51.23 293 P P **04 39 00.9 -1.8**
CELP IAmb IAmb 04 39 20.8
comp=Z,341nm,0.9s
ZCCA Zocca 51.26 26 P P **04 39 00.2 -2.4**
EMPR Esperanza - Ma 51.29 294 IAmb IAmb 04 39 21.9
comp=Z,442nm,1.1s

MUSN Musina, Limpop 51.34 119 *e*P P **04 39 02.9 -0.6**
MUSN IAmb IAmb 04 39 19.6
comp=Z,462nm,1.4s
MUSN IAMs_20 IAMs_20 04 54 30.8
comp=Z,349µm,54.9s
MUSN Musina, Limpop 51.34 119 *i*P P **04 39 03.8 +0.3**
MUSN Musina, Limpop 51.34 119 *i*P P **04 39 03.8 +0.3**
MATE Matera 51.39 34 ⇓P P **04 39 00.4 -3.1**
SENIN Lac Senin/Sane 51.39 22 IAmb IAmb 04 39 20.7
comp=Z,724nm,1.4s
AOPR Arecibo Observ 51.46 294 P P **04 39 02.0 -2.5**
AOPR IAmb IAmb 04 39 23.0
comp=Z,438nm,0.8s
AOPR Arecibo Observ 51.46 294 *e*P P **04 39 04.0 -0.5**
MLPR Magueyes Islan 51.63 293 IAmb IAmb 04 39 23.2
comp=Z,417nm,0.9s
SGRT San Giovanni R 51.64 32 IAmb IAmb 04 39 20.6
comp=Z,624nm,1.6s
CRPR Cabo Rojo, PR 51.70 293 IAmb IAmb 04 39 24.6
comp=Z,390nm,0.8s
SNKL Senekal, Frees 51.77 127 *e*P P **04 39 03.7 -3.2**
SNKL IAmb IAmb 04 39 33.5
comp=Z,647nm,1.4s
SNKL IAMs_20 IAMs_20 04 55 12.8
comp=Z,1188µm,90.0s
KEF3 Kipouria, Keph 51.92 38 P P **04 39 05.4 -2.2**
LTHK Lithakia 51.93 39 P P **04 39 05.8 -1.8**
DMLN Damoulianata-K 51.96 38 P P **04 39 05.7 -2.2**
SCTE Santa Cesarea 51.99 35 P P **04 39 06.4 -1.6**
SCTE Santa Cesarea 51.99 35 *i*P P **04 39 06.2 -1.8**
KEF4 Livadi, Kephal 52.01 38 P P **04 39 06.4 -1.7**
PSDA Pessada-Kefalo 52.02 38 P P **04 39 05.4 -2.8**
PYL PYLOS 52.02 40 P P **04 39 06.2 -2.1**
ROSN Rosenhof 52.04 135 *e*P P **04 39 08.4 -0.1**
ROSN IAmb IAmb 04 39 41.5
comp=Z,110nm,0.7s
ROSN IAMs_20 IAMs_20 04 55 12.7
comp=Z,111µm,32.0s
VLS Valsamata 52.06 38 P P **04 39 06.2 -2.4**
LPAZ La Paz 52.06 249 P P **04 39 09.1 -0.6**
comp=Z,20nm,1.0s,baz=92,slow=4.0,SNR=17
LPAZ LR LR 05 00 27.7
comp=Z,162µm,18.8s,baz=88,slow=35
comp=Z,20nm,1.0s
LPAZ La Paz 52.06 249 IAmb IAmb 04 39 28.0
comp=Z,970nm,1.9s
LPAZ La Paz 52.06 249 *e*P P **04 39 08.9 -0.8**
LPAZ La Paz 52.06 249 ⇓*i*P P **04 39 11.2 +1.5**
LPAZ La Paz 52.06 249 ⇓P P **04 39 09.1 -0.6**
LPAZ La Paz 52.06 249 *e*P P **04 39 09.4 -0.3**
SALO Salr 52.07 25 IAmb IAmb 04 39 24.7
comp=Z,744nm,1.1s
SALO Salr 52.07 25 ⇑P P **04 39 05.9 -2.6**
SOE Somerset East 52.08 133 *e*P P **04 39 05.8 -3.1**
SOE IAmb IAmb 04 39 41.1
comp=Z,290nm,1.3s
SOE IAMs_20 IAMs_20 04 55 13.9
comp=Z,141µm,38.5s
KROM Kromhout 52.12 135 *e*P P **04 39 10.1 +1.0**
KROM IAmb IAmb 04 39 33.7
comp=Z,181nm,0.9s
TBTG Tabatinga, AM 52.16 265 *e*P P **04 39 10.9 +1.2**
TBTG Tabatinga, AM 52.16 265 *e*P P **04 39 09.2 -0.5**
HATO Hato, Curacao 52.19 286 P P **04 39 08.3 -1.6**
ITM Ithomi 52.31 40 P P **04 39 08.9 -1.6**
ITM Ithomi 52.31 40 ⇑P P **04 39 08.6 -1.9**
TEOL Teio 52.36 26 IAmb IAmb 04 39 42.2
comp=Z,530nm,1.0s
DRAG Dragano-Lefkad 52.36 38 P P **04 39 09.1 -1.7**
EVGl Lefkada island 52.37 38 P P **04 39 09.2 -1.7**
KNDR Palaiochora Ch 52.37 43 P P **04 39 09.3 -1.6**
GVD Gavdhos 52.44 44 P P **04 39 09.8 -1.7**
GVDS Gavdos 52.44 44 P P **04 39 09.6 -1.9**
NYDR Nydri-Lefkada 52.45 38 P P **04 39 09.4 -2.1**
ANKY Antikythira Is 52.46 42 P P **04 39 10.5 -1.1**
LKD2 Lefkada island 52.48 38 P P **04 39 10.2 -1.5**
LKD2 Lefkada island 52.48 38 *i*P P **04 39 10.0 -1.7**
KTHR Kythira 52.48 42 P P **04 39 10.3 -1.5**
TSLK Tsoukalades, L 52.50 38 P P **04 39 10.3 -1.5**
KTHA Kythira Island 52.52 42 P P **04 39 11.1 -1.0**
RLS Riolos of Patr 52.53 39 P P **04 39 11.0 -1.1**
KEK Kerkira 52.54 36 P P **04 39 10.4 -1.7**
KEK Kerkira 52.54 36 IAmb IAmb 04 39 28.9
comp=Z,1µm,1.3s
KEK Kerkira 52.54 36 ⇑P P **04 39 10.5 -1.7**
RODP Rodopos 52.60 43 P P **04 39 12.0 -0.7**
VLI Veliai 52.70 41 P P **04 39 12.7 -0.7**
IMMV Iera Moni Meta 52.70 43 P P **04 39 11.8 -1.6**
CRLN Carolina, Mapu 52.74 123 *e*P P **04 39 14.6 +0.5**
CRLN IAmb IAmb 04 39 30.7
comp=Z,224nm,1.2s
CRLN IAMs_20 IAMs_20 05 07 42.2
comp=Z,67µm,14.7s
DAVOX Davos/Dischmat 52.74 24 LR LR 05 01 20.5
comp=Z,70µm,21.8s,baz=223,slow=36
SRN Sarande 52.77 36 P P **04 39 12.0 -1.8**
SRN Sarande 52.77 36 *i*P P **04 39 12.3 -1.5**
FUORN Ofenpass-Fuorn 52.77 24 P P **04 39 10.9 -3.1**
FUORN IAmb IAmb 04 39 30.2
comp=Z,741nm,1.7s
VLO Vlora 52.85 35 P P 04 39 20.5 +6.1
VLO Vlora 52.85 35 IAmb IAmb 04 39 33.3
comp=Z,678nm,1.2s
VLO Vlora 52.85 35 *i*P P 04 39 29.7 +15
DUGI Dugi Otok 52.90 29 *i*P P **04 39 10.7 -4.0**
ECH Echery 52.90 21 IAmb IAmb 04 39 31.4
comp=Z,1µm,1.8s
ECH Echery 52.90 21 ⇑P P **04 39 12.6 -2.1**
BRJN Brijuni 52.95 28 *i*P P **04 39 11.7 -3.3**
LSTV Lastovo 52.96 32 *i*P P **04 39 11.1 -4.1**
KLV Kalavryta, Ach 52.96 39 P P **04 39 14.9 -0.4**
LAKA Lakka 52.97 39 P P **04 39 14.9 -0.5**
PCDR Punta Cana, DR 53.00 293 IAmb IAmb 04 39 34.7
comp=Z,504nm,1.0s
PRNS Prines Rethymn 53.01 44 P P **04 39 13.6 -2.0**
HVAR Hvar 53.02 31 *i*P P **04 39 11.9 -3.7**
TMBK Timbaki Herakl 53.03 44 P P **04 39 20.5 +4.7**
SIVA Sivas 53.03 44 P P 04 39 21.5 +5.6
ALIK Aliki, Aigiali 53.06 39 P P **04 39 17.8 +1.8**
MOPA Mopani 53.07 120 *e*P P **04 39 13.8 -2.5**
MOPA IAmb IAmb 04 39 46.1
comp=Z,11nm,0.9s
MOPA Mopani 53.07 120 *i*P P **04 39 19.0 +2.6**
MOPA Mopani 53.07 120 *i*P P **04 39 19.0 +2.6**
VIRC Vir 53.12 29 *i*P P **04 39 12.7 -3.6**
MORI Morici 53.13 30 *i*P P **04 39 12.9 -3.5**
JAN Janina 53.13 37 P P **04 39 14.9 -1.7**
DAVA Damuels 53.15 23 *e*P P **04 39 14.0 -2.7**
comp=Z,119nm,1.3s,SNR=41
DAVA *e*S **S** **04 46 48.1 +1.9**
comp=Z,33nm,1.2s
DAVA Damuels 53.15 23 ⇑P P **04 39 13.9 -2.8**
RSBS Rosebush, Pemb 53.16 10 *e*P P **04 39 14.3 -2.1**
RSBS IAMs_20 IAMs_20 05 04 44.5
comp=Z,42µm,14.7s
HMNX Herstmonceux 53.21 14 *e*P P **04 39 15.4 -1.3**
HMNX IAMs_20 IAMs_20 05 00 24.1
comp=Z,104µm,18.8s
KRND KRANIDI 53.22 41 P P **04 39 15.4 -1.8**
NVLJ Novalja 53.23 29 *i*P P **04 39 13.5 -3.6**
IDI Anoyia 53.23 44 ⇑P P **04 39 17.3 -0.1**
IDI Anoyia 53.23 44 P P **04 39 16.0 -1.4**
comp=Z,151nm,1.1s
IDI LR LR 05 03 14.0
comp=Z,54µm,18.1s,baz=228,slow=38
comp=Z,151nm,1.1s
IDI Anoyia 53.23 44 P P **04 39 16.2 -1.2**
IDI Anoyia 53.23 44 P P **04 39 15.9 -1.4**
IDI Anoyia 53.23 44 ⇑P P **04 39 16.2 -1.2**
IWEX Carrickbyrne, 53.24 8 *e*P P **04 39 15.9 -1.1**
IWEX IAMs_20 IAMs_20 05 02 15.7
comp=Z,59µm,17.2s
SMRN Sveta Marina 53.24 28 *i*P P **04 39 14.0 -3.1**
EVR Evrytania 53.27 38 P P **04 39 15.7 -1.9**
A253A Karojba, Istri 53.28 28 *i*P P **04 39 14.3 -3.1**
NWCL Newcastle 53.28 125 *e*P P **04 39 16.6 -1.4**
NWCL IAmb IAmb 04 39 44.7
comp=Z,509nm,1.1s
NWCL IAMs_20 IAMs_20 04 55 52.3
comp=Z,1222µm,91.8s
FETA Feichten 53.28 24 *e*P P **04 39 15.0 -2.7**
comp=Z,475nm,1.2s,SNR=27
FETA *e*S **S** **04 46 55.5 +7.5**
comp=Z,40nm,2.0s

THAL Thalero 53.28 40 P P **04 39 15.7 -1.9**
LSK Leskovik 53.29 36 P P **04 39 16.7 -1.1**
LSK Leskovik 53.29 36 *i*P P **04 39 16.3 -1.5**
LODK Lodwar 53.30 86 P P **04 39 17.5 -0.8**
LODK IAmb IAmb 04 39 36.9
comp=Z,984nm,1.3s
LODK Lodwar 53.30 86 P P **04 39 18.6 +0.3**
SNR=48
LODK Lodwar 53.30 86 *e*P P 04 39 23.8 +5.5
SWN1 Swindon 53.31 12 *e*P P **04 39 16.4 -1.2**
SWN1 IAMs_20 IAMs_20 05 07 15.8
comp=Z,56µm,14.5s
RABC Rab 53.32 29 *i*P P **04 39 14.8 -2.9**
EPID Epidavros 53.33 40 P P **04 39 15.7 -2.3**
SDV Santo Domingo 53.34 281 LR LR 05 01 25.8
comp=Z,70µm,18.6s,baz=108,slow=35
SDV Santo Domingo 53.34 281 P P **04 39 16.5 -2.2**
SDV Santo Domingo 53.34 281 *e*P P **04 39 17.8 -0.9**
IACM Heraklion 53.37 44 P P **04 39 17.8 -0.5**
HRKL Herakleio 53.39 44 P P **04 39 17.7 -0.8**
BFO Black Forest 53.42 22 P P **04 39 15.6 -2.9**
BFO IAmb IAmb 04 39 35.1
comp=Z,1µm,1.6s
BFO Black Forest 53.42 22 P P **04 39 15.6 -2.9**
BFO pmax pmax
comp=Z,1µm,1.6s
BFO MLR MLR
comp=Z,57µm,21.0s
BFO Black Forest 53.42 22 ⇑P P **04 39 15.4 -3.1**
CIMO Cimolais 53.44 26 IAmb IAmb 04 39 35.2
comp=Z,817nm,1.6s
LOUT Loutraki 53.45 40 P P **04 39 16.9 -2.0**
STON Ston 53.46 32 ⇑*i*P P **04 39 15.1 -3.7**
SOCV Socops 53.49 280 *e*P P **04 39 20.7 +1.1**
STAL STALIGIAL 53.52 26 IAmb IAmb 04 39 36.8
comp=Z,361nm,1.0s
MCH1 Michaelchurch 53.52 11 *e*P P **04 39 17.7 -1.4**
MCH1 IAMs_20 IAMs_20 05 06 03.5
comp=Z,43µm,15.2s
MAKR Makrakomi, Fth 53.52 38 P P **04 39 17.8 -1.7**
SKDS Skadanscina 53.56 27 ⇑*i*P P **04 39 17.7 -1.9**
KIJV Kijevo 53.58 30 *i*P P **04 39 16.7 -3.1**
HCY Herceg Novi 53.59 33 *e*P P **04 39 18.3 -1.6**
HCY Herceg Novi 53.59 33 ⇑*i*P P **04 39 18.3 -1.6**
RIY Rijeka 53.61 28 P P **04 39 18.0 -1.9**
DABV Dabajuro 53.62 284 *e*P P **04 39 19.7 -0.8**
TIR Tirane 53.63 35 ⇑P P **04 39 19.7 -0.4**
TIR Tirane 53.63 35 P P **04 39 19.4 -0.7**
TIR Tirane 53.63 35 IAmb IAmb 04 39 45.3
comp=Z,764nm,1.0s
TIR Tirane 53.63 35 *i*P P **04 39 19.9 -0.3**
TIR Tirane 53.63 35 ⇑P P **04 39 19.4 -0.7**
A250A Rusevo Krmpots 53.63 28 *i*P P **04 39 18.5 -1.7**
SQTA Sankt Quirin 53.63 24 *e*P P **04 39 17.3 -2.9**
comp=Z,90nm,1.2s,SNR=28
SQTA S **S** **04 46 57.7 +5.0**
comp=Z,108nm,1.9s
UDBI Udbina 53.64 29 *i*P P **04 39 17.8 -2.4**
PENT Pentalofos 53.64 37 P P **04 39 19.4 -1.0**
MHLO Agia Marina, M 53.66 42 P P **04 39 24.1 +3.7**
RETA Reutte 53.67 24 *e*P P **04 39 17.5 -2.9**
comp=Z,47nm,1.3s,SNR=24
RETA *e*S **S** **04 46 55.4 +2.4**
comp=Z,40nm,1.4s
FRMA Ierapetra Chan 53.68 45 P P **04 39 19.5 -1.1**
ULC Ulcinj 53.68 34 ⇑*i*P P **04 39 19.5 -1.1**
DOU Dourbes 53.69 18 *d*P P **04 39 18.0 -2.3**
comp=Z,123nm,1.0s
DOU *dx* x 04 39 34.0
MOTA Moosalm 53.69 24 *e*P P **04 39 17.6 -3.1**
comp=Z,74nm,1.4s,SNR=26
MOTA S **S** **04 46 57.2 +3.7**
comp=Z,41nm,1.4s
SABO M.te Sabotino 53.70 27 IAmb IAmb 04 39 37.6
comp=Z,1µm,1.1s
TREB Trebinje 53.70 33 *e*P P **04 39 19.8 -0.8**
KBN Korca 53.70 36 P P **04 39 19.9 -0.9**
KBN Korca 53.70 36 *i*P P **04 39 20.3 -0.5**
AXAR Agios Charalam 53.71 39 P P **04 39 19.0 -1.8**
BUM Brajici-Budva 53.71 33 ⇑*i*P P **04 39 19.8 -1.0**
NEST Nestorio 53.73 36 P P **04 39 20.5 -0.5**
CLUD Cludinico 53.74 26 IAmb IAmb 04 39 53.7
comp=Z,799nm,1.0s
VILL Villia 53.77 40 P P **04 39 19.6 -1.7**
THL Klokotos Trika 53.78 38 P P **04 39 19.9 -1.4**
DRME Dracevica, Mon 53.80 34 ⇑*i*P P **04 39 20.5 -0.9**
DRME Dracevica, Mon 53.80 34 ⇑*i*P P **04 39 20.5 -0.9**
WLF Walferdange 53.80 19 IAmb IAmb 04 39 51.2
comp=Z,506nm,1.5s
WLF IAMs_20 IAMs_20 05 00 11.1
comp=Z,118µm,22.0s
WLF Walferdange 53.80 19 *d*P P **04 39 19.8 -1.4**
comp=Z,84nm,1.5s
WLF *dx* x 04 39 35.5
ABTA Abfaltersbach 53.81 26 *e*P P **04 39 19.6 -1.8**
comp=Z,174nm,1.2s,SNR=37
ABTA S **S** **04 47 02.4 +7.4**
comp=Z,34nm,1.6s
PB16 IPOC Station P 53.81 247 *e*P P **04 39 22.8 +0.2**
PLIT Plitvice 53.82 29 *i*P P **04 39 19.6 -1.9**
WTTA Wattenberg 53.85 25 *e*P P **04 39 19.2 -2.6**
comp=Z,60nm,1.4s,SNR=23
WTTA *e*S **S** **04 46 58.5 +2.8**
comp=Z,23nm,1.6s
AF01 San Pedro de A 53.85 241 IAmb IAmb 04 39 49.4
comp=Z,599nm,1.4s
LKR Lokris 53.85 39 P P **04 39 19.0 -2.8**
WATA Walderalm 53.88 24 *e*P P **04 39 19.0 -3.1**
comp=Z,44nm,1.2s,SNR=16
CEME Cevo 53.89 33 ⇑*i*P P **04 39 20.8 -1.3**
ATAL Atalanti 53.89 39 P P **04 39 20.2 -1.9**
CEY Cerknica 53.89 28 *i*P P **04 39 20.2 -1.8**
CEY *i*pP **pwP** **04 39 36.0 +1.2**
CEY *e*S **S** **04 46 57.7 +1.7**
VLY Voula,Athens 53.91 41 P P **04 39 20.1 -2.1**
PTCC Patocco-Chiusa 53.91 26 ⇑P P **04 39 20.2 -2.0**
BMRD Maredsous 53.92 18 *d*P P **04 39 19.7 -2.4**
comp=Z,72nm,1.3s
BMRD *dx* x 04 39 35.6
ATH Athens Observa 53.92 40 P P **04 39 20.8 -1.5**
BRY Bratogost 53.93 33 ⇑*i*P P **04 39 20.9 -1.6**
BRY Bratogost 53.93 33 ⇑*i*P P **04 39 20.9 -1.6**
RCHB Rochefort 53.93 18 *d*P P **04 39 19.7 -2.5**
comp=Z,103nm,1.2s
RCHB *dx* x 04 39 35.7
ATHU Athens Univers 53.96 40 P P **04 39 21.1 -1.6**
KSTD Kokstad 53.97 129 *e*P P **04 39 23.3 +0.3**
KSTD IAmb IAmb 04 39 51.5
comp=Z,207nm,1.2s
KSTD IAMs_20 IAMs_20 05 13 36.4
comp=Z,698nm,14.1s
DR12 Loma Pena Alta 53.98 293 P P **04 39 21.5 -1.7**
A050A Klekovaca 53.98 30 ⇑*i*P P **04 39 21.1 -1.7**
PDG Podgorica 54.00 34 ⇓P P **04 39 22.4 -0.4**
PDG Podgorica 54.00 34 IAMs_20 IAMs_20 05 03 23.0
comp=Z,101µm,20.0s
PDG Podgorica 54.00 34 ⇑P P **04 39 21.8 -1.0**
TTG Podgorica 54.00 34 ⇑*i*P P **04 39 21.8 -1.0**
SRKY Kupres RS 54.01 31 *e*P P **04 39 22.0 -1.0**
STIA Sitia Lasithi 54.03 45 P P **04 39 22.0 -1.1**
HLM1 Long Mynd 54.04 11 *e*P P **04 39 20.8 -2.2**
HLM1 IAMs_20 IAMs_20 05 08 15.7
comp=Z,43µm,14.1s
NKME Niksic 54.06 33 ⇑*i*P P **04 39 22.0 -1.3**
PTL Penteli 54.06 40 P P **04 39 21.8 -1.6**
ZKR Zakros 54.07 45 P P **04 39 25.8 +2.3**
LRSO Larissa Observ 54.08 38 P P 04 39 32.7 +9.3
KZN Kozani 54.09 37 P P **04 39 21.9 -1.7**
BOJANCI Bojanci 54.11 28 ⇑*i*P P **04 39 22.1 -1.4**
STU Stuttgart 54.11 22 IAmb IAmb 04 39 39.8
comp=Z,653nm,1.5s
NKY Niksic 54.11 33 ⇑*i*P P **04 39 22.4 -1.4**
DION Dionisos Attik 54.12 40 P P **04 39 22.3 -1.5**
THR6 Thira Island, 54.15 43 P P **04 39 22.0 -2.0**
SAP3 Santorini-Thir 54.16 43 P P **04 39 22.3 -1.8**
LJU Ljubljana 54.17 27 *i*P P **04 39 22.8 -1.2**
LJU *i*pP **pwP** **04 39 38.4 +1.5**
LJU *e*S **S** **04 47 03.0 +3.3**
LJU *e* 04 53 06.6
PHP Peshkopia 54.18 35 P P **04 39 23.5 -0.7**
PHP Peshkopia 54.18 35 *i*P P **04 39 24.2 0.0**
THR3 Thira Island, 54.18 43 P P **04 39 21.7 -2.5**
BCLA Clavier 54.19 18 *d*P P **04 39 20.7 -3.3**

comp=Z,96nm,1.0s
BCLA dx x 04 39 37.9
SANT Santorini 54.20 43 ⇑P **P 04 39 22.9 -1.6**
SANT Santorini 54.20 43 P **P 04 39 22.4 -2.0**
SANT Santorini 54.20 43 P **P 04 39 21.8 -2.6**
LLW Llanuwchllyn 54.21 11 *e*P **P 04 39 21.6 -2.5**
THT2 Imerovigli 54.21 43 P **P 04 39 28.2 +3.7**
MYKA Terra Mystica 54.21 26 *e*P **P 04 39 22.8 -1.6**
comp=Z,81nm,1.4s,SNR=34
MYKA S S 04 47 09.8 +9.4
comp=Z,11nm,1.2s
MGRS Mrkonjic Grad 54.22 30 *e*P **P 04 39 23.0 -1.4**
THR8 Santorini-Mono 54.23 43 P **P 04 39 22.3 -2.3**
TAMC Tame, Arauca 54.23 278 *e*P **P 04 39 25.6 +0.6**
OZLJ Ozalj 54.29 28 *i*P **P 04 39 23.3 -1.6**
UPM Unac-Piva 54.33 33 ⇑*i*P **P 04 39 24.3 -1.1**
UPM Unac-Piva 54.33 33 ⇑*i*P **P 04 39 24.4 -1.0**
FOEL Foel Wylfa 54.33 11 *e*P **P 04 39 22.7 -2.3**
FOEL IAMs_20 IAMs_20 05 03 59.0
comp=Z,46µm,15.0s
BHOU Houvegnez 54.35 19 *d*P **P 04 39 23.8 -1.4**
comp=Z,59nm,1.3s
BHOU dx x 04 39 39.1
KTI Kastanea 54.35 37 P **P 04 39 23.7 -1.9**
NEO Neokhori 54.38 39 P **P 04 39 23.9 -1.8**
LVC Limon Verde 54.39 242 P **P 04 39 25.5 -0.9**
comp=Z,14nm,0.8s,baz=63,slow=4.4,SNR=11
LVC LR LR 05 02 10.0
comp=Z,102µm,21.6s,baz=70,slow=36
comp=Z,14nm,0.8s
LVC Limon Verde 54.39 242 P **P 04 39 25.2 -1.3**
LVC IAmb IAmb 04 39 51.9
comp=Z,445nm,1.4s
LVC Limon Verde 54.39 242 IAMs_20 IAMs_20 05 01 58.0
comp=Z,108µm,20.0s
LVC Limon Verde 54.39 242 *e*P **P 04 39 26.1 -0.4**
XOR Xorichti 54.40 39 P **P 04 39 24.0 -1.8**
YLL Llanberis 54.40 10 *e*P **P 04 39 24.2 -1.2**
LIT Litokhoron 54.40 38 P **P 04 39 23.9 -1.9**
BCI Bajram Curri 54.41 34 *i*P **P 04 39 25.7 -0.1**
BSTI Sart Tilman 54.41 18 *d*P **P 04 39 23.8 -1.9**
comp=Z,16nm,1.3s
BSTI dx x 04 39 39.9
PTGC Puerto Gaitan, 54.42 275 *e*P **P 04 39 25.6 -0.7**
KOME Kolasin 54.42 33 ⇑*i*P **P 04 39 25.2 -0.8**
KBA Koelnbreinsper 54.43 26 *e*P **P 04 39 23.7 -2.3**
comp=Z,66nm,1.4s,SNR=38
KBA *e*S S 04 47 13.6 +10
comp=Z,13nm,1.3s
KBA Koelnbreinsper 54.43 26 ⇑P **P 04 39 23.8 -2.3**
PRIJ Prijedor 54.43 30 *e*P P 04 39 34.0 +8.1
YRC Rhoscolyn 54.43 10 *e*P **P 04 39 24.0 -1.7**
CRES Cresnjev 54.44 28 ⇑*i*P **P 04 39 24.2 -1.8**
PB09 IPOC Station P 54.45 243 *e*P **P 04 39 26.2 -0.5**
PB01 IPOC Station P 54.47 244 *e*P **P 04 39 26.7 -0.1**
A255A Hotnja, Vukome 54.49 29 *i*P **P 04 39 24.2 -2.1**
ELMS Elmsett, Ipswi 54.50 14 *e*P **P 04 39 23.7 -2.5**
ELMS IAMs_20 IAMs_20 05 05 45.4
comp=Z,94µm,14.3s
PVY Plav 54.50 34 ⇑*i*P **P 04 39 25.8 -0.8**
WLF1 Llynfaes 54.50 10 *e*P **P 04 39 24.3 -1.9**
WLF1 IAMs_20 IAMs_20 05 04 38.0
comp=Z,88µm,14.9s
BLY Banja Luka 54.50 30 ⇑*i*P **P 04 39 24.7 -1.7**
BLY Banja Luka 54.50 30 ⇑P **P 04 39 24.7 -1.7**
OBKA Obir 54.53 27 ⇑*i*P **P 04 39 24.8 -1.9**
OBKA Obir 54.53 27 *e*P **P 04 39 25.0 -1.8**
comp=Z,22nm,1.1s,SNR=12
OBKA *e*S **S 04 47 11.8 +7.1**
comp=Z,21nm,1.6s
KYMI Kymi, Euboea I 54.55 40 P **P 04 39 24.9 -2.0**
A051A Mrakovica 54.55 30 ⇑*i*P **P 04 39 24.9 -2.0**
MEM Membach 54.57 18 *d*P **P 04 39 25.1 -1.7**
comp=Z,67nm,1.5s
MEM dx x 04 39 41.1
WPS Cemaes, Angles 54.59 10 *e*P **P 04 39 24.0 -2.8**
BTNL Ternell 54.59 19 *d*P **P 04 39 25.4 -1.7**
comp=Z,103nm,1.4s
BTNL dx x 04 39 41.6
WME Myndd Eilian 54.62 10 *e*P **P 04 39 25.2 -1.9**
APE Apeiranthos 54.62 42 ⇑P **P 04 39 26.3 -1.2**
APE Apeiranthos 54.62 42 P **P 04 39 25.7 -1.8**
APE Apeiranthos 54.62 42 *i*P **P 04 39 25.1 -2.4**
APE pmax pmax
comp=Z,425nm,1.2s
APE MLR MLR
comp=Z,65µm,19.0s
POGA Pongola 54.63 124 P **P 04 39 26.1 -1.6**
POGA IAmb IAmb 04 39 44.8
comp=Z,497nm,1.1s
POGA Pongola 54.63 124 *e*P **P 04 39 26.5 -1.2**
POGA IAmb IAmb 04 39 44.5
comp=Z,490nm,1.1s
POGA IAMs_20 IAMs_20 05 12 31.9
comp=Z,79µm,15.0s
POGA Pongola 54.63 124 ⇑P **P 04 39 26.8 -1.0**
PB12 IPOC Station P 54.63 247 IAmb IAmb 04 39 44.7
comp=Z,1µm,1.6s
PB12 IPOC Station P 54.63 247 *e*P **P 04 39 28.6 +0.7**
BEBN Eben Emael 54.63 18 *d*P **P 04 39 25.5 -1.8**
comp=Z,207nm,1.3s
BEBN dx x 04 39 41.1
IVA Berane 54.65 33 ⇑*i*P **P 04 39 26.8 -0.8**
PLE Pljevlja 54.67 33 ⇑*i*P **P 04 39 26.7 -1.2**
AOS Alonnisos 54.72 39 P P 04 39 19.5 -8.6
PTJ Puntijarka 54.74 28 P **P 04 39 26.7 -1.6**
TA02 Huaiquique 54.85 245 IAmb IAmb 04 39 56.8
comp=Z,357nm,1.1s
TA02 Huaiquique 54.85 245 *e*P **P 04 39 28.7 -0.7**
RUDO Rudo 54.86 32 *e*P **P 04 39 26.4 -2.7**
SOKA Soboth 54.88 27 *e*P **P 04 39 27.4 -1.9**
comp=Z,56nm,1.1s,SNR=49
SOKA S **S 04 47 14.7 +5.4**
comp=Z,10nm,1.6s
ILTH Belurgan, Co L 54.91 8 *e*P **P 04 39 26.9 -2.3**
MOSL Moslavina 54.91 29 *i*P **P 04 39 27.4 -2.0**
PB02 IPOC Station P 54.91 244 IAmb IAmb 04 39 53.0
comp=Z,1µm,1.9s
PB02 IPOC Station P 54.91 244 *e*P **P 04 39 29.7 -0.3**
A052A Srbac 54.92 30 ⇑*i*P **P 04 39 27.7 -1.7**
KARP Karpathos 54.95 45 P **P 04 39 28.0 -1.9**
KARP Karpathos 54.95 45 P **P 04 39 28.1 -1.8**
KARP IAMs_20 IAMs_20 05 05 08.9
comp=Z,128µm,20.0s
DOB Doboj 54.95 31 *e*P P 04 39 35.7 +6.0
LOBO Lobor 54.97 28 *i*P **P 04 39 27.7 -2.1**
TA01 Diego Aracena 54.97 245 *e*P **P 04 39 32.1 +1.8**
SKY Skiros Island 54.98 40 P **P 04 39 28.5 -1.5**
PB06 IPOC Station P 55.00 242 *e*P **P 04 39 30.8 +0.1**
PB07 IPOC Station P 55.01 243 IAmb IAmb 04 40 01.1
comp=Z,607nm,1.1s
PB07 IPOC Station P 55.01 243 *e*P **P 04 39 29.2 -1.6**
THE Thessaloniki 55.01 37 P **P 04 39 28.1 -2.1**
BIOA Bad Ischl, Aus 55.03 26 *e*P **P 04 39 27.0 -3.2**
comp=Z,31nm,1.6s,SNR=9.4
BIOA S **S 04 47 12.8 +1.5**
comp=Z,36nm,1.3s
PAIG Paliouri 55.03 38 P **P 04 39 28.5 -1.8**
PB15 IPOC Station P 55.06 242 IAmb IAmb 04 39 57.2
comp=Z,794nm,1.2s
PB15 IPOC Station P 55.06 242 *e*P **P 04 39 31.4 +0.3**
HORT Hortiatis 55.07 37 P **P 04 39 28.6 -2.2**
KMBO Kilima Mbogo 55.10 91 P **P 04 39 31.7 0.0**
comp=Z,14nm,0.9s,baz=259,slow=8.7,SNR=21
KMBO LR LR 05 01 27.1
comp=Z,157µm,18.2s,baz=260,slow=34
comp=Z,14nm,0.9s
KMBO Kilima Mbogo 55.10 91 P **P 04 39 30.4 -1.3**
KMBO Kilima Mbogo 55.10 91 P **P 04 39 35.3 +3.7**
KMBO P **P 04 39 35.3 +3.7**
KMBO P **P 04 39 35.3 +3.7**
KMBO S **S 04 47 09.4 -4.4**
KMBO S **S 04 47 09.4 -4.4**
KMBO S **S 04 47 09.4 -4.4**
KMBO Kilima Mbogo 55.10 91 *e*P P 04 39 36.9 +5.2
KMBO Kilima Mbogo 55.10 91 *i*P **P 04 39 31.9 +0.3**
SNR=9.5
LBWR Ladybower, Pea 55.11 12 *e*P **P 04 39 28.4 -2.2**
LBWR IAMs_20 IAMs_20 05 08 31.2
comp=Z,60µm,15.6s
KALN Kalnik 55.14 29 *i*P **P 04 39 29.0 -2.0**
GMM Mts of Mourne 55.17 8 *e*P **P 04 39 28.9 -2.2**
CZSB Cruzeiro do Su 55.18 261 IAmb IAmb 04 39 49.2
comp=Z,2µm,2.0s
CZSB Cruzeiro do Su 55.18 261 *e*P **P 04 39 31.7 -0.2**
PAMC Pamplona, Colo 55.21 279 *e*P **P 04 39 31.5 -1.2**
KOGS Kog 55.27 28 *i*P **P 04 39 30.1 -1.9**
KOGS *i*pP **pwP 04 39 46.0 +1.1**
KNT Kendrikon 55.29 37 P **P 04 39 29.8 -2.4**
TRQA Tornquist 55.32 222 P **P 04 39 31.3 -1.2**
TRQA IAMs_20 IAMs_20 04 59 33.2
comp=Z,137µm,21.0s
TRQA Tornquist 55.32 222 P **P 04 39 31.3 -1.2**
TRQA pmax pmax
comp=Z,428nm,1.7s
A252A Venje 55.32 30 *i*P **P 04 39 30.5 -1.9**
SOH Sokhos 55.36 37 P **P 04 39 31.1 -1.7**
IOMK Kirk Michael 55.41 9 *e*P **P 04 39 30.2 -2.6**
IOMK IAMs_20 IAMs_20 05 05 53.1
comp=Z,125µm,15.0s
PB04 IPOC Station P 55.41 243 IAmb IAmb 04 39 59.4
comp=Z,928nm,1.4s
PB04 IPOC Station P 55.41 243 *e*P **P 04 39 33.7 +0.1**
MOA Molln 55.42 26 *e*P **P 04 39 29.9 -3.1**
comp=Z,57nm,1.4s,SNR=24
MOA S **S 04 47 20.3 +3.8**
comp=Z,38nm,1.6s
LMK Market Rasen 55.45 13 *e*P **P 04 39 31.4 -1.7**
OUR Ouranopolis 55.46 38 P **P 04 39 32.0 -1.4**
RUSC La Rusia 55.47 277 *e*P **P 04 39 37.4 +2.9**
NISR Nisiros 55.47 44 P **P 04 39 35.9 +2.3**
NIS1 Nisyros Isl. 55.50 44 P **P 04 39 32.0 -1.8**
DIVS Divibare 55.51 32 ⇑*i*P **P 04 39 32.6 -1.3**
DIVS Divibare 55.51 32 ⇑P **P 04 39 32.5 -1.4**
ARSA Arzberg 55.53 27 *e*P **P 04 39 31.5 -2.3**
comp=Z,37nm,1.2s,SNR=10
ARSA S **S 04 47 23.9 +5.9**
comp=Z,15nm,1.7s
ARSA Arzberg 55.53 27 ⇑P **P 04 39 31.6 -2.2**
BLJ Bijeljina 55.59 31 *e*P **P 04 39 36.0 +1.7**
BARC Barichara 55.62 278 *e*P P 04 39 49.2 +14
GRFO Grafenberg 55.62 22 P **P 04 39 31.9 -2.6**
GRFO IAmb IAmb 04 39 50.8
comp=Z,953nm,1.6s
GRFO Grafenberg 55.62 22 P **P 04 39 31.9 -2.6**
GRFO pmax pmax
comp=Z,953nm,1.6s
GRA1 Grafenberg Arr 55.63 22 IAmb IAmb 04 39 50.9
comp=Z,882nm,1.5s
HPK Haverah Park 55.65 12 *e*P **P 04 39 33.0 -1.5**
HPK IAMs_20 IAMs_20 05 02 32.8
comp=Z,47µm,14.8s
SRS Serrai 55.68 37 P **P 04 39 33.1 -2.0**
CHOS Chios island 55.68 41 P **P 04 39 33.8 -1.4**
KOKK Kokkinochori, 55.75 38 P **P 04 39 33.7 -1.8**
SDDR Presa de Saban 55.78 293 IAMs_20 IAMs_20 04 58 29.9
comp=Z,124µm,22.0s
SDDR Presa de Saban 55.78 293 *e*P **P 04 39 34.5 -1.7**
SDDR Presa de Saban 55.78 293 ⇓P **P 04 39 35.5 -0.7**
CRJC Cerrejon, Guaj 55.81 283 *e*P **P 04 39 34.5 -2.1**
BODT Bodrum 55.83 43 P **P 04 39 33.1 -3.1**
KKB Krupnik 55.83 36 *e*P P 04 39 43.5 +7.4
DAT Datca 55.84 44 P **P 04 39 34.0 -2.4**
SMG Samos 55.84 42 P **P 04 39 34.6 -1.7**
AC02 Maricunga 55.90 237 IAmb IAmb 04 40 00.6
comp=Z,766nm,1.4s
KOVH Kovagotottos 55.91 30 P **P 04 39 34.6 -1.9**
OCAC Ocana 55.91 280 *e*P **P 04 39 39.4 +2.1**
KIBK Kibwezi 55.91 93 P **P 04 39 35.9 -1.4**
KIBK IAmb IAmb 04 39 56.2
comp=Z,750nm,1.7s
KIBK Kibwezi 55.91 93 P P 04 39 42.2 +4.9
SNR=38
GERES GERESS Array B 55.95 25 P **P 04 39 34.5 -2.4**
comp=Z,15nm,0.9s,baz=222,slow=5.4,SNR=45
GERES LR LR 05 06 00.6
comp=Z,37µm,18.0s,baz=226,slow=39
comp=Z,15nm,0.9s
LIA Limnos Island 55.96 39 P **P 04 39 35.6 -1.4**
VILC Villavicencio, 55.96 275 *e*P P 04 39 52.2 +14
ARG Arkhangelos 55.97 45 P **P 04 39 35.2 -2.0**
ARG Arkhangelos 55.97 45 ⇑P **P 04 39 35.4 -1.8**
KESW Keswick, Cumbr 55.97 10 *e*P **P 04 39 35.5 -1.3**
KESW IAMs_20 IAMs_20 05 09 36.2
comp=Z,55µm,15.3s
NVR Nevrokopi 55.98 37 P **P 04 39 35.6 -1.7**
SIGR SIGRI 56.00 40 P **P 04 39 35.9 -1.5**
LL6C La Loma 6 Bece 56.03 282 *e*P **P 04 39 35.5 -2.5**
CHIC Chingaza 56.03 276 *e*P **P 04 39 37.4 -1.1**
MACC Macarena, Meta 56.04 273 *e*P **P 04 39 41.4 +3.3**
MMB Musomiste 56.05 37 *e*P P 04 39 47.9 +10
THAS Thassos island 56.07 38 P **P 04 39 36.2 -1.6**
KHC Kasperske Hory 56.12 24 IAmb IAmb 04 39 54.5
comp=Z,1µm,1.7s
KHC Kasperske Hory 56.12 24 *e*P **P 04 39 35.6 -2.5**
KHC *e* 04 39 43.5
KHC *e* 04 41 48.0
KHC *e*S **S 04 47 32.3 +6.5**
KHC MLR MLR
comp=Z,67µm,13.7s
KHC Kasperske Hory 56.12 24 *e*P **P 04 39 35.6 -2.5**
KHC x x 04 39 43.5
KHC x x 04 39 52.5
KHC *e*PP **PP 04 41 48.0 +4.7**
KHC *e*S **S 04 47 32.3 +6.5**
KHC AMS AMS 05 09 00.0
comp=Z,67µm,13.7s
KHC Kasperske Hory 56.12 24 ⇑P **P 04 39 35.6 -2.5**
FRGS Fruska Gora 56.13 31 ⇑P **P 04 39 37.8 -0.4**
FRGS Fruska Gora 56.13 31 ⇑*i*P **P 04 39 36.6 -1.6**
BOVS Bovan 56.15 34 ⇑P **P 04 39 36.7 -1.6**
KAVA Kavala 56.17 38 P **P 04 39 37.1 -1.4**
CKRC Cesky Krumlov 56.18 25 *e*P **P 04 39 36.6 -1.9**
CKRC *e*PP PP 04 41 52.9 +9.0
CKRC *e*S S 04 47 32.9 +6.3
CKRC AMS AMS 05 06 10.0
comp=Z,60µm,17.4s
CONA Conrad Observa 56.19 27 *e*P **P 04 39 36.4 -2.2**
comp=Z,63nm,1.5s,SNR=19
CONA S **S 04 47 34.0 +7.1**
comp=Z,0.2nm,0.3s
BRRC Barranca, Sant 56.19 279 *e*P **P 04 39 37.4 -1.7**
RONA Rosalia, Austr 56.21 27 *e*P **P 04 39 36.9 -1.8**
comp=Z,72nm,1.1s,SNR=45
RONA S **S 04 47 34.9 +7.8**
comp=Z,19nm,1.6s
GDLE Glaisdale, N Y 56.25 12 *e*P **P 04 39 36.5 -2.4**
GDLE IAMs_20 IAMs_20 05 09 28.8
comp=Z,50µm,14.7s
MORH Mrgy, Hungar 56.26 30 ⇑P **P 04 39 38.2 -0.8**
MORH Mrgy, Hungar 56.26 30 P **P 04 39 37.1 -2.0**
GRTK Grand Turk 56.27 296 P **P 04 39 38.8 -0.8**
GRTK Grand Turk 56.27 296 ⇑P **P 04 39 41.9 +2.3**
NEWG New Galloway 56.28 9 *e*P **P 04 39 36.8 -2.3**
NEWG IAMs_20 IAMs_20 05 03 29.6
comp=Z,45µm,17.4s
LL1C La Loma 1 Cana 56.28 282 *e*P P 04 39 49.2 +9.4
PB14 IPOC Station P 56.29 240 *e*P **P 04 39 41.9 +1.8**
PRK Paraskevi 56.29 41 P **P 04 39 39.2 -0.2**
SOP Sopron 56.32 27 P **P 04 39 38.0 -1.5**
BLCB Balcova 56.34 42 P **P 04 39 38.3 -1.5**
VTS Vitosha 56.38 36 *e*P P 04 39 49.2 +9.0
TIH Tihany 56.38 29 P **P 04 39 38.7 -1.2**
MPLH Magyarpolny 56.41 28 P **P 04 39 38.5 -1.6**
EDMD Edmundbyers 56.41 11 *e*P **P 04 39 37.5 -2.5**
EDMD IAMs_20 IAMs_20 05 09 26.1
comp=Z,53µm,14.6s
SPBC San Pablo de B 56.44 277 *e*P **P 04 39 42.4 +1.3**
LL5C La Loma 5 El P 56.47 282 *e*P **P 04 39 39.4 -1.7**
EGYH Egyhazaskeszo 56.48 28 P **P 04 39 39.6 -1.1**
SMTH Samothraki Isl 56.50 39 P **P 04 39 38.5 -2.4**
YER Yerkesik 56.53 44 P **P 04 39 39.1 -2.2**
ROSC El Rosal 56.63 276 P **P 04 39 42.1 -0.7**
comp=Z,34nm,0.7s,baz=120,slow=8.8,SNR=13
ROSC LR LR 05 02 52.3
comp=Z,202µm,18.3s,baz=124,slow=35
comp=Z,34nm,0.7s
ROSC El Rosal 56.63 276 *e*P P 04 39 57.1 +14
EZN Ezine 56.65 40 P **P 04 39 40.2 -1.7**
ESK Eskdalemuir 56.65 10 *e*P **P 04 39 39.2 -2.4**
ESK IAMs_20 IAMs_20 05 06 58.7
comp=Z,55µm,17.3s
ESK Eskdalemuir 56.65 10 P **P 04 39 38.8 -2.9**
ESK Eskdalemuir 56.65 10 P **P 04 39 38.8 -2.9**
ESK pmax pmax
comp=Z,400nm,1.5s
ESK MLR MLR
comp=Z,56µm,18.0s
ESK Eskdalemuir 56.65 10 ⇓P **P 04 39 39.7 -1.9**
EKA Eskdalemuir Ar 56.67 10 LR LR 05 03 50.3
comp=Z,30µm,18.1s,baz=198,slow=36
RZN Rozhen 56.70 37 *e*P P 04 39 51.2 +8.7
PTBC PUERTO BERRIO, 56.88 278 *e*P P 04 39 54.1 +10
CSKK Cskako 56.89 29 P **P 04 39 42.1 -1.5**
MDVR Moldovita 56.89 33 ⇓P **P 04 39 43.2 -0.4**
RDO Rodhopi 56.89 38 P **P 04 39 41.9 -1.7**
RDO Rodhopi 56.89 38 ⇑P **P 04 39 42.0 -1.6**
PGBU Glenifferbraes 56.91 9 *e*P **P 04 39 41.5 -2.0**
PGBU IAMs_20 IAMs_20 05 07 57.1
comp=Z,48µm,13.9s
AC01 Pan de Azucar 56.92 239 *e*P **P 04 39 46.2 +2.0**
ZST Bratislava 56.95 27 *e*P **P 04 39 42.3 -1.6**
ZST *e*S **S 04 47 41.8 +5.1**
ZST pmax pmax
comp=Z,316nm,1.4s
ZST Bratislava 56.95 27 *e*S **S 04 47 41.8 +5.1**
ZST Bratislava 56.95 27 *e*P **P 04 39 42.3 -1.6**
ZST Bratislava 56.95 27 *e* P 04 39 58.9 +15
ZST Bratislava 56.95 27 *e*PP PP 04 42 04.1 +13
PTLC Puerto Leguiza 56.95 270 *e*P **P 04 39 42.4 -2.3**
BANR Banloc 56.98 32 ⇓P **P 04 39 43.6 -0.5**
ARGC Ariguani, Magd 57.00 282 *e*P **P 04 39 45.3 +0.4**
FURI Furi 57.02 79 *e*P P 04 39 56.9 +11
ENEZ Enez 57.04 39 P **P 04 39 43.4 -1.3**
TREC Trest 57.05 25 *e*P **P 04 39 42.5 -2.1**
TREC *e* 04 41 56.8
TREC *e*S **S 04 47 45.4 +7.3**
TREC MLR MLR
comp=Z,59µm,16.0s
TREC Trest 57.05 25 *e*P **P 04 39 42.5 -2.1**
TREC *e*PP **PP 04 41 56.8 +5.2**
TREC *e*S **S 04 47 45.4 +7.3**
TREC AMS AMS 05 06 20.0
comp=Z,59µm,16.0s
ALN Alexandroupoli 57.07 39 P **P 04 39 42.9 -2.0**
ALN Alexandroupoli 57.07 39 ⇑P **P 04 39 43.2 -1.7**
GO03 Copiap 57.08 237 ⇓P **P 04 39 46.0 +0.6**
KDZ Kurdzhali 57.11 38 *e*P P 04 39 50.7 +5.5
EBL Broad Law 57.11 10 *e*P **P 04 39 42.6 -2.3**
AAE Adis Abeba 57.12 79 *e*P P 04 39 57.5 +11
SMRC Santa Marta, M 57.14 283 *e*P **P 04 39 46.3 +0.4**
MODS Modra-Piesok 57.16 27 *e*P **P 04 39 43.5 -1.9**
MODS *e* 04 43 12.4
MODS *e*S **S 04 47 47.0 +7.5**
MODS *e*SS **SS 04 51 32.5 +3.7**
MODS pmax pmax
comp=Z,184nm,1.4s
MODS Modra-Piesok 57.16 27 *e*P **P 04 39 43.5 -1.9**
MODS *e* 04 39 59.3
MODS *e*PP PP 04 42 01.5 +8.9
MODS *e* 04 43 12.4
MODS *e*S **S 04 47 47.0 +7.5**
MODS *e*SS **SS 04 51 32.5 +3.7**
MODS *e*L L 04 58 16.2
PRU Pruhonice 57.18 24 *e*P **P 04 39 43.4 -2.1**
PRU *e*S **S 04 47 45.2 +5.5**
PRU MLR MLR
comp=Z,68µm,14.7s
PRU Pruhonice 57.18 24 *e*P **P 04 39 43.4 -2.1**
PRU *e*PP **PP 04 41 59.4 +6.7**
PRU *e*S **S 04 47 45.2 +5.5**
PRU AMS AMS 05 08 50.0
comp=Z,68µm,14.7s
LAWE Loch Awe, Argy 57.21 8 *e*P **P 04 39 43.3 -2.3**
LAWE IAMs_20 IAMs_20 05 04 38.1
comp=Z,74µm,16.0s
NORC Norcasia 57.22 277 *e*P **P 04 39 45.3 -1.3**
ZON Zonda 57.23 232 IAmb IAmb 04 40 29.1
comp=Z,573nm,1.9s
EDI Edinburgh 57.23 10 *e*P **P 04 39 43.0 -2.8**
EDI IAMs_20 IAMs_20 05 10 02.7
comp=Z,49µm,16.0s
PUNG Punghina 57.24 34 ⇑P **P 04 39 45.0 -1.1**
DJES Djerdap 57.26 33 ⇑P **P 04 39 45.7 -0.5**
KRUC Moravsky 57.27 26 ⇑*i*P **P 04 39 43.4 -2.8**
KRUC *e* 04 39 59.3
KRUC *e*S **S 04 47 43.8 +2.9**
BAIL Bailesti 57.31 34 ⇑P **P 04 39 45.9 -0.7**
SMOL Smolenice 57.33 27 *e*P **P 04 39 44.2 -2.4**
SMOL *e* 04 43 13.2
SMOL *e*S **S 04 47 49.5 +7.8**
HERR Herculane 57.34 33 ⇑P **P 04 39 45.9 -0.8**
BUD Budapest 57.34 29 P **P 04 39 45.8 -0.9**
ZARC Zaragoza, Cauc 57.36 279 *e*P **P 04 39 44.3 -3.2**
BZS Buzias 57.38 32 ⇑P **P 04 39 45.8 -1.2**
ELL Elmali 57.48 45 P **P 04 39 46.5 -1.6**
ELL Elmali 57.48 45 P **P 04 39 46.5 -1.6**
ELL Elmali 57.48 45 ⇑P **P 04 39 47.4 -0.7**
AC05 El Transito 57.53 236 P **P 04 39 48.4 -0.2**
AC05 IAmb IAmb 04 40 11.3
comp=Z,631nm,1.3s
VRAC Vranov 57.54 26 ⇑P **P 04 39 46.5 -1.6**
VRAC Vranov 57.54 26 LR LR 05 07 01.6
comp=Z,74µm,18.3s,baz=224,slow=39
VRAC Vranov 57.54 26 ⇑*i*P **P 04 39 45.1 -3.0**
VRAC *e* 04 40 01.3
VRAC *e*S **S 04 47 46.7 +2.2**
INVG Invergeldie, C 57.57 9 *e*P **P 04 39 45.4 -2.7**
INVG IAMs_20 IAMs_20 05 03 31.0
comp=Z,51µm,16.2s
CLL Collm 57.60 22 IAMs_20 IAMs_20 05 06 27.8
comp=Z,73µm,18.0s
CLL Collm 57.60 22 *e*P **P 04 39 46.0 -2.5**
CLL *e*S **S 04 47 45.0 -0.2**
CLL pmax pmax
comp=Z,2µm,2.0s
CLL MLR MLR
comp=Z,76µm,18.0s
CLL Collm 57.60 22 *e*P **P 04 39 46.0 -2.5**
comp=Z,50nm,1.5s
CLL *e*x x 04 39 56.0
CLL *i* Pmax 04 40 00.9
comp=Z,2µm,2.0s
CLL *e*Pmax 04 40 04.0
CLL *e*Plp 04 40 07.0
comp=N,3µm,31.8s
CLL *e*Plp 04 40 07.0
comp=E,2µm,32.4s
CLL *e*Plp 04 40 07.0
comp=Z,5µm,30.4s
CLL *e*PP PP 04 42 06.0 +10
CLL *e*PPP PPP 04 43 24.0
CLL *e*S **S 04 47 45.0 -0.2**
CLL *e*Smax 04 48 06.0
comp=N,79µm,28.2s
CLL *e*Smax 04 48 06.0
comp=E,51µm,24.9s
CLL *e*Smax 04 48 06.0
comp=Z,26µm,26.8s
CLL *e*x x 04 49 18.0
CLL *e*(SS) 04 51 18.0
CLL *e*SSS SSS 04 54 06.0
CLL *e*SSSS 04 54 36.0
CLL Lm MLR 05 06 00.0
comp=Z,76µm,18.0s
CLL Lmax 05 06 00.0
PVCC Panska Ves 57.61 24 *e*P **P 04 39 46.7 -1.8**
PVCC *e*S **S 04 47 53.7 +8.4**
PVCC MLR MLR
comp=Z,55µm,13.6s
PVCC Panska Ves 57.61 24 *e*P **P 04 39 46.7 -1.8**
PVCC *e*PP PP 04 42 05.0 +8.5
PVCC *e*S **S 04 47 53.7 +8.4**
PVCC AMS AMS 05 04 40.0
comp=Z,55µm,13.6s
BRG Berggiesshubel 57.62 23 *i*P **P 04 39 46.4 -2.2**
BRG Amp 04 39 50.2
comp=Z,76nm,1.6s
BRG *i*x x 04 39 57.9
BRG Amp 04 39 59.0
comp=Z,82nm,1.0s
BRG *e*x x 04 40 04.2
BRG Amp 04 40 09.1
comp=Z,580nm,1.6s
BRG PP PP 04 42 08.5 +12
BRG Amp 04 42 10.6
comp=Z,371nm,1.7s
BRG Berggiesshubel 57.62 23 S **S 04 47 48.0 +2.5**
BRG PKPPKP 05 10 02.1
BRG Amp 05 10 17.0

comp=Z,77nm,14.6s
BRG Amp 05 10 19.0
comp=E,18nm,12.8s
BRG Amp 05 10 21.0
comp=N,30nm,14.9s
BRG Amp 05 10 23.2
comp=Z,35nm,1.8s
BRG Berggiesshubel 57.62 23 *i* P **P 04 39 46.4 -2.2**
BRG S **S 04 47 48.0 +2.5**
BRG pmax pmax
comp=Z,76nm,1.6s
BETC Betania 57.65 273 *eP* **P 04 39 49.2 -0.3**
GARC Garzon, Huila 57.68 273 *eP* **P 04 39 50.2 +0.2**
ANIL Santa Ana 57.69 275 *eP* **P 04 39 50.2 +0.1**
JAVC Velka Javorina 57.69 27⇑ *i eP* **P 04 39 47.6 -1.6**
JAVC *e* 04 40 03.3
JAVC *eS* **S 04 47 50.0 +3.4**
GUY2C Guyana, Caldas 57.69 276 *eP* **P 04 39 50.2 -0.2**
BSZH Besenyszg 57.82 30⇑ P **P 04 39 48.7 -1.4**
BSZH Besenyszg 57.82 30 P **P 04 39 48.4 -1.6**
FLOC Florencia 57.83 272 *eP* **P 04 39 51.2 +0.4**
SIRR Siria 57.84 31⇑ P **P 04 39 49.8 -0.4**
GZR Gura Zlata 57.86 33⇑ P **P 04 39 49.0 -1.5**
VLAD Vladila 57.90 35⇓ P **P 04 39 50.3 -0.4**
SJCC San Jacinto, C 57.92 282 *eP* **P 04 39 52.2 +0.7**
HELC Santa Helena 57.92 277 *eP* **P 04 39 49.2 -2.6**
LCO Las Campanas 57.94 235 P **P 04 39 51.1 -0.5**
LCO IAmb IAmb 04 40 13.7
comp=Z,1μm,2.1s
LCO Las Campanas 57.94 235 P **P 04 39 51.1 -0.5**
LCO pmax pmax
comp=Z,1μm,2.1s
LCO Las Campanas 57.94 235⇓ P **P 04 39 53.5 +1.9**
VYHS Vyhne 57.96 28 *eP* **P 04 39 49.1 -2.0**
VYHS *e* 04 43 20.7
VYHS *eS* **S 04 47 58.8 +8.7**
VYHS *eSS* **SS 04 51 44.5 +3.0**
VYHS pmax pmax
comp=Z,99nm,1.2s
VYHS Vyhne 57.96 28 *eP* **P 04 39 49.1 -2.0**
VYHS *e* 04 40 04.7
VYHS *ePP* PP 04 42 10.7 +11
VYHS *e* 04 43 20.6
VYHS *eS* **S 04 47 58.8 +8.7**
VYHS *eSS* **SS 04 51 44.5 +3.0**
VYHS *eL* L 04 58 54.0
EDRB Edirne 58.03 38 P **P 04 39 49.7 -2.0**
UREC San Jos de Ur 58.05 279⇑ *eP* **P 04 39 49.2 -3.1**
UREC San Jos de Ur 58.05 279 *eP* **P 04 39 53.2 +0.9**
UREC ⇓ *eS* S 04 48 10.9 +19
PSZ Piszkesteto 58.06 29⇑ P **P 04 39 51.0 -0.9**
PSZ Piszkesteto 58.06 29 IAMs_20 IAMs_20 05 06 38.3
comp=Z,87μm,19.0s
PSZ Piszkesteto 58.06 29 P **P 04 39 50.2 -1.7**
ANKE Ethiopia-Afar 58.13 79 *eP* P 04 40 04.7 +11
ANKE Ethiopia-Afar 58.13 79 *eP* **P 04 39 54.2 +0.8**
ANKE *eS* S 04 48 14.4 +20
UPC Upice 58.19 25 *eP* **P 04 39 50.7 -1.9**
UPC *eS* S 04 48 05.3 +12
UPC MLR MLR
comp=Z,59μm,16.0s
UPC Upice 58.19 25 *eP* **P 04 39 50.7 -1.9**
UPC *ePP* **PP 04 42 09.4 +7.7**
UPC *ex* x 04 48 05.3
UPC AMS AMS 05 07 10.0
comp=Z,59μm,16.0s
KRLC Kraliky 58.19 26 *eP* **P 04 39 50.9 -1.8**
KRLC *e* 04 42 07.7
KRLC *eS* **S 04 48 01.8 +8.7**
KRLC MLR MLR
comp=Z,60μm,14.5s
KRLC Kraliky 58.19 26 *eP* **P 04 39 50.9 -1.8**
KRLC *ePP* **PP 04 42 07.7 +5.9**
KRLC *eS* **S 04 48 01.8 +8.7**
KRLC AMS AMS 05 08 00.0
comp=Z,60μm,14.5s
DPC Dobruska-Polom 58.20 25 *eP* **P 04 39 50.7 -2.1**
DPC *e* 04 42 08.4
DPC *eS* S 04 48 03.0 +10
DPC MLR MLR
comp=Z,67μm,14.2s
DPC Dobruska-Polom 58.20 25 *eP* **P 04 39 50.7 -2.1**
DPC *ePP* **PP 04 42 08.4 +6.6**
DPC *ex* x 04 48 03.0
DPC AMS AMS 05 07 40.0
comp=Z,67μm,14.2s
KPL Plockton 58.22 8 *eP* **P 04 39 50.6 -2.1**
KPL IAMs_20 IAMs_20 05 02 46.9
comp=Z,51μm,17.1s
DEV Deva 58.24 32⇑ P **P 04 39 52.2 -0.9**
CHVC Chvalec 58.27 25 *eP* **P 04 39 51.3 -1.9**
CHVC *ePP* PP 04 42 11.2 +8.8
CHVC *eS* S 04 48 06.8 +13
CHVC AMS AMS 05 07 20.0
DRUM Mains of Drumt 58.29 10 *eP* **P 04 39 50.9 -2.3**
DRUM IAMs_20 IAMs_20 05 07 49.2
comp=Z,47μm,15.2s
MORC Moravsky Berou 58.30 26⇑ P **P 04 39 52.4 -1.1**
MORC Moravsky Berou 58.30 26⇑ *i P* **P 04 39 51.3 -2.2**
MORC *e* 04 40 07.2
MORC *eS* **S 04 47 57.6 +3.1**
OSTC Ostas 58.31 25 *eP* **P 04 39 51.8 -1.7**
OSTC *ePP* PP 04 42 11.5 +8.7
OSTC *eS* S 04 48 04.9 +10
OSTC AMS AMS 05 07 30.0
comp=Z,60μm,14.4s
CBOC Ciudad Bolivar 58.38 277 *eP* **P 04 39 56.1 +1.3**
EIL Elat 58.38 54 P **P 04 39 53.3 -1.1**
comp=Z,65nm,0.9s,baz=272,slow=2.0,SNR=20
EIL LR LR 05 07 23.1
comp=Z,112μm,18.1s,baz=253,slow=39
comp=Z,65nm,0.9s
GO04 Tololo Observa 58.42 234 IAmb IAmb 04 40 13.2
comp=Z,406nm,1.1s
ISP Isparta 58.42 44*c i P* **P 04 39 53.0 -1.7**
ISP pmax pmax
comp=Z,1μm,1.4s
ISP MLR MLR
comp=Z,49μm,18.0s
KAC Achnashellach 58.42 8 *eP* **P 04 39 52.1 -2.0**
LOT Lotru 58.44 33⇑ P **P 04 39 53.8 -0.8**
BORR Bors 58.44 31⇑ P **P 04 39 53.8 -0.7**
HUMR Humele 58.55 35⇑ P **P 04 39 53.9 -1.4**
KSP Ksiaz 58.56 25⇑ P **P 04 39 53.0 -2.2**
CO03 El Pedregal 58.56 233 P **P 04 39 55.2 -0.5**
CO03 IAmb IAmb 04 40 21.5
comp=Z,796nm,1.9s
PLMC San Jos del P 58.59 276 *eP* P 04 40 09.9 +14
YOTC Yotoco, Valle 58.60 275 *eP* P 04 40 05.9 +10
OKC Ostrava-Krasne 58.61 26 *eP* **P 04 39 54.4 -1.2**
OKC *e* 04 42 11.2
OKC *eS* S 04 48 10.9 +12
OKC MLR MLR
comp=Z,58μm,16.1s
OKC Ostrava-Krasne 58.61 26 *eP* **P 04 39 54.4 -1.2**
OKC *ePP* **PP 04 42 11.2 +5.7**
OKC *ex* x 04 48 10.9
OKC AMS AMS 05 09 00.0
comp=Z,58μm,16.1s
LTVH Ltavrtes, Hu 58.70 31⇑ P **P 04 39 56.0 -0.2**
LANS Liptovska Anna 58.72 28 *eP* **P 04 39 55.7 -0.7**
LANS *eS* S 04 48 16.2 +16
LANS Liptovska Anna 58.72 28 *eP* **P 04 39 55.6 -0.8**
LANS *e* 04 40 11.7
LANS *eS* S 04 48 16.2 +16
DRGR 58.73 32⇑ P **P 04 39 55.6 -1.0**
STFAR Stefanesti-Arg 58.74 34⇑ P **P 04 39 56.7 +0.1**
MASC Masc 58.75 294 *eP* **P 04 39 56.0 -1.1**
ARR Arges 58.86 34⇑ P **P 04 39 56.9 -0.6**
RAZG Razgrad 58.87 36⇑ P **P 04 39 56.4 -1.2**
SGRR Singureni 58.94 36⇑ P **P 04 39 57.1 -0.8**
CO02 Combarbal 58.94 233 IAmb IAmb 04 40 16.6
comp=Z,542nm,1.2s
LCBC Los crdobas, 58.97 280 *eP* **P 04 40 03.0 +4.2**
LCBC Los crdobas, 58.97 280⇓ *eP* **P 04 39 59.3 +0.5**
LCBC *eS* S 04 48 23.5 +19
LINV Loch Inver, As 59.07 8 IAMs_20 IAMs_20 05 03 10.6
comp=Z,39μm,17.9s
ISK Istanbul-Kandi 59.07 40 P **P 04 39 56.2 -2.7**
CRUC La Cruz 59.12 272 *eP* **P 04 40 02.0 +1.7**
VOIR 59.14 34⇑ P **P 04 39 57.6 -1.8**
CJR Cluj-Napoca 59.14 32⇑ P **P 04 39 58.8 -0.6**

VA03 San Esteban 59.16 231 IAmb IAmb 04 40 48.8
comp=Z,395nm,1.4s
CSS Mathiatis 59.16 48 IAMs_20 IAMs_20 05 05 05.6
comp=Z,80μm,22.0s
PRD Provadia 59.20 37 *eP* P 04 40 07.8 +8.1
NIE Niedzica 59.30 28 *eL* L 05 00 42.7
comp=Z,33μm,31.9s
NIE Niedzica 59.30 28 *eP* P 04 40 14.6 +14
NIE Niedzica 59.30 28 *eS* **S 04 48 16.1 +8.6**
LMEL Las Melosas 59.30 230 P **P 04 40 00.3 -0.6**
SULR 59.37 35⇑ P **P 04 40 00.1 -0.8**
BORA Eskisehir 59.38 42 P **P 04 39 59.3 -1.9**
MT03 Universidad Ad 59.40 231 IAmb IAmb 04 40 20.2
comp=Z,764nm,1.4s
MT03 Universidad Ad 59.40 231 *eP* **P 04 40 02.4 +0.9**
PEL Peldehue 59.41 231 IAmb IAmb 04 40 25.0
comp=Z,279nm,1.1s
PEL Peldehue 59.41 231 *eP* **P 04 40 04.5 +2.9**
PEL Peldehue 59.41 231⇑ P P 04 40 07.8 +6.3
GHAJ Ghor Haditha 59.46 53 IAMs_20 IAMs_20 05 03 40.9
comp=Z,84μm,18.0s
SECR 59.47 35⇑ P **P 04 39 60.0 -1.7**
MLA1 Latheron 59.48 9 *eP* **P 04 39 58.8 -2.7**
GCUF Volcan Galeras 59.51 272 *eP* **P 04 40 01.0 -2.1**
MT05 Renca 59.54 231 IAmb IAmb 04 40 25.9
comp=Z,556nm,1.2s
MT05 Renca 59.54 231 *eP* **P 04 40 02.2 -0.2**
GBN Guysborough 59.55 326 P **P 04 40 00.2 -1.9**
LEHL Lehliu 59.58 36⇑ P **P 04 40 01.6 -0.8**
BIGH Upper Bighouse 59.58 8 *eP* **P 04 39 59.9 -2.2**
BIGH IAMs_20 IAMs_20 05 05 15.7
comp=Z,45μm,16.4s
ROCH El Roble 59.59 231 *eP* **P 04 40 02.7 -0.4**
ROC1 El Roble 59.60 231 IAmb IAmb 04 40 26.3
comp=Z,214nm,0.8s
RASA Rasa 59.62 36⇑ P **P 04 40 00.8 -1.9**
OJC Ojcow 59.63 27 *eP* P 04 40 15.4 +13
OJC *eS* **S 04 48 18.5 +6.8**
OJC *eL* L 04 59 17.7
comp=Z,79μm,50.0s
OJC Ojcow 59.63 27 IAmb IAmb 04 40 18.3
comp=Z,675nm,1.3s
OJC Ojcow 59.63 27⇑ P **P 04 39 59.6 -3.1**
DOPR Dopca 59.65 34⇑ P **P 04 40 01.9 -1.0**
VA06 Catapilco 59.67 232 IAmb IAmb 04 40 24.5
comp=Z,350nm,0.9s
MLR Muntele Rosu 59.67 34⇑ P **P 04 40 01.4 -1.8**
MLR Muntele Rosu 59.67 34 P **P 04 40 01.1 -2.1**
comp=Z,95nm,1.1s,baz=213,slow=3.8,SNR=71
MLR LR LR 05 09 08.8
comp=Z,118μm,18.0s,baz=214,slow=40
comp=Z,95nm,1.1s
MLR Muntele Rosu 59.67 34 IAMs_20 IAMs_20 05 08 58.1
comp=Z,115μm,19.0s
NNA Nana 59.68 256 LR LR 05 04 38.5
comp=Z,246μm,20.6s,baz=72,slow=35
NNA Nana 59.68 256 P **P 04 40 03.6 -0.1**
NNA Nana 59.68 256 *i* P **P 04 40 03.6 -0.1**
NNA pmax pmax
comp=Z,350nm,1.5s
NNA Nana 59.68 256 *eP* P 04 40 17.7 +14
BONI La Bonita 59.69 271 *eP* **P 04 40 04.0 -0.1**
BMR Baia Mare 59.71 31⇑ P **P 04 40 01.7 -1.6**
UZH Uzhgorod 59.72 30⇑ *i P* **P 04 39 59.8 -3.5**
UZH *i* 04 40 04.0
UZH *e* 04 40 45.4
UZH *i* 04 42 22.2
UZH *i S* **S 04 48 06.7 -6.2**
UZH MLR MLR
comp=Z,8μm,15.0s
ARCR ARCALIA 59.78 32⇑ P **P 04 40 02.0 -1.7**
SOLC Bahia Solano 59.79 277⇓ *eP* P 04 40 18.7 +14
ISR Istrita 59.79 35⇑ P **P 04 40 02.8 -1.1**
NEHR Nehoiu 59.83 35⇑ P **P 04 40 03.3 -0.9**
MT09 Talagante 59.88 230 IAmb IAmb 04 40 30.9
comp=Z,505nm,1.4s
MT09 Talagante 59.88 230 *eP* **P 04 40 04.5 -0.3**
KOLS Kolonicke sedl 59.92 29 *eP* **P 04 40 03.6 -1.1**
KOLS *eS* S 04 48 30.4 +15
KOLS pmax pmax
comp=Z,26nm,1.0s
KOLS Kolonicke sedl 59.92 29 *eS* S 04 48 30.4 +15
KOLS Kolonicke sedl 59.92 29 *eP* **P 04 40 03.6 -1.1**
KOLS Kolonicke sedl 59.92 29 *e* P 04 40 19.8 +15
OZUR 59.95 34⇑ P **P 04 40 04.3 -0.6**
ICOR Ion Corvin 59.95 37⇑ P **P 04 40 03.0 -1.9**
AMRR Amara 59.96 36⇑ P **P 04 40 03.2 -1.8**
MMAI Mount Meron Ar 59.97 51 P **P 04 40 04.7 -0.7**
comp=Z,34nm,1.0s,baz=257,slow=7.6,SNR=27
MMAI LR LR 05 08 01.1
comp=Z,89μm,19.2s,baz=56,slow=38
comp=Z,34nm,1.0s
COVR Voineasa-Covas 60.03 34⇑ P **P 04 40 02.9 -2.7**
RCC Rio Carpintero 60.06 293 *eP* **P 04 40 02.7 -3.4**
VA01 Torpederas 60.11 231 P **P 04 40 06.0 -0.3**
MT01 Popeta 60.11 230 IAmb IAmb 04 41 21.4
comp=Z,448nm,1.6s
MDUB Mudurnu 60.17 42⇑ P **P 04 40 03.9 -2.8**
PTAC Punta Ardita, 60.25 278 *eP* P 04 40 19.7 +12
PTAC Punta Ardita, 60.25 278 *eP* **P 04 40 09.8 +2.2**
PTAC *eS* S 04 48 39.7 +19
MANR Mangalia 60.26 37⇑ P **P 04 40 05.0 -2.0**
PLOR Plostina 60.28 34⇓ P **P 04 40 04.9 -2.4**
HAL Halifax 60.30 324 IAmb IAmb 04 40 24.9
comp=Z,210nm,0.8s
VRI Vrincioaia 60.34 34⇑ P **P 04 40 05.0 -2.6**
HARR Harsova 60.35 36⇑ P **P 04 40 06.1 -1.6**
IMBA Imbaloura, San 60.35 270 P **P 04 40 08.3 -0.6**
GR1C Gorgoni, Isla 60.38 274 *eP* P 04 40 14.8 +6.3
QRWL Qaraoun 60.38 51 *eP* **P 04 40 07.3 -0.9**
RCY Rachaya 60.48 51 *eP* **P 04 40 07.7 -1.4**
BHL Bhannes 60.50 50 *eP* **P 04 40 07.8 -1.2**
TIRR Tirgusor 60.51 36⇑ P **P 04 40 06.3 -2.5**
TIRR Tirgusor 60.51 36⇑ P **P 04 40 06.3 -2.5**
CUSE Cuicocha Este 60.55 270 *eP* **P 04 40 12.8 +2.6**
UPD2 Meteti 60.57 280⇑ *eP* **P 04 40 09.9 +0.1**
UPD2 Meteti 60.57 280 *eP* **P 04 40 11.0 +1.3**
UPD2 *eS* S 04 48 43.6 +19
BURAR Bucovina Array 60.57 32⇑ P **P 04 40 08.1 -1.2**
BURAR Bucovina Array 60.57 32 P **P 04 40 07.1 -2.2**
MUD Monsted U'grnd 60.58 17 *i* P P 04 40 16.8 +7.9
MUD IAmb IAmb 04 40 25.3
comp=Z,2μm,2.2s
MUD Monsted U'grnd 60.58 17⇑ P **P 04 40 13.4 +4.4**
PANC Panciu 60.58 35⇑ P **P 04 40 07.5 -1.7**
OTAV Otavalo 60.60 270 P **P 04 40 09.0 -1.6**
OTAV IAmb IAmb 04 40 28.7
comp=Z,970nm,2.0s
OTAV Otavalo 60.60 270 IAMs_20 IAMs_20 05 03 39.8
comp=Z,131μm,22.0s
OTAV Otavalo 60.60 270 P **P 04 40 09.0 -1.6**
OTAV pmax pmax
comp=Z,970nm,2.0s
OTAV Otavalo 60.60 270 *eP* P 04 40 20.7 +10
OTAV Otavalo 60.60 270⇓ P **P 04 40 09.2 -1.3**
OTAV Otavalo 60.60 270 *eP* **P 04 40 07.9 -2.7**
BIZ Bicaz 60.63 33⇑ P **P 04 40 08.5 -1.1**
TESR Tescani 60.68 34⇓ P **P 04 40 07.2 -2.7**
TPGR Topolog 60.73 36⇑ P **P 04 40 08.0 -2.3**
KDZE Karadeniz Ereo 60.74 41⇑ P **P 04 40 08.6 -1.9**
CFR Carcaliu 60.75 36⇑ P **P 04 40 08.0 -2.4**
SCHL Schela 60.76 35⇑ P **P 04 40 08.6 -1.9**
ATAH Atahualpa 60.76 262 LR LR 05 06 00.5
comp=Z,255μm,19.1s,baz=91,slow=36
GKP Gorka Klasztor 60.77 23 *eP* **P 04 40 09.2 -1.1**
ASF Jabal al Asfar 60.83 52 P **P 04 40 10.7 -0.7**
comp=Z,122nm,1.0s,baz=244,slow=3.3,SNR=79
ASF LR LR 05 09 14.1
comp=Z,74μm,18.3s,baz=250,slow=39
comp=Z,122nm,1.0s
GHRR 60.84 34⇑ P **P 04 40 09.3 -1.7**
HWQ Hawqa 60.86 50 *eP* **P 04 40 10.3 -1.2**
TUMC Tumaco 60.90 272 *eP* P 04 40 25.6 +14
PORT Chimborazo Vol 60.93 268 IAmb IAmb 04 41 08.9
comp=Z,666nm,1.7s
COP Copenhagen 60.94 19 *i* P P 04 40 20.1 +8.7
COP IAmb IAmb 04 40 28.2
comp=Z,6μm,2.3s
PAC1 Pacto, Paraso 60.95 270 *eP* P 04 40 24.6 +12
SCTR Scanteiesti 60.95 35⇑ P **P 04 40 09.6 -2.1**
ANTO Ankara 60.95 43⇑ P **P 04 40 11.0 -1.0**
ANTO Ankara 60.95 43 P **P 04 40 10.2 -1.8**
ANTO Ankara 60.95 43 P **P 04 40 10.2 -1.8**

ANTO pmax pmax
comp=Z,2μm,1.5s
ANTO MLR MLR
comp=Z,47μm,22.0s
ANTO Ankara 60.95 43 P **P 04 40 10.8 -1.2**
ANTO S **S 04 48 33.2 +4.0**
ML02 Panimavida 60.97 228 IAmb IAmb 04 40 35.3
comp=Z,459nm,1.1s
CHSH Refugio Sur-Vo 61.03 268 IAmb IAmb 04 40 52.0
comp=Z,691nm,1.7s
GO05 Huala 61.07 229 P **P 04 40 11.8 -1.1**
GO05 IAmb IAmb 04 40 30.2
comp=Z,521nm,1.2s
GOET G??ttrup 61.09 17 *i* P P 04 40 21.1 +8.7
GOET IAmb IAmb 04 40 29.4
comp=Z,4μm,2.3s
LMGC Las Mercedes 61.28 293 *eP* P 04 40 02.6 -12
LMGC IVMs_BB IVMs_BB 04 54 19.5
comp=E,5μm,8.1s
LMGC IVMs_BB IVMs_BB 04 54 22.5
comp=N,5μm,10.2s
BSD Bornholm Skovb 61.32 21 *eP* **P 04 40 13.3 -0.7**
BSD Bornholm Skovb 61.32 21 *i* P P 04 40 22.8 +8.8
BSD IAmb IAmb 04 40 29.7
comp=Z,3μm,3.1s
LVV L'vov 61.36 30 *eP* **P 04 40 12.0 -2.5**
LVV *e* 04 40 50.2
LVV *e* 04 42 36.1
LVV *eS* **S 04 48 28.0 -5.9**
LVV *ePS* 04 48 46.2
LVV pmax pmax
comp=Z,2μm,1.5s
LVV MLR MLR
comp=N,39μm,17.0s
LVV MLR MLR
comp=E,27μm,17.0s
LVV MLR MLR
comp=Z,30μm,17.0s
ATD Arta Tunnel 61.38 77 LR LR 05 07 45.0
comp=Z,26μm,18.6s,baz=263,slow=37
ATD Arta Tunnel 61.38 77 IAmb IAmb 04 40 46.9
comp=Z,360nm,1.4s
ATD Arta Tunnel 61.38 77 *eP* P 04 40 28.1 +13
ATD Arta Tunnel 61.38 77⇑ P **P 04 40 16.0 +0.6**
VASR Vaslui 61.39 34⇑ P **P 04 40 12.5 -2.2**
EFI East Falkland 61.41 207 IAMs_20 IAMs_20 05 01 32.8
comp=Z,98μm,22.0s
MTDJ Mount Denham 61.41 291 P **P 04 40 13.1 -2.5**
MTDJ Mount Denham 61.41 291 *eP* P 04 40 25.6 +10
MTDJ Mount Denham 61.41 291⇓ P **P 04 40 14.7 -0.8**
BR131 Keskin Array S 61.47 43 P **P 04 40 13.2 -2.4**
BR131 Keskin Array S 61.47 43*c i* P **P 04 40 13.2 -2.4**
BRTR Keskin Array B 61.47 43 P **P 04 40 13.9 -1.6**
comp=Z,38nm,0.9s,baz=234,slow=5.9,SNR=160
BRTR PKP2ab **P'P'ab 05 09 46.8 -0.5**
comp=Z,1.6nm,1.0s,baz=90,slow=1.2,SNR=4.9
BRTR LR LR 05 10 00.6
comp=Z,57μm,18.7s,baz=224,slow=39
comp=Z,38nm,0.9s
BRTR Keskin Array B 61.47 43 *i* P **P 04 40 14.0 -1.6**
BRTR pmax pmax
comp=Z,48nm,1.0s
SNART Snartemo 61.68 15 *eP* **P 04 40 14.8 -1.6**
SNART IVmB_BB 04 40 31.8
comp=Z,27μm,3.5s
SNART *e* 04 48 49.0
LMN Caledonia Moun 61.69 325 P **P 04 40 13.9 -2.9**
LMN IAmb IAmb 04 40 51.8
comp=Z,440nm,1.2s
HOMB Homborsund 61.95 15 IVmB_BB 04 40 33.9
comp=Z,11μm,3.7s
HOMB *e* 04 48 54.8
HOMB IVMs_BB IVMs_BB 05 07 01.6
comp=Z,31μm,15.5s
KMY Karmoy 61.98 13 *eP* **P 04 40 17.1 -1.3**
FLF1 Flavio Alfaro- 61.99 270 *eP* P 04 40 28.5 +9.0
UPA Univ. de Panam 62.10 280 *eP* **P 04 40 21.7 +1.6**
UPA Univ. de Panam 62.10 280 *eP* **P 04 40 21.8 +1.7**
UPA *eS* S 04 49 02.0 +18
MILM Milestii Mici 62.12 34⇑ P **P 04 40 17.3 -2.3**
MILM Milestii Mici 62.12 34 *eP* **P 04 40 15.6 -4.0**
MILM Milestii Mici 62.12 34 *ePP* PP 04 42 34.4 -2.2
KIS Kishinev 62.17 34⇑ P **P 04 40 17.1 -2.9**
KIS Kishinev 62.17 34 *eP* **P 04 40 18.8 -1.2**
KIS Kishinev 62.17 34*de* P **P 04 40 18.8 -1.2**
KIS *ePPP* PPP 04 44 09.0
KIS MLR MLR
comp=E,18μm,14.0s
KIS MLR MLR
comp=N,16μm,17.0s
PTGL Punta Galera 62.19 271 *eP* P 04 40 28.5 +7.8
CCCC Cccc 62.21 294 *eP* **P 04 40 16.3 -4.4**
CCCC IVMs_BB IVMs_BB 04 49 55.2
comp=E,18μm,23.2s
CCCC IVMs_BB IVMs_BB 04 50 11.8
comp=N,9μm,17.1s
BCIP Isla Barro Col 62.41 280 *eP* P 04 40 35.4 +13
BCIP Isla Barro Col 62.41 280 *eP* **P 04 40 22.0 -0.2**
BCIP *eS* S 04 49 06.1 +18
BCIP Isla Barro Col 62.41 280⇓ P **P 04 40 21.6 -0.6**
PLCA Paso Flores 62.42 223 P **P 04 40 24.2 +2.4**
comp=N,8.1nm,1.1s,baz=54,slow=5.3,SNR=7.6
PLCA PcP **PcP 04 40 58.6 -2.6**
comp=N,12nm,0.7s,baz=350,slow=3.7,SNR=6.0
PLCA LR LR 05 03 54.0
comp=N,105μm,21.4s,baz=64,slow=33
comp=N,8.1nm,1.1s
PLCA Paso Flores 62.42 223 P **P 04 40 20.3 -1.5**
PLCA Paso Flores 62.42 223⇑ P **P 04 40 23.7 +1.8**
PLCA Paso Flores 62.42 223 *eP* **P 04 40 22.4 +0.6**
BLS5 Blasjo 62.45 14 *eP* **P 04 40 19.5 -2.1**
BLS5 IVmB_BB 04 40 36.8
comp=Z,9μm,3.8s
BLS5 *eS* **S 04 48 49.5 +2.1**
BLS5 *e* 04 55 52.6
BLS5 IVMs_BB IVMs_BB 05 08 39.9
comp=Z,23μm,15.8s
PURM Purcari 62.51 35⇑ P **P 04 40 19.8 -2.5**
EMMW East Machias 62.66 322 P **P 04 40 20.9 -2.4**
EMMW IAMs_20 IAMs_20 05 03 36.3
comp=Z,95μm,18.0s
BZK Bozkurt 62.74 41⇓ P **P 04 40 23.0 -0.8**
BZK Bozkurt 62.74 41⇑ P **P 04 40 19.6 -4.3**
PNME Penonome 62.84 280 *eP* **P 04 40 27.6 +2.5**
PNME Penonome 62.84 280 *eP* **P 04 40 26.6 +1.5**
PNME *eS* S 04 49 11.3 +18
ODD1 Odda 62.93 14 *eP* **P 04 40 23.4 -1.5**
ODD1 IVmB_BB 04 40 40.3
comp=Z,12μm,3.4s
ODD1 *e* 04 49 02.7
PPLP Puerto Lpez 62.93 268 *eP* P 04 40 34.4 +8.7
G65A Princeton 62.98 323 P **P 04 40 23.0 -2.4**
G65A Princeton 62.98 323 P **P 04 40 23.7 -1.7**
baz=121,SNR=6.7
G65A P **P 04 40 23.7 -1.7**
baz=121,SNR=6.7
BER Bergen 63.05 13 IVmB_BB 04 40 40.9
comp=Z,9μm,3.6s
BER *e* 04 49 01.7
BER IVMs_BB IVMs_BB 05 06 31.3
comp=Z,19μm,16.5s
ASK Askoy 63.11 13 *eP* **P 04 40 29.6 +3.6**
ASK IVmB_BB 04 40 41.2
comp=Z,19μm,3.6s
ASK *e* 04 49 08.4
CACAO El Cacao, Vera 63.28 278 *eP* P 04 40 39.3 +11
CACAO El Cacao, Vera 63.28 278 *eP* **P 04 40 30.0 +2.0**
CACAO *eS* S 04 49 18.1 +19
DIKM Dikmen 63.43 42⇑ P **P 04 40 27.2 -1.3**
KONO Kongsberg 63.43 15 P **P 04 40 26.1 -2.0**
KONO IAmb IAmb 04 41 09.3
comp=Z,540nm,1.6s
KONO Kongsberg 63.43 15*ce* P **P 04 40 25.6 -2.5**
KONO pmax pmax
comp=Z,57nm,1.3s
KONO MLR MLR
comp=Z,41μm,17.0s
KONO Kongsberg 63.43 15 *eP* **P 04 40 25.3 -2.8**
KONO IVmB_BB 04 40 43.2
comp=Z,10μm,3.3s
KONO *eS* **S 04 49 05.7 +6.2**
KONO *i* 04 56 18.0
KONO Kongsberg 63.43 15⇓ P **P 04 40 26.5 -1.7**
L64A Middleborough 63.48 318 P **P 04 40 26.9 -1.9**

L64A P P 04 40 26.9 -1.9
baz=117

SUE Sulen 63.54 12 eP P 04 40 27.5 -1.3
SUE IVmB_BB 04 40 44.1
comp=Z,11µm,3.4s

SUE eS S 04 49 04.1 +3.3
SUE IVMs_BB IVMs_BB 05 10 45.0
comp=Z,21µm,15.8s

LL04 Puerto Octay 63.76 224 IAmb IAmb 04 40 48.5
comp=Z,491nm,1.4s

F64A Sherman 63.79 323 P P 04 40 29.5 -1.3
baz=121,SNR=10

F64A P P 04 40 29.5 -1.3
baz=121,SNR=10

MAPC Malpelo 63.84 275 eP P 04 40 37.4 +5.6
BCX Boston College 63.88 319 P P 04 40 29.9 -1.6
BCX IAMs_20 IAMs_20 05 10 06.0
comp=Z,93µm,18.0s

HYA Hoyanger 63.94 13 eP P 04 40 29.6 -1.8
HYA IVmB_BB 04 40 47.1
comp=Z,6µm,3.2s

HYA eS S 04 49 10.7 +4.8
WVL Waterville 63.95 321 IAMs_20 IAMs_20 05 02 43.5
comp=Z,75µm,20.0s

OSL Oslo 63.98 16 eP P 04 40 30.0 -1.7
OSL IVmB_BB 04 40 46.8
comp=Z,10µm,3.6s

OSL eS S 04 49 06.5 +0.3
OSL IVMs_BB IVMs_BB 05 07 35.5
comp=Z,20µm,18.6s

SKAR Skarslia 64.00 14 eP P 04 40 30.2 -1.7
SKAR eS S 04 49 08.8 +2.1
SKAR IVMs_BB IVMs_BB 05 10 35.0
comp=Z,23µm,15.5s

WES Weston 64.01 319 P P 04 40 30.8 -1.4
WES IAmb IAmb 04 40 53.5
comp=Z,370nm,1.6s

WES IAMs_20 IAMs_20 05 08 38.0
comp=Z,90µm,18.0s

WES Weston 64.01 319 P P 04 40 30.8 -1.4
WES pmax pmax
comp=Z,370nm,1.6s

WES MLR MLR
comp=Z,90µm,18.0s

M63A Gales Ferry 64.06 317 IAmb IAmb 04 40 53.8
comp=Z,550nm,1.6s

M63A Gales Ferry 64.06 317 P P 04 40 30.4 -2.2
baz=116

M63A P P 04 40 30.4 -2.2
baz=116

PKME Peaks-Kenny Pk 64.06 322 IAMs_20 IAMs_20 05 04 55.5
comp=Z,71µm,18.0s

PKME Peaks-Kenny Pk 64.06 322 P P 04 40 31.2 -1.4
baz=120

PKME Peaks-Kenny Pk 64.06 322 P P 04 40 31.0 -1.6
baz=120

PKME S S 04 49 08.7 +0.7
baz=120

FOO Floro 64.09 12 eP P 04 40 30.1 -2.3
FOO IVmB_BB 04 40 48.0
comp=Z,11µm,3.3s

FOO e 04 49 22.1
FOO e 04 56 20.5
FOO IVMs_BB IVMs_BB 05 10 34.2
comp=Z,22µm,16.2s

E63A Oxbow 64.12 324 P P 04 40 31.9 -1.1
baz=121,SNR=6.1

E63A P P 04 40 31.9 -1.1
baz=121,SNR=6.1

E63A S S 04 49 10.3 +1.7
baz=121

E63A S S 04 49 10.3 +1.7
baz=121

F63A Nahmakanta, Br 64.17 323 IAmb IAmb 04 41 09.7
comp=Z,382nm,1.4s

F63A Nahmakanta, Br 64.17 323 P P 04 40 32.1 -1.2
baz=120

F63A P P 04 40 32.1 -1.2
baz=120

F63A S S 04 49 16.3 +7.1
baz=120

F63A S S 04 49 16.3 +7.1
baz=120

HRV Adam Dziewonsk 64.22 319 P P 04 40 31.5 -2.1
HRV IAmb IAmb 04 40 51.1
comp=Z,219nm,0.9s

HRV Adam Dziewonsk 64.22 319 IAMs_20 IAMs_20 05 10 16.6
comp=Z,91µm,18.0s

HRV Adam Dziewonsk 64.22 319 P P 04 40 31.5 -2.1
HRV pmax pmax
comp=Z,219nm,1.0s

HRV MLR MLR
comp=Z,91µm,18.0s

HRV Adam Dziewonsk 64.22 319 P P 04 40 32.0 -1.6
baz=116

HRV S S 04 49 13.7 +3.8
baz=116

HRV Adam Dziewonsk 64.22 319 P P 04 40 32.0 -1.6
baz=116

HRV S S 04 49 10.7 +0.7
baz=116

HRV Adam Dziewonsk 64.22 319 ⇓P P 04 40 32.3 -1.3
SIM Simferopol' 64.23 38 eP P 04 40 30.6 -3.1
SIM e 04 42 56.0
SIM ePPP PPP 04 44 29.0
SIM pmax pmax
comp=Z,5µm,3.7s

SIM pmax pmax
comp=Z,2µm,3.7s

SIM MLR MLR
comp=Z,34µm,19.9s

I63A Otisfield 64.29 320 S S 04 49 10.6 -0.1
baz=118

I63A S S 04 49 10.6 -0.1
baz=118

PRVC Isla de Provid 64.34 285 eP P 04 40 48.2 +13
UCCT U. Connecticut 64.35 318 IAmb IAmb 04 41 03.6
comp=Z,738nm,1.9s

LL02 Futaleuf 64.37 221 P P 04 40 33.1 -1.5
LL02 IAmb IAmb 04 40 53.1
comp=Z,529nm,1.5s

MGV Manicaragua 64.41 295 eP P 04 40 34.5 -0.8
AKASG Malin Array Be 64.53 31 P P 04 40 32.3 -3.2
comp=Z,45nm,0.9s,baz=233,slow=6.2,SNR=173

AKASG PKP2ab P'P'ab 05 09 40.9 +7.0
comp=Z,0.4nm,0.5s,baz=58,slow=1.7,SNR=5.5

AKASG LR LR 05 11 03.5
comp=Z,46µm,18.8s,baz=233,slow=38
comp=Z,45nm,0.9s

AKBB Malin Array Si 64.53 31 ceP P 04 40 32.5 -3.0
AKBB pmax pmax
comp=Z,370nm,1.1s

AKBB MLR MLR
comp=Z,80µm,17.0s

YLE Yale 64.63 317 IAMs_20 IAMs_20 05 08 24.4
comp=Z,82µm,18.0s

QUA2 Belchertown 64.64 318 IAmb IAmb 04 40 57.9
comp=Z,757nm,1.6s

QUA2 Belchertown 64.64 318 P P 04 40 35.0 -1.4
baz=116,SNR=7.3

QUA2 S S 04 49 23.6 +8.4
baz=116

PBUR Paburge 64.65 23 eP P 04 40 34.1 -2.0
CHGR2 Aguacate 64.67 280 eP P 04 40 48.0 +11
CHGR2 eS S 04 49 37.6 +21
I62A Tamworth 64.69 320 IAmb IAmb 04 40 55.8
comp=Z,376nm,1.0s

I62A Tamworth 64.69 320 P P 04 40 35.9 -0.8
baz=117,SNR=17

I62A P P 04 40 35.9 -0.8
baz=117,SNR=17

I62A S S 04 49 21.9 +6.2
baz=117

I62A S S 04 49 21.9 +6.2
baz=117

FFD Franklin Falls 64.71 319 P P 04 40 35.6 -1.3
FFD IAmb IAmb 04 40 56.0
comp=Z,233nm,1.0s

FFD Franklin Falls 64.71 319 P P 04 40 36.1 -0.7
baz=117

FFD S S 04 49 18.6 +2.6
baz=117

K62A Royalston 64.73 318 IAmb IAmb 04 40 56.1
comp=Z,363nm,1.0s

K62A Royalston 64.73 318 P P 04 40 35.9 -1.1
baz=116,SNR=16

K62A P P 04 40 35.9 -1.1
baz=116,SNR=16

K62A S S 04 49 19.5 +3.1
baz=116

K62A S S 04 49 19.5 +3.1
baz=116

NRS Narsarsuaq 64.77 346 i P P 04 40 44.2 +7.4
NRS IAmb IAmb 04 41 09.2
comp=Z,633nm,1.4s

NRS Narsarsuaq 64.77 346 ⇑P P 04 40 36.5 -0.3
F62A Pittston Farm, 64.79 322 P P 04 40 36.1 -1.2
baz=119

F62A P P 04 40 36.1 -1.2
baz=119

F62A S S 04 49 17.0 +0.1
baz=119

F62A S S 04 49 17.0 +0.1
baz=119

NAO01 NORSAR Array S 64.79 15 P P 04 40 34.5 -2.6
NAO01 IAmb IAmb 04 41 18.4
comp=Z,554nm,1.4s

G62A West of Eustis 64.81 322 P P 04 40 36.0 -1.5
baz=118

G62A P P 04 40 36.0 -1.5
baz=118

G62A S S 04 49 22.7 +5.5
baz=118

G62A S S 04 49 22.7 +5.5
baz=118

D62A Allapoint, All 64.83 324 IAmb IAmb 04 40 55.4
comp=Z,212nm,0.9s

D62A Allapoint, All 64.83 324 P P 04 40 36.1 -1.5
baz=120,SNR=20

D62A P P 04 40 36.1 -1.5
baz=120,SNR=20

D62A S S 04 49 15.2 -2.1
baz=120

D62A S S 04 49 15.2 -2.1
baz=120

N62A Caumsett State 64.83 316 P P 04 40 36.0 -1.7
N62A Caumsett State 64.83 316 S S 04 49 17.3 -0.3
baz=114

N62A S S 04 49 17.3 -0.3
baz=114

NC602 NORSAR Array S 64.87 15 P P 04 40 34.6 -2.9
NC602 IAmb IAmb 04 41 18.8
comp=Z,716nm,1.4s

NC602 NORSAR Array S 64.87 15 eP P 04 40 35.7 -1.8
NC602 IVmB_BB 04 40 52.7
comp=Z,7µm,3.6s

NC602 eS S 04 49 21.1 +3.8
BORG Borgarnes 64.88 358 P P 04 40 36.0 -1.4
BORG IAmb IAmb 04 41 32.1
comp=Z,1µm,2.1s

BORG Borgarnes 64.88 358 P P 04 40 36.1 -1.4
BORG pmax pmax
comp=Z,1µm,2.2s

BORG Borgarnes 64.88 358 ⇑P P 04 40 37.8 +0.3
E62A Clayton Lake 64.88 323 P P 04 40 36.5 -1.4
baz=120,SNR=5.8

E62A P P 04 40 36.5 -1.4
baz=120,SNR=5.8

E62A S S 04 49 14.8 -3.1
baz=120

E62A S S 04 49 14.8 -3.1
baz=120

H62A Milan 64.90 321 P P 04 40 37.0 -1.1
baz=118,SNR=12

H62A P P 04 40 37.0 -1.1
baz=118,SNR=12

H62A S S 04 49 24.0 +5.7
baz=118

H62A S S 04 49 24.0 +5.7
baz=118

L61B Northampton 64.94 318 IAmb IAmb 04 40 59.8
comp=Z,455nm,1.4s

L61B IAMs_20 IAMs_20 05 06 56.7
comp=Z,102µm,18.0s

L61B Northampton 64.94 318 P P 04 40 36.9 -1.5
baz=116,SNR=14

L61B S S 04 49 20.1 +1.2
baz=116

L61B Northampton 64.94 318 P P 04 40 36.6 -1.8
baz=116,SNR=14

L61B S S 04 49 21.0 +2.1
baz=116

HFS Hagfors 64.97 17 LR LR 05 11 10.4
comp=Z,41µm,18.2s,baz=220,slow=38

AKN Aaknes 65.02 13 eP P 04 40 37.2 -1.3
AKN IVmB_BB 04 40 54.2
comp=Z,8µm,3.3s

AKN e 04 49 27.2
AKN e 04 56 49.0
NB2 NORSAR Subarra 65.04 15 P P 04 40 36.7 -2.0
comp=Z,5µm,3.3s,baz=211,slow=6.9

NB2 NORSAR Subarra 65.04 15 P P 04 40 36.7 -2.0
baz=211,slow=6.9

NOA NORSAR Array B 65.04 15 P P 04 40 36.6 -2.2
comp=Z,17nm,1.0s,baz=210,slow=6.6,SNR=37

NOA LR LR 05 09 28.8
comp=Z,30µm,20.9s,baz=210,slow=37
comp=Z,17nm,1.0s

NB201 NORSAR Array S 65.07 15 IAmb IAmb 04 41 20.5
comp=Z,721nm,1.6s

FOR Fordham 65.10 316 P P 04 40 38.3 -1.1
baz=114

FOR S S 04 49 21.1 +0.3
baz=114

PABE Paberze 65.12 25 P P 04 40 36.7 -2.5
PABE Paberze 65.12 25 eP P 04 40 37.2 -2.0
R61A Willards 65.15 313 S S 04 49 27.7 +6.1
baz=112

R61A S S 04 49 27.7 +6.1
baz=112

S61A Accomac 65.16 312 S S 04 49 38.9 +17
baz=111

S61A S S 04 49 38.9 +17
baz=111

PAL Palisades 65.17 316 P P 04 40 38.3 -1.6
PAL IAmb IAmb 04 41 01.3
comp=Z,640nm,1.6s

PAL IAMs_20 IAMs_20 05 02 22.0
comp=Z,69µm,22.0s

PAL Palisades 65.17 316 P P 04 40 38.3 -1.6
PAL pmax pmax
comp=Z,640nm,1.6s

PAL Palisades 65.17 316 P P 04 40 38.8 -1.1
baz=114

PAL S S 04 49 34.1 +12
baz=114

PAL Palisades 65.17 316 P P 04 40 38.0 -1.8
baz=114

PAL S S 04 49 22.5 +0.8
baz=114

V61A Roper 65.19 310 S S 04 49 37.0 +15
baz=110

V61A S S 04 49 37.0 +15
baz=110

BRU2 Volcan 65.19 280 eP P 04 40 38.4 -2.4
HNH Hanover 65.23 319 IAmb IAmb 04 41 10.5
comp=Z,478nm,1.3s

HNH IAMs_20 IAMs_20 05 04 34.2
comp=Z,113µm,20.0s

HNH Hanover 65.23 319 P P 04 40 38.8 -1.4
baz=116,SNR=15

HNH S S 04 49 21.3 -1.1
baz=116

LBNH Lisbon 65.23 320 IAmb IAmb 04 41 09.8
comp=Z,328nm,1.2s

LBNH IAMs_20 IAMs_20 05 04 08.4
comp=Z,103µm,20.0s

LBNH Lisbon 65.23 320 P P 04 40 39.4 -0.9
baz=117,SNR=8.9

LBNH S S 04 49 23.4 +0.9
baz=117

LBNH Lisbon 65.23 320 P P 04 40 39.0 -1.3
baz=117,SNR=8.9

LBNH S S 04 49 25.0 +2.5
baz=117

NC405 NORSAR Array S 65.24 15 P P 04 40 37.2 -2.7
NC405 IAmb IAmb 04 41 19.5
comp=Z,354nm,1.2s

NC303 NORSAR Array S 65.24 15 IAmb IAmb 04 41 21.6
comp=Z,528nm,1.4s

J61A Chester 65.24 319 IAmb IAmb 04 40 58.1
comp=Z,230nm,0.9s

J61A Chester 65.24 319 P P 04 40 39.5 -0.9
baz=116,SNR=14

J61A P P 04 40 39.5 -0.9
baz=116,SNR=14

J61A S S 04 49 23.5 +0.9
baz=116

J61A S S 04 49 23.5 +0.9
baz=116

MIDE Milford 65.35 314 S S 04 49 26.9 +3.0
baz=112

DOMB Dombas 65.37 14 e P 04 40 54.5 +14
DOMB IVmB_BB 04 40 56.8
comp=Z,8µm,3.6s

DOMB eS S 04 49 30.1 +6.5
DOMB e 04 56 57.5
DOMB IVMs_BB IVMs_BB 05 10 08.4
comp=Z,24µm,19.0s

BRNY Black Rk. Fore 65.41 317 P P 04 40 40.2 -1.2
baz=114,SNR=8.5

BRNY S S 04 49 24.5 -0.1
baz=114

VSVD Vaisvydziai 65.43 24 eP P 04 40 39.6 -1.6
PANJ Princeton 65.47 315 P P 04 40 40.8 -1.0
baz=113,SNR=20

PANJ S S 04 49 24.9 -0.5
baz=113

MOL Molde 65.49 13 eP P 04 40 39.5 -2.0
MOL IVmB_BB 04 40 56.4
comp=Z,8µm,3.4s

MOL e 04 49 38.4
MOL e 04 56 55.4
MOL IVMs_BB IVMs_BB 05 12 52.0
comp=Z,19µm,15.2s

BRNJ Basking Ridge 65.50 316 IAmb IAmb 04 41 28.2
comp=Z,385nm,1.7s

BRNJ Basking Ridge 65.50 316 S S 04 49 29.3 +3.5
baz=113

IVI Ivigtut 65.52 344 i P P 04 40 46.4 +4.7
IVI IAmb IAmb 04 41 14.0
comp=Z,203nm,1.0s

IVI Ivigtut 65.52 344 ⇓P P 04 40 48.7 +7.0
COYC Coyhaique 65.58 219 IAMs_20 IAMs_20 05 13 39.2
comp=Z,56µm,18.0s

MARD Mardin 65.63 48 P P 04 40 40.5 -2.6
NPNY Mohonk Preserv 65.64 317 S S 04 49 26.0 -1.4
baz=114

ODNJ Ogdensburg 65.68 316 IAmb IAmb 04 41 12.4
comp=Z,621nm,1.8s

ODNJ Ogdensburg 65.68 316 P P 04 40 42.1 -1.2
baz=113

ODNJ S S 04 49 29.1 +1.1
baz=113

TRY Troy 65.72 318 IAmb IAmb 04 41 05.1
comp=Z,396nm,1.5s

TRY IAMs_20 IAMs_20 05 07 47.3
comp=Z,87µm,18.0s

TRY Troy 65.72 318 S S 04 49 30.7 +2.3
baz=115

TUPA Temple Univers 65.73 315 P P 04 40 43.0 -0.5
baz=112,SNR=19

TUPA S S 04 49 30.8 +2.1
baz=112

T60A Surry 65.76 311 S S 04 49 33.1 +4.0
baz=110

T60A S S 04 49 33.1 +4.0
baz=110

RAYN Ar Rayn 65.79 64 IAMs_20 IAMs_20 05 05 49.2
comp=Z,71µm,19.0s

MCVT Middlebury Col 65.80 319 P P 04 40 42.6 -1.3
baz=116,SNR=6.0

MCVT S S 04 49 22.8 -6.5
baz=116

VT1 Waterbury 65.81 320 IAmb IAmb 04 41 19.6
comp=Z,701nm,1.9s

VT1 IAMs_20 IAMs_20 05 05 03.4
comp=Z,109µm,20.0s

LMQ La Malbaie 65.82 324 IAmb IAmb 04 41 13.4
comp=Z,636nm,1.5s

PSUB Penn St. - Bra 65.83 315 P P 04 40 43.1 -1.1
baz=112

PSUB S S 04 49 24.5 -5.4
baz=112

Y60A Bolivia 65.89 308 S S 04 49 29.7 -1.0
baz=108

Y60A S S 04 49 29.7 -1.0
baz=108

GEDE Greenville 65.92 314 P P 04 40 43.0 -1.8
baz=112

GEDE S S 04 49 27.8 -3.1
baz=112

SLIT Slitere, Latvi 65.93 22 eP P 04 40 44.0 -0.4
NACGM Naroch 65.94 26 ⇓eP P 04 40 42.8 -1.8
baz=230

IIGN Ignalina 65.98 26 eP P 04 40 44.7 -0.1
ACCN Adirondack Com 65.99 319 IAmb IAmb 04 41 06.7
comp=Z,576nm,1.9s

ACCN Adirondack Com 65.99 319 P P 04 40 44.0 -1.2
baz=115

ACCN S S 04 49 33.9 +2.1
baz=115

061Z Ochoppi 66.02 298 S S 04 49 34.1 +1.5
baz=102

CNNC Cliffs of the 66.02 309 P P 04 40 44.7 -0.7
CNNC IAMs_20 IAMs_20 05 02 39.2
comp=Z,116µm,22.0s

CNNC Cliffs of the 66.02 309 P P 04 40 44.2 -1.3
baz=108,SNR=5.8

CNNC S S 04 49 34.7 +2.4
baz=108

CNNC Cliffs of the 66.02 309 P P 04 40 43.4 -2.1
baz=108

CNNC S S 04 49 33.6 +1.3
baz=108

CNNC Cliffs of the 66.02 309 ⇓P P 04 40 44.2 -1.3
LUPA Lehigh Univers 66.03 315 IAmb IAmb 04 41 07.3
comp=Z,808nm,1.9s

ISAL Salakas 66.08 26 eP P 04 40 44.7 -0.8
MNK Minsk 66.18 27 c iP P 04 40 42.8 -3.3
MNK Minsk 66.18 27 i P P 04 40 42.8 -3.3
comp=E,51nm,1.3s

MNK i P P 04 40 42.8 -3.3
MNK i P P 04 40 42.8 -3.3
comp=Z,666nm,1.3s,baz=51

MNK i PP PP 04 43 07.6 -4.4
MNK i PPP PPP 04 44 41.3
MNK i S S 04 49 28.6 -5.0
MNK i SS SS 04 53 46.4 -3.3
MNK i SSS SSS 04 56 53.4
MNK i LQ LQ 05 04 49.4
MNK i LR LR 05 09 50.3
MNK i LRM MLR 05 11 59.0
comp=E,7µm,17.7s

MNK i LRM MLR 05 11 59.0
MNK i LRM MLR 05 11 59.0
comp=Z,44µm,16.9s

HCNY Howe Caverns 66.19 318 P P 04 40 45.7 -0.8
baz=114

HCNY S S 04 49 34.5 +0.3
baz=114

KTUT Trabzon 66.24 44 ⇑P P 04 40 45.7 -1.1
ANN Anapa 66.25 40 eP P 04 40 40.4 -6.4
ANN i *PP pP 04 40 44.1 -8.8
ANN i S S 04 49 25.8 -9.0
ANN pmax pmax
comp=Z,172nm,1.0s

ANN MLR MLR
comp=Z,44µm,19.0s

ANN MLR MLR
comp=N,43µm,19.0s

ANN MLR MLR
comp=E,7µm,13.0s

U59A Littleton 66.30 310 P P 04 40 44.8 -2.5
U59A Littleton 66.30 310 P P 04 40 46.3 -0.9
baz=109,SNR=5.2

U59A P P 04 40 46.3 -0.9
baz=109,SNR=5.2

U59A S S 04 49 35.8 +0.1
baz=109

U59A S S 04 49 35.8 +0.1
baz=109

OPO Ambohidratompo 66.32 110 LR LR 05 07 32.2
comp=E,29µm,18.6s,baz=144,slow=34

T59A Double "B" Far 66.32 311 IAmb IAmb 04 41 09.2
comp=Z,744nm,1.6s

T59A Double "B" Far 66.32 311 P P 04 40 46.1 -1.3
baz=109

T59A P P 04 40 46.1 -1.3
baz=109

T59A S **S** **04 49 36.7 +0.7**
baz=109
T59A S **S** **04 49 36.7 +0.7**
baz=109
Y59A **Loris** **66.41 308** S **S** **04 49 37.2 +0.2**
baz=107
Y59A S **S** **04 49 37.2 +0.2**
baz=107
RIMA **Rio Macho** **66.42 281** IAmb IAmb 04 41 06.0
comp=Z,604nm,1.6s
L59A **Walton** **66.42 317** P **P** **04 40 46.7 -1.4**
L59A IAmb IAmb 04 41 17.5
comp=Z,643nm,1.6s
L59A **Walton** **66.42 317** P **P** **04 40 47.1 -0.9**
baz=113,SNR=10
L59A P **P** **04 40 47.1 -0.9**
baz=113,SNR=10
L59A S **S** **04 49 38.0 +0.9**
baz=113
L59A S **S** **04 49 38.0 +0.9**
baz=113
VOI **Vohitsoka** **66.47 114** IAMs_20 IAMs_20 05 06 44.3
comp=Z,113µm,20.0s
VOI **Vohitsoka** **66.47 114** P P 04 40 54.0 +5.1
SNR=11
J59A **Piesco** **66.58 318** IAmb IAmb 04 41 16.7
comp=Z,472nm,1.7s
J59A **Piesco** **66.58 318** P **P** **04 40 47.3 -1.7**
baz=114
J59A P **P** **04 40 47.3 -1.7**
baz=114
J59A S **S** **04 49 40.4 +1.5**
baz=114
J59A S **S** **04 49 40.4 +1.5**
baz=114
CBN **Corbin Frederi** **66.60 312** IAMs_20 IAMs_20 05 03 01.4
comp=Z,107µm,22.0s
CBN **Corbin Frederi** **66.60 312** P **P** **04 40 48.1 -1.1**
baz=110,SNR=6.1
CBN S S 04 49 52.4 +13
baz=110
CBN **Corbin Frederi** **66.60 312** P **P** **04 40 47.2 -2.0**
baz=110
CBN S **S** **04 49 39.9 +0.6**
baz=110
NCB **Newcomb** **66.61 319** IAmb IAmb 04 41 18.5
comp=Z,470nm,1.6s
NCB **Newcomb** **66.61 319** P **P** **04 40 47.9 -1.2**
baz=115
NCB S **S** **04 49 41.3 +2.1**
baz=115
SDMD **Soldier's Deli** **66.64 314** P **P** **04 40 47.5 -1.8**
SDMD **Soldier's Deli** **66.64 314** P **P** **04 40 48.4 -1.0**
baz=111,SNR=13
SDMD S **S** **04 49 40.1 +0.4**
baz=111
KSPA **Keystone Colle** **66.67 316** IAmb IAmb 04 41 19.0
comp=Z,675nm,1.8s
KSPA **Keystone Colle** **66.67 316** P **P** **04 40 48.5 -1.1**
baz=113
KSPA S **S** **04 49 41.0 +0.9**
baz=113
HDC **Heredia** **66.69 281** *e*P **P** **04 40 50.6 +0.3**
HDC *e*S S 04 49 58.3 +17
TBLU **Trondheim** **66.70 13** *e*P **P** **04 40 50.4 +1.1**
TBLU IVmB_BB 04 41 05.2
comp=Z,7µm,3.6s
TBLU *e*S **S** **04 49 43.4 +3.9**
TBLU *e*SS **SS** **04 53 50.9 -6.6**
TBLU IVMs_BB IVMs_BB 05 10 43.1
comp=Z,22µm,18.6s
PSWB **Penn State Wil** **66.75 316** S **S** **04 49 41.5 +0.4**
baz=112
PAGS **Pennsylvania G** **66.85 315** P **P** **04 40 49.4 -1.3**
PAGS IAmb IAmb 04 41 12.2
comp=Z,431nm,1.4s
R58B **Mineral** **66.90 312** IAmb IAmb 04 41 12.6
comp=Z,386nm,1.3s
R58B **Mineral** **66.90 312** P **P** **04 40 50.0 -1.1**
baz=110,SNR=19
R58B P **P** **04 40 50.0 -1.1**
baz=110,SNR=19
R58B S **S** **04 49 46.6 +3.7**
baz=110
R58B S **S** **04 49 46.6 +3.7**
baz=110
X58A **Rowland** **66.94 308** IAmb IAmb 04 41 09.2
comp=Z,295nm,0.9s
X58A **Rowland** **66.94 308** P **P** **04 40 50.2 -1.2**
baz=107,SNR=6.7
X58A P **P** **04 40 50.2 -1.2**
baz=107,SNR=6.7
X58A S **S** **04 49 43.4 -0.1**
baz=107
X58A S **S** **04 49 43.4 -0.1**
baz=107
DWPF **Disney Wildern** **66.98 301** IAMs_20 IAMs_20 05 03 05.5
comp=Z,88µm,21.0s
DWPF **Disney Wildern** **66.98 301** P **P** **04 40 50.7 -1.0**
baz=103
DWPF S **S** **04 49 46.9 +2.7**
baz=103
DWPF **Disney Wildern** **66.98 301** ⇑P **P** **04 40 54.7 +3.0**
Y58A **Scranton** **67.01 307** IAmb IAmb 04 41 09.5
comp=Z,251nm,0.9s
Y58A **Scranton** **67.01 307** P **P** **04 40 51.1 -0.8**
baz=107,SNR=5.7
Y58A P **P** **04 40 51.1 -0.8**
baz=107,SNR=5.7
Y58A S **S** **04 49 48.0 +3.7**
baz=107
Y58A S **S** **04 49 48.0 +3.7**
baz=107
J58A **Remsen** **67.06 318** IAmb IAmb 04 41 13.5
comp=Z,626nm,1.4s
J58A **Remsen** **67.06 318** P **P** **04 40 51.0 -1.1**
baz=114,SNR=24
J58A P **P** **04 40 51.0 -1.1**
baz=114,SNR=24
J58A S **S** **04 49 46.9 +2.2**
baz=114
J58A S **S** **04 49 46.9 +2.2**
baz=114
ESPN **Las Esperanzas** **67.06 283** IAmb IAmb 04 41 14.4
comp=Z,587nm,1.4s
N58A **Sunbury** **67.07 315** IAmb IAmb 04 41 13.5
comp=Z,296nm,1.1s
N58A **Sunbury** **67.07 315** P **P** **04 40 50.9 -1.2**
baz=112,SNR=22
N58A P **P** **04 40 50.9 -1.2**
baz=112,SNR=22
N58A S **S** **04 49 43.5 -1.3**
baz=112
N58A S **S** **04 49 43.5 -1.3**
baz=112
BINY **Binghamton** **67.07 317** IAmb IAmb 04 41 14.2
comp=Z,672nm,1.4s
BINY IAMs_20 IAMs_20 05 03 32.4
comp=Z,70µm,22.0s
BINY **Binghamton** **67.07 317** P **P** **04 40 51.2 -0.9**
baz=113,SNR=22
BINY S **S** **04 49 45.6 +0.7**
baz=113
BINY **Binghamton** **67.07 317** P **P** **04 40 50.9 -1.2**
baz=113,SNR=22
BINY S **S** **04 49 45.9 +1.0**
baz=113
LONY **Lake Ozonia** **67.11 320** P **P** **04 40 50.2 -2.1**
LONY IAMs_20 IAMs_20 05 05 14.1
comp=Z,89µm,20.0s
LONY **Lake Ozonia** **67.11 320** P **P** **04 40 50.6 -1.8**
baz=115,SNR=5.7
LONY S **S** **04 49 45.2 -0.2**
baz=115
V58A **Windy Hill, Pi** **67.14 309** IAmb IAmb 04 41 10.3
comp=Z,222nm,1.0s
V58A **Windy Hill, Pi** **67.14 309** P **P** **04 40 51.6 -1.1**
baz=108,SNR=5.3
V58A P **P** **04 40 51.6 -1.1**
baz=108,SNR=5.3
V58A S **S** **04 49 46.8 +0.9**
baz=108
V58A S **S** **04 49 46.8 +0.9**
baz=108
BMNY **Brushton-Moira** **67.16 320** P **P** **04 40 51.3 -1.3**
baz=115,SNR=17
BMNY S **S** **04 49 40.6 -5.1**
baz=115

FOMA **Nahampoana Res** **67.19 117** P P 04 41 00.9 +7.8
SNR=9.5
NHSC **New Hope** **67.19 306** IAMs_20 IAMs_20 05 03 06.7
comp=Z,110µm,22.0s
NHSC **New Hope** **67.19 306** P **P** **04 40 52.6 -0.4**
baz=106,SNR=5.9
NHSC S S 04 49 59.0 +12
baz=106
NHSC **New Hope** **67.19 306** P **P** **04 40 50.9 -2.2**
baz=106
NHSC S **S** **04 49 48.2 +1.6**
baz=106
LATQ **La Tuque** **67.20 323** IAmb IAmb 04 41 09.9
comp=Z,396nm,1.0s
ANGG **Ammassalik, Gr** **67.23 351** *i* P P 04 40 58.6 +6.0
ANGG IAmb IAmb 04 41 30.0
comp=Z,208nm,1.4s
SOC **Sochi** **67.23 42** *e*P **P** **04 40 49.5 -3.6**
SOC *e* 04 43 14.9
SOC *e*PPP PPP 04 44 59.3
SOC *e*S **S** **04 49 43.9 -2.8**
SOC pmax pmax
comp=Z,434nm,0.9s
MTSE **Matsula** **67.27 22** *e*P **P** **04 40 50.8 -2.1**
SOR **Soroa** **67.29 295** *e*P **P** **04 40 52.0 -1.8**
P57A **Homestead Farm** **67.51 313** IAmb IAmb 04 41 17.0
comp=Z,509nm,1.5s
P57A **Homestead Farm** **67.51 313** P **P** **04 40 53.9 -1.0**
baz=110,SNR=22
P57A P **P** **04 40 53.9 -1.0**
baz=110,SNR=22
P57A S **S** **04 49 49.1 -1.1**
baz=110
P57A S **S** **04 49 49.1 -1.1**
baz=110
JTS **Las Juntas de** **67.53 281** *i* P **P** **04 40 57.2 +1.6**
JTS pmax pmax
comp=Z,199nm,3.1s
JTS **Las Juntas de** **67.53 281** *e*P P 04 41 05.9 +10
JTS **Las Juntas de** **67.53 281** *e*P **P** **04 40 56.3 +0.7**
JTS *e*S S 04 50 07.8 +16
JTS **Las Juntas de** **67.53 281** ⇑P **P** **04 40 56.9 +1.3**
M57A **Sunshine Farm,** **67.54 316** P **P** **04 40 54.2 -0.9**
baz=112
M57A P **P** **04 40 54.2 -0.9**
baz=112
M57A S **S** **04 49 52.1 +1.5**
baz=112
M57A S **S** **04 49 52.1 +1.5**
baz=112
J57A **Williamstown** **67.55 318** IAmb IAmb 04 41 24.3
comp=Z,294nm,1.3s
J57A **Williamstown** **67.55 318** S **S** **04 49 50.1 -0.5**
baz=113
J57A S **S** **04 49 50.1 -0.5**
baz=113
WCNY **West Carthage** **67.55 319** P **P** **04 40 54.0 -1.1**
baz=114,SNR=15
WCNY S **S** **04 49 50.1 -0.5**
baz=114
257A **Skidaway Islan** **67.58 305** S S 04 50 05.6 +14
baz=105
T57A **Hurt** **67.62 311** IAmb IAmb 04 41 17.3
comp=Z,269nm,1.3s
T57A **Hurt** **67.62 311** P **P** **04 40 54.5 -1.2**
baz=108,SNR=6.1
T57A P **P** **04 40 54.5 -1.2**
baz=108,SNR=6.1
T57A S **S** **04 49 52.6 +0.9**
baz=108
T57A S **S** **04 49 52.6 +0.9**
baz=108
Y57A **Sumter** **67.62 307** IAmb IAmb 04 41 13.6
comp=Z,239nm,0.9s
Y57A **Sumter** **67.62 307** P **P** **04 40 55.1 -0.6**
baz=106
Y57A P **P** **04 40 55.1 -0.6**
baz=106
W57A **Gilead** **67.63 308** P **P** **04 40 54.6 -1.2**
baz=107
W57A P **P** **04 40 54.6 -1.2**
baz=107
W57A S **S** **04 49 51.3 -0.6**
baz=107
W57A S **S** **04 49 51.3 -0.6**
baz=107
S57A **Dark Hollow, R** **67.63 311** IAmb IAmb 04 41 17.6
comp=Z,397nm,1.3s
S57A **Dark Hollow, R** **67.63 311** P **P** **04 40 54.8 -0.9**
baz=109,SNR=11
S57A P **P** **04 40 54.8 -0.9**
baz=109,SNR=11
S57A S **S** **04 49 52.7 +0.9**
baz=109
S57A S **S** **04 49 52.7 +0.9**
baz=109
K57A **Scipio Center** **67.64 317** IAmb IAmb 04 41 24.9
comp=Z,669nm,1.8s
K57A **Scipio Center** **67.64 317** S **S** **04 49 49.2 -2.5**
baz=112
TRQ **Mont Tremblant** **67.78 321** IAmb IAmb 04 41 13.6
comp=Z,328nm,1.0s
SSPA **Standing Stone** **67.82 315** P **P** **04 40 54.8 -2.1**
SSPA **Standing Stone** **67.82 315** IAMs_20 IAMs_20 05 04 32.5
comp=Z,68µm,21.0s
SSPA **Standing Stone** **67.82 315** P **P** **04 40 55.8 -1.1**
baz=111,SNR=17
SSPA S **S** **04 50 02.2 +8.3**
baz=111
SSPA **Standing Stone** **67.82 315** P **P** **04 40 55.5 -1.4**
baz=111
SSPA S **S** **04 49 54.7 +0.8**
baz=111
SSPA **Standing Stone** **67.82 315** ⇓P **P** **04 40 55.5 -1.4**
BIRD **Birdtown, Kers** **67.85 308** IAmb IAmb 04 41 19.1
comp=Z,374nm,1.4s
BIRD **Birdtown, Kers** **67.85 308** P **P** **04 40 56.4 -0.8**
baz=106,SNR=7.9
BIRD S S 04 50 06.6 +12
baz=106
SCHQ **Schefferville** **67.89 332** P **P** **04 40 55.8 -1.3**
comp=Z,26nm,1.1s,baz=121,slow=7.8,SNR=12
comp=Z,26nm,1.1s
SCHQ **Schefferville** **67.89 332** ⇑P **P** **04 40 56.0 -1.0**
ACON **Accyapa** **67.89 283** *e*P **P** **04 40 59.0 +1.2**
J56A **Wolcott** **68.08 318** IAmb IAmb 04 41 20.0
comp=Z,395nm,1.2s
J56A **Wolcott** **68.08 318** S **S** **04 49 55.5 -1.4**
baz=112
J56A S **S** **04 49 55.5 -1.4**
baz=112
456A **Hilliard** **68.09 303** S S 04 50 08.8 +11
baz=104
L56A **Greenwood** **68.13 316** P **P** **04 40 57.5 -1.3**
L56A IAmb IAmb 04 41 20.3
comp=Z,239nm,1.0s
L56A **Greenwood** **68.13 316** P **P** **04 40 57.7 -1.2**
baz=111,SNR=16
L56A P **P** **04 40 57.7 -1.2**
baz=111,SNR=16
L56A S **S** **04 49 57.2 -0.5**
baz=111
L56A S **S** **04 49 57.2 -0.5**
baz=111
GAC **Glen Almond** **68.14 320** ⇓P **P** **04 40 56.9 -1.8**
RAF **Rauma** **68.18 20** *e*P **P** **04 40 56.6 -2.1**
NSS **Namsos** **68.19 13** *e*P **P** **04 40 57.6 -1.0**
NSS IVmB_BB 04 41 14.5
comp=Z,9µm,3.5s
NSS *e* 04 50 12.2
NSS IVMs_BB IVMs_BB 05 09 60.0
comp=Z,20µm,15.7s
656A **Willston** **68.21 302** S S 04 50 08.1 +9.2
baz=103
VSU **Vasula** **68.22 23** *i* P **P** **04 40 56.8 -2.2**
VSU pmax pmax
comp=Z,163nm,1.0s
VSU MLR MLR
comp=Z,157µm,18.0s
VSU **Vasula** **68.22 23** *e*P **P** **04 40 57.0 -2.0**
USHA **Ushuaia** **68.25 209** LR LR 05 05 52.4
comp=Z,49µm,21.1s,baz=52,slow=32
U56A **King** **68.28 310** P **P** **04 40 59.2 -0.7**
baz=107,SNR=5.2
U56A P **P** **04 40 59.2 -0.7**
baz=107,SNR=5.2
U56A S **S** **04 49 58.9 -0.8**
baz=107
U56A S **S** **04 49 58.9 -0.8**
baz=107
SBV **Sambava** **68.35 104** P **P** **04 41 04.6 +4.0**
SNR=6.4
JSC **Jenkinsville** **68.39 307** IAmb IAmb 04 41 18.5
comp=Z,202nm,1.0s
JSC **Jenkinsville** **68.39 307** P **P** **04 40 59.4 -1.1**
baz=106,SNR=16
JSC S **S** **04 50 06.5 +5.6**
baz=106
HAW **Hawthorne Fire** **68.42 306** P **P** **04 40 60.0 -0.8**
baz=105
HAW S **S** **04 50 02.5 +1.2**
baz=105
MEF **Metsahovi** **68.52 21** *e*P **P** **04 40 59.0 -1.8**
BLA **Blacksburg** **68.57 310** IAmb IAmb 04 41 23.8
comp=Z,600nm,1.4s
BLA **Blacksburg** **68.57 310** P **P** **04 41 01.0 -0.7**
baz=108,SNR=15
BLA S S 04 50 19.5 +16
baz=108
BLA **Blacksburg** **68.57 310** P **P** **04 41 00.4 -1.4**
baz=108
BLA S **S** **04 50 04.5 +1.4**
baz=108
MMNY **Mt. Morris Dam** **68.59 317** IAmb IAmb 04 41 30.8
comp=Z,577nm,1.4s
PSDB **Penn State Uni** **68.61 315** S **S** **04 50 03.7 +0.3**
baz=110
R55A **Marlinton** **68.67 312** IAmb IAmb 04 41 32.9
comp=Z,776nm,1.7s
R55A **Marlinton** **68.67 312** P **P** **04 41 01.9 -0.4**
baz=108,SNR=8.7
R55A P **P** **04 41 01.9 -0.4**
baz=108,SNR=8.7
R55A S **S** **04 50 04.8 +0.4**
baz=108
R55A S **S** **04 50 04.8 +0.4**
baz=108
KMSC **Kings Mountain** **68.68 308** P **P** **04 40 60.0 -2.4**
KMSC IAmb IAmb 04 41 20.3
comp=Z,246nm,0.9s
KMSC **Kings Mountain** **68.68 308** P **P** **04 41 01.7 -0.7**
baz=106,SNR=19
KMSC S **S** **04 50 03.4 -1.0**
baz=106
KMSC **Kings Mountain** **68.68 308** P **P** **04 41 01.3 -1.1**
baz=106
KMSC S **S** **04 50 05.7 +1.3**
baz=106
MATN **Matagalpa** **68.71 284** IAmb IAmb 04 41 20.6
comp=Z,778nm,1.9s
J55A **Hilton** **68.72 317** S **S** **04 50 05.1 +0.5**
baz=112
J55A S **S** **04 50 05.1 +0.5**
baz=112
M55A **Ridgway** **68.74 315** IAmb IAmb 04 41 32.0
comp=Z,651nm,1.4s
M55A **Ridgway** **68.74 315** P **P** **04 41 01.2 -1.5**
baz=110,SNR=32
M55A P **P** **04 41 01.2 -1.5**
baz=110,SNR=32
M55A S **S** **04 50 06.5 +1.7**
baz=110
M55A S **S** **04 50 06.5 +1.7**
baz=110
255A **Hazlehurst** **68.76 304** IAmb IAmb 04 41 21.1
comp=Z,347nm,0.9s
255A **Hazlehurst** **68.76 304** P **P** **04 41 02.4 -0.5**
baz=104
255A S **S** **04 50 07.4 +2.0**
baz=104
V55A **Taylorsville** **68.79 309** IAmb IAmb 04 41 21.2
comp=Z,315nm,1.1s
V55A **Taylorsville** **68.79 309** P **P** **04 41 01.9 -1.2**
baz=106,SNR=30
V55A P **P** **04 41 01.9 -1.2**
baz=106,SNR=30
V55A S **S** **04 50 06.9 +1.2**
baz=106
V55A S **S** **04 50 06.9 +1.2**
baz=106
NUUK **Nuuk** **68.90 345** *i* P P 04 41 09.2 +6.1
NUUK IAmb IAmb 04 41 35.6
comp=Z,293nm,1.4s
MCWV **Mont Chateau** **68.91 313** IAMs_20 IAMs_20 05 06 42.3
comp=Z,56µm,19.0s
MCWV **Mont Chateau** **68.91 313** P **P** **04 41 02.8 -0.9**
baz=109,SNR=7.4
MCWV S **S** **04 50 09.0 +2.1**
baz=109
MCWV **Mont Chateau** **68.91 313** P **P** **04 41 02.2 -1.5**
baz=109,SNR=7.4
MCWV S **S** **04 50 07.1 +0.2**
baz=109
WVNY **West Valley, N** **68.95 316** P **P** **04 41 03.0 -1.0**
baz=111,SNR=25
WVNY S **S** **04 50 07.2 -0.2**
baz=111
PAULI **Pauline** **68.97 308** P **P** **04 41 03.2 -1.0**
baz=106,SNR=7.4
PAULI S **S** **04 50 08.0 +0.2**
baz=106
DELO **Deloro Mine** **69.06 319** IAmb IAmb 04 41 21.9
comp=Z,249nm,1.0s
MEDO **Medina** **69.12 317** IAmb IAmb 04 41 34.0
comp=Z,356nm,1.1s
HODGE **Hodges** **69.17 307** IAmb IAmb 04 41 27.6
comp=Z,397nm,1.4s
HODGE **Hodges** **69.17 307** P **P** **04 41 04.4 -1.0**
baz=105,SNR=8.0
HODGE S **S** **04 50 13.4 +3.2**
baz=105
SHA1 **Shidzhatmaz** **69.26 42***c i*P **P** **04 41 04.4 -1.7**
J54A **Appleton** **69.29 317** S **S** **04 50 14.1 +2.9**
baz=111
J54A S **S** **04 50 14.1 +2.9**
baz=111
UPAO **U. Pittsburgh** **69.30 314** P **P** **04 41 05.4 -0.8**
baz=109
UPAO S **S** **04 50 09.3 -2.2**
baz=109
KIV **Kislovodsk** **69.36 42** ⇑P **P** **04 41 04.9 -1.6**
KIV **Kislovodsk** **69.36 42** P **P** **04 41 04.3 -2.2**
KIV **Kislovodsk** **69.36 42** *e*P **P** **04 41 04.2 -2.3**
KIV *e* 04 43 39.7
KIV *e*S **S** **04 50 10.3 -2.0**
KIV *e*SS **SS** **04 54 36.7 -3.0**
KIV pmax pmax
comp=Z,86nm,1.1s
KIV pmax pmax
comp=Z,207nm,4.3s
KIV MLR MLR
comp=Z,25µm,17.0s
KIV **Kislovodsk** **69.36 42** P **P** **04 41 04.8 -1.8**
KIV S **S** **04 50 15.3 +3.0**
KIV **Kislovodsk** **69.36 42** *i* P **P** **04 41 04.3 -2.2**
SNR=48
KIV **Kislovodsk** **69.36 42** ⇑P **P** **04 41 04.7 -1.8**
KVAR **Kislovodsk Arr** **69.37 42** LR LR 05 14 31.4
comp=Z,14µm,19.6s,slow=39
KBZ **Khabaz** **69.42 42** P **P** **04 41 05.2 -1.5**
comp=Z,77nm,0.9s,baz=253,slow=4.2,SNR=92
KBZ LR LR 05 13 54.1
comp=Z,29µm,20.0s,baz=264,slow=38
comp=Z,77nm,0.9s
KBZ **Khabaz** **69.42 42***c e*P **P** **04 41 04.2 -2.6**
KBZ pmax pmax
comp=Z,238nm,1.0s
KBZ MLR MLR
comp=Z,32µm,19.0s
CNGN **Cerro Negro** **69.42 283** *e*P **P** **04 41 09.8 +2.4**
Q54A **Coxs Mills** **69.42 312** IAmb IAmb 04 41 29.0
comp=Z,506nm,1.3s
Q54A **Coxs Mills** **69.42 312** P **P** **04 41 05.9 -1.0**
baz=108,SNR=30
Q54A P **P** **04 41 05.9 -1.0**
baz=108,SNR=30
Q54A S **S** **04 50 13.6 +0.6**
baz=108
Q54A S **S** **04 50 13.6 +0.6**
baz=108
S54A **Dingess, Beckl** **69.42 311** IAmb IAmb 04 41 24.8
comp=Z,226nm,0.9s
S54A **Dingess, Beckl** **69.42 311** P **P** **04 41 05.9 -1.1**
baz=107,SNR=17
S54A P **P** **04 41 05.9 -1.1**

baz=107,SNR=17
S54A S **S** **04 50 13.6 +0.4**
baz=107
S54A S **S** **04 50 13.6 +0.4**
baz=107
U54A Nelsons Funny 69.44 309 IAmb IAmb 04 41 25.3
comp=Z,256nm,0.9s
U54A Nelsons Funny 69.44 309 P **P** **04 41 06.3 -0.9**
baz=106,SNR=14
U54A P **P** **04 41 06.3 -0.9**
baz=106,SNR=14
U54A S **S** **04 50 15.1 +1.6**
baz=106
U54A S **S** **04 50 15.1 +1.6**
baz=106
154A Montrose 69.45 305 S **S** **04 50 17.9 +4.4**
baz=104
O54A Avella 69.46 313 P **P** **04 41 05.9 -1.2**
baz=109
O54A P **P** **04 41 05.9 -1.2**
baz=109
O54A S **S** **04 50 14.5 +1.1**
baz=109
O54A S **S** **04 50 14.5 +1.1**
baz=109
GNI Garni 69.49 47 P **P** **04 41 06.0 -1.6**
comp=Z,72nm,1.0s,baz=184,slow=2.0,SNR=38
GNI LR LR 05 14 29.9
comp=Z,24µm,18.7s,baz=270,slow=39
comp=Z,72nm,1.0s
GNI Garni 69.49 47 P **P** **04 41 05.3 -2.3**
GNI Garni 69.49 47 *ce*P **P** **04 41 05.8 -1.7**
GNI pmax pmax
comp=Z,103nm,1.0s
GNI Garni 69.49 47 P **P** **04 41 06.2 -1.4**
GNI P **P** **04 41 06.2 -1.4**
GNI S **S** **04 50 09.8 -4.4**
GNI S **S** **04 50 09.8 -4.4**
GNI Garni 69.49 47 P **P** **04 41 05.9 -1.7**
GNI Garni 69.49 47 ⇑P **P** **04 41 05.9 -1.6**
DY2G Dye2 69.55 348 *i* P **P** **04 41 07.1 -0.3**
DY2G IAmb IAmb 04 41 34.5
comp=Z,2µm,1.9s
DY2G Dye2 69.55 348 ⇑P **P** **04 41 06.7 -0.8**
TIGA Tifton 69.57 304 IAmb IAmb 04 41 26.3
comp=Z,381nm,1.0s
TIGA Tifton 69.57 304 P **P** **04 41 07.1 -0.9**
baz=103
TIGA S S 04 50 31.9 +17
baz=103
TIGA Tifton 69.57 304 P **P** **04 41 06.7 -1.3**
baz=103
TIGA S **S** **04 50 19.4 +4.4**
baz=103
NAX Nakhchivan 69.74 48 P **P** **04 41 07.9 -1.1**
ALLY Alegheny Colle 69.77 315 IAmb IAmb 04 41 30.6
comp=Z,501nm,1.2s
ALLY Alegheny Colle 69.77 315 P **P** **04 41 07.8 -1.3**
baz=109
ALLY S **S** **04 50 19.2 +2.1**
baz=109
ZEI Tsey 69.77 44 *e*P **P** **04 41 05.6 -3.7**
ZEI pmax pmax
comp=Z,510nm,1.7s
CRIN San Cristobal 69.78 284 *e*P P 04 41 19.6 +10
ERPA Erie 69.82 316 P **P** **04 41 06.8 -2.5**
ERPA IAmb IAmb 04 41 30.7
comp=Z,331nm,1.1s
ERPA Erie 69.82 316 P **P** **04 41 07.8 -1.5**
baz=110
ERPA S **S** **04 50 18.8 +1.2**
baz=110
ERPA Erie 69.82 316 P **P** **04 41 07.8 -1.5**
baz=110
ERPA S **S** **04 50 17.4 -0.2**
baz=110
BG3 Lake Jocassee 69.90 308 IAmb IAmb 04 41 32.2
comp=Z,801nm,1.5s
CASEE Lake Jocassee 69.90 308 P **P** **04 41 09.4 -0.6**
baz=105,SNR=25
CASEE S **S** **04 50 20.7 +1.9**
baz=105
GOGA Godfrey 69.93 306 IAMs_20 IAMs_20 05 05 02.3
comp=Z,94µm,21.0s
GOGA Godfrey 69.93 306 P **P** **04 41 09.1 -1.1**
baz=104
GOGA S **S** **04 50 20.9 +1.7**
baz=104
GOGA Godfrey 69.93 306 P **P** **04 41 09.0 -1.1**
baz=104
GOGA S **S** **04 50 19.9 +0.6**
baz=104
FINES FINESS Array B 69.97 21 P **P** **04 41 07.8 -1.9**
comp=Z,30nm,0.6s,baz=205,slow=4.7,SNR=148
FINES LR LR 05 11 56.3
comp=Z,52µm,20.7s,baz=234,slow=36
comp=Z,30nm,0.6s
FIA1 FINESS Array S 69.97 21 IAmb IAmb 04 41 26.4
comp=Z,827nm,1.5s
P53A Whipple 69.98 312 P **P** **04 41 09.3 -1.1**
baz=108,SNR=7.0
P53A P **P** **04 41 09.3 -1.1**
baz=108,SNR=7.0
P53A S **S** **04 50 24.7 +5.1**
baz=108
P53A S **S** **04 50 24.7 +5.1**
baz=108
V53A Saluda 69.99 308 IAmb IAmb 04 41 28.4
comp=Z,214nm,0.9s
V53A Saluda 69.99 308 P **P** **04 41 09.2 -1.4**
baz=105,SNR=34
V53A P **P** **04 41 09.2 -1.4**
baz=105,SNR=34
V53A S S 04 50 31.0 +11
baz=105
V53A S S 04 50 31.0 +11
baz=105
N53A Lisbon 69.99 314 P **P** **04 41 09.6 -0.8**
baz=108
N53A P **P** **04 41 09.6 -0.8**
baz=108
N53A S **S** **04 50 23.4 +3.7**
baz=108
N53A S **S** **04 50 23.4 +3.7**
baz=108
GOF Gofitskoye 70.00 41 ⇑*e*P **P** **04 41 08.5 -1.9**
GOF *e*S S 04 50 36.2 +17
GOF pmax pmax
comp=Z,336nm,1.0s
R53A Hurricane 70.06 311 P **P** **04 41 09.6 -1.3**
baz=107,SNR=12
R53A P **P** **04 41 09.6 -1.3**
baz=107,SNR=12
R53A S **S** **04 50 21.7 +1.1**
baz=107
R53A S **S** **04 50 21.7 +1.1**
baz=107
GUDG Gudauri 70.06 44 P **P** **04 41 08.7 -2.4**
GUDG IAmb IAmb 04 41 27.8
comp=Z,847nm,1.5s
GUDG Gudauri 70.06 44 P **P** **04 41 08.7 -2.4**
GUDG pmax pmax
comp=Z,847nm,1.5s
M53A WI Miller and 70.08 315 IAMs_20 IAMs_20 05 06 23.1
comp=Z,69µm,20.0s
M53A WI Miller and 70.08 315 P **P** **04 41 09.3 -1.6**
baz=109,SNR=11
M53A S **S** **04 50 20.5 -0.2**
baz=109
O53A New Philadelph 70.09 313 IAmb IAmb 04 41 32.9
comp=Z,476nm,1.2s
O53A IAMs_20 IAMs_20 05 07 28.6
comp=Z,62µm,19.0s
O53A New Philadelph 70.09 313 P **P** **04 41 09.8 -1.2**
baz=108,SNR=29
O53A S **S** **04 50 20.6 -0.3**
baz=108
KONS Konsvik 70.11 13 IVmB_BB 04 41 26.6
comp=Z,8µm,3.3s
KONS *e*PP **PP** **04 43 45.7 -0.2**
KONS *e* 04 50 30.7
KONS IVMs_BB IVMs_BB 05 19 52.4
comp=Z,19µm,18.2s
TGUH Tegucigalpa,Un 70.12 285 IAmb IAmb 04 41 29.5
comp=Z,529nm,1.1s
TGUH Tegucigalpa,Un 70.12 285 *e*P **P** **04 41 11.8 0.0**
TGUH Tegucigalpa,Un 70.12 285 ⇓P **P** **04 41 10.4 -1.4**

MOR8 Moi Rana 70.14 13 *e*P **P** **04 41 10.2 -0.6**
MOR8 IVmB_BB 04 41 27.4
comp=Z,10µm,3.5s
MOR8 *e* 04 50 38.1
MOR8 IVMs_BB IVMs_BB 05 12 06.3
comp=Z,22µm,16.0s
SADO Sadowa 70.16 318 P **P** **04 41 09.4 -2.0**
comp=Z,32nm,1.0s,baz=109,slow=3.9,SNR=11
SADO LR LR 05 05 44.1
comp=Z,85µm,22.0s,baz=158,slow=31
comp=Z,32nm,1.0s
SADO Sadowa 70.16 318 IAmb IAmb 04 41 41.0
comp=Z,693nm,1.6s
SADO Sadowa 70.16 318 ⇓P **P** **04 41 09.5 -1.8**
VSR Storozhevoye 70.17 34 *e*P **P** **04 41 08.6 -2.6**
VSR *e* 04 41 24.6
VSR *e*S **S** **04 50 16.5 -4.7**
VSR pmax pmax
comp=Z,140nm,1.2s
VSR smax smax
comp=N,10µm,11.4s
VSR MLR MLR
comp=Z,44nm,19.0s
VLDQ Val d'Or 70.36 322 IAmb IAmb 04 41 43.3
comp=Z,346nm,1.4s
VORR Voronezh 70.39 34 *e*P **P** **04 41 09.8 -2.8**
VORR pmax pmax
comp=Z,180nm,1.0s
Q52A Bidwell 70.48 312 IAmb IAmb 04 41 35.2
comp=Z,633nm,1.4s
Q52A Bidwell 70.48 312 P **P** **04 41 12.4 -1.0**
baz=107
Q52A P **P** **04 41 12.4 -1.0**
baz=107
Q52A S **S** **04 50 27.1 +1.6**
baz=107
Q52A S **S** **04 50 27.1 +1.6**
baz=107
O52A Adamsville 70.50 313 P **P** **04 41 12.4 -1.1**
baz=108,SNR=26
O52A P **P** **04 41 12.4 -1.1**
baz=108,SNR=26
O52A S **S** **04 50 23.7 -2.0**
baz=108
O52A S **S** **04 50 23.7 -2.0**
baz=108
Y52A Lilburn 70.53 306 IAmb IAmb 04 41 32.1
comp=Z,284nm,1.0s
Y52A Lilburn 70.53 306 P **P** **04 41 13.0 -0.8**
baz=104,SNR=26
Y52A P **P** **04 41 13.0 -0.8**
baz=104,SNR=26
Y52A S **S** **04 50 27.4 +1.2**
baz=104
Y52A S **S** **04 50 27.4 +1.2**
baz=104
P52A Corning 70.58 312 IAmb IAmb 04 41 43.4
comp=Z,887nm,1.7s
P52A IAMs_20 IAMs_20 05 05 57.5
comp=Z,89µm,22.0s
P52A Corning 70.58 312 P **P** **04 41 12.0 -2.0**
baz=107,SNR=23
P52A S **S** **04 50 25.1 -1.5**
baz=107
VNA1 Neumayer--Stat 70.58 177 P **P** **04 41 14.9 +1.5**
M52A Chesterland 70.60 315 IAmb IAmb 04 41 35.5
comp=Z,315nm,1.3s
M52A Chesterland 70.60 315 S **S** **04 50 27.8 +1.0**
baz=108
M52A S **S** **04 50 27.8 +1.0**
baz=108
SCO Scoresbysund 70.64 359 *i* P **P** **04 41 17.9 +4.1**
SCO IAmb IAmb 04 41 31.4
comp=Z,2µm,3.0s
V52A Sevierville 70.65 308 IAmb IAmb 04 41 31.2
comp=Z,935nm,2.0s
V52A Sevierville 70.65 308 P **P** **04 41 13.1 -1.4**
baz=105,SNR=16
V52A S **S** **04 50 29.5 +1.9**
baz=105
OBN Obninsk 70.67 30 ⇑P **P** **04 41 11.5 -2.6**
OBN Obninsk 70.67 30 P **P** **04 41 11.9 -2.2**
comp=Z,11nm,0.9s,baz=56,slow=22,SNR=13
OBN LR LR 05 15 07.8
comp=Z,20µm,18.9s,baz=232,slow=38
comp=Z,11nm,0.9s
OBN Obninsk 70.67 30 P **P** **04 41 10.7 -3.5**
OBN IAMs_20 IAMs_20 05 14 45.6
comp=Z,79µm,19.0s
OBN Obninsk 70.67 30 *ce*P **P** **04 41 11.3 -2.8**
OBN *e* 04 41 38.1
OBN *e* 04 43 53.7
OBN *e*S **S** **04 50 27.2 +0.3**
OBN *e*SS **SS** **04 54 59.1 +0.1**
OBN pmax pmax
comp=Z,65nm,1.0s
OBN MLR MLR
comp=Z,79µm,18.0s
OBN Obninsk 70.67 30 ⇑P **P** **04 41 11.3 -2.8**
LPSR Galich'ya Gora 70.67 33 *e*P **P** **04 41 10.9 -3.3**
LPSR *e* 04 41 27.6
LPSR *e*S **S** **04 50 26.0 -1.1**
LPSR pmax pmax
comp=Z,100nm,1.0s
LPSR smax smax
comp=N,12µm,11.3s
LPSR MLR MLR
comp=Z,42µm,15.0s
352A Blakely 70.69 304 P **P** **04 41 14.6 -0.3**
baz=102,SNR=19
W52A Murphy 70.72 307 IAmb IAmb 04 41 37.0
comp=Z,806nm,1.7s
W52A Murphy 70.72 307 P **P** **04 41 14.5 -0.5**
baz=104,SNR=6.3
W52A S **S** **04 50 28.5 +0.1**
baz=104
TKL Tuckaleechee C 70.74 308 LR LR 05 05 57.7
comp=Z,68µm,21.7s,baz=120,slow=31
TKL Tuckaleechee C 70.74 308 P **P** **04 41 14.3 -0.8**
baz=105,SNR=19
TKL S **S** **04 50 29.3 +0.7**
baz=105
SAKB Bahrain 70.74 62 P **P** **04 41 14.0 -1.2**
SAKB S **S** **04 50 34.2 +5.3**
ICESG Greenland Ices 70.76 352 *i* P **P** **04 41 13.9 -1.0**
ICESG IAmb IAmb 04 41 55.6
comp=Z,3µm,3.0s
ICESG Greenland Ices 70.76 352 ⇑P **P** **04 41 14.2 -0.7**
152A Waverly Hall 70.78 305 IAmb IAmb 04 41 37.6
comp=Z,528nm,1.6s
152A Waverly Hall 70.78 305 P **P** **04 41 14.6 -0.8**
baz=103,SNR=8.9
152A S **S** **04 50 32.4 +3.2**
baz=103
SMRA Abu-Samra 70.79 64 P **P** **04 41 14.5 -1.1**
SMRA S **S** **04 50 31.0 +1.5**
TZTN Tazewell 70.79 309 IAmb IAmb 04 41 32.4
comp=Z,778nm,1.9s
TZTN IAMs_20 IAMs_20 05 06 08.6
comp=Z,73µm,21.0s
TZTN Tazewell 70.79 309 P **P** **04 41 14.7 -0.7**
baz=105,SNR=12
TZTN S **S** **04 50 31.0 +1.8**
baz=105
TZTN Tazewell 70.79 309 P **P** **04 41 14.1 -1.3**
baz=105
TZTN S **S** **04 50 32.0 +2.8**
baz=105
GANJ Ganja 70.80 46 P **P** **04 41 13.9 -1.5**
VNA2 Neumayer--Watz 70.91 176 P **P** **04 41 16.0 +0.6**
baz=333,slow=6.0
SFJD Kangerlussuaq 70.93 347 P **P** **04 41 14.5 -1.0**
comp=Z,17nm,0.8s,baz=143,slow=10,SNR=4.0
SFJD LR LR 05 07 43.3
comp=Z,35µm,18.0s,baz=156,slow=32
comp=Z,17nm,0.8s
SFJD Kangerlussuaq 70.93 347 P **P** **04 41 13.9 -1.6**
SFJD Kangerlussuaq 70.93 347 IAMs_20 IAMs_20 05 03 54.9
comp=Z,54µm,20.0s
SFJD Kangerlussuaq 70.93 347 *i* P **P** **04 41 14.8 -0.7**
SFJD IAmb IAmb 04 41 45.7
comp=Z,218nm,1.0s
SFJD Kangerlussuaq 70.93 347 ⇑P P 04 41 25.3 +10
VNA3 Neumayer Olymp 71.10 177 P **P** **04 41 17.2 +0.6**
SHMA Al-Shehemyia 71.10 63 P **P** **04 41 15.8 -1.6**
SHMA S **S** **04 50 31.7 -1.3**
S51A Beattyville 71.11 310 IAmb IAmb 04 41 41.0
comp=Z,313nm,1.1s
S51A Beattyville 71.11 310 P **P** **04 41 16.6 -0.7**
baz=105,SNR=34
S51A P **P** **04 41 16.6 -0.7**
baz=105,SNR=34
S51A S **S** **04 50 32.3 -0.6**
baz=105
S51A S **S** **04 50 32.3 -0.6**
baz=105
N51A Ashland 71.14 314 IAmb IAmb 04 41 39.1
comp=Z,413nm,1.1s
N51A Ashland 71.14 314 P **P** **04 41 16.6 -0.8**
baz=107,SNR=20
N51A P **P** **04 41 16.6 -0.8**
baz=107,SNR=20
N51A S **S** **04 50 32.4 -0.6**
baz=107
N51A S **S** **04 50 32.4 -0.6**
baz=107
P51A Williamsport 71.22 312 IAmb IAmb 04 41 35.5
comp=Z,333nm,1.2s
P51A Williamsport 71.22 312 P **P** **04 41 16.6 -1.3**
baz=106,SNR=11
P51A P **P** **04 41 16.6 -1.3**
baz=106,SNR=11
P51A S **S** **04 50 30.8 -3.2**
baz=106
P51A S **S** **04 50 30.8 -3.2**
baz=106
GROC Groznyy 71.22 44 *e*P **P** **04 41 15.2 -2.6**
GROC *e* 04 41 35.9
GROC *e* 04 43 53.6
GROC *e*S **S** **04 50 28.8 -5.1**
GROC pmax pmax
comp=Z,676nm,1.2s
V51A Loudon 71.23 308 IAmb IAmb 04 41 40.0
comp=Z,971nm,1.7s
V51A Loudon 71.23 308 P **P** **04 41 17.3 -0.7**
baz=104,SNR=26
V51A S **S** **04 50 34.4 +0.1**
baz=104
CPCT Cooper Cave 71.28 308 IAmb IAmb 04 41 40.2
comp=Z,452nm,1.6s
Z51A Franklin 71.30 305 P **P** **04 41 17.7 -0.8**
baz=103,SNR=6.7
Z51A S **S** **04 50 35.5 +0.3**
baz=103
Q51A Peebles 71.30 312 P **P** **04 41 17.4 -1.1**
baz=106,SNR=22
Q51A P **P** **04 41 17.4 -1.1**
baz=106,SNR=22
Q51A S **S** **04 50 34.1 -0.9**
baz=106
Q51A S **S** **04 50 34.1 -0.9**
baz=106
FAUS Fauske 71.32 13 *e*P **P** **04 41 17.0 -0.9**
FAUS IVmB_BB 04 41 33.9
comp=Z,8µm,3.4s
FAUS *e* 04 50 41.9
FAUS IVMs_BB IVMs_BB 05 13 56.2
comp=Z,29µm,16.7s
X51A Calhoun 71.33 307 P **P** **04 41 17.5 -1.1**
baz=104,SNR=33
X51A P **P** **04 41 17.5 -1.1**
baz=104,SNR=33
X51A S **S** **04 50 35.7 +0.2**
baz=104
X51A S **S** **04 50 35.7 +0.2**
baz=104
JMIC Jan Mayen 71.36 3 LR LR 05 10 24.5
comp=Z,13µm,18.5s,baz=180,slow=34
JMIC Jan Mayen 71.36 3 *e*P **P** **04 41 18.7 +0.6**
JMIC *e* 04 50 48.8
ACSO Alum Creek Sta 71.38 313 IAmb IAmb 04 41 36.5
comp=Z,267nm,0.9s
ACSO IAMs_20 IAMs_20 05 12 14.7
comp=Z,72nm,18.0s
ACSO Alum Creek Sta 71.38 313 P **P** **04 41 17.6 -1.2**
baz=107,SNR=34
ACSO S **S** **04 50 35.3 -0.5**
baz=107
ACSO Alum Creek Sta 71.38 313 P **P** **04 41 17.6 -1.2**
baz=107,SNR=34
ACSO S **S** **04 50 36.5 +0.7**
baz=107
MNGR Mingechevir, A 71.39 47 P **P** **04 41 18.0 -0.9**
MOS Moscow 71.50 29 *e*P **P** **04 41 15.4 -3.8**
MOS *e* 04 41 33.0
MOS *e* 04 43 57.2
MOS *e*S **S** **04 50 34.5 -2.1**
MOS *e* 04 51 13.0
MOS pmax pmax
comp=Z,2µm,2.2s
MOS pmax pmax
comp=Z,720nm,1.5s
MOS smax smax
comp=N,14µm,5.6s
MOS smax smax
comp=E,4µm,5.1s
MOS MLR MLR
comp=Z,61nm,18.0s
MOS MLR MLR
comp=E,28µm,19.0s
MOS MLR MLR
comp=N,53µm,18.0s
LOF Lofoten 71.57 12 *e*P **P** **04 41 20.8 +1.3**
LOF IVmB_BB 04 41 35.2
comp=Z,8µm,3.6s
LOF *e* 04 50 51.9
SEKA Sheki 71.60 46 P **P** **04 41 18.0 -2.2**
VRH Novokhopyorsk 71.61 35 *e*P **P** **04 41 16.6 -3.4**
VRH *e* 04 41 33.8
VRH *e*S **S** **04 50 30.8 -7.2**
VRH pmax pmax
comp=Z,40nm,1.2s
VRH smax smax
comp=N,13µm,11.8s
VRH MLR MLR
comp=Z,43nm,17.0s
TEIG Tepich 71.75 291 P **P** **04 41 19.5 -1.9**
TEIG Tepich 71.75 291 *e*P P 04 41 33.4 +12
TEIG Tepich 71.75 291 ⇓P **P** **04 41 19.6 -1.9**
M50A Fremont 71.76 314 IAmb IAmb 04 41 38.7
comp=Z,256nm,0.8s
M50A Fremont 71.76 314 P **P** **04 41 20.2 -0.9**
baz=107,SNR=10
M50A P **P** **04 41 20.2 -0.9**
baz=107,SNR=10
M50A S **S** **04 50 39.7 -0.5**
baz=107
M50A S **S** **04 50 39.7 -0.5**
baz=107
STEI Steigen 71.76 13 *e*P **P** **04 41 19.5 -1.0**
STEI IVmB_BB 04 41 36.5
comp=Z,8µm,3.5s
STEI *e*S **S** **04 50 43.2 +4.0**
STEI IVMs_BB IVMs_BB 05 11 37.5
comp=Z,23µm,17.4s
R50A Paris 71.84 311 IAmb IAmb 04 41 43.6
comp=Z,507nm,1.3s
R50A Paris 71.84 311 P **P** **04 41 20.7 -1.0**
baz=105,SNR=34
R50A P **P** **04 41 20.7 -1.0**
baz=105,SNR=34
R50A S **S** **04 50 42.3 +1.0**
baz=105
R50A S **S** **04 50 42.3 +1.0**
baz=105
W50A Signal Mountai 71.84 307 IAmb IAmb 04 41 43.7
comp=Z,621nm,1.3s
W50A Signal Mountai 71.84 307 P **P** **04 41 20.9 -0.9**
baz=104,SNR=33
W50A S **S** **04 50 41.6 +0.1**
baz=104
K50A Casco 71.88 316 IAmb IAmb 04 41 51.0
comp=Z,855nm,1.4s
K50A Casco 71.88 316 P **P** **04 41 20.7 -1.1**
baz=108,SNR=5.9
K50A P **P** **04 41 20.7 -1.1**
baz=108,SNR=5.9
K50A S **S** **04 50 42.4 +1.0**
baz=108
K50A S **S** **04 50 42.4 +1.0**
baz=108
250A Grady 71.91 304 IAmb IAmb 04 41 40.3
comp=Z,656nm,1.1s
250A Grady 71.91 304 P **P** **04 41 21.2 -1.0**

	baz=102,SNR=20								
250A					S	**S**	**04 50 43.4**	**+1.1**	
	baz=102								
T50A	**Nancy**	**71.91**	**309**		P	**P**	**04 41 21.2**	**-0.9**	
	baz=104								
T50A					P	**P**	**04 41 21.2**	**-0.9**	
	baz=104								
T50A					S	**S**	**04 50 44.1**	**+1.9**	
	baz=104								
T50A					S	**S**	**04 50 44.1**	**+1.9**	
	baz=104								
SNAA	**Sanae**	**71.98**	**175**		P	**P**	**04 41 22.2**	**+0.3**	
SNAA	**Sanae**	**71.98**	**175**		LR	LR	05 07 32.6		
	comp=Z,14µm,18.7s,baz=336,slow=31								
SNAA	**Sanae**	**71.98**	**175**		P	**P**	**04 41 21.8**	**-0.1**	
SNAA	**Sanae**	**71.98**	**175**		P	**P**	**04 41 21.8**	**-0.1**	
SNAA					pmax	pmax			
	comp=Z,159nm,1.0s								
SNAA	**Sanae**	**71.98**	**175**	*e*	P	P	04 41 26.9	+4.9	
LKRN	**Lenkeran, Azer**	**72.07**	**49**		P	**P**	**04 41 20.9**	**-2.1**	
ABTO	**Aybut**	**72.09**	**72**		P	**P**	**04 41 26.5**	**+2.9**	
	SNR=20								
ABTO					S	**S**	**04 50 45.2**	**+0.3**	
MAK	**Makhachkala**	**72.34**	**44**	*e*	P	P	04 41 18.7	-5.8	
MAK				*e*			04 44 06.1		
MAK				*e*	S	**S**	**04 50 37.9**	**-8.8**	
MAK				*e*	SSS	SSS	04 58 33.7		
MAK					pmax	pmax			
	comp=Z,9µm,2.2s								
MAK					pmax	pmax			
	comp=Z,2µm,1.6s								
SWET	**Sewanee**	**72.34**	**307**		IAmb	IAmb	04 41 46.3		
	comp=Z,667nm,1.5s								
O49A	**Covington**	**72.36**	**313**		IAmb	IAmb	04 41 54.0		
	comp=Z,916nm,1.6s								
O49A	**Covington**	**72.36**	**313**		P	**P**	**04 41 23.3**	**-1.4**	
	baz=106,SNR=31								
O49A					P	**P**	**04 41 23.3**	**-1.4**	
	baz=106,SNR=31								
O49A					S	**S**	**04 50 48.8**	**+1.7**	
	baz=106								
O49A					S	**S**	**04 50 48.8**	**+1.7**	
	baz=106								
I49A	**Point Hope**	**72.37**	**317**		S	**S**	**04 50 45.4**	**-1.7**	
	baz=108								
I49A					S	**S**	**04 50 45.4**	**-1.7**	
	baz=108								
BRAL	**Brewton**	**72.40**	**303**		P	**P**	**04 41 23.7**	**-1.4**	
	baz=101								
BRAL					S	**S**	**04 50 49.8**	**+1.9**	
	baz=101								
BRAL	**Brewton**	**72.40**	**303**		P	**P**	**04 41 22.9**	**-2.3**	
	baz=101								
BRAL					S	**S**	**04 50 51.9**	**+4.0**	
	baz=101								
BRAL	**Brewton**	**72.40**	**303**	⇓	P	**P**	**04 41 28.4**	**+3.2**	
PAYG	**Puerto Ayora**	**72.44**	**269**		IAMs_20	IAMs_20	05 10 46.5		
	comp=Z,66µm,20.0s								
N49A	**Columbus Grove**	**72.45**	**313**		IAmb	IAmb	04 41 54.5		
	comp=Z,770nm,1.6s								
N49A	**Columbus Grove**	**72.45**	**313**		P	**P**	**04 41 24.2**	**-1.1**	
	baz=106,SNR=13								
N49A					P	**P**	**04 41 24.2**	**-1.1**	
	baz=106,SNR=13								
N49A					S	**S**	**04 50 48.7**	**+0.5**	
	baz=106								
N49A					S	**S**	**04 50 48.7**	**+0.5**	
	baz=106								
AAM	**Ann Arbor**	**72.46**	**315**		IAMs_20	IAMs_20	05 08 07.2		
	comp=Z,92µm,21.0s								
AAM	**Ann Arbor**	**72.46**	**315**		P	**P**	**04 41 24.2**	**-1.1**	
	baz=107,SNR=5.4								
AAM					S	**S**	**04 50 47.4**	**-0.9**	
	baz=107								
AAM	**Ann Arbor**	**72.46**	**315**		P	**P**	**04 41 23.9**	**-1.4**	
	baz=107,SNR=5.4								
AAM					S	**S**	**04 50 48.4**	**+0.2**	
	baz=107								
P49A	**Miami Univ. Ec**	**72.47**	**312**		P	**P**	**04 41 23.0**	**-2.4**	
P49A					IAmb	IAmb	04 41 54.7		
	comp=Z,931nm,1.8s								
P49A	**Miami Univ. Ec**	**72.47**	**312**		P	**P**	**04 41 23.8**	**-1.6**	
	baz=105,SNR=12								
P49A					S	**S**	**04 50 46.0**	**-2.4**	
	baz=105								
P49A	**Miami Univ. Ec**	**72.47**	**312**		P	**P**	**04 41 24.0**	**-1.4**	
	baz=105,SNR=12								
P49A					S	**S**	**04 50 45.3**	**-3.1**	
	baz=105								
R49A	**Shelbyville**	**72.49**	**310**		IAmb	IAmb	04 41 55.1		
	comp=Z,730nm,1.6s								
R49A	**Shelbyville**	**72.49**	**310**		P	**P**	**04 41 24.4**	**-1.1**	
	baz=104,SNR=13								
R49A					P	**P**	**04 41 24.4**	**-1.1**	
	baz=104,SNR=13								
R49A					S	**S**	**04 50 48.2**	**-0.5**	
	baz=104								
R49A					S	**S**	**04 50 48.2**	**-0.5**	
	baz=104								
U49A	**Red Boiling Sp**	**72.52**	**308**		P	**P**	**04 41 24.8**	**-1.0**	
	baz=104,SNR=53								
U49A					S	**S**	**04 50 48.4**	**-0.7**	
	baz=104								
PMSA	**Palmer Station**	**72.53**	**199**		LR	LR	05 11 00.8		
	comp=Z,35µm,18.0s,baz=38,slow=34								
PMSA	**Palmer Station**	**72.53**	**199**	⇓	P	P	04 41 40.5	+15	
PMSA	**Palmer Station**	**72.53**	**199**	*e*	P	**P**	**04 41 26.6**	**+1.4**	
WHFO	**Wadi Hawf**	**72.60**	**71**		P	**P**	**04 41 30.5**	**+3.9**	
	SNR=12								
WHFO					S	**S**	**04 50 55.2**	**+4.5**	
JRN	**Qarnain Island**	**72.64**	**64**		P	**P**	**04 41 25.7**	**-1.0**	
	SNR=27								
JRN					P	**P**	**04 41 25.7**	**-1.0**	
	SNR=27								
JRN					S	**SKiKP**	**04 50 57.0**	**-3.2**	
JRN					S	**SKiKP**	**04 50 57.0**	**-3.2**	
LRAL	**Lakeview Retre**	**72.73**	**305**		IAmb	IAmb	04 41 48.5		
	comp=Z,780nm,1.8s								
LRAL					IAMs_20	IAMs_20	05 08 08.6		
	comp=Z,57µm,20.0s								
LRAL	**Lakeview Retre**	**72.73**	**305**		P	**P**	**04 41 25.6**	**-1.5**	
	baz=102,SNR=32								
LRAL					S	**S**	**04 50 51.8**	**+0.1**	
	baz=102								
LRAL	**Lakeview Retre**	**72.73**	**305**		P	**P**	**04 41 25.7**	**-1.4**	
	baz=102								
LRAL					S	**S**	**04 50 52.0**	**+0.3**	
	baz=102								
TROLL	**Troll, Antarti**	**72.84**	**173**		P	**P**	**04 41 27.4**	**+0.2**	
ILULI	**Ilulissat**	**72.85**	**348**	*i*	P	P	04 41 32.7	+5.6	
ILULI					IAmb	IAmb	04 42 06.9		
	comp=Z,139nm,1.2s								
L48A	**N Adams**	**72.91**	**314**		IAmb	IAmb	04 41 45.4		
	comp=Z,459nm,0.8s								
L48A	**N Adams**	**72.91**	**314**		P	**P**	**04 41 26.7**	**-1.3**	
	baz=106,SNR=51								
L48A					P	**P**	**04 41 26.7**	**-1.3**	
	baz=106,SNR=51								
L48A					S	**S**	**04 50 52.1**	**-1.3**	
	baz=106								
L48A					S	**S**	**04 50 52.1**	**-1.3**	
	baz=106								
MZR	**Muzera**	**72.94**	**66**		P	**P**	**04 41 27.8**	**-0.7**	
	SNR=31								
MZR					P	**P**	**04 41 27.8**	**-0.7**	
	SNR=31								
MZR					S	**SKiKP**	**04 51 02.1**	**+1.3**	
MZR					S	**SKiKP**	**04 51 02.1**	**+1.3**	
MZR	**Muzera**	**72.94**	**66**	*i*	P	**P**	**04 41 27.2**	**-1.4**	
	SNR=12								
RBK	**Rabkut**	**72.97**	**72**		P	P	04 41 35.7	+6.9	
	SNR=32								
RBK					P	P	04 41 35.7	+6.9	
	SNR=32								
RBK					S	**SKiKP**	**04 51 00.4**	**-0.6**	
RBK					S	**SKiKP**	**04 51 00.4**	**-0.6**	
P48A	**Milroy**	**72.98**	**312**		P	**P**	**04 41 26.7**	**-1.8**	
	baz=105,SNR=24								
P48A					P	**P**	**04 41 26.7**	**-1.8**	
	baz=105,SNR=24								
P48A					S	**S**	**04 50 53.2**	**-1.0**	
	baz=105								
P48A					S	**S**	**04 50 53.2**	**-1.0**	
	baz=105								
O48B	**Farmland**	**72.98**	**312**		P	**P**	**04 41 27.0**	**-1.5**	
	baz=105,SNR=50								
O48B					S	**S**	**04 50 53.2**	**-1.0**	
	baz=105								
O48B	**Farmland**	**72.98**	**312**		P	**P**	**04 41 26.5**	**-2.0**	
	baz=105,SNR=50								
O48B					S	**S**	**04 50 53.3**	**-1.0**	
	baz=105								
X48A	**Hartselle**	**73.07**	**306**		IAmb	IAmb	04 41 50.4		
	comp=Z,992nm,1.8s								
X48A	**Hartselle**	**73.07**	**306**		P	**P**	**04 41 27.7**	**-1.4**	
	baz=102,SNR=27								
X48A					S	**S**	**04 50 54.5**	**-1.0**	
	baz=102								
V48A	**Smith Brothers**	**73.17**	**308**		IAmb	IAmb	04 41 51.0		
	comp=Z,559nm,1.4s								
V48A	**Smith Brothers**	**73.17**	**308**		P	**P**	**04 41 28.2**	**-1.5**	
	baz=103,SNR=38								
V48A					S	**S**	**04 50 55.0**	**-1.5**	
	baz=103								
WCI	**Wyandotte Cave**	**73.33**	**310**		P	**P**	**04 41 28.5**	**-2.0**	
WCI	**Wyandotte Cave**	**73.33**	**310**		P	**P**	**04 41 28.5**	**-2.0**	
WCI					pmax	pmax			
	comp=Z,2µm,2.2s								
WCI	**Wyandotte Cave**	**73.33**	**310**		P	**P**	**04 41 28.7**	**-1.8**	
	baz=104,SNR=30								
WCI					S	**SKiKP**	**04 51 00.9**	**-0.1**	
	baz=104								
WCI	**Wyandotte Cave**	**73.33**	**310**		P	**P**	**04 41 29.0**	**-1.5**	
	baz=104								
WCI					S	**S**	**04 50 58.6**	**+0.3**	
	baz=104								
WCI	**Wyandotte Cave**	**73.33**	**310**	⇓	P	**P**	**04 41 29.1**	**-1.5**	
MSEY	**Mahe Island**	**73.36**	**95**		P	P	04 41 38.4	+7.2	
MSEY					P	P	04 41 38.4	+7.2	
MSEY					S	**SKiKP**	**04 51 08.5**	**+6.8**	
MSEY					S	**SKiKP**	**04 51 08.5**	**+6.8**	
N47A	**Urbana**	**73.54**	**313**		IAmb	IAmb	04 41 48.9		
	comp=Z,332nm,0.8s								
N47A	**Urbana**	**73.54**	**313**		P	**P**	**04 41 30.2**	**-1.6**	
	baz=105,SNR=31								
N47A					P	**P**	**04 41 30.2**	**-1.6**	
	baz=105,SNR=31								
J47A	**Sunmer**	**73.55**	**315**		P	**P**	**04 41 30.3**	**-1.5**	
	baz=106								
J47A					P	**P**	**04 41 30.3**	**-1.5**	
	baz=106								
J47A					S	**S**	**04 51 00.1**	**-0.5**	
	baz=106								
J47A					S	**S**	**04 51 00.1**	**-0.5**	
	baz=106								
Z47A	**Carrollton**	**73.65**	**305**		IAmb	IAmb	04 41 53.3		
	comp=Z,514nm,0.8s								
Z47A	**Carrollton**	**73.65**	**305**		P	**P**	**04 41 30.5**	**-2.0**	
	baz=101,SNR=33								
Z47A					S	**SKiKP**	**04 51 01.4**	**-0.2**	
	baz=101								
T47A	**Sharon Grove**	**73.67**	**309**		IAmb	IAmb	04 42 01.7		
	comp=Z,1µm,1.8s								
T47A	**Sharon Grove**	**73.67**	**309**		P	**P**	**04 41 30.5**	**-2.1**	
	baz=103,SNR=20								
DMTO	**DMTO**	**73.70**	**72**		P	P	04 41 39.2	+6.1	
DMTO					S	**S**	**04 51 10.0**	**+6.9**	
BLO	**Bloomington**	**73.73**	**311**		IAmb	IAmb	04 42 02.3		
	comp=Z,939nm,1.6s								
SUMG	**Summit**	**73.85**	**354**		IAmb	IAmb	04 42 05.4		
	comp=Z,416nm,1.4s								
SUMG	**Summit**	**73.85**	**354**	*i*	P	**P**	**04 41 33.1**	**-0.3**	
SUMG					IAmb	IAmb	04 42 04.8		
	comp=Z,481nm,1.5s								
FRB	**Frobisher Bay**	**73.85**	**339**		P	**P**	**04 41 32.2**	**-0.8**	
	comp=Z,16nm,1.0s,baz=99,slow=5.5,SNR=6.9								
FRB					LR	LR	05 06 21.0		
	comp=Z,30µm,21.4s,baz=122,slow=30								
	comp=Z,16nm,1.0s								
FRB	**Frobisher Bay**	**73.85**	**339**	⇑	P	**P**	**04 41 35.1**	**+2.1**	
GLMI	**Grayling**	**73.87**	**317**		IAmb	IAmb	04 41 50.9		
	comp=Z,387nm,0.9s								
GLMI					IAMs_20	IAMs_20	05 14 24.1		
	comp=Z,68µm,18.0s								
GLMI	**Grayling**	**73.87**	**317**		P	**P**	**04 41 32.3**	**-1.3**	
	baz=107,SNR=6.9								
GLMI					S	**S**	**04 51 05.4**	**+1.3**	
	baz=107								
GLMI	**Grayling**	**73.87**	**317**		P	**P**	**04 41 31.8**	**-1.7**	
	baz=107,SNR=6.9								
GLMI					S	**S**	**04 51 03.6**	**-0.5**	
	baz=107								
TRO	**Tromso**	**73.94**	**13**	*e*	P	**P**	**04 41 35.2**	**+1.8**	
TRO					IVmB_BB		04 41 49.4		
	comp=Z,9µm,3.4s								
TRO				*e*			04 51 19.1		
TRO					IVMs_BB	IVMs_BB	05 14 31.1		
	comp=Z,21µm,16.0s								
KAPO	**Kapuskasing**	**73.96**	**322**	⇓	P	**P**	**04 41 34.5**	**+0.6**	
PLAL	**Pickwick Lake**	**74.01**	**307**		IAmb	IAmb	04 41 55.5		
	comp=Z,624nm,1.5s								
PLAL					IAMs_20	IAMs_20	05 07 19.1		
	comp=Z,80µm,21.0s								
WVT	**Waverly**	**74.05**	**308**		P	**P**	**04 41 31.6**	**-3.2**	
WVT	**Waverly**	**74.05**	**308**		IAMs_20	IAMs_20	05 12 48.1		
	comp=Z,64µm,19.0s								
WVT	**Waverly**	**74.05**	**308**		P	**P**	**04 41 31.6**	**-3.2**	
WVT					pmax	pmax			
	comp=Z,319nm,1.3s								
WVT	**Waverly**	**74.05**	**308**		P	**P**	**04 41 32.8**	**-2.0**	
	baz=102,SNR=38								
WVT					S	**S**	**04 51 06.5**	**0.0**	
	baz=102								
WVT	**Waverly**	**74.05**	**308**		P	**P**	**04 41 32.6**	**-2.2**	
	baz=102								
WVT					S	**S**	**04 51 07.0**	**+0.5**	
	baz=102								
WVT	**Waverly**	**74.05**	**308**	⇓	P	**P**	**04 41 32.7**	**-2.2**	
E46A	**Sault Ste Mari**	**74.11**	**319**		P	**P**	**04 41 33.2**	**-1.8**	
	baz=108,SNR=10								
E46A					S	**S**	**04 51 07.5**	**+0.7**	
	baz=108								
JETT	**Jettan, Norway**	**74.21**	**13**	*e*	P	**P**	**04 41 34.1**	**-1.0**	
JETT					IVmB_BB		04 41 51.2		
	comp=Z,9µm,2.6s								
JETT				*e*			04 51 21.5		
L46A	**Eue Claire**	**74.27**	**314**		IAmb	IAmb	04 42 04.8		
	comp=Z,443nm,1.4s								
L46A	**Eue Claire**	**74.27**	**314**		P	**P**	**04 41 34.2**	**-1.7**	
	baz=105								
L46A					P	**P**	**04 41 34.2**	**-1.7**	
	baz=105								
L46A					S	**S**	**04 51 07.7**	**-1.0**	
	baz=105								
L46A					S	**S**	**04 51 07.7**	**-1.0**	
	baz=105								
USIN	**University of**	**74.32**	**310**		IAmb	IAmb	04 42 05.0		
	comp=Z,826nm,1.6s								
P46A	**Rosedale**	**74.35**	**311**		IAmb	IAmb	04 41 53.5		
	comp=Z,424nm,0.8s								
P46A	**Rosedale**	**74.35**	**311**		P	**P**	**04 41 35.0**	**-1.5**	
	baz=104,SNR=32								
146A	**Union**	**74.36**	**304**		IAmb	IAmb	04 41 58.3		
	comp=Z,674nm,1.1s								
146A	**Union**	**74.36**	**304**		P	**P**	**04 41 35.8**	**-0.9**	
	baz=100,SNR=19								
146A					S	**S**	**04 51 15.3**	**+5.2**	
	baz=100								
SHAO	**Shalim**	**74.37**	**71**		P	**P**	**04 41 40.2**	**+3.2**	
	SNR=7.1								
SHAO					S	**S**	**04 51 18.0**	**+7.3**	
SHAO	**Shalim**	**74.37**	**71**		P	**P**	**04 41 35.7**	**-1.3**	
DBG	**Daneborg**	**74.45**	**359**	*i*	P	P	04 41 44.9	+8.5	
DBG					IAmb	IAmb	04 42 35.1		
	comp=Z,513nm,2.0s								
SFIN	**Lafayette**	**74.45**	**312**		IAmb	IAmb	04 41 57.9		
	comp=Z,652nm,1.5s								
SFIN	**Lafayette**	**74.45**	**312**		P	**P**	**04 41 35.3**	**-1.7**	
	baz=104,SNR=15								
SFIN					S	**S**	**04 51 07.4**	**-3.4**	
	baz=104								
SFIN	**Lafayette**	**74.45**	**312**		P	**P**	**04 41 34.8**	**-2.3**	
	baz=104,SNR=15								
SFIN					S	**S**	**04 51 08.2**	**-2.6**	
	baz=104								
KTK1	**Kautokeino**	**74.46**	**14**	*e*	P	**P**	**04 41 35.7**	**-0.9**	
KTK1					IVmB_BB		04 41 52.5		
	comp=Z,8µm,3.0s								
KTK1				*e*			04 51 22.4		
346A	**Big Creek Wild**	**74.48**	**303**		S	**S**	**04 51 16.0**	**+4.6**	
	baz=100								
AJN	**Ajban**	**74.51**	**65**		P	**P**	**04 41 38.4**	**+0.7**	
	SNR=38								
AJN					P	**P**	**04 41 38.4**	**+0.7**	
	SNR=38								
AJN					S	**S**	**04 51 18.3**	**+6.3**	
AJN					S	**S**	**04 51 18.3**	**+6.3**	
AJN	**Ajban**	**74.51**	**65**	*i*	P	**P**	**04 41 36.1**	**-1.6**	
	SNR=76								
RER	**Riviere de l'E**	**74.63**	**112**		IAMs_20	IAMs_20	05 12 40.8		
	comp=Z,52µm,18.0s								
G45A	**Suttons Bay**	**74.64**	**317**		IAmb	IAmb	04 42 05.5		
	comp=Z,835nm,1.7s								
G45A	**Suttons Bay**	**74.64**	**317**		P	**P**	**04 41 36.4**	**-1.7**	
	baz=106,SNR=6.9								
G45A					P	**P**	**04 41 36.4**	**-1.7**	
	baz=106,SNR=6.9								
G45A					S	**S**	**04 51 08.5**	**-4.2**	
	baz=106								
G45A					S	**S**	**04 51 08.5**	**-4.2**	
	baz=106								
I45A	**Fountain**	**74.76**	**316**		S	**S**	**04 51 10.6**	**-3.5**	
	baz=105								
I45A					S	**S**	**04 51 10.6**	**-3.5**	
	baz=105								
OLIL	**Olney**	**74.82**	**310**		P	**P**	**04 41 36.5**	**-2.7**	
OLIL	**Olney**	**74.82**	**310**		P	**P**	**04 41 37.4**	**-1.9**	
	baz=103,SNR=68								
OLIL					S	**S**	**04 51 15.2**	**+0.1**	
	baz=103								
ASUD	**Al Ashush, Dub**	**74.83**	**65**		P	**P**	**04 41 40.0**	**+0.4**	
	SNR=30								
ASUD					S	**S**	**04 51 19.1**	**+3.5**	
ASUD	**Al Ashush, Dub**	**74.83**	**65**	*i*	P	**P**	**04 41 38.7**	**-0.9**	
	SNR=52								
T45A	**Paducah**	**74.88**	**308**		IAmb	IAmb	04 42 08.0		
	comp=Z,244nm,0.8s								
T45B	**Paducah**	**74.88**	**308**		S	**S**	**04 51 12.0**	**-3.7**	
	baz=102								
KLMR	**Klimovskoe**	**74.90**	**25**	*e*	P	**P**	**04 41 35.6**	**-3.6**	
KLMR				*e*			04 44 21.3		
KLMR				*e*	S	**S**	**04 51 13.0**	**-2.0**	
KLMR				*e*	SS	**SS**	**04 56 01.2**	**-2.2**	
KLMR					pmax	pmax			
	comp=Z,351nm,1.4s								
KLMR					MLR	MLR			
	comp=Z,50µm,16.0s								
KLMR	**Klimovskoe**	**74.90**	**25**	*e*	P	**P**	**04 41 35.7**	**-3.5**	
KLMR					AMP		04 41 54.0		
	comp=Z,351nm,1.4s								
KLMR				*e*	PP	**PP**	**04 44 21.3**	**-5.6**	
KLMR				*e*	S	**S**	**04 51 13.0**	**-2.0**	
KLMR				*e*	S	**S**	**04 51 13.0**	**-2.0**	
KLMR				*e*	SS	**SS**	**04 56 01.3**	**-2.2**	
KLMR				*e*	SS	**SS**	**04 56 01.3**	**-2.2**	
KLMR				*e*	SSS	SSS	04 59 24.4		
KLMR				*e*	SSS	SSS	04 59 24.4		
KLMR					LQ	LQ	05 07 54.8		
KLMR					LQ	LQ	05 07 54.8		
KLMR					LR	LR	05 10 30.2		
KLMR					AMP		05 17 32.6		
	comp=Z,50µm,16.0s								
W45A	**Hickory Valley**	**74.94**	**306**		IAmb	IAmb	04 42 00.3		
	comp=Z,699nm,1.1s								
W45A	**Hickory Valley**	**74.94**	**306**		P	**P**	**04 41 37.9**	**-2.1**	
	baz=101,SNR=28								
W45A					S	**S**	**04 51 15.8**	**-0.6**	
	baz=101								
Y45A	**Yeager Farm, C**	**74.98**	**305**		IAmb	IAmb	04 42 01.4		
	comp=Z,674nm,1.2s								
Y45A	**Yeager Farm, C**	**74.98**	**305**		P	**P**	**04 41 37.9**	**-2.4**	
	baz=100,SNR=9.2								
Y45A					S	**S**	**04 51 17.5**	**+0.5**	
	baz=100								
CCIG	**Comitan**	**74.99**	**287**	⇓	P	**P**	**04 41 42.7**	**+1.8**	
OXF	**Oxford**	**74.99**	**306**		IAMs_20	IAMs_20	05 07 46.2		
	comp=Z,100µm,22.0s								
OXF	**Oxford**	**74.99**	**306**		P	**P**	**04 41 37.8**	**-2.6**	
	baz=101								
OXF					S	**S**	**04 51 16.9**	**-0.2**	
	baz=101								
OXF	**Oxford**	**74.99**	**306**		P	**P**	**04 41 37.5**	**-2.9**	
	baz=101								
OXF					S	**S**	**04 51 15.7**	**-1.4**	
	baz=101								
ALNE	**Al Ain**	**75.14**	**65**		P	**P**	**04 41 42.1**	**+0.7**	
	SNR=44								
ALNE					S	S	04 51 29.6	+11	
ALNE	**Al Ain**	**75.14**	**65**	*i*	P	**P**	**04 41 40.4**	**-1.0**	
	SNR=108								
NUUG	**Nuugaatsiaq**	**75.16**	**349**	*i*	P	P	04 41 48.9	+8.4	
NUUG					IAmb	IAmb	04 42 12.5		
	comp=Z,112nm,1.2s								
NAZ	**Nazwa, Dubai**	**75.17**	**64**		P	**P**	**04 41 41.5**	**0.0**	
	SNR=24								
NAZ					P	**P**	**04 41 41.5**	**0.0**	
	SNR=24								
NAZ					S	S	04 51 34.4	+15	
NAZ					S	S	04 51 34.4	+15	
NAZ	**Nazwa, Dubai**	**75.17**	**64**	*i*	P	**P**	**04 41 41.0**	**-0.6**	
	SNR=6.8								
HICK	**Hickman**	**75.24**	**308**		P	**P**	**04 41 38.6**	**-3.1**	
HICK					IAmb	IAmb	04 42 01.8		
	comp=Z,640nm,1.1s								
UMQ	**Umm Al-Quwin**	**75.24**	**64**		P	**P**	**04 41 42.6**	**+0.7**	
	SNR=7.9								
UMQ					S	S	04 51 29.9	+10	
UMQ	**Umm Al-Quwin**	**75.24**	**64**	*i*	P	**P**	**04 41 42.4**	**+0.5**	
	SNR=13								
HQIL	**Hanson Quary C**	**75.34**	**313**		IAmb	IAmb	04 42 11.7		
	comp=Z,1µm,1.8s								
HQIL					IAMs_20	IAMs_20	05 08 34.6		
	comp=Z,80µm,21.0s								
M44A	**Midewin, Midew**	**75.39**	**313**		IAmb	IAmb	04 42 11.7		
	comp=Z,942nm,1.8s								
ARA0	**ARCESS Array S**	**75.40**	**14**	*e*	P	**P**	**04 41 40.6**	**-1.4**	
ARA0				*e*	S	**S**	**04 51 22.1**	**+1.7**	
ARA0					IVMs_BB	IVMs_BB	05 20 35.5		
	comp=Z,18µm,17.9s								
ARCES	**ARCESS Array B**	**75.40**	**14**		P	**P**	**04 41 40.4**	**-1.6**	
	comp=Z,7.1nm,0.7s,baz=234,slow=4.3,SNR=21								
ARCES					LR	LR	05 14 03.1		
	comp=Z,35µm,21.8s,baz=236,slow=35								
	comp=Z,7.1nm,0.7s								
O44A	**Mansfield**	**75.42**	**312**		IAmb	IAmb	04 42 10.9		
	comp=Z,666nm,1.4s								
O44A	**Mansfield**	**75.42**	**312**		P	**P**	**04 41 40.1**	**-2.6**	
	baz=103,SNR=11								
BELG	**Belogornoye**	**75.45**	**35**		P	**P**	**04 41 40.5**	**-2.0**	
	comp=Z,100nm,1.1s,baz=78,slow=3.0,SNR=14								
BELG					LR	LR	05 18 25.4		
	comp=Z,40µm,19.6s,baz=262,slow=39								
	comp=Z,100nm,1.1s								
BELG	**Belogornoye**	**75.45**	**35**	*c i*	P	**P**	**04 41 39.9**	**-2.6**	
BELG					pmax	pmax			
	comp=Z

HATD	**Hatta, Dubai**	**75.58**	**64**		P		**P**	**04 41 42.3**	**-1.6**
	SNR=33									
HATD					P		**P**	**04 41 42.3**	**-1.6**
	SNR=33									
HATD					S		S	04 51 33.5	+10
HATD					S		S	04 51 33.5	+10
HATD	**Hatta, Dubai**	**75.58**	**64**	*i*	P		**P**	**04 41 43.0**	**-0.9**
	SNR=18									
UOSS	**Minazif**	**75.66**	**64**		P		**P**	**04 41 42.1**	**-2.2**
UOSS	**Minazif**	**75.66**	**64**		IAms_20		IAms_20	05 18 04.0		
	comp=Z,56µm,18.0s									
UOSS	**Minazif**	**75.66**	**64**		P		**P**	**04 41 40.8**	**-3.6**
UOSS					P		**P**	**04 41 40.8**	**-3.6**
UOSS					S		**S**	**04 51 26.5**	**+1.7**
UOSS					S		**S**	**04 51 26.5**	**+1.7**
UOSS	**Minazif**	**75.66**	**64**	*i*	P		**P**	**04 41 42.9**	**-1.4**
	SNR=18									
UOSS	**Minazif**	**75.66**	**64**	⇑	P		**P**	**04 41 42.4**	**-1.9**
PEBM	**Pemiscott Bayo**	**75.66**	**307**		IAmb		IAmb	04 42 04.3		
	comp=Z,708nm,1.4s									
MSFE	**Esma-Masafi**	**75.67**	**64**	*i*	P		**P**	**04 41 42.6**	**-1.8**
	SNR=64									
MASF	**Masafi**	**75.67**	**64**		P		**P**	**04 41 45.9**	**+1.4**
	SNR=42									
MASF					P		**P**	**04 41 45.9**	**+1.4**
	SNR=42									
MASF					S		**S**	**04 51 24.4**	**-0.6**
MASF					S		**S**	**04 51 24.4**	**-0.6**
CGM3	**Cape Girardeau**	**75.73**	**309**		IAmb		IAmb	04 42 04.5		
	comp=Z,762nm,1.8s									
SHME	**Shamm**	**75.74**	**63**		P		**P**	**04 41 46.7**	**+1.9**
	SNR=28									
SHME					P		**P**	**04 41 46.7**	**+1.9**
	SNR=28									
SHME					S		**S**	**04 51 33.1**	**+7.4**
SHME					S		**S**	**04 51 33.1**	**+7.4**
SHME	**Shamm**	**75.74**	**63**	*i*	P		**P**	**04 41 42.6**	**-2.2**
	SNR=52									
ARQ	**Araqi**	**75.75**	**66**		P		**P**	**04 41 47.6**	**+2.6**
	SNR=48									
ARQ					S		**S**	**04 51 31.9**	**+5.9**
HAMF	**Hammerfest**	**75.77**	**13**	*e*	P		**P**	**04 41 46.0**	**+2.0**
HAMF					IVmB_BB			04 41 60.0		
	comp=Z,9µm,3.1s									
HAMF				*e*	S		**S**	**04 51 24.0**	**-0.3**
HAMF					IVMs_BB		IVMs_BB	05 14 10.6		
	comp=Z,26µm,23.0s									
MDH	**Madha**	**75.78**	**64**		P		**P**	**04 41 47.3**	**+2.3**
	SNR=32									
MDH					P		**P**	**04 41 47.3**	**+2.3**
	SNR=32									
MDH					S		**S**	**04 51 34.2**	**+8.1**
MDH					S		**S**	**04 51 34.2**	**+8.1**
MDH	**Madha**	**75.78**	**64**	*i*	P		**P**	**04 41 43.7**	**-1.4**
	SNR=60									
SOHO	**SOHO**	**75.86**	**65**		P		**P**	**04 41 44.0**	**-1.5**
SOHO					P		**P**	**04 41 44.0**	**-1.5**
SOHO					S		S	04 51 36.8	+10
SOHO					S		S	04 51 36.8	+10
SOHO	**SOHO**	**75.86**	**65**	*i*	P		**P**	**04 41 43.9**	**-1.6**
	SNR=36									
E43A	**Lone Tree Farm**	**75.90**	**318**		P		**P**	**04 41 43.1**	**-2.2**
	baz=105,SNR=30									
K43A	**Burlington**	**75.90**	**314**		IAmb		IAmb	04 42 13.9		
	comp=Z,539nm,1.2s									
K43A	**Burlington**	**75.90**	**314**		P		**P**	**04 41 43.3**	**-2.1**
	baz=104,SNR=13									
KEV	**Kevo**	**75.94**	**15**	⇑	P		P	04 41 53.6	+8.6
H43A	**Windswept, Lux**	**75.94**	**316**		IAmb		IAmb	04 42 14.2		
	comp=Z,417nm,1.4s									
H43A	**Windswept, Lux**	**75.94**	**316**		P		**P**	**04 41 43.8**	**-1.7**
	baz=104,SNR=11									
P43A	**Skaggs, Pawnee**	**76.10**	**311**		P		**P**	**04 41 43.7**	**-2.9**
	baz=102,SNR=9.7									
HDIL	**Hopedale**	**76.12**	**312**		P		**P**	**04 41 43.4**	**-3.3**
HDIL					IAmb		IAmb	04 42 04.0		
	comp=Z,216nm,0.8s									
HDIL	**Hopedale**	**76.12**	**312**		P		**P**	**04 41 44.6**	**-2.1**
	baz=102,SNR=14									
HDIL	**Hopedale**	**76.12**	**312**		P		**P**	**04 41 43.9**	**-2.7**
	baz=102,SNR=14									
HDIL					S		**S**	**04 51 27.2**	**-2.2**
	baz=102									
HBAR	**Harrisburg**	**76.19**	**307**		P		**P**	**04 41 45.1**	**-2.1**
	baz=100,SNR=10.0									
BSY	**Bisya**	**76.31**	**67**		P		**P**	**04 41 46.3**	**-1.9**
	SNR=61									
BSY					S		S	04 51 42.1	+10
143A	**Socs Landing,**	**76.32**	**304**		P		**P**	**04 41 46.4**	**-1.5**
	baz=99,SNR=28									
APA	**Apatity**	**76.32**	**18**	⇑	*i*	P	P	04 41 54.7	+7.5
APA					*i*			04 51 36.0		
APA					*i*	S	S	04 51 45.0	+15
APA					*i*	PS	**PnS**	**04 52 21.0**	**+11**
APA						pmax	pmax			
	comp=Z,73nm,0.9s									
DQM	**DQM**	**76.35**	**70**		P		P	04 41 42.2	-6.1
DQM					P		P	04 41 42.2	-6.1
DQM					S		S	04 51 43.6	+11
DQM					S		S	04 51 43.6	+11
FVM	**French Village**	**76.46**	**309**		IAmb		IAmb	04 42 09.1		
	comp=Z,320nm,1.1s									
FVM	**French Village**	**76.46**	**309**		P		**P**	**04 41 46.4**	**-2.3**
	baz=101,SNR=41									
HOQ	**Hoqain**	**76.50**	**66**		P		P	04 41 54.6	+5.4
	SNR=25									
HOQ					P		P	04 41 54.6	+5.4
	SNR=25									
F42A	**Maple Grove Fa**	**76.51**	**317**		IAmb		IAmb	04 42 17.4		
	comp=Z,714nm,1.8s									
I42A	**Draeger Farm,**	**76.59**	**315**		P		**P**	**04 41 45.7**	**-3.6**
I42A	**Draeger Farm,**	**76.59**	**315**		P		**P**	**04 41 47.3**	**-2.0**
	baz=103,SNR=42									
LCAR	**Lake Charles**	**76.68**	**307**		IAmb		IAmb	04 42 18.4		
	comp=Z,1µm,1.9s									
LCAR	**Lake Charles**	**76.68**	**307**		P		**P**	**04 41 47.4**	**-2.5**
	baz=100,SNR=7.4									
UPNV	**Upernavik**	**76.71**	**349**	*i*	P		P	04 41 55.3	+6.0
UPNV					IAmb		IAmb	04 42 15.3		
	comp=Z,217nm,1.3s									
L42A	**Oliver, Polo**	**76.71**	**313**		IAmb		IAmb	04 42 10.5		
	comp=Z,322nm,0.9s									
L42A	**Oliver, Polo**	**76.71**	**313**		P		**P**	**04 41 47.7**	**-2.3**
	baz=102,SNR=24									
CCAR	**Cane Creek**	**76.82**	**305**		P		**P**	**04 41 49.2**	**-1.6**
	baz=99,SNR=12									
342B	**Flagon Creek P**	**76.89**	**302**		P		**P**	**04 41 50.1**	**-1.1**
	baz=98,SNR=7.9									
LVZ	**Lovozero**	**76.90**	**18**		IAMs_20		IAMs_20	05 13 50.6		
	comp=Z,60µm,22.0s									
LVZ	**Lovozero**	**76.90**	**18**	⇓	P		P	04 41 55.6	+5.0
DAG	**Danmarks Havn**	**76.92**	**360**	*i*	P		P	04 41 58.3	+7.8
DAG					IAmb		IAmb	04 42 30.5		
	comp=Z,122nm,1.0s									
JMDO	**Jabal Madar**	**77.10**	**67**		P		**P**	**04 41 50.5**	**-2.2**
	SNR=63									
JMDO					P		**P**	**04 41 50.5**	**-2.2**
	SNR=63									
JMDO					S		**S**	**04 51 47.3**	**+6.5**
JMDO					S		**S**	**04 51 47.3**	**+6.5**
CCM	**Cathedral Cave**	**77.11**	**309**		P		**P**	**04 41 49.4**	**-2.9**
CCM					IAmb		IAmb	04 42 12.8		
	comp=Z,388nm,1.1s									
CCM	**Cathedral Cave**	**77.11**	**309**		IAMs_20		IAMs_20	05 15 06.8		
	comp=Z,60µm,19.0s									
CCM	**Cathedral Cave**	**77.11**	**309**		P		**P**	**04 41 49.4**	**-2.9**
CCM					pmax		pmax			
	comp=Z,388nm,1.1s									
CCM					MLR		MLR			
	comp=Z,60µm,19.0s									
CCM	**Cathedral Cave**	**77.11**	**309**		P		**P**	**04 41 50.1**	**-2.2**
	baz=100,SNR=98									
CCM	**Cathedral Cave**	**77.11**	**309**		P		**P**	**04 41 49.8**	**-2.5**
	baz=100									
CCM					S		**S**	**04 51 44.1**	**+3.9**
	baz=100									
CCM	**Cathedral Cave**	**77.11**	**309**	⇓	P		**P**	**04 41 50.0**	**-2.3**
SMDO	**Samad**	**77.12**	**66**		P		**P**	**04 41 50.9**	**-1.9**
	SNR=64									
SMDO					P		**P**	**04 41 50.9**	**-1.9**
	SNR=64									
SMDO					S		**S**	**04 51 47.0**	**+5.8**
SMDO					S		**S**	**04 51 47.0**	**+5.8**
D41A	**Chassel**	**77.12**	**319**		P		**P**	**04 41 50.4**	**-1.8**
	baz=104,SNR=9.8									
BIDO	**Bidbid**	**77.24**	**66**		P		**P**	**04 41 49.9**	**-3.5**
	SNR=43									
BIDO					P		**P**	**04 41 49.9**	**-3.5**
	SNR=43									
BIDO					S		**S**	**04 51 50.6**	**+8.4**
BIDO					S		**S**	**04 51 50.6**	**+8.4**
JASK	**Jask - Hormozg**	**77.26**	**64**		P		**P**	**04 41 52.5**	**-0.9**
	SNR=33									
JASK					S		S	04 51 52.3	+10
COWI	**Conover**	**77.27**	**317**		IAmb		IAmb	04 42 22.4		
	comp=Z,634nm,1.9s									
COWI	**Conover**	**77.27**	**317**		P		**P**	**04 41 51.0**	**-2.1**
	baz=104									
N41A	**Harden Midland**	**77.32**	**312**		IAmb		IAmb	04 42 22.3		
	comp=Z,827nm,1.6s									
N41A	**Harden Midland**	**77.32**	**312**		P		**P**	**04 41 51.0**	**-2.4**
	baz=101,SNR=6.2									
JFWS	**Jewell Farm**	**77.33**	**314**		IAmb		IAmb	04 42 14.1		
	comp=Z,290nm,0.9s									
JFWS	**Jewell Farm**	**77.33**	**314**		IAMs_20		IAMs_20	05 09 56.9		
	comp=Z,61µm,21.0s									
JFWS	**Jewell Farm**	**77.33**	**314**		P		**P**	**04 41 51.4**	**-2.0**
	baz=102,SNR=44									
JFWS	**Jewell Farm**	**77.33**	**314**		P		**P**	**04 41 51.0**	**-2.4**
	baz=102									
JFWS					S		**S**	**04 51 39.2**	**-3.2**
	baz=102									
UALR	**University of**	**77.42**	**306**		IAmb		IAmb	04 42 15.0		
	comp=Z,535nm,1.4s									
FCAR	**Ozark Folk Cen**	**77.42**	**307**		IAmb		IAmb	04 42 21.1		
	comp=Z,551nm,1.9s									
WHAR	**Wooly Hollow**	**77.46**	**306**		P		**P**	**04 41 50.8**	**-3.5**
WHAR					IAmb		IAmb	04 42 14.8		
	comp=Z,570nm,1.6s									
441A	**DeRidder**	**77.54**	**301**		IAmb		IAmb	04 42 12.9		
	comp=Z,477nm,0.9s									
WSAR	**Wadi Sarin**	**77.67**	**66**		P		**P**	**04 41 54.0**	**-1.8**
	comp=Z,39nm,0.9s,baz=262,slow=5.8,SNR=18									
WSAR					LR		LR	05 16 25.0		
	comp=Z,39µm,19.5s,baz=282,slow=36									
	comp=Z,39nm,0.9s									
CMIG	**Matias Romero**	**77.68**	**287**		LR		LR	05 15 19.2		
	comp=Z,21µm,20.5s,baz=96,slow=35									
I40A	**Norwalk**	**77.80**	**315**		IAmb		IAmb	04 42 24.6		
	comp=Z,688nm,1.6s									
I40A	**Norwalk**	**77.80**	**315**		P		**P**	**04 41 54.0**	**-2.0**
	baz=102,SNR=22									
BJO1	**Bjornoya**	**77.80**	**9**	*e*	P		P	04 41 50.3	-5.1
BJO1					IVmB_BB			04 42 11.3		
	comp=Z,6µm,4.5s									
BJO1				*e*				04 52 01.2		
BJO1				*i*				05 02 46.3		
G40A	**Rib Lake**	**77.80**	**316**		IAmb		IAmb	04 42 24.4		
	comp=Z,415nm,1.6s									
G40A	**Rib Lake**	**77.80**	**316**		P		**P**	**04 41 53.8**	**-2.3**
	baz=103,SNR=22									
L40A	**Anamosa**	**77.85**	**313**		IAmb		IAmb	04 42 24.6		
	comp=Z,355nm,1.2s									
L40A	**Anamosa**	**77.85**	**313**		P		**P**	**04 41 54.0**	**-2.5**
	baz=101,SNR=30									
WLAR	**White Oak Lake**	**77.89**	**304**		P		**P**	**04 41 54.6**	**-2.1**
PRGR	**Permogore**	**77.89**	**26**	*e*	P		**P**	**04 41 52.9**	**-3.2**
PRGR				*e*				04 42 03.2		
PRGR				*e*				04 44 50.5		
WBK	**Wadi Bani Khal**	**77.92**	**67**		P		**P**	**04 41 56.1**	**-1.2**
	SNR=41									
WBK					P		**P**	**04 41 56.1**	**-1.2**
	SNR=41									
WBK					S		**S**	**04 51 55.4**	**+5.7**
WBK					S		**S**	**04 51 55.4**	**+5.7**
R40A	**Maddies Statio**	**77.94**	**309**		IAmb		IAmb	04 42 25.6		
	comp=Z,816nm,1.8s									
R40A	**Maddies Statio**	**77.94**	**309**		P		**P**	**04 41 54.8**	**-2.2**
	baz=100,SNR=45									
P40A	**Paris**	**77.99**	**310**		IAmb		IAmb	04 42 17.6		
	comp=Z,776nm,1.9s									
P40A	**Paris**	**77.99**	**310**		P		**P**	**04 41 54.8**	**-2.5**
	baz=100,SNR=14									
MIAR	**Mount Ida**	**78.39**	**305**		IAMs_20		IAMs_20	05 11 25.8		
	comp=Z,67µm,20.0s									
MIAR	**Mount Ida**	**78.39**	**305**		P		**P**	**04 41 57.8**	**-1.7**
	baz=98									
MIAR	**Mount Ida**	**78.39**	**305**		P		**P**	**04 41 57.5**	**-2.1**
	baz=98									
MIAR					S		**S**	**04 51 52.4**	**-1.8**
	baz=98									
KIRV	**Kirov**	**78.52**	**30**		P		**P**	**04 41 56.9**	**-2.8**
	comp=Z,18nm,0.6s,baz=255,slow=6.4,SNR=9.4									
KIRV					LR		LR	05 20 57.6		
	comp=Z,34µm,18.2s,baz=257,slow=39									
	comp=Z,18nm,0.6s									
KIRV	**Kirov**	**78.52**	**30**	*ce*	P		**P**	**04 41 57.0**	**-2.7**
S39A	**Bolivar**	**78.67**	**308**		IAmb		IAmb	04 42 21.6		
	comp=Z,531nm,1.4s									
S39A	**Bolivar**	**78.67**	**308**		P		**P**	**04 41 58.9**	**-2.2**
	baz=99,SNR=36									
NATX	**Nacogdoches**	**78.92**	**302**		P		**P**	**04 42 01.3**	**-1.2**
	baz=97,SNR=11									
NATX	**Nacogdoches**	**78.92**	**302**		P		**P**	**04 42 00.8**	**-1.7**
	baz=97									
NATX					S		**S**	**04 52 06.1**	**+6.2**
	baz=97									
HHAR	**Hobbs**	**78.94**	**307**		P		**P**	**04 42 00.2**	**-2.4**
	baz=98									
E38A	**The Farm, Brul**	**79.02**	**318**		P		**P**	**04 42 00.3**	**-2.4**
	baz=102,SNR=9.3									
GEYT	**Alibeck**	**79.09**	**51**		P		**P**	**04 42 01.4**	**-2.0**
	comp=Z,15nm,0.9s,baz=260,slow=7.4,SNR=18									
GEYT					LR		LR	05 19 53.9		
	comp=Z,42µm,18.7s,baz=276,slow=38									
	comp=Z,15nm,0.9s									
GYA0B	**ALIBECK ARRAY**	**79.09**	**51**		P		**P**	**04 42 00.5**	**-2.8**
GYA0B					IAmb		IAmb	04 42 20.2		
	comp=Z,974nm,1.6s									
K38A	**Parkersburg**	**79.09**	**313**		IAmb		IAmb	04 42 31.1		
	comp=Z,704nm,1.7s									
K38A	**Parkersburg**	**79.09**	**313**		P		**P**	**04 42 01.2**	**-2.0**
	baz=100,SNR=6.2									
N38A	**Joes South For**	**79.11**	**312**		IAmb		IAmb	04 42 31.6		
	comp=Z,693nm,1.6s									
P38A	**Dawn**	**79.14**	**310**		IAmb		IAmb	04 42 21.1		
	comp=Z,328nm,0.8s									
P38A	**Dawn**	**79.14**	**310**		P		**P**	**04 42 01.3**	**-2.3**
	baz=99,SNR=40									
EYMN	**Ely**	**79.26**	**319**		IAmb		IAmb	04 42 20.2		
	comp=Z,767nm,2.0s									
EYMN	**Ely**	**79.26**	**319**		P		**P**	**04 42 01.5**	**-2.5**
	baz=102,SNR=8.9									
EYMN	**Ely**	**79.26**	**319**		P		**P**	**04 42 01.4**	**-2.6**
	baz=102									
EYMN					S		**S**	**04 52 12.0**	**+8.9**
	baz=102									
SCIA	**State Center**	**79.29**	**313**		IAmb		IAmb	04 42 33.9		
	comp=Z,1µm,2.0s									
SCIA	**State Center**	**79.29**	**313**		P		**P**	**04 42 01.4**	**-2.9**
	baz=100									
SCIA					S		**S**	**04 52 10.2**	**+6.7**
	baz=100									
U38A	**Gravette**	**79.32**	**307**		IAmb		IAmb	04 42 25.2		
	comp=Z,409nm,1.2s									
U38A	**Gravette**	**79.32**	**307**		P		**P**	**04 42 02.2**	**-2.5**
	baz=98,SNR=38									
HSPB	**Hornsund (broa**	**79.33**	**7**	*e*	P		P	04 42 14.6	+11
HSPB				*e*	S		S	04 52 20.2	+18
HSPB				*e*	L		L	05 07 37.9		
	comp=Z,62µm,49.4s									
SPMN	**Marine on St.**	**79.59**	**316**		P		**P**	**04 42 03.1**	**-2.8**
	baz=101,SNR=8.1									
SPMN	**Marine on St.**	**79.59**	**316**		P		**P**	**04 42 03.3**	**-2.6**
	baz=101									
SPMN					S		**S**	**04 52 05.2**	**-1.4**
	baz=101									
NEEM	**North Greenlan**	**79.68**	**353**	*i*	P		**P**	**04 42 06.1**	**0.0**
NEEM					IAmb		IAmb	04 42 39.1		
	comp=Z,727nm,1.1s									
HKT	**Hockley**	**79.71**	**300**		P		**P**	**04 42 04.8**	**-1.9**
HKT					IAmb		IAmb	04 42 24.3		
	comp=Z,1µm,2.2s									
HKT	**Hockley**	**79.71**	**300**		IAMs_20		IAMs_20	05 16 29.9		
	comp=Z,49µm,20.0s									
HKT	**Hockley**	**79.71**	**300**	*i*	P		**P**	**04 42 05.4**	**-1.3**
HKT					pmax		pmax			
	comp=Z,428nm,2.2s									
HKT					MLR		MLR			
	comp=Z,46µm,19.0s									
HKT	**Hockley**	**79.71**	**300**		P		**P**	**04 42 05.4**	**-1.3**
	baz=96									
HKT	**Hockley**	**79.71**	**300**	⇓	P		**P**	**04 42 05.5**	**-1.2**
RLO	**Rose Lookout**	**79.79**	**307**		IAmb		IAmb	04 42 27.9		
	comp=Z,598nm,1.5s									
I37A	**Lemond, Waseca**	**79.79**	**315**		IAmb		IAmb	04 42 36.2		
	comp=Z,695nm,1.5s									
I37B	**Waseca**	**79.79**	**315**		P		**P**	**04 42 05.5**	**-1.5**
	baz=100,SNR=12									
X37A	**Clayton**	**79.86**	**305**		P		**P**	**04 42 06.0**	**-1.6**
	baz=97,SNR=27									
237A	**Washetta, Mont**	**79.92**	**302**		P		**P**	**04 42 05.6**	**-2.3**
237A	**Washetta, Mont**	**79.92**	**302**		P		**P**	**04 42 06.6**	**-1.3**
	baz=96,SNR=5.8									
NGCH	**Negor - Chabah**	**80.14**	**64**		P		**P**	**04 42 09.6**	**+0.4**
	SNR=8.4									
NGCH					S		**S**	**04 52 07.9**	**-5.3**
F36A	**Milaca**	**80.21**	**317**		P		**P**	**04 42 06.4**	**-2.9**
	baz=100,SNR=21									
HOPEN	**Hopen**	**80.32**	**9**	*e*	P		**P**	**04 42 09.6**	**+0.4**
HOPEN				*e*				04 52 31.1		
TUL1	**Leonard**	**80.37**	**306**		IAMs_20		IAMs_20	05 11 01.6		
	comp=Z,73µm,22.0s									
TUL1	**Leonard**	**80.37**	**306**		P		**P**	**04 42 07.3**	**-3.1**
	baz=97,SNR=27									
TUL1	**Leonard**	**80.37**	**306**		P		**P**	**04 42 08.0**	**-2.3**
	baz=97,SNR=27									
TUL1					S		**S**	**04 52 10.9**	**-4.4**
	baz=97									
SPA0	**Spitsbergen Ar**	**80.41**	**7**	*e*	P		**P**	**04 42 12.5**	**+2.8**
SPA0				*e*	ScS		S	04 52 28.8	+15
SPITS	**Spitsbergen Ar**	**80.41**	**7**		LR		LR	05 12 35.7		
	comp=Z,17µm,21.8s,baz=177,slow=32									
KBS	**Kingsbay**	**80.57**	**6**	*e*	P		P	04 42 16.0	+5.5
KBS	**Kingsbay**	**80.57**	**6**	*e*	P		**P**	**04 42 11.3**	**+0.8**
KBS				*i*				04 52 31.6		
B35A	**Bob, Littlefor**	**80.81**	**319**		IAmb		IAmb	04 42 40.8		
	comp=Z,443nm,1.2s									
B35A	**Bob, Littlefor**	**80.81**	**319**		P		**P**	**04 42 10.4**	**-2.0**
	baz=101,SNR=11									
N35A	**Tabor**	**80.92**	**311**		P		**P**	**04 42 11.1**	**-2.1**
	baz=98,SNR=8.0									
DEOK	**Depew**	**80.93**	**306**		IAmb		IAmb	04 42 42.2		
	comp=Z,1µm,1.9s									
T35A	**Sooner Cattle**	**81.08**	**307**		IAmb		IAmb	04 42 35.0		
	comp=Z,1µm,1.6s									
T35B	**Sooner Cattle**	**81.08**	**307**		P		**P**	**04 42 11.8**	**-2.3**
	baz=97,SNR=45									
OK034	**N. Norfolk Rd.**	**81.13**	**306**		IAmb		IAmb	04 42 32.4		
	comp=Z,354nm,1.2s									
OK034					IAMs_20		IAMs_20	05 11 36.6		
	comp=Z,69µm,21.0s									
OK030	**Cody Creek RV**	**81.17**	**306**		IAMs_20		IAMs_20	05 11 37.8		
	comp=Z,78µm,22.0s									
AKTO	**Aktyubinsk**	**81.19**	**39**		P		**P**	**04 42 12.7**	**-1.7**
	comp=Z,30nm,1.2s,baz=251,slow=5.4,SNR=36									
AKTO					LR		LR	05 21 35.8		
	comp=Z,21µm,21.9s,baz=268,slow=38									
	comp=Z,30nm,1.2s									
TLIG	**Tlapa**	**81.22**	**288**	⇑	P		**P**	**04 42 17.5**	**+2.2**
OK031	**S. Brethren Rd**	**81.22**	**306**		IAmb		IAmb	04 42 35.9		
	comp=Z,1µm,1.7s									
OK031					IAMs_20		IAMs_20	05 12 52.1		
	comp=Z,64µm,21.0s									
Z35A	**Perchaven, San**	**81.27**	**304**		P		**P**	**04 42 12.7**	**-2.5**
Z35A					IAmb		IAmb	04 42 36.4		
	comp=Z,501nm,1.1s									
Z35A	**Perchaven, San**	**81.27**	**304**		P		**P**	**04 42 13.3**	**-1.9**
	baz=96,SNR=29									
KVTX	**Kingsville**	**81.28**	**298**	⇓	P		**P**	**04 42 19.0**	**+3.7**
435B	**Jarrell**	**81.30**	**301**		IAmb		IAmb	04 42 36.7		
	comp=Z,421nm,1.1s									
435B					IAMs_20		IAMs_20	05 15 09.8		
	comp=Z,48µm,22.0s									
435B	**Jarrell**	**81.30**	**301**		P		**P**	**04 42 14.2**	**-1.2**
	baz=95,SNR=10									
435B	**Jarrell**	**81.30**	**301**		P		**P**	**04 42 13.8**	**-1.6**
	baz=95									
435B					S		**S**	**04 52 23.6**	**-1.5**
	baz=95									
WHTX	**Lake Whitney,**	**81.31**	**302**		IAmb		IAmb	04 42 36.4		
	comp=Z,1µm,1.8s									
WHTX	**Lake Whitney,**	**81.31**	**302**		P		**P**	**04 42 13.7**	**-1.7**
	baz=96,SNR=10									
WHTX	**Lake Whitney,**	**81.31**	**302**		P		**P**	**04 42 13.2**	**-2.2**
	baz=96,SNR=10									
WHTX					S		**S**	**04 52 23.7**	**-1.5**
	baz=96									
735A	**Kenedy**	**81.31**	**299**		P		**P**	**04 42 14.3**	**-1.2**
	baz=95,SNR=11									
KSU1	**Kansas State U**	**81.42**	**309**		IAMs_20		IAMs_20	05 13 21.0		
	comp=Z,61µm,20.0s									
KSU1	**Kansas State U**	**81.42**	**309**		P		**P**	**04 42 13.2**	**-2.7**
	baz=97,SNR=12									
KSU1	**Kansas State U**	**81.42**	**309**		P		**P**	**04 42 12.8**	**-3.1**
	baz=97									
KSU1					S		**S**	**04 52 30.9**	**+4.8**
	baz=97									
KSU1	**Kansas State U**	**81.42**	**309**	⇓	P		**P**	**04 42 14.2**	**-1.7**
OK025	**Westminster Rd**	**81.58

WMOK Wichita Mounta 82.67 305 P P 04 42 20.7 -1.9
baz=95,SNR=58
WMOK Wichita Mounta 82.67 305 P P 04 42 20.7 -1.9
baz=95
WMOK S S **04 52 41.3 +2.1**
baz=95
WMOK Wichita Mounta 82.67 305 ⇓P P **04 42 20.6 -1.9**
CSTR Hydro, Custer 82.69 306 IAmb IAmb 04 42 52.0
comp=Z,85nm,1.4s
ARU Arti 82.69 33 P P **04 42 20.6 -1.5**
comp=Z,15nm,0.8s,baz=242,slow=5.1,SNR=26
ARU LR LR 05 22 00.8
comp=Z,51µm,18.3s,baz=260,slow=38
comp=Z,15nm,0.8s
ARU Arti 82.69 33 P P **04 42 19.6 -2.6**
ARU IAmb IAmb 04 42 38.8
comp=Z,619nm,1.4s
ARU IAMs_20 IAMs_20 05 21 47.8
comp=Z,49µm,19.0s
ARU Arti 82.69 33*c iP* P **04 42 20.1 -2.0**
ARU 04 45 27.7
ARU PPP PPP 04 47 21.2
ARU S S **04 52 39.2 +0.8**
ARU SSS SSS 05 01 18.7
ARU pmax pmax
comp=Z,60nm,1.4s
ARU pmax pmax
comp=Z,4µm,7.7s
ARU MLR MLR
comp=Z,51µm,17.0s
ARU Arti 82.69 33 ⇑P P **04 42 20.2 -2.0**
OK035 E0210 Rd and N 82.81 307 IAMs_20 IAMs_20 05 19 50.9
comp=Z,57µm,19.0s
OK038 West end E0370 82.81 307 IAmb IAmb 04 42 40.6
comp=Z,371nm,1.0s
OK038 IAMs_20 IAMs_20 05 16 02.0
comp=Z,60µm,20.0s
BGNE Belgrade 82.87 312 P P **04 42 20.6 -2.9**
BGNE IAmb IAmb 04 42 41.1
comp=Z,423nm,0.9s
BGNE Belgrade 82.87 312 P P **04 42 23.2 -0.3**
baz=96,SNR=7.6
BGNE Belgrade 82.87 312 P P **04 42 21.1 -2.4**
baz=96
BGNE S S **04 52 40.9 0.0**
baz=96
NOKA Waynoka 82.97 307 IAmb IAmb 04 42 42.6
comp=Z,511nm,0.9s
R32A Long Quarter, 82.98 309 IAmb IAmb 04 42 45.0
comp=Z,418nm,1.4s
R32A Long Quarter, 82.98 309 P P **04 42 22.4 -1.7**
baz=96,SNR=14
FCC Fort Churchill 83.08 329 IAmb IAmb 04 42 59.8
comp=Z,311nm,1.2s
JCT Junction City 83.18 301 P P **04 42 23.8 -1.5**
baz=94,SNR=35
JCT Junction City 83.18 301 P P **04 42 23.8 -1.5**
baz=94
JCT S S **04 52 49.3 +4.8**
baz=94
ABTX Abilene, Hawle 83.21 303 IAmb IAmb 04 42 47.0
comp=Z,568nm,1.8s
ABTX Abilene, Hawle 83.21 303 P P **04 42 24.3 -1.1**
baz=94,SNR=5.4
ABTX Abilene, Hawle 83.21 303 P P **04 42 24.3 -1.1**
baz=94
ELIS Ellis County 83.31 306 IAmb IAmb 04 42 47.5
comp=Z,685nm,1.2s
K31A O'Neill 83.46 313 P P **04 42 25.2 -1.3**
baz=96,SNR=9.5
SUSD Miller 83.80 315 P P **04 42 25.9 -2.3**
baz=96
SUSD S S **04 52 50.9 +0.6**
baz=96
CBKS Cedar Bluff 83.82 309 IAmb IAmb 04 42 46.8
comp=Z,328nm,0.9s
CBKS IAMs_20 IAMs_20 05 19 34.4
comp=Z,61µm,18.0s
CBKS Cedar Bluff 83.82 309 P P **04 42 27.2 -1.3**
baz=95,SNR=14
CBKS Cedar Bluff 83.82 309 P P **04 42 26.8 -1.7**
baz=95
CBKS S S 04 53 00.8 +10
baz=95
CBKS Cedar Bluff 83.82 309 ⇓P P **04 42 26.7 -1.7**
MDND Maddock 84.63 318 P P **04 42 30.9 -1.3**
baz=96,SNR=10.0
MDND Maddock 84.63 318 P P **04 42 30.5 -1.8**
baz=96
MDND S S **04 53 00.9 +2.6**
baz=96
AMTX Amarillo 85.06 305 P P **04 42 32.2 -2.7**
AMTX Amarillo 85.06 305 P P **04 42 33.4 -1.5**
baz=94,SNR=11
AMTX Amarillo 85.06 305 P P **04 42 33.2 -1.7**
baz=94
AMTX S S **04 53 04.3 +0.9**
baz=94
ZAIG Zacatecas 85.22 293 ⇓P P **04 42 38.3 +2.2**
E28A Huff 85.24 317 P P **04 42 33.9 -1.5**
baz=95,SNR=10
OGNE Ogallala 85.75 311 P P **04 42 36.9 -1.2**
baz=94,SNR=7.0
OGNE Ogallala 85.75 311 P P **04 42 36.9 -1.2**
baz=94
OGNE S S **04 53 08.4 -1.5**
baz=94
MSTX Muleshoe 85.91 304 P P **04 42 38.2 -1.0**
baz=93,SNR=87
MSTX Muleshoe 85.91 304 P P **04 42 37.9 -1.3**
baz=93
MSTX S S 04 53 02.7 -9.1
baz=93
KSCO Kaye Shedlock' 86.08 309 IAmb IAmb 04 42 59.1
comp=Z,407nm,1.1s
KSCO Kaye Shedlock' 86.08 309 P P **04 42 38.9 -1.0**
baz=93,SNR=16
KSCO Kaye Shedlock' 86.08 309 P P **04 42 38.9 -1.0**
baz=93
KSCO S S **04 53 13.4 0.0**
baz=93
MAW Mawson 86.25 158 P P **04 42 39.6 -0.3**
comp=Z,3.9nm,0.8s,baz=293,slow=8.7,SNR=10
MAW LR LR 05 14 52.4
comp=Z,22µm,19.1s,baz=290,slow=31
comp=Z,3.9nm,0.8s
MAW Mawson 86.25 158 P P **04 42 41.0 +1.1**
MAW Mawson 86.25 158 ⇑P P **04 42 41.8 +2.0**
TX31 Lajitas Ar. Si 86.46 299 P P **04 42 41.2 -0.8**
baz=92,SNR=56
TX32 Lajitas Array 86.46 299 IAmb IAmb 04 43 03.8
comp=Z,709nm,1.6s
TXAR Lajitas Array 86.46 299 P P **04 42 41.0 -0.9**
comp=Z,19nm,0.8s,baz=113,slow=6.0,SNR=44
TXAR PKPPKP **P'P'df 05 08 44.3 -2.6**
comp=Z,0.2nm,0.8s,baz=158,slow=1.3,SNR=3.4
TXAR LR LR 05 18 44.1
comp=Z,21µm,20.6s,baz=66,slow=34
comp=Z,19nm,0.8s
FFC Flin Flon 86.78 325 P P **04 42 40.7 -2.1**
FFC Flin Flon 86.78 325 P P **04 42 40.7 -2.1**
FFC pmax pmax
comp=Z,260nm,1.6s
RES Resolute Bay 86.81 345 P P **04 42 40.7 -1.9**
comp=Z,13nm,1.1s,baz=81,slow=6.5,SNR=2.7
RES LR LR 05 16 39.4
comp=Z,28µm,18.7s,baz=106,slow=32
comp=Z,13nm,1.1s
T25A Trinidad 87.39 307 P P **04 42 45.1 -1.4**
baz=92
T25A S S **04 53 26.4 +0.1**
baz=92
RSSD Black Hills 87.41 314 P P **04 42 44.9 -1.5**
RSSD Black Hills 87.41 314 P P **04 42 44.9 -1.5**
RSSD pmax pmax
comp=Z,1µm,2.3s
RSSD Black Hills 87.41 314 P P **04 42 45.6 -0.8**
baz=93,SNR=11
RSSD Black Hills 87.41 314 P P **04 42 44.8 -1.6**
baz=93
RSSD S S **04 53 24.7 -1.5**
baz=93
RSSD Black Hills 87.41 314 ⇓P P **04 42 46.7 +0.3**
KBL Kabul 87.56 56 P P **04 42 44.6 -2.8**
KBL IAmb IAmb 04 43 05.4
comp=Z,466nm,1.6s
KBL Kabul 87.56 56 P P **04 42 44.6 -2.8**
KBL pmax pmax
comp=Z,466nm,1.6s
KBL Kabul 87.56 56 P P **04 42 46.8 -0.5**
SNR=19
KBL P P **04 42 46.8 -0.5**
SNR=19
DGMT Dagmar 87.74 318 P P **04 42 47.1 -0.5**
baz=93,SNR=10
DGMT Dagmar 87.74 318 P P **04 42 46.7 -0.9**
baz=93
DGMT S S **04 53 31.9 +3.1**
baz=93
MNTX Cornudas Mount 88.02 302 IAMs_20 IAMs_20 05 19 07.6
comp=Z,41µm,21.0s
MNTX Cornudas Mount 88.02 302 P P **04 42 47.9 -1.4**
baz=91,SNR=8.9
MNTX Cornudas Mount 88.02 302 P P **04 42 46.9 -2.4**
baz=91
MNTX S S **04 53 37.0 +4.9**
baz=91
Q24A Divide 88.04 309 IAmb IAmb 04 43 09.0
comp=Z,344nm,1.1s
Q24A Divide 88.04 309 P P **04 42 48.7 -1.0**
baz=92
Q24A S S **04 53 34.1 +1.5**
baz=92
HPIG 88.16 297 ⇑P P **04 42 51.4 +1.1**
SDCO Great Sand Dun 88.28 308 IAmb IAmb 04 43 10.1
comp=Z,227nm,1.1s
SDCO IAMs_20 IAMs_20 05 24 13.7
comp=Z,51µm,18.0s
SDCO Great Sand Dun 88.28 308 P P **04 42 49.9 -0.9**
baz=92,SNR=79
SDCO Great Sand Dun 88.28 308 P P **04 42 49.7 -1.1**
baz=92
SDCO S S **04 53 34.7 -0.2**
baz=92
PHWY Pilot Hill 88.35 311 P P **04 42 49.5 -1.5**
ISCO Idaho Springs 88.42 310 IAmb IAmb 04 43 22.8
comp=Z,557nm,1.6s
ISCO Idaho Springs 88.42 310 P P **04 42 50.4 -1.1**
baz=92,SNR=54
ISCO Idaho Springs 88.42 310 P P **04 42 50.1 -1.3**
baz=92
ISCO S S **04 53 39.9 +3.6**
baz=92
IUG luzhnay 88.58 48*c iP* P **04 42 50.5 -1.3**
IUG luzhnay 88.58 48⇑*iP* P **04 42 50.5 -1.3**
baz=48
N23A Red Feather La 88.71 311 IAmb IAmb 04 43 28.7
comp=Z,619nm,1.6s
N23A Red Feather La 88.71 311 P P **04 42 51.4 -1.3**
baz=91
N23A S S **04 53 36.5 -2.3**
baz=91
N23A S **ScS 04 53 38.6 -5.6**
baz=91
KK31 Karatay Array 88.95 47 IAmb IAmb 04 43 10.6
comp=Z,726nm,1.8s
KK31 Karatay Array 88.95 47 *i* P P **04 42 51.7 -1.8**
KKAR Karatay Array 88.95 47 P P **04 42 51.2 -2.3**
KKAR Karatay Array 88.95 47 P P **04 42 51.2 -2.3**
KKAR Karatay Array 88.95 47 ⇑P P **04 42 51.7 -1.8**
KIDD KIDD Seismic O 88.98 302 P P **04 42 55.2 +1.2**
baz=91,SNR=6.8
ANMO Albuquerque 88.99 305 P P **04 42 54.9 +0.8**
comp=Z,5.4nm,0.8s,baz=99,slow=7.0,SNR=11
ANMO LR LR 05 18 14.8
comp=Z,106µm,20.5s,baz=96,slow=33
comp=Z,5.4nm,0.8s
ANMO Albuquerque 88.99 305 P P **04 42 52.1 -2.0**
ANMO IAmb IAmb 04 43 12.5
comp=Z,729nm,2.2s
ANMO Albuquerque 88.99 305*ce*P P **04 42 53.6 -0.5**
ANMO pmax pmax
comp=Z,21nm,1.3s
ANMO Albuquerque 88.99 305 P P **04 42 53.2 -0.8**
baz=91,SNR=20
ANMO Albuquerque 88.99 305 P P **04 42 53.1 -1.0**
baz=91
ANMO S S **04 53 42.7 +1.2**
baz=91
ANMO Albuquerque 88.99 305 ⇓P P **04 42 54.2 +0.1**
LAO LASA Array 89.05 317 IAMs_20 IAMs_20 05 18 01.8
comp=Z,58µm,20.0s
LAO LASA Array 89.05 317 P P **04 42 53.1 -0.8**
baz=91,SNR=14
LAO LASA Array 89.05 317 P P **04 42 52.3 -1.6**
baz=91
LAO S S **04 53 49.7 +8.4**
baz=91
BRVK Borovoye 89.05 37 P P **04 42 51.4 -2.3**
BRVK Borovoye 89.05 37*ce*P P **04 42 52.6 -1.1**
BRVK Borovoye 89.05 37 P P **04 42 56.7 +3.0**
BRVK P P **04 42 56.7 +3.0**
BRVK Borovoye 89.05 37 ⇑P P **04 42 52.3 -1.4**
BVAR Borovoye Array 89.12 37 P P **04 42 51.7 -2.3**
comp=Z,2.6nm,0.7s,baz=280,slow=4.4,SNR=16
BVAR LR LR 05 26 46.9
comp=Z,15µm,18.6s,baz=269,slow=38
comp=Z,2.6nm,0.7s
K22A Casper 89.18 312 IAmb IAmb 04 43 12.0
comp=Z,831nm,2.0s
K22A Casper 89.18 312 P P **04 42 53.4 -1.4**
baz=91,SNR=6.1
K22A Casper 89.18 312 P P **04 42 51.3 -3.5**
baz=91
K22A S S **04 53 43.6 +0.7**
baz=91
S22A 4UR Ranch, Cre 89.33 308 IAmb IAmb 04 43 42.4
comp=Z,572nm,1.8s
S22A 4UR Ranch, Cre 89.33 308 P P **04 42 54.4 -1.4**
baz=91
S22A S S **04 53 42.3 -2.6**
baz=91
Y22D IRIS PASSCAL I 89.36 304 IAMs_20 IAMs_20 05 19 25.8
comp=Z,43µm,20.0s
Y22D IRIS PASSCAL I 89.36 304 P P **04 42 52.3 -3.5**
baz=90
Y22D S S **04 53 46.7 +1.8**
baz=90
SMCO Snowmass 89.46 309 IAmb IAmb 04 43 32.6
comp=Z,198nm,1.1s
SMCO Snowmass 89.46 309 ⇑P P **04 42 56.1 -0.4**
DZA Taraz 89.55 47 *eP* P **04 42 54.8 -1.5**
DZA Taraz 89.55 47 *eP* P **04 42 54.8 -1.5**
baz=47
QSPA South Pole Qui 89.84 180 LR LR 05 16 33.0
comp=Z,21µm,21.5s,baz=194,slow=31
DRK Karamyk 89.87 51 IAmb IAmb 04 43 28.8
comp=Z,316nm,1.1s
121A Cookes Peak, D 90.07 302 P P **04 42 57.6 -1.5**
baz=90
121A S S **04 53 52.1 +0.5**
baz=90
OTUK Ortayu 90.29 42 P P **04 42 57.9 -1.8**
O20A White River Ci 90.45 310 IAmb IAmb 04 43 36.5
comp=Z,552nm,1.8s
O20A White River Ci 90.45 310 P P **04 42 57.6 -3.2**
baz=90
O20A S S **04 53 59.4 +4.5**
baz=90
BRZS Berezniki 90.51 40*ce*P P **04 42 58.9 -1.7**
BRZS Berezniki 90.51 40⇑*eP* P **04 42 58.9 -1.7**
baz=40
PV15 Paradox Valley 90.64 308 IAmb IAmb 04 43 34.4
comp=Z,442nm,1.8s
MVCO Mesa Verde 90.66 307 IAMs_20 IAMs_20 05 25 18.6
comp=Z,45µm,18.0s
MVCO Mesa Verde 90.66 307 P P **04 42 58.6 -3.3**
baz=90
MVCO S S **04 54 04.0 +7.0**
baz=90
PV07 Paradox Valley 90.77 308 IAmb IAmb 04 43 20.6
comp=Z,459nm,1.9s
KAAM Kaadhehdhoo 90.84 90 IAMs_20 IAMs_20 05 18 27.2
comp=Z,46µm,21.0s
PV13 Radium Mtn., P 90.91 308 IAmb IAmb 04 43 37.0
comp=Z,298nm,1.2s
NIL Nilore 91.04 57 P P **04 43 01.9 -1.5**
NIL Nilore 91.04 57 IAMs_20 IAMs_20 05 25 41.9
comp=Z,48µm,20.0s
NIL Nilore 91.04 57 P P **04 43 02.0 -1.5**
NIL pmax pmax
comp=Z,537nm,1.3s
NIL MLR MLR
comp=Z,48µm,20.0s
NIL Nilore 91.04 57 P P **04 43 02.0 -1.5**
HMDM Hanimaadhoo 91.05 83 IAMs_20 IAMs_20 05 21 38.0
comp=Z,48µm,18.0s
RLMT Red Lodge 91.17 315 IAMs_20 IAMs_20 05 18 51.1
comp=Z,51µm,21.0s
RLMT Red Lodge 91.17 315 P P **04 43 02.1 -2.0**
baz=89
RLMT S S **04 54 05.8 +4.4**
baz=89
RPN Rapa Nui 91.22 243 LR LR 05 20 17.8
comp=Z,92µm,20.4s,baz=88,slow=33
319A Douglas 91.34 301 IAmb IAmb 04 43 23.5
comp=Z,591nm,2.0s
BW06 Boulder Array 91.41 313 P P **04 43 04.0 -1.3**
BW06 IAmb IAmb 04 43 22.2
comp=Z,426nm,2.4s
BW06 Boulder Array 91.41 313 P P **04 43 02.6 -2.7**
baz=89
BW06 S S **04 54 02.3 -1.4**
baz=89
PD31 Pinedale Array 91.41 313 ⇑P P **04 43 05.0 -0.3**
PDAR Pinedale Array 91.41 313 P P **04 43 05.0 -0.3**
comp=Z,3.6nm,0.8s,baz=104,slow=6.3,SNR=17
PDAR PKPPKP **P'P'df 05 08 39.8 +2.7**
comp=Z,0.1nm,0.5s,baz=50,slow=1.4,SNR=2.1
PDAR LR LR 05 18 34.4
comp=Z,70µm,21.6s,baz=104,slow=32
comp=Z,3.6nm,0.8s
EGMT Eagleton 91.45 318 P P **04 43 03.3 -1.8**
baz=89
EGMT S S **04 54 10.4 +6.9**
baz=89
RDMU Red Mountain 91.46 310 IAmb IAmb 04 43 53.8
comp=Z,436nm,2.0s
BTLS Baital 91.50 45*c iP* P **04 43 03.6 -1.7**
BTLS Baital 91.50 45⇑*iP* P **04 43 03.6 -1.7**
baz=45
GOA Goa 91.67 75 *eP* P **04 43 10.7 +4.0**
GOA IAmb IAmb 04 43 28.2
comp=Z,196nm,1.4s
W18A Petrified Fore 91.68 305 P P **04 43 04.0 -2.6**
baz=89
POO Poona 91.68 72 *eP* P 04 43 13.1 +6.3
POO IAmb IAmb 04 43 28.4
comp=Z,153nm,0.9s
AAK Ala-Archa 91.88 48 P P **04 43 05.5 -1.9**
AAK IAmb IAmb 04 43 25.0
comp=Z,323nm,1.3s
AAK Ala-Archa 91.88 48 IAMs_20 IAMs_20 05 29 44.6
comp=Z,38µm,18.0s
AAK Ala-Archa 91.88 48*ce*P P **04 43 05.8 -1.6**
AAK pmax pmax
comp=Z,120nm,1.9s
AAK Ala-Archa 91.88 48 P P **04 43 06.4 -0.9**
AAK Ala-Archa 91.88 48 *i* P P **04 43 06.6 -0.9**
SNR=13
AAK Ala-Archa 91.88 48 ⇑P P **04 43 06.5 -0.9**
SGDS Sogindy 91.96 47 *i* P P **04 43 05.1 -2.5**
SGDS Sogindy 91.96 47 *i* P P **04 43 05.2 -2.4**
baz=47
P18A Preston Nutter 92.00 309 IAmb IAmb 04 43 33.6
comp=Z,318nm,1.9s
KAD Karad 92.01 73 *eP* P 04 43 14.4 +6.2
CHMS Chumysh 92.06 47 *i* P P **04 43 06.6 -1.4**
CHMS pmax pmax
comp=Z,282nm,1.5s
H17A Grant Village 92.11 314 P P **04 43 07.1 -1.4**
baz=88
H17A S S 04 54 00.0 -10
baz=88
FLWY Flagg Ranch 92.21 314 IAMs_20 IAMs_20 05 21 08.9
comp=Z,57µm,20.0s
SRU San Rafael Swe 92.22 309 IAmb IAmb 04 43 43.6
comp=Z,378nm,1.9s
SNOW Snow King Moun 92.27 313 P P **04 43 07.3 -2.0**
SNOW IAmb IAmb 04 43 44.5
comp=Z,233nm,1.5s
AJM Ajmer 92.33 64 *eP* P 04 43 17.4 +7.8
LPIG La Paz 92.34 294 LR LR 05 22 05.9
comp=Z,12µm,20.2s,baz=106,slow=34
IMW Indian Meadow 92.39 314 IAMs_20 IAMs_20 05 24 49.8
comp=Z,47µm,19.0s
JMU Jammu 92.44 57 *eP* P **04 43 10.5 +0.6**
TUC Tucson 92.61 302 P P **04 43 09.7 -1.1**
TUC IAmb IAmb 04 43 29.0
comp=Z,532nm,2.5s
TUC Tucson 92.61 302 P P **04 43 09.7 -1.1**
TUC pmax pmax
comp=Z,532nm,2.5s
TUC MLR MLR
comp=Z,31µm,20.0s
TUC Tucson 92.61 302 P P **04 43 08.7 -2.1**
baz=88
TUC S S **04 54 17.1 +2.5**
baz=88
TUC Tucson 92.61 302 ⇑P P **04 43 11.9 +1.1**
TKM2 Tokmak 2 92.68 47 *i* P P **04 43 09.0 -2.1**
TKM2 pmax pmax
comp=Z,344nm,1.8s
TMUT Trail Mountain 92.75 309 IAmb IAmb 04 43 46.2
comp=Z,348nm,2.0s
BOZ Bozeman (W) 92.82 315 IAMs_20 IAMs_20 05 21 10.7
comp=Z,56µm,19.0s
BOZ Bozeman (W) 92.82 315 P P **04 43 10.3 -1.3**
baz=87
BOZ S S **04 54 21.9 +5.8**
baz=87
TCUT Toone Canyon 92.84 311 IAmb IAmb 04 43 39.7
comp=Z,556nm,1.9s
WUAZ Wupatki 93.01 305 IAMs_20 IAMs_20 05 19 00.2
comp=Z,52µm,22.0s
WUAZ Wupatki 93.01 305 P P **04 43 09.8 -2.9**
baz=88
WUAZ S S 04 54 27.6 +9.4
baz=88
WUAZ Wupatki 93.01 305 ⇓P P **04 43 14.7 +1.9**
NRN Naryn 93.04 49 IAmb IAmb 04 43 30.1
comp=Z,214nm,1.0s
MPU Maple Canyon 93.05 310 P P **04 43 10.3 -2.6**
KSH Kashi 93.10 51 P P **04 43 11.0 -2.0**
KSH pP pP 04 43 16.5 -2.9
KSH sP sP 04 43 21.5 -0.2
KSH S S **04 54 16.5 -2.2**
KSH SS SS **05 00 34.5 +0.9**
KSH pmax pmax
comp=Z,41nm,1.1s
KSH pmax pmax
comp=Z,7µm,6.2s
KSH LR LR
comp=Z,79µm,18.5s
KSH LR LR
comp=Z,39µm,22.6s
KSH LR LR
comp=Z,46µm,23.7s
THN Thein Dam 93.14 58 *eP* P **04 43 16.4 +3.3**
KUU Kurty 93.18 46 *eP* P **04 43 11.3 -1.8**
KUU Kurty 93.18 46 *eP* P **04 43 11.4 -1.8**
baz=46
KUU LR LR 05 29 45.6
comp=Z,16µm,14.6s,baz=46
YKA Yellowknife Ar 93.33 332 P P **04 43 11.6 -1.8**
comp=Z,6.9nm,0.9s,baz=83,slow=5.0,SNR=10
YKA PKKPbc **PKKPbc 05 00 28.3 +5.1**
comp=Z,0.8nm,0.6s,baz=263,slow=2.5,SNR=4.1
YKA LR LR 05 20 56.8
comp=Z,47µm,20.9s,baz=84,slow=33
comp=Z,6.9nm,0.9s
YKA Yellowknife Ar 93.33 332 *i* P P **04 43 15.1 +1.7**
YKA pmax pmax
comp=Z,8.0nm,0.9s
NLU North Lily Min 93.39 310 IAmb IAmb 04 43 43.7
comp=Z,265nm,1.7s
EDM Edmonton 93.49 323 P P **04 43 12.2 -2.2**
EDM Edmonton 93.49 323 P P **04 43 12.2 -2.2**
EDM pmax pmax
comp=Z,495nm,1.3s
AAA Alma-Ata 93.64 47 *eP* P **04 43 13.6 -1.7**
AAA Alma-Ata 93.64 47 *eP* P **04 43 13.7 -1.7**
baz=47
AAA LR LR 05 29 33.9
comp=Z,30µm,14.9s,baz=47
CHKK Chushkaly 93.65 46 *eP* P **04 43 13.2 -2.1**
CHKK Chushkaly 93.65 46 *eP* P **04 43 13.3 -2.1**
baz=46
MDOK Medeo 93.74 47 *eP* P **04 43 13.6 -2.3**
MDOK Medeo 93.74 47 *eP* P **04 43 13.6 -2.3**
baz=47

MDOK LR LR 05 29 33.9
comp=Z,17µm,16.5s,baz=47
DUG Dugway, Tooele 93.95 310 P **P** **04 43 13.7 -3.3**
baz=87
DUG S **S** **04 54 25.3 -0.9**
baz=87
KNB Kanab 94.12 307 P **P** **04 43 15.5 -2.3**
KNB Kanab 94.12 307 P **P** **04 43 15.5 -2.3**
KNB pmax pmax
comp=Z,39nm,1.2s
AIS Amsterdam Isla 94.15 128 IAMs_20 IAMs_20 05 19 08.3
comp=Z,44µm,20.0s
PCHI Peechi 94.17 80 *e*P P 04 43 27.9 +10
PCHI *e*S S 04 54 02.8 -26
KURBB Kurchatov Arra 94.23 39 P **P** **04 43 15.4 -2.4**
comp=Z,2.3nm,1.0s,baz=281,slow=5.6,SNR=11
KURBB PP **PP** **04 46 57.6 -6.9**
comp=Z,14nm,0.9s,baz=278,slow=7.5,SNR=4.1
KURBB LR LR 05 30 39.8
comp=Z,20µm,18.6s,baz=268,slow=39
comp=Z,2.3nm,1.0s
KURBB Kurchatov Arra 94.23 39 P **P** **04 43 16.0 -1.8**
ARXS Arharly 94.24 46 *e*P **P** **04 43 16.2 -1.9**
KURK Kurchatov 94.28 39 *i* P **P** **04 43 15.3 -2.7**
KURK pmax pmax
comp=Z,166nm,2.7s
KURK Kurchatov 94.28 39 P **P** **04 43 20.4 +2.4**
KURK P **P** **04 43 20.4 +2.4**
214A Organ Pipe Nat 94.34 302 P **P** **04 43 16.3 -2.4**
baz=87
214A S **S** **04 54 25.9 -3.8**
baz=87
MSO Missoula 94.35 317 IAMs_20 IAMs_20 05 27 43.0
comp=Z,48µm,18.0s
MSO Missoula 94.35 317 P **P** **04 43 18.3 -0.3**
baz=86
MSO S **S** **04 54 31.6 +2.3**
baz=86
SMLA Simla 94.42 59 *e*P **P** **04 43 20.2 +1.1**
SMLA IAmb IAmb 04 43 38.1
comp=Z,149nm,1.0s
TDK Taldyqorghan 94.59 45 *e*P **P** **04 43 17.9 -1.7**
TDK Taldyqorghan 94.59 45 *e*P **P** **04 43 18.0 -1.7**
baz=45
TDK LR LR 05 29 16.4
comp=Z,16µm,14.2s,baz=45
AKL Akola 94.63 69 *e*P **P** **04 43 22.7 +2.5**
ZHN Zhinishke 94.75 47 *e*P **P** **04 43 18.5 -2.0**
ZHN Zhinishke 94.75 47 *e*P **P** **04 43 18.5 -2.0**
baz=47
TRD Trivandrum 94.79 82 *e*P P 04 43 31.9 +11
HLID Hailey 94.92 314 IAMs_20 IAMs_20 05 21 47.8
comp=Z,58µm,19.0s
HLID Hailey 94.92 314 P **P** **04 43 20.3 -1.0**
baz=86
HLID S **S** **04 54 42.2 +7.5**
baz=86
BHPL Bhopal 94.94 67 *e*P **P** **04 43 23.6 +2.0**
BHPL IAmb IAmb 04 43 43.1
comp=Z,118nm,1.6s
SPR3 Spring Creek 3 95.19 309 IAmb IAmb 04 43 51.2
comp=Z,58nm,1.5s
KOD Kodaikanal 95.27 80 *e*P P 04 43 32.1 +8.4
PDMCI Parker Dam,Lak 95.33 304 P **P** **04 43 20.8 -2.4**
baz=86
SEM Semipalatinsk 95.35 40 *e*P **P** **04 43 20.4 -2.8**
SEM Semipalatinsk 95.35 40 *e*P **P** **04 43 20.4 -2.8**
comp=Z,600nm,5.0s,baz=40
SEM LR LR 05 27 53.3
baz=40
SHLS Shalkode 95.50 47 *e*P **P** **04 43 23.8 -0.1**
SHLS Shalkode 95.50 47 *e*P **P** **04 43 23.9 -0.1**
baz=47
A36M Sachs Harbour 95.56 343 P **P** **04 43 23.3 0.0**
baz=73
A36M S **S** **04 54 42.9 +4.4**
baz=73
NEE2 Needles Airpor 95.70 305 P **P** **04 43 26.0 +1.2**
baz=86
NEE2 S **S** **04 54 41.2 -0.2**
baz=86
ELK Elko 95.76 311 P **P** **04 43 24.1 -1.2**
comp=Z,3.1nm,0.8s,baz=43,slow=4.5,SNR=17
ELK LR LR 05 21 47.0
comp=Z,79µm,20.6s,baz=82,slow=32
comp=Z,3.1nm,0.8s
PRN Pahroc Range 95.87 307 ⇓P **P** **04 43 27.7 +2.0**
JHNI Jhansi 95.87 65 *e*P **P** **04 43 29.5 +3.7**
C36M Paulatuk 95.90 340 IAMs_20 IAMs_20 05 18 49.3
comp=Z,44µm,22.0s
C36M Paulatuk 95.90 340 P **P** **04 43 25.9 +0.9**
baz=75
C36M S **S** **04 54 43.1 +1.5**
baz=75
PLID Pearl Lake 95.93 315 IAMs_20 IAMs_20 05 22 05.0
comp=Z,62µm,20.0s
MFID Camas Ranch 95.96 313 IAMs_20 IAMs_20 05 21 02.2
comp=Z,46µm,21.0s
SALM Salem 95.97 78 *e*P P 04 43 32.1 +5.6
GLA Glamis 95.98 303 P **P** **04 43 27.4 +1.1**
baz=86
GLA S **S** **04 54 42.5 -1.5**
baz=86
IRM Iron Mountain 96.17 304 P **P** **04 43 27.2 +0.1**
baz=86
IRM S **S** **04 54 54.1 +8.5**
baz=86
HYBB Hyderabad (bro 96.18 73 *e*P **P** **04 43 25.5 -1.9**
HYBB IVmB_BB 04 43 43.1
comp=Z,1µm,3.4s
HYBB *e*PP **PP** **04 47 18.1 -2.6**
HYBB *e*SKSac **SKSac** **04 54 02.2 -1.1**
HYBB *e*PKKPbc **PKKPbc** **05 00 11.6 -2.7**
HYBB *e*SS **SS** **05 01 16.9 -1.5**
HYBB *e*PKKSdf PKKSdf 05 03 48.9 -3.0
HYBB *e*SKKSdf **SKKSdf** **05 07 23.6 -1.6**
HYBB IVMs_BB IVMs_BB 05 27 06.1
comp=Z,5µm,18.1s
HYB Hyderabad 96.18 73 *e*P P 04 43 35.0 +7.6
HYB IAmb IAmb 04 43 57.0
comp=Z,176nm,1.8s
R11A Troy Canyon, C 96.22 308 P **P** **04 43 23.4 -4.0**
baz=85
NEW Newport 96.35 318 P **P** **04 43 26.2 -1.4**
comp=Z,2.3nm,0.9s,baz=88,slow=2.5,SNR=5.8
NEW PP **PP** **04 47 19.9 -1.3**
comp=Z,6.3nm,1.0s,baz=82,slow=5.7,SNR=3.1
NEW LR LR 05 24 51.3
comp=Z,89µm,18.1s,baz=75,slow=34
comp=Z,2.3nm,0.9s
NEW Newport 96.35 318 P **P** **04 43 24.4 -3.2**
baz=83
NEW S **S** **04 54 48.3 +1.8**
baz=83
BC3 Big Chuckawall 96.47 304 P **P** **04 43 26.2 -2.3**
baz=86
BC3 S **S** **04 54 51.7 +3.4**
baz=86
NGP Nagpur 96.52 69 *e*P **P** **04 43 31.1 +2.2**
GMRC Granite Mounta 96.55 305 P **P** **04 43 27.3 -1.7**
baz=86
GMRC S **S** **04 54 54.2 +5.2**
baz=86
TUQ Turquoise Moun 96.72 306 P **P** **04 43 25.4 -4.3**
baz=85
TUQ S **S** **04 54 57.7 +7.3**
baz=85
SWSC Sam W. Stewart 96.81 303 P **P** **04 43 28.8 -1.1**
baz=86
SWSC S **S** **04 54 52.5 +1.6**
baz=86
TPNV Topopah Spring 96.86 307 IAMs_20 IAMs_20 05 21 15.9
comp=Z,49µm,22.0s
TPNV Topopah Spring 96.86 307 P **P** **04 43 27.6 -2.7**
baz=85
TPNV S S 04 55 04.9 +13
baz=85
BMO Blue Mountains 96.87 315 IAMs_20 IAMs_20 05 22 44.1
comp=Z,44µm,20.0s
BELC Belle Mtn. Jos 96.89 304 P **P** **04 43 26.8 -3.7**
baz=86
BELC S **S** **04 54 60.0 +8.0**
baz=86
MAKZ Makanchi 96.90 43 P **P** **04 43 26.7 -3.4**
MAKZ Makanchi 96.90 43 P **P** **04 43 26.7 -3.4**
MAKZ pmax pmax
comp=Z,112nm,1.7s

SHOC Shoshone, Teco 96.97 306 P **P** **04 43 27.1 -3.5**
baz=85
SHOC S **S** **04 54 58.9 +6.6**
baz=85
IKP In-Ko-Pah, Jac 97.09 303 P **P** **04 43 29.1 -2.3**
baz=86
IKP S **S** **04 54 55.9 +2.3**
baz=86
HEC Hector,Ludlow 97.10 305 P **P** **04 43 30.4 -1.0**
baz=85
HEC S **S** **04 54 58.8 +5.1**
baz=85
MK31 Makanchi Array 97.11 43 P **P** **04 43 28.2 -2.8**
MK31 IAmb IAmb 04 47 20.8
comp=Z,334nm,2.8s
MK31 Makanchi Array 97.11 43 *i* P **P** **04 43 29.4 -1.7**
MK31 pmax pmax
comp=Z,42nm,1.2s
MKAR Makanchi Array 97.11 43 P **P** **04 43 28.0 -3.1**
comp=Z,1.0nm,0.7s,baz=275,slow=3.4,SNR=9.6
MKAR PP **PP** **04 47 30.7 +3.6**
comp=Z,7.3nm,0.8s,baz=275,slow=6.8,SNR=2.2
MKAR PKKPbc **PKKPdf** **05 00 16.1 +1.7**
comp=Z,1.0nm,0.8s,baz=122,slow=1.6,SNR=3.9
MKAR PKPPKP **P'P'df** **05 08 29.1 +3.2**
comp=Z,0.1nm,0.4s,baz=76,slow=6.1,SNR=1.5
MKAR LR LR 05 34 30.5
comp=Z,23µm,18.8s,baz=282,slow=40
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 97.11 43 *i* P **P** **04 43 29.0 -2.1**
PTH Pithoragarh 97.13 60 *e*P Pdif 04 43 32.1 +0.2
LGTI Lohaghat 97.17 60 *e*P Pdif 04 43 37.9 +6.2
WRGLY Wrigley 97.20 334 P **P** **04 43 28.5 -2.5**
baz=76
WRGLY S S 04 55 03.8 +11
baz=76
TPFO Pinon Flats 97.30 304 P **P** **04 43 30.3 -2.0**
baz=85
TPFO S **S** **04 54 56.9 +1.4**
baz=85
PFO Pinyon Flats O 97.31 304 LR LR 05 23 50.7
comp=Z,40µm,19.8s,baz=91,slow=33
PFO Pinyon Flats O 97.31 304 IAMs_20 IAMs_20 05 25 38.2
comp=Z,44µm,19.0s
PFO Pinyon Flats O 97.31 304 P **P** **04 43 30.3 -2.0**
baz=85
PFO S **S** **04 54 53.4 -2.2**
baz=85
MONP2 Monument Peak 97.33 303 P **P** **04 43 31.8 -0.8**
baz=85
MONP2 S **S** **04 55 01.2 +5.3**
baz=85
FURC Furnace Creek, 97.39 307 P Pdif 04 43 33.3 +0.7
baz=85
FURC S **S** **04 54 56.5 +0.7**
baz=85
QSM Queen of Sheba 97.44 306 P **P** **04 43 30.6 -2.2**
GSC Goldstone, Bar 97.45 305 P **P** **04 43 32.9 0.0**
baz=85
GSC S **S** **04 54 59.6 +3.0**
baz=85
ZALV Zalesovo Beam 97.63 36 P **P** **04 43 31.2 -2.0**
comp=Z,0.5nm,0.5s,baz=317,slow=9.9,SNR=1.7
ZALV PP **PP** **04 47 28.3 -2.4**
comp=Z,29nm,1.1s,baz=289,slow=7.8,SNR=3.5
ZALV LR LR 05 32 15.4
comp=Z,39µm,18.2s,baz=290,slow=38
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 97.63 36 *i* P Pdif 04 43 39.7 +6.5
BBRC Big Bear Solar 97.63 304 P **P** **04 43 33.1 -0.9**
baz=85
BBRC S **S** **04 55 03.3 +4.7**
baz=85
RRX Edison Barstow 97.64 305 P **P** **04 43 31.8 -1.9**
baz=85
RRX S **S** **04 55 03.3 +5.2**
baz=85
GRAC Grapevine Rang 97.75 307 P **P** **04 43 33.9 -0.3**
baz=84
GRAC S **S** **04 55 03.0 +4.0**
baz=84
109C Camp Elliot, M 97.90 303 IAMs_20 IAMs_20 05 23 10.2
comp=Z,43µm,21.0s
109C Camp Elliot, M 97.90 303 P **P** **04 43 31.4 -3.5**
baz=85
109C S **S** **04 55 03.8 +3.4**
baz=85
MURC Murrieta 97.92 304 P **P** **04 43 33.7 -1.3**
baz=85
MURC S **S** **04 55 00.3 -0.2**
baz=85
FLDN Fort Liard 97.92 331 P **P** **04 43 30.8 -3.5**
baz=76
MPMC Manual Prospec 97.94 306 P **P** **04 43 33.1 -2.2**
baz=84
MPMC S S 04 55 10.5 +10
baz=84
WVOR Wild Horse Val 98.12 313 P **P** **04 43 34.1 -1.7**
WVOR IAmb IAmb 04 44 05.5
comp=Z,421nm,2.5s
WVOR Wild Horse Val 98.12 313 P **P** **04 43 34.1 -1.7**
WVOR pmax pmax
comp=Z,421nm,2.5s
LRMC Laurel Mtn Rad 98.15 306 P **P** **04 43 35.2 -0.9**
baz=84
LRMC S S 04 55 11.9 +9.2
baz=84
VJD Vijayawada 98.21 73 *e*P Pdif 04 43 44.8 +8.2
HAWA Hanford 98.22 317 IAMs_20 IAMs_20 05 24 13.6
comp=Z,42µm,18.0s
BFSC Mount Baldy Ra 98.24 304 P Pdif 04 43 37.8 +1.2
baz=84
BFSC S **S** **04 55 06.7 +3.2**
baz=84
NVAR Mina Array Bea 98.34 309 P **P** **04 43 35.5 -1.5**
comp=Z,1.8nm,0.9s,baz=88,slow=4.8,SNR=12
NVAR PP **PP** **04 47 39.0 +2.0**
comp=Z,3.0nm,0.9s,baz=82,slow=6.7,SNR=2.0
NVAR PKKPbc **PKKPdf** **05 00 17.0 +4.8**
comp=Z,1.0nm,0.8s,baz=241,slow=4.0,SNR=4.6
NVAR LR LR 05 22 38.6
comp=Z,45µm,21.6s,baz=86,slow=32
comp=Z,1.8nm,0.9s
CWC Cottonwood Cre 98.37 307 P **P** **04 43 32.6 -4.5**
baz=84
CWC S **S** **04 55 07.2 +2.6**
baz=84
TIN Tinemaha, Big 98.43 307 P **P** **04 43 36.4 -0.9**
baz=84
TIN S **S** **04 55 08.9 +4.0**
baz=84
EDW2 Edwards Air Fo 98.46 305 P **P** **04 43 37.3 -0.1**
baz=84
EDW2 S **S** **04 55 07.6 +2.5**
baz=84
PALK Pallekele 98.51 83 LR LR 05 26 15.1
comp=Z,47µm,18.1s,baz=16,slow=34
PALK Pallekele 98.51 83 IAMs_20 IAMs_20 05 25 54.7
comp=Z,51µm,18.0s
PASC Pasadena Art C 98.69 304 IAMs_20 IAMs_20 05 25 46.7
comp=Z,46µm,20.0s
ZSN Zaisan 98.76 42 *e*P **P** **04 43 36.4 -2.0**
ZSN Zaisan 98.76 42 *e*P **P** **04 43 36.4 -2.0**
baz=42
ISA Isabella, Lake 98.77 306 S **S** **04 55 10.4 +2.6**
baz=84
DECC Green Verdugo 98.80 304 S **S** **04 55 12.7 +4.7**
baz=84
FMP Fort Macarthur 98.82 304 S **S** **04 55 12.1 +4.0**
baz=84
MLAC Mammoth, Mammo 98.84 308 S **S** **04 55 11.4 +2.7**
baz=83
CIS Catalina Islan 98.95 304 S **S** **04 55 13.3 +4.1**
baz=84
PAHR Pah Rah Range 99.02 310 IAmb IAmb 04 44 08.0
comp=Z,118nm,1.5s
OSI Osito Audit: C 99.08 305 S **S** **04 55 13.9 +3.5**
baz=84
ARVC Arvin 99.12 305 S **S** **04 55 11.9 +1.4**
baz=84
VES Vestal, Richgr 99.25 306 S **S** **04 55 10.4 -1.2**
baz=83
INK Inuvik 99.48 340 P **Pdif** **04 43 41.4 +0.3**
comp=Z,2.5nm,0.9s,baz=90,slow=2.2,SNR=5.5
INK LR LR 05 24 52.9
comp=Z,28µm,18.2s,baz=67,slow=33
comp=Z,2.5nm,0.9s
INK Inuvik 99.48 340 S **S** **04 55 14.5 +2.3**
baz=66
VAR Varanasi 99.92 64 *e*P **Pdif** **04 43 50.6 +6.6**
CMB Columbia Colle 100.01 308 IAMs_20 IAMs_20 05 23 03.2
comp=Z,57µm,22.0s
DGZ Jazzator, Alta 100.03 40 *i* P **Pdif** **04 43 41.0 -3.2**
DGZ pmax pmax
comp=Z,48nm,1.9s
J04D Umpqua Nationa 100.53 314 IAMs_20 IAMs_20 05 27 40.0
comp=Z,49µm,19.0s
VIS Vishakhapatnam 100.72 72 *e*P **Pdif** **04 43 51.1 +3.4**
H04D Lebanon 100.75 315 IAMs_20 IAMs_20 05 27 13.7
comp=Z,35µm,18.0s
SAO San Andreas Ge 101.02 307 IAMs_20 IAMs_20 05 24 22.1
comp=Z,55µm,22.0s
COR Corvallis 101.14 315 IAMs_20 IAMs_20 05 32 22.0
comp=Z,38µm,18.0s
YBH Yreka Blue Hor 101.22 312 P **Pdif** **04 43 50.3 +0.7**
comp=Z,0.8nm,0.4s,baz=234,slow=2.7,SNR=5.1
WMQ Urumqi 101.34 45 *e*P **Pdif** **04 43 49.0 -1.1**
WMQ PP **PP** **04 48 05.5 +6.0**
WMQ S **Sdif** **04 55 27.8 -1.2**
WMQ SS **SS** **05 02 35.8 +6.3**
WMQ pmax pmax
comp=Z,26nm,1.3s
WMQ pmax pmax
comp=Z,940nm,6.5s
WMQ LR LR
comp=Z,33µm,20.5s
WMQ LR LR
comp=Z,18µm,19.7s
WMQ LR LR
comp=Z,19µm,22.3s
EPYK Eagle Plains 101.44 339 IAMs_20 IAMs_20 05 28 35.7
comp=Z,42µm,20.0s
I02E Swisshome, OR 101.61 315 IAMs_20 IAMs_20 05 27 51.5
comp=Z,27µm,18.0s
J01E Myrtle Point 101.86 314 IAMs_20 IAMs_20 05 28 45.1
comp=Z,43µm,18.0s
M31M Drury Creek, Y 102.30 335 IAMs_20 IAMs_20 05 28 33.9
comp=Z,43µm,20.0s
VNDA Vanda 102.34 180 Pdiff **Pdif** **04 44 00.0 +6.3**
comp=Z,1.9nm,0.9s,baz=285,slow=1.1,SNR=4.2
P33M Teslin, Yukon 102.37 332 IAMs_20 IAMs_20 05 28 08.1
comp=Z,55µm,20.0s
I29M Ogilvie Camp, 102.48 338 IAMs_20 IAMs_20 05 22 00.4
comp=Z,55µm,22.0s
BOK Bokaro 102.65 66 *e*P **Pdif** **04 44 01.0 +4.7**
BOK IAmb IAmb 04 44 18.8
comp=Z,11nm,0.8s
BWNR Bhubaneshwar 102.88 69 *e*P **Pdif** **04 44 02.4 +5.1**
N31M Braeburn, Yuko 103.19 334 IAMs_20 IAMs_20 05 31 30.7
comp=Z,50µm,18.0s
EGAK Eagle 103.82 338 IAMs_20 IAMs_20 05 22 51.8
comp=Z,46µm,22.0s
I26K Coal Creek Min 104.27 339 IAMs_20 IAMs_20 05 26 14.3
comp=Z,38µm,19.0s
FYU Fort Yukon 104.27 341 IAMs_20 IAMs_20 05 31 27.4
comp=Z,45µm,18.0s
YUK6 Outpost Mounta 104.56 334 PKiKP **PKiKP** **04 48 16.6 -3.4**
baz=63
H25K Birch Creek 104.64 341 PKiKP **PKiKP** **04 48 18.1 -1.6**
baz=54
GTK Tadong 104.70 62 *ex* x 04 44 14.5
GTK IAmb IAmb 04 44 23.1
comp=Z,106nm,1.8s
SIT Sitka 104.80 330 PKiKP **PKiKP** **04 48 17.8 -2.4**
baz=66
J26L Joseph Creek 104.85 339 IAMs_20 IAMs_20 05 27 54.9
comp=Z,40µm,21.0s
J26L Joseph Creek 104.85 339 PKiKP **PKiKP** **04 48 19.1 -1.2**
baz=57
P29M Windy Craggy 104.87 333 PKiKP **PKiKP** **04 48 21.7 +1.3**
baz=64
BVCY Beaver Creek 104.90 336 PKiKP **PKiKP** **04 48 20.5 +0.2**
baz=60
G24K Hadweenzic Riv 104.91 342 PKiKP **PKiKP** **04 48 18.1 -2.2**
baz=53
O29M Mount Kennedy 104.94 334 PKiKP **PKiKP** **04 48 23.2 +2.6**
baz=63
L27K Beaver Creek, 104.96 337 PKiKP **PKiKP** **04 48 20.8 +0.3**
baz=59
PRP Porcupine Dome 104.97 340 IAMs_20 IAMs_20 05 26 20.0
comp=Z,36µm,19.0s
PRP Porcupine Dome 104.97 340 PKiKP **PKiKP** **04 48 20.8 +0.2**
baz=55
YUK3 Moose Creek 105.05 336 PKiKP **PKiKP** **04 48 22.3 +1.4**
baz=61
SCRK Sand Creek 105.29 338 IAMs_20 IAMs_20 05 30 43.7
comp=Z,42µm,19.0s
SCRK Sand Creek 105.29 338 PKiKP **PKiKP** **04 48 21.0 -0.2**
baz=57
E22K Anaktuvuk Pass 105.29 344 PKiKP **PKiKP** **04 48 27.0 +6.0**
baz=48
M27K Edge Creek, AK 105.34 336 PKiKP **PKiKP** **04 48 20.0 -1.3**
baz=59
O28M Mount Upton 105.43 335 PKiKP **PKiKP** **04 48 27.0 +5.3**
baz=61
J25K Salcha River, 105.44 339 IAMs_20 IAMs_20 05 28 05.3
comp=Z,39µm,20.0s
J25K Salcha River, 105.44 339 PKiKP **PKiKP** **04 48 22.1 +0.7**
baz=55
L26K Log Cabin Wild 105.57 337 PKiKP **PKiKP** **04 48 26.0 +4.4**
baz=58
H24K Noodor Dome 105.57 341 PKiKP **PKiKP** **04 48 28.4 +6.9**
baz=52
G23K Bananza Creek 105.70 342 PKiKP **PKiKP** **04 48 16.4 -5.3**
baz=50
RIDG Independent Ri 105.74 338 IAMs_20 IAMs_20 05 31 34.5
comp=Z,41µm,19.0s
RIDG Independent Ri 105.74 338 PKiKP **PKiKP** **04 48 15.3 -6.6**
baz=56
M26K Nabesna, AK 105.76 337 PKiKP **PKiKP** **04 48 16.6 -5.4**
baz=58
PINM Pinnacle 105.78 334 PKiKP **PKiKP** **04 48 25.2 +3.1**
baz=61
F22K John River 105.82 343 PKiKP **PKiKP** **04 48 20.3 -1.6**
baz=48
CTG Chitna Glacier 105.82 335 PKiKP **PKiKP** **04 48 21.6 -0.7**
baz=60
POKR Poker Plat Res 105.86 340 IAMs_20 IAMs_20 05 27 06.4
comp=Z,49µm,19.0s
POKR Poker Plat Res 105.86 340 PKiKP **PKiKP** **04 48 26.5 +4.5**
baz=53
ILAR Eielson Array 105.88 340 Pdiff **Pdif** **04 44 08.4 -1.3**
comp=Z,0.2nm,0.7s,baz=41,slow=6.0,SNR=1.8
ILAR PP **PKiKP** **04 48 14.6 -7.5**
comp=Z,3.4nm,0.9s,baz=54,slow=5.1,SNR=4.9
ILAR PKKPbc **PKKPdf** **04 59 55.6 -2.9**
comp=Z,1.5nm,1.0s,baz=257,slow=4.6,SNR=4.8
K24K Donnelly Dome 106.05 339 PKiKP PKiKP 04 48 30.5 +8.1
baz=55
HDA Harding Lake 106.11 339 IAMs_20 IAMs_20 05 28 36.2
comp=Z,42µm,20.0s
HDA Harding Lake 106.11 339 PKiKP **PKiKP** **04 48 27.0 +4.5**
baz=54
H23K Yukon River 106.11 341 PKiKP PKiKP 04 48 30.6 +8.1
baz=51
COLA College 106.14 340 IAMs_20 IAMs_20 05 27 15.1
comp=Z,42µm,19.0s
COLA College 106.14 340 PKiKP **PKiKP** **04 48 28.3 +5.8**
baz=53
TCOL CIGO, UAF Yank 106.15 340 IAMs_20 IAMs_20 05 27 15.1
comp=Z,45µm,19.0s
TCOL CIGO, UAF Yank 106.15 340 PKiKP **PKiKP** **04 48 29.5 +7.0**
baz=53
MDM Murphy Dome 106.22 340 IAMs_20 IAMs_20 05 27 17.0
comp=Z,44µm,19.0s
CCB Clear Creek Bu 106.27 340 IAMs_20 IAMs_20 05 27 17.3
comp=Z,37µm,19.0s
MCARA McCarthy VSAT 106.31 336 IAMs_20 IAMs_20 05 29 09.8
comp=Z,36µm,21.0s
MCARA McCarthy VSAT 106.31 336 PKiKP PKiKP 04 48 38.4 +15
baz=58
F21K Alatna River 106.38 344 PKiKP PKiKP 04 48 33.6 +11
baz=47
PAX Paxson 106.41 338 PKiKP PKiKP 04 48 31.2 +8.0
baz=56
WRH Wood River Hil 106.47 340 IAMs_20 IAMs_20 05 27 32.7
comp=Z,40µm,19.0s
I23K Minto, Yukon-K 106.48 341 IAMs_20 IAMs_20 05 33 00.8
comp=Z,40µm,18.0s
I23K Minto, Yukon-K 106.48 341 PKiKP PKiKP 04 48 33.8 +11
baz=51
TGL Tana Glacier 106.56 335 IAMs_20 IAMs_20 05 28 38.5
comp=Z,49µm,21.0s
GLB Gilahina Butte 106.60 336 IAMs_20 IAMs_20 05 27 55.5
comp=Z,44µm,21.0s
HARP HAARP 106.61 337 PKiKP PKiKP 04 48 32.8 +9.3

baz=56
H22K Ishtalitna Cre 106.65 342 PKiKP PKiKP 04 48 35.3 +12
baz=49
NEA2 Nenana 106.73 340 IAms_20 IAms_20 05 27 42.5
comp=Z,41µm,19.0s
NEA2 Nenana 106.73 340 PKiKP **PKiKP 04 48 30.6 +6.9**
baz=52
N25K Chitina, Valde 106.83 336 PKiKP PKiKP 04 48 34.4 +10
baz=57
G21K Allakaket 106.87 343 PKiKP PKiKP 04 48 35.7 +12
baz=47
MLY Manley 107.01 341 PKiKP PKiKP 04 48 37.2 +13
baz=50
DHY Denali Highway 107.06 338 IAms_20 IAms_20 05 32 25.2
comp=Z,35µm,19.0s
DHY Denali Highway 107.06 338 PKiKP PKiKP 04 48 34.9 +10
baz=54
BWN Browne 107.13 340 IAms_20 IAms_20 05 27 52.5
comp=Z,37µm,18.0s
M24K Tolsona, Glenn 107.17 337 IAms_20 IAms_20 05 31 10.3
comp=Z,39µm,19.0s
M24K Tolsona, Glenn 107.17 337 PKiKP PKiKP 04 48 33.8 +9.2
baz=55
BMRM Bremner River 107.18 336 PKiKP **PKiKP 04 48 25.4 +0.8**
baz=57
MCK McKinley 107.22 339 IAms_20 IAms_20 05 29 19.4
comp=Z,45µm,20.0s
MCK McKinley 107.22 339 PKiKP **PKiKP 04 48 27.5 +2.9**
baz=52
H21K Melozitna Rive 107.25 342 PKiKP **PKiKP 04 48 31.7 +7.1**
baz=48
I21K Tanana 107.31 342 PKiKP **PKiKP 04 48 29.8 +5.1**
baz=49
RND Reindeer 107.39 339 IAms_20 IAms_20 05 31 44.1
comp=Z,37µm,20.0s
KLU Klutina 107.42 337 PKiKP **PKiKP 04 48 21.7 -3.4**
baz=56
WAT6 Susitna Watana 107.48 338 PKiKP **PKiKP 04 48 28.0 +2.7**
baz=53
RAGM Ragged Mountai 107.53 335 IAms_20 IAms_20 05 27 11.1
comp=Z,48µm,20.0s
GUWA GUWAHATI 107.59 63 *eP* **Pdif 04 44 22.4 +4.2**
WAT1 Susitna Watana 107.63 339 PKiKP **PKiKP 04 48 32.5 +7.1**
baz=53
KAIM Kayak Island 107.67 335 PKiKP **PKiKP 04 48 29.8 +4.3**
baz=57
BPAW Bear Paw Mtn. 107.69 340 IAms_20 IAms_20 05 28 11.8
comp=Z,38µm,20.0s
BPAW Bear Paw Mtn. 107.69 340 PKiKP PKiKP 04 48 34.0 +8.5
baz=50
SCM Sheep Creek Mo 107.77 337 IAms_20 IAms_20 05 31 57.3
comp=Z,45µm,20.0s
SCM Sheep Creek Mo 107.77 337 PKiKP **PKiKP 04 48 32.1 +6.3**
baz=54
TRF Thorofare Moun 107.87 340 IAms_20 IAms_20 05 33 12.6
comp=Z,45µm,18.0s
KTH Kantishna Hill 108.02 340 IAms_20 IAms_20 05 29 44.6
comp=Z,46µm,21.0s
SML Sawmill 108.17 338 IAms_20 IAms_20 05 32 10.8
comp=Z,40µm,20.0s
GLI Glacier Island 108.24 336 IAms_20 IAms_20 05 32 36.7
comp=Z,40µm,19.0s
HIN Hinchinbrook I 108.28 336 IAms_20 IAms_20 05 30 42.8
comp=Z,51µm,21.0s
GOMU GeErMu 108.30 52 SS SS 05 04 18.5 +13
GOMU AMB AMB
comp=Z,410nm,9.7s
GOMU LR LR
comp=N,11µm,17.8s
GOMU LR LR
comp=E,14µm,19.7s
GOMU LR LR
comp=Z,16µm,22.3s
GHO Glory Hole Cre 108.42 338 IAms_20 IAms_20 05 32 09.3
comp=Z,38µm,19.0s
CAST Castle Rocks 108.51 340 IAms_20 IAms_20 05 28 47.4
comp=Z,35µm,19.0s
CUT Chulitna 108.52 339 IAms_20 IAms_20 05 33 03.9
comp=Z,36µm,18.0s
J20K Nowinta River 108.68 341 IAms_20 IAms_20 05 28 57.8
comp=Z,32µm,19.0s
PWL Port Wells 108.74 337 IAms_20 IAms_20 05 30 55.9
comp=Z,45µm,20.0s
M22K Willow 108.88 338 IAms_20 IAms_20 05 32 55.4
comp=Z,30µm,20.0s
RC01 Rabbit Creek A 109.14 337 IAms_20 IAms_20 05 32 50.6
comp=Z,49µm,20.0s
K20K Telida 109.21 341 IAms_20 IAms_20 05 35 50.0
comp=Z,41µm,18.0s
SKT Skwentna 109.25 339 IAms_20 IAms_20 05 33 01.4
comp=Z,36µm,19.0s
IRK Irkutsk 109.27 33 *eP* **Pdif 04 44 39.8 +15**
IRK *e* 04 49 03.4
IRK pmax pmax
comp=Z,73nm,2.5s
KOHI KOHIMA 109.81 63 *eP* **Pdif 04 44 36.5 +8.2**
IMP Imphal 109.82 64 *eP* **Pdif 04 44 36.1 +7.9**
M20K Styx River 109.89 339 IAms_20 IAms_20 05 33 24.0
comp=Z,40µm,19.0s
MOKO MOKOCHONG 110.07 62 *ex* x 04 44 39.5
L19K White Mountain 110.28 340 IAms_20 IAms_20 05 29 43.4
comp=Z,37µm,19.0s
BOD Bodaibo 111.13 25 *e*PKiKP PKiKP 04 48 42.2 +10
BOD pmax pmax
comp=Z,108nm,2.0s
GTA Gaotai 111.23 47 SKS SKSdf 04 55 33.0 -11
P19K Oil Pt 111.40 337 IAms_20 IAms_20 05 33 47.2
comp=Z,48µm,20.0s
N18K Kilae Creek 111.68 339 IAms_20 IAms_20 05 30 29.5
comp=Z,34µm,19.0s
BILL Bilibino 112.26 358 *i* PKiKP **PKiKP 04 48 36.3 +2.3**
BILL *e* 04 49 18.5
BILL *e*PPP PPP 04 51 41.2
BILL *e*SS SS 05 04 57.5 +1.9
BILL *e*SSS SSS 05 09 07.7
BILL pmax pmax
comp=Z,7.0nm,1.2s
BILL MLR MLR
comp=Z,6µm,17.0s
P18K Big Mountain, 112.33 338 IAms_20 IAms_20 05 34 06.7
comp=Z,36µm,20.0s
SONM Songino Array 112.46 37 PP **PP 04 49 19.0 -1.8**
comp=Z,11nm,1.0s,baz=282,slow=7.4,SNR=3.9
ULN Ulaanbaatar 112.84 37 IAms_20 IAms_20 05 44 09.7
comp=Z,36µm,19.0s
YAK Yakutsk 113.66 16 IAms_20 IAms_20 05 42 52.9
comp=Z,25µm,20.0s
COCO West Island 114.05 103 IAms_20 IAms_20 05 32 07.0
comp=Z,40µm,19.0s
LZH Lanzhou 115.33 50 SKS **SKSdf 04 55 44.5 -7.7**
LZH Lanzhou 115.33 50 SS SS 05 05 47.3 +8.5
LZH AMB AMB
comp=Z,4µm,8.9s
LZH LR LR
comp=N,20µm,20.6s
LZH LR LR
comp=E,22µm,21.3s
LZH LR LR
comp=Z,21µm,21.6s
LZH Lanzhou 115.33 50 PKP **PKiKP 04 48 37.0 -4.0**
LZH sPKP 04 48 50.0
LZH PP **PP 04 49 42.8 +1.1**
LZH AMB AMB
comp=Z,4µm,8.9s
LZH LR LR
comp=Z,20µm,20.6s
LZH LR LR
comp=Z,22µm,21.3s
LZH LR LR
comp=Z,21µm,21.6s
CMAR Chiang Mai Arr 115.41 70 PKP **PKPdf 04 48 41.2 -0.2**
comp=Z,1.3nm,0.4s,baz=292,slow=4.8,SNR=2.1
CMAR PP **PP 04 49 39.9 -2.9**
comp=Z,3.2nm,0.8s,baz=276,slow=4.4,SNR=4.6
CMAR PKKPbc **PKKPab 04 59 23.0 +2.3**
comp=Z,0.9nm,0.4s,baz=92,slow=2.7,SNR=1.0
GSI Gunungsitoli 115.42 89 IAms_20 IAms_20 05 35 25.5
comp=Z,30µm,18.0s
PZH PanZhiHua 116.38 60 PKP **PKiKP 04 48 47.8 +4.6**
PZH PP **PP 04 49 51.3 +1.9**
PZH SKS **SKSdf 04 55 49.8 -4.7**
PZH AMB AMB
comp=Z,3µm,9.7s
PZH LR LR
comp=Z,13µm,18.0s
PZH LR LR
comp=Z,14µm,18.2s
PZH LR LR
comp=Z,13µm,19.2s
RPSI Rantau Prapat 116.75 87 IAms_20 IAms_20 05 34 42.6
comp=Z,37µm,20.0s
CD2 Chengdu 116.90 55 PKP **PKiKP 04 48 47.8 +3.8**
CD2 PP **PP 04 49 59.0 +6.2**
CD2 SKS **SKSdf 04 55 52.5 -2.7**
CD2 AMB AMB
comp=Z,2µm,8.8s
CD2 LR LR
comp=Z,22µm,20.1s
CD2 LR LR
comp=Z,19µm,18.1s
CD2 LR LR
comp=Z,28µm,20.6s
CNBA Chernabura Isl 117.24 336 IAms_20 IAms_20 05 34 14.5
comp=Z,38µm,20.0s
KMI Kunming 117.58 62 ⇓Pdif **Pdif 04 45 14.8 +12**
KMI PKP **PKiKP 04 48 49.3 +3.6**
KMI PP PP 04 50 06.5 +8.5
KMI PKS 04 52 23.3
KMI Kunming 117.58 62 PKP **PKiKP 04 48 49.3 +3.6**
KMI PP PP 04 50 06.5 +8.5
KMI PKS 04 52 23.3
KMI SKS **SKSdf 04 55 54.8 -2.2**
KMI LR LR
comp=Z,6µm,16.7s
KMI LR LR
comp=Z,11µm,18.2s
KMI LR LR
comp=Z,17µm,19.4s
KULM Kulim 118.39 84 IAms_20 IAms_20 05 34 23.7
comp=Z,29µm,21.0s
HIA Hailar 119.12 30 IAms_20 IAms_20 05 46 23.8
comp=Z,37µm,20.0s
XAN Xi'an 119.95 50 PKP **PKPdf 04 48 48.8 -1.0**
XAN SKS **SKSdf 04 56 02.5 +1.7**
XAN AMB AMB
comp=Z,8µm,9.4s
XAN LR LR
comp=Z,18µm,18.1s
XAN LR LR
comp=Z,30µm,16.8s
XAN LR LR
comp=Z,23µm,18.1s
GYA Guiyang 120.64 59 ⇑PKP **PKPdf 04 48 49.0 -2.4**
GYA PP **PP 04 50 22.0 +3.1**
GYA SKS **SKSdf 04 56 06.5 +3.9**
GYA AMB AMB
comp=Z,2µm,10.2s
GYA LR LR
comp=Z,16µm,19.8s
GYA LR LR
comp=Z,13µm,22.0s
GYA LR LR
comp=Z,21µm,24.9s
MNAI Manna 120.69 95 IAms_20 IAms_20 05 35 48.5
comp=Z,28µm,20.0s
ENH Enshi 121.78 54 IAms_20 IAms_20 05 46 26.1
comp=Z,27µm,22.0s
TAOE Nuku Hiva Isla 121.83 259 *e*PP **PP 04 50 25.2 -2.3**
comp=Z,2µm,23.6s
TAOE Nuku Hiva Isla 121.83 259 *e*SS SS 05 07 03.8 -0.6
comp=Z,12µm,27.6s
BJI Beijing 122.42 41 Pdif **Pdif 04 45 22.0 -1.8**
BJI PP **PP 04 50 32.3 +2.2**
BJI SKS **SKSdf 04 56 07.3 +2.2**
BJI AMB AMB
comp=Z,3µm,8.0s
BJI LR LR
comp=Z,6µm,19.2s
BJI LR LR
comp=Z,18µm,18.6s
BJI LR LR
comp=Z,31µm,18.5s
BJT Baijiatuau 122.42 41 IAms_20 IAms_20 05 50 09.8
comp=Z,28µm,19.0s
LYN LuoYang 122.43 48⇑ *e*PKP PKiKP 04 49 02.8 +8.1
LYN PP PP 04 50 43.5 +13
LYN SKS **SKSdf 04 56 09.5 +4.1**
LYN SKKS **SKKSac 04 57 29.0 0.0**
PMBI Palembang 122.56 94 IAms_20 IAms_20 05 35 02.1
comp=Z,31µm,21.0s
HNS HongShan 122.75 44 SKS **SKSdf 04 56 07.8 +2.0**
HNS HongShan 122.75 44 SS SS 05 07 23.0 +9.2
HNS LR LR
comp=N,23µm,18.1s
HNS LR LR
comp=E,8µm,17.4s
HNS LR LR
comp=Z,20µm,22.6s
KLR Kul'dur 124.64 24 *i* PKiKP **PKiKP 04 49 00.1 +1.5**
TIA Tai'an 125.02 44 *e*PKP **PKiKP 04 49 04.0 +4.2**
CNSH ChangSha 125.34 55⇑PKP PKiKP 04 49 14.0 +13
CNSH PP PP 04 51 04.8 +14
QIZ Qiongzhong 125.43 67 Pdif **Pdif 04 45 39.0 +1.4**
QIZ PKP **PKPdf 04 48 59.3 -1.3**
QIZ PKS 04 52 34.0
QIZ SKS **SKSdf 04 56 10.3 -1.3**
QIZ SS **SS 05 07 47.0 -2.3**
QIZ AMB AMB
comp=Z,3µm,10.8s
QIZ LR LR
comp=Z,15µm,19.1s
QIZ LR LR
comp=Z,15µm,19.1s
QIZ LR LR
comp=Z,15µm,23.5s
ADK Adak 125.53 344 IAms_20 IAms_20 05 45 51.2
comp=Z,35µm,19.0s
WHN Wuhan 125.56 52 PKP **PKiKP 04 49 06.5 +5.6**
WHN PP **PP 04 50 51.5 -0.1**
WHN AMB AMB
comp=Z,11µm,4.7s
WHN LR LR
comp=Z,22µm,16.1s
WHN LR LR
comp=Z,38µm,16.8s
WHN LR LR
comp=Z,59µm,17.6s
CN2 Changchun 125.68 32 PKP PKiKP 04 49 09.8 +9.0
CN2 PP PP 04 51 03.5 +12
SNY Shenyang 125.94 35⇑PKP PKiKP 04 49 11.5 +10
SNY PP **PP 04 50 50.8 -2.7**
NWAO Narrogin (SRO) 126.40 132 IAms_20 IAms_20 05 35 55.0
comp=Z,24µm,21.0s
DL2 Dalian 126.55 39 SS SS 05 08 05.3 +3.9
DL2 AMB AMB
comp=Z,2µm,7.0s
DL2 LR LR
comp=N,16µm,16.7s
DL2 LR LR
comp=E,14µm,18.4s
DL2 LR LR
comp=Z,24µm,27.5s
PETK Petropavlovsk- 127.17 3 PKP **PKiKP 04 49 04.0 +0.5**
comp=Z,2.0nm,0.8s,baz=264,slow=5.8,SNR=2.0
PETK SKKPbc SKKPbc 05 02 23.6 +0.5
comp=Z,3.8nm,1.1s,baz=222,slow=5.6,SNR=3.7
MDJ Mudanjiang 127.21 29 IAms_20 IAms_20 05 52 04.6
comp=Z,26µm,18.0s
PET Petropavlovsk 127.31 3 *eP* **Pdif 04 45 55.0 +10**
PET *e* 04 51 04.3
PET *e*PS PS 05 01 01.4 -6.2
PET *e*PPS PPS 05 02 33.4
PET *e*SS SS 05 08 05.0 -4.0
PET *e*SSS SSS 05 12 54.4
PET pmax pmax
comp=Z,174nm,1.1s
PET MLR MLR
comp=Z,13µm,18.0s
PET MLR MLR
comp=Z,22µm,21.0s
TBI Tubuai 127.50 240 *e*PP **PP 04 51 03.0 -1.9**
comp=Z,8µm,20.2s
TBI Tubuai 127.50 240 *e*SS SS 05 08 16.3 +1.6
comp=Z,58µm,30.8s
TBI Tubuai 127.50 240 *e*LR LR 05 29 04.2
comp=Z,37µm,18.8s
SUJ Sinuiju 127.57 36 PKPbc PKiKP 04 49 17.0 +12
SUJ PP PP 04 51 22.0 +18
SUJ AmB
comp=Z,8.4nm,0.4s
SUJ AMS AMS
comp=N,4µm,5.3s
SUJ AMS AMS
comp=E,6µm,7.4s
SUJ AMS AMS
comp=Z,6µm,6.9s
UGM Wanagama 127.91 100 IAms_20 IAms_20 05 37 18.2
comp=Z,24µm,20.0s
NJ2 Nanjing 128.32 48 *e*PKP **PKiKP 04 49 09.8 +3.4**
NJ2 sPKP 04 49 15.5
NJ2 PKS 04 52 39.5
NJ2 AMB AMB
comp=Z,6µm,6.2s
NJ2 LR LR
comp=Z,17µm,19.6s
NJ2 LR LR
comp=Z,12µm,18.1s
NJ2 LR LR
comp=Z,23µm,17.2s
UGL Uglegorsk 128.36 17 *e*PKIKP **PKiKP 04 49 11.8 +5.8**
UGL *eS* **SKKPdf 05 02 49.0 -0.6**
UGL pmax pmax
comp=E,3µm,6.0s
UGL pmax pmax
comp=N,3µm,10.0s
UGL pmax pmax
comp=Z,6µm,8.0s
USRK Ussuriysk Ar. 128.65 28 PKP **PKPdf 04 49 05.6 -0.5**
comp=Z,1.6nm,0.7s,baz=323,slow=3.0,SNR=1.8
USRK PP **PP 04 51 11.5 +0.3**
comp=Z,3.7nm,0.8s,baz=350,slow=7.5,SNR=1.9
PPTF Pamatai, Papee 129.31 247 IAms_20 IAms_20 05 37 13.7
comp=Z,23µm,22.0s
PPT2 Papeete2 129.32 247 *e*SS SS 05 08 38.2 +0.3
comp=Z,83µm,30.2s
PPT2 Papeete2 129.32 247 *e*LR LR 05 29 53.7
comp=Z,68µm,24.0s
HHU Hamhung 129.44 34 PKPbc PKiKP 04 49 22.7 +14
HHU PP PP 04 51 34.2 +18
HHU AmB
comp=Z,12nm,0.5s
HHU AMS AMS
comp=N,4µm,3.4s
HHU AMS AMS
comp=E,4µm,3.5s
HHU AMS AMS
comp=Z,8µm,6.3s
SKR Severo-Kuril's 129.47 5 *i* PKIKP PKiKP 04 49 19.2 +11
SKR pmax pmax
comp=Z,200nm,7.8s
HJU Haeju 129.62 37 PKPbc PKiKP 04 49 23.1 +14
HJU PP PP 04 51 35.8 +18
HJU AMS AMS
comp=N,2µm,8.4s
HJU AMS AMS
comp=E,605nm,2.8s
HJU AMS AMS
comp=Z,502nm,2.3s
YSS Yuzh-Sakhalins 130.47 17 IAms_20 IAms_20 05 55 15.6
comp=Z,24µm,19.0s
INCN Inchon 130.53 37 IAms_20 IAms_20 05 51 27.8
comp=Z,23µm,21.0s
QZH Quanzhou 131.26 56 *e*PKP **PKiKP 04 49 15.3 +2.8**
QZH PKS 04 52 48.8
QZH AMB AMB
comp=Z,3µm,6.3s
QZH LR LR
comp=Z,14µm,17.5s
QZH LR LR
comp=Z,6µm,14.7s
QZH LR LR
comp=Z,19µm,19.9s
KSRS Korea Array 131.33 37 PKP **PKPdf 04 49 11.2 -0.2**
comp=Z,0.6nm,0.3s,baz=16,slow=2.7,SNR=1.5
KSRS PP **PP 04 51 26.6 -2.2**
comp=Z,4.6nm,0.8s,baz=316,slow=4.4,SNR=4.8
MBWA Marble Bar 133.44 120 PKPdf **PKPdf 04 49 14.7 -1.1**
MBWA Marble Bar 133.44 120 IAms_20 IAms_20 05 38 13.9
comp=Z,39µm,22.0s
TPUB Ta-pu 133.62 57 IAms_20 IAms_20 05 54 59.3
comp=Z,19µm,21.0s
YHNB Yeheng 133.68 55 IAms_20 IAms_20 05 56 07.3
comp=Z,22µm,19.0s
SSLB Suanglung 133.70 57 IAms_20 IAms_20 05 57 20.1
comp=Z,24µm,20.0s
YUK Yuzh-Kuril'sk 134.03 16 *e*PKIKP **PKPdf 04 49 12.5 -3.7**
YUK *e* 04 51 41.7
YUK *e*PPP PPP 04 54 35.2
YUK *e*SS SS 05 09 29.6 -2.2
YUK *e*SSS SSS 05 14 26.4
NACB Ninganchiao 134.07 56 IAms_20 IAms_20 05 54 26.8
comp=Z,28µm,19.0s
TWG Pinlang 134.19 58 IAms_20 IAms_20 05 55 17.5
comp=Z,23µm,20.0s
DCZ Deep Cove 134.28 185 IAms_20 IAms_20 05 40 40.9
comp=Z,20µm,22.0s
WKZ Wanaka 134.72 187 IAms_20 IAms_20 05 47 22.6
comp=Z,20µm,19.0s
LBZ Lake Benmore 135.01 188 IAms_20 IAms_20 05 51 18.1
comp=Z,25µm,19.0s
ERM Erimo 135.01 20 IAms_20 IAms_20 05 57 26.0
comp=Z,23µm,18.0s
TAU Tasmania Unive 135.03 165 IAms_20 IAms_20 05 41 19.1
comp=Z,20µm,20.0s
RPZ Rata Peaks 135.53 189 IAms_20 IAms_20 05 51 18.0
comp=Z,20µm,18.0s
FOZ Fox Glacier 135.90 188 PKPdf **PKPdf 04 49 17.5 -2.3**
FOZ IAms_20 IAms_20 05 40 43.6
comp=Z,28µm,22.0s
MYLDM Lahad Datu 136.13 83 IAms_20 IAms_20 05 44 25.0
comp=Z,25µm,21.0s
LTZ Lake Taylor 136.22 191 IAms_20 IAms_20 05 58 51.7
comp=Z,20µm,18.0s
KHZ Kahutara 136.32 192 IAms_20 IAms_20 05 58 56.1
comp=Z,20µm,19.0s
THZ Tophouse 137.08 192 IAms_20 IAms_20 05 43 10.5
comp=Z,18µm,21.0s
RAR Rarotonga 137.15 238 IAms_20 IAms_20 05 44 57.9
comp=Z,22µm,18.0s
BFZ Birch Farm 137.31 196 IAms_20 IAms_20 05 43 54.4
comp=Z,21µm,20.0s
KAPI Kappang 137.33 98 IAms_20 IAms_20 05 43 38.1
comp=Z,21µm,21.0s
MAJO Matsushiro 137.59 29 IAms_20 IAms_20 06 01 05.3
comp=Z,21µm,18.0s
MJAR Matsushiro Arr 137.59 29 PKP **PKPdf 04 49 23.3 +0.1**
comp=Z,1.7nm,0.5s,baz=68,slow=2.3,SNR=2.4
MJAR PP **PP 04 52 11.8 +3.4**
comp=Z,9.9nm,1.1s,baz=343,slow=6.7,SNR=4.5
TOLI2 Tolitoli 138.62 89 IAms_20 IAms_20 05 49 10.6
comp=Z,26µm,20.0s
BBOO Buckleboo 138.95 146 PKPdf **PKPdf 04 49 23.9 -1.9**
URZ Urewera 139.30 198 PKPdf **PKPdf 04 49 26.1 -0.1**
URZ IAms_20 IAms_20 05 42 06.3
comp=Z,30µm,21.0s
HIZ Hauiti 139.71 195 IAms_20 IAms_20 05 49 31.2
comp=Z,16µm,19.0s
STKA Stephens Creek 142.61 151 PKP **PKPdf 04 49 30.4 -2.0**
comp=Z,7.9nm,0.8s,baz=100,slow=3.3,SNR=7.2
STKA Stephens Creek 142.61 151 PKPdf **PKPdf 04 49 29.2 -3.2**
OUZ Omahuta 143.15 196 IAms_20 IAms_20 05 48 05.2
comp=Z,26µm,20.0s
KNRA Kununurra 143.44 117 PKPpre 04 49 28.4
ASAR Alice Springs 143.72 133 PKP PKPbc 04 49 31.9 -0.2
comp=Z,3.7nm,0.9s,baz=212,slow=2.8,SNR=21
ASAR SKKPbc SKKPbc 05 01 07.1 -13
comp=Z,2.7nm,1.0s,baz=52,slow=3.4,SNR=4.5
ASAR Alice Springs 143.72 133 PKPpre 04 49 29.1
AS31 Alice Springs 143.72 133 PKPpre 04 49 29.9
MIDW Midway 145.95 327 IAms_20 IAms_20 05 48 03.0
comp=Z,19µm,20.0s
WRA Warramunga Arr 146.17 128 PKPbc **PKPdf 04 49 38.7 -0.2**
comp=Z,4.3nm,0.8s,baz=234,slow=2.5,SNR=28
WRA Warramunga Arr 146.17 128 PKPbc **PKPdf 04 49 38.9 -0.1**
WB2 Warramunga Arr 146.18 128 **PKPdf 04 49 39.1 +0.2**
WRAB Tennant Creek 146.19 128 **PKPdf 04 49 39.0 +0.1**
WRAB Tennant Creek 146.19 128 PKP2 **PKPdf 04 49 39.0 +0.1**
WRAB MLR MLR
comp=Z,42µm,20.0s
WB0 Warramunga Arr 146.31 128 **PKPdf 04 49 39.0 -0.2**
WR0 Warramunga Arr 146.32 128 PKPbc **PKPdf 04 49 38.4 -0.7**
FAKI Fak Fak 149.94 96 PKPbc **PKPbc 04 49 48.2 -2.0**
AFI Afiamalu 150.61 240 IAms_20 IAms_20 05 47 19.6
comp=Z,32µm,22.0s
EIDS Eidsvold 152.39 158 PKPbc **PKPdf 04 49 51.9 +3.2**
CTAO Charters Tower 154.50 143 **PKPbc 04 49 56.5 -3.8**
CTAO Charters Tower 154.50 143 PKIKP **PKPbc 04 49 56.5 -3.8**
MSVF Nonsavu 156.26 220 IAms_20 IAms_20 06 09 49.1
comp=Z,23µm,19.0s

DZM	**Mont Dzumac**	**157.44**	**190**	*e*P		**PKPdf**	**04 49 52.6**	**-3.2**
	comp=Z,132nm,1.6s							
DZM	**Mont Dzumac**	**157.44**	**190**	*e*PP		**PP**	**04 54 05.0**	**+0.5**
DZM	**Mont Dzumac**	**157.44**	**190**	*e*SS		SS	05 14 03.8	+5.4
	comp=Z,19µm,26.5s							
DZM	**Mont Dzumac**	**157.44**	**190**	*e*LR		LR	05 42 58.9	
	comp=Z,68µm,29.4s							
DZM	**Mont Dzumac**	**157.44**	**190**	PKPdf		**PKPdf**	**04 49 52.9**	**-2.9**
GUMO	**Guam**	**158.34**	**52**	IAMs_20	IAMs_20	IAMs_20	06 16 07.9	
	comp=Z,15µm,19.0s							
LIFNC	**LIFOU**	**158.54**	**193**	IAMs_20	IAMs_20		06 02 03.5	
	comp=Z,14µm,20.0s							

SVSA 29 04:35:57.7±1.5, 38.57N×29.12W, h2km±5km, ML3.9(INMG), 11D, Error ellipse: s-maj=6.4km s-min=6.1km az=100.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCAPE	**Capelo, Faial**	**0.23**	**83**	⇓*i*	P		Pg	04 36 02.9	+0.8
PCAPE						*e*S	Sg	04 36 05.3	+0.2
PCAPE						A	A	04 36 11.1	
	56µm,0.3s								
PFCBR	**Castelo Branco**	**0.32**	**98**	⇓*i*	P		Pg	04 36 03.7	-0.1
PFCBR						*e*S	Sg	04 36 08.0	+0.1
PFCBR						A	A	04 36 15.4	
	4µm,0.4s								
CALA	**Caldeira**	**0.33**	**88**	⇓*i*	P		Pg	04 36 03.9	-0.1
CALA						*e*S	Sg	04 36 07.8	-0.4
CALA						A	A	04 36 12.6	
	22µm,0.3s								
PCED	**Cedros**	**0.33**	**80**	⇓*i*	P		Pg	04 36 04.2	+0.1
PCED						A	A	04 36 11.8	
	15µm,0.3s								
HOR	**Horta**	**0.38**	**96**	⇓*i*	P		Pg	04 36 04.7	-0.4
HOR						*e*S	Sg	04 36 09.9	-0.2
PRIB2	**Ribeirinha**	**0.40**	**86**	*e*P			Pg	04 36 04.8	-0.5
PRIB2						*e*S	Sg	04 36 09.8	-0.6
PRIB2						A	A	04 36 10.5	
	4µm,0.1s								
PMAD	**Madalena**	**0.48**	**94**	*e*P			Pg	04 36 06.1	-0.8
PMAD						*e*S	Sg	04 36 12.3	-0.9
PMAD						A	A	04 36 13.3	
	3µm,0.2s								
PCAN	**Candelaria**	**0.51**	**102**	⇓*i*	P		Pg	04 36 06.3	-1.1
PCAN						*e*S	Sg	04 36 13.3	-0.7
PCAN						A	A	04 36 22.7	
	7µm,0.5s								
PICO	**Pico**	**0.55**	**97**	*e*P			Pg	04 36 07.1	-1.1
PICO						*e*S	Sg	04 36 14.7	-0.6
PICO						A	A	04 36 14.8	
	6µm,0.4s								
PPNO	**Prainha do Nor**	**0.68**	**98**	⇓*i*	P		Pg	04 36 09.3	-1.4
PPNO						*e*S	Sg	04 36 18.1	-1.3
PPNO						A	A	04 36 27.3	
	4µm,0.4s								
PLAJ	**Lajes**	**0.70**	**104**	*e*P			Pg	04 36 09.4	-1.7
PLAJ						*e*S	Sg	04 36 17.8	-2.3
PLAJ						A	A	04 36 18.7	
	1µm,0.2s								
ROSA	**Rosais**	**0.70**	**77**	⇓*i*	P		Pg	04 36 09.7	-1.5
ROSA						*e*S	Sg	04 36 18.5	-1.8
ROSA						A	A	04 36 21.0	
	4µm,0.3s								
PID	**Ribeirinha**	**0.79**	**99**	⇓*i*	P		Pg	04 36 10.8	-2.1
PID						*e*S	Sg	04 36 20.9	-2.3
PID						A	A	04 36 32.0	
	2µm,0.4s								
PMAN	**Manadas**	**0.81**	**85**	*e*P			Pg	04 36 10.9	-2.3
PMAN						*e*S	Sg	04 36 21.1	-2.6
PMAN						A	A	04 36 36.4	
	2µm,0.8s								
SRBC	**Serra Branca**	**0.96**	**61**	*e*P			Pg	04 36 13.3	-2.8
SRBC						*e*S	Sg	04 36 24.8	-3.8
SRBC						A	A	04 36 42.7	
	1µm,0.4s								
PGRA	**Graciosa**	**1.00**	**62**	⇓*i*	P		Pg	04 36 13.8	-3.1
PGRA						*e*S	Sg	04 36 24.5	-5.3
PGRA						A	A	04 36 35.9	
	556nm,0.5s								
ADH	**Angra Heroismo**	**1.48**	**86**	⇓*i*	P		Pn	04 36 20.4	-4.9
ADH						*e*S	Sb	04 36 37.9	-7.1
ADH						A	A	04 36 44.9	
	486nm,0.3s								
PAGU	**Agualva, Azore**	**1.53**	**82**	*e*P			Pn	04 36 20.9	-5.1
PSCM	**Serra do Cume**	**1.57**	**85**	*e*P			Pn	04 36 21.5	-5.1
PSCM						A	A	04 36 40.9	
	647nm,0.2s								
PSET	**Sete Cidades**	**2.78**	**104**	*e*P			Pn	04 36 38.7	-4.5
PSET						*e*S	Sn	04 37 09.5	-7.8
PSET						A	A	04 37 17.7	
	119nm,0.3s								
PDA	**Ponta Delgada**	**2.84**	**106**	*e*P			Pn	04 36 39.7	-4.3
PDA						*e*S	Sn	04 37 11.3	-7.5
PDA						A	A	04 37 13.0	
	79nm,0.5s								
CMLA	**Cha da Macela**	**2.94**	**105**	*e*P			Pn	04 36 41.2	-4.3
CMLA						*e*S	Sn	04 37 13.0	-8.4
CMLA						A	A	04 37 25.6	
	147nm,0.4s								
PGRON	**Lagoa das Cont**	**3.06**	**104**	*e*P			Pn	04 36 42.4	-4.6
PGRON						*e*S	Sn	04 37 16.5	-7.7
PGRON						A	A	04 37 19.2	
	24nm,0.3s								
BART	**Pico Bartolome**	**3.21**	**103**	*e*P			Pn	04 36 45.1	-4.1
BART						A	A	04 37 21.6	
	19nm,0.3s								
PSMA	**Santa Maria**	**3.53**	**115**	*e*P			Pn	04 36 48.5	-5.0
PSMA						*e*S	Sn	04 37 23.9	-12
PSMA						A	A	04 37 27.0	
	52nm,0.2s								
PSMN	**Pico do Norte,**	**3.57**	**115**	*e*P			Pn	04 36 48.9	-5.2
PSMN						*e*S	Sn	04 37 26.9	-10
PSMN						A	A	04 37 30.1	
	20nm,0.4s								

ROM 29 04:37:55.9±0.1, 42.712N×0.003×13.298E±0.006, h11km, ML1.5/7, 4C-3D, Error ellipse: s-maj=0.5km s-min=0.3km az=255.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
T1243	**Rocca Santa Ma**	**0.11**	**98**			P	Pg	04 37 59.5	+0.6
T1243						AML	AML		
	comp=E,2525µm,0.8s								
T1243						AML	AML		
	comp=N,2030µm,1.0s								
T1243						AML	AML		
	comp=E,2460µm,0.8s								
T1243						AML	AML		
	comp=N,2035µm,1.0s								
T1243						AML	AML		
	comp=N,1990µm,1.0s								
MMO1	**Montemonaco**	**0.19**	**6**			P	Pg	04 38 00.6	+0.5
MMO1						S	Sg	04 38 03.9	+1.0
MMO1						AML	AML		
	comp=E,264µm,0.5s								
MMO1						AML	AML		
	comp=N,384µm,0.4s								
CAMP	**Campotosto**	**0.19**	**155**	⇑	P		Pg	04 38 00.7	+0.6
CAMP						AML	AML		
	comp=N,115µm,1.1s								
CAMP						AML	AML		
	comp=E,76µm,0.9s								
RM33	**Pellescritta (**	**0.21**	**197**	⇓	P		Pg	04 38 01.1	+0.6
RM33						S	Sg	04 38 04.8	+1.2
RM33						AML	AML		
	comp=E,172µm,0.2s								
RM33						AML	AML		
	comp=N,136µm,0.4s								
RM33						AML	AML		
	comp=E,264µm,1.1s								
RM33						AML	AML		
	comp=E,266µm,1.2s								
RM33						AML	AML		
	comp=N,321µm,0.6s								
RM33						AML	AML		
	comp=N,180µm,0.9s								
MC2	**Monte Cornacci**	**0.22**	**338**	⇓	P		Pg	04 38 01.1	+0.5
MC2						S	Sg	04 38 04.8	+1.0
LNSS	**Leonessa**	**0.22**	**240**	⇑	P		Pg	04 38 01.1	+0.5
LNSS						AML	AML		
	comp=E,211µm,0.5s								
LNSS						AML	AML		
	comp=N,214µm,0.4s								
LNSS						AML	AML		
	comp=N,259µm,1.0s								
LNSS						AML	AML		
	comp=E,226µm,1.3s								
TERO	**Teramo**	**0.24**	**111**	⇑	P		Pg	04 38 01.4	+0.4
TERO						S	Sg	04 38 05.3	+1.0
TERO						AML	AML		
	comp=N,168µm,0.9s								
TERO						AML	AML		
	comp=E,223µm,0.3s								
GIGS	**Gran Sasso**	**0.33**	**143**	⇑	P		Pg	04 38 02.9	+0.3
GIGS						AML	AML		
	comp=E,20µm,0.4s								
GIGS						AML	AML		
	comp=N,16µm,0.4s								
GIGS						AML	AML		
	comp=E,160µm,1.0s								
GIGS						AML	AML		
	comp=N,59µm,1.2s								
FDMO	**Fiordimonte**	**0.36**	**335**			P	Pg	04 38 03.4	+0.2
FDMO						S	Sb	04 38 09.1	-1.0
FDMO						AML	AML		
	comp=E,38µm,0.4s								
FDMO						AML	AML		
	comp=N,71µm,0.2s								
FDMO						AML	AML		
	comp=N,125µm,0.3s								
FDMO						AML	AML		
	comp=E,129µm,0.8s								
OFFI	**Offida**	**0.36**	**52**	⇓	P		Pb	04 38 04.5	+0.1
OFFI						AML	AML		
	comp=E,380µm,0.6s								
OFFI						AML	AML		
	comp=N,440µm,0.7s								
CSP1	**Cessapalombo**	**0.39**	**350**			P	Pg	04 38 03.9	+0.3
ARRO	**Arrone**	**0.41**	**252**			P	Pg	04 38 04.4	+0.3
ARRO						AML	AML		
	comp=E,1006µm,1.6s								
ARRO						AML	AML		
	comp=N,581µm,1.6s								
FIAM	**Fiamignano**	**0.46**	**197**			S	Sg	04 38 12.0	+0.8

IDC 29 04:47:42.2±1.5, 0.°04N×17.°66W, h0km, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=56.0km s-min=39.9km az=135.0

ISC 29 04:47:44.7±1.4, 0.°2N±0.°3×17.°7W±0.°3, h12km, n8, σ0.°72/8, mb4.2/6, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GERES	**GERESS Array B**	**55.52**	**25**			P	**P**	**04 57 20.4**	**+0.6**
	0.6nm,0.6s,baz=210,slow=4.6,SNR=3.6								
	0.6nm,0.6s								
BRTR	**Keskin Array B**	**61.06**	**43**			P	**P**	**04 57 59.8**	**+1.0**
	1.6nm,0.9s,baz=238,slow=7.8,SNR=6.3								
	1.6nm,0.9s								
AKASG	**Malin Array Be**	**64.11**	**31**			P	**P**	**04 58 18.1**	**-0.6**
	1.3nm,0.8s,baz=235,slow=6.7,SNR=4.4								
	1.3nm,0.8s								
KBZ	**Khabaz**	**69.02**	**43**			P	**P**	**04 58 50.3**	**0.0**
	4.9nm,1.0s,baz=244,slow=3.1,SNR=3.5								
	4.9nm,1.0s								
FINES	**FINESS Array B**	**69.54**	**21**			P	**P**	**04 58 52.3**	**-0.9**
	5.0nm,1.0s,baz=211,slow=2.2,SNR=4.5								
	5.0nm,1.0s								
TXAR	**Lajitas Array**	**86.43**	**299**			P	**P**	**05 00 28.1**	**+0.3**
	2.2nm,1.1s,baz=120,slow=4.9,SNR=5.8								
	2.2nm,1.1s								
ASAR	**Alice Springs**	**143.85**	**132**			PKP	**PKPab**	**05 07 18.0**	**+0.1**
	0.5nm,0.4s,baz=220,slow=3.0,SNR=5.3								
WRA	**Warramunga Arr**	**146.27**	**127**			PKPbc	**PKPdf**	**05 07 24.9**	**-0.3**
	1.2nm,0.9s,baz=235,slow=2.5,SNR=8.2								

ISK 29 04:55:00.4, 43.°54N×40.°63E, h26km, ML3.0/4
MOS 29 04:55:02.1±0.0, 43.°38N×41.°06E, h13km, MPVA3.3
DDA 29 04:55:03.6±0.0, 42.°80N×40.°34E, h9km±2km, ML2.7

ISC 29 04:55:01.3±1.1, 43.°33N±0.°03×40.°98E±0.°03, h8km±9km, n21, σ0.°95/41, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARXR	**Arkhyz**	**0.32**	**42**	*i*	Pg		**Pg**	**04 55 07.4**	**-0.3**
ARXR				*i*	Sg		**Sg**	**04 55 11.5**	**-0.4**
DOMR	**Dombai**	**0.47**	**94**	*e*	Pg		**Pg**	**04 55 11.1**	**+0.6**
DOMR				*i*	Sg		**Sg**	**04 55 17.1**	**+0.4**
AHMR	**Akhmetovskaya**	**0.83**	**3**	*i*	Pg		**Pg**	**04 55 16.5**	**-0.8**
AHMR				*i*	Sg		**Sg**	**04 55 28.1**	**0.0**
SOC	**Sochi**	**0.95**	**286**	*e*	Pg		**Pn**	**04 55 20.1**	**-0.9**
SOC				*e*	Sg		**Sn**	**04 55 33.7**	**-1.0**
NEY	**Neytrino**	**1.27**	**93**	*e*	Pg		**Pn**	**04 55 25.5**	**0.0**
NEY				*e*	Sg		**Sb**	**04 55 41.3**	**-1.0**
SHA1	**Shidzhatmaz**	**1.29**	**71**	*e*	Pg		**Pn**	**04 55 25.2**	**-0.6**
SHA1				*e*	Sg		**Sb**	**04 55 41.7**	**-1.0**
LZRR	**Lazarevskoye**	**1.31**	**298**	*e*	Pg		**Pg**	**04 55 26.6**	**+0.2**
LZRR				*e*	Sg		**Sn**	**04 55 46.2**	**+2.7**
LABN	**Labinsk**	**1.33**	**352**	*e*	Pg		**Pg**	**04 55 26.9**	**+0.2**
LABN				*e*	Sg		**Sg**	**04 55 45.5**	**+1.6**
KIV	**Kislovodsk**	**1.39**	**63**		PN		**Pn**	**04 55 26.9**	**-0.2**
KIV					SN		**Sn**	**04 55 46.1**	**+0.5**
KIV	**Kislovodsk**	**1.39**	**63**	*e*	Pg		**Pn**	**04 55 26.8**	**-0.2**
KIV				*e*	Sg		**Sn**	**04 55 43.9**	**-1.7**
KIV0	**Kislovodsk Arr**	**1.40**	**63**	*e*	Pg		**Pn**	**04 55 26.9**	**-0.3**
KIV0				*e*	Sg		**Sn**	**04 55 44.0**	**-1.8**
KBZ	**Khabaz**	**1.45**	**73**	*i*	Pg		**Pn**	**04 55 28.5**	**0.0**
KBZ				*i*	Sg		**Sn**	**04 55 47.2**	**+0.2**
GOYR	**Goytkh**	**1.48**	**309**	*i*	Pg		**Pg**	**04 55 29.0**	**-0.7**
GOYR				*e*	Sg		**Sg**	**04 55 49.9**	**+1.0**
BEYR	**Belyy Ugol+**	**1.50**	**62**	*e*	Pg		**Pn**	**04 55 28.8**	**+0.3**
BEYR				*e*	Sg		**Sn**	**04 55 48.3**	**+0.1**
BCA	**Borcka**	**1.94**	**166**		PN		**Pb**	**04 55 36.8**	**-0.1**
BCA					SN		**Sg**	**04 56 02.6**	**-1.1**
ONI	**Oni**	**1.96**	**111**		PN		**Pb**	**04 55 37.5**	**+0.2**
ONI					SN		**Sb**	**04 56 04.2**	**+2.4**
ALER	**Alexandrovskoy**	**2.00**	**44**	*e*	Pg		**Pn**	**04 55 35.8**	**+0.3**
ALER				*e*	Sg		**Sn**	**04 56 01.5**	**+0.9**
DBOC	**Borcka**	**2.05**	**165**		P		**Pn**	**04 55 36.4**	**+0.3**
DBOC					S		**Sn**	**04 56 01.9**	**+0.1**
DAGI	**Agillar**	**2.35**	**163**		P		**Pb**	**04 55 43.7**	**-0.3**
DAGI					S		**Sn**	**04 56 09.4**	**0.0**
DAGI				*i*	AML	AML		04 56 17.0	
	comp=E,78nm,1.1s								
DAGI				*i*	AML	AML		04 56 25.0	
	comp=N,61nm,0.7s								
DBAD	**Bademkaya**	**2.37**	**167**		P		**Pn**	**04 55 41.4**	**+0.9**
DBAD					S		**Sn**	**04 56 09.6**	**-0.2**
DBAD				*i*	AML	AML		04 56 22.0	
	comp=E,38nm,0.9s								
DBAD				*i*	AML	AML		04 56 23.0	
	comp=N,72nm,0.8s								
ESPY	**Espiye-Giresun**	**2.94**	**216**		PN		**Pn**	**04 55 47.4**	**-0.8**

PRU 29 04:57:56.5±0.0, 44.°14N×15.°60E, h0km
RHSSO 29 04:57:56.6±0.4, 44.°14N×15.°43E, h9km±2km, ML3.1/12
BEO 29 04:57:57.4±0.4, 44.°21N×15.°59E, h0km, ML2.9/4
LDG 29 04:57:57.6±0.2, 43.°97N×15.°27E, h2km, Ml2.9/11, Error ellipse: s-maj=6.8km s-min=4.0km az=16.0

ISC 29 04:57:56.2±0.9, 44.°05N±0.°02×15.°42E±0.°02, h26km±8km, n92, σ2.°917/134, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DUGI	**Dugi Otok**	**0.27**	**258**	*e*	Pg		**Pn**	**04 58 04.0**	**-0.6**
DUGI							Sg	**Sn**	**04 58 09.7**	**-0.2**
MORI	**Morici**	**0.28**	**132**	*e*	Pg		**Pb**	**04 58 02.7**	**-0.2**
MORI							Sg	**Sb**	**04 58 07.8**	**+0.3**
VIRC	**Vir**	**0.36**	**312**	*e*	Pg		**Pb**	**04 58 03.6**	**-0.5**
VIRC							Sg	**Sb**	**04 58 09.7**	**+0.1**
UDBI	**Udbina**	**0.54**	**27**	*e*	Pg		**Pb**	**04 58 04.9**	**-2.2**
NVLJ	**Novalja**	**0.65**	**322**	*e*	Pg		**Pb**	**04 58 08.5**	**-0.4**
KIJV	**Kijevo**	**0.71**	**93**	*e*	Pg		**Pb**	**04 58 08.7**	**-1.2**
RABC	**Rab**	**0.84**	**327**	*e*	Pg		**Pb**	**04 58 11.6**	**-0.5**
PLIT	**Plitvice**	**0.84**	**10**	*e*	Pg		**Pb**	**04 58 10.3**	**-1.8**
A050A	**Klekovaca**	**0.91**	**61**	*e*	Pg		**Pb**	**04 58 11.4**	**-1.9**
A050A				*e*	Sg		**Sb**	**04 58 23.7**	**-1.3**
A250A	**Rusevo Krmpots**	**1.10**	**341**	*e*	Pg		**Pb**	**04 58 16.4**	**-0.2**
HVAR	**Hvar**	**1.15**	**139**	*e*	Pg		**Pb**	**04 58 17.7**	**+0.4**
MGRS	**Mrkonjic Grad**	**1.25**	**72**	*e*	Pg		**Pn**	**04 58 18.2**	**+0.1**
MGRS				*e*	Sg		**Sb**	**04 58 36.2**	**+1.4**
SRKY	**Kupres RS**	**1.26**	**89**	⇑	*i* Pg		**Pb**	**04 58 18.9**	**-0.4**
SRKY						*e* Sg	**Sb**	**04 58 36.5**	**+1.4**
PRIJ	**Prijedor**	**1.31**	**44**	*e*	Sg		**Sn**	**04 58 35.9**	**+0.4**
SMRN	**Sveta Marina**	**1.34**	**318**	*e*	Pg		**Pb**	**04 58 21.0**	**+0.4**
RICI	**Ricice**	**1.36**	**114**	*e*	Pg		**Pb**	**04 58 20.6**	**-0.3**
MAKA	**Makarska**	**1.39**	**123**	*e*	Pg		**Pb**	**04 58 21.2**	**-0.3**
A051A	**Mrakovica**	**1.43**	**47**	*e*	Pg		**Pn**	**04 58 21.2**	**+0.6**
A051A						*e* Sg	**Sb**	**04 58 40.1**	**0.0**
RIY	**Rijeka**	**1.44**	**333**	*e*	Pg		**Pb**	**04 58 22.5**	**+0.2**
RIY	**Rijeka**	**1.44**	**333**	*e*	Pn		**Pb**	**04 58 22.7**	**+0.4**
RIY						*e* Sn	**Sb**	**04 58 43.0**	**+2.7**
BLY	**Banja Luka**	**1.44**	**60**	*e*	Pg		**Pb**	**04 58 21.9**	**-0.5**
BLY						*e* Sg	**Sb**	**04 58 40.9**	**+0.6**
BLY	**Banja Luka**	**1.44**	**60**	*e*	Pn		**Pb**	**04 58 22.4**	**0.0**
BLY						*e* Sn	**Sn**	**04 58 39.1**	**+0.3**
BOJS	**Bojanci**	**1.46**	**355**	*e*	Pg		**Pb**	**04 58 21.6**	**-1.1**
BOJS						*e* Sg	**Sb**	**04 58 40.3**	**-0.5**
OZLJ	**Ozalj**	**1.56**	**1**	*e*	Pn		**Pb**	**04 58 24.0**	**-0.5**
LSTV	**Lastovo**	**1.67**	**140**	*e*	Pg		**Pb**	**04 58 26.6**	**+0.4**
A253A	**Karojba, Istri**	**1.69**	**318**	*e*	Pg		**Pb**	**04 58 26.0**	**-0.6**
CRES	**Cresnjev**	**1.78**	**1**	*e*	Pn		**Pb**	**04 58 26.8**	**-1.3**
CRES						*e* Sn	**Sn**	**04 58 47.9**	**+0.9**
SKDS	**Skadanscina**	**1.80**	**327**	*e*	Pn		**Pn**	**04 58 26.8**	**+1.2**
SKDS						*e* Sn	**Sn**	**04 58 48.4**	**+0.7**
A052A	**Srbac**	**1.83**	**54**	*e*	Sn		**Sb**	**04 58 49.8**	**-1.6**
MOSL	**Moslavina**	**1.83**	**31**	*e*	Pn		**Pn**	**04 58 26.4**	**+0.4**
PTJ	**Puntijarka**	**1.90**	**12**	*e*	Pn		**Pn**	**04 58 27.8**	**+0.8**
STON	**Ston**	**2.03**	**125**	*e*	Pn		**Pb**	**04 58 31.0**	**-1.5**
STON						*e* Sn	**Sb**	**04 58 57.4**	**+0.1**
STON	**Ston**	**2.03**	**125**	*e*	Pn		**Pb**	**04 58 30.6**	**-1.9**
STON	**Ston**	**2.03**	**125**	*e*	Pn		**Pb**	**04 58 30.9**	**-1.5**
STON						*e* Sn	**Sb**	**04 58 58.6**	**+1.3**
LOBO	**Lobor**	**2.15**	**12**	*e*	Pn		**Pn**	**04 58 31.6**	**+1.1**
KALN	**Kalnik**	**2.21**	**19**	*e*	Pn		**Pn**	**04 58 31.8**	**+0.6**
A252A	**Venje**	**2.21**	**50**	*e*	Pn		**Pn**	**04 58 32.0**	**+0.7**
TREB	**Trebinje**	**2.52**	**121**	*e*	Pn		**Pb**	**04 58 38.6**	**-2.1**
TREB						*e* Sn	**Sb**	**04 59 10.0**	**-1.2**
TREB	**Trebinje**	**2.52**	**121**	*e*	Pn		**Pb**	**04 58 39.2**	**-1.5**
TREB						*e* Sn	**Sb**	**04 59 10.5**	**-0.7**
OBKA	**Obir**	**2.54**	**346**	*e*	Pn		**Pn**	**04 58 37.6**	**+1.8**
OBKA						*e* Sn	**Sn**	**04 59 06.4**	**+0.5**
OBKA	**Obir**	**2.54**	**346**	*e*	Pn		**Pb**	**04 58 38.3**	**-2.8**
	3.0nm,0.1s,SNR=18								
OBKA						*e* Sn	**Sn**	**04 59 08.4**	**+2.5**
BRY	**Bratogost**	**2.54**	**116**	*e*	Pn		**Pb**	**04 58 39.1**	**-2.1**
BRY						*e* Sn	**Sb**	**04 59 10.6**	**-1.5**
SOKA	**Soboth**	**2.64**	**354**	*e*	Pn		**Pn**	**04 58 39.0**	**+1.7**
	3.2nm,0.2s								
UPM	**Unac-Piva**	**2.67**	**107**	*e*	Pn		**Pn**	**04 58 40.4**	**+2.7**
UPM						*e* Sn	**Sb**	**04 59 13.3**	**-2.4**
HCY	**Herceg Novi**	**2.76**	**124**	*e*	Pn		**Pn**	**04 58 41.6**	**+2.8**
HCY						*e* Sn	**Sb**	**04 59 15.0**	**-3.1**
MYKA	**Terra Mystica**	**2.87**	**335**		Pn		**Pn**	**04 58 43.1**	**+2.7**
	2.0nm,0.3s								
MYKA						*e* Sn	**Sb**	**04 59 18.0**	**-3.4**
BBLS	**Lazići**	**2.88**	**92**	*e*	Pn		**Pn**	**04 58 42.8**	**+2.3**
BBLS						*e* Sn	**Sn**	**04 59 17.4**	**+3.0**
BBLS	**Lazići**	**2.88**	**92**	*e*	Pn		**Pb**	**04 58 44.0**	**-2.9**
RUDO	**Rudo**	**2.89**	**97**	*e*	Pn		**Pn**	**04 58 42.4**	**+1.8**
RUDO						*e* Sn	**Sn**	**04 59 17.7**	**+3.2**
MORH	**Mrgy, Hungar**	**3.14**	**45**	*e*	Pn		**Pn**	**04 58 45.2**	**+1.2**
MORH						*e* Sn	**Sn**	**04 59 22.5**	**+1.8**
ARSA	**Arzberg**	**3.20**	**1**	*e*	Sn		**Sn**	**04 59 22.1**	**-0.1**
ARSA	**Arzberg**	**3.20**	**1**	⇓	*e* Pn		**Pn**	**04 58 46.3**	**+1.4**
	2.8nm,0.2s								
PDG	**Podgorica**	**3.23**	**119**	*e*	Pn		**Pn**	**04 58 48.0**	**+2.7**
PDG						*e* Sn	**Sn**	**04 59 26.3**	**+3.3**
PDG	**Podgorica**	**3.23**	**119**	*e*	Sn		**Sb**	**04 59 27.7**	**-4.1**
DIVS	**Divibare**	**3.29**	**88**	*e*	Pn		**Pn**	**04 58 48.2**	**+2.0**
DIVS						*e* Sn	**Sn**	**04 59 26.9**	**+2.3**
FRGS	**Fruska Gora**	**3.32**	**69**	*e*	Sn		**Sn**	**04 59 26.7**	**+1.5**
DRME	**Dracevica, Mon**	**3.32**	**123**	*e*	Pn		**Pn**	**04 58 48.9**	**+2.3**
DRME						*e* Sn	**Sn**	**04 59 29.3**	**+4.1**
KBA	**Koelnbreinsper**	**3.36**	**335**	*i*	Pn		**Pn**	**04 58 49.9**	**+2.7**
	0.8nm,0.2s								
ABTA	**Abfaltersbach**	**3.39**	**324**	*e*	Pn		**Pn**	**04 58 50.1**	**+2.6**
	0.7nm,0.2s								
ABTA						*e* Sn	**Sn**	**04 59 30.7**	**+3.8**
SJES	**Sjenica**	**3.40**	**102**	*e*	Pn		**Pn**	**04 58 50.3**	**+2.7**
SJES						*e* Sn	**Sn**	**04 59 30.3**	**+3.2**
SJES	**Sjenica**	**3.40**	**102**	*e*	Pn		**Pb**	**04 58 51.6**	**-4.1**
IVAS	**Ivanjica**	**3.46**	**96**	*e*	Pn		**Pn**	**04 58 50.7**	**+2.3**
IVAS						*e* Sn	**Sn**	**04 59 32.4**	**+3.9**
TRUS	**Trudelj**	**3.59**	**86**	*e*	Pn		**Pn**	**04 58 52.6**	**+2.4**
TRUS						*e* Sn	**Sn**	**04 59 33.3**	**+1.5**
**RON

NRCA				AML	AML		
	comp=E,2025μm,0.2s						
MC2	**Monte Cornacci**	**0.18**	**2**	P	Pg	05 00 30.3	+0.5
MC2				S	Sg	05 00 33.8	+1.2
MC2				AML	AML		
	comp=E,344μm,1.5s						
MC2				AML	AML		
	comp=N,317μm,1.5s						
MC2				AML	AML		
	comp=N,320μm,1.5s						
MC2				AML	AML		
	comp=E,345μm,1.5s						
T1243	**Rocca Santa Ma**	**0.20**	**99**	⇑P	Pg	05 00 30.7	+0.7
T1243				S	Sg	05 00 34.0	+1.1
MMO1	**Montemonaco**	**0.20**	**32**	⇑P	Pg	05 00 30.7	+0.7
MMO1				S	Sg	05 00 34.2	+1.3
RM33	**Pellescritta (**	**0.22**	**173**	⇓P	Pg	05 00 31.1	+0.7
RM33				S	Sg	05 00 34.9	+1.4
TERO	**Teramo**	**0.33**	**108**	⇑P	Pg	05 00 32.9	+0.5
ARRO	**Arrone**	**0.34**	**244**	⇑P	Pg	05 00 33.0	+0.5
CSP1	**Cessapalombo**	**0.36**	**3**	P	Pg	05 00 33.5	+0.5
CSP1				S	Sb	05 00 39.1	-1.0
EL6	**Elcito**	**0.60**	**355**	P	Pg	05 00 37.7	+0.2

*NEIC **29** 05:02:36.1±1.3,55°.44N±0°.07×156°.88W±0°.06, h35km±48km, Error ellipse: s-maj=9.9km s-min=4.6km az=173.0*
*AEIC **29** 05:02:36.0±1.7,55°.50N±0°.06×156°.92W±0°.05, h14km±4km, ML3.1/51,ML3.2/32(NEIC), Error ellipse: s-maj=9.5km s-min=3.4km az=164.0*

ISC 29 05:02:35.2±1.4, 55°.48N±0°.08×156°.95W±0°.04, h20km, n79, σ0s87/82, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.83**	**65**		**Pb**	**05 02 50.6**	**-0.1**
CHIR	**Chirikof Islan**	**0.83**	**65**		**Sb**	**05 03 01.5**	**0.0**
CHIR	**Chirikof Islan**	**0.83**	**65**	IAML		05 03 05.7	
	comp=E,695nm,0.7s						
CHIR				IAML		05 03 06.5	
	comp=N,770nm,0.7s						
CHIR	**Chirikof Islan**	**0.83**	**65**	P	**Pb**	**05 02 50.7**	**-0.1**
	baz=247						
CHIR				S	**Sb**	**05 03 01.5**	**0.0**
	baz=247						
CHGN	**Chignik**	**1.16**	**316**	Pn	**Pn**	**05 02 54.6**	**-1.7**
CHGN	**Chignik**	**1.16**	**316**		**Sb**	**05 03 10.0**	**-1.2**
CHGN	**Chignik**	**1.16**	**316**	IAML		05 03 11.9	
	comp=N,873nm,0.1s						
CHGN				IAML		05 03 12.2	
	comp=E,811nm,0.1s						
CHGN	**Chignik**	**1.16**	**316**	P	**Pn**	**05 02 54.6**	**-1.7**
	baz=133						
CHGN				S	**Sb**	**05 03 10.0**	**-1.2**
	baz=133						
VNSG	**Veniaminof 6**	**1.37**	**299**		**Pn**	**05 02 58.7**	**-0.5**
VNHG	**Veniaminof 1**	**1.45**	**302**		**Pn**	**05 02 60.0**	**-0.4**
ANPK	**Aniakchak Peak**	**1.51**	**335**		**Pn**	**05 03 00.6**	**-0.6**
ANPK					**Sn**	**05 03 19.1**	**-1.2**
ANPB	**Aniakchak Plen**	**1.52**	**331**		**Pn**	**05 03 00.6**	**-0.6**
AZAC	**Aniakchak**	**1.59**	**334**		**Pn**	**05 03 02.3**	**+0.1**
CHNA	**Chernabura Isl**	**1.65**	**248**	P	**Pn**	**05 03 03.1**	**+0.2**
	baz=65						
CNBA	**Chernabura Isl**	**1.65**	**247**	Pn	**Pn**	**05 03 02.8**	**-0.2**
CNBA				IAML		05 03 33.4	
	comp=N,191nm,0.6s						
VNFG	**Fog Glacier, M**	**1.67**	**300**		**Pn**	**05 03 03.6**	**+0.3**
VNFG					**Sn**	**05 03 24.8**	**+0.6**
SII	**Sitkinak Islan**	**1.89**	**54**	Pn	**Pn**	**05 03 05.2**	**-1.2**
SII				IAML		05 04 00.3	
	comp=E,208nm,0.7s						
SII	**Sitkinak Islan**	**1.89**	**54**	P	**Pn**	**05 03 05.2**	**-1.2**
	baz=236						
SDPT	**Sand Point**	**2.02**	**268**	Pn	**Pn**	**05 03 08.0**	**+0.1**
SDPT				IAML		05 03 48.2	
	comp=E,193nm,1.1s						
SDPT				IAML		05 03 49.9	
	comp=N,202nm,0.9s						
SDPT	**Sand Point**	**2.02**	**268**	P	**Pn**	**05 03 08.1**	**+0.1**
	baz=84						
R16K	**Pilot Point**	**2.12**	**351**		**Sn**	**05 03 36.2**	**+1.1**
R17K	**Ugashik Creek**	**2.19**	**8**		**Pn**	**05 03 10.5**	**+0.2**
R17K					**Sn**	**05 03 37.7**	**+0.9**
PLK3	**Peulik 3**	**2.25**	**9**		**Sn**	**05 03 40.0**	**+1.7**
OHAK	**Old Harbor**	**2.68**	**48**	Pn	**Pn**	**05 03 15.7**	**-1.5**
OHAK	**Old Harbor**	**2.68**	**48**	P	**Pn**	**05 03 15.6**	**-1.5**
	baz=231						
PS4A	**Pavlof South-4**	**2.80**	**269**		**Pn**	**05 03 18.8**	**0.0**
PN7A	**Pavlof North-7**	**2.88**	**271**		**Pn**	**05 03 20.3**	**+0.5**
KAKN	**Katmai Knife C**	**3.01**	**19**		**Pn**	**05 03 22.0**	**+0.3**
KDAK	**Kodiak Island**	**3.34**	**44**	Pn	**Pn**	**05 03 24.6**	**-1.5**
KDAK	**Kodiak Island**	**3.34**	**44**	P	**Pn**	**05 03 24.4**	**-1.8**
	baz=228						
P16K	**Nushagak River**	**3.60**	**351**		**Pn**	**05 03 29.3**	**-0.5**
P17K	**Kvichak River**	**3.73**	**4**		**Pn**	**05 03 31.6**	**0.0**
Q19K	**Cape Douglas,**	**3.90**	**26**	Pn	**Pn**	**05 03 33.9**	**0.0**
Q19K	**Cape Douglas,**	**3.90**	**26**	P	**Pn**	**05 03 33.7**	**-0.1**
	baz=209						
ISLZ	**Isanotski Laza**	**3.96**	**262**		**Pn**	**05 03 35.1**	**+0.4**
ISNN	**Isanotski Nort**	**3.97**	**263**		**Pn**	**05 03 35.5**	**+0.6**
SYI	**Shuyak Island**	**4.00**	**37**		**Pn**	**05 03 34.0**	**-1.2**
P18K	**Big Mountain,**	**4.03**	**13**		**Pn**	**05 03 34.8**	**-0.9**
P18K	**Big Mountain,**	**4.03**	**13**	P	**Pn**	**05 03 34.4**	**-1.3**
	baz=194						
SSLS	**Shishaldin Sou**	**4.12**	**262**		**Pn**	**05 03 37.7**	**+0.7**
O18K	**Koktuh Hills**	**4.48**	**11**	Pn	**Pn**	**05 03 42.2**	**+0.3**
O18K				IAML		05 05 14.2	
	comp=N,15nm,3.8s						
WECS	**Westdahl Cape**	**4.61**	**261**		**Pn**	**05 03 43.7**	**+0.1**
P19K	**Oil Pt**	**4.64**	**24**	Pn	**Pn**	**05 03 45.6**	**+1.6**
P19K				IAML		05 05 15.4	
	comp=N,23nm,4.9s						
P19K				IAML		05 05 46.3	
	comp=E,24nm,4.4s						
P19K	**Oil Pt**	**4.64**	**24**	P	**Pn**	**05 03 43.7**	**-0.3**
	baz=207						
ILSW	**Iliamna Southw**	**4.95**	**23**	Pn	**Pn**	**05 03 48.9**	**+0.4**
ILSW				IAML		05 05 14.3	
	comp=N,19nm,4.9s						
ILSW				IAML		05 05 28.8	
	comp=E,12nm,4.5s						
CNPM	**China Poot**	**5.09**	**35**	Pn	**Pn**	**05 03 49.0**	**-1.3**
CNPM				IAML		05 04 53.8	
	comp=E,16nm,4.9s						
CNPM				IAML		05 05 49.6	
	comp=N,15nm,4.3s						
O20K	**Slope Mountain**	**5.16**	**25**		**Pn**	**05 03 50.6**	**-0.6**
O20K	**Slope Mountain**	**5.16**	**25**	P	**Pn**	**05 03 50.6**	**-0.6**
	baz=208						
AKSA	**Akutan Strait**	**5.24**	**259**		**Pn**	**05 03 52.7**	**+0.5**
N18K	**Kilae Creek**	**5.24**	**6**	Pn	**Pn**	**05 03 51.8**	**-0.5**
N18K				IAML		05 05 37.7	
	comp=E,12nm,4.2s						
N18K				IAML		05 06 06.7	
	comp=N,8.9nm,5.0s						
N18K	**Kilae Creek**	**5.24**	**6**	P	**Pn**	**05 03 51.3**	**-1.1**
	baz=186						
AKUT	**Akutan**	**5.28**	**259**	Pn	**Pn**	**05 03 53.0**	**+0.2**
AKLV	**Akutan Long Va**	**5.37**	**259**		**Pn**	**05 03 54.1**	**0.0**
BRLK	**Bradley Lake**	**5.39**	**35**	Pn	**Pn**	**05 03 52.8**	**-1.6**
BRLK				IAML		05 04 54.2	
	comp=N,14nm,4.9s						
N19K	**Bonanza Creek**	**5.50**	**13**	Pn	**Pn**	**05 03 55.9**	**-0.1**
N19K	**Bonanza Creek**	**5.50**	**13**	P	**Pn**	**05 03 55.5**	**-0.5**
	baz=195						
SVW2	**Sparrevohn**	**5.68**	**7**	Pn	**Pn**	**05 03 59.8**	**+1.5**
UNV	**Unalaska Valle**	**5.78**	**257**	Pn	**Pn**	**05 03 59.5**	**-0.2**
UNV	**Unalaska Valle**	**5.78**	**257**	P	**Pn**	**05 03 59.2**	**-0.5**
	baz=70						
MNAT	**Makushin Natee**	**5.87**	**258**		**Pn**	**05 04 00.5**	**-0.5**
MREP	**Makushin Rep't**	**5.93**	**258**		**Pn**	**05 04 01.3**	**-0.5**
MGOD	**Makushin Gods**	**6.00**	**258**		**Pn**	**05 04 02.4**	**-0.5**
MAPS	**Pakushin South**	**6.04**	**258**		**Pn**	**05 04 02.8**	**-0.5**
M19K	**Big River Lodg**	**6.58**	**11**	Pn	**Pn**	**05 04 11.5**	**+0.9**
RC01	**Rabbit Creek A**	**6.79**	**31**	Pn	**Pn**	**05 04 13.9**	**+0.5**
L19K	**White Mountain**	**6.81**	**8**	Pn	**Pn**	**05 04 14.8**	**+1.0**
PWL	**Port Wells**	**7.05**	**37**	Pn	**Pn**	**05 04 17.3**	**+0.1**
TTA	**Tatalina**	**7.49**	**3**	Pn	**Pn**	**05 04 23.1**	**-0.1**
GHO	**Glory Hole Cre**	**7.57**	**30**	Pn	**Pn**	**05 04 24.2**	**-0.1**
FID	**Port Fidalgo**	**7.65**	**42**	Pn	**Pn**	**05 04 23.7**	**-1.7**
K20K	**Telida**	**8.03**	**9**	Pn	**Pn**	**05 04 30.5**	**-0.1**
KAIM	**Kayak Island**	**8.05**	**51**	Pn	**Pn**	**05 04 30.2**	**-0.6**
SCM	**Sheep Creek Mo**	**8.10**	**34**	Pn	**Pn**	**05 04 31.9**	**+0.4**
J20K	**Nowinta River**	**8.84**	**8**	Pn	**Pn**	**05 04 41.6**	**+0.1**
ANM	**Nome**	**10.03**	**339**	Pn	**Pn**	**05 04 58.2**	**+0.3**
HDA	**Harding Lake**	**10.25**	**25**	Pn	**Pn**	**05 05 02.6**	**+1.7**
IMAR	**Indian Mountai**	**10.65**	**7**	Pn	**Pn**	**05 05 06.5**	**+0.1**
L27K	**Beaver Creek,**	**10.82**	**39**	Pn	**Pn**	**05 05 10.1**	**+1.3**
H23K	**Yukon River**	**10.98**	**16**	Pn	**Pn**	**05 05 12.4**	**+1.5**

*REN **29** 05:03:51.6±1.0,38°.26N±0°.01×118°.74W±0°.03, h10km±5km, ML2.6/11,ML2.5/60(NEIC), Error ellipse: s-maj=4.2km s-min=1.0km az=114.0*

NEIC 29 05:03:51.7±1.0, 38°.267N±0°.004×118°.74W±0°.02, h10km±5km, Error ellipse: s-maj=2.6km s-min=0.4km az=103.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHV	**Little Huntoon**	**0.18**	**95**		Pg	05 03 55.9	+0.3
LHV					Sg	05 03 59.0	+0.7
LHV	**Little Huntoon**	**0.18**	**95**	IAML		05 03 59.3	
	comp=E,4μm,0.6s						
TVH1	**TV Hill, Hawth**	**0.19**	**353**		Pg	05 03 56.0	+0.1
TVH1					Sg	05 03 59.4	+0.5
NV08	**Mina Array Sit**	**0.36**	**67**		Pg	05 03 58.9	0.0
NV09	**Mina Array Sit**	**0.36**	**62**		Pg	05 03 58.9	0.0
NVAR	**Mina Array Bea**	**0.38**	**64**	Pg	Pg	05 03 57.6	-1.7
RYN	**Ryan**	**0.40**	**25**		Pg	05 03 59.7	+0.1
RYN					Sg	05 04 05.5	+0.6
RYN	**Ryan**	**0.40**	**25**	IAML		05 04 06.8	
	comp=N,335nm,0.4s						
LUL	**Lundy Lake**	**0.41**	**239**		Pg	05 03 59.9	+0.1
NV11	**Mina Array Sit**	**0.49**	**70**		Pg	05 04 01.1	-0.1
NV11					Sg	05 04 07.9	+0.2
NV11	**Mina Array Sit**	**0.49**	**70**	IAML		05 04 10.9	
	comp=E,228nm,0.3s						
BENR	**Benton**	**0.56**	**167**		Pg	05 04 02.4	-0.3
MCBM	**Casa Benchmark**	**0.63**	**192**		Pg	05 04 03.9	-0.1
ORC	**Owens River**	**0.63**	**174**		Pg	05 04 03.9	-0.1
MLAC	**Mammoth, Mammo**	**0.64**	**187**		Pg	05 04 04.0	-0.1
MDYM	**Dry Creek**	**0.65**	**200**		Pg	05 04 04.2	0.0
OMMB	**Old Mammoth Mi**	**0.69**	**198**		Pg	05 04 04.7	-0.3
OMMB					Sg	05 04 14.0	0.0
MDPB	**Devils Postpil**	**0.69**	**203**		Pg	05 04 04.7	-0.3
MDPB	**Devils Postpil**	**0.69**	**203**	IAML		05 04 14.1	
	comp=N,270nm,0.3s						
MDPB				IAML		05 04 15.3	
	comp=E,203nm,0.3s						
MLNR	**Milner Canyon**	**0.74**	**155**		Pg	05 04 05.8	-0.2
RCCR	**Rock Creek Can**	**0.78**	**179**		Pg	05 04 06.4	-0.4
YERR	**Yerington**	**0.82**	**331**		Pg	05 04 07.2	-0.3
SCHCA	**Scheelite**	**0.91**	**178**		Pg	05 04 08.8	-0.3
KVN	**Kaiserville**	**0.93**	**32**		Pg	05 04 09.2	-0.4
POCCA	**Poleta Canyon**	**0.97**	**158**		Pg	05 04 09.9	-0.5
KCC	**Kaiser Creek**	**1.05**	**206**		Pg	05 04 11.2	-0.6
PNTR	**Pine Nut**	**1.06**	**321**		Pg	05 04 11.7	-0.5
PNTR	**Pine Nut**	**1.06**	**321**	IAML		05 04 26.5	
	comp=N,104nm,1.1s						
PNTR				IAML		05 04 30.4	
	comp=E,159nm,0.7s						
DSP	**Deep Springs**	**1.08**	**146**		Pb	05 04 12.0	-0.4
TPH	**Tonopah**	**1.21**	**99**		Pb	05 04 14.3	-0.4
MZP	**Montezuma Peak**	**1.21**	**117**		Pb	05 04 14.6	-0.2
VCNR	**Virginia City**	**1.25**	**326**		Pn	05 04 15.1	-0.4
TIN	**Tinemaha, Big**	**1.27**	**161**		Pg	05 04 16.8	+0.6
EMB	**Emerald Bay**	**1.28**	**304**		Pn	05 04 15.8	0.0
EMB	**Emerald Bay**	**1.28**	**304**	IAML		05 04 36.8	
	comp=N,127nm,0.8s						
EMB				IAML		05 04 37.7	
	comp=E,103nm,0.7s						
CMB	**Columbia Colle**	**1.32**	**260**	Pn	Pn	05 04 16.1	-0.2
CMB				IAML		05 04 33.3	
	comp=N,143nm,0.3s						
CMB				IAML		05 04 33.6	
	comp=E,123nm,0.5s						
Q09A	**Carvers**	**1.34**	**65**		Pn	05 04 15.4	-1.3
LCH	**Last Change Ra**	**1.35**	**140**		Pn	05 04 15.8	-0.9
LCH				IAML		05 04 38.5	
	comp=E,57nm,0.5s						
MPK	**Martis Peak**	**1.44**	**316**		Pn	05 04 18.1	-0.1
MPK				IAML		05 04 41.6	
	comp=N,70nm,0.9s						
MPK				IAML		05 04 46.0	
	comp=E,67nm,1.0s						
GMN	**Gold Mountain**	**1.52**	**129**		Pn	05 04 19.1	0.0
GMN				IAML		05 04 25.3	
	comp=N,42nm,0.6s						
GMN				IAML		05 04 45.1	
	comp=E,41nm,0.3s						
PAHR	**Pah Rah Range**	**1.52**	**341**		Pn	05 04 19.0	-0.1
VPK	**Verdi Peak**	**1.58**	**320**		Pb	05 04 21.2	+0.1
DONR	**Donner Summit**	**1.64**	**312**		Pb	05 04 22.1	-0.1
PEAR	**Peavine Mounta**	**1.64**	**325**		Pb	05 04 22.3	+0.1
GRAC	**Grapevine Rang**	**1.67**	**139**		Pn	05 04 21.5	+0.4
GRAC	**Grapevine Rang**	**1.67**	**139**	Pn	Pn	05 04 21.4	+0.3
GRAC	**Grapevine Rang**	**1.67**	**139**	IAML		05 04 48.6	
	comp=E,78nm,0.8s						
GRAC				IAML		05 04 49.1	
	comp=N,64nm,0.8s						
LOY	**Loyalton**	**1.82**	**320**		Pb	05 04 25.3	+0.2
SGV	**South Grapevin**	**1.86**	**133**		Pn	05 04 23.9	+0.1
WVA	**Winnemucca Val**	**1.88**	**334**		Pb	05 04 26.0	-0.1
AFDM	**Forest Hills D**	**1.88**	**292**		Pb	05 04 26.0	-0.1
AFDM	**Forest Hills D**	**1.88**	**292**	IAML		05 04 53.7	
	comp=E,55nm,0.4s						
AFDM				IAML		05 04 54.8	
	comp=N,45nm,0.3s						
BEKR	**Beckworth**	**2.04**	**322**	Pn	Pn	05 04 24.9	-1.3
WCT	**Wildcat Mounta**	**2.23**	**131**		Pn	05 04 29.0	+0.2
TPNV	**Topopah Spring**	**2.37**	**123**		Pn	05 04 31.1	+0.3
TPNV				IAML		05 05 13.0	
	comp=N,40nm,1.1s						
TPNV				IAML		05 05 13.5	
	comp=N,37nm,0.8s						
S11A	**Rachel**	**2.44**	**104**	Pn	Pn	05 04 31.1	-0.7
BMN	**Battle Mountai**	**2.46**	**28**	Pn	Pn	05 04 30.3	-1.7
R11A	**Troy Canyon, C**	**2.48**	**87**		Pn	05 04 32.2	-0.2
R11A				IAML		05 05 11.7	
	comp=E,29nm,0.3s						
R11A				IAML		05 05 11.8	
	comp=N,35nm,0.3s						
CPY	**CP-1**	**2.51**	**121**		Pn	05 04 33.3	+0.6
PMPB	**Monarch Peak**	**2.63**	**219**	Pn	Pn	05 04 34.0	-0.3
GWY	**Greenwater Val**	**2.65**	**141**		Pn	05 04 33.3	-1.3
QSM	**Queen of Sheba**	**2.74**	**146**		Pn	05 04 35.5	-0.2
PRN	**Pahroc Range**	**3.04**	**105**		Pn	05 04 40.3	+0.3
GSC	**Goldstone, Bar**	**3.34**	**152**	Pn	Pn	05 04 41.2	-2.9
ELK	**Elko**	**3.67**	**46**	Pn	Pn	05 04 48.6	0.0
ELK				IAML		05 05 49.9	
	comp=N,9.0nm,3.7s						
PSUT	**Pine Spring**	**3.84**	**85**	Pn	Pn	05 04 49.8	-1.3
CCUT	**Cedar City**	**4.31**	**98**	Pn	Pn	05 04 58.3	+0.8
LCMT	**Little Creek M**	**4.54**	**104**	Pn	Pn	05 04 59.9	-0.6
KNB	**Kanab**	**4.86**	**103**	Pn	Pn	05 05 03.9	-1.1
TCRU	**Three Creeks R**	**4.95**	**84**	Pn	Pn	05 05 04.5	-1.8
DUG	**Dugway, Tooele**	**4.99**	**65**	Pn	Pn	05 05 04.7	-2.1

IDC 29 05:06:39.7±5.7, 39°.35N×110°.54E, h0km, mb3.5/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=120.8km s-min=24.4km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.00**	**342**	Pn	Pn	05 08 50.0	-1.0
	0.2nm,0.3s,baz=158,slow=12,SNR=2.6						
SONM				Lg	Lg	05 11 24.7	
	0.4nm,0.3s,baz=164,slow=26,SNR=2.5						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**21.85**	**299**	P	P	05 11 33.6	-0.2
	1.7nm,0.7s,baz=97,slow=13,SNR=15						
	1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**22.74**	**318**	P	P	05 11 44.4	+1.2
	0.4nm,0.4s,baz=118,slow=15,SNR=1.8						
	0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**23.11**	**209**	P	P	05 11 47.1	-0.2
	1.3nm,0.6s,baz=12,slow=9.7,SNR=7.4						
	1.3nm,0.6s						

IDC 29 05:09:38.4±9.7, 2°.55N×98°.56W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=227.4km s-min=174.0km az=85.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**20.17**	**324**	T	T	05 34 56.5	
	SNR=9.4						
TXAR	**Lajitas Array**	**27.08**	**350**	P	P	05 15 22.6	-0.4
	1.2nm,1.0s,baz=178,slow=12,SNR=7.7						
	1.2nm,1.0s						
NVAR	**Mina Array Bea**	**40.02**	**336**	P	P	05 17 15.7	+0.2
	0.3nm,0.5s,baz=165,slow=7.5,SNR=3.7						
	0.3nm,0.5s						
H03N2	**Juan Fernandez**	**40.31**	**154**	T	T	06 00 01.7	
	baz=330,slow=77,SNR=219						
H03N1	**Juan Fernandez**	**40.32**	**154**	T	T	06 00 03.4	
	baz=330,slow=77,SNR=250						
H03N3	**Juan Fernandez**	**40.33**	**154**	T	T	06 00 02.1	
	baz=330,slow=77,SNR=188						
PDAR	**Pinedale Array**	**41.23**	**348**	P	P	05 17 25.6	+0.2
	1.1nm,0.9s,baz=154,slow=7.6,SNR=8.1						
	1.1nm,0.9s						
INK	**Inuvik**	**69.80**	**347**	P	P	05 20 50.1	-0.2
	0.9nm,0.6s,baz=123,slow=4.1,SNR=1.9						
	0.9nm,0.6s						
H11N3	**WAKE ISLAND Hy**	**93.41**	**290**	T	T	07 06 14.8	
	baz=87,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**93.42**	**290**	T	T	07 06 15.3	
	baz=87,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**93.43**	**290**	T	T	07 06 15.0	
	baz=87,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**93.69**	**289**	T	T	07 06 31.3	
	baz=85,slow=74,SNR=24						
H11S1	**WAKE ISLAND Hy**	**93.69**	**289**	T	T	07 06 35.1	
	baz=85,slow=74,SNR=22						
H11S3	**WAKE ISLAND Hy**	**93.70**	**289**	T	T	07 06 33.2	
	baz=85,slow=74,SNR=19						

*JMA **29** 05:35:15.6±0.1,39°.9N±0°.2×142°.5E±0°.6, h33km±1km, MD3.9/40,MV4.2/40,E OFF IWATE PREF*
JMA Felt I J1 at E OFF IWATE PREF .
*IDC **29** 05:35:17.8±3.9,39°.86N×142°.58E, h60km±35km, mb3.4/8, mbtmp3.7/10,ML2.5/2, Error ellipse: s-maj=33.5km s-min=17.8km az=91.0*

ISC 29 05:35:14.5±2.0, 39°.92N±0°.04×142°.60E±0°.09, h26km±13km, n34, σ0s93/32, mb3.8/8, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.57**	**272**	*i* P	**Pn**	**05 35 26.4**	**-0.5**
JTH				S	**Sb**	**05 35 34.0**	**+0.4**
MIYJ	**Miyakonagasawa**	**0.69**	**241**	⇓*i* P	**Pn**	**05 35 28.4**	**-0.3**
MIYJ				⇓S	**Sb**	**05 35 36.8**	**-0.3**
JKEN	**Kujiedanarisaw**	**0.74**	**293**	*i* P	**Pb**	**05 35 28.6**	**-0.1**
JKEN				S	**Sb**	**05 35 38.1**	**-0.4**
JKEN	**Kujiedanarisaw**	**0.74**	**293**	A	A	05 35 28.6	
	comp=E,10.0nm,0.4s,comp=E,8.0nm,0.4s						
JANG	**Nango**	**0.95**	**299**	*i* P	**Pn**	**05 35 31.7**	**-0.4**
JANG				S	**Sb**	**05 35 43.4**	**-1.0**
JANG	**Nango**	**0.95**	**299**	A	A	05 35 31.7	
	comp=E,2.0nm,0.6s,comp=E,2.0nm,0.3s						
JKZ	**Kuzumaki**	**0.98**	**274**	*i* P	**Pb**	**05 35 32.9**	**0.0**
JKZ				S	**Sb**	**05 35 44.6**	**-0.8**
JOM	**Ohasama**	**1.10**	**247**	⇓*i* P	**Pb**	**05 35 34.7**	**-0.2**
JOM				⇓S	**Sn**	**05 35 48.4**	**-0.2**
JOM	**Ohasama**	**1.10**	**247**	A	A	05 35 34.7	
	comp=E,6.0nm,0.4s,comp=E,4.0nm,1.7s						
OFUJ	**Ofunato**	**1.10**	**221**	⇓*i* P	**Pb**	**05 35 34.6**	**-0.4**
OFUJ				⇓S	**Sn**	**05 35 48.5**	**-0.2**
OFUJ	**Ofunato**	**1.10**	**221**	A	A	05 35 34.6	
	comp=E,3.0nm,0.5s,comp=E,5.0nm,0.4s						
JSZI	**Iwateshizukuis**	**1.28**	**263**	A	A	05 35 37.2	
	comp=E,8.0nm,1.9s,comp=E,8.0nm,1.2s						
JMK	**Ichinoseki**	**1.44**	**228**	⇓*i* P	**Pb**	**05 35 39.7**	**-1.0**
JMK				⇓S	**Sn**	**05 35 57.6**	**+0.7**
JTM	**Tenmabayashi**	**1.46**	**307**	*i* P	**Pb**	**05 35 40.0**	**-1.0**
JTM				S	**Sn**	**05 35 57.8**	**+0.5**
JAH	**Hinai**	**1.53**	**281**	P	**Pb**	**05 35 41.4**	**-0.8**
JAH				S	**Sb**	**05 36 00.4**	**-0.8**
JRG	**Rokugo**	**1.60**	**252**	P	**Pb**	**05 35 42.9**	**-0.6**
JRG				S	**Sb**	**05 36 02.7**	**-0.6**
JRG	**Rokugo**	**1.60**	**252**	A	A	05 35 42.9	
	comp=E,4.0nm,0.5s,comp=E,3.0nm,0.4s						
JYA	**Atsumi**	**2.60**	**240**	A	A	05 35 56.5	
	comp=E,5.0nm,1.6s,comp=E,5.0nm,1.0s						
MJAR	**Matsushiro Arr**	**4.83**	**227**	P	**Pn**	**05 36 26.4**	**+0.9**
	0.4nm,0.3s,baz=44,slow=10.0,SNR=16						
	5.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**8.97**	**302**	P	**Pn**	**05 37 26.0**	**+3.7**
	0.3nm,0.3s,baz=106,slow=14,SNR=4.4						
	3.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.98**	**127**	T	T	06 11 49.6	
	baz=318,slow=75,SNR=220						
H11N1	**WAKE ISLAND Hy**	**28.99**	**127**	T	T	06 11 54.9	
	baz=318,slow=75,SNR=133						
H11N3	**WAKE ISLAND Hy**	**29.00**	**127**	T	T	06 11 49.8	
	baz=318,slow=75,SNR=164						
H11S1	**WAKE ISLAND

17nm,0.3s,baz=344,slow=22,SNR=14
14nm,0.3s
KOWA Kowa 19.32 42 P **P** 05 40 53.2 -0.2
2.3nm,0.3s,baz=220,slow=9.6,SNR=43
36nm,0.7s
KOWA Kowa 19.32 42 **P** 05 40 54.0 +0.6
KOWA IAmb IAmb 05 40 56.5
comp=Z,46nm,0.8s
RCBR Riachuelo 19.52 252 P **P** 05 40 56.0 +0.4
comp=Z,1.1nm,0.3s,baz=237,slow=12,SNR=12
RCBR S Sn 05 44 17.8 -18
comp=Z,5.6nm,0.5s,baz=308,slow=23,SNR=6.2
comp=Z,3.0nm,0.3s
RCBR Riachuelo 19.52 252 P **P** 05 40 55.9 +0.3
TORD Torodi Ar. Bea 22.78 55 P **P** 05 41 30.6 -0.3
comp=Z,53nm,0.4s,baz=245,slow=8.6,SNR=1.6
comp=Z,53nm,0.4s
BOAV Boa Vista 43.25 273 P **P** 05 44 29.7 -0.2
BOAV IAmb IAmb 05 44 35.4
comp=Z,4.3nm,1.0s
BIRV Birongo 49.71 283 P **P** 05 45 20.5 -0.2
HUMP Col San Antoni 50.88 293 P **P** 05 45 29.0 -0.4
PDPR Patillas Dam, 51.01 293 P **P** 05 45 30.8 +0.4
PDPR IAmb IAmb 05 45 31.6
comp=Z,12nm,1.0s
BAUV El Baul 51.24 281 P **P** 05 45 32.2 -0.1
DAVOX Davos/Dischmat 52.09 23 P **P** 05 45 38.2 -0.1
comp=Z,2.3nm,0.5s,baz=225,slow=3.3,SNR=5.7
comp=Z,2.3nm,0.5s
ECH Echery 52.27 21 P **P** 05 45 40.1 +0.8
LPAZ La Paz 52.73 249 LR LR 06 07 19.8
comp=Z,3µm,18.2s,baz=62,slow=35
BFO Black Forest 52.78 21 P **P** 05 45 42.7 -0.5
BFO IAmb IAmb 05 45 45.7
comp=Z,9.2nm,1.2s
PDG Podgorica 53.31 33 P **P** 05 45 47.2 0.0
PDG IAmb IAmb 05 45 50.3
comp=Z,10nm,1.2s
PRED Cave del Predi 53.37 26 P **P** 05 45 48.2 +0.6
PRED IAmb IAmb 05 45 49.5
comp=Z,4.0nm,0.7s
DIVS Divibare 54.82 32 P **P** 05 45 59.3 +1.0
GEC2 GERESS Array S 55.29 24 P **P** 05 46 02.7 +1.1
GEC2 IAmb IAmb 05 46 16.2
comp=Z,7.0nm,1.4s
GERES GERESS Array B 55.29 24 P **P** 05 46 02.5 +0.9
comp=Z,2.1nm,0.6s,baz=209,slow=7.5,SNR=19
GERES PP **PP** 05 48 05.8 +0.5
comp=Z,0.8nm,0.8s,baz=203,slow=9.9,SNR=4.3
comp=Z,2.1nm,0.6s
GERES GERESS Array B 55.29 24 P **P** 05 46 01.9 +0.3
MLR Muntele Rosu 58.98 34 P **P** 05 46 26.1 -1.7
comp=Z,6.6nm,1.1s,baz=208,slow=6.8,SNR=5.3
comp=Z,6.6nm,1.1s
MLR Muntele Rosu 58.98 34 P **P** 05 46 28.5 +0.7
BURAR Bucovina Array 59.88 32 P **P** 05 46 35.8 +1.8
BR131 Keskin Array S 60.75 43 P **P** 05 46 40.0 -0.2
BRTR Keskin Array B 60.75 43 P **P** 05 46 41.0 +0.9
comp=Z,3.1nm,0.7s,baz=240,slow=6.4,SNR=17
comp=Z,3.1nm,0.7s
BRTR Keskin Array B 60.75 43 P **P** 05 46 41.2 +1.0
AKASG Malin Array Be 63.85 31 P **P** 05 47 00.5 0.0
comp=Z,2.2nm,0.8s,baz=233,slow=4.8,SNR=14
comp=Z,2.2nm,0.8s
HFS Hagfors 64.36 17 P **P** 05 47 03.7 +0.1
comp=Z,3.0nm,0.5s,baz=205,slow=9.8,SNR=8.2
comp=Z,3.0nm,0.5s
NB2 NORSAR Subarra 64.44 15 P **P** 05 47 04.9 +0.7
comp=Z,1.1nm,0.8s,baz=210,slow=6.5
NOA NORSAR Array B 64.44 15 P **P** 05 47 05.0 +0.7
comp=Z,1.5nm,0.7s,baz=211,slow=6.6,SNR=5.3
comp=Z,1.5nm,0.7s
KBZ Khabaz 68.71 42 P **P** 05 47 32.7 +0.9
comp=Z,5.2nm,0.8s,baz=247,slow=6.9,SNR=8.8
comp=Z,5.2nm,0.8s
FINES FINESS Array B 69.33 21 P **P** 05 47 35.6 +0.3
comp=Z,4.6nm,0.7s,baz=202,slow=3.4,SNR=9.9
comp=Z,4.6nm,0.7s
MGMO Mountain Grove 77.88 308 P **P** 05 48 25.9 -0.3
MGMO IAmb IAmb 05 48 26.6
comp=Z,6.2nm,0.8s
L40A Anamosa 77.92 313 P **P** 05 48 24.9 -1.4
L40A IAmb IAmb 05 48 25.6
comp=Z,5.9nm,0.9s
R40A Maddies Statio 78.06 309 P **P** 05 48 26.4 -0.7
R40A IAmb IAmb 05 48 26.9
comp=Z,2.6nm,0.7s
AKTO Aktyubinsk 80.48 39 P **P** 05 48 40.4 +0.2
comp=Z,1.4nm,0.5s,baz=223,slow=2.7,SNR=4.3
comp=Z,1.4nm,0.5s
ABKAR Akbulak array 81.50 40 P **P** 05 48 46.0 +0.4
ABKAR IAmb IAmb 05 48 46.7
comp=Z,5.4nm,1.4s
TXAR Lajitas Array 86.69 299 P **P** 05 49 12.6 0.0
comp=Z,1.2nm,0.9s,baz=120,slow=6.4,SNR=9.5
comp=Z,1.2nm,0.9s
SDCO Great Sand Dun 88.41 308 P **P** 05 49 21.5 +0.6
SDCO IAmb IAmb 05 49 22.7
comp=Z,5.0nm,1.4s
MKAR Makanchi Array 96.40 43 P **P** 05 49 57.1 -0.2
comp=Z,0.3nm,0.7s,baz=11,slow=1.5,SNR=2.8
comp=Z,0.3nm,0.7s
ASAR Alice Springs 143.64 132 PKP PKPbc 05 56 02.4 +0.9
comp=Z,0.5nm,0.7s,baz=224,slow=2.5,SNR=2.8
WRA Warramunga Arr 146.04 127 PKPbc **PKPdf** 05 56 07.3 -0.9
comp=Z,0.8nm,0.9s,baz=233,slow=2.9,SNR=5.4

*NEIC **29** 05:45:17.5±2.8, 23°.73S±0°.09×173°.7W±0°.1, h10km±2km, mb4.6/9, Error ellipse: s-maj=22.2km s-min=6.5km az=129.0*
*IDC **29** 05:45:39.3±51.0, 23°.34S×177°.08W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=933.6km s-min=166.6km az=87.0.*
ISC 29 05:45:16.6±1.3, 23°.7S±0°.1×173°.7W±0°.2, h10km, n16, σ0s.98/16, mb4.5/8, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.79**	**38**	Pn	**Pn**	**05 46 42.5**	**-0.1**
RAO	**Raoul Island**	**6.69**	**213**	Pn	**Pn**	**05 46 54.2**	**-0.7**
MSVF	**Nonsavu**	**9.74**	**306**	Pn	**Pn**	**05 47 36.4**	**-0.5**
CTAO	**Charters Tower**	**37.25**	**268**	P	**P**	**05 52 28.6**	**-0.1**
CTAO				IAmb	IAmb	05 52 31.7	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**40.15**	**248**	P	**P**	**05 52 53.6**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=92,slow=12,SNR=3.1						
	comp=Z,0.8nm,0.4s						
AS31	**Alice Springs**	**47.74**	**259**	P	**P**	**05 53 55.2**	**+1.0**
ASAR	**Alice Springs**	**47.75**	**259**	P	**P**	**05 53 55.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=102,slow=7.0,SNR=8.6						
	comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**47.75**	**259**	P	**P**	**05 53 54.5**	**+0.3**
WR0	**Warramunga Arr**	**47.98**	**264**	P	**P**	**05 53 56.1**	**+0.1**
WR0				IAmb	IAmb	05 54 24.0	
	comp=Z,8.9nm,1.4s						
WB2	**Warramunga Arr**	**48.16**	**264**	P	**P**	**05 53 58.6**	**+1.3**
WRAB	**Tennant Creek**	**48.16**	**264**	P	**P**	**05 53 59.0**	**+1.7**
WB0	**Warramunga Arr**	**48.16**	**264**	P	**P**	**05 53 58.3**	**+0.9**
WB0				IAmb	IAmb	05 54 07.1	
	comp=Z,4.8nm,1.4s						
WRA	**Warramunga Arr**	**48.17**	**264**	P	**P**	**05 53 57.9**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=101,slow=8.4,SNR=35						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**48.17**	**264**	P	**P**	**05 53 58.3**	**+0.9**
KNRA	**Kununurra**	**54.46**	**267**	P	**P**	**05 54 43.5**	**-1.1**
KNRA				IAmb	IAmb	05 55 10.2	
	comp=Z,7.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**56.59**	**263**	P	**P**	**05 54 58.6**	**-1.3**
FITZ				IAmb	IAmb	05 55 13.4	
	comp=Z,8.7nm,1.4s						

*NNC **29** 05:57:27.7±6.1, 42°.32N×76°.21E, h0km, mb3.6, mpv2.8, Error ellipse: s-maj=47.9km s-min=19.7km az=22.0*
SOME 29 05:57:27.3, 42.72N×81°.32E, h10km, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.43**	**289**	*eP*	Pn	05 57 49.8	-3.7
	1.9nm,0.2s						
SHLS				*eS*	Sn	05 58 06.0	-6.4
	6.6nm,0.3s						
KPKS	**Kokpek**	**2.07**	**292**	*eP*	Pb	05 58 05.8	+0.8
	4.0nm,0.2s						
KPKS				*eS*	Sg	05 58 33.5	-0.3
	6.9nm,0.3s						
KPKS	**Kokpek**	**2.07**	**292**	Pg	Pb	05 58 05.8	+0.8
	4.0nm,0.2s						
KPKS				Lg	Lg	05 58 33.5	
	6.9nm,0.3s						
BLB	**Baldybastay**	**2.49**	**305**	*eP*	Pb	05 58 13.2	+1.1
	3.2nm,0.4s						
BLB				*eS*	Sg	05 58 46.5	-0.6
	7.0nm,0.4s						
BLB	**Baldybastay**	**2.49**	**305**	Pg	Pb	05 58 13.2	+1.1
	3.2nm,0.4s						
BLB				Lg	Lg	05 58 46.5	
	7.0nm,0.4s						
ARXS	**Arharly**	**2.95**	**302**	*eP*	Pb	05 58 20.8	+0.8
	1.4nm,0.6s						
ARXS				*eS*	Sb	05 58 59.0	+2.9
	3.2nm,0.7s						

*IDC **29** 05:58:22.2±5.9, 0°.29N×17°.19W, h0km, mb4.3/3, mbtmp4.4/6, ML4.4/3, Error ellipse: s-maj=103.0km s-min=64.7km az=15.0*
ISC 29 05:58:30.2±2.4, 1°.0N±0°.2×16°.9W±0°.2, h10km, n14, σ2s.04/11, mb4.1/3, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**9.08**	**165**	T	T	06 09 29.4	
	baz=338,slow=74,SNR=13						
H10N3	**ASCENSION HYDR**	**9.09**	**165**	T	T	06 09 25.6	
	baz=338,slow=74,SNR=14						
H10N1	**ASCENSION HYDR**	**9.10**	**165**	T	T	06 09 27.8	
	baz=338,slow=74,SNR=14						
H10S3	**ASCENSION HYDR**	**10.12**	**167**	T	T	06 10 45.0	
	baz=342,slow=74,SNR=12						
H10S2	**ASCENSION HYDR**	**10.13**	**167**	T	T	06 10 42.9	
	baz=238,slow=74,SNR=6.2						
LIC	**Lamto**	**12.96**	**66**	*eP*	**Pn**	**06 01 38.2**	**+3.6**
	4.7nm,0.4s						
TIC	**Tumodi**	**13.14**	**64**	*eP*	**Pn**	**06 01 38.4**	**+1.3**
	2.5nm,0.4s						
KIC	**Kosan Boka**	**13.28**	**66**	*eP*	**Pn**	**06 01 39.7**	**+0.8**
	7.4nm,0.4s						
DBIC	**Dimbokro**	**13.30**	**65**	Pn	**Pn**	**06 01 40.2**	**+1.1**
	1.5nm,0.3s,baz=264,slow=11,SNR=15						
DBIC				Sn	**Sn**	**06 04 06.0**	**-1.2**
	0.6nm,0.3s,baz=168,slow=18,SNR=3.4						
	9.1nm,0.6s						
BBTS	**Babate**	**13.60**	**2**	Pn	**Pn**	**06 01 45.6**	**+2.3**
	2.4nm,0.3s,baz=326,slow=16,SNR=5.2						
BBTS				Sn	**Sn**	**06 04 13.0**	**-1.6**
	4.1nm,0.3s,baz=160,slow=24,SNR=8.8						
	7.9nm,0.3s						
KOWA	**Kowa**	**18.52**	**43**	P	**Pn**	**06 02 48.8**	**+1.6**
	1.0nm,0.3s,baz=229,slow=9.8,SNR=20						
	6.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**22.05**	**56**	P	**P**	**06 03 24.4**	**-0.9**
	26nm,0.3s,baz=246,slow=11,SNR=2.2						
	26nm,0.3s						
GERES	**GERESS Array B**	**54.47**	**24**	P	**P**	**06 07 56.9**	**-1.2**
	0.7nm,0.6s,baz=191,slow=6.5,SNR=7.8						
	0.7nm,0.6s						
BRTR	**Keskin Array B**	**59.96**	**43**	P	**P**	**06 08 35.5**	**-1.6**
	1.0nm,0.7s,baz=256,slow=7.5,SNR=3.8						
	1.0nm,0.7s						

*NEIC **29** 05:59:16.1±1.9, 53°.93N±0°.08×166°.75W±0°.09, h125km±4km, mb4.0/29, ML4.0/10, ML4.0/77(AEIC), Error ellipse: s-maj=13.7km s-min=2.4km az=149.0*
*IDC **29** 05:59:17.3±1.1, 54°.20N×166°.95W, h137km±7km, mb3.6/17, mbtmp4.0/18, Error ellipse: s-maj=23.4km s-min=12.6km az=13.0*
*AEIC **29** 05:59:17.7±2.9, 54°.01N±0°.08×166°.82W±0°.09, h116km±3km, Error ellipse: s-maj=13.6km s-min=5.1km az=152.0*
ISC 29 05:59:15.6±0.6, 53°.91N±0°.08×166°.75W±0°.05, h130km±5km, n173, σ1s17/184, mb3.9/17, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSW	**Makushin Switc**	**0.02**	**275**		**Pn**	**05 59 33.0**	**-0.2**
MNAT	**Makushin Natee**	**0.05**	**126**		**Pn**	**05 59 33.0**	**-0.3**
MNAT					**Sn**	**05 59 46.5**	**-0.1**
MREP	**Makushin Rep't**	**0.10**	**178**		**Pn**	**05 59 33.0**	**-0.4**
MGOD	**Makushin Gods**	**0.14**	**211**		**Pn**	**05 59 33.3**	**-0.1**
MGOD					**Sn**	**05 59 46.4**	**-0.5**
MAPS	**Pakushin South**	**0.15**	**227**		**Pn**	**05 59 33.0**	**-0.4**
MAPS					**Sn**	**05 59 46.5**	**-0.3**
UNV	**Unalaska Valle**	**0.16**	**115**		**Pn**	**05 59 33.0**	**-0.4**
UNV					**Sn**	**05 59 46.4**	**-0.4**
UNV	**Unalaska Valle**	**0.16**	**115**	P	**Pn**	**05 59 32.9**	**-0.4**
	baz=312						
UNV				S	**Sn**	**05 59 46.4**	**-0.4**
	baz=312						
UNV	**Unalaska Valle**	**0.16**	**115**	P	**Pn**	**05 59 33.0**	**-0.4**
AKRB	**Akutan Reef Bi**	**0.46**	**61**		**Pn**	**05 59 34.5**	**0.0**
AKRB					**Sn**	**05 59 48.4**	**-0.3**
AKMO	**Akutan Morgan**	**0.47**	**68**		**Pn**	**05 59 34.5**	**-0.1**
AKMO					**Sn**	**05 59 48.6**	**-0.2**
AKBBA	**Akutan Broad B**	**0.52**	**69**		**Pn**	**05 59 34.5**	**-0.3**
AKBBA					**Sn**	**05 59 48.8**	**-0.5**
AKGG	**Akutan Green G**	**0.53**	**57**		**Pn**	**05 59 33.8**	**-1.0**
AKGG					**Sn**	**05 59 47.7**	**-1.7**
AKLV	**Akutan Long Va**	**0.53**	**62**		**Pn**	**05 59 34.6**	**-0.4**
AKUT	**Akutan**	**0.62**	**69**		**Pn**	**05 59 35.3**	**-0.1**
AKUT	**Akutan**	**0.62**	**69**		**Sn**	**05 59 49.9**	**-0.5**
AKUT	**Akutan**	**0.62**	**69**	IAML		05 59 39.0	
	comp=N,570nm,0.2s						
AKUT				IAML		05 59 46.7	
	comp=E,532nm,0.2s						
AKSA	**Akutan Strait**	**0.66**	**70**		**Pn**	**05 59 35.7**	**0.0**
AKSA					**Sn**	**05 59 50.4**	**-0.6**
OKNC	**Okmok New Cone**	**0.94**	**241**		**Pn**	**05 59 38.1**	**+0.2**
OKNC					**Sn**	**05 59 54.8**	**0.0**
OKCE	**Okmok Cone E**	**0.97**	**240**		**Pn**	**05 59 37.8**	**-0.5**
WECS	**Westdahl Cape**	**1.31**	**61**		**Pn**	**05 59 41.8**	**+0.1**
WESP	**Westdahl Peak**	**1.33**	**63**		**Pn**	**05 59 42.0**	**+0.2**
WESP					**Sn**	**06 00 01.9**	**0.0**
WESN	**West Dahl Nort**	**1.43**	**62**		**Pn**	**05 59 43.3**	**+0.3**
NIKH	**Nikolski High**	**1.57**	**234**		**Pn**	**05 59 45.0**	**+0.5**
NIKH					**Sn**	**06 00 07.2**	**+0.7**
NIKH	**Nikolski High**	**1.57**	**234**	P	**Pn**	**05 59 45.0**	**+0.5**
	baz=49						
NIKH				S	**Sn**	**06 00 07.2**	**+0.7**
	baz=49						
WTUG	**Tugumak**	**1.67**	**55**		**Pn**	**05 59 45.6**	**0.0**
SSBA	**Shishaldin**	**1.76**	**60**		**Pn**	**05 59 46.7**	**0.0**
SSLS	**Shishaldin Sou**	**1.80**	**62**		**Pn**	**05 59 47.4**	**+0.2**
SSLN	**Shishaldin Nor**	**1.85**	**60**		**Pn**	**05 59 48.0**	**+0.2**
BRPK	**Brown Peak**	**1.91**	**66**		**Pn**	**05 59 48.8**	**+0.3**
ISLZ	**Isanotski Laza**	**1.96**	**64**		**Pn**	**05 59 49.5**	**+0.4**
ISLZ					**Sn**	**06 00 15.0**	**+0.3**
ISNN	**Isanotski Nort**	**1.97**	**61**		**Pn**	**05 59 49.9**	**+0.7**
CLCO	**Concord Point,**	**2.11**	**239**		**Pn**	**05 59 52.0**	**+1.1**
FALS	**False Pass**	**2.17**	**63**		**Pn**	**05 59 52.2**	**+0.7**
FALS	**False Pass**	**2.17**	**63**	P	**Pn**	**05 59 52.2**	**+0.7**
	baz=248						
FALS	**False Pass**	**2.17**	**63**	P	**Pn**	**05 59 52.3**	**+0.7**
CLES	**Cleveland East**	**2.18**	**241**		**Pn**	**05 59 51.9**	**+0.2**
CLES				IAML		06 00 22.5	
	comp=N,2µm,0.6s						
CLES				IAML		06 00 25.2	
	comp=E,2µm,0.5s						
DT1	**Dutton Round H**	**2.87**	**64**		**Pn**	**06 00 00.8**	**+0.3**
HAG	**Hague Volcano**	**3.15**	**62**		**Pn**	**06 00 04.7**	**+0.6**
PS4A	**Pavlof South-4**	**3.19**	**61**		**Pn**	**06 00 05.3**	**+0.7**
SPIA	**Saint Paul Isl**	**3.83**	**330**		**Pn**	**06 00 13.5**	**+0.6**
SPIA	**Saint Paul Isl**	**3.83**	**330**	P	**Pn**	**06 00 13.5**	**+0.6**
	baz=147						
SPIA	**Saint Paul Isl**	**3.83**	**330**	P	**Pn**	**06 00 13.7**	**+0.7**
SDPT	**Sand Point**	**3.92**	**66**		**Pn**	**06 00 14.2**	**0.0**
SDPT				IAML		06 01 02.3	
	comp=E,239nm,0.6s						
SDPT				IAML		06 01 20.2	
	comp=N,178nm,0.9s						
SDPT	**Sand Point**	**3.92**	**66**	P	**Pn**	**06 00 14.4**	**+0.2**
	baz=252						
CNBA	**Chernabura Isl**	**4.29**	**75**		**Pn**	**06 00 18.3**	**-0.8**
CNBA	**Chernabura Isl**	**4.29**	**75**	IAML		06 01 09.3	
	comp=E,73nm,0.3s						
CNBA				IAML		06 01 11.4	
	comp=N,87nm,0.5s						
CHNA	**Chernabura Isl**	**4.29**	**75**	P	**Pn**	**06 00 18.3**	**-0.8**
	baz=262						

KOFP	**Korovin Flat P**	**4.72**	**253**		**Pn**	**06 00 26.1**	**+1.1**
KOKL	**Mount Kliuchef**	**4.76**	**253**		**Pn**	**06 00 26.6**	**+1.1**
VNFG	**Fog Glacier, M**	**4.77**	**57**		**Pn**	**06 00 26.8**	**+1.2**
ATKA	**Atka Island**	**4.81**	**252**		**Pn**	**06 00 27.1**	**+1.1**
ATKA	**Atka Island**	**4.81**	**252**	P	**Pn**	**06 00 27.2**	**+1.2**
VNHG	**Veniaminof 1**	**4.94**	**59**		**Pn**	**06 00 28.6**	**+0.7**
CHGN	**Chignik**	**5.35**	**60**		**Pn**	**06 00 33.1**	**-0.1**
CHGN				IAML		06 01 34.9	
	comp=E,130nm,0.3s						
CHGN				IAML		06 01 36.1	
	comp=N,133nm,0.1s						
CHGN	**Chignik**	**5.35**	**60**	P	**Pn**	**06 00 33.9**	**+0.6**
	baz=248						
ANPB	**Aniakchak Plen**	**5.63**	**56**		**Pn**	**06 00 37.9**	**+0.8**
GSTR	**Great Sitkin T**	**5.91**	**256**	Pn	**Pn**	**06 00 43.3**	**+2.4**
GSCK	**Great Sitkin C**	**6.00**	**255**		**Pn**	**06 00 43.2**	**+1.2**
ADK	**Adak**	**6.34**	**255**		**Pn**	**06 00 47.5**	**+0.9**
ADK	**Adak**	**6.34**	**255**	P	**Pn**	**06 00 48.0**	**+1.3**
KIWB	**Kanaga Island**	**6.62**	**256**		**Pn**	**06 00 51.9**	**+1.5**
CHIR	**Chirikof Islan**	**6.70**	**69**		**Pn**	**06 00 50.3**	**-1.2**
CHIR	**Chirikof Islan**	**6.70**	**69**	P	**Pn**	**06 00 50.1**	**-1.4**
	baz=259						
KIMD	**Kanaga Island**	**6.71**	**255**		**Pn**	**06 00 52.4**	**+0.8**
R17K	**Ugashik Creek**	**6.94**	**53**		**Pn**	**06 00 54.5**	**-0.1**
O16K	**Kokwok River B**	**7.42**	**36**		**Pn**	**06 01 01.3**	**+0.3**
SII	**Sitkinak Islan**	**7.66**	**65**		**Pn**	**06 01 02.6**	**-1.7**
SII	**Sitkinak Islan**	**7.66**	**65**	P	**Pn**	**06 01 02.7**	**-1.7**
	baz=256						
SII	**Sitkinak Islan**	**7.66**	**65**	P	**Pn**	**06 01 02.7**	**-1.7**
O17K	**Koliganek Bris**	**7.90**	**38**		**Pn**	**06 01 08.0**	**+0.5**
OHAK	**Old Harbor**	**8.32**	**61**		**Pn**	**06 01 10.6**	**-2.5**
OHAK	**Old Harbor**	**8.32**	**61**	P	**Pn**	**06 01 10.6**	**-2.5**
	baz=253						
P18K	**Big Mountain,**	**8.39**	**44**	Pn	**Pn**	**06 01 16.5**	**+2.4**
CEPE	**Semis' Perret**	**8.44**	**262**		**Pn**	**06 01 16.3**	**+1.4**
O18K	**Koktuh Hills**	**8.68**	**42**	Pn	Pn	06 01 21.1	+3.1
AMKA	**Amchitka**	**8.85**	**259**		**Pn**	**06 01 20.7**	**+0.3**
KDAK	**Kodiak Island**	**8.86**	**58**	Pn	**Pn**	**06 01 21.0**	**+0.6**
N18K	**Kilae Creek**	**8.97**	**37**	Pn	**Pn**	**06 01 23.6**	**+1.7**
SYI	**Shuyak Island**	**9.27**	**54**		**Pn**	**06 01 24.1**	**-1.8**
SVW2	**Sparrevohn**	**9.37**	**35**	Pn	**Pn**	**06 01 27.7**	**+0.4**
N19K	**Bonanza Creek**	**9.57**	**39**	Pn	Pn	06 01 33.6	+3.6
ILSW	**Iliamna Southw**	**9.59**	**45**	Pn	Pn	06 01 33.9	+3.5
M19K	**Big River Lodg**	**10.35**	**34**	Pn	**Pn**	**06 01 41.5**	**+1.2**
L19K	**White Mountain**	**10.40**	**32**	Pn	**Pn**	**06 01 40.7**	**-0.4**
M20K	**Styx River**	**10.76**	**37**	Pn	**Pn**	**06 01 48.5**	**+2.4**
O22K	**Cooper Landing**	**11.32**	**48**		**Pn**	**06 01 51.5**	**-1.7**
SKT	**Skwentna**	**11.41**	**39**	Pn	**Pn**	**06 01 54.1**	**-0.4**
K20K	**Telida**	**11.52**	**30**	Pn	**Pn**	**06 01 55.3**	**-0.6**
RC01	**Rabbit Creek A**	**11.61**	**45**		**Pn**	**06 01 57.1**	**0.0**
PWL	**Port Wells**	**12.10**	**48**		**Pn**	**06 02 01.1**	**-2.5**
J20K	**Nowinta River**	**12.13**	**27**	Pn	**Pn**	**06 02 05.7**	**+1.7**
CUT	**Chulitna**	**12.14**	**39**	Pn	**Pn**	**06 02 03.8**	**-0.2**
KNK	**Knik Glacier**	**12.31**	**45**	Pn	**Pn**	**06 02 03.8**	**-2.4**
HIN	**Hinchinbrook I**	**12.73**	**51**		**Pn**	**06 02 10.5**	**-1.3**
FID	**Port Fidalgo**	**12.88**	**50**	Pn	**Pn**	**06 02 13.0**	**-0.7**
SCM	**Sheep Creek Mo**	**12.98**	**45**		**Pn**	**06 02 13.9**	**-1.2**
BPAW	**Bear Paw Mtn.**	**13.00**	**32**	Pn	**Pn**	**06 02 16.2**	**+0.9**
EYAK	**Cordova Ski Ar**	**13.13**	**51**	Pn	**Pn**	**06 02 14.3**	**-2.6**
DIV	**Divide**	**13.34**	**49**	Pn	**Pn**	**06 02 16.9**	**-2.8**
KLU	**Klutina**	**13.43**	**47**		**Pn**	**06 02 19.5**	**-1.3**
I21K	**Tanana**	**13.50**	**27**	Pn	**Pn**	**06 02 22.3**	**+0.7**
KAIM	**Kayak Island**	**13.56**	**55**	Pn	**Pn**	**06 02 21.8**	**-0.6**
H21K	**Melozitna Rive**	**13.66**	**25**	Pn	**Pn**	**06 02 21.6**	**-2.1**
WRH	**Wood River Hil**	**14.19**	**34**	Pn	**Pn**	**06 02 30.9**	**+0.5**
I23K	**Minto, Yukon-K**	**14.24**	**31**		**Pn**	**06 02 29.2**	**-1.8**
PAX	**Paxson**	**14.30**	**42**	Pn	**Pn**	**06 02 32.1**	**+0.2**
GLB	**Gilahina Butte**	**14.34**	**49**	Pn	**Pn**	**06 02 31.3**	**-1.1**
CCB	**Clear Creek Bu**	**14.40**	**34**	Pn	**Pn**	**06 02 32.1**	**-1.0**
MDM	**Murphy Dome**	**14.46**	**33**	Pn	**Pn**	**06 02 34.3**	**+0.4**
COLA	**College**	**14.53**	**33**	Pn	**Pn**	**06 02 34.5**	**-0.2**
HDA	**Harding Lake**	**14.54**	**36**	Pn	**Pn**	**06 02 33.0**	**-1.9**
H23K	**Yukon River**	**14.67**	**29**	Pn	**Pn**	**06 02 36.2**	**-0.3**
MCARA	**McCarthy VSAT**	**14.67**	**50**	Pn	**Pn**	**06 02 34.3**	**-2.3**
ISLE	**Juniper Island**	**14.75**	**53**	Pn	**Pn**	**06 02 36.9**	**-0.7**
ILAR	**Eielson Array**	**14.78**	**35**	P	**Pn**	**06 02 36.2**	**-1.7**
	comp=N,1.0nm,0.6s,baz=236,slow=10,SNR=10.0						
ILAR	**Eielson Array**	**14.78**	**35**	Pn	**Pn**	**06 02 35.6**	**-2.4**
MESA	**MESA**	**14.82**	**55**	Pn	**Pn**	**06 02 36.1**	**-2.5**
MENT	**Mentasta**	**14.99**	**44**	Pn	**Pn**	**06 02 38.5**	**-2.0**
M26K	**Nabesna, AK**	**15.06**	**46**	Pn	**Pn**	**06 02 39.7**	**-1.8**
M26K				IAmb	IAmb	06 02 45.7	
	comp=Z,4.9nm,0.6s						
H24K	**Noodor Dome**	**15.16**	**31**	Pn	**Pn**	**06 02 42.6**	**-0.1**
H24K				IAmb	IAmb	06 02 58.8	
	comp=Z,4.7nm,0.7s						
L26K	**Log Cabin Wild**	**15.18**	**44**	Pn	**Pn**	**06 02 41.2**	**-1.7**
L26K				IAmb	IAmb	06 02 45.2	
	comp=Z,7.6nm,0.5s						
DOT	**Dot Lake**	**15.19**	**41**	Pn	**Pn**	**06 02 42.2**	**-0.8**
J25K	**Salcha River,**	**15.21**	**37**	Pn	**Pn**	**06 02 42.1**	**-1.3**
J25K				IAmb	IAmb	06 03 02.2	
	comp=Z,8.8nm,1.1s						
TABL	**Table Mountain**	**15.28**	**54**	Pn	**Pn**	**06 02 43.0**	**-1.3**
SCRK	**Sand Creek**	**15.38**	**40**	Pn	**Pn**	**06 02 43.2**	**-2.3**
LOGN	**Logan Glacier**	**15.44**	**53**	Pn	**Pn**	**06 02 44.4**	**-1.9**
LOGN				IAmb	IAmb	06 03 02.8	
	comp=Z,6.1nm,0.8s						
M27K	**Edge Creek, AK**	**15.53**	**

comp=Z,0.7nm,0.4s
TXAR Lajitas Array 51.19 92 P P 06 08 06.5 +1.0
SONM Songino Array 51.85 301 P P 06 08 09.4 -0.9
comp=Z,1.2nm,0.6s,baz=32,slow=9.2,SNR=2.8
comp=Z,1.2nm,0.6s
ARCES ARCESS Array B 56.54 355 P P 06 08 43.4 -0.3
comp=Z,11nm,1.2s,baz=9.3,slow=6.7,SNR=1.8
ARCES PcP **PcP 06 09 37.8 -0.9**
comp=Z,2.5nm,0.8s,baz=29,slow=4.5,SNR=3.7
comp=Z,11nm,1.2s
MKAR Makanchi Array 63.87 314 P P 06 09 32.6 -1.4
comp=Z,0.8nm,0.7s,baz=45,slow=6.2,SNR=8.2
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 63.87 314 P P 06 09 32.7 -1.2
FINES FINESS Array B 64.54 353 P P 06 09 36.2 -1.8
comp=Z,0.6nm,0.2s,baz=11,slow=8.1,SNR=8.8
FINES pP **PcP 06 10 10.2 -0.8**
comp=Z,2.1nm,0.7s,baz=30,slow=12,SNR=2.8
comp=Z,0.6nm,0.2s
NOA NORSAR Array B 65.38 1 P P 06 09 41.5 -2.1
comp=Z,0.7nm,0.8s,baz=1.3,slow=6.9,SNR=3.5
NOA pP **PcP 06 10 16.0 +1.4**
comp=Z,0.9nm,0.8s,baz=0.0,slow=6.4,SNR=2.5
comp=Z,0.7nm,0.8s
ABKAR Akbulak array 69.93 329 P P 06 10 11.9 -0.3
KKAR Karatay Array 71.66 320 P P 06 10 22.4 -0.5
KKAR IAmb IAmb 06 10 23.1
comp=Z,2.7nm,0.7s
AKASG Malin Array Be 74.90 350 P P 06 10 40.5 -1.1
comp=Z,1.8nm,0.5s,baz=15,slow=6.1,SNR=11
comp=Z,1.8nm,0.5s
GERES GERESS Array B 77.61 360 P P 06 10 56.8 -0.3
comp=Z,0.3nm,0.3s,baz=1.9,slow=8.0,SNR=4.7
comp=Z,0.3nm,0.3s
KBZ Khabaz 79.48 339 P P 06 11 08.2 +1.0
comp=Z,2.8nm,0.6s,baz=26,slow=3.8,SNR=7.1
comp=Z,2.8nm,0.6s
BRTR Keskin Array B 85.09 344 P P 06 11 36.8 0.0
comp=Z,1.9nm,0.6s,baz=9.1,slow=2.2,SNR=7.6
comp=Z,1.9nm,0.6s
WRA Warramunga Arr 89.20 234 P P 06 11 56.5 +0.1
comp=Z,0.3nm,0.8s,baz=24,slow=5.6,SNR=2.0
comp=Z,0.3nm,0.8s
H03N2 Juan Fernandez 115.05 113 T T 08 23 01.1
baz=322,slow=77,SNR=5.3
H03N1 Juan Fernandez 115.06 113 T T 08 22 56.7
baz=322,slow=77,SNR=5.1
H03N3 Juan Fernandez 115.06 113 T T 08 22 57.3
baz=322,slow=77,SNR=6.2
QSPA South Pole Qui 143.68 180 PKPdf PKPab 06 18 32.7 +2.0
TSUM Tsumeb 145.19 353 PKPbc PKPbc 06 18 37.6 0.0

IDC ***29*** *06:13:59.6±11.0, 11°.34S×166°.31E, h259km±134km, mb2.9/3, mbtmp3.8/4, Error ellipse: s-maj=95.5km s-min=32.0km az=158.0*
ISC 29 06:13:58.8±1.5, 11°.3S±0°.1×166°.3E±0°.3, h250km, n9, σ0s93/9, mb3.4/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**9.50**	**175**	P		Pn	06 16 05.6	-5.5
DZM	**Mont Dzumac**	**10.75**	**179**	P		**Pn**	**06 16 26.4**	**-0.4**
DZM	15nm,0.5s,baz=332,slow=7.1,SNR=70			S		**S**	**06 18 27.7**	**+0.3**
	5.1nm,0.9s,baz=144,slow=22,SNR=1.9							
DZM	**Mont Dzumac**	**10.75**	**179**	P		**Pn**	**06 16 26.6**	**-0.2**
YATNC	**Mamie plateau,**	**10.75**	**177**	P		**Pn**	**06 16 25.0**	**-1.8**
NOUC	**Port Laguerre**	**10.78**	**180**	P		**Pn**	**06 16 28.0**	**+0.9**
OUENC	**Ouen Island, N**	**11.10**	**177**	P		**Pn**	**06 16 32.1**	**+0.9**
WRA	**Warramunga Arr**	**31.91**	**250**	P		**P**	**06 20 01.3**	**-0.1**
	0.5nm,0.5s,baz=83,slow=9.0,SNR=17							
	0.5nm,0.5s							
ASAR	**Alice Springs**	**33.17**	**244**	P		**P**	**06 20 12.3**	**-0.1**
	0.3nm,0.8s,baz=69,slow=10,SNR=2.7							
	0.3nm,0.8s							
ILAR	**Eielson Array**	**83.55**	**18**	P		**P**	**06 25 58.6**	**+0.2**
	0.4nm,0.6s,baz=235,slow=4.6,SNR=4.8							
	0.4nm,0.6s							

LDG ***29*** *06:20:09.7±0.1, 42°.75N×13°.13E, h2km, Ml3.2/21, Error ellipse: s-maj=3.5km s-min=2.3km az=38.0*
ROM ***29*** *06:20:10.8±0.0, 42°.750N±0°.002×13°.179E±0°.002, h10km, ML3.6/98, Error ellipse: s-maj=0.2km s-min=0.1km az=249.0*
PDG ***29*** *06:20:11.6±0.6, 42°.75N×13°.15E, h11km, ML3.7/11, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
IDC ***29*** *06:20:12.8±1.7, 42°.90N×13°.43E, h0km, mb3.8/4, mbtmp3.7/9, ML3.4/5, Error ellipse: s-maj=28.9km s-min=17.1km az=74.0*
PRU ***29*** *06:20:25.6±0.0, 43°.77N×13°.49E, h0km*
ISC 29 06:20:11.3±0.7, 42°.75N±0°.01×13°.15E±0°.01, h11km±3km, n296, σ1s88/366, mb3.9/3, 56C-14D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.03**	**217**	⇑P		**Pg**	**06 20 13.2**	**-0.3**
T1213				S		**Sg**	**06 20 14.4**	**-0.5**
T1214	**Arquata del Tr**	**0.04**	**76**	⇓P		**Pg**	**06 20 12.8**	**-0.8**
T1214				S		**Sg**	**06 20 13.8**	**-1.5**
T1202	**Accumoli, Fraz**	**0.07**	**129**	⇓P		**Pg**	**06 20 13.4**	**-0.4**
T1202				S		**Sg**	**06 20 15.0**	**-0.6**
T1212	**Cascia, Frazio**	**0.08**	**272**	⇑P		**Pg**	**06 20 14.0**	**+0.1**
T1212				S		**Sg**	**06 20 16.0**	**+0.3**
T1218	**Civita (PG)**	**0.08**	**198**	⇑P		**Pg**	**06 20 13.9**	**0.0**
T1218				S		**Sg**	**06 20 16.0**	**+0.1**
NRCA	**Norcia**	**0.09**	**343**	⇓P		**Pg**	**06 20 13.7**	**-0.3**
NRCA				S		**Sg**	**06 20 15.3**	**-0.7**
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				AML	AML			
NRCA				END				
T1242	**Castelluccio d**	**0.09**	**26**	⇑P		**Pg**	**06 20 13.5**	**-0.6**
T1242				S		**Sg**	**06 20 15.1**	**-1.0**
T1244	**Arquata del Tr**	**0.11**	**86**	⇑P		**Pg**	**06 20 13.8**	**-0.5**
T1244				S		**Sg**	**06 20 15.1**	**-1.2**
T1201	**Domo (RI)**	**0.12**	**141**	⇓P		**Pg**	**06 20 14.4**	**0.0**
T1201				S		**Sg**	**06 20 16.7**	**+0.2**
T1204	**Amatrice, Fraz**	**0.14**	**121**	⇑P		**Pg**	**06 20 14.5**	**-0.3**
T1204				S		**Sg**	**06 20 16.9**	**-0.3**
MC2	**Monte Cornacci**	**0.17**	**10**	⇑P		**Pg**	**06 20 14.9**	**-0.3**
MC2				S		**Sg**	**06 20 17.9**	**0.0**
MC2				AML	AML			
MC2				AML	AML			
MC2				END				
LNSS	**Leonessa**	**0.17**	**209**	⇑P		**Pg**	**06 20 15.4**	**+0.3**
LNSS				S		**Sg**	**06 20 18.8**	**+1.0**
T1216	**Preci, Frazion**	**0.17**	**326**	⇑P		**Pg**	**06 20 15.2**	**0.0**
T1216				S		**Sg**	**06 20 18.6**	**+0.8**
MMO1	**Montemonaco**	**0.20**	**41**	⇑P		**Pg**	**06 20 15.1**	**-0.5**
MMO1				S		**Sg**	**06 20 18.2**	**-0.4**
MMO1				AML	AML			
	comp=E,59600μm,0.9s							
MMO1				AML	AML			
	comp=N,75050μm,1.3s							
MMO1				END				
T1215	**Vallo di Nera,**	**0.21**	**284**	⇑P		**Pg**	**06 20 16.2**	**+0.3**
T1215				S		**Sg**	**06 20 20.3**	**+1.3**
FEMA	**Monte Fema**	**0.23**	**341**	P		**Pg**	**06 20 16.2**	**0.0**
FEMA				S		**Sg**	**06 20 20.2**	**+0.8**
FEMA				AML	AML			
	comp=E,30500μm,0.4s							
FEMA				AML	AML			
	comp=N,25150μm,1.4s							
FEMA				AML	AML			
	comp=E,30450μm,0.4s							
FEMA				AML	AML			
	comp=N,25200μm,1.4s							
FEMA				END				
T1243	**Rocca Santa Ma**	**0.23**	**103**	⇑P		**Pg**	**06 20 15.6**	**-0.6**
T1243				S		**Sg**	**06 20 18.8**	**-0.6**
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				AML	AML			
T1243				END				
T1241	**Roccafluvione,**	**0.23**	**62**	⇑P		**Pg**	**06 20 15.7**	**-0.5**
T1241				S		**Sg**	**06 20 19.3**	**-0.2**
RM33	**Pellescritta (**	**0.24**	**169**	⇑P		**Pg**	**06 20 16.4**	**0.0**
RM33				S		**Sg**	**06 20 20.7**	**+0.8**
RM33				AML	AML			
	comp=E,27950μm,0.8s							
RM33				AML	AML			
	comp=N,26850μm,0.5s							
RM33				AML	AML			
	comp=E,27200μm,0.3s							
RM33				AML	AML			
	comp=N,26850μm,0.5s							
RM33				AML	AML			
	comp=E,28000μm,0.8s							
RM33				AML	AML			
	comp=N,26250μm,0.5s							
RM33				END				
CAMP	**Campotosto**	**0.29**	**138**	⇑P		**Pg**	**06 20 16.9**	**-0.3**
CAMP				S		**Sg**	**06 20 21.4**	**+0.3**
CAMP				AML	AML			
	comp=E,15250μm,0.5s							
CAMP				AML	AML			
	comp=N,16600μm,0.7s							
CAMP				END				
FDMO	**Fiordimonte**	**0.29**	**351**	⇑P		**Pg**	**06 20 17.1**	**-0.2**
FDMO				S		**Sg**	**06 20 21.9**	**+0.6**
FDMO				AML	AML			
	comp=N,19750μm,1.3s							
FDMO				AML	AML			
	comp=E,18850μm,1.1s							
FDMO				END				
T1211	**Morro Reatino**	**0.31**	**225**	⇑P		**Pg**	**06 20 17.8**	**+0.2**
T1211				S		**Sb**	**06 20 23.4**	**-0.5**
ARRO	**Arrone**	**0.33**	**239**	⇑P		**Pg**	**06 20 18.3**	**+0.3**
ARRO				S		**Sb**	**06 20 24.0**	**-0.6**
ARRO				AML	AML			
	comp=N,11150μm,1.1s							
ARRO				AML	AML			
	comp=E,14900μm,0.2s							
ARRO				END				
CSP1	**Cessapalombo**	**0.34**	**7**	⇑P		**Pg**	**06 20 17.9**	**-0.3**
CSP1				S		**Sg**	**06 20 23.5**	**+0.6**
CSP1				END				
TERO	**Teramo**	**0.36**	**110**	⇑P		**Pg**	**06 20 17.8**	**-0.7**
TERO				S		**Sg**	**06 20 23.1**	**-0.1**
TERO				AML	AML			
	comp=E,17400μm,0.6s							
TERO				AML	AML			
	comp=E,18000μm,0.6s							
TERO				AML	AML			
	comp=N,29750μm,0.3s							
TERO				AML	AML			
	comp=E,18050μm,0.6s							
TERO				AML	AML			
	comp=N,33100μm,0.3s							
TERO				AML	AML			
	comp=E,17350μm,0.6s							
TERO				AML	AML			
	comp=N,29800μm,0.3s							
TERO				END				
SEF1	**Sefro**	**0.42**	**340**	P		**Pg**	**06 20 19.5**	**-0.2**
SEF1				S		**Sb**	**06 20 26.5**	**-0.8**
SEF1				AML	AML			
	comp=E,19400μm,0.2s							
SEF1				AML	AML			
	comp=N,21850μm,0.5s							
SEF1				END				
GIGS	**Gran Sasso**	**0.43**	**134**	⇑P		**Pg**	**06 20 19.0**	**-0.8**
GIGS				S		**Sg**	**06 20 25.4**	**-0.1**
GIGS				AML	AML			
	comp=N,3450μm,0.6s							
GIGS				AML	AML			
	comp=E,4835μm,0.2s							
GIGS				END				
OFFI	**Offida**	**0.44**	**65**	⇑P		**Pg**	**06 20 20.1**	**+0.2**
OFFI				S		**Sb**	**06 20 28.0**	**+0.4**
OFFI				AML	AML			
	comp=E,21350μm,1.6s							
OFFI				AML	AML			
	comp=N,25850μm,0.5s							
OFFI				END				
CESX	**Cesi**	**0.44**	**252**	⇑P		**Pg**	**06 20 20.1**	**0.0**
CESX				S		**Sg**		
CESX				AML	AML			
	comp=E,10850μm,1.0s							
CESX				AML	AML			
	comp=N,10835μm,0.8s							
MDAR	**Monte D'Aria**	**0.44**	**359**	P		**Pg**	**06 20 19.7**	**-0.4**
MDAR				S		**Sg**	**06 20 26.6**	**+0.6**
MDAR				AML	AML			
	comp=E,9940μm,1.1s							
MDAR				AML	AML			
	comp=N,19400μm,0.4s							
MDAR				AML	AML			
	comp=N,19450μm,0.4s							
MDAR				AML	AML			
	comp=E,9970μm,1.1s							
MDAR				END				
PIO1	**Pioraco**	**0.45**	**344**	P		**Pg**	**06 20 19.9**	**-0.2**
MNTP	**Montappone**	**0.45**	**31**	P		**Pg**	**06 20 20.4**	**+0.1**
MNTP				S		**Sb**	**06 20 28.7**	**+0.6**
MNTP				AML	AML			
	comp=E,42000μm,0.2s							
MNTP				AML	AML			
	comp=N,29850μm,0.5s							
MNTP				END				
ASSB	**Assisi San Ben**	**0.47**	**309**	⇑P		**Pg**	**06 20 20.4**	**-0.1**
ASSB				S		**Sb**	**06 20 28.1**	**-0.4**
ASSB				AML	AML			
	comp=N,12415μm,1.4s							
ASSB				AML	AML			
	comp=E,10230μm,1.5s							
ASSB				END				
FIU1	**Fiuminata**	**0.47**	**340**	P		**Pg**	**06 20 20.5**	**-0.1**
FIU1				S		**Sb**	**06 20 27.8**	**-0.8**
FIU1				AML	AML			
	comp=E,5715μm,1.1s							
FIU1				AML	AML			
	comp=N,6185μm,1.6s							
FIU1				AML	AML			
	comp=E,5715μm,1.1s							
FIU1				AML	AML			
	comp=N,6185μm,1.6s							
FIU1				END				
FIAM	**Fiamignano**	**0.48**	**183**	⇑P		**Pg**	**06 20 20.5**	**-0.2**
FIAM				S		**Sg**	**06 20 28.0**	**+0.9**
FIAM				AML	AML			
	comp=N,8955μm,0.6s							
FIAM				AML	AML			
	comp=E,8475μm,0.5s							
FIAM				END				
GAG1	**Gagliole**	**0.49**	**353**	P		**Pg**	**06 20 20.8**	**-0.2**
GAG1				S		**Sb**	**06 20 28.7**	**-0.6**
GAG1				AML	AML			
	comp=E,24450μm,0.5s							
GAG1				AML	AML			
	comp=N,20500μm,1.4s							
GAG1				END				
MTL1	**Matelica**	**0.52**	**349**	P		**Pg**	**06 20 21.2**	**-0.2**
SNTG	**Esanatoglia**	**0.53**	**343**	⇑P		**Pg**	**06 20 21.3**	**-0.4**
SNTG				S		**Sb**	**06 20 29.6**	**-0.7**
SNTG				AML	AML			
	comp=E,534μm,1.4s							
SNTG				AML	AML			
	comp=N,612μm,0.7s							
SNTG				AML	AML			
	comp=N,4975μm,0.2s							
SNTG				AML	AML			
	comp=N,611μm,0.7s							
SNTG				AML	AML			
	comp=E,4420μm,0.5s							
SNTG				AML	AML			
	comp=E,534μm,1.4s							
SNTG				AML	AML			
	comp=N,4980μm,0.2s							
SNTG				END				
TRTR	**Tortoreto Alta**	**0.56**	**84**	⇑P		**Pg**	**06 20 22.8**	**+0.4**
TRTR				AML	AML			
	comp=N,28900μm,0.5s							
TRTR				AML	AML			
	comp=E,26450μm,0.6s							
TRE1	**Treia**	**0.57**	**12**	P		**Pg**	**06 20 22.4**	**-0.1**
TRE1				AML	AML			
	comp=N,25550μm,0.4s							
TRE1				AML	AML			
	comp=E,25800μm,0.3s							
FAGN	**Fagnano**	**0.58**	**146**	⇑P		**Pg**	**06 20 21.9**	**-0.7**
FAGN				AML	AML			
	comp=N,11200μm,0.4s							
FAGN				AML	AML			
	comp=E,10900μm,0.3s							
FAGN				END				
EL6	**Elcito**	**0.58**	**357**	⇑P		**Pg**	**06 20 22.2**	**-0.5**
EL6				AML	AML			
	comp=E,9945μm,0.4s							
EL6				AML	AML			
	comp=N,13300μm,1.3s							
EL6				AML	AML			
	comp=E,9975μm,0.4s							
FOSV	**Fossato di Vic**	**0.62**	**333**	⇑P		**Pg**	**06 20 23.0**	**-0.3**
FOSV				S		**Sb**	**06 20 32.5**	**-0.3**
FOSV				AML	AML			
	comp=E,4115μm,0.8s							
FOSV				AML	AML			
	comp=N,6220μm,0.4s							
FOSV				AML	AML			
	comp=N,6225μm,0.4s							
FOSV				END				
VCEL	**Villa Celiera**	**0.62**	**125**	⇑P		**Pg**	**06 20 22.8**	**-0.6**
VCEL				AML	AML			
	comp=E,12900μm,0.7s							
VCEL				AML	AML			
	comp=N,12350μm,0.7s							
VCEL				AML	AML			
	comp=E,12850μm,0.7s							
VCEL				AML	AML			
	comp=N,12300μm,0.7s							
CING	**Cingoli**	**0.63**	**3**	⇑P		**Pg**	**06 20 22.9**	**-0.6**
CING				S		**Sb**	**06 20 32.9**	**-0.3**
CING				AML	AML			
	comp=E,5755μm,0.3s							
CING				AML	AML			
	comp=N,4900μm,0.6s							
CADA	**Capodarco di F**	**0.63**	**45**	P		**Pb**	**06 20 24.3**	**-0.1**
CIMA	**Civitanova Mar**	**0.68**	**34**	P		**Pb**	**06 20 25.0**	**-0.1**
SRES	**S.Oreste - Sor**	**0.70**	**223**	⇑P		**Pg**	**06 20 24.4**	**-0.4**
SRES				AML	AML			
	comp=N,2935μm,0.5s							
SRES				AML	AML			
	comp=E,3615μm,0.4s							
T0110	**Collepietro**	**0.70**	**138**	P		**Pg**	**06 20 23.8**	**-1.0**
T0110				AML	AML			
	comp=E,7295μm,0.4s							
T0110				AML	AML			
	comp=N,9345μm,0.5s							
T0110				END				
MMUR	**Monte Murano**	**0.70**	**351**	P		**Pg**	**06 20 24.4**	**-0.5**
PP3	**Marolino**	**0.71**	**28**	⇑P		**Pg**	**06 20 25.2**	**+0.1**
PP3				AML	AML			
	comp=E,56100μm,0.5s							
PP3				AML	AML			
	comp=N,60650μm,0.4s							
PP3				AML	AML			
	comp=N,64400μm,0.4s							
PP3				AML	AML			
	comp=E,60300μm,0.5s							
SSFR	**Montelago di S**	**0.74**	**339**	P		**Pg**	**06 20 25.1**	**-0.5**
SSFR				AML	AML			
	comp=E,8545μm,0.2s							
SSFR				AML	AML			
	comp=N,10310μm,0.2s							
SSFR				AML	AML			
	comp=N,9725μm,0.2s							
SSFR				AML	AML			
	comp=E,8660μm,0.2s							
PTQR	**Pietraquaria**	**0.75**	**166**	P		**Pg**	**06 20 23.6**	**-2.2**
ATSC	**Scheggia e Pas**	**0.76**	**333**	P		**Pg**	**06 20 25.3**	**-0.7**
ARVD	**Arcevia**	**0.76**	**349**	⇑P		**Pg**	**06 20 25.4**	**-0.7**
ARVD				AML	AML			
	comp=E,2835μm,0.5s							
ARVD				AML	AML			
	comp=E,2840μm,0.5s							
ARVD				AML	AML			
	comp=N,4105μm,0.6s							
MGAB	**Montegabbione**	**0.78**	**282**	⇑P		**Pg**	**06 20 26.3**	**-0.1**
MGAB				AML	AML			
	comp=E,9070μm,0.4s							
MGAB				AML	AML			
	comp=N,10010μm,0.4s							
MGAB				AML	AML			
	comp=E,8715μm,0.4s							
MGAB				AML	AML			
	comp=E,9045μm,0.4s							
MGAB				AML	AML			
	comp=N,10005μm,0.4s							
MGAB				AML	AML			
	comp=N,9695μm,1.2s							
ATLO	**AVT- Montelove**	**0.79**	**316**	P		**Pg**	**06 20 26.2**	**-0.3**
MTCE	**Montecelio**	**0.79**	**203**	⇑P		**Pg**	**06 20 25.6**	**-0.9**
MTCE				AML	AML			
	comp=E,4495μm,0.6s							
MTCE				AML	AML			
	comp=N,3080μm,1.1s							
CERT	**Cerreto**	**0.81**	**189**	⇑P		**Pg**	**06 20 25.8**	**-1.1**
CERT				AML	AML			
	comp=E,6820μm,0.5s							
CERT				AML	AML			
	comp=N,4775μm,1.1s							
ATVA	**AVT- Monte Val**	**0.83**	**310**	P		**Pg**	**06 20 27.0**	**-0.3**
FRON	**Frontone**	**0.83**	**338**	P		**Pg**	**06 20 26.5**	**-0.9**
FRON				AML	AML			
	comp=E,3315μm,0.6s							
FRON				AML	AML			
	comp=N,4105μm,1.5s							
ATVO	**AVT- Monte Val**	**0.83**	**320**	P		**Pg**	**06 20 26.9**	**-0.6**
ATVO				AML	AML			
	comp=N,2550μm,0.9s							
ATVO				AML	AML			
	comp=E,2690μm,1.4s							
TB03	**Pietralunga**	**0.85**	**321**	P		**Pg**	**06 20 27.1**	**-0.6**
ATBU	**Serra di Buran**	**0.85**	**329**	P		**Pg**	**06 20 27.4**	**-0.3**
AOI	**Ancona**	**0.87**	**22**	⇑P		**Pg**	**06 20 27.3**	**-0.8**
AOI				AML	AML			
	comp=N,5480μm,0.4s							
AOI				AML	AML			
	comp=E,6025μm,0.4s							
ATMI	**Monte Miggiano**	**0.87**	**312**	P		**Pg**	**06 20 28.3**	**+0.2**
ATMI				AML	AML			
	comp=E,7065μm,0.7s							
ATMI				AML	AML			
	comp=N,7215μm,0.5s							
COR1	**Corinaldo**	**0.89**	**353**	AML	AML			
	comp=N,10590μm,1.3s							
COR1				AML	AML			
	comp=E,11300μm,1.1s							
ATPC	**Poggio Castell**	**0.89**	**325**	P		**Pg**	**06 20 28.0**	**-0.5**
ATPI	**Pietralunga -**	**0.89**	**322**	P		**Pg**	**06 20 28.0**	**-0.5**
ATPI				AML	AML			
	comp=E,2435μm,0.5s							
ATPI				AML	AML			
	comp=N,2435μm,0.5s							
PIEI	**Pieia**	**0.91**	**330**	P		**Pg**	**06 20 27.9**	**-0.9**
PIEI				AML	AML			
	comp=E,2190μm,0.3s							
PIEI				AML	AML			
	comp=N,2135μm,0.7s							
RCAV	**Rocca di Cave**	**0.91**	**190**	P		**Pg**	**06 20 27.5**	**-1.4**
RCAV				AML	AML			
	comp=N,7315μm,0.5s							
RCAV				AML	AML			
	comp=E,6565μm,1.1s							
SACS	**San Casciano d**	**0.92**	**277**	⇑P		**Pg**	**06 20 28.9**	**-0.2**
SACS				AML	AML			
	comp=N,4610μm,0.6s							
SACS				AML	AML			
	comp=E,3205μm,1.3s							
SACS				AML	AML			
	comp=N,4660μm,0.6s							
SACS				AML	AML			
	comp=E,3135μm,1.3s							
INTR	**Introdacqua**	**0.93**	**143**	P		**Pg**	**06 20 27.5**	**-1.6**
INTR				AML	AML			
	comp=N,5μm,0.7s							
INTR				AML	AML			
	comp=E,3230μm,1.2s							
INTR				AML	AML			
	comp=E,3μm,1.2s							
INTR				AML	AML			
	comp=N,7410μm,0.7s							
INTR				AML	AML			
	comp=N,5μm,0.7s							
MPAG	**Monte Paganucc**	**0.93**	**342**	⇑P		**Pg**	**06 20 28.4**	**-0.8**

MPAG AML AML
comp=E,3185µm,0.3s
MPAG AML AML
comp=N,1835µm,0.3s
VVLD Villa Vallelon 0.94 158 P **Pg 06 20 28.4 -1.1**
VVLD AML AML
comp=N,2830µm,0.6s
VVLD AML AML
comp=E,2425µm,0.5s
NARO Abbazia di Nar 0.96 334 P **Pg 06 20 28.7 -1.1**
NARO AML AML
comp=E,2310µm,0.5s
NARO AML AML
comp=N,2555µm,0.6s
SENI Senigallia 0.96 4 P **Pg 06 20 29.7 -0.1**
SENI AML AML
comp=E,16950µm,0.4s
SENI AML AML
comp=N,3942µm,0.6s
SENI AML AML
comp=E,6010µm,0.8s
SENI AML AML
comp=N,17250µm,0.6s
GUAR Guarcino 0.96 173 P **Pg 06 20 28.8 -1.1**
GUAR AML AML
comp=E,5045µm,0.7s
GUAR AML AML
comp=N,4735µm,0.6s
FSSB Fossombrone 0.98 344 P **Pg 06 20 29.5 -0.8**
FSSB AML AML
comp=N,11400µm,0.4s
FSSB AML AML
comp=E,10040µm,0.4s
ATMC Monte Cedrone 0.99 315 P **Pg 06 20 30.3 -0.1**
RMP Rome, Mte Porz 0.99 200 P **Pg 06 20 29.3 -1.1**
LATE Laterza 1.00 263 ⇑P **Pg 06 20 30.2 -0.5**
BADI Badiali 1.01 319 P **Pg 06 20 30.5 -0.3**
BADI AML AML
comp=E,231µm,1.5s
BADI AML AML
comp=N,2575µm,0.6s
LPEL Lama dei Pelig 1.04 132 P **Pg 06 20 29.2 -2.1**
LPEL AML AML
comp=N,1930µm,0.5s
LPEL AML AML
comp=E,2495µm,0.4s
RDP Rocca di Papa 1.04 198 P **Pg 06 20 30.3 -1.1**
CAFI Castiglion Fio 1.04 304 P **Pg 06 20 30.8 -0.6**
CAFI AML AML
comp=E,1705µm,0.4s
CAFI AML AML
comp=E,1630µm,0.4s
CAFI AML AML
comp=N,1710µm,1.2s
CAFI AML AML
comp=N,1805µm,1.2s
MA9 Marino 1.04 201 P **Pg 06 20 31.3 -0.1**
PE3 Peglio 1.06 333 P **Pg 06 20 31.3 -0.4**
SF03 Valle Cupa 1.08 273 P **Pg 06 20 32.0 -0.1**
MCIV Monte Civitell 1.09 272 P **Pg 06 20 31.5 -0.8**
MCIV AML AML
comp=E,1935µm,0.6s
MCIV AML AML
comp=N,1660µm,0.6s
SF11 Podere del Sol 1.09 277 P **Pg 06 20 32.4 +0.1**
TOLF Tolfa 1.09 232 P **Pb 06 20 31.5 -0.7**
SF04 Casetta 1.10 275 P **Pg 06 20 32.4 -0.1**
SF04 AML AML
comp=E,2980µm,0.3s
SF04 AML AML
comp=N,2202µm,0.3s
POFI Posta Fibreno 1.11 158 P **Pb 06 20 31.8 -0.8**
POFI AML AML
comp=N,1480µm,0.8s
POFI AML AML
comp=E,1675µm,0.8s
SSP9 Sansepolcro 1.11 318 P **Pn 06 20 33.1 +0.3**
SSP9 AML AML
comp=E,1920µm,1.6s
SSP9 AML AML
comp=N,1775µm,1.6s
PARC Parchiule 1.12 324 P **Pb 06 20 32.4 -0.4**
LAV9 Lanuvio 1.12 198 P **Pn 06 20 33.3 +0.3**
SF13 Bagnolo 1.13 274 P **Pb 06 20 32.5 -0.4**
SF14 Selvena 1.13 271 P **Pb 06 20 32.9 -0.1**
SF01 Poggio Pratacc 1.17 274 P **Pb 06 20 32.5 -1.1**
GIUL Giuliano Di Ro 1.19 176 P **Pb 06 20 33.0 -0.9**
GIUL AML AML
comp=E,1685µm,0.8s
GIUL AML AML
comp=N,1960µm,0.8s
PESA Pesaro 1.21 349 P **Pb 06 20 34.1 -0.2**
PESA AML AML
comp=N,6745µm,0.4s
PESA AML AML
comp=E,4690µm,0.5s
CRE Caprese Michel 1.24 315 P **Pn 06 20 34.3 -0.3**
ARCI Arcidosso 1.24 275 P **Pn 06 20 34.5 -0.1**
ARCI AML AML
comp=N,504µm,0.5s
ARCI AML AML
comp=E,546µm,0.7s
LATB Latina 1.26 186 P **Pn 06 20 33.4 -1.5**
LATB AML AML
comp=N,402µm,0.7s
LATB AML AML
comp=E,494µm,1.5s
RNI2 Rionero Sannit 1.28 144 P **Pn 06 20 35.6 +0.3**
CERA Filignano 1.32 150 P **Pn 06 20 35.0 -0.7**
CERA AML AML
comp=E,2470µm,0.7s
CERA AML AML
comp=N,1620µm,0.8s
CERA AML AML
comp=N,1680µm,0.8s
CERA AML AML
comp=E,2410µm,0.6s
FRES Fresagrandinar 1.37 124 P **Pg 06 20 37.4 -0.1**
TRIV Trivento 1.43 133 P **Pg 06 20 39.4 +0.6**
TRIV AML AML
comp=E,1705µm,0.7s
TRIV AML AML
comp=N,1535µm,0.9s
ASQU Asqua 1.44 317 P **Pn 06 20 37.1 -0.4**
SFI Santa Sofia 1.50 321 P **Pn 06 20 38.7 +0.5**
SFI AML AML
comp=N,648µm,1.3s
SFI AML AML
comp=E,724µm,0.6s
FROS Frosini 1.53 288 P **Pn 06 20 38.9 +0.2**
CSNT Castellina Chi 1.54 299 P **Pn 06 20 39.2 +0.4**
CSNT AML AML
comp=N,390µm,0.8s
CSNT AML AML
comp=E,434µm,0.5s
VAGA Valle Agricola 1.56 148 P **Pb 06 20 40.3 +0.1**
VAGA AML AML
comp=E,718µm,1.3s
VAGA AML AML
comp=N,794µm,0.6s
VAGA AML AML
comp=E,729µm,1.3s
VAGA AML AML
comp=N,836µm,0.6s
OSSC Osservatorio P 1.59 300 P **Pn 06 20 40.0 +0.5**
BSSO Busso 1.61 138 P **Pg 06 20 42.5 +0.3**
BSSO AML AML
comp=N,326µm,1.4s
BSSO AML AML
comp=E,250µm,1.5s
RUFI Rufina 1.62 313 P **Pn 06 20 40.2 +0.4**
CASP Castiglione de 1.68 272 P **Pn 06 20 40.8 +0.1**
CASP AML AML
comp=E,268µm,0.4s
CASP AML AML
comp=N,186µm,1.1s
MODR Mondragone 1.69 161 P **Pn 06 20 41.8 +1.0**
MODR AML AML
comp=N,546µm,1.1s
MODR AML AML
comp=E,431µm,1.6s
TRIF Trifonti 1.69 283 P **Pn 06 20 41.1 +0.2**
TRIF AML AML
comp=N,398µm,0.5s
TRIF AML AML
comp=E,392µm,0.8s

LMD Lutirano 1.69 322 AML AML
comp=N,614µm,0.8s
LMD AML AML
comp=E,642µm,0.6s
CIGN Sant'Elia a Pi 1.70 129 P **Pb 06 20 43.1 +0.4**
CIGN AML AML
comp=E,585µm,1.1s
CIGN AML AML
comp=N,651µm,0.6s
PTRJ Pietraroja 1.72 143 P **Pb 06 20 43.4 +0.4**
SACR S. Croce Del S 1.78 139 P **Pb 06 20 44.5 +0.5**
MELA Melanico ??? S 1.80 125 P **Pn 06 20 43.4 +1.1**
MELA AML AML
comp=E,1630µm,0.6s
MELA AML AML
comp=N,1890µm,1.6s
MELA AML AML
comp=E,1500µm,0.7s
MELA AML AML
comp=N,1805µm,1.6s
BRIS BRISIGHELLA 1.84 320 P **Pg 06 20 46.1 -0.5**
SEI Scarperia 1.85 316 P **Pb 06 20 44.9 -0.3**
TREM Isole Tremiti 1.86 109 P **Pb 06 20 44.4 -0.9**
TREM AML AML
comp=E,2465µm,0.7s
TREM AML AML
comp=N,1970µm,0.7s
DUGI Dugi Otok 1.86 48 *i* Pn **Pn 06 20 43.0 -0.2**
VITU Vitulano (BN) 1.91 144 P **Pb 06 20 46.8 +0.5**
MPPT Montemurlo 1.93 310 P **Pn 06 20 44.5 +0.4**
MPPT AML AML
comp=E,544µm,0.5s
MPPT AML AML
comp=N,312µm,0.6s
PSB1 Pescosannita 1.96 140 P **Pb 06 20 47.0 -0.1**
MTCR Monte La Croce 2.02 310 P **Pn 06 20 45.8 +0.3**
MOCO Biccari - m.te 2.03 132 P **Pb 06 20 47.8 -0.6**
APRC Apricena 2.03 118 P **Pn 06 20 46.0 +0.5**
APRC AML AML
comp=E,779µm,0.6s
APRC AML AML
comp=N,987µm,0.7s
FNVD Fontana Vidola 2.05 315 P **Pn 06 20 47.3 +1.5**
VIRC Vir 2.07 41 *e*Pn **Pn 06 20 45.8 -0.2**
SGRT San Giovanni R 2.17 116 P **Pn 06 20 48.4 +1.0**
SGRT AML AML
comp=E,873µm,0.5s
SGRT AML AML
comp=N,692µm,1.1s
POPM Popiglio 2.17 307 AML AML
comp=E,250µm,0.8s
POPM AML AML
comp=N,212µm,0.6s
MORI Morici 2.17 58 *e*Pn **Pn 06 20 48.0 +0.6**
BRJN Brijuni 2.20 11 *e*Pn **Pn 06 20 47.2 -0.5**
BRJN Brijuni 2.20 11 P **Pn 06 20 47.8 0.0**
NVLJ Novalja 2.20 34 *e*Pn **Pn 06 20 47.7 -0.1**
MAIM Mastiano 2.26 302 P **Pn 06 20 49.8 +1.1**
BDI Bagni Di Lucca 2.28 306 AML AML
comp=E,110µm,0.6s
BDI AML AML
comp=N,130µm,0.6s
MSAG Monte S. Angel 2.30 116 P **Pn 06 20 50.3 +1.1**
MSAG AML AML
comp=E,1230µm,0.6s
MSAG AML AML
comp=N,1965µm,0.4s
SGTA Sant Agata di 2.31 134 P **Pb 06 20 51.8 -1.2**
RABC Rab 2.32 30 *e*Pn **Pn 06 20 49.7 +0.2**
SMRN Sveta Marina 2.40 17 *e*Pn **Pn 06 20 50.2 -0.3**
VLC Villacollemand 2.46 306 P **Pn 06 20 51.5 +0.1**
HVAR Hvar 2.46 79 *e*Pn **Pn 06 20 51.5 +0.1**
HVAR Hvar 2.46 79 P **Pn 06 20 51.8 +0.4**
VULT Monte Vulture 2.57 133 P **Pn 06 20 54.8 +1.8**
VULT AML AML
comp=N,740µm,0.6s
VULT AML AML
comp=E,428µm,0.5s
VULT AML AML
comp=E,480µm,0.5s
VULT AML AML
comp=N,674µm,0.6s
A253A Karojba, Istri 2.59 10 *e*Pn **Pn 06 20 52.6 -0.5**
UDBI Udbina 2.60 46 *e*Pn **Pn 06 20 54.4 +1.0**
A250A Rusevo Krmpots 2.66 28 *e*Pn **Pn 06 20 54.4 +0.2**
KIJV Kijevo 2.69 61 *e*Pn **Pn 06 20 55.4 +0.9**
RIY Rijeka 2.75 20 *e*Pn **Pn 06 20 55.4 +0.1**
LSTV Lastovo 2.76 88 *e*Pn **Pn 06 20 55.5 +0.1**
PLIT Pltvice 2.78 39 *e*Pn **Pn 06 20 56.6 +0.8**
SKDS Skadanscina 2.87 12 *e*Pn **Pn 06 20 56.4 -0.6**
MAKA Makarska 2.89 78 *e*Pn **Pn 06 20 57.9 +0.7**
RICI Ricice 3.01 74 *e*Pn **Pn 06 21 00.0 +1.1**
PGF Pioggiola 3.07 268 *e*P **Pn 06 21 01.0 +1.1**
PGF *e*Sn **Sn 06 21 37.3 +0.7**
comp=N,26nm,0.5s
BOJS Bojanci 3.14 28 *e*Pn **Pn 06 21 01.5 +0.7**
BOJS Bojanci 3.14 28 P **Pn 06 21 02.1 +1.4**
BOJS AML AML
comp=N,598µm,0.4s
BOJS AML AML
comp=E,880µm,1.4s
AMUR Altamura 3.17 124 P **Pn 06 21 02.4 +1.3**
AMUR AML AML
comp=E,188µm,1.3s
AMUR AML AML
comp=N,184µm,0.7s
SRKY Kupres RS 3.21 64 *e*Pn **Pn 06 21 02.4 +0.6**
SABO M.te Sabotino 3.25 6 P **Pn 06 21 02.3 +0.1**
SABO AML AML
comp=E,2105µm,0.7s
SABO AML AML
comp=N,2995µm,0.8s
SABO AML AML
comp=E,456µm,1.0s
SABO AML AML
comp=N,790µm,0.8s
ROVR Rover Verones 3.26 333 P **Pn 06 21 03.7 +1.2**
ROVR AML AML
comp=E,85µm,0.9s
ROVR AML AML
comp=N,148µm,0.9s
CGRP Cima Grappa 3.28 343 P **Pn 06 21 03.8 +1.0**
CGRP AML AML
comp=N,532µm,0.6s
CGRP AML AML
comp=E,424µm,0.6s
CGRP AML AML
comp=E,473µm,0.6s
CGRP AML AML
comp=N,523µm,0.4s
MGRS Mrkonjic Grad 3.31 58 *e*Pn **Pn 06 21 05.4 +2.3**
STON Ston 3.35 86 *e*Pn **Pn 06 21 02.6 -1.0**
STON Ston 3.35 86 *e*Pn **Pn 06 21 03.0 -0.6**
STON Ston 3.35 86 P **Pn 06 21 03.2 -0.3**
STON AML AML
comp=E,100µm,0.6s
STON AML AML
comp=N,142µm,0.6s
AJAC Base Areonaval 3.35 257 P **Pn 06 21 05.1 +1.4**
AJAC AML AML
comp=N,132µm,0.8s
AJAC AML AML
comp=E,120µm,0.4s
DOSS Dosso del Somm 3.43 336 P **Pn 06 21 06.3 +1.4**
DOSS AML AML
comp=E,286µm,0.5s
DOSS AML AML
comp=E,333µm,0.5s
DOSS AML AML
comp=N,333µm,0.5s
DOSS AML AML
comp=N,284µm,0.5s
SALO Salr 3.44 328 P **Pn 06 21 06.8 +2.0**
SALO AML AML
comp=N,334µm,0.9s
SALO AML AML
comp=E,372µm,0.6s
SALO AML AML
comp=E,353µm,0.7s
SALO AML AML
comp=N,358µm,0.9s
LJU Ljubljana 3.44 16 AML AML
comp=N,2400µm,0.6s
LJU AML AML
comp=E,1745µm,0.6s

LTRZ Laterza 3.48 127 P **Pn 06 21 06.8 +1.3**
CRES Cresnjev 3.49 28 *e*Pn **Pn 06 21 06.0 +0.4**
MPRI Monte Prat 3.49 358 P **Pn 06 21 06.2 +0.5**
MPRI AML AML
comp=E,398µm,0.9s
MPRI AML AML
comp=N,426µm,1.1s
NOCI Noci 3.52 122 P **Pn 06 21 07.1 +1.1**
NOCI AML AML
comp=N,223µm,1.1s
NOCI AML AML
comp=E,177µm,0.5s
STAL STALIGIAL 3.52 355 P **Pn 06 21 06.2 +0.2**
STAL AML AML
comp=E,376µm,0.5s
STAL AML AML
comp=N,320µm,0.6s
MAGA Magasa 3.53 330 P **Pn 06 21 07.2 +1.0**
MAGA AML AML
comp=N,421µm,0.4s
MAGA AML AML
comp=E,685µm,0.5s
BLY Banja Luka 3.54 54 *e*Pn **Pn 06 21 09.0 +2.8**
LUSI Trento, Gardas 3.58 335 P **Pn 06 21 08.2 +1.4**
LUSI AML AML
comp=E,186µm,0.8s
LUSI AML AML
comp=N,336µm,0.6s
CIMO Cimolais 3.60 352 AML AML
comp=E,109µm,0.7s
CIMO AML AML
comp=N,111µm,0.9s
CIMO AML AML
comp=N,114µm,0.9s
CIMO AML AML
comp=E,114µm,0.7s
AGOR Agordo 3.62 348 AML AML
comp=E,151µm,0.5s
AGOR AML AML
comp=N,110µm,1.2s
DBRK Dubrovnik 3.68 90 *e*Pn **Pn 06 21 08.2 0.0**
GAGG Gaggia 3.69 336 P **Pn 06 21 09.6 +1.3**
GAGG AML AML
comp=N,234µm,0.9s
GAGG AML AML
comp=E,290µm,1.1s
CLUD Cludinico 3.71 357 P **Pn 06 21 08.7 +0.1**
CLUD AML AML
comp=E,222µm,1.5s
CLUD AML AML
comp=N,215µm,1.0s
ACOM Acomizza, Ital 3.81 4 P **Pn 06 21 10.9 +0.9**
ACOM AML AML
comp=N,373µm,0.7s
ACOM AML AML
comp=N,357µm,0.7s
ACOM AML AML
comp=E,324µm,1.6s
ACOM AML AML
comp=E,306µm,1.6s
TREB Trebinje 3.83 89 *e*Pn **Pn 06 21 11.0 +0.8**
CANO Canova, Maglio 3.86 294 AML AML
comp=E,170µm,1.0s
CANO AML AML
comp=N,106µm,0.4s
MOSL Moslavina 3.86 41 *e*Pn **Pn 06 21 10.4 -0.3**
OBKA Obir 3.89 14 *e*Pn **Pn 06 21 11.8 +0.7**
OBKA Obir 3.89 14 *e*Pn **Pn 06 21 10.8 -0.3**
comp=N,3.7nm,0.2s
MYKA Terra Mystica 3.90 5 *e*Pn **Pn 06 21 10.7 -0.5**
comp=N,11nm,0.4s,SNR=10
KOSI Kohlern 3.92 342 P **Pn 06 21 13.1 +1.5**
KOSI AML AML
comp=N,272µm,0.6s
KOSI AML AML
comp=E,290µm,1.0s
HCY Herceg Novi 3.96 93 *e*Pn **Pn 06 21 12.4 +0.4**
HCY Herceg Novi 3.96 93⇑*i*Pn **Pn 06 21 12.7 +0.7**
HCY *i* Sn **Sn 06 21 58.2 -0.1**
HCY Herceg Novi 3.96 93⇓*i*Pn **Pn 06 21 13.0 +1.0**
HCY *i* Sn **Sn 06 22 00.8 +2.5**
BRY Bratogost 3.97 86 *e*Pn **Pn 06 21 13.4 +1.2**
BRY Bratogost 3.97 86⇑*i*Pn **Pn 06 21 13.5 +1.2**
BRY *i* Sn **Sn 06 21 58.6 -0.2**
BRY Bratogost 3.97 86⇓*i*Pn **Pn 06 21 13.3 +1.1**
BRY *i* Sn **Sn 06 22 00.4 +1.6**
APPI Appiano 3.97 340 P **Pn 06 21 14.1 +1.8**
ABTA Abfaltersbach 4.02 354 *e*Pn **Pn 06 21 14.1 +1.1**
comp=E,33nm,0.5s,SNR=32
SOKA Soboth 4.15 18 *e*Pn **Pn 06 21 15.2 +0.5**
comp=E,3.1nm,0.3s
UPM Unac-Piva 4.25 82 *e*Pn **Pn 06 21 18.3 +2.2**
UPM Unac-Piva 4.25 82⇓*i*Pn **Pn 06 21 18.3 +2.2**
UPM *i* Sn **Sn 06 22 06.6 +0.8**
UPM Unac-Piva 4.25 82⇑*i*Pn **Pn 06 21 17.9 +1.8**
UPM *i* Sn **Sn 06 22 08.2 +2.4**
CEME Cevo 4.26 91⇑*i*Pn **Pn 06 21 17.2 +1.0**
CEME *i* Sn **Sn 06 22 05.5 -0.4**
CEME Cevo 4.26 91⇓*i*Pn **Pn 06 21 17.6 +1.4**
CEME *i* Sn **Sn 06 22 08.2 +2.3**
RISI Rein 4.27 350 P **Pn 06 21 18.1 +1.7**
RISI AML AML
comp=N,575µm,0.4s
RISI AML AML
comp=E,418µm,0.4s
BUM Brajici-Budva 4.27 94⇑*i*Pn **Pn 06 21 17.4 +1.1**
BUM *i* Sn **Sn 06 22 05.1 -1.0**
BUM Brajici-Budva 4.27 94⇑*i*Pn **Pn 06 21 17.9 +1.6**
BUM *i* Sn **Sn 06 22 08.4 +2.3**
NKME Niksic 4.27 88⇑*i*Pn **Pn 06 21 18.1 +1.8**
NKME *i* Sn **Sn 06 22 06.1 -0.1**
NKME Niksic 4.27 88⇑*i*Pn **Pn 06 21 18.1 +1.8**
NKME *i* Sn **Sn 06 22 08.6 +2.4**
NKY Niksic 4.30 87⇓*i*Pn **Pn 06 21 18.5 +1.7**
NKY *i* Sn **Sn 06 22 06.9 -0.1**
NKY Niksic 4.30 87⇑*i*Pn **Pn 06 21 18.5 +1.7**
NKY *i* Sn **Sn 06 22 08.5 +1.5**
SBF Sospel 4.32 287 *e*P **Pn 06 21 18.0 +1.0**
SBF *e*Sn **Sn 06 22 01.3 -6.0**
comp=E,17nm,0.4s
VSL Villasalto 4.32 222 P **Pn 06 21 18.2 +1.2**
MUGIO Muggio 4.33 319 AML AML
comp=N,86µm,0.5s
MUGIO AML AML
comp=E,74µm,0.4s
KBA Koelnbreinsper 4.33 2 *e*Pn **Pn 06 21 18.3 +1.0**
comp=E,21nm,0.6s,SNR=16
ROSI Rosskopf 4.36 344 P **Pn 06 21 19.6 +2.0**
ROSI AML AML
comp=E,218µm,0.6s
ROSI AML AML
comp=N,295µm,1.1s
DRME Dracevica, Mon 4.50 95 *e*Pn **Pn 06 21 20.7 +1.3**
DRME Dracevica, Mon 4.50 95⇑*i*Pn **Pn 06 21 20.5 +1.1**
DRME *i* Sn **Sn 06 22 10.3 -1.4**
DRME Dracevica, Mon 4.50 95⇑*i*Pn **Pn 06 21 20.7 +1.3**
DRME *i* Sn **Sn 06 22 13.3 +1.6**
TTG Podgorica 4.52 92⇓*i*Pn **Pn 06 21 21.1 +1.4**
TTG *i* Sn **Sn 06 22 11.4 -0.8**
TTG Podgorica 4.52 92⇑*i*Pn **Pn 06 21 21.5 +1.8**
TTG *i* Sn **Sn 06 22 14.2 +2.0**
FETA Feichten 4.61 339 *e*Pn **Pn 06 21 23.2 +2.2**
comp=N,3.7nm,0.3s,SNR=10
RUDO Rudo 4.63 77 *e*Pn **Pn 06 21 21.0 -0.2**
WTTA Wattenberg 4.64 347 *e*Pn **Pn 06 21 23.8 +2.2**
comp=N,1.7nm,0.2s
DAVOX Davos/Dischmat 4.66 331 Pn **Pn 06 21 24.4 +2.7**
comp=N,4.4nm,0.3s,baz=152,slow=20,SNR=19
DAVOX Sn **Sn 06 22 18.7 +2.9**
comp=N,2.8nm,0.3s,baz=104,slow=22,SNR=4.6
comp=N,23nm,0.5s
SQTA Sankt Quirin 4.68 344 *e*Pn **Pn 06 21 24.5 +2.5**
comp=N,4.6nm,0.2s,SNR=14
KOME Kolasin 4.69 87⇓*i*Pn **Pn 06 21 23.8 +1.8**
KOME *i* Sn **Sn 06 22 16.0 -0.4**
KOME Kolasin 4.69 87⇑*i*Pn **Pn 06 21 24.1 +2.1**
KOME *i* Sn **Sn 06 22 18.2 +1.8**
WATA Walderalm 4.72 347 *e*Pn **Pn 06 21 24.3 +1.7**
comp=N,9.1nm,0.3s,SNR=11
ARSA Arzberg 4.80 20 *e*Pn **Pn 06 21 25.5 +1.8**
comp=N,7.5nm,0.4s
MOTA Moosalm 4.82 343 *e*Pn **Pn 06 21 26.1 +2.1**
comp=N,6.8nm,0.4s
KOVH Kovagotottos 4.87 45 P **Pn 06 21 28.2 +3.8**
KOVH S **Sn 06 22 16.8 -4.0**

LMR	**La Mourre**	**4.90**	**279**	*e*P		**Pn**	**06 21 25.4**	**+0.5**
BIOA	**Bad Ischl, Aus**	**4.96**	**4**	*e*Pn		**Pn**	**06 21 26.8**	**+1.1**
	comp=N,10nm,0.4s,SNR=10.0							
IVA	**Berane**	**4.96**	**86**	||*i*Pn		**Pn**	**06 21 27.7**	**+1.9**
IVA				*i* Sn			**Sn**	**06 22 22.9**	**-0.4**
IVA	**Berane**	**4.96**	**86**	||*i*Pn		**Pn**	**06 21 27.8**	**+1.9**
IVA				*i* Sn			**Sn**	**06 22 25.0**	**+1.7**
PVY	**Plav**	**5.02**	**89**	||*i*Pn		**Pn**	**06 21 28.2**	**+1.5**
PVY				*i* Sn			**Sn**	**06 22 23.9**	**-0.9**
PVY	**Plav**	**5.02**	**89**	||*i*Pn		**Pn**	**06 21 28.4**	**+1.7**
PVY				*i* Sn			**Sn**	**06 22 26.5**	**+1.7**
MBDF	**Montbardon**	**5.03**	**295**	*e*P		**Pn**	**06 21 28.6**	**+1.8**
MBDF				*e*Sn		**Sn**	**06 22 19.2**	**-5.7**
	comp=N,12nm,0.6s							
RETA	**Reutte**	**5.03**	**341**	*e*Pn		**Pn**	**06 21 29.5**	**+2.7**
	comp=N,4.9nm,0.4s							
DAVA	**Damuels**	**5.09**	**334**	*e*Pn		**Pn**	**06 21 30.2**	**+2.5**
	comp=N,10.0nm,0.4s,SNR=9.7							
DIVS	**Divibare**	**5.16**	**73**	*e*Pn		**Pn**	**06 21 28.5**	**-0.1**
MORH	**Mrgy, Hungar**	**5.24**	**47**	P		**Pn**	**06 21 33.0**	**+3.5**
LPG	**La Plagne**	**5.36**	**303**	*e*P		**Pn**	**06 21 32.4**	**+0.9**
LPG				*e*Sn		**Sn**	**06 22 28.3**	**-5.1**
	comp=N,13nm,0.5s							
FRGS	**Fruska Gora**	**5.38**	**61**	*e*Pn		**Pn**	**06 21 34.2**	**+2.7**
LPL	**La Plagne**	**5.38**	**303**	*e*P		**Pn**	**06 21 33.1**	**+1.3**
LPL				*e*Sn		**Sn**	**06 22 26.9**	**-6.9**
	comp=N,3.5nm,0.3s							
RONA	**Rosalia, Austr**	**5.43**	**23**	*e*Pn		**Pn**	**06 21 33.2**	**+1.0**
	comp=N,4.0nm,0.2s,SNR=5.7							
CONA	**Conrad Observa**	**5.52**	**19**	*e*Pn		**Pn**	**06 21 33.7**	**+0.2**
	comp=N,7.8nm,0.3s,SNR=10							
SMRF	**Simiane la Rot**	**5.66**	**285**	*e*P		**Pn**	**06 21 36.7**	**+1.3**
SMRF				*e*Sn		**Sn**	**06 22 33.2**	**-7.1**
	comp=N,2.6nm,0.4s							
ORIF	**Oris-en-Rattie**	**5.69**	**295**	*e*P		**Pn**	**06 21 37.3**	**+1.5**
ORIF				*e*Sn		**Sn**	**06 22 35.2**	**-6.0**
	comp=N,26nm,0.9s							
GERES	**GERESS Array B**	**6.11**	**3**	Pn		**Pn**	**06 21 42.0**	**+0.4**
	comp=N,0.6nm,0.3s,baz=184,slow=13,SNR=11							
GERES				Sn		**Sn**	**06 22 51.2**	**-0.3**
	comp=N,3.2nm,0.3s,baz=176,slow=24,SNR=8.8							
	comp=N,1.2nm,0.3s							
ZST	**Bratislava**	**6.11**	**26**	*e*PN		**Pn**	**06 21 44.9**	**+3.3**
CKRC	**Cesky Krumlov**	**6.13**	**7**	*e*PN		**Pn**	**06 21 43.3**	**+1.5**
CKRC				*e*SN		**Sn**	**06 22 47.9**	**-3.9**
MODS	**Modra-Piesok**	**6.33**	**26**	*e*PN		Pn	06 21 49.4	+4.9
MODS				*e*SN		**Sn**	**06 22 56.2**	**-0.5**
CABF	**La Chapelle**	**6.34**	**310**	*e*P		**Pn**	**06 21 46.4**	**+1.6**
CABF				*e*Sn		**Sn**	**06 22 54.3**	**-3.0**
	comp=N,2.3nm,0.3s							
KHC	**Kasperske Hory**	**6.39**	**3**	*e*PN		**Pn**	**06 21 46.7**	**+1.3**
KHC				*e*SN		**Sn**	**06 22 54.6**	**-3.7**
VIVF	**Saint-Julien-l**	**6.49**	**292**	*e*P		**Pn**	**06 21 48.6**	**+1.9**
VIVF				*e*Sn		**Sn**	**06 22 53.3**	**-7.4**
	comp=N,1.5nm,0.3s							
KRUC	**Moravsky**	**6.71**	**19**	*e*PN		**Pn**	**06 21 48.8**	**-0.9**
HINF	**Hinteralfeld**	**6.74**	**321**	*e*P		**Pn**	**06 21 50.9**	**+0.7**
HINF				*e*Sn		**Sn**	**06 23 00.0**	**-6.9**
	comp=N,12nm,0.4s							
LASF	**Ste Croix**	**6.90**	**284**	*e*P		**Pn**	**06 21 54.0**	**+1.6**
LASF				*e*Sn		Sn	06 23 00.5	-10
	comp=N,1.1nm,0.3s							
CDF	**Champ du Feu**	**7.00**	**326**	*e*P		**Pn**	**06 21 54.8**	**+0.9**
CDF				*e*Sn		**Sn**	**06 23 06.6**	**-6.9**
	comp=N,11nm,0.6s							
HAU	**Haudompre**	**7.11**	**320**	*e*P		**Pn**	**06 21 55.6**	**+0.3**
HAU				*e*Sn		**Sn**	**06 23 10.6**	**-5.4**
	comp=N,8.9nm,0.2s							
PRU	**Pruhonice**	**7.30**	**7**	*e*SN		**Sn**	**06 23 17.3**	**-3.5**
KEST	**Kesra**	**7.60**	**204**	Pn		Pn	06 22 08.0	+5.8
	comp=N,0.9nm,0.3s,baz=347,slow=4.5,SNR=8.7							
	comp=N,2.7nm,0.5s							
SMF	**Signal de Mont**	**7.69**	**304**	*e*P		**Pn**	**06 22 04.1**	**+0.9**
SMF				*e*Sn		**Sn**	**06 23 22.9**	**-7.4**
	comp=N,6.0nm,0.4s							
PAGF	**Fort de Pagny**	**7.79**	**321**	*e*P		**Pn**	**06 22 07.8**	**+3.2**
	baz=139							
PAGF	**Fort de Pagny**	**7.79**	**321**	*e*Pg		Pb	06 22 32.2	+5.8
PAGF				*e*Sn		**Sn**	**06 23 27.4**	**-5.4**
	comp=N,17nm,0.6s							
LOR	**Lormes**	**7.98**	**308**	*e*P		**Pn**	**06 22 08.6**	**+1.4**
	baz=126							
LOR				*e*Sn		**Sn**	**06 23 30.0**	**-7.5**
	comp=N,2.1nm,0.2s							
MTLF	**Montolieu**	**8.03**	**278**	*e*P		**Pn**	**06 22 09.2**	**+1.3**
MTLF	**Montolieu**	**8.03**	**278**	*e*Pg		Pb	06 22 36.5	+6.1
MTLF				*e*Sn		**Sn**	**06 23 31.2**	**-7.5**
	comp=N,1.9nm,0.4s							
AVF	**Avril sur Loir**	**8.06**	**303**	*e*Pn		**Pn**	**06 22 05.9**	**-2.3**
AVF	**Avril sur Loir**	**8.06**	**303**	*e*Pg		**Pb**	**06 22 35.3**	**+4.5**
AVF				*e*Sn		**Sn**	**06 23 32.0**	**-7.3**
	comp=N,0.7nm,0.2s							
SSF	**Saint Saulge**	**8.09**	**306**	*e*P		**Pn**	**06 22 10.5**	**+1.8**
BRG	**Berggiesshubel**	**8.15**	**4**	*ex*		x	06 23 33.0	
BRG				Amp			06 23 37.1	
	comp=Z,3.0nm,0.6s							
BRG				*ex*		x	06 24 36.4	
BRG				Amp			06 24 56.9	
	comp=Z,8.4nm,0.9s							
BGF	**Bois d'Agland**	**8.27**	**301**	*e*Pn		**Pn**	**06 22 07.8**	**-3.4**
BGF	**Bois d'Agland**	**8.27**	**301**	*e*Pg		Pg	06 22 42.9	-6.7
CAF	**Calviac**	**8.30**	**289**	*e*P		**Pn**	**06 22 13.9**	**+2.2**
CAF				*e*Sn		**Sn**	**06 23 38.5**	**-7.0**
	comp=Z,0.5nm,0.2s							
CLL	**Collm**	**8.56**	**359**	*ex*		x	06 22 21.0	
CLL				*ex*		x	06 23 20.0	
CLL				*e*Sn		Sn	06 23 31.0	-21
CLL				*ex*		x	06 24 11.0	
CLL				*e*Sg		**Sg**	**06 24 40.0**	**-5.9**
	comp=Z,16nm,1.3s							
TCF	**Toulx Ste Croi**	**8.58**	**298**	*e*P		**Pn**	**06 22 17.3**	**+1.9**
RJF	**Les Rejaudoux**	**8.76**	**291**	*e*P		**Pn**	**06 22 20.2**	**+2.3**
EKA	**Eskdalemuir Ar**	**16.46**	**326**	Pn		**P**	**06 24 07.1**	**+2.3**
	baz=135,slow=14							
	comp=Z,0.3nm,0.4s							
NOA	**NORSAR Array B**	**18.36**	**357**	P		**P**	**06 24 28.0**	**+2.3**
	baz=172,slow=12,SNR=2.5							
	comp=Z,0.4nm,0.7s							
FINES	**FINESS Array B**	**20.27**	**18**	P		**P**	**06 24 47.4**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=217,slow=13,SNR=2.0							
	comp=Z,2.3nm,0.8s							
KBZ	**Khabaz**	**21.64**	**77**	P		**P**	**06 25 03.5**	**+1.9**
	comp=Z,5.0nm,1.0s,baz=328,slow=7.2,SNR=4.9							
	comp=Z,5.0nm,1.0s							
ARU	**Arti**	**31.83**	**49**	P		**P**	**06 26 36.2**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=253,slow=10,SNR=4.8							
	comp=Z,1.9nm,0.3s							
MKAR	**Makanchi Array**	**47.81**	**60**	P		**P**	**06 28 49.7**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=297,slow=5.3,SNR=6.8							
	comp=Z,0.7nm,0.7s							

IDC 29 06:27:28.6±10.0, 9°64N×104°10W, h0km, mb3.4/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=249.4km s-min=99.5km az=124.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**19.59**	**1**	P	P	06 31 58.4	-0.1
	baz=174,slow=12,SNR=14						
	1.8nm,1.0s						
ANMO	**Albuquerque**	**25.28**	**355**	P	P	06 32 56.6	-0.3
	0.6nm,0.7s,baz=197,slow=8.7,SNR=4.2						
	0.6nm,0.7s						
NVAR	**Mina Array Bea**	**31.37**	**338**	P	P	06 33 51.5	+0.1
	0.2nm,0.6s,baz=178,slow=4.5,SNR=2.6						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**33.34**	**353**	P	P	06 34 09.1	+0.5
	0.3nm,0.8s,baz=163,slow=7.7,SNR=5.2						
	0.3nm,0.8s						
H03N2	**Juan Fernandez**	**49.09**	**152**	T	T	07 29 39.7	
	baz=329,slow=77,SNR=15						
H03N1	**Juan Fernandez**	**49.10**	**152**	T	T	07 29 39.6	
	baz=329,slow=77,SNR=23						
H03N3	**Juan Fernandez**	**49.10**	**152**	T	T	07 29 38.9	
	baz=329,slow=77,SNR=20						
ILAR	**Eielson Array**	**62.58**	**341**	P	P	06 37 54.1	-0.1
	0.7nm,0.8s,baz=153,slow=6.1,SNR=7.4						
	0.7nm,0.8s						

IDC 29 06:35:04.7±5.8, 0°23N×17°83W, h0km, mb3.8/1, mbtmp4.1/2, ML4.3/1, Error ellipse: s-maj=299.7km s-min=45.5km az=134.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.67**	**157**	T	T	06 45 41.9	
	baz=339,slow=74,SNR=7.5						
H10N3	**ASCENSION HYDR**	**8.68**	**158**	T	T	06 45 41.9	
	baz=339,slow=74,SNR=6.7						
H10N1	**ASCENSION HYDR**	**8.69**	**157**	T	T	06 45 41.9	
	baz=339,slow=74,SNR=10						
H10S3	**ASCENSION HYDR**	**9.66**	**161**	T	T	06 46 53.5	
	baz=341,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**9.67**	**161**	T	T	06 46 53.5	
	baz=239,slow=74,SNR=11						
DBIC	**Dimbokro**	**14.44**	**63**	Pn	Pn	06 38 29.6	-0.9
	1.3nm,0.3s,baz=261,slow=15,SNR=19						
DBIC				Sn	Sn	06 40 58.5	-13
	0.6nm,0.3s,baz=175,slow=15,SNR=3.6						
	3.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**23.22**	**56**	P	P	06 40 13.9	+0.3
	3.3nm,0.9s,baz=242,slow=10,SNR=9.5						
	3.3nm,0.9s						
ASAR	**Alice Springs**	**144.01**	**132**	PKP	PKPbc	06 54 41.6	+0.5
	0.5nm,0.9s,baz=241,slow=1.0,SNR=2.4						
WRA	**Warramunga Arr**	**146.44**	**127**	PKPbc	PKPbc	06 54 48.2	-0.5
	0.3nm,0.6s,baz=235,slow=3.0,SNR=7.3						

IDC 29 06:38:44.1±35.0, 0°71S×17°52W, h0km, mb4.4/2, mbtmp4.4/3, ML4.0/1, Error ellipse: s-maj=799.8km s-min=86.7km az=1.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.69**	**157**	T	T	06 49 01.5	
	baz=338,slow=74,SNR=3.9						
H10N3	**ASCENSION HYDR**	**7.69**	**157**	T	T	06 49 01.5	
	baz=338,slow=74,SNR=7.3						
H10N1	**ASCENSION HYDR**	**7.71**	**157**	T	T	06 49 02.6	
	baz=338,slow=74,SNR=3.4						
H10S3	**ASCENSION HYDR**	**8.66**	**161**	T	T	06 50 18.1	
	baz=342,slow=74,SNR=5.6						
H10S2	**ASCENSION HYDR**	**8.68**	**161**	T	T	06 50 18.1	
	baz=238,slow=74,SNR=5.8						
DBIC	**Dimbokro**	**14.61**	**60**	Pn	Pn	06 42 12.2	-0.1
	0.7nm,0.3s,baz=255,slow=16,SNR=3.5						
DBIC				Sn	Sn	06 44 39.4	-16
	0.5nm,0.3s,baz=170,slow=18,SNR=3.8						
	2.6nm,0.3s						
TORD	**Torodi Ar. Bea**	**23.51**	**53**	P	P	06 43 56.0	0.0
	30nm,0.3s,baz=242,slow=9.4,SNR=2.2						
	30nm,0.3s						
GERES	**GERESS Array B**	**56.25**	**24**	P	P	06 48 26.2	-0.1
	0.3nm,0.5s,baz=190,slow=6.8,SNR=3.5						
	0.3nm,0.5s						

IDC 29 07:18:00.6±0.9, 26°72N×142°27E, h0km, mb4.1/15, mbtmp4.1/16, ML3.1/1, Error ellipse: s-maj=32.1km s-min=11.1km az=88.0

ISC 29 07:18:05.2±1.0, 26°70N±0°09×142°3E±0°2, h31km, n20, σ0s62/18, mb4.1/15, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.41**	**345**	Pn	**Pb**	**07 18 13.8**	**-0.5**
	802nm,0.3s,baz=252,slow=6.3,SNR=32						
JCJ				Sn	**Sb**	**07 18 20.4**	**-0.1**
	2µm,0.3s,baz=285,slow=22,SNR=22						
MJAR	**Matsushiro Arr**	**10.41**	**341**	Pn	**Pn**	**07 20 32.6**	**+0.2**
	0.2nm,0.3s,baz=160,slow=12,SNR=4.5						
	1.7nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**23.91**	**105**	T	T	07 47 55.3	
	baz=294,slow=75,SNR=2.9						
H11S1	**WAKE ISLAND Hy**	**23.92**	**105**	T	T	07 47 57.7	
	baz=294,slow=75,SNR=3.5						
H11S2	**WAKE ISLAND Hy**	**23.93**	**105**	T	T	07 48 00.5	
	baz=294,slow=75,SNR=3.5						
KLR	**Kul'dur**	**23.94**	**343**	P	**P**	**07 23 17.7**	**+1.3**
	3.2nm,0.5s,baz=149,slow=7.0,SNR=8.9						
	3.2nm,0.5s						
WRA	**Warramunga Arr**	**47.00**	**190**	P	**P**	**07 26 33.3**	**-0.4**
	4.3nm,0.4s,baz=11,slow=8.7,SNR=86						
	4.3nm,0.4s						
PSI	**Prapat**	**47.85**	**248**	P	**P**	**07 26 40.9**	**+0.4**
	2.8nm,0.5s,baz=22,slow=11,SNR=4.4						
	2.8nm,0.5s						
ZALV	**Zalesovo Beam**	**49.86**	**319**	P	**P**	**07 26 56.1**	**+0.8**
	0.7nm,0.4s,baz=108,slow=9.4,SNR=2.1						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**50.72**	**190**	P	**P**	**07 27 02.2**	**0.0**
	0.4nm,0.6s,baz=20,slow=10,SNR=6.8						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**50.81**	**310**	P	**P**	**07 27 02.2**	**-0.5**
	0.2nm,0.4s,baz=91,slow=9.6,SNR=5.1						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**58.01**	**29**	P	**P**	**07 27 54.7**	**0.0**
	0.6nm,0.9s,baz=252,slow=6.6,SNR=5.1						
	0.6nm,0.9s						
BVAR	**Borovoe Array**	**58.41**	**318**	P	**P**	**07 27 57.0**	**-0.7**
	1.2nm,0.7s,baz=72,slow=10.0,SNR=5.8						
	1.2nm,0.7s						
INK	**Inuvik**	**63.34**	**24**	P	**P**	**07 28 31.0**	**+0.1**
	0.6nm,0.5s,baz=359,slow=5.4,SNR=4.4						
	0.6nm,0.5s						
ARU	**Arti**	**64.80**	**322**	P	**P**	**07 28 40.4**	**-0.4**
	1.5nm,0.3s,baz=120,slow=20,SNR=3.5						
	1.5nm,0.3s						
ARCES	**ARCESS Array B**	**73.95**	**341**	P	**P**	**07 29 37.8**	**+0.7**
	2.6nm,0.7s,baz=71,slow=8.2,SNR=6.4						
	2.6nm,0.7s						
FINES	**FINESS Array B**	**78.35**	**334**	P	**P**	**07 30 02.7**	**+0.5**
	2.5nm,0.4s,baz=76,slow=4.9,SNR=24						
	2.5nm,0.4s						
KBZ	**Khabaz**	**78.36**	**313**	P	**P**	**07 30 02.9**	**+0.4**
	1.1nm,0.3s,baz=207,slow=2.3,SNR=4.3						
	1.1nm,0.3s						
AKASG	**Malin Array Be**	**83.00**	**324**	P	**P**	**07 30 26.4**	**-0.9**
	0.3nm,0.3s,baz=51,slow=5.4,SNR=5.4						
	0.3nm,0.3s						
NOA	**NORSAR Array B**	**84.02**	**338**	P	**P**	**07 30 31.9**	**-0.5**
	0.9nm,0.6s,baz=45,slow=5.0,SNR=3.6						
	0.9nm,0.6s						

IDC 29 07:21:29.4±8.9, 0°24S×16°98W, h0km, mb3.4/1, mbtmp3.8/2, ML3.9/1, Error ellipse: s-maj=396.1km s-min=53.7km az=130.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.94**	**162**	T	T	07 31 57.1	
	baz=337,slow=74,SNR=28						
H10N3	**ASCENSION HYDR**	**7.94**	**162**	T	T	07 31 59.0	
	baz=337,slow=74,SNR=30						
H10N1	**ASCENSION HYDR**	**7.95**	**162**	T	T	07 31 59.6	
	baz=337,SNR=39						
H10S3	**ASCENSION HYDR**	**8.96**	**165**	T	T	07 33 17.9	
	baz=342,slow=74,SNR=18						
H10S2	**ASCENSION HYDR**	**8.97**	**165**	T	T	07 33 20.6	
	baz=238,slow=74,SNR=6.4						
DBIC	**Dimbokro**	**13.91**	**60**	Pn	Pn	07 24 47.9	-0.1
	0.6nm,0.3s,baz=248,slow=14,SNR=7.8						
DBIC				Sn	Sn	07 27 15.1	-8.3
	0.3nm,0.3s,baz=270,slow=13,SNR=5.0						
	1.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**22.80**	**54**	P	P	07 26 34.0	+0.1
	1.1nm,0.8s,baz=236,slow=10,SNR=2.1						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**145.48**	**127**	PKPbc	PKPbc	07 41 09.7	-0.9
	0.4nm,0.7s,baz=246,slow=3.3,SNR=2.2						

IDC 29 07:27:38.4±3.3, 4°65S×133°39E, h0km, mb3.3/1, mbtmp3.2/4, ML3.2/3, Error ellipse: s-maj=134.6km s-min=32.3km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.23**	**177**	Pn	Pn	07 31 15.2	+0.3
	0.1nm,0.3s,baz=358,slow=13,SNR=6.9						
WRA				Sn	Sn	07 33 59.8	-4.7
	0.1nm,0.3s,baz=359,slow=23,SNR=6.5						
	0.1nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.37**	**209**	Pn	Pn	07 31 16.9	+0.2
	0.2nm,0.3s,baz=37,slow=15,SNR=1.6						
FITZ				Sn	Sn	07 33 58.3	-9.5
	0.2nm,0.3s,baz=28,slow=19,SNR=1.8						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**18.92**	**179**	P	P	07 32 00.8	-0.1
	baz=354,slow=13,SNR=2.0						
	0.2nm,0.4s						

MKAR	**Makanchi Array**	**68.18**	**325**	P		P	07 38 40.6	0.0
	0.2nm,0.6s,baz=116,slow=9.8,SNR=2.4							
	0.2nm,0.6s							

ATH 29 07:52:22.7, 35°82N×28°51E, h28km±8km, ML3.1/4, Error ellipse: s-maj=8.4km s-min=2.0km az=342.0
ISK 29 07:52:24.4, 35°82N×28°33E, h19km, ML3.2/12
DDA 29 07:52:24.7±0.0, 35°81N×28°17E, h19km±1km, ML2.9
NIC 29 07:52:24.8±0.0, 35°80N×28°22E, h13km±5km, Ml3.4/4
THE 29 07:52:26.2, 35°87N×28°22E, h0km±1km, ML2.9/4, Error ellipse: s-maj=4.3km s-min=1.2km az=117.0

ISC 29 07:52:25.2±1.1, 35°83N±0°02×28°24E±0°02, h7km±9km, n64, σ0s79/100, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.40**	**347**	P	**Pg**	**07 52 33.1**	**+0.1**
ARG				S	**Sb**	**07 52 39.7**	**-1.2**
	2µm,0.2s						
ARG	**Arkhangelos**	**0.40**	**347**	PG	**Pg**	**07 52 32.8**	**-0.2**
ARG				SG	**Sb**	**07 52 40.2**	**-0.7**
ARG	**Arkhangelos**	**0.40**	**347**	P	**Pg**	**07 52 33.0**	**+0.1**
ARG				S	**Sb**	**07 52 40.4**	**-0.5**
ARG	**Arkhangelos**	**0.40**	**347**	P	**Pg**	**07 52 33.1**	**+0.1**
ARG				AML	AML	07 52 39.9	
	comp=N,3232µm,0.7s						
ARG				S	**S**	**07 52 39.9**	**+1.7**
ARG				AML	AML	07 52 43.6	
	comp=E,5484µm,0.3s						
KARP	**Karpathos**	**0.92**	**253**	P	**Pg**	**07 52 42.2**	**-0.7**
KARP				S	**Sn**	**07 52 58.3**	**+0.3**
	comp=E,1µm,0.6s						
KARP	**Karpathos**	**0.92**	**253**	PG	**Pg**	**07 52 43.2**	**+0.3**
KARP	**Karpathos**	**0.92**	**253**	P	**Pg**	**07 52 42.2**	**-0.7**
KARP				S	**Sg**	**07 52 54.9**	**+0.1**
KARP				AML	AML	07 53 02.9	
	comp=E,2.4nm,0.4s						
KARP				AML	AML	07 53 02.9	
	comp=E,2.4nm,0.4s						
KARP				AML	AML	07 53 05.7	
	comp=E,1.6nm,0.5s						
KARP				AML	AML	07 53 05.7	
	comp=E,1.6nm,0.5s						
KARP	**Karpathos**	**0.92**	**253**	P	**Pg**	**07 52 42.5**	**-0.3**
KARP				S	**Sn**	**07 52 58.6**	**+0.5**
KARP				AML	AML	07 53 03.5	
	comp=N,2452µm,0.7s						
KARP				AML	AML	07 53 06.0	
	comp=E,1589µm,0.5s						
TURN	**Turunc**	**0.95**	**0**	PG	**Pg**	**07 52 43.1**	**-0.3**
TURN				SG	**Sb**	**07 52 56.9**	**+0.3**
TURN	**Turunc**	**0.95**	**0**	P	**Pg**	**07 52 42.9**	**-0.4**
TURN				S	**Sb**	**07 52 56.5**	**-0.2**
DALY	**Dalyan (Mula)**	**1.04**	**18**	PG	**Pg**	**07 52 44.4**	**-0.8**
DAT	**Datca**	**1.05**	**329**	PN	**Pb**	**07 52 45.2**	**-0.5**
NIS1	**Nisyros Isl.**	**1.16**	**312**	P	**Pb**	**07 52 47.1**	**-0.4**
NIS1				S	**Sn**	**07 53 05.2**	**+1.4**
NIS1	**Nisyros Isl.**	**1.16**	**312**	P	**Pb**	**07 52 47.1**	**-0.4**
NIS1				S	**Sn**	**07 53 04.8**	**+1.0**
NIS1				AML	AML	07 53 09.7	
	comp=E,2508µm,0.5s						
NIS1				AML	AML	07 53 10.8	
	comp=N,3721µm,0.5s						
AKAS	**Kas**	**1.18**	**69**	P	**Pg**	**07 52 47.1**	**-0.7**
AKAS				S	**Sn**	**07 53 06.2**	**+1.7**
AKAS				*i* AML	AML	07 53 08.0	
	comp=N,144nm,0.4s						
AKAS				*i* AML	AML	07 53 14.0	
	comp=N,179nm,0.4s						
YER	**Yerkesik**	**1.31**	**1**	P	**Pn**	**07 52 50.0**	**+0.1**
YER				S	**Sn**	**07 53 08.5**	**+0.9**
YER	**Yerkesik**	**1.31**	**1**	PN	**Pg**	**07 52 48.9**	**-1.3**
KOSK	**Kos Island**	**1.38**	**313**	PN	**Pn**	**07 52 50.7**	**0.0**
BDRM	**Kayabasi**	**1.39**	**333**	P	**Pn**	**07 52 51.0**	**0.0**
BDRM				S	**Sn**	**07 53 09.8**	**+0.1**
BDRM				*i* AML	AML	07 53 11.0	
	comp=N,208nm,0.4s						
MULA	**Mugla, Merkez-**	**1.43**	**3**	P	**Pn**	**07 52 51.8**	**+0.2**
MULA				S	**Sn**	**07 53 12.5**	**+1.8**
BODT	**Bodrum**	**1.44**	**329**	P	**Pn**	**07 52 50.8**	**-0.9**
BODT				S	**Sn**	**07 53 10.9**	**0.0**
BODT	**Bodrum**	**1.44**	**329**	PN	**Pn**	**07 52 50.9**	**-0.8**
CAEL	**Denizli, Camel**	**1.56**	**34**	P	**Pn**	**07 52 53.5**	**+0.1**
CAEL				S	**Sg**	**07 53 16.4**	**+1.1**
CAEL				*i* AML	AML	07 53 33.0	
	comp=N,150nm,0.7s						
TAVA	**DENIZLI_Tavas**	**1.72**	**18**	P	**Pb**	**07 52 56.7**	**-0.5**
TAVA				S	**Sg**	**07 53 20.3**	**-0.3**
GOLH	**Golhisar**	**1.76**	**37**	P	**Pb**	**07 52 58.0**	**+0.1**
GOLH				S	**Sg**	**07 53 22.8**	**+0.9**
AKUM	**Antalya-Kumluc**	**1.77**	**73**	P	**Pn**	**07 52 56.3**	**+0.1**
AKUM				S	**Sn**	**07 53 19.6**	**+0.6**
ZKR	**Zakros**	**1.80**	**247**	P	**Pn**	**07 52 57.7**	**+1.1**
ZKR				S	**Sb**	**07 53 21.6**	**+0.5**
	comp=N,168nm,1.0s		

comp=N,0.2nm,0.7s
ANKY Antikythira Is 4.01 272 P **Pn** **07 53 28.0 +1.0**
KTHA Kythira Island 4.22 277 P **Pn** **07 53 30.6 +0.7**
KTHA S **Sn** **07 54 19.5 +0.1**
KTHA Kythira Island 4.22 277 PN **Pn** **07 53 30.8 +0.9**
ASGA Asgata 4.22 103 P **Pn** **07 53 29.5 -0.4**
CSS Mathiatis 4.25 100 P **Pn** **07 53 29.8 -0.5**
OSC2 CSNet OBS 4 4.31 128 P **Pn** **07 53 30.2 -0.9**
VLI Veliai 4.38 283 P **Pn** **07 53 32.8 +0.8**
VLI S **Sn** **07 54 22.3 -0.9**
MVOU Mavrovouni 4.48 99 P **Pn** **07 53 32.6 -0.8**

*IDC **29** 08:20:35.8±0.5,0.08S×18.09W,h0km,mb4.6/25, mbtmp4.6/27,ML5.4/3,MS4.3/58,Error ellipse: s-maj=14.5km s-min=11.0km az=139.0*
*MOS **29** 08:20:35.2±1.2,0.02S×18.09W,h11km,mb5.1/41,Error ellipse: s-maj=9.8km s-min=6.3km az=56.5*
*NEIC **29** 08:20:36.6±1.7,0.12S±0.08×17.97W±0.09,h10km±1km, mb5.0/237,Error ellipse: s-maj=15.4km s-min=13.9km az=84.0*
ISC 29 08:20:36.5±0.3,0.03S±0.06×18.01W±0.05,h10km,n591, σ1§40/525,mb5.0/182,MS4.3/55,22C-18D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.50**	**156**	Pn	**Pn**	**08 22 39.5**	**0.0**
	baz=334,slow=12						
H10N2				T	T	08 31 39.2	
	baz=341,slow=74						
H10N3	**ASCENSION HYDR**	**8.51**	**156**	Pn	**Pn**	**08 22 39.8**	**+0.2**
	baz=334,slow=12						
H10N3				T	T	08 31 39.8	
	baz=341,slow=74						
H10N1	**ASCENSION HYDR**	**8.52**	**156**	Pn	**Pn**	**08 22 40.0**	**+0.2**
	baz=334,slow=12						
H10N1				T	T	08 31 43.2	
	baz=341,slow=74						
ASCN	**Ascension**	**8.65**	**155**	Pn	**Pn**	**08 22 41.2**	**-0.7**
H10S3	**ASCENSION HYDR**	**9.47**	**160**	Pn	**Pn**	**08 22 55.2**	**+2.3**
	baz=336,slow=74						
H10S3				T	T	08 32 55.7	
	baz=322,slow=74,SNR=93						
H10S2	**ASCENSION HYDR**	**9.48**	**159**	Pn	**Pn**	**08 22 55.3**	**+2.3**
	baz=244,slow=74						
H10S2				T	T	08 33 03.4	
	baz=258,slow=74,SNR=72						
MBO	**M'Bour**	**14.37**	**4**	Pn	**Pn**	**08 24 00.6**	**+0.4**
BBTS	**Babate**	**14.67**	**6**	Pn	**Pn**	**08 24 04.0**	**-0.3**
	17nm,0.3s,baz=164,slow=15,SNR=13						
BBTS				Sn	Sn	08 26 33.6	-13
	13nm,0.3s,baz=308,slow=23,SNR=11						
BBTS				LR	LR	08 29 14.9	
	comp=Z,2μm,18.6s,baz=221,slow=35						
DBIC	**Dimbokro**	**14.71**	**63**	Pn	**Pn**	**08 24 04.8**	**-0.1**
	26nm,0.3s,baz=260,slow=15,SNR=163						
DBIC				Sn	Sn	08 26 39.3	-8.8
	4.6nm,0.3s,baz=179,slow=14,SNR=4.3						
DBIC				LR	LR	08 27 56.6	
	comp=Z,1μm,20.2s,baz=241,slow=30						
	52nm,0.3s						
DBIC	**Dimbokro**	**14.71**	**63**	Pn	**Pn**	**08 24 04.2**	**-0.7**
SACV	**Santiago Islan**	**15.90**	**340**	Pn	**Pn**	**08 24 21.2**	**+0.6**
RCBR	**Riachuelo**	**18.77**	**252**	P	**P**	**08 24 53.8**	**-2.3**
	6.3nm,0.3s,baz=231,slow=14,SNR=34						
RCBR				S	Sn	08 28 07.4	-19
	13nm,1.0s,baz=312,slow=23,SNR=7.0						
RCBR				LR	LR	08 30 09.0	
	comp=Z,575nm,20.0s,baz=222,slow=31						
	16nm,0.4s						
RCBR	**Riachuelo**	**18.77**	**252**	P	**P**	**08 24 54.7**	**-1.4**
RCBR	**Riachuelo**	**18.77**	**252**	P	**P**	**08 24 54.7**	**-1.4**
RCBR				pmax	pmax		
	comp=Z,17nm,0.4s						
RCBR	**Riachuelo**	**18.77**	**252**	*e*P	**P**	**08 24 55.5**	**-0.6**
NBRF	**Rio Formoso -**	**19.10**	**243**	*e*P	**P**	**08 24 59.3**	**-0.4**
KOWA	**Kowa**	**20.00**	**43**	P	**P**	**08 25 10.8**	**+1.3**
	comp=Z,65nm,0.8s,baz=225,slow=8.8,SNR=51						
KOWA				LR	LR	08 32 27.8	
	comp=Z,2μm,18.8s,baz=232,slow=35						
	comp=Z,65nm,0.8s						
KOWA	**Kowa**	**20.00**	**43**	P	**P**	**08 25 10.6**	**+1.2**
KOWA				IAmb	IAmb	08 25 16.0	
	comp=Z,89nm,1.0s						
NBAN	**Anadia - AL**	**20.55**	**242**	*e*P	**P**	**08 25 16.4**	**+0.9**
NBLA	**Lagarto - SE**	**22.48**	**240**	*e*P	**P**	**08 25 37.1**	**+0.8**
TOA0	**Torodi Ar. Sit**	**23.51**	**55**	P	**P**	**08 25 46.8**	**-0.2**
TOA0				IAmb	IAmb	08 25 50.3	
	comp=Z,76nm,1.1s						
TORD	**Torodi Ar. Bea**	**23.51**	**55**	P	**P**	**08 25 47.3**	**+0.3**
	comp=Z,38nm,0.3s,baz=239,slow=9.0,SNR=4.3						
TORD				LR	LR	08 33 53.6	
	comp=Z,1μm,20.9s,baz=215,slow=34						
	comp=Z,38nm,0.3s						
GDU01	**Guandu, BA**	**25.32**	**237**	*e*P	**P**	**08 26 04.5**	**+0.7**
CMC01	**Camacan, BA**	**26.15**	**233**	*e*P	**P**	**08 26 11.9**	**+0.7**
ROSB	**Rosrio**	**26.26**	**264**	*e*P	**P**	**08 26 11.8**	**-0.5**
GUA01	**Guaratinga, BA**	**27.07**	**232**	*e*P	**P**	**08 26 20.5**	**+1.0**
NAN01	**Guarapari, ES**	**28.05**	**230**	*e*P	**P**	**08 26 29.4**	**+1.1**
RIB01	**Linhares ES**	**29.14**	**228**	*e*P	**P**	**08 26 38.9**	**+0.8**
SJMB	**Sao Joao De Ma**	**29.37**	**230**	*e*P	**P**	**08 26 40.1**	**+0.1**
SDBA	**SAO DESIDERIO**	**29.38**	**244**	*e*P	**P**	**08 26 40.6**	**+0.3**
JANB	**Januaria**	**29.98**	**239**	*e*P	**P**	**08 26 45.2**	**-0.4**
TMAB	**Tom-Au,PA,Br**	**30.17**	**265**	*e*P	**P**	**08 26 47.1**	**-0.1**
MC01	**Montes Claros**	**30.46**	**236**	*e*P	**P**	**08 26 49.8**	**-0.1**
DIAM	**Diamantina, MG**	**31.08**	**233**	*e*P	**P**	**08 26 55.8**	**+0.5**
PRPB	**Parauapebas**	**32.33**	**259**	*e*P	**P**	**08 27 08.6**	**+2.3**
PMOZ	**Porto Moniz, M**	**32.69**	**1**	*e*LQ	LQ	08 34 09.8	
PMNB	**Patos De Minas**	**33.44**	**235**	*e*P	**P**	**08 27 16.7**	**+0.7**
BDFB	**Brasilia**	**33.44**	**241**	P	**P**	**08 27 14.5**	**-1.6**
	comp=Z,6.0nm,0.8s,baz=48,slow=5.5,SNR=8.0						
BDFB				LR	LR	08 39 12.3	
	comp=Z,644nm,19.7s,baz=105,slow=34						
	comp=Z,6.0nm,0.8s						
BDFB	**Brasilia**	**33.44**	**241**	P	**P**	**08 27 14.5**	**-1.6**
BDFB				IAmb	IAmb	08 27 20.9	
	comp=Z,16nm,1.0s						
BDFB	**Brasilia**	**33.44**	**241**	*e*P	**P**	**08 27 16.6**	**+0.5**
MAN01	**Angra dos Reis**	**33.95**	**226**	*e*P	**P**	**08 27 21.3**	**+0.9**
AVE	**Averroes**	**34.62**	**16**	P	**P**	**08 27 24.0**	**-1.9**
IPMB	**Ipameri, GO**	**34.65**	**237**	*e*P	**P**	**08 27 27.1**	**+0.6**
MDP	**Montagnes des**	**34.96**	**279**	P	**P**	**08 27 29.7**	**+0.4**
	comp=Z,16nm,0.9s,baz=114,slow=8.6,SNR=6.6						
	comp=Z,16nm,0.9s						
MDT	**Midelt**	**35.03**	**20**	P	**P**	**08 27 33.2**	**+3.6**
	comp=Z,8.1nm,0.7s,baz=267,slow=4.4,SNR=17						
MDT				LR	LR	08 41 03.3	
	comp=Z,726nm,21.3s,baz=212,slow=35						
SNDB	**Serra Nova Dou**	**35.11**	**249**	*e*P	**P**	**08 27 30.8**	**+0.3**
PARB	**Paraibuna**	**35.45**	**227**	*e*P	**P**	**08 27 34.1**	**+0.7**
MALB	**Monte Alegre**	**36.30**	**267**	*e*P	**P**	**08 27 39.9**	**-0.9**
PET01	**Itanhaem-SP**	**37.23**	**228**	*e*P	**P**	**08 27 49.3**	**+0.8**
ITRB	**Iturama**	**37.24**	**236**	*e*P	**P**	**08 27 49.2**	**+0.5**
NPGB	**Novo Progresso**	**37.90**	**259**	*e*P	**P**	**08 27 53.4**	**-1.0**
ITTB	**Itaituba**	**37.94**	**263**	*e*P	**P**	**08 27 54.0**	**-0.6**
MORF	**Marmelete**	**38.15**	**12**	*e*P	**P**	**08 27 57.6**	**+1.5**
MORF				IAmb	IAmb	08 27 59.6	
	comp=Z,35nm,1.1s						
MORF	**Marmelete**	**38.15**	**12**	*e*P	**P**	**08 27 57.6**	**+1.5**
MORF				pmax	pmax		
	comp=Z,35nm,1.1s						
MORF	**Marmelete**	**38.15**	**12**	*e*P	**P**	**08 27 58.3**	**+2.2**
PBDV	**Barranco-do-Ve**	**38.24**	**13**	*e*P	**P**	**08 27 59.6**	**+2.7**
	comp=Z,61nm,1.4s						
PTEO	**Sao Teotonio**	**38.36**	**12**	*e*P	**P**	**08 28 01.0**	**+3.2**
	comp=Z,79nm,0.9s						
PVAQ	**Vaqueiros**	**38.44**	**13**	P	**P**	**08 27 58.8**	**+0.3**
PVAQ				IAmb	IAmb	08 28 02.8	
	comp=Z,31nm,1.0s						
PVAQ	**Vaqueiros**	**38.44**	**13**	*e*P	**P**	**08 28 01.4**	**+2.9**
	comp=Z,64nm,1.4s						
PVAQ	**Vaqueiros**	**38.44**	**13**	*e*LR	LR	08 40 14.7	
	comp=Z,348nm,18.0s						
MESJ	**Messejana**	**38.75**	**12**	*e*P	**P**	**08 28 02.7**	**+1.6**
MESJ				IAmb	IAmb	08 28 04.6	
	comp=Z,26nm,0.7s						
MESJ	**Messejana**	**38.75**	**12**	*e*P	**P**	**08 28 02.7**	**+1.6**
MESJ				pmax	pmax		
	comp=Z,26nm,0.7s						
MESJ	**Messejana**	**38.75**	**12**	*e*P	**P**	**08 28 04.1**	**+3.0**
	comp=Z,40nm,1.6s						
PCMB	**Pacaembu**	**38.89**	**234**	*e*P	**P**	**08 28 02.8**	**+0.2**
C2SB	**Chapadao do Su**	**38.93**	**239**	*e*P	**P**	**08 28 03.6**	**+0.6**
PNCL	**Nicolau / Gran**	**38.95**	**12**	*e*P	**P**	**08 28 05.8**	**+3.0**
	comp=Z,38nm,1.7s						
PBEJ	**Beja**	**39.01**	**13**	*e*P	**P**	**08 28 06.2**	**+2.9**
	comp=Z,37nm,1.8s						
CLDB	**Colider**	**39.07**	**253**	*e*P	**P**	**08 28 04.2**	**0.0**
TIJ01	**Guaruva-PR**	**39.11**	**228**	*e*P	**P**	**08 28 03.6**	**-0.9**
PBAR	**Barrancos**	**39.34**	**14**	*e*P	**P**	**08 28 08.2**	**+2.2**
	comp=Z,30nm,1.6s						
EVO	**Evora**	**39.46**	**12**	*e*P	**P**	**08 28 10.3**	**+3.2**
	comp=Z,52nm,0.8s						
TSUM	**Tsumeb**	**39.76**	**121**	LR	LR	08 41 09.4	
	comp=Z,382nm,20.1s,baz=324,slow=31						
TSUM	**Tsumeb**	**39.76**	**121**	P	**P**	**08 28 07.7**	**-2.3**
PESTR	**Estremoz**	**39.87**	**13**	P	**P**	**08 28 10.7**	**+0.2**
PESTR	**Estremoz**	**39.87**	**13**	*e*P	**P**	**08 28 13.4**	**+2.9**
	comp=Z,27nm,1.5s						
PMTG	**Montargil**	**39.93**	**12**	*e*P	**P**	**08 28 14.2**	**+3.2**
	comp=Z,35nm,1.9s						
PDRB	**Porto dos Gac**	**40.14**	**252**	*e*P	**P**	**08 28 13.5**	**+0.4**
SALV	**Santo Antonio**	**40.40**	**245**	*e*P	**P**	**08 28 15.6**	**+0.4**
PMRV	**Marv??o**	**40.45**	**13**	*e*P	**P**	**08 28 18.6**	**+3.3**
	comp=Z,29nm,1.6s						
PMRV	**Marv??o**	**40.45**	**13**	*e*LQ	LQ	08 38 48.7	
PMRV				*e*LR	LR	08 39 57.6	
	comp=Z,431nm,18.0s						
PCAS	**Casmilo, Conde**	**40.83**	**11**	*e*P	**P**	**08 28 21.5**	**+3.1**
COI	**Coimbra**	**40.99**	**11**	P	**P**	**08 28 19.9**	**+0.1**
COI	**Coimbra**	**40.99**	**11**	P	**P**	**08 28 19.9**	**+0.1**
COI				pmax	pmax		
	comp=Z,52nm,1.0s						
TER01	**Tubaro-SC**	**41.11**	**224**	*e*P	**P**	**08 28 21.8**	**+0.9**
PAB	**San Pablo**	**41.32**	**16**	P	**P**	**08 28 23.3**	**+0.7**
PAB				IAmb	IAmb	08 28 26.7	
	comp=Z,27nm,1.1s						
PAB	**San Pablo**	**41.32**	**16**	P	**P**	**08 28 23.3**	**+0.7**
PAB				pmax	pmax		
	comp=Z,27nm,1.1s						
MTE	**Manteigas**	**41.35**	**12**	P	**P**	**08 28 22.9**	**+0.1**
MTE	**Manteigas**	**41.35**	**12**	*e*P	**P**	**08 28 25.9**	**+3.1**
	comp=Z,36nm,1.4s						
MTE				*e*LQ	LQ	08 37 57.2	
MTE				*e*LR	LR	08 40 28.0	
	comp=Z,442nm,18.0s						
ESDC	**Sonseca Array**	**41.55**	**16**	P	**P**	**08 28 27.0**	**+2.6**
	comp=Z,6.5nm,1.0s,baz=207,slow=8.4,SNR=32						
ESDC				PP	**PP**	**08 30 03.2**	**+2.7**
	comp=Z,3.8nm,1.0s,baz=207,slow=11,SNR=4.0						
ESDC				LR	LR	08 45 53.0	
	comp=Z,406nm,19.4s,baz=211,slow=36						
	comp=Z,6.5nm,1.0s						
ESDC	**Sonseca Array**	**41.55**	**16**	P	**P**	**08 28 24.6**	**+0.2**
ESBB	**Sonseca Array**	**41.55**	**16**	P	**P**	**08 28 23.9**	**-0.6**
AQDB	**Aquidauana**	**42.09**	**239**	*e*P	**P**	**08 28 29.7**	**+0.7**
MVO	**Moncorvo**	**42.20**	**12**	*e*P	**P**	**08 28 32.7**	**+3.0**
	comp=Z,33nm,1.1s						
MVO				*e*LQ	LQ	08 37 59.5	
MVO				*e*LR	LR	08 40 39.9	
	comp=Z,412nm,18.0s						
POLO	**Lamas de Olo**	**42.24**	**11**	*e*P	**P**	**08 28 32.6**	**+2.5**
ITAB	**Concordia**	**42.50**	**228**	P	**P**	**08 28 30.3**	**-2.0**
ITAB	**Concordia**	**42.50**	**228**	*e*P	**P**	**08 28 32.9**	**+0.6**
BOAV	**Boa Vista**	**42.57**	**274**	P	**P**	**08 28 31.6**	**-1.5**
BOAV				IAmb	IAmb	08 28 41.9	
	comp=Z,45nm,1.6s						
BOAV	**Boa Vista**	**42.57**	**274**	*e*P	**P**	**08 28 32.7**	**-0.4**
PGAV	**Gavieira, Arco**	**42.72**	**11**	*e*LQ	LQ	08 37 55.7	
PGAV				*e*LR	LR	08 41 21.2	
	comp=Z,422nm,20.0s						
MACA	**Manacapuru-AM**	**42.77**	**265**	P	**P**	**08 28 34.4**	**-0.4**
MACA				IAmb	IAmb	08 28 39.3	
	comp=Z,15nm,1.0s						
MACA	**Manacapuru-AM**	**42.77**	**265**	*e*P	**P**	**08 28 34.7**	**0.0**
PTLB	**Pontes e Lacer**	**43.41**	**247**	P	**P**	**08 28 38.8**	**-1.0**
PTLB				IAmb	IAmb	08 28 44.1	
	comp=Z,13nm,1.5s						
PTLB	**Pontes e Lacer**	**43.41**	**247**	*e*P	**P**	**08 28 40.6**	**+0.8**
VILB	**Vilhena**	**43.75**	**251**	P	**P**	**08 28 41.0**	**-1.6**
VILB				IAmb	IAmb	08 29 13.5	
	comp=Z,45nm,1.9s						
VILB	**Vilhena**	**43.75**	**251**	*e*P	**P**	**08 28 43.0**	**+0.3**
KEST	**Kesra**	**43.75**	**33**	P	**P**	**08 28 44.8**	**+2.3**
	comp=Z,5.8nm,0.7s,baz=177,slow=5.5,SNR=9.6						
KEST				PP	**PP**	**08 30 23.8**	**-0.5**
	comp=Z,9.7nm,1.0s,baz=163,slow=16,SNR=3.9						
KEST				ScP	**ScP**	**08 34 21.8**	**+0.6**
	comp=Z,3.5nm,0.5s,baz=209,slow=1.5,SNR=3.7						
KEST				LR	LR	08 48 19.8	
	comp=Z,1μm,19.6s,baz=182,slow=38						
	comp=Z,5.8nm,0.7s						
KEST	**Kesra**	**43.75**	**33**	P	**P**	**08 28 42.0**	**-0.4**
H05S1	**Guadeloupe/Mar**	**44.73**	**291**	T	T	09 16 19.7	
	SNR=8.4						
CPSB	**Cacapava Do Su**	**45.24**	**225**	*e*P	**P**	**08 28 55.1**	**+0.8**
SIV	**San Ignacio**	**45.35**	**247**	P	**P**	**08 28 56.4**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=70,slow=8.6,SNR=14						
SIV				LR	LR	08 46 57.2	
	comp=Z,458nm,18.2s,baz=108,slow=35						
	comp=Z,3.9nm,0.9s						
CPUP	**Villa Florida**	**46.02**	**232**	P	**P**	**08 29 02.1**	**+1.6**
	comp=Z,4.5nm,0.9s,baz=64,slow=5.3,SNR=7.6						
CPUP				LR	LR	08 46 20.6	
	comp=Z,365nm,19.1s,baz=66,slow=34						
	comp=Z,4.5nm,0.9s						
CPUP	**Villa Florida**	**46.02**	**232**	*e*P	**P**	**08 29 01.0**	**+0.5**
PLTB	**Pedras Altas**	**46.14**	**223**	*e*P	**P**	**08 29 02.3**	**+0.8**
ITQB	**Itaqui**	**47.14**	**228**	*e*P	**P**	**08 29 10.1**	**+0.8**
CLTB	**Caltabellotta**	**47.23**	**34**	P	**P**	**08 29 09.6**	**-0.3**
CLTB				IAmb	IAmb	08 29 26.6	
	comp=Z,25nm,1.2s						
SMRT	**St. Maarten**	**47.80**	**295**	P	**P**	**08 29 14.2**	**-0.4**
VAE	**Valguarnera**	**47.84**	**35**	LR	LR	08 51 25.4	
	comp=Z,753nm,18.3s,baz=160,slow=39						
LSZ	**Lusaka**	**48.07**	**111**	P	**P**	**08 29 19.5**	**+2.6**
	comp=Z,2.0nm,0.4s,baz=289,slow=4.2,SNR=3.8						
LSZ				LR	LR	08 46 03.0	
	comp=Z,336nm,21.6s,baz=294,slow=32						
	comp=Z,2.0nm,0.4s						
SUR	**Sutherland**	**48.73**	**135**	P	**P**	**08 29 23.0**	**+1.1**
	comp=Z,4.3nm,0.8s,baz=288,slow=13,SNR=2.3						
SUR				LR	LR	08 44 53.9	
	comp=Z,298nm,21.5s,baz=315,slow=30						
	comp=Z,4.3nm,0.8s						
MBAR	**Mbarara**	**48.74**	**91**	LR	LR	08 47 34.2	
	comp=Z,599nm,20.1s,baz=222,slow=33						
LBTB	**Lobatse**	**48.91**	**124**	P	**P**	**08 29 24.9**	**+1.6**
	comp=Z,3.3nm,0.8s,baz=277,slow=7.7,SNR=5.1						
LBTB				LR	LR	08 45 56.9	
	comp=Z,353nm,21.8s,baz=284,slow=31						
	comp=Z,3.3nm,0.8s						
LBTB	**Lobatse**	**48.91**	**124**	P	**P**	**08 29 20.5**	**-2.7**
LBTB				IAmb	IAmb	08 29 46.1	
	comp=Z,45nm,1.9s						
ETMB	**Extrema**	**48.94**	**257**	P	**P**	**08 29 23.6**	**+0.1**
ETMB				IAmb	IAmb	08 29 38.0	
	comp=Z,8.9nm,0.8s						
ETMB	**Extrema**	**48.94**	**257**	*e*P	**P**	**08 29 23.4**	**0.0**
BIRV	**Birongo**	**49.11**	**284**	P	**P**	**08 29 24.1**	**-0.6**
CEL	**Celeste**	**49.22**	**35**	P	**P**	**08 29 25.4**	**+0.1**
CEL				IAmb	IAmb	08 30 15.2	
	comp=Z,13nm,0.7s						
CDVI	**St. Croix**	**49.26**	**294**	P	**P**	**08 29 25.7**	**-0.1**
SSB	**Saint Sauveur**	**49.33**	**21**	P	**P**	**08 29 26.1**	**+0.1**
SSB	**Saint Sauveur**	**49.33**	**21**	P	**P**	**08 29 26.1**	**+0.1**
SSB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
STVI	**Saint Thomas**	**49.59**	**294**	P	**P**	**08 29 27.9**	**-0.5**
CUPR	**Culebra, Puert**	**49.88**	**294**	P	**P**	**08 29 30.7**	**+0.1**
CUPR				IAmb	IAmb	08 29 32.6	
	comp=Z,17nm,0.8s						
CASP	**Castiglione de**	**49.89**	**28**	P	**P**	**08 29 30.1**	**-0.2**
BNI	**Bardonecchia**	**49.93**	**23**	P	**P**	**08 29 29.4**	**-1.3**
BNI				IAmb	IAmb	08 29 47.8	
	comp=Z,20nm,1.2s						
BNI	**Bardonecchia**	**49.93**	**23**	P	**P**	**08 29 29.4**	**-1.3**
BNI				pmax	pmax		
	comp=Z,20nm,1.2s						
MTP	**Monte Pirata**	**50.07**	**294**	P	**P**	**08 29 32.1**	**+0.1**
BOSA	**Boshof**	**50.17**	**128**	P	**P**	**08 29 32.9**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=313,slow=8.2,SNR=3.6						
BOSA				LR	LR	08 46 11.8	
	comp=Z,201nm,21.4s,baz=281,slow=31						
	comp=Z,2.8nm,0.8s						
LATE	**Laterza**	**50.20**	**29**	P	**P**	**08 29 32.4**	**-0.3**
TIP	**Timpagrande**	**50.34**	**35**	⇑P	**P**	**08 29 35.7**	**+1.8**
TIP	**Timpagrande**	**50.34**	**35**	P	**P**	**08 29 33.7**	**-0.2**
TIP				IAmb	IAmb	08 29 40.6	
	comp=Z,20nm,1.1s						
HUMP	**Col San Antoni**	**50.36**	**294**	P	**P**	**08 29 33.0**	**-1.2**
CUC	**Castrocucco**	**50.36**	**34**	P	**P**	**08 29 33.2**	**-0.7**
CBYP	**Canovanas**	**50.40**	**294**	P	**P**	**08 29 33.1**	**-1.4**
CBYP				IAmb	IAmb	08 29 36.3	
	comp=Z,22nm,1.2s						
PDPR	**Patillas Dam,**	**50.48**	**294**	P	**P**	**08 29 34.9**	**-0.2**
PDPR				IAmb	IAmb	08 29 37.0	
	comp=Z,29nm,1.2s						
GCPR	**Guaynabo City**	**50.61**	**294**	P	**P**	**08 29 35.9**	**-0.2**
GCPR				IAmb	IAmb	08 29 38.3	
	comp=Z,13nm,0.8s						
BAUV	**El Baul**	**50.62**	**282**	P	**P**	**08 29 34.5**	**-1.8**
SJG	**San Juan**	**50.62**	**294**	LR	LR	08 46 09.8	
	comp=Z,293nm,21.8s,baz=96,slow=30						
SJG	**San Juan**	**50.62**	**294**	P	**P**	**08 29 35.7**	**-0.5**
SJG				IAmb	IAmb	08 29 37.2	
	comp=Z,14nm,0.9s						
SJG	**San Juan**	**50.62**	**294**	P	**P**	**08 29 35.7**	**-0.5**
SJG				pmax	pmax		
	comp=Z,14nm,1.0s						
OSSC	**Osservatorio P**	**50.63**	**27**	P	**P**	**08 29 34.2**	**-1.7**
CELP	**Cerrillos**	**51.01**	**293**	P	**P**	**08 29 39.2**	**+0.1**
CELP				IAmb	IAmb	08 29 40.5	
	comp=Z,22nm,0.8s						
AOPR	**Arecibo Observ**	**51.24**	**294**	P	**P**	**08 29 40.6**	**-0.2**
SENIN	**Lac Senin/Sane**	**51.27**	**22**	P	**P**	**08 29 41.0**	**+0.1**
MLPR	**Magueyes Islan**	**51.41**	**293**	P	**P**	**08 29 41.1**	**-1.0**
MLPR				IAmb	IAmb	08 29 42.5	
	comp=Z,23nm,0.8s						
CRPR	**Cabo Rojo, PR**	**51.48**	**293**	P	**P**	**08 29 42.0**	**-0.6**
SCTE	**Santa Cesarea**	**51.92**	**35**	P	**P**	**08 29 44.9**	**-0.7**
HATO	**Hato, Curacao**	**51.99**	**285**	P	**P**	**08 29 45.9**	**-0.6**
LPAZ	**La Paz**	**51.99**	**249**	P	**P**	**08 29 46.8**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=56,slow=9.8,SNR=2.5						
LPAZ				LR	LR	08 51 08.7	
	comp=Z,299nm,18.1s,baz=92,slow=35						
	comp=Z,0.7nm,0.4s						
LPAZ	**La Paz**	**51.99**	**249**	P	**P**	**08 29 45.7**	**-1.5**
LPAZ	**La Paz**	**51.99**	**249**	*e*P	**P**	**08 29 46.8**	**-0.4**
DAVOX	**Davos/Dischmat**	**52.62**	**24**	LR	LR	08 51 44.2	
	comp=Z,433nm,21.2s,baz=258,slow=36						
DAVA	**Damuels**	**53.03**	**23**	*e*P	**P**	**08 29 55.2**	**+1.3**
	comp=Z,14nm,0.6s,SNR=13						
SDV	**Santo Domingo**	**53.15**	**281**	LR	LR	08 51 26.7	
	comp=Z,258nm,18.4s,baz=75,slow=35						
SDV	**Santo Domingo**	**53.15**	**281**	*e*P	**P**	**08 29 54.7**	**-0.7**
FETA	**Feichten**	**53.16**	**24**	*e*P	**P**	**08 29 56.1**	**+1.2**
	comp=Z,7.6nm,0.7s,SNR=5.7						
IDI	**Anoyia**	**53.20**	**44**	⇑P	**P**	**08 29 57.7**	**+2.4**
IDI	**Anoyia**	**53.20**	**44**	LR	LR	08 54 00.6	
	comp=Z,225nm,18.1s,baz=255,slow=38						
BFO	**Black Forest**	**53.30**	**22**	P	**P**	**08 29 54.5**	**-1.1**
BFO	**Black Forest**	**53.30**	**22**	*e*P	**P**	**08 29 54.6**	**-1.1**
CIMO	**Cimolais**	**53.33**	**26**	P	**P**	**08 29 53.8**	**-2.2**
CIMO				IAmb	IAmb	08 29 58.8	
	comp=Z,3.9nm,0.7s						
STAL	**STALIGIAL**	**53.41**	**26**	P	**P**	**08 29 56.8**	**+0.3**
STAL				IAmb	IAmb	08 29 59.8	
	comp=Z,12nm,0.8s						
TRI	**Trieste**	**53.46**	**27**	P	**P**	**08 29 56.9**	**0.0**
TRI				IAmb	IAmb	08 29 60.0	
	comp=Z,13nm,0.8s						
TRI	**Trieste**	**53.46**	**27**	P	**P**	**08 29 56.9**	**0.0**
TRI				pmax	pmax		
	comp=Z,13nm,0.8s						
SQTA	**Sankt Quirin**	**53.52**	**24**	*i* P	**P**	**08 29 58.8**	**+1.3**
	comp=Z,17nm,0.7s,SNR=5.3						
DOU	**Dourbes**	**53.55**	**18**	*d*P	**P**	**08 29 58.9**	**+1.5**
	comp=Z,12nm,1.0s						
RETA	**Reutte**	**53.55**	**24**	*i* P	**P**	**08 29 58.7**	**+1.0**
	comp=Z,3.7nm,0.7s						
TIR	**Tirane**	**53.56**	**35**	⇑P	**P**	**08 30 00.1**	**+2.4**
MOTA	**Moosalm**	**53.58**	**24**	*e*P	**P**	**08 29 58.8**	**+0.9**
	comp=Z,4.3nm,0.7s						
SABO	**M.te Sabotino**	**53.59**	**27**	P	**P**	**08 29 55.8**	**-2.1**
SABO				IAmb	IAmb	08 30 01.3	
	comp=Z,16nm

RDO IAmb IAmb 08 31 35.2
comp=Z,16nm,1.0s
ZST Bratislava 56.84 27 *e*P **P 08 30 23.5 +2.2**
ZST pmax pmax
comp=Z,30nm,0.7s
ZST Bratislava 56.84 27 *e*P **P 08 30 23.5 +2.2**
MODS Modra-Piesok 57.05 27 *e*P **P 08 30 24.6 +1.8**
MODS pmax pmax
comp=Z,21nm,0.9s
MODS Modra-Piesok 57.05 27 *e*P **P 08 30 24.6 +1.8**
KRUC Moravsky 57.16 26 *e*P **P 08 30 24.3 +0.8**
BUD Budapest 57.24 29 P **P 08 30 25.4 +1.3**
HERR Herculane 57.26 33 ⇑P **P 08 30 26.7 +2.5**
VRAC Vranov 57.43 26 ⇑P **P 08 30 26.9 +1.5**
VRAC Vranov 57.43 26 *e*P **P 08 30 26.5 +1.1**
CLL Collm 57.48 23 *i* P **P 08 30 27.3 +1.6**
CLL *e*S S 08 38 39.0 +16
CLL pmax pmax
comp=Z,20nm,1.4s
CLL Collm 57.48 23 *i* P **P 08 30 27.3 +1.6**
comp=Z,20nm,1.4s
CLL *e*S S 08 38 33.0 +10
BRG Berggiesshubel 57.51 23 *i* P **P 08 30 27.6 +1.6**
BRG Amp 08 30 30.2
comp=Z,8.7nm,0.9s
BRG Amp 08 53 01.0
comp=N,0.3nm,15.9s
BRG Amp 08 53 06.0
comp=E,0.3nm,18.6s
BRG Amp 08 53 13.0
comp=Z,0.4nm,23.5s
BRG Berggiesshubel 57.51 23 *i* P **P 08 30 27.5 +1.6**
BRG pmax pmax
comp=Z,9.0nm,0.9s
JAVC Velka Javorina 57.58 27 *e*P **P 08 30 28.6 +2.0**
BSZH Besenyszg 57.73 30 P **P 08 30 31.0 +3.5**
SIRR Siria 57.75 32 ⇓P **P 08 30 30.1 +2.3**
GZR Gura Zlata 57.78 33 ⇑P **P 08 30 30.3 +2.2**
VYHS Vyhne 57.86 28 *e*P **P 08 30 30.3 +1.8**
VYHS pmax pmax
comp=Z,14nm,0.9s
VYHS Vyhne 57.86 28 *e*P **P 08 30 30.3 +1.8**
PSZ Piszkesteto 57.97 29 IAmb IAmb 08 30 31.9
comp=Z,10nm,0.9s
PSZ Piszkesteto 57.97 29 P **P 08 30 31.7 +2.4**
KRLC Kraliky 58.08 26 *e*P **P 08 30 32.2 +2.2**
KRLC Kraliky 58.08 26 *e*P **P 08 30 32.2 +2.2**
DPC Dobruska-Polom 58.09 25 *e*P **P 08 30 31.9 +1.8**
DPC Dobruska-Polom 58.09 25 *e*P **P 08 30 31.9 +1.8**
MORC Moravsky Berou 58.19 26 ⇑P **P 08 30 32.3 +1.5**
MORC Moravsky Berou 58.19 26 P **P 08 30 32.5 +1.7**
MORC IAmb IAmb 08 30 33.1
comp=Z,8.7nm,0.8s
MORC Moravsky Berou 58.19 26 P **P 08 30 32.6 +1.7**
MORC pmax pmax
comp=Z,9.0nm,0.8s
MORC Moravsky Berou 58.19 26 *e*P **P 08 30 32.2 +1.4**
OSTC Ostas 58.20 25 *e*P **P 08 30 33.4 +2.6**
EIL Elat 58.40 55 LR LR 08 56 18.4
comp=Z,328nm,18.1s,baz=266,slow=37
LANS Liptovska Anna 58.62 28 *e*P **P 08 30 36.6 +2.8**
LANS Liptovska Anna 58.62 28 *e*P **P 08 30 36.6 +2.8**
ARR Arges 58.79 34 ⇓P **P 08 30 37.3 +2.2**
VOIR 59.06 34 ⇑P **P 08 30 38.9 +1.8**
OJC Ojcow 59.52 27 IAmb IAmb 08 30 41.8
comp=Z,11nm,0.8s
DOPR Dopca 59.57 34 ⇑P **P 08 30 42.2 +1.7**
NNA Nana 59.57 256 LR LR 08 54 41.2
comp=Z,427nm,21.4s,baz=72,slow=34
MLR Muntele Rosu 59.60 34 ⇑P **P 08 30 42.4 +1.6**
MLR Muntele Rosu 59.60 34 LR LR 08 58 35.8
comp=Z,410nm,18.2s,baz=216,slow=38
UZH Uzhgorod 59.63 30 ⇑ *i*P **P 08 30 40.4 -0.4**
UZH *e* 08 30 43.7
ISR Istrita 59.72 35 ⇑P **P 08 30 43.7 +2.1**
KOLS Kolonicke sedl 59.82 30 *e*P **P 08 30 44.4 +2.3**
KOLS pmax pmax
comp=Z,7.0nm,0.9s
KOLS Kolonicke sedl 59.82 30 *e*P **P 08 30 44.4 +2.3**
OZUR 59.87 34 ⇓P **P 08 30 44.6 +2.1**
MMAI Mount Meron Ar 59.96 51 LR LR 08 58 39.6
comp=Z,264nm,18.8s,baz=72,slow=38
MDUB Mudurnu 60.12 42 P **P 08 30 44.9 +0.4**
PLOR Plostina 60.21 34 ⇑P **P 08 30 45.9 +1.0**
VRI Vrincioaia 60.26 34 ⇑P **P 08 30 46.3 +1.1**
HARR Harsova 60.28 36 ⇑P **P 08 30 46.4 +1.0**
OTAV Otavalo 60.45 270 *e*P **P 08 30 47.0 -0.6**
BURAR Bucovina Array 60.48 32 ⇑P **P 08 30 48.8 +2.0**
BURAR Bucovina Array 60.48 32 P **P 08 30 46.2 -0.6**
BUR08 Bucovina Ar. S 60.49 32 P **P 08 30 46.1 -0.8**
BOSC San Juan Bosco 60.54 266 P **P 08 30 47.5 -0.4**
BIZ Bicaz 60.55 33 ⇓P **P 08 30 49.4 +2.2**
ATAH Atahualpa 60.63 262 LR LR 08 56 23.1
comp=Z,547nm,18.4s,baz=94,slow=36
LVV L'vov 61.27 30 *e*P **P 08 30 53.5 +1.5**
COHC Cochancay 61.28 267 P **P 08 30 52.5 -0.2**
BR131 Keskin Array S 61.43 44 P **P 08 30 53.4 -0.1**
BR131 IAmb IAmb 08 31 09.0
comp=Z,15nm,0.9s
BR131 Keskin Array S 61.43 44 ⇑ *e*P **P 08 30 53.8 +0.3**
BRTR Keskin Array B 61.43 44 P **P 08 30 55.3 +1.8**
comp=Z,4.8nm,0.7s,baz=240,slow=6.4,SNR=13
BRTR LR LR 09 00 38.3
comp=Z,226nm,19.1s,baz=226,slow=39
comp=Z,4.8nm,0.7s
BRTR Keskin Array B 61.43 44 P **P 08 30 53.6 +0.2**
BCIP Isla Barro Col 62.22 280 P **P 08 30 59.3 +0.2**
BCIP Isla Barro Col 62.22 280 P **P 08 30 59.3 +0.2**
BCIP pmax pmax
comp=Z,61nm,1.9s
PLCA Paso Flores 62.45 223 LR LR 08 53 49.7
comp=Z,196nm,21.6s,baz=72,slow=32
SIM Simferopol' 64.17 39 *e*P **P 08 31 15.4 +3.9**
SIM *e* 08 33 36.0
SIM pmax pmax
comp=Z,110nm,13.9s
SIM pmax pmax
comp=Z,220nm,18.7s
AKASG Malin Array Be 64.44 31 P **P 08 31 13.6 +0.5**
comp=Z,8.7nm,0.8s,baz=234,slow=6.7,SNR=34
AKASG LR LR 09 00 58.7
comp=Z,165nm,20.0s,baz=246,slow=38
comp=Z,8.7nm,0.8s
AKBB Malin Array Si 64.44 31 P **P 08 31 12.4 -0.7**
AKBB Malin Array Si 64.44 31 *c i*P **P 08 31 13.7 +0.6**
AKBB pmax pmax
comp=Z,24nm,0.9s
HFS Hagfors 64.83 17 LR LR 09 00 41.7
comp=Z,15nm,20.1s,baz=206,slow=37
NB2 NORSAR Subarra 64.89 15 P **P 08 31 17.4 +1.5**
comp=Z,8.5nm,0.8s,baz=210,slow=6.9
NOA NORSAR Array B 64.89 15 P **P 08 31 17.5 +1.5**
comp=Z,5.3nm,0.8s,baz=210,slow=6.7,SNR=17
NOA LR LR 08 59 43.9
comp=Z,143nm,21.9s,baz=215,slow=36
comp=Z,5.3nm,0.8s
NC405 NORSAR Array S 65.09 15 P **P 08 31 17.1 0.0**
NACGM Naroch 65.83 26 ⇓ *e*P **P 08 31 23.9 +1.9**
baz=230
ANN Anapa 66.20 40 *e*P **P 08 31 20.6 -4.0**
ANN *e**PP **pP 08 31 23.6 -2.3**
ANN *e* 08 33 48.7
ANN *e*S **S 08 40 09.8 -3.8**
ANN pmax pmax
comp=Z,27nm,0.8s
JSRW J. Sargeant Re 66.56 312 P **P 08 31 27.5 +0.5**
PSDB Penn State Uni 68.36 315 P **P 08 31 39.9 +1.4**
baz=110
KMSC Kings Mountain 68.43 308 IAmb IAmb 08 31 41.6
comp=Z,16nm,1.1s
KMSC Kings Mountain 68.43 308 P **P 08 31 41.1 +2.1**
baz=106
KMSC Kings Mountain 68.43 308 P **P 08 31 40.3 +1.3**
baz=106
V55A Taylorsville 68.54 309 P **P 08 31 40.8 +1.1**
V55A Taylorsville 68.54 309 P **P 08 31 41.3 +1.6**
baz=107,SNR=5.4
V55A P **P 08 31 41.3 +1.6**
baz=107,SNR=5.4
WVNY West Valley, N 68.70 316 P **P 08 31 41.7 +1.2**
baz=111
Q54A Coxs Mills 69.17 312 IAmb IAmb 08 31 46.1
comp=Z,13nm,1.0s
Q54A Coxs Mills 69.17 312 P **P 08 31 45.3 +1.8**
baz=108
Q54A P **P 08 31 45.3 +1.8**
baz=108
KIV Kislovodsk 69.32 42 *e*P **P 08 31 42.3 -2.1**
KIV pmax pmax
comp=Z,15nm,1.1s
KBZ Khabaz 69.38 43 P **P 08 31 46.5 +1.8**
comp=Z,8.7nm,0.8s,baz=219,slow=3.3,SNR=18
KBZ LR LR 09 03 37.5
comp=Z,112nm,21.7s,baz=297,slow=37
comp=Z,8.7nm,0.8s
KBZ Khabaz 69.38 43 ⇓ *i*P **P 08 31 45.8 +1.1**
KBZ pmax pmax
comp=Z,9.0nm,0.8s
V53A Saluda 69.74 308 P **P 08 31 47.7 +0.6**
V53A IAmb IAmb 08 31 49.7
comp=Z,10nm,1.1s
FINES FINESS Array B 69.84 21 P **P 08 31 48.9 +1.7**
comp=Z,12nm,0.8s,baz=207,slow=3.8,SNR=18
FINES LR LR 09 04 30.0
comp=Z,328nm,18.2s,baz=223,slow=38
comp=Z,12nm,0.8s
FINES FINESS Array B 69.84 21 P **P 08 31 47.9 +0.7**
O53A New Philadelph 69.84 313 P **P 08 31 49.1 +1.4**
baz=108
SADO Sadowa 69.91 318 LR LR 08 56 08.3
comp=Z,240nm,21.1s,baz=153,slow=30
VSR Storozhevoye 70.09 34 *e*P **P 08 31 48.9 0.0**
VSR pmax pmax
comp=Z,10.0nm,1.1s
O52A Adamsville 70.25 313 IAmb IAmb 08 31 52.7
comp=Z,18nm,1.1s
Y52A Lilburn 70.28 306 IAmb IAmb 08 31 53.4
comp=Z,14nm,1.1s
VORR Voronezh 70.32 34 *e*P **P 08 31 49.7 -0.6**
VORR pmax pmax
comp=Z,50nm,0.4s
P52A Corning 70.33 312 P **P 08 31 52.0 +1.3**
baz=107
W52A Murphy 70.47 307 P **P 08 31 53.2 +1.6**
baz=104
OBN Obninsk 70.57 30 LR LR 09 05 02.6
comp=Z,75nm,19.3s,baz=212,slow=38
OBN Obninsk 70.57 30 *e*P **P 08 31 51.0 -0.7**
OBN *e* 08 34 27.0
OBN *e*PPP PPP 08 36 09.3
OBN pmax pmax
comp=Z,12nm,0.5s
OBN MLR MLR
comp=Z,337nm,20.0s
LPSR Galich'ya Gora 70.59 33 *e*P P 08 31 45.3 -6.6
LPSR pmax pmax
comp=Z,10.0nm,0.5s
V51A Loudon 70.98 308 P **P 08 31 55.4 +0.7**
V51A IAmb IAmb 08 31 57.3
comp=Z,13nm,0.9s
V51A Loudon 70.98 308 P **P 08 31 56.4 +1.7**
baz=104,SNR=5.1
Q51A Peebles 71.06 312 IAmb IAmb 08 31 57.3
comp=Z,11nm,0.9s
Q51A Peebles 71.06 312 P **P 08 31 56.4 +1.3**
baz=106
Q51A P **P 08 31 56.4 +1.3**
baz=106
VNA2 Neumayer--Watz 71.12 176 P **P 08 31 55.9 +1.1**
ACSO Alum Creek Sta 71.13 313 P **P 08 31 54.6 -0.9**
ACSO IAmb IAmb 08 31 57.8
comp=Z,13nm,0.9s
ACSO Alum Creek Sta 71.13 313 P **P 08 31 56.8 +1.3**
baz=107
JMIC Jan Mayen 71.17 3 LR LR 08 59 07.6
comp=Z,86nm,21.4s,baz=134,slow=32
VNA3 Neumayer Olymp 71.30 177 P **P 08 32 00.2 +4.2**
MOS Moscow 71.41 30 *e*P P 08 31 51.8 -5.0
VRH Novokhopyorsk 71.53 35 *e*P P 08 31 46.0 -12
VRH pmax pmax
comp=Z,4.0nm,0.4s
W50A Signal Mountai 71.60 307 P **P 08 31 59.0 +0.5**
W50A IAmb IAmb 08 32 00.9
comp=Z,16nm,1.0s
W50A Signal Mountai 71.60 307 P **P 08 31 60.0 +1.4**
baz=104,SNR=5.3
T50A Nancy 71.67 309 IAmb IAmb 08 32 01.4
comp=Z,7.8nm,0.8s
T50A Nancy 71.67 309 P **P 08 32 00.8 +2.0**
baz=104
T50A P **P 08 32 00.8 +2.0**
baz=104
250A Grady 71.67 304 IAmb IAmb 08 32 01.5
comp=Z,16nm,0.9s
SWET Sewanee 72.10 307 P **P 08 32 01.1 -0.4**
SWET IAmb IAmb 08 32 03.1
comp=Z,9.8nm,0.8s
O49A Covington 72.11 313 IAmb IAmb 08 32 03.5
comp=Z,23nm,1.2s
SNAA Sanae 72.19 175 P **P 08 32 01.1 -0.3**
SNAA Sanae 72.19 175 P **P 08 32 01.2 -0.1**
comp=Z,0.6nm,0.8s,baz=355,slow=9.0,SNR=1.9
SNAA LR LR 08 54 56.9
comp=Z,115nm,22.0s,baz=354,slow=29
P49A Miami Univ. Ec 72.22 312 P **P 08 32 03.2 +1.1**
baz=105
U49A Red Boiling Sp 72.28 308 IAmb IAmb 08 32 04.8
comp=Z,14nm,0.9s
U49A Red Boiling Sp 72.28 308 P **P 08 32 04.0 +1.5**
baz=104,SNR=9.8
LRAL Lakeview Retre 72.49 305 P **P 08 32 03.8 -0.1**
LRAL Lakeview Retre 72.49 305 P **P 08 32 04.3 +0.4**
baz=102
CLTN Cedars of Leba 72.61 308 IAmb IAmb 08 32 06.5
comp=Z,12nm,0.9s
L48A N Adams 72.66 314 P **P 08 32 05.0 +0.3**
L48A N Adams 72.66 314 P **P 08 32 06.0 +1.3**
baz=106,SNR=7.0
L48A P **P 08 32 06.0 +1.3**
baz=106,SNR=7.0
PMSA Palmer Station 72.67 199 LR LR 08 56 00.1
comp=Z,208nm,21.3s,baz=53,slow=29
PETF Flores 72.67 288 P **P 08 32 03.9 -1.3**
O48B Farmland 72.73 312 P **P 08 32 06.1 +1.0**
baz=105
X48A Hartselle 72.82 306 IAmb IAmb 08 32 07.6
comp=Z,13nm,0.9s
X48A Hartselle 72.82 306 P **P 08 32 06.8 +1.0**
baz=102,SNR=5.2
V48A Smith Brothers 72.92 307 IAmb IAmb 08 32 08.2
comp=Z,13nm,1.0s
V48A Smith Brothers 72.92 307 P **P 08 32 07.6 +1.2**
baz=103,SNR=6.3
TROLL Troll, Antarti 73.05 173 P **P 08 32 07.9 +1.3**
WCI Wyandotte Cave 73.08 310 P **P 08 32 07.5 +0.3**
WCI IAmb IAmb 08 32 09.2
comp=Z,9.2nm,0.8s
WCI Wyandotte Cave 73.08 310 P **P 08 32 07.5 +0.3**
WCI pmax pmax
comp=Z,9.0nm,0.8s
WCI Wyandotte Cave 73.08 310 P **P 08 32 08.4 +1.1**
baz=104
N47A Urbana 73.29 313 P **P 08 32 09.4 +1.0**
baz=105
N47A P **P 08 32 09.4 +1.0**
baz=105
Z47A Carrollton 73.41 305 P **P 08 32 10.2 +1.0**
baz=101,SNR=8.9
T47A Sharon Grove 73.42 309 IAmb IAmb 08 32 11.1
comp=Z,20nm,1.3s
T47A Sharon Grove 73.42 309 P **P 08 32 10.3 +1.0**
baz=103
WVT Waverly 73.81 308 P **P 08 32 11.5 -0.1**
WVT Waverly 73.81 308 P **P 08 32 11.5 -0.1**
WVT pmax pmax
comp=Z,8.0nm,0.8s
WVT Waverly 73.81 308 P **P 08 32 11.8 +0.3**
baz=102,SNR=7.2
P46A Rosedale 74.10 311 P **P 08 32 14.1 +0.9**
baz=104,SNR=6.0
146A Union 74.12 304 IAmb IAmb 08 32 15.6
comp=Z,21nm,0.9s
OLIL Olney 74.58 310 P **P 08 32 15.0 -0.9**
OLIL Olney 74.58 310 P **P 08 32 16.4 +0.5**
baz=103,SNR=8.2
W45A Hickory Valley 74.69 306 P **P 08 32 16.0 -0.7**
W45A Hickory Valley 74.69 306 P **P 08 32 16.8 0.0**
baz=101
OXF Oxford 74.75 306 IAmb IAmb 08 32 17.6
comp=Z,18nm,1.0s
KLMR Klimovskoe 74.79 25 *e*P **P 08 32 14.2 -2.5**
KLMR *e* 08 35 02.5
KLMR pmax pmax
comp=Z,26nm,1.3s
KLMR Klimovskoe 74.79 25 *e*P **P 08 32 14.3 -2.5**
KLMR AMP 08 32 18.8
comp=Z,26nm,1.3s
KLMR *e*PP **PP 08 35 02.6 -1.4**
LNXT Lenox 75.12 307 P **P 08 32 17.9 -1.3**
O44A Mansfield 75.17 312 IAmb IAmb 08 32 20.3
comp=Z,14nm,0.9s
O44A Mansfield 75.17 312 P **P 08 32 19.2 -0.2**
baz=103
SIUC Southern Illin 75.22 309 IAmb IAmb 08 32 20.7
comp=Z,16nm,0.9s
S44A Carbondale 75.25 309 P **P 08 32 18.4 -1.5**
S44A IAmb IAmb 08 32 20.8
comp=Z,17nm,1.1s
ARCES ARCESS Array B 75.25 15 P **P 08 32 21.0 +1.7**
comp=Z,10.0nm,1.1s,baz=29,slow=2.8,SNR=5.8
comp=Z,10.0nm,1.1s
Q44A Meyer Farm, Va 75.31 310 P **P 08 32 19.4 -0.9**
Q44A IAmb IAmb 08 32 20.7
comp=Z,13nm,0.9s
BELG Belogornoye 75.38 35 LR LR 09 09 32.3
comp=Z,165nm,19.3s,baz=293,slow=39
CGM3 Cape Girardeau 75.48 309 IAmb IAmb 08 32 21.7
comp=Z,8.1nm,0.9s
143A Socs Landing, 76.08 304 P **P 08 32 25.7 +1.0**
baz=99
FVM French Village 76.21 309 P **P 08 32 24.3 -1.1**
FVM IAmb IAmb 08 32 26.4
comp=Z,15nm,1.0s
FVM French Village 76.21 309 P **P 08 32 24.3 -1.1**
FVM pmax pmax
comp=Z,15nm,1.0s
FVM French Village 76.21 309 P **P 08 32 25.7 +0.2**
baz=101,SNR=5.6
I42A Draeger Farm, 76.34 315 IAmb IAmb 08 32 27.6
comp=Z,15nm,1.0s
I42A Draeger Farm, 76.34 315 P **P 08 32 26.8 +0.7**
baz=104,SNR=7.8
LCAR Lake Charles 76.44 307 P **P 08 32 25.8 -1.0**
L42A Oliver, Polo 76.46 313 P **P 08 32 26.6 -0.1**
L42A IAmb IAmb 08 32 27.9
comp=Z,19nm,0.9s
CCM Cathedral Cave 76.86 309 P **P 08 32 27.5 -1.6**
CCM Cathedral Cave 76.86 309 P **P 08 32 27.5 -1.6**
CCM pmax pmax
comp=Z,17nm,0.8s
CCM Cathedral Cave 76.86 309 P **P 08 32 29.2 +0.1**
baz=101,SNR=16
COWI Conover 77.02 317 P **P 08 32 29.1 -0.8**
COWI Conover 77.02 317 P **P 08 32 30.0 +0.2**
baz=104
N41A Harden Midland 77.07 312 IAmb IAmb 08 32 30.9
comp=Z,18nm,1.1s
N41A Harden Midland 77.07 312 P **P 08 32 30.1 -0.1**
baz=102
JFWS Jewell Farm 77.07 314 P **P 08 32 29.8 -0.4**
JFWS IAmb IAmb 08 32 31.6
comp=Z,16nm,0.8s
JFWS Jewell Farm 77.07 314 P **P 08 32 29.8 -0.4**
JFWS pmax pmax
comp=Z,16nm,0.9s
JFWS Jewell Farm 77.07 314 P **P 08 32 30.6 +0.4**
baz=102,SNR=8.2
UALR University of 77.18 306 P **P 08 32 30.0 -1.0**
FCAR Ozark Folk Cen 77.18 307 P **P 08 32 29.7 -1.3**
MGMO Mountain Grove 77.50 308 P **P 08 32 31.5 -1.3**
MGMO IAmb IAmb 08 32 34.2
comp=Z,15nm,0.9s
I40A Norwalk 77.55 315 P **P 08 32 32.0 -0.8**
I40A IAmb IAmb 08 32 34.3
comp=Z,18nm,1.3s
G40A Rib Lake 77.55 316 P **P 08 32 32.1 -0.8**
L40A Anamosa 77.60 313 IAmb IAmb 08 32 34.0
comp=Z,12nm,0.8s
L40A Anamosa 77.60 313 P **P 08 32 33.1 -0.1**
baz=102,SNR=6.1
R40A Maddies Statio 77.70 309 P **P 08 32 32.6 -1.2**
R40A IAmb IAmb 08 32 34.4
comp=Z,7.6nm,0.7s
R40A Maddies Statio 77.70 309 P **P 08 32 34.0 +0.2**
baz=100,SNR=9.8
PRGR Permogore 77.78 26 *e*P **P 08 32 32.4 -1.3**
MIAR Mount Ida 78.15 305 P **P 08 32 36.9 +0.5**
baz=98
S39A Bolivar 78.42 308 P **P 08 32 37.5 -0.3**
S39A IAmb IAmb 08 32 39.0
comp=Z,14nm,0.9s
S39A Bolivar 78.42 308 P **P 08 32 38.1 +0.3**
baz=99,SNR=7.0
KIRV Kirov 78.42 30 LR LR 09 09 56.2
comp=Z,158nm,19.7s,baz=262,slow=38
KIRV Kirov 78.42 30 ‖ *e*P **P 08 32 38.1 +0.8**
NATX Nacogdoches 78.68 302 P **P 08 32 39.1 -0.3**
NATX Nacogdoches 78.68 302 P **P 08 32 40.3 +0.9**
baz=97
HHAR Hobbs 78.69 307 P **P 08 32 39.3 0.0**
baz=98
E38A The Farm, Brul 78.76 318 P **P 08 32 39.6 0.0**
baz=102
K38A Parkersburg 78.84 313 P **P 08 32 39.5 -0.6**
K38A IAmb IAmb 08 32 40.6
comp=Z,17nm,1.2s
P38A Dawn 78.89 310 P **P 08 32 39.4 -0.9**
P38A IAmb IAmb 08 32 41.5
comp=Z,21nm,0.9s
P38A Dawn 78.89 310 P **P 08 32 40.7 +0.3**
baz=99,SNR=9.7
U38A Gravette 79.07 307 P **P 08 32 41.6 +0.1**
baz=98,SNR=7.9
GEYT Ailbeck 79.08 51 LR LR 09 10 30.8
comp=Z,79nm,18.5s,baz=266,slow=38
SPMN Marine on St. 79.34 316 P **P 08 32 42.9 +0.1**
baz=101
I37A Lemond, Waseca 79.54 315 IAmb IAmb 08 32 44.9
comp=Z,17nm,1.1s
I37B Waseca 79.54 315 P **P 08 32 44.0 +0.2**
baz=100
X37A Clayton 79.62 305 **P 08 32 44.5 0.0**
X37A Clayton 79.62 305 P **P 08 32 45.3 +0.8**
baz=97
TUL1 Leonard 80.13 306 **P 08 32 46.3 -0.9**
TUL1 Leonard 80.13 306 P **P 08 32 47.3 +0.1**
baz=97,SNR=5.6
TUL1 Leonard 80.13 306 P **P 08 32 47.4 +0.2**
baz=97
B35A Bob, Littlefor 80.56 319 P **P 08 32 49.3 +0.1**
B35A IAmb IAmb 08 32 50.6
comp=Z,20nm,0.9s
B35A Bob, Littlefor 80.56 319 P **P 08 32 49.6 +0.4**
baz=101,SNR=9.4
N35A Tabor 80.67 311 P **P 08 32 49.9 -0.1**
N35A IAmb IAmb 08 32 51.2
comp=Z,16nm,0.9s
N35A Tabor 80.67 311 P **P 08 32 50.3 +0.3**
baz=98
DEOK Depew 80.69 306 P **P 08 32 50.0 -0.2**
DEOK IAmb IAmb 08 32 51.5
comp=Z,10nm,0.9s
T35A Sooner Cattle 80.83 307 P **P 08 32 50.1 -0.9**
T35A IAmb IAmb 08 32 52.4
comp=Z,21nm,1.1s
T35B Sooner Cattle 80.83 307 P **P 08 32 51.5 +0.5**
baz=97,SNR=8.9
OK034 N. Norfolk Rd. 80.88 306 **P 08 32 50.8 -0.5**
OK034 IAmb IAmb 08 32 52.6
comp=Z,15nm,1.1s
OK030 Cody Creek RV 80.93 306 IAmb IAmb 08 32 52.9
comp=Z,28nm,1.4s
OK031 S. Brethren Rd 80.98 306 IAmb IAmb 08 32 53.2
comp=Z,17nm,1.0s
Z35A Perchaven, San 81.03 304 P **P 08 32 52.6 +0.5**
Z35A Perchaven, San 81.03 304 P **P 08 32 53.0 +0.9**
baz=96
435B Jarrell 81.06 301 P **P 08 32 53.2 +0.9**
baz=96
WHTX Lake Whitney, 81.07 302 P **P 08 32 52.4 +0.1**
WHTX IAmb IAmb 08 32 53.7
comp=Z,11nm,0.9s
WHTX Lake Whitney, 81.07 302 P **P 08 32 52.6 +0.3**
baz=96
WHTX Lake Whitney, 81.07 302 P **P 08 32 52.6 +0.3**
baz=96
AKTO Aktyubinsk 81.14 39 LR LR 09 11 39.9
comp=Z,194nm,21.0s,baz=279,slow=38

KSU1	**Kansas State U**	**81.18**	**309**	P	**P**	**08 32 51.4**	**-1.4**
KSU1				IAmb	IAmb	08 32 53.1	
	comp=Z,12nm,1.0s						
KSU1	**Kansas State U**	**81.18**	**309**	P	**P**	**08 32 52.4**	**-0.3**
	baz=97						
OK025	**Westminster Rd**	**81.34**	**306**	IAmb	IAmb	08 32 55.2	
	comp=Z,22nm,1.1s						
FNO	**Franklin**	**81.36**	**306**	IAmb	IAmb	08 32 54.9	
	comp=Z,11nm,0.9s						
BLOK	**Blackwell**	**81.37**	**307**		**P**	**08 32 53.4**	**-0.5**
BLOK				IAmb	IAmb	08 32 55.6	
	comp=Z,19nm,1.1s						
L34A	**Svendsen Farm,**	**81.38**	**312**	P	**P**	**08 32 53.7**	**-0.1**
L34A				IAmb	IAmb	08 33 19.0	
	comp=Z,16nm,0.9s						
OK029	**Liberty Lake**	**81.46**	**306**		**P**	**08 32 54.1**	**-0.3**
OK029				IAmb	IAmb	08 32 55.8	
	comp=Z,12nm,0.7s						
BCOK	**Bluff Creek, N**	**81.57**	**306**	IAmb	IAmb	08 32 56.5	
	comp=Z,9.5nm,0.8s						
KAN13	**South Haven SW**	**81.61**	**307**		**P**	**08 32 55.0**	**-0.2**
KAN13				IAmb	IAmb	08 32 56.5	
	comp=Z,27nm,1.3s						
X34A	**Smith Ranch, M**	**81.64**	**305**	P	**P**	**08 32 55.0**	**-0.3**
X34A				IAmb	IAmb	08 32 56.8	
	comp=Z,9.9nm,0.7s						
KAN09	**Caldwell North**	**81.73**	**307**	IAmb	IAmb	08 32 57.2	
	comp=Z,24nm,1.3s						
ECSD	**EROS Data Cent**	**81.79**	**314**	IAmb	IAmb	08 32 57.2	
	comp=Z,13nm,0.8s						
ECSD	**EROS Data Cent**	**81.79**	**314**	P	**P**	**08 32 56.3**	**+0.4**
	baz=98,SNR=19						
KAN17	**Caldwell West**	**81.84**	**307**	IAmb	IAmb	08 32 57.8	
	comp=Z,17nm,1.1s						
KAN01	**Argonia South**	**81.85**	**307**		**P**	**08 32 57.1**	**+0.8**
KAN01				IAmb	IAmb	08 32 57.8	
	comp=Z,11nm,0.9s						
KAN06	**Argonia West S**	**81.94**	**308**	IAmb	IAmb	08 32 58.3	
	comp=Z,11nm,1.0s						
AGMN	**Agassiz Nation**	**81.95**	**319**	P	**P**	**08 32 56.8**	**+0.2**
AGMN				IAmb	IAmb	08 32 58.2	
	comp=Z,16nm,0.8s						
AGMN	**Agassiz Nation**	**81.95**	**319**	P	**P**	**08 32 57.3**	**+0.6**
	baz=99,SNR=12						
CROK	**Carrier**	**81.96**	**307**		**P**	**08 32 57.9**	**+0.9**
CROK				IAmb	IAmb	08 32 58.5	
	comp=Z,16nm,0.9s						
KAN14	**Manchester OK**	**81.99**	**307**	IAmb	IAmb	08 32 58.4	
	comp=Z,13nm,0.9s						
N33A	**J Bar K, Exete**	**82.02**	**311**	IAmb	IAmb	08 32 58.9	
	comp=Z,16nm,0.8s						
KAN10	**Anthony SW Sta**	**82.11**	**307**	P	**P**	**08 32 57.2**	**-0.5**
ABKAR	**Akbulak array**	**82.16**	**40**	P	**P**	**08 32 56.5**	**-1.2**
ULM	**Lac du Bonnet**	**82.27**	**321**	P	**P**	**08 32 58.8**	**+0.5**
	comp=Z,5.4nm,0.7s,baz=102,slow=6.0,SNR=8.1						
	comp=Z,5.4nm,0.7s						
ULM	**Lac du Bonnet**	**82.27**	**321**	P	**P**	**08 32 58.6**	**+0.3**
ULM				IAmb	IAmb	08 32 59.5	
	comp=Z,8.2nm,0.9s						
833A	**Chaparral WMA,**	**82.43**	**298**	P	**P**	**08 33 00.8**	**+1.2**
	baz=94						
833A	**Chaparral WMA,**	**82.43**	**298**	P	**P**	**08 33 00.6**	**+1.0**
	baz=94						
WMOK	**Wichita Mounta**	**82.43**	**305**	P	**P**	**08 32 59.0**	**-0.4**
WMOK				IAmb	IAmb	08 33 01.0	
	comp=Z,10nm,1.1s						
WMOK	**Wichita Mounta**	**82.43**	**305**	P	**P**	**08 32 59.1**	**-0.4**
WMOK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMOK	**Wichita Mounta**	**82.43**	**305**	P	**P**	**08 32 59.6**	**+0.1**
	baz=95,SNR=9.6						
ARU	**Arti**	**82.61**	**33**	LR	LR	09 13 29.5	
	comp=Z,173nm,18.3s,baz=242,slow=38						
ARU	**Arti**	**82.61**	**33***c iP*		**P**	**08 33 01.3**	**+1.4**
ARU						08 36 08.2	
ARU				S	**S**	**08 43 20.7**	**+3.6**
ARU				SS	**SS**	**08 48 38.7**	**-0.1**
ARU				pmax	pmax		
	comp=Z,12nm,1.8s						
BGNE	**Belgrade**	**82.62**	**312**	P	**P**	**08 33 00.8**	**+0.5**
	baz=97						
R32A	**Long Quarter,**	**82.73**	**309**	IAmb	IAmb	08 33 02.5	
	comp=Z,11nm,1.1s						
JCT	**Junction City**	**82.94**	**301**	P	**P**	**08 33 02.2**	**-0.1**
JCT				IAmb	IAmb	08 33 04.0	
	comp=Z,15nm,0.9s						
JCT	**Junction City**	**82.94**	**301**	P	**P**	**08 33 02.2**	**-0.1**
JCT				pmax	pmax		
	comp=Z,15nm,1.0s						
JCT	**Junction City**	**82.94**	**301**	P	**P**	**08 33 03.2**	**+1.0**
	baz=94,SNR=6.0						
ABTX	**Abilene, Hawle**	**82.97**	**303**	P	**P**	**08 33 03.3**	**+0.9**
	baz=95						
ELIS	**Ellis County**	**83.07**	**306**	P	**P**	**08 33 02.1**	**-0.8**
ELIS				IAmb	IAmb	08 33 04.9	
	comp=Z,23nm,1.0s						
K31A	**O'Neill**	**83.21**	**313**	P	**P**	**08 33 02.4**	**-1.0**
SUSD	**Miller**	**83.55**	**315**	P	**P**	**08 33 06.2**	**+1.1**
	baz=96						
CBKS	**Cedar Bluff**	**83.57**	**309**	P	**P**	**08 33 05.5**	**+0.1**
	baz=95,SNR=7.2						
MDND	**Maddock**	**84.37**	**318**	P	**P**	**08 33 10.3**	**+1.1**
	baz=96						
AMTX	**Amarillo**	**84.82**	**305**	IAmb	IAmb	08 33 14.2	
	comp=Z,13nm,1.4s						
E28A	**Huff**	**84.99**	**317**	P	**P**	**08 33 13.6**	**+1.2**
	baz=95						
OGNE	**Ogallala**	**85.50**	**311**	P	**P**	**08 33 14.4**	**-0.7**
OGNE	**Ogallala**	**85.50**	**311**	P	**P**	**08 33 16.6**	**+1.4**
	baz=94,SNR=7.3						
MSTX	**Muleshoe**	**85.67**	**304**	P	**P**	**08 33 15.9**	**-0.2**
MSTX	**Muleshoe**	**85.67**	**304**	P	**P**	**08 33 17.6**	**+1.4**
	baz=93,SNR=21						
MSTX	**Muleshoe**	**85.67**	**304**	P	**P**	**08 33 16.9**	**+0.8**
	baz=93						
KSCO	**Kaye Shedlock'**	**85.83**	**309**	P	**P**	**08 33 18.1**	**+1.2**
	baz=94,SNR=6.0						
KSCO	**Kaye Shedlock'**	**85.83**	**309**	P	**P**	**08 33 17.8**	**+0.9**
	baz=94						
TXAR	**Lajitas Array**	**86.23**	**299**	P	**P**	**08 33 19.9**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=122,slow=6.5,SNR=46						
	comp=Z,4.1nm,0.8s						
TXAR	**Lajitas Array**	**86.23**	**299**	P	**P**	**08 33 19.1**	**+0.1**
TXAR	**Lajitas Array**	**86.23**	**299**	P	**P**	**08 33 19.1**	**+0.1**
TX31	**Lajitas Ar. Si**	**86.23**	**299**	P	**P**	**08 33 18.9**	**-0.1**
TX31	**Lajitas Ar. Si**	**86.23**	**299**	P	**P**	**08 33 20.0**	**+1.0**
	baz=92,SNR=15						
MAW	**Mawson**	**86.49**	**158**	LR	LR	09 02 59.3	
	comp=Z,123nm,22.0s,baz=284,slow=29						
T25A	**Trinidad**	**87.15**	**307**	P	**P**	**08 33 24.3**	**+0.8**
	baz=92						
RSSD	**Black Hills**	**87.16**	**314**	P	**P**	**08 33 23.3**	**-0.1**
RSSD	**Black Hills**	**87.16**	**314**	P	**P**	**08 33 23.3**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RSSD	**Black Hills**	**87.16**	**314**	P	**P**	**08 33 24.6**	**+1.2**
	baz=93						
DGMT	**Dagmar**	**87.49**	**318**	P	**P**	**08 33 26.7**	**+2.1**
	baz=93						
Q24A	**Divide**	**87.79**	**309**	P	**P**	**08 33 27.9**	**+1.2**
	baz=92						
SDCO	**Great Sand Dun**	**88.03**	**308**	P	**P**	**08 33 28.2**	**+0.4**
SDCO				IAmb	IAmb	08 33 30.4	
	comp=Z,9.0nm,1.1s						
SDCO	**Great Sand Dun**	**88.03**	**308**	P	**P**	**08 33 29.4**	**+1.6**
	baz=92,SNR=20						
PHWY	**Pilot Hill**	**88.10**	**311**	P	**P**	**08 33 27.2**	**-0.9**
PHWY				IAmb	IAmb	08 33 30.3	
	comp=Z,5.1nm,0.8s						
ISCO	**Idaho Springs**	**88.18**	**310**	P	**P**	**08 33 27.7**	**-0.8**
ISCO				IAmb	IAmb	08 33 31.5	
	comp=Z,5.4nm,0.9s						
ISCO	**Idaho Springs**	**88.18**	**310**	P	**P**	**08 33 27.7**	**-0.8**
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ISCO	**Idaho Springs**	**88.18**	**310**	P	**P**	**08 33 30.6**	**+2.1**
	baz=92,SNR=9.4						
N23A	**Red Feather La**	**88.46**	**311**	P	**P**	**08 33 28.4**	**-1.4**
N23A	**Red Feather La**	**88.46**	**311**	P	**P**	**08 33 31.6**	**+1.8**
	baz=91						
ANMO	**Albuquerque**	**88.75**	**305**	LR	LR	09 08 27.9	
	comp=Z,200nm,20.4s,baz=50,slow=32						
ANMO	**Albuquerque**	**88.75**	**305**	P	**P**	**08 33 29.6**	**-1.5**
ANMO	**Albuquerque**	**88.75**	**305***i e*	P	**P**	**08 33 31.1**	**0.0**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	**Albuquerque**	**88.75**	**305**	P	**P**	**08 33 32.6**	**+1.4**
	baz=91						
LAO	**LASA Array**	**88.80**	**317**	P	**P**	**08 33 29.7**	**-1.3**
LAO				IAmb	IAmb	08 33 33.8	
	comp=Z,12nm,1.1s						
LAO	**LASA Array**	**88.80**	**317**	P	**P**	**08 33 32.5**	**+1.6**
	baz=91,SNR=5.8						
K22A	**Casper**	**88.93**	**312**	IAmb	IAmb	08 33 57.1	
	comp=Z,20nm,1.6s						
KK31	**Karatay Array**	**88.93**	**47**	P	**P**	**08 33 29.6**	**-2.0**
KK31	**Karatay Array**	**88.93**	**47**	P	**P**	**08 33 29.6**	**-2.0**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KKAR	**Karatay Array**	**88.93**	**47**	P	**P**	**08 33 31.1**	**-0.4**
KKAR	**Karatay Array**	**88.93**	**47**	P	**P**	**08 33 31.2**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
S22A	**4UR Ranch, Cre**	**89.09**	**308**	P	**P**	**08 33 34.2**	**+1.4**
	baz=91						
SMCO	**Snowmass**	**89.22**	**309**	P	**P**	**08 33 35.0**	**+1.5**
SMCO				IAmb	IAmb	08 33 36.2	
	comp=Z,7.1nm,0.8s						
121A	**Cookes Peak, D**	**89.83**	**302**	P	**P**	**08 33 35.9**	**-0.4**
121A	**Cookes Peak, D**	**89.83**	**302**	P	**P**	**08 33 37.2**	**+1.0**
	baz=90						
QSPA	**South Pole Qui**	**90.04**	**180**	LR	LR	09 10 11.6	
	comp=Z,77nm,18.2s,baz=217,slow=33						
O20A	**White River Ci**	**90.20**	**310**	P	**P**	**08 33 38.7**	**+0.9**
O20A				IAmb	IAmb	08 34 03.0	
	comp=Z,9.2nm,1.3s						
O20A	**White River Ci**	**90.20**	**310**	P	**P**	**08 33 38.7**	**+0.9**
	baz=90						
MVCO	**Mesa Verde**	**90.41**	**307**	P	**P**	**08 33 37.8**	**-1.2**
MVCO				IAmb	IAmb	08 34 05.0	
	comp=Z,11nm,1.2s						
PV13	**Radium Mtn., P**	**90.66**	**308**	P	**P**	**08 33 40.9**	**+0.8**
PV13				IAmb	IAmb	08 33 42.8	
	comp=Z,13nm,1.0s						
PV11	**David Mesa, Pa**	**90.70**	**308**	P	**P**	**08 33 40.0**	**-0.3**
PV23	**Carpenter Ridg**	**90.81**	**308**	P	**P**	**08 33 39.8**	**-1.1**
PV23				IAmb	IAmb	08 33 43.5	
	comp=Z,9.8nm,1.1s						
RLMT	**Red Lodge**	**90.92**	**315**	P	**P**	**08 33 39.3**	**-1.8**
PD31	**Pinedale Array**	**91.16**	**313**	P	**P**	**08 33 41.8**	**-0.5**
PDAR	**Pinedale Array**	**91.16**	**313**	P	**P**	**08 33 42.2**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=93,slow=5.4,SNR=9.5						
PDAR				LR	LR	09 10 10.2	
	comp=Z,162nm,19.7s,baz=94,slow=33						
	comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**91.16**	**313**	P	**P**	**08 33 41.6**	**-0.8**
RPN	**Rapa Nui**	**91.17**	**243**	LR	LR	09 10 34.0	
	comp=Z,133nm,20.0s,baz=88,slow=33						
P18A	**Preston Nutter**	**91.75**	**309**	P	**P**	**08 33 44.1**	**-1.1**
AAK	**Ala-Archa**	**91.86**	**48***i eP*		**P**	**08 33 43.2**	**-2.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SRU	**San Rafael Swe**	**91.98**	**309**	P	**P**	**08 33 46.4**	**+0.3**
SRU	**San Rafael Swe**	**91.98**	**309**	P	**P**	**08 33 46.4**	**+0.3**
SRU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SNOW	**Snow King Moun**	**92.02**	**313**	P	**P**	**08 33 46.0**	**-0.4**
REDW	**Red Top Meadow**	**92.10**	**313**	P	**P**	**08 33 46.4**	**-0.3**
REDW				IAmb	IAmb	08 34 10.4	
	comp=Z,6.3nm,1.2s						
JLU	**Jordanelle**	**92.64**	**310**	P	**P**	**08 33 49.3**	**+0.1**
YKA	**Yellowknife Ar**	**93.09**	**332**	P	**P**	**08 33 50.2**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=82,slow=4.4,SNR=2.1						
	comp=Z,0.9nm,0.8s						
MTPU	**Mount Pierson**	**93.32**	**308**	P	**P**	**08 33 53.3**	**+0.8**
MTPU				IAmb	IAmb	08 34 25.2	
	comp=Z,20nm,2.0s						
KURK	**Kurchatov**	**94.23**	**39***i eP*		**P**	**08 33 55.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ELK	**Elko**	**95.51**	**311**	LR	LR	09 11 19.4	
	comp=Z,173nm,20.2s,baz=90,slow=32						
R11A	**Troy Canyon, C**	**95.97**	**308**	P	**P**	**08 34 05.3**	**+0.8**
	baz=85						
NEW	**Newport**	**96.10**	**318**	LR	LR	09 12 28.9	
	comp=Z,137nm,19.2s,baz=68,slow=32						
BMO	**Blue Mountains**	**96.62**	**315**	P	**P**	**08 34 06.3**	**-0.9**
BMO	**Blue Mountains**	**96.62**	**315**	P	**P**	**08 34 06.3**	**-0.9**
BMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PFO	**Pinyon Flats O**	**97.06**	**304**	LR	LR	09 12 18.8	
	comp=Z,90nm,21.0s,baz=45,slow=32						
MKAR	**Makanchi Array**	**97.08**	**43**	PP	**PP**	**08 38 03.2**	**-1.7**
	comp=Z,0.7nm,0.9s,baz=298,slow=2.6,SNR=4.0						
TKX	**Tecate**	**97.27**	**303**	P	**P**	**08 34 09.0**	**-1.3**
ZALV	**Zalesovo Beam**	**97.56**	**36**	LR	LR	09 22 21.5	
	comp=Z,127nm,19.2s,baz=326,slow=38						
PALK	**Pallekele**	**98.64**	**83**	LR	LR	09 15 05.8	
	comp=Z,143nm,20.0s,baz=30,slow=33						
MOD	**Mcoc Plateau**	**99.17**	**312**	P	**Pdif**	**08 34 17.0**	**-1.8**
WMQ	**Urumqi**	**101.32**	**45**	*e*P	**Pdif**	**08 34 30.5**	**+2.3**
WMQ				pP	pwP	08 34 35.5	-2.2
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
BILL	**Bilibino**	**112.06**	**358**	*i e* PKIKP	**PKiKP**	**08 39 09.5**	**-2.3**
BILL						08 39 54.8	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,99nm,21.0s						
PZH	**PanZhiHua**	**116.41**	**60**	PKP	**PKPdf**	**08 39 20.8**	**-0.8**
HHC	**Hu-ho-hao-te**	**118.92**	**42**	*e*P	**PKPdf**	**08 39 21.8**	**-4.2**
PEA0B	**Petropavlovsk-**	**126.98**	**3**	*i*PKIKP	**PKPdf**	**08 39 39.5**	**-1.4**
NJ2	**Nanjing**	**128.31**	**48**	*e*P	**PKPdf**	**08 39 42.5**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**143.97**	**133**	PKP	PKPbc	08 40 11.3	+0.2
	comp=Z,1.6nm,0.7s,baz=224,slow=2.3,SNR=11						
WRA	**Warramunga Arr**	**146.42**	**128**	PKPbc	**PKPbc**	**08 40 18.6**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=239,slow=2.8,SNR=9.0						
WRAB	**Tennant Creek**	**146.43**	**128**	*i*PKP2	**PKPbc**	**08 40 18.9**	**0.0**

TIR **29** *08:30:31.1,38˚.88N×22˚.08E,h2km±8km,Ml3.9*
THE **29** *08:30:33.2,38˚.90N×22˚.03E,h7km,ML3.3/28,Error ellipse: s-maj=0.9km s-min=0.4km az=208.0*
ATH **29** *08:30:33.3,38˚.89N×21˚.97E,h15km±1km,ML3.4/10,Error ellipse: s-maj=1.2km s-min=0.7km az=296.0*
PDG **29** *08:30:34.5±0.1,38˚.60N×21˚.61E,h32km±30km,ML3.6/8, Error ellipse: s-maj=33.1km s-min=19.2km az=90.0*

ISC 29 08:30:33.2±0.8,**38˚.89N**±0˚.01×**22˚.03E**±0˚.01,**h12**km±5km, **n108,σ1§02/170,8C,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKR	**Makrakomi, Fth**	**0.15**	**32**	P	**Pb**	**08 30 37.6**	**-0.3**
MAKR				S	**Sb**	**08 30 41.1**	**+1.8**
MAKR				AML	AML	08 30 41.5	
MAKR				AML	AML	08 30 41.7	
	comp=N,76482μm,0.2s						
EVR	**Evrytania**	**0.17**	**280**	P	**Pg**	**08 30 36.8**	**-0.5**
EVR				S	**Sg**	**08 30 39.2**	**-0.9**
EVR	**Evrytania**	**0.17**	**280**	P	**Pg**	**08 30 36.8**	**-0.5**
EVR				S	**Sg**	**08 30 38.9**	**-1.2**
EVR				AML	AML	08 30 40.3	
	comp=N,51227μm,0.6s						
EVR				AML	AML	08 30 42.7	
	comp=E,33745μm,0.3s						
EFP	**Efpalio**	**0.47**	**192**	P	**Pg**	**08 30 42.6**	**+0.2**
SERG	**Sergoula**	**0.47**	**177**	P	**Pg**	**08 30 42.5**	**-0.1**
SERG				S	**Sb**	**08 30 49.6**	**-0.7**
SERG				AML	AML	08 30 51.9	
	comp=E,29455μm,0.5s						
SERG				AML	AML	08 30 52.2	
	comp=N,20531μm,0.4s						
PVO	**Paravola**	**0.48**	**236**	P	**Pg**	**08 30 41.8**	**-0.8**
PVO	**Paravola**	**0.48**	**236**	P	**Pg**	**08 30 41.8**	**-0.8**
PVO				S	**Sg**	**08 30 48.2**	**-0.8**
AXAR	**Agios Charalam**	**0.51**	**104**	P	**Pb**	**08 30 43.6**	**-0.4**
AXAR				S	**Sg**	**08 30 50.2**	**+0.3**
	comp=N,12μm,0.6s						
AXAR	**Agios Charalam**	**0.51**	**104**	P	**Pb**	**08 30 43.8**	**-0.2**
AXAR				S	**Sb**	**08 30 51.7**	**+0.4**
AXAR				AML	AML	08 30 51.9	
	comp=E,15481μm,0.3s						
AXAR				AML	AML	08 30 52.1	
	comp=N,29335μm,0.6s						
DLFA	**Delphi**	**0.55**	**138**	P	**Pg**	**08 30 43.8**	**-0.1**
DLFA				S	**Sb**	**08 30 52.7**	**+0.2**
ALIK	**Aliki, Aigiali**	**0.63**	**174**	P	**Pb**	**08 30 45.8**	**-0.3**
LAKA	**Lakka**	**0.65**	**184**	P	**Pg**	**08 30 45.4**	**-0.4**
LAKA				S	**Sb**	**08 30 55.6**	**+0.2**
	comp=N,4μm,0.8s						
LAKA	**Lakka**	**0.65**	**184**	P	**Pg**	**08 30 45.6**	**-0.2**
THL	**Klokotos Trika**	**0.68**	**359**	P	**Pg**	**08 30 45.5**	**-0.9**
THL				S	**Sg**	**08 30 55.3**	**0.0**
	comp=N,2μm,0.6s						
THL	**Klokotos Trika**	**0.68**	**359**	P	**Pg**	**08 30 45.8**	**-0.6**
THL				S	**Sg**	**08 30 55.4**	**+0.1**
THL				AML	AML	08 30 58.3	
	comp=E,3528μm,0.7s						
THL				AML	AML	08 30 58.9	
	comp=N,3083μm,0.3s						
LKR	**Lokris**	**0.79**	**107**	P	**Pg**	**08 30 47.8**	**-0.8**
LKR				S	**Sg**	**08 30 58.9**	**-0.1**
	comp=N,3μm,0.2s						
ATAL	**Atalanti**	**0.80**	**104**	P	**Pg**	**08 30 48.5**	**-0.1**
ATAL				S	**Sb**	**08 31 00.5**	**+0.8**
	comp=N,1μm,1.0s						
ATAL	**Atalanti**	**0.80**	**104**	P	**Pg**	**08 30 48.6**	**-0.1**
ATAL				S	**Sb**	**08 31 00.2**	**+0.4**
LRSO	**Larissa Observ**	**0.83**	**20**	P	**Pg**	**08 30 49.5**	**+0.2**
KLV	**Kalavryta, Ach**	**0.85**	**174**	P	**Pg**	**08 30 49.4**	**-0.2**
KLV				S	**Sb**	**08 31 01.6**	**+0.4**
	comp=N,1μm,0.7s						
KLV	**Kalavryta, Ach**	**0.85**	**174**	P	**Pg**	**08 30 49.3**	**-0.2**
KLV				S	**Sb**	**08 31 01.5**	**+0.4**
RLS	**Riolos of Patr**	**0.94**	**208**	P	**Pb**	**08 30 51.2**	**-0.2**
RLS				S	**Sn**	**08 31 05.7**	**+0.3**
	comp=N,1μm,0.6s						
RLS	**Riolos of Patr**	**0.94**	**208**	P	**Pb**	**08 30 51.2**	**-0.2**
RLS				S	**Sb**	**08 31 03.4**	**-0.3**
RLS				AML	AML	08 31 07.2	
	comp=N,2307μm,0.5s						
RLS				AML	AML	08 31 07.7	
	comp=E,1762μm,0.7s						
DRO	**Drossia**	**0.97**	**195**	P	**Pb**	**08 30 51.4**	**-0.4**
THAL	**Thalero**	**0.98**	**149**	P	**Pn**	**08 30 52.4**	**-0.4**
THAL				S	**Sg**	**08 31 05.4**	**+0.4**
	comp=E,4μm,0.8s						
THAL	**Thalero**	**0.98**	**149**	P	**Pn**	**08 30 52.7**	**-0.1**
NEO	**Neokhori**	**1.02**	**65**	P	**Pn**	**08 30 53.2**	**-0.1**
NEO				S	**Sb**	**08 31 06.0**	**-0.1**
NEO	**Neokhori**	**1.02**	**65**	P	**Pn**	**08 30 53.3**	**0.0**
NEO				S	**Sn**	**08 31 06.9**	**-0.6**
NEO				AML	AML	08 31 07.9	
	comp=E,2221μm,0.5s						
NEO				AML	AML	08 31 09.4	
	comp=N,3084μm,0.6s						
XOR	**Xorichti**	**1.02**	**62**	P	**Pb**	**08 30 52.8**	**0.0**
XOR				S	**Sn**	**08 31 06.9**	**-0.7**
	comp=N,2μm,0.7s						
XOR	**Xorichti**	**1.02**	**62**	P	**Pb**	**08 30 52.6**	**-0.2**
XOR				S	**Sn**	**08 31 07.5**	**-0.1**
XOR				AML	AML	08 31 11.0	
	comp=E,3982μm,0.6s						
XOR				AML	AML	08 31 13.7	
	comp=N,4844μm,0.9s						
NYDR	**Nydri-Lefkada**	**1.05**	**261**	P	**Pb**	**08 30 52.6**	**-0.7**
NYDR				S	**Sn**	**08 31 08.3**	**0.0**
	comp=N,625nm,0.6s						
TSLK	**Tsoukalades, L**	**1.07**	**267**	P	**Pb**	**08 30 53.1**	**-0.6**
TSLK				S	**Sn**	**08 31 08.5**	**-0.3**
	comp=N,802nm,0.6s						
LKD2	**Lefkada island**	**1.08**	**265**	P	**Pb**	**08 30 52.9**	**-0.8**
LKD2				S	**Sn**	**08 31 09.3**	**+0.4**
	comp=N,935nm,1.1s						
LKD2	**Lefkada island**	**1.08**	**265**	P	**Pb**	**08 30 53.4**	**-0.3**
	baz=266						
LKD2				S	**Sn**	**08 31 08.9**	**0.0**
	baz=266						
LKD2	**Lefkada island**	**1.08**	**265**	P	**Pb**	**08 30 52.9**	**-0.8**
EVGI	**Lefkada island**	**1.11**	**257**	P	**Pb**	**08 30 53.3**	**-0.9**
DRAG	**Dragano-Lefkad**	**1.16**	**260**	P	**Pn**	**08 30 54.2**	**-0.9**
DRAG				S	**Sg**	**08 31 12.4**	**+1.9**
LOUT	**Loutraki**	**1.17**	**140**	P	**Pg**	**08 30 55.4**	**-0.2**
LOUT				S	**Sg**	**08 31 12.0**	**+1.2**
	comp=N,1μm,0.7s						
LOUT	**Loutraki**	**1.17**	**140**	P	**Pg**	**08 30 55.7**	**+0.1**
VIL2	**Platees**	**1.18**	**124**	P	**Pg**	**08 30 56.3**	**+0.3**
VIL2				S	**Sg**	**08 31 13.1**	**+1.8**
VIL2				AML	AML	08 31 18.4	
	comp=N,2571μm,0.7s						
VIL2				AML	AML	08 31 21.0	
	comp=E,4089μm,0.8s						
JAN	**Janina**	**1.20**	**310**	P	**Pn**	**08 30 53.6**	**-2.1**
JAN				S	**Sg**	**08 31 13.0**	**+1.2**
	comp=E,1μm,0.6s						
JAN	**Janina**	**1.20**	**310**	P	**Pn**	**08 30 53.6**	**-2.1**
VILL	**Villia**	**1.24**	**125**	P	**Pb**	**08 30 56.3**	**-0.2**
VILL				S	**Sg**	**08 31 13.6**	**+0.5**
	comp=E,2μm,0.8s						
LIT	**Litokhoron**	**1.26**	**16**	P	**Pn**	**08 30 56.1**	**-0.6**
LIT				S	**Sn**	**08 31 13.3**	**-0.3**
	comp=E,3μm,0.7s						
LIT	**Litokhoron**	**1.26**	**16**	P	**Pn**	**08 30 56.5**	**-0.2**
LIT				S	**Sn**	**08 31 13.2**	**-0.4**
VLS	**Valsamata**	**1.33**	**238**	P	**Pn**	**08 30 56.6**	**-1.0**
VLS				S	**Sg**	**08 31 17.3**	**+1.1**
	comp=E,515nm,0.5s						
PSDA	**Pessada-Kefalo**	**1.37**	**236**	P	**Pn**	**08 30 57.3**	**-0.8**
KEF4	**Livadi, Kephal**	**1.41**	**244**	P	**Pn**	**08 30 58.3**	**-0.

SRN				AMP			
	comp=E,0.6nm,1.0s,baz=303						
HORT	**Hortiatis**	**1.90**	**25**	P	**Pn**	**08 31 04.7**	**-0.7**
HORT				S	**Sn**	**08 31 27.6**	**-1.7**
KEK	**Kerkira**	**1.92**	**296**	P	**Pb**	**08 31 07.3**	**-0.8**
KBN	**Korca**	**1.98**	**331**	P	**Pb**	**08 31 10.2**	**+1.0**
	baz=331						
KBN				S	**Sg**	**08 31 36.9**	**0.0**
	baz=331						
KBN				AMP			
	comp=N,1.8nm,0.8s,baz=331						
SOH	**Sokhos**	**2.18**	**27**	P	**Pn**	**08 31 09.4**	**+0.1**
VLI	**Veliai**	**2.28**	**161**	P	**Pn**	**08 31 11.2**	**+0.6**
VLI				S	**Sn**	**08 31 39.0**	**+0.4**
	comp=N,292nm,0.7s						
KNT	**Kendrikon**	**2.37**	**16**	P	**Pn**	**08 31 12.2**	**+0.4**
VLO	**Vlora**	**2.51**	**310**	P	**Pb**	**08 31 18.7**	**+0.5**
	baz=310						
VLO				S	**Sg**	**08 31 53.7**	**-0.3**
	baz=310						
VLO				AMP			
	comp=E,1.7nm,0.6s,baz=310						
KTHR	**Kythira**	**2.73**	**163**	P	**Pn**	**08 31 18.7**	**+1.8**
TIR	**Tirane**	**2.97**	**327**	P	**Pb**	**08 31 25.3**	**-0.6**
	baz=327						
TIR				S	**Sb**	**08 32 03.1**	**+1.0**
	baz=327						
MMB	**Musomiste**	**3.00**	**25**	*e*P	**Pn**	**08 31 20.4**	**-0.1**
SCTE	**Santa Cesarea**	**3.00**	**294**	P	**Pn**	**08 31 22.8**	**+2.3**
	baz=295						
PHP	**Peshkopia**	**3.05**	**337**	P	**Pb**	**08 31 24.3**	**-3.1**
	baz=337						
PHP				S	**Sb**	**08 32 02.7**	**-1.8**
	baz=337						
KKB	**Krupnik**	**3.08**	**15**	*e*P	**Pn**	**08 31 21.8**	**+0.1**
BCI	**Bajram Curri**	**3.78**	**337**	P	**Pn**	**08 31 33.8**	**+2.6**
	baz=337						
KDZ	**Kurdzhali**	**3.79**	**42**	*e*P	**Pn**	**08 31 27.3**	**-4.0**
DRME	**Dracevica, Mon**	**3.94**	**328**	⇑*i*Pn	**Pn**	**08 31 35.4**	**+1.9**
DRME				*i* Sn	**Sn**	**08 32 21.2**	**+1.5**
PVY	**Plav**	**4.02**	**338**	⇑*i*Pn	**Pn**	**08 31 37.4**	**+2.7**
PVY				*i* Sn	**Sn**	**08 32 24.8**	**+3.0**
BUM	**Brajici-Budva**	**4.16**	**326**	⇑*i*Pn	**Pn**	**08 31 38.3**	**+1.8**
BUM				*i* Sn	**Sn**	**08 32 26.0**	**+0.9**
CEME	**Cevo**	**4.35**	**328**	⇑*i*Pn	**Pn**	**08 31 41.0**	**+1.8**
CEME				*i* Sn	**Sn**	**08 32 30.9**	**+1.1**
KOME	**Kolasin**	**4.39**	**335**	⇑*i*Pn	**Pn**	**08 31 42.4**	**+2.7**
KOME				*i* Sn	**Sn**	**08 32 33.1**	**+2.2**
HCY	**Herceg Novi**	**4.46**	**324**	⇑*i*Pn	**Pn**	**08 31 42.1**	**+1.6**
HCY				*i* Sn	**Sn**	**08 32 32.8**	**+0.5**
DBRK	**Dubrovnik**	**4.79**	**323**	*e*Pn	**Pn**	**08 31 44.2**	**-0.9**
BRY	**Bratogost**	**4.80**	**328**	⇑*i*Pn	**Pn**	**08 31 47.2**	**+1.8**
BRY				*i* Sn	**Sn**	**08 32 41.7**	**+0.7**
UPM	**Unac-Piva**	**4.92**	**332**	⇑*i*Pn	**Pn**	**08 31 49.3**	**+2.3**
UPM				*i* Sn	**Sn**	**08 32 45.2**	**+1.3**
STON	**Ston**	**5.16**	**322**	*e*Pn	**Pn**	**08 31 49.9**	**-0.2**
LSTV	**Lastovo**	**5.50**	**316**	*e*Pn	**Pn**	**08 31 54.5**	**-0.3**
RICI	**Ricice**	**5.90**	**323**	*e*Pn	**Pn**	**08 32 01.3**	**+1.0**
HVAR	**Hvar**	**6.01**	**317**	*e*Pn	**Pn**	**08 32 02.0**	**+0.1**
KIJV	**Kijevo**	**6.63**	**322**	*e*Pn	**Pn**	**08 32 11.2**	**+0.8**
MORI	**Morici**	**6.88**	**318**	*e*Pn	**Pn**	**08 32 13.6**	**-0.2**
DUGI	**Dugi Otok**	**7.31**	**316**	*e*Pn	**Pn**	**08 32 19.6**	**-0.1**

JMA 29 08:49:22.6±0.2, **32°0N**±0°6×**13°2E**±°, **h36**km±1km, **MV0.9**/20, **HYUGANADA REGION, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.26**	**322**	P	Pn	08 49 29.9	-0.7
JTSN				*e*S	Sn	08 49 35.5	-1.8
JHHC	**Hyugahichiya**	**0.41**	**353**	*e*P	Pn	08 49 31.9	+0.1
JZO	**Okuchi**	**0.94**	**277**	*e*P	Pn	08 49 40.0	+0.7

JMA 29 08:49:43.5±0.0, **32°9N**±0°1×**131°0E**±0°1, **h10**km, **MV1.0**/32, **NE KUMAMOTO PREF, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTA	**Tamana**	**0.37**	**277**	P	Pg	08 49 51.0	+0.2
JTA				*e*S	Sg	08 49 56.2	+0.5
JIU3	**Izumi3**	**0.39**	**200**	*e*S	Pg	08 49 51.3	+0.1
JIU3	**Izumi3**	**0.39**	**200**	*e*P	Pg	08 49 51.3	+0.1
JIU3				*e*S	Sg	08 49 57.0	+0.7

IDC ***29*** *08:54:39.9*±*1.6, 35°.30N*×*141°.16E, h0*km*, mb3.5/2, mbtmp3.4/3, ML2.3/1, Error ellipse: s-maj=40.7km s-min=33.8km az=91.0*

JMA ***29*** *08:54:44.6*±*0.2, 35°.5N*±*0°.5*×*141°.0E*±*0°.9, h41*km±1km*, MV3.1/36, NEAR CHOSHI CITY*

ISC 29 08:54:44.7±1.1, **35°49N**±0°.05×**140°98E**±0°.08, **h33**km, **n20, σ0§61/17, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.24**	**335**	*i* P	**Pb**	**08 54 51.9**	**+0.2**
CHOJ				S	**Sb**	**08 54 57.0**	**+0.5**
JSMT	**Sammumatsuo**	**0.46**	**290**	P	**Pb**	**08 54 54.7**	**0.0**
JSMT				S	**Sn**	**08 55 02.0**	**0.0**
JIHU	**Itakohorinouch**	**0.60**	**322**	P	**Pn**	**08 54 56.8**	**-0.2**
JCN	**Nagara**	**0.64**	**264**	P	**Pb**	**08 54 57.9**	**+0.4**
KTR	**Katsuura**	**0.64**	**238**	P	**Pb**	**08 54 57.9**	**+0.4**
BSO4	**Boso 4**	**0.72**	**227**	P	**Pb**	**08 54 58.9**	**0.0**
BSO3	**Boso 3**	**0.78**	**210**	P	**Pn**	**08 54 59.3**	**+0.1**
BSO1	**Boso 1**	**0.83**	**180**	P	**Pn**	**08 55 00.0**	**+0.4**
JYT	**Yasato**	**0.98**	**319**	*i* P	**Pn**	**08 55 01.5**	**-0.6**
JYT				*e*S	**Sn**	**08 55 14.1**	**-0.7**
JIM2	**Oshima 3**	**1.48**	**239**	P	**Pn**	**08 55 08.6**	**-0.5**
JOD2	**Odawara 2**	**1.56**	**262**	P	**Pn**	**08 55 10.2**	**+0.1**
MJAR	**Matsushiro Arr**	**2.48**	**296**	Pn	**Pn**	**08 55 24.1**	**+1.3**
	0.5nm,0.3s,baz=107,slow=15,SNR=20 4.2nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**27.70**	**118**	T	T	09 29 37.9	
	baz=310,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**27.71**	**118**	T	T	09 29 39.5	
	baz=310,slow=75,SNR=28						
H11N3	**WAKE ISLAND Hy**	**27.72**	**118**	T	T	09 29 36.8	
	baz=310,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.35**	**120**	T	T	09 30 24.8	
	baz=312,slow=75,SNR=61						
H11S3	**WAKE ISLAND Hy**	**28.35**	**120**	T	T	09 30 24.8	
	baz=312,slow=75,SNR=52						
H11S2	**WAKE ISLAND Hy**	**28.37**	**120**	T	T	09 30 21.3	
	baz=312,slow=75,SNR=34						
ILAR	**Eielson Array**	**50.99**	**32**	P	**P**	**09 03 43.5**	**+0.6**
	0.3nm,0.7s,baz=278,slow=6.4,SNR=5.1 0.3nm,0.7s						
WRA	**Warramunga Arr**	**55.48**	**188**	P	**P**	**09 04 15.3**	**-1.1**
	0.7nm,0.7s,baz=4.0,slow=7.8,SNR=4.9 0.7nm,0.7s						

IDC ***29*** *08:55:02.8*±*2.3, 0°.80S*×*126°.90E, h98*km±*24*km*, mb3.7/8, mbtmp4.1/10, MS4.0/1, Error ellipse: s-maj=18.9km s-min=15.3km az=89.0*

DJA ***29*** *08:55:02.0*±*0.4, 1°.5*±*2°*×*12°.7E*±°, *h39*km±*13*km*, M4.6/17, mb4.9/6, mB5.3/7, MLv4.3/17, Mw(mB)4.7/7*

ISC 29 08:55:00.2±0.9, **0°83S**±0°.06×**126°83E**±0°.05, **h50**km, **n26, σ2§25/26, mb4.0/7, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.70**	**74**	P	**Pn**	**08 55 16.2**	**+2.2**
LBMI				S	**Sn**	**08 55 26.9**	**+2.9**
SANI	**Sanana**	**1.47**	**215**	P	**Pn**	**08 55 25.9**	**+1.5**
SANI				S	**Sn**	**08 55 43.1**	**+0.5**
TNTI	**Ternate**	**1.68**	**19**	P	**Pn**	**08 55 28.1**	**+0.9**
TNTI				S	**Sn**	**08 55 48.4**	**+0.8**
NLAI	**Namlea**	**2.41**	**173**	P	**Pn**	**08 55 39.4**	**+2.2**
MSAI	**Masohi**	**3.27**	**140**	P	**Pn**	**08 55 51.6**	**+2.6**
LUWI	**Luwuk**	**4.06**	**267**	P	**Pn**	**08 56 01.7**	**+1.9**
GTOI	**Gorontalo**	**4.08**	**291**	P	**Pn**	**08 56 04.2**	**+4.0**
SWI	**Sorong**	**4.43**	**90**	P	**Pn**	**08 56 07.1**	**+2.1**
SIJI	**Sorong**	**4.44**	**91**	P	**Pn**	**08 56 07.0**	**+1.8**
	9.0nm,0.2s,baz=185,slow=22,SNR=18			S	**Sn**	**08 56 57.3**	**+1.7**
SIJI	13nm,0.4s,baz=301,slow=24,SNR=6.2						
APSI	**Ampana**	**5.18**	**269**	P	**Pn**	**08 56 16.7**	**+1.5**
	4.2nm24µm287nm,0.4s						
BBSI	**Bau Bau**	**6.28**	**222**	P	**Pn**	**08 56 32.4**	**+2.0**
	0.1nm12nm,0.8s						
TTSI	**Tana Toraja**	**7.34**	**252**	P	**Pn**	**08 56 46.8**	**+1.9**
SPSI	**Sidrap Palu**	**7.71**	**246**	P	**Pn**	**08 56 51.8**	**+1.9**
	3.3nm16µm583nm,0.6s						
BKSI	**Bulukumba**	**8.04**	**236**	P	**Pn**	**08 56 56.4**	**+1.9**
	1µm99nm,0.6s						
KAPI	**Kappang**	**8.20**	**239**	P	**Pn**	**08 57 00.6**	**+4.0**
	30nm,0.3s,baz=38,slow=4.7,SNR=17						
KAPI				S	**Sn**	**08 58 27.3**	**-0.7**
	23nm,0.4s,baz=150,slow=23,SNR=7.6						
BSSI	**Bau Bau, Buton**	**8.24**	**230**	P	**Pn**	**08 56 59.1**	**+1.9**
	981nm49nm,0.8s						
EDFI	**Ende, Flores**	**9.38**	**213**	P	**Pn**	**08 57 14.9**	**+1.9**
WRA	**Warramunga Arr**	**20.37**	**159**	P	**P**	**08 59 30.6**	**-2.3**
	2.8nm,0.5s,baz=337,slow=11,SNR=29 2.8nm,0.5s						
ASAR	**Alice Springs**	**23.72**	**164**	P	**P**	**09 00 06.2**	**-1.7**
	5.1nm,0.4s,baz=343,slow=9.7,SNR=111 5.1nm,0.4s						
STKA	**Stephens Creek**	**33.89**	**157**	P	**P**	**09 01 37.0**	**-1.4**
	5.8nm,0.8s,baz=320,slow=8.9,SNR=11 5.8nm,0.8s						
KSRS	**Korea Array**	**38.10**	**1**	P	P	09 02 11.7	-2.6
	2.3nm,0.9s,baz=176,slow=9.3,SNR=3.1 2.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**45.07**	**5**	P	P	09 03 08.4	-2.8
	1.2nm,0.7s,baz=180,slow=7.4,SNR=4.1 1.2nm,0.7s						
SONM	**Songino Array**	**51.63**	**343**	P	P	09 03 59.1	-2.8
	0.5nm,0.5s,baz=148,slow=8.1,SNR=2.4 0.5nm,0.5s						
RPZ	**Rata Peaks**	**58.03**	**143**	LR	LR	09 28 56.4	
	comp=Z,148nm,20.4s,baz=155,slow=35						
PETK	**Petropavlovsk-**	**59.60**	**21**	P	**P**	**09 04 56.3**	**-2.6**
	0.8nm,0.6s,baz=198,slow=9.3,SNR=3.5 0.8nm,0.6s						
MKAR	**Makanchi Array**	**61.36**	**327**	P	P	09 05 08.3	-2.8
	0.5nm,0.4s,baz=117,slow=8.1,SNR=5.2 0.5nm,0.4s						

NNC 29 08:55:19.8±1.8, **54°36N**×**86°30E, h0**km, **mb3.7, mpv2.7, 4C-2D, Error ellipse: s-maj=10.0km s-min=7.8km az=62.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.97**	**245**	⇑P	Pg	08 55 38.0	-0.2
	0.2nm,0.3s,baz=64,slow=17						
ZAA0				⇓S	Sb	08 55 51.8	-0.9
	2.0nm,0.5s,baz=64,slow=26						
KURK	**Kurchatov**	**5.94**	**235**	⇓Pn	Pn	08 56 50.6	+1.7
	2.5nm,0.8s						
KURK				⇑Lg	Lg	08 58 29.3	
	3.5nm,0.9s						
KURBB	**Kurchatov Arra**	**6.04**	**235**	⇑Pn	Pn	08 56 52.1	+1.7
	2.7nm,0.8s,baz=53,slow=14						
KURBB				⇑Lg	Lg	08 58 31.5	
	8.6nm,0.7s						

IDC 29 09:45:18.4±3.0, **54°13N**×**87°12E, h0**km, **mbtmp2.9**/2, **ML2.6**/2, **Error ellipse: s-maj=28.1km s-min=17.3km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.37**	**263**	*i*		09 54 30.0	
	baz=83,slow=325,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.37**	**263**	Pg	Pg	09 45 43.0	-1.6
	1.0nm,0.3s,baz=81,slow=17,SNR=9.8						
ZALV				Lg	Lg	09 46 02.0	
	1.8nm,0.3s,baz=81,slow=28,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.33**	**240**	Pn	Pn	09 46 53.8	+0.9
	0.1nm,0.3s,baz=55,slow=14,SNR=6.4 0.6nm,0.4s						
MKAR	**Makanchi Array**	**7.96**	**205**	Pn	Pn	09 47 16.6	+1.2
	0.2nm,0.3s,baz=26,slow=13,SNR=6.6						
MKAR				Lg	Lg	09 49 31.2	
	0.1nm,0.3s,baz=24,slow=28,SNR=2.1 0.3nm,0.4s						

NEIC ***29*** *09:47:33.2*±*2.8, 5°.82S*×*0°.06*×*130°.57E*±*0°.08, h92*km±*10*km*, mb4.3/15, Error ellipse: s-maj=11.9km s-min=8.6km az=86.0*

DJA ***29*** *09:47:33.0*±*0.2, 6°S*±*2°*×*13°1E*±°, *h129*km±*6*km*, M4.5/12, mb4.6/8, mB5.1/7, MLv4.5/12, Mw(mB)4.4/7*

IDC ***29*** *09:47:33.3*±*0.8, 5°.89S*×*130°.33E, h93*km±*6*km*, mb3.9/10, mbtmp4.3/12, Error ellipse: s-maj=32.1km s-min=13.6km az=64.0*

ISC 29 09:47:33.2±0.5, **5°87S**±0°.04×**130°60E**±0°.06, **h100**km, **n59, σ1§38/60, mb4.2/15, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.51**	**333**	P	**Pn**	**09 48 01.0**	**+1.4**
BNDI				S	**Sn**	**09 48 23.5**	**+3.9**
SAUI	**Saumlaki**	**2.21**	**162**	P	**Pn**	**09 48 10.6**	**+2.0**
SAUI	**Saumlaki**	**2.21**	**162**	P	**Pn**	**09 48 10.3**	**+1.7**
SAUI				S	**Sn**	**09 48 37.8**	**+2.2**
MSAI	**Masohi**	**3.01**	**326**	P	**Pn**	**09 48 21.3**	**+2.2**
MSAI				S	**Sn**	**09 48 56.5**	**+2.0**
AAI	**Ambon**	**3.23**	**312**	P	**Pn**	**09 48 23.5**	**+1.4**
FAKI	**Fak Fak**	**3.37**	**29**		**Pn**	**09 48 24.3**	**+0.4**
FAKI	**Fak Fak**	**3.37**	**29**	P	**Pn**	**09 48 24.2**	**+0.3**
NLAI	**Namlea**	**4.36**	**307**	P	**Pn**	**09 48 38.9**	**+1.6**
SIJI	**Sorong**	**5.01**	**8**	P	**Pn**	**09 48 46.1**	**-0.1**
	80nm,0.3s,baz=31,slow=20,SNR=80						
SIJI				S	**Sn**	**09 49 39.6**	**-3.4**
	195nm,0.2s,baz=237,slow=23,SNR=17						
SWI	**Sorong**	**5.02**	**8**	P	**Pn**	**09 48 45.6**	**-0.7**
SANI	**Sanana**	**5.96**	**309**	P	**Pn**	**09 49 00.1**	**+1.1**
	0.2nm750nm28nm,0.5s						
LBMI	**Labuha**	**6.05**	**329**	P	**Pn**	**09 49 00.7**	**+0.5**
	0.2nm819nm54nm,0.6s						
MTN	**Manton Dam**	**6.95**	**176**	Pn	**Pn**	**09 49 11.7**	**-0.7**
BAKI	**Biak**	**7.20**	**50**	P	**Pn**	**09 49 16.3**	**+0.4**
BATI	**Baumata**	**8.10**	**237**	P	**Pn**	**09 49 28.9**	**+0.7**
	62nm,0.6s,baz=100,slow=2.4,SNR=10						
BATI				S	**Sn**	**09 50 57.7**	**-0.5**
	49nm,0.5s,baz=335,slow=17,SNR=5.7						
BATI	**Baumata**	**8.10**	**237**	P	**Pn**	**09 49 28.4**	**+0.2**
	49nm,0.4s						
KNRA	**Kunuurra**	**9.91**	**190**		**Pn**	**09 49 50.0**	**-2.7**
FITZ	**Fitzroy Crossi**	**13.08**	**201**	P	**Pn**	**09 50 31.1**	**-4.1**
	9.6nm,0.4s,baz=34,slow=8.9,SNR=38						
FITZ				S	Sn	09 52 45.4	-14
	11nm,0.3s,baz=82,slow=17,SNR=7.5						
WB0	**Warramunga Arr**	**14.30**	**165**	Pn	Pn	09 50 46.5	-4.6
WRAB	**Tennant Creek**	**14.45**	**166**	Pn	Pn	09 50 48.4	-4.6
WRA	**Warramunga Arr**	**14.45**	**166**	P	Pn	09 50 48.2	-4.9
	9.9nm,0.5s,baz=349,slow=13,SNR=92						
WRA				S	Sn	09 53 19.0	-13
	8.4nm,0.8s,baz=346,slow=21,SNR=7.2						
WRA	**Warramunga Arr**	**14.45**	**166**		Pn	09 50 46.8	-6.2
WB2	**Warramunga Arr**	**14.46**	**166**	Pn	Pn	09 50 48.6	-4.5
WR0	**Warramunga Arr**	**14.52**	**165**		Pn	09 50 49.3	-4.6
COEN	**Coen**	**14.76**	**124**	Pn	**Pn**	**09 50 56.9**	**-0.1**
AS31	**Alice Springs**	**17.98**	**170**	P	**P**	**09 51 35.6**	**-0.4**
AS31				IAmb	IAmb	09 51 38.4	
	comp=Z,6.6nm,0.5s						
ASAR	**Alice Springs**	**17.98**	**170**	P	**P**	**09 51 35.2**	**-0.7**
	comp=Z,7.6nm,0.6s,baz=339,slow=8.8,SNR=173						
ASAR				S	S	09 54 46.3	-11
	comp=Z,4.0nm,0.8s,baz=329,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**17.98**	**170**	P	**P**	**09 51 35.9**	**0.0**
MBWA	**Marble Bar**	**18.49**	**214**	P	**P**	**09 51 41.9**	**+0.3**
KKM	**Kota Kinabalu**	**18.61**	**309**	P	**P**	**09 51 42.6**	**-0.4**
KKM				IAmb	IAmb	09 52 11.7	
	comp=Z,16nm,1.0s						
PSA00	**Pilbara Seismi**	**18.76**	**213**		**P**	**09 51 44.5**	**-0.1**
PSA00				IAmb	IAmb	09 52 04.7	
	comp=Z,11nm,1.0s						
SBUM	**Sibu**	**20.13**	**294**	P	**P**	**09 51 59.9**	**+0.4**
CTA	**Charters Tower**	**20.77**	**134**	P	Pn	09 52 09.7	+0.1
	comp=Z,4.3nm,0.6s,baz=318,slow=10,SNR=6.4 comp=Z,4.3nm,0.6s						
CTAO	**Charters Tower**	**20.77**	**134**	P	**P**	**09 52 08.0**	**+1.7**
CTAO				IAmb	IAmb	09 52 10.6	
	comp=Z,9.4nm,0.9s						
FORT	**Forrest**	**24.89**	**185**	P	**P**	**09 52 48.5**	**+1.7**
FORT				IAmb	IAmb	09 53 12.3	
	comp=Z,22nm,0.9s						
BBOO	**Buckleboo**	**27.28**	**170**	P	**P**	**09 53 08.2**	**-0.1**
BBOO				IAmb	IAmb	09 53 49.3	
	comp=Z,24nm,1.4s						
STKA	**Stephens Creek**	**27.84**	**160**	P	**P**	**09 53 14.2**	**+0.9**
	comp=Z,1.4nm,0.4s,baz=328,slow=8.9,SNR=13 comp=Z,1.4nm,0.4s						
STKA	**Stephens Creek**	**27.84**	**160**	P	**P**	**09 53 14.1**	**+0.8**
CAN	**Canberra**	**33.86**	**152**	P	**P**	**09 54 07.7**	**+1.3**
TOO	**Toolangi**	**34.35**	**159**	P	**P**	**09 54 10.5**	**0.0**
TOO				IAmb	IAmb	09 54 25.7	
	comp=Z,8.2nm,1.2s						
NJ2	**Nanjing**	**39.34**	**344**	*e*P	**P**	**09 54 53.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CM31	**Chiang Mai Arr**	**39.48**	**308**	P	**P**	**09 54 52.0**	**-2.2**
CMAR	**Chiang Mai Arr**	**39.48**	**308**	P	**P**	**09 54 52.6**	**-1.7**
	comp=Z,2.8nm,0.3s,baz=140,slow=7.7,SNR=9.8 comp=Z,2.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.48**	**308**	P	**P**	**09 54 53.9**	**-0.4**
USRK	**Ussuriysk Ar.**	**49.86**	**1**	P	**P**	**09 56 17.2**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=170,slow=8.4,SNR=4.9 comp=Z,1.6nm,0.6s						
PEA0B	**Petropavlovsk-**	**63.08**	**18**	P	**P**	**09 57 50.6**	**+0.8**
PETK	**Petropavlovsk-**	**63.08**	**18**	P	**P**	**09 57 50.7**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=187,slow=5.6,SNR=4.8 comp=Z,1.1nm,0.6s						
MK31	**Makanchi Array**	**67.62**	**326**	P	**P**	**09 58 19.9**	**+0.5**
MK31				IAmb	IAmb	09 58 20.8	
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**67.62**	**326**	P	**P**	**09 58 20.0**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=115,slow=7.5,SNR=41						
MKAR				pP	**pP**	**09 58 43.7**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=123,slow=7.6,SNR=5.0 comp=Z,1.8nm,0.3s						
MKAR	**Makanchi Array**	**67.62**	**326**		**P**	**09 58 19.4**	**+0.1**
MAKZ	**Makanchi**	**67.80**	**326**	P	**P**	**09 58 20.7**	**+0.2**
MAKZ				IAmb	IAmb	09 58 21.9	
	comp=Z,3.8nm,1.0s						
ZALV	**Zalesovo Beam**	**70.84**	**333**	P	**P**	**09 58 38.6**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=100,slow=6.3,SNR=5.0						
ZALV				pP	**pP**	**09 59 02.4**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=116,slow=6.6,SNR=1.2 comp=Z,1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**71.87**	**328**	P	**P**	**09 58 45.5**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=127,slow=4.8,SNR=23						
KURBB				pP	**pP**	**09 59 09.4**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=127,slow=5.4,SNR=5.5 comp=Z,1.8nm,0.5s						
BVAR	**Borovoye Array**	**77.43**	**328**	P	**P**	**09 59 17.6**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=122,slow=5.6,SNR=5.6 comp=Z,0.9nm,0.4s						
AKTO	**Aktyubinsk**	**83.55**	**322**	P	**P**	**09 59 50.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=93,slow=14,SNR=4.5 comp=Z,1.5nm,0.7s						
TXAR	**Lajitas Array**	**123.84**	**59**	PKP	**PKiKP**	**10 06 21.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=200,slow=2.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**129.16**	**282**	PKP	**PKPdf**	**10 06 31.0**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=7.0,slow=0.6,SNR=1.9						
CPUP	**Villa Florida**	**147.08**	**167**	PKPbc	**PKPab**	**10 07 06.3**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=207,slow=7.6,SNR=3.6						
LPAZ	**La Paz**	**151.22**	**140**	PKPbc	**PKiKP**	**10 07 18.2**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=27,slow=4.5,SNR=10						

WEL 29 09:50:13.1±0.6, **43°S**±2°×**17°3E**±°, **h7**km±4km, **M3.5**/8, **ML3.6**/9, **MLv3.5**/8, **Error ellipse: s-maj=0.0km s-min=0.0km az=103.9, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.27**	**213**	P	Pg	09 50 18.9	+0.4
MQZ				S	Sg	09 50 22.8	+0.6
OKCZ	**Okains Bay**	**0.29**	**149**	P	Pb	09 50 19.9	-0.7
OKCZ				S	Sg	09 50 24.1	+1.5
AMCZ	**Amberley**	**0.34**	**333**	P	Pg	09 50 20.4	+0.6
AMCZ				S	Sb	09 50 25.8	-1.2
AKCZ	**Akaroa Harbour**	**0.40**	**174**	P	Pb	09 50 21.7	-0.8
AKCZ				S	Sb	09 50 27.6	-1.1
GVZ	**Greta Valley S**	**0.53**	**14**	P	Pb	09 50 24.3	-0.4
GVZ				S	Sb	09 50 32.3	-0.2
RACZ	**Rakaia**	**0.58**	**244**	P	Pg	09 50 24.9	+0.6
RACZ				S	Sb	09 50 33.2	-0.7
OXZ	**Oxford**	**0.62**	**284**	P	Pg	09 50 25.1	+0.1
OXZ				S	Sb	09 50 34.4	-0.6
LTZ	**Lake Taylor**	**0.82**	**328**	P	Pg	09 50 29.2	+0.4
LTZ				S	Sg	09 50 40.1	+0.7
WACZ	**Wakanui South**	**0.87**	**237**	P	Pb	09 50 30.4	-0.2
WACZ				S	Sb	09 50 42.6	+0.2
MHCZ	**Mount Hutt**	**0.94**	**266**	P	Pb	09 50 32.1	+0.4
MHCZ				S	Sb	09 50 44.1	-0.4
KHZ	**Kahutara**	**1.17**	**25**	P	Pg	09 50 34.2	-1.5
KHZ				S	Sg	09 50 50.5	-0.3
INZ	**Inchbonnie**	**1.28**	**306**	P	Pn	09 50 36.0	-1.4
ARCZ	**Arundel**	**1.31**	**248**	P	Pn	09 50 36.1

SGF					*e*S		**Sg**	**10 00 17.2**	**+1.2**
HEF	**Hetta**	**0.92**	**302**		*e*P		**Pb**	**10 00 16.1**	**-0.4**
HEF					*e*S		**Sb**	**10 00 29.2**	**-0.1**
HEF	**Hetta**	**0.92**	**302**		*e*P		**Pb**	**10 00 16.3**	**-0.3**
	baz=122								
HEF					MSG			10 00 27.9	
	comp=Z,5.1nm,0.2s								
HEF					*e*SB		**Sb**	**10 00 29.1**	**-0.2**
KLF	**Kolari**	**0.99**	**226**		*e*P		**Pb**	**10 00 17.4**	**-0.2**
	baz=39								
KLF					*e*S		**Sb**	**10 00 30.3**	**-0.9**
RNF	**Rovaniemi**	**1.34**	**176**		*e*P		**Pn**	**10 00 23.5**	**0.0**
	baz=357								
RNF					*e*S		**Sb**	**10 00 40.9**	**-0.3**
PAJU	**Pajala**	**1.38**	**230**		P		**Pb**	**10 00 24.3**	**+0.1**
PAJU					S		**Sn**	**10 00 43.2**	**+0.3**
PAJU	**Pajala**	**1.38**	**230**		*e*P		**Pb**	**10 00 24.5**	**+0.3**
PAJU					*e*SB		**Sn**	**10 00 43.3**	**+0.3**
KTK1	**Kautokeino**	**1.43**	**320**		*e*P		**Pb**	**10 00 25.4**	**+0.3**
KTK1					*e*S		**Sn**	**10 00 44.7**	**+0.4**
KTK1					IAML			10 00 48.8	
	comp=Z,4.5nm,0.1s								
KTK1	**Kautokeino**	**1.43**	**320**		*e*PG		**Pb**	**10 00 25.5**	**+0.3**
KTK1					*e*SN		**Sn**	**10 00 45.0**	**+0.6**
LANU	**Lannavaara**	**1.43**	**276**		P		**Pb**	**10 00 25.4**	**+0.2**
LANU	**Lannavaara**	**1.43**	**276**		*e*P		**Pb**	**10 00 25.1**	**-0.2**
LANU					*e*SB		**Sn**	**10 00 45.4**	**+1.0**
VRF	**Varrio**	**1.46**	**96**		*e*PG		**Pg**	**10 00 25.5**	**-0.2**
VRF					MSG			10 00 43.0	
	comp=Z,5.8nm,0.2s								
VRF					*e*S		**Sg**	**10 00 43.8**	**-0.8**
MASU	**Masugnsbyn**	**1.52**	**253**		P		**Pg**	**10 00 27.0**	**+0.2**
MASU	**Masugnsbyn**	**1.52**	**253**		*e*P		**Pg**	**10 00 27.0**	**+0.2**
ARA0	**ARCESS Array S**	**1.61**	**357**		*e*P		**Pg**	**10 00 28.6**	**+0.1**
ARA0					*e*S		**Sg**	**10 00 49.2**	**-0.1**
ARA0					IAML			10 00 51.9	
	comp=Z,4.5nm,0.4s								
ARA0	**ARCESS Array S**	**1.61**	**357**		*e*PG		**Pg**	**10 00 28.3**	**-0.2**
	baz=176								
ARA0					*e*SG		**Sb**	**10 00 49.1**	**0.0**
ARCES	**ARCESS Array B**	**1.61**	**357**		Pg		**Pb**	**10 00 28.3**	**0.0**
	comp=Z,1.0nm,0.3s,baz=175,slow=16,SNR=31								
ARCES					Lg		Lg	10 00 49.8	
	comp=Z,1.0nm,0.3s,baz=178,slow=29,SNR=10								
KEV	**Kevo**	**1.88**	**13**		*e*P		**Pb**	**10 00 32.8**	**0.0**
KEV					*e*S		**Sg**	**10 00 58.1**	**+0.1**
KEV	**Kevo**	**1.88**	**13**		*e*PG		**Pb**	**10 00 32.9**	**0.0**
KEV					MSG			10 00 55.1	
	comp=Z,7.1nm,0.2s								
KEV					*e*SG		**Sb**	**10 00 57.0**	**+0.1**
TOF	**Tornio**	**1.95**	**198**		*e*PG		**Pg**	**10 00 34.7**	**-0.3**
TOF					MSG			10 00 57.7	
	comp=Z,6.5nm,0.2s								
TOF					*e*SG		**Sg**	**10 00 59.9**	**-0.3**
ERTU	**Ertsjaerv**	**1.97**	**227**		P		**Pb**	**10 00 34.6**	**+0.3**
ERTU	**Ertsjaerv**	**1.97**	**227**		*e*PG		**Pg**	**10 00 35.1**	**-0.2**
ERTU					*e*SG		**Sg**	**10 01 01.4**	**+0.6**
KUA	**Kurravaara**	**2.06**	**273**		P		**Pb**	**10 00 35.5**	**-0.3**
KUA	**Kurravaara**	**2.06**	**273**		*e*P		**Pb**	**10 00 35.5**	**-0.3**
KIF	**Kilpisjarvi**	**2.13**	**303**		*e*P		**Pg**	**10 00 37.7**	**-0.7**
KIF					*i* Sg		**Sg**	**10 01 05.6**	**-0.3**
KIF	**Kilpisjarvi**	**2.13**	**303**		*e*PB		**Pb**	**10 00 37.3**	**+0.3**
KIF					MSG			10 01 03.1	
	comp=Z,4.3nm,0.2s								
KIF					*e*SB		**Sg**	**10 01 05.0**	**-0.9**
KOVU	**Salmi**	**2.13**	**280**		P		**Pb**	**10 00 36.7**	**-0.3**
KOVU	**Salmi**	**2.13**	**280**		*e*P		**Pb**	**10 00 36.7**	**-0.3**
DUNU	**Dundret**	**2.16**	**250**		P		**Pb**	**10 00 37.7**	**+0.1**
DUNU	**Dundret**	**2.16**	**250**		*e*P		**Pb**	**10 00 37.7**	**+0.1**
RATU	**Laukkuluspa**	**2.35**	**270**		P		**Pb**	**10 00 39.8**	**-1.0**
RATU	**Laukkuluspa**	**2.35**	**270**		*e*P		**Pb**	**10 00 39.8**	**-1.0**
MSF	**Maaselka**	**2.41**	**146**		*e*PB		**Pb**	**10 00 41.5**	**-0.3**
	baz=326								
MSF					*e*SB		**Sb**	**10 01 11.9**	**-0.1**
KU6	**Riekki**	**2.51**	**138**		*e*PB		**Pb**	**10 00 43.3**	**-0.2**
	baz=326								
KU6					MSG			10 01 13.5	
	comp=Z,3.2nm,0.2s								
KU6					*e*SB		**Sb**	**10 01 15.5**	**+0.6**
I37NO	**I37NO**	**2.88**	**297**		*i*			10 18 00.0	
	comp=Z,0.5nm,0.8s,baz=112,slow=318,SNR=19								
OBF4	**Vikkela, Lumij**	**3.15**	**185**		*e*S		**Sn**	**10 01 27.8**	**+1.2**
I26DE	**FREYUNG INFRAS20.08**		**204**		*i*			12 00 20.0	
	baz=15,slow=328,SNR=1.1								

*IDC **29** 10:17:47.5±1.8,6°.72S×129°.08E,h187km±20km,mb3.7/4, mbtmp4.4/9,MS3.8/1,Error ellipse: s-maj=24.0km s-min=16.7km az=115.0*
*DJA **29** 10:17:47.4±0.5,7°.5±3°×12°.9E±°,h249km±12km,M4.3/11, mb4.2/4,mB4.9/6,MLv4.4/11,Mw(mB)4.1/6*
*NEIC **29** 10:17:49.7±2.2,6°.66S±0°.07×129°.15E±0°.08,h200km±9km, mb4.2/13,Error ellipse: s-maj=12.8km s-min=7.4km az=52.0*

ISC 29 10:17:48.8±0.6,**6°.69S**±0°.06×**129°.12E**±0°.07,**h200**km,**n45, σ1§84/47,mb4.0/6,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.29**	**20**	P	**Pn**	**10 18 32.5**	**+2.1**
SAUI	**Saumlaki**	**2.52**	**121**	Pn	**Pn**	**10 18 33.5**	**+0.6**
SAUI	**Saumlaki**	**2.52**	**121**	P	**Pn**	**10 18 33.9**	**+1.0**
MSAI	**Masohi**	**3.32**	**357**	P	**Pn**	**10 18 44.2**	**+1.8**
FAKI	**Fak Fak**	**4.87**	**40**	Pn	**Pn**	**10 19 00.6**	**-1.0**
FAKI	**Fak Fak**	**4.87**	**40**	P	**Pn**	**10 19 00.4**	**-1.2**
SIJI	**Sorong**	**6.16**	**20**	P	**Pn**	**10 19 17.5**	**-0.8**
	30nm,0.3s,baz=232,slow=23,SNR=42						
SIJI				S	**Sn**	**10 20 24.4**	**-4.7**
	30nm,0.2s,baz=239,slow=21,SNR=12						
SWI	**Sorong**	**6.17**	**20**	P	**Pn**	**10 19 17.0**	**-1.3**
BATI	**Baumata**	**6.43**	**237**	P	**Pn**	**10 19 21.4**	**-0.4**
	32nm,0.5s,baz=160,slow=7.7,SNR=7.5						
BATI				S	**Sn**	**10 20 31.7**	**-3.6**
	94nm,0.3s,baz=185,slow=4.0,SNR=15						
BATI	**Baumata**	**6.43**	**237**	P	**Pn**	**10 19 21.3**	**-0.4**
	0.4nm29nm,0.6s						
MTN	**Manton Dam**	**6.43**	**162**	Pn	**Pn**	**10 19 20.9**	**-0.8**
EDFI	**Ende, Flores**	**7.64**	**254**	P	**Pn**	**10 19 38.4**	**+0.8**
	0.0nm3.6nm,0.7s						
KNRA	**Kununurra**	**8.94**	**182**	Pn	**Pn**	**10 19 52.7**	**-1.6**
FITZ	**Fitzroy Crossi**	**11.84**	**196**	P	**Pn**	**10 20 29.0**	**-2.7**
	14nm,0.5s,baz=34,slow=13,SNR=65						
FITZ				S	Sn	10 22 35.9	-7.9
	11nm,0.5s,baz=67,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	**11.84**	**196**		**Pn**	**10 20 30.3**	**-1.4**
WB0	**Warramunga Arr**	**13.97**	**159**	Pn	**Pn**	**10 20 57.1**	**-1.4**
WRAB	**Tennant Creek**	**14.11**	**159**		**Pn**	**10 20 58.9**	**-1.3**
WRA	**Warramunga Arr**	**14.12**	**159**	P	**Pn**	**10 20 57.6**	**-2.6**
	1.3nm,0.3s,baz=340,slow=13,SNR=50						
WRA				S	S	10 23 26.2	-11
	8.4nm,0.6s,baz=332,slow=22,SNR=8.7						
WRA	**Warramunga Arr**	**14.12**	**159**		**Pn**	**10 20 58.9**	**-1.4**
WB2	**Warramunga Arr**	**14.12**	**159**	Pn	**Pn**	**10 20 59.2**	**-1.2**
WR0	**Warramunga Arr**	**14.21**	**159**		**Pn**	**10 21 00.7**	**-0.7**
COEN	**Coen**	**15.59**	**119**		**Pn**	**10 21 18.5**	**+0.1**
COEN				IAmb	IAmb	10 21 19.6	
	comp=Z,15nm,1.0s						
MBWA	**Marble Bar**	**17.02**	**211**	P	**P**	**10 21 35.1**	**+1.1**
MBWA				IAmb	IAmb	10 22 12.0	
	comp=Z,9.1nm,1.1s						
PSA00	**Pilbara Seismi**	**17.30**	**210**	P	**P**	**10 21 38.0**	**+0.9**
PSA00				IAmb	IAmb	10 21 59.2	
	comp=Z,11nm,0.8s						
PSA00	**Pilbara Seismi**	**17.30**	**210**	P	**P**	**10 21 37.7**	**+0.6**
PSA00				IAmb	IAmb	10 21 49.4	
	comp=Z,5.1nm,1.3s						
AS31	**Alice Springs**	**17.50**	**165**	P	**P**	**10 21 40.6**	**+1.4**
AS31				IAmb	IAmb	10 21 43.5	
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**17.50**	**165**	P	**P**	**10 21 40.5**	**+1.2**
	comp=Z,9.2nm,0.5s,baz=337,slow=9.2,SNR=168						
ASAR				S	**S**	**10 24 44.4**	**-6.4**
	comp=Z,1.4nm,0.6s,baz=340,slow=21,SNR=5.0						
ASAR	**Alice Springs**	**17.50**	**165**	P	**P**	**10 21 40.2**	**+1.0**
SBUM	**Sibu**	**19.16**	**298**	P	**P**	**10 21 58.4**	**+1.1**
SBUM				IAmb	IAmb	10 22 00.8	
	comp=Z,7.6nm,0.8s						
MORW	**Morawa**	**25.46**	**207**	P	**P**	**10 23 00.9**	**+2.4**
GUMO	**Guam**	**25.50**	**38**	LR	LR	10 33 00.9	
	comp=Z,209nm,20.9s,baz=15,slow=36						
BBOO	**Buckleboo**	**26.78**	**167**	P	**P**	**10 23 12.8**	**+2.5**
CAN	**Canberra**	**33.86**	**150**	P	**P**	**10 24 14.3**	**+1.8**
CAN				IAmb	IAmb	10 24 47.6	
	comp=Z,15nm,1.4s						
CMWZ	**Cape Campbell**	**53.03**	**138**	P	**P**	**10 26 45.5**	**+0.2**
PEA0B	**Petropavlovsk-**	**64.31**	**19**	P	**P**	**10 28 02.4**	**-0.4**
PETK	**Petropavlovsk-**	**64.31**	**19**	P	**P**	**10 28 03.0**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=171,slow=3.8,SNR=5.1						
	comp=Z,1.1nm,0.5s						
PETK	**Petropavlovsk-**	**64.31**	**19**	P	**P**	**10 28 02.5**	**-0.2**
MK31	**Makanchi Array**	**67.49**	**327**	P	**P**	**10 28 24.1**	**+0.8**
MKAR	**Makanchi Array**	**67.49**	**327**	P	**P**	**10 28 23.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=115,slow=8.4,SNR=16						
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**67.49**	**327**	P	**P**	**10 28 23.8**	**+0.5**
MAKZ	**Makanchi**	**67.67**	**327**	P	**P**	**10 28 24.3**	**0.0**
MAKZ				IAmb	IAmb	10 28 36.7	
	comp=Z,2.5nm,0.6s						
ZAA0	**Zalesovo Array**	**70.92**	**334**	P	**P**	**10 28 46.3**	**+2.2**
ZALV	**Zalesovo Beam**	**70.92**	**334**	P	**P**	**10 28 43.7**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=122,slow=5.4,SNR=2.4						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**70.92**	**334**	P	**P**	**10 28 44.6**	**+0.6**
SEY	**Seymchan**	**71.66**	**11**	P	**P**	**10 28 49.1**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=193,slow=14,SNR=4.2						
	comp=Z,4.0nm,0.8s						

*NEIC **29** 10:18:39.1±2.5,38°.58S±0°.07×179°.6E±0°.1,h10km±2km, mb4.6/5,ML4.3(WEL),Error ellipse: s-maj=18.1km s-min=12.6km az=87.0*
*NOU **29** 10:18:40.9,38°.54S×179°.62E,h72km,MLv4.7/8,Off E. Coast of N. Island, N.Z.*
*IDC **29** 10:18:44.2±1.5,38°.63S×178°.75E,h0km,mb4.4/4, mbtmp4.3/5,ML3.6/1,Error ellipse: s-maj=48.7km s-min=26.1km az=4.0*
*WEL **29** 10:18:47.4±1.0,38°.5±5°×17°.9E±°,h25km±6km,M4.3/12, ML4.6/12,MLv4.3/12,Error ellipse: s-maj=0.0km s-min=0.0km az=102.5*

ISC 29 10:18:44.4±1.7,**38°.52S**±0°.03×**178°.97E**±0°.07,**h14**km±9km, **n158,σ1§27/164,mb4.5/7,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**0.60**	**273**	P	**Pn**	**10 19 58.8**	**+0.3**
CNGZ				S	**Sn**	**10 19 08.5**	**+0.4**
PUZ	**Puketiti**	**0.72**	**308**	P	**Pg**	**10 18 58.5**	**0.0**
PUZ				S	**Sg**	**10 19 06.0**	**-1.9**
WMGZ	**Waiomatatini S**	**0.83**	**328**	P	**Pb**	**10 19 00.6**	**+0.1**
WMGZ				S	**Sb**	**10 19 10.6**	**-0.9**
TWGZ	**Tauwhareparae**	**0.85**	**293**	P	**Pg**	**10 19 01.4**	**+0.4**
TWGZ				S	**Sb**	**10 19 12.1**	**-0.2**
TKGZ	**Te Karaka**	**0.89**	**275**	P	**Pn**	**10 19 02.5**	**+0.1**
TKGZ				P	**Pn**	**10 19 02.6**	**+0.1**
TKGZ				S	**Sn**	**10 19 14.2**	**-0.9**
PRGZ	**Paritu Road**	**0.94**	**244**	P	**Pn**	**10 19 04.8**	**+1.6**
PKGZ	**Pakihiroa**	**0.95**	**312**	P	**Pb**	**10 19 02.3**	**-0.3**
PKGZ				S	**Sb**	**10 19 13.4**	**-1.6**
RIGZ	**Rimuhau**	**0.97**	**259**	P	**Pn**	**10 19 04.4**	**+0.8**
RIGZ				S	**Sn**	**10 19 17.8**	**+0.7**
MHGZ	**Mahia Peninsul**	**1.04**	**233**	P	**Pg**	**10 19 06.7**	**+2.2**
MXZ	**Matakaoa Point**	**1.09**	**331**		**Pb**	**10 19 05.1**	**+0.1**
MXZ	**Matakaoa Point**	**1.09**	**331**	P	**Pb**	**10 19 04.8**	**-0.2**
KNZ	**Kokohu**	**1.13**	**243**	P	**Pg**	**10 19 07.1**	**+0.9**
MWZ	**Matawai**	**1.15**	**279**	P	**Pn**	**10 19 06.0**	**-0.1**
MWZ				S	**Sb**	**10 19 19.3**	**-1.6**
RUGZ	**Raukumara Rang**	**1.16**	**298**	P	**Pb**	**10 19 05.6**	**-0.7**
RUGZ				S	**Sb**	**10 19 18.8**	**-2.4**
HAZ	**Te Kaha**	**1.21**	**309**	P	**Pn**	**10 19 06.0**	**-0.9**
RAGZ	**Rawiri**	**1.22**	**271**	P	**Pn**	**10 19 07.4**	**+0.2**
RAGZ				S	**Sn**	**10 19 23.6**	**+0.1**
SNGZ	**Shannon Statio**	**1.30**	**258**	P	**Pb**	**10 19 08.9**	**+0.2**
WHHZ	**Waihua**	**1.47**	**247**	P	**Pb**	**10 19 11.8**	**+0.4**
URZ	**Urewera**	**1.49**	**280**	Pn	**Pn**	**10 19 10.8**	**+0.1**
	41nm,0.3s,baz=244,slow=3.3,SNR=201						
URZ				Sn	**Sn**	**10 19 28.8**	**-1.1**
	164nm,0.3s,baz=45,slow=12,SNR=8.7						
URZ	**Urewera**	**1.49**	**280**	P	**Pn**	**10 19 10.8**	**+0.1**
URZ	**Urewera**	**1.49**	**280**	P	**Pn**	**10 19 11.5**	**-0.3**
RAHZ	**Arahi**	**1.53**	**254**	P	**Pn**	**10 19 12.3**	**-0.2**
MTHZ	**Maungataniwha**	**1.70**	**258**	P	**Pn**	**10 19 14.5**	**+0.8**
WHRZ	**Whale Island**	**1.71**	**292**	P	**Pn**	**10 19 14.5**	**+0.8**
ARHZ	**Aropaoanui**	**1.71**	**244**	P	**Pb**	**10 19 15.3**	**-0.3**
WIZ	**White Island**	**1.72**	**305**	P	**Pn**	**10 19 13.8**	**-0.1**
MUGZ	**Murupara**	**1.73**	**271**	P	**Pn**	**10 19 14.8**	**+0.8**
NMHZ	**Naumai**	**1.79**	**251**	P	**Pn**	**10 19 16.1**	**+1.2**
EDRZ	**Edgecumbe**	**1.81**	**283**	P	**Pb**	**10 19 16.9**	**-0.3**
CKHZ	**Cape Kidnapper**	**1.86**	**232**	P	**Pn**	**10 19 17.6**	**+1.7**
MARZ	**Manawahe**	**1.89**	**286**	P	**Pb**	**10 19 18.0**	**-0.7**
RRRZ	**Republican Roa**	**1.94**	**275**	P	**Pn**	**10 19 17.5**	**+0.6**
TARZ	**Mount Tarawera**	**1.96**	**278**	P	**Pn**	**10 19 18.3**	**+1.0**
OPRZ	**Ohinepanea**	**2.02**	**289**	P	**Pn**	**10 19 17.8**	**-0.3**
MRHZ	**Matea Rd**	**2.02**	**260**	P	**Pn**	**10 19 19.2**	**+1.1**
PRRZ	**Plateau Road**	**2.02**	**270**	P	**Pn**	**10 19 19.0**	**+0.8**
BKZ	**Black Stump Fm**	**2.04**	**251**		**Pn**	**10 19 19.8**	**+1.4**
BKZ	**Black Stump Fm**	**2.04**	**251**	P	**Pn**	**10 19 19.7**	**+1.4**
BKZ	**Black Stump Fm**	**2.04**	**251**	P	**Pn**	**10 19 20.1**	**+1.7**
ALRZ	**Allen Road**	**2.06**	**268**	P	**Pn**	**10 19 19.6**	**+1.0**
KAHZ	**Kahuranaki**	**2.07**	**231**	P	**Pn**	**10 19 20.4**	**+1.7**
HLRZ	**Highlands Stat**	**2.08**	**277**	P	**Pb**	**10 19 22.4**	**+0.5**
OMRZ	**Omania**	**2.09**	**281**	P	**Pn**	**10 19 19.6**	**+0.6**
HSRZ	**Hossack Road**	**2.15**	**275**	P	**Pn**	**10 19 21.0**	**+1.1**
KWHZ	**Kaweka Forest**	**2.18**	**245**	P	**Pn**	**10 19 21.6**	**+1.3**
WPRZ	**Whakapapatarin**	**2.20**	**269**	P	**Pn**	**10 19 21.8**	**+1.2**
KARZ	**Kaharoa**	**2.21**	**282**	P	**Pn**	**10 19 21.2**	**+0.6**
PXZ	**Pawanui**	**2.23**	**227**	P	**Pn**	**10 19 21.8**	**+0.9**
NGRZ	**Ngongotaha**	**2.23**	**280**	P	**Pn**	**10 19 20.9**	**-0.1**
GRRZ	**Galatos Road**	**2.25**	**273**	P	**Pn**	**10 19 22.4**	**+1.1**
TGRZ	**Tauranga**	**2.28**	**289**	P	**Pn**	**10 19 21.5**	**-0.1**
KRHZ	**Kereru**	**2.31**	**240**	P	**Pn**	**10 19 23.0**	**+0.8**
BHHZ	**Black Hill Sta**	**2.46**	**246**	P	**Pn**	**10 19 25.1**	**+0.9**
KUTZ	**Kaahu Road**	**2.47**	**270**	P	**Pn**	**10 19 25.1**	**+0.8**
MYRZ	**Mayor Island**	**2.49**	**299**	P	**Pb**	**10 19 29.4**	**+0.5**
WPHZ	**Waipukurau**	**2.50**	**231**	P	**Pn**	**10 19 25.5**	**+0.9**
PRHZ	**Porangahau**	**2.51**	**225**	P	**Pn**	**10 19 25.6**	**+0.7**
RATZ	**Rangitukua**	**2.53**	**261**	P	**Pn**	**10 19 26.4**	**+1.3**
WATZ	**Wairara**	**2.54**	**265**	P	**Pn**	**10 19 26.6**	**+1.3**
PNHZ	**Pukenui**	**2.56**	**236**	P	**Pn**	**10 19 26.3**	**+0.7**
KATZ	**Kakaramea**	**2.60**	**259**	P	**Pn**	**10 19 26.3**	**+0.2**
ETVZ	**East Tongariro**	**2.62**	**255**	P	**Pn**	**10 19 27.6**	**+1.2**
TMVZ	**Te Maari**	**2.62**	**256**	P	**Pn**	**10 19 27.6**	**+1.2**
NTVZ	**North Tongarir**	**2.64**	**256**	P	**Pn**	**10 19 27.8**	**+1.1**
MOVZ	**Moawhango**	**2.66**	**250**	P	**Pn**	**10 19 28.3**	**+1.3**
OTVZ	**Oturere**	**2.66**	**255**	P	**Pn**	**10 19 28.2**	**+1.2**
KRVZ	**Karewarewa**	**2.67**	**257**	P	**Pn**	**10 19 28.1**	**+1.1**
SNVZ	**South Ngauruho**	**2.69**	**255**	P	**Pn**	**10 19 28.5**	**+1.2**
NNVZ	**North Ngauruho**	**2.69**	**256**	P	**Pn**	**10 19 28.7**	**+1.3**
TUVZ	**Tukino**	**2.69**	**253**	P	**Pn**	**10 19 28.4**	**+0.9**
TLZ	**Tolley Road**	**2.70**	**273**	P	**Pn**	**10 19 28.2**	**+0.7**
WTVZ	**West Tongariro**	**2.71**	**256**	P	**Pn**	**10 19 29.1**	**+1.5**
NGZ	**Ngauruhoe**	**2.71**	**255**	P	**Pn**	**10 19 28.9**	**+1.2**
ANWZ	**Angora Road**	**2.73**	**224**	P	**Pn**	**10 19 28.8**	**+0.9**
WHVZ	**Whangaehu Hut**	**2.75**	**253**	P	**Pn**	**10 19 29.7**	**+1.5**
WNVZ	**Wahianoa**	**2.75**	**252**	P	**Pn**	**10 19 29.3**	**+1.0**
FWVZ	**Far West T-bar**	**2.77**	**254**	P	**Pn**	**10 19 29.9**	**+1.4**
TRVZ	**Turoa**	**2.78**	**253**	P	**Pn**	**10 19 30.0**	**+1.2**
TSZ	**Takapari Road**	**2.80**	**236**	P	**Pn**	**10 19 29.1**	**+0.3**
DVHZ	**Dannevirke**	**2.81**	**230**	P	**Pn**	**10 19 29.4**	**+0.5**
TWVZ	**Taurewa**	**2.82**	**258**	P	**Pn**	**10 19 30.1**	**+1.0**
TOZ	**Tahuroa Road**	**2.85**	**285**	P	**Pn**	**10 19 29.4**	**0.0**
MTVZ	**Mangateitei**	**2.86**	**251**	P	**Pn**	**10 19 30.9**	**+1.2**
PKVZ	**Pokaka**	**2.93**	**254**	P	**Pn**	**10 19 32.0**	**+1.4**
BFZ	**Birch Farm**	**3.02**	**223**		**Pn**	**10 19 31.7**	**0.0**
BFZ	**Birch Farm**	**3.02**	**223**	P	**Pn**	**10 19 31.8**	**0.0**
BFZ	**Birch Farm**	**3.02**	**223**	P	**Pn**	**10 19 32.0**	**+0.3**
PRWZ	**Pori Road**	**3.08**	**228**	P	**Pn**	**10 19 33.4**	**+0.7**
POWZ	**Post Office Ro**	**3.10**	**232**	P	**Pn**	**10 19 33.8**	**+0.8**
KUZ	**Kuaotunu**	**3.13**	**303**	P	**Pn**	**10 19 32.3**	**-1.0**
HIZ	**Hauiti**	**3.23**	**269**		**Pn**	**10 19 36.1**	**+1.5**
HIZ	**Hauiti**	**3.23**	**269**	P	**Pn**	**10 19 36.2**	**+1.6**
HIZ	**Hauiti**	**3.23**	**269**	P	**Pn**	**10 19 36.3**	**+1.6**
TIWZ	**Tintock**	**3.28**	**226**	P	**Pn**	**10 19 35.8**	**+0.4**
MKAZ	**Moumakai**	**3.33**	**294**	P	**Pn**	**10 19 35.8**	**-0.3**
WAZ	**Wanganui**	**3.34**	**247**	P	**Pn**	**10 19 38.0**	**+1.8**
MRZ	**Mangatainoka R**	**3.38**	**230**	P	**Pn**	**10 19 36.7**	**-0.1**
WIAZ	**Waiheke Island**	**3.50**	**298**	P	**Pn**	**10 19 38.7**	**+0.3**
TMWZ	**Te Maipa**	**3.51**	**222**	P	**Pn**	**10 19 38.2**	**-0.3**
ETAZ	**East Tamaki Re**	**3.57**	**295**	P	**Pn**	**10 19 39.6**	**+0.3**
HOWZ	**Holdsworth Sta**	**3.57**	**227**	P	**Pn**	**10 19 39.2**	**-0.1**
GRZ	**Great Barrier**	**3.60**	**308**	P	**Pn**	**10 19 39.3**	**-0.4**
MHEZ	**Mangahewa**	**3.67**	**260**	P	**Pn**	**10 19 43.7**	**+2.9**
MBAZ	**Motutapu North**	**3.68**	**297**	P	**Pn**	**10 19 41.0**	**+0.2**
LREZ	**Lake Rotokare**	**3.68**	**254**	P	**Pn**	**10 19 42.6**	**+1.8**
OGWZ	**Otaki Gorge**	**3.72**	**231**	P	**Pn**	**10 19 41.4**	**-0.1**
AWAZ	**Awhitu Peninsu**	**3.73**	**292**	P	**Pn**	**10 19 42.6**	**+1.2**
EPAZ	**Eden Park BICE**	**3.73**	**295**	P	**Pn**	**10 19 42.4**	**+0.8**
MTW	**Mount Morrison**	**3.75**	**224**	P	**Pn**	**10 19 41.2**	**-0.7**
HBAZ	**Herne Bay Bore**	**3.76**	**295**	P	**Pn**	**10 19 42.6**	**+0.7**
DREZ	**Durham Road**	**3.78**	**258**	P	**Pn**	**10 19 44.8**	**+2.5**
ABAZ	**Army Bay**	**3.81**	**299**	P	**Pn**	**10 19 41.7**	**-0.9**
WTAZ	**Waiatarua**	**3.83**	**293**	P	**Pn**	**10 19 44.1**	**+1.1**
PREZ	**Palmer Road**	**3.84**	**256**	P	**Pn**	**10 19 45.6**	**+2.5**
NEZ	**North Egmont**	**3.88**	**257**	P	**Pn**	**10 19 46.1**	**+2.4**
RVAZ	**Riverhead Bore**	**3.90**	**295**	P	**Pn**	**10 19 44.3**	**+0.4**
KIW	**Kapiti Island**	**3.91**	**232**	P	**Pn**	**10 19 43.7**	**-0.4**
KHEZ	**Kahui Hut**	**3.94**	**257**	P	**Pn**	**10 19 47.0**	**+2.4**
PKE	**Pukeiti**	**3.95**	**259**	P	**Pn**	**10 19 46.8**	**+2.2**
CAW	**Cannon Point**	**3.96**	**228**	P	**Pn**	**10 19 44.3**	**-0.5**
NBEZ	**Newall Road No**	**4.05**	**258**	P	**Pn**	**10 19 48.1**	**+2.1**
MSWZ	**Moikau Station**	**4.07**	**224**		**Pn**	**10 19 44.9**	**-1.3**
NMEZ	**Namu Road**	**4.07**	**256**	P	**Pn**	**10 19 48.9**	**+2.7**
PLWZ	**Palliser**	**4.17**	**222**		**Pn**	**10 19 46.5**	**-1.2**
SNZO	**South Karori**	**4.30**	**228**		**Pn**	**10 19 48.3**	**-1.1**
WCZ	**Waipu Caves**	**4.50**	**303**	P	**Pn**	**10 19 52.3**	**+0.2**
DUWZ	**D'Urville Isla**	**4.51**	**238**	P	**Pn**	**10 19 51.6**	**-0.8**
TUWZ	**Tuamarina**	**4.83**	**231**		**Pn**	**10 19 55.3**	**-1.4**
CMWZ	**Cape Campbell**	**4.87**	**227**	Pn	**Pn**	**10 19 55.6**	**-1.6**
BSWZ	**Blackbirch Sta**	**5.04**	**229**	Pn	**Pn**	**10 19 58.2**	**-1.4**
TKNZ	**Takaka Hill**	**5.27**	**240**	P	**Pn**	**10 20 01.9**	**-0.8**
OUZ	**Omahuta**	**5.42**	**306**	P	**Pn**	**10 20 05.5**	**+0.7**
OUZ	**Omahuta**	**5.42**	**306**	P	**Pn**	**10 20 05.5**	**+

5.4nm,0.3s,baz=295,slow=8.4,SNR=193
MJAR LR LR 10 24 31.2
comp=Z,1μm,20.9s,baz=135,slow=44
55nm,0.6s
MAJO Matsushiro 3.50 310 Pn Pn 10 22 51.3 +0.5
MAJO Matsushiro 3.50 310 *d iP* **Pn 10 22 51.5 +0.7**
JMM Marumori 3.56 350 Pn **Pn 10 22 50.1 -1.6**
JGF Kuroka 3.66 291 Pn Pn 10 22 54.0 +1.0
INU Inuyama 3.86 286 Pn Pn 10 22 56.9 +1.2
JSD Sado 4.54 325 Pn **Pn 10 23 04.3 -0.7**
JMN Monobe 6.39 267 Pn **Pn 10 23 32.5 +1.9**
JTM Tenmabayashi 6.44 357 Pn **Pn 10 23 30.1 -1.1**
JHS Saijyo 6.97 278 Pn **Pn 10 23 41.1 +2.5**
ERM Erimo 7.76 9 Pn 10 23 48.4 -0.9
ERM Erimo 7.76 9 ⇓ *eP* **Pn 10 23 48.0 -1.3**
JEW Eniwo 8.48 360 Pn **Pn 10 24 00.3 +1.1**
KSRS Korea Array 11.47 290 Pn **Pn 10 24 40.0 -0.1**
0.3nm,0.3s,baz=103,slow=14,SNR=9.1
KSRS LR LR 10 29 42.3
comp=Z,391nm,18.4s,baz=100,slow=41
6.1nm,0.8s
VLA Vladivostok 11.55 322 ⇓ *eP* **Pn 10 24 42.5 +1.3**
TJN Taejon 11.76 284 ⇓ *eP* **Pn 10 24 46.0 +2.0**
KUR Kuril'sk 11.90 22 P **Pn 10 24 49.8 +3.8**
USA0B Ussuriysk Arra 12.30 326 Pn **Pn 10 24 50.8 -0.7**
USA0B Ussuriysk Arra 12.30 326 P **Pn 10 24 50.8 -0.7**
USRK Ussuriysk Ar. 12.30 326 Pn **Pn 10 24 50.5 -1.0**
0.1nm,0.3s,baz=128,slow=12,SNR=8.1
9.0nm,0.9s
USRK Ussuriysk Ar. 12.30 326 Pn **Pn 10 24 50.9 -0.6**
USRK Ussuriysk Ar. 12.30 326 P **Pn 10 24 50.9 -0.6**
YSS Yuzh-Sakhalins 12.63 4 Pn **Pn 10 24 53.9 -2.0**
YSS Yuzh-Sakhalins 12.63 4 *eP* Pn 10 24 48.2 -7.7
YSS pmax pmax
comp=Z,20nm,0.9s
CN2 Changchun 15.64 312 *eP* **P 10 25 39.3 -1.4**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,800nm,13.0s
CN2 LR LR
comp=E,700nm,13.0s
CN2 LR LR
comp=Z,800nm,14.0s
TYV Tymovskoe 16.53 2 *eP* **P 10 25 50.1 -0.4**
TYV pmax pmax
comp=Z,200nm,3.9s
TYV pmax pmax
comp=Z,14nm,0.9s
KLR Kul'dur 16.55 337 Pn **Pn 10 25 45.4 -2.8**
comp=Z,0.2nm,0.3s,baz=173,slow=6.6,SNR=4.4
KLR Kul'dur 16.55 337 ⇑ *eP* **Pn 10 25 45.4 -2.8**
KLR pmax pmax
comp=Z,5.0nm,0.9s
NJ2 Nanjing 19.12 269 *eP* **Pn 10 26 21.3 +1.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
SKR Severo-Kuril's 19.48 29 *eP* **P 10 26 16.7 -6.3**
SKR pmax pmax
comp=Z,23nm,0.8s
YHNB Yeheng 20.00 247 P **P 10 26 29.7 +0.8**
ZEA Zeya 21.86 337 *eP* **P 10 26 48.4 -0.3**
ZEA pmax pmax
comp=Z,100nm,1.2s
ZEA pmax pmax
comp=N,60nm,0.6s
ZEA pmax pmax
comp=E,30nm,1.0s
ZEA pmax pmax
comp=Z,80nm,1.0s
ZEA MLR MLR
comp=Z,200nm,15.0s
XLT XiLinHaoTe 21.86 303 ⇓ *iP* **P 10 26 48.8 -0.2**
XLT pP sP 10 26 55.0 +0.1
XLT sP pP 10 26 57.3 +4.4
XLT pmax pmax
comp=Z,15nm,0.8s
XLT pmax pmax
comp=Z,130nm,4.3s
HNS HongShan 21.93 286 *eP* **P 10 26 53.8 +4.2**
HNS *eS* **S 10 30 49.8 -1.1**
HNS pmax pmax
comp=Z,8.0nm,0.8s
HNS LR LR
comp=N,320nm,14.2s
HNS LR LR
comp=E,360nm,12.5s
HNS LR LR
comp=Z,360nm,13.7s
WHN Wuhan 23.23 268 ⇓ *P* **P 10 27 02.8 -0.6**
HHC Hu-ho-hao-te 24.55 294 *eP* **P 10 27 13.5 -2.5**
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,300nm,6.1s
HHC LR LR
comp=N,580nm,13.3s
HHC LR LR
comp=E,430nm,12.1s
HHC LR LR
comp=Z,610nm,12.1s
H11N2 WAKE ISLAND Hy 26.77 116 T T 10 55 55.9
baz=309,slow=76,SNR=12
H11N1 WAKE ISLAND Hy 26.77 116 T T 10 55 45.4
baz=309,slow=76,SNR=9.6
H11N3 WAKE ISLAND Hy 26.79 116 T T 10 55 47.8
baz=309,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 27.39 119 T T 10 56 44.4
baz=312,slow=76,SNR=12
H11S1 WAKE ISLAND Hy 27.39 119 T T 10 56 35.8
baz=312,slow=76,SNR=10
H11S2 WAKE ISLAND Hy 27.41 119 T T 10 56 36.1
baz=312,slow=76,SNR=8.6
YAK Yakutsk 28.71 348 ⇑ *iP* **P 10 27 53.3 +0.3**
YAK pmax pmax
comp=Z,15nm,0.5s
ULN Ulaanbaatar 29.03 308 P **P 10 27 56.5 +0.3**
ULN IAmb IAmb 10 27 58.1
comp=Z,12nm,1.1s
ULN Ulaanbaatar 29.03 308 *c iP* **P 10 27 56.8 +0.6**
ULN pmax pmax
comp=Z,14nm,1.3s
SONM Songino Array 29.45 308 P **P 10 28 00.0 +0.1**
comp=Z,5.2nm,0.8s,baz=108,slow=8.7,SNR=19
SONM LR LR 10 41 02.6
comp=Z,462nm,18.9s,baz=83,slow=39
comp=Z,5.2nm,0.8s
SONM Songino Array 29.45 308 P **P 10 28 00.0 +0.1**
SHEM Shemya Is, Ala 29.55 42 LR LR 10 38 47.4
comp=Z,63nm,21.3s,baz=340,slow=34
BOD Bodaibo 29.88 330 *eP* **P 10 28 02.6 -0.9**
BOD pmax pmax
comp=Z,16nm,1.1s
DAV Davao City (W) 30.89 212 LR LR 10 41 04.7
comp=Z,57nm,19.7s,baz=320,slow=37
ZAK Zakamensk 32.08 312 *eP* **P 10 28 22.4 -0.7**
ZAK pmax pmax
comp=Z,10.0nm,1.0s
GTA Gaotai 33.54 291 *eP* **P 10 28 35.5 -0.5**
GTA pP sP 10 28 43.0 +1.0
GTA sP pwP 10 28 46.8 -2.8
GTA pmax pmax
comp=Z,3.0nm,0.9s
PZH PanZhiHua 35.03 268 P **P 10 28 51.8 +2.8**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,4.8s
KNGR Kungurtug, Tuv 35.72 311 ⇓ *iP* **P 10 28 55.4 +0.7**
KNGR pmax pmax
comp=Z,21nm,1.1s
TNTI Ternate 35.94 205 P **P 10 28 55.4 -1.3**
comp=Z,20nm,0.6s
SWI Sorong 36.33 198 P **P 10 28 58.6 -1.5**
comp=Z,19nm,1.0s
SIJI Sorong 36.34 198 LR LR 10 41 08.9
comp=Z,119nm,20.8s,baz=58,slow=32
BILL Bilibino 36.58 15 *eP* **P 10 28 59.3 -2.4**
BILL *e* 10 30 24.2
BILL pmax pmax
comp=Z,3.0nm,1.1s
GOMU GeErMu 37.91 287 P **P 10 29 13.3 -0.6**
GOMU pP pP 10 29 16.8 -1.3
GOMU sP sP 10 29 18.3 -1.5
GOMU PP PnPn 10 31 03.3 +22
GOMU S S 10 34 47.3 -17
GOMU sS pS 10 35 02.0 -7.6
GOMU SS SS 10 38 27.8 +37
GOMU pmax pmax
comp=Z,8.0nm,1.0s
GOMU pmax pmax
comp=Z,66nm,3.9s
GOMU LR LR
comp=N,140nm,11.0s
GOMU LR LR
comp=E,66nm,12.7s
GOMU LR LR
comp=Z,63nm,15.2s
TIXI Tiksi 37.97 354 ⇓ *iP* **P 10 29 13.1 -0.3**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
FAKI Fak Fak 38.09 195 P **P 10 29 14.0 -1.0**
CMAR Chiang Mai Arr 40.99 258 P **P 10 29 37.9 -1.4**
comp=Z,2.5nm,0.6s,baz=47,slow=7.4,SNR=16
comp=Z,2.5nm,0.6s
CMAR Chiang Mai Arr 40.99 258 *i* P **P 10 29 38.5 -0.8**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
DGZ Jazzator, Alta 42.09 308 *c iP* **P 10 29 48.9 +0.7**
DGZ pmax pmax
comp=Z,25nm,0.8s
WMQ Urumqi 42.20 300 *eP* **P 10 29 49.8 +0.8**
WMQ PP **PP 10 31 31.5 +4.8**
WMQ pmax pmax
comp=Z,25nm,0.9s
FALS False Pass 42.91 44 P **P 10 29 56.2 +1.7**
ZAA0 Zalesovo Array 43.84 314 P **P 10 30 02.0 0.0**
ZALV Zalesovo Beam 43.84 314 P **P 10 30 01.5 -0.5**
comp=Z,4.6nm,0.8s,baz=89,slow=6.5,SNR=15
ZALV PcP **PcP 10 31 47.7 -0.4**
comp=Z,2.5nm,0.6s,baz=104,slow=3.3,SNR=4.5
comp=Z,4.6nm,0.8s
ZALV Zalesovo Beam 43.84 314 P **P 10 30 01.6 -0.4**
ZALV Zalesovo Beam 43.84 314 *i* P **P 10 30 01.7 -0.3**
ZALV pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 45.68 304 P **P 10 30 16.9 +0.1**
MK31 Makanchi Array 45.68 304 *c iP* **P 10 30 16.3 -0.5**
MKAR Makanchi Array 45.68 304 P **P 10 30 16.4 -0.5**
comp=Z,2.5nm,0.7s,baz=87,slow=9.5,SNR=15
MKAR LR LR 10 50 37.3
comp=Z,161nm,18.6s,baz=78,slow=38
comp=Z,2.5nm,0.7s
MKAR Makanchi Array 45.68 304 P **P 10 30 16.2 -0.6**
MKAR Makanchi Array 45.68 304 *i* P **P 10 30 16.7 -0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MAKZ Makanchi 45.89 304 P **P 10 30 18.7 +0.2**
MAKZ IAmb IAmb 10 30 37.2
comp=Z,4.8nm,0.8s
MAKZ Makanchi 45.89 304 P **P 10 30 18.7 +0.2**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
SEM Semipalatinsk 46.70 310 *eP* **P 10 30 23.5 -1.5**
SEM Semipalatinsk 46.70 310 *eP* **P 10 30 23.5 -1.5**
baz=309
RAMN Ramite 47.36 277 *eP* **P 10 30 29.6 -0.9**
JIRN Jiri 47.42 278 *eP* **P 10 30 30.7 -0.5**
GUN Gumba 47.59 278 *eP* **P 10 30 31.8 -0.6**
comp=Z,43nm,0.8s
KURK Kurchatov 47.71 310 P **P 10 30 32.4 -0.2**
KURK Kurchatov 47.71 310 *c iP* **P 10 30 31.6 -1.0**
KURK pmax pmax
comp=Z,33nm,0.9s
KURBB Kurchatov Arra 47.77 310 P **P 10 30 32.6 -0.5**
comp=Z,9.7nm,0.6s,baz=85,slow=8.0,SNR=36
KURBB LR LR 10 52 10.9
comp=Z,300nm,19.2s,baz=53,slow=38
comp=Z,9.7nm,0.6s
KURBB Kurchatov Arra 47.77 310 P **P 10 30 31.9 -1.2**
MTN Manton Dam 47.96 194 P **P 10 30 35.1 +0.2**
L19K White Mountain 48.04 34 P **P 10 30 35.1 0.0**
L19K IAmb IAmb 10 30 38.0
comp=Z,9.0nm,1.4s
PKI Pulchoki 48.10 278 *eP* **P 10 30 35.3 -1.1**
comp=Z,42nm,0.9s
PKIN Phulchoki 48.11 278 *eP* **P 10 30 35.2 -1.2**
KKN Kakani 48.12 278 *eP* **P 10 30 35.1 -1.3**
comp=Z,7.1nm,1.0s
SHLS Shalkode 48.22 300 *eP* **P 10 30 33.9 -3.0**
SHLS Shalkode 48.22 300 *eP* **P 10 30 33.9 -3.0**
baz=300
DMN Daman 48.33 278 *eP* **P 10 30 37.2 -0.9**
K20K Telida 48.50 33 P **P 10 30 40.0 +1.4**
K20K IAmb IAmb 10 31 08.2
comp=Z,4.8nm,1.0s
J20K Nowinta River 48.55 32 P **P 10 30 40.8 +1.9**
J20K IAmb IAmb 10 31 11.1
comp=Z,4.2nm,1.1s
GKN Gorkha 48.57 279 *eP* **P 10 30 38.9 -0.9**
comp=Z,99nm,1.0s
TDK Taldyqorghan 48.62 302 *eP* **P 10 30 39.6 -0.2**
TDK Taldyqorghan 48.62 302 *eP* **P 10 30 39.7 -0.2**
baz=302
KPKS Kokpek 48.72 300 *eP* **P 10 30 40.3 -0.3**
KPKS Kokpek 48.72 300 *eP* **P 10 30 40.4 -0.3**
baz=300
IMAR Indian Mountai 48.92 29 P **P 10 30 42.9 +1.2**
SATY Saty 49.00 300 *eP* **P 10 30 42.6 -0.3**
SATY Saty 49.00 300 *eP* **P 10 30 42.6 -0.3**
baz=300
KDAK Kodiak Island 49.05 40 P **P 10 30 43.2 +0.4**
KDAK Kodiak Island 49.05 40 P **P 10 30 43.2 +0.4**
KDAK pmax pmax
comp=Z,14nm,1.1s
DANN Dangsing 49.15 280 *eP* **P 10 30 43.6 -0.8**
comp=Z,128nm,0.9s
H21K Melozitna Rive 49.27 30 P **P 10 30 46.0 +1.6**
H21K IAmb IAmb 10 31 15.4
comp=Z,11nm,1.4s
PPLA Purkeypile 49.33 34 P **P 10 30 47.4 +2.4**
PPLA IAmb IAmb 10 31 05.8
comp=Z,8.6nm,1.1s
KOLN Koldanda 49.50 279 *eP* **P 10 30 46.0 -1.0**
comp=Z,8.2nm,1.4s
CHKK Chushkaly 49.84 301 *eP* **P 10 30 48.5 -0.6**
CHKK Chushkaly 49.84 301 *eP* **P 10 30 48.6 -0.6**
baz=301
PYUN Piuthan 49.87 280 *eP* **P 10 30 48.8 -1.0**
comp=Z,140nm,1.1s
BPAW Bear Paw Mtn. 49.92 32 P **P 10 30 49.0 -0.5**
MDOK Medeo 49.95 300 *eP* **P 10 30 50.0 -0.1**
MDOK Medeo 49.95 300 *eP* **P 10 30 50.1 -0.1**
baz=300
KUU Kurty 50.29 301 *eP* **P 10 30 52.0 -0.6**
KUU pmax pmax
comp=Z,5.0nm,0.7s
KUU Kurty 50.29 301 *eP* **P 10 30 52.0 -0.6**
comp=Z,4.8nm,0.7s,baz=301
TOLK Toolik Lake Re 50.82 26 P **P 10 30 56.6 +0.4**
BOOM Boomskoye usch 50.90 300 P **P 10 30 57.3 0.0**
BOOM IAmb IAmb 10 31 07.1
comp=Z,4.4nm,0.8s
BOOM Boomskoye usch 50.90 300 P **P 10 30 57.3 0.0**
BOOM pmax pmax
comp=Z,4.0nm,0.8s
TKM2 Tokmak 2 51.04 300 *i* P **P 10 30 58.5 0.0**
TKM2 pmax pmax
comp=Z,12nm,0.8s
MDM Murphy Dome 51.15 31 P **P 10 31 00.0 +1.3**
MDM IAmb IAmb 10 31 31.0
comp=Z,7.0nm,1.0s
KNRA Kununurra 51.21 196 P **P 10 31 00.5 +0.9**
H24K Noodor Dome 51.31 30 P **P 10 31 01.2 +1.2**
H24K IAmb IAmb 10 31 32.1
comp=Z,5.2nm,1.1s
BRZS Berezniki 51.58 310 *eP* **P 10 31 01.2 -0.9**
BRZS Berezniki 51.58 310 *eP* **P 10 31 01.3 -0.9**
baz=310
SGDS Sogindy 51.60 301 *eP* **P 10 31 02.4 -0.1**
SGDS Sogindy 51.60 301 *eP* **P 10 31 02.4 -0.1**
baz=301
KSH Kashi 51.64 296 P **P 10 31 06.5 +3.6**
KSH pP pwP 10 31 21.0 +4.3
KSH pmax pmax
comp=Z,6.0nm,0.9s
BTLS Baital 51.64 303 *eP* **P 10 31 02.1 -0.5**
BTLS pmax pmax
comp=Z,7.0nm,1.1s
BTLS Baital 51.64 303 *eP* **P 10 31 02.2 -0.5**
comp=Z,7.4nm,1.1s,baz=303
IL31 51.72 31 P **P 10 31 03.4 +0.5**
ILAR Eielson Array 51.72 31 P **P 10 31 03.3 +0.4**
comp=Z,2.2nm,0.8s,baz=262,slow=6.3,SNR=22
ILAR LR LR 10 55 36.2
comp=Z,36nm,20.1s,baz=216,slow=39
comp=Z,2.2nm,0.8s
ILAR Eielson Array 51.72 31 P **P 10 31 03.0 0.0**
AAK Ala-Archa 51.90 300 P **P 10 31 04.8 -0.1**
AAK IAmb IAmb 10 31 06.8
comp=Z,3.7nm,0.8s
AAK Ala-Archa 51.90 300 ⇓ *iP* **P 10 31 05.2 +0.4**
AAK pmax pmax
comp=Z,4.0nm,0.7s
LEM Lembang 52.02 225 LR LR 10 53 05.7
comp=Z,76nm,19.0s,baz=166,slow=36
OTUK Ortayu 52.12 308 P **P 10 31 05.7 -0.5**
BVA0 Borovoye Array 52.48 314 *i* P **P 10 31 08.2 -0.6**
BVAR Borovoye Array 52.48 314 P **P 10 31 08.4 -0.5**
comp=Z,2.8nm,0.7s,baz=90,slow=7.4,SNR=14
BVAR PcP **PcP 10 32 19.1 0.0**
comp=Z,2.0nm,0.6s,baz=90,slow=5.9,SNR=4.6
BVAR LR LR 10 55 20.2
comp=Z,152nm,18.5s,baz=78,slow=38
comp=Z,2.8nm,0.7s
BRVK Borovoye 52.54 314 P **P 10 31 09.0 -0.2**
BRVK IAmb IAmb 10 31 10.1
comp=Z,7.8nm,0.9s
BRVK Borovoye 52.54 314 *c iP* **P 10 31 08.9 -0.3**
BRVK pmax pmax
comp=Z,12nm,1.3s
DOT Dot Lake 52.99 33 P **P 10 31 13.5 +1.0**
SCRK Sand Creek 53.01 32 P **P 10 31 13.8 +1.2**
SCRK IAmb IAmb 10 31 57.0
comp=Z,7.8nm,1.3s
K27K Chicken 53.84 32 IAmb IAmb 10 31 54.3
comp=Z,4.8nm,1.1s
BCAR Beaver Creek A 54.06 33 P **P 10 31 21.1 +0.7**
EGAK Eagle 54.17 31 P **P 10 31 21.5 +0.5**
WB0 Warramunga Arr 54.24 188 P **P 10 31 21.7 -0.3**
WB0 IAmb IAmb 10 31 23.5
comp=Z,8.6nm,1.0s
FITZ Fitzroy Crossi 54.31 199 P **P 10 31 22.9 +0.5**
comp=Z,3.9nm,0.6s,baz=11,slow=6.9,SNR=11
comp=Z,3.9nm,0.6s
FITZ Fitzroy Crossi 54.31 199 IAmb IAmb 10 31 57.1
comp=Z,10nm,1.1s
WRAB Tennant Creek 54.41 188 P **P 10 31 23.8 +0.5**
WRAB Tennant Creek 54.41 188 ⇓ *eP* **P 10 31 24.0 +0.8**
WRAB pmax pmax
comp=Z,10.0nm,1.3s
WR0 Warramunga Arr 54.41 188 P **P 10 31 23.0 -0.2**
WR0 IAmb IAmb 10 32 01.0
comp=Z,7.1nm,0.9s
WB2 Warramunga Arr 54.42 188 P **P 10 31 23.4 +0.2**
WB2 IAmb IAmb 10 32 02.9
comp=Z,8.8nm,1.0s
WRA Warramunga Arr 54.42 188 P **P 10 31 22.5 -0.8**
comp=Z,5.4nm,0.9s,baz=4.4,slow=7.5,SNR=22
comp=Z,5.4nm,0.9s
WRA Warramunga Arr 54.42 188 P **P 10 31 22.9 -0.4**
WRA Warramunga Arr 54.42 188 P **P 10 31 22.9 -0.4**
WRA pmax pmax
comp=Z,1.0nm,1.1s
KK31 Karatay Array 54.60 302 P **P 10 31 24.4 -0.1**
KK31 Karatay Array 54.60 302 *i* P **P 10 31 23.5 -1.0**
KKAR Karatay Array 54.60 302 P **P 10 31 24.2 -0.3**
KKAR Karatay Array 54.60 302 P **P 10 31 24.4 -0.1**
KKAR IAmb IAmb 10 31 25.5
comp=Z,15nm,1.0s
KKAR Karatay Array 54.60 302 P **P 10 31 24.4 -0.1**
KKAR pmax pmax
comp=Z,15nm,1.0s
IUG luzhnay 55.21 301 *eP* **P 10 31 29.1 +0.1**
IUG luzhnay 55.21 301 *eP* **P 10 31 29.2 +0.1**
baz=301
EPYK Eagle Plains 55.81 29 P **P 10 31 34.7 +1.8**
HYT Haines Junctio 56.40 36 P **P 10 31 40.1 +2.8**
HYT IAmb IAmb 10 32 09.6
comp=Z,4.1nm,1.1s
INK Inuvik 56.73 26 P **P 10 31 40.0 +0.7**
comp=Z,3.6nm,0.8s,baz=290,slow=3.5,SNR=12
comp=Z,3.6nm,0.8s
INK Inuvik 56.73 26 P **P 10 31 40.6 +1.3**
INK IAmb IAmb 10 31 41.5
comp=Z,4.0nm,0.8s
INK Inuvik 56.73 26 P **P 10 31 40.6 +1.3**
INK pmax pmax
comp=Z,4.0nm,0.8s
CHGR Chuyangaron 56.95 297 P **P 10 31 41.6 +0.1**
CHGR Chuyangaron 56.95 297 P **P 10 31 41.6 +0.1**
CHGR pmax pmax
comp=Z,23nm,0.6s
N31M Braeburn, Yuko 57.09 35 P **P 10 31 44.3 +2.2**
N31M IAmb IAmb 10 32 14.9
comp=Z,7.0nm,1.1s
AS31 Alice Springs 58.15 188 P **P 10 31 49.4 -0.4**
ASAR Alice Springs 58.15 188 P **P 10 31 49.4 -0.4**
comp=Z,1.5nm,0.7s,baz=18,slow=11,SNR=14
ASAR PcP **PcP 10 32 41.9 +0.6**
comp=Z,1.5nm,0.9s,baz=14,slow=6.1,SNR=4.7
comp=Z,1.5nm,0.7s
ASAR Alice Springs 58.15 188 P **P 10 31 48.8 -1.1**
ARU Arti 58.46 320 P **P 10 31 51.3 -0.4**
comp=Z,11nm,0.6s,baz=27,slow=12,SNR=8.3
comp=Z,11nm,0.6s
ARU Arti 58.46 320 P **P 10 31 50.8 -1.0**
ARU Arti 58.46 320 *c iP* **P 10 31 51.0 -0.7**
ARU 10 32 41.3
ARU S **S 10 39 52.2 -1.4**
ARU SS **SS 10 43 51.3 +5.8**
ARU pmax pmax
comp=Z,20nm,0.9s
ARU MLR MLR
comp=Z,162nm,16.0s
KBL Kabul 58.51 293 P **P 10 31 51.8 -0.9**
KBL Kabul 58.51 293 P **P 10 31 51.8 -0.9**
KBL pmax pmax
comp=Z,10.0nm,1.1s
PSA00 Pilbara Seismi 59.32 204 P **P 10 31 57.6 -0.4**
PSA00 IAmb IAmb 10 32 17.6
comp=Z,6.0nm,1.2s
AB31 Akbulak array 59.77 311 *i* P **P 10 32 00.3 -0.6**
ABKAR Akbulak array 59.77 311 P **P 10 32 00.4 -0.5**
ABKAR Akbulak array 59.77 311 P **P 10 31 59.9 -1.0**
C36M Paulatuk 59.83 24 P **P 10 32 01.7 +0.8**
AKTO Aktyubinsk 60.57 313 P **P 10 32 05.6 -0.7**
comp=Z,8.3nm,0.8s,baz=79,slow=12,SNR=18
comp=Z,8.3nm,0.8s
DZM Mont Dzumac 60.90 153 *e* LR LR 10 50 24.2
comp=Z,146nm,22.1s
KIRV Kirov 62.46 324 LR LR 11 02 03.4
comp=Z,133nm,18.3s,baz=58,slow=38
KIRV Kirov 62.46 324 ⇓ *eP* **P 10 32 19.1 +0.1**
GEYT Alibeck 65.25 300 P **P 10 32 37.8 0.0**
comp=Z,3.3nm,0.7s,baz=55,slow=5.6,SNR=5.4
GEYT LR LR 11 03 45.3
comp=Z,105nm,18.2s,baz=8.0,slow=38
comp=Z,3.3nm,0.7s
BELG Belogornoye 65.85 318 ⇓ *eP* **P 10 32 41.1 -0.2**
BELG pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 66.55 340 LR LR 11 04 37.3
comp=Z,125nm,21.8s,baz=55,slow=38
VRH Novokhopyorsk 69.65 319 *eP* **P 10 33 01.1 -4.2**
VRH pmax pmax
comp=Z,8.0nm,0.8s
OBN Obninsk 70.32 324 *eP* **P 10 33 07.6 -1.7**
OBN *i* 10 33 32.1
OBN *i* 10 35 40.1
OBN *i* PPP PPP 10 37 25.4
OBN pmax pmax
comp=Z,8.0nm,0.6s
LPSR Galich'ya Gora 70.44 321 *eP* **P 10 33 07.8 -2.3**
LPSR pmax pmax
comp=Z,7.0nm,0.8s
B08A Colville Reser 70.67 44 P **P 10 33 11.4 -0.3**
B08A IAmb IAmb 10 33 14.1
comp=Z,3.9nm,1.0s
H04A Detroit Lake 70.78 49 P **P 10 33 13.2 +0.7**
H04A IAmb IAmb 10 33 14.6
comp=Z,5.5nm,1.0s
VSR Storozhevoye 71.03 319 *eP* **P 10 33 13.2 -0.6**
VSR pmax pmax
comp=Z,6.0nm,0.6s
FINES FINESS Array B 71.24 333 P **P 10 33 14.9 0.0**
comp=Z,4.8nm,0.9s,baz=114,slow=3.5,SNR=8.3

FINES LR LR 11 09 38.0
comp=Z,79nm,18.7s,baz=52,slow=40
comp=Z,4.8nm,0.9s
NEW **Newport** **71.99 44** P **P** **10 33 20.4 +0.7**
NEW IAmb IAmb 10 33 22.0
comp=Z,5.3nm,1.1s
NEW **Newport** **71.99 44** P **P** **10 33 20.4 +0.7**
NEW pmax pmax
comp=Z,5.0nm,1.2s
PINE **Pine Mountain** **72.00 49** P **P** **10 33 20.0 0.0**
PINE IAmb IAmb 10 33 23.3
comp=Z,7.1nm,0.8s
NCK **Nalchik** **72.43 311**⇑ *e*P **P** **10 33 24.5 +2.1**
NCK pmax pmax
comp=Z,18nm,0.3s
K05A **Summer Lake** **72.58 50** P **P** **10 33 24.6 +1.1**
K05A IAmb IAmb 10 33 26.8
comp=Z,10nm,1.0s
KBZ **Khabaz** **72.74 311** P **P** **10 33 24.8 +0.7**
comp=Z,9.6nm,1.0s,baz=300,slow=1.1,SNR=11
comp=Z,9.6nm,1.0s
KBZ **Khabaz** **72.74 311** *c i*P **P** **10 33 24.3 +0.1**
KBZ pmax pmax
comp=Z,13nm,1.0s
KIV **Kislovodsk** **72.76 312** *e*P **P** **10 33 25.3 +0.9**
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,59nm,18.0s
VSU **Vasula** **72.83 330**⇑ *e*P **P** **10 33 24.7 +0.3**
VSU pmax pmax
comp=Z,46nm,1.0s
GNI **Garni** **73.41 307** P **P** **10 33 29.0 +0.6**
comp=Z,6.6nm,0.4s,baz=160,slow=24,SNR=3.0
GNI LR LR 11 09 32.1
comp=Z,165nm,18.4s,baz=25,slow=39
comp=Z,6.6nm,0.4s
GNI **Garni** **73.41 307**⇓ *e*P **P** **10 33 29.6 +1.2**
GNI pmax pmax
comp=Z,11nm,0.8s
BMO **Blue Mountains** **73.68 47** P **P** **10 33 31.1 +1.2**
BMO **Blue Mountains** **73.68 47** P **P** **10 33 31.1 +1.2**
BMO pmax pmax
comp=Z,3.0nm,1.1s
J08A **Circle Bar Ran** **73.76 48** P **P** **10 33 30.9 +0.5**
JTMT **Jette** **73.88 43** P **P** **10 33 31.2 +0.2**
JTMT IAmb IAmb 10 33 33.6
comp=Z,4.4nm,0.9s
BEKR **Beckworth** **74.40 52** P **P** **10 33 34.7 +0.5**
BEKR IAmb IAmb 10 33 36.6
comp=Z,4.7nm,0.9s
MFID **Camas Ranch** **75.36 47** P **P** **10 33 40.3 +0.7**
ANN **Anapa** **75.48 315** *e*P **P** **10 33 44.3 +4.2**
ANN *e**PP **pwP** **10 33 55.2 +1.1**
ANN pmax pmax
comp=Z,34nm,1.1s
LRM **Limekiln Ridge** **76.00 44** P **P** **10 33 44.7 +1.2**
AKASG **Malin Array Be** **76.49 323** P **P** **10 33 45.1 -0.7**
comp=Z,2.6nm,0.6s,baz=47,slow=7.0,SNR=17
comp=Z,2.6nm,0.6s
AKASG **Malin Array Be** **76.49 323** *i* P **P** **10 33 45.4 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB **Malin Array Si** **76.49 323** P **P** **10 33 44.8 -0.9**
AKBB IAmb IAmb 10 33 46.1
comp=Z,6.1nm,0.7s
AKBB **Malin Array Si** **76.49 323**⇑ *i*P **P** **10 33 44.9 -0.9**
AKBB pmax pmax
comp=Z,6.0nm,0.7s
NVAR **Mina Array Bea** **76.52 53** P **P** **10 33 47.7 +1.2**
comp=Z,1.9nm,0.9s,baz=281,slow=6.5,SNR=15
NVAR LR LR 11 01 56.5
comp=Z,42nm,21.9s,baz=309,slow=31
comp=Z,1.9nm,0.9s
NVAR **Mina Array Bea** **76.52 53** P **P** **10 33 46.9 +0.4**
AK05 **Malin Array Si** **76.55 323** P **P** **10 33 44.9 -1.2**
AK05 IAmb IAmb 10 34 03.5
comp=Z,11nm,1.2s
HFS **Hagfors** **76.58 336** LR LR 11 11 44.2
comp=Z,154nm,19.5s,baz=24,slow=39
NC204 **NORSAR Array S** **76.66 338** P **P** **10 33 47.2 +0.5**
NB2 **NORSAR Subarra** **76.70 338** P **P** **10 33 46.8 -0.1**
comp=Z,1.4nm,0.7s,baz=41,slow=5.9
NOA **NORSAR Array B** **76.70 338** P **P** **10 33 46.5 -0.4**
comp=Z,2.6nm,0.8s,baz=40,slow=5.7,SNR=9.0
NOA LR LR 11 12 27.6
comp=Z,95nm,19.2s,baz=35,slow=40
comp=Z,2.6nm,0.8s
ELK **Elko** **77.21 49** P **P** **10 33 50.1 -0.2**
ELK **Elko** **77.21 49** P **P** **10 33 50.2 -0.2**
ELK pmax pmax
comp=Z,3.0nm,1.1s
MARD **Mardin** **77.54 307** P **P** **10 33 52.4 +0.3**
H17A **Grant Village** **77.91 44** P **P** **10 33 55.6 +1.4**
H17A IAmb IAmb 10 33 59.5
comp=Z,5.2nm,1.0s
IMW **Indian Meadow** **77.99 45** P **P** **10 33 56.1 +1.3**
KLNR **Kaliningrad** **78.09 329**⇑ *e*P **P** **10 33 53.9 -0.7**
KLNR pmax pmax
comp=Z,98nm,0.9s
HVU **Hansel Valley** **78.14 47** P **P** **10 33 56.0 +0.5**
HVU **Hansel Valley** **78.14 47** P **P** **10 33 56.0 +0.5**
HVU pmax pmax
comp=Z,3.0nm,0.9s
TPAW **Teton Pass** **78.23 45** P **P** **10 33 56.2 +0.2**
TPAW IAmb IAmb 10 34 16.7
comp=Z,5.4nm,1.3s
R11A **Troy Canyon, C** **78.34 52** P **P** **10 33 57.5 +0.9**
SNOW **Snow King Moun** **78.36 45** P **P** **10 33 58.1 +1.3**
SNOW IAmb IAmb 10 34 21.0
comp=Z,4.3nm,1.1s
RAR **Rarotonga** **78.51 126** LR LR 11 03 05.1
comp=Z,74nm,19.5s,baz=298,slow=31
SFJD **Kangerlussuaq** **78.55 5** LR LR 11 10 53.8
comp=Z,41nm,19.4s,baz=348,slow=37
HWUT **Hardware Ranch** **78.97 47** P **P** **10 34 00.9 +0.8**
HWUT IAmb IAmb 10 34 03.2
comp=Z,4.5nm,0.9s
DUG **Dugway, Tooele** **79.04 49** P **P** **10 34 01.2 +0.8**
DUG IAmb IAmb 10 34 03.4
comp=Z,6.4nm,1.1s
DUG **Dugway, Tooele** **79.04 49** P **P** **10 34 01.2 +0.8**
DUG pmax pmax
comp=Z,6.0nm,1.1s
TCUT **Toone Canyon** **79.36 47** P **P** **10 34 02.9 +0.6**
TCUT IAmb IAmb 10 34 04.6
comp=Z,4.4nm,0.9s
BW06 **Boulder Array** **79.48 45** P **P** **10 34 03.5 +0.7**
PD31 **Pinedale Array** **79.48 45** P **P** **10 34 03.0 +0.1**
PDAR **Pinedale Array** **79.48 45** P **P** **10 34 03.6 +0.7**
comp=Z,1.1nm,0.8s,baz=276,slow=1.3,SNR=9.4
comp=Z,1.1nm,0.8s
PDAR **Pinedale Array** **79.48 45** P **P** **10 34 03.8 +0.9**
JLU **Jordanelle** **79.64 48** P **P** **10 34 03.0 -0.9**
JLU IAmb IAmb 10 34 06.6
comp=Z,4.3nm,1.0s
MSU **Marysvale** **80.43 50** P **P** **10 34 09.8 +1.7**
MSU **Marysvale** **80.43 50** P **P** **10 34 09.8 +1.7**
PFO **Pinyon Flats O** **80.45 56** LR LR 11 06 51.9
comp=Z,82nm,18.3s,baz=290,slow=33
BR131 **Keskin Array S** **80.72 312**⇓ *e*P **P** **10 34 10.7 +1.2**
BRTR **Keskin Array B** **80.72 312** P **P** **10 34 09.8 +0.2**
comp=Z,2.8nm,0.7s,baz=123,slow=4.6,SNR=9.9
BRTR LR LR 11 15 21.2
comp=Z,87nm,18.1s,baz=86,slow=40
comp=Z,2.8nm,0.7s
BRTR **Keskin Array B** **80.72 312** P **P** **10 34 09.6 0.0**
RDMU **Red Mountain** **80.80 47** P **P** **10 34 11.2 +1.1**
RDMU IAmb IAmb 10 34 13.0
comp=Z,12nm,1.3s
MLR **Muntele Rosu** **81.51 320** LR LR 11 14 59.9
comp=Z,202nm,18.6s,baz=48,slow=39
RAYN **Ar Rayn** **81.78 293** P **P** **10 34 14.4 -0.9**
RAYN IAmb IAmb 10 34 17.4
comp=Z,6.9nm,1.1s
RAYN **Ar Rayn** **81.78 293** P **P** **10 34 14.4 -0.9**
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RPZ **Rata Peaks** **82.22 159** LR LR 11 04 06.4
comp=Z,73nm,21.4s,baz=207,slow=31
PV13 **Radium Mtn., P** **82.74 48** IAmb IAmb 10 34 23.0
comp=Z,7.8nm,1.0s
N23A **Red Feather La** **82.75 45** IAmb IAmb 10 34 26.2
comp=Z,7.3nm,1.2s
PPT **Papeete** **83.34 116** LR LR 11 12 54.5
comp=Z,41nm,18.9s,baz=322,slow=37
PPT2 **Papeete2** **83.36 116** *e*LR LR 11 00 44.5
comp=Z,102nm,24.5s
CLL **Collm** **83.48 330** *e*P **P** **10 34 25.0 +1.4**
CLL **Collm** **83.48 330** *e*P **P** **10 34 25.0 +1.4**
MVCO **Mesa Verde** **83.53 49** IAmb IAmb 10 34 29.3
comp=Z,6.2nm,1.2s
GERES **GERESS Array B** **85.05 328** P **P** **10 34 31.3 -0.5**
comp=Z,1.2nm,0.7s,baz=11,slow=2.9,SNR=6.7
comp=Z,1.2nm,0.7s
TAOE **Nuku Hiva Isla** **85.42 104** *e*LR LR 11 01 41.0
comp=Z,94nm,22.8s
ANMO **Albuquerque** **86.24 50** LR LR 11 15 56.7
comp=Z,29nm,18.0s,baz=328,slow=38
TBI **Tubuai** **87.06 121** *e*LR LR 11 02 28.0
comp=Z,123nm,23.2s
SCHQ **Schefferville** **87.89 16** LR LR 11 17 40.8
comp=Z,33nm,18.6s,baz=96,slow=38
DAVOX **Davos/Dischmat** **88.28 329** LR LR 11 18 40.8
comp=Z,67nm,18.8s,baz=74,slow=38
LPIG **La Paz** **90.43 60** LR LR 11 10 28.2
comp=Z,17nm,19.1s,baz=238,slow=32
TXAR **Lajitas Array** **91.67 52** P **P** **10 35 04.6 +0.8**
comp=Z,0.5nm,0.7s,baz=276,slow=2.5,SNR=8.1
comp=Z,0.5nm,0.7s
TKL **Tuckaleechee C** **98.50 36** LR LR 11 22 05.3
comp=Z,12nm,20.4s,baz=7.5,slow=37
ESDC **Sonseca Array** **99.74 334** LR LR 11 27 13.9
comp=Z,72nm,18.6s,baz=357,slow=39
TORD **Torodi Ar. Bea** **119.28 314** PKP **PKPdf** **10 40 45.2 -0.7**
comp=Z,40nm,0.4s,baz=128,slow=4.1,SNR=4.4

ROM 29 10:31:35.9±0.1, 42.782N±0.003×13.125E±0.004, h12km, ML2.9/43, 22C-19D, Error ellipse: s-maj=0.3km s-min=0.1km az=69.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
NRCA	**Norcia**	**0.05**	**352**	⇓P	Pg	10 31 38.7	+0.3
NRCA				S	Sg	10 31 40.3	+0.1
NRCA				AML	AML		
	comp=N,89000μm,0.2s						
NRCA				AML	AML		
	comp=E,52350μm,0.1s						
NRCA				AML	AML		
	comp=N,89200μm,0.2s						
NRCA				AML	AML		
NRCA				AML	AML		
	comp=N,89300μm,0.2s						
NRCA				AML	AML		
	comp=E,58300μm,0.2s						
NRCA				AML	AML		
	comp=N,88900μm,0.2s						
MC2	**Monte Cornacci**	**0.14**	**20**	⇑P	Pg	10 31 39.9	+0.4
MC2				S	Sg	10 31 42.8	+0.7
MC2				AML	AML		
	comp=E,9740μm,1.4s						
MC2				AML	AML		
	comp=N,9710μm,1.4s						
MC2				AML	AML		
	comp=E,9680μm,1.4s						
MC2				AML	AML		
	comp=N,9705μm,1.4s						
MC2				AML	AML		
	comp=N,9715μm,1.4s						
MC2				AML	AML		
	comp=E,9695μm,1.4s						
FEMA	**Monte Fema**	**0.19**	**343**	⇓P	Pg	10 31 40.6	+0.4
FEMA				S	Sg	10 31 43.8	+0.6
FEMA				AML	AML		
	comp=E,18350μm,0.9s						
FEMA				AML	AML		
	comp=N,13460μm,0.6s						
FEMA				AML	AML		
	comp=N,13470μm,0.6s						
FEMA				AML	AML		
	comp=E,18400μm,0.9s						
FEMA				AML	AML		
	comp=N,13495μm,0.6s						
LNSS	**Leonessa**	**0.19**	**199**	P	Pg	10 31 40.6	+0.4
LNSS				S	Sg	10 31 44.1	+1.0
MMO1	**Montemonaco**	**0.19**	**52**	P	Pg	10 31 40.6	+0.4
MMO1				S	Sg	10 31 44.1	+0.9
T1243	**Rocca Santa Ma**	**0.25**	**110**	P	Pg	10 31 41.8	+0.5
T1243				S	Sg	10 31 45.7	+0.8
T1243				AML	AML		
	comp=E,9530μm,1.4s						
T1243				AML	AML		
	comp=N,9525μm,0.3s						
T1243				AML	AML		
	comp=E,9330μm,1.4s						
T1243				AML	AML		
	comp=N,9460μm,0.3s						
T1243				AML	AML		
	comp=E,12400μm,0.2s						
T1243				AML	AML		
	comp=N,13350μm,0.2s						
T1243				AML	AML		
	comp=E,12450μm,0.2s						
T1243				AML	AML		
	comp=E,12450μm,0.2s						
T1243				AML	AML		
	comp=N,13350μm,0.2s						
FDMO	**Fiordimonte**	**0.26**	**354**	P	Pg	10 31 41.6	+0.3
FDMO				S	Sg	10 31 45.7	+0.8
FDMO				AML	AML		
	comp=N,6685μm,0.9s						
FDMO				AML	AML		
	comp=E,5100μm,1.4s						
CESI	**CESI - Serrava**	**0.28**	**324**	P	Pg	10 31 42.1	+0.4
CESI				S	Sg	10 31 46.5	+1.0
CESI				AML	AML		
	comp=N,8455μm,0.4s						
CESI				AML	AML		
	comp=E,3750μm,0.2s						
RM33	**Pellescritta (**	**0.28**	**166**	P	Pg	10 31 42.1	+0.3
RM33				S	Sb	10 31 46.8	-0.9
RM33				AML	AML		
	comp=E,2495μm,1.5s						
RM33				AML	AML		
	comp=E,2330μm,1.5s						
RM33				AML	AML		
	comp=N,2345μm,0.4s						
RM33				AML	AML		
	comp=E,2500μm,1.5s						
RM33				AML	AML		
	comp=N,2400μm,0.4s						
RM33				AML	AML		
	comp=N,2405μm,0.4s						
RM33				AML	AML		
	comp=N,2350μm,0.4s						
CSP1	**Cessapalombo**	**0.32**	**11**	P	Pg	10 31 42.7	+0.3
CSP1				S	Sb	10 31 47.9	-0.9
CSP1				AML	AML		
	comp=E,4135μm,1.6s						
CSP1				AML	AML		
	comp=N,5035μm,0.5s						
CSP1				AML	AML		
	comp=E,4120μm,1.6s						
CSP1				AML	AML		
	comp=N,5030μm,0.5s						
CSP1				AML	AML		
	comp=E,4130μm,1.6s						
CSP1				AML	AML		
	comp=N,5040μm,0.5s						
CAMP	**Campotosto**	**0.32**	**139**	⇓P	Pg	10 31 42.8	+0.2
CAMP				S	Sb	10 31 48.0	-0.9
CAMP				AML	AML		
	comp=E,1342μm,0.2s						
CAMP				AML	AML		
	comp=N,1310μm,0.5s						
ARRO	**Arrone**	**0.33**	**233**	⇑P	Pg	10 31 43.0	+0.3
ARRO				S	Sb	10 31 48.6	-0.5
ARRO				AML	AML		
	comp=N,1780μm,0.6s						
ARRO				AML	AML		
	comp=E,1470μm,0.2s						
SEF1	**Sefro**	**0.39**	**340**	P	Pg	10 31 43.9	+0.2
TERO	**Teramo**	**0.39**	**114**	P	Pg	10 31 43.8	+0.2
TERO				S	Sb	10 31 49.9	-0.8
TERO				AML	AML		
	comp=N,2810μm,0.4s						
TERO				AML	AML		
	comp=N,2805μm,0.4s						
TERO				AML	AML		
	comp=E,2485μm,0.3s						
TERO				AML	AML		
	comp=N,3160μm,0.4s						
TERO				AML	AML		
	comp=E,2210μm,0.3s						
ASSB	**Assisi San Ben**	**0.43**	**307**	⇓P	Pg	10 31 44.6	+0.1
ASSB				AML	AML		
	comp=N,2615μm,0.2s						
ASSB				AML	AML		
	comp=E,2700μm,0.2s						
FIU1	**Fiuminata**	**0.43**	**341**	P	Pg	10 31 42.9	-1.6
MNTP	**Montappone**	**0.44**	**35**	P	Pb	10 31 45.5	-0.2
MNTP				AML	AML		
	comp=E,3515μm,0.7s						
MNTP				AML	AML		
	comp=N,2930μm,1.6s						
CESX	**Cesi**	**0.44**	**247**	P	Pg	10 31 44.2	-0.4
CESX				AML	AML		
	comp=N,1600μm,0.4s						
CESX				AML	AML		
	comp=E,1265μm,0.7s						
OFFI	**Offida**	**0.44**	**69**	⇑P	Pb	10 31 45.7	0.0
OFFI				AML	AML		
	comp=E,3740μm,0.6s						
OFFI				AML	AML		
	comp=N,9725μm,0.5s						
SSM1	**San Severino M**	**0.45**	**5**	P	Pg	10 31 45.1	+0.3
GAG1	**Gagliole**	**0.46**	**355**	⇑P	Pg	10 31 45.3	+0.4
GAG1				AML	AML		
	comp=E,5855μm,0.3s						
GAG1				AML	AML		
	comp=N,4540μm,0.3s						
GIGS	**Gran Sasso**	**0.47**	**135**	P	Pg	10 31 45.0	-0.1
GIGS				AML	AML		
	comp=N,254μm,0.4s						
GIGS				AML	AML		
	comp=N,254μm,0.4s						
GIGS				AML	AML		
	comp=E,297μm,1.4s						
SNTG	**Esanatoglia**	**0.49**	**344**	⇑P	Pg	10 31 45.6	0.0
SNTG				S	Sb	10 31 54.0	+0.2
SNTG				AML	AML		
	comp=E,1775μm,0.6s						
SNTG				AML	AML		
	comp=N,1585μm,1.1s						
FIAM	**Fiamignano**	**0.51**	**181**	⇑P	Pg	10 31 46.0	0.0
FIAM				AML	AML		
	comp=E,1160μm,1.4s						
FIAM				AML	AML		
	comp=N,772μm,0.6s						
EL6	**Elcito**	**0.55**	**358**	⇑P	Pg	10 31 46.7	0.0
EL6				S	Sb	10 31 56.0	+0.6
FOSV	**Fossato di Vic**	**0.58**	**333**	⇑P	Pg	10 31 47.4	+0.1
TRTR	**Tortoreto Alta**	**0.58**	**87**	⇓P	Pb	10 31 48.6	+0.6
TRTR				AML	AML		
	comp=E,4505μm,0.5s						
TRTR				AML	AML		
	comp=N,4395μm,0.6s						
CING	**Cingoli**	**0.60**	**5**	⇑P	Pg	10 31 47.5	-0.1
CING				AML	AML		
	comp=E,1720μm,0.2s						
CING				AML	AML		
	comp=N,1575μm,0.6s						
FAGN	**Fagnano**	**0.62**	**146**	⇓P	Pb	10 31 49.0	+0.3
FAGN				AML	AML		
	comp=E,1415μm,0.4s						
FAGN				AML	AML		
	comp=N,1095μm,0.4s						
VCEL	**Villa Celiera**	**0.66**	**126**	⇑P	Pg	10 31 48.9	+0.2
VCEL				AML	AML		
	comp=N,1017μm,0.5s						
VCEL				AML	AML		
	comp=N,1018μm,0.5s						
VCEL				AML	AML		
	comp=E,954μm,0.3s						
VCEL				AML	AML		
	comp=N,1018μm,0.5s						
SSFR	**Montelago di S**	**0.70**	**339**	⇑P	Pg	10 31 49.7	+0.2
SSFR				AML	AML		
	comp=E,1650μm,0.2s						
SSFR				AML	AML		
	comp=N,2325μm,0.2s						
SSFR				AML	AML		
	comp=E,1385μm,0.8s						
SSFR				AML	AML		
	comp=N,2060μm,0.3s						
SRES	**S.Oreste - Sor**	**0.71**	**220**	⇓P	Pg	10 31 49.8	+0.1
SRES				AML	AML		
	comp=E,289μm,1.0s						
SRES				AML	AML		
	comp=N,249μm,0.4s						
ARVD	**Arcevia**	**0.73**	**349**	⇓P	Pg	10 31 50.1	0.0
ARVD				S	Sn	10 32 02.0	-1.2
ARVD				AML	AML		
	comp=N,677μm,0.6s						
ARVD				AML	AML		
	comp=E,928μm,0.9s						
ARVD				AML	AML		
	comp=N,676μm,0.6s						
T0110	**Collepietro**	**0.74**	**139**	⇑P	Pg	10 31 49.8	-0.4
T0110				AML	AML		
	comp=E,695μm,0.4s						
T0110				AML	AML		
	comp=N,859μm,0.5s						
MGAB	**Montegabbione**	**0.76**	**280**	⇑P	Pb	10 31 50.8	-0.2
MGAB				AML	AML		
	comp=N,1745μm,0.2s						
MGAB				AML	AML		
	comp=N,1845μm,0.2s						
MGAB				AML	AML		
	comp=E,1830μm,0.5s						
MGAB				AML	AML		
	comp=E,1600μm,1.4s						
FRON	**Frontone**	**0.79**	**338**	⇑P	Pg	10 31 51.0	-0.3
FRON				AML	AML		
	comp=E,600μm,0.5s						
FRON				AML	AML		
	comp=N,718μm,0.7s						
ATVO	**AVT- Monte Val**	**0.80**	**319**	⇓P	Pg	10 31 51.2	-0.2
ATVO				AML	AML		
	comp=E,418μm,0.3s						
ATVO				AML	AML		
	comp=N,511μm,0.4s						
ATVO				AML	AML		
	comp=E,417μm,0.3s						
ATMI	**Monte Miggiano**	**0.84**	**312**	⇓P	Pn	10 31 54.0	+0.4
CERT	**Cerreto**	**0.84**	**187**	⇓P	Pg	10 31 52.2	0.0
CERT				AML	AML		
	comp=E,718μm,0.5s						
CERT				AML	AML		
	comp=N,426μm,1.4s						
AOI	**Ancona**	**0.84**	**24**	P	Pb	10 31 52.7	+0.2
AOI				AML	AML		
	comp=E,748μm,0.3s						
AOI				AML	AML		
	comp=N,552μm,0.4s						
AOI				AML	AML		
	comp=E,748μm,0.3s						
ATPI	**Pietralunga -**	**0.85**	**322**	⇑P	Pg	10 31 52.4	0.0
ATPI				AML	AML		
	comp=N,398μm,0.5s						
ATPI				AML	AML		
	comp=E,372μm,0.4s						
COR1	**Corinaldo**	**0.85**	**354**	⇑P	Pb	10 31 53.2	+0.4
PIEI	**Pieia**	**0.87**	**330**	⇓P	Pg	10 31 52.3	-0.4
PIEI				S	Sn	10 32 07.0	+0.3
PIEI				AML	AML		
	comp=E,540μm,1.0s						
PIEI				AML	AML		
	comp=N,350μm,0.9s						
MPAG	**Monte Paganucc**	**0.89**	**343**	⇓P	Pg	10 31 52.8	-0.4
MPAG				S	Sn	10 32 08.0	+0.8
MPAG				AML	AML		
	comp=E,508μm,0.8s						
MPAG				AML	AML		
	comp=N,522μm,0.2s						
MPAG				AML	AML		
	comp=E,509μm,0.8s						
SACS	**San Casciano d**	**0.90**	**275**	⇓P	Pg	10 31 53.2	0.0
SACS				AML	AML		
	comp=N,355μm,0.6s						
SACS				AML	AML		
	comp=E,296μm,0.8s						
APEC	**Apecchio**	**0.93**	**327**	S	Sn	10 32 09.0	+0.8
FSSB	**Fossombrone**	**0.94**	**345**	⇑P	Pg	10 31 54.0	-0.2
FSSB				S	Sn	10 32 10.0	+1.4
FSSB				AML	AML		
	comp=E,2555μm,0.4s						

FSSB				AML	AML				
	comp=N,2725µm,0.3s								
INTR	**Introdacqua**	**0.96**	**143**	⇓P	Pg	10 31 53.2	-1.3		
INTR				AML	AML				
	comp=E,286µm,0.9s								
INTR				AML	AML				
	comp=N,440µm,0.6s								
CAFI	**Castiglion Fio**	**1.01**	**303**	⇑P	Pb	10 31 55.2	-0.2		
CAFI				AML	AML				
	comp=E,255µm,0.9s								
CAFI				AML	AML				
	comp=N,244µm,0.9s								
SF04	**Casetta**	**1.08**	**273**	⇑P	Pn	10 31 59.5	+2.5		
SF04				S	Sn	10 32 14.0	+2.1		
PARC	**Parchiule**	**1.08**	**324**	⇓P	Pg	10 31 56.8	0.0		
PARC				AML	AML				
	comp=N,220µm,0.4s								
PARC				AML	AML				
	comp=E,274µm,0.7s								
TOLF	**Tolfa**	**1.10**	**230**	⇓P	Pb	10 31 56.6	-0.3		
TOLF				AML	AML				
	comp=E,180µm,0.5s								
TOLF				AML	AML				
	comp=N,190µm,1.0s								
PESA	**Pesaro**	**1.18**	**350**	⇑P	Pg	10 31 58.9	+0.3		
PESA				AML	AML				
	comp=E,892µm,0.6s								
PESA				AML	AML				
	comp=N,728µm,0.8s								
CRE	**Caprese Michel**	**1.20**	**315**	⇑P	Pb	10 31 58.7	+0.1		
CRE				AML	AML				
	comp=E,190µm,0.4s								
CRE				AML	AML				
	comp=N,221µm,0.7s								
SFI	**Santa Sofia**	**1.46**	**321**	⇓P	Pg	10 32 05.1	+1.1		
RUFI	**Rufina**	**1.58**	**312**	⇑P	Pn	10 32 04.4	+0.5		
RUFI				AML	AML				
	comp=E,81µm,1.6s								
RUFI				AML	AML				
	comp=N,108µm,1.5s								
DUGI	**Dugi Otok**	**1.86**	**49**	*e*Pn	Pn	10 32 08.3	+0.7		
VIRC	**Vir**	**2.06**	**42**	*e*Pn	Pn	10 32 10.7	+0.3		
NVLJ	**Novalja**	**2.19**	**35**	*e*Pn	Pn	10 32 12.2	+0.1		
SMRN	**Sveta Marina**	**2.37**	**18**	*e*Pn	Pn	10 32 14.7	0.0		
HVAR	**Hvar**	**2.47**	**80**	*e*Pn	Pn	10 32 16.9	+0.9		
A253A	**Karojba, Istri**	**2.56**	**11**	*e*Pn	Pn	10 32 17.7	+0.4		
A250A	**Rusevo Krmpots**	**2.64**	**29**	*e*Pn	Pn	10 32 19.3	+0.9		
KIJV	**Kijevo**	**2.69**	**62**	*e*Pn	Pn	10 32 20.7	+1.7		
LSTV	**Lastovo**	**2.77**	**89**	*e*Pn	Pn	10 32 20.8	+0.6		
MAKA	**Makarska**	**2.90**	**79**	*e*Pn	Pn	10 32 22.8	+0.9		
RICI	**Ricice**	**3.02**	**75**	*e*Pn	Pn	10 32 25.3	+1.8		
RICI					Sn	10 33 02.4	+2.7		
CGRP	**Cima Grappa**	**3.24**	**343**	⇓P	Pn	10 32 28.3	+1.6		
STON	**Ston**	**3.37**	**87**	*e*Pn	Pn	10 32 28.3	0.0		
OBKA	**Obir**	**3.86**	**15**	*e*Pg	Pg	10 32 50.0	+0.1		
	comp=N,1.3nm,0.3s								
ABTA	**Abfaltersbach**	**3.99**	**354**	*e*Pn	Pn	10 32 38.3	+1.4		
	comp=N,0.6nm,0.1s								
KBA	**Koelnbreinsper**	**4.30**	**2**	*e*Pn	Pn	10 32 42.8	+1.5		
	comp=N,1.2nm,0.3s								
FETA	**Feichten**	**4.57**	**339**	*e*Pn	Pn	10 32 46.8	+1.8		
	comp=N,0.7nm,0.3s								
WTTA	**Wattenberg**	**4.60**	**347**	*e*Pn	Pn	10 32 45.8	+0.3		
	comp=N,1.0nm,0.2s								
SQTA	**Sankt Quirin**	**4.64**	**344**	*e*Pn	Pn	10 32 49.1	+3.1		
	comp=N,1.8nm,0.3s								

ROM 29 10:32:13.6±0.1, 42°800N±0°003×13°207E±0°005, h10km, ML2.9/10, 6C-6D, Error ellipse: s-maj=0.5km s-min=0.2km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**296**	⇑P	Pg	10 32 16.3	+0.4
NRCA				S	Sg	10 32 17.8	+0.2
NRCA				AML	AML		
	comp=E,49750µm,0.2s						
NRCA				AML	AML		
	comp=N,48650µm,0.1s						
NRCA				AML	AML		
	comp=N,55000µm,0.1s						
NRCA				AML	AML		
	comp=N,48600µm,0.1s						
NRCA				AML	AML		
	comp=E,56900µm,0.2s						
NRCA				AML	AML		
	comp=N,54950µm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**354**	⇓P	Pg	10 32 17.0	+0.4
MC2				S	Sg	10 32 19.4	+0.7
MC2				AML	AML		
	comp=E,3735µm,0.3s						
MC2				AML	AML		
	comp=N,3685µm,0.3s						
MC2				AML	AML		
	comp=E,3730µm,0.3s						
MC2				AML	AML		
	comp=N,3685µm,0.5s						
FEMA	**Monte Fema**	**0.20**	**325**	P	Pg	10 32 18.4	+0.6
FEMA				S	Sg	10 32 21.8	+1.0
T1243	**Rocca Santa Ma**	**0.21**	**120**	P	Pg	10 32 18.6	+0.7
T1243				S	Sg	10 32 21.9	+1.0
T1243				AML	AML		
	comp=E,12400µm,0.3s						
T1243				AML	AML		
	comp=N,13350µm,0.2s						
T1243				AML	AML		
	comp=E,12450µm,0.2s						
T1243				AML	AML		
	comp=N,13350µm,0.2s						
T1243				AML	AML		
	comp=E,12450µm,0.2s						
T1243				AML	AML		
	comp=N,13350µm,0.2s						
LNSS	**Leonessa**	**0.23**	**212**	⇑P	Pg	10 32 19.2	+0.8
LNSS				S	Sg	10 32 23.3	+1.6
LNSS				AML	AML		
	comp=E,11460µm,0.3s						
LNSS				AML	AML		
	comp=N,6980µm,0.4s						
FDMO	**Fiordimonte**	**0.25**	**340**	P	Pg	10 32 19.3	+0.6
FDMO				S	Sb	10 32 23.5	-1.3
FDMO				AML	AML		
	comp=E,1410µm,0.1s						
FDMO				AML	AML		
	comp=N,1725µm,1.1s						
CSP1	**Cessapalombo**	**0.29**	**360**	P	Pg	10 32 20.1	+0.6
CSP1				S	Sb	10 32 25.1	-0.9
RM33	**Pellescritta (**	**0.29**	**179**	P	Pg	10 32 20.2	+0.7
RM33				S	Sb	10 32 25.1	-0.8
CESI	**CESI - Serrava**	**0.30**	**313**	⇓P	Pg	10 32 20.3	+0.6
CESI				S	Sb	10 32 25.2	-1.0
CESI				AML	AML		
	comp=E,2425µm,0.2s						
CESI				AML	AML		
	comp=N,8005µm,0.2s						
CAMP	**Campotosto**	**0.30**	**151**	P	Pg	10 32 20.2	+0.5
CAMP				S	Sb	10 32 25.1	-1.1
CAMP				AML	AML		
	comp=E,1342µm,0.2s						
CAMP				AML	AML		
	comp=N,1149µm,0.2s						
TERO	**Teramo**	**0.34**	**121**	⇓P	Pg	10 32 20.8	+0.4
TERO				AML	AML		
	comp=E,1710µm,0.4s						
TERO				AML	AML		
	comp=N,3160µm,0.4s						
OFFI	**Offida**	**0.38**	**69**	⇓P	Pb	10 32 22.5	+0.1
ARRO	**Arrone**	**0.39**	**236**	⇓P	Pg	10 32 22.0	+0.7
GIGS	**Gran Sasso**	**0.44**	**143**	P	Pg	10 32 22.4	+0.2
GIGS				AML	AML		
	comp=N,218µm,0.3s						
GIGS				AML	AML		
	comp=E,227µm,1.4s						
GAG1	**Gagliole**	**0.45**	**347**	P	Pb	10 32 23.1	-0.6
ASSB	**Assisi San Ben**	**0.47**	**301**	⇑P	Pg	10 32 23.0	+0.2
ASSB				AML	AML		
	comp=N,882µm,0.2s						
ASSB				AML	AML		
	comp=E,1028µm,0.3s						
SNTG	**Esanatoglia**	**0.49**	**337**	⇑P	Pg	10 32 23.6	+0.3
EL6	**Elcito**	**0.53**	**352**	⇑P	Pg	10 32 24.4	+0.4
EL6				S	Sb	10 32 34.0	+1.0
FIAM	**Fiamignano**	**0.54**	**187**	S	Sb	10 32 33.0	0.0
FOSV	**Fossato di Vic**	**0.59**	**327**	⇓P	Pg	10 32 24.8	-0.3
T0110	**Collepietro**	**0.71**	**143**	⇑P	Pg	10 32 27.3	0.0
ARVD	**Arcevia**	**0.72**	**345**	S	Sn	10 32 40.0	-1.1
SRES	**S.Oreste - Sor**	**0.76**	**223**	S	Sn	10 32 41.0	-1.0
ATPI	**Pietralunga -**	**0.88**	**318**	S	Sn	10 32 45.0	+0.1
PIEI	**Pieia**	**0.89**	**326**	S	Sn	10 32 45.0	-0.1
MPAG	**Monte Paganucc**	**0.89**	**339**	S	Sn	10 32 46.0	+0.7

IDC ***29*** *10:36:48.6±2.3, 16°.18S×72°.20W, h78km±24km, mb3.7/9, mbtmp4.2/12, MS2.8/3, Error ellipse: s-maj=47.5km s-min=18.2km az=30.0*

NEIC ***29*** *10:36:48.9±2.0, 16°.38S±0°.08×72°.46W±0°.06, h86km±8km, mb4.4/31, ML4.7(ARE), Mwr4.6(GUC), Error ellipse: s-maj=14.5km s-min=1.8km az=215.0*

VAO ***29*** *10:36:48.3±0.3, 16°.27S×72°.39W, h80km, mb4.6*

ARE ***29*** *10:36:49±0.0, 16°.48S×72°.55W, h92km, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

GUC ***29*** *10:36:51.1±0.5, 16°.61S×72°.52W, h88km±3km, ML5.0*

ISC 29 10:36:49.4±0.5, 16°.41S±0°.06×72°.42W±0°.07, h100km, n144, σ1°46/138, mb4.3/23, 2C-5D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**2.78**	**135**		**Pn**	**10 37 33.2**	**+0.9**
AP01	**Chacalluta**	**2.78**	**135**	*e*P	**Pn**	**10 37 32.9**	**+0.6**
AP01				*i* S	**Sn**	**10 38 04.4**	**-0.9**
AP01				IAML		10 38 06.0	
	comp=N,7µm,0.2s						
PB12	**IPOC Station P**	**2.97**	**138**	Pn	**Pn**	**10 37 34.4**	**-0.4**
PB12	**IPOC Station P**	**2.97**	**138**	⇓*i*P	**Pn**	**10 37 34.5**	**-0.4**
PB12				IAML		10 38 09.7	
	comp=N,2µm,0.3s						
PB16	**IPOC Station P**	**3.38**	**125**	⇓*i*P	**Pn**	**10 37 41.6**	**+0.9**
PB16				*i* S	**Sn**	**10 38 19.5**	**-0.8**
PB16				IAML		10 38 22.1	
	comp=N,2µm,0.6s						
LPAZ	**La Paz**	**4.12**	**89**	P	**Pn**	**10 37 53.4**	**+2.6**
	comp=N,79nm,0.3s,baz=311,slow=7.3,SNR=271						
LPAZ				LR	LR	10 39 46.0	
	comp=N,130nm,18.7s,baz=118,slow=45						
TA02	**Huaiquique**	**4.41**	**151**		**Pn**	**10 37 54.0**	**-0.3**
TA02	**Huaiquique**	**4.41**	**151**	*e*P	**Pn**	**10 37 53.9**	**-0.3**
TA02				*i* S	**Sn**	**10 38 42.0**	**-2.5**
GO01	**Chusmiza**	**4.46**	**137**	Pn	**Pn**	**10 37 55.8**	**+0.4**
GO01	**Chusmiza**	**4.46**	**137**	⇓*i*P	**Pn**	**10 37 55.5**	**+0.2**
GO01				*i* S	**Sn**	**10 38 45.5**	**-0.9**
TA01	**Diego Aracena**	**4.65**	**153**	Pn	**Pn**	**10 37 56.8**	**-0.6**
TA01	**Diego Aracena**	**4.65**	**153**	⇓*i*P	**Pn**	**10 37 56.9**	**-0.5**
PB01	**IPOC Station P**	**5.38**	**149**	⇓*i*P	**Pn**	**10 38 06.7**	**-0.7**
PB01				*i* S	**Sn**	**10 39 03.3**	**-4.8**
PB02	**IPOC Station P**	**5.44**	**154**	⇓*i*P	**Sn**	**10 38 07.4**	**-0.8**
PB02				*i* S	**Sn**	**10 39 04.7**	**-4.8**
NNA	**Nana**	**6.14**	**315**	P	**Pn**	**10 38 17.0**	**-0.7**
	comp=N,28nm,0.6s,baz=143,slow=10,SNR=20						
NNA				S	**Sn**	**10 39 21.6**	**-5.0**
	comp=N,42nm,0.4s,baz=218,slow=16,SNR=4.2						
LVC	**Limon Verde**	**7.00**	**152**	P	**Pn**	**10 38 30.0**	**+0.4**
	comp=N,72nm,0.4s,baz=3.8,slow=8.6,SNR=698						
LVC				S	**Sn**	**10 39 45.6**	**-2.4**
	comp=N,95nm,0.4s,baz=97,slow=18,SNR=16						
LVC				LR	LR	10 41 24.7	
	comp=N,90nm,21.6s,baz=322,slow=39						
LVC	**Limon Verde**	**7.00**	**152**	Pn	**Pn**	**10 38 30.1**	**+0.4**
LVC	**Limon Verde**	**7.00**	**152**	*e*P	**Pn**	**10 38 28.8**	**-0.8**
CZSB	**Cruzeiro do Su**	**8.63**	**358**	*e*P	**Pn**	**10 38 47.5**	**-4.0**
ETMB	**Extrema**	**8.91**	**43**	Pn	**Pn**	**10 38 53.4**	**-2.0**
ETMB	**Extrema**	**8.91**	**43**	*e*P	**Pn**	**10 38 54.1**	**-1.3**
GO02	**Mina Guanaco**	**9.10**	**164**	Pn	**Pn**	**10 38 57.9**	**-0.3**
AC02	**Maricunga**	**10.82**	**164**	Pn	**Pn**	**10 39 22.1**	**+0.4**
SIV	**San Ignacio**	**10.91**	**89**	P	**Pn**	**10 39 19.1**	**-3.4**
	comp=N,3.1nm,0.3s,baz=259,slow=11,SNR=28						
SIV				LR	LR	10 44 22.1	
	comp=N,39nm,19.6s,baz=292,slow=42						
VILB	**Vilhena**	**12.31**	**75**	*e*P	**Pn**	**10 39 40.9**	**-0.5**
LCO	**Las Campanas**	**12.64**	**173**	Pn	**Pn**	**10 39 44.4**	**-1.5**
PTLB	**Pontes e Lacer**	**12.81**	**88**		**Pn**	**10 39 47.2**	**-0.7**
PTLB	**Pontes e Lacer**	**12.81**	**88**	*e*P	**Pn**	**10 39 47.7**	**-0.2**
PDRB	**Porto dos Gac**	**15.95**	**75**	*e*P	**Pn**	**10 40 28.6**	**+0.4**
SALV	**Santo Antonio**	**16.08**	**91**	*e*P	**Pn**	**10 40 28.5**	**-1.2**
PORT	**Chimborazo Vol**	**16.11**	**337**	Pn	**Pn**	**10 40 29.4**	**-1.4**
PORT				IAmb	IAmb	10 40 41.0	
	comp=Z,20nm,1.1s						
AQDB	**Aquidauana**	**16.37**	**107**		**Pn**	**10 40 33.7**	**+0.3**
AQDB	**Aquidauana**	**16.37**	**107**	*e*P	**Pn**	**10 40 33.5**	**+0.1**
PTLC	**Puerto Leguiza**	**16.64**	**352**	*e*P	**Pn**	**10 40 31.0**	**-5.7**
MT02	**Curacav**	**16.82**	**176**		**P**	**10 40 39.1**	**-0.2**
MT02				IAmb	IAmb	10 40 44.2	
	comp=Z,42nm,1.5s						
CLDB	**Colider**	**17.06**	**73**	*e*P	**Pn**	**10 40 40.9**	**-1.1**
CPUP	**Villa Florida**	**17.16**	**128**	*e*P	**P**	**10 40 43.4**	**+0.3**
MACA	**Manacapuru-AM**	**17.50**	**42**	*e*P	**P**	**10 40 45.2**	**-1.8**
OTAV	**Otavalo**	**17.58**	**340**	*e*P	**Pn**	**10 40 47.7**	**-0.9**
H03N1	**Juan Fernandez**	**17.94**	**198**	T	T	10 59 18.5	
	baz=21,slow=73,SNR=224						
H03N2	**Juan Fernandez**	**17.95**	**198**	T	T	10 59 16.9	
	baz=21,slow=73,SNR=614						
H03N3	**Juan Fernandez**	**17.96**	**198**	T	T	10 59 11.3	
	baz=21,slow=73,SNR=829						
FLOC	**Florencia**	**18.16**	**350**	*e*P	**Pn**	**10 40 56.8**	**+1.6**
GCUF	**Volcan Galeras**	**18.18**	**344**	*e*P	**Pn**	**10 40 58.0**	**+2.1**
C2SB	**Chapadao do Su**	**18.82**	**100**	*e*P	**Pn**	**10 41 02.7**	**-0.2**
BBAC	**Balboa, Cauca**	**18.92**	**345**	*e*P	**Pn**	**10 41 06.3**	**+1.8**
NPGB	**Novo Progresso**	**19.11**	**63**	*e*P	**P**	**10 41 03.1**	**-1.5**
ITQB	**Itaqui**	**19.61**	**135**	*e*P	**Pn**	**10 41 11.7**	**-0.4**
TRCB	**Terra Rica**	**19.68**	**112**	*e*P	**Pn**	**10 41 12.0**	**-1.1**
ITTB	**Itaituba**	**20.29**	**56**	*e*P	**P**	**10 41 15.7**	**-1.6**
YOTC	**Yotoco, Valle**	**20.63**	**349**	*e*P	Pn	10 41 24.1	-0.2
PCMB	**Pacaembu**	**20.66**	**108**	*e*P	**P**	**10 41 21.7**	**+0.4**
PTGB	**Pitanga**	**20.75**	**117**	*e*P	**P**	**10 41 23.0**	**+0.6**
SNDB	**Serra Nova Dou**	**20.95**	**81**	*e*P	**P**	**10 41 23.5**	**-0.9**
ANIL	**Santa Ana**	**20.97**	**352**	*e*P	Pn	10 41 26.2	-2.3
ITRB	**Iturama**	**21.23**	**102**	*e*P	**P**	**10 41 27.2**	**-0.2**
PLMC	**San Jos del P**	**21.52**	**349**	*e*P	**P**	**10 41 33.0**	**+2.4**
ITAB	**Concordia**	**21.67**	**123**	P	**P**	**10 41 34.4**	**+2.3**
ITAB	**Concordia**	**21.67**	**123**	*e*P	**P**	**10 41 34.3**	**+2.3**
GUY2C	**Guyana, Caldas**	**21.69**	**352**	*e*P	**P**	**10 41 34.9**	**+2.1**
NORC	**Norcasia**	**21.96**	**353**	*e*P	**P**	**10 41 35.5**	**+0.1**
BOAV	**Boa Vista**	**22.07**	**33**	P	**P**	**10 41 36.0**	**-0.5**
BOAV				IAmb	IAmb	10 42 03.7	
	comp=Z,3.5nm,1.0s						
BOAV	**Boa Vista**	**22.07**	**33**	*e*P	**P**	**10 41 35.9**	**-0.5**
RUSC	**La Rusia**	**22.17**	**358**	*e*P	**P**	**10 41 38.1**	**+0.2**
CPSB	**Cacapava Do Su**	**22.26**	**132**	*e*P	**P**	**10 41 40.1**	**+1.9**
CBOC	**Ciudad Bolivar**	**22.41**	**351**	*e*P	**P**	**10 41 42.4**	**+2.3**
PTBC	**PUERTO BERRIO,**	**22.89**	**355**	*e*P	**P**	**10 41 44.4**	**-0.4**
MALB	**Monte Alegre**	**22.99**	**53**	*e*P	**P**	**10 41 45.2**	**-0.6**
BB19B	**Bebedouro**	**23.09**	**105**	*e*P	**P**	**10 41 47.0**	**+0.3**
IPMB	**Ipameri, GO**	**23.18**	**97**	*e*P	**P**	**10 41 46.6**	**-1.0**
BDFB	**Brasilia**	**23.47**	**92**	P	**P**	**10 41 50.1**	**-0.3**
	comp=Z,6.5nm,0.4s,baz=268,slow=10,SNR=10						
	comp=Z,6.5nm,0.4s						
BDFB	**Brasilia**	**23.47**	**92**	P	**P**	**10 41 50.2**	**-0.2**
BDFB				IAmb	IAmb	10 41 53.7	
	comp=Z,6.2nm,0.7s						
BDFB	**Brasilia**	**23.47**	**92**	*e*P	**P**	**10 41 50.1**	**-0.3**
TIJ01	**Guaruva-PR**	**23.58**	**116**	*e*P	**P**	**10 41 52.5**	**+1.2**
CNLB	**Canela**	**23.61**	**127**	*e*P	**P**	**10 41 53.2**	**+1.7**
ZARC	**Zaragoza, Cauc**	**23.87**	**354**	*e*P	**P**	**10 41 53.5**	**-0.3**
RCLB	**Rio Claro- Sao**	**24.21**	**108**	*e*P	**P**	**10 41 57.7**	**+0.8**
PLCA	**Paso Flores**	**24.29**	**177**	*e*P	**P**	**10 41 59.9**	**+2.4**
PRPB	**Paraupebas**	**24.36**	**68**	*e*P	**P**	**10 41 58.1**	**-0.2**
TER01	**Tubaro-SC**	**24.62**	**123**	*e*P	**P**	**10 42 03.5**	**+2.9**
PET01	**Itanhaem-SP**	**24.82**	**113**	*e*P	**P**	**10 42 02.8**	**+0.4**
VAO	**Valinhos**	**24.82**	**109**	*e*P	**P**	**10 42 03.1**	**+0.6**
PMNB	**Patos De Minas**	**24.87**	**99**	*e*P	**P**	**10 42 03.3**	**-0.3**
SDV	**Santo Domingo**	**25.19**	**4**	*e*P	**P**	**10 42 06.0**	**-0.1**
SMTB	**Santa Maria do**	**25.34**	**76**	*e*P	**P**	**10 42 07.5**	**+0.2**
BAUV	**El Baul**	**25.56**	**10**	P	**P**	**10 42 08.5**	**-0.7**
BAUV				IAmb	IAmb	10 42 09.1	
	comp=Z,19nm,0.8s						
PARB	**Paraibuna**	**26.10**	**110**	*e*P	**P**	**10 42 14.9**	**+0.7**
SJCC	**San Jacinto, C**	**26.28**	**354**	*e*P	**P**	**10 42 16.0**	**+0.3**
SDBA	**SAO DESIDERIO**	**26.93**	**85**	*e*P	**P**	**10 42 22.1**	**+0.4**
JANB	**Januaria**	**27.08**	**91**	*e*P	**P**	**10 42 22.9**	**-0.1**
MC01	**Montes Claros**	**27.29**	**95**	*e*P	**P**	**10 42 25.2**	**+0.3**
DIAM	**Diamantina, MG**	**27.49**	**98**	*e*P	**P**	**10 42 27.1**	**+0.4**
ALF01	**Guarapari-ES**	**30.32**	**103**	*e*P	**P**	**10 42 54.4**	**+0.9**
RIB01	**Linhares ES**	**30.59**	**100**	*e*P	**P**	**10 42 55.1**	**+1.1**
NAN01	**Guarapari, ES**	**30.88**	**97**	*e*P	**P**	**10 42 57.2**	**+0.6**
GUA01	**Guaratinga, BA**	**31.25**	**95**	*e*P	**P**	**10 43 00.7**	**+0.8**
CMC01	**Camacan, BA**	**31.64**	**93**	*e*P	**P**	**10 43 02.7**	**-0.6**
GDU01	**Guandu, BA**	**31.81**	**90**	*e*P	**P**	**10 43 04.4**	**-0.4**
NBLA	**Lagarto - SE**	**34.04**	**85**	*e*P	**P**	**10 43 24.8**	**+0.6**
NBAN	**Anadia - AL**	**35.80**	**84**	*e*P	**P**	**10 43 39.8**	**+0.3**
USHA	**Ushuaia**	**38.47**	**176**	LR	LR	11 01 53.4	
	comp=Z,561nm,19.3s,baz=13,slow=39						
152A	**Waverly Hall**	**50.20**	**346**	P	**P**	**10 45 35.0**	**-0.1**
T59A	**Double "B" Far**	**53.31**	**355**	P	**P**	**10 45 58.0**	**-0.1**
T57A	**Hurt**	**53.51**	**353**	P	**P**	**10 46 00.8**	**+1.2**
MIAR	**Mount Ida**	**54.52**	**339**	P	**P**	**10 46 07.9**	**+0.9**
MIAR				IAmb	IAmb	10 46 08.4	
	comp=Z,3.4nm,0.8s						
TXAR	**Lajitas Array**	**54.57**	**326**	P	**P**	**10 46 08.0**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=146,slow=8.3,SNR=6.4						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**54.57**	**326**	P	**P**	**10 46 08.3**	**+0.7**
TX31	**Lajitas Ar. Si**	**54.57**	**326**	P	**P**	**10 46 08.8**	**+1.1**
TX32	**Lajitas Array**	**54.57**	**326**	P	**P**	**10 46 08.8**	**+1.1**
S44A	**Carbondale**	**56.10**	**344**	P	**P**	**10 46 18.4**	**+0.1**
SIUC	**Southern Illin**	**56.11**	**344**	P	**P**	**10 46 18.5**	**+0.2**
ANMO	**Albuquerque**	**60.44**	**328**	P	**P**	**10 46 49.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=115,slow=8.7,SNR=3.8						
	comp=Z,0.2nm,0.3s						
SADO	**Sadowa**	**61.19**	**355**	P	**P**	**10 46 53.8**	**+0.4**
	comp=Z,5.9nm,0.7s,baz=257,slow=3.9,SNR=5.0						
	comp=Z,5.9nm,0.7s						
F33A	**5 Mile Ranch,**	**65.62**	**342**	P	**P**	**10 47 22.7**	**+0.1**
F33A				IAmb	IAmb	10 47 23.8	
	comp=Z,5.4nm,0.8s						
EYMN	**Ely**	**66.30**	**346**	P	**P**	**10 47 26.6**	**-0.4**
EYMN				IAmb	IAmb	10 47 47.4	
	comp=Z,7.1nm,1.1s						
B35A	**Bob, Littlefor**	**67.22**	**345**	P	**P**	**10 47 32.8**	**-0.1**
B35A				IAmb	IAmb	10 47 33.8	
	comp=Z,9.0nm,1.1s						
AGMN	**Agassiz Nation**	**67.73**	**343**	P	**P**	**10 47 36.1**	**+0.1**
AGMN				IAmb	IAmb	10 47 37.2	
	comp=Z,5.5nm,1.0s						
R11A	**Troy Canyon, C**	**67.85**	**324**	P	**P**	**10 47 39.6**	**+2.4**
PDAR	**Pinedale Array**	**68.07**	**331**	P	**P**	**10 47 39.3**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=151,slow=6.4,SNR=4.1						
	comp=Z,0.3nm,0.6s						
HWUT	**Hardware Ranch**	**68.13**	**329**	P	**P**	**10 47 38.2**	**-0.7**
SNAA	**Sanae**	**68.14**	**161**	P	**P**	**10 47 40.3**	**+1.9**
SNAA				IAmb	IAmb	10 48 04.0	
	comp=Z,6.8nm,1.5s						
REDW	**Red Top Meadow**	**69.13**	**331**	P	**P**	**10 47 46.2**	**+1.0**
NVAR	**Mina Array Bea**	**69.45**	**323**	P	**P**	**10 47 49.3**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=151,slow=7.6,SNR=6.2						
	comp=Z,0.4nm,0.7s						
ULM	**Lac du Bonnet**	**69.51**	**344**	P	**P**	**10 47 47.3**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=127,slow=6.8,SNR=4.5						
	comp=Z,2.0nm,0.5s						
ULM	**Lac du Bonnet**	**69.51**	**344**	P	**P**	**10 47 46.0**	**-1.1**
ULM				IAmb	IAmb	10 48 19.8	
	comp=Z,3.7nm,1.0s						
RLMT	**Red Lodge**	**69.79**	**333**	P	**P**	**10 47 49.6**	**+0.5**
RLMT				IAmb	IAmb	10 47 51.6	
	comp=Z,4.1nm,1.1s						
MFID	**Camas Ranch**	**71.59**	**328**	P	**P**	**10 48 00.9**	**+0.9**
MFID				IAmb	IAmb	10 48 03.1	
	comp=Z,3.0nm,0.9s						
GSGM	**Seigler Mounta**	**72.35**	**321**		pP	10 48 29.7	-0.8
GDXM	**Geyser**	**72.36**	**321**		pP	10 48 29.8	-0.9
MOD	**Modoc Plateau**	**72.92**	**325**	P	**P**	**10 48 07.3**	**-0.7**
MOD				IAmb	IAmb	10 48 10.9	
	comp=Z,4.2nm,1.5s						
WALA	**Waterton Lakes**	**74.84**	**333**	P	**P**	**10 48 18.8**	**-0.2**
WALA				IAmb	IAmb	10 48 21.1	
	comp=Z,2.5nm,0.8s						
F04A	**Amboy**	**76.73**	**327**	P	**P**	**10 48 27.5**	**-2.2**
EDM	**Edmonton**	**77.78**	**336**	P	**P**	**10 48 36.3**	**+0.9**
EDM				IAmb	IAmb	10 48 36.5	
	comp=Z,5.7nm,0.6s						
TOA0	**Torodi Ar. Sit**	**78.90**	**73**	P	**P**	**10 48 42.5**	**0.0**
TOA0				IAmb	IAmb	10 48 43.4	
	comp=Z,4.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.90**	**73**	P	**P**	**10 48 42.5**	**+0.1**
	comp=Z,25nm,0.4s,baz=254,slow=5.4,SNR=1.5						
YKA	**Yellowknife Ar**	**85.32**	**

ARCES	**ARCESS Array B**	128.08	345	PKP		**PKPdf**	11 23 38.2	-1.6
	comp=Z,5.5nm,1.1s,baz=66,slow=2.3,SNR=3.7							
GERES	**GERESS Array B**	147.58	331	PKPbc		**PKPbc**	11 24 18.0	-0.8
	comp=Z,0.6nm,0.7s,baz=170,slow=3.0,SNR=4.3							

*IDC **29** 11:05:12.1±2.8, 6.83S×129.57E, h131km±33km, mb3.3/2, mbtmp3.9/6, Error ellipse: s-maj=53.6km s-min=19.2km az=83.0*
ISC 29 11:05:12.0±0.8, **6.84S**±0.06×**129.67E**±0.09, **h139**km, **n14,** σ**3**$\hat{}$**23**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**4.67**	**34**	P		**Pn**	**11 06 21.2**	**+0.3**
MTN	**Manton Dam**	**6.13**	**167**	P		**Pn**	**11 06 43.3**	**+2.8**
SIJI	**Sorong**	**6.14**	**15**	P		**Pn**	**11 06 41.0**	**+0.3**
	4.9nm,0.3s,baz=68,slow=2.2,SNR=23							
SIJI				S		**Sn**	**11 07 44.5**	**-5.4**
	24nm,0.2s,baz=252,slow=23,SNR=16							
KDU	**Kakadu**	**6.43**	**155**	P		**Pn**	**11 06 46.9**	**+2.4**
BATI	**Baumata**	**6.81**	**240**	P		Pn	11 06 54.5	+4.9
	34nm,0.6s,baz=84,slow=3.0,SNR=6.2							
KNRA	**Kununurra**	**8.82**	**186**	P		**Pn**	**11 07 18.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.86**	**199**	P		**Pn**	**11 07 57.2**	**+0.4**
	0.9nm,0.4s,baz=24,slow=11,SNR=9.7							
FITZ				S		**Sn**	**11 10 02.3**	**-5.4**
	1.6nm,0.3s,baz=292,slow=21,SNR=6.7							
PLAI	**Plampang**	**11.95**	**260**	P		**Pn**	**11 07 59.9**	**+1.9**
WRA	**Warramunga Arr**	**13.79**	**161**	P		**Pn**	**11 08 21.0**	**-0.8**
	1.1nm,0.3s,baz=343,slow=13,SNR=37							
WRA				S		**Sn**	**11 10 47.9**	**-6.5**
	2.0nm,0.5s,baz=343,slow=21,SNR=7.0							
COEN	**Coen**	**15.04**	**119**	P		**Pn**	**11 08 39.4**	**+1.8**
QIS	**Mount Isa**	**16.69**	**146**	P		**Pn**	**11 09 00.0**	**+2.1**
ASAR	**Alice Springs**	**17.22**	**167**	P		**Pn**	**11 09 06.3**	**+2.1**
	4.1nm,0.7s,baz=344,slow=9.3,SNR=88							
STKA	**Stephens Creek**	**27.28**	**157**	P		**P**	**11 10 44.7**	**+1.2**
	1.5nm,0.8s,baz=333,slow=14,SNR=2.9							
	1.5nm,0.8s							
MKAR	**Makanchi Array**	**67.91**	**327**	P		**P**	**11 15 56.2**	**+0.5**
	0.2nm,0.3s,baz=118,slow=9.5,SNR=4.3							
	0.2nm,0.3s							

*IDC **29** 11:38:31.9±0.7, 55.14S×141.36W, h0km, mb4.2/8, mbtmp4.2/8, MS3.3/3, Error ellipse: s-maj=32.6km s-min=19.8km az=174.0*
*NEIC **29** 11:38:34.3±1.1, 55.4S±0.2×141.3W±0.2, h15km±2km, mb4.6/21, Error ellipse: s-maj=26.4km s-min=13.2km az=174.0*
ISC 29 11:38:33.2±0.6, **55.2S**±0.2×**141.3W**±0.1, **h10**km, **n58,** σ**0**$\hat{}$**86**/45, **mb4.6**/18, **MS3.3**/3, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
QSPA	**South Pole Qui**	**34.94**	**180**	P		**P**	**11 45 26.4**	**+1.5**
	3.1nm,1.0s,baz=90,slow=1.5,SNR=3.8							
QSPA				LR		LR	11 56 34.7	
	comp=Z,52nm,20.1s,baz=62,slow=31							
	3.1nm,1.0s							
QSPA	**South Pole Qui**	**34.94**	**180**	P		**P**	**11 45 26.9**	**+2.0**
QSPA				IAmb		IAmb	11 45 31.5	
	comp=Z,9.0nm,1.2s							
PPT	**Papeete**	**38.12**	**347**	LR		LR	11 55 43.4	
	comp=Z,28nm,21.6s,baz=160,slow=27							
H03S2	**Juan Fernandez**	**47.51**	**90**	T		T	12 38 01.1	
	baz=223,SNR=28							
H03S1	**Juan Fernandez**	**47.51**	**90**	T		T	12 38 02.9	
	baz=223,SNR=36							
H03S3	**Juan Fernandez**	**47.52**	**90**	T		T	12 38 03.9	
	baz=223,SNR=32							
H03N3	**Juan Fernandez**	**47.78**	**90**	T		T	12 38 22.5	
	baz=225,slow=72,SNR=57							
H03N2	**Juan Fernandez**	**47.79**	**90**	T		T	12 38 21.4	
	baz=225,slow=72,SNR=60							
H03N1	**Juan Fernandez**	**47.80**	**90**	T		T	12 38 19.6	
	baz=225,slow=72,SNR=52							
VNA3	**Neumayer Olymp**	**49.28**	**161**	P		**P**	**11 47 20.6**	**-0.9**
VNA2	**Neumayer--Watz**	**49.95**	**162**	P		**P**	**11 47 25.9**	**-0.8**
	baz=212,slow=8.0							
VNA1	**Neumayer--Stat**	**50.03**	**161**	P		**P**	**11 47 26.6**	**-0.6**
SNAA	**Sanae**	**50.07**	**164**	P		**P**	**11 47 26.7**	**-0.9**
SNAA	**Sanae**	**50.07**	**164**	P		**P**	**11 47 26.9**	**-0.7**
SNAA				IAmb		IAmb	11 47 27.8	
	comp=Z,4.9nm,0.8s							
TROLL	**Troll, Antarti**	**50.56**	**166**	P		**P**	**11 47 30.8**	**-0.6**
BO02	**Sierra Bellavi**	**51.47**	**97**	P		**P**	**11 47 38.1**	**-0.5**
BO02				IAmb		IAmb	11 47 54.4	
	comp=Z,11nm,1.1s							
CO02	**Combarbal**	**53.97**	**94**	P		**P**	**11 47 57.1**	**-0.1**
TRQA	**Tornquist**	**54.05**	**107**	P		**P**	**11 47 57.7**	**+0.1**
TRQA				IAmb		IAmb	11 47 57.9	
	comp=Z,4.5nm,0.8s							
MAW	**Mawson**	**56.17**	**191**	P		**P**	**11 48 13.4**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=160,slow=12,SNR=4.7							
	comp=Z,1.8nm,0.8s							
MAW	**Mawson**	**56.17**	**191**	P		**P**	**11 48 11.6**	**-0.8**
STKA	**Stephens Creek**	**57.36**	**260**	P		**P**	**11 48 23.0**	**+1.6**
	comp=Z,4.0nm,0.8s,baz=138,slow=8.9,SNR=6.8							
	comp=Z,4.0nm,0.8s							
STKA	**Stephens Creek**	**57.36**	**260**	P		**P**	**11 48 21.9**	**+0.5**
CPUP	**Villa Florida**	**65.44**	**101**	P		**P**	**11 49 15.6**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=229,slow=8.2,SNR=6.8							
	comp=Z,3.6nm,0.8s							
CPUP	**Villa Florida**	**65.44**	**101**	P		**P**	**11 49 15.3**	**-0.8**
FORT	**Forrest**	**65.69**	**251**	P		**P**	**11 49 17.0**	**-0.7**
LPAZ	**La Paz**	**67.18**	**86**	P		**P**	**11 49 29.0**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=224,slow=5.4,SNR=6.5							
	comp=Z,1.7nm,0.6s							
LPAZ	**La Paz**	**67.18**	**86**	P		**P**	**11 49 28.6**	**+0.5**
AS31	**Alice Springs**	**68.00**	**260**	P		**P**	**11 49 32.1**	**-0.5**
ASAR	**Alice Springs**	**68.00**	**260**	P		**P**	**11 49 32.1**	**-0.5**
	comp=Z,6.6nm,0.7s,baz=138,slow=6.4,SNR=95							
	comp=Z,6.6nm,0.7s							
H01W1	**Cape Leeuwin H**	**69.62**	**238**	T		T	13 06 11.0	
	baz=143,slow=76,SNR=7.9							
H01W2	**Cape Leeuwin H**	**69.62**	**238**	T		T	13 06 12.7	
	baz=143,slow=76,SNR=8.4							
H01W3	**Cape Leeuwin H**	**69.63**	**238**	T		T	13 06 14.0	
	baz=143,slow=76,SNR=9.2							
WR0	**Warramunga Arr**	**70.56**	**263**	P		**P**	**11 49 47.4**	**-1.1**
WR0				IAmb		IAmb	11 50 01.5	
	comp=Z,8.8nm,1.4s							
WB2	**Warramunga Arr**	**70.68**	**263**	P		**P**	**11 49 48.1**	**-1.1**
WB2				IAmb		IAmb	11 49 49.5	
	comp=Z,5.8nm,0.9s							
WRA	**Warramunga Arr**	**70.69**	**263**	P		**P**	**11 49 48.9**	**-0.4**
	comp=Z,3.5nm,1.0s,baz=151,slow=5.5,SNR=21							
	comp=Z,3.5nm,1.0s							
WRA	**Warramunga Arr**	**70.69**	**263**	P		**P**	**11 49 48.6**	**-0.7**
WRAB	**Tennant Creek**	**70.69**	**263**	P		**P**	**11 49 48.8**	**-0.5**
WRAB				IAmb		IAmb	11 49 49.5	
	comp=Z,4.3nm,0.8s							
WB0	**Warramunga Arr**	**70.80**	**263**	P		**P**	**11 49 49.7**	**-0.2**
WB0				IAmb		IAmb	11 49 50.6	
	comp=Z,4.6nm,0.9s							
FITZ	**Fitzroy Crossi**	**77.07**	**257**	P		**P**	**11 50 26.7**	**+0.2**
FITZ				IAmb		IAmb	11 50 28.9	
	comp=Z,9.5nm,1.4s							
PSA00	**Pilbara Seismi**	**77.44**	**250**	P		**P**	**11 50 27.9**	**-0.8**
MBWA	**Marble Bar**	**77.84**	**251**	P		**P**	**11 50 30.0**	**-0.9**
MBWA				IAmb		IAmb	11 51 07.9	
	comp=Z,8.2nm,1.1s							
H11S2	**WAKE ISLAND Hy**	**85.62**	**311**	T		T	13 26 15.4	
	baz=162							
H11S3	**WAKE ISLAND Hy**	**85.63**	**311**	T		T	13 26 15.4	
	baz=162							
H11S1	**WAKE ISLAND Hy**	**85.64**	**311**	T		T	13 26 15.5	
	baz=162							
BOAV	**Boa Vista**	**86.68**	**81**	P		**P**	**11 51 17.0**	**-0.2**
BOAV				IAmb		IAmb	11 51 42.0	
	comp=Z,3.9nm,1.1s							
TXAR	**Lajitas Array**	**90.18**	**32**	P		**P**	**11 51 35.1**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=191,slow=8.3,SNR=3.0							
	comp=Z,0.3nm,0.7s							
NVAR	**Mina Array Bea**	**95.34**	**18**	LR		LR	12 25 28.1	
	comp=Z,26nm,20.7s,baz=194,slow=30							
ILAR	**Eielson Array**	**119.74**	**357**	PKP		**PKiKP**	**11 57 22.3**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=230,slow=1.5,SNR=11							
ILAR	**Eielson Array**	**119.74**	**357**			**PKiKP**	**11 57 22.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**121.87**	**256**	PKP		**PKiKP**	**11 57 27.3**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=196,slow=3.3,SNR=6.7							
SUMG	**Summit**	**145.07**	**31**			**PKPdf**	**11 58 09.9**	**+0.4**
ESDC	**Sonseca Array**	**147.81**	**101**	PKPbc		**PKiKP**	**11 58 18.0**	**-1.6**
	comp=Z,3.2nm,0.9s,baz=253,slow=2.2,SNR=20							

RAYN	**Ar Rayn**	**147.94**	**192**			**PKPbc**	**11 58 18.7**	**+0.3**
MK31	**Makanchi Array**	**151.73**	**271**			**PKPbc**	**11 58 25.9**	**-1.1**
MKAR	**Makanchi Array**	**151.73**	**271**	PKPbc		**PKPbc**	**11 58 26.5**	**-0.6**
	comp=Z,4.7nm,1.0s,baz=120,slow=4.3,SNR=19							
MKAR	**Makanchi Array**	**151.73**	**271**			**PKPbc**	**11 58 26.4**	**-0.6**
MKAR				PKPab		**PKPab**	**11 58 36.0**	**0.0**
MAKZ	**Makanchi**	**151.91**	**271**			**PKPbc**	**11 58 26.8**	**-0.7**
ZALV	**Zalesovo Beam**	**153.62**	**287**	PKPbc		**PKPbc**	**11 58 30.1**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=114,slow=3.6,SNR=4.1							

*IDC **29** 11:45:58.8±1.6, 32.77N×57.93E, h0km, mb3.8/7, mbtmp3.8/7, MS2.9/2, Error ellipse: s-maj=37.4km s-min=27.6km az=44.0*
*TEH **29** 11:45:59.1, 33.18N×57.94E, h8km, ML4.0*
ISC 29 11:46:00.4±0.7, **33.16N**±0.04×**57.94E**±0.03, **h10**km, **n76,** σ**1**$\hat{}$**35**/78, **mb3.7**/8, **1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ITEG	**Tejag**	**0.72**	**111**	*e*Pg		**Pb**	**11 46 14.1**	**-1.1**
TKDS	**Koohdasht(Taba**	**0.82**	**304**	*e*Pg		**Pg**	**11 46 14.7**	**-1.6**
TKDS				*e*Sg		**Sg**	**11 46 25.6**	**-1.5**
TKDS				*e*			11 46 26.7	
	comp=Z,58μm,0.4s							
TABS	**Tabas**	**0.85**	**306**	*e*Pn		**Pg**	**11 46 15.3**	**-1.5**
AFRZ	**Afriz**	**0.94**	**73**	*e*Pg		**Pg**	**11 46 17.0**	**-1.5**
TPRV	**Parvadeh(Tabas**	**1.06**	**264**	*e*Pg		**Pb**	**11 46 19.8**	**-1.1**
TPRV				*e*			11 46 42.5	
	comp=Z,57μm,0.2s							
IKOO	**Kooshah**	**1.15**	**129**	*e*Pg		**Pn**	**11 46 21.7**	**-1.2**
IKOO				*e*Sg		**Sn**	**11 46 37.6**	**-1.2**
IKOO				*e*			11 46 43.5	
	comp=Z,26μm,0.2s							
TNSJ	**Nastanj**	**1.38**	**306**	*e*Pg		**Pg**	**11 46 25.4**	**-1.4**
TNSJ				*e*			11 46 48.1	
	comp=Z,41μm,0.3s							
IMON	**Monand**	**1.45**	**88**	*e*Pg		**Pg**	**11 46 28.3**	**+0.1**
IMON				*e*			11 46 49.5	
	comp=Z,18μm,0.2s							
BSRN	**Basiran**	**1.55**	**140**	*e*Pg		**Pg**	**11 46 29.0**	**-1.2**
IDAH	**Dahanechah**	**1.67**	**104**	*e*Pn		**Pb**	**11 46 29.9**	**-1.5**
SHRT	**Shahrakht**	**2.02**	**75**	*e*Pn		**Pb**	**11 46 35.7**	**-1.6**
TBHD	**Torbat heydari**	**2.50**	**25**	*e*Pn		**Pn**	**11 46 41.5**	**+0.3**
TBHD				*e*			11 46 45.8	
	comp=Z,11μm,0.4s							
NHDN	**Nehbandan**	**2.50**	**134**	*e*Pn		**Pn**	**11 46 42.3**	**+1.0**
IBAF	**Bafgh**	**2.54**	**233**	*e*Pn		**Pb**	**11 46 43.4**	**-2.8**
IBAF				*e*			11 47 23.8	
	comp=Z,8μm,0.3s							
TBJM	**Torbat-e-JAM**	**2.89**	**43**	*e*Pn		**Pn**	**11 46 47.5**	**+0.8**
TBJM				*e*			11 46 55.2	
	comp=Z,8μm,0.3s							
YZKH	**Yazd**	**2.92**	**256**	*e*Pn		**Pn**	**11 46 48.2**	**+1.1**
KHGB	**Koh Gabri**	**3.04**	**205**	*e*Pn		**Pn**	**11 46 49.8**	**+1.0**
KHGB				*e*			11 47 52.3	
	comp=Z,4μm,0.5s							
ICHK	**Chekchek**	**3.12**	**254**	*e*Pn		**Pn**	**11 46 50.8**	**+1.0**
ICHK				*e*			11 47 47.9	
	comp=N,2μm,0.1s							
IMOG	**Moghan**	**3.16**	**21**	*e*Pn		**Pn**	**11 46 51.3**	**+0.8**
IMOG				*e*			11 47 51.2	
	comp=Z,2μm,0.5s							
SBZV	**Sabzevar**	**3.24**	**355**	*e*Pn		**Pn**	**11 46 52.2**	**+0.7**
SBZV				*e*			11 47 43.9	
	comp=Z,3μm,0.9s							
SHRO	**Shahrood**	**3.25**	**331**	*e*Pn		**Pn**	**11 46 51.6**	**+0.1**
CHMN	**Cheshme madani**	**3.30**	**186**	*e*Pn		**Pn**	**11 46 53.1**	**+0.6**
TVBK	**TV Kerman**	**3.32**	**198**	*e*Pn		**Pn**	**11 46 54.5**	**+1.8**
TVBK				*e*			11 47 52.5	
	comp=Z,6μm,0.5s							
KRBR	**Kerman**	**3.32**	**198**	*e*Pn		**Pn**	**11 46 54.7**	**+2.0**
IMEH	**Mehriz**	**3.32**	**239**	*e*Pn		**Pn**	**11 46 54.2**	**+1.5**
IMEH				*e*			11 47 49.6	
	comp=Z,3μm,0.4s							
JRKH	**Jarkhoshk**	**3.39**	**35**	*e*Pn		**Pn**	**11 46 54.1**	**+0.6**
IPAY	**Payeh**	**3.40**	**14**	*e*Pn		**Pn**	**11 46 53.7**	**0.0**
IPAY				*e*			11 47 42.4	
	comp=Z,1μm,0.4s							
IAKL	**Akhelmad**	**3.50**	**11**	*e*Pn		**Pn**	**11 46 55.7**	**+0.5**
IAKL				*e*			11 48 01.3	
	comp=Z,2μm,0.5s							
IMYA	**Miami**	**3.64**	**29**	*e*Pn		**Pn**	**11 46 57.7**	**+0.7**
NGRK	**Negar Kerman**	**3.65**	**197**	*e*Pn		**Pn**	**11 46 58.7**	**+1.4**
NGRK				*e*			11 48 01.5	
	comp=Z,4μm,0.5s							
ISAD	**Sadrabad**	**3.80**	**252**	*e*Pn		**Pn**	**11 47 00.3**	**+1.0**
ISAD				*e*			11 48 05.7	
	comp=Z,3μm,0.4s							
IKRD	**Kardeh**	**3.84**	**19**	*e*Pn		**Pn**	**11 47 00.9**	**+1.1**
IKRD				*e*			11 47 15.9	
	comp=Z,1μm,0.5s							
ISFR	**Sfrayin**	**3.89**	**1**	*e*Pn		**Pn**	**11 47 01.5**	**+1.0**
ISFR				*e*			11 47 22.1	
	comp=Z,1μm,0.4s							
KBAM	**BAM**	**4.03**	**174**	*e*Pn		**Pn**	**11 47 02.7**	**+0.4**
IANJ	**Anjilo**	**4.05**	**306**	*e*Pn		**Pn**	**11 47 03.3**	**+0.6**
IANJ				*e*			11 48 15.9	
	comp=Z,963nm,0.3s							
ZHSF	**Zahedan**	**4.28**	**145**	*e*Pn		**Pn**	**11 47 06.5**	**+0.7**
IEMG	**Emamgholi**	**4.29**	**8**	*e*			11 47 23.1	
IEMG	comp=N,1μm,0.2s							
				*e*Pn		**Pn**	**11 47 07.0**	**+1.0**
NASN	**Na'in**	**4.33**	**267**	*e*Pn		**Pn**	**11 47 07.7**	**+1.1**
ZHDN	**Zahedan**	**4.48**	**146**	*e*Pn		**Pn**	**11 47 09.1**	**+0.6**
BJRD	**Bojnurd**	**4.56**	**355**	*e*Pn		**Pn**	**11 47 10.1**	**+0.6**
ISHM	**Shahmirzad**	**4.66**	**306**	*e*Pn		**Pn**	**11 47 12.1**	**+1.0**
ISHM				*e*			11 48 39.0	
	comp=Z,1μm,0.4s							
ILAS	**Lasjerd**	**4.69**	**300**	*e*Pn		**Pn**	**11 47 13.0**	**+1.6**
IZEF	**Zefreh**	**4.72**	**268**	*e*Pn		**Pn**	**11 47 13.4**	**+1.5**
IZEF				*e*			11 48 30.9	
	comp=Z,766nm,0.7s							
MRVT	**Maraveh tapeh**	**4.74**	**342**	*e*Pn		**Pn**	**11 47 13.2**	**+1.2**
IGLO	**Ghaloghah**	**4.75**	**316**	*e*Pn		**Pn**	**11 47 14.0**	**+1.7**
IGLO				*e*			11 48 57.2	
	comp=Z,1μm,0.8s							
GEYT	**Alibeck**	**4.77**	**2**	Pn		**Pn**	**11 47 13.5**	**+1.1**
	comp=Z,3.9nm,0.3s,baz=183,slow=16,SNR=14							
IRAM	**Ramesheh**	**4.89**	**256**	*e*Pn		**Pn**	**11 47 15.4**	**+1.2**
ISFB	**Sefidab**	**4.90**	**286**	*e*Pn		**Pn**	**11 47 14.6**	**+0.4**
KRSH	**Karshahi**	**4.92**	**281**	*e*Pn		**Pn**	**11 47 15.7**	**+1.2**
IFIR	**Firoozkooh**	**4.96**	**301**	*e*Pn		**Pn**	**11 47 15.9**	**+0.8**
IGAR	**Gharneh**	**5.03**	**263**	*e*Pn		**Pn**	**11 47 17.3**	**+1.2**
IGAR				*e*			11 48 41.3	
	comp=Z,472nm,0.6s							
IKLH	**Kolahrood**	**5.33**	**273**	*e*Pn		**Pn**	**11 47 21.9**	**+1.5**
IDMV	**Damavand**	**5.45**	**298**	*e*Pn		**Pn**	**11 47 22.9**	**+0.9**
IDMV				*e*			11 47 24.3	
	comp=Z,916nm,0.3s							
IVRN	**Varamin**	**5.47**	**291**	*e*Pn		**Pn**	**11 47 23.1**	**+1.0**
QAMS	**Qamsar**	**5.50**	**278**	*e*Pn		**Pn**	**11 47 23.5**	**+0.8**
DAMV	**Damavand**	**5.52**	**298**	*e*Pn		**Pn**	**11 47 23.8**	**+0.9**
IPRN	**Peran**	**5.55**	**305**	*e*Pn		**Pn**	**11 47 24.5**	**+1.3**
GHVR	**GHOM**	**5.69**	**285**	*e*Pn		**Pn**	**11 47 26.9**	**+1.9**
KLNJ	**Kolanjah**	**5.80**	**250**	*e*Pn		**Pn**	**11 47 27.6**	**+0.8**
IQOM	**Qom**	**5.95**	**288**	*e*Pn		**Pn**	**11 47 29.6**	**+0.8**
CHTH	**Charan**	**6.26**	**298**	*e*Pn		**Pn**	**11 47 34.4**	**+1.4**
KHMZ	**Khomeyn**	**6.70**	**277**	*e*Pn		**Pn**	**11 47 40.3**	**+1.2**
ASAO	**Ashtian**	**6.73**	**284**	*e*Pn		**Pn**	**11 47 40.6**	**+1.1**
QALM	**Alamut, Qazvin**	**6.83**	**301**	*e*Pn		**Pn**	**11 47 42.3**	**+1.4**
IRAZ	**Razeghan**	**7.00**	**291**	*e*Pn		**Pn**	**11 47 44.4**	**+1.2**
HAGD	**Aghdareh**	**7.50**	**285**	*e*Pn		**Pn**	**11 47 52.2**	**+2.2**
ZNJK	**Zanjan**	**8.37**	**297**	*e*Pn		**Pn**	**11 48 03.0**	**+1.0**
SNGE	**Sanandaj**	**8.99**	**285**	*e*Pn		**Pn**	**11 48 12.1**	**+1.5**
BVAR	**Borovoye Array**	**21.78**	**21**	P		**P**	**11 50 52.5**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=218,slow=11,SNR=5.7							
BVAR				LR		LR	12 00 35.7	
	comp=Z,37nm,21.9s,baz=192,slow=40							
MKAR	**Makanchi Array**	**22.99**	**47**	P		**P**	**11 51 07.8**	**+2.6**
	comp=Z,1.0nm,0.8s,baz=238,slow=11,SNR=6.7							
	comp=Z,1.0nm,0.8s							
KURBB	**Kurchatov Arra**	**23.10**	**35**	P		**P**	**11 51 09.4**	**+3.1**
	comp=Z,2.7nm,1.0s,baz=235,slow=10,SNR=13							
	comp=Z,2.7nm,1.0s							
AKASG	**Malin Array Be**	**27.39**	**318**	P		**P**	**11 51 48.7**	**+2.9**
	comp=Z,1.7nm,0.5s,baz=122,slow=8.9,SNR=9.7							
	comp=Z,1.7nm,0.5s							
ZALV	**Zalesovo Beam**	**28.19**	**34**	P		**P**	**11 51 55.6**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=246,slow=11,SNR=2.1							
ZALV				LR		LR	12 03 16.3	
	comp=Z,17nm,18.0s,baz=46,slow=36							
	comp=Z,0.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**39.45**	**101**	P		**P**	**11 53 31.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=286,slow=7.5,SNR=5.5							
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**89.94**	**114**	P		**P**	**11 58 59.4**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=317,slow=4.5,SNR=1.9							
	comp=Z,0.4nm,0.8s							
ASAR	**Alice Springs**	**91.76**	**117**	P		**P**	**11 59 06.9**	**-1.8**
	comp=Z,0.5nm,1.0s,baz=309,slow=4.8,SNR=4.0							
	comp=Z,0.5nm,1.0s							

*IDC **29** 12:02:57.2±0.8, 7.11S×13.32W, h0km, mb4.1/8, mbtmp4.1/9, ML3.2/1, MS3.5/35, Error ellipse: s-maj=39.4km s-min=16.1km az=117.0*
ISC 29 12:02:58.4±0.7, **7.1S**±0.1×**13.3W**±0.2, **h10**km, **n53,** σ**1**$\hat{}$**03**/20, **mb4.3**/9, **MS3.6**/34, **3C, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**1.38**	**238**	Pn		**Pn**	**12 03 23.0**	**-0.5**
	baz=72,slow=13							
H10N2				T		T	12 05 11.5	
	baz=7.2							
H10N1	**ASCENSION HYDR**	**1.38**	**237**	Pn		**Pn**	**12 03 23.1**	**-0.5**
	baz=72,slow=13							
H10N1				T		T	12 05 08.3	
	baz=7.2							
H10N3	**ASCENSION HYDR**	**1.40**	**238**	Pn		**Pn**	**12 03 23.3**	**-0.4**
	baz=72,slow=13							
H10N3				T		T	12 05 09.7	
	baz=7.2							
H10S2	**ASCENSION HYDR**	**2.28**	**215**	T		T	12 05 47.0	
	baz=177,slow=74,SNR=146							
H10S3	**ASCENSION HYDR**	**2.28**	**216**	T		T	12 05 47.5	
	baz=43,slow=74,SNR=118							
LIC	**Lamto**	**15.60**	**32**	*e*P		**P**	**12 06 41.9**	**-0.9**
	29nm,0.8s							
KIC	**Kosan Boka**	**15.87**	**33**	*e*P		**Pn**	**12 06 40.0**	**-2.1**
	5.7nm,0.8s							
TIC	**Toumodi**	**15.96**	**31**	*e*P		**Pn**	**12 06 41.9**	**-1.4**
	18nm,0.8s							
DBIC	**Dimbokro**	**16.07**	**32**	Pn		**Pn**	**12 06 42.7**	**-1.9**
	0.1nm,0.3s,baz=204,slow=16,SNR=2.7							
DBIC				LR		LR	12 11 33.2	
	comp=Z,128nm,20.0s,baz=216,slow=32							
	4.8nm,1.0s							
BBTS	**Babate**	**21.85**	**352**	LR		LR	12 15 41.9	
	comp=Z,52nm,20.0s,baz=187,slow=35							
RCBR	**Riachuelo**	**22.48**	**272**	LR		LR	12 14 30.0	
	comp=Z,157nm,20.5s,baz=262,slow=31							
KOWA	**Kowa**	**23.35**	**23**	P		**P**	**12 08 06.9**	**-0.3**
	2.5nm,0.6s,baz=207,slow=8.1,SNR=7.1							
KOWA				LR		LR	12 15 49.7	
	comp=Z,156nm,21.1s,baz=226,slow=33							
	2.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**25.03**	**37**	P		**P**	**12 08 22.7**	**-0.3**
	43nm,0.3s,baz=222,slow=11,SNR=4.3							
TORD				LR		LR	12 17 39.0	
	comp=Z,55nm,21.1s,baz=206,slow=35							
TSUM	**Tsumeb**	**32.33**	**115**	LR		LR	12 20 18.1	
	comp=Z,129nm,19.4s,baz=327,slow=32							
SUR	**Sutherland**	**40.48**	**133**	LR		LR	12 24 22.9	
	comp=Z,98nm,18.6s,baz=312,slow=32							
MDT	**Midelt**	**40.54**	**11**	LR		LR	12 27 59.6	
	comp=Z,39nm,18.3s,baz=159,slow=37							
MDP	**Montagnes des**	**41.08**	**286**	LR		LR	12 24 47.3	
	comp=Z,43nm,20.0s,baz=153,slow=32							
LBTB	**Lobatse**	**41.21**	**120**	LR		LR	12 26 07.6	
	comp=Z,75nm,18.1s,baz=270,slow=34							
LSZ	**Lusaka**	**41.45**	**105**	LR		LR	12 25 16.4	
	comp=Z,95nm,20.5s,baz=207

AKMO Sn 13 00 32.7 +0.6
UNV Unalaska Valle 0.82 302 Pn 13 00 21.6 -0.3
UNV Unalaska Valle 0.82 302 Sn 13 00 33.1 +0.1
UNV Unalaska Valle 0.82 302 P Pn 13 00 21.7 -0.2
baz=122
UNV S Sn 13 00 33.0 +0.1
baz=122
AKLV Akutan Long Va 0.83 334 Pn 13 00 21.7 -0.4
AKLV Sn 13 00 33.2 -0.1
AKRB Akutan Reef Bi 0.83 329 Pn 13 00 22.1 -0.1
AKGG Akutan Green G 0.87 334 Pn 13 00 21.8 -0.9
MNAT Makushin Natee 0.93 300 Pn 13 00 23.6 +0.1
MNAT Sb 13 00 36.7 +0.5
MTBL Makushin Table 0.97 305 Pn 13 00 24.4 +0.3
MGOD Makushin Gods 0.99 293 Pn 13 00 24.4 0.0
MGOD Sn 13 00 37.6 +0.3
MSW Makushin Switc 0.99 300 Pn 13 00 24.6 +0.2
MSW Sb 13 00 38.1 0.0
MAPS Pakushin South 1.03 293 Pn 13 00 25.0 +0.1
WESE West Dahl East 1.14 22 Pn 13 00 26.2 -0.3
WECS Westdahl Cape 1.16 16 Pn 13 00 26.8 +0.1
WESN West Dahl Nort 1.23 21 Pn 13 00 27.8 +0.1
SSLS Shishaldin Sou 1.51 31 Pn 13 00 30.9 -0.7
SSBA Shishaldin 1.53 27 Pn 13 00 31.4 -0.4
SSLW Shishaldin Wes 1.53 27 Pn 13 00 31.5 -0.3
WTUG Tugumak 1.53 21 Pn 13 00 32.5 +0.7
BRPK Brown Peak 1.54 37 Pn 13 00 30.8 -1.1
OKFG Magazine Ridge 1.54 271 Pn 13 00 31.3 -0.6
SSLN Shishaldin Nor 1.60 29 Pn 13 00 32.6 -0.1
ISLZ Isanotski Laza 1.62 36 Pn 13 00 31.9 -1.1
OKNC Okmok New Cone 1.67 272 Pn 13 00 34.3 +0.6
ISNN Isanotski Nort 1.68 32 Pn 13 00 34.1 +0.2
OKCE Okmok Cone E 1.69 271 Pn 13 00 34.0 -0.1
OKSO Okmok South 1.69 269 Pn 13 00 33.5 -0.6
FALS False Pass 1.82 37 Pn Pn 13 00 35.2 -0.6
FALS False Pass 1.82 37 P Pn 13 00 35.2 -0.6
baz=217
FALS S Sn 13 00 57.9 +0.1
baz=217
NIKH Nikolski High 2.17 259 Pn 13 00 40.7 +0.2
NIKH Nikolski High 2.17 259 P Pn 13 00 40.8 +0.3
baz=78
NIKH S Sb 13 01 10.0 -1.6
baz=78
CLCO Concord Point, 2.72 258 Pn 13 00 49.3 +1.1
HAG Hague Volcano 2.76 45 Pn 13 00 49.9 +1.2
PS4A Pavlof South-4 2.80 45 Pn 13 00 50.7 +1.5
CLES Cleveland East 2.81 259 Pn 13 00 51.3 +1.9
SDPT Sand Point 3.43 54 Pn 13 00 58.2 +0.4
SDPT Sand Point 3.43 54 P Pn 13 00 58.3 +0.4
baz=237,SNR=12
SDPT S Sn 13 01 38.4 +1.0
baz=237
CNBA Chernabura Isl 3.66 65 Pn 13 01 00.6 -0.4
CHNA Chernabura Isl 3.66 65 P Pn 13 01 00.7 -0.3
baz=249
CHNA S Sn 13 01 43.4 +0.4
baz=249
S14K Fog Glacier 4.40 47 P Pn 13 01 11.7 +0.4
baz=231,SNR=8.5
VNFG Fog Glacier, M 4.40 47 Pn 13 01 12.2 +1.0
SPIA Saint Paul Isl 4.69 325 Pn Pn 13 01 17.4 +2.2
SPIA Saint Paul Isl 4.69 325 P Pn 13 01 16.7 +1.5
baz=141
CHGN Chignik 4.93 51 Pn 13 01 19.2 +0.8
CHGN Chignik 4.93 51 S Sn 13 02 16.8 +2.5
baz=236
KOFP Korovin Flat P 5.44 261 Pn 13 01 27.4 +1.9
ATKA Atka Island 5.51 261 Pn 13 01 28.1 +1.7
CHIR Chirikof Islan 6.13 63 Pn Pn 13 01 34.6 -0.3
CHIR Chirikof Islan 6.13 63 S Sn 13 02 42.9 -0.9
baz=250
R17K Ugashik Creek 6.60 47 Pn 13 01 43.3 +1.9
R17K Ugashik Creek 6.60 47 P Pn 13 01 42.9 +1.5
baz=234,SNR=10.0
P16K Nushagak River 6.95 33 Pn 13 01 48.0 +1.9
P16K Nushagak River 6.95 33 P Pn 13 01 47.6 +1.5
baz=219
ADK Adak 7.08 262 Pn 13 01 49.7 +1.8
SII Sitkinak Islan 7.14 59 Pn Pn 13 01 48.4 -0.5
SII Sitkinak Islan 7.14 59 P Pn 13 01 49.0 +0.2
baz=248
KIWB Kanaga Island 7.36 262 Pn Pn 13 01 53.7 +1.8
O16K Kokwok River B 7.36 30 Pn 13 01 54.3 +2.4
O16K Kokwok River B 7.36 30 P Pn 13 01 52.9 +1.1
baz=216,SNR=25
KIMD Kanaga Island 7.44 262 Pn 13 01 54.6 +1.7
P17K Kvichak River 7.61 37 Pn 13 01 57.0 +1.9
O17K Koliganek Bris 7.82 32 Pn 13 02 00.1 +2.1
O17K Koliganek Bris 7.82 32 P Pn 13 01 59.2 +1.2
baz=219,SNR=38
OHAK Old Harbor 7.85 56 Pn 13 01 58.0 -0.4
OHAK Old Harbor 7.85 56 P Pn 13 01 59.9 +1.4
baz=246
N16K Nishlik Lake 7.92 24 Pn 13 02 01.3 +1.8
N16K Nishlik Lake 7.92 24 P Pn 13 02 01.6 +2.1
baz=209,SNR=23
P18K Big Mountain, 8.19 39 P Pn 13 02 04.5 +1.3
baz=227
KDAK Kodiak Island 8.43 54 Pn 13 02 05.6 -0.9
KDAK Kodiak Island 8.43 54 P Pn 13 02 07.5 +1.0
baz=244
O18K Koktuh Hills 8.52 37 Pn 13 02 07.5 -0.1
O18K Koktuh Hills 8.52 37 P Pn 13 02 07.8 +0.2
baz=225
Q19K Cape Douglas, 8.53 45 Pn 13 02 07.9 0.0
Q19K Cape Douglas, 8.53 45 P Pn 13 02 07.8 -0.1
baz=234
N18K Kilae Creek 8.90 31 Pn 13 02 11.9 -1.0
AMKA Amchitka 9.62 264 Pn 13 02 23.9 +1.2
K20K Telida 11.56 26 Pn Pn 13 02 50.3 +1.0
PPLA Purkeypile 11.73 31 Pn 13 02 51.7 -0.1
GCSA Galena City Sc 12.14 17 P Pn 13 02 58.9 +1.8
baz=204,SNR=11
EYAK Cordova Ski Ar 12.80 48 P Pn 13 03 07.0 +0.8
baz=245
BPAW Bear Paw Mtn. 12.99 29 P Pn 13 03 10.1 +1.2
baz=221
WAT6 Susitna Watana 13.04 38 P Pn 13 03 09.9 +0.3
baz=233
DIV Divide 13.05 46 Pn Pn 13 03 08.7 -1.0
KLU Klutina 13.16 44 Pn Pn 13 03 09.3 -1.9
KLU Klutina 13.16 44 P Pn 13 03 09.6 -1.6
baz=241
MCK McKinley 13.36 33 P Pn 13 03 14.6 +0.8
baz=227
M24K Tolsona, Glenn 13.37 42 Pn Pn 13 03 11.8 -2.3
M24K Tolsona, Glenn 13.37 42 P Pn 13 03 13.7 -0.3
baz=238
BMRM Bremner River 13.49 48 P Pn 13 03 15.9 +0.2
baz=245
I21K Tanana 13.57 25 P Pn 13 03 17.8 +1.1
baz=216,SNR=7.9
H21K Melozitna Rive 13.77 22 P Pn 13 03 20.6 +1.1
baz=213,SNR=10
N25K Chitina, Valde 13.78 45 P Pn 13 03 19.4 -0.2
baz=243
MLY Manley 13.78 27 P Pn 13 03 20.1 +0.6
baz=219
HARP HAARP 13.93 42 P Pn 13 03 21.9 +0.3
baz=239
GLB Gilahina Butte 14.04 47 Pn Pn 13 03 21.4 -1.8
PAX Paxson 14.12 40 P Pn 13 03 24.0 -0.2
baz=236
H22K Ishtalitna Cre 14.30 24 P Pn 13 03 27.4 +0.8
baz=216,SNR=5.3
MCARA McCarthy VSAT 14.36 47 Pn Pn 13 03 28.0 +0.5
MCARA McCarthy VSAT 14.36 47 P Pn 13 03 27.8 +0.3
baz=246
ISLE Juniper Island 14.38 51 Pn 13 03 27.3 -0.6
YAH Yahtse 14.58 52 P P 13 03 34.6 -2.2
H23K Yukon River 14.71 26 P 13 03 36.4 -1.6
H23K Yukon River 14.71 26 P Pn 13 03 33.1 +0.9
baz=220,SNR=6.5
ILAR Eielson Array 14.73 32 P Pn 13 03 31.1 -1.3
0.1nm,0.3s,baz=223,slow=12,SNR=8.1
ILAR LR LR 13 09 31.7
comp=Z,205nm,19.2s,baz=234,slow=39
0.8nm,0.7s
M26K Nabesna, AK 14.81 44 Pn Pn 13 03 32.8 -0.8
M26K Nabesna, AK 14.81 44 P Pn 13 03 32.8 -0.8
baz=243,SNR=15
TABL Table Mountain 14.89 52 Pn Pn 13 03 34.8 0.0
CTG Chitna Glacier 14.97 50 P Pn 13 03 36.2 +0.4
baz=250
L26K Log Cabin Wild 14.97 41 P Pn 13 03 36.2 +0.5
baz=240
F21K Alatna River 14.99 18 P Pn 13 03 36.0 +0.1
baz=208
DOT Dot Lake 15.02 39 P P 13 03 40.2 -1.3
J25K Salcha River, 15.12 34 P Pn 13 03 37.5 -0.2
baz=231
H24K Noodor Dome 15.18 28 P P 13 03 43.4 +0.2
H24K Noodor Dome 15.18 28 P Pn 13 03 38.8 +0.3
baz=223
PCA Pinnacle 15.22 54 P P 13 03 43.5 -0.2
PCA IAmb IAmb 13 03 49.3
comp=Z,29nm,1.2s
PINM Pinnacle 15.22 54 P Pn 13 03 38.8 -0.3
baz=255
SCRK Sand Creek 15.23 38 P Pn 13 03 38.9 -0.4
baz=236
M27K Edge Creek, AK 15.26 45 Pn Pn 13 03 39.1 -0.5
M27K Edge Creek, AK 15.26 45 P Pn 13 03 39.4 -0.3
baz=245,SNR=8.1
G23K Bananza Creek 15.29 23 P Pn 13 03 41.4 +1.5
baz=217,SNR=14
O28M Mount Upton 15.44 52 P Pn 13 03 42.1 -0.1
baz=253,SNR=11
F22K John River 15.48 19 P Pn 13 03 43.1 +0.7
baz=210,SNR=7.6
PNL Peninsula 15.54 56 P Pn 13 03 42.9 -0.3
baz=231
L27K Beaver Creek, 15.60 43 Pn 13 03 43.6 -0.3
L27K Beaver Creek, 15.60 43 P Pn 13 03 43.8 -0.1
baz=242,SNR=8.8
BCAR Beaver Creek A 15.61 43 Pn 13 03 43.6 -0.6
J26L Joseph Creek 15.68 36 Pn Pn 13 03 44.3 -0.8
J26L Joseph Creek 15.68 36 P Pn 13 03 45.1 +0.1
baz=235,SNR=6.1
BVCY Beaver Creek 15.71 45 P Pn 13 03 44.9 -0.5
baz=246
G24K Hadweenzic Riv 15.92 26 P Pn 13 03 48.9 +0.8
baz=222
K27K Chicken 15.97 39 P P 13 03 51.6 -0.3
K27K Chicken 15.97 39 P Pn 13 03 48.5 -0.2
baz=239
O29M Mount Kennedy 16.08 54 P Pn 13 03 50.5 +0.2
baz=256,SNR=6.4
YUK6 Outpost Mounta 16.34 52 P Pn 13 03 54.4 +0.7
baz=254
P29M Windy Craggy 16.36 57 P P 13 03 56.3 0.0
P29M IAmb IAmb 13 04 03.1
comp=Z,23nm,1.2s
F24K Squaw Lake 16.44 24 P Pn 13 03 55.7 +1.0
baz=219
EGAK Eagle 16.70 38 P P 13 04 00.4 +0.4
EGAK Eagle 16.70 38 P Pn 13 03 58.6 +0.7
baz=238,SNR=12
HYT Haines Junctio 16.72 53 P Pn 13 03 59.0 +0.7
baz=256,SNR=7.5
E24K Your Creek 16.74 22 P P 13 04 00.5 0.0
baz=217
M29M Somme Creek 16.76 47 P Pn 13 03 58.0 -0.9
baz=250,SNR=15
P30M Million Dollar 16.83 55 P Pn 13 03 59.7 0.0
baz=259
TOLK Toolik Lake Re 16.97 20 Pn Pn 13 04 00.8 -0.5
TOLK Toolik Lake Re 16.97 20 P Pn 13 04 01.7 +0.3
baz=214
I27K Kandik River 16.99 35 P Pn 13 04 01.9 +0.3
baz=235
PLBC Pleasant Camp 17.02 58 P Pn 13 04 02.6 +0.6
baz=262
DAWY Dawson 17.02 41 Pn Pn 13 04 01.7 -0.4
DAWY IAmb IAmb 13 04 09.0
comp=Z,14nm,0.9s
DAWY Dawson 17.02 41 P P 13 04 02.7 -0.9
baz=243,SNR=23
F25K Christian Rive 17.07 26 P P 13 04 03.7 -0.4
baz=223
N30M Aishikik Lake 17.08 51 P Pn 13 04 03.3 +0.6
baz=254,SNR=19
M30M Minto, Yukon 17.54 47 Pn Pn 13 04 07.3 -1.1
M30M Minto, Yukon 17.54 47 P P 13 04 09.7 +0.4
baz=251
F26K Sheenjek River 17.54 27 P P 13 04 09.5 +0.2
baz=226
SKAG Skagway 17.55 58 Pn 13 04 08.1 -0.4
SKAG IAmb IAmb 13 04 17.4
comp=Z,13nm,0.8s
K29M Barlow Dome 17.68 43 P Pn 13 04 10.4 +0.1
baz=247,SNR=14
G27K Doyon Strip 17.69 32 P P 13 04 11.2 +0.2
baz=232
N31M Braeburn, Yuko 17.69 51 P Pn 13 04 10.2 -0.2
baz=256,SNR=12
C23K Itkillik River 17.80 17 P P 13 04 13.3 +1.3
baz=210
WHY Whitehorse 17.95 54 Pn 13 04 13.0 -0.6
M31M Drury Creek, Y 18.50 49 P Pn 13 04 21.5 +1.2
baz=251
P33M Teslin, Yukon 18.89 56 Pn 13 04 24.7 -0.4
P33M IAmb IAmb 13 04 30.9
comp=Z,23nm,0.8s
P33M Teslin, Yukon 18.89 56 P Pn 13 04 24.7 -0.4
baz=263,SNR=15
N32M Quiet Lake 18.90 53 P Pn 13 04 26.0 +1.0
baz=260
FARO Faro, Yukon 18.99 50 P Pn 13 04 26.1 0.0
FARO IAmb IAmb 13 04 31.9
comp=Z,20nm,1.0s
FARO Faro, Yukon 18.99 50 P Pn 13 04 26.4 +0.3
baz=257
C27K Jago River 19.05 23 P Pn 13 04 27.5 +0.8
baz=222
EPYK Eagle Plains 19.10 36 P P 13 04 25.9 -0.6
EPYK IAmb IAmb 13 04 33.1
comp=Z,12nm,0.8s
EPYK Eagle Plains 19.10 36 P P 13 04 25.9 -0.6
baz=241
S34M Telegraph Cree 19.66 63 P P 13 04 33.3 +0.7
baz=271,SNR=8.3
R33M Jennings River 19.76 59 P P 13 04 33.9 +0.1
baz=267,SNR=5.8
MMPY Sheldon Lake, 20.02 49 P P 13 04 36.6 +0.1
baz=258,SNR=34
DLBC Dease Lake 20.24 61 P Pn 13 04 40.7 -0.3
comp=Z,4.2nm,0.8s,baz=274,slow=13,SNR=9.1
comp=Z,4.2nm,0.8s
DLBC Dease Lake 20.24 61 Pn Pn 13 04 40.7 -0.3
INK Inuvik 21.12 33 P P 13 04 45.8 -2.4
comp=Z,4.9nm,0.5s,baz=245,slow=8.3,SNR=13
INK LR LR 13 13 33.9
comp=Z,116nm,21.4s,baz=242,slow=38
comp=Z,4.9nm,0.5s
INK Inuvik 21.12 33 P P 13 04 46.1 -2.2
INK IAmb IAmb 13 04 55.1
comp=Z,7.9nm,0.8s
INK Inuvik 21.12 33 P P 13 04 45.9 -2.4
baz=241,SNR=8.7
PEA0B Petropavlovsk- 21.96 284 P P 13 04 58.3 +0.9
PEA0B IAmb IAmb 13 05 41.6
comp=Z,15nm,1.1s
PETK Petropavlovsk- 21.96 284 P P 13 04 56.5 -1.0
comp=Z,1.8nm,0.5s,baz=122,slow=10,SNR=2.2
PETK LR LR 13 13 24.7
comp=Z,52nm,21.5s,baz=89,slow=36
comp=Z,1.8nm,0.5s
BBB Bella Bella 22.37 78 LR LR 13 11 18.0
comp=Z,45nm,21.8s,baz=291,slow=30
MA2 Magadan 24.62 302 LR LR 13 14 45.3
comp=Z,41nm,19.9s,baz=200,slow=36
C36M Paulatuk 24.68 34 P P 13 05 24.1 -0.1
C36M IAmb IAmb 13 05 25.2
comp=Z,14nm,1.2s
C36M Paulatuk 24.68 34 P P 13 05 24.3 0.0
baz=251
YKA Yellowknife Ar 27.69 51 P P 13 05 52.6 +1.2
comp=Z,2.1nm,0.7s,baz=271,slow=8.8,SNR=5.8
comp=Z,2.1nm,0.7s
KBO Bosley Butte 29.39 96 P P 13 06 07.7 +0.8
KBO IAmb IAmb 13 06 45.3
comp=Z,5.7nm,1.1s
G05D Wamic, OR 29.42 88 P P 13 06 08.2 +1.1
baz=302
K02D Willamette Mer 29.44 94 P P 13 06 08.9 +1.6
baz=306
I04A Tendick Farm, 29.56 91 P P 13 06 09.3 +1.0
baz=304
L02F Cave Junction 29.84 95 P P 13 06 11.9 +1.1
baz=307
I05D Terrebonne, OR 29.89 90 P P 13 06 12.7 +1.4
baz=304
J04D Umpqua Nationa 30.05 92 P P 13 06 14.6 +1.7
baz=305
NEW Newport 30.40 80 P P 13 06 16.7 +1.0
baz=298
L04D Klamath Falls 30.53 94 P P 13 06 17.9 +0.8
L04D Klamath Falls 30.53 94 P P 13 06 18.1 +1.1
baz=306
J05D Fort Rock, OR 30.55 91 P P 13 06 18.4 +1.2
baz=305,SNR=7.5
YBH Yreka Blue Hor 30.58 95 P P 13 06 20.2 +2.8
comp=Z,2.5nm,0.7s,baz=249,slow=6.4,SNR=7.6
comp=Z,2.5nm,0.7s
YBH Yreka Blue Hor 30.58 95 P P 13 06 18.8 +1.3
YBH IAmb IAmb 13 06 21.7
comp=Z,5.6nm,1.1s
KMRM Mail Ridge 30.92 98 P P 13 06 20.9 +0.5
KMRM IAmb IAmb 13 06 25.2
comp=Z,4.3nm,0.8s
WVOR Wild Horse Val 32.60 90 P P 13 06 36.8 +1.6
WVOR IAmb IAmb 13 06 42.2
comp=Z,4.5nm,0.9s
MSO Missoula 32.98 80 P P 13 06 39.1 +0.7
baz=301
TIXI Tiksi 33.11 328 LR LR 13 20 34.3
comp=Z,60nm,19.4s,baz=1.0,slow=37
BEKR Beckworth 33.14 96 P P 13 06 41.4 +1.4
BEKR IAmb IAmb 13 06 42.6
comp=Z,3.8nm,0.9s
PAHR Pah Rah Range 33.82 95 P P 13 06 46.5 +0.6
PNTR Pine Nut 34.09 96 P P 13 06 48.9 +0.6
YAK Yakutsk 34.33 311 LR LR 13 21 10.8
comp=Z,45nm,18.3s,baz=90,slow=37
RES Resolute Bay 34.35 26 LR LR 13 22 44.0
comp=Z,73nm,18.3s,baz=158,slow=40
YERR Yerington 34.37 96 P P 13 06 52.6 +1.9
HLID Hailey 34.47 86 P P 13 06 51.5 0.0
baz=305
BMN Battle Mountai 34.66 92 P P 13 06 53.2 +0.1
BMN IAmb IAmb 13 07 21.6
comp=Z,2.2nm,0.8s
EGMT Eagleton 34.82 76 P P 13 06 54.8 +0.3
EGMT Eagleton 34.82 76 P P 13 06 55.1 +0.7
baz=300
BOZ Bozeman (W) 34.99 81 P P 13 06 56.5 +0.5
BOZ Bozeman (W) 34.99 81 P P 13 06 56.7 +0.6
baz=303
KVN Kaiserville 35.00 95 P P 13 06 57.9 +1.7
KVN IAmb IAmb 13 07 10.3
comp=Z,3.9nm,0.9s
RYN Ryan 35.02 96 P P 13 06 57.6 +1.2
RYN IAmb IAmb 13 06 59.6
comp=Z,4.7nm,0.8s
NVAR Mina Array Bea 35.28 96 P P 13 07 01.0 +2.4
comp=Z,3.8nm,0.7s,baz=301,slow=8.7,SNR=41
comp=Z,3.8nm,0.7s
ELK Elko 35.65 90 P P 13 07 03.6 +1.8
comp=Z,2.5nm,0.8s,baz=283,slow=7.6,SNR=6.3
comp=Z,2.5nm,0.8s
RLMT Red Lodge 36.65 80 P P 13 07 11.5 +1.3
baz=304
CWC Cottonwood Cre 36.74 98 P P 13 07 12.5 +1.4
baz=313
R11A Troy Canyon, C 36.96 94 P P 13 07 13.7 +0.8
R11A IAmb IAmb 13 07 26.6
comp=Z,3.1nm,0.9s
R11A Troy Canyon, C 36.96 94 P P 13 07 13.0 +0.1
baz=311,SNR=6.3
ISA Isabella, Lake 37.04 99 P P 13 07 14.6 +1.1
baz=314
MPMC Manual Prospec 37.35 98 P P 13 07 17.4 +1.2
baz=313
DUG Dugway, Tooele 37.44 89 P P 13 07 17.2 +0.3
DUG IAmb IAmb 13 07 23.9
comp=Z,2.6nm,0.8s
DUG Dugway, Tooele 37.44 89 P P 13 07 17.6 +0.6
baz=309
FURC Furnace Creek, 37.44 97 P P 13 07 18.0 +1.2
baz=313
TPNV Topopah Spring 37.48 96 P P 13 07 18.7 +1.4
TPNV Topopah Spring 37.48 96 P P 13 07 18.8 +1.4
baz=312,SNR=7.8
LAO LASA Array 37.57 76 P P 13 07 18.6 +0.8
baz=303
GWY Greenwater Val 37.75 97 P P 13 07 20.5 +0.9
GWY IAmb IAmb 13 07 33.8
comp=Z,3.3nm,0.7s
QSM Queen of Sheba 37.78 98 P P 13 07 21.4 +1.6
QSM IAmb IAmb 13 07 22.7
comp=Z,4.9nm,0.9s
BW06 Boulder Array 37.82 83 P P 13 07 19.9 -0.4
baz=306
PD31 Pinedale Array 37.82 83 P P 13 07 20.2 -0.1
PDAR Pinedale Array 37.82 83 P P 13 07 21.3 +1.1
comp=Z,0.9nm,0.7s,baz=306,slow=5.1,SNR=9.9
comp=Z,0.9nm,0.7s
PDAR Pinedale Array 37.82 83 P P 13 07 20.4 +0.1
GSC Goldstone, Bar 38.27 98 P P 13 07 25.2 +1.3
baz=314
KLR Kul'dur 38.41 290 LR LR 13 24 25.4
comp=Z,37nm,18.5s,baz=62,slow=38
GMRC Granite Mounta 39.31 98 P P 13 07 33.9 +1.2
baz=314
K22A Casper 39.69 81 P P 13 07 36.7 +0.9
baz=307
H11N2 WAKE ISLAND Hy 39.85 223 T T 13 50 17.8
baz=25,slow=76,SNR=914
H11N3 WAKE ISLAND Hy 39.86 223 T T 13 50 18.4
baz=25,slow=76,SNR=761
H11N1 WAKE ISLAND Hy 39.87 223 T T 13 50 19.0
baz=25,slow=76,SNR=683
IRM Iron Mountain 40.05 98 P P 13 07 40.1 +1.4
baz=314
U15A North Rim 40.19 93 P P 13 07 39.7 -0.5
U15A IAmb IAmb 13 07 55.3
comp=Z,5.0nm,1.2s
O20A White River Ci 40.21 86 P P 13 07 39.8 -0.4
O20A White River Ci 40.21 86 P P 13 07 41.3 +1.1
baz=309
RSSD Black Hills 40.29 78 P P 13 07 40.8 -0.1
baz=306
PV11 David Mesa, Pa 41.01 88 P P 13 07 46.8 0.0
PV11 IAmb IAmb 13 07 58.5
comp=Z,5.3nm,0.9s
H11S1 WAKE ISLAND Hy 41.03 223 T T 13 51 48.8
baz=25,slow=76,SNR=669
H11S2 WAKE ISLAND Hy 41.05 223 T T 13 51 46.9
baz=25,slow=76,SNR=608
H11S3 WAKE ISLAND Hy 41.05 223 T T 13 51 43.7
baz=25,slow=76,SNR=529
N23A Red Feather La 41.10 83 P P 13 07 48.5 +0.8
baz=308
PV13 Radium Mtn., P 41.13 88 P P 13 07 48.5 +0.7
PV13 IAmb IAmb 13 07 54.0
comp=Z,5.8nm,0.8s
WUAZ Wupatki 41.36 93 P P 13 07 50.6 +0.9
baz=313
AGMN Agassiz Nation 42.56 68 P P 13 07 59.7 +0.5
baz=304
SDCO Great Sand Dun 43.38 86 P P 13 08 07.2 +0.9
SDCO Great Sand Dun 43.38 86 P P 13 08 06.5 +0.2
baz=311
T25A Trinidad 44.43 86 P P 13 08 15.1 +0.5
baz=312
ECSD EROS Data Cent 44.82 73 P P 13 08 17.3 -0.1
baz=308
BNM Barren Site 45.13 91 P P 13 08 19.0 -1.3
MNTX Cornudas Mount 47.59 92 P P 13 08 39.8 +0.5
MNTX IAmb IAmb 13 08 52.8
comp=Z,2.9nm,0.8s
MNTX Cornudas Mount 47.59 92 P P 13 08 40.9 +1.5
baz=316
SUMG Summit 49.02 19 P P 13 08 48.8 -1.5
P38A Dawn 49.21 76 P P 13 08 50.7 -1.0
WMOK Wichita Mounta 49.41 84 P P 13 08 53.3 0.0
WMOK Wichita Mounta 49.41 84 P P 13 08 56.4 +3.0
baz=314
P40A Paris 50.13 75 P P 13 08 57.9 -0.8
TX31 Lajitas Ar. Si 50.32 93 P P 13 09 00.8 +0.5
TX32 Lajitas Array 50.32 93 P P 13 09 00.7 +0.3
TXAR Lajitas Array 50.32 93 P P 13 09 01.4 +1.0
comp=Z,3.0nm,0.6s,baz=300,slow=5.6,SNR=46
TXAR pP **sP 13 09 12.6 -0.3**
comp=Z,4.3nm,0.7s,baz=303,slow=6.6,SNR=15
comp=Z,3.0nm,0.6s

TXAR	Lajitas Array	50.32	93	P		P		13 09 00.7	+0.3
R40A	Maddies Statio	50.83	76	P		P		13 09 02.3	-1.7
CCM	Cathedral Cave	51.59	76	P		P		13 09 07.8	-1.9
	baz=313								
HHC	Hu-ho-hao-te	54.80	293	*e*P		P		13 09 34.0	+0.6
HHC					pmax	pmax			
	comp=Z,45nm,0.7s								
HHC					pmax	pmax			
	comp=Z,360nm,4.7s								
WVT	Waverly	54.89	75	P		P		13 09 33.6	-0.4
	baz=314								
ZALV	Zalesovo Beam	58.26	319	LR		LR		13 36 29.8	
	comp=Z,44nm,18.7s,baz=20,slow=38								
KURBB	Kurchatov Arra	63.28	320	LR		LR		13 39 60.0	
	comp=Z,56nm,19.6s,baz=30,slow=38								
BVAR	Borovoye Array	64.22	326	LR		LR		13 39 46.1	
	comp=Z,39nm,19.3s,baz=5.7,slow=37								
WMQ	Urumqi	64.77	310	*e*P		P		13 10 43.5	+1.7
MK31	Makanchi Array	64.81	315	P		P		13 10 41.7	-0.3
MKAR	Makanchi Array	64.81	315	P		P		13 10 40.9	-1.1
	comp=Z,0.2nm,0.5s,baz=46,slow=6.3,SNR=2.5								
	comp=Z,0.2nm,0.5s								
KIRV	Kirov	64.86	341	LR		LR		13 41 39.0	
	comp=Z,40nm,18.8s,baz=321,slow=39								
FIA1	FINESS Array S	65.12	354	P		P		13 10 42.6	-1.1
FINES	FINESS Array B	65.12	354	P		P		13 10 41.6	-2.1
	comp=Z,1.6nm,0.7s,baz=64,slow=4.4,SNR=5.3								
	comp=Z,1.6nm,0.7s								
FINES	FINESS Array B	65.12	354	P		P		13 10 42.4	-1.3
TAOE	Nuku Hiva Isla	65.63	153	*e*T		T		14 22 26.4	
	comp=Z,15nm,0.2s								
PMOR	Pomariorio Ree	69.78	162	*e*T		T		14 27 33.8	
	comp=Z,7.0nm,0.2s								
PZH	PanZhiHua	70.84	289	P		P		13 11 22.0	+1.6
PZH					pmax	pmax			
	comp=Z,10.0nm,0.9s								
PZH					pmax	pmax			
	comp=Z,100nm,4.5s								
PPT	Papeete	72.00	164	LR		LR		13 36 38.6	
	comp=Z,77nm,21.3s,baz=317,slow=30								
PPT2	Papeete2	72.02	164	*e*LR		LR		13 33 35.6	
	comp=Z,86nm,26.0s								
MSVF	Nonsavu	72.30	197	LR		LR		13 42 50.2	
	comp=Z,36nm,18.3s,baz=22,slow=35								
AKASG	Malin Array Be	75.53	350	P		P		13 11 44.3	-3.1
	comp=Z,1.7nm,0.6s,baz=7.4,slow=5.3,SNR=2.9								
	comp=Z,1.7nm,0.6s								
CMAR	Chiang Mai Arr	78.73	286	P		P		13 12 06.5	+0.5
	comp=Z,0.5nm,0.5s,baz=20,slow=6.1,SNR=5.4								
	comp=Z,0.5nm,0.5s								
DZM	Mont Dzumac	79.06	207	LR		LR		13 49 00.5	
	comp=Z,52nm,18.1s,baz=52,slow=37								
ASAR	Alice Springs	92.97	233	P		P		13 13 16.3	-0.3
	comp=Z,0.6nm,0.7s,baz=30,slow=4.7,SNR=7.3								
	comp=Z,0.6nm,0.7s								
H03N2	Juan Fernandez	114.08	114	T		T		15 23 23.2	
	baz=322,slow=77,SNR=152								
H03N1	Juan Fernandez	114.09	114	T		T		15 23 24.5	
	baz=322,slow=77,SNR=136								
H03N3	Juan Fernandez	114.09	114	T		T		15 23 23.7	
	baz=322,slow=77,SNR=194								

*IDC **29** 13:05:03.0±0.7, 14°.20N×89°.56W, h0km, mb4.3/15, mbtmp4.4/18, ML4.2/3, MS3.9/41, Error ellipse: s-maj=26.2km s-min=11.9km az=52.0*
*UCR **29** 13:05:04.0±2.4, 14°.06N×89°.70W, h2km±6km, mb4.6(NEIC)*
*NEIC **29** 13:05:04.9±2.2, 14°.12N±0°.05×89°.64W±0°.03, h10km±1km, mb4.6/104, Md5.2(SNET), Error ellipse: s-maj=8.4km s-min=5.9km az=179.0*
*GCG **29** 13:05:05.6±3.0, 14°.16N×89°.77W, h0km±52km, MD4.6*
*INET **29** 13:05:09.2±2.4, 14°.25N×89°.43W, h16km±11km, MW5.2*
ISC 29 13:05:04.0±0.8, 14°.12N±0°.03×89°.70W±0°.02, h9km±5km, n448, σ1§14/422, mb4.6/55, MS3.9/42, 44C-20D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SLOZ	Alcaldia de Sa	0.12	222	⇑	*i*P		Pg	13 05 06.6	-0.3
SLOZ					*e*S		Sg	13 05 08.2	-0.6
LOAL	Lomas de Alarc	0.14	214	⇓	*i*P		Pg	13 05 07.0	-0.2
LOAL					*e*S		Sg	13 05 09.1	-0.3
LOAL	Lomas de Alarc	0.14	214	⇓	*i*P		Pg	13 05 07.0	-0.2
LOAL					*e*S		Sg	13 05 09.1	-0.3
UNIC	Universidad Ca	0.20	132	⇑	*i*P		Pg	13 05 08.4	+0.2
UNIC	Universidad Ca	0.20	132	⇑	*i*P		Pg	13 05 08.4	+0.2
RTR	El Retiro	0.22	166	⇓	*i*P		Pg	13 05 08.9	+0.2
RTR	El Retiro	0.22	166	⇓	*i*P		Pg	13 05 08.9	+0.2
NUBE	Las Nubes	0.23	200	⇓	*i*P		Pg	13 05 08.5	-0.2
NUBE					*e*S		Sg	13 05 11.3	-0.6
NUBE	Las Nubes	0.23	200	⇓	*i*P		Pg	13 05 08.5	-0.2
NUBE					*e*S		Sg	13 05 11.3	-0.6
SNJE	San Jose	0.26	160	⇓	*i*P		Pg	13 05 09.5	+0.1
SNJE	San Jose	0.26	160	⇓	*i*P		Pg	13 05 09.5	+0.1
SBLS	San Blas	0.28	165	⇓	*i*P		Pg	13 05 09.8	-0.1
SBLS	San Blas	0.28	165	⇓	*i*P		Pg	13 05 09.8	-0.1
CEVE	Cerro Verde	0.30	166	⇓	*i*P		Pg	13 05 10.1	+0.1
CEVE	Cerro Verde	0.30	166		*e*P		Pg	13 05 10.1	+0.1
CEVE					⇓	*i*P	Pg	13 05 10.1	+0.1
CEDA	San Andres	0.43	136	⇑	*i*P		Pg	13 05 12.4	-0.1
CEDA	San Andres	0.43	136	⇑	*i*P		Pg	13 05 12.4	-0.1
MTO3	Montecristo	0.43	49				Pg	13 05 13.0	+0.4
MTO3					Sg		Sg	13 05 18.9	+0.6
MTO3	Montecristo	0.43	49	⇑	*i*P		Pb	13 05 13.1	-0.9
MTO3	Montecristo	0.43	49	⇑	*i*P		Pb	13 05 13.1	-0.9
MTO3	Montecristo	0.43	49		*e*P		Pb	13 05 13.2	-0.9
MTO3					*e*S		Sb	13 05 19.9	-0.9
JAYA	Jayaque - finc	0.52	152	⇓	*i*P		Pg	13 05 14.1	-0.1
JAYA	Jayaque - finc	0.52	152	⇓	*i*P		Pg	13 05 14.1	-0.1
PMON	Piamonte	0.55	137	⇑	*i*P		Pg	13 05 15.0	+0.3
PMON					*e*S		Sb	13 05 23.1	-0.9
PMON	Piamonte	0.55	137	⇑	*i*P		Pg	13 05 15.0	+0.3
PMON					*e*S		Sb	13 05 23.1	-0.9
BOQS	Boqueron	0.56	133	⇑	*i*P		Pg	13 05 15.0	+0.1
BOQS	Boqueron	0.56	133	⇑	*i*P		Pg	13 05 15.0	+0.1
UEES	Universidad Ev	0.60	132	⇑	*i*P		Pg	13 05 15.6	-0.1
UEES	Universidad Ev	0.60	132	⇑	*i*P		Pg	13 05 15.6	-0.1
ITCA	Escuela Especi	0.60	137	⇑	*i*P		Pg	13 05 15.7	0.0
ITCA	Escuela Especi	0.60	137	⇑	*i*P		Pg	13 05 15.7	0.0
SEMO	Seminario San	0.62	132	⇑	*i*P		Pg	13 05 15.9	-0.1
SNET	Serv Nac Est T	0.62	133				Pg	13 05 15.8	-0.3
SNET	Serv Nac Est T	0.62	133	⇑	*i*P		Pg	13 05 16.0	-0.1
SNET					*e*S		Sg	13 05 24.7	+0.4
SNET	Serv Nac Est T	0.62	133	⇑	*i*P		Pg	13 05 16.0	-0.1
SNET					*e*S		Sg	13 05 24.7	+0.4
SNET	Serv Nac Est T	0.62	133		*e*P		Pg	13 05 16.0	-0.1
SNET					*e*S		Sg	13 05 25.1	+0.8
UESS	Universidad de	0.62	129		*i*P		Pg	13 05 16.0	-0.1
UESS	Universidad de	0.62	129		*i*P		Pg	13 05 16.0	-0.1
IGN	Direccin Gen	0.65	128	⇑	*i*P		Pg	13 05 16.4	-0.3
IGN	Direccin Gen	0.65	128	⇑	*i*P		Pg	13 05 16.4	-0.3
LFU	La Fuente	0.68	123	⇑	*i*P		Pg	13 05 17.1	0.0
LFU	La Fuente	0.68	123	⇑	*i*P		Pg	13 05 17.1	0.0
AEIL	Aeropuerto Ilo	0.70	126	⇑	*i*P		Pg	13 05 17.6	-0.1
AEIL	Aeropuerto Ilo	0.70	126	⇑	*i*P		Pg	13 05 17.6	-0.1
LLGN	La Laguna	0.73	86	⇑	*i*P		Pg	13 05 18.2	0.0
LLGN	La Laguna	0.73	86	⇑	*i*P		Pg	13 05 18.2	0.0
LBRS	Las Brisas	0.74	120	⇑	*i*P		Pg	13 05 18.3	-0.1
LBRS	Las Brisas	0.74	120	⇑	*i*P		Pg	13 05 18.3	-0.1
NBG	Las Nubes	0.78	307		*e*P		Pb	13 05 20.0	0.0
LFRS	El Faro	0.79	128	⇑	*i*P		Pg	13 05 18.9	-0.4
LFRS	El Faro	0.79	128	⇑	*i*P		Pg	13 05 18.9	-0.4
PAVA	Las Pavas	0.84	118	⇑	*i*P		Pg	13 05 20.0	-0.3
PAVA	Las Pavas	0.84	118	⇑	*i*P		Pg	13 05 20.0	-0.3
PCG	Pacaya	0.92	287		*e*P		Pb	13 05 22.2	-0.2
PSNO	Presa 5 de nov	0.92	98	⇑	*i*P		Pg	13 05 21.0	-0.8
COEG	Centro de Oper	0.94	122	⇑	*i*P		Pg	13 05 21.6	-0.4
COEG	Centro de Oper	0.94	122	⇑	*i*P		Pg	13 05 21.6	-0.4
MRL	Marmol	0.96	1		*e*P		Pn	13 05 23.6	-0.4
SNVI	San Vicente	0.97	121	⇑	*i*P		Pg	13 05 22.4	-0.4
SNVI	San Vicente	0.97	121	⇑	*i*P		Pg	13 05 22.4	-0.4
UESV	Universidad de	1.01	118		*i*P		Pg	13 05 22.7	-0.7
UESV	Universidad de	1.01	118		*i*P		Pg	13 05 22.7	-0.7
SCLA	Alcaldia de Sa	1.03	113	⇑	*i*P		Pg	13 05 23.3	-0.5
SCLA	Alcaldia de Sa	1.03	113	⇑	*i*P		Pg	13 05 23.3	-0.5
FUG	Fuego 3	1.16	287		*e*P		Pg	13 05 26.0	-0.3
PQSS	Presa 15 de Se	1.21	114	⇓	*i*P		Pb	13 05 26.2	-0.9
PQSS	Presa 15 de Se	1.21	114	⇓	*i*P		Pb	13 05 26.2	-0.9
COEB	Comit de Eme	1.29	118	⇑	*e*P		Pn	13 05 27.8	-0.7
COEB	Comit de Eme	1.29	118	⇑	*e*P		Pn	13 05 27.8	-0.7
PACA	Pacayal	1.48	116	⇑	*e*P		Pn	13 05 31.0	0.0
PACA	Pacayal	1.48	116	⇑	*e*P		Pn	13 05 31.0	0.0
PACA	Pacayal	1.48	116	⇓	*e*P		Pn	13 05 30.7	-0.4
CAHU	Cacacuatique	1.49	103	⇓	*i*P		Pn	13 05 30.6	-0.5
CAHU	Cacacuatique	1.49	103	⇓	*i*P		Pn	13 05 30.6	-0.5
RANC	El Ranchito	1.53	116		*e*P		Pn	13 05 31.4	-0.3
RANC	El Ranchito	1.53	116		*e*P		Pn	13 05 31.4	-0.3
CNRM	Centro Naciona	1.62	113	⇓	*i*P		Pn	13 05 33.1	+0.3
CNRM	Centro Naciona	1.62	113	⇓	*i*P		Pn	13 05 33.1	+0.3
STG3	Santiaguito 3,	1.91	288		*e*P		Pb	13 05 38.4	-0.8
CNCH	Conchagua	2.00	114		*i*P		Pn	13 05 38.2	+0.1
CNCH	Conchagua	2.00	114		*i*P		Pn	13 05 38.2	+0.1
TGUH	Tegucigalpa,Un	2.36	91		Pn		Pn	13 05 42.4	-0.7
TGUH	Tegucigalpa,Un	2.36	91		*e*P		Pn	13 05 42.5	-0.6
CSGN	Cosiguina Volc	2.37	118		*e*P		Pn	13 05 43.0	-0.3
CNGN	Cerro Negro	3.33	118				Pn	13 05 56.5	0.0
CNGN	Cerro Negro	3.33	118		*e*P		Pn	13 05 58.0	+1.5
MOMN	Momotombo	3.51	119		*e*P		Pn	13 05 58.6	-0.3
COPN	Copaltepe	3.59	122		*e*P		Pn	13 06 00.3	+0.4
APYN	Apoyeque	3.76	119		*e*P		Pn	13 06 03.1	+0.8
MATN	Matagalpa	3.86	107		Pn		Pn	13 06 03.3	-0.4
MATN	Matagalpa	3.86	107		*e*P		Pn	13 06 02.9	-0.7
BOAB	BOACO BROADBAN	4.26	112		Pn		Pn	13 06 08.5	-0.7
BOAB	BOACO BROADBAN	4.26	112		*e*P		Pn	13 06 08.7	-0.5
ACON	Acoyapa	4.90	115				Pn	13 06 17.1	-0.9
HZTE	Horizontes, Gu	5.25	130		Pn		Pn	13 06 24.4	+1.7
ORTG	Ortega, Santa	5.58	132				Pn	13 06 29.3	+2.0
ESPN	Las Esperanzas	5.60	109				Pn	13 06 27.0	-0.5
ESPN	Las Esperanzas	5.60	109		*e*P		Pn	13 06 27.3	-0.2
CMIG	Matias Romero	5.80	301		Pn		Pn	13 06 32.3	+1.9
	8.9nm,0.3s,baz=107,slow=10.0,SNR=159								
CMIG					Lg		Lg	13 08 06.7	
	9.0nm,0.3s,baz=201,slow=15,SNR=6.1								
CMIG					LR		LR	13 08 51.9	
	comp=Z,2μm,19.1s,baz=141,slow=39								
	73nm,0.6s								
JTS	Las Juntas de	6.00	129		Pn		Pn	13 06 34.3	+1.2
TEIG	Tepich	6.23	12		Pn		Pn	13 06 36.3	+0.1
TEIG	Tepich	6.23	12		*e*P		Pn	13 06 36.7	+0.5
JACO	JACO, Garabito	6.63	131		Pn		Pn	13 06 43.9	+2.2
LCR2	La Lucha 2	7.07	127		*e*P		Pn	13 06 51.5	+3.5
CVTR	Volcan Turrial	7.09	124				Pn	13 06 51.1	+2.7
CVTR	Volcan Turrial	7.09	124		*e*P		Pn	13 06 51.2	+2.7
RIMA	Rio Macho	7.16	126				Pn	13 06 51.9	+2.7
RIMA	Rio Macho	7.16	126		*e*P		Pn	13 06 53.1	+3.9
CDM	Cerro de Muert	7.37	127		*e*P		Pn	13 06 55.5	+3.1
MRVA	Moravia de Chi	7.46	124		*e*P		Pn	13 06 58.3	±5.0
SRBA	San Rafael, Bu	7.88	127		Pn		Pn	13 07 01.5	+2.4
SRBA	San Rafael, Bu	7.88	127		*e*P		Pn	13 07 01.4	+2.4
DRK0	Durika	7.95	127				Pn	13 07 02.5	+2.4
DRK0	Durika	7.95	127		*e*P		Pn	13 07 04.0	+3.9
POTG	Potrero Grande	8.18	127		*e*P		Pn	13 07 05.9	+2.8
BRU2	Volcan	8.67	127				Pn	13 07 11.6	+1.7
BRU2	Volcan	8.67	127		*e*P		Pn	13 07 12.7	+2.8
BCIP	Isla Barro Col	10.84	116				Pn	13 07 41.4	+1.9
SJCC	San Jacinto, C	14.81	105		*e*P		P	13 08 40.5	+0.6
ZARC	Zaragoza, Cauc	15.99	113		*e*P		P	13 08 53.2	+0.3
YOTC	Yotoco, Valle	16.58	126		*e*P		Pn	13 08 53.7	-3.4
GUY2C	Guyana, Caldas	16.66	121	⇑	*e*P		P	13 09 06.3	+5.5
833A	Chaparral WMA,	16.77	329				P	13 09 00.7	-0.8
833A						IAmb	IAmb	13 09 16.9	
	comp=Z,31nm,0.9s								
833A	Chaparral WMA,	16.77	329		P		P	13 09 01.8	+0.4
	baz=145								
PTBC	PUERTO BERRIO,	16.77	115		*e*P		P	13 09 02.8	+1.2
441A	DeRidder	16.86	350		Pn		Pn	13 09 01.2	+0.8
BBAC	Balboa, Cauca	17.20	133		*e*P		P	13 09 09.0	+2.4
342A	Flagon Creek P	17.35	352		P		P	13 09 08.0	+0.1
URIC	Uribia, Colomb	17.43	96		*e*P		P	13 09 15.3	+6.4
GCUF	Volcan Galeras	17.70	135		*e*P		P	13 09 15.3	+2.8
OTAV	Otavalo	17.72	140		*e*P		Pn	13 09 06.8	-5.0
ROSC	El Rosal	17.74	120		LR		LR	13 18 06.9	
	comp=Z,542nm,18.3s,baz=69,slow=44								
VBMS	Vicksburg	18.04	358		P		P	13 09 17.8	+2.3
	baz=177								
NATX	Nacogdoches	18.14	346		P		P	13 09 17.8	+1.1
NATX	Nacogdoches	18.14	346		P		P	13 09 18.9	+2.3
	baz=164								
RUSC	La Rusia	18.28	115		*e*P		P	13 09 24.8	+6.0
CHIC	Chingaza	18.34	119		*e*P		P	13 09 21.1	+1.6
FLOC	Florencia	18.65	131		*e*P		Pn	13 09 28.2	+5.5
JCT	Junction City	18.76	332		P		Pn	13 09 24.1	+0.2
	baz=147								
DABV	Dabajuro	18.88	98		*e*P		Pn	13 09 26.2	+0.7
PORT	Chimborazo Vol	18.89	144		P		Pn	13 09 27.0	+0.8
PORT						IAmb	IAmb	13 09 38.3	
	comp=Z,34nm,0.9s								
LRAL	Lakeview Retre	18.99	7		P		Pn	13 09 27.6	+0.9
	baz=187								
WHTX	Lake Whitney,	19.16	340		P		Pn	13 09 29.3	+0.6
WHTX						IAmb	IAmb	13 09 40.6	
	comp=Z,26nm,0.8s								
WHTX	Lake Whitney,	19.16	340		P		Pn	13 09 29.6	+0.9
	baz=156								
SOCV	Socops	19.37	105		*e*P		Pn	13 09 31.5	+0.1
SDV	Santo Domingo	19.39	103		P		P	13 09 31.2	+0.5
	comp=Z,0.9nm,0.3s,baz=282,slow=6.2,SNR=26								
SDV					LR		LR	13 18 02.7	
	comp=Z,338nm,21.0s,baz=298,slow=40								
	comp=Z,40nm,0.8s								
SDV	Santo Domingo	19.39	103		P		P	13 09 30.2	-0.5
SDV						IAmb	IAmb	13 09 33.3	
	comp=Z,49nm,0.8s								
WLAR	White Oak Lake	19.73	352		Pn		Pn	13 09 35.3	-0.2
TX31	Lajitas Ar. Si	19.91	322		P		Pn	13 09 38.5	+0.7
TX32	Lajitas Array	19.91	322		P		Pn	13 09 39.0	+1.2
TX32						IAmb	IAmb	13 09 45.1	
	comp=Z,24nm,1.1s								
TXAR	Lajitas Array	19.91	322		P		Pn	13 09 38.4	+0.5
	comp=Z,0.4nm,0.3s,baz=147,slow=10,SNR=38								
	comp=Z,17nm,1.0s								
GOGA	Godfrey	20.03	15		P		P	13 09 37.8	+0.4
GOGA	Godfrey	20.03	15		P		Pn	13 09 38.9	-0.2
	baz=197								
OXF	Oxford	20.31	1		P		Pn	13 09 42.1	-0.3
	baz=180								
Z35A	Perchaven, San	20.32	342		P		P	13 09 41.3	+0.7
Z35A						IAmb	IAmb	13 10 25.3	
	comp=Z,28nm,0.9s								
X48A	Hartselle	20.39	6				Pn	13 09 43.3	0.0
X48A						IAmb	IAmb	13 09 47.0	
	comp=Z,20nm,0.9s								
ABTX	Abilene, Hawle	20.54	335		P		Pn	13 09 44.2	-0.9
ABTX	Abilene, Hawle	20.54	335		P		Pn	13 09 44.5	-0.6
	baz=151								
MIAR	Mount Ida	20.64	351		P		Pn	13 09 45.2	-1.0
MIAR	Mount Ida	20.64	351		P		Pn	13 09 46.1	-0.2
	baz=168								
LOOK	Love County	20.92	342				P	13 09 48.2	+1.2
LOOK						IAmb	IAmb	13 09 54.9	
	comp=Z,48nm,1.0s								
SWET	Sewanee	21.28	9		P		P	13 09 50.4	-0.5
SWET						IAmb	IAmb	13 09 59.6	
	comp=Z,25nm,0.9s								
X34A	Smith Ranch, M	21.68	342				P	13 09 55.7	+0.5
X34A						IAmb	IAmb	13 10 22.8	
	comp=Z,27nm,0.9s								
BAUV	El Baul	21.83	101		P		P	13 09 56.2	-0.8
LPIG	La Paz	21.83	300		LR		LR	13 18 22.8	
	comp=Z,694nm,18.9s,baz=120,slow=36								
LCAR	Lake Charles	21.90	357		P		P	13 09 58.6	+1.0
WVT	Waverly	21.99	4		P		P	13 09 59.9	+1.5
	baz=184								
TKL	Tuckaleechee C	22.10	13		LR		LR	13 19 13.8	
	comp=Z,324nm,19.2s,baz=192,slow=39								
WMOK	Wichita Mounta	22.11	340		P		P	13 09 58.3	-1.5
WMOK						IAmb	IAmb	13 10 02.7	
	comp=Z,25nm,1.1s								
WMOK	Wichita Mounta	22.11	340		P		P	13 09 59.9	0.0
	baz=155,SNR=14								
HTMS	Hat Mesa	22.27	328		P		P	13 10 01.2	-0.5
CLN7	Carlsbad 7	22.31	327		P		P	13 10 02.7	+0.6
TUL1	Leonard	22.38	347		P		P	13 10 04.1	+1.4
	baz=164								
GDL2	Guadalupe Moun	22.44	326		P		P	13 10 04.2	+0.7
OK025	Westminster Rd	22.45	344		P		P	13 10 04.0	+0.5
U49A	Red Boiling Sp	22.58	8		P		P	13 10 03.7	-1.1
U49A						IAmb	IAmb	13 10 14.6	
	comp=Z,37nm,1.4s								
MNTX	Cornudas Mount	22.64	323		P		P	13 10 04.6	-1.0
MNTX	Cornudas Mount	22.64	323		P		P	13 10 06.4	+0.9
	baz=136,SNR=9.1								
OK031	S. Brethren Rd	22.67	345				P	13 10 05.9	+0.1
OK031						IAmb	IAmb	13 10 39.1	
	comp=Z,26nm,1.1s								
OK029	Liberty Lake	22.69	343				P	13 10 05.6	-0.3
CSTR	Hydro, Custer	22.91	341		P		P	13 10 08.2	-0.2
CSTR						IAmb	IAmb	13 10 25.9	
	comp=Z,3.2nm,0.9s								
SJG	San Juan	22.96	77		LR		LR	13 19 40.5	
	comp=Z,464nm,18.4s,baz=269,slow=38								
TZTN	Tazewell	23.00	13		P		P	13 10 10.0	+0.7
	baz=195								
MSTX	Muleshoe	23.05	331		P		P	13 10 09.5	-0.4
	baz=145								
MGMO	Mountain Grove	23.06	355		P		P	13 10 10.6	+0.7
MGMO						IAmb	IAmb	13 10 27.0	
	comp=Z,24nm,1.1s								
AMTX	Amarillo	23.34	334		P		P	13 10 11.9	-0.8
AMTX	Amarillo	23.34	334		P		P	13 10 12.3	-0.5
	baz=149								
S44A	Carbondale	23.49	1		P		P	13 10 14.8	+0.7
S39A	Bolivar	23.70	353		P		P	13 10 16.5	+0.2
S39A						IAmb	IAmb	13 10 23.1	
	comp=Z,23nm,0.9s								
CCM	Cathedral Cave	23.88	357		P		P	13 10 18.6	+0.6
CCM	Cathedral Cave	23.88	357		P		P	13 10 18.6	+0.6
	baz=176								
ATAH	Atahualpa	23.91	151		P		P	13 10 20.8	+1.8
	comp=Z,8.1nm,0.6s,baz=337,slow=5.9,SNR=5.4								
ATAH						LR	LR	13 18 58.4	
	comp=Z,153nm,18.0s,baz=331,slow=35								
	comp=Z,8.1nm,0.6s								
STVI	Saint Thomas	24.12	77		P		P	13 10 19.2	-1.3
R40A	Maddies Statio	24.19	355		P		P	13 10 21.2	+0.3
R40A						IAmb	IAmb	13 10 59.4	
	comp=Z,15nm,1.0s								
WCI	Wyandotte Cave	24.21	7		P		P	13 10 21.1	+0.1
WCI	Wyandotte Cave	24.21	7		P		P	13 10 22.2	+1.1
	baz=187								
121A	Cookes Peak, D	24.67	321		P		P	13 10 26.3	+0.8
121A						IAmb	IAmb	13 11 10.5	
	comp=Z,17nm,1.1s								
319A	Douglas	24.85	317		P		P	13 10 28.1	+0.9
319A						IAmb	IAmb	13 11 12.4	
	comp=Z,23nm,1.3s								
CRNM	Carthage	25.07	325		P		P	13 10 28.4	-0.8
BNM	Barren Site	25.16	325		P		P	13 10 29.0	-1.0
SBM	South Baldy	25.34	324		P		P	13 10 30.3	-1.5
LENM	Lemitar	25.36	325		P		P	13 10 31.2	-0.6
KSU1	Kansas State U	25.62	348		P		P	13 10 35.0	+1.1
	baz=164								
P38A	Dawn	25.63	353		P		P	13 10 33.3	-0.6
P38A						IAmb	IAmb	13 10 54.7	
	comp=Z,9.8nm,0

comp=Z,8.4nm,0.9s
BOZ Bozeman (W) 36.44 334 P P 13 12 10.5 +1.1
baz=142
PAHR Pah Rah Range 36.45 320 P P 13 12 09.9 +0.4
EMB Emerald Bay 36.48 318 P P 13 12 11.1 +1.2
EMB IAmb IAmb 13 12 13.7
comp=Z,11nm,1.2s
MPK Martis Peak 36.62 319 P P 13 12 11.0 -0.1
MPK IAmb IAmb 13 12 14.2
comp=Z,13nm,1.1s
MFID Camas Ranch 36.80 328 P P 13 12 13.0 +0.5
LPAZ La Paz 36.97 144 P P 13 12 15.6 +0.9
comp=Z,1.6nm,0.7s,baz=316,slow=8.1,SNR=4.8
LPAZ LR LR 13 28 38.6
comp=Z,168nm,19.7s,baz=354,slow=38
comp=Z,1.6nm,0.7s
LRM Limekiln Ridge 36.98 333 P P 13 12 15.3 +1.2
BEKR Beckworth 37.15 319 P P 13 12 16.5 +0.9
MDP Montagnes des 37.57 100 LR LR 13 29 05.7
comp=Z,146nm,22.0s,baz=290,slow=38
WVOR Wild Horse Val 37.67 324 P P 13 12 19.9 0.0
WVOR IAmb IAmb 13 12 25.4
comp=Z,11nm,1.4s
EGMT Eagleton 37.68 338 P P 13 12 20.1 +0.3
baz=147
J08A Circle Bar Ran 38.18 325 P P 13 12 23.2 -1.0
J08A IAmb IAmb 13 12 26.3
comp=Z,19nm,1.3s
MSO Missoula 38.41 333 P P 13 12 26.8 +0.8
baz=140
BMO Blue Mountains 38.57 328 P P 13 12 26.6 -0.8
KMRM Mail Ridge 39.49 318 P P 13 12 35.7 +0.5
YBH Yreka Blue Hor 39.68 320 LR LR 13 31 34.5
comp=Z,188nm,18.0s,baz=152,slow=40
J05D Fort Rock, OR 39.70 323 P P 13 12 37.3 +0.4
baz=127
L04D Klamath Falls 39.70 321 P P 13 12 36.5 -0.5
L04D IAmb IAmb 13 12 38.9
comp=Z,11nm,1.2s
L04D Klamath Falls 39.70 321 P P 13 12 37.0 +0.1
baz=125
PINE Pine Mountain 39.84 324 P P 13 12 37.1 -1.0
WALA Waterton Lakes 40.13 335 P P 13 12 41.4 +1.0
J04D Umpqua Nationa 40.18 323 P P 13 12 41.0 0.0
baz=126
KRPM Rodgers 40.19 319 P P 13 12 41.3 +0.3
KRPM IAmb IAmb 13 13 11.6
comp=Z,14nm,1.3s
I05D Terrebonne, OR 40.40 324 P P 13 12 43.5 +0.9
baz=128
L02F Cave Junction 40.43 320 P P 13 12 42.8 0.0
baz=123
I04A Tendick Farm, 40.69 323 P P 13 12 45.2 +0.2
baz=126
KBO Bosley Butte 40.88 320 P P 13 12 47.4 +0.7
KBO IAmb IAmb 13 12 48.9
comp=Z,16nm,1.2s
NEW Newport 40.91 332 LR LR 13 33 58.6
comp=Z,155nm,18.4s,baz=146,slow=42
G05D Wamic, OR 40.96 326 P P 13 12 48.2 +1.1
baz=129
SIV San Ignacio 41.18 136 P P 13 12 47.6 -1.7
comp=Z,1.9nm,0.5s,baz=306,slow=8.5,SNR=5.6
SIV LR LR 13 30 23.6
comp=Z,95nm,18.8s,baz=274,slow=37
comp=Z,1.9nm,0.5s
I03D Drain, OR 41.18 322 P P 13 12 49.3 +0.4
baz=125
J01E Myrtle Point 41.23 321 P P 13 12 50.0 +0.7
baz=124
FFC Flin Flon 41.64 349 P P 13 12 52.7 +0.1
FFC IAmb IAmb 13 12 55.5
comp=Z,12nm,1.1s
LVC Limon Verde 41.80 151 LR LR 13 30 13.3
comp=Z,62nm,18.1s,baz=326,slow=36
G03D McMinnville, O 42.02 324 P P 13 12 57.2 +1.3
baz=126
EDM Edmonton 43.28 339 P P 13 13 06.1 +0.1
EDM IAmb IAmb 13 13 07.5
comp=Z,15nm,1.0s
SCHQ Schefferville 44.37 19 P P 13 13 13.7 -1.0
comp=Z,6.4nm,0.8s,baz=219,slow=7.5,SNR=5.7
comp=Z,6.4nm,0.8s
SCHQ Schefferville 44.37 19 P P 13 13 13.8 -1.0
SCHQ IAmb IAmb 13 13 22.9
comp=Z,17nm,1.3s
BBB Bella Bella 48.77 329 LR LR 13 39 04.8
comp=Z,73nm,18.3s,baz=166,slow=42
BDFB Brasilia 50.72 124 LR LR 13 36 29.5
comp=Z,160nm,19.1s,baz=296,slow=37
CPUP Villa Florida 51.06 142 LR LR 13 37 23.2
comp=Z,89nm,19.0s,baz=339,slow=38
YKA Yellowknife Ar 51.45 346 P P 13 14 09.1 -0.3
comp=Z,2.0nm,0.7s,baz=250,slow=18,SNR=5.8
comp=Z,2.0nm,0.7s
FRB Frobisher Bay 51.72 12 LR LR 13 36 37.8
comp=Z,153nm,19.8s,baz=203,slow=37
DLBC Dease Lake 53.48 335 P P 13 14 25.7 +1.0
comp=Z,8.7nm,1.0s,baz=102,slow=4.4,SNR=8.3
DLBC LR LR 13 39 00.2
comp=Z,133nm,20.8s,baz=106,slow=38
comp=Z,8.7nm,1.0s
DLBC Dease Lake 53.48 335 P P 13 14 25.6 +1.0
DLBC IAmb IAmb 13 14 30.3
comp=Z,7.7nm,0.9s
DLBC Dease Lake 53.48 335 P P 13 14 25.7 +1.0
baz=128
S34M Telegraph Cree 53.62 334 P P 13 14 26.8 +1.2
baz=127
R33M Jennings River 54.45 335 P P 13 14 32.7 +0.8
baz=128
TGTN Hyland Airport 54.82 339 P P 13 14 35.3 +1.0
baz=132
TAOE Nuku Hiva Isla 55.01 248 *e*LR LR 13 30 34.4
comp=Z,48nm,22.1s
MMPY Sheldon Lake, 56.60 338 P P 13 14 48.2 +1.1
baz=129,SNR=7.5
RCBR Riachuelo 56.93 107 LR LR 13 42 00.4
comp=Z,140nm,19.6s,baz=92,slow=39
FARO Faro, Yukon 57.12 337 P P 13 14 51.1 +0.4
baz=127
O30N Mendenhall 57.34 335 P P 13 14 53.0 +0.5
baz=123
P30M Million Dollar 57.35 334 P P 13 14 53.2 +0.7
baz=122
PLCA Paso Flores 57.39 163 P P 13 14 53.0 0.0
comp=Z,6.0nm,1.1s,baz=15,slow=14,SNR=4.6
PLCA LR LR 13 34 50.6
comp=Z,41nm,18.4s,baz=336,slow=31
comp=Z,6.0nm,1.1s
P29M Windy Craggy 57.43 333 P P 13 14 53.5 +0.5
baz=121
M31M Drury Creek, Y 57.49 337 P P 13 14 54.3 +0.9
baz=126
N31M Braeburn, Yuko 57.62 336 P P 13 14 55.2 +0.9
baz=124
HYT Haines Junctio 57.96 335 P P 13 14 57.9 +1.1
baz=122
N30M Aishikik Lake 58.13 335 P P 13 14 58.4 +0.5
baz=122
PNL Peninsula 58.18 333 P P 13 14 58.4 +0.2
baz=119
M30M Minto, Yukon 58.63 337 P P 13 15 02.0 +0.6
baz=123
SFJD Kangerlussuaq 58.74 17 LR LR 13 41 09.0
comp=Z,89nm,19.0s,baz=225,slow=37
M29M Somme Creek 59.20 336 P P 13 15 06.1 +0.6
baz=122,SNR=8.7
K29M Barlow Dome 59.60 338 P P 13 15 08.0 -0.3
baz=123
YUK3 Moose Creek 59.67 335 P P 13 15 09.1 +0.3
baz=119
BVCY Beaver Creek 60.15 335 P P 13 15 11.6 -0.3
baz=119
DAWY Dawson 60.42 337 P P 13 15 13.1 -0.6
DAWY Dawson 60.42 337 P P 13 15 13.6 -0.2
baz=121
M27K Edge Creek, AK 60.54 335 P P 13 15 14.9 +0.2
baz=118
MCARA McCarthy VSAT 60.57 334 P P 13 15 14.3 -0.4
baz=116
RES Resolute Bay 60.63 358 LR LR 13 42 55.0
comp=Z,87nm,20.6s,baz=180,slow=38
EPYK Eagle Plains 60.76 340 P P 13 15 16.0 0.0
baz=125
BCAR Beaver Creek A 60.84 336 P P 13 15 16.5 -0.1
L27K Beaver Creek, 60.85 336 P P 13 15 16.5 -0.2
L27K IAmb IAmb 13 15 18.1
comp=Z,7.3nm,1.1s
L27K Beaver Creek, 60.85 336 P P 13 15 16.9 +0.2
baz=118,SNR=9.1
INK Inuvik 60.97 343 P P 13 15 17.2 -0.2
comp=Z,10nm,1.1s,baz=135,slow=7.8,SNR=9.9
INK LR LR 13 45 50.3
comp=Z,74nm,18.4s,baz=129,slow=40
comp=Z,10nm,1.1s
INK Inuvik 60.97 343 P P 13 15 16.5 -0.8
INK Inuvik 60.97 343 P P 13 15 17.1 -0.2
baz=130,SNR=9.0
M26K Nabesna, AK 61.02 335 P P 13 15 17.5 -0.4
baz=117
Q23K Middleton Isla 61.25 331 P P 13 15 19.3 -0.1
baz=112
N25K Chitina, Valde 61.34 334 P P 13 15 20.4 +0.3
N25K IAmb IAmb 13 15 34.2
comp=Z,4.1nm,0.7s
N25K Chitina, Valde 61.34 334 P P 13 15 20.8 +0.7
baz=115
EGAK Eagle 61.45 338 P P 13 15 20.6 0.0
baz=120
L26K Log Cabin Wild 61.45 335 P P 13 15 20.5 -0.2
baz=117
A36M Sachs Harbour 61.58 348 P P 13 15 21.1 -0.3
baz=140
KLU Klutina 61.87 333 P P 13 15 23.8 +0.1
KLU Klutina 61.87 333 P P 13 15 23.6 -0.1
baz=114
DOT Dot Lake 62.02 336 P P 13 15 24.4 -0.2
DOT IAmb IAmb 13 15 26.0
comp=Z,7.0nm,1.2s
I27K Kandik River 62.03 338 P P 13 15 24.2 -0.4
baz=120
SCRK Sand Creek 62.14 336 P P 13 15 25.3 -0.3
SCRK IAmb IAmb 13 15 26.4
comp=Z,6.9nm,1.4s
SCRK Sand Creek 62.14 336 P P 13 15 25.2 -0.3
baz=117
J26L Joseph Creek 62.22 337 P P 13 15 25.8 -0.2
J26L Joseph Creek 62.22 337 P P 13 15 26.1 +0.2
baz=117,SNR=6.4
M24K Tolsona, Glenn 62.23 334 P P 13 15 26.2 +0.2
baz=114
PAX Paxson 62.30 335 P P 13 15 25.9 -0.7
PAX IAmb IAmb 13 15 27.4
comp=Z,8.7nm,1.5s
PAX Paxson 62.30 335 P P 13 15 26.1 -0.4
baz=115
H27K Steamboat Moun 62.32 339 P P 13 15 26.4 -0.1
baz=120,SNR=5.6
RIDG Independent Ri 62.37 336 P P 13 15 26.4 -0.5
RIDG IAmb IAmb 13 15 43.1
comp=Z,4.5nm,0.9s
RIDG Independent Ri 62.37 336 P P 13 15 26.6 -0.4
baz=116
SCM Sheep Creek Mo 62.62 333 P P 13 15 27.7 -1.0
baz=112
G27K Doyon Strip 62.66 339 P P 13 15 28.1 -0.6
baz=120
PWL Port Wells 62.71 332 P P 13 15 29.5 +0.3
baz=111
K24K Donnelly Dome 62.78 336 P P 13 15 29.5 -0.1
baz=115
M23K Glacier View 62.78 333 P P 13 15 29.1 -0.6
baz=112
J25K Salcha River, 62.96 336 P P 13 15 30.5 -0.4
J25K IAmb IAmb 13 15 32.2
comp=Z,6.2nm,1.1s
J25K Salcha River, 62.96 336 P P 13 15 30.8 -0.2
baz=116,SNR=5.6
KNK Knik Glacier 62.97 333 P P 13 15 31.0 +0.1
baz=111
SML Sawmill 63.06 333 P P 13 15 31.7 +0.1
baz=111
WAT6 Susitna Watana 63.09 334 P P 13 15 32.3 +0.4
baz=112
PMR Palmer 63.33 333 P P 13 15 33.4 +0.1
baz=110
E27K Coleen River 63.35 341 P P 13 15 33.5 +0.2
baz=121
PRP Porcupine Dome 63.42 337 P P 13 15 34.2 +0.2
baz=116
BRSE Bradley Lake S 63.46 330 P P 13 15 33.4 -0.8
baz=108
G26K Porcupine Rive 63.46 339 P P 13 15 34.1 +0.1
baz=118
HDA Harding Lake 63.50 336 P P 13 15 33.8 -0.6
HDA Harding Lake 63.50 336 P P 13 15 34.0 -0.3
baz=114
IL31 63.62 336 P P 13 15 34.3 -0.8
IL31 IAmb IAmb 13 15 36.1
comp=Z,7.6nm,1.1s
ILAR Eielson Array 63.62 336 P P 13 15 34.6 -0.6
comp=Z,4.8nm,1.0s,baz=119,slow=4.6,SNR=29
ILAR LR LR 13 47 56.8
comp=Z,112nm,18.4s,baz=86,slow=40
comp=Z,4.8nm,1.0s
ILAR Eielson Array 63.62 336 P P 13 15 34.3 -0.9
H25K Birch Creek 63.86 338 P P 13 15 36.7 0.0
baz=116
HOM Homer 63.87 330 P P 13 15 37.1 +0.2
baz=107
RND Reindeer 63.88 335 P P 13 15 36.9 -0.1
F26K Sheenjek River 63.94 340 P P 13 15 37.7 +0.5
baz=118
BMAR Burnt Mountain 63.96 339 P P 13 15 37.4 -0.1
MCK McKinley 64.03 335 P P 13 15 38.1 +0.2
baz=112
F25K Christian River 64.40 339 P P 13 15 41.2 +0.9
baz=117,SNR=5.8
H24K Noodor Dome 64.44 337 P P 13 15 41.0 +0.4
baz=114
O20K Slope Mountain 64.46 330 P P 13 15 41.4 +0.5
baz=106
SKT Skwentna 64.54 333 P P 13 15 41.3 0.0
baz=108
E25K Arctic Village 64.61 340 P P 13 15 42.4 +0.7
baz=117
G24K Hadweenzic Riv 64.65 338 P P 13 15 42.6 +0.7
baz=114
H23K Yukon River 65.07 337 P P 13 15 44.5 -0.2
baz=112
PPLA Purkeypile 65.12 333 P P 13 15 44.9 -0.4
baz=108
F24K Squaw Lake 65.14 339 P P 13 15 44.9 -0.3
baz=114
MLY Manley 65.24 336 P P 13 15 45.0 -0.8
MLY Manley 65.24 336 P P 13 15 45.2 -0.6
baz=110,SNR=5.6
D25K Kavik River 65.43 341 P P 13 15 47.6 +0.7
baz=117
SUMG Summit 65.54 15 P P 13 15 47.3 -0.8
E24K Your Creek 65.58 339 P P 13 15 47.7 -0.3
baz=114
G23K Bananza Creek 65.58 338 P P 13 15 47.4 -0.6
baz=112
O18K Koktuh Hills 65.66 330 P P 13 15 47.6 -1.0
baz=104
L20K Farewell, AK 65.74 333 P P 13 15 48.4 -0.7
baz=106,SNR=5.6
I21K Tanana 65.78 336 P P 13 15 48.3 -1.0
I21K IAmb IAmb 13 16 01.1
comp=Z,5.5nm,1.2s
I21K Tanana 65.78 336 P P 13 15 48.7 -0.6
baz=109
H22K Ishtalitna Cre 65.79 337 P P 13 15 48.4 -1.0
baz=110
K20K Telida 66.08 334 P P 13 15 50.0 -1.2
K20K Telida 66.08 334 P P 13 15 50.7 -0.6
baz=107
L19K White Mountain 66.09 332 P P 13 15 50.5 -0.8
baz=105
Q16K King Salmon 66.11 328 P P 13 15 51.3 -0.1
baz=102
D24K Happy Valley 66.14 340 P P 13 15 51.3 -0.2
baz=114
TOLK Toolik Lake Re 66.18 340 P P 13 15 51.5 -0.3
baz=113
H21K Melozitna Rive 66.27 336 P P 13 15 51.4 -1.0
H21K IAmb IAmb 13 15 58.8
comp=Z,5.5nm,1.4s
H21K Melozitna Rive 66.27 336 P P 13 15 51.9 -0.5
baz=109
C24K Franklin Bluff 66.34 341 P P 13 15 52.1 -0.6
baz=114
J20K Nowinta River 66.35 334 P P 13 15 51.7 -1.2
J20K IAmb IAmb 13 15 52.8
comp=Z,4.2nm,1.1s
J20K Nowinta River 66.35 334 P P 13 15 52.5 -0.4
baz=107
F22K John River 66.66 338 P P 13 15 55.0 +0.1
baz=110
D23K Nanushuk River 66.68 340 P P 13 15 56.0 +1.0
baz=112
IMAR Indian Mountai 66.74 336 P P 13 15 54.6 -0.8
PPT2 Papeete2 66.94 244 *e*LR LR 13 36 05.4
comp=Z,55nm,20.8s
C23K Itkillik River 66.99 341 P P 13 15 57.6 +0.7
baz=113
O16K Kokwok River B 67.02 329 P P 13 15 56.5 -0.8
baz=101
F21K Alatna River 67.04 338 P P 13 15 57.4 0.0
baz=109,SNR=7.9
N16K Nishlik Lake 67.53 330 P P 13 16 00.6 0.0
baz=101
BORG Borgarnes 68.14 25 LR LR 13 46 28.2
comp=Z,55nm,18.0s,baz=260,slow=36
TBI Tubuai 69.30 238 *e*LR LR 13 37 11.2
comp=Z,84nm,25.0s
ANM Nome 71.20 334 P P 13 16 22.6 -0.5
baz=96
TNA Tin City 72.38 335 P P 13 16 30.0 -0.2
baz=94
JMIC Jan Mayen 73.88 20 LR LR 13 50 29.0
comp=Z,33nm,18.9s,baz=236,slow=37
EKA Eskdalemuir Ar 76.56 36 LR LR 13 47 53.0
comp=Z,55nm,19.1s,baz=244,slow=34
ESDC Sonseca Array 77.89 52 P P 13 17 01.8 -0.8
comp=Z,2.1nm,0.7s,baz=281,slow=6.7,SNR=7.7
ESDC LR LR 13 45 12.6
comp=Z,71nm,21.3s,baz=286,slow=31
comp=Z,2.1nm,0.7s
SHEM Shemya Is, Ala 82.61 322 LR LR 13 53 16.2
comp=Z,29nm,20.7s,baz=106,slow=35
NB2 NORSAR Subarra 82.97 29 P P 13 17 29.7 +0.2
comp=Z,3.5nm,1.1s,baz=290,slow=5.3
NOA NORSAR Array B 82.97 29 P P 13 17 29.6 +0.1
comp=Z,1.6nm,0.9s,baz=288,slow=5.1,SNR=3.8
NOA LR LR 13 53 46.8
comp=Z,22nm,20.0s,baz=270,slow=35
comp=Z,1.6nm,0.9s
DAVOX Davos/Dischmat 86.27 43 LR LR 13 52 26.0
comp=Z,40nm,18.9s,baz=263,slow=33
TORD Torodi Ar. Bea 88.18 77 LR LR 13 53 11.3
comp=Z,42nm,21.7s,baz=220,slow=33
VRAC Vranov 89.71 39 LR LR 13 57 24.1
comp=Z,41nm,18.5s,baz=288,slow=35
MA2 Magadan 91.99 334 LR LR 14 03 33.5
comp=Z,41nm,18.3s,baz=72,slow=38
AKASG Malin Array Be 96.39 34 LR LR 14 01 52.2
comp=Z,43nm,19.1s,baz=258,slow=35
YAK Yakutsk 98.04 342 LR LR 14 10 46.2
comp=Z,51nm,18.2s,baz=89,slow=40
HHC Hu-ho-hao-te 121.87 341 *e*P **PKPdf 13 23 54.5 -4.8**
WMQ Urumqi 122.30 2 *e*P **PKiKP 13 24 00.3 +0.1**
WMQ LR LR
comp=Z,110nm,21.1s
WRA Warramunga Arr 137.59 256 PKP PKPdf 13 24 29.5 +0.1
comp=Z,1.2nm,0.8s,baz=90,slow=2.7,SNR=9.9
ASAR Alice Springs 137.81 250 PKiKP PKPpre 13 24 20.1
comp=Z,0.6nm,1.0s,baz=112,slow=3.3,SNR=5.1
PZH PanZhiHua 138.12 345 PKP PKPdf 13 24 28.5 -2.0
FITZ Fitzroy Crossi 145.85 259 PKPbc PKPdf 13 24 44.2 0.0
comp=Z,5.4nm,0.8s,baz=324,slow=2.5,SNR=17
CMAR Chiang Mai Arr 146.53 345 PKPbc PKPdf 13 24 44.7 -0.8
comp=Z,0.3nm,0.4s,baz=344,slow=3.0,SNR=1.7

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*SNET **29** 13:23:12.3±1.0, 14.°11N×89.°74W, h10km±4km, ML3.6*
*UCR **29** 13:23:12.6±1.0, 14.°11N×89.°73W, h6km±8km, ML3.7*
*GCG **29** 13:23:13.7±0.5, 14.°10N×89.°72W, h13km±21km, MD3.2*

ISC 29 13:23:12.6±0.9, 14.°11N±0.°04×89.°72W±0.°03, h13km±6km, n45, σ0°35/54, 2C-8D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLOZ	**Alcaldia de Sa**	**0.11**	**219**	*i* P	**Pg**	**13 23 15.6**	**-0.2**
SLOZ				*e*S	**Sg**	**13 23 17.7**	**-0.3**
SLOZ				IAML		13 23 19.4	
	comp=Z,16μm,0.4s						
LOAL	**Lomas de Alarc**	**0.13**	**210**	*i* P	**Pg**	**13 23 16.0**	**-0.1**
LOAL				*e*S	**Sg**	**13 23 18.5**	**0.0**
LOAL	**Lomas de Alarc**	**0.13**	**210**	*i* P	**Pg**	**13 23 18.5**	**-0.1**
LOAL				*e*S	**Sg**	**13 23 18.5**	**0.0**
NUBE	**Las Nubes**	**0.21**	**197**	↓*i*P	**Pg**	**13 23 17.4**	**-0.1**
NUBE	**Las Nubes**	**0.21**	**197**	↓*i*P	**Pg**	**13 23 17.4**	**-0.1**
RTR	**El Retiro**	**0.22**	**162**	↓*i*P	**Pg**	**13 23 17.9**	**+0.3**
RTR	**El Retiro**	**0.22**	**162**	↓*i*P	**Pg**	**13 23 17.9**	**+0.3**
SNJE	**San Jose**	**0.26**	**156**	*i* P	**Pg**	**13 23 18.5**	**+0.2**
SNJE	**San Jose**	**0.26**	**156**	*i* P	**Pg**	**13 23 18.5**	**+0.2**
SBLS	**San Blas**	**0.28**	**161**	↓*i*P	**Pg**	**13 23 18.7**	**+0.1**
SBLS	**San Blas**	**0.28**	**161**	↓*i*P	**Pg**	**13 23 18.7**	**+0.1**
CEVE	**Cerro Verde**	**0.29**	**162**	↓*i*P	**Pg**	**13 23 19.1**	**+0.2**
CEVE				IAML		13 23 26.1	
	comp=Z,7μm,0.2s						
CEVE	**Cerro Verde**	**0.29**	**162**	↓*i*P	**Pg**	**13 23 19.1**	**+0.2**
CEVE				IAML		13 23 26.1	
	comp=Z,7μm,0.2s						
CEDA	**San Andres**	**0.44**	**134**	*i* P	**Pg**	**13 23 21.4**	**+0.1**
CEDA				IAML		13 23 31.0	
	comp=Z,8μm,0.3s						
CEDA	**San Andres**	**0.44**	**134**	*i* P	**Pg**	**13 23 21.4**	**+0.1**
CEDA				IAML		13 23 31.0	
	comp=Z,8μm,0.3s						
MTO3	**Montecristo**	**0.45**	**50**	↑*i*P	**Pg**	**13 23 21.9**	**+0.3**
MTO3	**Montecristo**	**0.45**	**50**	↑*i*P	**Pg**	**13 23 21.9**	**+0.3**
JAYA	**Jayaque - finc**	**0.52**	**150**	*i* P	**Pg**	**13 23 23.1**	**+0.1**
JAYA				*e*S	**Sb**	**13 23 30.8**	**-0.4**
JAYA				IAML		13 23 31.7	
	comp=Z,2μm,0.2s						
JAYA	**Jayaque - finc**	**0.52**	**150**	*i* P	**Pg**	**13 23 23.1**	**+0.1**
JAYA				*e*S	**Sb**	**13 23 30.8**	**-0.4**
JAYA				IAML		13 23 31.7	
	comp=Z,2μm,0.2s						
BOQS	**Boqueron**	**0.56**	**131**	*i* P	**Pg**	**13 23 24.0**	**+0.2**
BOQS	**Boqueron**	**0.56**	**131**	*i* P	**Pg**	**13 23 24.0**	**+0.2**
UEES	**Universidad Ev**	**0.61**	**130**	*i* P	**Pg**	**13 23 24.5**	**0.0**
UEES				IAML		13 23 36.0	
	comp=Z,4μm,0.5s						
UEES	**Universidad Ev**	**0.61**	**130**	*i* P	**Pg**	**13 23 24.5**	**0.0**
UEES				IAML		13 23 36.0	
	comp=Z,4μm,0.5s						
LFU	**La Fuente**	**0.69**	**121**	*i* P	**Pg**	**13 23 26.1**	**+0.1**
LFU	**La Fuente**	**0.69**	**121**	*i* P	**Pg**	**13 23 26.1**	**+0.1**
LBRS	**Las Brisas**	**0.75**	**119**	*i* P	**Pg**	**13 23 27.2**	**0.0**
LBRS	**Las Brisas**	**0.75**	**119**	*i* P	**Pg**	**13 23 27.2**	**0.0**
NBG	**Las Nubes**	**0.77**	**308**	*e*P	**Pn**	**13 23 29.0**	**-0.5**
NBG				*e*S	**Sn**	**13 23 40.8**	**-0.3**
LFRS	**El Faro**	**0.80**	**127**	*i* P	**Pg**	**13 23 27.9**	**-0.3**
LFRS	**El Faro**	**0.80**	**127**	*i* P	**Pg**	**13 23 27.9**	**-0.3**
PAVA	**Las Pavas**	**0.85**	**117**	*i* P	**Pg**	**13 23 28.9**	**-0.3**
PAVA	**Las Pavas**	**0.85**	**117**	*i* P	**Pg**	**13 23 28.9**	**-0.3**
PCG	**Pacaya**	**0.91**	**288**	*e*P	**Pb**	**13 23 30.9**	**+0.5**
PCG				*e*S	**Sn**	**13 23 44.2**	**-0.3**
P5NO	**Presa 5 de nov**	**0.94**	**97**	*e*P	**Pg**	**13 23 29.9**	**-0.9**
COEG	**Centro de Oper**	**0.95**	**121**	*i* P	**Pg**	**13 23 30.5**	**-0.4**
COEG	**Centro de Oper**	**0.95**	**121**	*i* P	**Pg**	**13 23 30.5**	**-0.4**
MRL	**Marmol**	**0.97**	**2**	*e*P	**Pn**	**13 23 32.3**	**+0.1**
MRL				*e*S	**Sn**	**13 23 46.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.04**	**113**	*e*P	**Pg**	**13 23 32.2**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.04**	**113**	*e*P	**Pg**	**13 23 32.2**	**-0.6**
FUG	**Fuego 3**	**1.14**	**287**	*e*P	**Pn**	**13 23 34.6**	**+0.1**
FUG				*e*S	**Sn**	**13 23 50.8**	**+0.7**
PQSS	**Presa 15 de Se**	**1.22**	**113**	*i* P	**Pn**	**13 23 35.0**	**-0.4**
PQSS	**Presa 15 de Se**	**1.22**	**113**	*i* P	**Pn**	**13 23 35.0**	**-0.4**
PACA	**Pacayal**	**1.50**	**115**	*e*P	**Pn**	**13 23 40.1**	**+0.8**
PACA	**Pacayal**	**1.50**	**115**	*e*P	**Pn**	**13 23 40.1**	**+0.8**
STG3	**Santiaguito 3,**	**1.89**	**289**	*e*P	**Pb**	**13 23 47.4**	**+0.2**

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*IDC **29** 13:33:04.0±1.9, 0.°12N×17.°68W, h0km, mb4.5/2, mbtmp4.6/3, ML4.6/1, MS3.3/8, Error ellipse: s-maj=42.3km s-min=37.7km az=153.0*

ISC 29 13:33:05.9±1.5, 0.°1N±0.°1×17.°7W±0.°2, h12km, n15, σ0°25/6, MS3.5/7, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**8.51**	**158**	Pn	**Pn**	**13 35 08.5**	**-0.3**
H10N2				T	T	13 44 01.2	

baz=337,slow=74,SNR=66
H10N3 ASCENSION HYDR 8.51 158 Pn **Pn** **13 35 09.0 +0.1**
H10N3 T T 13 43 59.7
baz=337,slow=74,SNR=45
H10N1 ASCENSION HYDR 8.53 158 Pn **Pn** **13 35 09.3 +0.3**
H10N1 T T 13 44 03.5
baz=337,slow=74,SNR=82
H10S3 ASCENSION HYDR 9.50 162 T T 13 45 30.1
baz=341,slow=74,SNR=47
H10S2 ASCENSION HYDR 9.51 162 T T 13 45 30.7
baz=239,slow=74,SNR=19
DBIC Dimbokro 14.33 63 Pn **Pn** **13 36 28.8 0.0**
2.5nm,0.3s,baz=261,slow=13,SNR=24
DBIC LR LR 13 41 28.9
comp=Z,70nm,19.4s,baz=262,slow=35
4.8nm,0.3s
TORD Torodi Ar. Bea 23.13 55 P **P** **13 38 12.2 -0.1**
24nm,0.3s,baz=230,slow=11,SNR=2.3
24nm,0.3s
CPUP Villa Florida 46.39 232 LR LR 13 58 44.2
comp=Z,31nm,19.4s,baz=28,slow=33
SJG San Juan 50.88 293 LR LR 13 58 19.5
comp=Z,18nm,21.1s,baz=122,slow=30
ROSC El Rosal 56.79 276 LR LR 14 04 22.9
comp=Z,63nm,21.7s,baz=260,slow=33
ATAH Atahualpa 61.00 262 LR LR 14 07 30.4
comp=Z,32nm,20.9s,baz=104,slow=34
NOA NORSAR Array B 64.65 15 LR LR 14 12 17.3
comp=Z,15nm,22.0s,baz=275,slow=36
FINES FINESS Array B 69.57 21 LR LR 14 13 22.3
comp=Z,34nm,21.4s,baz=221,slow=35
TXAR Lajitas Array 86.46 299 P **P** **13 45 49.2 0.0**
0.8nm,1.0s,baz=116,slow=5.7,SNR=4.5
0.8nm,1.0s
ELK Elko 95.67 311 LR LR 14 24 42.3
comp=Z,24nm,18.7s,baz=102,slow=32

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*VAO **29** 14:16:45.5±0.6, 22.30S×68.97W, h146km±4km, mb4.4*
*NEIC **29** 14:16:47.7±0.9, 22.26S±0.06×68.61W±0.07, h124km±8km, Error ellipse: s-maj=9.7km s-min=8.1km az=77.0*
*IDC **29** 14:16:47.1±0.7, 22.33S×68.23W, h103km±13km, mb4.0/4, mbtmp4.3/6, Error ellipse: s-maj=36.4km s-min=19.3km az=117.0*
*GUC **29** 14:16:48.2±0.8, 22.26S×68.56W, h117km±4km, ML4.1*
ISC 29 14:16:47.1±0.6, 22.25S±0.04×68.61W±0.05, h126km±6km, n105, σ1.28/115, mb4.2/5, 13C, Northern Chile

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LVC Limon Verde 0.45 218 P **Pn** **14 17 06.3 +0.4**
5µm,0.3s,baz=53,slow=8.3
LVC S **Sn** **14 17 19.6 -0.6**
2µm,0.3s,baz=207,slow=18,SNR=8.6
LVC Limon Verde 0.45 218 Pn **Pn** **14 17 06.1 +0.2**
LVC Limon Verde 0.45 218⇑*e*P **Pn** **14 17 05.2 -0.6**
LVC *e*S **Sn** **14 17 19.5 -0.6**
LVC Limon Verde 0.45 218 *e*P **Pn** **14 17 06.4 +0.5**
PB09 IPOC Station P 0.74 308 **Pn** **14 17 08.3 +0.8**
PB09 IPOC Station P 0.74 308⇑*e*P **Pn** **14 17 08.5 +0.9**
PB09 *e*S **Sn** **14 17 23.5 +0.4**
PB09 IAML 14 17 25.3
comp=N,4µm,0.6s
AF01 San Pedro de A 0.80 150 **Pn** **14 17 08.7 +0.5**
AF01 San Pedro de A 0.80 150⇑*e*P **Pn** **14 17 08.2 0.0**
AF01 *e*S **Sn** **14 17 23.4 -0.8**
AF01 IAML 14 17 39.7
comp=N,6µm,0.5s
PB06 IPOC Station P 0.99 243 **Pn** **14 17 10.2 +0.4**
PB06 IPOC Station P 0.99 243⇑*e*P **Pn** **14 17 10.2 +0.4**
PB06 *e*S **Sn** **14 17 27.3 +0.4**
PB06 IAML 14 17 29.1
comp=E,4µm,0.2s
PB15 IPOC Station P 1.24 220 **Pn** **14 17 13.2 +0.9**
PB15 IPOC Station P 1.24 220⇑*e*P **Pn** **14 17 12.9 +0.6**
PB15 *e*S **Sn** **14 17 32.0 +0.7**
PB07 IPOC Station P 1.29 294 **Pn** **14 17 13.2 +0.4**
PB07 IPOC Station P 1.29 294⇑*e*P **Pn** **14 17 13.4 +0.6**
PB07 *e*S **Sn** **14 17 32.5 +0.2**
PB07 IAML 14 17 33.9
comp=N,5µm,0.3s
PB04 IPOC Station P 1.42 267 Pn **Pn** **14 17 14.7 +0.4**
PB04 IPOC Station P 1.42 267⇑*e*P **Pn** **14 17 14.6 +0.4**
PB04 *e*S **Sn** **14 17 35.3 +0.4**
PB04 IAML 14 17 39.3
comp=E,3µm,0.4s
PB01 IPOC Station P 1.45 326 **Pn** **14 17 14.7 +0.2**
PB01 IPOC Station P 1.45 326⇑*e*P **Pn** **14 17 14.7 +0.2**
PB01 *e*S **Sn** **14 17 35.0 -0.4**
PB01 IAML 14 17 36.4
comp=N,3µm,0.3s
PB02 IPOC Station P 1.51 308 **Pn** **14 17 15.5 +0.3**
PB02 IPOC Station P 1.51 308⇑*e*P **Pn** **14 17 15.7 +0.5**
PB02 *e*S **Sn** **14 17 36.4 -0.1**
PB02 IAML 14 17 37.5
comp=N,3µm,0.5s
PB10 IPOC Station P 2.19 235 Pn **Pn** **14 17 23.1 0.0**
PB10 IPOC Station P 2.19 235 IAML 14 17 51.9
comp=E,1µm,0.2s
TA01 Diego Aracena 2.23 319 Pn **Pn** **14 17 23.3 -0.4**
TA01 Diego Aracena 2.23 319⇑*e*P **Pn** **14 17 23.2 -0.4**
TA01 *e*S **Sn** **14 17 51.1 -0.6**
TA01 IAML 14 17 55.0
comp=N,906nm,0.3s
TA02 Huaiquique 2.43 324 **Pn** **14 17 25.7 -0.6**
TA02 Huaiquique 2.43 324⇑*e*P **Pn** **14 17 26.5 +0.3**
TA02 *e*S **Sn** **14 17 55.4 -0.9**
TA02 IAML 14 18 06.5
comp=E,979nm,0.3s
GO01 Chusmiza 2.63 348 Pn **Pn** **14 17 29.1 -0.2**
GO01 Chusmiza 2.63 348⇑*e*P **Pn** **14 17 30.0 +0.7**
GO01 *e*S **Sn** **14 18 01.6 0.0**
GO01 IAML 14 18 04.7
comp=N,1µm,0.1s
PB14 IPOC Station P 2.88 215 Pn **Pn** **14 17 32.4 +0.1**
PB14 IPOC Station P 2.88 215 IAML 14 18 08.0
comp=E,417nm,0.6s
GO02 Mina Guanaco 3.03 197 Pn **Pn** **14 17 34.3 0.0**
GO02 Mina Guanaco 3.03 197 *e*P **Pn** **14 17 33.7 -0.6**
GO02 *e*S **Sn** **14 18 10.3 -0.3**
GO02 IAML 14 18 12.5
comp=N,947nm,0.4s
PB12 IPOC Station P 3.96 336 Pn **Pn** **14 17 44.9 -1.5**
PB12 IPOC Station P 3.96 336 *e*P **Pn** **14 17 44.8 -1.6**
PB12 *e*S **Sn** **14 18 28.0 -4.3**
PB12 IAML 14 18 30.0
comp=E,232nm,0.2s
PB16 IPOC Station P 3.99 348 **Pn** **14 17 47.6 +0.4**
PB16 IPOC Station P 3.99 348⇑*e*P **Pn** **14 17 48.2 +1.0**
PB16 *e*S **Sn** **14 18 35.4 +1.8**
PB16 IAML 14 18 43.5
comp=E,101nm,0.4s
AC01 Pan de Azucar 4.28 205 Pn **Pn** **14 17 49.2 -1.2**
AC02 Maricunga 4.59 186 Pn **Pn** **14 17 55.0 0.0**
AC06 Mina Casimiro 5.32 197 **Pn** **14 18 01.9 -2.6**
GO03 Copiap 5.52 195 **Pn** **14 18 05.1 -2.0**
LPAZ La Paz 5.95 4 P **Pn** **14 18 15.9 +2.4**
comp=E,6.4nm,0.4s,baz=201,slow=4.9,SNR=30
LPAZ La Paz 5.95 4 Pn **Pn** **14 18 14.7 +1.2**
AC04 Llanos de Chal 6.33 200 Pn **Pn** **14 18 14.3 -3.7**
AC05 El Transito 6.72 193 Pn **Pn** **14 18 20.7 -2.7**
LCO Las Campanas 6.99 195 Pn **Pn** **14 18 23.6 -3.5**
GO04 Tololo Observa 8.13 194 Pn **Pn** **14 18 38.5 -3.9**
CO06 Fray Jorge 8.81 197 Pn Pn 14 18 46.2 -5.2
CO02 Combarbal 9.16 193 Pn **Pn** **14 18 52.5 -3.9**
SIV San Ignacio 9.46 50 P **Pn** **14 18 57.3 -3.1**
comp=E,5.0nm,0.4s,baz=244,slow=6.8,SNR=26
SIV S Sn 14 20 33.4 -12
comp=E,2.3nm,0.5s,baz=243,slow=14,SNR=2.1
CPUP Villa Florida 11.06 114 *e*P **Pn** **14 19 24.8 +3.1**
MT02 Curacav 11.19 191 Pn **Pn** **14 19 24.2 +0.9**
AQDB Aquidauana 12.16 84 **Pn** **14 19 35.7 -0.6**
AQDB Aquidauana 12.16 84 *e*P **Pn** **14 19 38.5 +2.2**
ETMB Extrema 12.58 11 Pn **Pn** **14 19 39.5 -2.3**
H03N1 Juan Fernandez 14.38 217 T T 14 32 44.1
baz=42,slow=72,SNR=7.8
H03N2 Juan Fernandez 14.39 217 T T 14 32 27.2
baz=42,slow=72,SNR=10
H03N3 Juan Fernandez 14.40 217 T T 14 32 55.0
baz=42,slow=72,SNR=7.4
TRCB Terra Rica 14.78 95 P **P** **14 20 11.3 +0.5**
TRCB Terra Rica 14.78 95 *e*P **P** **14 20 12.3 -0.2**
PTGB Pitanga 15.38 102 *e*P **Pn** **14 20 18.2 +0.8**
PDRB Porto dos Gac 15.52 49 *e*P **P** **14 20 20.6 -0.2**
ITAB Concordia 15.77 112 Pn **Pn** **14 20 22.1 -0.1**
ITAB IAmb IAmb 14 21 05.3
comp=Z,26nm,1.4s
ITAB Concordia 15.77 112 *e*P **P** **14 20 23.3 -0.2**
CPSB Cacapava Do Su 15.83 124 *e*P **P** **14 20 23.9 -0.2**
PCMB Pacaembu 16.12 91 *e*P **P** **14 20 28.1 +0.7**
PLTB Pedras Altas 16.37 129 **Pn** **14 20 29.6 0.0**
PLTB IAmb IAmb 14 21 08.0
comp=Z,16nm,1.2s
PLTB Pedras Altas 16.37 129 *e*P **Pn** **14 20 29.4 -0.2**
CLDB Colider 16.69 49 *e*P **Pn** **14 20 33.1 -0.5**
ITRB Iturama 17.23 85 *e*P **Pn** **14 20 40.2 0.0**
CNLB Canela 17.46 117 *e*P **P** **14 20 41.9 -0.3**
TER01 Tubaro-SC 18.67 114 *e*P **P** **14 20 56.4 +0.9**
BB19B Bebedouro 18.71 90 *e*P **P** **14 20 55.5 -0.4**
SNDB Serra Nova Dou 19.43 61 *e*P **P** **14 21 02.3 -1.5**
IPMB Ipameri, GO 19.62 81 *e*P **P** **14 21 04.8 -1.1**
PET01 Itanhaem-SP 19.71 100 *e*P **P** **14 21 06.6 -0.1**
NPGB Novo Progresso 19.80 42 *e*P **P** **14 21 08.6 +0.8**
VAO Valinhos 20.00 96 *e*P **P** **14 21 08.5 -1.4**
BDFB Brasilia 20.55 75 P **P** **14 21 14.9 -1.1**
comp=Z,5.0nm,0.6s,baz=244,slow=9.5,SNR=6.6
comp=Z,5.0nm,0.6s
BDFB Brasilia 20.55 75 P **P** **14 21 14.8 -1.2**
BDFB Brasilia 20.55 75 *e*P **P** **14 21 16.3 +0.3**
PMNB Patos De Minas 21.11 84 *e*P **P** **14 21 22.2 +0.3**
ITTB Itaituba 21.72 37 *e*P **P** **14 21 27.4 -0.9**
MAN01 Angra dos Reis 22.77 96 *e*P **P** **14 21 39.2 +0.3**
DIAM Diamantina, MG 23.71 85 *e*P **P** **14 21 48.1 +0.2**
MC01 Montes Claros 23.89 81 *e*P **P** **14 21 49.3 0.0**
JANB Januaria 24.09 77 *e*P **P** **14 21 49.7 -1.5**
PRPB Parauapebas 24.19 51 *e*P **P** **14 21 52.0 0.0**
SMTB Santa Maria do 24.19 60 *e*P **P** **14 21 52.4 +0.4**
MALB Monte Alegre 24.61 36 *e*P **P** **14 21 55.0 -0.8**
BOAV Boa Vista 25.74 19 P **P** **14 22 07.2 +1.2**
BOAV IAmb IAmb 14 22 09.4
comp=Z,9.4nm,1.4s
GUA01 Guaratinga, BA 27.72 83 *e*P **P** **14 22 23.6 -0.2**
GDU01 Guandu, BA 28.85 78 *e*P **P** **14 22 33.1 -0.8**
NBLA Lagarto - SE 31.52 74 *e*P **P** **14 22 56.0 -1.4**
NBAN Anadia - AL 33.43 73 *e*P **P** **14 23 13.9 -0.1**
RCBR Riachuelo 35.56 68 P **P** **14 23 32.6 +0.1**
RCBR Riachuelo 35.56 68 *e*P **P** **14 23 32.6 +0.1**
VNA3 Neumayer Olymp 59.28 161 P **P** **14 26 36.9 +1.9**
VNA2 Neumayer--Watz 59.85 161 P **P** **14 26 39.5 +0.6**
baz=286,slow=8.0
SNAA Sanae 61.48 161 P **P** **14 26 51.5 +1.5**
SNAA Sanae 61.48 161 P **P** **14 26 51.6 +1.5**
comp=Z,0.8nm,0.6s,baz=262,slow=9.8,SNR=8.1
comp=Z,0.8nm,0.6s
TROLL Troll, Antarti 63.20 161 P **P** **14 27 03.3 +1.7**
DBIC Dimbokro 68.69 73 P **P** **14 27 37.6 +0.2**
comp=Z,5.3nm,0.8s,baz=267,slow=6.3,SNR=5.6
comp=Z,5.3nm,0.8s
TOA0 Torodi Ar. Sit 77.35 70 P **P** **14 28 28.5 +0.1**
TOA0 IAmb IAmb 14 28 29.1
comp=Z,3.1nm,0.7s
TORD Torodi Ar. Bea 77.35 70 P **P** **14 28 28.5 +0.1**
comp=Z,4.6nm,0.3s,baz=254,slow=5.2,SNR=1.3
comp=Z,4.6nm,0.3s
MKAR Makanchi Array 146.07 37 PKPbc **PKPab** **14 36 13.9 +0.8**
comp=Z,0.9nm,0.6s,baz=306,slow=2.6,SNR=8.5

ROM 29 14:34:19.4±0.0, 42.785N±0.002×13.246E±0.004, h8km, ML2.1/22, 14C-10D, Error ellipse: s-maj=0.4km s-min=0.1km az=68.0, Central Italy

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
T1244 Arquata del Tr 0.05 126 P Pg 14 34 21.8 +0.6
T1244 AML AML
comp=E,5525µm,0.6s
T1244 AML AML
comp=N,6620µm,0.4s
T1244 AML AML
comp=N,6620µm,0.4s
T1244 AML AML
comp=E,5330µm,0.6s
T1244 AML AML
comp=N,6490µm,0.4s
T1244 AML AML
comp=N,6615µm,0.4s
T1244 AML AML
comp=E,5530µm,0.6s
T1242 Castelluccio d 0.05 326 ⇑P Pg 14 34 21.6 +0.2
T1242 S Sg 14 34 22.7 -0.2
T1242 AML AML
comp=E,9425µm,0.6s
T1242 AML AML
comp=N,13700µm,0.4s
T1242 AML AML
comp=E,9465µm,0.6s
T1242 AML AML
comp=E,9410µm,0.6s
T1242 AML AML
comp=N,13700µm,0.4s
T1242 AML AML
comp=N,13750µm,0.4s
T1202 Accumoli, Fraz 0.08 191 ⇑P Pg 14 34 22.5 +0.8
T1202 S Sg 14 34 24.5 +1.2
T1202 AML AML
comp=E,10545µm,0.3s
T1202 AML AML
comp=E,10525µm,0.3s
T1202 AML AML
comp=N,13200µm,0.2s
T1202 AML AML
comp=E,10510µm,0.3s
NRCA Norcia 0.11 297 ⇑P Pg 14 34 22.7 +0.7
NRCA S Sg 14 34 24.7 +0.9
NRCA AML AML
comp=E,12250µm,0.5s
NRCA AML AML
comp=N,8740µm,0.1s
NRCA Norcia 0.11 297 P Pg 14 34 22.6 +0.6
NRCA S Sg 14 34 24.3 +0.5
NRCA AML AML
comp=E,12250µm,0.5s
NRCA AML AML
comp=N,8740µm,0.1s
NRCA AML AML
comp=E,12250µm,0.5s
NRCA AML AML
comp=N,8740µm,0.1s
NRCA AML AML
comp=E,12250µm,0.5s
NRCA AML AML
comp=N,8740µm,0.1s
NRCA AML AML
comp=N,8740µm,0.1s
NRCA AML AML
comp=E,12250µm,0.5s
MMO1 Montemonaco 0.13 28 ⇑P Pg 14 34 22.9 +0.5
MMO1 S Sg 14 34 25.2 +0.8
MMO1 AML AML
MMO1 AML AML
comp=N,2130µm,0.1s
comp=E,2190µm,0.8s
MMO1 Montemonaco 0.13 28 S Sg 14 34 25.2 +0.8
MMO1 AML AML
comp=E,2190µm,0.8s
MMO1 AML AML
comp=N,2130µm,0.1s
MMO1 AML AML
comp=E,2190µm,0.8s
MMO1 AML AML
comp=N,2130µm,0.1s
MMO1 AML AML
comp=E,2190µm,0.8s
MMO1 AML AML
comp=N,2130µm,0.1s
MMO1 AML AML
comp=N,2130µm,0.1s
MMO1 AML AML
comp=E,2190µm,0.8s
MC2 Monte Cornacci 0.13 342 ⇑P Pg 14 34 22.8 +0.3
MC2 Monte Cornacci 0.13 342 P Pg 14 34 23.0 +0.5
MC2 S Sg 14 34 25.3 +0.6
MC2 AML AML
comp=E,2135µm,1.0s
MC2 AML AML
comp=N,2160µm,1.0s
T1241 Roccafluvione, 0.15 62 ⇑P Pg 14 34 23.6 +0.9
T1241 AML AML
comp=N,1088µm,0.8s
T1241 AML AML
comp=E,2210µm,0.9s
T1241 AML AML
comp=N,996µm,0.3s
T1241 AML AML
comp=E,2260µm,0.9s
T1241 AML AML
comp=N,996µm,0.3s
SMA1 SAN MARTINO 0.17 157 ⇓P Pg 14 34 23.9 +0.9
SMA1 AML AML
comp=E,1325µm,0.4s
SMA1 AML AML
comp=N,1290µm,0.5s
SMA1 SAN MARTINO 0.17 157 S Sg 14 34 26.4 +1.1
SMA1 AML AML
comp=E,1325µm,0.4s
SMA1 AML AML
comp=N,1290µm,0.5s
SMA1 AML AML
comp=E,1325µm,0.4s
SMA1 AML AML
comp=N,1290µm,0.5s
SMA1 AML AML
comp=E,1325µm,0.4s
SMA1 AML AML
comp=N,1290µm,0.5s
SMA1 AML AML
comp=E,1325µm,0.4s
SMA1 AML AML
comp=N,1290µm,0.5s
LNSS Leonessa 0.24 220 ⇑P Pg 14 34 25.1 +0.9
LNSS S Sg 14 34 29.4 +2.0
LNSS AML AML
comp=N,1660µm,0.8s
LNSS AML AML
comp=E,1860µm,1.4s
LNSS Leonessa 0.24 220 S Sg 14 34 29.1 +1.7
LNSS AML AML
comp=E,1860µm,1.4s
LNSS AML AML
comp=N,1660µm,0.8s
LNSS AML AML
comp=E,1860µm,1.4s
LNSS AML AML
comp=N,1660µm,0.8s
LNSS AML AML
comp=E,1860µm,1.4s
LNSS AML AML
comp=N,1660µm,0.8s
LNSS AML AML
comp=N,1660µm,0.8s
LNSS AML AML
comp=E,1860µm,1.4s
CAMP Campotosto 0.28 154 ⇓P Pg 14 34 25.7 +0.8
CAMP AML AML
comp=E,230µm,1.2s
CAMP AML AML
comp=N,252µm,0.7s
CAMP AML AML
comp=E,229µm,1.2s
CAMP AML AML
comp=N,253µm,0.7s
CAMP Campotosto 0.28 154 P Pg 14 34 25.6 +0.7
CAMP S Sg 14 34 29.9 +1.3
CAMP AML AML
comp=E,230µm,1.2s
CAMP AML AML
comp=N,252µm,0.7s
CAMP AML AML
comp=E,229µm,1.2s
CAMP AML AML
comp=N,253µm,0.7s
CAMP AML AML
comp=E,229µm,1.2s
CAMP AML AML
comp=N,253µm,0.7s
FDMO Fiordimonte 0.28 335 ⇓P Pg 14 34 25.6 +0.7
FDMO S Sg 14 34 29.9 +1.3
FDMO AML AML
comp=N,698µm,0.2s
FDMO AML AML
comp=E,611µm,0.3s
FDMO Fiordimonte 0.28 335 AML AML
comp=E,611µm,0.3s
FDMO AML AML
comp=E,611µm,0.3s
FDMO AML AML
comp=N,698µm,0.2s
FDMO AML AML
comp=N,698µm,0.2s
FDMO AML AML
comp=E,611µm,0.3s
FDMO AML AML
comp=N,698µm,0.2s
FDMO AML AML
comp=N,698µm,0.2s
FDMO AML AML
comp=E,611µm,0.3s
RM33 Pellescritta (0.28 185 ⇑P Pb 14 34 25.9 -0.7
RM33 AML AML
comp=E,715µm,0.7s
RM33 AML AML
comp=N,634µm,0.9s
RM33 AML AML
comp=E,686µm,0.9s
RM33 AML AML
comp=E,715µm,0.7s
RM33 AML AML
comp=N,634µm,0.9s
RM33 AML AML
comp=N,652µm,0.9s
RM33 AML AML
comp=N,652µm,0.9s
RM33 AML AML
comp=E,716µm,0.7s
RM33 AML AML
comp=E,686µm,0.9s
RM33 Pellescritta (0.28 185 P Pb 14 34 25.9 -0.8
RM33 S Sb 14 34 30.3 -1.2
RM33 AML AML
comp=E,715µm,0.7s
RM33 AML AML
comp=N,634µm,0.9s
RM33 AML AML
comp=E,686µm,0.9s
RM33 AML AML
comp=N,652µm,0.9s
RM33 AML AML
comp=E,715µm,0.7s
RM33 AML AML
comp=N,634µm,0.9s
RM33 AML AML
comp=E,686µm,0.9s
RM33 AML AML
comp=N,652µm,0.9s
RM33 AML AML
comp=E,716µm,0.7s
RM33 AML AML
comp=N,634µm,0.9s
RM33 AML AML
comp=E,686µm,0.9s
RM33 AML AML
comp=N,652µm,0.9s
RM33 AML AML
comp=N,634µm,0.9s
RM33 AML AML
comp=E,716µm,0.7s
RM33 AML AML
comp=E,686µm,0.9s
RM33 AML AML
comp=N,652µm,0.9s
CSP1 Cessapalombo 0.31 354 ⇑P Pg 14 34 26.1 +0.6
CSP1 S Sb 14 34 31.3 -1.1
CSP1 AML AML
comp=E,842µm,1.2s
CSP1 AML AML
comp=N,1015µm,0.9s
CSP1 AML AML
comp=E,841µm,1.2s
CSP1 AML AML
comp=N,1018µm,0.9s
CSP1 AML AML
comp=N,1020µm,0.9s
CSP1 Cessapalombo 0.31 354 S Sb 14 34 31.1 -1.3
CSP1 AML AML
comp=E,842µm,1.2s
CSP1 AML AML
comp=N,1018µm,0.9s

CSP1 AML AML
comp=E,842μm,1.2s
CSP1 AML AML
comp=N,1020μm,0.9s
CSP1 AML AML
comp=N,1020μm,0.9s
CSP1 AML AML
comp=E,842μm,1.2s
TERO Teramo 0.31 121 ⇓P Pg 14 34 26.3 +0.7
TERO S Sb 14 34 31.4 -1.0
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=E,471μm,0.2s
TERO AML AML
comp=N,626μm,1.2s
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=N,588μm,1.2s
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=N,588μm,1.2s
TERO AML AML
comp=N,625μm,1.2s
TERO Teramo 0.31 121 S Sb 14 34 31.2 -1.1
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=N,588μm,1.2s
TERO AML AML
comp=E,471μm,0.2s
TERO AML AML
comp=N,626μm,1.2s
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=N,588μm,1.2s
TERO AML AML
comp=E,471μm,0.2s
TERO AML AML
comp=N,626μm,1.2s
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=N,588μm,1.2s
TERO AML AML
comp=E,471μm,0.2s
TERO AML AML
comp=N,625μm,1.2s
TERO AML AML
comp=N,588μm,1.2s
TERO AML AML
comp=E,438μm,0.8s
TERO AML AML
comp=N,625μm,1.2s
TERO AML AML
comp=E,471μm,0.2s
CESI CESI - Serrava 0.33 311 ⇓P Pg 14 34 26.6 +0.6
CESI AML AML
comp=N,1350μm,1.1s
CESI AML AML
comp=E,414μm,0.2s
CESI CESI - Serrava 0.33 311 P Pg 14 34 26.5 +0.5
CESI S Sb 14 34 31.9 -1.2
CESI AML AML
comp=E,414μm,0.2s
CESI AML AML
comp=N,1350μm,1.1s
CESI AML AML
comp=E,414μm,0.2s
CESI AML AML
comp=N,1350μm,1.1s
CESI AML AML
comp=N,1350μm,1.1s
CESI AML AML
comp=E,414μm,0.2s
ARRO Arrone 0.41 240 ⇓P Pb 14 34 28.1 -0.7
ARRO AML AML
comp=E,318μm,0.2s
ARRO AML AML
comp=N,232μm,1.1s
ARRO AML AML
comp=N,232μm,1.1s
ARRO Arrone 0.41 240 P Pg 14 34 28.0 +0.6
ARRO S Sb 14 34 34.3 -0.8
ARRO AML AML
comp=E,318μm,0.2s
ARRO AML AML
comp=N,232μm,1.1s
ARRO AML AML
comp=E,318μm,0.2s
ARRO AML AML
comp=N,232μm,1.1s
ARRO AML AML
comp=N,232μm,1.1s
ARRO AML AML
comp=E,318μm,0.2s
GIGS Gran Sasso 0.41 144 ⇑P Pb 14 34 28.3 -0.6
GIGS AML AML
comp=E,48μm,0.6s
GIGS AML AML
comp=N,43μm,0.7s
GIGS Gran Sasso 0.41 144 P Pg 14 34 28.0 +0.6
GIGS S Sb 14 34 34.7 -0.6
GIGS AML AML
comp=E,48μm,0.6s
GIGS AML AML
comp=N,43μm,0.7s
GIGS AML AML
comp=E,48μm,0.6s
GIGS AML AML
comp=N,43μm,0.7s
GIGS AML AML
comp=E,48μm,0.6s
GIGS AML AML
comp=N,43μm,0.7s
ASSB Assisi San Ben 0.50 301 ⇓P Pg 14 34 29.5 +0.3
ASSB AML AML
comp=E,402μm,0.1s
ASSB AML AML
comp=N,444μm,0.3s
ASSB Assisi San Ben 0.50 301 S Sb 14 34 37.0 -1.0
ASSB AML AML
comp=E,402μm,0.1s
ASSB AML AML
comp=N,444μm,0.3s
ASSB AML AML
comp=E,402μm,0.1s
ASSB AML AML
comp=N,444μm,0.3s
ASSB AML AML
comp=E,402μm,0.1s
ASSB AML AML
comp=N,444μm,0.3s
SNTG Esanatoglia 0.52 335 P Pg 14 34 30.0 +0.5
SNTG S Sb 14 34 38.2 -0.2
SNTG AML AML
comp=E,166μm,0.1s
SNTG AML AML
comp=E,166μm,0.1s
SNTG AML AML
comp=N,156μm,0.6s
SNTG Esanatoglia 0.52 335 P Pg 14 34 29.9 +0.5
SNTG S Sb 14 34 37.8 -0.6
SNTG AML AML
comp=E,166μm,0.1s
SNTG AML AML
comp=N,156μm,0.6s
SNTG AML AML
comp=E,166μm,0.1s
SNTG AML AML
comp=N,156μm,0.6s
SNTG AML AML
comp=N,156μm,0.6s
SNTG AML AML
comp=E,166μm,0.1s
FIAM Fiamignano 0.53 190 ⇑P Pg 14 34 30.1 +0.6
FIAM S Sb 14 34 38.2 -0.4
FIAM AML AML
comp=E,221μm,0.3s
FIAM AML AML
comp=N,188μm,1.4s
FIAM Fiamignano 0.53 190 S Sb 14 34 38.1 -0.5
FIAM AML AML
comp=E,221μm,0.3s
FIAM AML AML
comp=N,188μm,1.4s
FIAM AML AML
comp=E,221μm,0.3s
FIAM AML AML
comp=N,188μm,1.4s
FIAM AML AML
comp=E,221μm,0.3s
EL6 Elcito 0.55 349 ⇓P Pg 14 34 30.6 +0.4
EL6 Elcito 0.55 349 S Sb 14 34 39.1 -0.3
VCEL Villa Celiera 0.59 131 ⇑P Pb 14 34 32.2 +0.3
VCEL AML AML
comp=N,127μm,0.8s
VCEL AML AML
comp=E,168μm,0.3s
VCEL AML AML
comp=N,127μm,0.8s
VCEL AML AML
comp=N,127μm,0.8s
VCEL Villa Celiera 0.59 131 P Pb 14 34 31.5 -0.4
VCEL S Sb 14 34 40.3 -0.1
VCEL AML AML
comp=E,168μm,0.3s
VCEL AML AML
comp=N,127μm,0.8s
VCEL AML AML
comp=E,168μm,0.3s
VCEL AML AML
comp=N,127μm,0.8s
VCEL AML AML
comp=E,168μm,0.3s
VCEL AML AML
comp=N,127μm,0.8s
CING Cingoli 0.59 356 ⇑P Pg 14 34 31.2 +0.4
CING AML AML
comp=E,302μm,0.5s
CING AML AML
comp=N,180μm,0.6s
CING Cingoli 0.59 356 S Sb 14 34 40.5 0.0
CING AML AML
comp=E,302μm,0.5s
CING AML AML
comp=N,180μm,0.6s
CING AML AML
comp=E,302μm,0.5s
CING AML AML
comp=N,180μm,0.6s
CING AML AML
comp=E,302μm,0.5s
CING AML AML
comp=N,180μm,0.6s
ATCC AVT- Casa Cast 0.60 312 ⇑P Pg 14 34 31.4 +0.4
ATCC S Sb 14 34 40.9 +0.2
ATCC AML AML
comp=N,233μm,0.8s
ATCC AML AML
comp=E,244μm,0.2s
ATCC AVT- Casa Cast 0.60 312 P Pg 14 34 31.3 +0.3
ATCC S Sb 14 34 40.4 -0.3
ATCC AML AML
comp=E,243μm,0.2s
ATCC AML AML
comp=N,233μm,0.8s
ATCC AML AML
comp=E,244μm,0.2s
ATCC AML AML
comp=N,233μm,0.8s
ATCC AML AML
comp=N,233μm,0.8s
ATCC AML AML
comp=E,244μm,0.2s
FOSV Fossato di Vic 0.62 325 S Sb 14 34 42.0 +0.7
FOSV Fossato di Vic 0.62 325 P Pg 14 34 31.7 +0.3
FOSV S Sb 14 34 41.1 -0.2
T0110 Collepietro 0.68 145 P Pg 14 34 32.5 0.0
T0110 AML AML
comp=E,148μm,0.5s
T0110 AML AML
comp=N,168μm,0.4s
T0110 Collepietro 0.68 145 P Pg 14 34 32.8 +0.3
T0110 AML AML
comp=E,148μm,0.5s
T0110 AML AML
comp=N,168μm,0.4s
T0110 AML AML
comp=E,148μm,0.5s
T0110 AML AML
comp=N,168μm,0.4s
T0110 AML AML
comp=N,168μm,0.4s
T0110 AML AML
comp=E,148μm,0.5s
MURB Monte Urbino 0.71 312 P Pg 14 34 33.1 0.0
MURB AML AML
comp=E,280μm,0.6s
MURB AML AML
comp=N,328μm,0.2s
MURB AML AML
comp=E,250μm,0.6s
MURB AML AML
comp=N,280μm,0.2s
MURB Monte Urbino 0.71 312 S Sb 14 34 43.9 -0.1
MURB AML AML
comp=E,280μm,0.6s
MURB AML AML
comp=N,327μm,0.2s
MURB AML AML
comp=E,250μm,0.6s
MURB AML AML
comp=N,280μm,0.2s
MURB AML AML
comp=E,250μm,0.6s
MURB AML AML
comp=N,280μm,0.2s
SSFR Montelago di S 0.73 333 P Pg 14 34 31.6 -1.9
ARVD Arcevia 0.75 343 P Pg 14 34 31.8 -1.9
ARVD S Sn 14 34 47.0 -0.7
ATVO AVT- Monte Val 0.86 314 P Pg 14 34 35.2 -0.7
ATVO AML AML
comp=E,56μm,1.4s
ATVO AML AML
comp=N,52μm,0.4s
ATVO AML AML
comp=E,56μm,1.4s
ATVO AML AML
comp=N,52μm,0.4s
ATVO AVT- Monte Val 0.86 314 P Pg 14 34 35.8 -0.1
ATVO S Sb 14 34 48.2 +0.1
ATVO AML AML
comp=E,56μm,1.4s
ATVO AML AML
comp=N,52μm,0.4s
ATVO AML AML
comp=E,56μm,1.4s
ATVO AML AML
comp=N,52μm,0.4s
ATVO AML AML
comp=E,56μm,1.4s
ATVO AML AML
comp=N,52μm,0.4s
PIEI Pieia 0.91 326 ⇓P Pg 14 34 37.1 +0.2
PIEI AML AML
comp=E,57μm,0.3s
PIEI AML AML
comp=N,47μm,0.8s
PIEI Pieia 0.91 326 P Pg 14 34 36.8 -0.1
PIEI S Sb 14 34 50.0 +0.2
PIEI AML AML
comp=E,57μm,0.3s
PIEI AML AML
comp=N,47μm,0.8s
PIEI AML AML
comp=E,57μm,0.3s
PIEI AML AML
comp=N,47μm,0.8s
PIEI AML AML
comp=E,57μm,0.3s
PIEI AML AML
comp=N,47μm,0.8s
GIUL Giuliano Di Ro 1.23 180 S Sn 14 34 60.0 +0.5
VENT Ventotene 1.99 176 ⇓P Pg 14 34 57.0 -0.6

*IDC **29** 14:37:05.4±1.4,24.°24N×141.°47E,h156km±10km,*
mb3.7/21,mbtmp4.2/22,Error ellipse: s-maj=14.9km s-min=11.9km az=96.0
*NEIC **29** 14:37:06.8±1.4,24.°2N±0.°1×141.°5E±0.°2,h162km±8km, mb4.5/71,Error ellipse: s-maj=20.5km s-min=14.3km az=104.0*
*JMA **29** 14:37:07.6±0.2,24°N±1.°×14°1E±.°,h112km,MV5.0/23, IOTO ISLANDS REGION*

ISC 29 14:37:06.1±1.1,24.°25N±0.°08×141.°49E±0.°08,h161km±8km, n143,σ1$31/151,mb4.4/61,1D,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**2.46**	**14**	P	**Pn**	**14 37 47.6**	**+0.4**
JHH2				S	**Sn**	**14 38 17.6**	**-1.4**
CBIJ	**Chichi jima**	**2.91**	**12**	P	**Pn**	**14 37 53.2**	**+0.6**
CBIJ				S	**Sn**	**14 38 28.2**	**-0.7**
JCJ	**Chichijima**	**2.91**	**12**	P	**Pn**	**14 37 53.0**	**+0.3**
	396nm,0.3s,baz=231,slow=24,SNR=20						
JCJ				S	**Sn**	**14 38 27.8**	**-1.1**
	460nm,0.4s,baz=316,slow=24,SNR=11						
JCJ	**Chichijima**	**2.91**	**12**	Pn	**Pn**	**14 37 52.9**	**+0.3**
JHCJ	**Hachijojimakas**	**8.92**	**351**	*e*P	**Pn**	**14 39 11.1**	**-0.4**
BSO1	**Boso 1**	**10.38**	**358**	*e*P	**Pn**	**14 39 28.5**	**-1.9**
BSO3	**Boso 3**	**10.55**	**356**	P	**Pn**	**14 39 30.8**	**-2.1**
BSO3				*e*S	**Sn**	**14 41 22.4**	**-7.2**
BSO4	**Boso 4**	**10.75**	**355**	*e*P	**Pn**	**14 39 34.4**	**-1.2**
JOD2	**Odawara 2**	**11.18**	**350**	P	**Pn**	**14 39 40.4**	**-0.9**
JHS	**Saijyo**	**12.95**	**328**	P	**P**	**14 40 09.8**	**+1.1**
JMM	**Marumori**	**13.59**	**358**	P	**Pn**	**14 40 10.3**	**-2.0**
NAWB	**Namwon**	**16.52**	**316**	P	**Pn**	**14 40 49.2**	**+0.7**
NAWB				IAmb	IAmb	14 41 10.1	
	comp=Z,28nm,1.0s						
KSRS	**Korea Array**	**17.55**	**322**	P	**Pn**	**14 41 02.5**	**+1.7**
	comp=Z,5.0nm,0.7s,baz=135,slow=12,SNR=17						
USRK	**Ussuriysk Ar.**	**21.37**	**341**	P	**P**	**14 41 40.1**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=145,slow=7.5,SNR=4.3						
	comp=Z,3.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**21.37**	**341**	P	**P**	**14 41 42.3**	**+1.6**
NJ2	**Nanjing**	**21.40**	**296**	*e*P	**P**	**14 41 38.8**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**22.68**	**2**	P	**P**	**14 41 54.9**	**+1.1**
H11N1	**WAKE ISLAND Hy**	**23.97**	**96**	T	T	15 07 19.4	
	baz=284						
H11N2	**WAKE ISLAND Hy**	**23.97**	**96**	T	T	15 07 23.0	
	baz=284						
H11N3	**WAKE ISLAND Hy**	**23.98**	**96**	T	T	15 07 19.5	
	baz=284						
TIA	**Tai'an**	**24.13**	**305**	*e*P	**P**	**14 42 08.3**	**+1.2**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**24.13**	**99**	T	T	15 07 40.9	
	baz=287						
H11S1	**WAKE ISLAND Hy**	**24.14**	**99**	T	T	15 07 46.1	
	baz=287						
H11S2	**WAKE ISLAND Hy**	**24.15**	**99**	T	T	15 07 48.1	
	baz=287						
KLR	**Kul'dur**	**26.09**	**345**	P	**P**	**14 42 24.0**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=158,slow=12,SNR=3.6						
	comp=Z,1.3nm,0.6s						
HHC	**Hu-ho-hao-te**	**29.98**	**311**	*e*P	**P**	**14 43 01.5**	**+2.0**
HHC				pmax	pmax		
	comp=Z,46nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,6.3s						
PETK	**Petropavlovsk-**	**31.32**	**19**	P	**P**	**14 43 12.4**	**+1.4**
GYA	**Guiyang**	**31.50**	**281**	⇓P	**P**	**14 43 14.5**	**+1.5**
GYA				pmax	pmax		
	comp=Z,13nm,0.8s						
SONM	**Songino Array**	**36.39**	**319**	P	**P**	**14 43 56.0**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=126,slow=6.6,SNR=3.8						
SONM				PcP	**PcP**	**14 46 15.9**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=98,slow=1.1,SNR=7.2						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**36.39**	**319**	P	**P**	**14 43 56.3**	**+1.3**
CRAI	**Chiangrai**	**38.17**	**272**	P	**P**	**14 44 09.7**	**-0.5**
CRAI				IAmb	IAmb	14 44 12.7	
	comp=Z,6.8nm,0.8s						
MTN	**Manton Dam**	**38.23**	**196**	P	**P**	**14 44 09.0**	**-1.6**
MTN				IAmb	IAmb	14 44 37.0	
	comp=Z,17nm,1.2s						
CHTO	**Chiang Mai**	**39.83**	**271**	P	**P**	**14 44 24.5**	**+0.5**
CHTO				IAmb	IAmb	14 44 25.8	
	comp=Z,6.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.93**	**270**	P	**P**	**14 44 26.0**	**+1.2**
	comp=Z,3.6nm,0.6s,baz=62,slow=7.5,SNR=33						
	comp=Z,3.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.93**	**270**	P	**P**	**14 44 24.5**	**-0.3**
GOMU	**GeErMu**	**41.70**	**298**	P	**P**	**14 44 41.3**	**+1.8**
GOMU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,37nm,3.9s						
WR0	**Warramunga Arr**	**44.46**	**189**	P	**P**	**14 45 00.5**	**-0.8**
WRAB	**Tennant Creek**	**44.46**	**190**	P	**P**	**14 45 00.5**	**-0.8**
WB2	**Warramunga Arr**	**44.47**	**190**	P	**P**	**14 45 00.5**	**-0.9**
WRA	**Warramunga Arr**	**44.47**	**190**	P	**P**	**14 45 00.6**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=7.9,slow=8.5,SNR=55						
WRA				ScP	**ScP**	**14 50 19.3**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=1.8,slow=4.5,SNR=5.0						
	comp=Z,2.7nm,0.6s						
SHL	**Shillong**	**44.80**	**283**	P	**P**	**14 45 05.0**	**+0.7**
NIKH	**Nikolski High**	**46.95**	**39**	P	**P**	**14 45 21.0**	**+0.5**
WMQ	**Urumqi**	**47.78**	**308**	*e*P	**P**	**14 45 29.8**	**+2.7**
ASAR	**Alice Springs**	**48.19**	**189**	P	**P**	**14 45 29.3**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=6.5,slow=5.2,SNR=17						
ASAR				ScP	**ScP**	**14 50 34.0**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=3.6,slow=4.6,SNR=4.4						
ASAR				S	**S**	**14 52 14.4**	**-3.1**
	comp=Z,0.2nm,0.7s,baz=16,slow=18,SNR=4.9						
	comp=Z,0.3nm,0.5s						
TAPN	**Taplejung**	**48.21**	**286**	*e*P	**P**	**14 45 32.4**	**+1.4**
UNV	**Unalaska Valle**	**48.55**	**39**	P	**P**	**14 45 33.1**	**+0.3**
AKUT	**Akutan**	**49.05**	**38**	P	**P**	**14 45 37.1**	**+0.6**
RAMN	**Ramite**	**49.26**	**285**	*e*P	**P**	**14 45 39.8**	**+0.9**
JIRN	**Jiri**	**49.50**	**286**	*e*P	**P**	**14 45 42.5**	**+1.6**
GUN	**Gumba**	**49.73**	**287**	*e*P	**P**	**14 45 44.5**	**+1.9**
	comp=Z,23nm,0.5s						
PKI	**Pulchoki**	**50.20**	**286**	*e*P	**P**	**14 45 46.9**	**+0.8**
PKIN	**Phulchoki**	**50.21**	**286**	*e*P	**P**	**14 45 47.5**	**+1.4**
DMN	**Daman**	**50.45**	**287**	*e*P	**P**	**14 45 49.2**	**+1.2**
	comp=Z,11nm,0.4s						
GKN	**Gorkha**	**50.80**	**287**	*e*P	**P**	**14 45 51.5**	**+1.1**
	comp=Z,8.0nm,0.3s						
ZAA0	**Zalesovo Array**	**51.26**	**321**	P	**P**	**14 45 54.0**	**+0.8**
ZALV	**Zalesovo Beam**	**51.26**	**321**	P	**P**	**14 45 53.0**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=105,slow=8.1,SNR=7.1						
ZALV				PcP	**PcP**	**14 47 05.3**	**-0.7**
	comp=Z,3.4nm,0.6s,baz=119,slow=4.3,SNR=11						
	comp=Z,1.6nm,0.4s						
ZALV	**Zalesovo Beam**	**51.26**	**321**	P	**P**	**14 45 54.0**	**+0.8**
DANN	**Dangsing**	**51.51**	**288**	*e*P	**P**	**14 45 57.2**	**+1.4**
	comp=Z,113nm,0.8s						
MK31	**Makanchi Array**	**51.84**	**311**	P	**P**	**14 45 57.5**	**-0.2**
MKAR	**Makanchi Array**	**51.84**	**311**	P	**P**	**14 45 57.5**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=89,slow=8.6,SNR=41						
MKAR				PcP	**PcP**	**14 47 08.0**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=79,slow=6.0,SNR=6.9						
MKAR				ScP	**ScP**	**14 50 48.8**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=69,slow=8.0,SNR=4.0						
	comp=Z,2.7nm,0.6s						
MKAR	**Makanchi Array**	**51.84**	**311**	P	**P**	**14 45 57.7**	**-0.1**
MAKZ	**Makanchi**	**52.06**	**311**	P	**P**	**14 45 59.4**	**+0.1**
PYUN	**Piuthan**	**52.22**	**288**	*e*P	**P**	**14 46 02.3**	**+1.3**
KURK	**Kurchatov**	**54.56**	**316**	P	**P**	**14 46 16.9**	**-0.5**
KURK				IAmb	IAmb	14 46 18.5	
	comp=Z,8.8nm,1.2s						
KURBB	**Kurchatov Arra**	**54.61**	**316**	P	**P**	**14 46 17.1**	**-0.7**
	comp=Z,4.2nm,0.7s,baz=92,slow=8.2,SNR=23						
KURBB				PcP	**PcP**	**14 47 17.7**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=92,slow=3.8,SNR=6.0						
	comp=Z,4.2nm,0.7s						
O18K	**Koktuh Hills**	**55.98**	**33**	P	**P**	**14 46 29.1**	**+1.6**
O18K				IAmb	IAmb	14 47 03.4	
	comp=Z,8.8nm,1.2s						
SII	**Sitkinak Islan**	**56.01**	**37**	P	**P**	**14 46 29.1**	**+1.3**
SVW2	**Sparrevohn**	**56.03**	**31**	P	**P**	**14 46 29.2**	**+1.4**
SVW2				IAmb	IAmb	14 47 09.1	
	comp=Z,5.3nm,1.2s						
FORT	**Forrest**	**56.21**	**194**	P	**P**	**14 46 29.1**	**-0.2**
BOOM	**Boomskoye usch**	**56.34**	**306**	P	**P**	**14 46 31.4**	**+0.8**
N19K	**Bonanza Creek**	**56.50**	**32**	P	**P**	**14 46 32.3**	**+1.1**
N19K				IAmb	IAmb	14 47 07.0	
	comp=Z,5.3nm,1.2s						
KSH	**Kashi**	**56.54**	**302**	P	**P**	**14 46 36.3**	**+4.4**

KSH pmax pmax
comp=Z,6.0nm,0.7s
L19K White Mountain 56.59 30 P P 14 46 33.1 +1.3
L19K lAmb lAmb 14 46 39.8
comp=Z,8.3nm,1.5s
KDAK Kodiak Island 57.02 36 P P 14 46 35.4 +0.6
K20K Telida 57.17 29 P P 14 46 37.1 +1.2
K20K lAmb lAmb 14 46 39.2
comp=Z,3.1nm,0.6s
J20K Nowinta River 57.31 28 P P 14 46 38.3 +1.5
J20K lAmb lAmb 14 46 40.0
comp=Z,5.8nm,0.6s
IMAR Indian Mountai 57.87 26 P P 14 46 41.8 +1.2
PPLA Purkeypile 57.93 30 P P 14 46 43.5 +2.2
PPLA lAmb lAmb 14 47 02.5
comp=Z,7.7nm,1.3s
H21K Melozitna Rive 58.18 26 P P 14 46 44.5 +1.7
H21K lAmb lAmb 14 46 45.9
comp=Z,4.3nm,0.7s
I21K Tanana 58.42 27 P P 14 46 46.2 +1.7
I21K lAmb lAmb 14 46 47.6
comp=Z,3.0nm,0.6s
RC01 Rabbit Creek A 58.83 32 P P 14 46 49.0 +1.6
MLY Manley 58.91 27 P P 14 46 49.0 +1.0
KNK Knik Glacier 59.48 32 P P 14 46 53.2 +1.3
KNK lAmb lAmb 14 46 54.6
comp=Z,6.3nm,0.6s
PWL Port Wells 59.49 32 P P 14 46 53.4 +1.4
PWL lAmb lAmb 14 46 54.3
comp=Z,8.0nm,0.9s
RND Reindeer 59.50 29 P P 14 46 53.0 +1.0
RND lAmb lAmb 14 46 54.2
comp=Z,4.0nm,0.6s
MCK McKinley 59.51 29 P P 14 46 52.7 +0.7
H23K Yukon River 59.53 26 P P 14 46 54.0 +1.9
H23K lAmb lAmb 14 46 55.5
comp=Z,3.8nm,0.7s
NEA2 Nenana 59.55 28 P P 14 46 53.4 +1.1
NEA2 lAmb lAmb 14 46 55.2
comp=Z,5.7nm,0.6s
SML Sawmill 59.58 31 P P 14 46 52.7 +0.1
SML lAmb lAmb 14 46 55.0
comp=Z,6.4nm,0.7s
BRVK Borovoye 59.80 319 P P 14 46 53.4 -0.8
BRVK lAmb lAmb 14 46 54.4
comp=Z,3.7nm,0.8s
MDM Murphy Dome 59.96 28 P P 14 46 56.4 +1.3
MDM lAmb lAmb 14 46 57.8
comp=Z,4.8nm,0.6s
WRH Wood River Hil 59.96 28 P P 14 46 56.3 +1.2
TOLK Toolik Lake Re 59.99 23 P P 14 46 56.6 +1.3
SCM Sheep Creek Mo 60.05 31 P P 14 46 56.7 +0.9
SCM lAmb lAmb 14 46 58.1
comp=Z,4.8nm,0.7s
CCB Clear Creek Bu 60.10 28 P P 14 46 57.0 +0.9
DHY Denali Highway 60.13 30 P P 14 46 57.5 +1.0
H24K Noodor Dome 60.21 27 P P 14 46 57.9 +1.1
H24K lAmb lAmb 14 46 59.5
comp=Z,3.5nm,0.6s
KK31 Karatay Array 60.27 307 P P 14 46 57.4 -0.2
KK31 lAmb lAmb 14 46 58.6
comp=Z,2.7nm,0.7s
KKAR Karatay Array 60.27 307 P P 14 46 57.1 -0.5
KKAR Karatay Array 60.27 307 P P 14 46 57.2 -0.4
KKAR lAmb lAmb 14 46 58.6
comp=Z,2.7nm,0.7s
HDA Harding Lake 60.45 28 P P 14 46 58.4 0.0
HDA lAmb lAmb 14 46 59.4
comp=Z,3.5nm,0.6s
IL31 60.51 28 P P 14 46 58.3 -0.4
ILAR Eielson Array 60.51 28 P P 14 46 58.5 -0.2
comp=Z,1.5nm,0.7s,baz=254,slow=5.0,SNR=21
ILAR pP **pP 14 47 34.6 -1.0**
comp=Z,1.9nm,0.9s,baz=260,slow=6.0,SNR=6.5
comp=Z,1.5nm,0.7s
ILAR Eielson Array 60.51 28 P P 14 46 57.9 -0.9
KLU Klutina 60.70 32 P P 14 47 00.9 +0.7
KLU lAmb lAmb 14 47 02.6
comp=Z,3.4nm,0.6s
J25K Salcha River, 61.14 28 P P 14 47 03.6 +0.4
RIDG Independent Ri 61.32 29 P P 14 47 04.8 +0.4
RIDG lAmb lAmb 14 47 06.4
comp=Z,4.9nm,0.6s
FYU Fort Yukon 61.36 26 P P 14 47 04.9 +0.4
FYU lAmb lAmb 14 47 09.0
comp=Z,3.7nm,0.7s
DOT Dot Lake 61.66 29 P P 14 47 07.0 +0.4
DOT lAmb lAmb 14 47 08.8
comp=Z,5.9nm,0.7s
BMAR Burnt Mountain 61.69 25 P P 14 47 08.6 +1.8
SCRK Sand Creek 61.71 29 P P 14 47 07.6 +0.5
GLB Gilahina Butte 61.71 32 P P 14 47 08.5 +1.4
CHGR Chuyangaron 61.91 302 P P 14 47 08.5 -0.3
J26L Joseph Creek 61.92 28 P P 14 47 08.5 +0.1
J26L PcP **PcP 14 47 47.6 0.0**
L27K Beaver Creek, 62.66 30 P P 14 47 13.9 +0.6
BCAR Beaver Creek A 62.67 30 P P 14 47 14.4 +1.0
EGAK Eagle 62.96 28 P P 14 47 15.5 +0.4
EPYK Eagle Plains 64.77 26 P P 14 47 27.8 +0.8
EPYK lAmb lAmb 14 47 29.1
comp=Z,9.0nm,1.0s
M30M Minto, Yukon 64.98 30 P P 14 47 29.6 +1.1
INK Inuvik 65.87 24 P P 14 47 34.9 +0.9
comp=Z,3.7nm,0.5s,baz=290,slow=4.2,SNR=4.9
comp=Z,3.7nm,0.5s
INK Inuvik 65.87 24 P P 14 47 34.5 +0.5
INK lAmb lAmb 14 47 35.2
comp=Z,5.0nm,0.6s
M31M Drury Creek, Y 66.14 31 P P 14 47 37.2 +1.3
M31M lAmb lAmb 14 47 38.6
comp=Z,4.2nm,0.8s
ARU Arti 66.30 323 P P 14 47 37.3 +0.4
comp=Z,2.6nm,0.4s,baz=74,slow=7.4,SNR=5.2
comp=Z,2.6nm,0.4s
ABKAR Akbulak array 66.65 315 P P 14 47 38.4 -0.9
ABKAR Akbulak array 66.65 315 P P 14 47 38.5 -0.8
ABKAR lAmb lAmb 14 47 39.1
comp=Z,3.9nm,0.6s
AKTO Aktyubinsk 67.65 317 P P 14 47 44.5 -1.2
comp=Z,1.9nm,0.7s,baz=82,slow=4.7,SNR=3.8
comp=Z,1.9nm,0.7s
C36M Paulatuk 69.10 22 P P 14 47 54.5 +0.2
C36M lAmb lAmb 14 47 55.1
comp=Z,6.1nm,0.7s
YKA Yellowknife Ar 74.94 28 P P 14 48 29.1 0.0
comp=Z,2.3nm,0.7s,baz=291,slow=6.1,SNR=6.1
comp=Z,2.3nm,0.7s
ARCES ARCESS Array B 76.02 341 P P 14 48 35.9 +0.8
comp=Z,4.4nm,1.0s,baz=72,slow=8.2,SNR=10
comp=Z,4.4nm,1.0s
KBZ Khabaz 79.49 313 P P 14 48 55.2 +0.4
comp=Z,3.4nm,0.8s,baz=109,slow=2.0,SNR=6.2
comp=Z,3.4nm,0.8s
FIA1 FINESS Array S 80.22 334 P P 14 48 56.5 -1.9
FINES FINESS Array B 80.22 334 P P 14 48 57.1 -1.3
comp=Z,2.0nm,0.7s,baz=81,slow=4.5,SNR=16
comp=Z,2.0nm,0.7s
FINES FINESS Array B 80.22 334 P P 14 48 56.8 -1.6
NVAR Mina Array Bea 82.78 51 P P 14 49 13.3 +0.7
comp=Z,0.7nm,0.7s,baz=289,slow=4.5,SNR=5.8
comp=Z,0.7nm,0.7s
ELK Elko 83.90 48 P P 14 49 19.2 +0.8
comp=Z,0.4nm,0.4s,baz=290,slow=4.2,SNR=4.1
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 84.54 324 P P 14 49 19.6 -1.4
comp=Z,0.4nm,0.4s,baz=51,slow=5.6,SNR=4.9
comp=Z,0.4nm,0.4s
BRTR Keskin Array B 87.47 313 P P 14 49 34.6 -1.3
comp=Z,0.9nm,0.6s,baz=90,slow=2.1,SNR=2.8
comp=Z,0.9nm,0.6s
TORD Torodi Ar. Bea 125.93 309 PKP PKPdf 14 55 49.3 -0.5
comp=Z,17nm,0.3s,baz=18,slow=2.3,SNR=3.8
TROLL Troll, Antarti 127.02 195 PKPdf PKPdf 14 55 50.5 +0.2
VNA2 Neumayer--Watz 129.99 193 PKPdf PKPdf 14 55 55.7 -0.1
baz=57,slow=2.0
VNA3 Neumayer Olymp 130.17 192 PKPdf PKPdf 14 55 55.9 -0.3
PLCA Paso Flores 148.59 129 PKPbc PKPbc 14 56 34.5 +0.3
comp=Z,0.9nm,0.6s,baz=297,slow=2.3,SNR=4.4
LPAZ La Paz 151.15 80 PKPbc PKPbc 14 56 41.9 +0.1
comp=Z,2.1nm,0.6s,baz=344,slow=2.3,SNR=8.1

*IDC **29** 14:46:49.5±2.4,52°.03N×104°.92E,h0km,mb3.7/2, mbtmp3.7/3,ML3.6/1,MS2.7/2,Error ellipse: s-maj=86.4km s-min=29.4km az=81.0*

*MOS **29** 14:46:51.9±1.5,51°.99N×105°.72E,h11km,mb4.4/3,Error ellipse: s-maj=10.3km s-min=8.2km az=55.8*
MOS Felt (III) at Irkutsk, Shelekhov, Patrony, Smolenschina, Molodyozhnyy, Shigaeva, Kuytun, (II-III) at Baklashi.
*BYKL **29** 14:46:53.7±0.1,52°.05N×105°.67E,h18km±2km,FELT I=III-IV MSK at Irkutsk,Shelekhov;III at Patrony, Mamony,Smolenschina, Baklashi, Kuitun*
ISC 29 14:46:51.0±0.9,51°.99N±0°.02×105°.75E±0°.02,h5km±7km, n60,σ2s17/112,mb4.1/4,11C-8D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	ISC Res
BGT	**Bolshoye Golou**	**0.22**	**286**	*e*Pg	**Pb**		**14 46 58.2**	**+2.9**
BGT				*e*Sg	**Sg**		**14 47 01.5**	**+3.3**
BGT				Pmax				
	1μm,0.2s							
BGT				Smax				
	24μm,0.3s							
STDB	**Stepnoy Dvoret**	**0.42**	**64**	⇑*i*Pg	**Pn**		**14 47 02.9**	**-1.0**
STDB				*e*Sg	**Sb**		**14 47 09.0**	**+1.2**
KAB	**Kabansk**	**0.56**	**83**	⇑*i*Pg	**Pb**		**14 47 04.9**	**+1.5**
KAB				*e*Sg	**Sb**		**14 47 13.5**	**+1.7**
KAB				Pmax				
	2μm,0.3s							
KAB				Smax				
	14μm,0.3s							
KAB	**Kabansk**	**0.56**	**83**	⇑*i*PG	**Pb**		**14 47 04.9**	**+1.5**
KAB				*e*			14 47 13.0	
KAB				pmax	pmax			
	comp=Z,2μm,0.2s							
KAB				smax	smax			
	comp=N,14μm,0.3s							
LSTR	**Listvyanka**	**0.58**	**259**	⇓*i*Pg	**Pb**		**14 47 04.2**	**+0.5**
	comp=N,155nm,0.4s							
LSTR				⇓*i*Pg	**Pb**		**14 47 04.2**	**+0.5**
	comp=N,324nm,0.4s							
LSTR				⇑*i*Pg	**Pb**		**14 47 04.2**	**+0.5**
	comp=N,286nm,0.4s							
LSTR				*e*Sg	**Sb**		**14 47 11.8**	**-0.4**
LSTR				Pmax				
	comp=N,199nm,0.3s							
LSTR				Smax				
	comp=N,2μm,0.2s							
LSTR	**Listvyanka**	**0.58**	**259**	⇑*i*PG	**Pb**		**14 47 04.2**	**+0.5**
LSTR				*e*			14 47 11.7	
LSTR				pmax	pmax			
	comp=Z,215nm,0.2s							
LSTR				smax	smax			
	comp=N,2μm,0.3s							
FFNB	**Fofonovo**	**0.63**	**84**	⇑*i*Pg	**Pb**		**14 47 05.9**	**+1.3**
FFNB				*e*Sg	**Sb**		**14 47 14.8**	**+1.0**
IVK	**Ivanovka**	**0.85**	**258**	⇑*i*Pg	**Pb**		**14 47 08.8**	**+0.5**
IVK				*e*Pb	**Pn**		**14 47 10.6**	**+0.9**
IVK				*e*Sg	**Sb**		**14 47 19.8**	**-0.1**
IVK				max				
	comp=N,315nm,0.2s							
IVK				Smax				
	comp=N,3μm,0.2s							
IVK	**Ivanovka**	**0.85**	**258**	⇑*i*PG	**Pb**		**14 47 08.7**	**+0.5**
IVK				*e*			14 47 19.7	
IVK				pmax	pmax			
	comp=Z,318nm,0.2s							
IVK				smax	smax			
	comp=N,3μm,0.2s							
TRG	**Tyrgan**	**0.86**	**25**	⇓*i*Pg	**Pg**		**14 47 08.4**	**+0.9**
TRG				*e*Pb	**Pn**		**14 47 11.0**	**+1.1**
TRG				*e*Sg	**Sg**		**14 47 19.1**	**+0.4**
TRG				Pmax				
	comp=N,328nm,0.2s							
TRG				Smax				
	comp=N,3μm,0.2s							
TRG	**Tyrgan**	**0.86**	**25**	⇓*i*PG	**Pg**		**14 47 08.4**	**+0.9**
TRG				*e*			14 47 19.6	
TRG				pmax	pmax			
	comp=Z,338nm,0.2s							
TRG				smax	smax			
	comp=N,3μm,0.2s							
IRK	**Irkutsk**	**0.95**	**286**	*e*Pg	**Pb**		**14 47 10.3**	**+0.4**
IRK				*e*Pb	**Pn**		**14 47 11.7**	**+0.7**
IRK				*e*Sg	**Sg**		**14 47 22.1**	**+0.7**
IRK				*e*Sb	**Sn**		**14 47 26.3**	**+1.4**
IRK	**Irkutsk**	**0.95**	**286**	*e*PG	**Pb**		**14 47 10.1**	**+0.2**
IRK				*e*			14 47 22.1	
IRK				pmax	pmax			
	comp=Z,1μm,0.2s							
IRK				smax	smax			
	comp=N,18μm,0.5s							
ZRHB	**Zarechye**	**1.03**	**56**	⇑*i*Pg	**Pn**		**14 47 12.6**	**+0.3**
ZRHB				*e*Pb	**Pb**		**14 47 14.5**	**+3.0**
ZRHB				*e*Sg	**Sn**		**14 47 26.7**	**-0.4**
ZRHB				*e*			14 47 31.8	
ZRHB				max				
	comp=N,204nm,0.3s							
ZRHB				Smax				
	comp=N,7μm,0.8s							
TLY	**Talaya**	**1.34**	**258**	⇑*i*Pg	**Pg**		**14 47 17.3**	**+0.6**
TLY				*e*Pb	**Pb**		**14 47 18.2**	**+1.5**
TLY				*e*Sg	**Sg**		**14 47 35.1**	**+1.0**
TLY				*e*Sb	**Sn**		**14 47 36.8**	**+2.1**
TLY				max				
	comp=N,228nm,0.2s							
TLY				max				
	comp=N,3μm,0.3s							
TLY	**Talaya**	**1.34**	**258**	⇑*i*PG	**Pg**		**14 47 17.2**	**+0.6**
TLY				*e*			14 47 34.9	
TLY				pmax	pmax			
	comp=Z,232nm,0.2s							
TLY				smax	smax			
	comp=E,3μm,0.2s							
KELR	**Kotokel**	**1.63**	**61**	*e*Pg	**Pb**		**14 47 22.4**	**+0.9**
KELR				*e*			14 47 24.0	
KELR				*e*Sg	**Sb**		**14 47 43.4**	**+1.0**
OGRR	**Ongureny**	**2.00**	**33**	*e*Pn	**Pb**		**14 47 28.7**	**+0.8**
OGRR				*e*Pg	**Pg**		**14 47 29.8**	**+0.4**
OGRR				*e*			14 47 36.3	
OGRR				*e*Sg	**Sg**		**14 47 56.1**	**+0.7**
OGRR				max				
	comp=E,206nm,0.7s							
OGRR				Smax				
	comp=E,877nm,0.4s							
OGRR	**Ongureny**	**2.00**	**33**	*e*PN	**Pb**		**14 47 28.8**	**+0.8**
OGRR				*e*			14 47 30.4	
OGRR				*e*			14 47 56.1	
OGRR				pmax	pmax			
	comp=Z,205nm,0.7s							
OGRR				smax	smax			
	comp=E,948nm,0.8s							
ARS	**Arshan**	**2.06**	**269**	*e*Pn	**Pb**		**14 47 27.9**	**-1.0**
ARS				*e*Pg	**Pg**		**14 47 29.0**	**-1.4**
ARS				*e*Sg	**Sb**		**14 47 55.4**	**+0.6**
ARS				Pmax				
	comp=E,265nm,0.5s							
ARS				Smax				
	comp=E,4μm,0.5s							
MXMB	**Maximikha**	**2.23**	**54**	*e*Pn	**Pb**		**14 47 31.9**	**+0.1**
MXMB				*e*Pg	**Pg**		**14 47 34.2**	**+0.4**
MXMB				*e*Sg	**Sg**		**14 48 02.8**	**+0.1**
ZAK	**Zakamensk**	**2.23**	**225**	*e*Pn	**Pb**		**14 47 30.9**	**-1.0**
ZAK				*e*Pg	**Pg**		**14 47 33.9**	**+0.1**
ZAK				*e*			14 47 37.4	
ZAK				*e*Sg	**Sg**		**14 48 04.1**	**+1.4**
ZAK				Pmax				
	comp=E,65nm,0.5s							
ZAK				Smax				
	comp=E,624nm,0.5s							
ZAK	**Zakamensk**	**2.23**	**225**	*e*PN	**Pb**		**14 47 30.6**	**-1.3**
ZAK				*e*			14 47 33.7	
ZAK				*e*			14 48 02.7	
ZAK				pmax	pmax			
	comp=Z,48nm,0.2s							
ZAK				smax	smax			
	comp=N,619nm,0.4s							
MOY	**Mondy**	**2.97**	**266**	*e*Pn	**Pn**		**14 47 39.9**	**+1.0**
MOY				*e*Pg	**Pb**		**14 47 45.4**	**+1.0**
MOY				*e*Sg	**Sb**		**14 48 23.5**	**+2.5**
MOY				Pmax				
	comp=N,69nm,0.4s							
MOY				Smax				
	comp=N,1μm,0.7s							
MOY	**Mondy**	**2.97**	**266**	*e*PN	**Pb**		**14 47 43.1**	**-1.3**
MOY				*e*			14 47 45.7	
MOY				*e*			14 48 22.2	
MOY				pmax	pmax			
	comp=Z,71nm,0.3s							
MOY				smax	smax			
	comp=E,1μm,0.4s							
SYVR	**Suvo**	**3.08**	**55**	*e*Pn	**Pn**		**14 47 41.4**	**+1.1**
SYVR				*e*Pg	**Pg**		**14 47 49.0**	**-0.9**
SYVR				*e*Sg	**Sg**		**14 48 30.0**	**+0.2**
SYVR				Pmax				
	comp=E,19nm,0.6s							
SYVR				Smax				
	comp=E,162nm,0.4s							
SYVR	**Suvo**	**3.08**	**55**	*e*PN	**Pn**		**14 47 41.3**	**+1.0**
SYVR				*e*			14 47 48.2	
SYVR				*e*			14 48 28.9	
SYVR				pmax	pmax			
	comp=Z,16nm,0.3s							
SYVR				smax	smax			
	comp=E,171nm,0.3s							
ORL	**Orlik**	**3.69**	**281**	*e*Pn	**Pn**		**14 47 50.8**	**+2.0**
ORL				*e*Pg	**Pb**		**14 47 59.1**	**+2.3**
ORL				*e*Sn	**Sn**		**14 48 32.4**	**-0.4**
ORL				*e*Sg	**Sg**		**14 48 46.6**	**-2.9**
ORL				Pmax				
	comp=E,76nm,0.5s							
ORL				Smax				
	comp=E,303nm,1.0s							
ORL	**Orlik**	**3.69**	**281**	*e*PN	**Pn**		**14 47 50.8**	**+2.0**
ORL				*e*			14 47 57.5	
ORL				*e*S	**Sn**		**14 48 33.4**	**+0.6**
ORL				*e*			14 48 46.6	
ORL				pmax	pmax			
	comp=Z,75nm,0.4s							
ORL				smax	smax			
	comp=N,303nm,0.8s							
SONM	**Songino Array**	**4.18**	**174**	Pn	**Pn**		**14 47 57.9**	**+2.3**
	comp=N,3.4nm,0.3s,baz=346,slow=14,SNR=63							
SONM				Pg	**Pg**		**14 48 09.3**	**-1.7**
	comp=N,8.7nm,0.3s,baz=348,slow=18,SNR=27							
SONM				Lg	Lg		14 49 05.0	
	comp=N,26nm,0.3s,baz=346,slow=30,SNR=16							
SONM				LR	LR		14 49 55.1	
	comp=N,62nm,18.0s,baz=270,slow=43							
	comp=N,7.4nm,0.4s							
ULN	**Ulaanbaatar**	**4.21**	**168**	*e*Pn	**Pn**		**14 47 59.4**	**+3.4**
ULN				*e*Pg	**Pg**		**14 48 10.3**	**-1.4**
ULN				*e*Sg	**Sg**		**14 49 06.0**	**-0.2**
ULN	**Ulaanbaatar**	**4.21**	**168**	*d*iPN	**Pn**		**14 47 57.9**	**+1.9**
YLYR	**Ulyunkhan**	**4.34**	**46**	*e*Pn	**Pn**		**14 47 58.7**	**+1.0**
YLYR				*e*Pg	**Pb**		**14 48 10.7**	**+2.9**
YLYR				*e*Sn	**Sn**		**14 48 48.5**	**-0.2**
YLYR				*e*Sg	**Sg**		**14 49 07.0**	**-3.4**
YLYR				Pmax				
	comp=N,7.0nm,0.5s							
YLYR				Smax				
	comp=N,106nm,1.2s							
NIZ	**Nizh Angarsk**	**4.41**	**29**	*e*Pn	**Pn**		**14 47 59.6**	**+1.0**
NIZ				*e*Sn	**Sn**		**14 48 49.1**	**-1.2**
NIZ				*e*Sg	**Sg**		**14 49 09.3**	**-3.3**
NIZ				max				
	comp=N,14nm,0.4s							
NIZ				Smax				
	comp=N,250nm,1.3s							
NIZ	**Nizh Angarsk**	**4.41**	**29**	*e*PN	**Pn**		**14 48 01.1**	**+2.5**
KPC	**Khapcheranga**	**4.78**	**116**	*e*	**Pn**		**14 48 04.6**	**+0.8**
KPC				*e*Pg	**Pg**		**14 48 20.0**	**-2.6**
KPC				*e*			14 48 22.4	
KPC				*e*Sg	**Sg**		**14 49 23.5**	**-1.0**
KPC				max				
	comp=N,18nm,0.6s							
KPC				Smax				
	comp=N,295nm,1.2s							
KPC	**Khapcheranga**	**4.78**	**116**	*e*PN	**Pn**		**14 48 04.6**	**+0.8**
KPC				*e*			14 48 18.5	
KPC				*e*			14 49 22.2	
KPC				pmax	pmax			
	comp=Z,19nm,0.3s							
KPC				smax	smax			
	comp=E,295nm,1.2s							
CIT	**Chita**	**4.82**	**87**	*e*Sg	**Sg**		**14 49 23.8**	**-2.0**
CIT				Smax				
	comp=E,167nm,0.3s							
KMO	**Kumora**	**5.07**	**37**	*e*Pn	**Pn**		**14 48 09.1**	**+1.5**
KMO				*e*Pg	**Pb**		**14 48 24.2**	**+4.1**
KMO				*e*Sg	**Sg**		**14 49 29.5**	**-4.0**
KMO				Pmax				
	comp=E,16nm,0.4s							
KMO				Smax				
	comp=E,172nm,1.3s							
KNGR	**Kungurtug, Tuv**	**5.35**	**258**	*e*Pg	**Pb**		**14 48 27.8**	**+2.8**
KNGR				*e*Sg	**Sg**		**14 49 37.1**	**-5.5**
KNGR	**Kungurtug, Tuv**	**5.35**	**258**	⇓*e*PN	**Pn**		**14 48 11.4**	**-0.2**
KNGR				*e*S	**Sn**		**14 49 14.6**	**+1.0**
KNGR				pmax	pmax			
	comp=Z,5.0nm,1.0s							
YOA	**Uoyan**	**5.45**	**38**	*e*Sg	**Sg**		**14 49 42.8**	**-2.9**
YOA				Smax				
	comp=Z,604nm,1.6s							
UKT	**Uakit**	**5.85**	**50**	*e*Pn	**Pn**		**14 48 19.7**	**+1.3**
UKT				*e*Sg	**Sg**		**14 49 55.9**	**-2.7**
UKT				max				
	comp=Z,3.0nm,0.5s							
UKT				Smax				
	comp=Z,55nm,1.6s							
SVKR	**Severomuysk**	**6.19**	**45**	*e*Sg	**Sg**		**14 50 05.3**	**-4.2**
SVKR				Smax				
	comp=Z,145nm,1.4s							
KZLR	**Kyzyl**	**7.00**	**272**	*e*Sg	**Sg**		**14 50 28.1**	**-7.6**
NLYR	**Nelyaty**	**7.37**	**48**	*e*Pn	**Pn**		**14 48 42.1**	**+2.8**
NLYR				*e*Pg	Pg		14 49 07.2	-4.9
NLYR				*e*Sn	**Sn**		**14 50 02.4**	**-0.9**
NLYR				*e*Sg	**Sg**		**14 50 42.4**	**-5.1**
NLYR				Pmax				
	comp=Z,1.0nm,0.3s							
NLYR				Smax				
	comp=Z,98nm,1.6s							
BOD	**Bodaibo**	**7.53**	**36**	*e*Pg	Pg		14 49 09.4	-5.8
BOD				*e*Sg	**Sg**		**14 50 46.4**	**-6.3**
BOD				Pmax				
	comp=Z,1.0nm,0.2s							
BOD				Smax				
	comp=Z,46nm,1.5s							
VTMR	**Vitim**	**8.40**	**24**	*e*Pn	**Pn**		**14 48 55.1**	**+1.9**
VTMR				*e*Sn	**Sn**		**14 50 25.4**	**-2.9**
VTMR				*e*Sg	Sg		14 51 11.8	-8.5
KRAR	**Krasnoyarsk**	**8.59**	**303**	⇓*e*PN	**Pn**		**14 48 56.3**	**+0.4**
CRS	**Chara**	**8.80**	**51**	*e*Pg	Pg		14 49 31.8	-7.5
CRS				*e*Sg	Sg		14 51 24.2	-8.9
CRS				Smax				
	comp=Z,37nm,1.4s							
TUP	**Tupik**	**8.87**	**68**	*e*Pg	Pg		14 49 33.7	-7.1
TUP				*e*Sg	**Sg**		**14 51 29.1**	**-6.4**
TUP				Smax				
	comp=Z,93nm,1.5s							
DGZ	**Jazzator, Alta**	**11.80**	**266**	⇓*e*P	**Pn**		**14 49 43.4**	**+3.3**
ZALV	**Zalesovo Beam**	**12.76**	**287**	LR	LR		14 54 48.5	
	comp=Z,39nm,18.7s,baz=145,slow=39							
ZEA	**Zeya**	**13.10**	**74**	*e*P	**P**		**14 50 04.4**	**-3.7**
ZEA				*e*			14 52 34.1	
GOMU	**GeErMu**	**17.59**	**210**	P	**Pn**		**14 50 55.5**	**-1.8**
GOMU				pP	P		14 50 59.0	+0.6
GOMU				sP	pP		14 51 00.0	+0.2
GOMU				pmax	pmax			
	comp=Z,1.0nm,0.4s							
GOMU				pmax	pmax			
	comp=Z,51nm,6.4s							
BILL	**Bilibino**	**32.59**	**37**	*e*P	**P**		**14 53 23.2**	**+0.3**
BILL				pmax	pmax			
	comp=Z,4.0nm,1.0s							
BILL				MLR	MLR			
	comp=Z,15nm,13.0s							
OBN	**Obninsk**	**39.69**	**303**	*e*P	**P**		**14 54 24.6**	**+0.9**
OBN				pmax	pmax			
	comp=Z,7.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,21nm,15.0s							
WRA	**Warramunga Arr**	**75.85**	**152**	P	**P**		**14 58 38.8**	**+0.6**
	comp=Z,1.0nm,1.0s,baz=347,slow=6.7,SNR=4.9							
	comp=Z,1.0nm,1.0s							
WRA	**Warramunga Arr**	**75.85**	**152**	*i*P	**P**		**14 58 38.5**	**+0.3**
WRA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
ASAR	**Alice Springs**	**79.27**	**154**	P	**P**		**14 58 57.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=349,slow=5.6,SNR=8.3							
	comp=Z,0.4nm,0.7s							

DJA 29 15:28:43.5±1.2, 6°S±3″×117°7′E±″, h29km±13km, M3.6/12, mb3.5/5/1, MLv3.7/12, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**2.53**	**189**	P	Pn	15 29 22.4	-0.3
PLAI	**Plampang**	**2.64**	**169**	P	Pn	15 29 24.4	+0.2
SRBI	**Singaraja**	**2.76**	**228**	P	Pn	15 29 26.2	+0.4
BKSI	**Bulukumba**	**2.98**	**73**	P	Pn	15 29 29.3	+0.5
BSSI	**Bau Bau, Buton**	**3.20**	**89**	P	Pn	15 29 32.1	+0.2
SPSI	**Sidrap Palu**	**3.35**	**48**	P	Pn	15 29 33.5	-0.4
KMMI	**Kalianget**	**3.38**	**256**	P	Pn	15 29 35.1	+0.7
JAGI	**Jajag, Banyuwa**	**3.82**	**234**	P	Pn	15 29 40.3	-0.1
WBSI	**Waikabubak, Su**	**4.00**	**148**	P	Pn	15 29 42.8	-0.1
TTSI	**Tana Toraja**	**4.05**	**39**	P	Pn	15 29 43.9	+0.3
GMJI	**Gumukmas**	**4.31**	**242**	P	Pn	15 29 46.9	-0.2
EDFI	**Ende, Flores**	**5.05**	**120**	P	Pn	15 29 57.3	-0.2

*KRSC **29** 15:33:24.6±0.9, 55°.86N×161°.62E, h97km±11km, ML4.0*
*IDC **29** 15:33:26.4±2.5, 55°.87N×161°.24E, h101km±25km, mb3.4/10, mbtmp3.7/11, Error ellipse: s-maj=26.0km s-min=16.0km az=147.0*

ISC 29 15:33:25.9±0.7, 55°.88N±0°.04×161°.60E±0°.04, h96km±6km, n55, σ1§06/77, mb3.7/10, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.47**	**288**	P	**Pn**	**15 33 41.4**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**0.51**	**277**	P	**Pn**	**15 33 41.4**	**0.0**
BZGR				S	**Sn**	**15 33 53.7**	**+0.6**
CIRR	**Tsirk**	**0.53**	**297**	P	**Pn**	**15 33 41.9**	**+0.2**
BZWR	**Bezymyannyi-We**	**0.62**	**278**	P	**Pn**	**15 33 42.7**	**+0.3**
BZWR				S	**Sn**	**15 33 55.3**	**+0.5**
BZMR	**Bezymyannaya**	**0.62**	**276**	P	**Pn**	**15 33 42.6**	**+0.2**
BZMR				S	**Sn**	**15 33 55.6**	**+0.8**
KRSR	**Krestovskiy**	**0.67**	**301**	P	**Pn**	**15 33 42.5**	**-0.3**
KRSR				S	**Sn**	**15 33 55.1**	**-0.3**
KLY	**Klyuchi**	**0.68**	**310**	P	**Pn**	**15 33 41.8**	**-0.9**
KLY				S	**Sn**	**15 33 54.3**	**-1.1**
SMKR	**Semkarok**	**0.71**	**354**	P	**Pn**	**15 33 43.0**	**-0.1**
KIRR	**Kirishev**	**0.71**	**276**	P	**Pn**	**15 33 42.8**	**-0.4**
BDR	**Baidarnaya**	**0.72**	**343**	P	**Pn**	**15 33 43.3**	**+0.1**
BDR				S	**Sn**	**15 33 56.6**	**+0.4**
KBG	**Krutoberegovo**	**0.73**	**58**	P	**Pn**	**15 33 43.2**	**+0.1**
KBG				S	**Sn**	**15 33 57.1**	**+1.0**
KBTR	**Krutoberegovo**	**0.76**	**64**	P	**Pn**	**15 33 43.6**	**+0.1**
KBTR				S	**Sn**	**15 33 57.8**	**+1.1**
KMNR	**Kamenistaya**	**0.78**	**261**	P	**Pn**	**15 33 43.4**	**-0.4**
KMNR				S	**Sn**	**15 33 57.7**	**+0.6**
KPT	**Kopyto**	**0.78**	**277**	P	**Pn**	**15 33 43.6**	**-0.2**
KPT				S	**Sn**	**15 33 57.3**	**+0.2**
KOZ	**Kozyrevsk**	**0.98**	**281**	P	**Pn**	**15 33 45.8**	**0.0**
KOZ				S	**Sn**	**15 34 01.3**	**+0.5**
TUMR	**Tumrok**	**1.02**	**235**	P	**Pn**	**15 33 46.4**	**+0.1**
TUMR				S	**Sn**	**15 34 01.2**	**-0.4**
SRDR	**Sredinnyy**	**1.14**	**293**	P	**Pn**	**15 33 47.3**	**-0.3**
SRDR				S	**Sn**	**15 34 03.7**	**-0.3**
MKZ	**Mys Kozlova**	**1.33**	**177**	P	**Pn**	**15 33 49.4**	**-0.4**
MKZ				S	**Sn**	**15 34 08.0**	**+0.2**
ESO	**Esso**	**1.63**	**273**	P	**Pn**	**15 33 54.8**	**+1.2**
ESO				S	**Sn**	**15 34 15.6**	**+1.0**
KII	**Karymskiy**	**2.22**	**215**	P	**Pn**	**15 34 01.8**	**+0.5**
BKI	**Bering**	**2.58**	**103**	P	**Pn**	**15 34 05.8**	**0.0**
BKI				S	**Sn**	**15 34 35.9**	**-0.6**
SPN	**Mys Shipunski**	**2.94**	**199**	P	**Pn**	**15 34 09.7**	**-0.9**
SPN				S	**Sn**	**15 34 42.1**	**-3.0**
NLC	**Nalytchevo**	**3.01**	**207**	P	**Pn**	**15 34 11.9**	**+0.2**
NLC				S	**Sn**	**15 34 46.4**	**-0.5**
GNL	**Ganaly**	**3.04**	**226**	P	**Pn**	**15 34 12.8**	**+0.6**
SDLR	**Sedlovina**	**3.05**	**212**	P	**Pn**	**15 34 13.5**	**+1.2**
KRX	**Arik**	**3.05**	**215**	P	**Pn**	**15 34 14.1**	**+1.8**
KRER	**Koryakskii**	**3.07**	**214**	P	**Pn**	**15 34 14.2**	**+1.6**
KRER				S	**Sn**	**15 34 49.9**	**+1.4**
SMAR	**Somma**	**3.08**	**213**	P	**Pn**	**15 34 14.1**	**+1.2**
SMAR				S	**Sn**	**15 34 50.6**	**+1.6**
AVH	**Avacha**	**3.10**	**214**	P	**Pn**	**15 34 14.7**	**+1.7**
AVH				S	**Sn**	**15 34 52.0**	**+2.8**
KOK	**Koryaka**	**3.11**	**215**	P	**Pn**	**15 34 14.7**	**+1.6**
UGLR	**Uglovaya**	**3.12**	**212**	P	**Pn**	**15 34 14.5**	**+1.2**
DALK	**Dalny**	**3.30**	**211**	P	**Pn**	**15 34 16.3**	**+0.8**
DALK				S	**Sn**	**15 34 54.2**	**+0.4**
PALN	**Palana**	**3.34**	**345**	P	**Pn**	**15 34 16.4**	**+0.5**
PET	**Petropavlovsk**	**3.34**	**212**	P	**Pn**	**15 34 16.7**	**+0.7**
PET				S	**Sn**	**15 34 55.7**	**+1.0**
PETK	**Petropavlovsk-** 5.5nm,0.5s,baz=57,slow=21,SNR=24	**3.59**	**221**	P	**Pn**	**15 34 19.8**	**+0.4**
PETK				S	**Sn**	**15 34 58.0**	**-2.8**
	8.0nm,0.6s,baz=80,slow=20,SNR=4.6						
KRMR	**Karymshinskiy**	**3.67**	**215**	P	**Pn**	**15 34 21.9**	**+1.4**
RUS	**Russkaya**	**3.90**	**209**	P	**Pn**	**15 34 23.4**	**-0.2**
RUS				S	**Sn**	**15 35 07.9**	**-0.4**
GRL	**Gorelyy**	**3.92**	**213**	P	**Pn**	**15 34 26.5**	**+2.5**
APC	**Apacha**	**3.94**	**223**	P	**Pn**	**15 34 25.0**	**+0.9**
MTVR	**Mutnovka**	**3.95**	**212**	P	**Pn**	**15 34 24.9**	**+0.5**
KDTR	**Khodutka, Kamc**	**4.58**	**208**	P	**Pn**	**15 34 32.8**	**0.0**
MJAR	**Matsushiro Arr** 1.6nm,0.7s,baz=35,slow=6.9,SNR=5.0	**25.00**	**229**	P	**P**	**15 38 39.8**	**-0.8**
	1.6nm,0.7s						
ILAR	**Eielson Array** 0.5nm,0.6s,baz=260,slow=8.5,SNR=7.0	**26.28**	**49**	P	**P**	**15 38 51.8**	**-0.1**
	0.5nm,0.6s						
H11N2	**WAKE ISLAND Hy** baz=357,slow=76,SNR=20	**36.31**	**172**	T	T	16 19 31.1	
H11N3	**WAKE ISLAND Hy** baz=357,slow=76,SNR=18	**36.33**	**172**	T	T	16 19 34.6	
H11N1	**WAKE ISLAND Hy** baz=357,slow=76,SNR=22	**36.33**	**172**	T	T	16 19 34.8	
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=72,slow=5.7,SNR=3.1	**47.77**	**294**	P	**P**	**15 41 52.1**	**-1.0**
	0.3nm,0.6s						
NVAR	**Mina Array Bea** 1.0nm,0.6s,baz=302,slow=7.0,SNR=10	**54.02**	**73**	P	**P**	**15 42 42.4**	**+2.1**
	1.0nm,0.6s						
PDAR	**Pinedale Array** 0.8nm,0.7s,baz=327,slow=3.1,SNR=8.4	**55.44**	**63**	P	**P**	**15 42 51.6**	**+1.2**
	0.8nm,0.7s						
FINES	**FINESS Array B** 2.9nm,1.0s,baz=59,slow=6.8,SNR=2.0	**57.91**	**337**	P	**P**	**15 43 06.7**	**-0.6**
	2.9nm,1.0s						
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=18,slow=6.9	**61.10**	**344**	P	**P**	**15 43 28.4**	**-0.9**
NOA	**NORSAR Array B** comp=Z,0.9nm,0.7s,baz=18,slow=6.8,SNR=4.2	**61.10**	**344**	P	**P**	**15 43 28.5**	**-0.8**
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array** comp=Z,1.0nm,0.7s,baz=298,slow=5.0,SNR=16	**68.78**	**69**	P	**P**	**15 44 20.7**	**+1.1**
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr** comp=Z,0.5nm,0.8s,baz=16,slow=6.0,SNR=2.8	**78.98**	**206**	P	**P**	**15 45 18.2**	**-0.7**
	comp=Z,0.5nm,0.8s						
ASAR	**Alice Springs** comp=Z,0.2nm,0.8s,baz=20,slow=4.9,SNR=1.6	**82.66**	**205**	P	**P**	**15 45 36.8**	**-1.6**
	comp=Z,0.2nm,0.8s						

*IDC **29** 15:36:52.1±2.9, 8°.51N×71°.33W, h13km±18km, mb3.5/5, mbtmp3.7/7, ML3.0/2, MS3.2/3, Error ellipse: s-maj=23.5km s-min=14.9km az=158.0*
*FUNV **29** 15:36:53.9, 8°.41N×71°.41W, h5km, MW3.9*

ISC 29 15:36:52.1±1.2, 8°.52N±0°.03×71°.33W±0°.02, h7km±8km, n57, σ1§88/82, mb3.7/6, MS3.2/3, 2C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.53**	**117**	⇑*iP*	**Pg**	**15 37 03.4**	**+1.1**
SOCV				*eS*	**Sb**	**15 37 11.9**	**+0.5**
SOCV	**Socops**	**0.53**	**117**	*eP*	**Pg**	**15 37 03.4**	**+1.1**
SOCV				*eS*	**Sb**	**15 37 11.8**	**+0.4**
SDV	**Santo Domingo** 53nm,0.3s,baz=196,slow=5.0,SNR=62	**0.78**	**62**	Pg	**Pg**	**15 37 07.2**	**+0.1**
SDV				Lg	Lg	15 37 18.3	
	190nm,0.3s,baz=29,slow=4.3,SNR=26						
CAPV	**Capacho**	**1.17**	**236**	*eP*	**Pg**	**15 37 12.9**	**-1.8**
CAPV				*eS*	**Sg**	**15 37 28.4**	**-1.6**
PAMC	**Pamplona, Colo**	**1.79**	**229**	*eP*	**Pn**	**15 37 25.5**	**+1.5**
PAMC				*eS*	**Sg**	**15 37 50.5**	**+0.6**
PAMC	comp=Z,590nm,0.7s			*i*		15 37 53.2	
MCQV	**Machiques**	**1.93**	**322**	*eP*	**Pn**	**15 37 27.2**	**+1.8**
MCQV				*eS*	**Sn**	**15 37 51.3**	**+1.4**
OCAC	**Ocana**	**1.99**	**262**	*eP*	**Pn**	**15 37 26.2**	**-0.1**
OCAC				*eS*	**Sn**	**15 37 52.7**	**+1.1**
CURV	**Curarigua**	**2.00**	**42**	*eS*	**Sb**	**15 37 56.2**	**+2.1**
TAMC	**Tame, Arauca**	**2.12**	**192**	*eP*	**Pn**	**15 37 30.1**	**+2.1**
LL6C	**La Loma 6 Bece**	**2.27**	**302**	*eP*	**Pn**	**15 37 29.6**	**-0.4**
DABV	**Dabajuro**	**2.48**	**16**	*eP*	**Pn**	**15 37 33.9**	**+1.0**
DABV				*eS*	**Sn**	**15 38 05.5**	**+2.0**
SIQV	**Siquisique**	**2.59**	**35**	*eP*	**Pn**	**15 37 37.5**	**+3.0**
SIQV				*eS*	**Sn**	**15 38 09.8**	**+3.5**
BARC	**Barichara**	**2.66**	**224**	*eP*	**Pb**	**15 37 40.8**	**+0.6**
BARC				*eS*	**Sb**	**15 38 15.5**	**+2.4**
BARC	comp=Z,527nm,0.5s			*i*		15 38 20.5	
BRRC	**Barranca, Sant**	**2.75**	**239**	*eP*	**Pb**	**15 37 42.2**	**+0.6**
BRRC				*eS*	**Sb**	**15 38 18.1**	**+2.6**
CRJC	**Cerrejon, Guaj**	**2.92**	**328**	*eP*	**Pn**	**15 37 39.3**	**+0.3**
CRJC				*eS*	**Sn**	**15 38 14.7**	**+0.3**
MAPV	**Macapo**	**3.12**	**65**	*eP*	**Pn**	**15 37 44.7**	**+2.9**
MAPV				*eS*	**Sn**	**15 38 22.5**	**+3.2**
RUSC	**La Rusia**	**3.14**	**214**	*eP*	**Pn**	**15 37 44.0**	**+1.6**
ARGC	**Ariguani, Magd**	**3.17**	**295**	*eP*	**Pn**	**15 37 43.0**	**+0.6**
ARGC				*eS*	**Sn**	**15 38 21.2**	**+0.7**
BAUV	**El Baul**	**3.28**	**82**	*eP*	**Pn**	**15 37 45.6**	**+1.7**
BAUV				*eS*	**Sn**	**15 38 24.3**	**+1.2**
JACV	**Jacura**	**3.54**	**44**	*eP*	**Pn**	**15 37 50.6**	**+3.0**
JACV				*eS*	**Sn**	**15 38 33.0**	**+3.2**
ZARC	**Zaragoza, Cauc**	**3.64**	**254**	*eP*	**Pn**	**15 37 49.1**	**+0.2**
PTBC	**PUERTO BERRIO,**	**3.67**	**238**	*eP*	**Pn**	**15 37 48.8**	**-0.6**
SMRC	**Santa Marta, M**	**3.88**	**313**	*eP*	**Pn**	**15 37 51.2**	**-0.9**
TURV	**Turiamo**	**3.94**	**61**	*eP*	**Pn**	**15 37 56.1**	**+3.1**
TURV				*eS*	**Sn**	**15 38 54.9**	**+0.5**
CHIC	**Chingaza**	**4.54**	**212**	⇑*iP*	**Pn**	**15 38 03.3**	**+1.6**
CHIC				*eS*	**Sn**	**15 38 56.1**	**+1.1**
CHIC	comp=Z,31nm,0.4s			*i*		15 39 04.7	
NORC	**Norcasia**	**4.58**	**230**	*eP*	**Pn**	**15 38 03.4**	**+1.4**
ROSC	**El Rosal** comp=Z,4.0nm,0.3s,baz=84,slow=21,SNR=2.3	**4.71**	**219**	Pn	**Pn**	**15 38 03.6**	**-0.4**
	comp=Z,1.9nm,0.3s						
HELC	**Santa Helena**	**4.77**	**241**	*eP*	**Pn**	**15 38 06.7**	**+2.0**
PAYV	**Puerto Ayacuch**	**4.77**	**130**	*eP*	**Pn**	**15 38 05.3**	**+0.8**
PAYV				*eS*	**Sn**	**15 38 57.8**	**-2.3**
CACV	**CAICARA DEL OR**	**4.84**	**101**	*eP*	**Pb**	**15 38 14.1**	**-3.2**
CACV				*eS*	**Sb**	**15 39 13.4**	**-2.3**
FUNV	**FUNVISIS**	**4.86**	**66**	*eP*	**Pn**	**15 38 08.2**	**+2.4**
FUNV				*eS*	**Sn**	**15 39 01.9**	**-0.5**
VILC	**Villavicencio,**	**4.97**	**208**	*eP*	**Pn**	**15 38 08.4**	**+1.0**
LCBC	**Los crdobas,**	**4.99**	**274**	*eP*	**Pn**	**15 38 08.3**	**+0.8**
GUY2C	**Guyana, Caldas**	**5.18**	**231**	*eP*	**Pn**	**15 38 13.0**	**+2.5**
CBOC	**Ciudad Bolivar**	**5.34**	**241**	*eP*	**Pn**	**15 38 15.5**	**+3.0**
BIRV	**Birongo**	**5.36**	**68**	*eP*	**Pn**	**15 38 14.4**	**+1.9**
BIRV				*eS*	**Sn**	**15 39 13.4**	**-1.1**
ANIL	**Santa Ana**	**5.69**	**226**	*eP*	**Pn**	**15 38 20.1**	**+2.6**
ANIL				*eS*	**Sn**	**15 39 30.1**	**+6.8**
GUVC	**San Jose del G**	**6.08**	**192**	*eP*	**Pn**	**15 38 23.2**	**+0.8**
GUVC				*eS*	**Sn**	**15 39 31.6**	**-0.7**
PCRV	**Puerto La Cruz** comp=Z,2.1nm,0.3s,baz=238,slow=1.9,SNR=8.4	**6.81**	**76**	Pn	**Pn**	**15 38 34.2**	**+1.7**
PCRV				Sn	**Sn**	**15 39 51.7**	**+1.4**
	comp=Z,2.6nm,0.3s,baz=288,slow=22,SNR=6.1						
	comp=Z,4.4nm,0.3s						
PCRV	**Puerto La Cruz**	**6.81**	**76**	*eP*	**Pn**	**15 38 34.5**	**+2.0**
PCRV				*eS*	**Sn**	**15 39 48.7**	**-1.6**
GARC	**Garzon, Huila**	**7.54**	**214**	*eP*	**Pn**	**15 38 43.0**	**+0.3**
GARC				*eS*	**Sn**	**15 40 10.4**	**+1.9**
LPAZ	**La Paz** comp=Z,30nm,19.7s,baz=58,slow=41	**24.85**	**173**	LR	LR	15 53 52.0	
TXAR	**Lajitas Array** comp=Z,0.3nm,0.7s,baz=124,slow=11,SNR=4.2	**36.73**	**309**	P	**P**	**15 43 59.0**	**-1.3**
	comp=Z,0.3nm,0.7s						
CPUP	**Villa Florida** comp=Z,36nm,18.2s,baz=50,slow=38	**37.22**	**159**	LR	LR	16 00 21.3	
PDAR	**Pinedale Array** comp=Z,0.9nm,0.6s,baz=126,slow=10,SNR=8.1	**47.80**	**322**	P	**P**	**15 45 30.2**	**-0.4**
	comp=Z,0.9nm,0.6s						
PLCA	**Paso Flores** comp=Z,1.7nm,0.8s,baz=349,slow=11,SNR=3.9	**49.01**	**179**	P	**P**	**15 45 39.0**	**-0.6**
	comp=Z,1.7nm,0.8s						
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.5s,baz=118,slow=6.6,SNR=4.2	**51.60**	**313**	P	**P**	**15 45 59.5**	**-0.1**
	comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.7s,baz=260,slow=7.2,SNR=2.5	**71.66**	**79**	P	**P**	**15 48 14.3**	**-0.9**
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=120,slow=5.3,SNR=4.6	**76.19**	**335**	P	**P**	**15 48 39.5**	**-1.3**
	comp=Z,0.3nm,0.6s						
QSPA	**South Pole Qui** comp=Z,20nm,18.2s,baz=350,slow=38	**98.52**	**180**	LR	LR	16 39 34.7	
ASAR	**Alice Springs** comp=Z,0.9nm,0.8s,baz=121,slow=2.9,SNR=12	**151.54**	**235**	PKPbc	**PKPbc**	**15 56 46.5**	**-1.5**
WRA	**Warramunga Arr** comp=Z,1.0nm,0.6s,baz=105,slow=2.8,SNR=43	**152.70**	**243**	PKPbc	**PKPbc**	**15 56 49.1**	**-1.5**

IDC 29 15:49:28.0±5.2, 2°.42N×98°.80W, h0km, mb3.5/4, mbtmp3.5/4, MS3.3/14, Error ellipse: s-maj=231.2km s-min=29.3km az=54.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero** comp=Z,38nm,21.4s,baz=184,slow=27	**15.08**	**15**	LR	LR	15 56 18.4	
H06E1	**SOCORRO T-PHAS** SNR=6.6	**20.14**	**325**	T	T	16 14 45.3	
LPIG	**La Paz** comp=Z,162nm,18.2s,baz=172,slow=32	**24.26**	**334**	LR	LR	16 02 16.3	
NNA	**Nana** comp=Z,31nm,18.6s,baz=232,slow=31	**26.09**	**124**	LR	LR	16 03 07.5	
TXAR	**Lajitas Array** 0.6nm,0.9s,baz=170,slow=8.2,SNR=5.7	**27.17**	**351**	P	P	15 55 13.9	+0.5
TXAR				LR	LR	16 04 36.8	
	comp=Z,49nm,18.2s,baz=147,slow=34						
	0.6nm,0.9s						
SDV	**Santo Domingo** comp=Z,41nm,20.4s,baz=227,slow=33	**28.74**	**76**	LR	LR	16 05 12.9	
ANMO	**Albuquerque** comp=Z,73nm,18.9s,baz=164,slow=35	**33.14**	**348**	LR	LR	16 08 42.1	
PFO	**Pinyon Flats O** comp=Z,102nm,21.4s,baz=154,slow=31	**35.16**	**334**	LR	LR	16 07 47.4	
LPAZ	**La Paz** 0.8nm,0.6s,baz=317,slow=7.7,SNR=2.4	**35.55**	**123**	P	P	15 56 27.9	-0.1
LPAZ				LR	LR	16 08 09.7	
	comp=Z,28nm,21.9s,baz=120,slow=32						
	0.8nm,0.6s						
LVC	**Limon Verde** comp=Z,58nm,20.2s,baz=266,slow=30	**38.33**	**132**	LR	LR	16 08 23.0	
NVAR	**Mina Array Bea** 0.2nm,0.6s,baz=155,slow=9.0,SNR=2.4	**40.04**	**336**	P	P	15 57 05.4	+0.1
NVAR				LR	LR	16 10 32.1	
	comp=Z,75nm,19.3s,baz=150,slow=32						
	0.2nm,0.6s						
H03N2	**Juan Fernandez** baz=330,slow=78,SNR=128	**40.29**	**154**	T	T	16 39 54.2	
H03N1	**Juan Fernandez** baz=330,slow=78,SNR=138	**40.30**	**154**	T	T	16 39 48.7	
H03N3	**Juan Fernandez** baz=330,slow=78,SNR=100	**40.31**	**154**	T	T	16 39 47.8	
PDAR	**Pinedale Array** 0.4nm,0.6s,baz=140,slow=4.7,SNR=3.7	**41.31**	**348**	P	P	15 57 14.8	-0.9
	0.4nm,0.6s						
YBH	**Yreka Blue Hor** comp=Z,36nm,20.0s,baz=162,slow=32	**44.65**	**334**	LR	LR	16 13 34.3	
MDP	**Montagnes des** comp=Z,34nm,20.4s,baz=45,slow=33	**46.13**	**85**	LR	LR	16 14 46.1	
PLCA	**Paso Flores** comp=Z,44nm,18.6s,baz=246,slow=30	**50.09**	**152**	LR	LR	16 14 49.3	
BBB	**Bella Bella** comp=Z,26nm,18.9s,baz=202,slow=33	**55.29**	**338**	LR	LR	16 20 04.9	
H11N3	**WAKE ISLAND Hy** baz=87,slow=75,SNR=13	**93.23**	**290**	T	T	17 46 03.3	
H11N2	**WAKE ISLAND Hy** baz=87,slow=75,SNR=14	**93.24**	**290**	T	T	17 46 02.5	
H11N1	**WAKE ISLAND Hy** baz=87,slow=75,SNR=14	**93.25**	**290**	T	T	17 46 04.6	
H11S2	**WAKE ISLAND Hy** baz=85,slow=74,SNR=18	**93.50**	**289**	T	T	17 46 20.8	
H11S1	**WAKE ISLAND Hy** baz=85,slow=74,SNR=16	**93.51**	**289**	T	T	17 46 22.1	
H11S3	**WAKE ISLAND Hy** baz=85,slow=74,SNR=12	**93.52**	**289**	T	T	17 46 23.0	

*NOU **29** 15:59:46.4, 37°.96S×176°.08E, h255km, MLv3.8/9, North Island, New Zealand*
*WEL **29** 15:59:52.9±0.6, 38°.5S±4°.4×177°.6E±°, h197km±5km, M2.7/43, ML1.9/8, MLv2.7/43, Error ellipse: s-maj=0.0km s-min=0.0km az=144.1*

ISC 29 15:59:46.7±1.9, 38°.09S±0°.06×176°.05E±0°.06, h243km±10km, n125, σ1§89/138, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARZ	**Kaharoa**	**0.17**	**66**	P	**Pn**	**16 00 19.6**	**+1.5**
OMRZ	**Omania**	**0.26**	**94**	P	**Pn**	**16 00 19.8**	**+1.6**
KMRZ	**Kaimai**	**0.26**	**341**	P	**Pn**	**16 00 19.8**	**+1.5**
GRRZ	**Galatos Road**	**0.26**	**169**	P	**Pn**	**16 00 20.0**	**+1.8**
HSRZ	**Hossack Road**	**0.27**	**145**	P	**Pn**	**16 00 20.0**	**+1.9**
TARZ	**Mount Tarawera**	**0.39**	**112**	P	**Pn**	**16 00 20.1**	**+1.6**
TGRZ	**Tauranga**	**0.40**	**25**	P	**Pn**	**16 00 19.9**	**+1.4**
KUTZ	**Kaahu Road**	**0.43**	**204**	P	**Pn**	**16 00 20.5**	**+1.9**
WPRZ	**Whakapapatarin**	**0.44**	**168**	P	**Pn**	**16 00 20.3**	**+1.7**
RRRZ	**Republican Roa**	**0.44**	**124**	P	**Pn**	**16 00 20.0**	**+1.4**
TLZ	**Tolley Road**	**0.47**	**239**	P	**Pn**	**16 00 20.7**	**+2.1**
OPRZ	**Ohinepanea**	**0.47**	**59**	P	**Pn**	**16 00 19.9**	**+1.3**
PRRZ	**Plateau Road**	**0.49**	**146**	P	**Pn**	**16 00 20.2**	**+1.5**
MARZ	**Manawahe**	**0.51**	**78**	P	**Pn**	**16 00 20.3**	**+1.5**
ALRZ	**Allen Road**	**0.53**	**154**	P	**Pn**	**16 00 20.5**	**+1.7**
TOZ	**Tahuroa Road**	**0.56**	**310**	P	**Pn**	**16 00 20.9**	**+1.9**
MUGZ	**Murupara**	**0.69**	**124**	P	**Pn**	**16 00 20.5**	**+1.2**
MRHZ	**Matea Rd**	**0.80**	**159**	P	**Pn**	**16 00 21.4**	**+1.5**
MRHZ				S	S	**16 00 43.1**	**-3.0**
RATZ	**Rangitukua**	**0.80**	**195**	P	**Pn**	**16 00 21.7**	**+1.8**
URZ	**Urewera**	**0.85**	**102**	P	**Pn**	**16 00 21.1**	**+1.0**
URZ				S	S	**16 00 43.6**	**-2.7**
URZ	**Urewera**	**0.85**	**102**	P	**Pn**	**16 00 21.1**	**+1.0**
KATZ	**Kakaramea**	**0.93**	**197**	P	**Pn**	**16 00 22.7**	**+2.0**
MTHZ	**Maungataniwha**	**0.98**	**141**	P	**Pn**	**16 00 22.6**	**+1.7**
MTHZ				S	S	**16 00 45.6**	**-2.1**
HIZ	**Hauiti**	**1.03**	**245**	P	**Pn**	**16 00 23.3**	**+2.2**
HIZ	**Hauiti**	**1.03**	**245**	P	**Pn**	**16 00 23.3**	**+2.2**
NTVZ	**North Tongarir**	**1.05**	**196**	P	**Pn**	**16 00 23.7**	**+2.4**
TMVZ	**Te Maari**	**1.06**	**195**	P	**Pn**	**16 00 23.5**	**+2.2**
WTVZ	**West Tongariro**	**1.08**	**199**	P	**Pn**	**16 00 23.5**	**+2.0**
TWVZ	**Taurewa**	**1.09**	**206**	P	**Pn**	**16 00 23.5**	**+2.0**
OTVZ	**Oturere**	**1.11**	**195**	P	**Pn**	**16 00 23.9**	**+2.2**
OTVZ				S	S	**16 00 47.9**	**-1.4**
BKZ	**Black Stump Fm**	**1.13**	**162**	P	**Pn**	**16 00 23.5**	**+1.8**
BKZ				S	S	**16 00 47.2**	**-2.2**
BKZ	**Black Stump Fm**	**1.13**	**162**	P	**Pn**	**16 00 23.5**	**+1.8**
SNVZ	**South Ngauruho**	**1.14**	**196**	P	**Pn**	**16 00 24.1**	**+2.2**
SNVZ				S	S	**16 00 48.5**	**-1.2**
RAGZ	**Rawiri**	**1.15**	**111**	P	**Pn**	**16 00 23.7**	**+1.8**
RAGZ				S	S	**16 00 47.8**	**-1.7**
RAHZ	**Arahi**	**1.16**	**136**	P	**Pn**	**16 00 24.2**	**+2.3**
RAHZ				S	S	**16 00 48.5**	**-1.1**
NMHZ	**Naumai**	**1.17**	**150**	P	**Pn**	**16 00 24.7**	**+2.7**
NMHZ				S	S	**16 00 49.5**	**-0.3**
MWZ	**Matawai**	**1.19**	**102**	P	**Pn**	**16 00 23.6**	**+1.5**
MWZ				S	S	**16 00 47.6**	**-2.3**
MKAZ	**Moumakai**	**1.21**	**324**	P	**Pn**	**16 00 24.6**	**+2.3**
SNGZ	**Shannon Statio**	**1.23**	**125**	P	**Pn**	**16 00 24.6**	**+2.2**
SNGZ				S	S	**16 00 48.2**	**-2.1**
WNVZ	**Wahianoa**	**1.28**	**196**	P	**Pn**	**16 00 24.8**	**+1.9**
WNVZ				S	S	**16 00 50.1**	**-1.3**
RUGZ	**Raukumara Rang**	**1.29**	**85**	P	**Pn**	**16 00 23.5**	**+0.5**
RUGZ				S	S	**16 00 47.7**	**-3.9**
PKVZ	**Pokaka**	**1.32**	**204**	P	**Pn**	**16 00 25.0**	**+2.0**
MOVZ	**Moawhango**	**1.33**	**190**	P	**Pn**	**16 00 24.7**	**+1.6**
WHHZ	**Waihua**	**1.35**	**137**	P	**Pn**	**16 00 25.7**	**+2.5**
KWHZ	**Kaweka Forest**	**1.36**	**168**	P	**Pn**	**16 00 25.6**	**+2.3**
KUZ	**Kuaotunu**	**1.37**	**349**	P	**Pn**	**16 00 25.2**	**+1.9**
MTVZ	**Mangateitei**	**1.37**	**199**	P	**Pn**	**16 00 25.4**	**+2.1**
ARHZ	**Aropaoanui**	**1.39**	**148**	P	**Pn**	**16 00 26.1**	**+2.7**
BHHZ

σ0$62/22, **mb4.1**/10, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.85**	**335**	P	**P**	**16 02 16.6**	**+0.2**
	6.0nm,0.4s,baz=257,slow=23,SNR=4.9						
MSVF	**Nonsavu**	**4.85**	**335**	P	**P**	**16 02 16.3**	**-0.1**
RAO	**Raoul Island**	**7.26**	**167**	P	**P**	**16 02 37.0**	**+0.2**
ARMA	**Armidale**	**26.87**	**246**	P	**P**	**16 05 40.1**	**+0.8**
ARMA				IAmb	IAmb	16 06 12.2	
	comp=Z,14nm,1.4s						
CTA	**Charters Tower**	**31.71**	**267**	P	**P**	**16 06 21.8**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=96,slow=8.4,SNR=8.8						
	comp=Z,2.1nm,0.4s						
CTAO	**Charters Tower**	**31.71**	**267**	P	**P**	**16 06 21.8**	**+0.8**
TOO	**Toolangi**	**33.59**	**235**	P	**P**	**16 06 36.4**	**-0.2**
TOO				IAmb	IAmb	16 07 18.5	
	comp=Z,8.8nm,1.2s						
STKA	**Stephens Creek**	**35.59**	**246**	P	**P**	**16 06 53.4**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=89,slow=11,SNR=6.9						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**35.59**	**246**	P	**P**	**16 06 53.5**	**+0.2**
BBOO	**Buckleboo**	**40.34**	**245**	P	**P**	**16 07 30.6**	**-1.1**
AS31	**Alice Springs**	**42.54**	**259**	P	**P**	**16 07 49.1**	**-0.1**
ASAR	**Alice Springs**	**42.54**	**259**	P	**P**	**16 07 49.1**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=84,slow=7.6,SNR=59						
ASAR				PcP	**PcP**	**16 09 27.5**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=107,slow=3.2,SNR=3.6						
	comp=Z,1.7nm,0.4s						
ASAR	**Alice Springs**	**42.54**	**259**	P	**P**	**16 07 47.8**	**-1.4**
WR0	**Warramunga Arr**	**42.56**	**264**	P	**P**	**16 07 49.0**	**-0.4**
WR0				IAmb	IAmb	16 08 20.4	
	comp=Z,9.0nm,1.5s						
WB2	**Warramunga Arr**	**42.74**	**264**	P	**P**	**16 07 50.4**	**-0.4**
WB2				IAmb	IAmb	16 08 19.4	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**42.74**	**264**	P	**P**	**16 07 50.3**	**-0.5**
WRA	**Warramunga Arr**	**42.75**	**264**	P	**P**	**16 07 50.5**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=97,slow=8.2,SNR=158						
	comp=Z,0.9nm,0.3s						
KNRA	**Kununurra**	**48.92**	**268**	P	**P**	**16 08 37.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**51.18**	**264**	P	**P**	**16 08 54.9**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=111,slow=6.2,SNR=13						
	comp=Z,0.9nm,0.3s						
FITZ	**Fitzroy Crossi**	**51.18**	**264**	P	**P**	**16 08 54.6**	**+0.6**
FITZ				IAmb	IAmb	16 09 05.9	
	comp=Z,9.3nm,1.4s						
MBWA	**Marble Bar**	**55.89**	**259**	P	**P**	**16 09 26.8**	**-0.3**
MBWA				IAmb	IAmb	16 09 51.4	
	comp=Z,14nm,1.2s						

IDC ***29*** *16:24:12.3±10.0, 18.49N×97.92W, h0km, mb3.7/2, mbtmp3.5/3, ML2.9/1, MS3.2/5, Error ellipse: s-maj=179.9km s-min=143.0km az=102.0*

MEX ***29*** *16:24:17.9±1.3, 18.95N×98.58W, h3km, MD3.8*

ISC 29 16:24:17.0±1.3, 18.91N±0.04×98.60W±0.03, h3km±10km, n23, σ1$37/33, MS3.0/3, 1D, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPM	**Popocatepetl**	**0.16**	**352**	***e*P**	**Pg**	**16 24 19.9**	**-0.5**
	baz=159,slow=6.9						
PPM				*i* S	**Sg**	16 24 22.1	-0.4
YAIG	**Yautepec**	**0.44**	**264**	*i* P	**Pb**	16 24 26.2	-1.4
YAIG				*e*S	**Sb**	16 24 33.4	-1.2
THVM	**De Xico**	**0.53**	**319**	*e*P	**Pg**	16 24 27.6	+0.3
THVM				*e*S	**Sg**	16 24 35.8	+1.5
TLVM	**San Miguel Top**	**0.60**	**300**	*e*P	**Pg**	16 24 29.5	+0.9
TLVM				*e*S	**Sb**	16 24 38.9	-0.6
CNCY	**Coyoacan**	**0.68**	**307**	*i* P	**Pg**	16 24 30.4	+0.3
CNCY				*i* S	**Sg**	16 24 40.1	+1.2
UNM	**Universidad Na**	**0.69**	**308**	*e*P	**Pg**	16 24 30.9	+0.7
UNM				*e*S	**Sg**	16 24 39.7	+0.5
CTVM	**Cuauhtemoc**	**0.75**	**315**	*i* P	**Pg**	16 24 29.3	-2.2
CTVM				*e*S	**Sg**	16 24 42.8	+1.5
GMVM	**Gustavo A Made**	**0.76**	**321**	*e*P	**Pg**	16 24 31.3	-0.3
GMVM				*e*S	**Sg**	16 24 42.2	+0.8
AOVM	**Tlapan**	**0.77**	**298**	*e*P	**Pg**	16 24 32.4	+0.6
AOVM				*e*S	**Sb**	16 24 43.7	-0.7
MAVM	**Malinalco, Edo**	**0.85**	**274**	*e*P	**Pn**	16 24 38.6	+2.6
MAVM				*e*S	**Sn**	16 24 51.1	+2.1
PLIG	**Platanillo**	**0.99**	**239**	*e*P	**Pn**	16 24 36.5	-1.5
PLIG				*e*S	**Sn**	16 24 51.3	-1.3
FTIG	**Fresnillo de T**	**1.09**	**156**	*e*P	**Pn**	16 24 37.9	-1.4
THEZ	**Tehuacan**	**1.23**	**110**	*i* P	**Pg**	16 24 41.7	+1.0
THEZ				*i* S	**Sn**	16 24 58.5	0.0
DEIG	**Demacu**	**1.45**	**344**	*e*P	**Pn**	16 24 42.9	-1.4
CXUV	**Coxquihui**	**1.58**	**37**	*i* P	**Pn**	16 24 44.6	-1.4
CXUV				*i* S	**Sn**	16 25 04.9	-2.1
JAUV	**Jalcomulco**	**1.76**	**75**	*i* P	**Pn**	16 24 48.8	+0.4
JAUV				*i* S	**Sb**	16 25 13.9	+1.3
ARIG	**Puente Sto Nin**	**1.77**	**250**	*e*P	**Pg**	16 24 49.9	-1.0
TXAR	**Lajitas Array**	**11.36**	**337**	Pn	Pn	16 27 06.8	+6.4
	baz=157,slow=14,SNR=2.9						
TXAR				Lg	Lg	16 30 18.0	
	baz=141,slow=26,SNR=2.8						
TXAR				LR	LR	16 31 59.6	
	comp=Z,117nm,19.0s,baz=135,slow=39						
	0.4nm,1.0s						
ANMO	**Albuquerque**	**17.43**	**338**	LR	LR	16 35 34.4	
	comp=Z,70nm,19.7s,baz=159,slow=38						
PDAR	**Pinedale Array**	**25.53**	**341**	P	**P**	**16 29 48.3**	**+1.2**
	0.7nm,0.8s,baz=148,slow=12,SNR=7.2						
PDAR				LR	LR	16 41 05.2	
	comp=Z,34nm,18.1s,baz=152,slow=39						
	0.7nm,0.8s						
NVAR	**Mina Array Bea**	**25.92**	**323**	P	**P**	**16 29 53.2**	**+2.4**
	1.5nm,0.7s,baz=143,slow=9.9,SNR=12						
	1.5nm,0.7s						
ELK	**Elko**	**26.03**	**330**	LR	LR	16 41 37.5	
	comp=Z,46nm,20.7s,baz=149,slow=39						
YBH	**Yreka Blue Hor**	**30.64**	**323**	LR	LR	16 44 22.0	
	comp=Z,58nm,18.8s,baz=196,slow=39						

ARE ***29*** *16:54:10±1.8, 5.14S±0.09×80.6W±0.1, h72km±8km, Error ellipse: s-maj=20.3km s-min=12.8km az=76.0*

NEIC ***29*** *16:54:11.1±1.1, 5.21S±0.04×80.5W±0.2, h87km±17km, mb4.1/3, ML4.2(ARE), Error ellipse: s-maj=23.6km s-min=5.3km az=87.0*

ISC 29 16:54:11.9±2.3, 5.2S±0.1×80.4W±0.3, h100km, n10, σ1$24/10, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSC	**San Juan Bosco**	**2.80**	**44**	Pn	**Pn**	**16 54 54.5**	**-0.6**
CHSH	**Refugio Sur-Vo**	**3.98**	**23**	Pn	**Pn**	**16 55 11.0**	**-0.5**
PORT	**Chimborazo Vol**	**4.05**	**24**	Pn	**Pn**	**16 55 11.8**	**-0.6**
OTAV	**Otavalo**	**5.74**	**20**	Pn	**Pn**	**16 55 34.1**	**-1.0**
NNA	**Nana**	**7.64**	**153**	Pn	**Pn**	**16 56 00.1**	**-0.6**
CZSB	**Cruzeiro do Su**	**8.09**	**109**	Pn	**Pn**	**16 56 06.3**	**-0.5**
ETMB	**Extrema**	**14.84**	**109**	Pn	**Pn**	**16 57 35.4**	**-1.4**
SAML	**Samuel**	**17.53**	**103**	P	**Pn**	**16 58 12.3**	**+2.1**
SAML				IAmb	IAmb	16 58 31.5	
	comp=Z,4.5nm,0.8s						
BOAV	**Boa Vista**	**21.27**	**70**	P	**P**	**16 58 51.8**	**+1.3**
BOAV				IAmb	IAmb	16 58 53.7	
	comp=Z,7.8nm,1.1s						
P48A	**Milroy**	**44.65**	**355**	P	**P**	**17 02 15.0**	**+0.3**
P48A				IAmb	IAmb	17 02 17.0	
	comp=Z,8.4nm,0.6s						

IDC ***29*** *17:01:01.4±7.9, 19.34S×177.44W, h338km±78km, mb3.8/12, mbtmp4.4/12, Error ellipse: s-maj=32.7km s-min=21.2km az=154.0*

NEIC ***29*** *17:01:02.3±1.1, 19.3S±0.2×177.5W±0.1, h342km±7km, mb4.5/151, Error ellipse: s-maj=22.5km s-min=17.6km az=159.0*

ISC 29 17:01:02.1±0.5, 19.4S±0.1×177.40W±0.09, h350km, n211, σ0$99/211, mb4.5/88, 3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.64**	**291**	Pn	**Pn**	**17 02 15.2**	**-2.7**
NIUE	**Niue**	**7.06**	**88**	Pn	**Pn**	**17 02 43.2**	**-2.0**
TARA	**Tarawa**	**22.74**	**334**	P	**P**	**17 05 34.9**	**-0.3**
TOO	**Toolangi**	**36.99**	**233**	P	**P**	**17 07 40.3**	**+0.9**
TOO				IAmb	IAmb	17 07 41.0	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**38.77**	**243**	P	**P**	**17 07 55.0**	**+0.8**
	comp=Z,3.0nm,0.5s,baz=89,slow=4.0,SNR=12						
	comp=Z,3.0nm,0.5s						

WR0	**Warramunga Arr**	**45.13**	**261**	P	**P**	**17 08 45.2**	**0.0**
WB0	**Warramunga Arr**	**45.30**	**261**	P	**P**	**17 08 46.2**	**-0.3**
WB2	**Warramunga Arr**	**45.31**	**261**	P	**P**	**17 08 46.1**	**-0.6**
WRAB	**Tennant Creek**	**45.31**	**261**	P	**P**	**17 08 45.7**	**-1.0**
WRA	**Warramunga Arr**	**45.32**	**261**	P	**P**	**17 08 46.0**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=97,slow=7.2,SNR=76						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**45.32**	**261**	P	**P**	**17 08 45.0**	**-1.7**
AS31	**Alice Springs**	**45.32**	**256**	P	**P**	**17 08 46.5**	**-0.2**
ASAR	**Alice Springs**	**45.33**	**256**	P	**P**	**17 08 46.5**	**-0.2**
	comp=Z,12nm,0.7s,baz=93,slow=8.1,SNR=228						
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**45.33**	**256**	P	**P**	**17 08 46.4**	**-0.4**
FORT	**Forrest**	**50.24**	**246**	P	**P**	**17 09 23.9**	**-0.1**
FORT				IAmb	IAmb	17 09 43.3	
	comp=Z,32nm,1.1s						
PSA00	**Pilbara Seismi**	**58.47**	**256**	P	**P**	**17 10 22.8**	**0.0**
PSA00				IAmb	IAmb	17 10 24.0	
	comp=Z,12nm,0.8s						
PSA00	**Pilbara Seismi**	**58.47**	**256**	P	**P**	**17 10 22.7**	**-0.1**
PSA00				IAmb	IAmb	17 10 23.5	
	comp=Z,6.7nm,1.0s						
MBWA	**Marble Bar**	**58.65**	**257**	P	**P**	**17 10 24.1**	**0.0**
MBWA				IAmb	IAmb	17 10 50.6	
	comp=Z,27nm,1.5s						
CASY	**Casey**	**65.17**	**205**	P	**P**	**17 11 06.6**	**+0.3**
CASY				IAmb	IAmb	17 11 29.6	
	comp=Z,10.0nm,1.4s						
MJAR	**Matsushiro Arr**	**69.69**	**323**	P	**P**	**17 11 34.5**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=156,slow=6.6,SNR=10						
	comp=Z,5.1nm,0.8s						
PETK	**Peppavlovsk-**	**75.39**	**345**	P	**P**	**17 12 07.5**	**-0.2**
	comp=Z,4.0nm,0.6s,baz=134,slow=8.3,SNR=15						
	comp=Z,4.0nm,0.6s						
KSRS	**Korea Array**	**76.47**	**318**	P	**P**	**17 12 15.2**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=125,slow=6.8,SNR=3.3						
	comp=Z,1.8nm,0.8s						
BBGB	**Big Mountain B**	**77.02**	**43**	P	**P**	**17 12 18.5**	**+1.2**
KMPM	**Mount Pierce**	**77.45**	**39**	P	**P**	**17 12 21.2**	**+1.6**
KMPM				IAmb	IAmb	17 12 21.9	
	comp=Z,9.7nm,0.9s						
KMRM	**Mail Ridge**	**77.57**	**39**	P	**P**	**17 12 21.2**	**+1.0**
KHMM	**Horse Mountain**	**77.97**	**39**	P	**P**	**17 12 23.8**	**+1.3**
KHMM				IAmb	IAmb	17 12 25.1	
	comp=Z,12nm,1.3s						
ISA	**Isabella, Lake**	**78.18**	**45**	P	**P**	**17 12 24.6**	**+0.9**
ISA				IAmb	IAmb	17 12 25.8	
	comp=Z,8.1nm,0.8s						
KRMB	**Red Mountain**	**78.27**	**38**	P	**P**	**17 12 25.7**	**+1.6**
KRMB				IAmb	IAmb	17 12 27.2	
	comp=Z,7.9nm,1.2s						
CMB	**Columbia Colle**	**78.29**	**43**	P	**P**	**17 12 25.1**	**+0.9**
CMB				IAmb	IAmb	17 12 25.9	
	comp=Z,5.9nm,1.0s						
YUH	**Yuha Desert**	**78.31**	**49**	P	**P**	**17 12 25.1**	**+0.8**
YUH				IAmb	IAmb	17 12 26.3	
	comp=Z,10nm,1.4s						
USRK	**Ussuriysk Ar.**	**78.41**	**325**	P	**P**	**17 12 26.4**	**+1.9**
	comp=Z,1.4nm,0.6s,baz=92,slow=4.3,SNR=4.7						
	comp=Z,1.4nm,0.6s						
PFO	**Pinyon Flats O**	**78.44**	**48**	P	**P**	**17 12 25.3**	**+0.1**
AFDM	**Forest Hills D**	**78.46**	**42**	P	**P**	**17 12 25.8**	**+0.7**
AFDM				IAmb	IAmb	17 12 26.7	
	comp=Z,5.9nm,1.0s						
ORV	**Oroville**	**78.50**	**41**	P	**P**	**17 12 25.3**	**0.0**
ORV				IAmb	IAmb	17 12 26.9	
	comp=Z,6.2nm,0.9s						
PMD	**Palm Desert**	**78.52**	**48**	P	**P**	**17 12 25.4**	**0.0**
PMD				IAmb	IAmb	17 12 27.5	
	comp=Z,17nm,1.4s						
KBO	**Bosley Butte**	**78.53**	**37**	P	**P**	**17 12 26.1**	**+0.7**
KBO				IAmb	IAmb	17 12 27.2	
	comp=Z,16nm,1.5s						
MDPB	**Devils Postpil**	**78.90**	**44**	P	**P**	**17 12 28.8**	**+1.0**
MDPB				IAmb	IAmb	17 12 29.6	
	comp=Z,7.6nm,0.9s						
OMMB	**Old Mammoth Mi**	**78.94**	**44**	P	**P**	**17 12 29.2**	**+1.1**
YBH	**Yreka Blue Hor**	**79.10**	**38**	P	**P**	**17 12 29.8**	**+1.2**
YBH				IAmb	IAmb	17 12 30.7	
	comp=Z,5.9nm,0.9s						
GSC	**Goldstone, Bar**	**79.11**	**47**	P	**P**	**17 12 29.4**	**+0.6**
GSC				IAmb	IAmb	17 12 30.7	
	comp=Z,12nm,1.2s						
MPK	**Martis Peak**	**79.26**	**42**	P	**P**	**17 12 30.7**	**+1.0**
GLA	**Glamis**	**79.30**	**49**	P	**P**	**17 12 31.3**	**+1.6**
GLA				IAmb	IAmb	17 12 32.9	
	comp=Z,7.6nm,0.9s						
BEKR	**Beckworth**	**79.39**	**41**	P	**P**	**17 12 30.8**	**+0.5**
BEKR				IAmb	IAmb	17 12 32.0	
	comp=Z,6.9nm,1.0s						
PNTR	**Pine Nut**	**79.41**	**42**	P	**P**	**17 12 31.4**	**+1.0**
QSM	**Queen of Sheba**	**79.44**	**46**	P	**P**	**17 12 31.1**	**+0.7**
DSP	**Deep Springs**	**79.48**	**44**	P	**P**	**17 12 31.9**	**+1.4**
DSP				IAmb	IAmb	17 12 32.7	
	comp=Z,8.3nm,1.0s						
VCNR	**Virginia City**	**79.50**	**42**	P	**P**	**17 12 31.6**	**+0.7**
VCNR				IAmb	IAmb	17 12 32.8	
	comp=Z,5.9nm,0.9s						
HUMO	**Hull Mountain**	**79.50**	**38**	P	**P**	**17 12 31.2**	**+0.6**
HUMO				IAmb	IAmb	17 12 32.9	
	comp=Z,9.1nm,1.3s						
YERR	**Yerington**	**79.58**	**42**	P	**P**	**17 12 32.3**	**+1.0**
LCH	**Last Change Ra**	**79.62**	**45**	P	**P**	**17 12 32.4**	**+0.9**
LHV	**Little Huntoon**	**79.63**	**43**	P	**P**	**17 12 32.6**	**+1.3**
LHV				IAmb	IAmb	17 12 33.6	
	comp=Z,9.1nm,0.9s						
L04D	**Klamath Falls**	**79.64**	**38**	P	**P**	**17 12 32.4**	**+0.9**
L04D				IAmb	IAmb	17 12 33.2	
	comp=Z,8.9nm,0.8s						
DBO	**Dodson Butte**	**79.66**	**37**	P	**P**	**17 12 32.1**	**+0.6**
GRAC	**Grapevine Rang**	**79.67**	**45**	P	**P**	**17 12 32.8**	**+1.1**
GWY	**Greenwater Val**	**79.69**	**46**	P	**P**	**17 12 32.5**	**+0.5**
RYN	**Ryan**	**79.83**	**43**	P	**P**	**17 12 33.4**	**+0.8**
NVAR	**Mina Array Bea**	**79.86**	**43**	P	**P**	**17 12 33.5**	**+0.7**
	comp=Z,4.8nm,0.7s,baz=224,slow=9.2,SNR=37						
	comp=Z,4.8nm,0.7s						
NVAR	**Mina Array Bea**	**79.86**	**43**	P	**P**	**17 12 33.2**	**+0.4**
PAHR	**Pah Rah Range**	**79.91**	**42**	P	**P**	**17 12 33.9**	**+1.0**
PAHR				IAmb	IAmb	17 12 34.8	
	comp=Z,8.8nm,1.0s						
GMN	**Gold Mountain**	**79.91**	**45**	P	**P**	**17 12 33.9**	**+0.8**
113A	**Mohawk Valley,**	**79.92**	**50**	P	**P**	**17 12 33.5**	**+0.5**
NV11	**Mina Array Sit**	**79.96**	**43**	P	**P**	**17 12 33.9**	**+0.6**
NV11				IAmb	IAmb	17 12 35.1	
	comp=Z,6.3nm,0.9s						
MZP	**Montezuma Peak**	**80.05**	**44**	P	**P**	**17 12 34.1**	**+0.2**
214A	**Organ Pipe Nat**	**80.20**	**51**	P	**P**	**17 12 35.3**	**+0.7**
KVN	**Kaiserville**	**80.34**	**43**	P	**P**	**17 12 36.1**	**+0.7**
KVN				IAmb	IAmb	17 12 37.0	
	comp=Z,5.7nm,0.9s						
TPH	**Tonopah**	**80.36**	**44**	P	**P**	**17 12 35.9**	**+0.4**
J04D	**Umpqua Nationa**	**80.39**	**38**	P	**P**	**17 12 36.1**	**+0.6**
TPNV	**Topopah Spring**	**80.39**	**45**	P	**P**	**17 12 36.0**	**+0.4**
BUCK	**Buck Mountain**	**80.48**	**36**	P	**P**	**17 12 36.7**	**+0.9**
MOD	**Modoc Plateau**	**80.63**	**39**	P	**P**	**17 12 37.5**	**+0.7**
MOD				IAmb	IAmb	17 12 38.5	
	comp=Z,7.1nm,0.9s						
K05A	**Summer Lake**	**80.78**	**39**	P	**P**	**17 12 38.4**	**+0.9**
O18K	**Koktuh Hills**	**81.05**	**11**	P	**P**	**17 12 37.5**	**-0.9**
O18K				IAmb	IAmb	17 12 38.4	
	comp=Z,9.4nm,0.9s						
S11A	**Rachel**	**81.10**	**45**	P	**P**	**17 12 40.2**	**+0.9**
H04A	**Detroit Lake**	**81.23**	**36**	P	**P**	**17 12 40.3**	**+0.6**
H04A				IAmb	IAmb	17 12 41.0	
	comp=Z,6.8nm,0.7s						
PINE	**Pine Mountain**	**81.39**	**38**	P	**P**	**17 12 41.6**	**+0.9**
PRN	**Pahroc Range**	**81.44**	**46**	P	**P**	**17 12 42.5**	**+1.4**
PRN				IAmb	IAmb	17 12 43.4	
	comp=Z,8.3nm,1.1s						
O19K	**Port Alsworth**	**81.53**	**11**	P	**P**	**17 12 39.9**	**-0.9**
ILSW	**Iliamna Southw**	**81.56**	**12**	P	**P**	**17 12 38.5**	**-2.7**
ILSW				IAmb	IAmb	17 12 40.8	
	comp=Z,16nm,1.2s						
R11A	**Troy Canyon, C**	**81.59**	**44**	P	**P**	**17 12 42.6**	**+0.7**
E03A	**Lebam**	**81.66**	**34**	P	**P**	**17 12 41.6**	**-0.1**
BMN	**Battle Mountai**	**81.68**	**42**	P	**P**	**17 12 42.8**	**+0.5**
BMN				IAmb	IAmb	17 12 44.1	
	comp=Z,8.2nm,0.9s						
CN2	**Changchun**	**81.81**	**322**	***e*P**	**P**	**17 12 43.8**	**+1.2**
BRLK	**Bradley Lake**	**81.82**	**13**	P	**P**	**17 12 41.6**	**-0.8**
TUC	**Tucson**	**81.87**	**52**	P	**P**	**17 12 45.0**	**+1.6**
TUC				IAmb	IAmb	17 12 46.2	
	comp=Z,7.0nm,0.9s						
WVOR	**Wild Horse Val**	**81.95**	**40**	P	**P**	**17 12 44.5**	**+0.9**
WVOR				IAmb	IAmb	17 12 45.5	

	comp=Z,11nm,1.1s						
NLWA	**Neilton Lookou**	**82.04**	**33**	P	**P**	**17 12 44.7**	**+0.9**
NLWA				IAmb	IAmb	17 12 45.8	
	comp=Z,12nm,1.1s						
I07A	**Izee**	**82.40**	**38**	P	**P**	**17 12 47.1**	**+1.3**
LCMT	**Little Creek M**	**82.46**	**47**	P	**P**	**17 12 47.5**	**+1.1**
319A	**Douglas**	**82.56**	**53**	P	**P**	**17 12 49.1**	**+2.1**
J08A	**Circle Bar Ran**	**82.58**	**39**	P	**P**	**17 12 47.5**	**+0.7**
B04A	**Port Angeles**	**82.65**	**33**	P	**P**	**17 12 47.3**	**+0.5**
CCUT	**Cedar City**	**82.66**	**46**	P	**P**	**17 12 48.8**	**+1.3**
CCUT				IAmb	IAmb	17 12 49.8	
	comp=Z,7.2nm,0.9s						
KNB	**Kanab**	**82.76**	**47**	P	**P**	**17 12 49.5**	**+1.5**
KNB				IAmb	IAmb	17 12 50.2	
	comp=Z,5.7nm,0.9s						
SPR3	**Spring Creek 3**	**82.77**	**44**	P	**P**	**17 12 48.3**	**+0.1**
SPR3				IAmb	IAmb	17 12 49.4	
	comp=Z,4.0nm,0.9s						
CLRS	**Cowichan Lake**	**82.82**	**32**	P	**P**	**17 12 48.1**	**+0.4**
CLRS				IAmb	IAmb	17 12 49.4	
	comp=Z,7.2nm,0.9s						
U15A	**North Rim**	**82.82**	**48**	P	**P**	**17 12 49.6**	**+1.2**
PSUT	**Pine Spring**	**82.84**	**45**	P	**P**	**17 12 48.9**	**+0.5**
PSUT				IAmb	IAmb	17 12 50.1	
	comp=Z,5.2nm,1.0s						
SZCU	**Shurtz Canyon**	**82.87**	**46**	P	**P**	**17 12 49.5**	**+0.9**
SZCU				IAmb	IAmb	17 12 50.8	
	comp=Z,6.0nm,1.0s						
WUAZ	**Wupatki**	**83.01**	**49**	P	**P**	**17 12 50.2**	**+0.9**
WUAZ				IAmb	IAmb	17 12 52.2	
	comp=Z,8.6nm,1.1s						
ELK	**Elko**	**83.11**	**43**	P	**P**	**17 12 50.5**	**+0.7**
ELK				IAmb	IAmb	17 12 51.4	
	comp=Z,5.6nm,0.9s						
F07A	**Phinny Hill Vi**	**83.24**	**36**	P	**P**	**17 12 50.7**	**+0.8**
PKCU	**Pink Cliffs**	**83.32**	**47**	P	**P**	**17 12 53.2**	**+2.2**
G08A	**Pilot Rock**	**83.42**	**37**	P	**P**	**17 12 51.8**	**+0.8**
G08A				IAmb	IAmb	17 12 52.7	
	comp=Z,10nm,0.9s						
X18A	**Snowflake**	**83.55**	**50**	P	**P**	**17 12 52.4**	**+0.3**
LTY	**Liberty**	**83.65**	**35**	P	**P**	**17 12 52.0**	**-0.1**
LTY				IAmb	IAmb	17 12 53.3	
	comp=Z,7.2nm,1.2s						
MTPU	**Mount Pierson**	**83.71**	**46**	P	**P**	**17 12 54.7**	**+1.8**
MTPU				IAmb	IAmb	17 12 55.7	
	comp=Z,7.1nm,0.9s						
HAWA	**Hanford**	**83.75**	**36**	P	**P**	**17 12 53.2**	**+0.7**
HAWA				IAmb	IAmb	17 12 54.2	
	comp=Z,8.8nm,0.9s						
MVU	**Marysvale**	**83.93**	**46**	P	**P**	**17 12 55.5**	**+1.6**
MSU	**Marysvale**	**83.96**	**46**	P	**P**	**17 12 55.4**	**+1.4**
E08A	**Dider Farm, El**	**84.08**	**36**	P	**P**	**17 12 54.5**	**+0.4**
E08A				IAmb	IAmb	17 12 55.7	
	comp=Z,6.6nm,0.7s						
BMO	**Blue Mountains**	**84.13**	**38**	P	**P**	**17 12 54.8**	**+0.2**
MFID	**Camas Ranch**	**84.20**	**40**	P	**P**	**17 12 55.8**	**+0.8**
121A	**Cookes Peak, D**	**84.22**	**53**	P	**P**	**17 12 57.3**	**+2.0**
121A				IAmb	IAmb	17 12 58.3	
	comp=Z,5.5nm,0.9s						
SCM	**Sheep Creek Mo**	**84.46**	**14**	P	**P**	**17 12 54.9**	**-0.9**
SCM				IAmb	IAmb	17 12 55.9	
	comp=Z,9.0nm,0.8s						
D08A	**Wollman Farm,**	**84.49**	**36**	P	**P**	**17 12 56.9**	**+0.7**
D08A				IAmb	IAmb	17 12 57.3	
	comp=Z,6.7nm,0.9s						
E09A	**Wood Farm, Sta**	**84.60**	**37**	P	**P**	**17 12 57.1**	**+0.4**
E09A				IAmb	IAmb	17 12 58.1	
	comp=Z,5.5nm,1.0s						
N25K	**Chitina, Valde**	**84.91**	**15**	P	**P**	**17 12 57.6**	**-0.3**
N25K				IAmb	IAmb	17 12 58.3	
	comp=Z,5.0nm,0.8s						
M24K	**Tolsona, Glenn**	**84.97**	**14**	P	**P**	**17 12 58.0**	**-0.3**
B08A	**Colville Reser**	**85.03**	**35**	P	**P**	**17 12 58.7**	**-0.1**
B08A				IAmb	IAmb	17 12 59.6	
	comp=Z,4.1nm,0.8s						
HLID	**Hailey**	**85.15**	**41**	P	**P**	**17 13 00.7**	**+0.9**
HVU	**Hansel Valley**	**85.24**	**43**	P	**P**	**17 13 00.9**	**+0.7**
SRU	**San Rafael Swe**	**85.37**	**46**	P	**P**	**17 13 01.0**	**0.0**
SRU				IAmb	IAmb	17 13 02.5	
	comp=Z,4.1nm,0.7s						
**

comp=Z,290nm,4.8s
RLMT **Red Lodge** 89.12 41 P P 17 13 19.7 +1.1
RLMT IAmb IAmb 17 13 20.6
comp=Z,5.6nm,0.9s
VNA3 **Neumayer Olymp** 89.17 176 P P 17 13 17.9 -0.3
GCMT **Greycliff** 89.20 40 P P 17 13 20.1 +1.2
VNA2 **Neumayer--Watz** 89.61 177 P P 17 13 20.2 -0.1
baz=186,slow=4.0
AMTX **Amarillo** 89.82 53 P P 17 13 21.9 -0.1
AMTX IAmb IAmb 17 13 22.8
comp=Z,5.1nm,0.8s
CMAR **Chiang Mai Arr** 90.30 289 P P 17 13 26.2 +1.8
comp=Z,3.9nm,0.9s,baz=123,slow=2.8,SNR=23
comp=Z,3.9nm,0.9s
CMAR **Chiang Mai Arr** 90.30 289 P P 17 13 25.5 +1.0
CHTO **Chiang Mai** 90.42 290 P P 17 13 26.5 +1.4
CHTO IAmb IAmb 17 13 27.2
comp=Z,6.1nm,0.7s
PZH **PanZhiHua** 90.71 298 P P 17 13 27.5 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,4.8s
RSSD **Black Hills** 91.99 44 P P 17 13 32.3 +0.3
DGMT **Dagmar** 93.74 40 P P 17 13 39.8 +0.1
ARCES **ARCESS Array B** 127.97 350 PKP **PKPdf** 17 19 25.5 -0.5
comp=Z,1.5nm,0.7s,baz=349,slow=1.2,SNR=6.9
BRTR **Keskin Array B** 146.53 314 PKPbc **PKPbc** 17 20 02.4 -0.6
comp=Z,1.4nm,0.7s,baz=116,slow=5.6,SNR=5.4
CLL **Collm** 147.15 348 *i* PKPbc **PKPbc** 17 20 03.3 -0.9
comp=Z,11nm,1.0s
DPC **Dobruska-Polom** 147.27 344 *e*PKP **PKPbc** 17 20 04.4 -0.2
BRG **Berggiesshubel** 147.36 347 *i* PKP **PKPbc** 17 20 04.5 -0.2
BRG Amp 17 20 06.7
comp=Z,5.1nm,0.8s
KRLC **Kraliky** 147.40 343 *e*PKP **PKPbc** 17 20 05.1 +0.1
PRU **Pruhonice** 148.05 345 *e*PKP **PKPbc** 17 20 06.7 +0.1
BTNL **Ternell** 148.79 356 *d*PKP **PKPbc** 17 20 08.1 -0.4
KHC **Kasperske Hory** 149.08 346 **PKPbc** 17 20 08.6 -0.7
KHC **Kasperske Hory** 149.08 346 *e*PKP **PKPbc** 17 20 09.3 0.0
CKRC **Cesky Krumlov** 149.20 345 *e*PKP **PKPbc** 17 20 09.6 0.0
RCHB **Rochefort** 149.27 357 *d*PKP **PKPbc** 17 20 09.1 -0.5
GEC2 **GERESS Array S** 149.32 346 **PKPbc** 17 20 09.3 -0.7
GERES **GERESS Array B** 149.32 346 PKPbc **PKPbc** 17 20 09.5 -0.5
comp=Z,2.5nm,0.9s,baz=38,slow=2.4,SNR=18
GERES **GERESS Array B** 149.32 346 **PKPbc** 17 20 09.2 -0.8
CONA **Conrad Observa** 149.60 342 *e*P **PKPbc** 17 20 10.2 -0.4
comp=Z,3.4nm,0.7s
RONA **Rosalia, Austr** 149.68 342 *e*P **PKPbc** 17 20 10.6 -0.2
comp=Z,4.3nm,0.6s
WLF **Walferdange** 149.70 355 *d*PKP **PKPbc** 17 20 10.9 +0.2
ARSA **Arzberg** 150.31 342 *e*P **PKPbc** 17 20 10.9 -1.4
comp=Z,1.3nm,0.6s
BIOA **Bad Ischl, Aus** 150.41 345 *e*P **PKPbc** 17 20 11.8 -0.7
comp=Z,1.4nm,0.4s
SOKA **Soboth** 150.97 342 *e*P **PKPbc** 17 20 12.8 -1.1
comp=Z,5.2nm,1.1s
KBA **Koelnbreinsper** 151.06 345 *e*P **PKPbc** 17 20 13.7 -0.5
comp=Z,3.5nm,0.5s
WATA **Walderalm** 151.22 347 *e*P **PKPbc** 17 20 13.8 -0.8
comp=Z,4.4nm,0.5s
RETA **Reutte** 151.23 348 *e*P **PKPbc** 17 20 13.9 -0.5
comp=Z,2.6nm,0.6s
OBKA **Obir** 151.26 343 *e*P **PKPbc** 17 20 13.1 -1.5
comp=Z,1.3nm,0.6s
WTTA **Wattenberg** 151.27 347 *e*P **PKPbc** 17 20 14.2 -0.5
comp=Z,7.3nm,0.5s
MOTA **Moosalm** 151.30 348 *e*P **PKPbc** 17 20 13.9 -0.8
comp=Z,5.3nm,1.0s
MYKA **Terra Mystica** 151.40 344 *e*P **PKPbc** 17 20 13.5 -1.4
comp=Z,4.0nm,0.5s
SQTA **Sankt Quirin** 151.40 348 *e*P **PKPbc** 17 20 14.3 -0.6
comp=Z,4.6nm,0.6s
DIVS **Divibare** 151.43 333 **PKPbc** 17 20 13.7 -1.4
ABTA **Abfaltersbach** 151.57 346 *e*P **PKPbc** 17 20 14.0 -1.2
comp=Z,7.5nm,0.6s
DAVA **Damuels** 151.59 350 *e*P **PKPbc** 17 20 15.4 0.0
comp=Z,2.7nm,0.6s
PRED **Cave del Predi** 151.59 344 **PKPdf** 17 20 05.8 -3.0
FETA **Feichten** 151.69 348 *e*P **PKPbc** 17 20 15.2 -0.5
comp=Z,5.4nm,0.9s
LJU **Ljubljana** 151.69 342 *i* PKPbc **PKPbc** 17 20 14.9 -0.6
CRNS **Crni Vrh** 151.74 343 *i* PKPbc **PKPbc** 17 20 14.6 -1.0
STAL **STALIGIAL** 151.98 345 **PKPbc** 17 20 14.5 -1.7
CIMO **Cimolais** 151.99 345 **PKPbc** 17 20 14.7 -1.5

*NEIC **29** 17:10:16.7±1.0,20.9S±0.1×179.0W±0.1, h630km±9km, mb4.2/18, Error ellipse: s-maj=19.3km s-min=14.8km az=64.0*
*IDC **29** 17:10:16.1±1.7,20.88S×179.09W, h612km±18km, mb3.0/10, mbtmp4.0/11, Error ellipse: s-maj=23.3km s-min=16.9km az=139.0*
ISC 29 17:10:16.3±0.5, 20.91S±0.1×179.05W±0.09, h619km, n44, σ1°08/45, mb3.9/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.18**	**319**	P	**P**	**17 11 44.7**	**+0.1**
	84nm,0.5s,baz=154,slow=5.3,SNR=95						
NIUE	**Niue**	**8.77**	**80**	P	**P**	**17 12 23.0**	**-0.6**
MARNC	**Mare, Loyalty**	**12.07**	**265**	P	**P**	**17 12 55.4**	**-0.4**
PINNC	**Pines Island,**	**12.66**	**260**	P	**P**	**17 13 01.8**	**+0.2**
LIFNC	**LIFOU**	**12.82**	**268**	P	**P**	**17 13 00.6**	**-2.6**
OUZ	**Omahuta**	**15.66**	**203**	P	**P**	**17 13 31.6**	**+2.0**
OUZ				IAmb	IAmb	17 14 08.2	
	comp=Z,36nm,1.3s						
NNZ	**Nelson**	**21.24**	**196**	P	**P**	**17 14 19.1**	**-1.0**
CTAO	**Charters Tower**	**32.48**	**265**	P	**P**	**17 15 58.8**	**+0.6**
CTAO				IAmb	IAmb	17 16 21.2	
	comp=Z,20nm,1.4s						
BBOO	**Buckleboo**	**41.49**	**244**	P	**P**	**17 17 11.4**	**0.0**
WR0	**Warramunga Arr**	**43.38**	**263**	P	**P**	**17 17 26.6**	**+0.2**
WR0				IAmb	IAmb	17 18 10.7	
	comp=Z,9.9nm,1.5s						
AS31	**Alice Springs**	**43.47**	**257**	P	**P**	**17 17 26.6**	**-0.4**
ASAR	**Alice Springs**	**43.47**	**257**	P	**P**	**17 17 26.8**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=91,slow=8.0,SNR=26						
ASAR				PcP	**PcP**	**17 19 00.9**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=114,slow=4.0,SNR=4.6						
ASAR				ScP	**ScP**	**17 21 57.0**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=101,slow=4.3,SNR=6.5						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**43.47**	**257**	P	**P**	**17 17 26.7**	**-0.3**
WB0	**Warramunga Arr**	**43.55**	**263**	P	**P**	**17 17 27.1**	**-0.5**
WB0				IAmb	IAmb	17 17 43.2	
	comp=Z,9.3nm,1.4s						
WB2	**Warramunga Arr**	**43.56**	**263**	P	**P**	**17 17 27.5**	**-0.2**
WB2				IAmb	IAmb	17 17 34.7	
	comp=Z,5.3nm,1.2s						
WRAB	**Tennant Creek**	**43.56**	**263**	P	**P**	**17 17 24.6**	**-3.1**
WRAB				IAmb	IAmb	17 17 39.6	
	comp=Z,21nm,1.5s						
WRA	**Warramunga Arr**	**43.57**	**263**	P	**P**	**17 17 27.4**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.6,SNR=22						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**43.57**	**263**	P	**P**	**17 17 27.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**52.00**	**263**	P	**P**	**17 18 29.7**	**-0.6**
FITZ				IAmb	IAmb	17 19 05.8	
	comp=Z,5.7nm,1.1s						
SIJI	**Sorong**	**52.40**	**286**	P	**P**	**17 18 33.0**	**-0.3**
	comp=Z,6.3nm,0.7s,baz=44,slow=6.8,SNR=5.5						
	comp=Z,6.3nm,0.7s						
VNDA	**Vanda**	**57.42**	**185**	P	**P**	**17 19 07.4**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=4.8,slow=6.5,SNR=7.0						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	**57.42**	**185**	P	**P**	**17 19 07.1**	**+0.1**
QSPA	**South Pole Qui**	**69.16**	**180**	P	**P**	**17 20 22.4**	**+0.3**
QSPA				IAmb	IAmb	17 21 05.5	
	comp=Z,8.1nm,1.5s						
ADK	**Adak**	**72.50**	**2**	P	**P**	**17 20 40.7**	**-0.8**
PETK	**Petropavlovsk-**	**76.42**	**346**	P	**P**	**17 21 03.1**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=135,slow=7.1,SNR=4.1						
	comp=Z,1.4nm,0.6s						
CNBA	**Chernabura Isl**	**77.24**	**11**	P	**P**	**17 21 07.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**78.75**	**326**	P	**P**	**17 21 17.2**	**+1.1**
	comp=Z,2.4nm,0.9s,baz=109,slow=1.8,SNR=4.9						
	comp=Z,2.4nm,0.9s						
BELA	**Belgrano 2**	**79.28**	**173**	P	**P**	**17 21 17.8**	**-0.7**
OHAK	**Old Harbor**	**80.77**	**14**	P	**P**	**17 21 26.0**	**-0.3**
OHAK				IAmb	IAmb	17 21 54.4	
	comp=Z,19nm,1.4s						
NVAR	**Mina Array Bea**	**82.00**	**44**	P	**P**	**17 21 34.0**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=226,slow=7.6,SNR=5.1						
	comp=Z,0.5nm,0.5s						
TROLL	**Troll, Antarti**	**87.32**	**180**	P	**P**	**17 21 57.6**	**-0.9**
SNAA	**Sanae**	**87.63**	**179**	P	**P**	**17 21 58.6**	**-1.3**
VNA3	**Neumayer Olymp**	**87.80**	**177**	P	**P**	**17 21 59.6**	**-1.0**
TXAR	**Lajitas Array**	**88.10**	**58**	P	**P**	**17 22 04.5**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=246,slow=6.3,SNR=5.0						
	comp=Z,0.4nm,0.8s						
VNA2	**Neumayer--Watz**	**88.23**	**177**	P	**P**	**17 22 01.8**	**-0.8**
	baz=200,slow=4.0						
VNA1	**Neumayer--Stat**	**88.46**	**177**	P	**P**	**17 22 02.9**	**-0.7**
CCB	**Clear Creek Bu**	**88.63**	**13**	P	**P**	**17 22 03.5**	**-0.8**
CCB				IAmb	IAmb	17 22 03.9	
	comp=Z,2.5nm,0.8s						
ILAR	**Eielson Array**	**88.93**	**13**	P	**P**	**17 22 04.7**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=213,slow=5.3,SNR=11						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**17 22 10.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=116,slow=4.1,SNR=4.2						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**129.14**	**349**	PKP	**PKPdf**	**17 28 14.3**	**-0.3**
	comp=Z,5.2nm,1.0s,baz=349,slow=1.2,SNR=4.8						
FINES	**FINESS Array B**	**135.88**	**343**	SKPbc	**SKPbc**	**17 31 03.4**	**+1.3**
	comp=Z,3.3nm,1.0s,baz=79,slow=3.0,SNR=4.6						
AKASG	**Malin Array Be**	**142.88**	**330**	PKhKP	PKPpre	17 28 37.2	
	comp=Z,4.6nm,0.5s,baz=42,slow=4.2,SNR=17						
CLL	**Collm**	**148.22**	**346**	*i* PKPbc	**PKPbc**	**17 28 53.5**	**-0.2**
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**150.31**	**343**	PKPbc	**PKiKP**	**17 28 58.7**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=56,slow=2.4,SNR=5.9						

ASRS 29 17:20:46.1±0.8, 49°N±5°×9°9E±°, h10km, MLh3.1/5, Error ellipse: s-maj=10.6km s-min=4.0km az=4.3, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**1.51**	**334**	Pg	Pg	17 21 18.4	+3.3
KNGR				Sg	Sg	17 21 38.8	+4.1
ERNS	**Erzin**	**2.42**	**296**	Pg	Pg	17 21 32.8	+0.2
ERNS				Sg	Sg	17 22 04.3	+0.4
MOY	**Mondy**	**2.88**	**32**	Pg	Pg	17 21 41.9	+0.6
MOY				Sg	Sg	17 22 19.8	+1.1
ZAK	**Zakamensk**	**3.27**	**68**	Pg	Pg	17 21 49.4	+0.6
ZAK				Sg	Sg	17 22 33.0	+1.9
KZLR	**Kyzyl**	**3.59**	**315**	Sg	Sg	17 22 42.0	+0.6
ARDR	**Aradan**	**4.65**	**318**	Pg	Pg	17 22 13.8	-1.3
ARDR				Sg	Sg	17 23 13.5	-1.8
ULN	**Ulaanbaatar**	**5.81**	**101**	Sg	Sg	17 23 56.9	+4.2
CUR	**Chagan-Uzun**	**6.67**	**281**	Sg	Sg	17 24 22.6	+2.4
ULGR	**Ulagan, Altay**	**6.97**	**285**	Sg	Sg	17 24 29.1	-0.7
AKAR	**Aktash**	**7.16**	**283**	Sg	Sg	17 24 35.8	+0.1

NOU 29 17:21:39.9, 21°24S×169°79E, h0km, MLv4.3/15, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.66**	**261**	P	Pn	17 22 09.8	-0.4
MARNC	**Mare, Loyalty**	**1.66**	**261**	P	Pn	17 22 09.8	-0.4
LIFNC	**LIFOU**	**2.43**	**280**	P	Pn	17 22 19.1	-1.7
PINNC	**Pines Island,**	**2.57**	**237**	P	Pn	17 22 22.2	-0.6
PINNC	**Pines Island,**	**2.57**	**237**	P	Pn	17 22 22.2	-0.6
YATNC	**Mamie plateau,**	**2.82**	**253**	P	Pn	17 22 25.2	-1.0
YATNC	**Mamie plateau,**	**2.82**	**253**	P	Pn	17 22 25.2	-1.0
OUENC	**Ouen Island, N**	**2.98**	**246**	P	Pn	17 22 28.6	+0.1
OUENC	**Ouen Island, N**	**2.98**	**246**	P	Pn	17 22 28.3	-0.2
DZM	**Mont Dzumac**	**3.22**	**255**	P	Pn	17 22 32.2	+0.3
DZM	**Mont Dzumac**	**3.22**	**255**	P	Pn	17 22 31.9	0.0
ONTNC	**Ouen Toro**	**3.28**	**250**	P	Pn	17 22 32.3	-0.2
NOUC	**Port Laguerre**	**3.35**	**255**	P	Pn	17 22 33.6	0.0
NOUC	**Port Laguerre**	**3.35**	**255**	P	Pn	17 22 33.6	0.0
RTV	**Rentapao**	**3.66**	**339**	P	Pn	17 22 38.0	+0.2
DVP	**Devils Point**	**3.81**	**336**	P	Pn	17 22 39.3	-0.6
KOUNC	**Koumac, New Ca**	**5.19**	**277**	P	Pn	17 22 59.9	+1.0

*IDC **29** 17:21:40.6±1.2, 1.57N×125.92E, h0km, mb4.1/4, mbtmp3.9/6, ML3.5/2, Error ellipse: s-maj=56.0km s-min=20.3km az=63.0*
*DJA **29** 17:21:45.6±0.2,2.7N±2.2×12.6E±°, h10km, M4.2/15, mb4.3/4, mB5.0/2, MLv4.1/15, Mw(mB)4.3/2*
*NEIC **29** 17:21:48.9±1.1, 1.6N±0.1×126.38E±0.04, h59km±14km, mb4.1/9, Error ellipse: s-maj=18.0km s-min=4.6km az=189.0*
ISC 29 17:21:47.5±0.8, 1.66N±0.04×126.33E±0.06, h50km, n38, σ1°18/42, mb4.2/8, 3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**130**		**Pn**	**17 22 10.4**	**+0.2**
TNTI	**Ternate**	**1.36**	**130**	P	**Pn**	**17 22 10.5**	**+0.3**
TNTI				S	**Sn**	**17 22 28.5**	**+1.4**
SGSI	**Sangihe**	**2.17**	**338**	P	**Pn**	**17 22 21.4**	**+0.2**
SGSI				S	**Sn**	**17 22 47.7**	**+0.8**
LBMI	**Labuha**	**2.56**	**153**	P	**Pn**	**17 22 27.9**	**+1.3**
KMSI	**Cibinong**	**2.58**	**245**	P	**Pn**	**17 22 26.9**	**+0.1**
KMSI				S	**Sn**	**17 22 57.6**	**+0.6**
GTOI	**Gorontalo**	**3.47**	**253**	P	**Pn**	**17 22 39.8**	**+0.8**
SANI	**Sanana**	**3.70**	**185**	P	**Pn**	**17 22 41.4**	**-0.8**
SANI				S	**Sn**	**17 23 21.7**	**-2.8**
LUWI	**Luwuk**	**4.45**	**233**		**Pn**	**17 22 53.5**	**+1.0**
LUWI	**Luwuk**	**4.45**	**233**	P	**Pn**	**17 22 53.8**	**+1.3**
DDMP	**Don Marcelino,**	**4.46**	**352**	*e*P	**Pn**	**17 22 53.1**	**+0.5**
DDMP				*e*S	**Sn**	**17 23 43.0**	**-0.3**
MRSI	**Marisa**	**4.54**	**255**	P	**Pn**	**17 22 54.9**	**+1.2**
NLAI	**Namlea**	**4.92**	**171**	P	**Pn**	**17 22 59.8**	**+0.8**
SKMP	**Bagumbayan, Su**	**5.15**	**340**	*e*P	**Pn**	**17 23 02.4**	**+0.4**
SKMP				*e*S	**Sn**	**17 23 58.9**	**-1.4**
APSI	**Ampana**	**5.33**	**241**	P	**Pn**	**17 23 05.8**	**+1.2**
	0.4nm1μm94nm,0.6s						
SWI	**Sorong**	**5.53**	**117**	P	**Pn**	**17 23 07.8**	**+0.4**
	0.0nm8.4nm,1.0s						
SIJI	**Sorong**	**5.54**	**117**	Pn	**Pn**	**17 23 09.7**	**+2.2**
	0.7nm,0.3s,baz=336,slow=7.8,SNR=4.5						
	4.0nm,0.6s						
MPSI	**Mapaga**	**6.56**	**259**	P	**Pn**	**17 23 23.0**	**+1.5**
PAGZ	**Pagadian**	**6.81**	**335**	*e*P	**Pn**	**17 23 24.3**	**-0.7**
PAGZ				*e*S	Sn	17 24 34.4	-6.8
MYLDM	**Lahad Datu**	**8.56**	**294**		**Pn**	**17 23 51.2**	**+2.3**
KKM	**Kota Kinabalu**	**10.99**	**294**	Pn	**Pn**	**17 24 24.3**	**+2.1**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	**P**	**17 26 10.8**	**-1.4**
	0.2nm,0.3s,baz=5.5,slow=11,SNR=12						
	1.7nm,0.7s						
WB0	**Warramunga Arr**	**22.72**	**160**	P	**P**	**17 26 45.0**	**-0.4**
WB0				IAmb	IAmb	17 26 50.0	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**22.86**	**160**	P	**P**	**17 26 46.0**	**-0.8**
WRA	**Warramunga Arr**	**22.86**	**160**	P	**P**	**17 26 45.8**	**-1.0**
	comp=Z,5.3nm,0.6s,baz=339,slow=11,SNR=74						
	comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**22.86**	**160**	P	**P**	**17 26 45.8**	**-1.0**
WB2	**Warramunga Arr**	**22.86**	**160**	P	**P**	**17 26 45.9**	**-1.0**
WB2				IAmb	IAmb	17 26 48.0	
	comp=Z,6.9nm,0.8s						
WR0	**Warramunga Arr**	**22.95**	**160**	P	**P**	**17 26 46.9**	**-0.8**
AS31	**Alice Springs**	**26.23**	**164**	P	**P**	**17 27 17.7**	**-0.3**
ASAR	**Alice Springs**	**26.23**	**164**	P	**P**	**17 27 17.6**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=342,slow=7.8,SNR=43						
ASAR				PcP	**PcP**	**17 30 44.5**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=343,slow=2.0,SNR=8.6						
	comp=Z,1.2nm,0.6s						
STKA	**Stephens Creek**	**36.36**	**158**	P	**P**	**17 28 47.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=320,slow=8.0,SNR=8.1						
	comp=Z,0.9nm,0.3s						
STKA	**Stephens Creek**	**36.36**	**158**	P	**P**	**17 28 47.4**	**+0.5**
STKA				IAmb	IAmb	17 29 22.1	
	comp=Z,1.0nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**42.96**	**64**	T	T	18 16 45.4	
	baz=251,slow=74,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**42.97**	**64**	T	T	18 16 43.7	
	baz=251,slow=74,SNR=2.7						
H11S1	**WAKE ISLAND Hy**	**42.97**	**64**	T	T	18 16 51.0	
	baz=251						
MK31	**Makanchi Array**	**59.03**	**326**	P	**P**	**17 31 41.0**	**-1.4**
MK31				IAmb	IAmb	17 32 06.6	
	comp=Z,2.8nm,1.4s						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	**17 31 41.2**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=119,slow=7.7,SNR=20						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	**17 31 40.9**	**-1.5**
MAKZ	**Makanchi**	**59.21**	**326**	P	**P**	**17 31 42.3**	**-1.3**
MAKZ				IAmb	IAmb	17 32 21.8	
	comp=Z,2.4nm,1.4s						

*TUL **29** 17:53:52.2±0.3,36.21N±0.01×97.58W±0.02, h6km±3km, ML3.6, mb_Lg3.2/38(NEIC), Error ellipse: s-maj=1.9km s-min=1.8km az=60.0*
*NEIC **29** 17:53:52.8±0.3,36.21N±0.01×97.58W±0.02, h5km±1km, Error ellipse: s-maj=2.7km s-min=2.3km az=217.0*
*ANF **29** 17:53:52.3±0.2,36.25N×97.58W, h6km, ML3.9/12, Error ellipse: s-maj=3.4km s-min=2.2km az=161.0*
ISC 29 17:53:51.9±1.2, 36.23N±0.02×97.58W±0.02, h6km±11km, n104, σ0°73/105, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.42**	**310**		**Pg**	**17 54 01.0**	**+0.8**
OK029	**Liberty Lake**	**0.45**	**167**		**Pg**	**17 54 00.8**	**+0.3**
BCOK	**Bluff Creek, N**	**0.57**	**182**		**Pg**	**17 54 03.1**	**+0.2**
BLOK	**Blackwell**	**0.60**	**29**		**Pg**	**17 54 04.3**	**+0.7**
OK005	**Luther M Schoo**	**0.66**	**151**	Pg	**Pg**	**17 54 04.7**	**+0.1**
GC02	**Grant County #**	**0.66**	**340**		**Pg**	**17 54 05.2**	**+0.6**
OK009	**Oakdale Elemen**	**0.66**	**169**		**Pg**	**17 54 04.6**	**0.0**
OK031	**S. Brethren Rd**	**0.66**	**115**		**Pg**	**17 54 04.8**	**+0.2**
OK025	**Westminster Rd**	**0.68**	**163**		**Pg**	**17 54 05.1**	**+0.2**
QUOK	**Quay**	**0.71**	**95**		**Pg**	**17 54 05.7**	**+0.2**
OK030	**Cody Creek RV**	**0.71**	**115**		**Pg**	**17 54 05.8**	**+0.2**
OK034	**N. Norfolk Rd.**	**0.73**	**107**		**Pg**	**17 54 06.3**	**+0.2**
OK032	**Salt Plains WL**	**0.77**	**319**		**Pg**	**17 54 07.1**	**+0.4**
KAN13	**South Haven SW**	**0.78**	**6**		**Pg**	**17 54 07.5**	**+0.5**
KAN14	**Manchester OK**	**0.79**	**337**		**Pg**	**17 54 07.5**	**+0.5**
KAN17	**Caldwell West**	**0.82**	**350**		**Pg**	**17 54 08.2**	**+0.5**
OKCSW	**OKLAHOMA CITY**	**0.83**	**172**		**Pg**	**17 54 07.8**	**-0.1**
KAN09	**Caldwell North**	**0.90**	**358**		**Pg**	**17 54 09.7**	**+0.4**
KAN05	**Bluff City Nor**	**0.91**	**345**		**Pg**	**17 54 09.8**	**+0.4**
KAN01	**Argonia South**	**0.93**	**351**		**Pg**	**17 54 10.2**	**+0.4**
DEOK	**Depew**	**0.96**	**114**		**Pg**	**17 54 10.0**	**-0.3**
OK038	**West end E0370**	**0.97**	**285**		**Pg**	**17 54 09.7**	**-0.9**
KAN10	**Anthony SW Sta**	**0.98**	**335**		**Pg**	**17 54 11.0**	**+0.2**
FNO	**Franklin**	**0.98**	**171**		**Pg**	**17 54 10.5**	**-0.3**
KS20	**Mayfield South**	**1.00**	**1**		**Pg**	**17 54 11.4**	**+0.3**
OK035	**E0210 Rd and N**	**1.03**	**298**		**Pg**	**17 54 11.9**	**+0.2**
KAN06	**Argonia West S**	**1.04**	**348**		**Pg**	**17 54 12.1**	**+0.2**
KAN08	**Anthony NE Sta**	**1.04**	**343**		**Pg**	**17 54 12.2**	**+0.3**
KS21	**Milan North St**	**1.05**	**356**		**Pg**	**17 54 12.4**	**+0.2**
KAN16	**Harper SW Stat**	**1.07**	**339**		**Pg**	**17 54 12.6**	**+0.2**
CSTR	**Hydro, Custer**	**1.07**	**237**		**Pg**	**17 54 12.3**	**-0.2**
T35A	**Sooner Cattle**	**1.10**	**51**		**Pg**	**17 54 13.0**	**0.0**
T35B	**Sooner Cattle**	**1.10**	**51**	P	**Pg**	**17 54 13.1**	**+0.1**
	baz=231,SNR=328						
T35B				S	**Sg**	**17 54 27.5**	**+0.3**
	baz=231						
KAN12	**Harper NE Stat**	**1.12**	**343**		**Pg**	**17 54 13.4**	**+0.1**
U32A	**Winter Ranch,**	**1.16**	**278**		**Pg**	**17 54 13.6**	**-0.6**
U32A	**Winter Ranch,**	**1.16**	**278**	P	**Pg**	**17 54 13.9**	**-0.2**
	baz=98						
U32A				S	**Sb**	**17 54 30.2**	**+0.6**
	baz=98						
NOKA	**Waynoka**	**1.16**	**291**		**Pg**	**17 54 13.9**	**-0.3**
TUL1	**Leonard**	**1.48**	**102**		**Pn**	**17 54 18.7**	**-0.3**
TUL1	**Leonard**	**1.48**	**102**	P	**Pn**	**17 54 18.8**	**-0.3**
	baz=282,SNR=109						
TUL1				S	**Sn**	**17 54 39.0**	**+0.2**
	baz=282						
ELIS	**Ellis County**	**1.50**	**264**		**Pn**	**17 54 19.6**	**+0.2**
X34A	**Smith Ranch, M**	**1.64**	**187**	Pg	**Pb**	**17 54 22.3**	**-0.2**
WMOK	**Wichita Mounta**	**1.78**	**214**		**Pn**	**17 54 22.8**	**-0.5**
WMOK	**Wichita Mounta**	**1.78**	**214**	P	**Pn**	**17 54 23.6**	**+0.4**
	baz=33,SNR=215						
WMOK				S	**Sb**	**17 54 47.7**	**+0.1**
	baz=33						
RLO	**Rose Lookout**	**2.07**	**91**	Pg	**Pn**	**17 54 28.1**	**+0.9**
LOOK	**Love County**	**2.26**	**172**		**Pn**	**17 54 31.0**	**+1.2**
LOOK				IAmb_Lg		17 55 08.8	
	comp=Z,53nm,0.9s						
R32A	**Long Quarter,**	**2.37**	**338**		**Pb**	**17 54 34.1**	**-0.9**
R32A	**Long Quarter,**	**2.37**	**338**	P	**Pn**	**17 54 32.4**	**+1.1**
	baz=157,SNR=26						
X37A	**Clayton**	**2.44**	**132**	IAmb_Lg		17 55 12.5	
	comp=Z,117nm,1.1s						
X37A	**Clayton**	**2.44**	**132**	P	**Pn**	**17 54 33.1**	**+0.9**
	baz=313,SNR=42						
U38A	**Gravette**	**2.59**	**84**	Pn	**Pn**	**17 54 35.6**	**+1.2**
U38A	**Gravette**	**2.59**	**84**	P	**Pn**	**17 54 35.3**	**+1.0**

CPRX	Cap Rock	6.09 240	Pn	Pn	17 55 22.5	0.0
CLN7	Carlsbad 7	6.41 235	Pn	Pn	17 55 28.6	+1.7
K31A	O'Neill	6.45 352	Pn	Pn	17 55 28.1	+0.7
SDCO	Great Sand Dun	6.52 286	Pn	Pn	17 55 28.4	-0.2
SCIA	State Center	6.61 30	Pn	Pn	17 55 29.5	-0.1
S44A	Carbondale	6.82 75	Pn	Pn	17 55 33.2	+0.7
OXF	Oxford	6.89 102	Pn	Pn	17 55 32.5	-1.0
Q44A	Meyer Farm, Va	7.30 66	Pn	Pn	17 55 39.7	+0.6
ECSD	EROS Data Cent	7.53 5	Pn	Pn	17 55 41.6	-0.6
HDIL	Hopedale	7.81 54	Pn	Pn	17 55 45.1	-0.9
MNTX	Cornudas Mount	7.90 237	Pn	Pn	17 55 46.8	-0.5
833A	Chaparral WMA,	8.03 192	Pn	Pn	17 55 47.0	-2.1
N23A	Red Feather La	8.04 308	Pn	Pn	17 55 49.3	-0.1
TX31	Lajitas Ar. Si	8.57 218	Pn	Pn	17 55 55.8	-0.9
TX32	Lajitas Array	8.57 218	Pn	Pn	17 55 56.3	-0.4
TXAR	Lajitas Array	8.57 218	Pn	Pn	17 55 56.1	-0.5

WEL 29 18:56:28.6±0.9, 35°S±15″×18°0E±2″2, h280km±11km, M3.8/11, ML4.1/14, MLv3.8/11, Error ellipse: s-maj=0.0km s-min=0.0km az=121.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.78**	**205**	P		Pn	18 57 19.3	-1.4
MXZ				S		S	18 58 00.3	-1.8
WMGZ	**Waiomatatini S**	**2.98**	**202**	P		Pn	18 57 22.4	-0.2
WMGZ				S		S	18 58 07.0	+1.3
HAZ	**Te Kaha**	**3.15**	**211**	P		Pn	18 57 23.5	-0.9
HAZ				S		S	18 58 09.4	+0.4
PKGZ	**Pakihiroa**	**3.15**	**206**	P		Pn	18 57 23.7	-0.8
PKGZ				S		S	18 58 10.0	+0.9
PUZ	**Puketiti**	**3.26**	**202**	P		Pn	18 57 25.1	-0.5
PUZ				S		S	18 58 11.4	+0.4
RUGZ	**Raukumara Rang**	**3.37**	**210**	P		Pn	18 57 26.5	-0.4
RUGZ				S		S	18 58 10.9	-2.5
TWGZ	**Tauwhareparae**	**3.44**	**205**	S		S	18 58 16.6	+1.9
CNGZ	**Carnagh Statio**	**3.65**	**200**	P		Pn	18 57 30.6	+0.8
TKGZ	**Te Karaka**	**3.72**	**204**	P		Pn	18 57 32.0	+1.5
TKGZ				S		S	18 58 20.6	+0.5
MWZ	**Matawai**	**3.75**	**209**	P		Pn	18 57 30.5	-0.4
MWZ				S		S	18 58 19.7	-1.0
URZ	**Urewera**	**3.86**	**213**	P		Pn	18 57 31.9	-0.2
URZ				S		S	18 58 21.7	-1.1
RIGZ	**Rimuhau**	**3.99**	**204**	P		Pn	18 57 34.0	+0.4
RIGZ				S		S	18 58 27.6	+1.9
SNGZ	**Shannon Statio**	**4.21**	**207**	P		Pn	18 57 36.5	+0.4
SNGZ				S		S	18 58 31.6	+1.5
KNZ	**Kokohu**	**4.31**	**203**	P		Pn	18 57 35.9	-1.3
KNZ				S		S	18 58 30.5	-1.5
RAHZ	**Arahi**	**4.42**	**209**	P		Pn	18 57 38.8	+0.3
RAHZ				S		S	18 58 36.1	+1.6
NMHZ	**Naumai**	**4.69**	**210**	P		Pn	18 57 42.1	+0.4
NMHZ				S		S	18 58 41.0	+0.7
ARHZ	**Aropaoanui**	**4.76**	**207**	P		Pn	18 57 43.8	+1.4
ARHZ				S		S	18 58 44.2	+2.6
HIZ	**Hauiti**	**5.26**	**228**	P		Pn	18 57 50.2	+1.8
SNVZ	**South Ngauruho**	**5.30**	**218**	P		Pn	18 57 48.5	-0.5
KRHZ	**Kereru**	**5.33**	**210**	P		Pn	18 57 48.5	-0.7
KRHZ				S		S	18 58 53.3	-0.7
BHHZ	**Black Hill Sta**	**5.33**	**213**	P		Pn	18 57 49.7	+0.4
BHHZ				S		S	18 58 54.7	+0.6
BFZ	**Birch Farm**	**6.28**	**206**	P		Pn	18 58 01.0	+0.4
BFZ				S		S	18 59 14.6	-0.2
MRZ	**Mangatainoka R**	**6.52**	**210**	P		Pn	18 58 02.8	-0.8
MRZ				S		S	18 59 18.1	-1.9

*IDC **29** 19:03:37.3±0.5, 29°.20S×61°.18E, h0km, mb4.2/15, mbtmp4.2/16, ML4.7/1, MS3.7/38, Error ellipse: s-maj=19.1km s-min=16.5km az=78.0*
*NEIC **29** 19:03:39.3±1.1, 29°.0S±0°.1×60°.7E±0°.2, h10km±1km, mb4.4/10, Error ellipse: s-maj=25.3km s-min=19.7km az=249.0*

ISC 29 19:03:39.0±0.5, 29°.03S±0°.09×60°.77E±0°.09, h10km, n72, σ1§91/40, mb4.4/19, MS3.7/38, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.06**	**329**			**Pn**	**19 05 49.0**	**-0.9**
FOMA	**Nahampoana Res**	**12.94**	**285**			**Pn**	**19 06 43.2**	**+0.3**
VOI	**Vohitsoka**	**14.47**	**296**	P		**P**	**19 07 07.8**	**-3.1**
ABPO	**Ambohimpanom**	**15.87**	**306**	P		**P**	**19 07 25.5**	**-1.0**
ABPO				IAmb		IAmb	19 07 32.2	
	comp=Z,35nm,1.2s							
OPO	**Ambohidratompo**	**16.20**	**307**	Pn		**P**	**19 07 30.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=124,slow=13,SNR=16							
OPO				Sn		**Sn**	**19 10 18.9**	**-7.9**
	comp=Z,0.1nm,0.3s,baz=119,slow=17,SNR=3.2							
	comp=Z,7.4nm,0.4s							
H08S1	**Diego Garcia H**	**23.96**	**30**	T		T	19 33 57.7	
	baz=204,slow=75,SNR=5.1							
H08S2	**Diego Garcia H**	**23.97**	**30**	T		T	19 33 57.3	
	baz=204,slow=75,SNR=3.0							
H08S3	**Diego Garcia H**	**23.98**	**30**	T		T	19 33 58.3	
	baz=204,slow=75,SNR=4.6							
BOSA	**Boshof**	**31.05**	**262**	P		**P**	**19 10 00.1**	**+2.7**
	comp=Z,2.7nm,0.8s,baz=125,slow=14,SNR=3.3							
BOSA				LR		LR	19 20 41.1	
	comp=Z,110nm,19.1s,baz=106,slow=33							
	comp=Z,2.7nm,0.8s							
LBTB	**Lobatse**	**31.51**	**269**	LR		LR	19 20 30.1	
	comp=Z,43nm,21.5s,baz=110,slow=32							
LSZ	**Lusaka**	**33.01**	**287**	LR		LR	19 21 58.7	
	comp=Z,50nm,20.3s,baz=130,slow=33							
SUR	**Sutherland**	**34.38**	**254**	LR		LR	19 21 43.1	
	comp=Z,68nm,18.2s,baz=116,slow=31							
KMBO	**Kilima Mbogo**	**35.68**	**317**	LR		LR	19 23 25.1	
	comp=Z,167nm,19.9s,baz=94,slow=33							
MAW	**Mawson**	**38.62**	**179**	P		**P**	**19 11 01.0**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=342,slow=11,SNR=1.9							
MAW				LR		LR	19 23 21.6	
	comp=Z,109nm,19.6s,baz=6.5,slow=31							
	comp=Z,1.3nm,0.6s							
MBAR	**Mbarara**	**40.25**	**309**	LR		LR	19 26 23.6	
	comp=Z,113nm,20.0s,baz=127,slow=34							
TSUM	**Tsumeb**	**40.42**	**274**	LR		LR	19 26 48.0	
	comp=Z,80nm,19.9s,baz=128,slow=34							
PALK	**Pallekele**	**40.88**	**31**	LR		LR	19 24 30.3	
	comp=Z,80nm,18.7s,baz=307,slow=31							
ATD	**Arta Tunnel**	**43.88**	**334**	LR		LR	19 26 60.0	
	comp=Z,157nm,21.9s,baz=154,slow=32							
H01W2	**Cape Leeuwin H**	**45.21**	**112**	T		T	19 59 51.9	
	baz=261,slow=75,SNR=12							
H01W3	**Cape Leeuwin H**	**45.22**	**112**	T		T	19 59 54.1	
	baz=261,slow=75,SNR=12							
H01W1	**Cape Leeuwin H**	**45.23**	**112**	T		T	19 59 55.1	
	baz=261,slow=75,SNR=16							
SNAA	**Sanae**	**54.47**	**200**	P		**P**	**19 13 05.0**	**-1.4**
SNAA	**Sanae**	**54.47**	**200**	P		**P**	**19 13 05.4**	**-1.0**
	comp=Z,1.9nm,1.1s,baz=90,slow=9.0,SNR=6.1							
SNAA				LR		LR	19 31 17.0	
	comp=Z,80nm,21.4s,baz=158,slow=30							
	comp=Z,1.9nm,1.1s							
VNA2	**Neumayer--Watz**	**55.74**	**202**	P		**P**	**19 13 15.1**	**-0.4**
	baz=74,slow=7.0							
CMAR	**Chiang Mai Arr**	**59.90**	**43**	P		**P**	**19 13 44.8**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=229,slow=7.1,SNR=9.9							
CMAR				LR		LR	19 35 17.4	
	comp=Z,23nm,20.6s,baz=215,slow=32							
	comp=Z,1.9nm,0.8s							
QSPA	**South Pole Qui**	**61.13**	**180**	P		**P**	**19 13 51.7**	**-1.7**
	comp=Z,2.8nm,0.7s,baz=227,slow=1.2,SNR=15							
QSPA				LR		LR	19 36 50.7	
	comp=Z,83nm,20.2s,baz=286,slow=33							
	comp=Z,2.8nm,0.7s							
QSPA	**South Pole Qui**	**61.13**	**180**	P		**P**	**19 13 52.3**	**-1.0**
EIL	**Elat**	**63.36**	**335**	LR		LR	19 38 35.7	
	comp=Z,70nm,19.3s,baz=102,slow=33							
VNDA	**Vanda**	**64.24**	**166**	P		**P**	**19 14 12.2**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=274,slow=6.3,SNR=10							
VNDA				LR		LR	19 40 16.8	
	comp=Z,151nm,18.4s,baz=263,slow=34							
	comp=Z,1.7nm,0.8s							
ASAR	**Alice Springs**	**64.81**	**104**	P		**P**	**19 14 15.6**	**-2.8**
	comp=Z,2.8nm,0.7s,baz=244,slow=6.0,SNR=40							
	comp=Z,2.8nm,0.7s							
SBA	**Scott Base**	**65.12**	**167**	P		**P**	**19 14 20.2**	**+0.7**
SBA				IAmb		IAmb	19 14 33.2	
	comp=Z,3.2nm,1.0s							
MMAI	**Mount Meron Ar**	**66.23**	**337**	LR		LR	19 40 31.9	
	comp=Z,54nm,19.8s,baz=342,slow=33							
WRA	**Warramunga Arr**	**66.63**	**101**	P		**P**	**19 14 27.5**	**-2.7**
	comp=Z,2.7nm,0.8s,baz=248,slow=5.8,SNR=25							
WRA				LR		LR	19 38 17.8	
	comp=Z,105nm,21.8s,baz=224,slow=31							
	comp=Z,2.7nm,0.8s							
GEYT	**Alibeck**	**66.65**	**358**	LR		LR	19 41 17.5	
	comp=Z,47nm,19.8s,baz=188,slow=34							
GNI	**Garni**	**70.42**	**347**	LR		LR	19 44 13.4	
	comp=Z,75nm,19.5s,baz=173,slow=34							
TORD	**Torodi Ar. Bea**	**70.77**	**298**	P		**P**	**19 14 57.8**	**+1.9**
	comp=Z,2.8nm,0.3s,baz=103,slow=4.5,SNR=1.5							
	comp=Z,2.8nm,0.3s							
DAV	**Davao City (W)**	**71.89**	**71**	LR		LR	19 44 49.7	
	comp=Z,28nm,18.3s,baz=146,slow=34							
KK31	**Karatay Array**	**72.33**	**7**	P		**P**	**19 15 05.3**	**+0.6**
KK31				IAmb		IAmb	19 15 10.4	
	comp=Z,4.2nm,1.2s							
KKAR	**Karatay Array**	**72.33**	**7**	P		**P**	**19 15 05.8**	**+1.0**
KKAR	**Karatay Array**	**72.33**	**7**	P		**P**	**19 15 05.3**	**+0.6**
KKAR				IAmb		IAmb	19 15 10.4	
	comp=Z,4.2nm,1.2s							
DBIC	**Dimbokro**	**72.34**	**288**	P		**P**	**19 15 08.6**	**+3.2**
	comp=Z,7.6nm,1.1s,baz=157,slow=5.1,SNR=3.8							
DBIC				LR		LR	19 44 37.2	
	comp=Z,30nm,20.1s,baz=146,slow=34							
	comp=Z,7.6nm,1.1s							
BRTR	**Keskin Array B**	**72.91**	**338**	LR		LR	19 44 36.4	
	comp=Z,40nm,20.4s,baz=142,slow=34							
KBZ	**Khabaz**	**74.23**	**347**	LR		LR	19 46 13.7	
	comp=Z,76nm,21.4s,baz=166,slow=34							
MDUB	**Mudurnu**	**74.40**	**337**	P		**P**	**19 15 17.1**	**0.0**
KOWA	**Kowa**	**76.04**	**295**	LR		LR	19 48 45.3	
	comp=Z,54nm,19.4s,baz=106,slow=35							
CTA	**Charters Tower**	**76.73**	**106**	LR		LR	19 43 38.1	
	comp=Z,37nm,20.0s,baz=256,slow=32							
ABKAR	**Akbulak array**	**77.93**	**359**	P		**P**	**19 15 37.2**	**+0.3**
ABKAR				IAmb		IAmb	19 15 40.8	
	comp=Z,3.3nm,0.9s							
ABKAR	**Akbulak array**	**77.93**	**359**	P		**P**	**19 15 37.6**	**+0.8**
MK31	**Makanchi Array**	**77.94**	**15**	P		**P**	**19 15 37.3**	**+0.3**
MKAR	**Makanchi Array**	**77.94**	**15**	P		**P**	**19 15 37.5**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=191,slow=4.9,SNR=11							
MKAR				LR		LR	19 46 11.3	
	comp=Z,27nm,20.2s,baz=192,slow=33							
	comp=Z,1.3nm,0.8s							
MKAR	**Makanchi Array**	**77.94**	**15**	P		**P**	**19 15 36.9**	**-0.1**
AKTO	**Aktyubinsk**	**79.15**	**358**	LR		LR	19 46 59.4	
	comp=Z,34nm,21.9s,baz=159,slow=33							
KEST	**Kesra**	**80.58**	**320**	LR		LR	19 51 30.2	
	comp=Z,89nm,20.4s,baz=132,slow=36							
MLR	**Muntele Rosu**	**80.64**	**336**	LR		LR	19 50 26.8	
	comp=Z,27nm,19.3s,baz=186,slow=35							
KURK	**Kurchatov**	**80.95**	**11**	P		**P**	**19 15 54.1**	**+0.9**
BELG	**Belogornoye**	**81.89**	**352**	LR		LR	19 55 24.3	
	comp=Z,22nm,18.2s,baz=147,slow=38							
BVAR	**Borovoye Array**	**82.13**	**6**	LR		LR	19 50 11.0	
	comp=Z,52nm,21.6s,baz=189,slow=34							
AKASG	**Malin Array Be**	**84.14**	**340**	P		**P**	**19 16 10.8**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=154,slow=4.2,SNR=5.0							
	comp=Z,1.2nm,0.7s							
ZALV	**Zalesovo Beam**	**85.22**	**14**	P		**P**	**19 16 14.8**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=234,slow=3.4,SNR=8.4							
ZALV				LR		LR	19 50 30.3	
	comp=Z,39nm,20.9s,baz=170,slow=33							
	comp=Z,2.5nm,0.8s							
ZALV	**Zalesovo Beam**	**85.22**	**14**	P		**P**	**19 16 15.5**	**+0.3**
BBTS	**Babate**	**86.28**	**289**	LR		LR	19 55 16.4	
	comp=Z,62nm,18.0s,baz=104,slow=36							
SONM	**Songino Array**	**86.79**	**29**	P		**P**	**19 16 23.4**	**0.0**
	comp=Z,0.5nm,0.7s,baz=207,slow=5.0,SNR=5.2							
SONM				LR		LR	19 52 48.4	
	comp=Z,63nm,20.5s,baz=188,slow=34							
	comp=Z,0.5nm,0.7s							
MDT	**Midelt**	**87.31**	**310**	LR		LR	19 55 26.2	
	comp=Z,54nm,18.5s,baz=132,slow=35							
VRAC	**Vranov**	**87.36**	**333**	LR		LR	19 54 37.3	
	comp=Z,14nm,20.1s,baz=122,slow=35							
KIRV	**Kirov**	**87.79**	**354**	LR		LR	19 54 05.6	
	comp=Z,26nm,21.9s,baz=141,slow=34							
ESDC	**Sonseca Array**	**91.06**	**316**	P		**P**	**19 16 46.8**	**+3.1**
	comp=Z,0.7nm,0.8s,baz=122,slow=3.2,SNR=6.0							
	comp=Z,0.7nm,0.8s							
NOA	**NORSAR Array B**	**98.35**	**338**	LR		LR	20 02 15.2	
	comp=Z,14nm,16.7s,baz=135,slow=36							
YKA	**Yellowknife Ar**	**146.39**	**356**	PKPbc		**PKPbc**	**19 23 19.6**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=353,slow=3.6,SNR=5.2							
ULM	**Lac du Bonnet**	**152.41**	**327**	PKPbc		**PKPbc**	**19 23 34.8**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=64,slow=2.1,SNR=5.4							
PDAR	**Pinedale Array**	**164.22**	**333**	PKP		**PKPdf**	**19 23 42.9**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=141,slow=3.1,SNR=9.4							
TXAR	**Lajitas Array**	**166.40**	**275**	PKP		**PKPdf**	**19 23 46.0**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=103,slow=1.5,SNR=8.1							
NVAR	**Mina Array Bea**	**170.59**	**356**	PKP		**PKPdf**	**19 23 47.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=332,slow=0.9,SNR=4.4							

*BER **29** 19:17:48.2±0.7, 68°.06N×33°.29E, h0km, ML1.6, Suspected explosion*

HEL 29 19:17:28.4±0.3, 67°.97N×33°.60E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.40**	**100**	PG		Pg	19 17 35.4	-0.7
LVZ				SG		Sg	19 17 41.5	+0.2
VRF	**Varrio**	**1.53**	**263**	PG		Pn	19 17 56.0	-0.9
	baz=84							
VRF				MSG			19 18 14.3	
	comp=Z,5.0nm,0.2s							
VRF				SG		Sg	19 18 16.2	-1.3
KU6	**Riekki**	**2.44**	**218**	PN		Pn	19 18 07.5	-1.9
KU6				SN		Sn	19 18 37.1	-2.8
KU6				MSG			19 18 40.4	
	comp=Z,4.5nm,0.2s							
KEV	**Kevo**	**2.98**	**310**	*e*S		Sb	19 18 58.8	-0.5
KEV	**Kevo**	**2.98**	**310**	PB		Pb	19 18 20.1	-2.2
KEV				MSG			19 18 56.2	
	comp=Z,1.9nm,0.2s							
KEV				SG		Sb	19 18 58.6	-0.7
ARA0	**ARCESS Array S**	**3.34**	**302**	*e*P		Pg	19 18 33.4	+1.1
ARA0				*e*S		Sb	19 19 06.9	-2.6
ARA0				IAML			19 19 26.9	
	comp=Z,4.6nm,0.7s							
ARA0	**ARCESS Array S**	**3.34**	**302**	PB		Pn	19 18 23.8	+2.0
ARA0				SB		Sb	19 19 08.6	-0.9
HEF	**Hetta**	**3.74**	**281**	*e*P		Pg	19 18 37.7	-2.2
HEF				*e*S		Sn	19 19 15.4	+3.5
KTK1	**Kautokeino**	**3.96**	**290**	*e*P		Pg	19 18 42.0	-2.2
KTK1				*e*S		Sn	19 19 20.8	+3.5
KTK1				IAML			19 19 41.8	
	comp=Z,4.9nm,0.5s							
TOF	**Tornio**	**4.10**	**247**	PG		Pb	19 18 41.2	-0.1
TOF				SG		Sb	19 19 34.6	+3.1
PAJU	**Pajala**	**4.14**	**262**	PG		Pb	19 18 42.1	0.0
	baz=69							
PAJU				SN		Sn	19 19 21.3	-0.6
ERTU	**Ertsjaerv**	**4.65**	**257**	PB		Pb	19 18 47.0	-3.7
ERTU				SN		Sn	19 19 32.0	-2.4
KIF	**Kilpisjarvi**	**4.82**	**288**	*e*S		Sn	19 19 38.3	-0.3

*IDC **29** 19:25:29.1±3.1, 35°.58N×140°.31E, h0km, mb3.6/4, mbtmp3.6/4, MS3.4/1, Error ellipse: s-maj=100.6km s-min=22.7km az=60.0*
*JMA **29** 19:25:38.0±0.2, 35°.7N±0°.5×140°.1E±0°.8, h62km±2km, MV3.2/35, CENTRAL CHIBA PREF*
JMA Felt I J1 at CENTRAL CHIBA PREF .

ISC 29 19:25:38.0±1.0, 35°.65N±0°.06×140°.10E±0°.07, h71km±8km, n22, σ0§79/18, mb3.6/4, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.25**	**161**	P		**Pn**	**19 25 48.8**	**-0.2**
TOK	**Tokyo**	**0.28**	**277**	*e*P		**Pn**	**19 25 49.4**	**+0.3**
JSMT	**Sammumatsuo**	**0.28**	**92**	*i* P		**Pn**	**19 25 48.8**	**-0.4**
JOD2	**Odawara 2**	**0.91**	**245**	⇓P		**Pn**	**19 25 55.1**	**-0.3**
JOD2				⇓S		**Sn**	**19 26 07.8**	**-0.7**
BSO3	**Boso 3**	**0.91**	**158**	P		**Pn**	**19 25 54.6**	**-0.6**
BSO3				*e*S		**Sn**	**19 26 08.4**	**+0.4**
JAG	**Ashikaga**	**0.93**	**326**	⇓P		**Pn**	**19 25 55.3**	**-0.4**
JAG				⇓S		**Sn**	**19 26 08.2**	**-0.6**
JRY	**Ryogami san**	**1.04**	**291**	⇓P		**Pn**	**19 25 57.5**	**+0.5**
JIM2	**Oshima 3**	**1.08**	**211**	P		**Pn**	**19 25 56.9**	**-0.7**
BSO1	**Boso 1**	**1.23**	**144**	P		**Pn**	**19 25 58.1**	**-0.8**
JFNN	**Fujinakano**	**1.24**	**249**	⇓P		**Pn**	**19 25 59.6**	**0.0**
MJAR	**Matsushiro Arr**	**1.77**	**301**	Pn		**Pn**	**19 26 04.7**	**-1.8**
	5.9nm,0.3s,baz=119,slow=9.8,SNR=104							
JHJ	**Hachijo jima 2**	**2.54**	**186**	LR		LR	19 27 12.4	
	comp=Z,830nm,21.0s,baz=100,slow=42							
H11N2	**WAKE ISLAND Hy**	**28.41**	**117**	T		T	20 00 54.6	
	baz=309,slow=75,SNR=8.9							
H11N1	**WAKE ISLAND Hy**	**28.42**	**117**	T		T	20 00 49.6	
	baz=309,slow=75,SNR=7.9							
H11N3	**WAKE ISLAND Hy**	**28.43**	**117**	T		T	20 01 17.0	
	baz=309,slow=75,SNR=6.2							
H11S1	**WAKE ISLAND Hy**	**29.06**	**119**	T		T	20 01 32.9	
	baz=312,slow=76,SNR=4.7							
H11S3	**WAKE ISLAND Hy**	**29.06**	**119**	T		T	20 01 40.4	
	baz=312,slow=76,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**29.08**	**119**	T		T	20 01 40.1	
	baz=312,slow=76,SNR=4.2							
MKAR	**Makanchi Array**	**43.97**	**303**	P		**P**	**19 33 38.7**	**+0.7**
	0.6nm,0.8s,baz=87,slow=9.4,SNR=4.8							
	0.6nm,0.8s							
KURBB	**Kurchatov Arra**	**46.03**	**309**	P		**P**	**19 33 55.2**	**+1.0**
	0.5nm,0.4s,baz=79,slow=7.2,SNR=5.7							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**55.56**	**187**	P		**P**	**19 35 05.5**	**-0.6**
	0.7nm,0.4s,baz=0.0,slow=7.4,SNR=26							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**59.29**	**187**	P		**P**	**19 35 32.9**	**+0.5**
	0.2nm,0.5s,baz=20,slow=11,SNR=2.1							
	0.2nm,0.5s							

IDC 29 19:34:53.1±2.8, 14°.92S×174°.59W, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=254.4km s-min=25.3km az=153.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**37.97**	**330**	T		T	20 22 58.6	
	baz=149,slow=76,SNR=32							
H11S3	**WAKE ISLAND Hy**	**37.98**	**330**	T		T	20 22 59.9	
	baz=149,slow=76,SNR=19							
H11S1	**WAKE ISLAND Hy**	**37.99**	**330**	T		T	20 22 60.0	
	baz=149,slow=76,SNR=26							
H11N3	**WAKE ISLAND Hy**	**38.94**	**332**	T		T	20 24 10.2	
	baz=150,slow=76,SNR=23							
H11N1	**WAKE ISLAND Hy**	**38.94**	**332**	T		T	20 24 10.3	
	baz=150,slow=76,SNR=31							
H11N2	**WAKE ISLAND Hy**	**38.95**	**332**	T		T	20 24 11.1	
	baz=150,slow=76,SNR=16							
WRA	**Warramunga Arr**	**48.84**	**256**	P		P	19 43 40.8	0.0
	0.3nm,0.9s,baz=92,slow=7.6,SNR=1.5							
	0.3nm,0.9s							
ASAR	**Alice Springs**	**49.17**	**252**	P		P	19 43 43.2	-0.2
	0.9nm,0.7s,baz=85,slow=8.1,SNR=14							
	0.9nm,0.7s							
NVAR	**Mina Array Bea**	**74.75**	**43**	P		P	19 46 35.4	0.0
	0.2nm,0.3s,baz=237,slow=8.3,SNR=3.7							
	0.2nm,0.3s							
TXAR	**Lajitas Array**	**81.30**	**57**	P		P	19 47 11.9	0.0
	0.7nm,1.1s,baz=218,slow=5.9,SNR=4.0							
	0.7nm,1.1s							
PDAR	**Pinedale Array**	**82.68**	**42**	P		P	19 47 19.1	+0.1
	0.1nm,0.4s,baz=256,slow=3.6,SNR=1.5							
	0.1nm,0.4s							

*NIED **29** 19:44:36.6, 32°.47N×130°.55E, h8km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=1.18; Mθθ1.75; Mϕϕ-0.56; Mrθ-0.37; Mθϕ0.36; Mϕr0.93; Fault plane solution: M₀1.87000×10¹⁴ NP1: ϕs231.00000°, δ51.00000°, λ-140.00000°. NP2: ϕs113.00000°, δ60.00000°, λ-47.00000°.*

JMA 29 19:44:36.6±0.0, 32°.5N±0°.1×130°.5E±0°.1, h8km±1km, MV3.5/20, 4D, AMAKUSA REGION, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.24**	**71**	⇓*i*P		Pg	19 44 41.3	-0.1
JIU3				⇓S		Sg	19 44 45.1	+0.5
JZO	**Okuchi**	**0.33**	**172**	P		Pg	19 44 43.2	0.0
JZO				S		Sg	19 44 47.8	+0.2
JHD	**Hondo**	**0.34**	**269**	⇓P		Pg	19 44 43.5	+0.1
JHD				⇓S		Sg	19 44 48.6	+0.6
JTA	**Tamana**	**0.49**	**359**	P		Pg	19 44 46.1	0.0
JTA				*e*S		Sg	19 44 52.8	+0.2
JTZ	**Takazaki**	**0.73**	**141**	P		Pg

mbtmp4.4/11,ML4.2/4,MS3.8/46,Error ellipse:
s-maj=28.6km s-min=15.6km az=66.0
VAO 29 19:53:21.8±2.4, 16°.07S×74°.25W,h58km,mb4.5
ISC 29 19:53:20.0±0.5, 15°.81S±0°.06×74°.01W±0°.08, h54km, n189,
σ1.22/131, mb4.5/33, MS3.9/46, 1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**4.33**	**127**	Pn	**Pn**	**19 54 24.2**	**+0.8**
PB12	**IPOC Station P**	**4.49**	**129**	Pn	**Pn**	**19 54 25.5**	**-0.1**
PB12	**IPOC Station P**	**4.49**	**129**	*iP*	**Pn**	**19 54 25.7**	**+0.1**
PB18	**Visviri**	**4.69**	**113**		**Pn**	**19 54 30.3**	**+1.5**
NNA	**Nana**	**4.69**	**324**	P	**Pn**	**19 54 29.1**	**+0.7**
	15nm,0.3s,baz=164,slow=12,SNR=19						
NNA				LR	LR	19 56 10.3	
	comp=Z,479nm,20.6s,baz=166,slow=36						
	183nm,0.3s						
NNA	**Nana**	**4.69**	**324**	Pn	**Pn**	**19 54 28.8**	**+0.4**
PB16	**IPOC Station P**	**4.98**	**121**	Pn	**Pn**	**19 54 34.1**	**+1.3**
PB16	**IPOC Station P**	**4.98**	**121**	*eP*	**Pn**	**19 54 34.8**	**+1.9**
PB16				*i* S	**Sn**	**19 55 30.1**	**+0.6**
LPAZ	**La Paz**	**5.67**	**96**	P	Pn	19 54 47.9	+5.6
	48nm,0.4s,baz=298,slow=7.8,SNR=73						
LPAZ				LR	LR	19 57 32.6	
	comp=Z,568nm,21.7s,baz=262,slow=44						
LPAZ	**La Paz**	**5.67**	**96**	Pn	Pn	19 54 47.4	+5.1
LPAZ	**La Paz**	**5.67**	**96**	*eP*	Pn	19 54 47.6	+5.3
TA02	**Huaiquique**	**5.77**	**141**		**Pn**	**19 54 43.2**	**+0.1**
TA01	**Diego Aracena**	**5.97**	**143**	Pn	**Pn**	**19 54 45.8**	**-0.1**
GO01	**Chusmiza**	**5.98**	**131**	Pn	**Pn**	**19 54 47.6**	**+1.2**
GO01	**Chusmiza**	**5.98**	**131**	*eP*	**Pn**	**19 54 47.6**	**+1.2**
PB02	**IPOC Station P**	**6.73**	**145**		**Pn**	**19 54 55.8**	**-0.6**
PB01	**IPOC Station P**	**6.75**	**141**		**Pn**	**19 54 56.6**	**0.0**
PB07	**IPOC Station P**	**7.06**	**147**		**Pn**	**19 54 59.7**	**-1.4**
PB04	**IPOC Station P**	**7.45**	**151**		**Pn**	**19 55 05.0**	**-1.3**
PB09	**IPOC Station P**	**7.47**	**144**		**Pn**	**19 55 06.9**	**+0.3**
PB06	**IPOC Station P**	**8.04**	**149**		**Pn**	**19 55 13.3**	**-1.1**
CZSB	**Cruzeiro do Su**	**8.13**	**9**	Pn	**Pn**	**19 55 15.4**	**0.0**
LVC	**Limon Verde**	**8.30**	**145**	P	**Pn**	**19 55 19.4**	**+1.2**
	12nm,0.3s,baz=344,slow=10,SNR=48						
LVC				S	**Sn**	**19 56 47.4**	**-3.4**
	86nm,0.6s,baz=84,slow=10,SNR=8.0						
	26nm,0.3s						
LVC	**Limon Verde**	**8.30**	**145**	Pn	**Pn**	**19 55 19.1**	**+0.9**
LVC	**Limon Verde**	**8.30**	**145**	*eP*	**Pn**	**19 55 19.4**	**+1.2**
PB10	**IPOC Station P**	**8.33**	**158**		**Pn**	**19 55 16.7**	**-1.5**
PB15	**IPOC Station P**	**8.51**	**151**		**Pn**	**19 55 20.1**	**-0.8**
PB14	**IPOC Station P**	**9.40**	**160**		**Pn**	**19 55 31.1**	**-2.1**
ETMB	**Extrema**	**9.65**	**53**	Pn	**Pn**	**19 55 37.3**	**+1.0**
GO02	**Mina Guanaco**	**10.19**	**157**	Pn	**Pn**	**19 55 44.6**	**+0.8**
AC01	**Pan de Azucar**	**10.77**	**163**	Pn	**Pn**	**19 55 50.9**	**-0.7**
AC02	**Maricunga**	**11.88**	**158**	Pn	**Pn**	**19 56 08.5**	**+1.4**
AC06	**Mina Casimiro**	**11.98**	**164**		**Pn**	**19 56 07.5**	**-0.7**
TBTG	**Tabatinga, AM**	**12.23**	**20**	Pn	**Pn**	**19 56 09.6**	**-2.0**
GO03	**Copiap**	**12.24**	**164**	Pn	**Pn**	**19 56 12.4**	**+0.6**
SIV	**San Ignacio**	**12.45**	**93**	P	**Pn**	**19 56 14.1**	**-0.5**
	0.1nm,0.3s,baz=268,slow=10,SNR=18						
SIV				LR	LR	20 01 43.1	
	comp=Z,476nm,20.5s,baz=274,slow=40						
	3.3nm,0.4s						
SAML	**Samuel**	**12.57**	**58**	Pn	**Pn**	**19 56 14.4**	**-1.9**
BOSC	**San Juan Bosco**	**13.33**	**340**	Pn	**Pn**	**19 56 25.9**	**-0.9**
LCO	**Las Campanas**	**13.49**	**167**		**Pn**	**19 56 30.5**	**+1.5**
VILB	**Vilhena**	**13.67**	**80**	Pn	**Pn**	**19 56 28.6**	**-2.7**
PTLB	**Pontes e Lacer**	**14.33**	**91**	Pn	**Pn**	**19 56 40.5**	**+0.4**
CO01	**Juntas del Tor**	**14.56**	**166**	Pn	**Pn**	**19 56 43.8**	**+0.6**
GO04	**Tololo Observa**	**14.60**	**169**	Pn	**Pn**	**19 56 43.6**	**-0.2**
PORT	**Chimborazo Vol**	**15.01**	**341**		**P**	**19 56 53.6**	**-0.3**
CHSH	**Refugio Sur-Vo**	**15.01**	**341**	P	**P**	**19 56 54.0**	**+0.1**
CHSH				IAmb	IAmb	19 56 55.6	
	comp=Z,118nm,1.1s						
SLOR	**San Lorenzo -**	**15.62**	**343**	P	**P**	**19 57 02.3**	**+1.7**
SLOR				IAmb	IAmb	19 57 03.5	
	comp=Z,36nm,0.9s						
OTAV	**Otavalo**	**16.53**	**344**	Pn	**Pn**	**19 57 07.4**	**-1.5**
VA03	**San Esteban**	**17.17**	**170**	P	**Pn**	**19 57 14.5**	**-1.8**
VA03				IAmb	IAmb	19 57 19.2	
	comp=Z,60nm,1.4s						
VA01	**Torpederas**	**17.27**	**173**		**P**	**19 57 18.2**	**-0.1**
FLOC	**Florencia**	**17.35**	**354**	*eP*	**Pn**	**19 57 18.9**	**+0.2**
GARC	**Garzon, Huila**	**17.94**	**355**	*eP*	**Pn**	**19 57 25.6**	**-0.4**
AQDB	**Aquidauana**	**18.00**	**108**	P	**Pn**	**19 57 26.3**	**-0.2**
H03N1	**Juan Fernandez**	**18.11**	**193**	T	T	20 15 58.4	
	baz=15,slow=74,SNR=3646						
H03N2	**Juan Fernandez**	**18.11**	**193**	T	T	20 15 58.7	
	baz=15,slow=74,SNR=4944						
H03N3	**Juan Fernandez**	**18.13**	**193**	T	T	20 15 57.2	
	baz=15,slow=74,SNR=4714						
MACA	**Manacapuru-AM**	**18.16**	**48**	P	**P**	**19 57 26.5**	**-1.7**
MACA				IAmb	IAmb	19 57 31.2	
	comp=Z,135nm,1.3s						
LMEL	**Las Melosas**	**18.29**	**170**	P	**Pn**	**19 57 31.3**	**+1.2**
LMEL				IAmb	IAmb	19 57 33.5	
	comp=Z,43nm,1.3s						
CPUP	**Villa Florida**	**18.74**	**127**	P	**Pn**	**19 57 35.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=315,slow=12,SNR=4.1						
CPUP				LR	LR	20 05 02.5	
	comp=Z,104nm,20.9s,baz=292,slow=37						
	comp=Z,3.7nm,1.0s						
CPUP	**Villa Florida**	**18.74**	**127**	P	**P**	**19 57 32.8**	**-1.7**
CPUP	**Villa Florida**	**18.74**	**127**	*eP*	**Pn**	**19 57 36.3**	**+0.9**
ML02	**Panimavida**	**20.01**	**174**	P	Pn	19 57 49.6	-0.8
ROSC	**El Rosal**	**20.52**	**359**	LR	LR	20 06 42.3	
	comp=Z,465nm,21.4s,baz=226,slow=39						
ROSC	**El Rosal**	**20.52**	**359**	P	**P**	**19 57 55.4**	**+1.1**
MCR1	**Marechal Candi**	**20.61**	**118**	*eP*	**P**	**19 57 56.1**	**+1.2**
PLMC	**San Jose del P**	**20.70**	**354**	*eP*	Pn	19 58 04.7	+5.9
NORC	**Norcasia**	**21.25**	**358**	*eP*	**P**	**19 58 06.5**	**+4.6**
RUSC	**La Rusia**	**21.58**	**2**	*eP*	**P**	**19 58 07.0**	**+1.1**
CBOC	**Ciudad Bolivar**	**21.62**	**355**	*eP*	P	19 58 16.2	+10
PTBC	**PUERTO BERRIO,**	**22.21**	**359**	*eP*	**P**	**19 58 18.3**	**+6.2**
BOAV	**Boa Vista**	**22.47**	**38**	P	**P**	**19 58 15.0**	**+0.1**
BOAV				IAmb	IAmb	19 58 23.9	
	comp=Z,33nm,1.1s						
RODS	**Rosario do Sul**	**22.51**	**133**	*eP*	**P**	**19 58 15.4**	**+0.1**
BRRC	**Barranca, Sant**	**22.77**	**1**	*eP*	**P**	**19 58 19.9**	**+1.8**
ZARC	**Zaragoza, Cauc**	**23.16**	**358**	*eP*	P	19 58 29.9	+7.9
SOCV	**Socops**	**24.14**	**8**	*eP*	**P**	**19 58 31.9**	**+0.8**
CAPC	**Capurgana**	**24.51**	**352**	*eP*	P	19 58 48.1	+14
TRQA	**Tornquist**	**24.57**	**157**	P	**P**	**19 58 35.1**	**+0.2**
SDV	**Santo Domingo**	**24.76**	**8**	P	**P**	**19 58 37.5**	**+0.5**
	comp=Z,8.7nm,0.6s,baz=176,slow=9.9,SNR=2.4						
SDV				LR	LR	20 10 44.0	
	comp=Z,108nm,19.9s,baz=196,slow=42						
	comp=Z,8.7nm,0.6s						
SDV	**Santo Domingo**	**24.76**	**8**	P	**P**	**19 58 36.0**	**-1.0**
SDV				IAmb	IAmb	19 58 53.4	
	comp=Z,31nm,1.2s						
BDFB	**Brasilia**	**25.02**	**93**	LR	LR	20 09 16.3	
	comp=Z,283nm,21.9s,baz=334,slow=38						
BDFB	**Brasilia**	**25.02**	**93**		**P**	**19 58 38.8**	**-0.6**
PLCA	**Paso Flores**	**25.02**	**174**	P	**P**	**19 58 39.9**	**+0.9**
	comp=Z,11nm,1.1s,baz=346,slow=11,SNR=7.4						
PLCA				LR	LR	20 06 52.4	
	comp=Z,152nm,20.4s,baz=352,slow=32						
	comp=Z,11nm,1.1s						
PLCA	**Paso Flores**	**25.02**	**174**	*eP*	**P**	**19 58 38.9**	**-0.2**
BAUV	**El Baul**	**25.29**	**14**	P	**P**	**19 58 41.7**	**+0.1**
SJCC	**San Jacinto, C**	**25.56**	**357**	*eP*	P	19 58 55.1	+11
PCRV	**Puerto La Cruz**	**27.43**	**20**	LR	LR	20 10 49.3	
	comp=Z,1µm,18.3s,slow=38						
MDP	**Montagnes des**	**29.65**	**47**	LR	LR	20 12 06.6	
	comp=Z,853nm,18.6s,baz=243,slow=38						
SJG	**San Juan**	**34.58**	**13**	LR	LR	20 15 12.2	
	comp=Z,107nm,20.4s,baz=241,slow=38						
RPN	**Rapa Nui**	**34.64**	**245**	LR	LR	20 10 29.6	
	comp=Z,288nm,20.0s,baz=60,slow=30						
CMIG	**Matias Romero**	**38.63**	**327**	LR	LR	20 16 24.0	
	comp=Z,40nm,19.3s,baz=186,slow=36						
RCBR	**Riachuelo**	**38.65**	**79**	LR	LR	20 17 23.8	
	comp=Z,374nm,21.5s,baz=29,slow=37						
PMSA	**Palmer Station**	**49.39**	**174**	LR	LR	20 19 21.1	
	comp=Z,62nm,21.9s,baz=0.5,slow=32						
TKL	**Tuckaleechee C**	**52.01**	**350**	LR	LR	20 25 37.3	
	comp=Z,49nm,21.4s,baz=152,slow=37						
TX32	**Lajitas Array**	**53.24**	**327**	P	**P**	**20 02 32.8**	**-0.6**
TX32				IAmb	IAmb	20 02 33.8	
	comp=Z,6.7nm,1.2s						
TXAR	**Lajitas Array**	**53.24**	**327**	P	**P**	**20 02 32.7**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=152,slow=8.2,SNR=20						
	comp=Z,1.9nm,0.8s						
TX31	**Lajitas Ar. Si**	**53.24**	**327**	P	**P**	**20 02 32.8**	**-0.6**
121A	**Cookes Peak, D**	**57.92**	**326**	P	**P**	**20 03 07.1**	**0.0**
LENM	**Lemitar**	**58.78**	**328**	P	**P**	**20 03 12.3**	**-0.7**
ANMO	**Albuquerque**	**59.14**	**329**	P	**P**	**20 03 14.8**	**-0.6**
ANMO				IAmb	IAmb	20 03 19.1	
	comp=Z,3.1nm,0.8s						
TUC	**Tucson**	**59.41**	**324**	P	**P**	**20 03 17.0**	**-0.3**
TUC				IAmb	IAmb	20 03 18.2	
	comp=Z,4.3nm,1.2s						
SDCO	**Great Sand Dun**	**60.94**	**332**	P	**P**	**20 03 27.8**	**-0.1**
SDCO				IAmb	IAmb	20 03 31.6	
	comp=Z,6.1nm,1.0s						
WUAZ	**Wupatki**	**62.12**	**326**	P	**P**	**20 03 35.4**	**-0.3**
PV15	**Paradox Valley**	**62.82**	**330**	P	**P**	**20 03 40.2**	**-0.2**
U15A	**North Rim**	**63.30**	**326**	P	**P**	**20 03 43.5**	**-0.2**
U15A				IAmb	IAmb	20 04 15.4	
	comp=Z,7.4nm,1.4s						
KNB	**Kanab**	**64.02**	**326**		**P**	**20 03 47.6**	**-0.7**
KNB				IAmb	IAmb	20 04 15.9	
	comp=Z,8.5nm,1.2s						
LCMT	**Little Creek M**	**64.24**	**326**	P	**P**	**20 03 49.0**	**-0.7**
BBTS	**Babate**	**64.35**	**65**	LR	LR	20 30 37.3	
	comp=Z,103nm,19.3s,baz=244,slow=35						
SRU	**San Rafael Swe**	**64.42**	**329**	P	**P**	**20 03 49.4**	**-1.5**
SRU				IAmb	IAmb	20 04 17.5	
	comp=Z,4.3nm,1.0s						
Q16A	**Castle Valley**	**64.59**	**329**	P	**P**	**20 03 51.8**	**-0.3**
Q16A				IAmb	IAmb	20 04 08.0	
	comp=Z,7.5nm,1.3s						
P18A	**Preston Nutter**	**64.68**	**330**	P	**P**	**20 03 51.9**	**-0.8**
P18A				IAmb	IAmb	20 04 11.8	
	comp=Z,7.9nm,1.4s						
CCUT	**Cedar City**	**64.70**	**326**	P	**P**	**20 03 53.0**	**+0.2**
TAOE	**Nuku Hiva Isla**	**64.77**	**268**	*e*LR	LR	20 23 19.0	
	comp=Z,271nm,26.2s						
MSU	**Marysvale**	**64.79**	**328**	P	**P**	**20 03 53.0**	**-0.5**
P17A	**Butcher Ranch,**	**64.80**	**329**	P	**P**	**20 03 53.4**	**0.0**
P17A				IAmb	IAmb	20 04 07.5	
	comp=Z,8.9nm,1.4s						
MVU	**Marysvale**	**64.81**	**328**	P	**P**	**20 03 53.7**	**+0.2**
RWWY	**Rawlins**	**64.92**	**333**	P	**P**	**20 03 52.5**	**-1.7**
RWWY				IAmb	IAmb	20 04 16.6	
	comp=Z,10nm,1.4s						
SHPR	**Sheep Range**	**64.93**	**324**	P	**P**	**20 03 53.7**	**-0.6**
SHPR				IAmb	IAmb	20 04 09.6	
	comp=Z,5.8nm,1.3s						
PSUT	**Pine Spring**	**65.69**	**327**	P	**P**	**20 03 59.4**	**+0.2**
PSUT				IAmb	IAmb	20 04 00.8	
	comp=Z,6.6nm,1.4s						
DUG	**Dugway, Tooele**	**66.38**	**328**	P	**P**	**20 04 03.6**	**+0.1**
R11A	**Troy Canyon, C**	**66.49**	**325**	P	**P**	**20 04 04.1**	**-0.2**
R11A				IAmb	IAmb	20 04 20.0	
	comp=Z,6.1nm,1.4s						
GMN	**Gold Mountain**	**66.69**	**323**	P	**P**	**20 04 05.8**	**+0.2**
GMN				IAmb	IAmb	20 04 21.1	
	comp=Z,5.5nm,1.4s						
PDAR	**Pinedale Array**	**66.82**	**332**	P	**P**	**20 04 07.3**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=93,slow=3.6,SNR=1.6						
PDAR				LR	LR	20 35 38.6	
	comp=Z,31nm,18.3s,baz=98,slow=38						
HWUT	**Hardware Ranch**	**66.84**	**330**	P	**P**	**20 04 04.9**	**-1.6**
HWUT				IAmb	IAmb	20 04 21.7	
	comp=Z,5.3nm,1.1s						
LCH	**Last Change Ra**	**66.86**	**323**	P	**P**	**20 04 04.5**	**-2.1**
VNA3	**Neumayer Olymp**	**66.98**	**162**	P	**P**	**20 04 08.0**	**+1.2**
MZP	**Montezuma Peak**	**67.03**	**324**	P	**P**	**20 04 06.8**	**-1.1**
DSP	**Deep Springs**	**67.14**	**323**	P	**P**	**20 04 08.0**	**-0.2**
TPH	**Tonopah**	**67.20**	**324**	P	**P**	**20 04 08.6**	**-0.3**
VNA1	**Neumayer--Stat**	**67.23**	**161**	P	**P**	**20 04 09.9**	**+1.6**
HVU	**Hansel Valley**	**67.56**	**330**	P	**P**	**20 04 10.1**	**-0.9**
VNA2	**Neumayer--Watz**	**67.59**	**161**	P	**P**	**20 04 11.5**	**+0.9**
	baz=290,slow=7.0						
FXWY	**Fox Creek**	**68.17**	**332**	P	**P**	**20 04 13.5**	**-1.4**
YHL	**Hebgen Lake**	**69.19**	**333**	P	**P**	**20 04 20.7**	**-0.6**
YHL				IAmb	IAmb	20 04 37.8	
	comp=Z,9.2nm,1.2s						
SNAA	**Sanae**	**69.20**	**161**	P	**P**	**20 04 21.4**	**+0.6**
SNAA	**Sanae**	**69.20**	**161**	LR	LR	20 31 53.0	
	comp=Z,79nm,21.0s,baz=284,slow=33						
SNAA	**Sanae**	**69.20**	**161**	P	**P**	**20 04 20.9**	**+0.2**
PAHR	**Pah Rah Range**	**69.55**	**324**	P	**P**	**20 04 22.9**	**-0.5**
PAHR				IAmb	IAmb	20 04 39.2	
	comp=Z,15nm,1.4s						
HLID	**Hailey**	**69.70**	**330**	P	**P**	**20 04 24.4**	**+0.1**
MFID	**Camas Ranch**	**70.28**	**329**	P	**P**	**20 04 27.0**	**-0.8**
MFID				IAmb	IAmb	20 04 44.0	
	comp=Z,11nm,1.0s						
SCHQ	**Schefferville**	**70.62**	**4**	LR	LR	20 36 25.9	
	comp=Z,29nm,20.1s,baz=162,slow=37						
ORV	**Oroville**	**70.66**	**323**	P	**P**	**20 04 30.6**	**+0.5**
ORV				IAmb	IAmb	20 04 46.5	
	comp=Z,12nm,1.1s						
TBI	**Tubuai**	**70.80**	**250**	*e*LR	LR	20 26 07.7	
	comp=Z,79nm,26.5s						
TBI	**Tubuai**	**70.80**	**250**	*e*T	T	21 21 23.8	
	comp=Z,3.5nm,0.3s						
TROLL	**Troll, Antarti**	**70.92**	**161**	P	**P**	**20 04 32.6**	**+1.2**
MOD	**Modoc Plateau**	**71.55**	**325**	P	**P**	**20 04 36.0**	**+0.3**
MOD				IAmb	IAmb	20 04 51.2	
	comp=Z,8.2nm,1.2s						
PPT2	**Papeete2**	**71.93**	**256**	*e*LR	LR	20 26 39.3	
	comp=Z,156nm,24.5s						
PPT	**Papeete**	**71.94**	**256**	LR	LR	20 27 43.3	
	comp=Z,72nm,18.2s,baz=56,slow=29						
DBIC	**Dimbokro**	**71.99**	**77**	LR	LR	20 35 01.9	
	comp=Z,122nm,18.9s,baz=259,slow=35						
I07A	**Izee**	**72.62**	**327**	P	**P**	**20 04 41.4**	**-0.5**
I07A				IAmb	IAmb	20 04 57.9	
	comp=Z,5.2nm,1.1s						
QSPA	**South Pole Qui**	**74.35**	**180**	LR	LR	20 33 55.6	
	comp=Z,81nm,19.0s,baz=56,slow=33						
NEW	**Newport**	**74.45**	**332**	LR	LR	20 41 21.6	
	comp=Z,26nm,18.8s,baz=150,slow=39						
KOWA	**Kowa**	**75.42**	**70**	LR	LR	20 38 12.8	
	comp=Z,105nm,19.3s,baz=280,slow=36						
TOA0	**Torodi Ar. Sit**	**80.19**	**73**	P	**P**	**20 05 25.1**	**-0.1**
TOA0				IAmb	IAmb	20 05 40.1	
	comp=Z,11nm,1.2s						
TORD	**Torodi Ar. Bea**	**80.19**	**73**	P	**P**	**20 05 25.0**	**-0.2**
	comp=Z,5.7nm,0.4s,baz=252,slow=4.7,SNR=1.6						
TORD				LR	LR	20 39 49.8	
	comp=Z,76nm,21.5s,baz=205,slow=35						
	comp=Z,5.7nm,0.4s						
RAR	**Rarotonga**	**80.58**	**251**	LR	LR	20 34 01.8	
	comp=Z,75nm,21.1s,baz=287,slow=30						
VNDA	**Vanda**	**81.57**	**190**	P	**P**	**20 05 32.6**	**+1.1**
	comp=Z,1.7nm,1.1s,baz=154,slow=4.9,SNR=4.8						
VNDA				LR	LR	20 35 53.0	
	comp=Z,91nm,18.0s,baz=127,slow=31						
	comp=Z,1.7nm,1.1s						
MDT	**Midelt**	**82.00**	**53**	LR	LR	20 39 22.9	
	comp=Z,97nm,21.9s,baz=284,slow=34						
BBB	**Bella Bella**	**82.29**	**330**	LR	LR	20 43 24.0	
	comp=Z,34nm,20.2s,baz=135,slow=36						
YKA	**Yellowknife Ar**	**84.28**	**342**	LR	LR	20 46 48.9	
	comp=Z,28nm,18.1s,baz=322,slow=38						
SFJD	**Kangerlussuaq**	**84.36**	**9**	LR	LR	20 43 09.0	
	comp=Z,49nm,21.2s,baz=191,slow=35						
ESDC	**Sonseca Array**	**85.33**	**47**	P	**P**	**20 05 52.5**	**+1.0**
	comp=Z,1.4nm,1.1s,baz=243,slow=5.6,SNR=5.5						
ESDC				LR	LR	20 42 11.0	
	comp=Z,90nm,19.5s,baz=249,slow=34						
	comp=Z,1.4nm,1.1s						
TSUM	**Tsumeb**	**86.37**	**109**	LR	LR	20 40 46.8	
	comp=Z,21nm,21.9s,baz=292,slow=33						
TAM	**Tamanrasset**	**86.72**	**65**	P	P	20 05 53.7	-5.2
TAM				IAmb	IAmb	20 06 09.7	
	comp=Z,4.0nm,1.0s						
DLBC	**Dease Lake**	**86.97**	**334**	LR	LR	20 48 14.4	
	comp=Z,46nm,18.5s,baz=107,slow=38						
BORG	**Borgarnes**	**89.67**	**20**	LR	LR	20 42 52.7	
	comp=Z,30nm,21.8s,baz=234,slow=33						
MAW	**Mawson**	**91.10**	**165**	P	**P**	**20 06 19.6**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=218,slow=7.1,SNR=5.0						
MAW				LR	LR	20 45 01.1	
	comp=Z,83nm,21.0s,baz=212,slow=34						
	comp=Z,2.5nm,0.8s						
RES	**Resolute Bay**	**91.26**	**355**	LR	LR	20 49 56.4	
	comp=Z,32nm,20.9s,baz=11,slow=37						
LBTB	**Lobatse**	**91.83**	**116**	LR	LR	20 43 46.2	
	comp=Z,44nm,20.1s,baz=211,slow=33						
EKA	**Eskdalemuir Ar**	**92.39**	**33**	LR	LR	20 45 12.5	
	comp=Z,32nm,19.0s,baz=190,slow=34						
KEST	**Kesra**	**93.83**	**54**	LR	LR	20 48 30.4	
	comp=Z,47nm,20.0s,baz=233,slow=35						
URZ	**Urewera**	**94.49**	**228**	LR	LR	20 39 23.0	
	comp=Z,57nm,20.8s,baz=211,slow=29						
RPZ	**Rata Peaks**	**96.20**	**221**	LR	LR	20 39 46.0	
	comp=Z,93nm,20.7s,baz=140,slow=29						
JMIC	**Jan Mayen**	**97.17**	**17**	LR	LR	20 46 21.0	
	comp=Z,25nm,21.7s,baz=231,slow=33						
LSZ	**Lusaka**	**97.20**	**108**	LR	LR	20 50 06.7	
	comp=Z,40nm,18.8s,baz=168,slow=35						
DAVOX	**Davos/Dischmat**	**97.25**	**44**	LR	LR	20 49 08.5	
	comp=Z,44nm,19.2s,baz=264,slow=34						
DZM	**Mont Dzumac**	**109.83**	**239**	*e*LR	LR	20 44 12.5	
	comp=Z,172nm,23.1s						
STKA	**Stephens Creek**	**121.58**	**216**	PKP	**PKPdf**	**20 12 07.9**	**-0.4**
	comp=Z,2.9nm,1.1s,baz=243,slow=4.5,SNR=3.1						
H11N3	**WAKE ISLAND Hyl**	**122.11**	**284**	T	T	22 25 56.8	
	baz=98,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hyl**	**122.13**	**284**	T	T	22 25 58.4	
	baz=98,slow=74,SNR=24						
H11N1	**WAKE ISLAND Hyl**	**122.13**	**284**	T	T	22 26 01.9	
	baz=98,slow=74,SNR=21						
H11S2	**WAKE ISLAND Hyl**	**122.16**	**282**	T	T	22 26 01.5	
	baz=99,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hyl**	**122.17**	**282**	T	T	22 25 57.2	
	baz=99,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hyl**	**122.18**	**282**	T	T	22 25 57.9	
	baz=99,slow=75,SNR=46						
ASAR	**Alice Springs**	**132.22**	**215**	PKP	**PKPdf**	**20 12 27.4**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=170,slow=1.6,SNR=6.5						
WRA	**Warramunga Arr**	**134.85**	**219**	PKP	**PKPdf**	**20 12 33.5**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=147,slow=1.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**138.50**	**19**	PKP	**PKPdf**	**20 12 39.8**	**+0.3**
	comp=Z,3.0nm,1.0s,baz=304,slow=2.7,SNR=8.3						
KSH	**Kashi**	**144.72**	**42**	sPKP		20 13 06.0	
KSH	**Kashi**	**144.72**	**42**	PKP	**PKPdf**	**20 12 51.3**	**+0.1**
SONM	**Songino Array**	**148.06**	**359**	PKPbc	**PKPdf**	**20 12 57.1**	**+0.5**
	comp=Z,2.4nm,1.0s,baz=328,slow=2.0,SNR=9.7						
PZH	**PanZhiHua**	**168.64**	**20**	PKP	**PKPdf**	**20 13 19.5**	**-2.2**

ROM 29 20:01:36.4±0.1, 42°.623N±0°.004×13°.312E±0°.005,
h8km, ML1.9/14, 4C-3D, Error ellipse: s-maj=0.3km
s-min=0.3km az=260.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1202	**Accumoli, Fraz**	**0.10**	**321**	P	Pg	20 01 39.5	+0.5
T1202				S	Sg	20 01 42.0	+1.2
T1202				AML	AML		
	comp=N,2925µm,0.4s						
T1202				AML	AML		
	comp=N,2930µm,0.4s						
T1202				AML	AML		
	comp=E,4100µm,0.2s						
CAMP	**Campotosto**	**0.11**	**141**	⇓P	Pg	20 01 39.6	+0.5
CAMP				S	Sg	20 01 41.7	+0.7
CAMP				AML	AML		
	comp=E,462µm,1.0s						
CAMP				AML	AML		
	comp=N,566µm,0.5s						
CAMP				AML	AML		
	comp=N,566µm,0.5s						
T1243	**Rocca Santa Ma**	**0.12**	**54**	⇑P	Pg	20 01 39.8	+0.5
T1243				S	Sg	20 01 42.1	+0.8
T1244	**Arquata del Tr**	**0.13**	**356**	P	Pg	20 01 40.1	+0.6
T1244				S	Sg	20 01 42.5	+1.0
T1244				AML	AML		
	comp=E,1121µm,0.4s						
T1244				AML	AML		
	comp=N,1490µm,1.5s						
T1244				AML	AML		
	comp=E,1090µm,1.2s						
T1244				AML	AML		
	comp=N,1504µm,1.5s						
T1

1955

ROM 29 20:04:19.4±0.0, 42°.682N±0°.002×13°.232E±0°.002, h13km, ML1.4/4, 2D, Error ellipse: s-maj=0.2km s-min=0.1km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.02**	**347**	P	Pg	20 04 22.1	+0.2
T1202				S	Sg	20 04 23.6	0.0
T1201	**Domo (RI)**	**0.03**	**151**	P	Pg	20 04 22.2	+0.3
T1201				S	Sg	20 04 23.8	+0.3
T1204	**Amatrice, Fraz**	**0.06**	**96**	P	Pg	20 04 22.5	+0.3
T1204				S	Sg	20 04 24.2	+0.1
T1244	**Arquata del Tr**	**0.09**	**33**	P	Pg	20 04 22.7	+0.4
T1244				S	Sg	20 04 24.8	+0.3
SMA1	**SAN MARTINO**	**0.09**	**124**	P	Pg	20 04 22.8	+0.4
SMA1				S	Sg	20 04 25.0	+0.4
T1242	**Castelluccio d**	**0.15**	**352**	P	Pg	20 04 23.5	+0.3
T1242				S	Sg	20 04 26.3	+0.5
T1243	**Rocca Santa Ma**	**0.16**	**85**	P	Pg	20 04 23.7	+0.4
T1243				S	Sg	20 04 26.5	+0.5
LNSS	**Leonessa**	**0.16**	**241**	P	Pg	20 04 23.6	+0.3
LNSS				S	Sg	20 04 26.5	+0.4
NRCA	**Norcia**	**0.17**	**330**	P	Pg	20 04 23.7	+0.2
NRCA				S	Sg	20 04 26.7	+0.3
RM33	**Pellescritta (**	**0.17**	**184**	P	Pg	20 04 24.0	+0.5
RM33				S	Sg	20 04 27.0	+0.6
CAMP	**Campotosto**	**0.20**	**138**	P	Pg	20 04 24.3	+0.4
CAMP				S	Sg	20 04 27.7	+0.7
MMO1	**Montemonaco**	**0.23**	**18**	P	Pg	20 04 24.8	+0.4
MMO1				S	Sg	20 04 28.6	+0.8
T1241	**Roccafluvione,**	**0.23**	**40**	P	Pg	20 04 24.7	+0.4
T1241				S	Sg	20 04 28.6	+0.8
TERO	**Teramo**	**0.28**	**102**	P	Pg	20 04 25.6	+0.3
TERO				S	Sg	20 04 30.0	+0.8
TERO				AML	AML		
	comp=E,205μm,1.6s						
TERO				AML	AML		
	comp=N,252μm,0.2s						
FDMO	**Fiordimonte**	**0.37**	**343**	P	Pg	20 04 26.9	0.0
FDMO				S	Sb	20 04 32.8	-0.9
FDMO				AML	AML		
	comp=E,51μm,0.6s						
FDMO				AML	AML		
	comp=N,53μm,1.4s						
FDMO				AML	AML		
	comp=N,53μm,1.4s						
CESI	**CESI - Serrava**	**0.40**	**323**	⇓P	Pg	20 04 27.6	+0.1
CESI				S	Sb	20 04 33.9	-0.7
CESI				AML	AML		
	comp=E,82μm,0.6s						
CESI				AML	AML		
	comp=N,110μm,0.2s						
CSP1	**Cessapalombo**	**0.41**	**357**	P	Pg	20 04 27.9	+0.2
CSP1				S	Sb	20 04 34.2	-0.7
ASSB	**Assisi San Ben**	**0.55**	**311**	AML	AML		
	comp=N,38μm,0.6s						
ASSB				AML	AML		
	comp=E,46μm,0.3s						
SNTG	**Esanatoglia**	**0.61**	**340**	P	Pg	20 04 31.3	0.0
SNTG				S	Sb	20 04 40.1	-0.5
SNTG				AML	AML		
	comp=N,18μm,0.5s						
SNTG				AML	AML		
	comp=E,16μm,0.1s						
EL6	**Elcito**	**0.65**	**352**	P	Pg	20 04 32.1	-0.1
ATCC	**AVT- Casa Cast**	**0.67**	**319**	⇓P	Pg	20 04 32.3	0.0
ATCC				S	Sb	20 04 42.0	-0.1

*NIC **29** 20:05:07.6±0.0, 36°.33N×27°.71E, h102km±2km, Ml4.7/5*
*ATH **29** 20:05:07.6, 36°.37N×27°.49E, h82km±4km, ML3.7/8, Error ellipse: s-maj=6.0km s-min=1.7km az=38.0*
*IDC **29** 20:05:07.4±0.9, 36°.47N×27°.62E, h80km±12km, mb3.8/13, mbtmp4.0/22, MS2.5/2, Error ellipse: s-maj=14.9km s-min=7.7km az=157.0*
*ISK **29** 20:05:08.0, 36°.52N×27°.63E, h86km, ML3.8/35*
*DDA **29** 20:05:10.2±0.0, 36°.61N×27°.65E, h72km, MW3.8*
*GII **29** 20:05:10.7±0.4, 36°.40N×28°.05E, h60km, mb4.0/3, MD3.8/3, Mm3.8/4*
*THE **29** 20:05:10.7, 36°.51N×27°.59E, h77km±1km, ML3.6/6, Error ellipse: s-maj=1.7km s-min=0.9km az=56.0*
*HLW **29** 20:05:11.4, 36°.12N×27°.73E, h31km±41km, Md4.5, Ml4.6*

ISC 29 20:05:08.2±0.6, 36°.41N±0°.03×27°.72E±0°.03, h89km±5km, n161, σ1s41/210, mb3.9/13, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.33**	**341**	P	**Pn**	**20 05 21.5**	**-0.4**
DAT				S	**Sn**	**20 05 29.6**	**-2.4**
DAT	**Datca**	**0.33**	**341**	PG	**Pn**	**20 05 21.2**	**-0.7**
DAT				SG	**Sn**	**20 05 30.6**	**-1.4**
DAT	**Datca**	**0.33**	**341**	P	**Pn**	**20 05 21.5**	**-0.4**
DAT				S	**Sn**	**20 05 29.8**	**-2.2**
DAT				*i* AML	AML	20 05 31.0	
	comp=E,5μm,0.2s						
DAT				*i* AML	AML	20 05 31.0	
	comp=N,9μm,0.2s						
ARG	**Arkhangelos**	**0.39**	**121**	P	**Pn**	**20 05 23.4**	**+1.4**
ARG				S	**Sn**	**20 05 33.7**	**+1.4**
	18μm,0.2s						
ARG	**Arkhangelos**	**0.39**	**121**	PG	**Pn**	**20 05 22.9**	**+0.8**
ARG				SG	**Sn**	**20 05 33.9**	**+1.5**
ARG	**Arkhangelos**	**0.39**	**121**	P	**Pn**	**20 05 23.4**	**+1.4**
ARG				S	**Sn**	**20 05 33.8**	**+1.5**
ARG	**Arkhangelos**	**0.39**	**121**	P	**Pn**	**20 05 23.5**	**+1.4**
ARG				S	**Sn**	**20 05 34.1**	**+1.8**
ARG				AML	AML	20 05 34.4	
	comp=N,29902μm,0.2s						
ARG				AML	AML	20 05 34.7	
	comp=E,41639μm,0.3s						
NIS1	**Nisyros Isl.**	**0.47**	**294**	P	**Pn**	**20 05 22.4**	**-0.3**
NIS1				S	**Sn**	**20 05 31.6**	**-1.8**
	comp=E,9μm,0.5s						
NIS1	**Nisyros Isl.**	**0.47**	**294**	P	**Pn**	**20 05 22.4**	**-0.3**
NIS1				S	**Sn**	**20 05 31.4**	**-2.1**
NIS1				AML	AML	20 05 35.8	
	comp=N,19695μm,0.4s						
NIS1				AML	AML	20 05 37.3	
	comp=E,16559μm,0.3s						
NISR	**Nisiros**	**0.51**	**293**	P	**Pn**	**20 05 22.6**	**-0.3**
NISR	**Nisiros**	**0.51**	**293**	P	**Pn**	**20 05 22.6**	**-0.3**
NISR				S	**Sn**	**20 05 33.0**	**-1.0**
NISR				AML	AML	20 05 34.4	
	comp=N,2682μm,0.3s						
NISR				AML	AML	20 05 36.0	
	comp=E,5225μm,0.4s						
TURN	**Turunc**	**0.56**	**50**	PG	**Pn**	**20 05 23.5**	**+0.2**
KOSK	**Kos Island**	**0.68**	**300**	P	**Pn**	**20 05 24.1**	**-0.4**
KOSK				S	**Sn**	**20 05 33.9**	**-2.7**
	comp=E,2μm,0.7s						
KOSK	**Kos Island**	**0.68**	**300**	PG	**Pn**	**20 05 23.7**	**-0.8**
KOSK				SG	**Sn**	**20 05 35.0**	**-1.6**
KOSK	**Kos Island**	**0.68**	**300**	P	**Pn**	**20 05 24.0**	**-0.4**
KOSK				S	**Sn**	**20 05 35.2**	**-1.4**
KOSK				AML	AML	20 05 35.8	
	comp=N,9794μm,0.5s						
KOSK				AML	AML	20 05 37.1	
	comp=E,7997μm,0.6s						
BODT	**Bodrum**	**0.72**	**333**	P	**Pn**	**20 05 23.3**	**-1.6**
BODT				S	**Sn**	**20 05 34.3**	**-3.1**
BODT	**Bodrum**	**0.72**	**333**	PG	**Pn**	**20 05 23.4**	**-1.5**
YER	**Yerkesik**	**0.85**	**32**	P	**Pn**	**20 05 26.8**	**+0.5**
YER	**Yerkesik**	**0.85**	**32**	PG	**Pn**	**20 05 26.0**	**-0.3**
YER				SG	**Sn**	**20 05 39.2**	**-0.6**
DALY	**Dalyan (Mula)**	**0.86**	**62**	PG	**Pn**	**20 05 27.5**	**+1.3**
DALY				SG	**Sn**	**20 05 40.5**	**+0.8**
MULA	**Mugla, Merkez-**	**0.97**	**30**	P	**Pn**	**20 05 27.9**	**+0.3**
MULA				S	**Sn**	**20 05 41.0**	**-1.2**
MULA				*i* AML	AML	20 05 41.0	
	comp=E,805nm,0.6s						
MULA				*i* AML	AML	20 05 42.0	
	comp=E,1μm,0.3s						
DDIM	**Aydin, Didim**	**1.11**	**340**	P	**Pn**	**20 05 28.6**	**-0.5**
FETY	**Fethiye**	**1.12**	**78**	PN	**Pn**	**20 05 29.5**	**+0.2**
FETY	**Fethiye**	**1.12**	**78**	P	**Pn**	**20 05 29.9**	**+0.6**
GCAM	**G?zelcaml?**	**1.34**	**343**	PN	**Pn**	**20 05 31.3**	**-0.6**
CAME	**Cameli-Denizli**	**1.38**	**67**	PN	**Pn**	**20 05 33.5**	**+0.9**
CAME				SN	**Sn**	**20 05 52.0**	**+1.0**
TAVA	**DENIZLI_Tavas**	**1.42**	**42**	P	**Pn**	**20 05 34.2**	**+1.1**
TAVA				S	**Sn**	**20 05 51.1**	**-0.7**
TAVA				*i* AML	AML	20 05 54.0	
	comp=E,444nm,0.1s						

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CAEL	**Denizli, Camel**	**1.47**	**61**	P	**Pn**	**20 05 35.0**	**+1.3**
CAEL				S	**Sn**	**20 05 53.7**	**+0.8**
CAEL				*i* AML	AML	20 06 01.0	
	comp=E,1μm,0.4s						
CAEL				*i* AML	AML	20 06 06.0	
	comp=E,1μm,0.9s						
SMG	**Samos**	**1.47**	**332**	P	**Pn**	**20 05 32.8**	**-0.8**
AKAS	**Kas**	**1.54**	**96**	PN	**Pn**	**20 05 35.3**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**1.54**	**5**	PN	**Pn**	**20 05 33.9**	**-0.6**
AYDB				SN	**Sn**	**20 05 52.8**	**-1.6**
APMY	**Acipayam-Deniz**	**1.65**	**50**	PN	**Pn**	**20 05 36.6**	**+0.6**
DGB	**zmir**	**1.77**	**338**	P	**Pn**	**20 05 36.4**	**-0.9**
DEMR	**Demre-Antalya**	**1.78**	**95**	PN	**Pn**	**20 05 38.4**	**+0.9**
ZKR	**Zakros**	**1.78**	**224**	P	**Pn**	**20 05 38.8**	**+1.3**
ZKR				S	**Sn**	**20 06 00.9**	**+1.1**
	comp=E,1μm,0.2s						
ZKR	**Zakros**	**1.78**	**224**	PN	**Pn**	**20 05 38.9**	**+1.4**
ZKR	**Zakros**	**1.78**	**224**	P	**Pn**	**20 05 38.4**	**+0.9**
ZKR				S	**Sn**	**20 06 00.7**	**+0.9**
ZKR	**Zakros**	**1.78**	**224**	P	**Pn**	**20 05 38.8**	**+1.3**
ZKR				AML	AML	20 06 02.0	
	comp=E,4050μm,0.3s						
ZKR				AML	AML	20 06 03.7	
	comp=N,1352μm,0.3s						
STIA	**Sitia Lasithi**	**1.79**	**228**	P	**Pn**	**20 05 38.6**	**+1.0**
STIA				S	**Sn**	**20 06 00.4**	**+0.4**
STIA	**Sitia Lasithi**	**1.79**	**228**	P	**Pn**	**20 05 38.7**	**+1.0**
STIA				AML	AML	20 06 03.4	
	comp=N,6026μm,0.4s						
STIA				AML	AML	20 06 05.6	
	comp=E,3196μm,0.3s						
ELL	**Elmali**	**1.80**	**79**	PN	**Pn**	**20 05 39.3**	**+1.4**
ELL	**Elmali**	**1.80**	**79**	P	**Pn**	**20 05 39.3**	**+1.4**
ELL				S	**Sn**	**20 06 02.9**	**+2.6**
THR8	**Santorini-Mono**	**1.80**	**270**	P	**Pn**	**20 05 37.9**	**+0.1**
SANT	**Santorini**	**1.82**	**269**	PN	**Pn**	**20 05 38.1**	**0.0**
SANT	**Santorini**	**1.82**	**269**	P	**Pn**	**20 05 38.4**	**+0.3**
THR3	**Thira Island,**	**1.87**	**271**	P	**Pn**	**20 05 39.0**	**+0.4**
THR3	**Thira Island,**	**1.87**	**271**	P	**Pn**	**20 05 39.0**	**+0.4**
THR6	**Thira Island,**	**1.87**	**269**	P	**Pn**	**20 05 39.3**	**+0.6**
THR6	**Thira Island,**	**1.87**	**269**	P	**Pn**	**20 05 39.3**	**+0.6**
APE	**Apeiranthos**	**1.87**	**291**	P	**Pn**	**20 05 38.9**	**+0.1**
APE	**Apeiranthos**	**1.87**	**291**	PN	**Pn**	**20 05 38.3**	**-0.5**
APE	**Apeiranthos**	**1.87**	**291**	P	**Pn**	**20 05 38.9**	**+0.1**
APE	**Apeiranthos**	**1.87**	**291**	P	**Pn**	**20 05 38.9**	**+0.1**
APE				AML	AML	20 06 01.8	
	comp=E,792μm,0.8s						
APE				AML	AML	20 06 02.1	
	comp=N,705μm,0.6s						
THR9	**Santorini-Faro**	**1.90**	**269**	P	**Pn**	**20 05 39.7**	**+0.6**
THR9	**Santorini-Faro**	**1.90**	**269**	P	**Pn**	**20 05 39.6**	**+0.6**
THR5	**Thira Island,**	**1.91**	**271**	P	**Pn**	**20 05 39.9**	**+0.7**
BLCB	**Balcova**	**2.04**	**345**	PN	**Pn**	**20 05 40.1**	**-0.8**
FRMA	**Ierapetra Chan**	**2.13**	**230**	P	**Pn**	**20 05 42.5**	**+0.4**
FRMA				S	**Sn**	**20 06 07.0**	**-1.0**
	comp=N,510nm,0.5s						
FRMA	**Ierapetra Chan**	**2.13**	**230**	P	**Pn**	**20 05 42.5**	**+0.4**
FRMA				AML	AML	20 06 09.8	
	comp=E,2868μm,0.3s						
FRMA				AML	AML	20 06 13.5	
	comp=N,3136μm,0.7s						
URLA	**Izmir**	**2.14**	**336**	PN	**Pn**	**20 05 41.6**	**-0.7**
MANT	**Manisa**	**2.18**	**18**	P	**Pn**	**20 05 42.9**	**-0.1**
MANT				S	**Sn**	**20 06 06.2**	**-3.3**
MANT				*i* AML	AML	20 06 07.0	
	comp=N,222nm,0.5s						
MANT				*i* AML	AML	20 06 07.0	
	comp=N,278nm,0.5s						
KORT	**Korkueli**	**2.20**	**74**	PN	**Pn**	**20 05 45.0**	**+1.9**
BRDR	**BURDUR-Merkez**	**2.27**	**55**	P	**Pn**	**20 05 44.8**	**+0.8**
BRDR				S	**Sn**	**20 06 11.0**	**-0.5**
BRDR				*i* AML	AML	20 06 14.0	
	comp=N,186nm,0.4s						
BRDR				*i* AML	AML	20 06 16.0	
	comp=N,201nm,0.4s						
HRKL	**Herakleio**	**2.39**	**243**	P	**Pn**	**20 05 45.6**	**0.0**
HRKL	**Herakleio**	**2.39**	**243**	PN	**Pn**	**20 05 46.4**	**+0.8**
KHL	**Karahalli**	**2.39**	**37**	PN	**Pn**	**20 05 46.3**	**+0.7**
BASM	**Basmaki-Afyon**	**2.40**	**50**	PN	**Pn**	**20 05 46.6**	**+0.9**
ANTB	**Antalya**	**2.41**	**78**	PN	**Pn**	**20 05 47.7**	**+1.9**
AKS	**Akhisar**	**2.46**	**2**	PN	**Pn**	**20 05 46.5**	**0.0**
USAK	**Uak-Merkez**	**2.52**	**24**	P	**Pn**	**20 05 47.7**	**+0.4**
USAK				*i* AML	AML	20 06 15.0	
	comp=N,168nm,0.3s						
USAK				S	**Sn**	**20 06 15.3**	**-2.0**
BCK	**Bucak**	**2.53**	**65**	PN	**Pn**	**20 05 49.1**	**+1.6**
IDI	**Anoyia**	**2.56**	**245**	P	**Pn**	**20 05 48.0**	**+0.2**
IDI	comp=N,33nm,0.3s,baz=291,slow=18,SNR=125			S	**Sn**	**20 06 16.3**	**-1.9**
	comp=N,148nm,0.3s,baz=307,slow=22,SNR=23						
IDI	**Anoyia**	**2.56**	**245**	P	**Pn**	**20 05 47.9**	**+0.1**
IDI	**Anoyia**	**2.56**	**245**	PN	**Pn**	**20 05 48.8**	**+1.0**
ISP	**Isparta**	**2.65**	**57**	PN	**Pn**	**20 05 50.6**	**+1.5**
KZIL	**AFYON_Kizioren**	**2.67**	**46**	P	**Pn**	**20 05 50.1**	**+0.7**
KZIL				S	**Sn**	**20 06 20.1**	**-0.9**
KZIL				*i* AML	AML	20 06 23.0	
	comp=N,138nm,0.6s						
KZIL				*i* AML	AML	20 06 23.0	
	comp=N,149nm,0.7s						
DKL	**Dikili**	**2.73**	**347**	PN	**Pn**	**20 05 49.6**	**-0.5**
SMAA	**Simav-Kutahya**	**2.86**	**20**	PN	**Pn**	**20 05 52.1**	**+0.1**
GEDZ	**Gediz**	**2.95**	**27**	PN	**Pn**	**20 05 53.6**	**+0.5**
SHUT	**Suhut-Afyon**	**3.11**	**46**	PN	**Pn**	**20 05 56.1**	**+0.8**
SIGR	**SIGRI**	**3.16**	**333**	PN	**Pn**	**20 05 55.4**	**-0.4**
IMMV	**Iera Moni Meta**	**3.18**	**254**	P	**Pn**	**20 05 56.3**	**+0.2**
IMMV	**Iera Moni Meta**	**3.18**	**254**	PN	**Pn**	**20 05 57.4**	**+1.3**
TVSB	**Tavsanli**	**3.33**	**24**	PN	**Pn**	**20 05 57.7**	**-0.6**
GVDS	**Gavdos**	**3.34**	**243**	PN	**Pn**	**20 05 59.9**	**+1.6**
GVD	**Gavdhos**	**3.35**	**243**	P	**Pn**	**20 06 00.0**	**+1.6**
GVD	**Gavdhos**	**3.35**	**243**	PN	**Pn**	**20 05 59.6**	**+1.2**
SEYD	**Seydisehir-KON**	**3.45**	**72**	PN	**Pn**	**20 06 01.5**	**+1.6**
KNDR	**Palaiochora Ch**	**3.48**	**251**	P	**Pn**	**20 06 02.6**	**+2.4**
KNDR				S	**Sn**	**20 06 40.7**	**+0.4**
	comp=N,335nm,0.4s						
KNDR	**Palaiochora Ch**	**3.48**	**251**	PN	**Pn**	**20 06 01.7**	**+1.5**
EZN	**Ezine**	**3.58**	**343**	PN	**Pn**	**20 06 01.1**	**-0.4**
VLI	**Veliai**	**3.86**	**276**	P	**Pn**	**20 06 06.1**	**+0.8**
AKMS	**Akamas**	**4.01**	**109**	P	**Pn**	**20 06 07.5**	**+0.1**
AKMS				AML	AML	20 06 52.0	
	comp=N,2.4nm,0.4s						
AKMS				AML	AML	20 06 53.7	
	comp=N,5.8nm,0.6s						
OSC1	**CSNet OBS 1**	**4.12**	**134**	P	**Pn**	**20 06 09.2**	**+0.3**
ALFC	**Alefka**	**4.16**	**106**	P	**Pn**	**20 06 09.7**	**+0.2**
ALFC				AML	AML	20 06 57.3	
	comp=N,3.1nm,0.4s						
ALFC				AML	AML	20 06 58.4	
	comp=N,2.7nm,0.3s						
NATA	**Nata**	**4.28**	**111**	P	**Pn**	**20 06 11.6**	**+0.5**
NATA				AML	AML	20 07 01.9	
	comp=N,4.1nm,0.6s						
NATA				AML	AML	20 07 02.0	
	comp=N,6.5nm,0.6s						
SZAC	**Souni**	**4.52**	**110**	P	**Pn**	**20 06 14.7**	**+0.3**
SZAC				AML	AML	20 07 07.3	
	comp=N,1.9nm,0.5s						
SZAC				AML	AML	20 07 08.7	
	comp=N,3.8nm,0.2s						
ASGA	**Asgata**	**4.79**	**108**	P	**Pn**	**20 06 18.7**	**+0.7**
ASGA				AML	AML	20 07 13.4	
	comp=N,1.2nm,0.2s						
ASGA				AML	AML	20 07 15.3	
	comp=N,1.1nm,0.4s						
CSS	**Mathiatis**	**4.79**	**106**	P	**Pn**	**20 06 18.6**	**+0.5**
OSC2	**CSNet OBS 4**	**5.01**	**130**	P	**Pn**	**20 06 20.5**	**-0.5**
SLUM	**Salum**	**5.33**	**204**	P	**Pn**	**20 06 25.4**	**+0.1**
SLUM	baz=206			S	**Sn**	**20 07 19.1**	**-6.4**
	baz=206						
BRTR	**Keskin Array B**	**5.72**	**53**	P	**Pn**	**20 06 32.0**	**+1.1**
BRTR	comp=N,3.8nm,0.7s,baz=214,slow=10,SNR=12			S	**Sn**	**20 07 34.6**	**-0.6**
	comp=N,11nm,0.5s,baz=222,slow=25,SNR=19						
BRTR				LR	LR	20 09 25.3	
	comp=N,36nm,19.4s,baz=196,slow=45						
BHL	**Bhannes**	**6.97**	**109**	*e*P	**Pn**	**20 06 49.0**	**+1.2**
HNTI	**Hanita**	**6.98**	**116**	Pn	**Pn**	**20 06 47.6**	**-0.2**
HNTI				Sn	**Sn**	**20 08 03.3**	**-2.4**
HWQ	**Hawqa**	**7.05**	**105**	*e*P	**Pn**	**20 06 48.8**	**-0.1**
HMYD	**Mayadein**	**7.09**	**158**	P	**Pn**	**20 06 50.0**	**+0.7**
	baz=156						
OFRI	**`Ofer**	**7.09**	**120**	Pn	**Pn**	**20 06 49.2**	**-0.2**
OFRI				Sn	**Sn**	**20 08 05.7**	**-2.8**

QRWL	**Qaraoun**	**7.14**	**111**	*e*P	**Pn**	**20 06 50.2**	**+0.2**
MMA0B	**Mount Meron ar**	**7.18**	**116**	Pn	**Pn**	**20 06 50.9**	**+0.3**
MMA0B				Sn	**Sn**	**20 08 08.1**	**-2.6**
MMAI	**Mount Meron Ar**	**7.18**	**116**	P	**Pn**	**20 06 50.5**	**-0.1**
	comp=N,18nm,0.3s,baz=307,slow=11,SNR=94						
MMAI				S	**Sn**	**20 08 07.8**	**-2.9**
	comp=N,8.8nm,0.3s,baz=301,slow=19,SNR=11						
HNAT	**Natroun**	**7.19**	**159**	P	**Pn**	**20 06 51.2**	**+0.5**
	baz=158						
RCY	**Rachaya**	**7.27**	**111**	*e*P	**Pn**	**20 06 51.8**	**-0.1**
GEM	**Giv'at Ha'Em**	**7.28**	**114**	Pn	**Pn**	**20 06 51.6**	**-0.2**
GEM				Sn	**Sn**	**20 08 10.0**	**-2.9**
NATI	**Neve Ativ**	**7.30**	**113**	Pn	**Pn**	**20 06 52.1**	**-0.1**
KOT	**Kottamia**	**7.33**	**151**	P	**Pn**	**20 06 53.2**	**+0.6**
	baz=149						
SLTI	**Sal'it**	**7.35**	**122**	Pn	**Pn**	**20 06 52.1**	**-0.8**
SLTI				Sn	**Sn**	**20 08 11.2**	**-3.5**
SWA2		**7.40**	**196**	P	**Pn**	**20 06 53.4**	**-0.1**
	baz=197						
MMLI	**Mount Malkishu**	**7.50**	**120**	Pn	**Pn**	**20 06 55.0**	**+0.1**
MMLI				Sn	**Sn**	**20 08 15.5**	**-2.9**
HSAF	**As Saff**	**7.50**	**153**	P	**Pn**	**20 06 55.6**	**+0.7**
	baz=152						
GLL	**Jalalah**	**7.60**	**153**	P	**Pn**	**20 06 56.4**	**+0.1**
	baz=151						
HMDT	**Nahal Hemdat**	**7.68**	**120**	Pn	**Pn**	**20 06 57.7**	**+0.4**
HMDT				Sn	**Sn**	**20 08 21.0**	**-1.7**
AMAZ	**Amatzia**	**7.71**	**127**	Pn	**Pn**	**20 06 56.7**	**-1.1**
AMAZ				Sn	**Sn**	**20 08 21.4**	**-2.1**
KZIT	**Kziot**	**7.82**	**133**	Pn	**Pn**	**20 06 59.2**	**-0.1**
KZIT				Sn	**Sn**	**20 08 21.9**	**-4.3**
SUZ	**Suez**	**7.83**	**145**	P	**Pn**	**20 07 01.0**	**+1.6**
	baz=144						
YTIR	**Yattir**	**7.95**	**127**	Pn	**Pn**	**20 07 00.9**	**-0.2**
YTIR				Sn	**Sn**	**20 08 27.2**	**-2.3**
DSI	**Dead Sea**	**7.99**	**125**	Pn	**Pn**	**20 07 01.5**	**-0.1**
ZFRI	**Zfri**	**8.54**	**131**	Pn	**Pn**	**20 07 09.3**	**+0.2**
ZFRI				Sn	**Sn**	**20 08 40.3**	**-3.5**
PRNI	**Paran**	**8.58**	**133**	Pn	**Pn**	**20 07 09.5**	**-0.2**
PRNI				Sn	**Sn**	**20 08 40.5**	**-4.3**
KRMI	**Paran Flat**	**8.59**	**135**	Pn	**Pn**	**20 07 09.6**	**-0.2**
ASF	**Jabal al Asfar**	**8.69**	**116**	P	**Pn**	**20 07 13.1**	**+1.8**
	comp=N,6.5nm,0.3s,baz=297,slow=5.3,SNR=19						
ASF				S	**Sn**	**20 08 47.9**	**+0.2**
	comp=N,4.2nm,0.3s,baz=30,slow=10,SNR=2.4						
HRFI	**Mount Harif**	**8.83**	**134**	Pn	**Pn**	**20 07 14.2**	**+1.1**
HRFI				Sn	**Sn**	**20 08 48.5**	**-2.4**
MBRI	**Mt Berech**	**8.94**	**136**	Pn	**Pn**	**20 07 14.8**	**+0.1**
EIL	**Elat**	**9.06**	**136**	P	**Pn**	**20 07 15.9**	**-0.3**
	comp=N,5.2nm,0.3s,baz=330,slow=2.9,SNR=24						
EIL				S	**Sn**	**20 08 51.4**	**-5.0**
	comp=N,17nm,0.3s,baz=221,slow=4.3,SNR=10						
EIL	**Elat**	**9.06**	**136**	Pn	**Pn**	**20 07 16.5**	**+0.3**
MLR	**Muntele Rosu**	**9.17**	**352**	P	**Pn**	**20 07 16.0**	**-1.6**
	comp=N,1.8nm,0.8s,baz=111,slow=17,SNR=3.3						
NUB	**Nuweibaa**	**9.39**	**140**	P	**Pn**	**20 07 23.1**	**+2.3**
	baz=138						
TR2	**Tor 2**	**9.48**	**146**	P	**Pn**	**20 07 22.6**	**+0.8**
	baz=145						
DBRK	**Dubrovnik**	**9.67**	**313**	*i* P	**Pn**	**20 07 26.1**	**+1.6**
TR1	**Tor 1**	**9.90**	**146**	P	**Pn**	**20 07 28.2**	**+0.5**
	baz=145						
LSTV	**Lastovo**	**10.48**	**311**	*i* P	**Pn**	**20 07 37.1**	**+1.6**
HVAR	**Hvar**	**10.98**	**311**	*i* P	**Pn**	**20 07 43.7**	**+1.4**
KIJV	**Kijevo**	**11.49**	**315**	*i* P	**Pn**	**20 07 51.4**	**+2.2**
VIRC	**Vir**	**12.45**	**313**	*i* P	**Pn**	**20 08 04.3**	**+2.4**
GNI	**Garni**	**13.88**	**69**	LR	LR	20 14 32.8	
	comp=N,32nm,21.9s,baz=227,slow=41						
AKASG	**Malin Array Be**	**14.32**	**4**	P	**Pn**	**20 08 26.9**	**+0.3**
	comp=N,0.3nm,0.3s,baz=193,slow=11,SNR=1.8						
KEST	**Kesra**	**14.88**	**273**	P	**Pn**	**20 08 32.6**	**-1.3**
	comp=N,1.7nm,0.6s,baz=232,slow=1.9,SNR=2.2						
GERES	**GERESS Array B**	**16.11**	**325**	P	**Pn**	**20 08 48.9**	**-0.5**
	comp=N,0.5nm,0.6s,baz=124,slow=12,SNR=2.8						
BELG	**Belogornoye**	**21.28**	**35**	P	**P**	**20 09 47.5**	**+0.3**
	comp=N,20nm,0.6s,baz=322,slow=4.0,SNR=8.3						
	comp=N,20nm,0.6s						
GEYT	**Alibeck**	**24.23**	**77**	P	**P**	**20 10 17.5**	**+0.9**
	comp=N,2.3nm,0.5s,baz=262,slow=11,SNR=4.1						
	comp=N,2.3nm,0.5s						
FINES	**FINESS Array B**	**25.07**	**358**	P	**P**	**20 10 22.2**	**-1.8**
	comp=N,3.6nm,1.0s,baz=171,slow=9.8,SNR=2.5						
	comp=N,3.6nm,1.0s						
ESDC	**Sonseca Array**	**25.09**	**287**	P	**P**	**20 10 23.7**	**-0.9**
	comp=N,1.3nm,0.7s

BASI	**Baing, Sumba**	**3.92**	**220**	P		**P**		**20 09 00.2**	**-1.2**
KAPI	**Kappang**	**4.01**	**303**	P		**P**		**20 09 02.2**	**+0.1**
	146nm,0.4s,baz=140,slow=3.4,SNR=60								
KAPI				S		**S**		**20 10 10.5**	**-1.3**
	9.1nm,0.4s,baz=85,slow=18,SNR=0.9								
KAPI	**Kappang**	**4.01**	**303**	P		**P**		**20 09 00.8**	**-1.2**
KAPI	**Kappang**	**4.01**	**303**	P		**P**		**20 09 00.9**	**-1.2**
WBSI	**Waikabubak, Su**	**4.42**	**237**	P		**P**		**20 09 02.5**	**-2.6**
SPSI	**Sidrap Palu**	**4.64**	**314**	P		**P**		**20 09 06.2**	**-0.5**
TTSI	**Tana Toraja**	**5.29**	**321**	P		**P**		**20 09 11.3**	**-0.5**
	0.3nm1µm103nm,1.0s								
PLAI	**Plampang**	**5.54**	**253**	P		**P**		**20 09 11.5**	**-2.4**
	0.8nm2µm195nm,0.7s								
PLAI	**Plampang**	**5.54**	**253**	P		**P**		**20 09 11.7**	**-2.2**
NLAI	**Namlea**	**5.58**	**45**	P		**P**		**20 09 13.7**	**-0.5**
	0.8nm7µm203nm,0.6s								
SANI	**Sanana**	**5.86**	**29**	P		**P**		**20 09 16.0**	**-0.6**
	0.6nm2µm184nm,1.0s								
SANI	**Sanana**	**5.86**	**29**	P		**P**		**20 09 16.5**	**-0.1**
AAI	**Ambon**	**6.13**	**56**	P		**P**		**20 09 18.0**	**-0.9**
	0.8nm3µm177nm,1.1s								
LUWI	**Luwuk**	**6.13**	**357**	P		**P**		**20 09 18.4**	**-0.5**
LUWI	**Luwuk**	**6.13**	**357**	P		**P**		**20 09 19.0**	**+0.1**
	0.2nm2µm65nm,1.0s								
LUWI	**Luwuk**	**6.13**	**357**	P		**P**		**20 09 19.0**	**+0.1**
TWSI	**Taliwang, Sumb**	**6.38**	**256**	P		**P**		**20 09 18.8**	**-2.2**
	0.3nm67nm,0.6s								
MSAI	**Masohi**	**6.93**	**57**	P		**P**		**20 09 23.8**	**-2.2**
	0.1nm424nm13nm,0.4s								
MRSI	**Marisa**	**7.72**	**351**	P		**P**		**20 09 32.4**	**-1.0**
	0.6nm2µm175nm,1.0s								
KMSI	**Cibinong**	**7.78**	**6**	P		**P**		**20 09 33.6**	**-0.2**
	1.0nm3µm338nm,0.7s								
GTOI	**Gorontalo**	**7.79**	**359**	P		**P**		**20 09 33.8**	**-0.2**
	26nm,0.8s								
LBMI	**Labuha**	**7.85**	**34**	P		**P**		**20 09 34.2**	**-0.3**
	0.6nm2µm159nm,0.6s								
MPSI	**Mapaga**	**8.16**	**337**	P		**P**		**20 09 37.1**	**-0.4**
	7.4nm,0.9s								
TNTI	**Ternate**	**8.98**	**28**	P		**P**		**20 09 43.9**	**-1.5**
TNTI	**Ternate**	**8.98**	**28**	P		**P**		**20 09 44.6**	**-0.8**
	614nm50nm,1.0s								
JAGI	**Jajag, Banyuwa**	**8.98**	**261**	P		**P**		**20 09 42.0**	**-3.4**
JAGI	**Jajag, Banyuwa**	**8.98**	**261**	P		**P**		**20 09 42.8**	**-2.6**
BBKI	**Banjar Baru**	**9.05**	**294**	P		**P**		**20 09 46.7**	**+0.6**
MTN	**Manton Dam**	**9.66**	**126**	P		**P**		**20 09 52.1**	**0.0**
FAKI	**Fak Fak**	**10.03**	**65**	P		**P**		**20 09 53.9**	**-1.8**
FAKI	**Fak Fak**	**10.03**	**65**	P		**P**		**20 09 54.0**	**-1.7**
	37nm,0.7s								
FAKI	**Fak Fak**	**10.03**	**65**	P		**P**		**20 09 55.3**	**-0.4**
KNRA	**Kununurra**	**10.06**	**147**	P		**P**		**20 09 55.9**	**-0.1**
SWI	**Sorong**	**10.27**	**52**	P		**P**		**20 09 57.0**	**-1.0**
	86nm,0.7s								
SIJI	**Sorong**	**10.27**	**53**	P		**P**		**20 09 57.0**	**-1.0**
	52nm,0.5s,baz=290,slow=4.3,SNR=41								
SIJI				S		**S**		**20 11 51.3**	**-2.9**
	2.7nm,0.5s,baz=106,slow=20,SNR=9.0								
SGSI	**Sangihe**	**11.08**	**13**	P		**P**		**20 10 05.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**11.10**	**168**	P		**P**		**20 10 06.1**	**-0.1**
	12nm,0.8s,baz=351,slow=9.7,SNR=34								
FITZ				S		**S**		**20 12 07.2**	**-2.0**
	3.3nm,0.8s,baz=78,slow=20,SNR=2.2								
MBWA	**Marble Bar**	**14.26**	**193**	P		**P**		**20 10 37.0**	**-0.8**
MBWA	**Marble Bar**	**14.26**	**193**	P		**P**		**20 10 37.5**	**-0.3**
PSA00	**Pilbara Seismi**	**14.63**	**192**	P		**P**		**20 10 40.8**	**-0.5**
PSA00	**Pilbara Seismi**	**14.63**	**192**	P		**P**		**20 10 40.4**	**-0.9**
PSA00	**Pilbara Seismi**	**14.63**	**192**	P		**P**		**20 10 41.3**	**0.0**
LEM	**Lembang**	**15.40**	**270**	P		**P**		**20 10 49.3**	**+0.6**
	13nm,0.5s,baz=354,slow=8.6,SNR=4.4								
WB0	**Warramunga Arr**	**16.59**	**140**	P		**P**		**20 11 00.1**	**+0.7**
WB0				IAmb	IAmb			20 11 01.3	
	comp=Z,12nm,0.6s								
WRA	**Warramunga Ar**	**16.69**	**140**	P		**P**		**20 11 01.0**	**+0.7**
	comp=Z,11nm,0.8s,baz=319,slow=11,SNR=114								
WRA				S		**S**		**20 13 44.5**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=312,slow=19,SNR=6.8								
WRA				PcP		**PcP**		**20 15 12.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=318,slow=0.8,SNR=1.8								
WRA	**Warramunga Arr**	**16.69**	**140**	P		**P**		**20 11 00.9**	**+0.7**
WRAB	**Tennant Creek**	**16.69**	**140**	P		**P**		**20 11 01.0**	**+0.8**
WRAB				IAmb	IAmb			20 11 03.0	
	comp=Z,20nm,0.8s								
WRAB	**Tennant Creek**	**16.69**	**140**	P		**P**		**20 11 01.5**	**+1.3**
WB2	**Warramunga Arr**	**16.69**	**140**	P		**P**		**20 11 00.9**	**+0.5**
WR0	**Warramunga Arr**	**16.83**	**140**	P		**P**		**20 11 02.1**	**+0.5**
WR0				IAmb	IAmb			20 11 04.3	
	comp=Z,25nm,1.1s								
GIRL	**Giralia**	**17.58**	**208**	P		**P**		**20 11 09.4**	**+1.1**
WRKA	**Warakurna**	**18.41**	**165**	P		**P**		**20 11 17.3**	**+1.4**
ASAR	**Alice Springs**	**19.36**	**149**	P		**P**		**20 11 25.6**	**+1.0**
	comp=Z,2.7nm,0.5s,baz=325,slow=8.7,SNR=104								
ASAR				S		**S**		**20 14 27.2**	**-1.9**
	comp=Z,2.3nm,1.0s,baz=317,slow=16,SNR=9.5								
ASAR				PcP		**PcP**		**20 15 17.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=356,slow=1.8,SNR=5.1								
ASAR				ScP		**ScP**		**20 17 57.7**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=346,slow=2.1,SNR=9.9								
ASAR	**Alice Springs**	**19.36**	**149**	P		**P**		**20 11 25.2**	**+0.6**
MEEK	**Meekatharra**	**19.80**	**192**	P		**P**		**20 11 28.7**	**+0.2**
QIS	**Mount Isa**	**20.75**	**131**	P		**P**		**20 11 38.7**	**+1.5**
COEN	**Coen**	**20.80**	**110**	P		**P**		**20 11 38.2**	**+0.6**
COEN	**Coen**	**20.80**	**110**	P		**P**		**20 11 38.6**	**+0.9**
MORW	**Morawa**	**22.75**	**196**	P		**P**		**20 11 55.2**	**+0.3**
OOD	**Oodnadatta**	**23.68**	**151**	P		**P**		**20 12 04.4**	**+1.3**
BLDU	**Ballidu**	**24.05**	**194**	P		**P**		**20 12 06.4**	**0.0**
KLBR	**Kellerberrin**	**24.77**	**191**	P		**P**		**20 12 13.3**	**+0.6**
MULG	**Mulgathing**	**25.14**	**157**	P		**P**		**20 12 17.4**	**+1.4**
MUN	**Mundaring**	**25.48**	**194**	P		**P**		**20 12 19.7**	**+0.8**
NWAO	**Narrogin (SRO)**	**26.17**	**191**	P		**P**		**20 12 25.4**	**+0.4**
	comp=Z,10nm,1.0s,baz=242,slow=6.4,SNR=9.8								
	comp=Z,10nm,1.0s								
NWAO	**Narrogin (SRO)**	**26.17**	**191**	P		**P**		**20 12 25.6**	**+0.6**
INKA	**Innaminka**	**26.37**	**143**	P		**P**		**20 12 29.6**	**+2.8**
LCRK	**Leigh Creek**	**27.11**	**150**	P		**P**		**20 12 34.9**	**+1.7**
BBOO	**Buckleboo**	**28.16**	**156**	P		**P**		**20 12 43.6**	**+1.2**
BBOO				IAmb	IAmb			20 12 51.3	
	comp=Z,25nm,1.4s								
BBOO	**Buckleboo**	**28.16**	**156**	P		**P**		**20 12 43.6**	**+1.2**
HTT	**Hallett**	**29.92**	**153**	P		**P**		**20 12 59.5**	**+1.9**
STKA	**Stephens Creek**	**29.98**	**147**	P		**P**		**20 12 59.7**	**+1.6**
	comp=Z,10nm,0.6s,baz=320,slow=9.2,SNR=36								
STKA				S		**S**		**20 17 15.5**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=164,slow=18,SNR=3.4								
	comp=Z,10nm,0.6s								
STKA	**Stephens Creek**	**29.98**	**147**	P		**P**		**20 12 59.7**	**+1.6**
STKA				IAmb	IAmb			20 13 00.5	
	comp=Z,2.0nm,0.7s								
STKA	**Stephens Creek**	**29.98**	**147**	P		**P**		**20 12 59.9**	**+1.8**
RMQ	**Roma**	**31.01**	**131**	P		**P**		**20 13 09.5**	**+2.5**
TWOA	**Tennyson Woods**	**31.12**	**155**	P		**P**		**20 13 09.6**	**+1.8**
CMSA	**Cobar Meteorol**	**32.09**	**142**	P		**P**		**20 13 18.3**	**+2.3**
ARPS	**Mount Arapiles**	**34.01**	**153**	P		**P**		**20 13 34.1**	**+2.0**
ARMA	**Armidale**	**35.31**	**135**	P		**P**		**20 13 45.3**	**+2.2**
ARMA				IAmb	IAmb			20 14 08.7	
	comp=Z,8.9nm,1.3s								
CAN	**Canberra**	**36.70**	**143**	P		**P**		**20 13 56.7**	**+2.3**
USRK	**Ussuriysk Ar.**	**51.79**	**8**	P		**P**		**20 15 49.8**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=199,slow=6.9,SNR=4.4								
	comp=Z,1.1nm,0.6s								
RPZ	**Rata Peaks**	**55.39**	**139**	P		**P**		**20 16 16.9**	**+1.5**
	comp=Z,13nm,0.6s,baz=263,slow=2.4,SNR=9.2								
	comp=Z,13nm,0.6s								
SONM	**Songino Array**	**56.77**	**347**	P		**P**		**20 16 25.3**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=162,slow=6.1,SNR=1.7								
MK31	**Makanchi Array**	**64.84**	**330**	P		**P**		**20 17 18.1**	**+0.5**
MKAR	**Makanchi Array**	**64.84**	**330**	P		**P**		**20 17 18.1**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=127,slow=7.3,SNR=9.8								
	comp=Z,1.0nm,0.6s								
ZALV	**Zalesovo Beam**	**68.92**	**337**	P		**P**		**20 17 41.5**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=101,slow=7.5,SNR=2.3								
	comp=Z,0.5nm,0.5s								
VNDA	**Vanda**	**73.14**	**172**	P		**P**		**20 18 07.8**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=325,slow=8.1,SNR=7.5								
	comp=Z,0.5nm,0.6s								
ABKAR	**Akbulak array**	**78.52**	**323**	P		**P**		**20 18 36.9**	**+0.1**
GOGA	**Godfrey**	**144.13**	**40**			**PKPab**		**20 26 06.2**	**+0.6**
CPUP	**Villa Florida**	**146.66**	**179**	PKPbc		**PKiKP**		**20 26 13.3**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=220,slow=5.6,SNR=3.0								

IDC 29 21:03:30.2±3.8, 30.05S×60.57E, h0km, mb3.6/4, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=144.5km s-min=33.2km az=42.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.70**	**310**	Pn	Pn	21 07 25.7	-0.1
	baz=81,slow=18,SNR=1.5						
OPO				Sn	Sn	21 10 16.5	-16
	baz=72,slow=20,SNR=1.3						
	1.7nm,0.5s						
H08S1	**Diego Garcia H**	**24.93**	**29**	T	T	21 33 34.5	
	baz=203,slow=74						
H08S2	**Diego Garcia H**	**24.94**	**29**	T	T	21 33 38.6	
	baz=203						
H08S3	**Diego Garcia H**	**24.95**	**29**	T	T	21 33 37.3	
	baz=203,slow=74						
H01W2	**Cape Leeuwin H**	**45.01**	**111**	T	T	21 59 33.9	
	baz=261,slow=74,SNR=5.4						
H01W3	**Cape Leeuwin H**	**45.01**	**111**	T	T	21 59 31.8	
	baz=261,slow=74,SNR=6.5						
H01W1	**Cape Leeuwin H**	**45.02**	**111**	T	T	21 59 31.6	
	baz=261,slow=74,SNR=5.6						
ASAR	**Alice Springs**	**64.73**	**104**	P	P	21 14 10.6	-0.1
	0.3nm,0.6s,baz=244,slow=6.3,SNR=7.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**66.61**	**100**	P	P	21 14 23.0	+0.1
	0.5nm,0.9s,baz=247,slow=5.6,SNR=4.8						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**78.97**	**15**	P	P	21 15 35.3	-0.2
	0.4nm,0.8s,baz=191,slow=6.8,SNR=3.8						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**86.25**	**14**	P	P	21 16 13.7	+0.4
	0.7nm,0.7s,baz=190,slow=4.4,SNR=2.2						
	0.7nm,0.7s						

NEIC ***29*** *21:10:44.5±2.3, 20.5S±0.1×178.1W±0.1, h532km±5km, mb4.3/62, Error ellipse: s-maj=18.0km s-min=15.2km az=119.0*

IDC ***29*** *21:10:46.1±1.3, 20.35S×178.22W, h553km±12km, mb3.5/16, mbtmp4.4/18, Error ellipse: s-maj=21.2km s-min=9.8km az=152.0*

ISC 29 21:10:43.9±0.4, 20.55S±0.08×178.06W±0.07, h534km, n154, σ1s05/164, mb4.3/48, 23C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.62**	**307**	P	**P**	**21 12 10.6**	**+0.7**
	15nm,0.3s,baz=186,slow=3.9,SNR=51						
MSVF				S	**S**	**21 13 20.7**	**+1.0**
	7.6nm,0.7s,baz=181,slow=23,SNR=0.6						
MSVF	**Nonsavu**	**4.62**	**307**	P	**P**	**21 12 10.8**	**+0.9**
NIUE	**Niue**	**7.80**	**81**	P	**P**	**21 12 38.6**	**-0.6**
MARNC	**Mare, Loyalty**	**13.02**	**263**	P	**P**	**21 13 33.4**	**+0.2**
DZM	**Mont Dzumac**	**14.52**	**261**	P	**P**	**21 13 50.1**	**+1.3**
	4.3nm,0.5s,baz=200,slow=11,SNR=1.9						
OUZ	**Omahuta**	**16.36**	**205**	P	**P**	**21 14 09.8**	**+2.5**
KOUNC	**Koumac, New Ca**	**16.54**	**267**	P	**P**	**21 14 11.9**	**+2.7**
URZ	**Urewera**	**18.14**	**192**	P	**P**	**21 14 23.2**	**-0.4**
	11nm,0.9s,baz=117,slow=24,SNR=3.0						
URZ				S	**S**	**21 17 16.4**	**-6.2**
	5.3nm,1.0s,baz=302,slow=23,SNR=1.3						
URZ	**Urewera**	**18.14**	**192**	P	**P**	**21 14 23.3**	**-0.4**
BFZ	**Birch Farm**	**20.65**	**192**	P	**P**	**21 14 49.5**	**+3.0**
EIDS	**Eidsvold**	**28.78**	**255**	P	**P**	**21 15 59.3**	**+0.5**
EIDS				IAmb	IAmb	21 16 41.9	
	comp=Z,15nm,1.4s						
ARMA	**Armidale**	**28.99**	**244**	P	**P**	**21 16 02.0**	**+1.3**
ARMA				IAmb	IAmb	21 16 02.5	
	comp=Z,5.3nm,0.8s						
TOO	**Toolangi**	**35.82**	**234**	P	**P**	**21 16 59.0**	**+0.5**
TOO				IAmb	IAmb	21 17 03.6	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**37.72**	**244**	P	**P**	**21 17 14.9**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=93,slow=11,SNR=6.9						
	comp=Z,1.5nm,0.4s						
STKA	**Stephens Creek**	**37.72**	**244**	P	**P**	**21 17 14.0**	**-0.2**
BBOO	**Buckleboo**	**42.47**	**244**	P	**P**	**21 17 52.2**	**0.0**
WR0	**Warramunga Arr**	**44.35**	**262**	P	**P**	**21 18 06.2**	**-0.8**
WR0				IAmb	IAmb	21 18 07.7	
	comp=Z,4.4nm,0.4s						
AS31	**Alice Springs**	**44.45**	**257**	P	**P**	**21 18 07.8**	**0.0**
AS31				IAmb	IAmb	21 18 08.6	
	comp=Z,3.5nm,0.6s						
ASAR	**Alice Springs**	**44.45**	**257**	P	**P**	**21 18 08.0**	**+0.1**
	comp=Z,10nm,0.5s,baz=96,slow=7.6,SNR=217						
ASAR				PcP	**PcP**	**21 19 39.9**	**0.0**
	comp=Z,2.2nm,0.7s,baz=102,slow=4.4,SNR=8.7						
ASAR				S	**S**	**21 24 02.8**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=93,slow=16,SNR=8.4						
	comp=Z,10nm,0.5s						
WB0	**Warramunga Arr**	**44.52**	**262**	P	**P**	**21 18 07.5**	**-0.8**
WB2	**Warramunga Arr**	**44.53**	**262**	P	**P**	**21 18 07.4**	**-1.0**
WB2				IAmb	IAmb	21 18 08.4	
	comp=Z,6.2nm,0.7s						
WRAB	**Tennant Creek**	**44.53**	**262**	P	**P**	**21 18 07.4**	**-1.0**
WRAB				IAmb	IAmb	21 18 08.6	
	comp=Z,6.8nm,1.0s						
WRA	**Warramunga Arr**	**44.54**	**262**	P	**P**	**21 18 08.0**	**-0.5**
	comp=Z,4.3nm,0.4s,baz=97,slow=7.6,SNR=234						
WRA				PcP	**PcP**	**21 19 40.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=97,slow=7.2,SNR=2.0						
WRA				S	**S**	**21 24 02.5**	**-2.8**
	comp=Z,0.8nm,1.0s,baz=99,slow=14,SNR=4.0						
	comp=Z,4.3nm,0.4s						
WRA	**Warramunga Arr**	**44.54**	**262**	P	**P**	**21 18 07.4**	**-1.1**
MTN	**Manton Dam**	**49.11**	**271**	P	**P**	**21 18 42.6**	**-0.4**
MTN				IAmb	IAmb	21 18 48.3	
	comp=Z,18nm,1.2s						
FORT	**Forrest**	**49.22**	**247**	P	**P**	**21 18 43.2**	**-0.4**
KNRA	**Kununurra**	**50.60**	**266**	P	**P**	**21 18 54.0**	**0.0**
KNRA				IAmb	IAmb	21 18 54.6	
	comp=Z,7.6nm,0.6s						
SIJI	**Sorong**	**53.20**	**285**	P	**P**	**21 19 12.7**	**0.0**
	comp=Z,15nm,0.7s,baz=137,slow=23,SNR=4.0						
	comp=Z,15nm,0.7s						
PSA00	**Pilbara Seismi**	**57.60**	**257**	P	**P**	**21 19 43.0**	**-0.3**
MBWA	**Marble Bar**	**57.79**	**257**	P	**P**	**21 19 43.7**	**-0.9**
MBWA				IAmb	IAmb	21 19 45.0	
	comp=Z,10nm,0.9s						
SBA	**Scott Base**	**57.82**	**184**	P	**P**	**21 19 46.8**	**+3.1**
VNDA	**Vanda**	**57.85**	**185**	P	**P**	**21 19 46.0**	**+2.0**
	comp=Z,1.0nm,1.0s,baz=325,slow=6.5,SNR=4.2						
	comp=Z,1.0nm,1.0s						
VNDA	**Vanda**	**57.85**	**185**	P	**P**	**21 19 46.2**	**+2.2**
NWAO	**Narrogin (SRO)**	**58.30**	**243**	P	**P**	**21 19 47.8**	**0.0**
MORW	**Morawa**	**59.76**	**248**	P	**P**	**21 19 57.1**	**-0.5**
MORW				IAmb	IAmb	21 20 03.9	
	comp=Z,28nm,1.5s						
UNV	**Unalaska Valle**	**74.76**	**7**	P	**P**	**21 21 27.8**	**-1.2**
UNV				IAmb	IAmb	21 22 02.1	
	comp=Z,28nm,1.5s						
PETK	**Petropavlovsk-**	**76.31**	**345**	P	**P**	**21 21 37.2**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=134,slow=8.5,SNR=7.1						
	comp=Z,4.2nm,0.8s						
CHIR	**Chirikof Islan**	**78.42**	**13**	P	**P**	**21 21 48.4**	**-0.7**
KMRM	**Mail Ridge**	**78.83**	**39**	P	**P**	**21 21 53.6**	**+1.8**
KMRM				IAmb	IAmb	21 21 54.4	
	comp=Z,11nm,0.8s						
BELA	**Belgrano 2**	**79.52**	**173**	P	**P**	**21 21 54.5**	**-0.2**
YBH	**Yreka Blue Hor**	**80.36**	**39**	P	**P**	**21 22 00.5**	**+0.7**
	comp=Z,3.7nm,0.6s,baz=148,slow=3.1,SNR=5.8						
	comp=Z,3.7nm,0.6s						
YBH	**Yreka Blue Hor**	**80.36**	**39**	P	**P**	**21 22 00.9**	**+1.1**
YBH				IAmb	IAmb	21 22 01.8	
	comp=Z,4.7nm,0.8s						
PNTR	**Pine Nut**	**80.66**	**42**	P	**P**	**21 22 01.9**	**+0.4**
PNTR				IAmb	IAmb	21 22 03.4	
	comp=Z,10nm,0.9s						
YERR	**Yerington**	**80.82**	**42**	P	**P**	**21 22 03.0**	**+0.7**
YERR				IAmb	IAmb	21 22 03.6	
	comp=Z,4.8nm,0.8s						
L04D	**Klamath Falls**	**80.90**	**38**	P	**P**	**21 22 03.4**	**+0.8**
L04D				IAmb	IAmb	21 22 04.4	
	comp=Z,9.0nm,0.9s						
NVAR	**Mina Array Bea**	**81.10**	**43**	P	**P**	**21 22 03.6**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=226,slow=9.4,SNR=15						
	comp=Z,2.3nm,0.8s						
NVAR	**Mina Array Bea**	**81.10**	**43**	P	**P**	**21 22 03.8**	**0.0**
NV11	**Mina Array Sit**	**81.20**	**43**	P	**P**	**21 22 04.5**	**+0.2**
MAW	**Mawson**	**81.50**	**200**	P	**P**	**21 22 05.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=352,slow=11,SNR=2.0						
	comp=Z,1.2nm,0.7s						
KVN	**Kaiserville**	**81.59**	**43**	P	**P**	**21 22 06.8**	**+0.5**
J04D	**Umpqua Nationa**	**81.65**	**38**	P	**P**	**21 22 07.6**	**+1.1**
J04D				IAmb	IAmb	21 22 08.5	
	comp=Z,14nm,0.8s						
MOD	**Modoc Plateau**	**81.89**	**40**	P	**P**	**21 22 08.1**	**+0.3**
K05A	**Summer Lake**	**82.04**	**39**	P	**P**	**21 22 08.9**	**+0.4**
K05A				IAmb	IAmb	21 22 10.6	
	comp=Z,8.9nm,1.0s						
PINE	**Pine Mountain**	**82.66**	**38**	P	**P**	**21 22 12.5**	**+0.8**
PINE				IAmb	IAmb	21 22 13.7	
	comp=Z,10nm,0.9s						
PRN	**Pahroc Range**	**82.67**	**46**	P	**P**	**21 22 12.8**	**+1.0**
O19K	**Port Alsworth**	**82.75**	**12**	P	**P**	**21 22 10.8**	**-0.6**
ILSW	**Iliamna Southw**	**82.78**	**12**	P	**P**	**21 22 10.4**	**-1.3**
ILSW				IAmb	IAmb	21 22 11.7	
	comp=Z,14nm,0.8s						
BMN	**Battle Mountai**	**82.93**	**42**	P	**P**	**21 22 13.2**	**+0.2**
I07A	**Izee**	**83.66**	**38**	P	**P**	**21 22 17.2**	**+0.7**
I07A				IAmb	IAmb	21 22 18.4	
	comp=Z,5.5nm,0.9s						
J08A	**Circle Bar Ran**	**83.84**	**39**		**P**	**21 22 17.8**	**+0.4**
J08A				IAmb	IAmb	21 22 19.2	
	comp=Z,4.6nm,1.0s						
U15A	**North Rim**	**84.04**	**48**	P	**P**	**21 22 20.0**	**+1.2**
U15A				IAmb	IAmb	21 22 20.8	
	comp=Z,4.5nm,0.9s						
ELK	**Elko**	**84.36**	**43**	P	**P**	**21 22 20.3**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=298,slow=1.9,SNR=4.4						
	comp=Z,0.9nm,0.6s						
G08A	**Pilot Rock**	**84.69**	**37**	P	**P**	**21 22 22.1**	**+0.5**
G08A				IAmb	IAmb	21 22 23.2	
	comp=Z,8.1nm,1.1s						
BMO	**Blue Mountains**	**85.39**	**39**	P	**P**	**21 22 25.1**	**+0.2**
SCM	**Sheep Creek Mo**	**85.70**	**14**	P	**P**	**21 22 25.3**	**-0.7**
TMUT	**Trail Mountain**	**86.23**	**46**	P	**P**	**21 22 29.3**	**0.0**
RND	**Reindeer**	**86.76**	**13**	P	**P**	**21 22 30.2**	**-0.8**
TX31	**Lajitas Ar. Si**	**87.13**	**57**	P	**P**	**21 22 34.0**	**+0.4**
TX31				IAmb	IAmb	21 22 35.6	
	comp=Z,5.3nm,0.9s						
TX32	**Lajitas Array**	**87.13**	**57**	P	**P**	**21 22 34.4**	**+0.8**
TXAR	**Lajitas Array**	**87.13**	**57**	P	**P**	**21 22 34.5**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=217,slow=6.3,SNR=17						
	comp=Z,1.3nm,0.7s						
NEW	**Newport**	**87.45**	**36**	P	**P**	**21 22 34.2**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=12,slow=5.3,SNR=3.8						
	comp=Z,2.9nm,0.6s						
M27K	**Edge Creek, AK**	**87.47**	**16**	P	**P**	**21 22 34.5**	**+0.1**
M27K				IAmb	IAmb	21 22 35.7	
	comp=Z,5.6nm,1.0s						
MCMT	**McKenzie Canyo**	**88.03**	**40**	P	**P**	**21 22 36.9**	**-0.7**
HDA	**Harding Lake**	**88.05**	**13**	P	**P**	**21 22 36.0**	**-0.9**
CCB	**Clear Creek Bu**	**88.08**	**13**	P	**P**	**21 22 35.6**	**-1.4**
DLBC	**Dease Lake**	**88.12**	**23**	P	**P**	**21 22 37.2**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=99,slow=22,SNR=3.8						
	comp=Z,1.9nm,0.8s						
IMAR	**Indian Mountai**	**88.22**	**10**	P	**P**	**21 22 36.3**	**-1.3**
MDM	**Murphy Dome**	**88.27**	**12**	P	**P**	**21 22 36.5**	**-1.5**
MDM				IAmb	IAmb	21 22 38.1	
	comp=Z,7.1nm,0.9s						
ILAR	**Eielson Array**	**88.38**	**13**	P	**P**	**21 22 37.4**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=223,slow=5.4,SNR=14						
	comp=Z,2.5nm,0.8s						
J26L	**Joseph Creek**	**88.87**	**14**	P	**P**	**21 22 40.5**	**-0.4**
J26L				IAmb	IAmb	21 22 42.0	
	comp=

SQTA	**Sankt Quirin**	152.35	346	*eP*		PKPbc	21 29 38.1	-1.5
	comp=Z,2.2nm,0.7s							
PRED	**Cave del Predi**	152.48	342			PKPab	21 29 51.3	-1.4
ABTA	**Abfaltersbach**	152.48	344	*eP*		PKPbc	21 29 38.6	-1.2
	comp=Z,4.7nm,0.6s							
DAVA	**Damuels**	152.56	348	*eP*		PKPbc	21 29 39.1	-1.0
	comp=Z,5.0nm,1.6s							
FETA	**Feichten**	152.64	347	*eP*		PKPdf	21 29 32.5	-0.3
	comp=Z,2.2nm,0.9s							
CIMO	**Cimolais**	152.91	344			PKPbc	21 29 39.9	-0.8
ESDC	**Sonseca Array**	160.28	14	PKPab		PKPab	21 30 27.0	+0.5
	comp=Z,1.3nm,1.2s,baz=322,slow=4.5,SNR=4.0							

JMA ***29*** *21:18:12.7±0.3,32°N±3°×13°8E±°, h404km, MV3.7/59, FAR S OFF TOKAI DISTRICT*

IDC ***29*** *21:18:12.9±0.7,32°.19N×137°.63E, h390km±9km, mb3.2/12, mbtmp4.0/16, Error ellipse: s-maj=19.9km s-min=10.8km az=75.0*

ISC 29 21:18:12.7±0.6, 32°.11N±0°.07×137°.77E±0°.06, h400km, n49, σ1§31/56, mb3.7/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	1.72	332	*eP*			Pn	21 19 08.5	+1.9
JHJ	**Hachijo jima 2**	1.98	59	P			Pn	21 19 09.4	+0.9
	187nm,0.4s,baz=126,slow=20,SNR=2.7								
JHJ				S			S	21 19 53.8	+0.3
	142nm,0.4s,baz=62,slow=22,SNR=1.8								
JIE	**Ise**	2.44	339	P			Pn	21 19 12.7	+1.2
JIE				*eS*			S	21 19 59.3	+0.2
JKN2	**Miekihoku**	2.47	330	P			Pn	21 19 12.6	+0.9
JTNC	**Tanabenakahech**	2.49	314	P			Pn	21 19 12.4	+0.6
JWY	**Kouya**	2.78	320	*eP*			Pn	21 19 15.0	+0.8
JEG	**Eigenji**	3.23	340	*eP*			Pn	21 19 19.1	+1.3
JAI	**Aioi**	3.25	302	*eP*			Pn	21 19 18.4	+0.5
JOD2	**Odawara 2**	3.33	19	*eP*			Pn	21 19 20.0	+1.4
JOD2				S			S	21 20 12.2	+0.1
JYN	**Shimob**	3.44	11	*eP*			Pn	21 19 21.5	+1.9
BSO3	**Boso 3**	3.53	40	*eP*			Pn	21 19 21.1	+1.0
BSO3				*eS*			S	21 20 13.8	-1.0
BSO4	**Boso 4**	3.59	36	*eP*			Pn	21 19 21.4	+0.7
JMN	**Monobe**	3.65	297	P			Pn	21 19 22.1	+0.6
BSO1	**Boso 1**	3.70	46	*eP*			Pn	21 19 21.8	+0.6
BSO1				*eS*			S	21 20 15.9	-1.0
JHU	**Hanno**	3.94	18	*eP*			Pn	21 19 24.4	+0.3
JHU				*eS*			S	21 20 19.5	-2.6
JRY	**Ryogami san**	4.01	13	*eP*			Pn	21 19 26.2	+1.4
JTO	**Tosashimizu**	4.26	281	P			Pn	21 19 27.6	+0.3
MJAR	**Matsushiro Arr**	4.44	5	P			Pn	21 19 26.9	-2.0
	6.7nm,0.6s,baz=170,slow=11,SNR=27								
MJAR				S			S	21 20 26.3	-4.6
	1.6nm,0.4s,baz=200,slow=25,SNR=2.1								
JAG	**Ashikaga**	4.53	18	*eP*			Pn	21 19 29.5	-0.3
JHS	**Saijyo**	4.83	308	*eP*			Pn	21 19 33.2	+0.3
JCJ	**Chichijima**	6.30	141	S			S	21 21 02.9	-4.1
	204nm,0.4s,baz=255,slow=19,SNR=5.8								
KSRS	**Korea Array**	9.69	306	P			P	21 20 26.9	+0.2
	2.6nm,0.5s,baz=124,slow=9.7,SNR=10.0								
USRK	**Ussuriysk Ar.**	12.89	341	P			P	21 21 01.5	-0.5
	2.3nm,1.0s,baz=161,slow=11,SNR=1.2								
HHC	**Hu-ho-hao-te**	22.74	300	*eP*			P	21 22 42.8	+0.7
HHC					pmax		pmax		
	comp=Z,26nm,0.8s								
HHC					pmax		pmax		
	comp=Z,290nm,6.0s								
SONM	**Songino Array**	28.47	313	P			P	21 23 33.1	+0.1
	comp=Z,0.9nm,0.6s,baz=115,slow=8.8,SNR=5.4								
	comp=Z,0.9nm,0.6s								
SIJI	**Sorong**	33.37	192	P			P	21 24 16.6	+1.0
	comp=Z,10nm,0.5s,baz=339,slow=17,SNR=6.2								
	comp=L,10nm,0.5s								
GOMU	**GeErMu**	35.56	289	P			P	21 24 31.5	-3.0
GOMU					pmax		pmax		
	comp=Z,6.0nm,0.8s								
GOMU					pmax		pmax		
	comp=Z,73nm,3.9s								
CMAR	**Chiang Mai Arr**	37.44	258	P			P	21 24 49.6	-0.3
	comp=Z,0.4nm,0.5s,baz=48,slow=8.6,SNR=4.6								
	comp=Z,0.4nm,0.5s								
ZALV	**Zalesovo Beam**	43.20	316	P			P	21 25 35.4	-0.6
	comp=Z,1.2nm,0.4s,baz=88,slow=7.7,SNR=7.5								
	comp=Z,1.2nm,0.4s								
TAPN	**Taplejung**	43.42	277	*eP*			P	21 25 38.4	-0.1
	comp=Z,8.9nm,0.4s								
ODAN	**Odare**	43.85	277	*eP*			P	21 25 41.2	-0.6
	comp=Z,1.5nm,0.6s								
MKAR	**Makanchi Array**	44.37	306	P			P	21 25 45.2	-0.1
	comp=Z,2.2nm,0.5s,baz=88,slow=9.1,SNR=41								
	comp=Z,2.2nm,0.5s								
RAMN	**Ramite**	44.48	277	*eP*			P	21 25 46.4	-0.3
	comp=Z,26nm,0.7s								
JIRN	**Jiri**	44.60	278	*eP*			P	21 25 47.9	+0.1
	comp=Z,44nm,0.6s								
GUN	**Gumba**	44.78	279	*eP*			P	21 25 49.2	+0.1
	comp=Z,29nm,0.6s								
PKI	**Pulchoki**	45.28	278	*eP*			P	21 25 52.3	-0.7
	comp=Z,9.2nm,0.6s								
PKIN	**Phulchoki**	45.29	278	*eP*			P	21 25 52.3	-0.7
	comp=Z,9.0nm,0.6s								
KKN	**Kakani**	45.32	279	*eP*			P	21 25 52.9	-0.3
	comp=Z,3.4nm,0.9s								
GKN	**Gorkha**	45.79	279	*eP*			P	21 25 56.3	-0.5
	comp=Z,18nm,0.7s								
DANN	**Dangsing**	46.41	280	*eP*			P	21 26 01.9	+0.2
	comp=Z,16nm,0.4s								
KOLN	**Koldanda**	46.73	279	*eP*			P	21 26 03.4	-0.7
PYUN	**Piuthan**	47.13	280	*eP*			P	21 26 07.2	+0.1
	comp=Z,29nm,0.4s								
WRA	**Warramunga Arr**	51.86	184	P			P	21 26 43.6	+1.6
	comp=Z,0.4nm,0.3s,baz=1.2,slow=7.6,SNR=16								
	comp=Z,0.4nm,0.3s								
ILAR	**Eielson Array**	55.26	30	P			P	21 27 06.8	+1.0
	comp=Z,0.3nm,0.7s,baz=270,slow=7.2,SNR=2.7								
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	55.58	184	P			P	21 27 09.3	+0.7
	comp=Z,0.2nm,0.5s,baz=9.7,slow=11,SNR=4.7								
	comp=Z,0.2nm,0.5s								
ARCES	**ARCESS Array B**	67.54	339	P			P	21 28 27.4	+0.5
	comp=Z,5.9nm,1.0s,baz=32,slow=4.8,SNR=3.9								
	comp=Z,5.9nm,1.0s								
FINES	**FINESS Array B**	71.75	332	P			P	21 28 52.9	+0.5
	comp=Z,1.8nm,0.4s,baz=68,slow=5.6,SNR=35								
	comp=Z,1.8nm,0.4s								
KBZ	**Khabaz**	71.81	311	P			P	21 28 53.8	+0.8
	comp=Z,1.9nm,0.8s,baz=62,slow=8.9,SNR=4.8								
	comp=Z,1.9nm,0.8s								
PDAR	**Pinedale Array**	83.28	43	P			P	21 29 57.5	+1.4
	comp=Z,0.2nm,0.5s,baz=336,slow=9.9,SNR=3.0								
	comp=Z,0.2nm,0.5s								

IDC ***29*** *21:21:53.9±0.8,5°.36N×125°.39E, h182km±6km, mb3.7/22, mbtmp4.2/24, MS3.5/1, Error ellipse: s-maj=19.3km s-min=8.4km az=81.0*

DJA ***29*** *21:21:53.5±0.4,5°N±3°×12°6E±°, h173km±5km, M4.1/12, mb4.1/8, mB4.6/7, MLv4.5/12, Mw(mB)3.8/7*

NEIC ***29*** *21:21:54.5±2.7,5°.26N±0°.05×125°.57E±0°.09, h179km±6km, mb4.4/45, Error ellipse: s-maj=14.3km s-min=5.1km az=69.0*

MAN ***29*** *21:21:54,5°.32N×125°.64E, h164km, Ms3.7*

ISC 29 21:21:53.3±0.6, 5°.28N±0°.04×125°.62E±0°.05, h178km±5km, n108, σ1§43/129, mb4.3/41, 3C-8D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	0.82	6	*eP*			Pn	21 22 19.6	0.0
DDMP				*eS*			Sn	21 22 39.2	-0.8
SGSI	**Sangihe**	1.59	183	P			Pn	21 22 26.3	+0.3
SGSI				S			Sn	21 22 50.1	-1.3
SKMP	**Bagumbayan, Su**	1.63	319	*eP*			Pn	21 22 26.4	0.0
SKMP				*eS*			Sn	21 22 50.6	-1.4
MATI	**Mati**	1.77	21	*eP*			Pn	21 22 27.4	-0.4
MATI				*eS*			Sn	21 22 52.2	-2.5
DAV	**Davao City (W)**	1.78	359	P			Pn	21 22 28.1	+0.2
	164nm,0.4s,baz=93,slow=10.0,SNR=2.2								
DAV				S			Sn	21 22 54.7	0.0
	1μm,0.5s,baz=298,slow=21,SNR=9.2								
DAV					LR		LR	21 22 59.7	
	comp=Z,42nm,19.9s,baz=25,slow=39								
DAV	**Davao City (W)**	1.78	359	Pn			Pn	21 22 28.2	+0.3
KCP	**Kidapawan**	1.79	343	*eP*			Pn	21 22 28.7	+0.6
KCP				*i*	S		Sn	21 22 54.4	-0.8
CTBH	**Cotabato--PC H**	2.36	325	*iP*			Pn	21 22 34.9	+0.6
CTBH				*i*	S		Sn	21 23 06.3	+0.1
BUKP	**Musuan**	2.64	348	*eP*			Pn	21 22 38.5	+0.9
BUKP				*eS*			Sn	21 23 12.4	+0.3
BIPH	**Bislig**	2.98	14	*eP*			Pn	21 22 41.8	+0.3
BIPH				*i*	S		Sn	21 23 18.7	-0.6
PAGZ	**Pagadian**	3.38	319	*eP*			Pn	21 22 46.5	-0.1
DCPH	**Dipolog City**	3.98	326	*eP*			Pn	21 22 58.0	+4.0
SCPH	**Surigao**	4.47	358	*iP*			Pn	21 23 01.5	+1.1
GLSP	**General Luna,**	4.50	6	*eP*			Pn	21 23 02.2	+1.5
GLSP				*eS*			Sn	21 23 51.4	-2.4
TNTI	**Ternate**	4.81	159	Pn			Pn	21 23 04.4	-0.4
TNTI	**Ternate**	4.81	159	P			Pn	21 23 04.5	-0.3
TNTI				S			Sn	21 23 56.3	-4.6
GTOI	**Gorontalo**	5.30	210	P			Pn	21 23 07.7	-3.5
	0.1nm203nm17nm,0.8s								
GTOI				S			Sn	21 24 07.8	-4.6
	0.1nm203nm17nm,0.8s								
MRSI	**Marisa**	6.02	218	P			Pn	21 23 21.8	+1.1
	0.1nm30nm,0.5s								
LBMI	**Labuha**	6.17	162	P			Pn	21 23 22.6	0.0
	0.4nm967nm14nm,0.5s								
MYLDM	**Lahad Datu**	7.09	270	Pn			Pn	21 23 36.0	+1.3
SANI	**Sanana**	7.29	177	P			Pn	21 23 34.6	-2.8
	0.3nm1μm26nm,0.8s								
SWI	**Sorong**	8.31	137	P			Pn	21 23 48.7	-2.0
	17nm,0.9s								
SIJI	**Sorong**	8.31	137	P			Pn	21 23 52.8	+1.9
	3.5nm,0.4s,baz=322,slow=18,SNR=4.1								
SIJI				S			Sn	21 25 20.4	-3.6
	4.5nm,0.5s,baz=289,slow=23,SNR=1.9								
NLAI	**Namlea**	8.59	170	P			Pn	21 23 54.5	0.0
	2μm15nm,0.8s								
FAKI	**Fak Fak**	10.50	141	Pn			Pn	21 24 21.1	+1.6
SBUM	**Sibu**	13.66	259	P			P	21 25 06.2	+3.3
BATI	**Baumata**	15.51	187	P			Pn	21 25 23.9	+1.1
	14nm,0.3s,baz=16,slow=5.2,SNR=5.7								
JAGI	**Jajag, Banyuwa**	17.82	220	P			Pn	21 25 50.8	+0.2
JAGI					IAmb		IAmb	21 25 51.3	
	comp=Z,12nm,0.6s								
TWG	**Pinlang**	17.98	346	P			Pn	21 25 51.8	-0.6
TWG					IAmb		IAmb	21 25 56.6	
	comp=Z,28nm,1.1s								
TPUB	**Ta-pu**	18.55	345	P			P	21 25 56.4	-0.3
MTN	**Manton Dam**	18.82	163	P			P	21 26 01.7	+2.0
MTN					IAmb		IAmb	21 26 11.9	
	comp=Z,11nm,0.9s								
KNRA	**Kununurra**	21.06	172	P			P	21 26 24.9	+1.2
KNRA					IAmb		IAmb	21 27 08.1	
	comp=Z,21nm,1.1s								
JOW	**Kunigami**	21.58	6	P			P	21 26 30.0	+0.9
UBPT	**Khong Chiam**	22.15	298	P			P	21 26 34.9	-0.1
UBPT					IAmb		IAmb	21 26 35.8	
	comp=Z,16nm,0.9s								
FITZ	**Fitzroy Crossi**	23.23	180	P			P	21 26 45.6	+0.8
	comp=Z,2.3nm,0.3s,baz=342,slow=6.1,SNR=44								
	comp=Z,2.3nm,0.3s								
FITZ	**Fitzroy Crossi**	23.23	180	P			P	21 26 45.9	+1.0
FITZ				PcP			PcP	21 30 27.8	+0.4
KULM	**Kulim**	24.86	271	P			P	21 27 00.8	+1.1
KULM					IAmb		IAmb	21 27 13.7	
	comp=Z,15nm,1.1s								
WB0	**Warramunga Arr**	26.35	161	P			P	21 27 14.2	+1.1
WB0					IAmb		IAmb	21 27 56.4	
	comp=Z,14nm,1.4s								
WRAB	**Tennant Creek**	26.49	161	P			P	21 27 14.5	+0.2
WRA	**Warramunga Arr**	26.49	161	P			P	21 27 16.3	+1.9
	comp=Z,0.7nm,0.6s,baz=333,slow=11,SNR=9.7								
WRA					ScP		ScP	21 33 58.3	+0.2
	comp=Z,0.5nm,0.8s,baz=343,slow=2.8,SNR=2.5								
	comp=Z,0.7nm,0.6s								
WRA	**Warramunga Arr**	26.49	161	P			P	21 27 15.1	+0.7
WB2	**Warramunga Arr**	26.50	161	P			P	21 27 14.8	+0.4
WB2					IAmb		IAmb	21 27 50.1	
	comp=Z,14nm,1.5s								
WR0	**Warramunga Arr**	26.57	161	P			P	21 27 14.4	-0.7
WR0					IAmb		IAmb	21 27 41.7	
	comp=Z,8.4nm,1.2s								
PSI	**Prapat**	26.74	266	P			P	21 27 15.3	-1.6
	comp=Z,4.6nm,0.6s,baz=192,slow=10.0,SNR=2.1								
	comp=Z,4.6nm,0.6s								
RPSI	**Rantau Prapat**	26.75	266	P			P	21 27 15.3	-1.5
MBWA	**Marble Bar**	26.91	192	P			P	21 27 17.6	-0.4
MBWA					IAmb		IAmb	21 27 33.3	
	comp=Z,22nm,1.5s								
PSA00	**Pilbara Seismi**	27.28	192	P			P	21 27 21.7	+0.3
PSA00					IAmb		IAmb	21 27 22.2	
	comp=Z,14nm,1.2s								
GSI	**Gunungsitoli**	28.27	263	P			P	21 27 30.9	+0.6
CRAI	**Chiangrai**	28.69	303	P			P	21 27 33.9	-0.1
CMAR	**Chiang Mai Arr**	29.15	299	P			P	21 27 36.5	-1.6
	comp=Z,0.7nm,0.3s,baz=113,slow=6.8,SNR=1.4								
	comp=Z,0.7nm,0.3s								
AS31	**Alice Springs**	29.89	165	P			P	21 27 45.3	+0.8
AS31				PcP			PcP	21 30 44.0	+0.9
ASAR	**Alice Springs**	29.89	165	P			P	21 27 45.4	+0.9
	comp=Z,0.4nm,0.3s,baz=341,slow=7.2,SNR=17								
ASAR				PcP			PcP	21 30 43.3	+0.2
	comp=Z,0.6nm,0.4s,baz=350,slow=3.1,SNR=5.8								
ASAR				ScP			ScP	21 34 07.8	-0.8
	comp=Z,0.5nm,0.5s,baz=335,slow=2.9,SNR=3.9								
	comp=Z,0.4nm,0.3s								
ASAR	**Alice Springs**	29.89	165	P			P	21 27 45.8	+1.4
ASAR				PcP			PcP	21 30 43.8	+0.7
KSRS	**Korea Array**	32.09	3	P			P	21 28 03.2	-0.3
	comp=Z,1.9nm,0.7s,baz=169,slow=10,SNR=3.0								
	comp=Z,1.9nm,0.7s								
MJAR	**Matsushiro Arr**	33.19	19	P			P	21 28 12.6	-0.6
	comp=Z,0.8nm,0.6s,baz=189,slow=9.3,SNR=1.7								
	comp=Z,0.8nm,0.6s								
JMM	**Marumori**	35.26	21	P			P	21 28 33.1	+2.2
MORW	**Morawa**	35.37	195	P			P	21 28 32.1	0.0
MORW					IAmb		IAmb	21 28 43.8	
	comp=Z,13nm,1.2s								
FORT	**Forrest**	35.93	176	P			P	21 28 37.7	+0.9
SHL	**Shillong**	38.08	306	P			P	21 28 54.2	-1.0
SHL					IAmb		IAmb	21 28 59.2	
	comp=Z,6.5nm,0.6s								
NWAO	**Narrogin (SRO)**	38.83	191	P			P	21 29 01.7	+0.6
BBOO	**Buckleboo**	39.16	166	P			P	21 29 05.4	+1.6
USRK	**Ussuriysk Ar.**	39.16	7	P			P	21 29 03.3	-0.4
	comp=Z,3.9nm,0.8s,baz=184,slow=4.0,SNR=7.6								
	comp=Z,3.9nm,0.8s								
USRK	**Ussuriysk Ar.**	39.16	7	P			P	21 29 05.7	+2.0
STKA	**Stephens Creek**	39.97	159	P			P	21 29 11.9	+1.3
	comp=Z,1.4nm,0.6s,baz=339,slow=8.9,SNR=2.2								
	comp=Z,1.4nm,0.6s								
H11N1	**WAKE ISLAND Hy**	42.63	67	T			T	22 15 50.1	
	baz=258								
H11N2	**WAKE ISLAND Hy**	42.63	67	T			T	22 16 02.7	
	baz=258								
H11N3	**WAKE ISLAND Hy**	42.64	67	T			T	22 15 50.4	
	baz=258								
KLR	**Kul'dur**	44.10	6	P			P	21 29 44.1	+0.3
	comp=Z,1.2nm,0.4s,baz=200,slow=7.1,SNR=6.0								
	comp=Z,1.2nm,0.4s								
PALK	**Pallekele**	44.68	275	P			P	21 29 48.5	-0.5
PALK					IAmb		IAmb	21 29 52.3	
	comp=Z,19nm,1.1s								
SONM	**Songino Array**	45.49	342	P			P	21 29 53.3	-1.6
	comp=Z,0.3nm,0.5s,baz=156,slow=6.9,SNR=1.4								
SONM					PcP		PcP	21 31 30.4	-0.4
	comp=Z,0.7nm,1.0s,baz=168,slow=3.7,SNR=4.3								
	comp=Z,0.3nm,0.5s								
PETK	**Petropavlovsk-**	54.43	23	P			P	21 31 03.1	+1.1
	comp=Z,1.6nm,0.6s,baz=190,slow=5.9,SNR=2.8								
	comp=Z,1.6nm,0.6s								
PETK	**Petropavlovsk-**	54.43	23	P			P	21 31 04.0	+2.0
MK31	**Makanchi Array**	55.66	325	P			P	21 31 10.7	-0.3
MK31				PcP			PcP	21 32 07.4	-0.9
MKAR	**Makanchi Array**	55.66	325	P			P	21 31 10.1	-0.9
	comp=Z,1.3nm,0.4s,baz=119,slow=7.3,SNR=40								
MKAR					PcP		PcP	21 32 07.2	-1.1
	comp=Z,0.8nm,0.5s,baz=113,slow=3.8,SNR=4.7								
	comp=Z,1.3nm,0.4s								
MKAR	**Makanchi Array**	55.66	325	P			P	21 31 10.3	-0.7
MKAR				PcP			PcP	21 32 07.0	-1.3
YAK	**Yakutsk**	56.70	2	P			P	21 31 18.2	+0.2
	comp=Z,8.4nm,0.3s,baz=208,slow=0.9,SNR=9.3								
	comp=Z,8.4nm,0.3s								
YAK	**Yakutsk**	56.70	2	P			P	21 31 18.2	+0.2
ZALV	**Zalesovo Beam**	58.71	333	P			P	21 31 30.0	-2.2
	comp=Z,0.5nm,0.3s,baz=125,slow=6.2,SNR=2.9								
	comp=Z,0.5nm,0.3s								
KURK	**Kurchatov**	59.84	327	P			P	21 31 39.9	-0.2
KURK					IAmb		IAmb	21 31 44.0	
	comp=Z,3.4nm,0.6s								
GAR	**Garm**	60.07	312	P			P	21 31 41.4	-0.5
GAR					IAmb		IAmb	21 31 42.6	
	comp=Z,10.0nm,1.1s								
CHGR	**Chuyangaron**	60.81	312	P			P	21 31 46.6	-0.4
CHGR					IAmb		IAmb	21 32 10.8	
	comp=Z,6.2nm,1.0s								
KK31	**Karatay Array**	61.35	317	P			P	21 31 49.8	-0.6
KKAR	**Karatay Array**	61.35	317	P			P	21 31 49.6	-0.8
TIXI	**Tiksi**	66.32	1	P			P	21 32 22.3	+0.1
TIXI				PcP			PcP	21 32 50.2	-0.5
GEYT	**Alibeck**	69.07	309	P			P	21 32 39.5	-0.7
	comp=Z,1.5nm,0.6s,baz=83,slow=15,SNR=4.2								
	comp=Z,1.5nm,0.6s								
ABKAR	**Akbulak array**	70.26	321	P			P	21 32 45.6	-1.6
CASY	**Casey**	72.22	186	P			P	21 32 59.7	+1.1
CASY					IAmb		IAmb	21 33 00.0	
	comp=Z,15nm,1.4s								
CASY				PcP			PcP	21 33 16.6	+1.0
ARU	**Arti**	73.04	328	P			P	21 33 01.9	-1.8
O18K	**Koktuh Hills**	80.02	30	P			P	21 33 44.6	+1.8
O18K					IAmb		IAmb	21 34 25.8	
	comp=Z,7.9nm,1.1s								
J20K	**Nowinta River**	81.01	26	P			P	21 33 49.2	+1.2
M20K	**Styx River**	81.24	28	P			P	21 33 51.9	+2.5
IMAR	**Indian Mountai**	81.39	24	P			P	21 33 51.8	+1.9
VOI	**Vohitsoka**	81.65	247	P			P	21 33 50.7	-1.7
CNPM	**China Poot**	81.99	31	P			P	21 33 54.5	+1.2
CNPM					IAmb		IAmb	21 34 20.8	
	comp=Z,8.8nm,1.2s								
BRLK	**Bradley Lake**	82.18	30	P			P	21 33 55.0	+0.7
BRLK					IAmb		IAmb	21 34 11.9	
	comp=Z,8.5nm,1.1s								
H23K	**Yukon River**	83.09	24	P			P	21 34 00.8	+2.0
PWL	**Port Wells**	83.49	29	P			P	21 34 02.4	+1.5
PWL					IAmb		IAmb	21 34 05.2	
	comp=Z,6.2nm,1.0s								
ILAR	**Eielson Array**	84.19	25	P			P	21 34 05.1	+0.7
	comp=Z,0.6nm,0.5s,baz=249,slow=5.0,SNR=8.0								
	comp=Z,0.6nm,0.5s								
HIN	**Hinchinbrook I**	84.39	30	P			P	21 34 06.9	+1.3
MAW	**Mawson**	84.82	200	P			P	21 34 08.5	+1.2
	comp=Z,1.8nm,0.6s,baz=126,slow=13,SNR=10								
	comp=Z,1.8nm,0.6s								
MAW	**Mawson**	84.82	200	P			P	21 34 08.2	+0.8
J25K	**Salcha River,**	84.84	26	P			P	21 34 08.2	+0.4
VNDA	**Vanda**	85.10	173	P			P	21 34 09.4	+0.8
	comp=Z,0.3nm,0.4s,baz=314,slow=4.4,SNR=3.9								
	comp=Z,0.3nm,0.4s								
ARCES	**ARCESS Array B**	88.62	340	P			P	21 34 24.1	-1.8
	comp=Z,2.5nm,0.7s,baz=86,slow=5.7,SNR=8.2								
	comp=Z,2.5nm,0.7s								
FINES	**FINESS Array B**	89.95	332	P			P	21 34 30.4	-1.8
	comp=Z,1.0nm,0.4s,baz=50,slow=5.5,SNR=18								
	comp=Z,1.0nm,0.4s								
BBB	**Bella Bella**	95.72	36	LR		LR	LR	22 10 48.8	
	comp=Z,21nm,20.8s,baz=262,slow=31								
NOA	**NORSAR Array B**	96.91	333	P			P	21 35 01.6	-2.7
	comp=Z,0.6nm,0.7s,baz=67,slow=4.6,SNR=2.5								
	comp=Z,0.6nm,0.7s								
TORD	**Torodi Ar. Bea**	121.38	289	PKP			PKPdf	21 40 25.5	-0.9
	comp=Z,3.1nm,0.3s,baz=64,slow=2.0,SNR=1.6								

NEIC ***29*** *21:26:11.8±1.9,6°.14S±0°.09×149°.85E±0°.09, h35km±2km, mb4.3/16, Error ellipse: s-maj=16.2km s-min=14.0km az=334.0*

IDC ***29*** *21:26:12.8±2.2,6°.10S×149°.81E, h60km±23km, mb3.5/9, mbtmp3.8/9, ML4.6/1, MS3.5/11, Error ellipse: s-maj=29.8km s-min=13.4km az=126.0*

**ISC 29 21:26:12.2±0.6, 6°.1S±0°.1×149°.8E±0°.1, h52km, n40, σ

comp=Z,5.1nm,0.4s,baz=77,slow=1.9,SNR=2.3
BDFB Brasilia 152.08 141 PKPbc **PKPbc 21 46 03.0 0.0**
comp=Z,2.9nm,0.8s,baz=152,slow=22,SNR=2.0

*EAF **29** 21:27:56.6±4.8, 10.°69N×41.°42E, h0km±52km*
*AAE **29** 21:27:58.8±4.7, 10.°58N×41.°43E, h30km±101km*
ISC 29 21:27:50.8±2.9, 11.°4N±0.°2×41.°0E±0.°1, h7km±14km, n37, σ1.°979/71, 6C, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.2**	**+0.5**
ATD				*eS*			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 22.7**	**0.0**
ATD				*i* Sg			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.4**	**+0.7**
ATD				*eS*			**Sn**	**21 28 45.1**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.2**	**+0.5**
ATD				*eS*			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.1**	**+0.4**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 22.7**	**0.0**
ATD				*i* Sg			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.1**	**+0.4**
ATD				*eS*			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.4**	**+0.7**
ATD				*eS*			**Sn**	**21 28 45.1**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.1**	**+0.5**
ATD				*eS*			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.9**	**+1.3**
ATD				*eS*			**Sg**	**21 28 48.4**	**-1.0**
ATD	**Arta Tunnel**	**1.82**	**84**	*eP*			**Pn**	**21 28 23.1**	**+0.4**
ATD				*eS*			**Sg**	**21 28 48.4**	**-1.0**
ANKE	**Ethiopia-Afar**	**2.15**	**216**	*eP*			**Pn**	**21 28 29.5**	**+2.1**
ANKE				*eS*			**Sb**	**21 28 56.6**	**-0.7**
ANKE	**Ethiopia-Afar**	**2.15**	**216**	*eP*			**Pn**	**21 28 29.8**	**+2.3**
ANKE				*eS*			**Sg**	**21 28 59.2**	**-0.7**
ANKE	**Ethiopia-Afar**	**2.15**	**216**	*eP*			**Pn**	**21 28 29.6**	**+2.1**
ANKE				*eS*			**Sg**	**21 29 00.3**	**+0.4**
ANKE	**Ethiopia-Afar**	**2.15**	**216**	*eP*			**Pb**	**21 28 30.3**	**0.0**
ANKE				*eS*			**Sg**	**21 28 59.9**	**0.0**
ANKE	**Ethiopia-Afar**	**2.15**	**216**	*eP*			**Pn**	**21 28 29.8**	**+2.3**
ANKE				*eS*			**Sg**	**21 28 59.2**	**-0.7**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 47.8**	**-0.2**
AAE				*eS*			**Sb**	**21 29 27.6**	**+0.3**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 48.4**	**+0.3**
AAE				*i* Sg			**Sb**	**21 29 30.3**	**+3.1**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 47.2**	**-0.8**
AAE				*eS*			**Sn**	**21 29 15.6**	**-4.6**
AAE				IAML				21 29 19.0	
	comp=E,33nm,0.6s								
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 47.8**	**-0.2**
AAE				*eS*			**Sb**	**21 29 27.6**	**+0.3**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 47.6**	**-0.5**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 48.4**	**+0.3**
AAE				*i* Sg			**Sb**	**21 29 30.3**	**+3.1**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 48.6**	**+0.5**
AAE				*eS*			**Sb**	**21 29 29.9**	**+2.6**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 47.2**	**-0.8**
AAE				*eS*			**Sn**	**21 29 15.6**	**-4.6**
AAE				IAML				21 29 19.0	
	comp=E,33nm,0.6s								
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 48.9**	**+0.8**
AAE				*eS*			**Sb**	**21 29 30.0**	**+2.7**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 50.8**	**+2.8**
AAE				*eS*			**Sb**	**21 29 29.2**	**+2.0**
AAE	**Adis Abeba**	**3.19**	**224**	*eP*			**Pb**	**21 28 48.6**	**+0.5**
AAE				*eS*			**Sb**	**21 29 29.9**	**+2.6**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 51.4**	**+0.7**
FURI				*eS*			**Sb**	**21 29 35.0**	**+3.2**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 51.2**	**+0.5**
FURI				*i* Sg			**Sg**	**21 29 36.2**	**-2.2**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pn**	**21 28 44.2**	**+0.4**
FURI				*eS*			**Sn**	**21 29 21.8**	**-2.2**
FURI				IAML				21 29 32.5	
	comp=E,42nm,0.5s								
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 51.4**	**+0.7**
FURI				*eS*			**Sb**	**21 29 35.0**	**+3.2**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 51.4**	**+0.7**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 51.2**	**+0.5**
FURI				*i* Sg			**Sg**	**21 29 36.2**	**-2.2**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 52.9**	**+2.2**
FURI				*eS*			**Sg**	**21 29 35.8**	**-2.6**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pn**	**21 28 44.2**	**+0.4**
FURI				*eS*			**Sn**	**21 29 21.8**	**-2.2**
FURI				IAML				21 29 32.5	
	comp=E,42nm,0.5s								
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 53.9**	**+3.2**
FURI				*eS*			**Sg**	**21 29 35.9**	**-2.6**
FURI	**Furi**	**3.34**	**223**	*eP*			**Pb**	**21 28 52.9**	**+2.2**
FURI				*eS*			**Sg**	**21 29 35.8**	**-2.6**

*IDC **29** 21:40:36.9±0.5, 56.°03S×4.°73W, h0km, mb4.7/19, mbtmp4.6/20, ML4.3/1, MS4.2/38, Error ellipse: s-maj=15.4km s-min=14.1km az=108.0*
*NEIC **29** 21:40:38.8±1.5, 56.°07S±0.°05×4.°9W±0.°2, h10km±1km, mb5.4/55, Error ellipse: s-maj=17.8km s-min=8.8km az=83.0*
*MOS **29** 21:40:38.2±1.2, 56.°13S×4.°91W, h16km, mb5.5/13, Error ellipse: s-maj=21.9km s-min=11.5km az=93.5*
*GCMT **29** 21:40:40.8±0.3, 56.°23S±0.°02×4.°66W±0.°03, h18km±1km, MW4.9/101, Moment Tensor Solution. s19,c22; s101,c124; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr1.48±.16; Mθθ0.19±.13; Mϕϕ-1.67±.12; Mrθ-0.69±.28; Mrϕ-2.29±.08; Mθϕ1.18±.26; Best double couple: Mo3.08000×10^16^ NP1:ϕs358.00000°, δ67.00000°, λ38.00000°. NP2:ϕs251.00000°, δ55.00000°, λ152.00000°. Principal axes: T 2.8700, Plg43.0000°, Azm219.0000°; N 0.4190, Plg46.0000°, Azm24.0000°; P -3.2910, Plg8.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 21:40:38.4±0.3, 56.°06S±0.°06×4.°76W±0.°07, h10km, n231, σ0.°88/201, mb5.3/54, MS4.3/41, 8C-3D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.73**	**185**	P			**Pn**	**21 44 07.3**	**+0.8**
VNA2	**Neumayer--Watz**	**14.97**	**183**	P			**Pn**	**21 44 09.6**	**-0.2**
	baz=359,slow=15								
VNA3	**Neumayer Olymp**	**15.39**	**186**	P			**Pn**	**21 44 15.3**	**-0.1**
SNAA	**Sanae**	**15.70**	**178**	P			**Pn**	**21 44 19.6**	**+0.2**
SNAA	**Sanae**	**15.70**	**178**	Pn			**Pn**	**21 44 19.6**	**+0.2**
	1.1nm,0.3s,baz=28,slow=16,SNR=46								
SNAA				Sn			Sn	21 46 55.8	-17
	0.2nm,0.3s,baz=16,slow=22,SNR=0.9								
	24nm,0.9s								
SNAA	**Sanae**	**15.70**	**178**	Pn			**Pn**	**21 44 19.5**	**+0.1**
SNAA	**Sanae**	**15.70**	**178**	*c iP*			**Pn**	**21 44 19.0**	**-0.4**
TROLL	**Troll, Antarti**	**16.31**	**172**	P			**Pn**	**21 44 27.6**	**+0.3**
NVL	**N'lazarevskaya**	**16.42**	**160**	*eP*			**Pn**	**21 44 26.7**	**-1.9**
NVL				pmax			pmax		
	comp=Z,75nm,1.3s								
ORCD	**Orcadas**	**21.21**	**241**	P			**P**	**21 45 23.4**	**-0.5**
BELA	**Belgrano 2**	**24.22**	**195**	P			**P**	**21 45 54.1**	**-0.7**
BELA				IAmb			IAmb	21 45 56.4	
	comp=Z,226nm,1.7s								
PMSA	**Palmer Station**	**29.45**	**229**	P			**P**	**21 46 42.1**	**+0.2**
	comp=Z,6.5nm,1.0s,baz=91,slow=6.8,SNR=4.6								
PMSA				LR			LR	21 56 31.7	
	comp=Z,132nm,18.3s,baz=92,slow=32								
	comp=Z,6.5nm,1.0s								
PMSA	**Palmer Station**	**29.45**	**229**	P			**P**	**21 46 43.1**	**+1.2**
PMSA				IAmb			IAmb	21 46 44.5	
	comp=Z,81nm,1.6s								
SUR	**Sutherland**	**29.61**	**48**	LR			LR	21 55 43.5	
	comp=Z,415nm,20.0s,baz=197,slow=31								
SMAI	**San Martin Ant**	**30.11**	**221**	P			**P**	**21 46 48.4**	**+0.8**
SMAI				IAmb			IAmb	21 46 51.0	
	comp=Z,104nm,1.7s								
MAW	**Mawson**	**32.17**	**138**	P			**P**	**21 47 06.0**	**+0.3**
	comp=Z,11nm,1.0s,baz=270,slow=9.6,SNR=19								
MAW				LR			LR	21 57 32.4	
	comp=Z,268nm,21.5s,baz=268,slow=32								
	comp=Z,11nm,1.0s								
MAW	**Mawson**	**32.17**	**138**	P			**P**	**21 47 05.4**	**-0.4**
MAW	**Mawson**	**32.17**	**138**	*i* P			**P**	**21 47 05.4**	**-0.4**
MAW				pmax			pmax		
	comp=Z,7.0nm,1.3s								
ARMS	**Ukamas**	**33.04**	**42**	*eP*			**P**	**21 47 14.4**	**+0.5**
ARMS				IAmb			IAmb	21 47 15.6	
	comp=Z,80nm,1.8s								
QSPA	**South Pole Qui**	**34.18**	**180**	P			**P**	**21 47 23.9**	**+0.2**
	comp=Z,19nm,1.2s,baz=203,slow=3.2,SNR=16								
QSPA				LR			LR	22 01 04.3	
	comp=Z,170nm,18.0s,baz=208,slow=36								
	comp=Z,19nm,1.2s								
BOSA	**Boshof**	**34.77**	**50**	P			**P**	**21 47 28.5**	**-0.5**
	comp=Z,7.4nm,1.1s,baz=212,slow=7.5,SNR=5.6								
BOSA				LR			LR	21 59 12.9	
	comp=Z,234nm,18.5s,baz=210,slow=32								
	comp=Z,7.4nm,1.1s								
BOSA	**Boshof**	**34.77**	**50**	P			**P**	**21 47 28.7**	**-0.3**
BOSA	**Boshof**	**34.77**	**50**	P			**P**	**21 47 28.7**	**-0.3**
BOSA				pmax			pmax		
	comp=Z,41nm,1.6s								
BOSA	**Boshof**	**34.77**	**50**	*eP*			**P**	**21 47 25.7**	**-3.3**
BOSA				IAmb			IAmb	21 47 30.1	
	comp=Z,46nm,1.6s								
USHA	**Ushuaia**	**35.00**	**245**	P			**P**	**21 47 30.6**	**0.0**
	comp=Z,20nm,0.6s,baz=102,slow=9.3,SNR=4.0								
USHA				LR			LR	21 59 34.5	
	comp=Z,810nm,19.3s,baz=170,slow=32								
	comp=Z,20nm,0.6s								
PRYS	**Parys**	**37.15**	**52**	*eP*			**P**	**21 47 49.4**	**0.0**
PRYS				IAmb			IAmb	21 47 51.4	
	comp=Z,263nm,2.5s								
NWCL	**Newcastle**	**37.60**	**56**	*eP*			**P**	**21 47 53.7**	**+0.5**
NWCL				IAmb			IAmb	21 48 00.1	
	comp=Z,66nm,1.7s								
LBTB	**Lobatse**	**38.07**	**48**	P			**P**	**21 47 55.3**	**-1.8**
	comp=Z,4.6nm,1.1s,baz=119,slow=5.4,SNR=4.3								
LBTB				LR			LR	22 01 04.4	
	comp=Z,316nm,18.2s,baz=208,slow=32								
	comp=Z,4.6nm,1.1s								
LBTB	**Lobatse**	**38.07**	**48**	P			**P**	**21 47 56.8**	**-0.3**
LBTB	**Lobatse**	**38.07**	**48**	P			**P**	**21 47 56.8**	**-0.3**
LBTB				pmax			pmax		
	comp=Z,25nm,1.7s								
LBTB	**Lobatse**	**38.07**	**48**	*eP*			**P**	**21 47 55.3**	**-1.8**
LBTB				IAmb			IAmb	21 47 58.3	
	comp=Z,43nm,1.7s								
SLR	**Silverton**	**38.59**	**52**	*eP*			**P**	**21 48 01.4**	**-0.2**
SLR				IAmb			IAmb	21 48 03.3	
	comp=Z,41nm,1.3s								
POGA	**Pongola**	**38.78**	**58**	P			**P**	**21 48 04.4**	**+1.4**
TSUM	**Tsumeb**	**40.45**	**34**	P			**P**	**21 48 17.0**	**-0.1**
	comp=Z,7.7nm,1.1s,baz=194,slow=9.8,SNR=13								
TSUM				LR			LR	22 02 06.1	
	comp=Z,317nm,19.2s,baz=178,slow=32								
	comp=Z,7.7nm,1.1s								
TSUM	**Tsumeb**	**40.45**	**34**	P			**P**	**21 48 18.4**	**+1.3**
TRQA	**Tornquist**	**41.59**	**271**	P			**P**	**21 48 25.1**	**-1.1**
TRQA				IAmb			IAmb	21 48 27.8	
	comp=Z,98nm,1.6s								
TRQA	**Tornquist**	**41.59**	**271**	P			**P**	**21 48 25.1**	**-1.1**
TRQA				pmax			pmax		
	comp=Z,98nm,1.7s								
TER01	**Tubaro-SC**	**41.74**	**292**	*eP*			**P**	**21 48 28.6**	**+1.0**
MOPA	**Mopani**	**41.91**	**54**	*eP*			**P**	**21 48 28.6**	**-0.3**
MOPA				IAmb			IAmb	21 48 31.2	
	comp=Z,3.4nm,1.2s								
CNLB	**Canela**	**42.01**	**290**	*eP*			**P**	**21 48 30.9**	**+1.1**
MUSN	**Musina, Limpop**	**42.29**	**51**	*eP*			**P**	**21 48 32.2**	**+0.1**
MUSN				IAmb			IAmb	21 48 33.3	
	comp=Z,94nm,2.0s								
CPSB	**Cacapaa Do Su**	**42.53**	**286**	*eP*			**P**	**21 48 34.9**	**+0.9**
MATP	**Matopo**	**43.35**	**49**	LR			LR	22 04 58.7	
	comp=Z,450nm,19.7s,baz=239,slow=34								
MATP	**Matopo**	**43.35**	**49**	*eP*			**P**	**21 48 40.1**	**-0.7**
MATP				IAmb			IAmb	21 48 42.7	
	comp=Z,82nm,1.4s								
LL02	**Futaleuf**	**43.59**	**258**	P			**P**	**21 48 41.3**	**-1.1**
BLWY	**Bulawayo**	**43.65**	**48**	*eP*			**P**	**21 48 42.5**	**-0.8**
BLWY				IAmb			IAmb	21 48 43.9	
	comp=Z,469nm,2.4s								
MAN01	**Angra dos Reis**	**43.88**	**303**	*eP*			**P**	**21 48 46.6**	**+1.6**
PET01	**Itanhaem-SP**	**44.28**	**298**	*eP*			**P**	**21 48 48.8**	**+0.7**
ALF01	**Guarapari-ES**	**44.35**	**308**	*eP*			**P**	**21 48 50.4**	**+1.7**
PLCA	**Paso Flores**	**44.53**	**261**	P			**P**	**21 48 50.1**	**0.0**
	comp=Z,2.5nm,0.9s,baz=110,slow=9.1,SNR=1.3								
PLCA				LR			LR	22 06 39.8	
	comp=Z,216nm,18.1s,baz=143,slow=35								
	comp=Z,2.5nm,0.9s								
PLCA	**Paso Flores**	**44.53**	**261**	*eP*			**P**	**21 48 53.0**	**+2.9**
VAO	**Valinhos**	**45.21**	**299**	*eP*			**P**	**21 48 57.3**	**+1.7**
RIB01	**Linhares ES**	**45.35**	**309**	*eP*			**P**	**21 48 57.7**	**+1.0**
LL04	**Puerto Octay**	**45.44**	**260**	P			**P**	**21 48 56.9**	**-0.3**
SJMB	**Sao Joao De Ma**	**46.24**	**309**	*eP*			**P**	**21 49 04.3**	**+0.6**
SBA	**Scott Base**	**46.25**	**178**	P			**P**	**21 49 03.8**	**+0.7**
SBA				IAmb			IAmb	21 49 06.8	
	comp=Z,55nm,1.3s								
SBA	**Scott Base**	**46.25**	**178**	P			**P**	**21 49 03.8**	**+0.7**
SBA				pmax			pmax		
	comp=Z,55nm,1.3s								
PTGB	**Pitanga**	**46.36**	**293**	*eP*			**P**	**21 49 05.8**	**+1.1**
VNDA	**Vanda**	**46.42**	**176**	P			**P**	**21 49 05.3**	**+0.7**
	comp=Z,21nm,1.1s,baz=215,slow=8.8,SNR=27								
	comp=Z,21nm,1.1s								
VNDA	**Vanda**	**46.42**	**176**	P			**P**	**21 49 05.2**	**+0.7**
VNDA				IAmb			IAmb	21 49 07.6	
	comp=Z,63nm,1.4s								
VNDA	**Vanda**	**46.42**	**176**	P			**P**	**21 49 05.2**	**+0.7**
VNDA				pmax			pmax		
	comp=Z,63nm,1.4s								
GUA01	**Guaratinga, BA**	**47.53**	**312**	*eP*			**P**	**21 49 14.6**	**+0.7**
BB19B	**Bebedouro**	**47.61**	**299**	*eP*			**P**	**21 49 15.7**	**+1.3**
H10S2	**ASCENSION HYDR**	**47.62**	**347**	T			T	22 40 40.8	
	baz=172,slow=74,SNR=7.9								
H10S3	**ASCENSION HYDR**	**47.63**	**347**	T			T	22 40 42.9	
	baz=48,slow=74,SNR=11								
DIAM	**Diamantina, MG**	**47.70**	**306**	*eP*			**P**	**21 49 14.9**	**-0.4**
CPUP	**Villa Florida**	**47.84**	**286**	P			**P**	**21 49 15.8**	**-0.4**
	comp=Z,12nm,1.1s,baz=152,slow=7.3,SNR=12								
CPUP				LR			LR	22 06 02.3	
	comp=Z,445nm,21.9s,baz=152,slow=32								
	comp=Z,12nm,1.1s								
CPUP	**Villa Florida**	**47.84**	**286**	P			**P**	**21 49 15.6**	**-0.6**
CPUP	**Villa Florida**	**47.84**	**286**	P			**P**	**21 49 15.6**	**-0.6**
CPUP				pmax			pmax		
	comp=Z,95nm,1.7s								
CPUP	**Villa Florida**	**47.84**	**286**	*eP*			**P**	**21 49 16.7**	**+0.6**
LSZ	**Lusaka**	**47.85**	**45**	LR			LR	22 06 47.8	
	comp=Z,644nm,19.7s,baz=206,slow=33								
PCMB	**Pacaembu**	**48.52**	**296**	*eP*			**P**	**21 49 22.7**	**+1.2**
CASY	**Casey**	**48.69**	**151**	P			**P**	**21 49 22.7**	**+0.5**
CASY				IAmb			IAmb	21 49 25.7	
	comp=Z,46nm,1.4s								
PMNB	**Patos De Minas**	**48.77**	**303**	*eP*			**P**	**21 49 23.6**	**+0.2**
BI05	**Punta Hualpn**	**48.79**	**263**	P			**P**	**21 49 23.9**	**+0.5**
BO02	**Sierra Bellavi**	**48.86**	**267**	P			**P**	**21 49 23.3**	**-0.8**
BO02				IAmb			IAmb	21 49 26.1	
	comp=Z,69nm,1.6s								
MC01	**Montes Claros**	**49.22**	**307**	*eP*			**P**	**21 49 26.8**	**-0.1**
LMEL	**Las Melosas**	**49.23**	**268**	P			**P**	**21 49 26.8**	**-0.2**
LMEL				IAmb			IAmb	21 49 28.7	
	comp=Z,98nm,1.8s								
ITRB	**Iturama**	**49.67**	**298**	*eP*			**P**	**21 49 31.6**	**+1.3**
MT03	**Universidad Ad**	**49.67**	**268**	P			**P**	**21 49 30.0**	**-0.3**
MT01	**Popeta**	**49.81**	**267**	P			**P**	**21 49 31.3**	**+0.1**
GDU01	**Guandu, BA**	**50.01**	**314**	*eP*			**P**	**21 49 32.8**	**-0.1**
IPMB	**Ipameri, GO**	**50.09**	**301**	*eP*			**P**	**21 49 34.1**	**+0.6**
ZON	**Zonda**	**50.09**	**271**	P			**P**	**21 49 33.3**	**-0.2**
ZON				IAmb			IAmb	21 49 34.7	
	comp=Z,99nm,1.7s								
ZON	**Zonda**	**50.09**	**271**	P			**P**	**21 49 33.3**	**-0.2**
ZON				pmax			pmax		
	comp=Z,99nm,1.7s								
JANB	**Januaria**	**50.83**	**307**	*eP*			**P**	**21 49 39.3**	**+0.1**
C2SB	**Chapadao do Su**	**51.70**	**296**	*eP*			**P**	**21 49 47.2**	**+1.6**
AQDB	**Aquidauana**	**51.74**	**292**	P			**P**	**21 49 45.3**	**-0.6**
AQDB				IAmb			IAmb	21 49 46.8	
	comp=Z,94nm,1.6s								
AQDB	**Aquidauana**	**51.74**	**292**	*eP*			**P**	**21 49 46.0**	**+0.2**
CO03	**El Pedregal**	**51.75**	**270**	P			**P**	**21 49 46.0**	**0.0**
CO03				IAmb			IAmb	21 49 47.4	
	comp=Z,76nm,1.8s								
NBLA	**Lagarto - SE**	**51.79**	**317**	*eP*			**P**	**21 49 45.6**	**-0.6**
BDFB	**Brasilia**	**52.02**	**303**	P			**P**	**21 49 48.2**	**+0.1**
	comp=Z,15nm,0.8s,baz=134,slow=6.9,SNR=17								
BDFB				LR			LR	22 07 12.8	
	comp=Z,385nm,21.8s,baz=143,slow=31								
	comp=Z,15nm,0.8s								
BDFB	**Brasilia**	**52.02**	**303**	P			**P**	**21 49 48.1**	**0.0**
BDFB	**Brasilia**	**52.02**	**303**	P			**P**	**21 49 48.1**	**0.0**
BDFB				pmax			pmax		
	comp=Z,122nm,1.6s								
BDFB	**Brasilia**	**52.02**	**303**	*eP*			**P**	**21 49 49.0**	**+0.9**
CO01	**Juntas del Tor**	**52.07**	**272**	P			**P**	**21 49 48.6**	**0.0**
CO01				IAmb			IAmb	21 49 51.1	
	comp=Z,76nm,1.7s								
NBAN	**Anadia - AL**	**52.44**	**319**	*eP*			**P**	**21 49 51.5**	**+0.4**
AC05	**El Transito**	**53.04**	**272**	P			**P**	**21 49 55.3**	**-0.4**
SDBA	**SAO DESIDERIO**	**53.44**	**308**	*eP*			**P**	**21 49 58.5**	**-0.1**
AC02	**Maricunga**	**53.95**	**275**	P			**P**	**21 50 02.5**	**-0.3**
AC02				IAmb			IAmb	21 50 05.0	
	comp=Z,70nm,1.6s								
AC06	**Mina Casimiro**	**54.23**	**273**	P			**P**	**21 50 03.0**	**-1.2**
GO02	**Mina Guanaco**	**55.51**	**276**	P			**P**	**21 50 13.2**	**-0.7**
GO02				IAmb			IAmb	21 51 02.8	
	comp=Z,22nm,0.6s								
SALV	**Santo Antonio**	**55.56**	**295**	*eP*			**P**	**21 50 14.5**	**+0.6**
RCBR	**Riachuelo**	**55.87**	**322**	LR			LR	22 08 37.3	
	comp=Z,257nm,20.6s,baz=314,slow=30								
AF01	**San Pedro de A**	**56.47**	**279**	P			**P**	**21 50 21.9**	**+1.2**
SNDB	**Serra Nova Dou**	**56.75**	**302**	*eP*			**P**	**21 50 23.0**	**+0.5**
PB15	**IPOC Station P**	**56.99**	**277**	P			**P**	**21 50 24.6**	**+0.3**
PB15				IAmb			IAmb	21 50 43.8	
	comp=Z,78nm,1.6s								
LVC	**Limon Verde**	**57.15**	**278**	LR			LR	22 15 00.3	
	comp=Z,130nm,18.6s,baz=136,slow=36								
LVC	**Limon Verde**	**57.15**	**278**	P			**P**	**21 50 24.7**	**-1.0**
LVC				IAmb			IAmb	21 50 31.4	
	comp=Z,41nm,1.3s								
LVC	**Limon Verde**	**57.15**	**278**	P			**P**	**21 50 24.7**	**-1.0**
LVC				pmax			pmax		
	comp=Z,41nm,1.3s								
LVC	**Limon Verde**	**57.15**	**278**	*eP*			**P**	**21 50 27.0**	**+1.3**
PTLB	**Pontes e Lacer**	**57.71**	**292**	P			**P**	**21 50 28.3**	**-0.9**
PTLB				IAmb			IAmb	21 50 30.2	
	comp=Z,71nm,1.6s								
PTLB	**Pontes e Lacer**	**57.71**	**292**	*eP*			**P**	**21 50 29.1**	**-0.1**
SMTB	**Santa Maria do**	**57.78**	**307**	*eP*			**P**	**21 50 30.3**	**+0.6**
SIV	**San Ignacio**	**58.27**	**290**	LR			LR	22 13 29.4	
	comp=Z,583nm,19.1s,baz=98,slow=34								
PDRB	**Porto dos Gac**	**59.73**	**297**	*eP*			**P**	**21 50 43.4**	**+0.1**
CLDB	**Colider**	**59.89**	**298**	*eP*			**P**	**21 50 44.6**	**+0.2**
VILB	**Vilhena**	**60.36**	**293**	P			**P**	**21 50 47.4**	**-0.2**
VILB				IAmb			IAmb	21 50 48.8	
	comp=Z,116nm,1.7s								
VILB	**Vilhena**	**60.36**	**293**	*eP*			**P**	**21 50 48.3**	**+0.7**
PRPB	**Parauapebas**	**61.16**	**307**	*eP*			**P**	**21 50 53.7**	**+0.6**
ROSB	**Rosrio**	**61.66**	**314**	*eP*			**P**	**21 50 56.8**	**+0.4**
LPAZ	**La Paz**	**61.82**	**283**	P			**P**	**21 50 58.2**	**-0.1**
	comp=Z,10nm,0.9s,baz=126,slow=4.7,SNR=31								
LPAZ				LR			LR	22 17 34.2	
	comp=Z,245nm,19.4s,baz=101,slow=36								
	comp=Z,10nm,0.9s								
LPAZ	**La Paz**	**61.82**	**283**	P			**P**	**21 50 57.0**	**-1.3**
LPAZ	**La Paz**	**61.82**	**283**	P			**P**	**21 50 57.0**	**-1.3**
LPAZ				pmax			pmax		
	comp=Z,105nm,1.7s								
LPAZ	**La Paz**	**61.82**	**283**	*eP*			**P**	**21 50 58.4**	**+0.2**
LIC	**Lamto**	**62.06**	**360**	*eP*			**P**	**21 50 59.2**	**+0.2**
	comp=Z,66nm,

MDT	**Midelt**	**88.52**	**0**	LR	LR	22 28 11.3		
	comp=Z,126nm,20.0s,baz=198,slow=32							
PSA00	**Pilbara Seismi**	**89.65**	**130**	P	**P**	**21 53 36.4**	**-0.1**	
PSA00				IAmb	IAmb	21 53 38.2		
	comp=Z,47nm,1.5s							
RAYN	**Ar Rayn**	**89.97**	**45**	P	**P**	**21 53 38.6**	**+0.9**	
RAYN				IAmb	IAmb	21 53 42.5		
	comp=Z,44nm,1.9s							
RAYN	**Ar Rayn**	**89.97**	**45**	P	**P**	**21 53 38.6**	**+0.9**	
RAYN				pmax	pmax			
	comp=Z,44nm,1.9s							
EIL	**Elat**	**91.84**	**34**	LR	LR	22 34 12.5		
	comp=Z,221nm,18.3s,baz=218,slow=35							
ASAR	**Alice Springs**	**93.19**	**143**	P	**P**	**21 53 52.6**	**-0.4**	
	comp=Z,3.9nm,1.1s,baz=204,slow=4.7,SNR=13							
ASAR				LR	LR	22 29 45.0		
	comp=Z,128nm,21.4s,baz=202,slow=32							
	comp=Z,3.9nm,1.1s							
ASAR	**Alice Springs**	**93.19**	**143**	P	**P**	**21 53 52.3**	**-0.7**	
ASAR	**Alice Springs**	**93.19**	**143**	P	**P**	**21 53 52.3**	**-0.7**	
PALK	**Pallekele**	**93.44**	**82**	LR	LR	22 26 28.2		
	comp=Z,93nm,19.7s,baz=315,slow=30							
MMAI	**Mount Meron Ar**	**95.09**	**33**	LR	LR	22 34 41.3		
	comp=Z,132nm,20.9s,baz=53,slow=34							
FITZ	**Fitzroy Crossi**	**95.17**	**133**	LR	LR	22 31 18.9		
	comp=Z,101nm,20.3s,baz=220,slow=32							
ESDC	**Sonseca Array**	**95.37**	**1**	P	**P**	**21 54 02.0**	**-0.2**	
	comp=Z,2.7nm,1.2s,baz=188,slow=4.2,SNR=6.7							
	comp=Z,2.7nm,1.2s							
ESDC	**Sonseca Array**	**95.37**	**1**	P	**P**	**21 54 02.8**	**+0.6**	
TBI	**Tubuai**	**95.42**	**212**	*e*LR	LR	22 24 48.5		
	comp=Z,81nm,23.2s							
LEM	**Lembang**	**96.56**	**112**	LR	LR	22 29 14.4		
	comp=Z,135nm,19.7s,baz=199,slow=30							
WRA	**Warramunga Arr**	**96.79**	**142**	P	**P**	**21 54 09.0**	**-0.4**	
	comp=Z,1.6nm,1.2s,baz=194,slow=3.2,SNR=4.7							
WRA				LR	LR	22 31 14.1		
	comp=Z,122nm,21.7s,baz=226,slow=31							
	comp=Z,1.6nm,1.2s							
PSI	**Prapat**	**99.94**	**100**	LR	LR	22 30 30.5		
	comp=Z,99nm,19.6s,baz=184,slow=30							
PPT2	**Papeete2**	**100.87**	**214**	*e*LR	LR	22 27 20.1		
	comp=Z,46nm,20.2s							
DZM	**Mont Dzumac**	**101.83**	**172**	*e*LR	LR	22 27 48.2		
	comp=Z,170nm,26.6s							
CLL	**Collm**	**108.01**	**12**	*e*PP	**PP**	**21 59 28.0**	**-0.4**	
CLL				LmV		23 40 00.0		
	comp=Z,100nm,19.4s							
AKASG	**Malin Array Be**	**110.07**	**22**	PP	**PP**	**21 59 41.8**	**-1.5**	
	comp=Z,0.2nm,0.2s,baz=202,slow=5.8,SNR=7.5							
OBN	**Obninsk**	**115.82**	**25**	*i* PKIKP	**PKiKP**	**21 59 21.2**	**+1.4**	
OBN				*e*		21 59 25.8		
OBN				*e*		22 00 22.5		
OBN				pmax	pmax			
	comp=Z,3.0nm,0.8s							
KSH	**Kashi**	**117.05**	**59**	PKP	**PKiKP**	**21 59 23.0**	**+0.1**	
PZH	**PanZhiHua**	**120.68**	**87**	PKP	**PKiKP**	**21 59 30.5**	**+0.1**	
ARU	**Arti**	**123.26**	**36**	*i* PKIKP	**PKiKP**	**21 59 34.8**	**+0.5**	
ARU						22 01 15.1		
ARU						22 06 46.4		
ARU				SS	SS	22 18 05.4	**+4.5**	
ANMO	**Albuquerque**	**124.44**	**283**	*i* PKIKP	**PKPdf**	**21 59 37.4**	**0.0**	
BRVK	**Borovoye**	**124.94**	**45**	PKPdf	**PKPdf**	**21 59 36.7**	**-0.7**	
BRVK	**Borovoye**	**124.94**	**45**	*i* PKIKP	**PKiKP**	**21 59 38.6**	**+0.8**	
MK31	**Makanchi Array**	**125.57**	**58**	PKPdf	**PKPdf**	**21 59 38.9**	**+0.1**	
MK31	**Makanchi Array**	**125.57**	**58**	*c* PKIKP	**PKPdf**	**21 59 39.0**	**+0.1**	
MKAR	**Makanchi Array**	**125.57**	**58**	PKP	**PKPdf**	**21 59 38.7**	**-0.3**	
	comp=Z,2.9nm,1.2s,baz=288,slow=1.2,SNR=8.0							
MKAR	**Makanchi Array**	**125.57**	**58**	PKPdf	**PKPdf**	**21 59 37.8**	**-1.1**	
MKAR	**Makanchi Array**	**125.57**	**58**	PKIKP	**PKPdf**	**21 59 37.8**	**-1.1**	
WMQ	**Urumqi**	**126.06**	**63**	*e*PKP	**PKiKP**	**21 59 42.0**	**+1.6**	
S22A	**4UR Ranch, Cre**	**126.70**	**285**	PKPdf	**PKiKP**	**21 59 42.0**	**-0.2**	
KURK	**Kurchatov**	**126.72**	**52**	*c* PKIKP	**PKiKP**	**21 59 41.7**	**+0.3**	
GTA	**Gaotai**	**129.26**	**76**	*e*PKP	**PKiKP**	**21 59 48.5**	**+1.4**	
MSU	**Marysvale**	**130.17**	**282**	PKPdf	**PKPdf**	**21 59 48.3**	**+0.1**	
MSU	**Marysvale**	**130.17**	**282**	PKIKP	**PKPdf**	**21 59 48.3**	**+0.1**	
PDAR	**Pinedale Array**	**131.73**	**287**	PKP	**PKPdf**	**21 59 50.5**	**-0.6**	
	comp=Z,0.3nm,0.4s,baz=144,slow=4.0,SNR=6.8							
HWUT	**Hardware Ranch**	**132.01**	**285**	PKPdf	**PKPdf**	**21 59 50.4**	**-1.1**	
BGU	**Big Grassy Mou**	**132.34**	**283**	PKPdf	**PKPdf**	**21 59 52.4**	**+0.2**	
NVAR	**Mina Array Bea**	**133.51**	**277**	PKP	**PKiKP**	**21 59 55.5**	**-0.3**	
	comp=Z,0.2nm,0.4s,baz=134,slow=2.6,SNR=0.8							
KNGR	**Kungurtug, Tuv**	**135.56**	**63**	*e*PKIKP	**PKPdf**	**21 59 58.1**	**+0.3**	
HHC	**Hu-ho-hao-te**	**136.73**	**83**	*e*PKP	**PKPdf**	**21 59 58.3**	**-2.0**	
SONM	**Songino Array**	**138.43**	**71**	PKP	**PKPdf**	**22 00 03.9**	**+0.7**	
	comp=Z,0.3nm,0.6s,baz=248,slow=2.5,SNR=2.8							
G08A	**Pilot Rock**	**138.48**	**284**	PKPdf	**PKPdf**	**22 00 03.7**	**+0.3**	
ULN	**Ulaanbaatar**	**138.80**	**72**	*i* PKIKP	**PKiKP**	**22 00 06.6**	**+0.5**	
XLT	**XiLinHaoTe**	**141.25**	**83**	*e*PKP	**PKPdf**	**22 00 08.0**	**-0.5**	
YKA	**Yellowknife Ar**	**145.25**	**310**	PKPbc	**PKPbc**	**22 00 13.8**	**-0.8**	
	comp=Z,15nm,1.0s,baz=107,slow=3.9,SNR=27							
YKA	**Yellowknife Ar**	**145.25**	**310**	PKIKP	**PKPbc**	**22 00 13.9**	**-0.6**	
CN2	**Changchun**	**146.43**	**90**	*e*PKPbc	**PKPbc**	**22 00 18.3**	**-0.5**	
BOD	**Bodaibo**	**147.54**	**61**	*e*PKP2	**PKPbc**	**22 00 21.0**	**-0.4**	
BOD				pmax	pmax			
	comp=Z,27nm,1.4s							
MAJO	**Matsushiro**	**148.36**	**112**	*e*PKIKP	**PKPdf**	**22 00 21.3**	**+0.4**	
MJAR	**Matsushiro Arr**	**148.36**	**112**	*e*PKPbc	**PKPbc**	**22 00 24.1**	**-0.3**	
	comp=Z,9.5nm,1.1s,baz=230,slow=4.7,SNR=6.5							
C36M	**Paulatuk**	**150.62**	**321**		**PKPbc**	**22 00 27.5**	**-1.4**	
INK	**Inuvik**	**154.04**	**319**	PKPbc	**PKPbc**	**22 00 35.9**	**-0.7**	
INK	**Inuvik**	**154.04**	**319**	PKIKP	**PKPbc**	**22 00 35.9**	**-0.7**	
BCAR	**Beaver Creek A**	**157.51**	**306**	PKPdf	**PKPdf**	**22 00 30.4**	**-2.9**	
ILAR	**Eielson Array**	**159.68**	**311**	PKPab	**PKPab**	**22 01 14.5**	**-0.2**	
	comp=Z,3.0nm,1.2s,baz=97,slow=2.5,SNR=8.7							
BILL	**Bilibino**	**167.28**	**15**	*e*PKIKP	**PKPdf**	**22 00 40.9**	**-2.0**	
BILL				pmax	pmax			
	comp=Z,3.0nm,1.0s							

IDC ***29*** *22:41:07.3±0.7, 2.2°22N×98.7°97W, h0km, mb4.4/18, mbtmp4.4/19, ML3.1/1, MS4.5/58, Error ellipse: s-maj=23.3km s-min=12.0km az=52.0*

NEIC ***29*** *22:41:10.3±2.0, 2.4°N±0.1°×98.9°W±0.1, h10km±1km, mb4.9/345, Error ellipse: s-maj=20.8km s-min=14.4km az=229.0*

GCMT ***29*** *22:41:14.3±0.2, 2.38°N±0.01°×98.69°W±0.01, h12km, MW5.2/130, Moment Tensor Solution. s82,c115; s130,c198; Duration: 1ᵻ0 Moment tensor: Scale 10¹⁶ Nm; Mrr=1.16±.12; Mθθ=3.58±.12; Mϕϕ=-2.42±.13; Mrθ=4.57±.31; Mrϕ=5.62±.10; Mθϕ=-0.38±.31; Best double couple: M₀=7.83600×10¹⁶ NP1:ϕ=281.00000°, δ=86.00000°, λ=-37.00000°. NP2:ϕ=14.00000°, δ=54.00000°, λ=-176.00000°. Principal axes: T 8.4710, Plg22.0000°, Azm333.0000°; N -1.2700, Plg53.0000°, Azm97.0000°; P -7.2020, Plg28.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 22:41:09.8±0.4, 2.32N±0.06×98.85W±0.06, h10km, n585, σ=0.97/414, mb4.9/171, MS4.5/61, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**9.07**	**109**	Pn	**Pn**	**22 43 22.7**	**+1.8**
HUEH	**Huehuetenango**	**14.81**	**29**		**P**	**22 44 44.2**	**-1.5**
CMIG	**Matias Romero**	**15.19**	**15**	Pn	**Pn**	**22 44 43.9**	**-0.6**
	0.1nm,0.3s,baz=186,slow=10,SNR=4.3						
CMIG				LR	LR	22 49 06.7	
	comp=Z,1μm,20.1s,baz=196,slow=31						
	11nm,1.2s						
MTO3	**Montecristo**	**15.23**	**37**		**Pn**	**22 44 46.5**	**+1.2**
ESQI	**Esquipulas**	**15.37**	**37**	Pn	**Pn**	**22 44 47.3**	**+0.3**
ORTG	**Ortega, Santa**	**15.52**	**58**	Pn	**Pn**	**22 44 48.2**	**-0.8**
HZTE	**Horizontes, Gu**	**15.58**	**57**		**P**	**22 44 52.5**	**-1.5**
HZTE				IAmb	IAmb	22 44 55.4	
	comp=Z,79nm,1.0s						
CRIN	**San Cristobal**	**15.59**	**48**	Pn	**Pn**	**22 44 50.2**	**+0.4**
CRIN				IAmb	IAmb	22 44 55.3	
	comp=Z,136nm,1.7s						
CNGN	**Cerro Negro**	**15.73**	**49**		**Pn**	**22 44 53.8**	**+2.2**
JTS	**Las Juntas de**	**15.92**	**60**	Pn	**Pn**	**22 44 54.8**	**+0.8**
JTS	**Las Juntas de**	**15.92**	**60**	*e*P	**P**	**22 44 56.9**	**-0.8**
TGUH	**Tegucigalpa,Un**	**16.34**	**44**		**P**	**22 45 02.6**	**0.0**
TGUH	**Tegucigalpa,Un**	**16.34**	**44**	*e*P	**P**	**22 45 03.5**	**+1.0**
BOAB	**BOACO BROADBAN**	**16.49**	**52**	Pn	**Pn**	**22 45 01.4**	**0.0**
HDC	**Heredia**	**16.52**	**62**		**Pn**	**22 45 02.8**	**+1.0**
MATN	**Matagalpa**	**16.58**	**50**		**Pn**	**22 45 04.2**	**+1.6**
COVE	**Coope Vega, Sa**	**16.60**	**59**	Pn	**Pn**	**22 45 02.6**	**-0.1**
COVE				IAmb	IAmb	22 45 09.1	
	comp=Z,168nm,1.6s						
ACON	**Acoyapa**	**16.61**	**54**		**Pn**	**22 45 03.4**	**+0.5**
ACON				IAmb	IAmb	22 45 10.0	
	comp=Z,139nm,1.4s						
ACON	**Acoyapa**	**16.61**	**54**	*e*P	**Pn**	**22 45 03.7**	**+0.9**
RIMA	**Rio Macho**	**16.63**	**63**		**Pn**	**22 45 02.9**	**-0.5**
RIMA				IAmb	IAmb	22 45 07.3	
	comp=Z,190nm,1.7s						
PEZE	**Perez Zeledon,**	**16.64**	**64**		**P**	**22 45 05.5**	**-0.3**
PEZE				IAmb	IAmb	22 45 10.6	
	comp=Z,201nm,1.6s						
CVTR	**Volcan Turrial**	**16.84**	**62**		**Pn**	**22 45 07.5**	**+1.3**
SRBA	**San Rafael, Bu**	**16.87**	**65**		**Pn**	**22 45 06.8**	**+0.5**
SRBA				IAmb	IAmb	22 45 09.4	
	comp=Z,142nm,1.5s						
UNM	**Universidad Na**	**16.91**	**359**		**P**	**22 45 10.3**	**+1.3**
DRK0	**Durika**	**16.98**	**65**		**Pn**	**22 45 08.4**	**+0.5**
DRK0				IAmb	IAmb	22 45 16.9	
	comp=Z,198nm,1.3s						
PETF	**Flores**	**16.99**	**31**		**P**	**22 45 09.2**	**-0.3**
CDITO	**Canoas**	**17.07**	**68**	Pn	**Pn**	**22 45 09.1**	**+0.3**
BATAN	**Batan**	**17.21**	**63**		**Pn**	**22 45 11.1**	**+0.6**
BRU2	**Volcan**	**17.32**	**68**		**Pn**	**22 45 12.4**	**+0.4**
BRU2				IAmb	IAmb	22 45 17.4	
	comp=Z,151nm,1.5s						
BRU2	**Volcan**	**17.32**	**68**	*e*P	**Pn**	**22 45 12.3**	**+0.4**
ESPN	**Las Esperanzas**	**17.44**	**55**	P	**P**	**22 45 14.7**	**+0.1**
ESPN				IAmb	IAmb	22 45 17.6	
	comp=Z,182nm,1.4s						
FLF1	**Flavio Alfaro-**	**19.19**	**98**	*e*P	Pn	22 45 46.3	+11
BCIP	**Isla Barro Col**	**20.10**	**69**	P	**P**	**22 45 43.8**	**0.0**
BCIP	**Isla Barro Col**	**20.10**	**69**	*e*P	**P**	**22 45 45.1**	**+1.2**
CHSH	**Refugio Sur-Vo**	**20.34**	**101**	P	**P**	**22 45 48.1**	**+1.1**
CHSH				IAmb	IAmb	22 45 58.5	
	comp=Z,77nm,1.1s						
PRVC	**Isla de Provid**	**20.50**	**57**	*e*P	**P**	**22 45 49.6**	**+1.5**
OTAV	**Otavalo**	**20.50**	**95**	P	**P**	**22 45 47.9**	**-0.8**
OTAV				IAmb	IAmb	22 45 56.8	
	comp=Z,71nm,1.2s						
OTAV	**Otavalo**	**20.50**	**95**	*e*P	**P**	**22 45 49.5**	**+0.8**
OTAV	**Otavalo**	**20.50**	**95**	*e*P	**P**	**22 45 49.0**	**+0.3**
SLOR	**San Lorenzo -**	**20.58**	**98**	P	**P**	**22 45 51.2**	**+1.7**
SLOR				IAmb	IAmb	22 45 59.0	
	comp=Z,90nm,1.3s						
TEIG	**Tepich**	**20.58**	**29**	P	**P**	**22 45 48.9**	**-0.1**
IMBA	**Imbabura, San**	**20.75**	**95**	P	**P**	**22 45 49.1**	**-2.3**
BBAC	**Balboa, Cauca**	**21.59**	**90**	*e*P	**P**	**22 46 02.9**	**+2.6**
CAPC	**Capurgana**	**22.30**	**73**	*e*P	**P**	**22 46 04.4**	**-3.1**
ATAH	**Atahualpa**	**22.47**	**115**	P	**P**	**22 46 10.7**	**+0.8**
	comp=Z,85nm,1.3s,baz=291,slow=11,SNR=22						
	comp=Z,85nm,1.3s						
YOTC	**Yotoco, Valle**	**22.54**	**85**	*e*P	**P**	**22 46 09.6**	**-0.7**
PLMC	**San Jos del P**	**22.67**	**83**	*e*P	**P**	**22 46 12.8**	**+1.1**
CBOC	**Ciudad Bolivar**	**23.05**	**81**	*e*P	**P**	**22 46 17.7**	**+1.9**
FLOC	**Florencia**	**23.20**	**91**	*e*P	**P**	**22 46 19.5**	**+2.4**
GARC	**Garzon, Huila**	**23.34**	**90**	*e*P	**P**	**22 46 19.7**	**+0.9**
HELC	**Santa Helena**	**23.57**	**80**	*e*P	**P**	**22 46 21.0**	**-0.2**
GUY2C	**Guyana, Caldas**	**23.61**	**82**	*e*P	**P**	**22 46 24.2**	**+2.5**
SLBS	**Sierra La Lagu**	**23.80**	**334**	P	**P**	**22 46 24.9**	**+1.9**
SLBS				IAmb	IAmb	22 46 36.1	
	comp=Z,80nm,1.6s						
UREC	**San Jos de Ur**	**23.84**	**76**	*e*P	**P**	**22 46 23.4**	**0.0**
NORC	**Norcasia**	**24.14**	**82**	*e*P	**P**	**22 46 26.3**	**-0.1**
PTLC	**Puerto Leguiza**	**24.14**	**95**	*e*P	**P**	**22 46 26.7**	**+0.4**
LPIG	**La Paz**	**24.33**	**334**	LR	LR	22 53 59.5	
	comp=Z,5μm,18.3s,baz=158,slow=32						
ZARC	**Zaragoza, Cauc**	**24.45**	**77**	*e*P	**P**	**22 46 31.5**	**+2.4**
ROSC	**El Rosal**	**24.61**	**83**	P	**P**	**22 46 32.7**	**+1.7**
	comp=Z,7.1nm,0.4s,baz=247,slow=6.1,SNR=18						
ROSC				LR	LR	22 53 11.9	
	comp=Z,436nm,19.7s,baz=270,slow=29						
	comp=Z,7.1nm,0.4s						
ROSC	**El Rosal**	**24.61**	**83**	P	**P**	**22 46 31.5**	**+0.5**
ROSC	**El Rosal**	**24.61**	**83**	*e*P	**P**	**22 46 33.8**	**+2.8**
PTBC	**PUERTO BERRIO,**	**24.68**	**79**	*e*P	**P**	**22 46 31.1**	**-0.1**
SJCC	**San Jacinto, C**	**24.70**	**71**	*e*P	**P**	**22 46 33.4**	**+2.0**
MACC	**Macarena, Meta**	**24.99**	**90**	*e*P	**P**	**22 46 35.7**	**+1.7**
CHIC	**Chingaza**	**25.18**	**84**	*e*P	**P**	**22 46 40.7**	**+4.6**
BRRC	**Barranca, Sant**	**25.50**	**78**	*e*P	**P**	**22 46 40.8**	**+2.2**
833A	**Chaparral WMA,**	**25.87**	**359**	P	**P**	**22 46 41.4**	**-0.4**
833A				IAmb	IAmb	22 46 49.5	
	comp=Z,38nm,1.1s						
833A	**Chaparral WMA,**	**25.87**	**359**	P	**P**	**22 46 43.0**	**+1.2**
	baz=179,SNR=8.7						
RUSC	**La Rusia**	**25.95**	**81**	*e*P	**P**	**22 46 43.7**	**+0.5**
NNA	**Nana**	**26.09**	**123**	LR	LR	22 54 49.2	
	comp=Z,2μm,18.3s,baz=290,slow=32						
TXAR	**Lajitas Array**	**27.26**	**351**	P	**P**	**22 46 54.3**	**-0.1**
	comp=Z,5.7nm,1.0s,baz=172,slow=10,SNR=30						
TXAR				PcP	**PcP**	**22 50 14.8**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=152,slow=4.1,SNR=2.8						
TXAR				LR	LR	22 56 50.8	
	comp=Z,2μm,18.1s,baz=142,slow=34						
	comp=Z,5.7nm,1.0s						
TXAR	**Lajitas Array**	**27.26**	**351**	P	**P**	**22 46 53.8**	**-0.6**
HKT	**Hockley**	**27.63**	**6**	P	**P**	**22 46 57.6**	**+0.1**
HKT				IAmb	IAmb	22 47 08.0	
	comp=Z,47nm,1.6s						
CZSB	**Cruzeiro do Su**	**27.93**	**111**	P	**P**	**22 46 59.9**	**-0.6**
CZSB				IAmb	IAmb	22 47 08.0	
	comp=Z,52nm,1.1s						
CZSB	**Cruzeiro do Su**	**27.93**	**111**	*e*P	**P**	**22 47 01.5**	**+1.0**
JCT	**Junction City**	**28.02**	**358**	P	**P**	**22 47 01.9**	**+0.6**
	baz=178						
435B	**Jarrell**	**28.34**	**2**	P	**P**	**22 47 04.3**	**+0.3**
	baz=183						
SDV	**San Domingo**	**28.82**	**76**	P	**P**	**22 47 09.3**	**+0.6**
	comp=Z,2.3nm,0.4s,baz=239,slow=10,SNR=5.8						
SDV				LR	LR	22 56 43.8	
	comp=Z,1μm,21.3s,baz=252,slow=32						
	comp=Z,2.3nm,0.4s						
SDV	**Santo Domingo**	**28.82**	**76**	P	**P**	**22 47 08.7**	**0.0**
SDV				IAmb	IAmb	22 47 22.3	
	comp=Z,18nm,1.1s						
SDV	**Santo Domingo**	**28.82**	**76**	*e*P	**P**	**22 47 10.5**	**+1.8**
WHTX	**Lake Whitney,**	**29.55**	**2**	P	**P**	**22 47 14.6**	**-0.1**
	baz=183						
NATX	**Nacogdoches**	**29.55**	**7**	P	**P**	**22 47 16.2**	**+1.5**
MNTX	**Cornudas Mount**	**29.87**	**349**	P	**P**	**22 47 18.0**	**+0.5**
MNTX	**Cornudas Mount**	**29.87**	**349**	P	**P**	**22 47 17.8**	**+0.3**
	baz=167,SNR=7.8						
GDL2	**Guadalupe Moun**	**30.18**	**351**	P	**P**	**22 47 21.6**	**+1.2**
DWPF	**Disney Wildern**	**30.57**	**31**	P	**P**	**22 47 23.9**	**+0.1**
	baz=216						
BRAL	**Brewton**	**30.79**	**20**	P	**P**	**22 47 27.0**	**+1.3**
	baz=204						
Z35A	**Perchaven, San**	**30.89**	**3**	P	**P**	**22 47 26.3**	**-0.3**
RPN	**Rapa Nui**	**30.97**	**198**	LR	LR	22 56 13.0	
	comp=Z,362nm,18.4s,baz=43,slow=29						
121A	**Cookes Peak, D**	**31.21**	**345**	P	**P**	**22 47 30.8**	**+1.2**
	baz=163,SNR=5.7						
BAUV	**El Baul**	**31.34**	**77**	P	**P**	**22 47 29.5**	**-1.3**
LOOK	**Love County**	**31.55**	**3**	P	**P**	**22 47 32.6**	**+0.2**
LOOK				IAmb	IAmb	22 47 43.7	
	comp=Z,31nm,1.2s						
WLAR	**White Oak Lake**	**31.67**	**9**	P	**P**	**22 47 34.8**	**+1.4**
MSTX	**Muleshoe**	**31.70**	**354**	P	**P**	**22 47 34.5**	**+0.6**
	baz=173,SNR=12						
TUC	**Tucson**	**31.88**	**341**	P	**P**	**22 47 35.9**	**+0.5**
TUC				IAmb	IAmb	22 47 43.0	
	comp=Z,13nm,1.1s						
TUC	**Tucson**	**31.88**	**341**	P	**P**	**22 47 36.4**	**+1.0**
	baz=157						
X34A	**Smith Ranch, M**	**32.13**	**2**	P	**P**	**22 47 37.8**	**+0.3**
X34A				IAmb	IAmb	22 48 01.0	
	comp=Z,27nm,1.1s						
WMOK	**Wichita Mounta**	**32.26**	**0**	P	**P**	**22 47 38.4**	**-0.2**
	baz=180						
X37A	**Clayton**	**32.27**	**5**	IAmb	IAmb	22 48 21.7	
	comp=Z,29nm,1.6s						
SC01	**Santiago de lo**	**32.34**	**56**	P	**P**	**22 47 38.0**	**-1.5**
TIGA	**Tifton**	**32.35**	**25**	P	**P**	**22 47 39.3**	**-0.2**
	baz=209						
MIAR	**Mount Ida**	**32.44**	**8**	P	**P**	**22 47 40.0**	**-0.2**
MIAR				IAmb	IAmb	22 47 50.7	
	comp=Z,14nm,1.1s						
SBM	**South Baldy**	**32.44**	**347**	P	**P**	**22 47 39.0**	**-1.7**
AMTX	**Amarillo**	**32.51**	**356**	IAmb	IAmb	22 48 00.2	
	comp=Z,27nm,1.4s						
AMTX	**Amarillo**	**32.51**	**356**	P	**P**	**22 47 41.1**	**+0.2**
	baz=175						
LRAL	**Lakeview Retre**	**32.52**	**19**	P	**P**	**22 47 41.2**	**+0.3**
	baz=202						
LENM	**Lemitar**	**32.58**	**347**	P	**P**	**22 47 41.6**	**-0.1**
152A	**Waverly Hall**	**32.98**	**22**	IAmb	IAmb	22 47 58.5	
	comp=Z,12nm,0.9s						
CSTR	**Hydro, Custer**	**33.16**	**0**	P	**P**	**22 47 46.4**	**-0.2**
CSTR				IAmb	IAmb	22 47 49.0	
	comp=Z,6.6nm,1.7s						
OXF	**Oxford**	**33.22**	**14**	P	**P**	**22 47 46.8**	**-0.2**
	baz=197						
ANMO	**Albuquerque**	**33.23**	**349**	LR	LR	23 00 24.9	
	comp=Z,3μm,18.0s,baz=172,slow=35						
ANMO	**Albuquerque**	**33.23**	**349**	P	**P**	**22 47 48.1**	**+0.8**
ANMO				IAmb	IAmb	22 47 50.1	
	comp=Z,25nm,1.9s						
ANMO	**Albuquerque**	**33.23**	**349**	P	**P**	**22 47 48.3**	**+1.0**
	baz=166						
113A	**Mohawk Valley,**	**33.37**	**337**	P	**P**	**22 47 48.6**	**+0.2**
TUL1	**Leonard**	**33.55**	**4**	P	**P**	**22 47 50.1**	**+0.3**
	baz=186						
ELIS	**Ellis County**	**33.59**	**359**	P	**P**	**22 47 50.3**	**0.0**
ELIS				IAmb	IAmb	22 48 00.7	
	comp=Z,33nm,1.3s						
X18A	**Snowflake**	**33.68**	**343**	IAmb	IAmb	22 47 54.3	
	comp=Z,36nm,1.8s						
U32A	**Winter Ranch,**	**33.90**	**360**	P	**P**	**22 47 53.0**	**0.0**
U32A				IAmb	IAmb	22 48 16.0	
	comp=Z,20nm,1.1s						
FCAR	**Ozark Folk Cen**	**33.98**	**10**	IAmb	IAmb	22 48 23.1	
	comp=Z,28nm,2.0s						
PLAL	**Pickwick Lake**	**34.01**	**16**	P	**P**	**22 47 52.8**	**-1.2**
PLAL				IAmb	IAmb	22 48 04.2	
	comp=Z,19nm,1.2s						
CROK	**Carrier**	**34.03**	**1**	P	**P**	**22 47 54.6**	**+0.5**
CROK				IAmb	IAmb	22 48 16.8	
	comp=Z,75nm,1.6s						
GLA	**Glamis**	**34.05**	**336**	P	**P**	**22 47 55.5**	**+1.2**
	baz=151						
HHAR	**Hobbs**	**34.10**	**7**	P	**P**	**22 47 53.8**	**-0.9**
GOGA	**Godfrey**	**34.13**	**23**	P	**P**	**22 47 54.9**	**0.0**
	baz=208						
U38A	**Gravette**	**34.20**	**6**	P	**P**	**22 47 54.9**	**-0.7**
IKP	**In-Ko-Pah, Jac**	**34.25**	**334**	P	**P**	**22 47 57.2**	**+1.1**
	baz=148						
OK032	**Salt Plains WL**	**34.32**	**1**	P	**P**	**22 47 56.7**	**+0.1**
SWSC	**Sam W. Stewart**	**34.37**	**334**	P	**P**	**22 47 57.7**	**+0.7**
	baz=149						
T35A	**Sooner Cattle**	**34.50**	**3**	P	**P**	**22 47 57.7**	**-0.4**
T35A				IAmb	IAmb	22 48 08.2	
	comp=Z,38nm,1.8s						
MONP2	**Monument Peak**	**34.60**	**333**	P	**P**	**22 48 00.2**	**+0.9**
	baz=148						
KAN10	**Anthony SW Sta**	**34.65**	**1**	P	**P**	**22 47 59.0**	**-0.4**
ETMB	**Extrema**	**34.67**	**111**	P	**P**	**22 47 58.1**	**-1.8**
ETMB				IAmb	IAmb	22 48 05.1	
	comp=Z,26nm,0.9s						
ETMB	**Extrema**	**34.67**	**111**	*e*P	**P**	**22 47 59.1**	**-0.8**
BC3	**Big Chuckawall**	**34.83**	**335**	P	**P**	**22 48 02.0**	**+0.9**
	baz=150						
PCRV	**Puerto La Cruz**	**34.87**	**76**	LR	LR	23 02 24.7	
	comp=Z,814nm,19.0s,slow=36						
PDMCI	**Parker Dam,Lak**	**34.88**	**338**	P	**P**	**22 48 02.5**	**+1.2**
	baz=153						
109C	**Camp Elliot, M**	**34.91**	**333**	P	**P**	**22 48 02.4**	**+0.7**
	baz=147						
WUAZ	**Wupatki**	**35.02**	**342**	P	**P**	**22 48 04.2**	**+1.3**
	baz=158						
T25A	**Trinidad**	**35.03**	**352**	IAmb	IAmb	22 48 10.9	
	comp=Z,22nm,1.2s						
T25A	**Trinidad**	**35.03**	**352**	P	**P**	**22 48 04.2**	**+1.2**
	baz=170,SNR=9.4						
V48A	**Smith Brothers**	**35.08**	**17**	IAmb	IAmb	22 48 21.4	
	comp=Z,29nm,1.4s						
IRM	**Iron Mountain**	**35.14**	**336**	P	**P**	**22 48 05.2**	**+1.4**
	baz=151						
WVT	**Waverly**	**35.16**	**16**	P	**P**	**22 48 01.6**	**-2.2**

baz=149
KNB Kanab 36.85 341 IAmb IAmb 22 48 26.7
comp=Z,24nm,1.3s
T50A Nancy 36.87 19 IAmb IAmb 22 48 36.6
comp=Z,31nm,1.8s
TZTN Tazewell 36.88 21 IAmb IAmb 22 48 25.6
comp=Z,20nm,1.1s
TZTN Tazewell 36.88 21 P P **22 48 19.2 +0.6**
baz=206
PV15 Paradox Valley 36.92 347 P P **22 48 19.4 +0.1**
PV15 IAmb IAmb 22 48 27.0
comp=Z,25nm,1.4s
Q24A Divide 36.93 352 IAmb IAmb 22 48 22.0
comp=Z,30nm,1.4s
Q24A Divide 36.93 352 P P **22 48 20.3 +1.0**
baz=170
PB01 IPOC Station P 36.96 130 IAmb IAmb 22 48 20.8
comp=Z,35nm,1.3s
EDW2 Edwards Air Fo 36.97 333 P P **22 48 20.2 +0.8**
baz=147
SCZ2 Santa Cruz Isl 37.02 331 P P **22 48 20.4 +0.6**
baz=144
PV07 Paradox Valley 37.05 347 IAmb IAmb 22 48 22.9
comp=Z,29nm,1.7s
OSI Osito Audit: C 37.09 332 P P **22 48 21.2 +0.8**
baz=146
PKCU Pink Cliffs 37.09 342 IAmb IAmb 22 48 28.6
comp=Z,50nm,1.7s
PV23 Carpenter Ridg 37.15 347 IAmb IAmb 22 48 28.5
comp=Z,22nm,1.3s
V55A Taylorsville 37.16 24 IAmb IAmb 22 48 28.1
comp=Z,26nm,0.9s
LRMC Laurel Mtn Rad 37.34 334 P P **22 48 23.7 +1.0**
baz=148
P38A Dawn 37.45 7 IAmb IAmb 22 48 33.7
comp=Z,34nm,1.3s
U54A Nelsons Funny 37.50 23 IAmb IAmb 22 48 31.3
comp=Z,32nm,1.0s
Q44A Meyer Farm, Va 37.51 13 IAmb IAmb 22 48 34.3
comp=Z,25nm,1.1s
WCI Wyandotte Cave 37.55 16 P P **22 48 23.9 -0.3**
WCI Wyandotte Cave 37.55 16 P P **22 48 24.4 +0.2**
baz=201
P40A Paris 37.55 9 IAmb IAmb 22 48 34.5
comp=Z,37nm,1.1s
ARVC Arvin 37.56 333 P P **22 48 25.1 +0.7**
baz=146
MPMC Manual Prospec 37.75 335 P P **22 48 27.0 +0.9**
baz=149,SNR=8.6
ISCO Idaho Springs 37.81 351 P P **22 48 27.6 +0.8**
baz=169
PKM Mcpherson Peak 37.82 331 P P **22 48 27.6 +0.8**
baz=144
FURC Furnace Creek, 37.84 336 P P **22 48 28.2 +1.5**
baz=150
ISA Isabella, Lake 37.84 334 P P **22 48 28.3 +1.4**
baz=147
S51A Beattyville 37.85 20 IAmb IAmb 22 48 33.6
comp=Z,22nm,0.9s
R49A Shelbyville 37.94 18 IAmb IAmb 22 48 34.1
comp=Z,37nm,1.1s
V58A Windy Hill, Pi 38.00 26 IAmb IAmb 22 48 46.1
comp=Z,23nm,1.0s
TPNV Topopah Spring 38.01 337 P P **22 48 29.9 +1.5**
baz=151
MSU Marysvale 38.03 343 P P **22 48 28.0 -0.6**
CNNC Cliffs of the 38.11 28 P P **22 48 29.1 +0.1**
baz=215
Q16A Castle Valley 38.13 344 IAmb IAmb 22 48 32.4
comp=Z,45nm,1.9s
R50A Paris 38.19 19 IAmb IAmb 22 48 36.6
comp=Z,19nm,0.9s
BOAV Boa Vista 38.30 89 P P **22 48 30.4 -0.5**
BOAV IAmb IAmb 22 48 38.3
comp=Z,74nm,1.8s
BOAV Boa Vista 38.30 89 *e*P P **22 48 30.7 -0.2**
LVC Limon Verde 38.31 132 P P **22 48 28.8 -2.5**
comp=Z,9.6nm,1.0s,baz=231,slow=6.7,SNR=5.5
LVC LR LR 23 00 17.4
comp=Z,2µm,20.8s,baz=302,slow=30
comp=Z,9.6nm,1.0s
LVC Limon Verde 38.31 132 P P **22 48 31.5 +0.2**
LVC IAmb IAmb 22 48 34.5
comp=Z,54nm,1.4s
LVC Limon Verde 38.31 132 *e*P P **22 48 30.7 -0.6**
S11A Rachel 38.43 338 IAmb IAmb 22 48 39.8
comp=Z,31nm,1.3s
MACA Manacapuru-AM 38.54 98 *e*P P **22 48 34.4 +1.4**
OGNE Ogallala 38.56 356 P P **22 48 33.6 +0.8**
baz=175
O20A White River Ci 38.60 348 IAmb IAmb 22 48 41.1
comp=Z,23nm,1.2s
O20A White River Ci 38.60 348 P P **22 48 34.5 +1.2**
baz=165
P46A Rosedale 38.61 14 IAmb IAmb 22 48 43.6
comp=Z,44nm,1.2s
N38A Joes South For 38.64 7 IAmb IAmb 22 48 43.8
comp=Z,34nm,1.1s
BLA Blacksburg 38.65 24 IAmb IAmb 22 48 53.1
comp=Z,44nm,1.6s
BLA Blacksburg 38.65 24 P P **22 48 34.0 +0.4**
baz=210
S54A Dingess, Beckl 38.81 22 IAmb IAmb 22 48 41.6
comp=Z,24nm,0.9s
N23A Red Feather La 38.94 351 P P **22 48 37.4 +1.1**
baz=169
P48A Milroy 38.94 17 P P **22 48 34.3 -1.7**
P48A IAmb IAmb 22 48 45.7
comp=Z,30nm,1.1s
T57A Hurt 38.95 25 IAmb IAmb 22 48 54.4
comp=Z,38nm,1.2s
R11A Troy Canyon, C 39.00 339 P P **22 48 38.3 +1.6**
baz=153
HDIL Hopedale 39.04 12 P P **22 48 37.0 +0.3**
baz=195
R53A Hurricane 39.04 21 IAmb IAmb 22 48 44.2
comp=Z,26nm,0.9s
SPR3 Spring Creek 3 39.15 341 IAmb IAmb 22 48 45.4
comp=Z,33nm,1.3s
P49A Miami Univ. Ec 39.22 17 P P **22 48 38.4 +0.1**
baz=203
PHWY Pilot Hill 39.27 352 P P **22 48 39.7 +0.7**
MPU Maple Canyon 39.28 344 IAmb IAmb 22 48 47.6
comp=Z,30nm,1.4s
NLU North Lily Min 39.34 344 IAmb IAmb 22 48 48.5
comp=Z,32nm,1.5s
SFIN Lafayette 39.36 14 IAmb IAmb 22 48 49.4
comp=Z,35nm,1.2s
SFIN Lafayette 39.36 14 P P **22 48 39.1 -0.3**
baz=199
TPH Tonopah 39.37 337 IAmb IAmb 22 48 47.9
comp=Z,35nm,1.1s
GO02 Mina Guanaco 39.38 136 P P **22 48 39.3 -0.9**
GO02 IAmb IAmb 22 48 47.1
comp=Z,22nm,0.9s
T59A Double "B" Far 39.68 27 IAmb IAmb 22 49 00.2
comp=Z,46nm,1.1s
R55A Marlinton 39.70 23 IAmb IAmb 22 48 49.8
comp=Z,18nm,0.9s
O48B Farmland 39.76 16 P P **22 48 42.2 -0.5**
baz=202
DUG Dugway, Tooele 39.77 343 P P **22 48 44.6 +1.5**
baz=158,SNR=8.6
Q54A Coxs Mills 40.03 22 IAmb IAmb 22 48 52.4
comp=Z,41nm,0.9s
NVAR Mina Array Bea 40.11 336 P P **22 48 45.5 -0.5**
comp=Z,1.5nm,0.7s,baz=153,slow=8.1,SNR=13
NVAR PcP PcP **22 50 50.3 -0.3**
comp=Z,0.4nm,0.7s,baz=138,slow=4.2,SNR=2.3
NVAR LR LR 23 02 38.9
comp=Z,1µm,21.6s,baz=150,slow=32
comp=Z,1.5nm,0.7s
JSRW J. Sargeant Re 40.13 26 P P **22 48 45.6 -0.3**
P52A Corning 40.14 20 P P **22 48 45.9 -0.1**
baz=206,SNR=18
N47A Urbana 40.19 16 IAmb IAmb 22 48 51.8
comp=Z,26nm,0.9s
H03N2 Juan Fernandez 40.23 154 T T 23 31 31.2
baz=330,slow=77,SNR=499
H03N1 Juan Fernandez 40.24 154 T T 23 31 38.3
baz=330,slow=77,SNR=540
H03N3 Juan Fernandez 40.25 154 T T 23 31 35.6
baz=330,slow=77,SNR=372
TCUT Toone Canyon 40.26 345 IAmb IAmb 22 48 50.2
comp=Z,32nm,1.3s
P53A Whipple 40.27 21 IAmb IAmb 22 48 53.9
comp=Z,23nm,0.9s
L42A Oliver, Polo 40.37 11 IAmb IAmb 22 48 58.1
comp=Z,33nm,1.1s
ACSO Alum Creek Sta 40.39 19 IAmb IAmb 22 48 54.5
comp=Z,20nm,0.9s
BGU Big Grassy Mou 40.51 343 P P **22 48 49.9 +0.6**
BGU IAmb IAmb 22 48 57.1
comp=Z,30nm,1.2s
N49A Columbus Grove 40.65 17 IAmb IAmb 22 48 55.9
comp=Z,20nm,1.1s
K22A Casper 40.74 351 P P **22 48 51.7 +0.6**
baz=168
HWUT Hardware Ranch 40.76 345 IAmb IAmb 22 48 58.9
comp=Z,36nm,1.2s
AC02 Maricunga 40.77 137 P P **22 48 50.6 -1.3**
L44A Lake County Fo 40.88 12 P P **22 48 52.1 0.0**
baz=197
MCWV Mont Chateau 40.99 23 P P **22 48 52.9 -0.1**
baz=210
O53A New Philadelph 41.01 21 IAmb IAmb 22 48 59.7
comp=Z,24nm,0.9s
O53A New Philadelph 41.01 21 P P **22 48 53.3 +0.2**
baz=207
JFWS Jewell Farm 41.15 10 IAmb IAmb 22 49 00.2
comp=Z,17nm,0.9s
JFWS Jewell Farm 41.15 10 P P **22 48 53.8 -0.4**
baz=193
PNTR Pine Nut 41.20 335 IAmb IAmb 22 49 03.4
comp=Z,26nm,1.1s
HVU Hansel Valley 41.23 344 IAmb IAmb 22 49 02.8
comp=Z,36nm,1.1s
O54A Avella 41.25 22 IAmb IAmb 22 49 01.5
comp=Z,18nm,0.9s
VILB Vilhena 41.26 113 P P **22 48 52.7 -2.9**
VILB IAmb IAmb 22 49 48.0
comp=Z,65nm,0.2s
VILB Vilhena 41.26 113 *e*P P **22 48 55.6 0.0**
ECSD EROS Data Cent 41.29 2 P P **22 48 54.2 -1.2**
ECSD EROS Data Cent 41.29 2 P P **22 48 55.0 -0.4**
baz=183,SNR=13
K43A Burlington 41.30 12 P P **22 48 53.5 -2.0**
K43A IAmb IAmb 22 49 05.2
comp=Z,44nm,1.1s
AC05 El Transito 41.36 141 P P **22 48 56.0 -0.3**
BW06 Boulder Array 41.40 348 IAmb IAmb 22 49 03.5
comp=Z,19nm,1.1s
BW06 Boulder Array 41.40 348 P P **22 48 56.8 +0.3**
baz=164
PDAR Pinedale Array 41.40 348 P P **22 48 56.9 +0.3**
comp=Z,3.8nm,0.8s,baz=153,slow=8.1,SNR=35
PDAR LR LR 23 04 49.8
comp=Z,512nm,21.1s,baz=181,slow=34
comp=Z,3.8nm,0.8s
VCNR Virginia City 41.40 335 IAmb IAmb 22 49 04.9
comp=Z,23nm,1.3s
L48A N Adams 41.52 16 IAmb IAmb 22 49 02.7
comp=Z,16nm,0.9s
SIV San Ignacio 41.53 117 P P **22 48 57.3 -0.5**
comp=Z,3.9nm,1.0s,baz=314,slow=10,SNR=12
SIV LR LR 23 04 53.7
comp=Z,1µm,19.4s,baz=280,slow=34
comp=Z,3.9nm,1.0s
P57A Homestead Farm 41.57 25 IAmb IAmb 22 49 16.4
comp=Z,26nm,1.1s
N53A Lisbon 41.63 21 P P **22 48 56.3 -1.9**
N53A IAmb IAmb 22 49 04.8
comp=Z,28nm,1.0s
I37A Lemond, Waseca 41.80 6 IAmb IAmb 22 49 09.7
comp=Z,22nm,1.1s
RSSD Black Hills 41.88 354 P P **22 49 00.4 -0.1**
RSSD IAmb IAmb 22 49 07.9
comp=Z,24nm,1.2s
RSSD Black Hills 41.88 354 P P **22 49 00.9 +0.4**
baz=172
SUSD Miller 41.95 360 P P **22 49 00.6 -0.2**
baz=180
REDW Red Top Meadow 42.24 347 IAmb IAmb 22 49 10.5
comp=Z,18nm,1.1s
M53A WI Miller and 42.25 20 P P **22 49 03.2 -0.1**
baz=208
SNOW Snow King Moun 42.32 347 IAmb IAmb 22 49 14.4
comp=Z,29nm,1.2s
SSPA Standing Stone 42.60 24 P P **22 49 05.8 -0.4**
SSPA IAmb IAmb 22 49 24.3
comp=Z,54nm,1.4s
SSPA Standing Stone 42.60 24 P P **22 49 05.9 -0.3**
baz=212
TAOE Nuku Hiva Isla 42.63 254 *e*S S **22 55 31.8 +1.5**
comp=Z,117nm,27.1s
TAOE *e*LR LR 23 00 56.8
comp=Z,2µm,24.3s
TAOE Nuku Hiva Isla 42.63 254 *e*T T 23 34 17.0
comp=Z,34nm,0.2s
M55A Ridgway 42.97 22 IAmb IAmb 22 49 15.8
comp=Z,30nm,1.1s
PTLB Pontes e Lacer 43.07 116 P P **22 49 08.6 -1.7**
PTLB IAmb IAmb 22 49 15.7
comp=Z,28nm,1.2s
PTLB Pontes e Lacer 43.07 116 *e*P P **22 49 09.9 -0.4**
ERPA Erie 43.09 21 P P **22 49 09.7 -0.4**
baz=208
HLID Hailey 43.34 343 P P **22 49 13.0 +0.6**
baz=157,SNR=11
KCPM Cahto Peak 43.46 332 IAmb IAmb 22 49 21.8
comp=Z,20nm,1.1s
M57A Sunshine Farm, 43.50 24 IAmb IAmb 22 49 20.4
comp=Z,26nm,0.9s
ITTB Itaituba 43.60 99 *e*P P **22 49 14.0 -0.7**
RLMT Red Lodge 43.61 349 P P **22 49 14.2 -0.3**
baz=165
LUPA Lehigh Univers 43.63 26 IAmb IAmb 22 49 21.5
comp=Z,33nm,1.0s
YHL Hebgen Lake 43.73 347 IAmb IAmb 22 49 23.6
comp=Z,28nm,1.2s
MOD Modoc Plateau 43.87 337 P P **22 49 16.7 +0.1**
MOD IAmb IAmb 22 49 24.4
comp=Z,22nm,1.1s
KMRM Mail Ridge 43.94 332 IAmb IAmb 22 49 25.3
comp=Z,37nm,1.2s
L56A Greenwood 44.01 23 IAmb IAmb 22 49 34.8
comp=Z,26nm,1.1s
PDRB Porto dos Gac 44.10 109 *e*P P **22 49 18.5 -0.2**
GLMI Grayling 44.16 15 P P **22 49 18.1 -0.6**
baz=201
KSPA Keystone Colle 44.24 25 IAmb IAmb 22 49 26.1
comp=Z,16nm,0.9s
KMPM Mount Pierce 44.29 332 IAmb IAmb 22 49 27.9
comp=Z,18nm,1.2s
GCMT Greycliff 44.33 349 P P **22 49 19.8 -0.4**
ODNJ Ogdensburg 44.36 26 IAmb IAmb 22 49 27.0
comp=Z,19nm,1.0s
NPGB Novo Progresso 44.39 102 *e*P P **22 49 19.5 -1.6**
COWI Conover 44.43 10 IAmb IAmb 22 49 30.3
comp=Z,24nm,1.3s
BOZ Bozeman (W) 44.54 347 P P **22 49 22.3 +0.3**
baz=162,SNR=5.3
E38A The Farm, Brul 44.57 7 IAmb IAmb 22 49 31.3
comp=Z,27nm,1.4s
TRNY Table Rock, Ra 44.58 27 P P **22 49 21.3 -0.8**
TRNY IAmb IAmb 22 49 39.4
comp=Z,18nm,0.9s
PAL Palisades 44.61 27 P P **22 49 22.2 -0.1**
baz=217
BINY Binghamton 44.69 24 P P **22 49 23.3 +0.4**
baz=213,SNR=8.8
YBH Yreka Blue Hor 44.72 335 LR LR 23 05 29.6
comp=Z,649nm,20.7s,baz=146,slow=33
YBH Yreka Blue Hor 44.72 335 P P **22 49 22.0 -1.3**
MALB Monte Alegre 44.77 95 *e*P P **22 49 25.2 +1.1**
KRPM Rodgers 44.83 333 IAmb IAmb 22 49 26.6
comp=Z,20nm,1.2s
L04D Klamath Falls 44.94 335 IAmb IAmb 22 49 32.2
comp=Z,24nm,1.0s
L04D Klamath Falls 44.94 335 P P **22 49 25.8 +0.7**
baz=146
LMEL Las Melosas 44.97 146 P P **22 49 25.6 +0.1**
KRMB Red Mountain 45.07 333 IAmb IAmb 22 49 34.2
comp=Z,21nm,1.1s
KSXB Camp Six Broad 45.31 334 IAmb IAmb 22 49 35.8
comp=Z,21nm,1.2s
KSCT Kent School, K 45.38 27 IAmb IAmb 22 49 35.2
comp=Z,26nm,1.1s
J05D Fort Rock, OR 45.40 337 P P **22 49 29.4 +0.6**
baz=148,SNR=10
L02F Cave Junction 45.41 334 P P **22 49 29.1 +0.5**
baz=144
I07A Izee 45.44 339 P P **22 49 29.1 +0.1**
SADO Sadowa 45.72 20 LR LR 23 07 15.5
comp=Z,188nm,20.9s,baz=188,slow=34
PINE Pine Mountain 45.72 338 IAmb IAmb 22 49 39.2
comp=Z,28nm,1.3s
PECO Prince Edward 45.76 22 IAmb IAmb 22 49 37.5
comp=Z,20nm,1.0s
AGMN Agassiz Nation 45.88 3 IAmb IAmb 22 49 42.5
comp=Z,12nm,1.1s
AGMN Agassiz Nation 45.88 3 P P **22 49 31.8 -0.5**
baz=184
EYMN Ely 45.90 7 P P **22 49 31.1 -1.4**
EYMN IAmb IAmb 22 49 42.3
comp=Z,19nm,1.1s
EYMN Ely 45.90 7 P P **22 49 32.6 +0.1**
baz=190
K02D Willamette Mer 45.91 334 P P **22 49 34.0 +1.2**
baz=144,SNR=20
DBO Dodson Butte 46.08 335 IAmb IAmb 22 49 41.4
comp=Z,16nm,1.1s
B35A Bob, Littlefor 46.08 5 IAmb IAmb 22 49 43.2
comp=Z,23nm,1.3s
MDP Montagnes des 46.19 85 LR LR 23 08 24.6
comp=Z,551nm,18.4s,baz=258,slow=35
DGMT Dagmar 46.21 355 P P **22 49 35.7 +0.7**
baz=173
MSO Missoula 46.24 346 P P **22 49 35.8 +0.5**
baz=159
I04A Tendick Farm, 46.30 336 P P **22 49 36.1 +0.3**
baz=147
G08A Pilot Rock 46.31 340 IAmb IAmb 22 49 43.0
comp=Z,16nm,1.2s
L61B Northampton 46.31 27 P P **22 49 35.7 -0.1**
baz=218
SALV Santo Antonio 46.34 115 *e*P P **22 49 35.4 -1.0**
J01E Myrtle Point 46.40 335 P P **22 49 37.1 +0.6**
baz=144,SNR=5.7
EGMT Eagleton 46.50 350 IAmb IAmb 22 49 59.8
comp=Z,30nm,1.6s
EGMT Eagleton 46.50 350 P P **22 49 37.6 +0.3**
baz=165
I03D Drain, OR 46.60 336 P P **22 49 38.3 +0.3**
baz=145
H04D Lebanon 47.03 337 P P **22 49 41.2 -0.3**
baz=146
E09A Wood Farm, Sta 47.13 342 P P **22 49 41.1 -1.1**
E09A IAmb IAmb 22 49 48.0
comp=Z,14nm,1.0s
LONY Lake Ozonia 47.27 24 P P **22 49 43.2 -0.1**
baz=214
HAWA Hanford 47.47 341 IAmb IAmb 22 49 52.4
comp=Z,11nm,1.1s
ULM Lac du Bonnet 47.83 3 P P **22 49 46.5 -1.0**
comp=Z,6.6nm,0.8s,baz=191,slow=4.3
comp=Z,6.6nm,0.8s
AQDB Aquidauana 47.97 120 *e*P P **22 49 48.9 -0.3**
C09A Chrisman Ranch 48.32 343 IAmb IAmb 22 50 00.9
comp=Z,6.8nm,0.8s
ANTJ Antonio Joao (48.33 122 *e*P P **22 49 50.7 -1.2**
NEW Newport 48.41 344 LR LR 23 08 46.2
comp=Z,349nm,22.0s,baz=161,slow=34
NEW Newport 48.41 344 P P **22 49 52.8 +0.7**
baz=155
LTY Liberty 48.60 340 P P **22 49 53.4 -0.3**
LTY IAmb IAmb 22 50 00.3
comp=Z,9.6nm,1.1s
TRQ Mont Tremblant 48.61 22 IAmb IAmb 22 50 00.3
comp=Z,14nm,0.9s
CPUP Villa Florida 49.18 128 P P **22 49 57.8 -0.5**
comp=Z,5.1nm,0.9s,baz=311,slow=12,SNR=6.5
CPUP LR LR 23 09 24.6
comp=Z,440nm,21.5s,baz=316,slow=34
comp=Z,5.1nm,0.9s
CPUP Villa Florida 49.18 128 *e*P P **22 49 58.5 +0.1**
SNDB Serra Nova Dou 49.34 108 *e*P P **22 49 59.1 -0.7**
PRPB Parauapebas 49.69 100 *e*P P **22 50 03.4 +0.9**
PLCA Paso Flores 50.03 152 P P **22 50 03.5 -1.1**
comp=Z,6.9nm,1.1s,baz=42,slow=2.5,SNR=3.8
PLCA LR LR 23 06 31.5
comp=Z,1µm,18.9s,baz=344,slow=30
comp=Z,6.9nm,1.1s
PLCA Paso Flores 50.03 152 *e*P P **22 50 05.0 +0.3**
E62A Clayton Lake 50.99 26 IAmb IAmb 22 50 17.9
comp=Z,21nm,1.1s
ITQB Itaqui 51.38 132 *e*P P **22 50 16.4 +1.5**
UNIS Unistalda (Bra 52.26 130 *e*P P **22 50 20.1 -1.4**
SMTB Santa Maria do 52.29 103 *e*P P **22 50 22.1 +0.1**
FRBT Francisco Belt 52.44 126 *e*P P **22 50 22.8 -0.2**
PTGB Pitanga 52.73 124 *e*P P **22 50 24.8 -0.5**
RODS Rosario do Sul 52.79 131 *e*P P **22 50 26.0 +0.6**
BDFB Brasilia 53.33 111 P P **22 50 28.3 -1.5**
comp=Z,4.7nm,0.8s,baz=252,slow=5.2,SNR=3.3
BDFB LR LR 23 11 49.2
comp=Z,739nm,21.1s,baz=296,slow=34
comp=Z,4.7nm,0.8s
BDFB Brasilia 53.33 111 P P **22 50 27.2 -2.6**
BDFB IAmb IAmb 22 50 34.9
comp=Z,14nm,1.3s
BDFB Brasilia 53.33 111 *e*P P **22 50 30.8 +1.0**
ITAB Concordia 53.73 126 *e*P P **22 50 31.5 -0.9**
PPT Papeete 53.74 246 LR LR 23 07 43.6
comp=Z,506nm,18.1s,baz=44,slow=30
PPT2 Papeete2 53.75 246 *e*S S **22 58 08.1 +0.4**
comp=Z,268nm,27.5s
PPT2 *e*LR LR 23 06 06.0
comp=Z,1µm,25.0s
IPMB Ipameri, GO 53.79 114 *e*P P **22 50 31.8 -1.3**
CPSB Cacapava Do Su 54.14 131 *e*P P **22 50 35.7 +0.3**
BB19B Bebedouro 54.45 118 *e*P P **22 50 37.0 -0.9**
PLTB Pedras Altas 54.68 132 *e*P P **22 50 40.6 +1.3**
BBB Bella Bella 55.37 339 LR LR 23 12 03.3
comp=Z,342nm,21.6s,baz=164,slow=34
TBI Tubuai 55.46 240 *e*S S **22 58 31.1 +0.7**
comp=Z,237nm,27.8s
TBI *e*LR LR 23 06 53.7
comp=Z,913nm,27.5s
TIJ01 Guaruva-PR 55.53 123 *e*P P **22 50 46.2 +0.6**
SDBA SAO DESIDERIO 55.54 107 *e*P P **22 50 45.9 +0.1**
CNLB Canela 55.64 128 *e*P P **22 50 45.7 -0.7**
SCHQ Schefferville 58.47 21 P P **22 51 04.9 -1.0**
comp=Z,3.4nm,0.7s,baz=234,slow=11,SNR=3.8
SCHQ LR LR 23 15 57.0
comp=Z,750nm,19.9s,baz=214,slow=36
comp=Z,3.4nm,0.7s
DLBC Dease Lake 61.06 342 LR LR 23 17 28.7
comp=Z,824nm,19.5s,baz=124,slow=36
DLBC Dease Lake 61.06 342 IAmb IAmb 22 51 31.2
comp=Z,11nm,0.9s
DLBC Dease Lake 61.06 342 P P **22 51 24.7 +1.0**
baz=144
YKA Yellowknife Ar 61.18 352 P P **22 51 23.6 -0.8**
comp=Z,2.1nm,0.9s,baz=162,slow=6.7,SNR=5.2
YKA LR LR 23 17 45.9
comp=Z,1µm,19.5s,baz=154,slow=36
comp=Z,2.1nm,0.9s
NAN01 Guarapari, ES 61.20 112 *e*P P **22 51 25.1 -0.2**
GUA01 Guaratinga, BA 61.22 110 *e*P P **22 51 25.5 0.0**
RIB01 Linhares ES 61.29 113 *e*P P **22 51 27.2 +1.3**
R33M Jennings River 62.13 342 P P **22 51 31.9 +0.9**
baz=143
P32M Atlin 63.15 341 P P **22 51 38.7 +1.0**
baz=140
RCBR Riachuelo 63.38 98 LR LR 23 20 32.6
comp=Z,379nm,18.3s,baz=58,slow=37
PLBC Pleasant Camp 63.94 340 P P **22 51 42.5 -0.3**
baz=137
RAR Rarotonga 63.98 245 LR LR 23 12 16.9
comp=Z,534nm,20.1s,baz=52,slow=29
WHY Whitehorse 64.35 341 P P **22 51 46.5 +0.9**
baz=139
P29M Windy Craggy 64.55 339 P P **22 51 47.5 +0.6**
baz=136
P30M Million Dollar 64.63 340 P P **22 51 48.2 +0.7**
baz=137
MMPY Sheldon Lake, 64.81 344 P P **22 51 49.9 +1.3**
baz=144
FARO Faro, Yukon 65.09 343 P P **22 51 51.0 +0.6**
baz=141
PNL Peninsula 65.17 339 P P **22 51 52.4 +1.5**
baz=134
FRB Frobisher Bay 65.19 14 LR LR 23 20 38.1
comp=Z,160nm,18.9s,baz=199,slow=36
N31M Braeburn, Yuko 65.26 341 P P **22 51 52.5 +0.9**
baz=139
O29M Mount Kennedy 65.32 340 P P **22 51 53.1 +1.0**
baz=135
M31M Drury Creek, Y 65.38 343 P P **22 51 52.9 +0.6**
baz=140
N30M Aishikik Lake 65.66 341 P P **22 51 55.3 +1.1**
baz=137

O28M	Mount Upton	66.22 339	P	P	22 51 58.6	+0.6	
	baz=134						
M30M	Minto, Yukon	66.39 342	P	P	22 51 59.5	+0.7	
	baz=138						
M29M	Somme Creek	66.83 341	P	P	22 52 02.1	+0.5	
	baz=136						
K29M	Barlow Dome	67.56 343	P	P	22 52 07.0	+0.7	
	baz=138						
M27K	Edge Creek, AK	67.90 340	IAmb	IAmb	22 52 20.1		
	comp=Z,9.1nm,1.1s						
M27K	Edge Creek, AK	67.90 340	P	P	22 52 10.2	+1.7	
	baz=133						
BMRM	Bremner River	67.97 338	P	P	22 52 08.8	0.0	
BMRM	Bremner River	67.97 338	P	P	22 52 10.0	+1.2	
	baz=130						
EYAK	Cordova Ski Ar	68.14 337	P	P	22 52 11.4	+1.6	
	baz=128						
DAWY	Dawson	68.29 342	IAmb	IAmb	22 52 17.4		
	comp=Z,11nm,1.2s						
DAWY	Dawson	68.29 342	P	P	22 52 10.6	-0.2	
	baz=136						
M26K	Nabesna, AK	68.32 340	P	P	22 52 10.5	-0.5	
	baz=132						
L27K	Beaver Creek,	68.36 340	IAmb	IAmb	22 52 18.4		
	comp=Z,7.4nm,1.2s						
L27K	Beaver Creek,	68.36 340	P	P	22 52 11.9	+0.7	
	baz=133						
N25K	Chitina, Valde	68.37 338	IAmb	IAmb	22 52 18.8		
	comp=Z,13nm,1.1s						
N25K	Chitina, Valde	68.37 338	P	P	22 52 12.3	+0.9	
	baz=130						
KLU	Klutina	68.79 338	P	P	22 52 13.9	-0.1	
KLU			IAmb	IAmb	22 52 28.6		
	comp=Z,10nm,1.2s						
KLU	Klutina	68.79 338	P	P	22 52 14.3	+0.3	
	baz=128						
I29M	Ogilvie Camp,	68.91 343	P	P	22 52 15.6	+1.0	
	baz=137						
K27K	Chicken	69.11 341	IAmb	IAmb	22 52 23.5		
	comp=Z,13nm,1.2s						
K27K	Chicken	69.11 341	P	P	22 52 15.1	-0.7	
	baz=133						
EPYK	Eagle Plains	69.22 345	IAmb	IAmb	22 52 23.2		
	comp=Z,17nm,1.2s						
EPYK	Eagle Plains	69.22 345	P	P	22 52 16.2	-0.4	
	baz=139						
EGAK	Eagle	69.33 342	P	P	22 52 16.9	-0.3	
EGAK			IAmb	IAmb	22 52 44.1		
	comp=Z,10nm,1.2s						
EGAK	Eagle	69.33 342	P	P	22 52 18.3	+1.1	
	baz=134						
KDAK	Kodiak Island	69.48 333	P	P	22 52 17.9	-0.3	
	baz=121						
PAX	Paxson	69.56 339	P	P	22 52 18.9	+0.1	
	baz=129						
M23K	Glacier View	69.66 338	P	P	22 52 19.3	-0.1	
	baz=127						
SCRK	Sand Creek	69.70 341	P	P	22 52 19.6	0.0	
	baz=131						
BRSE	Bradley Lake S	69.70 335	P	P	22 52 20.2	+0.6	
	baz=123						
KNK	Knik Glacier	69.72 337	P	P	22 52 19.7	0.0	
	baz=126						
RIDG	Independent Ri	69.83 340	P	P	22 52 20.2	-0.2	
	baz=130						
SML	Sawmill	69.90 337	P	P	22 52 20.8	0.0	
	baz=126,SNR=13						
J26L	Joseph Creek	69.91 341	IAmb	IAmb	22 52 35.3		
	comp=Z,9.7nm,1.2s						
J26L	Joseph Creek	69.91 341	P	P	22 52 20.6	-0.3	
	baz=132						
INK	Inuvik	69.95 347	LR	LR	23 23 14.2		
	comp=Z,503nm,19.4s,baz=153,slow=36						
INK	Inuvik	69.95 347	P	P	22 52 21.4	+0.5	
	baz=143						
RC01	Rabbit Creek A	70.04 336	P	P	22 52 21.5	-0.2	
	baz=124						
I27K	Kandik River	70.05 343	P	P	22 52 22.1	+0.4	
	baz=134,SNR=13						
I26K	Coal Creek Min	70.32 342	IAmb	IAmb	22 52 29.8		
	comp=Z,11nm,1.1s						
I26K	Coal Creek Min	70.32 342	P	P	22 52 23.5	+0.2	
	baz=132						
H27K	Steamboat Moun	70.46 343	P	P	22 52 24.5	+0.3	
	baz=134						
J25K	Salcha River,	70.57 341	P	P	22 52 25.4	+0.5	
	baz=130						
O20K	Slope Mountain	70.69 335	P	P	22 52 26.4	+0.7	
	baz=121						
IL31		71.18 340	P	P	22 52 27.4	-1.1	
IL31			IAmb	IAmb	22 52 34.6		
	comp=Z,9.6nm,1.1s						
ILAR	Eielson Array	71.18 340	P	P	22 52 28.0	-0.6	
	comp=Z,2.5nm,0.8s,baz=154,slow=4.4,SNR=16						
ILAR			LR	LR	23 24 31.1		
	comp=Z,472nm,18.6s,baz=112,slow=37						
	comp=Z,2.5nm,0.8s						
R17K	Ugashik Creek	71.20 331	P	P	22 52 28.5	-0.3	
	baz=117						
PRP	Porcupine Dome	71.20 341	IAmb	IAmb	22 52 36.0		
	comp=Z,18nm,1.2s						
PRP	Porcupine Dome	71.20 341	P	P	22 52 28.6	-0.2	
	baz=130						
POKR	Poker Flat Res	71.58 340	P	P	22 52 30.8	-0.2	
	baz=128						
TRF	Thorofare Moun	71.59 338	P	P	22 52 30.9	-0.4	
	baz=125						
G26K	Porcupine Rive	71.61 343	P	P	22 52 31.0	-0.1	
	baz=132						
PMSA	Palmer Station	71.62 165	LR	LR	23 16 13.6		
	comp=Z,671nm,21.1s,baz=309,slow=29						
O18K	Koktuh Hills	71.69 334	P	P	22 52 31.1	-0.6	
	baz=119						
H25K	Birch Creek	71.78 342	P	P	22 52 31.8	-0.3	
	baz=130						
NEA2	Nenana	71.82 340	IAmb	IAmb	22 52 43.9		
	comp=Z,14nm,1.2s						
NEA2	Nenana	71.82 340	P	P	22 52 32.2	-0.2	
	baz=126						
M20K	Styx River	71.84 336	IAmb	IAmb	22 52 39.0		
	comp=Z,11nm,1.1s						
M20K	Styx River	71.84 336	P	P	22 52 32.7	0.0	
	baz=121						
E27K	Coleen River	71.85 345	P	P	22 52 32.4	-0.2	
	baz=134						
N19K	Bonanza Creek	71.85 335	IAmb	IAmb	22 52 38.6		
	comp=Z,13nm,1.2s						
N19K	Bonanza Creek	71.85 335	P	P	22 52 32.1	-0.7	
	baz=120						
P17K	Kvichak River	71.94 333	P	P	22 52 32.7	-0.5	
	baz=118						
PPLA	Purkeypile	72.00 337	P	P	22 52 33.7	-0.1	
	baz=123						
BMAR	Burnt Mountain	72.16 343	P	P	22 52 33.6	-0.8	
H24K	Noodor Dome	72.16 341	IAmb	IAmb	22 52 41.1		
	comp=Z,16nm,1.1s						
H24K	Noodor Dome	72.16 341	P	P	22 52 34.3	-0.2	
	baz=128,SNR=12						
F26K	Sheenjek River	72.22 343	P	P	22 52 34.8	0.0	
	baz=132						
I23K	Minto, Yukon-K	72.25 340	P	P	22 52 35.2	+0.3	
	baz=126						
RES	Resolute Bay	72.33 1	LR	LR	23 24 28.9		
	comp=Z,424nm,19.3s,baz=199,slow=36						
M19K	Big River Lodg	72.36 336	IAmb	IAmb	22 53 05.8		
	comp=Z,22nm,1.6s						
M19K	Big River Lodg	72.36 336	P	P	22 52 35.8	+0.1	
	baz=120						
N18K	Kilae Creek	72.39 334	IAmb	IAmb	22 52 42.0		
	comp=Z,15nm,1.2s						
N18K	Kilae Creek	72.39 334	P	P	22 52 35.7	-0.2	
	baz=118						
L20K	Farewell, AK	72.45 336	P	P	22 52 35.7	-0.5	
	baz=121						
O17K	Koliganek Bris	72.50 333	P	P	22 52 36.0	-0.5	
	baz=117						
G24K	Hadweenzic Riv	72.57 342	P	P	22 52 36.7	-0.2	
	baz=128						
F25K	Christian Rive	72.58 343	P	P	22 52 37.3	+0.3	
	baz=130						
SFJD	Kangerlussuaq	72.63 18	LR	LR	23 24 36.1		
	comp=Z,359nm,19.0s,baz=226,slow=36						
MLY	Manley	72.66 340	IAmb	IAmb	22 52 44.5		
	comp=Z,11nm,1.1s						
MLY	Manley	72.66 340	P	P	22 52 37.4	0.0	
	baz=125,SNR=12						
L19K	White Mountain	72.69 336	IAmb	IAmb	22 52 48.9		
	comp=Z,16nm,1.3s						
L19K	White Mountain	72.69 336	P	P	22 52 37.4	-0.3	
	baz=120						
H23K	Yukon River	72.71 341	P	P	22 52 37.8	+0.1	
	baz=126						
O16K	Kokwok River B	72.87 333	P	P	22 52 38.5	-0.3	
	baz=116						
K20K	Telida	72.97 337	IAmb	IAmb	22 52 45.4		
	comp=Z,18nm,1.2s						
K20K	Telida	72.97 337	P	P	22 52 39.2	-0.2	
	baz=121						
F24K	Squaw Lake	73.20 342	P	P	22 52 40.9	+0.2	
	baz=128						
H22K	Ishtalitna Cre	73.36 340	P	P	22 52 42.4	+0.8	
	baz=124						
G23K	Bananza Creek	73.39 341	P	P	22 52 42.6	+0.9	
	baz=126						
C27K	Jago River	73.40 345	P	P	22 52 42.5	+0.8	
	baz=133						
J20K	Nowinta River	73.43 338	IAmb	IAmb	22 52 48.1		
	comp=Z,12nm,1.1s						
J20K	Nowinta River	73.43 338	P	P	22 52 42.1	+0.1	
	baz=121						
N16K	Nishlik Lake	73.56 333	P	P	22 52 42.9	0.0	
	baz=116						
H21K	Melozitna Rive	73.72 340	IAmb	IAmb	22 52 49.8		
	comp=Z,12nm,1.3s						
H21K	Melozitna Rive	73.72 340	P	P	22 52 43.4	-0.4	
	baz=123						
E24K	Your Creek	73.72 343	P	P	22 52 43.9	+0.2	
	baz=128						
D25K	Kavik River	73.91 344	P	P	22 52 45.3	+0.6	
	baz=130,SNR=7.1						
G22K	Bettles	73.99 341	P	P	22 52 45.8	+0.6	
	baz=124						
TOLK	Toolik Lake Re	74.39 343	P	P	22 52 47.5	-0.1	
	baz=127						
G21K	Allakaket	74.43 340	P	P	22 52 48.3	+0.4	
	baz=122						
F22K	John River	74.53 341	P	P	22 52 48.5	+0.1	
	baz=124						
C24K	Franklin Bluff	74.80 344	P	P	22 52 49.7	-0.2	
	baz=128						
F21K	Alatna River	74.80 341	P	P	22 52 50.5	+0.5	
	baz=122,SNR=9.8						
UNV	Unalaska Valle	75.08 325	P	P	22 52 52.1	+0.3	
	baz=107						
C23K	Itkillik River	75.40 344	P	P	22 52 53.8	+0.5	
	baz=126						
NIKH	Nikolski High	76.19 324	P	P	22 52 58.3	0.0	
	baz=105						
RAO	Raoul Island	81.60 240	LR	LR	23 20 22.9		
	comp=Z,110nm,21.8s,baz=118,slow=29						
BBTS	Babate	81.99 76	LR	LR	23 28 14.5		
	comp=Z,139nm,19.8s,baz=252,slow=34						
BORG	Borgarnes	82.60 25	LR	LR	23 29 59.5		
	comp=Z,97nm,18.6s,baz=273,slow=35						
MSVF	Nonsavu	84.13 252	LR	LR	23 21 32.5		
	comp=Z,127nm,21.2s,baz=154,slow=29						
SHEM	Shemya Is, Ala	86.38 323	LR	LR	23 23 56.1		
	comp=Z,259nm,21.8s,baz=108,slow=30						
URZ	Urewera	86.73 232	LR	LR	23 27 36.3		
	comp=Z,121nm,18.0s,baz=31,slow=32						
BELA	Belgrano 2	86.98 169	IAmb	IAmb	22 54 01.6		
	comp=Z,9nm,1.2s						
JMIC	Jan Mayen	87.94 19	LR	LR	23 31 52.1		
	comp=Z,199nm,21.9s,baz=266,slow=35						
EKA	Eskdalemuir Ar	91.36 35	LR	LR	23 33 52.7		
	comp=Z,75nm,19.4s,baz=314,slow=35						
RPZ	Rata Peaks	91.65 227	LR	LR	23 28 26.5		
	comp=Z,283nm,18.1s,baz=102,slow=31						
VNA3	Neumayer Olymp	91.91 161	P	P	22 54 18.9	+0.8	
ESDC	Sonseca Array	92.31 51	LR	LR	23 31 55.6		
	comp=Z,113nm,18.6s,baz=272,slow=33						
MDT	Midelt	92.33 57	LR	LR	23 28 34.7		
	comp=Z,372nm,21.9s,baz=300,slow=31						
QSPA	South Pole Qui	92.33 180	LR	LR	23 27 08.8		
	comp=Z,199nm,21.8s,baz=125,slow=30						
QSPA	South Pole Qui	92.33 180	P	P	22 54 20.2	0.0	
VNA1	Neumayer--Stat	92.37 161	P	P	22 54 21.4	+1.2	
VNA2	Neumayer--Watz	92.65 161	P	P	22 54 26.4	+4.9	
	baz=259,slow=5.0						
SPITS	Spitsbergen Ar	92.78 11	LR	LR	23 39 50.7		
	comp=Z,193nm,19.1s,baz=284,slow=38						
H11N3	WAKE ISLAND Hy	93.21 290	T	T	00 37 44.3		
	baz=85,slow=73,SNR=60						
H11N2	WAKE ISLAND Hy	93.23 290	T	T	00 37 45.5		
	baz=85,slow=73,SNR=45						
H11N1	WAKE ISLAND Hy	93.23 290	T	T	00 37 45.7		
	baz=85,slow=73,SNR=48						
H11S2	WAKE ISLAND Hy	93.48 289	T	T	00 38 05.2		
	baz=85,slow=75,SNR=90						
H11S1	WAKE ISLAND Hy	93.49 289	T	T	00 38 02.2		
	baz=85,slow=75,SNR=54						
H11S3	WAKE ISLAND Hy	93.50 289	T	T	00 38 03.3		
	baz=85,slow=75,SNR=47						
DBIC	Dimbokro	93.70 83	LR	LR	23 34 05.7		
	comp=Z,82nm,19.0s,baz=273,slow=34						
SNAA	Sanae	94.08 162	P	P	22 54 29.1	+1.0	
SNAA	Sanae	94.08 162	LR	LR	23 29 52.7		
	comp=Z,139nm,20.0s,baz=292,slow=31						
SNAA	Sanae	94.08 162	P	P	22 54 29.4	+1.3	
VNDA	Vanda	94.26 192	LR	LR	23 28 41.9		
	comp=Z,104nm,18.9s,baz=100,slow=30						
DZM	Mont Dzumac	95.22 248	LR	LR	23 31 54.4		
	comp=Z,95nm,18.1s,baz=46,slow=32						
DZM	Mont Dzumac	95.22 248	*e*LR	LR	23 25 19.0		
	comp=Z,391nm,27.5s						
TROLL	Troll, Antarti	95.71 162	P	P	22 54 36.1	+0.4	
PETK	Petropavlovsk-	96.20 324	LR	LR	23 29 53.7		
	comp=Z,100nm,20.8s,baz=85,slow=30						
NOA	NORSAR Array B	97.57 27	LR	LR	23 35 28.9		
	comp=Z,65nm,21.0s,baz=290,slow=33						
HFS	Hagfors	99.03 28	LR	LR	23 39 53.5		
	comp=Z,71nm,18.4s,baz=290,slow=36						
ARCES	ARCESS Array B	99.25 17	LR	LR	23 38 46.3		
	comp=Z,90nm,19.9s,baz=304,slow=35						
TORD	Torodi Ar. Bea	99.74 76	LR	LR	23 36 05.7		
	comp=Z,93nm,21.4s,baz=216,slow=33						
ZALV	Zalesovo Beam	123.85 357	PKP	PKPdf	23 00 07.6	-0.5	
	comp=Z,0.7nm,0.6s,baz=354,slow=1.4,SNR=2.3						
ASAR	Alice Springs	124.78 243	PKP	PKPdf	23 00 09.2	-1.6	
	comp=Z,1.2nm,0.7s,baz=93,slow=2.2,SNR=13						
WRA	Warramunga Arr	125.22 247	PKP	PKPdf	23 00 10.7	-1.0	
	comp=Z,2.6nm,0.8s,baz=95,slow=1.9,SNR=22						
SONM	Songino Array	125.40 339	PKP	PKPdf	23 00 10.1	-1.4	
	comp=Z,0.3nm,0.5s,baz=38,slow=1.8,SNR=2.5						
HHC	Hu-ho-hao-te	128.87 330	*e*PKP	PKPdf	23 00 14.5	-3.8	
NJ2	Nanjing	130.55 317	*e*PKP	PKPdf	23 00 21.3	-0.2	
MKAR	Makanchi Array	131.09 359	PKP	PKPdf	23 00 22.3	+0.1	
	comp=Z,1.1nm,0.9s,baz=21,slow=7.0,SNR=4.0						
WMQ	Urumqi	133.69 353	*e*PKP	PKPdf	23 00 27.3	0.0	
WMQ			LR	LR			
	comp=Z,120nm,23.1s						
PZH	PanZhiHua	145.12 327	PKPbc	PKPbc	23 00 47.8	-0.2	
CMAR	Chiang Mai Arr	152.93 320	PKP	PKPdf	23 00 59.9	-1.2	
	comp=Z,0.8nm,0.4s,baz=323,slow=2.0,SNR=6.9						
CMAR			PKPbc	PKPbc	23 01 07.1	-1.3	
	comp=Z,1.1nm,0.4s,baz=342,slow=2.2,SNR=7.7						

NIC ***29*** *22:44:31.7±0.0,35.05N×32.41E,h20km,Ml3.0/6*
ISK ***29*** *22:44:32.7,35.17N×32.47E,h6km,ML2.5/15*
DDA ***29*** *22:44:33.1±0.0,35.18N×32.43E,h6km±1km,ML2.2*

ISC 29 22:44:30.8±1.0,35.13N±0.02×32.41E±0.03,h15km±9km, n39,σ1°10/53,2C-1D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKMS	Akamas	0.13	209	*i*P	Pb	22 44 35.0	0.0
AKMS				S	Sb	22 44 38.5	+0.7
AKMS				AML	AML	22 44 40.1	
	12nm,0.5s						
AKMS				AML	AML	22 44 40.1	
	12nm,0.5s						
AKMS				AML	AML	22 44 40.2	
	14nm,0.2s						
AKMS				AML	AML	22 44 40.2	
	14nm,0.2s						
ALFC	Alefka	0.16	82	⇑P	Pb	22 44 37.0	+1.5
ALFC				S	Sb	22 44 40.6	+2.1
ALFC				AML	AML	22 44 41.6	
	13nm,0.4s						
ALFC				AML	AML	22 44 41.6	
	13nm,0.4s						
ALFC				AML	AML	22 44 43.0	
	12nm,0.4s						
ALFC				AML	AML	22 44 43.0	
	12nm,0.4s						
NATA	Nata	0.38	160	⇑*e*P	Pg	22 44 38.3	-0.2
NATA				S	Sg	22 44 44.0	+0.3
NATA				AML	AML	22 44 48.4	
	22nm,0.5s						
NATA				AML	AML	22 44 48.4	
	22nm,0.5s						
NATA				AML	AML	22 44 50.0	
	9.7nm,0.7s						
NATA				AML	AML	22 44 50.0	
	9.7nm,0.7s						
LEF	Lefka	0.39	92	PG	Pb	22 44 39.1	-0.4
LEF				SG	Sb	22 44 44.5	-0.8
LEF	Lefka	0.39	92	P	Pn	22 44 40.5	-1.4
LEF				S	Sb	22 44 45.6	+0.3
SZAC	Souni	0.54	134	P	Pg	22 44 40.7	-0.8
SZAC				S	Sg	22 44 49.1	+0.3
SZAC				AML	AML	22 44 51.1	
	2.7nm,0.3s						
SZAC				AML	AML	22 44 51.1	
	2.7nm,0.3s						
SZAC				AML	AML	22 44 53.5	
	2.0nm,0.4s						
SZAC				AML	AML	22 44 53.5	
	2.0nm,0.4s						
ASGA	Asgata	0.77	117	P	Pb	22 44 46.3	+0.4
ASGA				AML	AML	22 45 00.1	
	2.2nm,0.8s						
ASGA				AML	AML	22 45 00.2	
	1.6nm,0.4s						
CSS	Mathiatis	0.77	102	PG	Pn	22 44 46.7	-0.5
CSS				SG	Sn	22 44 58.2	-0.3
CSS	Mathiatis	0.77	102	P	Pn	22 44 46.4	-0.8
CSS				S	Sn	22 44 57.2	-1.3
ATHAL	Athalassa	0.81	89	S	Sn	22 44 59.6	+0.2
LFK	Lefkose	0.93	81	PG	Pn	22 44 49.7	+0.3
MVOU	Mavrovouni	1.01	96	P	Pn	22 44 50.6	+0.2
MVOU				AML	AML	22 45 12.7	
	0.3nm,0.6s						
MVOU				AML	AML	22 45 13.0	
	0.4nm,0.7s						
GAZI	Gazipasa	1.10	356	PG	Pg	22 44 53.3	+1.2
GAZI				SG	Sn	22 45 09.7	+3.0
GAZI	Gazipasa	1.10	356	P	Pb	22 44 50.9	-0.7
TEKE	Tekeli-Mersin	1.16	29	PN	Pg	22 44 53.9	+0.7
PARAL	Paralimni	1.34	95	P	Pg	22 44 57.7	+1.0
BERE	Bereket-Mersin	1.38	28	PN	Pg	22 44 57.9	+0.5
AKKU	Akkuyu-Mersin	1.38	42	PN	Pg	22 44 57.4	0.0
GULN	MERSIN_Gulnar	1.40	41	P	Pg	22 44 58.7	+1.0
GULN				S	Sg	22 45 18.1	+2.2
EREN	Erenkoy	1.49	74	PN	Pg	22 45 00.1	+0.6
IKL	Isikli	1.51	43	PN	Pg	22 45 00.0	+0.1
TEVE	Tevekalti-Mers	1.55	33	PN	Pg	22 45 00.5	-0.1
KEBE	Keben-Mersin	1.69	39	PN	Pg	22 45 02.5	-0.7
KEPZ	Antalya-Kepez	1.88	340	P	Pb	22 45 05.4	+0.5
KIZK	Mersin	1.95	46	PN	Pb	22 45 06.4	+0.4
KIZK	Mersin	1.95	46	P	Pg	22 45 08.6	+0.4
KIZK				S	Sg	22 45 32.3	-1.2
KIZK				*i* AML	AML	22 45 38.0	
	comp=N,19nm,0.4s						
OSC2	CSNet OBS 4	2.06	183	P	Pn	22 45 04.7	-0.1
OSC2				S	Sn	22 45 30.2	+0.1
KKBE	Karaman, Kazim	2.13	11	P	Pg	22 45 11.1	-0.5
SEYD	Seydisehir-KON	2.31	349	PN	Pb	22 45 12.4	+0.1
SEDI	Konya, Seydise	2.37	347	P	Pb	22 45 13.3	0.0
SEDI				S	Sg	22 45 46.2	-0.9
SEDI				*i* AML	AML	22 45 59.0	
	comp=N,8.9nm,0.5s						
MERS	Mersin	2.43	44	PN	Pb	22 45 13.3	-1.0
KORT	Korkueli	2.50	319	PN	Pb	22 45 15.7	+0.2
KORT	Korkueli	2.50	319	P	Pg	22 45 17.2	-1.7
KERG	Konya-Eregli	2.67	31	P	Pb	22 45 18.4	+0.1
KERG				*i* AML	AML	22 45 48.0	
	comp=N,17nm,1.5s						
KERG				S	Sb	22 45 52.0	+1.1
KERG				*i* AML	AML	22 45 59.0	
	comp=E,20nm,0.8s						
KONT	Konya--Tatoy	2.81	359	PN	Pb	22 45 19.4	-1.3
GULE	Gulek	2.88	41	P	Pg	22 45 23.7	-2.3
DOGA	KONYA_Doganhis	3.03	349	P	Pb	22 45 24.6	+0.1
CMRD	Camardi-Nigde	3.27	39	PN	Pb	22 45 25.3	-3.3
AKO	Adana	3.38	46	P	Pb	22 45 29.9	-0.4

NEIC 29 23:06:54.9±2.1,36.00N±0.01×114.81W±0.02,h1km±6km, ML1.4/18,Error ellipse: s-maj=2.5km s-min=1.7km az=67.0,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WTNK	Soaring Height	0.26	320	Pg	Pg	23 06 59.5	-0.3
WTNK				Sg	Sg	23 07 04.3	+1.1
WTNK				IAML		23 07 04.8	
	comp=E,6.1nm,2.0s						
WTNK				IAML		23 07 07.0	
	comp=N,5.0nm,0.1s						
V12A	Nelson	0.27	187	Pg	Pg	23 06 59.8	-0.3
V12A				Sg	Sg	23 07 04.9	+1.3
V12A				IAML		23 07 05.9	
	comp=N,22nm,0.4s						
SHPR	Sheep Range	0.58	331	Pg	Pg	23 07 05.5	-0.6
SHPR				Sg	Sg	23 07 14.6	+0.9
W13A	Hualapai Mount	1.17	140	Pg	Pg	23 07 17.4	0.0
W13A					Sn	23 07 34.8	-0.4
W13A				IAML		23 07 41.8	
	comp=E,3.4nm,1.9s						
PRN	Pahroc Range	1.42	352	Pn	Pb	23 07 22.9	+0.6
PRN				Sg	Sn	23 07 42.3	+0.9
PRN				IAML		23 07 48.0	
	comp=N,4.9nm,2.6s						
PRN				IAML		23 08 08.6	
	comp=E,6.7nm,4.1s						
TPNV	Topopah Spring	1.50	310	Pn	Pn	23 07 22.7	-0.4
TPNV				IAML		23 07 48.3	
	comp=E,5.1nm,2.9s						
GWY	Greenwater Val	1.52	278	Pn	Pg	23 07 24.0	0.0
GWY				Sn	Sn	23 07 44.8	+1.0
LCMT	Little Creek M	1.62	51	Pn	Pn	23 07 24.6	-0.1
WCT	Wildcat Mounta	1.67	299	Pn	Pn	23 07 25.2	-0.1
QSM	Queen of Sheba	1.67	270	Pn	Pb	23 07 25.9	-0.6
QSM				IAML		23 07 49.5	
	comp=N,4.3nm,4.4s						
QSM				IAML		23 08 05.3	
	comp=E,4.9nm,4.4s						
R11A	Troy Canyon, C	2.43	345	Pg	Pb	23 07 40.5	+1.0
R11A				IAML		23 08 20.1	
	comp=E,2.3nm,4.7s						

KRSC 29 23:14:25.1±2.3,48.65N×156.84E,h19km±32km,ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.09	347	P	Pn	23 14 58.5	-0.5
SKR				S	Sn	23 15 24.1	-0.3
KDTR	Khodutka, Kamc	3.26	14	P	Pb	23 15 19.2	-3.1
KDTR				S	Sn	23 15 57.0	+3.7
MTVR	Mutnovka	3.93	12	P	Pn	23 15 29.1	+4.6
MTVR				S	Sb	23 16 16.1	-4.9
RUS	Russkaya	3.94	15	P	Pn	23 15 28.2	+3.8
RUS				S	Sb	23 16 15.9	-5.0
GRL	Gorelyy	3.98	11	P	Pb	23 15 30.0	-4.7
GRL				S	Sb	23 16 17.3	-5.2
KRX	Arik	4.85	13	P	Pn	23 15 42.2	+5.1
GNL	Ganaly	5.10	7	P	Pn	23 15 45.6	+5.1
MKZ	Mys Kozlova	6.65	25	P	Pn	23 16 06.2	+4.6

IDC ***29*** *23:14:56.8±1.1

TNTI			Sn	**Sn**	23 15 44.5	+0.5
TNTI	**Ternate**	1.39 132	P	**Pn**	23 15 27.6	+0.8
TNTI			S	**Sn**	23 15 44.9	+0.9
SGSI	**Sangihe**	2.12 338	P	**Pn**	23 15 38.6	+1.7
SGSI			S	**Sn**	23 16 04.0	+1.9
LBMI	**Labuha**	2.60 153	P	**Pn**	23 15 44.5	+1.0
KMSI	**Cibinong**	2.61 245	P	**Pn**	23 15 43.9	+0.4
KMSI			S	**Sn**	23 16 13.5	-0.5
GTOI	**Gorontalo**	3.49 252	P	**Pn**	23 15 56.7	+1.1
GTOI			S	**Sn**	23 16 36.7	+1.0
SANI	**Sanana**	3.75 185	P	**Pn**	23 15 58.6	-0.6
DDMP	**Don Marcelino,**	4.41 352	eP	**Pn**	23 16 09.6	+1.2
DDMP			eS	**Sn**	23 16 57.6	-0.9
LUWI	**Luwuk**	4.49 233	Pn	**Pn**	23 16 10.9	+1.5
LUWI			Sn	**Sn**	23 17 03.6	+3.3
LUWI	**Luwuk**	4.49 233	P	**Pn**	23 16 08.9	-0.4
LUWI			S	**Sn**	23 16 59.7	-0.6
MRSI	**Marisa**	4.56 255	P	**Pn**	23 16 10.8	+0.5
NLAI	**Namlea**	4.97 171	P	**Pn**	23 16 16.3	+0.3
SKMP	**Bagumbayan, Su**	5.11 340	eP	**Pn**	23 16 19.5	+1.7
SKMP			eS	**Sn**	23 17 13.1	-2.4
APSI	**Ampana**	5.36 241	P	**Pn**	23 16 21.7	+0.4
	0.4nm1μm66nm,0.5s					
KCP	**Kidapawan**	5.41 347	eP	**Pn**	23 16 24.5	+2.4
MPSI	**Mapaga**	6.58 258	P	**Pn**	23 16 37.5	-0.5
PAGZ	**Pagadian**	6.77 334	eP	**Pn**	23 16 43.0	+2.2
PAGZ			eS	**Sn**	23 17 56.8	+0.2
MYLDM	**Lahad Datu**	8.55 294		**Pn**	23 17 05.1	0.0
KKM	**Kota Kinabalu**	10.97 293	Pn	**Pn**	23 17 41.2	+2.8
SBUM	**Sibu**	14.12 273	P	**P**	23 18 29.8	+2.0
KNRA	**Kununurra**	17.44 172		**P**	23 19 04.9	+0.4
KNRA			IAmb	IAmb	23 19 40.5	
	comp=Z,34nm,1.4s					
FITZ	**Fitzroy Crossi**	19.69 182	P	**P**	23 19 27.9	-1.4
FITZ			IAmb	IAmb	23 19 53.2	
	comp=Z,19nm,1.4s					
TPUB	**Ta-pu**	22.17 346	P	**P**	23 19 56.4	+0.4
WB0	**Warramunga Arr**	22.76 160	P	**P**	23 20 02.4	+0.1
WRAB	**Tennant Creek**	22.90 160	P	**P**	23 20 03.7	-0.1
WRAB			IAmb	IAmb	23 20 37.1	
	comp=Z,16nm,1.4s					
WRA	**Warramunga Arr**	22.90 160	P	**P**	23 20 03.7	-0.1
	comp=Z,1.4nm,0.4s,baz=341,slow=12,SNR=31					
	comp=Z,1.4nm,0.4s					
WRA	**Warramunga Arr**	22.90 160	P	**P**	23 20 02.9	-1.0
WB2	**Warramunga Arr**	22.91 160	P	**P**	23 20 04.1	+0.3
WR0	**Warramunga Arr**	22.99 160	P	**P**	23 20 04.6	-0.1
WR0			IAmb	IAmb	23 20 11.3	
	comp=Z,15nm,1.4s					
YHNB	**Yeheng**	23.33 349	P	**P**	23 20 05.1	-3.0
YHNB			IAmb	IAmb	23 20 16.9	
	comp=Z,34nm,1.4s					
MBWA	**Marble Bar**	23.62 196	P	**P**	23 20 09.9	-0.9
MBWA			IAmb	IAmb	23 20 34.7	
	comp=Z,20nm,1.4s					
PSA00	**Pilbara Seismi**	23.99 195	P	**P**	23 20 12.6	-1.6
KULM	**Kulim**	25.88 279	P	**P**	23 20 31.0	-0.6
KULM			IAmb	IAmb	23 21 14.7	
	comp=Z,19nm,1.2s					
AS31	**Alice Springs**	26.27 164	P	**P**	23 20 37.4	+2.4
ASAR	**Alice Springs**	26.27 164	P	**P**	23 20 35.3	+0.3
	comp=Z,0.9nm,0.5s,baz=344,slow=7.9,SNR=13					
	comp=Z,0.9nm,0.5s					
ASAR	**Alice Springs**	26.27 164	P	**P**	23 20 35.7	+0.7
MORW	**Morawa**	32.15 197	P	**P**	23 21 26.6	-0.5
MORW			IAmb	IAmb	23 22 07.2	
	comp=Z,27nm,1.4s					
ENH	**Enshi**	32.60 332	P	**P**	23 21 33.6	+2.5
BBOO	**Buckleboo**	35.54 166	P	**P**	23 21 56.8	+0.3
PETK	**Petropavlovsk-**	57.44 22	P	**P**	23 24 45.1	-2.7
	comp=Z,1.6nm,0.8s,baz=233,slow=8.9,SNR=2.2					
	comp=Z,1.6nm,0.8s					
PETK	**Petropavlovsk-**	57.44 22	P	**P**	23 24 47.8	0.0
MK31	**Makanchi Array**	58.99 326	P	**P**	23 24 58.5	-0.3
MK31			IAmb	IAmb	23 25 12.5	
	comp=Z,4.0nm,1.5s					
MKAR	**Makanchi Array**	58.99 326	P	**P**	23 24 58.5	-0.3
	comp=Z,0.6nm,0.4s,baz=120,slow=7.6,SNR=20					
	comp=Z,0.6nm,0.4s					
BFZ	**Birch Farm**	61.95 139	P	**P**	23 25 18.7	-0.3
KURK	**Kurchatov**	63.23 328	P	**P**	23 25 27.0	-0.4
KURK			IAmb	IAmb	23 25 48.6	
	comp=Z,2.1nm,0.8s					
MSEY	**Mahe Island**	71.07 265	P	**P**	23 26 16.1	-1.8
ABKAR	**Akbulak array**	73.46 321	P	**P**	23 26 30.6	-0.8
VNDA	**Vanda**	81.48 173	P	**P**	23 27 15.2	-0.5
	comp=Z,0.3nm,0.8s,baz=321,slow=6.5,SNR=1.6					
	comp=Z,0.3nm,0.8s					

*IDC **29** 23:17:56.3±7.5, 13°.65S×167°.00E, h167km±72km, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=72.6km s-min=30.9km az=157.0*
*NEIC **29** 23:17:57.1±1.3, 13°.96S±0°.04×166°.7E±0°.1, h128km±15km, mb4.5/16, Error ellipse: s-maj=18.7km s-min=5.5km az=88.0*

ISC 29 23:17:55.9±0.9, **13°.81S**±0°.08×**166°.8E**±0°.1, **h150**km, **n27,**
σ1s**70**/30, **mb4.4**/11, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	6.94	176	Pn	**Pn**	23 19 33.4	-1.8
LIFNC				Sn	**Sn**	23 20 48.4	-4.7
MARNC	**Mare, Loyalty**	7.72	171	Pn	**Pn**	23 19 45.3	-0.3
HNR	**Honiara**	7.99	302	Pn	**Pn**	23 19 49.6	+0.3
DZM	**Mont Dzumac**	8.22	182	P	**Pn**	23 19 54.7	+2.3
	3.8nm,0.8s,baz=66,slow=24,SNR=1.1						
DZM				S	**Sn**	23 21 24.5	+0.5
	5.6nm,0.9s,baz=260,slow=8.3,SNR=1.9						
ONTNC	**Ouen Toro**	8.45	182	Pn	**Pn**	23 19 54.6	-0.8
EIDS	**Eidsvold**	18.71	230		**Pn**	23 22 05.1	-0.1
EIDS				IAmb	IAmb	23 22 29.5	
	comp=Z,20nm,1.5s						
RAO	**Raoul Island**	20.90	140	P	**P**	23 22 29.2	+2.7
ARMA	**Armidale**	21.64	218	P	**P**	23 22 36.0	+1.4
NIUE	**Niue**	22.93	106	P	**P**	23 22 49.6	+2.5
HIZ	**Hauiti**	25.62	165	P	**P**	23 23 12.9	+1.5
STKA	**Stephens Creek**	29.24	228	P	**P**	23 23 44.8	+1.0
	comp=Z,1.2nm,0.4s,baz=71,slow=11,SNR=3.7						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	29.24	228	P	**P**	23 23 44.8	+1.0
WR0	**Warramunga Arr**	31.42	254	P	**P**	23 24 04.5	+1.3
WR0				IAmb	IAmb	23 24 24.4	
	comp=Z,5.9nm,1.1s						
WB0	**Warramunga Arr**	31.54	255	P	**P**	23 24 05.0	+0.8
WB0				IAmb	IAmb	23 24 06.4	
	comp=Z,3.3nm,0.5s						
WB2	**Warramunga Arr**	31.59	254	P	**P**	23 24 06.2	+1.5
WB2				IAmb	IAmb	23 24 08.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	31.61	254	P	**P**	23 24 06.1	+1.3
	comp=Z,1.1nm,0.6s,baz=86,slow=9.5,SNR=11						
WRA				PcP	**PcP**	23 26 51.8	-1.9
	comp=Z,0.3nm,0.8s,baz=71,slow=2.5,SNR=1.4						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	31.61	254	P	**P**	23 24 05.3	+0.4
AS31	**Alice Springs**	32.57	248	P	**P**	23 24 13.8	+0.6
ASAR	**Alice Springs**	32.57	248	P	**P**	23 24 14.2	+0.9
	comp=Z,1.1nm,0.4s,baz=77,slow=9.4,SNR=15						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	32.57	248	P	**P**	23 24 14.3	+1.1
BBOO	**Buckleboo**	33.78	231	P	**P**	23 24 22.7	-0.9
BBOO				IAmb	IAmb	23 24 31.4	
	comp=Z,15nm,1.2s						
KNRA	**Kununurra**	36.79	262	P	**P**	23 24 51.1	+1.6
KNRA				IAmb	IAmb	23 25 35.2	
	comp=Z,13nm,1.2s						
FITZ	**Fitzroy Crossi**	39.73	258	P	**P**	23 25 15.5	+1.4
FITZ				IAmb	IAmb	23 25 37.1	
	comp=Z,16nm,1.4s						
NWAO	**Narrogin (SRO)**	48.82	238	P	**P**	23 26 25.6	-0.6
MORW	**Morawa**	49.25	243	P	**P**	23 26 29.5	0.0
MORW				IAmb	IAmb	23 26 56.8	
	comp=Z,20nm,1.5s						
ILAR	**Eielson Array**	85.81	18	P	**P**	23 30 15.7	-2.4
	comp=Z,0.3nm,0.6s,baz=231,slow=4.3,SNR=2.2						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	119.25	345	PKP	**PKPdf**	23 36 24.6	-2.1
	comp=Z,3.1nm,1.0s,baz=77,slow=1.2,SNR=5.0						

IDC 29 23:37:31.2±15.0, **36°.36N×72°.81E, h206**km±233km,
mb3.0/1, **mbtmp3.5**/3, **ML3.0**/2, **1C, Error ellipse:**
s-maj=626.3km s-min=75.8km az=130.0,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.96	346	Pn	Pn	23 39 10.9	0.0
	0.3nm,0.3s,baz=157,slow=11,SNR=28						
KK31				⇑Sn	S	23 40 45.0	+15
	1.2nm,0.4s,baz=158,slow=21,SNR=8.6						
MKAR	**Makanchi Array**	12.60	31	P	Pn	23 40 23.4	0.0
	0.1nm,0.3s,baz=216,slow=13,SNR=3.2						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	19.47	22	P	P	23 41 42.2	0.0
	0.3nm,0.3s,baz=213,slow=11,SNR=4.5						
	1.2nm,0.4s						
TORD	**Torodi Ar. Bea**	67.17	270	P	P	23 48 03.3	0.0
	0.2nm,0.5s,baz=51,slow=6.1,SNR=1.4						
	0.2nm,0.5s						

*IDC **29** 23:41:40.1±3.6, 19°.35N×145°.63E, h149km±37km, mb3.4/11, mbtmp3.9/12, Error ellipse: s-maj=30.1km s-min=20.6km az=54.0*

ISC 29 23:41:39.8±0.8, **19°.38N**±0°.08×**145°.7E**±0°.2, **h147**km, **n15,**
σ0s**72**/13, **mb3.8**/11, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	5.81	188	P	**Pn**	23 43 04.6	+0.7
	46nm,0.3s,baz=316,slow=22,SNR=2.8						
GUMO				S	**Sn**	23 44 09.3	-0.4
	19nm,0.4s,baz=5.6,slow=20,SNR=1.5						
H11S3	**WAKE ISLAND Hy**	19.91	89	T	T	00 06 48.3	
	baz=275,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	19.92	89	T	T	00 06 49.1	
	baz=275,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	19.93	89	T	T	00 06 49.6	
	baz=275,slow=75,SNR=13						
KSRS	**Korea Array**	23.75	323	P	**P**	23 46 38.4	-0.3
	2.3nm,0.7s,baz=146,slow=8.6,SNR=6.3						
	2.3nm,0.7s						
WRA	**Warramunga Arr**	40.62	196	P	**P**	23 49 04.8	-0.7
	1.1nm,0.5s,baz=18,slow=8.8,SNR=4.7						
	1.1nm,0.5s						
SONM	**Songino Array**	42.59	321	P	**P**	23 49 21.9	+0.5
	0.3nm,0.3s,baz=133,slow=8.1,SNR=1.3						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	57.46	322	P	**P**	23 51 13.2	+0.1
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	57.97	314	P	**P**	23 51 17.5	+0.6
	0.2nm,0.5s,baz=92,slow=7.9,SNR=2.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	60.80	318	P	**P**	23 51 36.6	+0.4
	0.4nm,0.3s,baz=91,slow=7.4,SNR=9.0						
	0.4nm,0.3s						
ILAR	**Eielson Array**	63.05	26	P	**P**	23 51 50.1	-0.9
	0.2nm,0.5s,baz=239,slow=7.0,SNR=2.9						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	65.93	320	P	**P**	23 52 10.3	+0.3
	0.8nm,0.6s,baz=82,slow=8.3,SNR=6.5						
	0.8nm,0.6s						
NVAR	**Mina Array Bea**	82.75	52	P	**P**	23 53 49.1	+1.3
	1.1nm,0.7s,baz=270,slow=6.1,SNR=8.3						
	1.1nm,0.7s						
FINES	**FINESS Array B**	86.26	335	P	**P**	23 54 03.8	-0.9
	2.5nm,0.9s,baz=54,slow=3.3,SNR=5.8						
	2.5nm,0.9s						
PDAR	**Pinedale Array**	87.38	45	P	**P**	23 54 10.9	+0.2
	0.2nm,0.4s,baz=269,slow=3.6,SNR=3.8						
	0.2nm,0.4s						

*ISK **30** 00:22:23.9, 35°.82N×28°.22E, h8km, ML3.1/24*
*DDA **30** 00:22:23.2±0.0, 35°.72N×28°.26E, h19km±2km, ML3.1*
*NIC **30** 00:22:23.8±0.0, 35°.81N×28°.27E, h6km±1km, Ml3.5/6*
*ATH **30** 00:22:24.1, 35°.84N×28°.29E, h32km±8km, ML3.0/3, Error ellipse: s-maj=8.4km s-min=2.1km az=52.0*
*THE **30** 00:22:25.9, 35°.85N×28°.09E, h1km±4km, ML2.9/3, Error ellipse: s-maj=7.9km s-min=1.1km az=123.0*

ISC 30 00:22:24.5±1.1, **35°.82N**±0°.03×**28°.23E**±0°.02, **h10**km±9km,
n70, σ0s**82**/91, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	0.41	349	P	**Pg**	00 22 32.6	+0.1
ARG				S	**Sb**	00 22 39.5	-0.6
	1μm,0.5s						
ARG	**Arkhangelos**	0.41	349	PG	**Pg**	00 22 32.5	+0.1
ARG				SG	**Sg**	00 22 38.6	+0.7
ARG	**Arkhangelos**	0.41	349	P	**Pg**	00 22 32.7	+0.1
ARG				S	**Sb**	00 22 39.7	-0.5
ARG	**Arkhangelos**	0.41	349	P	**Pg**	00 22 32.6	+0.1
ARG				S	**Sb**	00 22 39.5	-0.6
ARG				AML	AML	00 22 45.1	
	comp=N,1596μm,0.3s						
ARG				AML	AML	00 22 47.7	
	comp=E,2053μm,0.2s						
KARP	**Karpathos**	0.91	253	P	**Pg**	00 22 42.0	+0.1
KARP				S	**Sg**	00 22 53.9	+0.2
	comp=E,968nm,0.6s						
KARP	**Karpathos**	0.91	253	PG	**Pg**	00 22 41.7	-0.2
KARP				SG	**Sb**	00 22 54.6	+0.1
KARP	**Karpathos**	0.91	253	P	**Pg**	00 22 41.2	-0.7
KARP				S	**Sn**	00 22 55.9	-0.6
KARP				AML	AML	00 23 01.3	
	comp=E,1.8nm,0.5s						
KARP				AML	AML	00 23 01.3	
	comp=E,1.8nm,0.5s						
KARP				AML	AML	00 23 01.9	
	comp=E,2.1nm,0.5s						
KARP				AML	AML	00 23 01.9	
	comp=E,2.1nm,0.5s						
KARP	**Karpathos**	0.91	253	P	**Pg**	00 22 42.0	+0.1
KARP				S	**Sg**	00 22 54.2	+0.4
KARP				AML	AML	00 23 02.5	
	comp=N,2217μm,0.4s						
KARP				AML	AML	00 23 05.6	
	comp=E,1570μm,0.4s						
TURN	**Turunc**	0.96	1	PG	**Pg**	00 22 42.7	-0.2
TURN				SG	**Sb**	00 22 56.5	+0.5
DAT	**Datca**	1.05	330	P	**Pg**	00 22 44.7	0.0
DAT	**Datca**	1.05	330	PG	**Pg**	00 22 44.6	-0.1
DAT	**Datca**	1.05	330	P	**Pb**	00 22 44.9	+0.1
DALY	**Dalyan (Mula)**	1.06	19	PG	**Pg**	00 22 44.6	-0.2
DALY				SG	**Sn**	00 22 59.8	-0.4
FETY	**Fethiye**	1.07	40	PG	**Pg**	00 22 45.0	-0.1
FETY				SG	**Sn**	00 23 00.4	-0.3
FETY	**Fethiye**	1.07	40	P	**Pg**	00 22 43.8	-1.3
FETY				S	**Sn**	00 23 01.2	+0.5
NIS1	**Nisyros Isl.**	1.16	313	P	**Pb**	00 22 46.4	-0.2
NIS1				S	**Sb**	00 23 02.1	+0.4
	comp=E,2μm,0.5s						
NIS1	**Nisyros Isl.**	1.16	313	PN	**Pb**	00 22 46.3	-0.3
NIS1				SN	**Sn**	00 23 02.8	+0.1
NIS1	**Nisyros Isl.**	1.16	313	P	**Pb**	00 22 45.0	-1.6
NIS1				S	**Sg**	00 23 01.3	-0.4
NIS1				AML	AML	00 23 03.7	
	comp=E,1544μm,0.4s						
NIS1				AML	AML	00 23 05.3	
	comp=N,3578μm,0.5s						
AKAS	**Kas**	1.19	69	PN	**Pg**	00 22 47.2	-0.2
AKAS				SN	**Sn**	00 23 04.4	+0.6
YER	**Yerkesik**	1.32	2	P	**Pg**	00 22 49.7	-0.1
YER	**Yerkesik**	1.32	2	PN	**Pg**	00 22 49.6	-0.2
KOSK	**Kos Island**	1.37	313	PN	**Pn**	00 22 49.9	+0.2
CAME	**Cameli-Denizli**	1.42	37	PN	**Pn**	00 22 50.8	+0.2
MULA	**Mugla, Merkez-**	1.44	3	P	**Pg**	00 22 52.6	+0.5
MULA				S	**Sg**	00 23 12.6	+1.8
MULA				*i* AML	AML	00 23 20.0	
	comp=N,199nm,0.7s						
BODT	**Bodrum**	1.45	330	P	**Pn**	00 22 50.0	-0.8
BODT	**Bodrum**	1.45	330	PN	**Pn**	00 22 50.9	+0.1
CAEL	**Denizli, Camel**	1.58	34	P	**Pb**	00 22 53.5	-0.3
ELL	**Elmali**	1.65	55	PN	**Pn**	00 22 54.2	+0.5
TAVA	**DENIZLI_Tavas**	1.74	18	P	**Pb**	00 22 55.8	-0.7
TAVA				S	**Sn**	00 23 17.4	+0.2
ZKR	**Zakros**	1.78	247	P	**Pn**	00 22 55.9	+0.5
ZKR	**Zakros**	1.78	247	PN	**Pn**	00 22 55.9	+0.5
ZKR	**Zakros**	1.78	247	P	**Pn**	00 22 56.3	+0.9
ZKR	**Zakros**	1.78	247	P	**Pb**	00 22 57.0	-0.2
AKUM	**Antalya-Kumluc**	1.79	73	P	**Pn**	00 22 56.1	+0.7
APMY	**Acipayam-Deniz**	1.87	27	PN	**Pn**	00 22 57.4	+0.8
GCAM	**G?zelcaml?**	2.04	337	PN	**Pn**	00 22 59.6	+0.7
KORT	**Korkueli**	2.08	55	PN	**Pn**	00 23 00.2	+0.6
AYDB	**Zeytinkoy-Aydi**	2.14	353	PN	**Pn**	00 23 01.1	+0.6
SMG	**Samos**	2.19	330	P	**Pn**	00 23 01.4	+0.3
ANTB	**Antalya**	2.24	60	PN	**Pn**	00 23 02.5	+0.9
SANT	**Santorini**	2.31	285	PN	**Pn**	00 23 03.1	+0.5
THR3	**Thira Island,**	2.36	285	P	**Pn**	00 23 03.8	+0.5
BRDR	**BURDUR-Merkez**	2.39	38	P	**Pn**	00 23 04.5	+0.8
DGB	**zmir**	2.48	335	P	**Pn**	00 23 01.8	-3.1
APE	**Apeiranthos**	2.51	301	P	**Pn**	00 23 05.8	+0.4
APE	**Apeiranthos**	2.51	301	PN	**Pn**	00 23 06.1	+0.7
BASM	**Basmaki-Afyon**	2.56	34	PN	**Pn**	00 23 06.9	+0.8
HRKL	**Herakleio**	2.60	260	PN	**Pn**	00 23 07.2	+0.7
MANT	**Manisa**	2.68	6	P	**Pb**	00 23 10.4	-2.3
BLCB	**Balcova**	2.73	340	PN	**Pn**	00 23 09.3	+0.8
IDI	**Anoyia**	2.77	260	P	**Pn**	00 23 09.4	+0.4
IDI	**Anoyia**	2.77	260	PN	**Pn**	00 23 09.8	+0.8
ZEYE	**Izmir, Urla-Ze**	2.78	331	P	**Pn**	00 23 09.4	+0.2
KZIL	**AFYON_Kizioren**	2.88	32	P	**Pn**	00 23 11.6	+1.0
USAK	**Uak-Merkez**	2.96	12	P	**Pn**	00 23 13.3	+1.7
SEDI	**Konya, Seydise**	3.27	59	P	**Pn**	00 23 17.9	+1.9
ZEDA	**zmir-Bergama**	3.28	344	P	**Pn**	00 23 14.5	-1.4
OSC1	**CSNet OBS 1**	3.42	132	P	**Pn**	00 23 17.2	-0.6
OSC1				S	**Sn**	00 23 59.2	+0.8
GDZ	**Gediz**	3.42	17	P	**Pn**	00 23 16.2	-1.8
GDZ	**Gediz**	3.42	17	P	**Pn**	00 23 17.9	-0.1
AKMS	**Akamas**	3.45	102	P	**Pn**	00 23 18.0	-0.4
AKMS				S	**Sn**	00 23 60.0	+0.7
AKMS				AML	AML	00 24 00.5	
	comp=N,0.2nm,0.6s						
AKMS				AML	AML	00 24 00.5	
	comp=N,0.2nm,0.6s						
AKMS				AML	AML	00 24 05.4	
	comp=N,0.2nm,0.6s						
AKMS				AML	AML	00 24 05.4	
	comp=N,0.2nm,0.6s						
ALFC	**Alefka**	3.63	99	P	**Pn**	00 23 20.5	-0.3
ALFC				S	**Sn**	00 24 04.4	+0.7
ALFC				AML	AML	00 24 04.8	
	comp=N,0.2nm,0.7s						
ALFC				AML	AML	00 24 04.8	
	comp=N,0.2nm,0.7s						
ALFC				AML	AML	00 24 14.2	
	comp=N,0.2nm,0.6s						
ALFC				AML	AML	00 24 14.2	
	comp=N,0.2nm,0.6s						
NATA	**Nata**	3.70	105	P	**Pn**	00 23 21.7	0.0
NATA				AML	AML	00 24 09.7	
	comp=N,0.3nm,0.4s						
NATA				AML	AML	00 24 11.0	
	comp=N,0.5nm,0.3s						
PRK	**Paraskevi**	3.76	336	P	**Pn**	00 23 24.4	+1.8
SIGR	**SIGRI**	3.88	332	P	**Pn**	00 23 25.0	+0.8
SZAC	**Souni**	3.95	104	P	**Pn**	00 23 25.0	-0.2
SZAC				AML	AML	00 24 18.5	
	comp=N,0.3nm,0.3s						
SZAC				AML	AML	00 24 22.2	
	comp=N,0.2nm,0.7s						
ASGA	**Asgata**	4.23	103	P	**Pn**	00 23 28.8	-0.3
ASGA				AML	AML	00 24 20.3	
	comp=N,0.1nm,0.5s						
ASGA				AML	AML	00 24 21.9	
	comp=N,0.2nm,0.5s						
CSS	**Mathiatis**	4.26	100	P	**Pn**	00 23 29.1	-0.3
MVOU	**Mavrovouni**	4.49	99	P	**Pn**	00 23 32.1	-0.4
AKO	**Adana**	6.03	72	P	**Pn**	00 23 54.6	+0.8

*ISK **30** 00:23:13.9, 38°.57N×31°.97E, h5km, ML2.2/21*
*DDA **30** 00:23:13.9±0.0, 38°.61N×31°.89E, h7km±5km, ML2.0*

ISC 30 00:23:13.8±1.1, **38°.58N**±0°.02×**31°.92E**±0°.02, **h6**km±13km,
n33, σ0s**56**/42, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZT	**Kizilcal**	0.30	355	PG	**Pb**	00 23 20.7	-0.9
KIZT				SG	**Sb**	00 23 25.4	-1.5
DOGA	**KONYA_Doganhis**	0.52	202	*i* AML	AML	00 23 36.0	
	comp=E,39nm,0.4s						
DOGA	**KONYA_Doganhis**	0.52	202	P	**Pb**	00 23 24.8	-0.5
DOGA				S	**Sb**	00 23 32.9	-0.2
DOGA				*i* AML	AML	00 23 34.0	
	comp=N,76nm,0.5s						
DOGA	**KONYA_Doganhis**	0.52	202	P	**Pg**	00 23 23.7	0.0
DOGA	**KONYA_Doganhis**	0.52	202	S	**Sb**	00 23 32.8	-0.3
LADK	**Ladik-KONYA**	0.52	137	PG	**Pg**	00 23 23.3	-0.5
LADK				SG	**Sg**	00 23 30.5	-0.1
KONT	**Konya--Tatoy**	0.73	151	PG	**Pg**	00 23 27.4	-0.3
KONT				SG	**Sg**	00 23 37.7	+0.5
KONT	**Konya--Tatoy**	0.73	151	P	**Pg**	00 23 27.7	0.0
KONT				S	**Sg**	00 23 37.7	+0.5
KONT				*i* AML	AML	00 23 39.0	
	comp=E,81nm,0.1s						

CO02	**Combarbal**	**39.60**	**291**	P	**P**	**00 34 40.7**	**-0.3**
CO01	**Juntas del Tor**	**40.11**	**293**	P	**P**	**00 34 46.0**	**+0.6**
CO01				IAmb	IAmb	00 35 19.2	
	comp=Z,15nm,1.5s						
GO04	**Tololo Observa**	**40.32**	**292**	P	**P**	**00 34 48.8**	**+1.7**
SUR	**Sutherland**	**40.65**	**74**	LR	LR	00 47 57.0	
	comp=Z,74nm,19.9s,baz=140,slow=31						
AC05	**El Transito**	**41.13**	**294**	P	**P**	**00 34 53.4**	**-0.2**
AC05				IAmb	IAmb	00 35 27.5	
	comp=Z,19nm,1.3s						
AC02	**Maricunga**	**42.20**	**297**	P	**P**	**00 35 03.3**	**+0.5**
AC02				IAmb	IAmb	00 35 32.6	
	comp=Z,7.7nm,1.1s						
GO02	**Mina Guanaco**	**43.82**	**298**	P	**P**	**00 35 15.7**	**0.0**
GO02				IAmb	IAmb	00 35 59.5	
	comp=Z,19nm,1.2s						
BDFB	**Brasilia**	**43.83**	**330**	P	**P**	**00 35 16.4**	**+0.8**
	comp=Z,2.4nm,0.6s,baz=178,slow=6.6,SNR=3.5						
	comp=Z,2.4nm,0.6s						
LVC	**Limon Verde**	**45.65**	**300**	P	**P**	**00 35 30.8**	**+0.6**
LVC				IAmb	IAmb	00 35 42.9	
	comp=Z,17nm,1.4s						
BOSA	**Boshof**	**45.97**	**75**	P	**P**	**00 35 31.3**	**-1.2**
	comp=Z,2.9nm,1.0s,baz=166,slow=9.7,SNR=2.7						
	comp=Z,2.9nm,1.0s						
VNDA	**Vanda**	**46.11**	**183**	P	**P**	**00 35 34.3**	**+1.5**
VNDA	**Vanda**	**46.11**	**183**	P	**P**	**00 35 34.1**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=186,slow=6.3,SNR=7.7						
	comp=Z,1.4nm,0.8s						
PB01	**IPOC Station P**	**47.26**	**301**	P	**P**	**00 35 41.6**	**-0.9**
PB01				IAmb	IAmb	00 35 44.5	
	comp=Z,6.5nm,0.9s						
GO01	**Chusmiza**	**48.30**	**302**	P	**P**	**00 35 51.5**	**+0.5**
GO01				IAmb	IAmb	00 35 52.8	
	comp=Z,3.7nm,0.6s						
H10N1	**ASCENSION HYDR**	**49.53**	**16**	T	T	01 29 57.0	
	baz=188,slow=75,SNR=4.7						
H10N3	**ASCENSION HYDR**	**49.54**	**16**	T	T	01 29 55.5	
	baz=188,slow=75,SNR=9.3						
H10N2	**ASCENSION HYDR**	**49.55**	**16**	T	T	01 29 55.5	
	baz=188,slow=75,SNR=9.3						
PB16	**IPOC Station P**	**49.60**	**303**	P	**P**	**00 36 01.7**	**+0.6**
PB16				IAmb	IAmb	00 36 37.8	
	comp=Z,14nm,1.5s						
LPAZ	**La Paz**	**50.75**	**305**	P	**P**	**00 36 10.9**	**+1.1**
LPAZ	**La Paz**	**50.75**	**305**	P	**P**	**00 36 10.8**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=158,slow=6.4,SNR=12						
	comp=Z,2.5nm,0.5s						
VOI	**Vohitsoka**	**63.08**	**89**	P	**P**	**00 37 36.5**	**+0.2**
VOI				IAmb	IAmb	00 38 18.8	
	comp=Z,24nm,1.4s						
BOAV	**Boa Vista**	**64.73**	**322**	P	**P**	**00 37 46.5**	**-0.3**
BOAV				IAmb	IAmb	00 38 27.7	
	comp=Z,5.4nm,1.4s						
DBIC	**Dimbokro**	**65.54**	**24**	P	**P**	**00 37 52.5**	**+0.3**
DBIC				IAmb	IAmb	00 38 05.7	
	comp=Z,22nm,1.5s						
KOWA	**Kowa**	**73.31**	**23**	LR	LR	01 06 34.4	
	comp=Z,229nm,18.3s,baz=144,slow=32						
TORD	**Torodi Ar. Bea**	**73.41**	**29**	P	**P**	**00 38 39.4**	**-1.0**
	comp=Z,3.4nm,0.3s,baz=199,slow=6.5,SNR=1.7						
	comp=Z,3.4nm,0.3s						
BAUV	**El Baul**	**73.49**	**317**	P	**P**	**00 38 41.6**	**+0.6**
BAUV				IAmb	IAmb	00 39 07.3	
	comp=Z,13nm,1.1s						
BIRV	**Birongo**	**74.25**	**320**	P	**P**	**00 38 46.6**	**+1.2**
PDPR	**Patillas Dam,**	**81.16**	**323**	P	**P**	**00 39 25.7**	**+2.1**
ILAR	**Eielson Array**	**150.52**	**311**	PKPbc	**PKiKP**	**00 46 58.6**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=142,slow=5.8,SNR=11						
SONM	**Songino Array**	**150.63**	**87**	PKPbc	**PKPbc**	**00 46 58.4**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=255,slow=1.8,SNR=4.2						

PRU ***30*** *00:35:55.6±0.0,42.˚82N×13.˚11E,h0km*
LDG ***30*** *00:35:55.8±0.1,42.˚78N×13.˚09E,h8km,Md3.3/2,Ml3.2/24, Error ellipse: s-maj=4.9km s-min=3.2km az=47.0*
ROM ***30*** *00:35:55.7±0.1,42.˚804N±0.˚003×13.˚141E±0.˚005, h9km,ML3.4/121,Mw3.3,Error ellipse: s-maj=0.4km s-min=0.2km az=60.0,Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr=6.71; Mθθ2.75; Mφφ3.96; Mrθ-2.08; Mrφ-6.55; Mθφ-4.28; Fault plane solution: Ms9.98120×10¹³ NP1:φs108.00000°,δ48.00000°, λ-137.00000°. NP2:φs347.00000°,δ60.00000°, λ-51.00000°.*
PDG ***30*** *00:35:56.3±0.8,42.˚81N×13.˚13E,h10km,ML3.5/11 Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
BEO ***30*** *00:35:56.5±0.8,42.˚80N×13.˚11E,h0km,ML3.5/7*

ISC 30 00:35:56.1±0.7,42.˚81N±0.˚01×13.˚11E±0.˚01,h14km±4km, n269,σs14/378,62C-51D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**11**	P		**Pg**	**00 35 57.2**	**-1.5**
NRCA				S		**Sg**	**00 35 59.1**	**-1.4**
T1242	**Castelluccio d**	**0.07**	**77**	P		**Pg**	**00 35 57.3**	**-1.8**
T1242				S		**Sg**	**00 35 59.4**	**-1.8**
MC2	**Monte Cornacci**	**0.12**	**31**	P		**Pg**	**00 35 59.1**	**-0.6**
MC2				S		**Sg**	**00 36 01.3**	**-0.7**
T1202	**Accumoli, Fraz**	**0.14**	**142**	P		**Pg**	**00 35 59.2**	**-0.6**
T1202				S		**Sg**	**00 36 01.6**	**-0.8**
T1202				AML		AML		
T1202				AML		AML		
T1202				AML		AML		
T1244	**Arquata del Tr**	**0.15**	**112**	P		**Pg**	**00 35 59.4**	**-0.6**
T1244				S		**Sg**	**00 36 01.8**	**-0.7**
T1244				AML		AML		
T1244				AML		AML		
	comp=N,64900μm,0.4s							
T1244				AML		AML		
T1244				AML		AML		
T1244				AML		AML		
	comp=N,65350μm,0.4s							
FEMA	**Monte Fema**	**0.15**	**344**	P		**Pg**	**00 36 00.1**	**+0.1**
FEMA				S		**Sg**	**00 36 03.0**	**+0.2**
FEMA				AML		AML		
	comp=E,35500μm,0.4s							
FEMA				AML		AML		
	comp=N,23550μm,1.2s							
T1215	**Vallo di Nera,**	**0.18**	**267**	P		**Pg**	**00 36 00.7**	**+0.4**
T1215				S		**Sg**	**00 36 04.1**	**+1.0**
T1215				AML		AML		
	comp=N,18600μm,0.9s							
T1215				AML		AML		
	comp=E,18550μm,0.3s							
T1215				AML		AML		
	comp=E,18300μm,0.3s							
T1215				AML		AML		
	comp=N,18300μm,0.9s							
MMO1	**Montemonaco**	**0.18**	**62**	⇑P		**Pg**	**00 35 59.8**	**-0.6**
MMO1				S		**Sg**	**00 36 02.6**	**-0.7**
MMO1				AML		AML		
	comp=E,81300μm,0.8s							
MMO1				AML		AML		
MMO1				AML		AML		
	comp=E,81250μm,0.8s							
T1201	**Domo (RI)**	**0.19**	**146**	P		**Pg**	**00 36 00.3**	**-0.1**
T1201				S		**Sg**	**00 36 03.5**	**+0.1**
T1201				AML		AML		
T1201				AML		AML		
T1201				AML		AML		
T1201				AML		AML		
T1204	**Amatrice, Fraz**	**0.20**	**132**	P		**Pg**	**00 36 00.3**	**-0.5**
T1204				S		**Sg**	**00 36 03.4**	**-0.6**
LNSS	**Leonessa**	**0.22**	**194**	P		**Pg**	**00 36 01.0**	**0.0**
LNSS				S		**Sg**	**00 36 04.8**	**+0.6**
LNSS				AML		AML		
	comp=N,77400μm,0.3s							
LNSS				AML		AML		
FDMO	**Fiordimonte**	**0.22**	**356**	P		**Pg**	**00 36 01.1**	**+0.1**
FDMO				S		**Sg**	**00 36 04.9**	**+0.5**
FDMO				AML		AML		
	comp=E,17650μm,1.0s							
FDMO				AML		AML		
	comp=N,15400μm,1.6s							
T1241	**Roccafluvione,**	**0.24**	**80**	P		**Pg**	**00 36 00.7**	**-0.6**
T1241				S		**Sg**	**00 36 04.3**	**-0.6**
T1241				AML		AML		
	comp=E,49850μm,0.3s							
T1241				AML		AML		
	comp=E,48750μm,0.3s							
T1241				AML		AML		
	comp=N,59750μm,0.2s							
T1241				AML		AML		
	comp=N,59800μm,0.2s							
T1241				AML		AML		
	comp=E,49850μm,0.3s							
CESI	**CESI - Serrava**	**0.24**	**322**	P		**Pb**	**00 36 01.9**	**-0.5**
CESI				S		**Sb**	**00 36 06.2**	**-0.3**
CESI				AML		AML		
	comp=E,25950μm,0.2s							
CESI				AML		AML		
	comp=N,51450μm,0.3s							
CESI				AML		AML		
	comp=E,26000μm,0.2s							
T1243	**Rocca Santa Ma**	**0.28**	**115**	P		**Pg**	**00 36 01.3**	**-0.7**
T1243				S		**Sg**	**00 36 05.2**	**-0.7**
CSP1	**Cessapalombo**	**0.29**	**14**	P		**Pg**	**00 36 02.1**	**-0.1**
CSP1				S		**Sg**	**00 36 07.0**	**+0.7**
CSP1				AML		AML		
	comp=E,31150μm,1.0s							
CSP1				AML		AML		
	comp=N,36050μm,0.2s							
CSP1				AML		AML		
	comp=N,36100μm,0.2s							
RM33	**Pellescritta (**	**0.31**	**166**	P		**Pg**	**00 36 02.2**	**-0.4**
RM33				S		**Sg**	**00 36 07.3**	**+0.3**
RM33				AML		AML		
	comp=N,9290μm,0.5s							
RM33				AML		AML		
	comp=E,20250μm,0.3s							
RM33				AML		AML		
	comp=E,20350μm,0.3s							
RM33				AML		AML		
	comp=N,9410μm,1.1s							
RM33				AML		AML		
	comp=E,20350μm,0.3s							
RM33				AML		AML		
	comp=N,9400μm,1.1s							
RM33				AML		AML		
	comp=N,9420μm,1.1s							
RM33				AML		AML		
	comp=E,20300μm,0.3s							
RM33				AML		AML		
	comp=E,20400μm,0.3s							
RM33				AML		AML		
	comp=N,9300μm,0.5s							
ARRO	**Arrone**	**0.34**	**227**	P		**Pb**	**00 36 03.4**	**-0.6**
ARRO				AML		AML		
	comp=N,7795μm,0.2s							
ARRO				AML		AML		
	comp=E,7910μm,0.2s							
SEF1	**Sefro**	**0.35**	**341**	P		**Pg**	**00 36 03.5**	**+0.2**
SEF1				S		**Sb**	**00 36 09.6**	**0.0**
SEF1				AML		AML		
	comp=N,18850μm,0.3s							
SEF1				AML		AML		
	comp=E,23550μm,0.2s							
CAMP	**Campotosto**	**0.35**	**141**	P		**Pg**	**00 36 02.7**	**-0.6**
CAMP				S		**Sg**	**00 36 08.0**	**-0.3**
CAMP				AML		AML		
	comp=N,5740μm,0.5s							
CAMP				AML		AML		
	comp=N,5745μm,0.5s							
CAMP				AML		AML		
	comp=E,6735μm,0.2s							
MDAR	**Monte D'Aria**	**0.38**	**4**	P		**Pg**	**00 36 03.9**	**+0.1**
MDAR				S		**Sb**	**00 36 10.2**	**-0.3**
MDAR				AML		AML		
	comp=N,17000μm,0.5s							
MDAR				AML		AML		
	comp=E,11800μm,1.3s							
FIU1	**Fiuminata**	**0.40**	**341**	⇑P		**Pg**	**00 36 04.4**	**+0.3**
FIU1				S		**Sb**	**00 36 10.9**	**0.0**
FIU1				AML		AML		
	comp=E,8965μm,0.2s							
FIU1				AML		AML		
	comp=N,7290μm,1.6s							
ASSB	**Assisi San Ben**	**0.40**	**305**	P		**Pb**	**00 36 04.6**	**-0.4**
ASSB				S		**Sb**	**00 36 11.1**	**0.0**
ASSB				AML		AML		
	comp=N,13350μm,0.2s							
ASSB				AML		AML		
	comp=E,13450μm,0.3s							
TERO	**Teramo**	**0.41**	**117**	P		**Pg**	**00 36 03.6**	**-0.8**
TERO				S		**Sg**	**00 36 09.6**	**-0.3**
TERO				AML		AML		
	comp=E,9950μm,0.3s							
TERO				AML		AML		
	comp=E,8345μm,0.3s							
TERO				AML		AML		
	comp=N,7770μm,1.2s							
TERO				AML		AML		
	comp=N,9340μm,0.1s							
MNTP	**Montappone**	**0.42**	**39**	P		**Pb**	**00 36 04.8**	**-0.5**
MNTP				S		**Sb**	**00 36 12.6**	**+1.0**
MNTP				AML		AML		
	comp=E,15900μm,1.3s							
MNTP				AML		AML		
	comp=N,12950μm,0.4s							
SSM1	**San Severino M**	**0.42**	**7**	⇑P		**Pg**	**00 36 02.6**	**-1.9**
GAG1	**Gagliole**	**0.43**	**356**	P		**Pb**	**00 36 05.0**	**-0.5**
GAG1				S		**Sb**	**00 36 12.0**	**+0.2**
GAG1				AML		AML		
	comp=N,21100μm,0.4s							
GAG1				AML		AML		
	comp=E,21750μm,1.6s							
CESX	**Cesi**	**0.44**	**243**	⇑P		**Pg**	**00 36 03.0**	**-1.8**
CESX				S		**Sb**	**00 36 13.0**	**+0.9**
CESX				AML		AML		
	comp=E,5625μm,0.4s							
CESX				AML		AML		
	comp=N,6190μm,1.1s							
OFFI	**Offida**	**0.44**	**74**	P		**Pb**	**00 36 05.1**	**-0.6**
OFFI				S		**Sb**	**00 36 13.1**	**+0.9**
OFFI				AML		AML		
	comp=E,19650μm,0.6s							
OFFI				AML		AML		
	comp=N,23500μm,0.6s							
MTL1	**Matelica**	**0.45**	**351**	P		**Pg**	**00 36 05.2**	**+0.2**
MTL1				S		**Sb**	**00 36 12.8**	**+0.4**
MTL1				AML		AML		
	comp=N,24150μm,1.6s							
MTL1				AML		AML		
	comp=E,24800μm,0.4s							
SNTG	**Esanatoglia**	**0.46**	**344**	P		**Pg**	**00 36 05.4**	**+0.2**
SNTG				S		**Sb**	**00 36 12.8**	**+0.1**
SNTG				AML		AML		
	comp=N,750μm,0.9s							
SNTG				AML		AML		
	comp=E,5040μm,1.2s							
SNTG				AML		AML		
	comp=E,5045μm,1.2s							
SNTG				AML		AML		
	comp=N,5080μm,0.9s							
SNTG				AML		AML		
	comp=E,634μm,1.6s							
GIGS	**Gran Sasso**	**0.50**	**137**	⇑P		**Pg**	**00 36 02.9**	**-3.0**
GIGS				AML		AML		
	comp=E,1985μm,0.8s							
GIGS				AML		AML		
	comp=N,1084μm,0.4s							
ATCC	**AVT- Casa Cast**	**0.51**	**317**	P		**Pb**	**00 36 06.5**	**-0.3**
ATCC				S		**Sb**	**00 36 14.8**	**+0.7**
ATCC				AML		AML		
	comp=N,9965μm,0.3s							
ATCC				AML		AML		
	comp=E,8040μm,0.2s							
EL6	**Elcito**	**0.52**	**359**	AML		AML		
	comp=N,9500μm,0.4s							
EL6				AML		AML		
	comp=E,11350μm,0.2s							
EL6				AML		AML		
	comp=E,11320μm,0.2s							
EL6				AML		AML		
	comp=N,9490μm,0.4s							
TRE1	**Treia**	**0.52**	**17**	⇓P		**Pb**	**00 36 06.8**	**-0.2**
TRE1				AML		AML		
	comp=E,13450μm,0.5s							
TRE1				AML		AML		
	comp=N,14750μm,1.4s							
FIAM	**Fiamignano**	**0.55**	**179**	S		**Sb**	**00 36 15.0**	**-0.2**
FIAM				AML		AML		
	comp=E,4680μm,1.5s							
FIAM				AML		AML		
	comp=N,4115μm,0.9s							
FOSV	**Fossato di Vic**	**0.55**	**332**	⇓P		**Pg**	**00 36 05.0**	**-1.8**
FOSV				S		**Sb**	**00 36 17.0**	**+1.8**
FOSV				AML		AML		
	comp=N,5665μm,0.5s							
FOSV				AML		AML		
	comp=E,5665μm,0.2s							
CING	**Cingoli**	**0.57**	**6**	⇑P		**Pg**	**00 36 05.0**	**-2.2**
CING				AML		AML		
	comp=E,5910μm,0.2s							
CING				AML		AML		
	comp=N,4870μm,0.6s							
TRTR	**Tortoreto Alta**	**0.59**	**90**	⇑P		**Pg**	**00 36 06.0**	**-1.6**
TRTR				AML		AML		
	comp=E,10950μm,0.4s							
TRTR				AML		AML		
	comp=N,13750μm,0.4s							
MURB	**Monte Urbino**	**0.62**	**317**	P		**Pg**	**00 36 06.7**	**-1.5**
MURB				S		**Sb**	**00 36 19.0**	**+1.6**
MURB				AML		AML		
	comp=E,12500μm,0.2s							
MURB				AML		AML		
	comp=N,18000μm,0.4s							
MURB				AML		AML		
	comp=E,11800μm,0.3s							
MURB				AML		AML		
	comp=N,18850μm,0.3s							
MMUR	**Monte Murano**	**0.63**	**353**	P		**Pg**	**00 36 08.6**	**+0.1**
MMUR				AML		AML		
	comp=E,10450μm,0.3s							
MMUR				AML		AML		
	comp=N,6710μm,0.4s							
FAGN	**Fagnano**	**0.65**	**147**	AML		AML		
	comp=N,5380μm,0.4s							
FAGN				AML		AML		
	comp=E,6790μm,0.6s							
SSFR	**Montelago di S**	**0.67**	**339**	P		**Pb**	**00 36 10.4**	**+0.9**
SSFR				S		**Sn**	**00 36 21.0**	**-0.5**
SSFR				AML		AML		
	comp=E,10550μm,0.6s							
SSFR				AML		AML		
	comp=N,9665μm,0.3s							
PP3	**Marolino**	**0.67**	**33**	⇓P		**Pg**	**00 36 07.7**	**-1.5**
PP3				AML		AML		
	comp=N,10900μm,1.3s							
PP3				AML		AML		
	comp=E,33900μm,0.4s							
PP3				AML		AML		
	comp=N,13450μm,0.6s							
PP3				AML		AML		
	comp=N,10900μm,1.3s							
PP3				AML		AML		
	comp=E,34600μm,0.4s							
ATTE	**AVT- Monte Tez**	**0.67**	**305**	⇓P		**Pb**	**00 36 09.6**	**-0.1**
ATTE				S		**Sb**	**00 36 21.0**	**+2.1**
ATTE				AML		AML		
	comp=E,2645μm,0.3s							
ATTE				AML		AML		
	comp=N,2295μm,1.4s							
ATFO	**Monte Foce - G**	**0.68**	**325**	⇑P		**Pg**	**00 36 07.5**	**-1.8**
ATFO				AML		AML		
	comp=E,3120μm,1.1s							
ATFO				AML		AML		
	comp=N,3715μm,1.1s							
VCEL	**Villa Celiera**	**0.68**	**127**	⇑P		**Pg**	**00 36 06.7**	**-2.7**
VCEL				AML		AML		
	comp=E,4050μm,0.8s							
VCEL				AML		AML		
	comp=N,4985μm,1.5s							
ARVD	**Arcevia**	**0.70**	**350**	⇓P		**Pg**	**00 36 07.5**	**-2.1**
ARVD				S		**Sn**	**00 36 22.0**	**-0.2**
ARVD				AML		AML		
	comp=N,2310μm,0.4s							
ARVD				AML		AML		
	comp=E,2695μm,0.2s							
SRES	**S.Oreste - Sor**	**0.73**	**218**	⇑P		**Pg**	**00 36 08.5**	**-1.7**
SRES				AML		AML		
	comp=E,2120μm,1.1s							
SRES				AML		AML		
	comp=N,2020μm,0.4s							
MGAB	**Montegabbione**	**0.74**	**278**	P		**Pg**	**00 36 09.4**	**-1.1**
MGAB				AML		AML		
	comp=N,6355μm,1.2s							
MGAB				AML		AML		
	comp=N,5640μm,0.5s							
MGAB				AML		AML		
	comp=E,6650μm,0.6s							
MGAB				AML		AML		
	comp=E,6775μm,0.4s							
FRON	**Frontone**	**0.76**	**338**	⇑P		**Pg**	**00 36 08.7**	**-2.1**
FRON				S		**Sb**	**00 36 23.0**	**+1.7**
FRON				AML		AML		
	comp=N,3110μm,0.4s							
FRON				AML		AML		
	comp=E,2135μm,0.3s							
ATVO	**AVT- Monte Val**	**0.77**	**318**	⇑P		**Pg**	**00 36 09.0**	**-2.0**
ATVO				S		**Sn**	**00 36 24.0**	**0.0**
ATVO				AML		AML		
	comp=E,2125μm,0.5s							
ATVO				AML		AML		
	comp=N,1980μm,1.5s							
T0110	**Collepietro**	**0.77**	**140**	⇑P		**Pg**	**00 36 08.1**	**-2.9**
T0110				S		**Sb**	**00 36 23.0**	**+1.4**
T0110				AML		AML		
	comp=E,3455μm,0.7s							
T0110				AML		AML		
	comp=N,4145μm,0.9s							
ATMI	**Monte Miggiano**	**0.81**	**311**	⇑P		**Pb**	**00 36 12.1**	**+0.2**
ATMI				AML		AML		
	comp=N,6165μm,0.4s							
ATMI				AML		AML		
	comp=E,6990μm,0.3s							
PTQR	**Pietraquaria**	**0.82**	**165**	P		**Pg**	**00 36 10.4**	**-1.6**
PTQR				AML		AML		
	comp=E,1510μm,0.8s							
PTQR				AML		AML		
	comp=N,946μm,0.4s							
AOI	**Ancona**	**0.82**	**26**	⇓P		**Pg**	**00 36 11.9**	**-0.1**
AOI				S		**Sn**	**00 36 27.0**	**+1.7**
AOI				AML		AML		
	comp=E,3445μm,0.5s							
AOI				AML		AML		
	comp=N,3490μm,0.3s							
ATPI	**Pietralunga -**	**0.82**	**321**	P		**Pg**	**00 36 10.0**	**-2.0**
ATPI				S		**Sn**	**00 36 25.0**	**-0.3**
ATPI				AML		AML		
	comp=E,1865μm,0.4s							
ATPI				AML		AML		
	comp=N,1800μm,0.4s							
COR1	**Corinaldo**	**0.82**	**355**	⇑P		**Pg**	**00 36 10.7**	**-1.4**
COR1				AML		AML		
	comp=E,6755μm,0.5s							
COR1				AML		AML		
	comp=N,6010μm,0.6s							
COR1				AML		AML		
	comp=E,3855μm,0.5s							
COR1				AML		AML		
	comp=N,5485μm,0.4s							
COR1				AML		AML		
	comp=N,6015μm,0.6s							
COR1				AML		AML		
	comp=E,6760μm,0.5s							
MTCE	**Montecelio**	**0.83**	**199**	⇑P		**Pg**	**00 36 11.2**	**-1.1**
MTCE				AML		AML		
	comp=E,3705μm,0.5s							
MTCE				AML		AML		
	comp=N,2210μm,0.5s							
PIEI	**Pieia**	**0.84**	**330**	⇓P		**Pg**	**00 36 10.0**	**-2.3**
PIEI				S		**Sn**	**00 36 26.0**	**+0.3**
PIEI				AML		AML		
	comp=E,1750μm,0.3s							
PIEI				AML		AML		
	comp=N,1485μm,0.4s							
MPAG	**Monte Paganucc**	**0.85**	**343**	⇑P		**Pg**	**00 36 10.5**	**-2.1**
MPAG				AML		AML		
	comp=N,2405μm,1.1s							
MPAG				AML		AML		
	comp=N,2500μm,1.1s							
MPAG				AML		AML		
	comp=E,4495μm,0.3s							
MPAG				AML		AML		
	comp=E,4465μm,0.3s							
MPAG				AML		AML		
	comp=N,2495μm,1.1s							
MPAG				AML		AML		
	comp=N,2405μm,1.1s							
CERT	**Cerreto**	**0.87**	**186**	⇑P		**Pg**	**00 36 10.8**	**-2.1**
CERT				AML		AML		
	comp=E,5280μm,0.5s							
CERT				AML		AML		
	comp=N,2425μm,1.1s							

SACS **San Casciano d** 0.88 273 ⇑P Pb 00 36 13.3 +0.1
SACS AML AML
comp=N,2850µm,0.9s
SACS AML AML
comp=N,2930µm,0.9s
SACS AML AML
comp=E,1685µm,1.2s
SACS AML AML
comp=E,1655µm,0.5s
NARO **Abbazia di Nar** 0.89 334 ⇓P Pg 00 36 11.0 -2.3
NARO S Sn 00 36 28.0 +1.2
NARO AML AML
comp=E,1270µm,0.5s
NARO AML AML
comp=N,1280µm,1.2s
SENI **Senigallia** 0.90 6 ⇓P Pb 00 36 13.5 +0.1
SENI AML AML
comp=E,11710µm,1.0s
SENI AML AML
comp=N,13150µm,0.4s
APEC **Apecchio** 0.90 326 P Pg 00 36 11.8 -1.6
APEC S Sn 00 36 28.0 +0.8
FSSB **Fossombrone** 0.91 345 ⇑P Pg 00 36 11.5 -2.2
FSSB S Sn 00 36 29.0 +1.5
FSSB AML AML
comp=N,15900µm,0.3s
FSSB AML AML
comp=E,6575µm,0.3s
BADI **Badiali** 0.94 318 ⇓P Pg 00 36 12.5 -1.7
LATE **Laterza** 0.98 259 ⇑P Pb 00 36 15.2 +0.3
CAFI **Castiglion Fio** 0.98 302 ⇑P Pg 00 36 13.7 -1.4
CAFI AML AML
comp=E,1885µm,0.5s
CAFI AML AML
comp=N,1360µm,0.4s
CAFI AML AML
comp=N,1415µm,0.4s
CAFI AML AML
comp=E,1795µm,0.5s
INTR **Introdacqua** 0.99 143 ⇑P Pg 00 36 11.6 -3.7
INTR AML AML
comp=E,2µm,0.7s
INTR AML AML
comp=N,1µm,1.3s
INTR AML AML
comp=E,1600µm,0.7s
INTR AML AML
comp=N,2260µm,1.3s
VVLD **Villa Vallelon** 1.01 158 ⇓P Pg 00 36 14.6 -1.1
VVLD AML AML
comp=E,955µm,0.9s
VVLD AML AML
comp=N,1340µm,0.7s
GUAR **Guarcino** 1.03 171 ⇑P Pn 00 36 17.6 +1.5
GUAR AML AML
comp=E,1895µm,1.4s
GUAR AML AML
comp=N,1835µm,1.6s
SSP9 **Sansepolcro** 1.04 317 ⇑P Pn 00 36 16.5 +0.2
SSP9 AML AML
comp=E,1132µm,0.6s
SSP9 AML AML
comp=N,1174µm,1.5s
RMP **Rome, Mte Porz** 1.05 197 ⇓P Pn 00 36 17.0 +0.7
RMP AML AML
comp=N,2580µm,0.7s
RMP AML AML
comp=E,2500µm,0.5s
PARC **Parchiule** 1.05 323 ⇑P Pb 00 36 16.2 +0.2
PARC AML AML
comp=E,1700µm,0.8s
PARC AML AML
comp=N,1370µm,1.4s
SF04 **Casetta** 1.07 272 P Pn 00 36 17.7 +1.1
SF04 AML AML
comp=N,990µm,0.3s
SF04 AML AML
comp=E,1242µm,0.4s
VIVA **Pratoni del Vi** 1.09 193 ⇓P Pn 00 36 17.5 +0.5
VIVA AML AML
comp=E,3460µm,0.5s
VIVA AML AML
comp=N,4160µm,0.4s
RDP **Rocca di Papa** 1.09 196 ⇓P Pn 00 36 18.0 +0.9
RDP AML AML
comp=E,7880µm,0.5s
RDP AML AML
comp=N,3980µm,0.4s
MA9 **Marino** 1.09 198 ⇓P Pn 00 36 17.8 +0.8
MA9 AML AML
comp=N,3065µm,0.6s
MA9 AML AML
comp=E,3760µm,0.6s
LPEL **Lama dei Pelig** 1.10 134 ⇑P Pg 00 36 16.1 -1.3
LPEL AML AML
comp=E,1260µm,0.4s
LPEL AML AML
comp=N,1066µm,0.7s
TOLF **Tolfa** 1.11 228 ⇓P Pg 00 36 15.5 -2.0
TOLF AML AML
comp=N,1275µm,0.6s
TOLF AML AML
comp=E,1780µm,0.5s
PESA **Pesaro** 1.15 350 ⇑P Pg 00 36 16.9 -1.3
PESA AML AML
comp=N,3920µm,0.3s
PESA AML AML
comp=E,4000µm,0.4s
CRE **Caprese Michel** 1.17 314 ⇓P Pb 00 36 18.4 +0.3
CRE AML AML
comp=E,808µm,0.5s
CRE AML AML
comp=N,853µm,0.3s
LAV9 **Lanuvio** 1.17 195 ⇓P Pn 00 36 19.2 +1.1
LAV9 AML AML
comp=E,3570µm,0.5s
LAV9 AML AML
comp=N,3125µm,0.5s
LAV9 AML AML
comp=N,3080µm,0.5s
LAV9 AML AML
comp=E,3685µm,0.5s
POFI **Posta Fibreno** 1.18 158 P Pg 00 36 17.3 -1.6
POFI AML AML
comp=E,726µm,1.2s
POFI AML AML
comp=N,694µm,0.5s
ARCI **Arcidosso** 1.20 272 ⇑P Pn 00 36 19.8 +1.2
ARCI AML AML
comp=N,252µm,0.8s
ARCI AML AML
comp=E,358µm,1.0s
LRP **Arpino** 1.22 163 P Pg 00 36 20.3 +0.8
LRP AML AML
comp=N,800µm,0.9s
LRP AML AML
comp=E,502µm,0.5s
GIUL **Giuliano Di Ro** 1.26 175 ⇑P Pn 00 36 18.7 -0.6
GIUL AML AML
comp=E,704µm,0.5s
GIUL AML AML
comp=N,821µm,0.5s
ASQU **Asqua** 1.38 316 ⇑P Pg 00 36 24.3 +1.8
ASQU AML AML
comp=N,596µm,0.6s
ASQU AML AML
comp=E,638µm,0.5s
CERA **Filignano** 1.39 151 ⇓P Pg 00 36 22.1 -0.7
CERA AML AML
comp=E,900µm,0.5s
CERA AML AML
comp=N,791µm,0.5s
CERA AML AML
comp=N,770µm,0.5s
CERA AML AML
comp=E,959µm,0.5s
CSNT **Castellina Chi** 1.48 297 ⇑P Pb 00 36 23.5 0.0
CSNT AML AML
comp=N,487µm,0.7s
CSNT AML AML
comp=E,272µm,0.5s
TRIV **Trivento** 1.50 134 ⇑P Pg 00 36 24.7 -0.1
TRIV AML AML
comp=E,539µm,1.4s
TRIV AML AML
comp=N,588µm,0.6s

OSSC **Osservatorio P** 1.54 298 ⇑P Pb 00 36 24.7 +0.4
OSSC AML AML
comp=E,310µm,0.6s
OSSC AML AML
comp=N,358µm,0.9s
RUFI **Rufina** 1.55 312 ⇑P Pb 00 36 25.0 +0.4
VAGA **Valle Agricola** 1.63 149 ⇓P Pg 00 36 27.2 -0.1
VAGA AML AML
comp=N,414µm,1.1s
VAGA AML AML
comp=E,242µm,1.6s
TRIF **Trifonti** 1.65 281 ⇑P Pb 00 36 25.8 -0.4
TRIF AML AML
comp=E,375µm,0.6s
TRIF AML AML
comp=N,270µm,1.5s
CASP **Castiglione de** 1.65 270 ⇓P Pn 00 36 25.3 +0.6
CASP AML AML
comp=E,154µm,0.6s
CASP AML AML
comp=N,122µm,1.4s
MODR **Mondragone** 1.76 161 ⇑P Pb 00 36 28.5 +0.4
MODR AML AML
comp=N,178µm,0.6s
MODR AML AML
comp=E,204µm,0.9s
CIGN **Sant'Elia a Pi** 1.77 130 P Pb 00 36 28.8 +0.6
CIGN AML AML
comp=N,274µm,0.7s
CIGN AML AML
comp=E,266µm,1.1s
SEI **Scarperia** 1.78 315 ⇓P Pb 00 36 28.6 +0.1
SEI AML AML
comp=E,694µm,0.5s
SEI AML AML
comp=N,826µm,0.4s
DUGI **Dugi Otok** 1.85 50 *e*Pn Pn 00 36 25.9 -1.5
MELA **Melanico ??? S** 1.86 126 ⇑P Pb 00 36 29.2 -0.7
MELA AML AML
comp=E,762µm,1.1s
MELA AML AML
comp=E,719µm,1.1s
MELA AML AML
comp=N,838µm,0.5s
MELA AML AML
comp=N,914µm,0.5s
MPPT **Montemurlo** 1.86 309 ⇑P Pb 00 36 29.3 -0.6
MPPT AML AML
comp=E,240µm,1.6s
MPPT AML AML
comp=N,234µm,1.5s
TREM **Isole Tremiti** 1.91 110 ⇑P Pb 00 36 29.7 -0.9
TREM AML AML
comp=N,696µm,1.0s
TREM AML AML
comp=E,573µm,0.4s
VIRC **Vir** 2.05 43 *e*Pn Pn 00 36 28.8 -1.3
CELB **S.Piero in Cam** 2.13 269 ⇑P Pn 00 36 32.0 +0.7
CELB AML AML
comp=E,57µm,0.6s
CELB AML AML
comp=N,70µm,0.6s
BRJN **Brijuni** 2.14 12 *e*Pn Pn 00 36 31.9 +0.5
NVLJ **Novalja** 2.17 36 *e*Pn Pn 00 36 30.2 -1.5
MORI **Morici** 2.17 60 *e*Pn Pn 00 36 30.8 -1.0
MAIM **Mastiano** 2.20 301 S Sn 00 37 01.0 +1.7
SGRT **San Giovanni R** 2.22 118 ⇓P Pn 00 36 33.9 +1.3
SGRT AML AML
comp=N,251µm,1.3s
SGRT AML AML
comp=E,336µm,0.7s
RABC **Rab** 2.29 31 *e*Pn Pn 00 36 33.7 +0.3
SMRN **Sveta Marina** 2.35 18 *e*Pn Pn 00 36 34.4 +0.2
MSAG **Monte S. Angel** 2.35 117 ⇓P Pn 00 36 36.1 +1.7
MSAG AML AML
comp=N,631µm,0.8s
MSAG AML AML
comp=E,354µm,0.6s
HVAR **Hvar** 2.48 80 P Pn 00 36 37.0 +1.0
A253A **Karojba, Istri** 2.53 11 *e*Pn Pn 00 36 36.9 +0.2
UDBI **Udbina** 2.58 47 *e*Pn Pn 00 36 37.5 0.0
A250A **Rusevo Krmpots** 2.62 29 *e*Pn Pn 00 36 38.7 +0.7
VULT **Monte Vulture** 2.64 134 ⇓P Pn 00 36 40.5 +2.2
VULT AML AML
comp=E,230µm,0.4s
VULT AML AML
comp=N,312µm,0.4s
KIJV **Kijevo** 2.68 62 *e*Pn Pn 00 36 38.6 -0.2
RIY **Rijeka** 2.70 21 *e*Pn Pn 00 36 40.1 +1.0
PLIT **Plitvice** 2.75 41 *e*Pn Pn 00 36 40.8 +1.0
LSTV **Lastovo** 2.79 90 *e*Pn Pn 00 36 39.5 -0.8
SKDS **Skadanscina** 2.81 13 *e*Pn Pn 00 36 40.8 +0.2
SKDS **Skadanscina** 2.81 13 *i*Pn Pn 00 36 41.1 +0.4
SKDS *e*Sn Sn 00 37 14.6 +0.3
PALZ **Palazzo San Ge** 2.83 130 ⇓P Pn 00 36 42.5 +1.6
PALZ AML AML
comp=E,286µm,1.2s
PALZ AML AML
comp=N,235µm,0.8s
KNDS **Knezji Dol** 2.86 18 *i*Pn Pn 00 36 42.2 +0.7
KNDS *i*Sn Sn 00 37 17.6 +1.9
KNDS IAML 00 37 40.0
comp=Z,159nm,0.7s
GBRS **Gornja Briga** 2.98 24 *e*Pn Pn 00 36 44.1 +1.1
GBRS *e*Sn Sn 00 37 20.8 +2.3
GBRS IAML 00 37 53.6
comp=Z,48nm,0.6s
A050A **Klekovaca** 2.99 55 *e*Pn Pn 00 36 44.8 +1.6
PGF **Pioggiola** 3.04 266 *e*P Pn 00 36 45.5 +1.6
PGF *e*Sn Sn 00 37 17.1 -3.0
comp=Z,6.8nm,0.4s
CEY **Cerknica** 3.08 17 *e*Pn Pn 00 36 44.6 +0.3
CEY **Cerknica** 3.08 17 *e*Pn Pn 00 36 45.0 +0.7
CEY *e*Sn Sn 00 37 22.8 +1.9
CEY IAML 00 37 38.4
comp=Z,66nm,0.5s
BOJS **Bojanci** 3.10 29 *e*Pn Pn 00 36 45.9 +1.3
BOJS **Bojanci** 3.10 29 P Pn 00 36 47.0 +2.4
BOJS AML AML
comp=E,470µm,1.3s
BOJS AML AML
comp=N,357µm,0.8s
SABO **M.te Sabotino** 3.19 6 ⇓P Pn 00 36 46.7 +0.9
SABO AML AML
comp=N,424µm,0.6s
SABO AML AML
comp=E,1630µm,0.6s
SABO AML AML
comp=N,1660µm,0.6s
SABO AML AML
comp=E,379µm,0.6s
ROVR **Rover Verones** 3.19 333 ⇓P Pn 00 36 48.6 +2.7
ROVR AML AML
comp=N,80µm,0.8s
ROVR AML AML
comp=E,54µm,0.6s
CGRP **Cima Grappa** 3.21 343 ⇓P Pn 00 36 48.2 +2.0
CGRP S Sn 00 37 27.0 +2.7
CGRP AML AML
comp=N,288µm,0.6s
CGRP AML AML
comp=E,266µm,0.6s
SRKY **Kupres RS** 3.21 66 *e*Pn Pn 00 36 48.4 +2.2
AMUR **Altamura** 3.23 125 ⇓P Pn 00 36 47.8 +1.4
AMUR AML AML
comp=N,88µm,0.5s
AMUR AML AML
comp=E,93µm,1.1s
OZLJ **Ozalj** 3.27 30 *e*Pn Pn 00 36 48.0 +1.0
MGRS **Mrkonjic Grad** 3.30 60 *e*Pn Pn 00 36 48.8 +1.4
MIGL **Miglionico** 3.33 130 ⇓P Pn 00 36 50.1 +2.3
MIGL AML AML
comp=E,248µm,0.7s
MIGL AML AML
comp=N,291µm,0.6s
STON **Ston** 3.38 87 *e*Pn Pn 00 36 47.1 -1.2
STON **Ston** 3.38 87 *e*Pn Pn 00 36 48.5 +0.2
STON *e*Sn Sn 00 37 30.5 +2.3
STON **Ston** 3.38 87 ⇑P Pn 00 36 47.9 -0.4
STON AML AML
comp=N,69µm,1.1s
STON AML AML
comp=E,70µm,0.6s
LJU **Ljubljana** 3.39 17 P Pn 00 36 47.6 -0.9
LJU AML AML
comp=E,1042µm,1.5s
LJU AML AML
comp=N,1295µm,0.8s
PRIJ **Prijedor** 3.39 49 *e*Pn Pg 00 37 01.7 +0.8
A255A **Hotnja, Vukome** 3.43 37 *e*Pn Pn 00 36 49.9 +0.9
CADS **Cadrg** 3.44 7 *i* Pn Pn 00 36 49.9 +0.5
CRES **Cresnjev** 3.45 28 *e*Pn Pn 00 36 49.3 -0.1
MATE **Matera** 3.45 128 ⇑P Pn 00 36 51.4 +2.0
MAGA **Magasa** 3.46 330 ⇓P Pn 00 36 51.7 +2.1
MAGA AML AML
comp=N,314µm,1.2s
MAGA AML AML
comp=E,494µm,0.6s
STAL **STALIGIAL** 3.46 355 ⇓P Pn 00 36 51.3 +1.8
STAL AML AML
comp=E,237µm,1.1s
STAL AML AML
comp=N,158µm,0.8s
LUSI **Trento, Gardas** 3.51 334 ⇑P Pn 00 36 52.7 +2.4
LUSI AML AML
comp=E,126µm,0.5s
LUSI AML AML
comp=N,208µm,0.6s
LEGS **Legarje** 3.51 26 ⇑*i*Pn Pn 00 36 51.3 +1.1
A051A **Mrakovica** 3.52 50 *e*Pn Pn 00 36 51.2 +0.8
BLY **Banja Luka** 3.53 55 *e*Pn Pb 00 36 54.7 -3.6
CIMO **Cimolais** 3.53 352 ⇓P Pn 00 36 52.0 +1.5
CIMO AML AML
comp=E,63µm,0.6s
CIMO AML AML
comp=N,54µm,0.8s
CIMO AML AML
comp=E,55µm,0.7s
CIMO AML AML
comp=N,55µm,0.5s
GORS **Gorjuse** 3.56 10 *e*Pn Pn 00 36 51.4 +0.4
GORS *e*Sn Sn 00 37 35.0 +2.1
GORS IAML 00 37 40.0
comp=Z,42nm,0.6s
NOCI **Noci** 3.58 123 ⇑P Pn 00 36 52.7 +1.5
NOCI AML AML
comp=E,64µm,0.5s
NOCI AML AML
comp=N,94µm,0.5s
PTCC **Patocco-Chiusa** 3.60 3 ⇓P Pn 00 36 52.2 +0.8
PTCC AML AML
comp=N,94µm,0.7s
PTCC AML AML
comp=E,85µm,0.4s
GAGG **Gaggia** 3.61 336 ⇑P Pn 00 36 54.4 +2.6
GAGG AML AML
comp=E,160µm,0.8s
GAGG AML AML
comp=N,106µm,0.6s
ZONE **Zone** 3.65 325 P Pn 00 36 54.4 +2.2
ZONE AML AML
comp=N,164µm,0.4s
ZONE AML AML
comp=E,92µm,0.7s
ZOU **Zoufplan** 3.75 359 ⇓P Pn 00 36 55.0 +1.4
ZOU AML AML
comp=N,125µm,1.2s
ZOU AML AML
comp=E,142µm,1.3s
ACOM **Acomizza, Ital** 3.75 4 ⇓P Pn 00 36 55.5 +1.9
ACOM AML AML
comp=N,243µm,0.7s
ACOM AML AML
comp=E,244µm,0.9s
MYKA **Terra Mystica** 3.83 5 *i* Pn Pn 00 36 56.5 +1.7
comp=E,2.2nm,0.2s,SNR=6.4
MYKA *e*Sn Sn 00 37 41.2 +1.5
comp=E,8.6nm,0.4s
OBKA **Obir** 3.84 15 *e*Pn Pn 00 36 55.9 +1.1
OBKA **Obir** 3.84 15 *e*Pn Pn 00 36 56.1 +1.4
comp=E,1.4nm,0.2s
OBKA *e*Sn Sn 00 37 41.5 +1.8
comp=E,21nm,0.3s
KOSI **Kohlern** 3.85 342 ⇓P Pn 00 36 57.6 +2.5
KOSI AML AML
comp=E,195µm,0.8s
KOSI AML AML
comp=N,132µm,0.6s
TREB **Trebinje** 3.86 90 *e*Pn Pn 00 36 56.3 +1.3
LOBO **Lobor** 3.96 31 *e*Pn Pn 00 36 56.8 +0.4
ABTA **Abfaltersbach** 3.96 354 *i* Pn Pn 00 36 58.7 +2.3
comp=N,28nm,0.5s,SNR=26
ABTA *e*Sn Sn 00 37 44.4 +1.7
comp=N,23nm,0.8s
HCY **Herceg Novi** 3.99 93 *e*Pn Pn 00 36 57.4 +0.6
HCY **Herceg Novi** 3.99 93 ⇓*i*Pn Pn 00 36 58.4 +1.6
HCY *i* Sn Sn 00 37 46.4 +3.0
BRY **Bratogost** 3.99 87 *e*Pn Pn 00 36 58.4 +1.4
BRY **Bratogost** 3.99 87 ⇓*i*Pn Pn 00 36 58.6 +1.6
BRY *i* Sn Sn 00 37 46.4 +2.7
SOKA **Soboth** 4.10 19 *e*Pn Pn 00 36 59.7 +1.3
comp=N,1.0nm,0.2s
SOKA *e*Sn Sn 00 37 46.1 -0.1
comp=N,6.0nm,0.4s
RISI **Rein** 4.20 350 ⇑P Pn 00 37 02.6 +2.8
RISI AML AML
comp=N,343µm,0.4s
RISI AML AML
comp=E,362µm,0.5s
MUGIO **Muggio** 4.26 318 ⇑P Pn 00 37 03.0 +2.4
MUGIO AML AML
comp=N,36µm,0.4s
MUGIO AML AML
comp=E,40µm,0.4s
KBA **Koelnbreinsper** 4.27 2 *e*Pn Pn 00 37 02.8 +2.0
comp=E,15nm,0.7s
KBA *e*Sn Sn 00 37 52.0 +1.5
comp=E,17nm,0.4s
UPM **Unac-Piva** 4.27 83 *e*Pn Pn 00 37 03.1 +2.3
UPM **Unac-Piva** 4.27 83 ⇓*i*Pn Pn 00 37 02.6 +1.8
UPM *i* Sn Sn 00 37 53.1 +2.6
SBF **Sospel** 4.27 286 *e*P Pn 00 37 02.6 +1.9
SBF *e*Sn Sn 00 37 46.5 -3.9
comp=E,28nm,0.6s
ROSI **Rosskopf** 4.29 344 ⇓P Pn 00 37 03.7 +2.6
ROSI AML AML
comp=N,194µm,0.4s
ROSI AML AML
comp=E,219µm,0.4s
CEME **Cevo** 4.29 92 ⇑*i*Pn Pn 00 37 02.3 +1.3
CEME *i* Sn Sn 00 37 53.6 +2.7
NKME **Niksic** 4.30 89 ⇓*i*Pn Pn 00 37 03.0 +1.9
NKME *i* Sn Sn 00 37 54.1 +3.0
BUM **Brajici-Budva** 4.30 95 ⇑*i*Pn Pn 00 37 02.9 +1.7
BUM *i* Sn Sn 00 37 53.8 +2.6
NKY **Niksic** 4.33 88 ⇑*i*Pn Pn 00 37 03.4 +1.8
NKY *i* Sn Sn 00 37 54.6 +2.7
VSL **Villasalto** 4.35 222 ⇓P Pn 00 37 04.0 +2.2
VSL S Sn 00 37 53.0 +0.8
VSL AML AML
VSL AML AML
VARE **Varese** 4.36 316 S Sn 00 37 53.0 +0.3
FETA **Feichten** 4.53 339 *e*Pn Pn 00 37 07.7 +3.3
comp=E,3.2nm,0.3s
FETA *e*Sn Sn 00 38 01.0 +4.0
comp=E,5.3nm,0.4s
DRME **Dracevica, Mon** 4.54 96 *e*Pn Pn 00 37 06.0 +1.7
DRME **Dracevica, Mon** 4.54 96 ⇓*i*Pn Pn 00 37 06.2 +1.9
DRME *i* Sn Sn 00 37 59.2 +2.4
PDG **Podgorica** 4.55 93 ⇑P Pn 00 37 06.6 +2.1
TTG **Podgorica** 4.55 93 ⇑*i*Pn Pn 00 37 06.3 +1.8
TTG *i* Sn Sn 00 37 59.8 +2.6
TIP **Timpagrande** 4.56 142 ⇓P Pn 00 37 09.9 +5.2
WTTA **Wattenberg** 4.57 347 *e*Pn Pn 00 37 08.5 +3.5
comp=E,2.6nm,0.3s
WTTA *e*Sn Sn 00 37 59.4 +1.4
comp=E,18nm,0.4s
WTTA **Wattenberg** 4.57 347 ⇓P Pn 00 37 08.4 +3.5
DAVOX **Davos/Dischmat** 4.58 331 ⇓P Pn 00 37 09.1 +4.0
SQTA **Sankt Quirin** 4.61 344 *i* Pn Pn 00 37 09.0 +3.6
comp=E,6.2nm,0.4s,SNR=9.6
SQTA *e*Sn Sn 00 38 00.4 +1.6
comp=E,12nm,0.4s
RUDO **Rudo** 4.65 78 *e*Pn Pn 00 37 07.3 +1.5
WATA **Walderalm** 4.65 347 *e*Pn Pn 00 37 09.8 +3.8
comp=E,4.3nm,0.2s
WATA *e*Sn Sn 00 38 01.6 +1.7
comp=E,16nm,0.3s
BBLS **Lazići** 4.71 75 *e*Pn Pn 00 37 09.0 +2.2
BBLS *e*Sn Sn 00 38 02.0 +0.7

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δ89.00000°,λ-47.00000°.
*NEIC **30** 00:37:07.4±1.8,34.°54N±0.°08×136.°99E±0.°08, h338km±6km,mb4.1/125 Error ellipse: s-maj=12.3km s-min=8.7km az=151.0*
ISC 30 00:37:06.9±0.5,34.°58N±0.°06×136.°96E±0.°05,h337km±4km, n293,σ0.°99/311,mb4.1/99,9C-23D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JAA	**Atsumi**	**0.16**	**69**	⇓P		**Pn 00 37 49.8**	**+0.6**
JAA				⇓eS		**S 00 38 23.1**	**+0.1**
JIE	**Ise**	**0.28**	**229**	P		**Pn 00 37 49.9**	**+0.5**
JIE				S		**S 00 38 23.0**	**-0.4**
INU	**Inuyama**	**0.77**	**3**	Pn		**Pn 00 37 50.3**	**0.0**
TK02	**Tokai 2**	**0.91**	**133**	⇓P		**Pn 00 37 51.5**	**+0.8**
TK02				⇓eS		**S 00 38 27.9**	**+2.2**
JYTA	**Yamagatataniai**	**1.03**	**350**	P		**Pn 00 37 51.6**	**+0.3**
JGF	**Kuroka**	**1.07**	**17**	Pn		**Pn 00 37 51.4**	**-0.2**
JWY	**Kouya**	**1.19**	**253**	P		**Pn 00 37 52.6**	**+0.3**
JWY				S		**S 00 38 27.3**	**-1.2**
JTNC	**Tanabenakahech**	**1.35**	**236**	P		**Pn 00 37 53.2**	**+0.2**
JTNC				S		**S 00 38 29.1**	**-0.8**
JWT	**Wachi**	**1.47**	**299**	P		**Pn 00 37 53.6**	**+0.1**
JWT				S		**S 00 38 29.4**	**-1.4**
JFNN	**Fujinakano**	**1.54**	**66**	P		**Pn 00 37 54.1**	**+0.2**
JYN	**Shimob**	**1.59**	**54**	⇓P		**Pn 00 37 54.2**	**-0.1**
JKG	**Kaga**	**1.77**	**343**	eP		**Pn 00 37 55.4**	**0.0**
JOD2	**Odawara 2**	**1.88**	**68**	⇓P		**Pn 00 37 56.1**	**-0.1**
JRY	**Ryogami san**	**2.14**	**47**	⇓P		**Pn 00 37 58.2**	**+0.1**
JRY				⇓S		**S 00 38 39.4**	**+0.4**
MAJO	**Matsushiro**	**2.21**	**27**	Pn		**Pn 00 37 58.1**	**-0.4**
MAJO	**Matsushiro**	**2.21**	**27**	d iP		**Pn 00 37 58.2**	**-0.4**
MAT	**Matsushiro**	**2.21**	**27**	P		**Pn 00 37 58.3**	**-0.2**
MAT				S		**S 00 38 39.0**	**-1.0**
MJAR	**Matsushiro Arr**	**2.21**	**27**	P		**Pn 00 37 56.1**	**-2.5**
MJAR				S		**S 00 38 39.4**	**-0.6**
MJAR	**Matsushiro Arr**	**2.21**	**27**	P		**Pn 00 37 56.0**	**-2.5**
	105nm,0.7s,baz=194,slow=8.1,SNR=82						
MJAR				S		**S 00 38 39.4**	**-0.6**
	13nm,0.6s,baz=217,slow=24,SNR=2.1						
JAI	**Aioi**	**2.22**	**250**	P		**Pn 00 37 58.7**	**0.0**
JMN	**Monobe**	**2.69**	**253**	Pn		**Pn 00 38 02.7**	**+0.1**
JMN	**Monobe**	**2.69**	**253**	P		**Pn 00 38 02.7**	**+0.1**
JAG	**Ashikaga**	**2.74**	**47**	P		**Pn 00 38 01.5**	**-1.4**
JHJ2	**Mitsune**	**2.79**	**121**	Pn		**Pn 00 38 02.2**	**-1.2**
JYT	**Yasato**	**3.11**	**57**	Pn		**Pn 00 38 05.0**	**-1.2**
JYT				Sn		**S 00 38 52.2**	**-1.7**
JHS	**Saijyo**	**3.19**	**279**	Pn		**Pn 00 38 06.7**	**-0.4**
JHS	**Saijyo**	**3.19**	**279**	P		**Pn 00 38 07.3**	**+0.1**
BSO1	**Boso 1**	**3.31**	**88**	S		**S 00 38 54.3**	**-2.2**
JSD	**Sado**	**3.61**	**16**	Pn		**Pn 00 38 10.7**	**-0.3**
JTO	**Tosashimizu**	**3.87**	**245**	P		**Pn 00 38 13.8**	**0.0**
JMM	**Marumori**	**4.51**	**42**	Pn		**Pn 00 38 19.4**	**-1.1**
JMM				Sn		**S 00 39 15.8**	**-4.0**
JTU	**Tsushima**	**6.24**	**272**	Pn		**Pn 00 38 38.6**	**-1.4**
JSU	**Suzuyama**	**6.26**	**243**	Pn		**Pn 00 38 40.5**	**+0.1**
KSBUS	**Busan**	**6.49**	**278**	Pn		**Pn 00 38 42.0**	**-0.9**
JTN	**Tenmabayashi**	**7.00**	**26**	Pn		**Pn 00 38 48.0**	**-0.9**
KSCHJ	**Chungju**	**7.66**	**290**	Pn		**Pn 00 38 57.3**	**+0.6**
KSRS	**Korea Array**	**7.87**	**294**	P		**Pn 00 38 59.9**	**+0.7**
KSRS	**Korea Array**	**7.87**	**294**	P		**Pn 00 38 59.9**	**+0.7**
	6.0nm,0.6s,baz=105,slow=12,SNR=13						
KSAR	**Wonju Array Be**	**7.89**	**294**	Pn		**Pn 00 38 59.2**	**-0.3**
KSAR	**Wonju Array Be**	**7.89**	**294**	P		**Pn 00 38 59.2**	**-0.3**
SEHB	**SEOHWA**	**7.93**	**300**	Pn		**Pn 00 38 59.4**	**-0.6**
ERM	**Erimo**	**8.88**	**31**	Pn		**Pn 00 39 10.0**	**-1.2**
ERM	**Erimo**	**8.88**	**31**	⇓eP		**Pn 00 39 09.5**	**-1.7**
USRK	**Ussuriysk Ar.**	**10.35**	**340**	P		**Pn 00 39 29.3**	**+0.4**
USRK	**Ussuriysk Ar.**	**10.35**	**340**	P		**Pn 00 39 29.3**	**+0.4**
	1.7nm,0.4s,baz=142,slow=9.9,SNR=14						
JOW	**Kunigami**	**10.74**	**226**			**Pn 00 39 33.6**	**-0.2**
YSS	**Yuzh-Sakhalins**	**13.12**	**18**	P		**Pn 00 40 02.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**13.12**	**18**	eP		**Pn 00 40 01.5**	**-0.3**
YSS				pmax	pmax		
	comp=Z,50nm,0.4s						
KLR	**Kul'dur**	**15.14**	**347**	⇑iP		**P 00 40 22.2**	**-1.2**
KLR				pmax	pmax		
	comp=Z,29nm,2.5s						
KLR	**Kul'dur**	**15.14**	**347**	P		**P 00 40 22.4**	**-1.0**
	comp=Z,9.6nm,0.9s,baz=150,slow=9.2,SNR=14						
NACB	**Ninganchiao**	**16.92**	**236**	P		**P 00 40 42.1**	**-0.9**
NACB				lAmb	lAmb	00 40 49.5	
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	**17.40**	**294**	P		**P 00 40 46.7**	**-1.4**
BJT				lAmb	lAmb	00 40 47.0	
	comp=Z,6.0nm,0.7s						
BJT	**Baijiatuau**	**17.40**	**294**	P		**P 00 40 46.7**	**-1.4**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSLB	**Suanglung**	**17.61**	**237**	P		**P 00 40 47.9**	**-2.6**
TPUB	**Ta-pu**	**18.16**	**236**	P		**P 00 40 54.0**	**-2.2**
HNS	**HongShan**	**18.23**	**285**	⇓P		**P 00 40 55.5**	**-1.3**
HNS				pmax	pmax		
	comp=Z,28nm,0.9s						
XLT	**XiLinHaoTe**	**18.62**	**306**	eP		**P 00 41 03.0**	**+1.9**
XLT				pmax	pmax		
	comp=Z,18nm,0.6s						
XLT				pmax	pmax		
	comp=Z,170nm,6.3s						
WHN	**Wuhan**	**19.47**	**264**	⇓P		**P 00 41 09.8**	**-0.4**
LYN	**LuoYang**	**20.17**	**277**	⇓P		**P 00 41 15.0**	**-2.2**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	**Zeya**	**20.35**	**343**	eP		**P 00 41 19.5**	**+0.8**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.3s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	**Hu-ho-hao-te**	**21.01**	**295**	⇑P		**P 00 41 25.3**	**+0.2**
HHC				pmax	pmax		
	comp=Z,52nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
XAN	**Xi'an**	**23.14**	**277**	⇑iP		**P 00 41 44.0**	**-0.5**
XAN				pP	P	00 41 47.5	+3.0
XAN				pmax	pmax		
	comp=Z,21nm,0.7s						
PETK	**Petropavlovsk-**	**23.66**	**32**	P		**P 00 41 48.8**	**-0.1**
PETK	**Petropavlovsk-**	**23.66**	**32**	P		**P 00 41 48.8**	**-0.1**
PETK	**Petropavlovsk-**	**23.66**	**32**	P		**P 00 41 48.5**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=214,slow=10.0,SNR=5.4						
	comp=Z,3.8nm,0.8s						
ULN	**Ulaanbaatar**	**25.94**	**310**	P		**P 00 42 10.1**	**+0.5**
ULN				lAmb	lAmb	00 42 11.3	
	comp=Z,9.9nm,0.8s						
ULN	**Ulaanbaatar**	**25.94**	**310**	d iP		**P 00 42 10.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**26.35**	**309**	P		**P 00 42 13.8**	**+0.8**
SONM				lAmb	lAmb	00 42 15.0	
	comp=Z,5.9nm,1.0s						
SONM	**Songino Array**	**26.35**	**309**	P		**P 00 42 13.9**	**+0.8**
SONM	**Songino Array**	**26.35**	**309**	P		**P 00 42 13.9**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=114,slow=8.6,SNR=25						
SONM				ScP		**ScP 00 48 37.3**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=166,slow=3.2,SNR=2.0						
	comp=Z,5.2nm,0.8s						
CD2	**Chengdu**	**28.10**	**272**	P		**P 00 42 27.3**	**-1.4**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
SEY	**Seymchan**	**29.98**	**14**	⇓eP		**P 00 42 43.7**	**-1.0**
SEY				pmax	pmax		
	comp=Z,25nm,2.5s						
PZH	**PanZhiHua**	**31.26**	**265**	P		**P 00 42 58.8**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.6s						
KNGR	**Kungurtug, Tuv**	**32.71**	**311**	⇑eP		**P 00 43 09.6**	**+0.8**
KNGR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOMU	**GeErMu**	**34.21**	**285**	P		**P 00 43 21.8**	**-0.3**
GOMU				pP	P	00 43 25.5	+3.4
GOMU				sP	P	00 43 27.8	+5.7
GOMU				pmax	pmax		
	comp=Z,11nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,83nm,6.0s						
AMKA	**Amchitka**	**34.67**	**48**	P		**P 00 43 26.3**	**+1.0**
CRAI	**Chiangrai**	**35.28**	**256**	P		**P 00 43 31.4**	**+0.4**
CRAI				lAmb	lAmb	00 43 31.7	
KIWB	**Kanaga Island**	**36.93**	**48**	P		**P 00 43 44.9**	**+0.5**
MANU	**Manus Island**	**37.71**	**163**			**PcP 00 45 57.6**	**-2.9**
WMQ	**Urumqi**	**38.78**	**299**	eP		**P 00 44 01.8**	**+1.8**
DGZ	**Jazzator, Alta**	**38.98**	**308**	⇑iP		**P 00 44 02.7**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZAA0	**Zalesovo Array**	**40.98**	**315**	P		**P 00 44 17.2**	**-0.4**
ZALV	**Zalesovo Beam**	**40.98**	**315**	P		**P 00 44 17.4**	**-0.3**
ZALV	**Zalesovo Beam**	**40.98**	**315**	i P		**P 00 44 17.0**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZALV	**Zalesovo Beam**	**40.98**	**315**	P		**P 00 44 17.0**	**-0.6**
	comp=Z,2.5nm,0.4s,baz=99,slow=8.2,SNR=13						
ZALV				PcP		**PcP 00 46 09.8**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=105,slow=2.8,SNR=6.9						
ZALV				ScP		**ScP 00 49 26.7**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=106,slow=4.7,SNR=2.0						
	comp=Z,2.5nm,0.4s						
NIKH	**Nikolski High**	**42.10**	**47**	P		**P 00 44 27.4**	**+0.7**
MK31	**Makanchi Array**	**42.41**	**304**	P		**P 00 44 29.6**	**+0.3**
MK31				lAmb	lAmb	00 44 30.2	
	comp=Z,6.4nm,0.8s						
MK31	**Makanchi Array**	**42.41**	**304**	d iP		**P 00 44 29.4**	**+0.1**
MKAR	**Makanchi Array**	**42.41**	**304**	P		**P 00 44 29.3**	**0.0**
MKAR	**Makanchi Array**	**42.41**	**304**	P		**P 00 44 29.5**	**+0.1**
MKAR						00 46 14.9	
MKAR	**Makanchi Array**	**42.41**	**304**	P		**P 00 44 29.5**	**+0.1**
	comp=Z,5.6nm,0.4s,baz=85,slow=10,SNR=66						
MKAR				PcP		**sP 00 46 14.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=87,slow=5.2,SNR=4.0						
MKAR				ScP		**ScP 00 49 33.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=92,slow=5.3,SNR=2.6						
	comp=Z,5.6nm,0.4s						
TAPN	**Taplejung**	**42.51**	**274**	eP		**P 00 44 29.2**	**-1.5**
MAKZ	**Makanchi**	**42.63**	**304**	P		**P 00 44 31.4**	**+0.3**
MAKZ				lAmb	lAmb	00 44 32.0	
	comp=Z,7.2nm,0.8s						
MAKZ	**Makanchi**	**42.63**	**304**	P		**P 00 44 31.4**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAMN	**Ramite**	**43.57**	**274**	eP		**P 00 44 37.3**	**-1.8**
JIRN	**Jiri**	**43.64**	**275**	eP		**P 00 44 39.2**	**-0.5**
GUN	**Gumba**	**43.80**	**276**	eP		**P 00 44 40.6**	**-0.4**
PKI	**Pulchoki**	**44.31**	**276**	eP		**P 00 44 43.6**	**-1.4**
	comp=Z,12nm,0.6s						
PKIN	**Phulchoki**	**44.32**	**276**	eP		**P 00 44 43.9**	**-1.1**
	comp=Z,11nm,0.5s						
KURK	**Kurchatov**	**44.65**	**310**	P		**P 00 44 46.5**	**-0.4**
KURK				lAmb	lAmb	00 44 47.3	
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**44.65**	**310**	d iP		**P 00 44 46.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GKN	**Gorkha**	**44.78**	**277**	eP		**P 00 44 47.8**	**-0.7**
	comp=Z,24nm,0.7s						
DANN	**Dangsing**	**45.37**	**277**	eP		**P 00 44 53.0**	**-0.2**
	comp=Z,58nm,0.6s						
KOLN	**Koldanda**	**45.72**	**277**	eP		**P 00 44 55.3**	**-0.5**
	comp=Z,3.1nm,1.1s						
PYUN	**Piuthan**	**46.10**	**277**	eP		**P 00 44 58.0**	**-0.7**
	comp=Z,62nm,0.9s						
MDOK	**Medeo**	**46.55**	**299**	P		**P 00 45 01.9**	**-0.1**
BOOM	**Boomskoye usch**	**47.48**	**299**	P		**P 00 45 09.3**	**+0.2**
BOOM	**Boomskoye usch**	**47.48**	**299**	P		**P 00 45 09.3**	**+0.2**
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CNBA	**Chernabura Isl**	**47.61**	**45**	P		**P 00 45 09.8**	**+0.1**
CNBA				lAmb	lAmb	00 45 46.1	
	comp=Z,30nm,1.4s						
TKM2	**Tokmak 2**	**47.64**	**299**	i P		**P 00 45 10.6**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.4s						
OTUK	**Ortayu**	**48.97**	**307**	P		**P 00 45 19.7**	**-0.4**
GSI	**Gunungsitoli**	**49.43**	**237**	P		**P 00 45 23.4**	**-0.5**
N18K	**Kilae Creek**	**49.50**	**37**	P		**P 00 45 26.0**	**+2.2**
BRVK	**Borovoye**	**49.64**	**313**	P		**P 00 45 25.6**	**+0.6**
BRVK	**Borovoye**	**49.64**	**313**	⇓eP		**P 00 45 24.5**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SVW2	**Sparrevohn**	**49.65**	**36**	P		**P 00 45 26.6**	**+1.6**
CHIR	**Chirikof Islan**	**49.82**	**43**	P		**P 00 45 26.9**	**+0.6**
O18K	**Koktuh Hills**	**49.85**	**38**	P		**P 00 45 28.9**	**+2.4**
O18K				lAmb	lAmb	00 45 30.2	
	comp=Z,6.6nm,0.5s						
P18K	**Big Mountain,**	**49.85**	**38**	P		**P 00 45 27.8**	**+1.3**
P18K				lAmb	lAmb	00 45 28.7	
	comp=Z,8.7nm,0.8s						
L19K	**White Mountain**	**50.00**	**35**	P		**P 00 45 29.1**	**+1.5**
N19K	**Bonanza Creek**	**50.19**	**36**	P		**P 00 45 30.9**	**+1.8**
J20K	**Nowinta River**	**50.36**	**32**	P		**P 00 45 32.1**	**+2.0**
K20K	**Telida**	**50.38**	**33**	lAmb	lAmb	00 45 33.0	
	comp=Z,4.9nm,0.7s						
IMAR	**Indian Mountai**	**50.59**	**30**	P		**P 00 45 32.6**	**+0.8**
Q19K	**Cape Douglas,**	**50.68**	**39**	P		**P 00 45 32.9**	**+0.2**
M20K	**Styx River**	**50.82**	**35**	P		**P 00 45 35.6**	**+1.9**
P19K	**Oil Pt**	**50.85**	**38**	P		**P 00 45 34.9**	**+0.9**
P19K				lAmb	lAmb	00 45 36.4	
	comp=Z,9.2nm,1.0s						
H21K	**Melozitna Rive**	**50.97**	**30**	P		**P 00 45 35.2**	**+0.5**
OHAK	**Old Harbor**	**50.99**	**41**	P		**P 00 45 35.4**	**+0.5**
OHAK				lAmb	lAmb	00 45 36.4	
	comp=Z,26nm,1.5s						
PPLA	**Purkeypile**	**51.23**	**34**	P		**P 00 45 38.4**	**+1.6**
KK31	**Karatay Array**	**51.24**	**301**	P		**P 00 45 36.9**	**-0.1**
KK31	**Karatay Array**	**51.24**	**301**	eP		**P 00 45 36.5**	**-0.6**
KKAR	**Karatay Array**	**51.24**	**301**	P		**P 00 45 37.0**	**-0.1**
KKAR	**Karatay Array**	**51.24**	**301**	P		**P 00 45 37.2**	**+0.1**
KKAR	**Karatay Array**	**51.24**	**301**	P		**P 00 45 37.0**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KDAK	**Kodiak Island**	**51.32**	**40**	P		**P 00 45 37.9**	**+0.5**
KDAK				lAmb	lAmb	00 45 38.6	
	comp=Z,8.4nm,0.8s						
KDAK	**Kodiak Island**	**51.32**	**40**	P		**P 00 45 37.9**	**+0.5**
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MLY	**Manley**	**51.83**	**31**	P		**P 00 45 42.0**	**+0.9**
CNPM	**China Poot**	**51.88**	**38**	P		**P 00 45 41.3**	**-0.2**
CNPM				lAmb	lAmb	00 45 43.9	
	comp=Z,5.8nm,0.6s						
H23K	**Yukon River**	**52.31**	**30**	P		**P 00 45 46.6**	**+2.0**
I23K	**Minto, Yukon-K**	**52.41**	**31**	P		**P 00 45 46.5**	**+1.3**
NEA2	**Nenana**	**52.56**	**31**	P		**P 00 45 47.5**	**+1.2**
NEA2				lAmb	lAmb	00 45 48.6	
	comp=Z,5.3nm,0.7s						
MCK	**McKinley**	**52.66**	**33**	P		**P 00 45 47.4**	**+0.2**
MCK	**McKinley**	**52.66**	**33**	P		**P 00 45 47.4**	**+0.2**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
RND	**Reindeer**	**52.72**	**33**	P		**P 00 45 48.5**	**+0.8**
RND				lAmb	lAmb	00 46 22.9	
	comp=Z,7.1nm,0.8s						
RND	**Reindeer**	**52.72**	**33**	P		**P 00 45 48.5**	**+0.8**
RND				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDM	**Murphy Dome**	**52.90**	**31**	P		**P 00 45 50.6**	**+1.7**
MDM				lAmb	lAmb	00 45 51.2	
	comp=Z,7.6nm,0.7s						
H24K	**Noodor Dome**	**53.00**	**30**	P		**P 00 45 51.2**	**+1.6**
SML	**Sawmill**	**53.09**	**35**	P		**P 00 45 51.0**	**+0.7**
SML				lAmb	lAmb	00 45 52.5	
	comp=Z,6.4nm,0.7s						
PWL	**Port Wells**	**53.19**	**36**	P		**P 00 45 51.6**	**+0.6**
PWL				lAmb	lAmb	00 45 52.8	
	comp=Z,11nm,1.1s						
POKR	**Poker Plat Res**	**53.23**	**31**	P		**P 00 45 52.4**	**+1.2**
POKR				lAmb	lAmb	00 45 53.7	
	comp=Z,7.3nm,0.8s						
DHY	**Denali Highway**	**53.41**	**33**	P		**P 00 45 53.9**	**+1.2**
CHGR	**Chuyangaron**	**53.45**	**296**	P		**P 00 45 53.1**	**-0.2**
CHGR	**Chuyangaron**	**53.45**	**296**	P		**P 00 45 53.1**	**-0.2**
CHGR				pmax	pmax		
	comp=Z,16nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.48**	**193**	P		**P 00 45 52.9**	**-0.6**
FITZ				lAmb	lAmb	00 46 23.5	
	comp=Z,11nm,1.5s						
IL31		**53.48**	**31**	P		**P 00 45 53.5**	**+0.5**
ILAR	**Eielson Array**	**53.48**	**31**	P		**P 00 45 53.3**	**+0.3**
ILAR	**Eielson Array**	**53.48**	**31**	P		**P 00 45 53.3**	**+0.3**
ILAR	**Eielson Array**	**53.48**	**31**	P		**P 00 45 53.1**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=262,slow=5.1,SNR=17						
	comp=Z,1.1nm,0.6s						
WB0	**Warramunga Arr**	**54.10**	**183**	P		**P 00 45 56.9**	**-1.1**

*MOS **30** 00:37:04.6±1.0,34.°48N×136.°98E,h331km,mb4.2/32, Error ellipse: s-maj=9.9km s-min=5.9km az=118.2*
*IDC **30** 00:37:06.0±0.9,34.°52N×136.°93E,h330km±7km,mb3.6/19, mbtmp4.2/23,Error ellipse: s-maj=12.8km s-min=11.8km az=65.0*
*JMA **30** 00:37:06.4±0.2,35.°N±1.°1×13.°7E±.°,h342km±1km,MV3.8/35, MIKAWA BAY REGION*
*NIED **30** 00:37:06.4,34.°67N×136.°94E,h342km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.05; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$0.32; $M_{r\theta}$-0.24; $M_{\theta\phi}$-1.61; $M_{\phi r}$-1.74; Fault plane solution: $M_0$2.40000×10^{15} NP1: ϕ_s96.00000°,δ43.00000°,λ-179.00000°. NP2:ϕ_s5.00000°,*

HIN	**Hinchinbrook I**	**54.14**	**37**	P		**P**		**00 45 59.1**	**+1.2**
J25K	**Salcha River,**	**54.15**	**31**	P		**P**		**00 45 57.9**	**0.0**
BMAR	**Burnt Mountain**	**54.21**	**28**	P		**P**		**00 46 00.4**	**+2.2**
WRAB	**Tennant Creek**	**54.26**	**183**	P		**P**		**00 45 58.2**	**-0.9**
WRAB	**Tennant Creek**	**54.26**	**183**	⇑*i*P		**P**		**00 45 58.3**	**-0.9**
WRAB					pmax	pmax			
	comp=Z,10.0nm,1.6s								
WB2	**Warramunga Arr**	**54.27**	**183**	P		**P**		**00 45 58.4**	**-0.8**
WRA	**Warramunga Arr**	**54.27**	**183**	P		**P**		**00 45 57.9**	**-1.3**
WRA	**Warramunga Arr**	**54.27**	**183**	*i* P		**P**		**00 45 58.2**	**-1.0**
WRA					pmax	pmax			
	comp=Z,1.0nm,0.3s								
WRA	**Warramunga Arr**	**54.27**	**183**	P		**P**		**00 45 58.3**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=0.4,slow=7.5,SNR=50								
	comp=Z,0.7nm,0.3s								
PAX	**Paxson**	**54.29**	**33**	P		**P**		**00 45 59.6**	**+0.6**
PAX					IAmb	IAmb		00 46 31.0	
	comp=Z,8.9nm,1.4s								
PAX	**Paxson**	**54.29**	**33**	P		**P**		**00 45 59.6**	**+0.6**
PAX					pmax	pmax			
	comp=Z,9.0nm,1.4s								
RIDG	**Independent Ri**	**54.48**	**32**	P		**P**		**00 46 00.7**	**+0.5**
SCRK	**Sand Creek**	**54.82**	**32**	P		**P**		**00 46 03.8**	**+1.1**
SCRK					IAmb	IAmb		00 46 04.3	
	comp=Z,4.1nm,0.8s								
DOT	**Dot Lake**	**54.83**	**32**	P		**P**		**00 46 03.4**	**+0.7**
RAGM	**Ragged Mountai**	**55.04**	**36**	P		**P**		**00 46 05.4**	**+1.2**
RAGM					IAmb	IAmb		00 46 40.5	
	comp=Z,17nm,1.4s								
KAIM	**Kayak Island**	**55.25**	**37**	P		**P**		**00 46 05.5**	**-0.1**
M26K	**Nabesna, AK**	**55.50**	**34**			**P**		**00 46 08.4**	**+0.9**
SUCK	**Suckling Hills**	**55.54**	**37**	P		**P**		**00 46 09.0**	**+1.3**
K27K	**Chicken**	**55.65**	**32**	P		**P**		**00 46 10.0**	**+1.6**
K27K					IAmb	IAmb		00 46 10.3	
	comp=Z,9.3nm,1.4s								
MCARA	**McCarthy VSAT**	**55.66**	**35**	P		**P**		**00 46 10.2**	**+1.6**
ARU	**Arti**	**55.81**	**319**	P		**P**		**00 46 09.8**	**+0.1**
ARU					IAmb	IAmb		00 46 10.3	
	comp=Z,9.5nm,1.2s								
ARU	**Arti**	**55.81**	**319**	*d i* P		**P**		**00 46 08.7**	**-1.0**
ARU				*PP		**pP**		**00 47 19.9**	**-1.2**
ARU				S		**S**		**00 53 30.9**	**+1.2**
ARU					pmax	pmax			
	comp=Z,7.0nm,0.9s								
L27K	**Beaver Creek,**	**55.92**	**33**	P		**P**		**00 46 12.0**	**+1.5**
L27K					IAmb	IAmb		00 46 13.0	
	comp=Z,6.1nm,1.3s								
BCAR	**Beaver Creek A**	**55.94**	**33**	P		**P**		**00 46 12.6**	**+2.1**
M27K	**Edge Creek, AK**	**56.02**	**34**	IAmb		IAmb		00 46 13.6	
	comp=Z,5.4nm,0.9s								
AB31	**Akbulak array**	**56.76**	**310**	P		**P**		**00 46 15.8**	**-0.6**
ABKAR	**Akbulak array**	**56.76**	**310**	P		**P**		**00 46 16.2**	**-0.3**
ABKAR	**Akbulak array**	**56.76**	**310**	P		**P**		**00 46 16.2**	**-0.3**
EPYK	**Eagle Plains**	**57.43**	**29**	P		**P**		**00 46 22.5**	**+1.6**
MBWA	**Marble Bar**	**57.80**	**199**	P		**P**		**00 46 22.9**	**-1.0**
MBWA					IAmb	IAmb		00 46 37.3	
	comp=Z,15nm,1.4s								
ASAR	**Alice Springs**	**57.99**	**183**	P		**P**		**00 46 25.2**	**0.0**
ASAR	**Alice Springs**	**57.99**	**183**	P		**P**		**00 46 25.3**	**0.0**
ASAR	**Alice Springs**	**57.99**	**183**	P		**P**		**00 46 24.6**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=11,slow=13,SNR=7.1								
	comp=Z,0.4nm,0.3s								
M30M	**Minto, Yukon**	**58.28**	**33**	P		**P**		**00 46 28.9**	**+2.1**
M30M					IAmb	IAmb		00 46 47.0	
	comp=Z,6.4nm,1.4s								
HYT	**Haines Junctio**	**58.40**	**35**	P		**P**		**00 46 27.3**	**-0.5**
HYT					IAmb	IAmb		00 46 30.8	
	comp=Z,5.7nm,0.7s								
KIRV	**Kirov**	**60.02**	**323**	⇑*e*P		**P**		**00 46 38.0**	**-0.6**
HRA	**Herat**	**60.17**	**293**	P		**P**		**00 46 40.2**	**-0.1**
HRA					IAmb	IAmb		00 46 40.7	
	comp=Z,2.9nm,0.6s								
C36M	**Paulatuk**	**61.15**	**24**	P		**P**		**00 46 47.2**	**+1.3**
C36M					IAmb	IAmb		00 46 47.8	
	comp=Z,4.6nm,0.6s								
GEYT	**Alibeck**	**61.84**	**298**	P		**P**		**00 46 50.5**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=202,slow=11,SNR=5.1								
	comp=Z,2.5nm,0.7s								
BELG	**Belogornoye**	**63.11**	**317**	*d i* P		**P**		**00 46 58.7**	**-0.5**
BELG					pmax	pmax			
	comp=Z,2.0nm,0.8s								
KEV	**Kevo**	**64.43**	**339**	P		**P**		**00 47 08.3**	**+0.9**
KEV	**Kevo**	**64.43**	**339**	P		**P**		**00 47 08.3**	**+0.9**
KEV					pmax	pmax			
	comp=Z,66nm,1.5s								
ARCES	**ARCESS Array B**	**65.00**	**339**	P		**P**		**00 47 11.1**	**0.0**
ARCES	**ARCESS Array B**	**65.00**	**339**	P		**P**		**00 47 11.1**	**0.0**
ARCES					pmax	pmax			
	comp=Z,21nm,1.4s								
ARCES	**ARCESS Array B**	**65.00**	**339**	P		**P**		**00 47 11.0**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=67,slow=9.1,SNR=22								
	comp=Z,1.9nm,0.5s								
YKA	**Yellowknife Ar**	**67.72**	**28**	P		**P**		**00 47 28.8**	**+0.5**
YKA	**Yellowknife Ar**	**67.72**	**28**	P		**P**		**00 47 28.8**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=301,slow=5.8,SNR=3.8								
	comp=Z,1.8nm,0.8s								
OBN	**Obninsk**	**67.86**	**322**	⇑*e*P		**P**		**00 47 27.6**	**-1.7**
OBN				*e**PP		**pP**		**00 48 46.7**	**+2.9**
OBN				*e*				00 50 02.8	
OBN					pmax	pmax			
	comp=Z,4.0nm,0.4s								
VORR	**Voronezh**	**68.12**	**318**	*e*P		**P**		**00 47 32.8**	**+1.8**
VORR					pmax	pmax			
	comp=Z,30nm,0.5s								
FIA1	**FINESS Array S**	**69.26**	**331**	P		**P**		**00 47 37.6**	**-0.2**
FINES	**FINESS Array B**	**69.26**	**331**	P		**P**		**00 47 37.6**	**-0.2**
FINES	**FINESS Array B**	**69.26**	**331**	*i* P		**P**		**00 47 37.4**	**-0.4**
FINES					pmax	pmax			
	comp=Z,4.0nm,0.6s								
FINES	**FINESS Array B**	**69.26**	**331**	P		**P**		**00 47 37.4**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=77,slow=4.9,SNR=28								
	comp=Z,3.9nm,0.6s								
GUDG	**Gudauri**	**69.30**	**308**	P		**P**		**00 47 38.9**	**+0.2**
GUDG	**Gudauri**	**69.30**	**308**	P		**P**		**00 47 38.9**	**+0.2**
GUDG					pmax	pmax			
	comp=Z,17nm,1.5s								
NCK	**Nalchik**	**69.38**	**309**	⇓*e*P		**P**		**00 47 39.3**	**+0.4**
NCK					pmax	pmax			
	comp=Z,3.0nm,0.2s								
KBZ	**Khabaz**	**69.72**	**310**	*de*P		**P**		**00 47 41.0**	**+0.2**
KBZ					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KBZ	**Khabaz**	**69.72**	**310**	P		**P**		**00 47 41.0**	**+0.2**
	comp=Z,5.9nm,0.8s,baz=95,slow=3.1,SNR=16								
	comp=Z,5.9nm,0.8s								
KIV	**Kislovodsk**	**69.74**	**310**	P		**P**		**00 47 41.8**	**+0.7**
KIV	**Kislovodsk**	**69.74**	**310**	*e*P		**P**		**00 47 41.9**	**+0.7**
KIV					pmax	pmax			
	comp=Z,8.0nm,1.0s								
KEBM	**Edson Butte**	**73.07**	**49**	P		**P**		**00 48 00.8**	**-0.1**
SUMG	**Summit**	**73.09**	**359**	P		**P**		**00 48 02.0**	**+1.1**
SUMG	**Summit**	**73.09**	**359**	P		**P**		**00 48 02.0**	**+1.1**
SUMG					pmax	pmax			
	comp=Z,12nm,1.4s								
KBO	**Bosley Butte**	**73.48**	**50**	P		**P**		**00 48 03.6**	**+0.2**
PABE	**Paberze**	**73.67**	**327**	P		**P**		**00 48 03.7**	**-0.3**
AKASG	**Malin Array Be**	**73.97**	**321**	*i* P		**P**		**00 48 05.0**	**-0.8**
AKASG					pmax	pmax			
	comp=Z,2.0nm,0.5s								
AKASG	**Malin Array Be**	**73.97**	**321**	P		**P**		**00 48 05.0**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=49,slow=6.5,SNR=11								
	comp=Z,1.5nm,0.5s								
AKBB	**Malin Array Si**	**73.97**	**321**	⇓*e*P		**P**		**00 48 04.7**	**-1.1**
AKBB					pmax	pmax			
	comp=Z,5.0nm,0.7s								
HUMO	**Hull Mountain**	**74.07**	**49**	P		**P**		**00 48 08.2**	**+1.6**
HUMO					IAmb	IAmb		00 48 23.3	
	comp=Z,3.0nm,1.3s								
PINE	**Pine Mountain**	**74.67**	**47**	P		**P**		**00 48 12.1**	**+1.8**
PINE					IAmb	IAmb		00 48 12.9	
	comp=Z,5.0nm,0.7s								
NC405	**NORSAR Array S**	**74.78**	**336**	P		**P**		**00 48 10.2**	**-0.1**
NB201	**NORSAR Array S**	**74.96**	**336**	P		**P**		**00 48 11.2**	**-0.2**
NC204	**NORSAR Array S**	**74.98**	**336**	P		**P**		**00 48 11.6**	**+0.1**
NB2	**NORSAR Subarra**	**75.00**	**336**	P		**P**		**00 48 10.9**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=44,slow=5.9								
NOA	**NORSAR Array B**	**75.00**	**336**	P		**P**		**00 48 10.9**	**-0.7**
NOA	**NORSAR Array B**	**75.00**	**336**	P		**P**		**00 48 10.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=54,slow=6.9,SNR=7.0								
	comp=Z,1.4nm,0.6s								
KCPM	**Cahto Peak**	**75.24**	**52**	P		**P**		**00 48 14.0**	**+0.5**
K05A	**Summer Lake**	**75.29**	**48**	P		**P**		**00 48 15.4**	**+1.7**
K05A					IAmb	IAmb		00 48 19.1	
	comp=Z,8.0nm,1.2s								
WALA	**Waterton Lakes**	**75.66**	**40**	P		**P**		**00 48 13.7**	**-2.0**
WALA					IAmb	IAmb		00 48 17.5	
	comp=Z,3.7nm,0.8s								
BMO	**Blue Mountains**	**76.23**	**45**	P		**P**		**00 48 19.7**	**+0.8**
BMO					IAmb	IAmb		00 48 20.9	
	comp=Z,3.9nm,1.1s								
BMO	**Blue Mountains**	**76.23**	**45**	P		**P**		**00 48 19.7**	**+0.8**
BMO					pmax	pmax			
	comp=Z,4.0nm,1.1s								
JTMT	**Jette**	**76.24**	**41**	P		**P**		**00 48 19.4**	**+0.5**
PLID	**Pearl Lake**	**76.85**	**44**	P		**P**		**00 48 22.6**	**0.0**
PLID					IAmb	IAmb		00 48 23.2	
	comp=Z,2.6nm,0.9s								
BEKR	**Beckworth**	**77.21**	**50**	P		**P**		**00 48 25.2**	**+0.6**
BEKR					IAmb	IAmb		00 48 26.2	
	comp=Z,2.4nm,0.7s								
BRTR	**Keskin Array B**	**77.71**	**310**	*ce*P		**P**		**00 48 28.6**	**+1.4**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
BRTR	**Keskin Array B**	**77.71**	**310**	P		**P**		**00 48 27.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=104,slow=3.0,SNR=3.8								
	comp=Z,0.8nm,0.6s								
BUR08	**Bucovina Ar. S**	**77.92**	**320**	P		**P**		**00 48 28.2**	**0.0**
BUR08					IAmb	IAmb		00 48 29.3	
	comp=Z,4.6nm,1.3s								
BURAR	**Bucovina Array**	**77.93**	**320**	P		**P**		**00 48 28.5**	**+0.2**
PNTR	**Pine Nut**	**78.14**	**51**	P		**P**		**00 48 29.6**	**-0.1**
PNTR					IAmb	IAmb		00 49 02.9	
	comp=Z,3.3nm,0.8s								
RAYN	**Ar Rayn**	**78.18**	**290**	P		**P**		**00 48 29.8**	**-0.1**
RAYN	**Ar Rayn**	**78.18**	**290**	P		**P**		**00 48 29.8**	**-0.1**
RAYN					pmax	pmax			
	comp=Z,6.0nm,0.8s								
CMB	**Columbia Colle**	**78.23**	**52**	P		**P**		**00 48 30.5**	**+0.5**
CMB					IAmb	IAmb		00 48 31.6	
	comp=Z,1.7nm,0.7s								
CMB	**Columbia Colle**	**78.23**	**52**	P		**P**		**00 48 30.5**	**+0.5**
CMB					pmax	pmax			
	comp=Z,2.0nm,0.7s								
LRM	**Limekiln Ridge**	**78.41**	**42**	P		**P**		**00 48 31.8**	**+0.7**
YERR	**Yerington**	**78.43**	**51**	P		**P**		**00 48 32.6**	**+1.3**
YERR					IAmb	IAmb		00 48 33.1	
	comp=Z,8.2nm,1.4s								
MLR	**Muntele Rosu**	**78.85**	**318**	P		**P**		**00 48 33.6**	**+0.3**
MLR					IAmb	IAmb		00 48 47.5	
	comp=Z,4.6nm,1.4s								
MLR	**Muntele Rosu**	**78.85**	**318**	P		**P**		**00 48 33.6**	**+0.3**
MLR					pmax	pmax			
	comp=Z,5.0nm,1.4s								
PMPB	**Monarch Peak**	**79.00**	**54**	P		**P**		**00 48 35.5**	**+1.3**
KVN	**Kaiserville**	**79.11**	**50**	P		**P**		**00 48 36.2**	**+1.3**
KVN					IAmb	IAmb		00 48 36.8	
	comp=Z,2.1nm,0.7s								
KVN	**Kaiserville**	**79.11**	**50**	P		**P**		**00 48 36.3**	**+1.3**
KVN					pmax	pmax			
	comp=Z,2.0nm,0.7s								
NVAR	**Mina Array Bea**	**79.35**	**51**	P		**P**		**00 48 37.6**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=304,slow=5.1,SNR=3.9								
	comp=Z,0.8nm,0.6s								
KRLC	**Kraliky**	**80.52**	**326**	*e*P		**P**		**00 48 41.3**	**-0.7**
KRLC	**Kraliky**	**80.52**	**326**	*e*P		**P**		**00 48 41.3**	**-0.7**
TPAW	**Teton Pass**	**80.70**	**43**	P		**P**		**00 48 43.6**	**+0.2**
TPAW					IAmb	IAmb		00 48 48.1	
	comp=Z,3.0nm,1.1s								
HVU	**Hansel Valley**	**80.72**	**45**	P		**P**		**00 48 44.7**	**+1.3**
HVU					IAmb	IAmb		00 48 45.6	
	comp=Z,2.9nm,0.7s								
HVU	**Hansel Valley**	**80.72**	**45**	P		**P**		**00 48 44.7**	**+1.3**
HVU					pmax	pmax			
	comp=Z,3.0nm,0.7s								
R11A	**Troy Canyon, C**	**81.11**	**49**	P		**P**		**00 48 46.8**	**+1.2**
WCT	**Wildcat Mounta**	**81.39**	**51**	P		**P**		**00 48 47.4**	**+0.5**
WCT					IAmb	IAmb		00 48 49.9	
	comp=Z,2.9nm,1.4s								
TPNV	**Topopah Spring**	**81.54**	**51**	P		**P**		**00 48 48.3**	**+0.5**
TPNV					IAmb	IAmb		00 48 49.5	
	comp=Z,3.5nm,0.8s								
TPNV	**Topopah Spring**	**81.54**	**51**	P		**P**		**00 48 48.3**	**+0.5**
TPNV					pmax	pmax			
	comp=Z,3.0nm,0.9s								
GWY	**Greenwater Val**	**81.72**	**52**	P		**P**		**00 48 49.4**	**+0.6**
GWY					IAmb	IAmb		00 48 50.3	
	comp=Z,2.1nm,0.6s								
ELL	**Elmali**	**81.83**	**309**	P		**P**		**00 48 49.7**	**+0.5**
ELL	**Elmali**	**81.83**	**309**	P		**P**		**00 48 49.7**	**+0.5**
ELL					pmax	pmax			
	comp=Z,33nm,1.4s								
BW06	**Boulder Array**	**81.95**	**43**	P		**P**		**00 48 49.9**	**0.0**
PDAR	**Pinedale Array**	**81.95**	**43**	P		**P**		**00 48 50.1**	**+0.2**
PDAR	**Pinedale Array**	**81.95**	**43**	P		**P**		**00 48 50.5**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=298,slow=2.3,SNR=12								
	comp=Z,1.1nm,0.8s								
CKRC	**Cesky Krumlov**	**82.55**	**326**	*e*P		**P**		**00 48 52.6**	**0.0**
KHC	**Kasperske Hory**	**82.66**	**326**	P		**P**		**00 48 53.6**	**+0.4**
KHC					IAmb	IAmb		00 48 53.9	
	comp=Z,2.4nm,0.6s								
KHC	**Kasperske Hory**	**82.66**	**326**	*e*P		**P**		**00 48 53.2**	**0.0**
KHC	**Kasperske Hory**	**82.66**	**326**	*e*P		**P**		**00 48 53.2**	**0.0**
GEC2	**GERESS Array S**	**82.81**	**326**	P		**P**		**00 48 54.0**	**0.0**
GEC2					IAmb	IAmb		00 48 54.0	
	comp=Z,1.9nm,0.7s								
GERES	**GERESS Array B**	**82.81**	**326**	P		**P**		**00 48 53.8**	**-0.2**
GERES	**GERESS Array B**	**82.81**	**326**	P		**P**		**00 48 53.8**	**-0.2**
GERES	**GERESS Array B**	**82.81**	**326**	P		**P**		**00 48 53.8**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=41,slow=5.2,SNR=16								
	comp=Z,1.0nm,0.4s								
ARG	**Arkhangelos**	**83.29**	**310**	P		**P**		**00 48 57.2**	**+0.8**
ARG	**Arkhangelos**	**83.29**	**310**	P		**P**		**00 48 57.3**	**+0.8**
ARG					pmax	pmax			
	comp=Z,38nm,1.4s								
PMD	**Palm Desert**	**83.44**	**54**	P		**P**		**00 48 57.9**	**+0.6**
PMD					IAmb	IAmb		00 48 58.8	
	comp=Z,2.1nm,0.8s								
P18A	**Preston Nutter**	**83.57**	**46**	P		**P**		**00 48 58.6**	**+0.3**
P18A					IAmb	IAmb		00 49 01.1	
	comp=Z,3.0nm,0.7s								
SRU	**San Rafael Swe**	**83.74**	**46**	P		**P**		**00 48 59.1**	**+0.2**
SRU					IAmb	IAmb		00 49 00.8	
	comp=Z,2.9nm,0.9s								
SRU	**San Rafael Swe**	**83.74**	**46**	P		**P**		**00 48 59.2**	**+0.2**
SRU					pmax	pmax			
	comp=Z,3.0nm,0.9s								
TXAR	**Lajitas Array**	**94.47**	**50**	P		**P**		**00 49 50.6**	**+0.9**
TXAR	**Lajitas Array**	**94.47**	**50**	P		**P**		**00 49 50.6**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=298,slow=2.7,SNR=4.8								
	comp=Z,0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**116.32**	**310**	PKP		**PKPdf**		**00 55 10.1**	**-1.1**
	comp=Z,5.1nm,0.4s,baz=45,slow=2.3,SNR=2.0								

*KRNET **30** 00:53:19.0±0.1, 39.°77N×75.°73E, mb3.2*
*SOME **30** 00:53:19.9, 39.°88N×75.°70E, h0km*
*NNC **30** 00:53:23.3±1.2, 39.°98N×75.°70E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=9.4km s-min=7.6km az=116.0

ISC 30 00:53:17.6±3.0, 39.°8N±0.°1×75.°71E±0.°06, h3km±18km, n35,
σ1§02/52, 11C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.61**	**8**	⇑*i*P	**Pg**	**00 53 49.9**	**+1.3**
NRN	baz=6.0			⇑*i*S	**Sg**	**00 54 12.8**	**+3.3**
	baz=6.0						
ARLS	**Aral**	**2.28**	**333**	⇑*i*P	**Pb**	**00 54 00.4**	**+0.8**
ARLS	baz=33			⇑*i*S	**Sg**	**00 54 31.1**	**+0.1**
	baz=33						
ULHL	**Ulahol**	**2.44**	**9**	P	**Pg**	**00 54 05.1**	**+0.6**
	SNR=26						
ULHL	**Ulahol**	**2.44**	**9**	⇓*i*P	**Pb**	**00 54 03.1**	**+0.8**
ULHL	baz=9.0			⇓*i*S	**Sg**	**00 54 35.1**	**-1.0**
	baz=9.0						
BOOM	**Boomskoye usch**	**2.66**	**4**	⇓*e*P	**Pb**	**00 54 05.9**	**-0.1**
BOOM	baz=3.0			⇓*i*S	**Sb**	**00 54 40.4**	**+1.3**
	baz=3.0						
AML	**Almayashu**	**2.76**	**327**	P	**Pb**	**00 54 08.8**	**+1.0**
	SNR=16						
KBK	**Karagaybulak**	**2.88**	**349**	P	**Pb**	**00 54 11.0**	**+1.2**
	SNR=6.4						
KBK	**Karagaybulak**	**2.88**	**349**	⇓*e*P	**Pb**	**00 54 09.0**	**-0.7**
KBK	baz=49			⇓*i*S	**Sb**	**00 54 45.7**	**+0.3**
	baz=49						
AAK	**Ala-Archa**	**2.95**	**342**	P	**Pb**	**00 54 11.8**	**+0.9**
	SNR=6.2						
AAK	**Ala-Archa**	**2.95**	**342**	⇑*e*P	**Pb**	**00 54 10.2**	**-0.7**
AAK	baz=42			⇑*i*S	**Sb**	**00 54 47.3**	**-0.1**
	baz=42						
TKM2	**Tokmak 2**	**3.08**	**358**	P	**Pb**	**00 54 13.3**	**+0.1**
	SNR=6.7						
TKM2	**Tokmak 2**	**3.08**	**358**	⇑Pn	**Pb**	**00 54 12.6**	**-0.7**
	2.9nm,0.6s						
TKM2				⇑Lg	Lg	00 54 57.1	
	5.0nm,0.8s						
TKM2	**Tokmak 2**	**3.08**	**358**	⇑*i*P	**Pb**	**00 54 12.2**	**-1.1**
	baz=58						
TKM2				⇑*i*S	**Sb**	**00 54 50.8**	**-0.6**
	baz=58						
KST	**Kastek**	**3.21**	**3**	*e*P	**Pg**	**00 54 18.5**	**-0.7**
	3.2nm,0.7s						
KST				*e*S	**Sg**	**00 55 00.3**	**-0.5**
	7.5nm,0.8s						
KST	**Kastek**	**3.21**	**3**	Pg	**Pg**	**00 54 18.5**	**-0.7**
	3.2nm,0.7s						
KST				Lg	Lg	00 55 00.3	
	7.5nm,0.8s						
IZV	**Izvestkoviy**	**3.27**	**12**	*e*P	**Pg**	**00 54 20.5**	**+0.2**
	88nm,0.3s						
IZV				*e*S	**Sg**	**00 55 04.5**	**+1.8**
	6.2nm,0.6s						
IZV	**Izvestkoviy**	**3.27**	**12**	Pg	**Pg**	**00 54 20.5**	**+0.2**
	88nm,0.3s						
IZV				Lg	Lg	00 55 04.5	
	6.2nm,0.6s						
MDOK	**Medeo**	**3.47**	**16**	*e*P	**Pg**	**00 54 23.5**	**-0.8**
	2.8nm,0.5s						
MDOK				*e*S	**Sg**	**00 55 09.3**	**0.0**
	6.9nm,0.4s						
MDOK	**Medeo**	**3.47**	**16**	Pg	**Pg**	**00 54 24.1**	**-0.1**
	2.8nm,0.5s						
MDOK				Lg	Lg	00 55 09.8	
	4.9nm,0.7s						
USP	**Ospenovka**	**3.55**	**346**	P	**Pb**	**00 54 19.7**	**-1.4**
	SNR=6.1						
KOTS	**Kotyrbulak**	**3.56**	**17**	*e*P	**Pg**	**00 54 25.6**	**-0.2**
	4.1nm,0.5s						
KOTS				*e*S	**Sg**	**00 55 12.7**	**+0.9**
	8.4nm,0.7s						
KOTS	**Kotyrbulak**	**3.56**	**17**	Pg	**Pg**	**00 54 25.5**	**-0.2**
	4.1nm,0.5s						
KOTS				Lg	Lg	00 55 12.7	
	8.4nm,0.7s						
SGDS	**Sogindy**	**3.70**	**348**	*e*P	**Pg**	**00 54 26.8**	**-1.8**
	1.5nm,0.2s						
SGDS				*e*S	**Sg**	**00 55 15.2**	**-1.4**
	2.3nm,0.4s						
SGDS	**Sogindy**	**3.70**	**348**	Pg	**Pg**	**00 54 26.8**	**-1.8**
	1.5nm,0.4s						
SGDS				Lg	Lg	00 55 15.2	
	1.5nm,0.6s						
KRBS	**Karabastau**	**3.86**	**360**	*e*P	**Pg**	**00 54 30.7**	**-0.9**
	4.5nm,0.4s						
KRBS				*e*S	**Sg**	**00 55 21.4**	**-0.2**
	3.1nm,0.7s						
KRBS	**Karabastau**	**3.86**	**360**	Pg	**Pg**	**00 54 30.7**	**-0.9**
	4.5nm,0.4s						
KRBS				Lg	Lg	00 55 21.4	
	3.1nm,0.7s						
KTBS	**Karatobe**	**3.94**	**10**	*e*P	**Pg**	**00 54 32.5**	**-0.7**
	3.5nm,0.5s						
KTBS				*e*S	**Sg**	**00 55 25.2**	**+0.9**
	8.8nm,0.5s						
KTBS	**Karatobe**	**3.94**	**10**	Pg	**Pg**	**00 54 32.5**	**-0.7**
	3.5nm,0.5s						
KTBS				Lg	Lg	00 55 25.2	
	8.8nm,0.5s						
KUU	**Kurty**	**4.08**	**6**	*e*P	**Pg**	**00 54 35.1**	**-0.8**
	2.9nm,0.7s						
KUU				*e*S	**Sg**	**00 55 28.8**	**0.0**
	8.7nm,0.8s						
KUU	**Kurty**	**4.08**	**6**	Pg	**Pg**	**00 54 35.1**	**-0.8**
	2.9nm,0.7s						
KUU				Lg	Lg	00 55 28.8	
	8.7nm,0.8s						
KPKS	**Kokpek**	**4.26**	**31**	*e*P	**Pg**	**00 54 38.3**	**-0.9**
	2.2nm,0.6s						
KPKS				*e*S	**Sg**	**00 55 34.5**	**+0.2**
	7.3nm,0.6s						
KPKS	**Kokpek**	**4.26**	**31**	Pg	**Pg**	**00 54 38.3**	**-0.9**
	2.2nm,0.6s						
KPKS				Lg	Lg	00 55 34.5	
	7.3nm,0.6s			

comp=Z,56nm,18.1s,baz=287,slow=34
comp=Z,0.8nm,0.8s

ASAR	**Alice Springs**	**64.54**	**104**	P		**P**	**01 10 41.0**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=244,slow=6.3,SNR=14							
	comp=Z,1.6nm,0.7s							
WRA	**Warramunga Arr**	**66.36**	**100**	P		**P**	**01 10 51.7**	**-1.9**
WRA	**Warramunga Arr**	**66.36**	**100**	P		**P**	**01 10 53.0**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=247,slow=5.6,SNR=15							
	comp=Z,1.6nm,0.8s							
WB2	**Warramunga Arr**	**66.37**	**100**	P		**P**	**01 10 52.5**	**-1.2**
WB2				IAmb		IAmb	01 11 34.5	
	comp=Z,9.6nm,1.3s							
WB0	**Warramunga Arr**	**66.48**	**100**	P		**P**	**01 10 53.1**	**-1.2**
WB0				IAmb		IAmb	01 11 22.4	
	comp=Z,7.3nm,1.3s							
WR0	**Warramunga Arr**	**66.53**	**100**	P		**P**	**01 10 53.8**	**-0.8**
WR0				IAmb		IAmb	01 11 36.4	
	comp=Z,9.7nm,1.4s							
GNI	**Garni**	**70.66**	**347**	LR		LR	01 39 57.5	
	comp=Z,38nm,20.9s,baz=164,slow=34							
TORD	**Torodi Ar. Bea**	**71.07**	**298**	P		**P**	**01 11 23.7**	**+0.8**
	comp=Z,3.2nm,0.4s,baz=113,slow=5.3,SNR=1.7							
	comp=Z,3.2nm,0.4s							
IDI	**Anoyia**	**72.65**	**330**	P		**P**	**01 11 35.5**	**+3.5**
KBZ	**Khabaz**	**74.47**	**346**	LR		LR	01 43 54.3	
	comp=Z,33nm,19.3s,baz=153,slow=35							
PMSA	**Palmer Station**	**77.08**	**201**	LR		LR	01 41 00.8	
	comp=Z,33nm,21.4s,baz=186,slow=32							
MKAR	**Makanchi Array**	**78.06**	**15**	P		**P**	**01 12 02.7**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=166,slow=7.3,SNR=5.3							
	comp=Z,0.9nm,0.8s							
KEST	**Kesra**	**80.88**	**320**	LR		LR	01 48 04.2	
	comp=Z,62nm,19.4s,baz=181,slow=36							
RPZ	**Rata Peaks**	**83.25**	**137**	LR		LR	01 41 36.2	
	comp=Z,122nm,18.7s,baz=250,slow=30							
AKASG	**Malin Array Be**	**84.40**	**340**	P		**P**	**01 12 36.6**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=162,slow=4.3,SNR=2.2							
	comp=Z,0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**85.35**	**14**	P		**P**	**01 12 40.6**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=199,slow=7.0,SNR=5.1							
	comp=Z,0.8nm,0.5s							
ESDC	**Sonseca Array**	**91.36**	**316**	P		**P**	**01 13 11.8**	**+1.6**
	comp=Z,1.2nm,1.1s,baz=128,slow=2.1,SNR=5.1							
	comp=Z,1.2nm,1.1s							
NOA	**NORSAR Array B**	**98.61**	**338**	LR		LR	01 57 58.8	
	comp=Z,10.0nm,20.0s,baz=280,slow=35							
YKA	**Yellowknife Ar**	**146.60**	**356**	PKPbc		**PKPbc**	**01 19 44.4**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=347,slow=3.3,SNR=4.7							
ULM	**Lac du Bonnet**	**152.70**	**327**	PKPbc		**PKPbc**	**01 19 59.8**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=8.1,slow=1.6,SNR=4.2							
PDAR	**Pinedale Array**	**164.50**	**333**	PKP		**PKPdf**	**01 20 07.8**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=112,slow=1.6,SNR=5.0							
NVAR	**Mina Array Bea**	**170.80**	**357**	PKP		**PKPdf**	**01 20 13.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=108,slow=2.9,SNR=3.6							

*WEL **30** 01:00:00.4±3.6S×170.2±0.6E, h2km, ML3.6, Mw3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}0.01; M_{tt}2.71; M_{pp}-2.72; M_{rt}-0.62; M_{rp}-1.17; M_{tr}1.40; Fault plane solution: M_o3.33000×10^{14} NP1: ϕ_s238.00000°, δ63.00000°, λ-177.00000°. NP2: ϕ_s146.00000°, δ87.00000°, λ-27.00000°. Principal axes: T 32.2100, Plg16.0000°, Azm195.0000°; N 2.1100, Plg63.0000°, Azm320.0000°; P -34.3200, Plg21.0000°, Azm99.0000°;*

*WEL **30** 01:00:56.9±0.3, 43.2±2.1S×17.0±0.7E, h5km, M3.6/15, ML3.8/15, MLv3.6/15 Error ellipse: s-maj=0.0km s-min=0.0km az=137.9*

*NOU **30** 01:00:57.1, 43.4S×170.2E, h0km, MLv4.2/8, South Island, New Zealand*

ISC 30 01:00:57.1±1.1, 43.49S±0.03×170.27E±0.03, h4km±12km, n73, σ1°03/79, South Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GCSZ	**Gaunt Creek Bo**	**0.18**	**14**	P		**Pg**	**01 01 00.7**	**+0.1**
GCSZ				S		**Sg**	**01 01 03.0**	**-0.1**
FOZ	**Fox Glacier**	**0.33**	**263**	P		**Pg**	**01 01 03.9**	**+0.4**
FOZ				S		**Sg**	**01 01 08.5**	**+0.7**
WVZ	**Waitaha Valley**	**0.54**	**40**	P		**Pg**	**01 01 07.2**	**-0.3**
WVZ				S		**Sg**	**01 01 13.4**	**-1.1**
RPZ	**Rata Peaks**	**0.61**	**112**	P		**Pg**	**01 01 09.1**	**+0.2**
RPZ				S		**Sg**	**01 01 16.2**	**0.0**
RPZ	**Rata Peaks**	**0.61**	**112**	P		**Pg**	**01 01 09.1**	**+0.2**
ARCZ	**Arundel**	**0.80**	**125**	P		**Pg**	**01 01 12.4**	**-0.1**
LBZ	**Lake Benmore**	**0.90**	**184**	P		**Pg**	**01 01 14.2**	**-0.1**
MHCZ	**Mount Hutt**	**0.95**	**93**	P		**Pg**	**01 01 15.6**	**+0.3**
TMZ	**Timaru**	**1.04**	**149**	P		**Pg**	**01 01 16.9**	**-0.2**
INZ	**Inchbonnie**	**1.16**	**49**	P		**Pg**	**01 01 17.9**	**-1.3**
JCZ	**Jackson Bay**	**1.22**	**241**	P		**Pg**	**01 01 19.6**	**-0.9**
JCZ				S		**Sg**	**01 01 36.7**	**+0.4**
WACZ	**Wakanui South**	**1.23**	**112**	P		**Pg**	**01 01 20.9**	**+0.2**
WACZ				S		**Sg**	**01 01 36.1**	**-0.5**
OXZ	**Oxford**	**1.30**	**83**	P		**Pg**	**01 01 21.7**	**-0.4**
OXZ				S		**Sn**	**01 01 39.8**	**-0.2**
RACZ	**Rakaia**	**1.38**	**100**	P		**Pn**	**01 01 23.2**	**0.0**
ODZ	**Otahua Downs**	**1.58**	**170**	P		**Pn**	**01 01 25.6**	**-0.3**
ODZ	**Otahua Downs**	**1.58**	**170**	P		**Pn**	**01 01 25.8**	**-0.1**
WKZ	**Wanaka**	**1.61**	**213**	P		**Pn**	**01 01 26.3**	**-0.1**
LTZ	**Lake Taylor**	**1.63**	**65**	P		**Pn**	**01 01 26.8**	**+0.2**
MQZ	**McQueen's Vall**	**1.75**	**98**	P		**Pn**	**01 01 27.5**	**-0.7**
AMCZ	**Amberley**	**1.77**	**81**	P		**Pn**	**01 01 28.0**	**+0.1**
EAZ	**Earnscleugh**	**1.87**	**201**	P		**Pn**	**01 01 29.6**	**-0.4**
AKCZ	**Akaroa Harbour**	**1.96**	**102**	P		**Pb**	**01 01 33.8**	**+0.4**
OKCZ	**Okains Bay**	**2.04**	**97**	P		**Pn**	**01 01 32.2**	**-0.1**
MSZ	**Milford Sound**	**2.06**	**234**	P		**Pb**	**01 01 34.8**	**-0.2**
DSZ	**Denniston Nort**	**2.08**	**34**	P		**Pn**	**01 01 31.9**	**-1.0**
GVZ	**Greta Valley S**	**2.09**	**76**	P		**Pn**	**01 01 32.8**	**-0.1**
MLZ	**Mavora Lakes**	**2.42**	**219**	P		**Pn**	**01 01 37.4**	**-0.2**
TUZ	**Tuapeka**	**2.50**	**190**	P		**Pn**	**01 01 38.0**	**-0.6**
THZ	**Tophouse**	**2.60**	**49**	P		**Pn**	**01 01 40.0**	**-0.1**
KHZ	**Kahutara**	**2.63**	**67**	P		**Pn**	**01 01 40.4**	**0.0**
KHZ	**Kahutara**	**2.63**	**67**	P		**Pn**	**01 01 40.5**	**+0.1**
MRNZ	**Matariki Terra**	**2.79**	**42**	P		**Pn**	**01 01 42.6**	**0.0**
WHZ	**Wether Hill Ro**	**2.91**	**214**	P		**Pn**	**01 01 43.7**	**-0.6**
DCZ	**Deep Cove**	**2.98**	**227**	P		**Pn**	**01 01 45.3**	**+0.1**
QRZ	**Quartz Range**	**3.15**	**33**	P		**Pn**	**01 01 46.8**	**-0.7**
QRZ	**Quartz Range**	**3.15**	**33**	P		**Pn**	**01 01 47.4**	**-0.2**
TKNZ	**Takaka Hill**	**3.17**	**40**	P		**Pn**	**01 01 47.6**	**-0.2**
BSWZ	**Blackbirch Sta**	**3.20**	**58**	P		**Pn**	**01 01 50.4**	**+2.1**
NNZ	**Nelson**	**3.24**	**46**	P		**Pn**	**01 01 49.3**	**+0.5**
CMWZ	**Cape Campbell**	**3.40**	**60**	P		**Pn**	**01 01 52.9**	**+2.0**
TCW	**Tory Channel**	**3.75**	**54**	P		**Pn**	**01 01 57.0**	**+1.3**
DUWZ	**D'Urville Isla**	**3.82**	**47**	P		**Pn**	**01 01 57.7**	**+0.9**
SNZO	**South Karori**	**3.94**	**58**	P		**Pn**	**01 01 59.7**	**+1.3**
MSWZ	**Moikau Station**	**4.23**	**62**	P		**Pn**	**01 02 02.4**	**0.0**
CAW	**Cannon Point**	**4.29**	**58**	P		**Pn**	**01 02 02.6**	**-0.5**
KIW	**Kapiti Island**	**4.34**	**54**	P		**Pn**	**01 02 03.8**	**-0.1**
OGWZ	**Otaki Gorge**	**4.52**	**55**	P		**Pn**	**01 02 05.9**	**-0.5**
HOWZ	**Holdsworth Sta**	**4.68**	**58**	P		**Pn**	**01 02 08.7**	**+0.1**
MRZ	**Mangatainoka R**	**4.86**	**56**	P		**Pn**	**01 02 10.2**	**-0.8**
NMEZ	**Namu Road**	**4.90**	**35**	P		**Pn**	**01 02 12.1**	**+0.6**
NBEZ	**Newall Road No**	**5.01**	**34**	P		**Pn**	**01 02 13.5**	**+0.3**
KHEZ	**Kahui Hut**	**5.05**	**35**	P		**Pn**	**01 02 14.3**	**+0.5**
PREZ	**Palmer Road**	**5.08**	**37**	P		**Pn**	**01 02 14.7**	**+0.7**
NEZ	**North Egmont**	**5.11**	**36**	P		**Pn**	**01 02 15.3**	**+0.7**
PKE	**Pukeiti**	**5.13**	**34**	P		**Pn**	**01 02 15.4**	**+0.6**
WAZ	**Wanganui**	**5.14**	**45**	P		**Pn**	**01 02 16.5**	**+1.5**
DREZ	**Durham Road**	**5.22**	**36**	P		**Pn**	**01 02 16.5**	**+0.5**
BFZ	**Birch Farm**	**5.26**	**60**	P		**Pn**	**01 02 16.5**	**-0.1**
TSZ	**Takapari Road**	**5.47**	**53**	P		Pn	01 02 25.6	+6.1
WNVZ	**Wahianoa**	**5.78**	**46**	P		**Pn**	**01 02 26.2**	**+2.4**
TUVZ	**Tukino**	**5.85**	**46**	P		**Pn**	**01 02 26.7**	**+1.9**
NGZ	**Ngauruhoe**	**5.89**	**45**	P		**Pn**	**01 02 28.1**	**+2.7**
BHHZ	**Black Hill Sta**	**5.91**	**49**	P		**Pn**	**01 02 25.8**	**+0.3**
NNVZ	**North Ngauruho**	**5.93**	**45**	P		**Pn**	**01 02 28.7**	**+2.7**
WTVZ	**West Tongariro**	**5.93**	**44**	P		**Pn**	**01 02 27.6**	**+1.8**
OTVZ	**Oturere**	**5.93**	**45**	P		**Pn**	**01 02 28.5**	**+2.5**
TMVZ	**Te Maari**	**5.99**	**45**	P		**Pn**	**01 02 29.5**	**+2.8**
HIZ	**Hauiti**	**6.07**	**36**	P		**Pn**	**01 02 27.2**	**-0.4**
HIZ	**Hauiti**	**6.07**	**36**	P		**Pn**	**01 02 27.2**	**-0.4**
KATZ	**Kakaramea**	**6.09**	**44**	P		**Pn**	**01 02 31.1**	**+3.0**
TLZ	**Tolley Road**	**6.52**	**40**	P		**Pn**	**01 02 34.2**	**+0.3**
AWAZ	**Awhitu Peninsu**	**7.24**	**29**	P		**Pn**	**01 02 43.5**	**-0.2**
OUZ	**Omahuta**	**8.65**	**18**	P		**Pn**	**01 03 03.7**	**+0.6**

*KRNET **30** 01:07:12.7±0.1, 39.31N×73.56E, mb2.7*

ISC 30 01:07:15.4±2.2, 39.32N±0.09×73.45E±0.08, h10km, n8, σ1°65/15, 13C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DRK	**Karamyk**	**1.29**	**278**	⇑	*iP*	**Pn**	**01 07 38.6**	**-1.1**
	baz=78							
DRK				⇑	*iS*	**Sn**	**01 07 57.1**	**0.0**
	baz=78							
OHH	**Osh**	**1.31**	**337**	⇑	*iP*	**Pn**	**01 07 37.5**	**-2.3**
	baz=34							
OHH				⇑	*iS*	**Sg**	**01 07 56.6**	**-0.9**
	baz=34							
BTK	**Batken**	**2.16**	**291**	⇑	*iP*	**Pn**	**01 07 52.2**	**+0.7**
	baz=90							
BTK				⇑	*iS*	**Sb**	**01 08 21.2**	**-0.3**
	baz=90							
GAR	**Garm**	**2.46**	**264**	⇑	*iP*	**Pn**	**01 07 56.5**	**+0.9**
	baz=64							
GAR				⇑	*iS*	**Sb**	**01 08 28.5**	**-1.5**
	baz=64							
ARLS	**Aral**	**2.62**	**14**	⇓	*eP*	**Pn**	**01 07 57.5**	**-0.5**
	baz=13							
ARLS				⇓	*iS*	**Sn**	**01 08 30.0**	**0.0**
	baz=13							
TRKS	**Terek-Say**	**2.82**	**322**	⇑	*iP*	**Pn**	**01 08 00.5**	**-0.2**
	baz=20							
TRKS				⇑	*iS*	**Sn**	**01 08 35.2**	**+0.3**
	baz=20							
TKM2	**Tokmak 2**	**3.95**	**24**	⇑	Pn	**Pn**	**01 08 16.6**	**+0.4**
	2.1nm,1.0s							
TKM2				⇑	Lg	Lg	01 09 13.9	
	2.1nm,0.8s							
KK31	**Karatay Array**	**4.38**	**331**	⇑	Pn	**Pn**	**01 08 22.4**	**+0.5**
	0.3nm,0.4s,baz=136,slow=13,SNR=7.2							
KK31				⇓	Sn	**Sn**	**01 09 17.7**	**+4.6**
	0.3nm,0.3s,baz=137,slow=22							
KK31				⇓	Lg	Lg	01 09 28.1	
	0.7nm,0.5s							

*IDC **30** 01:09:25.7±1.2, 2.21N×95.92E, h0km, mb4.1/7, mbtmp4.0/9, ML3.7/2, MS3.3/8, Error ellipse: s-maj=28.7km s-min=16.7km az=32.0*

*NEIC **30** 01:09:31.8±0.5, 2.37N±0.10×96.2E±0.1, h35km±9km, mb4.2/9, Error ellipse: s-maj=21.7km s-min=10.9km az=60.0*

ISC 30 01:09:30.0±0.9, 2.4N±0.1×96.1E±0.1, h25km, n41, σ0°80/33, mb4.3/11, MS3.4/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.78**	**126**			**Pn**	**01 09 59.7**	**+0.5**
GSI				Sn		**Sn**	**01 10 20.7**	**-0.3**
RPSI	**Rantau Prapat**	**2.81**	**83**			**Pn**	**01 10 13.9**	**+0.5**
PSI	**Prapat**	**2.82**	**81**	Pn		**Pn**	**01 10 14.2**	**+0.5**
	4.1nm,0.3s,baz=275,slow=6.1,SNR=11							
PSI				Lg		Lg	01 11 04.4	
	3.2nm,0.3s,baz=324,slow=18,SNR=6.3							
PSI				LR		LR	01 11 40.0	
	comp=Z,335nm,18.3s,baz=150,slow=44							
	8.8nm,0.3s							
KULM	**Kulim**	**5.37**	**57**			**Pn**	**01 10 48.8**	**+0.2**
PALK	**Pallekele**	**16.13**	**288**	LR		LR	01 18 31.7	
	comp=Z,90nm,20.3s,baz=250,slow=34							
CMAR	**Chiang Mai Arr**	**16.24**	**10**	Pn		**Pn**	**01 13 17.7**	**+1.0**
	0.2nm,0.3s,baz=197,slow=11,SNR=11							
CMAR				LR		LR	01 20 15.3	
	comp=Z,63nm,19.2s,baz=200,slow=40							
	1.9nm,0.6s							
CRAI	**Chiangrai**	**18.24**	**13**	P		**P**	**01 13 40.3**	**-1.4**
HYBB	**Hyderabad (bro**	**22.86**	**312**	*eP*		**P**	**01 14 31.4**	**-0.3**
HYBB				*eS*		**S**	**01 18 40.4**	**+0.3**
H08S2	**Diego Garcia H**	**25.59**	**247**	T		T	01 41 29.0	
	baz=68,slow=75,SNR=692							
H08S3	**Diego Garcia H**	**25.60**	**247**	T		T	01 41 29.1	
	baz=68,slow=75,SNR=573							
H08S1	**Diego Garcia H**	**25.61**	**247**	T		T	01 41 30.3	
	baz=68,slow=75,SNR=715							
RAMN	**Ramite**	**26.11**	**340**	*eP*		**P**	**01 15 03.7**	**+1.3**
JIRN	**Jiri**	**26.90**	**340**	*eP*		**P**	**01 15 09.8**	**+0.1**
	23nm,0.7s							
PKI	**Pulchoki**	**27.09**	**339**	*eP*		**P**	**01 15 12.0**	**+0.6**
PKIN	**Phulchoki**	**27.10**	**339**	*eP*		**P**	**01 15 12.4**	**+1.0**
GUN	**Gumba**	**27.24**	**340**	*eP*		**P**	**01 15 12.6**	**-0.1**
	30nm,0.8s							
DMN	**Daman**	**27.24**	**338**	*eP*		**P**	**01 15 14.4**	**+1.8**
GKN	**Gorkha**	**27.77**	**338**	*eP*		**P**	**01 15 17.7**	**+0.5**
	20nm,0.9s							
H01W3	**Cape Leeuwin H**	**40.71**	**157**	T		T	02 00 22.8	
	baz=332,slow=76,SNR=318							
H01W2	**Cape Leeuwin H**	**40.73**	**157**	T		T	02 00 19.5	
	baz=332,slow=76,SNR=309							
H01W1	**Cape Leeuwin H**	**40.73**	**157**	T		T	02 00 24.1	
	baz=332,slow=76,SNR=343							
WB0	**Warramunga Arr**	**43.52**	**122**	P		**P**	**01 17 31.6**	**-0.3**
WB0				IAmb		IAmb	01 17 31.8	
	comp=Z,6.1nm,1.2s							
WRA	**Warramunga Arr**	**43.55**	**122**	P		**P**	**01 17 31.0**	**-1.2**
WRA	**Warramunga Arr**	**43.55**	**122**	P		**P**	**01 17 32.2**	**0.0**
	comp=Z,0.7nm,0.7s,baz=303,slow=9.0,SNR=10							
WRA				LR		LR	01 39 20.7	
	comp=Z,81nm,18.2s,baz=252,slow=41							
	comp=Z,0.7nm,0.7s							
WB2	**Warramunga Arr**	**43.56**	**122**	P		**P**	**01 17 32.2**	**0.0**
WB2				IAmb		IAmb	01 18 10.5	
	comp=Z,7.5nm,1.3s							
CHGR	**Chuyangaron**	**43.73**	**329**	P		**P**	**01 17 31.8**	**-1.7**
ASAR	**Alice Springs**	**44.94**	**127**	P		**P**	**01 17 43.3**	**0.0**
	comp=Z,0.4nm,0.6s,baz=298,slow=7.8,SNR=9.0							
	comp=Z,0.4nm,0.6s							
MK31	**Makanchi Array**	**45.88**	**347**	P		**P**	**01 17 50.5**	**+0.1**
MK31				IAmb		IAmb	01 17 51.0	
	comp=Z,2.4nm,0.7s							
MKAR	**Makanchi Array**	**45.88**	**347**	P		**P**	**01 17 50.1**	**-0.2**
MKAR	**Makanchi Array**	**45.88**	**347**	P		**P**	**01 17 50.5**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=162,slow=7.9,SNR=31							
MKAR				LR		LR	01 40 19.7	
	comp=Z,27nm,19.5s,baz=262,slow=40							
	comp=Z,3.0nm,0.6s							
MAKZ	**Makanchi**	**45.96**	**346**	P		**P**	**01 17 51.0**	**0.0**
MAKZ				IAmb		IAmb	01 17 52.0	
	comp=Z,3.8nm,0.7s							
SONM	**Songino Array**	**46.17**	**10**	P		**P**	**01 17 52.4**	**-0.3**
SONM				IAmb		IAmb	01 17 53.9	
	comp=Z,1.6nm,0.8s							
SONM	**Songino Array**	**46.17**	**10**	P		**P**	**01 17 52.4**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=189,slow=10,SNR=8.6							
	comp=Z,1.6nm,0.7s							
ZAA0	**Zalesovo Array**	**52.26**	**352**	P		**P**	**01 18 39.0**	**-0.2**
ZALV	**Zalesovo Beam**	**52.26**	**352**	P		**P**	**01 18 39.0**	**-0.2**
ZALV	**Zalesovo Beam**	**52.26**	**352**	P		**P**	**01 18 39.0**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=177,slow=7.5,SNR=15							
	comp=Z,2.6nm,0.4s							
AKTO	**Aktyubinsk**	**57.72**	**332**	LR		LR	01 46 38.1	
	comp=Z,26nm,18.0s,baz=167,slow=39							
ARU	**Arti**	**61.71**	**337**	LR		LR	01 47 51.3	
	comp=Z,29nm,19.0s,baz=150,slow=37							
BELG	**Belogornoye**	**64.03**	**329**	LR		LR	01 50 14.9	
	comp=Z,26nm,19.8s,baz=152,slow=38							
FINES	**FINESS Array B**	**78.49**	**333**	P		**P**	**01 21 30.7**	**+1.9**
	comp=Z,3.4nm,1.0s,baz=104,slow=5.9,SNR=3.5							
	comp=Z,3.4nm,1.0s							
ARCES	**ARCESS Array B**	**81.10**	**340**	P		**P**	**01 21 42.9**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=81,slow=5.6,SNR=4.2							
	comp=Z,3.2nm,0.9s							

*MEX **30** 01:11:57.9±0.9, 25.70N×99.70W, h5km, MD4.1*

*NEIC **30** 01:12:03.4±1.5, 25.8N±0.1×99.65W±0.10, h38km±9km, mb3.6/9, Md4.0/16(MEX), Error ellipse: s-maj=16.4km s-min=13.1km az=182.0*

ISC 30 01:11:56.5±0.6, 25.57N±0.04×99.62W±0.05, h10km, n46, σ1°61/51, 1C, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MNIG	**Monterrey**	**0.61**	**274**	*eP*		**Pg**	**01 12 08.0**	**-0.3**
MNIG				*i* S		**Sg**	**01 12 15.5**	**-0.8**
LNIG	**Linares**	**0.68**	**168**	⇑	*iP*	**Pn**	**01 12 11.8**	**-0.5**
	baz=344,slow=16							
LNIG					*eS*	**Sn**	**01 12 24.2**	**+1.3**
KVTX	**Kingsville**	**2.50**	**38**	Pn		**Pb**	**01 12 40.6**	**-0.9**
GTIG	**Gomez Farias**	**2.53**	**171**	*eP*		**Pn**	**01 12 38.5**	**+0.8**
GTIG				*eS*		**Sb**	**01 13 12.3**	**-0.8**
833A	**Chaparral WMA,**	**2.75**	**4**	Pn		**Pn**	**01 12 42.0**	**+1.3**
735A	**Kenedy**	**3.65**	**26**	Pn		**Pn**	**01 12 53.8**	**+0.7**
RPIG	**Rio Verde**	**3.68**	**185**	*eP*		**Pg**	**01 13 05.2**	**-1.9**
RPIG				*eS*		**Sb**	**01 13 43.3**	**-3.3**

ZAIG	**Zacatecas**	**3.88**	**225**	*eP*		**Pn**	**01 12 56.1**	**-0.4**
AAIG	**Aguscalientes**	**4.39**	**216**	*eP*		**Pn**	**01 13 05.6**	**+2.2**
JCT	**Junction City**	**4.89**	**358**	Pn		**Pn**	**01 13 11.8**	**+1.6**
JCT	**Junction City**	**4.89**	**358**	*eP*		**Pn**	**01 13 11.9**	**+1.6**
JCT				*eS*		**Sn**	**01 14 02.6**	**-4.4**
TX31	**Lajitas Ar. Si**	**5.20**	**317**	Pn		**Pn**	**01 13 15.4**	**+1.0**
TX32	**Lajitas Array**	**5.20**	**317**	Pn		**Pn**	**01 13 15.5**	**+1.0**
TXAR	**Lajitas Array**	**5.20**	**317**	Pn		**Pn**	**01 13 15.1**	**+0.7**
435B	**Jarrell**	**5.50**	**19**	Pn		**Pn**	**01 13 19.7**	**+1.3**
CXUV	**Coxquihui**	**5.69**	**160**	*eP*		**Pg**	**01 13 45.9**	**+0.4**
CXUV				*eS*		**Sb**	**01 14 40.5**	**-3.7**
WHTX	**Lake Whitney,**	**6.67**	**16**	Pn		**Pn**	**01 13 34.9**	**+0.2**
ABTX	**Abilene, Hawle**	**7.03**	**360**	Pn		**Pn**	**01 13 40.4**	**+0.9**
CLN7	**Carlsbad 7**	**7.74**	**333**	Pn		**Pn**	**01 13 51.2**	**+1.8**
GDL2	**Guadalupe Moun**	**7.80**	**329**	Pn		**Pn**	**01 13 52.5**	**+2.2**
MNTX	**Cornudas Mount**	**7.93**	**322**	Pn		**Pn**	**01 13 53.4**	**+1.5**
LOOK	**Love County**	**8.66**	**14**	Pn		**Pn**	**01 14 02.1**	**+0.2**
MSTX	**Muleshoe**	**8.81**	**343**	Pn		**Pn**	**01 14 03.2**	**-0.8**
X34A	**Smith Ranch, M**	**9.13**	**9**	Pn		**Pn**	**01 14 09.3**	**+0.9**
WMOK	**Wichita Mounta**	**9.17**	**4**	Pn		**Pn**	**01 14 08.9**	**0.0**
AMTX	**Amarillo**	**9.45**	**350**	Pn		**Pn**	**01 14 14.0**	**+1.2**
X37A	**Clayton**	**9.71**	**21**	Pn		**Pn**	**01 14 17.3**	**+1.0**
WLAR	**White Oak Lake**	**9.87**	**33**	Pn		**Pn**	**01 14 19.9**	**+1.5**
121A	**Cookes Peak, D**	**9.96**	**316**	Pn		**Pn**	**01 14 21.3**	**+1.5**
BCOK	**Bluff Creek, N**	**10.20**	**9**	Pn		**Pn**	**01 14 24.0**	**+1.0**
319A	**Douglas**	**10.28**	**306**	Pn		**Pn**	**01 14 26.2**	**+2.0**
OK029	**Liberty Lake**	**10.36**	**10**	Pn		**Pn**	**01 14 25.5**	**+0.3**
PVMO	**Portageville**	**13.74**	**36**			**Pn**	**01 15 13.6**	**+2.1**
Y49A	**Blount Mountai**	**14.13**	**51**	Pn		**Pn**	**01 15 18.9**	**+2.1**
Y14A	**Wickenburg**	**14.30**	**309**	Pn		**Pn**	**01 15 20.6**	**+1.5**
PV13	**Radium Mtn., P**	**14.77**	**330**	Pn		**Pn**	**01 15 26.8**	**+1.0**
ISCO	**Idaho Springs**	**15.05**	**342**	P		**P**	**01 15 37.6**	**+2.6**
MTPU	**Mount Pierson**	**16.37**	**322**	P		**P**	**01 15 50.9**	**+1.2**
BAR	**Barrett**	**16.49**	**299**	Pn		**Pn**	**01 15 49.5**	**+1.5**
BAR				IAmb		IAmb	01 16 30.3	
	comp=Z,9.4nm,1.2s							
TMUT	**Trail Mountain**	**16.80**	**327**	Pn		**Pn**	**01 15 51.0**	**-1.2**
TMUT				IAmb		IAmb	01 16 00.1	
	comp=Z,4.2nm,1.1s							
TCRU	**Three Creeks R**	**16.92**	**323**	Pn		**Pn**	**01 15 51.5**	**-2.2**
GWY	**Greenwater Val**	**18.03**	**310**	Pn		**Pn**	**01 16 07.2**	**-0.3**
ECSD	**EROS Data Cent**	**18.29**	**7**			**Pn**	**01 16 09.3**	**-1.0**
ECSD				IAmb		IAmb	01 16 13.6	
	comp=Z,3.0nm,0.8s							
KVN	**Kaiserville**	**20.55**	**315**	P		Pn	01 16 38.2	+0.5
KVN				IAmb		IAmb	01 16 40.2	
	com

WHYT S Sb 01 43 16.0 -0.8
baz=49
CHN1 Nanshi 0.32 192 ⇑P Pg 01 43 11.2 -0.1
baz=192
CHN1 eS Sb 01 43 17.4 0.0
baz=192
YUS Yu-Shan 0.33 92⇓iP Pg 01 43 11.9 +0.3
baz=91
YUS eS Sb 01 43 17.7 -0.2
baz=91
ICHU Yijhu 0.33 244⇓iP Pg 01 43 11.4 +0.1
baz=246
ICHU eS Sg 01 43 16.9 +1.1
baz=246
WJS Zhushan 0.34 20⇑iP Pg 01 43 12.0 +0.4
baz=20
WJS eS Sb 01 43 17.4 -0.5
baz=20
WSL Shuilin Townsh 0.34 273⇓eP Pg 01 43 10.8 -0.8
baz=275
WSL eS Sg 01 43 16.6 +0.3
baz=275
STYH Taoyuan 0.37 154⇓eP Pg 01 43 10.9 -1.2
baz=152
STYH eS Sg 01 43 16.4 -0.7
baz=152
STYT Tauyuan 0.37 157⇓iP Pg 01 43 12.1 -0.1
baz=156
STYT S Sb 01 43 18.0 -0.7
baz=156
WSF Szhu 0.37 291 eP Pg 01 43 12.3 +0.1
baz=292
WSF eS Sb 01 43 18.9 +0.2
baz=292
WNT Mingjian 0.38 12 ⇑P Pb 01 43 12.9 -0.3
baz=12
WNT eS Sb 01 43 19.4 +0.4
baz=12
WNT1 Nantou City 0.41 10 eP Pb 01 43 13.6 -0.1
baz=10.0
WNT1 eS Sb 01 43 20.2 +0.4
baz=10.0
SGST Jiashian 0.42 182 eP Pg 01 43 12.2 -0.9
baz=181
SGST eS Sg 01 43 19.1 +0.4
baz=181
SSLB Suanglung 0.43 49⇑eP Pg 01 43 13.3 0.0
baz=48
SSLB eS Sb 01 43 19.9 -0.6
baz=48
WRL Guolierlin Hig 0.45 333⇓eP Pg 01 43 12.6 -0.9
baz=333
WRL eS Sg 01 43 19.5 0.0
baz=333
WMLT Mailiao 0.46 311 eP Pg 01 43 13.9 +0.2
baz=312
WMLT eS Sb 01 43 21.5 +0.3
baz=312
WYL Yuanlin Townsh 0.46 358 eP Pb 01 43 14.3 -0.2
baz=358
WYL eS Sb 01 43 21.9 +0.7
baz=358
WTCT Ta-ch'eng 0.46 321 P Pg 01 43 14.0 +0.1
baz=322
WTCT eS Sb 01 43 21.6 +0.3
baz=322
SSHA Shanhua 0.46 218 eP Pb 01 43 14.9 +0.2
baz=219
SSHA eS Sb 01 43 22.8 +1.4
baz=219
TYC Yuchr 0.46 31⇑iP Pb 01 43 14.3 -0.4
baz=31
TYC eS Sb 01 43 21.8 +0.4
baz=31
SMLT Sun Moon Lake 0.47 36 ⇑P Pg 01 43 14.3 +0.3
baz=36
SMLT eS Sb 01 43 21.8 +0.2
baz=36
CHN3 Shinhua 0.48 207 eP Pb 01 43 14.9 +0.1
baz=208
CHN3 eS Sb 01 43 23.1 +1.3
baz=208
SCLT Jiali 0.49 229 eP Pg 01 43 14.9 +0.5
baz=229
ELDTW Lidau 0.50 129⇓eP Pg 01 43 14.4 -0.1
baz=128
ELDTW eS Sg 01 43 21.1 -0.1
baz=128
SLGT Liugui 0.51 175 eP Pb 01 43 15.3 -0.2
baz=175
SLGT eS Sb 01 43 23.6 +0.9
baz=175
SHHT Tainan City 0.53 206 eP Pg 01 43 15.3 +0.2
baz=206
SHHT eS Sb 01 43 24.9 +1.6
baz=206
WWF Wufeng 0.54 10⇑eP Pg 01 43 15.0 -0.4
baz=9.0
WWF eS Sb 01 43 23.6 -0.1
baz=9.0
VWDT VWDT 0.56 63⇓iP Pb 01 43 16.0 -0.2
baz=63
VWDT eS Sb 01 43 24.2 +0.1
baz=63
TAI1 Yung-k'ang 0.57 217 eP Pb 01 43 16.8 +0.3
baz=216
TAI1 eS Sn 01 43 27.0 -0.7
baz=216
WCHH Zhanghua 0.57 356 eP Pg 01 43 16.2 +0.3
baz=356
WCHH eS Sb 01 43 25.1 +0.5
baz=356
TSCK Chigu Township 0.59 233 eP Pg 01 43 15.4 -0.8
baz=234
TSCK eS Sg 01 43 24.7 +0.7
baz=234
WPL Puli Township 0.60 33 eP Pg 01 43 16.4 -0.1
baz=32
WPL eS Sb 01 43 25.3 -0.2
baz=32
DPDB Guoxing 0.61 30 eP Pg 01 43 16.6 +0.1
baz=29
DPDB eS Sb 01 43 25.9 +0.3
baz=29
WCS Beigang Elemen 0.62 27⇑eP Pg 01 43 15.9 -1.0
baz=27
WCS eS Sg 01 43 25.0 -0.1
baz=27
SCST Cishan 0.62 189 eP Pb 01 43 17.5 +0.2
baz=189
SCST eS Sn 01 43 27.6 -1.3
baz=189
TCU Taichung 0.65 6 eP Pb 01 43 17.7 0.0
baz=7.0
TCU eS Sb 01 43 27.1 +0.5
baz=7.0
TWF1 Yuli 0.66 103⇓iP Pb 01 43 17.6 -0.4
baz=103
TWF1 eS Sb 01 43 26.8 -0.2
baz=103
EHY Hungye 0.66 90 eP Pg 01 43 17.6 0.0
baz=89
EHY eS Sb 01 43 27.3 +0.1
baz=89
EYUL Yuli 0.68 103 P Pg 01 43 17.9 0.0
baz=103
EYUL eS Sg 01 43 26.8 -0.1
baz=103
WUSB Renai 0.68 44 ⇑P Pg 01 43 17.7 -0.2
baz=44
WUSB eS Sb 01 43 27.2 -0.6
baz=44
OWD Renai 0.69 50 ⇑P Pg 01 43 18.1 -0.1
baz=49
OWD eS Sb 01 43 27.5 -0.7
baz=49
TWM1 Shoushan 0.70 193⇓eP Pn 01 43 20.1 -0.1
baz=193
ECS Chishang 0.70 125 eP Pb 01 43 18.6 -0.1
baz=125
ECS eS Sb 01 43 27.9 -0.3
baz=125
FULB Fuli 0.71 115⇓eP Pb 01 43 18.9 +0.1
baz=115
FULB eS Sn 01 43 29.6 -1.5
baz=115
SSD Sandimen 0.76 178 eP Pg 01 43 19.4 +0.1
baz=177
SSD eS Sb 01 43 30.3 +0.5
baz=177
HGSD Ruisui 0.76 91 eP Pb 01 43 19.8 +0.1
baz=90
HGSD eS Sn 01 43 30.9 -1.4
baz=90
CHGB Renai 0.77 43⇑eP Pg 01 43 19.2 -0.4
baz=43
CHGB eS Sb 01 43 30.1 -0.1
baz=43
LONT Longtian 0.77 140 eP Pg 01 43 19.4 -0.3
baz=140
LONT eS Sb 01 43 30.1 -0.1
baz=140
EGFH Guangfu 0.78 78 eP Pb 01 43 19.9 -0.1
baz=77
EGFH eS Sb 01 43 30.5 +0.1
baz=77
SGLT Jiouru 0.78 187 eP Pn 01 43 21.8 +0.5
baz=187
TSMG Majia 0.80 177 eP Pb 01 43 20.0 -0.3
baz=177
TSMG eS Sb 01 43 31.1 +0.2
baz=177
CHKT Chengkung 0.81 120 eP Pg 01 43 20.6 +0.2
baz=119
CHKT eS Sn 01 43 32.9 -0.7
baz=119
TWGBT Beinan 0.81 147⇓eP Pb 01 43 20.2 -0.4
baz=147
TWGBT eS Sb 01 43 31.6 +0.1
baz=147
ESL Shilin 0.82 68 eP Pg 01 43 20.8 +0.2
baz=68
ESL eS Sb 01 43 32.0 +0.2
baz=68
ESL Shilin 0.82 68 eS Pb 01 43 20.7 -0.1
baz=236
WHP Taichung City 0.83 22 eP Pb 01 43 20.7 -0.3
baz=22
WHP eS Sb 01 43 32.9 +0.7
baz=22
EDH Donghe 0.84 129 eP Pg 01 43 21.0 +0.1
baz=129
EDH eS Sn 01 43 33.4 -0.8
baz=129
WDJ Dajia District 0.84 3 eP Pg 01 43 21.2 +0.2
baz=2.0
WDJ eS Sn 01 43 33.5 -0.8
baz=2.0
TWQ1 Liyutan 0.86 11 eP Pb 01 43 21.3 0.0
baz=11
TWQ1 eS Sn 01 43 34.0 -0.7
baz=11
WHF Hehuan Shan 0.88 44 eP Pg 01 43 21.7 -0.1
baz=44
WHF eS Sb 01 43 33.6 -0.2
baz=44
MASBT Mashibuluo 0.89 178⇑eP Pb 01 43 21.6 -0.3
baz=178
MASBT eS Sg 01 43 34.0 +0.5
baz=178
WDGT Dungji 0.90 254⇓eP Pb 01 43 20.8 -1.2
baz=255
WDGT eS Sb 01 43 32.8 -1.0
baz=255
TTN Taitung 0.90 146 eP Pg 01 43 22.1 0.0
baz=145
TTN eS Sn 01 43 36.1 +0.4
baz=145
TDCB Techi 0.91 34 eP Pb 01 43 21.2 -1.1
baz=34
TDCB eS Sg 01 43 34.3 +0.2
baz=34
WSSB Gushan 0.91 200 eP Pn 01 43 23.1 0.0
baz=200
TWT Tachien 0.91 35 eP Pb 01 43 21.3 -1.1
baz=34
NSY Sanyi 0.92 9 eP Pg 01 43 22.7 +0.3
baz=10.0
NSY eS Sn 01 43 36.5 +0.2
baz=10.0
ETM Tongmen 0.94 61 eP Pg 01 43 22.7 -0.1
baz=60
PHUB P'eng-hu 0.94 271 eP Pg 01 43 21.3 -1.5
baz=271
PHUB eS Sb 01 43 34.4 -0.8
baz=271
ECL Taimali 0.96 160 eP Pb 01 43 22.9 -0.2
baz=160
ECL eS Sg 01 43 35.9 +0.1
baz=160
PNG Penghu 0.96 274⇓eP Pb 01 43 21.7 -1.4
baz=274
PNG eS Sb 01 43 34.9 -0.8
baz=274
TEYL Yanliau Villag 0.98 68 eP Pn 01 43 24.1 0.0
baz=66
TEYL eS Sn 01 43 38.3 +0.4
baz=66
SSPT Xinbi 1.02 182 eP Pn 01 43 24.4 -0.1
baz=182
HWA Hwalien 1.04 63 eP Pg 01 43 24.7 +0.1
baz=63
HWA eS Sn 01 43 39.0 -0.1
baz=63
NMLH Miaoli 1.04 10 eP Pb 01 43 24.5 0.0
baz=9.0
NMLH eS Sg 01 43 38.5 +0.1
baz=9.0
VCHM Qimei 1.11 255⇑eP Pb 01 43 24.1 -1.6
baz=255
SCZT Fangliau 1.13 179 eP Pb 01 43 25.6 -0.3
baz=179
NACB Ninganchiao 1.13 54 eP Pg 01 43 26.1 -0.3
baz=53
NACB eS Sn 01 43 40.9 -0.6
baz=53
EAST Anshuo 1.14 168 eP Pn 01 43 26.3 +0.1
baz=168
EAST eS Sg 01 43 42.6 +1.1
baz=168
ETL Fush Village 1.14 55 eP Pg 01 43 27.4 +0.8
baz=55
ETL eS Sg 01 43 41.9 +0.2
baz=55
LDUT Ludao 1.15 136 eP Pn 01 43 25.9 -0.4
baz=136
LDUT eS Sg 01 43 42.5 +0.7
baz=136
TAW Tawu 1.17 166 eP Pg 01 43 27.1 -0.2
baz=166
NSTT Nanjuang 1.18 18 eP Pn 01 43 26.4 -0.5
baz=18
NSTT eS Sn 01 43 42.6 -0.1
baz=18
TAWH Dawu Township 1.19 167 eP Pn 01 43 25.9 -1.0
baz=167
TAWH eS Sb 01 43 42.2 0.0
baz=167
LIOB Emei 1.20 18 eP Pn 01 43 26.6 -0.5
baz=18
NFF Wufeng Townshi 1.22 23 eP Pn 01 43 26.1 -1.3
baz=23
NFF eS Sb 01 43 42.1 -1.1
baz=23
SLIU Shizi 1.29 172 eP Pn 01 43 28.1 -0.3
baz=172
SLIU eS Sn 01 43 45.8 +0.3
baz=172
LATG Datong 1.33 39 eP Pb 01 43 29.6 +0.1
baz=39
NSK Sanguang 1.36 31 eP Pn 01 43 28.5 -0.8
baz=31
NSK eS Sg 01 43 47.8 -0.7
baz=31
YHNB Yeheng 1.36 31 eP Pb 01 43 29.7 -0.3
baz=31
YHNB eS Sg 01 43 48.7 +0.1
baz=31
NDT Datong Townshi 1.38 37 eP Pn 01 43 29.7 +0.2
baz=37
ENA Nanau 1.39 48 eP Pn 01 43 30.6 +0.2
baz=49
ENTT Nioudou 1.44 38 eP Pn 01 43 30.0 -0.3
baz=38
JYNG Yonagunijimaku 2.34 66 eP Pn 01 43 44.1 +1.3
YOJ Yonaguni jima 2.40 66 eP Pn 01 43 45.0 +1.4
YOJ eS Sb 01 44 15.3 -1.9
IRIF Iriomote-Funau 2.98 73 P Pn 01 43 53.5 +1.9
IRIF S Sn 01 44 29.5 +2.3
HATJ Hateruma jima 2.99 79 P Pn 01 43 52.7 +1.0
HATJ eS Sn 01 44 28.9 +1.6
JKRS Kuro-shima 3.21 76 P Pn 01 43 56.2 +1.6
JKRS eS Sn 01 44 34.2 +1.5
JIJ Ishigaki jima 3.35 75 eP Pn 01 43 57.4 +0.7
JIJ S Sn 01 44 37.1 +0.8
JTJ Tarama 3.92 72 P Pn 01 44 03.3 -1.1
JTJ S Sn 01 44 51.5 +1.2

TAP 30 01:43:09.5, 23.90N×121.58E, h32km±1km, ML2.0, 1C, B, Taiwan

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

TEYL Yanliau Villag 0.03 154 P Pb 01 43 15.2 +0.2
baz=73
TEYL S Sb 01 43 19.1 +0.5
baz=73
HWA Hwalien 0.08 15 eP Pb 01 43 15.4 +0.3
baz=20
ETM Tongmen 0.11 309 eP Pb 01 43 15.7 +0.4
baz=309
ETM eS Sb 01 43 21.7 +2.5
baz=309
ESL Shilin 0.16 239 eP Pb 01 43 15.6 -0.1
baz=236
TWD Chiawan 0.18 4 iP Pb 01 43 15.9 0.0
baz=6.0
TEGC Jichi Village 0.19 192 eP Pb 01 43 15.5 -0.5
baz=190
TEGC eS Sn 01 43 21.3 +1.0
baz=190
ETL Fush Village 0.26 8 iP Pb 01 43 16.6 -0.2
baz=8.0
ETL eS Sn 01 43 23.5 +1.3
baz=8.0
EGFH Guangfu 0.27 212 eP Pb 01 43 16.0 -0.8
baz=212
NACB Ninganchiao 0.28 2 iP Pb 01 43 16.7 -0.2
baz=2.0
NACB eS Sn 01 43 23.9 +1.4
baz=2.0
ETLH Xiulin Townshi 0.32 343⇑iP Pb 01 43 17.5 -0.1
baz=343
ETLH eS Sn 01 43 24.2 +0.5
baz=343
WHF Hehuan Shan 0.38 310 eP Pb 01 43 18.9 +0.2
baz=311
HGSD Ruisui 0.43 200 eP Pb 01 43 17.6 -1.4
baz=200

IDC 30 01:55:31.8±1.6, 34.80N×23.71E, h0km, mb4.0/5, mbtmp3.8/6, ML3.6/1, MS3.4/1, Error ellipse: s-maj=39.5km s-min=28.1km az=129.0
THE 30 01:55:37.1, 34.89N×23.22E, h12km±3km, ML2.8/3, Error ellipse: s-maj=4.2km s-min=1.1km az=84.0
ATH 30 01:55:38.6, 35.01N×23.35E, h37km±9km, ML2.8/4, Error ellipse: s-maj=10.1km s-min=1.7km az=57.0
ISK 30 01:55:39.1, 35.04N×23.43E, h27km, ML3.0/12
DDA 30 01:55:43.0±0.0, 34.68N×24.41E, h57km, ML3.1
ISC 30 01:55:38.8±1.1, 35.01N±0.05×23.46E±0.05, h41km±9km, n44, σ2.01/57, mb4.0/5, Crete

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

KNDR Palaiochora Ch 0.29 40 P Pn 01 55 46.0 -1.1
KNDR Palaiochora Ch 0.29 40 PG Pn 01 55 46.2 -0.9
KNDR SG Sn 01 55 51.3 -1.5
GVD Gavdhos 0.54 108 P Pn 01 55 51.4 +1.3
GVD Gavdhos 0.54 108 PG Pn 01 55 51.4 +1.3
GVD SG Sn 01 56 00.4 +2.2
GVD Gavdhos 0.54 108 P Pn 01 55 51.4 +1.3
GVD S Sn 01 56 00.3 +2.2
GVD AML AML 01 56 03.8
comp=N,5048μm,0.4s
GVD AML AML 01 56 06.8
comp=E,3214μm,0.3s
GVDS Gavdos 0.55 107 P Pn 01 55 50.9 +0.8
GVDS S Sn 01 56 00.7 +2.5
comp=E,1μm,0.4s
GVDS Gavdos 0.55 107 PG Pn 01 55 51.0 +0.8
GVDS SG Sn 01 55 59.8 +1.6
RODP Rodopos 0.60 24 P Pn 01 55 52.0 +1.0
RODP S Sn 01 56 04.4 +4.7
comp=E,245nm,0.5s
RODP Rodopos 0.60 24 PG Pn 01 55 51.5 +0.5
RODP SG Sn 01 56 00.6 +0.9
IMMV Iera Moni Meta 0.62 43 P Pn 01 55 52.1 +0.9
IMMV Iera Moni Meta 0.62 43 PG Pn 01 55 52.1 +0.9
IMMV SG Sn 01 56 01.5 +1.4
IMMV Iera Moni Meta 0.62 43 P Pn 01 55 52.1 +0.9
IMMV S Sn 01 56 02.3 +2.2
IMMV AML AML 01 56 05.5
comp=N,2538μm,0.7s
IMMV AML AML 01 56 06.6
comp=E,2532μm,0.5s
ANKY Antikythira Is 0.87 352 P Pn 01 55 55.4 +0.8
ANKY S Sn 01 56 10.1 +4.1
comp=E,570nm,0.7s
ANKY Antikythira Is 0.87 352 P Pn 01 55 55.3 +0.8
ANKY S Sn 01 56 06.3 +0.3
ANKY AML AML 01 56 15.0
comp=N,908μm,0.4s
ANKY AML AML 01 56 16.2
comp=E,1174μm,0.9s
SIVA Sivas 1.11 89 P Pn 01 56 00.9 +3.0
IDI Anoyia 1.21 76 P Pn 01 56 01.2 +1.9
IDI Anoyia 1.21 76 PN Pn 01 56 00.8 +1.5
IDI SN Sn 01 56 16.7 +2.2
IDI Anoyia 1.21 76 P Pn 01 56 01.5 +2.2
IDI AML AML 01 56 24.2
comp=E,220μm,0.4s
IDI AML AML 01 56 26.3
comp=N,244μm,0.3s
KTHA Kythira Island 1.29 346 P Pn 01 56 01.2 +0.9
KTHA Kythira Island 1.29 346 PN Pn 01 56 01.3 +0.9
KTHA Kythira Island 1.29 346 P Pn 01 56 01.3 +1.0
KTHR Kythira 1.30 344 P Pn 01 56 01.1 +0.6
HRKL Herakleio 1.38 77 PN Pn 01 56 03.3 +1.7
VLI Veliai 1.76 346 P Pn 01 56 07.5 +0.7
SANT Santorini 2.12 50 PN Pn 01 56 13.6 +1.8
SANT SN Sn 01 56 38.9 +1.9
ZKR Zakros 2.27 86 PN Pn 01 56 15.9 +2.2
KRND KRANIDI 2.38 354 P Pn 01 56 16.3 +1.0
ITM Ithomi 2.50 331 PN Pn 01 56 18.5 +1.6
APE Apeiranthos 2.66 39 PN Pn 01 56 21.1 +2.0
KARP Karpathos 3.08 79 PN Pn 01 56 27.9 +3.0
ANX Ano Chora 3.79 341 P Pn 01 56 35.7 +1.0
TURN Turunc 4.27 64 P Pn 01 56 40.6 -0.6
TAVA DENIZLI_Tavas 5.05 59 P Pn 01 56 51.6 -0.4
AKAS Kas 5.16 75 P Pn 01 56 51.3 -2.3
AKAS S Sn 01 57 44.1 -7.8
AKAS iAML AML 01 58 06.0
comp=N,23nm,1.4s
CAEL Denizli, Camel 5.20 64 P Pn 01 56 53.8 -0.4
GOLH Golhisar 5.42 64 P Pn 01 56 58.4 +1.2
GERES GERESS Array B 15.60 335 Pn P 01 59 20.0 +0.6
comp=N,0.1nm,0.3s,baz=155,slow=12,SNR=2.6
comp=N,0.2nm,0.3s
AKASG Malin Array Be 16.24 13 Pn P 01 59 26.8 +0.5
comp=N,0.9nm,0.3s,baz=205,slow=8.2,SNR=4.9
KVAR Kislovodsk Arr 17.30 53 LR LR 02 08 41.3
comp=N,119nm,19.2s,baz=271,slow=46
NOA NORSAR Array B 27.21 347 P P 02 01 19.0 +0.5
comp=N,0.8nm,1.0s,baz=156,slow=12,SNR=2.5
comp=N,0.8nm,1.0s
TORD Torodi Ar. Bea 29.34 227 P P 02 01 36.6 -1.2
comp=N,3.7nm,0.3s,baz=34,slow=10,SNR=3.9
comp=N,3.7nm,0.3s
ARCES ARCESS Array B 34.60 1 P P 02 02 22.8 -0.6
comp=N,3.0nm,0.9s,baz=204,slow=8.5,SNR=2.1
comp=N,3.0nm,0.9s
MKAR Makanchi Array 45.02 56 P P 02 03 49.3 -1.0
comp=N,0.2nm,0.4s,baz=267,slow=8.0,SNR=5.2
comp=N,0.2nm,0.4s
ZALV Zalesovo Beam 46.12 46 P P 02 03 57.0 -1.8
comp=N,0.6nm,0.3s,baz=268,slow=6.6,SNR=2.7
comp=N,0.6nm,0.3s

NOU 30 02:10:23.8, 29°14′S×116°82′E, h0km, MLv3.9/8, Western Australia, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORW	Morawa	0.69	276	P	Pg	02 10 37.0	0.0
BLDU	Ballidu	1.47	184	P	Pn	02 10 50.8	-0.8
KLBR	Kellerberrin	2.57	162	P	Pn	02 11 06.6	-0.2
MUN	Mundaring	2.88	190	P	Pn	02 11 11.0	+0.1
MEEK	Meekatharra	2.96	33	P	Pn	02 11 12.0	0.0
NWAO	Narrogin (SRO)	3.79	175	P	Pn	02 11 22.6	-0.9
RKGY	Rocky Gully	5.46	179	P	Pn	02 11 46.6	+0.2
	59nm,1.5s						
GIRL	Giralia	6.88	340	P	Pn	02 12 05.9	0.0

NOU 30 02:15:45.4, 21°15S×169°74E, h0km, ML3.8/10, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	1.63	258	P	Pn	02 16 15.3	0.0
LIFNC	LIFOU	2.37	279	P	Pn	02 16 24.2	-1.3
PINNC	Pines Island,	2.58	235	P	Pn	02 16 27.8	-0.6
YATNC	Mamie plateau,	2.80	251	P	Pn	02 16 30.8	-0.7
OUENC	Ouen Island, N	2.98	244	P	Pn	02 16 33.6	-0.3
DZM	Mont Dzumac	3.20	263	P	Pn	02 16 38.0	+0.9
ONTNC	Ouen Toro	3.27	249	P	Pn	02 16 38.1	+0.2
NOUC	Port Laguerre	3.33	253	P	Pn	02 16 39.3	+0.5
KOUNC	Koumac, New Ca	5.14	276	P	Pn	02 17 03.6	0.0

*IDC **30** 03:03:39.8±1.3, 0°.23N×177°.20W, h0km, mb4.2/7, mbtmp4.4/11, ML4.4/4, MS3.4/19, Error ellipse: s-maj=46.5km s-min=19.9km az=152.0*
*NEIC **30** 03:03:41.2±0.6, 0°.5N±0°.1×177°.4W±0°.1, h10km±2km, mb4.5/7, Error ellipse: s-maj=30.8km s-min=11.6km az=139.0*
ISC 30 03:03:41.0±0.8, 0°.3N±0°.1×177°.2W±0°.1, h10km, n41, σ0s96/20, mb4.4/10, MS3.4/17, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	8.51	161	T	T	03 14 52.9	
	baz=339,slow=74,SNR=384						
H10N3	ASCENSION HYDR	8.52	161	T	T	03 14 51.5	
	baz=339,slow=74,SNR=919						
H10N1	ASCENSION HYDR	8.53	161	T	T	03 14 41.6	
	baz=339,slow=74,SNR=1278						
H10S3	ASCENSION HYDR	9.53	164	T	T	03 16 05.8	
	baz=342,slow=74,SNR=78						
H10S2	ASCENSION HYDR	9.54	164	T	T	03 16 08.7	
	baz=238,slow=74,SNR=43						
DBIC	Dimbokro	13.89	63		Pn	03 06 57.4	-0.8
DBIC	Dimbokro	13.89	63	Pn	Pn	03 06 56.6	-1.5
	1.2nm,0.3s,baz=260,slow=16,SNR=20						
DBIC				Sn	Sn	03 09 19.2	-13
	0.3nm,0.3s,baz=159,slow=8.4,SNR=2.6						
DBIC				LR	LR	03 10 38.7	
	comp=Z,115nm,20.6s,baz=242,slow=30						
	6.8nm,0.7s						
BBTS	Babate	14.30	3	Pn	Pn	03 07 03.0	-0.8
	2.2nm,0.3s,baz=143,slow=22,SNR=2.3						
BBTS				Sn	Sn	03 09 29.8	-13
	1.8nm,0.3s,baz=152,slow=18,SNR=2.0						
	50nm,1.1s						
KOWA	Kowa	19.25	42	P	P	03 08 05.2	-0.6
KOWA				IAmb	IAmb	03 08 08.8	
	comp=Z,12nm,0.9s						
KOWA	Kowa	19.25	42	P	P	03 08 06.0	+0.2
	comp=Z,1.2nm,0.3s,baz=227,slow=10,SNR=12						
KOWA				S	Sn	03 11 27.0	-16
	comp=Z,1.8nm,0.7s,baz=337,slow=20,SNR=1.6						
KOWA				LR	LR	03 15 14.2	
	comp=Z,176nm,18.9s,baz=276,slow=36						
	comp=Z,7.9nm,0.5s						
RCBR	Riachuelo	19.59	252	P	P	03 08 07.7	-2.0
RCBR	Riachuelo	19.59	252	P	P	03 08 09.6	0.0
	comp=Z,0.8nm,0.3s,baz=225,slow=11,SNR=11						
RCBR				S	S	03 11 33.6	-17
	comp=Z,9.8nm,1.1s,baz=340,slow=13,SNR=1.4						
	comp=Z,32nm,1.3s						
TOA0	Torodi Ar. Sit	22.70	55	P	P	03 08 42.6	-0.6
TOA0				IAmb	IAmb	03 08 45.2	
	comp=Z,10nm,0.9s						
TORD	Torodi Ar. Bea	22.70	55	P	P	03 08 42.9	-0.3
TORD				IAmb	IAmb	03 08 45.1	
	comp=Z,26nm,0.6s						
TORD	Torodi Ar. Bea	22.70	55	P	P	03 08 42.9	-0.3
	comp=Z,17nm,0.3s,baz=237,slow=11,SNR=7.3						
	comp=Z,17nm,0.3s						
MDT	Midelt	34.48	19	LR	LR	03 23 46.9	
	comp=Z,43nm,20.4s,baz=193,slow=35						
MDP	Montagnes des	35.67	278	LR	LR	03 22 52.3	
	comp=Z,36nm,20.6s,baz=140,slow=32						
TSUM	Tsumeb	39.27	122	LR	LR	03 24 37.5	
	comp=Z,47nm,18.9s,baz=313,slow=32						
KEST	Kesra	43.08	32	P	P	03 11 43.5	+2.0
	comp=Z,1.7nm,0.8s,baz=259,slow=10,SNR=4.0						
KEST				LR	LR	03 30 28.4	
	comp=Z,85nm,19.4s,baz=291,slow=37						
	comp=Z,1.7nm,0.8s						
CPUP	Villa Florida	46.81	232	LR	LR	03 29 30.0	
	comp=Z,40nm,18.4s,baz=70,slow=33						
LSZ	Lusaka	47.47	111	LR	LR	03 29 53.6	
	comp=Z,48nm,19.4s,baz=139,slow=33						
MBAR	Mbarara	47.99	91	LR	LR	03 30 33.7	
	comp=Z,48nm,18.6s,baz=242,slow=34						
PCRV	Puerto La Cruz	48.14	283	P	P	03 12 22.3	+0.4
	comp=Z,9.3nm,1.1s,baz=70,slow=11,SNR=1.5						
	comp=Z,9.3nm,1.1s						
SUR	Sutherland	48.42	136	LR	LR	03 29 26.3	
	comp=Z,26nm,18.9s,baz=41,slow=32						
LBTB	Lobatse	48.45	124	P	P	03 12 25.0	+0.8
LBTB				IAmb	IAmb	03 13 09.1	
	comp=Z,4.0nm,1.4s						
SJG	San Juan	51.20	293	LR	LR	03 29 12.7	
	comp=Z,19nm,21.8s,baz=96,slow=30						
KMBO	Kilima Mbogo	54.51	92	LR	LR	03 32 44.9	
	comp=Z,49nm,21.5s,baz=87,slow=32						
GERES	GERESS Array B	55.23	24	P	P	03 13 15.0	+0.6
	comp=Z,0.7nm,0.8s,baz=211,slow=9.3,SNR=6.3						
	comp=Z,0.7nm,0.8s						
ROSC	El Rosal	57.18	276	LR	LR	03 36 40.3	
	comp=Z,36nm,18.8s,baz=236,slow=35						
NNA	Nana	60.39	256	LR	LR	03 38 56.4	
	comp=Z,44nm,18.1s,baz=72,slow=35						
BNN	Bunyan	61.84	45	P	P	03 14 00.2	-0.5
BNN				IAmb	IAmb	03 14 02.0	
	comp=Z,13nm,0.9s						
PLCA	Paso Flores	63.20	223	LR	LR	03 40 01.6	
	comp=Z,16nm,18.6s,baz=176,slow=34						
HFS	Hagfors	64.31	17	LR	LR	03 43 13.4	
	comp=Z,20nm,19.0s,baz=84,slow=37						
NOA	NORSAR Array B	64.39	15	LR	LR	03 44 27.4	
	comp=Z,11nm,18.0s,baz=60,slow=38						
KBZ	Khabaz	68.64	42	P	P	03 14 44.9	+0.3
	comp=Z,2.3nm,0.8s,baz=232,slow=3.3,SNR=4.7						
	comp=Z,2.3nm,0.8s						
FINES	FINESS Array B	69.28	21	P	P	03 14 48.5	+0.4
	comp=Z,3.0nm,0.9s,baz=211,slow=6.2,SNR=6.7						
	comp=Z,3.0nm,0.9s						
ARU	Arti	81.93	33	LR	LR	03 57 32.8	
	comp=Z,22nm,18.2s,baz=117,slow=39						
TXAR	Lajitas Array	86.74	299	P	P	03 16 26.2	+0.2
	comp=Z,0.4nm,0.8s,baz=111,slow=6.9,SNR=3.5						
	comp=Z,0.4nm,0.8s						
YKA	Yellowknife Ar	93.16	333	LR	LR	03 56 03.1	
	comp=Z,18nm,18.4s,baz=302,slow=34						
ASAR	Alice Springs	143.61	132	PKP	PKiKP	03 23 19.4	-1.2
	comp=Z,0.7nm,1.0s,baz=216,slow=2.0,SNR=2.4						
WRA	Warramunga Arr	146.00	127	PKPbc	PKPdf	03 23 21.1	-0.3
	comp=Z,1.2nm,1.1s,baz=240,slow=3.2,SNR=1.5						

*IDC **30** 03:09:34.2±2.5, 19°.93S×177°.99W, h623km±31km, mb3.2/8, mbtmp4.3/8, Error ellipse: s-maj=24.0km s-min=17.8km az=170.0*
*NEIC **30** 03:09:37.6±1.3, 20°.40S±0°.07×178°.4W±0°.2, h616km±15km, mb4.3/21, Error ellipse: s-maj=25.7km s-min=6.0km az=71.0*
ISC 30 03:09:35.5±0.9, 20°.3S±0°.1×178°.3W±0°.1, h600km, n38, σ1s16/38, mb4.2/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.35	260	P	P	03 12 38.5	+0.6
OUZ	Omahuta	16.49	204	P	P	03 12 58.3	+1.1
QRZ	Quartz Range	21.91	199	P	P	03 13 45.2	-0.8
THZ	Tophouse	22.66	197	P	P	03 13 51.5	-1.4
THZ				IAmb	IAmb	03 14 02.8	
	comp=Z,16nm,1.1s						
WHZ	Wether Hill Ro	27.92	201	P	P	03 14 39.3	+0.3
CTA	Charters Tower	33.24	264	P	P	03 15 24.9	0.0
	comp=Z,6.8nm,0.6s,baz=89,slow=10,SNR=7.6						
	comp=Z,6.8nm,0.6s						
CTAO	Charters Tower	33.24	264	P	P	03 15 24.9	0.0
CTAO				IAmb	IAmb	03 15 25.6	
	comp=Z,8.6nm,0.9s						
TOO	Toolangi	35.80	233	P	P	03 15 45.8	-0.1
TOO				IAmb	IAmb	03 15 52.1	
	comp=Z,5.0nm,1.0s						
COEN	Coen	37.30	273	P	P	03 15 58.1	-0.3
COEN				IAmb	IAmb	03 15 59.1	
	comp=Z,7.6nm,0.8s						
STKA	Stephens Creek	37.63	244	P	P	03 16 00.8	-0.2
STKA	Stephens Creek	37.63	244	P	P	03 16 01.6	+0.6
	comp=Z,1.5nm,0.5s,baz=122,slow=13,SNR=4.2						
	comp=Z,1.5nm,0.5s						
BBOO	Buckleboo	42.39	243	P	P	03 16 38.4	-0.4
BBOO				IAmb	IAmb	03 16 58.4	
	comp=Z,6.7nm,0.9s						
WR0	Warramunga Arr	44.17	262	P	P	03 16 52.7	-0.1
AS31	Alice Springs	44.30	257	P	P	03 16 53.6	-0.2
ASAR	Alice Springs	44.30	257	P	P	03 16 52.7	-1.1
ASAR	Alice Springs	44.30	257	P	P	03 16 53.5	-0.3
	comp=Z,2.2nm,0.5s,baz=91,slow=7.9,SNR=49						
ASAR				S	S	03 22 47.8	+2.3
	comp=Z,1.3nm,0.7s,baz=93,slow=16,SNR=10						
	comp=Z,2.2nm,0.5s						
WB0	Warramunga Arr	44.34	262	P	P	03 16 53.3	-0.8
WB2	Warramunga Arr	44.35	262	P	P	03 16 53.4	-0.8
WB2				IAmb	IAmb	03 16 53.8	
	comp=Z,3.5nm,0.6s						
WRA	Warramunga Arr	44.36	262	P	P	03 16 53.4	-0.9
WRA	Warramunga Arr	44.36	262	P	P	03 16 53.1	-1.1
	comp=Z,1.3nm,0.3s,baz=97,slow=8.0,SNR=2.5						
WRA				S	S	03 22 46.8	+0.4
	comp=Z,0.4nm,0.7s,baz=101,slow=14,SNR=0.6						
	comp=Z,1.3nm,0.3s						
FITZ	Fitzroy Crossi	52.79	262	P	P	03 17 56.1	-0.4
	comp=Z,1.7nm,0.5s,baz=82,slow=6.1,SNR=8.5						
	comp=Z,1.7nm,0.5s						
SIJI	Sorong	52.93	285	P	P	03 17 56.2	-1.3
SIJI	Sorong	52.93	285	P	P	03 17 56.2	-1.3
	comp=Z,9.5nm,0.7s,baz=279,slow=11,SNR=4.7						
	comp=Z,9.5nm,0.7s						
VNDA	Vanda	58.08	185	P	P	03 18 32.0	0.0
	comp=Z,0.6nm,0.7s,baz=359,slow=7.6,SNR=9.3						
	comp=Z,0.6nm,0.7s						
MJAR	Matsushiro Arr	69.89	324	P	P	03 19 44.2	-3.2
	comp=Z,0.9nm,0.5s,baz=146,slow=6.2,SNR=2.2						
	comp=Z,0.9nm,0.5s						
PWL	Port Wells	84.42	14	P	P	03 21 08.5	+3.1
PMR	Palmer	84.89	14	P	P	03 21 07.1	-0.5
PMR				IAmb	IAmb	03 21 07.6	
	comp=Z,4.7nm,0.7s						
SCM	Sheep Creek Mo	85.51	14	P	P	03 21 12.3	+1.6
SCM				IAmb	IAmb	03 21 14.3	
	comp=Z,9.9nm,0.9s						
PAX	Paxson	86.93	14	P	P	03 21 19.6	+2.2
PAX				IAmb	IAmb	03 21 20.2	
	comp=Z,3.7nm,0.6s						
RIDG	Independent Ri	87.74	14	P	P	03 21 21.7	+0.6
RIDG				IAmb	IAmb	03 21 22.5	
	comp=Z,3.6nm,0.5s						
DOT	Dot Lake	87.84	15	P	P	03 21 23.6	+2.0
J26L	Joseph Creek	88.68	14	P	P	03 21 26.0	+0.5
J26L				IAmb	IAmb	03 21 26.9	
	comp=Z,3.4nm,0.7s						
FINES	FINESS Array B	135.51	344	PKP	PKPdf	03 27 45.6	-2.2
	comp=Z,3.2nm,1.1s,baz=113,slow=3.6,SNR=3.5						
AKASG	Malin Array Be	142.71	331	PKP	PKPdf	03 27 54.5	-6.7
	comp=Z,0.9nm,0.4s,baz=41,slow=4.6,SNR=8.1						
BRTR	Keskin Array B	146.51	312	PKPbc	PKPdf	03 28 07.2	-1.1
	comp=Z,0.9nm,0.5s,baz=158,slow=3.2,SNR=2.7						
BUR08	Bucovina Ar. S	146.74	331		PKPdf	03 28 08.5	+0.1
CLL	Collm	147.81	347	*i* PKPbc	PKPdf	03 28 10.5	+0.7
GERES	GERESS Array B	149.94	344	PKPbc	PKPdf	03 28 14.1	+0.7
	comp=Z,0.3nm,0.3s,baz=25,slow=2.6,SNR=5.6						

*IDC **30** 03:10:00.5±0.7, 12°.07N×143°.08E, h0km, mb4.2/15, mbtmp4.2/16, ML3.8/1, Error ellipse: s-maj=20.4km s-min=16.6km az=99.0*
ISC 30 03:10:05.3±0.7, 12°.1N±0°.1×143°.1E±0°.1, h31km, n23, σ0s82/19, mb4.3/14, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.33	49	Pn	Pn	03 10 41.8	+0.3
	24nm,0.3s,baz=216,slow=12,SNR=5.5						
GUMO				Sn	Sn	03 11 09.1	0.0
	32nm,0.3s,baz=51,slow=22,SNR=4.4						
	67nm,0.3s						
H11S3	WAKE ISLAND Hy	23.65	71	T	T	03 39 54.1	
	baz=253						
H11S1	WAKE ISLAND Hy	23.67	71	T	T	03 39 53.9	
	baz=253						
H11S2	WAKE ISLAND Hy	23.67	71	T	T	03 39 54.4	
	baz=253						
H11N1	WAKE ISLAND Hy	24.12	69	T	T	03 40 30.0	
	baz=255,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	24.14	69	T	T	03 40 31.5	
	baz=255,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	24.14	69	T	T	03 40 23.2	
	baz=255,slow=75,SNR=14						
WRA	Warramunga Arr	32.93	195	P	P	03 16 36.6	-0.6
	1.0nm,0.3s,baz=18,slow=9.6,SNR=6.7						
	1.0nm,0.3s						
ASAR	Alice Springs	36.61	194	P	P	03 17 09.1	+0.2
	0.4nm,0.7s,baz=21,slow=11,SNR=6.9						
	0.4nm,0.7s						
KLR	Kul'dur	38.24	348	P	P	03 17 22.6	+0.1
	2.6nm,0.9s,baz=144,slow=14,SNR=4.1						
	2.6nm,0.9s						
DZM	Mont Dzumac	40.93	146	P	P	03 17 45.5	+0.2
	11nm,0.9s,baz=302,slow=13,SNR=2.9						
	11nm,0.9s						
CMAR	Chiang Mai Arr	42.97	284	P	P	03 18 03.1	+1.2
	1.0nm,0.3s,baz=77,slow=7.3,SNR=5.3						
	1.0nm,0.3s						
SONM	Songino Array	47.01	327	P	P	03 18 34.4	+0.5
	0.8nm,0.4s,baz=138,slow=6.5,SNR=4.8						
	0.8nm,0.4s						
MKAR	Makanchi Array	61.40	317	P	P	03 20 18.7	+0.2
	1.4nm,1.0s,baz=79,slow=7.5,SNR=5.4						
	1.4nm,1.0s						
ZALV	Zalesovo Beam	61.87	325	P	P	03 20 20.3	-1.2
	1.3nm,0.5s,baz=101,slow=7.7,SNR=3.6						
ZALV				PcP	PcP	03 21 01.4	-0.9
	1.5nm,0.6s,baz=114,slow=3.6,SNR=4.3						
	1.3nm,0.5s						
KURBB	Kurchatov Arra	64.68	320	P	P	03 20 40.4	+0.2
	0.9nm,0.3s,baz=103,slow=6.5,SNR=8.8						
	0.9nm,0.3s						
ILAR	Eielson Array	70.70	25	P	P	03 21 16.6	-1.3
	3.5nm,0.5s,baz=249,slow=6.1,SNR=48						
	3.5nm,0.5s						
DLBC	Dease Lake	78.22	32	P	P	03 22 02.7	+0.8
	1.7nm,0.7s,baz=202,slow=11,SNR=3.3						
	1.7nm,0.7s						
YKA	Yellowknife Ar	85.03	27	P	P	03 22 38.0	+0.4
	1.2nm,0.6s,baz=285,slow=5.0,SNR=6.8						
	1.2nm,0.6s						
ARCES	ARCESS Array B	88.00	342	P	P	03 22 51.6	-0.4
	7.7nm,1.1s,baz=78,slow=8.0,SNR=13						
	7.7nm,1.1s						
NVAR	Mina Array Bea	89.25	51	P	P	03 23 00.0	+1.1
	1.0nm,0.7s,baz=272,slow=5.4,SNR=8.4						
	1.0nm,0.7s						
FINES	FINESS Array B	91.81	335	P	P	03 23 08.7	-1.3
	1.2nm,0.3s,baz=71,slow=3.8,SNR=18						
	1.2nm,0.3s						
LPAZ	La Paz	149.47	102	PKPbc	PKPbc	03 29 52.4	-0.8
	0.9nm,0.6s,baz=321,slow=5.8,SNR=2.6						

IDC 30 03:14:20.1±5.1, 7°.82N×137°.45E, h0km, mb3.6/3, mbtmp3.6/3, MS3.3/2, Error ellipse: s-maj=230.3km s-min=29.9km az=76.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	10.61	216	LR	LR	03 19 59.2	
	comp=Z,84nm,18.6s,baz=33,slow=32						
WRA	Warramunga Arr	27.76	186	P	P	03 20 10.4	-0.3
	0.8nm,0.7s,baz=5.0,slow=10,SNR=11						
WRA				LR	LR	03 32 03.9	
	comp=Z,102nm,18.2s,baz=284,slow=38						
	0.8nm,0.7s						
H11S3	WAKE ISLAND Hy	30.33	67	T	T	03 53 01.9	
	baz=253,slow=75,SNR=95						
H11S1	WAKE ISLAND Hy	30.35	67	T	T	03 53 02.2	
	baz=253,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	30.35	67	T	T	03 53 02.1	
	baz=253,slow=75,SNR=71						
H11N1	WAKE ISLAND Hy	30.88	64	T	T	03 53 49.7	
	baz=250,slow=75						
H11N2	WAKE ISLAND Hy	30.89	64	T	T	03 53 42.2	
	baz=250						
H11N3	WAKE ISLAND Hy	30.90	64	T	T	03 53 45.5	
	baz=250,slow=75						
ASAR	Alice Springs	31.49	186	P	P	03 20 44.2	+0.4
	0.4nm,0.8s,baz=17,slow=12,SNR=4.2						
	0.4nm,0.8s						
MKAR	Makanchi Array	60.85	320	P	P	03 24 34.4	-0.1
	0.5nm,0.6s,baz=107,slow=7.7,SNR=4.3						
	0.5nm,0.6s						

ASRS 30 03:40:49.4±0.6, 50°N±4°×99°8E±°, h5km, MLh3.7/5, Error ellipse: s-maj=9.0km s-min=3.4km az=3.4, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	Kungurtug, Tuv	0.62	323	Pg	Pn	03 41 05.1	+0.2
KNGR				Sg	Sb	03 41 12.9	+1.1
ERNS	Erzin	1.90	276	Pg	Pg	03 41 26.4	+0.6
ERNS				Sg	Sg	03 41 52.5	+2.1
MOY	Mondy	2.40	49	Pg	Pg	03 41 34.9	-0.5
MOY				Sg	Sg	03 42 08.0	+1.5
KZLR	Kyzyl	2.81	306	Sg	Sg	03 42 18.8	-0.7
ZAK	Zakamensk	3.34	83	Pg	Pg	03 41 54.3	+1.0
ZAK				Sg	Sg	03 42 39.4	+2.9
ARDR	Aradan	3.83	312	Pg	Pb	03 41 58.6	+1.1
ARDR				Sg	Sg	03 42 48.3	-4.0
DJO	Djoy, Khakassi	5.07	304	Sg	Sg	03 43 31.4	-0.5
CUR	Chagan-Uzun	6.27	274	Pg	Pg	03 42 46.6	-2.9
CUR				Sg	Sg	03 44 10.7	0.0
ULN	Ulaanbaatar	6.31	107	Pg	Pg	03 42 59.3	+9.2
ULN				Sg	Sg	03 44 13.3	+1.6
ULGR	Ulagan, Altay	6.51	278	Pg	Pg	03 42 55.2	+1.2
ULGR				Sg	Sg	03 44 15.3	-3.0
AKAR	Aktash	6.73	276	Pg	Pg	03 42 59.7	+1.5
AKAR				Sg	Sg	03 44 20.2	-5.1

*UCR **30** 03:45:19.9±1.4, 10°.14N×84°.03W, h88km±2km, MW3.7*
*INET **30** 03:45:20.8±1.8, 10°.30N×83°.93W, h17km±14km, MW3.3*
ISC 30 03:45:20.6±1.6, 10°.17N±0°.05×84°.01W±0°.05, h84km±9km, n50, σ0s63/60, 17C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIFO	Rio Frio, Sara	0.17	31	*i*P	Pn	03 45 32.6	-0.2
HDC3	Heredia 3	0.19	211	*i*P	Pn	03 45 32.8	-0.2
HDC	Heredia	0.20	211	*i*P	Pn	03 45 32.7	-0.4
HDC				eS	Sn	03 45 43.0	+0.8
CRPO	Crater poas	0.21	277	eP	Pn	03 45 33.1	-0.2
SJS	Escuela Geolog	0.23	191	eP	Pn	03 45 32.8	-0.4
OCM	Ochomogo	0.28	170	*i*P	Pn	03 45 32.9	-0.6
RAFA	San Farael, Vo	0.29	137	eP	Pn	03 45 33.7	0.0
LCR2	La Lucha 2	0.43	179	*i*P	Pn	03 45 33.1	-1.4
LCR2				eS	Sn	03 45 44.3	-0.3
RIMA	Rio Macho	0.43	160	eP	Pn	03 45 33.8	-0.6
RIMA				eS	Sn	03 45 44.8	+0.2
RIMA	Rio Macho	0.43	160	eP	Pn	03 45 33.8	-0.6
MRVA	Moravia de Chi	0.66	122	*i*P	Pn	03 45 36.0	-0.3
MRVA				eS	Sn	03 45 48.9	+0.9
CDM	Cerro de Muert	0.66	158	eP	Pn	03 45 35.9	-0.8
CDM				eS	Sn	03 45 48.5	-0.1
CDM	Cerro de Muert	0.66	158	eP	Pn	03 45 35.9	-0.8
CDM				eS	Sn	03 45 48.5	-0.1
COVE	Coope Vega, Sa	0.67	325	*i*P	Pn	03 45 35.6	-0.7
JACO	JACO, Garabito	0.81	232	eP	Pn	03 45 37.2	-0.5
JACO	JACO, Garabito	0.81	232	eP	Pn	03 45 37.3	-0.5
JACO				eS	Sn	03 45 52.3	+1.7
PEZE	Perez Zeledon,	0.85	157	*i*P	Pn	03 45 37.5	-0.8
PEZE				eS	Sn	03 45 51.6	+0.1
PEZE	Perez Zeledon,	0.85	157	eP	Pn	03 45 37.5	-0.8
JTS	Las Juntas de	0.94	277	eP	Pn	03 45 38.5	-0.6
JTS	Las Juntas de	0.94	277	eP	Pn	03 45 38.6	-0.6
LAFE	Finca La Fe, P	0.96	248	eP	Pn	03 45 39.7	+0.3
LAFE	Finca La Fe, P	0.96	248	eP	Pn	03 45 39.7	+0.3
PTEN	Parque Tenorio	1.10	300	eP	Pn	03 45 40.6	-0.6
ACAL	Aguas Claras	1.11	295	eP	Pn	03 45 40.7	-0.5
SRBA	San Rafael, Bu	1.13	145	eP	Pn	03 45 40.9	-0.7
DRK0	Durika	1.18	140	*i*P	Pn	03 45 42.6	+0.4
DRK0				eS	Sn	03 45 59.6	+1.2
CUI	Cuipilapa	1.23	293	eP	Pn	03 45 42.4	-0.4
VMAR	Armenia, Volca	1.27	300	eP	Pn	03 45 42.5	-0.7
HORNC	Hornillas	1.27	295	eP	Pn	03 45 42.7	-0.6
COLC	Colonia	1.27	293	eP	Pn	03 45 42.9	-0.3
GUAB	Guayabo de Bag	1.31	294	eP	Pn	03 45 43.7	0.0
EDPN	Palmar Norte	1.32	155	eP	Pn	03 45 43.7	-0.1
LIM1	Limonal	1.33	293	eP	Pn	03 45 43.5	-0.4
NICO	Nicoya	1.42	269	*i*P	Pn	03 45 45.1	+0.1
POTG	Potrero Grande	1.42	142	eP	Pn	03 45 44.5	-0.6
ORTG	Ortega, Santa	1.44

comp=E,4877µm,0.2s
SMTH Samothraki Isl 0.69 53 P **Pg** **03 51 07.9 +0.1**
SMTH S **Sb** **03 51 17.8 -0.2**
comp=E,2µm,0.4s
SMTH Samothraki Isl 0.69 53 P **Pg** **03 51 07.9 +0.1**
SMTH S **Sb** **03 51 18.1 +0.1**
SMTH AML AML 03 51 18.8
comp=N,3480µm,0.4s
SMTH AML AML 03 51 20.6
comp=E,3231µm,0.4s
OUR Ouranopolis 0.69 294 P **Pb** **03 51 08.4 -0.1**
OUR S **Sg** **03 51 17.4 +0.5**
OUR Ouranopolis 0.69 294 PG **Pb** **03 51 08.3 -0.2**
OUR SG **Sb** **03 51 18.2 +0.1**
OUR Ouranopolis 0.69 294 P **Pg** **03 51 08.2 +0.3**
OUR S **Sg** **03 51 17.1 +0.2**
GADA Gvkgeada 0.84 81 PG **Pb** **03 51 11.4 +0.2**
GADA SG **Sn** **03 51 23.7 -1.0**
GOKA anakkale-Gk 0.85 81 P **Pb** **03 51 11.6 +0.3**
GOKA S **Sn** **03 51 24.6 -0.2**
GOKA *i* AML AML 03 51 26.0
comp=E,5µm,0.6s
PAIG Paliouri 0.88 262 P **Pb** **03 51 11.8 +0.1**
PAIG S **Sn** **03 51 25.1 -0.4**
PAIG Paliouri 0.88 262 P **Pg** **03 51 11.5 0.0**
PAIG S **Sg** **03 51 22.8 -0.1**
KVLA Kavala 0.93 340 P **Pb** **03 51 12.9 +0.2**
KVLA S **Sb** **03 51 25.1 0.0**
KAVA Kavala 0.96 347 P **Pb** **03 51 13.2 0.0**
KAVA S **Sg** **03 51 25.3 -0.3**
comp=E,5µm,0.5s
KAVA Kavala 0.96 347 P **Pb** **03 51 13.1 0.0**
KAVA S **Sb** **03 51 25.9 0.0**
KOKK Kokkinochori, 0.98 321 P **Pb** **03 51 13.4 -0.1**
KOKK S **Sg** **03 51 26.2 +0.1**
comp=E,1µm,0.3s
KOKK Kokkinochori, 0.98 321 P **Pb** **03 51 13.6 +0.2**
KOKK S **Sg** **03 51 26.2 +0.1**
BOZC Bozcaada 0.98 102 PG **Pn** **03 51 13.8 -0.4**
BOZC Bozcaada 0.98 102 P **Pn** **03 51 13.8 -0.4**
BOZC S **Sn** **03 51 28.5 +0.5**
BOZC *i* AML AML 03 51 29.0
comp=E,490nm,0.5s
BOZC *i* AML AML 03 51 30.0
comp=E,447nm,0.6s
ECEA Canakkale, Ece 1.05 90 P **Pn** **03 51 14.8 -0.3**
ECEA S **Sn** **03 51 30.4 +0.7**
ECEA *i* AML AML 03 51 32.0
comp=E,701nm,0.7s
ECEA *i* AML AML 03 51 35.0
comp=E,522nm,0.6s
KOCA Canakkale, Ayv 1.17 118 P **Pg** **03 51 17.5 +0.6**
KOCA S **Sn** **03 51 33.0 +0.3**
KOCA *i* AML AML 03 51 36.0
comp=E,551nm,0.3s
KOCA *i* AML AML 03 51 36.0
comp=E,482nm,0.6s
ALNA Alonissos 1.17 219 P **Pn** **03 51 16.7 -0.1**
ALNA S **Sb** **03 51 31.4 -0.4**
ALNA AML AML 03 51 37.6
comp=E,2111µm,0.4s
ALNA AML AML 03 51 37.7
comp=N,2280µm,0.4s
SIGR SIGRI 1.17 136 P **Pg** **03 51 17.4 +0.4**
SIGR S **Sn** **03 51 33.6 +0.9**
comp=N,4µm,0.4s
SIGR SIGRI 1.17 136 PN **Pg** **03 51 17.6 +0.6**
SIGR SIGRI 1.17 136 P **Pg** **03 51 17.3 +0.4**
SIGR S **Sg** **03 51 32.0 -0.2**
SIGR AML AML 03 51 35.9
comp=N,9632µm,0.5s
SIGR AML AML 03 51 36.0
comp=E,5210µm,0.5s
GPNR Gulpinar-Canak 1.19 120 PN **Pg** **03 51 17.7 +0.4**
EZN Ezine 1.19 101 P **Pg** **03 51 17.3 0.0**
EZN S **Sg** **03 51 32.6 -0.2**
comp=E,645nm,0.5s
EZN Ezine 1.19 101 PN **Pg** **03 51 17.3 0.0**
SKY Skiros Island 1.20 190 P **Pg** **03 51 17.2 -0.3**
SKY Skiros Island 1.20 190 P **Pb** **03 51 16.9 -0.4**
SKY S **Sb** **03 51 32.0 -0.7**
SKY AML AML 03 51 37.5
comp=E,1926µm,0.2s
SKY AML AML 03 51 39.1
comp=N,2093µm,0.4s
CAVK Edirne/Enez-Ca 1.21 58 P **Pn** **03 51 16.8 -0.6**
CAVK S **Sn** **03 51 34.1 +0.3**
CAVK *i* AML AML 03 51 41.0
comp=N,416nm,0.4s
CAVK *i* AML AML 03 51 41.0
comp=N,424nm,0.4s
ENEZ Enez 1.23 56 P **Pn** **03 51 17.0 -0.5**
ENEZ S **Sg** **03 51 33.7 -0.4**
comp=N,2µm,0.4s
ENEZ Enez 1.23 56 PN **Pn** **03 51 17.1 -0.5**
ALN Alexandroupoli 1.26 48 P **Pn** **03 51 17.2 -0.8**
ALN S **Sb** **03 51 34.3 -0.2**
comp=N,608nm,0.5s
ALN Alexandroupoli 1.26 48 PN **Pn** **03 51 17.3 -0.8**
ALN Alexandroupoli 1.26 48 P **Pn** **03 51 17.5 -0.6**
ALN S **Sg** **03 51 35.8 +0.7**
ALN AML AML 03 51 37.9
comp=N,1237µm,0.7s
ALN AML AML 03 51 38.7
comp=E,1059µm,0.3s
GELI Tayfur-Gelibol 1.32 75 PN **Pn** **03 51 18.7 -0.1**
SOH Sokhos 1.35 305 P **Pn** **03 51 19.2 0.0**
SOH S **Sb** **03 51 36.5 -0.5**
comp=E,1µm,0.5s
SOH Sokhos 1.35 305 P **Pn** **03 51 19.3 0.0**
SOH AML AML 03 51 41.0
comp=E,3637µm,0.5s
SOH AML AML 03 51 41.7
comp=N,2100µm,0.5s
BAYC CANAKKALE_Bayr 1.37 103 P **Pb** **03 51 20.1 -0.1**
BAYC S **Sg** **03 51 38.2 -0.5**
PRK Paraskevi 1.39 125 P **Pb** **03 51 20.3 -0.2**
PRK S **Sg** **03 51 38.5 -0.8**
PRK AML AML 03 51 43.9
comp=E,5102µm,0.4s
PRK AML AML 03 51 44.2
comp=N,4756µm,0.5s
SRS Serrai 1.41 319 P **Pn** **03 51 19.7 -0.4**
SRS S **Sn** **03 51 37.1 -1.5**
comp=N,592nm,0.5s
SRS Serrai 1.41 319 *e*Pg **Pn** **03 51 19.7 -0.4**
SRS *e*Sg **Sn** **03 51 36.0 -2.6**
SRS Serrai 1.41 319 P **Pn** **03 51 19.9 -0.2**
SRS S **Sn** **03 51 38.5 -0.1**
SRS AML AML 03 51 44.3
comp=N,1203µm,0.4s
SRS AML AML 03 51 47.5
comp=E,1154µm,0.5s
HORT Hortiatis 1.41 293 P **Pn** **03 51 20.1 -0.1**
HORT S **Sb** **03 51 39.1 +0.1**
comp=E,305nm,0.6s
HORT Hortiatis 1.41 293 PN **Pn** **03 51 20.1 -0.1**
HORT Hortiatis 1.41 293 P **Pn** **03 51 20.2 -0.1**
HORT AML AML 03 51 44.2
comp=E,641µm,0.5s
HORT AML AML 03 51 45.5
comp=N,580µm,0.6s
XOR Xorichti 1.43 241 P **Pn** **03 51 19.9 -0.4**
XOR Xorichti 1.43 241 P **Pn** **03 51 20.0 -0.4**
XOR S **Sn** **03 51 38.4 -0.8**
XOR AML AML 03 51 52.5
comp=E,566µm,0.4s
XOR AML AML 03 51 52.8
comp=N,645µm,0.4s
NEO Neokhori 1.44 239 P **Pn** **03 51 19.9 -0.6**
NEO Neokhori 1.44 239 P **Pn** **03 51 20.0 -0.6**
NEO AML AML 03 51 45.9
comp=N,908µm,0.4s
NEO AML AML 03 51 46.1
comp=E,754µm,0.3s
NVR Nevrokopi 1.48 331 P **Pn** **03 51 20.9 -0.2**
NVR S **Sn** **03 51 39.5 -0.9**
comp=E,495nm,0.3s
NVR Nevrokopi 1.48 331 P **Pn** **03 51 21.0 -0.1**
NVR S **Sb** **03 51 40.8 0.0**
NVR AML AML 03 51 43.6
comp=N,958µm,0.2s
NVR AML AML 03 51 45.5
comp=E,1047µm,0.3s

THE Thessaloniki 1.52 293 P **Pn** **03 51 21.7 +0.1**
THE AML AML 03 51 46.8
comp=E,253µm,0.6s
THE AML AML 03 51 51.4
comp=N,187µm,0.4s
KYMI Kymi, Euboea I 1.53 201 P **Pn** **03 51 21.8 +0.1**
KYMI Kymi, Euboea I 1.53 201 P **Pn** **03 51 21.6 -0.1**
KYMI AML AML 03 51 48.6
comp=E,696µm,0.5s
KYMI AML AML 03 51 49.4
comp=N,682µm,0.6s
KESN Edirne-Kesan 1.62 61 P **Pn** **03 51 22.6 -0.8**
KESN S **Sg** **03 51 47.3 +0.7**
KESN *i* AML AML 03 51 49.0
comp=N,400nm,0.5s
KESN *i* AML AML 03 51 49.0
comp=N,351nm,0.4s
PSRA Psara 1.63 159 P **Pb** **03 51 24.3 -0.2**
PSRA AML AML 03 51 51.0
comp=N,1024µm,0.3s
PSRA AML AML 03 51 51.4
comp=E,1641µm,0.5s
RZN Rozhen 1.63 358 *i* P **Pn** **03 51 23.5 +0.2**
AYVA Ayvalik 1.63 117 P **Pb** **03 51 24.4 -0.3**
AYVA S **Sb** **03 51 45.0 -0.3**
AYVA *i* AML AML 03 51 52.0
comp=E,181nm,0.5s
AYVA *i* AML AML 03 51 53.0
comp=E,171nm,0.5s
KDZ Kurdzhali 1.65 16 PN **Pn** **03 51 22.7 -0.7**
KDZ Kurdzhali 1.65 16 *i* P **Pn** **03 51 22.8 -0.7**
MMB Musomiste 1.73 332 *i* P **Pn** **03 51 24.6 0.0**
UKOP Uzunkopru-Edir 1.75 52 PN **Pn** **03 51 24.9 +0.1**
LIT Litokhoron 1.78 272 P **Pn** **03 51 25.0 -0.3**
LIT Litokhoron 1.78 272 P **Pn** **03 51 24.9 -0.3**
KNT Kendrikon 1.82 308 P **Pn** **03 51 26.3 +0.5**
KNT Kendrikon 1.82 308 PN **Pn** **03 51 25.9 +0.1**
KNT Kendrikon 1.82 308 P **Pn** **03 51 26.4 +0.6**
BUHA Balikesir, Bur 1.83 107 P **Pb** **03 51 27.1 -1.0**
BUHA S **Sb** **03 51 49.8 -1.2**
BUHA *i* AML AML 03 51 56.0
comp=E,240nm,0.4s
DKL Dikili 1.90 121 PN **Pn** **03 51 27.7 +0.9**
RKY Sarkoy-Tekirda 1.92 70 PN **Pn** **03 51 26.9 -0.2**
CHOS Chios island 1.93 150 P **Pn** **03 51 28.2 +0.9**
CHOS Chios island 1.93 150 P **Pn** **03 51 28.3 +0.9**
CHOS AML AML 03 52 04.2
comp=E,786µm,0.6s
CHOS AML AML 03 52 09.6
comp=N,436µm,0.7s
PLD Plovdiv 2.04 358 PN **Pn** **03 51 29.3 +0.5**
PLD Plovdiv 2.04 358 *i* P **Pg** **03 51 33.8 +0.1**
DIM Dimitrovgrad 2.06 15 *i* P **Pn** **03 51 29.7 +0.6**
ZEDA zmir-Bergama 2.07 121 P **Pb** **03 51 30.4 -1.6**
ZEDA S **Sn** **03 51 55.8 +0.9**
KNL Balıkesir 2.09 83 P **Pn** **03 51 30.6 +1.1**
KNL S **Sg** **03 52 01.1 -0.6**
KNL *i* AML AML 03 52 04.0
comp=N,324nm,0.8s
DION Dionisos Attik 2.09 199 P **Pn** **03 51 29.8 +0.3**
BALY Balya 2.19 98 P **Pn** **03 51 31.4 +0.6**
BALY S **Sn** **03 51 58.9 +1.0**
BALY *i* AML AML 03 52 10.0
comp=N,106nm,1.6s
URLA Izmir 2.19 140 PN **Pn** **03 51 31.3 +0.4**
URLA Izmir 2.19 140 P **Pn** **03 51 30.8 -0.1**
URLA S **Sg** **03 52 05.4 +0.4**
URLA *i* AML AML 03 52 11.0
comp=N,124nm,1.4s
URLA *i* AML AML 03 52 14.0
comp=N,90nm,1.4s
GONE Gonen-Balikesi 2.21 89 PN **Pn** **03 51 31.8 +0.7**
THL Klokotos Trika 2.21 258 P **Pn** **03 51 31.5 +0.4**
KKB Krupnik 2.23 325 *i* P **Pg** **03 51 37.1 -0.1**
EDRB Edirne 2.31 39 PN **Pn** **03 51 32.6 +0.1**
EDC Edincik 2.36 82 PN **Pn** **03 51 33.9 +0.8**
BLCB Balcova 2.41 133 PN **Pn** **03 51 34.9 +1.1**
KIRK Kırklareli 2.44 44 P **Pn** **03 51 35.9 +1.6**
KIRK S **Sg** **03 52 11.4 -1.6**
CRLT Corlu 2.47 63 PN **Pn** **03 51 35.0 +0.3**
LTK Loutraki 2.49 216 P **Pn** **03 51 35.9 +0.9**
PGB Panagyurishte 2.53 349 *i* P **Pg** **03 51 42.5 -0.6**
ANX Ano Chora 2.68 238 P **Pn** **03 51 38.2 +0.6**
JMB Yambol 2.75 29 *e*P **Pb** **03 51 43.1 -0.6**
SLVT Silivri 2.84 65 PN **Pn** **03 51 40.7 +1.0**
CTYL Yalikoy Yolu 3.00 61 PN **Pn** **03 51 42.8 +0.9**
BOSS Bosilegrad 3.00 325 *e*Pn **Pn** **03 51 43.2 +1.2**
BOSS *e*Sn **Sn** **03 52 18.0 0.0**
APE Apeiranthos 3.04 169 PN **Pn** **03 51 43.2 +0.6**
CTKS Kestanelik-??a 3.05 66 PN **Pn** **03 51 43.4 +0.8**
MDNY Mudanya-Bursa 3.13 83 PN **Pn** **03 51 44.9 +1.1**
ARMT Armutlu 3.14 79 PN **Pn** **03 51 45.4 +1.5**
AYDB Zeytinkoy-Aydi 3.20 130 PN **Pn** **03 51 46.4 +1.6**
PRVS Prvonek 3.20 321 *e*Pn **Pn** **03 51 45.7 +1.0**
PRVS *e*Sn **Sn** **03 52 25.2 +2.4**
ISK Istanbul-Kandi 3.39 71 PN **Pn** **03 51 48.7 +1.4**
MPEP Malo Peshtene 3.39 347 *e*P **Pn** **03 51 48.4 +1.1**
KLYT Kilyos 3.43 68 PN **Pn** **03 51 49.2 +1.3**
BARS Barje 3.56 322 *e*Pn **Pn** **03 51 50.0 +0.4**
ZAPS Zavoj 3.60 334 *e*Pn **Pn** **03 51 52.1 +1.8**
BLKB Belogradchik 3.90 337 ⇑P **Pn** **03 51 55.3 +0.9**
TIR Tirane 3.97 290 ⇓P **Pn** **03 51 57.5 +2.2**
SELS Selova 4.20 320 *e*Pn **Pn** **03 51 57.9 -0.5**
ZAGS Zajecar 4.21 334 *e*Pn **Pn** **03 51 58.9 +0.3**
BOVS Bovan 4.26 328 ⇑P **Pn** **03 51 59.7 +0.4**
BOVS Bovan 4.26 328 *e*Pn **Pn** **03 51 59.1 -0.1**
PDG Podgorica 4.81 301 ⇑P **Pn** **03 52 09.2 +2.4**
SJES Sjenica 4.83 313 *e*Pn **Pn** **03 52 08.0 +0.8**
GRUS Gruza 4.89 323 *e*Pn **Pn** **03 52 08.2 +0.2**
IVAS Ivanjica 4.94 317 *e*Pn **Pn** **03 52 09.0 +0.3**
HARR Harsova 5.17 26 ⇑P **Pn** **03 52 12.3 +0.5**
MDVR Moldovita 5.25 335 ⇓P **Pn** **03 52 13.5 +0.6**
TRUS Trudelj 5.29 323 *e*Pn **Pn** **03 52 12.0 -1.5**
ARR Arges 5.31 359 ⇑P **Pn** **03 52 13.5 -0.2**
VOIR 5.38 2 ⇓P **Pn** **03 52 15.6 +0.9**
DIVS Divibare 5.40 320 *e*Pn **Pn** **03 52 15.6 +0.6**
LOT Lotru 5.44 352 ⇑P **Pn** **03 52 15.6 0.0**
MLR Muntele Rosu 5.49 8 ⇑P **Pn** **03 52 17.2 +0.9**
GZR Gura Zlata 5.54 345 ⇓P **Pn** **03 52 17.3 +0.4**
BBLS Lazići 5.54 315 *e*Pn **Pn** **03 52 16.0 -0.9**
CFR Carcaliu 5.67 25 ⇑P **Pn** **03 52 18.3 -0.4**
DOPR Dopca 5.92 4 ⇑P **Pn** **03 52 22.1 0.0**
PLOR Plostina 5.94 13 ⇑P **Pn** **03 52 23.1 +0.7**
VRI Vrincioaia 5.97 13 ⇑P **Pn** **03 52 23.5 +0.7**
TESR Tescani 6.59 11 ⇑P **Pn** **03 52 32.5 +1.2**
BURAR Bucovina Array 7.56 2 ⇓P **Pn** **03 52 46.2 +1.6**

IDC 30 03:53:13.4±2.7, 15°.40S×173°.69W, h0km, mb3.7/5, mbtmp3.7/5, MS3.4/4, Error ellipse: s-maj=240.7km s-min=23.5km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.37**	**52**	Pn	Pn	03 53 47.5	-6.2
	106nm,0.3s,baz=287,slow=17,SNR=58						
AFI				Sn	Sn	03 54 07.4	-16
	369nm,0.3s,baz=355,slow=1.0,SNR=42						
AFI				LR	LR	03 54 31.3	
	comp=Z,421nm,18.4s,baz=267,slow=33						
H11S2	**WAKE ISLAND Hy**	**38.82**	**329**	T	T	04 41 28.0	
	baz=147,slow=76,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**38.83**	**329**	T	T	04 41 26.6	
	baz=147,slow=76,SNR=8.4						
H11S1	**WAKE ISLAND Hy**	**38.84**	**329**	T	T	04 41 26.6	
	baz=147,slow=76,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**39.77**	**331**	T	T	04 43 09.7	
	baz=146						
H11N1	**WAKE ISLAND Hy**	**39.78**	**331**	T	T	04 42 40.7	
	baz=146						
H11N2	**WAKE ISLAND Hy**	**39.79**	**331**	T	T	04 42 45.7	
	baz=146						
WRA	**Warramunga Arr**	**49.57**	**257**	P	P	04 02 07.0	+0.3
	0.4nm,0.2s,baz=95,slow=6.9,SNR=9.5 0.4nm,0.2s						
ASAR	**Alice Springs**	**49.84**	**252**	P	P	04 02 08.2	-0.5
	1.9nm,0.7s,baz=90,slow=7.2,SNR=8.5 1.9nm,0.7s						
PFO	**Pinyon Flats O**	**73.13**	**47**	LR	LR	04 30 15.7	
	comp=Z,36nm,19.8s,baz=244,slow=30						
LPIG	**La Paz**	**73.28**	**59**	LR	LR	04 30 34.7	
	comp=Z,31nm,19.6s,baz=186,slow=31						
NVAR	**Mina Array Bea**	**74.52**	**42**	P	P	04 04 53.9	-0.4
	0.4nm,0.7s,baz=232,slow=10,SNR=7.6						
NVAR				LR	LR	04 33 12.3	
	comp=Z,26nm,19.0s,baz=252,slow=32 0.4nm,0.7s						
TXAR	**Lajitas Array**	**80.84**	**56**	P	P	04 05 30.3	+0.6
	0.6nm,0.9s,baz=201,slow=4.8,SNR=5.8 0.6nm,0.9s						
PDAR	**Pinedale Array**	**82.45**	**42**	P	P	04 05 38.1	0.0
	0.1nm,0.4s,baz=214,slow=3.1,SNR=3.7 0.1nm,0.4s						

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*NEIC **30** 03:53:27.4±1.2, 22°.92S±0°.09×173°.14E±0°.08, h10km±1km, mb4.7/31, Error ellipse: s-maj=15.4km s-min=11.9km az=11.0*
*IDC **30** 03:53:31.5±1.7, 22°.72S×173°.03E, h45km±16km, mb4.1/12, mbtmp4.3/15, ML4.5/3, MS3.9/22, Error ellipse: s-maj=17.7km s-min=12.4km az=154.0*
*GCMT **30** 03:53:32.4±0.2, 22°.99S±0°.02×173°.32E±0°.03, h20km, MW5.0/105, Moment Tensor Solution. s36,c45; s105,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.35±.17; $M_{\theta\theta}$=2.85±.12; $M_{\phi\phi}$=0.50±.10; $M_{r\theta}$=1.17±.20; $M_{\theta\phi}$=1.23±.06; $M_{r\phi}$=-0.19±.20; Best double couple: M_o=3.56600×10^{16} NP1:φs=71.00000°, δ55.00000°, λ=-85.00000°. NP2:φs=242.00000°, δ36.00000°, λ=-97.00000°. Principal axes: T 3.5680, Plg9.0000°, Azm158.0000°; N -0.0040, Plg4.0000°, Azm248.0000°; P -3.5640, Plg80.0000°, Azm3.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 03:53:31.2±0.4, 22°.89S±0°.06×173°.18E±0°.05, h49km, n108, σ1§50/97, mb4.6/23, MS3.9/22, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.97**	**285**		**Pn**	**03 54 42.9**	**-0.3**
MARNC				Sn	**Sn**	**03 55 38.2**	**-1.2**
PINNC	**Pines Island,**	**5.29**	**272**		**Pn**	**03 54 47.2**	**-0.6**
OUENC	**Ouen Island, N**	**5.87**	**273**	Pn	**Pn**	**03 54 55.8**	**+0.2**
LIFNC	**LIFOU**	**5.90**	**290**	Pn	**Pn**	**03 54 54.5**	**-1.5**
ONTNC	**Ouen Toro**	**6.24**	**274**	Pn	**Pn**	**03 54 59.0**	**-1.6**
DZM	**Mont Dzumac**	**6.28**	**276**	*e*Pn	**Pn**	**03 54 57.8**	**-3.5**
	68nm,1.1s						
DZM				*e*Sn	**Sn**	**03 56 10.0**	**-1.8**
	94nm,0.9s						
DZM				*e*LR	LR	03 56 28.0	
	comp=Z,1µm,28.3s						
DZM	**Mont Dzumac**	**6.28**	**276**	Pn	**Pn**	**03 55 00.2**	**-1.1**
DZM	**Mont Dzumac**	**6.28**	**276**	P	**Pn**	**03 54 59.9**	**-1.4**
	1.8nm,0.3s,baz=90,slow=7.3,SNR=22						
DZM				S	**Sn**	**03 56 07.4**	**-4.4**
	14nm,0.6s,baz=89,slow=7.6,SNR=1.6 9.0nm,0.5s						
MSVF	**Nonsavu**	**6.87**	**43**		**Pn**	**03 55 08.8**	**-0.6**
MSVF	**Nonsavu**	**6.87**	**43**	P	**Pn**	**03 55 08.4**	**-1.1**
	2.3nm,0.3s,baz=44,slow=23,SNR=15						
MSVF				S	**Sn**	**03 56 27.2**	**+0.8**
	10nm,0.5s,baz=104,slow=23,SNR=7.0 10nm,0.5s						
RAO	**Raoul Island**	**10.21**	**130**	Pn	**Pn**	**03 55 55.9**	**+0.9**
RAO	**Raoul Island**	**10.21**	**130**	P	**Pn**	**03 55 58.1**	**+3.1**
	446nm,0.3s,baz=5.0,slow=21,SNR=5.1						
RAO				LR	LR	03 58 52.4	
	comp=Z,2µm,21.6s,baz=286,slow=31						
OUZ	**Omahuta**	**12.29**	**178**	Pn	**Pn**	**03 56 21.6**	**-1.9**
URZ	**Urewera**	**15.69**	**168**	P	**P**	**03 57 11.4**	**-0.8**
	0.3nm,0.3s,baz=302,slow=22,SNR=5.2						
URZ				LR	LR	04 01 44.9	
	comp=Z,1µm,21.1s,baz=31,slow=31 13nm,0.9s						
BFZ	**Birch Farm**	**17.93**	**172**	P	**Pn**	**03 57 33.7**	**-3.2**
BFZ				IAmb	IAmb	03 57 56.8	
	comp=Z,62nm,1.2s						
HNR	**Honiara**	**18.43**	**314**	LR	LR	04 03 46.2	
	comp=Z,241nm,20.7s,baz=143,slow=34						
LTZ	**Lake Taylor**	**19.85**	**182**	P	**P**	**03 57 58.4**	**+0.3**
LTZ				IAmb	IAmb	03 58 07.9	
	comp=Z,35nm,0.9s						
EIDS	**Eidsvold**	**20.31**	**259**	P	**P**	**03 58 03.4**	**+0.2**
EIDS				IAmb	IAmb	03 58 36.5	
	comp=Z,40nm,1.2s						
OXZ	**Oxford**	**20.41**	**182**	P	**P**	**03 58 03.2**	**-0.8**
OXZ				IAmb	IAmb	03 58 10.9	
	comp=Z,76nm,1.4s						
RPZ	**Rata Peaks**	**20.85**	**184**	P	Pn	03 58 13.0	+1.3
	comp=Z,23nm,0.9s,baz=192,slow=6.0,SNR=4.4						
RPZ				LR	LR	04 05 48.9	
	comp=Z,1µm,18.0s,baz=355,slow=35 comp=Z,23nm,0.9s						
RAR	**Rarotonga**	**25.12**	**91**	LR	LR	04 08 38.6	
	comp=Z,41nm,18.1s,baz=264,slow=36						
CTA	**Charters Tower**	**25.19**	**271**	P	**P**	**03 58 53.0**	**+0.7**
	comp=Z,5.8nm,0.7s,baz=72,slow=11,SNR=4.9						
CTA				LR	LR	04 08 27.7	
	comp=Z,270nm,18.8s,baz=86,slow=36 comp=Z,5.8nm,0.7s						
STKA	**Stephens Creek**	**29.35**	**245**	P	**P**	**03 59 30.2**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=86,slow=8.3,SNR=5.4						
STKA				LR	LR	04 11 06.9	
	comp=Z,153nm,18.1s,baz=61,slow=36 comp=Z,4.3nm,0.8s						
TBI	**Tubuai**	**34.30**	**98**	*e*LR	LR	04 09 04.9	
	comp=Z,331nm,29.5s						
PPT2	**Papeete2**	**35.28**	**88**	*e*S	**S**	**04 05 46.8**	**-5.6**
	comp=Z,39nm,23.8s						
PPT2				*e*LR	LR	04 09 32.3	
	comp=Z,284nm,29.0s						
AS31	**Alice Springs**	**36.01**	**261**	P	**P**	**04 00 28.1**	**+0.2**
ASAR	**Alice Springs**	**36.01**	**261**	P	**P**	**04 00 28.0**	**+0.2**
ASAR	**Alice Springs**	**36.01**	**261**	P	**P**	**04 00 27.8**	**0.0**
	comp=Z,9.3nm,0.9s,baz=85,slow=8.8,SNR=64						
ASAR				LR	LR	04 14 02.1	
	comp=Z,138nm,19.6s,baz=99,slow=34 comp=Z,9.3nm,0.9s						
WR0	**Warramunga Arr**	**36.02**	**267**	P	**P**	**04 00 27.6**	**-0.3**
WR0				IAmb	IAmb	04 00 38.8	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**36.20**	**267**	P	**P**	**04 00 28.7**	**-0.8**
WRA	**Warramunga Arr**	**36.20**	**267**	P	**P**	**04 00 28.3**	**-1.2**
	comp=Z,4.1nm,1.1s,baz=97,slow=8.2,SNR=16						
WRA				LR	LR	04 15 22.4	
	comp=Z,263nm,18.3s,baz=105,slow=36 comp=Z,4.1nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**41.61**	**351**	T	T	04 45 49.2	
	baz=171,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**41.62**	**351**	T	T	04 45 51.7	
	baz=171,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**41.63**	**351**	T	T	04 45 51.5	
	baz=171,slow=76,SNR=11						
FITZ	**Fitzroy Crossi**	**44.64**	**267**	P	**P**	**04 01 39.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**44.64**	**267**	LR	LR	04 20 04.7	
	comp=Z,134nm,18.5s,baz=112,slow=36						
SIJI	**Sorong**	**46.21**	**292**	LR	LR	04 22 37.2	
	comp=Z,128nm,18.1s,baz=54,slow=38						
TAOE	**Nuku Hiva Isla**	**46.81**	**80**	*e*S	**S**	**04 08 37.0**	**-6.7**
	comp=Z,66nm,25.4s						
TAOE				*e*LR	LR	04 14 52.5	
	comp=Z,134nm,25.9s						
BATI	**Baumata**	**48.89**	**276**	LR	LR	04 24 47.2	
	comp=Z,291nm,18.3s,baz=74,slow=38						
PSA00	**Pilbara Seismi**	**49.16**	**261**	P	**P**	**04 02 15.2**	**+0.7**
PSA00				IAmb	IAmb	04 02 18.5	
	comp=Z,12nm,1.4s						
MBWA	**Marble Bar**	**49.35**	**261**	P	**P**	**04 02 16.6**	**+0.6**
KAPI	**Kappang**	**54.48**	**281**	LR	LR	04 26 32.8	
	comp=Z,89nm,19.1s,baz=104,slow=36						
VNDA	**Vanda**	**54.96**	**183**	P	**P**	**04 02 57.4**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=352,slow=8.6,SNR=3.1						
VNDA				LR	LR	04 22 29.2	
	comp=Z,227nm,21.7s,baz=12,slow=32 comp=Z,0.9nm,0.9s						
SBA	**Scott Base**	**55.11**	**182**	P	**P**	**04 02 59.1**	**+1.3**
SBA				IAmb	IAmb	04 03 04.4	
	comp=Z,7.3nm,0.9s						
QSPA	**South Pole Qui**	**67.19**	**180**	P	**P**	**04 04 20.3**	**+0.3**
QSPA				IAmb	IAmb	04 04 57.0	
	comp=Z,7.9nm,1.1s						
QSPA	**South Pole Qui**	**67.19**	**180**	LR	LR	04 30 34.0	
	comp=Z,129nm,19.2s,baz=36,slow=33						
RPN	**Rapa Nui**	**69.30**	**112**	LR	LR	04 26 38.7	
	comp=Z,86nm,21.8s,baz=344,slow=29						
SHEM	**Shemya Is, Ala**	**75.30**	**1**	LR	LR	04 31 54.4	
	comp=Z,26nm,20.7s,baz=180,slow=31						
MAW	**Mawson**	**76.43**	**202**	P	**P**	**04 05 15.8**	**+0.5**

comp=Z,1.4nm,0.8s,baz=108,slow=12,SNR=3.1
MAW LR LR 04 35 55.0
comp=Z,59nm,18.9s,baz=76,slow=33
comp=Z,1.4nm,0.8s
PETK Petropavlovsk- 76.86 350 P **P** **04 05 19.0 +1.3**
comp=Z,3.2nm,0.9s,baz=168,slow=8.5,SNR=3.9
comp=Z,3.2nm,0.9s
BELA Belgrano 2 78.14 174 P **P** **04 05 24.5 -0.2**
SMAI San Martin Ant 79.21 161 P **P** **04 05 32.0 +1.4**
SMAI IAmb IAmb 04 05 35.8
comp=Z,11nm,1.3s
CMAR Chiang Mai Arr 83.33 293 P **P** **04 05 54.0 +0.7**
comp=Z,1.4nm,0.3s,baz=132,slow=3.8,SNR=5.4
CMAR LR LR 04 44 54.1
comp=Z,20nm,20.2s,baz=120,slow=37
comp=Z,1.4nm,0.3s
TROLL Troll, Antarti 85.14 183 P **P** **04 06 01.6 -0.3**
SNAA Sanae 85.65 181 P **P** **04 06 03.7 -0.7**
VNA3 Neumayer Olymp 86.10 179 P **P** **04 06 05.8 -0.7**
VNA2 Neumayer--Watz 86.44 180 P **P** **04 06 07.7 -0.5**
baz=186,slow=3.7
HUMO Hull Mountain 87.76 42 P **P** **04 06 16.8 +1.9**
HUMO IAmb IAmb 04 06 40.9
comp=Z,4.4nm,1.1s
BEKR Beckworth 87.91 45 P **P** **04 06 16.9 +1.1**
NVAR Mina Array Bea 88.52 47 P **P** **04 06 19.8 +0.9**
comp=Z,0.8nm,0.8s,baz=225,slow=6.4,SNR=6.2
comp=Z,0.8nm,0.8s
KVN Kaiserville 88.97 47 P **P** **04 06 21.7 +0.7**
MOD Modoc Plateau 89.03 43 P **P** **04 06 21.8 +0.7**
MOD IAmb IAmb 04 06 24.3
comp=Z,4.4nm,1.0s
PINE Pine Mountain 89.65 41 P **P** **04 06 25.3 +1.4**
WVOR Wild Horse Val 90.36 43 P **P** **04 06 28.4 +1.1**
MESA MESA 90.48 21 P **P** **04 06 29.5 +2.1**
BBB Bella Bella 90.56 32 LR LR 04 46 19.0
comp=Z,47nm,18.1s,baz=276,slow=35
I07A Izee 90.68 42 P **P** **04 06 29.7 +1.0**
I07A IAmb IAmb 04 06 32.5
comp=Z,3.5nm,1.1s
YAH Yahtse 90.68 21 P **P** **04 06 29.5 +1.1**
TABL Table Mountain 90.94 21 P **P** **04 06 30.1 +0.5**
KNB Kanab 91.63 50 P **P** **04 06 34.7 +1.4**
KNB IAmb IAmb 04 06 39.2
comp=Z,3.7nm,1.2s
G08A Pilot Rock 91.64 41 P **P** **04 06 34.3 +1.2**
U15A North Rim 91.74 51 P **P** **04 06 35.3 +1.3**
U15A IAmb IAmb 04 06 38.3
comp=Z,6.1nm,1.3s
SONM Songino Array 92.34 322 P **P** **04 06 36.1 -0.2**
comp=Z,0.7nm,0.7s,baz=114,slow=3.6,SNR=2.6
comp=Z,0.7nm,0.7s
MTPU Mount Pierson 92.55 50 P **P** **04 06 39.1 +1.3**
MTPU IAmb IAmb 04 06 40.1
comp=Z,2.5nm,1.0s
ILAR Eielson Array 92.66 16 P **P** **04 06 36.1 -1.0**
comp=Z,1.3nm,0.7s,baz=232,slow=5.3,SNR=12
ILAR LR LR 04 41 05.2
comp=Z,51nm,20.8s,baz=256,slow=31
comp=Z,1.3nm,0.7s
J26L Joseph Creek 93.32 17 P **P** **04 06 41.1 +0.7**
J26L IAmb IAmb 04 07 19.0
comp=Z,3.1nm,1.1s
GDL2 Guadalupe Moun 95.88 58 P **P** **04 06 54.1 +1.1**
INK Inuvik 98.86 18 LR LR 04 43 57.4
comp=Z,28nm,21.2s,baz=276,slow=31
BOSA Boshof 120.18 213 PKP **PKiKP** **04 12 18.3 +0.7**
comp=Z,1.9nm,0.9s,baz=128,slow=4.0,SNR=3.0
ARCES ARCESS Array B 129.50 346 PKP **PKPdf** **04 12 33.6 -0.2**
comp=Z,2.1nm,0.8s,baz=64,slow=6.1,SNR=1.1
MORC Moravsky Berou 147.04 331 *e*PKP **PKPbc** **04 13 08.1 -0.4**
OSTC Ostas 147.05 333 *e*PKP **PKPbc** **04 13 08.6 +0.1**
DPC Dobruska-Polom 147.16 332 *e*PKP **PKPbc** **04 13 08.6 -0.2**
KRLC Kraliky 147.16 332 *e*PKP **PKPbc** **04 13 08.6 -0.2**
JAVC Velka Javorina 147.63 329 *e*PKP **PKPbc** **04 13 11.5 +1.3**
CLL Collm 147.74 336 *i* PKPbc **PKPbc** **04 13 09.9 -0.4**
CLL *i* PKPab **PKiKP** **04 13 12.7 +0.5**
VRAC Vranov 147.81 331 *e*PKP **PKPbc** **04 13 10.5 -0.1**
VRAC Vranov 147.81 331 PKPbc **PKPbc** **04 13 09.8 -0.8**
comp=Z,1.1nm,0.4s,baz=68,slow=6.2,SNR=3.9
KRUC Moravsky 148.07 331 *e*PKP **PKPbc** **04 13 11.4 +0.1**
RONA Rosalia, Austr 149.10 329 *e*P **PKiKP** **04 13 16.6 +1.4**
comp=Z,5.9nm,1.2s
CONA Conrad Observa 149.14 330 *e*P **PKPbc** **04 13 13.2 -0.9**
comp=Z,5.5nm,1.1s
CKRC Cesky Krumlov 149.17 332 *e*PKP **PKiKP** **04 13 15.3 0.0**
KHC Kasperske Hory 149.24 333 *e*PKP **PKPbc** **04 13 14.3 0.0**
GERES GERESS Array B 149.41 333 PKPbc **PKPbc** **04 13 13.8 -1.1**
comp=Z,1.3nm,0.7s,baz=45,slow=4.3,SNR=7.5
MOA Molln 149.93 331 *e*P **PKiKP** **04 13 18.2 +1.2**
comp=Z,4.4nm,1.1s
BIOA Bad Ischl, Aus 150.32 332 *e*P **PKPbc** **04 13 17.5 +0.5**
comp=Z,0.8nm,0.4s
SOKA Soboth 150.43 329 *e*P **PKPab** **04 13 24.2 +0.3**
comp=Z,8.1nm,1.6s
KBA Koelnbreinsper 150.92 331 *e*P **PKiKP** **04 13 20.3 +1.1**
comp=Z,3.3nm,0.8s
MYKA Terra Mystica 151.12 330 *e*P **PKiKP** **04 13 20.0 +0.5**
comp=Z,3.4nm,0.8s
WTTA Wattenberg 151.51 333 *e*P **PKPbc** **04 13 19.6 -0.4**
comp=Z,4.2nm,0.8s
ABTA Abfaltersbach 151.54 331 *e*P **PKPbc** **04 13 18.8 -1.1**
comp=Z,8.4nm,1.5s
MOTA Moosalm 151.67 334 *e*P **PKPbc** **04 13 20.0 -0.3**
comp=Z,6.8nm,1.5s
RETA Reutte 151.69 334 *e*P **PKiKP** **04 13 21.4 +0.7**
comp=Z,2.5nm,0.7s
SQTA Sankt Quirin 151.72 334 *e*P **PKPbc** **04 13 19.3 -1.1**
comp=Z,1.8nm,0.5s
FETA Feichten 152.08 334 *e*P **PKPbc** **04 13 21.0 -0.3**
comp=Z,5.1nm,1.2s
DAVA Damuels 152.20 335 *e*P **PKiKP** **04 13 24.4 +2.6**
comp=Z,4.4nm,1.1s
DAVOX Davos/Dischmat 152.62 335 PKPbc **PKPbc** **04 13 22.1 -0.5**
comp=Z,1.8nm,0.5s,baz=315,slow=1.4,SNR=4.6
TORD Torodi Ar. Bea 167.38 221 PKPab **PKPab** **04 14 38.6 +0.9**
comp=Z,1.7nm,0.4s,baz=103,slow=4.2,SNR=0.2

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*TRN **30** 04:01:06.2, 18.87N×64.51W, h28km, M3.5(RSPR)*
*OSPL **30** 04:01:07.5±3.2, 19.15N×64.46W, h25km±791km, ML3.0*
*RSPR **30** 04:01:07.7, 18.93N×64.40W, h22km±26km, MD3.5/17*
*NEIC **30** 04:01:09.9±3.1, 18.83N±0.08×64.58W±0.06, h36km±51km, Error ellipse: s-maj=12.7km s-min=6.3km az=205.0*
ISC 30 04:01:05.1±2.3, 19.02N±0.08×64.50W±0.03, h16km±12km, n79, σ0.81/106, 30C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.61**	**191**	*i*P		**Pb**		**04 01 17.8**	**+0.5**
TBVI	**Tortola**	**0.61**	**191**			**Pb**		**04 01 17.8**	**+0.5**
TBVI						**Sg**		**04 01 25.4**	**+0.2**
TBVI	**Tortola**	**0.61**	**191**	i P		**Pb**		**04 01 17.8**	**+0.5**
TBVI					eS	**Sg**		**04 01 25.4**	**+0.2**
SJVI	**Gifft Hill Sch**	**0.73**	**201**	*i*P		**Pb**		**04 01 19.7**	**+0.3**
SJVI	**Gifft Hill Sch**	**0.73**	**201**	eS		**Sg**		**04 01 28.7**	**-0.3**
SJVI	**Gifft Hill Sch**	**0.73**	**201**			**Pb**		**04 01 19.7**	**+0.3**
SJVI						**Sg**		**04 01 28.7**	**-0.3**
STVI	**Saint Thomas**	**0.79**	**213**	*i*P		**Pb**		**04 01 20.6**	**+0.2**
STVI	**Saint Thomas**	**0.79**	**213**			**Pb**		**04 01 20.6**	**+0.2**
STVI						**Sb**		**04 01 30.4**	**-0.5**
STVI	**Saint Thomas**	**0.79**	**213**	i P		**Pb**		**04 01 20.6**	**+0.2**
STVI					eS	**Sb**		**04 01 30.4**	**-0.5**
CUPR	**Culebra, Puert**	**1.03**	**227**	i P		**Pb**		**04 01 24.4**	**-0.1**
CUPR	**Culebra, Puert**	**1.03**	**227**	eS		**Sb**		**04 01 37.1**	**-0.5**
CUPR	**Culebra, Puert**	**1.03**	**227**			**Pb**		**04 01 24.4**	**-0.1**
CUPR						**Sb**		**04 01 37.1**	**-0.5**
CUPR	**Culebra, Puert**	**1.03**	**227**		IAML			04 01 37.5	
	comp=N,333nm,0.4s								
CDVI	**St. Croix**	**1.28**	**192**	*i*P		**Pb**		**04 01 28.8**	**0.0**
CDVI	**St. Croix**	**1.28**	**192**	eS		**Sb**		**04 01 44.9**	**-0.2**
CDVI	**St. Croix**	**1.28**	**192**			**Pb**		**04 01 28.8**	**0.0**
CDVI						**Sb**		**04 01 44.9**	**-0.2**
CDVI	**St. Croix**	**1.28**	**192**		IAML			04 01 50.7	
	comp=N,620nm,0.5s								
CDVI	**St. Croix**	**1.28**	**192**	*e*P		**Pn**		**04 01 28.7**	**+0.4**
CDVI					eS	**Sb**		**04 01 45.0**	**-0.1**
MTP	**Monte Pirata**	**1.36**	**228**			**Pn**		**04 01 28.9**	**-0.5**
MTP					IAML			04 01 49.8	
	comp=E,528nm,0.2s								
MTP					IAML			04 01 51.3	
	comp=N,397nm,0.2s								
CBYP	**Canovanas**	**1.49**	**240**	i P		**Pn**		**04 01 30.7**	**-0.5**
CBYP	**Canovanas**	**1.49**	**240**			**Pn**		**04 01 30.7**	**-0.5**
CBYP						**Sn**		**04 01 50.2**	**-0.2**
CBYP	**Canovanas**	**1.49**	**240**		eP	**Pn**		**04 01 30.7**	**-0.5**
CBYP					eS	**Sn**		**04 01 50.2**	**-0.2**
HUMP	**Col San Antoni**	**1.55**	**236**	i P		**Pn**		**04 01 31.8**	**-0.3**
HUMP	**Col San Antoni**	**1.55**	**236**			**Pn**		**04 01 31.8**	**-0.3**
HUMP						**Sn**		**04 01 51.2**	**-0.6**
HUMP	**Col San Antoni**	**1.55**	**236**	i P		**Pn**		**04 01 31.8**	**-0.3**
HUMP					eS	**Sn**		**04 01 51.2**	**-0.6**
SMRT	**St. Maarten**	**1.66**	**125**		Pn	**Pn**		**04 01 33.2**	**-0.3**
SMRT					IAML			04 01 57.8	
	comp=E,341nm,0.4s								
SMRT					IAML			04 01 58.5	
	comp=N,392nm,0.2s								
SMRT	**St. Maarten**	**1.66**	**125**	*e*P		**Pn**		**04 01 33.3**	**-0.3**
SMRT					eS	**Sn**		**04 01 54.5**	**+0.1**
GCPR	**Guaynabo City**	**1.66**	**245**	i P		**Pn**		**04 01 33.3**	**-0.3**
GCPR	**Guaynabo City**	**1.66**	**245**	eS		**Sn**		**04 01 54.4**	**-0.2**
GCPR	**Guaynabo City**	**1.66**	**245**			**Pn**		**04 01 33.3**	**-0.3**
GCPR						**Sn**		**04 01 54.4**	**-0.2**
PDPR	**Patillas Dam,**	**1.75**	**236**			**Pn**		**04 01 35.0**	**+0.1**
SJG	**San Juan**	**1.81**	**240**			**Pn**		**04 01 35.7**	**+0.1**
SJG					IAML			04 02 02.9	
	comp=N,158nm,0.3s								
SJG					IAML			04 02 03.3	
	comp=N,124nm,0.3s								
IGPR	**InterUniversit**	**1.85**	**236**	i P		**Pn**		**04 01 36.3**	**+0.1**
IGPR	**InterUniversit**	**1.85**	**236**	eS		**Sn**		**04 01 58.1**	**-1.1**
EMPR	**Esperanza - Ma**	**2.00**	**255**	i P		**Pn**		**04 01 38.5**	**+0.3**
EMPR	**Esperanza - Ma**	**2.00**	**255**	eS		**Sn**		**04 02 03.0**	**0.0**
EMPR	**Esperanza - Ma**	**2.00**	**255**			**Pn**		**04 01 38.5**	**+0.3**
EMPR						**Sn**		**04 02 03.0**	**0.0**
EMPR	**Esperanza - Ma**	**2.00**	**255**		IAML			04 02 13.6	
	comp=E,186nm,0.6s								
EMPR					IAML			04 02 22.7	
	comp=N,120nm,0.6s								
CELP	**Cerrillos**	**2.19**	**245**	i P		**Pn**		**04 01 41.5**	**+0.7**
CELP	**Cerrillos**	**2.19**	**245**			**Pn**		**04 01 41.5**	**+0.7**
CELP						**Sn**		**04 02 07.7**	**+0.1**
CELP	**Cerrillos**	**2.19**	**245**		IAML			04 02 12.9	
	comp=E,82nm,0.8s								
CELP	**Cerrillos**	**2.19**	**245**	*e*P		**Pn**		**04 01 41.5**	**+0.7**
CELP					eS	**Sn**		**04 02 07.7**	**+0.1**
OBIP	**Obispado Ponce**	**2.22**	**245**	i P		**Pn**		**04 01 41.1**	**-0.2**
OBIP	**Obispado Ponce**	**2.22**	**245**			**Pn**		**04 01 41.1**	**-0.2**
OBIP						**Sn**		**04 02 08.0**	**-0.4**
OBIP	**Obispado Ponce**	**2.22**	**245**	i P		**Pn**		**04 01 41.1**	**-0.2**
OBIP					eS	**Sn**		**04 02 08.0**	**-0.4**
UUPR	**Utuado, UPR, P**	**2.24**	**251**	i P		**Pn**		**04 01 42.7**	**+1.2**
UUPR	**Utuado, UPR, P**	**2.24**	**251**			**Pn**		**04 01 42.7**	**+1.2**
AOPR	**Arecibo Observ**	**2.24**	**253**	i P		**Pn**		**04 01 42.4**	**+0.8**
AOPR	**Arecibo Observ**	**2.24**	**253**			**Pn**		**04 01 42.4**	**+0.8**
AOPR						**Sn**		**04 02 09.0**	**+0.1**
AOPR	**Arecibo Observ**	**2.24**	**253**	*e*P		**Pn**		**04 01 42.1**	**+0.5**
AOPR					eS	**Sn**		**04 02 09.2**	**+0.2**
SKI	**Saint Kitts**	**2.36**	**135**	*e*P		**Pn**		**04 01 44.7**	**+1.4**
SKI					eS	**Sn**		**04 02 11.8**	**-0.1**
GBPR	**Guanica, Bosqu**	**2.49**	**246**	i P		**Pb**		**04 01 47.6**	**-1.8**
GBPR	**Guanica, Bosqu**	**2.49**	**246**	i P		**Pb**		**04 01 47.6**	**-1.8**
AGPR	**Aguadilla, PR**	**2.54**	**258**	i P		**Pn**		**04 01 47.0**	**+1.3**
AGPR	**Aguadilla, PR**	**2.54**	**258**			**Pn**		**04 01 47.0**	**+1.3**
AGPR						**Sn**		**04 02 17.4**	**+1.2**
AGPR	**Aguadilla, PR**	**2.54**	**258**		IAML			04 02 22.2	
	comp=E,93nm,1.2s								
AGPR					IAML			04 02 28.1	
	comp=N,80nm,2.0s								
AGPR	**Aguadilla, PR**	**2.54**	**258**	i P		**Pn**		**04 01 47.0**	**+1.3**
AGPR					eS	**Sn**		**04 02 17.4**	**+1.2**
AGPR	**Aguadilla, PR**	**2.54**	**258**	*i* P		**Pn**		**04 01 46.4**	**+0.8**
AGPR					IAML			04 02 25.9	
	comp=Z,68nm,1.9s								
LSP	**Las Mesas**	**2.59**	**252**	i P		**Pn**		**04 01 47.7**	**+1.2**
LSP	**Las Mesas**	**2.59**	**252**	i P		**Pn**		**04 01 47.7**	**+1.2**
LSP					eS	**Sn**		**04 02 17.7**	**0.0**
MLPR	**Magueyes Islan**	**2.63**	**247**	i P		**Pn**		**04 01 46.9**	**0.0**
MLPR	**Magueyes Islan**	**2.63**	**247**	eS		**Sn**		**04 02 18.6**	**+0.1**
MLPR	**Magueyes Islan**	**2.63**	**247**			**Pn**		**04 01 46.9**	**0.0**
MLPR						**Sn**		**04 02 18.6**	**+0.1**
PRSN	**Puerto Rico Se**	**2.63**	**253**			**Pn**		**04 01 48.3**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.67**	**248**	i P		**Pn**		**04 01 48.5**	**+1.0**
CRPR	**Cabo Rojo, PR**	**2.67**	**248**			**Pn**		**04 01 48.5**	**+1.0**
CRPR						**Sn**		**04 02 20.2**	**+0.6**
CRPR	**Cabo Rojo, PR**	**2.67**	**248**	i P		**Pn**		**04 01 48.5**	**+1.0**
CRPR					eS	**Sn**		**04 02 20.2**	**+0.6**
CRPR	**Cabo Rojo, PR**	**2.67**	**248**	*i* P		**Pn**		**04 01 48.4**	**+1.0**
CRPR					eS	**Sn**		**04 02 19.5**	**-0.1**
CRPR					IAML			04 02 31.1	
	comp=Z,52nm,0.3s								
IDE	**Isla Desecheo**	**2.89**	**258**	i P		**Pn**		**04 01 52.0**	**+1.5**
IDE	**Isla Desecheo**	**2.89**	**258**	i P		**Pn**		**04 01 52.0**	**+1.5**
IDE					eS	**Sn**		**04 02 25.9**	**+0.9**
ANWB	**Willy Bob**	**2.90**	**117**	*e*P		**Pn**		**04 01 49.8**	**-0.8**
ANWB					eS	**Sn**		**04 02 23.6**	**-1.6**
MBFL	**Flemmings, Mon**	**3.13**	**136**	*e*P		**Pn**		**04 01 55.2**	**+1.4**
MLYT	**Lee's Yard**	**3.17**	**136**	*e*P		**Pn**		**04 01 55.1**	**+0.8**
ANBD	**Bethesda, Anti**	**3.25**	**127**	*e*P		**Pn**		**04 01 55.8**	**+0.3**
ANBD					eS	**Sn**		**04 02 31.9**	**-1.9**
PCDR	**Punta Cana, DR**	**3.71**	**263**	*i* P		**Pn**		**04 02 03.1**	**+1.3**
ABD	**La Joyeuse, An**	**3.82**	**131**	*e*P		**Pn**		**04 02 04.2**	**+0.9**
CBE	**Ff, Capester**	**4.02**	**136**	*e*P		**Pn**		**04 02 07.9**	**+1.8**
MAGL	**Barre de l'ile**	**4.32**	**134**	*e*P		**Pn**		**04 02 11.8**	**+1.6**
DSLB	**Salisbury**	**4.61**	**140**	*e*P		**Pn**		**04 02 16.1**	**+1.9**

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*IDC **30** 04:24:56.8±0.9, 0.32N×17.40W, h0km, mb4.2/11, mbtmp4.4/14, ML5.0/3, MS3.5/31, Error ellipse: s-maj=35.6km s-min=20.3km az=133.0*
*NEIC **30** 04:24:59.9±1.4, 0.41N±0.07×17.34W±0.10, h10km±1km, mb4.7/18, Error ellipse: s-maj=18.9km s-min=8.4km az=303.0*
*LIC **30** 04:25:55.9±0.0, 2.42N×13.18W, h2km, Mb5.6/3, Error ellipse: s-maj=0.0km s-min=0.0km az=64.0*
ISC 30 04:24:58.9±0.6, 0.53N±0.08×17.32W±0.08, h10km, n78, σ1§89/52, mb4.5/21, MS3.5/28, 3C, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.77**	**161**			T	T	04 36 00.7	
	baz=342,slow=74,SNR=1162								
H10N3	**ASCENSION HYDR**	**8.78**	**161**			T	T	04 36 01.3	
	baz=342,slow=74,SNR=887								
H10N1	**ASCENSION HYDR**	**8.79**	**161**			T	T	04 36 00.0	
	baz=342,slow=74,SNR=2066								
ASCN	**Ascension**	**8.91**	**161**			Pn	**Pn**	**04 27 06.7**	**-1.1**
H10S3	**ASCENSION HYDR**	**9.78**	**164**			T	T	04 37 13.9	
	baz=345,slow=74,SNR=392								
H10S2	**ASCENSION HYDR**	**9.79**	**164**			T	T	04 37 14.9	
	baz=235,slow=74,SNR=206								
LIC	**Lamto**	**13.51**	**65**	i P			**Pn**	**04 28 09.4**	**-1.5**
	28nm,0.5s								
TIC	**Toumodi**	**13.70**	**63**	i P			**Pn**	**04 28 12.0**	**-1.4**
	20nm,0.5s								
MBO	**M'Bour**	**13.78**	**2**		Pn		**Pn**	**04 28 15.4**	**+0.9**
KIC	**Kosan Boka**	**13.83**	**65**	i P			**Pn**	**04 28 13.7**	**-1.5**
	22nm,0.5s								
DBIC	**Dimbokro**	**13.85**	**64**				**Pn**	**04 28 14.6**	**-1.0**
DBIC	**Dimbokro**	**13.85**	**64**		Pn		**Pn**	**04 28 14.8**	**-0.8**
	6.0nm,0.3s,baz=260,slow=14,SNR=78								
DBIC						Sn	Sn	04 30 39.9	-10
	4.1nm,0.3s,baz=157,slow=11,SNR=5.8								
DBIC						LR	LR	04 31 57.5	
	comp=Z,185nm,21.9s,baz=244,slow=30								
	17nm,0.5s								
BBTS	**Babate**	**14.06**	**3**				**Pn**	**04 28 19.8**	**+1.4**
BBTS	**Babate**	**14.06**	**3**		Pn		**Pn**	**04 28 19.8**	**+1.4**
	7.8nm,0.3s,baz=208,slow=0.8,SNR=27								
BBTS						Sn	**Sn**	**04 30 49.0**	**-5.7**
	11nm,0.3s,baz=329,slow=23,SNR=13								
BBTS						LR	LR	04 32 43.6	
	comp=Z,256nm,19.5s,baz=214,slow=33								
	16nm,0.3s								
SACV	**Santiago Islan**	**15.64**	**337**			Pn	**Pn**	**04 28 40.2**	**+0.6**
SACV						IAmb	IAmb	04 29 08.1	
	comp=Z,34nm,0.9s								
KOWA	**Kowa**	**19.13**	**43**			P	**P**	**04 29 23.9**	**+1.5**
KOWA						IAmb	IAmb	04 29 26.5	
	comp=Z,30nm,0.8s								
KOWA	**Kowa**	**19.13**	**43**		P		**P**	**04 29 23.2**	**+0.8**
	comp=Z,6.0nm,0.3s,baz=215,slow=13,SNR=85								
KOWA						S	**Sn**	**04 32 51.0**	**-6.7**
	comp=Z,11nm,0.7s,baz=252,slow=7.8,SNR=4.1								
KOWA						LR	LR	04 36 31.4	
	comp=Z,307nm,18.6s,baz=264,slow=36								

comp=Z,23nm,0.4s
RCBR Riachuelo 19.59 251 P **P** **04 29 25.5 -2.1**
TOA0 Torodi Ar. Sit 22.63 56 P **P** **04 30 00.6 +0.2**
TOA0 IAmb IAmb 04 30 06.0
comp=Z,28nm,0.9s
TORD Torodi Ar. Bea 22.63 56 P **P** **04 30 00.1 -0.2**
comp=Z,12nm,0.6s,baz=242,slow=9.5,SNR=4.5
TORD LR LR 04 37 32.9
comp=Z,172nm,21.6s,baz=212,slow=33
comp=Z,12nm,0.6s
MDT Midelt 34.28 19 LR LR 04 45 49.5
comp=Z,67nm,19.7s,baz=205,slow=36
MDP Montagnes des 35.56 278 LR LR 04 44 43.4
comp=Z,49nm,18.6s,baz=50,slow=33
TSUM Tsumeb 39.47 122 LR LR 04 45 16.7
comp=Z,90nm,19.2s,baz=22,slow=31
ESDC Sonseca Array 40.83 16 LR LR 04 49 37.8
comp=Z,28nm,19.0s,baz=214,slow=36
KEST Kesra 42.92 32 P **P** **04 33 00.9 +2.8**
KEST Kesra 42.92 32 P **P** **04 32 58.4 +0.3**
comp=Z,3.8nm,0.9s,baz=262,slow=2.7,SNR=7.5
KEST LR LR 04 51 45.8
comp=Z,131nm,20.2s,baz=346,slow=37
comp=Z,3.8nm,0.9s
BOAV Boa Vista 43.22 273 P **P** **04 33 00.1 -0.7**
BOAV IAmb IAmb 04 33 02.6
comp=Z,7.4nm,1.2s
SIV San Ignacio 46.19 247 P **P** **04 33 20.9 -3.6**
comp=Z,0.5nm,0.8s,baz=108,slow=9.6,SNR=2.1
SIV LR LR 04 51 49.8
comp=Z,96nm,18.9s,baz=162,slow=35
CPUP Villa Florida 46.89 232 LR LR 04 51 38.4
comp=Z,88nm,18.7s,baz=142,slow=34
LSZ Lusaka 47.63 111 LR LR 04 51 11.5
comp=Z,74nm,19.3s,baz=182,slow=33
PCRV Puerto La Cruz 48.01 283 LR LR 04 51 45.6
comp=Z,57nm,21.5s,slow=34
MBAR Mbarara 48.07 91 LR LR 04 51 50.2
comp=Z,111nm,18.9s,baz=243,slow=34
TIP Timpagrande 49.50 35 P **P** **04 33 51.6 +1.7**
TIP IAmb IAmb 04 33 52.8
comp=Z,6.1nm,0.8s
SJG San Juan 51.03 293 LR LR 04 50 41.7
comp=Z,34nm,21.9s,baz=105,slow=30
BAUV El Baul 51.18 281 P **P** **04 34 04.2 +1.4**
BAUV IAmb IAmb 04 34 05.2
comp=Z,12nm,0.8s
LPAZ La Paz 52.82 249 LR LR 04 55 36.2
comp=Z,79nm,19.1s,baz=79,slow=35
SDV Santo Domingo 53.72 281 LR LR 04 54 30.8
comp=Z,26nm,19.9s,baz=80,slow=33
DIVS Divibare 54.60 32 P **P** **04 34 28.4 +0.6**
DIVS IAmb IAmb 04 34 32.1
comp=Z,4.7nm,1.1s
KMBO Kilima Mbogo 54.60 92 LR LR 04 55 14.1
comp=Z,78nm,20.0s,baz=96,slow=33
GERES GERESS Array B 55.04 25 P **P** **04 34 32.1 +1.2**
GERES GERESS Array B 55.04 25 P **P** **04 34 32.2 +1.2**
comp=Z,1.1nm,0.6s,baz=201,slow=7.1,SNR=14
GERES PP **PP** **04 36 34.6 +0.4**
comp=Z,1.7nm,0.9s,baz=213,slow=9.5,SNR=4.9
comp=Z,1.1nm,0.6s
KHC Kasperske Hory 55.22 24 *e*P **P** **04 34 34.6 +2.5**
VTS Vitosha 55.46 36 P **P** **04 34 35.5 +1.4**
VTS IAmb IAmb 04 34 37.8
comp=Z,6.1nm,1.0s
CLL Collm 56.71 22 *i* P **P** **04 34 45.1 +2.4**
comp=Z,5.0nm,1.1s
CLL *ex* x 04 41 48.0
CLL eS S 04 42 45.0 +10
CLL *ex* x 04 52 06.0
VYHS Vyhne 57.05 28 *e*P **P** **04 34 48.0 +2.8**
ROSC El Rosal 57.08 275 LR LR 04 56 16.3
comp=Z,69nm,21.2s,baz=63,slow=33
DPC Dobruska-Polom 57.30 25 *e*P **P** **04 34 48.3 +1.4**
EIL Elat 57.52 55 LR LR 04 59 29.5
comp=Z,39nm,19.2s,baz=276,slow=36
MLR Muntele Rosu 58.76 34 P **P** **04 34 58.9 +1.4**
MLR Muntele Rosu 58.76 34 LR LR 05 02 30.3
comp=Z,41nm,19.6s,baz=105,slow=38
NNA Nana 60.37 256 LR LR 05 00 24.8
comp=Z,76nm,18.0s,baz=74,slow=35
BRTR Keskin Array B 60.56 43 P **P** **04 35 11.1 +1.1**
BRTR Keskin Array B 60.56 43 P **P** **04 35 11.6 +1.6**
comp=Z,3.7nm,0.9s,baz=244,slow=5.4,SNR=7.9
comp=Z,3.7nm,0.9s
ATAH Atahualpa 61.39 262 LR LR 05 00 58.9
comp=Z,56nm,18.4s,baz=81,slow=35
BNN Bunyan 61.72 45 P **P** **04 35 17.7 -0.1**
AKASG Malin Array Be 63.62 31 P **P** **04 35 31.2 +1.1**
comp=Z,0.6nm,0.5s,baz=237,slow=6.3,SNR=10
comp=Z,0.6nm,0.5s
AKBB Malin Array Si 63.62 31 P **P** **04 35 29.6 -0.4**
NB2 NORSAR Subarra 64.18 15 P **P** **04 35 35.8 +2.1**
comp=Z,1.2nm,0.7s,baz=210,slow=6.5
NOA NORSAR Array B 64.18 15 P **P** **04 35 35.1 +1.4**
comp=Z,1.3nm,0.8s,baz=199,slow=5.5,SNR=3.5
NOA LR LR 05 03 20.0
comp=Z,23nm,21.1s,baz=25,slow=36
comp=Z,1.3nm,0.8s
GURO Guroymak-BITLI 66.09 48 P **P** **04 35 46.9 +0.2**
GEVA Gevas 66.77 48 P **P** **04 35 52.1 +1.1**
GEVA IAmb IAmb 04 35 53.1
comp=Z,5.2nm,0.8s
KBZ Khabaz 68.51 43 P **P** **04 36 02.8 +1.1**
KBZ Khabaz 68.51 43 P **P** **04 36 02.8 +1.1**
comp=Z,4.9nm,0.9s,baz=240,slow=4.7,SNR=8.3
comp=Z,4.9nm,0.9s
GNI Garni 68.60 47 LR LR 05 08 18.1
comp=Z,15nm,20.6s,baz=86,slow=38
FINES FINESS Array B 69.08 21 P **P** **04 36 06.0 +1.2**
comp=Z,2.8nm,0.5s,baz=196,slow=5.2,SNR=19
comp=Z,2.8nm,0.5s
JMIC Jan Mayen 70.58 3 LR LR 05 02 17.1
comp=Z,1.3nm,21.5s,baz=76,slow=32
ABKAR Akbulak array 81.30 40 P **P** **04 37 16.7 +1.2**
TXAR Lajitas Array 86.55 299 P **P** **04 37 43.0 0.0**
comp=Z,1.2nm,0.9s,baz=99,slow=5.8,SNR=5.6
TXAR LR LR 05 17 55.1
comp

MSVF	**Nonsavu**	**6.99**	**344**	P	**P**	**04 26 52.2**	**+1.6**
MSVF				S	**S**	**04 28 20.8**	**+3.2**
MSVF	**Nonsavu**	**6.99**	**344**	P	**P**	**04 26 52.1**	**+1.4**
	56nm,0.5s,baz=274,slow=21,SNR=80						
NIUE	**Niue**	**10.79**	**62**	P	**P**	**04 27 33.1**	**+3.0**
MARNC	**Mare, Loyalty**	**11.45**	**283**	P	**P**	**04 27 37.3**	**+0.2**
PINNC	**Pines Island,**	**11.69**	**277**	P	**P**	**04 27 41.3**	**+1.7**
OUZ	**Omahuta**	**12.04**	**206**	P	**P**	**04 27 45.1**	**+2.0**
OUZ	**Omahuta**	**12.04**	**206**	P	**P**	**04 27 45.3**	**+2.2**
OUZ	**Omahuta**	**12.04**	**206**	P	**P**	**04 27 45.2**	**+2.0**
YATNC	**Mamie plateau,**	**12.31**	**279**	P	**P**	**04 27 48.0**	**+1.7**
DZM	**Mont Dzumac**	**12.71**	**278**	P	**P**	**04 27 51.0**	**+0.4**
DZM	**Mont Dzumac**	**12.71**	**278**	P	**P**	**04 27 51.9**	**+1.3**
DZM	**Mont Dzumac**	**12.71**	**278**	P	**P**	**04 27 50.1**	**-0.5**
	11nm,0.6s,baz=76,slow=16,SNR=10						
KUZ	**Kuaotunu**	**12.74**	**196**	P	**P**	**04 27 51.4**	**+0.8**
NOUC	**Port Laguerre**	**12.83**	**278**	P	**P**	**04 27 53.1**	**+1.3**
AFI	**Afiamalu**	**13.08**	**38**	P	**P**	**04 27 52.7**	**-1.8**
AFI	**Afiamalu**	**13.08**	**38**	P	**P**	**04 27 52.7**	**-1.8**
	70nm,0.8s,baz=317,slow=0.1,SNR=7.3						
AFI				S	**S**	**04 30 10.9**	**-3.9**
	56nm,0.7s,baz=66,slow=13,SNR=4.1						
MXZ	**Matakaoa Point**	**13.09**	**186**	P	**P**	**04 27 53.8**	**-0.5**
MXZ	**Matakaoa Point**	**13.09**	**186**	P	**P**	**04 27 54.0**	**-0.3**
MYRZ	**Mayor Island**	**13.13**	**193**	P	**P**	**04 27 59.1**	**+4.4**
WHRZ	**Whale Island**	**13.56**	**190**	P	**P**	**04 28 02.0**	**+2.8**
RUGZ	**Raukumara Rang**	**13.56**	**188**	P	**P**	**04 28 00.1**	**+0.7**
RUGZ				S	**S**	**04 30 23.4**	**-0.3**
TOZ	**Tahuroa Road**	**13.73**	**195**	P	**P**	**04 28 04.2**	**+3.2**
TWGZ	**Tauwhareparae**	**13.73**	**187**	P	**P**	**04 28 00.5**	**-0.6**
TWGZ				S	**S**	**04 30 27.9**	**+0.9**
KMRZ	**Kaimai**	**13.74**	**194**	P	**P**	**04 28 04.1**	**+3.0**
EDRZ	**Edgecumbe**	**13.84**	**191**	P	**P**	**04 28 03.2**	**+0.9**
KARZ	**Kaharoa**	**13.85**	**193**	P	**P**	**04 28 03.0**	**+0.7**
OMRZ	**Omania**	**13.91**	**192**	P	**P**	**04 28 04.9**	**+2.0**
URZ	**Urewera**	**13.93**	**190**	P	**P**	**04 27 59.2**	**-3.9**
URZ	**Urewera**	**13.93**	**190**	P	**P**	**04 27 59.9**	**-3.2**
URZ				S	**S**	**04 30 26.9**	**-3.6**
URZ	**Urewera**	**13.93**	**190**	P	**P**	**04 27 59.9**	**-3.2**
URZ	**Urewera**	**13.93**	**190**	P	**P**	**04 28 01.4**	**-1.7**
	89nm,0.5s,baz=120,slow=23,SNR=94						
URZ				S	**S**	**04 30 28.8**	**-1.7**
	26nm,0.7s,baz=280,slow=20,SNR=5.3						
MWZ	**Matawai**	**13.94**	**188**	P	**P**	**04 28 02.1**	**-1.2**
MWZ				S	**S**	**04 30 27.9**	**-3.1**
TARZ	**Mount Tarawera**	**14.01**	**192**	P	**P**	**04 28 05.7**	**+1.7**
CNGZ	**Carnagh Statio**	**14.02**	**186**	P	**P**	**04 28 06.1**	**+2.1**
RAGZ	**Rawiri**	**14.12**	**188**	P	**P**	**04 28 04.6**	**-0.6**
RAGZ				S	**S**	**04 30 31.3**	**-3.0**
HSRZ	**Hossack Road**	**14.13**	**192**	P	**P**	**04 28 07.7**	**+2.4**
RIGZ	**Rimuhau**	**14.28**	**187**	P	**P**	**04 28 06.6**	**-0.3**
RIGZ				S	**S**	**04 30 35.6**	**-1.8**
TLZ	**Tolley Road**	**14.29**	**194**	P	**P**	**04 28 07.9**	**+0.9**
KUTZ	**Kaahu Road**	**14.39**	**193**	P	**P**	**04 28 10.5**	**+2.5**
SNGZ	**Shannon Statio**	**14.41**	**188**	P	**P**	**04 28 05.7**	**-2.5**
SNGZ				S	**S**	**04 30 38.4**	**-1.4**
MRHZ	**Matea Rd**	**14.60**	**191**	P	**P**	**04 28 09.4**	**-0.9**
WATZ	**Wairara**	**14.62**	**193**	P	**P**	**04 28 11.8**	**+1.4**
HIZ	**Hauiti**	**14.63**	**196**	P	**P**	**04 28 10.6**	**+0.1**
HIZ	**Hauiti**	**14.63**	**196**	P	**P**	**04 28 13.6**	**+3.1**
HIZ	**Hauiti**	**14.63**	**196**	P	**P**	**04 28 10.0**	**-0.5**
RATZ	**Rangitukua**	**14.76**	**193**	P	**P**	**04 28 12.4**	**+0.5**
NMHZ	**Naumai**	**14.80**	**190**	P	**P**	**04 28 11.1**	**-1.2**
NMHZ				S	**S**	**04 30 47.0**	**-0.3**
KATZ	**Kakaramea**	**14.88**	**193**	P	**P**	**04 28 14.0**	**+0.8**
BKZ	**Black Stump Fm**	**14.91**	**191**	P	**P**	**04 28 11.6**	**-1.9**
BKZ	**Black Stump Fm**	**14.91**	**191**	P	**P**	**04 28 12.5**	**-1.0**
BKZ	**Black Stump Fm**	**14.91**	**191**	P	**P**	**04 28 12.0**	**-1.5**
NTVZ	**North Tongariro**	**15.00**	**193**	P	**P**	**04 28 14.3**	**-0.2**
KRVZ	**Karewarewa**	**15.01**	**193**	P	**P**	**04 28 11.9**	**-2.7**
TMVZ	**Te Maari**	**15.01**	**193**	P	**P**	**04 28 14.3**	**-0.3**
TWVZ	**Taurewa**	**15.03**	**194**	P	**P**	**04 28 13.7**	**-1.0**
ETVZ	**East Tongariro**	**15.03**	**193**	P	**P**	**04 28 14.5**	**-0.3**
WTVZ	**West Tongariro**	**15.04**	**193**	P	**P**	**04 28 13.6**	**-1.3**
NNVZ	**North Ngauruho**	**15.05**	**193**	P	**P**	**04 28 14.7**	**-0.4**
OTVZ	**Oturere**	**15.07**	**193**	P	**P**	**04 28 12.5**	**-2.7**
NGZ	**Ngauruhoe**	**15.09**	**193**	P	**P**	**04 28 14.6**	**-0.9**
SNVZ	**South Ngauruho**	**15.10**	**193**	P	**P**	**04 28 14.0**	**-1.5**
TUVZ	**Tukino**	**15.17**	**193**	P	**P**	**04 28 15.8**	**-0.5**
KWHZ	**Kaweka Forest**	**15.18**	**191**	P	**P**	**04 28 14.5**	**-1.8**
FWVZ	**Far West T-bar**	**15.18**	**193**	P	**P**	**04 28 16.2**	**-0.3**
WHVZ	**Whangaehu Hut**	**15.20**	**193**	P	**P**	**04 28 15.3**	**-1.3**
TRVZ	**Turoa**	**15.22**	**193**	P	**P**	**04 28 15.8**	**-1.1**
WNVZ	**Wahianoa**	**15.24**	**193**	P	**P**	**04 28 15.3**	**-1.7**
PKVZ	**Pokaka**	**15.26**	**194**	P	**P**	**04 28 16.6**	**-0.5**
MOVZ	**Moawhango**	**15.29**	**193**	P	**P**	**04 28 15.9**	**-1.5**
BHHZ	**Black Hill Sta**	**15.30**	**192**	P	**P**	**04 28 13.0**	**-4.5**
KRHZ	**Kereru**	**15.40**	**191**	P	**P**	**04 28 16.6**	**-2.0**
KAHZ	**Kahuranaki**	**15.47**	**189**	P	**P**	**04 28 18.3**	**-1.0**
NEZ	**North Egmont**	**15.55**	**197**	P	**P**	**04 28 23.5**	**+3.3**
KHEZ	**Kahui Hut**	**15.58**	**198**	P	**P**	**04 28 24.6**	**+4.0**
WAZ	**Wanganui**	**15.78**	**194**	P	**P**	**04 28 23.5**	**+1.0**
TSZ	**Takapari Road**	**15.88**	**191**	P	**P**	**04 28 21.6**	**-1.9**
DVHZ	**Dannevirke**	**16.07**	**191**	P	**P**	**04 28 24.2**	**-1.4**
ANWZ	**Angora Road**	**16.18**	**190**	P	**P**	**04 28 24.3**	**-2.4**
BFZ	**Birch Farm**	**16.43**	**190**	P	**P**	**04 28 26.2**	**-3.1**
BFZ	**Birch Farm**	**16.43**	**190**	P	**P**	**04 28 26.5**	**-2.8**
BFZ	**Birch Farm**	**16.43**	**190**	P	**P**	**04 28 26.2**	**-3.1**
MRZ	**Mangatainoka R**	**16.53**	**192**	P	**P**	**04 28 25.7**	**-4.6**
TIWZ	**Tintock**	**16.59**	**191**	P	**P**	**04 28 29.2**	**-1.8**
OGWZ	**Otaki Gorge**	**16.76**	**193**	P	**P**	**04 28 28.7**	**-4.0**
HOWZ	**Holdsworth Sta**	**16.77**	**192**	P	**P**	**04 28 30.5**	**-2.3**
TMWZ	**Te Maipa**	**16.91**	**191**	P	**P**	**04 28 32.2**	**-2.0**
MTW	**Mount Morrison**	**17.03**	**192**	P	**P**	**04 28 32.7**	**-2.6**
DUWZ	**D'Urville Isla**	**17.03**	**196**	P	**P**	**04 28 33.6**	**-1.9**
CAW	**Cannon Point**	**17.06**	**193**	P	**P**	**04 28 33.5**	**-2.3**
TRWZ	**Traveller**	**17.23**	**191**	P	**P**	**04 28 32.8**	**-4.5**
PAWZ	**Paruwai Farm**	**17.26**	**192**	P	**P**	**04 28 35.2**	**-2.4**
MSWZ	**Moikau Station**	**17.32**	**192**	P	**P**	**04 28 35.8**	**-2.4**
SNZO	**South Karori**	**17.33**	**194**	P	**P**	**04 28 36.3**	**-2.0**
SNZO	**South Karori**	**17.33**	**194**	P	**P**	**04 28 36.2**	**-2.0**
QRZ	**Quartz Range**	**17.44**	**199**	P	**P**	**04 28 37.8**	**-1.5**
QRZ	**Quartz Range**	**17.44**	**199**	P	**P**	**04 28 37.8**	**-1.5**
PLWZ	**Palliser**	**17.47**	**192**	P	**P**	**04 28 38.1**	**-1.6**
NNZ	**Nelson**	**17.56**	**197**	P	**P**	**04 28 38.5**	**-1.9**
TUWZ	**Tuamarina**	**17.62**	**195**	P	**P**	**04 28 38.2**	**-2.7**
BSWZ	**Blackbirch Sta**	**17.91**	**195**	P	**P**	**04 28 41.4**	**-2.2**
THZ	**Tophouse**	**18.20**	**197**	P	**P**	**04 28 44.1**	**-2.3**
KHZ	**Kahutara**	**18.65**	**195**	P	**P**	**04 28 48.0**	**-2.3**
KHZ	**Kahutara**	**18.65**	**195**	P	**P**	**04 28 48.1**	**-2.3**
LTZ	**Lake Taylor**	**19.32**	**197**	P	**P**	**04 28 53.6**	**-3.0**
OXZ	**Oxford**	**19.88**	**197**	P	**P**	**04 28 59.2**	**-2.5**
RPZ	**Rata Peaks**	**20.52**	**199**	P	**P**	**04 29 05.8**	**-1.7**
RPZ	**Rata Peaks**	**20.52**	**199**	P	**P**	**04 29 05.7**	**-1.8**
RPZ	**Rata Peaks**	**20.52**	**199**	P	**P**	**04 29 05.1**	**-2.4**
	18nm,0.5s,baz=326,slow=2.9,SNR=21						
	18nm,0.5s						
ODZ	**Otahua Downs**	**21.86**	**198**	P	**P**	**04 29 19.3**	**-0.2**
STKA	**Stephens Creek**	**34.52**	**249**	P	**P**	**04 31 08.6**	**-1.7**
	1.0nm,0.4s,baz=91,slow=14,SNR=6.7						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**41.96**	**261**	P	**P**	**04 32 09.3**	**-1.7**
	1.3nm,0.6s,baz=89,slow=8.5,SNR=20						
ASAR				pP	**pP**	**04 33 42.6**	**+1.7**
	0.7nm,0.7s,baz=99,slow=8.8,SNR=4.4						
ASAR				S	**S**	**04 37 53.0**	**-0.2**
	0.3nm,0.3s,baz=220,slow=39,SNR=1.4						
	1.3nm,0.6s						
WB0	**Warramunga Arr**	**42.38**	**267**	P	**P**	**04 32 11.9**	**-2.5**
WB0				IAmb	IAmb	04 32 12.9	
	comp=Z,5.4nm,0.6s						
WRA	**Warramunga Arr**	**42.39**	**267**	P	**P**	**04 32 12.1**	**-2.4**
WRA	**Warramunga Arr**	**42.39**	**267**	P	**P**	**04 32 12.3**	**-2.2**
	comp=Z,3.1nm,0.5s,baz=99,slow=6.8,SNR=99						
WRA				ScP	**ScP**	**04 36 60.0**	**+0.6**
	comp=Z,3.4nm,1.0s,baz=100,slow=4.3,SNR=11						
	comp=Z,3.1nm,0.5s						
VNDA	**Vanda**	**53.78**	**185**	P	**P**	**04 33 38.4**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=317,slow=5.9,SNR=3.9						
	comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**65.58**	**180**	P	**P**	**04 34 58.3**	**+0.5**
QSPA				IAmb	IAmb	04 34 59.2	
	comp=Z,7.0nm,0.8s						
SMAI	**San Martin Ant**	**75.53**	**159**	P	**P**	**04 35 57.4**	**+0.8**
SMAI				IAmb	IAmb	04 35 59.0	
	comp=Z,9.8nm,0.8s						
BELA	**Belgrano 2**	**75.83**	**173**	P	**P**	**04 35 57.5**	**-0.7**
BELA				IAmb	IAmb	04 35 58.4	
	comp=Z,6.0nm,0.8s						
MAW	**Mawson**	**77.19**	**200**	P	**P**	**04 36 05.7**	**0.0**
	comp=Z,2.5nm,0.7s,baz=154,slow=4.7,SNR=10						
	comp=Z,2.5nm,0.7s						

PETK	**Petropavlovsk-**	**79.69**	**347**	P	**P**	**04 36 19.4**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=178,slow=7.0,SNR=4.7						
	comp=Z,1.1nm,0.5s						
KMPM	**Mount Pierce**	**82.88**	**40**	P	**P**	**04 36 38.0**	**+1.9**
KMPM				IAmb	IAmb	04 36 38.6	
	comp=Z,5.1nm,0.7s						
KMRM	**Mail Ridge**	**83.00**	**40**	P	**P**	**04 36 38.2**	**+1.6**
KMRM				IAmb	IAmb	04 36 39.8	
	comp=Z,9.3nm,1.0s						
ISA	**Isabella, Lake**	**83.43**	**46**	P	**P**	**04 36 40.5**	**+1.6**
ISA				IAmb	IAmb	04 36 41.5	
	comp=Z,6.9nm,0.9s						
CMB	**Columbia Colle**	**83.63**	**43**	P	**P**	**04 36 41.6**	**+1.8**
TROLL	**Troll, Antarti**	**83.72**	**181**	P	**P**	**04 36 39.3**	**-0.6**
SNAA	**Sanae**	**84.06**	**179**	P	**P**	**04 36 40.5**	**-1.0**
SNAA	**Sanae**	**84.06**	**179**	P	**P**	**04 36 39.8**	**-1.7**
	comp=Z,2.5nm,0.7s,baz=202,slow=10,SNR=19						
	comp=Z,2.5nm,0.7s						
VNA3	**Neumayer Olymp**	**84.27**	**177**	P	**P**	**04 36 41.4**	**-1.0**
GLA	**Glamis**	**84.40**	**50**	P	**P**	**04 36 45.9**	**+2.1**
GLA				IAmb	IAmb	04 36 46.9	
	comp=Z,9.0nm,0.8s						
VNA2	**Neumayer--Watz**	**84.69**	**178**	P	**P**	**04 36 43.8**	**-0.8**
	baz=185,slow=4.1						
HUMO	**Hull Mountain**	**84.96**	**38**	P	**P**	**04 36 47.8**	**+1.5**
NVAR	**Mina Array Bea**	**85.17**	**44**	P	**P**	**04 36 48.2**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=223,slow=8.1,SNR=12						
	comp=Z,1.3nm,0.8s						
TPNV	**Topopah Spring**	**85.64**	**46**	P	**P**	**04 36 50.8**	**+1.0**
TPH	**Topopah**	**85.66**	**45**	P	**P**	**04 36 51.0**	**+1.0**
KVN	**Kaiserville**	**85.67**	**44**	P	**P**	**04 36 50.6**	**+0.6**
MOD	**Modoc Plateau**	**86.05**	**40**	P	**P**	**04 36 51.9**	**+0.2**
PRN	**Pahroc Range**	**86.68**	**46**	P	**P**	**04 36 56.0**	**+1.2**
PINE	**Pine Mountain**	**86.85**	**38**	P	**P**	**04 36 57.0**	**+1.5**
PINE				IAmb	IAmb	04 37 08.9	
	comp=Z,8.2nm,1.1s						
TUC	**Tucson**	**86.87**	**52**	P	**P**	**04 36 57.5**	**+1.8**
TUC				IAmb	IAmb	04 36 59.1	
	comp=Z,5.5nm,0.9s						
WVOR	**Wild Horse Val**	**87.36**	**41**	P	**P**	**04 36 59.2**	**+1.4**
X16A	**Lo Mia Camp, P**	**87.51**	**50**	P	**P**	**04 36 58.9**	**+0.1**
PLCA	**Paso Flores**	**87.83**	**134**	P	**P**	**04 37 01.6**	**+1.3**
	comp=Z,5.3nm,1.2s,baz=325,slow=5.4,SNR=3.1						
	comp=Z,5.3nm,1.2s						
I07A	**Izee**	**87.85**	**39**	P	**P**	**04 37 01.6**	**+1.6**
I07A				IAmb	IAmb	04 37 02.5	
	comp=Z,4.9nm,0.9s						
U15A	**North Rim**	**87.99**	**48**	P	**P**	**04 37 02.9**	**+1.7**
U15A				IAmb	IAmb	04 37 04.0	
	comp=Z,6.5nm,1.1s						
J08A	**Circle Bar Ran**	**88.01**	**40**	P	**P**	**04 37 02.5**	**+1.6**
J08A				IAmb	IAmb	04 37 03.1	
	comp=Z,5.9nm,1.1s						
PKCU	**Pink Cliffs**	**88.53**	**47**	P	**P**	**04 37 04.4**	**+0.7**
PKCU				IAmb	IAmb	04 37 06.9	
	comp=Z,4.3nm,0.8s						
X18A	**Snowflake**	**88.62**	**51**	P	**P**	**04 37 05.4**	**+1.4**
X18A				IAmb	IAmb	04 37 06.6	
	comp=Z,3.2nm,0.9s						
G08A	**Pilot Rock**	**88.89**	**38**	P	**P**	**04 37 06.6**	**+1.7**
G08A				IAmb	IAmb	04 37 07.8	
	comp=Z,3.2nm,0.9s						
MTPU	**Mount Pierson**	**88.93**	**47**	P	**P**	**04 37 06.4**	**+0.9**
MTPU				IAmb	IAmb	04 37 08.8	
	comp=Z,3.5nm,0.8s						
MFID	**Camas Ranch**	**89.61**	**41**	P	**P**	**04 37 09.2**	**+1.0**
MFID				IAmb	IAmb	04 37 10.4	
	comp=Z,5.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**89.76**	**290**	P	**P**	**04 37 10.3**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=146,slow=3.7,SNR=6.4						
	comp=Z,1.0nm,0.3s						
TMUT	**Trail Mountain**	**90.25**	**46**	P	**P**	**04 37 13.0**	**+1.4**
TMUT				IAmb	IAmb	04 37 14.2	
	comp=Z,6.1nm,0.8s						
HLID	**Hailey**	**90.54**	**41**	P	**P**	**04 37 13.2**	**+0.5**
HVU	**Hansel Valley**	**90.56**	**44**	P	**P**	**04 37 14.0**	**+1.2**
HVU				IAmb	IAmb	04 37 14.9	
	comp=Z,2.9nm,0.7s						
SRU	**San Rafael Swe**	**90.60**	**47**	P	**P**	**04 37 14.2**	**+1.1**
SRU				IAmb	IAmb	04 37 15.1	
	comp=Z,4.7nm,0.8s						
TX31	**Lajitas Ar. Si**	**90.73**	**58**	P	**P**	**04 37 14.8**	**+0.9**
TX32	**Lajitas Array**	**90.73**	**58**	P	**P**	**04 37 15.0**	**+1.2**
TX32				IAmb	IAmb	04 37 16.4	
	comp=Z,3.5nm,0.9s						
TXAR	**Lajitas Array**	**90.74**	**58**	P	**P**	**04 37 15.1**	**+1.3**
TXAR	**Lajitas Array**	**90.74**	**58**	P	**P**	**04 37 15.7**	**+1.9**
	comp=Z,2.5nm,0.8s,baz=213,slow=6.7,SNR=36						
	comp=Z,2.5nm,0.8s						
TCUT	**Toone Canyon**	**91.08**	**45**	P	**P**	**04 37 16.4**	**+1.0**
TCUT				IAmb	IAmb	04 37 17.5	
	comp=Z,6.0nm,0.9s						
S22A	**4UR Ranch, Cre**	**92.42**	**49**	P	**P**	**04 37 22.7**	**+1.1**
S22A				IAmb	IAmb	04 37 23.8	
	comp=Z,2.4nm,1.0s						
ILAR	**Eielson Array**	**92.62**	**14**	P	**P**	**04 37 20.6**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=22,slow=36,SNR=2.1						
	comp=Z,0.2nm,0.5s						
SMCO	**Snowmass**	**93.02**	**48**	P	**P**	**04 37 25.5**	**+1.0**
SMCO				IAmb	IAmb	04 37 29.7	
	comp=Z,2.6nm,1.1s						
PDAR	**Pinedale Array**	**93.11**	**44**	P	**P**	**04 37 25.1**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=222,slow=1.8,SNR=5.2						
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**112.58**	**312**	PKiKP	**PKiKP**	**04 42 41.8**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=89,slow=0.4,SNR=2.9						
KURBB	**Kurchatov Arra**	**115.70**	**316**	PKP	**PKPdf**	**04 42 47.2**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=104,slow=2.1,SNR=11						
BVAR	**Borovoye Array**	**120.91**	**318**	PKP	**PKPdf**	**04 42 57.8**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=64,slow=3.4,SNR=7.1						
SPITS	**Spitsbergen Ar**	**125.73**	**356**	PKP	**PKPdf**	**04 43 07.0**	**-0.8**
	comp=Z,4.6nm,0.7s,baz=128,slow=9.6,SNR=1.8						
MDP	**Montagnes des**	**125.93**	**102**		**PKPdf**	**04 43 09.9**	**-0.1**
MDP	**Montagnes des**	**125.93**	**102**	PKP	**PKPdf**	**04 43 09.9**	**-0.1**
	comp=Z,9.4nm,1.1s,baz=62,slow=1.9,SNR=5.2						
ARU	**Arti**	**127.38**	**323**	PKP	**PKPdf**	**04 43 10.1**	**-1.3**
	comp=Z,4.0nm,0.4s,baz=118,slow=19,SNR=4.3						
AKTO	**Aktyubinsk**	**128.75**	**316**	PKP	**PKPdf**	**04 43 13.7**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=126,slow=3.3,SNR=4.6						
ARCES	**ARCESS Array B**	**132.49**	**348**	PKhKP	PKPpre	04 43 12.1	
	comp=Z,3.1nm,1.0s,baz=350,slow=3.7,SNR=3.8						
ARCES				PKP	**PKPdf**	**04 43 19.2**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=85,slow=2.9,SNR=8.8						
FINES	**FINESS Array B**	**139.03**	**341**	PKhKP	PKPpre	04 43 23.2	
	comp=Z,0.8nm,0.4s,baz=54,slow=3.9,SNR=9.1						
FINES				PKP	**PKPdf**	**04 43 32.7**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=42,slow=1.2,SNR=5.9						
FINES				SKPbc	**SKPbc**	**04 46 19.7**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=82,slow=2.7,SNR=3.9						
NB2	**NORSAR Subarra**	**142.68**	**351**	PKP	**PKPdf**	**04 43 35.9**	**-3.8**
	comp=Z,0.7nm,0.5s,baz=14,slow=2.9						
NOA	**NORSAR Array I**	**142.68**	**351**		PKPpre	04 43 35.0	
NOA	**NORSAR Array B**	**142.68**	**351**	PKhKP	PKPpre	04 43 35.0	
	comp=Z,1.1nm,0.6s,baz=16,slow=4.6,SNR=5.4						
HFS	**Hagfors**	**143.15**	**349**		PKPpre	04 43 37.0	
HFS	**Hagfors**	**143.15**	**349**	PKhKP	PKPpre	04 43 37.0	
	comp=Z,9.9nm,0.5s,baz=60,slow=3.6,SNR=69						
PABE	**Paberze**	**144.38**	**337**		PKPbc	04 43 42.2	-0.3
AKASG	**Malin Array Be**	**145.49**	**327**	PKPbc	**PKPdf**	**04 43 44.5**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=43,slow=4.0,SNR=14						
AKBB	**Malin Array Si**	**145.49**	**327**		**PKPdf**	**04 43 45.0**	**+0.2**
BNN	**Bunyan**	**146.56**	**304**		**PKPdf**	**04 43 47.1**	**0.0**
ASF	**Jabal al Asfar**	**146.78**	**292**	PKPbc	**PKPdf**	**04 43 50.0**	**+2.3**
	comp=Z,1.7nm,0.6s,baz=198,slow=6.4,SNR=3.6						
BRTR	**Keskin Array B**	**147.96**	**306**	PKPbc	**PKPdf**	**04 43 52.0**	**+2.5**
	comp=Z,2.5nm,0.7s,baz=156,slow=3.4,SNR=5.9						
MMAI	**Mount Meron Ar**	**147.97**	**293**	PKPbc	**PKPbc**	**04 43 53.5**	**+0.1**
	comp=Z,5.0nm,0.5s,baz=79,slow=6.0,SNR=8.0						
ANTO	**Ankara**	**148.53**	**307**		**PKPbc**	**04 43 54.1**	**-0.5**
EKA	**Eskdalemuir Ar**	**149.12**	**4**	PKPbc	**PKPbc**	**04 43 54.6**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=349,slow=3.0,SNR=23						
BURAR	**Bucovina Array**	**149.48**	**325**		**PKPbc**	**04 43 56.3**	**-0.4**
MLR	**Muntele Rosu**	**150.40**	**321**		**PKPbc**	**04 43 58.1**	**-0.9**
MLR	**Muntele Rosu**	**150.40**	**321**	PKPbc	**PKPbc**	**04 43 58.1**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=334,slow=10,SNR=5.5						
CLL	**Collm**	**151.44**	**343**		**PKPbc**	**04 44 00.9**	**-0.1**
CLL	**Collm**	**151.44**	**343**	*i*PKPbc	**PKPbc**	**04 44 00.4**	**-0.6**
	comp=Z,10.0nm,0.8s						
CLL				⇓*i*PKPab	**PKPab**	**04 44 11.3**	**-0.3**
	comp=Z,7.0nm,0.7s						
BRG	**Berggiesshubel**	**151.57**	**341**	*e*PKP	**PKPbc**	**04 44 01.2**	**0.0**
BRG				Amp		04 44 01.5	
	comp=Z,6.6nm,0.6s						
BRG				*ex*	x	04 44 08.3	
BRG				Amp		04 44 09.0	
	comp=Z,5.0nm,0.9s						
BRG				*ex*	x	04 44 11.8	
BRG				Amp		04 44 12.1	
	comp=Z,5.3nm,0.6s						
GERES	**GERESS Array B**	**153.43**	**340**	PKPbc	**PKPbc**	**04 44 04.3**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=341,slow=3.2,SNR=4.3						

IDC 30 04:33:07.1±4.8, 0.82N×16.94W, h0km, mb4.2/2, mbtmp4.3/5, ML4.1/3, Error ellipse: s-maj=80.5km s-min=68.5km az=4.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.93**	**164**	T	T	04 44 00.6	
	baz=341,slow=74,SNR=8.7						
H10N3	**ASCENSION HYDR**	**8.94**	**164**	T	T	04 43 60.0	
	baz=341,slow=74,SNR=16						
H10N1	**ASCENSION HYDR**	**8.95**	**164**	T	T	04 44 01.9	
	baz=341,slow=74,SNR=7.1						
H10S3	**ASCENSION HYDR**	**9.97**	**167**	T	T	04 45 21.6	
	baz=344,slow=74,SNR=12						
H10S2	**ASCENSION HYDR**	**9.98**	**167**	T	T	04 45 22.4	
	baz=236,slow=74,SNR=11						
DBIC	**Dimbokro**	**13.38**	**64**	Pn	Pn	04 36 16.8	-1.6
	0.6nm,0.3s,baz=261,slow=13,SNR=8.4						
DBIC				Sn	Sn	04 38 41.5	-6.6
	0.7nm,0.3s,baz=168,slow=13,SNR=3.6						
	2.4nm,0.4s						
BBTS	**Babate**	**13.76**	**2**	Pn	Pn	04 36 22.9	-0.7
	1.4nm,0.3s,baz=149,slow=19,SNR=4.7						
BBTS				Sn	Sn	04 38 53.0	-4.3
	1.2nm,0.3s,baz=139,slow=23,SNR=7.7						
	14nm,0.6s						
KOWA	**Kowa**	**18.66**	**43**	Pn	Pn	04 37 28.0	+1.1
	0.5nm,0.3s,baz=220,slow=11,SNR=8.3						
	3.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**22.16**	**56**	P	P	04 38 05.3	+0.5
	3.3nm,0.3s

	comp=N,861µm,0.4s							
LKD2					AML	AML	04 39 17.5	
	comp=E,877µm,0.4s							
NEO	**Neokhori**	**1.04**	**67**	P	**Pg**	**04 38 51.8**	**-0.5**	
NEO				S	**Sg**	**04 39 05.7**	**-0.3**	
	comp=E,315nm,0.6s							
NEO	**Neokhori**	**1.04**	**67**	P	**Pg**	**04 38 52.0**	**-0.2**	
NEO				S	**Sg**	**04 39 05.7**	**-0.3**	
NEO				AML	AML	04 39 07.8		
	comp=N,680µm,0.6s							
NEO				AML	AML	04 39 11.0		
	comp=E,521µm,0.4s							
XOR	**Xorichti**	**1.05**	**64**	P	**Pg**	**04 38 51.8**	**-0.5**	
XOR				S	**Sb**	**04 39 06.8**	**+1.7**	
	comp=E,482nm,0.7s							
XOR	**Xorichti**	**1.05**	**64**	P	**Pg**	**04 38 51.6**	**-0.6**	
XOR				S	**Sg**	**04 39 05.6**	**-0.4**	
XOR				AML	AML	04 39 10.0		
	comp=E,821µm,0.6s							
XOR				AML	AML	04 39 12.7		
	comp=N,1108µm,0.9s							
EVGl	**Lefkada island**	**1.07**	**255**	P	**Pg**	**04 38 52.1**	**-0.7**	
EVGl	**Lefkada island**	**1.07**	**255**	P	**Pg**	**04 38 52.0**	**-0.8**	
JAN	**Janina**	**1.15**	**311**	P	**Pb**	**04 38 52.6**	**-0.8**	
JAN				AML	AML	04 39 16.9		
	comp=E,1387µm,0.3s							
JAN				AML	AML	04 39 17.5		
	comp=N,1817µm,0.5s							
LTK	**Loutraki**	**1.18**	**139**	P	**Pb**	**04 38 54.1**	**+0.3**	
LTK	**Loutraki**	**1.18**	**139**	P	**Pb**	**04 38 54.3**	**+0.4**	
FSK	**Fiskardo**	**1.20**	**248**	P	**Pb**	**04 38 54.4**	**+0.2**	
FSK	**Fiskardo**	**1.20**	**248**	P	**Pb**	**04 38 54.4**	**+0.2**	
FSK				AML	AML	04 39 19.5		
	comp=N,673µm,0.4s							
FSK				AML	AML	04 39 21.7		
	comp=E,609µm,0.6s							
LOUT	**Loutraki**	**1.21**	**139**	P	**Pb**	**04 38 55.0**	**+0.6**	
LOUT	**Loutraki**	**1.21**	**139**	P	**Pb**	**04 38 54.7**	**+0.3**	
VIL2	**Platees**	**1.23**	**124**	P	**Pb**	**04 38 54.9**	**+0.2**	
VIL2				AML	AML	04 39 18.6		
	comp=N,720µm,0.6s							
VIL2				AML	AML	04 39 21.1		
	comp=E,894µm,1.0s							
LIT	**Litokhoron**	**1.25**	**18**	P	**Pn**	**04 38 54.9**	**+0.2**	
LIT	**Litokhoron**	**1.25**	**18**	P	**Pn**	**04 38 55.0**	**+0.3**	
LIT				S	**Sb**	**04 39 11.8**	**+0.8**	
LIT				AML	AML	04 39 16.4		
	comp=E,830µm,0.4s							
LIT				AML	AML	04 39 16.9		
	comp=N,1412µm,0.5s							
VILL	**Villia**	**1.28**	**125**	P	**Pn**	**04 38 55.0**	**-0.1**	
VLS	**Valsamata**	**1.31**	**237**	P	**Pn**	**04 38 55.5**	**0.0**	
VLS				S	**Sb**	**04 39 14.1**	**+1.4**	
VLS				AML	AML	04 39 22.2		
	comp=N,563µm,0.4s							
VLS				AML	AML	04 39 26.2		
	comp=E,440µm,0.3s							
PSDA	**Pessada-Kefalo**	**1.35**	**234**	P	**Pn**	**04 38 56.5**	**+0.5**	
PSDA	**Pessada-Kefalo**	**1.35**	**234**	P	**Pn**	**04 38 56.3**	**+0.3**	
KEF4	**Livadi, Kephal**	**1.38**	**242**	P	**Pn**	**04 38 57.1**	**+0.6**	
KZN	**Kozani**	**1.40**	**353**	P	**Pn**	**04 38 58.1**	**+1.2**	
KZN	**Kozani**	**1.40**	**353**	P	**Pn**	**04 38 58.0**	**+1.2**	
KZN				S	**Sb**	**04 39 15.7**	**+0.3**	
KZN				AML	AML	04 39 23.7		
	comp=N,752µm,0.7s							
KZN				AML	AML	04 39 26.1		
	comp=E,1216µm,0.5s							
PENT	**Pentalofos**	**1.44**	**333**	P	**Pn**	**04 38 58.2**	**+0.8**	
KEF3	**Kipouria, Keph**	**1.46**	**242**	P	**Pn**	**04 38 57.7**	**+0.2**	
LTHK	**Lithakia**	**1.50**	**217**	P	**Pn**	**04 38 59.5**	**+1.5**	
NEST	**Nestorio**	**1.67**	**335**	P	**Pb**	**04 39 02.6**	**+0.4**	
NEST				AML	AML	04 39 35.5		
	comp=N,545µm,0.5s							
NEST				AML	AML	04 39 36.0		
	comp=E,625µm,0.5s							
KYMI	**Kymi, Euboea I**	**1.68**	**99**	P	**Pn**	**04 39 00.6**	**+0.1**	
ATHU	**Athens Univers**	**1.70**	**123**	P	**Pn**	**04 39 01.8**	**+0.9**	
ITM	**Ithomi**	**1.73**	**181**	P	**Pb**	**04 39 03.5**	**+0.2**	
ITM				AML	AML	04 39 35.8		
	comp=N,321µm,0.5s							
ITM				AML	AML	04 39 36.5		
	comp=E,277µm,0.8s							
DION	**Dionisos Attik**	**1.74**	**118**	P	**Pn**	**04 39 02.2**	**+0.8**	
DION	**Dionisos Attik**	**1.74**	**118**	P	**Pn**	**04 39 02.5**	**+1.1**	
DION				AML	AML	04 39 32.6		
	comp=E,468µm,0.5s							
DION				AML	AML	04 39 33.2		
	comp=N,530µm,0.4s							
VLY	**Voula,Athens**	**1.77**	**126**	P	**Pn**	**04 39 02.9**	**+1.1**	
KRND	**KRANIDI**	**1.78**	**148**	P	**Pn**	**04 39 02.9**	**+1.0**	
KEK	**Kerkira**	**1.87**	**296**	P	**Pb**	**04 39 06.3**	**+0.6**	
PYL	**PYLOS**	**2.02**	**185**	P	**Pb**	**04 39 08.3**	**+0.1**	
SRS	**Serrai**	**2.53**	**29**	*e*Pg	**Pb**	**04 39 17.0**	**+0.1**	
SRS				*e*Sg	**Sn**	**04 39 42.9**	**+0.3**	
PRVS	**Prvonek**	**3.59**	**1**	*e*Pn	**Pn**	**04 39 28.2**	**+1.3**	
PRVS				*e*Sn	**Sn**	**04 40 07.0**	**-1.9**	
BOSS	**Bosilegrad**	**3.60**	**6**	*e*Pn	**Pn**	**04 39 28.7**	**+1.7**	
SELS	**Selova**	**4.35**	**352**	*e*Pn	**Pn**	**04 39 37.3**	**0.0**	
ZAPS	**Zavoj**	**4.39**	**6**	*e*Pn	**Pn**	**04 39 39.6**	**+1.8**	
ZAPS				*e*Sn	**Sn**	**04 40 23.5**	**-5.0**	
SJES	**Sjenica**	**4.60**	**341**	*e*Pn	**Pn**	**04 39 43.2**	**+2.4**	
IVAS	**Ivanjica**	**4.86**	**344**	*e*Pn	**Pn**	**04 39 45.4**	**+1.1**	
GRUS	**Gruza**	**5.06**	**350**	*e*Pn	**Pn**	**04 39 48.8**	**+1.8**	
STON	**Ston**	**5.12**	**322**	*e*Pn	**Pn**	**04 39 48.3**	**+0.6**	
DIVS	**Divibare**	**5.39**	**345**	*e*Pn	**Pn**	**04 39 52.4**	**+0.7**	
LSTV	**Lastovo**	**5.45**	**317**	*e*Pn	**Pn**	**04 39 53.8**	**+1.4**	
MAKA	**Makarska**	**5.76**	**321**	*e*Pn	**Pn**	**04 39 58.0**	**+1.4**	
KIJV	**Kijevo**	**6.59**	**322**	*e*Pn	**Pn**	**04 40 08.8**	**+0.8**	
DUGI	**Dugi Otok**	**7.26**	**317**	*e*Pn	**Pn**	**04 40 19.1**	**+1.8**	
NVLJ	**Novalja**	**7.75**	**319**	*e*Pn	**Pn**	**04 40 25.8**	**+1.9**	

ROM 30 04:42:45.1±0.1,42°802N±0.008×13°204E±0.007, h10km,ML1.4/1,Error ellipse: s-maj=0.9km s-min=0.6km az=15.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.03**	**0**	P	Pg	04 42 47.0	0.0
T1242				S	Sg	04 42 48.0	-0.5
NRCA	**Norcia**	**0.07**	**295**	P	Pg	04 42 47.8	+0.4
NRCA				S	Sg	04 42 49.2	+0.1
T1202	**Accumoli, Fraz**	**0.10**	**171**	AML	AML		
	comp=N,287µm,0.3s						
T1202				AML	AML		
	comp=E,262µm,0.1s						
T1202				AML	AML		
	comp=N,290µm,0.3s						
T1202				AML	AML		
	comp=E,262µm,0.1s						
MC2	**Monte Cornacci**	**0.11**	**355**	P	Pg	04 42 48.3	+0.3
MC2				S	Sg	04 42 51.0	+0.9
MMO1	**Montemonaco**	**0.13**	**43**	P	Pg	04 42 48.7	+0.5
MMO1				S	Sg	04 42 51.0	+0.6
T1241	**Roccafluvione,**	**0.17**	**72**	P	Pg	04 42 49.6	+0.7
T1241				S	Sg	04 42 52.5	+1.0
T1215	**Vallo di Nera,**	**0.25**	**270**	P	Pg	04 42 50.8	+0.7
T1215				S	Sg	04 42 55.0	+1.5
FDMO	**Fiordimonte**	**0.25**	**340**	P	Pg	04 42 50.9	+0.7
FDMO				S	Sg	04 42 55.2	+1.6
RM33	**Pellescritta (**	**0.29**	**179**	P	Pb	04 42 52.1	-0.4
RM33				S	Sb	04 42 56.7	-0.8
CESI	**CESI - Serrava**	**0.30**	**313**	P	Pg	04 42 51.8	+0.7
CESI				S	Sb	04 42 56.8	-0.9
TERO	**Teramo**	**0.34**	**121**	P	Pg	04 42 52.3	+0.4
TERO				S	Sb	04 42 58.0	-0.9

*IDC **30** 04:42:48.8±0.5,13°.26N×144°.22E,h141km±4km,mb4.0/17, mbtmp4.4/17,MS3.5/2,Error ellipse: s-maj=16.9km s-min=10.8km az=91.0*

*NEIC **30** 04:42:49.3±0.6,13°.3N±0°.1×144°.1E±0°.1,h135km±7km, mb4.6/93,Error ellipse: s-maj=17.9km s-min=13.9km az=113.0*

ISC 30 04:42:49.2±0.5,13°.28N±0°.09×144°.11E±0°.09,h142km, n141,σ0°69/138,mb4.5/61,1C-2D,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.80**	**67**	Pn	**Pn**	**04 43 11.7**	**+0.2**
GUMO				Sn	**Sn**	**04 43 27.8**	**-0.7**
GUMO	**Guam**	**0.80**	**67**	P	**Pn**	**04 43 11.7**	**+0.2**
	263nm,0.3s,baz=185,slow=23,SNR=35						
GUMO				S	**Sn**	**04 43 27.6**	**-0.8**
	3µm,0.4s,baz=352,slow=23,SNR=29						
PATS	**Pohnpei**	**15.37**	**113**			**04 46 21.1**	**+1.0**
PATS				IAmb	IAmb	04 46 57.1	
	comp=Z,52nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**22.74**	**71**	T	T		
	baz=255,slow=75,SNR=9.0					05 11 26.5	
H11N2	**WAKE ISLAND Hy**	**22.75**	**71**	T	T		
	baz=255,slow=75,SNR=6.4					05 11 28.0	
H11N3	**WAKE ISLAND Hy**	**22.76**	**71**	T	T		
	baz=255,slow=75,SNR=9.3					05 11 28.0	
JNU	**Nakatsue**	**23.16**	**331**	P	**P**	**04 47 40.6**	**-2.5**
MJAR	**Matsushiro Arr**	**23.77**	**348**	P	**P**	**04 47 47.6**	**-1.0**
	comp=Z,5.1nm,0.4s,baz=165,slow=9.2,SNR=10						
MJAR				LR	LR	04 55 25.8	
	comp=Z,133nm,18.1s,baz=182,slow=32						
	comp=E,5.1nm,0.4s						
SSLB	**Suanglung**	**24.28**	**299**	P	**P**	**04 47 53.5**	**0.0**
SSLB				IAmb	IAmb	04 47 56.9	
	comp=E,19nm,0.8s						
KSRS	**Korea Array**	**28.08**	**332**	P	**P**	**04 48 27.6**	**+0.1**
KSRS	**Korea Array**	**28.08**	**332**	P	**P**	**04 48 27.6**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=142,slow=9.2,SNR=8.2						
	comp=E,3.5nm,0.6s						
USRK	**Ussuriysk Ar.**	**32.52**	**344**	P	**P**	**04 49 06.8**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=160,slow=15,SNR=4.0						
	comp=E,1.9nm,0.6s						
CTA	**Charters Tower**	**33.22**	**176**	LR	LR		
	comp=Z,57nm,18.9s,baz=256,slow=39					05 04 08.7	
WB0	**Warramunga Arr**	**34.20**	**196**	P	**P**	**04 49 20.9**	**-0.4**
WB0				IAmb	IAmb	04 49 21.5	
	comp=Z,7.8nm,0.7s						
WR0	**Warramunga Arr**	**34.35**	**196**	P	**P**	**04 49 21.7**	**-0.8**
WB2	**Warramunga Arr**	**34.38**	**196**	P	**P**	**04 49 22.6**	**-0.3**
WRA	**Warramunga Arr**	**34.38**	**196**	P	**P**	**04 49 21.1**	**-1.8**
WRA	**Warramunga Arr**	**34.38**	**196**	P	**P**	**04 49 22.4**	**-0.4**
	comp=Z,7.2nm,0.8s,baz=20,slow=9.6,SNR=43						
WRA				ScP	**ScP**	**04 55 26.2**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=9.3,slow=3.5,SNR=5.6						
	comp=E,7.2nm,0.8s						
ENH	**Enshi**	**36.14**	**304**		**PcP**	**04 52 03.3**	**+2.6**
KLR	**Kul'dur**	**37.27**	**347**	P	**P**	**04 49 47.4**	**+0.3**
KLR	**Kul'dur**	**37.27**	**347**	P	**P**	**04 49 47.4**	**+0.3**
	comp=Z,3.5nm,0.5s,baz=162,slow=4.3,SNR=10						
	comp=E,3.5nm,0.5s						
AS31	**Alice Springs**	**38.05**	**195**	P	**P**	**04 49 54.1**	**+0.1**
ASAR	**Alice Springs**	**38.05**	**195**	P	**P**	**04 49 53.5**	**-0.6**
	comp=E,1.0nm,0.5s,baz=16,slow=13,SNR=28						
ASAR				ScP	**ScP**	**04 55 39.5**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=22,slow=2.9,SNR=4.5						
	comp=E,1.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.67**	**283**	P	**P**	**04 50 40.7**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=84,slow=6.5,SNR=12						
CMAR				PcP	**PcP**	**04 52 26.2**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=100,slow=1.9,SNR=8.5						
	comp=E,2.9nm,0.6s						
STKA	**Stephens Creek**	**44.96**	**183**	P	**P**	**04 50 49.5**	**-0.7**
	comp=Z,5.3nm,0.6s,baz=1.6,slow=7.5,SNR=13						
	comp=E,5.3nm,0.6s						
SHEM	**Shemya Is, Ala**	**46.05**	**25**	P	**P**	**04 50 59.3**	**+0.8**
SHEM	**Shemya Is, Ala**	**46.05**	**25**	P	**P**	**04 50 59.3**	**+0.8**
	comp=Z,53nm,0.3s,baz=226,slow=4.4,SNR=8.8						
SMY	**Shemya**	**46.05**	**25**	P	**P**	**04 50 59.5**	**+1.0**
ULN	**Ulaanbaatar**	**46.22**	**326**	P	**P**	**04 51 00.3**	**+0.2**
TOO	**Toolangi**	**50.59**	**179**	P	**P**	**04 51 34.6**	**+1.1**
RAMN	**Ramite**	**55.27**	**294**	*e*P	**P**	**04 52 09.4**	**+1.0**
JIRN	**Jiri**	**55.67**	**294**	*e*P	**P**	**04 52 11.7**	**+0.3**
	comp=Z,8.5nm,0.4s						
GUN	**Gumba**	**55.95**	**295**	*e*P	**P**	**04 52 14.1**	**+0.7**
	comp=Z,10nm,0.4s						
PKI	**Pulchoki**	**56.36**	**294**	*e*P	**P**	**04 52 15.9**	**-0.3**
	comp=Z,5.4nm,0.4s						
PKIN	**Phulchoki**	**56.37**	**294**	*e*P	**P**	**04 52 16.1**	**-0.1**
	comp=Z,6.5nm,0.3s						
DMN	**Daman**	**56.63**	**294**	*e*P	**P**	**04 52 18.2**	**+0.2**
GKN	**Gorkha**	**57.06**	**295**	*e*P	**P**	**04 52 21.3**	**+0.4**
	comp=Z,11nm,0.3s						
DANN	**Dangsing**	**57.84**	**295**	*e*P	**P**	**04 52 26.8**	**+0.2**
	comp=Z,18nm,0.4s						
KOLN	**Koldanda**	**57.97**	**295**	*e*P	**P**	**04 52 28.0**	**+0.6**
PYUN	**Piuthan**	**58.51**	**295**	*e*P	**P**	**04 52 31.1**	**-0.1**
	comp=Z,8.3nm,0.4s						
MK31	**Makanchi Array**	**61.20**	**316**	P	**P**	**04 52 48.1**	**-0.9**
MKAR	**Makanchi Array**	**61.20**	**316**	P	**P**	**04 52 49.5**	**+0.4**
MKAR	**Makanchi Array**	**61.20**	**316**	P	**P**	**04 52 49.8**	**+0.8**
	comp=Z,2.0nm,0.3s,baz=94,slow=8.7,SNR=58						
	comp=E,2.0nm,0.3s						
MAKZ	**Makanchi**	**61.42**	**316**	P	**P**	**04 52 50.6**	**+0.1**
MAKZ				IAmb	IAmb	04 52 51.6	
	comp=Z,4.7nm,0.6s						
KURK	**Kurchatov**	**64.35**	**320**	P	**P**	**04 53 09.8**	**+0.1**
KURBB	**Kurchatov Arra**	**64.39**	**320**	P	**P**	**04 53 10.2**	**+0.3**
	comp=Z,3.6nm,0.4s,baz=103,slow=6.8,SNR=16						
	comp=Z,3.6nm,0.4s						
NIL	**Nilore**	**66.91**	**301**	P	**P**	**04 53 26.0**	**-0.6**
NIL				IAmb	IAmb	04 53 28.9	
	comp=Z,9.2nm,0.8s						
PWL	**Port Wells**	**67.61**	**29**	P	**P**	**04 53 29.5**	**-0.8**
PWL				IAmb	IAmb	04 53 33.6	
	comp=Z,7.0nm,0.6s						
KK31	**Karatay Array**	**69.10**	**311**	P	**P**	**04 53 39.9**	**-0.2**
KKAR	**Karatay Array**	**69.10**	**311**	P	**P**	**04 53 39.5**	**-0.6**
KKAR	**Karatay Array**	**69.10**	**311**	P	**P**	**04 53 39.8**	**-0.2**
ILAR	**Eielson Array**	**69.16**	**25**	P	**P**	**04 53 38.0**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=254,slow=5.5,SNR=13						
	comp=Z,0.8nm,0.5s						
GAR	**Garm**	**69.22**	**307**	P	**P**	**04 53 41.0**	**0.0**
BVAR	**Borovoye Array**	**69.72**	**322**	P	**P**	**04 53 43.9**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=98,slow=7.7,SNR=18						
	comp=Z,2.9nm,0.5s						
DOT	**Dot Lake**	**70.14**	**27**	P	**P**	**04 53 45.3**	**-0.7**
J26L	**Joseph Creek**	**70.51**	**26**	P	**P**	**04 53 47.8**	**-0.5**
KMPM	**Mount Pierce**	**82.85**	**50**	P	**P**	**04 54 57.6**	**-0.5**
KMPM				IAmb	IAmb	04 55 00.3	
	comp=Z,15nm,1.3s						
HUMO	**Hull Mountain**	**83.27**	**48**	P	**P**	**04 55 01.3**	**+1.1**
KCPM	**Cahto Peak**	**83.40**	**51**	P	**P**	**04 55 02.0**	**+1.1**
YKA	**Yellowknife Ar**	**83.47**	**27**	P	**P**	**04 55 00.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=286,slow=5.1,SNR=11						
	comp=E,1.7nm,0.6s						
YBH	**Yreka Blue Hor**	**83.63**	**49**	P	**P**	**04 55 02.6**	**+0.5**
YBH				IAmb	IAmb	04 55 03.8	
	comp=Z,6.3nm,0.7s						
J04D	**Umpqua Nationa**	**83.75**	**47**	P	**P**	**04 55 03.3**	**+0.5**
L04D	**Klamath Falls**	**83.82**	**48**	P	**P**	**04 55 03.5**	**+0.4**
PINE	**Pine Mountain**	**84.46**	**46**	P	**P**	**04 55 06.9**	**+0.5**
B08A	**Colville Reser**	**84.50**	**42**	P	**P**	**04 55 06.4**	**+0.2**
B08A				IAmb	IAmb	04 55 06.8	
	comp=Z,4.8nm,0.6s						
K05A	**Summer Lake**	**84.73**	**47**	P	**P**	**04 55 08.5**	**+0.7**
K05A				IAmb	IAmb	04 55 09.3	
	comp=Z,8.5nm,1.0s						
HAWA	**Hanford**	**84.83**	**44**	P	**P**	**04 55 08.4**	**+0.5**
D08A	**Wollman Farm,**	**85.08**	**43**	P	**P**	**04 55 09.5**	**+0.4**
D08A				IAmb	IAmb	04 55 11.0	
	comp=Z,7.2nm,1.2s						
C09A	**Chrisman Ranch**	**85.32**	**42**	P	**P**	**04 55 10.9**	**+0.5**
C09A				IAmb	IAmb	04 55 11.5	
	comp=Z,11nm,1.2s						
MOD	**Modoc Plateau**	**85.35**	**48**	P	**P**	**04 55 11.4**	**+0.6**
G08A	**Pilot Rock**	**85.48**	**45**	P	**P**	**04 55 12.0**	**+0.6**
AFDM	**Forest Hills D**	**85.54**	**51**	P	**P**	**04 55 12.1**	**+0.5**
E09A	**Wood Farm, Sta**	**85.73**	**43**	P	**P**	**04 55 13.0**	**+0.7**
E09A				IAmb	IAmb	04 55 13.8	
	comp=Z,8.2nm,1.1s						
BEKR	**Beckworth**	**85.78**	**50**	P	**P**	**04 55 13.5**	**+0.5**
BEKR				IAmb	IAmb	04 55 14.1	
	comp=Z,6.9nm,0.6s						
NEW	**Newport**	**85.95**	**41**	P	**P**	**04 55 13.8**	**+0.3**
CMB	**Columbia Colle**	**86.20**	**52**	P	**P**	**04 55 15.5**	**+0.6**
WVOR	**Wild Horse Val**	**86.42**	**47**	P	**P**	**04 55 15.6**	**-0.5**
PNTR	**Pine Nut**	**86.54**	**51**	P	**P**	**04 55 17.1**	**+0.3**
PNTR				IAmb	IAmb	04 55 18.5	
	comp=Z,4.7nm,0.8s						
PAHR	**Pah Rah Range**	**86.55**	**50**	P	**P**	**04 55 17.1**	**+0.4**
BMO	**Blue Mountains**	**86.73**	**45**	P	**P**	**04 55 17.9**	**+0.4**
EDM	**Edmonton**	**86.83**	**36**	P	**P**	**04 55 17.1**	**-0.6**
YERR	**Yerington**	**86.84**	**51**	P	**P**	**04 55 18.6**	**+0.3**
YERR				IAmb	IAmb	04 55 19.7	
	comp=Z,12nm,1.5s						
ARCES	**ARCESS Array B**	**87.15**	**342**	P	**P**	**04 55 18.7**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=88,slow=8.6,SNR=6.9						
	comp=E,2.3nm,0.7s						
OMMB	**Old Mammoth Mi**	**87.36**	**52**	P	**P**	**04 55 21.6**	**+0.6**
RYN	**Ryan**	**87.47**	**51**	P	**P**	**04 55 21.9**	**+0.6**
RYN				IAmb	IAmb	04 55 23.5	
	comp=Z,4.7nm,1.0s						
PLID	**Pearl Lake**	**87.56**	**44**	P	**P**	**04 55 21.5**	**-0.1**
PLID				IAmb	IAmb	04 55 22.1	
	comp=Z,5.8nm,0.8s						
LHV	**Little Huntoon**	**87.58**	**51**	P	**P**	**04 55 22.5**	**+1.0**
LHV				IAmb	IAmb	04 55 24.3	
	comp=Z,5.2nm,0.9s						
KVN	**Kaiserville**	**87.68**	**51**	P	**P**	**04 55 22.7**	**+0.4**
KVN				IAmb	IAmb	04 55 23.3	
	comp=Z,4.4nm,0.9s						
NVAR	**Mina Array Bea**	**87.69**	**51**	P	**P**	**04 55 22.9**	**+0.7**
NVAR	**Mina Array Bea**	**87.69**	**51**	P	**P**	**04 55 23.1**	**+0.7**
	comp=Z,5.7nm,0.8s,baz=266,slow=5.9,SNR=38						
	comp=Z,5.7nm,0.8s						
NV11	**Mina Array Sit**	**87.80**	**51**	P	**P**	**04 55 23.3**	**+0.5**
NV11				IAmb	IAmb	04 55 25.0	
	comp=Z,5.5nm,1.0s						
BMN	**Battle Mountai**	**87.97**	**49**	P	**P**	**04 55 24.1**	**+0.6**
BMN				IAmb	IAmb	04 55 24.7	
	comp=Z,3.0nm,0.7s						
MFID	**Camas Ranch**	**88.14**	**46**	P	**P**	**04 55 24.9**	**+0.6**
DSP	**Deep Springs**	**88.22**	**52**	P	**P**	**04 55 25.0**	**+0.5**
DSP				IAmb	IAmb	04 55 26.6	
	comp=Z,5.0nm,1.0s						
LCH	**Last Change Ra**	**88.50**	**52**	P	**P**	**04 55 26.7**	**+0.6**
MZP	**Montezuma Peak**	**88.58**	**52**	P	**P**	**04 55 27.1**	**+0.5**
MZP				IAmb	IAmb	04 55 28.1	
	comp=Z,3.4nm,0.9s						
TPH	**Tonopah**	**88.60**	**51**	P	**P**	**04 55 27.2**	**+0.6**
GMN	**Gold Mountain**	**88.78**	**52**	P	**P**	**04 55 27.7**	**+0.1**
GMN				IAmb	IAmb	04 55 29.1	
	comp=Z,4.1nm,0.9s						
HLID	**Hailey**	**89.09**	**45**	P	**P**	**04 55 29.0**	**+0.3**
HLID				IAmb	IAmb	04 55 30.4	
	comp=Z,6.3nm,0.9s						
ELK	**Elko**	**89.33**	**48**	P	**P**	**04 55 30.5**	**+0.4**
ELK				IAmb	IAmb	04 55 31.7	
	comp=Z,6.2nm,0.8s						
WCT	**Wildcat Mounta**	**89.41**	**52**	P	**P**	**04 55 30.1**	**-0.2**
WCT				IAmb	IAmb	04 55 31.9	
	comp=Z,5.6nm,0.8s						
QSM	**Queen of Sheba**	**89.45**	**53**	P	**P**	**04 55 30.6**	**+0.2**
QSM				IAmb	IAmb	04 55 32.0	
	comp=Z,4.8nm,0.7s						
GWY	**Greenwater Val**	**89.54**	**53**	P	**P**	**04 55 31.5**	**+0.5**
GWY				IAmb	IAmb	04 55 33.1	
	comp=Z,7.5nm,1.3s						
TPNV	**Topopah Spring**	**89.66**	**52**	P	**P**	**04 55 32.0**	**+0.5**
GSC	**Goldstone, Bar**	**89.68**	**54**	P	**P**	**04 55 32.2**	**+0.6**
GSC				IAmb	IAmb	04 55 33.2	
	comp=E,6.1nm,0.9s						
LRM	**Limekiln Ridge**	**89.72**	**43**	P	**P**	**04 55 32.4**	**+0.6**
HRY	**Holter Researc**	**89.83**	**42**	P	**P**	**04 55 32.4**	**+0.3**
BOZ	**Bozeman (W)**	**90.33**	**43**	P	**P**	**04 55 35.5**	**+0.9**
PRN	**Pahroc Range**	**90.44**	**51**	P	**P**	**04 55 35.6**	**+0.4**
PRN				IAmb	IAmb	04 55 37.1	
	comp=Z,5.6nm,1.2s						
PMD	**Palm Desert**	**90.47**	**55**	P	**P**	**04 55 35.3**	**+0.1**
PMD				IAmb	IAmb	04 55 37.4	
	comp=Z,7.8nm,1.1s						
SHPR	**Sheep Range**	**90.62**	**52**	P	**P**	**04 55 36.1**	**+0.1**
SHPR				IAmb	IAmb	04 55 38.1	
	comp=Z,3.0nm,0.7s						
QLMT	**Earthquake Lak**	**90.72**	**44**	P	**P**	**04 55 36.7**	**+0.3**
HVU	**Hansel Valley**	**90.78**	**47**	P	**P**	**04 55 36.8**	**+0.1**
HVU				IAmb	IAmb	04 55 38.5	
	comp=Z,7.0nm,1.2s						
YHL	**Hebgen Lake**	**90.88**	**43**	P	**P**	**04 55 37.2**	**0.0**
PSUT	**Pine Spring**	**91.01**	**50**	P	**P**	**04 55 38.1**	**+0.2**
PSUT				IAmb	IAmb	04 55 39.4	
	comp=Z,3.8nm,1.0s						
FINES	**FINESS Array B**	**91.13**	**335**	P	**P**	**04 55 36.3**	**-1.4**
	comp=Z,1.6nm,0.4s,baz=55,slow=4.3,SNR=12						
	comp=Z,1.6nm,0.4s						
DUG	**Dugway, Tooele**	**91.26**	**48**	P	**P**	**04 55 39.7**	**+0.7**
DUG				IAmb	IAmb	04 55 40.3	
	comp=Z,4.5nm,1.1s						
IMW	**Indian Meadow**	**91.37**	**44**	P	**P**	**04 55 40.1**	**+0.6**
FXWY	**

SDPT	**Sand Point**	1.14	276	P		Pn	04 43 17.0	-0.5
	baz=94,SNR=102								
SDPT				S		Sn	04 43 31.0	-0.8
	baz=94								
S14K	**Fog Glacier**	1.20	330	P		Pn	04 43 18.8	+0.3
	baz=151,SNR=114								
S14K				S		Sn	04 43 35.5	+1.9
	baz=151								
VNFG	**Fog Glacier, M**	1.20	330			Pn	04 43 18.8	+0.4
VNFG						Sn	04 43 34.2	+0.6
ANPB	**Aniakchak Plen**	1.56	4			Pn	04 43 24.4	+1.0
ANPK	**Aniakchak Peak**	1.61	7			Pn	04 43 25.0	+0.9
CHIR	**Chirikof Islan**	1.73	69	Pn		Pn	04 43 26.3	+0.7
CHIR	**Chirikof Islan**	1.73	69	P		Pn	04 43 26.2	+0.7
	baz=252,SNR=63								
CHIR				S		Sn	04 43 46.5	+0.2
	baz=252								
PVV	**Pavlof Volcano**	1.89	275			Pn	04 43 27.8	+0.1
PVV						Sn	04 43 51.4	+1.0
PS4A	**Pavlof South-4**	1.93	274			Pn	04 43 28.3	0.0
HAG	**Hague Volcano**	1.96	273			Pn	04 43 28.5	-0.1
PN7A	**Pavlof North-7**	2.01	277			Pn	04 43 29.8	+0.3
DT1	**Dutton Round H**	2.18	268			Pn	04 43 31.5	-0.2
R16K	**Pilot Point**	2.38	12	P		Pn	04 43 35.0	+0.6
	baz=193								
R17K	**Ugashik Creek**	2.67	25			Pn	04 43 39.9	+1.5
R17K	**Ugashik Creek**	2.67	25	P		Pn	04 43 39.9	+1.5
	baz=207,SNR=125								
R17K				S		Sn	04 44 11.3	+1.8
	baz=207								
PLK3	**Peulik 3**	2.74	26			Pn	04 43 41.1	+1.6
SII	**Sitkinak Islan**	2.76	60	Pn		Pn	04 43 40.0	+0.3
SII						Sn	04 44 11.1	-0.7
SII				IAML			04 44 29.6	
	comp=N,190nm,0.9s								
SII	**Sitkinak Islan**	2.76	60	P		Pn	04 43 40.3	+0.6
	baz=244,SNR=17								
SII	**Sitkinak Islan**	2.76	60	P		Pn	04 43 40.5	+0.8
PLK1	**Peulik 1**	2.77	21			Pn	04 43 40.8	+1.0
FALS	**False Pass**	2.86	264			Pn	04 43 42.6	+1.6
FALS	**False Pass**	2.86	264	P		Pn	04 43 41.8	+0.7
	baz=80								
FALS	**False Pass**	2.86	264	P		Pn	04 43 42.1	+1.0
ISLZ	**Isanotski Laza**	3.05	262			Pn	04 43 44.1	+0.3
ISNN	**Isanotski Nort**	3.07	264			Pn	04 43 44.8	+0.8
SSLS	**Shishaldin Sou**	3.22	263			Pn	04 43 47.0	+0.9
SSBA	**Shishaldin**	3.28	264			Pn	04 43 47.5	+0.6
KABR	**Katmai Barrier**	3.48	32			Pn	04 43 50.2	+0.5
OHAK	**Old Harbor**	3.52	54	Pn		Pn	04 43 50.0	0.0
OHAK				IAML			04 45 08.0	
	comp=N,190nm,0.9s								
OHAK	**Old Harbor**	3.52	54	P		Pn	04 43 50.1	0.0
	baz=238,SNR=29								
OHAK				S		Sn	04 44 30.0	-0.3
	baz=238								
KELA	**Mount Kelaz**	3.54	24			Pn	04 43 51.4	+0.9
Q16K	**King Salmon**	3.58	16			Pn	04 43 51.8	+0.8
Q16K	**King Salmon**	3.58	16	P		Pn	04 43 51.8	+0.8
	baz=198,SNR=15								
Q16K				S		Sn	04 44 33.6	+1.6
	baz=198								
KAKN	**Katmai Knife C**	3.59	30			Pn	04 43 52.1	+0.8
WECS	**Westdahl Cape**	3.70	261			Pn	04 43 53.5	+0.9
P16K	**Nushagak River**	3.81	4			Pn	04 43 54.9	+0.8
P16K	**Nushagak River**	3.81	4	P		Pn	04 43 54.8	+0.8
	baz=185,SNR=7.5								
P16K				S		Sn	04 44 38.2	+0.7
	baz=185								
KAHC	**Katmai Hardscr**	3.91	28			Pn	04 43 56.2	+0.6
KAPH	**Katmai Pasha**	4.05	32			Pn	04 43 58.4	+0.8
P17K	**Kvichak River**	4.11	15			Pn	04 43 59.0	+0.7
P17K	**Kvichak River**	4.11	15	P		Pn	04 43 58.9	+0.6
	baz=197,SNR=21								
P17K				S		Sn	04 44 46.5	+1.4
	baz=197								
KDAK	**Kodiak Island**	4.14	50	Pn		Pn	04 43 58.1	-0.5
KDAK				IAML			04 45 13.1	
	comp=N,105nm,1.1s								
KDAK				IAML			04 45 19.6	
	comp=N,128nm,1.0s								
KDAK	**Kodiak Island**	4.14	50	P		Pn	04 43 58.5	-0.2
	baz=235								
AKSA	**Akutan Strait**	4.33	258			Pn	04 44 01.7	+0.5
O16K	**Kokwok River B**	4.37	3			Pn	04 44 01.9	+0.2
O16K	**Kokwok River B**	4.37	3	P		Pn	04 44 01.9	+0.2
	baz=183,SNR=17								
O16K				S		Sn	04 44 52.5	+1.3
	baz=183								
AKUT	**Akutan**	4.37	258	Pn		Pn	04 44 02.4	+0.6
AKUT				IAML			04 45 11.8	
	comp=N,115nm,1.4s								
AKUT				IAML			04 45 19.4	
	comp=E,129nm,0.8s								
P18K	**Big Mountain,**	4.52	22			Pn	04 44 04.5	+0.7
P18K	**Big Mountain,**	4.52	22	P		Pn	04 44 04.5	+0.7
	baz=205								
Q19K	**Cape Douglas,**	4.54	34			Pn	04 44 04.3	+0.3
Q19K	**Cape Douglas,**	4.54	34	P		Pn	04 44 04.3	+0.1
	baz=218,SNR=24								
O17K	**Koliganek Bris**	4.60	9			Pn	04 44 05.4	+0.4
O17K	**Koliganek Bris**	4.60	9	P		Pn	04 44 05.3	+0.4
	baz=190,SNR=16								
O17K				S		Sn	04 44 56.9	-0.2
	baz=190								
Q20K	**Shuyak Island**	4.75	42	P		Pn	04 44 07.1	+0.2
	baz=228,SNR=5.2								
SYI	**Shuyak Island**	4.75	42			Pn	04 44 07.1	+0.2
UNV	**Unalaska Valle**	4.87	257	Pn		Pn	04 44 08.5	-0.2
UNV	**Unalaska Valle**	4.87	257	P		Pn	04 44 08.5	-0.2
	baz=70								
O18K	**Koktuh Hills**	4.95	20			Pn	04 44 10.3	+0.5
O18K	**Koktuh Hills**	4.95	20	P		Pn	04 44 10.6	+0.9
	baz=203								
O18K				S		Sn	04 45 07.2	+1.5
	baz=203								
AUQ	**Augustine Qik'**	4.95	32			Pn	04 44 11.0	+1.2
AU22	**Augustine Moun**	4.98	32			Pn	04 44 11.3	+1.1
MGOD	**Makushin Gods**	5.09	257			Pn	04 44 11.8	0.0
N16K	**Nishlik Lake**	5.25	358			Pn	04 44 14.5	+0.7
N16K	**Nishlik Lake**	5.25	358	P		Pn	04 44 14.5	+0.7
	baz=179,SNR=61								
P19K	**Oil Pt**	5.25	31	Pn		Pn	04 44 14.5	+0.6
P19K				IAML			04 45 49.6	
	comp=E,72nm,0.8s								
P19K				IAML			04 45 59.6	
	comp=N,67nm,0.8s								
P19K	**Oil Pt**	5.25	31	P		Pn	04 44 14.6	+0.6
	baz=215,SNR=24								
OPT	**Oil Point**	5.25	31			Pn	04 44 14.8	+0.9
O19K	**Port Alsworth**	5.44	23			Pn	04 44 16.7	+0.3
O19K	**Port Alsworth**	5.44	23	P		Pn	04 44 17.1	+0.7
	baz=206,SNR=8.4								
ILSW	**Iliamna Southw**	5.55	29			Pn	04 44 18.7	+0.6
IVE	**Iliamna Volcan**	5.61	29			Pn	04 44 19.6	+0.7
N18K	**Kilae Creek**	5.62	13			Pn	04 44 19.5	+0.5
N18K	**Kilae Creek**	5.62	13	P		Pn	04 44 19.4	+0.4
	baz=196,SNR=17								
HOM	**Homer**	5.76	37	P		Pn	04 44 21.6	+0.8
	baz=223								
O20K	**Slope Mountain**	5.78	31			Pn	04 44 22.0	+0.8
O20K	**Slope Mountain**	5.78	31	P		Pn	04 44 21.9	+0.8
	baz=216,SNR=30								
CNPM	**China Poot**	5.81	39			Pn	04 44 21.4	-0.2
N19K	**Bonanza Creek**	5.97	19			Pn	04 44 25.2	+1.3
N19K	**Bonanza Creek**	5.97	19	P		Pn	04 44 25.0	+1.1
	baz=203,SNR=28								
RED	**Redoubt Volcan**	6.02	28			Pn	04 44 25.4	+0.9
RDWB	**Redoubt West**	6.06	28			Pn	04 44 25.4	+0.3
RSO	**Redoubt South**	6.06	28			Pn	04 44 26.0	+0.9
SVW2	**Sparrevohn**	6.07	13			Pn	04 44 25.4	+0.4
NCT	**North Crescent**	6.10	27			Pn	04 44 25.9	+0.3
BRLK	**Bradley Lake**	6.11	39			Pn	04 44 24.8	-0.8
BRSE	**Bradley Lake S**	6.14	40			Pn	04 44 25.5	-0.7
BRSE	**Bradley Lake S**	6.14	40	P		Pn	04 44 25.4	-0.7
	baz=226,SNR=8.8								
SPIA	**Saint Paul Isl**	6.84	291			Pn	04 44 36.4	+0.8
SPIA	**Saint Paul Isl**	6.84	291	P		Pn	04 44 35.9	+0.3
	baz=102								
SPNN	**North Nagishla**	6.85	24			Pn	04 44 37.1	+1.1
SPU	**Mount Spurr**	6.85	27			Pn	04 44 37.4	+1.5
SEW	**Seward**	6.87	41			Pn	04 44 35.3	-0.8
SEW	**Seward**	6.87	41	P		Pn	04 44 35.4	-0.6
	baz=229								
SLKM	**Skilak Lake**	6.87	36			Pn	04 44 35.3	-0.9

M19K	**Big River Lodg**	7.01	16			Pn	04 44 39.2	+1.1
M19K	**Big River Lodg**	7.01	16	P		Pn	04 44 38.8	+0.7
	baz=200,SNR=46							
O22K	**Cooper Landing**	7.03	38			Pn	04 44 40.0	+1.8
CLCO	**Concord Point,**	7.06	254			Pn	04 44 39.5	+0.7
L19K	**White Mountain**	7.21	14			Pn	04 44 41.3	+0.6
L19K	**White Mountain**	7.21	14	P		Pn	04 44 41.1	+0.3
	baz=197,SNR=26							
M20K	**Styx River**	7.22	21			Pn	04 44 42.3	+1.3
M20K	**Styx River**	7.22	21	P		Pn	04 44 42.0	+1.1
	baz=205							
RC01	**Rabbit Creek A**	7.46	35			Pn	04 44 43.6	-0.6
RC01	**Rabbit Creek A**	7.46	35	P		Pn	04 44 43.4	-0.8
	baz=222							
L20K	**Farewell, AK**	7.64	16			Pn	04 44 48.0	+1.4
L20K	**Farewell, AK**	7.64	16	P		Pn	04 44 47.3	+0.7
	baz=200,SNR=18							
PWL	**Port Wells**	7.78	40			Pn	04 44 47.3	-1.4
PWL	**Port Wells**	7.78	40	P		Pn	04 44 47.5	-1.1
	baz=228,SNR=40							
Q23K	**Middleton Isla**	7.79	52			Pn	04 44 48.8	+0.1
TT01	**Tatalina**	7.79	8			Pn	04 44 48.9	+0.2
MID	**Middleton Isla**	7.79	53			Pn	04 44 48.9	+0.2
TTA	**Tatalina**	7.81	8	Pn		Pn	04 44 49.0	-0.1
M22K	**Willow**	7.86	30			Pn	04 44 50.5	+1.0
PMR	**Palmer**	8.03	34			Pn	04 44 53.5	+1.6
KNK	**Knik Glacier**	8.12	36			Pn	04 44 54.3	+1.0
KNK	**Knik Glacier**	8.12	36	P		Pn	04 44 52.2	-1.0
	baz=225							
HIN	**Hinchinbrook I**	8.21	46			Pn	04 44 53.6	-0.9
GLI	**Glacier Island**	8.26	42	P		Pn	04 44 53.7	-1.4
	baz=232							
PPLA	**Purkeypile**	8.33	20	Pn		Pn	04 44 57.5	+1.3
PPLA	**Purkeypile**	8.33	20	P		Pn	04 44 57.4	+1.2
	baz=205							
FID	**Port Fidalgo**	8.43	44			Pn	04 44 55.4	-2.0
K20K	**Telida**	8.44	14			Pn	04 44 57.5	-0.1
K20K	**Telida**	8.44	14	P		Pn	04 44 57.9	+0.3
	baz=198,SNR=8.4							
SML	**Sawmill**	8.45	35			Pn	04 44 57.7	0.0
SML	**Sawmill**	8.45	35	P		Pn	04 44 57.7	0.0
	baz=224,SNR=6.9							
EYAK	**Cordova Ski Ar**	8.61	47			Pn	04 44 58.3	-1.6
EYAK	**Cordova Ski Ar**	8.61	47	P		Pn	04 44 58.8	-1.1
	baz=238,SNR=5.3							
SCM	**Sheep Creek Mo**	8.80	37			Pn	04 45 01.9	-0.7
SCM	**Sheep Creek Mo**	8.80	37	P		Pn	04 45 02.0	-0.7
	baz=227,SNR=23							
KAIM	**Kayak Island**	8.89	52			Pn	04 45 04.5	+0.7
KAIM	**Kayak Island**	8.89	52	P		Pn	04 45 04.2	+0.5
	baz=244,SNR=19							
RAGM	**Ragged Mountai**	8.99	49			Pn	04 45 04.4	-0.7
KLU	**Klutina**	9.09	41			Pn	04 45 05.5	-1.1
KLU	**Klutina**	9.09	41	P		Pn	04 45 05.7	-0.8
	baz=232,SNR=20							
HMT	**Hamilton**	9.14	50			Pn	04 45 07.5	+0.3
WAT1	**Susitna Watana**	9.16	30	P		Pn	04 45 06.3	-1.1
	baz=221,SNR=5.4							
J20K	**Nowinta River**	9.22	12	Pn		Pn	04 45 09.2	+1.0
J20K	**Nowinta River**	9.22	12	P		Pn	04 45 08.4	+0.1
	baz=196							
TRF	**Thorofare Moun**	9.22	24			Pn	04 45 08.8	+0.3
TRF	**Thorofare Moun**	9.22	24	P		Pn	04 45 08.2	-0.2
	baz=211							
NICHA	**Nichawak Mount**	9.23	51			Pn	04 45 08.2	-0.2
SUCK	**Suckling Hills**	9.24	52			Pn	04 45 09.2	+0.6
BMRM	**Bremner River**	9.31	46	P		Pn	04 45 09.8	+0.2
	baz=238							
M24K	**Tolsona, Glenn**	9.39	38			Pn	04 45 10.4	-0.3
M24K	**Tolsona, Glenn**	9.39	38	P		Pn	04 45 10.5	-0.1
	baz=229							
RND	**Reindeer**	9.54	27			Pn	04 45 12.2	-0.5
GCSA	**Galena City Sc**	9.56	4	P		Pn	04 45 13.1	+0.2
	baz=186							
N25K	**Chitina, Valde**	9.67	43			Pn	04 45 13.7	-0.8
N25K	**Chitina, Valde**	9.67	43	P		Pn	04 45 13.4	-1.0
	baz=235							
DHY	**Denali Highway**	9.69	31			Pn	04 45 12.9	-2.0
DHY	**Denali Highway**	9.69	31	P		Pn	04 45 12.8	-2.0
	baz=221,SNR=5.4							
SNH	**Sunshine Point**	9.71	53			Pn	04 45 14.9	-0.2
MCK	**McKinley**	9.79	26	Pn		Pn	04 45 16.1	+0.1
ATKA	**Atka Island**	9.79	258	P		Pn	04 45 12.3	-3.8
GLB	**Gilahina Butte**	9.89	45			Pn	04 45 16.2	-1.3
HARP	**HAARP**	9.94	38	P		Pn	04 45 18.3	+0.2
	baz=230							
ANM	**Nome**	9.96	343			Pn	04 45 18.3	0.0
TGL	**Tana Glacier**	9.96	50			Pn	04 45 18.7	+0.2
ISLE	**Juniper Island**	10.12	51			Pn	04 45 21.0	+0.3
BAGL	**Bagley Icefiel**	10.18	52			Pn	04 45 22.2	+0.8
PAX	**Paxson**	10.22	35			Pn	04 45 21.8	-0.2
PAX	**Paxson**	10.22	35	P		Pn	04 45 21.4	-0.6
	baz=227,SNR=22							
YAH	**Yahtse**	10.29	53			Pn	04 45 24.2	+1.1
NEA2	**Nenana**	10.48	23			Pn	04 45 23.9	-1.7
MLY	**Manley**	10.54	18	P		Pn	04 45 26.0	-0.4
	baz=205							
TABL	**Table Mountain**	10.59	54			Pn	04 45 28.2	+0.9
WRH	**Wood River Hil**	10.61	25			Pn	04 45 25.4	-1.9
K24K	**Donnelly Dome**	10.71	32	P		Pn	04 45 28.5	-0.2
	baz=223,SNR=13							
M26K	**Nabesna, AK**	10.74	42	Pn		Pn	04 45 29.6	+0.4
M26K	**Nabesna, AK**	10.74	42	P		Pn	04 45 28.8	-0.4
	baz=235,SNR=11							
MENT	**Mentasta**	10.80	38			Pn	04 45 31.0	+1.1
H21K	**Melozitna Rive**	10.81	13	Pn		Pn	04 45 30.9	+0.9
H21K	**Melozitna Rive**	10.81	13	P		Pn	04 45 29.5	-0.5
	baz=198,SNR=10							
CCB	**Clear Creek Bu**	10.82	25			Pn	04 45 27.8	-2.3
HDA	**Harding Lake**	10.85	27	Pn		Pn	04 45 28.4	-2.2
PINM	**Pinnacle**	10.89	56	P		Pn	04 45 31.6	+0.4
	baz=252							
RIDG	**Independent Ri**	10.96	34			Pn	04 45 32.2	+0.1
L26K	**Log Cabin Wild**	10.99	39			Pn	04 45 32.3	-0.2
MDM	**Murphy Dome**	10.99	23			Pn	04 45 30.6	-1.8
DOT	**Dot Lake**	11.15	35			Pn	04 45 34.6	-0.1
O28M	**Mount Upton**	11.15	53	P		Pn	04 45 35.0	+0.1
	baz=248,SNR=10							
M27K	**Edge Creek, AK**	11.15	44			Pn	04 45 35.4	+0.6
M27K	**Edge Creek, AK**	11.15	44	P		Pn	04 45 34.5	-0.3
	baz=238							
IL31		11.16	26			Pn	04 45 31.4	-3.2
ILAR	**Eielson Array**	11.16	26			Pn	04 45 31.8	-2.9
ILAR	**Eielson Array**	11.16	26	P		Pn	04 45 32.1	-2.6
	comp=N,1.0nm,0.3s,baz=220,slow=13,SNR=30							
ILAR				S		Sn	04 47 31.2	-6.7
	comp=N,0.4nm,0.5s,baz=242,slow=9.4,SNR=1.4							
ILAR				LR		LR	04 49 59.1	
	comp=N,56nm,19.4s,baz=204,slow=38							
	comp=N,4.2nm,0.5s							
PNL	**Peninsula**	11.18	59	P		Pn	04 45 35.3	+0.2
	baz=255							
H22K	**Ishtalitna Cre**	11.23	15	P		Pn	04 45 35.9	+0.2
	baz=202							
SCRK	**Sand Creek**	11.39	34	Pn		Pn	04 45 38.5	+0.4
SCRK	**Sand Creek**	11.39	34	P		Pn	04 45 37.9	-0.2
	baz=227							
J25K	**Salcha River,**	11.44	30			Pn	04 45 36.5	-2.1
J25K	**Salcha River,**	11.44	30	P		Pn	04 45 36.2	-2.5
	baz=221,SNR=9.3							
H23K	**Yukon River**	11.47	19	P		Pn	04 45 37.2	-1.9
	baz=207							
G21K	**Allakaket**	11.56	10	P		Pn	04 45 40.0	-0.3
	baz=194							
L27K	**Beaver Creek,**	11.56	41			Pn	04 45 40.1	-0.3
L27K	**Beaver Creek,**	11.56	41	P		Pn	04 45 39.8	-0.6
	baz=235,SNR=8.4							
BCAR	**Beaver Creek A**	11.58	41	Pn		Pn	04 45 40.3	-0.3
O29M	**Mount Kennedy**	11.75	56	P		Pn	04 45 42.2	-0.9
	baz=253,SNR=10							
H24K	**Noodor Dome**	11.81	22	Pn		Pn	04 45 43.7	0.0
H24K	**Noodor Dome**	11.81	22	P		Pn	04 45 43.4	-0.4
	baz=211							
J26L	**Joseph Creek**	11.89	33			Pn	04 45 43.9	-1.0
J26L	**Joseph Creek**	11.89	33	P		Pn	04 45 43.5	-1.3
	baz=226,SNR=6.1							
P29M	**Windy Craggy**	11.99	60	Pn		Pn	04 45 47.9	+1.8
P29M	**Windy Craggy**	11.99	60	P		Pn	04 45 47.4	+1.2
	baz=258,SNR=5.6							
K27K	**Chicken**	12.06	37	P		Pn	04 45 47.0	-0.1
	baz=231							
G23K	**Bananza Creek**	12.20	16	P		Pn	04 45 48.8	-0.1
	baz=204							
F21K	**Alatna River**	12.25	9	P		Pn	04 45 50.0	+0.3
	baz=194							

P30M	**Million Dollar**	12.48	58	P		Pn	04 45 54.3	+1.3
	baz=256							
M29M	**Somme Creek**	12.59	47	P		Pn	04 45 54.2	-0.2
	baz=244,SNR=9.5							
I26K	**Coal Creek Min**	12.59	31			Pn	04 45 51.9	-2.3
I26K	**Coal Creek Min**	12.59	31	P		Pn	04 45 52.1	-2.2
	baz=224							
N30M	**Aishikik Lake**	12.81	52	P		Pn	04 45 57.4	+0.1
	baz=251							
DAWY	**Dawson**	13.03	40			Pn	04 45 60.0	-0.4
DAWY	**Dawson**	13.03	40	P		Pn	04 46 00.2	-0.2
	baz=236,SNR=5.5							
SKAG	**Skagway**	13.17	62			Pn	04 46 04.0	+1.8
I27K	**Kandik River**	13.26	32	P		Pn	04 46 02.7	-0.8
	baz=227							
N31M	**Braeburn, Yuko**	13.41	53			Pn	04 46 07.3	+1.8
WHY	**Whitehorse**	13.61	57	P		Pn	04 46 08.8	+0.5
	baz=257							
E24K	**Your Creek**	13.69	16	P		Pn	04 46 08.3	-1.0
	baz=205							
P32M	**Atlin**	14.00	62	P		Pn	04 46 13.8	+0.3
	baz=263							
TOLK	**Toolik Lake Re**	14.06	14	P		Pn	04 46 16.7	+2.5
	baz=202							
G27K	**Doyon Strip**	14.11	28	P		Pn	04 46 14.7	-0.3
	baz=223							
I29M	**Ogilvie Camp,**	14.16	36			P	04 46 22.4	-0.2
M31M	**Drury Creek, Y**	14.26	51			Pn	04 46 18.3	+1.2
P33M	**Teslin, Yukon**	14.53	60	Pn		Pn	04 46 23.0	+2.2
P33M	**Teslin, Yukon**	14.53	60	P		Pn	04 46 22.7	+1.8
	baz=261,SNR=5.2							
FARO	**Faro, Yukon**	14.73	51	Pn		Pn	04 46 24.3	+0.8
FARO	**Faro, Yukon**	14.73	51	P		Pn	04 46 24.0	+0.6
	baz=253							
EPYK	**Eagle Plains**	15.29	35	Pn		P	04 46 34.3	-0.7
EPYK				IAmb		IAmb	04 46 36.8	
	comp=Z,70nm,0.6s							
EPYK	**Eagle Plains**	15.29	35	P		Pn	04 46 30.3	-0.4
	baz=234,SNR=34							
R33M	**Jennings River**	15.38	63	P		Pn	04 46 31.7	-0.3
	baz=266							
MMPY	**Sheldon Lake,**	15.77	51	P		Pn	04 46 37.9	+0.8
	baz=255,SNR=6.0							
DLBC	**Dease Lake**	15.84	67	P		Pn	04 46 40.3	+2.3
	comp=Z,0.4nm,0.3s,baz=234,slow=12,SNR=6.0							
	comp=Z,1.1nm,0.3s							
TGTN	**Hyland Airport**	16.93	56	P		Pn	04 46 52.8	+1.1
	baz=262							
INK	**Inuvik**	17.44	32	Pn		Pn	04 46 56.9	-0.9
INK	**Inuvik**	17.44	32	P		Pn	04 46 56.9	-0.9
	baz=234							
INK	**Inuvik**	17.44	32	P		Pn	04 46 56.5	-1.3
	comp=Z,1.1nm,0.3s,baz=207,slow=13,SNR=17							
	comp=Z,2.8nm,0.3s							
C36M	**Paulatuk**	20.92	34	P		P	04 47 36.5	-0.2
C36M	**Paulatuk**	20.92	34	P		P	04 47 36.0	-0.8
	baz=245,SNR=9.6							
YKA	**Yellowknife Ar**	23.41	54	P		P	04 48 03.0	+0.1
	comp=Z,1.1nm,0.7s,baz=271,slow=9.0,SNR=9.0							
	comp=Z,1.1nm,0.7s							
EDM	**Edmonton**	26.11	76	P		P	04 48 29.3	+1.4
EDM				IAmb		IAmb	04 48 30.1	
	comp=Z,3.5nm,0.7s							
MSO	**Missoula**	28.81	88	P		P	04 48 53.1	+0.9
MSO				IAmb		IAmb	04 49 35.0	
	comp=Z,2.5nm,1.1s							
PDAR	**Pinedale Array**	33.73	91	P		P	04 49 37.6	+2.0
	comp=Z,0.2nm,0.5s,baz=310,slow=4.2,SNR=4.1							
PDAR				pP		sP	04 49 51.8	+0.4
	comp=Z,0.5nm,0.7s,baz=298,slow=3.2,SNR=4.4							
	comp=Z,0.2nm,0.5s							
TXAR	**Lajitas Array**	46.56	101	P		P	04 51 23.4	+1.6
	comp=Z,0.2nm,0.5s,baz=306,slow=8.5,SNR=4.0							
TXAR				pP		sP	04 51 36.8	-0.9
	comp=Z,0.3nm,0.7s,baz=313,slow=6.0,SNR=3.8							
TXAR				LR		LR	05 09 14.6	
	comp=Z,40nm,18.2s,baz=340,slow=34							
	comp=Z,0.2nm,0.5s							
ARCES	**ARCESS Array B**	55.49	358	P		P	04 52 27.0	-1.2
	comp=Z,3.6nm,0.8s,baz=19,slow=7.7,SNR=6.2							
	comp=

baz=130,slow=22
NRS *i* P **Pb** **05 57 49.8 -1.8**
NRS IAML 05 58 11.0
comp=Z,622nm,0.3s
IVI Ivigtut 2.16 283 Pn **Pn** **05 58 11.1 +0.6**
IVI Ivigtut 2.16 283 *i* P **Pn** **05 58 10.1 -0.3**
NUUK Nuuk 5.00 316 *i* P **Pn** **05 58 50.5 +1.0**
NUUK IAML 06 00 17.8
comp=Z,58nm,0.4s
ANGG Ammassalik, Gr 5.60 27 *i* P **Pn** **05 58 57.7 -0.1**
DY2G Dye2 5.82 350 *i* P **Pn** **05 59 01.5 +0.5**
DY2G *i* S **Sn** **06 00 09.9 +2.1**
SFJD Kangerlussuaq 6.92 337 **Pn** **05 59 17.0 +1.2**
SFJD Kangerlussuaq 6.92 337 *i* P **Pn** **05 59 16.6 +0.8**
SFJD *e*S **Sn** **06 00 32.4 -2.0**
SFJD IAML 06 01 15.6
comp=Z,20nm,0.5s
SFJD Kangerlussuaq 6.92 337 Pn **Pn** **05 59 16.0 +0.2**
comp=Z,5.9nm,0.3s,baz=138,slow=6.0,SNR=12
SFJD Sn **Sn** **06 00 32.4 -2.0**
comp=Z,5.3nm,0.3s,baz=209,slow=18,SNR=6.7
SFJD Lg Lg 06 01 05.4
comp=Z,8.2nm,0.3s,baz=235,slow=18,SNR=6.8
SFJD LR LR 06 02 11.2
comp=Z,150nm,21.4s,baz=156,slow=39
comp=Z,20nm,0.5s
ILULI Ilulissat 9.00 343 Pn **Pn** **05 59 42.8 -1.5**
BORG Borgarnes 11.02 59 **Pn** **06 00 12.0 0.0**
BORG Borgarnes 11.02 59 Pn **Pn** **06 00 10.7 -1.3**
comp=Z,2.6nm,0.3s,baz=248,slow=5.5,SNR=16
BORG LR LR 06 03 34.5
comp=Z,47nm,20.2s,baz=294,slow=33
comp=Z,8.2nm,0.5s
FRB Frobisher Bay 11.86 295 LR LR 06 04 42.8
comp=Z,38nm,21.6s,baz=228,slow=36
SUMG Summit 12.03 8 Pn **Pn** **06 00 24.2 -1.9**
SUMG Summit 12.03 8 *e*P Pn 06 00 22.4 -3.7
SUMG *e*S Sn 06 02 32.2 -8.2
SUMG IAML 06 03 07.4
comp=Z,4.1nm,0.4s
SCHQ Schefferville 13.59 254 Pn **Pn** **06 00 48.3 +1.2**
SCHQ Schefferville 13.59 254 Pn **Pn** **06 00 46.7 -0.4**
comp=Z,0.5nm,0.3s,baz=46,slow=9.4,SNR=8.0
SCHQ Sn **Sn** **06 03 11.4 -6.5**
comp=Z,0.8nm,0.3s,baz=247,slow=16,SNR=4.8
SCHQ LR LR 06 06 04.8
comp=Z,36nm,18.4s,baz=90,slow=38
comp=Z,1.4nm,0.3s
JMIC Jan Mayen 17.37 39 LR LR 06 07 30.8
comp=Z,41nm,20.1s,baz=240,slow=34
BATG Bathurst New B 18.66 234 P **Pn** **06 01 56.3 +3.6**
BATG IAmb IAmb 06 02 25.3
comp=Z,30nm,1.4s
D62A Allapoint, All 20.04 238 P Pn 06 02 11.6 +2.5
D62A IAmb IAmb 06 02 41.7
comp=Z,13nm,1.1s
E62A Clayton Lake 20.60 238 P Pn 06 02 17.4 +1.7
E62A IAmb IAmb 06 03 00.9
comp=Z,23nm,1.3s
GGN Saint George 20.75 231 P Pn 06 02 20.0 +2.5
EKA Eskdalemuir Ar 21.92 86 P **P** **06 02 26.6 -1.0**
comp=Z,1.2nm,0.7s,baz=291,slow=9.0,SNR=2.2
comp=Z,1.2nm,0.7s
TRQ Mont Tremblant 23.08 245 P **P** **06 02 42.0 +1.9**
NOA NORSAR Array B 26.10 65 LR LR 06 11 38.3
comp=Z,10.0nm,20.8s,baz=40,slow=32
SADO Sadowa 26.26 249 LR LR 06 13 06.8
comp=Z,42nm,19.0s,baz=18,slow=36
ARCES ARCESS Array B 28.77 43 P **P** **06 03 28.6 -3.3**
ARCES ARCESS Array B 28.77 43 P **P** **06 03 31.1 -0.8**
comp=Z,3.7nm,0.9s,baz=302,slow=7.0,SNR=6.6
comp=Z,3.7nm,0.9s
KEV Kevo 29.20 42 P **P** **06 03 36.0 +0.3**
ULM Lac du Bonnet 30.48 274 P **P** **06 03 49.0 +1.9**
comp=Z,3.9nm,1.0s,baz=175,slow=7.3,SNR=2.9
comp=Z,3.9nm,1.0s
YKA Yellowknife Ar 32.14 305 P **P** **06 04 03.0 +1.3**
comp=Z,1.2nm,0.8s,baz=45,slow=8.2,SNR=4.0
YKA LR LR 06 16 40.6
comp=Z,59nm,18.6s,baz=318,slow=36
comp=Z,1.2nm,0.8s
FINES FINESS Array B 32.31 58 P **P** **06 04 03.5 +0.3**
FINES FINESS Array B 32.31 58 P **P** **06 04 02.8 -0.4**
comp=Z,1.7nm,0.8s,baz=310,slow=11,SNR=4.0
comp=Z,1.7nm,0.8s
ESDC Sonseca Array 32.36 112 P **P** **06 04 02.0 -1.9**
comp=Z,1.0nm,1.0s,baz=321,slow=8.5,SNR=4.6
ESDC LR LR 06 15 40.4
comp=Z,20nm,18.4s,baz=261,slow=34
comp=Z,1.0nm,1.0s
P48A Milroy 33.32 249 P **P** **06 04 11.7 -0.5**
P48A IAmb IAmb 06 04 15.2
comp=Z,4.7nm,0.7s
V53A Saluda 35.27 242 P **P** **06 04 31.1 +1.9**
V53A IAmb IAmb 06 04 39.6
comp=Z,8.1nm,1.3s
CLUD Cludinico 35.34 88 P **P** **06 04 29.9 +0.2**
CLUD IAmb IAmb 06 04 31.6
comp=Z,5.7nm,0.8s
TKL Tuckaleechee C 35.70 244 LR LR 06 18 51.8
comp=Z,65nm,19.0s,baz=16,slow=36
INK Inuvik 35.92 321 P **P** **06 04 36.3 +1.9**
INK IAmb IAmb 06 04 37.1
comp=Z,5.3nm,0.9s
INK Inuvik 35.92 321 LR LR 06 19 34.9
comp=Z,35nm,21.6s,baz=88,slow=37
CPCT Cooper Cave 36.21 244 P **P** **06 04 37.9 +0.7**
CPCT IAmb IAmb 06 04 41.2
comp=Z,6.6nm,1.0s
SWET Sewanee 37.03 246 P **P** **06 04 44.1 -0.1**
SWET IAmb IAmb 06 05 07.8
comp=Z,7.0nm,1.1s
WVT Waverly 37.13 249 P **P** **06 04 45.3 +0.3**
WVT IAmb IAmb 06 04 48.5
comp=Z,3.6nm,0.8s
CCM Cathedral Cave 37.16 254 P **P** **06 04 45.2 0.0**
CCM IAmb IAmb 06 04 46.8
comp=Z,2.8nm,0.7s
FPAL Fort Paine 37.45 245 P **P** **06 04 48.2 +0.4**
FPAL IAmb IAmb 06 05 21.9
comp=Z,11nm,1.4s
EPYK Eagle Plains 38.05 319 P **P** **06 04 53.8 +1.2**
EPYK IAmb IAmb 06 04 55.2
comp=Z,5.8nm,0.8s
LRAL Lakeview Retre 39.34 245 P **P** **06 05 04.3 +0.7**
LRAL IAmb IAmb 06 05 07.3
comp=Z,4.6nm,0.8s
FARO Faro, Yukon 39.48 313 P **P** **06 05 07.0 +2.4**
BMAR Burnt Mountain 39.78 324 P **P** **06 05 08.1 +1.1**
BLOK Blackwell 41.04 259 **P** **06 05 20.4 +2.7**
BLOK IAmb IAmb 06 05 29.4
comp=Z,13nm,0.9s
KAN17 Caldwell West 41.08 260 **P** **06 05 19.6 +1.6**
J26L Joseph Creek 41.45 320 P **P** **06 05 21.7 +0.8**
BCAR Beaver Creek A 41.85 317 P **P** **06 05 26.0 +1.8**
L27K Beaver Creek, 41.87 317 P **P** **06 05 26.8 +2.5**
L27K IAmb IAmb 06 05 28.5
comp=Z,3.9nm,0.8s
J25K Salcha River, 41.93 321 P **P** **06 05 27.4 +2.6**
SCRK Sand Creek 41.94 319 P **P** **06 05 28.0 +3.0**
SCRK IAmb IAmb 06 05 29.2
comp=Z,6.7nm,0.8s
DOT Dot Lake 42.19 319 P **P** **06 05 29.3 +2.3**
IL31 42.29 322 P **P** **06 05 30.4 +2.8**
ILAR Eielson Array 42.29 322 P **P** **06 05 30.1 +2.4**
ILAR Eielson Array 42.29 322 P **P** **06 05 28.6 +1.0**
comp=Z,1.6nm,0.7s,baz=39,slow=7.0,SNR=15
ILAR PcP **PcP** **06 07 20.5 -0.5**
comp=Z,0.6nm,0.7s,baz=18,slow=3.2,SNR=4.6
comp=Z,1.6nm,0.7s
H23K Yukon River 42.33 324 P **P** **06 05 30.4 +2.4**
RIDG Independent Ri 42.38 320 P **P** **06 05 31.8 +3.3**
PDAR Pinedale Array 42.43 276 P **P** **06 05 28.4 -1.0**
comp=Z,0.5nm,0.5s,baz=73,slow=7.2,SNR=5.5
comp=Z,0.5nm,0.5s
MCMT McKenzie Canyo 42.50 280 P **P** **06 05 32.0 +2.1**
IMAR Indian Mountai 43.40 326 P **P** **06 05 38.4 +1.8**
DHY Denali Highway 43.66 320 P **P** **06 05 41.3 +2.4**
RND Reindeer 43.87 321 P **P** **06 05 42.2 +1.6**
RND IAmb IAmb 06 05 43.3
comp=Z,3.4nm,0.8s
J20K Nowinta River 44.87 324 P **P** **06 05 50.8 +2.3**
J20K IAmb IAmb 06 05 51.5
comp=Z,2.2nm,0.7s
SJG San Juan 45.50 210 LR LR 06 24 13.5
comp=Z,21nm,19.3s,baz=46,slow=35

CNPM China Poot 47.56 319 P **P** **06 06 10.9 +1.3**
N19K Bonanza Creek 47.57 322 P **P** **06 06 11.8 +2.0**
TIXI Tiksi 47.75 3 LR LR 06 27 57.2
comp=Z,26nm,18.6s,baz=357,slow=38
ARU Arti 48.24 47 LR LR 06 23 35.1
comp=Z,26nm,20.4s,baz=22,slow=32
PAHR Pah Rah Range 49.54 281 P **P** **06 06 27.6 +2.3**
NVAR Mina Array Bea 50.02 279 P **P** **06 06 29.6 +0.6**
comp=Z,0.8nm,0.7s,baz=48,slow=6.6,SNR=7.6
comp=Z,0.8nm,0.7s
BBTS Babate 50.12 145 LR LR 06 23 37.0
comp=Z,46nm,18.7s,baz=111,slow=31
PNTR Pine Nut 50.13 281 P **P** **06 06 32.0 +2.2**
PNTR IAmb IAmb 06 06 43.2
comp=Z,4.5nm,0.8s
TXAR Lajitas Array 50.21 259 P **P** **06 06 30.3 -0.1**
comp=Z,0.5nm,0.6s,baz=55,slow=6.7,SNR=7.4
comp=Z,0.5nm,0.6s
KBZ Khabaz 51.65 67 P **P** **06 06 41.0 0.0**
comp=Z,2.1nm,0.8s,baz=334,slow=21,SNR=4.2
comp=Z,2.1nm,0.8s
AKTO Aktyubinsk 52.74 52 P **P** **06 06 48.9 -0.1**
comp=Z,2.0nm,0.6s,baz=314,slow=6.7,SNR=6.0
comp=Z,2.0nm,0.6s
ABKAR Akbulak array 54.43 51 P **P** **06 07 02.2 +0.8**
ABKAR Akbulak array 54.43 51 P **P** **06 07 01.9 +0.6**
ABKAR IAmb IAmb 06 07 04.2
comp=Z,4.4nm,0.7s
BVAR Borovoye Array 55.05 42 P **P** **06 07 05.5 -0.4**
comp=Z,1.6nm,0.7s,baz=339,slow=7.9,SNR=9.6
comp=Z,1.6nm,0.7s
SDV Santo Domingo 55.49 213 LR LR 06 28 10.5
comp=Z,19nm,21.4s,baz=74,slow=33
MDP Montagnes des 55.95 191 LR LR 06 27 29.1
comp=Z,15nm,19.7s,baz=194,slow=32
YAK Yakutsk 57.41 4 LR LR 06 31 22.1
comp=Z,46nm,21.0s,baz=89,slow=35
TORD Torodi Ar. Bea 57.87 125 P **P** **06 07 24.0 -2.3**
comp=Z,6.8nm,0.4s,baz=340,slow=6.6,SNR=2.1
comp=Z,6.8nm,0.4s
ZALV Zalesovo Beam 58.56 33 P **P** **06 07 32.1 +1.4**
comp=Z,1.1nm,0.5s,baz=340,slow=8.3,SNR=4.7
comp=Z,1.1nm,0.5s
MA2 Magadan 59.44 351 LR LR 06 35 32.3
comp=Z,71nm,18.5s,baz=70,slow=38
KURBB Kurchatov Arra 59.71 39 P **P** **06 07 39.2 +0.5**
comp=Z,1.1nm,0.3s,baz=327,slow=6.7,SNR=7.6
comp=Z,1.1nm,0.3s
DBIC Dimbokro 61.35 135 LR LR 06 32 10.1
comp=Z,36nm,18.0s,baz=147,slow=34
MK31 Makanchi Array 64.25 38 P **P** **06 08 10.2 +0.8**
MK31 IAmb IAmb 06 08 12.1
comp=Z,2.1nm,0.6s
MKAR Makanchi Array 64.25 38 P **P** **06 08 10.2 +0.8**
MKAR Makanchi Array 64.25 38 P **P** **06 08 09.1 -0.3**
comp=Z,2.2nm,0.6s,baz=344,slow=5.0,SNR=18
comp=Z,2.2nm,0.6s
PETK Petropavlovsk- 65.17 346 LR LR 06 38 09.8
comp=Z,36nm,18.4s,baz=331,slow=37
SONM Songino Array 69.09 21 P **P** **06 08 40.7 +0.4**
comp=Z,0.7nm,0.5s,baz=328,slow=8.1,SNR=3.8
SONM LR LR 06 40 17.8
comp=Z,54nm,20.8s,baz=41,slow=37
comp=Z,0.7nm,0.5s
BDFB Brasilia 76.23 184 P **P** **06 09 22.9 0.0**
comp=Z,2.5nm,0.7s,baz=56,slow=5.1,SNR=3.7
comp=Z,2.5nm,0.7s
LPAZ La Paz 79.25 204 P **P** **06 09 40.2 -0.2**
comp=Z,1.2nm,0.8s,baz=352,slow=2.0,SNR=3.6
LPAZ LR LR 06 48 33.7
comp=Z,12nm,18.0s,baz=82,slow=39
comp=Z,1.2nm,0.8s
LVC Limon Verde 85.55 203 LR LR 06 48 17.7
comp=Z,16nm,20.9s,baz=224,slow=36
CPUP Villa Florida 87.49 192 LR LR 06 48 23.6
comp=Z,50nm,18.9s,baz=256,slow=35
WRA Warramunga Arr 139.18 3 PKhKP PKPpre 06 16 54.4
comp=Z,0.7nm,1.0s,baz=350,slow=3.4,SNR=2.8
ASAR Alice Springs 142.88 3 PKhKP PKPpre 06 17 03.2
comp=Z,0.6nm,0.6s,baz=357,slow=2.6,SNR=10
MAW Mawson 149.19 134 PKPbc **PKPbc** **06 17 19.8 -1.6**
comp=Z,2.9nm,0.8s,baz=280,slow=5.3,SNR=7.5

IDC 30 06:04:22.5±1.1, 54°71S×30°75W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=8.1km s-min=27.6km az=66.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**42.42**	**145**	P	P	06 12 18.1	-0.1
	1.8nm,0.8s,baz=251,slow=8.0,SNR=4.6						
	1.8nm,0.8s						
VNDA	**Vanda**	**47.80**	**184**	P	P	06 13 00.9	+0.1
	0.7nm,0.8s,baz=159,slow=4.9,SNR=5.1						
	0.7nm,0.8s						
LPAZ	**La Paz**	**47.95**	**308**	P	P	06 13 03.6	+0.2
	1.3nm,0.7s,baz=158,slow=5.4,SNR=5.1						
	1.3nm,0.7s						
H10N1	**ASCENSION HYDR**	**48.52**	**22**	T	T	07 05 38.0	
	baz=192,slow=75,SNR=3.2						
H10N3	**ASCENSION HYDR**	**48.52**	**22**	T	T	07 05 38.2	
	baz=192,slow=75,SNR=5.8						
H10N2	**ASCENSION HYDR**	**48.54**	**22**	T	T	07 05 39.3	
	baz=192,slow=75,SNR=4.7						
TORD	**Torodi Ar. Bea**	**72.97**	**33**	P	P	06 15 53.9	+0.3
	4.6nm,0.3s,baz=200,slow=6.3,SNR=0.7						
	4.6nm,0.3s						
ILAR	**Eielson Array**	**147.71**	**314**	PKPbc	PKPbc	06 24 06.2	-1.4
	0.6nm,0.7s,baz=125,slow=1.6,SNR=6.3						

*DJA **30** 06:18:29.6±0.2, 1°N±2°×12°1E±°, h10km, M4.2/12, mb4.2/4, mB4.6/1, MLv4.2/12, Mw(mB)3.8/1*
*IDC **30** 06:18:30.4±1.2, 0.°89N×121°.28E, h0km, mb3.6/4, mbtmp3.7/6, ML3.8/2, MS2.9/1, Error ellipse: s-maj=66.9km s-min=20.4km az=71.0*

ISC 30 06:18:33.5±0.9, 0.°77N±0.°08×120°.86E±0.°04, h29km, n16, σ1s91°/20, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.05**	**246**	P	**Pn**	**06 18 49.9**	**-2.4**
MPSI				S	**Sn**	**06 19 03.3**	**-2.8**
MRSI	**Marisa**	**1.12**	**105**	P	**Pn**	**06 18 50.2**	**-3.0**
MRSI				S	**Sn**	**06 19 06.1**	**-1.5**
APSI	**Ampana**	**1.84**	**155**	P	**Pn**	**06 19 00.9**	**-2.3**
GTOI	**Gorontalo**	**2.15**	**93**	P	**Pn**	**06 19 04.5**	**-2.9**
GTOI				S	**Sn**	**06 19 31.3**	**-1.9**
LUWI	**Luwuk**	**2.62**	**133**	P	**Pn**	**06 19 14.7**	**+0.8**
LUWI				S	**Sb**	**06 19 51.9**	**+0.3**
KMSI	**Cibinong**	**3.12**	**93**	P	**Pn**	**06 19 21.0**	**+0.2**
TTSI	**Tana Toraja**	**3.93**	**195**	P	**Pn**	**06 19 30.6**	**-1.3**
SPSI	**Sidrap Palu**	**4.83**	**193**	P	**Pn**	**06 19 42.9**	**-1.3**
SANI	**Sanana**	**5.84**	**119**	P	**Pn**	**06 19 57.1**	**-1.1**
	comp=Z,26nm,1.0s						
KAPI	**Kappang**	**5.85**	**191**	Pn	**Pn**	**06 20 00.2**	**+1.9**
	3.9nm,0.3s,baz=92,slow=8.1,SNR=9.0						
KAPI				LR	LR	06 22 47.5	
	comp=Z,103nm,18.2s,baz=317,slow=42						
	15nm,0.5s						
BKSI	**Bulukumba**	**6.09**	**187**	P	**Pn**	**06 19 59.9**	**-1.8**
	0.1nm485nm24nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.33**	**166**	P	**Pn**	**06 22 59.4**	**+1.6**
	0.2nm,0.3s,baz=352,slow=11,SNR=3.9						
	3.0nm,0.8s						
WRA	**Warramunga Arr**	**24.46**	**148**	P	**P**	**06 23 49.5**	**-0.7**
	2.5nm,0.9s,baz=326,slow=10,SNR=19						
	2.5nm,0.9s						
ASAR	**Alice Springs**	**27.40**	**153**	P	**P**	**06 24 17.5**	**+0.8**
	0.4nm,0.6s,baz=344,slow=14,SNR=6.8						
	0.4nm,0.6s						
SONM	**Songino Array**	**48.54**	**347**	P	**P**	**06 27 15.2**	**+1.1**
	0.7nm,0.7s,baz=154,slow=7.6,SNR=3.8						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**56.85**	**329**	P	**P**	**06 28 17.4**	**+1.8**
	0.2nm,0.5s,baz=134,slow=8.4,SNR=2.4						
	0.2nm,0.5s						

*IDC **30** 06:44:06.3±1.3, 29°.06S×178°.82W, h316km±17km, mb3.0/2, mbtmp3.9/3, Error ellipse: s-maj=51.3km s-min=27.5km az=108.0*

ISC 30 06:44:07.4±1.3, 29°.1S±0°.1×179°.2W±0°.2, h300km, n25, σ1s23°/25, Kermadec Islands region

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

RAO Raoul Island 1.12 96 P **Pn** **06 44 48.9 +0.6**
429nm,0.3s,baz=108,slow=5.1,SNR=5.3
RAO S **S** **06 45 20.3 -0.5**
306nm,0.3s,baz=88,slow=22,SNR=2.6
WMGZ Waiomatatini S 8.88 192 P **Pn** **06 46 14.1 +2.4**
HAZ Te Kaha 8.96 196 P **Pn** **06 46 12.2 -0.4**
PKGZ Pakihiroa 9.02 194 P **Pn** **06 46 13.6 +0.2**
PUZ Puketiti 9.16 193 P **Pn** **06 46 15.4 +0.3**
RUGZ Raukumara Rang 9.18 196 P **Pn** **06 46 15.4 -0.1**
TWGZ Tauwhareparae 9.32 194 P **P** **06 46 20.3 -1.1**
MWZ Matawai 9.57 196 P **Pn** **06 46 17.9 -2.2**
TKGZ Te Karaka 9.60 194 P Pn 06 46 12.5 -7.9
URZ Urewera 9.60 198 P **Pn** **06 46 19.2 -1.3**
URZ Urewera 9.60 198 P **Pn** **06 46 22.8 +2.3**
3.7nm,0.3s,baz=245,slow=3.3,SNR=30
URZ S **S** **06 48 09.3 +0.3**
12nm,0.4s,baz=293,slow=21,SNR=6.0
RIGZ Rimuhau 9.87 194 P **Pn** **06 46 23.8 -0.1**
MUGZ Murupara 9.90 199 P **Pn** **06 46 24.6 +0.4**
SNGZ Shannon Statio 10.04 196 P **Pn** **06 46 28.0 +2.1**
MTHZ Maungataniwha 10.23 198 P **Pn** **06 46 29.6 +1.4**
NMHZ Naumai 10.47 197 P **Pn** **06 46 32.4 +1.2**
TWVZ Taurewa 10.86 203 P **Pn** **06 46 36.5 +0.5**
KWHZ Kaweka Forest 10.88 198 P **Pn** **06 46 36.2 0.0**
SNVZ South Ngauruho 10.90 202 P **Pn** **06 46 38.5 +2.0**
WNVZ Wahianoa 11.04 202 P **Pn** **06 46 39.1 +0.8**
BHHZ Black Hill Sta 11.04 200 P **Pn** **06 46 37.6 -0.6**
PNHZ Pukenui 11.40 198 P **Pn** **06 46 41.8 -0.7**
ASAR Alice Springs 42.15 266 P **P** **06 51 31.2 -0.1**
0.7nm,0.7s,baz=97,slow=6.8,SNR=12
0.7nm,0.7s
WRA Warramunga Arr 43.02 271 P **P** **06 51 38.2 -0.1**
0.9nm,0.5s,baz=110,slow=7.9,SNR=17
0.9nm,0.5s
FINES FINESS Array B 143.61 340 PKP PKPab 07 03 01.5 -1.8
0.5nm,0.4s,baz=50,slow=6.0,SNR=4.3

*HVO **30** 07:12:38.1±0.7, 19°.20N±0°.05×155°.19W±0°.02, h47km±3km, ML2.7/10, ML2.5/44(NEIC), Error ellipse: s-maj=8.3km s-min=1.7km az=164.0*

NEIC 30 07:12:37.0±0.5, 19°24N±0°.03×155°20W±0°.02, h51km±2km, Error ellipse: s-maj=4.1km s-min=3.0km az=175.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HLP	**Hilina Pali**	**0.12**	**300**		Pn	07 12 45.3	+0.2
HLP	**Hilina Pali**	**0.12**	**300**		Sn	07 12 50.4	-0.4
PUH	**Pauahi**	**0.14**	**354**		Pn	07 12 45.2	0.0
KNHH	**Kane Nui o Ham**	**0.14**	**12**		Pn	07 12 45.2	0.0
KKO	**Keanakako`i**	**0.17**	**339**		Pn	07 12 45.4	0.0
KKO	**Keanakako`i**	**0.17**	**339**	IAML		07 12 46.3	
	comp=E,1μm,0.4s						
KKO				IAML		07 12 48.4	
	comp=N,1μm,1.1s						
RIM	**Rim**	**0.17**	**336**		Pn	07 12 45.4	0.0
RIM	**Rim**	**0.17**	**336**	IAML		07 12 46.9	
	comp=E,1μm,0.6s						
RIM				IAML		07 12 47.8	
	comp=N,2μm,0.9s						
JCUZ	**Jacuzzi**	**0.17**	**33**		Pn	07 12 45.4	0.0
JCUZ					Sn	07 12 50.5	-0.8
SDHHI	**Sand Hill**	**0.17**	**330**		Pn	07 12 45.4	0.0
SDHHI	**Sand Hill**	**0.17**	**330**	IAML		07 12 46.1	
	comp=N,2μm,0.1s						
SDHHI				IAML		07 12 46.4	
	comp=E,1μm,0.2s						
NPOC	**North of Pu'u**	**0.18**	**30**		Sn	07 12 50.4	-0.9
NPOC	**North of Pu'u**	**0.18**	**30**	IAML		07 12 44.4	
	comp=N,546nm,0.7s						
NPOC	**North of Pu'u**	**0.18**	**30**		Pn	07 12 45.4	0.0
BYL	**Byron's Ledge**	**0.18**	**342**		Pn	07 12 45.4	0.0
BYL	**Byron's Ledge**	**0.18**	**342**	IAML		07 12 49.4	
	comp=N,721nm,1.4s						
BYL				IAML		07 12 49.6	
	comp=E,463nm,1.0s						
HTC	**Hot Caves**	**0.18**	**270**		Pn	07 12 45.5	+0.2
HTC					Sn	07 12 50.8	-0.5
NPH	**North Pit**	**0.19**	**337**		Pn	07 12 45.4	-0.1
NPH	**North Pit**	**0.19**	**337**	IAML		07 12 47.3	
	comp=N,512nm,0.5s						
NPH				IAML		07 12 49.1	
	comp=E,265nm,0.7s						
WRMHI	**West Rim**	**0.19**	**331**	IAML		07 12 45.4	
	comp=N,1μm,1.2s						
WRMHI				IAML		07 12 50.7	
	comp=E,1μm,0.6s						
WRMHI	**West Rim**	**0.19**	**331**		Pn	07 12 45.5	-0.1
HATHI	**Halema'uma'u T**	**0.19**	**343**		Pn	07 12 45.5	-0.1
HATHI	**Halema'uma'u T**	**0.19**	**343**	IAML		07 12 46.7	
	comp=N,936nm,0.7s						
HATHI				IAML		07 12 50.3	
	comp=E,716nm,1.0s						
OBL	**Observatory Le**	**0.19**	**337**		Pn	07 12 45.5	-0.1
OBL	**Observatory Le**	**0.19**	**337**	IAML		07 12 50.8	
	comp=E,1μm,1.0s						
OBL				IAML		07 12 50.9	
	comp=N,2μm,0.8s						
SBLHI	**Steaming Bluff**	**0.20**	**342**	IAML		07 12 46.1	
	comp=N,633nm,0.6s						
SBLHI	**Steaming Bluff**	**0.20**	**342**		Pn	07 12 45.4	-0.1
UWB	**Uwekahuna B**	**0.20**	**339**		Pn	07 12 45.4	-0.2
UWB	**Uwekahuna B**	**0.20**	**339**	IAML		07 12 47.1	
	comp=E,186nm,1.6s						
UWB				IAML		07 12 49.4	
	comp=N,260nm,1.2s						
UWE	**Uwekahuna**	**0.20**	**335**	IAML		07 12 45.5	
	comp=E,1μm,1.3s						
UWE	**Uwekahuna**	**0.20**	**335**		Pn	07 12 45.6	0.0
RSD	**Rainshed**	**0.23**	**342**		Pn	07 12 45.8	0.0
JOKA	**Jonika Flow**	**0.27**	**44**		Pn	07 12 45.9	-0.1
JOKA					Sn	07 12 50.7	-1.6
AIN	**Ainahou**	**0.28**	**299**		Pn	07 12 46.6	+0.4
AIN	**Ainahou**	**0.28**	**299**		Sn	07 12 53.1	+0.3
MLH	**Mauna Loa**	**0.31**	**326**		Pn	07 12 46.8	+0.2
MLH	**Mauna Loa**	**0.31**	**326**	IAML		07 12 48.1	
	comp=N,566nm,0.4s						
MLH				IAML		07 12 48.6	
	comp=E,407nm,0.1s						
HPO	**Honuapo**	**0.36**	**246**		Pn	07 12 46.5	-0.3
KHU	**Kahuku**	**0.39**	**271**		Pn	07 12 46.9	-0.4
MWH	**Moku'aweowe**	**0.45**	**303**		Pn	07 12 48.2	0.0
MWH				IAML		07 12 56.2	
	comp=E,521nm,0.8s						
MWH				IAML		07 12 56.3	
	comp=N,525nm,0.2s						
HMH	**Humu'ula Sheep**	**0.45**	**324**		Pn	07 12 48.5	+0.4
HMH	**Humu'ula Sheep**	**0.45**	**324**		Sn	07 12 56.0	+0.1
HMH	**Humu'ula Sheep**	**0.45**	**324**	IAML		07 12 56.1	
	comp=E,523nm,0.4s						
HMH				IAML		07 12 56.9	
	comp=N,400nm,0.2s						
MLOA	**Mauna Loa Obse**	**0.46**	**310**		Pn	07 12 48.5	+0.2
MLOA	**Mauna Loa Obse**	**0.46**	**310**		Sn	07 12 55.7	-0.6
MLOA	**Mauna Loa Obse**	**0.46**	**310**	IAML		07 12 56.4	
	comp=E,702nm,0.1s						
MLOA				IAML		07 12 56.4	
	comp=N,980nm,0.2s						
ALEP	**Alea Permanent**	**0.52**	**306**		Pn	07 12 48.7	-0.2
ALEP					Sn	07 12 56.3	-1.0
POHA	**Pohakuloa**	**0.60**	**329**		Pn	07 12 49.7	-0.1
CPH	**Captain Cook**	**0.72**	**290**		Pn	07 12 50.7	-0.3
CPH					Sn	07 12 59.9	-1.4
KHLU	**Kahalu`u**	**0.74**	**298**		Pn	07 12 51.2	-0.2
HUH	**Hualalai**	**0.74**	**307**		Pn	07 12 51.6	0.0
HPAH	**Hawaii Prepara**	**0.92**	**329**		Pn	07 12 53.7	0.0
HPAH	**Hawaii Prepara**	**0.92**	**329**		Sn	07 13 04.7	-1.3
MHA	**Mahukona**	**1.15**	**325**	Pn	Pn	07 12 56.9	+0.1
HLK	**Haleakala**	**1.80**	**327**	Pn	Pn	07 13 05.9	0.0

*NNC **30** 07:26:22.2±0.3, 50°.02N×78°.73E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=2.9km s-min=1.7km az=64.0, Suspected Mining explosion.*

ISC 30 07:26:22.9±1.0, 50°.17N±0°.04×78°.82E±0°.04, h0km, n16, σ0s72°/29, 16C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.46**	**335**	⇑P	**Pb**	**07 26 33.6**	**-0.3**
KUR07				⇑S	**Sb**	**07 26 42.0**	**+0.7**
KUR14	**Kurchatov Arra**	**0.47**	**342**	⇓P	**Pb**	**07 26 33.7**	**-0.4**
KUR14				⇓S	**Sb**	**07 26 42.2**	**+0.7**

KUR06	**Kurchatov Arra**	**0.47**	**336**	⇑P		**Pb**	**07 26 33.8**	**-0.4**
KUR06				⇑S		**Sb**	**07 26 43.0**	**+1.3**
KUR15	**Kurchatov Arra**	**0.48**	**340**	⇑P		**Pb**	**07 26 34.1**	**-0.1**
KUR15				⇑S		**Sb**	**07 26 43.0**	**+1.2**
KURBB	**Kurchatov Arra**	**0.49**	**338**	⇑P		**Pb**	**07 26 34.2**	**-0.2**
	43nm,0.3s							
KURBB				⇑S		**Sb**	**07 26 42.8**	**+0.6**
	76nm,0.6s							
KUR16	**Kurchatov Arra**	**0.50**	**336**	⇓P		**Pb**	**07 26 34.4**	**-0.2**
KUR16				⇑S		**Sb**	**07 26 43.1**	**+0.6**
KUR05	**Kurchatov Arra**	**0.51**	**339**	⇑P		**Pb**	**07 26 34.3**	**-0.4**
KUR05				⇑S		**Sb**	**07 26 43.5**	**+0.8**
KUR17	**Kurchatov Arra**	**0.52**	**334**	⇑P		**Pb**	**07 26 34.8**	**-0.1**
KUR17				⇓S		**Sb**	**07 26 43.9**	**+1.0**
KUR04	**Kurchatov Arra**	**0.53**	**340**	⇑P		**Pb**	**07 26 34.8**	**-0.2**
KUR04				⇓S		**Sb**	**07 26 44.3**	**+1.2**
KURK	**Kurchatov**	**0.56**	**347**	⇑P		**Pb**	**07 26 35.8**	**+0.1**
	16nm,0.4s							
KURK				⇑S		**Sb**	**07 26 46.0**	**+1.7**
	13nm,0.5s							
SEM	**Semipalatinsk**	**0.95**	**75**	P		**Pb**	**07 26 42.1**	**-0.2**
	7.1nm,0.1s							
SEM				S		**Sn**	**07 26 57.2**	**-0.9**
	54nm,0.5s							
BRZS	**Berezniki**	**3.96**	**270**	Pg		**Pb**	**07 27 33.0**	**-0.6**
	2.3nm,0.3s							
BRZS				Lg		Lg	07 28 24.0	
	7.9nm,0.4s							
MAKZ	**Makanchi**	**3.96**	**147**	⇓Pg		**Pb**	**07 27 34.0**	**+0.3**
	0.4nm,0.2s							
MAKZ				⇓Lg		Lg	07 28 22.5	
	9.9nm,0.7s							
MK31	**Makanchi Array**	**4.09**	**144**	Pn		**Pn**	**07 27 26.4**	**-0.3**
	0.1nm,0.1s,baz=278,slow=6.0,SNR=42							
MK31				⇓Pg		**Pb**	**07 27 35.8**	**0.0**
	1.6nm,0.3s,baz=328,slow=13,SNR=18							
MK31				Lg		Lg	07 28 29.1	
	7.2nm,0.4s,baz=334,slow=33,SNR=14							
OTUK	**Ortayu**	**4.67**	**248**	⇓Pn		**Pn**	**07 27 33.8**	**-0.9**
	1.4nm,0.2s							
OTUK				⇑Pg		**Pb**	**07 27 46.0**	**+0.4**
	1.5nm,0.4s							
OTUK				⇓Lg		Lg	07 28 46.8	
	7.4nm,0.7s							
KUU	**Kurty**	**6.50**	**196**	Pg		**Pb**	**07 28 17.2**	**+0.3**
	0.9nm,0.3s							
KUU				Lg		Lg	07 29 40.4	
	10nm,0.8s							

MOS ***30*** *08:07:35.9±0.9, 37.°37N×141.°80E, h34km, mb4.6/19, Error ellipse: s-maj=9.4km s-min=6.7km az=101.8*
JMA ***30*** *08:07:38.6±0.1, 37.°4N±0.°4×141.°7E±0.°8, h43km±2km, MD4.4/40, MV4.6/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
NIED ***30*** *08:07:38.6, 37.°39N×141.°70E, h43km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.30; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$-2.07; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.55; $M_{\phi r}$2.61; Fault plane solution: $M_0$3.48000×10^{15} NP1: ϕ_s209.00000°, δ23.00000°, λ120.00000°. NP2: ϕ_s357.00000°, δ70.00000°, λ78.00000°.*
IDC ***30*** *08:07:39.9±0.7, 37.°34N×141.°55E, h46km±6km, mb4.0/19, mbtmp4.2/22, ML3.8/3, MS3.3/8 Error ellipse: s-maj=17.3km s-min=12.7km az=79.0*
BJI ***30*** *08:07:39.0±0.0, 37.°41N×141.°55E, h52km, mb4.6/40, mB4.8/20, Ms4.1/5, Ms7 3.8/7*
NEIC ***30*** *08:07:39.8±1.2, 37.°41N±0.°05×141.°69E±0.°10, h46km±7km, mb4.8/24, Error ellipse: s-maj=11.4km s-min=7.7km az=98.0*
ISC 30 08:07:38.9±0.5, 37.°40N±0.°04×141.°77E±0.°05, h46km±4km, h46km:pP-P, n183, σ1°67/195, mb4.5/51, MS3.6/10, 13C-15D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.71**	**268**	⇓*i*P		**Pn**	**08 07 51.6**	**-1.1**
JFK				⇓S		**Sn**	**08 08 00.5**	**-2.1**
JFK	**Kawauchi**	**0.71**	**268**	A		A	08 07 51.6	
	comp=E,27nm,0.6s,comp=E,14nm,0.6s							
JMST	**Minamisoumatoc**	**0.77**	**295**	⇓*i*P		**Pn**	**08 07 52.4**	**-1.0**
JMST				⇓S		**Sn**	**08 08 02.1**	**-1.8**
JMST	**Minamisoumatoc**	**0.77**	**295**	A		A	08 07 52.4	
	comp=E,17nm,1.2s,comp=E,18nm,0.2s							
JMM	**Marumori**	**0.90**	**301**	Pn		**Pn**	**08 07 54.6**	**-0.6**
JMM	**Marumori**	**0.90**	**301**	⇓*i*P		**Pn**	**08 07 54.5**	**-0.7**
JMM				⇓S		**Sn**	**08 08 05.6**	**-1.5**
JMM	**Marumori**	**0.90**	**301**	A		A	08 07 54.5	
	comp=E,13nm,1.7s,comp=E,14nm,1.9s							
JIKH	**Ishinomakikobu**	**0.94**	**345**	*i* P		**Pn**	**08 07 55.4**	**-0.3**
JIKH				S		**Sn**	**08 08 07.0**	**-1.0**
JFFD	**Fukushimafurud**	**1.01**	**253**	⇓*i*P		**Pn**	**08 07 55.0**	**-1.1**
JFFD				⇓S		**Sn**	**08 08 07.7**	**-2.1**
JIO	**Ouri**	**1.10**	**343**	⇓*i*P		**Pn**	**08 07 57.8**	**-0.2**
JIO				⇓S		**Sn**	**08 08 11.0**	**-1.0**
JFT	**Otama**	**1.14**	**276**	*i* P		**Pn**	**08 07 58.5**	**-0.1**
JFT				S		**Sn**	**08 08 12.6**	**-0.5**
JFT	**Otama**	**1.14**	**276**	A		A	08 07 58.5	
	comp=E,20nm,0.8s,comp=E,15nm,1.5s							
JOU	**Okura**	**1.30**	**318**	P		**Pn**	**08 08 01.1**	**+0.4**
JOU				S		**Sn**	**08 08 17.1**	**+0.2**
JYAR	**Yonezawaarcadi**	**1.39**	**292**	A		A	08 08 01.5	
	comp=E,18nm,1.2s,comp=E,20nm,1.1s							
JYS	**Shirataka**	**1.58**	**302**	P		**Pn**	**08 08 05.0**	**+0.6**
JYS	**Shirataka**	**1.58**	**302**	A		A	08 08 05.0	
	comp=E,10.0nm,1.6s,comp=E,8.0nm,2.9s							
JMK	**Ichinoseki**	**1.61**	**345**	*i* P		**Pn**	**08 08 05.4**	**+0.6**
JMK				S		**Sn**	**08 08 25.0**	**+0.6**
JFY	**Yanaizu**	**1.64**	**271**	⇓*i*P		**Pn**	**08 08 05.4**	**0.0**
JFY				⇓S		**Sn**	**08 08 25.6**	**+0.3**
JYT	**Yasato**	**1.72**	**228**	Pn		**Pn**	**08 08 05.4**	**-1.0**
JYT	**Yasato**	**1.72**	**228**	A		A	08 08 06.3	
	comp=E,10.0nm,0.3s,comp=E,10.0nm,0.4s							
JKEN	**Kujiedanarisaw**	**2.80**	**359**	A		A	08 08 22.5	
	comp=E,7.0nm,0.5s,comp=E,9.0nm,0.9s							
JSD	**Sado**	**2.85**	**284**	Pn		**Pn**	**08 08 22.2**	**+0.3**
MJAR	**Matsushiro Arr**	**2.97**	**254**	P		**Pn**	**08 08 22.1**	**-1.5**
MJAR	**Matsushiro Arr**	**2.97**	**254**	P		**Pn**	**08 08 22.1**	**-1.5**
	3.8nm,0.3s,baz=82,slow=15,SNR=79							
MJAR				S		**Sn**	**08 09 02.0**	**+3.9**
	71nm,0.5s,baz=202,slow=32,SNR=7.0							
MJAR				LR		LR	08 09 48.4	
	comp=Z,1μm,18.3s,baz=116,slow=46 23nm,0.3s							
MAJO	**Matsushiro**	**2.98**	**254**	Pn		**Pn**	**08 08 24.2**	**+0.5**
MAJO	**Matsushiro**	**2.98**	**254**	*i* P		**Pn**	**08 08 24.0**	**+0.4**
JTM	**Tenmabayashi**	**3.42**	**351**			**Pn**	**08 08 32.8**	**+3.0**
JGF	**Kuroka**	**3.98**	**244**	Pn		**Pn**	**08 08 39.3**	**+1.8**
INJ	**Inuyama**	**4.34**	**243**	Pn		**Pn**	**08 08 44.3**	**+1.9**
JHJ	**Hachijo jima 2**	**4.57**	**201**			**Pn**	**08 08 45.5**	**0.0**
JHJ						**Sn**	**08 09 35.5**	**-1.8**
JHJ	**Hachijo jima 2**	**4.57**	**201**	P		**Pn**	**08 08 45.5**	**0.0**
	133nm,0.3s,baz=275,slow=23,SNR=7.2							
JHJ				S		**Sn**	**08 09 35.5**	**-1.8**
	263nm,0.4s,baz=252,slow=19,SNR=4.1 207nm,0.3s							
ERM	**Erimo**	**4.73**	**13**			**Pn**	**08 08 48.9**	**+1.2**
ERM	**Erimo**	**4.73**	**13**	*i* P		**Pn**	**08 08 48.5**	**+0.8**
NMR	**Nemuro--Hokkai**	**6.69**	**26**	*e*P		**Pn**	**08 09 12.4**	**-2.1**
NMR				*e*S		**Sn**	**08 10 23.7**	**-5.6**
YUK	**Yuzh-Kuril'sk**	**7.32**	**24**	P		**Pn**	**08 09 22.2**	**-1.0**
YUK				*e*S		**Sn**	**08 10 41.6**	**-3.3**
JHS	**Saijyo**	**7.39**	**254**			**Pn**	**08 09 27.2**	**+2.9**
JMN	**Monobe**	**7.40**	**243**	Pn		**Pn**	**08 09 26.0**	**+1.7**
KUR	**Kuril'sk**	**9.07**	**28**	*e*P		**Pn**	**08 09 47.9**	**+0.8**
KUR				*i* S		**Sn**	**08 11 22.9**	**-4.9**
YSS	**Yuzh-Sakhalins**	**9.57**	**4**	*i* P		**Pn**	**08 09 54.9**	**+0.8**
YSS				pmax	pmax			
	comp=Z,8.0nm,0.3s							
USRK	**Ussuriysk Ar.**	**10.05**	**316**	P		**Pn**	**08 10 03.0**	**+2.5**
	comp=Z,7.2nm,0.7s,baz=122,slow=14,SNR=11							
KSRS	**Korea Array**	**11.01**	**274**			**Pn**	**08 10 14.2**	**+0.5**
KSRS	**Korea Array**	**11.01**	**274**	P		**Pn**	**08 10 14.3**	**+0.5**
KSRS	**Korea Array**	**11.01**	**274**	P		**Pn**	**08 10 14.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=90,slow=14,SNR=12							
KSRS				LR		LR	08 14 09.4	
	comp=Z,208nm,18.8s,baz=80,slow=36 comp=Z,7.3nm,0.9s							
KLR	**Kul'dur**	**13.88**	**332**	P		**P**	**08 10 56.2**	**-3.7**
KLR	**Kul'dur**	**13.88**	**332**	*i* P		**P**	**08 10 57.4**	**-2.5**
KLR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KLR	**Kul'dur**	**13.88**	**332**	P		**P**	**08 10 56.2**	**-3.7**
	comp=Z,1.6nm,0.6s,baz=189,slow=6.4,SNR=3.8							
KLR				LR		LR	08 16 10.4	
	comp=Z,111nm,18.1s,baz=144,slow=37							
CN2	**Changchun**	**13.94**	**302**	*e*P		**Pn**	**08 10 51.5**	**-2.2**
PETK	**Petropavlovsk-**	**19.23**	**30**	LR		LR	08 19 47.3	
	comp=Z,60nm,18.4s,baz=213,slow=38							
NJ2	**Nanjing**	**19.56**	**261**	*e*P		**Pn**	**08 12 03.3**	**-1.1**
NJ2				pmax	pmax			
	comp=Z,6.0nm,0.5s							
XLT	**XiLinHaoTe**	**20.50**	**297**	*e*P		**P**	**08 12 11.8**	**-1.2**
XLT				pP		pP	08 12 24.5	+0.6
XLT				sP		sP	08 12 32.0	+2.3
XLT				pmax	pmax			
	comp=Z,21nm,0.6s							
XLT				pmax	pmax			
	comp=Z,250nm,4.9s							
HNS	**HongShan**	**21.48**	**278**	⇓P		**P**	**08 12 21.3**	**-2.2**
HNS				S		**S**	**08 16 10.0**	**-9.1**
HNS				pmax	pmax			
	comp=Z,19nm,0.8s							
HNS				LR		LR		
	comp=Z,290nm,12.2s							
HNS				LR		LR		
	comp=Z,180nm,12.6s							
MA2	**Magadan**	**22.94**	**12**	LR		LR	08 21 02.4	
	comp=Z,58nm,19.9s,baz=318,slow=35							
HHC	**Hu-ho-hao-te**	**23.62**	**288**	*e*P		**P**	**08 12 45.5**	**-0.4**
HHC				pmax	pmax			
	comp=Z,22nm,0.7s							
HHC				pmax	pmax			
	comp=Z,340nm,5.3s							
WHN	**Wuhan**	**23.69**	**261**	⇑P		**P**	**08 12 46.8**	**+0.4**
LYN	**LuoYang**	**23.84**	**272**	⇓P		**P**	**08 12 46.8**	**-1.0**
LYN				S		**S**	**08 17 00.0**	**-0.5**
LYN				pmax	pmax			
	comp=Z,10.0nm,0.7s							
LYN				pmax	pmax			
	comp=Z,170nm,4.2s							
LYN				LR		LR		
	comp=Z,110nm,7.3s							
LYN				LR		LR		
	comp=Z,120nm,13.9s							
YAK	**Yakutsk**	**25.78**	**347**	*i* P		**P**	**08 13 05.8**	**+0.7**
YAK				pmax	pmax			
	comp=Z,10.0nm,0.9s							
SEY	**Seymchan**	**26.38**	**11**	*i* P		**P**	**08 13 11.3**	**+0.8**
SEY				pmax	pmax			
	comp=Z,10.0nm,1.6s							
XAN	**Xi'an**	**26.80**	**273**	P		**P**	**08 13 17.5**	**+2.7**
XAN				pmax	pmax			
	comp=Z,17nm,0.6s							
SHEM	**Shemya Is, Ala**	**27.21**	**45**	LR		LR	08 21 28.4	
	comp=Z,35nm,20.9s,baz=298,slow=30							
ULN	**Ulaanbaatar**	**27.38**	**304**	*ce*P		**P**	**08 13 19.6**	**-0.4**
ULN				pmax	pmax			
	comp=Z,6.0nm,1.3s							
ENH	**Enshi**	**27.64**	**265**	P		**P**	**08 13 21.7**	**-0.6**
ENH				IAmb	IAmb		08 13 23.3	
	comp=Z,26nm,0.8s							
SONM	**Songino Array**	**27.82**	**303**	P		**P**	**08 13 24.4**	**+0.6**
SONM	**Songino Array**	**27.82**	**303**	P		**P**	**08 13 24.4**	**+0.6**
SONM				pmax	pmax			
	comp=Z,4.0nm,0.8s							
SONM	**Songino Array**	**27.82**	**303**	P		**P**	**08 13 23.8**	**0.0**
	comp=Z,4.9nm,0.6s,baz=104,slow=9.3,SNR=16 comp=Z,4.9nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**28.10**	**122**	T		T	08 42 57.2	
	baz=314,slow=75,SNR=625							
H11N1	**WAKE ISLAND Hy**	**28.11**	**122**	T		T	08 42 55.5	
	baz=314,slow=75,SNR=733							
H11N3	**WAKE ISLAND Hy**	**28.12**	**122**	T		T	08 42 56.1	
	baz=314,slow=75,SNR=595							
H11S1	**WAKE ISLAND Hy**	**28.83**	**124**	T		T	08 43 52.8	
	baz=316,slow=76,SNR=531							
H11S3	**WAKE ISLAND Hy**	**28.83**	**124**	T		T	08 43 57.0	
	baz=316,slow=76,SNR=468							
H11S2	**WAKE ISLAND Hy**	**28.84**	**124**	T		T	08 43 51.9	
	baz=316,slow=76,SNR=572							
GYA	**Guiyang**	**31.56**	**260**	⇑P		**P**	**08 13 57.3**	**+0.1**
GYA				pmax	pmax			
	comp=Z,30nm,1.2s							
GTA	**Gaotai**	**32.73**	**287**	*e*P		**P**	**08 14 08.3**	**+1.0**
GTA				pP		sP	08 14 24.5	-0.4
GTA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BILL	**Bilibino**	**33.60**	**16**	⇓*e*P		**P**	**08 14 14.8**	**+0.4**
BILL				*e*			08 15 29.0	
BILL				*e*S		**S**	**08 19 38.5**	**+5.2**
BILL				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BILL				MLR	MLR			
	comp=Z,126nm,18.0s							
KMI	**Kunming**	**35.30**	**261**	⇑P		**P**	**08 14 30.8**	**+1.0**
KMI				pmax	pmax			
	comp=Z,17nm,0.8s							
PZH	**PanZhiHua**	**35.42**	**264**	P		**P**	**08 14 31.0**	**+0.3**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,100nm,5.1s							
GOMU	**GeErMu**	**37.31**	**283**	P		**P**	**08 14 47.5**	**+0.4**
GOMU				PP		**PnPn**	**08 16 12.8**	**-0.8**
GOMU				PcP		**PcP**	**08 17 09.0**	**+3.3**
GOMU				pmax	pmax			
	comp=Z,7.0nm,0.4s							
GOMU				pmax	pmax			
	comp=Z,38nm,5.0s							
DGZ	**Jazzator, Alta**	**40.41**	**306**	*i* P		**P**	**08 15 12.8**	**+0.2**
DGZ				pmax	pmax			
	comp=Z,32nm,0.7s							
WMQ	**Urumqi**	**40.93**	**297**	*e*P		**P**	**08 15 18.5**	**+1.7**
WMQ				LR	LR			
	comp=Z,110nm,21.9s							
CMAR	**Chiang Mai Arr**	**41.86**	**255**	*ce*P		**P**	**08 15 25.6**	**+0.9**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**41.86**	**255**	P		**P**	**08 15 23.6**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=46,slow=5.9,SNR=4.7							
CMAR				LR		LR	08 33 24.2	
	comp=Z,41nm,21.0s,baz=235,slow=37 comp=Z,1.1nm,0.3s							
ZAA0	**Zalesovo Array**	**41.88**	**312**	P		**P**	**08 15 25.2**	**+0.8**
ZALV	**Zalesovo Beam**	**41.88**	**312**	P		**P**	**08 15 25.1**	**+0.7**
ZALV	**Zalesovo Beam**	**41.88**	**312**	*i* P		**P**	**08 15 25.1**	**+0.7**
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.6s							
ZALV	**Zalesovo Beam**	**41.88**	**312**	P		**P**	**08 15 25.1**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=86,slow=7.6,SNR=12 comp=Z,2.4nm,0.5s							
MK31	**Makanchi Array**	**44.16**	**302**	P		**P**	**08 15 42.9**	**-0.2**
MK31				IAmb	IAmb		08 15 44.7	
	comp=Z,6.7nm,0.7s							
MK31	**Makanchi Array**	**44.16**	**302**	*i* P		**P**	**08 15 43.3**	**+0.3**
MKAR	**Makanchi Array**	**44.16**	**302**	P		**P**	**08 15 43.5**	**+0.5**
MKAR	**Makanchi Array**	**44.16**	**302**	*ce*P		**P**	**08 15 43.5**	**+0.5**
MKAR				pmax	pmax			
	comp=Z,8.0nm,0.7s							
MKAR	**Makanchi Array**	**44.16**	**302**	P		**P**	**08 15 43.5**	**+0.5**
	comp=Z,7.6nm,0.7s,baz=88,slow=9.8,SNR=56 comp=Z,7.6nm,0.7s							
MAKZ	**Makanchi**	**44.37**	**302**	P		**P**	**08 15 44.6**	**0.0**
MAKZ	**Makanchi**	**44.37**	**302**	P		**P**	**08 15 44.7**	**0.0**
KURK	**Kurchatov**	**45.93**	**308**	P		**P**	**08 15 57.0**	**+0.1**
KURK				IAmb	IAmb		08 15 58.1	
	comp=Z,16nm,0.9s							
KURK	**Kurchatov**	**45.93**	**308**	*ce*P		**P**	**08 15 56.6**	**-0.3**
KURK				pmax	pmax			
	comp=Z,12nm,0.9s							
KURBB	**Kurchatov Arra**	**46.00**	**308**	P		**P**	**08 15 56.7**	**-0.8**
KURBB	**Kurchatov Arra**	**46.00**	**308**	P		**P**	**08 15 57.9**	**+0.4**
	comp=Z,13nm,0.7s,baz=83,slow=7.9,SNR=78 comp=Z,13nm,0.7s							
RAMN	**Ramite**	**47.26**	**274**	*e*P		**P**	**08 16 08.6**	**+0.6**
	comp=Z,40nm,1.0s							
JIRN	**Jiri**	**47.26**	**275**	*e*P		**P**	**08 16 08.7**	**+0.5**
GUN	**Gumba**	**47.40**	**276**	*e*P		**P**	**08 16 10.4**	**+1.2**
PKI	**Pulchoki**	**47.92**	**275**	*e*P		**P**	**08 16 13.4**	**+0.2**
GKN	**Gorkha**	**48.34**	**276**	*e*P		**P**	**08 16 16.6**	**+0.3**
	comp=Z,44nm,0.9s							
DANN	**Dangsing**	**48.88**	**277**	*e*P		**P**	**08 16 20.9**	**+0.3**
	comp=Z,75nm,0.7s							
IL31		**49.03**	**33**	P		**P**	**08 16 21.8**	**+1.0**
IL31				IAmb	IAmb		08 17 09.6	
	comp=Z,11nm,1.8s							
ILAR	**Eielson Array**	**49.03**	**33**	P		**P**	**08 16 22.8**	**+1.9**
ILAR	**Eielson Array**	**49.03**	**33**	P		**P**	**08 16 22.8**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=261,slow=6.1,SNR=10 comp=Z,0.7nm,0.7s							
KOLN	**Koldanda**	**49.27**	**277**	*e*P		**P**	**08 16 23.8**	**+0.4**
BOOM	**Boomskoye usch**	**49.59**	**298**	P		**P**	**08 16 24.8**	**-0.8**
BOOM				IAmb	IAmb		08 16 30.1	
	comp=Z,4.8nm,0.7s							
BOOM	**Boomskoye usch**	**49.59**	**298**	P		**P**	**08 16 24.8**	**-0.8**
BOOM				pmax	pmax			
	comp=Z,5.0nm,0.7s							
PYUN	**Piuthan**	**49.60**	**277**	*e*P		**P**	**08 16 25.9**	**-0.1**
	comp=Z,56nm,1.0s							
TKM2	**Tokmak 2**	**49.70**	**298**	P		**P**	**08 16 26.9**	**+0.3**
OTUK	**Ortayu**	**50.44**	**306**	P		**P**	**08 16 30.8**	**-1.0**
BVA0	**Borovoye Array**	**50.53**	**312**	*i* P		**P**	**08 16 32.6**	**+0.2**
BRVK	**Borovoye**	**50.59**	**312**	*ce*P		**P**	**08 16 34.1**	**+1.3**
BRVK				pmax	pmax			
	comp=Z,10.0nm,2.5s							
MTN	**Manton Dam**	**50.97**	**193**	P		**P**	**08 16 35.9**	**-0.1**
MTN				IAmb	IAmb		08 16 38.4	
	comp=Z,18nm,1.4s							
KK31	**Karatay Array**	**53.19**	**300**	P		**P**	**08 16 52.7**	**+0.4**
KK31	**Karatay Array**	**53.19**	**300**	P		**P**	**08 16 52.7**	**+0.4**
KK31				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KKAR	**Karatay Array**	**53.19**	**300**	P		**P**	**08 16 52.8**	**+0.4**
KKAR	**Karatay Array**	**53.19**	**300**	P		**P**	**08 16 52.7**	**+0.4**
KKAR				IAmb	IAmb		08 16 53.6	
	comp=Z,3.3nm,0.9s							
KKAR	**Karatay Array**	**53.19**	**300**	P		**P**	**08 16 52.7**	**+0.4**
KKAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KNRA	**Kununurra**	**54.19**	**196**	P		**P**	**08 16 60.0**	**+0.1**
GAR	**Garm**	**54.80**	**295**	P		**P**	**08 17 04.1**	**-0.2**
GAR				IAmb	IAmb		08 17 05.5	
	comp=Z,8.0nm,0.7s							
CHGR	**Chuyangaron**	**55.76**	**295**	P		**P**	**08 17 10.9**	**-0.3**
CHGR	**Chuyangaron**	**55.76**	**295**	P		**P**	**08 17 10.9**	**-0.3**
CHGR				pmax	pmax			
	comp=Z,33nm,0.7s							
ARU	**Arti**	**56.27**	**318**	P		**P**	**08 17 14.5**	**+0.1**
ARU				IAmb	IAmb		08 17 15.9	
	comp=Z,8.6nm,0.8s							
ARU	**Arti**	**56.27**	**318**	*c i*P		**P**	**08 17 15.0**	**+0.6**
ARU							08 18 09.7	
ARU							08 19 18.2	
ARU				S		**S**	**08 25 03.5**	**+2.7**
ARU				SS		**SS**	**08 28 45.9**	**-1.5**
ARU				pmax	pmax			
	comp=Z,10.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**57.25**	**198**	P		**P**	**08 17 22.1**	**+0.4**
WB0	**Warramunga Arr**	**57.28**	**188**	P		**P**	**08 17 22.2**	**+0.3**
WB0				IAmb	IAmb		08 17 22.6	
	comp=Z,29nm,1.7s							
CTA	**Charters Tower**	**57.34**	**175**	LR		LR	08 47 20.6	
	comp=Z,38nm,18.1s,baz=250,slow=42							
WRAB	**Tennant Creek**	**57.45**	**188**	P		**P**	**08 17 23.2**	**+0.1**
WRAB				IAmb	IAmb		08 17 55.5	
	comp=Z,21nm,1.6s							
WRAB	**Tennant Creek**	**57.45**	**188**	P		**P**	**08 17 23.2**	**+0.1**
WRAB				pmax	pmax			
	comp=Z,21nm,1.6s							
WR0	**Warramunga Arr**	**57.46**	**188**	P		**P**	**08 17 23.1**	**-0.1**
WB2	**Warramunga Arr**	**57.46**	**188**	P		**P**	**08 17 22.9**	**-0.3**
WB2				IAmb	IAmb		08 17 23.6	
	comp=Z,5.2nm,0.6s							
WRA	**Warramunga Arr**	**57.46**	**188**	P		**P**	**08 17 23.2**	**-0.1**
WRA	**Warramunga Arr**	**57.46**	**188**	*i* P		**P**	**08 17 23.1**	**-0.1**
WRA				pmax	pmax			
	comp=Z,4.0nm,0.5s							
WRA	**Warramunga Arr**	**57.46**	**188**	P		**P**	**08 17 23.1**	**-0.1**
	comp=Z,3.9nm,0.5s,baz=7.8,slow=7.7,SNR=124 comp=Z,3.9nm,0.5s							
AB31	**Akbulak array**	**57.92**	**310**	P		**P**	**08 17 25.7**	**-0.5**
ABKAR	**Akbulak array**	**57.92**	**310**	P		**P**	**08 17 26.2**	**0.0**
ABKAR	**Akbulak array**	**57.92**	**310**	P		**P**	**08 17 26.5**	**+0.3**
ABKAR				IAmb	IAmb		08 17 27.2	
	comp=Z,4.1nm,0.8s							
HYBB	**Hyderabad (bro**	**58.49**	**268**	*e*P		**P**	**08 17 30.8**	**+0.1**
HYBB				*es*P		**sP**	**08 17 49.1**	**+0.2**
HYBB				*e*PP		**PP**	**08 19 40.4**	**0.0**
HYBB				*e*S		**S**	**08 25 31.0**	**-0.1**
KIRV	**Kirov**	**60.13**	**323**	*ce*P		**P**	**08 17 42.6**	**+1.3**
ASAR	**Alice Springs**	**61.19**	**188**	P		**P**	**08 17 49.3**	**+0.4**
ASAR	**Alice Springs**	**61.19**	**188**	P		**P**	**08 17 49.3**	**+0.4**
ASAR				*PP		**pP**	**08 18 02.9**	**+1.0**
ASAR	**Alice Springs**	**61.19**	**188**	P		**P**	**08 17 49.2**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=6.3,

comp=Z,1.0nm,0.7s,baz=38,slow=6.5
NOA NORSAR Array B 73.96 337 P **P** **08 19 09.1 0.0**
NOA *PP **pP** **08 19 23.1 +0.7**
NOA NORSAR Array B 73.96 337 P **P** **08 19 09.1 0.0**
comp=Z,1.6nm,0.8s,baz=39,slow=6.1,SNR=4.1
NOA pP **pP** **08 19 23.1 +0.7**
comp=Z,1.4nm,0.8s,baz=38,slow=6.1,SNR=3.5
comp=Z,1.6nm,0.8s
AKASG Malin Array Be 74.18 322 P **P** **08 19 09.9 -0.6**
AKASG *PP **pP** **08 19 23.8 0.0**
AKASG Malin Array Be 74.18 322 P **P** **08 19 09.9 -0.6**
comp=Z,0.7nm,0.3s,baz=45,slow=6.3,SNR=7.5
AKASG pP **pP** **08 19 23.8 0.0**
comp=Z,1.8nm,0.5s,baz=47,slow=5.9,SNR=8.1
comp=Z,0.7nm,0.3s
NVAR Mina Array Bea 74.54 53 P **P** **08 19 15.7 +2.5**
comp=Z,0.4nm,0.8s,baz=294,slow=4.6,SNR=3.1
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 77.21 46 P **P** **08 19 31.1 +2.8**
comp=Z,0.3nm,0.6s,baz=281,slow=1.5,SNR=2.5
comp=Z,0.3nm,0.6s
BRTR Keskin Array B 78.82 312 *ce*P **P** **08 19 38.7 +1.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 78.82 312 P **P** **08 19 37.2 0.0**
comp=Z,0.9nm,0.7s,baz=104,slow=5.2,SNR=3.7
comp=Z,0.9nm,0.7s
VYHS Vyhne 80.58 326 *eP* **P** **08 19 48.3 +1.9**
VYHS Vyhne 80.58 326 *eP* **P** **08 19 48.3 +1.9**
CLL Collm 80.92 330 *eP* **P** **08 19 49.0 +0.9**
GERES GERESS Array B 82.55 328 P **P** **08 19 57.1 +0.2**
GERES GERESS Array B 82.55 328 P **P** **08 19 57.1 +0.2**
comp=Z,0.3nm,0.3s,baz=28,slow=6.0,SNR=4.9
comp=Z,0.3nm,0.3s
LOOK Love County 90.27 45 **P** **08 20 34.6 -0.3**
LOOK IAmb IAmb 08 20 50.6
comp=Z,107nm,1.5s
Z51A Franklin 97.16 38 pP 08 21 22.2 +2.1
TROLL Troll, Antarti 139.67 198 PKPdf **PKiKP** **08 27 02.1 -0.9**
SNAA Sanae 141.18 197 PKPdf **PKPdf** **08 27 01.0 -2.2**
VNA2 Neumayer--Watz 142.75 196 PKPdf **PKPdf** **08 27 04.3 -1.7**
baz=100,slow=0.4
VNA2 Neumayer--Watz 142.75 196 pPKPdf pPKPdf 08 27 22.1 +2.1
VNA3 Neumayer Olymp 142.99 195 PKPdf **PKPdf** **08 27 04.0 -2.4**
VNA1 Neumayer--Stat 143.15 196 PKPdf PKPbc 08 27 04.6 +0.9
LPAZ La Paz 146.26 60 PKPbc **PKPab** **08 27 16.6 +0.2**
comp=Z,0.6nm,0.5s,baz=38,slow=3.0,SNR=2.4
H03N2 Juan Fernandez 146.78 96 T T 11 11 27.9
baz=292,slow=76,SNR=17
H03N3 Juan Fernandez 146.79 96 T T 11 11 27.0
baz=292,slow=76,SNR=32
H03N1 Juan Fernandez 146.80 96 T T 11 11 29.2
baz=292,slow=76,SNR=27

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*SJA **30** 08:09:02.9±0.7,35°.03S×72°.92W,h28km±4km, ML5.3, MW5.3*
*IDC **30** 08:09:06.5±0.4,34°.90S×72°.37W,h0km, mb5.0/22, mbtmp5.0/26, ML4.8/4, MS5.0/44, Error ellipse: s-maj=18.3km s-min=10.2km az=88.0*
*GUC **30** 08:09:07.4±0.7,34°.87S×72°.58W,h12km±2km, ML5.1*
*MOS **30** 08:09:07.3±1.2,34°.87S×72°.48W,h12km, mb5.6/42, MS5.1/5, Error ellipse: s-maj=11.9km s-min=6.1km az=89.1*
*BJI **30** 08:09:09.9±0.0,34°.80S×72°.75W,h30km, mB5.4/24, Ms5.5/30, Ms7 5.3/31*
*NEIC **30** 08:09:09.3±1.8,34°.90S±0°.04×72°.56W±0°.05,h14km±1km, mb5.5/223, Mwr5.3/75, Mww5.4, Mwr5.1(GUC), Error ellipse: s-maj=6.4km s-min=6.0km az=197.0*
*VAO **30** 08:09:09.0±0.3,34°.85S×72°.23W,h10km, mb5.1*
*NEIC **30** 08:09:09.8, 34°.90S×72°.53W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}6.92; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-5.82; $M_{r\theta}$-1.69; $M_{\theta\phi}$-1.74; $M_{\phi r}$-6.98; Fault plane solution: $M_0$9.80000×10^{16} NP1:ϕ_s194.95000°, δ68.60000°, λ87.81000°. NP2:ϕ_s20.94000°, δ21.50000°, λ95.57000°. Principal axes: T 10.0613, Plg66.0000°, Azm101.0000°; N -0.5469, Plg2.0000°, Azm196.0000°; P -9.5144, Plg24.0000°, Azm287.0000°;*
*NEIC **30** 08:09:13, 34°.90S×72°.41W, h24km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.07; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-0.98; $M_{r\theta}$-0.43; $M_{\theta\phi}$-0.34; $M_{\phi r}$-1.35; Fault plane solution: $M_0$1.79000×10^{17} NP1: ϕ_s19.00000°, δ19.00000°, λ91.00000°. NP2:ϕ_s198.00000°, δ71.00000°, λ90.00000°. Principal axes: T 1.7700, Plg64.0000°, Azm107.0000°; N 0.0331, Plg0.0000°, Azm198.0000°; P -1.8031, Plg26.0000°, Azm288.0000°;*
*GCMT **30** 08:09:14.3±0.1,34°.91S±0°.01×72°.67W±0°.01,h30km, MW5.4/135, Moment Tensor Solution. s115,c190; s135,c216; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.04±.02; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-1.14±.02; $M_{r\theta}$-0.25±.03; $M_{\theta\phi}$-0.36±.01; $M_{\phi r}$-1.34±.04; Best double couple: $M_0$1.77700×10^{17} NP1:ϕ_s191.00000°, δ70.00000°, λ87.00000°. NP2:ϕ_s20.00000°, δ20.00000°, λ98.00000°. Principal axes: T 1.6810, Plg65.0000°, Azm96.0000°; N 0.1920, Plg3.0000°, Azm192.0000°; P -1.8740, Plg25.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 08:09:09.2±0.6,34°.90S±0°.02×72°.51W±0°.03,h18km±2km, n1036,σ1s24/1151,mb5.5/179,MS5.1/51,40C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
GO05	**Huala**	**0.49**	**104**			**Pg**	**08 09 18.9**		**-0.2**
GO05				Sg		**Sb**	**08 09 27.0**		**+0.8**
GO05	**Huala**	**0.49**	**104**	*eP*		**Pg**	**08 09 18.7**		**-0.5**
GO05				*i* S		**Sb**	**08 09 26.7**		**+0.5**
GO05				IAML			08 09 27.8		
	comp=E,265μm,0.3s								
GO05	**Huala**	**0.49**	**104**	*eP*		**Pg**	**08 09 19.0**		**-0.2**
BO03	**Pichilemu**	**0.60**	**49**	↓*iP*		**Pb**	**08 09 21.3**		**+0.1**
BO03				*i* S		**Sb**	**08 09 29.3**		**+0.1**
BO03				IAML			08 09 34.4		
	comp=N,79μm,0.3s								
ML02	**Panimavida**	**1.24**	**134**	Pn		**Pn**	**08 09 30.8**		**-0.9**
ML02	**Panimavida**	**1.24**	**134**	↓*iP*		**Pn**	**08 09 30.8**		**-0.9**
ML02				*i* S		**Sb**	**08 09 47.4**		**-0.4**
BO02	**Sierra Bellavi**	**1.42**	**86**			**Pn**	**08 09 34.3**		**0.0**
BO02	**Sierra Bellavi**	**1.42**	**86**	↓*iP*		**Pn**	**08 09 33.6**		**-0.7**
BO02				*i* S		**Sb**	**08 09 53.7**		**+0.6**
BO02	**Sierra Bellavi**	**1.42**	**86**	*eP*		**Pn**	**08 09 33.8**		**-0.5**
BO02				*eS*		**Sg**	**08 09 57.3**		**+2.0**
BO02				IAML			08 10 02.6		
	comp=Z,46μm,0.5s								
VA05	**Santo Domingo**	**1.44**	**31**			**Pn**	**08 09 34.2**		**-0.2**
VA05	**Santo Domingo**	**1.44**	**31**	↑*iP*		**Pn**	**08 09 33.8**		**-0.6**
VA05				*i* S		**Sb**	**08 09 53.3**		**-0.2**
VA05				IAML			08 10 02.0		
	comp=E,43μm,0.5s								
MT01	**Popeta**	**1.46**	**46**			**Pn**	**08 09 34.6**		**-0.2**
MT01	**Popeta**	**1.46**	**46**	*eP*		**Pn**	**08 09 33.9**		**-0.8**
MT01				*i* S		**Sb**	**08 09 53.9**		**-0.2**
MT01	**Popeta**	**1.46**	**46**	*eP*		**Pn**	**08 09 34.2**		**-0.5**
MT01				*eS*		**Sg**	**08 09 55.9**		**-0.6**
MT09	**Talagante**	**1.68**	**49**	*eP*		**Pn**	**08 09 37.6**		**-0.2**
MT09				*i* S		**Sb**	**08 10 00.5**		**-0.1**
MT09				IAML			08 10 09.1		
	comp=N,32μm,0.6s								
BI05	**Punta Hualpn**	**1.93**	**197**	Pn		**Pn**	**08 09 40.2**		**-1.0**
BI05	**Punta Hualpn**	**1.93**	**197**	*eP*		**Pn**	**08 09 39.8**		**-1.3**
BI05				*i* S		**Sb**	**08 10 06.7**		**-0.9**
MT02	**Curacav**	**1.99**	**35**	*eP*		**Pn**	**08 09 41.4**		**-0.6**
MT02				*i* S		**Sb**	**08 10 08.6**		**-0.7**
MT02	**Curacav**	**1.99**	**35**	*eP*		**Pn**	**08 09 41.0**		**-1.0**
MT02				*eP*		**Pn**	**08 09 41.4**		**-0.6**
MT02				*eS*		**Sb**	**08 10 09.9**		**+0.6**
VA01	**Torpederas**	**2.00**	**21**	*eP*		**Pn**	**08 09 42.0**		**-0.1**
VA01	**Torpederas**	**2.00**	**21**	*eP*		**Pn**	**08 09 41.0**		**-1.1**
CCSP	**San Pedro de C**	**2.00**	**194**	*eP*		**Pn**	**08 09 42.2**		**0.0**
CCSP				*i* S		**Sb**	**08 10 09.5**		**-0.3**
MT05	**Renca**	**2.10**	**45**	*eP*		**Pn**	**08 09 44.0**		**+0.4**
MT05				*i* S		**Sb**	**08 10 11.8**		**-0.8**
MT05				*i* S		**Sn**	**08 10 12.1**		**+2.8**
MT05				IAML			08 10 17.6		
	comp=N,21μm,0.7s								
MT05	**Renca**	**2.10**	**45**	*eP*		**Pn**	**08 09 44.0**		**+0.4**
MT05				*eS*		**Sb**	**08 10 13.4**		**+0.9**
MT05				IAML			08 10 18.0		
	comp=Z,11μm,1.4s								
MT03	**Universidad Ad**	**2.17**	**50**	Pn		**Pn**	**08 09 45.2**		**+0.6**
MT03	**Universidad Ad**	**2.17**	**50**	*eP*		**Pn**	**08 09 45.1**		**+0.6**
MT03				*eS*		**Sb**	**08 10 15.7**		**+1.1**
MT03				IAML			08 10 23.4		
	comp=Z,11μm,0.6s								
LMEL	**Las Melosas**	**2.17**	**62**			**Pn**	**08 09 45.9**		**+1.3**
LMEL	**Las Melosas**	**2.17**	**62**	*eP*		**Pn**	**08 09 45.4**		**+0.8**
LMEL				*i* S		**Sb**	**08 10 14.7**		**-0.1**
ROC1	**El Roble**	**2.28**	**33**			**Pn**	**08 09 46.5**		**+0.3**
ROC1	**El Roble**	**2.28**	**33**	*eP*		**Pn**	**08 09 46.0**		**-0.2**
ROCH	**El Roble**	**2.29**	**33**	*eP*		**Pn**	**08 09 46.2**		**-0.1**
ROCH				*i* S		**Sb**	**08 10 16.9**		**-1.2**
ROCH				IAML			08 10 36.5		
	comp=N,17μm,0.7s								
PEL	**Peldehue**	**2.31**	**41**			**Pn**	**08 09 47.1**		**+0.6**
PEL	**Peldehue**	**2.31**	**41**	P		**Pn**	**08 09 47.1**		**+0.6**
FCH	**Farellones**	**2.41**	**50**	*eP*		**Pn**	**08 09 48.1**		**0.0**
FCH				*i* S		**Sb**	**08 10 21.9**		**0.0**
VA06	**Catapilco**	**2.54**	**24**	↑*iP*		**Pn**	**08 09 49.0**		**-0.5**
VA06				*i* S		**Sb**	**08 10 22.7**		**-2.4**
VA03	**San Esteban**	**2.68**	**38**	↑*iP*		**Pn**	**08 09 52.1**		**+0.6**
VA03				*i* S		**Sb**	**08 10 26.7**		**-2.5**
VA03				IAML			08 10 37.2		
	comp=E,14μm,0.6s								
VA03	**San Esteban**	**2.68**	**38**	*eP*		**Pn**	**08 09 52.0**		**+0.5**
VA03				IAML			08 10 45.2		
	comp=Z,7μm,1.1s								
EDS3	**Malargue**	**2.69**	**110**	*eP*		**Pn**	**08 09 50.9**		**-0.8**
RFA	**San Rafael**	**3.33**	**89**	*eP*		**Pn**	**08 10 02.4**		**+2.0**
RFA				*eS*		**Sg**	**08 10 56.1**		**0.0**
RFA				IAML			08 10 57.9		
	comp=Z,5μm,1.4s								
AAGR	**Agrelo**	**3.55**	**60**	*eP*		**Pn**	**08 10 06.9**		**+3.4**
AAGR				*eS*		**Sg**	**08 11 09.6**		**+6.3**
ARCO	**CERRO ARCO**	**3.61**	**56**	*eP*		**Pn**	**08 10 08.0**		**+3.6**
ASAL	**Salagasta**	**3.83**	**54**	*eP*		**Pn**	**08 10 10.0**		**+2.7**
ASAL				*eS*		**Sb**	**08 11 03.9**		**+1.6**
CO02	**Combarbal**	**3.89**	**19**			**Pn**	**08 10 08.4**		**+0.2**
CO02	**Combarbal**	**3.89**	**19**	*eP*		**Pn**	**08 10 08.1**		**-0.2**
CO02				*i* S		**Sn**	**08 10 55.3**		**+1.7**
CO02	**Combarbal**	**3.89**	**19**	*eP*		**Pn**	**08 10 08.0**		**-0.2**
CO02				*eS*		**Sn**	**08 10 55.2**		**+1.6**
CO02				IAML			08 11 21.2		
	comp=Z,3μm,0.8s								
RTLS	**Leoncito**	**4.09**	**42**	*eP*		**Pn**	**08 10 13.0**		**+1.8**
RTLS				IAML			08 11 24.8		
	comp=Z,2μm,1.6s								
CO03	**El Pedregal**	**4.33**	**21**	↑*iP*		**Pn**	**08 10 14.6**		**+0.4**
CO03				*i* S		**Sn**	**08 11 04.8**		**+0.6**
CO03	**El Pedregal**	**4.33**	**21**	*eP*		**Pn**	**08 10 14.0**		**-0.2**
CO03				*eS*		**Sn**	**08 11 05.7**		**+1.5**
ZON	**Zonda**	**4.63**	**45**	Pn		**Pn**	**08 10 20.4**		**+2.0**
ZON	**Zonda**	**4.63**	**45**	P		**Pn**	**08 10 20.4**		**+2.0**
ZON	**Zonda**	**4.63**	**45**	*eP*		**Pn**	**08 10 21.0**		**+2.6**
LR03	**Panguipulli**	**4.73**	**178**			**Pn**	**08 10 19.4**		**-0.2**
RTLL	**Cerro Villicun**	**4.91**	**45**	*eP*		**Pn**	**08 10 23.0**		**+0.8**
GO04	**Tololo Observa**	**4.92**	**17**			**Pn**	**08 10 22.8**		**+0.2**
GO04	**Tololo Observa**	**4.92**	**17**	*eP*		**Pn**	**08 10 22.4**		**-0.2**
GO04				*eS*		**Sn**	**08 11 21.0**		**+1.8**
LR04	**Corral**	**5.03**	**188**	Pn		**Pn**	**08 10 22.7**		**-1.0**
ACCO	**Cerro Coronel**	**5.18**	**35**	*eP*		**Pn**	**08 10 27.0**		**+0.8**
CO01	**Juntas del Tor**	**5.31**	**23**	*eP*		**Pn**	**08 10 28.0**		**+0.1**
CO01				*eS*		**Sn**	**08 11 29.7**		**+0.9**
VA04	**Juan Fernndez**	**5.38**	**282**	Pn		**Pn**	**08 10 28.0**		**-0.6**
H03S1	**Juan Fernandez**	**5.39**	**279**	T		T	08 15 58.7		
	baz=108,SNR=2955								
H03S3	**Juan Fernandez**	**5.40**	**280**	T		T	08 16 00.4		
	baz=108,SNR=3788								
H03S2	**Juan Fernandez**	**5.41**	**279**	T		T	08 15 53.6		
	baz=108,SNR=3922								
H03N1	**Juan Fernandez**	**5.50**	**283**	T		T	08 16 13.0		
	baz=112,slow=76,SNR=364								
H03N3	**Juan Fernandez**	**5.51**	**283**	T		T	08 16 14.9		
	baz=112,slow=76,SNR=390								
H03N2	**Juan Fernandez**	**5.52**	**283**	T		T	08 16 12.9		
	baz=112,slow=76,SNR=271								
LL04	**Puerto Octay**	**6.00**	**179**			**Pn**	**08 10 36.2**		**-0.9**
PLCA	**Paso Flores**	**6.03**	**166**	Pn		**Pn**	**08 10 38.4**		**+0.8**
PLCA	**Paso Flores**	**6.03**	**166**	P		**Pn**	**08 10 38.3**		**+0.8**
PLCA	**Paso Flores**	**6.03**	**166**	*eP*		**Pn**	**08 10 38.4**		**+0.8**
PLCA	**Paso Flores**	**6.03**	**166**	Pn		**Pn**	**08 10 38.3**		**+0.8**
	comp=Z,18nm,0.3s,baz=341,slow=11,SNR=287								
PLCA					Lg	Lg	08 12 14.2		
	comp=Z,32nm,0.3s,baz=68,slow=24,SNR=5.7								
PLCA					LR	LR	08 13 06.4		
	comp=Z,9μm,21.8s,baz=346,slow=40								
	comp=Z,138nm,0.8s								
LCO	**Las Campanas**	**6.06**	**15**			**Pn**	**08 10 37.6**		**-0.6**
LCO	**Las Campanas**	**6.06**	**15**	*eP*		**Pn**	**08 10 37.6**		**-0.6**
AC05	**El Transito**	**6.33**	**18**	Pn		**Pn**	**08 10 41.5**		**-0.3**
AC04	**Llanos de Chal**	**6.78**	**11**			**Pn**	**08 10 46.4**		**-1.5**
GO03	**Copiap**	**7.53**	**16**			**Pn**	**08 10 57.4**		**-0.9**
AC06	**Mina Casimiro**	**7.74**	**14**			**Pn**	**08 10 59.7**		**-1.3**
LL02	**Futaleuf**	**8.30**	**177**			**Pn**	**08 11 09.1**		**+0.5**
AC02	**Maricunga**	**8.54**	**21**			**Pn**	**08 11 11.5**		**-0.9**
TRQA	**Tornquist**	**9.05**	**113**			**Pn**	**08 11 20.0**		**+1.1**
TRQA	**Tornquist**	**9.05**	**113**	*eP*		**Pn**	**08 11 20.0**		**+1.1**
TRQA	**Tornquist**	**9.05**	**113**	*eP*		**Pn**	**08 11 17.9**		**-1.0**
COYC	**Coyhaique**	**10.67**	**178**			**Pn**	**08 11 39.9**		**-1.2**
LPA	**La Plata**	**11.97**	**94**	PN		**Pn**	**08 11 56.6**		**-2.3**
LPA				pP			08 12 03.1		
LPA				sP			08 12 09.6		
LPA				PPP		PPP	08 12 16.4		
LPA				PP		**PbPb**	**08 12 42.4**		**+4.3**
LPA				pPP			08 13 00.5		
LPA				S		**Sn**	**08 14 06.6**		**-5.3**
LPA	**La Plata**	**11.97**	**94**	SN		**Sn**	**08 14 10.4**		**+2.1**
LPA				sS			08 14 21.0		
LPA				SS		**SnSn**	**08 14 32.6**		**+8.8**
LPA				SSS		SSS	08 14 43.9		
LPA				PCP		**PcP**	**08 17 45.2**		**+0.5**
LPA				SCS		**ScS**	**08 24 54.6**		**+2.2**
LPA				PKIKP		**PKiKP**	**08 25 50.2**		**+7.6**
LPA				SKIKP			08 29 07.7		
LPA				PKIKS			08 29 13.7		
LPA				SKIKS			08 33 07.1		
LVC	**Limon Verde**	**12.64**	**15**	P		**Pn**	**08 12 08.8**		**+0.3**
LVC	**Limon Verde**	**12.64**	**15**	Pn		**Pn**	**08 12 08.8**		**+0.3**
	comp=Z,1.2nm,0.3s,baz=200,slow=8.9,SNR=6.8								
LVC					Lg	Lg	08 15 34.9		
	comp=Z,1.8nm,0.3s,baz=324,slow=24,SNR=6.3								
LVC					LR	LR	08 17 19.0		
	comp=Z,7μm,19.3s,baz=204,slow=39								
	comp=Z,3.1nm,0.3s								
PB04	**IPOC Station P**	**12.69**	**10**			**Pn**	**08 12 11.2**		**+2.3**
ITQB	**Itaqui**	**14.40**	**73**			**Pn**	**08 12 28.6**		**-3.7**
ITQB	**Itaqui**	**14.40**	**73**	*eP*		**Pn**	**08 12 30.1**		**-2.1**
CPUP	**Villa Florida**	**15.59**	**61**			**Pn**	**08 12 47.4**		**-0.8**
CPUP	**Villa Florida**	**15.59**	**61**	P		**Pn**	**08 12 47.4**		**-0.8**
CPUP	**Villa Florida**	**15.59**	**61**	*eP*		**Pn**	**08 12 47.6**		**-0.5**
CPUP	**Villa Florida**	**15.59**	**61**	Pn		**Pn**	**08 12 47.4**		**-0.8**
	comp=Z,0.4nm,0.3s,baz=239,slow=9.8,SNR=8.2								
CPUP					LR	LR	08 19 19.6		
	comp=Z,11μm,19.2s,baz=238,slow=40								
	comp=Z,6.0nm,0.6s								
PLTB	**Pedras Altas**	**16.11**	**84**	P		**Pn**	**08 12 50.4**		**-4.4**
GO09	**Cerro Castillo**	**16.37**	**180**	P		**P**	**08 12 59.5**		**-1.2**
CPSB	**Cacapava Do Su**	**16.67**	**80**	*eP*		**Pn**	**08 13 01.0**		**-0.9**
PB16	**IPOC Station P**	**16.71**	**10**	P		**Pn**	**08 13 01.6**		**-1.4**
LPAZ	**La Paz**	**18.94**	**13**	P		**Pn**	**08 13 32.8**		**+2.2**
LPAZ	**La Paz**	**18.94**	**13**	*eP*		**Pn**	**08 13 32.8**		**+2.2**
LPAZ	**La Paz**	**18.94**	**13**	*eP*		**P**	**08 13 29.4**		**-0.5**
LPAZ	**La Paz**	**18.94**	**13**	P		**Pn**	**08 13 31.1**		**+0.4**
	comp=Z,1.2nm,0.3s,baz=188,slow=9.3,SNR=37								
	comp=Z,26nm,0.7s								
ITAB	**Concordia**	**19.03**	**72**	P		**P**	**08 13 29.6**		**-0.7**
ITAB	**Concordia**	**19.03**	**72**	*eP*		**P**	**08 13 29.2**		**-1.1**
CNLB	**Canela**	**19.16**	**79**	*eP*		**P**	**08 13 30.3**		**-1.4**
EFI	**East Falkland**	**19.73**	**153**	P		**P**	**08 13 36.9**		**-0.8**
EFI	**East Falkland**	**19.73**	**153**	*ce*P		**P**	**08 13 37.1**		**-0.6**
EFI					pmax	pmax			
	comp=Z,118nm,1.0s								
USHA	**Ushuaia**	**20.14**	**173**	P		Pn	08 13 43.1		-0.9
USHA	**Ushuaia**	**20.14**	**173**	P		Pn	08 13 43.1		-0.9
	comp=Z,92nm,1.0s,baz=158,slow=1.2,SNR=6.9								
	comp=Z,92nm,1.0s								
PTGB	**Pitanga**	**20.40**	**66**	*eP*		**P**	**08 13 44.3**		**-1.1**
AQDB	**Aquidauana**	**20.64**	**50**	P		**P**	**08 13 47.4**		**-0.5**
AQDB	**Aquidauana**	**20.64**	**50**	*eP*		**P**	**08 13 47.8**		**-0.1**
TER01	**Tubaro-SC**	**20.85**	**79**	*eP*		**P**	**08 13 47.5**		**-2.7**
TRCB	**Terra Rica**	**21.13**	**60**	P		**P**	**08 13 52.1**		**-1.1**
TRCB				IAmb		IAmb	08 14 02.4		
	comp=Z,114nm,0.7s								
TRCB	**Terra Rica**	**21.13**	**60**	*eP*		**P**	**08 13 52.1**		**-1.1**
SIV	**San Ignacio**	**21.44**	**31**	P		**P**	**08 13 56.1**		**-0.4**
SIV	**San Ignacio**	**21.44**	**31**	P		**P**	**08 13 56.1**		**-0.4**
	comp=Z,51nm,0.6s,baz=212,slow=9.2,SNR=286								
SIV					LR	LR	08 23 45.4		
	comp=Z,8μm,19.3s,baz=226,slow=41								
	comp=Z,51nm,0.6s								
TIJ01	**Guaruva-PR**	**22.41**	**71**	*eP*		**P**	**08 14 00.8**		**-6.2**
PTLB	**Pontes e Lacer**	**22.79**	**35**	P		**P**	**08 14 10.3**		**-0.6**
PTLB					IAmb	IAmb	08 14 13.5		
	comp=Z,100nm,1.3s								
PTLB	**Pontes e Lacer**	**22.79**	**35**	*eP*		**P**	**08 14 10.4**		**-0.5**
PCMB	**Pacaembu**	**22.86**	**60**	*eP*		**P**	**08 14 09.0**		**-2.8**
NNA	**Nana**	**23.14**	**349**	*i* P		**P**	**08 14 15.0**		**+0.3**
NNA					pmax	pmax			
	comp=Z,218nm,1.8s								
NNA	**Nana**	**23.14**	**349**	P		**P**	**08 14 16.2**		**+1.6**
	comp=Z,20nm,0.9s,baz=172,slow=7.8,SNR=4.7								
NNA					LR	LR	08 21 32.8		
	comp=Z,3μm,18.2s,baz=164,slow=32								
	comp=Z,20nm,0.9s								
C2SB	**Chapadao do Su**	**23.72**	**52**	*eP*		**P**	**08 14 19.4**		**-0.9**
SALV	**Santo Antonio**	**24.19**	**43**	*eP*		**P**	**08 14 23.3**		**-1.5**
PET01	**Itanhaem-SP**	**24.29**	**71**	*eP*		**P**	**08 14 24.6**		**-1.0**
VILB	**Vilhena**	**24.53**	**30**	P		**P**	**08 14 27.1**		**-0.8**
VILB					IAmb	IAmb	08 14 39.4		
	comp=Z,94nm,0.8s								
VILB	**Vilhena**	**24.53**	**30**	*eP*		**P**	**08 14 27.5**		**-0.4**
ITRB	**Iturama**	**24.75**	**58**	*eP*		**P**	**08 14 28.8**		**-1.0**
RCLB	**Rio Claro- Sao**	**25.12**	**67**	*eP*		**P**	**08 14 32.4**		**-0.8**
BB19B	**Bebedouro**	**25.18**	**63**	*eP*		**P**	**08 14 32.3**		**-1.5**
VAO	**Valinhos**	**25.22**	**69**	*eP*		**P**	**08 14 33.5**		**-0.7**
ETMB	**Extrema**	**25.62**	**14**	P		**P**	**08 14 38.2**		**+0.5**
ETMB					IAmb	IAmb	08 14 51.9		
	comp=Z,278nm,1.7s								
ETMB	**Extrema**	**25.62**	**14**	*eP*		**P**	**08 14 38.5**		**+0.9**
PARB	**Paraibuna**	**26.08**	**71**	*eP*		**P**	**08 14 41.5**		**-0.4**
CZSB	**Cruzeiro do Su**	**27.04**	**360**	*eP*		**P**	**08 14 51.7**		**+1.2**
PDRB	**Porto dos Gac**	**27.26**	**36**	*eP*		**P**	**08 14 52.0**		**-0.6**
IPMB	**Ipameri, GO**	**27.40**	**58**	*eP*		**P**	**08 14 54.9**		**+1.0**
MAN01	**Ângra dos Reis**	**27.62**	**72**	*eP*		**P**	**08 14 55.2**		**-0.6**
ATAH	**Atahualpa**	**28.15**	**348**	LR		LR	08 24 35.7		
	comp=Z,2μm,18.5s,baz=185,slow=33								
PMNB	**Patos De Minas**	**28.30**	**62**	*eP*		**P**	**08 15 01.6**		**-0.4**
VAS01	**Vassouras-RJ**	**28.34**	**71**	*eP*		**P**	**08 15 02.1**		**-0.1**
CLDB	**Colider**	**28.35**	**36**	*eP*		**P**	**08 15 01.3**		**-1.0**
BDFB	**Brasilia**	**29.16**	**55**	P		**P**	**08 15 08.5**		**-1.2**
BDFB	**Brasilia**	**29.16**	**55**	P		**P**	**08 15 08.6**		**-1.0**
BDFB	**Brasilia**	**29.16**	**55**	*eP*		**P**	**08 15 08.6**		**-1.0**
BDFB	**Brasilia**	**29.16**	**55**	P		**P**	**08 15 08.6**		**-1.0**
	comp=Z,8.3nm,0.7s,baz=245,slow=9.7,SNR=8.5								
BDFB					LR	LR	08 28 09.0		
	comp=Z,5μm,20.0s,baz=230,slow=39								
	comp=Z,8.3nm,0.7s								
DUB01	**Friburgo-RJ**	**29.28**	**72**	*eP*		**P**	**08 15 10.5**		**-0.1**
SNDB	**Serra Nova Dou**	**29.86**	**45**	*eP*		**P**	**08 15 14.1**		**-1.6**
CAM01	**Campos-RJ**	**29.98**	**72**	*eP*		**P**	**08 15 16.3**		**-0.4**
PMSA	**Palmer Station**	**30.35**	**173**	*eP*		**P**	**08 15 20.2**		**+0.7**
DIAM	**Diamantina, MG**

BIRV IAmb IAmb 08 17 33.9
comp=Z,58nm,0.9s
SMRC Santa Marta, M 45.84 358 *e*P **P 08 17 30.6 +0.3**
BELA Belgrano 2 46.07 170 P **P 08 17 31.9 +0.4**
JTS Las Juntas de 46.46 343 *i* P **P 08 17 35.4 +0.2**
JTS pmax pmax
comp=Z,27nm,1.2s
VNA3 Neumayer Olymp 48.68 157 P **P 08 17 52.5 +0.6**
VNA1 Neumayer--Stat 49.01 157 P **P 08 17 55.3 +0.9**
MATN Matagalpa 49.24 343 P **P 08 17 57.0 +0.2**
VNA2 Neumayer--Watz 49.34 157 P **P 08 17 57.2 +0.3**
baz=284,slow=8.8
TGUH Tegucigalpa,Un 50.66 341 P **P 08 18 07.4 -0.3**
TGUH Tegucigalpa,Un 50.66 341 *e*P **P 08 18 08.4 +0.7**
SNAA Sanae 50.91 158 P **P 08 18 09.4 +0.5**
SNAA Sanae 50.91 158 P **P 08 18 09.0 +0.1**
SNAA Sanae 50.91 158 *ce*P **P 08 18 09.2 +0.3**
SNAA pmax pmax
comp=Z,125nm,1.3s
SNAA Sanae 50.91 158⇑ *i*P **P 08 18 08.9 0.0**
SNAA Sanae 50.91 158 P **P 08 18 08.8 -0.1**
comp=Z,63nm,1.1s,baz=279,slow=5.9,SNR=90
SNAA LR LR 08 39 33.9
comp=Z,1μm,18.7s,baz=290,slow=36
comp=Z,63nm,1.1s
MTO3 Montecristo 51.57 339 P **P 08 18 15.0 +0.3**
TROLL Troll, Antarti 52.61 158 P **P 08 18 22.0 +0.3**
MLPR Magueyes Islan 52.83 7 P **P 08 18 22.4 -1.3**
MLPR IAmb IAmb 08 18 23.0
comp=Z,58nm,1.1s
CRPR Cabo Rojo, PR 52.86 6 P **P 08 18 23.2 -0.6**
CRPR IAmb IAmb 08 18 24.2
comp=Z,94nm,1.3s
OBIP Obispado Ponce 52.94 7 P **P 08 18 23.0 -1.5**
OBIP IAmb IAmb 08 18 24.8
comp=Z,106nm,1.6s
CELP Cerrillos 52.98 7 P **P 08 18 24.4 -0.4**
CBYP Canovanas 53.25 8 P **P 08 18 25.6 -1.2**
CBYP IAmb IAmb 08 18 26.5
comp=Z,90nm,1.5s
PETF Flores 54.10 339 P **P 08 18 32.9 -0.2**
QSPA South Pole Qui 55.34 180 P **P 08 18 42.2 +0.5**
QSPA South Pole Qui 55.34 180 P **P 08 18 42.4 +0.7**
comp=Z,31nm,0.9s,baz=150,slow=2.4,SNR=75
QSPA LR LR 08 40 11.6
comp=Z,634nm,21.8s,baz=166,slow=34
comp=Z,31nm,0.9s
NVL N'lazarevskaya 55.66 156 *e*P **P 08 18 43.2 -0.5**
NVL *e*S **S 08 26 26.8 -1.8**
NVL pmax pmax
comp=Z,92nm,1.3s
NVL MLR MLR
comp=Z,669nm,17.0s
CMIG Matias Romero 55.90 334 LR LR 08 36 58.9
comp=Z,649nm,21.3s,baz=164,slow=30
SBA Scott Base 62.12 192 P **P 08 19 29.1 +0.6**
SBA IAmb IAmb 08 19 50.3
comp=Z,86nm,2.0s
SBA Scott Base 62.12 192 P **P 08 19 29.1 +0.6**
SBA pmax pmax
comp=Z,86nm,2.0s
VNDA Vanda 63.15 191 P **P 08 19 37.0 +1.6**
VNDA Vanda 63.15 191 P **P 08 19 36.7 +1.3**
VNDA Vanda 63.15 191 P **P 08 19 36.7 +1.3**
comp=Z,6.4nm,1.1s,baz=151,slow=3.8,SNR=18
VNDA LR LR 08 43 58.7
comp=Z,428nm,19.3s,baz=131,slow=33
comp=Z,6.4nm,1.1s
H06E1 SOCORRO T-PHAS 54.67 319 T T 09 30 13.0
SNR=33
TAOE Nuku Hiva Isla 66.67 276 *e*P **P 08 20 01.0 +1.7**
comp=Z,88nm,27.6s
TAOE *e*S **S 08 28 49.3 -1.1**
comp=Z,588nm,24.9s
TAOE Nuku Hiva Isla 66.67 276 *e*LR LR 08 40 02.2
comp=Z,1μm,26.1s
TBI Tubuai 66.74 257 *e*P **P 08 20 01.0 +1.4**
comp=Z,79nm,29.0s
TBI *e*S **S 08 28 50.2 -0.7**
comp=Z,525nm,26.0s
TBI Tubuai 66.74 257 *e*LR LR 08 40 03.6
comp=Z,48μm,24.2s
TBI *e*LR LR 08 40 03.6
comp=Z,3μm,25.5s
TBI Tubuai 66.74 257 *e*T T 09 32 29.2
comp=Z,6.2nm,0.3s
TIGA Tifton 66.80 350 P **P 08 19 59.2 -0.3**
baz=170
352A Blakely 67.05 348 P **P 08 20 01.1 -0.1**
352A Blakely 67.05 348 P **P 08 20 00.6 -0.6**
baz=169,SNR=6.3
BRAL Brewton 67.12 346 P **P 08 20 01.8 +0.2**
baz=167
BBSR BB Station 67.31 7 P **P 08 20 02.7 -0.1**
BBSR IAmb IAmb 08 20 04.3
comp=Z,76nm,1.6s
735A Kenedy 67.76 336 P **P 08 20 06.5 +0.8**
735A Kenedy 67.76 336 P **P 08 20 07.3 +1.6**
baz=158,SNR=8.1
833A Chaparral WMA, 67.82 334 P **P 08 20 07.0 +0.9**
833A Chaparral WMA, 67.82 334 P **P 08 20 07.6 +1.5**
baz=156,SNR=21
833A Chaparral WMA, 67.82 334 P **P 08 20 07.3 +1.2**
baz=156,SNR=21
346A Big Creek Wild 67.84 344 P **P 08 20 07.2 +1.1**
baz=165,SNR=5.1
154A Montrose 67.89 350 P **P 08 20 06.7 +0.2**
154A Montrose 67.89 350 P **P 08 20 06.6 +0.2**
baz=171,SNR=8.0
NHSC New Hope 68.03 353 P **P 08 20 07.8 +0.5**
NHSC New Hope 68.03 353 P **P 08 20 07.5 +0.2**
baz=173
HKT Hockley 68.15 338 P **P 08 20 08.8 +0.8**
HKT IAmb IAmb 08 20 26.0
comp=Z,53nm,1.6s
HKT Hockley 68.15 338 *i* P **P 08 20 07.8 -0.2**
HKT pmax pmax
comp=Z,32nm,1.5s
152A Waverly Hall 68.18 349 P **P 08 20 08.1 -0.2**
152A IAmb IAmb 08 20 09.1
comp=Z,38nm,1.2s
152A Waverly Hall 68.18 349 P **P 08 20 08.2 -0.2**
baz=169,SNR=7.1
344A Westbrook Farm 68.19 343 P **P 08 20 09.7 +1.3**
344A IAmb IAmb 08 20 11.5
comp=Z,29nm,1.0s
SLBS Sierra La Lagu 68.23 323 P **P 08 20 08.4 -0.5**
SLBS IAmb IAmb 08 20 11.8
comp=Z,43nm,1.4s
MEH Mehetia 68.35 263 *e*T T 09 34 30.9
comp=Z,50nm,0.2s
342A Flagon Creek P 68.51 342 P **P 08 20 11.0 +0.7**
342B Flagon Creek P 68.51 342 P **P 08 20 12.1 +1.8**
baz=163,SNR=11
GOGA Godfrey 68.72 350 P **P 08 20 11.6 -0.1**
GOGA IAmb IAmb 08 20 12.6
comp=Z,51nm,1.4s
GOGA Godfrey 68.72 350 P **P 08 20 11.6 -0.1**
GOGA pmax pmax
comp=Z,51nm,1.4s
GOGA Godfrey 68.72 350 P **P 08 20 11.3 -0.3**
baz=170,SNR=9.8
GOGA Godfrey 68.72 350 P **P 08 20 11.3 -0.3**
baz=170,SNR=9.8
LPIG La Paz 68.76 323 LR LR 08 43 25.3
comp=Z,396nm,20.2s,baz=162,slow=30
VBMS Vicksburg 68.87 344 P **P 08 20 13.6 +1.0**
VBMS IAmb IAmb 08 20 15.0
comp=Z,49nm,1.1s
VBMS Vicksburg 68.87 344 P **P 08 20 13.3 +0.7**
baz=164
Z51A Franklin 68.89 349 P **P 08 20 13.2 +0.5**
LRAL Lakeview Retre 68.93 347 P **P 08 20 13.0 +0.1**
LRAL IAmb IAmb 08 20 14.3
comp=Z,32nm,1.2s
LRAL Lakeview Retre 68.93 347 P **P 08 20 13.1 +0.1**
baz=167,SNR=7.6
LRAL Lakeview Retre 68.93 347 P **P 08 20 13.1 +0.1**
baz=167,SNR=7.6
146A Union 68.95 345 P **P 08 20 14.5 +1.4**
146A Union 68.95 345 P **P 08 20 14.3 +1.2**
baz=166,SNR=5.6
Y52A Lilburn 69.25 350 P **P 08 20 14.8 -0.1**
Y52A Lilburn 69.25 350 P **P 08 20 15.3 +0.3**
baz=170,SNR=13
Y52A P **P 08 20 15.3 +0.3**
baz=170,SNR=13
Z47A Carrollton 69.29 346 P **P 08 20 15.9 +0.7**
baz=166,SNR=17
JSC Jenkinsville 69.30 352 P **P 08 20 14.9 -0.3**
JSC IAmb IAmb 08 20 16.4
comp=Z,47nm,1.3s
JSC Jenkinsville 69.30 352 P **P 08 20 14.9 -0.3**
JSC pmax pmax
comp=Z,47nm,1.3s
JSC Jenkinsville 69.30 352 P **P 08 20 15.4 +0.2**
baz=172,SNR=5.5
HODGE Hodges 69.37 351 P **P 08 20 15.6 -0.1**
HODGE IAmb IAmb 08 20 16.9
comp=Z,37nm,1.3s
HODGE Hodges 69.37 351 P **P 08 20 15.4 -0.3**
baz=172,SNR=6.6
435B Jarrell 69.47 337 P **P 08 20 16.8 +0.4**
baz=158
NATX Nacogdoches 69.50 340 P **P 08 20 17.6 +1.1**
NATX Nacogdoches 69.50 340 P **P 08 20 17.9 +1.4**
baz=161,SNR=6.1
NATX Nacogdoches 69.50 340 P **P 08 20 17.4 +0.8**
baz=161,SNR=6.1
143A Socs Landing, 69.55 343 P **P 08 20 17.9 +1.1**
143A Socs Landing, 69.55 343 P **P 08 20 18.1 +1.3**
baz=164,SNR=17
TIAR Tiarei 69.56 262 *e*T T 09 36 04.6
comp=Z,4.8nm,0.2s
BIRD Birdtown, Kers 69.58 353 P **P 08 20 16.4 -0.5**
BIRD IAmb IAmb 08 20 18.1
comp=Z,41nm,1.5s
Y49A Blount Mountai 69.62 348 P **P 08 20 17.7 +0.4**
Y49A Blount Mountai 69.62 348 P **P 08 20 17.3 0.0**
baz=168,SNR=5.2
PAE Paea 69.69 262 *e*T T 09 36 03.8
comp=Z,1.4nm,0.2s
PPT2 Papeete2 69.73 262 *e*P **P 08 20 19.6 +1.1**
comp=Z,74nm,26.0s
PPT2 *e*S **S 08 29 26.2 -0.7**
comp=Z,738nm,23.5s
PPT2 Papeete2 69.73 262 *e*LR LR 08 41 26.5
comp=Z,2μm,26.8s
PPT2 *e*LR LR 08 41 27.0
comp=Z,3μm,25.0s
PPT2 Papeete2 69.73 262 *e*T T 09 36 01.6
comp=Z,2.0nm,0.2s
PPT Papeete 69.74 262 LR LR 08 43 21.2
comp=Z,1μm,18.5s,baz=130,slow=29
PAULI Pauline 69.90 352 P **P 08 20 19.5 +0.6**
PAULI IAmb IAmb 08 20 20.2
comp=Z,63nm,1.3s
PAULI Pauline 69.90 352 P **P 08 20 19.3 +0.4**
baz=172,SNR=10
JCT Junction City 69.93 335 P **P 08 20 20.5 +1.2**
JCT Junction City 69.93 335 P **P 08 20 20.5 +1.2**
JCT pmax pmax
comp=Z,106nm,1.3s
JCT Junction City 69.93 335 P **P 08 20 20.4 +1.2**
baz=156,SNR=34
JCT Junction City 69.93 335 P **P 08 20 20.1 +0.9**
baz=156,SNR=34
CNNC Cliffs of the 69.95 355 P **P 08 20 19.8 +0.6**
CNNC Cliffs of the 69.95 355 P **P 08 20 19.2 0.0**
baz=175
W57A Gilead 70.04 353 P **P 08 20 20.0 +0.2**
W57A IAmb IAmb 08 20 20.8
comp=Z,47nm,1.2s
W57A Gilead 70.04 353 P **P 08 20 19.9 +0.2**
baz=174,SNR=6.3
W57A P **P 08 20 19.9 +0.2**
baz=174,SNR=6.3
237A Washetta, Mont 70.06 339 P **P 08 20 20.6 +0.7**
237A Washetta, Mont 70.06 339 P **P 08 20 21.4 +1.4**
baz=160,SNR=5.6
X51A Calhoun 70.06 349 P **P 08 20 20.4 +0.5**
X51A Calhoun 70.06 349 P **P 08 20 20.5 +0.6**
baz=169,SNR=14
X51A P **P 08 20 20.5 +0.6**
baz=169,SNR=14
FPAL Fort Paine 70.16 349 P **P 08 20 20.2 -0.4**
FPAL IAmb IAmb 08 20 21.7
comp=Z,63nm,1.5s
KMSC Kings Mountain 70.16 352 P **P 08 20 20.6 0.0**
baz=172,SNR=11
KMSC Kings Mountain 70.16 352 P **P 08 20 20.6 0.0**
baz=172,SNR=11
BG3 Lake Jocassee 70.21 351 P **P 08 20 20.9 +0.1**
CASEE Lake Jocassee 70.21 351 P **P 08 20 21.2 +0.3**
baz=171,SNR=12
Y45A Yeager Farm, C 70.24 345 P **P 08 20 22.2 +1.2**
baz=165,SNR=11
X48A Hartselle 70.32 347 P **P 08 20 21.4 0.0**
X48A IAmb IAmb 08 20 23.1
comp=Z,66nm,1.1s
X48A Hartselle 70.32 347 P **P 08 20 22.1 +0.6**
baz=167,SNR=22
TX31 Lajitas Ar. Si 70.33 331 P **P 08 20 22.3 +0.4**
TX31 Lajitas Ar. Si 70.33 331 P **P 08 20 23.1 +1.3**
baz=153,SNR=47
TX32 Lajitas Array 70.33 331 P **P 08 20 22.5 +0.7**
TX32 IAmb IAmb 08 20 24.1
comp=Z,51nm,1.4s
TXAR Lajitas Array 70.33 331 P **P 08 20 22.5 +0.7**
TXAR Lajitas Array 70.33 331 P **P 08 20 22.9 +1.1**
TXAR Lajitas Array 70.33 331 P **P 08 20 22.9 +1.1**
comp=Z,9.0nm,0.7s,baz=153,slow=8.4,SNR=101
TXAR LR LR 08 46 44.4
comp=Z,2μm,18.6s,baz=140,slow=32
comp=Z,9.0nm,0.7s
W52A Murphy 70.44 350 P **P 08 20 22.7 +0.4**
baz=170,SNR=9.5
WHTX Lake Whitney, 70.55 338 P **P 08 20 23.8 +0.8**
WHTX IAmb IAmb 08 20 24.8
comp=Z,53nm,1.0s
WHTX Lake Whitney, 70.55 338 P **P 08 20 23.8 +0.8**
baz=158,SNR=21
WHTX Lake Whitney, 70.55 338 P **P 08 20 23.2 +0.2**
baz=158,SNR=21
V58A Windy Hill, Pi 70.60 354 P **P 08 20 23.1 -0.1**
V58A IAmb IAmb 08 20 34.3
comp=Z,28nm,0.9s
V58A Windy Hill, Pi 70.60 354 P **P 08 20 23.2 0.0**
baz=174,SNR=6.2
V58A P **P 08 20 23.2 0.0**
baz=174,SNR=6.2
W50A Signal Mountai 70.75 349 P **P 08 20 24.3 +0.1**
W50A Signal Mountai 70.75 349 P **P 08 20 24.6 +0.5**
baz=169,SNR=19
CCAR Cane Creek 70.79 343 P **P 08 20 24.8 +0.4**
CCAR IAmb IAmb 08 20 27.2
comp=Z,49nm,1.0s
OXF Oxford 70.84 345 P **P 08 20 24.2 -0.5**
OXF IAmb IAmb 08 20 26.2
comp=Z,57nm,1.1s
OXF Oxford 70.84 345 P **P 08 20 24.2 -0.5**
OXF pmax pmax
comp=Z,57nm,1.1s
OXF Oxford 70.84 345 P **P 08 20 24.9 +0.3**
baz=165,SNR=9.2
OXF Oxford 70.84 345 P **P 08 20 24.2 -0.5**
baz=165,SNR=9.2
V55A Taylorsville 70.85 353 P **P 08 20 25.1 +0.3**
baz=172,SNR=15
V55A P **P 08 20 25.1 +0.3**
baz=172,SNR=15
V53A Saluda 70.86 351 P **P 08 20 24.9 +0.1**
baz=171,SNR=16
V53A P **P 08 20 24.9 +0.1**
baz=171,SNR=16
SWET Sewanee 70.87 348 P **P 08 20 25.3 +0.4**
CPCT Cooper Cave 70.88 350 P **P 08 20 25.0 +0.1**
CPCT IAmb IAmb 08 20 26.1
comp=Z,75nm,1.3s
WLAR White Oak Lake 70.91 342 P **P 08 20 26.0 +0.9**
WLAR IAmb IAmb 08 20 27.4
comp=Z,65nm,1.2s
TKL Tuckaleechee C 70.97 350 P **P 08 20 24.7 -0.8**
TKL IAmb IAmb 08 20 41.7
comp=Z,37nm,0.9s
TKL Tuckaleechee C 70.97 350 P **P 08 20 24.7 -0.8**
TKL pmax pmax
comp=Z,37nm,1.0s
TKL Tuckaleechee C 70.97 350 P **P 08 20 25.4 -0.1**
baz=170,SNR=9.8
Z38A Mt. Pleasant 71.00 340 P **P 08 20 26.2 +0.5**
PLAL Pickwick Lake 71.02 347 P **P 08 20 25.5 -0.3**
PLAL IAmb IAmb 08 20 26.9
comp=Z,44nm,1.1s
U59A Littleton 71.06 355 P **P 08 20 26.6 +0.6**
U59A IAmb IAmb 08 20 27.7
comp=Z,76nm,1.4s
U59A Littleton 71.06 355 P **P 08 20 26.5 +0.6**
baz=175,SNR=9.8
U59A P **P 08 20 26.5 +0.6**
baz=175,SNR=9.8
V52A Sevierville 71.13 350 P **P 08 20 26.1 -0.3**
V52A IAmb IAmb 08 20 27.4
comp=Z,60nm,1.4s
V52A Sevierville 71.13 350 P **P 08 20 26.2 -0.2**
baz=170,SNR=10
V51A Loudon 71.20 350 P **P 08 20 26.8 0.0**
V51A IAmb IAmb 08 20 27.8
comp=Z,51nm,1.2s
V51A Loudon 71.20 350 P **P 08 20 26.9 0.0**
baz=170,SNR=9.2
U56A King 71.26 353 P **P 08 20 27.8 +0.6**
baz=173,SNR=6.3
U56A P **P 08 20 27.8 +0.6**
baz=173,SNR=6.3
W45A Hickory Valley 71.41 346 P **P 08 20 28.7 +0.6**
baz=166,SNR=10
V48A Smith Brothers 71.53 348 P **P 08 20 28.9 +0.1**
V48A Smith Brothers 71.53 348 P **P 08 20 29.4 +0.5**
baz=168,SNR=60
U54A Nelsons Funny 71.58 352 P **P 08 20 28.8 -0.4**
U54A Nelsons Funny 71.58 352 P **P 08 20 29.3 +0.1**
baz=172,SNR=12
U54A P **P 08 20 29.3 +0.1**
baz=172,SNR=12
T59A Double "B" Far 71.66 356 P **P 08 20 30.3 +0.8**
baz=176,SNR=13
T59A P **P 08 20 30.3 +0.8**
baz=176,SNR=13
Z35A Perchaven, San 71.73 338 P **P 08 20 30.9 +0.8**
baz=159,SNR=21
T60A Surry 71.78 356 P **P 08 20 31.4 +1.1**
baz=176,SNR=6.8
T60A P **P 08 20 31.4 +1.1**
baz=176,SNR=6.8
CLTN Cedars of Leba 71.79 348 P **P 08 20 30.8 +0.4**
CLTN IAmb IAmb 08 20 47.1
comp=Z,71nm,1.1s
T57A Hurt 71.80 354 P **P 08 20 30.7 +0.3**
baz=174,SNR=8.2
T57A P **P 08 20 30.7 +0.3**
baz=174,SNR=8.2
TZTN Tazewell 71.82 351 P **P 08 20 30.2 -0.4**
TZTN IAmb IAmb 08 20 46.1
comp=Z,93nm,1.5s
TZTN Tazewell 71.82 351 P **P 08 20 30.5 -0.1**
baz=170,SNR=7.2
TZTN Tazewell 71.82 351 P **P 08 20 30.0 -0.5**
baz=170,SNR=7.2
ABTX Abilene, Hawle 71.84 336 P **P 08 20 31.6 +0.8**
baz=157,SNR=7.8
ABTX Abilene, Hawle 71.84 336 P **P 08 20 31.2 +0.4**
baz=157,SNR=7.8
MIAR Mount Ida 71.84 342 P **P 08 20 30.6 -0.1**
MIAR Mount Ida 71.84 342 P **P 08 20 30.6 -0.1**
MIAR pmax pmax
comp=Z,31nm,1.4s
MIAR Mount Ida 71.84 342 P **P 08 20 31.1 +0.4**
baz=162,SNR=10
MIAR Mount Ida 71.84 342 P **P 08 20 30.8 +0.1**
baz=162,SNR=10
WVT Waverly 72.09 347 P **P 08 20 32.0 -0.1**
WVT Waverly 72.09 347 P **P 08 20 32.0 -0.1**
WVT pmax pmax
comp=Z,97nm,1.0s
WVT Waverly 72.09 347 P **P 08 20 32.1 -0.1**
baz=167,SNR=46
WVT Waverly 72.09 347 P **P 08 20 32.1 -0.1**
baz=167
U49A Red Boiling Sp 72.11 349 P **P 08 20 32.4 +0.1**
U49A IAmb IAmb 08 20 43.0
comp=Z,25nm,0.7s
U49A Red Boiling Sp 72.11 349 P **P 08 20 32.4 +0.1**
baz=169,SNR=14
BLA Blacksburg 72.12 353 P **P 08 20 32.4 0.0**
BLA IAmb IAmb 08 20 33.7
comp=Z,98nm,1.9s
BLA Blacksburg 72.12 353 P **P 08 20 32.4 0.0**
BLA pmax pmax
comp=Z,99nm,1.9s
BLA Blacksburg 72.12 353 P **P 08 20 32.3 0.0**
baz=173
WHAR Wooly Hollow 72.23 343 P **P 08 20 33.4 +0.4**
WHAR IAmb IAmb 08 20 34.5
comp=Z,68nm,1.2s
X37A Clayton 72.36 340 P **P 08 20 34.1 +0.3**
baz=160,SNR=6.6
BBTS Babate 72.43 57 LR LR 08 50 37.6
comp=Z,2μm,21.6s,baz=233,slow=34
MAW Mawson 72.43 164 P **P 08 20 34.5 +0.5**
MAW Mawson 72.43 164 P **P 08 20 34.5 +0.5**
MAW pmax pmax
comp=Z,15nm,1.3s
MAW Mawson 72.43 164 P **P 08 20 34.6 +0.7**
comp=Z,40nm,1.1s,baz=216,slow=7.1,SNR=42
MAW LR LR 08 55 19.7
comp=Z,1μm,18.0s,baz=230,slow=38
comp=Z,40nm,1.1s
S57A Dark Hollow, R 72.54 355 P **P 08 20 35.3 +0.5**
baz=174,SNR=13
S57A P **P 08 20 35.3 +0.5**
baz=174,SNR=13
R58B Mineral 72.66 356 P **P 08 20 36.3 +0.8**
R58B IAmb IAmb 08 20 37.6
comp=Z,95nm,1.4s
R58B Mineral 72.66 356 P **P 08 20 36.1 +0.5**
baz=175,SNR=14
R58B P **P 08 20 36.1 +0.5**
baz=175,SNR=14
LCAR Lake Charles 72.71 344 P **P 08 20 36.0 +0.1**
LCAR IAmb IAmb 08 20 36.9
comp=Z,41nm,0.9s
FCAR Ozark Folk Cen 72.76 343 P **P 08 20 36.3 +0.1**
S54A Dingess, Beckl 72.79 353 P **P 08 20 36.1 -0.3**
baz=172,SNR=6.7
S54A P **P 08 20 36.1 -0.3**
baz=172,SNR=6.7
ELIM Elim 72.83 120 *e*P **P 08 20 36.9 -0.1**
ELIM IAmb IAmb 08 20 37.6
comp=Z,48nm,1.2s
CBN Corbin Frederi 72.87 356 P **P 08 20 36.6 -0.2**
baz=176
S51A Beattyville 72.90 351 P **P 08 20 36.7 -0.3**
S51A IAmb IAmb 08 20 48.3
comp=Z,34nm,0.8s
S51A Beattyville 72.90 351 P **P 08 20 37.0 0.0**
baz=170,SNR=13
S51A P **P 08 20 37.0 0.0**
baz=170,SNR=13
MNTX Cornudas Mount 73.10 331 P **P 08 20 38.1 -0.3**
baz=152,SNR=29
MNTX Cornudas Mount 73.10 331 P **P 08 20 38.1 -0.3**
baz=152,SNR=29
CLN7 Carlsbad 7 73.13 333 P **P 08 20 39.7 +1.1**
CER Ceres 73.14 119⇑ *i*P P 08 20 21.8 -17
CER IAmb IAmb 08 20 24.0
comp=Z,97nm,1.2s
GDL2 Guadalupe Moun 73.15 332 P **P 08 20 39.6 +0.8**
R55A Marlinton 73.15 354 P **P 08 20 38.5 0.0**
R55A IAmb IAmb 08 20 50.0
comp=Z,34nm,0.8s
R53A Hurricane 73.38 352 P **P 08 20 39.8 0.0**
baz=172,SNR=6.4
R53A P **P 08 20 39.8 0.0**
baz=172,SNR=6.4
WMOK Wichita Mounta 73.50 338 P **P 08 20 40.5 -0.1**
WMOK Wichita Mounta 73.50 338 P **P 08 20 40.5 -0.1**
WMOK pmax pmax
comp=Z,39nm,1.4s
WMOK Wichita Mounta 73.50 338 P **P 08 20 40.8 +0.2**
baz=158,SNR=13
WMOK Wichita Mounta 73.50 338 P **P 08 20 40.6 0.0**
baz=158,SNR=13
HHAR Hobbs 73.58 342 P **P 08 20 41.2 +0.2**
HHAR IAmb IAmb 08 20 42.1
comp=Z,47nm,1.4s
KIDD KIDD Seismic O 73.62 330 P **P 08 20 42.5 +1.0**
baz=152,SNR=6.1
R50A Paris 73.63 350 P **P 08 20 41.1 -0.2**
baz=170,SNR=7.8

R50A P P 08 20 41.1 -0.2
baz=170,SNR=7.8
CPRX Cap Rock 73.70 333 P P 08 20 42.9 +0.9
TUL1 Leonard 73.72 340 P P 08 20 42.1 +0.3
baz=160,SNR=17
TUL1 Leonard 73.72 340 P P 08 20 42.1 +0.3
baz=160,SNR=17
R49A Shelbyville 73.76 350 P P 08 20 41.8 -0.3
baz=169,SNR=8.2
R49A P P 08 20 41.8 -0.3
baz=169,SNR=8.2
U38A Gravette 73.84 342 P P 08 20 42.7 +0.1
baz=162,SNR=6.6
OK025 Westminster Rd 73.85 339 P 08 20 42.7 +0.1
WCI Wyandotte Cave 73.87 349 P P 08 20 42.3 -0.4
WCI IAmb IAmb 08 20 49.8
comp=Z,91nm,1.9s
WCI Wyandotte Cave 73.87 349 P P 08 20 42.3 -0.4
WCI pmax pmax
comp=Z,91nm,1.9s
WCI Wyandotte Cave 73.87 349 P P 08 20 41.6 -1.1
baz=168
S44A Carbondale 73.88 346 P P 08 20 42.1 -0.6
S44A IAmb IAmb 08 20 43.6
comp=Z,30nm,0.9s
S44A Carbondale 73.88 346 P P 08 20 42.2 -0.5
baz=166,SNR=8.3
SIUC Southern Illin 73.89 346 P P 08 20 42.8 0.0
SIUC IAmb IAmb 08 20 43.7
comp=Z,36nm,0.9s
BCOK Bluff Creek, N 74.00 339 P 08 20 44.1 +0.6
BCOK IAmb IAmb 08 20 44.9
comp=Z,85nm,1.4s
MGMO Mountain Grove 74.00 344 P P 08 20 44.0 +0.4
OK030 Cody Creek RV 74.01 340 P 08 20 43.8 +0.3
OK030 IAmb IAmb 08 20 44.7
comp=Z,82nm,1.2s
Q52A Bidwell 74.04 352 P P 08 20 44.0 +0.3
Q52A IAmb IAmb 08 20 44.7
comp=Z,83nm,1.1s
Q52A Bidwell 74.04 352 P P 08 20 43.9 +0.3
baz=172,SNR=7.6
Q52A P P 08 20 43.9 +0.3
baz=172,SNR=7.6
SDMD Soldier's Deli 74.05 357 P P 08 20 44.7 +1.0
OK031 S. Brethren Rd 74.05 340 P 08 20 43.8 -0.1
OK031 IAmb IAmb 08 20 45.0
comp=Z,78nm,1.2s
MATJ Matjiesfontein 74.11 120⇑*iP* P 08 20 45.3 +0.7
MATJ IAmb IAmb 08 20 54.7
comp=Z,51nm,0.7s
MSTX Muleshoe 74.14 334 P P 08 20 45.4 +0.9
baz=155,SNR=20
MSTX Muleshoe 74.14 334 P P 08 20 44.9 +0.3
baz=155,SNR=20
P57A Homestead Farm 74.19 356 P P 08 20 45.7 +1.2
baz=175,SNR=9.6
P57A P P 08 20 45.7 +1.2
baz=175,SNR=9.6
Q51A Peebles 74.23 351 P P 08 20 44.9 +0.1
baz=171,SNR=12
Q51A P P 08 20 44.9 +0.1
baz=171,SNR=12
AUSN Aus 74.33 112 *eP* P 08 20 46.3 +0.2
AUSN IAmb IAmb 08 20 47.0
comp=Z,34nm,1.2s
GEDE Greenville 74.39 357 P P 08 20 46.5 +0.8
baz=177,SNR=6.2
FVM French Village 74.40 345 P P 08 20 46.0 +0.2
baz=165,SNR=17
CVNA Calvinia 74.44 118⇑*iP* P 08 20 47.2 +0.6
CVNA IAmb IAmb 08 20 57.2
comp=Z,255nm,1.6s
319A Douglas 74.45 328 P P 08 20 48.5 +2.1
319A IAmb IAmb 08 20 49.3
comp=Z,52nm,1.1s
P53A Whipple 74.47 353 P P 08 20 46.3 +0.2
baz=172,SNR=6.8
P53A P P 08 20 46.3 +0.2
baz=172,SNR=6.8
MCWV Mont Chateau 74.49 354 P P 08 20 46.3 0.0
baz=174
WUPA West Chester U 74.51 358 P P 08 20 47.0 +0.6
WUPA IAmb IAmb 08 20 48.4
comp=Z,57nm,1.4s
AMTX Amarillo 74.58 335 P P 08 20 47.8 +0.7
baz=156,SNR=26
AMTX Amarillo 74.58 335 P P 08 20 47.7 +0.7
baz=156
CCM Cathedral Cave 74.64 345 P P 08 20 47.2 0.0
CCM IAmb IAmb 08 20 48.5
comp=Z,64nm,0.9s
CCM Cathedral Cave 74.64 345 P P 08 20 47.2 0.0
CCM pmax pmax
comp=Z,64nm,0.9s
CCM Cathedral Cave 74.64 345 P P 08 20 47.6 +0.4
baz=164,SNR=42
CCM Cathedral Cave 74.64 345 P P 08 20 47.4 +0.2
baz=164
P51A Williamsport 74.65 352 P P 08 20 47.1 -0.1
P51A IAmb IAmb 08 20 48.1
comp=Z,83nm,1.1s
P51A Williamsport 74.65 352 P P 08 20 47.2 -0.1
baz=171,SNR=13
P51A P P 08 20 47.2 -0.1
baz=171,SNR=13
OLIL Olney 74.67 347 P P 08 20 47.0 -0.3
OLIL IAmb IAmb 08 21 03.2
comp=Z,54nm,1.4s
OLIL Olney 74.67 347 P P 08 20 47.0 -0.3
baz=167,SNR=6.1
P52A Corning 74.69 352 P P 08 20 47.3 -0.2
P52A IAmb IAmb 08 20 48.3
comp=Z,90nm,1.2s
P52A Corning 74.69 352 P P 08 20 47.2 -0.2
baz=172,SNR=16
TUPA Temple Univers 74.73 358 P P 08 20 48.6 +0.9
baz=178,SNR=6.5
SUR Sutherland 74.74 119 P P 08 20 49.3 +0.9
SUR IAmb IAmb 08 20 50.7
comp=Z,96nm,1.3s
SUR Sutherland 74.74 119 LR LR 08 48 53.8
comp=Z,2µm,20.7s,baz=231,slow=32
S39A Bolivar 74.76 343 P P 08 20 48.0 +0.1
S39A Bolivar 74.76 343 P P 08 20 48.2 +0.3
baz=162,SNR=9.6
121A Cookes Peak, D 74.81 330 P P 08 20 49.4 +0.8
121A IAmb IAmb 08 20 51.5
comp=Z,53nm,1.1s
121A Cookes Peak, D 74.81 330 P P 08 20 50.4 +1.9
baz=151,SNR=34
121A Cookes Peak, D 74.81 330 P P 08 20 50.1 +1.6
baz=151,SNR=34
BLO Bloomington 74.83 349 P P 08 20 48.0 -0.3
BLO IAmb IAmb 08 21 04.1
comp=Z,31nm,0.9s
BLO Bloomington 74.83 349 P P 08 20 48.0 -0.3
BLO pmax pmax
comp=Z,31nm,0.9s
PAGS Pennsylvania G 74.85 357 P P 08 20 48.7 +0.4
PAGS IAmb IAmb 08 20 50.1
comp=Z,114nm,1.5s
T35A Sooner Cattle 74.86 340 P 08 20 48.9 +0.4
T35A IAmb IAmb 08 20 50.1
comp=Z,50nm,1.0s
T35B Sooner Cattle 74.86 340 P P 08 20 49.0 +0.5
baz=160,SNR=22
CROK Carrier 74.90 339 P 08 20 49.1 +0.4
CROK IAmb IAmb 08 20 50.0
comp=Z,40nm,1.0s
P49A Miami Univ. Ec 74.92 350 P P 08 20 48.5 -0.2
baz=170,SNR=5.6
P49A Miami Univ. Ec 74.92 350 P P 08 20 48.0 -0.7
baz=170,SNR=5.6
P48A Milroy 74.94 350 P P 08 20 48.1 -0.8
baz=169,SNR=24
P48A P P 08 20 48.1 -0.8
baz=169,SNR=24
R40A Maddies Statio 75.09 344 P P 08 20 50.0 +0.2
baz=163,SNR=34
MERW Merweville 75.09 119⇑*iP* P 08 20 50.7 +0.3
MERW IAmb IAmb 08 21 01.4
comp=Z,52nm,0.9s
O52A Adamsville 75.14 353 P P 08 20 50.0 -0.1
baz=172,SNR=6.8
O52A P P 08 20 50.0 -0.1
baz=172,SNR=6.8

O53A New Philadelph 75.20 353 P P 08 20 50.2 -0.2
O53A IAmb IAmb 08 20 51.5
comp=Z,74nm,1.4s
O53A New Philadelph 75.20 353 P P 08 20 49.9 -0.5
baz=173,SNR=8.3
OK032 Salt Plains WL 75.24 339 P 08 20 51.4 +0.7
OK032 IAmb IAmb 08 20 52.3
comp=Z,101nm,1.4s
SSPA Standing Stone 75.32 356 P P 08 20 51.6 +0.5
SSPA Standing Stone 75.32 356 P P 08 20 51.6 +0.5
baz=175,SNR=6.9
SSPA Standing Stone 75.32 356 P P 08 20 51.3 +0.2
baz=175
KAN09 Caldwell North 75.38 339 P P 08 20 52.2 +0.8
KAN09 IAmb IAmb 08 20 53.2
comp=Z,82nm,1.3s
P46A Rosedale 75.38 348 P P 08 20 51.0 -0.4
P46A IAmb IAmb 08 20 51.7
comp=Z,49nm,1.1s
P46A Rosedale 75.38 348 P P 08 20 50.8 -0.6
baz=168,SNR=10
ACSO Alum Creek Sta 75.38 352 P P 08 20 51.5 +0.1
ACSO IAmb IAmb 08 20 52.3
comp=Z,54nm,0.8s
ACSO Alum Creek Sta 75.38 352 P P 08 20 51.5 +0.1
baz=171,SNR=19
ACSO Alum Creek Sta 75.38 352 P P 08 20 51.2 -0.2
baz=171,SNR=19
FRAZ Fraserburg 75.40 119 *eP* P 08 20 52.6 +0.4
FRAZ IAmb IAmb 08 21 03.6
comp=Z,248nm,1.7s
KAN05 Bluff City Nor 75.42 339 P P 08 20 52.6 +0.8
LIC Lamto 75.42 72⇑*iP* P 08 20 51.9 -0.4
comp=Z,61nm,0.7s
KAN01 Argonia South 75.43 339 P 08 20 52.0 +0.2
KAN01 IAmb IAmb 08 20 53.6
comp=Z,80nm,1.2s
KS20 Mayfield South 75.44 340 P 08 20 52.2 +0.4
KS20 IAmb IAmb 08 20 53.6
comp=Z,59nm,1.1s
N58A Sunbury 75.46 357 P P 08 20 52.5 +0.7
baz=176,SNR=6.0
N58A P P 08 20 52.5 +0.7
baz=176,SNR=6.0
O49A Covington 75.51 351 P P 08 20 52.0 -0.1
baz=170,SNR=16
O49A P P 08 20 52.0 -0.1
baz=170,SNR=16
KAN06 Argonia West S 75.55 339 P P 08 20 53.2 +0.8
KAN06 IAmb IAmb 08 20 54.3
comp=Z,69nm,1.2s
ODNJ Ogdensburg 75.63 358 P P 08 20 53.7 +0.9
baz=178,SNR=5.9
O48B Farmland 75.69 350 P P 08 20 52.7 -0.4
baz=169,SNR=10
O48B Farmland 75.69 350 P P 08 20 52.7 -0.4
baz=169,SNR=10
TIC Toumodi 75.69 71⇑*iP* P 08 20 53.5 -0.4
N53A Lisbon 75.72 353 P P 08 20 53.5 +0.2
baz=173,SNR=7.2
N53A P P 08 20 53.5 +0.2
baz=173,SNR=7.2
KIC Kosan Boka 75.73 72⇑*iP* P 08 20 53.9 -0.2
comp=Z,32nm,0.5s
GRAN Grantham 75.75 119 *eP* P 08 20 54.1 0.0
GRAN IAmb IAmb 08 21 05.3
comp=Z,24nm,0.7s
P43A Skaggs, Pawnee 75.81 347 P P 08 20 53.9 0.0
baz=166,SNR=16
DBIC Dimbokro 75.83 71 P P 08 20 54.5 -0.1
DBIC Dimbokro 75.83 71 P P 08 20 54.6 -0.1
DBIC Dimbokro 75.83 71⇑*iP* P 08 20 54.0 -0.6
DBIC Dimbokro 75.83 71 P P 08 20 54.6 -0.1
comp=Z,21nm,0.8s,baz=237,slow=5.8,SNR=32
DBIC LR LR 08 51 44.1
comp=Z,1µm,20.2s,baz=237,slow=34
comp=Z,21nm,0.8s
LENM Lemitar 75.90 331 P P 08 20 56.1 +1.3
TUC Tucson 75.91 327 P P 08 20 55.3 +0.6
TUC IAmb IAmb 08 20 58.2
comp=Z,43nm,1.4s
TUC Tucson 75.91 327 P P 08 20 55.3 +0.6
TUC pmax pmax
comp=Z,43nm,1.4s
TUC Tucson 75.91 327 P P 08 20 56.1 +1.4
baz=148
M57A Sunshine Farm, 75.98 356 P P 08 20 55.2 +0.4
M57A IAmb IAmb 08 20 56.6
comp=Z,60nm,1.4s
M57A Sunshine Farm, 75.98 356 P P 08 20 55.6 +0.7
baz=176,SNR=6.6
M57A P P 08 20 55.6 +0.7
baz=176,SNR=6.6
N51A Ashland 75.99 352 P P 08 20 54.2 -0.7
N51A IAmb IAmb 08 21 06.0
comp=Z,57nm,0.9s
RAR Rarotonga 76.03 254 LR LR 08 46 19.5
comp=Z,911nm,18.9s,baz=156,slow=29
SFIN Lafayette 76.10 349 P P 08 20 54.9 -0.6
SFIN Lafayette 76.10 349 P P 08 20 54.2 -1.3
baz=165
O44A Mansfield 76.12 347 P P 08 20 55.4 -0.2
baz=167,SNR=7.4
N49A Columbus Grove 76.21 351 P P 08 20 55.7 -0.4
baz=170,SNR=17
N49A P P 08 20 55.7 -0.4
baz=170,SNR=17
M55A Ridgway 76.21 355 P P 08 20 56.6 +0.4
baz=175,SNR=9.9
M55A P P 08 20 56.6 +0.4
baz=175,SNR=9.9
P40A Paris 76.23 345 P P 08 20 56.6 +0.4
baz=164,SNR=40
ARMS Ukamas 76.24 115 *eP* P 08 20 57.2 +0.2
ARMS IAmb IAmb 08 20 58.2
comp=Z,60nm,1.2s
M53A WI Miller and 76.33 354 P P 08 20 56.7 -0.1
baz=173,SNR=9.8
N47A Urbana 76.38 350 P P 08 20 56.7 -0.4
N47A Urbana 76.38 350 P P 08 20 56.7 -0.4
baz=169,SNR=7.3
N47A P P 08 20 56.7 -0.4
baz=169,SNR=7.3
ANMO Albuquerque 76.38 332 P P 08 20 58.5 +1.0
ANMO IAmb IAmb 08 21 00.1
comp=Z,34nm,1.1s
ANMO Albuquerque 76.38 332*ceP* P 08 20 56.2 -1.3
ANMO pmax pmax
comp=Z,45nm,1.3s
ANMO Albuquerque 76.38 332 P P 08 20 58.9 +1.4
baz=152,SNR=43
ANMO Albuquerque 76.38 332 P P 08 20 58.7 +1.2
baz=152
ANMO Albuquerque 76.38 332 LR LR 08 50 12.4
comp=Z,2µm,19.4s,baz=160,slow=32
AUGR Augrabies 76.39 115 *eP* P 08 20 58.4 +0.6
AUGR IAmb IAmb 08 20 59.0
comp=Z,152nm,1.4s
BRYW Bryant College 76.45 1 P P 08 20 58.3 +0.8
ROSN Rosenhof 76.46 122 *eP* P 08 20 58.0 0.0
ROSN IAmb IAmb 08 21 08.3
comp=Z,109nm,1.5s
L64A Middleborough 76.47 1 P P 08 20 58.5 +0.9
L64A IAmb IAmb 08 20 59.8
comp=Z,90nm,1.4s
KROM Kromhout 76.49 122⇑*iP* P 08 20 58.9 +0.7
KROM IAmb IAmb 08 20 59.2
comp=Z,86nm,1.4s
ALLY Alegheny Colle 76.50 354 P P 08 20 58.0 +0.3
ALLY IAmb IAmb 08 20 58.8
comp=Z,68nm,1.2s
M52A Chesterland 76.50 353 P P 08 20 58.0 +0.2
M52A Chesterland 76.50 353 P P 08 20 57.7 -0.1
baz=173,SNR=9.1
M52A P P 08 20 57.7 -0.1
baz=173,SNR=9.1
214A Organ Pipe Nat 76.53 326 P P 08 20 58.8 +0.5
214A Organ Pipe Nat 76.53 326 P P 08 20 60.0 +1.7
baz=147,SNR=12
M50A Fremont 76.54 352 P P 08 20 57.9 -0.1
baz=171,SNR=6.1
M50A P P 08 20 57.9 -0.1
baz=171,SNR=6.1
BRAK Brakfontein 76.55 119 *eP* P 08 20 59.3 +0.6
BRAK IAmb IAmb 08 21 10.4
comp=Z,236nm,1.7s

ROOI Rooidraai Farm 76.63 120⇑*iP* P 08 20 59.0 -0.1
ROOI IAmb IAmb 08 21 08.9
comp=Z,199nm,1.7s
P38A Dawn 76.65 343 P P 08 20 58.7 0.0
baz=162,SNR=26
HDIL Hopedale 76.66 347 P P 08 20 58.8 +0.1
baz=166,SNR=11
HDIL Hopedale 76.66 347 P P 08 20 58.5 -0.2
baz=166,SNR=11
L59A Walton 76.75 358 P P 08 21 00.4 +1.2
baz=178,SNR=6.8
L59A P P 08 21 00.4 +1.2
baz=178,SNR=6.8
BINY Binghamton 76.79 357 P P 08 20 59.9 +0.5
baz=177
L56A Greenwood 76.80 356 P P 08 21 00.1 +0.6
baz=176,SNR=16
L56A P P 08 21 00.1 +0.6
baz=176,SNR=16
KEIM Keimoes 76.80 116⇑*iP* P 08 21 00.3 +0.1
KEIM IAmb IAmb 08 21 01.5
comp=Z,64nm,1.2s
R32A Long Quarter, 76.89 339 P P 08 21 00.8 +0.7
R32A Long Quarter, 76.89 339 P P 08 21 00.8 +0.7
baz=158,SNR=19
KSU1 Kansas State U 76.93 341 P P 08 20 59.9 -0.3
baz=160
ERPA Erie 76.95 354 P P 08 20 59.9 -0.3
baz=174
L61B Northampton 76.97 360 P P 08 21 01.4 +1.0
baz=180,SNR=8.9
L61B Northampton 76.97 360 P P 08 21 00.9 +0.5
baz=180,SNR=8.9
HRV Adam Dziewonsk 77.03 1 P P 08 21 01.8 +1.0
HRV IAmb IAmb 08 21 03.1
comp=Z,90nm,1.4s
HRV Adam Dziewonsk 77.03 1 P P 08 21 01.8 +1.0
HRV pmax pmax
comp=Z,90nm,1.4s
HRV Adam Dziewonsk 77.03 1 P P 08 21 02.2 +1.4
baz=181,SNR=6.0
HRV Adam Dziewonsk 77.03 1 P P 08 21 01.5 +0.7
baz=181
N41A Harden Midland 77.11 346 P P 08 21 00.9 -0.3
N41A IAmb IAmb 08 21 02.0
comp=Z,72nm,1.1s
N41A Harden Midland 77.11 346 P P 08 21 01.4 +0.2
baz=165,SNR=8.4
BFON Badsfontein, M 77.11 120⇑*iP* P 08 21 02.1 +0.2
BFON IAmb IAmb 08 21 03.3
comp=Z,196nm,1.7s
WVNY West Valley, N 77.13 355 P P 08 21 01.9 +0.6
WVNY West Valley, N 77.13 355 P P 08 21 02.0 +0.6
baz=175,SNR=12
WIN Windhoek 77.14 109 *eP* P 08 21 03.1 +0.8
WIN IAmb IAmb 08 21 12.6
comp=Z,75nm,1.7s
K62A Royalston 77.19 0 P P 08 21 02.7 +1.1
K62A IAmb IAmb 08 21 04.1
comp=Z,86nm,1.4s
K62A Royalston 77.19 0 P P 08 21 03.1 +1.4
baz=180,SNR=7.8
K62A P P 08 21 03.1 +1.4
baz=180,SNR=7.8
UPI Upington 77.19 116⇑*iP* P 08 21 02.3 0.0
UPI IAmb IAmb 08 21 03.6
comp=Z,61nm,1.4s
HCNY Howe Caverns 77.24 359 P P 08 21 02.6 +0.7
baz=178,SNR=6.7
M44A Midewin, Midew 77.24 348 P P 08 21 01.6 -0.3
M44A Midewin, Midew 77.24 348 P P 08 21 02.0 +0.1
baz=167,SNR=9.6
L48A N Adams 77.25 351 P P 08 21 01.5 -0.5
L48A IAmb IAmb 08 21 02.4
comp=Z,73nm,1.2s
L48A N Adams 77.25 351 P P 08 21 01.8 -0.2
baz=170,SNR=8.9
L48A P P 08 21 01.8 -0.2
baz=170,SNR=8.9
TRY Troy 77.26 359 P P 08 21 02.7 +0.7
GRAF Camdeboo Natio 77.42 121 *eP* P 08 21 02.8 -0.7
X18A Snowflake 77.44 329 P P 08 21 04.6 +1.1
AAM Ann Arbor 77.50 352 P P 08 21 02.9 -0.5
baz=171
CBKS Cedar Bluff 77.56 339 P P 08 21 05.0 +1.1
baz=157,SNR=9.7
CBKS Cedar Bluff 77.56 339 P P 08 21 04.5 +0.7
baz=157,SNR=9.7
T25A Trinidad 77.57 334 P P 08 21 05.4 +1.2
baz=154,SNR=48
L46A Eue Claire 77.57 350 P P 08 21 03.1 -0.7
baz=168,SNR=5.7
L46A P P 08 21 03.1 -0.7
baz=168,SNR=5.7
PKA Prieska 77.59 117 *eP* P 08 21 04.7 +0.1
PKA IAmb IAmb 08 21 25.5
comp=Z,13nm,1.0s
N38A Joes South For 77.70 344 P P 08 21 04.8 +0.3
baz=163,SNR=18
K50A Casco 77.85 352 P P 08 21 05.0 -0.3
baz=172,SNR=7.2
K50A P P 08 21 05.0 -0.3
baz=172,SNR=7.2
W18A Petrified Fore 77.85 330 P P 08 21 07.0 +1.2
baz=150,SNR=21
ACCN Adirondack Com 77.91 359 P P 08 21 06.5 +0.8
baz=179,SNR=9.5
J58A Remsen 77.92 358 P P 08 21 06.1 +0.4
baz=178,SNR=5.0
J58A P P 08 21 06.1 +0.4
baz=178,SNR=5.0
SOE Somerset East 77.93 121 P P 08 21 06.7 +0.3
SOE Somerset East 77.93 121 *eP* P 08 21 07.0 +0.6
SOE IAmb IAmb 08 21 17.4
comp=Z,53nm,1.0s
X16A Lo Mia Camp, P 77.98 328 P P 08 21 07.8 +1.3
X16A IAmb IAmb 08 21 10.1
comp=Z,38nm,1.0s
L44A Lake County Fo 77.99 348 P P 08 21 06.0 -0.1
L44A IAmb IAmb 08 21 21.5
comp=Z,89nm,1.4s
L44A Lake County Fo 77.99 348 P P 08 21 05.6 -0.5
baz=167
FFD Franklin Falls 78.00 1 P P 08 21 07.0 +0.9
J57A Williamstown 78.00 357 P P 08 21 06.3 +0.2
J57A IAmb IAmb 08 21 07.5
comp=Z,66nm,1.4s
J57A Williamstown 78.00 357 P P 08 21 06.5 +0.4
baz=177,SNR=8.6
J57A P P 08 21 06.5 +0.4
baz=177,SNR=8.6
J59A Piesco 78.01 359 P P 08 21 06.8 +0.6
L42A Oliver, Polo 78.13 347 P P 08 21 06.7 -0.2
L42A IAmb IAmb 08 21 07.7
comp=Z,54nm,1.0s
L42A Oliver, Polo 78.13 347 P P 08 21 06.6 -0.3
baz=166,SNR=12
HNH Hanover 78.23 0 P P 08 21 08.9 +1.6
baz=180,SNR=7.1
Y14A Wickenburg 78.28 327 P P 08 21 09.4 +1.4
N35A Tabor 78.34 342 P P 08 21 08.0 -0.1
N35A Tabor 78.34 342 P P 08 21 08.4 +0.3
baz=161,SNR=12
GLA Glamis 78.39 325 P P 08 21 09.8 +1.2
baz=146,SNR=6.6
I62A Tamworth 78.40 1 P P 08 21 09.6 +1.3
baz=181,SNR=5.9
I62A P P 08 21 09.6 +1.3
baz=181,SNR=5.9
MCVT Middlebury Col 78.48 360 P P 08 21 09.9 +1.1
baz=180,SNR=7.4
L40A Anamosa 78.49 346 P P 08 21 08.7 -0.2
baz=164,SNR=16
SDCO Great Sand Dun 78.50 334 P P 08 21 10.6 +1.2
baz=153,SNR=28
SDCO Great Sand Dun 78.50 334 P P 08 21 10.3 +0.9
baz=153,SNR=28
NCB Newcomb 78.51 359 P P 08 21 09.3 +0.3
baz=179,SNR=5.8
WCNY West Carthage 78.56 358 P P 08 21 09.5 +0.3
baz=177,SNR=11
I63A Otisfield 78.59 1 P P 08 21 11.4 +2.0
baz=182,SNR=10
I63A P P 08 21 11.4 +2.0
baz=182,SNR=10
KSCO Kaye Shedlock' 78.64 336 P P 08 21 11.4 +1.4
KSCO Kaye Shedlock' 78.64 336 P P 08 21 11.8 +1.8

baz=155,SNR=11
KSCO Kaye Shedlock' 78.64 336 P P 08 21 11.2 +1.2
baz=155,SNR=11
IKP In-Ko-Pah, Jac 78.67 324 P P 08 21 11.6 +1.4
baz=145,SNR=6.1
SCIA State Center 78.76 344 P P 08 21 10.9 +0.6
baz=163,SNR=7.4
SCIA State Center 78.76 344 P P 08 21 10.4 +0.1
baz=163,SNR=7.4
LBNH Lisbon 78.76 0 P P 08 21 11.6 +1.2
baz=180,SNR=6.3
LBNH Lisbon 78.76 0 P P 08 21 11.3 +0.9
baz=180,SNR=6.3
SWSC Sam W. Stewart 78.77 324 P P 08 21 12.4 +1.7
baz=145,SNR=8.9
WUAZ Wupatki 78.89 329 P P 08 21 12.7 +1.3
WUAZ IAmb IAmb 08 21 14.5
comp=Z,50nm,1.1s
WUAZ Wupatki 78.89 329 P P 08 21 12.9 +1.5
baz=148,SNR=30
S22A 4UR Ranch, Cre 78.99 333 P P 08 21 13.3 +1.2
baz=152,SNR=23
MONP2 Monument Peak 79.02 324 P P 08 21 14.0 +1.7
baz=145
HVD Gariep Dam 79.06 120⇑*i*P P 08 21 13.1 +0.3
HVD IAmb IAmb 08 21 22.9
comp=Z,211nm,1.5s
PDMCI Parker Dam,Lak 79.10 326 P P 08 21 14.1 +1.7
baz=146
JFWS Jewell Farm 79.12 347 P P 08 21 12.0 -0.3
baz=165,SNR=17
JFWS Jewell Farm 79.12 347 P P 08 21 11.8 -0.6
baz=165,SNR=17
CASY Casey 79.12 181 P P 08 21 12.8 +0.6
CASY IAmb IAmb 08 21 14.1
comp=Z,76nm,1.2s
WVL Waterville 79.13 2 P P 08 21 13.0 +0.7
WVL IAmb IAmb 08 21 14.8
comp=Z,60nm,1.2s
WVL Waterville 79.13 2 P P 08 21 13.5 +1.2
baz=182,SNR=5.6
MVCO Mesa Verde 79.16 331 P P 08 21 13.7 +0.7
MVCO IAmb IAmb 08 21 15.5
comp=Z,46nm,1.2s
MVCO Mesa Verde 79.16 331 P P 08 21 14.2 +1.2
baz=151,SNR=24
LONY Lake Ozonia 79.17 358 P P 08 21 13.4 +0.8
LONY IAmb IAmb 08 21 14.3
comp=Z,63nm,1.3s
LONY Lake Ozonia 79.17 358 P P 08 21 13.3 +0.8
baz=178,SNR=15
DELO Deloro Mine 79.18 356 P P 08 21 13.0 +0.4
BC3 Big Chuckawall 79.18 325 P P 08 21 15.3 +2.3
baz=145,SNR=17
TSUM Tsumeb 79.34 106 P P 08 21 14.3 -0.1
TSUM Tsumeb 79.34 106 *e*P P 08 21 14.3 -0.1
TSUM IAmb IAmb 08 21 25.6
comp=Z,95nm,1.4s
TSUM Tsumeb 79.34 106 LR LR 08 51 08.7
comp=Z,1μm,21.4s,baz=164,slow=32
109C Camp Elliot, M 79.36 323 P P 08 21 15.2 +1.4
baz=144
K38A Parkersburg 79.37 345 P P 08 21 13.5 -0.2
baz=163,SNR=6.7
BMNY Brushton-Moira 79.38 359 P P 08 21 14.4 +0.8
baz=178,SNR=9.9
IRM Iron Mountain 79.45 325 P P 08 21 16.0 +1.6
baz=146,SNR=17
Q24A Divide 79.46 335 P P 08 21 15.1 +0.4
Q24A IAmb IAmb 08 21 17.0
comp=Z,93nm,1.6s
Q24A Divide 79.46 335 P P 08 21 15.6 +0.9
baz=153,SNR=11
BGNE Belgrade 79.50 341 P P 08 21 15.0 +0.5
BGNE Belgrade 79.50 341 P P 08 21 15.1 +0.6
baz=159,SNR=6.5
BGNE Belgrade 79.50 341 P P 08 21 14.8 +0.3
baz=159,SNR=6.5
SADO Sadowa 79.52 355 P P 08 21 14.4 0.0
L34A Svendsen Farm, 79.56 342 P P 08 21 15.1 +0.3
baz=160,SNR=5.5
TPFO Pinon Flats 79.62 324 P P 08 21 17.1 +1.7
baz=145,SNR=17
PFO Pinyon Flats O 79.63 324 P P 08 21 16.7 +1.2
PFO Pinyon Flats O 79.63 324 *i* P P 08 21 15.9 +0.4
PFO pmax pmax
comp=Z,44nm,1.1s
PFO Pinyon Flats O 79.63 324 P P 08 21 17.1 +1.6
baz=145,SNR=17
PFO Pinyon Flats O 79.63 324 LR LR 08 50 31.2
comp=Z,562nm,18.1s,baz=141,slow=31
W13A Hualapai Mount 79.64 327 P P 08 21 16.3 +0.6
NEE2 Needles Airpor 79.70 326 P P 08 21 17.0 +1.2
baz=146
BELC Belle Mtn. Jos 79.72 324 P P 08 21 17.8 +1.8
baz=145,SNR=8.4
G62A West of Eustis 79.76 1 P P 08 21 16.5 +0.7
G62A IAmb IAmb 08 21 18.1
comp=Z,61nm,1.1s
G62A West of Eustis 79.76 1 P P 08 21 17.2 +1.4
baz=182,SNR=10
G62A P P 08 21 17.2 +1.4
baz=182,SNR=10
GGN Saint George 79.81 4 P P 08 21 16.8 +0.8
GGN IAmb IAmb 08 21 18.4
comp=Z,69nm,1.3s
I42A Draeger Farm, 79.83 348 P P 08 21 16.0 -0.1
I42A IAmb IAmb 08 21 17.1
comp=Z,65nm,1.2s
I42A Draeger Farm, 79.83 348 P P 08 21 16.2 +0.1
baz=166,SNR=16
PKME Peaks-Kenny Pk 79.84 2 P P 08 21 17.0 +0.8
baz=183
MURC Murrieta 79.98 323 P P 08 21 19.0 +1.8
baz=144,SNR=6.6
BOSA Boshof 80.00 118 P P 08 21 17.9 0.0
BOSA IAmb IAmb 08 21 28.6
comp=Z,55nm,0.9s
BOSA Boshof 80.00 118 P P 08 21 17.9 0.0
BOSA pmax pmax
comp=Z,55nm,0.9s
BOSA Boshof 80.00 118⇑*i*P P 08 21 17.0 -0.9
BOSA IAmb IAmb 08 21 28.4
comp=Z,57nm,0.9s
BOSA Boshof 80.00 118 P P 08 21 17.7 -0.2
comp=Z,23nm,0.7s,baz=244,slow=3.4,SNR=50
BOSA LR LR 08 51 58.8
comp=Z,759nm,20.8s,baz=230,slow=32
comp=Z,23nm,0.7s
U15A North Rim 80.05 328 P P 08 21 19.3 +1.4
GLMI Grayling 80.11 351 P P 08 21 17.0 -0.6
baz=170
PV13 Radium Mtn., P 80.11 332 P P 08 21 19.8 +1.7
PV13 IAmb IAmb 08 21 20.4
comp=Z,42nm,1.1s
I40A Norwalk 80.13 347 P P 08 21 17.5 -0.3
baz=165,SNR=7.9
SCI2 San Clemente I 80.15 322 P P 08 21 18.6 +0.4
baz=143
H43A Windswept, Lux 80.20 349 P P 08 21 18.4 +0.2
baz=167,SNR=7.8
GMRC Granite Mounta 80.20 325 P P 08 21 20.5 +1.9
baz=145,SNR=18
OGNE Ogallala 80.21 338 P P 08 21 19.4 +0.9
baz=156
F63A Nahmakanta, Br 80.28 2 P P 08 21 19.9 +1.3
baz=183,SNR=8.1
F63A P P 08 21 19.9 +1.3
baz=183,SNR=8.1
SMCO Snowmass 80.30 333 P P 08 21 20.9 +1.5
SMCO IAmb IAmb 08 21 38.0
comp=Z,59nm,1.2s
ISCO Idaho Springs 80.36 335 P P 08 21 20.6 +1.0
ISCO Idaho Springs 80.36 335 P P 08 21 20.6 +1.0
ISCO pmax pmax
comp=Z,19nm,1.1s
ISCO Idaho Springs 80.36 335 P P 08 21 20.7 +1.1
baz=153,SNR=20
ISCO Idaho Springs 80.36 335 P P 08 21 20.7 +1.1
baz=153,SNR=20
BBRC Big Bear Solar 80.38 324 P P 08 21 21.1 +1.4
baz=144
CIS Catalina Islan 80.42 322 P P 08 21 20.6 +0.9
baz=143
F62A Pittston Farm, 80.45 2 P P 08 21 20.9 +1.4
baz=182,SNR=10.0
F62A P P 08 21 20.9 +1.4
baz=182,SNR=10.0
F64A Sherman 80.47 3 P P 08 21 21.2 +1.6
baz=184,SNR=6.1
F64A P P 08 21 21.2 +1.6
baz=184,SNR=6.1
HEC Hector,Ludlow 80.56 325 P P 08 21 22.1 +1.6
baz=145,SNR=5.0
BFSC Mount Baldy Ra 80.72 323 P P 08 21 22.1 +0.7
baz=144,SNR=12
K31A O'Neill 80.80 341 P P 08 21 22.4 +0.9
baz=158,SNR=25
I37B Waseca 80.81 345 P P 08 21 21.6 +0.1
baz=163,SNR=17
SWZ Schweizer 80.86 117 *e*P P 08 21 21.6 -0.9
SWZ IAmb IAmb 08 21 32.6
comp=Z,101nm,1.5s
SNCC San Nicolas Is 80.86 322 P P 08 21 23.0 +1.0
baz=143
TUQ Turquoise Moun 80.86 325 P P 08 21 23.8 +1.7
baz=145,SNR=21
RRX Edison Barstow 80.91 324 P P 08 21 23.6 +1.4
baz=144
DECC Green Verdugo 81.06 323 P P 08 21 24.6 +1.5
baz=144
GSC Goldstone, Bar 81.17 325 P P 08 21 25.0 +1.3
baz=145,SNR=10
E62A Clayton Lake 81.19 2 P P 08 21 24.5 +1.1
baz=182,SNR=7.0
E62A P P 08 21 24.5 +1.1
baz=182,SNR=7.0
ECSD EROS Data Cent 81.28 343 P P 08 21 24.5 +0.5
baz=160,SNR=16
ECSD EROS Data Cent 81.28 343 P P 08 21 24.1 +0.1
baz=160,SNR=16
KOWA Kowa 81.36 66 P P 08 21 25.3 +0.2
KOWA IAmb IAmb 08 21 26.5
comp=Z,52nm,1.0s
KOWA Kowa 81.36 66 P P 08 21 25.2 +0.2
comp=Z,17nm,0.6s,baz=234,slow=5.3,SNR=33
KOWA LR LR 08 56 01.0
comp=Z,1μm,20.3s,baz=241,slow=35
comp=Z,17nm,0.6s
MTPU Mount Pierson 81.37 329 P P 08 21 26.5 +1.4
MTPU IAmb IAmb 08 21 39.2
comp=Z,99nm,1.9s
G40A Rib Lake 81.39 347 P P 08 21 24.4 -0.1
baz=165,SNR=6.9
EDW2 Edwards Air Fo 81.40 324 P P 08 21 26.1 +1.2
baz=144,SNR=7.7
SHOC Shoshone, Teco 81.40 325 P P 08 21 25.7 +0.8
baz=145,SNR=6.5
N23A Red Feather La 81.45 335 P P 08 21 26.3 +1.0
N23A Red Feather La 81.45 335 P P 08 21 26.0 +0.7
baz=153,SNR=14
CCUT Cedar City 81.46 328 P P 08 21 26.9 +1.5
CCUT IAmb IAmb 08 21 28.7
comp=Z,45nm,1.1s
SCZ2 Santa Cruz Isl 81.51 322 P P 08 21 25.9 +0.5
baz=143
F42A Maple Grove Fa 81.52 349 P P 08 21 25.4 +0.2
OSI Osito Audit: C 81.54 323 P P 08 21 26.9 +1.3
baz=143
E46A Sault Ste Mari 81.59 352 P P 08 21 25.5 0.0
E46A Sault Ste Mari 81.59 352 P P 08 21 25.6 0.0
baz=170,SNR=18
SRU San Rafael Swe 81.60 331 P P 08 21 26.4 +0.4
SRU San Rafael Swe 81.60 331 P P 08 21 26.4 +0.4
SRU pmax pmax
comp=Z,21nm,0.8s
O20A White River Ci 81.61 333 P P 08 21 27.1 +1.0
O20A IAmb IAmb 08 21 40.2
comp=Z,64nm,1.6s
O20A White River Ci 81.61 333 P P 08 21 27.0 +1.0
baz=151,SNR=12
PHWY Pilot Hill 81.65 336 P P 08 21 27.2 +0.8
D62A Allapoint, All 81.66 2 P P 08 21 27.0 +1.1
baz=183,SNR=6.2
D62A P P 08 21 27.0 +1.1
baz=183,SNR=6.2
LRMC Laurel Mtn Rad 81.73 324 P P 08 21 28.0 +1.3
baz=144,SNR=11
KSTD Kokstad 81.75 122 *e*P P 08 21 25.5 -1.7
KSTD IAmb IAmb 08 21 27.9
comp=Z,26nm,1.3s
MVU Marysvale 81.77 330 P P 08 21 28.8 +1.8
SPMN Marine on St. 81.84 346 P P 08 21 26.6 -0.2
baz=163,SNR=7.7
SPMN Marine on St. 81.84 346 P P 08 21 26.2 -0.7
baz=163,SNR=7.7
SBC Santa Barbara 81.90 322 P P 08 21 27.9 +0.4
baz=143
LATQ La Tuque 81.91 360 P P 08 21 28.0 +0.8
LATQ IAmb IAmb 08 21 28.7
comp=Z,54nm,1.3s
P18A Preston Nutter 81.94 331 P P 08 21 29.3 +1.3
E43A Lone Tree Farm 81.95 350 P P 08 21 27.8 +0.4
baz=168,SNR=11
ARVC Arvin 82.00 323 P P 08 21 28.2 +0.2
baz=143
SNKL Senekal, Frees 82.01 119⇑*i*P P 08 21 28.6 -0.1
SNKL IAmb IAmb 08 21 38.4
comp=Z,241nm,1.6s
MPMC Manual Prospec 82.10 325 P P 08 21 29.3 +0.6
baz=144,SNR=9.0
FURC Furnace Creek, 82.14 325 P P 08 21 30.2 +1.6
baz=145,SNR=10
TPNV Topaph Spring 82.25 326 P P 08 21 31.1 +1.7
baz=145,SNR=19
ISA Isabella, Lake 82.26 324 P P 08 21 31.1 +1.7
baz=144,SNR=14
LBTB Lobatse 82.28 115 P P 08 21 29.9 -0.2
LBTB Lobatse 82.28 115 P P 08 21 29.9 -0.2
LBTB pmax pmax
comp=Z,113nm,1.5s
LBTB Lobatse 82.28 115⇑*i*P P 08 21 29.8 -0.2
LBTB IAmb IAmb 08 21 39.6
comp=Z,259nm,2.0s
LBTB Lobatse 82.28 115 LR LR 08 52 40.7
comp=Z,864nm,21.5s,baz=226,slow=32
PKM Mcpherson Peak 82.30 322 P P 08 21 31.5 +1.6
baz=143,SNR=5.1
PRYS Parys 82.49 117 *e*P P 08 21 30.1 -1.1
PRYS IAmb IAmb 08 21 41.3
comp=Z,133nm,1.6s
SUSD Miller 82.54 341 P P 08 21 30.7 0.0
baz=158
F36A Milaca 82.60 345 P P 08 21 30.7 -0.1
baz=163,SNR=15
CWC Cottonwood Cre 82.69 325 P P 08 21 33.0 +1.2
baz=144
VES Vestal, Richgr 82.70 323 P P 08 21 32.7 +1.1
baz=143,SNR=13
RPZ Rata Peaks 82.72 221 LR LR 08 51 11.7
comp=Z,743nm,18.2s,baz=122,slow=30
SMMC Simmler 82.73 323 P P 08 21 33.7 +1.8
baz=142
VLDQ Val d'Or 82.75 357 P P 08 21 32.1 +0.6
VLDQ IAmb IAmb 08 21 33.0
comp=Z,39nm,1.1s
KSR Koster 82.76 116 *e*P P 08 21 31.4 -1.3
KSR IAmb IAmb 08 21 43.8
comp=Z,306nm,2.2s
GRAC Grapevine Rang 82.80 325 P P 08 21 34.5 +2.3
GRAC IAmb IAmb 08 21 40.9
comp=Z,70nm,1.6s
GRAC Grapevine Rang 82.80 325 P P 08 21 33.9 +1.7
baz=144,SNR=14
D41A Chassel 82.85 349 P P 08 21 32.7 +0.6
baz=167,SNR=6.5
E38A The Farm, Brul 82.92 347 P P 08 21 32.5 0.0
baz=164,SNR=5.0
R11A Troy Canyon, C 83.10 327 P P 08 21 35.3 +1.5
baz=146,SNR=40
F33A 5 Mile Ranch, 83.19 344 P P 08 21 33.8 -0.1
baz=161,SNR=5.0
K22A Casper 83.21 335 P P 08 21 35.3 +1.0
baz=152,SNR=13
K22A Casper 83.21 335 P P 08 21 35.3 +1.0
baz=152,SNR=13
TIN Tinemaha, Big 83.26 325 P P 08 21 35.8 +1.1
baz=144
HRAO HartRAO 83.32 117⇑*i*P P 08 21 35.3 -0.2
DUG Dugway, Tooele 83.45 330 P P 08 21 36.6 +1.0
baz=148,SNR=36
RSSD Black Hills 83.71 338 P P 08 21 36.8 -0.1
RSSD Black Hills 83.71 338 P P 08 21 36.8 -0.1
RSSD pmax pmax
comp=Z,17nm,1.0s
RSSD Black Hills 83.71 338 P P 08 21 37.6 +0.7
baz=154,SNR=10.0
RSSD Black Hills 83.71 338 P P 08 21 37.2 +0.2
baz=154
NWCL Newcastle 83.85 119 *e*P P 08 21 38.1 0.0
NWCL IAmb IAmb 08 21 48.5
comp=Z,121nm,1.7s
SLR Silverton 83.85 117⇑*i*P P 08 21 37.3 -0.9
SLR IAmb IAmb 08 21 48.4
comp=Z,121nm,1.6s
MLAC Mammoth, Mammo 84.01 325 P P 08 21 40.1 +1.5
baz=143,SNR=11
OMMB Old Mammoth Mi 84.07 325 P P 08 21 40.4 +1.4
EYMN Ely 84.20 347 P P 08 21 38.8 -0.3
baz=164,SNR=7.8
EYMN Ely 84.20 347 P P 08 21 38.3 -0.8
baz=164,SNR=7.8
NV11 Mina Array Sit 84.33 326 P P 08 21 41.5 +1.3
BW06 Boulder Array 84.39 334 P P 08 21 41.0 +0.5
BW06 Boulder Array 84.39 334 P P 08 21 40.4 0.0
baz=150,SNR=12
PD31 Pinedale Array 84.39 334 P P 08 21 40.7 +0.2
PDAR Pinedale Array 84.39 334 P P 08 21 39.8 -0.6
PDAR Pinedale Array 84.39 334 P P 08 21 40.6 +0.2
comp=Z,7.4nm,1.0s,baz=158,slow=4.8,SNR=32
PDAR PKKPbc PKKPbc 08 39 59.2 +5.5
comp=Z,0.3nm,0.6s,baz=259,slow=0.3,SNR=3.7
PDAR LR LR 08 55 24.5
comp=Z,996nm,19.4s,baz=153,slow=33
comp=Z,7.4nm,1.0s
NVAR Mina Array Bea 84.40 326 P P 08 21 41.8 +1.2
NVAR Mina Array Bea 84.40 326 P P 08 21 42.0 +1.4
comp=Z,7.5nm,0.8s,baz=155,slow=6.4,SNR=49
NVAR LR LR 08 52 17.6
comp=Z,424nm,21.8s,baz=140,slow=31
comp=Z,7.5nm,0.8s
LEPH Lephalale, Lim 84.58 115 *e*P P 08 21 42.0 +0.1
LEPH IAmb IAmb 08 21 51.4
comp=Z,114nm,1.7s
TOA0 Torodi Ar. Sit 84.88 70 P P 08 21 43.0 -0.3
TORD Torodi Ar. Bea 84.88 70 P P 08 21 42.6 -0.7
TORD Torodi Ar. Bea 84.88 70 P P 08 21 43.2 -0.1
comp=Z,10nm,0.6s,baz=262,slow=3.0,SNR=6.6
TORD LR LR 08 58 07.0
comp=Z,1μm,18.7s,baz=209,slow=35
comp=Z,10nm,0.6s
ELK Elko 84.92 329 LR LR 08 56 31.9
comp=Z,631nm,18.4s,baz=148,slow=34
AHID Auburn Hatcher 84.96 333 P P 08 21 44.3 +1.0
AHID IAmb IAmb 08 22 01.1
comp=Z,70nm,1.6s
E28A Huff 84.98 341 P P 08 21 43.6 +0.6
baz=157,SNR=9.8
B35A Bob, Littlefor 85.03 346 P P 08 21 43.0 -0.2
baz=163,SNR=10
RAO Raoul Island 85.07 238 LR LR 08 50 11.1
comp=Z,277nm,20.9s,baz=128,slow=29
POGA Pongola 85.37 120 P P 08 21 46.1 +0.4
POGA Pongola 85.37 120 *e*P P 08 21 45.1 -0.6
POGA IAmb IAmb 08 21 46.7
comp=Z,78nm,1.6s
AGMN Agassiz Nation 85.41 345 P P 08 21 45.2 +0.1
baz=161,SNR=9.8
AGMN Agassiz Nation 85.41 345 P P 08 21 44.8 -0.4
baz=161,SNR=9.8
MDND Maddock 85.87 342 P P 08 21 47.9 +0.4
baz=158,SNR=15
MDND Maddock 85.87 342 P P 08 21 47.4 -0.1
baz=158,SNR=15
H17A Grant Village 86.17 334 P P 08 21 50.2 +0.8
baz=150
RLMT Red Lodge 86.33 335 P P 08 21 50.6 +0.6
RLMT IAmb IAmb 08 22 00.3
comp=Z,18nm,0.7s
RLMT Red Lodge 86.33 335 P P 08 21 50.3 +0.2
baz=151,SNR=22
LAO LASA Array 86.70 337 P P 08 21 52.0 +0.4
baz=153,SNR=18
LAO LASA Array 86.70 337 P P 08 21 51.4 -0.2
baz=153,SNR=18
QLMT Earthquake Lak 86.85 333 P P 08 21 54.3 +1.7
HLID Hailey 86.93 331 P P 08 21 53.8 +0.8
baz=147,SNR=36
MUSN Musina, Limpop 87.04 115 *e*P P 08 21 54.2 +0.2
MUSN IAmb IAmb 08 22 04.6
comp=Z,58nm,1.4s
MATP Matopo 87.11 113⇑*i*P P 08 21 54.5 0.0
MATP IAmb IAmb 08 22 06.2
comp=Z,258nm,1.6s
MATP Matopo 87.11 113 LR LR 08 57 52.1
comp=Z,2μm,19.3s,baz=238,slow=34
ULM Lac du Bonnet 87.26 345 *i* P P 08 21 53.6 -0.6
ULM Lac du Bonnet 87.26 345 P P 08 21 53.9 -0.3
comp=Z,25nm,1.1s,baz=164,slow=4.2,SNR=15
comp=Z,25nm,1.1s
BLWY Bulawayo 87.36 113⇑*i*P P 08 21 55.2 -0.6
BLWY IAmb IAmb 08 21 56.0
comp=Z,175nm,1.4s
MOPA Mopani 87.44 117 *e*P P 08 21 56.6 +0.6
MOPA IAmb IAmb 08 22 08.5
comp=Z,7.6nm,1.8s
BOZ Bozeman (W) 87.58 334 P P 08 21 56.2 +0.1
baz=149,SNR=10
DGMT Dagmar 87.68 340 P P 08 21 57.1 +0.7
DGMT Dagmar 87.68 340 P P 08 21 57.2 +0.9
baz=154,SNR=19
DGMT Dagmar 87.68 340 P P 08 21 56.6 +0.3
baz=154,SNR=19
EGMT Eagleton 89.02 336 P P 08 22 02.6 -0.1
baz=150
YBH Yreka Blue Hor 89.08 325 LR LR 08 56 04.9
comp=Z,464nm,20.4s,baz=142,slow=32
L04D Klamath Falls 89.26 325 P P 08 22 04.4 +0.3
baz=141
K04D Chiloquin, OR 89.32 326 P P 08 22 05.3 +0.9
baz=142
MSO Missoula 89.48 333 P P 08 22 05.6 +0.7
baz=147,SNR=5.6
SCHQ Schefferville 89.50 3 LR LR 09 02 30.2
comp=Z,275nm,21.2s,baz=221,slow=36
AFI Afiamalu 89.57 253 LR LR 08 52 37.9
comp=Z,874nm,20.2s,baz=114,slow=29
J05D Fort Rock, OR 89.61 327 P P 08 22 06.9 +1.3
baz=142
L02F Cave Junction 89.78 325 P P 08 22 07.6 +1.3
baz=140
PINE Pine Mountain 89.87 327 P P 08 22 08.3 +1.4
PINE IAmb IAmb 08 22 09.7
comp=Z,24nm,1.0s
LSZ Lusaka 89.89 108 LR LR 08 58 19.9
comp=Z,2μm,20.5s,baz=216,slow=33
J04D Umpqua Nationa 89.97 326 P P 08 22 08.3 +0.8
baz=141
K02D Willamette Mer 90.27 325 P P 08 22 09.9 +1.2
baz=140
I05D Terrebonne, OR 90.48 327 P P 08 22 10.8 +1.2
baz=142
I04A Tendick Farm, 90.54 326 P P 08 22 10.3 +0.5
baz=141
I03D Drain, OR 90.89 326 P P 08 22 12.4 +1.0
baz=140
E08A Dider Farm, El 91.21 330 P P 08 22 13.9 +1.1
NEW Newport 91.88 332 P P 08 22 15.6 -0.4
baz=145
NEW Newport 91.88 332 LR LR 09 00 13.3
comp=Z,472nm,19.1s,baz=146,slow=33
C09A Chrisman Ranch 91.95 331 P P 08 22 17.0 +0.7
C09A IAmb IAmb 08 22 18.0
comp=Z,15nm,1.0s
MDT Midelt 92.68 51 P P 08 22 21.0 +0.9
MDT Midelt 92.68 51 P P 08 22 21.0 +0.9
comp=Z,8.5nm,1.1s,baz=239,slow=6.1,SNR=6.6
MDT LR LR 09 02 41.7
comp=Z,615nm,21.5s,baz=238,slow=35
comp=Z,8.5nm,1.1s
MSVF Nonsavu 95.07 244 LR LR 08 55 30.8
comp=Z,432nm,22.0s,baz=132,slow=29
ESDC Sonseca Array 97.47 46 P P 08 22 41.1 -0.8
comp=Z,2.3nm,1.1s,baz=231,slow=3.5,SNR=7.1
comp=Z,2.3nm,1.1s
BBB Bella Bella 99.37 329 LR LR 09 02 15.7
comp=Z,149nm,21.7s,baz=202,slow=32
DZM Mont Dzumac 100.40 234 *e*SS SS 08 41 26.7 +1.1
comp=Z,368nm,24.2s
DZM Mont Dzumac 100.40 234 *e*LR LR 08 55 39.5
comp=Z,919nm,28.4s

YKA **Yellowknife Ar** 102.78 341 P **Pdif** 08 23 04.5 -0.3
YKA **Yellowknife Ar** 102.78 341 P **Pdif** 08 23 04.5 -0.3
comp=Z,1.8nm,1.0s,baz=147,slow=5.3,SNR=4.0
CLL **Collm** 113.76 43 *e*PKiKP **PKiKP** 08 27 48.0 +1.9
CLL *e*PP **PP** 08 28 40.0 +0.3
CLL *e*Sdif Sdif 08 36 24.0 +3.0
CLL *e*PS **PS** 08 38 19.0 +2.9
CLL *e*PPS PPS 08 39 30.0
CLL *e*SS **SS** 08 44 24.0 -3.4
CLL *e*SSS SSS 08 48 36.0
CLL *e*SSSS 08 52 06.0
CLL *ex* x 08 55 30.0
CLL LmV 09 14 00.0
comp=N,400nm,21.7s
CLL LmV 09 14 00.0
comp=E,400nm,20.4s
CLL LmV 09 14 00.0
comp=Z,600nm,20.9s
CLL LmH 09 19 00.0
comp=N,300nm,18.7s
CLL LmH 09 19 00.0
comp=E,500nm,19.9s
BRG **Berggiesshubel** 114.10 44 *e*(P) **PKiKP** 08 27 48.8 +1.9
BRG Amp 08 27 50.5
comp=Z,3.6nm,1.0s
BRG **Berggiesshubel** 114.10 44 *ex* x 08 38 24.0
BRG **Berggiesshubel** 114.10 44 *e*PKiKP **PKiKP** 08 27 48.7 +1.9
BRG *e* 08 38 24.0
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG MLR MLR
comp=Z,590nm,21.3s
BRG MLR MLR
comp=E,421nm,18.5s
BRG MLR MLR
comp=N,172nm,17.4s
ILAR **Eielson Array** 114.81 333 PKiKP PKPdf 08 27 47.4 -0.4
ILAR **Eielson Array** 114.81 333 PKP PKPdf 08 27 47.4 -0.4
comp=N,0.6nm,0.8s,baz=181,slow=1.2,SNR=5.5
ILAR PP **PP** 08 28 52.8 +6.0
comp=N,0.5nm,0.8s,baz=108,slow=5.2,SNR=4.1
ILAR PKKPbc **PKKPab** 08 38 28.5 +0.1
comp=N,0.2nm,0.6s,baz=274,slow=4.1,SNR=4.7
ASAR **Alice Springs** 116.60 207 PKiKP **PKPdf** 08 27 51.5 -1.2
ASAR **Alice Springs** 116.60 207 PKP **PKPdf** 08 27 51.5 -1.2
comp=N,1.9nm,1.0s,baz=129,slow=2.1,SNR=10
ASAR PKKPbc **PKKPbc** 08 38 19.6 +0.2
comp=N,0.5nm,0.5s,baz=341,slow=3.1,SNR=7.8
H22K **Ishtalitna Cre** 117.00 333 P **PKiKP** 08 27 52.8 +0.8
baz=115
H21K **Melozitna Rive** 117.44 333 PKPdf **PKiKP** 08 27 53.1 +0.3
H21K **Melozitna Rive** 117.44 333 P **PKiKP** 08 27 52.9 +0.1
baz=114
G22K **Bettles** 117.49 334 P **PKiKP** 08 27 53.8 +0.9
baz=115
TOLK **Toolik Lake Re** 117.55 336 P **PKiKP** 08 27 53.1 +0.1
baz=115
C24K **Franklin Bluff** 117.73 338 P **PKiKP** 08 27 54.4 +1.1
baz=116
G21K **Allakaket** 118.05 333 P **PKiKP** 08 27 54.6 +0.6
baz=113
F21K **Alatna River** 118.32 334 P **PKiKP** 08 27 55.1 +0.6
baz=113
C23K **Itkillik River** 118.39 337 P **PKiKP** 08 27 54.8 +0.3
baz=114
MLR **Muntele Rosu** 119.33 53 PKiKP **PKPdf** 08 27 56.3 -0.9
MLR **Muntele Rosu** 119.33 53 PKP **PKPdf** 08 27 56.3 -0.9
comp=N,1.9nm,0.5s,baz=19,slow=1.9,SNR=5.1
WRA **Warramunga Arr** 119.79 209 **PKPdf** 08 27 58.1 -0.8
WRA **Warramunga Arr** 119.79 209 PKiKP **PKPdf** 08 27 58.1 -0.8
WRA **Warramunga Arr** 119.79 209 PKP **PKPdf** 08 27 58.1 -0.8
comp=N,2.4nm,0.8s,baz=159,slow=1.7,SNR=26
BRTR **Keskin Array B** 122.60 62 PKPdf **PKPdf** 08 28 03.5 -0.2
BRTR **Keskin Array B** 122.60 62*c* *i*PKiKP **PKPdf** 08 28 03.5 -0.2
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR **Keskin Array B** 122.60 62 PKP **PKPdf** 08 28 03.5 -0.2
comp=Z,2.8nm,0.8s,baz=200,slow=3.3,SNR=9.1
AKASG **Malin Array Be** 123.08 48 PKPdf **PKPdf** 08 28 02.9 -1.2
AKASG **Malin Array Be** 123.08 48*c* *i*PKiKP **PKPdf** 08 28 02.7 -1.3
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKASG **Malin Array Be** 123.08 48 PKP **PKPdf** 08 28 02.8 -1.3
comp=Z,2.5nm,0.8s,baz=278,slow=1.8,SNR=14
AKASG PP **PP** 08 29 46.6 +2.3
comp=Z,0.2nm,0.3s,baz=254,slow=6.4,SNR=4.0
AKBB **Malin Array Si** 123.08 48 PKPdf **PKPdf** 08 28 02.5 -1.6
AKBB **Malin Array Si** 123.08 48*c* *i*PKiKP **PKPdf** 08 28 03.5 -0.6
MNK **Minsk** 123.30 43 *i* PKiKP **PKPdf** 08 27 58.5 -5.9
MNK *i* 08 35 09.2
MNK *i* PS **PS** 08 39 35.8 -6.3
MNK *i* SS SS 08 46 25.3 -5.4
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK pmax pmax
comp=E,1.0nm,0.6s
MNK pmax pmax
comp=Z,8.0nm,0.5s
MNK MLR MLR
comp=N,37nm,21.0s
MNK MLR MLR
comp=Z,332nm,20.0s
MNK MLR MLR
comp=E,72nm,22.0s
MNK **Minsk** 123.30 43 *i* PKP **PKPdf** 08 27 58.5 -5.9
comp=E,1.0nm,0.6s
MNK *i* PKP **PKPdf** 08 27 58.5 -5.9
comp=N,6.0nm,0.8s
MNK *i* PKP **PKPdf** 08 27 58.5 -5.9
comp=Z,8.0nm,0.5s,baz=75
MNK *i* PP **PP** 08 29 39.1 -6.5
MNK *i* PPP PPP 08 32 16.3
MNK *i* SKS **SKSdf** 08 35 09.3 -5.8
MNK *i* PS **PS** 08 39 35.8 -6.3
MNK *i* SS **SS** 08 46 25.3 -5.4
MNK *i* SSS SSS 08 50 58.3
MNK *i* LR LR 09 16 51.2
MNK *i* LRM MLR 09 20 18.5
comp=N,37nm,21.0s
MNK *i* LRM MLR 09 21 38.5
comp=Z,332nm,19.7s
MNK *i* LRM MLR 09 21 59.5
comp=E,72nm,22.3s
ARCES **ARCESS Array B** 124.99 25 PKiKP **PKiKP** 08 28 08.0 +0.4
ARCES **ARCESS Array B** 124.99 25 PKP **PKiKP** 08 28 08.0 +0.4
comp=E,2.0nm,0.7s,baz=302,slow=2.7,SNR=3.7
H11S2 **WAKE ISLAND Hyt** 25.37 269 T T 10 46 11.3
baz=119,slow=75,SNR=75
H11S1 **WAKE ISLAND Hyt** 25.38 269 T T 10 46 08.0
baz=119,slow=75,SNR=74
H11S3 **WAKE ISLAND Hyt** 25.39 269 T T 10 46 01.7
baz=119,slow=75,SNR=72
RAYN **Ar Rayn** 125.47 84 PKPdf **PKPdf** 08 28 09.4 -0.2
RAYN **Ar Rayn** 125.47 84 PKiKP **PKPdf** 08 28 09.4 -0.2
H11N3 **WAKE ISLAND Hyt** 25.80 270 T T 10 46 33.0
baz=122,slow=76,SNR=64
H11N1 **WAKE ISLAND Hyt** 25.82 270 T T 10 46 34.7
baz=122,slow=76,SNR=135
H11N2 **WAKE ISLAND Hyt** 25.82 270 T T 10 46 39.1
baz=122,slow=76,SNR=89
ANN **Anapa** 126.83 57 *i* PKiKP **PKPdf** 08 28 10.4 -1.0
ANN *e* 08 28 17.2
ANN *e*PPP PPP 08 32 51.0
ANN *e* 08 35 20.4
ANN pmax pmax
comp=Z,36nm,1.3s
SOC **Sochi** 128.11 59 *i* PKiKP **PKPdf** 08 28 12.7 -1.2
SOC *e* 08 30 14.3
SOC *e*PPP PPP 08 32 59.5
OBN **Obninsk** 128.35 44*d* *i*PKiKP **PKPdf** 08 28 13.9 -0.1
OBN *e* 08 30 18.0
OBN pmax pmax
comp=Z,10.0nm,0.5s
OBN MLR MLR
comp=Z,531nm,20.0s
MOS **Moscow** 129.03 43 *i* PKiKP **PKPdf** 08 28 14.0 -1.3
MOS *e* 08 30 20.6
MOS pmax pmax
comp=Z,41nm,0.7s
MOS MLR MLR
comp=Z,800nm,22.0s
VSR **Storozhevoye** 129.32 49 *e*PKiKP **PKPdf** 08 28 13.2 -2.8
VSR pmax pmax
comp=Z,8.0nm,1.1s
LPSR **Galich'ya Gora** 129.38 47 *e*PKiKP **PKPdf** 08 28 12.8 -3.2
LPSR pmax pmax
comp=Z,10.0nm,1.0s
KIV **Kislovodsk** 130.29 59 *i* PKiKP **PKPdf** 08 28 18.5 +0.3
KIV *e* 08 30 30.0
KIV *e*PS **PS** 08 40 42.9 -1.0
KIV *e*SS SS 08 47 56.1 -2.6
KIV pmax pmax
comp=Z,11nm,1.1s
KLMR **Klimovskoe** 130.35 37 *e*PKiKP **PKPdf** 08 28 15.1 -2.5
KLMR pmax pmax
comp=Z,53nm,1.4s
KLMR **Klimovskoe** 130.35 37 *e*PKPdf **PKPdf** 08 28 15.1 -2.5
KLMR AMP 08 28 19.4
comp=Z,53nm,1.4s
KLMR *e*SKPab **SKPbc** 08 31 40.6 +0.7
KBZ **Khabaz** 130.38 59*c* *i*PKiKP **PKiKP** 08 28 18.9 -0.2
KBZ pmax pmax
comp=Z,8.0nm,1.1s
KBZ **Khabaz** 130.38 59 PKP **PKiKP** 08 28 18.8 -0.3
comp=Z,3.4nm,0.8s,baz=329,slow=2.4,SNR=7.1
GNI **Garni** 130.86 64*c* *i*PKiKP **PKiKP** 08 28 21.0 +0.6
GNI pmax pmax
comp=Z,23nm,1.7s
GNI **Garni** 130.86 64 PKP **PKPdf** 08 28 19.6 0.0
comp=Z,4.0nm,0.5s,baz=178,slow=4.7,SNR=5.9
ZEI **Tsey** 130.89 61 *i* PKiKP **PKPdf** 08 28 19.0 -0.5
ZEI pmax pmax
comp=Z,12nm,1.3s
GROC **Groznyy** 132.33 61 *i* PKiKP **PKPdf** 08 28 21.9 -0.1
GROC pmax pmax
comp=Z,40nm,0.5s
PRGR **Permogore** 133.27 35 *e*PKiKP **PKPdf** 08 28 20.5 -2.6
BILL **Bilibino** 133.47 334*d* *i*PKiKP **PKiKP** 08 28 24.8 +0.2
BILL *e* 08 30 49.7
BILL pmax pmax
comp=Z,6.0nm,0.4s
MAK **Makhachkala** 133.51 61 *i* P **Pdif** 08 25 22.4 +0.4
MAK *i* 08 28 21.1
MAK *e* 08 35 28.6
MAK *e*SS SS 08 48 38.9 +1.0
MAK pmax pmax
comp=Z,173nm,1.3s
PETK **Petropavlovsk-** 140.49 313 PKiKP **PKPdf** 08 28 36.7 -0.1
PETK **Petropavlovsk-** 140.49 313 PKP **PKPdf** 08 28 36.7 -0.1
comp=Z,3.7nm,0.9s,baz=142,slow=7.3,SNR=4.0
SEY **Seymchan** 140.61 329 **PKPdf** 08 28 35.8 -0.9
SEY **Seymchan** 140.61 329*c* *i*PKiKP **PKiKP** 08 28 38.1 -1.2
SEY pmax pmax
comp=Z,23nm,2.5s
SEY **Seymchan** 140.61 329 PKP **PKPdf** 08 28 35.8 -0.9
comp=Z,8.4nm,1.0s,baz=85,slow=4.1,SNR=8.5
ARU **Arti** 140.67 41*c* *i*PKiKP **PKiKP** 08 28 38.7 -0.9
ARU pmax pmax
comp=Z,22nm,2.5s
TIXI **Tiksi** 141.50 349 **PKPdf** 08 28 38.3 +0.2
TIXI **Tiksi** 141.50 349*c* *i*PKiKP **PKPdf** 08 28 38.7 +0.7
TIXI pmax pmax
comp=Z,13nm,1.3s
TIXI **Tiksi** 141.50 349 PKP **PKPdf** 08 28 38.2 +0.2
comp=Z,6.2nm,0.9s,baz=312,slow=12,SNR=6.9
ABKAR **Akbulak array** 142.54 53 PKPdf **PKPdf** 08 28 41.5 +0.9
ABKAR **Akbulak array** 142.54 53 PKPdf **PKPdf** 08 28 41.7 +1.1
PCHI **Peechi** 142.68 123 *e*P **PKPdf** 08 28 41.0 -0.9
TOLI2 **Tolitoli** 144.18 203 PKPdf **PKPab** 08 28 41.3 -0.9
STKI **Sintang** 145.15 187 PKP **PKPdf** 08 28 46.1 -0.2
STKI PKP **PKPab** 08 28 46.7 +0.9
SBSI **Sibolga** 145.87 165 PKP **PKPdf** 08 28 47.2 -0.3
SBSI PKP sPKPab 08 28 59.3 +2.7
BRVK **Borovoye** 148.12 44 **PKPdf** 08 28 50.9 +0.8
BRVK **Borovoye** 148.12 44 *i* PKiKP **PKPdf** 08 28 50.4 +0.4
BVAR **Borovoye Array** 148.20 44 PKiKP **PKPdf** 08 28 50.7 +0.5
BVAR **Borovoye Array** 148.20 44 PKPbc **PKPdf** 08 28 50.6 +0.5
comp=Z,8.5nm,0.8s,baz=224,slow=3.8,SNR=3.0
KBL **Kabul** 148.52 79 **PKPdf** 08 28 50.2 -1.4
KBL PKPbc **PKPbc** 08 28 54.4 -0.8
KBL **PKPab** 08 28 58.7 0.0
KBL **Kabul** 148.52 79 PKiKP **PKPdf** 08 28 50.2 -1.4
KBL 08 28 54.4
KBL 08 28 58.7
HYBB **Hyderabad (bro** 148.89 117 *e*PKPbc **PKPbc** 08 28 55.9 -0.5
HYBB *e*PKiKP **PKiKP** 08 28 57.8 +0.1
HYBB *e*SKPdf **SKPdf** 08 32 25.1 -0.3
HYBB *e*SKSdf **SKSdf** 08 36 00.1 0.0
IPM **Ipoh** 149.15 167 **PKPbc** 08 28 56.6 -0.6
YAK **Yakutsk** 149.44 340 PKPdf **PKPdf** 08 28 51.0 -0.8
YAK **PKPbc** 08 28 55.7 -0.7
YAK **Yakutsk** 149.44 340 *e*PKP2 **PKPbc** 08 28 55.2 -1.1
YAK pmax pmax
comp=Z,50nm,0.8s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK **Yakutsk** 149.44 340 PKPbc **PKPbc** 08 28 54.5 -1.8
comp=E,14nm,0.5s,baz=51,slow=0.6,SNR=13
IUG **luzhnay** 149.99 65 *i* PKP2 **PKPbc** 08 28 58.1 -0.4
IUG **luzhnay** 149.99 65 *i* PKPbc **PKPbc** 08 28 58.1 -0.4
baz=65
IUG *i* PKPab **PKPab** 08 29 04.0 -0.3
baz=65
GAR **Garm** 150.14 71 **PKPdf** 08 28 54.1 +0.2
GAR PKPbc **PKiKP** 08 28 59.9 0.0
GAR PKPab **PKPab** 08 29 05.5 +0.4
KK31 **Karatay Array** 150.31 63 **PKPdf** 08 28 52.8 -1.1
KK31 PKPbc **PKiKP** 08 28 59.7 -0.2
KK31 **Karatay Array** 150.31 63 PKiKP **PKPdf** 08 28 52.8 -1.1
KK31 08 28 59.7
KKAR **Karatay Array** 150.31 63 PKPdf **PKPdf** 08 28 53.8 -0.2
KKAR PKPbc **PKPbc** 08 28 59.1 0.0
KKAR **Karatay Array** 150.31 63 PKPdf **PKPdf** 08 28 53.7 -0.2
KKAR PKPbc **PKPbc** 08 28 59.3 +0.2
KKAR **Karatay Array** 150.31 63 PKiKP **PKPbc** 08 28 59.1 0.0
KKAR 08 28 59.3
BRZS **Berezniki** 150.53 49 *e*PKiKP **PKPbc** 08 28 58.7 -0.7
BRZS **Berezniki** 150.53 49 *e*PKPbc **PKPbc** 08 28 58.7 -0.7
baz=49
BRZS *i* PKPab **PKPab** 08 29 05.8 -0.3
baz=49
BTK **Batken** 150.58 69 PKPdf **PKPdf** 08 28 54.6 +0.1
BTK PKPbc **PKPbc** 08 28 59.7 -0.2
BTK **Batken** 150.58 69 PKiKP **PKPdf** 08 28 54.6 +0.1
BTK 08 28 59.7
DZA **Taraz** 150.92 63 *i* PKiKP **PKPbc** 08 29 00.4 -0.2
DZA **Taraz** 150.92 63 *i* PKPbc **PKPbc** 08 29 00.5 -0.2
baz=63
BTLS **Baital** 152.61 58 *i* PKiKP **PKPdf** 08 28 57.3 0.0
BTLS **Baital** 152.61 58 *i* PKP **PKPdf** 08 28 57.4 0.0
baz=58
BTLS *i* PKPbc **PKiKP** 08 29 04.5 -0.1
baz=58
BTLS *i* PKPab **PKPab** 08 29 14.8 -0.2
baz=58
SGDS **Sogindy** 153.27 61 *e*PKiKP **PKPdf** 08 28 58.1 -0.3
SGDS **Sogindy** 153.27 61 *e*PKP **PKPdf** 08 28 58.1 -0.3
baz=62
SGDS *i* PKPbc **PKPbc** 08 29 05.5 -0.5
baz=62
SGDS *i* PKPab **PKPab** 08 29 17.0 -0.9
baz=62
KURBB **Kurchatov Arra** 153.78 44 PKP **PKPdf** 08 28 59.1 +0.3
comp=E,6.4nm,1.1s,baz=304,slow=2.2,SNR=19
KURBB PKPbc **sPKPdf** 08 29 07.0 0.0
comp=E,6.1nm,0.8s,baz=298,slow=2.7,SNR=23
KURBB PP **PP** 08 32 60.0 +5.7
comp=E,0.7nm,0.7s,baz=281,slow=6.4,SNR=4.7
KURK **Kurchatov** 153.79 44 PKiKP **PKPdf** 08 28 59.1 +0.3
KURK 08 29 07.0
KUU **Kurty** 154.43 60 *e*PKiKP **PKPdf** 08 28 59.1 -0.9
KUU **Kurty** 154.43 60 *e*PKP **PKPdf** 08 28 59.2 -0.9
baz=60
KUU *i* PKPab **PKPab** 08 29 22.6 -0.1
baz=60
KUU LR LR 09 43 35.6
baz=60
KSH **Kashi** 154.55 70 PKPbc **PKPdf** 08 29 01.3 +0.8
KSH pPKP sPKPdf 08 29 08.5 -0.1
KSH PP **PP** 08 32 57.8 -1.7
KSH AMB AMB
comp=E,190nm,6.2s
KSH LR LR
comp=E,800nm,22.3s
KSH LR LR
comp=E,760nm,22.0s
KSH LR LR
comp=E,770nm,21.3s
SEM **Semipalatinsk** 154.86 44 *e*PKiKP **PKPdf** 08 28 59.7 -0.9
SEM **Semipalatinsk** 154.86 44 *e*PKP **PKPdf** 08 28 59.7 -0.9
baz=44
SEM *e*PKPbc **sPKPdf** 08 29 08.5 -0.3
baz=44
SEM *e*PKPab **PKPab** 08 29 23.8 -0.8
baz=44
CHKK **Chushkaly** 154.89 60 *e*PKiKP **PKPdf** 08 29 00.3 -0.3
CHKK **Chushkaly** 154.89 60 *e*PKP **PKPdf** 08 29 00.4 -0.3
baz=60
AAA **Alma-Ata** 154.95 61 *e*PKiKP **PKPdf** 08 29 00.4 -0.4
AAA **Alma-Ata** 154.95 61 *e*PKP **PKPdf** 08 29 00.5 -0.4
baz=62
AAA *e*PKPab **PKPab** 08 29 24.6 -0.4
baz=62
MDOK **Medeo** 155.05 62 *e*PKiKP **PKPdf** 08 28 59.3 -1.8
MDOK **Medeo** 155.05 62 *e*PKP **PKPdf** 08 28 59.3 -1.8
baz=62
MDOK *e*PKPab **PKPab** 08 29 25.5 -0.1
baz=62
MDOK LR LR 09 42 25.9
baz=62
ZAA0 **Zalesovo Array** 155.19 33 PKPdf **PKPdf** 08 29 00.3 -0.3
ZAA0 PKPab **PKPab** 08 29 24.2 -1.4
ZALV **Zalesovo Beam** 155.19 33 PKPdf **PKPdf** 08 28 59.8 -0.9
ZALV PKPab **PKPab** 08 29 25.5 -0.1
ZALV **Zalesovo Beam** 155.19 33 PKiKP **PKPdf** 08 28 59.8 -0.9
ZALV **Zalesovo Beam** 155.19 33 PKP **PKPdf** 08 29 00.2 -0.4
comp=E,7.7nm,0.9s,baz=282,slow=2.9,SNR=21
ZALV PKPbc **sPKPdf** 08 29 09.6 +0.7
comp=E,6.8nm,0.8s,baz=264,slow=1.4,SNR=6.7
ARXS **Arharly** 155.42 59 *e*PKiKP **PKPdf** 08 29 00.6 -0.8
SATY **Saty** 156.05 61 *e*PKiKP **PKPdf** 08 29 02.0 -0.4
SATY **Saty** 156.05 61 *e*PKP **PKPdf** 08 29 02.0 -0.4
baz=61
SATY *i* PKPab **PKPab** 08 29 29.4 -0.5
baz=61
KPKS **Kokpek** 156.18 60 *e*PKiKP **PKPdf** 08 29 01.9 -0.6
KPKS **Kokpek** 156.18 60 *e*PKP **PKPdf** 08 29 01.9 -0.6
baz=60
KPKS *i* PKPab **PKPab** 08 29 30.3 -0.1
baz=60
ZEA **Zeya** 156.59 330 *i* PKiKP **PKPdf** 08 29 04.0 +1.5
SHLS **Shalkode** 156.79 61 *e*PKiKP **PKPdf** 08 29 03.8 +0.5
SHLS **Shalkode** 156.79 61 *e*PKP **PKPdf** 08 29 03.9 +0.5
baz=61
SHLS *e*PKPab **PKPab** 08 29 34.7 +1.7
baz=61
MAKZ **Makanchi** 157.43 50 PKPdf **PKPdf** 08 29 03.7 -0.2
MAKZ PKPab **PKPab** 08 29 35.1 -0.5
MAKZ **Makanchi** 157.43 50 PKP2 **PKPab** 08 29 35.1 -0.5
MAKZ 09 29 03.7
MK31 **Makanchi Array** 157.64 50 PKPdf **PKPdf** 08 29 03.2 -1.0
MK31 PKPab **PKPab** 08 29 36.0 -0.5
MK31 **Makanchi Array** 157.64 50 PKiKP **PKPdf** 08 29 03.2 -1.0
MK31 08 29 36.0
MKAR **Makanchi Array** 157.64 50 PKPdf **PKPdf** 08 29 03.6 -0.6
MKAR PKPab **PKPab** 08 29 35.7 -0.7
MKAR **Makanchi Array** 157.64 50 PKiKP **PKPdf** 08 29 03.6 -0.6
MKAR **Makanchi Array** 157.64 50 PKP **PKPdf** 08 29 04.0 -0.2
comp=E,2.1nm,0.8s,baz=336,slow=1.5,SNR=18
MKAR PKPab **PKPab** 08 29 36.3 -0.1
comp=E,3.1nm,0.7s,baz=267,slow=1.3,SNR=7.5
ZSN **Zaisan** 158.94 47 *e*PKiKP **PKPdf** 08 29 04.5 -1.2
ZSN **Zaisan** 158.94 47 *e*PKP **PKPdf** 08 29 04.6 -1.2
baz=47
UBPT **Khong Chiam** 160.38 174 PKPdf **PKPdf** 08 29 07.2 -1.0
UBPT PKPab **PKPab** 08 29 49.5 +0.6
CMAR **Chiang Mai Arr** 161.95 153 PKPdf **PKPdf** 08 29 09.1 -0.7
CMAR PKPab **PKPab** 08 29 54.7 -1.0
CMAR **Chiang Mai Arr** 161.95 153 PKiKP **PKPdf** 08 29 09.9 0.0
CMAR 08 29 54.6
CMAR **Chiang Mai Arr** 161.95 153 PKP **PKPdf** 08 29 09.9 0.0
comp=E,1.2nm,0.3s,baz=268,slow=2.3,SNR=14
CMAR PKPab **PKPab** 08 29 54.6 -1.1
comp=E,1.4nm,0.3s,baz=216,slow=5.2,SNR=8.5
CHTO **Chiang Mai** 162.27 152 PKPdf **PKPdf** 08 29 09.9 -0.3
CHTO PKPab **PKPab** 08 29 56.4 -0.7
CHTO **Chiang Mai** 162.27 152 PKP2 **PKPab** 08 29 56.4 -0.7
CHTO 09 29 09.9
WMQ **Urumqi** 162.32 54 *e*PKP **PKPdf** 08 29 10.0 +0.4
WMQ LR LR
comp=E,340nm,21.5s
WMQ LR LR
comp=E,420nm,23.3s
WMQ LR LR
comp=E,610nm,23.3s
MOY **Mondy** 162.59 14 *e*PKP2 **PKPab** 08 29 58.7 +0.8
KSRS **Korea Array** 163.31 285 PKiKP **PKPdf** 08 29 10.6 0.0
KSRS 08 30 02.2
KSRS **Korea Array** 163.31 285 PKP **PKPdf** 08 29 10.6 0.0
comp=E,2.3nm,1.0s,baz=119,slow=1.6,SNR=4.1
KSRS PKPab **PKPab** 08 30 02.2 +0.8
comp=E,4.8nm,1.0s,baz=102,slow=4.3,SNR=5.6
SHL **Shillong** 163.63 120 PKPdf **PKPdf** 08 29 11.0 -0.6
SHL PKPab **PKPab** 08 30 02.6 -0.7
SHL **Shillong** 163.63 120 PKiKP **PKPdf** 08 29 11.0 -0.6
SHL 08 30 02.6
QIZ **Qiongzhong** 164.06 188 PKP **PKPdf** 08 29 11.3 -0.6
QIZ PP **PP** 08 33 53.8 +4.4
QIZ SS SS 08 54 22.0 +4.3
QIZ LR LR
comp=E,290nm,17.3s
QIZ LR LR
comp=E,210nm,20.0s
QIZ LR LR
comp=E,340nm,24.3s
CRAI **Chiangrai** 164.09 155 PKPdf **PKPdf** 08 29 11.4 -0.5
CRAI PKPab **PKPab** 08 30 05.0 -0.1
ULN **Ulaanbaatar** 167.04 1 PKPdf **PKPdf** 08 29 13.2 -0.5
ULN PKPab **PKPab** 08 30 18.7 +1.1
ULN **Ulaanbaatar** 167.04 1 PKiKP **PKPdf** 08 29 13.2 -0.5
SONM **Songino Array** 167.05 3 PKPdf **PKPdf** 08 29 13.0 -0.7
SONM PKPab **PKPab** 08 30 18.3 +0.7
SONM **Songino Array** 167.05 3 PKiKP **PKPdf** 08 29 13.0 -0.7
SONM 08 30 18.3
SONM **Songino Array** 167.05 3 PKP **PKPdf** 08 29 13.2 -0.5
comp=E,0.5nm,0.3s,baz=140,slow=2.3,SNR=5.1
SONM PKPab **PKPab** 08 30 17.6 +0.1
comp=E,5.8nm,0.9s,baz=338,slow=3.8,SNR=13
SONM PP PP 08 34 15.4 +10
comp=E,0.5nm,0.4s,baz=343,slow=4.6,SNR=3.7
XLT **XiLinHaoTe** 168.83 326 *e*PKP **PKPdf** 08 29 15.3 +0.3
KMI **Kunming** 169.43 156 ⇑PKP **PKPdf** 08 29 12.0 -4.1
NJ2 **Nanjing** 170.10 257 *e*PKP **PKPdf** 08 29 15.5 -0.5
PZH **PanZhiHua** 170.28 148 PKP **PKPdf** 08 29 15.5 -0.9
PZH PP **PP** 08 34 20.8 -1.2
PZH SS SS 08 55 22.0 +0.4
PZH AMB AMB
comp=E,210nm,5.4s
PZH LR LR
comp=E,310nm,17.5s
PZH LR LR
comp=E,250nm,18.0s
PZH LR LR
comp=E,320nm,17.7s
GYA **Guiyang** 171.56 175 PKP **PKPdf** 08 29 19.0 +1.9
GYA PKPab **PKPab** 08 30 38.3 +0.3
GYA SS SS 08 55 32.8 -0.5
GYA AMB AMB
comp=E,220nm,14.8s
GYA LR LR
comp=E,510nm,18.4s
TIA **Tai'an** 172.04 282 *e*PKP **PKPdf** 08 29 13.3 -3.6
GTA **Gaotai** 172.39 51 ⇓PKP **PKPdf** 08 29 17.5 +0.4
GTA pPKP pPKPdf 08 29 24.0 +0.8
GTA sPKP 08 29 28.5
GTA PKPab **PKPab** 08 30 42.5 +0.8
GTA PP **PP** 08 34 34.0 +0.9
GTA AMB AMB
comp=E,220nm,8.4s
GTA LR LR
comp=E,340nm,21.1s
GTA LR LR
comp=E,370nm,20.7s
GTA LR LR
comp=E,590nm,20.0s
HHC **Hu-ho-hao-te** 173.24 333 *e*PKP **PKPdf** 08 29 14.5 -2.9
HNS **HongShan** 173.65 295 ⇑PKP **PKPdf** 08 29 17.5 +0.1
HNS PP **PP** 08 34 44.8 +5.3
HNS SKKS 08 41 26.3
HNS LR LR
comp=E,570nm,15.6s
HNS LR LR
comp=E,510nm,19.4s

CD2	**Chengdu**	**174.94**	**141**	PKP	**PKPdf**	**08 29 17.5**	**-0.7**
CD2				PKPab	**PKPab**	**08 30 52.0**	**-1.0**
CD2				SS	SS	08 56 08.5	+1.3
CD2				LR	LR		
	comp=E,340nm,13.6s						
CD2				LR	LR		
	comp=E,400nm,15.0s						
CD2				LR	LR		
	comp=E,380nm,19.2s						
LZH	**Lanzhou**	**176.79**	**67**	ePKP	**PKPdf**	**08 29 17.5**	**-1.1**
LZH				pPKP	sPKPdf	08 29 27.3	+0.5
LZH				sPKP		08 29 34.5	
LZH				PKPab	**PKPab**	**08 31 00.5**	**-0.9**
LZH				PP	**PP**	**08 34 54.3**	**-0.6**
LZH				AMB	AMB		
	comp=E,470nm,9.3s						
LZH				LR	LR		
	comp=E,470nm,19.3s						
LZH				LR	LR		
	comp=E,560nm,19.9s						
LZH				LR	LR		
	comp=E,640nm,18.9s						
XAN	**Xi'an**	**178.54**	**235**	PKP	**PKPdf**	**08 29 18.3**	**-0.5**
XAN				pPKP	sPKPdf	08 29 29.3	+2.4

*NEIC **30** 08:11:42.5±1.8,54.˚73N±0.˚07×160.˚19W±0.˚09, h30km±13km, ML2.9/14, ML2.7/25(AEIC), Error ellipse: s-maj=11.9km s-min=5.6km az=150.0*

AEIC 30 08:11:42.1±0.7,**54.68N**±0.˚04×**160.23W**±0.˚04,**h7**km±6km, **Error ellipse: s-maj=6.5km s-min=3.0km az=189.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.40**	**69**		Pg	08 11 52.5	+0.7
CNBA					Sb	08 11 57.3	-0.3
CNBA	**Chernabura Isl**	**0.40**	**69**	IAML		08 11 57.7	
	comp=E,1µm,0.7s						
CNBA				IAML		08 11 57.7	
	comp=N,891nm,0.4s						
SDPT	**Sand Point**	**0.68**	**348**		Sb	08 12 05.4	-0.5
PVV	**Pavlof Volcano**	**1.13**	**308**		Pg	08 12 02.1	-1.7
PVV					Sg	08 12 17.1	-1.4
PS1A	**Pavlof South-1**	**1.14**	**311**		Pg	08 12 02.5	-1.5
PS4A	**Pavlof South-4**	**1.15**	**306**		Pg	08 12 02.3	-1.8
HAG	**Hague Volcano**	**1.16**	**304**		Pg	08 12 02.3	-1.9
DT1	**Dutton Round H**	**1.26**	**291**		Pn	08 12 03.1	-2.9
PN7A	**Pavlof North-7**	**1.27**	**307**		Pn	08 12 04.4	-1.8
VNFG	**Fog Glacier, M**	**1.65**	**13**		Pn	08 12 09.8	-1.7
VNHG	**Veniaminof 1**	**1.66**	**21**		Pn	08 12 09.7	-1.9
FALS	**False Pass**	**1.85**	**277**		Pn	08 12 12.2	-2.0
FALS					Sn	08 12 36.3	-1.6
CHGN	**Chignik**	**1.92**	**32**	Pn	Pn	08 12 12.2	-3.0
CHGN				IAML		08 12 42.5	
	comp=E,86nm,0.1s						
ISLZ	**Isanotski Laza**	**2.02**	**273**		Pn	08 12 14.4	-2.1
ISNN	**Isanotski Nort**	**2.06**	**276**		Pn	08 12 15.8	-1.3
AZAC	**Aniakchak**	**2.49**	**26**		Pn	08 12 21.3	-1.8
CHIR	**Chirikof Islan**	**2.88**	**65**		Pn	08 12 24.7	-3.6
CHIR	**Chirikof Islan**	**2.88**	**65**	IAML		08 13 37.2	
	comp=E,42nm,1.7s						
CHIR				IAML		08 14 08.5	
	comp=N,49nm,1.9s						
AKSA	**Akutan Strait**	**3.24**	**263**		Pn	08 12 31.7	-1.6
AKUT	**Akutan**	**3.28**	**263**	Pn	Pn	08 12 32.2	-1.7
AKUT				IAML		08 12 58.3	
	comp=N,22nm,2.2s						
AKUT				IAML		08 13 20.6	
	comp=E,25nm,2.2s						
R17K	**Ugashik Creek**	**3.66**	**34**		Pn	08 12 37.0	-2.0
UNV	**Unalaska Valle**	**3.77**	**260**	Pn	Pn	08 12 38.9	-1.6
SII	**Sitkinak Islan**	**3.91**	**59**	Pn	Pn	08 12 38.9	-3.6
OHAK	**Old Harbor**	**4.66**	**54**		Pn	08 12 48.7	-4.1
OHAK	**Old Harbor**	**4.66**	**54**	IAML		08 14 06.4	
	comp=E,12nm,2.5s						
KDAK	**Kodiak Island**	**5.28**	**51**	Pn	Pn	08 12 57.4	-3.9
KDAK				IAML		08 14 46.9	
	comp=E,7.6nm,2.0s						
KDAK				IAML		08 14 58.5	
	comp=E,6.6nm,2.3s						
O18K	**Koktuh Hills**	**5.86**	**26**	Pn	Pn	08 13 07.9	-1.3

*TUL **30** 08:24:55.3±1.1,36.˚938N±0.˚010×97.˚91W±0.˚01,h5km±5km, ML3.0,mb_Lg2.8/63(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=174.0*

*ANF **30** 08:24:55.9±0.3,36.˚91N×97.˚92W,h5km,ML3.6/16, Error ellipse: s-maj=3.8km s-min=2.9km az=86.0*

*NEIC **30** 08:24:55.7±0.9,36.˚923N±0.˚008×97.˚90W±0.˚01,h6km±5km, Error ellipse: s-maj=1.5km s-min=1.0km az=57.0*

ISC 30 08:24:55.6±0.8,**36.92N**±0.˚02×**97.90W**±0.˚02,**h6**km±6km, **n98**,σ0**s58**/106,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.06**	**305**		**Pg**	**08 24 56.9**	**-0.2**
KAN14				Sg	**Sg**	**08 24 58.0**	**-0.3**
GC02	**Grant County #**	**0.08**	**156**	Pg	**Pg**	**08 24 57.7**	**+0.3**
GC02				Sg	**Sg**	**08 24 59.1**	**+0.5**
KAN17	**Caldwell West**	**0.16**	**41**	Pg	**Pg**	**08 24 58.9**	**0.0**
KAN17				Sg	**Sg**	**08 25 01.2**	**+0.2**
KAN05	**Bluff City Nor**	**0.19**	**6**		**Pg**	**08 24 59.2**	**-0.1**
KAN05				Sg	**Sg**	**08 25 01.9**	**0.0**
KAN10	**Anthony SW Sta**	**0.26**	**322**	Pg	**Pg**	**08 25 00.6**	**0.0**
KAN10				Sg	**Sg**	**08 25 03.4**	**-0.6**
KAN01	**Argonia South**	**0.26**	**26**	Pg	**Pg**	**08 25 00.6**	**0.0**
KAN01				Sg	**Sg**	**08 25 04.2**	**+0.1**
OK032	**Salt Plains WL**	**0.28**	**245**	Pg	**Pg**	**08 25 01.3**	**+0.3**
OK032				Sg	**Sg**	**08 25 04.8**	**+0.2**
KAN08	**Anthony NE Sta**	**0.31**	**349**		**Pg**	**08 25 01.6**	**-0.1**
KAN08				Sg	**Sg**	**08 25 06.2**	**+0.4**
KAN09	**Caldwell North**	**0.31**	**46**		**Pg**	**08 25 01.8**	**+0.1**
KAN09				Sg	**Sg**	**08 25 05.5**	**-0.2**
KAN06	**Argonia West S**	**0.33**	**6**		**Pg**	**08 25 01.9**	**-0.1**
KAN06				Sg	**Sg**	**08 25 06.2**	**-0.1**
KAN16	**Harper SW Stat**	**0.33**	**336**	Pg	**Pg**	**08 25 02.0**	**-0.1**
KAN16				Sg	**Sg**	**08 25 06.1**	**-0.3**
KAN13	**South Haven SW**	**0.35**	**75**	Pg	**Pg**	**08 25 02.5**	**+0.1**
KAN13				Sg	**Sg**	**08 25 07.1**	**+0.1**
KAN12	**Harper NE Stat**	**0.38**	**348**	Pg	**Pg**	**08 25 02.9**	**-0.1**
KAN12				Sg	**Sg**	**08 25 08.4**	**+0.3**
KS21	**Milan North St**	**0.41**	**27**	Pg	**Pg**	**08 25 03.5**	**-0.1**
KS21				Sg	**Sg**	**08 25 09.0**	**+0.1**
KS20	**Mayfield South**	**0.41**	**42**	Pg	**Pg**	**08 25 03.6**	**0.0**
KS20				Sg	**Sg**	**08 25 09.4**	**+0.4**
CROK	**Carrier**	**0.42**	**189**	Pg	**Pg**	**08 25 04.0**	**+0.3**
CROK				Sg	**Sg**	**08 25 09.8**	**+0.6**
BLOK	**Blackwell**	**0.57**	**106**	Pg	**Pg**	**08 25 06.6**	**+0.1**
BLOK				Sg	**Sg**	**08 25 14.3**	**+0.3**
OK035	**E0210 Rd and N**	**0.69**	**252**		**Pg**	**08 25 08.8**	**+0.1**
OK035				Sg	**Sg**	**08 25 18.1**	**+0.4**
OK038	**West end E0370**	**0.81**	**237**		**Pg**	**08 25 10.2**	**-0.9**
OK038				Sg	**Sg**	**08 25 21.2**	**-0.4**
NOKA	**Waynoka**	**0.88**	**251**	Pg	**Pg**	**08 25 12.7**	**+0.3**
NOKA				Sg	**Sg**	**08 25 24.3**	**+0.5**
U32A	**Winter Ranch,**	**1.04**	**239**	Pg	**Pg**	**08 25 15.3**	**-0.3**
U32A				Sg	**Sg**	**08 25 28.6**	**-0.4**
U32A	**Winter Ranch,**	**1.04**	**239**	P	**Pg**	**08 25 15.2**	**-0.3**
	baz=57,SNR=8.4						
T35A	**Sooner Cattle**	**1.11**	**90**	Pg	**Pg**	**08 25 16.7**	**-0.2**
T35A				Sg	**Sg**	**08 25 31.6**	**+0.3**
T35B	**Sooner Cattle**	**1.11**	**90**	P	**Pg**	**08 25 16.6**	**-0.3**
	baz=272,SNR=69						
OK029	**Liberty Lake**	**1.18**	**162**	Pg	**Pg**	**08 25 17.7**	**-0.4**
OK029				Sg	**Sg**	**08 25 32.9**	**-0.6**
QUOK	**Quay**	**1.22**	**128**		**Pg**	**08 25 18.1**	**-0.8**
QUOK				Sg	**Sb**	**08 25 34.9**	**-0.1**
BCOK	**Bluff Creek, N**	**1.28**	**169**		**Pn**	**08 25 19.4**	**-0.7**
BCOK				Sg	**Sg**	**08 25 37.1**	**+0.3**
OK031	**S. Brethren Rd**	**1.29**	**138**		**Pn**	**08 25 19.3**	**-0.9**
OK031				Sg	**Sn**	**08 25 37.4**	**-0.4**
OK034	**N. Norfolk Rd.**	**1.32**	**133**	Pn	**Pn**	**08 25 20.1**	**-0.5**
OK034				Sg	**Sb**	**08 25 37.8**	**-0.1**
OK030	**Cody Creek RV**	**1.34**	**137**	Pn	**Pn**	**08 25 20.4**	**-0.5**
OK025	**Westminster Rd**	**1.41**	**161**		**Pn**	**08 25 22.0**	**+0.1**
CSTR	**Hydro, Custer**	**1.42**	**207**		**Pn**	**08 25 21.8**	**-0.2**
ELIS	**Ellis County**	**1.49**	**236**		**Pb**	**08 25 23.4**	**-0.4**
OKCSW	**OKLAHOMA CITY**	**1.56**	**166**		**Pb**	**08 25 24.4**	**-0.5**
DEOK	**Depew**	**1.56**	**133**		**Pn**	**08 25 23.6**	**-0.4**
R32A	**Long Quarter,**	**1.63**	**337**		**Pn**	**08 25 24.9**	**0.0**
R32A	**Long Quarter,**	**1.63**	**337**	P	**Pn**	**08 25 25.3**	**+0.4**
	baz=157,SNR=48						
R32A				S	**Sb**	**08 25 46.5**	**-0.5**
	baz=157						
FNO	**Franklin**	**1.71**	**166**		**Pn**	**08 25 26.2**	**+0.3**
TUL1	**Leonard**	**1.98**	**120**		**Pb**	**08 25 30.8**	**-1.1**
TUL1	**Leonard**	**1.98**	**120**	P	**Pb**	**08 25 30.9**	**-1.1**
	baz=302						
WMOK	**Wichita Mounta**	**2.29**	**198**		**Pn**	**08 25 34.5**	**+0.5**
WMOK	**Wichita Mounta**	**2.29**	**198**	P	**Pn**	**08 25 34.6**	**+0.6**
	baz=18,SNR=14						
X34A	**Smith Ranch, M**	**2.32**	**179**	Pn	**Pn**	**08 25 35.7**	**+1.4**
X34A				IAmb_Lg		08 26 11.2	
	comp=Z,33nm,0.7s						
CBKS	**Cedar Bluff**	**2.38**	**323**		**Pn**	**08 25 36.3**	**+1.0**
CBKS	**Cedar Bluff**	**2.38**	**323**	S	**Sb**	**08 26 09.0**	**+0.3**
	baz=142						
KSU1	**Kansas State U**	**2.40**	**25**	Pn	**Pn**	**08 25 35.8**	**+0.3**
KSU1	**Kansas State U**	**2.40**	**25**	P	**Pn**	**08 25 36.0**	**+0.5**
	baz=206,SNR=11						
KSU1				S	**Sb**	**08 26 09.0**	**-0.2**
	baz=206						
RLO	**Rose Lookout**	**2.44**	**107**		**Pn**	**08 25 37.1**	**+1.2**
U38A	**Gravette**	**2.86**	**99**		**Pn**	**08 25 43.1**	**+1.2**
U38A	**Gravette**	**2.86**	**99**	P	**Pn**	**08 25 43.0**	**+1.2**
	baz=281,SNR=18						
LOOK	**Love County**	**2.98**	**168**	Pn	**Pn**	**08 25 44.4**	**+0.9**
LOOK				IAmb_Lg		08 26 36.9	
	comp=Z,12nm,0.8s						
X37A	**Clayton**	**3.10**	**138**	Pn	**Pn**	**08 25 46.2**	**+1.1**
X37A				IAmb_Lg		08 26 39.5	
	comp=Z,42nm,0.8s						
X37A	**Clayton**	**3.10**	**138**	P	**Pn**	**08 25 45.6**	**+0.4**
	baz=320,SNR=26						
HHAR	**Hobbs**	**3.25**	**100**		**Pn**	**08 25 47.5**	**+0.4**
HHAR	**Hobbs**	**3.25**	**100**	P	**Pn**	**08 25 48.1**	**+0.9**
	baz=283						
Z35A	**Perchaven, San**	**3.62**	**171**	Pn	**Pn**	**08 25 52.3**	**+0.1**
Z35A	**Perchaven, San**	**3.62**	**171**	P	**Pn**	**08 25 52.9**	**+0.7**
	baz=352,SNR=9.7						
Z35A				S	**Sn**	**08 26 36.7**	**+1.4**
	baz=352						
AMTX	**Amarillo**	**3.68**	**238**	IAmb_Lg		08 27 01.8	
	comp=Z,32nm,0.9s						
S39A	**Bolivar**	**3.73**	**77**	Pn	**Pn**	**08 25 54.1**	**+0.3**
S39A				IAmb_Lg		08 26 56.7	
	comp=Z,15nm,0.9s						
N33A	**J Bar K, Exete**	**3.83**	**5**	IAmb_Lg		08 27 04.4	
	comp=Z,24nm,0.8s						
MIAR	**Mount Ida**	**4.24**	**123**		**Pn**	**08 26 02.5**	**+1.7**
MIAR				IAmb_Lg		08 27 12.2	
	comp=Z,19nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.28**	**301**		**Pn**	**08 26 01.5**	**0.0**
KSCO				IAmb_Lg		08 27 14.3	
	comp=Z,19nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.28**	**301**	P	**Pn**	**08 26 01.9**	**+0.5**
	baz=118						
N35A	**Tabor**	**4.31**	**23**		**Pn**	**08 26 02.0**	**+0.3**
N35A	**Tabor**	**4.31**	**23**	P	**Pn**	**08 26 02.3**	**+0.6**
	baz=205,SNR=5.0						
Z38A	**Mt. Pleasant**	**4.36**	**146**		**Pn**	**08 26 02.5**	**+0.1**
P38A	**Dawn**	**4.37**	**51**		**Pn**	**08 26 03.0**	**+0.5**
P38A				IAmb_Lg		08 27 24.2	
	comp=Z,21nm,0.8s						
P38A	**Dawn**	**4.37**	**51**	P	**Pn**	**08 26 02.9**	**+0.4**
	baz=233,SNR=20						
BGNE	**Belgrade**	**4.49**	**358**		**Pn**	**08 26 04.5**	**+0.4**
BGNE	**Belgrade**	**4.49**	**358**	P	**Pn**	**08 26 04.2**	**0.0**
	baz=178,SNR=7.7						
MGMO	**Mountain Grove**	**4.51**	**85**		**Pn**	**08 26 04.8**	**+0.3**
MGMO				IAmb_Lg		08 27 20.3	
	comp=Z,14nm,0.8s						
R40A	**Maddies Statio**	**4.67**	**71**		**Pn**	**08 26 07.5**	**+0.8**
R40A				IAmb_Lg		08 27 30.1	
	comp=Z,12nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.77**	**101**		**Pn**	**08 26 09.7**	**+1.7**
FCAR				IAmb_Lg		08 27 28.1	
	comp=Z,12nm,0.8s						
WHAR	**Wooly Hollow**	**4.83**	**108**		**Pn**	**08 26 09.4**	**+0.6**
WHAR				IAmb_Lg		08 27 31.1	
	comp=Z,27nm,0.9s						
WHTX	**Lake Whitney,**	**4.93**	**176**		**Pn**	**08 26 09.9**	**-0.3**
WHTX	**Lake Whitney,**	**4.93**	**176**	P	**Pn**	**08 26 10.3**	**+0.1**
	baz=355,SNR=21						
WLAR	**White Oak Lake**	**5.07**	**128**	IAmb_Lg		08 27 44.9	
	comp=Z,17nm,0.9s						
OGNE	**Ogallala**	**5.15**	**323**	IAmb_Lg		08 27 46.3	
	comp=Z,22nm,0.8s						
237A	**Washetta, Mont**	**5.20**	**160**	IAmb_Lg		08 27 54.1	
	comp=Z,16nm,1.0s						
T25A	**Trinidad**	**5.21**	**274**	IAmb_Lg		08 27 52.2	
	comp=Z,10nm,0.8s						
P40A	**Paris**	**5.29**	**59**	Pn	**Pn**	**08 26 15.2**	**+0.1**
P40A				IAmb_Lg		08 27 45.0	
	comp=Z,19nm,0.7s						
N38A	**Joes South For**	**5.31**	**42**	IAmb_Lg		08 27 54.3	
	comp=Z,15nm,0.7s						
N38A	**Joes South For**	**5.31**	**42**	P	**Pn**	**08 26 15.5**	**0.0**
	baz=225,SNR=8.0						
CCM	**Cathedral Cave**	**5.41**	**76**	IAmb_Lg		08 27 58.0	
	comp=Z,11nm,0.7s						
K31A	**O'Neill**	**5.73**	**354**	IAmb_Lg		08 28 07.5	
	comp=Z,24nm,0.8s						
CCAR	**Cane Creek**	**5.83**	**119**	IAmb_Lg		08 28 12.8	
	comp=Z,11nm,0.7s						
435B	**Jarrell**	**6.13**	**177**	IAmb_Lg		08 28 20.8	
	comp=Z,17nm,1.1s						
S44A	**Carbondale**	**6.93**	**81**	IAmb_Lg		08 28 40.4	
	comp=Z,11nm,0.8s						
SIUC	**Southern Illin**	**6.96**	**81**	IAmb_Lg		08 28 48.0	
	comp=Z,10nm,0.9s						
W45A	**Hickory Valley**	**7.28**	**101**	IAmb_Lg		08 28 47.9	
	comp=Z,17nm,1.0s						
L40A	**Anamosa**	**7.28**	**43**	IAmb_Lg		08 28 54.3	
	comp=Z,13nm,0.9s						
PHWY	**Pilot Hill**	**7.33**	**309**	IAmb_Lg		08 29 00.5	
	comp=Z,9.3nm,0.9s						
N23A	**Red Feather La**	**7.42**	**305**	IAmb_Lg		08 28 54.5	
	comp=Z,13nm,0.8s						
O44A	**Mansfield**	**8.06**	**64**	IAmb_Lg		08 29 12.5	
	comp=Z,12nm,0.7s						
JFWS	**Jewell Farm**	**8.39**	**42**	IAmb_Lg		08 29 42.6	
	comp=Z,9.8nm,0.7s						
I40A	**Norwalk**	**8.90**	**36**	IAmb_Lg		08 29 46.9	
	comp=Z,6.7nm,0.9s						
F33A	**5 Mile Ranch,**	**8.99**	**7**	IAmb_Lg		08 29 50.0	
	comp=Z,9.7nm,1.0s						
SPMN	**Marine on St.**	**9.14**	**23**	IAmb_Lg		08 29 51.3	
	comp=Z,5.3nm,0.8s						

IDC 30 08:32:03.1±2.6,**54.12N**×**86.46E**,**h0**km,**mbtmp3.2**/2, **ML2.9**/2, **Error ellipse: s-maj=20.4km s-min=12.7km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**261**	*i*		08 38 30.0	
	baz=81,slow=320,SNR=1.1						
ZALV	**Zalesovo Beam**	**0.98**	**261**	Pg	Pg	08 32 20.8	-1.2
	1.0nm,0.3s,baz=77,slow=17,SNR=6.7						
ZALV				Lg	Lg	08 32 35.7	
	2.1nm,0.3s,baz=79,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**5.99**	**237**	Pn	Pn	08 33 33.8	+0.9
	0.2nm,0.3s,baz=54,slow=13,SNR=9.7						
KURBB				Lg	Lg	08 35 14.2	
	0.1nm,0.3s,baz=56,slow=34,SNR=4.8						
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**7.80**	**202**	Pn	Pn	08 33 58.8	+1.0
	0.2nm,0.3s,baz=26,slow=12,SNR=5.1						
MKAR				Lg	Lg	08 36 09.6	
	baz=18,slow=31						
	0.5nm,0.4s						

ROM 30 08:35:58.6±0.1,**42.633N**±0.˚004×**13.219E**±0.˚006, **h13**km±1km,**ML1.6**/14,**6C**,**Error ellipse: s-maj=0.5km s-min=0.3km az=71.0**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.07**	**4**	P	Pg	08 36 01.8	+0.4
T1202				S	Sg	08 36 03.8	+0.4
RM33	**Pellescritta (**	**0.12**	**181**	↑P	Pb	08 36 02.5	-0.4
RM33				S	Sg	08 36 05.0	+0.6
RM33				AML	AML		
	comp=E,422µm,1.0s						
RM33				AML	AML		
	comp=N,354µm,0.4s						
LNSS	**Leonessa**	**0.14**	**257**	↑P	Pg	08 36 02.5	+0.3
LNSS				S	Sg	08 36 05.1	+0.5
LNSS				AML	AML		
	comp=N,708µm,0.2s						
LNSS				AML	AML		
	comp=E,732µm,0.4s						
LNSS				AML	AML		
	comp=N,708µm,0.2s						
T1244	**Arquata del Tr**	**0.14**	**25**	↑P	Pg	08 36 02.6	+0.5
T1244				S	Sg	08 36 05.3	+0.6
T1244				AML	AML		
	comp=E,1376µm,0.1s						
T1244				AML	AML		
	comp=N,758µm,1.4s						
T1244				AML	AML		
	comp=E,1365µm,0.1s						
T1244				AML	AML		
	comp=N,681µm,0.3s						
T1244				AML	AML		
	comp=E,1375µm,0.1s						
T1244				AML	AML		
	comp=N,758µm,1.4s						
T1244				AML	AML		
	comp=E,1364µm,0.1s						
T1244				AML	AML		
	comp=N,676µm,0.3s						
CAMP	**Campotosto**	**0.17**	**124**	P	Pg	08 36 03.2	+0.5
CAMP				S	Sb	08 36 06.4	-0.7
CAMP				AML	AML		
	comp=E,64µm,0.2s						
CAMP				AML	AML		
	comp=N,64µm,1.2s						
T1243	**Rocca Santa Ma**	**0.18**	**69**	P	Pg	08 36 03.2	+0.3
T1243				S	Sg	08 36 06.4	+0.7
T1242	**Castelluccio d**	**0.20**	**357**	P	Pg	08 36 01.7	-1.4
T1242				S	Sg	08 36 06.9	+0.7
T1242				AML	AML		
	comp=E,306µm,0.4s						
T1242				AML	AML		
	comp=N,520µm,0.2s						
T1242				AML	AML		
	comp=E,305µm,0.4s						
NRCA	**Norcia**	**0.21**	**339**	P	Pg	08 36 03.4	+0.1
NRCA				S	Sg	08 36 07.0	+0.4
NRCA				AML	AML		
	comp=E,626µm,0.1s						
NRCA				AML	AML		
	comp=N,666µm,0.1s						
T1241	**Roccafluvione,**	**0.27**	**35**	↑P	Pg	08 36 04.7	+0.4
T1241				S	Sg	08 36 09.0	+0.8
T1241				AML	AML		
	comp=E,374µm,1.3s						
T1241				AML	AML		
	comp=E,373µm,1.3s						
T1241				AML	AML		
	comp=N,328µm,1.0s						
T1241				AML	AML		
	comp=N,83µm,0.4s						
T1241				AML	AML		
	comp=E,200µm,0.2s						
MMO1	**Montemonaco**	**0.28**	**17**	P	Pg	08 36 04.8	+0.3
MMO1				S	Sb	08 36 09.4	-0.8
MC2	**Monte Cornacci**	**0.28**	**356**	P	Pg	08 36 04.4	-0.1
MC2				S	Sb	08 36 09.7	-0.7
TERO	**Teramo**	**0.28**	**92**	↑P	Pg	08 36 04.9	+0.4
TERO				S	Sg	08 36 09.3	+0.8
TERO				AML	AML		
	comp=E,129µm,0.5s						
TERO				AML	AML		
	comp=N,138µm,0.1s						
GIGS	**Gran Sasso**	**0.32**	**125**	P	Pg	08 36 05.5	+0.3
GIGS				S	Sb	08 36 10.4	-0.9
GIGS				AML	AML		
	comp=E,32µm,0.2s						
GIGS				AML	AML		
	comp=E,33µm,0.2s						
GIGS				AML	AML		
	comp=N,26µm,0.1s						
ARRO	**Arrone**	**0.34**	**261**	P	Pg	08 36 05.7	+0.2
ARRO				S	Sg	08 36 10.9	+0.9
ARRO				AML	AML		
	comp=E,85µm,0.2s						
ARRO				AML	AML		
	comp=N,72µm,0.2s						
FIAM	**Fiamignano**	**0.37**	**192**	P	Pg	08 36 06.4	+0.3
FIAM				S	Sb	08 36 12.4	-0.5
FIAM				AML	AML		
	comp=N,52µm,0.9s						
FIAM				AML	AML		
	comp=E,80µm,0.3s						
FDMO	**Fiordimonte**	**0.41**	**347**	↑P	Pg	08 36 07.2	+0.3
FDMO				S	Sb	08 36 13.9	-0.3
FDMO				AML	AML		
	comp=E,38µm,0.2s						
FDMO				AML	AML		
	comp=N,39µm,0.2s						
CESI	**CESI - Serrava**	**0.44**	**328**	P	Pg	08 36 06.5	-0.8
CESI				S	Sb	08 36 14.4	-0.4
CESI				AML	AML		
	comp=N,47µm,0.2s						
CESI				AML	AML		
	comp=E,31µm,1.3s						
CSP1	**Cessapalombo**	**0.46**	**359**	P	Pg	08 36 07.8	+0.1
CSP1				S	Sb	08 36 15.2	-0.3
EL6	**Elcito**	**0.70**	**353**	P	Pg	08 36 11.1	-1.2
EL6				S	Sb	08 36 23.1	+0.7
LATB	**Latina**	**1.15**	**190**	S	Sb	08 36 35.0	-0.3

*IPEC **30** 08:44:04.4±0.2,51.˚54N×16.˚25E,h0km,ML2.4/5, Error ellipse: s-maj=1.8km s-min=1.0km az=31.0*

*PRU **30** 08:44:05.9±0.0,51.˚47N×16.˚17E,h0km*

*VIE **30** 08:44:07.6±1.1,51.˚32N×15.˚85E,h0km,mb2.4/4,ml2.7/5, Error ellipse: s-maj=7.1km s-min=6.1km az=3.0 79 km NE of Liberec Suspected Mining induced.*

ISC 30 08:44:05.1±1.3,**51.48N**±0.˚06×**16.19E**±0.˚03,**h0**km,**n28**, σ0**s66**/47,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**174**	*e*Pg	**Pb**	**08 44 18.2**	**-0.9**
KSP				*e*Sg	**Sg**	**08 44 27.1**	**+1.5**
CHVC	**Chvalec**	**0.89**	**185**	*e*SG	**Sb**	**08 44 35.3**	**-0.7**
OSTC	**Ostas**	**0.92**	**179**	*e*PG	**Pb**	**08 44 23.4**	**-0.6**
OSTC				*e*SG	**Sb**	**08 44 36.1**	**-0.7**
	comp=Z,30nm,0.3s						
UPC	**Upice**	**0.98**	**187**	*e*PG	**Pb**	**08 44 24.4**	**-0.5**
UPC				*e*SG	**Sg**	**08 44 37.3**	**+0.9**
	comp=Z,57nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**176**	*e*PG	**Pg**	**08

comp=Z,13nm,0.8s

OKC	**Ostrava-Krasne**	**2.06**	**142**	*e*PG	**Pg**		**08 44 44.1**	**-0.5**
OKC				*e*SG	**Sg**		**08 45 11.0**	**-0.3**

comp=Z,19nm,0.6s

VRAC	**Vranov**	**2.19**	**173**	*e*Pn	**Pn**		**08 44 42.7**	**0.0**
VRAC	baz=354			*e*Sg	**Sg**		**08 45 14.7**	**-0.6**

comp=Z,19nm,0.7s,baz=354

VRAC	**Vranov**	**2.19**	**173**	*e*PN	**Pn**		**08 44 42.8**	**0.0**
VRAC				*e*SG	**Sg**		**08 45 14.7**	**-0.6**
KRUC	**Moravsky**	**2.42**	**177**	*e*Pn	**Pn**		**08 44 46.2**	**+0.3**
KRUC	baz=358			*e*Sg	**Sg**		**08 45 22.5**	**-0.3**

comp=Z,16nm,0.7s,baz=358

KRUC	**Moravsky**	**2.42**	**177**	*e*PN	**Pn**		**08 44 46.2**	**+0.3**
KRUC				*e*SG	**Sg**		**08 45 22.6**	**-0.3**
OJC	**Ojcow**	**2.61**	**117**	*e*Pg	**Pg**		**08 44 55.1**	**0.0**
OJC				*e*Sg	**Sg**		**08 45 29.6**	**+0.6**
KHC	**Kasperske Hory**	**2.88**	**216**	*e*PN	**Pn**		**08 44 52.4**	**+0.1**
KHC				*e*PG	**Pb**		**08 44 58.0**	**+0.6**
KHC				*e*SG	**Sg**		**08 45 36.9**	**-0.8**

comp=Z,7.8nm,0.4s

CKRC	**Cesky Krumlov**	**2.92**	**205**	*e*SG	**Sg**		**08 45 38.0**	**-0.9**
MODS	**Modra-Piesok**	**3.19**	**167**	*e*SG	**Sg**		**08 45 48.8**	**+1.4**
CONA	**Conrad Observa**	**3.56**	**184**	*e*Pn	**Pn**		**08 45 03.4**	**+1.8**

comp=Z,0.1nm,0.1s

CONA				*e*Sg	**Sg**		**08 46 00.1**	**+0.7**

comp=Z,10nm,0.5s

RONA	**Rosalia, Austr**	**3.78**	**179**	*e*Sg	**Sg**		**08 46 07.6**	**+1.0**

comp=Z,2.1nm,0.2s

MOA	**Molln**	**3.84**	**200**	*e*Pn	**Pn**		**08 45 06.7**	**+1.2**

comp=Z,1.0nm,0.2s

MOA				*e*Sg	**Sg**		**08 46 09.0**	**+0.7**

comp=Z,4.4nm,0.3s

ARSA	**Arzberg**	**4.25**	**186**	*e*Sg	**Sg**		**08 46 21.0**	**-0.6**

comp=Z,1.3nm,0.3s

WTTA	**Wattenberg**	**5.16**	**217**	*e*Sn	**Sn**		**08 46 23.8**	**-0.2**

comp=Z,1.1nm,0.2s

INET ***30*** *08:47:38.0±0.6, 12°.16N×87°.51W, h25km±3km, MW3.4*
SNET ***30*** *08:47:38.8±1.3, 12°.24N×87°.67W, h25km±8km, ML3.5*

ISC 30 08:47:37.1±2.1, 12°.1N±0°.1×87°.51W±0°.07, h59km±31km, n21, σ0°55/30, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TELN	**Telica**	**0.81**	**55**	*e*P		**Pn**		**08 47 52.9**	**+0.1**
TELN				*e*S		**Sn**		**08 48 04.2**	**-0.1**
CSGN	**Cosiguina Volc**	**0.84**	**357**	*e*P		**Pn**		**08 47 53.1**	**-0.1**
CNGN	**Cerro Negro**	**0.88**	**65**	*e*P		**Pn**		**08 47 53.6**	**+0.1**
CNGN				*e*S		**Sn**		**08 48 06.0**	**+0.4**
COPN	**Copaltepe**	**0.90**	**87**	*e*P		**Pn**		**08 47 54.0**	**+0.2**
MOMN	**Momotombo**	**0.99**	**74**	*e*P		**Pn**		**08 47 55.0**	**0.0**
CNCH	**Conchagua**	**1.18**	**345**	*e*P		**Pn**		**08 47 57.8**	**+0.1**
CNCH				*e*S		**Sn**		**08 48 13.0**	**+0.1**
CNCH				IAML				08 48 16.0	

comp=Z,3μm,0.2s

MGAN	**Managua**	**1.24**	**89**	*e*P		**Pn**		**08 47 58.5**	**+0.3**
BRAN	**Las Pilas**	**1.28**	**63**	*e*P		**Pn**		**08 47 57.6**	**-1.2**
HUEN		**1.33**	**81**	*e*P		**Pn**		**08 47 59.8**	**+0.4**
CNRM	**Centro Naciona**	**1.48**	**334**	*e*P		**Pn**		**08 48 01.1**	**-0.4**
CNRM				*e*S		**Sn**		**08 48 20.1**	**+0.2**
RANC	**El Ranchito**	**1.50**	**330**	*e*P		**Pn**		**08 48 02.6**	**+0.7**
RANC				*e*S		**Sn**		**08 48 20.3**	**-0.3**
PACA	**Pacayal**	**1.55**	**329**	*e*P		**Pn**		**08 48 03.4**	**+0.9**
PACA				*e*S		**Sn**		**08 48 21.7**	**0.0**
COEB	**Comit de Eme**	**1.68**	**324**	*e*P		**Pn**		**08 48 04.9**	**+0.6**
COEB				*e*S		**Sn**		**08 48 23.8**	**-1.1**
MATN	**Matagalpa**	**1.74**	**63**	*e*P		**Pn**		**08 48 05.1**	**0.0**
RCON	**San Juan de Ri**	**1.89**	**44**	*e*P		**Pn**		**08 48 07.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.93**	**7**	*e*P		**Pn**		**08 48 08.3**	**+0.5**
UESV	**Universidad de**	**1.94**	**320**	*e*P		**Pn**		**08 48 07.9**	**+0.1**
UESV				*e*S		**Sn**		**08 48 30.9**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.96**	**323**	*e*P		**Pn**		**08 48 09.0**	**+0.9**
COEG	**Centro de Oper**	**1.99**	**318**	*e*P		**Pn**		**08 48 09.3**	**+0.8**
COEG				IAML				08 48 41.4	

comp=Z,226nm,0.3s

PAVA	**Las Pavas**	**2.10**	**319**	*e*P		**Pn**		**08 48 10.0**	**0.0**
LFRS	**El Faro**	**2.12**	**315**	*e*P		**Pn**		**08 48 09.8**	**-0.5**
LFRS				*e*S		**Sn**		**08 48 34.7**	**-0.8**

SOME ***30*** *08:48:28.9, 37°.75N×72°.32E, h10km*
BJI ***30*** *08:48:29.9±0.0, 36°.41N×70°.69E, h191km, mb4.3/12, mB4.5/5*
MOS ***30*** *08:48:31.3±0.8, 36°.47N×70°.81E, h206km, mb4.2/12, Error ellipse: s-maj=10.1km s-min=4.1km az=77.2*
NEIC ***30*** *08:48:32.1±1.9, 36°.45N±0°.05×70°.61E±0°.08, h202km±11km, mb4.4/4, Error ellipse: s-maj=10.7km s-min=4.1km az=56.0*
IDC ***30*** *08:48:36.3±2.9, 36°.59N×71°.01E, h241km±28km, mb3.5/11, mbtmp4.1/17, Error ellipse: s-maj=22.1km s-min=14.2km az=48.0*
NNC ***30*** *08:48:37.5±9.9, 36°.94N×70°.80E, h198km±136km, mb3.4, mpv4.8, Error ellipse: s-maj=93.3km s-min=47.2km az=4.0*

ISC 30 08:48:30.7±0.4, 36°.38N±0°.04×70°.99E±0°.04, h188km, n154, σ2s.34/196, mb3.9/17, 13C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.42**	**222**			**Pn**		**08 49 14.1**	**+0.8**
KBL	**Kabul**	**2.42**	**222**	PN		**Pn**		**08 49 14.1**	**+0.8**
CEP	**Cherat**	**2.66**	**163**	P		**Pn**		**08 49 20.6**	**+4.7**
CEP				S		**Sn**		**08 49 56.0**	**+5.0**
GAR	**Garm**	**2.67**	**349**			**Pn**		**08 49 16.9**	**+0.9**
CHGR	**Chuyangaron**	**2.70**	**328**			**Pn**		**08 49 16.0**	**-0.3**
CHGR	**Chuyangaron**	**2.70**	**328**	PN		**Pn**		**08 49 16.0**	**-0.3**
DRK	**Karamyk**	**3.17**	**11**			**Pn**		**08 49 24.1**	**+2.1**
NIL	**Nilore**	**3.29**	**145**	Pn		Pn		08 49 28.3	+5.0
NIL	**Nilore**	**3.29**	**145**	PN		Pn		08 49 28.3	+5.0
THW	**Thamme Wali**	**3.63**	**170**	P		**Pn**		**08 49 30.5**	**+3.0**
BTK	**Batken**	**3.68**	**358**	Pn		**Pn**		**08 49 29.1**	**+1.0**
BTK	**Batken**	**3.68**	**358**	PN		**Pn**		**08 49 29.1**	**+1.0**
OHH	**Osh**	**4.38**	**18**	PN		**Pn**		**08 49 38.6**	**+1.8**
JMU	**Jammu**	**4.87**	**137**	*e*S		**Sn**		**08 50 40.4**	**+0.3**
KSH	**Kashi**	**5.03**	**50**	P		**Pn**		**08 49 43.8**	**-1.5**
KSH				S		**Sn**		**08 50 37.0**	**-7.1**
KSH				smax		smax			

comp=N,240nm,0.6s

KSH				smax		smax			

comp=E,300nm,0.5s

TAS	**Tashkent**	**5.12**	**346**			**Pn**		**08 49 46.0**	**-0.3**
TAS	**Tashkent**	**5.12**	**346**	PN		**Pn**		**08 49 46.0**	**-0.3**
THN	**Thein Dam**	**5.54**	**134**	*e*P		**Pn**		**08 49 56.1**	**+4.2**
THN				*e*S		**Sn**		**08 50 60.0**	**+4.2**
IUG	**Iuzhnay**	**5.81**	**353**	*d i*	PN	**Pn**		**08 49 55.7**	**+0.3**
IUG	**Iuzhnay**	**5.81**	**353**	*e*P		**Pn**		**08 49 55.7**	**+0.3**

2μm,0.3s

IUG				*e*S		**Sn**		**08 50 58.0**	**-4.2**

535nm,0.6s

IUG	**Iuzhnay**	**5.81**	**353**	⇓ *i*	P	**Pn**		**08 49 55.7**	**+0.3**

baz=354

IUG				*e*S		**Sn**		**08 50 57.8**	**-4.4**

baz=354

ARLS	**Aral**	**6.06**	**24**	PN		**Pn**		**08 49 59.7**	**+1.0**
AML	**Almayashu**	**6.12**	**19**	P		**Pn**		**08 50 00.6**	**+1.0**

SNR=597

NRN	**Naryn**	**6.38**	**36**	Pn		**Pn**		**08 50 04.0**	**+0.9**
NRN	**Naryn**	**6.38**	**36**	PN		**Pn**		**08 50 04.0**	**+0.9**
UCH	**Uchtor**	**6.45**	**24**	P		**Pn**		**08 50 05.5**	**+1.5**

SNR=27

DZA	**Taraz**	**6.51**	**2**	*e*PN		**Pn**		**08 50 04.7**	**+0.2**
DZA				*e*S		**Sn**		**08 51 15.8**	**-2.8**
DZA	**Taraz**	**6.51**	**2**	*e*P		**Pn**		**08 50 05.5**	**+1.1**

234nm,0.2s

DZA				*e*S		**Sn**		**08 51 15.2**	**-3.4**

363nm,0.4s

DZA	**Taraz**	**6.51**	**2**	*e*P		**Pn**		**08 50 04.7**	**+0.2**

baz=3.4

DZA				*e*S		**Sn**		**08 51 15.8**	**-2.8**

baz=3.4

EKS2	**Erkin-Say**	**6.64**	**18**	P		**Pn**		**08 50 07.4**	**+1.3**

SNR=46

KK31	**Karatay Array**	**6.73**	**357**			**Pn**		**08 50 07.0**	**-0.3**
KK31	**Karatay Array**	**6.73**	**357**	PN		**Pn**		**08 50 07.0**	**-0.3**
KK31	**Karatay Array**	**6.73**	**357**	P		**Pn**		**08 50 07.0**	**-0.3**

16nm,0.4s,baz=180,slow=13,SNR=306

KK31				⇑S		**Sn**		**08 51 18.7**	**-5.0**

45nm,0.5s,baz=187,slow=22,SNR=21

KKAR	**Karatay Array**	**6.73**	**357**	Pn		**Pn**		**08 50 06.8**	**-0.4**
KKAR	**Karatay Array**	**6.73**	**357**	Pn		**Pn**		**08 50 07.0**	**-0.3**
KKAR	**Karatay Array**	**6.73**	**357**	PN		**Pn**		**08 50 07.0**	**-0.3**
AAK	**Ala-Archa**	**6.81**	**22**	P		**Pn**		**08 50 10.0**	**+1.4**

SNR=40

AAK	**Ala-Archa**	**6.81**	**22**	Pn		**Pn**		**08 50 09.9**	**+1.4**
AAK	**Ala-Archa**	**6.81**	**22**	PN		**Pn**		**08 50 09.9**	**+1.4**
KBK	**Karagaybulak**	**6.98**	**25**	P		**Pn**		**08 50 12.7**	**+2.0**

SNR=23

ULHL	**Ulahol**	**7.13**	**33**	P		**Pn**		**08 50 14.4**	**+1.7**

SNR=7.4

BOOM	**Boomskoye usch**	**7.21**	**31**			**Pn**		**08 50 15.4**	**+1.8**
BOOM	**Boomskoye usch**	**7.21**	**31**	PN		**Pn**		**08 50 15.5**	**+1.8**
CHMS	**Chumysh**	**7.22**	**23**	P		**Pn**		**08 50 15.0**	**+1.3**

SNR=21

CHMS	**Chumysh**	**7.22**	**23**	*i*	PN	**Pn**		**08 50 15.0**	**+1.3**
CHMS					S	**Sn**		**08 51 34.5**	**-0.8**
CHMS	**Chumysh**	**7.22**	**23**	⇑	P	**Pn**		**08 50 15.0**	**+1.3**

26nm,0.4s

CHMS				⇓	S	**Sn**		**08 51 34.5**	**-0.8**

27nm,0.6s

SMLA	**Simla**	**7.34**	**134**	*e*P		**Pn**		**08 50 17.7**	**+2.4**
SMLA				*e*S		**Sn**		**08 51 39.2**	**+1.1**
SMLA				IAML				08 51 42.4	

comp=N,99nm,0.3s

SMLA				IAML				08 51 43.8	

comp=E,80nm,0.1s

SMLA				IAML				08 51 46.2	

comp=E,63nm,0.5s

USP	**Ospenovka**	**7.39**	**20**	P		**Pn**		**08 50 16.6**	**+0.6**

SNR=19

TKM2	**Tokmak 2**	**7.44**	**27**	P		**Pn**		**08 50 18.2**	**+1.4**

SNR=160

TKM2	**Tokmak 2**	**7.44**	**27**	PN		**Pn**		**08 50 18.4**	**+1.7**
TKM2	**Tokmak 2**	**7.44**	**27**	⇓	P	**Pn**		**08 50 18.2**	**+1.4**

comp=E,136nm,0.9s

TKM2				⇑	S	**Sn**		**08 51 38.3**	**-2.5**

comp=E,32nm,0.9s

SGDS	**Sogindy**	**7.60**	**20**	*e*PN		**Pn**		**08 50 18.9**	**+0.2**
SGDS				pmax		pmax			

comp=Z,3.0nm,0.2s

SGDS	**Sogindy**	**7.60**	**20**	*e*P		**Pn**		**08 50 19.0**	**+0.3**

comp=Z,18nm,0.5s

SGDS				*e*S		**Sn**		**08 51 38.4**	**-6.0**

comp=Z,20nm,0.9s

SGDS	**Sogindy**	**7.60**	**20**	*e*P		**Pn**		**08 50 18.1**	**-0.6**

comp=Z,3.2nm,0.2s,baz=21

SGDS				*e*S		**Sn**		**08 51 42.3**	**-2.1**

baz=21

KST	**Kastek**	**7.68**	**28**	*e*P		**Pn**		**08 50 21.6**	**+1.7**

comp=Z,60nm,0.4s

KST				*e*S		**Sn**		**08 51 42.4**	**-4.0**

comp=Z,33nm,0.4s

DGS	**Degeres**	**7.78**	**27**	*e*P		**Pn**		**08 50 21.8**	**+0.6**

comp=Z,23nm,0.3s

DGS				*e*S		**Sn**		**08 51 42.8**	**-5.9**

comp=Z,15nm,0.4s

MTBS	**Maitube**	**7.94**	**30**	*e*P		**Pn**		**08 50 24.8**	**+1.7**

comp=Z,56nm,0.7s

MTBS				*e*S		**Sn**		**08 51 48.0**	**-4.5**

comp=Z,17nm,1.1s

AAA	**Alma-Ata**	**8.21**	**32**	*e*PN		**Pn**		**08 50 28.1**	**+1.5**
AAA	**Alma-Ata**	**8.21**	**32**	*e*P		**Pn**		**08 50 28.2**	**+1.5**

baz=32

ANVS	**Anan'yevo**	**8.21**	**37**	PN		**Pn**		**08 50 27.0**	**+0.1**
MDOK	**Medeo**	**8.23**	**33**	*e*PN		**Pn**		**08 50 28.8**	**+1.8**
MDOK	**Medeo**	**8.23**	**33**	*e*P		**Pn**		**08 50 29.0**	**+2.0**

comp=Z,46nm,0.3s

MDOK				*e*S		**Sn**		**08 51 55.3**	**-4.1**

comp=Z,6.3nm,0.6s

MDOK	**Medeo**	**8.23**	**33**	*e*P		**Pn**		**08 50 28.9**	**+1.9**

baz=33

MDOK	**Medeo**	**8.23**	**33**	⇑	P	**Pn**		**08 50 28.8**	**+1.8**

comp=Z,41nm,0.6s

MDOK				⇓	S	**Sn**		**08 51 52.6**	**-6.8**

comp=Z,4.7nm,0.6s

KUU	**Kurty**	**8.55**	**27**	*i*	PN	**Pn**		**08 50 31.5**	**+0.4**
KUU					pmax	pmax			

comp=Z,4.0nm,0.3s

KUU	**Kurty**	**8.55**	**27**	*e*P		**Pn**		**08 50 34.6**	**+3.5**

comp=Z,2.1nm,0.2s

KUU				*e*S		**Sn**		**08 52 05.4**	**-1.5**

comp=Z,7.8nm,0.3s

KUU	**Kurty**	**8.55**	**27**	*i*	P	**Pn**		**08 50 31.6**	**+0.4**

comp=Z,4.5nm,0.3s,baz=28

CHKK	**Chushkaly**	**8.77**	**30**	*e*PN		**Pn**		**08 50 34.5**	**+0.6**
CHKK	**Chushkaly**	**8.77**	**30**	*e*P		**Pn**		**08 50 34.6**	**+0.6**

baz=30

SATY	**Saty**	**8.78**	**38**	*e*PN		**Pn**		**08 50 35.2**	**+1.0**
SATY	**Saty**	**8.78**	**38**	*e*P		**Pn**		**08 50 35.3**	**+1.0**

baz=39

BTLS	**Baital**	**8.96**	**14**	*e*PN		**Pn**		**08 50 36.8**	**+0.4**
BTLS	**Baital**	**8.96**	**14**	*e*P		**Pn**		**08 50 36.8**	**+0.4**

baz=15

KPKS	**Kokpek**	**9.22**	**37**	*e*P		**Pn**		**08 50 40.7**	**+0.8**
KPKS				*e*S		**Sn**		**08 52 23.6**	**+0.7**
KPKS	**Kokpek**	**9.22**	**37**	*e*P		**Pn**		**08 50 40.7**	**+0.8**

baz=38

KPKS				*e*S		**Sn**		**08 52 23.6**	**+0.7**

baz=38

SHLS	**Shalkode**	**9.40**	**41**	*e*P		**Pn**		**08 50 46.4**	**+4.1**
SHLS	**Shalkode**	**9.40**	**41**	*e*P		**Pn**		**08 50 46.5**	**+4.1**

baz=43

ARXS	**Arharly**	**9.41**	**32**	*e*P		**Pn**		**08 50 42.6**	**+0.2**
KUDL	**Kundal**	**9.43**	**149**	*e*P		**Pn**		**08 50 43.6**	**+0.9**
KUDL				*e*S		**Sn**		**08 52 24.7**	**-3.4**
BLB	**Baldybastay**	**9.60**	**34**	*e*P		Pn		08 50 54.3	+9.4

comp=Z,22nm,0.4s

BLB				*e*S		**Sn**		**08 52 38.9**	**+6.8**

comp=Z,2.9nm,0.6s

GEYT	**Alibeck**	**10.39**	**282**	Pn		**Pn**		**08 50 53.0**	**-2.3**
GEYT	**Alibeck**	**10.39**	**282**	P		**P**		**08 51 00.2**	**-3.0**

comp=Z,2.1nm,0.3s,baz=125,slow=12,SNR=2.6

GYAOB	**ALIBECK ARRAY**	**10.39**	**282**	Pn		**Pn**		**08 50 52.3**	**-2.9**
PYUN	**Piuthan**	**13.08**	**126**	*e*Pn		**Pn**		**08 51 32.0**	**+2.2**
PYUN				*e*Sn		**Sn**		**08 53 53.1**	**-2.4**

comp=Z,82nm,0.6s

MAKZ	**Makanchi**	**13.26**	**35**	Pn		**Pn**		**08 51 33.0**	**+1.3**
MAKZ	**Makanchi**	**13.26**	**35**	P		**Pn**		**08 51 33.0**	**+1.3**
MK31	**Makanchi Array**	**13.40**	**36**	Pn		**P**		**08 51 35.0**	**-1.5**
MK31	**Makanchi Array**	**13.40**	**36**	*i*	P	**P**		**08 51 35.0**	**-1.5**
MK31	**Makanchi Array**	**13.40**	**36**	⇑	P	**P**		**08 51 35.5**	**-0.9**

comp=Z,2.1nm,0.6s,baz=209,slow=11,SNR=30

MKAR	**Makanchi Array**	**13.40**	**36**	Pn		**P**		**08 51 35.0**	**-1.5**
MKAR	**Makanchi Array**	**13.40**	**36**	*i*	P	**P**		**08 51 35.5**	**-1.0**
MKAR				pmax		pmax			

comp=Z,2.0nm,0.3s

MKAR	**Makanchi Array**	**13.40**	**36**	P		**Pn**		**08 51 34.2**	**+0.8**

comp=Z,2.1nm,0.5s,baz=208,slow=10,SNR=20

DANN	**Dangsing**	**13.43**	**123**	*e*Pn		**Pn**		**08 51 36.2**	**+1.9**
GKN	**Gorkha**	**14.24**	**122**	*e*Pn		**P**		**08 51 46.8**	**+0.6**
GKN				*e*Sn		**Sn**		**08 54 18.0**	**-5.3**

comp=Z,36nm,0.4s

DMN	**Daman**	**14.81**	**122**	*e*Pn		**P**		**08 51 53.6**	**+1.0**
DMN				*e*Sn		**Sn**		**08 54 31.6**	**-5.5**

comp=Z,80nm,0.8s

PKI	**Pulchoki**	**15.04**	**122**	*e*Pn		**P**		**08 51 56.4**	**+1.2**
PKI				*e*Sn		**S**		**08 54 36.7**	**-6.1**
GUN	**Gumba**	**15.16**	**120**	*e*Pn		**P**		**08 51 57.8**	**+1.3**
AB31	**Akbulak array**	**15.19**	**331**	P		**P**		**08 51 56.8**	**+0.5**
AB31	**Akbulak array**	**15.19**	**331**	P		**P**		**08 51 56.8**	**+0.5**

comp=Z,0.3nm,0.3s,baz=139,slow=13,SNR=27

ABKAR	**Akbulak array**	**15.19**	**331**			**P**		**08 51 55.5**	**-0.8**
KURBB	**Kurchatov Arra**	**15.24**	**19**	P		**Pn**		**08 51 55.0**	**-1.2**

comp=Z,1.8nm,0.5s,baz=208,slow=10,SNR=12

KURBB				S		**Sn**		**08 54 48.0**	**+1.5**

comp=Z,0.3nm,0.5s,baz=201,slow=20,SNR=4.4

KURK	**Kurchatov**	**15.35**	**19**	P		**Pn**		**08 51 55.0**	**-2.5**
JIRN	**Jiri**	**15.53**	**120**	*e*Pn		**P**		**08 52 02.9**	**+2.2**
JIRN				*e*Sn		**S**		**08 54 46.8**	**-6.7**

comp=Z,26nm,0.5s

SEM	**Semipalatinsk**	**15.54**	**23**	*e*P		**P**		**08 52 00.0**	**-0.3**
SEM	**Semipalatinsk**	**15.54**	**23**	*e*P		**P**		**08 52 00.1**	**-0.3**

baz=23

RAMN	**Ramite**	**16.26**	**121**	*e*Sn		**S**		**08 55 04.6**	**-4.3**
BVAR	**Borovoye Array**	**16.65**	**359**	P		**P**		**08 52 11.6**	**-0.8**
BVAR	**Borovoye Array**	**16.65**	**359**	P		**P**		**08 52 11.6**	**-0.8**

comp=Z,0.6nm,0.3s,baz=159,slow=10,SNR=8.3

BRVK	**Borovoye**	**16.69**	**359**	*ce*P		**Pn**		**08 52 14.5**	**+0.9**
BRVK				pmax		pmax			

comp=Z,4.0nm,0.6s

TAPN	**Taplejung**	**16.79**	**118**	*e*Sn		**S**		**08 55 15.8**	**-4.5**

comp=Z,20nm,0.6s

AKTO	**Aktyubinsk**	**16.89**	**330**	P		**P**		**08 52 13.7**	**-1.2**
AKTO	**Aktyubinsk**	**16.89**	**330**	⇑	P	**P**		**08 52 14.2**	**-0.7**

comp=Z,2.4nm,0.7s

AKTO	**Aktyubinsk**	**16.89**	**330**	P		**P**		**08 52 13.7**	**-1.2**

comp=Z,2.4nm,0.7s,baz=147,slow=8.1,SNR=4.6

AKTO				S		**S**		**08 55 20.6**	**-0.6**

comp=Z,2.4nm,0.8s,baz=173,slow=12,SNR=3.7

UOSS	**Minazif**	**17.05**	**232**			**P**		**08 52 13.8**	**-3.3**
DGZ	**Jazzator, Alta**	**17.88**	**37**	*i*	P	**Pn**		**08 52 28.1**	**+0.1**
DGZ					pmax	pmax			

comp=Z,7.0nm,0.6s

GOMU	**GeErMu**	**19.20**	**83**	P		**Pn**		**08 52 44.3**	**+0.5**
GOMU				pmax		pmax			

comp=Z,3.0nm,0.4s

GOMU				pmax		pmax			

comp=Z,51nm,7.3s

ZAA0	**Zalesovo Array**	**20.03**	**24**	P		**P**		**08 52 50.0**	**+1.0**
ZAA0				IAmb		IAmb		08 52 52.5	

comp=

mb5.0/2,mB4.9/2,MLv4.3/7,Mw(mB)4.2/2
*IDC **30** 09:12:05.8±3.8,6.°80S×133.°30E,h0km,mb3.4/1, mbtmp3.8/3,ML3.9/2,MS3.6/1,Error ellipse: s-maj=198.6km s-min=27.5km az=78.0*
ISC 30 09:11:55.9±0.9,5.°73S±0.°05×130.°86E±0.°09,h150km,n17, σ3°08/20,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.53**	**321**	P	**Pn**	**09 12 28.4**	**+2.6**
BNDI				S	**Sn**	**09 12 49.8**	**+1.1**
BNDI	**Bandanaira**	**1.53**	**321**	P	**Pn**	**09 12 28.8**	**+3.0**
SAUI	**Saumlaki**	**2.29**	**169**	P	**Pn**	**09 12 36.0**	**+1.6**
SAUI				S	**Sn**	**09 12 59.0**	**-5.2**
MSAI	**Masohi**	**3.05**	**321**	P	**Pn**	**09 12 40.9**	**-3.0**
MSAI				S	**Sn**	**09 13 21.8**	**+0.7**
FAKI	**Fak Fak**	**3.11**	**26**	P	**Pn**	**09 12 45.5**	**+0.8**
FAKI				S	**Sn**	**09 13 18.8**	**-3.7**
FAKI	**Fak Fak**	**3.11**	**26**	P	**Pn**	**09 12 45.8**	**+1.1**
SWI	**Sorong**	**4.85**	**5**	P	**Pn**	**09 13 08.9**	**+1.6**
SWI				S	**Sn**	**09 14 00.2**	**-2.8**
SANI	**Sanana**	**6.08**	**307**	P	Pn	09 13 30.7	+7.0
MTN	**Manton Dam**	**7.08**	**178**	P	**Pn**	**09 13 38.8**	**+1.7**
KDU	**Kakadu**	**7.10**	**167**	P	**Pn**	**09 13 37.8**	**+0.5**
KNRA	**Kununurra**	**10.10**	**192**	P	**Pn**	**09 14 19.1**	**+1.8**
WRA	**Warramunga Arr**	**14.53**	**167**	Pn	**Pn**	**09 15 13.4**	**-1.1**
	0.6nm,0.3s,baz=351,slow=13,SNR=48						
WRA				Sn	Sn	09 17 43.8	-12
	1.3nm,0.3s,baz=333,slow=22,SNR=7.4						
	1.1nm,0.4s						
COEN	**Coen**	**14.62**	**125**	P	**P**	**09 15 18.3**	**+0.2**
QIS	**Mount Isa**	**17.01**	**151**	P	**Pn**	**09 15 49.8**	**+4.7**
ASAR	**Alice Springs**	**18.08**	**171**	Pn	**Pn**	**09 16 01.8**	**+4.0**
	0.6nm,0.3s,baz=355,slow=13,SNR=38						
ASAR				Sn	**S**	**09 19 09.9**	**-5.8**
	0.3nm,0.3s,baz=1.3,slow=26,SNR=8.0						
	3.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**49.70**	**1**	LR	LR	09 44 11.4	
	comp=Z,57nm,18.4s,baz=140,slow=38						
MKAR	**Makanchi Array**	**67.64**	**326**				
	0.2nm,0.5s						

*IDC **30** 09:34:26.9±2.5,7.°13S×70.°89W,h636km±30km,mb2.8/3, mbtmp4.0/5,Error ellipse: s-maj=68.9km s-min=19.4km az=67.0*
*VAO **30** 09:34:28.5±1.0,7.°19S×70.°88W,h631km±11km,mb3.9*
ISC 30 09:34:26.3±0.7,7.°10S±0.°10×71.°0W±0.°1,h600km,n24, σ1°95/23,mb3.7/3,Western Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.80**	**250**	*eP*	**P**	**09 35 44.4**	**+4.5**
TBTG	**Tabatinga, AM**	**3.09**	**21**	*eP*	P	09 35 51.4	+5.3
ETMB	**Extrema**	**5.46**	**120**	*eP*	**P**	**09 36 05.7**	**+2.8**
ATAH	**Atahualpa**	**7.33**	**269**	P	**P**	**09 36 22.7**	**+2.8**
	24nm,0.7s,baz=80,slow=12,SNR=23						
LPAZ	**La Paz**	**9.55**	**163**	*eP*	**P**	**09 36 43.3**	**+1.9**
LPAZ	**La Paz**	**9.55**	**163**	P	**P**	**09 36 43.0**	**+1.7**
	2.2nm,0.4s,baz=341,slow=10,SNR=12						
LPAZ				S	**S**	**09 38 30.6**	**-1.4**
	0.7nm,0.7s,baz=191,slow=20,SNR=1.8						
MACA	**Manacapuru-AM**	**11.00**	**70**	*eP*	**P**	**09 36 56.6**	**+1.5**
BOAV	**Boa Vista**	**14.09**	**48**	*eP*	**P**	**09 37 27.9**	**+1.7**
PTLB	**Pontes e Lacer**	**14.29**	**127**	*eP*	**P**	**09 37 28.0**	**0.0**
PDRB	**Porto dos Gac**	**14.78**	**109**	*eP*	**P**	**09 37 32.5**	**-0.2**
ITTB	**Itaituba**	**15.44**	**81**	*eP*	**P**	**09 37 39.7**	**+1.1**
CLDB	**Colider**	**15.48**	**105**	*eP*	**P**	**09 37 39.0**	**0.0**
NPGB	**Novo Progresso**	**15.53**	**91**	*eP*	**P**	**09 37 39.5**	**0.0**
SNDB	**Serra Nova Dou**	**20.03**	**105**	*eP*	**P**	**09 38 20.9**	**+0.4**
PRPB	**Parauapebas**	**21.07**	**89**	*eP*	**P**	**09 38 29.8**	**-0.1**
SMTB	**Santa Maria do**	**23.26**	**96**	*eP*	**P**	**09 38 49.5**	**+0.2**
IPMB	**Ipameri, GO**	**24.71**	**118**	*eP*	**P**	**09 39 01.7**	**-0.5**
SDBA	**SAO DESIDERIO**	**26.25**	**104**	*eP*	**P**	**09 39 15.6**	**-0.2**
GDU01	**Guandu, BA**	**31.58**	**105**	*eP*	**P**	**09 40 01.3**	**-0.5**
PLCA	**Paso Flores**	**33.49**	**179**	P	**P**	**09 40 16.3**	**-1.3**
	0.8nm,0.4s,baz=357,slow=9.2,SNR=5.8						
	0.8nm,0.4s						
PDAR	**Pinedale Array**	**60.76**	**328**	P	**P**	**09 43 40.5**	**-1.1**
	0.2nm,0.5s,baz=128,slow=9.4,SNR=3.7						
	0.2nm,0.5s						
ULM	**Lac du Bonnet**	**61.06**	**342**	P	**P**	**09 43 41.1**	**-2.0**
	4.2nm,0.9s,baz=157,slow=3.6,SNR=3.1						
	4.2nm,0.9s						
ASAR	**Alice Springs**	**140.92**	**218**	PKP	**PKPdf**	**09 52 45.8**	**-4.2**
	0.5nm,0.8s,baz=145,slow=3.1,SNR=5.0						
WRA	**Warramunga Arr**	**143.34**	**222**	PKP	PKPab	09 52 50.6	-2.1
	2.4nm,0.4s,baz=138,slow=2.9,SNR=54						

IDC 30 09:39:18.2±3.3,54.°21N×87.°65E,h0km,mbtmp2.5/2, ML2.3/2,Error ellipse: s-maj=29.4km s-min=21.1km az=39.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**262**	*i*		09 48 40.0	
	baz=79,slow=320,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.69**	**262**	Pn	Pn	09 39 48.9	0.0
	1.3nm,0.3s,baz=80,slow=16,SNR=13						
ZALV				Lg	Lg	09 40 11.5	
	0.9nm,0.3s,baz=78,slow=24,SNR=6.3						
KURBB	**Kurchatov Arra**	**6.63**	**241**	Pn	Pn	09 40 57.4	+0.6
	baz=53,slow=13,SNR=3.5						
KURBB				Lg	Lg	09 42 49.6	
	baz=61,slow=34						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.17**	**207**	Pn	Pn	09 41 19.0	+1.0
	0.1nm,0.3s,baz=31,slow=12,SNR=2.1						
	0.1nm,0.4s						

*SKHL **30** 09:39:33.5±0.7,48.°00N×146.°70E,h36km±6km,mb3.9/3*
*IDC **30** 09:39:38.6±3.2,47.°20N×150.°52E,h190km±29km,mb3.3/7, mbtmp3.9/10,Error ellipse: s-maj=38.4km s-min=13.6km az=156.0*
ISC 30 09:39:33.3±0.9,46.°7N±0.°2×150.°8E±0.°1,h150km,n19, σ2°40/14,mb3.6/7,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.52**	**234**	*eP*	**Pn**	**09 40 17.3**	**+2.7**
KUR				AMB	AMB	09 40 18.6	
	30nm,0.7s						
KUR				*eS*	**Sn**	**09 40 50.7**	**+4.3**
KUR				A	A	09 40 56.2	
	110nm,0.6s						
KUR				A	A	09 40 56.2	
	100nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.38**	**234**	*eP*	Pn	09 40 33.6	-5.0
YUK				AMB	AMB	09 40 35.7	
	20nm,0.6s						
YUK				*eS*	Sn	09 41 19.8	-10
YUK				A	A	09 41 22.1	
	100nm,0.6s						
YUK				A	A	09 41 22.1	
	30nm,0.6s						
NMR	**Nemuro--Hokkai**	**4.91**	**229**	*eP*	**Pn**	**09 40 44.1**	**-1.3**
NMR				*eS*	**Sn**	**09 41 36.9**	**-4.7**
PETK	**Petropavlovsk-**	**7.79**	**32**	P	**Pn**	**09 41 25.2**	**+1.5**
	1.8nm,0.6s,baz=171,slow=9.9,SNR=4.1						
USRK	**Ussuriysk Ar.**	**13.42**	**266**	P	**Pn**	**09 42 38.7**	**+1.0**
	2.5nm,0.4s,baz=71,slow=11,SNR=11						
KSRS	**Korea Array**	**19.27**	**249**	P	**Pn**	**09 43 49.8**	**+0.9**
	2.0nm,0.5s,baz=55,slow=11,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**30.00**	**148**	T	T	10 16 41.0	
	baz=337,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	**30.01**	**148**	T	T	10 16 47.6	
	baz=337,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**30.02**	**148**	T	T	10 16 45.9	
	baz=337,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**31.06**	**150**	T	T	10 18 06.2	
	baz=338,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**31.07**	**150**	T	T	10 18 07.2	
	baz=338,slow=76,SNR=21						
H11S2	**WAKE ISLAND Hy**	**31.08**	**150**	T	T	10 18 07.5	
	baz=338,slow=76,SNR=18						
INK	**Inuvik**	**42.52**	**32**	P	**P**	**09 47 12.5**	**-0.8**
	2.1nm,0.8s,baz=292,slow=9.7,SNR=14						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**45.51**	**296**	P	**P**	**09 47 35.9**	**-1.6**
	0.8nm,0.6s,baz=72,slow=7.6,SNR=7.0						
	0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**50.81**	**254**	P	**P**	**09 48 19.4**	**+1.0**
	1.2nm,0.7s,baz=34,slow=7.5,SNR=5.3						
	1.2nm,0.7s						
FINES	**FINESS Array B**	**63.35**	**334**	P	**P**	**09 49 43.6**	**-2.3**
	1.0nm,0.7s,baz=90,slow=6.5,SNR=3.7						
	1.0nm,0.7s						
NVAR	**Mina Array Bea**	**63.86**	**61**	P	**P**	**09 49 50.5**	**+0.6**
	0.4nm,0.6s,baz=302,slow=7.8,SNR=5.7						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**66.05**	**53**	P	**P**	**09 50 04.0**	**0.0**
	0.5nm,0.6s,baz=273,slow=0.6,SNR=6.7						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**78.89**	**59**	P	**P**	**09 51 20.2**	**+0.1**
	0.5nm,0.6s,baz=304,slow=4.6,SNR=10						
	0.5nm,0.6s						

*IDC **30** 09:40:10.5±1.3,7.°57S×156.°82E,h393km±13km,mb3.5/13, mbtmp4.4/17,Error ellipse: s-maj=16.8km s-min=11.6km az=91.0*
*NEIC **30** 09:40:11.7±1.2,7.°5S±0.°1×156.°85E±0.°10,h401km±8km, mb4.3/44,Error ellipse: s-maj=17.0km s-min=11.3km az=218.0*
ISC 30 09:40:11.1±0.5,7.°56S±0.°06×156.°83E±0.°07,h398km,n95, σ0°81/99,mb4.2/34,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.61**	**121**	Pn	**Pn**	**09 41 20.2**	**+0.8**
HNR	**Honiara**	**3.61**	**121**	P	**Pn**	**09 41 18.5**	**-0.9**
	98nm,0.3s,baz=234,slow=3.7,SNR=7.7						
HNR				S	**S**	**09 42 13.8**	**-0.9**
	214nm,0.7s,baz=180,slow=22,SNR=6.0						
KRVT	**Keravat (AS076**	**5.76**	**304**		**Pn**	**09 41 39.6**	**-1.5**
KRVT	**Keravat (AS076**	**5.76**	**304**	P	**Pn**	**09 41 39.6**	**-1.5**
	125nm,0.4s,baz=1.3,slow=3.6,SNR=22						
KRVT				S	**S**	**09 42 54.5**	**+0.1**
	65nm,0.5s,baz=127,slow=3.3,SNR=4.9						
MANU	**Manus Island**	**10.90**	**300**	Pn	**Pn**	**09 42 41.2**	**+1.6**
COEN	**Coen**	**14.84**	**243**	P	**Pn**	**09 43 24.3**	**-0.5**
COEN	**Coen**	**14.84**	**243**	P	**Pn**	**09 43 24.8**	**+0.1**
CTA	**Charters Tower**	**16.13**	**218**	P	**Pn**	**09 43 38.2**	**-1.3**
CTA	**Charters Tower**	**16.13**	**218**	P	**P**	**09 43 36.8**	**+0.9**
	7.1nm,0.4s,baz=40,slow=10,SNR=13						
CTAO	**Charters Tower**	**16.13**	**218**	P	**P**	**09 43 38.0**	**+2.1**
CTAO				IAmb	IAmb	09 43 41.5	
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**16.13**	**218**	P	**Pn**	**09 43 38.2**	**-1.3**
LIFNC	**LIFOU**	**16.56**	**144**	P	**P**	**09 43 40.1**	**-0.3**
RK1H	**Rockhampton Ha**	**16.88**	**200**	P	**P**	**09 43 45.0**	**+1.2**
DZM	**Mont Dzumac**	**17.15**	**148**	P	**P**	**09 43 47.8**	**+0.9**
	comp=Z,9.4nm,0.9s,baz=99,slow=21,SNR=7.6						
MARNC	**Mare, Loyalty**	**17.57**	**143**	P	**P**	**09 43 49.6**	**-1.5**
EIDS	**Eidsvold**	**18.54**	**197**	P	**P**	**09 44 03.5**	**+2.0**
QIS	**Mount Isa**	**21.09**	**230**	P	**P**	**09 44 26.3**	**+0.6**
ARMA	**Armidale**	**23.26**	**191**	P	**P**	**09 44 46.5**	**+1.1**
ARMA				IAmb	IAmb	09 45 16.2	
	comp=Z,11nm,1.1s						
ARMA	**Armidale**	**23.26**	**191**	P	**P**	**09 44 46.4**	**+1.0**
WR0	**Warramunga Arr**	**24.87**	**238**	P	**P**	**09 44 59.9**	**0.0**
WR0				IAmb	IAmb	09 45 00.3	
	comp=Z,5.8nm,0.5s						
WB0	**Warramunga Arr**	**24.91**	**239**	P	**P**	**09 45 00.2**	**0.0**
WB0				IAmb	IAmb	09 45 01.1	
	comp=Z,16nm,1.4s						
WRAB	**Tennant Creek**	**25.02**	**238**	P	**P**	**09 45 01.0**	**-0.2**
WRAB				IAmb	IAmb	09 45 02.1	
	comp=Z,6.8nm,0.8s						
WRAB	**Tennant Creek**	**25.02**	**238**	P	**P**	**09 45 01.2**	**0.0**
WB2	**Warramunga Arr**	**25.02**	**238**	P	**P**	**09 45 01.4**	**+0.1**
WB2				IAmb	IAmb	09 45 02.2	
	comp=Z,6.7nm,0.8s						
WRA	**Warramunga Arr**	**25.03**	**238**	P	**P**	**09 45 00.2**	**-1.2**
WRA	**Warramunga Arr**	**25.03**	**238**	P	**P**	**09 45 00.3**	**-1.0**
	comp=Z,4.0nm,0.3s,baz=66,slow=8.7,SNR=163						
WRA				PcP	**PcP**	**09 48 24.0**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=69,slow=2.9,SNR=9.1						
	comp=Z,4.0nm,0.3s						
INKA	**Innaminka**	**25.20**	**215**	P	**P**	**09 45 02.9**	**+0.3**
CMSA	**Cobar Meteorol**	**26.03**	**202**	P	**P**	**09 45 09.9**	**-0.1**
AS31	**Alice Springs**	**27.20**	**231**	P	**P**	**09 45 20.0**	**-0.6**
ASAR	**Alice Springs**	**27.20**	**231**	P	**P**	**09 45 19.4**	**-1.2**
ASAR	**Alice Springs**	**27.20**	**231**	P	**P**	**09 45 19.9**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=60,slow=9.8,SNR=58						
ASAR				PcP	**PcP**	**09 48 29.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=73,slow=2.9,SNR=6.7						
ASAR				S	**S**	**09 49 28.2**	**-1.8**
	comp=Z,1.0nm,1.0s,baz=58,slow=15,SNR=5.4						
	comp=Z,2.6nm,0.5s						
STKA	**Stephens Creek**	**28.05**	**208**	P	**P**	**09 45 28.8**	**+0.9**
STKA	**Stephens Creek**	**28.05**	**208**	P	**P**	**09 45 27.6**	**-0.3**
STKA	**Stephens Creek**	**28.05**	**208**	P	**P**	**09 45 26.9**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=56,slow=13,SNR=6.2						
	comp=Z,0.9nm,0.4s						
OOD	**Oodnadatta**	**28.38**	**222**	P	**P**	**09 45 30.8**	**0.0**
CAN	**Canberra**	**28.55**	**193**	P	**P**	**09 45 33.4**	**+1.0**
CAN				IAmb	IAmb	09 46 11.4	
	comp=Z,14nm,1.3s						
KNRA	**Kununurra**	**28.62**	**251**	P	**P**	**09 45 33.0**	**-0.1**
KNRA				IAmb	IAmb	09 45 34.1	
	comp=Z,22nm,1.4s						
KNRA	**Kununurra**	**28.62**	**251**	P	**P**	**09 45 32.9**	**-0.2**
LCRK	**Leigh Creek**	**28.68**	**215**	P	**P**	**09 45 33.3**	**-0.2**
BBOO	**Buckleboo**	**31.67**	**215**	P	**P**	**09 45 59.3**	**-0.1**
BBOO				IAmb	IAmb	09 46 03.6	
	comp=Z,30nm,1.4s						
BBOO	**Buckleboo**	**31.67**	**215**	P	**P**	**09 45 59.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**32.11**	**248**	P	**P**	**09 46 02.7**	**-0.8**
ARPS	**Mount Arapiles**	**32.13**	**203**	P	**P**	**09 46 03.8**	**+0.4**
WRKA	**Warakurna**	**32.32**	**234**	P	**P**	**09 46 04.5**	**-0.7**
FORT	**Forrest**	**35.46**	**226**	P	**P**	**09 46 32.2**	**+0.4**
FORT	**Forrest**	**35.46**	**226**	P	**P**	**09 46 32.1**	**+0.2**
TAU	**Tasmania Unive**	**36.20**	**192**	P	**P**	**09 46 38.5**	**+0.8**
LTZ	**Lake Taylor**	**37.63**	**161**	P	**P**	**09 46 49.5**	**-0.4**
KHZ	**Kahutara**	**37.73**	**160**	P	**P**	**09 46 50.0**	**-0.5**
MBWA	**Marble Bar**	**38.28**	**245**	P	**P**	**09 46 54.5**	**-0.9**
MBWA				IAmb	IAmb	09 47 23.6	
	comp=Z,17nm,1.4s						
PSA00	**Pilbara Seismi**	**38.28**	**245**	P	**P**	**09 46 55.2**	**-0.3**
JAGI	**Jajag, Banyuwa**	**42.25**	**266**	P	**P**	**09 47 26.1**	**-1.6**
KKM	**Kota Kinabalu**	**42.70**	**287**	P	**P**	**09 47 31.8**	**+0.4**
MORW	**Morawa**	**43.92**	**236**	P	**P**	**09 47 40.3**	**-0.4**
MORW				IAmb	IAmb	09 47 40.6	
	comp=Z,8.8nm,0.9s						
NWAO	**Narrogin (SRO)**	**44.50**	**230**	P	**P**	**09 47 45.1**	**-0.1**
NWAO				IAmb	IAmb	09 47 45.5	
	comp=Z,13nm,0.6s						
YULB	**Yu-li**	**46.39**	**312**	P	**P**	**09 47 59.8**	**-0.1**
MJAR	**Matsushiro Arr**	**47.22**	**339**	P	**P**	**09 48 05.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=171,slow=18,SNR=4.9						
	comp=Z,1.2nm,0.5s						
MAJO	**Matsushiro**	**47.22**	**339**	P	**P**	**09 48 05.7**	**-0.3**
MAJO				IAmb	IAmb	09 48 17.7	
	comp=Z,26nm,1.4s						
KSRS	**Korea Array**	**52.29**	**331**	P	**P**	**09 48 44.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=162,slow=8.8,SNR=4.5						
	comp=Z,1.4nm,0.6s						
KULM	**Kulim**	**57.48**	**281**	P	**P**	**09 49 20.5**	**-0.4**
KULM				IAmb	IAmb	09 49 50.2	
	comp=Z,23nm,1.4s						
PEA0B	**Petropavlovsk-**	**60.43**	**1**	P	**P**	**09 49 40.2**	**+0.1**
PETK	**Petropavlovsk-**	**60.43**	**1**	P	**P**	**09 49 40.0**	**-0.1**
PETK	**Petropavlovsk-**	**60.43**	**1**	P	**P**	**09 49 40.0**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=135,slow=5.5,SNR=8.6						
	comp=Z,1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**62.66**	**295**	P	**P**	**09 49 56.9**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=116,slow=4.9,SNR=6.5						
	comp=Z,1.3nm,0.4s						
VNDA	**Vanda**	**69.98**	**179**	P	**P**	**09 50 40.9**	**+0.6**
VNDA	**Vanda**	**69.98**	**179**	P	**P**	**09 50 40.3**	**0.0**
	comp=Z,0.7nm,0.5s,baz=338,slow=5.8,SNR=6.6						
	comp=Z,0.7nm,0.5s						
SONM	**Songino Array**	**70.79**	**327**	P	**P**	**09 50 46.7**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=129,slow=3.8,SNR=7.8						
	comp=Z,1.6nm,0.6s						
OHAK	**Old Harbor**	**76.24**	**25**	P	**P**	**09 51 17.3**	**+0.5**
KDAK	**Kodiak Island**	**76.89**	**25**	P	**P**	**09 51 19.6**	**-0.7**
O18K	**Koktuh Hills**	**77.16**	**23**	P	**P**	**09 51 22.0**	**+0.1**
O18K				IAmb	IAmb	09 51 33.8	
	comp=Z,4.5nm,1.1s						
N18K	**Kilae Creek**	**77.45**	**22**	P	**P**	**09 51 24.5**	**+1.1**
N18K				IAmb	IAmb	09 51 24.8	
	comp=Z,3.2nm,0.7s						
SVW2	**Sparrevohn**	**77.84**	**22**	P	**P**	**09 51 26.7**	**+1.2**
CNPM	**China Poot**	**78.51**	**24**	P	**P**	**09 51 28.6**	**-0.7**
L19K	**White Mountain**	**78.82**	**21**	P	**P**	**09 51 31.1**	**+0.2**
RC01	**Rabbit Creek A**	**80.05**	**23**	P	**P**	**09 51 37.6**	**+0.2**
RC01				IAmb	IAmb	09 52 13.7	
	comp=Z,8.9nm,1.0s						
PWL	**Port Wells**	**80.47**	**24**	P	**P**	**09 51 40.0**	**+0.4**
PWL				IAmb	IAmb	09 52 04.6	
	comp=Z,7.4nm,1.2s						
CAST	**Castle Rocks**	**80.59**	**21**	P	**P**	**09 51 40.6**	**+0.4**
CAST				IAmb	IAmb	09 51 55.0	
	comp=Z,2.6nm,0.6s						
IMAR	**Indian Mountai**	**81.68**	**18**	P	**P**	**09 51 46.4**	**+0.6**
QSPA	**South Pole Qui**	**82.42**	**180**	P	**P**	**09 51 50.3**	**+0.4**
QSPA				IAmb	IAmb	09 51 50.8	
	comp=Z,5.4nm,0.7s						
IL31		**83.23**	**21**	P	**P**	**09 51 53.0**	**-0.8**
ILAR	**Eielson Array**	**83.23**	**21**	P	**P**	**09 51 53.4**	**-0.3**
ILAR	**Eielson Array**	**83.23**	**21**	P	**P**	**09 51 52.9**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=257,slow=5.3,SNR=16						
	comp=Z,0.7nm,0.3s						
DGAR	**Diego Garcia**	**83.50**	**263**	P	**P**	**09 51 56.6**	**+0.4**
J25K	**Salcha River,**	**83.69**	**22**	P	**P**	**09 51 56.6**	**+0.5**
M27K	**Edge Creek, AK**	**83.88**	**24**	P	**P**	**09 51 58.4**	**+1.1**
M27K				IAmb	IAmb	09 52 38.7	
	comp=Z,7.9nm,1.5s						
MAW	**Mawson**	**84.58**	**203**	P	**P**	**09 52 00.8**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=76,slow=7.6,SNR=4.2						
	comp=Z,1.5nm,0.6s						
MK31	**Makanchi Array**	**85.03**	**318**	P	**P**	**09 52 02.8**	**-0.3**
MK31				IAmb	IAmb	09 52 04.0	
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**85.03**	**318**	P	**P**	**09 52 03.4**	**+0.3**
MKAR	**Makanchi Array**	**85.03**	**318**	P	**P**	**09 52 03.3**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=98,slow=5.9,SNR=36						
	comp=Z,3.2nm,0.6s						
ZALV	**Zalesovo Beam**	**85.66**	**326**	P	**P**	**09 52 05.6**	**-0.4**
ZALV	**Zalesovo Beam**	**85.66**	**326**	P	**P**	**09 52 05.2**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=105,slow=5.8,SNR=5.4						
	comp=Z,1.8nm,0.4s						
FINES	**FINESS Array B**	**115.18**	**336**	PKP	**PKPdf**	**09 58 04.2**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=126,slow=4.9,SNR=4.6						
AKASG	**Malin Array Be**	**119.05**	**325**	PKP	**PKPdf**	**09 58 12.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=55,slow=2.7,SNR=3.9						
ESDC	**Sonseca Array**	**143.67**	**335**	PKP	PKPab	09 58 58.0	+0.1
	comp=Z,0.7nm,0.7s,baz=18,slow=3.5,SNR=5.0						
BDFB	**Brasilia**	**146.29**	**133**	PKPbc	**PKPdf**	**09 59 06.2**	**+1.1**
	comp=Z,1.9nm,0.4s,baz=38,slow=12,SNR=3.3						

IDC 30 09:43:12.0±2.9,53.°66N×87.°20E,h0km,mbtmp2.6/2, ML2.0/2,Error ellipse: s-maj=25.7km s-min=17.2km az=69.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.44**	**283**	*i*		09 51 40.0	
	baz=101,slow=322,SNR=0.9						
ZALV	**Zalesovo Beam**	**1.44**	**283**	Pg	Pn	09 43 38.2	-1.1
	0.6nm,0.3s,baz=100,slow=16,SNR=9.3						
ZALV				Lg	Lg	09 43 57.3	
	1.5nm,0.3s,baz=102,slow=30,SNR=7.4						
KURBB	**Kurchatov Arra**	**6.14**	**244**	Pn	Pn	09 44 44.9	+1.0
	baz=55,slow=14,SNR=2.7						
KURBB				Lg	Lg	09 46 28.5	
	baz=62,slow=30,SNR=4.0						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**7.55**	**207**	Pn	Pn	09 45 04.4	+1.0
	0.1nm,0.3s,baz=29,slow=15,SNR=1.9						
	0.2nm,0.3s						

*IDC **30** 10:31:44.5±1.2,52.°27S×13.°75E,h0km,mb4.1/4, mbtmp4.1/4,MS3.4/11,Error ellipse: s-maj=62.5km s-min=32.3km az=61.0*
*NEIC **30** 10:31:44.3±1.4,52.°09S±0.°10×14.°1E±0.°4,h10km±2km, mb4.5/9,Error ellipse: s-maj=47.0km s-min=5.2km az=110.0*
ISC 30 10:31:44.8±0.7,52.°08S±0.°10×14.°1E±0.°2,h10km,n32, σ0°93/17,mb4.4/8,MS3.4/12,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.29**	**17**	P	**P**	**10 36 19.1**	**-1.7**
SUR				IAmb	IAmb	10 36 31.3	
	comp=Z,34nm,1.4s						
SUR	**Sutherland**	**20.29**	**17**	LR	LR	10 42 41.8	
	comp=Z,92nm,18.4s,baz=152,slow=32						
TROLL	**Troll, Antarti**	**20.64**	**190**	P	P

SANI	**Sanana**	**3.56**	**279**	P	Pn	10 38 20.3 -2.3
SANI				S	Sn	10 39 00.7 -3.4
APSI	**Ampana**	**8.03**	**282**	P	Pn	10 39 23.6 -0.5
	29nm,0.8s					

*IDC **30** 10:44:49.6±1.6,35°.71N×20°.74E,h0km,mb4.1/10, mbtmp3.9/19,ML4.2/5,MS3.4/11,Error ellipse: s-maj=31.9km s-min=15.0km az=18.0*
*MOS **30** 10:44:55.3±1.4,36°.18N×20°.99E,h25km,mb4.3/12,Error ellipse: s-maj=11.3km s-min=5.6km az=64.5*
*ATH **30** 10:44:57.0,36°.09N×21°.13E,h39km±15km,ML3.4/9,Error ellipse: s-maj=16.4km s-min=1.9km az=42.0*
*NEIC **30** 10:44:57.2±1.6,36°.07N±0°.06×20°.93E±0°.08,h33km±8km, mb4.3/7,ML3.4(THE),Error ellipse: s-maj=9.8km s-min=8.2km az=65.0*
*THE **30** 10:44:58.1,36°.04N×21°.06E,h18km±7km,ML3.4/6,Error ellipse: s-maj=9.9km s-min=1.6km az=225.0*
*PDG **30** 10:44:58.9±0.3,36°.49N×20°.89E,h11km±9km,ML4.1/10, Error ellipse: s-maj=10.4km s-min=2.2km az=90.0*

ISC 30 10:44:56.3±1.1,36°.13N±0°.05×20°.85E±0°.04,h29km±7km, n186,σ1°78/206,mb4.2/23,MS3.5/11,12C-7D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**1.05**	**43**	P	**Pb**	**10 45 15.9**	**0.0**
PYL				S	**Sb**	**10 45 31.8**	**+2.5**
	2μm,0.8s						
PYL	**PYLOS**	**1.05**	**43**	P	**Pn**	**10 45 14.8**	**-0.3**
PYL				S	**Sn**	**10 45 27.4**	**-1.4**
PYL				AML	AML	10 45 47.4	
	comp=E,3423μm,0.7s						
PYL				AML	AML	10 45 51.0	
	comp=N,3176μm,1.1s						
ITM	**Ithomi**	**1.36**	**39**	P	**Pb**	**10 45 20.6**	**-0.5**
ITM	**Ithomi**	**1.36**	**39**		**Pn**	**10 45 20.0**	**+0.6**
ITM				Sn	**Sn**	**10 45 35.8**	**-0.7**
ITM	**Ithomi**	**1.36**	**39**	P	**Pn**	**10 45 19.9**	**+0.5**
ITM				AML	AML	10 45 56.0	
	comp=N,1950μm,0.7s						
ITM				AML	AML	10 45 58.1	
	comp=E,2906μm,0.4s						
LTHK	**Lithakia**	**1.58**	**360**	P	**Pb**	**10 45 26.0**	**+1.2**
LTHK				AML	AML	10 45 52.0	
	comp=N,1361μm,0.4s						
LTHK				AML	AML	10 45 56.5	
	comp=E,925μm,0.4s						
KTHR	**Kythira**	**1.75**	**85**	P	**Pn**	**10 45 24.8**	**+0.1**
KTHR	**Kythira**	**1.75**	**85**	P	**Pn**	**10 45 24.3**	**-0.4**
KTHR				AML	AML	10 46 06.5	
	comp=N,5674μm,0.5s						
KTHR				AML	AML	10 46 08.1	
	comp=E,3354μm,0.4s						
VLI	**Velíai**	**1.78**	**70**	P	**Pn**	**10 45 26.0**	**+0.8**
VLI				S	**Sn**	**10 45 47.6**	**+0.7**
	comp=E,1μm,0.7s						
VLI	**Velíai**	**1.78**	**70**	P	**Pn**	**10 45 25.5**	**+0.3**
VLI				S	**Sn**	**10 45 46.1**	**-0.8**
VLI				AML	AML	10 45 49.5	
	comp=N,2117μm,0.7s						
VLI				AML	AML	10 45 49.9	
	comp=E,1905μm,0.7s						
KTHA	**Kythira Island**	**1.79**	**85**	P	**Pn**	**10 45 25.5**	**+0.2**
KTHA				S	**Sn**	**10 45 47.6**	**+0.5**
	comp=E,1μm,0.9s						
KTHA	**Kythira Island**	**1.79**	**85**	P	**Pn**	**10 45 25.0**	**-0.3**
KTHA				AML	AML	10 46 15.8	
	comp=E,1995μm,0.7s						
KTHA				AML	AML	10 46 18.1	
	comp=N,1700μm,1.1s						
DRO	**Drossia**	**1.95**	**20**	P	**Pb**	**10 45 31.0**	**-0.1**
DRO	**Drossia**	**1.95**	**20**	P	**Pb**	**10 45 30.7**	**-0.4**
DRO				AML	AML	10 46 18.3	
	comp=E,1319μm,0.5s						
DRO				AML	AML	10 46 24.0	
	comp=N,1694μm,0.6s						
RLS	**Riolos of Patr**	**1.99**	**14**	P	**Pb**	**10 45 31.0**	**-0.8**
RLS				S	**Sb**	**10 45 55.9**	**-0.3**
	comp=N,380nm,0.6s						
RLS	**Riolos of Patr**	**1.99**	**14**	P	**Pb**	**10 45 32.0**	**+0.2**
RLS				AML	AML	10 46 04.8	
	comp=N,907μm,0.8s						
RLS				AML	AML	10 46 27.4	
	comp=E,495μm,0.8s						
ANKY	**Antikythira Is**	**2.00**	**97**	P	**Pn**	**10 45 27.9**	**-0.3**
ANKY	**Antikythira Is**	**2.00**	**97**	P	**Pn**	**10 45 28.1**	**-0.1**
ANKY				AML	AML	10 46 14.4	
	comp=N,1872μm,1.1s						
ANKY				AML	AML	10 46 23.9	
	comp=E,1516μm,0.8s						
VLS	**Valsamata**	**2.06**	**354**	P	**Pb**	**10 45 32.3**	**-0.7**
DMLN	**Damoulianata-K**	**2.14**	**350**	P	**Pb**	**10 45 33.5**	**-0.9**
GUR	**Goura**	**2.17**	**33**	P	**Pb**	**10 45 33.0**	**-1.9**
KLV	**Kalavryta, Ach**	**2.18**	**28**	P	**Pb**	**10 45 33.3**	**-1.8**
KLV	**Kalavryta, Ach**	**2.18**	**28**	P	**Pb**	**10 45 34.0**	**-1.1**
KRND	**KRANIDI**	**2.23**	**55**	P	**Pn**	**10 45 22.2**	**+0.9**
LAKA	**Lakka**	**2.29**	**23**	P	**Pb**	**10 45 35.5**	**-1.5**
FSK	**Fiskardo**	**2.34**	**354**	P	**Pb**	**10 45 37.2**	**-0.6**
EPID	**Epidavros**	**2.35**	**50**	P	**Pn**	**10 45 34.0**	**+1.1**
EPID				S	**Sn**	**10 46 02.2**	**+1.4**
	comp=E,502nm,0.6s						
LTK	**Loutraki**	**2.54**	**41**	P	**Pn**	**10 45 36.7**	**+1.1**
PVO	**Paravola**	**2.54**	**12**	P	**Pb**	**10 45 40.0**	**-1.2**
ANX	**Ano Chora**	**2.61**	**19**	P	**Pb**	**10 45 40.9**	**-1.5**
IMMV	**Iera Moni Meta**	**2.63**	**104**	P	**Pn**	**10 45 35.8**	**-1.0**
LKD2	**Lefkada island**	**2.66**	**357**	P	**Pb**	**10 45 42.5**	**-0.8**
EVR	**Evrytania**	**2.89**	**15**	P	**Pb**	**10 45 45.2**	**-2.0**
MAKR	**Makrakomi, Fth**	**3.06**	**19**	P	**Pb**	**10 45 47.1**	**-2.9**
ATAL	**Atalanti**	**3.09**	**33**	P	**Pn**	**10 45 45.2**	**+2.1**
DION	**Dionisos Attik**	**3.14**	**51**	P	**Pn**	**10 45 44.1**	**+0.2**
IDI	**Anoyia**	**3.39**	**103**	Pn	**Pn**	**10 45 46.4**	**-1.0**
IDI				Sn	**Sn**	**10 46 24.0**	**-2.6**
IDI	**Anoyia**	**3.39**	**103**	Pn	**Pn**	**10 45 45.0**	**-2.3**
	comp=E,3.6nm,0.3s,baz=270,slow=16,SNR=1.4						
IDI				Sn	**Sn**	**10 46 24.9**	**-1.7**
	comp=E,11nm,0.3s,baz=310,slow=19,SNR=9.0						
THL	**Klokotos Trika**	**3.56**	**15**	P	**Pn**	**10 45 52.8**	**+3.3**
THL				S	**Sn**	**10 46 35.1**	**+4.6**
	comp=E,92nm,0.4s						
KEK	**Kerkira**	**3.68**	**347**	P	**Pn**	**10 45 54.5**	**+3.3**
KEK	**Kerkira**	**3.68**	**347**	Pn	**Pn**	**10 45 50.4**	**-0.8**
XOR	**Xorichti**	**3.73**	**29**	P	**Pn**	**10 45 54.5**	**+2.6**
APE	**Apeiranthos**	**3.88**	**75**	*i* P	**Pn**	**10 45 52.6**	**-1.4**
LIT	**Litokhoron**	**4.17**	**18**	Pn	**Pn**	**10 46 00.6**	**+2.6**
LIT	**Litokhoron**	**4.17**	**18**	P	**Pn**	**10 46 00.6**	**+2.6**
SCTE	**Santa Cesarea**	**4.37**	**335**	Pn	**Pn**	**10 46 04.4**	**+3.8**
TIP	**Timpagrande**	**4.45**	**314**		**Pn**	**10 46 04.4**	**+2.5**
CEL	**Celeste**	**4.49**	**300**	Pn	**Pn**	**10 46 04.2**	**+1.7**
KARP	**Karpathos**	**5.16**	**95**	Pn	**Pn**	**10 46 11.6**	**0.0**
TIR	**Tirane**	**5.27**	**352**	Pn	**Pn**	**10 46 13.9**	**+0.8**
TIR	**Tirane**	**5.27**	**352**	P	**Pn**	**10 46 13.9**	**+0.8**
RAFF	**Raffo Rosso**	**5.33**	**284**		**Pn**	**10 46 17.0**	**+3.1**
VAE	**Valguarnera**	**5.34**	**287**	Pn	**Pn**	**10 46 12.3**	**-1.8**
	comp=E,5.2nm,0.4s,baz=145,slow=16,SNR=2.4						
VAE				Sn	**Sn**	**10 47 17.9**	**+3.2**
	comp=E,3.0nm,0.3s,baz=211,slow=6.9,SNR=2.0						
CUC	**Castrocucco**	**5.54**	**316**		**Pn**	**10 46 18.7**	**+1.9**
MMB	**Musomiste**	**5.90**	**21**	P	**Pn**	**10 46 23.4**	**+1.6**
DRME	**Dracevica, Mon**	**6.19**	**348**	*e*Pn	**Pn**	**10 46 27.3**	**+1.6**
DRME	**Dracevica, Mon**	**6.19**	**348**	⇓*i* Pn	**Pn**	**10 46 27.1**	**+1.4**
DRME				*i* Sn	**Sn**	**10 47 33.5**	**-2.0**
RDO	**Rodhopi**	**6.21**	**35**		**Pn**	**10 46 26.0**	**0.0**
ALN	**Alexandroupoli**	**6.27**	**39**		**Pn**	**10 46 26.7**	**0.0**
ALN	**Alexandroupoli**	**6.27**	**39**	P	**Pn**	**10 46 26.7**	**0.0**
RZN	**Rozhen**	**6.32**	**27**	P	**Pn**	**10 46 29.9**	**+2.3**
BUM	**Brajici-Budva**	**6.35**	**347**	⇓*i* Pn	**Pn**	**10 46 29.6**	**+1.6**
BUM				*i* Sn	**Sn**	**10 47 37.3**	**-2.3**
PDG	**Podgorica**	**6.42**	**349**	Pn	**Pn**	**10 46 29.0**	**+0.2**
TTG	**Podgorica**	**6.42**	**349**	*e*Pn	**Pn**	**10 46 25.5**	**-3.3**
TTG				*i* Sn	**Sn**	**10 47 39.1**	**-1.9**
KDZ	**Kurdzhali**	**6.56**	**31**	P	**Pn**	**10 46 32.5**	**+1.6**
HCY	**Herceg Novi**	**6.57**	**345**	*e*Pn	**Pn**	**10 46 33.0**	**+2.0**
HCY	**Herceg Novi**	**6.57**	**345**	⇑*i* Pn	**Pn**	**10 46 32.5**	**+1.5**
HCY				*i* Sn	**Sn**	**10 47 42.6**	**-2.3**
CEME	**Cevo**	**6.58**	**347**	⇓*i* Pn	**Pn**	**10 46 32.8**	**+1.6**
CEME				*i* Sn	**Sn**	**10 47 43.1**	**-2.2**
VTS	**Vitosha**	**6.74**	**15**		**Pn**	**10 46 33.5**	**+0.2**
VTS	**Vitosha**	**6.74**	**15**	P	**Pn**	**10 46 33.6**	**+0.2**
VTS	**Vitosha**	**6.74**	**15**	P	**Pn**	**10 46 35.6**	**+2.2**
IVA	**Berane**	**6.78**	**354**	⇓*i* Pn	**Pn**	**10 46 35.4**	**+1.5**
IVA				*i* Sn	**Sn**	**10 47 47.6**	**-2.5**
KOME	**Kolasin**	**6.79**	**352**	⇓*i* Pn	**Pn**	**10 46 35.4**	**+1.3**
KOME				*i* Sn	**Sn**	**10 47 47.9**	**-2.6**
TREB	**Trebinje**	**6.86**	**344**	*e*Pn	Pn	10 46 28.2	-6.7
DBRK	**Dubrovnik**	**6.86**	**343**	*e*Pn	**Pn**	**10 46 35.3**	**+0.4**
SGRT	**San Giovanni R**	**6.89**	**326**	Pn	**Pn**	**10 46 37.3**	**+2.0**
BRY	**Bratogost**	**7.00**	**346**	*e*Pn	**Pn**	**10 46 38.3**	**+1.4**
BRY	**Bratogost**	**7.00**	**346**	⇓*i* Pn	**Pn**	**10 46 38.6**	**+1.7**
BRY				*i* Sn	**Sn**	**10 47 53.0**	**-2.6**
AKAS	**Kas**	**7.08**	**87**	Pn	**Pn**	**10 46 37.5**	**-0.6**
STON	**Ston**	**7.16**	**341**	*e*Pn	**Pn**	**10 46 39.2**	**+0.1**
STON	**Ston**	**7.16**	**341**	*e*Pn	**Pn**	**10 46 39.1**	**+0.1**
UPM	**Unac-Piva**	**7.23**	**349**	*e*Pn	**Pn**	**10 46 41.8**	**+1.7**
UPM	**Unac-Piva**	**7.23**	**349**	⇑*i* Pn	**Pn**	**10 46 41.6**	**+1.5**
UPM				*i* Sn	**Sn**	**10 47 58.4**	**-2.9**
PLE	**Plјevlja**	**7.28**	**352**	⇑*i* Pn	**Pn**	**10 46 42.3**	**+1.5**
PLE				*i* Sn	**Sn**	**10 47 59.6**	**-3.0**
LSTV	**Lastovo**	**7.31**	**336**	*e*Pn	**Pn**	**10 46 41.8**	**+0.8**
ELL	**Elmali**	**7.33**	**82**	Pn	**Pn**	**10 46 41.2**	**-0.3**
ELL	**Elmali**	**7.33**	**82**	P	**Pn**	**10 46 41.2**	**-0.3**
RUDO	**Rudo**	**7.57**	**352**	*e*Pn	**Pn**	**10 46 42.5**	**-2.1**
RICI	**Ricice**	**7.89**	**340**	*e*Pn	**Pn**	**10 46 51.5**	**+2.4**
DIVS	**Divibare**	**7.99**	**356**	Pn	**Pn**	**10 46 50.1**	**-0.4**
DIVS	**Divibare**	**7.99**	**356**	*e*Pn	**Pn**	**10 46 50.5**	**0.0**
SRKY	**Kupres RS**	**8.42**	**342**	*e*Pn	**Pn**	**10 47 00.4**	**+4.0**
KIJV	**Kijevo**	**8.57**	**338**	*e*Pn	**Pn**	**10 47 00.9**	**+2.5**
MORI	**Morici**	**8.68**	**335**	*e*Pn	**Pn**	**10 47 02.0**	**+2.2**
A050A	**Klekovaca**	**8.97**	**340**	*e*Pn	**Pn**	**10 47 05.9**	**+1.9**
DUGI	**Dugi Otok**	**9.02**	**332**	*e*Pn	**Pn**	**10 47 07.9**	**+3.3**
BLY	**Banja Luka**	**9.05**	**343**	*e*Pn	Pn	10 47 10.3	+5.3
A051A	**Mrakovica**	**9.37**	**343**	*e*Pn	**Pn**	**10 47 10.9**	**+1.5**
MLR	**Muntele Rosu**	**10.12**	**21**	Pn	**Pn**	**10 47 21.8**	**+2.1**
MLR	**Muntele Rosu**	**10.12**	**21**	P	**Pn**	**10 47 21.8**	**+2.1**
MLR	**Muntele Rosu**	**10.12**	**21**	Pn	**Pn**	**10 47 22.5**	**+2.8**
	comp=E,0.3nm,0.3s,baz=181,slow=14,SNR=4.6						
	comp=E,3.8nm,0.7s						
BOJS	**Bojanci**	**10.28**	**337**	*e*Pn	**Pn**	**10 47 25.1**	**+3.3**
CRES	**Cresnjev**	**10.51**	**339**	*e*Pn	**Pn**	**10 47 24.8**	**-0.1**
BRTR	**Keskin Array B**	**10.72**	**67**	*ce*P	**Pn**	**10 47 30.8**	**+2.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**10.72**	**67**	Pn	**Pn**	**10 47 27.9**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=259,slow=18,SNR=6.3						
SKDS	**Skadanscina**	**10.74**	**333**	*e*Pn	**Pn**	**10 47 30.5**	**+2.4**
CEY	**Cerknica**	**10.76**	**335**	*e*Pn	**Pn**	**10 47 32.9**	**+4.5**
OBKA	**Obir**	**11.40**	**337**	*e*Pn	**Pn**	**10 47 33.6**	**-3.6**
OBKA	**Obir**	**11.40**	**337**	*e*Pn	**Pn**	**10 47 41.0**	**+3.8**
	comp=Z,2.2nm,0.4s						
SOKA	**Soboth**	**11.41**	**339**	*e*Pn	**Pn**	**10 47 41.2**	**+3.9**
	comp=Z,2.2nm,0.2s						
MMAI	**Mount Meron Ar**	**12.39**	**100**	Pn	**Pn**	**10 47 49.2**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=299,slow=15,SNR=2.1						
MOA	**Molln**	**12.69**	**339**	*e*Pn	**Pn**	**10 47 58.6**	**+3.8**
	comp=Z,1.2nm,0.3s						
MAHO	**Mahon**	**13.61**	**291**	Pn	**Pn**	**10 48 07.1**	**-0.2**
GERES	**GERESS Array B**	**13.75**	**340**	P	**Pn**	**10 48 12.1**	**+2.8**
GERES	**GERESS Array B**	**13.75**	**340**	Pn	**Pn**	**10 48 12.1**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=158,slow=19,SNR=6.1						
	comp=Z,0.4nm,0.3s						
AKASG	**Malin Array Be**	**15.77**	**20**	*i* P	**P**	**10 48 40.4**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**15.77**	**20**	Pn	**Pn**	**10 48 38.0**	**+1.8**
	comp=Z,1.7nm,0.3s,baz=213,slow=11,SNR=6.6						
AKASG				LR	LR	10 54 51.3	
	comp=Z,39nm,21.5s,baz=234,slow=37						
	comp=Z,0.5nm,0.4s						
AKBB	**Malin Array Si**	**15.77**	**20**	*ce*P	**Pn**	**10 48 36.8**	**+0.6**
CLL	**Collm**	**16.19**	**342**	*i* pP	**pP**	**10 48 49.2**	**-2.0**
CLL				Lm	MLR	10 56 00.0	
	comp=Z,100nm,18.3s						
SHA1	**Shidzhatmaz**	**18.34**	**59**	*i* P	**Pn**	**10 49 10.4**	**+1.8**
KBZ	**Khabaz**	**18.50**	**59**	P	**P**	**10 49 10.3**	**+0.2**
KBZ	**Khabaz**	**18.50**	**59**	*i* P	**Pn**	**10 49 11.8**	**+1.5**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KBZ	**Khabaz**	**18.50**	**59**	P	**P**	**10 49 10.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=250,slow=9.2,SNR=3.0						
	comp=Z,1.7nm,0.4s						
MNK	**Minsk**	**19.01**	**13**	*i* P	**P**	**10 49 15.0**	**-0.6**
MNK				*i* S	**S**	**10 52 50.5**	**+1.0**
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,23nm,15.0s						
MNK				MLR	MLR		
	comp=N,29nm,17.0s						
MNK				MLR	MLR		
	comp=Z,321nm,20.0s						
MNK	**Minsk**	**19.01**	**13**	*i* P	**P**	**10 49 15.0**	**-0.6**
	comp=E,2.0nm,0.7s						
MNK				*i* P	**P**	**10 49 15.0**	**-0.6**
	comp=N,9.0nm,0.8s						
MNK				*i* P	**P**	**10 49 15.0**	**-0.6**
	comp=Z,20nm,0.8s,baz=198						
MNK				*i* PP	**PnPn**	**10 49 28.6**	**-0.6**
MNK				*i* PPP	PPP	10 49 36.4	
MNK				*i* S	**S**	**10 52 50.5**	**+1.0**
MNK				*i* SS	**SnSn**	**10 53 06.2**	**+3.6**
MNK				*i* SSS	SSS	10 53 19.1	
MNK				*i* LR	LR	10 56 17.8	
MNK				*i* LRM	MLR	10 57 50.6	
	comp=E,23nm,15.3s						
MNK				*i* LRM	MLR	10 57 56.8	
	comp=N,29nm,17.2s						
MNK				*i* LRM	MLR	10 58 05.1	
	comp=Z,321nm,19.8s						
GNI	**Garni**	**19.20**	**71**	*ce*P	**P**	**10 49 17.9**	**-0.1**
GNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	**Garni**	**19.20**	**71**	LR	LR	10 58 12.8	
	comp=Z,92nm,18.2s,baz=269,slow=41						
NACGM	**Naroch**	**19.22**	**10**	⇑*e*P	**Pn**	**10 49 19.7**	**+0.7**
	baz=193						
ESDC	**Sonseca Array**	**19.88**	**288**	P	**P**	**10 49 21.6**	**-3.6**
	comp=Z,0.5nm,0.3s,baz=89,slow=9.8,SNR=6.1						
	comp=Z,0.7nm,0.3s						
VSR	**Storozhevoye**	**19.99**	**35**	*e*P	**P**	**10 49 25.2**	**-1.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORR	**Voronezh**	**20.32**	**34**	*e*P	**P**	**10 49 29.1**	**-0.7**
VORR				pmax	pmax		
	comp=Z,60nm,0.4s						
LPSR	**Galich'ya Gora**	**20.84**	**32**	*e*P	**P**	**10 49 33.8**	**-1.7**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH	**Novokhopyorsk**	**21.22**	**38**	*e*P	**P**	**10 49 37.8**	**-1.8**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDT	**Midelt**	**21.23**	**268**	LR	LR	10 58 52.1	
	comp=Z,47nm,21.8s,baz=96,slow=40						
OBN	**Obninsk**	**21.85**	**25**	*ce*P	**P**	**10 49 46.3**	**+0.1**
OBN				*e*		10 50 06.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.4s						
OBN				MLR	MLR		
	comp=Z,49nm,16.0s						
HFS	**Hagfors**	**24.46**	**351**	P	**P**	**10 50 14.2**	**+1.7**
HFS	**Hagfors**	**24.46**	**351**	P	**P**	**10 50 14.2**	**+1.7**
HFS	**Hagfors**	**24.46**	**351**	P	**P**	**10 50 14.2**	**+1.7**
	comp=Z,4.5nm,0.7s,baz=167,slow=13,SNR=15						
HFS				LR	LR	11 01 52.0	
	comp=Z,50nm,19.5s,baz=165,slow=41						
	comp=Z,4.5nm,0.7s						
BELG	**Belogornoye**	**24.93**	**41**	P	**P**	**10 50 17.2**	**+0.4**
BELG	**Belogornoye**	**24.93**	**41**	P	**P**	**10 50 17.2**	**+0.4**
BELG	**Belogornoye**	**24.93**	**41**	P	**P**	**10 50 17.2**	**+0.4**
	comp=Z,24nm,0.7s,baz=84,slow=1.9,SNR=5.8						
	comp=Z,24nm,0.7s						
EKA	**Eskdalemuir Ar**	**25.27**	**327**	P	**P**	**10 50 19.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**25.27**	**327**	P	**P**	**10 50 19.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**25.27**	**327**	P	**P**	**10 50 19.9**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=131,slow=10,SNR=3.5						
	comp=Z,1.3nm,0.7s						
FINES	**FINESS Array B**	**25.55**	**6**	P	**P**	**10 50 23.3**	**+1.0**
FINES	**FINESS Array B**	**25.55**	**6**	*ce*P	**P**	**10 50 24.7**	**+2.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	**FINESS Array B**	**25.55**	**6**	P	**P**	**10 50 24.2**	**+1.9**
	comp=Z,4.8nm,0.9s,baz=177,slow=11,SNR=4.5						
FINES				LR	LR	11 02 10.8	
	comp=Z,187nm,19.1s,baz=214,slow=40						
	comp=Z,4.8nm,0.9s						
NC405	**NORSAR Array S**	**25.68**	**350**	P	**P**	**10 50 24.4**	**+1.0**
NC405				IAmb	IAmb	10 50 33.9	
	comp=Z,43nm,1.3s						
NB201	**NORSAR Array S**	**25.68**	**349**	P	**P**	**10 50 23.2**	**-0.2**
NB2	**NORSAR Subarra**	**25.68**	**349**	P	**P**	**10 50 26.2**	**+2.7**
	comp=Z,0.9nm,0.7s,baz=157,slow=9.3						
NOA	**NORSAR Array B**	**25.68**	**349**	P	**P**	**10 50 23.7**	**+0.2**
NOA	**NORSAR Array B**	**25.68**	**349**	P	**P**	**10 50 23.7**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=152,slow=6.6,SNR=4.2						
NOA				LR	LR	11 02 58.9	
	comp=Z,42nm,18.4s,baz=175,slow=42						
	comp=Z,1.2nm,0.7s						
GEYT	**Alibeck**	**29.68**	**75**	P	**P**	**10 50 59.0**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**29.68**	**75**	P	**P**	**10 50 59.0**	**-0.6**
GYA0B				IAmb	IAmb	10 51 06.9	
	comp=Z,4.1nm,0.7s						
ABKAR	**Akbulak array**	**31.23**	**53**	P	**P**	**10 51 11.8**	**-1.2**
ARU	**Arti**	**32.45**	**39**	*i* P	**P**	**10 51 24.5**	**+0.8**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	**ARCESS Array B**	**33.56**	**3**	P	**P**	**10 51 34.1**	**+0.8**
ARCES	**ARCESS Array B**	**33.56**	**3**	P	**P**	**10 51 34.1**	**+0.8**
	comp=Z,4.6nm,1.1s,baz=188,slow=14,SNR=4.4						
	comp=Z,4.6nm,1.1s						
BORG	**Borgarnes**	**38.04**	**332**	LR	LR	11 11 19.3	
	comp=Z,35nm,18.3s,baz=147,slow=41						
KK31	**Karatay Array**	**38.42**	**64**	P	**P**	**10 52 14.7**	**-0.6**
KK31	**Karatay Array**	**38.42**	**64**	P	**P**	**10 52 14.7**	**-0.6**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KKAR	**Karatay Array**	**38.42**	**64**	P	**P**	**10 52 14.5**	**-0.7**
KKAR	**Karatay Array**	**38.42**	**64**	P	**P**	**10 52 14.5**	**-0.7**
KBL	**Kabul**	**39.03**	**78**		**P**	**10 52 20.7**	**0.0**
KBL				IAmb	IAmb	10 52 47.2	
	comp=Z,3.8nm,0.5s						
KBL	**Kabul**	**39.03**	**78**	P	**P**	**10 52 20.7**	**0.0**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MK31	**Makanchi Array**	**46.18**	**57**	P	**P**	**10 53 17.9**	**-0.5**
MK31				IAmb	IAmb	10 53 19.2	
	comp=Z,2.9nm,1.3s						
MK31	**Makanchi Array**	**46.18**	**57**	P	**P**	**10 53 17.9**	**-0.5**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MKAR	**Makanchi Array**	**46.18**	**57**	P	**P**	**10 53 17.8**	**-0.5**
MKAR	**Makanchi Array**	**46.18**	**57**	*ce*P	**P**	**10 53 17.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**46.18**	**57**	P	**P**	**10 53 17.9**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=270,slow=7.8,SNR=19						
	comp=Z,0.9nm,0.3s						
ZAA0	**Zalesovo Array**	**46.88**	**47**	P	**P**	**10 53 22.9**	**-0.8**
ZAA0				IAmb	IAmb	10 53 23.9	
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**46.88**	**47**	P	**P**	**10 53 23.1**	**-0.6**
ZALV	**Zalesovo Beam**	**46.88**	**47**	*i* P	**P**	**10 53 23.1**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**46.88**	**47**	P	**P**	**10 53 23.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=267,slow=10,SNR=6.1						
	comp=Z,1.3nm,0.4s						
TSUM	**Tsumeb**	**55.11**	**184**	LR	LR	11 18 40.8	
	comp=Z,87nm,18.0s,baz=154,slow=37						
FRB	**Frobisher Bay**	**58.03**	**328**	LR	LR	11 21 24.9	
	comp=Z,34nm,19.2s,baz=240,slow=38						
TIXI	**Tiksi**	**61.48**	**20**	*i* P	**P**	**10 55 12.1**	**+2.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	**Tiksi**	**61.48**	**20**	LR	LR	11 26 00.5	
	comp=Z,101nm,19.5s,baz=198,slow=40						
SONM	**Songino Array**	**61.57**	**50**	P	**P**	**10

KTK1 **Kautokeino** **3.32 352** SN Sn 11 03 09.4 +1.6

*INET **30** 11:18:34.8±0.8, 12.°52N×87.°77W, h25km±18km, MW3.4*
*SNET **30** 11:18:35.5±0.7, 12.°62N×87.°85W, h59km±10km, ML3.0*
ISC 30 11:18:31.9±1.8,**12.°47N**±0.°09×**87.°80W**±0.°05,**h15**km±14km, **n17**,σ0°**58**/25,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.80**	**357**	*e*P		**Pn**	**11 18 48.9**	**+0.2**
CNCH				*e*S		**Sn**	**11 19 00.9**	**+0.5**
RANC	**El Ranchito**	**1.07**	**333**	*e*P		**Pb**	**11 18 52.6**	**+0.5**
RANC				*e*S		**Sb**	**11 19 06.3**	**+0.3**
RANC				IAML			11 19 09.1	
	comp=Z,364nm,0.2s							
CNGN	**Cerro Negro**	**1.07**	**88**	*e*P		**Pn**	**11 18 52.9**	**+0.5**
CNGN				*e*S		**Sn**	**11 19 07.8**	**+0.8**
PACA	**Pacayal**	**1.11**	**333**	*e*P		**Pb**	**11 18 53.4**	**+0.4**
PACA				*e*S		**Sb**	**11 19 07.2**	**-0.2**
PACA				IAML			11 19 10.7	
	comp=Z,3μm,0.2s							
MOMN	**Momotombo**	**1.23**	**93**	*e*P		**Pg**	**11 18 55.2**	**-0.4**
COEB	**Comit de Eme**	**1.25**	**325**	*e*P		**Pn**	**11 18 55.3**	**+0.4**
COEB				IAML			11 19 13.3	
	comp=Z,180nm,0.2s							
APYN	**Apoyeque**	**1.43**	**99**	*e*P		**Pn**	**11 18 57.2**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.52**	**323**	*e*P		**Pn**	**11 18 58.7**	**+0.1**
SCLA				*e*S		**Sn**	**11 19 17.4**	**-0.8**
TGUH	**Tegucigalpa,Un**	**1.66**	**18**	*e*P		**Pn**	**11 19 00.7**	**+0.2**
TGUH				*e*S		**Sn**	**11 19 20.3**	**-1.3**
TGUH	**Tegucigalpa,Un**	**1.66**	**18**	*e*P		**Pn**	**11 19 01.0**	**+0.4**
LFRS	**El Faro**	**1.68**	**313**	*e*P		**Pn**	**11 19 01.5**	**+0.7**
LFRS				*e*S		**Sn**	**11 19 21.3**	**-0.9**
P5NO	**Presa 5 de nov**	**1.77**	**328**	*e*P		**Pn**	**11 19 01.8**	**-0.2**
MATN	**Matagalpa**	**1.88**	**76**	*e*P		**Pn**	**11 19 03.8**	**+0.2**
MATN				*e*S		**Sn**	**11 19 26.3**	**-0.9**
RCON	**San Juan de Ri**	**1.89**	**58**	*e*P		**Pn**	**11 19 04.4**	**+0.6**
JAYA	**Jayaque - finc**	**1.99**	**306**	*e*P		**Pn**	**11 19 05.3**	**+0.2**
JAYA				IAML			11 19 32.2	
	comp=Z,141nm,0.2s							
BOAB	**BOACO BROADBAN**	**2.08**	**90**	*e*P		**Pn**	**11 19 06.3**	**0.0**
NUBE	**Las Nubes**	**2.40**	**307**	*e*P		**Pn**	**11 19 11.1**	**+0.3**
NUBE				IAML			11 19 41.0	
	comp=Z,23nm,0.1s							

*IDC **30** 11:19:15.5±1.9, 31.°98N×131.°96E, h0km, mb3.5/2,*
mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=119.4km
s-min=26.7km az=78.0
*JMA **30** 11:19:18.4±0.1, 32.°2N±0.°3×132.°2E±0.°3, h23km±1km,*
MV3.8/32, HYUGANADA REGION
JMA Felt I J1 at HYUGANADA REGION .
*NIED **30** 11:19:18.4, 32.°22N×132.°20E, h23km, MW3.8, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}-1.81; $M_{\theta\theta}$0.44; $M_{\phi\phi}$1.36; $M_{r\theta}$4.20; $M_{\theta\phi}$0.45; $M_{\phi r}$3.17;
Fault plane solution: $M_0$5.50000×10^{14} NP1:ϕ_s15.00000°,
δ10.00000°, λ-126.00000°. NP2:ϕ_s231.00000°,
δ82.00000°, λ-84.00000°.
ISC 30 11:19:17.1±2.7,**32.°18N**±0.°07×**132.°22E**±0.°05,**h16**km±18km, **n13**,σ0°**71**/20,**6D**,**Shikoku**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHHC	**Hyugahichiya**	**0.56**	**298**	⇓P		**Pb**	**11 19 28.7**	**+0.1**
JHHC				⇓S		**Sb**	**11 19 36.0**	**-0.4**
JTSN	**Tsuno**	**0.61**	**277**	P		**Pn**	**11 19 29.6**	**-1.6**
JTSN				S		**Sb**	**11 19 37.6**	**-0.3**
JSKE	**Saikikamae**	**0.68**	**337**	P		**Pb**	**11 19 30.7**	**+0.1**
JSKE				S		**Sg**	**11 19 39.4**	**0.0**
JKIT	**Kitakata**	**0.79**	**305**	P		**Pb**	**11 19 32.5**	**0.0**
JKIT				S		**Sb**	**11 19 43.1**	**+0.1**
JTO	**Tosashimizu**	**0.84**	**36**	P		**Pb**	**11 19 33.4**	**0.0**
JUS	**Usuki**	**0.97**	**336**	P		**Pb**	**11 19 35.8**	**+0.1**
JUS				S		**Sb**	**11 19 48.1**	**-0.1**
JTZ	**Takazaki**	**1.00**	**254**	⇓P		**Pn**	**11 19 36.2**	**-0.3**
JTZ				⇓S		**Sn**	**11 19 50.3**	**0.0**
JNAR	**Kushima--Naru**	**1.03**	**232**	⇓*i*P		**Pn**	**11 19 37.5**	**+0.5**
JNAR				⇓S		**Sn**	**11 19 52.0**	**+0.8**
UWA2	**Uwa jima 2**	**1.09**	**18**	P		**Pn**	**11 19 37.1**	**-0.7**
KSRS	**Korea Array**	**6.34**	**327**	Pn		**Pn**	**11 20 50.6**	**+0.7**
	0.8nm,0.3s,baz=147,slow=14,SNR=7.6							
	2.1nm,0.4s							
KLR	**Kul'dur**	**17.04**	**359**	P		**P**	**11 23 17.9**	**+1.5**
	0.3nm,0.3s,baz=157,slow=7.8,SNR=12							
	3.5nm,0.6s							
WRA	**Warramunga Arr**	**51.86**	**177**	P		**P**	**11 28 24.0**	**-0.8**
	0.5nm,0.8s,baz=358,slow=8.4,SNR=5.4							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**55.55**	**178**	P		**P**	**11 28 51.4**	**-0.5**
	0.6nm,0.9s,baz=10,slow=13,SNR=5.7							
	0.6nm,0.9s							

*IDC **30** 11:23:15.7±1.5, 37.°36N×141.°89E, h0km, mb3.4/3,*
mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=36.2km
s-min=26.5km az=106.0
*JMA **30** 11:23:21.1±0.1, 37.°4N±0.°4×141.°7E±0.°8, h43km±2km,*
MV3.8/40, E OFF FUKUSHIMA PREF
ISC 30 11:23:18.5±1.7,**37.°39N**±0.°04×**141.°78E**±0.°06,**h17**km±9km, **n22**,σ0°**43**/28,**mb3.4**/3,**12D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.72**	**269**	⇓*i*P		**Pn**	**11 23 34.1**	**+0.2**
JFK				⇓S		**Sb**	**11 23 42.7**	**+0.6**
JMST	**Minamisoumatoc**	**0.78**	**296**	⇓*i*P		**Pn**	**11 23 34.9**	**+0.2**
JMST				⇓S		**Sg**	**11 23 44.7**	**+0.5**
JMM	**Marumori**	**0.92**	**302**	⇓*i*P		**Pn**	**11 23 37.0**	**+0.4**
JMM				⇓S		**Sg**	**11 23 48.2**	**-0.2**
JIKH	**Ishinomakikobu**	**0.96**	**345**	⇓*i*P		**Pn**	**11 23 37.9**	**+0.8**
JIKH				⇓S		**Sg**	**11 23 49.4**	**-0.3**
JFFD	**Fukushimafurud**	**1.01**	**254**	⇓*i*P		**Pg**	**11 23 38.2**	**0.0**
JFFD				⇓S		**Sb**	**11 23 50.8**	**+0.2**
JIO	**Ouri**	**1.12**	**343**	⇓*i*P		**Pg**	**11 23 40.3**	**+0.1**
JIO				⇓S		**Sb**	**11 23 53.3**	**-0.3**
JFT	**Otama**	**1.15**	**277**	*i*P		**Pg**	**11 23 41.0**	**+0.2**
JFT				S		**Sb**	**11 23 54.8**	**+0.2**
JOU	**Okura**	**1.32**	**318**	P		**Pg**	**11 23 43.5**	**-0.4**
JOU				S		**Sb**	**11 23 59.5**	**+0.1**
JYS	**Shirataka**	**1.59**	**302**	P		**Pb**	**11 23 47.5**	**0.0**
JYS				S		**Sb**	**11 24 07.0**	**-0.3**
JMK	**Ichinoseki**	**1.62**	**345**	P		**Pb**	**11 23 48.0**	**0.0**
JMK				S		**Sn**	**11 24 07.1**	**+0.3**
JFY	**Yanaizu**	**1.65**	**271**	P		**Pb**	**11 23 48.0**	**-0.5**
JFY				S		**Sn**	**11 24 07.8**	**+0.3**
MJAR	**Matsushiro Arr**	**2.98**	**255**	Pn		**Pn**	**11 24 05.5**	**+0.6**
	1.0nm,0.3s,baz=77,slow=17,SNR=24							
MJAR				Sn		**Sb**	**11 24 46.2**	**-1.0**
	1.3nm,0.3s,baz=42,slow=28,SNR=6.3							
	6.8nm,0.4s							
JHJ	**Hachijo jima 2**	**4.56**	**202**	Pn		**Pn**	**11 24 27.3**	**+0.7**
	25nm,0.3s,baz=65,slow=19,SNR=4.5							
	83nm,0.3s							
H11N2	**WAKE ISLAND Hy 28.08**	**122**		T		T	11 58 38.4	
	baz=315,slow=75,SNR=61							
H11N1	**WAKE ISLAND Hy 28.09**	**122**		T		T	11 58 42.8	
	baz=315,slow=75,SNR=72							
H11N3	**WAKE ISLAND Hy 28.10**	**122**		T		T	11 58 43.7	
	baz=315,slow=75,SNR=59							
H11S1	**WAKE ISLAND Hy 28.81**	**124**		T		T	11 59 35.2	
	baz=316,slow=76,SNR=75							
H11S3	**WAKE ISLAND Hy 28.81**	**124**		T		T	11 59 35.3	
	baz=316,slow=76,SNR=81							
H11S2	**WAKE ISLAND Hy 28.83**	**124**		T		T	11 59 36.4	
	baz=316,slow=76,SNR=69							
MKAR	**Makanchi Array**	**44.18**	**302**	P		**P**	**11 31 26.1**	**-0.3**
	0.4nm,0.6s,baz=86,slow=9.6,SNR=4.9							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**49.04**	**33**	P		**P**	**11 32 04.2**	**+0.1**
	0.3nm,0.7s,baz=280,slow=5.3,SNR=2.9							
	0.3nm,0.7s							
WRA	**Warramunga Arr**	**57.45**	**188**	P		**P**	**11 33 05.9**	**-0.5**
	0.2nm,0.4s,baz=7.8,slow=7.7,SNR=11							
	0.2nm,0.4s							

*DRS **30** 11:24:18.7±0.0, 43.°29N×46.°20E, h14km*
*NORS **30** 11:24:19.3±0.0, 42.°54N×46.°32E, h30km, MPVA3.5*
*MOS **30** 11:24:19.7±0.0, 43.°17N×46.°30E, h12km, MPVA3.3*

ISC 30 11:24:20.9±1.1,**43.°20N**±0.°06×**46.°31E**±0.°03,**h15**km±8km, **n21**,σ0°**99**/40,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.27**	**120**	*e*Pg		**Pg**	**11 24 26.4**	**-0.2**
DLMR				*e*Sg		**Sb**	**11 24 32.2**	**+0.3**
GROC	**Groznyy**	**0.37**	**270**	*e*Pg		**Pg**	**11 24 27.9**	**-0.6**
GROC				*e*Sg		**Sg**	**11 24 33.5**	**-0.2**
DBC	**Dubki**	**0.42**	**116**	*e*Pg		**Pb**	**11 24 29.6**	**-0.6**
DBC				*e*Sg		**Sb**	**11 24 37.4**	**+0.9**
KRNR	**Karanay**	**0.58**	**130**	*e*Pg		**Pg**	**11 24 31.9**	**-0.4**
KRNR				*e*Sg		**Sb**	**11 24 41.5**	**+0.5**
UNCR	**Uncukul**	**0.61**	**144**	*e*Pg		**Pg**	**11 24 32.4**	**-0.4**
UNCR				*e*Sg		**Sb**	**11 24 42.2**	**+0.6**
BUJR	**Buynaksk**	**0.70**	**123**	*e*Pg		**Pg**	**11 24 33.7**	**-0.8**
BUJR				*e*Sg		**Sb**	**11 24 44.8**	**+0.5**
XNZR	**Khunzakh**	**0.72**	**156**	*i*Pg		**Pg**	**11 24 34.3**	**-0.7**
XNZR				*e*Sg		**Sb**	**11 24 45.5**	**+0.3**
ARKR	**Arakani**	**0.79**	**140**	*e*Pg		**Pn**	**11 24 36.5**	**-1.0**
ARKR				*e*Sg		**Sn**	**11 24 48.8**	**-0.2**
GNBR	**Gunib**	**0.95**	**149**	*e*Pg		**Pb**	**11 24 38.5**	**-0.6**
GNBR				*e*Sg		**Sn**	**11 24 52.9**	**-0.2**
KMGR	**Komgaron**	**1.06**	**263**	*e*Pg		**Pn**	**11 24 42.5**	**+1.1**
KMGR				*e*Sg		**Sn**	**11 24 57.4**	**+1.4**
VLKR	**Vladikavkaz**	**1.20**	**263**	*e*Pg		**Pg**	**11 24 44.2**	**+0.2**
VLKR				*e*Sg		**Sg**	**11 25 02.5**	**+2.7**
KMKR	**Kumukh**	**1.22**	**151**	*e*Pg		**Pg**	**11 24 44.1**	**-0.4**
KMKR				*e*Sg		**Sg**	**11 25 02.6**	**+2.2**
PNSH	**Pansheti**	**1.37**	**246**	P		**Pn**	**11 24 45.4**	**-0.3**
PNSH				S		**Sn**	**11 25 02.6**	**-1.0**
LGD	**Lagodekhi**	**1.37**	**182**	P		**Pb**	**11 24 46.2**	**0.0**
LGD				S		**Sg**	**11 25 05.2**	**+0.1**
LACR	**Lac**	**1.52**	**256**	*e*Pg		**Pb**	**11 24 47.8**	**-1.2**
LACR				*e*Sg		**Sg**	**11 25 08.4**	**-1.5**
KORR	**Kora**	**1.64**	**267**	*e*Pg		**Pb**	**11 24 50.9**	**-0.1**
KORR				*e*Sg		**Sg**	**11 25 13.8**	**0.0**
STDR	**Stavd-Durt**	**1.65**	**276**	*e*Pg		**Pg**	**11 24 52.2**	**-0.3**
STDR				*e*Sg		**Sg**	**11 25 15.7**	**+1.8**
DDFL	**Dedoflistskaro**	**1.76**	**185**	P		**Pg**	**11 24 56.2**	**+1.5**
ZEI	**Tsey**	**1.81**	**258**	*e*Pg		**Pn**	**11 24 51.6**	**-0.2**
ZEI				*e*Sg		**Sb**	**11 25 16.2**	**-0.4**
DGRG	**David-gareji**	**1.88**	**202**	P		**Pg**	**11 24 55.6**	**-1.4**
DIGR	**Digorskoe uzhe**	**2.02**	**262**	*e*Pg		**Pn**	**11 24 55.2**	**+0.5**
DIGR				*e*Sg		**Sb**	**11 25 21.7**	**-0.8**

*IDC **30** 11:45:17.9±1.3, 21.°83N×122.°10E, h0km, mb3.8/6,*
mbtmp3.9/6, MS3.1/6, Error ellipse: s-maj=59.0km
s-min=18.5km az=61.0
*TAP **30** 11:45:20.1, 21.°77N×121.°65E, h21km, ML4.1, D*
*NIED **30** 11:45:21.5, 21.°90N×121.°70E, h40km, MW3.9, Moment*
Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm;
M_{rr}-6.78; $M_{\theta\theta}$5.09; $M_{\phi\phi}$1.69; $M_{r\theta}$2.42; $M_{\theta\phi}$-2.32; $M_{\phi r}$2.73;
Fault plane solution: $M_0$7.30000×10^{14} NP1:
ϕ_s136.00000°, δ44.00000°, λ-58.00000°. NP2:
ϕ_s275.00000°, δ53.00000°, λ-117.00000°.
*JMA **30** 11:45:21.5±0.4, 22.°N±1.°×12.°2E±.°, h40km, MV4.0/15,*
TAIWAN REGION
ISC 30 11:45:17.8±1.5,**21.°74N**±0.°04×**121.°76E**±0.°03,**h0**km±9km, **n141**,σ1°**30**/204,**mb3.9**/6,**MS3.1**/4,**2D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**0.30**	**328**	P		**Pb**	**11 45 26.6**	**+0.4**
	baz=346							
LYUB				S		**Sb**	**11 45 30.3**	**-1.4**
	baz=346							
LAY	**Lan-yu**	**0.35**	**327**	*i*P		**Pb**	**11 45 26.4**	**-0.6**
	baz=343							
LAY				S		**Sg**	**11 45 31.5**	**+2.3**
	baz=343							
TSEB	**Hengchuen, Pin**	**0.81**	**281**	*i*P		**Pb**	**11 45 35.1**	**+0.3**
	baz=280							
TSEB				*i*S		**Sb**	**11 45 46.0**	**-0.3**
	baz=280							
SMST	**Manzhou Townsh**	**0.90**	**288**	P		**Pg**	**11 45 35.7**	**+0.6**
	baz=301							
SMST				S		**Sg**	**11 45 47.3**	**+0.6**
	baz=301							
TWKBT	**Hengchun**	**0.90**	**283**	⇓P		**Pg**	**11 45 35.7**	**+0.6**
	baz=295							
TWKBT				S		**Sg**	**11 45 46.8**	**0.0**
	baz=295							
TWK1	**Hengchun**	**0.91**	**283**	⇓*i*P		**Pg**	**11 45 35.7**	**+0.5**
	baz=295							
TWK1				*i*S		**Sg**	**11 45 47.1**	**+0.2**
	baz=295							
LDUT	**Ludao**	**0.96**	**344**	P		**Pg**	**11 45 36.5**	**+0.2**
	baz=350							
HEN	**Hengchun**	**0.98**	**286**	*e*P		**Pg**	**11 45 37.2**	**+0.6**
	baz=298							
HEN				*i*S		**Sg**	**11 45 49.5**	**+0.1**
	baz=298							
TAWH	**Dawu Township**	**1.00**	**307**	P		**Pg**	**11 45 36.0**	**-1.0**
	baz=309							
TAWH				S		**Sg**	**11 45 48.7**	**-1.4**
	baz=309							
SLIU	**Shizi**	**1.01**	**298**	*i*P		**Pg**	**11 45 37.0**	**-0.1**
	baz=300							
SLIU				*e*S		**Sg**	**11 45 48.4**	**-1.8**
	baz=300							
TAW	**Tawu**	**1.01**	**308**	*i*P		**Pg**	**11 45 37.3**	**+0.2**
	baz=311							
TAW				*i*S		**Sg**	**11 45 49.8**	**-0.4**
	baz=311							
EAST	**Anshuo**	**1.06**	**307**	*i*P		**Pg**	**11 45 37.4**	**-0.7**
	baz=310							
EAST				S		**Sg**	**11 45 50.4**	**-1.5**
	baz=310							
ECL	**Taimali**	**1.13**	**319**	*i*P		**Pg**	**11 45 38.7**	**-0.8**
	baz=313							
ECL				S		**Sg**	**11 45 53.9**	**-0.3**
	baz=313							
TTN	**Taitung**	**1.16**	**331**	*i*P		**Pg**	**11 45 40.2**	**+0.2**
	baz=345							
TTN				S		**Sg**	**11 45 55.4**	**+0.4**
	baz=345							
SCZT	**Fangliau**	**1.23**	**301**	*i*P		**Pg**	**11 45 40.6**	**-0.8**
	baz=312							
SCZT				S		**Sg**	**11 45 56.6**	**-0.7**
	baz=312							
TWGBT	**Beinan**	**1.24**	**330**	P		**Pg**	**11 45 40.0**	**-1.6**
	baz=318							
TWGBT				S		**Sg**	**11 45 58.2**	**+0.4**
	baz=318							
EDH	**Donghe**	**1.30**	**341**	P		**Pb**	**11 45 43.3**	**+0.2**
	baz=356							
EDH				*i*S		**Sb**	**11 45 59.4**	**-0.9**
	baz=356							
LONT	**Longtian**	**1.30**	**333**	*i*P		**Pg**	**11 45 43.6**	**+0.9**
	baz=321							
LONT				S		**Sb**	**11 45 59.7**	**-0.6**
	baz=321							
SSPT	**Xinbi**	**1.33**	**304**	*e*P		**Pn**	**11 45 42.3**	**-1.2**
	baz=321							
WLCH	**Liuqiu**	**1.42**	**296**	*e*P		**Pn**	**11 45 44.9**	**+0.1**
	baz=296							
WLCH				*e*S		**Sb**	**11 46 03.1**	**-0.6**
	baz=296							
FULB	**Fuli**	**1.51**	**344**	*i*P		**Pn**	**11 45 44.6**	**-1.5**
	baz=331							
SGLT	**Jiouru**	**1.53**	**310**	*e*P		**Pn**	**11 45 46.3**	**0.0**
	baz=326							
SGLT				*e*S		**Sn**	**11 46 04.8**	**-2.1**
	baz=326							
ELDTW	**Lidau**	**1.60**	**335**	*e*P		**Pn**	**11 45 46.5**	**-0.9**
	baz=328							
SCST	**Cishan**	**1.63**	**314**	*e*P		**Pb**	**11 45 49.0**	**+0.2**
	baz=316							
SCST				S		**Sn**	**11 46 07.7**	**-1.7**
	baz=316							
EYUL	**Yuli**	**1.65**	**346**	*e*P		**Pn**	**11 45 47.9**	**-0.1**
	baz=334							
EYUL				*e*S		**Sn**	**11 46 08.2**	**-1.7**
	baz=334							
WSSB	**Gushan**	**1.65**	**303**	*e*P		**Pg**	**11 45 49.8**	**+0.3**
	baz=304							
STYH	**Taoyuan**	**1.69**	**328**	*e*P		**Pn**	**11 45 48.3**	**-0.3**
	baz=339							
YULB	**Yu-li**	**1.70**	**346**	P		**Pn**	**11 45 48.2**	**-0.5**
	baz=334							
YULB				S		**Sn**	**11 46 11.0**	**-0.2**
	baz=334							
SGST	**Jiashian**	**1.72**	**321**	P		**Pn**	**11 45 49.7**	**+0.7**
	baz=323							
SGST				S		**Sn**	**11 46 11.2**	**-0.5**
	baz=323							
HGSD	**Ruisui**	**1.77**	**350**	*e*P		**Pn**	**11 45 50.1**	**+0.5**
	baz=2.0							
HGSD				*e*S		**Sn**	**11 46 10.8**	**-2.0**
	baz=2.0							
EHY	**Hungye**	**1.80**	**347**	P		**Pn**	**11 45 49.5**	**-0.6**
	baz=335							
EHY				S		**Sn**	**11 46 12.2**	**-1.5**
	baz=335							
SHHT	**Tainan City**	**1.82**	**315**	*e*P		**Pn**	**11 45 50.0**	**-0.4**
	baz=316							
CHN1	**Nanshi**	**1.83**	**322**	P		**Pb**	**11 45 52.2**	**0.0**
	baz=324							
CHN1				*e*S		**Sn**	**11 46 13.6**	**-0.9**
	baz=324							
WTP	**Ta-pu**	**1.83**	**325**	P		**Pb**	**11 45 52.1**	**-0.2**
	baz=327							
WTP				*e*S		**Sn**	**11 46 13.5**	**-1.0**
	baz=327							
CHN3	**Shinhua**	**1.85**	**316**	*e*P		**Pn**	**11 45 51.1**	**+0.3**
	baz=318							
TPUB	**Ta-pu**	**1.87**	**326**	P		**Pb**	**11 45 52.4**	**-0.4**
	baz=329							
TPUB				*e*S		**Sn**	**11 46 14.2**	**-1.2**
	baz=329							
YUS	**Yu-Shan**	**1.89**	**337**	P		**Pn**	**11 45 52.2**	**+0.4**
	baz=340							
YUS				*e*S		**Sn**	**11 46 14.3**	**-2.3**
	baz=340							
TWK	**Hsinying**	**1.92**	**323**	P		**Pb**	**11 45 52.9**	**-0.8**
	baz=325							
TWK				*e*S		**Sn**	**11 46 14.8**	**-1.9**
	baz=325							
CHN4	**Tsaushan**	**1.93**	**326**	*i*P		**Pb**	**11 45 53.0**	**-0.8**
	baz=328							
EGFH	**Guangfu**	**1.94**	**351**	*e*P		**Pn**	**11 45 53.0**	**+1.0**
	baz=338							
EGFH				*e*S		**Sn**	**11 46 16.3**	**-0.8**
	baz=338							
ALS	**Alishan**	**1.97**	**334**	S		**Sn**	**11 46 16.7**	**-1.5**
	baz=336							
WCKO	**Fanlu**	**2.00**	**328**	P		**Pb**	**11 45 54.6**	**-0.4**
	baz=330							
WCKO				*e*S		**Sn**	**11 46 17.9**	**-0.6**
	baz=330							
VWDT	**VWDT**	**2.08**	**344**	P		**Pn**	**11 45 54.5**	**+0.5**
	baz=355							
ESL	**Shilin**	**2.08**	**352**	*e*P		**Pn**	**11 45 54.7**	**+0.7**
	baz=342							
TSCK	**Chigu Township**	**2.09**	**312**	*e*P		**Pn**	**11 45 53.7**	**-0.2**
	baz=297							
TSCK				*e*S		**Sn**	**11 46 20.2**	**-0.5**
	baz=297							
CHN5	**Tsauling**	**2.10**	**332**	P		**Pb**	**11 45 55.9**	**-0.9**
	baz=334							
ICHU	**Yijhu**	**2.11**	**320**	P		**Pn**	**11 45 55.5**	**+1.2**
	baz=322							
ICHU				*e*S		**Sn**	**11 46 20.1**	**-1.3**
	baz=322							
WHYT	**Xinyi Township**	**2.12**	**337**	*e*P		**Pn**	**11 45 55.9**	**+1.4**
	baz=339							
CHY	**Chiayi**	**2.14**	**325**	*e*P		**Pn**	**11 45 54.9**	**+0.2**
	baz=327							
CHY				*e*S		**Sn**	**11 46 21.7**	**-0.2**
	baz=327							
CHN2	**Minshiung**	**2.14**	**327**	*e*P		**Pn**	**11 45 55.2**	**+0.4**
	baz=329							
CHN2				*e*S		**Sn**	**11 46 20.8**	**-1.2**
	baz=329							
SSLB	**Suanglung**	**2.17**	**340**	P		**Pb**	**11 45 56.9**	**-1.1**
	baz=328							
SSLB				*e*S		**Sn**	**11 46 22.6**	**-0.2**
	baz=328							
HWA	**Hwalien**	**2.23**	**356**	*e*P		**Pb**	**11 45 57.7**	**-1.3**
	baz=12							
HWA				*e*S		**Sn**	**11 46 24.9**	**+0.6**
	baz=12							
WDLH	**Douliu**	**2.24**	**330**	*e*P		**Pb**	**11 45 58.5**	**-0.6**
	baz=316							
OWD	**Renai**	**2.27**	**346**	P		**Pn**	**11 45 56.7**	**+0.1**
	baz=349							
OWD				S		**Sn**	**11 46 25.1**	**-0.3**
	baz=349							
WSL	**Shuilin Townsh**	**2.27**	**322**	*e*P		**Pn**	**11 45 56.2**	**-0.2**
	baz=323							
WSL				*e*S		**Sn**	**11 46 23.9**	**-1.3**
	baz=323							
SMLT	**Sun Moon Lake**	**2.27**	**340**	P		**Pn**	**11 45 58.0**	**+1.3**
	baz=326							
SMLT				*e*S		**Sn**	**11 46 25.4**	**0.0**
	baz=326							
WJS	**Zhushan**	**2.28**	**336**	*e*P		**Pn**	**11 45 57.6**	**+0.9**
	baz=322							
WJS				*e*S		**Sn**	**11 46 25.2**	**-0.2**
	baz=322							
TYC	**Yuchr**	**2.31**	**339**	P		**Pb**	**11 45 59.6**	**-0.7**
	baz=342							
WTK	**Tuku**	**2.31**	**327**	*e*P		**Pn**	**11 45 58.8**	**+1.6**
	baz=329							
WTK				*e*S		**Sn**	**11 46 25.8**	**-0.5**
	baz=329							
WUSB	**Renai**	**2.32**	**345**	P		**Pn**	**11 45 58.2**	**+0.9**
	baz=357							
TWD	**Chiawan**	**2.33**	**356**	*e*P		**Pn**	**11 45 58.4**	**+1.0**
	baz=7.0							
WNT	**Mingjian**	**2.35**	**335**	P		**Pb**	**11 45 59.8**	**-1.1**
	baz=321							
WNT				S		**Sn**	**11 46 28.1**	**+1.0**
	baz=321							
CHGB	**Renai**	**2.37**	**347**	P		**Pn**	**11 45 58.8**	**+0.6**
	baz=349							
CHGB				*e*S		**Sn**	**11 46 28.4**	**+0.4**
	baz=349							
NACB	**Ninganchiao**	**2.43**	**356**	*e*P	

NNS					*e*S		**Sn**	**11 46 36.3**	**+0.1**
	baz=5.0								
PNG	**Penghu**	**2.73**	**312**		P		**Pn**	**11 46 01.9**	**-1.0**
	baz=301								
PNG					*e*S		**Sn**	**11 46 32.0**	**-4.5**
	baz=301								
TWQ1	**Liyutan**	**2.75**	**341**		P		**Pb**	**11 46 05.8**	**-2.0**
	baz=327								
TWQ1					*e*S		**Sn**	**11 46 36.9**	**-0.1**
	baz=327								
LATG	**Datong**	**2.79**	**356**		*e*P		**Pn**	**11 46 04.5**	**+0.7**
	baz=358								
NSY	**Sanyi**	**2.82**	**341**		*e*P		**Pn**	**11 46 05.9**	**+1.9**
	baz=328								
TWC	**Suao**	**2.86**	**2**		P		**Pn**	**11 46 05.6**	**+1.0**
	baz=14								
NDT	**Datong Townshi**	**2.86**	**356**		*e*P		**Pn**	**11 46 07.1**	**+2.5**
	baz=358								
NDS	**Dongshan**	**2.88**	**359**		*e*P		**Pn**	**11 46 05.7**	**+0.8**
	baz=11								
ENTT	**Nioudou**	**2.89**	**357**		P		**Pn**	**11 46 05.8**	**+0.7**
	baz=348								
JYNG	**Yonagunijimaku**	**2.91**	**22**		P		**Pn**	**11 46 05.3**	**-0.1**
JYNG					*e*S		**Sn**	**11 46 37.7**	**-3.4**
NMLH	**Miaoli**	**2.92**	**342**		*e*P		**Pb**	**11 46 08.9**	**-1.8**
	baz=344								
YHNB	**Yeheng**	**2.94**	**353**		*e*P		**Pn**	**11 46 06.4**	**+0.6**
	baz=4.0								
YHNB					*e*S		**Sn**	**11 46 40.6**	**-1.2**
	baz=4.0								
NFF	**Wufeng Townshi**	**2.94**	**349**		*e*P		**Pn**	**11 46 07.5**	**+1.7**
	baz=335								
NFF					*e*S		**Sn**	**11 46 42.7**	**+0.9**
	baz=335								
YOJ	**Yonaguni jima**	**2.94**	**23**		*e*P		**Pn**	**11 46 06.2**	**+0.4**
	baz=25								
YOJ	**Yonaguni jima**	**2.94**	**23**		*e*P		**Pn**	**11 46 06.1**	**+0.4**
YOJ					*e*S		**Sn**	**11 46 39.6**	**-2.3**
NSK	**Sanguang**	**2.94**	**353**		*e*P		**Pn**	**11 46 06.5**	**+0.7**
	baz=4.0								
NSK					*e*S		**Sn**	**11 46 42.4**	**+0.5**
	baz=4.0								
NSTT	**Nanjuang**	**2.96**	**347**		*e*P		**Pb**	**11 46 09.4**	**-2.0**
	baz=333								
NSTT					*e*S		**Sn**	**11 46 42.4**	**+0.2**
	baz=333								
LIOB	**Emei**	**2.97**	**347**		*e*P		**Pn**	**11 46 08.8**	**+2.6**
	baz=332								
HATJ	**Hateruma jima**	**2.98**	**39**		*e*P		**Pn**	**11 46 06.2**	**0.0**
HATJ					*e*S		**Sn**	**11 46 40.1**	**-2.6**
FUSB	**Fushanzhiwuyua**	**3.01**	**357**		*e*P		**Pn**	**11 46 07.6**	**+0.8**
	baz=348								
FUSB					*e*S		**Sn**	**11 46 44.2**	**+0.7**
	baz=348								
EGS		**3.09**	**3**		*e*P		**Pn**	**11 46 10.6**	**+2.8**
	baz=16								
NTC	**Toucheng**	**3.10**	**1**		*e*P		**Pn**	**11 46 09.2**	**+1.2**
	baz=14								
IRIF	**Iriomote-Funau**	**3.16**	**35**		P		**Pn**	**11 46 09.5**	**+0.8**
IRIF					S		**Sn**	**11 46 45.5**	**-1.6**
NHDH	**Xindian Distri**	**3.21**	**356**		*e*P		**Pn**	**11 46 10.6**	**+1.1**
	baz=8.0								
TIPB	**Shuangxi**	**3.22**	**1**		*e*P		**Pn**	**11 46 11.1**	**+1.5**
	baz=351								
JKRS	**Kuro-shima**	**3.24**	**39**		P		**Pn**	**11 46 10.8**	**+1.0**
JKRS					S		**Sn**	**11 46 46.9**	**-2.2**
NWF	**Wu-fen Shan**	**3.31**	**0**		*e*P		**Pn**	**11 46 13.6**	**+2.6**
	baz=352								
SXI1	**Grass Mountain**	**3.34**	**2**		*e*P		**Pn**	**11 46 13.0**	**+1.7**
	baz=351								
YM01	**YM01**	**3.39**	**357**		*e*P		**Pn**	**11 46 14.1**	**+2.0**
	baz=359								
JIJ	**Ishigaki jima**	**3.41**	**40**		P		**Pn**	**11 46 12.7**	**+0.5**
JIJ					*e*S		**Sn**	**11 46 50.1**	**-3.3**
JISG	**Ishigakijimahi**	**3.68**	**39**		P		**Pn**	**11 46 16.6**	**+0.6**
JISG					*e*S		**Sn**	**11 46 57.2**	**-2.9**
VWUC	**VWUC**	**3.87**	**327**		*e*P		**Pn**	**11 46 19.5**	**+1.0**
	baz=328								
JTJ	**Tarama**	**3.96**	**43**		P		**Pn**	**11 46 20.5**	**+0.8**
JTJ					*e*S		**Sn**	**11 47 04.0**	**-2.9**
KNM	**Kinmen**	**4.06**	**312**		*e*P		**Pn**	**11 46 22.8**	**+1.7**
	baz=311								
PTMZ	**Houxiangcun**	**4.08**	**324**		*e*P		**Pn**	**11 46 20.1**	**-1.4**
	baz=325								
KNMB	**Chin-men Tao**	**4.12**	**312**		*e*P		**Pn**	**11 46 21.9**	**-0.1**
	baz=312								
ZPLA	**Ao Xicun**	**4.29**	**301**		*e*P		**Pn**	**11 46 23.1**	**-1.3**
	baz=301								
JIRB	**Irabujima**	**4.39**	**45**		P		**Pn**	**11 46 26.9**	**+1.2**
JIRB					*e*S		**Sn**	**11 47 15.1**	**-2.5**
JMJ2	**Miyako jima3**	**4.44**	**47**		*e*P		**Pn**	**11 46 27.8**	**+1.4**
JMJ2					*e*S		**Sn**	**11 47 16.8**	**-1.9**
DSXP	**Dongshan**	**4.45**	**297**		*e*P		**Pn**	**11 46 26.1**	**-0.5**
	baz=296								
JOGS	**Gusukube**	**4.50**	**47**		S		**Sn**	**11 47 18.7**	**-1.7**
AXDP	**Jialang**	**4.69**	**313**		*e*P		**Pn**	**11 46 30.7**	**+0.9**
	baz=313								
MATB	**Ma-tsu**	**4.69**	**340**		*e*P		**Pn**	**11 46 30.7**	**+0.9**
	baz=329								
MHZQ	**Yeshan**	**5.01**	**331**		*e*P		**Pn**	**11 46 35.1**	**+1.0**
	baz=331								
XPSS	**Dashiqiu**	**5.36**	**345**		*e*P		**Pn**	**11 46 40.5**	**+1.5**
	baz=334								
SXFK	**Yanhouchang**	**5.97**	**322**		*e*P		**Pn**	**11 46 48.3**	**+0.9**
	baz=322								
DAV	**Davao City (W)**	**15.05**	**165**		LR		LR	11 54 59.7	
	comp=Z,56nm,19.0s,baz=218,slow=39								
KSRS	**Korea Array**	**16.54**	**17**		LR		LR	11 56 35.4	
	comp=Z,54nm,18.1s,baz=215,slow=42								
CMAR	**Chiang Mai Arr**	**21.67**	**265**		P		**P**	**11 50 13.5**	**+3.3**
	1.2nm,0.8s,baz=67,slow=9.9,SNR=1.9								
CMAR					LR		LR	12 00 54.6	
	comp=Z,22nm,18.1s,baz=45,slow=43 1.2nm,0.8s								
KLR	**Kul'dur**	**28.56**	**14**		LR		LR	12 04 17.1	
	comp=Z,47nm,19.2s,baz=198,slow=40								
MKAR	**Makanchi Array**	**40.47**	**318**		P		**P**	**11 52 59.9**	**+1.7**
	2.6nm,0.7s,baz=110,slow=10,SNR=24 2.6nm,0.7s								
H11N1	**WAKE ISLAND Hy**	**42.15**	**84**		T		T	12 38 15.3	
	baz=281,slow=75,SNR=74								
H11N2	**WAKE ISLAND Hy**	**42.15**	**84**		T		T	12 38 17.1	
	baz=281,slow=75,SNR=79								
H11N3	**WAKE ISLAND Hy**	**42.17**	**84**		T		T	12 38 19.9	
	baz=281,slow=75,SNR=84								
H11S3	**WAKE ISLAND Hy**	**42.20**	**86**		T		T	12 38 23.0	
	baz=282,slow=75,SNR=264								
H11S1	**WAKE ISLAND Hy**	**42.21**	**86**		T		T	12 38 20.8	
	baz=282,slow=75,SNR=369								
H11S2	**WAKE ISLAND Hy**	**42.22**	**86**		T		T	12 38 21.4	
	baz=282,slow=75,SNR=278								
ZALV	**Zalesovo Beam**	**42.58**	**328**		P		**P**	**11 53 15.6**	**+0.2**
	0.6nm,0.3s,baz=107,slow=9.5,SNR=4.7 0.6nm,0.3s								
MA2	**Magadan**	**43.05**	**21**		LR		LR	12 13 00.8	
	comp=Z,22nm,18.4s,baz=256,slow=39								
WRA	**Warramunga Arr**	**43.22**	**163**		P		**P**	**11 53 20.2**	**-0.6**
	1.1nm,0.6s,baz=344,slow=9.1,SNR=24 1.1nm,0.6s								
KURBB	**Kurchatov Arra**	**44.32**	**321**		P		**P**	**11 53 30.5**	**+1.1**
	0.9nm,0.4s,baz=117,slow=7.5,SNR=6.6 0.9nm,0.4s								
ASAR	**Alice Springs**	**46.66**	**165**		P		**P**	**11 53 49.0**	**+0.8**
	0.4nm,0.3s,baz=346,slow=7.3,SNR=18 0.4nm,0.3s								
NOA	**NORSAR Array B**	**80.62**	**332**		LR		LR	12 35 18.5	
	comp=Z,11nm,19.2s,baz=70,slow=37								

*NORS **30** 12:18:27.5±0.0, 43°.23N×46°.62E, h32km, MPVA3.9*
*DRS **30** 12:18:29.8±0.0, 43°.35N×46°.30E, h14km*
*MOS **30** 12:18:30.3±0.0, 43°.10N×46°.25E, h6km, MPVA3.7*

ISC 30 12:18:32.1±1.0, 43°.20N±0°.04×46°.31E±0°.03, h14km±8km, n31, σ0883/58, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.27**	**119**	*e*Pg	**Pg**	**12 18 37.4**	**-0.5**
DLMR				*e*Sg	**Sb**	**12 18 42.9**	**-0.4**
GROC	**Groznyy**	**0.37**	**270**	*e*Pg	**Pg**	**12 18 38.7**	**-0.9**
GROC				*e*Sg	**Sg**	**12 18 45.4**	**+0.7**
DBC	**Dubki**	**0.42**	**115**	*e*Pg	**Pg**	**12 18 40.2**	**-0.4**
DBC				*e*Sg	**Sb**	**12 18 48.0**	**+0.2**
KRNR	**Karanay**	**0.58**	**130**	*e*Pg	**Pg**	**12 18 42.4**	**-1.0**
KRNR				*e*Sg	**Sg**	**12 18 51.7**	**+0.5**
UNCR	**Uncukul**	**0.61**	**144**	*e*Pg	**Pg**	**12 18 42.9**	**-1.1**
UNCR				*e*Sg	**Sg**	**12 18 52.4**	**+0.4**
BUJR	**Buynaksk**	**0.70**	**122**	*e*Pg	**Pn**	**12 18 47.6**	**-0.1**
BUJR				*e*Sg	**Sb**	**12 18 57.1**	**+1.5**
XNZR	**Khunzakh**	**0.72**	**156**	*e*Pg	**Pg**	**12 18 44.8**	**-1.4**
XNZR				*e*Sg	**Sg**	**12 18 55.8**	**0.0**
ARKR	**Arakani**	**0.79**	**140**	*e*Pg	**Pg**	**12 18 46.7**	**-0.7**
ARKR				*e*Sg	**Sg**	**12 18 58.5**	**+0.9**
GNBR	**Gunib**	**0.95**	**149**	*e*Pg	**Pb**	**12 18 49.6**	**-0.8**
GNBR				*e*Sg	**Sb**	**12 19 03.6**	**+0.8**
KMGR	**Komgaron**	**1.06**	**263**	*e*Pg	**Pg**	**12 18 52.7**	**0.0**
KMGR				*e*Sg	**Sn**	**12 19 07.9**	**+0.5**
KMKR	**Kumukh**	**1.22**	**151**	*e*Pg	**Pn**	**12 18 55.2**	**+0.2**
KMKR				*e*Sg	**Sg**	**12 19 12.5**	**+0.9**
SGKR	**Sergokala**	**1.24**	**126**	*e*Pg	**Pn**	**12 18 55.3**	**+0.1**
SGKR				*e*Sg	**Sg**	**12 19 13.2**	**+1.0**
TRKR	**Terskaya**	**1.26**	**295**	*e*Pg	**Pn**	**12 18 54.2**	**-1.1**
TRKR				*e*Sg	**Sg**	**12 19 14.6**	**+1.9**
BTKR	**Batakoyurt**	**1.30**	**278**	*e*Pg	**Pb**	**12 18 56.3**	**-0.1**
BTKR				*e*Sg	**Sg**	**12 19 15.3**	**+1.3**
PNSH	**Pansheti**	**1.37**	**246**	P	**Pn**	**12 18 55.7**	**-1.3**
PNSH				S	**Sn**	**12 19 13.0**	**-2.0**
LGD	**Lagodekhi**	**1.37**	**182**	P	**Pn**	**12 18 56.6**	**-0.3**
LGD				S	**Sn**	**12 19 15.5**	**+0.7**
URKR	**Urkarakh**	**1.43**	**136**	*e*Pg	**Pb**	**12 18 58.5**	**0.0**
URKR				*e*Sg	**Sg**	**12 19 18.9**	**+0.8**
ARNR	**Ardon**	**1.48**	**270**	*e*Pg	**Pn**	**12 18 58.4**	**0.0**
ARNR				*e*Sg	**Sg**	**12 19 19.6**	**-0.2**
LACR	**Lac**	**1.52**	**256**	*e*Pg	**Pn**	**12 18 58.1**	**-0.9**
LACR				*e*Sg	**Sn**	**12 19 17.3**	**-1.4**
GUDG	**Gudauri**	**1.54**	**242**	P	**Pn**	**12 18 59.1**	**-0.3**
GUDG				S	**Sn**	**12 19 18.4**	**-0.8**
PRTR	**Priterechnaya**	**1.57**	**291**	*e*Pg	**Pb**	**12 19 00.8**	**-0.2**
PRTR				*e*Sg	**Sg**	**12 19 23.3**	**+0.6**
KORR	**Kora**	**1.64**	**267**	*e*Pg	**Pb**	**12 19 01.9**	**-0.3**
KORR				*e*Sg	**Sb**	**12 19 23.1**	**+0.3**
STDR	**Stavd-Durt**	**1.65**	**277**	*e*Pg	**Pg**	**12 19 03.4**	**-0.3**
STDR				*e*Sg	**Sg**	**12 19 25.2**	**+0.1**
DDFL	**Dedoflistskaro**	**1.76**	**185**	P	**Pg**	**12 19 06.4**	**+0.5**
ZEI	**Tsey**	**1.81**	**258**	*e*Pg	**Pb**	**12 19 06.2**	**+0.9**
ZEI				*e*Sg	**Sn**	**12 19 26.0**	**-0.1**
LSNR	**Lesken**	**1.81**	**273**	*e*Pg	**Pb**	**12 19 04.8**	**-0.4**
LSNR				*e*Sg	**Sg**	**12 19 30.1**	**-0.3**
DGRG	**David-gareji**	**1.88**	**202**	P	**Pb**	**12 19 05.9**	**-0.5**
DGRG				S	**Sg**	**12 19 33.7**	**+1.0**
DIGR	**Digorskoe uzhe**	**2.02**	**262**	*e*Pg	**Pn**	**12 19 07.2**	**+1.2**
DIGR				*e*Sg	**Sn**	**12 19 31.6**	**+0.4**
ONI	**Oni**	**2.19**	**255**	P	**Pn**	**12 19 09.0**	**+0.9**
KBZ	**Khabaz**	**2.54**	**283**	*e*Pn	**Pn**	**12 19 13.5**	**+0.6**
NEY	**Neytrino**	**2.62**	**272**	*e*Pn	**Pn**	**12 19 14.0**	**-0.2**

*KRNET **30** 12:25:13.2±0.1, 39°.37N×73°.49E, mb2.7*

ISC 30 12:25:16.0±2.5, 39°.3N±0°.1×73°.45E±0°.08, h10km, n6, σ2961/10, 7C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.29**	**279**	⇓*e*P	**Pn**	**12 25 38.2**	**-2.2**
	baz=75						
DRK				⇓*e*S	**Sb**	**12 25 56.4**	**-1.0**
	baz=75						
OHH	**Osh**	**1.34**	**338**	⇓*i*P	Pn	12 25 37.5	-3.4
	baz=35						
OHH				⇓*e*S	**Sb**	**12 25 55.0**	**-3.6**
	baz=35						
BTK	**Batken**	**2.17**	**292**	⇑*e*P	**Pn**	**12 25 52.6**	**+0.3**
	baz=89						
BTK				⇑*e*S	**Sn**	**12 26 21.3**	**+1.9**
	baz=89						
ARLS	**Aral**	**2.66**	**14**	⇑*e*P	**Pn**	**12 25 58.0**	**-1.1**
	baz=14						
ARLS				⇑*e*S	**Sn**	**12 26 30.8**	**-0.7**
	baz=14						
TKM2	**Tokmak 2**	**3.98**	**23**	⇓Pg	**Pb**	**12 26 28.2**	**+1.8**
	0.6nm,0.5s						
TKM2				⇑Lg	Lg	12 27 12.5	
	2.3nm,0.7s						
KK31	**Karatay Array**	**4.41**	**331**	⇓Pg	**Pb**	**12 26 33.9**	**+0.3**
	0.3nm,0.3s,baz=148,slow=16,SNR=3.9						
KK31				⇑Sn	**Sn**	**12 27 19.0**	**+4.5**
	1.1nm,0.5s,baz=143,slow=25,SNR=2.6						
KK31				⇑Lg	Lg	12 27 29.5	
	0.9nm,0.5s						

*AEIC **30** 12:27:59.9±1.1, 61°.12N±0°.02×149°.15W±0°.05, h38km±8km, ML3.8/152, ML4.0/185(NEIC), Mwr4.0/132(NEIC), Error ellipse: s-maj=3.8km s-min=3.2km az=120.0*
*NEIC **30** 12:27:59.5±1.2, 61°.14N±0°.02×149°.19W±0°.05, h35km±6km, Error ellipse: s-maj=3.3km s-min=3.0km az=89.0*
*ANF **30** 12:27:59.3±0.1, 61°.11N×149°.17W, h34km±1km, ML4.2/91, Error ellipse: s-maj=1.1km s-min=0.9km az=147.0*
*NEIC **30** 12:28:00, 61°.13N×149°.18W, h43km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=1.00; Mθθ=0.04; Mθθ=0.96; Mθθ=0.38; Mθθ=0.38; Mθr=0.06; Fault plane solution: M0 1.12000×10^15^ NP1:φ=218.84000°, δ=50.41000°, λ=-63.75000°. NP2:φ=1.10000°, δ=46.28000°, λ=-118.14000°. Principal axes: T 1.0959, Plg2.0000°, Azm291.0000°; N 0.0448, Plg20.0000°, Azm21.0000°; P -1.1407, Plg70.0000°, Azm195.0000°;*
*IDC **30** 12:28:12.6±3.7, 62°.22N×149°.79W, h114km±29km, mb3.4/8, mbtmp3.7/10, MS3.1/3 Error ellipse: s-maj=40.0km s-min=19.0km az=43.0*

ISC 30 12:27:58.7±0.9, 61°.12N±0°.02×149°.17W±0°.03, h37km±1km, n340, σ1±25/353, mb3.9/8, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RC01	**Rabbit Creek A**	**0.28**	**264**		**Pn**	**12 28 07.3**	**+0.4**
RC01	**Rabbit Creek A**	**0.28**	**264**		**Sn**	**12 28 13.2**	**-0.9**
RC01	**Rabbit Creek A**	**0.28**	**264**	P	**Pn**	**12 28 07.2**	**+0.4**
	baz=84,SNR=788						
RC01				S	**Sn**	**12 28 13.2**	**-0.9**
	baz=84						
KNK	**Knik Glacier**	**0.45**	**49**		**Pn**	**12 28 09.0**	**+0.5**
KNK				IAML		12 28 17.5	
	comp=N,15μm,0.4s						
KNK	**Knik Glacier**	**0.45**	**49**		**Sn**	**12 28 16.5**	**+1.0**
KNK	**Knik Glacier**	**0.45**	**49**	P	**Pn**	**12 28 09.0**	**+0.5**
	baz=229,SNR=735						
KNK				S	**Sn**	**12 28 16.5**	**+1.0**
	baz=229						
PMR	**Palmer**	**0.48**	**2**		**Pn**	**12 28 08.9**	**+0.1**
PMR					**Sn**	**12 28 16.1**	**+0.1**
PMR	**Palmer**	**0.48**	**2**	IAML		12 28 16.7	
	comp=N,10μm,0.7s						
PMR				IAML		12 28 16.8	
	comp=E,11μm,0.4s						
PMR	**Palmer**	**0.48**	**2**	P	**Pn**	**12 28 08.9**	**+0.1**
	baz=181,SNR=668						
PMR				S	**Sn**	**12 28 16.3**	**+0.3**
	baz=181						
PWL	**Port Wells**	**0.48**	**122**		**Pn**	**12 28 09.7**	**+0.7**
PWL					**Sn**	**12 28 17.8**	**+1.6**
PWL	**Port Wells**	**0.48**	**122**	IAML		12 28 18.5	
	comp=N,25μm,0.4s						
PWL	**Port Wells**	**0.48**	**122**	P	**Pn**	**12 28 09.7**	**+0.7**
	baz=304,SNR=1000						
PWL				S	**Sn**	**12 28 17.6**	**+1.4**
	baz=304						
FIS	**Fire Island**	**0.51**	**273**		**Pn**	**12 28 10.5**	**+1.1**
FIS	**Fire Island**	**0.51**	**273**	IAML		12 28 25.5	
	comp=N,15μm,0.8s						
GHO	**Glory Hole Cre**	**0.67**	**10**		**Pn**	**12 28 11.7**	**-0.1**
GHO					**Sn**	**12 28 21.0**	**0.0**
GHO	**Glory Hole Cre**	**0.67**	**10**	IAML		12 28 22.7	
	comp=E,7μm,0.5s						
O22K	**Cooper Landing**	**0.69**	**203**		**Pn**	**12 28 12.4**	**+0.4**
O22K	**Cooper Landing**	**0.69**	**203**	P	**Pn**	**12 28 12.3**	**+0.3**
	baz=24,SNR=245						
O22K				S	**Sn**	**12 28 22.6**	**+1.2**
	baz=24						
M22K	**Willow**	**0.79**	**325**		**Pn**	**12 28 13.0**	**-0.1**
M22K					**Sn**	**12 28 23.9**	**+0.2**
M22K	**Willow**	**0.79**	**325**	P	**Pn**	**12 28 13.1**	**-0.1**
	baz=143,SNR=350						
M22K				S	**Sn**	**12 28 24.1**	**+0.5**
	baz=143						
SML	**Sawmill**	**0.80**	**30**		**Pn**	**12 28 13.6**	**+0.1**
SML				IAML		12 28 27.2	
	comp=E,4μm,0.5s						
SML	**Sawmill**	**0.80**	**30**	P	**Pn**	**12 28 13.6**	**+0.1**
	baz=210,SNR=388						
SML				S	**Sn**	**12 28 24.8**	**+0.6**
	baz=210						
SLKM	**Skilak Lake**	**0.80**	**221**		**Pn**	**12 28 14.0**	**+0.6**
SLKM					**Sn**	**12 28 25.3**	**+1.1**
M23K	**Glacier View**	**0.97**	**45**		**Pn**	**12 28 16.3**	**+0.6**
M23K					**Sn**	**12 28 29.8**	**+1.6**
M23K	**Glacier View**	**0.97**	**45**	P	**Pn**	**12 28 16.3**	**+0.6**
	baz=226,SNR=413						
M23K				S	**Sn**	**12 28 29.9**	**+1.7**
	baz=226						
SEW	**Seward**	**1.03**	**188**		**Pn**	**12 28 17.0**	**+0.5**
SEW	**Seward**	**1.03**	**188**	P	**Pn**	**12 28 17.0**	**+0.5**
	baz=8.2,SNR=139						
SEW				S	**Sn**	**12 28 31.2**	**+1.7**
	baz=8.2						
CAPN	**Captain Cook N**	**1.03**	**251**	Pn	**Pn**	**12 28 18.8**	**+2.3**
CAPN	**Captain Cook N**	**1.03**	**251**	P	**Pn**	**12 28 18.8**	**+2.3**
	baz=69,SNR=6.9						
GLI	**Glacier Island**	**1.04**	**102**		**Pn**	**12 28 16.9**	**+0.3**
GLI					**Sn**	**12 28 31.1**	**+1.3**
GLI	**Glacier Island**	**1.04**	**102**	IAML		12 28 32.7	
	comp=N,5μm,0.6s						
GLI	**Glacier Island**	**1.04**	**102**	P	**Pn**	**12 28 17.0**	**+0.3**
	baz=284,SNR=162						
GLI				S	**Sn**	**12 28 31.6**	**+1.7**
	baz=284						
SCM	**Sheep Creek Mo**	**1.14**	**50**		**Pn**	**12 28 18.8**	**+0.8**
SCM	**Sheep Creek Mo**	**1.14**	**50**	IAML		12 28 36.9	
	comp=E,3μm,0.7s						
SCM				IAML		12 28 37.2	
	comp=N,2μm,0.7s						
SCM	**Sheep Creek Mo**	**1.14**	**50**	P	**Pn**	**12 28 18.8**	**+0.8**
	baz=231,SNR=198						
SCM				S	**Sn**	**12 28 34.1**	**+1.6**
	baz=231						
JPK	**Jack Peak**	**1.25**	**92**		**Pn**	**12 28 20.5**	**+0.9**
VMT	**TAPS TI Valdez**	**1.36**	**90**		**Pn**	**12 28 22.0**	**+1.0**
FID	**Port Fidalgo**	**1.36**	**105**		**Pn**	**12 28 21.1**	**0.0**
FID	**Port Fidalgo**	**1.36**	**105**	IAML		12 28 43.1	
	comp=E,3μm,0.4s						
SPCG	**Spurr Capps Gl**	**1.39**	**278**		**Pn**	**12 28 22.5**	**+0.9**
CUT	**Chulitna**	**1.39**	**338**		**Pn**	**12 28 22.2**	**+0.7**
CUT	**Chulitna**	**1.39**	**338**	P	**Pn**	**12 28 22.2**	**+0.7**
	baz=157,SNR=173						
CUT				S	**Sn**	**12 28 40.4**	**+1.8**
	baz=157						
SPU	**Mount Spurr**	**1.40**	**274**		**Pn**	**12 28 22.3**	**+0.6**
SPCN	**Chakachatna No**	**1.47**	**276**		**Pn**	**12 28 23.7**	**+1.1**
SPCR	**Spurr Chakacha**	**1.48**	**275**		**Pn**	**12 28 23.5**	**+0.8**
SPCR	**Spurr Chakacha**	**1.48**	**275**	P	**Pn**	**12 28 23.5**	**+0.8**
	baz=92,SNR=130						
SPCR				S	**Sn**	**12 28 42.6**	**+1.8**
	baz=92						
HIN	**Hinchinbrook I**	**1.50**	**118**		**Pn**	**12 28 23.8**	**+0.8**
HIN	**Hinchinbrook I**	**1.50**	**118**	IAML		12 28 50.0	
	comp=E,2μm,0.4s						
HIN				IAML		12 28 50.3	
	comp=N,2μm,0.6s						
CKL	**Chakachamna La**	**1.54**	**274**		**Pn**	**12 28 24.6**	**+0.9**
BRSE	**Bradley Lake S**	**1.59**	**210**		**Pn**	**12 28 24.8**	**+0.7**
BRSE	**Bradley Lake S**	**1.59**	**210**	P	**Pn**	**12 28 24.9**	**+0.7**
	baz=29,SNR=72						
BRSE				S	**Sn**	**12 28 45.3**	**+1.9**
	baz=29						
BRLK	**Bradley Lake**	**1.60**	**213**		**Pn**	**12 28 25.3**	**+0.9**
BRLK				IAML		12 28 50.9	
	comp=E,2μm,0.4s						
KLU	**Klutina**	**1.61**	**75**		**Pn**	**12 28 25.5**	**+1.0**
KLU	**Klutina**	**1.61**	**75**	IAML		12 28 48.4	
	comp=N,2μm,0.6s						
KLU				IAML		12 28 50.4	
	comp=E,1μm,0.5s						
KLU	**Klutina**	**1.61**	**75**	P	**Pn**	**12 28 25.5**	**+1.0**
	baz=258,SNR=461						
KLU				S	**Sn**	**12 28 46.3**	**+2.2**
	baz=258						
WAT6	**Susitna Watana**	**1.62**	**24**		**Pn**	**12 28 25.7**	**+1.0**
WAT6	**Susitna Watana**	**1.62**	**24**	P	**Pn**	**12 28 25.6**	**+0.8**
	baz=205,SNR=39						
WAT6				S	**Sn**	**12 28 46.4**	**+2.0**
	baz=205						
DIV	**Divide**	**1.65**	**88**		**Pn**	**12 28 26.1**	**+1.0**
SPNN	**North Nagishla**	**1.73**	**280**		**Pn**	**12 28 27.5**	**+1.3**
WAT7	**Susitna Watana**	**1.73**	**5**		**Pn**	**12 28 27.2**	**+1.0**
M24K	**Tolsona, Glenn**	**1.74**	**54**		**Pn**	**12 28 27.9**	**+1.5**
M24K	**Tolsona, Glenn**	**1.74**	**54**	P	**Pn**	**12 28 27.9**	**+1.5**
	baz=236,SNR=267						
WAT1	**Susitna Watana**	**1.74**	**9**		**Pn**	**12 28 27.3**	**+0.9**
WAT1	**Susitna Watana**	**1.74**	**9**	P	**Pn**	**12 28 27.2**	**+0.9**
	baz=190						
WAT1				S	**Sn**	**12 28 49.0**	**+1.7**
	baz=190						
EYAK	**Cordova Ski Ar**	**1.77**	**107**		**Pn**	**12 28 27.4**	**+0.8**
EYAK	**Cordova Ski Ar**	**1.77**	**107**	P	**Pn**	**12 28 27.5**	**+0.9**
	baz=290,SN

RAGM **Ragged Mountai** 2.32 106 Pn 12 28 34.8 +0.5
TRF **Thorofare Moun** 2.40 348 Pn 12 28 36.8 +1.4
TRF IAML 12 29 12.2
comp=N,810nm,0.7s
TRF IAML 12 29 16.3
comp=E,751nm,1.1s
TRF Thorofare Moun 2.40 348 P Pn 12 28 36.7 +1.2
baz=167,SNR=49
OPT Oil Point 2.50 236 Pn 12 28 37.9 +1.2
P19K Oil Pt 2.50 236 Pn Pn 12 28 37.9 +1.2
P19K Oil Pt 2.50 236 P Pn 12 28 37.8 +1.1
baz=52,SNR=32
P19K S Sn 12 29 07.1 +1.2
baz=52
HMT Hamilton 2.53 106 Pn 12 28 37.5 +0.3
PAX Paxson 2.55 42 Pn 12 28 38.7 +1.3
PAX Paxson 2.55 42 P Pn 12 28 38.6 +1.1
baz=225,SNR=123
PAX S Sn 12 29 09.7 +2.5
baz=225
KTH Kantishna Hill 2.58 342 Pn 12 28 39.1 +1.3
KTH IAML 12 29 15.8
comp=E,726nm,0.6s
KTH IAML 12 29 18.6
comp=N,914nm,0.7s
GLB Gilahina Butte 2.61 81 Pn 12 28 39.1 +0.9
GLB IAML 12 29 22.5
comp=N,614nm,0.8s
N19K Bonanza Creek 2.61 266 Pn 12 28 39.0 +0.7
N19K IAML 12 29 16.3
comp=E,465nm,0.8s
N19K IAML 12 29 24.0
comp=N,680nm,0.6s
N19K Bonanza Creek 2.61 266 P Pn 12 28 38.9 +0.5
baz=81,SNR=68
L20K Farewell, AK 2.62 303 P Pn 12 28 39.1 +0.7
baz=119,SNR=245
M19K Big River Lodg 2.63 290 Pn 12 28 39.4 +0.9
M19K Big River Lodg 2.63 290 IAML 12 29 26.9
comp=E,473nm,0.9s
M19K IAML 12 29 29.9
comp=N,428nm,0.8s
MCK McKinley 2.63 2 Pn 12 28 40.1 +1.6
MCK IAML 12 29 19.0
comp=N,522nm,0.6s
MCK IAML 12 29 19.4
comp=E,527nm,0.6s
MCK McKinley 2.63 2 P Pn 12 28 39.9 +1.4
baz=182,SNR=55
KAIM Kayak Island 2.63 115 Pn 12 28 38.3 -0.2
KAIM IAML 12 29 33.1
comp=E,409nm,0.6s
KAIM Kayak Island 2.63 115 P Pn 12 28 38.2 -0.4
baz=299
CAST Castle Rocks 2.68 331 Pn 12 28 39.9 +0.6
CAST IAML 12 29 28.1
comp=N,449nm,0.8s
CAST Castle Rocks 2.68 331 P Pn 12 28 39.8 +0.6
baz=148,SNR=191
O19K Port Alsworth 2.70 252 Pn 12 28 39.9 +0.4
O19K Port Alsworth 2.70 252 P Pn 12 28 39.8 +0.4
baz=68,SNR=24
NICHA Nichawak Mount 2.71 107 Pn 12 28 39.6 +0.1
AU22 Augustine Moun 2.73 232 Pn 12 28 41.1 +1.3
AUQ Augustine Qik' 2.76 232 Pn 12 28 41.7 +1.4
BERG Berg Lake 2.78 103 Pn 12 28 40.6 +0.1
BERG IAML 12 29 28.4
comp=N,782nm,0.5s
SUCK Suckling Hills 2.86 109 Pn Pn 12 28 41.6 0.0
SUCK IAML 12 29 38.7
comp=N,348nm,0.7s
L19K White Mountain 2.92 294 Pn Pn 12 28 43.5 +1.0
L19K IAML 12 29 36.3
comp=N,367nm,0.9s
L19K IAML 12 29 42.1
comp=E,413nm,1.4s
L19K White Mountain 2.92 294 P Pn 12 28 43.5 +1.0
baz=109,SNR=336
KHIT Khitrov Hills 2.98 101 Pn 12 28 43.5 +0.1
MCARA McCarthy VSAT 2.98 82 Pn 12 28 44.3 +1.0
MCARA McCarthy VSAT 2.98 82 P Pn 12 28 44.1 +0.8
baz=268,SNR=49
GRIN Grindle Hills 3.00 104 Pn 12 28 43.8 +0.2
SYI Shuyak Island 3.00 214 Pn 12 28 44.3 +0.8
Q20K Shuyak Island 3.00 214 P Pn 12 28 44.5 +1.0
baz=32,SNR=8.8
BGLC Bering Glacier 3.07 106 Pn 12 28 45.0 +0.5
BGLC Bering Glacier 3.07 106 P Pn 12 28 44.9 +0.5
baz=292
BWN Browne 3.07 358 Pn 12 28 44.9 +0.4
BPAW Bear Paw Mtn. 3.11 345 Pn 12 28 45.9 +0.8
BPAW IAML 12 29 36.6
comp=E,483nm,1.2s
BPAW IAML 12 29 36.6
comp=N,495nm,1.3s
BPAW Bear Paw Mtn. 3.11 345 P Pn 12 28 45.7 +0.7
baz=163,SNR=15
SVW2 Sparrevohn 3.11 272 Pn Pn 12 28 45.5 +0.3
SVW2 IAML 12 29 37.7
comp=N,400nm,0.6s
SVW2 IAML 12 29 42.1
comp=E,297nm,0.8s
TGL Tana Glacier 3.11 94 Pn 12 28 46.2 +1.0
TGL IAML 12 29 37.8
comp=E,598nm,0.7s
K24K Donnelly Dome 3.12 29 Pn 12 28 48.1 +2.8
K24K Donnelly Dome 3.12 29 P Pn 12 28 46.9 +1.6
baz=212,SNR=195
CHUM Lake Minchumin 3.14 334 Pn 12 28 46.2 +0.8
CHUM Lake Minchumin 3.14 334 P Pn 12 28 46.1 +0.8
baz=151,SNR=19
Q19K Cape Douglas, 3.14 228 Pn Pn 12 28 46.2 +0.6
Q19K Cape Douglas, 3.14 228 P Pn 12 28 46.4 +0.8
baz=44,SNR=32
MENT Mentasta 3.15 52 Pn 12 28 46.5 +0.9
MENT IAML 12 29 38.2
comp=E,559nm,0.5s
WAX Waxell Ridge 3.17 99 Pn 12 28 45.8 -0.1
M26K Nabesna, AK 3.20 64 Pn 12 28 47.1 +0.7
M26K Nabesna, AK 3.20 64 P Pn 12 28 47.6 +1.2
baz=249,SNR=28
K20K Telida 3.21 317 Pn Pn 12 28 46.7 +0.2
K20K IAML 12 29 46.3
comp=E,268nm,0.8s
K20K Telida 3.21 317 P Pn 12 28 46.9 +0.4
baz=132,SNR=105
O18K Koktuh Hills 3.25 250 Pn 12 28 47.0 +0.1
O18K IAML 12 29 43.0
comp=E,315nm,0.6s
O18K IAML 12 29 49.5
comp=N,454nm,0.7s
O18K Koktuh Hills 3.25 250 P Pn 12 28 46.9 -0.1
baz=64,SNR=25
PTPK Patty Peak 3.25 86 Pn 12 28 48.3 +1.1
SNH Sunshine Point 3.25 104 Pn 12 28 47.3 +0.2
RIDG Independent Ri 3.31 35 Pn Pn 12 28 49.3 +1.4
RIDG IAML 12 29 43.0
comp=N,317nm,1.3s
RIDG IAML 12 29 43.3
comp=E,479nm,0.7s
RIDG Independent Ri 3.31 35 P Pn 12 28 49.0 +1.2
baz=219,SNR=21
N18K Kilae Creek 3.31 265 Pn 12 28 48.0 +0.1
N18K Kilae Creek 3.31 265 IAML 12 29 42.4
comp=N,260nm,1.3s
N18K IAML 12 29 42.8
comp=E,325nm,0.7s
N18K Kilae Creek 3.31 265 P Pn 12 28 47.9 0.0
baz=79,SNR=19
L26K Log Cabin Wild 3.34 53 Pn 12 28 49.9 +1.7
L26K IAML 12 29 44.0
comp=E,390nm,0.6s
L26K IAML 12 29 46.1
comp=N,294nm,0.6s
L26K Log Cabin Wild 3.34 53 P Pn 12 28 49.1 +0.9
baz=238,SNR=32
ISLE Juniper Island 3.38 96 Pn 12 28 49.4 +0.5
WRH Wood River Hil 3.40 8 Pn 12 28 50.7 +1.6
HDA Harding Lake 3.46 16 Pn 12 28 51.2 +1.4
HDA IAML 12 29 38.8
comp=N,318nm,0.7s
HDA IAML 12 29 48.1
comp=E,213nm,0.5s
DOT Dot Lake 3.48 41 Pn 12 28 51.4 +1.2
P18K Big Mountain, 3.48 243 Pn Pn 12 28 50.7 +0.5
P18K Big Mountain, 3.48 243 P Pn 12 28 50.6 +0.4
baz=58,SNR=8.0
NEA2 Nenana 3.49 1 Pn 12 28 51.4 +1.1
BAGL Bagley Icefiel 3.52 97 Pn 12 28 51.5 +0.8
CCB Clear Creek Bu 3.60 9 Pn 12 28 53.2 +1.5
MESA MESA 3.68 102 Pn 12 28 54.0 +1.0
MESA IAML 12 30 03.0
comp=E,371nm,0.6s
MESA MESA 3.68 102 P Pn 12 28 53.4 +0.4
baz=288,SNR=9.6
M27K Edge Creek, AK 3.68 67 Pn 12 28 54.5 +1.5
M27K Edge Creek, AK 3.68 67 P Pn 12 28 54.5 +1.5
baz=253,SNR=14
TT01 Tatalina 3.70 302 Pn 12 28 53.2 +0.1
TTA Tatalina 3.70 302 Pn 12 28 53.5 +0.2
TTA IAML 12 30 02.9
comp=E,220nm,1.0s
TTA Tatalina 3.70 302 P Pn 12 28 53.7 +0.4
baz=116,SNR=25
YAH Yahtse 3.72 98 Pn 12 28 54.4 +0.7
YAH IAML 12 29 53.9
comp=E,266nm,0.7s
YAH IAML 12 30 00.1
comp=N,296nm,0.8s
SCRK Sand Creek 3.74 38 Pn 12 28 54.1 +0.3
SCRK IAML 12 29 54.7
comp=N,168nm,0.8s
SCRK Sand Creek 3.74 38 P Pn 12 28 53.9 +0.1
baz=222
KDAK Kodiak Island 3.77 209 Pn Pn 12 28 54.4 +0.2
KDAK Kodiak Island 3.77 209 P Pn 12 28 54.1 -0.1
baz=26
CTG Chitna Glacier 3.81 89 P Pn 12 28 56.0 +1.1
baz=276,SNR=22
IL31 3.81 15 Pn 12 28 55.9 +1.2
ILAR Eielson Array 3.81 15 Pn 12 28 56.6 +2.0
ILAR Eielson Array 3.81 15 P Pn 12 28 56.7 +2.0
comp=N,4.9nm,0.5s,baz=204,slow=14,SNR=63
ILAR S Sn 12 29 46.1 +7.9
comp=N,114nm,0.8s,baz=201,slow=22,SNR=15
CTGM Chitina Glacie 3.81 89 Pn 12 28 55.6 +0.8
CTGM IAML 12 29 54.2
comp=N,220nm,0.6s
CTGM IAML 12 29 56.6
comp=E,176nm,0.7s
TCOL CIGO, UAF Yank 3.82 8 Pn 12 28 56.3 +1.6
TCOL CIGO, UAF Yank 3.82 8 P Pn 12 28 56.4 +1.7
baz=189,SNR=21
COLA College 3.82 8 Pn 12 28 56.3 +1.6
COLA College 3.82 8 P Pn 12 28 55.4 +0.6
baz=189
J20K Nowinta River 3.83 325 Pn Pn 12 28 55.5 +0.5
J20K IAML 12 30 05.7
comp=E,340nm,0.7s
J20K Nowinta River 3.83 325 P Pn 12 28 55.5 +0.5
baz=141,SNR=270
MDM Murphy Dome 3.88 6 Pn 12 28 57.3 +1.7
MDM IAML 12 30 02.0
comp=N,149nm,0.7s
J25K Salcha River, 3.92 25 Pn 12 28 57.2 +1.0
J25K IAML 12 29 50.2
comp=E,165nm,0.6s
J25K Salcha River, 3.92 25 P Pn 12 28 57.7 +1.5
baz=208,SNR=47
L27K Beaver Creek, 3.96 57 Pn 12 28 58.3 +1.5
BCAR Beaver Creek A 3.98 57 Pn 12 28 55.2 -1.9
LOGN Logan Glacier 3.99 91 Pn 12 28 56.2 -1.1
LOGN IAML 12 30 02.4
comp=E,165nm,0.8s
LOGN IAML 12 30 10.4
comp=N,176nm,0.7s
MLY Manley 3.99 350 Pn 12 28 58.1 +0.9
MLY Manley 3.99 350 P Pn 12 28 58.1 +0.9
baz=169,SNR=46
TABL Table Mountain 3.99 96 Pn Pn 12 28 58.4 +1.0
TABL IAML 12 30 00.3
comp=N,195nm,1.0s
TABL IAML 12 30 00.8
comp=E,251nm,0.8s
YUK2 White River 4.05 77 Pn 12 28 59.1 +1.0
POKR Poker Plat Res 4.09 10 Pn Pn 12 29 00.3 +1.8
POKR Poker Plat Res 4.09 10 P Pn 12 29 00.4 +1.8
baz=192
P17K Kvichak River 4.12 245 Pn 12 28 59.5 +0.7
P17K Kvichak River 4.12 245 P Pn 12 28 59.4 +0.5
baz=59,SNR=15
O17K Koliganek Bris 4.15 255 Pn 12 28 59.7 +0.3
O17K Koliganek Bris 4.15 255 P Pn 12 28 59.8 +0.4
baz=68
BVCY Beaver Creek 4.16 68 P Pn 12 29 00.3 +0.9
baz=255
SAMH Samovar Hills 4.25 100 Pn 12 29 02.0 +1.3
J26L Joseph Creek 4.26 35 Pn 12 29 01.6 +0.7
J26L IAML 12 30 14.7
comp=N,117nm,0.9s
J26L Joseph Creek 4.26 35 P Pn 12 29 01.6 +0.7
baz=220,SNR=32
I21K Tanana 4.27 344 Pn 12 29 01.7 +0.7
I21K IAML 12 30 20.6
comp=E,122nm,1.4s
I21K IAML 12 30 23.2
comp=N,128nm,0.8s
I21K Tanana 4.27 344 P Pn 12 29 01.9 +0.9
baz=161,SNR=10
K27K Chicken 4.39 45 Pn Pn 12 29 06.4 +3.7
K27K Chicken 4.39 45 P Pn 12 29 04.3 +1.7
baz=231
O28M Mount Upton 4.39 91 Pn 12 29 04.5 +1.5
O28M Mount Upton 4.39 91 P Pn 12 29 04.3 +1.4
baz=278,SNR=38
OHAK Old Harbor 4.45 210 Pn Pn 12 29 02.8 -0.6
OHAK Old Harbor 4.45 210 P Pn 12 29 02.8 -0.6
baz=27
Q16K King Salmon 4.50 240 Pn 12 29 04.7 +0.6
Q16K King Salmon 4.50 240 P Pn 12 29 04.7 +0.6
baz=54,SNR=10
PINM Pinnacle 4.51 99 P Pn 12 29 04.0 -0.3
baz=287
O16K Kokwok River B 4.69 255 Pn 12 29 07.1 +0.3
O16K Kokwok River B 4.69 255 P Pn 12 29 06.9 +0.1
baz=67
PRP Porcupine Dome 4.71 19 Pn 12 29 07.3 +0.2
PRP IAML 12 30 08.9
comp=E,96nm,0.5s
PRP IAML 12 30 09.6
comp=N,173nm,0.7s
PRP Porcupine Dome 4.71 19 P Pn 12 29 09.5 +2.3
baz=202
H23K Yukon River 4.73 358 Pn 12 29 08.8 +1.5
H23K Yukon River 4.73 358 P Pn 12 29 09.6 +2.3
baz=178
N16K Nishlik Lake 4.75 266 Pn 12 29 08.1 +0.4
N16K Nishlik Lake 4.75 266 P Pn 12 29 08.0 +0.4
baz=78,SNR=18
H24K Noodor Dome 4.77 6 Pn 12 29 10.1 +2.2
H24K IAML 12 30 37.6
comp=E,77nm,1.7s
H24K Noodor Dome 4.77 6 P Pn 12 29 09.3 +1.3
baz=187
H21K Melozitna Rive 4.84 342 Pn Pn 12 29 09.4 +0.6
H21K IAML 12 30 37.9
comp=E,86nm,0.9s
H21K IAML 12 30 41.0
comp=N,93nm,1.4s
H21K Melozitna Rive 4.84 342 P Pn 12 29 09.6 +0.7
baz=158,SNR=125
BCPM Bancas Point 4.85 100 Pn 12 29 09.3 +0.3
BCPM IAML 12 30 30.1
comp=N,152nm,1.0s
BCPM IAML 12 30 45.2
comp=E,109nm,0.7s
P16K Nushagak River 4.89 249 Pn 12 29 10.3 +0.8
P16K Nushagak River 4.89 249 P Pn 12 29 10.3 +0.8
baz=61
H22K Ishtalitna Cre 4.89 349 Pn 12 29 10.3 +0.7
H22K Ishtalitna Cre 4.89 349 P Pn 12 29 10.9 +1.3
baz=167,SNR=39
I26K Coal Creek Min 5.00 30 Pn 12 29 14.9 +3.9
I26K IAML 12 30 38.3
comp=E,123nm,1.1s
I26K IAML 12 30 52.0
comp=N,121nm,0.8s
I26K Coal Creek Min 5.00 30 P Pn 12 29 12.2 +1.2
baz=216
PNL Peninsula 5.06 102 Pn 12 29 12.7 +0.8
PNL Peninsula 5.06 102 P Pn 12 29 12.2 +0.4
baz=291
GCSA Galena City Sc 5.06 319 P Pn 12 29 12.7 +0.8
baz=132
R17K Ugashik Creek 5.08 230 Pn 12 29 13.2 +1.1
R17K Ugashik Creek 5.08 230 P Pn 12 29 13.3 +1.1
baz=44
YUK4 Talbot Arm 5.09 83 P Pn 12 29 14.2 +1.7
baz=271
EGAK Eagle 5.18 41 Pn 12 29 14.1 +0.6
EGAK IAML 12 30 48.2
comp=N,115nm,1.1s
EGAK IAML 12 30 57.5
comp=N,122nm,0.8s
EGAK Eagle 5.18 41 P Pn 12 29 14.0 +0.6
baz=228
M29M Somme Creek 5.25 71 Pn 12 29 15.4 +0.8
M29M Somme Creek 5.25 71 P Pn 12 29 15.7 +1.1
baz=260,SNR=15
YUK6 Outpost Mounta 5.26 87 P Pn 12 29 15.8 +1.0
baz=277,SNR=7.4
SII Sitkinak Islan 5.26 212 Pn Pn 12 29 14.3 -0.3
SII IAML 12 30 51.7
comp=N,110nm,0.9s
SII IAML 12 30 53.3
comp=E,83nm,0.8s
SII Sitkinak Islan 5.26 212 P Pn 12 29 15.7 +1.0
baz=28
O29M Mount Kennedy 5.27 94 Pn 12 29 13.9 -0.9
O29M Mount Kennedy 5.27 94 P Pn 12 29 15.9 +1.1
baz=284,SNR=19
IM03 5.29 339 Pn 12 29 15.7 +0.6
IMAR Indian Mountai 5.29 339 Pn Pn 12 29 15.8 +0.8
H25K Birch Creek 5.38 15 Pn 12 29 18.9 +2.8
H25K Birch Creek 5.38 15 P Pn 12 29 18.3 +2.1
baz=198,SNR=9.2
DAWY Dawson 5.40 53 Pn 12 29 17.4 +0.9
DAWY IAML 12 30 56.7
comp=N,48nm,0.7s
DAWY Dawson 5.40 53 P Pn 12 29 17.2 +0.7
baz=241
G23K Bananza Creek 5.63 357 P Pn 12 29 21.6 +1.9
baz=176
I27K Kandik River 5.64 34 P Pn 12 29 21.8 +2.0
baz=220,SNR=8.9
G24K Hadweenzic Riv 5.65 7 Pn 12 29 22.3 +2.3
G24K Hadweenzic Riv 5.65 7 P Pn 12 29 22.1 +2.1
baz=188
HYT Haines Junctio 5.69 88 Pn 12 29 21.5 +0.9
HYT Haines Junctio 5.69 88 P Pn 12 29 21.7 +1.1
baz=278,SNR=15
FYU Fort Yukon 5.74 16 Pn 12 29 21.4 +0.3
G21K Allakaket 5.75 342 P Pn 12 29 22.6 +1.3
baz=158
N30M Aishikik Lake 5.83 81 Pn 12 29 22.3 -0.2
N30M Aishikik Lake 5.83 81 P Pn 12 29 22.4 -0.2
baz=272,SNR=10.0
P29M Windy Craggy 5.86 100 Pn 12 29 23.0 +0.1
P29M Windy Craggy 5.86 100 P Pn 12 29 23.8 +0.9
baz=290,SNR=25
M30M Minto, Yukon 6.04 71 Pn Pn 12 29 26.1 +0.8
M30M Minto, Yukon 6.04 71 P Pn 12 29 26.3 +1.0
baz=262
P30M Million Dollar 6.09 94 P Pn 12 29 27.1 +1.0
baz=285
H27K Steamboat Moun 6.15 30 P Pn 12 29 27.8 +1.0
baz=217
G26K Porcupine Rive 6.31 20 P Pn 12 29 31.5 +2.6
baz=204
F21K Alatna River 6.41 345 P Pn 12 29 32.4 +2.1
baz=161,SNR=19
F24K Squaw Lake 6.45 4 P Pn 12 29 33.2 +2.2
baz=186
N31M Braeburn, Yuko 6.46 81 Pn 12 29 31.9 +0.8
I29M Ogilvie Camp, 6.49 44 Pn Pn 12 29 34.0 +2.5
I29M Ogilvie Camp, 6.49 44 P Pn 12 29 33.0 +1.6
baz=234
F22K John River 6.55 350 P Pn 12 29 35.1 +2.9
baz=167
PLBC Pleasant Camp 6.58 99 P Pn 12 29 33.5 +0.8
baz=290,SNR=7.0
G27K Doyon Strip 6.60 27 P Pn 12 29 34.8 +1.9
baz=213
BMAR Burnt Mountain 6.64 15 Pn Pn 12 29 33.6 0.0
MAYO Mayo, Yukon 6.66 62 Pn Pn 12 29 35.2 +1.5
F25K Christian Rive 6.68 12 P Pn 12 29 35.7 +1.6
baz=195
F26K Sheenjek River 6.95 16 P Pn 12 29 39.0 +1.2
baz=200
WHY Whitehorse 6.99 88 Pn Pn 12 29 39.0 +0.6
WHY Whitehorse 6.99 88 P Pn 12 29 39.1 +0.7
baz=280,SNR=8.5
E24K Your Creek 6.99 2 P Pn 12 29 40.1 +1.8
baz=183
SKAG Skagway 7.08 98 Pn 12 29 40.5 +1.0
SKAG Skagway 7.08 98 P Pn 12 29 40.1 +0.6
baz=290,SNR=8.6
M31M Drury Creek, Y 7.12 75 Pn 12 29 41.2 +1.1
M31M Drury Creek, Y 7.12 75 P Pn 12 29 41.6 +1.5
baz=268
E22K Anaktuvuk Pass 7.14 352 P Pn 12 29 42.9 +2.6
baz=170
E25K Arctic Village 7.20 11 P Pn 12 29 42.8 +1.6
baz=194
TOLK Toolik Lake Re 7.56 359 Pn Pn 12 29 47.5 +1.4
TOLK Toolik Lake Re 7.56 359 P Pn 12 29 47.0 +0.9
baz=178
FARO Faro, Yukon 7.61 75 Pn 12 29 48.2 +1.4
FARO Faro, Yukon 7.61 75 P Pn 12 29 48.0 +1.2
baz=269
EPYK Eagle Plains 7.62 41 Pn Pn 12 29 48.2 +1.2
BESE Bessie Mountai 7.64 103 Pn Pn 12 29 48.4 +1.1
N32M Quiet Lake 7.79 83 P Pn 12 29 49.8 +0.6
baz=277
P32M Atlin 7.81 95 P Pn 12 29 49.9 +0.3
baz=288
JIS Juneau Island 8.00 104 Pn Pn 12 29 53.1 +1.0
P33M Teslin, Yukon 8.08 89 Pn 12 29 53.4 0.0
P33M Teslin, Yukon 8.08 89 P Pn 12 29 53.5 +0.2
baz=284
SIT Sitka 8.20 114 Pn Pn 12 29 55.1 +0.2
SIT Sitka 8.20 114 P Pn 12 29 54.8 -0.1
baz=306
D25K Kavik River 8.32 7 P Pn 12 29 58.0 +1.4
baz=189
CHNA Chernabura Isl 8.38 226 P Pn 12 29 57.8 +0.5
baz=37
CNBA Chernabura Isl 8.39 226 Pn Pn 12 29 57.8 +0.3
MMPY Sheldon Lake, 8.59 72 P Pn 12 30 01.4 +1.1
baz=268
R33M Jennings River 9.21 93 P Pn 12 30 09.4 +0.6
baz=289,SNR=5.4
TNA Tin City 9.51 306 P Pn 12 30 15.3 +2.5
baz=109
S34M Telegraph Cree 9.70 101 P Pn 12 30 16.5 +1.0
baz=297
INK Inuvik 9.81 36 P Pn 12 30 21.5 +4.7
comp=N,2.3nm,0.9s,baz=250,slow=13,SNR=2.5
INK S Sn 12 32 09.3 +3.9
comp=N,2.9nm,0.7s,baz=294,slow=14,SNR=1.1
INK LR LR 12 33 35.4
comp=N,43nm,18.3s,baz=31,slow=35
WRAK Wrangell Islan 9.91 111 P Pn 12 30 19.0 +0.8
baz=305
DLBC Dease Lake 10.01 97 P Pn 12 30 21.1 +1.3
baz=294
T35M Bob Quinn 10.57 105 P Pn 12 30 28.0 +0.6
baz=301
NVAR Mina Array Bea 29.72 126 P P 12 34 15.2 +14
comp=N,0.2nm,0.5s,baz=317,slow=8.3,SNR=3.6
comp=N,0.2nm,0.5s
TXAR Lajitas Array 43.68 116 P P 12 36 12.4 +13
comp=N,0.3nm,0.8s,baz=294,slow=4.0,SNR=4.3
comp=N,0.3nm,0.8s
TKL Tuckaleechee C 47.78 91 LR LR 12 58 42.1
comp=N,29nm,19.5s,baz=337,slow=38
SONM Songino Array 55.63 308 P P 12 37 30.6 +0.1
comp=N,2.0nm,0.7s,baz=31,slow=7.4,SNR=8.1
comp=N,2.0nm,0.7s
ZALV Zalesovo Beam 57.56 325 P P 12 37 41.1 -2.8
comp=N,1.1nm,0.5s,baz=15,slow=6.2,SNR=3.8
comp=N,1.1nm,0.5s
FINES FINESS Array B 57.71 3 P P 12 37 43.9 -1.0
comp=N,0.7nm,0.6s,baz=23,slow=10,SNR=5.5
comp=N,0.7nm,0.6s
CMIG Matias Romero 58.24 114 LR LR 13 07 00.8
comp=N,32nm,20.6s,baz=51,slow=40
MKAR Makanchi Array 64.70 324 P P 12 38 30.3 -2.2
comp=N,0.3nm,0.5s,baz=48,slow=5.6,SNR=4.6

comp=N,0.3nm,0.5s
AKASG Malin Array Be 68.53 1 P P 12 38 55.3 -1.4
comp=N,1.2nm,0.4s,baz=2.5,slow=6.0,SNR=7.9
comp=N,1.2nm,0.4s
ESDC Sonseca Array 75.63 27 P P 12 39 39.3 -0.2
comp=N,1.0nm,0.7s,baz=339,slow=5.6,SNR=6.6
comp=N,1.0nm,0.7s

JMA 30 12:40:45.9±0.2, 28°N±1°×14°1E±°, h350km, MV3.8/17, NEAR CHICHIJIMA ISLAND, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.48**	**133**	P	Pn	12 41 34.1	+0.2
JHH2	**Haha-jima-NKT2**	**1.82**	**143**	*e*P	Pn	12 41 36.3	+0.2
JHH2				*e*S	S	12 42 15.8	-0.4
BSO1	**Boso 1**	**6.52**	**0**	*e*P	Pn	12 42 23.8	+1.8
BSO3	**Boso 3**	**6.68**	**357**	*e*P	Pn	12 42 25.6	+1.4
JHO	**Hitachi**	**8.48**	**358**	*e*P	Pn	12 42 46.5	+0.9

*IDC **30** 12:41:12.8±1.7, 30°.35S×177°.27W, h0km, mb4.6/4, mbtmp4.5/5, ML3.3/1, MS3.3/3, Error ellipse: s-maj=38.2km s-min=23.9km az=111.0*
*NEIC **30** 12:41:13.1±1.5, 30°.25S±0°.04×177°.2W±0°.2, h10km±1km, mb4.6/21, Error ellipse: s-maj=23.6km s-min=5.8km az=79.0*

ISC 30 12:41:15.7±0.9, 30°29S±0°.06×177°3W±0°.1, h35km, n51, σ2s15/43, mb4.6/15, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.17**	**332**		**Pn**	**12 41 36.0**	**+0.4**
RAO	**Raoul Island**	**1.17**	**332**	Pn	**Pn**	**12 41 37.1**	**+1.5**
	270nm,0.3s,baz=38,slow=21,SNR=16						
RAO				Sn	**Sn**	**12 41 48.5**	**-1.8**
	2μm,0.3s,baz=90,slow=20,SNR=15						
RAO				LR	LR	12 42 12.1	
	comp=Z,173nm,21.3s,baz=146,slow=48						
HAZ	**Te Kaha**	**8.50**	**207**	S	**Sn**	**12 44 44.3**	**-6.6**
HAZ	**Te Kaha**	**8.50**	**207**	P	**Pn**	**12 43 17.9**	**+1.7**
PUZ	**Puketiti**	**8.60**	**204**	S	**Sn**	**12 44 47.4**	**-5.9**
PUZ	**Puketiti**	**8.60**	**204**	P	**Pn**	**12 43 19.2**	**+1.6**
RUGZ	**Raukumara Rang**	**8.72**	**207**	P	**Pn**	**12 43 22.6**	**+3.2**
MWZ	**Matawai**	**9.10**	**207**	P	**Pn**	**12 43 26.6**	**+2.1**
URZ	**Urewera**	**9.20**	**209**	Pn	**Pn**	**12 43 27.0**	**+1.1**
URZ	**Urewera**	**9.20**	**209**	P	**Pn**	**12 43 27.2**	**+1.3**
URZ	**Urewera**	**9.20**	**209**	Pn	**Pn**	**12 43 26.3**	**+0.4**
	0.3nm,0.3s,baz=114,slow=20,SNR=1.2						
URZ				Sn	**Sn**	**12 45 09.3**	**+1.2**
	2.3nm,0.3s,baz=134,slow=23,SNR=5.5						
	2.4nm,0.6s						
URZ	**Urewera**	**9.20**	**209**	S	**Sn**	**12 45 07.0**	**-1.1**
MSVF	**Nonsavu**	**13.20**	**340**	LR	LR	12 48 17.8	
	comp=Z,85nm,20.0s,baz=130,slow=32						
DZM	**Mont Dzumac**	**16.73**	**295**	LR	LR	12 49 26.8	
	comp=Z,90nm,19.8s,baz=4.0,slow=30						
ARMA	**Armidale**	**26.79**	**262**	P	**P**	**12 46 53.1**	**+0.5**
ARMA				IAmb	IAmb	12 47 20.0	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**28.35**	**272**	P	**P**	**12 47 07.2**	**+0.7**
EIDS				IAmb	IAmb	12 47 43.6	
	comp=Z,19nm,1.4s						
CAN	**Canberra**	**28.70**	**251**	P	**P**	**12 47 09.9**	**+0.3**
TOO	**Toolangi**	**31.58**	**247**	P	**P**	**12 47 36.4**	**+1.5**
CTA	**Charters Tower**	**34.39**	**279**	P	P	12 48 03.3	+3.5
	comp=Z,10nm,0.5s,baz=103,slow=10,SNR=34						
	comp=Z,10nm,0.5s						
CTAO	**Charters Tower**	**34.39**	**279**	P	**P**	**12 48 00.3**	**+0.6**
STKA	**Stephens Creek**	**35.11**	**257**	P	**P**	**12 48 07.2**	**+1.4**
STKA	**Stephens Creek**	**35.11**	**257**	P	P	12 48 09.1	+3.4
	comp=Z,5.5nm,0.7s,baz=98,slow=11,SNR=14						
	comp=Z,5.5nm,0.7s						
BBOO	**Buckleboo**	**39.59**	**254**	P	**P**	**12 48 45.6**	**+1.8**
BBOO				IAmb	IAmb	12 49 25.1	
	comp=Z,19nm,1.1s						
COEN	**Coen**	**39.84**	**285**	P	**P**	**12 48 45.5**	**-0.5**
COEN				IAmb	IAmb	12 49 17.7	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**43.73**	**266**	P	**P**	**12 49 19.7**	**+1.9**
ASAR	**Alice Springs**	**43.73**	**266**	P	**P**	**12 49 19.6**	**+1.8**
ASAR	**Alice Springs**	**43.73**	**266**	P	**P**	**12 49 19.1**	**+1.3**
	comp=Z,2.1nm,0.5s,baz=105,slow=7.1,SNR=44						
	comp=Z,2.1nm,0.5s						
WR0	**Warramunga Arr**	**44.53**	**272**	P	**P**	**12 49 24.9**	**+0.7**
WR0				IAmb	IAmb	12 49 27.6	
	comp=Z,5.7nm,0.6s						
WB2	**Warramunga Arr**	**44.70**	**272**	P	**P**	**12 49 26.6**	**+1.0**
WB2				IAmb	IAmb	12 49 28.9	
	comp=Z,10nm,1.2s						
WRAB	**Tennant Creek**	**44.71**	**272**	P	**P**	**12 49 26.1**	**+0.4**
WRAB				IAmb	IAmb	12 49 27.9	
	comp=Z,5.9nm,0.7s						
WRA	**Warramunga Arr**	**44.71**	**272**	P	**P**	**12 49 26.3**	**+0.6**
WRA	**Warramunga Arr**	**44.71**	**272**	P	**P**	**12 49 26.8**	**+1.1**
	comp=Z,3.5nm,0.2s,baz=111,slow=8.1,SNR=181						
	comp=Z,3.5nm,0.2s						
WB0	**Warramunga Arr**	**44.74**	**272**	P	**P**	**12 49 27.1**	**+1.3**
FORT	**Forrest**	**46.67**	**255**	P	**P**	**12 49 41.3**	**+0.3**
SBA	**Scott Base**	**48.20**	**184**	P	**P**	**12 49 51.4**	**-0.8**
VNDA	**Vanda**	**48.27**	**186**	P	**P**	**12 49 53.9**	**+1.1**
KNRA	**Kununurra**	**51.32**	**274**	P	**P**	**12 50 17.7**	**+1.0**
KNRA				IAmb	IAmb	12 50 25.3	
	comp=Z,15nm,1.5s						
FITZ	**Fitzroy Crossi**	**52.98**	**269**	P	**P**	**12 50 29.2**	**+0.1**
FITZ				IAmb	IAmb	12 50 58.3	
	comp=Z,7.3nm,1.4s						
QSPA	**South Pole Qui**	**59.82**	**180**	P	**P**	**12 51 17.9**	**+0.6**
QSPA				IAmb	IAmb	12 51 31.9	
	comp=Z,5.5nm,1.1s						
DAV	**Davao City (W)**	**66.14**	**294**	LR	LR	13 20 35.1	
	comp=Z,30nm,19.1s,baz=176,slow=36						
SMAI	**San Martin Ant**	**69.30**	**158**	P	**P**	**12 52 20.2**	**+1.3**
SMAI				IAmb	IAmb	12 52 57.8	
	comp=Z,6.6nm,1.3s						
TROLL	**Troll, Antarti**	**77.98**	**180**	P	P	12 53 16.7	+6.6
SNAA	**Sanae**	**78.25**	**178**	P	P	12 53 18.4	+6.9
VNA3	**Neumayer Olymp**	**78.37**	**176**	P	P	12 53 18.3	+6.2
VNA2	**Neumayer--Watz**	**78.81**	**177**	P	P	12 53 21.1	+6.6
	baz=180,slow=4.6						
VNA1	**Neumayer--Stat**	**79.04**	**176**	P	P	12 53 24.9	+9.2
FINES	**FINESS Array B**	**145.25**	**340**	PKPbc	**PKiKP**	**13 00 51.9**	**-0.9**
	comp=Z,4.8nm,0.6s,baz=52,slow=3.6,SNR=25						
NB2	**NORSAR Subarra**	**148.73**	**352**	PKP	**PKPab**	**13 01 03.0**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=36,slow=3.1						
NOA	**NORSAR Array B**	**148.73**	**352**		**PKPab**	**13 01 00.1**	**-2.4**
NOA	**NORSAR Array B**	**148.73**	**352**	PKPbc	**PKPab**	**13 01 00.1**	**-2.4**
	comp=Z,1.1nm,0.8s,baz=24,slow=3.4,SNR=3.7						
AKASG	**Malin Array Be**	**151.58**	**323**	PKPbc	**PKPab**	**13 01 08.4**	**-6.0**
	comp=Z,0.8nm,0.4s,baz=51,slow=3.0,SNR=5.4						

WEL 30 12:43:21.0±0.8, 37°S±4°×17°7E±°, h5km, M2.2/3, ML2.4/6, MLv2.2/3, Error ellipse: s-maj=0.0km s-min=0.0km az=40.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSRZ	**White Island S**	**0.08**	**149**	P	Pg	12 43 23.4	+0.5
WSRZ				S	Sg	12 43 25.4	+1.2
WIZ	**White Island**	**0.10**	**147**	P	Pg	12 43 24.1	+1.1
WIZ				S	Sg	12 43 25.3	+0.8
WHRZ	**Whale Island**	**0.42**	**196**	P	Pn	12 43 33.3	-0.5
WHRZ				S	Sg	12 43 36.1	+1.3
OPRZ	**Ohinepanea**	**0.60**	**228**	P	Pg	12 43 32.5	-0.1
OPRZ				S	Sg	12 43 40.2	-0.2
MARZ	**Manawahe**	**0.65**	**213**	P	Pb	12 43 34.5	-0.3
MARZ				S	Sg	12 43 42.3	+0.5
RUGZ	**Raukumara Rang**	**0.68**	**140**	S	Sb	12 43 44.1	-1.1
TGRZ	**Tauranga**	**0.74**	**247**	P	Pb	12 43 35.9	-0.5
KARZ	**Kaharoa**	**0.90**	**230**	P	Pb	12 43 38.9	-0.3
KARZ				S	Sb	12 43 51.7	+0.2
MWZ	**Matawai**	**0.94**	**160**	S	Sg	12 43 51.7	+0.4
TOZ	**Tahuroa Road**	**1.32**	**257**	P	Pg	12 43 46.7	+0.4
KUZ	**Kuaotunu**	**1.32**	**302**	P	Pn	12 43 44.5	-1.6
KUZ				S	Sg	12 44 03.3	-0.3
MKAZ	**Moumakai**	**1.60**	**282**	P	Pn	12 43 48.6	-1.4

*KRNET **30** 12:55:25.6±0.1, 39°.38N×73°.39E, mb3.9*
*SOME **30** 12:55:25.2, 39°.42N×73°.47E, h15km*
*NNC **30** 12:55:31.5±2.5, 39°.66N×73°.38E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=20.6km s-min=11.0km az=170.0*

ISC 30 12:55:24.2±1.8, 39°45N±0°.07×73°48E±0°.03, h6km±11km, n50, σ2s01/78, 22C-20D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.20**	**334**	⇑*e*P	**Pg**	**12 55 48.7**	**+1.5**
	baz=38						
OHH				⇑*e*S	**Sn**	**12 56 05.7**	**+1.4**
	baz=38						
DRK	**Karamyk**	**1.30**	**272**	⇑*e*P	**Pn**	**12 55 48.7**	**-0.6**
	baz=76						
DRK				⇑*e*S	**Sb**	**12 56 05.7**	**-0.8**
	baz=76						
BTK	**Batken**	**2.14**	**287**	⇑*e*P	**Pb**	**12 56 03.2**	**-0.3**
	baz=90						
BTK				⇑*e*S	**Sb**	**12 56 30.5**	**+0.1**
	baz=90						
ARLS	**Aral**	**2.49**	**15**	⇓*e*P	**Pb**	**12 56 09.8**	**+0.4**
	baz=16						
ARLS				⇓*e*S	**Sg**	**12 56 42.2**	**-2.0**
	baz=16						
AML	**Almayashu**	**2.68**	**3**	P	**Pg**	**12 56 14.2**	**-1.4**
	SNR=45						
UCH	**Uchtor**	**2.88**	**15**	P	**Sg**	**12 56 58.8**	**+2.0**
	SNR=5.5						
UCH	**Uchtor**	**2.88**	**15**	⇑*e*P	**Pb**	**12 56 15.8**	**-0.5**
	baz=16						
UCH				⇑*e*S	**Sb**	**12 56 52.2**	**+0.2**
	baz=16						
EKS2	**Erkin-Say**	**3.21**	**4**	P	**Pb**	**12 56 23.1**	**+1.3**
	SNR=9.1						
EKS2	**Erkin-Say**	**3.21**	**4**	⇓*i*P	**Pb**	**12 56 19.8**	**-2.0**
	baz=5.0						
EKS2				⇓*e*S	**Sb**	**12 56 59.5**	**-1.7**
	baz=5.0						
AAK	**Ala-Archa**	**3.27**	**13**	P	**Pb**	**12 56 23.8**	**+1.0**
	SNR=19						
AAK	**Ala-Archa**	**3.27**	**13**	⇑*e*P	**Pb**	**12 56 20.9**	**-1.9**
	baz=14						
AAK				⇑*e*S	**Sb**	**12 57 01.1**	**-1.9**
	baz=14						
KBK	**Karagaybulak**	**3.39**	**19**	P	**Pg**	**12 56 30.4**	**+1.3**
	SNR=12						
KBK	**Karagaybulak**	**3.39**	**19**	⇑*e*P	**Pb**	**12 56 22.5**	**-2.3**
	baz=19						
KBK				⇑*e*S	**Sb**	**12 57 04.0**	**-2.3**
	baz=19						
FRU1	**Bishkek**	**3.46**	**14**	⇓*e*P	**Pb**	**12 56 23.7**	**-2.3**
	baz=15						
FRU1				⇓*e*S	**Sb**	**12 57 06.3**	**-2.1**
	baz=15						
ULHL	**Ulahol**	**3.49**	**36**	P	**Pg**	**12 56 32.1**	**+1.1**
	SNR=18						
ULHL	**Ulahol**	**3.49**	**36**	⇓*e*P	**Pb**	**12 56 24.0**	**-2.5**
	baz=36						
ULHL				⇓*e*S	**Sb**	**12 57 06.9**	**-2.3**
	baz=36						
BOOM	**Boomskoye usch**	**3.56**	**31**	⇑*e*P	**Pb**	**12 56 25.0**	**-2.7**
	baz=31						
BOOM				⇑*e*S	**Sb**	**12 57 08.3**	**-2.9**
	baz=31						
CHMS	**Chumysh**	**3.67**	**15**	P	**Pb**	**12 56 31.9**	**+2.4**
	SNR=7.7						
CHMS	**Chumysh**	**3.67**	**15**	⇑Pg	**Pb**	**12 56 29.6**	**+0.1**
	7.0nm,0.3s						
CHMS				⇓Lg	Lg	12 57 23.7	
	23nm,0.6s						
CHMS	**Chumysh**	**3.67**	**15**	⇓*e*P	**Pb**	**12 56 26.1**	**-3.4**
	baz=15						
CHMS				⇓*e*S	**Sb**	**12 57 10.7**	**-3.6**
	baz=15						
IUG	**luzhnay**	**3.76**	**317**	*e*P	**Pg**	**12 56 34.1**	**-2.0**
	578nm,0.7s						
IUG				*e*S	**Sg**	**12 57 24.3**	**-0.5**
	264nm,0.7s						
IUG	**luzhnay**	**3.76**	**317**	Pg	**Pg**	**12 56 35.4**	**-0.8**
	578nm,0.7s						
IUG				Lg	Lg	12 57 24.3	
	264nm,0.7s						
DZA	**Taraz**	**3.80**	**335**	*e*P	**Pg**	**12 56 36.4**	**-0.6**
	58nm,0.2s						
DZA				*e*S	**Sg**	**12 57 27.3**	**+1.0**
	276nm,0.4s						
DZA	**Taraz**	**3.80**	**335**	Pg	**Pg**	**12 56 37.0**	**0.0**
	58nm,0.2s						
DZA				Lg	Lg	12 57 27.3	
	276nm,0.4s						
TKM2	**Tokmak 2**	**3.81**	**24**	⇓Pn	**Pb**	**12 56 31.1**	**-0.9**
	2.8nm,0.7s						
TKM2				⇑Pg	**Pg**	**12 56 37.8**	**+0.5**
	6.3nm,0.4s						
TKM2				⇓Lg	Lg	12 57 30.9	
	35nm,0.5s						
TKM2	**Tokmak 2**	**3.81**	**24**	⇑*e*P	**Pb**	**12 56 28.6**	**-3.5**
	baz=25						
TKM2				⇑*e*S	**Sb**	**12 57 14.7**	**-3.9**
	baz=25						
USP	**Ospenovka**	**3.89**	**11**	P	**Pb**	**12 56 31.2**	**-2.0**
	SNR=14						
USP	**Ospenovka**	**3.89**	**11**	⇓*e*P	**Pb**	**12 56 29.2**	**-4.0**
	baz=12						
USP				⇓*e*S	**Sb**	**12 57 15.7**	**-4.8**
	baz=12						
KST	**Kastek**	**4.04**	**27**	*e*P	**Pg**	**12 56 41.1**	**-0.6**
	10.0nm,0.5s						
KST				*e*S	**Sg**	**12 57 36.1**	**+2.1**
	104nm,0.7s						
KST	**Kastek**	**4.04**	**27**	Pg	**Pg**	**12 56 42.4**	**+0.7**
	10.0nm,0.5s						
KST				Lg	Lg	12 57 36.2	
	104nm,0.7s						
SGDS	**Sogindy**	**4.09**	**12**	*e*P	**Pg**	**12 56 41.0**	**-1.5**
	8.3nm,0.5s						
SGDS				*e*S	**Sg**	**12 57 35.5**	**+0.1**
	30nm,1.0s						
SGDS	**Sogindy**	**4.09**	**12**	Pg	**Pg**	**12 56 42.3**	**-0.2**
	8.3nm,0.5s						
SGDS				Lg	Lg	12 57 35.8	
	30nm,1.0s						
DGS	**Degeres**	**4.16**	**24**	*e*P	**Pg**	**12 56 44.1**	**+0.3**
	14nm,0.2s						
DGS				*e*S	**Sg**	**12 57 41.0**	**+3.3**
	63nm,0.4s						
KK31	**Karatay Array**	**4.28**	**329**	Pn	**Pb**	**12 56 35.5**	**-4.4**
	3.0nm,0.5s,baz=138,slow=12,SNR=84						
KK31				⇑Lg	Lg	12 57 39.2	
	39nm,0.6s,baz=54,slow=8.3,SNR=4.7						
KKAR	**Karatay Array**	**4.28**	**329**	⇓*e*P	**Pn**	**12 56 33.9**	**+4.0**
	baz=31						
KKAR				⇓*i*S	**Sn**	**12 57 23.7**	**+3.5**
	baz=31						
IZV	**Izvestkoviy**	**4.29**	**32**	*e*P	**Pg**	**12 56 46.0**	**-0.4**
	72nm,0.1s						
IZV				*e*S	**Sg**	**12 57 43.8**	**+1.9**
	72nm,0.3s						
MTBS	**Maitube**	**4.29**	**30**	*e*P	**Pg**	**12 56 46.0**	**-0.4**
	12nm,0.3s						
MTBS				*e*S	**Sg**	**12 57 43.7**	**+1.7**
	63nm,0.5s						
MTBS	**Maitube**	**4.29**	**30**	Pg	**Pg**	**12 56 46.7**	**+0.3**
	12nm,0.3s						
MTBS				Lg	Lg	12 57 43.7	
	63nm,0.5s						
KRBS	**Karabastau**	**4.55**	**20**	*e*P	**Pg**	**12 56 50.7**	**-0.6**
	12nm,0.7s						
KRBS				*e*S	**Sg**	**12 57 52.3**	**+2.1**
	33nm,0.6s						
KRBS	**Karabastau**	**4.55**	**20**	Pg	**Pg**	**12 56 51.8**	**+0.5**
	12nm,0.7s						
KRBS				Lg	Lg	12 57 52.3	
	33nm,0.6s						
MDOK	**Medeo**	**4.58**	**35**	*e*P	**Pg**	**12 56 51.2**	**-0.6**
	12nm,0.2s						
MDOK				*e*S	**Sg**	**12 57 52.9**	**+1.7**
	50nm,0.5s						
MDOK	**Medeo**	**4.58**	**35**	⇑Pn	**Pb**	**12 56 42.9**	**-2.1**
	5.6nm,0.8s						
MDOK				⇑Pg	**Pg**	**12 56 52.1**	**+0.2**
	7.9nm,0.4s						
MDOK				⇑Lg	Lg	12 57 53.3	
	43nm,0.7s						
KOTS	**Kotyrbulak**	**4.66**	**35**	*e*P	**Pg**	**12 56 53.7**	**+0.2**
	9.7nm,0.4s						
KOTS				*e*S	**Sg**	**12 57 57.5**	**+3.6**
	135nm,0.9s						
KOTS	**Kotyrbulak**	**4.66**	**35**	Pg	**Pg**	**12 56 54.4**	**+0.9**
	9.7nm,0.4s						
KOTS				Lg	Lg	12 57 57.5	
	135nm,0.9s						
KTBS	**Karatobe**	**4.88**	**28**	*e*P	**Pg**	**12 56 57.6**	**-0.1**
	14nm,0.5s						
KTBS				*e*S	**Sg**	**12 58 03.2**	**+2.2**
	76nm,0.5s						
KTBS	**Karatobe**	**4.88**	**28**	Pg	**Pg**	**12 56 57.7**	**-0.1**
	14nm,0.5s						
KTBS				Lg	Lg	12 58 03.2	
	76nm,0.5s						
ARXS	**Arharly**	**5.76**	**33**	*e*P	**Pg**	**12 57 13.0**	**-1.4**
	8.4nm,0.2s						
ARXS				*e*S	**Sg**	**12 58 30.4**	**+1.4**
	44nm,0.3s						
MK31	**Makanchi Array**	**9.76**	**38**	⇓Pg	Pg	12 58 28.3	
	1.4nm,0.9s						
MK31				⇓Lg	Lg	13 00 38.0	
	4.8nm,1.1s,baz=225,slow=29,SNR=3.9						
AB31	**Akbulak array**	**13.76**	**320**	P	**Pn**	**12 58 40.6**	**+0.9**
	0.5nm,0.5s,baz=135,slow=12,SNR=8.7						
AKTO	**Aktyubinsk**	**15.47**	**320**	⇓P	**P**	**12 59 06.4**	**-1.1**
	1.6nm,0.7s						

IDC 30 13:33:16.6±4.3, 6°16S×129°00E, h367km±48km, mb2.6/1, mbtmp3.5/4, Error ellipse: s-maj=62.1km s-min=17.2km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.31**	**195**	P	P	13 35 58.8	-2.1
	1.3nm,0.9s,baz=6.3,slow=9.2,SNR=1.6						
FITZ				S	S	13 38 16.8	-0.4
	1.6nm,0.9s,baz=90,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**14.65**	**160**	P	P	13 36 27.0	+0.3
	1.2nm,0.9s,baz=340,slow=12,SNR=13						
ASAR	**Alice Springs**	**18.04**	**165**	P	P	13 37 03.8	+0.6
	0.6nm,0.3s,baz=345,slow=11,SNR=18						
ASAR				S	S	13 40 11.7	+0.8
	1.0nm,0.8s,baz=346,slow=22,SNR=7.4						
MKAR	**Makanchi Array**	**66.98**	**327**	P	P	13 43 31.0	0.0
	0.1nm,0.4s,baz=110,slow=8.6,SNR=2.7						
	0.1nm,0.4s						

JMA 30 13:45:56.4±0.4, 24°N±1°×122°4E±°, h15km±2km, MV0.8/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.19**	**42**	P	Pg	13 46 00.8	-0.1
HATJ				S	Sg	13 46 04.2	+0.2
IRIF	**Iriomote-Funau**	**0.42**	**8**	*e*P	Pg	13 46 05.0	0.0
IRIF				*e*S	Sg	13 46 10.6	-0.1
JKRS	**Kuro-shima**	**0.45**	**44**	*e*P	Pg	13 46 05.7	+0.1
JKRS				*e*S	Sg	13 46 11.7	+0.2
JIJ	**Ishigaki jima**	**0.62**	**44**	P	Pg	13 46 08.2	-0.5
JISG	**Ishigakijimahi**	**0.89**	**41**	P	Pb	13 46 13.0	-0.7

TAP 30 13:46:40.6, 23°.74N×121°.63E, h24km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.09**	**253**	P	Pb	13 46 45.4	+0.4
	baz=251						
TEGC				S	Sb	13 46 49.0	+1.0
	baz=251						
TEYL	**Yanliau Villag**	**0.14**	**346**	*e*S	Sb	13 46 51.1	+2.4
	baz=356						
ESL	**Shilin**	**0.20**	**293**	*i* P	Pb	13 46 46.1	-0.1
	baz=287						
ESL				S	Sb	13 46 50.3	+0.4
	baz=287						
EGFH	**Guangfu**	**0.20**	**251**	*i* P	Pb	13 46 46.2	+0.1
	baz=257						
EGFH				*i* S	Sb	13 46 50.6	+0.7
	baz=257						
ETM	**Tongmen**	**0.26**	**331**	P	Pb	13 46 47.2	+0.2
	baz=330						
ETM				S	Sb	13 46 52.1	+0.6
	baz=330						
HGSD	**Ruisui**	**0.31**	**219**	P	Pb	13 46 48.5	+0.8
	baz=214						
EHY	**Hungye**	**0.37**	**232**	*i* P	Pb	13 46 48.6	-0.1
	baz=241						
EHY				*i* S	Sb	13 46 54.5	+0.5
	baz=241						
NACB	**Ninganchiao**	**0.44**	**355**	P	Pb	13 46 49.9	0.0
NACB				S	Sb	13 46 57.4	+1.3
VWDT	**VWDT**	**0.45**	**272**	P	Pb	13 46 50.3	+0.3
	baz=272						
VWDT				S	Sb	13 46 57.1	+0.8
	baz=272						
YULB	**Yu-li**	**0.46**	**222**	P	Pb	13 46 49.6	-0.6
	baz=235						
YULB				S	Sb	13 46 56.6	0.0
	baz=235						
OWD	**Renai**	**0.47**	**298**	*i* P	Pb	13 46 50.5	+0.1
	baz=298						
OWD				*i* S	Sb	13 46 57.2	+0.1
	baz=298						
ETLH	**Xiulin Townshi**	**0.49**	**344**	P	Pb	13 46 50.9	+0.2
	baz=343						
ETLH				S	Sb	13 46 58.0	+0.5
	baz=343						
TWF1	**Yuli**	**0.49**	**219**	*e*P	Pb	13 46 51.0	+0.3
	baz=229						
WHF	**Hehuan Shan**	**0.53**	**320**	*i* P	Pb	13 46 51.7	+0.1
	baz=321						
WHF				*i* S	Sb	13 46 59.3	+0.2
	baz=321						
CHGB	**Renai**	**0.53**	**308**	P	Pb	13 46 51.6	+0.1
	baz=315						
CHGB				S	Sb	13 46 59.8	+0.9
	baz=315						
WUSB	**Renai**	**0.54**	**299**	P	Pb	13 46 51.7	+0.1
	baz=304						
WUSB				S	Sb	13 46 59.3	+0.4
	baz=304						
FULB	**Fuli**	**0.62**	**210**	P	Pb	13 46 53.2	+0.4
	baz=224						
FULB				S	Sn	13 47 04.0	+0.9
	baz=224						
FUSS	**Fushou**	**0.62**	**325**	P	Pb	13 46 53.1	+0.1
	baz=325						
FUSS				*i* S	Sb	13 47 02.2	+0.7
	baz=325						
SSLB	**Suanglung**	**0.62**	**275**	P	Pb	13 46 53.1	+0.2
	baz=275						
SSLB				S	Sb	13 47 01.0	-0.3
	baz=275						
WHYT	**Xinyi Township**	**0.72**	**267**	S	Sb	13 47 04.4	+0.4
	baz=267						
NNSB	**Datong**	**0.73**	**342**	P	Pn	13 46 55.3	-0.3
	baz=333						
NNSB				S	Sb	13 47 04.9	+0.5
	baz=333						
WCS	**Beigang Elemen**	**0.73**	**296**	P	Pb

TWKBT	**Hengchun**	**0.89**	**280**	P	**Pg**	**14 02 37.4**	**+0.2**
	baz=276						
TWKBT				S	**Sg**	**14 02 48.7**	**0.0**
	baz=276						
TWK1	**Hengchun**	**0.90**	**280**	S	**Sg**	**14 02 49.0**	**0.0**
	baz=276						
LDUT	**Ludao**	**0.92**	**343**	*i* P	**Pg**	**14 02 37.7**	**0.0**
	baz=346						
LDUT				*i* S	**Sg**	**14 02 49.6**	**-0.1**
	baz=346						
HEN	**Hengchun**	**0.97**	**283**	*i* P	**Pg**	**14 02 38.6**	**-0.1**
	baz=279						
HEN				*i* S	**Sg**	**14 02 51.3**	**0.0**
	baz=279						
TAWH	**Dawu Township**	**0.97**	**304**	P	**Pg**	**14 02 37.9**	**-0.9**
	baz=303						
TAWH				S	**Sg**	**14 02 50.3**	**-1.1**
	baz=303						
TAW	**Tawu**	**0.98**	**305**	*i* P	**Pb**	**14 02 40.4**	**+1.0**
	baz=304						
TAW				*i* S	**Sg**	**14 02 51.3**	**-0.3**
	baz=304						
SLIU	**Shizi**	**0.99**	**296**	*i* P	**Pg**	**14 02 38.5**	**-0.5**
	baz=293						
SLIU				S	**Sg**	**14 02 50.8**	**-1.1**
	baz=293						
EAST	**Anshuo**	**1.03**	**305**	*i* P	**Pn**	**14 02 41.4**	**+0.3**
	baz=304						
EAST				*e*S	**Sg**	**14 02 53.7**	**+0.5**
	baz=304						
ECL	**Taimali**	**1.10**	**317**	*i* P	**Pg**	**14 02 41.8**	**+0.7**
	baz=317						
TTN	**Taitung**	**1.11**	**330**	P	**Pb**	**14 02 42.0**	**+0.3**
	baz=331						
TTN				*e*S	**Sg**	**14 02 55.4**	**-0.5**
	baz=331						
TWGBT	**Beinan**	**1.20**	**329**	P	**Pn**	**14 02 43.3**	**-0.1**
	baz=329						
SCZT	**Fangliau**	**1.20**	**299**	*i* P	**Pn**	**14 02 42.8**	**-0.6**
	baz=297						
SCZT				S	**Sb**	**14 02 57.5**	**-1.5**
	baz=297						
EDH	**Donghe**	**1.25**	**340**	*i* P	**Pn**	**14 02 43.3**	**-0.8**
	baz=342						
EDH				S	**Sb**	**14 02 59.5**	**-0.9**
	baz=342						
LONT	**Longtian**	**1.25**	**332**	*i* P	**Pn**	**14 02 44.2**	**+0.1**
	baz=334						
LONT				S	**Sb**	**14 03 01.2**	**+0.7**
	baz=334						
SSPT	**Xinbi**	**1.30**	**302**	*i* P	**Pb**	**14 02 45.7**	**+0.8**
	baz=301						
MASBT	**Mashibuluo**	**1.33**	**308**	P	**Pn**	**14 02 45.2**	**+0.1**
	baz=307						
MASBT				*e*S	**Sb**	**14 03 00.7**	**-1.9**
	baz=307						
TSMG	**Majia**	**1.38**	**312**	*i* P	**Pn**	**14 02 46.3**	**+0.5**
	baz=311						
ECS	**Chishang**	**1.39**	**339**	P	**Pb**	**14 02 47.2**	**+0.7**
	baz=340						
ECS				S	**Sn**	**14 03 04.7**	**0.0**
	baz=340						
WLCH	**Liuqiu**	**1.40**	**294**	*i* P	**Pb**	**14 02 47.4**	**+0.9**
	baz=292						
TWP	**Hsiaoliuchiu**	**1.41**	**293**	*i* P	**Pn**	**14 02 46.6**	**+0.4**
	baz=292						
SSD	**Sandimen**	**1.41**	**313**	*i* P	**Pb**	**14 02 47.5**	**+0.6**
	baz=312						
FULB	**Fuli**	**1.47**	**343**	*i* P	**Pn**	**14 02 46.5**	**-0.6**
	baz=345						
FULB				S	**Sn**	**14 03 05.0**	**-1.6**
	baz=345						
SGLT	**Jiouru**	**1.50**	**309**	*e*P	**Pb**	**14 02 49.1**	**+0.9**
	baz=308						
ELDTW	**Lidau**	**1.55**	**334**	*i* P	**Pn**	**14 02 48.5**	**+0.1**
	baz=335						
SCST	**Cishan**	**1.60**	**313**	*i* P	**Pn**	**14 02 50.0**	**+1.1**
	baz=313						
EYUL	**Yuli**	**1.60**	**345**	*i* P	**Pn**	**14 02 48.7**	**-0.2**
	baz=347						
EYUL				S	**Sn**	**14 03 09.8**	**-0.1**
	baz=347						
TWM1	**Shoushan**	**1.61**	**310**	P	**Pb**	**14 02 50.4**	**+0.2**
	baz=309						
TWF1	**Yuli**	**1.61**	**345**	*i* P	**Pn**	**14 02 49.0**	**-0.1**
	baz=346						
TWF1				S	**Sn**	**14 03 10.2**	**0.0**
	baz=346						
WSSB	**Gushan**	**1.62**	**302**	*e*P	**Pb**	**14 02 50.5**	**+0.1**
	baz=300						
STYH	**Taoyuan**	**1.65**	**327**	P	**Pn**	**14 02 50.3**	**+0.8**
	baz=327						
YULB	**Yu-li**	**1.65**	**345**	P	**Pn**	**14 02 49.3**	**-0.3**
	baz=346						
YULB				S	**Sn**	**14 03 10.8**	**-0.3**
	baz=346						
SGST	**Jiashian**	**1.68**	**320**	*i* P	**Pb**	**14 02 51.4**	**0.0**
	baz=320						
SGST				*e*S	**Sn**	**14 03 12.1**	**+0.2**
	baz=320						
HGSD	**Ruisui**	**1.72**	**350**	P	**Pn**	**14 02 49.9**	**-0.6**
	baz=351						
EHY	**Hungye**	**1.75**	**347**	*i* P	**Pn**	**14 02 51.3**	**+0.3**
	baz=348						
EHY				S	**Sn**	**14 03 12.6**	**-1.0**
	baz=348						
SHHT	**Tainan City**	**1.79**	**313**	P	**Pb**	**14 02 53.1**	**-0.2**
	baz=313						
WTP	**Ta-pu**	**1.79**	**324**	*i* P	**Pb**	**14 02 53.6**	**+0.3**
	baz=324						
WTP				*e*S	**Sn**	**14 03 15.2**	**+0.5**
	baz=324						
CHN1	**Nanshi**	**1.79**	**321**	*i* P	**Pb**	**14 02 54.1**	**+0.8**
	baz=321						
CHN1				*e*S	**Sn**	**14 03 14.6**	**-0.1**
	baz=321						
CHN3	**Shinhua**	**1.82**	**315**	*e*P	**Pb**	**14 02 53.9**	**+0.2**
	baz=314						
TPUB	**Ta-pu**	**1.83**	**325**	P	**Pb**	**14 02 53.7**	**-0.2**
	baz=325						
TPUB				*e*S	**Sn**	**14 03 15.8**	**+0.2**
	baz=325						
SNST	**Tainan City**	**1.84**	**321**	*i* P	**Pb**	**14 02 54.1**	**0.0**
	baz=321						
YUS	**Yu-Shan**	**1.85**	**336**	*i* P	**Pn**	**14 02 53.5**	**+0.8**
	baz=337						
TWK	**Hsinying**	**1.88**	**322**	*i* P	**Pb**	**14 02 54.8**	**-0.1**
	baz=322						
TWK				S	**Sn**	**14 03 15.7**	**-1.2**
	baz=322						
CHN4	**Tsaushan**	**1.89**	**325**	*e*S	**Sn**	**14 03 17.9**	**+0.9**
	baz=326						
EGFH	**Guangfu**	**1.90**	**351**	*i* P	**Pn**	**14 02 53.6**	**+0.6**
	baz=352						
EGFH				S	**Sn**	**14 03 17.1**	**-0.1**
	baz=352						
ALS	**Alishan**	**1.93**	**333**	*i* P	**Pb**	**14 02 55.8**	**+0.1**
	baz=334						
ALS				S	**Sn**	**14 03 18.3**	**0.0**
	baz=334						
WCKO	**Fanlu**	**1.96**	**327**	P	**Pb**	**14 02 55.7**	**-0.4**
	baz=327						
WCKO				S	**Sn**	**14 03 18.3**	**-0.4**
	baz=327						
VWDT	**VWDT**	**2.04**	**344**	P	**Pn**	**14 02 56.1**	**+1.3**
	baz=345						
ESL	**Shilin**	**2.04**	**352**	*i* P	**Pn**	**14 02 55.2**	**+0.3**
	baz=353						
ESL				S	**Sn**	**14 03 19.5**	**-1.1**
	baz=353						
TSCK	**Chigu Township**	**2.05**	**311**	P	**Pn**	**14 02 55.1**	**0.0**
	baz=311						
TSCK				S	**Sn**	**14 03 21.1**	**+0.1**
	baz=311						
WHYT	**Xinyi Township**	**2.07**	**336**	*i* P	**Pb**	**14 02 57.6**	**-0.5**
	baz=337						
SSLB	**Suanglung**	**2.12**	**340**	P	**Pn**	**14 02 57.6**	**+1.5**
	baz=340						
SSLB				S	**Sn**	**14 03 22.8**	**0.0**
	baz=340						
WDLH	**Douliu**	**2.20**	**329**	P	**Pn**	**14 02 59.1**	**+2.0**
	baz=329						
WDLH				*e*S	**Sn**	**14 03 24.4**	**-0.2**
	baz=329						
OWD	**Renai**	**2.22**	**346**	*i* P	**Pn**	**14 02 58.4**	**+0.9**
	baz=347						
OWD				S	**Sn**	**14 03 24.7**	**-0.6**
	baz=347						

SMLT	**Sun Moon Lake**	**2.23**	**339**	*i* P	**Pn**	**14 02 59.0**	**+1.4**
	baz=340						
SMLT				*e*S	**Sn**	**14 03 25.7**	**+0.2**
	baz=340						
WSL	**Shuilin Townsh**	**2.23**	**321**	P	**Pn**	**14 02 58.9**	**+1.4**
	baz=321						
WSL				S	**Sn**	**14 03 25.7**	**+0.4**
	baz=321						
WJS	**Zhushan**	**2.23**	**335**	*i* P	**Pb**	**14 03 00.5**	**-0.4**
	baz=335						
WJS				*e*S	**Sn**	**14 03 25.8**	**+0.3**
	baz=335						
TYC	**Yuchr**	**2.26**	**339**	*i* P	**Pb**	**14 03 00.6**	**-0.7**
	baz=339						
TYC				*e*S	**Sn**	**14 03 27.1**	**+0.9**
	baz=339						
WUSB	**Renai**	**2.27**	**345**	P	**Pn**	**14 03 00.0**	**+1.8**
	baz=346						
WUSB				*e*S	**Sn**	**14 03 26.6**	**0.0**
	baz=346						
WTK	**Tuku**	**2.27**	**326**	P	**Pn**	**14 02 59.1**	**+1.0**
	baz=326						
WTK				S	**Sn**	**14 03 25.4**	**-1.0**
	baz=326						
TWD	**Chiawan**	**2.28**	**356**	*i* P	**Pn**	**14 02 59.5**	**+1.2**
	baz=358						
TWD				S	**Sn**	**14 03 26.4**	**-0.3**
	baz=358						
WNT	**Mingjian**	**2.30**	**335**	*i* P	**Pb**	**14 03 01.6**	**-0.4**
	baz=335						
WNT				S	**Sn**	**14 03 27.0**	**-0.2**
	baz=335						
CHGB	**Renai**	**2.32**	**347**	P	**Pn**	**14 03 00.5**	**+1.5**
	baz=347						
NACB	**Ninganchiao**	**2.38**	**356**	P	**Pn**	**14 02 59.9**	**+0.3**
	baz=357						
NACB				S	**Sn**	**14 03 28.2**	**-0.8**
	baz=357						
WCS	**Beigang Elemen**	**2.39**	**341**	P	**Pn**	**14 03 01.2**	**+1.5**
	baz=342						
WCS				S	**Sn**	**14 03 30.6**	**+1.3**
	baz=342						
WHF	**Hehuan Shan**	**2.39**	**349**	*i* P	**Pn**	**14 03 02.0**	**+1.9**
	baz=350						
WHF				S	**Sn**	**14 03 28.7**	**-1.2**
	baz=350						
ETLH	**Xiulin Townshi**	**2.42**	**354**	P	**Pn**	**14 03 00.8**	**+0.5**
	baz=355						
ETLH				S	**Sn**	**14 03 29.4**	**-0.8**
	baz=355						
WDGT	**Dungji**	**2.43**	**307**	*i* P	**Pn**	**14 03 01.8**	**+1.5**
	baz=306						
WDGT				S	**Sn**	**14 03 28.7**	**-1.6**
	baz=306						
WRL	**Guolierlin Hig**	**2.46**	**329**	P	**Pn**	**14 03 02.1**	**+1.5**
	baz=329						
WRL				*e*S	**Sn**	**14 03 29.8**	**-1.2**
	baz=329						
FUSS	**Fushou**	**2.49**	**349**	*i* P	**Pn**	**14 03 02.2**	**+0.9**
	baz=350						
FUSS				S	**Sn**	**14 03 32.5**	**+0.2**
	baz=350						
TWT	**Tachien**	**2.51**	**348**	*e*P	**Pb**	**14 03 04.4**	**-1.2**
	baz=348						
VCHM	**Qimei**	**2.58**	**304**	*i* P	**Pn**	**14 03 02.1**	**-0.1**
	baz=302						
VCHM				S	**Sn**	**14 03 31.9**	**-2.0**
	baz=302						
WHP	**Taichung City**	**2.59**	**343**	*i* P	**Pn**	**14 03 05.1**	**+2.5**
	baz=344						
WHP				S	**Sn**	**14 03 35.6**	**+1.3**
	baz=344						
ENA	**Nanau**	**2.63**	**360**	P	**Pn**	**14 03 04.8**	**+1.8**
	baz=1.0						
ENA				S	**Sn**	**14 03 35.0**	**-0.2**
	baz=1.0						
EWUT	**Wuta**	**2.64**	**0**	S	**Sn**	**14 03 35.3**	**-0.3**
	baz=1.0						
NNSB	**Datong**	**2.65**	**353**	P	**Pn**	**14 03 04.6**	**+1.2**
	baz=353						
NNSB				S	**Sn**	**14 03 35.4**	**-0.5**
	baz=353						
PHUB	**P'eng-hu**	**2.65**	**311**	P	**Pn**	**14 03 04.4**	**+1.2**
	baz=310						
PHUB				S	**Sn**	**14 03 34.7**	**-1.1**
	baz=310						
NNS	**Nan Shan**	**2.66**	**352**	*i* P	**Pb**	**14 03 06.5**	**-1.6**
	baz=353						
NNS				S	**Sn**	**14 03 36.2**	**0.0**
	baz=353						
PNG	**Penghu**	**2.70**	**311**	P	**Pn**	**14 03 03.8**	**-0.1**
	baz=311						
PNG				S	**Sn**	**14 03 34.2**	**-2.7**
	baz=311						
TWQ1	**Liyutan**	**2.70**	**341**	P	**Pn**	**14 03 06.5**	**+2.5**
	baz=341						
TWQ1				*e*S	**Sn**	**14 03 37.4**	**+0.3**
	baz=341						
LATG	**Datong**	**2.74**	**356**	P	**Pn**	**14 03 05.5**	**+0.8**
	baz=356						
LATG				*e*S	**Sn**	**14 03 37.4**	**-0.8**
	baz=356						
NSY	**Sanyi**	**2.77**	**341**	P	**Pn**	**14 03 07.3**	**+2.3**
	baz=341						
NSY				*e*S	**Sn**	**14 03 40.2**	**+1.4**
	baz=341						
TWC	**Suao**	**2.81**	**2**	*e*S	**Sn**	**14 03 39.4**	**-0.2**
	baz=3.0						
NDT	**Datong Townshi**	**2.81**	**355**	P	**Pn**	**14 03 08.5**	**+3.0**
	baz=356						
NDT				S	**Sn**	**14 03 40.1**	**+0.4**
	baz=356						
NDS	**Dongshan**	**2.83**	**359**	P	**Pn**	**14 03 07.6**	**+1.8**
NDS				S	**Sn**	**14 03 40.2**	**0.0**
ENTT	**Nioudou**	**2.84**	**356**	*i* P	**Pn**	**14 03 07.3**	**+1.3**
	baz=357						
ENTT				S	**Sn**	**14 03 39.5**	**-1.1**
	baz=357						
YHNB	**Yeheng**	**2.89**	**353**	P	**Pn**	**14 03 07.8**	**+1.2**
	baz=354						
YHNB				S	**Sn**	**14 03 42.5**	**+0.8**
	baz=354						
NFF	**Wufeng Townshi**	**2.89**	**348**	P	**Pn**	**14 03 09.5**	**+2.8**
	baz=349						
NFF				S	**Sn**	**14 03 41.7**	**-0.1**
	baz=349						
NSK	**Sanguang**	**2.90**	**353**	*i* P	**Pn**	**14 03 08.6**	**+1.8**
	baz=354						
NSK				S	**Sn**	**14 03 40.6**	**-1.4**
	baz=354						
NSTT	**Nanjuang**	**2.91**	**346**	*i* P	**Pn**	**14 03 10.2**	**+3.3**
	baz=347						
NSTT				S	**Sn**	**14 03 42.9**	**+0.6**
	baz=347						
LIOB	**Emei**	**2.92**	**347**	P	**Pn**	**14 03 09.4**	**+2.3**
	baz=347						
LIOB				*e*S	**Sn**	**14 03 43.3**	**+0.8**
	baz=347						
HATJ	**Hateruma jima**	**2.94**	**40**	P	**Pn**	**14 03 08.5**	**+1.2**
HATJ				*e*S	**Sn**	**14 03 41.8**	**-1.1**
FUSB	**Fushanzhiwuyua**	**2.96**	**357**	P	**Pn**	**14 03 09.1**	**+1.4**
	baz=358						
FUSB				S	**Sn**	**14 03 42.9**	**-0.6**
	baz=358						
NTC	**Toucheng**	**3.05**	**1**	S	**Sn**	**14 03 46.1**	**+0.5**
	baz=2.0						
IRIF	**Iriomote-Funau**	**3.12**	**35**	P	**Pn**	**14 03 11.0**	**+1.3**
IRIF				*e*S	**Sn**	**14 03 47.1**	**-0.1**
TIPB	**Shuangxi**	**3.17**	**1**	*i* P	**Pn**	**14 03 11.7**	**+1.3**
	baz=2.0						
TIPB				*i* S	**Sn**	**14 03 49.8**	**+1.2**
	baz=2.0						
TWA	**Mucha**	**3.18**	**357**	*e*S	**Sn**	**14 03 49.6**	**+0.7**
	baz=358						
JKRS	**Kuro-shima**	**3.20**	**40**	P	**Pn**	**14 03 12.3**	**+1.5**
JKRS				S	**Sn**	**14 03 48.8**	**-0.5**
NWF	**Wu-fen Shan**	**3.27**	**0**	*e*S	**Sn**	**14 03 50.6**	**-0.5**
	baz=1.0						
SXI1	**Grass Mountain**	**3.29**	**2**	P	**Pn**	**14 03 14.3**	**+2.1**
	baz=3.0						
SXI1				S	**Sn**	**14 03 52.3**	**+0.6**
	baz=3.0						
JIJ	**Ishigaki jima**	**3.37**	**40**	P	**Pn**	**14 03 14.2**	**+0.9**
JIJ				*e*S	**Sn**	**14 03 51.8**	**-1.8**
JISG	**Ishigakijimahi**	**3.64**	**40**	P	**Pn**	**14 03 17.9**	**+0.9**
JISG				*e*S	**Sn**	**14 03 59.2**	**-1.0**
JTJ	**Tarama**	**3.92**	**43**	P	**Pn**	**14 03 22.0**	**+1.2**
JTJ				S	**Sn**	**14 04 05.8**	**-1.3**

*SOME **30** 14:07:33.3, 48.00N × 87.80E, h5km*
*NNC **30** 14:07:34.8 ± 4.3, 48.49N × 87.73E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=38.2km s-min=22.1km az=113.0*
*ASRS **30** 14:07:35.6 ± 0.7, 49.N ± 3.° × 8.8E ± .°, h5km, MLh3.6/13, Error ellipse: s-maj=8.0km s-min=6.1km az=80.8, confirmed*

ISC 30 14:07:33.9 ± 1.5, **48.47N** ± 0.04 × **87.83E** ± 0.04, **h1**km ± 12km, **n31**, σ 2.963/58, **9C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
DGZ	**Jazzator, Alta**	**1.26**	**348**		Pg	**Pn**	**14 07 56.6**	**-2.2**
DGZ					Sg	**Sb**	**14 08 12.5**	**-2.8**
SLNR	**Muhor-Tarhata,**	**1.37**	**18**		Pg	**Pn**	**14 07 57.8**	**-2.6**
SLNR					Sg	**Sb**	**14 08 14.1**	**-4.6**
CUR	**Chagan-Uzun**	**1.67**	**12**		Pg	**Pn**	**14 08 03.3**	**-1.0**
CUR					Sg	**Sn**	**14 08 23.8**	**-2.7**
AKAR	**Aktash**	**1.85**	**356**	⇓Pg		**Pb**	**14 08 07.6**	**-1.1**
AKAR					Sg	**Sn**	**14 08 30.3**	**-0.8**
CHBI	**Chibit, Altay**	**1.85**	**354**		Pg	**Pb**	**14 08 08.6**	**0.0**
CHBI					Sg	**Sb**	**14 08 31.4**	**-1.0**
ULGR	**Ulagan, Altay**	**2.15**	**2**		Pg	**Pb**	**14 08 13.4**	**-0.4**
ULGR					Sg	**Sb**	**14 08 40.1**	**-0.9**
ZSN	**Zaisan**	**2.24**	**244**		*e*P	**Pg**	**14 08 16.2**	**-0.5**
	26nm,0.3s							
ZSN					*e*S	**Sg**	**14 08 47.8**	**+2.1**
	198nm,0.4s							
ZSN	**Zaisan**	**2.24**	**244**		Pg	**Pg**	**14 08 15.8**	**-0.9**
	26nm,0.3s							
ZSN					Lg	Lg	14 08 47.8	
	198nm,0.4s							
UKR	**Ust'-Kan**	**3.16**	**322**		Pg	**Pb**	**14 08 32.2**	**+1.2**
UKR					Sg	**Sg**	**14 09 11.9**	**-3.6**
ARTR	**Artybash**	**3.35**	**354**		Pg	**Pb**	**14 08 34.8**	**+0.7**
ARTR					Sg	**Sb**	**14 09 14.4**	**-0.8**
GALT	**Gorno-Altaysk,**	**3.69**	**342**		Pg	**Pb**	**14 08 40.5**	**+0.6**
GALT					Sg	**Sb**	**14 09 26.0**	**+0.9**
MK31	**Makanchi Array**	**4.10**	**248**		Pn	**Pn**	**14 08 41.5**	**+3.7**
	0.6nm,0.2s,baz=76,slow=12,SNR=135							
MK31					⇑Pg	**Pg**	**14 08 51.3**	**-1.1**
	12nm,0.4s,baz=71,slow=17,SNR=16							
MK31					⇓Lg	Lg	14 09 46.1	
	33nm,0.4s,baz=77,slow=34,SNR=9.0							
MKAR	**Makanchi Array**	**4.10**	**248**		Pn	**Pn**	**14 08 40.8**	**+3.0**
MKAR					Pg	**Pg**	**14 08 52.0**	**-0.5**
MKAR					S	**Sb**	**14 09 30.8**	**-6.2**
MKAR					Sg	**Sg**	**14 09 46.0**	**+0.4**
MAKZ	**Makanchi**	**4.29**	**249**	⇓Pn		**Pn**	**14 08 42.9**	**+2.6**
	2.4nm,0.9s							
MAKZ					⇓Pg	**Pg**	**14 08 53.3**	**-2.8**
	15nm,0.7s							
MAKZ					⇑Lg	Lg	14 09 51.2	
	34nm,0.8s							
MAKZ	**Makanchi**	**4.29**	**249**		Pn	**Pn**	**14 08 42.7**	**+2.3**
MAKZ					Pg	**Pg**	**14 08 55.2**	**-0.9**
MAKZ					Sg	**Sg**	**14 09 51.4**	**-0.3**
TASR	**Tashtagol**	**4.29**	**0**		Pg	**Pb**	**14 08 50.3**	**+0.2**
TASR					Sg	**Sb**	**14 09 45.1**	**+2.6**
DJO	**Djoy, Khakassi**	**4.82**	**25**		Pg	**Pb**	**14 09 01.4**	**+2.2**
DJO					Sg	**Sb**	**14 10 01.4**	**+3.7**
DJOS	**Djoyskaya Sosn**	**4.89**	**26**		Sg	**Sb**	**14 10 04.9**	**+5.4**
ELT	**Eltsovka**	**4.90**	**349**		Pn	**Pn**	**14 08 49.4**	**+0.8**
ELT					Pg	**Pb**	**14 09 03.1**	**+2.7**
ELT					Sg	**Sb**	**14 10 02.4**	**+2.6**
CERR	**Cheremushki**	**4.95**	**26**		Pg	**Pb**	**14 09 04.2**	**+3.0**
CERR					Sg	**Sb**	**14 10 06.8**	**+5.6**
ERNS	**Erzin**	**5.11**	**67**		Pg	**Pb**	**14 09 03.7**	**-0.5**
ERNS					Sg	**Sb**	**14 10 07.8**	**+1.7**
LUZB	**Luzhba, Kemero**	**5.24**	**7**		Pg	**Pb**	**14 09 07.8**	**+1.6**
LUZB					Sg	**Sb**	**14 10 14.5**	**+4.8**
SEM	**Semipalatinsk**	**5.31**	**294**		*e*P	**Pg**	**14 09 14.6**	**-1.0**
	4.4nm,0.1s							
SEM					*e*S	**Sg**	**14 10 28.3**	**+4.0**
	26nm,0.3s							
SEM	**Semipalatinsk**	**5.31**	**294**		Pg	**Pg**	**14 09 14.6**	**-1.0**
	4.4nm,0.1s							
SEM					Lg	Lg	14 10 28.3	
	26nm,0.3s							
ZAA0	**Zalesovo Array**	**5.80**	**342**	⇑Pn		**Pn**	**14 09 01.7**	**+0.7**
	0.1nm,0.4s							
ZAA0				⇑Pg		**Pb**	**14 09 13.3**	**-2.4**
	0.3nm,0.5s							
ZAA0				⇑Lg		Lg	14 10 36.9	
	4.9nm,0.9s							
KURBB	**Kurchatov Arra**	**6.42**	**293**	⇑Pn		**Pn**	**14 09 09.8**	**+0.3**
	9.7nm,0.5s							
KURBB				⇑Sn		**Sn**	**14 10 23.1**	**-0.3**
	16nm,0.6s							
KURBB				⇓Lg		Lg	14 10 56.1	
	61nm,0.6s							
DJR	**Jarkent**	**6.93**	**236**		*e*P	**Pb**	**14 09 36.2**	**+1.2**
	1.7nm,0.4s							
DJR					*e*S	**Sb**	**14 11 05.0**	**+6.7**
	3.9nm,0.2s							
DJR	**Jarkent**	**6.93**	**236**		Pg	**Pb**	**14 09 36.3**	**+1.2**
	1.7nm,0.4s							
DJR					Lg	Lg	14 11 05.0	
BRZS	**Berezniki**	**10.03**	**284**		*e*P	Pg	14 10 40.0	
	1.5nm,0.2s							
BRZS					*e*S	Sg	14 12 53.9	
	3.8nm,0.2s							
OTUK	**Ortayu**	**10.31**	**275**	⇑Pn		**Pn**	**14 10 00.6**	**-2.4**
	0.6nm,0.4s							
OTUK				⇓Lg		Lg	14 13 00.7	
	14nm,1.2s							
BVA0	**Borovoye Array**	**11.94**	**299**		Pn	**Pn**	**14 10 24.5**	**-0.6**
	1.2nm,0.6s,baz=100,slow=15,SNR=8.3							
BVA0				⇑Lg		Lg	14 13 52.5	
	6.7nm,1.1s							

*IDC **30** 14:08:42.6 ± 1.4, 22.06N × 122.48E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=56.5km s-min=19.9km az=60.0*
*TAP **30** 14:08:45.7, 21.79N × 121.67E, h27km, ML3.8, D*
*JMA **30** 14:08:48.0 ± 0.3, 22.N ± 1.° × 121.8E ± 0.7, h55km, MV3.5/14, TAIWAN REGION*
*NIED **30** 14:08:48.0, 21.91N × 121.76E, h55km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^14 Nm; Mrr=5.18; Mθθ=2.80; Mφφ=2.38; Mrθ=1.68; Mθφ=-0.21; Mφr=3.79; Fault plane solution: M0=5.58000 × 10^14 NP1: φ=25.00000°, δ=21.00000°, λ=-89.00000°. NP2: φ=204.00000°, δ=69.00000°, λ=-90.00000°.*

ISC 30 14:08:43.9 ± 1.6, **21.75N** ± 0.05 × **121.70E** ± 0.03, **h7**km ± 9km, **n53**, σ 1.970/90, **mb3.5/6, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LYUB	**Lan-yu**	**0.28**	**337**	*i* P		**Pb**	**14 08 52.0**	**+0.9**
	baz=339							
LYUB				S		**Sb**	**14 08 56.4**	**+0.4**
	baz=339							
LAY	**Lan-yu**	**0.32**	**335**	P		**Pb**	**14 08 52.0**	**0.0**
	baz=337							
LAY				*e*S		**Sb**	**14 08 56.5**	**-0.8**
	baz=337							
TSEB	**Hengchuen, Pin**	**0.76**	**282**	*i* P		**Pn**	**14 09 00.9**	**0.0**
	baz=278							
TSEB				S		**Sn**	**14 09 11.9**	**-0.7**
	baz=278							
SMST	**Manzhou Townsh**	**0.84**	**289**	P		**Pb**	**14 09 01.1**	**+0.3**
	baz=297							
SMST				S		**Sb**	**14 09 12.9**	**+0.5**
	baz=297							
LDUT	**Ludao**	**0.95**	**347**	P		**Pg**	**14 09 02.0**	**-0.1**
	baz=348							
LDUT				*e*S		**Sg**	**14 09 13.

WHYT	**Xinyi Township**	**2.09**	**338**	*e*P		**Pb**	**14 09 21.9**	**-0.3**
	baz=338							
WHYT				*e*S		**Sb**	**14 09 49.2**	**+0.9**
	baz=338							
OWD	**Renai**	**2.25**	**348**	*e*P		**Pn**	**14 09 23.0**	**+1.4**
	baz=348							
OWD				*e*S		**Sn**	**14 09 48.2**	**-1.5**
	baz=348							
WUSB	**Renai**	**2.30**	**347**	*e*P		**Pn**	**14 09 23.8**	**+1.5**
	baz=347							
WUSB				*e*S		**Sn**	**14 09 49.2**	**-1.7**
	baz=347							
CHGB	**Renai**	**2.35**	**348**	*e*P		**Pn**	**14 09 24.6**	**+1.5**
	baz=348							
CHGB				*e*S		**Sn**	**14 09 53.6**	**+1.3**
	baz=348							
WDGT	**Dungji**	**2.41**	**309**	*e*P		**Pn**	**14 09 23.9**	**+0.2**
	baz=308							
WDGT				*e*S		**Sn**	**14 09 52.5**	**-1.0**
	baz=308							
NACB	**Ninganchiao**	**2.42**	**358**	*e*P		**Pn**	**14 09 24.6**	**+0.8**
	baz=8.0							
NACB				S		**Sn**	**14 09 51.0**	**-2.6**
	baz=8.0							
VCHM	**Qimei**	**2.55**	**305**	*e*P		**Pn**	**14 09 26.8**	**+1.1**
	baz=304							
VCHM				S		**Sn**	**14 09 55.2**	**-1.7**
	baz=304							
PHUB	**P'eng-hu**	**2.64**	**312**	*e*P		**Pn**	**14 09 27.2**	**+0.4**
	baz=300							
PHUB				*e*S		**Sn**	**14 09 57.7**	**-1.3**
	baz=300							
PNG	**Penghu**	**2.68**	**313**	*e*P		**Pn**	**14 09 28.0**	**+0.5**
	baz=312							
PNG				*e*S		**Sn**	**14 09 58.5**	**-1.7**
	baz=312							
YHNB	**Yeheng**	**2.92**	**354**	*e*P		**Pn**	**14 09 32.9**	**+2.0**
	baz=355							
YHNB				*e*S		**Sn**	**14 10 05.8**	**-0.5**
	baz=355							
JYNG	**Yonagunijimaku**	**2.93**	**23**	P		**Pn**	**14 09 31.3**	**+0.5**
JYNG				S		**Sn**	**14 10 03.2**	**-3.0**
NSK	**Sanguang**	**2.93**	**354**	P		**Pn**	**14 09 32.8**	**+1.8**
	baz=354							
NSK				*e*S		**Sn**	**14 10 04.3**	**-2.2**
	baz=354							
YOJ	**Yonaguni jima**	**2.96**	**24**	P		**Pn**	**14 09 31.9**	**+0.6**
	baz=24							
YOJ				S		**Sn**	**14 10 05.4**	**-1.6**
	baz=24							
YOJ	**Yonaguni jima**	**2.96**	**24**	*e*P		**Pn**	**14 09 31.6**	**+0.4**
YOJ				*e*S		**Sn**	**14 10 03.8**	**-3.3**
HATJ	**Hateruma jima**	**3.01**	**40**	*e*S		**Sn**	**14 10 05.8**	**-2.5**
IRIF	**Iriomote-Funau**	**3.18**	**36**	P		**Pn**	**14 09 34.8**	**+0.5**
TIPB	**Shuangxi**	**3.21**	**2**	*e*P		**Pn**	**14 09 37.1**	**+2.3**
	baz=12							
TIPB				*e*S		**Sn**	**14 10 13.4**	**+0.1**
	baz=12							
JKRS	**Kuro-shima**	**3.27**	**40**	P		**Pn**	**14 09 35.8**	**+0.3**
JIJ	**Ishigaki jima**	**3.44**	**40**	P		**Pn**	**14 09 38.3**	**+0.4**
JIJ				S		**Sn**	**14 10 16.1**	**-2.9**
JISG	**Ishigakijimahi**	**3.71**	**40**	P		**Pn**	**14 09 42.0**	**+0.4**
JISG				*e*S		**Sn**	**14 10 23.0**	**-2.6**
VWUC	**VWUC**	**3.83**	**328**	*e*P		**Pn**	**14 09 45.2**	**+2.0**
	baz=327							
VWUC				*e*S		**Sn**	**14 10 27.7**	**-0.9**
	baz=327							
JTJ	**Tarama**	**3.99**	**43**	P		**Pn**	**14 09 45.9**	**+0.5**
JTJ				*e*S		**Sn**	**14 10 30.3**	**-2.2**
KNM	**Kinmen**	**4.01**	**312**	P		**Pn**	**14 09 47.6**	**+1.9**
	baz=310							
KNM				*e*S		**Sn**	**14 10 32.0**	**-1.0**
	baz=310							
PTMZ	**Houxiangcun**	**4.04**	**325**	*i* P		**Pn**	**14 09 46.7**	**+0.6**
	baz=324							
PTMZ				*e*S		**Sn**	**14 10 30.3**	**-3.5**
	baz=324							
KNMB	**Chin-men Tao**	**4.07**	**312**	P		**Pn**	**14 09 47.7**	**+1.2**
	baz=312							
KNMB				*e*S		**Sn**	**14 10 32.3**	**-2.2**
	baz=312							
ZPLA	**Ao Xicun**	**4.24**	**302**	*e*P		**Pn**	**14 09 48.6**	**-0.2**
	baz=301							
ZPLA				*e*S		**Sn**	**14 10 35.4**	**-3.2**
	baz=301							
DSXP	**Dongshan**	**4.40**	**297**	*e*P		**Pn**	**14 09 51.1**	**+0.1**
	baz=296							
DSXP				*e*S		**Sn**	**14 10 39.4**	**-3.2**
	baz=296							
JIRB	**Irabujima**	**4.43**	**46**	S		**Sn**	**14 10 41.2**	**-2.1**
JMJ2	**Miyako jima3**	**4.47**	**48**	*e*S		**Sn**	**14 10 42.3**	**-2.1**
JMJ	**Miyako jima 2**	**4.50**	**47**	P		**Pn**	**14 09 53.6**	**+1.2**
	baz=46							
JMJ				*i* S		**Sn**	**14 10 42.5**	**-2.5**
	baz=46							
JOGS	**Gusukube**	**4.54**	**48**	S		**Sn**	**14 10 45.1**	**-1.0**
JIKM	**Ikemajima**	**4.54**	**45**	*e*S		**Sn**	**14 10 44.2**	**-1.9**
AXDP	**Jialang**	**4.65**	**313**	*e*P		**Pn**	**14 09 56.5**	**+2.0**
	baz=312							
AXDP				S		**Sn**	**14 10 47.4**	**-1.2**
	baz=312							
MATB	**Ma-tsu**	**4.67**	**340**	*e*P		**Pn**	**14 09 56.9**	**+2.2**
	baz=330							
MATB				*e*S		**Sn**	**14 10 47.9**	**-1.3**
	baz=330							
VDOS	**Pratas Island**	**4.75**	**258**	P		**Pn**	**14 09 57.4**	**+1.5**
	baz=257							
VDOS				*e*S		**Sn**	**14 10 47.3**	**-3.9**
	baz=257							
MHZQ	**Yeshan**	**4.97**	**331**	*e*P		**Pn**	**14 10 01.2**	**+2.3**
	baz=330							
MHZQ				*e*S		**Sn**	**14 10 55.6**	**-1.1**
	baz=330							
SXFK	**Yanhouchang**	**5.93**	**322**	*e*P		**Pn**	**14 10 11.8**	**-0.3**
	baz=321							
SXFK				*e*S		**Sn**	**14 11 14.9**	**-5.5**
	baz=321							
CMAR	**Chiang Mai Arr**	**21.61**	**265**	P		P	14 13 42.5	+7.8
	0.7nm,0.4s,baz=66,slow=9.0,SNR=4.7							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**40.43**	**318**	P		**P**	**14 16 24.5**	**+1.7**
	3.0nm,0.9s,baz=113,slow=9.4,SNR=9.2							
	3.0nm,0.9s							
ZALV	**Zalesovo Beam**	**42.55**	**328**	P		**P**	**14 16 40.4**	**+0.3**
	0.5nm,0.4s,baz=109,slow=7.8,SNR=3.9							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**43.24**	**163**	P		**P**	**14 16 45.9**	**-0.1**
	0.6nm,0.7s,baz=345,slow=8.9,SNR=7.7							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**44.28**	**321**	P		**P**	**14 16 56.0**	**+1.9**
	1.9nm,0.9s,baz=115,slow=7.7,SNR=4.6							
	1.9nm,0.9s							
ASAR	**Alice Springs**	**46.68**	**165**	P		**P**	**14 17 14.5**	**+1.2**
	0.2nm,0.7s,baz=340,slow=7.2,SNR=3.4							
	0.2nm,0.7s							

*GCG **30** 14:19:57.5±0.6, 15°.07N×89°.55W, h6km, MD3.4*
*SNET **30** 14:20:00.4±1.4, 14°.85N×89°.61W, h1km±5km, ML2.6*
ISC 30 14:19:58.6±1.3, **14°.96N**±0°.05×**89°.63W**±0°.04, **h10**km±13km, **n14**, σ0**s54**/19, **3C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.13**	**337**⇑	*i*P	**Pg**	**14 20 01.8**	**-0.1**
ESQI	**Esquipulas**	**0.49**	**145**⇑	*e*P	**Pb**	**14 20 08.9**	**-0.5**
ESQI				*e*S	**Sb**	**14 20 16.4**	**-0.2**
ESQI				IAML		14 20 27.6	
	comp=Z,241nm,0.6s						
MTO3	**Montecristo**	**0.62**	**155**⇑	*i*P	**Pg**	**14 20 10.9**	**+0.3**
MTO3				*e*P	**Pb**	**14 20 11.6**	**0.0**
MTO3				*e*S	**Sb**	**14 20 20.0**	**-0.5**
NBG	**Las Nubes**	**0.79**	**242**	*e*P	**Pb**	**14 20 15.0**	**+0.4**
NBG				*e*S	**Sb**	**14 20 25.4**	**0.0**
LLGN	**La Laguna**	**1.04**	**140**	*e*P	**Pb**	**14 20 19.0**	**+0.3**
LLGN				*e*S	**Sb**	**14 20 33.8**	**+1.4**
RTR	**El Retiro**	**1.06**	**181**	*e*P	**Pb**	**14 20 19.2**	**+0.1**
NUBE	**Las Nubes**	**1.06**	**188**	*e*P	**Pg**	**14 20 18.9**	**-0.3**
CEVE	**Cerro Verde**	**1.13**	**180**	*e*P	**Pb**	**14 20 20.5**	**+0.1**
CEVE				IAML		14 20 46.5	
	comp=Z,333nm,0.6s						
FUG	**Fuego 3**	**1.28**	**247**	*e*P	**Pb**	**14 20 23.0**	**+0.1**
P5NO	**Presa 5 de nov**	**1.29**	**139**	*e*P	**Pb**	**14 20 23.2**	**+0.3**
JAYA	**Jayaque - finc**	**1.31**	**172**	*e*P	**Pg**	**14 20 23.2**	**-0.7**
JAYA				IAML		14 20 43.2	
	comp=Z,160nm,0.2s						
PAVA	**Las Pavas**	**1.41**	**151**	*e*P	**Pb**	**14 20 25.7**	**+0.6**
LFRS	**El Faro**	**1.44**	**157**	*e*P	**Pg**	**14 20 25.8**	**-0.6**
PETF	**Flores**	**1.96**	**353**	*e*P	**Pg**	**14 20 35.6**	**-0.5**

*ANF **30** 14:25:09.7±0.1, 34°.41N×116°.55W, h13km±1km, ML3.5/35, Error ellipse: s-maj=1.0km s-min=0.8km az=68.0*
*NEIC **30** 14:25:10.3±0.8, 34°.418N±0°.009×116°.55W±0°.01, h17km±1km, Error ellipse: s-maj=1.6km s-min=1.3km az=72.0*
*PAS **30** 14:25:10.8±1.2, 34°.420N±0°.008×116°.550W±0°.009, h8km±5km, ML3.4/234, ML3.2/70(NEIC), Error ellipse: s-maj=1.3km s-min=0.9km az=146.0*
ISC 30 14:25:10.3±0.8, **34°.41N**±0°.01×**116°.54W**±0°.01, **h16**km±6km, **n141**, σ0**s55**/193, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTM	**Goat Mountain**	**0.19**	**126**		**Pg**	**14 25 14.8**	**-0.2**
GTM					**Sg**	**14 25 17.9**	**-0.3**
SIL	**Silver Peak**	**0.24**	**256**		**Pg**	**14 25 15.7**	**-0.2**
SIL					**Sg**	**14 25 19.3**	**-0.4**
BBRC	**Big Bear Solar**	**0.35**	**245**		**Pg**	**14 25 17.4**	**-0.2**
BBRC					**Sg**	**14 25 22.6**	**-0.1**
BBRC	**Big Bear Solar**	**0.35**	**245**	P	**Pg**	**14 25 17.4**	**-0.2**
	baz=63,SNR=210						
BBRC				S	**Sg**	**14 25 22.4**	**-0.2**
	baz=63						
BLAC	**Blackrock camp**	**0.36**	**159**		**Pg**	**14 25 18.1**	**+0.2**
BLAC					**Sg**	**14 25 23.3**	**+0.4**
HEC	**Hector,Ludlow**	**0.45**	**22**		**Pg**	**14 25 19.4**	**-0.1**
HEC					**Sg**	**14 25 25.9**	**+0.2**
HEC	**Hector,Ludlow**	**0.45**	**22**	P	**Pg**	**14 25 19.4**	**-0.1**
	baz=203,SNR=170						
HEC				S	**Sg**	**14 25 25.6**	**-0.1**
	baz=203						
DEVC	**Devers**	**0.47**	**184**		**Pb**	**14 25 20.2**	**0.0**
DEVC					**Sb**	**14 25 27.1**	**+0.2**
EW2	**E Wide Canyon**	**0.48**	**167**		**Pg**	**14 25 20.1**	**+0.2**
EW2					**Sg**	**14 25 26.8**	**+0.4**
TPC	**Twentynine Pal**	**0.51**	**126**		**Pg**	**14 25 20.6**	**+0.2**
SVD	**Seven Oaks Dam**	**0.55**	**237**		**Pg**	**14 25 20.9**	**-0.3**
SVD					**Sg**	**14 25 28.6**	**0.0**
RRX	**Edison Barstow**	**0.60**	**321**		**Pg**	**14 25 22.0**	**-0.2**
RRX					**Sg**	**14 25 30.2**	**0.0**
RRX	**Edison Barstow**	**0.60**	**321**	P	**Pg**	**14 25 22.0**	**-0.2**
	baz=141,SNR=36						
RRX				S	**Sg**	**14 25 30.0**	**-0.1**
	baz=141						
CFT	**Crafton Hills**	**0.60**	**232**		**Pg**	**14 25 22.1**	**-0.1**
CFT					**Sg**	**14 25 30.4**	**+0.2**
BBSC	**Beaumont Base**	**0.61**	**217**		**Pg**	**14 25 22.4**	**+0.1**
BBSC					**Sb**	**14 25 31.3**	**+0.4**
BELC	**Belle Mtn. Jos**	**0.61**	**132**		**Pg**	**14 25 22.4**	**0.0**
BELC					**Sb**	**14 25 31.3**	**+0.3**
BELC	**Belle Mtn. Jos**	**0.61**	**132**	P	**Pg**	**14 25 22.4**	**0.0**
	baz=313,SNR=643						
BELC				S	**Sg**	**14 25 30.5**	**+0.1**
	baz=313						
HLNC	**Highland**	**0.63**	**243**		**Sg**	**14 25 31.2**	**+0.1**
VTV	**Victorville**	**0.67**	**283**		**Pg**	**14 25 22.9**	**-0.5**
VTV					**Sg**	**14 25 31.7**	**-0.7**
CLTC	**Calectric**	**0.71**	**244**		**Sb**	**14 25 34.5**	**+0.5**
GVDA	**Garner Valley**	**0.75**	**189**		**Pg**	**14 25 24.6**	**-0.3**
GVDA					**Sg**	**14 25 34.5**	**-0.3**
ADO	**Adelanto Recei**	**0.75**	**281**		**Pg**	**14 25 24.7**	**-0.3**
ADO					**Sb**	**14 25 35.3**	**+0.2**
PMD	**Palm Desert**	**0.77**	**170**		**Pb**	**14 25 25.0**	**-0.3**
PMD					**Sg**	**14 25 34.9**	**-0.6**
PMD	**Palm Desert**	**0.77**	**170**	Pg	**Pb**	**14 25 24.9**	**-0.4**
PMD	**Palm Desert**	**0.77**	**170**	IAML		14 25 38.9	
	comp=N,999nm,0.3s						
RSBC	**Riverside Bore**	**0.78**	**237**		**Pb**	**14 25 25.1**	**-0.4**
RSBC	**Riverside Bore**	**0.78**	**237**		**Pb**	**14 25 25.2**	**-0.3**
POB	**Polly Butte**	**0.79**	**204**		**Pb**	**14 25 25.5**	**-0.2**
POB					**Sg**	**14 25 36.0**	**-0.1**
HMTC	**Hemet**	**0.80**	**209**		**Pb**	**14 25 25.5**	**-0.3**
HMTC					**Sg**	**14 25 36.3**	**-0.1**
PFO	**Pinyon Flats O**	**0.80**	**175**		**Pb**	**14 25 25.6**	**-0.3**
PFO					**Sg**	**14 25 35.9**	**-0.6**
PFO	**Pinyon Flats O**	**0.80**	**175**	Pg	**Pb**	**14 25 25.5**	**-0.3**
PFO				IAML		14 25 40.1	
	comp=N,2μm,0.3s						
PFO				IAML		14 25 40.5	
	comp=N,1μm,0.3s						
PFO	**Pinyon Flats O**	**0.80**	**175**	P	**Pb**	**14 25 25.5**	**-0.3**
	baz=355,SNR=73						
PFO				S	**Sg**	**14 25 36.0**	**-0.4**
	baz=355						
XPFO	**Pion Flat**	**0.80**	**175**		**Pb**	**14 25 25.5**	**-0.4**
XPFO					**Sg**	**14 25 35.8**	**-0.7**
FON	**Fontana**	**0.80**	**248**		**Pb**	**14 25 25.9**	**0.0**
FON					**Sb**	**14 25 36.6**	**0.0**
RVR	**Riverside**	**0.81**	**239**		**Pb**	**14 25 25.4**	**-0.5**
DSCC	**Desert Studies**	**0.82**	**26**		**Pb**	**14 25 25.8**	**-0.3**
DSCC					**Sg**	**14 25 37.0**	**0.0**
GMRC	**Granite Mounta**	**0.82**	**62**		**Pb**	**14 25 25.8**	**-0.5**
GMRC	**Granite Mounta**	**0.82**	**62**	P	**Pb**	**14 25 25.8**	**-0.5**
	baz=244						
GMRC				S	**Sb**	**14 25 37.0**	**-0.1**
	baz=244						
SS2	**San Sevaine**	**0.82**	**256**		**Pb**	**14 25 26.0**	**-0.1**
DNR	**Dunn Ranch,Anz**	**0.84**	**185**		**Pb**	**14 25 26.6**	**0.0**
DNR					**Sb**	**14 25 38.0**	**+0.3**
DGR	**Domenigoni Val**	**0.85**	**207**		**Pb**	**14 25 26.5**	**-0.2**
DGR					**Sb**	**14 25 37.9**	**0.0**
CRY	**Cary Ranch**	**0.86**	**191**		**Pb**	**14 25 26.7**	**-0.2**
CRY					**Sb**	**14 25 37.7**	**-0.4**
SNDA	**J Saunders Pla**	**0.86**	**184**		**Pb**	**14 25 26.8**	**0.0**
SNDA					**Sb**	**14 25 38.3**	**+0.1**
CTCC	**Cactus City**	**0.88**	**148**		**Pg**	**14 25 27.6**	**+0.2**
CTCC					**Sg**	**14 25 39.5**	**+0.5**
SME	**Santa Rosa Min**	**0.89**	**229**		**Pb**	**14 25 26.9**	**-0.5**
BACC	**Bachelor Mtn.**	**0.90**	**208**		**Pb**	**14 25 27.2**	**-0.3**
FRD	**Ford Ranch, An**	**0.91**	**183**		**Pb**	**14 25 27.8**	**0.0**
CTW	**Cottonwood Mou**	**0.92**	**142**		**Pg**	**14 25 28.4**	**+0.3**
GSC	**Goldstone, Bar**	**0.92**	**346**		**Pb**	**14 25 27.5**	**-0.4**
GSC				IAML		14 25 43.3	
	comp=N,940nm,0.3s						
GSC	**Goldstone, Bar**	**0.92**	**346**	P	**Pb**	**14 25 27.6**	**-0.3**
	baz=166,SNR=125						
GSC				S	**Sb**	**14 25 39.8**	**-0.1**
	baz=166						
BZNA	**Buzz No.'s Pla**	**0.92**	**187**		**Pb**	**14 25 28.0**	**0.0**
BFSC	**Mount Baldy Ra**	**0.94**	**260**		**Pb**	**14 25 27.9**	**-0.4**
BFSC	**Mount Baldy Ra**	**0.94**	**260**	P	**Pb**	**14 25 27.8**	**-0.5**
	baz=78,SNR=91						
BFSC				S	**Sb**	**14 25 40.2**	**-0.3**
	baz=78						
HYS	**Haystack Butte**	**0.96**	**299**		**Pb**	**14 25 28.3**	**-0.3**
MURC	**Murrieta**	**0.97**	**214**		**Pb**	**14 25 28.4**	**-0.3**
MURC	**Murrieta**	**0.97**	**214**	P	**Pb**	**14 25 28.5**	**-0.3**
	baz=33,SNR=48						
MURC				S	**Sb**	**14 25 41.6**	**+0.2**
	baz=33						
SSK	**Sunset Peak**	**0.97**	**259**		**Pb**	**14 25 28.6**	**-0.3**
DANC	**Danby, Needles**	**0.98**	**76**		**Pb**	**14 25 29.1**	**+0.1**
HAY	**Hayfield**	**1.00**	**134**		**Pn**	**14 25 29.7**	**0.0**
ELS	**Elsinore Mount**	**1.06**	**224**	Pg	**Pb**	**14 25 29.7**	**-0.5**
ELS				IAML		14 25 44.1	
	comp=E,672nm,0.2s						
ELS				IAML		14 25 44.9	
	comp=N,418nm,0.4s						
HOLC	**Holcomb Ridge**	**1.08**	**273**		**Pb**	**14 25 30.3**	**-0.3**
PLM	**Palomar**	**1.08**	**194**		**Pb**	**14 25 30.8**	**0.0**
PSRC	**Puddingstone R**	**1.09**	**254**		**Pb**	**14 25 30.8**	**-0.1**
SBB	**Saddle Back Bu**	**1.10**	**285**		**Pb**	**14 25 30.4**	**-0.5**
XTL	**Crystal Lake,**	**1.10**	**265**		**Pb**	**14 25 30.7**	**-0.3**
PEM	**Pine Mountain**	**1.13**	**258**		**Pb**	**14 25 31.3**	**-0.1**
BORC	**Borrego Spring**	**1.14**	**175**		**Pb**	**14 25 32.0**	**+0.4**
TUQ	**Turquoise Moun**	**1.14**	**26**		**Pb**	**14 25 31.7**	**-0.1**
TUQ	**Turquoise Moun**	**1.14**	**26**	P	**Pb**	**14 25 31.3**	**-0.4**
	baz=207,SNR=137						
TUQ				S	**Sn**	**14 25 47.2**	**0.0**
	baz=207						
JNH	**Juniper Hills**	**1.17**	**272**		**Pn**	**14 25 31.9**	**-0.1**
BC3	**Big Chuckawall**	**1.18**	**129**		**Pg**	**14 25 33.4**	**+0.4**
BC3	**Big Chuckawall**	**1.18**	**129**	P	**Pn**	**14 25 31.5**	**-0.6**
	baz=310,SNR=166						
BC3				S	**Sg**	**14 25 48.4**	**0.0**
	baz=310						
IRM	**Iron Mountain**	**1.18**	**102**		**Pn**	**14 25 31.3**	**-0.9**
IRM	**Iron Mountain**	**1.18**	**102**	P	**Pn**	**14 25 31.3**	**-0.9**
	baz=283,SNR=496						
IRM				S	**Sn**	**14 25 48.5**	**+0.5**
	baz=283						
MATG	**Mataguay Scout**	**1.21**	**184**		**Pb**	**14 25 33.2**	**+0.3**
CHFC	**Chilao Flat St**	**1.23**	**267**		**Pn**	**14 25 32.9**	**-0.1**
LRRC	**Littlerock Res**	**1.23**	**276**		**Pb**	**14 25 33.1**	**-0.1**
SLH	**Sleepy Hollow**	**1.24**	**169**		**Pb**	**14 25 33.3**	**+0.1**
FRK	**Frink**	**1.25**	**143**		**Pg**	**14 25 34.4**	**-0.1**
MWC	**Mount Wilson**	**1.27**	**262**		**Pb**	**14 25 33.9**	**-0.1**
EDW2	**Edwards Air Fo**	**1.29**	**292**		**Pb**	**14 25 34.1**	**-0.1**
EDW2	**Edwards Air Fo**	**1.29**	**292**	P	**Pn**	**14 25 32.7**	**-1.0**
	baz=111,SNR=203						
EDW2				S	**Sn**	**14 25 50.8**	**+0.2**
	baz=111						
CCCA	**Chr Cany lake**	**1.30**	**329**		**Pg**	**14 25 35.3**	**-0.2**
JUEM	**Julian Eagle M**	**1.32**	**182**		**Pg**	**14 25 35.6**	**-0.3**
CJV	**Casa Juvan**	**1.33**	**276**		**Pb**	**14 25 34.8**	**-0.1**
MTPC	**Mountain Pass**	**1.35**	**37**		**Pg**	**14 25 36.5**	**+0.2**
DTP	**Desert Tortois**	**1.37**	**309**		**Pb**	**14 25 36.1**	**+0.5**
PASC	**Pasadena Art C**	**1.38**	**261**		**Pn**	**14 25 35.2**	**+0.3**
PASC	**Pasadena Art C**	**1.38**	**261**	IAML		14 25 54.7	
	comp=N,393nm,0.4s						
LRMC	**Laurel Mtn Rad**	**1.42**	**319**		**Pn**	**14 25 35.4**	**-0.2**
LRMC	**Laurel Mtn Rad**	**1.42**	**319**	P	**Pn**	**14 25 35.3**	**-0.3**
	baz=138,SNR=170						
LRMC				Sb	**Sg**	**14 25 55.5**	**-0.8**
	baz=138						
CCAC	**Calif City Air**	**1.42**	**302**		**Pb**	**14 25 36.2**	**-0.3**
CCAC				IAML		14 25 57.3	
	comp=E,434nm,0.5s						
DPP	**Dos Picos Cty**	**1.45**	**193**		**Pn**	**14 25 36.1**	**+0.3**
DECC	**Green Verdugo**	**1.49**	**265**	Pg	**Pb**	**14 25 38.0**	**+0.3**
	baz=83						
DECC				Sb	**Sg**	**14 25 57.4**	**-1.0**
	baz=83						
SHOC	**Shoshone, Teco**	**1.50**	**8**	Pg	**Pb**	**14 25 38.4**	**+0.5**
	baz=189						
SHOC				Sb	**Sg**	**14 25 58.5**	**-0.4**
	baz=189						
MONP2	**Monument Peak**	**1.52**	**176**	P	**Pn**	**14 25 37.2**	**+0.3**
	baz=356,SNR=42						
MONP2				Sb	**Sg**	**14 25 58.5**	**-0.8**
	baz=356						
QSM	**Queen of Sheba**	**1.58**	**350**		**Pn**	**14 25 37.3**	**-0.3**
SWSC	**Sam W. Stewart**	**1.58**	**157**	P	**Pn**	**14 25 37.4**	**-0.3**
	baz=337						
SWSC				Sb	**Sg**	**14 26 00.9**	**-0.5**
	baz=337						
109C	**Camp Elliot, M**	**1.59**	**197**	Pn	**Pn**	**14 25 37.9**	**+0.2**
109C	**Camp Elliot, M**	**1.59**	**197**	Pb	**Pb**	**14 25 38.9**	**-0.4**
	baz=17						
109C				S	**Sb**	**14 25 58.8**	**-0.2**
	baz=17						
FMP	**Fort Macarthur**	**1.61**	**245**	Sb	**Sb**	**14 26 00.4**	**+0.6**
	baz=63						
NEE2	**Needles Airpor**	**1.63**	**77**	P	**Pn**	**14 25 38.2**	**0.0**
	baz=258						
NEE2				Sb	**Sg**	**14 26 01.9**	**-0.8**
	baz=258						
BAR	**Barrett**	**1.73**	**184**		**Pn**	**14 25 39.8**	**+0.1**
BAR				IAML		14 26 05.9	
	comp=E,243nm,0.2s						
GWY	**Greenwater Val**	**1.78**	**357**		**Pn**	**14 25 40.1**	**-0.4**
GWY				IAML		14 26 09.0	
	comp=N,291nm,0.5s						
IKP	**In-Ko-Pah, Jac**	**1.79**	**168**	P	**Pn**	**14 25 40.7**	**+0.1**
	baz=348,SNR=14						
IKP				Sb	**Sg**	**14 26 06.7**	**-1.2**
	baz=348						
BLYC	**Blythe**	**1.80**	**111**		**Pn**	**14 25 39.5**	**-1.1**
BLYC				IAML		14 26 12.3	
	comp=E,139nm,0.5s						
BLYC				IAML		14 26 16.3	
	comp=N,154nm,0.5s						
OSI	**Osito Audit: C**	**1.81**	**277**	Pb	**Pb**	**14 25 43.1**	**-0.1**
	baz=96						
OSI				S	**Sn**	**14 26 04.0**	**+0.4**
	baz=96						
MPMC	**Manual Prospec**	**1.82**	**335**	P	**Pn**	**14 25 40.8**	**-0.3**
	baz=155,SNR=45						
MPMC				Sb	**Sg**	**14 26 07.7**	**-1.3**
	baz=155						
YUH	**Yuha Desert**	**1.83**	**163**		**Pn**	**14 25 41.1**	**0.0**
RMX	**La Rumorosa**	**1.84**	**168**		**Pn**	**14 25 42.0**	**+0.6**
RMX				IAML		14 26 11.9	
	comp=E,213nm,0.5s						
CIS	**Catalina Islan**	**1.85**	**238**	P	**Pn**	**14 25 41.7**	**+0.3**
	baz=56						
CIS				Sb	**Sb**	**14 26 07.6**	**+0.8**
	baz=56						
V12A	**Nelson**	**1.91**	**46**		**Pn**	**14 25 42.1**	**-0.2**
V12A				IAML		14 26 13.1	
	comp=N,161nm,0.3s						
V12A				IAML		14 26 19.0	
	comp=E,201nm,0.4s						
TJX	**Tijuana**	**1.94**	**193**	Pn	**Pn**	**14 25 41.9**	**-0.7**
TJX				IAML		14 26 15.8	
	comp=N,278nm,0.7s						
GLA	**Glamis**	**1.97**	**133**		**Pn**	**14 25 42.1**	**-0.9**
GLA				IAML		14 26 17.1	
	comp=N,180nm,0.5s						
GLA	**Glamis**	**1.97**	**133**	P	**Pn**	**14 25 42.3**	**-0.7**
	baz=314,SN

*IDC **30** 14:47:29.5±0.8,55˚.09S×30˚.56W,h0km,mb4.0/5, mbtmp4.1/5,MS3.5/2,Error ellipse: s-maj=30.7km s-min=22.4km az=79.0*
*NEIC **30** 14:47:32.5±2.2,55˚.1S±0˚.1×30˚.4W±0˚.2,h10km±1km, mb5.1/18,Error ellipse: s-maj=18.1km s-min=16.4km az=28.0*
ISC 30 14:47:32.1±0.5,**55˚.17S**±0˚.09×**30˚.36W**±0˚.10,**h10**km,**n74,** σ1§**86**/68,**mb5.1**/15,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.66**	**282**		**Pn**	**14 48 27.5**	**-1.3**
ORCD	**Orcadas**	**9.45**	**228**	Pn	**Pn**	**14 49 48.0**	**0.0**
VNA1	**Neumayer--Stat**	**18.30**	**156**	P	**Pn**	**14 51 46.7**	**+1.0**
VNA3	**Neumayer Olymp**	**18.44**	**159**	P	**P**	**14 51 47.7**	**+0.3**
VNA2	**Neumayer--Watz**	**18.70**	**156**	P	**P**	**14 51 50.2**	**-0.1**
	baz=313,slow=13						
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**14 52 06.3**	**-1.3**
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**14 52 05.7**	**-1.9**
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**14 52 06.8**	**-0.8**
	4.2nm,0.8s,baz=277,slow=13,SNR=10.0						
SNAA				LR	LR	14 58 31.7	
	comp=Z,44nm,20.8s,baz=296,slow=32						
	4.2nm,0.8s						
TROLL	**Troll, Antarti**	**21.84**	**153**	P	**P**	**14 52 25.9**	**+1.5**
BELA	**Belgrano 2**	**22.85**	**182**	P	**P**	**14 52 34.3**	**-0.7**
MG05	**Puerto Natales**	**25.07**	**260**	P	**P**	**14 52 54.6**	**-1.8**
GO09	**Cerro Castillo**	**25.15**	**261**	P	**P**	**14 52 55.3**	**-1.8**
TRQA	**Tornquist**	**27.32**	**296**	P	**P**	**14 53 17.9**	**+1.0**
TRQA				IAmb	IAmb	14 53 29.7	
	comp=Z,51nm,1.9s						
QSPA	**South Pole Qui**	**35.08**	**180**	P	**P**	**14 54 24.4**	**-0.7**
QSPA	**South Pole Qui**	**35.08**	**180**	P	**P**	**14 54 25.2**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=202,slow=2.2,SNR=8.1						
	comp=Z,3.9nm,0.9s						
MT09	**Talagante**	**35.32**	**290**	P	**P**	**14 54 27.2**	**-0.2**
MT09				IAmb	IAmb	14 54 39.1	
	comp=Z,48nm,1.8s						
VA06	**Catapilco**	**36.42**	**291**	P	**P**	**14 54 36.6**	**0.0**
VA06				IAmb	IAmb	14 54 38.3	
	comp=Z,21nm,0.8s						
CO02	**Combarbal**	**37.32**	**293**	P	**P**	**14 54 45.7**	**+1.3**
CO02				IAmb	IAmb	14 55 26.6	
	comp=Z,108nm,1.9s						
CO03	**El Pedregal**	**37.44**	**294**	P	**P**	**14 54 46.6**	**+1.1**
CO03				IAmb	IAmb	14 55 53.0	
	comp=Z,70nm,1.9s						
CO01	**Juntas del Tor**	**37.82**	**295**	P	**P**	**14 54 49.9**	**+1.1**
CO01				IAmb	IAmb	14 55 00.7	
	comp=Z,30nm,1.8s						
GO02	**Mina Guanaco**	**41.49**	**300**	P	**P**	**14 55 20.5**	**+0.9**
GO02				IAmb	IAmb	14 55 28.2	
	comp=Z,94nm,2.0s						
SUR	**Sutherland**	**42.19**	**79**	P	**P**	**14 55 24.7**	**-0.4**
SUR				IAmb	IAmb	14 56 37.3	
	comp=Z,92nm,1.9s						
PB04	**IPOC Station P**	**44.14**	**302**	P	**P**	**14 55 41.4**	**+0.5**
PB01	**IPOC Station P**	**44.92**	**303**	P	**P**	**14 55 47.9**	**+0.9**
PB01				IAmb	IAmb	14 56 06.1	
	comp=Z,63nm,1.7s						
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**14 56 05.9**	**+0.5**
VNDA	**Vanda**	**47.35**	**184**	P	**P**	**14 56 04.5**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=198,slow=14,SNR=2.5						
	comp=Z,0.6nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.76**	**21**	T	T	15 47 36.9	
	baz=28,slow=74,SNR=19						
H10S3	**ASCENSION HYDR**	**47.76**	**21**	T	T	15 47 33.5	
	baz=192,slow=74,SNR=30						
LPAZ	**La Paz**	**48.41**	**308**	P	P	14 56 11.3	-3.7
	comp=Z,2.7nm,0.7s,baz=302,slow=8.6,SNR=8.3						
	comp=Z,2.7nm,0.7s						
H10N1	**ASCENSION HYDR**	**48.87**	**21**	T	T	15 48 58.1	
	baz=191,slow=75,SNR=19						
H10N3	**ASCENSION HYDR**	**48.87**	**21**	T	T	15 49 00.7	
	baz=191,slow=75,SNR=32						
H10N2	**ASCENSION HYDR**	**48.89**	**21**	T	T	15 48 58.9	
	baz=191,slow=75,SNR=31						
LBTB	**Lobatse**	**50.52**	**77**	P	**P**	**14 56 29.5**	**-1.0**
	comp=Z,2.6nm,1.0s,baz=216,slow=8.5,SNR=2.4						
	comp=Z,2.6nm,1.0s						
TOA0	**Torodi Ar. Sit**	**73.23**	**33**	P	**P**	**14 59 01.3**	**-1.9**
TORD	**Torodi Ar. Bea**	**73.23**	**33**	P	**P**	**14 59 02.7**	**-0.4**
	comp=Z,25nm,0.4s,baz=202,slow=5.9,SNR=6.7						
BCIP	**Isla Barro Col**	**76.21**	**309**	P	**P**	**14 59 20.0**	**-0.4**
BCIP				IAmb	IAmb	15 00 06.6	
	comp=Z,33nm,1.4s						
URZ	**Urewera**	**84.01**	**201**	LR	LR	15 32 43.8	
	comp=Z,86nm,21.2s,baz=211,slow=32						
NVAR	**Mina Array Bea**	**119.40**	**296**	PKP	**PKPdf**	**15 06 21.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=190,slow=1.6,SNR=2.6						
BMO	**Blue Mountains**	**123.64**	**301**		**PKPdf**	**15 06 28.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**127.06**	**113**	PKP	**PKPdf**	**15 06 36.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=233,slow=4.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**143.60**	**64**	PKP	PKPab	15 07 02.5	+0.1
	comp=Z,1.2nm,0.6s,baz=200,slow=4.1,SNR=5.2						
CTGM	**Chitina Glacie**	**144.63**	**308**		**PKPab**	**15 07 06.5**	**+0.3**
M27K	**Edge Creek, AK**	**145.35**	**310**		**PKPbc**	**15 07 08.4**	**-0.4**
BCAR	**Beaver Creek A**	**145.55**	**311**		**PKPdf**	**15 07 08.4**	**-0.6**
L27K	**Beaver Creek,**	**145.57**	**311**		**PKPdf**	**15 07 08.8**	**-0.3**
EYAK	**Cordova Ski Ar**	**146.47**	**306**		**PKPdf**	**15 07 11.0**	**+0.4**
DIV	**Divide**	**146.68**	**307**	PKPdf	**PKPdf**	**15 07 12.2**	**+1.2**
DOT	**Dot Lake**	**146.71**	**312**	PKPdf	**PKPdf**	**15 07 11.8**	**+0.8**
J26L	**Joseph Creek**	**146.74**	**313**		**PKPdf**	**15 07 12.1**	**+1.0**
I26K	**Coal Creek Min**	**146.79**	**315**		**PKPdf**	**15 07 12.0**	**+1.0**
KLU	**Klutina**	**146.87**	**308**	PKPdf	**PKPdf**	**15 07 12.6**	**+1.2**
RIDG	**Independent Ri**	**147.07**	**312**	PKPbc	**PKPdf**	**15 07 14.0**	**+2.4**
PAX	**Paxson**	**147.12**	**310**	PKPdf	**PKPdf**	**15 07 13.1**	**+1.3**
SCM	**Sheep Creek Mo**	**147.61**	**308**		**PKPdf**	**15 07 15.8**	**+3.3**
PWL	**Port Wells**	**147.78**	**306**		**PKPdf**	**15 07 15.8**	**+3.0**
SML	**Sawmill**	**148.06**	**308**		**PKPdf**	**15 07 16.4**	**+3.1**
IL31		**148.20**	**313**	PKPdf	**PKPdf**	**15 07 15.1**	**+1.8**
ILAR	**Eielson Array**	**148.20**	**313**	PKPdf	**PKPdf**	**15 07 15.6**	**+2.2**
ILAR	**Eielson Array**	**148.20**	**313**	PKPbc	**PKPdf**	**15 07 15.9**	**+2.6**
	comp=Z,6.5nm,0.8s,baz=130,slow=1.9,SNR=65						
WRH	**Wood River Hil**	**148.63**	**313**	PKPdf	**PKPdf**	**15 07 15.3**	**+1.3**
RND	**Reindeer**	**148.72**	**310**		**PKPdf**	**15 07 18.0**	**+3.7**
MCK	**McKinley**	**148.83**	**311**	PKPdf	**PKPdf**	**15 07 16.0**	**+1.5**
M22K	**Willow**	**148.86**	**307**		**PKPbc**	**15 07 18.7**	**+0.3**
NEA2	**Nenana**	**149.07**	**313**		**PKPdf**	**15 07 18.2**	**+3.4**
BPAW	**Bear Paw Mtn.**	**149.79**	**311**		**PKPdf**	**15 07 20.0**	**+4.0**
TOLK	**Toolik Lake Re**	**149.85**	**320**		**PKPdf**	**15 07 20.2**	**+4.2**
M20K	**Styx River**	**150.28**	**307**		**PKPdf**	**15 07 21.0**	**+4.1**
N19K	**Bonanza Creek**	**150.66**	**304**		**PKPdf**	**15 07 21.8**	**+4.2**
N19K					**sPKPbc**	**15 07 29.5**	**+3.6**
O18K	**Koktuh Hills**	**150.76**	**302**		**PKPdf**	**15 07 22.2**	**+4.6**
O18K				PKPab	**PKPab**	**15 07 30.0**	**-0.4**
H21K	**Melozitna Rive**	**150.81**	**314**		**PKPbc**	**15 07 22.8**	**-0.3**
IMAR	**Indian Mountai**	**151.23**	**315**		**PKPbc**	**15 07 23.6**	**-0.5**
CNBA	**Chernabura Isl**	**151.40**	**291**		**PKPbc**	**15 07 24.2**	**-0.6**
TTA	**Tatalina**	**151.80**	**308**		**PKPbc**	**15 07 25.9**	**+0.3**
SONM	**Songino Array**	**152.48**	**87**	PKPbc	**PKPbc**	**15 07 26.6**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=215,slow=3.4,SNR=5.6						

*IDC **30** 14:57:57.6±0.8,55˚.21S×30˚.13W,h0km,mb4.2/7, mbtmp4.3/7,MS3.4/13,Error ellipse: s-maj=31.0km s-min=19.6km az=78.0*
*NEIC **30** 14:57:59.4±1.2,55˚.19S±0˚.08×30˚.4W±0˚.1,h10km±1km, mb4.5/14,Error ellipse: s-maj=17.9km s-min=6.5km az=48.0*
ISC 30 14:57:58.9±0.6,**55˚.16S**±0˚.08×**30˚.3W**±0˚.1,**h10**km,**n65,** σ0§**84**/48,**mb4.5**/12,**MS3.3**/13,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.69**	**281**		**Pn**	**14 58 55.1**	**-0.7**
ORCD	**Orcadas**	**9.47**	**228**	Pn	**Pn**	**15 00 14.5**	**-0.6**
VNA1	**Neumayer--Stat**	**18.30**	**157**	P	P	**15 02 14.0**	**+1.5**
VNA3	**Neumayer Olymp**	**18.44**	**159**	P	**Pn**	**15 02 14.9**	**+0.7**
VNA2	**Neumayer--Watz**	**18.70**	**156**	P	**Pn**	**15 02 17.4**	**+0.1**
	baz=311,slow=14						
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**15 02 33.8**	**-0.5**
SNAA	**Sanae**	**20.29**	**155**	PcP	**PcP**	**15 06 43.8**	**-3.5**
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**15 02 33.8**	**-0.5**
SNAA	**Sanae**	**20.29**	**155**	P	**P**	**15 02 34.1**	**-0.2**
	4.6nm,0.8s,baz=294,slow=12,SNR=18						
SNAA				LR	LR	15 09 21.6	
	comp=Z,72nm,20.0s,baz=298,slow=34						
	4.6nm,0.8s						
TROLL	**Troll, Antarti**	**21.84**	**153**	P	**P**	**15 02 50.3**	**-0.8**
BELA	**Belgrano 2**	**22.86**	**182**	P	**P**	**15 03 02.9**	**+1.0**
BELA				IAmb	IAmb	15 03 11.1	
	comp=Z,19nm,1.5s						
MG05	**Puerto Natales**	**25.10**	**260**	P	**P**	**15 03 23.9**	**+0.6**
PLCA	**Paso Flores**	**30.09**	**282**	LR	LR	15 15 57.2	
	comp=Z,60nm,19.1s,baz=147,slow=36						
CPUP	**Villa Florida**	**34.91**	**315**	LR	LR	15 20 31.6	
	comp=Z,54nm,18.3s,baz=169,slow=39						
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**15 04 50.8**	**-1.1**
QSPA	**South Pole Qui**	**35.09**	**180**	P	**P**	**15 04 51.0**	**-0.9**
	comp=Z,8.0nm,1.0s,baz=162,slow=2.1,SNR=13						
	comp=Z,8.0nm,1.0s						
MAW	**Mawson**	**41.91**	**145**	P	**P**	**15 05 48.7**	**-0.1**
MAW	**Mawson**	**41.91**	**145**	P	**P**	**15 05 48.6**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=269,slow=13,SNR=4.1						
	comp=Z,1.5nm,0.7s						
SUR	**Sutherland**	**42.17**	**79**	LR	LR	15 18 42.2	
	comp=Z,105nm,18.3s,baz=176,slow=30						
LVC	**Limon Verde**	**43.32**	**303**	LR	LR	15 27 58.0	
	comp=Z,13nm,18.2s,baz=165,slow=41						
PTLB	**Pontes e Lacer**	**45.44**	**319**	P	**P**	**15 06 17.3**	**-0.5**
PTLB				IAmb	IAmb	15 06 20.5	
	comp=Z,4.4nm,0.8s						
VNDA	**Vanda**	**47.36**	**184**	P	**P**	**15 06 34.2**	**+2.0**
VNDA				IAmb	IAmb	15 07 11.3	
	comp=Z,4.8nm,1.5s						
VNDA	**Vanda**	**47.36**	**184**	P	**P**	**15 06 33.1**	**+0.8**
	comp=Z,1.6nm,1.0s,baz=204,slow=7.1,SNR=6.4						
	comp=Z,1.6nm,1.0s						
BOSA	**Boshof**	**47.51**	**80**	P	**P**	**15 06 34.4**	**+0.2**
BOSA				IAmb	IAmb	15 06 47.4	
	comp=Z,9.6nm,1.4s						
BOSA	**Boshof**	**47.51**	**80**	LR	LR	15 23 08.3	
	comp=Z,93nm,18.8s,baz=190,slow=32						
H10S2	**ASCENSION HYDR**	**47.74**	**21**	T	T	15 58 00.5	
	baz=192,slow=74,SNR=25						
H10S3	**ASCENSION HYDR**	**47.74**	**21**	T	T	15 58 00.7	
	baz=28,slow=74,SNR=41						
LPAZ	**La Paz**	**48.42**	**308**		**P**	**15 06 41.9**	**0.0**
LPAZ	**La Paz**	**48.42**	**308**	P	**P**	**15 06 43.2**	**+1.4**
	comp=Z,3.0nm,0.5s,baz=141,slow=5.3,SNR=11						
LPAZ				LR	LR	15 28 06.6	
	comp=Z,22nm,20.4s,baz=216,slow=37						
	comp=Z,3.0nm,0.5s						
H10N1	**ASCENSION HYDR**	**48.85**	**21**	T	T	15 59 24.7	
	baz=191,slow=75,SNR=36						
H10N3	**ASCENSION HYDR**	**48.85**	**21**	T	T	15 59 25.1	
	baz=191,slow=75,SNR=60						
H10N2	**ASCENSION HYDR**	**48.87**	**21**	T	T	15 59 26.2	
	baz=191,slow=75,SNR=94						
LBTB	**Lobatse**	**50.49**	**77**	P	**P**	**15 06 57.5**	**+0.4**
LBTB				IAmb	IAmb	15 07 13.7	
	comp=Z,9.6nm,1.4s						
LBTB	**Lobatse**	**50.49**	**77**	P	**P**	**15 06 57.0**	**0.0**
	comp=Z,3.4nm,0.9s,baz=217,slow=6.8,SNR=3.6						
	comp=Z,3.4nm,0.9s						
TSUM	**Tsumeb**	**50.85**	**65**	LR	LR	15 25 47.0	
	comp=Z,72nm,18.0s,baz=322,slow=33						
SAML	**Samuel**	**52.93**	**318**		**P**	**15 07 14.8**	**-0.4**
SAML				IAmb	IAmb	15 07 18.2	
	comp=Z,6.1nm,1.1s						
ETMB	**Extrema**	**53.36**	**314**	P	**P**	**15 07 17.8**	**-0.5**
ETMB				IAmb	IAmb	15 07 21.6	
	comp=Z,4.1nm,1.1s						
NNA	**Nana**	**56.27**	**301**	LR	LR	15 32 24.7	
	comp=Z,14nm,20.3s,baz=162,slow=37						
ATAH	**Atahualpa**	**61.22**	**303**	LR	LR	15 36 56.5	
	comp=Z,37nm,18.9s,baz=158,slow=38						
BOAV	**Boa Vista**	**62.52**	**325**	P	**P**	**15 08 23.9**	**+1.3**
BOAV				IAmb	IAmb	15 08 26.9	
	comp=Z,5.5nm,1.1s						
MDP	**Montagnes des**	**62.85**	**335**	LR	LR	15 37 27.0	
	comp=Z,20nm,18.0s,baz=317,slow=38						
TOA0	**Torodi Ar. Sit**	**73.21**	**33**	P	**P**	**15 09 29.8**	**0.0**
TOA0				IAmb	IAmb	15 09 31.4	
	comp=Z,3.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.21**	**33**	P	**P**	**15 09 30.3**	**+0.5**
	comp=Z,3.6nm,0.4s,baz=196,slow=6.3,SNR=12						
	comp=Z,3.6nm,0.4s						
MBAR	**Mbarara**	**73.37**	**66**	LR	LR	15 37 36.3	
	comp=Z,57nm,20.5s,baz=80,slow=32						
ATD	**Arta Tunnel**	**89.99**	**70**	LR	LR	15 50 35.5	
	comp=Z,48nm,18.3s,baz=102,slow=35						
FINES	**FINESS Array B**	**124.45**	**29**	PKP	**PKPdf**	**15 16 56.6**	**0.0**
	comp=Z,2.8nm,0.9s,baz=93,slow=4.2,SNR=3.5						
ARCES	**ARCESS Array B**	**130.79**	**23**	PKP	**PKPdf**	**15 17 08.6**	**0.0**
	comp=Z,2.8nm,0.8s,baz=54,slow=2.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**143.58**	**64**	PKP	PKPbc	15 17 30.2	+0.2
	comp=Z,0.7nm,0.4s,baz=242,slow=3.2,SNR=4.3						
J26L	**Joseph Creek**	**146.75**	**313**	PKPbc	**PKPbc**	**15 17 40.2**	**+0.6**
BMAR	**Burnt Mountain**	**147.84**	**319**	PKPbc	**PKPbc**	**15 17 43.1**	**+0.6**
IL31		**148.21**	**313**		**PKPbc**	**15 17 43.5**	**+0.1**
ILAR	**Eielson Array**	**148.21**	**313**		**PKPbc**	**15 17 43.4**	**-0.1**
ILAR	**Eielson Array**	**148.21**	**313**	PKPbc	**PKPbc**	**15 17 43.9**	**+0.4**
	comp=Z,9.1nm,0.9s,baz=130,slow=1.8,SNR=49						
CCB	**Clear Creek Bu**	**148.56**	**310**		**PKPbc**	**15 17 44.2**	**-0.2**
RND	**Reindeer**	**148.73**	**310**		**PKPbc**	**15 17 45.2**	**+0.2**
H24K	**Noodor Dome**	**148.83**	**315**		**PKPbc**	**15 17 45.2**	**+0.1**
MCK	**McKinley**	**148.84**	**311**		**PKPbc**	**15 17 45.5**	**+0.4**
OHAK	**Old Harbor**	**148.99**	**298**		**PKPbc**	**15 17 45.9**	**+0.2**
NEA2	**Nenana**	**149.09**	**313**		**PKPbc**	**15 17 45.6**	**-0.2**
KTH	**Kantishna Hill**	**149.67**	**310**		**PKPbc**	**15 17 47.4**	**+0.1**
BPAW	**Bear Paw Mtn.**	**149.81**	**311**		**PKPbc**	**15 17 47.6**	**0.0**
MLY	**Manley**	**149.87**	**313**		**PKPbc**	**15 17 47.2**	**-0.5**
PPLA	**Purkeypile**	**150.09**	**309**		**PKiKP**	**15 17 49.3**	**0.0**
M20K	**Styx River**	**150.29**	**307**		**PKPbc**	**15 17 48.7**	**-0.2**
SONM	**Songino Array**	**152.45**	**87**	PKPbc	**PKPbc**	**15 17 53.7**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=234,slow=3.7,SNR=5.4						

*JMA **30** 15:16:06.0±0.2,23˚.N±1˚.×121˚.9E±0˚.6,h30km,MV2.5/12, TAIWAN REGION*
*TAP **30** 15:16:07.8,23˚.55N×121˚.90E,h33km,ML2.7,C*
ISC 30 15:16:05.5±1.0,**23˚.52N**±0˚.02×**121˚.95E**±0˚.02,**h17**km±8km, **n92,**σ0§**55**/173,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.42**	**297**	*eP*	**Pn**	**15 16 16.0**	**-0.7**
	baz=296						
TEGC				*eS*	**Sn**	**15 16 22.5**	**-1.5**
	baz=296						
HGSD	**Ruisui**	**0.48**	**267**	P	**Pn**	**15 16 16.7**	**-0.8**
	baz=263						
HGSD				S	**Sb**	**15 16 23.6**	**+1.3**
	baz=263						
EGFH	**Guangfu**	**0.50**	**287**	*eP*	**Pn**	**15 16 17.1**	**-0.7**
	baz=291						
EGFH				*eS*	**Sn**	**15 16 24.6**	**-1.5**
	baz=291						
HWA	**Hwalien**	**0.55**	**325**	*eP*	**Pn**	**15 16 18.9**	**+0.3**
	baz=333						
HWA				*eS*	**Sn**	**15 16 26.4**	**-0.9**
	baz=333						
ESL	**Shilin**	**0.55**	**302**	P	**Pb**	**15 16 17.3**	**+0.6**
	baz=296						
ESL				S	**Sb**	**15 16 24.6**	**+0.3**
	baz=296						
EHY	**Hungye**	**0.57**	**269**	P	**Pn**	**15 16 18.6**	**-0.2**
	baz=265						
EHY				S	**Sn**	**15 16 26.6**	**-1.4**
	baz=265						
EYUL	**Yuli**	**0.60**	**253**	P	**Pn**	**15 16 19.2**	**-0.1**
	baz=250						
EYUL				S	**Sn**	**15 16 28.1**	**-0.5**
	baz=250						
YULB	**Yu-li**	**0.61**	**258**	*eP*	**Pn**	**15 16 19.6**	**+0.2**
	baz=250						
YULB				*eS*	**Sn**	**15 16 28.9**	**+0.1**
	baz=250						
TWD	**Chiawan**	**0.64**	**330**	*eP*	**Pn**	**15 16 20.0**	**+0.3**
	baz=332						
TWD				*eS*	**Sn**	**15 16 29.2**	**-0.4**
	baz=332						
FULB	**Fuli**	**0.68**	**242**	P	**Pn**	**15 16 19.6**	**-0.7**
	baz=228						
FULB				*eS*	**Sn**	**15 16 30.1**	**-0.4**
	baz=228						
ETL	**Fush Village**	**0.70**	**335**	*eP*	**Pb**	**15 16 19.6**	**+0.3**
	baz=337						
ETL				*eS*	**Sb**	**15 16 29.1**	**+0.5**
	baz=337						
NACB	**Ninganchiao**	**0.72**	**334**	P	**Pb**	**15 16 19.9**	**+0.2**
	baz=342						
NACB				S	**Sb**	**15 16 29.4**	**+0.1**
	baz=342						
VWDT	**VWDT**	**0.78**	**287**	P	**Pn**	**15 16 21.6**	**0.0**
	baz=286						
VWDT				*eS*	**Sn**	**15 16 32.5**	**-0.3**
	baz=286						
ETLH	**Xiulin Townshi**	**0.80**	**328**	*eP*	**Pg**	**15 16 21.5**	**+0.2**
	baz=329						
ETLH				*eS*	**Sg**	**15 16 32.0**	**+0.1**
	baz=329						
EDH	**Donghe**	**0.81**	**227**	*eP*	**Pn**	**15 16 21.7**	**-0.4**
	baz=218						
EDH				*eS*	**Sg**	**15 16 31.7**	**-0.2**
	baz=218						
OWD	**Renai**	**0.83**	**301**	*eP*	**Pn**	**15 16 22.5**	**0.0**
	baz=301						
OWD				*eS*	**Sg**	**15 16 32.6**	**-0.1**
	baz=301						
WHF	**Hehuan Shan**	**0.88**	**315**	P	**Pg**	**15 16 23.0**	**+0.2**
	baz=316						
WHF				S	**Sg**	**15 16 34.4**	**-0.1**
	baz=316						
CHGB	**Renai**	**0.89**	**307**	P	**Pn**	**15 16 23.5**	**+0.2**
	baz=307						
CHGB				S	**Sb**	**15 16 34.2**	**0.0**
	baz=307						
WUSB	**Renai**	**0.89**	**302**	P	**Pn**	**15 16 23.6**	**+0.3**
	baz=302						
WUSB				*eS*	**Sb**	**15 16 33.7**	**-0.5**
	baz=302						
YUS	**Yu-Shan**	**0.92**	**268**	*eP*	**Pn**	**15 16 24.6**	**+0.6**
	baz=266						
YUS				*eS*	**Sn**	**15 16 36.6**	**-0.4**
	baz=266						
ELDTW	**Lidau**	**0.92**	**249**	P	**Pn**	**15 16 23.4**	**-0.2**
	baz=246						
ELDTW				*eS*	**Sg**	**15 16 35.4**	**-0.1**
	baz=246						
ENA	**Nanau**	**0.92**	**348**	P	**Pg**	**15 16 23.3**	**-0.1**
	baz=350						
ENA				*eS*	**Sb**	**15 16 35.1**	**+0.1**
	baz=350						
EWUT	**Wuta**	**0.93**	**350**	*eP*	**Pb**	**15 16 22.6**	**-0.6**
	baz=352						
EWUT				*eS*	**Sb**	**15 16 34.5**	**-0.8**
	baz=352						
SSLB	**Suanglung**	**0.95**	**286**	*eP*	**Pn**	**15 16 24.8**	**+0.7**
	baz=285						
SSLB				*eS*	**Sn**	**15 16 37.3**	**+0.1**
	baz=285						
LDUT	**Ludao**	**0.95**	**208**	*eP*	**Pb**	**15 16 23.3**	**-0.2**
	baz=205						
LDUT				*eS*	**Sb**	**15 16 35.7**	**-0.1**
	baz=205						
FUSS	**Fushou**	**0.97**	**318**	*eP*	**Pg**	**15 16 24.2**	**-0.2**
	baz=319						
FUSS				*eS*	**Sg**	**15 16 37.3**	**+0.2**
	baz=319						
LONT	**Longtian**	**0.97**	**231**	*eP*	**Pn**	**15 16 24.5**	**+0.2**
	baz=240						
LONT				*eS*	**Sn**	**15 16 37.5**	**-0.2**
	baz=240						
TWT	**Tachien**	**1.01**	**316**	*eP*	**Pn**	**15 16 26.1**	**+1.0**
	baz=308						
TWT				*eS*	**Sn**	**15 16 39.0**	**0.0**
	baz=308						
WHYT	**Xinyi Township**	**1.02**	**280**	*eP*	**Pg**	**15 16 26.2**	**+0.9**
	baz=274						
WHYT				*eS*	**Sn**	**15 16 40.0**	**+1.0**
	baz=274						
SMLT	**Sun Moon Lake**	**1.03**	**291**	*eP*	**Pg**	**15 16 26.1**	**+0.7**
	baz=295						
SMLT				*eS*	**Sn**	**15 16 39.5**	**+0.3**
	baz=295						
TDCB	**Techi**	**1.03**	**315**	*eS*	**Sb**	**15 16 38.2**	**+0.1**
	baz=308						
NNSB	**Datong**	**1.04**	**330**	*eP*	**Pn**	**15 16 25.3**	**-0.1**
	baz=331						
NNSB				*eS*	**Sg**	**15 16 38.9**	**-0.5**
	baz=331						
ALS	**Alishan**	**1.05**	**270**	P	**Pg**	**15 16 26.5**	**+0.6**
	baz=268						
ALS				*eS*	**Sn**	**15 16 40.2**	**+0.2**
	baz=268						
NNS	**Nan Shan**	**1.05**	**330**	*eP*	**Pn**	**15 16 25.5**	**0.0**
	baz=331						
NNS				*eS*	**Sb**	**15 16 38.6**	**-0.3**
	baz=331						
TWGBT	**Beinan**	**1.06**	**229**	*eP*	**Pg**	**15 16 25.8**	**-0.3**
	baz=239						
TWGBT				*eS*	**Sn**	**15 16 40.0**	**0.0**
	baz=239						
TYC	**Yuchr**	**1.07**	**291**	*eP*	**Pg**	**15 16 26.6**	**+0.4**
	baz=291						
TYC				*eS*	**Sn**	**15 16 40.4**	**+0.3**
	baz=291						
LATG	**Datong**	**1.08**	**339**	*eP*	**Pg**	**15 16 26.2**	**-0.2**
	baz=340						
LATG				*eS*	**Sb**	**15 16 40.0**	**+0.3**
	baz=340						
TWC	**Suao

NTC				*e*S		**Sn**	**15 16 46.4**	**-0.2**
	baz=356							
NFF	**Wufeng Townshi**	**1.34**	**326**	*e*P		**Pg**	**15 16 31.2**	**-0.2**
	baz=326							
NFF				*e*S		**Sb**	**15 16 47.5**	**+0.4**
	baz=326							
CHN1	**Nanshi**	**1.35**	**256**	*e*P		**Pg**	**15 16 31.3**	**-0.2**
	baz=255							
CHN1				*e*S		**Sg**	**15 16 48.5**	**-0.6**
	baz=255							
YOJ	**Yonaguni jima**	**1.35**	**46**	*e*P		**Pg**	**15 16 31.3**	**-0.2**
	baz=47							
YOJ				*e*S		**Sb**	**15 16 48.0**	**+0.7**
	baz=47							
YOJ	**Yonaguni jima**	**1.35**	**46**	P		**Pb**	**15 16 30.1**	**-0.1**
YOJ				S		**Sb**	**15 16 47.3**	**+0.1**
TWQ1	**Liyutan**	**1.35**	**308**	*e*P		**Pb**	**15 16 30.6**	**+0.3**
	baz=308							
TWQ1				*e*S		**Sb**	**15 16 48.1**	**+0.7**
	baz=308							
TWK	**Hsinying**	**1.36**	**260**	*e*P		**Pb**	**15 16 30.8**	**+0.2**
	baz=258							
TWK				*e*S		**Sn**	**15 16 47.6**	**+0.1**
	baz=258							
SNST	**Tainan City**	**1.37**	**258**	*e*P		**Pg**	**15 16 32.0**	**+0.2**
	baz=256							
SNST				*e*S		**Sb**	**15 16 48.6**	**+0.8**
	baz=256							
NSTT	**Nanjuang**	**1.40**	**322**	*e*P		**Pg**	**15 16 31.8**	**-0.8**
	baz=323							
NSTT				*e*S		**Sb**	**15 16 49.5**	**+0.7**
	baz=323							
LIOB	**Emei**	**1.41**	**323**	*e*P		**Pg**	**15 16 32.1**	**-0.5**
	baz=309							
LIOB				*e*S		**Sb**	**15 16 49.4**	**+0.5**
	baz=309							
SSD	**Sandimen**	**1.44**	**238**	*e*P		**Pg**	**15 16 32.6**	**-0.5**
	baz=233							
SSD				*e*S		**Sb**	**15 16 50.3**	**+0.6**
	baz=233							
WTK	**Tuku**	**1.44**	**277**	*e*S		**Sb**	**15 16 50.0**	**+0.2**
	baz=276							
TIPB	**Shuangxi**	**1.45**	**356**	*e*P		**Pg**	**15 16 32.6**	**-0.8**
	baz=9.0							
TIPB				S		**Sb**	**15 16 50.5**	**+0.4**
	baz=9.0							
TSMG	**Majia**	**1.45**	**236**	*e*P		**Pb**	**15 16 32.5**	**+0.5**
	baz=232							
TSMG				*e*S		**Sb**	**15 16 50.5**	**+0.4**
	baz=232							
SCST	**Cishan**	**1.48**	**245**	*e*P		**Pb**	**15 16 32.9**	**+0.4**
	baz=243							
TWB1	**Santiao Chiao**	**1.48**	**1**	*e*S		**Sb**	**15 16 51.9**	**+0.9**
	baz=3.0							
NHDH	**Xindian Distri**	**1.48**	**345**	*e*P		**Pb**	**15 16 33.0**	**+0.4**
	baz=336							
NHDH				*e*S		**Sb**	**15 16 51.7**	**+0.5**
	baz=336							
WRL	**Guolierlin Hig**	**1.49**	**285**	*e*S		**Sb**	**15 16 51.9**	**+0.6**
	baz=285							
TWA	**Mucha**	**1.49**	**347**	*e*P		**Pb**	**15 16 33.0**	**+0.3**
	baz=338							
TWA				*e*S		**Sb**	**15 16 51.4**	**+0.1**
	baz=338							
MASBT	**Mashibuluo**	**1.51**	**233**	*e*P		**Pb**	**15 16 33.1**	**+0.1**
	baz=230							
MASBT				*e*S		**Sb**	**15 16 52.0**	**0.0**
	baz=230							
EAST	**Anshuo**	**1.52**	**222**	*e*P		**Pb**	**15 16 32.7**	**-0.6**
	baz=220							
EAST				*e*S		**Sb**	**15 16 52.3**	**0.0**
	baz=220							
LAY	**Lan-yu**	**1.52**	**194**	*e*P		**Pn**	**15 16 32.3**	**+0.4**
	baz=192							
LAY				*e*S		**Sn**	**15 16 50.5**	**-0.8**
	baz=192							
TAWH	**Dawu Township**	**1.53**	**220**	*e*P		**Pb**	**15 16 32.7**	**-0.7**
	baz=218							
TAWH				*e*S		**Sb**	**15 16 52.5**	**0.0**
	baz=218							
NWF	**Wu-fen Shan**	**1.55**	**354**	*e*S		**Sb**	**15 16 53.8**	**+0.7**
	baz=355							
SXI1	**Grass Mountain**	**1.57**	**358**	*e*P		**Pb**	**15 16 34.0**	**0.0**
	baz=13							
SXI1				*e*S		**Sb**	**15 16 53.7**	**+0.1**
	baz=13							
SSPT	**Xinbi**	**1.64**	**231**	*e*P		**Pb**	**15 16 35.9**	**+0.7**
	baz=225							
YM01	**YM01**	**1.65**	**348**	*e*P		**Pb**	**15 16 35.5**	**0.0**
	baz=334							
YM01				*e*S		**Sb**	**15 16 55.7**	**-0.4**
	baz=334							
SCZT	**Fangliau**	**1.68**	**227**	*e*P		**Pb**	**15 16 35.6**	**-0.2**
	baz=221							
SCZT				*e*S		**Sb**	**15 16 57.3**	**+0.6**
	baz=221							
SLIU	**Shizi**	**1.68**	**219**	*e*P		**Pb**	**15 16 36.6**	**+0.7**
	baz=218							
HATJ	**Hateruma jima**	**1.78**	**72**	P		**Pn**	**15 16 36.1**	**+0.6**
HATJ				*e*S		**Sn**	**15 16 57.1**	**-0.6**
IRIF	**Iriomote-Funau**	**1.82**	**63**	P		**Pn**	**15 16 37.0**	**+1.0**
JKRS	**Kuro-shima**	**2.02**	**69**	P		**Pn**	**15 16 39.7**	**+1.0**
JKRS				*e*S		**Sn**	**15 17 03.5**	**0.0**
JIJ	**Ishigaki jima**	**2.18**	**67**	P		**Pn**	**15 16 41.5**	**+0.7**
JIJ				*e*S		**Sn**	**15 17 06.1**	**-1.3**
JISG	**Ishigakijimahi**	**2.41**	**63**	P		**Pn**	**15 16 44.5**	**+0.4**
JISG				*e*S		**Sn**	**15 17 11.4**	**-1.7**
JTJ	**Tarama**	**2.75**	**66**	P		**Pn**	**15 16 49.5**	**+0.7**
JTJ				*e*S		**Sn**	**15 17 21.6**	**-0.1**
JMJ2	**Miyako jima3**	**3.32**	**68**	P		**Pn**	**15 16 57.6**	**+1.0**
JMJ2				*e*S		**Sn**	**15 17 35.9**	**+0.3**

NOU 30 15:39:28.7, 15°33S × 167°12E, h5km, mb4.3/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.59**	**157**	P	Pn	15 40 12.0	+0.7
KOUNC	**Koumac, New Ca**	**5.85**	**207**	P	Pn	15 40 56.9	+0.8
MARNC	**Mare, Loyalty**	**6.18**	**172**	P	Pn	15 40 59.9	-0.7
YATNC	**Mamie plateau,**	**6.70**	**182**	P	Pn	15 41 07.2	-0.6
DZM	**Mont Dzumac**	**6.74**	**185**	P	Pn	15 41 07.8	-0.6
ONTNC	**Ouen Toro**	**6.97**	**185**	P	Pn	15 41 11.8	+0.3
OUENC	**Ouen Island, N**	**7.06**	**182**	P	Pn	15 41 12.4	-0.3
PINNC	**Pines Island,**	**7.25**	**178**	P	Pn	15 41 15.4	0.0

*IDC **30** 15:46:00.7±0.3,55°.25S×30°.08W, h0km, mb5.2/23, mbtmp5.2/24, ML4.5/1, MS4.6/44, Error ellipse: s-maj=15.0km s-min=11.0km az=47.0*

*NEIC **30** 15:46:02.3±1.1,55°.30S±0°.08×30°.4W±0°.1, h10km±1km, mb5.6/110, Mwc5.3(GCMT), Error ellipse: s-maj=14.4km s-min=13.5km az=62.0*

*BJI **30** 15:46:02.0±0.0,55°.30S×30°.30W, h20km, mB5.5/16, Ms5.2/22, Ms7 5.0/22*

*MOS **30** 15:46:03.6±1.1,55°.24S×30°.39W, h27km, mb5.7/30, MS4.5/4, Error ellipse: s-maj=15.2km s-min=9.7km az=114.4*

*GCMT **30** 15:46:04.3±0.1,55°.38S±0°.01×30°.18W±0°.01, h12km, MW5.2/149, Moment Tensor Solution. s88,c117; s149,c254; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.91±.01; $M_{\theta\theta}$-0.14±.01; $M_{\phi\phi}$-0.76±.01; $M_{r\theta}$-0.04±.04; $M_{r\phi}$-0.15±.01; $M_{\theta\phi}$-0.25±.03; Best double couple: $M_0$0.89400×10^{17} NP1:ϕ_s192.00000°, δ53.00000°, λ89.00000°. NP2:ϕ_s14.00000°, δ37.00000°, λ92.00000°. Principal axes: T 0.9490, Plg82.0000°, Azm96.0000°; N -0.1100, Plg1.0000°, Azm193.0000°; P -0.8400, Plg8.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **30** 15:46:05, 55°.39S×30°.16W, h12km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-0.84; $M_{r\theta}$0.24; $M_{r\phi}$-0.17; $M_{\theta r}$-0.30; Fault plane solution: $M_0$1.02000×10^{17} NP1:ϕ_s25.00000°, δ39.00000°, λ111.00000°. NP2:ϕ_s179.00000°, δ54.00000°, λ73.00000°. Principal axes: T 1.1032, Plg75.0000°, Azm39.0000°; N -0.1986, Plg13.0000°, Azm189.0000°; P -0.9046, Plg7.0000°, Azm280.0000°;*

ISC 30 15:46:05.1±1.2, 55°29S±0°.05×30°35W±0°.05, h30km±7km, n765, σ1ϕ05/756, mb5.6/108, MS4.6/58, 32C-5D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.70**	**283**	Pn	**Pn**	**15 46 58.0**	**-2.1**
HOPE	**Hope Point**	**3.70**	**283**	P	**Pn**	**15 46 58.0**	**-2.1**
ORCD	**Orcadas**	**9.38**	**229**		**Pn**	**15 48 14.9**	**-3.1**
EFI	**East Falkland**	**16.84**	**271**	P	**P**	**15 50 00.0**	**-0.2**
EFI	**East Falkland**	**16.84**	**271**	*i* P	**P**	**15 49 59.8**	**-0.4**
EFI				pmax	pmax		
	comp=Z,248nm,1.6s						
VNA1	**Neumayer--Stat**	**18.19**	**156**	P	**P**	**15 50 17.0**	**+2.0**
VNA1	**Neumayer--Stat**	**18.19**	**156**	PcP	**PcP**	**15 54 47.3**	**+0.9**
VNA3	**Neumayer Olymp**	**18.33**	**159**	P	**Pn**	**15 50 17.1**	**+0.4**
VNA2	**Neumayer--Watz**	**18.59**	**156**	P	**Pn**	**15 50 19.6**	**-0.2**
	baz=315,slow=13						
PMSA	**Palmer Station**	**19.09**	**227**	P	**Pn**	**15 50 27.6**	**+1.8**
	comp=Z,1.6nm,0.3s,baz=66,slow=8.5,SNR=18						
PMSA				LR	LR	15 56 39.6	
	comp=Z,2μm,19.8s,baz=62,slow=33						
	comp=Z,69nm,0.8s						
SNAA	**Sanae**	**20.18**	**155**	P	**P**	**15 50 36.4**	**-0.5**
SNAA	**Sanae**	**20.18**	**155**	PcP	**PcP**	**15 54 50.7**	**+0.6**
SNAA	**Sanae**	**20.18**	**155**	P	**P**	**15 50 36.2**	**-0.7**
SNAA	**Sanae**	**20.18**	**155**	*e*P	**P**	**15 50 35.1**	**-1.7**
SNAA				pmax	pmax		
	comp=Z,134nm,1.7s						
SNAA	**Sanae**	**20.18**	**155**	⇑*i*P	**P**	**15 50 36.9**	**0.0**
SNAA	**Sanae**	**20.18**	**155**	P	**P**	**15 50 36.9**	**0.0**
	comp=Z,75nm,1.0s,baz=300,slow=10,SNR=125						
SNAA				LR	LR	15 57 02.7	
	comp=Z,996nm,21.2s,baz=312,slow=33						
SNAA				PKiKP	**PKiKP**	**16 02 36.7**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=219,slow=1.9,SNR=5.5						
	comp=Z,75nm,1.0s						
MG01	**Puerto William**	**21.17**	**255**	P	**P**	**15 50 47.4**	**-0.1**
USHA	**Ushuaia**	**21.64**	**255**	P	**P**	**15 50 53.4**	**+0.8**
USHA	**Ushuaia**	**21.64**	**255**	P	**P**	**15 50 53.4**	**+0.8**
	comp=Z,135nm,0.9s,baz=90,slow=12,SNR=19						
	comp=Z,135nm,0.9s						
TROLL	**Troll, Antarti**	**21.73**	**153**	P	**P**	**15 50 53.1**	**-0.5**
TROLL	**Troll, Antarti**	**21.73**	**153**	PcP	**PcP**	**15 54 53.9**	**+0.7**
BELA	**Belgrano 2**	**22.74**	**182**	P	**P**	**15 51 04.2**	**0.0**
BELA				IAmb	IAmb	15 51 10.2	
	comp=Z,216nm,1.4s						
MG02	**Cerro Sombrero**	**22.77**	**260**	P	**P**	**15 51 04.1**	**-0.6**
GO10	**Punta Arenas**	**23.66**	**258**	P	**P**	**15 51 12.9**	**-0.7**
NVL	**N'lazarevskaya**	**23.88**	**147**	*e*P	**P**	**15 51 14.1**	**-1.5**
NVL				*e*S	**S**	**15 55 30.0**	**+0.6**
NVL				pmax	pmax		
	comp=Z,37nm,1.1s						
NVL				MLR	MLR		
	comp=Z,771nm,16.0s						
MG04	**Isla Riesco**	**24.06**	**259**	P	**P**	**15 51 17.9**	**+0.6**
MG05	**Puerto Natales**	**25.06**	**261**	P	**P**	**15 51 25.9**	**-0.6**
GO09	**Cerro Castillo**	**25.14**	**262**	P	**P**	**15 51 26.6**	**-0.7**
GO09				IAmb	IAmb	15 51 29.2	
	comp=Z,165nm,1.1s						
TRQA	**Tornquist**	**27.38**	**296**	P	**P**	**15 51 47.3**	**-0.3**
TRQA				IAmb	IAmb	15 51 54.6	
	comp=Z,151nm,1.4s						
TRQA	**Tornquist**	**27.38**	**296**	P	**P**	**15 51 47.3**	**-0.3**
TRQA				pmax	pmax		
	comp=Z,151nm,1.5s						
COYC	**Coyhaique**	**27.91**	**273**	P	**P**	**15 51 52.4**	**+0.1**
PLTB	**Pedras Altas**	**28.68**	**315**	P	**P**	**15 51 59.5**	**+0.4**
PLTB	**Pedras Altas**	**28.68**	**315**	*e*P	**P**	**15 52 00.6**	**+1.4**
AY01	**Puyuhuapi**	**28.92**	**274**	P	**P**	**15 52 01.4**	**+0.2**
CPSB	**Cacapava Do Su**	**29.81**	**317**	*e*P	**P**	**15 52 11.2**	**+1.9**
CNLB	**Canela**	**29.84**	**322**	*e*P	**P**	**15 52 11.2**	**+1.6**
TER01	**Tubaro-SC**	**29.97**	**325**	*e*P	**P**	**15 52 12.9**	**+2.2**
PLCA	**Paso Flores**	**30.10**	**282**	P	**P**	**15 52 11.9**	**+0.1**
PLCA	**Paso Flores**	**30.10**	**282**	*e*P	**P**	**15 52 11.9**	**+0.1**
PLCA	**Paso Flores**	**30.10**	**282**	*e*P	**P**	**15 52 13.2**	**+1.3**
PLCA	**Paso Flores**	**30.10**	**282**	P	**P**	**15 52 11.4**	**-0.4**
	comp=Z,8.1nm,1.0s,baz=180,slow=4.3,SNR=4.7						
PLCA				LR	LR	16 03 50.8	
	comp=Z,1μm,21.6s,baz=128,slow=35						
	comp=Z,8.1nm,1.0s						
ITQB	**Itaqui**	**31.75**	**313**	P	**P**	**15 52 26.5**	**+0.2**
ITQB				IAmb	IAmb	15 52 34.6	
	comp=Z,67nm,1.0s						
ITQB	**Itaqui**	**31.75**	**313**	*e*P	**P**	**15 52 27.4**	**+1.1**
ITAB	**Concordia**	**32.19**	**322**	P	**P**	**15 52 30.7**	**+0.6**
ITAB				IAmb	IAmb	15 52 45.7	
	comp=Z,136nm,1.8s						
ITAB	**Concordia**	**32.19**	**322**	*e*P	**P**	**15 52 32.3**	**+2.1**
PARB	**Paraibuna**	**33.87**	**334**	*e*P	**P**	**15 52 47.1**	**+2.1**
MAN01	**Angra dos Reis**	**33.94**	**337**	*e*P	**P**	**15 52 47.1**	**+1.6**
PTGB	**Pitanga**	**34.48**	**324**	*e*P	**P**	**15 52 50.3**	**0.0**
VAO	**Valinhos**	**34.54**	**332**	*e*P	**P**	**15 52 52.9**	**+2.1**
LMEL	**Las Melosas**	**34.90**	**291**	P	**P**	**15 52 53.3**	**-0.6**
GO05	**Huala**	**34.95**	**288**	P	**P**	**15 52 52.7**	**-1.5**
QSPA	**South Pole Qui**	**34.96**	**180**	P	**P**	**15 52 54.9**	**+0.7**
QSPA	**South Pole Qui**	**34.96**	**180**	LR	LR	16 06 07.3	
	comp=Z,954nm,21.8s,baz=186,slow=34						
CPUP	**Villa Florida**	**34.98**	**315**	P	**P**	**15 52 53.9**	**-0.6**
CPUP	**Villa Florida**	**34.98**	**315**	P	**P**	**15 52 53.9**	**-0.6**
CPUP				pmax	pmax		
	comp=Z,66nm,1.3s						
CPUP	**Villa Florida**	**34.98**	**315**	*e*P	**P**	**15 52 55.7**	**+1.2**
CPUP	**Villa Florida**	**34.98**	**315**	P	**P**	**15 52 54.6**	**+0.1**
	comp=Z,34nm,1.1s,baz=155,slow=8.7,SNR=24						
CPUP				PcP	**PcP**	**15 55 26.9**	**+0.6**
	comp=Z,10nm,1.0s,baz=110,slow=6.2,SNR=3.0						
CPUP				LR	LR	16 06 44.3	
	comp=Z,812nm,19.2s,baz=158,slow=36						
	comp=Z,34nm,1.1s						
RCLB	**Rio Claro- Sao**	**35.24**	**332**	*e*P	**P**	**15 52 58.9**	**+2.0**
MT09	**Talagante**	**35.37**	**290**	P	**P**	**15 52 57.1**	**-0.8**
MT01	**Popeta**	**35.44**	**290**	P	**P**	**15 52 57.1**	**-1.4**
PEL	**Peldehue**	**35.69**	**291**	P	**P**	**15 53 00.1**	**-0.6**
PEL				IAmb	IAmb	15 53 03.6	
	comp=Z,119nm,1.0s						
PEL	**Peldehue**	**35.69**	**291**	P	**P**	**15 53 00.1**	**-0.6**
PEL				pmax	pmax		
	comp=Z,119nm,1.0s						
MT02	**Curacav**	**35.85**	**291**	P	**P**	**15 53 01.0**	**-0.9**
ZON	**Zonda**	**35.89**	**295**	P	**P**	**15 53 01.9**	**-0.5**
ZON				IAmb	IAmb	15 53 05.8	
	comp=Z,152nm,1.4s						
ZON	**Zonda**	**35.89**	**295**	P	**P**	**15 53 01.9**	**-0.5**
ZON				pmax	pmax		
	comp=Z,152nm,1.4s						
VA03	**San Esteban**	**35.92**	**292**	P	**P**	**15 53 01.8**	**-0.9**
VA03				IAmb	IAmb	15 53 05.7	
	comp=Z,163nm,1.1s						
ROC1	**El Roble**	**36.00**	**291**	P	**P**	**15 53 02.7**	**-0.8**
ROC1				IAmb	IAmb	15 53 27.1	
	comp=Z,118nm,1.0s						
VA01	**Torpederas**	**36.30**	**291**	P	**P**	**15 53 05.4**	**-0.4**
TRCB	**Terra Rica**	**36.45**	**324**	P	**P**	**15 53 07.0**	**-0.1**
TRCB				IAmb	IAmb	15 53 09.2	
	comp=Z,208nm,1.9s						
TRCB	**Terra Rica**	**36.45**	**324**	*e*P	**P**	**15 53 08.3**	**+1.1**
VA06	**Catapilco**	**36.47**	**291**	P	**P**	**15 53 06.8**	**-0.4**
RIB01	**Linhares ES**	**36.72**	**344**	*e*P	**P**	**15 53 09.1**	**-0.3**
BB19B	**Bebedouro**	**36.80**	**331**	*e*P	**P**	**15 53 12.3**	**+2.1**
PCMB	**Pacaembu**	**37.11**	**327**	*e*P	**P**	**15 53 14.3**	**+1.5**
CO02	**Combarbal**	**37.37**	**293**	P	**P**	**15 53 14.7**	**-0.4**
CO02				IAmb	IAmb	15 53 18.4	
	comp=Z,179nm,1.1s						
CO03	**El Pedregal**	**37.50**	**294**	P	**P**	**15 53 15.8**	**-0.3**
CO03				IAmb	IAmb	15 53 21.3	
	comp=Z,191nm,1.4s						
GO04	**Tololo Observa**	**38.08**	**294**	P	**P**	**15 53 20.8**	**-0.4**
GO04				IAmb	IAmb	15 53 23.6	
	comp=Z,152nm,1.2s						
CO06	**Fray Jorge**	**38.12**	**293**	P	**P**	**15 53 21.1**	**-0.2**
CO06				IAmb	IAmb	15 53 23.6	
	comp=Z,150nm,1.4s						
DIAM	**Diamantina, MG**	**38.30**	**339**	*e*P	**P**	**15 53 24.3**	**+1.3**
ITRB	**Iturama**	**38.62**	**329**	*e*P	**P**	**15 53 27.1**	**+1.6**
PMNB	**Patos De Minas**	**38.68**	**335**	*e*P	**P**	**15 53 27.1**	**+1.0**
AC05	**El Transito**	**38.88**	**296**	P	**P**	**15 53 27.0**	**-0.9**
AC05				IAmb	IAmb	15 53 30.8	
	comp=Z,154nm,1.3s						
LCO	**Las Campanas**	**38.96**	**296**	P	**P**	**15 53 28.2**	**-0.5**
LCO	**Las Campanas**	**38.96**	**296**	P	**P**	**15 53 28.2**	**-0.5**
LCO				pmax	pmax		
	comp=Z,98nm,1.2s						
GUA01	**Guaratinga, BA**	**39.31**	**346**	*e*P	**P**	**15 53 32.6**	**+1.3**
AQDB	**Aquidauana**	**39.66**	**321**	P	**P**	**15 53 33.4**	**-0.8**
AQDB	**Aquidauana**	**39.66**	**321**	*e*P	**P**	**15 53 34.6**	**+0.4**
IPMB	**Ipameri, GO**	**39.66**	**333**	*e*P	**P**	**15 53 35.4**	**+1.2**
MC01	**Montes Claros**	**39.90**	**339**	*e*P	**P**	**15 53 37.7**	**+1.4**
AC02	**Maricunga**	**39.94**	**299**	P	**P**	**15 53 35.7**	**-1.4**
AC02				IAmb	IAmb	15 53 40.5	
	comp=Z,226nm,1.6s						
ELIM	**Elim**	**39.97**	**80**	*e*P	**P**	**15 53 37.1**	**+0.4**
ELIM				IAmb	IAmb	15 53 39.5	
	comp=Z,522nm,2.8s						
AC06	**Mina Casimiro**	**40.13**	**297**	P	**P**	**15 53 37.1**	**-0.9**
AC06				IAmb	IAmb	15 53 40.3	
	comp=Z,189nm,1.6s						
C2SB	**Chapadao do Su**	**40.26**	**326**	*e*P	**P**	**15 53 40.6**	**+1.4**
CMC01	**Camacan, BA**	**40.47**	**346**	*e*P	**P**	**15 53 42.6**	**+1.6**
MATJ	**Matjiesfontein**	**41.42**	**79**	*e*P	**P**	**15 53 49.1**	**+0.3**
MATJ				IAmb	IAmb	15 53 51.7	
	comp=Z,118nm,1.6s						
GO02	**Mina Guanaco**	**41.56**	**300**	P	**P**	**15 53 50.0**	**-0.2**
GO02				IAmb	IAmb	15 53 53.1	
	comp=Z,150nm,0.9s						
JANB	**Januaria**	**41.58**	**339**	*e*P	**P**	**15 53 51.1**	**+1.0**
MAW	**Mawson**	**41.81**	**145**	P	**P**	**15 53 50.9**	**-0.5**
MAW	**Mawson**	**41.81**	**145**	P	**P**	**15 53 50.9**	**-0.5**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAW	**Mawson**	**41.81**	**145**	P	**P**	**15 53 51.4**	**-0.1**
	comp=Z,16nm,0.7s,baz=236,slow=7.3,SNR=26						
MAW				PcP	**PcP**	**15 55 47.2**	**+0.4**
	comp=Z,11nm,1.0s,baz=234,slow=8.7,SNR=4.0						
MAW				LR	LR	16 08 37.5	
	comp=Z,1μm,21.8s,baz=254,slow=32						
	comp=Z,16nm,0.7s						
GDU01	**Guandu, BA**	**42.10**	**347**	*e*P	**P**	**15 53 55.4**	**+1.1**
SUR	**Sutherland**	**42.21**	**79**	P	**P**	**15 53 55.1**	**-0.3**
SUR	**Sutherland**	**42.21**	**79**	LR	LR	16 06 56.4	
	comp=Z,651nm,20.6s,baz=218,slow=30						
CVNA	**Calvinia**	**42.29**	**77**	*e*P	**P**	**15 53 55.9**	**0.0**
CVNA				IAmb	IAmb	15 53 59.8	
	comp=Z,16nm,1.1s						
PB14	**IPOC Station P**	**42.41**	**300**	P	**P**	**15 53 54.9**	**-2.3**
FRAZ	**Fraserburg**	**42.88**	**79**	*e*P	**P**	**15 54 00.5**	**-0.2**
GRAN	**Grantham**	**43.03**	**80**	*e*P	**P**	**15 54 02.4**	**+0.5**
GRAN				IAmb	IAmb	15 54 04.3	
	comp=Z,21nm,1.0s						
KROM	**Kromhout**	**43.06**	**84**	*e*P	**P**	**15 54 02.1**	**+0.1**
KROM				IAmb	IAmb	15 54 11.1	
	comp=Z,82nm,1.3s						
BUFB	**Buffelsbos**	**43.13**	**84**	*e*P	**P**	**15 54 01.2**	**-1.3**
BUFB				IAmb	IAmb	15 54 05.6	
	comp=Z,535nm,2.5s						
LVC	**Limon Verde**	**43.38**	**303**	P	**P**	**15 54 04.3**	**-0.7**
LVC				IAmb	IAmb	15 54 09.9	
	comp=Z,120nm,1.2s						
LVC	**Limon Verde**	**43.38**	**303**	P	**P**	**15 54 04.4**	**-0.7**
LVC				pmax	pmax		
	comp=Z,120nm,1.2s						
LVC	**Limon Verde**	**43.38**	**303**	*e*P	**P**	**15 54 07.4**	**+2.3**
LVC	**Limon Verde**	**43.38**	**303**	P	**P**	**15 54 07.4**	**+2.3**
	comp=Z,71nm,1.0s,baz=163,slow=6.1,SNR=27						
LVC				PcP	**PcP**	**15 55 54.2**	**+1.0**
	comp=Z,26nm,1.1s,baz=160,slow=4.9,SNR=3.1						
LVC				LR	LR	16 11 09.1	
	comp=Z,424nm,21.9s,baz=166,slow=35						
	comp=Z,71nm,1.0s						
SHEL	**Horse Pasture**	**43.58**	**36**	P	**P**	**15 54 05.8**	**-0.5**
SHEL	**Horse Pasture**	**43.58**	**36**	P	**P**	**15 54 05.9**	**-0.5**
SHEL				pmax	pmax		
	comp=Z,246nm,1.0s						
SALV	**Santo Antonio**	**43.88**	**324**	*e*P	**P**	**15 54 09.1**	**+0.4**
BFON	**Badsfontein, M**	**44.26**	**81**	*e*P	**P**	**15 54 12.4**	**+0.5**
BFON				IAmb	IAmb	15 54 20.8	
	comp=Z,42nm,1.2s						
SDBA	**SAO DESIDERIO**	**44.27**	**339**	*e*P	**P**	**15 54 13.4**	**+1.5**
GRAF	**Camdeboo Natio**	**44.36**	**82**	*e*P	**P**	**15 54 13.1**	**+0.5**
GRAF				IAmb	IAmb	15 54 13.9	
	comp=Z,56nm,1.1s						
NBLA	**Lagarto - SE**	**44.58**	**350**	*e*P	**P**	**15 54 14.3**	**0.0**
PB07	**IPOC Station P**	**44.60**	**303**	P	**P**	**15 54 14.2**	**-0.5**
PB07				IAmb	IAmb	15 54 17.5	
	comp=Z,71nm,1.1s						
SOE	**Somerset East**	**44.65**	**83**	*e*P	**P**	**15 54 14.7**	**-0.1**
SOE				IAmb	IAmb	15 54 23.8	
	comp=Z,76nm,1.4s						
ARMS	**Ukamas**	**44.93**	**74**	*e*P	**P**	**15 54 16.9**	**-0.2**
ARMS				IAmb	IAmb	15 54 18.9	
	comp=Z,21nm,1.0s						
PB01	**IPOC Station P**	**44.99**	**303**	P	**P**	**15 54 17.4**	**-0.3**
PB01				IAmb	IAmb	15 54 20.8	
	comp=Z,141nm,1.1s						
KEIM	**Keimoes**	**45.09**	**76**	*e*P	**P**	**15 54 18.4**	**0.0**
UPI	**Upington**	**45.51**	**75**	*e*P	**P**	**15 54 21.7**	**-0.1**
UPI				IAmb	IAmb	15 54 22.1	
	comp=Z,23nm,1.4s						
PTLB	**Pontes e Lacer**	**45.53**	**319**	P	**P**	**15 54 20.7**	**-1.1**
PTLB				IAmb	IAmb	15 54 23.8	
	comp=Z,68nm,1.0s						
PTLB	**Pontes e Lacer**	**45.53**	**319**	*e*P	**P**	**15 54 21.7**	**-0.2**
**NB

ASCN Ascension 48.92 21 P **P** **15 54 47.6 -0.7**
H10N1 ASCENSION HYDR 48.98 21 T T 16 47 28.8
baz=191,slow=75,SNR=153
H10N3 ASCENSION HYDR 48.98 21 T T 16 47 28.2
baz=191,slow=75,SNR=223
H10N2 ASCENSION HYDR 48.99 21 T T 16 47 29.3
baz=191,slow=75,SNR=256
SNKL Senekal, Frees 49.23 81⇑ *i*P **P** **15 54 50.8 0.0**
SNKL lAmb lAmb 15 54 53.0
comp=Z,45nm,0.8s
RCBR Riachuelo 49.52 353 P **P** **15 54 52.5 -0.4**
RCBR Riachuelo 49.52 353 P **P** **15 54 52.5 -0.4**
RCBR pmax pmax
comp=Z,15nm,1.1s
RCBR Riachuelo 49.52 353 *e*P **P** **15 54 54.2 +1.3**
RCBR Riachuelo 49.52 353 LR LR 16 13 57.0
comp=Z,384nm,18.0s,baz=334,slow=34
PRYS Parys 50.04 80⇑ *i*P **P** **15 54 56.2 -0.7**
PRYS lAmb lAmb 15 54 57.3
comp=Z,38nm,0.9s
LBTB Lobatse 50.54 77 P **P** **15 54 59.6 -1.1**
LBTB lAmb lAmb 15 55 03.2
comp=Z,189nm,1.8s
LBTB Lobatse 50.54 77 P **P** **15 54 59.6 -1.1**
LBTB pmax pmax
comp=Z,189nm,1.8s
LBTB Lobatse 50.54 77⇑ *i*P **P** **15 54 59.7 -1.1**
LBTB lAmb lAmb 15 55 02.9
comp=Z,217nm,1.9s
KSR Koster 50.61 79 *e*P **P** **15 55 00.5 -0.8**
KSR lAmb lAmb 15 55 01.9
comp=Z,68nm,0.9s
NWCL Newcastle 50.84 83⇑ *i*P **P** **15 55 02.5 -0.5**
NWCL lAmb lAmb 15 55 03.3
comp=Z,62nm,1.2s
TSUM Tsumeb 50.92 65 P **P** **15 55 02.8 -0.9**
TSUM lAmb lAmb 15 55 04.9
comp=Z,57nm,0.9s
TSUM Tsumeb 50.92 65⇑ *i*P **P** **15 55 02.6 -1.0**
TSUM lAmb lAmb 15 55 04.5
comp=Z,55nm,0.9s
TSUM Tsumeb 50.92 65 LR LR 16 13 42.9
comp=Z,398nm,19.1s,baz=164,slow=33
HRAO HartRAO 51.02 79 *e*P **P** **15 55 03.5 -0.8**
PRPB Paraupebas 51.40 335 *e*P **P** **15 55 07.7 +0.6**
SLR Silverton 51.48 80 *e*P **P** **15 55 06.7 -1.1**
SLR lAmb lAmb 15 55 07.4
comp=Z,41nm,1.2s
NPGB Novo Progresso 52.09 328 *e*P **P** **15 55 11.7 -0.6**
POGA Pongola 52.17 84 P **P** **15 55 11.7 -1.1**
POGA Pongola 52.17 84⇑ *i*P **P** **15 55 12.4 -0.4**
POGA lAmb lAmb 15 55 13.7
comp=Z,42nm,1.0s
LEPH Lephalale, Lim 52.68 78⇑ *i*P **P** **15 55 16.0 -0.7**
LEPH lAmb lAmb 15 55 18.5
comp=Z,362nm,2.5s
SAML Samuel 53.02 318 P **P** **15 55 17.6 -1.5**
SAML lAmb lAmb 15 55 21.0
comp=Z,95nm,1.1s
SAML Samuel 53.02 318 P **P** **15 55 17.6 -1.5**
SAML pmax pmax
comp=Z,95nm,1.2s
ROSB Rosrio 53.41 343 *e*P **P** **15 55 22.5 +0.5**
ETMB Extrema 53.43 314 P **P** **15 55 20.7 -1.4**
ETMB lAmb lAmb 15 55 24.2
comp=Z,155nm,1.6s
ETMB Extrema 53.43 314 *e*P **P** **15 55 22.5 +0.4**
TMAB Tom-Au,PA,Br 54.69 338 *e*P **P** **15 55 32.2 +1.0**
ITTB Itaituba 54.74 328 *e*P **P** **15 55 31.5 -0.2**
MOPA Mopani 54.97 81⇑ *i*P **P** **15 55 32.7 -0.6**
MOPA lAmb lAmb 15 55 34.3
comp=Z,2.5nm,0.9s
MUSN Musina, Limpop 55.07 79⇑ *i*P **P** **15 55 33.6 -0.5**
MUSN lAmb lAmb 15 55 35.8
comp=Z,39nm,1.0s
CASY Casey 55.21 162 P **P** **15 55 34.7 +0.2**
MATP Matopo 55.80 76⇑ *i*P **P** **15 55 38.3 -1.2**
MATP lAmb lAmb 15 55 39.7
comp=Z,88nm,1.1s
MATP Matopo 55.80 76 LR LR 16 16 28.6
comp=Z,392nm,21.8s,baz=240,slow=33
BLWY Bulawayo 56.09 76⇑ *i*P **P** **15 55 40.8 -0.7**
BLWY lAmb lAmb 15 55 41.7
comp=Z,194nm,1.2s
NNA Nana 56.32 301 *i*P **P** **15 55 42.7 -0.4**
NNA pmax pmax
comp=Z,88nm,1.2s
NNA Nana 56.32 301 P **P** **15 55 44.4 +1.3**
comp=Z,28nm,1.0s,baz=138,slow=5.9,SNR=4.8
NNA LR LR 16 23 19.6
comp=Z,231nm,18.0s,baz=147,slow=40
comp=Z,28nm,1.0s
MALB Monte Alegre 56.70 331 *e*P **P** **15 55 46.9 +1.2**
MACA Manacapuru-AM 57.46 323 P **P** **15 55 50.1 -1.0**
MACA lAmb lAmb 15 55 51.9
comp=Z,196nm,1.5s
MACA Manacapuru-AM 57.46 323 *e*P **P** **15 55 51.2 +0.1**
CZSB Cruzeiro do Su 58.10 308 P **P** **15 55 54.3 -1.4**
CZSB lAmb lAmb 15 55 59.4
comp=Z,120nm,1.3s
CZSB Cruzeiro do Su 58.10 308 *e*P **P** **15 55 54.9 -0.7**
LSZ Lusaka 59.80 72 LR LR 16 18 41.9
comp=Z,967nm,20.3s,baz=210,slow=33
TBTG Tabatinga, AM 60.05 313 *e*P **P** **15 56 09.8 +0.6**
ATAH Atahualpa 61.27 303 P **P** **15 56 20.2 +2.3**
ATAH Atahualpa 61.27 303 P **P** **15 56 20.2 +2.3**
comp=Z,62nm,1.1s,baz=164,slow=4.5,SNR=25
ATAH LR LR 16 24 40.6
comp=Z,433nm,19.8s,baz=159,slow=38
comp=Z,62nm,1.1s
RPN Rapa Nui 62.01 262 LR LR 16 20 43.2
comp=Z,326nm,18.3s,baz=112,slow=34
BOAV Boa Vista 62.61 326 P **P** **15 56 24.9 -1.5**
BOAV lAmb lAmb 15 56 27.7
comp=Z,62nm,1.0s
BOAV Boa Vista 62.61 326 *e*P **P** **15 56 26.0 -0.4**
MDP Montagnes des 62.95 335 P **P** **15 56 28.2 -0.5**
comp=Z,42nm,0.9s,baz=174,slow=8.1,SNR=18
MDP LR LR 16 22 34.1
comp=Z,343nm,20.5s,baz=114,slow=35
comp=Z,42nm,0.9s
LIC Lamto 64.80 28⇑ *i*P **P** **15 56 40.1 -0.7**
comp=Z,106nm,0.8s
VOI Vohitsoka 65.01 93 P **P** **15 56 44.8 +2.5**
KIC Kosan Boka 65.01 28⇓ *e*P **P** **15 56 41.1 -1.1**
comp=Z,33nm,0.9s
TIC Toumodi 65.21 28⇓ *e*P **P** **15 56 42.4 -1.1**
comp=Z,71nm,0.8s
DBIC Dimbokro 65.28 28 P **P** **15 56 43.0 -0.9**
DBIC lAmb lAmb 15 56 44.4
comp=Z,34nm,0.9s
DBIC Dimbokro 65.28 28 P **P** **15 56 43.0 -0.9**
DBIC pmax pmax
comp=Z,34nm,0.9s
DBIC Dimbokro 65.28 28 *e*P **P** **15 56 42.8 -1.1**
DBIC Dimbokro 65.28 28 P **P** **15 56 43.3 -0.6**
comp=Z,24nm,0.8s,baz=197,slow=6.9,SNR=28
DBIC LR LR 16 20 28.6
comp=Z,226nm,18.1s,baz=194,slow=32
comp=Z,24nm,0.8s
OTAV Otavalo 67.75 306 P **P** **15 56 59.9 -0.5**
OTAV Otavalo 67.75 306 P **P** **15 56 59.9 -0.5**
OTAV pmax pmax
comp=Z,143nm,1.4s
OTAV Otavalo 67.75 306 *e*P **P** **15 57 01.5 +1.1**
OPO Ambohidratompo 67.87 91 LR LR 16 21 08.1
comp=Z,671nm,21.2s,baz=348,slow=31
ROSC El Rosal 70.03 313 P **P** **15 57 15.7 +1.3**
ROSC El Rosal 70.03 313 P **P** **15 57 15.7 +1.3**
comp=Z,25nm,0.7s,baz=108,slow=5.2,SNR=10
ROSC LR LR 16 32 24.4
comp=Z,608nm,18.1s,baz=177,slow=40
comp=Z,25nm,0.7s
BBTS Babate 70.65 14 LR LR 16 21 47.1
comp=Z,276nm,18.8s,baz=218,slow=30
PCRV Puerto La Cruz 71.26 324 P **P** **15 57 21.8 +0.4**
comp=Z,112nm,1.0s,baz=159,slow=4.1,SNR=23
PCRV LR LR 16 31 24.7
comp=Z,669nm,18.3s,slow=38
comp=Z,112nm,1.0s
BAUV El Baul 71.31 320 P **P** **15 57 20.3 -1.4**
BIRV Birongo 72.09 323 P **P** **15 57 25.4 -1.0**
SDV Santo Domingo 72.22 318 P **P** **15 57 26.7 -0.7**
SDV lAmb lAmb 15 57 29.8
comp=Z,84nm,1.0s

SDV Santo Domingo 72.22 318 *e*P **P** **15 57 26.9 -0.5**
SDV Santo Domingo 72.22 318 P **P** **15 57 27.3 -0.2**
comp=Z,56nm,0.9s,baz=136,slow=4.4,SNR=33
SDV LR LR 16 32 38.6
comp=Z,2μm,18.1s,baz=154,slow=39
comp=Z,56nm,0.9s
KOWA Kowa 72.99 27 P **P** **15 57 31.5 -0.2**
KOWA Kowa 72.99 27 LR LR 16 23 28.0
comp=Z,137nm,19.4s,baz=242,slow=31
TOA0 Torodi Ar. Sit 73.33 33 P **P** **15 57 32.8 -0.8**
TOA0 lAmb lAmb 15 57 34.7
comp=Z,53nm,0.8s
TORD Torodi Ar. Bea 73.33 33 P **P** **15 57 33.4 -0.2**
comp=Z,46nm,0.8s,baz=200,slow=6.5,SNR=6.3
TORD LR LR 16 24 17.4
comp=Z,655nm,19.3s,baz=194,slow=31
comp=Z,46nm,0.8s
MBAR Mbarara 73.43 66 P **P** **15 57 35.4 +0.8**
MBAR lAmb lAmb 15 57 38.6
comp=Z,53nm,1.4s
MBAR Mbarara 73.43 66 *i*P **P** **15 57 34.8 +0.1**
MBAR pmax pmax
comp=Z,48nm,1.4s
MBAR Mbarara 73.43 66 LR LR 16 27 09.6
comp=Z,354nm,18.7s,baz=178,slow=34
BIM Bigot 74.22 329 P **P** **15 57 38.8 -0.2**
FDF Fort de France 74.45 329 P **P** **15 57 40.5 +0.2**
FDF lAmb lAmb 15 57 41.4
comp=Z,74nm,1.0s
FDF Fort de France 74.45 329 P **P** **15 57 40.5 +0.2**
FDF pmax pmax
comp=Z,74nm,1.0s
GDSD La Dsirade Is 75.92 330 P **P** **15 57 48.6 -0.1**
GDHS Morne Mazeau, 76.09 329 P **P** **15 57 49.8 +0.1**
BCIP Isla Barro Col 76.29 309 P **P** **15 57 50.9 +0.1**
BCIP lAmb lAmb 15 57 53.6
comp=Z,64nm,1.1s
BCIP Isla Barro Col 76.29 309 P **P** **15 57 50.9 +0.1**
BCIP pmax pmax
comp=Z,64nm,1.2s
KMBO Kilima Mbogo 76.47 72 *i*P **P** **15 57 53.6 +1.3**
KMBO Kilima Mbogo 76.47 72 LR LR 16 30 18.8
comp=Z,1μm,18.1s,baz=255,slow=35
ANWB Willy Bob 77.42 329 P **P** **15 57 56.6 -0.4**
WHZ Wether Hill Ro 78.01 193 P **P** **15 58 00.4 +0.1**
WHZ lAmb lAmb 15 58 02.2
comp=Z,78nm,1.1s
JACO JACO, Garabito 78.92 305 P **P** **15 58 05.1 -0.4**
JACO lAmb lAmb 15 58 08.9
comp=Z,93nm,1.2s
MTP Monte Pirata 78.97 326 P **P** **15 58 04.9 -0.8**
MTP lAmb lAmb 15 58 07.3
comp=Z,52nm,1.1s
STVI Saint Thomas 79.02 327 P **P** **15 58 05.2 -0.7**
STVI lAmb lAmb 15 58 07.9
comp=Z,61nm,1.0s
CUPR Culebra, Puert 79.08 326 P **P** **15 58 05.6 -0.7**
SJG San Juan 79.18 325 LR LR 16 34 59.2
comp=Z,227nm,19.5s,baz=190,slow=37
CBYP Canovanas 79.23 326 P **P** **15 58 06.3 -0.9**
CBYP lAmb lAmb 15 58 08.8
comp=Z,73nm,1.1s
MLPR Magueyes Islan 79.34 325 P **P** **15 58 06.4 -1.3**
MLPR lAmb lAmb 15 58 09.5
comp=Z,74nm,1.1s
CRPR Cabo Rojo, PR 79.39 325 P **P** **15 58 06.8 -1.2**
CRPR lAmb lAmb 15 58 09.8
comp=Z,84nm,1.1s
JTS Las Juntas de 79.60 305 P **P** **15 58 09.2 -0.1**
JTS lAmb lAmb 15 58 12.8
comp=Z,123nm,1.1s
JTS Las Juntas de 79.60 305 *i*P **P** **15 58 09.3 -0.1**
JTS pmax pmax
comp=Z,82nm,1.1s
RPZ Rata Peaks 79.71 196 P **P** **15 58 09.9 +0.2**
RPZ Rata Peaks 79.71 196 P **P** **15 58 10.3 +0.7**
comp=Z,84nm,0.9s,baz=175,slow=6.0,SNR=18
RPZ LR LR 16 28 12.2
comp=Z,185nm,21.5s,baz=109,slow=32
comp=Z,84nm,0.9s
COVE Coope Vega, Sa 79.72 306 P **P** **15 58 10.2 +0.3**
ORTG Ortega, Santa 79.90 305 P **P** **15 58 11.5 +0.5**
ORTG lAmb lAmb 15 58 14.9
comp=Z,98nm,1.1s
OXZ Oxford 79.93 196 P **P** **15 58 10.9 +0.1**
OXZ lAmb lAmb 15 58 20.1
comp=Z,106nm,1.4s
HZTE Horizontes, Gu 80.27 305 P **P** **15 58 13.5 +0.6**
LTZ Lake Taylor 80.42 197 P **P** **15 58 14.0 +0.4**
LTZ lAmb lAmb 15 58 15.3
comp=Z,81nm,1.0s
ACON Acoyapa 81.17 306 P **P** **15 58 17.2 -0.5**
BSWZ Blackbirch Sta 81.19 198 P **P** **15 58 17.9 +0.3**
THZ Tophouse 81.31 197 P **P** **15 58 18.1 -0.2**
THZ lAmb lAmb 15 58 21.1
comp=Z,72nm,1.1s
SNZO South Karori 81.43 199 P **P** **15 58 18.9 0.0**
SNZO lAmb lAmb 15 58 22.4
comp=Z,69nm,0.9s
TUWZ Tuamarina 81.45 198 P **P** **15 58 19.0 0.0**
BFZ Birch Farm 81.74 200 P **P** **15 58 20.2 -0.4**
BFZ lAmb lAmb 15 58 23.7
comp=Z,95nm,1.2s
NNZ Nelson 81.76 198 P **P** **15 58 20.4 -0.2**
TAU Tasmania Unive 82.15 178 P **P** **15 58 22.5 -0.1**
TAU lAmb lAmb 15 58 24.6
comp=Z,39nm,1.1s
TAU Tasmania Unive 82.15 178 P **P** **15 58 22.5 -0.1**
TAU pmax pmax
comp=Z,39nm,1.2s
MATN Matagalpa 82.36 306 P **P** **15 58 24.0 -0.1**
MATN lAmb lAmb 15 58 27.2
comp=Z,56nm,0.9s
URZ Urewera 83.90 201 P **P** **15 58 32.1 +0.3**
comp=Z,14nm,0.9s,baz=128,slow=20
URZ LR LR 16 31 60.0
comp=Z,186nm,18.7s,baz=211,slow=33
comp=Z,14nm,0.9s
TGUH Tegucigalpa,Un 83.97 305 P **P** **15 58 32.4 0.0**
TGUH lAmb lAmb 15 58 37.6
comp=Z,57nm,0.9s
GRTK Grand Turk 84.02 322 P **P** **15 58 32.6 +0.3**
HIZ Hauiti 84.11 200 P **P** **15 58 32.8 -0.1**
MTO3 Montecristo 85.26 304 P **P** **15 58 38.6 -0.5**
MTO3 lAmb lAmb 15 58 41.5
comp=Z,62nm,1.1s
TBI Tubuai 86.13 234 *e*S **S** **16 09 17.3 +1.7**
comp=Z,108nm,25.2s
TBI Tubuai 86.13 234 *e*LR LR 16 25 56.3
comp=Z,847nm,28.5s
NWAO Narrogin (SRO) 87.84 153 LR LR 16 32 58.4
comp=Z,335nm,20.9s,baz=64,slow=32
TEIG Tepich 89.81 307 P **P** **15 59 00.5 -0.1**
ATD Arta Tunnel 90.05 70 LR LR 16 38 30.4
comp=Z,647nm,18.1s,baz=182,slow=35
CMIG Matias Romero 90.25 300 P **P** **15 59 03.3 +0.6**
comp=Z,19nm,1.0s,baz=138,slow=3.7,SNR=18
CMIG LR LR 16 34 25.3
comp=Z,214nm,21.9s,baz=152,slow=32
comp=Z,19nm,1.0s
MDT Midelt 90.49 21 P **P** **15 59 05.9 +2.4**
MDT Midelt 90.49 21 P **P** **15 59 05.9 +2.4**
comp=Z,7.0nm,0.9s,baz=251,slow=3.5,SNR=8.4
MDT LR LR 16 35 21.5
comp=Z,189nm,18.1s,baz=178,slow=33
PPT2 Papeete2 91.15 236 *e*S **S** **16 10 03.3 0.0**
comp=Z,134nm,29.5s
PPT2 Papeete2 91.15 236 *e*LR LR 16 28 14.9
comp=Z,826nm,29.5s
PPT Papeete 91.17 236 LR LR 16 32 05.0
comp=Z,232nm,20.2s,baz=145,slow=30
RAO Raoul Island 91.33 208 LR LR 16 35 33.4
comp=Z,71nm,18.0s,baz=160,slow=32
RAR Rarotonga 92.52 226 LR LR 16 33 20.0
comp=Z,123nm,20.6s,baz=154,slow=31
STKA Stephens Creek 92.91 173 *i*P **P** **15 59 14.5 -0.5**
STKA Stephens Creek 92.91 173 P **P** **15 59 13.7 -1.4**
comp=Z,4.1nm,0.9s,baz=176,slow=8.9,SNR=5.7
STKA LR LR 16 40 34.7
comp=Z,446nm,19.1s,baz=196,slow=35
comp=Z,4.1nm,0.9s
TAOE Nuku Hiva Isla 93.79 249 *e*LR LR 16 29 27.6
comp=Z,533nm,28.8s
KEST Kesra 96.82 32 P **P** **15 59 34.9 +2.3**
comp=Z,3.6nm,0.8s,baz=250,slow=5.3,SNR=4.4
KEST LR LR 16 39 26.3

comp=Z,543nm,19.2s,baz=162,slow=33
ESDC Sonseca Array 97.24 20 P Pdif 15 59 35.2 +0.7
ESDC Sonseca Array 97.24 20 P Pdif 15 59 35.7 +1.2
comp=Z,2.5nm,0.9s,baz=187,slow=4.5,SNR=13
ESDC LR LR 16 38 36.7
comp=Z,196nm,20.3s,baz=178,slow=32
comp=Z,2.5nm,0.9s
VAE Valguarnera 100.01 35 LR LR 16 41 47.6
comp=Z,164nm,18.4s,baz=154,slow=34
ASAR Alice Springs 100.22 165 Pdif **Pdif** **15 59 46.6 -1.7**
ASAR Alice Springs 100.22 165 P **Pdif** **15 59 46.6 -1.7**
ASAR Alice Springs 100.22 165 P **Pdif** **15 59 46.6 -1.7**
comp=Z,3.0nm,0.9s,baz=195,slow=4.4,SNR=20
ASAR PP **PP** **16 03 53.7 +0.5**
comp=Z,2.1nm,0.9s,baz=189,slow=8.0,SNR=8.3
ASAR PKKP **PKKPbc** **16 16 04.3 +1.4**
comp=Z,1.0nm,0.8s,baz=10,slow=2.0,SNR=9.0
HKT Hockley 101.62 306 *i*P **Pdif** **15 59 56.5 +2.5**
HKT pmax pmax
comp=Z,6.0nm,1.1s
DZM Mont Dzumac 101.63 196 *e*LR LR 16 33 05.9
comp=Z,447nm,23.9s
WRA Warramunga Arr 103.94 165 Pdiff **Pdif** **16 00 04.1 -0.8**
comp=Z,0.6nm,0.9s,baz=197,slow=4.8,SNR=2.6
WRA PP **PKiKP** **16 04 23.1 +0.8**
comp=Z,0.7nm,0.9s,baz=188,slow=16,SNR=3.0
WRA PKKPbc **PKKPbc** **16 15 53.7 +1.6**
comp=Z,1.5nm,0.9s,baz=356,slow=3.6,SNR=8.4
TXAR Lajitas Array 104.86 300 Pdiff **Pdif** **16 00 08.9 +0.3**
comp=Z,1.0nm,1.0s,baz=126,slow=6.4,SNR=5.2
TXAR PKiKP **PKiKP** **16 04 23.5 -0.1**
comp=Z,0.7nm,0.9s,baz=224,slow=3.8,SNR=4.3
TXAR PKKPbc **PKKPbc** **16 15 51.2 +1.3**
comp=Z,0.9nm,0.9s,baz=260,slow=2.3,SNR=6.5
MSTX Muleshoe 108.22 303 P **PKiKP** **16 04 29.4 -0.4**
baz=145
GERES GERESS Array B 110.13 29 PKiKP **PKiKP** **16 04 33.0 +0.1**
comp=Z,0.6nm,0.7s,baz=242,slow=2.9,SNR=4.8
ANMO Albuquerque 110.79 301 P **PKiKP** **16 04 35.6 +0.9**
baz=144
TUC Tucson 110.85 297 PKiKP **PKiKP** **16 04 35.5 +0.8**
TUC Tucson 110.85 297 *i* PKiKP **PKiKP** **16 04 35.5 +0.8**
TUC Tucson 110.85 297 P **PKiKP** **16 04 35.5 +0.8**
baz=143
T25A Trinidad 111.57 304 P **PKiKP** **16 04 37.3 +1.2**
baz=144
CLL Collm 112.17 28 *e*PS PS 16 15 03.0 +8.2
CLL *e*PPS PPS 16 16 03.0
CLL *e*SS SS 16 20 48.0 -11
CLL *e*SSS SSS 16 25 12.0
CLL *e*x x 16 26 36.0
CLL LmH 17 07 00.0
comp=N,100nm,18.6s
CLL LmH 17 07 00.0
comp=E,100nm,19.4s
BGNE Belgrade 112.20 311 P **PKiKP** **16 04 38.7 +1.8**
baz=145
W18A Petrified Fore 112.54 299 P **PKiKP** **16 04 39.0 +1.0**
baz=143
SDCO Great Sand Dun 112.57 304 PKiKP **PKiKP** **16 04 38.0 0.0**
SDCO Great Sand Dun 112.57 304 P **PKiKP** **16 04 39.0 +0.9**
baz=143
S22A 4UR Ranch, Cre 113.20 303 P **PKiKP** **16 04 40.1 +0.8**
baz=143
ECSD EROS Data Cent 113.46 314 P **PKiKP** **16 04 41.0 +1.8**
baz=145
GLA Glamis 113.52 294 P **PKiKP** **16 04 40.4 +0.7**
baz=142
WUAZ Wupatki 113.68 298 PKiKP **PKiKP** **16 04 40.2 +0.1**
WUAZ Wupatki 113.68 298 P **PKiKP** **16 04 40.9 +0.9**
baz=142
SIM Simferopol' 113.73 44 *i* PKiKP **PKiKP** **16 04 43.2 +3.6**
SIM *e* 16 05 39.2
SIM *e*PPP PPP 16 08 03.9
SIM *e*SS SS 16 21 33.5 +14
SIM *e*SSS SSS 16 25 40.0
SIM pmax pmax
comp=Z,5.0nm,5.2s
SIM pmax pmax
comp=Z,40nm,10.2s
SIM pmax pmax
comp=E,33nm,15.6s
IKP In-Ko-Pah, Jac 113.88 293 P **PKiKP** **16 04 41.5 +1.1**
baz=142
PDMCI Parker Dam,Lak 114.14 296 P **PKiKP** **16 04 41.9 +1.1**
baz=142
MONP2 Monument Peak 114.23 293 P **PKiKP** **16 04 42.3 +1.0**
baz=141
ISCO Idaho Springs 114.26 305 P **PKiKP** **16 04 42.5 +1.2**
baz=143
BC3 Big Chuckawall 114.32 294 P **PKiKP** **16 04 42.0 +0.7**
baz=141
IRM Iron Mountain 114.55 295 P **PKiKP** **16 04 42.5 +0.8**
baz=141
NEE2 Needles Airpor 114.75 296 P **PKiKP** **16 04 43.6 +1.7**
baz=141
TPFO Pinon Flats 114.80 293 P **PKiKP** **16 04 43.4 +1.1**
baz=141
PFO Pinyon Flats O 114.81 293 P **PKiKP** **16 04 43.2 +0.9**
baz=141
BELC Belle Mtn. Jos 114.87 294 P **PKiKP** **16 04 43.3 +0.9**
baz=141
HYBB Hyderabad (bro 114.89 95 *e*PP **PP** **16 05 42.8 +1.0**
HYBB *e*SKSac **SKSac** **16 11 30.6 +2.1**
SOC Sochi 114.94 49 *i* PKiKP PKPdf 16 04 41.4 -0.6
SOC *e* 16 05 39.8
SOC *e* 16 11 29.0
SOC *e*PS **PKKPbc** **16 15 16.1 -1.4**
SOC *e*SS SS 16 21 40.9 +5.2
SOC *e*SSS SSS 16 25 51.3
ANN Anapa 114.96 47 *i* PKiKP PKPdf 16 04 37.7 -4.3
ANN *e* 16 05 40.2
ANN *e* 16 11 26.3
ANN pmax pmax
comp=Z,52nm,1.2s
N23A Red Feather La 115.28 306 P **PKiKP** **16 04 44.3 +1.2**
baz=142
GMRC Granite Mounta 115.30 295 P **PKiKP** **16 04 44.5 +1.3**
baz=141
SCI2 San Clemente I 115.42 292 P **PKiKP** **16 04 43.7 +0.4**
baz=141
KNB Kanab 115.58 298 **PKPdf** **16 04 43.5 -0.2**
KNB Kanab 115.58 298 PKiKP **PKPdf** **16 04 43.5 -0.2**
V12A Nelson 115.61 296 **PKPdf** **16 04 43.6 -0.1**
CIS Catalina Islan 115.68 292 P **PKiKP** **16 04 44.4 +0.6**
baz=141
HEC Hector,Ludlow 115.69 294 P **PKiKP** **16 04 44.6 +0.8**
baz=141
O20A White River Ci 115.77 304 P **PKiKP** **16 04 44.8 +0.8**
baz=142
FMP Fort Macarthur 115.85 292 P **PKiKP** **16 04 44.4 +0.3**
baz=141
BFSC Mount Baldy Ra 115.92 293 P **PKiKP** **16 04 45.0 +0.6**
baz=141
TUQ Turquoise Moun 115.94 295 P **PKiKP** **16 04 45.6 +1.2**
baz=141
SHA1 Shidzhatmaz 116.35 51 *i* PKiKP **PKPdf** **16 04 45.0 0.0**
MSU Marysvale 116.42 300 PKPdf **PKPdf** **16 04 45.6 +0.2**
MSU Marysvale 116.42 300 PKiKP **PKPdf** **16 04 45.6 +0.2**
KBZ Khabaz 116.45 51 **PKPdf** **16 04 44.7 -0.1**
KBZ Khabaz 116.45 51*c* *i*PKiKP **PKPdf** **16 04 44.1 -0.8**
KBZ Khabaz 116.45 51 PKP **PKPdf** **16 04 44.7 -0.1**
comp=Z,1.1nm,0.5s,baz=186,slow=4.7,SNR=4.3
SHOC Shoshone, Teco 116.48 295 P **PKiKP** **16 04 46.2 +0.9**
baz=140
KIV Kislovodsk 116.54 51 *i* PKiKP **PKPdf** **16 04 44.8 -0.4**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,153nm,22.0s
EDW2 Edwards Air Fo 116.59 293 P **PKiKP** **16 04 46.3 +0.7**
baz=140,SNR=10
AKASG Malin Array Be 116.67 38 PKPdf **PKPdf** **16 04 44.4 -0.6**
AKASG Malin Array Be 116.67 38*c* *i*PKiKP **PKPdf** **16 04 44.5 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 116.67 38 PKP **PKPdf** **16 04 44.6 -0.5**
comp=Z,1.8nm,0.7s,baz=245,slow=1.3,SNR=7.4
AKBB Malin Array Si 116.67 38*c* *i*PKiKP **PKiKP** **16 04 45.4 +0.3**
LRMC Laurel Mtn Rad 116.89 294 P **PKiKP** **16 04 46.6 +0.4**
baz=140,SNR=5.3
AGMN Agassiz Nation 116.89 317 P **PKiKP** **16 04 46.9 +1.3**
baz=144
K22A Casper 116.93 307 P **PKiKP** **16 04 47.2 +1.1**
baz=142
RSSD Black Hills 116.96 309 PKPdf **PKPdf** **16 04 45.7 -0.5**

RSSD	Black Hills	116.96	309		PKIKP	PKPdf	16 04 45.7	-0.5		
RSSD	Black Hills	116.96	309		P	PKiKP	16 04 47.0	+0.8		
	baz=142									
SBC	Santa Barbara	117.17	292		P	PKiKP	16 04 47.8	+1.2		
	baz=140									
MPMC	Manual Prospec	117.23	294		P	PKiKP	16 04 47.8	+0.9		
	baz=140,SNR=7.7									
TPNV	Topopah Spring	117.27	296		P	PKiKP	16 04 48.0	+1.0		
	baz=140,SNR=19									
ISA	Isabella, Lake	117.44	293		PKPdf	PKiKP	16 04 48.1	+0.9		
ISA	Isabella, Lake	117.44	293		PKIKP	PKiKP	16 04 48.1	+0.9		
ISA	Isabella, Lake	117.44	293		P	PKiKP	16 04 48.5	+1.2		
	baz=140,SNR=11									
PKM	Mcpherson Peak	117.56	292		P	PKPdf	16 04 47.9	+0.3		
	baz=140									
CWC	Cottonwood Cre	117.83	294		P	PKiKP	16 04 48.9	+0.8		
	baz=140									
SPR3	Spring Creek 3	117.86	299		PKPdf	PKiKP	16 04 48.5	+0.3		
GRAC	Grapevine Rang	117.88	295		P	PKiKP	16 04 49.1	+1.1		
	baz=140									
MAK	Makhachkala	117.94	54	*i*	P	Pdif	16 01 00.9	-5.4		
MAK					pmax	pmax				
	comp=Z,179nm,1.1s									
SMMC	Simmler	117.98	292		P	PKiKP	16 04 49.5	+1.2		
	baz=140									
R11A	Troy Canyon, C	118.00	297		P	PKPdf	16 04 48.5	+0.2		
	baz=140,SNR=8.6									
MDND	Maddock	118.02	314		P	PKiKP	16 04 49.2	+1.3		
	baz=143									
DUG	Dugway, Tooele	118.03	301		P	PKiKP	16 04 49.0	+0.7		
	baz=140,SNR=5.5									
BW06	Boulder Array	118.43	305		P	PKPdf	16 04 49.2	+0.1		
	baz=140									
PD31	Pinedale Array	118.43	305		PKPdf	PKPdf	16 04 48.7	-0.3		
PDAR	Pinedale Array	118.43	305		PKPdf	PKPdf	16 04 48.8	-0.3		
PDAR	Pinedale Array	118.43	305		PKP	PKPdf	16 04 48.8	-0.3		
	comp=Z,2.2nm,0.9s,baz=142,slow=2.8,SNR=11									
PDAR					PP	PP	16 06 03.5	-3.3		
	comp=Z,2.3nm,1.1s,baz=127,slow=5.7,SNR=2.8									
PDAR					PKKPab	PKKPbc	16 15 05.4	-0.1		
	comp=Z,0.5nm,0.7s,baz=331,slow=1.9,SNR=4.9									
ULM	Lac du Bonnet	118.47	318		PKIKP	PKPdf	16 04 47.4	-1.2		
ULM	Lac du Bonnet	118.47	318		PKP	PKPdf	16 04 47.4	-1.2		
	baz=90,slow=20									
DSP	Deep Springs	118.48	295		PKPdf	PKiKP	16 04 49.7	+0.7		
HWUT	Hardware Ranch	118.50	303		PKPdf	PKPdf	16 04 48.9	-0.2		
BGU	Big Grassy Mou	118.69	301		PKPdf	PKPdf	16 04 49.4	-0.1		
OMMB	Old Mammoth Mi	119.20	295		PKPdf	PKPdf	16 04 50.7	-0.1		
NACGM	Naroch	119.36	34	⇑*e*	PKP	PKiKP	16 04 50.9	+0.7		
	baz=213									
MNK	Minsk	119.38	35	*i*	PKIKP	PKPdf	16 04 49.9	-0.2		
MNK				*i*			16 06 11.7			
MNK				*i*	PPP	PPP	16 08 53.4			
MNK				*i*			16 11 52.3			
MNK				*i*	PS	PS	16 16 00.5	+0.1		
MNK				*i*	SS	SS	16 22 36.3	+3.2		
MNK				*i*	SSS	SSS	16 27 01.3			
MNK					pmax	pmax				
	comp=N,6.0nm,0.9s									
MNK					pmax	pmax				
	comp=E,2.0nm,0.9s									
MNK					pmax	pmax				
	comp=Z,17nm,1.0s									
MNK					MLR	MLR				
	comp=Z,158nm,20.0s									
MNK					MLR	MLR				
	comp=N,14nm,18.0s									
MNK					MLR	MLR				
	comp=E,14nm,19.0s									
MNK	Minsk	119.38	35	*i*	PKP	PKPdf	16 04 49.9	-0.2		
	comp=E,2.0nm,0.9s									
MNK				*i*	PKP	PKPdf	16 04 49.9	-0.2		
	comp=N,6.0nm,0.8s									
MNK				*i*	PKP	PKPdf	16 04 49.9	-0.2		
	comp=Z,17nm,1.0s,baz=214									
MNK				*i*	PP	PP	16 06 11.7	-1.1		
MNK				*i*	PPP	PPP	16 08 53.5			
MNK				*i*	SKS	SKSdf	16 11 52.4	-7.0		
MNK				*i*	PS	PS	16 16 00.5	+0.1		
MNK				*i*	SS	SS	16 22 36.4	+3.3		
MNK				*i*	SSS	SSS	16 27 01.3			
MNK				*i*	LQ	LQ	16 49 27.3			
MNK				*i*	LR	LR	16 53 21.2			
MNK				*i*	LRM	MLR	16 54 50.2			
	comp=Z,158nm,19.8s									
MNK				*i*	LRM	MLR	16 54 59.5			
	comp=N,14nm,17.9s									
MNK				*i*	LRM	MLR	16 55 22.5			
	comp=E,14nm,19.2s									
NVAR	Mina Array Bea	119.45	296		PKPdf	PKPdf	16 04 51.3	+0.1		
NVAR	Mina Array Bea	119.45	296		PKP	PKiKP	16 04 52.0	+0.8		
	comp=E,5.2nm,0.9s,baz=161,slow=3.0,SNR=24									
NVAR					PKKPab	PKKPab	16 15 03.2	+0.1		
	comp=E,0.9nm,0.9s,baz=317,slow=1.9,SNR=5.2									
ELK	Elko	119.64	299		PKPdf	PKiKP	16 04 51.9	+0.3		
ELK	Elko	119.64	299		PKIKP	PKiKP	16 04 51.9	+0.3		
MOOW	Moose Ponds	119.74	305		PKPdf	PKPdf	16 04 51.5	0.0		
KVN	Kaiserville	119.82	296		PKPdf	PKPdf	16 04 51.9	+0.1		
KVN	Kaiserville	119.82	296		PKIKP	PKPdf	16 04 51.9	+0.1		
RLMT	Red Lodge	120.10	307		P	PKPdf	16 04 52.5	+0.3		
	baz=140									
BMN	Battle Mountai	120.40	298		PKPdf	PKPdf	16 04 52.9	+0.1		
BMN	Battle Mountai	120.40	298		PKIKP	PKPdf	16 04 52.9	+0.1		
NB2	NORSAR Subarra	120.55	22		PKPdf	PKPdf	16 04 52.3	0.0		
	comp=Z,45nm,2.5s,baz=202,slow=1.9									
NB2	NORSAR Subarra	120.55	22		PKPdf	PKPdf	16 04 52.3	0.0		
	baz=202,slow=1.9									
NOA	NORSAR Array B	120.55	22		PKIKP	PKPdf	16 04 52.4	+0.1		
NOA	NORSAR Array B	120.55	22		PKP	PKPdf	16 04 52.4	+0.1		
	comp=Z,3.9nm,1.0s,baz=195,slow=1.7,SNR=7.3									
KRVT	Keravat (AS076	120.58	183			PKiKP	16 04 55.2	+1.2		
KRVT	Keravat (AS076	120.58	183		PKP	PKiKP	16 04 55.2	+1.2		
	comp=Z,26nm,0.7s,baz=265,slow=6.8,SNR=5.7									
VSR	Storozhevoye	120.78	43	*e*	PKIKP	PKPdf	16 04 50.5	-2.5		
VSR					pmax	pmax				
	comp=Z,10.0nm,1.4s									
VORR	Voronezh	121.16	43	*e*	PKIKP	PKPdf	16 04 51.4	-2.3		
VORR					pmax	pmax				
	comp=Z,40nm,0.4s									
HLID	Hailey	121.35	302		PKPdf	PKPdf	16 04 54.9	+0.3		
HLID	Hailey	121.35	302		P	PKiKP	16 04 56.0	+1.3		
	baz=138									
BOZ	Bozeman (W)	121.55	305		P	PKiKP	16 04 55.8	+0.8		
	baz=139,SNR=8.0									
BEKR	Beckworth	121.59	295		PKPdf	PKPdf	16 04 55.5	+0.3		
MFID	Camas Ranch	121.93	301		PKPdf	PKiKP	16 04 56.2	+0.4		
VSU	Vasula	122.30	31	*i*	PKIKP	PKiKP	16 04 56.3	+0.5		
VSU					pmax	pmax				
	comp=Z,64nm,1.0s									
EGMT	Eagleton	122.50	309		P	PKiKP	16 04 57.6	+0.8		
	baz=138									
OBN	Obninsk	122.85	39	⇑*i*	PKIKP	PKPdf	16 04 55.6	-1.2		
OBN				*e*			16 06 36.8			
OBN				*e*	SS	SS	16 23 15.1	-2.4		
OBN					pmax	pmax				
	comp=Z,24nm,1.7s									
PLID	Pearl Lake	123.25	302		PKPdf	PKPdf	16 04 58.5	+0.2		
MSO	Missoula	123.54	305		P	PKiKP	16 04 59.3	+0.4		
	baz=137,SNR=13									
KMRM	Mail Ridge	123.59	293		PKPdf	PKiKP	16 04 59.6	+0.5		
KMPM	Mount Pierce	123.95	293		PKPdf	PKiKP	16 05 00.3	+0.5		
K05A	Summer Lake	123.95	297		PKPdf	PKPdf	16 04 59.9	+0.2		
YBH	Yreka Blue Hor	124.17	295		PKPdf	PKPdf	16 04 59.9	-0.1		
YBH	Yreka Blue Hor	124.17	295		PKIKP	PKPdf	16 04 59.9	-0.1		
I07A	Izee	124.23	299		PKPdf	PKiKP	16 05 00.6	+0.3		
L04D	Klamath Falls	124.31	296		PKPdf	PKPdf	16 05 00.4	+0.2		
L04D	Klamath Falls	124.31	296		P	PKPdf	16 05 00.7	+0.4		
	baz=136									
JTMT	Jette	124.37	306		PKPdf	PKPdf	16 04 59.8	-0.4		
NIL	Nilore	124.37	79		PKPdf	PKPdf	16 05 00.2	-0.3		
NIL	Nilore	124.37	79		PKIKP	PKPdf	16 05 00.2	-0.3		
J05D	Fort Rock, OR	124.53	298		P	PKiKP	16 05 01.6	+0.6		
	baz=136,SNR=16									
FINES	FINESS Array B	124.56	29	*c*	*i* PKIKP	PKPdf	16 05 00.3	+0.4		
FINES					pmax	pmax				
	comp=Z,12nm,0.8s									
FINES	FINESS Array B	124.56	29		PKP	PKPdf	16 05 00.2	+0.3		
	comp=Z,12nm,0.8s,baz=132,slow=2.8,SNR=22									
FIA1	FINESS Array S	124.57	29		PKPdf	PKPdf	16 05 00.2	+0.3		
PINE	Pine Mountain	124.75	298		PKPdf	PKiKP	16 05 02.0	+0.5		
G08A	Pilot Rock	124.83	301		PKPdf	PKPdf	16 05 01.4	+0.3		
KSXB	Camp Six Broad	124.84	295		PKPdf	PKiKP	16 05 02.2	+0.6		
L02F	Cave Junction	124.89	295		P	PKiKP	16 05 02.2	+0.7		
	baz=136,SNR=10.0									
HUMO	Hull Mountain	124.92	296		PKPdf	PKPdf	16 05 01.5	+0.2		
J04D	Umpqua Nationa	124.94	297		P	PKiKP	16 05 02.1	+0.2		
	baz=136,SNR=9.3									
BELG	Belogornoye	125.11	47			PKPdf	16 05 00.9	-0.3		
BELG	Belogornoye	125.11	47		PKIKP	PKPdf	16 05 00.9	-0.3		
BELG	Belogornoye	125.11	47		PKP	PKPdf	16 05 00.9	-0.3		
	comp=Z,21nm,0.8s,baz=150,slow=4.1,SNR=6.5									
WALA	Waterton Lakes	125.14	307		PKPdf	PKPdf	16 05 01.3	-0.4		
KBO	Bosley Butte	125.30	295		PKPdf	PKiKP	16 05 03.2	+0.7		
I05D	Terrebonne, OR	125.34	298		P	PKiKP	16 05 03.1	+0.7		
	baz=136									
K02D	Willamette Mer	125.35	296		P	PKiKP	16 05 03.2	+0.7		
	baz=136,SNR=21									
I04A	Tendick Farm,	125.49	297		P	PKPdf	16 05 02.5	+0.1		
	baz=136,SNR=8.4									
PYUN	Piuthan	125.77	91	*e*	P	PKPdf	16 05 03.1	-0.5		
J01E	Myrtle Point	125.82	296		P	PKiKP	16 05 04.0	+0.7		
	baz=135									
KOLN	Koldanda	125.87	92	*e*	P	PKPdf	16 05 02.8	-1.0		
I03D	Drain, OR	125.90	297		P	PKiKP	16 05 03.8	+0.4		
	baz=135									
G05D	Wamic, OR	125.97	299		P	PKiKP	16 05 04.0	+0.3		
	baz=135									
H04A	Detroit Lake	126.01	298		PKPdf	PKPdf	16 05 03.2	-0.1		
NEW	Newport	126.07	304		P	PKiKP	16 05 04.6	+0.9		
	baz=135									
BUCK	Buck Mountain	126.07	297		PKPdf	PKPdf	16 05 03.8	+0.3		
D08A	Wollman Farm,	126.08	302		PKPdf	PKiKP	16 05 03.9	+0.2		
H04D	Lebanon	126.18	298		P	PKiKP	16 05 04.6	+0.6		
	baz=135									
DANN	Dangsing	126.40	92	*e*	P	PKPdf	16 05 04.8	-0.1		
I02E	Swisshome, OR	126.45	297		P	PKiKP	16 05 05.3	+0.8		
	baz=135									
DMN	Daman	126.60	94	*e*	P	PKPdf	16 05 05.1	-0.2		
GKN	Gorkha	126.64	93	*e*	P	PKPdf	16 05 04.7	-0.5		
PKIN	Phulchoki	126.75	94	*e*	P	PKPdf	16 05 05.2	-0.4		
PKI	Pulchoki	126.75	94	*e*	P	PKPdf	16 05 04.7	-1.0		
	comp=Z,63nm,1.1s									
KKN	Kakani	126.84	94	*e*	P	PKPdf	16 05 04.6	-1.1		
G03D	McMinnville, O	126.93	298		P	PKiKP	16 05 05.9	+0.4		
	baz=134									
RAMN	Ramite	126.95	95	*e*	P	PKPdf	16 05 05.2	-0.8		
CMAR	Chiang Mai Arr	127.01	113		PKPdf	PKPdf	16 05 05.8	-0.2		
CMAR	Chiang Mai Arr	127.01	113	*c*	PKIKP	PKPdf	16 05 06.1	+0.1		
CMAR					pmax	pmax				
	comp=Z,9.0nm,0.9s									
CMAR	Chiang Mai Arr	127.01	113		PKP	PKPdf	16 05 06.4	+0.4		
	comp=Z,9.0nm,0.9s,baz=233,slow=3.7,SNR=40									
CMAR					PKKP	PKKPdf	16 15 21.3	+3.8		
	comp=Z,0.4nm,0.7s,baz=358,slow=1.8,SNR=4.3									
B08A	Colville Reser	127.19	303		PKPdf	PKPdf	16 05 05.3	-0.1		
JIRN	Jiri	127.26	94	*e*	P	PKPdf	16 05 06.7	0.0		
GUN	Gumba	127.28	94	*e*	P	PKPdf	16 05 06.8	+0.1		
	comp=Z,81nm,1.1s									
ODAN	Odare	127.33	96	*e*	P	PKPdf	16 05 06.2	-0.5		
	comp=Z,17nm,2.1s									
F04D	Rainier, OR	127.41	299		P	PKiKP	16 05 07.5	+1.1		
	baz=134									
UBPT	Khong Chiam	127.64	122		PKPdf	PKPdf	16 05 07.2	0.0		
BTK	Batken	127.65	72		PKPdf	PKPdf	16 05 06.6	-0.1		
BTK	Batken	127.65	72		PKIKP	PKPdf	16 05 06.6	-0.1		
TAPN	Taplejung	127.89	96	*e*	P	PKPdf	16 05 08.0	+0.2		
KLMR	Klimovskoe	128.23	36	*e*	PKIKP	PKPdf	16 05 04.9	-2.0		
KLMR					pmax	pmax				
	comp=Z,36nm,1.6s									
KLMR	Klimovskoe	128.23	36	*e*	PKPdf	PKPdf	16 05 04.9	-2.0		
KLMR					AMP		16 05 10.0			
	comp=Z,36nm,1.6s									
KLMR				*e*	PP	PP	16 07 07.2	-5.0		
AKTO	Aktyubinsk	128.33	55		PKIKP	PKPdf	16 05 07.4	0.0		
AKTO	Aktyubinsk	128.33	55		PKP	PKPdf	16 05 07.5	0.0		
	comp=Z,8.8nm,0.9s,baz=183,slow=2.7,SNR=20									
AB31	Akbulak array	128.43	57	*i*	PKIKP	PKPdf	16 05 07.2	-0.5		
ABKAR	Akbulak array	128.43	57		PKPdf	PKPdf	16 05 07.3	-0.4		
ABKAR	Akbulak array	128.43	57		PKPdf	PKPdf	16 05 07.2	-0.4		
IUG	luzhnay	128.68	70	*e*	PKIKP	PKPdf	16 05 08.6	0.0		
IUG	luzhnay	128.68	70	*e*	PKP	PKPdf	16 05 08.7	0.0		
	baz=70									
KK31	Karatay Array	129.60	69	*i*	PKIKP	PKPdf	16 05 09.6	-0.6		
KKAR	Karatay Array	129.60	69		PKPdf	PKPdf	16 05 09.7	-0.5		
KKAR	Karatay Array	129.60	69		PKPdf	PKPdf	16 05 09.8	-0.5		
KKAR	Karatay Array	129.60	69		PKIKP	PKPdf	16 05 09.7	-0.5		
DZA	Taraz	129.89	70	*e*	PKIKP	PKPdf	16 05 10.0	-0.7		
DZA	Taraz	129.89	70	*e*	PKP	PKPdf	16 05 10.1	-0.7		
	baz=70									
LLLB	Lillooet	129.94	304		PKPdf	PKPdf	16 05 10.5	-0.1		
KSH	Kashi	130.10	76		PKP	PKPdf	16 05 11.5	+0.1		
KIRV	Kirov	130.20	42	*c*	PKIKP	PKPdf	16 05 11.3	+0.6		
KIRV	Kirov	130.20	42		PKP	PKPdf	16 05 10.8	+0.1		
	comp=Z,6.7nm,0.5s,baz=126,slow=0.3,SNR=7.6									
PRGR	Permogore	130.88	38	*e*	PKIKP	PKPdf	16 05 10.6	-1.3		
ARCES	ARCESS Array B	130.91	23		PKPdf	PKPdf	16 05 11.7	-0.1		
ARCES	ARCESS Array B	130.91	23		PKIKP	PKPdf	16 05 11.7	-0.1		
ARCES	ARCESS Array B	130.91	23		PKP	PKPdf	16 05 11.7	-0.1		
	comp=Z,22nm,0.9s,baz=222,slow=1.6,SNR=25									
APA	Apatity	131.33	27	⇑*i*	PKIKP	PKPdf	16 05 10.5	-2.1		
APA				*i*	PPP	PPP	16 10 28.0			
APA					pmax	pmax				
	comp=Z,12nm,1.0s									
AAK	Ala-Archa	131.43	72		PKPdf	PKPdf	16 05 14.1	+0.2		
AAK	Ala-Archa	131.43	72		PKIKP	PKPdf	16 05 14.1	+0.2		
NRN	Naryn	131.44	74		PKPdf	PKPdf	16 05 13.8	-0.3		
NRN	Naryn	131.44	74		PKIKP	PKPdf	16 05 13.8	-0.3		
SGDS	Sogindy	132.05	71	*e*	PKIKP	PKPdf	16 05 14.4	-0.5		
SGDS	Sogindy	132.05	71	*e*	PKP	PKPdf	16 05 14.4	-0.5		
	baz=71									
TKM2	Tokmak 2	132.22	73		PKIKP	PKPdf	16 05 14.7	-0.7		
ARU	Arti	132.53	49		PKPdf	PKPdf	16 05 15.4	+0.1		
ARU	Arti	132.53	49	*i*	PKIKP	PKPdf	16 05 15.4	+0.1		
ARU							16 07 36.5			
ARU					SS	SS	16 25 17.6	-0.1		
ARU					MLR	MLR				
	comp=Z,206nm,20.0s									
ARU	Arti	132.53	49		PKP	PKPdf	16 05 15.6	+0.4		
	comp=Z,3.5nm,0.5s,baz=197,slow=2.4,SNR=13									
BTLS	Baital	132.79	69	*ce*	PKIKP	PKPdf	16 05 15.9	-0.2		
BTLS	Baital	132.79	69	⇑*e*	PKP	PKPdf	16 05 16.0	-0.2		
	baz=69									
QIZ	Qiongzhong	132.96	124		PKP	PKPdf	16 05 18.0	+0.7		
QIZ					PP	PP	16 07 43.8	+0.9		
QIZ					SS	SS	16 25 27.3	+4.5		
QIZ					LR	LR				
	comp=Z,260nm,22.8s									
QIZ					LR	LR				
	comp=Z,170nm,22.8s									
QIZ					LR	LR				
	comp=Z,300nm,26.1s									
AAA	Alma-Ata	133.13	73	*e*	PKIKP	PKPdf	16 05 16.7	-0.2		
AAA	Alma-Ata	133.13	73	*e*	PKP	PKPdf	16 05 16.7	-0.2		
	baz=73									
MDOK	Medeo	133.17	73	*e*	PKIKP	PKPdf	16 05 16.3	-0.8		
MDOK	Medeo	133.17	73	*e*	PKP	PKPdf	16 05 16.3	-0.8		
	baz=73									
KUU	Kurty	133.27	72	*e*	PKIKP	PKPdf	16 05 15.9	-1.2		
KUU				*e*			16 07 44.0			
KUU	Kurty	133.27	72	*e*	PKP	PKPdf	16 05 15.9	-1.2		
	baz=72									
KUU				*e*	PP	PP	16 07 44.0	-1.2		
	baz=72									
CHKK	Chushkaly	133.60	72	*e*	PKIKP	PKPdf	16 05 17.0	-0.7		
CHKK	Chushkaly	133.60	72	*e*	PKP	PKPdf	16 05 17.0	-0.7		
	baz=72									
SATY	Saty	133.85	74	*e*	PKIKP	PKPdf	16 05 17.9	-0.5		
SATY	Saty	133.85	74	*e*	PKP	PKPdf	16 05 18.0	-0.5		
	baz=74									
KPKS	Kokpek	134.27	74	*e*	PKIKP	PKPdf	16 05 18.1	-1.0		
KPKS	Kokpek	134.27	74	*e*	PKP	PKPdf	16 05 18.1	-1.0		
	baz=74									
YKA	Yellowknife Ar	134.42	320		PKPdf	PKPdf	16 05 18.3	-0.3		
YKA	Yellowknife Ar	134.42	320		PKIKP	PKPdf	16 05 18.2	-0.3		
YKA	Yellowknife Ar	134.42	320		PKiKP	PKPpre	16 05 12.9			
	comp=Z,4.1nm,0.8s,baz=162,slow=1.1,SNR=5.1									
YKA					PKP	PKPdf	16 05 18.2	-0.3		
	comp=Z,4.9nm,0.7s,baz=128,slow=2.2,SNR=16									
YKA					PP	PP	16 07 49.2	-2.9		
	comp=Z,5.4nm,1.1s,baz=118,slow=5.8,SNR=5.9									
SHLS	Shalkode	134.50	75	*e*	PKIKP	PKPdf	16 05 19.7	+0.2		
SHLS	Shalkode	134.50	75	*e*	PKP	PKPdf	16 05 19.8	+0.2		
	baz=75									
PZH	PanZhiHua	135.04	110		PKP	PKPdf	16 05 21.8	+0.7		
PZH					PP	PP	16 08 02.0	+5.5		
PZH					SKS	SKSdf	16 12 23.3	-6.7		
PZH					AMB	AMB				
	comp=Z,120nm,6.9s									
PZH					LR	LR				
	comp=Z,380nm,18.3s									
PZH					LR	LR				
	comp=Z,390nm,19.2s									
PZH					LR	LR				
	comp=Z,410nm,18.7s									
TDK	Taldyqorghan	135.12	72	*e*	PKIKP	PKPdf	16 05 20.2	-0.3		
TDK	Taldyqorghan	135.12	72	*e*	PKP	PKPdf	16 05 20.2	-0.3		
	baz=72									
BRZS	Berezniki	135.21	63	*e*	PKIKP	PKPdf	16 05 20.4	-0.1		
BRZS	Berezniki	135.21	63	*e*	PKP	PKPdf	16 05 20.4	-0.1		
	baz=63									
BRVK	Borovoye	135.86	58		PKPdf	PKPdf	16 05 21.6	0.0		
BRVK	Borovoye	135.86	58	*c*	*i* PKIKP	PKPdf	16 05 22.6	+1.0		
BRVK					pmax	pmax				
	comp=Z,15nm,1.0s									
BVA0	Borovoye Array	135.89	59	*i*	PKIKP	PKPdf	16 05 19.9	-1.8		
BVAR	Borovoye Array	135.89	59		PKIKP	PKPdf	16 05 21.2	-0.5		
BVAR	Borovoye Array	135.89	59		PKP	PKPdf	16 05 21.1	-0.5		
	comp=Z,11nm,0.9s,baz=184,slow=5.8,SNR=6.7									
BVAR					PP	PP	16 07 59.1	-2.5		
	comp=Z,4.1nm,1.1s,baz=235,slow=5.2,SNR=4.1									
KBS	Kingsbay	136.30	11	*c*	*i* PKIKP	PKiKP	16 05 23.4	0.0		
KBS					pmax	pmax				
	comp=Z,83nm,2.5s									
V35K	Ketchikan	137.48	304		P	PKiKP	16 05 27.6	+1.2		
	baz=124									
T35M	Bob Quinn	137.75	307		P	PKPdf	16 05 26.3	+1.3		
	baz=123									
MAKZ	Makanchi	138.19	72		PKHKP	PKPpre	16 05 16.9			
CRAG	Craig	138.27	303		P	PKPdf	16 05 26.6	+0.7		
	baz=123									
MK31	Makanchi Array	138.35	73	*i*	PKIKP	PKPdf	16 05 23.3	-3.2		
MKAR	Makanchi Array	138.35	73			PKPpre	16 05 17.4			
MKAR	Makanchi Array	138.35	73		PKIKP	PKPdf	16 05 24.1	-2.4		
MKAR	Makanchi Array	138.35	73		PKhKP	PKPpre	16 05 17.8			
	comp=Z,0.7nm,0.8s,baz=268,slow=2.6,SNR=7.0									
MKAR					PKP	PKPdf	16 05 24.1	-2.4		
	comp=Z,1.6nm,0.8s,baz=237,slow=3.8,SNR=11									
MKAR					PP	PP	16 08 16.1	-1.1		
	comp=Z,1.9nm,1.1s,baz=256,slow=4.9,SNR=3.7									
WRAK	Wrangell Islan	138.42	305		P	PKPdf	16 05 26.9	+0.7		
	baz=129									
DLBC	Dease Lake	138.44	309		P	PKPdf	16 05 27.1	+0.8		
	baz=122									
GOMU	GeErMu	138.48	94		PKP	PKPdf	16 05 21.3	-6.2		
GOMU					sPKP		16 05 39.8			
GOMU					AMB	AMB				
	comp=Z,160nm,5.5s									
GOMU					LR	LR				
	comp=Z,130nm,14.5s									
GOMU					LR	LR				
	comp=Z,120nm,17.1s									
GOMU					LR	LR				
	comp=Z,120nm,17.1s

baz=102
LYN LuoYang 147.06 113 ⇑PKPbc PKPdf 16 05 42.5 +0.3
LYN PKPab pPKPdf 16 05 49.3 -1.6
LYN pPKP sPKPbc 16 05 52.8 -3.2
LYN LR LR
comp=Z,290nm,22.2s
LYN LR LR
comp=Z,280nm,21.6s
RIDG Independent Ri 147.16 312 P PKPbc 16 05 44.4 +0.5
baz=106,SNR=80
PAX Paxson 147.20 310 P PKPbc 16 05 44.2 +0.2
baz=107,SNR=88
M24K Tolsona, Glenn 147.25 309 P PKPbc 16 05 45.3 +1.2
baz=108,SNR=46
GLI Glacier Island 147.28 306 P PKPbc 16 05 44.1 -0.1
baz=109,SNR=24
G26K Porcupine Rive 147.52 318 P PKPbc 16 05 44.7 +0.1
baz=102,SNR=31
K24K Donnelly Dome 147.57 312 P PKPbc 16 05 45.1 +0.2
baz=106,SNR=41
J25K Salcha River, 147.61 313 P PKPbc 16 05 45.1 +0.1
baz=105,SNR=24
SCM Sheep Creek Mo 147.69 308 P PKPbc 16 05 46.0 +0.7
baz=108,SNR=41
F26K Sheenjek River 147.81 319 P PKPbc 16 05 46.0 +0.5
baz=101
PWL Port Wells 147.85 306 P PKPbc 16 05 46.2 +0.4
baz=108,SNR=34
M23K Glacier View 147.86 308 P PKPbc 16 05 46.5 +0.7
baz=107,SNR=24
PRP Porcupine Dome 147.89 315 P PKPbc 16 05 46.2 +0.4
baz=103,SNR=20
C27K Jago River 147.97 323 P PKPbc 16 05 46.4 +0.6
baz=98
FYU Fort Yukon 148.00 317 PKPdf PKPdf 16 05 44.0 +1.3
DHY Denali Highway 148.07 310 P PKPbc 16 05 46.9 +0.4
baz=106,SNR=33
KNK Knik Glacier 148.08 307 P PKPbc 16 05 46.6 +0.3
baz=108,SNR=16
WAT6 Susitna Watana 148.09 309 P PKPbc 16 05 46.9 +0.4
baz=106,SNR=6.3
SEW Seward 148.13 304 P PKPbc 16 05 46.5 +0.1
baz=109,SNR=22
SML Sawmill 148.14 307 P PKPbc 16 05 47.2 +0.7
baz=107,SNR=26
H25K Birch Creek 148.17 316 P PKPbc 16 05 47.2 +0.8
baz=102,SNR=44
HDA Harding Lake 148.22 312 P PKPbc 16 05 46.7 +0.1
baz=104,SNR=10
NJ2 Nanjing 148.26 124 ePKPbc PKPdf 16 05 44.5 +0.2
ILAR Eielson Array 148.28 313 PKP2 PKPbc 16 05 47.0 +0.2
ILAR Eielson Array 148.28 313 PKPbc PKPbc 16 05 47.0 +0.2
comp=Z,127nm,0.9s,baz=121,slow=1.4,SNR=173
F25K Christian Rive 148.35 319 P PKPbc 16 05 47.8 +0.9
baz=100
E25K Arctic Village 148.41 320 P PKPbc 16 05 47.8 +0.7
baz=99
C26K Camden Bay 148.42 323 P PKPbc 16 05 47.8 +0.9
baz=97
PMR Palmer 148.44 307 P PKPbc 16 05 47.5 +0.3
baz=107
WAT1 Susitna Watana 148.52 309 P PKPbc 16 05 47.8 +0.4
baz=105
RC01 Rabbit Creek A 148.57 306 P PKPbc 16 05 47.9 +0.3
baz=107,SNR=10.0
POKR Poker Flat Res 148.59 314 P PKPbc 16 05 47.5 -0.1
baz=102,SNR=11
BRSE Bradley Lake S 148.63 303 P PKPbc 16 05 48.4 +0.6
baz=109,SNR=25
COLA College 148.71 313 P PKPbc 16 05 47.7 -0.1
baz=102
TCOL CIGO, UAF Yank 148.71 313 P PKPbc 16 05 47.9 +0.1
baz=102,SNR=23
D25K Kavik River 148.86 322 P PKPbc 16 05 48.4 +0.2
baz=96
KDAK Kodiak Island 148.88 299 PKPbc 16 05 48.4 0.0
KDAK Kodiak Island 148.88 299 PKP2 PKPbc 16 05 48.4 0.0
KDAK Kodiak Island 148.88 299 P PKPbc 16 05 49.2 +0.7
baz=111
G24K Hadweenzic Riv 148.91 317 P PKPbc 16 05 49.0 +0.7
baz=100,SNR=61
H24K Noodor Dome 148.91 315 PKPbc PKPbc 16 05 48.7 +0.3
H24K Noodor Dome 148.91 315 P PKPbc 16 05 48.5 +0.2
baz=101,SNR=40
MCK McKinley 148.91 311 PKPbc PKPbc 16 05 48.8 +0.4
MCK McKinley 148.91 311 PKP2 PKPbc 16 05 48.8 +0.4
MCK McKinley 148.91 311 P PKPbc 16 05 49.2 +0.8
baz=104
M22K Willow 148.94 307 P PKPbc 16 05 49.2 +0.7
baz=106,SNR=23
OHAK Old Harbor 149.03 297 PKPbc 16 05 49.5 +0.7
OHAK Old Harbor 149.03 297 P PKPbc 16 05 49.3 +0.5
baz=111,SNR=45
HOM Homer 149.04 303 P PKPbc 16 05 48.6 -0.1
baz=108
Q20K Shuyak Island 149.07 300 P PKPbc 16 05 49.3 +0.5
baz=110,SNR=21
NEA2 Nenana 149.16 312 P PKPbc 16 05 49.2 +0.2
baz=102,SNR=52
CUT Chulitna 149.18 308 P PKiKP 16 05 50.0 -0.2
baz=105,SNR=18
F24K Squaw Lake 149.19 318 P PKPbc 16 05 49.8 +0.8
baz=98,SNR=48
SII Sitkinak Islan 149.25 296 PKPbc 16 05 49.8 +0.4
SII Sitkinak Islan 149.25 296 P PKiKP 16 05 50.3 -0.3
baz=112,SNR=12
TIY Taiyuan 149.42 109 PKPbc PKPbc 16 05 50.5 -0.1
TRF Thorofare Moun 149.44 310 P PKPbc 16 05 50.5 +0.6
baz=103
E24K Your Creek 149.49 319 P PKPbc 16 05 50.5 +0.8
baz=97,SNR=35
H23K Yukon River 149.58 315 PKPbc PKPbc 16 05 50.1 +0.1
H23K Yukon River 149.58 315 P PKPbc 16 05 50.3 +0.3
baz=100,SNR=13
O20K Slope Mountain 149.64 303 P PKPbc 16 05 50.6 +0.2
baz=107
CHIR Chirikof Islan 149.72 294 PKPbc 16 05 51.2 +0.6
CHIR Chirikof Islan 149.72 294 P PKPbc 16 05 50.9 +0.3
baz=112
KTH Kantishna Hill 149.74 310 PKPbc 16 05 51.0 +0.4
SPCR Spurr Chakacha 149.75 305 P PKPbc 16 05 51.0 +0.4
baz=105,SNR=12
Q19K Cape Douglas, 149.79 301 PKPbc 16 05 50.7 0.0
Q19K Cape Douglas, 149.79 301 P PKPbc 16 05 50.4 -0.4
baz=108,SNR=5.1
P19K Oil Pt 149.81 302 PKPbc 16 05 51.1 +0.4
P19K Oil Pt 149.81 302 P PKPbc 16 05 51.0 +0.2
baz=107,SNR=12
BPAW Bear Paw Mtn. 149.88 311 PKPbc PKPbc 16 05 50.9 +0.1
BPAW Bear Paw Mtn. 149.88 311 P PKPbc 16 05 50.8 +0.1
baz=101,SNR=35
G23K Bananza Creek 149.91 316 P PKiKP 16 05 51.7 0.0
baz=98,SNR=64
MLY Manley 149.94 313 P PKPbc 16 05 50.9 0.0
baz=100,SNR=34
TOLK Toolik Lake Re 149.94 320 P PKPbc 16 05 51.4 +0.6
baz=95,SNR=46
BTO Baotou 150.13 103 ePKPbc PKPdf 16 05 46.3 -0.9
PPLA Purkeypile 150.16 309 P PKPbc 16 05 52.1 +0.5
baz=102,SNR=18
CAST Castle Rocks 150.22 310 P PKPbc 16 05 51.6 0.0
baz=102,SNR=6.9
M20K Styx River 150.35 306 P PKPbc 16 05 52.3 +0.2
baz=104
D23K Nanushuk River 150.37 321 P PKiKP 16 05 52.6 0.0
baz=93,SNR=17
C23K Itkillik River 150.38 323 P PKPbc 16 05 52.1 +0.3
baz=92,SNR=26
HNS HongShan 150.40 113 ⇓PKPbc PKPdf 16 05 47.8 +0.3
CHUM Lake Minchumin 150.41 311 P PKPbc 16 05 52.3 +0.3
baz=101,SNR=9.3
I21K Tanana 150.49 313 P PKPbc 16 05 51.9 -0.2
baz=99
O19K Port Alsworth 150.49 303 P PKPbc 16 05 51.7 -0.6
baz=106,SNR=30
P18K Big Mountain, 150.71 301 PKPbc PKPbc 16 05 52.4 -0.6
P18K Big Mountain, 150.71 301 P PKPbc 16 05 52.5 -0.4
baz=106
N19K Bonanza Creek 150.73 304 PKPbc 16 05 52.8 -0.2
N19K Bonanza Creek 150.73 304 P PKPbc 16 05 52.6 -0.3
baz=104,SNR=48
E22K Anaktuvuk Pass 150.74 319 P PKPbc 16 05 53.3 +0.6
baz=94,SNR=42
TIA Tai'an 150.75 117 ⇑P PKPbc 16 05 53.5 -0.2
TIA pmax pmax
comp=Z,37nm,0.9s
R17K Ugashik Creek 150.75 297 P PKPbc 16 05 53.4 +0.4
baz=109,SNR=32
O18K Koktuh Hills 150.82 302 PKPbc 16 05 52.7 -0.4
O18K Koktuh Hills 150.82 302 P PKPbc 16 05 53.3 +0.2
baz=106,SNR=73
L20K Farewell, AK 150.83 307 P PKPbc 16 05 52.8 -0.3
baz=102,SNR=16
F22K John River 150.83 318 P PKiKP 16 05 53.9 +0.3
baz=94,SNR=37
H21K Melozitna Rive 150.89 314 PKPbc PKPbc 16 05 53.4 +0.2
H21K Melozitna Rive 150.89 314 P PKPbc 16 05 53.5 +0.3
baz=97
M19K Big River Lodg 150.94 306 PKPbc 16 05 53.4 0.0
M19K Big River Lodg 150.94 306 P PKPbc 16 05 53.4 0.0
baz=103,SNR=18
K20K Telida 151.08 309 PKPbc 16 05 54.0 +0.3
K20K Telida 151.08 309 P PKPbc 16 05 53.6 0.0
baz=100,SNR=21
HHC Hu-ho-hao-te 151.16 104 ePKPbc PKPdf 16 05 46.5 -2.3
Q16K King Salmon 151.21 299 P PKPbc 16 05 53.6 -0.3
baz=107,SNR=16
L19K White Mountain 151.21 307 P PKPbc 16 05 53.9 -0.1
baz=102,SNR=11
P17K Kvichak River 151.25 300 P PKPbc 16 05 53.9 -0.2
baz=106,SNR=65
J20K Nowinta River 151.25 311 P PKPbc 16 05 54.1 +0.1
baz=99
G21K Allakaket 151.27 316 P PKiKP 16 05 54.6 +0.1
baz=95
MOY Mondy 151.29 77 ePKIKP PKPdf 16 05 48.5 -0.1
MOY pmax pmax
comp=Z,134nm,2.2s
F21K Alatna River 151.31 317 P PKiKP 16 05 54.9 +0.3
baz=94
SVW2 Sparrevohn 151.31 304 PKPbc 16 05 53.9 -0.3
IMAR Indian Mountai 151.32 315 PKPbc PKiKP 16 05 54.6 +0.1
R16K Pilot Point 151.34 297 P PKPbc 16 05 54.4 +0.1
baz=108
CHGN Chignik 151.35 294 PKPbc PKPbc 16 05 54.4 0.0
CHGN Chignik 151.35 294 P PKPbc 16 05 54.0 -0.4
baz=110,SNR=13
N18K Kilae Creek 151.36 303 P PKPbc 16 05 54.4 0.0
baz=104,SNR=18
CNBA Chernabura Isl 151.44 290 PKPbc PKPbc 16 05 54.5 -0.2
CHNA Chernabura Isl 151.45 290 P PKPbc 16 05 54.5 -0.2
baz=112,SNR=29
O17K Koliganek Bris 151.72 301 P PKPbc 16 05 55.1 -0.1
baz=105,SNR=49
TTA Tatalina 151.88 308 PKPbc PKPbc 16 05 56.0 +0.4
TTA Tatalina 151.88 308 PKIKP PKPbc 16 05 56.0 +0.4
TTA Tatalina 151.88 308 P PKiKP 16 05 56.7 +0.8
baz=100,SNR=15
S14K Fog Glacier 151.95 293 P PKPbc 16 05 56.3 +0.3
baz=110,SNR=16
P16K Nushagak River 151.97 299 P PKPbc 16 05 55.5 -0.2
baz=106,SNR=8.7
ZAK Zakamensk 151.98 81 ePKIKP PKPdf 16 05 48.7 -1.0
ZAK pmax pmax
comp=Z,43nm,1.9s
SDPT Sand Point 152.11 291 PKPbc 16 05 56.2 0.0
SDPT Sand Point 152.11 291 P PKPbc 16 05 56.2 0.0
baz=111,SNR=15
O16K Kokwok River B 152.17 301 P PKPbc 16 05 56.0 -0.2
baz=104,SNR=9.8
SONM Songino Array 152.47 87 PKPbc PKPbc 16 05 57.2 -0.2
SONM Songino Array 152.47 87 PKIKP PKPdf 16 05 50.7 +0.1
SONM 16 05 57.3
SONM Songino Array 152.47 87 PKP PKPdf 16 05 50.7 +0.1
comp=Z,1.4nm,0.8s,baz=188,slow=1.4,SNR=10
SONM PKPbc PKPbc 16 05 57.3 -0.2
comp=Z,19nm,0.8s,baz=224,slow=2.5,SNR=55
GCSA Galena City Sc 152.50 312 P PKiKP 16 05 58.0 +1.0
baz=96
N16K Nishlik Lake 152.70 302 P PKiKP 16 05 58.4 +0.8
baz=102,SNR=12
BJI Beijing 153.11 111 PKPbc PKPdf 16 05 51.8 +0.3
BJI PKS PKSdf 16 09 24.0 -1.8
IRK Irkutsk 153.37 78 ePKIKP PKPdf 16 05 51.8 +0.3
IRK pmax pmax
comp=Z,70nm,2.1s
FALS False Pass 153.52 289 P PKiKP 16 06 00.6 +1.2
baz=110
XLT XiLinHaoTe 155.68 104 ePKP PKPdf 16 05 54.5 -0.6
XLT PKPab PKPab 16 06 21.8 +0.1
KSRS Korea Array 156.86 131 PKP2 PKPab 16 06 27.0 +0.3
KSRS Korea Array 156.86 131 PKPab PKPab 16 06 26.9 +0.3
comp=Z,15nm,0.9s,baz=218,slow=4.2,SNR=20
CIT Chita 158.51 84 ePKIKP PKPdf 16 05 54.7 -3.7
CIT e 16 06 34.6
CIT pmax pmax
comp=Z,124nm,2.3s
BOD Bodaibo 160.33 68 ePKIKP PKPdf 16 05 59.0 -1.2
BOD pmax pmax
comp=Z,39nm,1.9s
TIXI Tiksi 161.33 21 PKPab PKPab 16 06 45.3 +0.1
TIXI Tiksi 161.33 21 PKP2 PKPab 16 06 45.3 +0.1
TIXI Tiksi 161.33 21 PKPab PKPab 16 06 45.4 +0.2
comp=Z,6.5nm,0.9s,baz=296,slow=9.0,SNR=11
USRK Ussuriysk Ar. 164.13 127 PKP2 PKPab 16 06 56.0 -2.2
USRK Ussuriysk Ar. 164.13 127 PKPab PKPab 16 06 56.0 -2.2
comp=Z,6.7nm,1.1s,baz=143,slow=3.6,SNR=3.3
ZEA Zeya 166.90 88 ePKIKP PKPdf 16 06 06.6 +0.1
ZEA pmax pmax
comp=Z,10.0nm,2.1s
PETK Petropavlovsk- 174.80 248 PKIKP PKPdf 16 06 09.7 -1.0
PETK 16 07 44.8
PETK Petropavlovsk- 174.80 248 PKP PKPdf 16 06 09.7 -1.0
comp=Z,12nm,1.0s,baz=151,slow=3.4,SNR=9.1
PETK PKPab PKPab 16 07 44.8 -0.5
comp=Z,3.3nm,0.8s,baz=134,slow=11,SNR=3.5

*SOME **30** 15:47:07.3,41.°18N×72.°78E,h5km*
*ISU **30** 15:47:09,40.°98N×72.°40E,h0km*
*NNC **30** 15:47:10.4±3.6,41.°10N×72.°90E,h0km,mb2.9,mpv2.6,*
Error ellipse: s-maj=35.4km s-min=18.0km az=164.0

ISC 30 15:47:08.5±1.5,41.0N±0.1×72.83E±0.0,h6km±16km,n14,σ1s45/23,4C-1D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSTA	**Tashata**	**0.45**	**216**	P	**Pg**	**15 47 17.3**	**0.0**
TSTA				S	**Sg**	**15 47 24.1**	**+0.9**
BTK	**Batken**	**1.77**	**241**	P	**Pn**	**15 47 40.4**	**+0.6**
BTK				S	**Sn**	**15 48 01.6**	**-1.1**
CHMS	**Chumysh**	**2.50**	**34**	⇑Pn	**Pb**	**15 47 51.9**	**-2.1**
	1.5nm,0.5s						
CHMS				⇓Sn	**Sb**	**15 48 22.6**	**-2.4**
	7.6nm,0.6s						
KK31	**Karatay Array**	**2.76**	**322**	Pn	**Pn**	**15 47 54.3**	**+0.9**
	0.5nm,0.3s,baz=129,slow=15,SNR=11						
KK31				⇑Lg	Lg	15 48 33.5	
	0.9nm,0.2s,baz=139,slow=30,SNR=8.1						
SGDS	**Sogindy**	**2.84**	**28**	*e*P	**Pn**	**15 47 55.7**	**+1.2**
	0.7nm,0.1s						
SGDS				*e*S	**Sn**	**15 48 29.1**	**0.0**
	3.7nm,0.2s						
TKM2	**Tokmak 2**	**2.86**	**45**	⇑Pn	**Pn**	**15 47 55.0**	**+0.1**
	1.3nm,0.3s						
TKM2				⇑Sn	**Sn**	**15 48 31.8**	**+2.0**
	4.8nm,0.5s						
KST	**Kastek**	**3.14**	**47**	*e*P	**Pb**	**15 48 02.9**	**-2.0**
	3.7nm,0.6s						
KST				*e*S	**Sb**	**15 48 41.3**	**-2.1**
	6.5nm,0.2s						
KST	**Kastek**	**3.14**	**47**	Pg	**Pb**	**15 48 02.9**	**-2.0**
	1.7nm,0.5s						
KST				Lg	Lg	15 48 41.3	
	6.5nm,0.6s						
DGS	**Degeres**	**3.17**	**43**	*e*P	**Pb**	**15 48 04.5**	**-0.9**
	1.0nm,0.5s						
DGS				*e*S	**Sb**	**15 48 44.0**	**-0.4**
	8.0nm,0.2s						
DGS	**Degeres**	**3.17**	**43**	Pg	**Pb**	**15 48 04.5**	**-0.9**
	1.0nm,0.5s						
DGS				Lg	Lg	15 48 44.0	
	7.2nm,0.7s						
KRBS	**Karabastau**	**3.47**	**37**	*e*P	**Pb**	**15 48 09.9**	**-0.5**
	0.8nm,0.2s						
KRBS				*e*S	**Sb**	**15 48 53.5**	**+0.7**
	3.3nm,0.3s						
KRBS	**Karabastau**	**3.47**	**37**	Pg	**Pb**	**15 48 09.9**	**-0.5**
	0.8nm,0.5s						
KRBS				Lg	Lg	15 48 53.5	
	3.2nm,0.4s						
KTBS	**Karatobe**	**3.98**	**45**	*e*P	**Pb**	**15 48 19.4**	**+0.3**
	1.0nm,0.2s						
KTBS				*e*S	**Sb**	**15 49 09.7**	**+2.3**
	8.3nm,0.7s						
KTBS	**Karatobe**	**3.98**	**45**	Pg	**Pb**	**15 48 19.4**	**+0.3**
	1.0nm,0.6s						
KTBS				Lg	Lg	15 49 09.7	
	8.3nm,0.7s						

*UCR **30** 15:48:23.5±1.9,8.°63N×82.°96W,h14km±3km,MW4.2*
*INET **30** 15:48:23.6±0.2,8.°83N×82.°92W,h5km,MW4.4*
*UPA **30** 15:48:23.2±1.4,8.°64N×82.°91W,h6km±3km,MW4.1*

ISC 30 15:48:23.5±0.8,8.65N±0.03×82.93W±0.02,h17km±5km,n68,σ1s07/101,12C-20D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDITO	**Canoas**	**0.10**	**142**	⇓*i*P	**Pg**	**15 48 26.6**	**-0.5**
CDITO				*e*S	**Sg**	**15 48 29.5**	**+0.1**
EDSV	**San Vito**	**0.17**	**347**	⇑*i*P	**Pb**	**15 48 28.5**	**+0.1**
EDSV				*e*S	**Sg**	**15 48 33.0**	**+1.8**
CCOL	**Caracol de Cor**	**0.24**	**189**	*e*P	**Pb**	**15 48 30.3**	**+0.9**
CCOL				*e*S	**Sg**	**15 48 33.6**	**+0.8**
BRU2	**Volcan**	**0.28**	**59**	⇓*i*P	**Pb**	**15 48 30.0**	**-0.2**
BRU2				*e*S	**Sb**	**15 48 35.3**	**+0.6**
BRU2	**Volcan**	**0.28**	**59**	⇓*i*P	**Pb**	**15 48 30.0**	**-0.2**
	baz=264,slow=5.9						
BRU2				*e*S	**Sb**	**15 48 34.9**	**+0.3**
PTJ1	**Puerto Jimnez**	**0.38**	**253**	⇓*i*P	**Pg**	**15 48 30.8**	**-0.6**
PTJ1				*e*S	**Sg**	**15 48 36.7**	**0.0**
BCO2	**Palmira**	**0.41**	**80**	⇓*i*P	**Pb**	**15 48 31.9**	**-0.4**
BCO2				*e*S	**Sb**	**15 48 38.5**	**+0.3**
PTAR3	**Potrerillos Ar**	**0.43**	**84**	⇓*i*P	**Pb**	**15 48 32.3**	**-0.5**
PTAR3				*e*S	**Sb**	**15 48 39.5**	**+0.4**
POTG	**Potrero Grande**	**0.44**	**335**	⇑*e*P	**Pb**	**15 48 32.7**	**-0.2**
POTG				*e*S	**Sb**	**15 48 40.1**	**+0.9**
LNBQ3	**Los Naranjos,**	**0.51**	**74**	⇓*i*P	**Pg**	**15 48 33.0**	**-0.7**
LNBQ3				*e*S	**Sb**	**15 48 40.9**	**-0.3**
DVD	**David**	**0.52**	**114**	⇑*i*P	**Pb**	**15 48 33.3**	**-0.9**
DVD				*i* S	**Sb**	**15 48 41.6**	**+0.1**
EDPN	**Palmar Norte**	**0.60**	**301**	⇓*i*P	**Pg**	**15 48 34.2**	**-1.2**
EDPN				*e*S	**Sg**	**15 48 42.9**	**-0.6**
EDBA	**Buenos Aires**	**0.61**	**327**	*e*P	**Pb**	**15 48 35.6**	**-0.2**
EDBA				*e*S	**Sb**	**15 48 45.1**	**+1.0**
CHIR3	**Chiriqui UPA,**	**0.65**	**113**	⇑*e*P	**Pb**	**15 48 35.6**	**-0.7**
CHIR3				*e*S	**Sb**	**15 48 44.5**	**-0.5**
DRK0	**Durika**	**0.68**	**333**	⇑*i*P	**Pb**	**15 48 37.4**	**+0.3**
DRK0				*e*S	**Sb**	**15 48 47.4**	**+1.1**
DRK0	**Durika**	**0.68**	**333**	⇑*i*P	**Pb**	**15 48 37.4**	**+0.3**
DRK0				*e*S	**Sn**	**15 48 48.5**	**-0.3**
SRBA	**San Rafael, Bu**	**0.72**	**324**	*e*P	**Pg**	**15 48 36.6**	**-1.0**
SRBA				*e*S	**Sg**	**15 48 46.8**	**-0.3**
CHGR2	**Aguacate**	**0.83**	**70**	⇓*e*P	**Pg**	**15 48 38.1**	**-1.6**
CHGR2				*e*S	**Sb**	**15 48 51.1**	**+0.8**
CNI2	**El Empalme, Bo**	**0.90**	**31**	⇓*e*P	**Pg**	**15 48 39.9**	**-1.0**
CNI2				*e*S	**Sb**	**15 48 52.6**	**+0.4**
PEZE	**Perez Zeledon,**	**1.03**	**315**	*e*P	**Pb**	**15 48 41.1**	**-1.9**
PEZE	**Perez Zeledon,**	**1.03**	**315**	*e*P	**Pb**	**15 48 41.5**	**-1.5**
REME3	**Remedios, Chir**	**1.17**	**111**	⇑*e*P	**Pb**	**15 48 43.7**	**-1.5**
REME3				*e*S	**Sn**	**15 49 00.8**	**+0.2**
CDM	**Cerro de Muert**	**1.22**	**318**	⇓*e*P	**Pn**	**15 48 44.6**	**-1.5**
CDM				*e*S	**Sb**	**15 49 00.9**	**-1.0**
NANC3	**Nancito, Chiri**	**1.26**	**109**	⇓*e*P	**Pn**	**15 48 44.7**	**-1.6**
NANC3				*i* S	**Sb**	**15 49 01.1**	**-1.6**
MRVA	**Moravia de Chi**	**1.27**	**337**	⇑*e*P	**Pn**	**15 48 45.9**	**-0.7**
RIMA	**Rio Macho**	**1.44**	**320**	⇓*e*P	**Pn**	**15 48 47.7**	**-1.2**
RIMA	**Rio Macho**	**1.44**	**320**	*e*P	**Pn**	**15 48 47.8**	**-1.2**
BATAN	**Batan**	**1.50**	**343**	⇑*e*P	**Pn**	**15 48 50.1**	**+0.4**
BATAN	**Batan**	**1.50**	**343**	⇓*i*P	**Pb**	**15 48 50.5**	**-0.5**
BATAN				*e*S	**Sb**	**15 49 10.3**	**+0.5**
LCR2	**La Lucha 2**	**1.52**	**316**	*e*P	**Pn**	**15 48 48.1**	**-1.9**
RAFA	**San Farael, Vo**	**1.56**	**326**	*e*P	**Pn**	**15 48 50.8**	**0.0**
RAFA				*e*S	**Sn**	**15 49 11.4**	**+0.6**
CVTR	**Volcan Turrial**	**1.59**	**329**	*e*P	**Pn**	**15 48 51.1**	**-0.1**
OCM	**Ochomogo**	**1.60**	**321**	*e*P	**Pn**	**15 48 50.7**	**-0.5**
HDC3	**Heredia 3**	**1.78**	**319**	*e*P	**Pn**	**15 48 53.6**	**+0.1**
HDC3	**Heredia 3**	**1.78**	**319**	*e*P	**Pn**	**15 48 54.1**	**+0.5**
HDC3				*e*S	**Sb**	**15 49 17.5**	**-0.2**
HDC	**Heredia**	**1.78**	**319**	*e*P	**Pn**	**15 48 53.8**	**+0.2**
HDC	**Heredia**	**1.78**	**319**	⇑*e*P	**Pn**	**15 48 54.0**	**+0.5**
HDC				*e*S	**Sb**	**15 49 17.9**	**+0.1**
RSUS3	**Rio de Jesus,**	**1.88**	**111**	⇓*e*P	**Pn**	**15 48 54.3**	**-0.5**
RSUS3				*e*S	**Sn**	**15 49 18.0**	**-0.1**
RIFO	**Rio Frio, Sara**	**1.92**	**330**	*e*P	**Pn**	**15 48 55.8**	**+0.3**
JACO	**JACO, Garabito**	**1.98**	**301**	*e*P	**Pn**	**15 48 55.8**	**-0.5**
JACO	**JACO, Garabito**	**1.98**	**301**	*e*P	**Pn**	**15 48 56.2**	**0.0**
STIA3	**Santiago, Vera**	**2.02**	**106**	⇓*e*P	**Pn**	**15 48 57.1**	**+0.3**
CALO3	**Calobre, Verag**	**2.10**	**99**	⇓*i*P	**Pn**	**15 48 58.3**	**+0.5**
CALO3				*i* S	**Sb**	**15 49 25.8**	**-1.0**
MARI3	**Mariato, Verag**	**2.17**	**117**	*e*P	**Pn**	**15 48 59.3**	**+0.5**
LAFE	**Finca La Fe, P**	**2.27**	**301**	*e*P	**Pn**	**15 48 60.0**	**-0.2**
LAFE	**Finca La Fe, P**	**2.27**	**301**	*e*P	**Pn**	**15 49 00.2**	**+0.1**
CACAO	**El Cacao, Vera**	**2.43**	**122**	⇓*e*P	**Pn**	**15 49 03.1**	**+0.7**
CACAO				*e*S	**Sn**	**15 49 32.2**	**+0.6**
JTS	**Las Juntas de**	**2.58**	**309**	*e*P	**Pn**	**15 49 05.0**	**+0.6**
JTS	**Las Juntas de**	**2.58**	**309**	⇓*i*P	**Pn**	**15 49 05.0**	**+0.6**
JTS				*e*S	**Sn**	**15 49 37.8**	**+2.4**
PNME	**Penonome**	**2.58**	**93**	*e*P	**Pn**	**15 49 05.7**	**+1.2**
PNME				*e*S	**Sn**	**15 49 36.9**	**+1.3**
VTON	**El Valle, Cocl**	**2.79**	**91**	*e*P	**Pb**	**15 49 10.2**	**-2.7**
INDI	**Punta indio, G**	**2.81**	**296**	*e*P	**Pn**	**15 49 08.1**	**+0.5**
ACAL	**Aguas Claras**	**2.86**	**314**	*e*P	**Pn**	**15 49 09.9**	**+1.5**
PTEN	**Parque Tenorio**	**2.88**	**316**	*e*P	**Pn**	**15 49 08.5**	**-0.2**
GRZA	**Playa Garza**	**2.95**	**295**	*e*P	**Pn**	**15 49 10.3**	**+0.8**
CUI	**Cuipilapa**	**2.97**	**312**	*e*P	**Pn**	**15 49 11.0**	**+1.1**
ACHO3	**Achotines, Los**	**3.00**	**114**	⇑*e*P	**Pn**	**15 49 12.4**	**+2.2**
HORNC	**Hornillas**	**3.02**	**313**	*e*P	**Pn**	**15 49 11.4**	**+0.8**
SAJU	**San Juanillo,**	**3.08**	**297**	*e*P	**Pn**	**15 49 12.2**	**+0.8**
PEDA3	**Pedasi**	**3.09**	**111**	*e*P	**Pn**	**15 49 13.4**	**+2.0**
BCIP	**Isla Barro Col**	**3.10**	**80**	⇑*i*P	**Pn**	**15 49 12.1**	**+0.4**
BCIP				*e*S	**Sn**	**15 49 48.9**	**+0.5**
BCIP	**Isla Barro Col**	**3.10**	**80**	*e*P	**Pn**	**15 49 12.1**	**+0.4**
GPS2	**Hotel Rincn d**	**3.17**	**311**	*e*P	**Pn**	**15 49 13.8**	**+1.1**
BUEV	**Buena Vista**	**3.24**	**311**	*e*P	**Pn**	**15 49 14.4**	**+0.8**
TABO3	**Taboga, Panama**	**3.34**	**87**	⇓*e*P	**Pn**	**15 49 17.9**	**+2.9**
UPA	**Univ. de Panam**	**3.38**	**84**	*e*P	**Pn**	**15 49 16.8**	**+1.4**
UPA				*e*S	**Sn**	**15 49 56.0**	**+0.8**
ESPN	**Las Esperanzas**	**3.77**	**339**	*e*P	**Pn**	**15 49 21.0**	**+0.1**
UPD2	**Meteti**	**4.87**	**91**	*e*P	**Pn**	**15 49 40.1**	**+4.2**

ROM 30 15:56:52.0±0.0,42.826N±0.003×13.238E±0.004,
h10km,ML1.7/7,5C-2D,Error ellipse: s-maj=0.3km
s-min=0.2km az=59.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1242	**Castelluccio d**	**0.03**	**278**	P	Pg	15 56 54.0	-0.1
T1242				S	Sg	15 56 54.9	-0.6
T1242				AML	AML		
	comp=E,1395μm,0.3s						
T1242				AML	AML		
	comp=N,2325μm,0.3s						
T1242				AML	AML		
	comp=E,1396μm,0.3s						
T1242				AML	AML		
	comp=N,2375μm,0.3s						
T1242				AML	AML		
	comp=N,2330μm,0.3s						
T1242				AML	AML		
	comp=E,1350μm,0.3s						
T1244	**Arquata del Tr**	**0.08**	**147**	⇓P	Pg	15 56 54.9	+0.4
T1244				S	Sg	15 56 56.4	+0.3
NRCA	**Norcia**	**0.09**	**275**	⇑P	Pg	15 56 55.0	+0.4
NRCA				S	Sg	15 56 56.8	+0.4
NRCA				AML	AML		
	comp=E,935μm,0.1s						
NRCA				AML	AML		
	comp=N,708μm,1.3s						
MC2	**Monte Cornacci**	**0.09**	**338**	P	Pg	15 56 55.2	+0.4
MMO1	**Montemonaco**	**0.10**	**42**	P	Pg	15 56 54.9	+0.2
MMO1				S	Sg	15 56 57.0	+0.5
MMO1				AML	AML		
	comp=N,332μm,0.6s						
MMO1				AML	AML		
	comp=E,633μm,0.3s						
T1202	**Accumoli, Fraz**	**0.12**	**184**	⇑P	Pg	15 56 55.6	+0.6
T1202				S	Sg	15 56 58.1	+1.0
T1241	**Roccafluvione,**	**0.15**	**78**	⇑P	Pg	15 56 56.1	+0.7
T1241				S	Sg	15 56 58.7	+1.1
T1241				AML	AML		

comp=N,87µm,0.6s
T1241 AML AML
comp=E,68µm,0.2s
T1241 AML AML
comp=N,87µm,0.6s
T1204 Amatrice, Fraz 0.16 159 P Pg 15 56 56.3 +0.7
T1204 S Sg 15 56 59.2 +1.1
T1201 Domo (RI) 0.17 177 P Pg 15 56 56.6 +0.9
T1243 Rocca Santa Ma 0.20 130 P Pg 15 56 56.9 +0.5
T1243 S Sg 15 57 00.2 +1.0
FDMO Fiordimonte 0.24 332 P Pg 15 56 57.6 +0.7
FDMO S Sg 15 57 01.8 +1.6
FDMO AML AML
comp=N,158µm,0.2s
FDMO AML AML
comp=E,126µm,0.2s
LNSS Leonessa 0.27 213 P Pg 15 56 58.2 +0.7
LNSS S Sb 15 57 02.7 -1.0
CSP1 Cessapalombo 0.27 355 P Pg 15 56 58.3 +0.8
CSP1 S Sb 15 57 02.8 -1.0
T1215 Vallo di Nera, 0.27 265 P Pg 15 56 58.2 +0.6
T1215 S Sb 15 57 02.6 -1.2
CESI CESI - Serrava 0.30 306 P Pg 15 56 58.9 +0.7
CESI S Sb 15 57 04.0 -0.8
CESI AML AML
comp=E,128µm,0.5s
CESI AML AML
comp=N,324µm,0.1s
CAMP Campotosto 0.32 156 P Pg 15 56 58.8 +0.4
CAMP S Sg 15 57 03.7 +1.1
RM33 Pellescritta (0.32 183 P Pb 15 56 59.2 -0.7
RM33 S Sb 15 57 04.2 -0.9
TERO Teramo 0.34 127 P Pg 15 56 59.3 +0.5
TERO S Sb 15 57 04.7 -0.9
TERO AML AML
comp=N,222µm,0.1s
TERO AML AML
comp=E,125µm,0.1s
SSFR Montelago di S 0.69 332 S Sn 15 57 18.0 -1.0
PTQR Pietraquaria 0.81 171 S Sb 15 57 20.0 +0.6
ATVO AVT- Monte Val 0.82 313 S Sg 15 57 19.0 +0.3
LIK San Giovanni I 1.34 170 S Sg 15 57 36.0 +0.8
BRIS BRISIGHELLA 1.82 317 P Pb 15 57 24.7 -0.8

VIE 30 15:57:09.5±1.5, 44°39N×11°65E, h8km, mb2.3/4, ml2.6/8, Error ellipse: s-maj=11.8km s-min=5.4km az=39.0 28 km ESE of Bologna, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETA	**Feichten**	**2.71**	**347**	Sg	Sg	15 58 38.2	+1.6
	0.8nm,0.3s						
SQTA	**Sankt Quirin**	**2.85**	**354**	Sg	Sg	15 58 42.7	+1.6
	2.6nm,0.2s						
WTTA	**Wattenberg**	**2.88**	**360**	Sg	Sg	15 58 44.1	+2.1
	1.3nm,0.3s						
MOTA	**Moosalm**	**2.98**	**353**	Sg	Sg	15 58 46.9	+1.6
	0.7nm,0.2s						

*IDC **30** 16:17:20.2±0.5, 17°03N×94°46W, h140km±5km, mb3.8/15, mbtmp4.2/16, MS4.0/2, Error ellipse: s-maj=24.8km s-min=10.1km az=60.0*
*NEIC **30** 16:17:20.2±2.2, 17°41N±0°07×94°61W±0°05, h137km±6km, mb4.4/147, Md4.6/109(MEX), Error ellipse: s-maj=11.2km s-min=6.3km az=203.0*
*MEX **30** 16:17:21.0±1.2, 17°35N×94°67W, h143km±6km, MD4.6*
ISC 30 16:17:20.0±0.5, 17°32N±0°03×94°65W±0°03, h148km±4km, n424, σ1.2°77/486, mb4.4/68, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.32**	**225**		**Pn**	**16 17 39.5**	**-0.8**
CMIG					**Sn**	**16 17 54.0**	**-1.8**
CMIG	**Matias Romero**	**0.32**	**225**	*i* P	**Pn**	**16 17 39.5**	**-0.8**
CMIG				*e*S	**Sn**	**16 17 54.0**	**-1.8**
CMIG	**Matias Romero**	**0.32**	**225**	P	**Pn**	**16 17 39.7**	**-0.6**
	4µm,0.3s,baz=73,slow=2.3						
UXUV	**UXUV**	**0.48**	**90**	*i* P	**Pn**	**16 17 40.4**	**-0.6**
UXUV				*e*S	**Sn**	**16 17 54.3**	**-2.5**
MIHL	**Minatitlan**	**0.67**	**8**	*i* P	**Pn**	**16 17 41.5**	**-0.5**
MIHL				*e*S	**Sn**	**16 17 56.9**	**-2.0**
TUIG	**Tuzandepetl**	**0.74**	**17**	*e*P	**Pn**	**16 17 41.9**	**-0.6**
TUIG				*e*S	**Sn**	**16 17 58.1**	**-1.7**
NILT	**Santiago Nilte**	**0.75**	**178**	*i* P	**Pn**	**16 17 42.1**	**-0.5**
NILT				*i* S	**Sn**	**16 17 58.5**	**-1.3**
NEUV	**Arroyo Zacate**	**1.17**	**290**	*e*P	**Pn**	**16 17 44.6**	**-1.4**
NEUV				*i* S	**Sn**	**16 18 03.7**	**-2.3**
CARR	**Arriaga**	**1.27**	**147**	*i* P	**Pn**	**16 17 47.0**	**-0.1**
CARR				*i* S	**Sn**	**16 18 07.2**	**-0.6**
TGIG		**1.55**	**110**		**Pn**	**16 17 49.8**	**-0.2**
TGIG					**Sn**	**16 18 11.3**	**-1.7**
TGIG		**1.55**	**110**	*e*P	**Pn**	**16 17 49.8**	**-0.2**
TGIG				*e*S	**Sn**	**16 18 11.3**	**-1.7**
TGBT	**Tuxtla Gutierr**	**1.58**	**110**		**Pn**	**16 17 50.0**	**-0.2**
TGBT					**Sn**	**16 18 12.0**	**-1.4**
TGBT	**Tuxtla Gutierr**	**1.58**	**110**	*i* P	**Pn**	**16 17 50.0**	**-0.2**
TGBT				*i* S	**Sn**	**16 18 12.0**	**-1.4**
VHSA	**Villahermosa**	**1.76**	**68**	*i* P	**Pn**	**16 17 51.5**	**-0.6**
VHSA				*i* S	**Sn**	**16 18 16.0**	**-0.7**
OXLC	**Oaxaca**	**1.98**	**263**	*i* P	**Pn**	**16 17 55.3**	**+0.3**
OXLC				*i* S	**Sn**	**16 18 21.7**	**-0.1**
OXBJ	**Oaxaca**	**2.00**	**263**		**Pn**	**16 17 55.3**	**+0.1**
OXBJ					**Sn**	**16 18 21.9**	**-0.4**
OXBJ	**Oaxaca**	**2.00**	**263**	*i* P	**Pn**	**16 17 55.3**	**+0.1**
OXBJ				*i* S	**Sn**	**16 18 21.9**	**-0.4**
VHO	**Vista Hermosa**	**2.01**	**263**	*e*P	**Pn**	**16 17 55.2**	**-0.1**
VHO				*e*S	**Sn**	**16 18 22.0**	**-0.4**
PCIG		**2.11**	**139**		**Pn**	**16 17 56.5**	**+0.3**
PCIG					**Sn**	**16 18 21.8**	**-2.3**
PCIG		**2.11**	**139**	*e*P	**Pn**	**16 17 56.5**	**+0.3**
PCIG				*e*S	**Sn**	**16 18 21.8**	**-2.3**
PANG	**Puerto Angel**	**2.40**	**227**		**Pn**	**16 17 57.4**	**-2.4**
PANG					**Sn**	**16 18 28.1**	**-2.3**
PANG	**Puerto Angel**	**2.40**	**227**	*i* P	**Pn**	**16 17 57.4**	**-2.4**
PANG				*i* S	**Sn**	**16 18 28.1**	**-2.3**
TOIG	**Toxpalan**	**2.43**	**289**	*e*P	**Pn**	**16 17 59.9**	**-0.4**
TOIG				*e*S	**Sn**	**16 18 29.3**	**-1.9**
CCIG	**Comitan**	**2.61**	**113**	*e*P	**Pn**	**16 18 02.6**	**+0.1**
CCIG				*e*S	**Sn**	**16 18 29.4**	**-5.9**
OZST	**Orizaba**	**2.79**	**304**	*i* S	**Sn**	**16 18 36.3**	**-3.0**
TPIG	**Tehuac#an**	**2.81**	**293**		**Pn**	**16 18 04.1**	**-0.9**
TPIG					**Sn**	**16 18 37.3**	**-2.4**
TPIG	**Tehuac#an**	**2.81**	**293**	*i* P	**Pn**	**16 18 04.1**	**-0.9**
TPIG				*e*S	**Sn**	**16 18 37.3**	**-2.4**
YOIG	**Yosondua**	**2.81**	**261**	*e*P	**Pn**	**16 18 04.1**	**-1.0**
YOIG				*e*S	**Sn**	**16 18 37.6**	**-2.3**
JAUV	**Jalcomulco**	**2.89**	**315**	*e*P	**Pn**	**16 18 04.1**	**-1.8**
JAUV				*i* S	**Sn**	**16 18 37.6**	**-3.8**
LVIG	**Laguna Verde**	**2.92**	**325**	*e*P	**Pn**	**16 18 04.2**	**-2.0**
LVIG				*e*S	**Sn**	**16 18 37.5**	**-4.6**
TXIG	**Tlaxiaco**	**2.98**	**269**	*e*P	**Pn**	**16 18 06.9**	**-0.4**
TXIG				*e*S	**Sn**	**16 18 38.2**	**-5.7**
PAVE	**Pavencul**	**3.17**	**131**	*e*P	**Pn**	**16 18 10.1**	**+0.4**
PAVE				*i* S	**Sn**	**16 18 42.4**	**-5.8**
PATR	**El Naranjo**	**3.19**	**133**	*e*P	**Pn**	**16 18 10.1**	**+0.2**
PATR				*i* S	**Sn**	**16 18 41.8**	**-6.6**
CHUJ	**Union Juarez**	**3.29**	**132**	*e*P	**Pn**	**16 18 11.7**	**+0.4**
CHUJ				*e*S	**Sn**	**16 18 46.6**	**-4.3**
FTIG	**Fresnillo de T**	**3.38**	**281**	*e*P	**Pn**	**16 18 12.3**	**+0.1**
FTIG				*e*S	**Sn**	**16 18 48.8**	**-3.8**
PNIG	**Pinotepa**	**3.46**	**255**		**Pn**	**16 18 10.8**	**-2.3**
PNIG					**Sn**	**16 18 47.9**	**-6.5**
PNIG	**Pinotepa**	**3.46**	**255**	*i* P	**Pn**	**16 18 10.8**	**-2.3**
PNIG				*e*S	**Sn**	**16 18 47.9**	**-6.5**
HUEH	**Huehuetenango**	**3.61**	**123**		**Pn**	**16 18 15.2**	**-0.2**
SCIG	**Sabancuy**	**3.67**	**63**	*e*P	**Pn**	**16 18 13.5**	**-2.4**
SCIG				*e*S	**Sn**	**16 18 54.8**	**-4.5**
TLIG	**Tlapa**	**3.75**	**274**	*e*P	**Pn**	**16 18 16.8**	**-0.2**
TLIG				*e*S	**Sn**	**16 18 55.5**	**-5.8**
HMTT	**Tlapaneco**	**3.77**	**278**		**Pn**	**16 18 15.8**	**-1.4**
HMTT					**Sn**	**16 18 58.5**	**-3.1**
HMTT	**Tlapaneco**	**3.77**	**278**	*i* P	**Pn**	**16 18 15.8**	**-1.4**
HMTT				*i* S	**Sn**	**16 18 58.5**	**-3.1**
MGIG	**Malinaltepec**	**3.81**	**269**	*e*S	**Sn**	**16 18 59.7**	**-3.1**
CXUV	**Coxquihui**	**3.98**	**316**	*i* P	**Pn**	**16 18 19.3**	**-0.7**
CXUV				*i* S	**Sn**	**16 19 03.8**	**-2.8**
PPM	**Popocatepetl**	**4.17**	**295**	*e*P	**Pn**	**16 18 24.4**	**+1.6**
PPM				*i* S	**Sn**	**16 19 04.8**	**-6.8**
CRIG	**Cruz Grande**	**4.33**	**263**		**Pn**	**16 18 22.4**	**-2.1**
CRIG					**Sn**	**16 19 10.0**	**-4.7**
CRIG	**Cruz Grande**	**4.33**	**263**	*e*P	**Pn**	**16 18 22.4**	**-2.1**
CRIG				*e*S	**Sn**	**16 19 10.0**	**-4.7**
YAIG	**Yautepec**	**4.48**	**291**		**Pn**	**16 18 27.6**	**+1.0**
YAIG					**Sn**	**16 19 14.5**	**-3.9**
YAIG	**Yautepec**	**4.48**	**291**	*e*P	**Pn**	**16 18 27.6**	**+1.0**
YAIG				*e*S	**Sn**	**16 19 14.5**	**-3.9**
PETF	**Flores**	**4.59**	**94**		**Pn**	**16 18 26.8**	**-1.1**
TLVM	**San Miguel Top**	**4.68**	**294**	*i* P	**Pn**	**16 18 31.3**	**+1.9**
TLVM				*i* S	**Sn**	**16 19 20.8**	**-2.7**
PLIG	**Platanillo**	**4.75**	**284**		**Pn**	**16 18 30.7**	**+0.6**
PLIG					Sn	16 19 15.2	-10
PLIG	**Platanillo**	**4.75**	**284**	*e*P	**Pn**	**16 18 30.7**	**+0.6**
PLIG				*e*S	Sn	16 19 15.2	-10
MEIG	**Mezcala**	**4.78**	**278**		**Pn**	**16 18 30.8**	**+0.2**
MEIG					**Sn**	**16 19 18.8**	**-6.7**
MEIG	**Mezcala**	**4.78**	**278**	*e*P	**Pn**	**16 18 30.8**	**+0.2**
MEIG				*e*S	**Sn**	**16 19 18.8**	**-6.7**
AOVM	**Tlapan**	**4.85**	**294**	*i* P	**Pn**	**16 18 33.7**	**+1.9**
AOVM				*e*S	**Sn**	**16 19 21.7**	**-6.0**
MAVM	**Malinalco, Edo**	**4.89**	**290**		Pn	16 18 38.5	+6.4
MAVM					**Sn**	**16 19 27.9**	**-0.4**
MAVM	**Malinalco, Edo**	**4.89**	**290**	*i* P	Pn	16 18 38.5	+6.4
MAVM				*i* S	**Sn**	**16 19 27.9**	**-0.4**
DEIG	**Demacu**	**5.11**	**306**	*e*P	**Pn**	**16 18 36.9**	**+1.9**
DEIG				*e*		16 19 19.9	
CAIG	**El Cayaco**	**5.38**	**268**		**Pn**	**16 18 37.0**	**-1.4**
CAIG					Sn	16 19 31.1	-8.5
CAIG	**El Cayaco**	**5.38**	**268**	*e*P	**Pn**	**16 18 37.0**	**-1.4**
CAIG				*e*S	**Sn**	**16 19 34.5**	**-5.1**
ARIG	**Puente Sto Nin**	**5.52**	**281**		**Pn**	**16 18 41.1**	**+0.9**
ARIG					Sn	16 19 29.8	-13
ARIG	**Puente Sto Nin**	**5.52**	**281**	*e*P	**Pn**	**16 18 41.1**	**+0.9**
ARIG				*e*S	**Sn**	**16 19 37.8**	**-5.1**
MTO3	**Montecristo**	**5.86**	**119**		**Pn**	**16 18 43.4**	**-1.5**
ZIIG	**Zihuatanejo**	**6.52**	**274**		**Pn**	**16 18 53.4**	**-0.1**
ZIIG					**Sn**	**16 20 02.2**	**-4.7**
ZIIG	**Zihuatanejo**	**6.52**	**274**	*e*P	**Pn**	**16 18 53.4**	**-0.1**
ZIIG				*e*S	**Sn**	**16 20 02.2**	**-4.7**
TEIG	**Tepich**	**6.69**	**63**	Pn	**Pn**	**16 18 53.5**	**-2.3**
MMIG	**Aquila**	**8.34**	**278**		**Pn**	**16 19 17.2**	**-0.8**
MMIG					**Sn**	**16 20 49.6**	**-1.2**
MMIG	**Aquila**	**8.34**	**278**	*e*P	**Pn**	**16 19 17.2**	**-0.8**
MMIG				*e*S	**Sn**	**16 20 49.6**	**-1.2**
JUBC	**Volcan de Coli**	**8.75**	**286**	*i*	**Pn**	**16 19 26.3**	**+2.6**
JUBC				*e*S	**Sn**	**16 20 59.2**	**-1.9**
EZ5V		**8.77**	**286**		**Pn**	**16 19 24.6**	**+0.7**
EZ5V		**8.77**	**286**	*e*	**Pn**	**16 19 26.1**	**+2.1**
EZ5V				*e*		16 21 05.5	
INCO	**Volcan de Coli**	**8.78**	**286**	*e*P	**Pn**	**16 19 24.6**	**+0.3**
INCO				*e*S	**Sn**	**16 20 58.0**	**-4.0**
MNGA	**Volcan de Coli**	**8.79**	**285**	*e*	**Pn**	**16 19 26.2**	**+2.0**
MNGA				*e*S	**Sn**	**16 21 00.2**	**-1.7**
COIG	**Colima**	**8.79**	**284**	*e*	**Pn**	**16 19 24.6**	**+0.6**
COIG				*e*S	**Sn**	**16 20 59.1**	**-2.7**
CDAR	**Ciudad de Arme**	**9.05**	**282**	*e*	**Pn**	**16 19 29.3**	**+1.8**
CDAR				*e*		16 21 06.5	
R15V		**9.06**	**283**		**Sn**	**16 21 10.0**	**+1.7**
R15V		**9.06**	**283**	*e*P	**Pn**	**16 19 29.0**	**+1.4**
R15V				*e*S	**Sn**	**16 21 02.9**	**-5.4**
HZTE	**Horizontes, Gu**	**10.96**	**126**	Pn	**Pn**	**16 19 53.7**	**+0.8**
ORTG	**Ortega, Santa**	**11.28**	**127**	Pn	**Pn**	**16 19 57.7**	**+0.6**
JTS	**Las Juntas de**	**11.72**	**125**		**Pn**	**16 20 02.5**	**-0.3**
833A	**Chaparral WMA,**	**11.79**	**339**	Pn	**Pn**	**16 20 04.4**	**+0.8**
833A	**Chaparral WMA,**	**11.79**	**339**	P	**Pn**	**16 20 04.1**	**+0.5**
	baz=157						
RIMA	**Rio Macho**	**12.89**	**124**		**Pn**	**16 20 18.3**	**+0.2**
441A	**DeRidder**	**13.44**	**5**	Pn	**Pn**	**16 20 24.5**	**-0.3**
SRBA	**San Rafael, Bu**	**13.60**	**125**	Pn	**Pn**	**16 20 27.0**	**-0.2**
DRK0	**Durika**	**13.68**	**124**		**Pn**	**16 20 28.9**	**+0.8**
342A	**Flagon Creek P**	**14.15**	**8**	P	**P**	**16 20 37.2**	**+0.3**
NATX	**Nacogdoches**	**14.38**	**360**	P	**Pn**	**16 20 36.9**	**+0.2**
	baz=180						
344A	**Westbrook Farm**	**14.51**	**13**	P	**P**	**16 20 41.2**	**+0.3**
TX31	**Lajitas Ar. Si**	**14.54**	**327**	P	**P**	**16 20 40.6**	**-0.8**
TX32	**Lajitas Array**	**14.54**	**327**	P	**P**	**16 20 40.6**	**-0.7**
TXAR	**Lajitas Array**	**14.54**	**327**		**Pn**	**16 20 39.9**	**+1.0**
TXAR	**Lajitas Array**	**14.54**	**327**	P	**P**	**16 20 41.2**	**-0.1**
	1.9nm,0.7s,baz=149,slow=14,SNR=15						
WHTX	**Lake Whitney,**	**14.83**	**351**		**Pn**	**16 20 43.0**	**+0.6**
WHTX	**Lake Whitney,**	**14.83**	**351**	P	**Pn**	**16 20 42.7**	**+0.4**
	baz=169						
061Z	**Ochoppi**	**15.34**	**54**	Pn	**Pn**	**16 20 46.1**	**-2.6**
Z38A	**Mt. Pleasant**	**15.88**	**359**		**Pn**	**16 20 54.5**	**-0.8**
ABTX	**Abilene, Hawle**	**15.89**	**344**	P	**P**	**16 20 57.8**	**+1.5**
	baz=162						
Z35A	**Perchaven, San**	**16.12**	**352**		**Pn**	**16 20 57.2**	**-1.0**
Z35A				IAmb	IAmb	16 21 10.7	
	comp=Z,41nm,1.3s						
LRAL	**Lakeview Retre**	**17.10**	**22**		**Pn**	**16 21 09.8**	**-0.3**
LRAL				IAmb	IAmb	16 21 16.6	
	comp=Z,16nm,0.5s						
LRAL	**Lakeview Retre**	**17.10**	**22**	P	**P**	**16 21 09.1**	**-0.4**
	baz=206,SNR=7.3						
HTMS	**Hat Mesa**	**17.14**	**333**	P	**Pn**	**16 21 11.2**	**+0.5**
MIAR	**Mount Ida**	**17.18**	**3**	P	**Pn**	**16 21 10.9**	**-0.3**
MIAR	**Mount Ida**	**17.18**	**3**	P	**Pn**	**16 21 10.8**	**-0.3**
	baz=183,SNR=5.4						
X37A	**Clayton**	**17.21**	**358**	P	**Pn**	**16 21 11.3**	**-0.2**
GDL2	**Guadalupe Moun**	**17.23**	**331**		**Pn**	**16 21 13.3**	**+1.4**
MNTX	**Cornudas Mount**	**17.32**	**328**	P	**Pn**	**16 21 13.8**	**+1.0**
	baz=143						
152A	**Waverly Hall**	**17.72**	**29**		**Pn**	**16 21 16.8**	**-0.7**
WMOK	**Wichita Mounta**	**17.74**	**349**	P	**P**	**16 21 16.4**	**-0.2**
WMOK	**Wichita Mounta**	**17.74**	**349**	P	**P**	**16 21 16.9**	**+0.4**
	baz=167						
MSTX	**Muleshoe**	**18.11**	**338**	P	**Pn**	**16 21 21.8**	**-0.5**
MSTX	**Muleshoe**	**18.11**	**338**	P	**Pn**	**16 21 22.4**	**+0.1**
	baz=154						
OK025	**Westminster Rd**	**18.35**	**353**	P	**P**	**16 21 23.3**	**+0.1**
X48A	**Hartselle**	**18.37**	**20**	P	**P**	**16 21 22.5**	**-0.9**
X48A				IAmb	IAmb	16 21 33.4	
	comp=Z,9.4nm,0.7s						
DEOK	**Depew**	**18.52**	**355**	P	**P**	**16 21 24.8**	**-0.3**
DEOK				IAmb	IAmb	16 21 25.7	
	comp=Z,14nm,0.7s						
PLAL	**Pickwick Lake**	**18.54**	**17**	P	**P**	**16 21 24.1**	**-1.2**
TUL1	**Leonard**	**18.55**	**357**	P	**P**	**16 21 25.6**	**+0.3**
	baz=176						
OK029	**Liberty Lake**	**18.57**	**353**		**P**	**16 21 25.9**	**+0.2**
AMTX	**Amarillo**	**18.59**	**342**	P	**P**	**16 21 26.1**	**+0.2**
AMTX				IAmb	IAmb	16 21 30.8	
	comp=Z,15nm,0.5s						
AMTX	**Amarillo**	**18.59**	**342**	P	**P**	**16 21 26.6**	**+0.7**
	baz=158						
FCAR	**Ozark Folk Cen**	**18.63**	**6**	P	**P**	**16 21 26.5**	**+0.2**
FCAR				IAmb	IAmb	16 21 27.3	
	comp=Z,16nm,0.6s						
OK030	**Cody Creek RV**	**18.63**	**355**		**P**	**16 21 25.8**	**-0.5**
OK031	**S. Brethren Rd**	**18.66**	**354**	P	**P**	**16 21 26.2**	**-0.3**
OK034	**N. Norfolk Rd.**	**18.71**	**355**		**P**	**16 21 26.9**	**-0.2**
QUOK	**Quay**	**18.87**	**355**		**P**	**16 21 28.5**	**-0.4**
QUOK				IAmb	IAmb	16 21 29.5	
	comp=Z,19nm,0.5s						
LCAR	**Lake Charles**	**18.93**	**9**	P	**P**	**16 21 28.5**	**-1.0**
LCAR				IAmb	IAmb	16 21 44.3	
	comp=Z,8.4nm,0.6s						
FPAL	**Fort Paine**	**18.96**	**24**	P	**P**	**16 21 28.3**	**-1.6**
Y52A	**Lilburn**	**19.02**	**28**	P	**P**	**16 21 30.1**	**-0.4**
Y52A				IAmb	IAmb	16 21 30.6	
	comp=Z,9.4nm,0.7s						
121A	**Cookes Peak, D**	**19.24**	**324**		**Pn**	**16 21 35.8**	**+0.1**
121A	**Cookes Peak, D**	**19.24**	**324**	P	**P**	**16 21 34.4**	**+1.2**
	baz=139						
T35A	**Sooner Cattle**	**19.59**	**356**	P	**P**	**16 21 36.4**	**-0.3**
T35A				IAmb	IAmb	16 21 56.4	
	comp=Z,16nm,0.6s						
W50A	**Signal Mountai**	**19.66**	**23**	P	**P**	**16 21 34.0**	**-3.4**
W50A				IAmb	IAmb	16 21 47.2	
	comp=Z,16nm,1.1s						
WVT	**Waverly**	**19.69**	**17**	P	**P**	**16 21 37.3**	**-0.4**
WVT	**Waverly**	**19.69**	**17**	P	**P**	**16 21 36.9**	**-0.8**
	baz=200						
CRNM	**Carthage**	**19.80**	**329**	P	**Pn**	**16 21 41.1**	**-1.1**
BNM	**Barren Site**	**19.91**	**330**	P	**P**	**16 21 42.0**	**+1.6**
KAN06	**Argonia West S**	**20.05**	**353**	P	**P**	**16 21 42.4**	**+0.8**
KAN06				IAmb	IAmb	16 21 45.0	
	comp=Z,12nm,0.6s						
LENM	**Lemitar**	**20.09**	**329**	P	Pn	16 21 44.5	-1.1
KAN12	**Harper NE Stat**	**20.12**	**352**		Pn	16 21 44.0	-1.7
S39A	**Bolivar**	**20.33**	**3**	P	**P**	**16 21 43.8**	**-0.8**
ANMO	**Albuquerque**	**20.48**	**331**		**P**	**16 21 47.6**	**+1.2**
ANMO	**Albuquerque**	**20.48**	**331**	P	**P**	**16 21 48.1**	**+1.7**
	baz=146						
ANMO	**Albuquerque**	**20.48**	**331**	P	**P**	**16 21 47.6**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=147,slow=13,SNR=8.5						
	comp=Z,3.1nm,0.7s						
U49A	**Red Boiling Sp**	**20.67**	**21**	P	**P**	**16 21 48.0**	**-0.2**
U49A				IAmb	IAmb	16 21 49.1	
	comp=Z,14nm,0.5s						
TUC	**Tucson**	**20.87**	**319**	P	**P**	**16 21 52.2**	**+1.7**
TUC	**Tucson**	**20.87**	**319**	P	**P**	**16 21 52.3**	**+1.8**
	baz=132						
CCM	**Cathedral Cave**	**20.88**	**8**	P	**P**	**16 21 48.8**	**-1.6**
CCM				IAmb	IAmb	16 22 20.9	
	comp=Z,21nm,1.4s						
CCM	**Cathedral Cave**	**20.88**	**8**	P	**P**	**16 21 49.3**	**-1.1**
	baz=189						
FVM	**French Village**	**20.92**	**9**	P	**P**	**16 21 50.8**	**-0.1**
FVM				IAmb	IAmb	16 22 27.3	
	comp=Z,19nm,1.4s						
R40A	**Maddies Statio**	**21.00**	**5**	P	**P**	**16 21 50.2**	**-1.5**
R32A	**Long Quarter,**	**21.33**	**351**	P	**P**	**16 21 55.5**	**+0.3**
R32A				IAmb	IAmb	16 21 57.2	
	comp=Z,13nm,0.6s						
KMSC	**Kings Mountain**	**21.35**	**31**	P	**P**	**16 21 53.8**	**-1.8**
KMSC				IAmb	IAmb	16 21 56.1	
	comp=Z,14nm,0.6s						
KMSC	**Kings Mountain**	**21.35**	**31**	P	**P**	**16 21 54.2**	**-1.4**
	baz=217						
TZTN	**Tazewell**	**21.52**	**25**	P	**P**	**16 21 55.4**	**-1.9**
TZTN				IAmb	IAmb	16 22 13.3	
	comp=Z,13nm,1.2s						
T25A	**Trinidad**	**21.54**	**338**	P	**P**	**16 21 58.9**	**+1.1**
T25A	**Trinidad**	**21.54**	**338**	P	**P**	**16 21 59.3**	**+1.5**
	baz=154						
CBKS	**Cedar Bluff**	**21.88**	**349**	P	**P**	**16 22 01.1**	**0.0**
CBKS				IAmb	IAmb	16 22 02.6	
	comp=Z,9.0nm,0.7s						
CBKS	**Cedar Bluff**	**21.88**	**349**	P	**P**	**16 22 01.7**	**+0.6**
	baz=167						
214A	**Organ Pipe Nat**	**21.98**	**315**	P	**P**	**16 22 04.0**	**+1.8**
	baz=127						
V55A	**Taylorsville**	**21.98**	**30**	P	**P**	**16 22 00.5**	**-1.6**
U54A	**Nelsons Funny**	**22.24**	**28**	P	**P**	**16 22 02.6**	**-2.2**
U54A				IAmb	IAmb	16 22 04.1	
	comp=Z,13nm,0.7s						
P40A	**Paris**	**22.25**	**5**	P	**P**	**16 22 02.4**	**-2.3**
P40A				IAmb	IAmb	16 22 03.7	
	comp=Z,7.5nm,0.6s						
P38A	**Dawn**	**22.25**	**2**	P	**P**	**16 22 02.4**	**-2.3**
W18A	**Petrified Fore**	**22.25**	**326**	P	**P**	**16 22 07.4**	**+2.3**
	baz=139						
SDCO	**Great Sand Dun**	**22.48**	**337**	P	**P**	**16 22 08.0**	**+0.7**
SDCO	**Great Sand Dun**	**22.48**	**337**	P	**P**	**16 22 08.5**	**+1.2**
	baz=152,SNR=6.0						
X16A	**Lo Mia Camp, P**	**22.71**	**322**	P	**P**	**16 22 11.8**	**+2.4**
U56A	**King**	**22.78**	**31**	P	**P**	**16 22 08.4**	**-1.5**
S22A	**4UR Ranch, Cre**	**23.00**	**335**	P	**P**	**16 22 13.9**	**+1.7**
	baz=149						
MVCO	**Mesa Verde**	**23.28**	**331**	P	**P**	**16 22 16.3**	**+1.6**
MVCO	**Mesa Verde**	**23.28**	**331**	P	**P**	**16 22 16.4**	**+1.6**
	baz=145						
N38A	**Joes South For**	**23.43**	**3**	P	**P**	**16 22 15.1**	**-0.7**
Q24A	**Divide**	**23.44**	**339**	P	**P**	**16 22 17.3**	**+1.1**
	baz=154						
BLA	**Blacksburg**	**23.45**	**30**	P	**P**	**16 22 14.7**	**-1.4**
	baz=216						
WUAZ	**Wupatki**	**23.45**	**324**	P	**P**	**16 22 17.8**	**+1.5**
WUAZ	**Wupatki**	**23.45**	**324**	P	**P**	**16 22 17.7**	**+1.5**
	baz=136						
N41A	**Harden Midland**	**23.54**	**7**	P	**P**	**16 22 15.6**	**-1.2**
N41A				IAmb	IAmb	16 22 16.6	
	comp=Z,11nm,1.1s						
HDIL	**Hopedale**	**23.61**	**10**	P	**P**	**16 22 17.4**	**-0.1**
	baz=193						
P49A	**Miami Univ. Ec**	**23.76**	**19**	P	**P**	**16 22 17.5**	**-1.3**
	baz=204						
T57A	**Hurt**	**23.85**	**32**	P	**P**	**16 22 18.6**	**-1.0**
T57A				IAmb	IAmb	16 22 19.2	
	comp=Z,15nm,1.1s						
PV13	**Radium Mtn., P**	**24.20**	**332**	P	**P**	**16 22 24.3**	**+1.2**
PV13				IAmb	IAmb	16 22 27.1	
	comp=Z,9.4nm,0.6s						
O48B	**Farmland**	**24.29**	**18**	P	**P**	**16 22 22.9**	**-0.7**
	baz=202						
PDMCI	**Parker Dam,Lak**	**24.30**	**318

NVAR Mina Array Bea 29.50 320 P P 16 23 13.3 +2.7
comp=Z,2.6nm,0.6s,baz=135,slow=9.0,SNR=9.6
NVAR pP pP 16 23 43.9 +1.9
comp=Z,0.8nm,0.6s,baz=139,slow=10,SNR=3.0
comp=Z,2.6nm,0.6s
LHV Little Huntoon 29.52 320 P P **16 23 12.6 +2.2**
PAL Palisades 29.60 33 P P **16 23 08.9 -2.2**
baz=223
E28A Huff 29.60 352 P P **16 23 11.2 +0.1**
E43A Lone Tree Farm 29.66 11 P P **16 23 10.0 -1.6**
E43A IAmb IAmb 16 23 10.6
comp=Z,7.5nm,0.6s
KVN Kaiserville 29.78 321 P P **16 23 14.6 +1.6**
IMW Indian Meadow 29.86 336 P P **16 23 14.5 +0.8**
L59A Walton 29.92 30 P P **16 23 11.9 -2.1**
L59A IAmb IAmb 16 23 12.9
comp=Z,7.0nm,0.6s
RLMT Red Lodge 30.31 339 P P **16 23 18.4 +0.8**
RLMT Red Lodge 30.31 339 P P **16 23 18.1 +0.5**
baz=151
EYMN Ely 30.66 4 P P **16 23 18.8 -1.6**
EYMN IAmb IAmb 16 23 19.8
comp=Z,4.0nm,0.6s
EYMN Ely 30.66 4 P P **16 23 19.2 -1.2**
baz=186
MDND Maddock 30.72 353 P P **16 23 20.3 -0.6**
MDND Maddock 30.72 353 P P **16 23 20.7 -0.2**
baz=171
AGMN Agassiz Nation 30.91 358 P P **16 23 21.7 -0.9**
AGMN Agassiz Nation 30.91 358 P P **16 23 22.1 -0.5**
baz=178,SNR=14
GCMT Greycliff 31.03 339 P P **16 23 23.8 0.0**
HLID Hailey 31.06 332 P P **16 23 25.3 +1.1**
baz=141
MCMT McKenzie Canyo 31.40 335 P P **16 23 28.9 +1.7**
LONY Lake Ozonia 32.02 28 P P **16 23 30.6 -1.8**
baz=218
ULM Lac du Bonnet 32.87 359 P P **16 23 37.9 -1.7**
ULM IAmb IAmb 16 23 57.4
comp=Z,10nm,1.3s
ULM Lac du Bonnet 32.87 359 P P **16 23 38.2 -1.5**
comp=Z,4.6nm,0.5s,baz=170,slow=12,SNR=5.2
comp=Z,4.6nm,0.5s
J08A Circle Bar Ran 32.89 327 P P **16 23 40.7 +0.6**
J08A IAmb IAmb 16 23 42.7
comp=Z,5.7nm,0.6s
LBNH Lisbon 32.96 31 P P **16 23 39.2 -1.4**
baz=223
EGMT Eagleton 33.03 341 P P **16 23 41.8 +0.6**
EGMT IAmb IAmb 16 24 17.9
comp=Z,6.1nm,1.1s
EGMT Eagleton 33.03 341 P P **16 23 42.0 +0.8**
baz=153
G62A West of Eustis 34.36 31 P P **16 23 50.7 -2.0**
G62A IAmb IAmb 16 23 51.7
comp=Z,6.9nm,0.7s
PKME Peaks-Kenny Pk 35.01 32 P P **16 23 56.7 -1.5**
baz=225
G05D Wamic, OR 35.66 327 P P **16 24 05.1 +1.2**
baz=133
I03D Drain, OR 35.77 323 P P **16 24 05.7 +1.0**
baz=126
J01E Myrtle Point 35.78 322 P P **16 24 05.9 +1.1**
J01E IAmb IAmb 16 24 18.1
comp=Z,14nm,1.2s
J01E Myrtle Point 35.78 322 P P **16 24 06.3 +1.5**
baz=127
G65A Princeton 35.85 33 P P **16 24 03.4 -2.0**
G65A IAmb IAmb 16 24 38.0
comp=Z,14nm,1.2s
E62A Clayton Lake 35.86 30 P P **16 24 03.7 -1.7**
E62A IAmb IAmb 16 24 11.4
comp=Z,12nm,1.3s
LMQ La Malbaie 36.16 28 P P **16 24 05.7 -2.4**
LMQ IAmb IAmb 16 24 23.9
comp=Z,12nm,1.1s
D62A Allapoint, All 36.41 30 P P **16 24 08.5 -1.6**
D62A IAmb IAmb 16 24 19.7
comp=Z,14nm,1.4s
BOAV Boa Vista 36.64 110 P P **16 24 10.8 -1.7**
BOAV IAmb IAmb 16 24 29.5
comp=Z,3.1nm,1.1s
FFC Flin Flon 37.76 353 P P **16 24 21.0 -0.5**
FFC IAmb IAmb 16 24 45.0
comp=Z,8.0nm,1.1s
EDM Edmonton 38.70 342 P P **16 24 29.9 +0.5**
ETMB Extrema 38.94 132 P P **16 24 31.3 -0.6**
ETMB IAmb IAmb 16 24 32.0
comp=Z,2.8nm,0.9s
LPAZ La Paz 42.40 141 P P **16 25 01.5 +0.6**
LPAZ IAmb IAmb 16 25 02.5
comp=Z,4.3nm,0.7s
LPAZ La Paz 42.40 141 P P **16 25 01.9 +1.1**
comp=Z,3.7nm,0.7s,baz=329,slow=6.6,SNR=16
comp=Z,3.7nm,0.7s
SCHQ Schefferville 43.10 23 P P **16 25 03.1 -2.2**
SCHQ IAmb IAmb 16 25 17.5
comp=Z,12nm,1.1s
SCHQ Schefferville 43.10 23 LR LR 16 46 21.9
comp=Z,94nm,18.3s,baz=129,slow=40
PB16 IPOC Station P 43.21 144 P P **16 25 09.1 +1.8**
PB16 IAmb IAmb 16 25 16.1
comp=Z,4.8nm,0.7s
GO01 Chusmiza 44.45 145 P P **16 25 19.5 +2.4**
GO01 IAmb IAmb 16 25 22.2
comp=Z,5.4nm,0.7s
YKA Yellowknife Ar 47.24 348 P P **16 25 37.3 -0.5**
YKA Yellowknife Ar 47.24 348 P P **16 25 37.8 0.0**
comp=Z,2.9nm,0.6s,baz=153,slow=7.3,SNR=15
YKA pP pP 16 26 10.8 -0.5
comp=Z,1.5nm,0.7s,baz=150,slow=7.3,SNR=4.4
comp=Z,2.9nm,0.6s
PTLB Pontes e Lacer 47.81 131 P P **16 25 42.5 -0.3**
PTLB IAmb IAmb 16 25 43.5
comp=Z,9.0nm,1.0s
DLBC Dease Lake 48.60 336 P P **16 25 51.0 +2.5**
DLBC IAmb IAmb 16 25 51.9
comp=Z,7.1nm,0.8s
DLBC Dease Lake 48.60 336 P P **16 25 51.1 +2.7**
baz=132
R33M Jennings River 49.61 337 P P **16 25 58.1 +1.9**
baz=132
SIT Sitka 49.94 332 P P **16 26 00.6 +2.1**
baz=126
TGTN Hyland Airport 50.15 340 P P **16 26 01.8 +1.7**
baz=136
P33M Teslin, Yukon 50.85 337 P P **16 26 07.3 +1.8**
baz=130
N32M Quiet Lake 51.57 337 P P **16 26 12.5 +1.8**
baz=131
MMPY Sheldon Lake, 51.92 339 P P **16 26 15.1 +1.8**
baz=134,SNR=5.8
WHY Whitehorse 51.93 336 P P **16 26 14.9 +1.4**
baz=128
FARO Faro, Yukon 52.37 338 P P **16 26 18.1 +1.4**
baz=131
P29M Windy Craggy 52.47 334 P P **16 26 19.6 +2.2**
baz=125
M31M Drury Creek, Y 52.72 338 P P **16 26 21.1 +1.8**
M31M IAmb IAmb 16 26 21.3
comp=Z,5.4nm,1.1s
M31M Drury Creek, Y 52.72 338 P P **16 26 20.4 +1.2**
baz=130
N31M Braeburn, Yuko 52.79 337 P P **16 26 21.6 +1.9**
baz=128
HYT Haines Junctio 53.06 335 P P **16 26 23.6 +1.7**
baz=126
O29M Mount Kennedy 53.19 334 P P **16 26 24.0 +1.2**
baz=124
N30M Aishikik Lake 53.27 336 P P **16 26 24.6 +1.3**
baz=126
YUK6 Outpost Mounta 53.47 335 P P **16 26 25.8 +0.9**
baz=125
M30M Minto, Yukon 53.83 337 P P **16 26 28.5 +1.1**
M30M IAmb IAmb 16 26 29.6
comp=Z,9.4nm,1.4s
M30M Minto, Yukon 53.83 337 P P **16 26 28.9 +1.6**
baz=127
M29M Somme Creek 54.38 337 P P **16 26 32.9 +1.5**
baz=126,SNR=11
BVCY Beaver Creek 55.28 336 P P **16 26 39.1 +1.3**
baz=123
M27K Edge Creek, AK 55.65 335 P P **16 26 42.3 +1.7**
M27K Edge Creek, AK 55.65 335 P P **16 26 42.2 +1.7**
baz=122
GLB Gilahina Butte 55.97 334 P P **16 26 44.3 +1.5**
GLB IAmb IAmb 16 26 45.1
comp=Z,3.5nm,0.7s
BCAR Beaver Creek A 55.99 336 P P **16 26 43.9 +1.1**
L27K Beaver Creek, 56.01 336 P P **16 26 44.0 +1.1**
L27K IAmb IAmb 16 26 45.4
comp=Z,5.2nm,1.1s
L27K Beaver Creek, 56.01 336 P P **16 26 44.5 +1.6**
baz=122
BMRM Bremner River 56.08 333 P P **16 26 45.5 +2.0**
baz=118
M26K Nabesna, AK 56.12 335 P P **16 26 45.2 +1.4**
baz=121
Q23K Middleton Isla 56.16 331 P P **16 26 45.4 +1.4**
baz=116
EPYK Eagle Plains 56.18 341 P P **16 26 44.9 +0.7**
baz=130
N25K Chitina, Valde 56.38 334 P P **16 26 47.0 +1.2**
N25K IAmb IAmb 16 26 48.7
comp=Z,3.1nm,0.8s
N25K Chitina, Valde 56.38 334 P P **16 26 45.6 -0.1**
baz=118
EYAK Cordova Ski Ar 56.38 332 P P **16 26 47.4 +1.8**
baz=117
CPUP Villa Florida 56.55 139 P P **16 26 48.6 +1.4**
comp=Z,1.2nm,0.5s,baz=339,slow=8.6,SNR=3.4
comp=Z,1.2nm,0.5s
INK Inuvik 56.56 344 P P **16 26 46.9 +0.2**
INK IAmb IAmb 16 26 47.9
comp=Z,5.6nm,1.0s
INK Inuvik 56.56 344 P P **16 26 47.2 +0.6**
baz=134
EGAK Eagle 56.70 338 P P **16 26 48.4 +0.6**
EGAK Eagle 56.70 338 P P **16 26 48.2 +0.4**
baz=124
KLU Klutina 56.89 333 P P **16 26 50.5 +1.3**
baz=117
SFJD Kangerlussuaq 57.18 19 LR LR 16 52 48.1
comp=Z,28nm,19.3s,baz=174,slow=37
I27K Kandik River 57.33 339 P P **16 26 53.0 +0.8**
baz=124
PAX Paxson 57.39 335 P P **16 26 53.5 +0.7**
PAX IAmb IAmb 16 26 54.4
comp=Z,2.7nm,0.8s
PAX Paxson 57.39 335 P P **16 26 53.7 +0.9**
baz=118
J26L Joseph Creek 57.42 337 P P **16 26 54.3 +1.3**
J26L IAmb IAmb 16 26 55.5
comp=Z,11nm,1.4s
J26L Joseph Creek 57.42 337 P P **16 26 54.1 +1.1**
baz=121
RIDG Independent Ri 57.52 336 P P **16 26 54.9 +1.2**
baz=120
SCM Sheep Creek Mo 57.64 333 P P **16 26 55.9 +1.4**
baz=116
H27K Steamboat Moun 57.65 339 P P **16 26 55.1 +0.6**
baz=124
I26K Coal Creek Min 57.70 338 P P **16 26 55.4 +0.6**
I26K Coal Creek Min 57.70 338 P P **16 26 55.3 +0.5**
baz=122
M23K Glacier View 57.80 333 P P **16 26 57.5 +2.0**
baz=116
SEW Seward 57.87 331 P P **16 26 56.6 +0.6**
baz=113
K24K Donnelly Dome 57.92 336 P P **16 26 57.2 +0.8**
baz=119
G27K Doyon Strip 58.02 340 P P **16 26 57.5 +0.4**
baz=124
J25K Salcha River, 58.15 337 P P **16 26 59.2 +1.1**
J25K IAmb IAmb 16 27 00.1
comp=Z,5.2nm,1.1s
J25K Salcha River, 58.15 337 P P **16 26 58.8 +0.7**
baz=119
DHY Denali Highway 58.21 335 P P **16 26 58.4 -0.3**
baz=116
BRSE Bradley Lake S 58.34 330 P P **16 27 00.7 +1.4**
baz=111
RC01 Rabbit Creek A 58.38 332 P P **16 27 00.7 +1.1**
baz=113
KDAK Kodiak Island 58.57 328 P P **16 27 02.4 +1.5**
baz=108
WAT1 Susitna Watana 58.59 334 P P **16 27 01.6 +0.5**
baz=115
HDA Harding Lake 58.66 336 P P **16 27 02.1 +0.6**
baz=118
PRP Porcupine Dome 58.66 338 P P **16 27 02.3 +0.6**
PRP IAmb IAmb 16 27 03.8
comp=Z,4.6nm,0.7s
PRP Porcupine Dome 58.66 338 P P **16 27 02.7 +1.0**
baz=120
E27K Coleen River 58.79 341 P P **16 27 03.0 +0.7**
baz=125
G26K Porcupine Rive 58.80 340 P P **16 27 03.4 +1.0**
baz=122
IL31 58.80 337 P P **16 27 02.6 +0.2**
IL31 IAmb IAmb 16 27 04.6
comp=Z,3.2nm,0.8s
ILAR Eielson Array 58.80 337 P P **16 27 02.8 +0.3**
ILAR Eielson Array 58.80 337 P P **16 27 02.9 +0.4**
comp=Z,1.1nm,0.7s,baz=151,slow=4.5,SNR=16
ILAR pP pP **16 27 37.2 0.0**
comp=Z,0.7nm,0.6s,baz=155,slow=4.4,SNR=4.0
comp=Z,1.1nm,0.7s
RND Reindeer 58.96 335 P P **16 27 04.7 +1.0**
MCK McKinley 59.13 335 P P **16 27 05.6 +0.9**
baz=115
CUT Chulitna 59.14 333 P P **16 27 05.5 +0.8**
baz=113
H25K Birch Creek 59.14 338 P P **16 27 05.7 +1.0**
baz=120
BMAR Burnt Mountain 59.32 340 P P **16 27 06.5 +0.4**
O20K Slope Mountain 59.34 330 P P **16 27 05.7 +1.2**
baz=110
MDM Murphy Dome 59.40 337 P P **16 27 06.6 0.0**
MDM IAmb IAmb 16 27 07.4
comp=Z,2.0nm,0.6s
SPU Mount Spurr 59.46 332 P P **16 27 08.4 +1.2**
TRF Thorofare Moun 59.57 335 P P **16 27 08.8 +0.9**
TRF Thorofare Moun 59.57 335 P P **16 27 09.2 +1.2**
baz=114
H24K Noodor Dome 59.67 338 P P **16 27 08.9 +0.5**
H24K IAmb IAmb 16 27 10.1
comp=Z,6.5nm,0.9s
H24K Noodor Dome 59.67 338 P P **16 27 08.7 +0.3**
baz=118,SNR=6.0
F25K Christian Rive 59.75 340 P P **16 27 09.5 +0.5**
baz=121
G24K Haweenzic Riv 59.93 339 P P **16 27 10.7 +0.5**
baz=118
BPAW Bear Paw Mtn. 60.11 335 P P **16 27 12.2 +0.7**
baz=113
M20K Styx River 60.19 332 P P **16 27 12.6 +0.5**
M20K IAmb IAmb 16 27 50.1
comp=Z,8.2nm,1.5s
M20K Styx River 60.19 332 P P **16 27 13.0 +0.8**
baz=110
MLY Manley 60.39 336 P P **16 27 13.8 +0.4**
baz=114
N19K Bonanza Creek 60.45 331 P P **16 27 14.2 +0.3**
N19K IAmb IAmb 16 27 15.2
comp=Z,5.5nm,0.8s
N19K Bonanza Creek 60.45 331 P P **16 27 14.3 +0.3**
baz=108
F24K Squaw Lake 60.47 339 P P **16 27 14.0 +0.1**
baz=118
O18K Koktuh Hills 60.50 330 P P **16 27 14.5 +0.3**
O18K IAmb IAmb 16 27 16.2
comp=Z,6.1nm,0.8s
O18K Koktuh Hills 60.50 330 P P **16 27 15.1 +0.9**
baz=107
ITAB Concordia 60.51 136 P P **16 27 16.0 +1.3**
L20K Farewell, AK 60.73 333 P P **16 27 16.4 +0.7**
baz=110
M19K Big River Lodg 60.76 332 P P **16 27 16.6 +0.7**
M19K IAmb IAmb 16 27 18.4
comp=Z,2.6nm,0.8s
M19K Big River Lodg 60.76 332 P P **16 27 16.8 +0.9**
baz=109
G23K Bananza Creek 60.84 338 P P **16 27 17.3 +0.9**
baz=116
D25K Kavik River 60.88 341 P P **16 27 17.5 +0.9**
baz=121
P17K Kvichak River 60.92 329 P P **16 27 17.8 +0.8**
baz=106
H22K Ishtalitna Cre 60.99 337 P P **16 27 17.8 +0.4**
baz=114
SVW2 Sparrevohn 61.05 331 P P **16 27 18.1 +0.2**
SVW2 IAmb IAmb 16 27 18.6
comp=Z,2.9nm,0.7s
L19K White Mountain 61.06 332 P P **16 27 18.5 +0.6**
baz=109
N18K Kilae Creek 61.07 330 P P **16 27 18.4 +0.4**
N18K IAmb IAmb 16 27 56.4
comp=Z,8.3nm,1.2s
N18K Kilae Creek 61.07 330 P P **16 27 18.9 +0.9**
baz=107
K20K Telida 61.11 334 P P **16 27 18.7 +0.5**
K20K IAmb IAmb 16 27 19.4
comp=Z,7.6nm,1.3s
K20K Telida 61.11 334 P P **16 27 19.2 +0.9**
baz=110
O17K Koliganek Bris 61.40 329 P P **16 27 21.3 +1.1**
baz=105
J20K Nowinta River 61.43 335 P P **16 27 20.6 +0.3**
J20K IAmb IAmb 16 27 21.5
comp=Z,3.6nm,0.9s
J20K Nowinta River 61.43 335 P P **16 27 20.6 +0.3**
baz=110
H21K Melozitna Rive 61.44 336 P P **16 27 20.4 0.0**
H21K Melozitna Rive 61.44 336 P P **16 27 20.6 +0.2**
baz=112
TOLK Toolik Lake Re 61.55 340 P P **16 27 22.1 +1.0**
TOLK Toolik Lake Re 61.55 340 P P **16 27 21.8 +0.6**
baz=117
TTA Tatalina 61.80 333 P P **16 27 23.4 +0.4**
baz=108
O16K Kokwok River B 61.84 329 P P **16 27 23.2 0.0**
baz=104
IMAR Indian Mountai 61.92 337 P P **16 27 23.2 -0.4**
F22K John River 61.94 338 P P **16 27 25.2 +1.4**
baz=114
PLCA Paso Flores 61.94 159 P P **16 27 25.7 +1.6**
PLCA IAmb IAmb 16 27 27.3
comp=Z,9.5nm,1.3s
PLCA Paso Flores 61.94 159 P P **16 27 25.5 +1.3**
comp=Z,3.4nm,1.0s,baz=309,slow=7.3,SNR=3.6
PLCA pP pP **16 28 00.1 +0.7**
comp=Z,5.3nm,1.0s,baz=320,slow=9.3,SNR=4.0
comp=Z,3.4nm,1.0s
G21K Allakaket 62.03 337 P P **16 27 25.7 +1.4**
baz=112
E22K Anaktuvuk Pass 62.08 339 P P **16 27 25.3 +0.6**
baz=115
F21K Alatna River 62.29 338 P P **16 27 27.3 +1.2**
baz=112,SNR=8.0
N16K Nishlik Lake 62.39 330 P P **16 27 27.9 +1.0**
baz=104
C23K Itkillik River 62.43 341 P P **16 27 28.1 +1.2**
baz=117
EUNU Eureka 62.89 2 P P **16 27 30.7 +0.8**
SUMG Summit 63.75 16 P P **16 27 36.4 +0.3**
UNV Unalaska Valle 65.51 322 P P **16 27 48.4 +1.1**
UNV Unalaska Valle 65.51 322 P P **16 27 48.5 +1.2**
baz=94
RDOG Red Dog Mine 65.97 338 P P **16 27 51.1 +1.0**
baz=104
GAMB Gambell 68.89 332 P P **16 28 09.4 +1.0**
baz=94
ESK Eskdalemuir 76.76 36 P P **16 28 54.2 -0.8**
PAB San Pablo 79.41 52 P P **16 29 09.9 -0.1**
ESDC Sonseca Array 79.67 52 P P **16 29 11.2 -0.2**
comp=Z,2.4nm,0.9s,baz=286,slow=5.4,SNR=13
comp=Z,2.4nm,0.9s
NC204 NORSAR Array S 82.16 28 P P **16 29 24.9 +0.8**
NB2 NORSAR Subarra 82.45 28 P P **16 29 26.3 +0.6**
comp=Z,1.7nm,0.7s,baz=294,slow=5.3
NOA NORSAR Array B 82.45 28 P P **16 29 26.2 +0.6**
comp=Z,3.0nm,0.8s,baz=294,slow=5.3,SNR=14
comp=Z,3.0nm,0.8s
NB201 NORSAR Array S 82.48 28 P P **16 29 26.2 +0.4**
NC602 NORSAR Array S 82.71 28 P P **16 29 27.4 +0.4**
ARCES ARCESS Array B 83.79 18 P P **16 29 32.4 0.0**
ARCES ARCESS Array B 83.79 18 P P **16 29 32.5 +0.2**
comp=Z,3.4nm,0.7s,baz=303,slow=5.1,SNR=11
comp=Z,3.4nm,0.7s
KOWA Kowa 86.36 76 P P **16 29 46.5 +0.3**
DBIC Dimbokro 87.84 84 P P **16 29 53.4 0.0**
DBIC IAmb IAmb 16 30 06.3
comp=Z,7.6nm,1.2s
DBIC Dimbokro 87.84 84 P P **16 29 52.8 -0.6**
comp=Z,4.1nm,0.6s,baz=281,slow=7.2,SNR=5.0
comp=Z,4.1nm,0.6s
TORD Torodi Ar. Bea 92.06 76 P P **16 30 12.2 -0.8**
comp=Z,28nm,0.4s,baz=288,slow=6.1,SNR=6.4
BOSA Boshof 124.03 113 PKP PKPdf **16 36 02.1 +0.6**
comp=Z,1.7nm,0.8s,baz=305,slow=4.1,SNR=3.7
PZH PanZhiHua 133.62 340 PKP PKPdf **16 36 20.8 +0.9**
WRA Warramunga Arr 133.64 259 PKP PKPdf **16 36 20.2 +0.4**
comp=Z,0.3nm,0.5s,baz=357,slow=0.8,SNR=12
ASAR Alice Springs 134.26 254 PKP PKPdf **16 36 21.4 +0.4**
comp=Z,0.4nm,0.7s,baz=112,slow=2.1,SNR=7.8

*IDC **30** 16:29:24.9±1.2,51°.87N×176°.25E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=36.3km s-min=32.8km az=18.0*
*AEIC **30** 16:29:28.9±1.1,51°.9N±0°.1×176°.41E±0°.05, h5km±7km, Error ellipse: s-maj=18.7km s-min=3.8km az=188.0*
*NEIC **30** 16:29:30.9±0.8,51°.8N±0°.2×176°.39E±0°.09, h30km±13km, ML3.2/15(AEIC), Error ellipse: s-maj=24.4km s-min=5.0km az=193.0*

ISC 30 16:29:30.8±0.9, 51°.8N±0°.2×176°.35E±0°.06, h40km, n30, σ0s78/27, mb3.6/6, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LSSA	**Little Sitkin**	**1.35**	**83**			**Pn**	**16 29 53.3**	**+0.2**
LSNW	**Little Sitkin**	**1.35**	**83**			**Pn**	**16 29 53.2**	**0.0**
LSNW						**Sn**	**16 30 09.9**	**+0.1**
LSSE	**Little Sitkin**	**1.38**	**84**			**Pn**	**16 29 53.7**	**+0.2**
SMY	**Shemya**	**1.66**	**304**			**Pn**	**16 29 57.9**	**+0.5**
SMY						**Sn**	**16 30 18.9**	**+1.5**
AMKA	**Amchitka**	**1.89**	**102**			**Pn**	**16 30 00.7**	**+0.2**
AMKA						**Sn**	**16 30 23.7**	**+0.5**
CESW	**Semis' Southwe**	**1.99**	**86**			**Pn**	**16 30 02.1**	**+0.1**
CEPE	**Semis' Perret**	**2.05**	**85**			**Pn**	**16 30 03.4**	**+0.6**
GANO	**Gareloi North**	**3.01**	**88**			**Pn**	**16 30 16.4**	**+0.4**
TAFP	**Tanaga Falls P**	**3.51**	**86**			**Pn**	**16 30 23.0**	**+0.1**
KIMD	**Kanaga Island**	**3.98**	**88**			**Pn**	**16 30 29.9**	**+0.6**
KICM	**Kanaga Island**	**4.00**	**86**			**Pn**	**16 30 30.2**	**+0.7**
KIWB	**Kanaga Island**	**4.03**	**87**		Pn	**Pn**	**16 30 30.8**	**+0.9**
ADK	**Adak**	**4.32**	**86**			**Pn**	**16 30 34.3**	**+0.4**
GSTR	**Great Sitkin T**	**4.70**	**84**		Pn	**Pn**	**16 30 39.3**	**+0.1**
SPIA	**Saint Paul Isl**	**9.46**	**50**		Pn	**Pn**	**16 31 44.9**	**+0.6**
AKUT	**Akutan**	**11.03**	**71**		Pn	**Pn**	**16 32 07.6**	**+1.9**
SDPT	**Sand Point**	**14.19**	**66**		Pn	**Pn**	**16 32 48.6**	**-0.3**
CNBA	**Chernabura Isl**	**14.67**	**69**		Pn	**Pn**	**16 32 53.9**	**-1.5**
H11N2	**WAKE ISLAND Hy**	**32.87**	**197**	T		T	17 11 13.7	
	baz=11,slow=76,SNR=101							
H11N3	**WAKE ISLAND Hy**	**32.88**	**197**	T		T	17 11 19.6	
	baz=11,slow=76,SNR=103							
H11N1	**WAKE ISLAND Hy**	**32.89**	**197**	T		T	17 11 20.3	
	baz=11,slow=76,SNR=109							
H11S1	**WAKE ISLAND Hy**	**34.10**	**196**	T		T	17 12 39.1	
	baz=11,slow=76,SNR=76							
H11S3	**WAKE ISLAND Hy**	**34.11**	**197**	T		T	17 12 40.1	
	baz=11,slow=76,SNR=56							
H11S2	**WAKE ISLAND Hy**	**34.11**	**196**	T		T	17 12 52.6	
	baz=11,slow=76,SNR=34							
SONM	**Songino Array**	**43.72**	**294**	P		**P**	**16 37 32.2**	**+0.3**
	0.5nm,0.5s,baz=55,slow=8.7,SNR=3.8							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**57.35**	**306**	P		**P**	**16 39 13.6**	**-1.0**
	0.3nm,0.4s,baz=49,slow=6.0,SNR=6.6							
	0.3nm,0.4s							
TXAR	**Lajitas Array**	**61.55**	**78**	P		**P**	**16 39 44.6**	**+0.8**
	0.1nm,0.4s,baz=324,slow=6.2,SNR=3.5							
	0.1nm,0.4s							
AKASG	**Malin Array Be**	**74.13**	**339**	P		**P**	**16 41 01.6**	**-0.9**
	0.4nm,0.4s,baz=21,slow=5.7,SNR=2.4							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**80.32**	**220**	P		**P**	**16 41 37.1**	**-0.4**
	0.2nm,0.5s,baz=30,slow=5.7,SNR=5.7							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**83.86**	**218**	P		**P**	**16 41 56.5**	**+0.5**
	0.5nm,0.9s,baz=20,slow=5.1,SNR=2.8							
	0.5nm,0.9s							

*NEIC **30** 16:42:31.1±0.9, 12°.56N±0°.05×146°.34E±0°.09, h10km±1km, mb4.3/8, Error ellipse: s-maj=14.1km s-min=8.0km az=90.0*
*IDC **30** 16:42:42.2±6.0, 12°.25N×145°.39E, h69km±98km, mb3.4/3,*

mbtmp3.8/4,ML4.1/1,MS4.2/1,Error ellipse: s-maj=74.1km s-min=71.1km az=136.0

ISC 30 16:42:39.3±1.9, 12°.13N±0°.09×145°.6E±0°.3, h35km, n17, σ0§68/18, mb4.0/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.60**	**335**		Pn	16 42 59.8	-5.3
GUMO				Pg	**Pn**	**16 43 05.2**	**+0.1**
GUMO				Sn	**Sn**	**16 43 24.2**	**-0.3**
GUMO	**Guam**	**1.60**	**335**	P	**Pn**	**16 43 05.7**	**+0.5**
	208nm,0.3s,baz=293,slow=1.5,SNR=35						
GUMO				S	**Sn**	**16 43 24.2**	**-0.3**
	803nm,0.3s,baz=343,slow=19,SNR=14						
SIJI	**Sorong**	**19.19**	**229**	P	**P**	**16 47 00.5**	**+0.3**
SIJI	**Sorong**	**19.19**	**229**	P	**P**	**16 47 00.5**	**+0.3**
	0.5nm,0.3s,baz=30,slow=9.9,SNR=5.2						
	4.0nm,0.6s						
FAKI	**Fak Fak**	**19.96**	**222**		**Pn**	**16 47 11.1**	**+0.5**
KNRA	**Kununurra**	**32.24**	**211**	P	**P**	**16 49 02.4**	**-2.3**
WB0	**Warramunga Arr**	**33.55**	**199**	P	**P**	**16 49 15.3**	**-0.7**
WB0				IAmb	IAmb	16 49 29.9	
	comp=Z,2.3nm,1.0s						
WR0	**Warramunga Arr**	**33.68**	**199**	P	**P**	**16 49 17.0**	**-0.3**
WR0				IAmb	IAmb	16 49 51.6	
	comp=Z,6.6nm,1.2s						
WRAB	**Tennant Creek**	**33.72**	**199**	P	**P**	**16 49 17.4**	**-0.2**
WRAB				IAmb	IAmb	16 49 56.1	
	comp=Z,7.1nm,1.3s						
WB2	**Warramunga Arr**	**33.73**	**199**	P	**P**	**16 49 17.7**	**+0.1**
WB2				IAmb	IAmb	16 49 34.8	
	comp=Z,7.5nm,1.3s						
WRA	**Warramunga Arr**	**33.73**	**199**	P	**P**	**16 49 17.7**	**0.0**
	comp=Z,0.6nm,0.5s,baz=19,slow=9.7,SNR=18						
	comp=Z,0.6nm,0.5s						
AS31	**Alice Springs**	**37.36**	**198**	P	**P**	**16 49 48.8**	**0.0**
ASAR	**Alice Springs**	**37.36**	**198**	P	**P**	**16 49 49.0**	**+0.2**
ASAR	**Alice Springs**	**37.36**	**198**	P	**P**	**16 49 48.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=14,slow=10,SNR=9.5						
	comp=Z,0.1nm,0.3s						
STKA	**Stephens Creek**	**43.92**	**185**	P	**P**	**16 50 43.0**	**+0.1**
STKA	**Stephens Creek**	**43.92**	**185**	P	**P**	**16 50 43.0**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=18,slow=6.0,SNR=7.4						
	comp=Z,1.0nm,0.4s						
SHEM	**Shemya Is, Ala**	**46.51**	**24**	LR	LR	17 10 58.5	
	comp=Z,293nm,19.7s,baz=108,slow=36						

*IDC **30** 16:43:35.2±1.0, 18°.84N×145°.74E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=47.6km s-min=22.7km az=109.0*

*NEIC **30** 16:43:58.3±0.7, 18°.7N±0°.04×145°.4E±0°.3, h194km±12km, mb4.0/6, Error ellipse: s-maj=42.2km s-min=6.5km az=88.0*

ISC 30 16:43:58.0±0.9, 18°.7N±0°.2×145°.5E±0°.2, h200km, n16, σ0§95/16, mb3.5/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WB0	**Warramunga Arr**	**39.76**	**196**	P	**P**	**16 51 11.6**	**0.0**
WB0				IAmb	IAmb	16 51 30.7	
	comp=Z,5.7nm,1.4s						
WR0	**Warramunga Arr**	**39.91**	**196**	P	**P**	**16 51 12.6**	**-0.2**
WR0				IAmb	IAmb	16 51 16.3	
	comp=Z,5.6nm,1.2s						
WRAB	**Tennant Creek**	**39.93**	**196**	P	**P**	**16 51 13.1**	**+0.2**
WRAB				IAmb	IAmb	16 51 39.7	
	comp=Z,7.0nm,1.4s						
WB2	**Warramunga Arr**	**39.94**	**196**	P	**P**	**16 51 13.0**	**0.0**
WB2				IAmb	IAmb	16 51 48.5	
	comp=Z,8.0nm,1.4s						
WRA	**Warramunga Arr**	**39.94**	**196**	P	**P**	**16 51 13.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=17,slow=8.2,SNR=8.6						
	comp=Z,0.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.45**	**209**	P	**P**	**16 51 25.6**	**+0.2**
ASAR	**Alice Springs**	**43.61**	**195**	P	**P**	**16 51 42.4**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=16,slow=6.6,SNR=4.4						
	comp=Z,0.2nm,0.7s						
MKAR	**Makanchi Array**	**58.28**	**314**	P	**P**	**16 53 33.2**	**+1.4**
MKAR	**Makanchi Array**	**58.28**	**314**	P	**P**	**16 53 32.7**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=85,slow=8.9,SNR=5.3						
	comp=Z,0.3nm,0.5s						
MAKZ	**Makanchi**	**58.50**	**314**	P	**P**	**16 53 33.9**	**+0.6**
ILAR	**Eielson Array**	**63.72**	**26**	P	**P**	**16 54 06.5**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=249,slow=4.9,SNR=5.1						
	comp=Z,0.5nm,0.7s						
BMAR	**Burnt Mountain**	**65.19**	**24**	P	**P**	**16 54 19.2**	**+1.6**
ABKAR	**Akbulak array**	**73.17**	**317**	P	**P**	**16 55 06.3**	**-0.5**
YKA	**Yellowknife Ar**	**78.07**	**28**	P	**P**	**16 55 34.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=280,slow=4.8,SNR=2.5						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**83.30**	**52**	P	**P**	**16 56 03.6**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=260,slow=5.9,SNR=6.1						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**86.77**	**335**	P	**P**	**16 56 17.8**	**-1.5**

IDC 30 16:49:52.5±1.9, 18°.54S×177°.24W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=148.5km s-min=30.3km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**34.45**	**261**	P	P	16 56 43.4	+1.2
	4.0nm,0.9s,baz=117,slow=6.8,SNR=1.9						
	4.0nm,0.9s						
STKA	**Stephens Creek**	**39.31**	**242**	P	P	16 57 24.8	+1.3
	1.1nm,0.5s,baz=82,slow=8.6,SNR=4.9						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**45.62**	**260**	P	P	16 58 14.0	-1.0
	1.0nm,0.4s,baz=98,slow=7.0,SNR=59						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**45.70**	**255**	P	P	16 58 14.7	-1.0
	2.1nm,0.7s,baz=96,slow=7.6,SNR=44						
	2.1nm,0.7s						
TXAR	**Lajitas Array**	**85.39**	**57**	P	P	17 02 32.5	+0.1
	0.4nm,0.8s,baz=212,slow=4.4,SNR=4.8						
	0.4nm,0.8s						

*UPP **30** 17:03:03.0±0.1, 67°.08N×20°.85E, h0km, ML1.8, Explosion*

*HEL **30** 17:03:04.0±0.2, 67°.07N×20°.82E, h0km, ML1.8(UPP), Explosion*

*IDC **30** 17:03:05.8±1.0, 67°.02N×20°.97E, h0km, mbtmp2.8/4, ML2.0/4, Error ellipse: s-maj=14.8km s-min=6.1km az=146.0*

*BER **30** 17:03:05.8±2.0, 66°.90N×21°.24E, h0km, ML2.0, Suspected explosion*

*KOLA **30** 17:03:16.7, 67°.33N×20°.92E, h0km, ML2.6*

ISC 30 17:03:03.7±0.8, 67°.07N±0°.02×20°.90E±0°.02, h0km, n45, σ1§35/56, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.14**	**291**	P	**Pg**	**17 03 05.3**	**-1.0**
DUNU				S	**Sg**	**17 03 07.9**	**-0.3**
DUNU	**Dundret**	**0.14**	**291**	*i* P	**Pg**	**17 03 05.3**	**-1.0**
DUNU				*i* S	**Sg**	**17 03 07.9**	**-0.3**
MASU	**Masugnsbyn**	**0.58**	**47**	P	**Pg**	**17 03 13.9**	**-0.8**
MASU	**Masugnsbyn**	**0.58**	**47**	*i* P	**Pg**	**17 03 13.9**	**-0.8**
ERTU	**Ertsjaerv**	**0.73**	**135**	P	**Pg**	**17 03 16.9**	**-0.7**
ERTU	**Ertsjaerv**	**0.73**	**135**	*i* P	**Pg**	**17 03 16.9**	**-0.7**
PAJU	**Pajala**	**0.87**	**92**	P	**Pg**	**17 03 19.8**	**-0.5**
PAJU	**Pajala**	**0.87**	**92**	eS	**Sg**	**17 03 31.5**	**0.0**
RATU	**Laukkuluspa**	**0.91**	**327**	P	**Pg**	**17 03 20.3**	**-0.8**
RATU	**Laukkuluspa**	**0.91**	**327**	*i* P	**Pg**	**17 03 20.3**	**-0.8**
HARU	**Harads**	**0.91**	**178**	P	**Pg**	**17 03 20.4**	**-0.7**
HARU	**Harads**	**0.91**	**178**	eP	**Pg**	**17 03 20.4**	**-0.7**
KUA	**Kurravaara**	**0.91**	**346**	P	**Pg**	**17 03 20.1**	**-1.0**
KUA	**Kurravaara**	**0.91**	**346**	eP	**Pg**	**17 03 20.1**	**-1.0**
SALU	**Saltoluokta**	**0.98**	**290**	P	**Pg**	**17 03 21.3**	**-1.2**
SALU	**Saltoluokta**	**0.98**	**290**	eP	**Pg**	**17 03 21.3**	**-1.2**
NIKU	**Nikkaluokta**	**1.08**	**319**	P	**Pg**	**17 03 22.9**	**-1.3**
NIKU	**Nikkaluokta**	**1.08**	**319**	eP	**Pg**	**17 03 22.9**	**-1.3**
KOVU	**Salmi**	**1.19**	**347**	P	**Pg**	**17 03 24.9**	**-1.6**
KOVU	**Salmi**	**1.19**	**347**	eP	**Pg**	**17 03 24.9**	**-1.6**
SJUU	**Sjulsmark**	**1.60**	**169**	P	**Pn**	**17 03 32.9**	**-0.2**
SJUU	**Sjulsmark**	**1.60**	**169**	eP	**Pn**	**17 03 32.9**	**-0.2**
TOF	**Tornio**	**1.69**	**124**	eP	**Pb**	**17 03 35.0**	**-0.6**
TOF				eS	**Sg**	**17 03 57.7**	**-0.2**
HEF	**Hetta**	**1.71**	**37**	eP	**Pn**	**17 03 34.0**	**-0.7**
HEF				eS	**Sg**	**17 03 58.5**	**+0.1**
HEF	**Hetta**	**1.71**	**37**	eP	**Pb**	**17 03 35.3**	**-0.6**
HEF				eS	**Sb**	**17 03 57.7**	**-0.1**
KIF	**Kilpisjarvi**	**1.94**	**359**	eP	**Pg**	**17 03 40.6**	**-0.3**
KIF				eS	**Sg**	**17 04 06.6**	**+0.6**
KIF	**Kilpisjarvi**	**1.94**	**359**	eP	**Pb**	**17 03 40.0**	**+0.1**
KIF				eS	**Sg**	**17 04 07.0**	**+1.0**
KTK1	**Kautokeino**	**2.14**	**23**	eP	**Pb**	**17 03 42.6**	**-0.7**
KTK1				IAML		17 04 21.0	
	comp=Z,15nm,0.3s						
I37NO	**I37NO**	**2.19**	**338**	*i*		17 17 20.0	
	baz=156,slow=331,SNR=2.9						
FAUS	**Fauske**	**2.21**	**281**	eP	**Pb**	**17 03 43.5**	**-0.9**
FAUS				IAML		17 04 27.3	
	comp=Z,23nm,0.1s						
STEI	**Steigen**	**2.34**	**294**	eP	**Pb**	**17 03 45.8**	**-0.9**
STEI				IAML		17 04 30.5	
	comp=Z,10nm,0.2s						
JETT	**Jettan, Norway**	**2.50**	**356**	eP	**Pb**	**17 03 48.4**	**-1.1**
JETT				eS	**Sb**	**17 04 20.8**	**0.0**
JETT				IAML		17 04 31.6	
	comp=Z,39nm,0.2s						
TRO	**Tromso**	**2.68**	**345**	eP	**Pb**	**17 03 50.5**	**-1.9**
TRO				eS	**Sb**	**17 04 25.1**	**-0.6**
TRO				IAML		17 04 36.7	
	comp=Z,13nm,0.2s						
MOR8	**Moi Rana**	**2.73**	**254**	eP	**Pn**	**17 03 50.1**	**+1.3**
MOR8				IAML		17 04 40.5	
	comp=Z,12nm,0.2s						
ARA0	**ARCESS Array S**	**3.01**	**33**	eP	**Pn**	**17 03 54.2**	**+1.7**
ARA0				IAML		17 04 50.6	
	comp=Z,13nm,0.3s						
ARCES	**ARCESS Array B**	**3.01**	**33**	S	**Sg**	**17 04 38.5**	**-1.7**
ARCES	**ARCESS Array B**	**3.01**	**33**	Pn	**Pn**	**17 03 54.4**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=211,slow=13,SNR=19						
ARCES				Sn	**Sb**	**17 04 33.4**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=205,slow=24,SNR=8.2						
	comp=Z,1.1nm,0.2s						
LOF	**Lofoten**	**3.01**	**294**	eP	**Pn**	**17 03 54.7**	**+2.1**
LOF				IAML		17 04 52.2	
	comp=Z,10nm,0.2s						
KONS	**Konsvik**	**3.14**	**263**	eP	**Pn**	**17 03 55.8**	**+1.5**
KONS				IAML		17 04 58.0	
	comp=Z,7.4nm,0.3s						
KEV	**Kevo**	**3.52**	**37**	eP	**Pn**	**17 04 01.4**	**+2.0**
APA0	**Apatity Array**	**4.71**	**78**	P	**Pg**	**17 04 33.0**	**-0.8**
APA0				S	**Sb**	**17 05 21.0**	**-3.1**
TERR	**Teriberka**	**5.72**	**62**	P	**Pn**	**17 04 32.6**	**+2.9**
TERR				S	**Sn**	**17 05 39.4**	**+3.5**
FINES	**FINESS Array B**	**6.08**	**156**	Pn	**Pn**	**17 04 34.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=7.2						
	comp=Z,1.2nm,0.9s						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**17 04 55.2**	**+2.5**
	baz=32,slow=11,SNR=1.7						
	comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**17 04 58.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=29,slow=12,SNR=1.2						
	comp=Z,1.0nm,0.7s						

*NEIC **30** 17:16:59.0±2.7, 27°.9S±0°.1×176°.26W±0°.06, h10km±1km, mb4.6/24, Error ellipse: s-maj=19.0km s-min=6.1km az=155.0*

*IDC **30** 17:16:59.2±0.8, 28°.04S×176°.52W, h0km, mb4.4/8, mbtmp4.4/8, MS3.6/9, Error ellipse: s-maj=31.8km s-min=17.8km az=153.0*

ISC 30 17:17:01.3±0.6, 28°.57S±0°.07×176°.03W±0°.08, h35km, n92, σ2§32/80, mb4.6/17, MS3.7/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.79**	**247**		**Pn**	**17 17 32.4**	**+2.8**
RAO				Sn	**Sn**	**17 17 52.8**	**+1.7**
RAO	**Raoul Island**	**1.79**	**247**	Pn	**Pn**	**17 17 32.2**	**+2.6**
	254nm,0.3s,baz=56,slow=22,SNR=7.6						
RAO				LR	LR	17 17 47.2	
	comp=Z,136nm,19.0s,baz=24,slow=28						
RAO				Sn	**Sn**	**17 17 54.9**	**+3.8**
	688nm,0.3s,baz=79,slow=24,SNR=16						
GLKZ	**Green Lake**	**1.79**	**247**	P	**Pn**	**17 17 32.5**	**+2.8**
GLKZ				S	**Sn**	**17 17 54.7**	**+3.5**
RIZ	**Raoul Island**	**1.79**	**248**	P	**Pn**	**17 17 32.7**	**+3.0**
RIZ				S	**Sn**	**17 17 55.4**	**+4.2**
MXZ	**Matakaoa Point**	**10.14**	**206**		**Pn**	**17 19 21.6**	**-2.8**
WMGZ	**Waiomatatini S**	**10.32**	**205**	P	**Pn**	**17 19 26.6**	**-0.3**
PKGZ	**Pakihiroa**	**10.52**	**206**	P	**Pn**	**17 19 27.4**	**-2.1**
PKGZ				S	**Sn**	**17 21 24.4**	**-1.7**
HAZ	**Te Kaha**	**10.52**	**208**	P	**Pn**	**17 19 27.7**	**-1.8**
HAZ				S	**Sn**	**17 21 29.4**	**+3.3**
PUZ	**Puketiti**	**10.61**	**205**	P	**Pn**	**17 19 28.0**	**-2.7**
RUGZ	**Raukumara Rang**	**10.74**	**208**	P	**Pn**	**17 19 31.0**	**-1.7**
RUGZ				S	**Sn**	**17 21 33.9**	**+2.2**
NIUE	**Niue**	**10.98**	**32**	Pn	Pn	17 19 28.0	-7.9
CNGZ	**Carnagh Statio**	**10.99**	**204**	P	**Pn**	**17 19 33.4**	**-2.5**
CNGZ				S	**Sn**	**17 21 38.8**	**+1.3**
MWZ	**Matawai**	**11.12**	**207**	P	**Pn**	**17 19 35.3**	**-2.4**
MWZ				S	**Sn**	**17 21 41.1**	**+0.3**
URZ	**Urewera**	**11.23**	**209**		**Pn**	17 19 33.7	-5.5
URZ					**Sn**	**17 21 45.0**	**+1.6**
URZ	**Urewera**	**11.23**	**209**	P	**Pn**	**17 19 36.7**	**-2.5**
URZ				S	**Sn**	**17 21 42.5**	**-0.9**
URZ	**Urewera**	**11.23**	**209**	Pn	**Pn**	**17 19 36.5**	**-2.7**
	0.8nm,0.3s,baz=299,slow=23,SNR=12						
URZ				Sn	**Sn**	**17 21 39.4**	**-4.0**
	2.1nm,0.3s,baz=128,slow=20,SNR=3.2						
MUGZ	**Murupara**	**11.55**	**209**	P	**Pn**	**17 19 40.6**	**-3.1**
MUGZ				S	**Sn**	**17 21 50.9**	**-0.6**
SNGZ	**Shannon Statio**	**11.58**	**207**	P	**Pn**	**17 19 42.3**	**-1.8**
SNGZ				S	**Sn**	**17 21 52.1**	**+0.1**
MTHZ	**Maungataniwha**	**11.84**	**208**	P	**Pn**	**17 19 46.3**	**-1.3**
NMHZ	**Naumai**	**12.06**	**208**	P	**Pn**	**17 19 48.7**	**-2.0**
NMHZ				S	**Sn**	**17 22 03.1**	**-0.9**
MSVF	**Nonsavu**	**12.08**	**332**		**Pn**	**17 19 50.9**	**-0.2**
MSVF	**Nonsavu**	**12.08**	**332**	Pn	**Pn**	**17 19 50.1**	**-0.9**
	0.5nm,0.3s,baz=118,slow=17,SNR=3.3						
MSVF				LR	LR	17 23 02.7	
	comp=Z,84nm,18.8s,baz=139,slow=32						
BKZ	**Black Stump Fm**	**12.25**	**208**		Pn	17 19 42.4	-11
HIZ	**Hauiti**	**12.48**	**215**		Pn	17 19 49.5	-6.9
BFZ	**Birch Farm**	**13.64**	**206**	Pn	Pn	17 20 07.1	-5.1
HOWZ	**Holdsworth Sta**	**14.11**	**207**	P	**Pn**	**17 20 17.7**	**-1.0**
TUWZ	**Tuamarina**	**15.22**	**210**	P	**Pn**	**17 20 27.7**	**-5.8**
NNZ	**Nelson**	**15.30**	**212**	Pn	**Pn**	**17 20 27.5**	**-7.0**
NNZ				IAmb	IAmb	17 20 47.8	
	comp=Z,56nm,1.5s						
TKNZ	**Takaka Hill**	**15.35**	**213**	P	**Pn**	**17 20 37.2**	**+1.9**
QRZ	**Quartz Range**	**15.40**	**215**	P	**Pn**	**17 20 36.7**	**+0.8**
THZ	**Tophouse**	**15.95**	**211**	P	**Pn**	**17 20 41.8**	**-1.2**
MARNC	**Mare, Loyalty**	**16.07**	**292**	Pn	**Pn**	**17 20 38.5**	**-6.0**
RAR	**Rarotonga**	**16.46**	**67**	Pn	**Pn**	**17 20 47.8**	**-1.9**
RAR				IAmb	IAmb	17 20 50.2	
	comp=Z,44nm,1.1s						
RAR	**Rarotonga**	**16.46**	**67**	LR	LR	17 25 41.0	
	comp=Z,145nm,21.5s,baz=254,slow=31						
DZM	**Mont Dzumac**	**17.10**	**288**	eLR	LR	17 24 43.7	
	comp=Z,464nm,24.3s						
DZM	**Mont Dzumac**	**17.10**	**288**	Pn	**Pn**	**17 20 59.1**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=107,slow=12,SNR=4.7						
RPZ	**Rata Peaks**	**18.32**	**211**		**P**	**17 21 07.7**	**-4.8**
RPZ	**Rata Peaks**	**18.32**	**211**	P	**P**	**17 21 11.7**	**-0.8**
	comp=Z,14nm,0.8s,baz=26,slow=3.4,SNR=15						
KOUNC	**Koumac, New Ca**	**19.58**	**290**	P	**Pn**	**17 21 27.9**	**0.0**
KOUNC				IAmb	IAmb	17 21 31.0	
	comp=Z,49nm,1.0s						
TBI	**Tubuai**	**24.43**	**84**	eLR	LR	17 28 25.3	
	comp=Z,202nm,24.5s						
PPT2	**Papeete2**	**26.62**	**72**	eLR	LR	17 29 21.8	
	comp=Z,122nm,22.8s						
PPT	**Papeete**	**26.63**	**71**	LR	LR	17 30 10.3	
	comp=Z,59nm,21.7s,baz=248,slow=29						
ARMA	**Armidale**	**28.16**	**258**	P	**P**	**17 22 50.6**	**+0.2**
EIDS	**Eidsvold**	**29.43**	**268**	P	**P**	**17 23 01.5**	**-0.2**
EIDS				IAmb	IAmb	17 23 30.4	
	comp=Z,16nm,1.3s						
CAN	**Canberra**	**30.31**	**248**	P	**P**	**17 23 12.1**	**+2.6**
CAN				IAmb	IAmb	17 23 20.5	
	comp=Z,16nm,1.2s						
CTAO	**Charters Tower**	**35.27**	**275**	P	**P**	**17 23 50.5**	**-2.4**
CTAO				IAmb	IAmb	17 24 17.6	
	comp=Z,22nm,1.4s						
STKA	**Stephens Creek**	**36.59**	**254**	P	**P**	**17 24 03.8**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=109,slow=9.2,SNR=5.5						
STKA				LR	LR	17 37 05.0	
	comp=Z,130nm,20.0s,baz=95,slow=33						
	comp=Z,2.3nm,0.6s						
KRVT	**Keravat (AS076**	**38.76**	**303**	P	**P**	**17 24 20.4**	**-2.1**
KRVT	**Keravat (AS076**	**38.76**	**303**	P	**P**	**17 24 20.4**	**-2.1**
	comp=Z,14nm,0.6s,baz=350,slow=7.2,SNR=4.2						
	comp=Z,14nm,0.6s						
TAOE	**Nuku Hiva Isla**	**39.02**	**67**	eLR	LR	17 35 04.2	
	comp=Z,153nm,23.3s						
BBOO	**Buckleboo**	**41.14**	**252**	P	**P**	**17 24 42.1**	**-0.1**
AS31	**Alice Springs**	**44.96**	**264**	P	**P**	**17 25 11.8**	**-1.5**
ASAR	**Alice Springs**	**44.96**	**264**	P	**P**	**17 25 11.8**	**-1.4**
ASAR	**Alice Springs**	**44.96**	**264**	P	**P**	**17 25 12.9**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=99,slow=6.9,SNR=30						
ASAR				LR	LR	17 42 34.3	
	comp=Z,178nm,20.5s,baz=88,slow=34						
	comp=Z,1.9nm,0.7s						
WR0	**Warramunga Arr**	**45.60**	**269**	P	**P**	**17 25 17.4**	**-1.0**
WR0				IAmb	IAmb	17 25 20.0	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**45.78**	**269**	P	**P**	**17 25 18.7**	**-1.0**
WB2				IAmb	IAmb	17 25 27.4	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**45.78**	**269**	P	**P**	**17 25 18.7**	**-1.0**
WRAB				IAmb	IAmb	17 25 57.3	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**45.79**	**269**	P	**P**	**17 25 18.0**	**-1.9**
WRA	**Warramunga Arr**	**45.79**	**269**	P	**P**	**17 25 19.2**	**-0.7**
	comp=Z,2.1nm,0.4s,baz=109,slow=6.2,SNR=110						
	comp=Z,2.1nm,0.4s						
WB0	**Warramunga Arr**	**45.80**	**270**	P	**P**	**17 25 18.8**	**-1.1**
FORT	**Forrest**	**48.20**	**253**	P	P	**17 25 38.1**	**-0.3**
SBA	**Scott Base**	**49.99**	**185**	P	P	17 25 59.1	+7.6
VNDA	**Vanda**	**50.09**	**186**	P	P	17 26 00.4	+8.1
FITZ	**Fitzroy Crossi**	**54.11**	**268**	P	**P**	**17 26 23.3**	**+0.3**
FITZ				IAmb	IAmb	17 26 37.7	
	comp=Z,9.6nm,1.5s						
SIJI	**Sorong**	**57.31**	**289**	P	**P**	**17 26 45.1**	**-0.9**
SIJI	**Sorong**	**57.31**	**289**	P	**P**	**17 26 45.1**	**-0.9**
	comp=Z,11nm,0.5s,baz=104,slow=8.3						
	comp=Z,11nm,0.5s						
CASY	**Casey**	**57.55**	**207**	P	P	17 26 51.8	+4.9
CASY				IAmb	IAmb	17 27 07.2	
	comp=Z,6.2nm,1.0s						
MORW	**Morawa**	**58.71**	**252**	P	**P**	**17 26 55.1**	**-0.6**
BATI	**Baumata**	**59.16**	**275**	LR	LR	17 51 58.9	
	comp=Z,206nm,20.0s,baz=262,slow=36						
QSPA	**South Pole Qui**	**61.53**	**180**	P	P	17 27 21.0	+6.3
KKM	**Kota Kinabalu**	**73.65**	**286**	P	**P**	**17 28 31.9**	**0.0**
TROLL	**Troll, Antarti**	**79.69**	**180**	P	P	17 29 10.5	+5.4
SNAA	**Sanae**	**79.92**	**178**	P	P	17 29 11.1	+4.8
SNAA	**Sanae**	**79.92**	**178**	P	P	17 29 11.4	+5.2
SNAA				IAmb	IAmb	17 29 41.1	
	comp=Z,8.5nm,1.4s						
VNA3	**Neumayer Olymp**	**80.00**	**176**	P	P	17 29 11.6	+5.0
VNA2	**Neumayer--Watz**	**80.45**	**176**	P	P	17 29 14.4	+5.4
	baz=178,slow=4.6						
VNA1	**Neumayer--Stat**	**80.67**	**176**	P	P	17 29 15.5	+5.3
SHEM	**Shemya Is, Ala**	**81.41**	**354**	LR	LR	17 59 13.6	
	comp=Z,35nm,19.9s,baz=100,slow=31						
PLCA	**Paso Flores**	**82.48**	**132**	P	P	17 29 26.9	+6.4
	comp=Z,1.7nm,0.6s,baz=281,slow=6.0,SNR=4.0						
	comp=Z,1.7nm,0.6s						
NVAR	**Mina Array Bea**	**85.74**	**42**	P	**P**	**17 29 40.6**	**+3.7**
	comp=Z,0.9nm,0.7s,baz=225,slow=8.8,SNR=6.9						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**89.96**	**56**	P	**P**	**17 30 00.1**	**+2.9**
	comp=Z,0.7nm,1.1s,baz=163,slow=3.5,SNR=4.7						
	comp=Z,0.7nm,1.1s						
KLR	**Kul'dur**	**90.34**	**329**	LR	LR	18 06 32.2	
	comp=Z,48nm,19.3s,baz=198,slow=33						
YAK	**Yakutsk**	**100.22**	**337**	LR	LR	18 16 00.9	
	comp=Z,27nm,20.2s,baz=268,slow=36						
MKAR	**Makanchi Array**	**117.90**	**310**	PKP	**PKiKP**	**17 35 45.4**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=251,slow=2.0,SNR=4.3						
KURBB	**Kurchatov Arra**	**121.06**	**314**	PKP	**PKiKP**	**17 35 52.0**	**+2.1**
	comp=Z,0.8nm,0.2s,baz=97,slow=2.0,SNR=4.9						
ARCES	**ARCESS Array B**	**137.15**	**349**	PKP	**PKiKP**	**17 36 23.2**	**+1.5**
	comp=Z,4.1nm,1.1s,baz=64,slow=2.8,SNR=4.2						
FINES	**FINESS Array B**	**143.98**	**342**	PKhKP	PKPpre	17 36 31.8	
	comp=Z,3.5nm,1.0s,baz=48,slow=3.6,SNR=13						
NB2	**NORSAR Subarra**

KMGR	**Komgaron**	**1.14 259**	*e*PG	**Pg**	**17 17 39.3**	**-0.1**
KMGR			*e*S	**Sn**	**17 17 55.2**	**+1.4**
KMGR	**Komgaron**	**1.14 259**	*e*PG	**Pb**	**17 17 39.6**	**+0.9**
KMGR			*e*Sg	**Sb**	**17 17 55.0**	**+1.9**
SGKR	**Sergokala**	**1.25 131**	*e*PG	**Pn**	**17 17 40.2**	**+0.1**
SGKR			*i* S	**Sn**	**17 17 58.1**	**+1.5**
SGKR			pmax	pmax		
	comp=Z,55nm,0.2s					
SGKR			smax	smax		
	comp=N,289nm,0.4s					
SGKR	**Sergokala**	**1.25 131**	*e*Pg	**Pg**	**17 17 42.3**	**+0.7**
SGKR			*e*Sg	**Sn**	**17 18 00.0**	**+3.5**
KMKR	**Kumukh**	**1.27 155**	*e*PG	**Pn**	**17 17 40.7**	**+0.1**
KMKR			*i* S	**Sg**	**17 17 58.1**	**-0.6**
KMKR			pmax	pmax		
	comp=Z,131nm,0.2s					
KMKR			smax	smax		
	comp=N,1μm,0.5s					
KMKR	**Kumukh**	**1.27 155**	*e*Pg	**Pn**	**17 17 41.5**	**+0.9**
KMKR			*e*Sg	**Sn**	**17 17 59.1**	**+1.7**
VLKR	**Vladikavkaz**	**1.27 260**	*e*PG	**Pb**	**17 17 41.8**	**+0.8**
VLKR			*e*S	**Sn**	**17 17 59.8**	**+2.7**
TRKR	**Terskaya**	**1.28 290**	*e*PG	**Pg**	**17 17 42.3**	**+0.2**
TRKR			*e*S	**Sn**	**17 18 00.8**	**+3.6**
TRKR	**Terskaya**	**1.28 290**	*e*Pg	**Pg**	**17 17 42.4**	**+0.2**
TRKR			*e*Sg	**Sn**	**17 18 00.8**	**+3.6**
BTKR	**Batakoyurt**	**1.35 274**	*e*PG	**Pg**	**17 17 44.0**	**+0.6**
BTKR			*e*S	**Sg**	**17 18 03.9**	**+2.9**
BTKR	**Batakoyurt**	**1.35 274**	*e*Pg	**Pg**	**17 17 43.5**	**+0.1**
BTKR			*e*Sg	**Sg**	**17 18 01.8**	**+0.8**
URKR	**Urkarakh**	**1.45 140**	*e*PG	**Pn**	**17 17 44.2**	**+1.2**
URKR			*i* S	**Sg**	**17 18 04.4**	**0.0**
URKR			pmax	pmax		
	comp=Z,60nm,0.3s					
URKR			smax	smax		
	comp=N,194nm,0.3s					
URKR	**Urkarakh**	**1.45 140**	*e*Pg	**Pg**	**17 17 45.5**	**+0.1**
URKR			*e*Sg	**Sg**	**17 18 05.4**	**+1.0**
PNSH	**Pansheti**	**1.46 244**	P	**Pn**	**17 17 42.6**	**-0.5**
PNSH			S	**Sn**	**17 17 59.1**	**-2.7**
PNSH	**Pansheti**	**1.46 244**	⇑PG	**Pn**	**17 17 42.6**	**-0.5**
LGD	**Lagodekhi**	**1.46 184**	P	**Pn**	**17 17 43.5**	**+0.5**
LGD			S	**Sn**	**17 18 02.0**	**+0.3**
LGD	**Lagodekhi**	**1.46 184**	⇑PG	**Pn**	**17 17 43.5**	**+0.5**
LGD			S	**Sn**	**17 18 02.0**	**+0.3**
ARNR	**Ardon**	**1.54 267**	*e*PG	**Pb**	**17 17 46.0**	**+0.5**
ARNR			*e*S	**Sg**	**17 18 07.3**	**+0.2**
ARNR	**Ardon**	**1.54 267**	*e*Pg	**Pb**	**17 17 46.0**	**+0.5**
ARNR			*e*Sg	**Sb**	**17 18 06.5**	**+1.8**
PRTR	**Priterechnaya**	**1.60 287**	*e*PG	**Pb**	**17 17 47.7**	**+1.3**
PRTR			*e*S	**Sg**	**17 18 10.3**	**+1.3**
PRTR	**Priterechnaya**	**1.60 287**	*e*Pg	**Pb**	**17 17 47.2**	**+0.8**
PRTR			*e*Sg	**Sg**	**17 18 10.2**	**+1.3**
LACR	**Lac**	**1.60 254**	*e*PN	**Pn**	**17 17 45.0**	**0.0**
LACR	**Lac**	**1.60 254**	*e*Pg	**Pn**	**17 17 45.0**	**0.0**
LACR			*e*Sg	**Sn**	**17 18 05.6**	**+0.3**
GUDG	**Gudauri**	**1.63 240**	P	**Pn**	**17 17 45.7**	**+0.2**
GUDG			S	**Sn**	**17 18 05.4**	**-0.8**
GUDG	**Gudauri**	**1.63 240**	PN	**Pn**	**17 17 45.7**	**+0.2**
STDR	**Stavd-Durt**	**1.70 273**	*e*PN	**Pb**	**17 17 49.0**	**+0.9**
STDR			*e*S	**Sg**	**17 18 12.6**	**+0.5**
STDR	**Stavd-Durt**	**1.70 273**	*e*Pg	**Pb**	**17 17 49.0**	**+0.9**
STDR			*e*Sg	**Sg**	**17 18 12.6**	**+0.5**
KORR	**Kora**	**1.71 264**	*e*PN	**Pn**	**17 17 48.4**	**+2.0**
KORR			pmax	pmax		
	comp=Z,13nm,0.5s					
KORR	**Kora**	**1.71 264**	*e*Pg	**Pn**	**17 17 48.5**	**+2.0**
KORR			*e*Sg	**Sn**	**17 18 10.1**	**+2.2**
DDFL	**Dedoflistskaro**	**1.85 186**	P	**Pg**	**17 17 52.7**	**-0.4**
DDFL			S	**Sg**	**17 18 23.4**	**+6.2**
DDFL	**Dedoflistskaro**	**1.85 186**	PN	**Pg**	**17 17 52.7**	**-0.4**
DDFL			S	**Sg**	**17 18 23.4**	**+6.2**
LSNR	**Lesken**	**1.87 270**	*e*Pg	**Pb**	**17 17 52.3**	**+1.2**
LSNR			*e*Sg	**Sg**	**17 18 17.3**	**-0.4**
ZEI	**Tsey**	**1.89 255**	*e*PN	**Pn**	**17 17 49.1**	**0.0**
DGRG	**David-gareji**	**1.99 203**	P	**Pb**	**17 17 52.9**	**-0.2**
DGRG			S	**Sb**	**17 18 19.3**	**+1.7**
DGRG	**David-gareji**	**1.99 203**	PN	**Pb**	**17 17 52.9**	**-0.2**
NCK	**Nalchik**	**2.04 277**	*i* PN	**Pn**	**17 17 52.5**	**+1.5**
NCK			pmax	pmax		
	comp=Z,11nm,0.3s					
AKT	**Akhty**	**2.07 151**	*e*PN	**Pn**	**17 17 53.2**	**+1.8**
AKT			*i* S	**Sb**	**17 18 20.9**	**+1.0**
AKT			pmax	pmax		
	comp=Z,52nm,0.2s					
AKT			smax	smax		
	comp=E,175nm,0.3s					
AKT	**Akhty**	**2.07 151**	*e*Pg	**Pb**	**17 17 55.6**	**+1.1**
DIGR	**Digorskoe uzhe**	**2.09 260**	*e*PN	**Pn**	**17 17 51.2**	**-0.6**
KBTC	**Kuba-Taba**	**2.23 285**	*e*Pg	**Pn**	**17 17 55.6**	**+2.0**
ONI	**Oni**	**2.27 253**	P	**Pn**	**17 17 56.1**	**+2.0**
ONI			S	**Sb**	**17 18 25.5**	**-0.1**
ONI	**Oni**	**2.27 253**	PN	**Pn**	**17 17 56.1**	**+2.0**
ONI			S	**Sb**	**17 18 25.5**	**-0.1**
BRNG	**Burnasheti**	**2.52 230**	P	**Pb**	**17 18 01.4**	**-0.9**
BRNG			S	**Sb**	**17 18 33.9**	**+0.8**
DMNI	**Dmanisi**	**2.55 220**	P	**Pn**	**17 17 59.5**	**+1.4**
DMNI	**Dmanisi**	**2.55 220**	PN	**Pn**	**17 17 59.5**	**+1.4**
KBZ	**Khabaz**	**2.58 281**	*i* PN	**Pn**	**17 17 58.1**	**-0.2**
KBZ	**Khabaz**	**2.58 281**	*e*Sn	**Sn**	**17 18 31.4**	**+2.3**
NEY	**Neytrino**	**2.68 270**	*e*Pn	**Pn**	**17 18 01.9**	**+2.0**
SHA1	**Shidzhatmaz**	**2.75 281**	*i* PN	**Pn**	**17 18 00.7**	**-0.2**
KIV0	**Kislovodsk Arr**	**2.76 285**	*e*Pn	**Pn**	**17 18 02.8**	**+1.9**
KIV	**Kislovodsk**	**2.77 285**	*e*Pn	**Pn**	**17 18 03.9**	**+2.8**
KIV			*e*Sn	**Sn**	**17 18 34.9**	**+0.8**
GOF	**Gofitskoye**	**2.98 307**	⇑*e*PN	**Pb**	**17 18 11.0**	**+0.9**
GOF			*e*S	**Sb**	**17 18 48.4**	**+2.2**
GOF			pmax	pmax		
	comp=Z,67nm,0.6s					
GOF			smax	smax		
	comp=N,83nm,0.4s					
GNI	**Garni**	**3.37 202**	*i* PN	**Pb**	**17 18 14.6**	**-2.2**
GNI			pmax	pmax		
	comp=Z,9.0nm,0.9s					
AKTO	**Aktyubinsk**	**10.69 44**	P	**Pn**	**17 19 51.9**	**+2.3**
AKTO	**Aktyubinsk**	**10.69 44**	⇑Pn	**Pn**	**17 19 51.9**	**+2.3**
	comp=Z,0.3nm,0.4s					
AKTO			⇓Sn	**Sn**	**17 21 42.0**	**-6.8**
	comp=Z,1.2nm,0.6s					
AB31	**Akbulak array**	**11.11 53**	P	**Pn**	**17 19 58.9**	**+3.5**
AB31			S	**Sn**	**17 21 56.5**	**-2.6**
AB31	**Akbulak array**	**11.11 53**	Pn	**Pn**	**17 19 58.9**	**+3.5**
	comp=Z,0.4nm,0.5s,baz=241,slow=12,SNR=10					
AB31			⇑Sn	**Sn**	**17 21 56.5**	**-2.6**
	comp=Z,0.5nm,0.4s,baz=240,slow=25,SNR=4.3					
ARU	**Arti**	**15.28 26**	*i* P	Pn	17 20 42.2	-10
ARU			pmax	pmax		
	comp=Z,1.0nm,0.2s					
MNK	**Minsk**	**16.49 319**	*i* P	**Pn**	**17 21 03.9**	**-3.7**
MNK			*i* S	**Sn**	**17 24 06.8**	**-3.3**
MNK			pmax	pmax		
	comp=E,2.0nm,0.9s					
MNK			pmax	pmax		
	comp=Z,5.0nm,0.7s					
MNK			pmax	pmax		
	comp=N,7.0nm,0.8s					
MNK			MLR	MLR		
	comp=E,23nm,20.0s					
MNK			MLR	MLR		
	comp=N,23nm,24.0s					
MNK			MLR	MLR		
	comp=Z,89nm,21.0s					
MNK	**Minsk**	**16.49 319**	*i* P	**Pn**	**17 21 04.0**	**-3.7**
	comp=E,2.0nm,0.8s					
MNK			*i* P	**Pn**	**17 21 04.0**	**-3.7**
	comp=N,7.0nm,0.8s					
MNK			*i* P	**Pn**	**17 21 04.0**	**-3.7**
	comp=Z,5.0nm,0.7s,baz=305					
MNK			*i* PP	**pP**	**17 21 13.0**	**-2.2**
MNK			*i* PPP	PPP	17 21 20.7	
MNK			*i* S	**Sn**	**17 24 06.9**	**-3.3**
MNK			*i* SS	**S**	**17 24 21.3**	**-0.7**
MNK			*i* SSS	SSS	17 24 34.0	
MNK			*i* LQ	LQ	17 25 54.5	
MNK			*i* LR	LR	17 26 26.0	
MNK			*i* LRM	MLR	17 28 16.3	
	comp=E,23nm,19.8s					
MNK			*i* LRM	MLR	17 28 22.9	
	comp=N,23nm,24.1s					
MNK			*i* LRM	MLR	17 28 23.7	
	comp=Z,89nm,20.6s					

TAP ***30*** *17:18:47.4,24.82N×122.04E,h93km,ML2.8,B*
JMA ***30*** *17:18:47.4±0.2,24.8N±0.5×122.0E±0.4,h96km±1km, MV2.1/11, TAIWAN REGION*

ISC 30 17:18:48.2±1.4,**24.83N**±0.04×**122.01E**±0.03,**h90**km±7km, **n103,**σ0§**51**/138,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EGS		**0.07**	**285**	*e*P		**Pn**	**17 19 00.7**	**-0.2**
	baz=286							
NTC	**Toucheng**	**0.17**	**280**	P		**Pn**	**17 19 00.9**	**-0.1**
	baz=280							
TWB1	**Santiao Chiao**	**0.18**	**354**	P		**Pn**	**17 19 01.1**	**-0.1**
TWB1	baz=349			S		**Sn**	**17 19 10.6**	**-0.1**
	baz=349							
TIPB	**Shuangxi**	**0.22**	**311**	P		**Pn**	**17 19 01.1**	**-0.2**
	baz=308							
TIPB				*e*S		**Sn**	**17 19 10.8**	**-0.3**
	baz=308							
TWC	**Suao**	**0.26**	**214**	P		**Pn**	**17 19 01.4**	**-0.1**
	baz=217							
TWC				S		**Sn**	**17 19 11.2**	**0.0**
	baz=217							
SXI1	**Grass Mountain**	**0.29**	**336**	P		**Pn**	**17 19 01.4**	**-0.3**
	baz=332							
SXI1				*e*S		**Sn**	**17 19 12.0**	**+0.2**
	baz=332							
NWF	**Wu-fen Shan**	**0.32**	**320**	P		**Pn**	**17 19 01.7**	**-0.2**
	baz=317							
WFSB	**Wu-fen Shan**	**0.32**	**320**	P		**Pn**	**17 19 01.7**	**-0.1**
	baz=317							
TWE	**Neicheng**	**0.33**	**251**	*e*P		**Pn**	**17 19 01.9**	**+0.2**
	baz=252							
NDS	**Dongshan**	**0.33**	**234**	*e*P		**Pn**	**17 19 01.4**	**-0.4**
	baz=237							
NDS				S		**Sn**	**17 19 12.1**	**+0.2**
	baz=237							
FUSB	**Fushanzhiwuyua**	**0.39**	**260**	P		**Pn**	**17 19 02.2**	**-0.1**
	baz=261							
TWA	**Mucha**	**0.42**	**292**	P		**Pn**	**17 19 02.0**	**-0.3**
	baz=291							
TWA				*e*S		**Sn**	**17 19 12.9**	**0.0**
	baz=291							
EWUT	**Wuta**	**0.43**	**209**	*e*P		**Pn**	**17 19 01.7**	**-0.8**
	baz=212							
EWUT				S		**Sn**	**17 19 13.1**	**+0.1**
	baz=212							
ENTT	**Nioudou**	**0.44**	**245**	*e*P		**Pn**	**17 19 02.0**	**-0.6**
	baz=246							
NHDH	**Xindian Distri**	**0.46**	**287**	P		**Pn**	**17 19 02.5**	**-0.1**
	baz=287							
NHDH				*e*S		**Sn**	**17 19 14.4**	**+1.0**
	baz=287							
ENA	**Nanau**	**0.47**	**212**	*e*P		**Pn**	**17 19 02.9**	**+0.2**
	baz=213							
ENA				*e*S		**Sn**	**17 19 14.5**	**+1.1**
	baz=213							
TATO	**Taipei**	**0.50**	**288**	P		**Pn**	**17 19 02.8**	**-0.1**
	baz=287							
NDT	**Datong Townshi**	**0.50**	**244**	*e*P		**Pn**	**17 19 03.4**	**+0.4**
	baz=245							
YM01	**YM01**	**0.51**	**309**	P		**Pn**	**17 19 02.9**	**-0.2**
	baz=307							
YM08	**YM08**	**0.52**	**313**	*e*P		**Pn**	**17 19 02.9**	**-0.3**
	baz=312							
LATG	**Datong**	**0.53**	**237**	*e*P		**Pn**	**17 19 03.7**	**+0.4**
	baz=238							
TWY	**Chenhua**	**0.58**	**320**	P		**Pn**	**17 19 03.6**	**0.0**
	baz=319							
YHNB	**Yeheng**	**0.60**	**255**	P		**Pn**	**17 19 03.8**	**0.0**
	baz=256							
YHNB				*e*S		**Sn**	**17 19 15.4**	**-0.1**
	baz=256							
TWS1	**Kuangyinshan**	**0.60**	**297**	*e*P		**Pn**	**17 19 04.1**	**+0.3**
	baz=296							
NSK	**Sanguang**	**0.61**	**256**	*e*P		**Pn**	**17 19 02.9**	**-1.1**
	baz=256							
NSK				*e*S		**Sn**	**17 19 14.8**	**-1.0**
	baz=256							
NTY	**Taoyuan**	**0.67**	**285**	*e*P		**Pn**	**17 19 04.7**	**+0.3**
	baz=285							
NNSB	**Datong**	**0.69**	**235**	*e*P		**Pn**	**17 19 05.0**	**+0.2**
	baz=236							
NNSB				*e*S		**Sn**	**17 19 18.0**	**+0.8**
	baz=236							
NNSH	**Datong**	**0.69**	**235**	*e*P		**Pn**	**17 19 04.9**	**+0.1**
	baz=236							
NNSH				*e*S		**Sn**	**17 19 17.5**	**+0.4**
	baz=236							
NNS	**Nan Shan**	**0.69**	**237**	*e*P		**Pn**	**17 19 04.1**	**-0.7**
	baz=237							
NACB	**Ninganchiao**	**0.75**	**210**	*e*P		**Pn**	**17 19 04.5**	**-0.7**
	baz=212							
ETL	**Fush Village**	**0.75**	**208**	*e*P		**Pn**	**17 19 04.8**	**-0.5**
	baz=209							
NCU	**National Centr**	**0.76**	**281**	*e*P		**Pn**	**17 19 05.5**	**+0.2**
	baz=280							
NCUH	**Zhongli**	**0.76**	**281**	P		**Pn**	**17 19 05.4**	**+0.1**
	baz=280							
NCUH				*e*S		**Sn**	**17 19 18.9**	**+0.7**
	baz=280							
ETLH	**Xiulin Townshi**	**0.78**	**218**	*e*P		**Pn**	**17 19 05.2**	**-0.4**
	baz=219							
TWD	**Chiawan**	**0.83**	**207**	*e*P		**Pn**	**17 19 05.4**	**-0.7**
	baz=208							
TWD				*e*S		**Sn**	**17 19 19.1**	**-0.4**
	baz=208							
NFF	**Wufeng Townshi**	**0.83**	**257**	*e*P		**Pn**	**17 19 04.8**	**-1.4**
	baz=257							
NFF				*e*S		**Sn**	**17 19 18.5**	**-1.1**
	baz=257							
NJD	**Zhudong**	**0.84**	**264**	P		**Pn**	**17 19 06.4**	**+0.3**
	baz=264							
NJD				*e*S		**Sn**	**17 19 20.4**	**+0.8**
	baz=264							
NHW	**Xinwu Township**	**0.89**	**282**	P		**Pn**	**17 19 06.8**	**+0.1**
	baz=281							
HSN1	**Hsinchu**	**0.90**	**267**	P		**Pn**	**17 19 07.0**	**+0.2**
	baz=267							
HSN1				*e*S		**Sn**	**17 19 21.4**	**+0.6**
	baz=267							
FUSS	**Fushou**	**0.90**	**231**	*e*P		**Pn**	**17 19 07.3**	**+0.2**
	baz=231							
FUSS				*e*S		**Sn**	**17 19 21.4**	**+0.2**
	baz=231							
LIOB	**Emei**	**0.92**	**259**	P		**Pn**	**17 19 07.0**	**-0.1**
	baz=259							
LIOB				*e*S		**Sn**	**17 19 21.6**	**+0.5**
	baz=259							
HWA	**Hwalien**	**0.92**	**204**	P		**Pn**	**17 19 06.8**	**-0.3**
	baz=204							
JYNG	**Yonagunijimaku**	**0.93**	**113**	P		**Pn**	**17 19 07.0**	**-0.1**
JYNG				*e*S		**Sn**	**17 19 21.7**	**+0.5**
SBCB	**Hsinchu**	**0.93**	**268**	*e*P		**Pn**	**17 19 07.3**	**+0.2**
	baz=268							
SBCB				*e*S		**Sn**	**17 19 21.9**	**+0.6**
	baz=268							
NSTT	**Nanjuang**	**0.94**	**258**	*e*P		**Pn**	**17 19 07.0**	**-0.2**
	baz=258							
NSTT				*e*S		**Sn**	**17 19 21.4**	**-0.1**
	baz=258							
HSN	**Hsinchu**	**0.94**	**269**	P		**Pn**	**17 19 07.0**	**-0.2**
	baz=270							
HSN				*e*S		**Sn**	**17 19 21.6**	**0.0**
	baz=270							
TWT	**Tachien**	**0.95**	**233**	*e*P		**Pn**	**17 19 08.1**	**+0.6**
	baz=234							
WHF	**Hehuan Shan**	**0.96**	**225**	*e*P		**Pn**	**17 19 07.8**	**-0.1**
	baz=225							
TDCB	**Techi**	**0.96**	**234**	*e*P		**Pn**	**17 19 07.9**	**+0.3**
	baz=234							
ETM	**Tongmen**	**0.98**	**209**	*e*P		**Pn**	**17 19 06.7**	**-1.0**
	baz=210							
YOJ	**Yonaguni jima**	**0.98**	**112**	*e*P		**Pn**	**17 19 07.3**	**-0.4**
	baz=111							
YOJ	**Yonaguni jima**	**0.98**	**112**	P		**Pn**	**17 19 07.5**	**-0.2**
TEYL	**Yanliau Villag**	**1.02**	**202**	P		**Pn**	**17 19 07.7**	**-0.5**
	baz=203							
NJN	**Zhunan**	**1.04**	**262**	*e*P		**Pn**	**17 19 08.6**	**+0.2**
	baz=262							
CHGB	**Renai**	**1.08**	**225**	*e*P		**Pn**	**17 19 09.3**	**+0.2**
	baz=226							
CHGB				*e*S		**Sn**	**17 19 24.7**	**0.0**
	baz=226							
WHP	**Taichung City**	**1.11**	**241**	*e*P		**Pn**	**17 19 09.7**	**+0.3**
	baz=241							
WHP				*e*S		**Sn**	**17 19 25.2**	**+0.1**
	baz=241							
ESL	**Shilin**	**1.14**	**208**	*e*P		**Pn**	**17 19 08.1**	**-1.5**
	baz=208							
NMLH	**Miaoli**	**1.15**	**256**	P		**Pn**	**17 19 09.6**	**0.0**
	baz=256							
OWD	**Renai**	**1.15**	**221**	P		**Pn**	**17 19 09.8**	**-0.1**
	baz=222							
WUSB	**Renai**	**1.16**	**225**	P		**Pn**	**17 19 10.1**	**+0.1**
	baz=225							
NSY	**Sanyi**	**1.21**	**250**	P		**Pn**	**17 19 10.6**	**+0.2**
	baz=250							
TWQ1	**Liyutan**	**1.22**	**247**	*e*P		**Pn**	**17 19 10.9**	**+0.3**
	baz=247							
WPL	**Puli Township**	**1.26**	**230**	*e*P		**Pn**	**17 19 11.6**	**+0.7**
	baz=231							
WCS	**Beigang Elemen**	**1.26**	**233**	*e*P		**Pn**	**17 19 10.1**	**-0.8**
	baz=233							
WCS				*e*S		**Sn**	**17 19 27.6**	**-0.6**
	baz=233							
DPDB	**Guoxing**	**1.26**	**232**	*e*P		**Pn**	**17 19 11.2**	**+0.1**
	baz=232							
EGFH	**Guangfu**	**1.27**	**205**	*e*P		**Pn**	**17 19 10.8**	**-0.3**
	baz=205							
VWDT	**VWDT**	**1.33**	**217**	*e*P		**Pn**	**17 19 12.0**	**+0.1**
	baz=217							
SMLT	**Sun Moon Lake**	**1.38**	**227**	*e*P		**Pn**	**17 19 12.7**	**+0.1**
	baz=227							
TCU	**Taichung**	**1.39**	**241**	*e*P		**Pn**	**17 19 12.7**	**+0.1**
	baz=241							
TYC	**Yuchr**	**1.40**	**229**	*e*P		**Pn**	**17 19 12.8**	**+0.2**
	baz=229							
SSLB	**Suanglung**	**1.41**	**223**	*e*P		**Pn**	**17 19 13.1**	**+0.2**
	baz=223							
SSLB				*e*S		**Sn**	**17 19 32.4**	**+0.8**
	baz=223							
WWF	**Wufeng**	**1.43**	**237**	*e*P		**Pn**	**17 19 12.2**	**-0.9**
	baz=237							
HGSD	**Ruisui**	**1.43**	**202**	*e*P		**Pn**	**17 19 13.1**	**0.0**
	baz=202							
EHY	**Hungye**	**1.46**	**206**	*e*P		**Pn**	**17 19 12.7**	**-0.7**
	baz=206							
WNT	**Mingjian**	**1.53**	**232**	*e*P		**Pn**	**17 19 14.7**	**+0.3**
	baz=232							
WNT				*e*S		**Sn**	**17 19 34.8**	**+0.6**
	baz=232							
WJS	**Zhushan**	**1.54**	**230**	*e*P		**Pn**	**17 19 14.8**	**+0.3**
	baz=230							
WJS				*e*S		**Sn**	**17 19 34.8**	**+0.5**
	baz=230							
WHYT	**Xinyi Township**	**1.54**	**223**	*e*P		**Pn**	**17 19 15.1**	**+0.6**
	baz=224							
YULB	**Yu-li**	**1.57**	**205**	*e*P		**Pn**	**17 19 13.3**	**-1.6**
	baz=205							
EYUL	**Yuli**	**1.60**	**203**	*e*P		**Pn**	**17 19 15.4**	**+0.1**
	baz=204							
TWF1	**Yuli**	**1.60**	**204**	*e*P		**Pn**	**17 19 15.2**	**-0.2**
	baz=204							
IRIF	**Iriomote-Funau**	**1.64**	**107**	P		**Pn**	**17 19 15.8**	**0.0**
IRIF				S		**Sn**	**17 19 36.4**	**-0.3**
YUS	**Yu-Shan**	**1.64**	**216**	*e*P		**Pn**	**17 19 16.3**	**0.0**
	baz=216							
ALS	**Alishan**	**1.71**	**220**	*e*P		**Pn**	**17 19 17.2**	**+0.2**
	baz=220							
FULB	**Fuli**	**1.75**	**202**	*e*P		**Pn**	**17 19 16.9**	**-0.3**
	baz=202							
WRL	**Guolierlin Hig**	**1.75**	**239**	*e*P		**Pn**	**17 19 15.8**	**-1.4**
	baz=238							
HATJ	**Hateruma jima**	**1.81**	**115**	P		**Pn**	**17 19 18.2**	**+0.3**
HATJ				*e*S		**Sn**	**17 19 41.9**	**+1.4**
ELDTW	**Lidau**	**1.86**	**209**	*e*P		**Pn**	**17 19 18.5**	**-0.3**
	baz=209							
WCKO	**Fanlu**	**1.89**	**223**	*e*P		**Pn**	**17 19 18.3**	**-0.7**
	baz=223							
JKRS	**Kuro-shima**	**1.91**	**107**	P		**Pn**	**17 19 19.4**	**+0.1**
JKRS				S		**Sn**	**17 19 43.0**	**+0.1**
EDH	**Donghe**	**1.96**	**199**	*e*P		**Pn**	**17 19 19.6**	**-0.3**
	baz=200							
TPUB	**Ta-pu**	**1.97**	**220**	*e*P		**Pn**	**17 19 20.3**	**+0.2**
	baz=220							
JIJ	**Ishigaki jima**	**2.00**	**103**	P		**Pn**	**17 19 20.2**	**-0.2**
JIJ				S		**Sn**	**17 19 43.8**	**-1.1**
STYH	**Taoyuan**	**2.00**	**215**	*e*P		**Pn**	**17 19 20.2**	**-0.2**
	baz=215							
STYT	**Tauyuan**	**2.01**	**215**	*e*P		**Pn**	**17 19 21.1**	**+0.5**
	baz=215							
WTP	**Ta-pu**	**2.02**	**219**	*e*P		**Pn**	**17 19 21.0**	**+0.2**
	baz=219							
JISG	**Ishigakijimahi**	**2.11**	**96**	*e*S		**Sn**	**17 19 47.8**	**+0.3**
SNST	**Tainan City**	**2.11**	**221**	*e*P		**Pn**	**17 19 22.1**	**+0.1**
	baz=221							
CHN1	**Nanshi**	**2.12**	**220**	*e*P		**Pn**	**17 19 22.1**	**0.0**
	baz=220							
CHN1				*e*S		**Sn**	**17 19 47.8**	**-0.1**
	baz=220							
SGST	**Jiashian**	**2.17**	**217**	*e*P		**Pn**	**17 19 22.6**	**-0.1**
	baz=217							
MATB	**Ma-tsu**	**2.29**	**306**	*e*P		**Pn**	**17 19 23.3**	**-0.8**
	baz=304							
VWUC	**VWUC**	**2.33**	**275**	*e*P		**Pn**	**17 19 24.1**	**-0.7**
	baz=274							
JTJ	**Tarama**	**2.46**	**94**	S		**Sn**	**17 19 56.2**	**+0.5**
MASBT	**Mashibuluo**	**2.54**	**210**	*e*P		**Pn**	**17 19 28.0**	**+0.4**
	baz=210							

NEIC ***30*** *17:27:22.9±1.2,16.20N±0.06×146.0E±0.3,h124km±10km, mb4.4/4, Error ellipse: s-maj=37.5km s-min=8.2km az=96.0*
IDC ***30*** *17:27:23.3±7.3,16.03N×146.09E,h114km±45km,mb3.0/3, mbtmp3.4/4, Error ellipse: s-maj=105.4km s-min=25.5km az=81.0*

ISC 30 17:27:21.9±1.1,**16.15N**±0.08×**146.1E**±0.2,**h109**km,**n10,** σ1§**12**/12,**mb3.8/5,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.81**	**206**		Pn	**Pn**	**17 28 05.9**	**+0.4**
GUMO					Sn	**Sn**	**17 28 39.0**	**+0.1**
GUMO	**Guam**	**2.81**	**206**		P	**Pn**	**17 28 06.8**	**+1.3**
	16nm,0.3s,baz=156,slow=10.0,SNR=12							
GUMO					S	**Sn**	**17 28 38.1**	**-0.9**
	80nm,0.4s,baz=217,slow=23,SNR=8.7	

SGDS					*e*S	**Sn**	**17 39 57.5**	**-1.2**
	6.3nm,0.3s							
KST	**Kastek**	**7.64**	**28**	*e*P		**Pn**	**17 38 39.5**	**+4.0**
	0.8nm,0.2s							
KST					*e*S	**Sn**	**17 40 00.8**	**+0.3**
	6.0nm,0.4s							
GEYT	**Alibeck**	**10.49**	**282**	P		**Pn**	**17 39 12.5**	**-1.7**
	0.5nm,0.3s,baz=86,slow=7.5,SNR=2.2							
	0.8nm,0.3s							
PYUN	**Piuthan**	**12.99**	**126**	*e*P		**Pn**	**17 39 48.4**	**+0.7**
DANN	**Dangsing**	**13.34**	**123**	*e*P		**Pn**	**17 39 54.0**	**+1.7**
	4.6nm,0.2s							
GKN	**Gorkha**	**14.15**	**122**	*e*P		**Pn**	**17 40 04.0**	**+1.2**
	8.2nm,0.3s							
GKN					*e*S	**Sn**	**17 42 33.2**	**-5.6**
PKIN	**Phulchoki**	**14.94**	**122**	*e*P		**P**	**17 40 15.3**	**-0.8**
	6.2nm,0.4s							
PKI	**Pulchoki**	**14.95**	**122**	*e*P		**P**	**17 40 15.1**	**-1.2**
	3.8nm,0.3s							
AB31	**Akbulak array**	**15.25**	**331**	P		**Pn**	**17 40 15.4**	**-1.1**
	0.6nm,0.4s,baz=154,slow=12,SNR=31							
JIRN	**Jiri**	**15.44**	**120**	*e*P		**P**	**17 40 21.2**	**-0.6**
	8.2nm,0.3s							
AKTO	**Aktyubinsk**	**16.95**	**330**	⇑P		**P**	**17 40 39.1**	**+1.3**
	2.7nm,0.7s							
ZALV	**Zalesovo Beam**	**20.00**	**24**	P		**P**	**17 41 12.8**	**+1.6**
	1.7nm,0.5s,baz=220,slow=10,SNR=10							
	1.7nm,0.5s							
ARCES	**ARCESS Array B**	**41.31**	**338**	P		**P**	**17 44 22.9**	**+0.9**
	2.6nm,1.1s,baz=122,slow=12,SNR=3.5							
	2.6nm,1.1s							
WRA	**Warramunga Arr**	**81.84**	**122**	P		**P**	**17 48 56.4**	**+1.3**
	0.2nm,0.9s,baz=326,slow=4.9,SNR=1.3							
	0.2nm,0.9s							
ASAR	**Alice Springs**	**84.10**	**125**	P		**P**	**17 49 08.1**	**+1.4**
	0.3nm,0.9s,baz=315,slow=5.1,SNR=2.1							
	0.3nm,0.9s							

ROM 30 17:51:43.6±0.1, 42.477N±0.003×13.277E±0.005, h15km, ML2.7/30, 21C-10D, Error ellipse: s-maj=0.4km s-min=0.1km az=244.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.06**	**304**	P	Pg	17 51 46.7	+0.1
RM33				S	Sg	17 51 48.6	0.0
RM33				AML	AML		
	comp=E,24000µm,0.7s						
RM33				AML	AML		
	comp=N,30450µm,0.3s						
RM33				AML	AML		
	comp=E,24500µm,0.7s						
RM33				AML	AML		
	comp=E,24550µm,0.7s						
RM33				AML	AML		
	comp=E,24000µm,0.7s						
RM33				AML	AML		
	comp=N,30500µm,0.3s						
RM33				AML	AML		
	comp=N,29600µm,0.3s						
CAMP	**Campotosto**	**0.11**	**59**	P	Pb	17 51 47.4	-0.2
CAMP				S	Sg	17 51 49.8	+0.3
CAMP				AML	AML		
	comp=E,2415µm,0.6s						
CAMP				AML	AML		
	comp=N,4080µm,0.4s						
SMA1	**SAN MARTINO**	**0.16**	**16**	⇑P	Pg	17 51 48.1	+0.3
SMA1				S	Sb	17 51 51.3	-0.2
SMA1				AML	AML		
	comp=E,56550µm,0.3s						
SMA1				AML	AML		
	comp=E,56500µm,0.3s						
SMA1				AML	AML		
	comp=N,29950µm,0.4s						
T1204	**Amatrice, Fraz**	**0.20**	**8**	⇑P	Pg	17 51 48.6	+0.2
T1204				S	Sg	17 51 51.9	+0.3
T1204				AML	AML		
	comp=E,63µm,1.6s						
T1204				AML	AML		
	comp=N,66µm,1.5s						
T1204				AML	AML		
	comp=E,110µm,1.6s						
T1204				AML	AML		
	comp=N,69µm,1.5s						
LNSS	**Leonessa**	**0.21**	**306**	⇑P	Pg	17 51 48.8	+0.2
LNSS				S	Sg	17 51 52.5	+0.6
LNSS				AML	AML		
	comp=E,4725µm,0.5s						
LNSS				AML	AML		
	comp=N,5085µm,0.8s						
LNSS				AML	AML		
	comp=N,5090µm,0.8s						
GIGS	**Gran Sasso**	**0.22**	**97**	⇓P	Pg	17 51 48.9	+0.3
GIGS				S	Sb	17 51 52.9	-0.3
GIGS				AML	AML		
	comp=E,722µm,0.9s						
GIGS				AML	AML		
	comp=N,764µm,0.8s						
GIGS				AML	AML		
	comp=E,721µm,0.9s						
T1202	**Accumoli, Fraz**	**0.23**	**350**	⇑P	Pg	17 51 49.2	+0.3
T1202				S	Sb	17 51 53.6	+0.1
T1202				AML	AML		
	comp=E,7625µm,0.6s						
T1202				AML	AML		
	comp=N,10270µm,0.6s						
T1202				AML	AML		
	comp=N,10275µm,0.6s						
T1202				AML	AML		
	comp=E,7620µm,0.6s						
FIAM	**Fiamignano**	**0.24**	**210**	⇑P	Pg	17 51 49.3	+0.4
FIAM				S	Sb	17 51 53.3	-0.5
FIAM				AML	AML		
	comp=N,1295µm,1.0s						
FIAM				AML	AML		
	comp=E,1730µm,0.4s						
T1243	**Rocca Santa Ma**	**0.25**	**30**	⇑P	Pg	17 51 49.3	+0.1
T1243				S	Sg	17 51 53.4	+0.4
TERO	**Teramo**	**0.28**	**59**	⇑P	Pg	17 51 49.7	+0.1
TERO				S	Sg	17 51 54.2	+0.5
TERO				AML	AML		
	comp=E,1640µm,1.5s						
TERO				AML	AML		
	comp=N,1725µm,1.3s						
TERO				AML	AML		
	comp=E,1880µm,1.0s						
TERO				AML	AML		
	comp=N,1935µm,1.3s						
TERO				AML	AML		
	comp=E,1635µm,1.5s						
FAGN	**Fagnano**	**0.31**	**133**	⇓P	Pb	17 51 50.6	-0.3
FAGN				AML	AML		
	comp=E,4025µm,0.4s						
FAGN				AML	AML		
	comp=N,3455µm,0.7s						
FAGN				AML	AML		
	comp=E,4020µm,0.4s						
FAGN				AML	AML		
	comp=N,3460µm,0.7s						
T1242	**Castelluccio d**	**0.36**	**351**	⇑P	Pg	17 51 51.1	+0.2
T1242				S	Sb	17 51 56.9	-0.4
T1242				AML	AML		
	comp=N,11550µm,1.1s						
T1242				AML	AML		
	comp=E,8710µm,0.3s						
T1242				AML	AML		
	comp=E,8730µm,0.3s						
T1242				AML	AML		
	comp=N,11600µm,1.1s						
T1242				AML	AML		
	comp=N,11600µm,1.1s						
T1242				AML	AML		
	comp=E,8730µm,0.3s						
T1242				AML	AML		
	comp=N,11500µm,1.1s						
NRCA	**Norcia**	**0.38**	**341**	⇓P	Pg	17 51 51.5	+0.1
NRCA				S	Sg	17 51 57.1	+0.5
NRCA				AML	AML		
	comp=E,12550µm,0.6s						
NRCA				AML	AML		
	comp=N,11400µm,0.1s						
NRCA				AML	AML		
	comp=E,14250µm,0.1s						
NRCA				AML	AML		
	comp=E,12500µm,0.6s						
NRCA				AML	AML		
	comp=N,11400µm,0.1s						
NRCA				AML	AML		
	comp=N,12800µm,0.1s						
NRCA				AML	AML		
	comp=E,12550µm,0.6s						
ARRO	**Arrone**	**0.39**	**285**	⇓P	Pg	17 51 51.6	+0.1
ARRO				AML	AML		
	comp=N,2035µm,0.2s						
ARRO				AML	AML		
	comp=N,2040µm,0.2s						
ARRO				AML	AML		
	comp=E,2470µm,0.2s						
T1241	**Roccafluvione,**	**0.40**	**17**	⇑P	Pg	17 51 51.6	0.0
T1241				S	Sb	17 51 57.9	-0.4
T1241				AML	AML		
	comp=E,1440µm,1.6s						
T1241				AML	AML		
	comp=N,1290µm,0.3s						
T1241				AML	AML		
	comp=N,1205µm,0.3s						
T1241				AML	AML		
	comp=N,1285µm,0.3s						
T1241				AML	AML		
	comp=E,1405µm,1.6s						
T1241				AML	AML		
	comp=E,1435µm,1.6s						
MMO1	**Montemonaco**	**0.42**	**5**	⇑P	Pg	17 51 52.2	0.0
MMO1				S	Sb	17 51 58.8	-0.3
MMO1				AML	AML		
	comp=N,6385µm,0.3s						
MMO1				AML	AML		
	comp=E,4520µm,0.3s						
MMO1				AML	AML		
	comp=N,6390µm,0.3s						
VCEL	**Villa Celiera**	**0.42**	**101**	⇓P	Pb	17 51 52.8	-0.1
VCEL				AML	AML		
	comp=E,2095µm,1.1s						
VCEL				AML	AML		
	comp=N,1755µm,0.5s						
MC2	**Monte Cornacci**	**0.44**	**352**	⇑P	Pg	17 51 52.5	0.0
MC2				S	Sb	17 51 59.7	0.0
T1215	**Vallo di Nera,**	**0.44**	**317**	P	Pg	17 51 52.4	-0.1
T1215				S	Sg	17 51 58.8	+0.3
T0110	**Collepietro**	**0.45**	**124**	⇑P	Pb	17 51 53.0	-0.3
T0110				AML	AML		
	comp=E,1590µm,0.5s						
T0110				AML	AML		
	comp=N,1630µm,0.3s						
PTQR	**Pietraquaria**	**0.46**	**169**	⇑P	Pb	17 51 53.4	-0.1
PTQR				AML	AML		
	comp=E,448µm,0.3s						
PTQR				AML	AML		
	comp=E,447µm,0.3s						
PTQR				AML	AML		
	comp=N,266µm,0.3s						
CESX	**Cesi**	**0.53**	**285**	⇓P	Pg	17 51 53.9	-0.2
CESX				AML	AML		
	comp=E,656µm,1.6s						
CESX				AML	AML		
	comp=N,578µm,0.2s						
OFFI	**Offida**	**0.55**	**33**	AML	AML		
	comp=N,1410µm,0.7s						
OFFI				AML	AML		
	comp=E,1595µm,0.3s						
CERT	**Certeto**	**0.57**	**203**	⇑P	Pg	17 51 54.6	-0.2
CERT				AML	AML		
	comp=E,722µm,0.2s						
CERT				AML	AML		
	comp=N,534µm,0.4s						
FDMO	**Fiordimonte**	**0.58**	**346**	⇑P	Pg	17 51 54.7	-0.3
FDMO				AML	AML		
	comp=E,1280µm,0.2s						
FDMO				AML	AML		
	comp=N,1140µm,1.3s						
CESI	**CESI - Serrava**	**0.59**	**333**	⇑P	Pg	17 51 55.3	0.0
CESI				S	Sb	17 52 04.4	+0.4
CESI				AML	AML		
	comp=E,852µm,1.0s						
CESI				AML	AML		
	comp=N,1025µm,0.6s						
CESI				AML	AML		
	comp=N,1024µm,0.6s						
MTCE	**Montecelio**	**0.60**	**221**	⇓P	Pb	17 51 56.3	+0.4
MTCE				AML	AML		
	comp=E,369µm,0.3s						
MTCE				AML	AML		
	comp=N,244µm,1.2s						
CSP1	**Cessapalombo**	**0.62**	**355**	⇑P	Pg	17 51 55.5	-0.3
INTR	**Introdacqua**	**0.66**	**135**	⇓P	Pg	17 51 56.4	-0.1
INTR				AML	AML		
	comp=E,240µm,1.5s						
INTR				AML	AML		
	comp=N,541µm,1.0s						
INTR				AML	AML		
	comp=E,240µm,1.5s						
ASSB	**Assisi San Ben**	**0.73**	**321**	⇓P	Pb	17 51 57.9	-0.1
ASSB				S	Sn	17 52 10.0	-0.3
ASSB				AML	AML		
	comp=E,386µm,0.3s						
ASSB				AML	AML		
	comp=N,421µm,1.1s						
LPEL	**Lama dei Pelig**	**0.80**	**122**	⇓P	Pg	17 51 58.5	-0.6
LPEL				S	Sn	17 52 11.0	-1.1
LPEL				AML	AML		
	comp=E,1063µm,0.1s						
LPEL				AML	AML		
	comp=N,787µm,0.1s						
SNTG	**Esanatoglia**	**0.82**	**342**	P	Pg	17 51 59.2	-0.3
SNTG				AML	AML		
	comp=E,395µm,0.8s						
SNTG				AML	AML		
	comp=N,377µm,0.5s						
EL6	**Elcito**	**0.86**	**351**	P	Pb	17 51 59.8	-0.6
EL6				AML	AML		
	comp=E,783µm,1.1s						
EL6				AML	AML		
	comp=N,972µm,0.2s						
CING	**Cingoli**	**0.90**	**356**	⇑P	Pb	17 52 00.7	-0.3
CING				AML	AML		
	comp=N,510µm,0.9s						
CING				AML	AML		
	comp=E,523µm,1.2s						
FOSV	**Fossato di Vic**	**0.90**	**335**	P	Pb	17 52 00.5	-0.4
FOSV				AML	AML		
	comp=N,338µm,0.6s						
FOSV				AML	AML		
	comp=E,295µm,0.2s						
ARVD	**Arcevia**	**1.05**	**347**	P	Pb	17 52 03.2	-0.3
ARVD				AML	AML		
	comp=E,180µm,1.4s						
ARVD				AML	AML		
	comp=N,172µm,0.8s						
CPGN	**Carpegna, Ital**	**1.50**	**332**	⇑P	Pg	17 52 13.3	+0.9
CRE	**Caprese Michel**	**1.50**	**320**	S	Sg	17 52 33.0	+1.0
MRB1	**Monte Rocchett**	**1.85**	**136**	P	Pn	17 52 15.2	+0.4
ZCCA	**Zocca**	**2.51**	**319**	P	Pn	17 52 22.0	-2.0
CAVE	**Cavezzo**	**2.90**	**326**	⇑P	Pb	17 52 36.8	+1.8
CRAC	**Craco**	**3.18**	**131**	⇑P	Pn	17 52 33.6	+0.6

ROM 30 17:52:00.6±0.1, 42.477N±0.003×13.270E±0.004, h16km, ML3.1/13, Error ellipse: s-maj=0.3km s-min=0.1km az=135.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.05**	**308**	P	Pg	17 52 03.7	0.0
RM33				S	Sg	17 52 05.6	-0.2
RM33				AML	AML		
	comp=E,461µm,0.4s						
RM33				AML	AML		
	comp=N,480µm,0.1s						
RM33				AML	AML		
	comp=E,24000µm,0.7s						
RM33				AML	AML		
	comp=N,30450µm,0.3s						
RM33				AML	AML		
	comp=E,24550µm,0.7s						
RM33				AML	AML		
	comp=E,24500µm,0.7s						
RM33				AML	AML		
	comp=N,29600µm,0.3s						
RM33				AML	AML		
	comp=N,30500µm,0.3s						
CAMP	**Campotosto**	**0.12**	**60**	P	Pg	17 52 04.5	+0.1
CAMP				S	Sb	17 52 07.1	-0.1
CAMP				AML	AML		
	comp=N,4080µm,0.4s						
CAMP				AML	AML		
	comp=E,2415µm,0.6s						
SMA1	**SAN MARTINO**	**0.16**	**17**	P	Pb	17 52 05.2	-0.1
SMA1				S	Sb	17 52 08.3	-0.1
SMA1				AML	AML		
	comp=N,29950µm,0.4s						
SMA1				AML	AML		
	comp=E,56500µm,0.3s						
LNSS	**Leonessa**	**0.21**	**307**	P	Pg	17 52 05.7	+0.1
LNSS				S	Sb	17 52 09.5	-0.4
LNSS				AML	AML		
	comp=E,288µm,0.2s						
LNSS				AML	AML		
	comp=N,334µm,0.2s						
LNSS				AML	AML		
	comp=N,5085µm,0.8s						
LNSS				AML	AML		
	comp=E,4725µm,0.5s						
LNSS				AML	AML		
	comp=N,5090µm,0.8s						
GIGS	**Gran Sasso**	**0.22**	**97**	P	Pb	17 52 06.0	-0.3
GIGS				S	Sb	17 52 09.9	-0.3
GIGS				AML	AML		
	comp=E,721µm,0.9s						
GIGS				AML	AML		
	comp=N,764µm,0.8s						
T1202	**Accumoli, Fraz**	**0.23**	**352**	P	Pb	17 52 06.3	-0.2
T1202				S	Sb	17 52 10.3	-0.1
T1202				AML	AML		
	comp=E,2655µm,0.9s						
T1202				AML	AML		
	comp=N,1435µm,0.2s						
T1202				AML	AML		
	comp=E,7620µm,0.6s						
T1202				AML	AML		
	comp=N,10275µm,0.6s						
FIAM	**Fiamignano**	**0.24**	**209**	P	Pb	17 52 06.3	-0.3
FIAM				S	Sb	17 52 10.5	-0.1
FIAM				AML	AML		
	comp=E,1730µm,0.4s						
FIAM				AML	AML		
	comp=N,1295µm,1.0s						
T1243	**Rocca Santa Ma**	**0.26**	**31**	P	Pg	17 52 06.4	+0.1
T1243				S	Sg	17 52 10.6	+0.4
TERO	**Teramo**	**0.29**	**59**	P	Pg	17 52 06.8	+0.1
TERO				S	Sg	17 52 11.5	+0.5
TERO				AML	AML		
	comp=E,200µm,0.3s						
TERO				AML	AML		
	comp=N,259µm,0.1s						
TERO				AML	AML		
	comp=E,1640µm,1.5s						
TERO				AML	AML		
	comp=N,1725µm,1.3s						
TERO				AML	AML		
	comp=E,1880µm,1.0s						
TERO				AML	AML		
	comp=N,1935µm,1.3s						
TERO				AML	AML		
	comp=E,1635µm,1.5s						
T1242	**Castelluccio d**	**0.35**	**352**	P	Pg	17 52 08.2	+0.2
T1242				S	Sb	17 52 13.8	-0.2
T1242				AML	AML		
	comp=E,362µm,0.4s						
T1242				AML	AML		
	comp=N,510µm,1.1s						
T1242				AML	AML		
	comp=E,8730µm,0.3s						
T1242				AML	AML		
	comp=N,11600µm,1.1s						
T1242				AML	AML		
	comp=E,8730µm,0.3s						
T1242				AML	AML		
	comp=N,11600µm,1.1s						
T1242				AML	AML		
	comp=N,11500µm,1.1s						
NRCA	**Norcia**	**0.37**	**342**	P	Pg	17 52 08.4	+0.1
NRCA				S	Sb	17 52 14.1	-0.5
NRCA				AML	AML		
	comp=E,12500µm,0.6s						
NRCA				AML	AML		
	comp=N,11400µm,0.1s						
NRCA				AML	AML		
	comp=N,12800µm,0.1s						
NRCA				AML	AML		
	comp=E,14250µm,0.1s						
NRCA				AML	AML		
	comp=E,12550µm,0.6s						
ARRO	**Arrone**	**0.39**	**285**	P	Pg	17 52 08.5	0.0
ARRO				S	Sg	17 52 14.1	+0.3
ARRO				AML	AML		
	comp=N,2035µm,0.2s						
ARRO				AML	AML		
	comp=N,2040µm,0.2s						
ARRO				AML	AML		
	comp=E,2470µm,0.2s						
T1241	**Roccafluvione,**	**0.40**	**17**	P	Pg	17 52 08.6	-0.1
T1241				S	Sb	17 52 14.8	-0.3
T1241				AML	AML		
	comp=E,312µm,0.2s						
T1241				AML	AML		
	comp=N,126µm,0.1s						
T1241				AML	AML		
	comp=E,1440µm,1.6s						
T1241				AML	AML		
	comp=N,1290µm,0.3s						
T1241				AML	AML		
	comp=N,1205µm,0.3s						
T1241				AML	AML		
	comp=N,1285µm,0.3s						
T1241				AML	AML		
	comp=E,1405µm,1.6s						
T1241				AML	AML		
	comp=E,1435µm,1.6s						
MC2	**Monte Cornacci**	**0.44**	**352**	P	Pg	17 52 09.6	0.0
MC2				S	Sb	17 52 16.4	-0.2
T1215	**Vallo di Nera,**	**0.44**	**318**	P	Pg	17 52 09.3	-0.1
T1215				S	Sb	17 52 16.1	-0.3
FDMO	**Fiordimonte**	**0.57**	**347**	P	Pg	17 52 11.9	-0.1
FDMO				S	Sb	17 52 20.5	+0.2
CSP1	**Cessapalombo**	**0.62**	**356**	P	Pg	17 52 12.8	0.0
CSP1				S	Sb	17 52 21.9	+0.4

IDC 30 18:00:48.6±25.0, 17.44S×172.62W, h0km, mb4.7/4, mbtmp4.7/4, Error ellipse: s-maj=478.6km s-min=161.5km az=72.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.97**	**259**	P	P	18 08 17.4	+0.6
	10nm,0.5s,baz=83,slow=10,SNR=4.5						
	10nm,0.5s						
STKA	**Stephens Creek**	**43.71**	**242**	P	P	18 08 55.6	-0.1
	2.3nm,0.6s,baz=88,slow=12,SNR=6.9						
	2.3nm,0.6s						
WRA	**Warramunga Arr**	**50.14**	**258**	P	P	18 09 45.9	-0.3
	3.5nm,0.4s,baz=96,slow=6.9,SNR=4.7						
	3.5nm,0.4s						
ASAR	**Alice Springs**	**50.23**	**253**	P	P	18 09 46.4	-0.5
	8.5nm,0.6s,baz=88,slow=8.8,SNR=17						
	8.5nm,0.6s						

*IDC **30** 18:02:03.5±1.9, 19.59S×177.56W, h568km±23km, mb3.4/12, mbtmp4.4/14, Error ellipse: s-maj=19.4km s-min=13.1km az=141.0*

*NEIC **30** 18:02:04.6±1.6, 19.4S±0.1×177.6W±0.1, h579km±7km, mb4.4/51, Error ellipse: s-maj=19.7km s-min=14.9km az=147.0*

*NOU **30** 18:02:05.7, 19.60S×177.20W, h569km, mb4.6/18, Fiji Islands Region*

ISC 30 18:02:05.3±0.4, 19.41S±0.09×177.46W±0.07, h600km, n127,σ1ϑ65/129, mb4.4/37, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**1.74**	**312**	P	**P**	**18 03 18.3**	**-0.4**
TAVE	**Taveuni**	**3.56**	**319**	P	**P**	**18 03 28.0**	**+0.1**
MSVF	**Nonsavu**	**4.58**	**291**	P	**P**	**18 03 34.3**	**-0.8**
MSVF	**Nonsavu**	**4.58**	**291**	P	**P**	**18 03 34.7**	**-0.4**
MSVF	**Nonsavu**	**4.58**	**291**	P	**P**	**18 03 34.3**	**-0.8**
	baz=0.0,slow=0.0						

MSVF				S		S	18 04 50.1	+1.8	
	16nm,0.9s,baz=101,slow=21,SNR=3.7								
NIUE	Niue	7.12	89	P		P	18 03 55.5	-0.9	
NIUE	Niue	7.12	89	P		P	18 03 53.8	-2.6	
AFI	Afiamalu	7.72	46	P		P	18 03 57.0	-5.2	
AFI	Afiamalu	7.72	46	P		P	18 03 59.1	-3.0	
	45nm,0.5s,baz=333,slow=4.5,SNR=2.5								
AFI				S		S	18 05 31.1	-6.6	
	21nm,0.4s,baz=54,slow=19,SNR=1.6								
DZM	Mont Dzumac	15.29	257	P		P	18 05 15.7	-0.6	
DZM				IAmb		IAmb	18 05 19.2		
	comp=Z,16nm,1.2s								
DZM	Mont Dzumac	15.29	257	P		P	18 05 19.4	+3.1	
KOUNC	Koumac, New Ca	17.20	263	P		P	18 05 33.8	+0.1	
KOUNC	Koumac, New Ca	17.20	263	P		P	18 05 38.1	+4.4	
OUZ	Omahuta	17.62	205	P		P	18 05 39.3	+2.0	
URZ	Urewera	19.36	193	P		P	18 05 49.8	-3.3	
URZ	Urewera	19.36	193	P		P	18 05 52.0	-1.1	
URZ	Urewera	19.36	193	P		P	18 05 50.6	-2.5	
	comp=Z,26nm,0.5s,baz=301,slow=23,SNR=28								
BKZ	Black Stump Fm	20.37	194	P		P	18 05 58.9	-3.3	
BKZ	Black Stump Fm	20.37	194	P		P	18 06 03.0	+0.8	
BFZ	Birch Farm	21.88	193	P		P	18 06 12.4	-3.2	
BFZ	Birch Farm	21.88	193	P		P	18 06 16.4	+0.8	
PLWZ	Palliser	22.94	194	P		P	18 06 23.3	-1.9	
QRZ	Quartz Range	23.00	200	P		P	18 06 25.3	-0.3	
QRZ	Quartz Range	23.00	200	P		P	18 06 26.1	+0.5	
TUWZ	Tuamarina	23.14	197	P		P	18 06 24.9	-2.0	
THZ	Tophouse	23.74	198	P		P	18 06 30.4	-1.8	
KHZ	Kahutara	24.17	196	P		P	18 06 36.5	+0.6	
RPZ	Rata Peaks	26.08	199	P		P	18 06 55.4	+2.6	
RPZ	Rata Peaks	26.08	199	P		P	18 06 51.2	-1.6	
	comp=Z,3.9nm,0.5s,baz=32,slow=2.4,SNR=6.8								
	comp=Z,3.9nm,0.5s								
FOZ	Fox Glacier	26.32	201	P		P	18 06 53.2	-1.6	
MLZ	Mavora Lakes	28.51	202	P		P	18 07 13.3	-0.7	
WHZ	Wether Hill Ro	29.03	201	P		P	18 07 17.5	-1.0	
CTA	Charters Tower	34.12	263	P		P	18 08 01.8	-0.3	
	comp=Z,13nm,0.6s,baz=96,slow=11,SNR=4.7								
	comp=Z,13nm,0.6s								
CTAO	Charters Tower	34.12	263	P		P	18 08 01.5	-0.6	
CTAO				IAmb		IAmb	18 08 04.6		
	comp=Z,13nm,0.8s								
TOO	Toolangi	36.95	233	P		P	18 08 24.9	-0.3	
TOO				IAmb		IAmb	18 09 01.8		
	comp=Z,29nm,1.4s								
COEN	Coen	38.04	272	P		P	18 08 33.5	-0.8	
COEN				IAmb		IAmb	18 08 37.2		
	comp=Z,17nm,0.8s								
STKA	Stephens Creek	38.73	243	P		P	18 08 39.7	+0.1	
STKA	Stephens Creek	38.73	243	P		P	18 08 39.0	-0.6	
	comp=Z,2.3nm,0.5s,baz=94,slow=14,SNR=7.6								
	comp=Z,2.3nm,0.5s								
BBOO	Buckleboo	43.49	243	P		P	18 09 16.6	-0.6	
WR0	Warramunga Arr	45.08	261	P		P	18 09 28.6	-1.0	
WR0				IAmb		IAmb	18 09 32.2		
	comp=Z,6.4nm,0.9s								
WB0	Warramunga Arr	45.24	261	P		P	18 09 29.6	-1.2	
WB0				IAmb		IAmb	18 09 32.3		
	comp=Z,9.3nm,0.8s								
WB2	Warramunga Arr	45.26	261	P		P	18 09 30.0	-0.9	
WB2				IAmb		IAmb	18 09 32.9		
	comp=Z,17nm,1.1s								
WRAB	Tennant Creek	45.26	261	P		P	18 09 29.7	-1.2	
WRAB				IAmb		IAmb	18 09 32.9		
	comp=Z,12nm,1.1s								
WRA	Warramunga Arr	45.27	261	P		P	18 09 29.6	-1.4	
WRA	Warramunga Arr	45.27	261	P		P	18 09 30.0	-1.0	
	comp=Z,4.7nm,0.6s,baz=97,slow=7.4,SNR=181								
WRA				S		S	18 15 25.1	-3.8	
	comp=Z,1.2nm,0.9s,baz=94,slow=13,SNR=6.6								
	comp=Z,4.7nm,0.6s								
AS31	Alice Springs	45.27	256	P		P	18 09 30.5	-0.5	
AS31				IAmb		IAmb	18 09 34.3		
	comp=Z,3.8nm,0.5s								
ASAR	Alice Springs	45.27	256	P		P	18 09 30.3	-0.7	
ASAR	Alice Springs	45.27	256	P		P	18 09 30.4	-0.7	
	comp=Z,11nm,0.8s,baz=89,slow=8.3,SNR=165								
ASAR				PcP		PcP	18 10 57.9	0.0	
	comp=Z,0.7nm,0.6s,baz=101,slow=3.6,SNR=5.2								
ASAR				S		S	18 15 26.9	-2.0	
	comp=Z,2.9nm,0.8s,baz=92,slow=15,SNR=15								
	comp=Z,11nm,0.8s								
MTN	Manton Dam	49.67	269	P		P	18 10 03.0	-0.9	
FORT	Forrest	50.20	246	P		P	18 10 06.8	-0.7	
FORT				IAmb		IAmb	18 10 07.3		
	comp=Z,24nm,1.0s								
KNRA	Kununurra	51.25	265	P		P	18 10 14.7	-0.6	
KNRA				IAmb		IAmb	18 10 17.6		
	comp=Z,18nm,0.7s								
FITZ	Fitzroy Crossi	53.69	261	P		P	18 10 32.3	-0.3	
FITZ				IAmb		IAmb	18 11 15.3		
	comp=Z,12nm,1.4s								
TNTI	Ternate	57.69	284	P		P	18 10 59.0	-1.3	
TNTI				IAmb		IAmb	18 11 03.0		
	comp=Z,14nm,0.9s								
PSA00	Pilbara Seismi	58.42	256	P		P	18 11 04.5	-0.6	
MBWA	Marble Bar	58.60	257	P		P	18 11 05.8	-0.5	
SBA	Scott Base	58.98	184	P		P	18 11 10.6	+2.7	
VNDA	Vanda	59.03	185	P		P	18 11 09.0	+0.8	
VNDA	Vanda	59.03	185	P		P	18 11 07.9	-0.3	
	comp=Z,0.7nm,0.7s,baz=5.2,slow=11,SNR=2.9								
	comp=Z,0.7nm,0.7s								
MJAR	Matsushiro Arr	69.65	323	P		P	18 12 17.5	+1.7	
	comp=Z,2.0nm,0.7s,baz=107,slow=9.1,SNR=4.2								
	comp=Z,2.0nm,0.7s								
KKM	Kota Kinabalu	69.98	284	P		P	18 12 18.3	-0.1	
KKM				IAmb		IAmb	18 12 48.0		
	comp=Z,20nm,1.1s								
QSPA	South Pole Qui	70.65	180	P		P	18 12 22.7	+1.3	
ADK	Adak	70.99	1	P		P	18 12 25.1	+1.8	
ADK				IAmb		IAmb	18 12 25.3		
	comp=Z,17nm,0.9s								
TWG	Pinlang	73.23	302	P		P	18 12 36.9	0.0	
TWG				IAmb		IAmb	18 12 44.6		
	comp=Z,14nm,1.2s								
YULB	Yu-li	73.34	303	P		P	18 12 36.4	-1.1	
YULB				IAmb		IAmb	18 13 06.8		
	comp=Z,19nm,1.5s								
NACB	Ninganchiao	73.50	304	P		P	18 12 37.8	-0.6	
NACB				IAmb		IAmb	18 12 41.0		
	comp=Z,16nm,1.1s								
SSLB	Suanglung	73.81	303	P		P	18 12 39.0	-1.2	
SSLB				IAmb		IAmb	18 12 41.7		
	comp=Z,13nm,1.1s								
TPUB	Ta-pu	73.83	302	P		P	18 12 38.4	-1.9	
PEA0B	Petropavlovsk-	75.36	345	P		P	18 12 48.5	+0.4	
PEA0B				IAmb		IAmb	18 12 50.0		
	comp=Z,30nm,1.4s								
PETK	Petropavlovsk-	75.36	345	P		P	18 12 48.3	+0.1	
SII	Sitkinak Islan	78.18	13	P		P	18 13 05.6	+2.2	
OHAK	Old Harbor	78.98	13	P		P	18 13 08.2	+0.7	
OHAK				IAmb		IAmb	18 13 20.1		
	comp=Z,24nm,1.4s								
KDAK	Kodiak Island	79.65	13	P		P	18 13 13.3	+2.2	
KDAK				IAmb		IAmb	18 13 32.6		
	comp=Z,12nm,1.2s								
NVAR	Mina Array Bea	79.89	43	P		P	18 13 16.5	+3.4	
	comp=Z,1.0nm,0.7s,baz=224,slow=9.2,SNR=6.1								
	comp=Z,1.0nm,0.7s								
KVN	Kaiserville	80.37	43	P		P	18 13 16.7	+1.1	
K05A	Summer Lake	80.80	39	P		P	18 13 19.5	+1.7	
K05A				IAmb		IAmb	18 13 23.3		
	comp=Z,12nm,1.3s								
TUC	Tucson	81.91	52	P		P	18 13 25.7	+2.2	
X16A	Lo Mia Camp, P	82.45	50	P		P	18 13 28.2	+1.9	
U15A	North Rim	82.86	48	P		P	18 13 30.0	+1.6	
RND	Reindeer	85.53	12	P		P	18 13 42.3	+1.7	
RND				IAmb		IAmb	18 13 43.7		
	comp=Z,8.2nm,0.9s								
TX31	Lajitas Ar. Si	86.04	57	P		P	18 13 45.5	+1.7	
TX31				IAmb		IAmb	18 13 49.1		
	comp=Z,9.6nm,1.1s								
TX32	Lajitas Array	86.04	57	P		P	18 13 45.5	+1.7	
TX32				IAmb		IAmb	18 13 49.1		
	comp=Z,6.3nm,1.4s								
TXAR	Lajitas Array	86.04	57	P		P	18 13 46.4	+2.5	
	comp=Z,1.2nm,0.7s,baz=222,slow=5.5,SNR=16								
	comp=Z,1.2nm,0.7s								
CCB	Clear Creek Bu	86.85	12	P		P	18 13 46.0	-0.6	
CCB				IAmb		IAmb	18 13 49.1		
	comp=Z,4.4nm,0.6s								
ILAR	Eielson Array	87.15	13	P		P	18 13 50.0	+1.9	
	comp=Z,1.2nm,0.7s,baz=227,slow=6.1,SNR=8.1								
	comp=Z,1.2nm,0.7s								
J26L	Joseph Creek	87.63	14	P		P	18 13 52.8	+2.3	
PDAR	Pinedale Array	87.82	43	P		P	18 13 55.1	+3.0	
	comp=Z,1.0nm,0.7s,baz=197,slow=3.2,SNR=9.8								
	comp=Z,1.0nm,0.7s								
CMAR	Chiang Mai Arr	90.24	289	P		P	18 14 04.0	+0.5	
CMAR	Chiang Mai Arr	90.24	289	P		P	18 14 04.9	+1.4	
	comp=Z,2.1nm,0.8s,baz=123,slow=2.9,SNR=12								
	comp=Z,2.1nm,0.8s								
MKAR	Makanchi Array	110.82	314	PKiKP		PKiKP	18 19 30.6	-0.5	
	comp=Z,0.6nm,0.5s,baz=87,slow=1.7,SNR=9.2								
ARCES	ARCESS Array B	127.95	350	PKP		PKiKP	18 20 03.3	-0.6	
	comp=Z,2.1nm,0.7s,baz=2.9,slow=2.4,SNR=9.7								
FINES	FINESS Array B	134.88	344	PKhKP		PKPpre	18 20 11.9		
	comp=Z,2.1nm,0.9s,baz=321,slow=1.8,SNR=2.2								
FINES				PKP		PKiKP	18 20 19.1	+1.1	
	comp=Z,2.0nm,0.9s,baz=11,slow=1.4,SNR=4.8								
AKASG	Malin Array Be	142.31	332	PKhKP		PKPpre	18 20 26.6		
	comp=Z,1.4nm,0.5s,baz=40,slow=4.7,SNR=9.6								
BUR08	Bucovina Ar. S	146.34	332			PKiKP	18 20 40.9	-1.2	
BRTR	Keskin Array B	146.47	314	PKPbc		PKPbc	18 20 40.8	+0.1	
	comp=Z,3.1nm,0.7s,baz=139,slow=2.7,SNR=7.6								
CLL	Collm	147.12	348			PKPbc	18 20 41.6	-0.1	
CLL	Collm	147.12	348	*i* x		x	18 20 57.6		
CLL	Collm	147.12	348	*i* PKP		PKiKP	18 20 42.0	-1.5	
	comp=Z,3.0nm,0.6s								
CLL	Collm	147.12	348	⇓ *i* PKPbc		PKPab	18 20 44.2	-1.2	
	comp=Z,8.0nm,0.8s								
CLL	Collm	147.12	348	⇑ *i* PKPab		PKPab	18 20 47.3	+1.9	
	comp=Z,6.0nm,1.0s								
DPC	Dobruska-Polom	147.24	344	*e*PKP		PKiKP	18 20 42.7	-1.1	
DPC				*ex*		x	18 20 45.0		
BRG	Berggiesshubel	147.33	347	Amp			18 20 45.9		
	comp=Z,5.8nm,0.8s								
BRG	Berggiesshubel	147.33	347	*e*P		PKPab	18 20 45.0	-1.3	
KRLC	Kraliky	147.37	343	*e*PKP		PKPab	18 20 44.8	-1.7	
KRLC				*ex*		x	18 20 48.3		
MORC	Moravsky Berou	147.42	342	*e*PKP		PKPab	18 20 45.5	-1.2	
MDUB	Mudurnu	147.72	317			PKPbc	18 20 42.8	-1.0	
PRU	Pruhonice	148.02	345	*e*PKP		PKPab	18 20 46.7	-2.4	
VRAC	Vranov	148.11	342	*e*PKP		PKPab	18 20 47.8	-1.7	
VYHS	Vyhne	148.14	339	*e*		PKiKP	18 20 46.8	+1.1	
JAVC	Velka Javorina	148.19	341	*e*PKP		PKPab	18 20 48.5	-1.4	
KRUC	Moravsky	148.39	343	*e*PKP		PKPab	18 20 47.9	-2.8	
MODS	Modra-Piesok	148.74	341	*e*		PKiKP	18 20 47.9	+0.9	
KHC	Kasperske Hory	149.05	346			PKPbc	18 20 45.5	-1.2	
KHC	Kasperske Hory	149.05	346	*e*PKP		PKPbc	18 20 46.2	-0.5	
KHC				*ex*		x	18 20 49.2		
CKRC	Cesky Krumlov	149.17	345	*e*PKP		PKiKP	18 20 47.3	-0.5	
CKRC				*ex*		x	18 20 49.2		
GERES	GERESS Array B	149.29	346			PKPbc	18 20 46.9	-0.5	
GERES	GERESS Array B	149.29	346	PKPbc		PKiKP	18 20 47.9	-0.3	
	comp=Z,3.1nm,0.8s,baz=29,slow=3.0,SNR=20								
CONA	Conrad Observa	149.57	342	*e*P		PKiKP	18 20 48.6	-0.2	
	comp=Z,6.7nm,1.1s								
RONA	Rosalia, Austr	149.64	341	*e*P		PKiKP	18 20 48.6	-0.3	
	comp=Z,6.8nm,0.6s								
MOA	Molln	150.07	344	*e*P		PKiKP	18 20 51.4	+1.6	
	comp=Z,1.6nm,0.6s								
RDO	Rodhopi	150.78	323	PKPdf		PKPdf	18 20 45.0	+0.3	
RDO						PKPbc	18 20 49.5	-1.5	
KBA	Koelnbreinsper	151.03	345	*e*P		PKiKP	18 20 52.9	+0.9	
	comp=Z,6.2nm,1.0s								
WTTA	Wattenberg	151.24	347	*e*P		PKiKP	18 20 52.4	+0.1	
	comp=Z,3.4nm,0.6s								
MOTA	Moosalm	151.28	348	*e*P		PKiKP	18 20 52.2	-0.1	
	comp=Z,1.2nm,0.6s								
MYKA	Terra Mystica	151.37	344	*e*P		PKiKP	18 20 51.9	-0.6	
	comp=Z,1.7nm,0.4s								
SQTA	Sankt Quirin	151.37	348	*e*P		PKiKP	18 20 52.5	0.0	
	comp=Z,5.2nm,0.7s								
ABTA	Abfaltersbach	151.54	346	*e*P		PKiKP	18 20 52.1	-0.8	
	comp=Z,4.5nm,0.7s								
FETA	Feichten	151.66	348	*e*P		PKiKP	18 20 53.3	+0.1	
	comp=Z,3.4nm,0.7s								

*IDC **30** 18:09:42.2±1.0,26˚.26S×70˚.73W,h0km,mb3.4/2, mbtmp3.6/4,ML3.5/2,MS2.6/1,Error ellipse: s-maj=55.2km s-min=23.7km az=96.0*
*GUC **30** 18:09:48.3±0.7,26˚.10S×70˚.36W,h68km±7km, ML4.0*
*NEIC **30** 18:09:49.3±2.4,26˚.12S±0˚.04×70˚.47W±0˚.09,h49km±9km, mb4.4/5,ML4.0(GUC),Error ellipse: s-maj=11.1km s-min=5.2km az=83.0*

ISC 30 18:09:49.5±0.7,26˚.10S±0˚.03×70˚.43W±0˚.05,h56km±6km, n71,σ1°23/84,mb4.1/3,5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.16	253				Pn	18 09 59.2	+0.9
AC01						Sn	Sn	18 10 05.7	+1.1
AC01	Pan de Azucar	0.16	253	⇓ *i* P			Pn	18 09 59.4	+1.1
AC01						*e*S	Sn	18 10 05.8	+1.1
AC01					IAML			18 10 06.4	
	comp=N,10μm,0.1s								
GO02	Mina Guanaco	1.20	39				Pn	18 10 10.6	+0.1
GO02						Sn	Sn	18 10 25.6	-0.3
GO02	Mina Guanaco	1.20	39	*e*P			Pn	18 10 10.6	+0.1
GO02						*e*S	Sn	18 10 25.8	-0.2
GO02					IAML			18 10 31.5	
	comp=N,11μm,0.1s								
AC06	Mina Casimiro	1.25	177				Pn	18 10 11.1	+0.2
AC06	Mina Casimiro	1.25	177	*e*P			Pn	18 10 11.1	+0.2
AC06						*e*S	Sn	18 10 27.7	+1.0
AC06					IAML			18 10 32.0	
	comp=E,2μm,0.2s								
AC02	Maricunga	1.38	122				Pn	18 10 13.3	+0.4
AC02						Sn	Sn	18 10 30.1	-0.2
AC02	Maricunga	1.38	122	⇓ *i* P			Pn	18 10 13.4	+0.5
AC02						*e*S	Sn	18 10 30.4	0.0
AC02					IAML			18 10 31.4	
	comp=E,6μm,0.1s								
PB14	IPOC Station P	1.47	1				Pn	18 10 15.2	+1.1
PB14						Sn	Sn	18 10 33.6	+1.2
PB14	IPOC Station P	1.47	1	⇓ *e*P			Pn	18 10 15.2	+1.1
PB14						*e*S	Sn	18 10 34.1	+1.7
PB14					IAML			18 10 37.7	
	comp=E,1μm,0.2s								
GO03	Copiap	1.50	173				Pn	18 10 14.4	+0.2
GO03	Copiap	1.50	173	⇓ *e*P			Pn	18 10 14.6	+0.4
GO03						*e*S	Sn	18 10 34.5	+1.8
AC04	Llanos de Chal	2.17	195				Pn	18 10 23.6	+0.3
AC04	Llanos de Chal	2.17	195	*e*P			Pn	18 10 23.6	+0.3
AC04						*e*S	Sn	18 10 50.1	+1.0
AC04					IAML			18 11 02.4	
	comp=E,553nm,0.5s								
PB10	IPOC Station P	2.58	357				Pn	18 10 29.1	+0.2
PB10	IPOC Station P	2.58	357	*e*P			Pn	18 10 29.1	+0.2
PB10						*e*S	Sn	18 11 00.4	+1.3
PB10					IAML			18 11 13.2	
	comp=E,626nm,0.3s								
AC05	El Transito	2.73	177				Pn	18 10 32.7	+1.7
AC05	El Transito	2.73	177	*e*P			Pn	18 10 32.8	+1.7
AC05						*e*S	Sn	18 11 05.1	+2.2
AC05					IAML			18 11 20.9	
	comp=N,502nm,0.4s								
LCO	Las Campanas	2.91	185				Pn	18 10 34.0	+0.3
PB15	IPOC Station P	3.01	17				Pn	18 10 36.3	+1.3
PB15	IPOC Station P	3.01	17	*e*P			Pn	18 10 36.4	+1.4
PB15						*e*S	Sn	18 11 11.3	+1.3
PB06	IPOC Station P	3.47	13				Pn	18 10 41.3	+0.1
PB06	IPOC Station P	3.47	13	⇓ *e*P			Pn	18 10 41.5	+0.3
PB06						*e*S	Sn	18 11 21.7	+0.5
PB06					IAML			18 11 34.7	
	comp=E,840nm,0.5s								
LVC	Limon Verde	3.74	22				Pn	18 10 46.0	+0.9
LVC	Limon Verde	3.74	22	Pn		Pn	Pn	18 10 46.5	+1.3
	comp=E,12nm,0.3s,baz=182,slow=8.9,SNR=47								
LVC						Sn	Sn	18 11 32.2	+4.0
	comp=E,61nm,0.3s,baz=345,slow=21,SNR=9.6								
LVC					LR	LR	LR	18 12 12.2	
	comp=E,70nm,19.5s,baz=212,slow=38								
	comp=E,27nm,0.3s								
AF01	San Pedro de A	3.75	34				Pn	18 10 45.8	+0.6
PB04	IPOC Station P	3.76	4				Pn	18 10 44.4	-0.9
CO05	La Serena	3.87	190	Pn		Pn	Pn	18 10 47.3	+0.8
CO01	Juntas del Tor	3.87	176				Pn	18 10 47.7	+0.9
GO04	Tololo Observa	4.07	185				Pn	18 10 50.1	+0.6
PB07	IPOC Station P	4.38	7				Pn	18 10 53.0	-0.8
PB09	IPOC Station P	4.42	14				Pn	18 10 54.2	-0.1
CO06	Fray Jorge	4.68	193	Pn			Pn	18 10 56.1	-1.5
CO03	El Pedregal	4.72	183				Pn	18 10 58.1	-0.2
PB02	IPOC Station P	4.79	6				Pn	18 10 58.1	-1.1
CO02	Combarbal	5.11	186				Pn	18 11 02.9	-0.7
PB01	IPOC Station P	5.11	10				Pn	18 11 02.8	-0.9
TA01	Diego Aracena	5.51	2	Pn			Pn	18 11 08.8	-0.4
TA02	Huaiquique	5.81	3	Pn			Pn	18 11 12.1	-1.1
VA06	Catapilco	6.48	187	Pn			Pn	18 11 22.0	-0.3
GO01	Chusmiza	6.50	10	Pn			Pn	18 11 21.2	-2.0
VA03	San Esteban	6.64	181	Pn			Pn	18 11 23.2	-1.4
ROC1	El Roble	6.87	184	Pn			Pn	18 11 26.9	-1.0
PEL	Peldehue	7.02	182	Pn			Pn	18 11 28.8	-1.0
MT02	Curacav	7.16	185	Pn			Pn	18 11 29.9	-1.7
PB12	IPOC Station P	7.45	1	Pn			Pn	18 11 34.0	-1.8
MT09	Talagante	7.66	184	Pn			Pn	18 11 37.5	-1.2
LMEL	Las Melosas	7.72	179	Pn			Pn	18 11 38.0	-1.4
MT01	Popeta	7.77	185	Pn			Pn	18 11 38.1	-1.9
PB16	IPOC Station P	7.78	6	Pn			Pn	18 11 41.5	+0.8
BO02	Sierra Bellavi	8.67	182	Pn			Pn	18 11 50.6	-1.8
GO05	Huala	8.97	188	Pn			Pn	18 11 54.5	-2.0
LPAZ	La Paz	10.00	13	Pn			Pn	18 12 09.2	-1.8
LPAZ	La Paz	10.00	13	Pn			Pn	18 12 10.8	-0.3
	comp=E,0.1nm,0.3s,baz=205,slow=7.2,SNR=4.1								
	comp=E,1.0nm,0.5s								
H03N1	Juan Fernandez	10.38	223	T		T		18 22 51.1	
	baz=48,slow=72,SNR=22								
H03N2	Juan Fernandez	10.39	223	T		T		18 22 51.7	
	baz=48,slow=72,SNR=20								
H03N3	Juan Fernandez	10.40	223	T		T		18 22 50.3	
	baz=48,slow=72,SNR=18								
VA04	Juan Fernndez	10.47	222	Pn		Pn	Pn	18 12 15.6	-1.2
SIV	San Ignacio	13.31	43	Pn		Pn	Pn	18 12 52.5	-3.4
	baz=223,slow=7.3,SNR=6.1								
TRQA	Tornquist	13.90	151	Pn		Pn	Pn	18 13 05.1	+1.5
BCIP	Isla Barro Col	36.23	344	P		P	P	18 16 45.9	-1.4
BELA	Belgrano 2	54.42	171	P		P	P	18 19 12.8	+2.3
SNAA	Sanae	58.43	160	P		P	P	18 19 39.3	+0.1
SNAA				IAmb		IAmb	IAmb	18 20 19.6	
	comp=Z,4.0nm,1.3s								
SNAA	Sanae	58.43	160	P		P	P	18 19 39.0	-0.2
	comp=Z,0.7nm,1.0s,baz=269,slow=11,SNR=6.2								
	comp=Z,0.7nm,1.0s								
TXAR	Lajitas Array	63.68	328	P		P	P	18 20 15.6	+0.3
	comp=Z,0.2nm,0.6s,baz=153,slow=6.1,SNR=2.6								
	comp=Z,0.2nm,0.6s								
QSPA	South Pole Qui	64.11	180	P		P	P	18 20 18.9	+1.2
QSPA				IAmb		IAmb	IAmb	18 20 56.6	
	comp=Z,5.3nm,1.4s								
TOA0	Torodi Ar. Sit	80.21	70	P		P	P	18 21 54.4	-0.1
ASAR	Alice Springs	125.21	208	PKP		PKiKP	P	18 28 44.8	-0.2
	comp=Z,0.2nm,0.6s,baz=129,slow=1.7,SNR=4.4								
WRA	Warramunga Arr	128.30	210	PKP		PKiKP	P	18 28 51.1	-0.1
	comp=Z,0.7nm,1.1s,baz=142,slow=1.8,SNR=2.1								
ZALV	Zalesovo Beam	146.68	27	PKPbc		PKPbc	P	18 29 25.0	+0.3
	comp=Z,2.5nm,0.5s,baz=306,slow=3.8,SNR=12								
MKAR	Makanchi Array	150.12	39	PKPbc		PKiKP	P	18 29 35.0	+0.2
	comp=Z,2.2nm,0.7s,baz=326,slow=2.1,SNR=22								

*SNET **30** 18:10:57.7±1.2, 13˚.40N×90˚.06W,h55km, MD3.1,ML3.6, MW3.8*
*GCG **30** 18:11:00.4±0.7, 13˚.53N×90˚.04W,h29km, MD3.7*

ISC 30 18:10:59.3±2.1,13˚.4N±0˚.1×90˚.01W±0˚.06,h41km±36km, n15,σ0°80/27,1C,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.57	23	*e*P			Pn	18 11 10.7	-0.5

RM33 AML AML
comp=N,2880µm,0.4s
RM33 AML AML
comp=E,3645µm,0.3s
RM33 AML AML
comp=N,2920µm,0.5s
RM33 AML AML
comp=E,3645µm,0.3s
RM33 AML AML
comp=E,3640µm,0.3s
RM33 AML AML
comp=N,2920µm,0.5s
RM33 AML AML
comp=N,2880µm,0.4s
T1202 Accumoli, Fraz 0.14 333 P Pg 18 28 58.1 +0.7
T1202 S Sg 18 29 00.7 +1.1
T1202 AML AML
comp=N,4305µm,1.2s
T1202 AML AML
comp=N,4325µm,1.2s
T1202 AML AML
comp=E,3235µm,0.4s
T1202 Accumoli, Fraz 0.14 333 P Pg 18 28 58.1 +0.7
T1202 S Sg 18 29 00.7 +1.0
T1202 AML AML
comp=E,3240µm,0.4s
T1202 AML AML
comp=N,4310µm,1.2s
T1202 AML AML
comp=E,3240µm,0.4s
T1202 AML AML
comp=N,4320µm,1.2s
T1202 AML AML
comp=E,3235µm,0.4s
T1202 AML AML
comp=N,4305µm,1.2s
T1202 AML AML
comp=N,4325µm,1.2s
T1202 AML AML
comp=E,3235µm,0.4s
T1243 Rocca Santa Ma 0.15 42 P Pg 18 28 58.2 +0.5
T1243 S Sg 18 29 00.9 +0.8
T1243 Rocca Santa Ma 0.15 42 ⇑P Pg 18 28 58.2 +0.5
T1243 S Sg 18 29 01.0 +0.8
T1244 Arquata del Tr 0.17 358 P Pg 18 28 58.6 +0.6
T1244 S Sg 18 29 01.6 +0.9
T1244 AML AML
comp=E,352µm,0.6s
T1244 AML AML
comp=N,490µm,0.2s
T1244 AML AML
comp=E,1475µm,0.2s
T1244 AML AML
comp=N,1775µm,1.3s
T1244 AML AML
comp=E,1480µm,0.2s
T1244 Arquata del Tr 0.17 358 ⇓P Pg 18 28 58.6 +0.6
T1244 S Sg 18 29 01.6 +0.9
T1244 AML AML
comp=E,1475µm,0.2s
T1244 AML AML
comp=N,1775µm,1.3s
T1244 AML AML
comp=E,1475µm,0.2s
T1244 AML AML
comp=N,1775µm,1.3s
T1244 AML AML
comp=E,1475µm,0.2s
T1244 AML AML
comp=N,1775µm,1.3s
T1244 AML AML
comp=N,1775µm,1.3s
T1244 AML AML
comp=E,1480µm,0.2s
LNSS Leonessa 0.20 276 P Pg 18 28 59.0 +0.5
LNSS S Sg 18 29 02.3 +1.0
LNSS Leonessa 0.20 276 ⇓P Pg 18 28 59.0 +0.6
LNSS S Sg 18 29 02.3 +1.1
LNSS AML AML
comp=E,1690µm,0.3s
LNSS AML AML
comp=N,1485µm,0.2s
LNSS AML AML
comp=E,1690µm,0.3s
LNSS AML AML
comp=N,1485µm,0.2s
LNSS AML AML
comp=N,1485µm,0.2s
LNSS AML AML
comp=E,1690µm,0.3s
TERO Teramo 0.22 79 P Pg 18 28 59.4 +0.6
TERO S Sg 18 29 03.1 +1.2
TERO AML AML
comp=E,1350µm,1.0s
TERO AML AML
comp=N,1147µm,0.3s
TERO AML AML
comp=N,1290µm,0.3s
TERO AML AML
comp=N,1150µm,0.3s
TERO AML AML
comp=E,1490µm,0.9s
TERO AML AML
comp=E,1350µm,1.0s
TERO Teramo 0.22 79 ⇑P Pg 18 28 59.4 +0.6
TERO S Sg 18 29 02.9 +1.0
TERO AML AML
comp=E,1350µm,1.0s
TERO AML AML
comp=N,1150µm,0.3s
TERO AML AML
comp=E,1490µm,0.9s
TERO AML AML
comp=N,1290µm,0.3s
TERO AML AML
comp=E,1350µm,1.0s
TERO AML AML
comp=N,1147µm,0.3s
TERO AML AML
comp=E,1490µm,0.9s
TERO AML AML
comp=N,1290µm,0.3s
TERO AML AML
comp=E,1350µm,1.0s
TERO AML AML
comp=N,1290µm,0.3s
TERO AML AML
comp=N,1150µm,0.3s
TERO AML AML
comp=E,1490µm,0.9s
GIGS Gran Sasso 0.23 124 P Pg 18 28 59.5 +0.4
GIGS AML AML
comp=E,169µm,0.3s
GIGS AML AML
comp=E,168µm,0.3s
GIGS AML AML
comp=N,251µm,1.6s
GIGS Gran Sasso 0.23 124 ⇑P Pg 18 28 59.5 +0.5
GIGS AML AML
comp=E,168µm,0.3s
GIGS AML AML
comp=N,250µm,1.6s
GIGS AML AML
comp=E,168µm,0.3s
GIGS AML AML
comp=N,250µm,1.6s
GIGS AML AML
comp=E,169µm,0.3s
GIGS AML AML
comp=N,251µm,1.6s
GIGS AML AML
comp=E,168µm,0.3s
GIGS AML AML
comp=N,251µm,1.6s
T1242 Castelluccio d 0.26 343 P Pg 18 29 00.0 +0.5
T1242 AML AML
comp=E,798µm,0.1s
T1242 AML AML
comp=N,1110µm,0.5s
T1242 AML AML
comp=E,810µm,0.1s
T1242 AML AML
comp=N,1125µm,0.5s
T1242 AML AML
comp=E,797µm,0.1s
T1242 AML AML
comp=N,1112µm,0.5s
T1242 AML AML
comp=E,810µm,0.1s
T1242 Castelluccio d 0.26 343 ⇑P Pg 18 29 00.1 +0.6
T1242 AML AML
comp=E,688µm,0.3s
T1242 AML AML
comp=N,876µm,0.6s
T1242 AML AML
comp=E,688µm,0.3s
T1242 AML AML
comp=N,876µm,0.6s
T1242 AML AML
comp=E,688µm,0.3s
T1242 AML AML
comp=N,876µm,0.6s
NRCA Norcia 0.29 331 P Pg 18 29 00.5 +0.5
NRCA S Sg 18 29 04.7 +0.8
NRCA AML AML
comp=E,1210µm,0.7s
NRCA AML AML
comp=N,905µm,1.0s
NRCA AML AML
comp=E,2510µm,0.1s
NRCA AML AML
comp=N,1395µm,0.1s
NRCA AML AML
comp=N,1264µm,0.1s
NRCA AML AML
comp=E,2280µm,0.1s
NRCA AML AML
comp=N,1400µm,0.1s
NRCA Norcia 0.29 331 P Pg 18 29 00.5 +0.5
NRCA AML AML
comp=E,2280µm,0.1s
NRCA AML AML
comp=N,1265µm,0.1s
NRCA AML AML
comp=E,2510µm,0.1s
NRCA AML AML
comp=N,1400µm,0.1s
NRCA AML AML
comp=E,2280µm,0.1s
NRCA AML AML
comp=N,1264µm,0.1s
NRCA AML AML
comp=E,2510µm,0.1s
NRCA AML AML
comp=N,1400µm,0.1s
NRCA AML AML
comp=E,2280µm,0.1s
NRCA AML AML
comp=N,1264µm,0.1s
NRCA AML AML
comp=E,2510µm,0.1s
NRCA AML AML
comp=N,1395µm,0.1s
NRCA AML AML
comp=N,1264µm,0.1s
NRCA AML AML
comp=E,2280µm,0.1s
NRCA AML AML
comp=E,2510µm,0.1s
NRCA AML AML
comp=N,1400µm,0.1s
T1241 Roccafluvione, 0.29 18 P Pg 18 29 00.5 +0.4
T1241 AML AML
comp=E,88µm,0.3s
T1241 AML AML
comp=N,67µm,0.7s
T1241 AML AML
comp=E,549µm,0.3s
T1241 AML AML
comp=N,360µm,0.7s
T1241 AML AML
comp=E,550µm,0.3s
T1241 Roccafluvione, 0.29 18 ⇓P Pg 18 29 00.5 +0.5
T1241 S Sg 18 29 05.0 +1.1
T1241 AML AML
comp=E,550µm,0.3s
T1241 AML AML
comp=N,360µm,0.7s
T1241 AML AML
comp=E,549µm,0.3s
T1241 AML AML
comp=N,360µm,0.7s
T1241 AML AML
comp=E,549µm,0.3s
T1241 AML AML
comp=N,360µm,0.7s
T1241 AML AML
comp=N,360µm,0.7s
T1241 AML AML
comp=E,550µm,0.3s
MMO1 Montemonaco 0.32 3 P Pg 18 29 01.1 +0.5
MMO1 S Sb 18 29 06.2 -1.1
MMO1 AML AML
comp=E,72µm,0.4s
MMO1 AML AML
comp=N,107µm,0.7s
MMO1 AML AML
comp=N,800µm,0.8s
MMO1 AML AML
comp=E,712µm,0.4s
MMO1 AML AML
comp=N,800µm,0.8s
MMO1 Montemonaco 0.32 3 ⇓P Pg 18 29 01.1 +0.5
MMO1 AML AML
comp=E,712µm,0.4s
MMO1 AML AML
comp=N,800µm,0.8s
MMO1 AML AML
comp=E,712µm,0.4s
MMO1 AML AML
comp=N,800µm,0.8s
MMO1 AML AML
comp=N,800µm,0.8s
MMO1 AML AML
comp=E,712µm,0.4s
MC2 Monte Cornacci 0.34 345 P Pg 18 29 01.5 +0.4
MC2 Monte Cornacci 0.34 345 ⇓P Pg 18 29 01.5 +0.5
FIAM Fiamignano 0.34 204 ⇑P Pg 18 29 01.5 +0.4
FIAM AML AML
comp=E,179µm,0.3s
FIAM AML AML
comp=N,176µm,0.5s
FIAM AML AML
comp=E,179µm,0.3s
FIAM AML AML
comp=N,176µm,0.5s
FIAM AML AML
comp=E,179µm,0.3s
FIAM AML AML
comp=N,176µm,0.5s
FAGN Fagnano 0.38 147 ⇑P Pg 18 29 02.1 +0.4
FAGN AML AML
comp=E,1009µm,0.5s
FAGN AML AML
comp=N,720µm,0.3s
FAGN AML AML
comp=E,1009µm,0.5s
FAGN AML AML
comp=N,720µm,0.3s
FAGN AML AML
comp=E,1009µm,0.5s
FAGN AML AML
comp=N,720µm,0.3s
T1215 Vallo di Nera, 0.39 304 ⇓P Pg 18 29 02.1 +0.2
T1215 S Sb 18 29 08.3 -1.1
ARRO Arrone 0.40 270 ⇑P Pg 18 29 02.5 +0.4
ARRO AML AML
comp=E,219µm,0.2s
ARRO AML AML
comp=N,157µm,0.5s
ARRO AML AML
comp=E,220µm,0.2s
ARRO AML AML
comp=N,157µm,0.5s
ARRO AML AML
comp=E,220µm,0.2s
ARRO AML AML
comp=N,157µm,0.5s
VCEL Villa Celiera 0.44 115 ⇑P Pb 18 29 03.6 -0.5
VCEL AML AML
comp=E,516µm,0.5s
VCEL AML AML
comp=N,518µm,1.2s
VCEL AML AML
comp=E,516µm,0.5s
VCEL AML AML
comp=N,518µm,1.2s
VCEL AML AML
comp=N,518µm,1.2s
VCEL AML AML
comp=E,516µm,0.5s
OFFI Offida 0.45 38 P Pb 18 29 04.3 +0.1
OFFI S Sb 18 29 12.9 +1.9
OFFI AML AML
comp=E,606µm,0.3s
OFFI AML AML
comp=N,691µm,0.5s
OFFI AML AML
comp=E,606µm,0.3s
OFFI AML AML
comp=N,691µm,0.5s
OFFI AML AML
comp=E,606µm,0.3s
OFFI AML AML
comp=N,691µm,0.5s
FDMO Fiordimonte 0.48 340 ⇓P Pg 18 29 04.0 +0.4
FDMO AML AML
comp=E,268µm,0.2s
FDMO AML AML
comp=N,222µm,0.2s
FDMO AML AML
comp=E,268µm,0.2s
FDMO AML AML
comp=N,221µm,0.3s
FDMO AML AML
comp=N,222µm,0.2s
FDMO AML AML
comp=E,268µm,0.2s
T0110 Collepietro 0.50 135 ⇑P Pg 18 29 04.4 +0.5
T0110 AML AML
comp=E,350µm,0.2s
T0110 AML AML
comp=N,380µm,0.4s
T0110 AML AML
comp=E,350µm,0.2s
T0110 AML AML
comp=N,380µm,0.4s
T0110 AML AML
comp=N,380µm,0.4s
T0110 AML AML
comp=E,350µm,0.2s
CSP1 Cessapalombo 0.52 352 ⇓P Pg 18 29 04.5 +0.3
CSP1 S Sb 18 29 12.7 -0.3
CESI CESI - Serrava 0.52 325 ⇓P Pg 18 29 04.6 +0.3
CESI S Sb 18 29 12.9 -0.1
CESI AML AML
comp=E,165µm,0.5s
CESI AML AML
comp=N,332µm,1.6s
CESI AML AML
comp=E,165µm,0.5s
CESI AML AML
comp=N,332µm,1.6s
CESI AML AML
comp=E,165µm,0.5s
CESI AML AML
comp=N,332µm,1.6s
ASSB Assisi San Ben 0.66 314 ⇓P Pg 18 29 07.1 +0.1
ASSB AML AML
comp=E,163µm,0.3s
ASSB AML AML
comp=N,160µm,0.2s
ASSB AML AML
comp=E,163µm,0.3s
ASSB AML AML
comp=N,160µm,0.2s
ASSB AML AML
comp=N,160µm,0.2s
ASSB AML AML
comp=E,163µm,0.3s
INTR Introdacqua 0.72 142 ⇑P Pg 18 29 08.0 -0.1
INTR AML AML
comp=E,67µm,1.1s
INTR AML AML
comp=N,192µm,0.7s
INTR AML AML
comp=E,67µm,1.1s
INTR AML AML
comp=N,192µm,0.7s
INTR AML AML
comp=N,192µm,0.7s
INTR AML AML
comp=E,67µm,1.1s
SNTG Esanatoglia 0.72 338 ⇑P Pg 18 29 08.1 -0.1
SNTG AML AML
comp=E,67µm,0.4s
SNTG AML AML
comp=N,97µm,0.4s
SNTG AML AML
comp=E,67µm,0.4s
SNTG AML AML
comp=N,97µm,0.4s
SNTG AML AML
comp=N,97µm,0.4s
SNTG AML AML
comp=E,67µm,0.4s
EL6 Elcito 0.76 349 ⇑P Pg 18 29 08.9 0.0
ATCC AVT- Casa Cast 0.78 321 P Pg 18 29 09.3 +0.1
ATCC S Sn 18 29 21.8 -1.3
ATCC AML AML
comp=E,123µm,1.1s
ATCC AML AML
comp=N,133µm,0.4s
ATCC AML AML
comp=E,123µm,1.1s
ATCC AML AML
comp=N,133µm,0.4s
ATCC AML AML
comp=N,133µm,0.4s
ATCC AML AML
comp=E,123µm,1.1s
CING Cingoli 0.80 354 ⇑P Pg 18 29 09.6 0.0
CING AML AML
comp=E,168µm,1.0s
CING AML AML
comp=N,160µm,0.4s
CING AML AML
comp=E,168µm,1.0s
CING AML AML
comp=N,160µm,0.4s
FOSV Fossato di Vic 0.82 331 AML AML
comp=E,77µm,0.5s
FOSV AML AML
comp=E,77µm,0.5s
FOSV AML AML
comp=N,101µm,0.4s
FOSV AML AML
comp=N,101µm,0.4s
FOSV AML AML
comp=N,101µm,0.4s
FOSV AML AML
comp=E,77µm,0.5s
PP3 Marolino 0.82 15 AML AML
comp=N,361µm,1.3s
PP3 AML AML
comp=E,256µm,1.1s
PP3 AML AML
comp=E,256µm,1.1s
PP3 AML AML
comp=N,360µm,1.3s
PP3 AML AML
comp=N,360µm,1.3s
PP3 AML AML
comp=E,256µm,1.1s
LPEL Lama dei Pelig 0.84 129 AML AML
comp=E,106µm,0.3s
LPEL AML AML
comp=E,106µm,0.3s
LPEL AML AML
comp=N,75µm,1.0s
LPEL AML AML
comp=E,106µm,0.3s
LPEL AML AML
comp=N,75µm,1.0s
LPEL AML AML
comp=N,75µm,1.0s

AAE 30 18:58:09.4±24.0,5°.15N×34°.64E,h15^{km}±307^{km},ML4.3, 3C-4D,Sudan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODK	**Lodwar**	**1.86**	**157⇓**	*e*P	Pn	18 58 39.3	-1.6
LODK				*e*S	Sn	18 59 03.1	-1.1
LODK				IAML		18 59 11.1	
	comp=N,1μm,0.4s						
LODK	**Lodwar**	**1.86**	**157**	*e*P	Pn	18 58 39.2	-1.6
LODK				*e*S	Sn	18 59 03.1	-1.1
LODK	**Lodwar**	**1.86**	**157**	*e*P	Pn	18 58 38.9	-2.0
LODK				*e*S	Sn	18 59 03.1	-1.1
LODK	**Lodwar**	**1.86**	**157⇓**	*e*P	Pn	18 58 39.3	-1.6
LODK				*e*S	Sn	18 59 03.1	-1.1
LODK				IAML		18 59 11.1	
	comp=N,1μm,0.4s						
FURI	**Furi**	**5.47**	**47⇑**	*e*P	Pn	18 59 19.8	-11
FURI				*e*S	Sn	19 00 27.1	-6.6
FURI				IAML		19 00 44.2	
	comp=N,269nm,0.5s						
FURI	**Furi**	**5.47**	**47**	*e*P	Pn	18 59 18.7	-12
FURI				*e*S	Sn	19 00 33.9	+0.2
FURI	**Furi**	**5.47**	**47**	*e*P	Pn	18 59 19.4	-11
FURI				⇓*e*S	Sn	19 00 30.9	-2.8
FURI				IAML		19 00 47.2	
	comp=N,242nm,0.5s						
FURI	**Furi**	**5.47**	**47⇑**	*e*P	Pn	18 59 19.8	-11
FURI				*e*S	Sn	19 00 27.1	-6.6
FURI				IAML		19 00 44.2	
	comp=N,269nm,0.5s						
AAE	**Adis Abeba**	**5.62**	**47⇓**	*e*P	Pn	18 59 22.1	-11
AAE				*e*S	Sn	19 00 36.0	-1.4
AAE				IAML		19 00 43.2	
	comp=N,303nm,0.5s						
AAE	**Adis Abeba**	**5.62**	**47**	*e*S	Sn	19 00 41.2	+3.8
AAE	**Adis Abeba**	**5.62**	**47⇑**	*i e*		18 57 04.4	
AAE				*e*S	Sn	19 00 35.1	-2.3
AAE				IAML		19 00 40.5	
	comp=E,83nm,0.6s						
AAE	**Adis Abeba**	**5.62**	**47**	*e*S	Sn	19 00 36.0	-1.4
AAE				IAML		19 00 43.2	
	comp=N,303nm,0.5s						
ANKE	**Ethiopia-Afar**	**6.71**	**49**	*e*P	Pn	18 59 47.2	-0.6
ANKE				*e*S	Sn	19 01 13.5	+9.2
MBAR	**Mbarara**	**6.91**	**214**	*e*P	Pb	19 00 05.2	-4.2
MBAR				*i* Sg	Sb	19 01 29.6	-2.4

BJI ***30*** *19:05:04.7±0.0,5.˚63S×153.˚39E, h5km, mb4.7/20, mB5.0/9, Ms4.9/1, Ms7 4.7/1*
IDC ***30*** *19:05:05.5±0.7,5.˚70S×153.˚30E, h0km, mb4.3/16, mbtmp4.3/16, MS3.5/15, Error ellipse: s-maj=18.9km s-min=12.1km az=72.0*
NEIC ***30*** *19:05:06.6±1.3,5.˚72S±0.˚07×153.˚43E±0.˚09, h10km±1km, mb4.6/38, Error ellipse: s-maj=16.3km s-min=9.1km az=57.0*
DJA ***30*** *19:05:09.0±0.3,5˚S±3˚×15˚3E±˚, h10km, M4.6/19, mB6.3/1, mb4.6/19, MLv4.7/1, Mw(mB)6.1/1*

ISC 30 19:05:06.5±0.5, 5.˚74S±0.˚07×153.˚46E±0.˚08, h10km, n110, σ1§02/99, mb4.5/42, MS3.5/14, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.01**	**320**	Pn	**Pn**	**19 05 39.7**	**-0.9**
KRVT	**Keravat (AS076**	**2.02**	**315**		**Pn**	**19 05 40.4**	**-0.2**
KRVT	**Keravat (AS076**	**2.02**	**315**	Pg	**Pn**	**19 05 40.4**	**-0.2**
	316nm,0.3s,baz=139,slow=4.5,SNR=676						
KRVT				Lg	Lg	19 06 03.6	
	510nm,0.3s,baz=156,slow=18,SNR=5.6						
KRVT				LR	LR	19 06 21.8	
	comp=Z,1μm,20.6s,baz=339,slow=41						
HNR	**Honiara**	**7.40**	**120**	Pn	**Pn**	**19 06 54.8**	**+0.2**
COEN	**Coen**	**13.01**	**230**	Pn	**Pn**	**19 08 09.9**	**-1.6**
PATS	**Pohnpei**	**13.40**	**21**	Pn	**Pn**	**19 08 14.7**	**-2.2**
GENI	**Genyem**	**13.62**	**283**	P	**Pn**	**19 08 20.7**	**+0.8**
	70nm,1.2s						
SMPI	**Sarmi**	**15.18**	**284**	P	**Pn**	**19 08 42.6**	**+1.5**
	33nm,1.7s						
CTA	**Charters Tower**	**15.89**	**206**	LR	LR	19 14 35.0	
	comp=Z,109nm,18.2s,baz=52,slow=36						
SRPI	**Serui, Papua**	**17.61**	**282**	P	**P**	**19 09 14.7**	**+1.5**
EIDS	**Eidsvold**	**19.65**	**186**	P	**P**	**19 09 35.8**	**+0.2**
DZM	**Mont Dzumac**	**20.52**	**144**	LR	LR	19 15 51.6	
	comp=Z,228nm,20.7s,baz=90,slow=31						
GUMO	**Guam**	**21.02**	**336**	LR	LR	19 18 58.4	
	comp=Z,102nm,18.1s,baz=136,slow=40						
FAKI	**Fak Fak**	**21.34**	**277**	P	**P**	**19 09 51.8**	**-2.2**
FAKI				IAmb	IAmb	19 10 08.6	
	comp=Z,29nm,1.2s						
FAKI	**Fak Fak**	**21.34**	**277**	P	**P**	**19 09 55.6**	**+1.6**
	comp=Z,21nm,1.4s						
SIJI	**Sorong**	**22.67**	**282**	P	**P**	**19 10 06.8**	**-1.6**
	comp=Z,3.1nm,0.3s,baz=96,slow=10,SNR=8.1						
	comp=Z,3.1nm,0.3s						
SWI	**Sorong**	**22.68**	**282**	P	**P**	**19 10 10.0**	**+1.6**
	comp=Z,25nm,0.8s						
MTN	**Manton Dam**	**23.12**	**251**	P	**P**	**19 10 12.7**	**-0.3**
WR0	**Warramunga Arr**	**23.20**	**231**	P	**P**	**19 10 12.6**	**-1.1**
WB0	**Warramunga Arr**	**23.20**	**231**		**P**	**19 10 12.5**	**-1.3**
WB0				IAmb	IAmb	19 10 25.4	
	comp=Z,29nm,1.4s						
WRAB	**Tennant Creek**	**23.33**	**231**	P	**P**	**19 10 14.9**	**-0.2**
WRAB				IAmb	IAmb	19 10 51.5	
	comp=Z,19nm,1.4s						
WB2	**Warramunga Arr**	**23.33**	**231**		**P**	**19 10 14.0**	**-1.1**
WB2				IAmb	IAmb	19 10 53.6	
	comp=Z,22nm,1.5s						
WRA	**Warramunga Arr**	**23.34**	**231**	P	**P**	**19 10 13.4**	**-1.8**
WRA	**Warramunga Arr**	**23.34**	**231**	P	**P**	**19 10 14.2**	**-1.0**
	comp=Z,2.5nm,0.7s,baz=56,slow=10.0,SNR=32						
WRA				LR	LR	19 19 40.7	
	comp=Z,128nm,18.4s,baz=19,slow=38						
	comp=Z,2.5nm,0.7s						
AAI	**Ambon**	**25.26**	**274**	P	**P**	**19 10 36.1**	**+2.9**
	comp=Z,24nm,0.8s						
AS31	**Alice Springs**	**25.92**	**225**	P	**P**	**19 10 38.0**	**-1.1**
ASAR	**Alice Springs**	**25.92**	**225**	P	**P**	**19 10 38.5**	**-0.6**
ASAR	**Alice Springs**	**25.92**	**225**	P	**P**	**19 10 39.1**	**0.0**
	comp=Z,1.1nm,0.4s,baz=58,slow=9.4,SNR=33						
	comp=Z,1.1nm,0.4s						
KNRA	**Kununurra**	**26.17**	**246**	P	**P**	**19 10 40.2**	**-1.2**
NLAI	**Namlea**	**26.39**	**274**	P	**P**	**19 10 46.0**	**+2.5**
	comp=Z,10nm,0.5s						
LBMI	**Labuha**	**26.40**	**280**	P	**P**	**19 10 45.7**	**+2.2**
	comp=Z,13nm,1.1s						
MSVF	**Nonsavu**	**26.82**	**118**	LR	LR	19 22 15.7	
	comp=Z,132nm,18.2s,baz=282,slow=38						
H11S3	**WAKE ISLAND Hy**	**27.39**	**28**	T	T	19 39 18.0	
	baz=208,slow=73,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**27.39**	**28**	T	T	19 39 12.2	
	baz=208,slow=73,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	**27.41**	**28**	T	T	19 39 14.6	
	baz=208,slow=73,SNR=4.8						
STKA	**Stephens Creek**	**28.27**	**202**	P	**P**	**19 10 59.5**	**-0.6**
STKA	**Stephens Creek**	**28.27**	**202**	P	**P**	**19 11 00.4**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=354,slow=6.5,SNR=3.7						
STKA				LR	LR	19 22 16.0	
	comp=Z,92nm,18.4s,baz=202,slow=36						
	comp=Z,2.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**29.80**	**243**	P	**P**	**19 11 12.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**29.80**	**243**	P	**P**	**19 11 12.9**	**-1.0**
	comp=Z,2.7nm,0.4s,baz=48,slow=9.5,SNR=49						
FITZ				LR	LR	19 24 21.7	
	comp=Z,118nm,18.1s,baz=280,slow=39						
	comp=Z,2.7nm,0.4s						
BATI	**Baumata**	**29.83**	**260**	P	**P**	**19 11 14.2**	**0.0**
BATI	**Baumata**	**29.83**	**260**	P	**P**	**19 11 14.2**	**0.0**
	comp=Z,9.9nm,0.7s,baz=78,slow=6.3,SNR=2.6						
	comp=Z,9.9nm,0.7s						
FORT	**Forrest**	**34.49**	**221**	P	**P**	**19 11 54.5**	**-0.4**
AFI	**Afiamalu**	**35.16**	**106**	LR	LR	19 25 31.6	
	comp=Z,65nm,18.8s,baz=54,slow=35						
MBWA	**Marble Bar**	**36.09**	**242**	P	**P**	**19 12 07.8**	**-1.0**
MBWA				IAmb	IAmb	19 12 23.1	
	comp=Z,5.8nm,1.1s						
PSA00	**Pilbara Seismi**	**36.13**	**241**	P	**P**	**19 12 07.4**	**-1.7**
PSA00				IAmb	IAmb	19 12 09.9	
	comp=Z,7.8nm,1.1s						
JOW	**Kunigami**	**40.54**	**324**	LR	LR	19 28 33.4	
	comp=Z,67nm,18.8s,baz=310,slow=35						
RAR	**Rarotonga**	**47.80**	**113**	LR	LR	19 33 33.5	
	comp=Z,42nm,18.2s,baz=322,slow=36						
KSRS	**Korea Array**	**49.13**	**333**	P	**P**	**19 13 55.5**	**+1.0**
KSRS	**Korea Array**	**49.13**	**333**	P	**P**	**19 13 55.5**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=152,slow=6.7,SNR=2.7						
KSRS				LR	LR	19 34 14.6	

	comp=Z,23nm,18.5s,baz=205,slow=36						
	comp=Z,1.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.35**	**341**	P	**P**	**19 14 26.3**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=160,slow=6.3,SNR=5.2						
	comp=Z,2.2nm,0.8s						
PETK	**Petropavlovsk-**	**58.74**	**3**	P	**P**	**19 15 04.8**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=185,slow=11,SNR=4.0						
PETK				LR	LR	19 35 13.2	
	comp=Z,55nm,21.4s,baz=186,slow=31						
	comp=Z,3.2nm,0.7s						
CM31	**Chiang Mai Arr**	**58.87**	**295**	P	**P**	**19 15 04.5**	**-1.6**
CM31				IAmb	IAmb	19 15 11.2	
	comp=Z,3.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.87**	**295**	P	**P**	**19 15 04.8**	**-1.3**
CMAR	**Chiang Mai Arr**	**58.87**	**295**	P	**P**	**19 15 06.5**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=104,slow=5.1,SNR=10						
	comp=Z,1.9nm,0.7s						
PZH	**PanZhiHua**	**59.45**	**305**	P	**P**	**19 15 11.8**	**+1.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,100nm,5.1s						
HHC	**Hu-ho-hao-te**	**60.19**	**324**	*e*P	**P**	**19 15 15.0**	**+0.1**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,5.9s						
SHEM	**Shemya Is, Ala**	**60.83**	**14**	LR	LR	19 38 55.1	
	comp=Z,37nm,18.8s,baz=198,slow=33						
CLES	**Cleveland East**	**66.08**	**23**	P	**P**	**19 15 54.0**	**+0.5**
CLES				IAmb	IAmb	19 15 55.6	
	comp=Z,318nm,1.0s						
GTA	**Gaotai**	**66.79**	**317**	*e*P	**P**	**19 16 00.5**	**+1.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ULN	**Ulaanbaatar**	**67.14**	**328**	P	**P**	**19 16 00.7**	**0.0**
ULN				IAmb	IAmb	19 16 12.3	
	comp=Z,4.2nm,1.1s						
SHL	**Shillong**	**67.35**	**301**	P	**P**	**19 16 01.7**	**-0.8**
SONM	**Songino Array**	**67.47**	**328**	P	**P**	**19 16 02.6**	**-0.2**
SONM	**Songino Array**	**67.47**	**328**	P	**P**	**19 16 03.0**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=124,slow=6.7,SNR=12						
SONM				PcP	**PcP**	**19 16 30.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=155,slow=2.5,SNR=3.7						
SONM				LR	LR	19 43 36.6	
	comp=Z,44nm,21.3s,baz=260,slow=34						
	comp=Z,1.9nm,0.7s						
AKUT	**Akutan**	**68.71**	**24**	P	**P**	**19 16 09.6**	**-0.6**
YAK	**Yakutsk**	**70.02**	**348**	P	**P**	**19 16 18.6**	**+0.4**
VNDA	**Vanda**	**71.87**	**178**	P	**P**	**19 16 30.3**	**+1.0**
VNDA				IAmb	IAmb	19 16 32.2	
	comp=Z,3.4nm,0.8s						
VNDA	**Vanda**	**71.87**	**178**	P	**P**	**19 16 29.9**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=331,slow=6.3,SNR=16						
	comp=Z,2.5nm,0.8s						
RAMN	**Ramite**	**72.29**	**300**	*e*P	**P**	**19 16 33.0**	**0.0**
JIRN	**Jiri**	**72.84**	**301**	*e*P	**P**	**19 16 36.7**	**+0.3**
GUN	**Gumba**	**73.17**	**301**	*e*P	**P**	**19 16 38.7**	**+0.3**
	comp=Z,36nm,0.8s						
PKI	**Pulchoki**	**73.48**	**301**	*e*P	**P**	**19 16 40.0**	**-0.2**
	comp=Z,64nm,1.7s						
PKIN	**Phulchoki**	**73.49**	**301**	*e*P	**P**	**19 16 39.5**	**-0.7**
	comp=Z,17nm,1.1s						
DMN	**Daman**	**73.75**	**301**	*e*P	**P**	**19 16 42.0**	**+0.3**
	comp=Z,33nm,1.0s						
GKN	**Gorkha**	**74.25**	**301**	*e*P	**P**	**19 16 44.4**	**-0.1**
	comp=Z,35nm,1.1s						
PYUN	**Piuthan**	**75.68**	**301**	*e*P	**P**	**19 16 52.2**	**-0.6**
	comp=Z,27nm,0.9s						
WMQ	**Urumqi**	**76.88**	**317**	*e*P	**P**	**19 17 00.8**	**+1.7**
N18K	**Kilae Creek**	**77.06**	**23**	P	**P**	**19 16 59.9**	**+0.2**
N18K				IAmb	IAmb	19 17 24.2	
	comp=Z,5.1nm,1.1s						
TIXI	**Tiksi**	**78.91**	**352**	P	**P**	**19 17 09.0**	**-0.7**
TIXI				IAmb	IAmb	19 17 12.3	
	comp=Z,8.5nm,1.3s						
J20K	**Nowinta River**	**79.83**	**21**	P	**P**	**19 17 15.2**	**+0.3**
J20K				IAmb	IAmb	19 17 16.2	
	comp=Z,7.6nm,1.2s						
PWL	**Port Wells**	**80.22**	**25**	P	**P**	**19 17 16.7**	**-0.4**
PWL				IAmb	IAmb	19 17 18.2	
	comp=Z,7.2nm,1.1s						
IMAR	**Indian Mountai**	**81.05**	**19**	P	**P**	**19 17 21.2**	**-0.2**
SCM	**Sheep Creek Mo**	**81.13**	**24**	P	**P**	**19 17 21.4**	**-0.7**
SCM				IAmb	IAmb	19 17 52.2	
	comp=Z,10.0nm,1.3s						
H21K	**Melozitna Rive**	**81.17**	**20**	P	**P**	**19 17 22.1**	**0.0**
MK31	**Makanchi Array**	**81.46**	**319**	P	**P**	**19 17 23.1**	**-1.0**
MKAR	**Makanchi Array**	**81.46**	**319**	P	**P**	**19 17 23.5**	**-0.5**
MKAR	**Makanchi Array**	**81.46**	**319**	P	**P**	**19 17 23.8**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=104,slow=5.1,SNR=14						
	comp=Z,1.9nm,0.8s						
MCK	**McKinley**	**81.48**	**22**	P	**P**	**19 17 22.6**	**-1.2**
MCK				IAmb	IAmb	19 17 24.1	
	comp=Z,7.0nm,1.0s						
MAKZ	**Makanchi**	**81.67**	**319**	P	**P**	**19 17 24.6**	**-0.6**
MAKZ				IAmb	IAmb	19 17 26.4	
	comp=Z,5.2nm,0.9s						
ZAA0	**Zalesovo Array**	**82.30**	**326**	P	**P**	**19 17 27.1**	**-1.2**
ZAA0				IAmb	IAmb	19 17 28.4	
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**82.30**	**326**	P	**P**	**19 17 27.1**	**-1.2**
ZALV	**Zalesovo Beam**	**82.30**	**326**	P	**P**	**19 17 27.8**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=116,slow=5.2,SNR=18						
	comp=Z,3.9nm,0.7s						
ILAR	**Eielson Array**	**82.78**	**22**	P	**P**	**19 17 29.8**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=243,slow=5.6,SNR=6.0						
	comp=Z,0.6nm,0.3s						
J25K	**Salcha River,**	**83.27**	**22**	P	**P**	**19 17 32.1**	**-1.1**
J25K				IAmb	IAmb	19 18 13.7	
	comp=Z,8.7nm,1.4s						
M27K	**Edge Creek, AK**	**83.64**	**25**	P	**P**	**19 17 35.5**	**+0.2**
M27K				IAmb	IAmb	19 17 36.7	
	comp=Z,4.1nm,0.9s						
BCAR	**Beaver Creek A**	**83.99**	**24**	P	**P**	**19 17 37.2**	**+0.4**
KSH	**Kashi**	**84.05**	**311**	P	**P**	**19 17 37.0**	**-0.8**
KSH				sP	pwP	19 17 46.0	+0.1
KURK	**Kurchatov**	**84.91**	**322**	P	**P**	**19 17 41.3**	**-0.4**
MAW	**Mawson**	**84.96**	**203**	P	**P**	**19 17 41.0**	**-0.7**
MAW	**Mawson**	**84.96**	**203**	P	**P**	**19 17 42.3**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=83,slow=8.1,SNR=6.8						
	comp=Z,2.9nm,0.7s						
EGAK	**Eagle**	**84.96**	**23**	P	**P**	**19 17 41.8**	**+0.1**
EGAK				IAmb	IAmb	19 17 48.1	
	comp=Z,8.9nm,1.3s						
YBH	**Yreka Blue Hor**	**89.19**	**48**	LR	LR	19 52 29.3	
	comp=Z,64nm,19.6s,baz=270,slow=32						
AKASG	**Malin Array Be**	**115.64**	**324**	PKP	**PKiKP**	**19 23 49.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=67,slow=1.6,SNR=5.0						
PLCA	**Paso Flores**	**118.63**	**143**	PKP	**PKiKP**	**19 23 56.5**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=240,slow=8.1,SNR=3.5						
CLL	**Collm**	**123.99**	**331**	*i* PKPdf	**PKiKP**	**19 24 06.4**	**+1.0**
	comp=Z,3.0nm,0.9s						
CKRC	**Cesky Krumlov**	**124.89**	**328**	*e*PKP	**PKiKP**	**19 24 08.4**	**+1.1**
KHC	**Kasperske Hory**	**125.08**	**329**	*e*PKP	**PKiKP**	**19 24 08.0**	**+0.3**
GERES	**GERESS Array B**	**125.20**	**329**	PKP	**PKiKP**	**19 24 08.4**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=98,slow=1.5,SNR=11						
LPAZ	**La Paz**	**133.39**	**119**	PKP	**PKiKP**	**19 24 26.9**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=293,slow=1.7,SNR=5.6						
TOA0	**Torodi Ar. Sit**	**151.22**	**287**		**PKPbc**	**19 25 00.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**151.22**	**287**	PKPbc	**PKPbc**	**19 25 01.0**	**-0.4**
	comp=Z,3.7nm,0.3s,baz=60,slow=2.4,SNR=3.2						

NEIC ***30*** *19:08:00.1±0.8, 14.˚72S±0.˚10×167.˚4E±0.˚2, h116km±7km, mb4.5/6, Error ellipse: s-maj=25.5km s-min=13.7km az=78.0*
NOU ***30*** *19:08:00.4, 14.˚69S×167.˚20E, h103km, MLv5.0/14, Vanuatu Islands*
IDC ***30*** *19:08:00.4±3.0, 14.˚74S×167.˚38E, h127km±25km, mb3.9/8, mbtmp4.4/10, Error ellipse: s-maj=30.0km s-min=17.5km az=78.0*

ISC 30 19:07:57.8±0.7, 14.˚66S±0.˚07×167.˚4E±0.˚1, h100km, n40, σ1§76/42, mb4.3/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.13**	**167**	P	**Pn**	**19 08 49.6**	**+4.3**
RTV	**Rentapao**	**3.25**	**163**	P	**Pn**	**19 08 51.0**	**+4.1**
LIFNC	**LIFOU**	**6.09**	**182**	Pn	**Pn**	**19 09 24.1**	**-1.2**
LIFNC	**LIFOU**	**6.09**	**182**	P	**Pn**	**19 09 26.4**	**+1.1**
KOUNC	**Koumac, New Ca**	**6.59**	**207**	Pn	**Pn**	**19 09 33.2**	**+1.1**
KOUNC	**Koumac, New Ca**	**6.59**	**207**	P	**Pn**	**19 09 33.2**	**+1.1**
MARNC	**Mare, Loyalty**	**6.81**	**175**		**Pn**	**19 09 34.2**	**-0.8**
MARNC	**Mare, Loyalty**	**6.81**	**175**	P	**Pn**	**19 09 35.6**	**+0.5**

YATNC	**Mamie plateau,**	**7.38**	**184**	P	**Pn**	**19 09 44.0**	**+1.2**
DZM	**Mont Dzumac**	**7.43**	**187**		**Pn**	**19 09 45.2**	**+1.5**
DZM	**Mont Dzumac**	**7.43**	**187**	P	**Pn**	**19 09 45.5**	**+1.8**
DZM	**Mont Dzumac**	**7.43**	**187**	P	**Pn**	**19 09 45.9**	**+2.3**
	55nm,0.4s,baz=8.8,slow=14,SNR=29						
DZM				S	**Sn**	**19 11 06.6**	**+0.1**
	14nm,0.4s,baz=294,slow=22,SNR=1.5						
NOUC	**Port Laguerre**	**7.48**	**188**	P	**Pn**	**19 09 46.3**	**+2.1**
ONTNC	**Ouen Toro**	**7.67**	**187**		**Pn**	**19 09 49.1**	**+2.4**
ONTNC	**Ouen Toro**	**7.67**	**187**	P	**Pn**	**19 09 49.8**	**+3.1**
OUENC	**Ouen Island, N**	**7.74**	**184**		**Pn**	**19 09 50.4**	**+2.7**
OUENC	**Ouen Island, N**	**7.74**	**184**	P	**Pn**	**19 09 49.6**	**+1.9**
PINNC	**Pines Island,**	**7.91**	**180**		**Pn**	**19 09 52.1**	**+2.1**
HNR	**Honiara**	**8.99**	**304**	Pn	**Pn**	**19 10 06.8**	**+2.1**
HNR	**Honiara**	**8.99**	**304**	P	**Pn**	**19 10 07.6**	**+2.9**
	57nm,0.4s,baz=151,slow=9.7,SNR=4.9						
HNR				S	**Sn**	**19 11 46.4**	**+2.2**
	56nm,0.6s,baz=74,slow=23,SNR=6.1						
BKZ	**Black Stump Fm**	**25.68**	**164**	P	**P**	**19 13 18.4**	**0.0**
LTZ	**Lake Taylor**	**28.33**	**173**	P	**P**	**19 13 41.6**	**-0.5**
LTZ				IAmb	IAmb	19 13 49.1	
	comp=Z,27nm,1.4s						
STKA	**Stephens Creek**	**29.17**	**230**	P	**P**	**19 13 49.2**	**-0.5**
STKA	**Stephens Creek**	**29.17**	**230**	P	**P**	**19 13 49.5**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=53,slow=9.6,SNR=8.9						
	comp=Z,1.4nm,0.4s						
ASAR	**Alice Springs**	**32.86**	**249**	P	**P**	**19 14 20.1**	**-2.2**
	comp=Z,0.9nm,0.8s,baz=72,slow=8.8,SNR=4.7						
	comp=Z,0.9nm,0.8s						
BBOO	**Buckleboo**	**33.76**	**232**	P	**P**	**19 14 29.2**	**-0.8**
BBOO				IAmb	IAmb	19 14 52.7	
	comp=Z,31nm,1.4s						
FITZ	**Fitzroy Crossi**	**40.19**	**259**	P	**P**	**19 15 23.7**	**-1.0**
FITZ				IAmb	IAmb	19 15 53.2	
	comp=Z,4.2nm,1.0s						
PEA0B	**Petropavlovsk-**	**68.01**	**354**	P	**P**	**19 18 46.4**	**+0.3**
PETK	**Petropavlovsk-**	**68.01**	**354**	P	**P**	**19 18 46.7**	**+0.6**
PETK	**Petropavlovsk-**	**68.01**	**354**	P	**P**	**19 18 46.6**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=158,slow=9.2,SNR=4.6						
	comp=Z,4.4nm,0.8s						
CRAI	**Chiangrai**	**74.48**	**296**	P	**P**	**19 19 26.1**	**+0.3**
CRAI				IAmb	IAmb	19 19 27.0	
	comp=Z,4.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.08**	**294**	P	**P**	**19 19 29.2**	**0.0**
	comp=Z,1.1nm,0.9s,baz=104,slow=3.8,SNR=5.4						
	comp=Z,1.1nm,0.9s						
SONM	**Songino Array**	**82.54**	**324**	P	**P**	**19 20 09.9**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=136,slow=7.0,SNR=3.9						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**86.41**	**18**	P	**P**	**19 20 27.4**	**-1.2**
	comp=Z,1.3nm,0.2s,baz=243,slow=5.0,SNR=4.2						
	comp=Z,1.3nm,0.2s						
MKAR	**Makanchi Array**	**97.27**	**316**	P	**P**	**19 21 19.2**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=97,slow=6.0,SNR=6.4						
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**97.44**	**324**	P	**P**	**19 21 18.3**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=112,slow=6.4,SNR=4.2						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**120.23**	**345**	PKP	**PKPdf**	**19 26 35.6**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=72,slow=2.9,SNR=13						
FINES	**FINESS Array B**	**125.72**	**338**	PKP	**PKPdf**	**19 26 47.0**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=103,slow=3.0,SNR=4.0						
KEST	**Kesra**	**151.26**	**321**	PKPbc	**PKPbc**	**19 27 39.6**	**-0.5**
	comp=Z,2.7nm,0.9s,baz=64,slow=4.1,SNR=4.2						
ESDC	**Sonseca Array**	**153.96**	**345**	PKPab	**PKPab**	**19 27 58.3**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=20,slow=4.1,SNR=4.8						

ROM 30 19:26:41.9±0.0, 42.˚720N±0.˚002×13.˚174E±0.˚004, h12km, ML2.1/28, 11C-10D, Error ellipse: s-maj=0.3km s-min=0.1km az=251.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.04**	**113**	P

comp=N,5585µm,0.2s
T1242 AML AML
comp=E,4400µm,0.2s
T1242 AML AML
comp=N,5590µm,0.5s
T1242 AML AML
comp=E,4400µm,0.2s
T1242 AML AML
comp=E,4470µm,0.1s
T1242 AML AML
comp=N,5590µm,0.5s
T1242 AML AML
comp=N,5585µm,0.2s
T1242 Castelluccio d 0.11 12 P Pg 19 26 45.3 +0.2
T1242 S Sg 19 26 47.5 +0.1
T1242 AML AML
comp=N,5590µm,0.2s
T1242 AML AML
comp=E,4395µm,0.2s
T1242 AML AML
comp=N,5590µm,0.5s
T1242 AML AML
comp=E,4470µm,0.2s
T1242 AML AML
comp=N,5585µm,0.2s
T1242 AML AML
comp=E,4400µm,0.2s
T1204 Amatrice, Fraz 0.11 112 ⇑P Pg 19 26 45.5 +0.4
T1204 S Sg 19 26 47.8 +0.4
T1204 Amatrice, Fraz 0.11 112 S Sg 19 26 47.9 +0.4
NRCA Norcia 0.12 339 ⇓P Pg 19 26 45.3 +0.1
NRCA S Sg 19 26 47.5 0.0
NRCA AML AML
comp=E,8740µm,0.2s
NRCA AML AML
comp=N,7530µm,0.1s
NRCA AML AML
comp=E,9555µm,0.1s
NRCA AML AML
comp=N,8525µm,0.1s
NRCA AML AML
comp=E,8740µm,0.2s
NRCA AML AML
comp=N,7530µm,0.1s
NRCA AML AML
comp=E,9555µm,0.1s
NRCA AML AML
comp=N,8525µm,0.1s
NRCA AML AML
comp=E,8740µm,0.1s
NRCA AML AML
comp=N,7535µm,0.1s
NRCA AML AML
comp=E,9555µm,0.1s
NRCA AML AML
comp=N,8525µm,0.1s
NRCA AML AML
comp=N,7535µm,0.1s
NRCA Norcia 0.12 339 S Sg 19 26 47.5 -0.1
NRCA AML AML
comp=E,8740µm,0.2s
NRCA AML AML
comp=N,7530µm,0.1s
NRCA AML AML
comp=N,7530µm,0.1s
NRCA AML AML
comp=E,8740µm,0.1s
NRCA AML AML
comp=N,7535µm,0.1s
NRCA AML AML
comp=N,8525µm,0.1s
NRCA AML AML
comp=E,9555µm,0.1s
SMA1 SAN MARTINO 0.15 127 P Pg 19 26 45.7 +0.2
SMA1 S Sg 19 26 49.0 +0.8
SMA1 AML AML
comp=E,2490µm,0.7s
SMA1 AML AML
comp=N,1645µm,0.3s
SMA1 AML AML
comp=E,2490µm,0.7s
SMA1 AML AML
comp=N,1645µm,0.3s
SMA1 AML AML
comp=N,1645µm,0.3s
SMA1 AML AML
comp=E,2490µm,0.7s
SMA1 SAN MARTINO 0.15 127 P Pg 19 26 46.0 +0.4
SMA1 S Sg 19 26 49.0 +0.8
SMA1 AML AML
comp=E,2490µm,0.7s
SMA1 AML AML
comp=N,1645µm,0.3s
LNSS Leonessa 0.15 220 ⇓P Pg 19 26 46.0 +0.4
LNSS S Sg 19 26 49.1 +0.9
LNSS AML AML
comp=E,2930µm,0.8s
LNSS AML AML
comp=N,3025µm,0.3s
LNSS AML AML
comp=E,2930µm,0.8s
LNSS AML AML
comp=N,3030µm,0.3s
LNSS AML AML
comp=E,2930µm,0.8s
LNSS AML AML
comp=N,3025µm,0.3s
LNSS AML AML
comp=N,3025µm,0.3s
LNSS AML AML
comp=E,2930µm,0.8s
LNSS Leonessa 0.15 220 S Sg 19 26 49.0 +0.8
LNSS AML AML
comp=E,2930µm,0.8s
LNSS AML AML
comp=N,3030µm,0.3s
LNSS AML AML
comp=N,3025µm,0.3s
MC2 Monte Cornacci 0.19 4 ⇓P Pg 19 26 46.6 +0.3
MC2 S Sg 19 26 50.1 +0.7
MC2 Monte Cornacci 0.19 4 S Sg 19 26 50.2 +0.8
T1243 Rocca Santa Ma 0.20 96 P Pg 19 26 46.6 +0.2
T1243 S Sg 19 26 50.1 +0.6
T1243 Rocca Santa Ma 0.20 96 P Pg 19 26 46.6 +0.2
T1243 S Sg 19 26 50.0 +0.5
MMO1 Montemonaco 0.21 32 P Pg 19 26 46.8 +0.3
MMO1 S Sg 19 26 50.4 +0.7
MMO1 Montemonaco 0.21 32 P Pg 19 26 46.8 +0.2
MMO1 S Sg 19 26 50.4 +0.7
RM33 Pellescritta (0.21 172 P Pg 19 26 47.0 +0.4
RM33 S Sg 19 26 50.8 +1.1
RM33 AML AML
comp=E,1190µm,1.5s
RM33 AML AML
comp=N,888µm,0.2s
RM33 AML AML
comp=E,1215µm,1.5s
RM33 AML AML
comp=N,829µm,0.2s
RM33 AML AML
comp=E,1190µm,1.5s
RM33 AML AML
comp=N,888µm,0.2s
RM33 AML AML
comp=E,1215µm,1.5s
RM33 AML AML
comp=N,829µm,0.2s
RM33 AML AML
comp=E,1195µm,1.5s
RM33 AML AML
comp=N,888µm,0.2s
RM33 AML AML
comp=E,1215µm,1.5s
RM33 AML AML
comp=N,828µm,0.2s
RM33 AML AML
comp=E,1215µm,1.5s
RM33 AML AML
comp=E,1195µm,1.5s
RM33 AML AML
comp=N,888µm,0.2s
RM33 AML AML
comp=N,828µm,0.2s
RM33 Pellescritta (0.21 172 P Pg 19 26 47.0 +0.4
RM33 S Sg 19 26 50.8 +1.1
RM33 AML AML
comp=E,1190µm,1.5s
RM33 AML AML
comp=N,888µm,0.2s
RM33 AML AML
comp=E,1190µm,1.5s
RM33 AML AML
comp=N,888µm,0.2s
RM33 AML AML
comp=E,1195µm,1.5s
RM33 AML AML
comp=N,828µm,0.2s
T1241 Roccafluvione, 0.23 54 ⇑P Pg 19 26 47.1 +0.3
T1241 S Sg 19 26 51.1 +0.8
T1241 AML AML
comp=E,807µm,1.0s
T1241 AML AML
comp=N,441µm,0.5s
T1241 AML AML
comp=E,800µm,1.0s
T1241 AML AML
comp=N,408µm,0.5s
T1241 AML AML
comp=E,806µm,1.0s
T1241 AML AML
comp=N,441µm,0.5s
T1241 AML AML
comp=E,800µm,1.0s
T1241 AML AML
comp=N,408µm,0.5s
T1241 AML AML
comp=E,806µm,1.0s
T1241 Roccafluvione, 0.23 54 S Sg 19 26 51.1 +0.8
T1241 AML AML
comp=E,807µm,1.0s
T1241 AML AML
comp=N,441µm,0.5s
T1241 AML AML
comp=E,800µm,1.0s
T1241 AML AML
comp=E,806µm,1.0s
T1241 AML AML
comp=E,800µm,1.0s
T1241 AML AML
comp=N,408µm,0.5s
T1241 AML AML
comp=N,441µm,0.5s
T1215 Vallo di Nera, 0.24 290 ⇑P Pg 19 26 47.2 +0.2
T1215 S Sg 19 26 51.1 +0.7
T1215 Vallo di Nera, 0.24 290 S Sg 19 26 51.1 +0.6
CAMP Campotosto 0.25 137 ⇓P Pg 19 26 47.6 +0.4
CAMP S Sb 19 26 51.9 -0.9
CAMP AML AML
comp=E,443µm,0.3s
CAMP AML AML
comp=N,378µm,0.2s
CAMP AML AML
comp=E,443µm,0.3s
CAMP AML AML
comp=N,378µm,0.2s
CAMP AML AML
comp=E,443µm,0.3s
CAMP AML AML
comp=N,378µm,0.2s
CAMP Campotosto 0.25 137 S Sb 19 26 51.8 -0.9
CAMP AML AML
comp=E,443µm,0.3s
CAMP AML AML
comp=N,378µm,0.2s
FDMO Fiordimonte 0.32 349 ⇓P Pg 19 26 48.6 +0.1
FDMO S Sg 19 26 53.5 +0.7
FDMO AML AML
comp=E,290µm,0.1s
FDMO AML AML
comp=N,327µm,0.9s
FDMO AML AML
comp=E,290µm,0.1s
FDMO AML AML
comp=N,327µm,0.9s
FDMO AML AML
comp=N,327µm,0.9s
FDMO AML AML
comp=E,290µm,0.1s
FDMO Fiordimonte 0.32 349 P Pg 19 26 48.6 +0.1
FDMO S Sg 19 26 53.6 +0.7
FDMO AML AML
comp=N,327µm,0.9s
FDMO AML AML
comp=E,290µm,0.1s
ARRO Arrone 0.33 245 ⇑P Pg 19 26 48.9 +0.3
ARRO S Sb 19 26 54.6 -0.3
ARRO AML AML
comp=E,298µm,0.2s
ARRO AML AML
comp=N,308µm,1.4s
ARRO AML AML
comp=E,297µm,0.2s
ARRO AML AML
comp=N,308µm,1.4s
ARRO AML AML
comp=E,297µm,0.2s
ARRO AML AML
comp=N,308µm,1.4s
ARRO Arrone 0.33 245 AML AML
comp=N,308µm,1.4s
ARRO AML AML
comp=E,298µm,0.2s
ARRO AML AML
comp=N,309µm,1.4s
ARRO AML AML
comp=E,297µm,0.2s
TERO Teramo 0.33 107 P Pg 19 26 48.7 +0.1
TERO S Sb 19 26 54.1 -0.9
TERO AML AML
comp=E,434µm,0.3s
TERO AML AML
comp=N,616µm,1.2s
TERO AML AML
comp=E,434µm,0.3s
TERO AML AML
comp=N,616µm,1.2s
TERO AML AML
comp=N,616µm,1.2s
TERO AML AML
comp=E,434µm,0.3s
TERO Teramo 0.33 107 ⇑P Pg 19 26 48.7 +0.1
TERO AML AML
comp=E,434µm,0.3s
TERO AML AML
comp=N,616µm,1.2s
CESI CESI - Serrava 0.35 325 ⇓P Pg 19 26 49.1 +0.2
CESI S Sg 19 26 54.3 +0.7
CESI AML AML
comp=E,290µm,0.2s
CESI AML AML
comp=N,330µm,1.3s
CESI AML AML
comp=E,290µm,0.2s
CESI AML AML
comp=N,330µm,1.3s
CESI AML AML
comp=E,290µm,0.2s
CESI AML AML
comp=N,330µm,1.3s
CESI CESI - Serrava 0.35 325 AML AML
comp=N,330µm,1.3s
CESI AML AML
comp=E,290µm,0.2s
CSP1 Cessapalombo 0.37 4 ⇑P Pg 19 26 49.5 +0.1
CSP1 S Sb 19 26 55.4 -0.8
CSP1 AML AML
comp=E,275µm,1.3s
CSP1 AML AML
comp=N,414µm,1.1s
CSP1 Cessapalombo 0.37 4 S Sg 19 26 55.3 +0.9
CSP1 AML AML
comp=E,275µm,1.3s
CSP1 AML AML
comp=N,414µm,1.1s
GIGS Gran Sasso 0.40 133 P Pg 19 26 49.8 0.0
GIGS S Sb 19 26 56.2 -0.7
GIGS AML AML
comp=E,106µm,1.1s
GIGS AML AML
comp=N,88µm,1.0s
GIGS AML AML
comp=E,106µm,1.1s
GIGS AML AML
comp=N,88µm,1.0s
GIGS AML AML
comp=E,106µm,1.1s
GIGS AML AML
comp=N,88µm,1.0s
GIGS Gran Sasso 0.40 133 P Pg 19 26 49.8 0.0
GIGS AML AML
comp=E,106µm,1.1s
GIGS AML AML
comp=N,88µm,1.0s
CESX Cesi 0.45 256 P Pg 19 26 51.2 +0.5
CESX AML AML
comp=E,122µm,1.1s
CESX AML AML
comp=N,128µm,0.4s
CESX AML AML
comp=E,122µm,1.1s
CESX AML AML
comp=N,128µm,0.4s
CESX AML AML
comp=N,128µm,0.4s
CESX AML AML
comp=E,122µm,1.1s
CESX Cesi 0.45 256 AML AML
comp=N,128µm,0.4s
CESX AML AML
comp=E,122µm,1.1s
FIAM Fiamignano 0.45 185 ⇓P Pg 19 26 51.0 +0.1
FIAM S Sb 19 26 58.1 -0.4
FIAM AML AML
comp=E,290µm,0.2s
FIAM AML AML
comp=N,153µm,0.2s
FIAM AML AML
comp=E,290µm,0.2s
FIAM AML AML
comp=N,153µm,0.2s
FIAM AML AML
comp=E,290µm,0.2s
FIAM AML AML
comp=N,153µm,0.2s
FIAM Fiamignano 0.45 185 AML AML
comp=N,153µm,0.2s
FIAM AML AML
comp=E,290µm,0.2s
ASSB Assisi San Ben 0.50 311 P Pg 19 26 51.7 0.0
ASSB AML AML
comp=E,190µm,1.2s
ASSB AML AML
comp=N,216µm,0.2s
ASSB AML AML
comp=E,190µm,1.2s
ASSB AML AML
comp=N,216µm,0.2s
ASSB AML AML
comp=E,190µm,1.2s
ASSB Assisi San Ben 0.50 311 P Pg 19 26 51.6 0.0
ASSB AML AML
comp=E,190µm,1.2s
ASSB AML AML
comp=N,216µm,0.2s
FAGN Fagnano 0.55 146 ⇑P Pg 19 26 52.5 0.0
FAGN S Sb 19 27 02.2 +1.1
FAGN AML AML
comp=E,355µm,0.4s
FAGN AML AML
comp=N,362µm,0.3s
FAGN AML AML
comp=E,355µm,0.4s
FAGN AML AML
comp=N,362µm,0.3s
FAGN AML AML
comp=N,362µm,0.3s
FAGN AML AML
comp=E,355µm,0.4s
FAGN Fagnano 0.55 146 AML AML
comp=E,355µm,0.4s
FAGN AML AML
comp=N,362µm,0.3s
SNTG Esanatoglia 0.56 342 P Pg 19 26 52.9 +0.1
SNTG S Sb 19 27 01.7 +0.1
SNTG AML AML
comp=E,83µm,0.5s
SNTG AML AML
comp=N,67µm,1.0s
SNTG AML AML
comp=E,83µm,0.5s
SNTG AML AML
comp=N,67µm,1.0s
SNTG AML AML
comp=E,83µm,0.5s
SNTG AML AML
comp=N,67µm,1.0s
SNTG Esanatoglia 0.56 342 AML AML
comp=E,83µm,0.5s
SNTG AML AML
comp=N,67µm,1.0s
VCEL Villa Celiera 0.59 123 ⇓P Pb 19 26 53.8 -0.3
VCEL S Sb 19 27 04.0 +1.5
VCEL AML AML
comp=E,272µm,0.2s
VCEL AML AML
comp=N,228µm,0.6s
VCEL AML AML
comp=E,272µm,0.2s
VCEL AML AML
comp=N,228µm,0.6s
VCEL AML AML
comp=N,228µm,0.6s
VCEL AML AML
comp=E,272µm,0.2s
VCEL Villa Celiera 0.59 123 P Pg 19 26 53.7 +0.3
VCEL AML AML
comp=E,272µm,0.2s
VCEL AML AML
comp=N,228µm,0.6s
VCEL AML AML
comp=E,272µm,0.2s
EL6 Elcito 0.61 355 P Pg 19 26 53.8 0.0
EL6 S Sb 19 27 03.8 +0.7
EL6 Elcito 0.61 355 ⇓P Pg 19 26 53.7 -0.1
EL6 S Sb 19 27 03.4 +0.3
FOSV Fossato di Vic 0.65 332 P Pb 19 26 54.9 -0.2
FOSV Fossato di Vic 0.65 332 P Pg 19 26 54.4 -0.1
CING Cingoli 0.66 1 P Pb 19 26 55.0 -0.3
CING S Sb 19 27 05.0 +0.7
CING AML AML
comp=E,92µm,0.4s
CING AML AML
comp=N,100µm,1.0s
CING AML AML
comp=E,92µm,0.4s
CING AML AML
comp=N,100µm,1.0s
CING Cingoli 0.66 1 P Pg 19 26 54.8 +0.1
CING AML AML
comp=E,92µm,0.4s
CING AML AML
comp=N,100µm,1.0s
T0110 Collepietro 0.67 138 ⇓P Pg 19 26 54.6 -0.2
T0110 S Sb 19 27 05.7 +1.1
T0110 AML AML
comp=E,184µm,0.3s
T0110 AML AML
comp=N,172µm,0.3s
T0110 AML AML
comp=E,184µm,0.3s
T0110 AML AML
comp=N,172µm,0.3s
T0110 AML AML

	comp=N,172μm,0.3s							
T0110					AML	AML		
	comp=E,184μm,0.3s							
T0110	**Collepietro**	**0.67**	**138**		AML	AML		
	comp=N,172μm,0.3s							
T0110					AML	AML		
	comp=E,184μm,0.3s							
ATFO	**Monte Foce - G**	**0.78**	**326**		P	Pg	19 26 57.1	+0.1
ATFO					AML	AML		
	comp=E,44μm,0.3s							
ATFO					AML	AML		
	comp=N,35μm,0.4s							
ATFO					AML	AML		
	comp=E,44μm,0.3s							
ATFO					AML	AML		
	comp=N,35μm,0.4s							
ATFO					AML	AML		
	comp=E,44μm,0.3s							
ATFO					AML	AML		
	comp=N,35μm,0.4s							
ATFO	**Monte Foce - G**	**0.78**	**326**		P	Pg	19 26 57.0	-0.1
ATFO					AML	AML		
	comp=E,44μm,0.3s							
ATFO					AML	AML		
	comp=N,35μm,0.4s							
ATFO					AML	AML		
	comp=E,44μm,0.3s							
CERT	**Cerreto**	**0.78**	**191**		P	Pg	19 26 56.5	-0.5
CERT					AML	AML		
	comp=E,112μm,0.5s							
CERT					AML	AML		
	comp=N,60μm,0.3s							
CERT					AML	AML		
	comp=E,112μm,0.5s							
CERT					AML	AML		
	comp=N,60μm,0.3s							
CERT					AML	AML		
	comp=N,60μm,0.3s							
CERT					AML	AML		
	comp=E,112μm,0.5s							
CERT	**Cerreto**	**0.78**	**191**		P	Pg	19 26 56.4	-0.6
CERT					AML	AML		
	comp=E,112μm,0.5s							
CERT					AML	AML		
	comp=N,60μm,0.3s							
ARVD	**Arcevia**	**0.80**	**348**	⇑	P	Pg	19 26 57.2	0.0
ARVD					S	Sn	19 27 10.0	-0.7
ARVD					AML	AML		
	comp=E,38μm,0.2s							
ARVD					AML	AML		
	comp=N,37μm,1.4s							
ARVD					AML	AML		
	comp=E,38μm,0.2s							
ARVD					AML	AML		
	comp=N,37μm,1.4s							
ARVD					AML	AML		
	comp=E,38μm,0.2s							
ARVD					AML	AML		
	comp=N,37μm,1.4s							
ARVD	**Arcevia**	**0.80**	**348**		S	Sb	19 27 09.3	+1.0
ARVD					AML	AML		
	comp=N,37μm,1.4s							
ARVD					AML	AML		
	comp=E,38μm,0.2s							
ATVO	**AVT- Monte Val**	**0.87**	**320**	⇑	P	Pg	19 26 58.6	0.0
ATVO					AML	AML		
	comp=E,31μm,1.6s							
ATVO					AML	AML		
	comp=N,24μm,0.3s							
ATVO					AML	AML		
	comp=E,31μm,1.6s							
ATVO					AML	AML		
	comp=N,24μm,0.3s							
ATVO					AML	AML		
	comp=E,31μm,1.6s							
ATVO					AML	AML		
	comp=N,24μm,0.3s							
ATVO	**AVT- Monte Val**	**0.87**	**320**		P	Pg	19 26 58.4	-0.3
ATVO					AML	AML		
	comp=E,31μm,1.6s							
ATVO					AML	AML		
	comp=N,24μm,0.3s							
INTR	**Introdacqua**	**0.89**	**142**	⇑	P	Pg	19 26 58.2	-0.9
INTR					AML	AML		
	comp=E,38μm,0.9s							
INTR					AML	AML		
	comp=N,75μm,0.5s							
INTR					AML	AML		
	comp=E,38μm,0.9s							
INTR					AML	AML		
	comp=N,75μm,0.5s							
INTR					AML	AML		
	comp=E,38μm,0.9s							
INTR					AML	AML		
	comp=N,75μm,0.5s							
INTR					AML	AML		
	comp=E,38μm,0.9s							
INTR	**Introdacqua**	**0.89**	**142**		P	Pg	19 26 58.1	-0.9
INTR					AML	AML		
	comp=E,38μm,0.9s							
INTR					AML	AML		
	comp=N,75μm,0.5s							
INTR					AML	AML		
	comp=N,75μm,0.5s							
INTR					AML	AML		
	comp=E,38μm,0.9s							

*TEH **30** 19:42:35.9, 29°.82N × 50°.47E, h18km, ML3.2*
*OMAN **30** 19:43:19.3 ± 1.1, 27°.30N × 52°.51E, h33km, mb4.3/2, ml3.0/10, Error ellipse: s-maj=15.5km s-min=4.1km az=167.0*
ISC 30 19:42:38.8 ± 1.1, **29°.83N** ± 0°.04 × **50°.49E** ± 0°.08, **h22**km, **n45, σ1§61/47, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**1.19**	**144**	*e*	Pg		**Pn**	**19 42 58.5**	**-1.7**
AHBU				*e*	Sg		**Sb**	**19 43 15.5**	**-0.3**
AHBU				*e*				19 43 19.0	
	comp=Z,99nm,0.6s								
KLNJ	**Kolanjah**	**1.51**	**39**	*e*	Sg		**Sb**	**19 43 26.9**	**+1.6**
KLNJ				*e*	Pg		**Pn**	**19 43 04.4**	**-0.5**
KLNJ				*e*				19 43 30.9	
	comp=Z,4μm,0.4s								
SHI	**Shiraz**	**1.77**	**96**	*e*				19 43 40.6	
	comp=Z,7μm,0.5s								
SHI				*e*	Pn		**Pn**	**19 43 07.7**	**-0.6**
AMIS	**Naft Sefid**	**2.10**	**331**	*e*	Pn		**Pn**	**19 43 12.6**	**-0.1**
AMIS				*e*				19 43 58.1	
	comp=Z,3μm,0.4s								
IBRJ	**Brojen**	**2.17**	**18**	*e*	Pn		**Pb**	**19 43 14.8**	**-2.9**
IBRJ				*e*				19 43 55.5	
	comp=Z,967nm,0.7s								
SHK1	**Shahrekord**	**2.51**	**8**	*e*	Pn		**Pn**	**19 43 18.7**	**+0.1**
IPIR	**Pirpir**	**2.87**	**7**	*e*	Pn		**Pn**	**19 43 24.0**	**+0.5**
IPIR				*e*				19 44 10.2	
	comp=Z,549nm,0.6s								
IGAR	**Gharneh**	**2.89**	**27**	*e*	Pn		**Pn**	**19 43 24.0**	**+0.2**
IGAR				*e*				19 43 28.5	
	comp=Z,344nm,0.2s								
IZEF	**Zefreh**	**3.44**	**27**	*e*	Pn		**Pn**	**19 43 31.4**	**+0.1**
ISAD	**Sadrabad**	**3.45**	**52**	*e*	Pn		**Pn**	**19 43 31.3**	**-0.2**
ISAD				*e*				19 43 46.0	
	comp=Z,243nm,0.4s								
NASN	**Na'in**	**3.56**	**33**	*e*	Pn		**Pn**	**19 43 32.4**	**-0.7**
IKLH	**Kolahrood**	**3.60**	**15**	*e*	Pn		**Pn**	**19 43 33.9**	**+0.3**
IMEH	**Mehriz**	**3.88**	**65**	*e*	Pn		**Pn**	**19 43 37.2**	**-0.2**
KHMZ	**Khomeyn**	**3.92**	**354**	*e*	Pn		**Pn**	**19 43 37.1**	**-0.9**
QAMS	**Qamsar**	**3.97**	**11**	*e*			**Sn**	**19 44 30.1**	**+5.4**
	comp=Z,316nm,0.4s								
SHMA	**Al-Shehemyia**	**3.98**	**174**		P		**Pb**	**19 43 50.6**	**+2.3**
IKFM	**Kafar-mosalman**	**4.32**	**329**	*e*	Pn		**Pn**	**19 43 41.9**	**-1.2**
YZKH	**Yazd**	**4.35**	**53**	*e*	Pn		**Pn**	**19 43 43.2**	**-0.5**
KRSH	**Karshahi**	**4.36**	**18**	*e*	Pn		**Pn**	**19 43 43.7**	**-0.2**
KRSH				*e*				19 44 43.4	
	comp=Z,221nm,0.5s								
IDOB	**Doab**	**4.41**	**334**	*e*	Pn		**Pn**	**19 43 45.4**	**+0.8**
HSAM	**Samen**	**4.65**	**340**	*e*	Pn		**Pn**	**19 43 48.0**	**0.0**
IBAF	**Bafgh**	**4.71**	**67**	*e*	Pn		**Pn**	**19 43 48.2**	**-0.6**
ISFB	**Sefidab**	**4.75**	**18**	*e*	Pn		**Pn**	**19 43 48.6**	**-0.6**
IKOM	**Komasi**	**5.01**	**330**	*e*	Pn		**Pn**	**19 43 52.4**	**-0.5**
JRN	**Qarnain Island**	**5.30**	**156**		P		**Pn**	**19 43 56.2**	**-0.5**
KRBR	**Kerman**	**5.45**	**87**	*e*	Pn		**Pn**	**19 43 58.8**	**-0.2**
SNGE	**Sanandaj**	**5.88**	**334**	*e*	Pn		**Pn**	**19 44 04.3**	**-0.5**
IDHR	**Dehrash**	**5.97**	**325**	*e*	Pn		**Pn**	**19 44 04.7**	**-1.3**
SHME	**Shamm**	**6.26**	**126**		P		**Pn**	**19 44 11.4**	**+1.5**
NAZ	**Nazwa, Dubai**	**6.66**	**135**		P		**Pn**	**19 44 14.0**	**-1.4**
MASF	**Masafi**	**6.71**	**130**		P		**Pn**	**19 44 15.8**	**-0.4**
ASUD	**Al Ashush, Dub** SNR=29	**6.74**	**139**		P		**Pn**	**19 44 14.3**	**-2.2**
FAQ	**Al Faqa, Dubai**	**6.80**	**137**		P		**Pn**	**19 44 15.5**	**-1.9**
TABS	**Tabas**	**6.81**	**54**	*e*	Pn		**Pn**	**19 44 17.3**	**-0.2**
MDH	**Madha**	**6.85**	**130**		P		**Pn**	**19 44 17.8**	**-0.2**
UOSS	**Minazif**	**7.04**	**132**		P		**Pn**	**19 44 19.2**	**-1.4**
HATD	**Hatta, Dubai**	**7.07**	**133**		P		**Pn**	**19 44 19.6**	**-1.5**
ASHO	**Ashiyiah** SNR=7.8	**7.13**	**135**		P		**Pn**	**19 44 19.8**	**-2.1**
MZR	**Muzera**	**7.31**	**158**		P		**Pn**	**19 44 22.5**	**-1.9**
SHRO	**Shahrood**	**7.70**	**36**	*e*	Pn		**Pn**	**19 44 29.3**	**-0.4**
BSRN	**Basiran**	**7.72**	**72**	*e*	Pn		**Pn**	**19 44 29.9**	**-0.2**
ARQ	**Araqi** SNR=16	**8.43**	**139**		P		**Pn**	**19 44 36.3**	**-3.4**
HOQ	**Hoqain**	**8.71**	**134**		P		**Pn**	**19 44 40.5**	**-3.1**
BSY	**Bisya**	**9.28**	**138**		P		**Pn**	**19 44 48.4**	**-2.9**
SMDO	**Samad**	**9.56**	**133**		P		**Pn**	**19 44 53.3**	**-1.9**

*KRNET **30** 19:55:29.1 ± 0.1, 39°.51N × 73°.68E, mb3.0*
*SOME **30** 19:55:29.4, 39°.58N × 73°.80E, h15km*
*NNC **30** 19:55:32.0 ± 3.0, 39°.70N × 73°.76E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=23.2km s-min=12.0km az=164.0*
ISC 30 19:55:29.4 ± 1.3, **39°.61N** ± 0°.06 × **73°.67E** ± 0°.04, **h10**km, **n32, σ2§63/53, 10C-13D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.13**	**324**	⇑	*e*	P	**Pg**	**19 55 51.4**	**+0.2**
	baz=26								
OHH				⇑	*e*	S	**Sn**	**19 56 07.9**	**+0.8**
	baz=26								
DRK	**Karamyk**	**1.45**	**265**	⇑	*e*	P	**Pb**	**19 55 55.8**	**-0.9**
	baz=69								
DRK				⇑	*e*	S	**Sg**	**19 56 15.4**	**-0.7**
	baz=69								
BTK	**Batken**	**2.24**	**282**	⇑	*e*	P	**Pb**	**19 56 08.2**	**-1.8**
	baz=85								
BTK				⇑	*i*	S	**Sb**	**19 56 37.0**	**-0.8**
	baz=85								
ARLS	**Aral**	**2.30**	**12**	⇓	*e*	P	**Pb**	**19 56 09.9**	**-1.2**
	baz=12								
ARLS				⇓	*e*	S	**Sb**	**19 56 40.0**	**+0.3**
	baz=12								
GAR	**Garm**	**2.67**	**258**	⇓	*e*	P	**Pn**	**19 56 13.6**	**+1.0**
	baz=60								
GAR				⇓	*e*	S	**Sn**	**19 56 46.3**	**+1.2**
	baz=60								
TRKS	**Terek-Say**	**2.71**	**316**	⇓	*e*	P	**Pn**	**19 56 14.9**	**+1.6**
	baz=16								
TRKS				⇓	*e*	S	**Sn**	**19 56 48.0**	**+1.8**
	baz=16								
EKS2	**Erkin-Say**	**3.05**	**2**	⇓	*e*	P	**Pb**	**19 56 20.5**	**-3.3**
	baz=1.0								
EKS2				⇓	*e*	S	**Sb**	**19 56 58.1**	**-3.0**
	baz=1.0								
AAK	**Ala-Archa**	**3.08**	**11**	⇑	*e*	P	**Pb**	**19 56 21.1**	**-3.4**
	baz=11								
AAK				⇑	*e*	S	**Sn**	**19 56 58.9**	**+3.5**
	baz=11								
KBK	**Karagaybulak**	**3.19**	**17**	⇓	*e*	P	**Pn**	**19 56 22.5**	**+2.7**
	baz=17								
KBK				⇓	*e*	S	**Sn**	**19 57 01.4**	**+3.4**
	baz=17								
TKM2	**Tokmak 2**	**3.61**	**23**	⇓	Pg		**Pg**	**19 56 40.6**	**+2.0**
	1.4nm,0.4s								
TKM2				⇑	Lg		Lg	19 57 24.0	
	5.1nm,0.7s								
IUG	**Iuzhnay**	**3.74**	**314**		*e*	P	**Pg**	**19 56 40.0**	**-1.1**
	87nm,0.2s								
IUG					*e*	S	**Sg**	**19 57 30.9**	**+1.4**
	22nm,0.2s								
IUG	**Iuzhnay**	**3.74**	**314**		Pg		**Pg**	**19 56 40.0**	**-1.1**
	131nm,0.8s								
IUG					Lg		Lg	19 57 30.9	
	13nm,0.5s								
KST	**Kastek**	**3.84**	**26**		*e*	P	**Pb**	**19 56 39.6**	**+2.3**
	4.5nm,0.5s								
KST					*e*	S	**Sg**	**19 57 30.4**	**-2.3**
	9.1nm,0.5s								
KST	**Kastek**	**3.84**	**26**		Pg		**Pb**	**19 56 39.6**	**+2.3**
	2.0nm,0.4s								
KST					Lg		Lg	19 57 30.4	
	6.7nm,0.7s								
SGDS	**Sogindy**	**3.90**	**10**		*e*	P	**Pg**	**19 56 42.0**	**-2.2**
	1.7nm,0.2s								
SGDS					*e*	S	**Sg**	**19 57 34.5**	**-0.2**
	6.1nm,0.4s								
SGDS	**Sogindy**	**3.90**	**10**		Pg		**Pg**	**19 56 42.1**	**-2.1**
	1.7nm,0.4s								
SGDS					Lg		Lg	19 57 34.5	
	3.1nm,1.0s								
DGS	**Degeres**	**3.96**	**23**		*e*	P	**Pg**	**19 56 43.1**	**-2.1**
	3.2nm,0.3s								
DGS					*e*	S	**Sg**	**19 57 36.4**	**-0.1**
	5.0nm,0.6s								
DGS	**Degeres**	**3.96**	**23**		Pg		**Pg**	**19 56 42.9**	**-2.3**
	3.2nm,0.7s								
DGS					Lg		Lg	19 57 36.4	
	5.0nm,0.6s								
MTBS	**Maitube**	**4.08**	**30**		*e*	P	**Pg**	**19 56 44.5**	**-3.1**
	1.7nm,0.0s								
MTBS					*e*	S	**Sg**	**19 57 38.8**	**-1.7**
	4.6nm,0.1s								
MTBS	**Maitube**	**4.08**	**30**		Pg		**Pg**	**19 56 44.5**	**-3.1**
	1.2nm,0.1s								
MTBS					Lg		Lg	19 57 38.8	
	4.6nm,0.3s								
KK31	**Karatay Array**	**4.22**	**327**	⇑	Pg		**Pg**	**19 56 47.1**	**-3.1**
	0.6nm,0.3s,baz=141,slow=16,SNR=4.6								
KK31				⇓	Sn		**Sn**	**19 57 27.9**	**+4.8**
	0.9nm,0.3s,baz=39,slow=24,SNR=3.9								
KK31				⇓	Lg		Lg	19 57 40.9	
	1.5nm,0.3s,baz=134,slow=28,SNR=3.7								
KRBS	**Karabastau**	**4.35**	**20**		*e*	P	**Pg**	**19 56 49.8**	**-2.9**
	1.1nm,0.2s								
KRBS					*e*	S	**Sg**	**19 57 47.8**	**-1.2**
	4.7nm,0.3s								
KRBS	**Karabastau**	**4.35**	**20**		Pg		**Pg**	**19 56 49.6**	**-3.1**
	1.1nm,0.5s								
KRBS					Lg		Lg	19 57 47.8	
	2.5nm,0.6s								
MDOK	**Medeo**	**4.36**	**35**		*e*	P	**Pb**	**19 56 46.3**	**0.0**
	1.0nm,0.2s								
MDOK					*e*	S	**Sb**	**19 57 41.8**	**+2.8**
	2.6nm,0.4s								
MDOK	**Medeo**	**4.36**	**35**		Pg		**Pb**	**19 56 46.3**	**0.0**
	0.8nm,0.2s								
MDOK					Lg		Lg	19 57 41.8	
	2.6nm,1.3s								
KTBS	**Karatobe**	**4.68**	**28**		*e*	P	**Pg**	**19 56 55.1**	**-3.9**
	1.5nm,0.4s								
KTBS					*e*	S	**Sg**	**19 57 57.1**	**-2.4**
	6.5nm,0.5s								
KTBS	**Karatobe**	**4.68**	**28**		Pg		**Pg**	**19 56 55.1**	**-3.9**
	1.5nm,0.8s								
KTBS					Lg		Lg	19 57 57.1	
	5.6nm,0.8s								
KUU	**Kurty**	**4.72**	**24**		*e*	P	**Pb**	**19 56 55.1**	**+2.9**
	1.4nm,0.4s								
KUU					*e*	S	**Sg**	**19 57 57.1**	**-3.8**
	5.6nm,0.3s								
KUU	**Kurty**	**4.72**	**24**		Pg		**Pb**	**19 56 55.0**	**+2.7**
	1.4nm,0.8s								
KUU					Lg		Lg	19 57 57.1	
	3.5nm,1.1s								
CHKK	**Chushkaly**	**4.91**	**29**		*e*	P	**Pg**	**19 56 59.3**	**-4.2**
	0.4nm,0.1s								
CHKK					*e*	S	**Sg**	**19 58 04.1**	**-3.0**
	4.4nm,0.3s								
CHKK	**Chushkaly**	**4.91**	**29**		Pg		**Pg**	**19 56 59.3**	**-4.2**
	0.3nm,0.2s								
CHKK					Lg		Lg	19 58 04.1	
	3.1nm,0.5s								
ARXS	**Arharly**	**5.54**	**33**		*e*	P	**Pb**	**19 57 10.6**	**+4.2**
	2.7nm,0.5s								
ARXS					*e*	S	**Sg**	**19 58 23.6**	**-3.8**
	4.8nm,0.3s								

*BJI **30** 20:04:44.0 ± 0.0, 36°.40N × 141°.80E, h20km, mb5.0/65, mB5.0/46, Ms4.7/64, Ms7 4.7/62*
*MOS **30** 20:04:47.5 ± 0.9, 36°.40N × 141°.75E, h35km, mb5.1/38, MS4.6/23, Error ellipse: s-maj=6.9km s-min=4.1km az=123.9*

*NEIC **30** 20:04:47.9 ± 1.6, 36°.33N ± 0°.04 × 141°.79E ± 0°.07, h23km ± 4km, mb4.9/236, Error ellipse: s-maj=7.9km s-min=6.1km az=108.0*
*GCMT **30** 20:04:48.8 ± 0.5, 36°.42N ± 0°.03 × 142°.08E ± 0°.04, h30km ± 1km, MW4.9/77, Moment Tensor Solution. s32,c40; s77,c104; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.11±.14; Mθθ-0.89±.10; Mϕϕ-1.22±.09; Mrθ0.38±.14; Mrϕ-1.00±.05; Mθϕ1.44±.10; Best double couple: Mo2.56200×10¹⁶ NP1:ϕs232.00000°, δ30.00000°, λ113.00000°. Principal axes: T 2.6460, Plg70.0000°, Azm270.0000°; N -0.1690, Plg11.0000°, Azm32.0000°; P -2.4770, Plg17.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **30** 20:04:48.5 ± 4.3, 36°.34N × 141°.78E, h30km ± 30km, mb4.4/33, mbtmp4.6/39, ML3.8/5, MS4.1/74 Error ellipse: s-maj=13.6km s-min=11.3km az=95.0*
*JMA **30** 20:04:48.3 ± 0.3, 36°.4N ± 0°.5 × 14°.2E ± °, h52km, MD4.9/40, MW4.8/40, FAR E OFF IBARAKI PREF*
JMA Felt II J1 at FAR E OFF IBARAKI PREF .
*NIED **30** 20:04:48.3, 36°.39N × 141°.73E, h52km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.84; Mθθ-0.03; Mϕϕ-0.81; Mrθ0.56; Mθϕ-0.41; Mϕr1.26; Fault plane solution: Mo1.65000×10¹⁶ NP1: ϕs202.00000°, δ17.00000°, λ88.00000°. NP2:ϕs24.00000°, δ73.00000°, λ91.00000°.*
ISC 30 20:04:48.0 ± 0.6, **36°.38N** ± 0°.04, **h29**km ± 3km, **n739, σ1§46/638, mb4.9**/240, **MS4.4**/115, **52C-32D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**1.00**	**268**	⇓	*i*	P	**Pn**	**20 05 05.3**	**-0.8**
JHYU	**Hitachinakayam**	**1.00**	**268**		A		A	20 05 05.3	
	comp=E,66nm,2.8s,comp=E,78nm,0.7s								
CHOJ	**Chosi**	**1.04**	**229**	*i*	P		**Pn**	**20 05 06.1**	**-0.5**
CHOJ	**Chosi**	**1.04**	**229**		A		A	20 05 06.1	
	comp=E,53nm,1.3s,comp=E,59nm,1.5s								
JHO	**Hitachi**	**1.04**	**283**	⇓	P		**Pn**	**20 05 05.3**	**-1.4**
JHO	**Hitachi**	**1.04**	**283**		A		A	20 05 05.3	
	comp=E,37nm,1.7s,comp=E,31nm,1.2s								
JIHU	**Itakohorinouch**	**1.13**	**249**	*i*	P		**Pn**	**20 05 07.8**	**-0.1**
JIHU	**Itakohorinouch**	**1.13**	**249**		A		A	20 05 07.8	
	comp=E,159nm,1.9s,comp=E,211nm,2.2s								
JFFD	**Fukushimafurud**	**1.24**	**305**		A		A	20 05 08.7	
	comp=E,32nm,0.5s,comp=E,22nm,0.5s								
JFK	**Kawauchi**	**1.25**	**322**	*i*	P		**Pn**	**20 05 09.0**	**-0.5**
JFK	**Kawauchi**	**1.25**	**322**		A		A	20 05 09.0	
	comp=E,24nm,2.1s,comp=E,20nm,0.4s								
JYT	**Yasato**	**1.33**	**264**		Pn		**Pn**	**20 05 09.1**	**-1.6**
JYT					Sn		**Sn**	**20 05 26.5**	**-0.8**
JYT	**Yasato**	**1.33**	**264**		A		A	20 05 09.8	
	comp=E,53nm,0.5s,comp=E,66nm,1.3s								
JSMT	**Sammumatsuo**	**1.34**	**237**		A		A	20 05 10.1	
	comp=E,132nm,1.3s,comp=E,107nm,1.2s								
JMST	**Minamisoumatoc**	**1.54**	**331**		A		A	20 05 13.3	
	comp=E,28nm,0.9s,comp=E,32nm,1.2s								
JCN	**Nagara**	**1.64**	**234**		A		A	20 05 14.4	
	comp=E,81nm,1.9s,comp=E,72nm,1.6s								
JSB	**Shiboa**	**1.64**	**291**		A		A	20 05 14.3	
	comp=E,79nm,2.5s,comp=E,63nm,0.8s								
JFT	**Otama**	**1.65**	**314**	⇓	P		**Pn**	**20 05 15.3**	**+0.2**
JFT	**Otama**	**1.65**	**314**		A		A	20 05 15.3	
	comp=E,54nm,0.7s,comp=E,90nm,0.8s								
JMM	**Marumori**	**1.70**	**331**				**Pn**	**20 05 15.0**	**-0.7**
JMM							**Sn**	**20 05 37.2**	**+0.8**
JMM	**Marumori**	**1.70**	**331**		P		**Pn**	**20 05 15.0**	**-0.7**
JMM	**Marumori**	**1.70**	**331**		A		A	20 05 15.0	
	comp=E,15nm,0.9s,comp=E,15nm,1.1s								
JKUC	**kamogawauchiur**	**1.80**	**228**		A		A	20 05 16.8	
	comp=E,28nm,5.6s,comp=E,24nm,2.7s								
TOK	**Tokyo**	**1.82**	**248**		A		A	20 05 16.8	
	comp=E,61nm,3.5s,comp=E,66nm,1.9s								
BSO1	**Boso 1**	**1.86**	**202**	*e*	P		**Pn**	**20 05 16.8**	**-0.7**
BSO1				*e*	S		**Sn**	**20 05 38.6**	**-1.0**
BSO3	**Boso 3**	**1.91**	**215**	*e*	P		**Pn**	**20 05 17.9**	**-0.5**
JAG	**Ashikaga**	**1.92**	**272**		P		**Pn**	**20 05 18.1**	**-0.6**
JAG	**Ashikaga**	**1.92**	**272**		A		A	20 05 18.1	
	comp=E,13nm,3.7s,comp=E,11nm,7.6s								
JIKH	**Ishinomakikobu**	**1.95**	**352**		A		A	20 05 19.5	
	comp=E,18nm,5.2s,comp=E,14nm,8.5s								
JFY	**Yanaizu**	**1.99**	**302**	*e*	P		**Pn**	**20 05 20.4**	**+0.7**
JFY	**Yanaizu**	**1.99**	**302**		A		A	20 05 20.4	
	comp=E,14nm,3.9s,comp=E,14nm,1.1s								
JYAR	**Yonezawaarcadi**	**2.04**	**319**		A		A	20 05 20.2	
	comp=E,68nm,1.3s,comp=E,91nm,0.5s								
JYO	**Yokosk**	**2.10**	**237**		A		A	20 05 21.0	
	comp=E,27nm,1.7s,comp=E,37nm,3.7s								
JKT	**Katashina**	**2.11**	**281**		P		**Pn**	**20 05 21.9**	**+0.4**
JKT	**Katashina**	**2.11**	**281**		A		A	20 05 21.9	
	comp=E,42nm,0.4s,comp=E,32nm,0.3s								
JHU	**Hanno**	**2.13**	**256**		A		A	20 05 21.2	
	comp=E,14nm,4.3s,comp=E,14nm,3.1s								
JOU	**Okura**	**2.19**	**335**		A		A	20 05 22.6	
	comp=E,32nm,1.1s,comp=E,41nm,2.1s								
JSGW	**Sagamiharawaka**	**2.26**	**251**		A		A	20 05 23.1	
	comp=E,11nm,2.6s,comp=E,14nm,1.1s								
JYS	**Shirataka**	**2.31**	**323**		A		A	20 05 24.2	
	comp=E,34nm,1.7s,comp=E,36nm,1.1s								
JOFO	**Osakifurukawao**	**2.33**	**342**		A		A	20 05 24.8	
	comp=E,112nm,3.4s,comp=E,79nm,1.8s								
JUON	**Uonuma**	**2.37**	**291**		A		A	20 05 24.6	
	comp=E,9.0nm,3.5s,comp=E,9.0nm,3.9s								
JRY	**Ryogami san**	**2.40**	**262**	*i*	P		**Pn**	**20 05 25.2**	**-0.2**
JRY	**Ryogami san**	**2.40**	**262**		A		A	20 05 25.2	
	comp=E,8.0nm,2.1s,comp=E,14nm,5.9s								
JKMT	**Kesennumatoy**	**2.44**	**353**		A		A	20 05 26.5	
	comp=E,12nm,4.5s,comp=E,6.0nm,2.5s								
JNS	**Sasagawa**	**2.47**	**306**		A		A	20 05 26.2	
	comp=E,8.0nm,3.0s,comp=E,7.0nm,7.7s								
JOD2	**Odawara 2**	**2.49**	**244**		A		A	20 05 26.4	
	comp=E,13nm,2.1s,comp=E,17nm,2.2s								
JIM2	**Oshima 3**	**2.57**	**230**		A		A	20 05 27.6	
	comp=E,18nm,3.2s,comp=E,18nm,2.3s								
JGK	**Kuni**	**2.58**	**275**		A		A	20 05 27.5	
	comp=E,21nm,1.7s

JNY **Yasuok** 3.38 254 A A 20 05 38.9
comp=E,11nm,2.0s,comp=E,14nm,3.5s
JYW **Yuwa** 3.40 338 A A 20 05 39.9
comp=E,21nm,1.3s,comp=E,27nm,1.4s
JSZI **Iwateshizukuis** 3.42 349 A A 20 05 40.3
comp=E,18nm,2.3s,comp=E,17nm,3.2s
JSG **Sagara** 3.42 241 A A 20 05 39.6
comp=E,14nm,6.4s,comp=E,12nm,2.4s
JTH **Tanohata** 3.55 0 A A 20 05 42.4
comp=E,8.0nm,4.2s,comp=E,5.0nm,2.4s
JHJ2 **Mitsune** 3.66 207 Pn 20 05 42.1 -0.6
JHJ2 Sn **Sn** 20 06 22.2 -2.6
JHJ2 **Mitsune** 3.66 207 P Pn 20 05 43.1 +0.4
JHJ **Hachijo jima 2** 3.67 208 Pn 20 05 42.0 -0.8
JHJ **Hachijo jima 2** 3.67 208 Pn Pn 20 05 42.0 -0.8
134nm,0.3s,baz=330,slow=11,SNR=31
JHJ Sn **Sn** 20 06 22.1 -2.9
271nm,0.3s,baz=73,slow=23,SNR=13
JHJ LR LR 20 07 26.6
comp=Z,1µm,18.8s,baz=300,slow=44
574nm,0.3s
JGF **Kuroka** 3.71 259 Pn 20 05 45.3 +1.9
INU **Inuyama** 4.04 257 Pn 20 05 48.8 +0.9
INU **Inuyama** 4.04 257 P Pn 20 05 49.7 +1.8
JTM **Tenmabayashi** 4.44 353 Pn 20 05 55.0 +1.6
JEW **Eniwo** 6.46 358 Pn Pn 20 06 22.9 +1.9
JMN **Monobe** 7.04 250 Pn Pn 20 06 29.9 +0.8
JHS **Saijyo** 7.22 262 Pn Pn 20 06 32.7 +1.0
NMR **Nemuro--Hokkai** 7.59 22 *eP* Pn 20 06 33.6 -3.1
RUSJ **Misakicho** 8.14 18 *eP* Pn 20 06 46.3 +2.1
RUSJ *eS* **Sn** 20 08 12.8 -2.4
YUK **Yuzh-Kuril'sk** 8.24 21 P Pn 20 06 42.0 -3.5
JCJ **Chichijima** 9.27 178 Pn Pn 20 06 57.3 -2.4
JCJ **Chichijima** 9.27 178 Pn Pn 20 06 59.4 -0.2
60nm,0.3s,baz=41,slow=19,SNR=2.2
JCJ Sn **Sn** 20 08 37.3 -5.6
28nm,0.3s,baz=19,slow=22,SNR=3.8
JCJ LR LR 20 11 33.6
comp=Z,195nm,19.2s,baz=2.5,slow=44
KUR **Kuril'sk** 9.95 25 P Pn 20 07 11.5 +2.5
KUR pmax pmax
comp=E,61nm,0.6s
KUR MLR MLR
comp=Z,534nm,16.0s
MSHR **Mys Shultsa** 10.31 310 *ceP* Pn 20 07 15.1 +1.2
MSHR pmax pmax
comp=Z,290nm,2.5s
JTU **Tsushima** 10.31 263 Pn Pn 20 07 15.9 +2.0
KSBUS **Busan** 10.39 267 Pn Pn 20 07 16.1 +1.1
YSS **Yuzh-Sakhalins** 10.59 3 Pn Pn 20 07 21.0 +3.3
YSS **Yuzh-Sakhalins** 10.59 3 *eP* Pn 20 07 17.8 +0.2
YSS pmax pmax
comp=Z,60nm,0.8s
YSS MLR MLR
comp=Z,1µm,10.0s
JSU **Suzuyama** 10.62 246 Pn Pn 20 07 19.0 +0.7
USA0B **Ussuriysk Arra** 10.83 319 Pn Pn 20 07 23.3 +2.3
USA0B **Ussuriysk Arra** 10.83 319 P Pn 20 07 23.3 +2.3
USRK **Ussuriysk Ar.** 10.83 319 P Pn 20 07 22.4 +1.4
USRK **Ussuriysk Ar.** 10.83 319 Pn Pn 20 07 22.4 +1.4
comp=Z,1.3nm,0.3s,baz=129,slow=13,SNR=10
USRK LR LR 20 11 20.2
comp=Z,2µm,18.9s,baz=233,slow=36
comp=Z,8.4nm,0.8s
SEHB **SEOHWA** 10.97 284 Pn Pn 20 07 24.1 +1.0
KSCHJ **Chungju** 11.15 277 Pn 20 07 25.9 +0.5
KSRS **Korea Array** 11.19 280 P Pn 20 07 26.9 +1.0
KSRS **Korea Array** 11.19 280 Pn Pn 20 07 26.9 +1.0
comp=Z,0.8nm,0.3s,baz=94,slow=13,SNR=20
KSRS LR LR 20 11 40.3
comp=Z,2µm,19.2s,baz=90,slow=37
comp=Z,7.5nm,0.6s
KSAR **Wonju Array Be** 11.22 280 Pn 20 07 25.7 -0.6
KSAR **Wonju Array Be** 11.22 280 P Pn 20 07 25.7 -0.6
KS19 **Wonju Array Si** 11.23 280 Pn 20 07 26.9 +0.3
TJN **Taejon** 11.66 274 Pn Pn 20 07 33.6 +1.2
TJN **Taejon** 11.66 274 P Pn 20 07 33.6 +1.2
NAWB **Namwon** 11.75 270 Pn Pn 20 07 35.3 +1.7
MDJ **Mudanjiang** 12.41 315 P P 20 07 51.5 -2.8
MDJ pmax pmax
comp=Z,26nm,1.6s
MDJ pmax pmax
comp=Z,2µm,5.6s
BNX **BinXian** 14.32 315 ⇓P Pn 20 08 05.0 -3.8
BNX pmax pmax
comp=Z,18nm,1.8s
BNX pmax pmax
comp=Z,330nm,4.9s
CN2 **Changchun** 14.55 306 *eP* Pn 20 08 10.8 -1.0
CN2 PP PnPn 20 08 23.0 +3.2
CN2 S Sn 20 10 49.8 -2.3
CN2 sS S 20 11 01.0 -10
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=Z,2µm,15.0s
CN2 LR LR
comp=Z,2µm,15.0s
CN2 LR LR
comp=Z,2µm,17.0s
KLR **Kul'dur** 14.80 333 Pn 20 08 14.8 -0.4
KLR **Kul'dur** 14.80 333 *i* P Pn 20 08 14.5 -0.7
KLR pmax pmax
comp=Z,4.0nm,0.6s
KLR **Kul'dur** 14.80 333 Pn Pn 20 08 14.8 -0.4
comp=Z,0.4nm,0.3s,baz=144,slow=9.6,SNR=5.6
KLR LR LR 20 13 51.6
comp=Z,959nm,19.2s,baz=146,slow=37
comp=Z,2.7nm,0.8s
GRNR **Gornyy** 14.90 347 ⇓*i* P P 20 08 22.3 +0.4
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR MLR MLR
comp=E,750nm,17.0s
GRNR MLR MLR
comp=N,720nm,15.0s
GRNR MLR MLR
comp=Z,1µm,15.0s
JOW **Kunigami** 14.95 234 Pn Pn 20 08 18.8 +1.5
OKH **Okha** 17.18 2 *deP* Pn 20 08 41.2 -4.6
OKH *eS* **Sn** 20 11 49.4 -6.5
OKH MLR MLR
comp=N,2µm,17.0s
OKH MLR MLR
comp=E,1µm,15.0s
OKH MLR MLR
comp=Z,1µm,16.0s
JMJ **Miyako jima 2** 18.29 236 P Pn 20 09 00.2 +0.6
NJ2 **Nanjing** 19.47 264 *eP* P 20 09 12.0 -0.5
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 LR LR
comp=Z,870nm,14.1s
NJ2 LR LR
comp=Z,2µm,13.1s
NJ2 LR LR
comp=Z,1µm,13.7s
TIA **Tai'an** 19.90 277 ⇓P P 20 09 15.5 -1.7
TIA pmax pmax
comp=Z,26nm,1.6s
TIA pmax pmax
comp=Z,270nm,4.7s
TIA LR LR
comp=Z,970nm,13.4s
TIA LR LR
comp=Z,1µm,12.7s
TIA LR LR
comp=Z,970nm,19.1s
YOJ **Yonaguni jima** 20.07 239 20 09 15.8 -3.3
YOJ IAmb IAmb 20 09 21.7
comp=Z,52nm,1.0s
YOJ **Yonaguni jima** 20.07 239 P P 20 09 15.8 -3.3
YOJ pmax pmax
comp=Z,52nm,1.0s
PEA0B **Petropavlovsk-** 20.09 29 P P 20 09 18.1 -0.9
PEA0B **Petropavlovsk-** 20.09 29 P P 20 09 18.2 -0.9
PEA0B pmax pmax
comp=Z,14nm,0.9s
PETK **Petropavlovsk-** 20.09 29 P P 20 09 17.8 -1.3
PETK **Petropavlovsk-** 20.09 29 P P 20 09 20.2 +1.1
PETK **Petropavlovsk-** 20.09 29 P P 20 09 20.1 +1.1
comp=Z,3.7nm,0.8s,baz=147,slow=3.5,SNR=4.9
PETK LR LR 20 17 18.8
comp=Z,307nm,20.0s,baz=215,slow=37
comp=Z,3.7nm,0.8s

ZEA **Zeya** 20.11 334 *eP* P 20 09 18.0 -1.3
ZEA *e* 20 13 01.2
ZEA pmax pmax
comp=E,20nm,0.6s
ZEA pmax pmax
comp=N,30nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA MLR MLR
comp=E,500nm,15.0s
ZEA MLR MLR
comp=Z,700nm,13.0s
PET **Petropavlovsk** 20.40 30 P P 20 09 11.7 -11
comp=Z,163nm,1.4s
BJI **Beijing** 20.46 288 P P 20 09 22.0 -1.2
BJI pmax pmax
comp=Z,16nm,0.9s
BJI LR LR
comp=Z,140nm,14.3s
BJI LR LR
comp=Z,650nm,16.4s
BJI LR LR
comp=Z,960nm,15.1s
BJT **Baijiatuau** 20.47 288 P P 20 09 20.3 -3.0
BJT **Baijiatuau** 20.47 288 P P 20 09 20.3 -3.0
BJT pmax pmax
comp=Z,16nm,0.6s
XLT **XiLinHaoTe** 21.01 299 ⇓*i* P P 20 09 27.3 -2.0
XLT pP 20 09 33.5
XLT sP pP 20 09 37.5 +0.9
XLT S **S** 20 13 19.5 -2.3
XLT pmax pmax
comp=Z,82nm,1.0s
XLT pmax pmax
comp=Z,390nm,5.7s
XLT LR LR
comp=Z,2µm,17.8s
XLT LR LR
comp=Z,3µm,15.1s
YHNB **Yeheng** 21.09 242 P P 20 09 27.5 -2.7
YHNB IAmb IAmb 20 09 32.6
comp=Z,54nm,1.5s
YHNB **Yeheng** 21.09 242 P P 20 09 27.8 -2.4
NACB **Ninganchiao** 21.24 241 P P 20 09 28.3 -3.5
HNS **HongShan** 21.69 281 ⇓P P 20 09 34.3 -2.2
HNS S **S** 20 13 34.5 -0.6
HNS SS **SnSn** 20 14 07.5 +7.4
HNS pmax pmax
comp=Z,36nm,1.1s
HNS LR LR
comp=Z,460nm,12.0s
HNS LR LR
comp=Z,2µm,13.0s
HNS LR LR
comp=Z,2µm,14.5s
SSLB **Suanglung** 21.94 241 P P 20 09 35.9 -3.4
SSLB **Suanglung** 21.94 241 P P 20 09 36.7 -2.6
YULB **Yu-li** 21.95 240 P P 20 09 35.1 -4.4
TPUB **Ta-pu** 22.48 240 P P 20 09 41.0 -4.1
TPUB **Ta-pu** 22.48 240 P P 20 09 42.8 -2.3
TWG **Pinlang** 22.48 239 P P 20 09 41.1 -4.1
TWG IAmb IAmb 20 10 02.2
comp=Z,29nm,0.9s
GUMO **Guam** 22.86 172 LR LR 20 18 59.2
comp=Z,82nm,21.5s,baz=16,slow=37
WHN **Wuhan** 23.61 264 ⇓P P 20 09 56.0 -0.5
WHN LR LR
comp=Z,2µm,11.4s
WHN LR LR
comp=Z,2µm,11.8s
WHN LR LR
comp=Z,4µm,15.0s
MA2 **Magadan** 23.92 11 P P 20 09 59.9 +0.6
MA2 IAmb IAmb 20 10 16.6
comp=Z,19nm,0.8s
MA2 **Magadan** 23.92 11 P P 20 09 59.9 +0.6
MA2 pmax pmax
comp=Z,19nm,0.8s
MA2 **Magadan** 23.92 11 P P 20 09 59.8 +0.6
comp=Z,7.2nm,0.7s,baz=198,slow=19,SNR=1.7
MA2 LR LR 20 19 18.0
comp=Z,141nm,18.3s,baz=236,slow=36
comp=Z,7.2nm,0.7s
LYN **LuoYang** 23.95 274 ⇑P P 20 09 59.8 +0.1
LYN pmax pmax
comp=Z,30nm,0.7s
LYN pmax pmax
comp=Z,170nm,6.3s
LYN LR LR
comp=Z,1µm,14.2s
LYN LR LR
comp=Z,1µm,15.7s
HHC **Hu-ho-hao-te** 24.00 290 *eP* P 20 10 01.0 +0.7
HHC pmax pmax
comp=Z,61nm,0.9s
HHC pmax pmax
comp=Z,310nm,4.7s
HHC LR LR
comp=Z,1µm,14.7s
HHC LR LR
comp=Z,1µm,13.1s
HHC LR LR
comp=Z,2µm,13.4s
CIT **Chita** 25.38 317 *eP* P 20 10 12.2 -0.4
CIT *e* 20 10 24.4
CIT *e* 20 10 50.8
CIT *e* 20 11 07.6
CIT pmax pmax
comp=Z,100nm,1.9s
CNSH **ChangSha** 25.69 260 ⇓P P 20 10 15.8 +0.2
CNSH S **S** 20 14 44.0 +1.5
CNSH pmax pmax
comp=Z,34nm,0.8s
CNSH LR LR
comp=Z,780nm,14.5s
CNSH LR LR
comp=Z,710nm,12.6s
CNSH LR LR
comp=Z,1µm,14.1s
YAK **Yakutsk** 26.78 347 P P 20 10 24.5 -0.6
YAK **Yakutsk** 26.78 347 *ci* P P 20 10 25.0 -0.1
YAK *e**PP **pP** 20 10 33.9 +1.1
YAK *e* 20 11 07.0
YAK *e*PPP PPP 20 11 18.5
YAK *e* 20 13 45.2
YAK *e*S **S** 20 14 59.8 +0.8
YAK *e*SS **SnSn** 20 16 04.5 +0.5
YAK *e*SSS SSS 20 16 31.1
YAK pmax pmax
comp=Z,49nm,0.7s
YAK pmax pmax
comp=N,30nm,0.9s
YAK pmax pmax
comp=E,16nm,1.2s
YAK pmax pmax
comp=Z,57nm,2.2s
YAK pmax pmax
comp=N,100nm,2.3s
YAK pmax pmax
comp=E,27nm,1.5s
YAK smax smax
comp=N,107nm,3.3s
YAK smax smax
comp=E,243nm,3.6s
YAK MLR MLR
comp=Z,634nm,17.0s
YAK MLR MLR
comp=N,415nm,17.0s
YAK MLR MLR
comp=E,233nm,18.0s
YAK **Yakutsk** 26.78 347 P P 20 10 25.3 +0.3
comp=E,38nm,0.8s,baz=155,slow=2.9,SNR=27
YAK LR LR 20 21 20.4
comp=E,425nm,18.4s,baz=105,slow=37
comp=E,38nm,0.8s
XAN **Xi'an** 26.92 275 ⇓*i* P P 20 10 26.5 -0.3
XAN pP pP 20 10 31.0 -3.6
XAN sP pwP 20 10 36.5 -0.4
XAN pmax pmax
comp=E,33nm,0.7s
XAN pmax pmax
comp=E,200nm,4.6s
XAN LR LR
comp=E,670nm,10.8s
XAN LR LR
comp=E,820nm,14.2s

XAN LR LR
comp=E,1µm,11.3s
SEY **Seymchan** 27.37 11 *ceP* P 20 10 30.8 +0.4
SEY pmax pmax
comp=Z,16nm,1.7s
SEY **Seymchan** 27.37 11 P P 20 10 30.7 +0.4
comp=Z,5.3nm,0.8s,baz=184,slow=8.2,SNR=6.6
comp=Z,5.3nm,0.8s
H11N2 **WAKE ISLAND Hy** 27.53 120 T T 20 40 03.3
baz=312,slow=75,SNR=163
H11N1 **WAKE ISLAND Hy** 27.54 120 T T 20 40 04.0
baz=312,slow=75,SNR=187
H11N3 **WAKE ISLAND Hy** 27.55 120 T T 20 40 03.2
baz=312,slow=75,SNR=138
ENH **Enshi** 27.62 267 P P 20 10 30.9 -2.2
SHEM **Shemya Is, Ala** 27.90 44 LR LR 20 20 08.6
comp=Z,170nm,19.2s,baz=290,slow=33
ULN **Ulaanbaatar** 28.00 305 P P 20 10 35.8 -0.6
ULN IAmb IAmb 20 10 38.1
comp=Z,33nm,0.9s
ULN **Ulaanbaatar** 28.00 305 *ceP* P 20 10 36.8 +0.4
ULN pmax pmax
comp=Z,50nm,1.3s
H11S1 **WAKE ISLAND Hy** 28.23 122 T T 20 40 52.7
baz=314,slow=75,SNR=408
H11S3 **WAKE ISLAND Hy** 28.23 122 T T 20 40 46.6
baz=314,slow=75,SNR=344
H11S2 **WAKE ISLAND Hy** 28.24 122 T T 20 41 05.3
baz=314,slow=75,SNR=340
BOD **Bodaibo** 28.26 328 *eP* P 20 10 38.4 0.0
BOD pmax pmax
comp=Z,36nm,1.4s
SONM **Songino Array** 28.43 305 P P 20 10 40.0 -0.2
SONM **Songino Array** 28.43 305 P P 20 10 40.0 -0.2
SONM pmax pmax
comp=Z,60nm,1.2s
SONM **Songino Array** 28.43 305 P P 20 10 39.6 -0.6
comp=Z,32nm,0.8s,baz=106,slow=5.8,SNR=93
SONM LR LR 20 22 23.3
comp=Z,516nm,18.3s,baz=76,slow=37
comp=Z,32nm,0.8s
LZH **Lanzhou** 30.51 281 *eP* P 20 10 58.5 -0.3
LZH pP pP 20 11 04.5 -2.3
LZH sP pwP 20 11 08.8 -0.3
LZH S **S** 20 16 05.5 +6.9
LZH SS **ScP** 20 17 39.5 +1.6
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,130nm,4.8s
LZH LR LR
comp=Z,920nm,13.7s
LZH LR LR
comp=Z,2µm,16.8s
LZH LR LR
comp=Z,2µm,17.9s
ZAK **Zakamensk** 30.94 309 *eP* P 20 11 01.3 -1.1
ZAK pmax pmax
comp=Z,31nm,1.2s
GYA **Guiyang** 31.45 262 ⇓*i* P P 20 11 06.5 -0.6
GYA pP pP 20 11 16.0 +0.9
GYA S **S** 20 16 09.5 -3.9
GYA pmax pmax
comp=Z,90nm,1.0s
GYA LR LR
comp=Z,400nm,11.5s
GYA LR LR
comp=Z,910nm,16.1s
GYA LR LR
comp=Z,1µm,16.1s
CD2 **Chengdu** 32.02 271 P P 20 11 11.3 -0.7
CD2 pP pP 20 11 19.3 -0.6
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 LR LR
comp=Z,740nm,14.9s
CD2 LR LR
comp=Z,870nm,13.3s
CD2 LR LR
comp=Z,860nm,12.9s
MOY **Mondy** 32.61 311 *eP* P 20 11 17.3 +0.2
MOY pmax pmax
comp=Z,25nm,1.4s
QIZ **Qiongzhong** 32.97 247 P P 20 11 21.0 +0.6
QIZ S **S** 20 16 38.0 +1.0
QIZ LR LR
comp=Z,430nm,16.2s
QIZ LR LR
comp=Z,460nm,17.3s
QIZ LR LR
comp=Z,470nm,19.6s
GTA **Gaotai** 33.08 288 ⇑P P 20 11 21.8 +0.5
GTA pP pP 20 11 27.5 -1.8
GTA sP pwP 20 11 30.3 -1.1
GTA PcP **PcP** 20 14 06.0 +1.7
GTA pmax pmax
comp=Z,33nm,1.2s
GTA pmax pmax
comp=Z,150nm,5.1s
GTA LR LR
comp=Z,340nm,18.2s
GTA LR LR
comp=Z,710nm,17.1s
GTA LR LR
comp=Z,700nm,17.1s
BILL **Bilibino** 34.56 16 ⇑*eP* P 20 11 33.1 -0.6
BILL *e* 20 12 53.7
BILL pmax pmax
comp=Z,7.0nm,1.1s
BILL MLR MLR
comp=Z,530nm,18.0s
KMI **Kunming** 35.20 263 ⇓P P 20 11 39.8 -0.2
KMI sP pwP 20 11 49.8 -0.5
KMI pmax pmax
comp=Z,40nm,1.1s
KMI LR LR
comp=Z,690nm,14.2s
KMI LR LR
comp=Z,1µm,16.2s
KMI LR LR
comp=Z,1µm,16.1s
PZH **PanZhiHua** 35.38 265 P P 20 11 42.8 +1.4
PZH pmax pmax
comp=Z,9.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.7s
SGSI **Sangihe** 35.84 209 P P 20 11 49.5 +4.3
comp=Z,30nm,0.5s
TIXI **Tiksi** 35.98 353 P P 20 11 45.0 -0.8
TIXI **Tiksi** 35.98 353 *ceP* P 20 11 45.3 -0.5
TIXI pmax pmax
comp=Z,6.0nm,1.0s
TIXI **Tiksi** 35.98 353 P P 20 11 45.9 +0.1
comp=Z,4.9nm,0.8s,baz=90,slow=24,SNR=6.3
TIXI LR LR 20 27 34.3
comp=Z,324nm,18.1s,baz=180,slow=38
comp=Z,4.9nm,0.8s
GOMU **GeErMu** 37.60 284 P P 20 12 00.5 0.0
GOMU pP pP 20 12 05.8 -2.7
GOMU sP pwP 20 12 08.0 -3.0
GOMU pmax pmax
comp=Z,53nm,1.1s
GOMU pmax pmax
comp=Z,140nm,5.6s
GOMU LR LR
comp=Z,410nm,15.4s
GOMU LR LR
comp=Z,400nm,16.8s
GOMU LR LR
comp=Z,500nm,14.7s
MYLDM **Lahad Datu** 37.72 220 P P 20 12 01.5 +0.2
MYLDM IAmb IAmb 20 12 37.0
comp=Z,13nm,1.0s
TNTI **Ternate** 37.89 204 P P 20 12 01.5 -1.1
TNTI IAmb IAmb 20 12 06.6
comp=Z,39nm,1.4s
TNTI **Ternate** 37.89 204 P P 20 12 05.7 +3.1
comp=Z,456nmcomp=Z,18nm,1.1s
SMPI **Sarmi** 38.29 185 P P 20 12 13.8 +7.8
comp=Z,20nm,1.3s
SIJI **Sorong** 38.34 197 LR LR 20 27 00.6
comp=Z,120nm,18.7s,baz=36,slow=35
SRPI **Serui, Papua** 38.41 189 P P 20 12 13.8 +6.8
comp=Z,56nm,0.4s
UBPT **Khong Chiam** 38.57 247 P P 20 12 08.7 +0.2
UBPT IAmb IAmb 20 12 10.8

comp=Z,22nm,1.1s
LBMI Labuha 39.17 203 P P 20 12 20.5 +7.1
comp=Z,22nm,0.9s
KMSI Cibinong 39.29 209 P P 20 12 19.5 +5.1
comp=Z,82nm,0.7s
CRAI Chiangrai 39.56 257 P **P** **20 12 16.4 -0.3**
CRAI IAmb IAmb 20 12 18.4
comp=Z,32nm,0.8s
GTOI Gorontalo 39.62 210 P **P** **20 12 17.3 +0.1**
FAKI Fak Fak 40.11 195 P **P** **20 12 22.0 +0.8**
FAKI Fak Fak 40.11 195 P **P** **20 12 23.8 +2.6**
TOLI2 Tolitoli 40.15 214 P **P** **20 12 20.4 -1.2**
TOLI2 Tolitoli 40.15 214 P **P** **20 12 21.8 +0.2**
WAMI Wamena 40.16 185 P P 20 12 31.3 +10
comp=Z,42nm,0.4s
MRSI Marisa 40.21 212 P **P** **20 12 23.8 +1.7**
comp=Z,53nm,1.7s
SANI Sanana 40.99 205 P **P** **20 12 32.8 +4.3**
comp=Z,3µmcomp=Z,55nm,0.8s
SANI Sanana 40.99 205 P **P** **20 12 28.5 0.0**
DGZ Jazzator, Alta 41.05 306*c iP* **P** **20 12 30.1 +1.2**
DGZ pmax pmax
comp=Z,64nm,0.9s
MPSI Mapaga 41.23 215 P P 20 12 36.3 +5.8
LUWI Luwuk 41.24 210 P **P** **20 12 31.4 +0.9**
LUWI IAmb IAmb 20 13 18.2
comp=Z,34nm,0.8s
LUWI Luwuk 41.24 210 P P 20 12 35.7 +5.1
comp=Z,39nm,1.1s
WMQ Urumqi 41.43 298 *eP* **P** **20 12 33.8 +1.8**
WMQ pP pP 20 12 40.0 0.0
WMQ sP sP 20 12 43.8 +0.5
WMQ pmax pmax
comp=Z,35nm,1.3s
WMQ pmax pmax
comp=Z,220nm,3.9s
WMQ LR LR
comp=Z,570nm,17.7s
WMQ LR LR
comp=Z,600nm,16.7s
WMQ LR LR
comp=Z,470nm,19.9s
CHTO Chiang Mai 41.46 257 P **P** **20 12 32.5 0.0**
CHTO IAmb IAmb 20 12 33.6
comp=Z,18nm,0.8s
CHTO Chiang Mai 41.46 257 P **P** **20 12 32.5 0.0**
CHTO pmax pmax
comp=Z,18nm,0.9s
APSI Ampana 41.58 211 P **P** **20 12 36.2 +2.8**
comp=Z,432nmcomp=Z,42nm,0.8s
CM31 Chiang Mai Arr 41.66 256 P **P** **20 12 33.4 -0.7**
CM31 IAmb IAmb 20 12 36.7
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 41.66 256 P **P** **20 12 33.1 -1.0**
CMAR Chiang Mai Arr 41.66 256 P **P** **20 12 34.8 +0.7**
CMAR Chiang Mai Arr 41.66 256 P **P** **20 12 34.8 +0.7**
comp=Z,9.0nm,0.9s,baz=48,slow=5.8,SNR=50
CMAR LR LR 20 30 36.3
comp=Z,147nm,20.2s,baz=40,slow=37
comp=Z,9.0nm,0.9s
NLAI Namlea 41.75 202 P P 20 12 39.6 +4.9
comp=Z,5µmcomp=Z,16nm,0.7s
AAI Ambon 41.85 201 P **P** **20 12 40.1 +4.6**
comp=Z,47nm,0.6s
ZAA0 Zalesovo Array 42.60 313 P **P** **20 12 41.0 -0.3**
ZAA0 IAmb IAmb 20 12 43.1
comp=Z,29nm,1.0s
ZALV Zalesovo Beam 42.60 313 P **P** **20 12 41.4 0.0**
ZALV Zalesovo Beam 42.60 313 P **P** **20 12 41.7 +0.4**
ZALV Zalesovo Beam 42.60 313 P **P** **20 12 41.7 +0.4**
comp=Z,28nm,0.9s,baz=93,slow=6.5,SNR=70
ZALV LR LR 20 31 04.8
comp=Z,527nm,19.8s,baz=84,slow=37
comp=Z,28nm,0.9s
LSA Lhasa 42.60 276 P **P** **20 12 42.4 +0.2**
LSA IAmb IAmb 20 12 54.7
comp=Z,26nm,1.1s
LSA Lhasa 42.60 276 P **P** **20 12 43.5 +1.3**
LSA pmax pmax
comp=Z,24nm,1.0s
LSA Lhasa 42.60 276 P **P** **20 12 42.4 +0.2**
LSA pmax pmax
comp=Z,26nm,1.1s
ZSN Zaisan 42.92 303*c iP* **P** **20 12 44.9 +0.9**
ZSN pmax pmax
comp=Z,33nm,1.3s
ZSN Zaisan 42.92 303⇑*iP* **P** **20 12 45.0 +0.9**
comp=Z,33nm,1.3s,baz=303
SDPT Sand Point 43.02 45 P **P** **20 12 45.5 +0.8**
SDPT IAmb IAmb 20 13 07.9
comp=Z,33nm,1.4s
SBUM Sibu 43.45 226 P **P** **20 12 47.6 -0.9**
SHL Shillong 43.74 270 P **P** **20 12 50.5 -0.6**
SHL IAmb IAmb 20 13 37.6
comp=Z,12nm,0.5s
SHL Shillong 43.74 270 P **P** **20 12 50.5 -0.6**
SHL pmax pmax
comp=Z,12nm,0.5s
BKB Balikpapan 44.05 217 P **P** **20 12 52.1 -1.3**
BKB Balikpapan 44.05 217 P **P** **20 12 56.0 +2.6**
comp=Z,90nm,1.2s
MK31 Makanchi Array 44.75 303 P **P** **20 12 58.7 -0.1**
MK31 IAmb IAmb 20 13 02.1
comp=Z,24nm,1.1s
MK31 PcP **PcP** **20 14 38.0 -2.6**
MK31 Makanchi Array 44.75 303*d iP* **P** **20 12 59.3 +0.5**
MKAR Makanchi Array 44.75 303 P **P** **20 12 58.4 -0.3**
MKAR Makanchi Array 44.75 303 P **P** **20 12 59.3 +0.5**
MKAR Makanchi Array 44.75 303 P **P** **20 12 59.3 +0.5**
comp=Z,12nm,0.7s,baz=88,slow=10,SNR=100
MKAR LR LR 20 32 21.9
comp=Z,378nm,19.6s,baz=104,slow=37
comp=Z,12nm,0.7s
MTKI Muara Teweh, K 44.79 220 P **P** **20 13 01.8 +2.5**
MAKZ Makanchi 44.96 303 P **P** **20 13 00.7 +0.3**
MAKZ IAmb IAmb 20 13 03.9
comp=Z,27nm,1.0s
MAKZ Makanchi 44.96 303 P **P** **20 13 00.7 +0.3**
MAKZ pmax pmax
comp=Z,27nm,1.0s
SAUI Saumlaki 45.23 195 P P 20 13 09.2 +6.5
comp=Z,351nm,0.8s
N18K Kilae Creek 45.66 38 P **P** **20 13 07.8 +2.0**
N18K IAmb IAmb 20 13 29.6
comp=Z,13nm,1.2s
STKI Sintang 45.81 225 P **P** **20 13 08.5 +1.1**
comp=Z,1µmcomp=Z,37nm,1.0s
SVW2 Sparrevohn 45.84 37 P **P** **20 13 10.0 +2.8**
SVW2 IAmb IAmb 20 13 30.8
comp=Z,11nm,1.2s
KAPI Kappang 46.08 211 P **P** **20 13 10.6 +1.1**
KAPI Kappang 46.08 211 P **P** **20 13 10.6 +1.1**
KAPI pmax pmax
comp=Z,40nm,1.1s
BKSI Bulukumba 46.20 211 P **P** **20 13 14.4 +4.0**
comp=Z,16nm,1.1s
L19K White Mountain 46.24 35 P **P** **20 13 11.9 +1.6**
TAPN Taplejung 46.32 275 *eP* **P** **20 13 12.5 +0.7**
N19K Bonanza Creek 46.36 37 P **P** **20 13 13.5 +2.1**
N19K IAmb IAmb 20 13 43.9
comp=Z,16nm,1.6s
M19K Big River Lodg 46.45 36 P **P** **20 13 13.7 +1.7**
M19K IAmb IAmb 20 14 02.3
comp=Z,23nm,1.9s
KURK Kurchatov 46.60 309 P **P** **20 13 13.2 0.0**
KURK Kurchatov 46.60 309*ceP* **P** **20 13 11.5 -1.7**
KURK pmax pmax
comp=Z,38nm,0.8s
KURBB Kurchatov Arra 46.67 309 P **P** **20 13 14.0 +0.2**
comp=Z,14nm,0.5s,baz=84,slow=8.0,SNR=163
KURBB LR LR 20 33 34.3
comp=Z,603nm,19.0s,baz=55,slow=37
comp=Z,14nm,0.5s
K20K Telida 46.68 34 P **P** **20 13 15.1 +1.4**
J20K Nowinta River 46.71 33 P **P** **20 13 16.0 +2.1**
ODAN Odare 46.79 274 *eP* **P** **20 13 15.6 +0.2**
comp=Z,18nm,1.4s
BBKI Banjar Baru 46.97 218 P **P** **20 13 20.6 +4.1**
comp=Z,35nm,1.4s
OHAK Old Harbor 47.01 42 P **P** **20 13 17.8 +1.4**
IMAR Indian Mountai 47.04 30 P **P** **20 13 18.6 +2.1**
M20K Styx River 47.04 36 P **P** **20 13 18.6 +1.9**
RSO Redoubt South 47.21 38 P **P** **20 13 19.0 +0.9**
SRIT Nakonsritamara 47.26 245 P **P** **20 13 18.9 0.0**
KDAK Kodiak Island 47.36 42 P **P** **20 13 20.0 +0.9**
KDAK IAmb IAmb 20 13 31.1
comp=Z,15nm,1.0s
KDAK Kodiak Island 47.36 42 P **P** **20 13 20.0 +0.9**
KDAK pmax pmax
comp=Z,15nm,1.0s
RAMN Ramite 47.39 275 *eP* **P** **20 13 20.1 +0.1**
comp=Z,203nm,0.9s
H21K Melozitna Rive 47.40 31 P **P** **20 13 22.4 +3.1**
JIRN Jiri 47.41 276 *eP* **P** **20 13 21.0 +0.6**
comp=Z,192nm,1.2s
SHLS Shalkode 47.44 298 *eP* **P** **20 13 18.1 -2.0**
SHLS pmax pmax
comp=Z,13nm,1.1s
SHLS Shalkode 47.44 298 *eP* **P** **20 13 18.1 -2.0**
comp=Z,13nm,1.1s,baz=298
GUN Gumba 47.56 276 *eP* **P** **20 13 22.2 +0.7**
I21K Tanana 47.71 31 P **P** **20 13 23.7 +2.0**
TDK Taldyqorghan 47.75 301 *eP* **P** **20 13 22.9 +0.5**
TDK pmax pmax
comp=Z,24nm,1.3s
TDK MLR MLR
comp=Z,827nm,17.0s
TDK Taldyqorghan 47.75 301 *eP* **P** **20 13 22.9 +0.5**
comp=Z,24nm,1.3s,baz=301
TDK LR LR 20 33 40.8
comp=Z,827nm,17.1s,baz=301
KPKS Kokpek 47.91 299*c iP* **P** **20 13 24.1 +0.4**
KPKS pmax pmax
comp=Z,17nm,1.5s
KPKS Kokpek 47.91 299⇑*iP* **P** **20 13 24.1 +0.4**
comp=Z,16nm,1.5s,baz=299
PKI Pulchoki 48.08 276 *eP* **P** **20 13 25.5 0.0**
comp=Z,73nm,1.2s
PKIN Phulchoki 48.08 276 *eP* **P** **20 13 25.5 0.0**
comp=Z,38nm,0.7s
BPAW Bear Paw Mtn. 48.09 33 P **P** **20 13 26.8 +2.1**
BPAW IAmb IAmb 20 14 40.4
comp=Z,7.0nm,0.9s
KKN Kakani 48.09 277 *eP* **P** **20 13 25.6 +0.2**
KTH Kantishna Hill 48.10 34 P **P** **20 13 26.3 +1.4**
KTH IAmb IAmb 20 13 48.6
comp=Z,7.5nm,1.0s
ZHN Zhinishke 48.16 299 *eP* **P** **20 13 25.5 -0.2**
ZHN Zhinishke 48.16 299 *eP* **P** **20 13 25.6 -0.2**
baz=299
SATY Saty 48.21 298*c iP* **P** **20 13 26.4 +0.3**
SATY Saty 48.21 298⇑*iP* **P** **20 13 26.4 +0.3**
baz=298
MLY Manley 48.23 32 P **P** **20 13 26.7 +0.9**
MLY IAmb IAmb 20 13 40.3
comp=Z,40nm,2.0s
DMN Daman 48.30 276 *eP* **P** **20 13 27.6 +0.4**
ARXS Arharly 48.34 300 *i* P **P** **20 13 27.4 +0.4**
TRF Thorofare Moun 48.38 34 P **P** **20 13 28.4 +1.3**
MMRI Maumere 48.42 206 P P 20 13 33.8 +6.1
comp=Z,38nm,0.8s
GKN Gorkha 48.51 277 *eP* **P** **20 13 28.8 +0.2**
comp=Z,149nm,1.1s
HNR Honiara 48.66 156 LR LR 20 32 28.4
comp=Z,143nm,20.4s,baz=346,slow=34
EDFI Ende, Flores 48.73 207 P **P** **20 13 34.3 +4.1**
comp=Z,10nm,1.0s
H23K Yukon River 48.75 31 P **P** **20 13 31.2 +1.4**
H23K IAmb IAmb 20 13 58.3
comp=Z,8.2nm,0.9s
KULM Kulim 48.78 241 **P** **20 13 30.2 -0.4**
TOLK Toolik Lake Re 48.90 27 P **P** **20 13 31.4 +0.5**
TOLK IAmb IAmb 20 14 37.0
comp=Z,16nm,1.3s
NEA2 Nenana 48.93 32 P **P** **20 13 31.2 0.0**
NEA2 IAmb IAmb 20 13 59.2
comp=Z,15nm,1.4s
CHKK Chushkaly 49.01 300 *eP* **P** **20 13 32.1 +0.1**
CHKK Chushkaly 49.01 300 *eP* **P** **20 13 32.2 +0.1**
baz=300
RND Reindeer 49.03 34 P **P** **20 13 32.8 +0.8**
RND IAmb IAmb 20 13 54.1
comp=Z,9.5nm,1.1s
RND Reindeer 49.03 34 P **P** **20 13 32.8 +0.8**
RND pmax pmax
comp=Z,10.0nm,1.1s
DANN Dangsing 49.07 278 *eP* **P** **20 13 33.7 +0.6**
IPM Ipoh 49.09 240 P **P** **20 13 32.2 -0.8**
IPM IAmb IAmb 20 13 33.7
comp=Z,21nm,1.0s
MDOK Medeo 49.15 299 *i* P **P** **20 13 34.2 +0.9**
MDOK MLR MLR
comp=Z,666nm,16.0s
MDOK Medeo 49.15 299 *i* P **P** **20 13 34.2 +0.9**
baz=299
MDOK LR LR 20 33 50.3
comp=Z,666nm,15.6s,baz=299
MYKOM Kota Tinggi 49.15 234 P **P** **20 13 33.3 -0.1**
MYKOM IAmb IAmb 20 13 35.1
comp=Z,17nm,1.2s
AAA Alma-Ata 49.23 299*c iP* **P** **20 13 34.9 +1.1**
AAA pmax pmax
comp=Z,15nm,0.7s
AAA Alma-Ata 49.23 299⇑*iP* **P** **20 13 35.0 +1.1**
comp=Z,15nm,0.7s,baz=299
KNK Knik Glacier 49.28 37 P **P** **20 13 35.1 +1.2**
KNK IAmb IAmb 20 14 08.7
comp=Z,26nm,1.6s
MDM Murphy Dome 49.29 32 P **P** **20 13 34.8 +0.9**
MDM IAmb IAmb 20 14 01.9
comp=Z,10nm,1.0s
SML Sawmill 49.32 36 P **P** **20 13 35.1 +0.8**
SML IAmb IAmb 20 14 10.1
comp=Z,9.4nm,0.8s
PWL Port Wells 49.37 37 P **P** **20 13 35.8 +1.3**
PWL IAmb IAmb 20 14 02.1
comp=Z,8.4nm,1.0s
BATI Baumata 49.40 204 P P 20 13 40.7 +5.4
comp=Z,29nm,1.0s
H24K Noodor Dome 49.44 31 P **P** **20 13 37.1 +2.1**
KOLN Koldanda 49.44 277 *eP* **P** **20 13 35.2 -0.6**
KUU Kurty 49.45 300*c iP* **P** **20 13 35.3 -0.2**
KUU pmax pmax
comp=Z,21nm,1.0s
KUU MLR MLR
comp=Z,519nm,15.0s
KUU Kurty 49.45 300⇑*iP* **P** **20 13 35.3 -0.2**
comp=Z,21nm,1.0s,baz=300
KUU LR LR 20 35 01.6
comp=Z,519nm,15.2s,baz=300
CCB Clear Creek Bu 49.47 32 P **P** **20 13 37.3 +2.0**
DHY Denali Highway 49.71 34 P **P** **20 13 39.2 +1.9**
PYUN Piuthan 49.79 278 *eP* **P** **20 13 38.8 +0.3**
SCM Sheep Creek Mo 49.80 36 P **P** **20 13 39.8 +1.9**
SCM IAmb IAmb 20 14 33.2
comp=Z,10nm,1.0s
SCM Sheep Creek Mo 49.80 36 P **P** **20 13 39.8 +1.9**
SCM pmax pmax
comp=Z,11nm,1.0s
IL31 49.87 32 P **P** **20 13 38.2 0.0**
IL31 IAmb IAmb 20 14 04.5
comp=Z,12nm,1.3s
ILAR Eielson Array 49.87 32 P **P** **20 13 38.2 -0.1**
ILAR Eielson Array 49.87 32 P **P** **20 13 38.9 +0.6**
ILAR Eielson Array 49.87 32 P **P** **20 13 38.9 +0.6**
comp=Z,2.9nm,0.9s,baz=266,slow=6.5,SNR=18
ILAR LR LR 20 37 05.5
comp=Z,95nm,18.9s,baz=256,slow=39
comp=Z,2.9nm,0.9s
MTN Manton Dam 49.99 194 P **P** **20 13 39.7 0.0**
MTN IAmb IAmb 20 13 48.2
comp=Z,27nm,1.3s
COEN Coen 50.08 178 P **P** **20 13 41.1 +0.7**
COEN IAmb IAmb 20 14 17.8
comp=Z,21nm,1.1s
COEN Coen 50.08 178 P **P** **20 13 40.9 +0.5**
TKM2 Tokmak 2 50.23 299 P **P** **20 13 42.6 +1.0**
SNR=36
FID Port Fidalgo 50.29 37 P **P** **20 13 43.5 +1.9**
FID IAmb IAmb 20 13 47.7
comp=Z,14nm,1.2s
HIN Hinchinbrook I 50.31 38 P **P** **20 13 43.9 +2.2**
HIN IAmb IAmb 20 14 04.4
comp=Z,17nm,1.0s
TPI Tanjungpandan 50.31 227 P **P** **20 13 44.5 +2.3**
comp=Z,19nm,1.1s
NRN Naryn 50.37 297 P **P** **20 13 43.0 +0.2**
NRN IAmb IAmb 20 13 54.4
comp=Z,35nm,1.6s
NRN Naryn 50.37 297 P **P** **20 13 43.0 +0.2**
NRN pmax pmax
comp=Z,35nm,1.6s
WBSI Waikabubak, Su 50.42 209 P **P** **20 13 47.7 +4.7**
comp=Z,23nm,0.8s
BRZS Berezniki 50.47 309*c iP* **P** **20 13 42.8 -0.3**
BRZS pmax pmax
comp=Z,11nm,1.0s
BRZS Berezniki 50.47 309⇑*iP* **P** **20 13 42.9 -0.2**
comp=Z,11nm,1.0s,baz=308
PBA Port Blair 50.48 254 P **P** **20 13 43.7 +0.1**
KMMI Kalianget 50.50 217 P **P** **20 13 47.7 +4.1**
comp=Z,51nm,1.8s
TWSI Taliwang, Sumb 50.64 213 P P 20 13 49.6 +4.9
comp=Z,18nm,1.1s
BTLS Baital 50.74 302*c iP* **P** **20 13 45.3 +0.1**
BTLS pmax pmax
comp=Z,8.0nm,0.9s
BTLS Baital 50.74 302⇑*iP* **P** **20 13 45.4 +0.1**
comp=Z,8.2nm,0.9s,baz=302
BMAR Burnt Mountain 50.74 29 P **P** **20 13 47.6 +2.7**
PPBI Pangkal Pinang 50.74 229 P **P** **20 13 46.7 +1.2**
comp=Z,22nm,1.0s
SGDS Sogindy 50.77 300*c iP* **P** **20 13 45.4 -0.1**
SGDS pmax pmax
comp=Z,7.0nm,1.1s
SGDS Sogindy 50.77 300⇑*iP* **P** **20 13 45.4 -0.1**
comp=Z,7.0nm,1.1s,baz=300
KBK Karagaybulak 50.77 299 P **P** **20 13 47.1 +1.5**
SNR=20
CHMS Chumysh 50.81 299 P **P** **20 13 46.9 +1.1**
SNR=8.1
USP Ospenovka 50.91 300 P **P** **20 13 47.3 +0.8**
SNR=16
KSH Kashi 50.98 295 P P 20 13 52.0 +4.8
KSH sP sP 20 14 01.8 +3.2
KSH pmax pmax
comp=Z,11nm,1.0s
KSH LR LR
comp=Z,810nm,18.2s
KSH LR LR
comp=Z,640nm,18.2s
KSH LR LR
comp=Z,1µm,17.5s
AAK Ala-Archa 51.09 299 P **P** **20 13 48.3 +0.2**
AAK IAmb IAmb 20 13 59.5
comp=Z,18nm,1.0s
AAK Ala-Archa 51.09 299 P **P** **20 13 48.3 +0.2**
AAK pmax pmax
comp=Z,18nm,1.0s
BVAR Borovoye Array 51.26 313 P **P** **20 13 48.7 -0.2**
BVAR Borovoye Array 51.26 313 P **P** **20 13 48.7 -0.2**
comp=Z,5.0nm,0.8s,baz=83,slow=8.1,SNR=2.0
BVAR LR LR 20 36 42.4
comp=Z,779nm,18.0s,baz=74,slow=37
comp=Z,5.0nm,0.8s
J26L Joseph Creek 51.31 32 P **P** **20 13 50.1 +0.8**
BRVK Borovoye 51.31 313 P **P** **20 13 49.4 0.0**
BRVK IAmb IAmb 20 13 50.9
comp=Z,14nm,0.9s
BRVK Borovoye 51.31 313*ceP* **P** **20 13 50.1 +0.7**
BRVK pmax pmax
comp=Z,17nm,1.0s
LHMI Lhok Sumawe 51.47 244 P **P** **20 13 49.2 -1.8**
L26K Log Cabin Wild 51.54 34 P **P** **20 13 51.9 +0.9**
EKS2 Erkin-Say 51.59 299 P **P** **20 13 52.9 +1.1**
SNR=7.0
JAGI Jajag, Banyuwa 51.65 216 P **P** **20 13 51.6 -0.6**
JAGI IAmb IAmb 20 14 06.9
comp=Z,20nm,1.0s
BERG Berg Lake 51.69 38 **S** **20 21 13.4 +2.0**
PSI Prapat 51.75 240 LR LR 20 38 00.8
comp=Z,257nm,18.2s,baz=156,slow=38
M26K Nabesna, AK 51.77 35 P **P** **20 13 52.7 0.0**
M26K IAmb IAmb 20 14 16.9
comp=Z,15nm,1.4s
AML Almayashu 51.81 299 P **P** **20 13 55.4 +1.7**
SNR=27
GMJI Gumukmas 51.81 217 P **P** **20 13 58.0 +4.5**
comp=Z,24nm,1.4s
K27K Chicken 52.00 33 P **P** **20 13 55.4 +1.1**
NGJI Ngawi 52.02 220 P **P** **20 13 59.4 +4.4**
comp=Z,43nm,0.9s
KCSI Kotacane, Aceh 52.06 242 P **P** **20 13 56.7 +1.3**
comp=Z,12nm,1.0s
BKNI Bangkinang 52.10 236 P **P** **20 13 55.6 -0.1**
L27K Beaver Creek, 52.23 34 P **P** **20 13 57.7 +1.6**
L27K IAmb IAmb 20 14 19.4
comp=Z,20nm,1.6s
BCAR Beaver Creek A 52.24 34 P **P** **20 13 57.8 +1.6**
SMRI Semarang 52.28 221 P **P** **20 14 00.8 +3.8**
comp=Z,48nm,0.5s
M27K Edge Creek, AK 52.29 35 P **P** **20 13 57.4 +0.6**
EGAK Eagle 52.31 32 P **P** **20 13 57.9 +1.2**
KNRA Kunumurra 53.23 196 P **P** **20 14 03.9 0.0**
KNRA Kunumurra 53.23 196 P **P** **20 14 03.9 0.0**
DZA Taraz 53.24 300*c iP* **P** **20 14 04.4 +0.6**
DZA Taraz 53.24 300⇑*iP* **P** **20 14 04.5 +0.6**
baz=300
I29M Ogilvie Camp, 53.44 31 P **P** **20 14 04.7 -0.3**
I29M IAmb IAmb 20 14 34.2
comp=Z,21nm,1.4s
KRJI Kerinci 53.63 234 P **P** **20 14 09.6 +2.5**
comp=Z,59nm,0.8s
KK31 Karatay Array 53.74 301 P **P** **20 14 07.8 +0.2**
KK31 IAmb IAmb 20 14 13.6
comp=Z,19nm,0.9s
KK31 Karatay Array 53.74 301 P **P** **20 14 07.8 +0.2**
KK31 pmax pmax
comp=Z,19nm,1.0s
KKAR Karatay Array 53.74 301 P **P** **20 14 07.8 +0.3**
KKAR Karatay Array 53.74 301 P **P** **20 14 07.9 +0.3**
KKAR IAmb IAmb 20 14 13.6
comp=Z,19nm,0.9s
KKAR Karatay Array 53.74 301 P **P** **20 14 07.8 +0.3**
KKAR pmax pmax
comp=Z,19nm,1.0s
GSI Gunungsitoli 53.76 240 P **P** **20 14 07.2 -0.7**
GSI Gunungsitoli 53.76 240 P **P** **20 14 09.4 +1.5**
comp=Z,54nm,0.8s
GSI Gunungsitoli 53.76 240 P **P** **20 14 08.0 +0.1**
EPYK Eagle Plains 53.92 30 P **P** **20 14 10.2 +1.6**
DRK Karamyk 54.03 296 P **P** **20 14 10.7 +0.6**
IUG Iuzhnay 54.39 300*c iP* **P** **20 14 13.0 +0.7**
IUG Iuzhnay 54.39 300⇑*iP* **P** **20 14 13.1 +0.7**
baz=300
BTK Batken 54.54 297 P **P** **20 14 13.8 +0.3**
BTK IAmb IAmb 20 14 41.7
comp=Z,22nm,1.1s
BTK Batken 54.54 297 P **P** **20 14 13.8 +0.3**
BTK pmax pmax
comp=Z,22nm,1.2s
M30M Minto, Yukon 54.59 34 P **P** **20 14 14.3 +0.9**
HYT Haines Junctio 54.62 36 P **P** **20 14 16.5 +2.7**
HYT IAmb IAmb 20 14 37.2
comp=Z,23nm,1.3s
INK Inuvik 54.81 27 P **P** **20 14 16.1 +1.3**
INK IAmb IAmb 20 14 40.4
comp=Z,9.7nm,0.9s
INK Inuvik 54.81 27 P **P** **20 14 16.2 +1.3**
INK pmax pmax
comp=Z,10.0nm,0.9s
INK Inuvik 54.81 27 P **P** **20 14 15.0 +0.1**
comp=Z,1.5nm,0.3s,baz=296,slow=6.0,SNR=5.0
INK LR LR 20 39 43.0
comp=Z,104nm,18.8s,baz=250,slow=38
comp=Z,1.5nm,0.3s
NIL Nilore 55.14 289 P **P** **20 14 18.1 +0.2**
NIL Nilore 55.14 289 P **P** **20 14 18.1 +0.2**
NIL pmax pmax
comp=Z,26nm,0.7s
TAS Tashkent 55.19 299 P **P** **20 14 18.7 +0.7**
TAS Tashkent 55.19 299 P **P** **20 14 18.7 +0.7**
TAS pmax pmax
comp=Z,54nm,0.8s
GAR Garm 55.28 296 P **P** **20 14 19.4 +0.5**
N31M Braeburn, Yuko 55.29 35 P **P** **20 14 21.0 +2.4**
N31M IAmb IAmb 20 14 31.9
comp=Z,20nm,1.2s
M31M Drury Creek, Y 55.76 34 P **P** **20 14 22.5 +0.6**
WHY Whitehorse 55.91 36 P **P** **20 14 24.6 +1.5**
WHY IAmb IAmb 20 14 45.4
comp=Z,22nm,1.6s
FARO Faro, Yukon 56.23 34 P **P** **20 14 26.7 +1.5**
CHGR Chuyangaron 56.25 296 P **P** **20 14 26.1 +0.3**
CHGR Chuyangaron 56.25 296 P **P** **20 14 26.1 +0.3**
CHGR pmax pmax

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WB0 Warramunga Arr 56.29 188 P **P** **20 14 24.5 -1.5**
WB0 IAmb IAmb 20 14 35.7
comp=Z,16nm,1.0s
FITZ Fitzroy Crossi 56.31 199 P **P** **20 14 26.2 +0.1**
FITZ IAmb IAmb 20 14 44.5
comp=Z,35nm,1.7s
FITZ Fitzroy Crossi 56.31 199 P **P** **20 14 26.9 +0.8**
WRAB Tennant Creek 56.45 188 P **P** **20 14 25.7 -1.5**
WRAB Tennant Creek 56.45 188 *i* P **P** **20 14 26.4 -0.8**
WRAB pmax pmax
comp=Z,9.0nm,1.0s
WRAB Tennant Creek 56.45 188 P **P** **20 14 27.0 -0.2**
WR0 Warramunga Arr 56.46 188 P **P** **20 14 25.9 -1.3**
WB2 Warramunga Arr 56.46 188 P **P** **20 14 26.4 -0.9**
WRA Warramunga Arr 56.47 188 P **P** **20 14 25.9 -1.4**
WRA Warramunga Arr 56.47 188 P **P** **20 14 26.7 -0.6**
WRA Warramunga Arr 56.47 188 P **P** **20 14 26.7 -0.6**
comp=Z,3.8nm,0.8s,baz=7.2,slow=7.4,SNR=29
WRA LR LR 20 39 13.4
comp=Z,121nm,19.1s,baz=16,slow=37
comp=Z,3.8nm,0.8s
QIS Mount Isa 56.67 182 P **P** **20 14 28.8 +0.1**
P33M Teslin, Yukon 57.02 36 P **P** **20 14 31.7 +0.8**
P33M IAmb IAmb 20 14 35.6
comp=Z,8.2nm,0.9s
ARU Arti 57.07 319 P **P** **20 14 31.5 +0.2**
ARU Arti 57.07 319*c i* P **P** **20 14 31.4 +0.2**
ARU 20 15 21.3
ARU 20 16 36.4
ARU S **S** **20 22 27.5 +3.6**
ARU SS **SS** **20 26 14.7 +2.4**
ARU pmax pmax
comp=Z,47nm,1.2s
ARU MLR MLR
comp=Z,625nm,16.0s
ARU Arti 57.07 319 P **P** **20 14 31.5 +0.2**
comp=Z,17nm,0.8s,baz=80,slow=5.0
ARU LR LR 20 41 12.5
comp=Z,529nm,19.1s,baz=72,slow=38
comp=Z,17nm,0.8s
KBL Kabul 57.96 292 P **P** **20 14 37.2 -0.9**
KBL Kabul 57.96 292 P **P** **20 14 37.2 -0.9**
KBL pmax pmax
comp=Z,38nm,0.6s
HYBB Hyderabad (bro 58.52 269 *e*P **P** **20 14 41.9 -0.1**
HYBB *es*P **pwP** **20 14 52.1 -0.8**
HYBB *e*PcP **PcP** **20 15 31.5 -0.8**
HYBB *e*PcS **PcS** **20 19 33.7 -0.6**
HYBB *e*S **S** **20 22 43.9 -0.2**
ABKAR Akbulak array 58.61 311 P **P** **20 14 41.7 -0.5**
ABKAR Akbulak array 58.61 311 P **P** **20 14 41.9 -0.3**
ABKAR IAmb IAmb 20 14 43.3
comp=Z,11nm,0.8s
AKTO Aktyubinsk 59.36 312 P **P** **20 14 47.2 -0.2**
AKTO Aktyubinsk 59.36 312 P **P** **20 14 47.1 -0.2**
comp=Z,8.4nm,0.9s,baz=75,slow=12,SNR=12
AKTO LR LR 20 41 32.0
comp=Z,424nm,19.5s,baz=71,slow=37
comp=Z,8.4nm,0.9s
AS31 Alice Springs 60.19 188 P **P** **20 14 52.5 -0.8**
ASAR Alice Springs 60.19 188 P **P** **20 14 52.6 -0.7**
ASAR Alice Springs 60.19 188 P **P** **20 14 52.9 -0.4**
ASAR Alice Springs 60.19 188 P **P** **20 14 52.9 -0.4**
comp=Z,2.6nm,0.8s,baz=9.9,slow=6.8,SNR=26
ASAR LR LR 20 41 18.9
comp=Z,85nm,19.2s,baz=316,slow=36
comp=Z,2.6nm,0.8s
MBWA Marble Bar 60.92 204 P **P** **20 14 57.5 -0.8**
MBWA IAmb IAmb 20 15 20.9
comp=Z,7.3nm,0.8s
MBWA Marble Bar 60.92 204 P **P** **20 14 58.6 +0.3**
KIRV Kirov 60.97 323*ce*P **P** **20 14 57.9 -0.3**
KIRV Kirov 60.97 323 LR LR 20 43 58.1
comp=Z,249nm,18.6s,baz=64,slow=38
SPITS Spitsbergen Ar 61.23 349 P **P** **20 14 59.8 +0.1**
SPITS pmax pmax
comp=Z,109nm,1.7s
SPITS Spitsbergen Ar 61.23 349 LR LR 20 45 14.1
comp=Z,174nm,18.2s,baz=1.0,slow=40
PSA00 Pilbara Seismi 61.27 203 P **P** **20 15 00.1 -0.5**
PSA00 IAmb IAmb 20 15 25.7
comp=Z,23nm,1.9s
PSA00 Pilbara Seismi 61.27 203 P **P** **20 15 00.1 -0.5**
PSA00 IAmb IAmb 20 16 15.6
comp=Z,22nm,1.4s
PRGR Permogore 61.49 327 *e*P **P** **20 15 00.3 -1.4**
BBB Bella Bella 62.30 44 LR LR 20 38 24.9
comp=Z,56nm,21.0s,baz=286,slow=32
WRKA Warakurna 62.41 194 P **P** **20 15 08.5 +0.2**
PALK Pallekele 62.56 258 LR LR 20 45 19.1
comp=Z,111nm,18.3s,baz=193,slow=39
DZM Mont Dzumac 62.62 154 *e*LR LR 20 33 46.4
comp=Z,321nm,21.1s
DZM Mont Dzumac 62.62 154 LR LR 20 40 33.6
comp=Z,248nm,20.2s,baz=20,slow=34
MARNC Mare, Loyalty 62.66 152 P **P** **20 15 10.1 +0.2**
comp=Z,0.7nm,1.1s
HRA Herat 63.09 294 P **P** **20 15 12.7 -0.4**
HRA IAmb IAmb 20 15 15.1
comp=Z,22nm,1.4s
RES Resolute Bay 63.15 14 LR LR 20 42 17.4
comp=Z,49nm,21.7s,baz=357,slow=36
MSVF Nonsavu 63.79 141 LR LR 20 37 41.4
comp=Z,121nm,20.7s,baz=342,slow=31
INKA Innaminka 63.79 181 P **P** **20 15 18.8 +1.5**
OOD Oodnadatta 64.10 186 P **P** **20 15 19.9 +0.6**
YKA Yellowknife Ar 64.20 30 P **P** **20 15 20.9 +1.2**
YKA Yellowknife Ar 64.20 30 P **P** **20 15 20.9 +1.2**
comp=Z,3.7nm,0.9s,baz=300,slow=6.6,SNR=9.0
YKA LR LR 20 44 01.2
comp=Z,41nm,21.2s,baz=317,slow=37
comp=Z,3.7nm,0.9s
GEYT Alibeck 64.44 299 P **P** **20 15 21.9 +0.1**
GEYT IAmb IAmb 20 15 34.2
comp=Z,10nm,0.8s
GEYT Alibeck 64.44 299 P **P** **20 15 21.6 -0.2**
comp=Z,8.9nm,1.0s,baz=45,slow=2.3,SNR=13
GEYT LR LR 20 45 23.6
comp=Z,195nm,18.7s,baz=50,slow=38
comp=Z,8.9nm,1.0s
GYA0B ALIBECK ARRAY 64.44 299 P **P** **20 15 21.4 -0.3**
GYA0B IAmb IAmb 20 15 34.2
comp=Z,10nm,0.8s
KLMR Klimovskoe 64.48 328 *e*P **P** **20 15 20.9 -0.7**
KLMR pmax pmax
comp=Z,27nm,1.3s
KLMR Klimovskoe 64.48 328 *e*P **P** **20 15 20.9 -0.7**
KLMR AMP 20 15 23.0
comp=Z,27nm,1.3s
BELG Belogornoye 64.50 317*c i* P **P** **20 15 21.6 -0.2**
BELG pmax pmax
comp=Z,8.0nm,1.1s
BELG Belogornoye 64.50 317 LR LR 20 45 23.3
comp=Z,272nm,18.4s,baz=76,slow=38
ARCES ARCESS Array B 64.72 340 P **P** **20 15 23.0 0.0**
ARCES ARCESS Array B 64.72 340 P **P** **20 15 23.0 0.0**
comp=Z,5.7nm,0.8s,baz=54,slow=6.2,SNR=9.1
ARCES LR LR 20 49 53.5
comp=Z,319nm,18.1s,baz=33,slow=42
comp=Z,5.7nm,0.8s
AFI Afiamalu 66.46 130 LR LR 20 42 20.9
comp=Z,116nm,18.5s,baz=54,slow=34
LCRK Leigh Creek 66.56 183 P **P** **20 15 36.5 +1.2**
STKA Stephens Creek 67.90 180 P **P** **20 15 44.0 +0.3**
STKA Stephens Creek 67.90 180 P **P** **20 15 44.0 +0.3**
comp=Z,3.8nm,0.9s,baz=343,slow=1.1,SNR=4.9
comp=Z,3.8nm,0.9s
MOS Moscow 67.97 324 *e*P **P** **20 15 44.1 +0.1**
MOS pmax pmax
comp=Z,50nm,1.0s
FORT Forrest 68.05 193 P **P** **20 15 44.3 -0.3**
VRH Novokhopyorsk 68.29 318 *e*P **P** **20 15 44.6 -1.5**
VRH pmax pmax
comp=Z,10.0nm,0.9s
VRH MLR MLR
comp=Z,670nm,15.0s
OBN Obninsk 68.82 324*d i* P **P** **20 15 50.0 +0.7**
OBN *e* 20 16 14.2
OBN *e* 20 18 25.5
OBN *e*S **S** **20 24 51.5 +0.6**
OBN pmax pmax
comp=Z,32nm,1.3s
OBN MLR MLR
comp=Z,515nm,16.0s
LPSR Galich'ya Gora 69.01 320 *e*P **P** **20 15 50.1 -0.5**

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LPSR pmax pmax
comp=Z,20nm,0.8s
LPSR MLR MLR
comp=Z,600nm,15.0s
B08A Colville Reser 69.06 45 P **P** **20 15 52.1 +1.0**
B08A IAmb IAmb 20 17 33.7
comp=Z,7.6nm,0.8s
MAK Makhachkala 69.12 308 *e*P **P** **20 15 49.2 -2.2**
MAK *e* 20 18 23.9
MAK *e*PPP PPP 20 20 08.3
MAK *e*S **S** **20 24 50.5 -4.5**
MAK *e*SSS SSS 20 32 30.3
MAK pmax pmax
comp=Z,212nm,1.3s
MAK MLR MLR
comp=Z,223nm,15.0s
VORR Voronezh 69.37 320 *e*P **P** **20 15 53.4 +0.6**
VORR pmax pmax
comp=Z,30nm,0.4s
FIA1 FINESS Array S 69.54 332 P **P** **20 15 53.9 +0.2**
FINES FINESS Array B 69.54 332 P **P** **20 15 53.8 +0.1**
FINES FINESS Array B 69.54 332 P **P** **20 15 54.4 +0.7**
FINES FINESS Array B 69.54 332 P **P** **20 15 54.4 +0.7**
comp=Z,11nm,0.8s,baz=54,slow=8.2,SNR=23
FINES LR LR 20 48 46.2
comp=Z,290nm,18.1s,baz=36,slow=38
comp=Z,11nm,0.8s
VSR Storozhevoye 69.64 319 *e*P **P** **20 15 54.2 -0.3**
VSR pmax pmax
comp=Z,20nm,1.0s
VSR MLR MLR
comp=Z,770nm,16.0s
C09A Chrisman Ranch 69.96 45 P **P** **20 15 57.0 +0.4**
D08A Wollman Farm, 69.98 46 P **P** **20 15 57.6 +0.9**
D08A IAmb IAmb 20 17 54.9
comp=Z,8.3nm,0.8s
YBH Yreka Blue Hor 70.48 52 P **P** **20 16 01.0 +1.0**
YBH Yreka Blue Hor 70.48 52 P **P** **20 16 01.0 +1.0**
YBH pmax pmax
comp=Z,4.0nm,1.1s
YBH Yreka Blue Hor 70.48 52 LR LR 20 42 57.7
comp=Z,23nm,19.1s,baz=300,slow=32
L04D Klamath Falls 70.48 52 P **P** **20 16 00.9 +0.9**
L04D IAmb IAmb 20 16 13.9
comp=Z,12nm,1.0s
PINE Pine Mountain 70.50 50 P **P** **20 16 00.4 +0.2**
E09A Wood Farm, Sta 70.72 46 P **P** **20 16 02.0 +0.8**
E09A IAmb IAmb 20 17 55.1
comp=Z,12nm,1.1s
JMIC Jan Mayen 70.84 350 LR LR 20 48 17.9
comp=Z,25nm,19.8s,baz=52,slow=37
MEF Metsahovi 70.97 332 *e*P **P** **20 16 03.4 +1.0**
K05A Summer Lake 71.10 51 P **P** **20 16 05.5 +1.7**
K05A IAmb IAmb 20 16 17.8
comp=Z,16nm,1.1s
VSU Vasula 71.18 330 *e*P **P** **20 16 04.7 +0.9**
I07A Izee 71.23 49 P **P** **20 16 05.5 +1.0**
GUDG Gudauri 71.28 309 P **P** **20 16 05.1 +0.1**
GUDG IAmb IAmb 20 16 06.7
comp=Z,15nm,0.9s
GUDG Gudauri 71.28 309 P **P** **20 16 05.1 +0.1**
GUDG pmax pmax
comp=Z,15nm,0.9s
SUMG Summit 71.33 0 P **P** **20 16 05.9 +0.9**
SUMG IAmb IAmb 20 16 30.8
comp=Z,9.3nm,0.9s
SUMG Summit 71.33 0 P **P** **20 16 05.9 +0.9**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 71.33 0 *i* P **P** **20 16 06.0 +0.9**
WSAR Wadi Sarin 71.36 285 LR LR 20 52 11.0
comp=Z,146nm,19.1s,baz=88,slow=40
RAF Rauma 71.40 334 *e*P **P** **20 16 05.9 +0.9**
KBZ Khabaz 71.58 311*ce*P **P** **20 16 07.1 +0.7**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 71.58 311 P **P** **20 16 07.5 +1.1**
comp=Z,10nm,1.0s,baz=65,slow=5.1,SNR=14
KBZ LR LR 20 51 22.4
comp=Z,171nm,19.1s,baz=53,slow=39
comp=Z,10nm,1.0s
KVAR Kislovodsk Arr 71.58 311 P **P** **20 16 06.5 -0.1**
comp=Z,9.0nm,1.0s,baz=80,slow=6.1,SNR=6.6
KVAR LR LR 20 49 40.9
comp=Z,192nm,18.3s,baz=294,slow=38
comp=Z,9.0nm,1.0s
KIV Kislovodsk 71.58 311 ⇑P **P** **20 16 07.1 +0.5**
KIV Kislovodsk 71.58 311 P **P** **20 16 06.7 +0.1**
KIV Kislovodsk 71.58 311 *e*P **P** **20 16 07.5 +0.9**
KIV pmax pmax
comp=Z,27nm,1.1s
KIV MLR MLR
comp=Z,190nm,18.0s
BMO Blue Mountains 72.12 47 P **P** **20 16 10.7 +0.8**
BMO Blue Mountains 72.12 47 P **P** **20 16 10.7 +0.8**
BMO pmax pmax
comp=Z,8.0nm,1.2s
MTSE Matsula 72.18 331 *e*P **P** **20 16 10.8 +1.1**
JTMT Jette 72.24 43 P **P** **20 16 11.1 +0.6**
UOSS Minazif 72.33 288 P **P** **20 16 11.6 +0.3**
UOSS IAmb IAmb 20 16 12.4
comp=Z,10.0nm,0.9s
GNI Garni 72.36 307*ce*P **P** **20 16 11.7 +0.2**
GNI pmax pmax
comp=Z,19nm,1.7s
GNI Garni 72.36 307 P **P** **20 16 11.1 -0.4**
comp=Z,9.4nm,1.1s,baz=101,slow=5.4,SNR=4.7
GNI LR LR 20 50 30.0
comp=Z,154nm,18.7s,baz=67,slow=38
comp=Z,9.4nm,1.1s
BEKR Beckworth 72.98 53 P **P** **20 16 15.6 +0.4**
MNK Minsk 73.22 326 *i* P **P** **20 16 14.7 -1.3**
MNK *i* 20 16 30.9
MNK *i* 20 18 57.8
MNK *i* PPP PPP 20 20 42.7
MNK *i* S **S** **20 25 41.1 -0.9**
MNK *i* 20 26 20.3
MNK *i* SS **SS** **20 30 23.9 +1.0**
MNK pmax pmax
comp=N,11nm,1.1s
MNK pmax pmax
comp=Z,37nm,1.1s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK MLR MLR
comp=N,23nm,16.0s
MNK MLR MLR
comp=E,54nm,16.0s
MNK MLR MLR
comp=Z,242nm,16.0s
MNK Minsk 73.22 326 *i* P **P** **20 16 14.8 -1.3**
comp=E,2.0nm,0.9s
MNK *i* P **P** **20 16 14.8 -1.3**
comp=N,11nm,1.1s
MNK *i* P **P** **20 16 14.8 -1.3**
comp=Z,37nm,1.1s,baz=230
MNK *i* PcP **PcP** **20 16 30.9 -1.5**
MNK *i* PP **PP** **20 18 57.8 -0.9**
MNK *i* PPP PPP 20 20 42.8
MNK *i* S **S** **20 25 41.2 -0.9**
MNK *i* SS **SS** **20 30 24.0 +1.0**
MNK *i* SSS SSS 20 33 45.3
MNK *i* LR LR 20 49 23.5
MNK *i* LRM MLR 20 51 20.1
comp=N,23nm,15.7s
MNK *i* LRM MLR 20 51 45.9
comp=E,54nm,16.4s
MNK *i* LRM MLR 20 51 49.8
comp=Z,242nm,15.8s
ISAL Salakas 73.30 328 *e*P **P** **20 16 18.4 +1.9**
IIGN Ignalina 73.41 327 *e*P **P** **20 16 18.1 +1.0**
NACGM Naroch 73.45 327⇑ *e*P **P** **20 16 18.2 +0.9**
baz=49
SOC Sochi 73.58 312 *e*P **P** **20 16 16.0 -2.4**
SOC *e* 20 19 01.0
SOC *e*PPP PPP 20 20 47.3
SOC *e*S **S** **20 25 44.7 -1.8**
SOC *e*SS **SS** **20 30 25.7 -3.3**
SOC MLR MLR
comp=Z,358nm,22.0s
PAHR Pah Rah Range 73.70 53 IAmb IAmb 20 16 33.5
comp=Z,10nm,1.3s
YERR Yerington 74.19 53 IAmb IAmb 20 16 40.5
comp=Z,8.4nm,1.0s
ANN Anapa 74.22 314 *e*P **P** **20 16 20.2 -1.9**

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ANN *e*PPP PPP 20 20 50.0
ANN *e*S **S** **20 25 52.2 -1.5**
ANN pmax pmax
comp=Z,25nm,0.8s
PABE Paberze 74.27 328 *e*P **P** **20 16 22.9 +0.8**
HFS Hagfors 74.82 336 LR LR 20 52 06.8
comp=Z,436nm,19.2s,baz=26,slow=38
RYN Ryan 74.86 53 IAmb IAmb 20 16 44.4
comp=Z,18nm,1.7s
NC204 NORSAR Array S 74.87 338 P **P** **20 16 26.1 +0.5**
KVN Kaiserville 74.89 53 P **P** **20 16 27.0 +0.6**
KVN IAmb IAmb 20 16 40.2
comp=Z,14nm,1.3s
KVN Kaiserville 74.89 53 P **P** **20 16 27.0 +0.6**
KVN pmax pmax
comp=Z,14nm,1.3s
NB2 NORSAR Subarra 74.91 338 P **P** **20 16 26.8 +0.9**
comp=Z,4.6nm,0.7s,baz=40,slow=5.9
NOA NORSAR Array B 74.91 338 P **P** **20 16 26.5 +0.6**
NOA NORSAR Array B 74.91 338 P **P** **20 16 26.5 +0.6**
comp=Z,9.1nm,0.8s,baz=39,slow=5.8,SNR=32
NOA LR LR 20 51 38.3
comp=Z,311nm,21.7s,baz=40,slow=38
comp=Z,9.1nm,0.8s
BOZ Bozeman (W) 74.97 44 P **P** **20 16 27.1 +0.4**
BOZ IAmb IAmb 20 16 39.7
comp=Z,12nm,1.4s
BOZ Bozeman (W) 74.97 44 P **P** **20 16 27.1 +0.4**
BOZ pmax pmax
comp=Z,12nm,1.4s
GURO Guroymak-BITLI 75.00 307 IAmb IAmb 20 16 29.2
comp=Z,13nm,1.2s
AKASG Malin Array Be 75.02 323 P **P** **20 16 26.6 +0.1**
AKASG IAmb IAmb 20 16 28.1
comp=Z,15nm,1.4s
AKASG Malin Array Be 75.02 323 P **P** **20 16 26.9 +0.3**
AKASG Malin Array Be 75.02 323 P **P** **20 16 26.9 +0.3**
comp=Z,6.6nm,0.6s,baz=46,slow=6.1,SNR=42
AKASG LR LR 20 52 18.1
comp=Z,353nm,19.7s,baz=48,slow=38
comp=Z,6.6nm,0.6s
MDPB Devils Postpil 75.06 54 P **P** **20 16 26.3 -1.1**
LHV Little Huntoon 75.08 53 P **P** **20 16 28.0 +0.8**
LHV IAmb IAmb 20 16 41.1
comp=Z,12nm,1.1s
NVAR Mina Array Bea 75.11 53 P **P** **20 16 28.7 +1.0**
comp=Z,4.1nm,0.9s,baz=287,slow=6.2,SNR=19
NVAR LR LR 20 44 55.1
comp=Z,63nm,18.8s,baz=270,slow=32
comp=Z,4.1nm,0.9s
DSP Deep Springs 75.93 54 P **P** **20 16 34.2 +2.1**
SIM Simferopol' 76.03 316 *e*P **P** **20 16 33.0 +0.5**
SIM *e* 20 16 45.0
SIM *e* 20 19 20.1
SIM pmax pmax
comp=Z,51nm,1.6s
SIM pmax pmax
comp=Z,49nm,1.7s
SIM MLR MLR
comp=Z,230nm,18.7s
MZP Montezuma Peak 76.12 53 P **P** **20 16 33.7 +0.1**
MZP IAmb IAmb 20 16 46.8
comp=Z,6.9nm,0.9s
GMN Gold Mountain 76.43 54 P **P** **20 16 35.4 +0.2**
SFJD Kangerlussuaq 76.50 5 LR LR 20 52 00.7
comp=Z,70nm,19.6s,baz=350,slow=37
MARD Mardin 76.52 306 P **P** **20 16 35.5 -0.1**
TPAW Teton Pass 76.64 46 P **P** **20 16 36.4 +0.1**
R11A Troy Canyon, C 76.90 52 P **P** **20 16 37.6 -0.2**
FRB Frobisher Bay 77.33 13 LR LR 20 55 00.8
comp=Z,72nm,19.0s,baz=10,slow=39
HWUT Hardware Ranch 77.42 47 P **P** **20 16 40.9 +0.2**
HWUT IAmb IAmb 20 16 54.3
comp=Z,11nm,1.4s
QSM Queen of Sheba 77.47 55 IAmb IAmb 20 16 53.8
comp=Z,7.6nm,1.0s
DUG Dugway, Tooele 77.53 49 IAmb IAmb 20 16 54.2
comp=Z,8.7nm,0.9s
PD31 Pinedale Array 77.88 46 P **P** **20 16 43.1 -0.2**
PDAR Pinedale Array 77.88 46 P **P** **20 16 44.1 +0.8**
comp=Z,1.1nm,0.8s,baz=298,slow=0.8,SNR=7.7
PDAR LR LR 20 52 11.3
comp=Z,21nm,18.4s,baz=326,slow=36
comp=Z,1.1nm,0.8s
LVV L'vov 78.10 324 *e*P **P** **20 16 44.8 +0.7**
LVV MLR MLR
comp=E,300nm,17.0s
LVV MLR MLR
comp=N,200nm,18.0s
LVV MLR MLR
comp=Z,400nm,18.0s
NLU North Lily Min 78.12 49 P **P** **20 16 45.5 +0.8**
BEL Belsk 78.17 327 *e*P **P** **20 16 45.8 +1.4**
BORG Borgarnes 78.33 353 LR LR 20 53 17.2
comp=Z,40nm,18.0s,baz=19,slow=37
KWP Kalwaria Pacla 78.85 325 *e*P **P** **20 16 48.8 +0.6**
MVU Marysvale 78.92 50 IAmb IAmb 20 17 52.0
comp=Z,16nm,0.8s
BUR08 Bucovina Ar. S 79.02 322 IAmb IAmb 20 16 51.2
comp=Z,9.1nm,0.9s
BURAR Bucovina Array 79.03 322 ⇑P **P** **20 16 50.2 +0.9**
BURAR Bucovina Array 79.03 322 P **P** **20 16 49.6 +0.2**
BURAR IAmb IAmb 20 16 51.6
comp=Z,9.8nm,0.9s
BIZ Bicaz 79.04 321 ⇓P **P** **20 16 49.9 +0.5**
TESR Tescani 79.05 320 ⇓P **P** **20 16 50.3 +0.9**
PFO Pinyon Flats O 79.12 56 P **P** **20 16 50.8 +0.6**
PFO IAmb IAmb 20 17 08.1
comp=Z,6.5nm,0.8s
PFO Pinyon Flats O 79.12 56 P **P** **20 16 50.8 +0.6**
PFO pmax pmax
comp=Z,7.0nm,0.8s
PFO Pinyon Flats O 79.12 56 LR LR 20 47 26.0
comp=Z,114nm,18.7s,baz=284,slow=32
TPGR Topolog 79.21 318 ⇓P **P** **20 16 51.3 +0.9**
P17A Butcher Ranch, 79.23 49 P **P** **20 16 51.1 +0.4**
P17A IAmb IAmb 20 17 04.2
comp=Z,17nm,1.2s
RDMU Red Mountain 79.25 47 IAmb IAmb 20 17 03.7
comp=Z,13nm,1.1s
VRI Vrincioaia 79.44 320 ⇑P **P** **20 16 51.2 -0.3**
KNB Kanab 79.45 52 IAmb IAmb 20 17 10.7
comp=Z,10nm,1.1s
PLOR Plostina 79.49 320 ⇓P **P** **20 16 52.4 +0.6**
RAR Rarotonga 79.51 126 LR LR 20 47 23.5
comp=Z,158nm,19.2s,baz=315,slow=32
BRTR Keskin Array B 79.53 312 P **P** **20 16 52.0 -0.3**
BRTR Keskin Array B 79.53 312 P **P** **20 16 53.2 +0.9**
BRTR Keskin Array B 79.53 312 P **P** **20 16 53.2 +0.9**
comp=Z,7.1nm,1.0s,baz=114,slow=3.1,SNR=15
BRTR LR LR 20 58 11.0
comp=Z,164nm,18.1s,baz=76,slow=40
comp=Z,7.1nm,1.0s
KOLS Kolonicke sedl 79.54 324 *e*P **P** **20 16 52.8 +0.8**
KOLS pmax pmax
comp=Z,6.0nm,0.9s
KOLS Kolonicke sedl 79.54 324 *e*P **P** **20 16 52.8 +0.8**
SRU San Rafael Swe 79.59 49 IAmb IAmb 20 17 05.2
comp=Z,6.9nm,0.8s
COVR Voineasa-Covas 79.72 320 ⇓P **P** **20 16 54.5 +1.3**
UZH Uzhgorod 79.75 324 *e*P **P** **20 16 51.2 -1.9**
UZH *e* 20 17 01.0
UZH *e* 20 17 10.4
UZH *e*S **S** **20 26 48.2 -5.6**
UZH MLR MLR
comp=Z,80nm,16.0s
OJC Ojcow 79.77 326 *e*P **P** **20 16 52.8 -0.4**
OJC Ojcow 79.77 326 IAmb IAmb 20 16 54.1
comp=Z,20nm,1.1s
OZUR 79.77 321 ⇓P **P** **20 16 54.0 +0.7**
DOPR Dopca 80.06 321 ⇓P **P** **20 16 55.1 +0.2**
MLR Muntele Rosu 80.10 320 ⇑P **P** **20 16 56.4 +1.1**
MLR Muntele Rosu 80.10 320 IAmb IAmb 20 17 28.6
comp=Z,27nm,2.0s
MLR Muntele Rosu 80.10 320 LR LR 20 55 44.5
comp=Z,595nm,18.4s,baz=58,slow=38
NIE Niedzica 80.11 326 *e*P **P** **20 16 56.4 +1.3**
LANS Liptovska Anna 80.69 326 *e*P **P** **20 16 59.4 +1.2**
LANS pmax pmax
comp=Z,4.0nm,0.9s
LANS Liptovska Anna 80.69 326 *e*P **P** **20 16 59.4 +1.2**
KECS Kecovo 80.70 325 *e*P **P** **20 16 58.9 +0.6**
KECS pmax pmax
comp=Z,10.0nm,1.2s
KECS Kecovo 80.70 325 *e*P **P** **20 16 58.9 +0.6**

OKC	Ostrava-Krasne	80.78	327	AMS	AMS	20 56 00.0	
	comp=Z,400nm,15.1s						
KSP	Ksiaz	80.83	328	*e*P	P	20 16 59.7	+0.7
DRGR		80.83	323	⇑P	P	20 17 00.0	+0.9
ARR	Arges	80.86	321	⇓P	P	20 17 00.2	+0.9
PV23	Carpenter Ridg	80.92	49	IAmb	IAmb	20 17 12.8	
	comp=Z,10nm,1.0s						
PV10	Paradox Valley	80.95	49	IAmb	IAmb	20 17 13.2	
	comp=Z,19nm,0.9s						
OSTC	Ostas	81.08	328	AMS	AMS	20 58 10.0	
	comp=Z,400nm,15.1s						
MORC	Moravsky Berou	81.08	327	⇑P	P	20 17 01.3	+0.9
MORC	Moravsky Berou	81.08	327	P	P	20 17 00.2	-0.2
MORC				IAmb	IAmb	20 17 02.3	
	comp=Z,9.7nm,1.1s						
MORC	Moravsky Berou	81.08	327	P	P	20 17 00.2	-0.2
MORC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MORC	Moravsky Berou	81.08	327	*e*P	P	20 17 00.9	+0.5
N23A	Red Feather La	81.16	45	IAmb	IAmb	20 17 14.8	
	comp=Z,13nm,1.3s						
DPC	Dobruska-Polom	81.19	328	*e*P	P	20 17 00.9	0.0
DPC				MLR	MLR		
	comp=Z,300nm,10.6s						
DPC	Dobruska-Polom	81.19	328	*e*P	P	20 17 00.9	0.0
DPC				AMS	AMS	20 58 00.0	
	comp=Z,300nm,10.6s						
KRLC	Kraliky	81.19	328	*e*P	P	20 17 01.8	+0.9
KRLC				MLR	MLR		
	comp=Z,400nm,13.4s						
KRLC	Kraliky	81.19	328	*e*P	P	20 17 01.8	+0.9
KRLC				AMS	AMS	20 57 20.0	
	comp=Z,400nm,13.4s						
UPC	Upice	81.20	328	AMS	AMS	20 57 20.0	
	comp=Z,400nm,16.3s						
RAYN	Ar Rayn	81.21	293	P	P	20 17 00.8	-0.7
RAYN				IAmb	IAmb	20 17 03.0	
	comp=Z,14nm,1.4s						
RAYN	Ar Rayn	81.21	293	P	P	20 17 00.8	-0.7
RAYN				pmax	pmax		
	comp=Z,15nm,1.4s						
PV13	Radium Mtn., P	81.22	49	IAmb	IAmb	20 17 14.8	
	comp=Z,21nm,1.2s						
LOT	Lotru	81.24	321	⇑P	P	20 17 01.8	+0.5
PSZ	Piszkesteto	81.38	325	⇓P	P	20 17 03.1	+1.1
PSZ	Piszkesteto	81.38	325	P	P	20 17 02.0	0.0
PSZ				IAmb	IAmb	20 17 04.2	
	comp=Z,13nm,1.0s						
PSZ	Piszkesteto	81.38	325	P	P	20 17 02.0	0.0
PSZ				pmax	pmax		
	comp=Z,13nm,1.0s						
PSZ	Piszkesteto	81.38	325	P	P	20 17 03.4	+1.4
VYHS	Vyhne	81.45	326	*e*P	P	20 17 03.4	+1.1
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VYHS	Vyhne	81.45	326	*e*P	P	20 17 03.4	+1.1
VYHS				*e*PP	PP	20 20 07.7	-0.1
JAVC	Velka Javorina	81.71	326	*e*P	P	20 17 05.5	+1.8
BRG	Berggiesshubel	81.78	330	*e*P	P	20 17 04.8	+0.9
BRG				Amp		20 17 05.6	
	comp=Z,7.2nm,1.1s						
BRG				*ex*	x	20 17 26.3	
BRG				Amp		20 17 27.2	
	comp=Z,4.9nm,0.9s						
BRG				Amp		20 59 04.0	
	comp=E,0.2nm,14.9s						
BRG				Amp		20 59 07.0	
	comp=Z,0.4nm,13.4s						
BRG				Amp		20 59 12.0	
	comp=N,0.2nm,13.8s						
BRG	Berggiesshubel	81.78	330	*e*P	P	20 17 04.8	+0.9
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG				MLR	MLR		
	comp=E,171nm,14.9s						
BRG				MLR	MLR		
	comp=Z,377nm,13.4s						
BRG				MLR	MLR		
	comp=N,212nm,13.8s						
GZR	Gura Zlata	81.78	322	⇑P	P	20 17 04.9	+0.7
PVCC	Panska Ves	81.79	329	*e*P	P	20 17 05.4	+1.4
PVCC				MLR	MLR		
	comp=Z,400nm,20.7s						
PVCC	Panska Ves	81.79	329	*e*P	P	20 17 05.4	+1.4
PVCC				AMS	AMS	20 56 10.0	
	comp=Z,400nm,20.7s						
CLL	Collm	81.83	330	IAmb	IAmb	20 17 05.5	
	comp=Z,9.9nm,0.9s						
CLL	Collm	81.83	330	*i* P	P	20 17 04.8	+0.6
	comp=Z,14nm,1.1s						
CLL				*i* x	x	20 17 08.6	
CLL				*es*P	sP	20 17 17.0	+1.2
CLL				*ex*	x	20 17 21.0	
CLL				*ex*	x	20 17 26.0	
CLL				*e*PP	PP	20 20 14.0	+3.2
CLL				LmH		20 56 00.0	
	comp=N,200nm,18.3s						
CLL				LmH		20 56 00.0	
	comp=E,200nm,19.1s						
VRAC	Vranov	81.85	327	*e*P	P	20 17 04.9	+0.5
VRAC	Vranov	81.85	327	LR	LR	20 57 14.5	
	comp=E,314nm,18.8s,baz=44,slow=38						
SMOL	Smolenice	82.07	326	*e*P	P	20 17 06.5	+1.0
KRUC	Moravsky	82.12	327	*e*P	P	20 17 06.3	+0.5
ASF	Jabal al Asfar	82.15	304	P	P	20 17 06.6	+0.3
ASF	Jabal al Asfar	82.15	304	P	P	20 17 06.6	+0.3
	comp=E,2.9nm,0.7s,baz=347,slow=9.2,SNR=5.3						
	comp=E,2.9nm,0.7s						
SRO	Srobarova	82.19	325	*e*P	P	20 17 07.8	+1.7
SRO	Srobarova	82.19	325	*e*P	P	20 17 07.8	+1.7
BZS	Buzias	82.20	322	⇑P	P	20 17 06.8	+0.5
PRU	Pruhonice	82.21	329	*e*P	P	20 17 06.8	+0.6
PRU				*e*		20 17 17.4	
PRU				MLR	MLR		
	comp=Z,300nm,14.6s						
PRU	Pruhonice	82.21	329	*e*P	P	20 17 06.8	+0.6
PRU				*ep*P	pwP	20 17 17.4	-0.2
PRU				AMS	AMS	20 57 40.0	
	comp=Z,300nm,14.6s						
MODS	Modra-Piesok	82.24	326	*e*P	P	20 17 07.5	+1.0
MODS				pmax	pmax		
	comp=Z,42nm,1.8s						
MODS	Modra-Piesok	82.24	326	*e*P	P	20 17 07.5	+1.0
TREC	Trest	82.34	328	*e*P	P	20 17 07.8	+0.9
TREC				MLR	MLR		
	comp=Z,400nm,14.3s						
TREC	Trest	82.34	328	*e*P	P	20 17 07.8	+0.9
TREC				AMS	AMS	20 58 00.0	
	comp=Z,400nm,14.3s						
MMAI	Mount Meron Ar	82.61	306	P	P	20 17 08.8	+0.1
	comp=Z,4.1nm,0.7s,baz=50,slow=6.7,SNR=6.4						
MMAI				LR	LR	20 57 01.2	
	comp=Z,217nm,20.6s,baz=218,slow=38						
	comp=Z,4.1nm,0.7s						
MDVR	Moldovita	82.75	322	⇑P	P	20 17 09.6	+0.4
NKC	Novy Kostel	82.88	330	AMS	AMS	20 57 30.0	
	comp=Z,300nm,14.4s						
MPLH	Magyarpolny	83.02	325	P	P	20 17 11.1	+0.7
RONA	Rosalia, Austr	83.18	326	*e*P	P	20 17 12.4	+1.0
	comp=Z,12nm,1.2s						
CKRC	Cesky Krumlov	83.20	328	*e*P	P	20 17 11.6	+0.2
CONA	Conrad Observa	83.20	327	*e*P	P	20 17 12.3	+0.7
	comp=Z,10nm,1.2s						
MORH	Mrgy, Hungar	83.21	324	⇑P	P	20 17 11.5	+0.1
MORH	Mrgy, Hungar	83.21	324	P	P	20 17 12.2	+0.8
KHC	Kasperske Hory	83.27	329	IAmb	IAmb	20 17 13.6	
	comp=Z,7.7nm,0.9s						
KHC	Kasperske Hory	83.27	329	*e*P	P	20 17 11.9	+0.1
KHC				*e*		20 17 17.4	
KHC				MLR	MLR		
	comp=Z,400nm,16.1s						
KHC	Kasperske Hory	83.27	329	*e*P	P	20 17 11.9	+0.1
KHC				*ep*P	PcP	20 17 17.4	+1.1
KHC				AMS	AMS	20 57 30.0	
	comp=Z,400nm,16.1s						
RDO	Rodhopi	83.27	317	P	P	20 17 11.8	-0.1
FRGS	Fruska Gora	83.42	323	⇓P	P	20 17 13.6	+0.9
GERES	GERESS Array B	83.44	328	P	P	20 17 12.1	-0.7
GERES	GERESS Array B	83.44	328	P	P	20 17 12.3	-0.5
GERES	GERESS Array B	83.44	328	P	P	20 17 12.3	-0.5
	comp=Z,2.4nm,0.7s,baz=46,slow=5.8,SNR=22						
	comp=Z,2.4nm,0.7s						
VTS	Vitosha	83.49	319	⇑P	P	20 17 13.1	-0.1
VTS	Vitosha	83.49	319	IAmb	IAmb	20 17 15.5	
	comp=Z,9.4nm,1.0s						
BOVS	Bovan	83.56	321	⇑P	P	20 17 13.8	+0.4
GRFO	Grafenberg	83.80	330	P	P	20 17 14.6	+0.1
GRFO				IAmb	IAmb	20 17 16.5	
	comp=Z,13nm,0.9s						
GRFO	Grafenberg	83.80	330	P	P	20 17 14.6	+0.1
GRFO				pmax	pmax		
	comp=Z,13nm,0.9s						
EKA	Eskdalemuir Ar	83.86	341	LR	LR	20 58 25.1	
	comp=Z,191nm,18.6s,baz=12,slow=38						
ARSA	Arzberg	83.87	326	*e*P	P	20 17 15.6	+0.7
	comp=Z,3.1nm,0.7s						
MOA	Molln	83.96	328	*e*P	P	20 17 15.5	+0.1
	comp=Z,4.7nm,1.3s						
PPT	Papeete	84.04	117	LR	LR	20 48 40.1	
	comp=Z,108nm,19.4s,baz=342,slow=31						
PPT2	Papeete2	84.06	117	*e*LR	LR	20 43 45.1	
	comp=Z,181nm,21.8s						
DIVS	Divibare	84.09	322	IAmb	IAmb	20 17 17.7	
	comp=Z,7.5nm,0.9s						
KOGS	Kog	84.14	326	*i* P	P	20 17 17.4	+1.1
BIOA	Bad Ischl, Aus	84.36	328	*e*P	P	20 17 17.8	+0.4
	comp=Z,3.5nm,0.6s						
GROS	Grobnik	84.47	326	*i* P	P	20 17 17.7	-0.3
SOKA	Soboth	84.52	326	*e*P	P	20 17 18.2	-0.1
	comp=Z,15nm,1.6s						
STIP	Stip	84.69	319	*i* P	P	20 17 19.0	-0.2
ANMO	Albuquerque	84.75	50	P	P	20 17 20.3	+0.5
ANMO				IAmb	IAmb	20 17 33.2	
	comp=Z,5.3nm,1.1s						
ANMO	Albuquerque	84.75	50	*ce*P	P	20 17 20.9	+1.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	Albuquerque	84.75	50	LR	LR	20 57 47.9	
	comp=Z,46nm,18.3s,baz=328,slow=38						
GCIS	Gornji Cirnik	84.87	326	*e*P	P	20 17 20.1	+0.1
SKO	Skopje	84.89	320	*i* P	P	20 17 21.5	+1.3
EIL	Elat	85.01	303	LR	LR	20 59 29.5	
	comp=Z,110nm,18.4s,baz=67,slow=39						
BTNL	Tenell	85.02	333	*d*P	P	20 17 20.6	0.0
	comp=Z,3.8nm,1.2s						
MEM	Membach	85.04	334	*d*P	P	20 17 20.6	-0.1
	comp=Z,4.6nm,1.1s						
BHOU	Houvegnez	85.25	333	*d*P	P	20 17 22.5	+0.7
BCLA	Clavier	85.45	334	*d*P	P	20 17 23.1	+0.3
	comp=Z,4.2nm,1.1s						
CLUD	Cludinico	85.64	327	IAmb	IAmb	20 17 24.3	
	comp=Z,9.8nm,1.0s						
PDG	Podgorica	85.68	321	⇑P	P	20 17 24.5	+0.5
TAOE	Nuku Hiva Isla	85.69	104	*e*LR	LR	20 44 28.7	
	comp=Z,378nm,26.1s						
RETA	Reutte	85.73	329	*e*P	P	20 17 24.8	+0.5
	comp=Z,4.9nm,0.9s						
BMRD	Maredsous	85.74	334	*d*P	P	20 17 24.2	0.0
	comp=Z,5.9nm,1.1s						
OHR	Ohrid	85.84	320	*i* P	P	20 17 25.5	+0.5
SCHQ	Schefferville	85.87	16	LR	LR	20 56 21.3	
	comp=Z,90nm,21.9s,baz=330,slow=36						
DOU	Dourbes	85.97	334	*d*P	P	20 17 23.8	-1.5
	comp=Z,2.7nm,1.3s						
BFO	Black Forest	86.03	331	P	P	20 17 24.4	-1.3
BFO				IAmb	IAmb	20 17 27.0	
	comp=Z,8.8nm,0.9s						
BFO	Black Forest	86.03	331	P	P	20 17 24.4	-1.3
BFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAVA	Damuels	86.25	330	*e*P	P	20 17 27.1	0.0
	comp=Z,8.2nm,1.1s						
ECH	Echery	86.58	332	IAmb	IAmb	20 17 29.1	
	comp=Z,8.1nm,1.2s						
DAVOX	Davos/Dischmat	86.66	329	LR	LR	20 59 48.7	
	comp=Z,248nm,19.1s,baz=15,slow=38						
TBI	Tubuai	87.91	121	*e*LR	LR	20 45 31.5	
	comp=Z,227nm,23.8s						
LPIG	La Paz	89.22	60	LR	LR	20 57 15.8	
	comp=Z,38nm,18.0s,baz=254,slow=35						
TX32	Lajitas Array	90.25	53	IAmb	IAmb	20 18 07.3	
	comp=Z,6.6nm,0.6s						
TXAR	Lajitas Array	90.25	53	P	P	20 17 45.5	-0.8
TXAR	Lajitas Array	90.25	53	P	P	20 17 45.5	-0.8
TXAR	Lajitas Array	90.25	53	LR	LR	20 58 11.4	
	comp=Z,75nm,18.6s,baz=305,slow=36						
ATD	Arta Tunnel	90.35	285	LR	LR	21 04 13.6	
	comp=Z,78nm,18.6s,baz=74,slow=40						
SADO	Sadowa	91.12	28	LR	LR	21 03 58.7	
	comp=Z,57nm,18.4s,baz=358,slow=39						
VAE	Valguarnera	91.85	321	LR	LR	21 03 26.0	
	comp=Z,155nm,18.3s,baz=36,slow=38						
KEST	Kera	95.74	323	LR	LR	21 06 48.1	
	comp=Z,183nm,18.4s,baz=304,slow=39						
TKL	Tuckaleechee C	96.72	36	LR	LR	21 08 02.7	
	comp=Z,33nm,19.1s,baz=342,slow=39						
ESDC	Sonseca Array	98.02	334	LR	LR	21 07 07.9	
	comp=Z,218nm,20.1s,baz=19,slow=38						
QSPA	South Pole Qui	126.13	180	PKP	PKPdf	20 23 46.1	-0.4
	comp=Z,2.0nm,0.9s,baz=348,slow=2.9,SNR=8.3						
SNAA	Sanae	140.22	197	PKhKP	PKPpre	20 24 07.4	
	comp=Z,0.8nm,0.8s,baz=233,slow=6.9,SNR=5.4						
VNA2	Neumayer--Watz	141.79	196	PKPdf	PKPdf	20 24 12.7	-3.0
	baz=134,slow=2.8						
VNA3	Neumayer Olymp	142.02	195	PKPdf	PKPdf	20 24 15.7	-0.4
VNA1	Neumayer--Stat	142.18	196	PKPdf	PKPdf	20 24 14.8	-1.5
H03N2	Juan Fernandez	146.62	97	T	T	23 08 58.7	
	baz=291,slow=76,SNR=8.7						
H03N3	Juan Fernandez	146.63	97	T	T	23 09 09.1	
	baz=291,slow=76,SNR=7.8						
H03N1	Juan Fernandez	146.63	97	T	T	23 09 11.6	
	baz=291,slow=76,SNR=5.6						
LPAZ	La Paz	146.72	61	PKP2	PKPbc	20 24 27.8	-0.6
LPAZ	La Paz	146.72	61	PKPbc	PKPbc	20 24 27.8	-0.6
	comp=Z,2.6nm,0.6s,baz=316,slow=2.5,SNR=11						

DJA 30 20:07:37.4±0.6, 9°S±5°×11°9E±°, h111km±7km, M3.0/7, MLv3.0/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	0.84	258	P	Pn	20 07 58.2	+1.1
PLAI				S	Sn	20 08 13.6	+1.6
WBSI	Waikabubak, Su	1.25	142	P	Pn	20 08 01.6	+0.2
WBSI				S	Sn	20 08 20.3	+0.7
TWSI	Taliwang, Sumb	1.71	267	P	Pn	20 08 06.9	+0.1
TWSI				S	Sn	20 08 30.1	+0.9
BASI	Baing, Sumba	2.49	129	P	Pn	20 08 16.8	+0.1
BASI				S	Sn	20 08 47.4	+0.5
EDFI	Ende, Flores	3.05	92	P	Pn	20 08 25.0	+0.8
EDFI				S	Sn	20 09 00.7	+0.5

*IDC **30** 20:15:41.2±3.7, 36°34N×70°84E, h177km±33km, mb3.3/9, mbtmp3.8/14, MS2.9/1, Error ellipse: s-maj=23.3km s-min=16.5km az=22.0*

*SOME **30** 20:15:42.7, 37°90N×72°17E, h15km*

*NNC **30** 20:15:45.8±14.0, 36°66N×70°72E, h190km±150km, mb3.3, mpv4.2, Error ellipse: s-maj=135.4km s-min=91.6km az=173.0*

*NEIC **30** 20:15:45.2±1.8, 36°60N±0°06×70°78E±0°09, h209km±7km, mb4.0/13, Error ellipse: s-maj=11.0km s-min=8.3km az=118.0*

ISC 30 20:15:43.2±0.6, 36°55N±0°04×70°95E±0°04, h192km±7km, n93, σ2°37/116, mb3.7/13, 2C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.50	349		Pn	20 16 29.1	+2.5
GAR				Sn	Sn	20 17 00.8	+0.2
KBL	Kabul	2.54	218	Pn	Pn	20 16 29.3	+2.1
KBL				Sn	Sn	20 17 01.8	+0.4
CHGR	Chuyangaron	2.54	326		Pn	20 16 28.9	+1.9
CHGR				Sn	Sn	20 17 00.5	-0.9
CEP	Cherat	2.83	164	P	Pn	20 16 35.0	+4.4
CEP				S	Sn	20 17 11.0	+3.5
DRK	Karamyk	3.00	13	Pn	Pn	20 16 35.0	+2.4
DRK				Sn	Sn	20 17 11.7	+0.3
CHCP	Chirah Chowk	3.45	146	P	Pn	20 16 41.6	+3.7
BTK	Batken	3.50	358		Pn	20 16 41.5	+2.9
BTK				Sn	Sn	20 17 23.2	+1.2
THW	Thamme Wali	3.80	170	P	Pn	20 16 45.0	+2.7
SARP	Sargodha	4.83	162	P	Pn	20 16 57.5	+2.2
TAS	Tashkent	4.94	345	Pn	Pn	20 16 58.7	+2.2
TAS				Sn	Sn	20 17 52.9	-1.5
KSH	Kashi	4.95	52	Pn	Pn	20 16 55.5	-1.3
KSH				Sn	Sn	20 17 47.5	-7.3
KSH				pmax	pmax		
	comp=Z,21nm,0.6s						
KSH				smax	smax		
	comp=N,120nm,0.6s						
KSH				smax	smax		
	comp=E,71nm,0.6s						
JMU	Jammu	5.02	138	*e*P	Pn	20 16 59.3	+1.7
JMU				*e*S	Sn	20 17 56.4	+0.1
IUG	Iuzhnay	5.63	353	*e*P	Pn	20 17 07.7	+2.1
	comp=E,1μm,0.1s						
IUG				*e*S	Sn	20 18 08.4	-2.2
	comp=E,466nm,0.3s						
THN	Thein Dam	5.69	135	*e*P	Pn	20 17 08.9	+2.7
THN				*e*P	Pn	20 17 10.0	+3.7
THN				*e*S	Sn	20 18 12.8	+1.0
THN				*e*S	Sn	20 18 14.0	+2.2
AML	Almayashu	5.96	20	P	Pn	20 17 12.3	+2.1
	SNR=113						
NRN	Naryn	6.26	37	Pn	Pn	20 17 13.8	-0.2
NRN				Sn	Sn	20 18 24.6	-1.1
UCH	Uchtor	6.30	25	P	Pn	20 17 17.2	+2.6
	SNR=6.2						
EKS2	Erkin-Say	6.48	19	P	Pn	20 17 19.0	+2.4
	SNR=12						
KK31	Karatay Array	6.55	357	Pn	Pn	20 17 18.9	+1.5
KK31	Karatay Array	6.55	357	⇓Pn	Pn	20 17 18.7	+1.3
	comp=E,7.7nm,0.3s,baz=197,slow=16,SNR=163						
KK31				⇑Sn	Sn	20 18 28.8	-3.3
	comp=E,31nm,0.6s,baz=189,slow=25,SNR=4.7						
KKAR	Karatay Array	6.55	357	Pn	Pn	20 17 18.8	+1.4
KKAR	Karatay Array	6.55	357		Pn	20 17 18.9	+1.4
AAK	Ala-Archa	6.67	23	P	Pn	20 17 21.6	+2.6
	SNR=6.9						
AAK	Ala-Archa	6.67	23	Pn	Pn	20 17 21.3	+2.2
KBK	Karagaybulak	6.83	26	P	Pn	20 17 24.0	+2.7
	SNR=7.6						
BHK	Bhakra	6.84	137	*e*P	Pn	20 17 23.1	+1.8
BHK				*e*S	Sn	20 18 38.5	-0.5
CHMS	Chumysh	7.07	23	P	Pn	20 17 26.8	+2.6
	SNR=6.5						
BOOM	Boomskoye usch	7.08	32	Pn	Pn	20 17 26.9	+2.5
USP	Ospenovka	7.24	21	P	Pn	20 17 28.6	+2.2
	SNR=6.1						
TKM2	Tokmak 2	7.30	28	P	Pn	20 17 29.7	+2.3
	SNR=11						
TKM2	Tokmak 2	7.30	28	⇓Pn	Pn	20 17 29.6	+2.3
	comp=E,8.1nm,0.5s						
TKM2				⇓Sn	Sn	20 18 48.0	-2.0
	comp=E,8.4nm,0.6s						
SGDS	Sogindy	7.45	21	*e*P	Pn	20 17 30.1	+0.9
	comp=E,6.3nm,0.3s						
SGDS				*e*S	Sn	20 18 46.7	-6.6
	comp=E,14nm,0.5s						
SMLA	Simla	7.48	134	*e*P	Pn	20 17 31.1	+1.5
SMLA				*e*S	Sn	20 18 51.8	-2.3
SMLA				IAML		20 18 55.1	
	comp=N,106nm,0.7s						
SMLA				IAML		20 18 55.5	
	comp=E,137nm,0.4s						
SMLA				IAML		20 18 57.8	
	comp=N,105nm,0.3s						
KST	Kastek	7.54	29	*e*P	Pn	20 17 32.7	+2.2
	comp=N,4.8nm,0.3s						
KST				*e*S	Sn	20 18 51.3	-4.4
	comp=N,13nm,0.4s						
DGS	Degeres	7.64	28	*e*P	Pn	20 17 32.7	+1.0
	comp=N,3.1nm,0.3s						
DGS				*e*S	Sn	20 18 51.4	-6.5
	comp=N,6.2nm,0.3s						
KRBS	Karabastau	8.00	25	*e*P	Pn	20 17 43.7	+7.3
	comp=N,1.1nm,0.4s						
KRBS				*e*S	Sn	20 19 10.9	+4.5
	comp=N,1.9nm,0.3s						
KHET	Khetri	9.40	153	*e*P	Pn	20 17 54.8	+0.1
KHET				*e*S	Sn	20 19 34.0	-5.8
KUDL	Kundal	9.60	149	*e*P	Pn	20 17 56.0	-1.3
KUDL				*e*S	Sn	20 19 38.0	-6.5
GEYT	Alibeck	10.32	282	Pn	Pn	20 18 05.3	-1.3
GEYT	Alibeck	10.32	282	P	Pn	20 18 05.2	-1.5
	comp=N,1.5nm,0.4s,baz=110,slow=10,SNR=5.9						
GEYT				S	Sn	20 19 59.1	-2.7
	comp=N,3.3nm,0.5s,baz=100,slow=4,SNR=2.4						
GYA0B	ALIBECK ARRAY	10.32	282	Pn	Pn	20 18 05.0	-1.7
PTH	Pithoragarh	10.45	129	*e*S	Sn	20 19 59.2	-5.9
AJM	Ajmer	10.52	162	*e*P	Pn	20 18 10.1	+0.7
LGTI	Lohaghat	10.53	130	*e*P	Pn	20 18 09.3	-0.1
LGTI				*e*S	Sn	20 20 00.1	-6.8
JHNI	Jhansi	12.82	147	*e*P	Pn	20 18 39.6	+0.9
MAKZ	Makanchi	13.14	35	Pn	Pn	20 18 43.8	+1.3
PYUN	Piuthan	13.21	126	*e*P	Pn	20 18 44.1	+0.4
	comp=N,22nm,0.3s						
MK31	Makanchi Array	13.27	36	Pn	Pn	20 18 45.6	+1.4
MKAR	Makanchi Array	13.27	36	P	P	20 18 46.5	-0.8
	comp=N,0.3nm,0.6s,baz=225,slow=19,SNR=2.1						
DANN	Dangsing	13.55	123	*e*P	Pn	20 18 49.5	+1.4
	comp=N,16nm,0.3s						
GKN	Gorkha	14.37	122	*e*P	P	20 18 59.2	-0.5
	comp=N,11nm,0.3s						
BHPL	Bhopal	14.40	155	*e*P	P	20 19 01.8	+1.9
WMQ	Urumqi	14.70	55	*e*P	P	20 19 05.5	+2.3
WMQ				LR	LR		
	comp=N,600nm,19.5s						
WMQ				LR	LR		
	comp=E,640nm,15.9s						
WMQ				LR	LR		
	comp=Z,470nm,20.7s						
AB31	Akbulak array	15.02	331	P	Pn	20 19 05.3	-0.5
	comp=Z,3.4nm,0.5s,baz=143,slow=10,SNR=64						
ABKAR	Akbulak array	15.02	331		Pn	20 19 05.0	-0.7
ABKAR	Akbulak array	15.02	331		Pn	20 19 04.7	-1.0
KURBB	Kurchatov Arra	15.09	19	P	Pn	20 19 06.6	+0.1
	comp=Z,0.4nm,0.5s,baz=214,slow=9.3,SNR=4.2						
PKIN	Phulchoki	15.15	122	*e*P	P	20 19 08.9	+0.3
	comp=Z,9.5nm,0.4s						
PKI	Pulchoki	15.17	122	*e*P	P	20 19 09.1	+0.3
	comp=Z,6.6nm,0.3s						
KURK	Kurchatov	15.20	19	P	P	20 19 09.0	+0.5
GUN	Gumba	15.28	120	*e*P	P	20 19 11.0	+1.0
	comp=Z,23nm,0.3s						
JIRN	Jiri	15.65	120	*e*P	P	20 19 15.4	+1.3
	comp=Z,40nm,0.4s						
RAMN	Ramite	16.38	121	*e*P	Pn	20 19 23.8	+1.1
	comp=Z,27nm,0.6s						
BVA0	Borovoye Array

comp=Z,1.5nm,0.8s
ARCES **ARCESS Array B 41.08 338** P **P** **20 23 08.9 +1.3**
ARCES **ARCESS Array B 41.08 338** P **P** **20 23 08.3 +0.7**
comp=Z,0.9nm,0.5s,baz=112,slow=9.3,SNR=5.1
comp=Z,0.9nm,0.5s
CLL Collm 43.13 309 *e*P **P** **20 23 25.0 +0.7**
NC303 NORSAR Array S 44.26 323 P **P** **20 23 34.0 +0.7**
NC303 IAmb IAmb 20 24 09.8
comp=Z,16nm,1.4s
NB201 NORSAR Array S 44.28 323 P **P** **20 23 33.3 -0.1**
NB2 NORSAR Subarra 44.31 323 P **P** **20 23 33.7 0.0**
comp=Z,0.7nm,0.6s,baz=95,slow=7.9
NOA NORSAR Array B 44.31 323 P **P** **20 23 34.0 +0.3**
comp=Z,1.4nm,0.7s,baz=96,slow=7.8,SNR=7.4
comp=Z,1.4nm,0.7s
TIXI Tiksi 45.74 22 P **P** **20 23 45.4 +0.7**
ESDC Sonseca Array 57.40 298 P **P** **20 25 11.6 0.0**
comp=Z,0.4nm,0.8s,baz=60,slow=6.9,SNR=3.2
comp=Z,0.4nm,0.8s
TORD Torodi Ar. Bea 65.68 269 P **P** **20 26 05.2 -2.1**
comp=Z,2.3nm,0.3s,baz=45,slow=5.5,SNR=1.1
YKA Yellowknife Ar 81.20 3 P **P** **20 27 38.1 +1.1**
comp=Z,0.6nm,0.4s,baz=352,slow=5.6,SNR=7.4
comp=Z,0.6nm,0.4s
WRA Warramunga Arr 82.05 122 P **P** **20 27 41.6 -0.5**
comp=Z,0.5nm,0.5s,baz=325,slow=4.9,SNR=22
comp=Z,0.5nm,0.5s
ASAR Alice Springs 84.32 125 P **P** **20 27 53.2 -0.5**
comp=Z,0.8nm,0.5s,baz=309,slow=5.0,SNR=22
comp=Z,0.8nm,0.5s

BJI ***30*** *20:36:47.5±0.0,36.21N×141.40E,h16km,mb4.5/35, mB4.9/20,Ms4.3/15,Ms7 4.1/18*
MOS ***30*** *20:36:47.0±1.1,36.34N×141.73E,h24km,mb4.7/14,Error ellipse: s-maj=12.7km s-min=6.8km az=130.9*
NEIC ***30*** *20:36:48.9±2.2,36.35N±0.05×141.69E±0.08,h22km±6km, mb4.6/28,Error ellipse: s-maj=9.6km s-min=6.1km az=115.0*
NIED ***30*** *20:36:49.4,36.39N×141.72E,h54km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.10; Mθθ0.41; Mφφ-1.51; Mrθ1.25; Mθφ-0.47; Mφr2.08; Fault plane solution: M₀2.80000×10¹⁵ NP1: φs168.00000°,δ18.00000°,λ49.00000°. NP2:φs30.00000°, δ76.00000°,λ102.00000°.*
JMA ***30*** *20:36:49.4±0.2,36.4N±0.4×14.2E±,h54km±4km, MD4.3/32,MV4.2/32,FAR E OFF IBARAKI PREF*
JMA Felt I J1 at FAR E OFF IBARAKI PREF .
IDC ***30*** *20:36:50.8±3.0,36.26N×141.68E,h40km±25km,mb3.8/18, mbtmp4.0/23,ML2.8/4,MS3.7/22,Error ellipse: s-maj=21.9km s-min=14.1km az=85.0*
ISC 30 20:36:50.1±1.2,36.35N±0.03×141.67E±0.05,h33km±7km, n185,σ1$24/159,mb4.4/51,MS3.8/27,14C-3D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.87**	**269**	⇓P	**Pb**	**20 37 06.4**	**-0.4**
JHYU	**Hitachinakayam**	**0.87**	**269**	A	A	20 37 06.4	
	comp=E,11nm,0.7s,comp=E,13nm,0.4s						
JHO	**Hitachi**	**0.92**	**286**	⇓P	**Pn**	**20 37 06.6**	**-0.2**
JHO				⇓*e*S	**Sb**	**20 37 19.6**	**0.0**
JHO	**Hitachi**	**0.92**	**286**	A	A	20 37 06.6	
	comp=E,8.0nm,2.3s,comp=E,5.0nm,5.4s						
CHOJ	**Chosi**	**0.92**	**226**	P	**Pb**	**20 37 07.2**	**-0.5**
CHOJ				*e*S	**Sb**	**20 37 20.1**	**+0.5**
CHOJ	**Chosi**	**0.92**	**226**	A	A	20 37 07.2	
	comp=E,13nm,3.3s,comp=E,11nm,1.9s						
JIHU	**Itakohorinouch**	**1.00**	**248**	P	**Pb**	**20 37 08.8**	**-0.1**
JIHU	**Itakohorinouch**	**1.00**	**248**	A	A	20 37 08.8	
	comp=E,44nm,1.7s,comp=E,44nm,4.8s						
JFFD	**Fukushimafurud**	**1.15**	**310**	A	A	20 37 09.7	
	comp=E,7.0nm,0.5s,comp=E,4.0nm,5.3s						
JFK	**Kawauchi**	**1.19**	**328**	P	**Pn**	**20 37 10.2**	**-0.4**
JYT	**Yasato**	**1.20**	**264**		**Pn**	**20 37 10.2**	**-0.3**
JYT				Sn	**Sn**	**20 37 26.3**	**+0.6**
JYT	**Yasato**	**1.20**	**264**	A	A	20 37 10.9	
	comp=E,11nm,0.4s,comp=E,9.0nm,2.5s						
JMST	**Minamisoumatoc**	**1.50**	**336**	A	A	20 37 14.3	
	comp=E,6.0nm,2.6s,comp=E,8.0nm,2.2s						
JFT	**Otama**	**1.58**	**318**	P	**Pn**	**20 37 16.5**	**+0.7**
JFT	**Otama**	**1.58**	**318**	A	A	20 37 16.5	
	comp=E,12nm,0.9s,comp=E,14nm,6.2s						
JMM	**Marumori**	**1.66**	**335**		**Pn**	**20 37 16.0**	**-1.0**
JMM				Sn	**Sn**	**20 37 37.6**	**+0.5**
JMM	**Marumori**	**1.66**	**335**	P	**Pn**	**20 37 16.2**	**-0.8**
JMM	**Marumori**	**1.66**	**335**	A	A	20 37 16.2	
	comp=E,5.0nm,6.2s,comp=E,6.0nm,4.0s						
BSO1	**Boso 1**	**1.79**	**199**	P	**Pn**	**20 37 18.7**	**+0.5**
BSO1				S	**Sn**	**20 37 40.9**	**+1.4**
JAG	**Ashikaga**	**1.79**	**273**	P	**Pn**	**20 37 19.1**	**+0.3**
JAG	**Ashikaga**	**1.79**	**273**	A	A	20 37 19.1	
	comp=E,4.0nm,4.8s,comp=E,3.0nm,2.1s						
BSO3	**Boso 3**	**1.81**	**212**	P	**Pn**	**20 37 19.1**	**+0.2**
JFY	**Yanaizu**	**1.89**	**304**	*e*P	**Pn**	**20 37 21.4**	**+1.3**
JFY	**Yanaizu**	**1.89**	**304**	A	A	20 37 21.4	
	comp=N,3.0nm,1.1s						
JYAR	**Yonezawaarcadi**	**1.98**	**322**	A	A	20 37 21.2	
	comp=E,16nm,0.7s,comp=E,16nm,0.7s						
JKT	**Katashina**	**1.99**	**283**	A	A	20 37 22.0	
	comp=E,6.0nm,0.4s,comp=E,6.0nm,9.3s						
JHU	**Hanno**	**2.00**	**256**	A	A	20 37 22.3	
	comp=E,3.0nm,5.1s,comp=E,4.0nm,5.1s						
JOU	**Okura**	**2.16**	**339**	A	A	20 37 23.6	
	comp=E,9.0nm,5.5s,comp=E,9.0nm,4.2s						
JYS	**Shirataka**	**2.26**	**326**	A	A	20 37 25.2	
	comp=E,7.0nm,1.3s,comp=E,6.0nm,1.3s						
JRY	**Ryogami san**	**2.26**	**262**	A	A	20 37 26.0	
	comp=E,4.0nm,5.1s						
JOD2	**Odawara 2**	**2.36**	**243**	A	A	20 37 27.5	
	comp=E,3.0nm,5.6s						
JGK	**Kuni**	**2.45**	**276**	A	A	20 37 28.5	
	comp=E,4.0nm,6.0s,comp=E,3.0nm,5.6s						
JHTM	**Izuhatsuma**	**2.58**	**238**	A	A	20 37 30.5	
	comp=E,5.0nm,4.4s,comp=E,6.0nm,5.7s						
JMK	**Ichinoseki**	**2.62**	**352**	A	A	20 37 29.9	
	comp=N,4.0nm,6.4s						
JYA	**Atsumi**	**2.72**	**326**	A	A	20 37 31.7	
	comp=E,5.0nm,1.0s,comp=E,4.0nm,0.8s						
JYK	**Kaneyama**	**2.76**	**338**	A	A	20 37 32.1	
	comp=E,4.0nm,5.9s,comp=E,5.0nm,5.6s						
MJAR	**Matsushiro Arr**	**2.79**	**275**	P	**Pn**	**20 37 32.5**	**-0.1**
MJAR	**Matsushiro Arr**	**2.79**	**275**	Pn	**Pn**	**20 37 32.5**	**-0.1**
	3.7nm,0.3s,baz=90,slow=10,SNR=86						
MJAR				Sn	**Sb**	**20 38 11.8**	**-1.4**
	4.4nm,0.3s,baz=64,slow=13,SNR=6.4						
MJAR				LR	LR	20 38 58.9	
	comp=Z,934nm,18.5s,baz=127,slow=46 45nm,0.7s						
MAJO	**Matsushiro**	**2.80**	**275**		**Pn**	**20 37 34.5**	**+1.9**
MAJO	**Matsushiro**	**2.80**	**275**	*i* P	**Pn**	**20 37 34.8**	**+2.2**
JNG	**Nsakai**	**2.88**	**272**	A	A	20 37 34.6	
	comp=N,2.0nm,3.3s						
JNT	**Takato**	**2.90**	**262**	A	A	20 37 35.0	
	comp=N,3.0nm,7.9s						
SHZ3	**Shizuoka 3**	**3.09**	**246**	A	A	20 37 37.8	
	comp=E,3.0nm,4.9s						
JSD	**Sado**	**3.20**	**303**		**Pn**	**20 37 37.7**	**-0.4**
JHJ2	**Mitsune**	**3.58**	**206**	Pn	**Pn**	**20 37 43.7**	**+0.4**
JGF	**Kuroka**	**3.58**	**259**		**Pn**	**20 37 43.9**	**+0.6**
JHJ	**Hachijo jima 2**	**3.58**	**206**		**Pn**	**20 37 42.5**	**-0.9**
JHJ					**Sn**	**20 38 23.5**	**-1.0**
JHJ	**Hachijo jima 2**	**3.58**	**206**	Pn	**Pn**	**20 37 42.5**	**-0.9**
	166nm,0.3s,baz=322,slow=19,SNR=31						
JHJ				Sn	**Sn**	**20 38 23.5**	**-1.0**
	91nm,0.3s,baz=91,slow=22,SNR=8.6						
JKEN	**Kujiedanarisaw**	**3.84**	**0**	A	A	20 37 47.1	
	comp=E,7.0nm,6.9s,comp=E,6.0nm,6.5s						
INU	**Inuyama**	**3.91**	**256**		**Pn**	**20 37 48.5**	**+0.7**
JTM	**Tenmabayashi**	**4.45**	**354**	Pn	**Pn**	**20 37 53.8**	**-1.5**
JWT	**Wachi**	**5.20**	**260**	Pn	**Pn**	**20 38 03.9**	**-1.8**
JEW	**Eniwo**	**6.48**	**359**	Pn	**Pn**	**20 38 24.0**	**+0.8**
JMN	**Monobe**	**6.91**	**250**	Pn	**Pn**	**20 38 30.1**	**+1.0**
JHS	**Saijyo**	**7.09**	**262**	Pn	**Pn**	**20 38 31.6**	**0.0**
USA0B	**Ussuriysk Arra**	**10.77**	**320**	Pn	**Pn**	**20 39 23.1**	**+1.2**
USA0B	**Ussuriysk Arra**	**10.77**	**320**	P	**Pn**	**20 39 23.1**	**+1.2**
USRK	**Ussuriysk Ar.**	**10.77**	**320**	Pn	**Pn**	**20 39 22.7**	**+0.8**
USRK	**Ussuriysk Ar.**	**10.77**	**320**	P	**Pn**	**20 39 24.5**	**+2.6**
USRK	**Ussuriysk Ar.**	**10.77**	**320**	Pn	**Pn**	**20 39 24.5**	**+2.6**
	0.1nm,0.3s,baz=134,slow=16,SNR=1.8 2.4nm,0.8s						
KSRS	**Korea Array**	**11.06**	**280**		**Pn**	**20 39 26.4**	**+0.4**
KSRS	**Korea Array**	**11.06**	**280**	P	**Pn**	**20 39 26.4**	**+0.4**
KSRS	**Korea Array**	**11.06**	**280**	Pn	**Pn**	**20 39 26.4**	**+0.4**
	0.1nm,0.3s,baz=96,slow=17,SNR=1.4						
KSRS				LR	LR	20 43 41.5	
	comp=Z,268nm,19.7s,baz=105,slow=37 1.1nm,0.8s						
KLR	**Kul'dur**	**14.77**	**334**		**Pn**	**20 40 18.5**	**+2.0**
KLR	**Kul'dur**	**14.77**	**334**	P	**Pn**	**20 40 18.5**	**+2.0**
KLR	**Kul'dur**	**14.77**	**334**	Pn	**Pn**	**20 40 18.5**	**+2.0**
	0.1nm,0.3s,baz=132,slow=12,SNR=2.5						
KLR				LR	LR	20 45 53.6	
	comp=Z,221nm,19.0s,baz=144,slow=36 2.7nm,1.0s						
XLT	**XiLinHaoTe**	**20.91**	**299**	*e*P	**P**	**20 41 29.3**	**-0.5**
XLT				pP	Pn	20 41 34.8	+2.3
XLT				sP	pP	20 41 37.8	-0.3
XLT				S	**S**	**20 45 17.5**	**-3.7**
XLT				sS	Sn	20 45 25.5	-2.2
XLT				pmax	pmax		
	comp=Z,21nm,1.0s						
XLT				pmax	pmax		
	comp=Z,230nm,6.9s						
XLT				LR	LR		
	comp=E,630nm,12.9s						
XLT				LR	LR		
	comp=Z,530nm,13.1s						
HNS	**HongShan**	**21.57**	**281**	⇑P	**P**	**20 41 36.0**	**-0.8**
HNS				S	**S**	**20 45 35.0**	**+0.9**
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
HNS				LR	LR		
	comp=E,460nm,13.3s						
HNS				LR	LR		
	comp=Z,360nm,15.1s						
SSLB	**Suanglung**	**21.81**	**241**	P	**P**	**20 41 37.9**	**-1.7**
SSLB				IAmb	IAmb	20 41 53.9	
	comp=Z,22nm,1.3s						
YULB	**Yu-li**	**21.83**	**239**	P	**P**	**20 41 37.0**	**-2.7**
YULB				IAmb	IAmb	20 41 40.2	
	comp=Z,23nm,1.5s						
TPUB	**Ta-pu**	**22.35**	**240**	P	**P**	**20 41 42.6**	**-2.8**
TPUB				IAmb	IAmb	20 42 00.4	
	comp=Z,35nm,1.3s						
HHC	**Hu-ho-hao-te**	**23.89**	**290**	*e*P	**P**	**20 42 01.3**	**+0.4**
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,360nm,5.9s						
MA2	**Magadan**	**23.98**	**11**	LR	LR	20 52 50.2	
	comp=Z,57nm,18.1s,baz=254,slow=40						
YAK	**Yakutsk**	**26.78**	**347**	*e*P	**P**	**20 42 26.1**	**-0.6**
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK	**Yakutsk**	**26.78**	**347**	P	**P**	**20 42 26.5**	**-0.1**
	comp=E,6.9nm,0.4s,baz=81,slow=1.1,SNR=4.2						
YAK				LR	LR	20 53 32.2	
	comp=E,113nm,19.2s,baz=93,slow=37 comp=E,6.9nm,0.4s						
ENH	**Enshi**	**27.49**	**267**	P	**P**	**20 42 32.8**	**-0.7**
ENH				IAmb	IAmb	20 42 34.3	
	comp=Z,18nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.63**	**120**	T	T	21 12 12.4	
	baz=312,slow=75,SNR=68						
H11N1	**WAKE ISLAND Hy**	**27.64**	**120**	T	T	21 12 07.2	
	baz=312,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hy**	**27.65**	**120**	T	T	21 11 59.8	
	baz=312,slow=75,SNR=54						
ULN	**Ulaanbaatar**	**27.91**	**305**	P	**P**	**20 42 36.3**	**-0.9**
ULN	**Ulaanbaatar**	**27.91**	**305**	*e*P	**P**	**20 42 37.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,11nm,1.7s						
H11S1	**WAKE ISLAND Hy**	**28.32**	**122**	T	T	21 13 02.2	
	baz=314,slow=75,SNR=57						
H11S3	**WAKE ISLAND Hy**	**28.32**	**122**	T	T	21 12 38.2	
	baz=314,slow=75,SNR=37						
H11S2	**WAKE ISLAND Hy**	**28.34**	**122**	T	T	21 12 47.8	
	baz=314,slow=75,SNR=30						
SONM	**Songino Array**	**28.34**	**305**	P	**P**	**20 42 40.9**	**-0.2**
SONM				IAmb	IAmb	20 42 43.6	
	comp=Z,9.4nm,1.2s						
SONM	**Songino Array**	**28.34**	**305**	P	**P**	**20 42 41.8**	**+0.8**
SONM	**Songino Array**	**28.34**	**305**	P	**P**	**20 42 41.8**	**+0.8**
	comp=Z,6.2nm,0.8s,baz=100,slow=9.4,SNR=24						
SONM				LR	LR	20 54 05.1	
	comp=Z,122nm,19.7s,baz=104,slow=36 comp=Z,6.2nm,0.8s						
ZAK	**Zakamensk**	**30.85**	**309**	*e*P	**P**	**20 43 02.7**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GYA	**Guiyang**	**31.32**	**262**	*i* P	**P**	**20 43 07.0**	**-0.6**
GYA				pmax	pmax		
	comp=Z,14nm,1.2s						
GYA				LR	LR		
	comp=Z,280nm,16.9s						
GTA	**Gaotai**	**32.96**	**288**	*e*P	**P**	**20 43 22.8**	**+0.9**
GTA				pP	pwP	20 43 31.5	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,6.4s						
GTA				LR	LR		
	comp=Z,68nm,16.4s						
GTA				LR	LR		
	comp=Z,140nm,17.4s						
GTA				LR	LR		
	comp=Z,160nm,16.4s						
BILL	**Bilibino**	**34.62**	**16**	*i* P	**P**	**20 43 36.4**	**+0.6**
BILL				*e*		20 44 50.0	
BILL				*e*S	**S**	**20 48 59.8**	**-3.0**
BILL				pmax	pmax		
	comp=Z,18nm,2.0s						
BILL				MLR	MLR		
	comp=Z,113nm,18.0s						
PZH	**PanZhiHua**	**35.24**	**265**	P	**P**	**20 43 43.8**	**+2.0**
PZH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,90nm,4.1s						
TIXI	**Tiksi**	**35.99**	**353**	*e*P	**P**	**20 43 45.5**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TIXI	**Tiksi**	**35.99**	**353**	LR	LR	20 59 54.0	
	comp=Z,103nm,19.1s,baz=182,slow=38						
GOMU	**GeErMu**	**37.48**	**284**	P	**P**	**20 44 02.3**	**+1.2**
GOMU				pP	pP	20 44 07.0	-3.2
GOMU				sP	pwP	20 44 09.0	-1.2
GOMU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CRAI	**Chiangrai**	**39.43**	**257**	P	**P**	**20 44 17.8**	**+0.6**
DGZ	**Jazzator, Alta**	**40.96**	**307**	*c i* P	**P**	**20 44 30.7**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ	**Urumqi**	**41.33**	**298**	*e*P	**P**	**20 44 34.5**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				LR	LR		
	comp=Z,200nm,16.5s						
WMQ				LR	LR		
	comp=Z,77nm,19.7s						
CMAR	**Chiang Mai Arr**	**41.53**	**256**	P	**P**	**20 44 35.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**41.53**	**256**	*e*P	**P**	**20 44 35.2**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.53**	**256**	P	**P**	**20 44 35.1**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=46,slow=5.8,SNR=11 comp=Z,1.5nm,0.8s						
LSA	**Lhasa**	**42.48**	**276**	P	**P**	**20 44 43.9**	**+1.1**
LSA	**Lhasa**	**42.48**	**276**	P	**P**	**20 44 43.9**	**+1.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAA0	**Zalesovo Array**	**42.52**	**313**	P	**P**	**20 44 42.2**	**-0.1**
ZALV	**Zalesovo Beam**	**42.52**	**313**	P	**P**	**20 44 42.3**	**0.0**
ZALV	**Zalesovo Beam**	**42.52**	**313**	P	**P**	**20 44 42.8**	**+0.5**
ZALV	**Zalesovo Beam**	**42.52**	**313**	P	**P**	**20 44 42.8**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=93,slow=7.4,SNR=15						
ZALV				LR	LR	21 03 15.7	
	comp=Z,103nm,18.7s,baz=92,slow=37 comp=Z,1.4nm,0.3s						
MK31	**Makanchi Array**	**44.66**	**303**	P	**P**	**20 44 59.6**	**+0.1**
MK31	**Makanchi Array**	**44.66**	**303**	*i* P	**P**	**20 45 00.1**	**+0.5**
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	**20 44 59.0**	**-0.5**
MKAR	**Makanchi Array**	**44.66**	**303**	*c*eP	**P**	**20 45 00.3**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**44.66**	**303**	P	**P**	**20 45 00.3**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=89,slow=10.0,SNR=20						
MKAR				LR	LR	21 04 01.0	
	comp=Z,112nm,19.9s,baz=86,slow=36 comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**46.51**	**309**	P	**P**	**20 45 14.1**	**-0.1**
KURK				IAmb	IAmb	20 45 15.3	
	comp=Z,6.4nm,0.8s						
KURK	**Kurchatov**	**46.51**	**309**	*c*eP	**P**	**20 45 13.9**	**-0.3**
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURBB	**Kurchatov Arra**	**46.58**	**309**	LR	LR	21 05 35.8	
	comp=Z,101nm,19.8s,baz=123,slow=37						
K20K	**Telida**	**46.77**	**34**	P	**P**	**20 45 18.4**	**+2.4**
K20K				IAmb	IAmb	20 45 19.8	
	comp=Z,3.2nm,0.8s						
ILSW	**Iliamna Southw**	**47.12**	**39**	P	**P**	**20 45 21.1**	**+2.2**
ILSW				IAmb	IAmb	20 45 40.7	
	comp=Z,6.8nm,0.6s						
ILAR	**Eielson Array**	**49.96**	**32**	P	**P**	**20 45 40.4**	**-0.2**
ILAR	**Eielson Array**	**49.96**	**32**	P	**P**	**20 45 40.4**	**-0.2**
	comp=Z,0.7nm,0.2s,baz=265,slow=4.2,SNR=4.9						
ILAR				LR	LR	21 05 38.4	
	comp=Z,22nm,21.9s,baz=72,slow=34 comp=Z,0.7nm,0.2s						
BOOM	**Boomskoye usch**	**50.01**	**298**	P	**P**	**20 45 45.2**	**+3.8**
BOOM	**Boomskoye usch**	**50.01**	**298**	P	**P**	**20 45 45.3**	**+3.8**
BOOM				pmax	pmax		
	comp=Z,47nm,1.3s						
BVAR	**Borovoye Array**	**51.18**	**313**	LR	LR	21 08 35.1	
	comp=Z,112nm,19.1s,baz=84,slow=37						
BRVK	**Borovoye**	**51.24**	**313**	*i* P	**P**	**20 45 52.3**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	**Karatay Array**	**53.64**	**301**	P	**P**	**20 46 08.1**	**-0.3**
KK31				IAmb	IAmb	20 46 14.5	
	comp=Z,3.6nm,0.9s						
KK31	**Karatay Array**	**53.64**	**301**	P	**P**	**20 46 08.1**	**-0.3**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**53.64**	**301**	P	**P**	**20 46 08.3**	**-0.1**
KKAR	**Karatay Array**	**53.64**	**301**	P	**P**	**20 46 08.1**	**-0.3**
KKAR				IAmb	IAmb	20 46 14.5	
	comp=Z,3.6nm,0.9s						
KKAR	**Karatay Array**	**53.64**	**301**	P	**P**	**20 46 08.3**	**-0.1**
DRK	**Karamyk**	**53.93**	**296**	P	**P**	**20 46 11.6**	**+0.8**
BTK	**Batken**	**54.44**	**297**	P	**P**	**20 46 14.5**	**+0.2**
BTK	**Batken**	**54.44**	**297**	P	**P**	**20 46 14.5**	**+0.2**
BTK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	**Inuvik**	**54.90**	**27**	LR	LR	21 11 53.6	
	comp=Z,33nm,18.1s,baz=345,slow=38						
GAR	**Garm**	**55.18**	**296**	P	**P**	**20 46 19.9**	**+0.2**
GAR				IAmb	IAmb	20 46 21.6	
	comp=Z,22nm,1.5s						
CHGR	**Chuyangaron**	**56.14**	**296**	P	**P**	**20 46 26.5**	**-0.2**
CHGR	**Chuyangaron**	**56.14**	**296**	P	**P**	**20 46 26.5**	**-0.2**
CHGR				pmax	pmax		
	comp=Z,23nm,0.9s						
FITZ	**Fitzroy Crossi**	**56.24**	**198**	P	**P**	**20 46 25.8**	**-1.4**
	comp=Z,1.6nm,1.0s,baz=30,slow=8.1,SNR=1.9 comp=Z,1.6nm,1.0s						
WRA	**Warramunga Arr**	**56.42**	**188**	*c*eP	**P**	**20 46 30.0**	**+1.5**
WRA	**Warramunga Arr**	**56.42**	**188**	P	**P**	**20 46 27.1**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=4.7,slow=7.3,SNR=11 comp=Z,0.5nm,0.7s						
ARU	**Arti**	**57.01**	**319**	P	**P**	**20 46 32.0**	**-0.3**
ARU				IAmb	IAmb	20 46 34.1	
	comp=Z,10.0nm,1.3s						
ARU	**Arti**	**57.01**	**319**	*c i* P	**P**	**20 46 32.6**	**+0.3**
ARU						20 48 42.2	
ARU				PPP	PPP	20 49 58.0	
ARU				S	**S**	**20 54 27.8**	**+3.5**
ARU				SS	**SS**	**20 58 11.6**	**-1.0**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARU				MLR	MLR		
	comp=Z,138nm,17.0s						
ARU	**Arti**	**57.01**	**319**	LR	LR	21 13 04.0	
	comp=Z,100nm,18.5s,baz=124,slow=38						
ABKAR	**Akbulak array**	**58.53**	**311**	P	**P**	**20 46 42.7**	**-0.5**
AKTO	**Aktyubinsk**	**59.28**	**312**	LR	LR	21 13 10.8	
	comp=Z,63nm,20.3s,baz=97,slow=37						
ASAR	**Alice Springs**	**60.15**	**188**	P	**P**	**20 46 53.4**	**-1.2**
ASAR	**Alice Springs**	**60.15**	**188**	P	**P**	**20 46 53.4**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=8.3,slow=7.0,SNR=5.9 comp=Z,0.3nm,0.6s						
KIRV	**Kirov**	**60.91**	**323**	*c*eP	**P**	**20 47 00.5**	**+1.1**
SPITS	**Spitsbergen Ar**	**61.23**	**349**	LR	LR	21 16 30.8	
	comp=Z,56nm,18.2s,baz=70,slow=39						
GEYT	**Allbeck**	**64.34**	**299**	LR	LR	21 18 26.4	
	comp=Z,63nm,18.7s,baz=182,slow=39						
ARCES	**ARCESS Array B**	**64.70**	**340**	LR	LR	21 21 55.8	
	comp=Z,68nm,18.2s,baz=82,slow=42						
OBN	**Obninsk**	**68.76**	**323**	*c*eP	**P**	**20 47 49.4**	**-1.1**
OBN				*e*		20 48 15.0	
OBN				*e*		20 50 22.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,77nm,16.0s						
FINES	**FINESS Array B**	**69.51**	**332**	P	**P**	**20 47 54.9**	**-0.2**
FINES	**FINESS Array B**	**69.51**	**332**	P	**P**	**20 47 54.9**	**-0.2**
	comp=Z,3.8nm,1.0s,baz=46,slow=5.5,SNR=6.3 comp=Z,3.8nm,1.0s						
KBZ	**Khabaz**	**71.50**	**311**	P	**P**	**20 48 07.3**	**-0.2**
KBZ	**Khabaz**	**71.50**	**311**	P	**P**	**20 48 07.3**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=261,slow=5.3,SNR=3.8 comp=Z,2.1nm,0.9s						
KIV	**Kislovodsk**	**71.51**	**311**	*e*P	**P**	**20 48 07.4**	**-0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK	**Minsk**	**73.17**	**326**	*i* P	**P**	**20 48 15.3**	**-1.9**
MNK				*i*		20 50 58.3	

HVU	**Hansel Valley**	**76.71**	**48**	P	**P**		**20 48 39.9**	**+1.7**
HVU				pmax	pmax			
	comp=Z,26nm,0.8s							
PDAR	**Pinedale Array**	**78.00**	**45**	P	**P**		**20 48 45.5**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=301,slow=3.7,SNR=2.4							
	comp=Z,0.2nm,0.7s							
MVU	**Marysvale**	**79.04**	**50**	P	**P**		**20 48 50.7**	**-0.7**
MSU	**Marysvale**	**79.06**	**50**	P	**P**		**20 48 51.2**	**-0.2**
MSU	**Marysvale**	**79.06**	**50**	P	**P**		**20 48 51.2**	**-0.2**
PFO	**Pinyon Flats O**	**79.25**	**56**	LR	LR		21 16 33.0	
	comp=Z,28nm,19.9s,baz=77,slow=30							
RDMU	**Red Mountain**	**79.36**	**47**	P	**P**		**20 48 51.6**	**-1.5**
BRTR	**Keskin Array B**	**79.45**	**312**	*ce*P	**P**		**20 48 54.0**	**+0.6**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**79.45**	**312**	P	**P**		**20 48 54.1**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=122,slow=4.7,SNR=3.7							
	comp=Z,1.2nm,0.8s							
ULM	**Lac du Bonnet**	**79.96**	**33**	P	**P**		**20 48 57.4**	**+1.6**
ULM	**Lac du Bonnet**	**79.96**	**33**	P	**P**		**20 48 57.4**	**+1.6**
	comp=Z,2.6nm,0.7s,baz=281,slow=4.6,SNR=3.1							
	comp=Z,2.6nm,0.7s							
GERES	**GERESS Array B**	**83.40**	**328**	P	**P**		**20 49 13.5**	**-0.6**
GERES	**GERESS Array B**	**83.40**	**328**	P	**P**		**20 49 13.5**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=15,slow=5.5,SNR=5.1							
	comp=Z,0.8nm,0.9s							
PPT	**Papeete**	**84.15**	**117**	LR	LR		21 21 49.3	
	comp=Z,41nm,19.6s,baz=288,slow=32							
TXAR	**Lajitas Array**	**90.37**	**53**	P	**P**		**20 49 48.2**	**-0.3**
TXAR	**Lajitas Array**	**90.37**	**53**	P	**P**		**20 49 48.1**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=251,slow=3.8,SNR=3.5							
	comp=Z,0.3nm,0.8s							
ESDC	**Sonseca Array**	**97.99**	**334**	LR	LR		21 38 01.4	
	comp=Z,60nm,19.2s,baz=53,slow=37							
LPAZ	**La Paz**	**146.85**	**61**	PKP2	**PKPab**		**20 56 31.7**	**+0.1**
LPAZ	**La Paz**	**146.85**	**61**	PKPbc	**PKPab**		**20 56 31.7**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=29,slow=2.4,SNR=2.4							

*IDC **30** 20:47:11.7±1.8, 19°.60S×177°.50W, h594km±18km, mb3.2/5, mbtmp4.2/7, Error ellipse: s-maj=24.6km s-min=21.4km az=162.0*

*NEIC **30** 20:47:12.5±1.0, 19°.6S±0°.2×177°.5W±0°.1, h592km±18km, mb4.3/19, Error ellipse: s-maj=28.3km s-min=17.7km az=195.0*

ISC 30 20:47:12.0±0.8, 19°.4S±0°.1×177°.6W±0°.1, h600km, n32, σ0s75/34, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.48**	**291**	P		**P**	**20 48 41.2**	**+0.1**
MSVF	**Nonsavu**	**4.48**	**291**	P		**P**	**20 48 40.7**	**-0.4**
	1.9nm,0.3s,baz=297,slow=23,SNR=8.3							
NIUE	**Niue**	**7.22**	**89**	P		**P**	**20 49 04.2**	**0.0**
AFI	**Afiamalu**	**7.79**	**46**	P		**P**	**20 49 09.2**	**-0.4**
URZ	**Urewera**	**19.35**	**193**	P		**P**	**20 50 57.4**	**-2.3**
URZ				IAmb		IAmb	20 50 59.0	
	comp=Z,16nm,0.9s							
URZ	**Urewera**	**19.35**	**193**	P		**P**	**20 50 57.5**	**-2.1**
	comp=Z,6.5nm,0.3s,baz=301,slow=23,SNR=15							
THZ	**Tophouse**	**23.71**	**198**	P		**P**	**20 51 38.0**	**-0.8**
MLZ	**Mavora Lakes**	**28.48**	**201**	P		**P**	**20 52 20.4**	**0.0**
WHZ	**Wether Hill Ro**	**29.00**	**201**	P		**P**	**20 52 26.2**	**+1.3**
CTA	**Charters Tower**	**34.02**	**263**	P		**P**	**20 53 08.1**	**+0.1**
	comp=Z,4.4nm,0.6s,baz=105,slow=9.7,SNR=6.4							
	comp=Z,4.4nm,0.6s							
CTAO	**Charters Tower**	**34.02**	**263**	P		**P**	**20 53 08.1**	**+0.1**
CTAO				IAmb		IAmb	20 53 36.6	
	comp=Z,18nm,1.4s							
COEN	**Coen**	**37.94**	**272**	P		**P**	**20 53 40.4**	**+0.1**
COEN				IAmb		IAmb	20 53 43.6	
	comp=Z,32nm,1.4s							
STKA	**Stephens Creek**	**38.64**	**243**	P		**P**	**20 53 44.8**	**-0.9**
STKA	**Stephens Creek**	**38.64**	**243**	P		**P**	**20 53 46.8**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=95,slow=9.1,SNR=3.9							
	comp=Z,1.1nm,0.5s							
BBOO	**Buckleboo**	**43.41**	**243**	P		**P**	**20 54 23.4**	**+0.1**
BBOO				IAmb		IAmb	20 54 36.7	
	comp=Z,26nm,1.5s							
WR0	**Warramunga Arr**	**44.98**	**261**	P		**P**	**20 54 35.2**	**-0.3**
WR0				IAmb		IAmb	20 54 46.4	
	comp=Z,7.7nm,1.4s							
WB0	**Warramunga Arr**	**45.14**	**261**	P		**P**	**20 54 36.6**	**-0.2**
WB0				IAmb		IAmb	20 54 37.1	
	comp=Z,5.0nm,1.1s							
WB2	**Warramunga Arr**	**45.16**	**261**	P		**P**	**20 54 36.6**	**-0.3**
WB2				IAmb		IAmb	20 54 38.0	
	comp=Z,4.2nm,0.8s							
WRA	**Warramunga Arr**	**45.17**	**261**	P		**P**	**20 54 36.5**	**-0.5**
WRA				PcP		**PcP**	**20 56 04.3**	**+0.1**
WRA	**Warramunga Arr**	**45.17**	**261**	P		**P**	**20 54 36.5**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=98,slow=7.7,SNR=28							
	comp=Z,2.1nm,0.5s							
AS31	**Alice Springs**	**45.17**	**256**	P		**P**	**20 54 37.2**	**+0.1**
AS31				IAmb		IAmb	20 54 38.8	
	comp=Z,1.7nm,0.3s							
ASAR	**Alice Springs**	**45.18**	**256**	P		**P**	**20 54 37.0**	**-0.1**
ASAR	**Alice Springs**	**45.18**	**256**	P		**P**	**20 54 37.3**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=88,slow=8.7,SNR=41							
ASAR				PcP		**PcP**	**20 56 04.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=105,slow=3.7,SNR=4.3							
ASAR				S		**S**	**21 00 34.2**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=89,slow=17,SNR=5.5							
	comp=Z,3.6nm,0.7s							
MTN	**Manton Dam**	**49.57**	**269**	P		**P**	**20 55 09.8**	**-0.1**
MTN				IAmb		IAmb	20 55 10.2	
	comp=Z,8.9nm,0.8s							
KNRA	**Kununurra**	**51.15**	**265**	P		**P**	**20 55 21.4**	**0.0**
KNRA				IAmb		IAmb	20 55 45.9	
	comp=Z,21nm,1.5s							
FAKI	**Fak Fak**	**51.66**	**282**	P		P	20 55 31.8	+6.7
FITZ	**Fitzroy Crossi**	**53.59**	**261**	P		**P**	**20 55 39.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**53.59**	**261**	P		**P**	**20 55 39.3**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=78,slow=2.7,SNR=13							
	comp=Z,1.3nm,0.4s							
VNDA	**Vanda**	**59.03**	**185**	P		**P**	**20 56 15.4**	**+0.5**
QSPA	**South Pole Qui**	**70.65**	**180**	P		**P**	**20 57 28.9**	**+0.8**
QSPA				IAmb		IAmb	20 57 58.5	
	comp=Z,3.8nm,1.4s							
ARCES	**ARCESS Array B**	**127.92**	**350**	PKP		**PKPdf**	**21 05 09.3**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=5.7,slow=1.2,SNR=5.6							
GERES	**GERESS Array B**	**149.26**	**345**	PKPbc		**PKPbc**	**21 05 54.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=45,slow=1.5,SNR=8.6							

JMA 30 20:56:39.8±0.1, 24°N±1°×122°4E±°, h11km±4km, MV0.1/6, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKRS	**Kuro-shima**	**0.12**	**140**	*i* P		Pg	20 56 42.8	0.0
JKRS				*e*S		Sg	20 56 45.1	+0.2
JIJ	**Ishigaki jima**	**0.20**	**81**	P		Pg	20 56 44.2	+0.1
JIJ				*e*S		Sg	20 56 47.1	+0.1
HATJ	**Hateruma jima**	**0.30**	**201**	P		Pg	20 56 45.8	0.0
HATJ				*e*S		Sg	20 56 49.7	-0.1
JISG	**Ishigakijimahi**	**0.43**	**54**	*e*P		Pg	20 56 48.4	0.0
YOJ	**Yonaguni jima**	**0.84**	**279**	*e*S		Sg	20 57 06.6	-0.5

TAP 30 20:57:22.5, 23°.13N×121°.83E, h31km, ML1.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ECBN	**Changbin**	**0.39**	**298**	*e*P		Pn	20 57 32.0	0.0
	baz=298							
FULB	**Fuli**	**0.49**	**278**	P		Pb	20 57 31.9	-1.1
	baz=279							
FULB				*e*S		Sb	20 57 38.6	-1.4
	baz=279							
EDH	**Donghe**	**0.51**	**252**	P		Pb	20 57 32.3	-0.8
	baz=250							
EDH				*i* S		Sb	20 57 39.3	-1.0
	baz=250							
EYUL	**Yuli**	**0.52**	**295**	*i* P		Pb	20 57 32.4	-0.8
	baz=287							
EYUL				S		Sb	20 57 39.7	-0.8
	baz=287							
HGSD	**Ruisui**	**0.52**	**314**	*e*P		Pb	20 57 31.6	-1.6
	baz=314							
HGSD				*e*S		Sb	20 57 38.5	-2.1
	baz=314							
TWF1	**Yuli**	**0.54**	**295**	P		Pb	20 57 32.5	-1.0
	baz=287							
TWF1				S		Sb	20 57 40.1	-1.1
	baz=287							
YULB	**Yu-li**	**0.55**	**298**	P		Pb	20 57 32.8	-1.0
	baz=298							
YULB				S		Sb	20 57 40.9	-0.7
	baz=298							
ECS	**Chishang**	**0.56**	**267**	P		Pb	20 57 34.1	+0.1
	baz=267							
ECS				S		Sn	20 57 42.6	-0.1
	baz=267							
LDUT	**Ludao**	**0.56**	**216**	P		Pb	20 57 33.1	-0.9
	baz=216							
LDUT				S		Sb	20 57 40.7	-1.1
	baz=216							
EHY	**Hungye**	**0.60**	**309**	P		Pb	20 57 33.3	-1.3
	baz=314							
EHY				S		Sb	20 57 42.6	-0.2
	baz=314							
EGFH	**Guangfu**	**0.65**	**326**	P		Pb	20 57 34.2	-1.2
	baz=330							
EGFH				S		Sb	20 57 43.3	-1.0
	baz=330							
LONT	**Longtian**	**0.68**	**251**	*e*P		Pn	20 57 36.6	+0.5
	baz=247							
LONT				*e*S		Sn	20 57 45.6	-0.1
	baz=247							
ELDTW	**Lidau**	**0.75**	**275**	*i* P		Pn	20 57 35.9	-1.2
	baz=275							
ELDTW				*i* S		Sb	20 57 45.0	-2.0
	baz=275							
TWGBT	**Beinan**	**0.76**	**246**	*e*P		Pn	20 57 36.9	-0.2
	baz=240							
TWGBT				S		Sb	20 57 47.0	-0.2
	baz=240							
ESL	**Shilin**	**0.77**	**332**	*e*P		Pn	20 57 36.8	-0.5
	baz=340							
ESL				*i* S		Sb	20 57 46.2	-1.5
	baz=340							
YUS	**Yu-Shan**	**0.88**	**294**	P		Pn	20 57 38.8	-0.5
	baz=286							
YUS				*e*S		Sn	20 57 51.9	+0.6
	baz=286							
VWDT	**VWDT**	**0.88**	**315**	P		Pn	20 57 38.4	-0.5
	baz=314							
VWDT				S		Sn	20 57 49.7	-0.9
	baz=314							
ALS	**Alishan**	**1.01**	**292**	P		Pn	20 57 41.1	+0.2
	baz=292							
ALS				S		Sb	20 57 54.6	-0.2
	baz=292							
OWD	**Renai**	**1.01**	**324**	*i* P		Pn	20 57 40.0	-0.8
	baz=324							
OWD				*e*S		Sn	20 57 52.2	-1.9
	baz=324							
SSLB	**Guanglung**	**1.03**	**309**	P		Pn	20 57 40.7	-0.3
	baz=309							
SSLB				S		Sn	20 57 53.7	-0.7
	baz=309							
WUSB	**Renai**	**1.08**	**323**	*i* P		Pn	20 57 41.3	-0.4
	baz=323							
WUSB				*e*S		Sn	20 57 54.0	-1.7
	baz=323							
CHGB	**Renai**	**1.10**	**327**	*i* P		Pn	20 57 41.3	-0.8
	baz=327							
CHGB				S		Sn	20 57 55.4	-1.0
	baz=327							
ETLH	**Xiulin Townshi**	**1.12**	**344**	*e*P		Pn	20 57 40.7	-1.4
	baz=331							
ETLH				*e*S		Sn	20 57 54.5	-2.1
	baz=331							
WHF	**Hehuan Shan**	**1.13**	**333**	P		Pn	20 57 41.8	-0.9
	baz=333							
WHF				*e*S		Sn	20 57 55.4	-2.1
	baz=333							
FUSS	**Fushou**	**1.23**	**334**	P		Pn	20 57 43.7	-0.2
	baz=334							
FUSS				*e*S		Sn	20 57 58.0	-1.6
	baz=334							
YOJ	**Yonaguni jima**	**1.71**	**39**	*e*P		Pn	20 57 50.5	+0.3
	baz=39							
JMJ	**Miyako jima 2**	**3.59**	**61**	*e*P		Pn	20 58 16.3	+0.3
	baz=62							

*IDC **30** 21:12:49.2±0.7, 5°.51S×153°.17E, h0km, mb4.2/13, mbtmp4.3/13, MS3.6/21, Error ellipse: s-maj=20.9km s-min=15.2km az=90.0*

*NEIC **30** 21:12:52.1±1.2, 5°.48S±0°.08×153°.17E±0°.09, h16km±5km, mb4.5/30, Error ellipse: s-maj=16.5km s-min=6.3km az=48.0*

ISC 30 21:12:54.7±0.5, 5°.50S±0°.07×153°.17E±0°.09, h37km, n75, σ0s95/66, mb4.4/30, MS3.6/20, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**1.64**	**322**			**Pn**	**21 13 19.5**	**-1.5**
RABL					Sn	**Sn**	**21 13 40.8**	**0.0**
KRVT	**Keravat (AS076**	**1.64**	**316**			**Pn**	**21 13 19.9**	**-1.1**
KRVT						**Sn**	**21 13 40.4**	**-0.4**
KRVT	**Keravat (AS076**	**1.64**	**316**	Pn		**Pn**	**21 13 19.9**	**-1.1**
	507nm,0.3s,baz=295,slow=1.2,SNR=121							
KRVT					Sn	**Sn**	**21 13 40.4**	**-0.4**
	552nm,0.3s,baz=104,slow=23,SNR=4.5							
KRVT					LR	LR	21 14 10.6	
	comp=Z,2μm,18.2s,baz=272,slow=49							
PATS	**Pohnpei**	**13.28**	**23**	Pn		**Pn**	**21 15 59.4**	**-1.5**
CTA	**Charters Tower**	**15.99**	**204**	LR		LR	21 21 53.2	
	comp=Z,119nm,18.6s,baz=30,slow=34							
EIDS	**Eidsvold**	**19.86**	**186**	P		**P**	**21 17 22.8**	**+0.1**
GUMO	**Guam**	**20.67**	**337**	LR		LR	21 26 10.4	
	comp=Z,70nm,18.2s,baz=158,slow=39							
DZM	**Mont Dzumac**	**20.89**	**143**	P		**P**	**21 17 32.4**	**-1.6**
DZM				IAmb		IAmb	21 17 55.9	
	comp=Z,31nm,1.3s							
DZM	**Mont Dzumac**	**20.89**	**143**	P		**P**	**21 17 32.2**	**-1.8**
	comp=Z,8.3nm,1.0s,baz=323,slow=20,SNR=1.8							
DZM				LR		LR	21 23 40.6	
	comp=Z,139nm,21.4s,baz=36,slow=31							
	comp=Z,8.3nm,1.0s							
SIJI	**Sorong**	**22.34**	**281**	P		**P**	**21 17 49.4**	**-0.2**
SIJI	**Sorong**	**22.34**	**281**	P		**P**	**21 17 49.4**	**-0.2**
	comp=Z,6.2nm,0.6s,baz=124,slow=3.3,SNR=3.7							
	comp=Z,6.2nm,0.6s							
MTN	**Manton Dam**	**22.93**	**250**	P		**P**	**21 17 54.8**	**-1.0**
MTN				IAmb		IAmb	21 18 09.9	
	comp=Z,9.9nm,0.8s							
WB0	**Warramunga Arr**	**23.13**	**231**	P		**P**	**21 17 56.3**	**-1.4**
WB0				IAmb		IAmb	21 18 03.0	
	comp=Z,12nm,0.9s							
WRAB	**Tennant Creek**	**23.26**	**230**	P		**P**	**21 17 58.1**	**-0.9**
WRAB				IAmb		IAmb	21 18 03.8	
	comp=Z,14nm,1.0s							
WRA	**Warramunga Arr**	**23.27**	**230**	P		**P**	**21 17 58.3**	**-0.9**
WRA	**Warramunga Arr**	**23.27**	**230**	P		**P**	**21 17 57.8**	**-1.4**
	comp=Z,3.3nm,0.8s,baz=55,slow=10,SNR=19							
WRA				LR		LR	21 27 09.3	
	comp=Z,97nm,18.6s,baz=280,slow=37							
	comp=Z,3.3nm,0.8s							
AS31	**Alice Springs**	**25.89**	**224**	P		**P**	**21 18 23.6**	**+0.2**
ASAR	**Alice Springs**	**25.89**	**224**	P		**P**	**21 18 23.3**	**-0.1**
ASAR	**Alice Springs**	**25.89**	**224**	P		**P**	**21 18 22.9**	**-0.4**
	comp=Z,5.0nm,0.9s,baz=54,slow=9.1,SNR=20							
ASAR				PcP		**PcP**	**21 21 53.2**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=66,slow=3.1,SNR=4.6							
ASAR				LR		LR	21 27 58.2	
	comp=Z,138nm,19.6s,baz=95,slow=35							
	comp=Z,5.0nm,0.9s							
KNRA	**Kununurra**	**26.00**	**245**	P		**P**	**21 18 24.4**	**0.0**
STKA	**Stephens Creek**	**28.39**	**201**	P		**P**	**21 18 44.5**	**-1.2**
STKA	**Stephens Creek**	**28.39**	**201**	P		**P**	**21 18 44.5**	**-1.2**
	comp=Z,2.5nm,0.8s,baz=28,slow=14,SNR=6.7							
STKA				LR		LR	21 30 28.3	
	comp=Z,93nm,18.6s,baz=354,slow=37							
	comp=Z,2.5nm,0.8s							
FITZ	**Fitzroy Crossi**	**29.66**	**243**	P		**P**	**21 18 56.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**29.66**	**243**	P		**P**	**21 18 57.5**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=89,slow=6.9,SNR=11							
FITZ				LR		LR	21 30 26.9	
	comp=Z,109nm,19.8s,baz=336,slow=36							
	comp=Z,3.6nm,0.8s							
KAPI	**Kappang**	**33.28**	**269**	LR		LR	21 34 39.9	
	comp=Z,90nm,19.4s,baz=194,slow=39							
MBWA	**Marble Bar**	**35.95**	**241**	P		**P**	**21 19 52.2**	**+0.1**
MBWA				IAmb		IAmb	21 19 55.8	
	comp=Z,8.2nm,1.0s							
RPZ	**Rata Peaks**	**41.20**	**160**	LR		LR	21 35 39.4	
	comp=Z,92nm,19.0s,baz=294,slow=33							
MYKOM	**Kota Tinggi**	**49.79**	**277**	P		**P**	**21 21 44.6**	**+0.3**
MYKOM				IAmb		IAmb	21 22 06.2	
	comp=Z,13nm,1.5s							
USRK	**Ussuriysk Ar.**	**53.02**	**341**	P		**P**	**21 22 08.3**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=132,slow=7.0,SNR=5.0							
	comp=Z,1.0nm,0.6s							
BJT	**Baijiatuau**	**56.66**	**326**	P		**P**	**21 22 34.0**	**-0.3**
BJT				IAmb		IAmb	21 22 56.9	
	comp=Z,6.0nm,1.2s							
PPT	**Papeete**	**57.17**	**107**	LR		LR	21 45 13.0	
	comp=Z,47nm,18.1s,baz=214,slow=34							
CRAI	**Chiangrai**	**57.82**	**298**	P		**P**	**21 22 42.5**	**-0.4**
CRAI				IAmb		IAmb	21 22 44.6	
	comp=Z,5.9nm,1.4s							
CMAR	**Chiang Mai Arr**	**58.50**	**295**	P		**P**	**21 22 46.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**58.50**	**295**	P		**P**	**21 22 48.0**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=120,slow=5.9,SNR=9.3							
	comp=Z,1.6nm,0.8s							
PEA0B	**Petropavlovsk-**	**58.51**	**3**	P		**P**	**21 22 47.1**	**0.0**
PETK	**Petropavlovsk-**	**58.51**	**3**	P		**P**	**21 22 47.2**	**+0.1**
PETK	**Petropavlovsk-**	**58.51**	**3**	P		**P**	**21 22 47.5**	**+0.4**
	comp=Z,12nm,0.5s,baz=174,slow=7.5,SNR=40							
PETK				LR		LR	21 44 47.8	
	comp=Z,44nm,20.0s,baz=213,slow=33							
	comp=Z,12nm,0.5s							
PZH	**PanZhiHua**	**59.07**	**305**	P		**P**	**21 22 53.5**	**+1.8**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,100nm,5.7s							
HHC	**Hu-ho-hao-te**	**59.82**	**324**	*e*P		**P**	**21 22 58.8**	**+2.2**
HHC				pmax		pmax		
	comp=Z,32nm,1.0s							
HHC				pmax		pmax		
	comp=Z,310nm,5.4s							
ULN	**Ulaanbaatar**	**66.78**	**328**	P		**P**	**21 23 42.0**	**-0.6**
ULN				IAmb		IAmb	21 23 44.3	
	comp=Z,3.1nm,0.8s							
SHL	**Shillong**	**66.97**	**301**	P		**P**	**21 23 43.3**	**-1.0**
SONM	**Songino Array**	**67.11**	**328**	P		**P**	**21 23 44.4**	**-0.2**
SONM	**Songino Array**	**67.11**	**328**	P		**P**	**21 23 45.1**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=144,slow=5.3,SNR=10							
	comp=Z,0.8nm,0.4s							
YAK	**Yakutsk**	**69.72**	**348**	LR		LR	21 53 17.5	
	comp=Z,28nm,19.9s,baz=267,slow=35							
BILL	**Bilibino**	**73.95**	**5**	P		**P**	**21 24 26.7**	**+0.9**
WMQ	**Urumqi**	**76.50**	**317**	*e*P		**P**	**21 24 43.3**	**+2.2**
N18K	**Kilae Creek**	**76.94**	**23**	P		**P**	**21 24 44.0**	**+0.8**
N18K				IAmb		IAmb	21 24 45.5	
	comp=Z,5.3nm,0.9s							
SVW2	**Sparrevohn**	**77.32**	**23**	P		**P**	**21 24 45.6**	**+0.4**
SVW2				IAmb		IAmb	21 24 47.4	
	comp=Z,2.6nm,0.8s							
PWL	**Port Wells**	**80.12**	**25**	P		**P**	**21 25 00.7**	**+0.1**
IMAR	**Indian Mountai**	**80.91**	**19**	P		**P**	**21 25 05.1**	**+0.3**
MK31	**Makanchi Array**	**81.09**	**319**	P		**P**	**21 25 06.0**	**-0.1**
MKAR	**Makanchi Array**	**81.09**	**319**	P		**P**	**21 25 05.9**	**-0.2**
MKAR	**Makanchi Array**	**81.09**	**319**	P		**P**	**21 25 06.2**	**0.0**
	comp=Z,1.1nm,0.7s,baz=98,slow=7.7,SNR=13							
	comp=Z,1.1nm,0.7s							
RND	**Reindeer**	**81.22**	**23**	P		**P**	**21 25 05.8**	**-0.8**
RND				IAmb		IAmb	21 25 07.2	
	comp=Z,4.4nm,0.9s							
MAKZ	**Makanchi**	**81.30**	**319**	P		**P**	**21 25 06.2**	**-1.1**
MAKZ				IAmb		IAmb	21 25 08.0	
	comp=Z,3.2nm,0.9s							
MCK	**McKinley**	**81.36**	**22**	P		**P**	**21 25 06.8**	**-0.4**
ZAA0	**Zalesovo Array**	**81.93**	**326**	P		**P**	**21 25 09.6**	**-0.8**
ZAA0				IAmb		IAmb	21 25 10.3	
	comp=Z,3.1nm,0.8s							
ZALV	**Zalesovo Beam**	**81.93**	**326**	P		**P**	**21 25 09.6**	**-0.8**
ZALV	**Zalesovo Beam**	**81.93**	**326**	P		**P**	**21 25 10.1**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=110,slow=5.6,SNR=13							
ZALV				LR		LR	22 04 34.6	
	comp=Z,26nm,18.0s,baz=92,slow=38							
	comp=Z,2.8nm,0.6s							
ILAR	**Eielson Array**	**82.66**	**22**	P		**P**	**21 25 13.4**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=251,slow=5.5,SNR=12							
ILAR				LR		LR	21 59 25.0	
	comp=Z,20nm,18.9s,baz=252,slow=34							
	comp=Z,0.7nm,0.3s							
M27K	**Edge Creek, AK**	**83.55**	**25**	P		**P**	**21 25 19.7**	**+0.9**
M27K				IAmb		IAmb	21 25 23.0	
	comp=Z,4.7nm,0.9s							
KSH	**Kashi**	**83.66**	**311**	P		**P**	**21 25 22.0**	**+2.1**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.8s							
QSPA	**South Pole Qui**	**84.47**	**180**	P		**P**	**21 25 24.6**	**+1.1**
QSPA				IAmb		IAmb	21 25 44.6	
	comp=Z,6.2nm,1.3s							
NIL	**Nilore**	**84.67**	**304**	P		**P**	**21 25 24.9**	**-0.1**
BMAR	**Burnt Mountain**	**84.77**	**20**	P		**P**	**21 25 26.4**	**+1.6**
BBB	**Bella Bella**	**87.43**	**37**	LR		LR	22 03 23.4	
	comp=Z,22nm,18.5s,baz=232,slow=35							
DLBC	**Dease Lake**	**87.79**	**31**	LR		LR	21 57 54.8	
	comp=Z,55nm,20.9s,baz=287,slow=31							
INK	**Inuvik**	**88.97**	**21**	LR		LR	22 01 49.0	
	comp=Z,45nm,20.4s,baz=223,slow=33							
YBH	**Yreka Blue Hor**	**89.24**	**48**	LR		LR	22 01 18.3	
	comp=Z,51nm,18.7s,baz=306,slow=33							
NEW	**New

BOAV IAmb IAmb 21 41 57.6
comp=Z,4.3nm,0.6s
TOA0 **Torodi Ar. Sit** **74.07 28** P **P** **21 42 45.3 +0.1**
TOA0 IAmb IAmb 21 42 57.0
comp=Z,5.4nm,1.3s
TORD **Torodi Ar. Bea** **74.07 28** P **P** **21 42 45.2 0.0**
comp=Z,4.0nm,0.6s,baz=197,slow=6.0,SNR=7.0
comp=Z,4.0nm,0.6s
BIRV **Birongo** **75.71 318** P **P** **21 42 55.1 +0.4**
SONM **Songino Array** **149.84 88** PKPbc **PKPbc** **21 50 57.8 -0.5**
comp=Z,0.2nm,0.3s,baz=241,slow=5.0,SNR=2.8
ILAR **Eielson Array** **151.94 309** PKPbc **PKPbc** **21 51 02.1 -0.4**
comp=Z,0.7nm,0.6s,baz=145,slow=5.1,SNR=7.9

*IDC **30** 21:31:20.2±2.6, 5.°33S×151.°48E, h58km±36km, mb3.2/3, mbtmp3.4/3, Error ellipse: s-maj=112.6km s-min=26.4km az=122.0*
ISC 30 21:31:20.1±1.3, **5.°1S**±0.°7×**151.°2E**±0.°6, **h50**km, **n5**, σ**0**s**75**/6, **mb3.1**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.16**	**49**	P			**Pn**	**21 31 39.6**	**-0.4**
	63nm,0.3s,baz=183,slow=5.8,SNR=12								
KRVT				S			**Sn**	**21 31 55.4**	**+0.6**
	235nm,0.4s,baz=68,slow=23,SNR=26								
WRA	**Warramunga Arr**	**22.05**	**226**	P			**P**	**21 36 10.5**	**-0.4**
	0.5nm,0.6s,baz=52,slow=9.8,SNR=8.7								
	0.5nm,0.6s								
ASAR	**Alice Springs**	**24.86**	**220**	P			**P**	**21 36 38.5**	**+0.3**
	0.5nm,0.8s,baz=58,slow=8.7,SNR=5.6								
	0.5nm,0.8s								
FITZ	**Fitzroy Crossi**	**28.09**	**240**	P			**P**	**21 37 07.9**	**+0.5**
	0.7nm,0.5s,baz=39,slow=8.1,SNR=6.7								
	0.7nm,0.5s								
TORD	**Torodi Ar. Bea**	**148.82**	**287**	PKPbc			**PKPbc**	**21 51 02.5**	**-0.8**
	0.3nm,0.7s,baz=94,slow=2.5,SNR=2.0								

IDC 30 21:42:04.3±3.2, **31.°09S**×**176.°95W**, **h0**km, **mb3.5**/2, **mbtmp3.6**/3, **ML4.0**/1, **Error ellipse: s-maj=64.8km s-min=34.8km az=92.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.02**	**335**	Pn			Pn	21 42 39.7	+0.2
	50nm,0.3s,baz=89,slow=23,SNR=2.1								
RAO				Sn			Sb	21 43 06.4	-1.0
	181nm,0.3s,baz=36,slow=23,SNR=6.0								
	224nm,0.5s								
ASAR	**Alice Springs**	**43.97**	**267**	P			P	21 50 13.5	0.0
	0.4nm,0.8s,baz=100,slow=7.5,SNR=4.6								
	0.4nm,0.8s								
WRA	**Warramunga Arr**	**45.02**	**272**	P			P	21 50 21.6	-0.3
	0.6nm,0.6s,baz=113,slow=7.3,SNR=14								
	0.6nm,0.6s								
FINES	**FINESS Array B**	**146.10**	**340**	PKPbc			PKPdf	22 01 44.8	+0.2
	1.5nm,0.8s,baz=302,slow=2.6,SNR=3.5								

*JMA **30** 21:43:32.8±0.3, 24.°N±2.°×122.°3E±0.°5, h19km, MV2.1/7, TAIWAN REGION*
*TAP **30** 21:43:33.3, 24.°11N×122.°24E, h16km, ML2.5, D*
ISC 30 21:43:31.9±1.0, **24.°08N**±0.°02×**122.°33E**±0.°02, **h15**km±8km, **n64**, σ**0**s**58**/122, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.62**	**306**	*e*P			**Pg**	**21 43 44.2**	**+0.1**
	baz=307								
EWUT				*e*S			**Sg**	**21 43 52.3**	**0.0**
	baz=307								
ENA	**Nanau**	**0.64**	**303**	P			**Pb**	**21 43 44.8**	**0.0**
	baz=304								
ENA				S			**Sg**	**21 43 53.2**	**+0.2**
	baz=304								
TWD	**Chiawan**	**0.67**	**270**	*e*P			**Pg**	**21 43 45.3**	**+0.3**
	baz=266								
TWD				*e*S			**Sg**	**21 43 54.2**	**+0.3**
	baz=266								
JYNG	**Yonagunijimaku**	**0.67**	**57**	*e*P			**Pn**	**21 43 47.6**	**+0.7**
JYNG				*e*S			**Sn**	**21 43 58.0**	**+0.7**
NACB	**Ninganchiao**	**0.68**	**278**	*e*P			**Pb**	**21 43 45.8**	**+0.3**
	baz=275								
NACB				*e*S			**Sg**	**21 43 54.4**	**+0.2**
	baz=275								
TWC	**Suao**	**0.69**	**320**	P			**Pb**	**21 43 45.6**	**0.0**
	baz=324								
TWC				S			**Sg**	**21 43 54.3**	**-0.1**
	baz=324								
YOJ	**Yonaguni jima**	**0.73**	**58**	*e*P			**Pn**	**21 43 48.6**	**+0.9**
	baz=63								
YOJ				*e*S			**Sn**	**21 43 59.8**	**+1.2**
	baz=63								
YOJ	**Yonaguni jima**	**0.73**	**58**	P			**Pn**	**21 43 48.2**	**+0.5**
YOJ				*e*S			**Sn**	**21 43 59.4**	**+0.8**
ETLH	**Xiulin Townshi**	**0.78**	**279**	*e*P			**Pb**	**21 43 47.3**	**-0.1**
	baz=277								
ETLH				*e*S			**Sb**	**21 43 58.0**	**+0.2**
	baz=277								
NDS	**Dongshan**	**0.79**	**315**	*e*P			**Pb**	**21 43 46.7**	**-0.7**
	baz=317								
NDS				*e*S			**Sb**	**21 43 57.5**	**-0.3**
	baz=317								
EGS		**0.84**	**335**	*e*P			**Pn**	**21 43 49.4**	**+0.1**
	baz=339								
EGS				*e*S			**Sn**	**21 44 00.6**	**-0.9**
	baz=339								
LATG	**Datong**	**0.86**	**302**	P			**Pg**	**21 43 48.9**	**+0.2**
	baz=302								
LATG				S			**Sb**	**21 43 59.9**	**-0.2**
	baz=302								
ENTT	**Nioudou**	**0.89**	**309**	P			**Pb**	**21 43 48.8**	**-0.4**
	baz=310								
ENTT				*e*S			**Sb**	**21 44 00.3**	**-0.5**
	baz=310								
NTC	**Toucheng**	**0.90**	**330**	*e*P			**Pn**	**21 43 49.6**	**-0.4**
	baz=332								
NTC				*e*S			**Sb**	**21 44 01.3**	**+0.3**
	baz=332								
NDT	**Datong Townshi**	**0.91**	**305**	*e*P			**Pb**	**21 43 49.6**	**+0.1**
	baz=306								
NDT				S			**Sb**	**21 44 00.8**	**-0.5**
	baz=306								
EGFH	**Guangfu**	**0.92**	**244**	*e*P			**Pn**	**21 43 51.0**	**+0.6**
	baz=239								
EGFH				*e*S			**Sg**	**21 44 02.5**	**+0.6**
	baz=239								
NNSB	**Datong**	**0.93**	**292**	P			**Pb**	**21 43 50.1**	**+0.2**
	baz=291								
NNSB				*e*S			**Sb**	**21 44 01.8**	**-0.3**
	baz=291								
NNS	**Nan Shan**	**0.94**	**293**	*e*P			**Pb**	**21 43 49.9**	**-0.2**
	baz=292								
NNS				*e*S			**Sb**	**21 44 01.8**	**-0.7**
	baz=292								
FUSB	**Fushanzhiwuyua**	**0.96**	**315**	*e*P			**Pg**	**21 43 50.6**	**+0.2**
	baz=317								
FUSB				*e*S			**Sb**	**21 44 02.9**	**+0.1**
	baz=317								
WHF	**Hehuan Shan**	**0.97**	**274**	*e*P			**Pb**	**21 43 50.4**	**-0.4**
	baz=271								
WHF				*e*S			**Sb**	**21 44 03.6**	**0.0**
	baz=271								
TIPB	**Shuangxi**	**1.00**	**333**	*e*P			**Pg**	**21 43 51.7**	**+0.4**
	baz=336								
TIPB				*e*S			**Sb**	**21 44 04.4**	**+0.4**
	baz=336								
FUSS	**Fushou**	**1.00**	**280**	*e*P			**Pb**	**21 43 50.6**	**-0.7**
	baz=278								
FUSS				*e*S			**Sb**	**21 44 04.5**	**+0.1**
	baz=278								
HGSD	**Ruisui**	**1.01**	**235**	*e*P			**Pg**	**21 43 51.8**	**+0.3**
	baz=230								
HGSD				*e*S			**Sn**	**21 44 06.1**	**+0.4**
	baz=230								
YHNB	**Yeheng**	**1.05**	**304**	*e*P			**Pn**	**21 43 52.1**	**-0.1**
	baz=304								
YHNB				*e*S			**Sb**	**21 44 05.5**	**+0.1**
	baz=304								
CHGB	**Renai**	**1.06**	**269**	*e*P			**Pb**	**21 43 51.6**	**-0.5**
	baz=266								
CHGB				*e*S			**Sb**	**21 44 05.3**	**-0.5**
	baz=266								
OWD	**Renai**	**1.06**	**263**	*e*P			**Pb**	**21 43 51.3**	**-0.8**
	baz=260								
OWD				*e*S			**Sb**	**21 44 05.5**	**-0.4**
	baz=260								
NSK	**Sanguang**	**1.07**	**304**	*e*P			**Pb**	**21 43 51.8**	**-0.3**
	baz=304								
NSK				*e*S			**Sb**	**21 44 05.0**	**-1.0**
	baz=304								
TWT	**Tachien**	**1.07**	**280**	*e*P			**Pg**	**21 43 52.8**	**+0.2**
	baz=277								
TWT				*e*S			**Sb**	**21 44 06.4**	**+0.3**
	baz=277								
EHY	**Hungye**	**1.08**	**238**	*e*P			**Pn**	**21 43 52.5**	**-0.1**
	baz=233								
EHY				*e*S			**Sb**	**21 44 06.8**	**+0.4**
	baz=233								
SXI1	**Grass Mountain**	**1.09**	**338**	*e*P			**Pg**	**21 43 52.7**	**-0.3**
	baz=341								
SXI1				*e*S			**Sb**	**21 44 06.7**	**0.0**
	baz=341								
NWF	**Wu-fen Shan**	**1.11**	**333**	*e*P			**Pg**	**21 43 53.2**	**-0.1**
	baz=336								
NWF				*e*S			**Sb**	**21 44 07.4**	**+0.3**
	baz=336								
WUSB	**Renai**	**1.11**	**266**	*e*P			**Pn**	**21 43 52.4**	**-0.7**
	baz=263								
WUSB				*e*S			**Sb**	**21 44 06.9**	**-0.4**
	baz=263								
TWA	**Mucha**	**1.12**	**323**	*e*P			**Pg**	**21 43 53.5**	**-0.1**
	baz=325								
TWA				*e*S			**Sb**	**21 44 08.0**	**+0.4**
	baz=325								
VWDT	**VWDT**	**1.14**	**254**	*e*P			**Pn**	**21 43 53.2**	**-0.1**
	baz=250								
VWDT				*e*S			**Sb**	**21 44 07.7**	**-0.2**
	baz=250								
YULB	**Yu-li**	**1.17**	**234**	*e*P			**Pg**	**21 43 54.3**	**-0.1**
	baz=230								
YULB				*e*S			**Sn**	**21 44 09.5**	**0.0**
	baz=230								
EYUL	**Yuli**	**1.18**	**232**	*e*P			**Pg**	**21 43 54.5**	**-0.1**
	baz=227								
EYUL				*e*S			**Sg**	**21 44 10.5**	**+0.4**
	baz=227								
NFF	**Wufeng Townshi**	**1.23**	**297**	*e*P			**Pn**	**21 43 54.8**	**0.0**
	baz=296								
NFF				*e*S			**Sb**	**21 44 10.6**	**-0.2**
	baz=296								
YM01	**YM01**	**1.27**	**327**	*e*P			**Pb**	**21 43 55.5**	**-0.1**
	baz=329								
YM01				*e*S			**Sb**	**21 44 11.8**	**+0.1**
	baz=329								
WHP	**Taichung City**	**1.28**	**279**	*e*P			**Pb**	**21 43 56.2**	**+0.5**
	baz=277								
WHP				*e*S			**Sn**	**21 44 11.7**	**-0.6**
	baz=277								
SSLB	**Suanglung**	**1.29**	**257**	*e*P			**Pb**	**21 43 56.3**	**+0.3**
	baz=254								
SSLB				*e*S			**Sn**	**21 44 12.5**	**-0.1**
	baz=254								
FULB	**Fuli**	**1.29**	**227**	*e*P			**Pb**	**21 43 56.2**	**+0.3**
	baz=223								
FULB				*e*S			**Sg**	**21 44 13.9**	**+0.2**
	baz=223								
WCS	**Beigang Elemen**	**1.30**	**269**	*e*P			**Pb**	**21 43 56.0**	**-0.1**
	baz=267								
WCS				*e*S			**Sn**	**21 44 12.5**	**-0.1**
	baz=267								
SMLT	**Sun Moon Lake**	**1.32**	**262**	*e*P			**Pn**	**21 43 56.2**	**+0.2**
	baz=259								
SMLT				*e*S			**Sn**	**21 44 12.9**	**-0.5**
	baz=259								
LIOB	**Emei**	**1.32**	**295**	*e*P			**Pb**	**21 43 56.9**	**+0.4**
	baz=295								
NSTT	**Nanjuang**	**1.33**	**295**	*e*P			**Pb**	**21 43 56.4**	**-0.2**
	baz=294								
NSTT				*e*S			**Sn**	**21 44 13.0**	**-0.5**
	baz=294								
TYC	**Yuchr**	**1.36**	**263**	*e*P			**Pb**	**21 43 57.4**	**+0.4**
	baz=260								
TYC				*e*S			**Sn**	**21 44 13.5**	**-0.6**
	baz=260								
WHYT	**Xinyi Township**	**1.40**	**255**	*e*S			**Sn**	**21 44 15.6**	**+0.3**
	baz=251								
EDH	**Donghe**	**1.45**	**221**	*e*P			**Pb**	**21 43 58.3**	**-0.3**
	baz=217								
EDH				*e*S			**Sb**	**21 44 17.0**	**+0.1**
	baz=217								
ELDTW	**Lidau**	**1.50**	**234**	*e*P			**Pn**	**21 43 58.4**	**0.0**
	baz=230								
ELDTW				*e*S			**Sn**	**21 44 17.7**	**0.0**
	baz=230								
ALS	**Alishan**	**1.51**	**248**	*e*P			**Pn**	**21 43 58.1**	**-0.5**
	baz=245								
ALS				*e*S			**Sn**	**21 44 17.0**	**-1.2**
	baz=245								
WNT	**Mingjian**	**1.52**	**263**	*e*S			**Sn**	**21 44 18.2**	**+0.1**
	baz=260								
JKRS	**Kuro-shima**	**1.54**	**84**	*e*P			**Pg**	**21 44 02.0**	**+0.4**
JKRS				S			**Sg**	**21 44 23.0**	**+1.3**
LONT	**Longtian**	**1.60**	**224**	*e*P			**Pb**	**21 44 00.8**	**-0.5**
	baz=220								
LONT				*e*S			**Sn**	**21 44 20.5**	**+0.2**
	baz=220								
LDUT	**Ludao**	**1.61**	**210**	*e*P			**Pb**	**21 44 00.3**	**-1.0**
	baz=206								
LDUT				*e*S			**Sb**	**21 44 21.6**	**+0.2**
	baz=206								
JIJ	**Ishigaki jima**	**1.68**	**80**	P			**Pg**	**21 44 02.3**	**-1.9**
JIJ				*e*S			**Sg**	**21 44 24.1**	**-1.9**
STYH	**Taoyuan**	**1.69**	**238**	*e*P			**Pb**	**21 44 01.6**	**-1.1**
	baz=235								
STYH				*e*S			**Sn**	**21 44 21.8**	**-0.4**
	baz=235								
TPUB	**Ta-pu**	**1.74**	**244**	*e*P			**Pn**	**21 44 02.3**	**+0.7**
	baz=241								
TPUB				*e*S			**Sn**	**21 44 24.4**	**+0.8**
	baz=241								
TWK	**Hsinying**	**1.87**	**245**	*e*P			**Pn**	**21 44 04.5**	**+1.0**
	baz=242								
TWK				*e*S			**Sn**	**21 44 26.9**	**0.0**
	baz=242								
CHN1	**Nanshi**	**1.88**	**242**	*e*P			**Pn**	**21 44 04.2**	**+0.7**
	baz=239								
CHN1				*e*S			**Sn**	**21 44 27.6**	**+0.6**
	baz=239								
SGST	**Jiashian**	**1.89**	**239**	*e*S			**Sn**	**21 44 27.5**	**+0.3**
	baz=235								
SNST	**Tainan City**	**1.89**	**243**	*e*S			**Sn**	**21 44 26.7**	**-0.4**
	baz=240								
MASBT	**Mashibuluo**	**2.14**	**227**	*e*P			**Pn**	**21 44 08.2**	**+1.1**
	baz=224								
MASBT				*e*S			**Sn**	**21 44 33.5**	**+0.2**
	baz=224								
EAST	**Anshuo**	**2.17**	**219**	*e*P			**Pb**	**21 44 09.1**	**-1.9**
	baz=216								
EAST				*e*S			**Sn**	**21 44 35.3**	**+1.1**
	baz=216								
SSPT	**Xinbi**	**2.27**	**226**	*e*S			**Sn**	**21 44 37.6**	**+1.0**
	baz=223								

IDC 30 21:59:37.5±1.4, **40.°57N**×**105.°62E**, **h0**km, **mb3.3**/3, **mbtmp3.4**/5, **ML3.3**/2, **Error ellipse: s-maj=45.1km s-min=21.6km az=71.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**7.28**	**4**	Pn			Pn	22 01 25.7	+0.5
	1.3nm,0.3s,baz=186,slow=14,SNR=27								
SONM				Lg			Lg	22 03 28.1	
	1.2nm,0.3s,baz=181,slow=33,SNR=4.0								
	2.4nm,0.3s								
MKAR	**Makanchi Array**	**17.95**	**298**	Pn			Pn	22 03 47.3	-1.1
	baz=104,slow=17,SNR=2.4								
	0.2nm,0.6s								
KURBB	**Kurchatov Arra**	**21.34**	**307**	P			P	22 04 25.6	-0.4
	0.3nm,0.3s,baz=110,slow=9.4,SNR=1.4								
	0.3nm,0.3s								
WRA	**Warramunga Arr**	**65.87**	**150**	P			P	22 10 25.1	+0.1
	0.1nm,0.3s,baz=340,slow=7.1,SNR=1.3								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**69.12**	**152**	P			P	22 10 45.4	-0.1
	0.4nm,0.7s,baz=339,slow=6.4,SNR=4.2								
	0.4nm,0.7s								

*HEL **30** 22:03:58.8, 67.°17N×20.°60E, h0km, ML1.6, Explosion*
*BER **30** 22:03:59.9±2.4, 66.°94N×21.°16E, h0km, ML1.2, Suspected explosion*
UPP 30 22:03:58.8±0.1, **67.°19N**×**20.°67E**, **h0**km, **ML1.8,**

Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.08**	**210**	P			Pg	22 04 00.7	+0.3
DUNU				S			Sg	22 04 01.9	+0.6
DUNU	**Dundret**	**0.08**	**210**	*i* P			Pg	22 04 00.7	+0.3
DUNU				*i* S			Sg	22 04 01.9	+0.6
MASU	**Masugnsbyn**	**0.58**	**62**	P			Pg	22 04 10.0	+0.1
MASU	**Masugnsbyn**	**0.58**	**62**	*i* P			Pg	22 04 10.0	+0.1
KUA	**Kurravaara**	**0.78**	**351**	P			Pg	22 04 13.2	-0.4
KUA	**Kurravaara**	**0.78**	**351**	*i* P			Pg	22 04 13.2	-0.4
SALU	**Saltoluokta**	**0.86**	**284**	P			Pg	22 04 15.0	-0.3
SALU	**Saltoluokta**	**0.86**	**284**	*i* P			Pg	22 04 15.0	-0.3
ERTU	**Ertsjaerv**	**0.88**	**136**	P			Pg	22 04 14.9	-0.7
ERTU	**Ertsjaerv**	**0.88**	**136**	*e*P			Pg	22 04 14.7	-0.9
ERTU				*e*SB			Sg	22 04 26.8	-0.1
NIKU	**Nikkaluokta**	**0.93**	**318**	P			Pg	22 04 16.1	-0.4
NIKU	**Nikkaluokta**	**0.93**	**318**	*e*P			Pg	22 04 16.1	-0.4
PAJU	**Pajala**	**0.97**	**99**	P			Pg	22 04 16.7	-0.6
PAJU	**Pajala**	**0.97**	**99**	*e*P			Pg	22 04 16.7	-0.6
	baz=283								
PAJU				*e*SB			Sn	22 04 33.6	-0.5
KOVU	**Salmi**	**1.05**	**350**	P			Pg	22 04 18.9	-0.1
KOVU	**Salmi**	**1.05**	**350**	*e*P			Pg	22 04 18.9	-0.1
KLF	**Kolari**	**1.28**	**87**	*e*PB			Pg	22 04 22.6	-0.7
KLF				*e*SB			Sg	22 04 39.4	-0.5
HEF	**Hetta**	**1.67**	**42**	*e*P			Pb	22 04 30.4	+0.1
HEF				*e*S			Sn	22 04 50.8	-0.5
HEF	**Hetta**	**1.67**	**42**	*e*P			Pn	22 04 29.2	0.0
	baz=228								
HEF	comp=Z,3.5nm,0.2s				MSG			22 04 49.6	
HEF				*e*S			Sn	22 04 50.5	-0.8
SJUU	**Sjulsmark**	**1.73**	**167**	P			Pn	22 04 30.0	-0.1
SJUU	**Sjulsmark**	**1.73**	**167**	*e*P			Pn	22 04 30.0	-0.1
KIF	**Kilpisjarvi**	**1.82**	**1**	*e*P			Pg	22 04 33.7	0.0
KIF				*e*S			Sg	22 04 58.3	+1.1
KIF	**Kilpisjarvi**	**1.82**	**1**	*e*P			Pb	22 04 32.3	-0.7
KIF				MSG				22 04 54.8	
	comp=Z,3.7nm,0.2s								
KIF				*e*SG			Sg	22 04 57.9	+0.6
TOF	**Tornio**	**1.83**	**126**	*e*PG			Pb	22 04 32.4	-0.8
	baz=305								
TOF	comp=Z,4.7nm,0.2s				MSG			22 04 54.0	
TOF				*e*SN			Sb	22 04 56.7	+0.1
KTK1	**Kautokeino**	**2.07**	**27**	*e*P			Pb	22 04 36.1	-1.1
KTK1				*e*S			Sb	22 05 03.8	+0.4
KTK1				IAML				22 05 04.3	
	comp=Z,3.3nm,0.3s								
KTK1	**Kautokeino**	**2.07**	**27**	*e*PG			Pb	22 04 36.7	-0.4
KTK1				*e*SG			Sb	22 05 03.7	+0.4
FAUS	**Fauske**	**2.10**	**278**	*e*P			Pb	22 04 36.4	-1.2
FAUS				*e*S			Sg	22 05 05.9	-0.2
FAUS				IAML				22 05 08.3	
	comp=Z,3.0nm,0.5s								
RNF	**Rovaniemi**	**2.19**	**103**	*e*PB			Pn	22 04 37.6	+1.3
RNF				*e*SG			Sb	22 05 06.8	0.0
STEI	**Steigen**	**2.21**	**292**	*e*P			Pg	22 04 40.4	-0.7
STEI				*e*S			Sg	22 05 08.8	-1.0
STEI				IAML				22 05 12.0	
	comp=Z,2.5nm,0.7s								
SGF	**Sodankyl**	**2.28**	**81**	*e*PB			Pb	22 04 39.5	-1.3
SGF				*e*SG			Sb	22 05 09.1	-0.5
JETT	**Jettan, Norway**	**2.38**	**358**	*e*S			Sg	22 05 14.6	-0.5
TRO	**Tromso**	**2.54**	**346**	*e*SG			Sg	22 05 18.6	-1.6
KEV	**Kevo**	**3.48**	**39**	*e*S			Sn	22 05 36.4	+0.6

IDC 30 22:08:25.4±2.6, **6.°54S**×**129.°06E**, **h0**km, **mb3.4**/1, **mbtmp3.3**/3, **ML3.7**/2, **Error ellipse: s-maj=208.5km s-min=33.4km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.28**	**159**	Pn			Pn	22 11 48.1	-0.9
	0.5nm,0.3s,baz=333,slow=15,SNR=37								
WRA				Sn			Sn	22 14 17.3	-11
	0.3nm,0.3s,baz=342,slow=22,SNR=6.6								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**17.65**	**165**	P			P	22 12 33.7	-0.3
	0.2nm,0.3s,baz=343,slow=8.3,SNR=4.7								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**67.33**	**327**	P			P	22 19 22.4	0.0
	0.3nm,0.7s,baz=109,slow=8.0,SNR=2.7								
	0.3nm,0.7s								

*HVO **30** 22:09:40.6±0.8, 18.°89N±0.°02×155.°18W±0.°04, h36km±9km, ML2.7/2, ML2.7/46(NEIC), Error ellipse: s-maj=5.2km s-min=2.1km az=69.0*
NEIC 30 22:09:39.4±0.3, **18.°95N**±0.°07×**155.°22W**±0.°04, **h46**km±3km, **Error ellipse: s-maj=10.7km s-min=3.7km az=154.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.34**	**329**				Pn	22 09 48.9	+0.3
HLP	**Hilina Pali**	**0.36**	**346**				Pn	22 09 49.3	+0.4
HLP							Sn	22 09 55.6	0.0
HLP	**Hilina Pali**	**0.36**	**346**	IAML				22 09 55.6	
	comp=N,445nm,0.4s								
HLP	comp=E,470nm,0.2s			IAML				22 09 55.9	
PUH	**Pauahi**	**0.42**	**0**				Sn	22 09 55.7	-1.2
PUH	**Pauahi**	**0.42**	**0**				Pn	22 09 49.6	-0.1
KNHH	**Kane Nui o Ham**	**0.43**	**6**				Pn	22 09 49.7	-0.1
SDHHI	**Sand Hill**	**0.45**	**351**				Pn	22 09 50.0	0.0
SDHHI	**Sand Hill**	**0.45**	**351**	IAML				22 10 06.8	
	comp=E,760nm,1.3s								
JCUZ	**Jacuzzi**	**0.45**	**14**	Pn			Pn	22 09 49.8	-0.1
JCUZ				IAML				22 09 51.9	
	comp=N,547nm,0.8s								
JCUZ	comp=E,390nm,0.8s			IAML				22 09 58.1	
RIM	**Rim**	**0.45**	**353**				Pn	22 09 50.0	0.0
RIM	**Rim**	**0.45**	**353**	IAML				22 09 57.7	
	comp=E,736nm,1.6s								
RIM	comp=N,866nm,0.9s			IAML				22 09 58.2	
KKO	**Keanakako`i**	**0.45**	**354**				Pn	22 09 50.0	0.0
KKO	**Keanakako`i**	**0.45**	**354**	IAML				22 10 04.8	
	comp=E,573nm,1.5s								
NPOC	**North of Pu'u**	**0.46**	**13**				Pn	22 09 49.9	-0.1
NPOC	**North of Pu'u**	**0.46**	**13**	IAML				22 10 02.4	
	comp=N,617nm,0.8s								
NPOC	comp=E,490nm,0.8s			IAML				22 10 06.0	
WRMHI	**West Rim**	**0.46**	**350**				Pn	22 09 50.1	-0.1
WRMHI	**West Rim**	**0.

JOKA	**Jonika Flow**	**0.52**	**22**		Pn		22 09 50.6	-0.2
JOKA					Sn		22 09 57.6	-1.3
MLH	**Mauna Loa**	**0.57**	**344**		Pn		22 09 52.2	+0.6
MLH					Sn		22 10 00.1	-0.1
MLH	**Mauna Loa**	**0.57**	**344**	IAML			22 10 00.3	
	comp=N,518nm,1.3s							
MLH				IAML			22 10 02.7	
	comp=E,221nm,0.4s							
MWH	**Moku'aweowe**	**0.65**	**326**		Pn		22 09 52.7	-0.1
MWH	**Moku'aweowe**	**0.65**	**326**	IAML			22 10 13.5	
	comp=N,316nm,2.9s							
MWH				IAML			22 10 17.7	
	comp=E,361nm,1.7s							
MLOA	**Mauna Loa Obse**	**0.68**	**330**	Pn	Pn		22 09 53.0	-0.2
HMH	**Humu'ula Sheep**	**0.70**	**339**	IAML			22 10 04.0	
	comp=N,262nm,0.2s							
HMH	**Humu'ula Sheep**	**0.70**	**339**		Pn		22 09 53.6	+0.3
HMH					Sn		22 10 03.0	-0.3
ALEP	**Alea Permanent**	**0.72**	**326**		Pn		22 09 53.5	-0.1
ALEP					Sn		22 10 02.5	-1.3
CPH	**Captain Cook**	**0.85**	**309**		Pn		22 09 55.0	-0.1
POHA	**Pohakuloa**	**0.86**	**340**	Pn	Pn		22 09 55.4	0.0
POHA				IAML			22 10 08.3	
	comp=N,230nm,0.2s							
KHLU	**Kahalu`u**	**0.91**	**315**	IAML			22 10 06.4	
	comp=E,216nm,3.1s							
KHLU	**Kahalu`u**	**0.91**	**315**		Pn		22 09 55.9	0.0
KHLU				IAML			22 10 14.1	
	comp=N,198nm,3.9s							
KHLU	**Kahalu`u**	**0.91**	**315**		Sn		22 10 06.6	-1.3
HUH	**Hualalai**	**0.94**	**322**	Pn	Pn		22 09 56.9	+0.4
HUH				IAML			22 10 22.1	
	comp=E,262nm,3.1s							
HUH				IAML			22 10 32.4	
	comp=N,304nm,3.4s							
HPAH	**Hawaii Prepara**	**1.17**	**337**	Pn	Pn		22 09 59.3	-0.2
MHA	**Mahukona**	**1.39**	**332**	Pn	Pn		22 10 02.6	+0.1
KEKH	**Kekaha**	**5.18**	**306**	Pn	Pn		22 10 53.6	-0.9

*MDD **30** 22:14:56.9±1.3,36°.16N×15°.89W, h0^{km}, Mb4.2/4, M_mb3.5/4, Error ellipse: s-maj=13.9km s-min=9.4km az=163.0*
*INMG **30** 22:14:58.6±2.4, 35°.88N×16°.22W, h11^{km}±8^{km}, ML2.7, Error ellipse: s-maj=15.9km s-min=3.1km az=119.0*
ISC 30 22:14:52.7±1.6, 35°.8N±0°.1×15°.9W±0°.1, h10^{km}, n30, σ2^{s}77/39, 4C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**2.71**	**188**	*e*P	**Pn**	**22 15 36.9**	**+0.6**
PMPST				*e*S	**Sn**	**22 16 06.5**	**-2.7**
PMPST				A	A	22 16 08.7	
	47nm,0.6s						
PMPS	**Porto Santo**	**2.74**	**188**	*e*P	**Pn**	**22 15 38.1**	**+1.5**
PMPS				*e*S	**Sn**	**22 16 07.0**	**-2.7**
PMPS				A	A	22 16 12.4	
	24nm,0.3s						
PMOZ	**Porto Moniz, M**	**3.14**	**201**	*e*P	**Pn**	**22 15 44.9**	**+2.6**
PMOZ				*e*S	**Sn**	**22 16 16.1**	**-3.8**
PMOZ				A	A	22 16 18.6	
	37nm,0.6s						
PMAR	**Madeira**	**3.16**	**196**	*e*P	**Pn**	**22 15 42.9**	**+0.2**
PMAR				*e*S	**Sn**	**22 16 16.5**	**-4.1**
PMAR				A	A	22 16 19.6	
	35nm,0.5s						
FUL	**Funchal**	**3.23**	**196**	*e*S	**Sn**	**22 16 17.6**	**-4.4**
PTEO	**Sao Teotonio**	**6.00**	**71**	*e*P	**Pn**	**22 16 24.9**	**+3.3**
PTEO				*e*S	**Sn**	**22 17 28.4**	**-2.0**
PTEO				A	A	22 17 32.6	
	6.9nm,1.1s						
PMAFR	**Mafra**	**6.13**	**57**	*e*S	**Sn**	**22 17 32.9**	**-0.5**
PMAFR				A	A	22 17 37.6	
	15nm,0.6s						
PNCL	**Nicolau / Gran**	**6.32**	**66**	*e*P	**Pn**	**22 16 28.5**	**+2.6**
PNCL				*e*S	**Sn**	**22 17 35.6**	**-2.5**
PNCL				A	A	22 17 46.0	
	3.7nm,0.6s						
MESJ	**Messejana**	**6.47**	**69**	*e*S	**Sn**	**22 17 40.4**	**-1.4**
PCVE	**Castro Verde**	**6.55**	**71**	*e*S	**Sn**	**22 17 42.5**	**-1.4**
PBDV	**Barranco-do-Ve**	**6.55**	**75**	*e*P	**Pn**	**22 16 32.8**	**+3.7**
PBDV				*e*S	**Sn**	**22 17 43.9**	**-0.1**
PBDV				A	A	22 17 48.3	
	4.7nm,0.7s						
PSBE	**So Bento**	**6.74**	**54**	*e*P	**Pn**	**22 16 34.0**	**+2.4**
PSBE				*e*S	**Sn**	**22 17 46.6**	**-1.8**
PSBE				A	A	22 17 52.4	
	6.0nm,0.6s						
PVAQ	**Vaqueiros**	**6.75**	**74**	*e*P	**Pn**	**22 16 35.8**	**+4.0**
PVAQ				A	A	22 17 53.2	
	3.7nm,0.9s						
EVO	**Evora**	**6.85**	**64**	*e*S	**Sn**	**22 17 48.1**	**-3.0**
EVO				A	A	22 17 51.1	
	2.5nm,0.5s						
PMTG	**Montargil**	**6.91**	**59**	*e*P	**Pn**	**22 16 36.3**	**+2.3**
PMTG				*e*S	**Sn**	**22 17 49.2**	**-3.5**
PMTG				A	A	22 17 52.5	
	2.6nm,1.0s						
EGRO	**El Granado**	**6.96**	**73**	S	**Sn**	**22 17 52.0**	**-1.9**
PCAS	**Casmilo, Conde**	**7.22**	**52**	*e*S	**Sn**	**22 17 58.0**	**-2.3**
PCAS				A	A	22 17 58.8	
	2.6nm,0.9s						
PESTR	**Estremoz**	**7.28**	**62**	*e*S	**Sn**	**22 17 58.1**	**-3.7**
PESTR				A	A	22 18 00.2	
	2.3nm,0.6s						
PBAR	**Barrancos**	**7.46**	**69**	*e*P	**Pn**	**22 16 44.9**	**+3.4**
PBAR				*e*S	**Sn**	**22 18 03.3**	**-2.9**
PBAR				A	A	22 18 10.5	
	1.6nm,0.7s						
EMIN	**Mina Concepcio**	**7.64**	**72**	S	**Sn**	**22 18 07.7**	**-2.9**
PMRV	**Marv??o**	**7.65**	**59**	*e*P	**Pn**	**22 16 46.1**	**+1.9**
PMRV				*e*S	**Sn**	**22 18 07.3**	**-3.6**
PMRV				A	A	22 18 09.9	
	3.0nm,0.4s						
EBAD	**Badajoz**	**7.66**	**64**	P	**Pn**	**22 16 47.8**	**+3.6**
EBAD				⇑*i*Vmb_V		22 16 55.6	
	61nm,SNR=1.1						
EBAD				S	Sn	22 18 05.2	-5.8
PVIS	**Viseu**	**7.98**	**49**	*e*S	Sn	22 18 13.9	-5.1
POLO	**Lamas de Olo**	**8.44**	**46**	*e*P	**Pn**	**22 16 56.7**	**+1.7**
POLO				*e*S	Sn	22 18 23.0	-7.3
PCAB	**Cabril**	**8.52**	**44**	*e*S	Sn	22 18 26.5	-5.8
PGAV	**Gavieira, Arco**	**8.56**	**41**	*e*P	**Pn**	**22 16 57.6**	**+0.9**
PGAV				*e*S	Sn	22 18 27.4	-6.0
PGAV				A	A	22 18 32.2	
	3.0nm,0.8s						
ELOB	**Lobios**	**8.61**	**43**	S	Sn	22 18 26.2	-8.3
ECAB	**El Cabril**	**8.67**	**72**	P	**Pn**	**22 17 00.7**	**+2.5**
ECAB				⇑*i*Vmb_V		22 17 02.9	
	71nm,SNR=1.8						
ECAB				S	Sn	22 18 31.3	-4.8
EADA	**Adamuz**	**9.34**	**72**	P	**Pn**	**22 17 09.7**	**+2.3**
EADA				⇑*i*Vmb_V		22 17 16.2	
	54nm,SNR=1.3						
EADA				S	**Sn**	**22 18 49.6**	**-2.9**
ECAL	**Calabor**	**9.41**	**46**	P	**Pn**	**22 17 09.6**	**+1.2**
ECAL				⇑*i*Vmb_V		22 17 15.4	
	97nm,SNR=1.2						
ECAL				S	Sn	22 18 46.6	-7.7

*KRNET **30** 22:18:46.1±0.1,39°.45N×73°.44E, mb2.7*
ISC 30 22:18:44.2±2.1, 39°.39N±0°.08×73°.42E±0°.07, h11^{km}±13^{km}, n9, σ1^{s}68/17, 11C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**337**	⇓*e*P	**Pg**	**22 19 08.7**	**+0.7**
	baz=35						
OHH				⇓*e*S	**Sg**	**22 19 25.6**	**+1.5**
	baz=35						
DRK	**Karamyk**	**1.26**	**275**	⇑*e*P	**Pg**	**22 19 10.3**	**+1.9**
	baz=72						
DRK				⇑*e*S	**Sn**	**22 19 28.1**	**+3.0**
	baz=72						
BTK	**Batken**	**2.12**	**289**	⇑*e*P	**Pg**	**22 19 24.8**	**0.0**
	baz=88						
BTK				⇑*e*S	**Sg**	**22 19 53.0**	**+0.7**
	baz=88						
GAR	**Garm**	**2.44**	**262**	⇑*e*P	**Pg**	**22 19 29.9**	**-1.1**
	baz=61						
GAR				⇑*e*S	**Sg**	**22 20 01.7**	**-1.0**
	baz=61						
ARLS	**Aral**	**2.57**	**15**	⇓*e*P	**Pb**	**22 19 30.1**	**-0.3**
	baz=15						
ARLS				⇓*e*S	**Sb**	**22 20 02.4**	**+0.4**
	baz=15						
ARK	**Arkit**	**2.65**	**336**	⇑*e*P	**Pb**	**22 19 31.8**	**0.0**
	baz=35						
ARK				⇑*e*S	**Sb**	**22 20 05.0**	**+0.5**
	baz=35						
TRKS	**Terek-Say**	**2.76**	**322**	⇓*e*P	**Pb**	**22 19 32.5**	**-1.2**
	baz=20						
TRKS				⇓*e*S	**Sb**	**22 20 06.2**	**-1.4**
	baz=20						
TKM2	**Tokmak 2**	**3.90**	**24**	⇑Pg	**Pg**	**22 19 58.5**	**-0.3**
	0.4nm,0.3s						
TKM2				⇑Lg	Lg	22 20 46.0	
	3.1nm,0.8s						
KK31	**Karatay Array**	**4.31**	**330**	⇓Pg	**Pg**	**22 20 06.0**	**-0.9**
	0.3nm,0.3s,baz=144,slow=16,SNR=4.8						
KK31				⇓Sn	**Sb**	**22 20 48.3**	**-3.8**
	0.5nm,0.4s,baz=146,slow=21						
KK31				⇑Lg	Lg	22 21 00.6	
	0.7nm,0.3s,baz=146,slow=29						

*MDD **30** 22:20:42.5±0.4, 35°.46N×3°.71W, h0^{km}, mb_Lg2.4/11, Error ellipse: s-maj=3.2km s-min=2.7km az=22.0*
*SFS **30** 22:20:42.0, 35°.42N×3°.67W, ML2.4, ALBORAN SUR*
*CNRM **30** 22:20:44.1, 35°.49N×3°.61W, h0^{km}, ml2.2*
ISC 30 22:20:42.2±0.7, 35°.51N±0°.02×3°.65W±0°.02, h10^{km}, n36, σ1^{s}44/64, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.38**	**219**	P	**Pb**	**22 20 51.4**	**+0.4**
PALE	**Palemas**	**0.38**	**219**	P	**Pb**	**22 20 51.6**	**+0.5**
PALE				S	**Sb**	**22 20 57.9**	**+0.9**
WMELI	**Melilla**	**0.60**	**109**	P	**Pb**	**22 20 54.8**	**-0.1**
WMELI				S	**Sg**	**22 21 02.1**	**+0.2**
EMEL	**Melilla**	**0.61**	**110**	Pg	**Pb**	**22 20 54.8**	**-0.1**
EMEL				Sg	**Sg**	**22 21 01.9**	**0.0**
GOG	**Mont Gurugu**	**0.61**	**118**	P	**Pb**	**22 20 54.7**	**-0.3**
GOG				S	**Sb**	**22 21 05.0**	**+1.3**
GOG	**Mont Gurugu**	**0.61**	**118**	P	**Pb**	**22 20 54.7**	**-0.3**
GOG				S	**Sg**	**22 21 00.6**	**-1.5**
CHAS	**Isla Isabel II**	**1.05**	**108**	P	**Pg**	**22 21 01.2**	**-1.2**
CHAS				S	**Sg**	**22 21 13.8**	**-2.3**
TAF	**Taforalt**	**1.23**	**124**	P	**Pg**	**22 21 07.0**	**+1.1**
TAF	**Taforalt**	**1.23**	**124**	P	**Pn**	**22 21 04.5**	**-1.1**
TAF				S	**Sb**	**22 21 20.5**	**-1.0**
ELGU	**Los Guajares,**	**1.35**	**1**	Pg	**Pn**	**22 21 07.5**	**+0.3**
ELGU				Sg	**Sb**	**22 21 24.3**	**-0.8**
ELGU				*i* Vmb_Lg		22 21 29.9	
EMIJ	**Mijas**	**1.39**	**319**	Pg	**Pn**	**22 21 07.9**	**+0.2**
EMIJ				Sg	**Sn**	**22 21 24.4**	**-1.7**
EMIJ				*i* Vmb_Lg		22 21 30.2	
EMAL	**Malaga-Limoner**	**1.40**	**333**	P	**Pn**	**22 21 06.5**	**-1.3**
EMAL				S	**Sn**	**22 21 24.3**	**-1.9**
SMIR	**Smir Dam**	**1.42**	**277**	P	**Pn**	**22 21 07.2**	**-0.9**
CHEFC	**Chefchaouen**	**1.44**	**254**	P	**Pg**	**22 21 12.1**	**+2.2**
CHEFC	**Chefchaouen**	**1.44**	**254**	P	**Pg**	**22 21 10.2**	**+0.3**
CHEFC				S	**Sn**	**22 21 27.4**	**-0.1**
CEU	**Ceuta**	**1.45**	**286**	P	**Pn**	**22 21 07.3**	**-1.2**
CEU				S	**Sn**	**22 21 22.7**	**-4.9**
ECEU	**Ceuta**	**1.46**	**286**	Pg	**Pn**	**22 21 07.2**	**-1.4**
ECEU				Sg	**Sn**	**22 21 24.7**	**-3.0**
ECEU				*i* Vmb_Lg		22 21 28.5	
JBK	**JBK**	**1.48**	**143**	P	**Pg**	**22 21 12.0**	**+1.4**
JBK	**JBK**	**1.48**	**143**	P	**Pn**	**22 21 07.9**	**-1.1**
JBK				S	**Sn**	**22 21 28.0**	**-0.5**
EBER	**Berja**	**1.51**	**24**	Pn	**Pn**	**22 21 09.9**	**+0.3**
EBER				Sn	**Sn**	**22 21 28.8**	**-0.6**
EBER				*i* Vmb_Lg		22 21 33.5	
EGOR	**Sierra Gorda,**	**1.64**	**347**	Pn	**Pb**	**22 21 13.0**	**+0.4**
EGOR				Sn	**Sb**	**22 21 34.4**	**+1.1**
EGOR				*i* Vmb_Lg		22 21 39.8	
EQUE	**Quentar**	**1.70**	**6**	Pn	**Pb**	**22 21 13.9**	**+0.3**
EQUE				Sn	**Sn**	**22 21 33.9**	**+0.1**
EQUE				*i* Vmb_Lg		22 21 38.8	
EQES	**Quesada**	**2.33**	**11**	Pn	**Pb**	**22 21 24.1**	**-0.3**
EQES				Sn	**Sb**	**22 21 52.4**	**-0.9**
EQES				*i* Vmb_Lg		22 21 55.3	
IFR	**Ifrane**	**2.33**	**212**	P	**Pb**	**22 21 23.1**	**-1.4**
IFR				S	**Sn**	**22 21 47.6**	**-2.1**
EADA	**Adamuz**	**2.75**	**345**	Pn	**Pb**	**22 21 29.5**	**-2.0**
EADA				Sn	**Sn**	**22 22 00.7**	**+1.0**
EADA				*i* Vmb_Lg		22 22 10.3	
MD31	**MD31**	**2.79**	**199**	P	**Pn**	**22 21 28.4**	**+1.3**
MD31				S	**Sn**	**22 22 02.5**	**+1.6**
MDT	**Midelt**	**2.81**	**197**	P	**Pn**	**22 21 28.9**	**+1.6**
MDT				S	**Sn**	**22 22 01.9**	**+0.7**
ECAB	**El Cabril**	**2.92**	**331**	Pn	**Pn**	**22 21 31.2**	**+2.4**
ECAB				Sn	**Sn**	**22 22 05.6**	**+1.6**
ECAB				*i* Vmb_Lg		22 22 16.9	
EMUR	**La Murta**	**3.03**	**39**	Sn	**Sn**	**22 22 05.1**	**-1.4**
ETOB	**Tobarra**	**3.55**	**28**	Pn	**Pn**	**22 21 40.3**	**+2.9**
ETOB				Sn	**Sn**	**22 22 21.7**	**+2.2**
EGRO	**El Granado**	**3.69**	**304**	Pn	**Pn**	**22 21 40.5**	**+1.2**
EGRO				Sn	**Sn**	**22 22 22.0**	**-0.7**
PBAR	**Barrancos**	**3.80**	**315**	*e*Pn	**Pn**	**22 21 43.4**	**+1.6**
PBAR				*e*Sn	**Sn**	**22 22 25.1**	**-0.4**
PBDV	**Barranco-do-Ve**	**3.86**	**298**	*e*Pn	**Pn**	**22 21 42.4**	**+0.7**
PBDV				*e*Sn	**Sn**	**22 22 27.3**	**+0.2**
EBAD	**Badajoz**	**4.21**	**321**	Pn	**Pn**	**22 21 47.9**	**+1.6**
EBAD				Sn	**Sn**	**22 22 34.7**	**-0.9**
EBAD				*i* Vmb_Lg		22 22 36.9	
PNCL	**Nicolau / Gran**	**4.69**	**305**	*e*Pn	**Pn**	**22 21 54.1**	**+1.0**
PMRV	**Marv??o**	**4.91**	**324**	*e*Sn	**Sn**	**22 22 51.3**	**-1.7**

*KRSC **30** 22:53:18.7±2.3, 49°.75N×156°.88E, h52^{km}±34^{km}, ML4.8*
*MOS **30** 22:53:19.7±1.2, 50°.21N×155°.31E, h109^{km}, mb4.2/11, Error ellipse: s-maj=9.3km s-min=4.1km az=71.9*
MOS Felt (II-III) at Severo-Kuril'sk.
*IDC **30** 22:53:20.4±0.6, 50°.22N×155°.43E, h104^{km}±5^{km}, mb3.8/25, mbtmp4.1/31, MS3.2/21, Error ellipse: s-maj=13.5km s-min=9.9km az=160.0*
*NEIC **30** 22:53:21.9±1.4, 50°.23N±0°.10×155°.4E±0°.2, h116^{km}±6^{km}, mb4.5/91, Error ellipse: s-maj=16.4km s-min=11.1km az=134.0*
ISC 30 22:53:20.1±0.5, 50°.08N±0°.05×155°.67E±0°.05, h109^{km}±3^{km}, h108^{km}:pP-P, n288, σ1^{s}47/309, mb4.4/83, 12C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.67**	**25**	⇑*i*PN	**Pn**	**22 53 36.9**	**-1.0**
SKR				*e*S	**Sn**	**22 53 50.3**	**-1.2**
SKR				pmax	pmax		
	comp=Z,813nm,0.4s						
SKR				smax	smax		
	comp=E,5μm,0.5s						
SKR				smax	smax		
	comp=N,3μm,0.2s						
SKR	**Severo-Kuril's**	**0.67**	**25**	P	**Pn**	**22 53 37.0**	**-1.0**
SKR				S	**Sn**	**22 53 50.2**	**-1.2**
PAU	**Pauzhetka**	**1.56**	**27**	PN	**Pn**	**22 53 47.5**	**0.0**
PAU				S	**Sn**	**22 54 08.8**	**+0.4**
PAU	**Pauzhetka**	**1.56**	**27**	P	**Pn**	**22 53 47.5**	**0.0**
PAU				S	**Sn**	**22 54 08.8**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.30**	**41**	PN	**Pn**	**22 53 56.4**	**-0.4**
KDTR				S	**Sn**	**22 54 23.5**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.30**	**41**	P	**Pn**	**22 53 56.4**	**-0.4**
KDTR				S	**Sn**	**22 54 23.5**	**-1.5**
MTVR	**Mutnovka**	**2.88**	**32**	PN	**Pn**	**22 54 06.0**	**+1.5**
MTVR				S	**Sn**	**22 54 39.7**	**+1.1**
MTVR	**Mutnovka**	**2.88**	**32**	P	**Pn**	**22 54 06.0**	**+1.5**
MTVR				S	**Sn**	**22 54 39.7**	**+1.1**
GRL	**Gorelyy**	**2.90**	**30**	PN	**Pn**	**22 54 06.8**	**+2.1**
GRL				S	**Sn**	**22 54 41.5**	**+2.4**
GRL	**Gorelyy**	**2.90**	**30**	P	**Pn**	**22 54 06.8**	**+2.1**
GRL				S	**Sn**	**22 54 41.5**	**+2.4**
RUS	**Russkaya**	**2.96**	**36**	PN	**Pn**	**22 54 05.2**	**-0.2**
RUS				S	**Sn**	**22 54 39.9**	**-0.4**
RUS	**Russkaya**	**2.96**	**36**	P	**Pn**	**22 54 05.2**	**-0.2**
RUS				S	**Sn**	**22 54 39.9**	**-0.4**
APC	**Apacha**	**2.99**	**18**	PN	**Pn**	**22 54 07.8**	**+1.9**
APC	**Apacha**	**2.99**	**18**	P	**Pn**	**22 54 07.8**	**+1.9**
KRMR	**Karymshinskiy**	**3.15**	**28**	PN	**Pn**	**22 54 09.3**	**+1.3**
KRMR	**Karymshinskiy**	**3.15**	**28**	P	**Pn**	**22 54 09.3**	**+1.3**
PEA0B	**Petropavlovsk-**	**3.28**	**22**	*ce*Pn	**Pn**	**22 54 11.5**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.28**	**22**	*ce*PN	**Pn**	**22 54 11.4**	**+1.6**
PETK	**Petropavlovsk-**	**3.28**	**22**	Pn	**Pn**	**22 54 10.7**	**+0.9**
PETK	**Petropavlovsk-**	**3.28**	**22**	PN	**Pn**	**22 54 10.7**	**+0.9**
PETK	**Petropavlovsk-**	**3.28**	**22**	P	**Pn**	**22 54 10.2**	**+0.4**
	comp=N,28nm,0.4s,baz=183,slow=11,SNR=111						
PET	**Petropavlovsk**	**3.48**	**31**		**Pn**	**22 54 13.7**	**+1.3**
PET	**Petropavlovsk**	**3.48**	**31**	*e*PN	**Pn**	**22 54 14.4**	**+2.0**
PET				*e*S	**Sn**	**22 54 55.4**	**+2.5**
PET				pmax	pmax		
	comp=Z,97nm,0.5s						
PET				smax	smax		
	comp=N,299nm,0.5s						
PET				smax	smax		
	comp=E,386nm,0.6s						
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
PET				MLR	MLR		
	comp=Z,600nm,12.0s						
PET	**Petropavlovsk**	**3.48**	**31**	P	**Pn**	**22 54 13.9**	**+1.5**
PET				S	**Sn**	**22 54 54.8**	**+1.9**
DALK	**Dalny**	**3.52**	**32**	PN	**Pn**	**22 54 14.7**	**+1.8**
DALK				S	**Sn**	**22 54 55.4**	**+1.6**
DALK	**Dalny**	**3.52**	**32**	P	**Pn**	**22 54 14.7**	**+1.8**
DALK				S	**Sn**	**22 54 55.4**	**+1.6**
UGLR	**Uglovaya**	**3.70**	**31**	PN	**Pn**	**22 54 18.0**	**+2.6**
UGLR	**Uglovaya**	**3.70**	**31**	P	**Pn**	**22 54 18.0**	**+2.6**
KOK	**Koryaka**	**3.71**	**29**	PN	**Pn**	**22 54 18.5**	**+3.0**
KOK	**Koryaka**	**3.71**	**29**	P	**Pn**	**22 54 18.5**	**+3.0**
AVH	**Avacha**	**3.71**	**30**	PN	**Pn**	**22 54 18.6**	**+3.0**
AVH	**Avacha**	**3.71**	**30**	P	**Pn**	**22 54 18.6**	**+3.0**
KRER	**Koryakskii**	**3.75**	**30**	PN	**Pn**	**22 54 18.8**	**+2.6**
KRER	**Koryakskii**	**3.75**	**30**	P	**Pn**	**22 54 18.8**	**+2.6**
KRX	**Arik**	**3.77**	**28**	PN	**Pn**	**22 54 19.2**	**+2.8**
KRX	**Arik**	**3.77**	**28**	P	**Pn**	**22 54 19.2**	**+2.8**
NLC	**Nalytchevo**	**3.85**	**35**	PN	**Pn**	**22 54 17.0**	**-0.3**
NLC				S	**Sn**	**22 55 00.6**	**-1.0**
NLC	**Nalytchevo**	**3.85**	**35**	P	**Pn**	**22 54 17.0**	**-0.3**
NLC				S	**Sn**	**22 55 00.6**	**-1.0**
GNL	**Ganaly**	**3.88**	**20**	PN	**Pn**	**22 54 20.1**	**+2.2**
GNL	**Ganaly**	**3.88**	**20**	P	**Pn**	**22 54 20.1**	**+2.2**
SPN	**Mys Shipunski**	**4.06**	**40**	PN	**Pn**	**22 54 20.5**	**+0.4**
SPN				S	**Sn**	**22 55 05.1**	**-1.6**
SPN	**Mys Shipunski**	**4.06**	**40**	P	**Pn**	**22 54 20.5**	**+0.4**
SPN				S	**Sn**	**22 55 05.1**	**-1.6**
MKZ	**Mys Kozlova**	**5.82**	**37**	PN	**Pn**	**22 54 43.3**	**-0.5**
MKZ				S	**Sn**	**22 55 46.5**	**-2.7**
MKZ	**Mys Kozlova**	**5.82**	**37**	P	**Pn**	**22 54 43.3**	**-0.5**
MKZ				S	**Sn**	**22 55 46.5**	**-2.7**
TUMR	**Tumrok**	**5.88**	**26**	PN	**Pn**	**22 54 47.3**	**+2.6**
TUMR	**Tumrok**	**5.88**	**26**	P	**Pn**	**22 54 47.3**	**+2.6**
KUR	**Kuril'sk**	**7.16**	**230**	PN	**Pn**	**22 55 03.6**	**+1.5**
KUR				S	**Sn**	**22 56 24.6**	**+2.8**
KUR				pmax	pmax		
	comp=Z,109nm,0.6s						
KBG	**Krutoberegovo**	**7.49**	**32**	PN	**Pn**	**22 55 08.6**	**+2.2**
KBG	**Krutoberegovo**	**7.49**	**32**	P	**Pn**	**22 55 08.6**	**+2.2**
KBTR	**Krutoberegovo**	**7.49**	**32**	PN	**Pn**	**22 55 08.2**	**+1.7**
KBTR				S	**Sn**	**22 56 27.9**	**-1.8**
KBTR	**Krutoberegovo**	**7.49**	**32**	P	**Pn**	**22 55 08.2**	**+1.7**
KBTR				S	**Sn**	**22 56 27.9**	**-1.8**
BKI	**Bering**	**8.09**	**47**	PN	**Pn**	**22 55 13.2**	**-1.5**
BKI	**Bering**	**8.09**	**47**	P	**Pn**	**22 55 13.2**	**-1.5**
BKI				S	**Sn**	**22 56 36.8**	**-7.5**
TYV	**Tymovskoe**	**8.34**	**280**	*e*PN	Pn	22 55 21.1	+3.1
TYV				*e*S	**Sn**	**22 56 52.9**	**+2.5**
TYV				pmax	pmax		
	comp=Z,26nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
TYV				smax	smax		
	comp=N,25nm,0.4s						
TYV				smax	smax		
	comp=E,23nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**9.02**	**232**	*i* PN	**Pn**	**22 55 26.1**	**-1.2**
YSS	**Yuzh-Sakhalins**	**9.12**	**255**	*i* PN	**Pn**	**22 55 28.9**	**+0.2**
YSS				pmax	pmax		
	comp=Z,119nm,1.6s						
MA2	**Magadan**	**9.92**	**345**	*ce*PN	**Pn**	**22 55 38.0**	**-1.4**
MA2				pmax	pmax		
	comp=Z,29nm,1.3s						
MA2	**Magadan**	**9.92**	**345**	LR	LR	23 00 02.3	
	comp=Z,40nm,19.5s,baz=110,slow=41						
SHEM	**Shemya Is, Ala**	**11.81**	**70**	LR	LR	23 00 18.4	
	comp=Z,35nm,21.6s,baz=288,slow=35						
JEW	**Eniwo**	**12.18**	**239**	Pn	**Pn**	**22 56 10.0**	**+0.2**
SEY	**Seymchan**	**13.01**	**353**		**Pn**	**22 56 20.9**	**+0.4**
SEY	**Seymchan**	**13.01**	**353**	*i* PN	**Pn**	**22 56 19.6**	**-0.9**
SEY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SEY	**Seymchan**	**13.01**	**353**	P	**Pn**	**22 56 20.9**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=168,slow=13,SNR=5.0						
KLR	**Kul'dur**	**15.50**	**276**	P	**P**	**22 56 52.7**	**-1.8**
KLR	**Kul'dur**	**15.50**	**276**	*ce*P	**P**	**22 56 52.5**	**-2.0**
KLR				pmax	pmax		
	comp=Z,54nm,2.5s						

KDAK Kodiak Island 30.74 55 P **P** **22 59 24.8 +0.3**
KDAK pmax pmax
comp=Z,9.0nm,0.9s
KTH Kantishna Hill 31.15 44 P **P** **22 59 29.4 +1.2**
ULN Ulaanbaatar 31.54 285 *ceP* **P** **22 59 30.9 -1.0**
ULN pmax pmax
comp=Z,2.0nm,1.0s
H11N2 WAKE ISLAND Hy 31.58 159 T T 23 32 47.7
baz=347,slow=76,SNR=139
H11N1 WAKE ISLAND Hy 31.60 160 T T 23 32 48.4
baz=347,slow=76,SNR=240
H11N3 WAKE ISLAND Hy 31.60 159 T T 23 32 47.7
baz=347,slow=76,SNR=270
H23K Yukon River 31.79 40 P **P** **22 59 35.1 +1.3**
HHC Hu-ho-hao-te 31.87 270 *eP* **P** **22 59 35.5 +0.7**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,370nm,4.8s
SONM Songino Array 31.96 285 P **P** **22 59 35.7 +0.1**
SONM 23 02 23.1
SONM Songino Array 31.96 285 P **P** **22 59 35.7 +0.1**
comp=Z,0.5nm,0.5s,baz=73,slow=8.6,SNR=4.9
SONM PcP **PcP** **23 02 23.1 +0.1**
comp=Z,0.6nm,0.5s,baz=95,slow=4.1,SNR=4.0
SONM LR LR 23 14 08.5
comp=Z,30nm,18.5s,baz=136,slow=39
comp=Z,0.5nm,0.5s
NEA2 Nenana 31.96 42 P **P** **22 59 36.6 +1.3**
NEA2 lAmb lAmb 22 59 38.5
comp=Z,4.8nm,0.5s
MDM Murphy Dome 32.32 41 P **P** **22 59 40.0 +1.5**
WRH Wood River Hil 32.39 42 P **P** **22 59 39.9 +0.9**
WRH lAmb lAmb 22 59 47.8
comp=Z,5.1nm,0.6s
SML Sawmill 32.42 47 P **P** **22 59 39.9 +0.6**
COLA College 32.49 42 *i* P **P** **22 59 40.4 +0.6**
CCB Clear Creek Bu 32.51 42 P **P** **22 59 40.8 +0.8**
POKR Poker Plat Res 32.66 41 P **P** **22 59 42.7 +1.4**
POKR lAmb lAmb 22 59 44.4
comp=Z,4.7nm,0.5s
H11S1 WAKE ISLAND Hy 32.72 160 T T 23 34 06.1
baz=347,slow=76,SNR=1736
H11S3 WAKE ISLAND Hy 32.73 160 T T 23 34 07.1
baz=347,slow=76,SNR=1556
H11S2 WAKE ISLAND Hy 32.74 160 T T 23 34 07.5
baz=347,slow=76,SNR=988
HDA Harding Lake 32.89 42 P **P** **22 59 44.2 +0.9**
HDA lAmb lAmb 22 59 45.2
comp=Z,6.9nm,0.5s
IL31 32.90 42 P **P** **22 59 44.7 +1.4**
ILAR Eielson Array 32.90 42 P **P** **22 59 44.7 +1.3**
ILAR Eielson Array 32.90 42 P **P** **22 59 44.7 +1.3**
ILAR Eielson Array 32.90 42 P **P** **22 59 44.3 +0.9**
comp=Z,1.7nm,0.7s,baz=263,slow=5.3,SNR=30
comp=Z,1.7nm,0.7s
PRP Porcupine Dome 33.46 40 P **P** **22 59 48.2 -0.2**
PRP lAmb lAmb 22 59 50.6
comp=Z,4.3nm,0.6s
J25K Salcha River, 33.56 42 P **P** **22 59 49.3 0.0**
J25K lAmb lAmb 22 59 50.5
comp=Z,3.0nm,0.6s
DOT Dot Lake 34.20 44 P **P** **22 59 55.1 +0.3**
LYN LuoYang 34.97 260 *eP* P 23 00 12.3 +11
LYN pmax pmax
comp=Z,150nm,4.7s
BCAR Beaver Creek A 35.30 44 P **P** **23 00 05.8 +1.6**
M27K Edge Creek, AK 35.36 46 P **P** **23 00 06.5 +1.7**
M27K lAmb lAmb 23 00 08.1
comp=Z,4.4nm,0.8s
GUMO Guam 37.45 197 LR LR 23 14 15.4
comp=Z,27nm,19.8s,baz=216,slow=33
HYT Haines Junctio 37.73 47 P **P** **23 00 26.8 +1.9**
HYT lAmb lAmb 23 00 31.3
comp=Z,8.0nm,1.3s
ZAA0 Zalesovo Array 42.11 304 P **P** **23 01 00.1 -1.0**
ZALV Zalesovo Beam 42.11 304 P **P** **23 01 00.2 -0.9**
ZALV Zalesovo Beam 42.11 304 *i* P **P** **23 01 00.7 -0.4**
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 42.11 304 P **P** **23 01 00.7 -0.4**
comp=Z,1.7nm,0.3s,baz=59,slow=7.0,SNR=9.0
ZALV pP **pP** **23 01 25.8 +0.2**
comp=Z,1.9nm,0.9s,baz=87,slow=7.6,SNR=2.8
ZALV PcP **PcP** **23 02 53.2 -0.4**
comp=Z,1.0nm,0.5s,baz=85,slow=3.2,SNR=5.7
comp=Z,1.7nm,0.3s
DGZ Jazzator, Alta 42.54 297 *i* P **P** **23 01 02.1 -2.7**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
GRNB Grenville Isla 44.03 55 P **P** **23 01 19.3 +2.7**
WMQ Urumqi 45.36 289 *eP* **P** **23 01 27.5 +0.2**
MK31 Makanchi Array 46.97 296 P **P** **23 01 38.8 -1.1**
MK31 Makanchi Array 46.97 296 *i* P **P** **23 01 38.5 -1.3**
MKAR Makanchi Array 46.97 296 P **P** **23 01 38.7 -1.1**
MKAR Makanchi Array 46.97 296 *i* P **P** **23 01 38.0 -1.8**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 46.97 296 P **P** **23 01 38.1 -1.8**
comp=Z,2.9nm,0.8s,baz=60,slow=6.9,SNR=23
MKAR pP **pP** **23 02 05.0 +0.2**
comp=Z,3.1nm,0.8s,baz=60,slow=8.7,SNR=9.8
MKAR LR LR 23 22 19.4
comp=Z,49nm,19.1s,baz=76,slow=37
comp=Z,2.9nm,0.8s
KURK Kurchatov 46.98 302 P **P** **23 01 39.0 -0.8**
KURK lAmb lAmb 23 01 40.5
comp=Z,11nm,0.8s
KURK Kurchatov 46.98 302 *ce*P **P** **23 01 39.6 -0.2**
KURK pmax pmax
comp=Z,12nm,0.8s
MAKZ Makanchi 47.15 296 P **P** **23 01 39.9 -1.3**
MAKZ Makanchi 47.15 296 P **P** **23 01 39.9 -1.3**
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
PZH PanZhiHua 47.20 261 P **P** **23 01 42.3 +0.3**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,5.6s
YKA Yellowknife Ar 47.25 39 *i* P **P** **23 01 43.7 +2.0**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 47.25 39 P **P** **23 01 42.4 +0.7**
comp=Z,1.0nm,0.6s,baz=300,slow=7.6,SNR=4.9
comp=Z,1.0nm,0.6s
SPITS Spitsbergen Ar 49.63 350 P **P** **23 01 58.4 -1.4**
SPITS pmax pmax
comp=Z,29nm,1.4s
LLLB Lillooet 49.95 56 P **P** **23 02 04.5 +1.9**
LLLB lAmb lAmb 23 02 05.5
comp=Z,7.2nm,1.0s
BRVK Borovoye 50.12 308 P **P** **23 02 03.2 -0.6**
BRVK lAmb lAmb 23 02 03.7
comp=Z,3.4nm,0.8s
BRVK Borovoye 50.12 308 *ce*P **P** **23 02 02.7 -1.1**
BRVK pmax pmax
comp=Z,5.0nm,1.7s
LTY Liberty 52.52 59 P **P** **23 02 23.6 +1.7**
LTY lAmb lAmb 23 02 33.1
comp=Z,8.0nm,1.4s
B08A Colville Reser 52.60 57 P **P** **23 02 23.6 +1.2**
B08A lAmb lAmb 23 02 24.9
comp=Z,5.0nm,0.9s
BOOM Boomskoye usch 53.15 295 P **P** **23 02 26.7 0.0**
BOOM Boomskoye usch 53.15 295 P **P** **23 02 26.7 0.0**
BOOM pmax pmax
comp=Z,28nm,1.5s
UBPT Khong Chiam 53.25 248 P **P** **23 02 27.6 0.0**
ARU Arti 53.72 317 P **P** **23 02 28.6 -1.8**
ARU lAmb lAmb 23 02 29.6
comp=Z,8.1nm,1.1s
ARU Arti 53.72 317 *c i*P **P** **23 02 28.8 -1.7**
ARU *PP **pP** **23 02 57.9 +1.9**
ARU 23 03 33.6
ARU S **S** **23 09 53.6 -2.3**
ARU SS **SS** **23 13 39.0 +1.7**
ARU pmax pmax
comp=Z,8.0nm,1.1s
AAK Ala-Archa 53.90 296 *i* P **P** **23 02 30.7 -1.5**
AAK pmax pmax
comp=Z,2.0nm,0.7s
E09A Wood Farm, Sta 54.36 58 P **P** **23 02 36.0 +0.8**
E09A lAmb lAmb 23 02 37.6
comp=Z,6.7nm,0.8s

CHTO Chiang Mai 54.55 256 P **P** **23 02 36.9 -0.1**
CHTO lAmb lAmb 23 02 38.3
comp=Z,5.7nm,1.0s
CHTO Chiang Mai 54.55 256 P **P** **23 02 36.9 -0.1**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
L04D Klamath Falls 54.66 64 P **P** **23 02 39.6 +1.9**
YBH Yreka Blue Hor 54.73 65 LR LR 23 23 14.4
comp=Z,16nm,19.1s,baz=352,slow=33
CMAR Chiang Mai Arr 54.82 256 P **P** **23 02 38.8 -0.1**
CMAR Chiang Mai Arr 54.82 256 P **P** **23 02 39.9 +1.0**
CMAR Chiang Mai Arr 54.82 256 P **P** **23 02 39.9 +1.0**
comp=Z,1.3nm,0.4s,baz=29,slow=7.0,SNR=6.7
CMAR LR LR 23 29 31.0
comp=Z,23nm,19.5s,baz=200,slow=40
comp=Z,1.3nm,0.4s
WALA Waterton Lakes 55.04 53 P **P** **23 02 41.5 +1.2**
WALA lAmb lAmb 23 02 42.8
comp=Z,5.7nm,0.8s
K05A Summer Lake 55.16 63 P **P** **23 02 43.6 +2.2**
K05A lAmb lAmb 23 02 45.2
comp=Z,8.1nm,1.0s
ARCES ARCESS Array B 55.26 341 P **P** **23 02 39.1 -2.3**
ARCES ARCESS Array B 55.26 341 P **P** **23 02 39.1 -2.3**
comp=Z,0.5nm,0.4s,baz=39,slow=7.8,SNR=7.7
ARCES LR LR 23 28 07.0
comp=Z,24nm,22.0s,baz=308,slow=38
comp=Z,0.5nm,0.4s
JTMT Jette 55.66 55 P **P** **23 02 46.3 +1.5**
PLID Pearl Lake 56.42 58 P **P** **23 02 52.0 +1.7**
PLID lAmb lAmb 23 02 53.1
comp=Z,5.7nm,0.7s
SUMG Summit 57.24 5 P **P** **23 02 55.7 -0.2**
SUMG lAmb lAmb 23 02 56.7
comp=Z,3.9nm,0.6s
SUMG Summit 57.24 5 P **P** **23 02 55.7 -0.2**
SUMG pmax pmax
comp=Z,4.0nm,0.6s
SUMG Summit 57.24 5 *i* P **P** **23 02 55.0 -0.9**
ABKAR Akbulak array 57.61 309 P **P** **23 02 57.6 -0.7**
ABKAR Akbulak array 57.61 309 P **P** **23 02 57.6 -0.7**
ABKAR lAmb lAmb 23 02 57.9
comp=Z,3.1nm,0.8s
AKTO Aktyubinsk 57.78 311 P **P** **23 02 58.7 -0.8**
AKTO Aktyubinsk 57.78 311 P **P** **23 02 58.7 -0.8**
comp=Z,0.7nm,0.3s,baz=59,slow=7.0,SNR=3.9
AKTO LR LR 23 31 31.3
comp=Z,37nm,18.2s,baz=93,slow=40
comp=Z,0.7nm,0.3s
LRM Limekiln Ridge 57.86 56 P **P** **23 03 02.5 +2.1**
BOZ Bozeman (W) 58.45 55 P **P** **23 03 06.5 +2.1**
BOZ lAmb lAmb 23 03 07.3
comp=Z,4.5nm,0.8s
BOZ Bozeman (W) 58.45 55 P **P** **23 03 06.5 +2.1**
BOZ pmax pmax
comp=Z,5.0nm,0.9s
KVN Kaiserville 59.15 65 P **P** **23 03 11.6 +2.2**
KVN lAmb lAmb 23 03 12.6
comp=Z,4.1nm,0.9s
KVN Kaiserville 59.15 65 P **P** **23 03 11.6 +2.2**
KVN pmax pmax
comp=Z,4.0nm,0.9s
GCMT Greycliff 59.35 54 P **P** **23 03 13.0 +2.3**
NVAR Mina Array Bea 59.44 65 P **P** **23 03 12.9 +1.4**
NVAR Mina Array Bea 59.44 65 P **P** **23 03 13.9 +2.4**
comp=Z,1.5nm,0.6s,baz=291,slow=7.6,SNR=15
NVAR pP **pP** **23 03 37.7 -0.2**
comp=Z,0.8nm,0.6s,baz=296,slow=6.5,SNR=3.3
comp=Z,1.5nm,0.6s
CHGR Chuyangaron 59.57 295 P **P** **23 03 11.1 -1.1**
CHGR Chuyangaron 59.57 295 P **P** **23 03 11.1 -1.1**
CHGR pmax pmax
comp=Z,16nm,1.0s
ELK Elko 59.67 62 LR LR 23 27 28.0
comp=Z,10.0nm,18.9s,baz=252,slow=34
IMW Indian Meadow 59.94 56 P **P** **23 03 17.0 +2.0**
IMW lAmb lAmb 23 03 18.6
comp=Z,4.2nm,1.1s
FXWY Fox Creek 60.07 57 P **P** **23 03 18.4 +2.7**
FXWY lAmb lAmb 23 03 19.2
comp=Z,2.9nm,0.8s
TPAW Teton Pass 60.21 57 P **P** **23 03 18.5 +1.8**
R11A Troy Canyon, C 61.08 64 P **P** **23 03 23.7 +1.2**
PD31 Pinedale Array 61.45 57 P **P** **23 03 26.6 +1.6**
PD31 lAmb lAmb 23 03 27.9
comp=Z,3.5nm,0.8s
PDAR Pinedale Array 61.45 57 P **P** **23 03 26.7 +1.6**
PDAR Pinedale Array 61.45 57 P **P** **23 03 27.2 +2.2**
comp=Z,3.1nm,0.7s,baz=314,slow=2.5,SNR=18
PDAR pP **pP** **23 03 51.2 -0.4**
comp=Z,1.2nm,0.7s,baz=328,slow=1.6,SNR=4.0
comp=Z,3.1nm,0.7s
FIA1 FINESS Array S 61.74 335 P **P** **23 03 25.0 -1.4**
FINES FINESS Array B 61.74 335 P **P** **23 03 24.9 -1.5**
FINES FINESS Array B 61.74 335 *ce*P **P** **23 03 25.7 -0.7**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES FINESS Array B 61.74 335 P **P** **23 03 24.5 -1.9**
comp=Z,0.6nm,0.3s,baz=33,slow=7.0,SNR=17
FINES PcP **PcP** **23 04 06.3 -0.3**
comp=Z,0.8nm,0.4s,baz=64,slow=4.3,SNR=7.9
comp=Z,0.6nm,0.3s
RDMU Red Mountain 62.95 58 P **P** **23 03 37.1 +2.0**
RSSD Black Hills 63.40 52 P **P** **23 03 39.1 +1.0**
RSSD Black Hills 63.40 52 P **P** **23 03 39.1 +1.0**
RSSD pmax pmax
comp=Z,6.0nm,0.6s
OBN Obninsk 63.51 326 *ll eP* **P** **23 03 36.8 -1.4**
OBN *e**PP **pP** **23 04 05.4 +0.8**
OBN *e* 23 06 01.5
OBN *e*S **S** **23 12 08.0 +5.4**
OBN pmax pmax
comp=Z,2.0nm,0.8s
KULM Kulim 64.03 245 P **P** **23 03 42.8 +0.5**
KULM lAmb lAmb 23 03 44.3
comp=Z,8.4nm,0.9s
PV13 Radium Mtn., P 65.05 60 P **P** **23 03 50.6 +1.7**
PV13 lAmb lAmb 23 03 51.7
comp=Z,6.7nm,0.8s
NC204 NORSAR Array S 65.48 342 P **P** **23 03 50.4 -0.7**
NOA NORSAR Array B 65.60 342 P **P** **23 03 51.2 -0.7**
NOA NORSAR Array B 65.60 342 P **P** **23 03 51.2 -0.7**
comp=Z,0.5nm,0.7s,baz=28,slow=6.5,SNR=4.9
NOA LR LR 23 37 10.3
comp=Z,12nm,18.6s,baz=35,slow=40
comp=Z,0.5nm,0.7s
HFS Hagfors 65.91 340 P **P** **23 03 53.3 -0.5**
HFS Hagfors 65.91 340 P **P** **23 03 53.3 -0.5**
comp=Z,2.3nm,0.8s,baz=66,slow=5.0,SNR=11
HFS LR LR 23 35 13.6
comp=Z,25nm,18.4s,baz=67,slow=38
comp=Z,2.3nm,0.8s
GEYT Alibeck 66.34 301 P **P** **23 03 56.8 -0.2**
GEYT lAmb lAmb 23 03 58.7
comp=Z,2.9nm,0.7s
GEYT Alibeck 66.34 301 P **P** **23 03 57.1 +0.1**
comp=Z,2.2nm,0.6s,baz=34,slow=2.8,SNR=4.6
comp=Z,2.2nm,0.6s
PABE Paberze 67.34 333 P **P** **23 04 02.5 -0.4**
ECSD EROS Data Cent 67.37 48 P **P** **23 04 04.2 +0.8**
ECSD lAmb lAmb 23 04 05.0
comp=Z,6.6nm,0.8s
ANMO Albuquerque 68.68 61 LR LR 23 34 20.1
comp=Z,25nm,18.9s,baz=287,slow=36
SCHQ Schefferville 69.57 25 P **P** **23 04 17.1 +0.3**
comp=Z,2.8nm,0.8s,baz=348,slow=6.5,SNR=6.3
comp=Z,2.8nm,0.8s
AKASG Malin Array Be 69.70 327 *ce*P **P** **23 04 16.8 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 69.70 327 P **P** **23 04 15.3 -2.4**
comp=Z,0.6nm,0.3s,baz=33,slow=6.6,SNR=4.9
AKASG LR LR 23 36 56.7
comp=Z,19nm,20.8s,baz=4.0,slow=38
comp=Z,0.6nm,0.3s
GNI Garni 71.65 311 LR LR 23 40 51.3
comp=Z,32nm,18.7s,baz=103,slow=40
WB2 Warramunga Arr 72.23 201 P **P** **23 04 34.2 +1.0**
WB2 lAmb lAmb 23 04 38.1
comp=Z,8.7nm,1.4s
WRA Warramunga Arr 72.23 201 P **P** **23 04 34.4 +1.1**
WRA Warramunga Arr 72.23 201 *ce*P **P** **23 04 34.5 +1.3**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 72.23 201 P **P** **23 04 32.9 -0.4**
comp=Z,0.8nm,0.9s,baz=19,slow=6.2,SNR=7.2
comp=Z,0.8nm,0.9s
KWP Kalwaria Pacla 72.80 330 P **P** **23 04 36.0 -0.4**
KWP Kalwaria Pacla 72.80 330 P **P** **23 04 36.0 -0.4**
KWP pmax pmax
comp=Z,88nm,1.3s
FITZ Fitzroy Crossi 72.88 210 P **P** **23 04 38.6 +1.5**
EKA Eskdalemuir Ar 73.47 348 P **P** **23 04 38.7 -1.5**
EKA Eskdalemuir Ar 73.47 348 P **P** **23 04 38.7 -1.5**
comp=Z,0.3nm,0.3s,baz=18,slow=5.1,SNR=7.5
comp=Z,0.3nm,0.3s
KOLS Kolonicke sedl 73.55 330 *eP* **P** **23 04 40.9 +0.1**
KOLS Kolonicke sedl 73.55 330 *eP* **P** **23 04 40.9 +0.1**
BUR08 Bucovina Ar. S 73.69 328 P **P** **23 04 40.7 -1.1**
BURAR Bucovina Array 73.71 328 P **P** **23 04 40.6 -1.3**
CLL Collm 74.10 337 *i* P **P** **23 04 44.1 +0.1**
comp=Z,3.0nm,1.1s
TX31 Lajitas Ar. Si 74.41 63 P **P** **23 04 47.7 +1.4**
TXAR Lajitas Array 74.41 63 P **P** **23 04 47.6 +1.3**
TXAR Lajitas Array 74.41 63 P **P** **23 04 48.0 +1.7**
TXAR *PP **pP** **23 05 13.0 -0.7**
TXAR Lajitas Array 74.41 63 P **P** **23 04 48.0 +1.7**
comp=Z,3.3nm,0.4s,baz=298,slow=5.1,SNR=64
TXAR pP **pP** **23 05 13.0 -0.7**
comp=Z,1.6nm,0.6s,baz=292,slow=4.7,SNR=7.2
comp=Z,3.3nm,0.4s
PALK Pallekele 74.81 263 P **P** **23 04 49.4 +0.7**
PALK Pallekele 74.81 263 P **P** **23 04 49.4 +0.7**
PALK pmax pmax
comp=Z,42nm,1.3s
VRAC Vranov 74.95 334 LR LR 23 40 21.3
comp=Z,21nm,19.1s,baz=54,slow=38
MLR Muntele Rosu 75.28 326 P **P** **23 04 50.4 -0.7**
MLR Muntele Rosu 75.28 326 P **P** **23 04 50.4 -0.7**
MLR pmax pmax
comp=Z,7.0nm,1.5s
MODS Modra-Piesok 75.59 333 *eP* **P** **23 04 51.4 -1.2**
MODS Modra-Piesok 75.59 333 *eP* **P** **23 04 51.4 -1.2**
FCAR Ozark Folk Cen 75.60 51 P **P** **23 04 53.4 +0.5**
MARD Mardin 75.79 312 P **P** **23 04 53.6 -0.5**
MARD lAmb lAmb 23 04 55.5
comp=Z,9.3nm,1.2s
ASAR Alice Springs 75.92 201 P **P** **23 04 55.6 +1.0**
ASAR Alice Springs 75.92 201 P **P** **23 04 56.7 +2.0**
ASAR *PP **pP** **23 05 20.9 -1.1**
ASAR Alice Springs 75.92 201 P **P** **23 04 56.7 +2.0**
comp=Z,0.3nm,0.5s,baz=16,slow=5.7,SNR=4.3
ASAR pP **pP** **23 05 20.9 -1.1**
comp=Z,0.5nm,0.6s,baz=12,slow=5.2,SNR=3.4
comp=Z,0.3nm,0.5s
KHC Kasperske Hory 75.94 335 *eP* P 23 05 00.1 +5.4
KHC Kasperske Hory 75.94 335 *eP* P 23 05 00.1 +5.4
GERES GERESS Array B 76.17 335 P **P** **23 04 55.1 -0.9**
GERES GERESS Array B 76.17 335 P **P** **23 04 56.5 +0.5**
GERES GERESS Array B 76.17 335 P **P** **23 04 56.5 +0.5**
comp=Z,0.4nm,0.4s,baz=50,slow=7.1,SNR=6.3
comp=Z,0.4nm,0.4s
WVT Waverly 77.51 48 P **P** **23 05 04.5 +1.0**
WVT lAmb lAmb 23 05 15.2
comp=Z,8.1nm,1.4s
WVT Waverly 77.51 48 P **P** **23 05 04.6 +1.0**
WVT pmax pmax
comp=Z,8.0nm,1.5s
KBA Koelnbreinsper 77.88 335 *eP* **P** **23 05 05.7 0.0**
comp=Z,1.8nm,0.4s
WTTA Wattenberg 78.17 336 *eP* **P** **23 05 08.1 +0.7**
comp=Z,1.1nm,0.3s
PRED Cave del Predi 78.41 334 P **P** **23 05 08.0 -0.5**
PRED lAmb lAmb 23 05 14.6
comp=Z,8.7nm,1.4s
ABTA Abfaltersbach 78.42 335 *eP* **P** **23 05 08.6 +0.1**
comp=Z,0.8nm,0.3s
DIVS Divibare 78.56 329 P **P** **23 05 08.6 -0.9**
DAVA Damuels 78.61 337 *eP* **P** **23 05 10.3 +0.6**
comp=Z,2.7nm,0.5s
VTS Vitosha 78.75 326 P **P** **23 05 10.1 -0.4**
VTS Vitosha 78.75 326 P **P** **23 05 10.1 -0.4**
VTS pmax pmax
comp=Z,2.0nm,0.7s
BNI Bardonecchia 81.48 338 P **P** **23 05 25.3 +0.2**
BNI lAmb lAmb 23 05 40.5
comp=Z,13nm,1.5s
BNI Bardonecchia 81.48 338 P **P** **23 05 25.3 +0.2**
BNI pmax pmax
comp=Z,13nm,1.5s
ITM Ithomi 84.00 325 P **P** **23 05 36.9 -1.3**
ITM lAmb lAmb 23 05 59.9
comp=Z,11nm,1.1s
RAYN Ar Rayn 84.28 300 P **P** **23 05 39.2 -0.6**
RAYN Ar Rayn 84.28 300 P **P** **23 05 39.2 -0.6**
RAYN pmax pmax
comp=Z,11nm,0.7s
IDI Anoyia 84.51 322 P **P** **23 05 39.3 -1.5**
EIL Elat 84.82 311 LR LR 23 48 19.1
comp=Z,56nm,18.6s,baz=108,slow=39
ESBB Sonseca Array 88.84 344 P **P** **23 06 01.3 -0.5**
ESBB lAmb lAmb 23 06 22.3
comp=Z,6.4nm,1.4s
ESDC Sonseca Array 88.84 344 P **P** **23 06 00.9 -0.9**
ESDC lAmb lAmb 23 06 01.7
comp=Z,2.6nm,0.9s
ESDC Sonseca Array 88.84 344 P **P** **23 06 00.9 -0.9**
comp=Z,2.1nm,0.8s,baz=357,slow=4.3,SNR=20
comp=Z,2.1nm,0.8s
PAB San Pablo 89.03 345 P **P** **23 06 02.0 -0.7**
PAB lAmb lAmb 23 06 04.3
comp=Z,4.3nm,1.0s
PAB San Pablo 89.03 345 P **P** **23 06 02.0 -0.7**
PAB pmax pmax
comp=Z,4.0nm,1.0s
KEST Kesra 89.51 333 P **P** **23 06 05.9 +0.8**
KEST lAmb lAmb 23 06 06.2
comp=Z,3.9nm,0.8s
KEST Kesra 89.51 333 P **P** **23 06 05.5 +0.4**
comp=Z,2.5nm,0.6s,baz=307,slow=3.1,SNR=6.0
comp=Z,2.5nm,0.6s
H03N2 Juan Fernandez 137.02 89 T T 01 44 40.8
baz=300,slow=78,SNR=17
H03N1 Juan Fernandez 137.03 89 T T 01 44 40.8
baz=300,slow=78,SNR=27
H03N3 Juan Fernandez 137.03 89 T T 01 44 40.8
baz=300,slow=78,SNR=67
CPUP Villa Florida 145.32 59 PKP2 **PKPab** **23 12 45.7 +0.6**
CPUP Villa Florida 145.32 59 PKPbc **PKPab** **23 12 45.7 +0.6**
comp=Z,1.4nm,0.4s,baz=333,slow=6.2,SNR=4.9
PLCA Paso Flores 146.71 92 PKP2 **PKPbc** **23 12 49.4 +0.6**
PLCA Paso Flores 146.71 92 PKPbc **PKPbc** **23 12 49.4 +0.6**
comp=Z,2.2nm,0.8s,baz=230,slow=0.5,SNR=3.8

IDC 30 23:07:13.2±2.5, 4°.44N×123°.04E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=372.6km s-min=27.2km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.66**	**156**	P	P	23 12 54.1	+0.1
	0.3nm,0.3s,baz=336,slow=9.8,SNR=16						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**29.88**	**160**	P	P	23 13 22.6	-0.2
	0.2nm,0.3s,baz=332,slow=9.2,SNR=2.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**54.91**	**327**	P	P	23 16 45.7	-0.1
	0.2nm,0.3s,baz=132,slow=7.5,SNR=4.9						
	0.2nm,0.3s						

*SOME **30** 23:42:07.3, 45°.12N×80°.33E, h15km*
*NNC **30** 23:42:07.3±1.5, 45°.18N×80°.36E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=29.5km s-min=7.5km az=135.0*
ISC 30 23:42:06.4±1.2, 45°.15N±0°.05×80°.49E±0°.06, h10km, n24, σ1°25/38, 5C-3D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**0.96**	**211**	*eP*	**Pg**	**23 42 24.1**	**-0.6**
	5.4nm,0.2s						
DJR				*eS*	**Sg**	**23 42 36.4**	**-0.9**
	12nm,0.2s						
TDK	**Taldyqorghan**	**1.48**	**265**	*eP*	**Pb**	**23 42 33.0**	**-0.9**
	35nm,0.1s						
TDK				*eS*	**Sn**	**23 42 51.6**	**-0.9**
	88nm,0.2s						
BLB	**Baldybastay**	**1.78**	**234**	*eP*	**Pb**	**23 42 38.6**	**-0.5**
	20nm,0.4s						
BLB				*eS*	**Sb**	**23 43 01.5**	**0.0**
	29nm,0.3s						

MAKZ	**Makanchi**	**1.96**	**32**	⇓Pg		**Pg**	**23 42 44.6**	**+0.7**
	0.5nm,0.2s							
MAKZ				⇓Lg		Lg	23 43 09.8	
	0.8nm,0.2s							
MK31	**Makanchi Array**	**2.07**	**37**	⇓Pg		**Pg**	**23 42 45.0**	**-1.1**
	1.4nm,0.3s,baz=212,slow=12,SNR=60							
MK31				Lg		Lg	23 43 13.3	
	1.9nm,0.2s,baz=214,slow=29,SNR=16							
ARXS	**Arharly**	**2.12**	**245**	*e*P		**Pb**	**23 42 44.4**	**-0.4**
	4.0nm,0.4s							
ARXS				*e*S		**Sb**	**23 43 11.5**	**+0.3**
	25nm,0.2s							
KPKS	**Kokpek**	**2.12**	**218**	*e*P		**Pb**	**23 42 44.7**	**-0.3**
	20nm,0.3s							
KPKS				*e*S		**Sb**	**23 43 12.3**	**+0.9**
	55nm,0.2s							
SHLS	**Shalkode**	**2.12**	**201**	*e*P		**Pb**	**23 42 43.5**	**-1.5**
	12nm,0.4s							
SHLS				*e*S		**Sn**	**23 43 09.7**	**+1.2**
	17nm,0.3s							
KURS	**Kuram**	**2.35**	**226**	*e*P		**Pb**	**23 42 48.9**	**+0.1**
	8.8nm,0.3s							
KURS				*e*S		**Sb**	**23 43 19.4**	**+1.4**
	7.5nm,0.1s							
ZHN	**Zhinishke**	**2.47**	**217**	*e*P		**Pb**	**23 42 50.7**	**-0.2**
	8.1nm,0.2s							
ZHN				*e*S		**Sb**	**23 43 22.5**	**+1.0**
	47nm,0.2s							
SATY	**Saty**	**2.57**	**216**	*e*P		**Pb**	**23 42 52.9**	**+0.2**
	4.0nm,0.2s							
SATY				*e*S		**Sb**	**23 43 25.8**	**+1.4**
	24nm,0.3s							
CHKK	**Chushkaly**	**2.82**	**244**	*e*P		**Pb**	**23 42 56.6**	**-0.2**
	1.9nm,0.2s							
CHKK				*e*S		**Sb**	**23 43 32.1**	**+0.7**
	14nm,0.4s							
KTBS	**Karatobe**	**3.08**	**244**	*e*P		**Pb**	**23 43 00.8**	**-0.5**
	1.1nm,0.5s							
KTBS				*e*S		**Sb**	**23 43 39.2**	**+0.2**
	44nm,0.5s							
KOTS	**Kotyrbulak**	**3.09**	**233**	*e*P		**Pb**	**23 43 02.6**	**+1.1**
	3.5nm,0.7s							
KOTS				*e*S		**Sg**	**23 43 42.3**	**-3.3**
	44nm,0.6s							
MDOK	**Medeo**	**3.17**	**232**	*e*P		**Pb**	**23 43 03.3**	**+0.4**
	1.5nm,0.3s							
MDOK				*e*S		**Sb**	**23 43 43.4**	**+1.8**
	11nm,0.7s							
MDOK	**Medeo**	**3.17**	**232**	Pg		**Pg**	**23 43 06.6**	**-0.5**
	1.9nm,0.6s							
MDOK				Lg		Lg	23 43 43.4	
	15nm,0.8s							
KUU	**Kurty**	**3.22**	**248**	*e*P		**Pb**	**23 43 03.5**	**-0.2**
	1.6nm,0.5s							
KUU				*e*S		**Sb**	**23 43 44.0**	**+1.1**
	15nm,0.5s							
MTBS	**Maitube**	**3.55**	**237**	*e*P		**Pb**	**23 43 09.5**	**+0.2**
	2.0nm,0.1s							
MTBS				*e*S		**Sb**	**23 43 54.0**	**+1.6**
	12nm,0.4s							
KRBS	**Karabastau**	**3.74**	**249**	*e*P		**Pb**	**23 43 12.4**	**-0.1**
	1.3nm,0.6s							
KRBS				*e*S		**Sb**	**23 43 59.1**	**+1.2**
	4.2nm,0.4s							
DGS	**Degeres**	**3.89**	**242**	*e*P		**Pb**	**23 43 16.2**	**+1.1**
	1.1nm,0.4s							
DGS				*e*S		**Sb**	**23 44 05.7**	**+3.4**
	6.5nm,0.5s							
TKM2	**Tokmak 2**	**4.17**	**239**	⇑Sn		**Sn**	**23 44 01.5**	**+2.3**
	0.3nm,0.2s							
TKM2				⇑Lg		Lg	23 44 13.0	
	0.8nm,0.3s							
KURBB	**Kurchatov Arra**	**5.63**	**347**	⇑Lg		Lg	23 45 03.4	
	7.1nm,0.7s							
KURK	**Kurchatov**	**5.71**	**348**	⇑Lg		Lg	23 45 05.7	
	4.8nm,0.7s							
OTUK	**Ortayu**	**6.40**	**302**	⇑Lg		Lg	23 45 28.0	
	0.5nm,0.5s							

LJU 30 23:42:16.1, 46.39N×15.07E, h0km, Confirmed Rockburst, Northwestern Balkan Peninsula

ROM 30 23:45:10.0±0.0, 42.802N±0.003×13.195E±0.004, h10km, ML1.3/10, 2C-1D, Error ellipse: s-maj=0.3km s-min=0.2km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.07**	**298**	⇓P		Pg	23 45 12.6	+0.2
NRCA				S		Sg	23 45 13.9	-0.2
NRCA				AML		AML		
	comp=E,1585μm,0.2s							
NRCA				AML		AML		
	comp=N,1279μm,0.8s							
NRCA				AML		AML		
	comp=E,1810μm,0.2s							
NRCA				AML		AML		
	comp=N,1380μm,0.8s							
NRCA				AML		AML		
	comp=E,1590μm,0.2s							
NRCA				AML		AML		
	comp=N,1275μm,0.7s							
T1244	**Arquata del Tr**	**0.09**	**121**	P		Pg	23 45 13.1	+0.5
T1244				S		Sg	23 45 14.9	+0.5
T1244				AML		AML		
	comp=E,551μm,0.7s							
T1244				AML		AML		
	comp=E,543μm,0.7s							
T1244				AML		AML		
	comp=N,394μm,1.0s							
T1202	**Accumoli, Fraz**	**0.10**	**167**	P		Pg	23 45 13.3	+0.5
T1202				S		Sg	23 45 15.4	+0.7
T1202				AML		AML		
	comp=E,350μm,0.2s							
T1202				AML		AML		
	comp=N,514μm,0.1s							
MC2	**Monte Cornacci**	**0.11**	**358**	⇑P		Pg	23 45 13.4	+0.4
MC2				S		Sg	23 45 15.7	+0.5
MMO1	**Montemonaco**	**0.14**	**45**	⇑P		Pg	23 45 13.8	+0.5
MMO1				S		Sg	23 45 16.4	+0.8
MMO1				AML		AML		
	comp=N,190μm,1.0s							
MMO1				AML		AML		
	comp=N,190μm,1.0s							
MMO1				AML		AML		
	comp=E,374μm,0.3s							
T1241	**Roccafluvione,**	**0.18**	**73**	P		Pg	23 45 14.6	+0.7
T1241				S		Sg	23 45 17.9	+1.2
T1241				AML		AML		
	comp=E,108μm,0.3s							
T1241				AML		AML		
	comp=N,68μm,0.2s							
T1243	**Rocca Santa Ma**	**0.21**	**119**	P		Pg	23 45 15.0	+0.5
T1243				S		Sg	23 45 18.5	+0.9
LNSS	**Leonessa**	**0.23**	**210**	P		Pg	23 45 15.5	+0.6
LNSS				S		Sg	23 45 19.4	+1.4
LNSS				AML		AML		
	comp=N,204μm,0.1s							
LNSS				AML		AML		
	comp=E,198μm,0.2s							
T1215	**Vallo di Nera,**	**0.24**	**270**	P		Pg	23 45 15.5	+0.5
T1215				S		Sg	23 45 19.4	+1.1
FDMO	**Fiordimonte**	**0.25**	**341**	P		Pb	23 45 15.9	-0.7
FDMO				S		Sg	23 45 19.8	+1.3
FDMO				AML		AML		
	comp=N,54μm,0.7s							
FDMO				AML		AML		
	comp=E,59μm,0.2s							
CSP1	**Cessapalombo**	**0.29**	**1**	P		Pg	23 45 16.5	+0.5
CSP1				S		Sb	23 45 21.4	-1.0
RM33	**Pellescritta (**	**0.29**	**177**	P		Pb	23 45 16.8	-0.6
RM33				S		Sb	23 45 21.4	-1.0
CESI	**CESI - Serrava**	**0.29**	**314**	P		Pb	23 45 16.8	-0.7
CESI				S		Sb	23 45 21.4	-1.0
CESI				AML		AML		
	comp=E,84μm,0.5s							
CESI				AML		AML		
	comp=N,158μm,0.5s							
TERO	**Teramo**	**0.35**	**121**	P		Pg	23 45 17.3	+0.3
TERO				S		Sb	23 45 22.9	-1.0
TERO				AML		AML		
	comp=E,47μm,1.3s							
TERO				AML		AML		
	comp=N,80μm,1.2s							
TERO				AML		AML		
	comp=E,47μm,1.3s							
TERO				AML		AML		
	comp=N,80μm,1.2s							
ARRO	**Arrone**	**0.39**	**235**	P		Pb	23 45 18.7	-0.3
ASSB	**Assisi San Ben**	**0.46**	**302**	AML		AML		
	comp=N,30μm,0.6s							
ASSB				AML		AML		
	comp=E,31μm,0.2s							

PDG 30 23:46:14.3±0.1, 42.42N×19.24E, h20km, ML1.6/10, 4C-6D, Error ellipse: s-maj=0.3km s-min=0.3km az=90.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TTG	**Podgorica**	**0.01**	**63**	⇑*i*Pg		Pg	23 46 17.7	0.0
TTG				*i* Sg		Sg	23 46 20.2	+0.2
DRME	**Dracevica, Mon**	**0.24**	**190**	⇓*i*Pg		Pb	23 46 19.7	-0.1
DRME				*i* Sg		Sg	23 46 24.6	+0.7
CEME	**Cevo**	**0.27**	**297**	⇑*i*Pg		Pg	23 46 20.5	0.0
CEME				*i* Sg		Sg	23 46 25.5	+0.8
BUM	**Brajici-Budva**	**0.28**	**244**	⇓*i*Pg		Pb	23 46 20.3	-0.4
BUM				*i* Sg		Sg	23 46 25.6	+0.4
NKME	**Niksic**	**0.40**	**328**	⇑*i*Pg		Pg	23 46 22.3	-0.5
NKME				*i* Sg		Sb	23 46 29.2	+0.5
KOME	**Kolasin**	**0.47**	**25**	⇓*i*Pg		Pg	23 46 23.9	-0.1
KOME				*i* Sg		Sb	23 46 31.6	+0.9
HCY	**Herceg Novi**	**0.55**	**273**	⇑*i*Pg		Pb	23 46 25.1	-0.2
HCY				*i* Sg		Sg	23 46 34.1	+1.2
PVY	**Plav**	**0.56**	**72**	⇓*i*Pg		Pb	23 46 25.1	-0.4
PVY				*i* Sg		Sg	23 46 34.2	+1.0
IVA	**Berane**	**0.66**	**47**	⇓*i*Pg		Pb	23 46 26.9	-0.2
IVA				*i* Sg		Sg	23 46 37.2	+1.0
BRY	**Bratogost**	**0.70**	**313**	⇓*i*Pg		Pb	23 46 27.5	-0.5
BRY				*i* Sg		Sn	23 46 38.9	-0.8
DBRK	**Dubrovnik**	**0.84**	**287**	*e*Pg		Pb	23 46 29.3	-1.0
DBRK						Sg	23 46 41.9	-0.1
STON	**Ston**	**1.22**	**292**	*i* Pn		Pn	23 46 35.6	-0.7
STON						Sn	23 46 54.4	+0.4
LSTV	**Lastovo**	**1.77**	**282**	*e*Pg		Pn	23 46 44.1	+0.3

ROM 30 23:47:28.8±0.1, 42.594N±0.004×13.312E±0.005, h10km, ML1.5/20, 8C-7D, Error ellipse: s-maj=0.5km s-min=0.3km az=31.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	**0.04**	**25**	⇑P		Pg	23 47 31.1	+0.3
SMA1				S		Sg	23 47 32.4	+0.2
SMA1				AML		AML		
	comp=E,16250μm,0.4s							
SMA1				AML		AML		
	comp=N,10750μm,0.2s							
CAMP	**Campotosto**	**0.09**	**129**	P		Pg	23 47 31.8	+0.5
CAMP				S		Sg	23 47 33.5	+0.4
CAMP				AML		AML		
	comp=N,271μm,0.2s							
CAMP				AML		AML		
	comp=E,341μm,0.2s							
RM33	**Pellescritta (**	**0.11**	**220**	P		Pg	23 47 32.1	+0.5
RM33				AML		AML		
	comp=N,462μm,0.4s							
RM33				AML		AML		
	comp=E,527μm,0.2s							
RM33				AML		AML		
	comp=N,464μm,0.4s							
RM33				AML		AML		
	comp=E,599μm,0.3s							
RM33				AML		AML		
	comp=N,496μm,0.3s							
RM33				AML		AML		
	comp=E,542μm,0.8s							
RM33				AML		AML		
	comp=N,498μm,0.3s							
RM33				AML		AML		
	comp=N,496μm,0.3s							
RM33				AML		AML		
	comp=N,498μm,0.3s							
T1202	**Accumoli, Fraz**	**0.13**	**330**	⇑P		Pg	23 47 32.6	+0.8
T1243	**Rocca Santa Ma**	**0.14**	**44**	⇑P		Pg	23 47 32.5	+0.5
T1244	**Arquata del Tr**	**0.16**	**356**	P		Pg	23 47 32.9	+0.6
LNSS	**Leonessa**	**0.20**	**273**	P		Pg	23 47 33.6	+0.6
LNSS				S		Sg	23 47 37.0	+1.1
LNSS				AML		AML		
	comp=E,283μm,0.8s							
LNSS				AML		AML		
	comp=N,256μm,1.1s							
LNSS				AML		AML		
	comp=N,470μm,0.2s							
LNSS				AML		AML		
	comp=E,430μm,0.3s							
LNSS				AML		AML		
	comp=N,471μm,0.2s							
TERO	**Teramo**	**0.22**	**82**	P		Pg	23 47 33.7	+0.5
TERO				S		Sg	23 47 37.4	+1.0
TERO				AML		AML		
	comp=N,380μm,1.3s							
TERO				AML		AML		
	comp=E,294μm,0.5s							
GIGS	**Gran Sasso**	**0.24**	**127**	P		Pg	23 47 34.3	+0.6
GIGS				S		Sg	23 47 38.1	+1.1
GIGS				AML		AML		
	comp=N,37μm,0.1s							
GIGS				AML		AML		
	comp=E,45μm,0.3s							
T1242	**Castelluccio d**	**0.25**	**341**	⇑P		Pg	23 47 34.6	+0.7
T1242				AML		AML		
	comp=E,316μm,0.6s							
T1242				AML		AML		
	comp=N,430μm,0.4s							
T1241	**Roccafluvione,**	**0.28**	**19**	⇑P		Pg	23 47 34.8	+0.4
T1241				AML		AML		
	comp=N,72μm,1.1s							
T1241				AML		AML		
	comp=E,81μm,0.7s							
NRCA	**Norcia**	**0.28**	**329**	P		Pg	23 47 35.0	+0.6
NRCA				AML		AML		
	comp=E,708μm,0.8s							
NRCA				AML		AML		
	comp=N,748μm,0.1s							
NRCA				AML		AML		
	comp=N,747μm,0.1s							
MMO1	**Montemonaco**	**0.31**	**2**	⇑P		Pg	23 47 35.4	+0.5
MC2	**Monte Cornacci**	**0.33**	**344**	S		Sb	23 47 43.0	+0.6
FIAM	**Fiamignano**	**0.36**	**204**	P		Pg	23 47 36.2	+0.3
FIAM				AML		AML		
	comp=N,56μm,0.7s							
FIAM				AML		AML		
	comp=E,79μm,0.6s							
FIAM				AML		AML		
	comp=N,56μm,0.7s							
FAGN	**Fagnano**	**0.39**	**148**	P		Pb	23 47 37.5	-0.3
FAGN				AML		AML		
	comp=E,202μm,0.8s							
FAGN				AML		AML		
	comp=N,186μm,1.5s							
FAGN				AML		AML		
	comp=N,185μm,1.5s							
T1215	**Vallo di Nera,**	**0.39**	**303**	P		Pg	23 47 36.7	+0.3
ARRO	**Arrone**	**0.40**	**268**	P		Pg	23 47 37.0	+0.3
ARRO				AML		AML		
	comp=E,49μm,1.6s							
ARRO				AML		AML		
	comp=N,54μm,0.1s							
ARRO				AML		AML		
	comp=N,54μm,0.1s							
ARRO				AML		AML		
	comp=E,49μm,1.6s							
OFFI	**Offida**	**0.44**	**39**	⇓P		Pb	23 47 38.7	+0.1
VCEL	**Villa Celiera**	**0.44**	**117**	P		Pb	23 47 38.4	-0.3
VCEL				AML		AML		
	comp=E,247μm,0.8s							
VCEL				AML		AML		
	comp=N,186μm,0.8s							
FDMO	**Fiordimonte**	**0.47**	**340**	P		Pg	23 47 38.5	+0.5
FDMO				AML		AML		
	comp=E,42μm,0.1s							
FDMO				AML		AML		
	comp=E,42μm,0.1s							
FDMO				AML		AML		
	comp=N,57μm,0.2s							
CSP1	**Cessapalombo**	**0.50**	**351**	⇑P		Pg	23 47 38.9	+0.3
CSP1				S		Sb	23 47 48.0	+0.7
T0110	**Collepietro**	**0.51**	**137**	⇑P		Pg	23 47 39.1	+0.5
T0110				S		Sb	23 47 48.0	+0.7
T0110				AML		AML		
	comp=E,103μm,0.5s							
T0110				AML		AML		
	comp=N,105μm,0.3s							
T0110				AML		AML		
	comp=E,102μm,0.5s							
T0110				AML		AML		
	comp=N,105μm,0.3s							
CESI	**CESI - Serrava**	**0.51**	**324**	⇓P		Pg	23 47 39.1	+0.5
CESI				AML		AML		
	comp=N,45μm,1.3s							
CESI				AML		AML		
	comp=E,44μm,0.2s							
CESI				AML		AML		
	comp=N,45μm,1.3s							
ASSB	**Assisi San Ben**	**0.66**	**313**	⇓P		Pb	23 47 42.4	0.0
ASSB				AML		AML		
	comp=E,30μm,0.5s							
ASSB				AML		AML		
	comp=N,23μm,1.1s							
SNTG	**Esanatoglia**	**0.71**	**338**	⇓P		Pg	23 47 42.7	+0.2
SNTG				AML		AML		
	comp=N,17μm,1.2s							
SNTG				AML		AML		
	comp=E,16μm,1.2s							
SNTG				AML		AML		
	comp=N,17μm,1.2s							
INTR	**Introdacqua**	**0.73**	**143**	⇓P		Pg	23 47 42.6	-0.2
INTR				AML		AML		
	comp=N,34μm,0.7s							
INTR				AML		AML		
	comp=E,20μm,0.7s							
CING	**Cingoli**	**0.79**	**354**	⇓P		Pg	23 47 44.0	+0.1
CING				AML		AML		
	comp=E,32μm,1.6s							
CING				AML		AML		
	comp=N,25μm,0.8s							
LIK	**San Giovanni I**	**1.10**	**170**	⇓P		Pg	23 47 49.6	-0.4
LIK				AML		AML		
	comp=N,400μm,1.6s							
LIK				AML		AML		
	comp=E,500μm,1.6s							

*IDC **30** 23:59:10.0±4.5, 33.74N×135.59E, h37km±48km, mb3.5/4, mbtmp3.6/6, ML3.0/2, MS2.5/1, Error ellipse: s-maj=36.0km s-min=18.4km az=40.0*
*JMA **30** 23:59:11.2±0.1, 33.8N±0.2×135.6E±0.2, h51km, MD3.9/40, MV4.0/40, SOUTHERN WAKAYAMA PREF*
JMA Felt II J1 at SOUTHERN WAKAYAMA PREF .
*NIED **30** 23:59:11.2, 33.83N×135.62E, h51km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.42; $M_{\theta\theta}$-3.23; $M_{\phi\phi}$6.65; $M_{r\theta}$3.07; $M_{\theta\phi}$0.12; $M_{\phi r}$-1.15; Fault plane solution: $M_0$6.62000×10^{14} NP1: ϕ_s216.00000°, δ54.00000°, λ-32.00000°. NP2: ϕ_s326.00000°, δ65.00000°, λ-139.00000°.*

ISC 30 23:59:11.1±0.9, 33.82N±0.05×135.63E±0.04, h50km±6km, n36, σ0°48/30, mb3.6/4, 12D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTNC	**Tanabenakahech**	**0.01**	**268**	⇓*i*P		**Pn**	**23 59 19.0**	**+0.2**
JTNC				⇓S		**Sn**	**23 59 24.4**	**+0.1**
JTNC	**Tanabenakahech**	**0.01**	**268**	A		A	23 59 19.0	
	comp=E,27nm,0.3s,comp=E,24nm,0.3s							
JWM	**Minabe**	**0.23**	**278**	P		**Pn**	**23 59 19.7**	**0.0**
JWM				S		**Sn**	**23 59 25.6**	**-0.2**
JWM	**Minabe**	**0.23**	**278**	A		A	23 59 19.7	
	comp=E,45nm,0.4s,comp=E,54nm,0.3s							
JMMH	**Miemihama**	**0.33**	**90**	A		A	23 59 20.8	
	comp=E,31nm,0.5s,comp=E,12nm,0.5s							
JWKM	**Wakayamakushim**	**0.38**	**163**	A		A	23 59 21.3	
	comp=E,14nm,0.3s,comp=E,18nm,0.3s							
JWY	**Kouya**	**0.40**	**356**	⇓*i*P		**Pn**	**23 59 21.5**	**+0.1**
JWY				⇓S		**Sn**	**23 59 28.4**	**-0.3**
JWY	**Kouya**	**0.40**	**356**	A		A	23 59 21.5	
	comp=E,9.0nm,1.6s,comp=E,16nm,0.4s							
JNTK	**Naratenkawa**	**0.50**	**25**	A		A	23 59 22.4	
	comp=E,46nm,0.3s,comp=E,11nm,0.2s							
JKN2	**Miekihoku**	**0.68**	**52**	⇓*i*P		**Pn**	**23 59 24.7**	**0.0**
JKN2				⇓S		**Sn**	**23 59 34.2**	**-0.2**
JKN2	**Miekihoku**	**0.68**	**52**	A		A	23 59 24.7	
	comp=E,12nm,1.1s,comp=E,9.0nm,0.8s							
JHE	**Heguri**	**0.83**	**3**	⇓*i*P		**Pn**	**23 59 26.6**	**-0.1**
JHE				⇓S		**Sn**	**23 59 37.8**	**-0.2**
JAWN	**Awajishima-nag**	**0.90**	**318**	*i* P		**Pn**	**23 59 27.4**	**0.0**
JAWN				S		**Sn**	**23 59 39.1**	**-0.3**
JAWN	**Awajishima-nag**	**0.90**	**318**	A		A	23 59 27.4	
	comp=E,5.0nm,0.4s,comp=E,7.0nm,0.7s							
JAI	**Aioi**	**0.98**	**269**	*i* P		**Pn**	**23 59 28.5**	**-0.1**
JAI	**Aioi**	**0.98**	**269**	A		A	23 59 28.5	
	comp=E,5.0nm,0.7s,comp=E,4.0nm,1.0s							
TTO1	**TONANKAI O.B.S**	**0.99**	**101**	*i* P		**Pn**	**23 59 28.6**	**+0.2**
JIE	**Ise**	**1.06**	**57**	⇓*i*P		**Pn**	**23 59 29.8**	**+0.1**
JIE				⇓S		**Sn**	**23 59 42.8**	**-0.7**
JIE	**Ise**	**1.06**	**57**	A		A	23 59 29.8	
	comp=E,3.0nm,1.7s,comp=E,5.0nm,1.0s							
JMIK	**Miki**	**1.09**	**335**	A		A	23 59 30.4	
	comp=E,7.0nm,2.0s,comp=E,9.0nm,0.5s							
TSUJ	**Tsu 2**	**1.11**	**36**	⇓*i*P		**Pn**	**23 59 30.4**	**+0.1**
TSUJ				⇓S		**Sn**	**23 59 43.8**	**-0.7**
TTO2	**TONANKAI O.B.S**	**1.17**	**94**	*i* P		**Pn**	**23 59 31.1**	**+0.2**
JKS	**Kasai**	**1.33**	**331**	*i* P		**Pn**	**23 59 33.2**	**-0.1**
MJAR	**Matsushiro Arr**	**3.44**	**37**	Pn		**Pn**	**00 00 02.0**	**-0.2**
	0.5nm,0.3s,baz=224,slow=13,SNR=9.0							
MJAR						**Sn**	**00 00 42.9**	**+1.1**
	1.7nm,0.3s,baz=216,slow=23,SNR=7.9							
	1.8nm,0.2s							
JHJ	**Hachijo jima 2**	**3.54**	**100**	Pn		**Pn**	**00 00 03.9**	**+0.2**
	188nm,0.3s,baz=47,slow=22,SNR=33							
JHJ						**Sn**	**00 00 43.6**	**-0.7**
	18nm,0.3s,baz=282,slow=20,SNR=2.2							
KSRS	**Korea Array**	**7.24**	**302**	Pn		**Pn**	**00 00 53.5**	**-0.8**
	0.8nm,0.3s,baz=121,slow=14,SNR=6.9							
KSRS						**Sn**	**00 02 15.5**	**+0.3**
	0.8nm,0.3s,baz=117,slow=24,SNR=6.4							
KSRS				LR		LR	00 03 47.5	
	comp=Z,37nm,18.4s,baz=220,slow=38							
	3.0nm,0.6s							
SONM	**Songino Array**	**25.99**	**311**	P		**P**	**00 04 39.1**	**-0.1**
	0.4nm,0.6s,baz=110,slow=12,SNR=2.8							
	0.4nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**31.11**	**109**	T		T	00 37 59.5	
	baz=303,slow=75,SNR=24							
H11N1	**WAKE ISLAND Hy**	**31.11**	**109**	T		T	00 37 58.6	
	baz=303,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**31.12**	**109**	T		T	00 38 00.1	
	baz=303,slow=75,SNR=28							
H11S3	**WAKE ISLAND Hy**	**31.63**	**111**	T		T	00 38 38.2	
	baz=305,slow=75,SNR=44							
H11S1	**WAKE ISLAND Hy**	**31.63**	**111**	T		T	00 38 38.1	
	baz=305,slow=75,SNR=33							
H11S2	**WAKE ISLAND Hy**	**31.65**	**111**	T		T	00 38 39.3	
	baz=305,slow=75,SNR=26							
MKAR	**Makanchi Array**	**41.92**	**304**	P		**P**	**00 06 57.8**	**+1.1**
	0.4nm,0.7s,baz=91,slow=9.1,SNR=2.5							
	0.4nm,0.7s							
WRA	**Warramunga Arr**	**53.48**	**182**	P		**P**	**00 08 25.8**	**-0.6**
	2.1nm,0.7s,baz=354,slow=7.7,SNR=33							
	2.1nm,0.7s							
ASAR	**Alice Springs**	**57.19**	**182**	P		**P**	**00 08 52.6**	**-0.4**
	0.9nm,0.7s,baz=12,slow=13,SNR=16							
	0.9nm,0.7s							

*IDC **31** 00:00:04.0±3.9, 24.86N×94.93E, h98km±38km, mb3.4/5, mbtmp3.6/6, MS3.3/2, Error ellipse: s-maj=63.7km s-min=17.6km az=64.0*

ISC 31 00:00:04.4±1.3, 24.8N±0.2×94.9E±0.4, h104km, n8, σ0°43/6, mb3.7/5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.37**	**149**	P		**Pn**	**00 01 49.1**	**-0.3**
	0.9nm,0.3s,baz=323,slow=12,SNR=7.1							
PALK	**Pallekele**	**22.14**	**220**	LR		LR	00 16 17.4	
	comp=Z,88nm,19.7s,baz=223,slow=44							
MKAR	**Makanchi Array**	**24.12**	**338**	P		**P**	**00 05 10.7**	**+0.3**
	0.7nm,0.5s,baz=151,slow=8.6,SNR=

	0.8nm,0.6s,baz=200,slow=8.7,SNR=5.0							
	0.8nm,0.6s							
FINES	**FINESS Array B**	**58.40**	**328**	P		**P**	**00 09 48.4**	**-0.3**
	1.5nm,0.8s,baz=83,slow=12,SNR=1.8							
	1.5nm,0.8s							
WRA	**Warramunga Arr**	**58.76**	**136**	P		**P**	**00 09 51.9**	**+0.1**
	0.5nm,0.6s,baz=324,slow=7.3,SNR=12							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**61.26**	**139**	P		**P**	**00 10 09.4**	**+0.5**
	0.4nm,0.5s,baz=322,slow=7.4,SNR=6.1							
	0.4nm,0.5s							
VRAC	**Vranov**	**64.14**	**315**	LR		LR	00 39 58.2	
	comp=Z,19nm,19.4s,baz=170,slow=37							

NEIC ***31*** *00:08:49.6±1.7, 17°.8S±0°.2×178°.5W±0°.1, h582km±8km, mb4.2/88, Error ellipse: s-maj=28.9km s-min=13.9km az=161.0*

IDC ***31*** *00:08:50.7±1.5, 17°.43S×178°.79W, h588km±19km, mb3.7/10, mbtmp4.6/12, Error ellipse: s-maj=30.9km s-min=10.6km az=148.0*

ISC 31 00:08:50.6±0.5, 17°.7S±0°.1×178°.57W±0°.09, h600km, n137, σ0s86/139, mb4.2/52, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.22**	**269**		**P**	**00 10 12.7**	**+1.5**
AFI	**Afiamalu**	**7.56**	**61**	P	**P**	**00 10 44.0**	**-1.9**
AFI	**Afiamalu**	**7.56**	**61**	P	**P**	**00 10 45.2**	**-0.7**
	53nm,0.6s,baz=321,slow=3.8,SNR=6.9						
NIUE	**Niue**	**8.32**	**101**	P	**P**	**00 10 50.9**	**-2.1**
MARNC	**Mare, Loyalty**	**13.17**	**251**	P	**P**	**00 11 40.2**	**-0.9**
PINNC	**Pines Island,**	**14.00**	**247**	P	**P**	**00 11 48.8**	**-0.7**
DZM	**Mont Dzumac**	**14.74**	**250**	P	**P**	**00 11 56.9**	**+0.4**
DZM	**Mont Dzumac**	**14.74**	**250**	P	**P**	**00 11 56.8**	**+0.2**
	6.9nm,0.6s,baz=346,slow=20,SNR=11						
URZ	**Urewera**	**20.81**	**190**	P	**P**	**00 12 54.5**	**+3.1**
	6.3nm,0.5s,baz=299,slow=23,SNR=2.2						
	6.3nm,0.5s						
EIDS	**Eidsvold**	**29.19**	**250**	P	**P**	**00 14 05.2**	**-0.3**
ARMA	**Armidale**	**29.90**	**239**	P	**P**	**00 14 11.1**	**-0.5**
ARMA				IAmb	IAmb	00 14 12.8	
	comp=Z,9.5nm,0.8s						
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**00 14 40.6**	**-0.1**
CAN	**Canberra**	**33.69**	**232**	P	**P**	**00 14 43.2**	**-0.5**
COEN	**Coen**	**36.95**	**270**	P	**P**	**00 15 11.8**	**+1.0**
TOO	**Toolangi**	**37.17**	**231**	P	**P**	**00 15 11.6**	**-0.7**
STKA	**Stephens Creek**	**38.58**	**241**	P	**P**	**00 15 23.6**	**-0.2**
STKA	**Stephens Creek**	**38.58**	**241**	P	**P**	**00 15 24.2**	**+0.4**
	comp=Z,8.9nm,0.6s,baz=92,slow=11,SNR=22						
	comp=Z,8.9nm,0.6s						
BBOO	**Buckleboo**	**43.36**	**241**	P	**P**	**00 16 01.1**	**-0.4**
WR0	**Warramunga Arr**	**44.32**	**259**	P	**P**	**00 16 08.6**	**-0.5**
WR0				IAmb	IAmb	00 16 13.5	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**44.48**	**260**	P	**P**	**00 16 09.8**	**-0.6**
WB2	**Warramunga Arr**	**44.50**	**259**	P	**P**	**00 16 10.1**	**-0.4**
WRA	**Warramunga Arr**	**44.51**	**259**	P	**P**	**00 16 10.1**	**-0.5**
WRA	**Warramunga Arr**	**44.51**	**259**	P	**P**	**00 16 10.2**	**-0.4**
	comp=Z,9.3nm,0.5s,baz=96,slow=7.1,SNR=225						
	comp=Z,9.3nm,0.5s						
AS31	**Alice Springs**	**44.69**	**254**	P	**P**	**00 16 12.1**	**+0.1**
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**00 16 12.1**	**+0.1**
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**00 16 12.0**	**+0.1**
	comp=Z,50nm,0.6s,baz=87,slow=8.7,SNR=735						
ASAR				ScP	**ScP**	**00 20 39.3**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=112,slow=5.0,SNR=2.1						
ASAR				S	**S**	**00 22 05.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=96,slow=15,SNR=7.3						
	comp=Z,50nm,0.6s						
MTN	**Manton Dam**	**48.65**	**268**	P	**P**	**00 16 41.9**	**+0.2**
MTN				IAmb	IAmb	00 16 42.7	
	comp=Z,14nm,0.9s						
FORT	**Forrest**	**49.95**	**244**	P	**P**	**00 16 50.1**	**-0.9**
KNRA	**Kununurra**	**50.35**	**264**	P	**P**	**00 16 54.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**52.91**	**260**	P	**P**	**00 17 12.6**	**+0.1**
PSA00	**Pilbara Seismi**	**57.81**	**255**	P	**P**	**00 17 45.9**	**-0.4**
PSA00				IAmb	IAmb	00 17 46.6	
	comp=Z,11nm,0.8s						
MBWA	**Marble Bar**	**57.97**	**256**	P	**P**	**00 17 46.8**	**-0.7**
MBWA				IAmb	IAmb	00 17 49.4	
	comp=Z,16nm,1.3s						
NWAO	**Narrogin (SRO)**	**59.16**	**242**	P	**P**	**00 17 54.5**	**-0.8**
MORW	**Morawa**	**60.41**	**246**	P	**P**	**00 18 02.8**	**-0.8**
MORW				IAmb	IAmb	00 18 03.9	
	comp=Z,27nm,1.5s						
GIRL	**Giralia**	**62.80**	**253**	P	**P**	**00 18 20.0**	**+0.8**
UGM	**Wanagama**	**69.50**	**268**	P	**P**	**00 19 00.9**	**+0.2**
UNV	**Unalaska Valle**	**72.03**	**7**	P	**P**	**00 19 14.7**	**+0.1**
PETK	**Petropavlovsk-**	**73.46**	**345**	P	**P**	**00 19 22.8**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=152,slow=9.6,SNR=3.8						
	comp=Z,3.2nm,0.7s						
CHIR	**Chirikof Islan**	**75.78**	**13**	P	**P**	**00 19 36.2**	**+0.4**
SII	**Sitkinak Islan**	**76.78**	**14**	P	**P**	**00 19 41.5**	**+0.2**
KMRM	**Mail Ridge**	**76.97**	**40**	P	**P**	**00 19 44.6**	**+1.8**
KMRM				IAmb	IAmb	00 19 45.5	
	comp=Z,12nm,1.0s						
OHAK	**Old Harbor**	**77.59**	**14**	P	**P**	**00 19 46.4**	**+0.9**
OHAK				IAmb	IAmb	00 19 46.9	
	comp=Z,8.4nm,0.8s						
ISA	**Isabella, Lake**	**77.80**	**46**	P	**P**	**00 19 47.7**	**+0.4**
CMB	**Columbia Colle**	**77.81**	**43**	P	**P**	**00 19 47.8**	**+0.5**
YUH	**Yuha Desert**	**78.05**	**50**	P	**P**	**00 19 49.1**	**+0.5**
OMMB	**Old Mammoth Mi**	**78.49**	**44**	P	**P**	**00 19 51.5**	**+0.2**
BEKR	**Beckworth**	**78.86**	**42**	P	**P**	**00 19 54.1**	**+1.0**
BEKR				IAmb	IAmb	00 19 54.6	
	comp=Z,3.6nm,0.6s						
PNTR	**Pine Nut**	**78.91**	**43**	P	**P**	**00 19 54.8**	**+1.4**
PNTR				IAmb	IAmb	00 20 02.4	
	comp=Z,11nm,1.1s						
L04D	**Klamath Falls**	**79.01**	**39**	P	**P**	**00 19 55.2**	**+1.5**
L04D				IAmb	IAmb	00 19 55.8	
	comp=Z,7.5nm,0.8s						
DSP	**Deep Springs**	**79.05**	**45**	P	**P**	**00 19 54.4**	**+0.6**
LCH	**Last Change Ra**	**79.20**	**45**	P	**P**	**00 19 55.5**	**+0.6**
LCH				IAmb	IAmb	00 20 17.9	
	comp=Z,7.0nm,0.7s						
NVAR	**Mina Array Bea**	**79.40**	**44**	P	**P**	**00 19 56.4**	**+0.5**
NVAR	**Mina Array Bea**	**79.40**	**44**	P	**P**	**00 19 57.1**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=225,slow=9.0,SNR=22						
	comp=Z,2.9nm,0.8s						
KVN	**Kaiserville**	**79.87**	**43**	P	**P**	**00 19 59.5**	**+1.1**
MOD	**Modoc Plateau**	**80.04**	**40**	P	**P**	**00 19 59.9**	**+0.7**
MOD				IAmb	IAmb	00 20 01.2	
	comp=Z,5.1nm,0.7s						
CNPM	**China Poot**	**80.14**	**14**	P	**P**	**00 20 00.2**	**+1.2**
CNPM				IAmb	IAmb	00 20 02.1	
	comp=Z,22nm,1.4s						
ILSW	**Iliamna Southw**	**80.14**	**13**	P	**P**	**00 19 59.3**	**+0.1**
ILSW				IAmb	IAmb	00 20 00.1	
	comp=Z,9.1nm,0.7s						
K05A	**Summer Lake**	**80.15**	**39**	P	**P**	**00 20 01.2**	**+1.4**
K05A				IAmb	IAmb	00 20 02.3	
	comp=Z,11nm,1.1s						
N18K	**Kilae Creek**	**80.24**	**11**	P	**P**	**00 20 00.0**	**+0.5**
H04A	**Detroit Lake**	**80.54**	**37**	P	**P**	**00 20 02.6**	**+1.1**
H04A				IAmb	IAmb	00 20 02.7	
	comp=Z,5.2nm,0.5s						
N19K	**Bonanza Creek**	**80.63**	**12**	P	**P**	**00 20 01.9**	**+0.2**
PINE	**Pine Mountain**	**80.74**	**38**	P	**P**	**00 20 03.6**	**+0.9**
PINE				IAmb	IAmb	00 20 05.3	
	comp=Z,9.0nm,0.9s						
PRN	**Pahroc Range**	**81.06**	**46**	P	**P**	**00 20 05.8**	**+1.3**
PRN				IAmb	IAmb	00 20 06.9	
	comp=Z,4.8nm,0.9s						
NLWA	**Neilton Lookou**	**81.25**	**34**	P	**P**	**00 20 06.4**	**+1.3**
WVOR	**Wild Horse Val**	**81.37**	**40**	P	**P**	**00 20 07.1**	**+1.2**
WVOR				IAmb	IAmb	00 20 08.1	
	comp=Z,6.5nm,1.1s						
TUC	**Tucson**	**81.71**	**52**	P	**P**	**00 20 08.6**	**+0.7**
I07A	**Izee**	**81.76**	**39**	P	**P**	**00 20 08.9**	**+1.0**
I07A				IAmb	IAmb	00 20 10.1	
	comp=Z,5.6nm,0.8s						
L19K	**White Mountain**	**81.83**	**11**	P	**P**	**00 20 08.6**	**+1.0**
L19K				IAmb	IAmb	00 20 10.3	
	comp=Z,7.1nm,1.1s						
PWL	**Port Wells**	**82.00**	**14**	P	**P**	**00 20 08.8**	**+0.3**
PWL				IAmb	IAmb	00 20 09.2	
	comp=Z,5.0nm,0.6s						
CCUT	**Cedar City**	**82.30**	**47**	P	**P**	**00 20 11.9**	**+1.0**
GLI	**Glacier Island**	**82.31**	**15**	P	**P**	**00 20 10.5**	**+0.3**
GLI				IAmb	IAmb	00 20 18.9	
	comp=Z,14nm,0.9s						
PSUT	**Pine Spring**	**82.44**	**46**	P	**P**	**00 20 12.3**	**+0.8**
U15A	**North Rim**	**82.51**	**48**	P	**P**	**00 20 13.2**	**+1.1**
U15A				IAmb	IAmb	00 20 14.5	
	comp=Z,7.0nm,0.8s						
HMT	**Hamilton**	**82.58**	**16**	P	**P**	**00 20 12.0**	**+0.5**
HMT				IAmb	IAmb	00 20 24.7	
	comp=Z,18nm,1.4s						
GHO	**Glory Hole Cre**	**82.67**	**14**	P	**P**	**00 20 12.5**	**+0.6**
G08A	**Pilot Rock**	**82.76**	**38**	P	**P**	**00 20 14.0**	**+1.1**
G08A				IAmb	IAmb	00 20 14.9	
	comp=Z,10nm,1.4s						
SML	**Sawmill**	**82.83**	**14**	P	**P**	**00 20 13.3**	**+0.5**
BMRM	**Bremner River**	**83.02**	**16**	P	**P**	**00 20 14.5**	**+0.7**
BMRM				IAmb	IAmb	00 20 17.6	
	comp=Z,6.2nm,1.0s						
K20K	**Telida**	**83.05**	**11**	P	**P**	**00 20 14.7**	**+0.9**
K20K				IAmb	IAmb	00 20 15.4	
	comp=Z,6.3nm,0.8s						
SCM	**Sheep Creek Mo**	**83.09**	**14**	P	**P**	**00 20 14.7**	**+0.6**
MESA	**MESA**	**83.09**	**17**	P	**P**	**00 20 15.6**	**+1.3**
N25K	**Chitina, Valde**	**83.56**	**16**	P	**P**	**00 20 17.4**	**+0.9**
N25K				IAmb	IAmb	00 20 17.9	
	comp=Z,7.3nm,0.7s						
GLB	**Gilahina Butte**	**83.63**	**16**	P	**P**	**00 20 17.5**	**+0.7**
GLB				IAmb	IAmb	00 20 18.1	
	comp=Z,4.6nm,0.6s						
J20K	**Nowinta River**	**83.80**	**10**	P	**P**	**00 20 17.9**	**+0.5**
J20K				IAmb	IAmb	00 20 19.1	
	comp=Z,3.1nm,0.8s						
RND	**Reindeer**	**84.12**	**13**	P	**P**	**00 20 19.6**	**+0.4**
RND				IAmb	IAmb	00 20 20.4	
	comp=Z,7.4nm,0.7s						
DHY	**Denali Highway**	**84.16**	**14**	P	**P**	**00 20 19.9**	**+0.5**
B08A	**Colville Reser**	**84.28**	**35**	P	**P**	**00 20 20.4**	**+0.2**
B08A				IAmb	IAmb	00 20 21.4	
	comp=Z,5.7nm,0.9s						
PLID	**Pearl Lake**	**84.41**	**39**	P	**P**	**00 20 22.2**	**+1.0**
HLID	**Hailey**	**84.59**	**41**	P	**P**	**00 20 23.2**	**+1.2**
HVU	**Hansel Valley**	**84.75**	**43**	P	**P**	**00 20 23.9**	**+1.0**
M27K	**Edge Creek, AK**	**84.91**	**16**	P	**P**	**00 20 24.4**	**+1.3**
M27K				IAmb	IAmb	00 20 25.1	
	comp=Z,6.3nm,1.1s						
DOT	**Dot Lake**	**85.43**	**15**	P	**P**	**00 20 25.7**	**+0.3**
CCB	**Clear Creek Bu**	**85.44**	**13**	P	**P**	**00 20 25.2**	**-0.2**
CCB				IAmb	IAmb	00 20 25.9	
	comp=Z,3.6nm,0.4s						
IL31		**85.74**	**13**	P	**P**	**00 20 26.3**	**-0.5**
IL31				IAmb	IAmb	00 20 27.6	
	comp=Z,5.4nm,1.1s						
ILAR	**Eielson Array**	**85.74**	**13**	P	**P**	**00 20 26.6**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=220,slow=5.0,SNR=25						
	comp=Z,1.4nm,0.4s						
J25K	**Salcha River,**	**85.94**	**14**	P	**P**	**00 20 28.3**	**+0.4**
J25K				IAmb	IAmb	00 20 28.6	
	comp=Z,2.8nm,0.7s						
TX31	**Lajitas Ar. Si**	**86.03**	**58**	P	**P**	**00 20 30.1**	**+1.0**
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**00 20 30.8**	**+1.6**
	comp=Z,3.1nm,0.8s,baz=219,slow=6.3,SNR=38						
	comp=Z,3.1nm,0.8s						
J26L	**Joseph Creek**	**86.26**	**14**	P	**P**	**00 20 29.5**	**+0.1**
J26L				IAmb	IAmb	00 20 31.3	
	comp=Z,3.0nm,0.6s						
M30M	**Minto, Yukon**	**86.51**	**18**	P	**P**	**00 20 30.9**	**+0.3**
M30M				IAmb	IAmb	00 20 31.7	
	comp=Z,3.0nm,0.6s						
IMW	**Indian Meadow**	**86.95**	**42**	P	**P**	**00 20 33.8**	**+0.3**
IMW				IAmb	IAmb	00 20 35.6	
	comp=Z,4.1nm,0.9s						
BW06	**Boulder Array**	**87.32**	**43**	P	**P**	**00 20 35.2**	**+0.1**
BW06				IAmb	IAmb	00 20 36.5	
	comp=Z,2.6nm,0.8s						
PD31	**Pinedale Array**	**87.32**	**43**	P	**P**	**00 20 34.5**	**-0.6**
PD31				IAmb	IAmb	00 20 36.5	
	comp=Z,2.5nm,0.8s						
PDAR	**Pinedale Array**	**87.32**	**43**	P	**P**	**00 20 35.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=218,slow=3.9,SNR=24						
	comp=Z,1.7nm,0.6s						
PZH	**PanZhiHua**	**88.93**	**298**	P	**P**	**00 20 42.8**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,130nm,5.4s						
YKA	**Yellowknife Ar**	**94.23**	**25**	P	**P**	**00 21 06.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=247,slow=4.7,SNR=4.0						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**108.90**	**314**	PKiKP	**PKiKP**	**00 26 12.0**	**-0.7**
	comp=Z,2.2nm,1.2s,baz=109,slow=2.4,SNR=2.7						
BVAR	**Borovoye Array**	**116.61**	**321**	PKP	**PKiKP**	**00 26 26.7**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=143,slow=4.1,SNR=4.2						
ARCES	**ARCESS Array B**	**126.11**	**350**	PKP	**PKPdf**	**00 26 44.5**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=5.4,slow=3.9,SNR=5.5						
FINES	**FINESS Array B**	**132.97**	**344**	PKP	**PKPdf**	**00 26 58.0**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=302,slow=3.6,SNR=4.0						
KWP	**Kalwaria Pacla**	**143.84**	**336**		**PKPdf**	**00 27 17.8**	**-0.6**
BUR08	**Bucovina Ar. S**	**144.36**	**332**		**PKPab**	**00 27 19.8**	**-0.3**
BURAR	**Bucovina Array**	**144.38**	**332**		**PKPab**	**00 27 19.7**	**-0.5**
OSTC	**Ostas**	**145.17**	**343**	*e*PKP	**PKPab**	**00 27 22.5**	**-0.5**
CLL	**Collm**	**145.25**	**347**	PKPbc	**PKPbc**	**00 27 21.9**	**0.0**
DPC	**Dobruska-Polom**	**145.33**	**343**	*e*PKP	**PKPab**	**00 27 23.0**	**-0.7**
KRLC	**Kraliky**	**145.44**	**342**	*e*PKP	**PKPab**	**00 27 23.2**	**-1.0**
PRU	**Pruhonice**	**146.13**	**345**	*e*PKP	**PKiKP**	**00 27 25.1**	**-1.7**
KHC	**Kasperske Hory**	**147.16**	**345**	PKPbc	**PKiKP**	**00 27 27.6**	**-1.4**
KHC	**Kasperske Hory**	**147.16**	**345**	*e*PKP	**PKiKP**	**00 27 27.7**	**-1.4**
KHC				*ex*	x	00 27 32.3	
CKRC	**Cesky Krumlov**	**147.26**	**344**	*e*PKP	**PKiKP**	**00 27 27.9**	**-1.4**
GEC2	**GERESS Array S**	**147.39**	**345**	PKPbc	**PKPbc**	**00 27 27.8**	**-0.3**
GERES	**GERESS Array B**	**147.39**	**345**	PKPbc	**PKPbc**	**00 27 27.8**	**-0.3**
GERES	**GERESS Array B**	**147.39**	**345**	PKPbc	**PKiKP**	**00 27 28.5**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=28,slow=3.2,SNR=22						
CONA	**Conrad Observa**	**147.64**	**342**	*i* P	**PKiKP**	**00 27 29.6**	**-0.5**
	comp=Z,0.6nm,0.4s						
SOKA	**Sobon**	**149.01**	**342**	*i* P	**PKiKP**	**00 27 32.8**	**-0.2**
	comp=Z,0.1nm,0.2s						
VTS	**Vitosha**	**149.02**	**328**	PKPbc	**PKiKP**	**00 27 32.4**	**-0.9**
KBA	**Koelnbreinsper**	**149.12**	**344**	*e*P	**PKiKP**	**00 27 32.8**	**-0.5**
	comp=Z,1.0nm,0.5s						
WATA	**Walderalm**	**149.31**	**346**	*e*P	**PKiKP**	**00 27 33.2**	**-0.5**
	comp=Z,2.1nm,0.5s						
WTTA	**Wattenberg**	**149.36**	**346**	*i* P	**PKiKP**	**00 27 33.4**	**-0.5**
	comp=Z,1.7nm,0.4s						
MOTA	**Moosalm**	**149.40**	**347**	*e*P	**PKiKP**	**00 27 33.2**	**-0.7**
	comp=Z,1.0nm,0.5s						
MYKA	**Terra Mystica**	**149.45**	**343**	*e*P	**PKiKP**	**00 27 33.0**	**-0.9**
	comp=Z,0.7nm,0.3s						
SQTA	**Sankt Quirin**	**149.50**	**347**	*i* P	**PKiKP**	**00 27 33.8**	**-0.2**
	comp=Z,2.0nm,0.5s						
ABTA	**Abfaltersbach**	**149.64**	**345**	*i* P	**PKiKP**	**00 27 33.5**	**-0.8**
	comp=Z,3.9nm,0.7s						
PRED	**Cave del Predi**	**149.65**	**343**	PKPab	**PKPab**	**00 27 41.6**	**+0.2**
FETA	**Feichten**	**149.79**	**347**	*e*P	**PKiKP**	**00 27 34.6**	**-0.1**
	comp=Z,0.4nm,0.3s						
ESDC	**Sonseca Array**	**157.63**	**11**	PKPab	**PKPab**	**00 28 15.4**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=325,slow=3.7,SNR=4.5						

IDC ***31*** *00:13:19.7±1.0, 29°.70N×66°.56E, h0km, mb3.7/16, mbtmp3.8/18, ML3.7/2, MS3.3/16, Error ellipse: s-maj=22.6km s-min=18.2km az=127.0*

MOS ***31*** *00:13:20.3±1.5, 29°.68N×66°.45E, h20km, mb4.1/13, Error ellipse: s-maj=11.4km s-min=6.2km az=84.8*

NEIC ***31*** *00:13:21.1±2.4, 29°.5N±0°.1×66°.59E±0°.06, h18km±5km, mb4.1/8, Error ellipse: s-maj=16.3km s-min=4.2km az=154.0*

ISC 31 00:13:20.3±0.5, 29°.56N±0°.06×66°.47E±0°.05, h10km, n111, σ2s15/110, mb4.0/27, MS3.3/15, 6C, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**5.42**	**23**	Pn	**Pn**	**00 14 43.3**	**+1.9**
KBL	**Kabul**	**5.42**	**23**	P	**Pn**	**00 14 43.3**	**+1.9**
KBL	**Kabul**	**5.42**	**23**	P	**Pn**	**00 14 43.9**	**+2.5**
	SNR=14						
KBL				S	**Sn**	**00 15 46.7**	**+2.7**
HRA	**Herat**	**6.00**	**324**		**Pn**	**00 14 47.6**	**-1.7**
CEP	**Cherat**	**6.29**	**46**	P	**Pn**	**00 14 56.6**	**+3.4**
NIL	**Nilore**	**7.08**	**53**	Pn	**Pn**	**00 15 00.6**	**-3.4**
NIL	**Nilore**	**7.08**	**53**	P	**Pn**	**00 15 00.6**	**-3.4**
JASK	**Jask - Hormozg**	**8.46**	**246**	P	**Pn**	**00 15 25.7**	**+2.7**
CHGR	**Chuyangaron**	**9.34**	**13**	Pn	**Pn**	**00 15 35.8**	**+0.7**
CHGR	**Chuyangaron**	**9.34**	**13**	P	**Pn**	**00 15 35.8**	**+0.7**
SMLA	**Simla**	**9.38**	**78**	*e*P	Pn	00 15 40.6	+5.1
SMLA				*e*S	**Sn**	**00 17 25.8**	**+4.9**
WSAR	**Wadi Sarin**	**9.43**	**230**		**Pn**	**00 15 37.6**	**+1.4**
WSAR	**Wadi Sarin**	**9.43**	**230**	Pn	**Pn**	**00 15 37.6**	**+1.4**
	0.7nm,0.3s,baz=39,slow=5.2,SNR=16						
WSAR				Sn	**Sn**	**00 17 16.6**	**-5.9**
	1.9nm,0.3s,baz=276,slow=18,SNR=10						
	2.9nm,0.5s						
WBK	**Wadi Bani Khal**	**9.66**	**226**	P	**Pn**	**00 15 42.0**	**+2.6**
	SNR=18						
SHME	**Shamm**	**9.79**	**252**	P	**Pn**	**00 15 44.3**	**+3.2**
SHME				S	**Sn**	**00 17 28.6**	**-2.6**
GAR	**Garm**	**9.94**	**18**	Pn	**Pn**	**00 15 42.8**	**-0.5**
SMDO	**Samad**	**9.95**	**231**	P	**Pn**	**00 15 46.5**	**+3.1**
SMDO				S	**Sn**	**00 17 35.5**	**+0.3**
MASF	**Masafi**	**10.06**	**248**	P	**Pn**	**00 15 49.0**	**+4.0**
MASF				P	Pn	**00 15 49.0**	**+4.0**
MASF				S	**Sn**	**00 17 35.9**	**-2.0**
MASF				S	**Sn**	**00 17 35.9**	**-2.0**
HOQ	**Hoqain**	**10.13**	**236**	P	**Pn**	**00 15 47.0**	**+1.1**
UOSS	**Minazif**	**10.22**	**246**	P	**Pn**	**00 15 49.0**	**+1.9**
JMDO	**Jabal Madar**	**10.38**	**228**	P	**Pn**	**00 15 53.0**	**+3.6**
	SNR=18						
JMDO				S	**Sn**	**00 17 43.4**	**-2.5**
ASHO	**Ashiyiah**	**10.47**	**245**	P	**Pn**	**00 15 54.5**	**+4.0**
ASHO				S	**Sn**	**00 17 45.1**	**-2.7**
BSY	**Bisya**	**10.74**	**233**	P	**Pn**	**00 15 58.2**	**+4.0**
	SNR=11						
ARQ	**Araqi**	**10.85**	**237**	P	Pn	00 16 01.7	+5.9
GEYT	**Alibeck**	**10.86**	**322**		**Pn**	**00 15 56.5**	**+0.7**
GEYT	**Alibeck**	**10.86**	**322**	Pn	**Pn**	**00 15 56.8**	**+1.0**
	0.6nm,0.3s,baz=144,slow=12,SNR=2.4						
GEYT				LR	LR	00 20 03.9	
	comp=Z,92nm,19.6s,baz=152,slow=37						
	0.8nm,0.4s						
GYA0	**ALIBECK ARRAY**	**10.86**	**322**	P	**Pn**	**00 15 57.7**	**+1.9**
GYA0B	**ALIBECK ARRAY**	**10.86**	**322**	Pn	**Pn**	**00 15 57.7**	**+1.9**
BTK	**Batken**	**11.06**	**18**	Pn	**Pn**	**00 15 59.5**	**+0.9**
BTK	**Batken**	**11.06**	**18**	P	**Pn**	**00 15 59.6**	**+0.9**
KSH	**Kashi**	**12.64**	**36**	P	Pn	00 16 15.0	-5.2
KSH				S	Sn	00 18 24.3	-17
KSH				SS	**SnSn**	**00 18 46.5**	**-6.9**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH				LR	LR		
	comp=N,470nm,11.2s						
KSH				LR	LR		
	comp=E,350nm,11.3s						
KSH				LR	LR		
	comp=Z,310nm,10.0s						
KK31	**Karatay Array**	**13.90**	**12**	Pn	**Pn**	**00 16 36.8**	**-0.5**
KK31	**Karatay Array**	**13.90**	**12**	*ce*P	**Pn**	**00 16 41.6**	**+4.3**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	**Karatay Array**	**13.90**	**12**	Pn	**Pn**	**00 16 37.0**	**-0.2**
KKAR	**Karatay Array**	**13.90**	**12**	Pn	**Pn**	**00 16 37.5**	**+0.2**
KKAR	**Karatay Array**	**13.90**	**12**	P	**Pn**	**00 16 37.1**	**-0.2**
AAK	**Ala-Archa**	**14.56**	**24**	Pn	**Pn**	**00 16 44.9**	**-1.7**
AAK	**Ala-Archa**	**14.56**	**24**	*ce*P	**Pn**	**00 16 44.1**	**-2.4**
AAK				pmax	pmax		
	comp=Z,14nm,2.5s						
MDOK	**Medeo**	**16.01**	**29**	P	**P**	**00 17 08.9**	**-0.3**
HYBB	**Hyderabad (bro**	**16.38**	**135**	*e*P	**Pn**	**00 17 11.3**	**+0.9**
HYBB				*e*S	**S**	**00 20 21.9**	**-2.9**
RAYN	**Ar Rayn**	**19.69**	**257**	P	**P**	**00 17 48.2**	**-1.5**
RAYN				IAmb	IAmb	00 17 59.8	
	comp=Z,6.3nm,1.1s						
RAYN	**Ar Rayn**	**19.69**	**257**	P	**P**	**00 17 48.3**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AB31	**Akbulak array**	**20.29**	**348**	*ce*P	**P**	**00 17 55.5**	**-0.5**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ABKAR	**Akbulak array**	**20.29**	**348**	P	**P**	**00 17 55.4**	**-0.7**
GNI	**Garni**	**20.67**	**307**	*i* P	**P**	**00 17 58.5**	**-2.0**
GNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	**Garni**	**20.67**	**307**	P	**P**	**00 18 02.7**	**+2.2**
	comp=Z,4.0nm,0.7s,baz=156,slow=7.3,SNR=3.6						
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**21.16**	**31**	P	**P**	**00 18 03.7**	**-1.9**
MK31	**Makanchi Array**	**21.16**	**31**	*i* P	**P**	**00 18 05.0**	**-0.6**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**

comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,150nm,5.7s
FINES FINESS Array B 41.47 332 *ce*P **P 00 21 06.1 -0.9**
FINES pmax pmax
comp=Z,1.0nm,0.8s
FINES FINESS Array B 41.47 332 P **P 00 21 06.2 -0.9**
comp=Z,1.3nm,0.8s,baz=145,slow=7.0,SNR=3.5
FINES LR LR 00 42 42.1
comp=Z,30nm,19.8s,baz=101,slow=43
comp=Z,1.3nm,0.8s
CUC Castrocucco 42.39 298 P **P 00 21 14.9 -0.1**
CUC IAmb IAmb 00 21 18.4
comp=Z,4.1nm,0.6s
GERES GERESS Array B 44.22 311 P **P 00 21 30.5 +0.9**
GERES GERESS Array B 44.22 311 P **P 00 21 30.5 +0.9**
comp=Z,0.2nm,0.3s,baz=105,slow=9.8,SNR=3.6
comp=Z,0.2nm,0.3s
ARCES ARCESS Array B 46.30 341 P **P 00 21 45.5 -0.3**
ARCES ARCESS Array B 46.30 341 P **P 00 21 45.5 -0.3**
ARCES pmax pmax
comp=Z,8.0nm,1.2s
ARCES ARCESS Array B 46.30 341 P **P 00 21 44.7 -1.1**
comp=Z,1.1nm,0.6s,baz=128,slow=9.3,SNR=9.7
ARCES LR LR 00 42 27.1
comp=Z,41nm,18.2s,baz=172,slow=38
comp=Z,1.1nm,0.6s
HFS Hagfors 46.47 327 LR LR 00 43 56.8
comp=Z,38nm,18.1s,baz=98,slow=40
NOA NORSAR Array B 47.90 327 LR LR 00 45 47.4
comp=Z,23nm,18.2s,baz=95,slow=41
TIXI Tiksi 53.60 20 *ce*P **P 00 22 40.8 -0.3**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
EKA Eskdalemuir Ar 54.82 319 LR LR 00 49 58.0
comp=Z,35nm,18.4s,baz=191,slow=40
ESDC Sonseca Array 57.50 300 P **P 00 23 10.4 +0.6**
comp=Z,0.3nm,0.7s,baz=67,slow=6.9,SNR=1.9
comp=Z,0.3nm,0.7s
BORG Borgarnes 62.76 331 LR LR 00 53 01.1
comp=Z,27nm,18.3s,baz=51,slow=38
JCJ Chichijima 65.54 72 LR LR 00 56 54.3
comp=Z,22nm,18.4s,baz=336,slow=40
BILL Bilibino 66.48 24 *e*P **P 00 24 09.0 -0.7**
BILL pmax pmax
comp=Z,2.0nm,0.9s
PEA0B Petropavlovsk- 67.65 41 *ce*P **P 00 24 13.5 -3.8**
BOSA Boshof 69.98 218 P **P 00 24 31.2 -0.9**
BOSA Boshof 69.98 218 P **P 00 24 33.4 +1.2**
BOSA Boshof 69.98 218 P **P 00 24 33.4 +1.2**
comp=Z,1.3nm,0.7s,baz=76,slow=3.3,SNR=4.7
comp=Z,1.3nm,0.7s
SFJD Kangerlussuaq 72.82 339 LR LR 01 00 37.5
comp=Z,41nm,18.9s,baz=48,slow=39
ILAR Eielson Array 82.44 14 P **P 00 25 43.2 +0.7**
ILAR Eielson Array 82.44 14 P **P 00 25 43.2 +0.7**
comp=Z,0.2nm,0.6s,baz=320,slow=3.5,SNR=2.0
comp=Z,0.2nm,0.6s
ASAR Alice Springs 83.65 122 P **P 00 25 51.5 +2.1**
ASAR Alice Springs 83.65 122 P **P 00 25 51.5 +2.1**
comp=Z,0.3nm,0.3s,baz=319,slow=4.9,SNR=4.8
comp=Z,0.3nm,0.3s
YKA Yellowknife Ar 88.27 0 P **P 00 26 13.0 +1.4**
YKA Yellowknife Ar 88.27 0 P **P 00 26 13.0 +1.4**
comp=Z,0.5nm,0.8s,baz=3.2,slow=5.6,SNR=2.6
comp=Z,0.5nm,0.8s

IDC 31 00:18:53.5±8.5, 31°.63S×179°.74E, h344km±95km, mb3.2/2, mbtmp3.9/3, Error ellipse: s-maj=102.8km s-min=37.8km az=4.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.96**	**197**	P		Pn	00 20 36.6	+1.5
	2.9nm,0.2s,baz=123,slow=23,SNR=17						
URZ				S		S	00 21 56.1	-1.6
	11nm,0.5s,baz=298,slow=21,SNR=6.8						
ASAR	**Alice Springs**	**41.13**	**269**	P		P	00 26 05.3	0.0
	0.4nm,0.3s,baz=101,slow=7.7,SNR=6.5						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**42.23**	**275**	P		P	00 26 14.0	-0.2
	1.2nm,0.4s,baz=112,slow=7.8,SNR=33						
	1.2nm,0.4s						
FINES	**FINESS Array B**	**145.59**	**338**	PKPbc	PKPdf		00 37 50.2	0.0
	2.0nm,0.5s,baz=41,slow=4.5,SNR=26						

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*KRSC **31** 00:37:18.9±0.9, 55°.23N×162°.50E, h72km±20km, ML4.4*
*NEIC **31** 00:37:19.8±2.2, 55°.58N±0°.05×162°.3E±0°.1, h35km±2km, mb4.1/10, Error ellipse: s-maj=13.3km s-min=7.4km az=76.0*
*MOS **31** 00:37:20.2±0.7, 55°.29N×162°.48E, h82km, mb4.0/4, Error ellipse: s-maj=9.0km s-min=5.1km az=70.8*
*IDC **31** 00:37:22.0±2.4, 55°.41N×162°.23E, h78km±22km, mb3.5/18, mbtmp3.8/20, MS2.8/2, Error ellipse: s-maj=17.2km s-min=14.3km az=132.0*

ISC 31 00:37:20.8±0.8, 55°.25N±0°.03×162°.48E±0°.03, h70km±7km, n132, σ1§19/182, mb3.9/24, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.82**	**212**	PN		**Pn**	**00 37 37.0**	**-0.1**
MKZ				S		**Sn**	**00 37 49.2**	**+0.1**
MKZ	**Mys Kozlova**	**0.82**	**212**	P		**Pn**	**00 37 37.0**	**-0.1**
MKZ				S		**Sn**	**00 37 49.2**	**+0.1**
KBTR	**Krutoberegovo**	**0.98**	**11**	PN		**Pn**	**00 37 38.9**	**-0.1**
KBTR				S		**Sn**	**00 37 52.5**	**-0.1**
KBTR	**Krutoberegovo**	**0.98**	**11**	P		**Pn**	**00 37 38.9**	**-0.1**
KBTR				S		**Sn**	**00 37 52.5**	**-0.1**
KBG	**Krutoberegovo**	**1.01**	**7**	PN		**Pn**	**00 37 39.3**	**-0.1**
KBG				S		**Sn**	**00 37 53.4**	**+0.1**
KBG	**Krutoberegovo**	**1.01**	**7**	P		**Pn**	**00 37 39.3**	**-0.1**
KBG				S		**Sn**	**00 37 53.4**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.23**	**305**	S		**Sn**	**00 37 59.1**	**+0.8**
TUMR	**Tumrok**	**1.34**	**272**	PN		**Pn**	**00 37 44.5**	**+0.8**
TUMR				S		**Sn**	**00 38 01.2**	**+0.3**
TUMR	**Tumrok**	**1.34**	**272**	P		**Pn**	**00 37 44.5**	**+0.8**
TUMR				S		**Sn**	**00 38 01.2**	**+0.3**
KMNR	**Kamenistaya**	**1.37**	**293**	PN		**Pn**	**00 37 44.8**	**+0.6**
KMNR	**Kamenistaya**	**1.37**	**293**	P		**Pn**	**00 37 44.8**	**+0.6**
SMKR	**Semkarok**	**1.45**	**337**	PN		**Pn**	**00 37 45.4**	**+0.2**
SMKR				S		**Sn**	**00 38 04.2**	**+0.7**
SMKR	**Semkarok**	**1.45**	**337**	P		**Pn**	**00 37 45.4**	**+0.2**
SMKR				S		**Sn**	**00 38 04.2**	**+0.7**
KRSR	**Krestovskiy**	**1.45**	**313**	PN		**Pn**	**00 37 45.6**	**+0.4**
KRSR				S		**Sn**	**00 38 03.5**	**-0.1**
KRSR	**Krestovskiy**	**1.45**	**313**	P		**Pn**	**00 37 45.6**	**+0.4**
KRSR				S		**Sn**	**00 38 03.5**	**-0.1**
KPT	**Kopyto**	**1.47**	**300**	PN		**Pn**	**00 37 45.8**	**+0.4**
KPT	**Kopyto**	**1.47**	**300**	P		**Pn**	**00 37 45.8**	**+0.4**
KLY	**Klyuchi**	**1.48**	**317**	PN		**Pn**	**00 37 45.0**	**-0.5**
KLY				S		**Sn**	**00 38 03.2**	**-0.9**
KLY	**Klyuchi**	**1.48**	**317**	P		**Pn**	**00 37 45.0**	**-0.5**
KLY				S		**Sn**	**00 38 03.2**	**-0.9**
BDR	**Baidarnaya**	**1.50**	**332**	PN		**Pn**	**00 37 46.3**	**+0.5**
BDR				S		**Sn**	**00 38 05.0**	**+0.3**
BDR	**Baidarnaya**	**1.50**	**332**	P		**Pn**	**00 37 46.3**	**+0.5**
BDR				S		**Sn**	**00 38 05.0**	**+0.3**
KOZ	**Kozyrevsk**	**1.68**	**300**	PN		**Pn**	**00 37 49.1**	**+0.9**
KOZ				S		**Sn**	**00 38 10.5**	**+1.5**
KOZ	**Kozyrevsk**	**1.68**	**300**	P		**Pn**	**00 37 49.1**	**+0.9**
KOZ				S		**Sn**	**00 38 10.5**	**+1.5**
SRDR	**Sredinnyy**	**1.89**	**306**	PN		**Pn**	**00 37 51.3**	**+0.3**
SRDR				S		**Sn**	**00 38 14.0**	**0.0**
SRDR	**Sredinnyy**	**1.89**	**306**	P		**Pn**	**00 37 51.3**	**+0.3**
SRDR				S		**Sn**	**00 38 14.0**	**0.0**
BKI	**Bering**	**2.00**	**90**	PN		**Pn**	**00 37 52.8**	**+0.4**
BKI				S		**Sn**	**00 38 15.8**	**-0.6**
BKI	**Bering**	**2.00**	**90**	P		**Pn**	**00 37 52.8**	**+0.4**
BKI				S		**Sn**	**00 38 15.8**	**-0.6**
KII	**Karymskiy**	**2.14**	**237**	PN		**Pn**	**00 37 55.3**	**+0.9**
KII	**Karymskiy**	**2.14**	**237**	P		**Pn**	**00 37 55.3**	**+0.9**
ESO	**Esso**	**2.25**	**289**	PN		**Pn**	**00 37 57.2**	**+1.4**
ESO				S		**Sn**	**00 38 22.5**	**-0.1**
ESO	**Esso**	**2.25**	**289**	P		**Pn**	**00 37 57.2**	**+1.4**
ESO				S		**Sn**	**00 38 22.5**	**-0.1**
SPN	**Mys Shipunski**	**2.60**	**215**	PN		**Pn**	**00 38 00.0**	**-0.5**
SPN				S		**Sn**	**00 38 28.5**	**-2.4**
SPN	**Mys Shipunski**	**2.60**	**215**	P		**Pn**	**00 38 00.0**	**-0.5**
SPN				S		**Sn**	**00 38 28.5**	**-2.4**
NLC	**Nalytchevo**	**2.78**	**223**	PN		**Pn**	**00 38 03.4**	**+0.4**
NLC				S		**Sn**	**00 38 34.9**	**-0.5**
NLC	**Nalytchevo**	**2.78**	**223**	P		**Pn**	**00 38 03.4**	**+0.4**
NLC				S		**Sn**	**00 38 34.9**	**-0.5**
SDLR	**Sedlovina**	**2.89**	**228**	PN		**Pn**	**00 38 05.6**	**+1.0**
SDLR	**Sedlovina**	**2.89**	**228**	P		**Pn**	**00 38 05.6**	**+1.0**
KRER	**Koryakskii**	**2.93**	**230**	PN		**Pn**	**00 38 06.9**	**+1.7**
KRER				S		**Sn**	**00 38 40.7**	**+1.3**
KRER	**Koryakskii**	**2.93**	**230**	P		**Pn**	**00 38 06.9**	**+1.7**
KRER				S		**Sn**	**00 38 40.7**	**+1.3**
SMAR	**Somma**	**2.94**	**229**	PN		**Pn**	**00 38 06.8**	**+1.5**
SMAR				S		**Sn**	**00 38 38.9**	**-0.6**
SMAR	**Somma**	**2.94**	**229**	P		**Pn**	**00 38 06.8**	**+1.5**
SMAR				S		**Sn**	**00 38 38.9**	**-0.6**
KRX	**Arik**	**2.94**	**231**	PN		**Pn**	**00 38 06.6**	**+1.3**
KRX	**Arik**	**2.94**	**231**	P		**Pn**	**00 38 06.6**	**+1.3**
AVH	**Avacha**	**2.96**	**229**	PN		**Pn**	**00 38 07.3**	**+1.8**
AVH				S		**Sn**	**00 38 41.1**	**+1.1**
AVH	**Avacha**	**2.96**	**229**	P		**Pn**	**00 38 07.3**	**+1.8**
AVH				S		**Sn**	**00 38 41.1**	**+1.1**
UGLR	**Uglovaya**	**2.96**	**228**	PN		**Pn**	**00 38 06.9**	**+1.3**
UGLR				S		**Sn**	**00 38 39.9**	**-0.2**
UGLR	**Uglovaya**	**2.96**	**228**	P		**Pn**	**00 38 06.9**	**+1.3**
UGLR				S		**Sn**	**00 38 39.9**	**-0.2**
KOK	**Koryaka**	**2.99**	**231**	PN		**Pn**	**00 38 06.8**	**+0.9**
KOK				S		**Sn**	**00 38 41.3**	**+0.7**
KOK	**Koryaka**	**2.99**	**231**	P		**Pn**	**00 38 06.8**	**+0.9**
KOK				S		**Sn**	**00 38 41.3**	**+0.7**
GNL	**Ganaly**	**3.07**	**241**	PN		**Pn**	**00 38 08.6**	**+1.5**
GNL	**Ganaly**	**3.07**	**241**	P		**Pn**	**00 38 08.6**	**+1.5**
DALK	**Dalny**	**3.12**	**226**	PN		**Pn**	**00 38 08.5**	**+0.9**
DALK				S		**Sn**	**00 38 43.2**	**-0.5**
DALK	**Dalny**	**3.12**	**226**	P		**Pn**	**00 38 08.5**	**+0.9**
DALK				S		**Sn**	**00 38 43.2**	**-0.5**
PET	**Petropavlovsk**	**3.17**	**227**			**Sn**	**00 38 09.2**	**+1.0**
PET	**Petropavlovsk**	**3.17**	**227**	*e*PN		**Pn**	**00 38 09.5**	**+1.3**
PET				*e*S		**Sn**	**00 38 45.3**	**+0.4**
PET				pmax	pmax			
	comp=Z,205nm,0.5s							
PET				smax	smax			
	comp=N,330nm,0.4s							
PET				smax	smax			
	comp=E,611nm,0.5s							
PET	**Petropavlovsk**	**3.17**	**227**	P		**Pn**	**00 38 09.7**	**+1.5**
PET				S		**Sn**	**00 38 45.1**	**+0.2**
KRMR	**Karymshinskiy**	**3.53**	**228**	PN		**Pn**	**00 38 14.9**	**+1.7**
KRMR				S		**Sn**	**00 38 54.8**	**+1.1**
KRMR	**Karymshinskiy**	**3.53**	**228**	P		**Pn**	**00 38 14.9**	**+1.7**
KRMR				S		**Sn**	**00 38 54.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**3.54**	**235**	Pn		**Sn**	**00 38 14.8**	**+1.5**
PEA0B	**Petropavlovsk-**	**3.54**	**235**	PN		**Pn**	**00 38 14.8**	**+1.5**
PETK	**Petropavlovsk-**	**3.54**	**235**	Pn		**Pn**	**00 38 13.5**	**+0.3**
PETK	**Petropavlovsk-**	**3.54**	**235**	PN		**Pn**	**00 38 14.2**	**+0.9**
PETK				S		**Sn**	**00 38 55.5**	**+1.6**
PETK	**Petropavlovsk-**	**3.54**	**235**	P		**Pn**	**00 38 14.2**	**+0.9**
	comp=E,9.2nm,0.3s,baz=72,slow=14,SNR=38							
PETK				S		**Sn**	**00 38 55.5**	**+1.6**
	comp=E,40nm,0.7s,baz=67,slow=41,SNR=7.1							
RUS	**Russkaya**	**3.67**	**221**	PN		**Pn**	**00 38 16.2**	**+1.1**
RUS				S		**Sn**	**00 38 55.2**	**-2.0**
RUS	**Russkaya**	**3.67**	**221**	P		**Pn**	**00 38 16.2**	**+1.1**
RUS				S		**Sn**	**00 38 55.2**	**-2.0**
GRL	**Gorelyy**	**3.76**	**226**	PN		**Pn**	**00 38 17.8**	**+1.4**
GRL				S		**Sn**	**00 39 01.2**	**+1.8**
GRL	**Gorelyy**	**3.76**	**226**	P		**Pn**	**00 38 17.8**	**+1.4**
GRL				S		**Sn**	**00 39 01.2**	**+1.8**
MTVR	**Mutnovka**	**3.76**	**224**	PN		**Pn**	**00 38 17.7**	**+1.2**
MTVR				S		**Sn**	**00 39 00.0**	**+0.4**
MTVR	**Mutnovka**	**3.76**	**224**	P		**Pn**	**00 38 17.7**	**+1.2**
MTVR				S		**Sn**	**00 39 00.0**	**+0.4**
KDTR	**Khodutka, Kamc**	**4.33**	**219**	PN		**Pn**	**00 38 24.8**	**+0.7**
KDTR				S		**Sn**	**00 39 10.3**	**-3.0**
KDTR	**Khodutka, Kamc**	**4.33**	**219**	P		**Pn**	**00 38 24.8**	**+0.7**
KDTR				S		**Sn**	**00 39 10.3**	**-3.0**
SKR	**Severo-Kuril's**	**5.97**	**223**	*de*PN		**Pn**	**00 38 47.8**	**+1.3**
SMY	**Shemya**	**7.30**	**105**	Pn		**Pn**	**00 39 05.6**	**+1.0**
SMY	**Shemya**	**7.30**	**105**	PN		**Pn**	**00 39 05.6**	**+1.0**
MA2	**Magadan**	**7.66**	**309**	LR		LR	00 42 31.5	
	comp=E,20nm,20.5s,baz=172,slow=42							
YAK	**Yakutsk**	**18.21**	**305**	*i* P		**P**	**00 41 24.9**	**-2.8**
YAK				pmax	pmax			
	comp=Z,12nm,0.6s							
KLR	**Kul'dur**	**19.65**	**265**	P		**P**	**00 41 44.3**	**+0.7**
KLR	**Kul'dur**	**19.65**	**265**	*i* P		**P**	**00 41 41.0**	**-2.6**
KLR				pmax	pmax			
	comp=Z,3.0nm,1.5s							
KLR	**Kul'dur**	**19.65**	**265**	P		**P**	**00 41 44.3**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=56,slow=7.3,SNR=1.9							
CNBA	**Chernabura Isl**	**21.57**	**75**	P		**P**	**00 42 05.3**	**+1.1**
CNBA				IAmb	IAmb		00 42 25.4	
	comp=Z,9.1nm,1.2s							
TIXI	**Tiksi**	**21.77**	**332**	P		**P**	**00 42 04.1**	**-2.1**
TIXI				IAmb	IAmb		00 42 08.1	
	comp=Z,4.9nm,0.6s							
TIXI	**Tiksi**	**21.77**	**332**	P		**P**	**00 42 04.8**	**-1.4**
TIXI	**Tiksi**	**21.77**	**332**	P		**P**	**00 42 04.8**	**-1.4**
	comp=Z,4.2nm,0.6s,baz=85,slow=23,SNR=7.5							
	comp=Z,4.2nm,0.6s							
M19K	**Big River Lodg**	**23.07**	**56**	P		**P**	**00 42 19.7**	**-0.3**
J20K	**Nowinta River**	**23.17**	**50**	P		**P**	**00 42 22.3**	**+1.3**
K20K	**Telida**	**23.19**	**52**	P		**P**	**00 42 22.1**	**+0.9**
K20K				IAmb	IAmb		00 43 03.1	
	comp=Z,6.7nm,1.4s							
IMAR	**Indian Mountai**	**23.47**	**45**	P		**P**	**00 42 24.6**	**+0.9**
MJAR	**Matsushiro Arr**	**24.99**	**232**	P		**P**	**00 42 37.6**	**-0.2**
MJAR	**Matsushiro Arr**	**24.99**	**232**	P		**P**	**00 42 37.6**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=33,slow=8.6,SNR=5.4							
	comp=Z,3.8nm,0.7s							
H23K	**Yukon River**	**25.18**	**46**	P		**P**	**00 42 41.1**	**+1.8**
H23K				IAmb	IAmb		00 43 02.7	
	comp=Z,7.8nm,1.4s							
TOLK	**Toolik Lake Re**	**25.40**	**39**	P		**P**	**00 42 42.9**	**+1.7**
TOLK				IAmb	IAmb		00 43 26.3	
	comp=Z,6.0nm,1.1s							
ILAR	**Eielson Array**	**26.31**	**48**	*e*P		**P**	**00 42 50.2**	**+0.8**
ILAR	**Eielson Array**	**26.31**	**48**	P		**P**	**00 42 48.5**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=268,slow=9.6,SNR=5.2							
	comp=Z,0.3nm,0.6s							
BMAR	**Burnt Mountain**	**27.19**	**42**	P		**P**	**00 42 58.8**	**+1.5**
M27K	**Edge Creek, AK**	**28.84**	**53**	P		**P**	**00 43 14.6**	**+2.4**
M27K				IAmb	IAmb		00 43 44.5	
	comp=Z,6.4nm,1.5s							
SONM	**Songino Array**	**34.81**	**282**	P		**P**	**00 44 05.2**	**+0.6**
SONM	**Songino Array**	**34.81**	**282**	P		**P**	**00 44 05.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=60,slow=8.5,SNR=2.1							
	comp=Z,0.3nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**35.62**	**173**	T		T	01 21 37.5	
	baz=355,slow=76,SNR=19							
H11N3	**WAKE ISLAND Hy**	**35.63**	**173**	T		T	01 21 42.1	
	baz=355,slow=76,SNR=20							
H11N1	**WAKE ISLAND Hy**	**35.64**	**173**	T		T	01 21 38.2	
	baz=355,slow=76,SNR=20							
YKA	**Yellowknife Ar**	**40.63**	**45**	*e*P		**P**	**00 44 54.9**	**+1.6**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**40.63**	**45**	P		**P**	**00 44 53.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=299,slow=8.7,SNR=5.3							
	comp=Z,0.6nm,0.6s							
KURK	**Kurchatov**	**47.79**	**301**	P		**P**	**00 45 48.6**	**-2.1**
KURK	**Kurchatov**	**47.79**	**301**	P		**P**	**00 45 48.8**	**-1.8**
KURBB	**Kurchatov Arra**	**47.90**	**301**	P		**P**	**00 45 48.8**	**-2.6**
	comp=Z,1.2nm,0.6s,baz=56,slow=7.8,SNR=8.6							
	comp=Z,1.2nm,0.6s							
MKAR	**Makanchi Array**	**48.49**	**295**	P		**P**	**00 45 53.9**	**-2.2**
	comp=Z,1.2nm,1.0s,baz=54,slow=9.1,SNR=5.7							
	comp=Z,1.2nm,1.0s							
BVAR	**Borovoye Array**	**50.15**	**308**	P		**P**	**00 46 07.0**	**-1.7**
BVAR	**Borovoye Array**	**50.15**	**308**	P		**P**	**00 46 07.0**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=58,slow=8.9,SNR=4.3							
	comp=Z,0.2nm,0.3s							
BRVK	**Borovoye**	**50.18**	**308**	P		**P**	**00 46 09.2**	**+0.4**
BRVK	**Borovoye**	**50.18**	**308**	P		**P**	**00 46 09.2**	**+0.4**
BRVK				pmax	pmax			
	comp=Z,4.0nm,1.4s							
ARCES	**ARCESS Array B**	**51.66**	**342**	P		**P**	**00 46 18.3**	**-1.5**
ARCES	**ARCESS Array B**	**51.66**	**342**	P		**P**	**00 46 18.2**	**-1.5**
	comp=Z,4.5nm,1.1s,baz=26,slow=12,SNR=2.2							
ARCES				LR		LR	01 11 12.5	
	comp=Z,29nm,18.2s,baz=326,slow=40							
	comp=Z,4.5nm,1.1s							
ARU	**Arti**	**52.76**	**317**	P		**P**	**00 46 26.0**	**-2.0**
ARU	**Arti**	**52.76**	**317**	P		**P**	**00 46 26.0**	**-2.0**
	comp=Z,1.1nm,0.4s,baz=302,slow=23,SNR=4.5							
	comp=Z,1.1nm,0.4s							
NVAR	**Mina Array Bea**	**53.73**	**73**	P		**P**	**00 46 36.7**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=324,slow=5.9,SNR=1.7							
	comp=Z,0.1nm,0.4s							
SCO	**Scoresbysund**	**54.53**	**2**	*i* P		**P**	**00 46 43.0**	**+2.3**
FINES	**FINESS Array B**	**58.68**	**337**	P		**P**	**00 47 09.8**	**-0.5**
FINES	**FINESS Array B**	**58.68**	**337**	*e*P		**P**	**00 47 09.6**	**-0.7**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.5s							
FINES	**FINESS Array B**	**58.68**	**337**	P		**P**	**00 47 09.7**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=37,slow=8.2,SNR=32							
	comp=Z,2.0nm,0.5s							
BELG	**Belogornoye**	**59.97**	**320**	P		**P**	**00 47 18.9**	**-0.4**
BELG	**Belogornoye**	**59.97**	**320**	P		**P**	**00 47 18.9**	**-0.4**
	comp=Z,2.1nm,0.4s,baz=7.1,slow=8.1,SNR=1.6							
	comp=Z,2.1nm,0.4s							
AKASG	**Malin Array Be**	**67.47**	**330**	P		**P**	**00 48 07.5**	**-1.1**
AKASG	**Malin Array Be**	**67.47**	**330**	P		**P**	**00 48 07.5**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=29,slow=6.9,SNR=2.6							
	comp=Z,0.5nm,0.3s							
TXAR	**Lajitas Array**	**68.53**	**69**	P		**P**	**00 48 17.4**	**+1.6**
TXAR	**Lajitas Array**	**68.53**	**69**	P		**P**	**00 48 17.4**	**+1.6**
	comp=Z,0.3nm,1.0s,baz=77,slow=4.1,SNR=1.8							
	comp=Z,0.3nm,1.0s							
BRTR	**Keskin Array B**	**75.82**	**322**	P		**P**	**00 48 58.8**	**-0.4**
BRTR	**Keskin Array B**	**75.82**	**322**	P		**P**	**00 48 58.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=2.3							
	comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**78.64**	**207**	P		**P**	**00 49 15.5**	**+0.7**
WRA	**Warramunga Arr**	**78.64**	**207**	P		**P**	**00 49 15.5**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=9.4,slow=5.9,SNR=2.1							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**82.31**	**206**	P		**P**	**00 49 35.1**	**+0.7**
ASAR	**Alice Springs**	**82.31**	**206**	P		**P**	**00 49 35.1**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=9.4,slow=5.1,SNR=5.7							
	comp=Z,1.0nm,0.8s							
QSPA	**South Pole Qui**	**145.00**	**180**	PKPbc	**PKPbc**		**00 56 47.8**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=310,slow=1.2,SNR=12							

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*IDC **31** 00:38:33.7±0.7, 60°.47S×32°.33W, h0km, mb4.2/9, mbtmp4.2/10, ML4.0/1, MS3.8/22, Error ellipse: s-maj=24.7km s-min=18.3km az=73.0*
*NEIC **31** 00:38:35.4±2.6, 60°.74S±0°.06×32°.6W±0°.3, h10km±2km, mb4.5/9, Error ellipse: s-maj=20.9km s-min=10.0km az=88.0*
*GCMT **31** 00:38:39.4±0.4, 60°.68S±0°.02×32°.39W±0°.05, h18km±2km, MW4.8/75, Moment Tensor Solution. s12,c12; s75,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.54±.13; $M_{\theta\theta}$0.08±.10; $M_{\phi\phi}$0.45±.11; $M_{r\theta}$0.74±.27; $M_{\theta\phi}$1.99±.10; $M_{\phi r}$0.95±.27; Best double couple: M_o2.22800×10^{16} NP1:ϕ_s356.00000°, δ80.00000°, λ161.00000°. NP2: ϕ_s90.00000°, δ71.00000°, λ10.00000°. Principal axes: T 2.7140, Plg20.0000°, Azm312.0000°; N -0.9720, Plg69.0000°, Azm151.0000°; P -1.7410, Plg6.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 00:38:34.7±0.5, 60°.77S±0°.07×31°.82W±0°.10, h10km, n54, σ2§90/38, mb4.2/10, MS3.9/20, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORCD	**Orcadas**	**6.33**	**265**	Pn		Pn	00 40 00.9	-7.0
HOPE	**Hope Point**	**6.97**	**337**	Pn		**Pn**	**00 40 14.9**	**-1.7**
VNA3	**Neumayer Olymp**	**13.72**	**149**	P		**Pn**	**00 41 49.5**	**+0.5**
VNA3				S		**Sn**	**00 44 15.5**	**-5.7**
VNA1	**Neumayer--Stat**	**13.74**	**146**	P		**Pn**	**00 41 50.0**	**+0.8**
VNA1				S		**Sn**	**00 44 16.2**	**-5.4**
VNA2	**Neumayer--Watz**	**14.13**	**146**	P		**Pn**	**00 41 55.6**	**+1.0**
	baz=307,slow=16							
VNA2				S		**Sn**	**00 44 24.8**	**-6.4**
PMSA	**Palmer Station**	**15.18**	**241**			**Pn**	**00 42 09.7**	**+0.9**
PMSA	**Palmer Station**	**15.18**	**241**	LR		LR	00 47 00.2	
	comp=Z,459nm,18.7s,baz=77,slow=34							
SNAA	**Sanae**	**15.78**	**146**	P		**Pn**	**00 42 17.9**	**+1.2**
SNAA				S		**Sn**	**00 45 03.0**	**-8.2**
SNAA	**Sanae**	**15.78**	**146**			**Pn**	**00 42 19.8**	**+3.1**
SNAA	**Sanae**	**15.78**	**146**	Pn		**P**	**00 42 19.9**	**-0.7**
	0.5nm,0.3s,baz=318,slow=17,SNR=50							
SNAA				Sn		**Sn**	**00 45 08.9**	**-2.4**

comp=Z,60nm,20.4s,baz=142,slow=37
BBTS Babate 76.16 15 LR LR 01 18 52.1
comp=Z,31nm,19.6s,baz=167,slow=32
TOA0 Torodi Ar. Sit 78.36 33 P **P** **00 50 35.4 +0.4**
TOA0 IAmb IAmb 00 50 36.7
comp=Z,6.8nm,1.0s
TORD Torodi Ar. Bea 78.36 33 P **P** **00 50 35.0 0.0**
comp=Z,3.4nm,0.8s,baz=198,slow=6.1,SNR=14
comp=Z,3.4nm,0.8s
KMBO Kilima Mbogo 78.91 72 LR LR 01 21 27.4
comp=Z,54nm,20.6s,baz=196,slow=33
SJG San Juan 83.32 327 LR LR 01 26 58.1
comp=Z,60nm,21.8s,baz=148,slow=35
STKA Stephens Creek 87.54 174 LR LR 01 28 15.6
comp=Z,177nm,19.4s,baz=204,slow=34
ARCES ARCESS Array B 136.25 25 PKP **PKPdf** **00 57 54.7 +0.2**
comp=Z,1.6nm,0.8s,baz=328,slow=16,SNR=1.3
YKA Yellowknife Ar 137.99 317 PKP **PKPdf** **00 57 59.5 +1.6**
comp=Z,0.9nm,0.8s,baz=124,slow=3.7,SNR=3.8
MKAR Makanchi Array 140.43 80 PKhKP PKPpre 00 57 57.3
comp=Z,0.1nm,0.4s,baz=17,slow=41,SNR=2.7
ZALV Zalesovo Beam 146.39 73 PKPbc **PKPdf** **00 58 14.2 +1.2**
comp=Z,3.0nm,0.8s,baz=250,slow=3.4,SNR=11
INK Inuvik 147.76 317 PKPbc **PKPbc** **00 58 17.8 0.0**
comp=Z,2.5nm,0.7s,baz=114,slow=5.6,SNR=4.5
ILAR Eielson Array 151.20 306 PKPbc **PKPbc** **00 58 24.4 -2.0**
comp=Z,2.6nm,0.8s,baz=151,slow=1.7,SNR=15
SONM Songino Array 152.93 99 PKPbc **PKiKP** **00 58 32.9 +1.6**
comp=Z,0.7nm,0.9s,baz=238,slow=4.4,SNR=2.8

*IDC **31** 00:43:34.3±1.4,38.61N×74.96E,h0km,mb3.8/7, mbtmp3.7/11,ML3.2/4,MS3.9/2,Error ellipse: s-maj=28.3km s-min=26.1km az=179.0*
*SOME **31** 00:43:36.9,38.98N×75.00E,h5km*
*NNC **31** 00:43:39.2±1.3,39.05N×75.07E,h0km,mb4.4,mpv4.0, Error ellipse: s-maj=10.0km s-min=7.0km az=155.0*
ISC 31 00:43:35.0±0.7,38.62N±0.05×74.84E±0.05,h10km,n53, σ1§74/65,mb3.6/6,6C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**4.33**	**7**	⇓Pn		**Pn**	**00 44 42.3**	**+1.2**
	15nm,0.5s							
TKM2				⇑Sn		**Sn**	**00 45 30.4**	**-1.4**
	44nm,0.7s							
TKM2				⇑Lg		Lg	00 45 41.9	
	27nm,0.6s							
CHMS	**Chumysh**	**4.37**	**359**	⇓Pn		**Pn**	**00 44 42.4**	**+0.9**
	20nm,0.9s							
CHMS				⇓Lg		Lg	00 45 46.1	
	26nm,1.1s							
KST	**Kastek**	**4.50**	**11**	*e*P		**Pb**	**00 44 53.0**	**-1.1**
	9.0nm,0.6s							
KST				*e*S		**Sb**	**00 45 48.4**	**0.0**
	49nm,0.9s							
KST	**Kastek**	**4.50**	**11**	Pg		**Pb**	**00 44 52.5**	**-1.6**
KST				Lg		Lg	00 45 48.1	
IZV	**Izvestkoviy**	**4.61**	**16**	Pg		**Pb**	**00 44 54.9**	**-1.2**
	15nm,0.4s							
IZV				Lg		Lg	00 45 51.6	
	34nm,0.5s							
MTBS	**Maitube**	**4.66**	**14**	*e*P		**Pb**	**00 44 56.0**	**-0.9**
	17nm,0.3s							
MTBS				*e*S		**Sb**	**00 45 53.5**	**+0.4**
	15nm,0.6s							
MTBS	**Maitube**	**4.66**	**14**	Pg		**Pb**	**00 44 56.0**	**-0.9**
	22nm,0.6s							
MTBS				Lg		Lg	00 45 53.2	
	16nm,0.5s							
DGS	**Degeres**	**4.67**	**8**	*e*P		**Pb**	**00 44 58.2**	**+1.2**
	22nm,0.7s							
DGS				*e*S		**Sb**	**00 45 57.3**	**+4.0**
	32nm,0.8s							
DGS	**Degeres**	**4.67**	**8**	Pg		**Pb**	**00 44 56.0**	**-1.0**
	23nm,0.5s							
DGS				Lg		Lg	00 45 54.0	
	21nm,0.8s							
SGDS	**Sogindy**	**4.83**	**358**	*e*P		**Pb**	**00 45 00.7**	**+1.0**
	8.7nm,0.5s							
SGDS				*e*S		**Sb**	**00 46 01.4**	**+3.5**
	14nm,0.8s							
SGDS	**Sogindy**	**4.83**	**358**	Pg		**Pb**	**00 44 59.5**	**-0.2**
	9.2nm,0.5s							
SGDS				Lg		Lg	00 45 59.2	
	13nm,1.0s							
MDOK	**Medeo**	**4.83**	**20**	*e*P		**Pb**	**00 45 00.2**	**+0.3**
	13nm,0.8s							
MDOK				*e*S		**Sb**	**00 45 59.8**	**+1.7**
	28nm,0.4s							
MDOK	**Medeo**	**4.83**	**20**	⇑Pg		**Pb**	**00 44 57.5**	**-2.3**
	11nm,0.5s							
MDOK				Pg		Pg	00 44 58.1	-10
	11nm,0.3s							
MDOK				Lg		Lg	00 45 57.8	
	28nm,0.6s							
MDOK				⇑Lg		Lg	00 45 59.3	
	44nm,1.0s							
KOTS	**Kotyrbulak**	**4.92**	**20**	*e*P		**Pb**	**00 45 00.9**	**-0.3**
	17nm,1.0s							
KOTS				*e*S		**Sb**	**00 46 02.1**	**+1.6**
	38nm,1.2s							
KOTS	**Kotyrbulak**	**4.92**	**20**	Pg		**Pb**	**00 45 01.0**	**-0.3**
	18nm,0.6s							
KOTS				Lg		Lg	00 46 02.1	
	44nm,0.8s							
IUG	**Iuzhnay**	**5.09**	**315**	*e*P		**Pg**	**00 45 09.3**	**-3.1**
	306nm,6.6s							
IUG				*e*S		**Sg**	**00 46 15.4**	**-2.9**
	48nm,1.3s							
KRBS	**Karabastau**	**5.11**	**7**	*e*P		**Pb**	**00 45 05.9**	**+1.4**
	11nm,0.7s							
KRBS				*e*S		**Sb**	**00 46 10.1**	**+4.2**
	21nm,0.8s							
KRBS	**Karabastau**	**5.11**	**7**	Pg		**Pb**	**00 45 03.8**	**-0.6**
	8.4nm,0.5s							
KRBS				Lg		Lg	00 46 06.9	
	14nm,0.7s							
CHCP	**Chirah Chowk**	**5.11**	**195**	P		**Pb**	**00 45 03.6**	**-1.0**
SATY	**Saty**	**5.19**	**30**	Pg		**Pb**	**00 45 04.6**	**-1.3**
	19nm,0.5s							
SATY				Lg		Lg	00 46 08.0	
	24nm,0.5s							
KTBS	**Karatobe**	**5.27**	**15**	*e*P		**Pb**	**00 45 06.9**	**-0.3**
	9.8nm,0.5s							
KTBS				*e*S		**Sb**	**00 46 12.2**	**+1.6**
	48nm,0.4s							
KTBS	**Karatobe**	**5.27**	**15**	Pg		**Pb**	**00 45 06.3**	**-0.9**
	15nm,0.5s							
KTBS				Lg		Lg	00 46 11.1	
	48nm,0.6s							
ZHN	**Zhinishke**	**5.29**	**30**	Pg		**Pb**	**00 45 06.2**	**-1.5**
	14nm,0.3s							
ZHN				Lg		Lg	00 46 10.7	
	15nm,0.3s							
CEP	**Cherat**	**5.34**	**207**	P		**Pb**	**00 45 05.0**	**-3.5**
KUU	**Kurty**	**5.39**	**12**	*e*P		**Pb**	**00 45 09.0**	**-0.2**
	14nm,0.3s							
KUU				*e*S		**Sb**	**00 46 15.4**	**+1.5**
	25nm,0.6s							
KUU	**Kurty**	**5.39**	**12**	Pg		**Pb**	**00 45 08.8**	**-0.4**
	14nm,0.4s							
KUU				Lg		Lg	00 46 15.0	
	24nm,0.8s							
CHKK	**Chushkaly**	**5.47**	**16**	*e*P		**Pb**	**00 45 10.2**	**-0.4**
	10nm,0.6s							
CHKK				*e*S		**Sb**	**00 46 17.8**	**+1.5**
	19nm,0.7s							
CHKK	**Chushkaly**	**5.47**	**16**	Pg		**Pb**	**00 45 09.5**	**-1.1**
	13nm,0.6s							
CHKK				Lg		Lg	00 46 17.2	
	19nm,0.7s							
KURS	**Kuram**	**5.47**	**26**	*e*P		**Pb**	**00 45 10.3**	**-0.4**
	13nm,0.6s							
KURS				*e*S		**Sb**	**00 46 17.8**	**+1.4**
KURS	**Kuram**	**5.47**	**26**	Pg		**Pb**	**00 45 08.7**	**-1.9**
	15nm,0.6s							
KURS				Lg		Lg	00 46 15.1	
	12nm,0.6s							
KK31	**Karatay Array**	**5.55**	**325**	Pn		**Pn**	**00 44 59.1**	**+1.5**
	2.1nm,0.6s,baz=124,slow=12,SNR=28							
KK31				⇑Pg		**Pg**	**00 45 17.4**	**-3.9**
	2.1nm,0.5s,baz=148,slow=16,SNR=3.9							
KK31				⇓Sn		**Sn**	**00 46 01.4**	**-0.2**
	2.1nm,0.3s,baz=138,slow=25,SNR=4.8							
KK31				⇑Lg		Lg	00 46 25.6	
	4.9nm,0.5s							
KPKS	**Kokpek**	**5.64**	**30**	Pg		**Pb**	**00 45 13.7**	**+0.1**
	14nm,0.4s							
KPKS				Lg		Lg	00 46 23.9	
	31nm,0.8s							
SHLS	**Shalkode**	**5.72**	**36**	*e*P		**Pg**	**00 45 20.9**	**-3.7**
	8.2nm,0.4s							
SHLS				*e*S		**Sg**	**00 46 35.2**	**-3.6**
	13nm,0.5s							
PDGK	**Podgornoye**	**5.87**	**35**	Pg		**Pb**	**00 45 18.4**	**+0.9**
	12nm,0.7s							
PDGK				Lg		Lg	00 46 31.8	
	34nm,1.0s							
ARXS	**Arharly**	**6.02**	**21**	Pg		**Pb**	**00 45 19.9**	**-0.1**
	22nm,0.6s							
ARXS				Lg		Lg	00 46 35.0	
	19nm,0.9s							
BLB	**Baldybastay**	**6.12**	**25**	Pg		**Pb**	**00 45 21.5**	**-0.1**
	40nm,0.5s							
BLB				Lg		Lg	00 46 38.1	
	16nm,0.4s							
THW	**Thamme Wali**	**6.34**	**204**	P		Pn	00 45 14.4	+5.9
DJR	**Jarkent**	**6.81**	**31**	Pg		**Pb**	**00 45 35.7**	**+2.3**
	4.0nm,0.5s							
DJR				Lg		Lg	00 47 02.1	
	7.6nm,0.5s							
TDK	**Taldyqorghan**	**6.91**	**22**	Pg		**Pb**	**00 45 36.6**	**+1.6**
	21nm,0.2s							
TDK				Lg		Lg	00 47 02.9	
	37nm,0.9s							
MKAR	**Makanchi Array**	**9.83**	**31**	Pn		**Pn**	**00 45 57.2**	**+0.9**
	0.2nm,0.3s,baz=211,slow=13,SNR=5.2							
MKAR				Lg		Lg	00 48 40.3	
	0.1nm,0.3s,baz=206,slow=26,SNR=2.9							
MKAR				LR		LR	00 50 10.7	
	comp=Z,38nm,18.4s,baz=228,slow=40							
	0.7nm,0.5s							
KURBB	**Kurchatov Arra**	**12.28**	**11**	Lg		Lg	00 49 55.8	
	baz=206,slow=29,SNR=4.0							
GEYT	**Alibeck**	**13.16**	**272**	Pn		**Pn**	**00 46 43.6**	**+1.6**
	0.4nm,0.3s,baz=104,slow=12,SNR=4.0							
	1.4nm,0.4s							
BVAR	**Borovoye Array**	**14.73**	**349**	Pn		**Pn**	**00 47 04.5**	**+1.2**
	0.1nm,0.3s,baz=161,slow=6.1,SNR=3.0							
ZALV	**Zalesovo Beam**	**16.78**	**21**	Pn		**Pn**	**00 47 29.4**	**-0.5**
	0.1nm,0.3s,baz=219,slow=13,SNR=2.0							
	0.3nm,0.3s							
AKTO	**Aktyubinsk**	**16.79**	**320**	Pn		**P**	**00 47 31.5**	**-0.7**
	0.2nm,0.3s,baz=116,slow=12,SNR=4.0							
	1.6nm,0.8s							
ARU	**Arti**	**20.84**	**334**	P		Pn	00 48 18.7	-0.3
	5.2nm,0.9s,baz=146,slow=9.3,SNR=7.0							
	5.2nm,0.9s							
FINES	**FINESS Array B**	**37.51**	**324**	P		**P**	**00 50 48.9**	**+0.3**
	1.0nm,0.7s,baz=124,slow=12,SNR=4.9							
	1.0nm,0.7s							
ARCES	**ARCESS Array B**	**40.41**	**336**	P		**P**	**00 51 14.1**	**+1.2**
	2.7nm,1.0s,baz=97,slow=7.7,SNR=5.3							
	2.7nm,1.0s							
TORD	**Torodi Ar. Bea**	**68.80**	**270**	P		**P**	**00 54 40.8**	**+1.2**
	0.8nm,0.4s,baz=52,slow=5.8,SNR=5.0							
	0.8nm,0.4s							
ILAR	**Eielson Array**	**71.88**	**17**	P		**P**	**00 54 59.0**	**+1.3**
	0.3nm,0.8s,baz=335,slow=4.0,SNR=2.7							
	0.3nm,0.8s							
YKA	**Yellowknife Ar**	**78.94**	**4**	P		**P**	**00 55 38.8**	**+0.5**
	0.4nm,0.6s,baz=347,slow=5.9,SNR=2.3							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**80.60**	**125**	P		**P**	**00 55 49.2**	**+1.3**
	0.3nm,0.8s,baz=338,slow=5.7,SNR=2.5							
WRA				LR		LR	01 39 23.5	
	comp=Z,58nm,18.5s,baz=146,slow=42							
	0.3nm,0.8s							
SADO	**Sadowa**	**93.74**	**342**	LR		LR	01 42 17.3	
	comp=Z,60nm,18.7s,baz=190,slow=38							

*IDC **31** 00:44:36.3±1.9,6.53S×129.31E,h0km,mb3.7/2, mbtmp3.6/4,ML3.7/2,Error ellipse: s-maj=146.9km s-min=29.4km az=68.0*
ISC 31 00:44:52.4±1.0,7.08S±0.09×129.3E±0.1,h150km,n12, σ1§61/13,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**5.09**	**36**	P		**Pn**	**00 46 06.6**	**-0.4**
	22nm,0.6s							
SOEI	**Soe**	**5.62**	**241**	P		**Pn**	**00 46 15.6**	**+1.4**
	49nm,0.8s							
MTN	**Manton Dam**	**6.02**	**162**	P		**Pn**	**00 46 20.7**	**+1.3**
KDU	**Kakadu**	**6.41**	**151**	P		**Pn**	**00 46 25.7**	**+1.1**
	11nm,0.9s							
KNRA	**Kununurra**	**8.56**	**183**	P		**Pn**	**00 46 52.8**	**-0.5**
	11nm,1.0s							
FITZ	**Fitzroy Crossi**	**11.51**	**198**	P		**Pn**	**00 47 31.9**	**-0.5**
	5.0nm,1.8s							
WRAB	**Tennant Creek**	**13.70**	**159**	P		**Pn**	**00 48 02.0**	**+1.4**
WRA	**Warramunga Arr**	**13.70**	**159**	Pn		**Pn**	**00 47 58.6**	**-2.1**
	0.4nm,0.3s,baz=343,slow=13,SNR=23							
WRA				Sn		Sn	00 50 22.9	-10
	1.3nm,0.3s,baz=332,slow=22,SNR=12							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**17.09**	**165**	P		**Pn**	**00 48 43.4**	**+0.9**
	0.2nm,0.3s,baz=345,slow=12,SNR=8.0							
ASAR				S		**S**	**00 51 49.2**	**-3.1**
	1.0nm,0.5s,baz=318,slow=15,SNR=7.9							
	0.5nm,0.4s							
OOD	**Oodnadatta**	**21.49**	**164**	P		**P**	**00 49 30.7**	**+1.4**
MKAR	**Makanchi Array**	**67.89**	**327**	P		**P**	**00 55 33.6**	**-1.1**
	0.2nm,0.3s,baz=124,slow=8.7,SNR=6.2							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**72.20**	**329**	P		**P**	**00 56 00.7**	**-0.1**
	0.4nm,0.3s,baz=133,slow=4.9,SNR=7.3							
	0.4nm,0.3s							

*SFS **31** 00:50:02.0,36.39N×3.19W,ML2.5,ALBORAN NORTE*
*CNRM **31** 00:50:04.3,36.30N×3.06W,h9km,ml1.8*
*INMG **31** 00:50:04.8±1.4,36.51N×3.24W,h0km±31km,ML2.2,Error ellipse: s-maj=27.2km s-min=9.9km az=135.0*
*MDD **31** 00:50:05.2±0.8,36.50N×3.20W,h11km,mb_Lg2.4/15, Error ellipse: s-maj=6.4km s-min=3.3km az=156.0*
ISC 31 00:50:01.4±1.2,36.44N±0.02×3.21W±0.03,h0km±10km, n28,σ1§23/54,1C-1D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EBER	**Berja**	**0.53**	**29**	⇓Pg		**Pg**	**00 50 12.0**	**+0.3**
EBER				Sg		**Sg**	**00 50 18.7**	**+0.2**
EBER				*i* Vmb_Lg			00 50 20.1	
ELGU	**Los Guajares,**	**0.54**	**322**	⇑Pg		**Pb**	**00 50 14.2**	**+0.3**
ELGU				Sg		**Sb**	**00 50 21.2**	**-1.1**
EQUE	**Quentar**	**0.79**	**347**	Pg		**Pb**	**00 50 17.9**	**-0.2**
EQUE				Sg		**Sg**	**00 50 27.2**	**+0.4**
EQUE				*i* Vmb_Lg			00 50 29.8	
ENIJ	**Nijar**	**0.97**	**56**	Pg		**Pg**	**00 50 19.3**	**-0.8**
ENIJ				Sg		**Sg**	**00 50 31.6**	**-1.0**
ENIJ				*i* Vmb_Lg			00 50 33.3	
EGOR	**Sierra Gorda,**	**0.98**	**313**	Pg		**Pb**	**00 50 21.1**	**-0.4**
EGOR				Sg		**Sn**	**00 50 36.0**	**-1.4**
EGOR				*i* Vmb_Lg			00 50 41.5	
EMAL	**Malaga-Limoner**	**1.03**	**289**	P		**Pg**	**00 50 21.1**	**-0.1**
EMAL				S		**Sg**	**00 50 33.7**	**-0.9**
GOG	**Mont Gurugu**	**1.22**	**172**	P		**Pn**	**00 50 25.5**	**-0.4**
GOG				S		**Sg**	**00 50 39.8**	**-1.0**
EMIJ	**Mijas**	**1.26**	**276**	Pg		**Pg**	**00 50 24.8**	**-0.9**
EMIJ				Sg		**Sn**	**00 50 44.7**	**+0.7**
EMIJ				*i* Vmb_Lg			00 50 45.9	
PALE	**Palemas**	**1.35**	**206**	P		**Pb**	**00 50 29.1**	**+1.4**
PALE				S		**Sn**	**00 50 47.0**	**+0.8**
EQES	**Quesada**	**1.37**	**5**	Pg		**Pb**	**00 50 28.5**	**+0.5**
EQES				Sg		**Sn**	**00 50 47.6**	**+0.8**
EQES				*i* Vmb_Lg			00 50 51.9	
CHAS	**Isla Isabel II**	**1.40**	**153**	P		**Pb**	**00 50 29.7**	**+1.2**
CHAS				S		**Sn**	**00 50 50.1**	**+2.7**
TAF	**Taforalt**	**1.74**	**158**	P		**Pn**	**00 50 32.8**	**-0.2**
TAF				S		**Sn**	**00 50 53.5**	**-2.5**
SMIR	**Smir Dam**	**1.91**	**247**	P		**Pb**	**00 50 36.7**	**-0.4**
AKLM	**AKL**	**1.99**	**196**	P		**Pb**	**00 50 38.0**	**-0.6**
EADA	**Adamuz**	**2.04**	**328**	Pn		**Pb**	**00 50 38.3**	**-1.1**
EADA				Sn		**Sn**	**00 51 03.5**	**+0.2**
EADA				Sg		**Sg**	**00 51 09.1**	**+2.0**
EADA				*i* Vmb_Lg			00 51 12.8	
JBK	**JBK**	**2.16**	**166**	P		**Pn**	**00 50 39.1**	**+0.2**
ECAB	**El Cabril**	**2.40**	**314**	Pn		**Pn**	**00 50 41.8**	**-0.3**
ECAB				Pg		**Pg**	**00 50 47.4**	**-0.1**
ECAB				Sn		**Sn**	**00 51 12.2**	**0.0**
ECAB				Sg		**Sg**	**00 51 19.0**	**+0.4**
ECAB				*i* Vmb_Lg			00 51 23.9	
ETOB	**Tobarra**	**2.57**	**30**	Pn		**Pn**	**00 50 45.4**	**+1.0**
ETOB				Sn		**Sn**	**00 51 15.9**	**-0.5**
ETOB				*i* Vmb_Lg			00 51 30.7	
EMIN	**Mina Concepcio**	**3.07**	**297**	Pn		**Pn**	**00 50 52.9**	**+1.8**
EMIN				Sn		**Sn**	**00 51 27.0**	**-1.6**
EMIN				*i* Vmb_Lg			00 51 27.1	
PAB	**San Pablo**	**3.23**	**344**	Pn		**Pn**	**00 50 54.9**	**+1.4**
PAB				Sn		**Sn**	**00 51 30.6**	**-2.1**
PAB				Sg		**Sg**	**00 51 45.5**	**+0.2**
PAB				*i* Vmb_Lg			00 51 53.3	
PBAR	**Barrancos**	**3.51**	**301**	*e*Pn		**Pn**	**00 50 58.8**	**+1.6**
PBAR				*e*Sn		**Sn**	**00 51 39.5**	**+0.1**
PVAQ	**Vaqueiros**	**3.74**	**286**	*e*Pn		**Pn**	**00 51 01.3**	**+1.0**
EBAD	**Badajoz**	**3.80**	**309**	Pn		**Pn**	**00 51 01.8**	**+0.5**
EBAD				Sn		**Sn**	**00 51 44.0**	**-2.7**
EBAD				*i* Vmb_Lg			00 51 48.8	
PBDV	**Barranco-do-Ve**	**3.87**	**283**	*e*Pn		**Pn**	**00 51 04.8**	**+2.6**
PBDV				*e*Sn		**Sn**	**00 51 49.1**	**+0.7**
PCVE	**Castro Verde**	**4.04**	**289**	*e*Pn		**Pn**	**00 51 06.2**	**+1.7**
PCVE				*e*Sn		**Sn**	**00 51 51.6**	**-1.0**
PESTR	**Estremoz**	**4.24**	**306**	*e*Pn		**Pn**	**00 51 08.7**	**+1.5**
PESTR				*e*Sn		**Sn**	**00 51 55.8**	**-1.6**
MESJ	**Messejana**	**4.24**	**291**	*e*Pn		**Pn**	**00 51 08.5**	**+1.3**
PNCL	**Nicolau / Gran**	**4.56**	**293**	*e*Pn		**Pn**	**00 51 13.0**	**+1.4**

*SSNC **31** 00:54:05.5±1.7,19.51N×73.63W,h7km±10km,MD3.1, ML3.1,MW3.0*
*OSPL **31** 00:54:06.1±2.4,19.75N×73.66W,h70km±38km,ML3.0*
ISC 31 00:54:01.9±3.3,19.73N±0.07×73.58W±0.03,h16km±24km, n11,σ2§02/20,Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.76**	**306**	*e*P		**Pn**	**00 54 20.0**	**+2.0**
MASC				*e*S		**Sn**	**00 54 30.7**	**+1.7**
MASC				IAML			00 54 32.2	
	comp=N,282nm,0.1s							
MASC				IAML			00 54 32.6	
	comp=E,397nm,0.1s							
MASC	**Masc**	**0.76**	**306**	*i* P		**Pn**	**00 54 20.1**	**+2.0**
MASC				*e*S		**Sn**	**00 54 30.8**	**+1.7**
PAPH	**Port-au-Prince**	**1.70**	**135**	*i* P		**Pb**	**00 54 33.0**	**+0.1**
PAPH				*e*S		**Sb**	**00 54 53.9**	**-0.1**
PAPH				*e*S		**Sb**	**00 54 53.9**	**-0.1**
PAPH				IAML			00 54 54.5	
	comp=Z,66nm,0.2s							
LODA1	**ITESIL, Dajabo**	**1.77**	**96**	*e*S		**Sn**	**00 54 52.5**	**-1.7**
RCC	**Rio Carpintero**	**2.01**	**278**	*e*P		**Pb**	**00 54 37.5**	**-0.6**
RCC				*e*S		**Sn**	**00 55 00.9**	**+0.8**
RCC				*e*Sg		Sg	00 55 02.5	-4.3
RCC				IAML			00 55 03.7	
	comp=E,116nm,0.2s							
RCC				IAML			00 55 03.8	
	comp=N,110nm,0.2s							
SDDR	**Presa de Saban**	**2.29**	**109**	*i* P		**Pn**	**00 54 40.7**	**+1.6**
SDDR				*e*S		**Sn**	**00 55 07.9**	**+1.0**
SDDR				IAML			00 55 14.5	
	comp=Z,72nm,0.4s							
LOPE2	**Hotel El Peder**	**2.42**	**134**	*i* P		**Pb**	**00 54 44.0**	**-1.1**
LOPE2				IAML			00 55 24.0	
	comp=Z,83nm,1.1s							
SC01	**Santiago de lo**	**2.70**	**96**	*i* P		**Pb**	**00 54 48.5**	**-1.4**
SC01				IAML			00 55 26.4	
	comp=Z,64nm,0.6s							
GRTK	**Grand Turk**	**2.89**	**52**	*i* P		**Pn**	**00 54 48.8**	**+1.4**
GRTK				*e*S		**Sn**	**00 55 21.2**	**-0.7**
GRTK				IAML			00 55 27.7	
	comp=Z,51nm,1.0s							
LMGC	**Las Mercedes**	**3.24**	**276**	*e*P		**Pn**	**00 54 54.0**	**+1.8**
LMGC				*e*S		**Sn**	**00 55 30.3**	**-0.2**
LMGC				IAML			00 55 32.0	
	comp=E,58nm,0.1s							
LMGC				IAML			00 55 35.8	
	comp=N,66nm,0.2s							
CCCC	**Cccc**	**4.19**	**291**	*e*P		**Pn**	**00 55 03.9**	**-1.3**
CCCC				*e*S		**Sn**	**00 55 48.1**	**-5.8**
CCCC				IAML			00 55 50.5	
	comp=E,9.0nm,0.1s							
CCCC				IAML			00 55 50.7	
	comp=N,8.1nm,0.3s							

*IDC **31** 01:13:09.3±0.8,3.67S×151.38E,h403km±9km,mb3.6/15, mbtmp4.3/16,Error ellipse: s-maj=22.0km s-min=10.2km az=108.0*
*NEIC **31** 01:13:09.7±1.4,3.75S±0.1×151.4E±0.1,h401km±8km, mb4.4/76,Error ellipse: s-maj=19.8km s-min=15.1km az=94.0*
ISC 31 01:13:09.4±0.5,3.67S±0.07×151.3E±0.1,h400km,n107, σ0§75/108,mb4.3/51,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.96**	**131**			**Pn**	**01 14 00.3**	**0.0**
KRVT	**Keravat (AS076**	**0.96**	**131**	P		**Pn**	**01 14 00.3**	**0.0**
	333nm,0.6s,baz=127,slow=0.4,SNR=19							
RABL	**Rabaul**	**1.01**	**121**	Pn		**Pn**	**01 14 00.5**	**-0.1**
PATS	**Pohnpei**	**12.57**	**34**	P		**P**	**01 15 56.3**	**+0.9**
COEN	**Coen**	**12.99**	**218**	P		**Pn**	**01 16 01.8**	**-0.3**
CTA	**Charters Tower**	**17.04**	**196**	P		**P**	**01 16 45.7**	**+1.8**
	12nm,0.6s,baz=11,slow=13,SNR=13							
CTAO	**Charters Tower**	**17.04**	**196**	P		**P**	**01 16 45.5**	**+1.7**
CTAO				IAmb		IAmb	01 16 48.7	
	comp=Z,15nm,0.8s							
FAKI	**Fak Fak**	**19.03**	**272**	P		**P**	**01 17 05.9**	**+1.1**
EIDS	**Eidsvold**	**21.58**	**181**	P		**P**	**01 17 28.7**	**+0.5**
EIDS				IAmb		IAmb	01 17 31.0	
	comp=Z,11nm,0.7s							
MTN	**Manton Dam**	**21.92**	**244**	P		**P**	**01 17 31.7**	**+0.2**
MTN				IAmb		IAmb	01 17 39.4	
	comp=Z,15nm,1.1s							
WB0	**Warramunga Arr**	**22.98**	**225**	P		**P**	**01 17 41.4**	**+0.4**
WB0				IAmb		IAmb	01 17

YULB					IAmb	IAmb	01 20 12.6		
	comp=Z,17nm,1.4s								
TPUB	**Ta-pu**	**40.16**	**313**		P	**P**	**01 20 09.5**	**+0.6**	
JHS	**Saijyo**	**42.09**	**338**		P	**P**	**01 20 24.4**	**+0.1**	
KSRS	**Korea Array**	**46.33**	**334**		P	**P**	**01 20 57.4**	**+0.2**	
	comp=Z,2.3nm,0.7s,baz=146,slow=9.1,SNR=5.6								
	comp=Z,2.3nm,0.7s								
USRK	**Ussuriysk Ar.**	**50.71**	**342**		P	**P**	**01 21 30.6**	**+0.4**	
USRK	**Ussuriysk Ar.**	**50.71**	**342**		P	**P**	**01 21 30.7**	**+0.6**	
	comp=Z,1.0nm,0.4s,baz=166,slow=7.0,SNR=6.7								
	comp=Z,1.0nm,0.4s								
PETK	**Petropavlovsk-**	**56.83**	**5**		P	**P**	**01 22 12.1**	**-1.6**	
	comp=Z,3.4nm,0.5s,baz=178,slow=8.7,SNR=6.6								
	comp=Z,3.4nm,0.5s								
SONM	**Songino Array**	**64.58**	**328**		P	**P**	**01 23 06.3**	**+0.7**	
SONM	**Songino Array**	**64.58**	**328**		P	**P**	**01 23 06.6**	**+1.0**	
	comp=Z,1.7nm,0.6s,baz=151,slow=5.6,SNR=11								
	comp=Z,1.7nm,0.6s								
UNV	**Unalaska Valle**	**67.24**	**26**		P	**P**	**01 23 21.0**	**-1.1**	
CNBA	**Chernabura Isl**	**70.96**	**28**		P	**P**	**01 23 44.1**	**-0.5**	
CNBA					IAmb	IAmb	01 24 17.8		
	comp=Z,8.9nm,1.1s								
CHIR	**Chirikof Islan**	**73.39**	**28**		P	**P**	**01 23 58.8**	**0.0**	
VNDA	**Vanda**	**74.01**	**178**		P	**P**	**01 24 01.9**	**-0.2**	
VNDA	**Vanda**	**74.01**	**178**		P	**P**	**01 24 02.2**	**+0.1**	
	comp=Z,0.2nm,0.5s,baz=315,slow=6.7,SNR=5.1								
	comp=Z,0.2nm,0.5s								
SII	**Sitkinak Islan**	**74.47**	**28**		P	**P**	**01 24 05.1**	**+0.1**	
OHAK	**Old Harbor**	**75.24**	**28**		P	**P**	**01 24 09.4**	**+0.1**	
OHAK					IAmb	IAmb	01 24 10.0		
	comp=Z,5.3nm,0.6s								
P18K	**Big Mountain,**	**75.56**	**25**		P	**P**	**01 24 10.1**	**-1.1**	
O18K	**Koktuh Hills**	**75.83**	**25**		P	**P**	**01 24 11.8**	**-0.9**	
KDAK	**Kodiak Island**	**75.86**	**27**		P	**P**	**01 24 12.6**	**-0.2**	
Q19K	**Cape Douglas,**	**75.99**	**26**		P	**P**	**01 24 12.9**	**-0.6**	
N18K	**Kilae Creek**	**76.02**	**24**		P	**P**	**01 24 14.1**	**+0.4**	
SVW2	**Sparrevohn**	**76.39**	**24**		P	**P**	**01 24 15.6**	**-0.1**	
SVW2					IAmb	IAmb	01 24 18.2		
	comp=Z,4.3nm,0.7s								
P19K	**Oil Pt**	**76.56**	**25**		P	**P**	**01 24 16.4**	**-0.3**	
N19K	**Bonanza Creek**	**76.67**	**24**		P	**P**	**01 24 17.5**	**+0.1**	
N19K					IAmb	IAmb	01 24 18.2		
	comp=Z,3.2nm,0.6s								
ILSW	**Iliamna Southw**	**76.77**	**25**		P	**P**	**01 24 17.5**	**-0.5**	
ILSW					IAmb	IAmb	01 24 18.4		
	comp=Z,3.6nm,0.7s								
L19K	**White Mountain**	**77.29**	**23**		P	**P**	**01 24 21.4**	**+0.7**	
L19K					IAmb	IAmb	01 24 22.0		
	comp=Z,9.2nm,0.9s								
M19K	**Big River Lodg**	**77.31**	**23**		P	**P**	**01 24 21.7**	**+0.9**	
M19K					IAmb	IAmb	01 24 22.4		
	comp=Z,5.3nm,0.7s								
CNPM	**China Poot**	**77.36**	**26**		P	**P**	**01 24 21.4**	**+0.3**	
M20K	**Styx River**	**77.80**	**24**		P	**P**	**01 24 23.8**	**+0.2**	
M20K					IAmb	IAmb	01 24 24.7		
	comp=Z,4.5nm,0.7s								
K20K	**Telida**	**78.25**	**22**		P	**P**	**01 24 26.5**	**+0.6**	
K20K					IAmb	IAmb	01 24 27.3		
	comp=Z,4.0nm,0.7s								
SEW	**Seward**	**78.43**	**26**		P	**P**	**01 24 26.7**	**-0.1**	
SEW					IAmb	IAmb	01 24 34.8		
	comp=Z,7.0nm,1.0s								
MK31	**Makanchi Array**	**78.50**	**319**		P	**P**	**01 24 28.1**	**+0.5**	
MKAR	**Makanchi Array**	**78.50**	**319**		P	**P**	**01 24 27.6**	**0.0**	
MKAR	**Makanchi Array**	**78.50**	**319**		P	**P**	**01 24 27.9**	**+0.4**	
	comp=Z,1.2nm,0.6s,baz=96,slow=7.8,SNR=17								
	comp=Z,1.2nm,0.6s								
J20K	**Nowinta River**	**78.68**	**21**		P	**P**	**01 24 28.8**	**+0.6**	
J20K					IAmb	IAmb	01 24 29.3		
	comp=Z,3.9nm,0.6s								
PPLA	**Purkeypile**	**78.72**	**23**		P	**P**	**01 24 28.1**	**-0.5**	
PPLA					IAmb	IAmb	01 24 43.9		
	comp=Z,7.2nm,1.5s								
RC01	**Rabbit Creek A**	**78.79**	**25**		P	**P**	**01 24 28.2**	**-0.6**	
RC01					IAmb	IAmb	01 24 28.7		
	comp=Z,5.1nm,0.5s								
PWL	**Port Wells**	**79.28**	**26**		P	**P**	**01 24 31.3**	**-0.2**	
ZAA0	**Zalesovo Array**	**79.39**	**327**		P	**P**	**01 24 31.8**	**-0.4**	
ZALV	**Zalesovo Beam**	**79.39**	**327**		P	**P**	**01 24 31.6**	**-0.6**	
ZALV	**Zalesovo Beam**	**79.39**	**327**		P	**P**	**01 24 31.5**	**-0.6**	
	comp=Z,2.3nm,0.4s,baz=115,slow=5.3,SNR=8.6								
	comp=Z,2.3nm,0.4s								
SML	**Sawmill**	**79.73**	**25**		P	**P**	**01 24 33.8**	**-0.1**	
IMAR	**Indian Mountai**	**79.83**	**20**		P	**P**	**01 24 34.4**	**+0.1**	
H21K	**Melozitna Rive**	**79.98**	**20**		P	**P**	**01 24 34.7**	**-0.4**	
SCM	**Sheep Creek Mo**	**80.16**	**25**		P	**P**	**01 24 35.9**	**-0.3**	
SCM					IAmb	IAmb	01 25 12.7		
	comp=Z,5.4nm,0.5s								
RND	**Reindeer**	**80.28**	**23**		P	**P**	**01 24 35.6**	**-1.2**	
MLY	**Manley**	**80.38**	**21**		P	**P**	**01 24 36.9**	**-0.4**	
MLY					IAmb	IAmb	01 24 37.8		
	comp=Z,7.0nm,0.6s								
MCK	**McKinley**	**80.41**	**23**		P	**P**	**01 24 36.5**	**-0.9**	
KLU	**Klutina**	**80.61**	**26**		P	**P**	**01 24 39.1**	**+0.5**	
KLU					IAmb	IAmb	01 24 39.9		
	comp=Z,4.9nm,0.7s								
DHY	**Denali Highway**	**80.71**	**24**		P	**P**	**01 24 38.6**	**-0.6**	
DHY					IAmb	IAmb	01 24 39.7		
	comp=Z,4.5nm,0.8s								
NEA2	**Nenana**	**80.78**	**22**		P	**P**	**01 24 38.2**	**-1.1**	
NEA2					IAmb	IAmb	01 24 38.9		
	comp=Z,5.7nm,0.5s								
HMT	**Hamilton**	**80.85**	**27**		P	**P**	**01 24 40.1**	**+0.3**	
HMT					IAmb	IAmb	01 24 58.0		
	comp=Z,14nm,1.3s								
WRH	**Wood River Hil**	**81.09**	**22**		P	**P**	**01 24 39.7**	**-1.2**	
WRH					IAmb	IAmb	01 24 40.4		
	comp=Z,4.6nm,0.9s								
H23K	**Yukon River**	**81.21**	**21**		P	**P**	**01 24 41.2**	**-0.4**	
CCB	**Clear Creek Bu**	**81.28**	**22**		P	**P**	**01 24 40.3**	**-1.6**	
CCB					IAmb	IAmb	01 24 41.2		
	comp=Z,4.6nm,0.6s								
GLB	**Gilahina Butte**	**81.51**	**26**		P	**P**	**01 24 43.1**	**-0.1**	
POKR	**Poker Plat Res**	**81.64**	**22**		P	**P**	**01 24 42.7**	**-1.1**	
POKR					IAmb	IAmb	01 24 43.1		
	comp=Z,5.2nm,0.6s								
IL31		**81.69**	**22**		P	**P**	**01 24 42.5**	**-1.5**	
IL31					IAmb	IAmb	01 24 43.1		
	comp=Z,5.2nm,0.7s								
ILAR	**Eielson Array**	**81.69**	**22**		P	**P**	**01 24 42.2**	**-1.7**	
ILAR	**Eielson Array**	**81.69**	**22**		P	**P**	**01 24 42.4**	**-1.7**	
	comp=Z,4.7nm,0.6s,baz=248,slow=5.3,SNR=62								
	comp=Z,4.7nm,0.6s								
H24K	**Noodor Dome**	**81.82**	**21**		P	**P**	**01 24 44.0**	**-0.7**	
RIDG	**Independent Ri**	**82.03**	**24**		P	**P**	**01 24 45.4**	**-0.5**	
RIDG					IAmb	IAmb	01 24 46.1		
	comp=Z,4.0nm,0.8s								
J25K	**Salcha River,**	**82.20**	**23**		P	**P**	**01 24 46.3**	**-0.5**	
CTGM	**Chitina Glacie**	**82.42**	**27**		P	**P**	**01 24 48.5**	**+0.4**	
SCRK	**Sand Creek**	**82.48**	**24**		P	**P**	**01 24 47.8**	**-0.4**	
M27K	**Edge Creek, AK**	**82.71**	**26**		P	**P**	**01 24 50.1**	**+0.6**	
J26L	**Joseph Creek**	**82.86**	**23**		P	**P**	**01 24 50.2**	**+0.1**	
L27K	**Beaver Creek,**	**83.00**	**25**		P	**P**	**01 24 51.2**	**+0.4**	
BCAR	**Beaver Creek A**	**83.02**	**25**		P	**P**	**01 24 51.4**	**+0.5**	
BMAR	**Burnt Mountain**	**83.72**	**20**		P	**P**	**01 24 54.8**	**+0.4**	
HYT	**Haines Junctio**	**84.14**	**28**		P	**P**	**01 24 57.5**	**+0.9**	
DAWY	**Dawson**	**84.38**	**24**		P	**P**	**01 24 58.1**	**+0.4**	
M30M	**Minto, Yukon**	**85.00**	**26**		P	**P**	**01 25 01.2**	**+0.4**	
M30M					IAmb	IAmb	01 25 02.6		
	comp=Z,5.8nm,1.2s								
NVAR	**Mina Array Bea**	**92.57**	**52**		P	**P**	**01 25 37.3**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=256,slow=2.7,SNR=3.9								
	comp=Z,0.4nm,0.7s								
YKA	**Yellowknife Ar**	**95.13**	**28**		P	**P**	**01 25 47.5**	**-0.4**	
	comp=Z,0.6nm,0.6s,baz=271,slow=4.9,SNR=7.9								
	comp=Z,0.6nm,0.6s								
PDAR	**Pinedale Array**	**99.20**	**47**		P	**Pdif**	**01 26 06.1**	**-0.9**	
	comp=Z,0.3nm,0.5s,baz=252,slow=2.6,SNR=2.7								
	comp=Z,0.3nm,0.5s								
GERES	**GERESS Array B**	**122.31**	**328**		PKP	**PKPdf**	**01 31 17.5**	**-0.4**	
	comp=Z,0.3nm,0.4s,baz=57,slow=4.9,SNR=4.1								
TORD	**Torodi Ar. Bea**	**148.53**	**289**		PKPbc	**PKPbc**	**01 32 10.5**	**-0.4**	
	comp=Z,1.4nm,0.3s,baz=79,slow=3.2,SNR=1.4								

*IDC **31** 01:32:08.9±3.7, 13°.57S×112°.26W, h0km, mb3.8/4, mbtmp3.8/4, MS4.0/40, Error ellipse: s-maj=124.1km s-min=29.6km az=49.0*
*GCMT **31** 01:32:17.0±0.4, 13°.46S±0°.02×112°.09W±0°.02, h23km±1km, MW4.9/97, Moment Tensor Solution. s30,c32; s97,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.92±.17; $M_{\theta\theta}$1.39±.12; $M_{\phi\phi}$-0.47±.13; $M_{r\theta}$0.42±.17; $M_{\theta\phi}$2.93±.10; $M_{\phi r}$0.34±.20; Best double couple: M_o3.10700×10^{16}*

NP1:ϕ_s9.00000°, δ86.00000°, λ175.00000°. NP2: ϕ_s99.00000°, δ85.00000°, λ4.00000°. Principal axes: T 3.5980, Plg7.0000°, Azm324.0000°; N -0.9850, Plg83.0000°, Azm151.0000°; P -2.6170, Plg1.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function
ISC 31 01:32:10.7±1.4, 13°.5S±0°.2×112°.2W±0°.3, h10km, n59, σ0.68/7, mb3.9/4, MS4.1/43, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.81**	**169**	LR	LR	LR	01 39 18.5	
	comp=Z,1μm,19.5s,baz=334,slow=31							
TAOE	**Nuku Hiva Isla**	**27.81**	**277**	*e*LR	LR	LR	01 44 42.9	
	comp=Z,211nm,23.2s							
ATAH	**Atahualpa**	**33.82**	**83**	LR	LR	LR	01 49 32.1	
	comp=Z,215nm,19.2s,baz=259,slow=31							
NNA	**Nana**	**34.49**	**92**	LR	LR	LR	01 49 15.4	
	comp=Z,109nm,18.3s,baz=253,slow=30							
H03N2	**Juan Fernandez**	**36.15**	**129**	T	T	T	02 17 30.1	
	baz=300,slow=76,SNR=78							
H03N3	**Juan Fernandez**	**36.16**	**129**	T	T	T	02 17 31.1	
	baz=300,slow=76,SNR=67							
H03N1	**Juan Fernandez**	**36.17**	**129**	T	T	T	02 17 31.4	
	baz=300,slow=76,SNR=102							
PPT2	**Papeete2**	**36.21**	**259**	*e*LR	LR	LR	01 48 38.1	
	comp=Z,297nm,28.0s							
TBI	**Tubuai**	**36.60**	**249**	*e*LR	LR	LR	01 48 50.3	
	comp=Z,452nm,27.0s							
LPIG	**La Paz**	**37.43**	**3**	LR	LR	LR	01 50 47.1	
	comp=Z,399nm,20.7s,baz=194,slow=30							
ROSC	**El Rosal**	**41.78**	**67**	LR	LR	LR	01 52 35.8	
	comp=Z,70nm,18.2s,baz=92,slow=29							
LVC	**Limon Verde**	**42.00**	**109**	LR	LR	LR	01 53 08.7	
	comp=Z,148nm,19.3s,baz=271,slow=30							
LPAZ	**La Paz**	**42.60**	**99**	P	**P**	**01 40 08.7**	**+0.6**	
	2.9nm,0.9s,baz=274,slow=6.9,SNR=8.7							
	2.9nm,0.9s							
TXAR	**Lajitas Array**	**43.38**	**11**	LR	LR	LR	01 54 55.9	
	comp=Z,139nm,18.5s,baz=196,slow=32							
PLCA	**Paso Flores**	**45.30**	**135**	LR	LR	LR	01 54 47.8	
	comp=Z,403nm,18.4s,baz=287,slow=30							
RAR	**Rarotonga**	**45.92**	**254**	LR	LR	LR	01 54 16.3	
	comp=Z,178nm,20.6s,baz=76,slow=29							
SDV	**Santo Domingo**	**46.87**	**64**	LR	LR	LR	01 58 30.1	
	comp=Z,76nm,18.7s,baz=246,slow=34							
PFO	**Pinyon Flats O**	**47.03**	**355**	LR	LR	LR	01 55 27.8	
	comp=Z,192nm,20.7s,baz=171,slow=30							
ANMO	**Albuquerque**	**48.49**	**6**	LR	LR	LR	01 57 52.7	
	comp=Z,205nm,18.4s,baz=194,slow=32							
SIV	**San Ignacio**	**49.39**	**100**	LR	LR	LR	01 57 43.0	
	comp=Z,92nm,21.0s,baz=270,slow=31							
NVAR	**Mina Array Bea**	**51.98**	**354**	P	**P**	**01 41 21.1**	**+0.7**	
	1.0nm,0.7s,baz=180,slow=9.8,SNR=4.7							
NVAR				LR	LR	LR	01 59 15.8	
	comp=Z,217nm,18.2s,baz=157,slow=31							
	1.0nm,0.7s							
PCRV	**Puerto La Cruz**	**52.73**	**66**	LR	LR	LR	02 01 09.0	
	comp=Z,164nm,19.1s,slow=33							
CPUP	**Villa Florida**	**52.78**	**113**	P	**P**	**01 41 25.9**	**-0.5**	
	1.7nm,0.8s,baz=246,slow=10.0,SNR=3.1							
CPUP				LR	LR	LR	01 59 34.5	
	comp=Z,120nm,21.1s,baz=271,slow=31							
	1.7nm,0.8s							
ELK	**Elko**	**54.05**	**357**	LR	LR	LR	02 00 33.3	
	comp=Z,195nm,18.1s,baz=182,slow=32							
SJG	**San Juan**	**55.22**	**56**	LR	LR	LR	02 01 33.8	
	comp=Z,40nm,21.4s,baz=242,slow=32							
YBH	**Yreka Blue Hor**	**55.82**	**350**	LR	LR	LR	01 59 54.7	
	comp=Z,321nm,21.6s,baz=172,slow=30							
PDAR	**Pinedale Array**	**56.05**	**2**	P	**P**	**01 41 49.4**	**-0.7**	
	0.3nm,0.6s,baz=179,slow=5.0,SNR=3.8							
PDAR				LR	LR	LR	02 02 10.9	
	comp=Z,133nm,18.5s,baz=190,slow=32							
	0.3nm,0.6s							
PMSA	**Palmer Station**	**60.80**	**159**	LR	LR	LR	02 01 40.7	
	comp=Z,150nm,21.5s,baz=298,slow=29							
NEW	**Newport**	**61.65**	**356**	LR	LR	LR	02 05 03.4	
	comp=Z,125nm,18.5s,baz=166,slow=32							
MDP	**Montagnes des**	**61.93**	**77**	LR	LR	LR	02 05 48.6	
	comp=Z,66nm,19.3s,baz=299,slow=33							
SADO	**Sadowa**	**65.30**	**25**	LR	LR	LR	02 10 24.0	
	comp=Z,78nm,18.2s,baz=200,slow=35							
URZ	**Urewera**	**66.66**	**234**	LR	LR	LR	02 08 01.5	
	comp=Z,88nm,18.9s,baz=31,slow=32							
BBB	**Bella Bella**	**66.86**	**349**	LR	LR	LR	02 07 45.0	
	comp=Z,76nm,18.3s,baz=204,slow=32							
MSVF	**Nonsavu**	**66.99**	**256**	LR	LR	LR	02 05 07.8	
	comp=Z,62nm,21.2s,baz=167,slow=30							
DLBC	**Dease Lake**	**73.17**	**350**	LR	LR	LR	02 10 15.3	
	comp=Z,117nm,19.3s,baz=158,slow=31							
YKA	**Yellowknife Ar**	**75.78**	**359**	LR	LR	LR	02 14 08.5	
	comp=Z,204nm,18.6s,baz=186,slow=33							
VNDA	**Vanda**	**76.03**	**193**	LR	LR	LR	02 10 28.8	
	comp=Z,114nm,18.3s,baz=258,slow=30							
QSPA	**South Pole Qui**	**76.59**	**180**	LR	LR	LR	02 13 53.1	
	comp=Z,93nm,18.8s,baz=80,slow=33							
DZM	**Mont Dzumac**	**77.17**	**250**	*e*LR	LR	LR	02 07 38.6	
	comp=Z,141nm,25.1s							
SCHQ	**Schefferville**	**78.11**	**25**	LR	LR	LR	02 17 04.1	
	comp=Z,108nm,20.7s,baz=184,slow=34							
VNA3	**Neumayer Olymp**	**81.29**	**161**	P	**P**	**01 44 27.1**	**+0.2**	
VNA1	**Neumayer--Stat**	**81.90**	**161**	P	P	01 44 36.2	+6.2	
VNA2	**Neumayer--Watz**	**82.09**	**161**	P	P	01 44 36.3	+5.2	
	baz=245,slow=6.8							
ILAR	**Eielson Array**	**82.36**	**346**	LR	LR	LR	02 13 55.4	
	comp=Z,56nm,19.3s,baz=90,slow=30							
INK	**Inuvik**	**83.03**	**352**	LR	LR	LR	02 16 53.4	
	comp=Z,105nm,19.5s,baz=180,slow=32							
SNAA	**Sanae**	**83.21**	**163**	P	**P**	**01 44 37.0**	**0.0**	
SNAA	**Sanae**	**83.21**	**163**	LR	LR	LR	02 15 19.0	
	comp=Z,111nm,18.8s,baz=347,slow=31							
FRB	**Frobisher Bay**	**83.97**	**18**	LR	LR	LR	02 18 53.7	
	comp=Z,85nm,21.2s,baz=215,slow=33							
H11S2	**WAKE ISLAND Hy**	**86.02**	**290**	T	T	T	03 19 54.4	
	baz=106,slow=74,SNR=47							
H11S1	**WAKE ISLAND Hy**	**86.03**	**290**	T	T	T	03 19 52.1	
	baz=106,slow=74,SNR=62							
H11S3	**WAKE ISLAND Hy**	**86.03**	**290**	T	T	T	03 19 49.6	
	baz=106,slow=74,SNR=51							
H11N3	**WAKE ISLAND Hy**	**86.16**	**291**	T	T	T	03 20 09.3	
	baz=107,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**86.17**	**291**	T	T	T	03 19 59.9	
	baz=107,slow=75,SNR=11							
H11N2	**WAKE ISLAND Hy**	**86.17**	**291**	T	T	T	03 20 00.4	
	baz=107,slow=75,SNR=9.9							
RES	**Resolute Bay**	**88.68**	**5**	LR	LR	LR	02 21 35.0	
	comp=Z,100nm,20.4s,baz=360,slow=33							
SHEM	**Shemya Is, Ala**	**91.06**	**324**	LR	LR	LR	02 16 15.6	
	comp=Z,79nm,21.9s,baz=107,slow=29							
STKA	**Stephens Creek**	**96.27**	**235**	LR	LR	LR	02 26 09.9	
	comp=Z,58nm,18.1s,baz=201,slow=34							
BBTS	**Babate**	**98.69**	**77**	LR	LR	LR	02 23 59.7	
	comp=Z,60nm,19.5s,baz=218,slow=32							
MKAR	**Makanchi Array**	**144.66**	**343**	PKP	**PKPdf**	**01 51 47.5**	**-0.4**	
	1.8nm,1.1s,baz=29,slow=2.8,SNR=5.0							

*OSPL **31** 01:33:34.8±1.8, 19°.90N×73°.96W, h84km±17km, ML2.8 SSNC **31** 01:33:36.4±1.2, 19°.75N×73°.73W, h17km±8km, MD3.6, ML3.0, MW3.7*
ISC 31 01:33:35.2±1.3, 20°.02N±0°.10×73°.75W±0°.05, h66km±12km, n10, σ1.88/17, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.48**	**289**	*e*P	**Pn**		**01 33 47.7**	**+0.3**
MASC				*e*S	**Sn**		**01 33 55.9**	**-0.5**
MASC				IAML			01 33 57.2	
	comp=N,690nm,0.2s							
MASC				IAML			01 33 57.8	
	comp=E,507nm,0.1s							
MASC	**Masc**	**0.48**	**289**	*i* P	**Pn**		**01 33 47.8**	**+0.3**
MASC				*e*S	**Sn**		**01 33 56.0**	**-0.3**
MASC				IAML			01 33 56.4	
	comp=Z,325nm,0.3s							
RCC	**Rio Carpintero**	**1.83**	**270**	*e*P	**Pn**		**01 34 05.6**	**+1.2**
RCC				*e*S	**Sn**		**01 34 28.8**	**+2.2**
RCC				IAML			01 34 31.2	
	comp=N,90nm,0.1s							
RCC				IAML			01 34 35.8	
	comp=E,119nm,0.3s							
PAPH	**Port-au-Prince**	**2.02**	**137**	*i* P	**Pn**		**01 34 07.4**	**+0.3**
PAPH				*e*S	**Sn**		**01 34 30.1**	**-1.3**
PAPH				IAML			01 34 33.3	
	comp=Z,36nm,0.2s							
SDDR	**Presa de Saban**	**2.54**	**113**	*i* P	**Pn**		**01 34 14.2**	**0.0**
SDDR				*e*S	**Sn**		**01 34 44.0**	**-0.2**
SDDR				IAML			01 34 52.7	
	comp=Z,65nm,0.5s							
GRTK	**Grand Turk**	**2.87**	**58**	*e*P	**Pn**		**01 34 20.2**	**+1.6**
GRTK				IAML			01 35 00.2	
	comp=Z,41nm,0.9s							
SC01	**Santiago de lo**	**2.91**	**101**	*i* P	**Pn**		**01 34 19.7**	**+0.5**
LMGC	**Las Mercedes**	**3.06**	**271**	*e*P	**Pn**		**01 34 22.8**	**+1.7**
LMGC				*e*S	**Sn**		**01 34 56.7**	**+0.1**
LMGC				IAML			01 35 04.2	
	comp=N,53nm,0.1s							
LMGC				IAML			01 35 05.1	
	comp=E,67nm,0.3s							
CCCC	**Cccc**	**3.94**	**288**	*e*P	Pn		01 34 30.2	-3.0
CCCC				*e*S	**Sn**		**01 35 12.8**	**-5.4**
CCCC				IAML			01 35 18.9	
	comp=E,5.7nm,0.1s							
CCCC				IAML			01 35 18.9	
	comp=N,9.0nm,0.2s							
MGV	**Manicaragua**	**6.18**	**291**	*e*P	**Pn**		**01 35 04.3**	**+0.5**
MGV				*e*S	**Sn**		**01 36 11.4**	**-1.7**
MGV				IAML			01 36 19.3	
	comp=N,2.2nm,0.5s							
MGV				IAML			01 36 19.9	
	comp=E,1.8nm,0.1s							

ROM 31 01:35:38.7±0.1, 42°.805N±0°.004×13°.157E±0°.007, h9km, ML2.0/10, 3C-7D, Error ellipse: s-maj=0.6km s-min=0.4km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.04**	**312**	P		Pg	01 35 40.8	+0.2
NRCA				S		Sg	01 35 42.0	0.0
NRCA	**Norcia**	**0.04**	**312**	⇓P		Pg	01 35 40.8	+0.2
NRCA				S		Sg	01 35 42.0	0.0
NRCA				AML		AML		
	comp=E,10005μm,0.5s							
NRCA				AML		AML		
	comp=N,13500μm,0.2s							
NRCA				AML		AML		
	comp=E,11350μm,0.5s							
NRCA				AML		AML		
	comp=N,14650μm,0.2s							
NRCA				AML		AML		
	comp=E,10020μm,0.5s							
NRCA				AML		AML		
	comp=N,13500μm,0.2s							
NRCA				AML		AML		
	comp=E,11350μm,0.5s							
NRCA				AML		AML		
	comp=N,14650μm,0.2s							
NRCA				AML		AML		
	comp=N,13500μm,0.2s							
NRCA				AML		AML		
	comp=N,14650μm,0.2s							
NRCA				AML		AML		
	comp=E,10020μm,0.5s							
NRCA				AML		AML		
	comp=E,11350μm,0.5s							
T1242	**Castelluccio d**	**0.04**	**55**	P		Pg	01 35 40.9	+0.2
T1242				S		Sg	01 35 42.3	+0.2
T1242				AML		AML		
	comp=E,2740μm,0.3s							
T1242				AML		AML		
	comp=E,2735μm,0.3s							
T1242				AML		AML		
	comp=N,5950μm,0.4s							
T1242				AML		AML		
	comp=E,2725μm,0.3s							
T1242				AML		AML		
	comp=N,5910μm,0.4s							
T1242	**Castelluccio d**	**0.04**	**55**	⇓P		Pg	01 35 41.0	+0.2
T1242				S		Sg	01 35 42.3	+0.2
T1242				AML		AML		
	comp=E,2740μm,0.3s							
T1242				AML		AML		
	comp=N,5955μm,0.4s							
T1242				AML		AML		
	comp=E,2725μm,0.3s							
T1242				AML		AML		
	comp=N,5910μm,0.4s							
T1242				AML		AML		
	comp=E,2740μm,0.3s							
T1242				AML		AML		
	comp=N,5955μm,0.4s							
T1242				AML		AML		
	comp=E,2725μm,0.3s							
T1242				AML		AML		
	comp=N,5910μm,0.4s							
T1242				AML		AML		
	comp=E,2740μm,0.3s							
T1242				AML		AML		
	comp=E,2725μm,0.3s							
T1242

T1244 AML AML
comp=E,1334µm,0.5s
T1244 AML AML
comp=E,1330µm,0.5s
MMO1 Montemonaco 0.16 53 P Pg 01 35 43.2 +1.0
MMO1 S Sg 01 35 45.3 +0.8
MMO1 AML AML
comp=E,791µm,0.7s
MMO1 AML AML
comp=N,778µm,0.3s
MMO1 AML AML
comp=E,792µm,0.7s
MMO1 Montemonaco 0.16 53 ⇓P Pg 01 35 42.6 +0.5
MMO1 S Sg 01 35 45.3 +0.8
MMO1 AML AML
comp=E,791µm,0.7s
MMO1 AML AML
comp=N,778µm,0.3s
MMO1 AML AML
comp=E,792µm,0.7s
MMO1 AML AML
comp=N,778µm,0.3s
MMO1 AML AML
comp=E,792µm,0.7s
MMO1 AML AML
comp=N,778µm,0.3s
T1201 Domo (RI) 0.16 155 P Pg 01 35 43.1 +0.8
T1201 S Sg 01 35 46.3 +1.6
T1204 Amatrice, Fraz 0.17 138 P Pg 01 35 43.1 +0.7
T1204 S Sg 01 35 46.2 +1.1
FEMA Monte Fema 0.18 333 P Pg 01 35 42.9 +0.3
FEMA S Sg 01 35 46.0 +0.8
T1241 Roccafluvione, 0.21 76 P Pg 01 35 43.6 +0.6
T1241 S Sg 01 35 47.0 +1.1
T1241 AML AML
comp=E,562µm,0.2s
T1241 AML AML
comp=N,418µm,0.4s
T1241 AML AML
comp=N,396µm,0.2s
T1241 AML AML
comp=E,562µm,0.2s
T1241 AML AML
comp=E,605µm,0.3s
T1215 Vallo di Nera, 0.21 269 P Pg 01 35 43.6 +0.5
T1215 S Sg 01 35 46.9 +0.8
SMA1 SAN MARTINO 0.22 143 P Pg 01 35 43.8 +0.5
SMA1 S Sg 01 35 47.5 +1.2
SMA1 AML AML
comp=E,654µm,0.5s
SMA1 AML AML
comp=N,524µm,1.3s
SMA1 AML AML
comp=N,524µm,1.3s
LNSS Leonessa 0.22 203 P Pg 01 35 43.8 +0.5
LNSS S Sg 01 35 47.7 +1.4
LNSS Leonessa 0.22 203 AML AML
comp=N,1820µm,0.2s
LNSS AML AML
comp=E,2550µm,0.2s
LNSS AML AML
comp=N,1820µm,0.2s
LNSS AML AML
comp=E,2550µm,0.2s
LNSS AML AML
comp=N,1820µm,0.2s
LNSS AML AML
comp=E,2550µm,0.2s
FDMO Fiordimonte 0.24 347 P Pg 01 35 43.8 +0.3
FDMO S Sg 01 35 47.6 +0.8
T1243 Rocca Santa Ma 0.24 117 P Pg 01 35 44.0 +0.4
T1243 S Sg 01 35 47.8 +0.9
T1243 Rocca Santa Ma 0.24 117 ⇑P Pg 01 35 44.1 +0.5
T1243 S Sg 01 35 48.0 +1.1
CESI CESI - Serrava 0.27 317 P Pg 01 35 44.6 +0.3
CESI S Sg 01 35 48.9 +1.0
CSP1 Cessapalombo 0.29 7 P Pg 01 35 44.9 +0.3
CSP1 S Sg 01 35 49.6 +1.1
RM33 Pellescritta (0.30 172 P Pg 01 35 44.9 +0.2
RM33 S Sb 01 35 50.1 -1.3
CAMP Campotosto 0.33 145 P Pg 01 35 45.4 +0.2
CAMP S Sg 01 35 50.7 +1.1
CAMP AML AML
comp=N,144µm,0.9s
CAMP AML AML
comp=E,126µm,0.9s
CAMP AML AML
comp=N,143µm,0.9s
ARRO Arrone 0.37 232 P Pg 01 35 46.3 +0.3
ARRO S Sb 01 35 52.1 -1.1
ARRO AML AML
comp=E,118µm,0.9s
ARRO AML AML
comp=N,106µm,0.6s
ARRO AML AML
comp=E,118µm,0.9s
ARRO Arrone 0.37 232 ⇓P Pg 01 35 46.3 +0.4
ARRO AML AML
comp=E,118µm,0.9s
ARRO AML AML
comp=N,106µm,0.6s
ARRO AML AML
comp=E,118µm,0.9s
ARRO AML AML
comp=N,106µm,0.6s
TERO Teramo 0.38 119 P Pg 01 35 38.4 -7.8
TERO S Sg 01 35 47.0 -4.1
TERO AML AML
comp=N,302µm,0.1s
TERO AML AML
comp=E,288µm,0.1s
OFFI Offida 0.41 71 S Sg 01 35 49.0 -3.2
ASSB Assisi San Ben 0.44 303 S Sg 01 35 48.0 -5.0
GIGS Gran Sasso 0.47 139 S Sg 01 35 48.0 -6.0
SNTG Esanatoglia 0.48 341 S Sg 01 35 49.0 -5.3
EL6 Elcito 0.53 356 S Sg 01 35 49.0 -6.9
EL6 Elcito 0.53 356 P Pg 01 35 48.8 -0.2
EL6 S Sb 01 35 57.4 -0.6
ATCC AVT- Casa Cast 0.54 315 S Sg 01 35 50.0 -6.2
FIAM Fiamignano 0.54 183 S Sg 01 35 50.0 -6.2
FOSV Fossato di Vic 0.57 329 S Sg 01 35 50.0 -7.3
FOSV Fossato di Vic 0.57 329 S Sb 01 35 59.0 -0.1
CING Cingoli 0.57 3 P Pg 01 35 49.9 +0.1
CING S Sb 01 35 59.0 -0.2
CING AML AML
comp=E,112µm,1.3s
CING AML AML
comp=N,97µm,0.2s
CING AML AML
comp=N,97µm,0.2s
CING AML AML
comp=E,112µm,1.3s
FAGN Fagnano 0.62 150 S Sg 01 35 52.0 -7.0
VCEL Villa Celiera 0.65 129 S Sg 01 35 52.0 -7.8
ARVD Arcevia 0.71 347 S Sg 01 35 53.0 -8.7
ARVD Arcevia 0.71 347 P Pg 01 35 52.5 0.0
ARVD S Sb 01 36 03.1 0.0
T0110 Collepietro 0.74 141 S Sg 01 35 53.0 -10
FRON Frontone 0.78 336 ⇑P Pg 01 35 53.5 -0.3
FRON AML AML
comp=E,38µm,0.7s
FRON AML AML
comp=N,51µm,0.4s
FRON AML AML
comp=E,38µm,0.7s
FRON AML AML
comp=N,51µm,0.4s
PIEI Pieia 0.86 328 S Sn 01 36 09.0 -0.8
MPAG Monte Paganucc 0.87 341 S Sn 01 36 10.0 -0.2
NARO Abbazia di Nar 0.91 333 ⇓P Pg 01 35 55.8 -0.4
NARO AML AML
comp=E,21µm,0.9s
NARO AML AML
comp=N,18µm,1.3s
NARO AML AML
comp=N,18µm,1.3s
NARO AML AML
comp=E,21µm,0.9s
FSSB Fossombrone 0.93 343 S Sn 01 36 12.0 +0.5
LRP Arpino 1.20 164 ⇓P Pb 01 35 58.7 -2.9
LRP S Sb 01 36 15.0 -2.2

*ROM **31** 01:41:49.0±0.0, 42°.806N±0°.003×13°.159E±0°.004,*

h11km, ML3.1/102, Error ellipse: s-maj=0.4km s-min=0.2km az=55.0
*LDG **31** 01:41:49.0±0.1, 42°.79N×13°.08E, h9km, Md3.1/2, Ml2.7/22, Error ellipse: s-maj=3.5km s-min=2.2km az=47.0*
*STR **31** 01:41:50.8±0.7, 43°.N±6°×1°.3E±°, h10km, MLv3.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=57.7, preliminary*
*PRU **31** 01:41:51.6±0.0, 42°.93N×13°.38E, h0km*
*BEO **31** 01:41:52.7±2.1, 42°.69N×13°.08E, h45km±5km, ML3.1/5*
ISC 31 01:41:48.8±0.7, **42.79N**±0°.01×**13.14E**±0°.02, **h15**km±4km, **n257**, σ**2**§**35**/322, **75C-44D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
NRCA	**Norcia**	**0.05**	**333**	⇑P	**Pg**	**01 41 51.4**	**-0.3**
NRCA				S	**Sg**	**01 41 52.6**	**-1.0**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1242	**Castelluccio d**	**0.06**	**50**	⇑P	**Pg**	**01 41 51.4**	**-0.5**
T1242				S	**Sg**	**01 41 52.7**	**-1.2**
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1202	**Accumoli, Fraz**	**0.11**	**146**	P	**Pg**	**01 41 52.4**	**+0.2**
T1202				S	**Sg**	**01 41 54.8**	**+0.2**
T1202				AML	AML		
T1202				AML	AML		
T1202				AML	AML		
T1202				AML	AML		
T1244	**Arquata del Tr**	**0.12**	**107**	P	**Pg**	**01 41 52.5**	**+0.1**
T1244				S	**Sg**	**01 41 54.9**	**+0.2**
T1244				AML	AML		
T1244				AML	AML		
	comp=N,85500µm,0.2s						
T1244				AML	AML		
	comp=N,85550µm,0.2s						
T1244				AML	AML		
	comp=N,85650µm,0.2s						
T1244				AML	AML		
T1244				AML	AML		
	comp=N,85519µm,0.2s						
T1244				AML	AML		
	comp=E,98424µm,0.3s						
MMO1	**Montemonaco**	**0.17**	**51**	AML	AML		
	comp=E,28400µm,0.4s						
MMO1				AML	AML		
	comp=N,34150µm,0.8s						
T1204	**Amatrice, Fraz**	**0.17**	**132**	P	**Pg**	**01 41 53.4**	**+0.3**
T1204				S	**Sg**	**01 41 56.5**	**+0.5**
T1204				AML	AML		
	comp=N,234µm,0.1s						
T1204				AML	AML		
	comp=E,291µm,0.2s						
FEMA	**Monte Fema**	**0.18**	**338**	⇑P	**Pg**	**01 41 53.5**	**+0.2**
FEMA				S	**Sg**	**01 41 56.6**	**+0.3**
FEMA				AML	AML		
	comp=N,41500µm,0.5s						
FEMA				AML	AML		
	comp=E,41950µm,0.3s						
FEMA				AML	AML		
	comp=N,41500µm,0.5s						
FEMA				AML	AML		
	comp=E,41929µm,0.3s						
FEMA				AML	AML		
	comp=N,36140µm,0.3s						
T1215	**Vallo di Nera,**	**0.20**	**273**	⇓P	**Pb**	**01 41 54.1**	**-0.2**
T1215				S	**Sg**	**01 41 57.6**	**+0.9**
T1215				AML	AML		
	comp=E,7075µm,1.2s						
T1215				AML	AML		
	comp=E,7290µm,1.2s						
T1215				AML	AML		
	comp=N,7245µm,0.5s						
T1215				AML	AML		
	comp=E,7285µm,1.2s						
T1215				AML	AML		
	comp=N,7035µm,0.5s						
T1215				AML	AML		
	comp=E,7070µm,1.2s						
T1215				AML	AML		
	comp=N,7250µm,0.5s						
T1215				AML	AML		
	comp=N,7030µm,0.5s						
T1215				AML	AML		
	comp=E,7290µm,1.2s						
T1215				AML	AML		
	comp=N,5343µm,0.2s						
T1215				AML	AML		
	comp=E,6952µm,0.2s						
T1215				AML	AML		
	comp=N,5507µm,0.2s						
T1215				AML	AML		
	comp=E,6620µm,0.2s						
LNSS	**Leonessa**	**0.20**	**202**	P	**Pb**	**01 41 54.2**	**-0.1**
LNSS				S	**Sg**	**01 41 58.0**	**+1.3**
LNSS				AML	AML		
	comp=N,39150µm,0.2s						
LNSS				AML	AML		
	comp=E,53500µm,0.5s						
LNSS				AML	AML		
	comp=E,49282µm,0.3s						
LNSS				AML	AML		
	comp=N,39168µm,0.2s						
SMA1	**SAN MARTINO**	**0.21**	**139**	⇑P	**Pg**	**01 41 54.0**	**+0.3**
SMA1				S	**Sg**	**01 41 57.9**	**+0.9**
SMA1				AML	AML		
	comp=E,32100µm,0.4s						
SMA1				AML	AML		
	comp=N,29000µm,0.4s						
SMA1				AML	AML		
	comp=E,32097µm,0.4s						
SMA1				AML	AML		
	comp=N,29032µm,0.4s						
T1241	**Roccafluvione,**	**0.22**	**73**	⇑P	**Pg**	**01 41 52.1**	**-1.7**
T1241				AML	AML		
	comp=N,16700µm,0.2s						
T1241				AML	AML		
	comp=N,15900µm,0.2s						
T1241				AML	AML		
	comp=E,33900µm,0.2s						
T1241				AML	AML		
	comp=E,34250µm,0.2s						
T1241				AML	AML		
	comp=N,16700µm,0.2s						
T1241				AML	AML		
	comp=E,34220µm,0.2s						
T1241				AML	AML		
	comp=E,33897µm,0.2s						
T1241				AML	AML		
	comp=N,16702µm,0.2s						
T1241				AML	AML		
	comp=N,15344µm,0.2s						
T1243	**Rocca Santa Ma**	**0.24**	**113**	P	**Pg**	**01 41 54.3**	**+0.1**
FDMO	**Fiordimonte**	**0.25**	**350**	⇑P	**Pg**	**01 41 54.4**	**+0.2**
FDMO				S	**Sg**	**01 41 58.4**	**+0.4**
FDMO				AML	AML		
	comp=N,21650µm,1.0s						
FDMO				AML	AML		
	comp=E,13950µm,0.6s						
FDMO				AML	AML		
	comp=N,20384µm,0.3s						
FDMO				AML	AML		
	comp=E,12624µm,0.2s						
CESI	**CESI - Serrava**	**0.28**	**321**	P	**Pg**	**01 41 55.2**	**+0.5**
CESI				S	**Sb**	**01 41 59.7**	**-0.4**
CESI				AML	AML		
	comp=N,59100µm,0.3s						
CESI				AML	AML		
	comp=E,34600µm,0.2s						
CESI				AML	AML		
	comp=N,59106µm,0.3s						
CESI				AML	AML		
	comp=E,34619µm,0.2s						
RM33	**Pellescritta (**	**0.29**	**169**	⇑P	**Pg**	**01 41 55.4**	**+0.5**
RM33				S	**Sb**	**01 42 00.2**	**-0.2**
RM33				AML	AML		
	comp=E,12800µm,0.9s						
RM33				AML	AML		
	comp=N,9510µm,0.2s						
RM33				AML	AML		
	comp=N,9140µm,1.5s						
RM33				AML	AML		
	comp=N,9520µm,0.2s						
RM33				AML	AML		
	comp=N,9145µm,1.5s						
RM33				AML	AML		
	comp=E,13200µm,0.9s						
RM33				AML	AML		
	comp=E,11681µm,0.2s						
RM33				AML	AML		
	comp=N,9526µm,0.2s						
RM33				AML	AML		
	comp=N,8896µm,0.2s						
RM33				AML	AML		
	comp=E,11220µm,0.2s						
CSP1	**Cessapalombo**	**0.30**	**9**	P	**Pg**	**01 41 55.3**	**0.0**
CSP1				AML	AML		
	comp=E,22650µm,0.4s						
CSP1				AML	AML		
	comp=N,28100µm,0.3s						
CSP1				AML	AML		
	comp=E,22600µm,0.4s						
CSP1				AML	AML		
	comp=N,28050µm,0.3s						
CSP1				AML	AML		
	comp=E,22620µm,0.4s						
CSP1				AML	AML		
	comp=N,28062µm,0.3s						
CAMP	**Campotosto**	**0.32**	**142**	⇑P	**Pg**	**01 41 55.8**	**+0.3**
CAMP				S	**Sg**	**01 42 00.9**	**+0.8**
CAMP				AML	AML		
	comp=E,5230µm,0.5s						
CAMP				AML	AML		
	comp=N,7850µm,0.5s						
CAMP				AML	AML		
	comp=N,7544µm,0.3s						
CAMP				AML	AML		
	comp=E,4344µm,0.2s						
ARRO	**Arrone**	**0.35**	**233**	⇑P	**Pb**	**01 41 56.8**	**0.0**
ARRO				S	**Sb**	**01 42 02.5**	**+0.4**
ARRO				AML	AML		
	comp=E,3050µm,1.2s						
ARRO				AML	AML		
	comp=N,3665µm,1.3s						
ARRO				AML	AML		
	comp=N,3670µm,1.3s						
ARRO				AML	AML		
	comp=E,3055µm,1.2s						
ARRO				AML	AML		
	comp=E,3004µm,0.2s						
ARRO				AML	AML		
	comp=N,3556µm,0.2s						
TERO	**Teramo**	**0.38**	**116**	⇑P	**Pg**	**01 41 56.6**	**+0.1**
TERO				AML	AML		
	comp=N,10910µm,0.1s						
TERO				AML	AML		
	comp=E,14100µm,0.8s						
TERO				AML	AML		
	comp=N,13100µm,0.1s						
TERO				AML	AML		
	comp=E,12450µm,0.8s						
TERO				AML	AML		
	comp=N,10950µm,0.1s						
TERO				AML	AML		
	comp=N,10940µm,0.1s						
TERO				AML	AML		
	comp=E,12500µm,0.8s						
TERO				AML	AML		
	comp=N,10927µm,0.1s						
TERO				AML	AML		
	comp=N,13097µm,0.1s						
TERO				AML	AML		
	comp=E,10981µm,0.1s						
TERO				AML	AML		
	comp=E,12839µm,0.1s						
SEF1	**Sefro**	**0.38**	**338**	⇑P	**Pg**	**01 41 56.9**	**+0.3**
SEF1				AML	AML		
	comp=E,19700µm,1.1s						
SEF1				AML	AML		
	comp=N,29600µm,0.2s						
SEF1				AML	AML		
	comp=N,29589µm,0.2s						
SEF1				AML	AML		
	comp=E,18522µm,0.3s						
MDAR	**Monte D'Aria**	**0.40**	**360**	⇓P	**Pg**	**01 41 57.2**	**+0.3**
MDAR				AML	AML		
	comp=E,11485µm,0.2s						
MDAR				AML	AML		
	comp=E,11470µm,0.2s						
MDAR				AML	AML		
	comp=N,7660µm,1.3s						
MDAR				AML	AML		
	comp=N,6668µm,0.3s						
MDAR				AML	AML		
	comp=E,11485µm,0.2s						
PIO1	**Pioraco**	**0.40**	**343**	⇑P	**Pg**	**01 41 57.4**	**+0.4**
PIO1				AML	AML		
	comp=E,4970µm,0.3s						
PIO1				AML	AML		
	comp=N,8130µm,1.2s						
PIO1				AML	AML		
	comp=N,8135µm,1.2s						
PIO1				AML	AML		
	comp=N,6510µm,0.4s						
PIO1				AML	AML		
	comp=E,4971µm,0.3s						
MNTP	**Montappone**	**0.42**	**35**	⇑P	**Pb**	**01 41 58.1**	**+0.2**
MNTP				AML	AML		
	comp=E,9565µm,0.6s						
MNTP				AML	AML		
	comp=N,7340µm,1.6s						
MNTP				AML	AML		
	comp=E,9550µm,0.7s						
MNTP				AML	AML		
	comp=N,7019µm,0.1s						
MNTP				AML	AML		
	comp=E,8317µm,0.3s						
OFFI	**Offida**	**0.42**	**70**	⇑P	**Pb**	**01 41 58.3**	**+0.2**
OFFI				AML	AML		
	comp=N,10900µm,0.3s						
OFFI				AML	AML		
	comp=E,6730µm,0.6s						
OFFI				AML	AML		
	comp=N,10916µm,0.3s						
OFFI				AML	AML		
	comp=E,6196µm,0.5s						
FIU1	**Fiuminata**	**0.43**	**339**	⇑P	**Pg**	**01 41 57.8**	**+0.4**
FIU1				AML	AML		
	comp=E,9405µm,0.4s						
FIU1				AML	AML		
	comp=E,9385µm,0.4s						
FIU1				AML	AML		
	comp=N,9915µm,1.0s						
FIU1				AML	AML		
	comp=E,6898µm,0.2s						
FIU1				AML	AML		
	comp=N,8911µm,0.1s						
ASSB	**Assisi San Ben**	**0.43**	**305**	⇓P	**Pg**	**01 41 57.9**	**+0.3**
ASSB				S	**Sb**	**01 42 04.7**	**0.0**
ASSB				AML	AML		
	comp=E,6195µm,0.2s						
ASSB				AML	AML		
	comp=N,7275µm,0.2s						
ASSB				AML	AML		
	comp=N,7274µm,0.2s						
ASSB				AML	AML		
	comp=E,6194µm,0.2s						
SSM1	**San Severino M**	**0.44**	**3**	⇓P	**Pg**	**01 41 57.8**	**+0.3**
GAG1	**Gagliole**	**0.45**	**353**	⇓P	**Pb**	**01 41 58.2**	**-0.3**
GAG1				AML	AML		
	comp=E,24000µm,0.2s						
GAG1				AML	AML		
	comp=N,19550µm,0.5s						
GAG1				AML	AML		
	comp=E,24050µm,0.2s						
GAG1				AML	AML		
	comp=N,19600µm,0.4s						
GAG1				AML	AML		
	comp=N,17484µm,0.2s						
GAG1				AML	AML		
	comp=E,24008µm,0.2s						

GIGS Gran Sasso 0.46 137 ⇑P Pg 01 41 58.0 -0.1
GIGS AML AML
comp=N,1290µm,1.5s
GIGS AML AML
comp=E,1175µm,0.3s
GIGS AML AML
comp=N,980µm,0.3s
GIGS AML AML
comp=E,885µm,0.2s
MTL1 Matelica 0.47 348 ⇓P Pg 01 41 58.7 +0.4
MTL1 AML AML
comp=E,18800µm,0.5s
MTL1 AML AML
comp=N,22900µm,0.4s
MTL1 AML AML
comp=E,13554µm,0.2s
MTL1 AML AML
comp=N,22896µm,0.4s
SNTG Esanatoglia 0.49 342 ⇑P Pg 01 41 58.5 0.0
SNTG S Sb 01 42 07.0 +0.9
SNTG AML AML
comp=E,860µm,0.1s
SNTG AML AML
comp=N,8045µm,0.1s
SNTG AML AML
comp=E,6895µm,0.1s
SNTG AML AML
comp=N,926µm,0.1s
SNTG AML AML
comp=E,6896µm,0.1s
SNTG AML AML
comp=N,8044µm,0.1s
SNTG AML AML
comp=N,927µm,0.1s
SNTG AML AML
comp=E,860µm,0.1s
FIAM Fiamignano 0.52 182 ⇑P Pg 01 41 59.4 +0.2
FIAM S Sb 01 42 08.0 +0.8
FIAM AML AML
comp=E,1940µm,0.4s
FIAM AML AML
comp=N,2700µm,1.2s
FIAM AML AML
comp=N,2253µm,0.4s
TRE1 Treia 0.53 13 ⇑P Pb 01 42 00.2 +0.3
TRE1 AML AML
comp=E,8985µm,0.7s
TRE1 AML AML
comp=N,6725µm,0.4s
TRE1 AML AML
comp=E,7814µm,0.4s
TRE1 AML AML
comp=N,6728µm,0.4s
EL6 Elcito 0.54 357 ⇓P Pb 01 42 00.7 +0.6
ATCC AVT- Casa Cast 0.54 317 ⇓P Pg 01 41 59.8 +0.3
ATCC S Sb 01 42 09.0 +1.4
ATCC AML AML
comp=E,6060µm,0.3s
ATCC AML AML
comp=N,7850µm,0.3s
ATCC AML AML
comp=N,7851µm,0.3s
ATCC AML AML
comp=E,6060µm,0.3s
TRTR Tortoreto Alta 0.57 88 ⇑P Pb 01 42 01.2 +0.8
TRTR AML AML
comp=E,7255µm,0.5s
TRTR AML AML
comp=N,6515µm,0.3s
TRTR AML AML
comp=N,6518µm,0.3s
TRTR AML AML
comp=E,7253µm,0.5s
FOSV Fossato di Vic 0.57 331 ⇓P Pg 01 42 00.3 +0.1
FOSV S Sb 01 42 10.0 +1.3
FOSV AML AML
comp=E,6605µm,0.2s
FOSV AML AML
comp=N,8655µm,0.3s
FOSV AML AML
comp=E,6601µm,0.2s
FOSV AML AML
comp=N,8653µm,0.3s
CING Cingoli 0.58 4 ⇓P Pg 01 42 00.3 0.0
CING AML AML
comp=N,4405µm,0.7s
CING AML AML
comp=E,5205µm,0.5s
CING AML AML
comp=E,4821µm,0.2s
CING AML AML
comp=N,4367µm,0.2s
FAGN Fagnano 0.62 148 ⇑P Pg 01 42 00.8 -0.2
FAGN AML AML
comp=E,6145µm,0.3s
FAGN AML AML
comp=N,6155µm,0.3s
FAGN AML AML
comp=N,6157µm,0.3s
FAGN AML AML
comp=E,6143µm,0.3s
VCEL Villa Celiera 0.65 127 ⇑P Pg 01 42 01.5 0.0
VCEL S Sn 01 42 13.0 -0.7
VCEL AML AML
comp=N,4635µm,1.4s
VCEL AML AML
comp=E,4280µm,1.2s
VCEL AML AML
comp=E,3757µm,0.3s
VCEL AML AML
comp=N,3924µm,0.3s
MURB Monte Urbino 0.65 316 ⇑P Pg 01 42 01.9 +0.3
MURB S Sn 01 42 13.0 -0.8
MURB AML AML
comp=N,10950µm,0.3s
MURB AML AML
comp=E,8605µm,1.3s
MURB AML AML
comp=N,11070µm,0.3s
MURB AML AML
comp=E,7165µm,1.4s
MURB AML AML
comp=E,6691µm,0.3s
MURB AML AML
comp=E,7625µm,0.3s
MURB AML AML
comp=N,11064µm,0.3s
MURB AML AML
comp=N,10952µm,0.3s
MMUR Monte Murano 0.66 351 ⇓P Pg 01 42 01.9 +0.2
MMUR AML AML
comp=E,6750µm,1.5s
MMUR AML AML
comp=N,7640µm,0.3s
MMUR AML AML
comp=E,6638µm,0.1s
MMUR AML AML
comp=N,7641µm,0.3s
PP3 Marolino 0.68 30 ⇑P Pb 01 42 02.9 +0.6
PP3 S Sn 01 42 14.0 -0.2
PP3 AML AML
comp=N,6760µm,0.4s
PP3 AML AML
comp=E,5465µm,0.4s
PP3 AML AML
comp=E,5385µm,1.0s
PP3 AML AML
comp=N,6825µm,0.4s
PP3 AML AML
comp=N,6826µm,0.4s
PP3 AML AML
comp=N,6761µm,0.4s
PP3 AML AML
comp=E,5466µm,0.4s
PP3 AML AML
comp=E,5291µm,0.4s
SSFR Montelago di S 0.70 338 ⇑P Pg 01 42 02.5 0.0
SSFR S Sn 01 42 14.0 -0.8
SSFR AML AML
comp=E,6655µm,1.5s
SSFR AML AML
comp=N,12450µm,0.2s
SSFR AML AML
comp=N,13000µm,0.3s
SSFR AML AML
comp=E,6395µm,0.2s
SSFR AML AML
comp=N,12446µm,0.2s
SSFR AML AML
comp=N,13012µm,0.3s
SSFR AML AML
comp=E,6631µm,0.2s
SSFR AML AML
comp=E,6396µm,0.2s
ATTE AVT- Monte Tez 0.71 305 ⇑P Pg 01 42 02.8 +0.2
ATTE AML AML
comp=E,1620µm,0.4s
ATTE AML AML
comp=N,1108µm,0.4s
ATTE AML AML
comp=E,1623µm,0.4s
ATTE AML AML
comp=N,1109µm,0.4s
ATFO Monte Foce - G 0.71 324 ⇑P Pg 01 42 02.8 +0.1
ATFO AML AML
comp=E,2430µm,0.2s
ATFO AML AML
comp=N,2870µm,0.3s
ATFO AML AML
comp=N,2870µm,0.3s
ATFO AML AML
comp=E,2433µm,0.2s
ARVD Arcevia 0.72 348 ⇓P Pg 01 42 02.8 -0.1
ARVD S Sn 01 42 15.0 -0.4
ARVD AML AML
comp=E,2590µm,0.2s
ARVD AML AML
comp=N,2060µm,0.3s
ARVD AML AML
comp=N,1889µm,0.1s
ARVD AML AML
comp=E,2587µm,0.2s
T0110 Collepietro 0.73 140 ⇑P Pg 01 42 02.6 -0.5
T0110 AML AML
comp=E,2930µm,0.4s
T0110 AML AML
comp=N,4355µm,0.6s
T0110 AML AML
comp=N,4353µm,0.6s
MGAB Montegabbione 0.77 279 ⇑P Pb 01 42 04.2 +0.3
MGAB AML AML
comp=E,1620µm,0.7s
MGAB AML AML
comp=N,2240µm,1.1s
MGAB AML AML
comp=E,2030µm,0.4s
MGAB AML AML
comp=N,2130µm,0.4s
MGAB AML AML
comp=E,2030µm,0.4s
MGAB AML AML
comp=E,1569µm,0.3s
MGAB AML AML
comp=N,2140µm,0.4s
MGAB AML AML
comp=N,2131µm,0.4s
FRON Frontone 0.79 337 ⇓P Pg 01 42 03.8 -0.3
FRON AML AML
comp=E,3380µm,0.2s
FRON AML AML
comp=N,3005µm,0.3s
FRON AML AML
comp=N,3008µm,0.3s
FRON AML AML
comp=E,3382µm,0.2s
PTQR Pietraquaria 0.79 166 ⇑P Pg 01 42 03.9 -0.3
PTQR AML AML
comp=N,442µm,0.3s
PTQR AML AML
comp=E,757µm,0.5s
PTQR AML AML
comp=N,442µm,0.3s
PTQR AML AML
comp=E,757µm,0.5s
ATVO AVT- Monte Val 0.80 318 ⇓P Pg 01 42 04.2 -0.2
ATVO AML AML
comp=E,1195µm,0.8s
ATVO AML AML
comp=N,1350µm,0.6s
ATVO AML AML
comp=E,1158µm,0.4s
ATVO AML AML
comp=N,1348µm,0.6s
MTCE Montecelio 0.82 201 P Pg 01 42 04.4 -0.4
MTCE AML AML
comp=E,1013µm,0.4s
MTCE AML AML
comp=N,632µm,0.4s
MTCE AML AML
comp=E,1013µm,0.4s
MTCE AML AML
comp=N,632µm,0.4s
AOI Ancona 0.83 24 ⇑P Pb 01 42 05.4 +0.5
AOI AML AML
comp=E,1235µm,0.7s
AOI AML AML
comp=N,1395µm,0.3s
AOI AML AML
comp=N,1396µm,0.3s
AOI AML AML
comp=E,1222µm,0.3s
ATMI Monte Miggiano 0.84 310 ⇓P Pb 01 42 05.3 +0.2
ATMI AML AML
comp=N,3190µm,0.3s
ATMI AML AML
comp=E,3025µm,0.4s
ATMI AML AML
comp=N,3186µm,0.3s
ATMI AML AML
comp=E,3026µm,0.4s
COR1 Corinaldo 0.85 353 ⇑P Pb 01 42 05.9 +0.6
COR1 AML AML
comp=E,2616µm,0.4s
COR1 AML AML
comp=N,3390µm,0.4s
COR1 AML AML
comp=E,4505µm,0.3s
COR1 AML AML
comp=N,3520µm,0.4s
COR1 AML AML
comp=E,4503µm,0.3s
COR1 AML AML
comp=E,2617µm,0.4s
COR1 AML AML
comp=N,3522µm,0.4s
COR1 AML AML
comp=N,3388µm,0.4s
CERT Cerreto 0.85 188 ⇓P Pg 01 42 05.0 -0.3
CERT AML AML
comp=E,1340µm,0.5s
CERT AML AML
comp=N,926µm,0.5s
CERT AML AML
comp=N,926µm,0.5s
CERT AML AML
comp=E,1269µm,0.3s
ATPI Pietralunga - 0.85 321 P Pg 01 42 05.2 -0.1
ATPI AML AML
comp=N,1108µm,0.5s
ATPI AML AML
comp=E,1130µm,0.7s
ATPI AML AML
comp=E,997µm,0.3s
ATPI AML AML
comp=N,1106µm,0.5s
PIEI Pieia 0.87 329 ⇑P Pg 01 42 05.3 -0.4
PIEI S Sn 01 42 20.0 +1.0
PIEI AML AML
comp=E,1805µm,0.9s
PIEI AML AML
comp=N,1082µm,0.2s
PIEI AML AML
comp=N,1081µm,0.2s
PIEI AML AML
comp=E,1774µm,0.2s
MPAG Monte Paganucc 0.88 342 ⇑P Pg 01 42 05.7 -0.2
MPAG S Sn 01 42 20.0 +0.6
MPAG AML AML
comp=E,4235µm,0.3s
MPAG AML AML
comp=N,3260µm,0.2s
MPAG AML AML
comp=E,4220µm,0.2s
MPAG AML AML
comp=N,3285µm,0.2s
MPAG AML AML
comp=E,4235µm,0.2s
MPAG AML AML
comp=E,4222µm,0.2s
MPAG AML AML
comp=N,3258µm,0.2s
MPAG AML AML
comp=N,3285µm,0.2s
SACS San Casciano d 0.91 274 ⇓P Pb 01 42 07.0 +0.7
SACS AML AML
comp=E,766µm,1.2s
SACS AML AML
comp=N,714µm,0.8s
SACS AML AML
comp=N,711µm,0.6s
SACS AML AML
comp=E,540µm,0.8s
SACS AML AML
comp=E,560µm,0.8s
SENI Senigallia 0.92 4 ⇓P Pn 01 42 07.3 +0.2
SENI AML AML
comp=N,6915µm,1.3s
SENI AML AML
comp=E,6095µm,0.3s
SENI AML AML
comp=E,6096µm,0.3s
SENI AML AML
comp=N,6150µm,0.3s
NARO Abbazia di Nar 0.92 334 P Pg 01 42 06.0 -0.5
NARO S Sn 01 42 21.0 +0.9
NARO AML AML
comp=E,942µm,0.7s
NARO AML AML
comp=N,899µm,1.0s
NARO AML AML
comp=N,628µm,0.3s
NARO AML AML
comp=E,885µm,0.3s
APEC Apecchio 0.93 326 ⇓P Pg 01 42 06.8 -0.1
APEC S Sn 01 42 22.0 +1.5
APEC AML AML
comp=N,712µm,0.3s
FSSB Fossombrone 0.94 344 ⇓P Pg 01 42 06.7 -0.3
FSSB S Sn 01 42 22.0 +1.3
FSSB AML AML
comp=E,7790µm,0.3s
FSSB AML AML
comp=N,11000µm,0.3s
FSSB AML AML
comp=N,11049µm,0.3s
FSSB AML AML
comp=E,7793µm,0.3s
RCAV Rocca di Cave 0.95 189 P Pn 01 42 08.7 +1.0
RCAV AML AML
comp=N,1415µm,0.4s
RCAV AML AML
comp=E,1366µm,1.0s
RCAV AML AML
comp=E,1192µm,0.4s
RCAV AML AML
comp=N,1417µm,0.4s
INTR Introdacqua 0.96 144 ⇑P Pg 01 42 06.4 -1.1
INTR AML AML
comp=E,770µm,1.3s
INTR AML AML
comp=N,1450µm,0.6s
INTR AML AML
comp=E,758µm,0.6s
INTR AML AML
comp=E,758nm,0.6s
BADI Badiali 0.97 318 P Pb 01 42 07.8 +0.3
BADI AML AML
comp=E,117µm,0.4s
BADI AML AML
comp=N,625µm,0.8s
VVLD Villa Vallelon 0.99 159 ⇓P Pg 01 42 07.7 -0.2
VVLD AML AML
comp=E,674µm,0.5s
VVLD AML AML
comp=N,833µm,0.5s
VVLD AML AML
comp=N,835µm,0.5s
VVLD AML AML
comp=E,674µm,0.5s
GUAR Guarcino 1.00 173 ⇑P Pn 01 42 09.2 +0.8
GUAR AML AML
comp=E,742µm,0.6s
GUAR AML AML
comp=N,815µm,0.6s
GUAR AML AML
comp=N,815µm,0.6s
GUAR AML AML
comp=E,742µm,0.6s
CAFI Castiglion Fio 1.02 302 ⇓P Pg 01 42 08.6 +0.1
CAFI AML AML
comp=E,604µm,0.4s
CAFI AML AML
comp=E,618µm,0.4s
CAFI AML AML
comp=N,741µm,0.5s
CAFI AML AML
comp=N,786µm,0.5s
CAFI AML AML
comp=E,618µm,0.4s
CAFI AML AML
comp=E,605µm,0.4s
CAFI AML AML
comp=N,786µm,0.5s
CAFI AML AML
comp=N,741µm,0.5s
PE3 Peglio 1.02 333 ⇑P Pb 01 42 08.5 +0.3
PE3 AML AML
comp=E,11µm,1.0s
PE3 AML AML
comp=N,11µm,0.2s
PE3 AML AML
comp=E,11µm,0.2s
PE3 AML AML
comp=N,11µm,0.2s
RMP Rome, Mte Porz 1.03 199 ⇓P Pn 01 42 10.5 +1.7
RMP AML AML
comp=N,1262µm,0.4s
RMP AML AML
comp=E,1100µm,0.4s
RMP AML AML
comp=E,1099µm,0.4s
RMP AML AML
comp=N,1263µm,0.4s
LPEL Lama dei Pelig 1.07 134 ⇓P Pb 01 42 08.0 -1.1
LPEL S Sn 01 42 25.0 +1.0
LPEL AML AML
comp=E,718µm,0.3s
LPEL AML AML
comp=N,820µm,0.5s
LPEL AML AML
comp=E,718µm,0.3s
LPEL AML AML
comp=N,776µm,0.3s
SSP9 Sansepolcro 1.08 317 ⇓P Pn 01 42 10.2 +0.8
SSP9 AML AML
comp=E,555µm,0.9s
SSP9 AML AML
comp=N,652µm,0.7s
SSP9 AML AML
comp=N,652µm,0.7s
SSP9 AML AML
comp=E,556µm,0.9s
MCIV Monte Civitell 1.08 270 ⇓P Pn 01 42 10.8 +1.3
MCIV AML AML
comp=E,257µm,1.5s
MCIV AML AML
comp=N,290µm,0.7s
MCIV AML AML
comp=N,289µm,0.7s
MCIV AML AML
comp=E,253µm,0.3s
PARC Parchiule 1.08 323 ⇑P Pb 01 42 09.5 +0.2
PARC AML AML
comp=E,906µm,1.0s
PARC AML AML
comp=N,704µm,0.7s
PARC AML AML
comp=E,906µm,1.0s
PARC AML AML
comp=N,704µm,0.7s
SF04 Casetta 1.09 273 ⇑P Pn 01 42 11.2 +1.5

SF04 AML AML
SF04 comp=N,351µm,0.2s AML AML
SF04 comp=E,452µm,0.4s AML AML
TOLF Tolfa 1.12 230 ⇓P Pg 01 42 10.9 +0.5
TOLF AML AML
TOLF comp=E,336µm,0.5s AML AML
TOLF comp=N,363µm,0.4s AML AML
TOLF comp=N,363µm,0.4s AML AML
TOLF comp=E,336µm,0.5s AML AML
POFI Posta Fibreno 1.15 158 ⇑P Pb 01 42 10.4 -0.1
POFI AML AML
POFI comp=E,374µm,1.0s AML AML
POFI comp=N,300µm,0.5s AML AML
POFI comp=E,375µm,1.0s AML AML
POFI comp=E,370µm,1.0s AML AML
POFI comp=N,300µm,0.5s AML AML
POFI comp=N,290µm,0.5s AML AML
LAV9 Lanuvio 1.16 197 ⇑P Pg 01 42 12.4 +1.2
LAV9 AML AML
LAV9 comp=N,1560µm,0.4s AML AML
LAV9 comp=E,1870µm,0.4s AML AML
LAV9 comp=N,1660µm,0.4s AML AML
LAV9 comp=E,1820µm,0.4s AML AML
LAV9 comp=E,1819µm,0.4s AML AML
LAV9 comp=E,1870µm,0.4s AML AML
LAV9 comp=N,1663µm,0.4s AML AML
LAV9 comp=N,1562µm,0.4s AML AML
PESA Pesaro 1.17 349 ⇑P Pg 01 42 11.6 +0.2
PESA AML AML
PESA comp=E,2315µm,0.3s AML AML
PESA comp=N,2945µm,0.7s AML AML
LRP Arpino 1.19 164 P Pg 01 42 13.3 +1.6
LRP AML AML
LRP comp=N,460µm,0.7s AML AML
LRP comp=E,264µm,0.5s AML AML
LRP comp=N,460µm,0.7s AML AML
LRP comp=E,264µm,0.5s AML AML
CRE Caprese Michel 1.20 314 ⇑P Pn 01 42 11.7 +0.5
CRE AML AML
CRE comp=E,412µm,0.4s AML AML
CRE comp=N,526µm,0.4s AML AML
CRE comp=N,526µm,0.4s AML AML
CRE comp=E,413µm,0.4s AML AML
ARCI Arcidosso 1.23 273 ⇑P Pg 01 42 13.9 +1.4
ARCI AML AML
ARCI comp=E,113µm,0.6s AML AML
ARCI comp=N,103µm,0.9s AML AML
ARCI comp=E,113µm,0.6s AML AML
ARCI comp=N,103µm,0.9s AML AML
GIUL Giuliano Di Ro 1.24 176 ⇓P Pg 01 42 14.2 +1.6
GIUL AML AML
GIUL comp=N,376µm,0.5s AML AML
GIUL comp=E,258µm,0.9s AML AML
GIUL comp=E,257µm,0.9s AML AML
GIUL comp=N,375µm,0.5s AML AML
LATB Latina 1.30 186 ⇓P Pg 01 42 14.2 +0.3
LATB AML AML
LATB comp=E,113µm,0.6s AML AML
LATB comp=N,73µm,0.9s AML AML
LATB comp=N,73µm,0.9s AML AML
LATB comp=E,113µm,0.6s AML AML
CERA Filignano 1.36 151 ⇓P Pn 01 42 13.5 +0.1
CERA AML AML
CERA comp=N,520µm,0.7s AML AML
CERA comp=E,551µm,0.5s AML AML
CERA comp=N,550µm,0.7s AML AML
CERA comp=E,522µm,0.5s AML AML
CERA comp=E,523µm,0.5s AML AML
CERA comp=E,551µm,0.5s AML AML
CERA comp=N,551µm,0.7s AML AML
CERA comp=N,520µm,0.7s AML AML
FRES Fresagrandinar 1.40 125 ⇑P Pg 01 42 16.2 +0.6
FRES AML AML
FRES comp=N,244µm,1.5s AML AML
FRES comp=E,370µm,0.6s AML AML
FRES comp=E,370µm,0.6s AML AML
FRES comp=N,195µm,0.6s AML AML
ASQU Asqua 1.41 316 ⇑P Pg 01 42 16.3 +0.4
ASQU AML AML
ASQU comp=E,276µm,0.4s AML AML
ASQU comp=N,402µm,0.8s AML AML
ASQU comp=E,276µm,0.4s AML AML
ASQU comp=N,403µm,0.8s AML AML
SFI Santa Sofia 1.46 320 ⇓P Pn 01 42 15.4 +0.7
SFI AML AML
SFI comp=E,265µm,0.9s AML AML
SFI comp=N,260µm,1.6s AML AML
SFI comp=N,312µm,0.9s AML AML
SFI comp=N,258µm,0.9s AML AML
SFI comp=E,266µm,0.9s AML AML
SFI comp=E,265µm,0.9s AML AML
TRIV Trivento 1.46 134 ⇑P Pg 01 42 17.8 +0.9
TRIV AML AML
TRIV comp=E,362µm,0.9s AML AML
TRIV comp=N,303µm,0.6s AML AML
TRIV comp=N,303µm,0.6s AML AML
TRIV comp=N,280µm,0.7s AML AML
TRIV comp=E,361µm,0.9s AML AML
TRIV comp=E,378µm,0.8s AML AML
RUFI Rufina 1.59 312 ⇑P Pb 01 42 18.4 +0.5
RUFI AML AML
RUFI comp=E,260µm,0.7s AML AML
RUFI comp=N,218µm,0.5s AML AML
VAGA Valle Agricola 1.60 149 ⇓P Pg 01 42 20.3 +0.8
VAGA AML AML
VAGA comp=E,182µm,1.0s AML AML
VAGA comp=N,324µm,0.4s AML AML
VAGA comp=E,181µm,1.0s AML AML
VAGA comp=E,146µm,0.7s AML AML

BSSO Busso 1.65 139 ⇓P Pg 01 42 21.2 +0.8
TRIF Trifonti 1.68 282 ⇑P Pb 01 42 19.1 -0.3
TRIF AML AML
TRIF comp=E,117µm,0.7s AML AML
TRIF comp=N,116µm,0.9s AML AML
TRIF comp=E,117µm,0.7s AML AML
TRIF comp=N,117µm,0.9s AML AML
CASP Castiglione de 1.68 271 ⇓P Pn 01 42 18.6 +1.0
CASP AML AML
CASP comp=E,67µm,0.8s AML AML
CASP comp=N,54µm,1.3s AML AML
CASP comp=N,43µm,1.0s AML AML
CIGN Sant'Elia a Pi 1.73 130 ⇑P Pb 01 42 21.4 +1.0
CIGN AML AML
CIGN comp=E,130µm,0.7s AML AML
CIGN comp=N,165µm,0.8s AML AML
CIGN comp=E,130µm,0.7s AML AML
CIGN comp=N,165µm,0.8s AML AML
BRIS BRISIGHELLA 1.80 319 ⇑P Pg 01 42 24.1 +0.6
MELA Melanico ??? S 1.83 126 ⇑P Pb 01 42 22.2 +0.3
MELA AML AML
MELA comp=E,636µm,0.4s AML AML
MELA comp=N,482µm,0.4s AML AML
MELA comp=N,560µm,0.4s AML AML
MELA comp=E,606µm,0.4s AML AML
MELA comp=N,483µm,0.4s AML AML
MELA comp=N,560µm,0.5s AML AML
MELA comp=E,636µm,0.4s AML AML
MELA comp=E,605µm,0.4s AML AML
DUGI Dugi Otok 1.84 49 ePn Pb 01 42 21.4 -0.7
MTCR Monte La Croce 1.99 309 P Pb 01 42 23.9 -0.9
VIRC Vir 2.04 42 ePn Pn 01 42 23.9 +1.2
APRC Apricena 2.06 119 P Pn 01 42 24.9 +1.9
APRC AML AML
APRC comp=E,229µm,0.3s AML AML
APRC comp=N,298µm,1.0s AML AML
APRC comp=E,211µm,0.2s AML AML
APRC comp=E,229µm,0.3s AML AML
APRC comp=N,284µm,0.3s AML AML
PII Pisa 2.13 297 P Pn 01 42 25.0 +1.2
PII AML AML
PII comp=E,84µm,0.7s AML AML
PII comp=N,99µm,0.6s AML AML
PII comp=N,98µm,0.6s AML AML
PII comp=E,84µm,0.7s AML AML
POPM Popiglio 2.14 307 ⇑P Pn 01 42 25.6 +1.5
POPM AML AML
POPM comp=N,78µm,0.7s AML AML
POPM comp=E,68µm,1.2s AML AML
POPM comp=E,66µm,0.3s AML AML
MORI Morici 2.16 59 ePn Pn 01 42 25.8 +1.6
BRJN Brijuni 2.16 12 ⇓P Pn 01 42 26.1 +1.8
NVLJ Novalja 2.17 35 ePn Pn 01 42 25.4 +1.0
SGRT San Giovanni R 2.19 117 ⇑P Pn 01 42 26.9 +2.1
SGRT AML AML
SGRT comp=N,226µm,0.4s AML AML
SGRT comp=E,264µm,0.6s AML AML
SGRT comp=N,226µm,0.4s AML AML
SGRT comp=E,264µm,0.6s AML AML
MAIM Mastiano 2.24 301 ⇑P Pn 01 42 27.0 +1.7
MAIM AML AML
MAIM comp=E,83µm,0.7s AML AML
MAIM comp=N,82µm,1.0s AML AML
MAIM comp=N,82µm,1.0s AML AML
MAIM comp=E,83µm,0.7s AML AML
BDI Bagni Di Lucca 2.25 305 P Pn 01 42 26.8 +1.2
BDI AML AML
BDI comp=E,38µm,1.0s AML AML
BDI comp=N,42µm,0.4s AML AML
BDI comp=N,148µm,0.4s AML AML
BDI comp=E,38µm,1.0s AML AML
BDI comp=N,42µm,0.4s AML AML
RABC Rab 2.29 31 ePn Pn 01 42 27.1 +1.1
MSAG Monte S. Angel 2.32 117 P Pn 01 42 28.8 +2.2
MSAG AML AML
MSAG comp=E,297µm,0.6s AML AML
MSAG comp=N,438µm,1.0s AML AML
MSAG comp=N,415µm,0.7s AML AML
MSAG comp=N,433µm,0.3s AML AML
MSAG comp=E,297µm,0.6s AML AML
MSAG comp=E,287µm,0.6s AML AML
SGTA Sant Agata di 2.34 134 P Pb 01 42 30.3 -0.5
SGTA AML AML
SGTA comp=N,85µm,0.6s AML AML
SGTA comp=E,120µm,1.2s AML AML
SGTA comp=N,233µm,1.0s AML AML
SGTA comp=E,164µm,0.9s AML AML
SGTA comp=N,85µm,0.6s AML AML
SGTA comp=E,120µm,1.2s AML AML
SNAL S. Angelo Dei 2.42 140 ⇑P Pb 01 42 31.2 -0.9
SNAL AML AML
SNAL comp=E,103µm,1.1s AML AML
SNAL comp=N,99µm,0.7s AML AML
SNAL comp=N,116µm,0.8s AML AML
SNAL comp=N,99µm,0.7s AML AML
SNAL comp=E,103µm,1.1s AML AML
SNAL comp=E,104µm,1.2s AML AML
HVAR Hvar 2.46 80 ePn Pn 01 42 29.8 +1.4
HVAR Hvar 2.46 80 ⇑P Pn 01 42 30.2 +1.9
HVAR S Sb 01 43 01.0 -1.7
UDBI Udbina 2.58 47 ePn Pn 01 42 32.4 +2.4
KIJV Kijevo 2.67 62 ePn Pn 01 42 33.8 +2.5
LSTV Lastovo 2.76 89 ePn Pn 01 42 33.9 +1.4
PALZ Palazzo San Ge 2.80 130 ⇓P Pn 01 42 35.5 +2.5
PALZ AML AML
PALZ comp=E,161µm,0.9s AML AML
PALZ comp=N,126µm,1.4s AML AML
PALZ comp=N,126µm,1.4s AML AML
PALZ comp=E,161µm,0.9s AML AML
SKDS Skadanscina 2.82 13 ePn Pn 01 42 33.1 -0.3
SKDS Skadanscina 2.82 13 i Pn Pn 01 42 34.2 +0.8
SKDS i Sn Sn 01 43 08.6 +1.3
SKDS IAML 01 43 09.0
SKDS comp=Z,38nm,0.4s
KNDS Knezji Dol 2.88 18 ePn Pn 01 42 35.5 +1.3

KNDS i Sn Sn 01 43 10.4 +1.8
KNDS IAML 01 43 16.9
KNDS comp=Z,22nm,0.4s
MAKA Makarska 2.88 79 ePn Pn 01 42 35.8 +1.6
SMPL Sampolo 2.94 258 P Pn 01 42 37.6 +2.6
A050A Klekovaca 2.98 54 ePn Pn 01 42 38.6 +2.9
RICI Ricice 3.00 75 ePn Pn 01 42 38.1 +2.2
PGF Pioggiola 3.06 267 eP Pn 01 42 38.8 +2.0
PGF eSn Sn 01 43 09.5 -3.8
PGF comp=Z,3.6nm,0.4s
PGF Pioggiola 3.06 267 P Pn 01 42 38.8 +2.0
CEY Cerknica 3.09 17 ePn Pn 01 42 37.3 +0.2
CEY Cerknica 3.09 17 ePn Pn 01 42 38.1 +1.0
CEY i Sg Sn 01 43 14.7 +1.0
CEY IAML 01 43 20.8
BOJS Bojanci 3.11 29 ePn Pn 01 42 39.3 +2.0
BOJS Bojanci 3.11 29 P Pn 01 42 40.4 +3.1
BOJS AML AML
BOJS comp=E,196µm,1.5s AML AML
BOJS comp=N,162µm,1.1s AML AML
BOJS comp=E,179µm,0.6s AML AML
BOJS comp=N,160µm,0.8s AML AML
JAVS Javornik 3.17 12 i Pn Pn 01 42 38.7 +0.5
JAVS eSn Sn 01 43 17.1 +1.2
JAVS IAML 01 43 18.5
JAVS comp=Z,6.1nm,0.2s
SRKY Kupres RS 3.19 65 ePn Pb 01 42 43.3 -2.0
AMUR Altamura 3.20 125 ⇓P Pn 01 42 40.9 +2.3
AMUR S Sn 01 43 19.0 +2.5
AMUR AML AML
AMUR comp=N,61µm,0.9s AML AML
AMUR comp=E,62µm,0.8s AML AML
AMUR comp=N,55µm,0.4s AML AML
AMUR comp=E,54µm,0.6s AML AML
SABO M.te Sabotino 3.20 6 ⇑P Pn 01 42 39.9 +1.2
SABO AML AML
SABO comp=E,530µm,0.7s AML AML
SABO comp=E,132µm,0.4s AML AML
SABO comp=N,200µm,0.6s AML AML
SABO comp=N,764µm,0.6s AML AML
SABO comp=E,132µm,0.4s AML AML
SABO comp=E,530µm,0.7s AML AML
SABO comp=N,200µm,0.6s AML AML
SABO comp=N,764µm,0.6s AML AML
CGRP Cima Grappa 3.23 343 ⇓P Pn 01 42 41.3 +2.1
CGRP AML AML
CGRP comp=N,180µm,0.5s AML AML
CGRP comp=E,150µm,0.4s AML AML
CGRP comp=N,181µm,0.5s AML AML
CGRP comp=N,179µm,0.5s AML AML
CGRP comp=E,150µm,0.4s AML AML
CGRP comp=E,160µm,1.1s AML AML
GBAS Gorenja Brezov 3.28 16 i Pn Pn 01 42 41.3 +1.6
GBAS i Sn Sn 01 43 19.5 +1.1
MGRS Mrkonjic Grad 3.29 59 ePn Pb 01 42 44.7 -2.2
GORR Gorreto 3.33 304 ⇑P Pb 01 42 46.6 -1.0
STON Ston 3.35 87 ePn Pn 01 42 32.7 -7.9
STON Ston 3.35 87 ePn Pn 01 42 41.1 +0.5
STON Ston 3.35 87 ePn Pn 01 42 41.5 +0.9
STON eSn Sn 01 43 20.5 +0.3
STON Ston 3.35 87 ⇑P Pn 01 42 42.1 +1.4
STON AML AML
STON comp=E,47µm,0.8s AML AML
STON comp=N,58µm,1.2s AML AML
STON comp=N,41µm,0.3s AML AML
STON comp=E,41µm,0.3s AML AML
DOSS Dosso del Somm 3.39 336 P Pn 01 42 44.1 +2.8
DOSS AML AML
DOSS comp=N,75µm,0.6s AML AML
DOSS comp=E,81µm,0.5s AML AML
DOSS comp=N,86µm,0.9s AML AML
DOSS comp=E,161µm,1.1s AML AML
DOSS comp=E,81µm,0.5s AML AML
DOSS comp=N,75µm,0.6s AML AML
SALO Salr 3.40 327 ⇑P Pn 01 42 44.4 +3.1
SALO AML AML
SALO comp=N,102µm,0.6s AML AML
SALO comp=E,100µm,0.6s AML AML
SALO comp=N,103µm,0.6s AML AML
SALO comp=N,103µm,0.6s AML AML
SALO comp=E,100µm,0.6s AML AML
SALO comp=E,97µm,1.0s AML AML
LJU Ljubljana 3.40 16 ⇑P Pn 01 42 43.3 +1.9
LJU AML AML
LJU comp=E,368µm,0.8s AML AML
LJU comp=N,602µm,0.8s AML AML
LJU comp=N,602µm,0.8s AML AML
LJU comp=E,368µm,0.8s AML AML
CRES Cresnjev 3.46 28 ePn Pn 01 42 43.5 +1.4
STAL STALIGIAL 3.48 355 ⇑P Pn 01 42 44.2 +1.7
STAL AML AML
STAL comp=E,132µm,0.4s AML AML
STAL comp=N,94µm,0.2s AML AML
STAL comp=N,93µm,0.2s AML AML
STAL comp=E,132µm,0.4s AML AML
STAL comp=N,233µm,1.0s AML AML
STAL comp=E,150µm,0.6s AML AML
MAGA Magasa 3.49 330 ⇓P Pn 01 42 45.1 +2.5
MAGA AML AML
MAGA comp=E,246µm,0.5s AML AML
MAGA comp=N,142µm,0.4s AML AML
MAGA comp=E,246µm,0.5s AML AML
MAGA comp=N,143µm,0.4s AML AML
A051A Mrakovica 3.51 49 ePn Pn 01 42 45.6 +2.7
LTRZ Laterza 3.52 127 P Pn 01 42 45.4 +2.5
LTRZ AML AML
LTRZ comp=E,477µm,1.3s AML AML
LTRZ comp=E,45µm,0.4s AML AML
LTRZ comp=N,1098µm,1.9s AML AML
LTRZ comp=N,22718µm,32.7s AML AML
BLY Banja Luka 3.52 55 ePn Pn 01 42 47.2 +4.2
LUSI Trento, Gardas 3.54 334 ⇑P Pn 01 42 45.8 +2.5
LUSI AML AML
LUSI comp=E,65µm,0.8s AML AML
LUSI comp=N,108µm,0.8s AML AML
LUSI comp=N,103µm,0.2s AML AML
LUSI comp=E,57µm,0.7s AML AML
NOCI Noci 3.55 123 ⇓P Pn 01 42 45.7 +2.3

NOCI AML AML
comp=E,53µm,1.4s
NOCI AML AML
comp=N,76µm,0.4s
NOCI AML AML
comp=E,48µm,0.4s
NOCI AML AML
comp=N,76µm,0.4s
CIMO Cimolais 3.55 352 ⇓P **Pn 01 42 44.9 +1.4**
CIMO AML AML
comp=E,32µm,0.7s
CIMO AML AML
comp=N,23µm,1.3s
CIMO AML AML
comp=E,34µm,0.4s
CIMO AML AML
comp=N,26µm,0.5s
CIMO AML AML
comp=E,32µm,0.7s
CIMO AML AML
comp=N,21µm,0.5s
PTCC Patocco-Chiusa 3.62 2 ⇑P **Pn 01 42 45.4 +1.1**
PTCC AML AML
comp=N,37µm,0.8s
PTCC AML AML
comp=E,39µm,0.4s
PTCC AML AML
comp=N,37µm,0.4s
PTCC AML AML
comp=E,39µm,0.4s
CLUD Cludinico 3.67 357 ⇑P **Pn 01 42 46.8 +1.7**
CLUD AML AML
comp=E,60µm,0.8s
CLUD AML AML
comp=N,49µm,0.7s
CLUD AML AML
comp=N,120µm,1.7s
CLUD AML AML
comp=N,49µm,0.7s
CLUD AML AML
comp=E,65µm,1.0s
CLUD AML AML
comp=E,57µm,1.0s
ZONE Zone 3.68 325 ⇑P **Pn 01 42 47.6 +2.4**
ZONE AML AML
comp=E,137µm,1.6s
ZONE AML AML
comp=E,59µm,0.7s
ZONE AML AML
comp=N,85µm,0.6s
ZONE AML AML
comp=N,180µm,1.4s
ZONE AML AML
comp=N,158µm,0.9s
ZONE AML AML
comp=E,125µm,0.8s
ZONE AML AML
comp=N,73µm,0.3s
ZONE AML AML
comp=E,54µm,0.2s
DBRK Dubrovnik 3.69 90 *e*Pn **Pn 01 42 46.2 +0.9**
ACOM Acomizza, Ital 3.77 4 ⇑P **Pn 01 42 48.7 +2.2**
ACOM AML AML
comp=E,116µm,1.5s
ACOM AML AML
comp=N,100µm,0.7s
ACOM AML AML
comp=E,88µm,0.9s
ACOM AML AML
comp=N,140µm,0.8s
ACOM AML AML
comp=E,71µm,0.3s
ACOM AML AML
comp=N,91µm,0.8s
ACOM AML AML
comp=N,87µm,0.7s
ACOM AML AML
comp=E,92µm,0.7s
ZOU Zoufplan 3.77 358 ⇑P **Pn 01 42 48.1 +1.6**
ZOU AML AML
comp=E,60µm,0.5s
ZOU AML AML
comp=N,64µm,0.7s
ZOU AML AML
comp=E,60µm,0.5s
ZOU AML AML
comp=E,82µm,0.8s
ZOU AML AML
comp=N,69µm,0.8s
ZOU AML AML
comp=N,64µm,0.7s
TREB Trebinje 3.83 89 *e*Pn **Pn 01 42 48.6 +1.3**
TAR1 Taranto 3.84 125 ⇓P **Pn 01 42 50.0 +2.6**
TAR1 AML AML
comp=E,40µm,0.2s
TAR1 AML AML
comp=N,52µm,0.5s
TAR1 AML AML
comp=E,40µm,0.2s
TAR1 AML AML
comp=N,52µm,0.5s
OBKA Obir 3.85 15 *e*Pn **Pn 01 42 48.6 +1.0**
OBKA Obir 3.85 15 *e*Pn **Pn 01 42 48.8 +1.3**
comp=N,0.8nm,0.1s
MYKA Terra Mystica 3.85 5 *e*Pn **Pn 01 42 49.3 +1.6**
comp=N,2.0nm,0.2s
KOSI Kohlern 3.88 342 ⇑P **Pn 01 42 50.6 +2.5**
APPI Appiano 3.93 340 P **Pn 01 42 51.6 +2.8**
APPI AML AML
comp=E,62µm,0.2s
APPI AML AML
comp=N,50µm,0.4s
HCY Herceg Novi 3.96 93 *e*Pn **Pn 01 42 50.6 +1.5**
ABTA Abfaltersbach 3.98 354 *e*Pn **Pn 01 42 51.7 +2.3**
comp=N,19nm,0.5s,SNR=30
BRES Bressanone 4.03 346 P **Pn 01 42 52.9 +2.7**
BRES AML AML
comp=E,280µm,4.1s
BRES AML AML
comp=N,63µm,0.5s
SOKA Soboth 4.11 18 *e*Pn **Pn 01 42 52.9 +1.7**
comp=N,0.5nm,0.2s
RISI Rein 4.22 350 ⇑P **Pn 01 42 55.7 +2.9**
RISI AML AML
comp=E,97µm,0.4s
RISI AML AML
comp=N,116µm,0.4s
RISI AML AML
comp=N,116µm,0.4s
RISI AML AML
comp=E,97µm,0.4s
UPM Unac-Piva 4.25 82 *e*Pn **Pn 01 42 55.7 +2.6**
KBA Koelnbreinsper 4.29 2 *e*Pn **Pn 01 42 55.8 +2.1**
comp=E,6.5nm,0.3s,SNR=5.7
IST3 Stromboli F 4.29 158 ⇑P **Pb 01 43 05.6 +1.7**
ISTR Stromboli Gino 4.29 158 ⇑P **Pg 01 43 08.1 -2.9**
MUGIO Muggio 4.29 318 ⇓P **Pn 01 42 56.1 +2.4**
MUGIO AML AML
comp=E,20µm,0.7s
MUGIO AML AML
comp=N,21µm,0.5s
MUGIO AML AML
comp=E,16µm,0.3s
MUGIO AML AML
comp=N,20µm,0.4s
SBF Sospel 4.30 286 *e*P **Pn 01 42 55.6 +1.8**
SBF *e*Sn **Sn 01 43 38.8 -4.9**
comp=N,10nm,0.6s
ROSI Rosskopf 4.32 344 ⇑P **Pn 01 42 57.2 +3.1**
VARE Varese 4.39 316 ⇑P **Pn 01 42 57.8 +2.7**
VARE AML AML
comp=E,32µm,0.9s
VARE AML AML
comp=N,37µm,0.8s
VARE AML AML
comp=E,30µm,0.4s
VARE AML AML
comp=N,29µm,0.5s
SPIF crte de Spivo 4.48 288 P **Pn 01 42 59.4 +3.0**
DRME Dracevica, Mon 4.51 96 *e*Pn **Pn 01 42 59.1 +2.5**
PDG Podgorica 4.53 93 ⇓P **Pn 01 43 00.2 +3.4**
FETA Feichten 4.56 339 *e*Pn **Pn 01 43 01.3 +3.9**
comp=N,0.7nm,0.2s,SNR=7.1
WTTA Wattenberg 4.60 347 *e*Pn **Pn 01 43 01.2 +3.3**
comp=N,2.0nm,0.2s,SNR=6.5
WTTA Wattenberg 4.60 347 P **Pn 01 43 01.8 +3.8**
RUDO Rudo 4.63 78 *e*Pn **Pn 01 43 02.1 +3.9**

SQTA Sankt Quirin 4.64 343 *e*Pn **Pn 01 43 01.9 +3.5**
comp=N,3.8nm,0.2s,SNR=12
WATA Walderalm 4.68 347 *e*Pn **Pn 01 43 03.0 +4.0**
comp=N,2.7nm,0.2s,SNR=11
BBLS Lazići 4.69 75 *e*Pn **Pn 01 43 01.5 +2.3**
BBLS *e*Sn **Sn 01 43 52.5 -0.9**
ARSA Arzberg 4.77 20 *e*Pn **Pn 01 42 58.5 -1.6**
comp=N,1.1nm,0.2s
MOTA Moosalm 4.78 343 *i* Pn **Pn 01 43 03.6 +3.2**
comp=N,1.5nm,0.3s,SNR=6.3
LMR La Mourre 4.89 279 *e*P **Pn 01 43 03.2 +1.4**
LMR *e*Sn **Sn 01 43 52.8 -5.3**
comp=N,0.9nm,0.4s
SURF Saint Ours 4.89 292 P **Pn 01 43 04.3 +2.3**
BIOA Bad Ischl, Aus 4.91 4 *e*Pn **Pn 01 43 03.9 +1.8**
comp=N,3.1nm,0.2s,SNR=6.1
RETA Reutte 4.99 341 *e*Pn **Pn 01 43 06.4 +3.2**
comp=N,2.9nm,0.4s,SNR=6.2
MBDF Montbardon 5.00 295 *e*P **Pn 01 43 06.1 +2.6**
MBDF *e*Sn **Sn 01 43 55.6 -5.5**
comp=N,2.0nm,0.5s
TRIGF Trigance 5.01 283 P **Pn 01 43 06.6 +3.0**
SJES Sjenica 5.03 82 *e*Pn **Pn 01 43 06.6 +2.8**
SJES *e*Sn **Sn 01 44 00.1 -1.6**
DAVA Damuels 5.05 334 *e*Pn **Pn 01 43 06.5 +2.3**
comp=N,1.3nm,0.2s
MOA Molln 5.12 9 *e*Pn **Pn 01 43 06.5 +1.5**
MOA *e*Sn **Sn 01 44 04.2 +0.4**
MOA Molln 5.12 9 *e*Pn **Pn 01 43 06.4 +1.5**
comp=N,1.0nm,0.2s
DIVS Divibare 5.15 73 *e*Pn **Pn 01 43 06.5 +1.0**
IVAS Ivanjica 5.18 79 *e*Pn **Pn 01 43 08.1 +2.2**
IVAS *e*Sn **Sn 01 44 04.1 -1.4**
DIX Grande Dixence 5.26 311 P **Pn 01 43 10.4 +3.3**
LPG La Plagne 5.33 303 *e*P **Pn 01 43 10.8 +2.6**
LPG *e*Sn **Sn 01 44 03.6 -5.9**
comp=N,1.6nm,0.4s
LPL La Plagne 5.36 303 *e*P **Pn 01 43 11.3 +2.9**
LPL *e*Sn **Sn 01 44 04.1 -5.8**
comp=N,2.0nm,0.4s
RONA Rosalia, Austr 5.39 23 *e*Pn **Pn 01 43 10.2 +1.5**
comp=N,0.6nm,0.2s
CONA Conrad Observa 5.48 20 *e*Pn **Pn 01 43 11.4 +1.4**
comp=N,1.6nm,0.4s
RSL Roselend 5.50 304 P **Pn 01 43 14.4 +4.0**
SMRF Simiane la Rot 5.64 285 *e*P **Pn 01 43 15.1 +2.9**
SMRF *e*Sn **Sn 01 44 10.9 -5.8**
comp=N,0.7nm,0.4s
ORIF Oris-en-Rattie 5.67 295 *e*P **Pn 01 43 15.8 +3.3**
ORIF *e*Sn **Sn 01 44 11.4 -6.0**
comp=N,1.1nm,0.4s
SELS Selova 5.86 83 *e*Pn **Pn 01 43 17.2 +2.0**
SULZ Cheisacher 5.92 325 S **Sn 01 44 26.4 +2.8**
SULZ Cheisacher 5.92 325 P **Pn 01 43 18.9 +2.9**
SLE Schleitheim 5.96 328 P **Pn 01 43 18.7 +2.2**
BALST Balsthal 5.96 322 S **Sn 01 44 28.2 +3.6**
BALST Balsthal 5.96 322 P **Pn 01 43 18.9 +2.4**
CKRC Cesky Krumlov 6.08 7 *e*PN **Pn 01 43 19.1 +0.9**
CKRC *e*SN **Sn 01 44 26.1 -1.4**
GIMEL St. Georges / 6.17 310 P **Pn 01 43 22.3 +2.9**
BOURR Bourrignon 6.22 320 P **Pn 01 43 23.0 +2.9**
FELD Feldberg im Sc 6.24 326 S **Sn 01 44 33.0 +1.4**
FELD Feldberg im Sc 6.24 326 P **Pn 01 43 22.6 +2.1**
BRANT Les Verrieres 6.30 313 P **Pn 01 43 24.1 +2.9**
CABF La Chapelle 6.31 310 *e*P **Pn 01 43 24.6 +3.2**
CABF *e*Sn **Sn 01 44 27.6 -5.7**
comp=N,1.2nm,0.3s
OG35 Corcelles 6.32 304 P **Pn 01 43 24.1 +2.6**
KIZ Kirchzarten 6.34 326 S **Sn 01 44 34.9 +1.1**
KIZ Kirchzarten 6.34 326 P **Pn 01 43 23.6 +1.9**
KHC Kasperske Hory 6.35 3 *e*PN **Pn 01 43 22.8 +1.0**
KHC *e*SN **Sn 01 44 32.8 -1.3**
BARS Barje 6.38 87 *e*Pn **Pn 01 43 24.4 +2.1**
CHMF Charmoille 6.40 316 P **Pn 01 43 25.0 +2.4**
CHMF S **Sn 01 44 36.0 +0.6**
VIVF Saint-Julien-l 6.46 291 *e*P **Pn 01 43 26.4 +2.9**
PRVS Prvonek 6.59 89 *e*Pn **Pn 01 43 27.5 +2.3**
PRVS *e*Sn **Sn 01 44 36.9 -3.2**
MOF Molkenrain 6.60 322 P **Pn 01 43 27.3 +2.0**
MOF S **Sn 01 44 43.8 +3.5**
BOUC Bouclans 6.61 315 P **Pn 01 43 27.8 +2.5**
OPP Oppenau 6.68 330 P **Pn 01 43 28.4 +2.0**
HINF Hinteralfeld 6.70 321 *e*P **Pn 01 43 28.7 +2.0**
HINF *e*Sn **Sn 01 44 38.5 -4.3**
comp=N,3.3nm,0.5s
ECH Echery 6.86 324 P **Pn 01 43 30.9 +2.0**
LASF Ste Croix 6.88 284 *e*P **Pn 01 43 31.6 +2.4**
LASF *e*Sn **Sn 01 44 40.4 -6.8**
comp=N,0.4nm,0.4s
WLS Welschbruch 6.93 326 P **Pn 01 43 31.4 +1.5**
ZAPS Zavoj 6.97 83 *e*Pn **Pn 01 43 32.0 +1.6**
HAU Haudompre 7.07 320 *e*P **Pn 01 43 34.0 +2.2**
HAU *e*Sn **Sn 01 44 46.0 -5.9**
comp=N,4.9nm,0.3s
SMF Signal de Mont 7.66 303 *e*P **Pn 01 43 42.4 +2.5**
SMF *e*Sn **Sn 01 44 59.6 -6.8**
comp=N,1.2nm,0.3s
PAGF Fort de Pagny 7.76 321 *e*P **Pn 01 43 45.0 +3.9**
PAGF *e*Sn **Sn 01 45 02.4 -6.3**
comp=N,4.0nm,0.6s
LOR Lormes 7.95 307 *e*P **Pn 01 43 47.5 +3.7**
baz=123
LOR *e*Sn **Sn 01 45 06.7 -6.8**
comp=N,4.5nm,0.8s
MTLF Montolieu 8.02 278 *e*P **Pn 01 43 47.9 +3.1**
MTLF *e*Sn **Sn 01 45 07.0 -8.2**
comp=N,0.7nm,0.4s
AVF Avril sur Loir 8.03 303 *e*P **Pn 01 43 47.6 +2.8**
AVF *e*Sn **Sn 01 45 07.6 -7.7**
comp=N,0.5nm,0.5s
SSF Saint Saulge 8.06 305 *e*P **Pn 01 43 48.4 +3.1**
SSF *e*Sn **Sn 01 45 08.3 -7.8**
comp=N,0.6nm,0.3s
BGF Bois d'Agland 8.25 301 *e*P **Pn 01 43 49.4 +1.5**
CAF Calviac 8.29 289 *e*P **Pn 01 43 51.8 +3.4**
CAF *e*Sn **Sn 01 45 13.9 -7.9**
comp=N,0.3nm,0.3s
CLL Collm 8.52 359 *ex* **Sn 01 45 24.0 -3.4**
TCF Toulx Ste Croi 8.55 298 *e*P **Pn 01 43 54.1 +2.0**
TCF *e*Sn **Sn 01 45 20.3 -8.0**
comp=N,0.7nm,0.5s

*JMA **31** 01:53:55.4±0.3,24°N±2°×122°2E±0°.4,h13^{km}±4^{km}, MV2.2/10,TAIWAN REGION*
*TAP **31** 01:53:56.4,24°.18N×122°.16E,h23^{km},ML2.7,C*
ISC 31 01:53:55.5±1.0,24°.07N±0°.03×122°.19E±0°.02,h17^{km}±9^{km}, n70,σ0^{s}71/82,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.47**	**300**	*e*P		**Pg**		**01 54 05.3**	**+0.3**
	baz=296								
ETL	**Fush Village**	**0.52**	**279**	*e*P		**Pn**		**01 54 07.9**	**-0.3**
	baz=267								
EWUT	**Wuta**	**0.53**	**315**	*e*P		**Pg**		**01 54 04.5**	**-1.5**
	baz=314								
ENA	**Nanau**	**0.54**	**311**	*i* P		**Pg**		**01 54 05.8**	**-0.4**
	baz=310								
TWD	**Chiawan**	**0.54**	**271**	*e*P		**Pb**		**01 54 07.4**	**+0.9**
	baz=259								
NACB	**Ninganchiao**	**0.55**	**281**	P		**Pg**		**01 54 06.8**	**+0.4**
	baz=269								
NACB				S		**Sb**		**01 54 15.4**	**+1.1**
	baz=269								
TEYL	**Yanliau Villag**	**0.58**	**249**	*e*P		**Pn**		**01 54 08.9**	**0.0**
	baz=228								
TEYL				S		**Sn**		**01 54 17.1**	**-0.9**
	baz=228								
TWC	**Suao**	**0.61**	**330**	P		**Pb**		**01 54 06.8**	**-1.0**
	baz=334								
TWC				*e*S		**Sg**		**01 54 15.0**	**-0.9**
	baz=334								
ETM	**Tongmen**	**0.64**	**260**	*e*P		**Pb**		**01 54 08.1**	**-0.2**
	baz=251								
ETLH	**Xiulin Townshi**	**0.66**	**282**	*e*P		**Pb**		**01 54 08.7**	**+0.1**
	baz=273								
ETLH				*e*S		**Sg**		**01 54 18.3**	**+1.0**
	baz=273								
NDS	**Dongshan**	**0.70**	**322**	*e*P		**Pb**		**01 54 07.6**	**-1.7**
	baz=321								
ESL	**Shilin**	**0.74**	**250**	*e*P		**Pn**		**01 54 11.8**	**+0.6**
	baz=228								
LATG	**Datong**	**0.76**	**307**	*e*P		**Pb**		**01 54 10.0**	**-0.3**
	baz=302								
JYNG	**Yonagunijimaku**	**0.79**	**61**	P		**Pb**		**01 54 10.6**	**-0.1**
JYNG				*e*S		**Sb**		**01 54 21.3**	**+0.2**
ENTT	**Nioudou**	**0.80**	**315**	*e*P		**Pb**		**01 54 09.6**	**-1.3**
	baz=319								
EGS		**0.80**	**343**	*e*P		**Pb**		**01 54 11.2**	**+0.1**
	baz=350								
NDT	**Datong Townshi**	**0.81**	**311**	P		**Pb**		**01 54 11.2**	**0.0**
	baz=306								
NNSB	**Datong**	**0.81**	**296**	*i* P		**Pb**		**01 54 11.3**	**0.0**
	baz=280								
NNSH	**Datong**	**0.81**	**296**	*i* P		**Pb**		**01 54 11.3**	**0.0**
	baz=279								
NNS	**Nan Shan**	**0.83**	**296**	*e*P		**Pb**		**01 54 10.7**	**-0.8**
	baz=280								
NTC	**Toucheng**	**0.84**	**337**	*e*P		**Pb**		**01 54 11.6**	**-0.1**
	baz=344								
WHF	**Hehuan Shan**	**0.84**	**275**	*e*P		**Pb**		**01 54 11.6**	**-0.4**
	baz=257								
YOJ	**Yonaguni jima**	**0.84**	**63**	*i* P		**Pg**		**01 54 12.3**	**+0.3**
	baz=70								
YOJ				*i* S		**Sg**		**01 54 23.5**	**+0.3**
	baz=70								
YOJ	**Yonaguni jima**	**0.84**	**63**	P		**Pb**		**01 54 12.1**	**+0.4**
YOJ				*e*S		**Sg**		**01 54 23.5**	**+0.3**
FUSB	**Fushanzhiwuyua**	**0.87**	**321**	*i* P		**Pb**		**01 54 12.1**	**-0.2**
	baz=318								
FUSS	**Fushou**	**0.88**	**282**	*e*P		**Pb**		**01 54 12.5**	**0.0**
	baz=275								
HGSD	**Ruisui**	**0.91**	**230**	*e*P		**Pb**		**01 54 15.5**	**+2.0**
	baz=213								
CHGB	**Renai**	**0.93**	**269**	*e*P		**Pb**		**01 54 12.9**	**-0.4**
	baz=248								
OWD	**Renai**	**0.93**	**263**	*e*P		**Pb**		**01 54 12.8**	**-0.5**
	baz=243								
TWB1	**Santiao Chiao**	**0.95**	**349**	*e*P		**Pb**		**01 54 13.4**	**-0.1**
	baz=350								
YHNB	**Yeheng**	**0.95**	**309**	*e*P		**Pb**		**01 54 13.7**	**+0.1**
	baz=304								
TIPB	**Shuangxi**	**0.95**	**340**	*e*P		**Pb**		**01 54 13.5**	**-0.1**
	baz=346								
NSK	**Sanguang**	**0.96**	**309**	*e*P		**Pb**		**01 54 13.2**	**-0.6**
	baz=304								
EHY	**Hungye**	**0.97**	**235**	*e*P		**Pb**		**01 54 13.3**	**-0.6**
	baz=242								
WUSB	**Renai**	**0.98**	**265**	*e*P		**Pb**		**01 54 14.1**	**0.0**
	baz=248								
VWDT	**VWDT**	**1.01**	**252**	*e*P		**Pb**		**01 54 14.9**	**+0.4**
	baz=232								
SXI1	**Grass Mountain**	**1.05**	**344**	*e*P		**Pb**		**01 54 15.0**	**-0.4**
	baz=1.0								
TWA	**Mucha**	**1.06**	**329**	*e*P		**Pg**		**01 54 16.5**	**+0.5**
	baz=327								
NWF	**Wu-fen Shan**	**1.06**	**340**	P		**Pb**		**01 54 15.5**	**0.0**
	baz=356								
WFSB	**Wu-fen Shan**	**1.06**	**340**	*e*P		**Pb**		**01 54 15.4**	**+0.1**
	baz=355								
YULB	**Yu-li**	**1.06**	**230**	*e*P		**Pb**		**01 54 14.6**	**-0.9**
	baz=238								
NFF	**Wufeng Townshi**	**1.12**	**300**	*e*P		**Pn**		**01 54 16.1**	**-0.5**
	baz=295								
WHP	**Taichung City**	**1.15**	**280**	*e*P		**Pg**		**01 54 18.1**	**+0.2**
	baz=263								
SSLB	**Suanglung**	**1.16**	**256**	*e*P		**Pn**		**01 54 17.3**	**+0.3**
	baz=237								
FULB	**Fuli**	**1.20**	**223**	*e*P		**Pn**		**01 54 15.7**	**-1.8**
	baz=204								
YM01	**YM01**	**1.21**	**332**	*e*P		**Pn**		**01 54 17.6**	**0.0**
	baz=349								
LIOB	**Emei**	**1.21**	**298**	P		**Pb**		**01 54 18.6**	**+0.7**
	baz=294								
NSTT	**Nanjuang**	**1.22**	**297**	*e*P		**Pn**		**01 54 17.7**	**0.0**
	baz=293								
TYC	**Yuchr**	**1.23**	**262**	*e*P		**Pn**		**01 54 17.8**	**-0.1**
	baz=243								
YM08	**YM08**	**1.23**	**334**	*e*P		**Pn**		**01 54 18.2**	**+0.2**
	baz=351								
YUS	**Yu-Shan**	**1.27**	**243**	*e*P		**Pn**		**01 54 18.5**	**-0.4**
	baz=225								
WHYT	**Xinyi Township**	**1.28**	**253**	*e*P		**Pn**		**01 54 19.2**	**+0.5**
	baz=238								
TWQ1	**Liyutan**	**1.32**	**282**	*e*P		**Pn**		**01 54 19.3**	**+0.1**
	baz=277								
EDH	**Donghe**	**1.36**	**217**	*e*P		**Pn**		**01 54 18.1**	**-1.7**
	baz=201								
ALS	**Alishan**	**1.38**	**246**	*e*P		**Pb**		**01 54 21.2**	**+0.1**
	baz=241								
ELDTW	**Lidau**	**1.39**	**231**	*e*P		**Pn**		**01 54 20.9**	**+0.7**
	baz=225								
IRIF	**Iriomote-Funau**	**1.43**	**79**	P		**Pb**		**01 54 21.6**	**-0.2**
IRIF				*e*S		**Sn**		**01 54 39.6**	**+0.4**
LDUT	**Ludao**	**1.54**	**205**	*e*P		**Pn**		**01 54 20.4**	**-1.8**
	baz=202								
STYH	**Taoyuan**	**1.58**	**235**	*e*P		**Pn**		**01 54 23.7**	**+1.0**
	baz=231								
WCKO	**Fanlu**	**1.58**	**247**	*e*P		**Pn**		**01 54 23.8**	**+1.0**
	baz=242								
STYT	**Tauyuan**	**1.59**	**236**	*e*P		**Pb**		**01 54 24.5**	**0.0**
	baz=230								
TPUB	**Ta-pu**	**1.62**	**242**	*e*P		**Pb**		**01 54 24.8**	**-0.2**
	baz=225								
TPUB				*e*S		**Sb**		**01 54 45.6**	**+0.4**
	baz=225								
WTP	**Ta-pu**	**1.66**	**241**	*e*P		**Pb**		**01 54 25.5**	**-0.2**
	baz=235								
WTP				*e*S		**Sb**		**01 54 46.5**	**+0.2**
	baz=235								
JKRS	**Kuro-shima**	**1.67**	**84**	*e*S		**Sb**		**01 54 46.8**	**+0.1**
TWK	**Hsinying**	**1.75**	**243**	*e*P		**Pb**		**01 54 27.0**	**-0.2**
	baz=238								
CHN1	**Nanshi**	**1.76**	**240**	*e*P		**Pb**		**01 54 27.1**	**-0.3**
	baz=234								
CHN1				*e*S		**Sb**		**01 54 49.1**	**-0.1**
	baz=234								
SGST	**Jiashian**	**1.77**	**236**	*e*P		**Pn**		**01 54 26.3**	**+0.9**
	baz=220								
SGST				*e*S		**Sb**		**01 54 49.3**	**-0.3**
	baz=220								
JIJ	**Ishigaki jima**	**1.81**	**80**	*e*S		**Sn**		**01 54 47.8**	**-0.6**
JISG	**Ishigakijimahi**	**2.00**	**75**	S		**Sn**		**01 54 52.1**	**-1.1**
JTJ	**Tarama**	**2.36**	**76**	*e*S		**Sn**		**01 55 03.0**	**+0.9**

IDC 31 02:03:14.1±4.1,17°.68S×177°.27W,h0^{km},mb4.2/4, mbtmp4.2/4,Error ellipse: s-maj=176.9km s-min=33.8km az=138.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.69**	**241**	P		P	P	02 10 48.6	+0.4
	1.8nm,0.3s,baz=74,slow=9.0,SNR=8.7 1.8nm,0.3s								
WRA	**Warramunga Arr**	**45.74**	**259**	P		P	P	02 11 37.4	-0.2
	1.9nm,0.4s,baz=97,slow=7.6,SNR=71 1.9nm,0.4s								
ASAR	**Alice Springs**	**45.90**	**254**	P		P	P	02 11 38.2	-0.6
	4.6nm,0.8s,baz=90,slow=7.6,SNR=39 4.6nm,0.8s								
ILAR	**Eielson Array**	**85.42**	**13**	P		P	P	02 15 53.0	0.0
	0.2nm,0.4s,baz=226,slow=4.7,SNR=5.8 0.2nm,0.4s								

*IDC **31** 02:04:33.1±2.0,13°.25N×50°.81E,h0^{km},mb3.8/8, mbtmp3.9/9,ML4.1/1,MS3.5/10,Error ellipse: s-maj=44.8km s-min=23.9km az=176.0*
ISC 31 02:04:34.8±1.6,13°.3N±0°.2×50°.8E±0°.1,h10^{km},n17, σ1^{s}09/9,mb4.0/8,MS3.5/9,Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**7.99**	**258**	Pn		**Pn**	**Pn**	**02 06 31.7**	**+0.5**
	2.4nm,0.3s,baz=62,slow=1.0,SNR=19 6.0nm,0.2s								
WSAR	**Wadi Sarin**	**12.37**	**36**	LR		LR	LR	02 11 56.6	
	comp=Z,139nm,18.7s,baz=202,slow=36								
EIL	**Elat**	**21.97**	**320**	LR		LR	LR	02 17 57.5	
	comp=Z,196nm,19.4s,baz=100,slow=37								
GEYT	**Alibeck**	**25.40**	**14**	P		**P**	**P**	**02 10 03.0**	**+0.4**
	1.8nm,0.6s,baz=204,slow=14,SNR=6.6								
GEYT						LR	LR	02 21 52.9	
	comp=Z,227nm,18.7s,baz=187,slow=41 1.8nm,0.6s								
GNI	**Garni**	**27.30**	**350**	LR		LR	LR	02 23 15.9	
	comp=Z,143nm,21.1s,baz=174,slow=41								
BRTR	**Keskin Array B**	**30.39**	**333**	LR		LR	LR	02 22 38.2	
	comp=Z,61nm,19.3s,baz=153,slow=36								
KBZ	**Khabaz**	**31.11**	**349**	P			**P**	**02 10 55.0**	**+1.6**

KBZ 3.1nm,0.9s,baz=176,slow=7.6,SNR=5.3 LR LR 02 25 49.4
comp=Z,153nm,18.1s,baz=160,slow=41 3.1nm,0.9s
AKTO Aktyubinsk 37.52 8 LR LR 02 29 55.9
comp=Z,59nm,20.2s,baz=158,slow=41
MLR Muntele Rosu 38.42 332 LR LR 02 28 50.2
comp=Z,68nm,19.4s,baz=102,slow=38
BELG Belogornoye 39.10 357 LR LR 02 32 16.1
comp=Z,58nm,18.9s,baz=127,slow=42
AKASG Malin Array Be 41.26 339 P **P 02 12 19.8 -0.3**
0.3nm,0.3s,baz=145,slow=7.6,SNR=8.0 0.3nm,0.3s
MKAR Makanchi Array 42.58 32 P **P 02 12 31.2 +0.2**
1.1nm,1.0s,baz=242,slow=7.7,SNR=6.1 1.1nm,1.0s
CMAR Chiang Mai Arr 46.46 77 P **P 02 13 02.7 +0.2**
0.7nm,0.3s,baz=274,slow=8.3,SNR=7.2 0.7nm,0.3s
GERES GERESS Array B 46.84 327 P **P 02 13 05.0 -0.1**
0.2nm,0.5s,baz=146,slow=7.1,SNR=4.1 0.2nm,0.5s
ZALV Zalesovo Beam 48.61 26 P **P 02 13 17.2 -1.4**
1.2nm,0.6s,baz=226,slow=9.6,SNR=5.4 1.2nm,0.6s
ESDC Sonseca Array 54.67 309 P **P 02 14 02.9 -1.4**
1.4nm,0.9s,baz=101,slow=6.4,SNR=8.0 1.4nm,0.9s
NOA NORSAR Array B 55.64 338 LR LR 02 41 43.7
comp=Z,26nm,18.1s,baz=30,slow=40

UCR ***31*** *02:05:05.6±2.3, 11°.18N×86°.85W, h1km±11km, MW3.6*
INET ***31*** *02:05:08.5±0.6, 11°.25N×86°.78W, h15km±9km, MW3.5*
ISC 31 02:05:06.6±1.6, 11°.25N±0°.06×86°.80W±0°.09, h10km, n35, σ0°88/36, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.95**	**12**	*eP*		**Pg**		**02 05 25.6**	**+0.7**
WILN	**Americas 2**	**1.09**	**33**	*eP*		**Pg**		**02 05 27.1**	**-0.5**
WILN				*eS*		**Sg**		**02 05 42.4**	**+0.6**
MOMN	**Momotombo**	**1.18**	**12**	*eP*		**Pb**		**02 05 28.8**	**-0.4**
HUEN		**1.25**	**30**	*eP*		**Pn**		**02 05 29.9**	**-0.2**
CNGN	**Cerro Negro**	**1.25**	**5**	*eP*		**Pn**		**02 05 29.7**	**-0.5**
HZTE	**Horizontes, Gu**	**1.30**	**114**	*eP*		**Pn**		**02 05 30.5**	**-0.3**
HZTE	**Horizontes, Gu**	**1.30**	**114**	*eP*		**Pn**		**02 05 30.5**	**-0.3**
TEL3	**Telica 3**	**1.32**	**358**	*eP*		**Pn**		**02 05 30.9**	**-0.2**
TELN	**Telica**	**1.35**	**359**	*eP*		**Pn**		**02 05 31.7**	**0.0**
GBS3	**Finca Las Img**	**1.40**	**109**	*eP*		**Pn**		**02 05 31.4**	**-0.9**
LAPC	**Finca la Perla**	**1.43**	**109**	*eP*		**Pn**		**02 05 31.8**	**-0.8**
BUEV	**Buena Vista**	**1.44**	**108**	*eP*		**Pn**		**02 05 32.5**	**-0.4**
GB1A	**Borinquen Arri**	**1.44**	**107**	*eP*		**Pn**		**02 05 33.0**	**0.0**
CRIN	**San Cristobal**	**1.47**	**350**	*eP*		**Pn**		**02 05 33.3**	**+0.1**
CRIN	**San Cristobal**	**1.47**	**350**	*eP*		**Pn**		**02 05 33.3**	**+0.1**
VRLE	**La Escondida,**	**1.48**	**108**	*eP*		**Pn**		**02 05 32.8**	**-0.7**
GPS2	**Hotel Rincn d**	**1.50**	**109**	*eP*		**Pn**		**02 05 33.9**	**+0.1**
ORTG	**Ortega, Santa**	**1.58**	**124**	*eP*		**Pn**		**02 05 33.6**	**-1.3**
SAJU	**San Juanillo,**	**1.59**	**137**	*eP*		**Pn**		**02 05 32.7**	**-2.1**
LIM1	**Limonal**	**1.61**	**110**	*eP*		**Pn**		**02 05 34.7**	**-0.6**
GUAB	**Guayabo de Bag**	**1.63**	**109**	*eP*		**Pn**		**02 05 35.6**	**+0.1**
COLC	**Colonia**	**1.67**	**110**	*eP*		**Pn**		**02 05 36.7**	**+0.6**
HORNC	**Hornillas**	**1.68**	**108**	*eP*		**Pn**		**02 05 36.0**	**-0.2**
VMAR	**Armenia, Volca**	**1.71**	**105**	*eP*		**Pn**		**02 05 36.4**	**-0.1**
CUI	**Cuipilapa**	**1.71**	**110**	*eP*		**Pn**		**02 05 36.4**	**-0.2**
NICO	**Nicoya**	**1.73**	**130**	*eP*		**Pn**		**02 05 37.8**	**+1.0**
ACON	**Acoyapa**	**1.75**	**66**	*eP*		**Pn**		**02 05 35.9**	**-1.1**
ACAL	**Aguas Claras**	**1.84**	**109**	*eP*		**Pn**		**02 05 39.5**	**+1.2**
PTEN	**Parque Tenorio**	**1.86**	**106**	*eP*		**Pn**		**02 05 38.6**	**0.0**
CSGN	**Cosiguina Volc**	**1.87**	**337**	*eP*		**Pn**		**02 05 38.9**	**+0.1**
MATN	**Matagalpa**	**1.88**	**27**	*eP*		**Pn**		**02 05 38.3**	**-0.6**
JTS	**Las Juntas de**	**2.05**	**117**	*eP*		**Pn**		**02 05 41.8**	**+0.6**
CEDE	**Laguna Cedeo**	**2.19**	**110**	*eP*		**Pn**		**02 05 45.5**	**+2.3**
FORC	**Fortuna**	**2.23**	**110**	*eP*		**Pn**		**02 05 46.0**	**+2.3**
LAFE	**Finca La Fe, P**	**2.35**	**127**	*eP*		**Pn**		**02 05 45.6**	**+0.3**

IDC ***31*** *02:07:29.8±0.6, 34°.34N×141°.47E, h0km, mb4.2/22, mbtmp4.2/24, ML2.6/2, MS3.8/15, Error ellipse: s-maj=16.9km s-min=13.7km az=134.0*
NIED ***31*** *02:07:30.9, 34°.34N×141°.66E, h26km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr2.94; Mθθ0.45; Mϕϕ-3.38; Mrθ3.79; Mθϕ0.12; Mϕr4.33; Fault plane solution: M06.53000×10^15 NP1: ϕs158.00000°, δ21.00000°, λ36.00000°. NP2:ϕs33.00000°, δ78.00000°, λ107.00000°.*
JMA ***31*** *02:07:30.9±0.6, 34°.1N×14°.2E±°, h26km±2km, MV3.9/36, FAR SE OFF BOSO PEN*
BJI ***31*** *02:07:31.5±0.0, 34°.34N×141°.87E, h41km, mb4.5/39, mB4.9/22, Ms4.4/18, Ms7 4.1/20*
MOS ***31*** *02:07:32.6±0.9, 34°.28N×141°.36E, h30km, mb4.7/35, Error ellipse: s-maj=13.3km s-min=5.9km az=126.8*
NEIC ***31*** *02:07:35.9±2.1, 34°.40N±0°.06×141°.5E±0°.1, h36km±7km, mb4.6/61, Error ellipse: s-maj=13.5km s-min=8.1km az=110.0*
ISC 31 02:07:34.2±0.4, 34°.39N±0°.04×141°.45E±0°.05, h27km, n233, σ1§14/223, mb4.5/86, MS4.0/21, 15C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.47**	**305**	*eP*		**Pb**		**02 07 43.2**	**-0.4**
BSO3	**Boso 3**	**0.88**	**299**	*eP*		**Pn**		**02 07 50.3**	**-0.2**
BSO4	**Boso 4**	**1.09**	**304**	P		**Pn**		**02 07 54.1**	**+0.4**
KTR	**Katsuura**	**1.20**	**310**	*eP*		**Pn**		**02 07 55.3**	**+0.1**
JKUC	**kamogawauchiur**	**1.28**	**307**	*eP*		**Pn**		**02 07 56.2**	**-0.2**
JKUC				*eS*		**Sb**		**02 08 14.1**	**+0.3**
CHOJ	**Chosi**	**1.40**	**340**	*eP*		**Pn**		**02 07 56.8**	**-1.1**
CHOJ				*eS*		**Sn**		**02 08 14.6**	**-1.0**
JMKN	**Mikurajimanish**	**1.62**	**253**	*eP*		**Pn**		**02 08 00.8**	**-0.1**
JMKN				*eS*		**Sb**		**02 08 22.7**	**-0.6**
JIM2	**Oshima 3**	**1.70**	**282**	*eP*		**Pn**		**02 08 01.5**	**-0.6**
JTHY	**Toshimahigashi**	**1.79**	**275**	*eP*		**Pn**		**02 08 03.2**	**-0.1**
JHJ2	**Mitsune**	**1.86**	**227**	Pn		**Pn**		**02 08 04.5**	**+0.2**
JHJ2	**Mitsune**	**1.86**	**227**	*eP*		**Pn**		**02 08 04.4**	**+0.1**
JHJ	**Hachijo jima 2**	**1.88**	**228**			**Pn**		**02 08 04.7**	**+0.2**
JHJ						**Sb**		**02 08 28.8**	**-2.0**
JHJ	**Hachijo jima 2**	**1.88**	**228**	Pn		**Pn**		**02 08 04.7**	**+0.2**
	84nm,0.3s,baz=106,slow=22,SNR=29								
JHJ				Sn		**Sb**		**02 08 28.8**	**-2.0**
	139nm,0.3s,baz=90,slow=23,SNR=5.8								
JHJ				LR		LR		02 08 52.6	
	comp=Z,347nm,21.0s,baz=91,slow=45								
JYT	**Yasato**	**2.10**	**331**	Pn		**Pn**		**02 08 07.0**	**-0.7**
JOD2	**Odawara 2**	**2.13**	**295**	*eP*		**Pn**		**02 08 07.6**	**-0.4**
JIZS	**Izushimoda**	**2.15**	**280**	*eP*		**Pn**		**02 08 07.9**	**-0.3**
MJAR	**Matsushiro Arr**	**3.41**	**310**	P		**Pn**		**02 08 24.1**	**-1.5**
MJAR	**Matsushiro Arr**	**3.41**	**310**	Pn		**Pn**		**02 08 24.1**	**-1.5**
	2.4nm,0.3s,baz=134,slow=11,SNR=53								
MJAR				LR		LR		02 10 06.2	
	comp=Z,991nm,20.1s,baz=88,slow=45 40nm,0.6s								
MAJO	**Matsushiro**	**3.41**	**310**	Pn		**Pn**		**02 08 25.9**	**+0.2**
MAJO	**Matsushiro**	**3.41**	**310**	*iP*		**Pn**		**02 08 26.6**	**+1.0**
JMM	**Marumori**	**3.51**	**352**			**Pn**		**02 08 25.3**	**-1.8**
JGF	**Kuroka**	**3.57**	**291**	Pn		**Pn**		**02 08 29.4**	**+1.6**
INU	**Inuyama**	**3.77**	**286**	Pn		**Pn**		**02 08 31.0**	**+0.5**
JSD	**Sado**	**4.46**	**326**	Pn		**Pn**		**02 08 40.1**	**+0.1**
JMN	**Monobe**	**6.32**	**266**	Pn		**Pn**		**02 09 08.2**	**+2.6**
JHS	**Saijyo**	**6.89**	**277**	Pn		**Pn**		**02 09 17.7**	**+4.3**
SEHB	**SEOHWA**	**11.32**	**294**	Pn		**Pn**		**02 10 17.4**	**+3.2**
KSRS	**Korea Array**	**11.38**	**289**	LR		LR		02 15 18.2	
	comp=Z,320nm,18.6s,baz=100,slow=41								
USRK	**Ussuriysk Ar.**	**12.23**	**326**	Pn		**Pn**		**02 10 26.2**	**-0.2**
USRK	**Ussuriysk Ar.**	**12.23**	**326**	P		**Pn**		**02 10 26.3**	**-0.2**
USRK	**Ussuriysk Ar.**	**12.23**	**326**	Pn		**Pn**		**02 10 25.0**	**-1.5**
	0.1nm,0.3s,baz=119,slow=12,SNR=3.0 3.5nm,0.9s								
KLR	**Kul'dur**	**16.48**	**337**	*iP*		**P**		**02 11 25.4**	**-0.4**
KLR				pmax	pmax				
	comp=Z,2.0nm,0.5s								
NJ2	**Nanjing**	**19.04**	**269**	*eP*		**P**		**02 11 53.5**	**-0.7**
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
GUMO	**Guam**	**20.94**	**171**	LR		LR		02 18 36.8	
	comp=Z,156nm,21.3s,baz=40,slow=32								
XLT	**XiLinHaoTe**	**21.77**	**303**	⇑*iP*		**P**		**02 12 27.3**	**+3.4**
XLT				pP	pwP			02 12 37.0	-1.6
XLT				sP	sP			02 12 41.5	+10
XLT				pmax	pmax				
	comp=Z,16nm,1.2s								
XLT				pmax	pmax				
	comp=Z,160nm,4.5s								
ZEA	**Zeya**	**21.79**	**337**	*eP*		**P**		**02 12 23.9**	**0.0**
ZEA				pmax	pmax				
	comp=N,30nm,0.8s								
ZEA				pmax	pmax				
	comp=Z,40nm,1.1s								
HNS	**HongShan**	**21.84**	**286**	⇑*iP*		**P**		**02 12 23.3**	**-1.3**
HNS				S		**S**		**02 16 26.3**	**+1.7**
HNS				pmax	pmax				
	comp=Z,6.0nm,0.7s								
HNS				LR	LR				
	comp=Z,370nm,12.1s								
HNS				LR	LR				
	comp=Z,260nm,10.0s								
HNS				LR	LR				
	comp=Z,360nm,11.6s								
HIA	**Hailar**	**21.86**	**319**	*i*	P	**P**		**02 12 25.5**	**+0.8**
HIA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
HHC	**Hu-ho-hao-te**	**24.46**	**294**	*eP*		**P**		**02 12 52.8**	**+1.8**
HHC				pmax	pmax				
	comp=Z,22nm,0.8s								
HHC				pmax	pmax				
	comp=Z,280nm,4.3s								
HHC				LR	LR				
	comp=Z,510nm,14.0s								
HHC				LR	LR				
	comp=Z,640nm,14.6s								
HHC				LR	LR				
	comp=Z,590nm,12.7s								
MA2	**Magadan**	**25.94**	**11**	LR		LR		02 25 11.5	
	comp=Z,226nm,18.5s,baz=136,slow=41								
H11N2	**WAKE ISLAND Hy**	**26.86**	**116**	T		T		02 41 09.2	
	baz=309,slow=75,SNR=14								
H11N1	**WAKE ISLAND Hy**	**26.87**	**116**	T		T		02 41 12.0	
	baz=309,slow=75,SNR=14								
H11N3	**WAKE ISLAND Hy**	**26.88**	**116**	T		T		02 41 17.2	
	baz=309,slow=75,SNR=12								
H11S3	**WAKE ISLAND Hy**	**27.48**	**119**	T		T		02 42 09.3	
	baz=312,slow=75,SNR=9.2								
H11S1	**WAKE ISLAND Hy**	**27.48**	**119**	T		T		02 42 14.1	
	baz=312,slow=75,SNR=11								
H11S2	**WAKE ISLAND Hy**	**27.50**	**119**	T		T		02 42 08.0	
	baz=312,slow=75,SNR=6.5								
ULN	**Ulaanbaatar**	**28.94**	**308**	P		**P**		**02 13 30.8**	**-0.4**
ULN	**Ulaanbaatar**	**28.94**	**308**	*ceP*		**P**		**02 13 32.1**	**+0.9**
ULN				pmax	pmax				
	comp=Z,8.0nm,1.0s								
SONM	**Songino Array**	**29.36**	**308**	P		**P**		**02 13 35.2**	**+0.3**
SONM	**Songino Array**	**29.36**	**308**	P		**P**		**02 13 35.2**	**+0.3**
SONM				pmax	pmax				
	comp=Z,5.0nm,0.9s								
SONM	**Songino Array**	**29.36**	**308**	P		**P**		**02 13 35.7**	**+0.8**
	comp=Z,4.4nm,0.9s,baz=109,slow=9.2,SNR=16								
SONM				LR		LR		02 26 18.9	
	comp=Z,312nm,19.6s,baz=138,slow=38 comp=Z,4.4nm,0.8s								
SHEM	**Shmya Is, Ala**	**29.57**	**42**	LR		LR		02 25 19.8	
	comp=Z,83nm,18.3s,baz=281,slow=36								
BOD	**Bodaibo**	**29.81**	**330**	*eP*		**P**		**02 13 41.4**	**+2.8**
BOD				pmax	pmax				
	comp=Z,13nm,1.3s								
GYA	**Guiyang**	**30.90**	**265**	⇑P		P		02 13 53.5	+4.7
GYA				S		**S**		**02 18 47.0**	**-4.5**
GYA				pmax	pmax				
	comp=Z,11nm,0.6s								
GYA				LR	LR				
	comp=Z,530nm,16.4s								
ZAK	**Zakamensk**	**31.99**	**312**	*eP*		**P**		**02 13 57.4**	**-0.7**
ZAK				pmax	pmax				
	comp=Z,7.0nm,1.0s								
GTA	**Gaotai**	**33.45**	**291**	*eP*		**P**		**02 14 10.5**	**-0.6**
GTA				pP	sP			02 14 21.5	+2.3
GTA				sP	pwP			02 14 24.8	-1.4
GTA				pmax	pmax				
	comp=Z,4.0nm,1.2s								
PZH	**PanZhiHua**	**34.95**	**268**	P		**P**		**02 14 26.8**	**+2.7**
PZH				pmax	pmax				
	comp=Z,10.0nm,0.8s								
PZH				pmax	pmax				
	comp=Z,100nm,6.1s								
BILL	**Bilibino**	**36.56**	**15**	*eP*		**P**		**02 14 38.7**	**+1.4**
BILL				pmax	pmax				
	comp=Z,3.0nm,0.9s								
GOMU	**GeErMu**	**37.82**	**286**	P		**P**		**02 14 49.0**	**+0.1**
GOMU				PcP		**PcP**		**02 17 06.5**	**+1.4**
GOMU				S		S		02 20 29.0	-10
GOMU				SS		**SnSn**		**02 23 17.5**	**-2.4**
GOMU				pmax	pmax				
	comp=Z,7.0nm,1.1s								
GOMU				pmax	pmax				
	comp=Z,43nm,3.9s								
GOMU				LR	LR				
	comp=Z,120nm,13.3s								
GOMU				LR	LR				
	comp=Z,110nm,14.2s								
GOMU				LR	LR				
	comp=Z,60nm,11.9s								
TIXI	**Tiksi**	**37.92**	**354**	*ceP*		**P**		**02 14 51.2**	**+2.4**
TIXI				pmax	pmax				
	comp=Z,3.0nm,1.0s								
CHTO	**Chiang Mai**	**40.73**	**259**	P		**P**		**02 15 12.0**	**-0.9**
CHTO	**Chiang Mai**	**40.73**	**259**	P		**P**		**02 15 12.0**	**-0.9**
CHTO				pmax	pmax				
	comp=Z,4.0nm,0.9s								
CM31	**Chiang Mai Arr**	**40.92**	**258**	P		**P**		**02 15 13.5**	**-0.9**
CM31				IAmb	IAmb			02 15 14.0	
	comp=Z,5.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**40.92**	**258**	P		**P**		**02 15 13.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**40.92**	**258**	*ceP*		**P**		**02 15 13.6**	**-0.9**
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**40.92**	**258**	P		**P**		**02 15 13.7**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=46,slow=7.5,SNR=15 comp=Z,1.9nm,0.4s								
DGZ	**Jazzator, Alta**	**42.01**	**308**	*i*	P	**P**		**02 15 23.8**	**+0.6**
DGZ				pmax	pmax				
	comp=Z,24nm,0.8s								
WMQ	**Urumqi**	**42.11**	**299**	*eP*		**P**		**02 15 26.0**	**+1.9**
WMQ				pmax	pmax				
	comp=Z,34nm,1.1s								
ZAA0	**Zalesovo Array**	**43.75**	**314**	P		**P**		**02 15 36.6**	**-0.5**
ZALV	**Zalesovo Beam**	**43.75**	**314**	P		**P**		**02 15 36.1**	**-0.9**
ZALV	**Zalesovo Beam**	**43.75**	**314**	P		**P**		**02 15 36.2**	**-0.9**
ZALV	**Zalesovo Beam**	**43.75**	**314**	P		**P**		**02 15 37.0**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=91,slow=6.2,SNR=9.0								
ZALV				PcP		**PcP**		**02 17 23.1**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=105,slow=3.9,SNR=2.2 comp=Z,3.1nm,0.7s								
MK31	**Makanchi Array**	**45.59**	**304**	P		**P**		**02 15 52.3**	**+0.4**
MK31				IAmb	IAmb			02 16 13.8	
	comp=Z,5.2nm,0.9s								
MK31	**Makanchi Array**	**45.59**	**304**	*iP*		**P**		**02 15 51.4**	**-0.5**
MK31				pmax	pmax				
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**	**45.59**	**304**	P		**P**		**02 15 52.0**	**+0.1**
MKAR	**Makanchi Array**	**45.59**	**304**	*ceP*		**P**		**02 15 54.2**	**+2.3**
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**	**45.59**	**304**	P		**P**		**02 15 51.9**	**0.0**
	comp=Z,1.9nm,0.6s,baz=86,slow=9.1,SNR=16 comp=Z,1.9nm,0.6s								
MAKZ	**Makanchi**	**45.80**	**304**	P		**P**		**02 15 52.9**	**-0.7**
MAKZ				IAmb	IAmb			02 16 16.0	
	comp=Z,4.7nm,0.9s								
MAKZ	**Makanchi**	**45.80**	**304**	P		**P**		**02 15 52.9**	**-0.7**
MAKZ				pmax	pmax				
	comp=Z,5.0nm,1.0s								
ODAN	**Odare**	**46.66**	**276**	*eP*		**P**		**02 15 59.0**	**-1.8**
RAMN	**Ramite**	**47.27**	**277**	*eP*		**P**		**02 16 04.8**	**-0.9**
	comp=Z,48nm,0.8s								
JIRN	**Jiri**	**47.34**	**278**	*eP*		**P**		**02 16 05.7**	**-0.6**
	comp=Z,74nm,1.0s								
GUN	**Gumba**	**47.50**	**278**	*eP*		**P**		**02 16 06.9**	**-0.6**
	comp=Z,50nm,0.9s								
KURK	**Kurchatov**	**47.62**	**310**	P		**P**		**02 16 06.7**	**-1.0**
KURK	**Kurchatov**	**47.62**	**310**	*ceP*		**P**		**02 16 07.7**	**0.0**
KURK				pmax	pmax				
	comp=Z,23nm,0.7s								
KURBB	**Kurchatov Arra**	**47.68**	**310**	P		**P**		**02 16 07.6**	**-0.6**
MTN	**Manton Dam**	**47.98**	**194**	P		**P**		**02 16 09.5**	**-1.3**
PKI	**Pulchoki**	**48.01**	**278**	*eP*		**P**		**02 16 10.5**	**-1.0**
	comp=Z,27nm,0.9s								
PKIN	**Phulchoki**	**48.02**	**278**	*eP*		**P**		**02 16 10.6**	**-0.9**
KKN	**Kakani**	**48.03**	**278**	*eP*		**P**		**02 16 10.8**	**-0.7**
PDGK	**Podgornoye**	**48.08**	**300**	*i*	P	**P**		**02 16 10.5**	**-1.1**
PDGK				pmax	pmax				
	comp=Z,12nm,0.9s								
DMN	**Daman**	**48.25**	**278**	*eP*		**P**		**02 16 12.5**	**-0.7**
GKN	**Gorkha**	**48.48**	**279**	*eP*		**P**		**02 16 14.4**	**-0.5**
K20K	**Telida**	**48.52**	**33**	P		**P**		**02 16 15.5**	**+1.0**
K20K				IAmb	IAmb			02 16 16.4	
	comp=Z,9.3nm,1.5s								
J20K	**Nowinta River**	**48.56**	**32**	P		**P**		**02 16 15.8**	**+1.1**
J20K				IAmb	IAmb			02 16 36.5	
	comp=Z,3.5nm,1.0s								
IMAR	**Indian Mountai**	**48.93**	**29**	P		**P**		**02 16 17.1**	**-0.4**
DANN	**Dangsing**	**49.06**	**280**	*eP*		**P**		**02 16 19.6**	**+0.1**
	comp=Z,104nm,0.9s								
H21K	**Melozitna Rive**	**49.28**	**30**	P		**P**		**02 16 21.5**	**+1.2**
H21K				IAmb	IAmb			02 16 41.9	
	comp=Z,9.0nm,1.4s								
PPLA	**Purkeypile**	**49.34**	**34**	P		**P**		**02 16 21.9**	**+1.0**
PPLA				IAmb	IAmb			02 16 46.3	
	comp=Z,7.3nm,1.2s								
KOLN	**Koldanda**	**49.42**	**279**	*eP*		**P**		**02 16 21.5**	**-0.6**
PYUN	**Piuthan**	**49.79**	**280**	*eP*		**P**		**02 16 24.4**	**-0.5**
	comp=Z,99nm,1.1s								
MDOK	**Medeo**	**49.86**	**300**	P		**P**		**02 16 24.5**	**-0.7**
MLY	**Manley**	**50.09**	**31**	P		**P**		**02 16 27.2**	**+0.7**
MLY				IAmb	IAmb			02 16 57.8	
	comp=Z,7.3nm,1.3s								
NEA2	**Nenana**	**50.79**	**31**	P		**P**		**02 16 31.8**	**+0.1**
NEA2				IAmb	IAmb			02 16 53.2	
	comp=Z,10nm,1.2s								
BOOM	**Boomskoye usch**	**50.81**	**300**	P		**P**		**02 16 32.6**	**+0.2**
BOOM				IAmb	IAmb			02 16 56.6	
	comp=Z,11nm,1.4s								
BOOM	**Boomskoye usch**	**50.81**	**300**	P		**P**		**02 16 32.6**	**+0.2**
BOOM				pmax	pmax				
	comp=Z,11nm,1.4s								
TKM2	**Tokmak 2**	**50.95**	**300**	*i*	P	**P**		**02 16 33.9**	**+0.3**
TKM2				pmax	pmax				
	comp=Z,10.0nm,0.9s								
NRN	**Naryn**	**51.02**	**298**	P		**P**		**02 16 32.6**	**-1.7**
NRN	**Naryn**	**51.02**	**298**	P		**P**		**02 16 32.6**	**-1.7**
NRN				pmax	pmax				
	comp=Z,3.0nm,0.8s								
MDM	**Murphy Dome**	**51.15**	**31**	P		**P**		**02 16 34.8**	**+0.3**
MDM				IAmb	IAmb			02 16 36.1	
	comp=Z,5.4nm,0.9s								
KNRA	**Kununurra**	**51.23**	**196**	P		**P**		**02 16 34.9**	**-0.6**
H24K	**Noodor Dome**	**51.32**	**30**	P		**P**		**02 16 37.1**	**+1.3**
H24K				IAmb	IAmb			02 17 07.9	
	comp=Z,4.4nm,1.1s								
CCB	**Clear Creek Bu**	**51.33**	**31**	P		**P**		**02 16 36.7**	**+0.9**
KSH	**Kashi**	**51.55**	**296**	P		**P**		**02 16 42.0**	**+4.0**
KSH				pmax	pmax				
	comp=Z,3.0nm,0.7s								
IL31		**51.73**	**31**	P		**P**		**02 16 38.8**	**+0.1**
ILAR	**Eielson Array**	**51.73**	**31**	P		**P**		**02 16 38.8**	**0.0**
ILAR	**Eielson Array**	**51.73**	**31**	P		**P**		**02 16 38.5**	**-0.3**
ILAR	**Eielson Array**	**51.73**	**31**	P		**P**		**02 16 38.5**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=272,slow=6.2,SNR=21 comp=Z,1.4nm,0.6s								
AAK	**Ala-Archa**	**51.80**	**300**	*i*	P	**P**		**02 16 40.4**	**+0.5**
AAK				pmax	pmax				
	comp=Z,2.0nm,0.7s								
OTUK	**Ortayu**	**52.03**	**308**	*i*	P	**P**		**02 16 40.5**	**-0.8**
OTUK				pmax	pmax				
	comp=Z,14nm,1.0s								
BVA0	**Borovoye Array**	**52.40**	**314**	*i*	P	**P**		**02 16 44.3**	**+0.4**
BRVK	**Borovoye**	**52.45**	**314**	*ceP*		**P**		**02 16 45.1**	**+0.8**
BRVK				pmax	pmax				
	comp=Z,3.0nm,0.8s								
BMAR	**Burnt Mountain**	**52.65**	**28**	P		**P**		**02 16 47.6**	**+2.0**
RIDG	**Independent Ri**	**52.65**	**32**	P		**P**		**02 16 45.6**	**-0.1**
RIDG				IAmb	IAmb			02 17 15.6	
	comp=Z,7.3nm,1.3s								
DOT	**Dot Lake**	**53.00**	**33**	P		**P**		**02 16 48.3**	**0.0**
DOT				IAmb	IAmb			02 17 23.5	
	comp=Z,5.7nm,1.2s								
BCAR	**Beaver Creek A**	**54.08**	**33**	P		**P**		**02 16 57.3**	**+1.1**
WB0	**Warramunga Arr**	**54.27**	**188**	P		**P**		**02 16 57.9**	**0.0**
FITZ	**Fitzroy Crossi**	**54.32**	**199**	P		**P**		**02 16 57.9**	**-0.4**
FITZ				IAmb	IAmb			02 17 14.2	
	comp=Z,4.6nm,0.7s								
WRAB	**Tennant Creek**	**54.44**	**188**	*ceP*		**P**		**02 17 02.0**	**+2.8**
WRAB				pmax	pmax				
	comp=Z,9.0nm,1.7s								
**WR0

VORR	**Voronezh**	**70.69**	**320**	*e*P		**P**		**02 18 48.5**	**+1.1**
VORR				pmax		pmax			
	comp=Z,20nm,0.4s								
FINES	**FINESS Array B**	**71.17**	**333**	P		**P**		**02 18 49.6**	**-0.6**
FINES	**FINESS Array B**	**71.17**	**333**	*ce*P		**P**		**02 18 53.0**	**+2.9**
FINES				pmax		pmax			
	comp=Z,2.0nm,0.9s								
FINES	**FINESS Array B**	**71.17**	**333**	P		**P**		**02 18 49.8**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=120,slow=6.8,SNR=3.9								
	comp=Z,1.6nm,0.7s								
YBH	**Yreka Blue Hor**	**71.95**	**52**	LR		LR		02 43 59.7	
	comp=Z,26nm,21.3s,baz=330,slow=30								
PINE	**Pine Mountain**	**72.04**	**49**	P		**P**		**02 18 56.7**	**+0.7**
PINE				IAmb		IAmb		02 18 58.1	
	comp=Z,7.0nm,0.9s								
GUDG	**Gudauri**	**72.31**	**310**	P		**P**		**02 18 57.8**	**+0.2**
GUDG				IAmb		IAmb		02 18 59.1	
	comp=Z,10nm,0.9s								
GUDG	**Gudauri**	**72.31**	**310**	P		**P**		**02 18 57.8**	**+0.2**
GUDG				pmax		pmax			
	comp=Z,10.0nm,0.9s								
ZEI	**Tsey**	**72.51**	**310**	*e*P		**P**		**02 18 57.5**	**-1.3**
ZEI				pmax		pmax			
	comp=Z,5.0nm,0.9s								
K05A	**Summer Lake**	**72.61**	**50**	P		**P**		**02 19 00.1**	**+0.7**
K05A				IAmb		IAmb		02 19 07.6	
	comp=Z,7.9nm,1.0s								
KBZ	**Khabaz**	**72.66**	**311**	*ce*P		**P**		**02 19 00.0**	**+0.6**
KBZ				pmax		pmax			
	comp=Z,7.0nm,1.1s								
KBZ	**Khabaz**	**72.66**	**311**	P		**P**		**02 18 59.9**	**+0.5**
	comp=Z,4.5nm,1.0s,baz=75,slow=2.9,SNR=6.3								
KBZ				LR		LR		02 54 35.6	
	comp=Z,96nm,18.5s,baz=46,slow=39								
	comp=Z,4.5nm,1.0s								
KIV	**Kislovodsk**	**72.67**	**312**	P		**P**		**02 18 59.2**	**-0.4**
KIV	**Kislovodsk**	**72.67**	**312**	*e*P		**P**		**02 19 00.8**	**+1.2**
KIV				pmax		pmax			
	comp=Z,11nm,1.0s								
KIV				MLR		MLR			
	comp=Z,63nm,18.0s								
GNI	**Garni**	**73.32**	**307**	LR		LR		02 55 07.9	
	comp=Z,109nm,18.5s,baz=67,slow=39								
BEKR	**Beckworth**	**74.44**	**52**	P		**P**		**02 19 10.3**	**+0.1**
NACGM	**Naroch**	**74.95**	**327**⇑	*e*P		P		02 19 20.2	+7.6
	baz=51								
MFID	**Camas Ranch**	**75.39**	**47**	P		**P**		**02 19 15.7**	**+0.1**
GURO	**Guroymak-BITLI**	**75.94**	**307**	P		**P**		**02 19 19.3**	**+0.5**
GURO				IAmb		IAmb		02 19 20.9	
	comp=Z,5.3nm,1.1s								
LRM	**Limekiln Ridge**	**76.03**	**44**	P		**P**		**02 19 19.1**	**-0.2**
AKASG	**Malin Array Be**	**76.41**	**323**	*i* P		**P**		**02 19 20.2**	**-0.9**
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.6s								
AKASG	**Malin Array Be**	**76.41**	**323**	P		**P**		**02 19 20.5**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=46,slow=6.5,SNR=9.9								
	comp=Z,2.2nm,0.7s								
HFS	**Hagfors**	**76.51**	**336**	LR		LR		02 57 08.7	
	comp=Z,122nm,20.3s,baz=30,slow=39								
NVAR	**Mina Array Bea**	**76.56**	**53**	P		**P**		**02 19 22.3**	**-0.1**
NVAR	**Mina Array Bea**	**76.56**	**53**	P		**P**		**02 19 23.3**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=293,slow=6.1,SNR=11								
	comp=Z,1.2nm,0.8s								
NB2	**NORSAR Subarra**	**76.64**	**338**	P		**P**		**02 19 22.2**	**0.0**
	comp=Z,0.8nm,0.8s,baz=38,slow=5.9								
NOA	**NORSAR Array B**	**76.64**	**338**	P		**P**		**02 19 22.3**	**0.0**
NOA	**NORSAR Array B**	**76.64**	**338**	P		**P**		**02 19 22.3**	**0.0**
	comp=Z,1.1nm,0.7s,baz=39,slow=5.9,SNR=4.9								
NOA				LR		LR		02 58 02.8	
	comp=Z,84nm,19.2s,baz=30,slow=40								
	comp=Z,1.1nm,0.7s								
QLMT	**Earthquake Lak**	**77.19**	**44**	P		**P**		**02 19 26.8**	**+0.9**
MARD	**Mardin**	**77.45**	**307**	P		**P**		**02 19 27.7**	**+0.3**
HVU	**Hansel Valley**	**78.17**	**47**	P		**P**		**02 19 32.4**	**+1.1**
HVU				IAmb		IAmb		02 19 40.7	
	comp=Z,5.2nm,1.2s								
HVU	**Hansel Valley**	**78.17**	**47**	P		**P**		**02 19 32.4**	**+1.1**
HVU				pmax		pmax			
	comp=Z,5.0nm,1.2s								
HWUT	**Hardware Ranch**	**79.01**	**47**	P		**P**		**02 19 35.7**	**-0.3**
HWUT				IAmb		IAmb		02 19 38.0	
	comp=Z,5.5nm,1.2s								
DUG	**Dugway, Tooele**	**79.07**	**49**	P		**P**		**02 19 36.6**	**+0.3**
DUG				IAmb		IAmb		02 19 38.1	
	comp=Z,6.1nm,1.1s								
DUG	**Dugway, Tooele**	**79.07**	**49**	P		**P**		**02 19 36.6**	**+0.3**
DUG				pmax		pmax			
	comp=Z,6.0nm,1.2s								
FRB	**Frobisher Bay**	**79.34**	**13**	LR		LR		02 58 01.8	
	comp=Z,58nm,19.2s,baz=246,slow=38								
PSUT	**Pine Spring**	**79.39**	**51**	P		**P**		**02 19 38.3**	**+0.1**
PSUT				IAmb		IAmb		02 19 48.7	
	comp=Z,5.9nm,1.3s								
PDAR	**Pinedale Array**	**79.51**	**45**	P		**P**		**02 19 38.6**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=262,slow=4.5,SNR=4.9								
	comp=Z,0.2nm,0.4s								
NLU	**North Lily Min**	**79.67**	**49**	P		**P**		**02 19 38.7**	**-1.0**
BNN	**Bunyan**	**79.77**	**310**	P		**P**		**02 19 39.0**	**-1.2**
BORG	**Borgarnes**	**80.27**	**353**	LR		LR		02 57 30.5	
	comp=Z,27nm,18.8s,baz=330,slow=37								
BURAR	**Bucovina Array**	**80.41**	**322**	P		**P**		**02 19 42.7**	**-0.6**
BRTR	**Keskin Array II**	**80.63**	**312**	P		**P**		**02 19 42.9**	**-1.8**
BRTR	**Keskin Array B**	**80.63**	**312**	*ce*P		**P**		**02 19 45.5**	**+0.7**
BRTR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
BRTR	**Keskin Array B**	**80.63**	**312**	P		**P**		**02 19 44.6**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=116,slow=3.5,SNR=5.6								
	comp=Z,2.1nm,0.7s								
P17A	**Butcher Ranch,**	**80.79**	**48**	P		**P**		**02 19 46.0**	**+0.3**
P17A				IAmb		IAmb		02 20 03.0	
	comp=Z,6.2nm,1.1s								
KNB	**Kanab**	**80.94**	**51**	P		**P**		**02 19 47.0**	**+0.6**
KNB				IAmb		IAmb		02 20 15.2	
	comp=Z,9.4nm,1.4s								
KNB	**Kanab**	**80.94**	**51**	P		**P**		**02 19 47.1**	**+0.6**
KNB				pmax		pmax			
	comp=Z,9.0nm,1.4s								
MLR	**Muntele Rosu**	**81.42**	**320**	LR		LR		03 00 17.1	
	comp=Z,157nm,18.0s,baz=56,slow=39								
ASF	**Jabal al Asfar**	**83.01**	**304**	P		**P**		**02 19 57.3**	**-0.1**
ASF	**Jabal al Asfar**	**83.01**	**304**	P		**P**		**02 19 57.3**	**-0.1**
ASF	**Jabal al Asfar**	**83.01**	**304**	P		**P**		**02 19 57.3**	**-0.1**
	comp=Z,3.1nm,1.0s,baz=0.0,slow=6.1,SNR=3.5								
	comp=Z,3.1nm,1.0s								
PPT2	**Papeete2**	**83.45**	**116**	*e*LR		LR		02 46 15.3	
	comp=Z,60nm,22.8s								
MMAI	**Mount Meron Ar**	**83.52**	**306**	P		**P**		**02 20 00.8**	**+0.8**
MMAI	**Mount Meron Ar**	**83.52**	**306**	P		**P**		**02 20 00.8**	**+0.8**
	comp=Z,7.0nm,1.0s,baz=354,slow=7.0,SNR=5.1								
	comp=Z,7.0nm,1.0s								
CKRC	**Cesky Krumlov**	**84.73**	**328**	*e*P		**P**		**02 20 03.3**	**-2.4**
KHC	**Kasperske Hory**	**84.81**	**329**	*e*P		**P**		**02 20 05.3**	**-0.9**
KHC	**Kasperske Hory**	**84.81**	**329**	*e*P		**P**		**02 20 05.3**	**-0.9**
GERES	**GERESS Array B**	**84.97**	**328**	P		**P**		**02 20 06.5**	**-0.6**
GERES	**GERESS Array B**	**84.97**	**328**	P		**P**		**02 20 06.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=20,slow=4.3,SNR=4.9								
	comp=Z,0.4nm,0.5s								
TAOE	**Nuku Hiva Isla**	**85.51**	**104**	*e*LR		LR		02 47 12.6	
	comp=Z,78nm,22.3s								
TBI	**Tubuai**	**87.15**	**121**	*e*LR		LR		02 47 59.0	
	comp=Z,123nm,24.8s								
TXAR	**Lajitas Array**	**91.71**	**52**	P		**P**		**02 20 39.6**	**0.0**
TXAR	**Lajitas Array**	**91.71**	**52**	P		**P**		**02 20 39.6**	**0.0**
	comp=Z,0.2nm,0.5s,baz=314,slow=5.3,SNR=4.3								
	comp=Z,0.2nm,0.5s								
SNAA	**Sanae**	**138.22**	**196**	PKPdf		**PKPdf**		**02 26 53.9**	**-1.9**
VNA2	**Neumayer--Watz**	**139.78**	**195**	PKPdf		**PKiKP**		**02 27 00.0**	**-1.0**
	baz=122,slow=1.2								
LPAZ	**La Paz**	**147.94**	**63**	PKP2		**PKPbc**		**02 27 18.4**	**+0.2**
LPAZ	**La Paz**	**147.94**	**63**	PKPbc		**PKPbc**		**02 27 18.4**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=25,slow=3.8,SNR=3.9								

NEIC ***31*** *02:51:54.2±2.0, 25°.4S±0°.2×178°.7W±0°.2, h339km±12km, mb4.2/22, Error ellipse: s-maj=23.6km s-min=17.8km az=215.0*

IDC ***31*** *02:52:21.8±7.0, 25°.17S×179°.52E, h550km±78km, mb3.5/7, mbtmp4.4/8, Error ellipse: s-maj=86.8km s-min=28.6km az=152.0*

ISC 31 02:51:54.5±1.2, 25°.5S±0°.2×178°.6W±0°.1, h350km, n34, σ1ˢ42/30, mb4.2/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.83**	**171**				**Pn**	**02 53 00.9**	**-0.9**
MARNC	**Mare, Loyalty**	**12.88**	**285**	P			Pn	02 54 50.5	+3.7
PINNC	**Pines Island,**	**13.05**	**280**				**Pn**	**02 54 50.6**	**+1.9**
DZM	**Mont Dzumac**	**14.10**	**281**	P			**Pn**	**02 55 03.8**	**+2.7**
	12nm,0.9s,baz=98,slow=17,SNR=4.3								
ARMA	**Armidale**	**26.71**	**253**	P		**P**		**02 57 04.9**	**+1.6**
ARMA				IAmb		IAmb		02 57 45.2	
	comp=Z,15nm,1.2s								
EIDS	**Eidsvold**	**27.35**	**264**	P		**P**		**02 57 08.8**	**0.0**
EIDS				IAmb		IAmb		02 57 09.7	
	comp=Z,9.6nm,0.7s								
CAN	**Canberra**	**29.51**	**243**	P		**P**		**02 57 29.9**	**+2.1**
TOO	**Toolangi**	**32.71**	**240**	P		**P**		**02 57 57.2**	**+1.6**
TOO				IAmb		IAmb		02 58 16.2	
	comp=Z,9.3nm,1.1s								
CTA	**Charters Tower**	**32.77**	**272**	P		**P**		**02 57 56.2**	**-0.1**
	comp=Z,26nm,0.7s,baz=96,slow=10,SNR=35								
	comp=Z,26nm,0.7s								
CTAO	**Charters Tower**	**32.77**	**272**	P		**P**		**02 57 55.8**	**-0.5**
STKA	**Stephens Creek**	**35.36**	**250**	P		**P**		**02 58 18.6**	**+0.4**
STKA	**Stephens Creek**	**35.36**	**250**	P		**P**		**02 58 19.1**	**+0.9**
	comp=Z,2.8nm,0.5s,baz=98,slow=13,SNR=11								
	comp=Z,2.8nm,0.5s								
PMG	**Port Moresby**	**36.21**	**290**				**P**	**02 58 25.5**	**0.0**
COEN	**Coen**	**37.63**	**280**	P			**P**	**02 58 37.1**	**-0.3**
COEN				IAmb		IAmb		02 58 38.0	
	comp=Z,12nm,0.8s								
BBOO	**Buckleboo**	**40.03**	**249**	P		**P**		**02 58 56.0**	**-0.9**
BBOO				IAmb		IAmb		02 59 30.8	
	comp=Z,29nm,1.4s								
AS31	**Alice Springs**	**43.05**	**262**	P		**P**		**02 59 20.8**	**-0.6**
ASAR	**Alice Springs**	**43.05**	**262**	P		**P**		**02 59 20.4**	**-1.0**
ASAR	**Alice Springs**	**43.05**	**262**	P		**P**		**02 59 20.4**	**-1.0**
	comp=Z,4.8nm,0.4s,baz=88,slow=7.4,SNR=117								
	comp=Z,4.8nm,0.4s								
WR0	**Warramunga Arr**	**43.40**	**267**	P		**P**		**02 59 22.4**	**-1.7**
WB2	**Warramunga Arr**	**43.57**	**267**	P		**P**		**02 59 24.0**	**-1.5**
WB2				IAmb		IAmb		02 59 24.9	
	comp=Z,8.6nm,0.5s								
WRAB	**Tennant Creek**	**43.58**	**267**	P		**P**		**02 59 24.1**	**-1.4**
WRAB				IAmb		IAmb		02 59 24.9	
	comp=Z,7.3nm,0.7s								
WB0	**Warramunga Arr**	**43.58**	**268**	P		**P**		**02 59 23.4**	**-2.2**
WB0				IAmb		IAmb		02 59 25.3	
	comp=Z,13nm,0.8s								
WRA	**Warramunga Arr**	**43.58**	**267**	P		**P**		**02 59 24.0**	**-1.6**
WRA	**Warramunga Arr**	**43.58**	**267**	P		**P**		**02 59 24.2**	**-1.4**
	comp=Z,5.7nm,0.4s,baz=100,slow=6.2,SNR=125								
	comp=Z,5.7nm,0.4s								
PTCN	**Pitcairn Islan**	**43.68**	**100**	P		**P**		**02 59 26.9**	**+0.7**
FORT	**Forrest**	**46.98**	**251**	P		**P**		**02 59 49.9**	**-1.9**
FORT				IAmb		IAmb		03 00 08.5	
	comp=Z,37nm,1.2s								
KNRA	**Kununurra**	**49.96**	**271**	P		**P**		**03 00 13.7**	**-0.8**
KNRA				IAmb		IAmb		03 00 15.2	
	comp=Z,18nm,1.1s								
FITZ	**Fitzroy Crossi**	**51.98**	**266**	P		**P**		**03 00 28.3**	**-1.1**
FAKI	**Fak Fak**	**52.25**	**287**	P		**P**		**03 00 30.7**	**-0.7**
PSA00	**Pilbara Seismi**	**56.14**	**260**	P		**P**		**03 00 57.1**	**-2.1**
PSA00				IAmb		IAmb		03 01 35.5	
	comp=Z,13nm,1.2s								
QSPA	**South Pole Qui**	**64.63**	**180**	P		**P**		**03 01 56.9**	**+1.4**
QSPA				IAmb		IAmb		03 02 04.6	
	comp=Z,5.5nm,1.4s								
NVAR	**Mina Array Bea**	**85.00**	**43**	P		P		03 04 04.3	+13
	comp=Z,0.5nm,0.7s,baz=223,slow=7.7,SNR=4.8								
	comp=Z,0.5nm,0.7s								
TXAR	**Lajitas Array**	**90.19**	**57**	P		P		03 04 30.3	+14
	comp=Z,0.7nm,0.9s,baz=218,slow=5.7,SNR=6.9								
	comp=Z,0.7nm,0.9s								
PDAR	**Pinedale Array**	**92.93**	**44**	P		P		03 04 40.4	+12
	comp=Z,0.1nm,0.5s,baz=234,slow=3.1,SNR=1.6								
	comp=Z,0.1nm,0.5s								

PRU 31 02:52:15.1±0.0, 50°.01N×18°.54E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.31**	**236**	*e*PG		Pg		02 52 24.4	-0.6
OKC				*e*SG		Sg		02 52 25.3	+0.4
	comp=Z,4.9nm,0.4s								
MORC	**Moravsky Berou**	**0.69**	**250**	*e*PG		Pg		02 52 27.9	-0.3
MORC				*e*SG		Sg		02 52 36.8	-0.3
OJC	**Ojcow**	**0.84**	**75**	*e*Pg		Pg		02 52 29.0	-2.1
OJC				*e*Sg		Sg		02 52 42.2	+0.2
LANS	**Liptovska Anna**	**1.05**	**145**	*e*SG		Sg		02 52 49.1	+0.3
LANS				*e*LG		Lg		02 52 52.7	
KRLC	**Kraliky**	**1.14**	**274**	*e*PG		Pg		02 52 35.8	-1.0
KRLC				*e*SG		Sg		02 52 50.8	-0.8
	comp=Z,1.8nm,0.6s								
NIE	**Niedzica**	**1.29**	**117**	*e*Pg		Pg		02 52 39.2	-0.6
NIE				*e*Sg		Sb		02 52 57.5	+0.2
VRAC	**Vranov**	**1.45**	**242**	*e*PG		Pn		02 52 41.1	-1.4
VRAC				*e*SG		Sg		02 53 00.3	-1.2
DPC	**Dobruska-Polom**	**1.47**	**284**	*e*PG		Pn		02 52 42.3	-0.5
DPC				*e*SG		Sg		02 53 02.3	+0.1
	comp=Z,1.4nm,0.6s								
VYHS	**Vyhne**	**1.53**	**173**	*e*SG		Sg		02 53 03.3	-0.9
KRUC	**Moravsky**	**1.69**	**237**	*e*SG		Sn		02 53 07.2	-1.0

IDC 31 02:58:19.9±1.7, 6°.18S×150°.42E, h0km, mb3.5/2, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=116.8km s-min=21.3km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.46**	**41**			Pn		02 59 02.0	+0.8
	11nm,0.3s,baz=18,slow=4.2,SNR=4.6								
KRVT						Sn		Sb 02 59 34.9	-0.9
	12nm,0.3s,baz=295,slow=18,SNR=3.9								
	46nm,0.5s								
WRA	**Warramunga Arr**	**20.77**	**227**	P		P		03 03 03.2	+0.6
	1.4nm,0.6s,baz=52,slow=10.0,SNR=12								
	1.4nm,0.6s								
ASAR	**Alice Springs**	**23.55**	**221**	P		P		03 03 32.0	-0.1
	1.0nm,0.5s,baz=57,slow=8.5,SNR=15								
	1.0nm,0.5s								
TORD	**Torodi Ar. Bea**	**148.43**	**285**	PKPbc		PKPbc		03 18 07.9	-1.7
	2.1nm,0.3s,baz=71,slow=4.0,SNR=1.7								

IDC 31 02:59:25.0±2.8, 21°.86S×179°.07W, h388km±33km, mb3.3/5, mbtmp4.0/6, Error ellipse: s-maj=53.1km s-min=30.8km az=44.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.92**	**326**	P		P	Pn	03 00 45.7	-0.1
	10nm,1.0s,baz=162,slow=16								
STKA	**Stephens Creek**	**36.31**	**246**	P		P		03 05 53.9	+0.3
	1.4nm,0.5s,baz=103,slow=12,SNR=5.2								
	1.4nm,0.5s								
ASAR	**Alice Springs**	**43.25**	**258**	P		P		03 06 50.0	-0.2
	3.0nm,0.7s,baz=92,slow=8.0,SNR=32								
	3.0nm,0.7s								
WRA	**Warramunga Arr**	**43.44**	**264**	P		P		03 06 51.2	-0.5
	1.5nm,0.8s,baz=96,slow=8.2,SNR=39								
	1.5nm,0.8s								
VNDA	**Vanda**	**56.48**	**185**	P		P		03 08 27.3	-0.2
	0.2nm,0.4s,baz=18,slow=9.3,SNR=5.8								
	0.2nm,0.4s								
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P		P		03 11 40.6	+0.3
	0.9nm,0.3s,baz=111,slow=2.0,SNR=4.5								
	0.9nm,0.3s								

IDC ***31*** *03:09:42.9±0.8, 56°.04S×4°.71W, h0km, mb4.5/9, mbtmp4.5/10, ML4.4/1, Error ellipse: s-maj=25.6km s-min=17.2km az=68.0*

NEIC ***31*** *03:09:45.2±0.4, 56°.2S±0°.1×5°.0W±0°.2, h10km±1km, mb4.9/14, Error ellipse: s-maj=25.0km s-min=19.5km az=49.0*

ISC 31 03:09:44.6±0.6, 56°.10S±0°.08×5°.0W±0°.1, h10km, n36, σ0ˢ65/31, mb4.7/15, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.68**	**184**	P			**Pn**	**03 13 12.7**	**+0.7**
VNA2	**Neumayer--Watz**	**14.92**	**183**	P			**Pn**	**03 13 14.8**	**-0.5**
	baz=0.6,slow=15								
VNA3	**Neumayer Olymp**	**15.34**	**186**	P			**Pn**	**03 13 20.8**	**0.0**
SNAA	**Sanae**	**15.66**	**178**	P			**Pn**	**03 13 24.9**	**-0.2**
SNAA	**Sanae**	**15.66**	**178**	Pn			**Pn**	**03 13 25.4**	**+0.3**
SNAA	**Sanae**	**15.66**	**178**	Pn			**Pn**	**03 13 25.1**	**0.0**
	1.5nm,0.3s,baz=358,slow=14,SNR=41								
SNAA						Sn	Sn	03 16 06.5	-12
	0.2nm,0.3s,baz=12,slow=18,SNR=3.2								
	9.5nm,0.7s								
TROLL	**Troll, Antarti**	**16.28**	**172**	P			**Pn**	**03 13 34.2**	**+1.0**
MAW	**Mawson**	**32.22**	**138**	P			**P**	**03 16 11.9**	**-0.4**
MAW	**Mawson**	**32.22**	**138**	P			**P**	**03 16 11.8**	**-0.6**
	5.0nm,0.8s,baz=264,slow=9.2,SNR=12								
	5.0nm,0.8s								
QSPA	**South Pole Qui**	**34.14**	**180**	P			**P**	**03 16 29.4**	**0.0**
	5.4nm,1.0s,baz=222,slow=5.9,SNR=9.4								
	5.4nm,1.0s								
TSUM	**Tsumeb**	**40.55**	**34**	P			**P**	**03 17 25.6**	**+1.5**
	1.0nm,0.3s,baz=203,slow=8.3,SNR=3.1								
SBA	**Scott Base**	**46.21**	**178**	P			**P**	**03 18 09.3**	**+0.3**
SBA				IAmb		IAmb		03 18 12.5	
	comp=Z,13nm,1.1s								
VNDA	**Vanda**	**46.39**	**176**	P			**P**	**03 18 10.8**	**+0.4**
VNDA				IAmb		IAmb		03 18 12.8	
	comp=Z,14nm,1.2s								
VNDA	**Vanda**	**46.39**	**176**	P			**P**	**03 18 10.7**	**+0.4**
	comp=Z,7.8nm,1.0s,baz=216,slow=7.9,SNR=28								
	comp=Z,7.8nm,1.0s								
H10S2	**ASCENSION HYDR**	**47.63**	**347**	T			T	04 09 42.4	
	baz=172,slow=74,SNR=6.2								
H10S3	**ASCENSION HYDR**	**47.64**	**347**	T			T	04 09 46.1	
	baz=48,slow=74,SNR=12								
CPUP	**Villa Florida**	**47.75**	**286**	P			**P**	**03 18 21.0**	**-0.6**
CPUP				IAmb		IAmb		03 18 23.2	
	comp=Z,17nm,1.4s								
CPUP	**Villa Florida**	**47.75**	**286**	P			**P**	**03 18 22.3**	**+0.7**
	comp=Z,4.9nm,1.1s,baz=160,slow=11,SNR=5.6								
	comp=Z,4.9nm,1.1s								
LSZ	**Lusaka**	**47.96**	**45**	P			**P**	**03 18 22.7**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=188,slow=8.8,SNR=4.0								
	comp=Z,1.1nm,0.3s								
CASY	**Casey**	**48.71**	**151**	P			**P**	**03 18 28.2**	**-0.3**
CASY				IAmb		IAmb		03 18 30.8	
	comp=Z,9.2nm,1.0s								
LMEL	**Las Melosas**	**49.12**	**268**	P			**P**	**03 18 32.4**	**0.0**
LMEL				IAmb		IAmb		03 18 34.6	
	comp=Z,17nm,1.2s								
AQDB	**Aquidauana**	**51.65**	**292**	P			**P**	**03 18 50.1**	**-1.2**
BDFB	**Brasilia**	**51.95**	**303**	P			**P**	**03 18 53.7**	**-0.1**
BDFB				IAmb		IAmb		03 18 55.8	
	comp=Z,23nm,1.2s								
BDFB	**Brasilia**	**51.95**	**303**	P			**P**	**03 18 54.5**	**+0.8**
	comp=Z,14nm,1.1s,baz=154,slow=4.7,SNR=11								
	comp=Z,14nm,1.1s								
ABPO	**Ambohimpanom**	**53.61**	**68**	P			**P**	**03 19 06.5**	**+0.4**
PTLB	**Pontes e Lacer**	**57.62**	**292**	P			**P**	**03 19 35.0**	**+0.3**
PTLB				IAmb		IAmb		03 19 36.2	
	comp=Z,18nm,1.4s								
LPAZ	**La Paz**	**61.72**	**283**	P			**P**	**03 20 04.0**	**+0.2**
LPAZ	**La Paz**	**61.72**	**283**	P			**P**	**03 20 04.4**	**+0.7**
	comp=Z,5.6nm,1.0s,baz=124,slow=7.7,SNR=14								
	comp=Z,5.6nm,1.0s								
DBIC	**Dimbokro**	**62.55**	**0**	P			**P**	**03 20 09.1**	**+0.7**
DBIC	**Dimbokro**	**62.55**	**0**	P			**P**	**03 20 07.9**	**-0.5**
	comp=Z,6.4nm,1.1s,baz=168,slow=12,SNR=4.2								
	comp=Z,6.4nm,1.1s								
ETMB	**Extrema**	**66.05**	**289**	P			**P**	**03 20 31.6**	**+0.1**
ETMB				IAmb		IAmb		03 20 32.8	
	comp=Z,6.9nm,1.2s								
TORD	**Torodi Ar. Bea**	**69.21**	**7**	P			**P**	**03 20 50.0**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=188,slow=4.4,SNR=6.5								
	comp=Z,1.7nm,0.3s								
H01W2	**Cape Leeuwin H**	**75.66**	**132**	T			T	04 45 15.1	
	baz=211,slow=75,SNR=19								
H01W1	**Cape Leeuwin H**	**75.67**	**132**	T			T	04 45 05.2	
	baz=211,slow=75,SNR=26								
H01W3	**Cape Leeuwin H**	**75.67**	**132**	T			T	04 45 11.9	
	baz=211,slow=75,SNR=28								
YKA	**Yellowknife Ar**	**145.

CTA S S 03 18 08.5 +1.0
129nm,0.9s,baz=167,slow=24,SNR=6.7
CTAO Charters Tower 17.49 201 P P 03 15 11.4 +0.3
CTAO Charters Tower 17.49 201 P P 03 15 11.4 +0.3
CTAO Charters Tower 17.49 201 P P 03 15 11.5 +0.4
CTAO Charters Tower 17.49 201 ⇓P P 03 15 11.3 +0.3
GUMO Guam 18.88 336 P P 03 15 23.6 -0.3
GUMO Guam 18.88 336 P P 03 15 23.6 -0.3
GUMO Guam 18.88 336 P P 03 15 23.8 -0.1
GUMO Guam 18.88 336 ⇑P P 03 15 23.3 -0.6
GUMO Guam 18.88 336 P P 03 15 23.3 -0.6
8µm,0.8s,baz=176,slow=6.0,SNR=188
KWAJ Kwajalein Atol 19.31 50 P P 03 15 27.8 -0.1
KWAJ Kwajalein Atol 19.31 50 P P 03 15 27.8 -0.1
KWAJ Kwajalein Atol 19.31 50 P P 03 15 28.3 +0.4
KWAJ Kwajalein Atol 19.31 50 ⇓P P 03 15 27.9 -0.1
RK1H Rockhampton Ha 19.70 186 P P 03 15 31.4 +0.1
3µm,0.7s
KOUNC Koumac, New Ca 20.16 147 P P 03 15 35.6 +0.1
KOUNC Koumac, New Ca 20.16 147 P P 03 15 36.6 +1.1
KOUNC Koumac, New Ca 20.16 147 ⇓P P 03 15 35.6 +0.1
FAKI Fak Fak 20.50 272 P P 03 15 39.0 +0.2
FAKI Fak Fak 20.50 272 P P 03 15 38.9 +0.1
92µm40µm2µm,0.9s
FAKI Fak Fak 20.50 272 P P 03 15 39.7 +0.9
DVP Devils Point 20.56 134 P P 03 15 41.5 +2.3
TARA Tarawa 20.75 76 P P 03 15 40.6 -0.4
TARA Tarawa 20.75 76 P P 03 15 41.1 +0.1
TARA Tarawa 20.75 76 ⇓P P 03 15 40.6 -0.4
QIS Mount Isa 21.11 216 P P 03 15 44.7 +0.6
I39PW PALAU INFRASON 21.34 302 P P 03 15 46.3 0.0
baz=136,slow=15,SNR=3.5
EIDS Eidsvold 21.61 184 P P 03 15 48.7 +0.1
EIDS Eidsvold 21.61 184 P P 03 15 49.1 +0.5
EIDS Eidsvold 21.61 184 ⇓P P 03 15 48.6 0.0
SIJI Sorong 21.67 277 P P 03 15 49.7 +0.3
2µm,1.0s,baz=81,slow=6.6,SNR=228
2µm,1.0s
SWI Sorong 21.68 277 P P 03 15 49.6 +0.2
84µm27µm3µm,0.9s
SAUI Saumlaki 21.78 258 P P 03 15 50.5 +0.2
SAUI Saumlaki 21.78 258 P P 03 15 50.7 +0.5
69µm41µm4µm,1.4s
SAUI Saumlaki 21.78 258 P P 03 15 50.8 +0.5
KDU Kakadu 21.97 245 P P 03 15 52.3 +0.3
KDU Kakadu 21.97 245 ⇑P P 03 15 51.3 -0.7
LIFNC LIFOU 22.06 142 P P 03 15 51.7 -1.0
LIFNC LIFOU 22.06 142 P P 03 15 52.2 -0.5
NOUC Port Laguerre 22.52 145 P P 03 15 57.5 +0.7
NOUC Port Laguerre 22.52 145 P P 03 15 57.2 +0.4
DZM Mont Dzumac 22.58 145 *eP* P 03 15 58.0 +0.5
4µm,1.0s
DZM *es*P **sP** 03 18 12.3 -0.4
2µm,1.1s
DZM *e*S S 03 19 30.2 +0.9
81µm,28.1s
DZM Mont Dzumac 22.58 145 P P 03 15 57.6 +0.1
DZM Mont Dzumac 22.58 145 P P 03 15 57.6 +0.1
DZM Mont Dzumac 22.58 145 P P 03 15 57.9 +0.5
DZM Mont Dzumac 22.58 145 ⇓P P 03 15 57.5 0.0
DZM Mont Dzumac 22.58 145 P P 03 15 57.6 +0.1
2µm,0.8s,baz=264,slow=5.8,SNR=158
2µm,0.8s
ONTNC Ouen Toro 22.77 146 P P 03 15 58.5 -0.6
ONTNC Ouen Toro 22.77 146 P P 03 15 59.9 +0.8
ONTNC Ouen Toro 22.77 146 P P 03 15 59.6 +0.5
ONTNC Ouen Toro 22.77 146 ⇓P P 03 15 58.7 -0.4
BNDI Bandanaira 22.82 267 P P 03 15 59.8 +0.1
55µm57µm5µm,1.3s
BNDI Bandanaira 22.82 267 P P 03 16 01.6 +1.9
YATNC Mamie plateau, 22.82 144 P P 03 16 02.6 +3.0
YATNC Mamie plateau, 22.82 144 P P 03 15 59.9 +0.3
RMQ Roma 22.99 189 P P 03 16 01.2 +0.2
MARNC Mare, Loyalty 23.07 141 P P 03 16 01.4 -0.4
MARNC Mare, Loyalty 23.07 141 P P 03 16 02.3 +0.5
MARNC Mare, Loyalty 23.07 141 ⇓P P 03 16 01.5 -0.3
OUENC Ouen Island, N 23.07 145 P P 03 16 01.7 -0.1
OUENC Ouen Island, N 23.07 145 P P 03 16 02.4 +0.6
MTN Manton Dam 23.24 246 P P 03 16 02.7 -0.8
MTN Manton Dam 23.24 246 P P 03 16 03.4 0.0
MTN Manton Dam 23.24 246 ⇑P P 03 16 02.8 -0.6
PINNC Pines Island, 23.58 144 P P 03 16 06.7 +0.4
PINNC Pines Island, 23.58 144 P P 03 16 07.3 +1.0
MSAI Masohi 23.80 270 P P 03 16 08.5 +0.1
4µm449nm,0.6s
WB0 Warramunga Arr 24.02 227 P P 03 16 10.0 -0.2
WR0 Warramunga Arr 24.03 226 P P 03 16 10.4 0.0
WRAB Tennant Creek 24.15 227 P P 03 16 11.3 -0.1
WRAB Tennant Creek 24.15 227 *ce*P P 03 16 11.5 0.0
WRAB pmax pmax
comp=Z,480nm,1.7s
WRAB Tennant Creek 24.15 227 P P 03 16 11.4 -0.1
comp=Z,405nm,0.8s
WRAB Tennant Creek 24.15 227 ⇑P P 03 16 11.1 -0.4
WB2 Warramunga Arr 24.16 227 P P 03 16 11.2 -0.3
WRA Warramunga Arr 24.17 227 P P 03 16 11.2 -0.4
WRA Warramunga Arr 24.17 227 *i* P P 03 16 10.3 -1.3
WRA pmax pmax
comp=Z,100nm,0.4s
WRA Warramunga Arr 24.17 227 P P 03 16 11.4 -0.2
comp=Z,92nm,0.4s,baz=52,slow=9.3,SNR=496
WRA S S 03 19 54.4 +0.2
comp=Z,195nm,0.9s,baz=48,slow=15,SNR=5.1
WRA P3KP 03 50 05.5
comp=Z,3.0nm,0.9s,baz=156,slow=3.0,SNR=8.6
comp=Z,92nm,0.4s
AAI Ambon 24.53 269 P P 03 16 15.0 +0.1
comp=Z,57µmcomp=Z,38µmcomp=Z,3µm,1.3s
LBMI Labuha 25.43 276 P P 03 16 24.1 +1.2
comp=Z,41µmcomp=Z,40µmcomp=Z,3µm,1.2s
NLAI Namlea 25.63 270 P P 03 16 25.4 +0.7
comp=Z,18µmcomp=Z,1µm,0.8s
TNTI Ternate 25.78 279 P P 03 16 25.6 -0.4
TNTI Ternate 25.78 279 P P 03 16 26.0 0.0
comp=Z,34µmcomp=Z,10µmcomp=Z,893nm,1.0s
TNTI Ternate 25.78 279 P P 03 16 26.4 +0.4
comp=Z,905nm,1.0s
H11S3 WAKE ISLAND Hy 25.96 31 P P 03 16 28.1 +0.8
baz=199,slow=74,SNR=28
H11S2 WAKE ISLAND Hy 25.97 31 P P 03 16 28.3 +0.9
baz=9.9,slow=74,SNR=30
H11S1 WAKE ISLAND Hy 25.98 31 P P 03 16 28.1 +0.6
KNRA Kununurra 26.45 242 P P 03 16 31.2 -0.7
KNRA Kununurra 26.45 242 P P 03 16 31.7 -0.2
INKA Innaminka 26.52 204 P P 03 16 32.5 +0.2
ARMA Armidale 26.60 182 P P 03 16 33.9 +0.8
ARMA Armidale 26.60 182 P P 03 16 33.8 +0.6
ARMA Armidale 26.60 182 ⇓P P 03 16 33.8 +0.6
WAKE Wake Island 26.61 30 P P 03 16 32.9 -0.3
WAKE Wake Island 26.61 30 P P 03 16 33.2 +0.1
WAKE Wake Island 26.61 30 ⇓P P 03 16 33.5 +0.4
FUNA Funafuti 26.70 102 P P 03 16 33.8 -0.3
FUNA Funafuti 26.70 102 P P 03 16 33.4 -0.7
SANI Sanana 26.80 273 P P 03 16 35.0 0.0
comp=Z,60µmcomp=Z,24µmcomp=Z,2µm,1.3s
SANI Sanana 26.80 273 P P 03 16 35.3 +0.3
AS31 Alice Springs 26.95 221 P P 03 16 35.8 -0.5
ASAR Alice Springs 26.95 221 P P 03 16 35.6 -0.7
ASAR Alice Springs 26.95 221 P P 03 16 35.8 -0.5
ASAR Alice Springs 26.95 221 P P 03 16 35.8 -0.5
comp=Z,156nm,0.6s,baz=56,slow=9.1,SNR=430
ASAR pP **pP** 03 17 59.8 +1.6
comp=Z,206nm,1.0s,baz=57,slow=9.2,SNR=3.2
ASAR S S 03 20 38.9 +0.9
comp=Z,82nm,0.8s,baz=50,slow=14,SNR=2.6
ASAR P3KPbc 03 48 56.8
comp=Z,0.5nm,0.8s,baz=193,slow=2.3,SNR=4.0
ASAR P3KP 03 49 57.2
comp=Z,2.4nm,0.9s,baz=149,slow=3.3,SNR=5.7
comp=Z,156nm,0.6s
H11N1 WAKE ISLAND Hy 27.09 30 P P 03 16 38.1 +0.9
baz=208,slow=11,SNR=169
H11N3 WAKE ISLAND Hy 27.10 30 P P 03 16 38.4 +1.1
baz=208,slow=11,SNR=74
H11N2 WAKE ISLAND Hy 27.11 30 P P 03 16 38.5 +1.2
baz=208,slow=11,SNR=139
SGSI Sangihe 28.20 285 P P 03 16 48.2 +0.9
comp=Z,4µmcomp=Z,47µmcomp=Z,5µm,0.8s
LHI Lord Howe Isla 28.31 169 P P 03 16 48.0 +0.1
LHI Lord Howe Isla 28.31 169 P P 03 16 48.8 +0.9
LHI Lord Howe Isla 28.31 169 ⇓P P 03 16 48.0 +0.1
MSVF Nonsavu 28.43 121 P P 03 16 49.4 +0.1
MSVF Nonsavu 28.43 121 *d i*P P 03 16 49.1 -0.2
MSVF pmax pmax
comp=Z,749nm,0.9s
MSVF Nonsavu 28.43 121 P P 03 16 49.9 +0.6
comp=Z,767nm,0.9s
MSVF Nonsavu 28.43 121 ⇓P P 03 16 49.9 +0.6
MSVF Nonsavu 28.43 121 P P 03 16 50.0 +0.6
MSVF pP **pwP** 03 18 15.4 -1.7
MSVF ScP **ScP** 03 22 45.9 +6.0
CMSA Cobar Meteorol 28.49 193 P P 03 16 49.9 +0.3
SOEI Soe 28.93 257 P P 03 16 54.5 +0.7
SOEI Soe 28.93 257 P P 03 16 54.6 +0.8
comp=Z,43µmcomp=Z,33µmcomp=Z,5µm,0.8s
SOEI Soe 28.93 257 P P 03 16 55.0 +1.2
OOD Oodnadatta 28.98 212 P P 03 16 53.5 -0.4
NFK Norfolk Island 29.04 152 P P 03 16 55.0 +0.6
NFK Norfolk Island 29.04 152 ⇓P P 03 16 54.1 -0.3
NTLH Newcastle Hard 29.07 182 P P 03 16 55.9 +1.3
KMSI Cibinong 29.09 278 P P 03 16 55.6 +0.6
comp=Z,2µmcomp=Z,75µmcomp=Z,9µm,0.9s
NTLS Newcastle Soft 29.10 182 P P 03 16 56.5 +1.6
DAV Davao City (W) 29.17 291 P P 03 16 56.4 +0.6
DAV Davao City (W) 29.17 291 P P 03 16 55.6 -0.2
DAV P P 03 16 55.6 -0.2
DAV S S 03 21 20.2 +7.4
DAV S S 03 21 20.2 +7.4
DAV Davao City (W) 29.17 291 P P 03 16 56.0 +0.2
DAV Davao City (W) 29.17 291 P P 03 16 55.2 -0.5
comp=Z,759nm,0.6s,baz=61,slow=2.3,SNR=14
comp=Z,759nm,0.6s
DAV Davao City (W) 29.17 291 P P 03 16 58.5 +2.7
BATI Baumata 29.59 256 P P 03 17 00.8 +1.3
comp=Z,21µmcomp=Z,18µmcomp=Z,2µm,1.2s
BATI Baumata 29.59 256 P P 03 17 01.1 +1.6
comp=Z,3µm,0.9s,baz=140,slow=1.6,SNR=101
BATI S S 03 21 22.8 +3.5
comp=Z,235nm,1.0s,baz=150,slow=20,SNR=2.3
comp=Z,3µm,0.9s
TAVE Taveuni 29.78 118 P P 03 17 03.0 +2.0
BUKP Musuan 29.94 293 *eP* P 03 17 02.6 +0.1
STKA Stephens Creek 29.94 199 P P 03 17 01.4 -0.8
STKA Stephens Creek 29.94 199 *d i*P P 03 17 01.3 -0.9
STKA Stephens Creek 29.94 199 P P 03 17 01.9 -0.3
STKA Stephens Creek 29.94 199 P P 03 17 01.7 -0.5
comp=Z,326nm,0.7s,baz=8.4,slow=9.1,SNR=94
STKA pP **pP** 03 18 27.9 +0.7
comp=Z,92nm,0.7s,baz=7.8,slow=16,SNR=2.5
comp=Z,326nm,0.7s
LCRK Leigh Creek 29.96 206 P P 03 17 02.0 -0.4
SYDH Sydney Hard Ro 29.98 183 P P 03 17 03.4 +1.0
LUWI Luwuk 30.09 274 P P 03 17 04.1 +0.4
LUWI Luwuk 30.09 274 P P 03 17 04.3 +0.6
comp=Z,55µmcomp=Z,49µmcomp=Z,5µm,0.8s
LUWI Luwuk 30.09 274 P P 03 17 04.5 +0.8
FITZ Fitzroy Crossi 30.18 240 P P 03 17 03.5 -0.9
FITZ Fitzroy Crossi 30.18 240 P P 03 17 04.3 -0.1
FITZ Fitzroy Crossi 30.18 240 ⇑P P 03 17 03.3 -1.1
FITZ ⇓p **pwP** 03 18 32.8 +0.1
FITZ Fitzroy Crossi 30.18 240 P P 03 17 03.4 -1.1
comp=Z,307nm,0.9s,baz=70,slow=8.6,SNR=178
FITZ pP **pP** 03 18 29.6 +1.0
comp=Z,216nm,0.9s,baz=75,slow=6.3,SNR=3.3
FITZ S S 03 21 26.8 -1.4
comp=Z,128nm,1.2s,baz=301,slow=19,SNR=1.4
FITZ P3KPbc 03 48 49.0
comp=Z,11nm,0.8s,baz=233,slow=5.9,SNR=22
comp=Z,307nm,0.9s
CTBH Cotabato--PC H 30.46 291 *eP* P 03 17 07.6 +0.6
MMRI Maumere 30.74 259 P P 03 17 08.1 -1.3
MMRI Maumere 30.74 259 P P 03 17 07.6 -1.8
comp=Z,30µmcomp=Z,17µmcomp=Z,1µm,0.6s
MMRI Maumere 30.74 259 P P 03 17 09.9 +0.5
MSLP Maasin 31.01 297 *eP* P 03 17 12.5 +0.8
MRSI Marisa 31.09 277 P P 03 17 11.5 -0.9
comp=Z,43µmcomp=Z,15µmcomp=Z,1µm,0.6s
APSI Ampana 31.22 274 P P 03 17 13.9 +0.4
comp=Z,29µmcomp=Z,25µmcomp=Z,3µm,1.1s
EDFI Ende, Flores 31.29 259 P P 03 17 12.3 -2.0
comp=Z,16µmcomp=Z,11µmcomp=Z,970nm,1.1s
LKBA Tubou, Lakemba 31.34 120 P P 03 17 14.6 +0.2
PAGZ Pagadian 31.48 291 *i*P P 03 17 17.0 +1.2
CNB Canberra Magne 31.62 185 P P 03 17 17.7 +1.0
CAN Canberra 31.66 186 P P 03 17 17.5 +0.4
CAN Canberra 31.66 186 P P 03 17 17.5 +0.4
CAN pmax pmax
comp=Z,1µm,0.7s
CAN Canberra 31.66 186 P P 03 17 18.2 +1.1
CAN Canberra 31.66 186 ⇓P P 03 17 16.2 -0.9
CAN Canberra 31.66 186 P P 03 17 17.9 +0.9
CAN pP **pP** 03 18 43.2 +0.8
CAN sP **sP** 03 19 40.2 +1.0
WRKA Warakurna 31.70 226 P P 03 17 17.2 -0.3
WRKA Warakurna 31.70 226 ⇑P P 03 17 16.6 -0.9
DCPH Dipolog City 31.77 293 *eP* P 03 17 21.9 +3.7
MULG Mulgathing 31.82 212 P P 03 17 17.8 -0.6
LLP Lapu-Lapu 31.88 296 *i*eP P 03 17 18.9 -0.3
LLP *eS* S 03 21 53.9 -0.6
SNPH Sibulan 32.16 294 *eP* P 03 17 22.1 +0.5
BSSI Bau Bau, Buton 32.25 264 P P 03 17 22.6 +0.2
comp=Z,25µmcomp=Z,12µmcomp=Z,1µm,1.4s
JCJ Chichijima 32.27 342 P P 03 17 19.4 -2.9
JCJ Chichijima 32.27 342 P P 03 17 19.7 -2.6
JCJ Chichijima 32.27 342 ⇑P P 03 17 19.4 -2.9
JCJ Chichijima 32.27 342 P P 03 17 19.2 -3.1
comp=Z,1µm,0.5s,baz=173,slow=4.8,SNR=32
HTT Hallett 32.29 202 P P 03 17 22.5 0.0
HTT Hallett 32.29 202 ⇓P P 03 17 22.2 -0.2
TOLI2 Tolitoli 32.33 278 P P 03 17 22.4 -0.6
TOLI2 IAmb IAmb 03 17 25.4
comp=Z,602nm,0.9s
PTPS Port Pirie 32.42 204 P P 03 17 24.3 +0.8
WHYH Whyalla 32.47 204 P P 03 17 23.5 -0.4
BKSI Bulukumba 32.59 266 P P 03 17 24.8 -0.4
comp=Z,36µmcomp=Z,8µmcomp=Z,811nm,1.0s
BASI Baing, Sumba 32.59 257 P P 03 17 25.5 +0.3
comp=Z,20µmcomp=Z,37µmcomp=Z,3µm,1.0s
CNOP Candoni, Negro 32.89 294 *eP* P 03 17 27.9 +0.2
CNOP *i* S ScS 03 27 04.6 +8.0
TTSI Tana Toraja 32.90 270 P P 03 17 28.6 +0.7
comp=Z,14µmcomp=Z,1µm,1.0s
BBOO Buckleboo 32.92 206 P P 03 17 27.2 -0.6
BBOO IAmb IAmb 03 17 31.7
comp=Z,585nm,0.8s
BBOO Buckleboo 32.92 206 P P 03 17 27.3 -0.5
SPSI Sidrap Palu 32.93 268 P P 03 17 27.7 -0.4
comp=Z,33µmcomp=Z,11µmcomp=Z,1µm,1.1s
KAPI Kappang 32.95 267 P P 03 17 28.7 +0.4
KAPI Kappang 32.95 267 *c i*P P 03 17 28.5 +0.2
KAPI pmax pmax
comp=Z,1µm,1.0s
KAPI Kappang 32.95 267 P P 03 17 28.9 +0.6
KAPI P P 03 17 28.9 +0.6
KAPI S S 03 22 10.8 -0.1
KAPI S S 03 22 10.8 -0.1
KAPI Kappang 32.95 267 P P 03 17 28.9 +0.6
KAPI Kappang 32.95 267 ⇑P P 03 17 28.7 +0.4
KAPI Kappang 32.95 267 P P 03 17 28.8 +0.6
comp=Z,1µm,0.9s,baz=98,slow=5.7,SNR=85
comp=Z,1µm,0.9s
KAPI Kappang 32.95 267 P P 03 17 28.8 +0.4
KAPI ScP **ScP** 03 22 56.7 +1.7
MPSI Mapaga 33.10 276 P P 03 17 28.9 -0.6
comp=Z,42µmcomp=Z,28µmcomp=Z,2µm,0.6s
MILA Mila 33.37 185 ⇓P P 03 17 32.4 +0.8
RCP Roxas 33.49 297 *eP* P 03 17 33.5 +0.7
WBSI Waikabubak, Su 33.66 258 P P 03 17 33.3 -1.1
comp=Z,29µmcomp=Z,32µmcomp=Z,2µm,0.9s
GHSS Government Hou 33.74 201 P P 03 17 36.7 +2.1
comp=Z,1µm,0.7s
TWOA Tennyson Woods 33.85 201 P P 03 17 36.1 +0.5
TOO Toolangi 34.37 190 P P 03 17 40.5 +0.5
TOO IAmb IAmb 03 17 45.3
comp=Z,600nm,1.1s
TOO Toolangi 34.37 190 P P 03 17 40.5 +0.5
TOO pmax pmax
comp=Z,600nm,1.1s
TOO Toolangi 34.37 190 P P 03 17 41.0 +1.0
TOO Toolangi 34.37 190 ⇓P P 03 17 40.4 +0.5
ARPS Mount Arapiles 34.42 196 P P 03 17 40.9 +0.5
BRAT Ballarat 34.66 192 P P 03 17 43.4 +1.1
comp=Z,169nm,0.8s
MLBS Spotswood, Mel 34.73 191 P P 03 17 44.9 +2.0
JCNP Jose Panganiba 34.76 302 *eP* P 03 17 43.3 -0.2
GQP Guinayangan 34.80 301 *eP* P 03 17 44.2 +0.4
PLAI Plampang 35.14 260 P P 03 17 44.1 -2.7
comp=Z,25µmcomp=Z,17µmcomp=Z,2µm,0.7s
PLAI Plampang 35.14 260 P P 03 17 45.0 -1.8
GEXS Deakin Univers 35.21 192 P P 03 17 49.1 +2.2
comp=Z,1µm,1.0s
SGKI Sangatta, Kali 35.28 274 P P 03 17 50.2 +2.2
comp=Z,60µmcomp=Z,26µmcomp=Z,2µm,1.1s
MYLDM Lahad Datu 35.35 284 P P 03 17 50.3 +1.8
MYLDM Lahad Datu 35.35 284 ⇑P P 03 17 50.3 +1.8
FORT Forrest 35.63 218 P P 03 17 50.1 -0.4
FORT Forrest 35.63 218 P P 03 17 50.2 -0.4
FORT Forrest 35.63 218 ⇓P P 03 17 50.1 -0.4
LQP Lukban 35.67 300 *i*eP P 03 17 51.9 +0.5
PGP Puerto Galera 35.91 299 *i*P P 03 17 52.8 -0.4
BKB Balikpapan 35.92 273 P P 03 17 55.4 +2.2
BKB Balikpapan 35.92 273 P P 03 17 55.4 +2.2
BKB Balikpapan 35.92 273 P P 03 17 55.5 +2.2
comp=Z,1µm,1.6s
TGY Tagaytay City 36.19 300 *i*eP P 03 17 58.4 +2.9
AFI Afiamalu 36.42 108 P P 03 17 57.6 +0.1
AFI Afiamalu 36.42 108 P P 03 17 57.8 +0.3
AFI Afiamalu 36.42 108 P P 03 17 57.6 +0.1
comp=Z,1µm,0.8s
AFI Afiamalu 36.42 108 ⇑P P 03 17 56.6 -0.9
AFI Afiamalu 36.42 108 P P 03 17 57.8 +0.3
comp=Z,755nm,0.9s,baz=99,slow=5.6,SNR=44
comp=Z,755nm,0.9s
AFI Afiamalu 36.42 108 P P 03 17 57.7 +0.3
PPR Puerto Princes 36.46 292 *i*eP P 03 17 59.5 +1.8
MBWA Marble Bar 36.51 239 P P 03 17 55.6 -2.4
MBWA IAmb IAmb 03 18 07.8
comp=Z,617nm,1.4s
MBWA Marble Bar 36.51 239 P P 03 17 56.8 -1.2
MBWA P P 03 17 56.8 -1.2
MBWA S S 03 22 59.4 -4.9
MBWA S S 03 22 59.4 -4.9
MBWA Marble Bar 36.51 239 P P 03 17 57.3 -0.7
MBWA Marble Bar 36.51 239 ⇑P P 03 17 56.9 -1.1
MBWA Marble Bar 36.51 239 P P 03 17 56.9 -1.1
MBWA pP **pP** 03 19 25.2 +0.8
PSA00 Pilbara Seismi 36.58 238 P P 03 17 57.8 -0.8
PSA00 IAmb IAmb 03 18 08.4
comp=Z,456nm,0.8s
PSA00 Pilbara Seismi 36.58 238 P P 03 17 57.8 -0.8
PSA00 IAmb IAmb 03 18 08.4
comp=Z,438nm,0.7s
PSA00 Pilbara Seismi 36.58 238 P P 03 17 57.6 -1.0
LUBP Lubang 36.62 299 *i*eP P 03 17 58.5 -0.5
PCPH Palayan 36.73 302 *i*eP P 03 18 00.1 +0.2
OUZ Omahuta 36.83 151 P P 03 18 01.6 +1.2
OUZ IAmb IAmb 03 18 05.5
comp=Z,488nm,0.9s
OUZ Omahuta 36.83 151 ⇓P P 03 18 02.2 +1.8
SPMM Sapulut 37.22 283 P P 03 18 05.0 +0.9
GLAD Gladstone 37.37 186 P P 03 18 06.1 +1.3
RAO Raoul Island 37.67 136 P P 03 18 06.7 -0.8
RAO Raoul Island 37.67 136 P P 03 18 06.3 -1.1
RAO Raoul Island 37.67 136 P P 03 18 08.0 +0.5
RAO Raoul Island 37.67 136 ⇑P P 03 18 06.8 -0.7
RAO Raoul Island 37.67 136 P P 03 18 06.3 -1.1
comp=Z,1µm,0.8s,baz=316,slow=4.0,SNR=16
comp=Z,1µm,0.8s
RAO Raoul Island 37.67 136 P P 03 18 06.4 -1.0
RAO pP **pP** 03 19 36.7 +0.7
APYP Conner 37.76 306 *i*eP P 03 18 08.1 +0.2
KKM Kota Kinabalu 37.77 285 P P 03 18 08.8 +0.2
KKM Kota Kinabalu 37.77 285 P P 03 18 09.2 +0.6
KKM Kota Kinabalu 37.77 285 ⇑P P 03 18 09.1 +0.6
CORO Coronation Par 37.93 187 P P 03 18 10.9 +1.5
comp=Z,844nm,0.9s
JOW Kunigami 38.49 323 P P 03 18 15.3 +1.1
JOW Kunigami 38.49 323 P P 03 18 15.4 +1.2
JOW Kunigami 38.49 323 ⇑P P 03 18 15.3 +1.2
JHJ2 Mitsune 38.61 342 P P 03 18 12.1 -2.9
JHJ2 Mitsune 38.61 342 P P 03 18 14.0 -1.0
comp=Z,2µm,1.0s
JHJ Hachijo jima 2 38.62 342 P P 03 18 12.8 -2.3
comp=Z,1µm,0.8s,baz=179,slow=9.6,SNR=15
JAGI Jajag, Banyuwa 38.68 261 P P 03 18 13.7 -2.2
JAGI IAmb IAmb 03 18 17.2
comp=Z,610nm,0.9s
JAGI Jajag, Banyuwa 38.68 261 P P 03 18 14.1 -1.8
MOO Moorlands 38.90 187 P P 03 18 18.8 +1.5
JAM Amami Oshima 38.93 327 P P 03 18 18.5 +0.8
JMJ Miyako jima 2 38.94 318 P P 03 18 19.2 +1.4
TAU Tasmania Unive 39.35 186 P P 03 18 21.7 +0.8
TAU Tasmania Unive 39.35 186 P P 03 18 21.7 +0.8
TAU pmax pmax
comp=Z,975nm,1.1s
TAU Tasmania Unive 39.35 186 P P 03 18 22.0 +1.1
TAU Tasmania Unive 39.35 186 ⇓P P 03 18 21.9 +1.0
TAU Tasmania Unive 39.35 186 P P 03 18 22.0 +1.1
TAU pP **pP** 03 19 52.3 +3.3
TAU sP **sP** 03 20 48.9 +3.8
NIUE Niue 39.51 116 P P 03 18 22.8 +0.2
NIUE Niue 39.51 116 P P 03 18 23.2 +0.7
NIUE Niue 39.51 116 ⇓P P 03 18 23.2 +0.7
MEEK Meekatharra 39.85 232 P P 03 18 25.1 -0.2
HIZ Hauiti 40.08 153 P P 03 18 26.8 -0.1
YOJ Yonaguni jima 40.26 316 P P 03 18 29.7 +1.2
YOJ Yonaguni jima 40.26 316 P P 03 18 29.7 +1.2
YOJ pmax pmax
comp=Z,3µm,0.7s
YOJ Yonaguni jima 40.26 316 P P 03 18 29.4 +0.9
YOJ Yonaguni jima 40.26 316 ⇑P P 03 18 29.6 +1.0
TWG Pinlang 40.65 312 P P 03 18 31.0 -0.7
JIE Ise 40.80 339 P P 03 18 31.6 -1.0
YULB Yu-li 40.82 313 P P 03 18 33.1 0.0
JOD2 Odawara 2 40.83 343 P P 03 18 31.4 -1.5
JSU Suzuyama 40.95 330 P P 03 18 34.1 +0.1
JSU IAmb IAmb 03 18 39.0
comp=Z,742nm,0.9s
JSU Suzuyama 40.95 330 ⇑P P 03 18 34.0 0.0
URZ Urewera 40.95 150 P P 03 18 34.5 +0.7
URZ IAmb IAmb 03 18 53.4
comp=Z,412nm,0.8s
URZ Urewera 40.95 150 P P 03 18 34.7 +0.9
URZ Urewera 40.95 150 ⇑P P 03 18 33.6 -0.3
URZ Urewera 40.95 150 P P 03 18 34.1 +0.3
comp=Z,262nm,0.4s,baz=301,slow=24,SNR=99
URZ S S 03 24 08.7 -0.6
comp=Z,97nm,1.0s,baz=168,slow=22,SNR=2.5
comp=Z,262nm,0.4s
SBUM Sibu 40.99 278 P P 03 18 36.2 +1.7
SBUM IAmb IAmb 03 18 39.4
comp=Z,700nm,1.0s
SBUM Sibu 40.99 278 ⇑P P 03 18 35.6 +1.1
MXZ Matakaoa Point 41.02 149 P P 03 18 34.6 +0.1
MXZ IAmb IAmb 03 18 39.7
comp=Z,508nm,0.8s
QRZ Quartz Range 41.03 157 P P 03 18 35.8 +1.4
QRZ Quartz Range 41.03 157 P P 03 18 35.6 +1.2
NACB Ninganchiao 41.08 314 P P 03 18 35.9 +0.8
TPUB Ta-pu 41.26 312 P P 03 18 36.5 -0.1
TPUB Ta-pu 41.26 312 P P 03 18 36.4 -0.1
JMN Monobe 41.28 336 P P 03 18 36.9 +0.4
JMN Monobe 41.28 336 P P 03 18 36.5 -0.1
JMN Monobe 41.28 336 ⇑P P 03 18 36.5 -0.1
SSLB Suanglung 41.31 313 P P 03 18 37.4 +0.3
SSLB Suanglung 41.31 313 P P 03 18 37.3 +0.3
BKZ Black Stump Fm 41.37 152 P P 03 18 37.5 +0.4
BKZ Black Stump Fm 41.37 152 P P 03 18 37.6 +0.4
JYT Yasato 41.42 345 P P 03 18 37.7 +0.1
JYT Yasato 41.42 345 ⇑P P 03 18 36.8 -0.8
YHNB Yeheng 41.55 314 P P 03 18 40.0 +1.2
YHNB Yeheng 41.55 314 P P 03 18 39.8 +0.9
INU Inuyama 41.56 340 P P 03 18 38.1 -0.6
INU Inuyama 41.56 340 P P 03 18 38.1 -0.6
INU Inuyama 41.56 340 ⇑P P 03 18 37.9 -0.8
INU Inuyama 41.56 340 P P 03 18 38.0 -0.6
INU ScP **ScP** 03 23 30.4 +3.4
JRY Ryogami san 41.58 343 P P 03 18 38.1 -0.9
TATO Taipei 41.66 315 P P 03 18 40.3 +0.7
TATO Taipei 41.66 315 P P 03 18 39.7 +0.1
TATO P P 03 18 39.7 +0.1
TATO S S 03 24 21.4 +1.5
TATO S S 03 24 21.4 +1.5
TATO Taipei 41.66 315 P P 03 18 40.2 +0.5
TATO pP **pP** 03 20 05.5 -3.7
JGF Kuroka 41.68 341 P P 03 18 38.7 -1.0
JGF IAmb IAmb 03 18 43.7
comp=Z,439nm,0.9s
JGF Kuroka 41.68 341 ⇑P P 03 18 38.7 -1.0
NNZ Nelson 41.70 156 P P 03 18 40.2 +0.5

NNZ				IAmb	IAmb	03 18 48.5	
	comp=Z,676nm,1.0s						
GIRL	**Giralia**	**41.79 240**		P	**P**	**03 18 41.2**	**+0.4**
GIRL	**Giralia**	**41.79 240**		P	**P**	**03 18 41.3**	**+0.6**
GIRL	**Giralia**	**41.79 240**	⇑	P	**P**	**03 18 41.1**	**+0.4**
THZ	**Tophouse**	**41.98 157**		P	**P**	**03 18 41.9**	**-0.1**
JWT	**Wachi**	**42.06 339**		P	**P**	**03 18 42.1**	**-0.6**
JNU	**Nakatsue**	**42.08 332**		P	**P**	**03 18 42.8**	**-0.1**
TUWZ	**Tuamarina**	**42.10 156**		P	**P**	**03 18 43.5**	**+0.6**
JAD	**Aida**	**42.22 337**		P	**P**	**03 18 43.9**	**-0.1**
UGM	**Wanagama**	**42.22 262**		P	**P**	**03 18 43.9**	**-0.5**
UGM	**Wanagama**	**42.22 262**		P	**P**	**03 18 44.4**	**0.0**
JGN	**Niukaw**	**42.26 341**		P	**P**	**03 18 43.5**	**-0.8**
SMRI	**Semarang**	**42.27 264**		P	**P**	**03 18 44.9**	**+0.2**
SMRI				IAmb	IAmb	03 18 50.5	
	comp=Z,950nm,1.2s						
SMRI	**Semarang**	**42.27 264**		P	**P**	**03 18 45.0**	**+0.3**
	comp=Z,830nm,1.1s						
MJAR	**Matsushiro Arr**	**42.27 342**		P	**P**	**03 18 40.8**	**-3.6**
	comp=Z,518nm,0.9s,baz=164,slow=7.2,SNR=164						
MAJO	**Matsushiro**	**42.28 342**		P	**P**	**03 18 43.5**	**-1.0**
MAJO	**Matsushiro**	**42.28 342**	*c i*	P	**P**	**03 18 43.1**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,880nm,0.7s						
MAJO	**Matsushiro**	**42.28 342**		P	**P**	**03 18 43.4**	**-1.0**
MAJO	**Matsushiro**	**42.28 342**	⇑	P	**P**	**03 18 43.2**	**-1.3**
MAJO	**Matsushiro**	**42.28 342**	⇓	P	**P**	**03 18 43.3**	**-1.1**
MAJO				ScP	**ScP**	**03 23 32.9**	**+2.9**
MAT	**Matsushiro**	**42.28 342**		P	**P**	**03 18 43.2**	**-1.2**
SNZO	**South Karori**	**42.31 155**		P	**P**	**03 18 44.7**	**+0.1**
SNZO				IAmb	IAmb	03 19 07.9	
	comp=Z,524nm,0.8s						
SNZO	**South Karori**	**42.31 155**		P	**P**	**03 18 45.4**	**+0.8**
SNZO	**South Karori**	**42.31 155**	⇓	P	**P**	**03 18 44.3**	**-0.2**
SNZO	**South Karori**	**42.31 155**		P	**P**	**03 18 44.4**	**-0.2**
SNZO				pP	**pP**	**03 20 14.5**	**-0.3**
BSWZ	**Blackbirch Sta**	**42.31 156**		P	**P**	**03 18 44.6**	**0.0**
JOHN	**Johnston Islan**	**42.41 60**		P	**P**	**03 18 46.0**	**+0.3**
JOHN	**Johnston Islan**	**42.41 60**		P	**P**	**03 18 47.0**	**+1.3**
JOHN	**Johnston Islan**	**42.41 60**	⇓	P	**P**	**03 18 46.1**	**+0.3**
JOHN	**Johnston Islan**	**42.41 60**		P	**P**	**03 18 46.1**	**+0.4**
JOHN				ScP	**ScP**	**03 23 34.2**	**+3.3**
FOZ	**Fox Glacier**	**42.45 162**		P	**P**	**03 18 46.1**	**+0.5**
BFZ	**Birch Farm**	**42.47 153**		P	**P**	**03 18 45.8**	**-0.1**
BFZ	**Birch Farm**	**42.47 153**		P	**P**	**03 18 45.9**	**+0.1**
CMWZ	**Cape Campbell**	**42.48 156**		P	**P**	**03 18 46.6**	**+0.7**
LTZ	**Lake Taylor**	**42.62 159**		P	**P**	**03 18 47.3**	**+0.3**
MSWZ	**Moikau Station**	**42.63 155**		P	**P**	**03 18 47.0**	**-0.2**
JHS	**Saijyo**	**42.69 336**		P	**P**	**03 18 47.8**	**+0.1**
JHS	**Saijyo**	**42.69 336**		P	**P**	**03 18 47.6**	**-0.1**
JHS	**Saijyo**	**42.69 336**	⇑	P	**P**	**03 18 47.6**	**-0.1**
JFU	**Fukue jima 2**	**42.73 330**		P	**P**	**03 18 48.1**	**+0.1**
PLWZ	**Palliser**	**42.76 155**		P	**P**	**03 18 48.0**	**-0.1**
KHZ	**Kahutara**	**42.78 157**		P	**P**	**03 18 47.8**	**-0.4**
KHZ	**Kahutara**	**42.78 157**		P	**P**	**03 18 47.6**	**-0.6**
KHZ	**Kahutara**	**42.78 157**	⇓	P	**P**	**03 18 47.5**	**-0.7**
MIDW	**Midway**	**42.80 40**		P	**P**	**03 18 48.7**	**+0.1**
MIDW				IAmb	IAmb	03 18 53.8	
	comp=Z,903nm,1.3s						
MIDW	**Midway**	**42.80 40**		P	**P**	**03 18 48.8**	**+0.1**
MIDW	**Midway**	**42.80 40**	⇑	P	**P**	**03 18 49.3**	**+0.6**
MIDW	**Midway**	**42.80 40**		P	**P**	**03 18 48.7**	**+0.1**
JMM	**Marumori**	**42.82 346**		P	**P**	**03 18 48.6**	**0.0**
JMM	**Marumori**	**42.82 346**		P	**P**	**03 18 48.3**	**-0.3**
JMM	**Marumori**	**42.82 346**	⇑	P	**P**	**03 18 48.2**	**-0.3**
OXZ	**Oxford**	**43.01 159**		P	**P**	**03 18 49.5**	**-0.5**
OXZ				IAmb	IAmb	03 18 58.0	
	comp=Z,402nm,0.7s						
RPZ	**Rata Peaks**	**43.02 161**		P	**P**	**03 18 49.8**	**-0.3**
RPZ	**Rata Peaks**	**43.02 161**		P	**P**	**03 18 50.6**	**+0.5**
RPZ	**Rata Peaks**	**43.02 161**		P	**P**	**03 18 49.4**	**-0.7**
	comp=Z,995nm,0.9s,baz=19,slow=1.3,SNR=79						
RPZ				S	**S**	**03 24 42.0**	**+3.0**
	comp=Z,117nm,1.2s,baz=356,slow=20,SNR=4.0						
	comp=Z,995nm,0.9s						
MORW	**Morawa**	**43.02 230**		P	**P**	**03 18 50.2**	**-0.3**
MORW				IAmb	IAmb	03 18 52.7	
	comp=Z,338nm,0.7s						
MORW	**Morawa**	**43.02 230**		P	**P**	**03 18 50.1**	**-0.3**
MORW	**Morawa**	**43.02 230**	⇑	P	**P**	**03 18 49.6**	**-0.8**
KLBR	**Kellerberrin**	**43.05 226**		P	**P**	**03 18 50.0**	**-0.6**
BLDU	**Ballidu**	**43.29 228**		P	**P**	**03 18 52.0**	**-0.5**
LBZ	**Lake Benmore**	**43.34 162**		P	**P**	**03 18 52.4**	**-0.2**
LBZ				IAmb	IAmb	03 18 58.1	
	comp=Z,531nm,0.9s						
WKZ	**Wanaka**	**43.38 163**		P	**P**	**03 18 53.0**	**0.0**
WKZ				IAmb	IAmb	03 18 57.7	
	comp=Z,489nm,1.0s						
DCZ	**Deep Cove**	**43.47 165**		P	**P**	**03 18 53.8**	**+0.3**
MQZ	**McQueen's Vall**	**43.56 159**		P	**P**	**03 18 54.3**	**0.0**
MQZ				IAmb	IAmb	03 19 05.8	
	comp=Z,386nm,0.5s						
KNMB	**Chin-men Tao**	**43.60 312**		P	**P**	**03 18 56.0**	**+1.0**
MLZ	**Mavora Lakes**	**43.63 164**		P	**P**	**03 18 55.3**	**+0.4**
JSD	**Sado**	**43.65 343**		P	**P**	**03 18 54.4**	**-0.6**
JSD	**Sado**	**43.65 343**		P	**P**	**03 18 54.6**	**-0.5**
JSD	**Sado**	**43.65 343**	⇑	P	**P**	**03 18 54.5**	**-0.6**
QZH	**Quanzhou**	**43.73 312**	⇑ *i*	P	**P**	**03 18 56.8**	**+0.9**
QZH				pP	**PcP**	**03 20 29.5**	**-2.6**
QZH				PP	**PP**	**03 20 47.3**	**-0.9**
QZH				sP	**sP**	**03 21 25.5**	**+3.4**
QZH				ScP	**ScP**	**03 23 36.8**	**+0.7**
QZH				S	**S**	**03 24 53.0**	**+3.4**
QZH				sS	**sS**	**03 27 37.5**	**+1.0**
QZH				pmax	pmax		
	comp=Z,1μm,0.8s						
QZH				pmax	pmax		
	comp=Z,13μm,4.1s						
JYA	**Atsumi**	**43.78 345**		P	**P**	**03 18 56.4**	**+0.4**
JTU	**Tsushima**	**43.92 332**		P	**P**	**03 18 57.5**	**+0.2**
JTU	**Tsushima**	**43.92 332**	⇑	P	**P**	**03 18 57.1**	**-0.1**
PYZ	**Puysegur Point**	**44.01 166**		P	**P**	**03 18 58.5**	**+0.7**
PYZ				IAmb	IAmb	03 19 02.4	
	comp=Z,711nm,0.9s						
ODZ	**Otahua Downs**	**44.07 162**		P	**P**	**03 18 58.3**	**0.0**
ODZ				IAmb	IAmb	03 19 04.7	
	comp=Z,436nm,1.0s						
ODZ	**Otahua Downs**	**44.07 162**		P	**P**	**03 18 58.1**	**-0.2**
ODZ	**Otahua Downs**	**44.07 162**	⇓	P	**P**	**03 18 58.0**	**-0.3**
WHZ	**Wether Hill Ro**	**44.07 165**		P	**P**	**03 18 58.1**	**-0.2**
WHZ				IAmb	IAmb	03 19 03.3	
	comp=Z,458nm,0.7s						
NWAO	**Narrogin (SRO)**	**44.15 225**		P	**P**	**03 18 59.5**	**+0.4**
NWAO				IAmb	IAmb	03 19 02.7	
	comp=Z,882nm,1.9s						
NWAO	**Narrogin (SRO)**	**44.15 225**		P	**P**	**03 18 59.5**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,882nm,2.0s						
NWAO	**Narrogin (SRO)**	**44.15 225**		P	**P**	**03 19 00.6**	**+1.5**
NWAO				S	**S**	**03 24 50.8**	**-4.6**
NWAO	**Narrogin (SRO)**	**44.15 225**		P	**P**	**03 18 59.0**	**-0.1**
NWAO	**Narrogin (SRO)**	**44.15 225**		P	**P**	**03 18 58.7**	**-0.4**
	comp=Z,61nm,0.7s,baz=291,slow=5.5,SNR=20						
NWAO	**Narrogin (SRO)**	**44.15 225**		P	**P**	**03 18 59.8**	**+0.7**
JOM	**Ohasama**	**44.24 347**		P	**P**	**03 18 59.4**	**-0.2**
MUN	**Mundaring**	**44.36 226**		P	**P**	**03 19 00.6**	**-0.2**
KSBUS	**Busan**	**44.65 332**		P	**P**	**03 19 03.1**	**+0.2**
KSBUS				IAmb	IAmb	03 19 19.4	
	comp=Z,1μm,1.7s						
MTKN	**Mount Kenneth**	**44.66 227**		P	**P**	**03 19 03.7**	**+0.7**
RKGY	**Rocky Gully**	**45.27 223**		P	**P**	**03 19 08.2**	**+0.5**
JTM	**Tenmabayashi**	**45.54 348**		P	**P**	**03 19 08.8**	**-0.9**
JTM	**Tenmabayashi**	**45.54 348**	⇑	P	**P**	**03 19 09.2**	**-0.4**
NAWB	**Namwon**	**45.61 331**		P	**P**	**03 19 10.2**	**-0.1**
SSE	**Sheshan**	**45.86 321**		P	**P**	**03 19 13.0**	**+0.7**
SSE				pP	**pP**	**03 20 43.3**	**-0.8**
SSE				S	**S**	**03 25 23.0**	**+3.4**
SSE				pmax	pmax		
	comp=Z,220nm,1.5s						
SSE				pmax	pmax		
	comp=Z,6μm,10.1s						
SSE	**Sheshan**	**45.86 321**		P	**P**	**03 19 12.5**	**+0.2**
SSE				pP	**pP**	**03 20 44.8**	**+0.7**
MCO	**Taipa Grande**	**46.13 306**		P	**P**	**03 19 16.0**	**+1.5**
ERM	**Erimo**	**46.33 350**		P	**P**	**03 19 16.2**	**+0.6**
ERM				IAmb	IAmb	03 19 26.9	
	comp=Z,356nm,1.0s						
ERM	**Erimo**	**46.33 350**		P	**P**	**03 19 16.2**	**+0.6**
ERM				pmax	pmax		
	comp=Z,357nm,1.0s						
ERM	**Erimo**	**46.33 350**		P	**P**	**03 19 15.8**	**+0.2**
ERM				pP	**pP**	**03 20 49.4**	**+1.6**

ERM				ScP	**ScP**	**03 23 51.1**	**+4.7**
JEM	**Erimo**	**46.33 350**		P	**P**	**03 19 15.9**	**+0.3**
TJN	**Taejon**	**46.40 331**		P	**P**	**03 19 16.7**	**+0.5**
TJN	**Taejon**	**46.40 331**	*ce*	P	**P**	**03 19 14.9**	**-1.4**
TJN	**Taejon**	**46.40 331**		P	**P**	**03 19 16.1**	**-0.2**
KSCHJ	**Chungju**	**46.51 332**		P	**P**	**03 19 17.4**	**+0.3**
KSCHJ				IAmb	IAmb	03 19 22.2	
	comp=Z,670nm,1.0s						
DLV	**T Lat**	**46.69 290**		P	**P**	**03 19 20.1**	**+1.0**
DLV	**T Lat**	**46.69 290**	⇑	P	**P**	**03 19 20.0**	**+1.0**
KSRS	**Korea Array**	**47.01 333**		P	**P**	**03 19 21.0**	**+0.1**
KSRS				*PP	**pP**	**03 20 55.3**	**+2.0**
KSRS	**Korea Array**	**47.01 333**		P	**P**	**03 19 21.0**	**+0.1**
	comp=Z,474nm,0.8s,baz=147,slow=7.1,SNR=241						
KSRS				pP	**pP**	**03 20 55.3**	**+2.0**
	comp=Z,79nm,0.9s,baz=148,slow=9.2,SNR=4.3						
KSRS				ScP	**ScP**	**03 23 50.4**	**+0.9**
	comp=Z,18nm,1.0s,baz=147,slow=7.0,SNR=2.0						
	comp=Z,474nm,0.8s						
KSAR	**Wonju Array Be**	**47.02 333**		P	**P**	**03 19 21.4**	**+0.5**
KSAR	**Wonju Array Be**	**47.02 333**		P	**P**	**03 19 21.4**	**+0.5**
KS19	**Wonju Array Si**	**47.07 333**		P	**P**	**03 19 21.3**	**-0.1**
KS19				IAmb	IAmb	03 19 24.0	
	comp=Z,718nm,0.9s						
XMI	**Christmas Isla**	**47.16 259**		P	**P**	**03 19 22.9**	**+0.4**
XMI	**Christmas Isla**	**47.16 259**	⇑	P	**P**	**03 19 22.8**	**+0.3**
XMIS	**Christmas Isla**	**47.20 259**		P	**P**	**03 19 23.1**	**+0.3**
XMIS	**Christmas Isla**	**47.20 259**		P	**P**	**03 19 23.0**	**+0.3**
H01W1	**Cape Leeuwin H**	**47.36 224**		P	**P**	**03 19 25.6**	**+2.2**
	baz=83,slow=4.3,SNR=10.0						
H01W3	**Cape Leeuwin H**	**47.37 224**		P	**P**	**03 19 25.3**	**+1.9**
	baz=83,slow=4.3,SNR=5.6						
H01W2	**Cape Leeuwin H**	**47.38 224**		P	**P**	**03 19 26.1**	**+2.6**
	baz=83,slow=4.3,SNR=6.4						
JEW	**Eniwo**	**47.44 349**		P	**P**	**03 19 24.5**	**+0.4**
JEW	**Eniwo**	**47.44 349**		P	**P**	**03 19 24.3**	**+0.2**
JEW	**Eniwo**	**47.44 349**	⇑	P	**P**	**03 19 24.3**	**+0.2**
SEHB	**SEOHWA**	**47.53 334**		P	**P**	**03 19 25.4**	**+0.5**
SEHB				IAmb	IAmb	03 19 30.4	
	comp=Z,592nm,1.0s						
JSH	**Shimam**	**47.54 347**		P	**P**	**03 19 24.9**	**+0.1**
INCN	**Inchon**	**47.63 332**		P	**P**	**03 19 26.3**	**+0.7**
INCN	**Inchon**	**47.63 332**		P	**P**	**03 19 26.3**	**+0.7**
INCN				pmax	pmax		
	comp=Z,2μm,0.9s						
INCN	**Inchon**	**47.63 332**		P	**P**	**03 19 26.0**	**+0.4**
INCN				P	**P**	**03 19 26.0**	**+0.4**
INCN				S	**S**	**03 25 44.1**	**0.0**
INCN				S	**S**	**03 25 44.1**	**0.0**
INCN	**Inchon**	**47.63 332**		P	**P**	**03 19 26.3**	**+0.7**
INCN	**Inchon**	**47.63 332**	⇑	P	**P**	**03 19 26.1**	**+0.4**
INCN	**Inchon**	**47.63 332**		P	**P**	**03 19 26.1**	**+0.4**
INCN				pP	**pP**	**03 21 00.7**	**+2.2**
QIZ	**Qiongzhong**	**47.89 300**		P	**P**	**03 19 29.6**	**+1.6**
QIZ				IAmb	IAmb	03 19 32.6	
	comp=Z,758nm,0.9s						
QIZ	**Qiongzhong**	**47.89 300**	⇑ *i*	P	**P**	**03 19 29.3**	**+1.4**
QIZ				pP	**pP**	**03 21 02.5**	**+0.6**
QIZ				sP	**sP**	**03 21 58.3**	**+1.4**
QIZ				S	**S**	**03 25 49.3**	**+1.0**
QIZ				ScS	**ScS**	**03 28 29.3**	**+1.9**
QIZ				sS	**sS**	**03 28 36.0**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,890nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,12μm,10.8s						
QIZ	**Qiongzhong**	**47.89 300**		P	**P**	**03 19 29.5**	**+1.6**
QIZ				pP	**pP**	**03 21 02.0**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**47.92 353**	*e*	P	P	03 19 20.9	-6.7
YUK			*e*			03 20 59.6	
YUK			*e*	S	**S**	**03 25 42.8**	**-4.9**
YUK			*e*			03 28 24.3	
YUK			*e*	SS	**SS**	**03 29 17.5**	**-7.3**
YUK				pmax	pmax		
	comp=N,957nm,1.1s						
YUK				pmax	pmax		
	comp=E,794nm,1.1s						
YUK				pmax	pmax		
	comp=Z,2μm,1.1s						
YUK				pmax	pmax		
	comp=Z,2μm,1.4s						
PMBI	**Palembang**	**47.92 269**		P	**P**	**03 19 29.2**	**+0.9**
NJ2	**Nanjing**	**47.98 320**	⇑ *i*	P	**P**	**03 19 29.3**	**+1.0**
NJ2				PcP	**PcP**	**03 20 49.0**	**+2.0**
NJ2				pP	**pP**	**03 21 01.8**	**+0.6**
NJ2				PP	**PP**	**03 21 26.8**	**+0.1**
NJ2				sP	**sP**	**03 21 58.5**	**+2.8**
NJ2				ScP	**ScP**	**03 23 50.8**	**-2.9**
NJ2				S	**S**	**03 25 51.0**	**+2.0**
NJ2				sS	**sS**	**03 28 39.3**	**+0.1**
NJ2				SS	**SS**	**03 29 23.8**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,600nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,16μm,4.0s						
JMP	**Maruseppu**	**48.23 351**		P	**P**	**03 19 30.5**	**+0.5**
ASAJ	**Asahikawa**	**48.47 350**		P	**P**	**03 19 32.5**	**+0.8**
HJU	**Haeju**	**48.51 331**		P	**P**	**03 19 32.1**	**-0.1**
HJU				pP	**pP**	**03 21 05.2**	**-0.1**
HJU				S	**S**	**03 25 54.3**	**-1.8**
HJU				AmB			
	comp=Z,3μm,1.4s						
HJU				AMS	AMS		
	comp=N,12μm,4.7s						
HJU				AMS	AMS		
	comp=E,10μm,3.8s						
HJU				AMS	AMS		
	comp=Z,24μm,9.4s						
KUR	**Kuril'sk**	**48.91 355**	*c i*	P	**P**	**03 19 35.4**	**+0.5**
KUR			*e*			03 21 10.4	
KUR			*e*	S	**S**	**03 26 02.0**	**+0.7**
KUR			*e*	SS	**sS**	**03 28 52.0**	**-0.2**
KUR				pmax	pmax		
	comp=Z,4μm,1.2s						
KUR				pmax	pmax		
	comp=Z,10μm,8.2s						
KUR				MLR	MLR		
	comp=Z,5μm,17.0s						
MYKOM	**Kota Tinggi**	**49.20 276**		P	**P**	**03 19 38.4**	**+0.7**
HHU	**Hamhung**	**49.22 334**		P	**P**	**03 19 37.2**	**-0.1**
HHU				pP	**pP**	**03 21 12.3**	**+1.3**
HHU				S	**S**	**03 26 05.8**	**+0.1**
HHU				AmB			
	comp=Z,2μm,1.7s						
HHU				AMS	AMS		
	comp=N,9μm,10.4s						
HHU				AMS	AMS		
	comp=E,3μm,3.4s						
HHU				AMS	AMS		
	comp=Z,4μm,4.7s						
RAR	**Rarotonga**	**49.26 115**		P	**P**	**03 19 37.9**	**-0.1**
RAR				IAmb	IAmb	03 19 43.4	
	comp=Z,450nm,0.9s						
RAR	**Rarotonga**	**49.26 115**		P	**P**	**03 19 38.3**	**+0.3**
RAR	**Rarotonga**	**49.26 115**	⇓	P	**P**	**03 19 38.2**	**+0.1**
RAR	**Rarotonga**	**49.26 115**		P	**P**	**03 19 38.3**	**+0.3**
	comp=Z,213nm,0.8s,baz=255,slow=5.6,SNR=36						
	comp=Z,213nm,0.8s						
RAR	**Rarotonga**	**49.26 115**		P	**P**	**03 19 38.7**	**+0.6**
RAR				pP	**pwP**	**03 21 14.3**	**-0.4**
RAR				ScP	**ScP**	**03 23 59.3**	**-0.2**
MNAI	**Manna**	**49.69 267**		P	**P**	**03 19 39.2**	**-2.2**
MNAI	**Manna**	**49.69 267**		P	**P**	**03 19 39.9**	**-1.5**
CNSH	**ChangSha**	**49.73 312**	⇑	P	**P**	**03 19 42.3**	**+0.9**
CNSH				S	**S**	**03 26 14.5**	**+1.3**
CNSH				pmax	pmax		
	comp=Z,14μm,3.9s						
WHN	**Wuhan**	**50.05 316**	⇑ *i*	P	**P**	**03 19 44.8**	**+1.1**
WHN				pP	**pP**	**03 21 19.3**	**+1.5**
WHN				PP	**PP**	**03 21 47.0**	**+1.6**
WHN				S	**S**	**03 26 18.3**	**+0.9**
WHN				ScS	**ScS**	**03 28 42.3**	**+0.7**
WHN				pmax	pmax		
	comp=Z,2μm,1.3s						
WHN				pmax	pmax		
	comp=Z,29μm,11.7s						
MSHR	**Mys Shultsa**	**50.05 339**	*ce*	P	**P**	**03 19 43.0**	**-0.5**
MSHR				pmax	pmax		
	comp=Z,296nm,1.2s						
XMAS	**Kiritimati**	**50.08 84**		P	**P**	**03 19 44.9**	**+0.6**
XMAS	**Kiritimati**	**50.08 84**	⇑	P	**P**	**03 19 43.7**	**-0.6**
XMAS	**Kiritimati**	**50.08 84**		P	**P**	**03 19 44.8**	**+0.6**
XMAS				pP	**pP**	**03 21 20.2**	**+0.9**

XMAS				ScP	**ScP**	**03 24 01.4**	**-1.8**
GULI	**GuiLin**	**50.22 307**	⇑	P	**P**	**03 19 49.0**	**+3.9**
GULI				pP	**pP**	**03 21 22.3**	**+1.8**
GULI				S	**S**	**03 26 25.5**	**+5.6**
GULI				pmax	pmax		
	comp=Z,820nm,1.1s						
VLA	**Vladivostok**	**50.27 340**	*c i*	P	**P**	**03 19 42.1**	**-3.0**
VLA				pmax	pmax		
	comp=Z,1μm,1.3s						
UBPT	**Khong Chiam**	**50.48 293**		P	**P**	**03 19 48.3**	**+1.2**
UBPT				IAmb	IAmb	03 19 52.8	
	comp=Z,298nm,0.7s						
UBPT	**Khong Chiam**	**50.48 293**	⇑	P	**P**	**03 19 48.1**	**+1.0**
TEY	**Ternei**	**50.62 345**	⇓ *e*	P	**P**	**03 19 46.6**	**-1.0**
TEY			*e*			03 21 21.9	
TEY			*e*			03 26 29.0	
TEY				pmax	pmax		
	comp=Z,80nm,1.1s						
TEY				pmax	pmax		
	comp=N,30nm,1.1s						
TEY				pmax	pmax		
	comp=E,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,1μm,5.5s						
SUJ	**Sinuiju**	**50.73 332**		P	**P**	**03 19 48.5**	**0.0**
SUJ				pP	**pP**	**03 21 22.5**	**-0.5**
SUJ				S	**S**	**03 26 25.2**	**-1.1**
SUJ				AmB			
	comp=Z,2μm,1.6s						
SUJ				AMS	AMS		
	comp=N,6μm,7.4s						
SUJ				AMS	AMS		
	comp=E,8μm,11.0s						
SUJ				AMS	AMS		
	comp=Z,4μm,4.6s						
MCQ	**Macquarie Isla**	**50.90 175**		P	**P**	**03 19 50.3**	**+0.9**
MCQ				IAmb	IAmb	03 19 54.7	
	comp=Z,796nm,1.1s						
MCQ					**pP**	**03 21 21.0**	**-3.3**
MCQ	**Macquarie Isla**	**50.90 175**		P	**P**	**03 19 50.3**	**+0.9**
MCQ				pmax	pmax		
	comp=Z,797nm,1.1s						
MCQ	**Macquarie Isla**	**50.90 175**		P	**P**	**03 19 49.9**	**+0.4**
MCQ	**Macquarie Isla**	**50.90 175**	⇑	P	**P**	**03 19 50.4**	**+0.9**
USA0B	**Ussuriysk Arra**	**51.20 341**		P	**P**	**03 19 52.6**	**+0.7**
USA0B				IAmb	IAmb	03 19 55.1	
	comp=Z,692nm,1.1s						
USA0B	**Ussuriysk Arra**	**51.20 341**		P	**P**	**03 19 52.6**	**+0.7**
USA0B				pmax	pmax		
	comp=Z,692nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.20 341**		P	**P**	**03 19 52.5**	**+0.6**
USRK	**Ussuriysk Ar.**	**51.20 341**		P	**P**	**03 19 52.5**	**+0.6**
USRK	**Ussuriysk Ar.**	**51.20 341**		P	**P**	**03 19 52.1**	**+0.2**
	comp=Z,533nm,0.8s,baz=145,slow=5.3,SNR=213			PKPPKP	**P'P'df**		
USRK						**03 50 17.1**	**-5.6**
	comp=Z,6.8nm,1.0s,baz=318,slow=2.6,SNR=4.3						
	comp=Z,533nm,0.8s						
YSS	**Yuzh-Sakhalins**	**51.20 351**		P	**P**	**03 19 52.0**	**+0.2**
YSS				IAmb	IAmb	03 19 57.6	
	comp=Z,822nm,1.0s						
YSS	**Yuzh-Sakhalins**	**51.20 351**	*ce*	P	**P**	**03 19 52.2**	**+0.4**
YSS			*e*			03 21 00.1	
YSS			*e*	*PP	**pP**	**03 21 27.5**	**+0.9**
YSS			*e*	S	**S**	**03 26 28.9**	**-3.5**
YSS			*e*			03 28 52.7	
YSS				pmax	pmax		
	comp=Z,8μm,4.7s						
YSS				pmax	pmax		
	comp=N,4μm,3.9s						
YSS				pmax	pmax		
	comp=Z,730nm,0.9s						
YSS				smax	smax		
	comp=N,10μm,10.2s						
YSS	**Yuzh-Sakhalins**	**51.20 351**	⇑	P	**P**	**03 19 52.0**	**+0.2**
YSS	**Yuzh-Sakhalins**	**51.20 351**		P	**P**	**03 19 52.0**	**+0.2**
YSS				pP	**pP**	**03 21 24.0**	**-2.5**
YSS				ScP	**ScP**	**03 24 07.2**	**-0.1**
DL2	**Dalian**	**51.22 329**		P	**P**	**03 19 52.5**	**+0.4**
DL2				ScP	**ScP**	**03 24 11.0**	**+3.5**
DL2				S	**S**	**03 26 34.0**	**+1.1**
DL2				ScS	**ScS**	**03 28 45.5**	**-3.9**
DL2				pmax	pmax		
	comp=N,1μm,0.9s						
DL2				pmax	pmax		
	comp=N,10μm,11.6s						
TIA	**Tai'an**	**51.82 323**	⇑	P	**P**	**03 19 56.3**	**-0.2**
TIA				S	**S**	**03 26 41.5**	**+0.4**
TIA				pmax	pmax		
	comp=N,330nm,1.0s						
TIA				pmax	pmax		
	comp=N,9μm,3.5s						
BKNI	**Bangkinang**	**51.85 273**		P	**P**	**03 19 57.3**	**+0.2**
BKNI	**Bangkinang**	**51.85 273**		P	**P**	**03 19 57.4**	**+0.2**
IPM	**Ipoh**	**52.34 278**		P	**P**	**03 20 00.7**	**0.0**
IPM				IAmb	IAmb	03 20 10.3	
	comp=Z,749nm,0.7s						
IPM	**Ipoh**	**52.34 278**	⇑	P	**P**	**03 20 00.4**	**-0.3**
MDJ	**Mudanjiang**	**52.38 339**		P	**P**	**03 20 00.9**	**+0.5**
MDJ				IAmb	IAmb	03 20 03.5	
	comp=Z

GYA sS sS 03 29 59.8 -1.7
GYA pmax pmax
comp=Z,300nm,1.0s
GYA pmax pmax
comp=Z,13μm,10.2s
HNS HongShan 54.05 323 ⇑P **P** **03 20 13.0 +0.5**
HNS pP **pP** **03 21 48.0 -0.3**
HNS sP **sP** **03 22 42.3 +0.5**
HNS S **S** **03 27 11.5 +0.7**
HNS sS **sS** **03 30 02.8 -2.9**
HNS pmax pmax
comp=Z,1μm,1.4s
HNS pmax pmax
comp=Z,12μm,4.8s
BNX BinXian 54.14 338 ⇑P **P** **03 20 12.8 -0.1**
BNX pP **pP** **03 21 49.3 +0.4**
BNX PP **PP** **03 22 23.0 +1.4**
BNX S **S** **03 27 09.5 -2.1**
BNX pmax pmax
comp=Z,1μm,1.5s
BNX pmax pmax
comp=Z,10μm,10.7s
RPSI Rantau Prapat 54.19 276 P **P** **03 20 13.2 -0.7**
RPSI IAmb IAmb 03 20 16.6
comp=Z,635nm,1.4s
PSI Prapat 54.20 276 P **P** **03 20 12.9 -1.2**
PSI *PP **pP** **03 21 51.7 +0.6**
PSI Prapat 54.20 276 P **P** **03 20 12.9 -1.2**
comp=Z,200nm,1.0s,baz=329,slow=17,SNR=54
PSI pP **pP** **03 21 51.7 +0.6**
comp=Z,150nm,1.1s,baz=238,slow=2.3,SNR=4.6
comp=Z,200nm,1.0s
HON Honolulu 54.23 60 P **P** **03 20 15.1 +1.1**
HON Honolulu 54.23 60 P **P** **03 20 15.1 +1.1**
HON pmax pmax
comp=Z,2μm,1.2s
SKR Severo-Kuril's 54.24 3 *eP* **P** **03 20 14.0 +0.5**
SKR *e* 03 21 49.7
SKR *eS* **S** **03 27 16.9 +4.2**
SKR pmax pmax
comp=Z,569nm,1.1s
SKR pmax pmax
comp=Z,3μm,9.9s
KIP Kipapa 54.26 60 P **P** **03 20 14.4 +0.2**
KIP IAmb IAmb 03 20 18.3
comp=Z,1μm,1.2s
KIP Kipapa 54.26 60*ce*P **P** **03 20 13.6 -0.6**
KIP pmax pmax
comp=Z,2μm,1.2s
KIP Kipapa 54.26 60 P **P** **03 20 14.7 +0.5**
KIP pP **pwP** **03 21 53.6 -0.1**
OPA Opana 54.36 60 P **P** **03 20 15.5 +0.6**
OPA Opana 54.36 60 P **P** **03 20 15.5 +0.6**
OPA pmax pmax
comp=Z,1μm,1.1s
SRIT Nakonsritamara 54.40 283 P **P** **03 20 15.8 +0.4**
SRIT IAmb IAmb 03 20 25.4
comp=Z,459nm,1.0s
BJT Baijiatuan 54.95 326 P **P** **03 20 18.9 +0.1**
BJT Baijiatuan 54.95 326 P **P** **03 20 18.9 +0.1**
BJT pmax pmax
comp=Z,329nm,0.9s
BJT Baijiatuan 54.95 326 P **P** **03 20 18.8 0.0**
BJT pP **pP** **03 21 56.3 +1.2**
BJI Beijing 54.96 326 P **P** **03 20 18.5 -0.3**
BJI PcP **PcP** **03 21 15.5 +2.3**
BJI pP **pP** **03 21 56.8 +1.6**
BJI sP **sP** **03 22 51.8 +3.1**
BJI ScP **ScP** **03 24 25.3 +1.4**
BJI S **S** **03 27 22.5 -0.1**
BJI ScS **ScS** **03 29 15.8 -0.3**
BJI pmax pmax
comp=Z,200nm,1.6s
BJI pmax pmax
comp=Z,9μm,6.8s
TYV Tymovskoe 55.03 352 *eP* **P** **03 20 20.1 +1.0**
TYV *eS* **S** **03 27 25.8 +2.7**
TYV pmax pmax
comp=Z,683nm,1.0s
TYV pmax pmax
comp=Z,7μm,3.6s
TYV smax smax
comp=N,10μm,9.9s
TYV smax smax
comp=E,18μm,9.9s
GSI Gunungsitoli 55.39 274 P **P** **03 20 21.4 -0.9**
KHLH Kahului Airpor 55.46 62 P **P** **03 20 23.1 +0.4**
KHLU Kahalu`u 55.49 63 P **P** **03 20 23.3 +0.3**
HLK Haleakala 55.57 62 P **P** **03 20 24.6 +0.9**
HUH Hualalai 55.57 63 P **P** **03 20 23.5 -0.3**
KHU Kahuku 55.63 64 P **P** **03 20 23.7 -0.5**
KHU Kahuku 55.63 64 P **P** **03 20 23.7 -0.5**
KHU pmax pmax
comp=Z,2μm,1.2s
TIY Taiyuan 55.65 322 ⇑P **P** **03 20 24.0 +0.2**
TIY pP **pP** **03 21 58.3 -2.1**
TIY sP **sP** **03 22 54.8 +1.1**
TIY S **S** **03 27 29.0 -2.8**
TIY pmax pmax
comp=Z,190nm,1.5s
TIY pmax pmax
comp=Z,9μm,10.2s
MHA Mahukona 55.68 63 P **P** **03 20 23.8 -0.4**
MHA Mahukona 55.68 63 P **P** **03 20 23.8 -0.4**
MWH Moku'aweowe 55.72 64 P **P** **03 20 25.2 0.0**
MWH IAmb IAmb 03 20 28.8
comp=Z,1μm,1.4s
MLOA Mauna Loa Obse 55.76 63 P **P** **03 20 25.1 -0.2**
KLR Kul'dur 55.78 343*ce*P **P** **03 20 24.7 +0.3**
KLR pmax pmax
comp=Z,2μm,1.3s
KLR Kul'dur 55.78 343 P **P** **03 20 24.9 +0.5**
comp=Z,955nm,0.8s,baz=157,slow=4.9,SNR=325
KLR S **S** **03 27 34.2 +1.3**
comp=Z,7.6nm,1.1s,baz=352,slow=17,SNR=1.4
KLR PKPPKP **P'P'df** **03 50 12.7 -3.3**
comp=Z,5.5nm,1.0s,baz=207,slow=2.3,SNR=4.2
comp=Z,955nm,0.8s
XAN Xi'an 55.81 316 ⇑*i*P **P** **03 20 25.3 +0.4**
XAN pP pP 03 22 02.3 -0.1
XAN S **S** **03 27 34.5 +0.5**
XAN pmax pmax
comp=Z,1μm,0.7s
XAN pmax pmax
comp=Z,14μm,6.8s
XAN Xi'an 55.81 316 P **P** **03 20 25.1 +0.2**
XAN pP **pP** **03 22 03.5 +1.1**
HPAH Hawaii Prepara 55.81 63 P **P** **03 20 25.6 +0.4**
HPAH IAmb IAmb 03 20 32.8
comp=Z,687nm,0.8s
AIN Ainahou 55.81 64 P **P** **03 20 26.1 +0.8**
AIN IAmb IAmb 03 20 33.7
comp=Z,801nm,1.1s
HMH Humu'ula Sheep 55.86 63 P **P** **03 20 26.0 +0.2**
POHA Pohakuloa 55.87 63 P **P** **03 20 26.3 +0.5**
POHA Pohakuloa 55.87 63 ⇓P **P** **03 20 26.4 +0.5**
POHA Pohakuloa 55.87 63 P **P** **03 20 26.4 +0.6**
MLH Mauna Loa 55.91 64 P **P** **03 20 26.7 +0.6**
MLH IAmb IAmb 03 20 30.2
comp=Z,816nm,1.1s
HLP Hilina Pali 55.92 64 P **P** **03 20 25.6 -0.4**
COCO West Island 55.95 258 P **P** **03 20 26.1 0.0**
COCO IAmb IAmb 03 20 30.7
comp=Z,645nm,0.9s
COCO West Island 55.95 258 P **P** **03 20 26.2 0.0**
COCO pmax pmax
comp=Z,645nm,1.0s
SDHHI Sand Hill 55.96 64 P **P** **03 20 25.4 -1.0**
SDHHI IAmb IAmb 03 20 31.3
comp=Z,625nm,1.3s
PUH Pauahi 56.03 64 P **P** **03 20 26.2 -0.6**
GRNR Gornyy 56.04 348 ⇑*i*P **P** **03 20 26.7 +0.6**
GRNR *eS* **S** **03 27 38.3 +2.0**
GRNR *eSS* **ScS** **03 29 18.8 -4.7**
GRNR pmax pmax
comp=E,30nm,0.8s
GRNR pmax pmax
comp=N,130nm,1.0s
GRNR pmax pmax
comp=Z,270nm,0.8s
GRNR smax smax
comp=E,10.0nm,0.9s
KMI Kunming 56.35 303 ⇑P **P** **03 20 30.5 +1.4**
KMI pP pP 03 22 06.8 -0.7
KMI sP sP 03 23 04.5 +3.2
KMI S **S** **03 27 45.5 +3.8**
KMI sS sS 03 30 38.8 +0.5
KMI pmax pmax
comp=E,610nm,1.4s
KMI pmax pmax
comp=E,10μm,12.2s
KMI Kunming 56.35 303 P **P** **03 20 30.8 +1.7**
KMI pP **pP** **03 22 10.1 +2.6**
LHMI Lhok Sumawe 56.46 279 P **P** **03 20 29.6 -0.1**
CRAI Chiangrai 56.65 297 P **P** **03 20 32.3 +1.4**
CRAI IAmb IAmb 03 20 41.6
comp=Z,1μm,1.3s
PET Petropavlovsk 56.73 4 P **P** **03 20 31.1 +0.4**
PET IAmb IAmb 03 20 33.6
comp=Z,542nm,0.7s
PET Petropavlovsk 56.73 4α *i*P **P** **03 20 31.0 +0.2**
PET *e* 03 21 23.6
PET *e**PP **pP** **03 22 09.4 +1.0**
PET *e* 03 22 40.2
PET *i*S **S** **03 27 45.5 +0.5**
PET *e*SP **SPn** **03 28 04.3 +8.1**
PET *e* 03 29 30.7
PET *e*SS **SS** **03 31 45.0 +1.8**
PET pmax pmax
comp=Z,1μm,0.8s
PET pmax pmax
comp=Z,6μm,12.5s
PET pmax pmax
comp=Z,6μm,14.7s
PET pmax pmax
comp=Z,3μm,11.9s
PET MLR MLR
comp=Z,5μm,14.0s
PET MLR MLR
comp=Z,5μm,14.0s
PET Petropavlovsk 56.73 4 ⇑P **P** **03 20 31.0 +0.2**
PET Petropavlovsk 56.73 4 P **P** **03 20 31.0 +0.2**
PET pP **pP** **03 22 07.6 -0.8**
PEA0B Petropavlovsk- 56.74 4 P **P** **03 20 31.7 +0.7**
PEA0B IAmb IAmb 03 20 34.2
comp=Z,898nm,0.9s
PEA0B Petropavlovsk- 56.74 4*ce*P **P** **03 20 31.1 +0.1**
PETK Petropavlovsk- 56.74 4 P **P** **03 20 31.3 +0.3**
PETK Petropavlovsk- 56.74 4 P **P** **03 20 31.3 +0.3**
PETK Petropavlovsk- 56.74 4 P **P** **03 20 30.5 -0.5**
comp=Z,426nm,0.7s,baz=180,slow=7.2,SNR=178
PETK pP **pP** **03 22 10.1 +1.5**
comp=Z,178nm,1.0s,baz=168,slow=6.3,SNR=2.8
comp=Z,426nm,0.7s
CM31 Chiang Mai Arr 57.39 295 P **P** **03 20 37.6 +1.5**
CM31 IAmb IAmb 03 20 42.1
comp=Z,661nm,0.8s
CMAR Chiang Mai Arr 57.39 295 P **P** **03 20 37.8 +1.8**
CMAR Chiang Mai Arr 57.39 295 P **P** **03 20 37.8 +1.8**
CMAR Chiang Mai Arr 57.39 295 P **P** **03 20 37.4 +1.3**
comp=Z,475nm,0.7s,baz=114,slow=5.5,SNR=427
CMAR PKPPKP **P'P'df** 03 50 07.1 -9.4
comp=Z,3.9nm,0.8s,baz=274,slow=5.7,SNR=7.7
comp=Z,475nm,0.7s
CHTO Chiang Mai 57.49 295 P **P** **03 20 37.9 +1.1**
CHTO IAmb IAmb 03 20 42.9
comp=Z,1μm,1.5s
CHTO Chiang Mai 57.49 295 P **P** **03 20 37.9 +1.1**
CHTO pmax pmax
comp=Z,1μm,1.5s
CHTO Chiang Mai 57.49 295 P **P** **03 20 37.3 +0.5**
CHTO P **P** **03 20 37.3 +0.5**
CHTO Chiang Mai 57.49 295 ⇑P **P** **03 20 37.6 +0.9**
CHTO Chiang Mai 57.49 295 P **P** **03 20 37.6 +0.9**
CHTO pP **pP** **03 22 17.1 +1.3**
XLT XiLinHaoTe 57.71 329⇑*i*P **P** **03 20 38.5 +0.6**
XLT pP pP 03 22 16.5 +0.8
XLT sP sP 03 23 13.0 +4.1
XLT S **S** **03 27 54.5 -3.7**
XLT ScS **ScS** **03 29 32.3 -4.0**
XLT sS sS 03 30 54.8 -1.0
XLT pmax pmax
comp=Z,1μm,1.2s
XLT pmax pmax
comp=Z,11μm,3.9s
PZH PanZhiHua 57.72 305 ⇑P **P** **03 20 39.0 +0.6**
PZH pP **pP** **03 22 17.0 -0.4**
PZH PP **PP** **03 22 59.8 +5.9**
PZH sP **sP** **03 23 13.3 +2.2**
PZH ScP **ScP** **03 24 37.0 +0.4**
PZH S **S** **03 27 59.3 +0.2**
PZH ScS **ScS** **03 29 36.5 -0.7**
PZH sS **sS** **03 30 58.0 +1.3**
PZH pmax pmax
comp=Z,370nm,1.0s
PZH pmax pmax
comp=Z,9μm,11.2s
CD2 Chengdu 58.01 310⇑*i*P **P** **03 20 40.5 +0.4**
CD2 pP pP 03 22 18.5 -0.7
CD2 PP **PP** **03 22 55.5 -0.7**
CD2 S **S** **03 28 03.0 +0.6**
CD2 ScS **ScS** **03 29 40.3 +1.3**
CD2 sS sS 03 30 58.5 -1.7
CD2 pmax pmax
comp=Z,2μm,0.8s
CD2 pmax pmax
comp=Z,13μm,8.0s
PPT Papeete 58.09 108 P **P** **03 20 42.1 +1.2**
PPT Papeete 58.09 108 P **P** **03 20 42.1 +1.2**
comp=Z,452nm,0.8s,baz=51,slow=4.8,SNR=17
comp=Z,452nm,0.8s
PPT2 Papeete2 58.09 108 *eP* **P** **03 20 41.6 +0.6**
comp=Z,709nm,1.1s
PPT2 *ep*P **pwP** **03 22 23.0 +0.8**
comp=Z,308nm,1.2s
PPT2 *eS* **S** **03 28 05.0 +1.1**
comp=Z,9μm,18.2s
PPT2 *es*S **sS** **03 31 03.0 +1.2**
comp=Z,15μm,25.2s
PPT2 *e*LR LR 03 38 30.6
comp=Z,12μm,19.0s
PAE Paea 58.10 108 *eP* **P** **03 20 41.7 +0.8**
comp=Z,126nm,0.9s
PAE *ep*P **pP** **03 22 20.4 +0.5**
comp=Z,137nm,1.3s
PPTF Pamatai, Papee 58.10 108 P **P** **03 20 41.8 +0.7**
PPTF IAmb IAmb 03 20 47.3
comp=Z,679nm,0.9s
PPTF Pamatai, Papee 58.10 108 ⇑P **P** **03 20 42.4 +1.4**
PPTF Pamatai, Papee 58.10 108 P **P** **03 20 42.4 +1.4**
PPTF pP **pP** **03 22 20.8 +0.7**
PPTF sP **sP** **03 23 13.2 -0.4**
HHC Hu-ho-hao-te 58.14 324 *eP* **P** **03 20 41.5 +0.6**
HHC sP sP 03 23 13.5 +1.9
HHC S **S** **03 28 01.0 -2.9**
HHC ScS **ScS** **03 29 40.5 +0.8**
HHC pmax pmax
comp=Z,900nm,1.0s
TIAR Tiarei 58.31 108 *eP* **P** **03 20 43.6 +1.3**
comp=Z,198nm,0.9s
TIAR *ep*P **pwP** **03 22 24.1 +0.4**
comp=Z,115nm,1.1s
BTO Baotou 58.91 323 *eP* **P** **03 20 47.3 +1.2**
BTO S **S** **03 28 13.8 +0.2**
SHEM Shemya Is, Ala 59.03 15 P **P** **03 20 47.3 +0.8**
comp=Z,430nm,0.8s,baz=118,slow=1.8,SNR=25
SHEM S **S** **03 28 16.1 +1.7**
comp=Z,17nm,0.3s,baz=163,slow=22,SNR=3.7
SHEM ScS **ScS** **03 29 43.7 -1.7**
comp=Z,14nm,0.8s,baz=113,slow=23,SNR=6.0
comp=Z,430nm,0.8s
SMY Shemya 59.03 15 P **P** **03 20 47.3 +0.8**
SMY IAmb IAmb 03 20 52.1
comp=Z,987nm,1.2s
SMY Shemya 59.03 15 P **P** **03 20 47.3 +0.8**
SMY pmax pmax
comp=Z,987nm,1.2s
SMY Shemya 59.03 15 ⇑P **P** **03 20 47.2 +0.8**
TBI Tubuai 59.04 115 *eP* **P** **03 20 48.0 +0.8**
comp=Z,811nm,0.8s
TBI *ep*P **pwP** **03 22 28.0 -1.1**
comp=Z,878nm,1.2s
TBI *es*S **sS** **03 31 15.6 +1.4**
comp=Z,16μm,30.8s
TBI *e*LR LR 03 38 56.7
comp=Z,19μm,26.5s
AMKA Amchitka 59.35 19 P **P** **03 20 49.0 +0.3**
PMOR Pomariorio Ree 59.45 105 *eT* T 04 24 37.8
comp=Z,4.1nm,0.2s
MEH Mehetia 59.55 108 *eP* **P** **03 20 50.9 +0.2**
comp=Z,167nm,1.2s
MEH *ep*P **pP** **03 22 31.0 +0.6**
comp=Z,155nm,1.1s
VAH Vaihoa 59.72 105 *eP* **P** **03 20 52.5 +0.7**
comp=Z,509nm,0.9s
VAH *ep*P **pP** **03 22 31.8 +0.2**
comp=Z,227nm,1.1s
HIA Hailar 60.02 336 P **P** **03 20 53.9 +0.7**
HIA pP **pP** **03 22 31.9 -0.3**
HIA Hailar 60.02 336 P **P** **03 20 53.8 +0.5**
HIA pP **pP** **03 22 32.8 +0.5**
HIA pwP **pwP** **03 22 40.7 +2.3**
LZH Lanzhou 60.42 315 ⇑P **P** **03 20 57.8 +1.4**
LZH pP pwP 03 22 42.0 +2.0
LZH sP sP 03 23 28.3 -1.2
LZH ScP **ScP** **03 24 50.5 +2.1**
LZH PcS **PcS** **03 25 41.0 +2.4**
LZH S **S** **03 28 30.0 -3.0**
LZH sS sS 03 31 33.3 +0.8
LZH SS **SS** **03 32 41.0 -1.1**
LZH pmax pmax
comp=Z,970nm,1.4s
LZH pmax pmax
comp=Z,13μm,6.2s
KIWB Kanaga Island 60.96 21 P **P** **03 20 59.9 +0.5**
ZEA Zeya 61.09 343 *eP* **P** **03 21 00.7 +0.5**
ZEA *e**PP **pP** **03 22 38.3 -1.3**
ZEA *e* 03 23 38.0
ZEA *eS* **S** **03 28 40.8 +0.7**
ZEA *e* 03 29 59.8
ZEA pmax pmax
comp=E,170nm,0.8s
ZEA pmax pmax
comp=N,630nm,1.0s
ZEA pmax pmax
comp=Z,1μm,1.0s
ZEA pmax pmax
comp=E,1μm,4.8s
ZEA pmax pmax
comp=N,2μm,1.5s
ZEA pmax pmax
comp=Z,5μm,3.6s
ZEA pmax pmax
comp=E,700nm,9.2s
ZEA pmax pmax
comp=N,1μm,8.5s
ZEA pmax pmax
comp=Z,2μm,12.9s
ZEA smax smax
comp=E,6μm,8.3s
ZEA smax smax
comp=N,9μm,11.2s
ADK Adak 61.15 21 P **P** **03 21 01.0 +0.4**
ADK IAmb IAmb 03 21 06.8
comp=Z,474nm,1.1s
ADK Adak 61.15 21 P **P** **03 21 01.0 +0.4**
ADK pmax pmax
comp=Z,474nm,1.1s
ADK Adak 61.15 21 ⇑P **P** **03 21 01.0 +0.4**
ADK Adak 61.15 21 P **P** **03 21 01.1 +0.4**
ADK pP **pP** **03 22 40.1 -0.3**
ADK pwP pwP 03 22 54.6 +9.4
GSTR Great Sitkin T 61.55 21 P **P** **03 21 03.8 +0.5**
PBA Port Blair 61.61 285 P **P** **03 21 03.0 -1.4**
PBA IAmb IAmb 03 21 07.4
comp=Z,330nm,0.7s
PBA Port Blair 61.61 285 *eP* **P** **03 21 02.2 -2.1**
PBA Port Blair 61.61 285 ⇑P **P** **03 21 02.9 -1.4**
DGPR DIGLIPUR 61.72 287 *eP* **P** **03 21 04.6 -0.4**
DGPR *i*x **pP** **03 22 44.0 -1.6**
LKP Lekhapani 62.92 303 *eP* **P** **03 21 12.9 +0.2**
MA2 Magadan 63.10 359 P **P** **03 21 13.4 +0.3**
MA2 Magadan 63.10 359*ce*P **P** **03 21 13.1 0.0**
MA2 pmax pmax
comp=Z,1μm,1.3s
MA2 MLR MLR
comp=Z,4μm,17.0s
MA2 Magadan 63.10 359 ⇑P **P** **03 21 13.2 0.0**
MA2 Magadan 63.10 359 P **P** **03 21 13.2 +0.1**
comp=Z,504nm,0.8s,baz=163,slow=6.1,SNR=119
MA2 pP **pP** **03 22 52.6 -0.9**
comp=Z,174nm,1.1s,baz=168,slow=7.8,SNR=3.5
MA2 S **S** **03 29 05.2 +0.6**
comp=Z,8.4nm,0.9s,baz=31,slow=22,SNR=8.6
MA2 PKP2bc 03 50 13.3
comp=Z,3.0nm,0.3s,baz=272,slow=4.8,SNR=4.2
comp=Z,504nm,0.8s
MA2 Magadan 63.10 359 P **P** **03 21 13.2 +0.1**
MA2 pP **pP** **03 22 52.5 -1.0**
DRV Dumont d'Urvil 63.49 186 P **P** **03 21 15.8 +0.2**
DRV pP **pP** **03 22 56.2 +0.2**
MOKO MOKOCHONG 63.70 302⇑*i*P **P** **03 21 17.8 -0.1**
IMP Imphal 63.73 300⇑*i*P **P** **03 21 17.7 -0.4**
KOHI KOHIMA 63.86 301 *eP* **P** **03 21 18.6 -0.4**
JORH JORHAT 64.06 302 *eP* **P** **03 21 20.2 +0.2**
CLES Cleveland East 64.49 24 P **P** **03 21 22.9 +0.8**
CLES IAmb IAmb 03 21 29.1
comp=Z,863nm,1.2s
ITAN ITANAGAR 64.64 302⇑*i*P **P** **03 21 24.8 +1.1**
ZIRO ZIRO 64.66 303 *eP* **P** **03 21 24.8 +0.8**
CIT Chita 64.69 334 *eP* **P** **03 21 23.8 +0.2**
CIT *e* 03 21 54.8
CIT *e* 03 23 05.2
CIT *e* 03 23 52.4
CIT *eS* **S** **03 29 24.0 -0.4**
CIT *e* 03 30 28.6
CIT pmax pmax
comp=Z,2μm,2.7s
SILR SILCHAR 64.70 299 *eP* **P** **03 21 25.5 +1.4**
GTA Gaotai 64.83 317 ⇑P **P** **03 21 26.0 +1.1**
GTA pP pP 03 23 08.3 +1.8
GTA sP sP 03 24 00.3 +1.1
GTA S **S** **03 29 28.3 +1.6**
GTA ScS **ScS** **03 30 30.8 +0.1**
GTA sS sS 03 32 28.3 -1.1
GTA pmax pmax
comp=Z,1μm,1.5s
GTA pmax pmax
comp=Z,9μm,10.5s
NIKH Nikolski High 65.03 24 P **P** **03 21 26.2 +0.6**
NIKH IAmb IAmb 03 21 32.4
comp=Z,406nm,0.8s
NIKH Nikolski High 65.03 24 P **P** **03 21 25.6 0.0**
baz=223
NIKH S **S** **03 29 28.3 +0.1**
baz=223
ULN Ulaanbaatar 65.05 328 P **P** **03 21 27.3 +1.3**
ULN Ulaanbaatar 65.05 328*ce*P **P** **03 21 26.5 +0.4**
ULN pmax pmax
comp=Z,1μm,1.3s
ULN Ulaanbaatar 65.05 328 P **P** **03 21 26.9 +0.8**
ULN Ulaanbaatar 65.05 328 ⇑P **P** **03 21 27.1 +1.0**
ULN Ulaanbaatar 65.05 328 P **P** **03 21 27.2 +1.1**
ULN pP **pP** **03 23 08.7 +1.9**
TEZP TEZPUR 65.26 301 *eP* **P** **03 21 27.6 0.0**
SONM Songino Array 65.38 328 P **P** **03 21 29.2 +1.1**
SONM Songino Array 65.38 328 P **P** **03 21 29.0 +0.9**
SONM *PP **pP** **03 23 10.9 +1.8**
SONM Songino Array 65.38 328 P **P** **03 21 29.0 +0.9**
comp=Z,291nm,0.5s,baz=137,slow=5.1,SNR=472
SONM pP **pP** **03 23 10.9 +1.8**
comp=Z,117nm,1.1s,baz=156,slow=5.4,SNR=3.7
SONM PKPPKP **P'P'df** 03 49 40.3 -22
comp=Z,2.1nm,0.9s,baz=280,slow=3.1,SNR=5.7
SONM PKP2bc 03 50 07.9
comp=Z,14nm,0.8s,baz=285,slow=2.0,SNR=13
comp=Z,291nm,0.5s
SHL Shillong 65.73 300 P **P** **03 21 31.4 +0.6**
SHL Shillong 65.73 300 P **P** **03 21 31.4 +0.6**
SHL pmax pmax
comp=Z,1μm,0.9s
SHL Shillong 65.73 300 P **P** **03 21 31.2 +0.4**
SNR=330
SHL Shillong 65.73 300 *eP* **P** **03 21 31.5 +0.6**
SHL *i*x **pP** **03 23 12.9 -0.7**
AGT Agartala 65.81 298 *eP* **P** **03 21 32.0 +0.9**
AGT *i*x **pP** **03 23 15.9 +2.0**
GUWA GUWAHATI 66.08 301 *eP* **P** **03 21 33.0 +0.2**
GUWA *i*x **pP** **03 23 11.5 -4.1**
SEY Seymchan 66.45 360*ce*P **P** **03 21 34.0 -0.3**
SEY pmax pmax
comp=Z,344nm,1.3s
SEY MLR MLR

comp=Z,5µm,18.0s
SEY Seymchan 66.45 360 P **P 03 21 34.6 +0.4**
comp=Z,176nm,1.0s,baz=175,slow=5.6,SNR=82
SEY pP **pP 03 23 16.7 +0.6**
comp=Z,205nm,1.2s,baz=154,slow=6.0,SNR=5.4
SEY S **S 03 29 45.2 +0.5**
comp=Z,1.2nm,0.2s,baz=10,slow=22,SNR=1.4
comp=Z,176nm,1.0s
UNV Unalaska Valle 66.63 25 P **P 03 21 36.0 +0.4**
UNV Unalaska Valle 66.63 25 P **P 03 21 35.5 -0.1**
baz=225,SNR=30
UNV S **S 03 29 46.8 -0.4**
baz=225
TAOE Nuku Hiva Isla 66.80 98 *e*P **P 03 21 37.1 -0.5**
comp=Z,1µm,1.1s
TAOE *e*pP **pP 03 23 20.5 +0.2**
comp=Z,848nm,1.2s
TAOE *e*S **S 03 29 51.1 +0.1**
comp=Z,4µm,26.1s
TAOE Nuku Hiva Isla 66.80 98 *e*LR LR 03 42 32.0
comp=Z,7µm,25.9s
TAOE Nuku Hiva Isla 66.80 98 *e*T T 04 32 06.8
comp=Z,19nm,0.2s
TAOE Nuku Hiva Isla 66.80 98 P **P 03 21 37.0 -0.7**
TAOE IAmb IAmb 03 21 40.8
comp=Z,568nm,1.0s
TAOE Nuku Hiva Isla 66.80 98 ⇓P **P 03 21 38.0 +0.3**
TAOE Nuku Hiva Isla 66.80 98 ⇑P **P 03 21 38.0 +0.3**
TAOE pP **pwP 03 23 21.7 -1.1**
GOMU GeErMu 67.01 312⇑*e*P **P 03 21 39.8 +1.0**
GOMU PP **PP 03 24 15.3 +0.4**
GOMU S **S 03 29 54.5 +1.3**
GOMU pmax pmax
comp=Z,88nm,1.0s
AKUT Akutan 67.15 25 P **P 03 21 39.2 +0.5**
AKUT IAmb IAmb 03 21 45.2
comp=Z,530nm,1.3s
AKUT Akutan 67.15 25 ⇑P **P 03 21 38.8 0.0**
LSA Lhasa 67.60 304 P **P 03 21 44.0 +1.4**
LSA IAmb IAmb 03 21 50.0
comp=Z,350nm,0.6s
LSA Lhasa 67.60 304 P **P 03 21 44.0 +1.4**
LSA S **S 03 30 04.3 +3.8**
LSA pmax pmax
comp=Z,260nm,1.4s
LSA Lhasa 67.60 304 P **P 03 21 44.1 +1.4**
LSA pmax pmax
comp=Z,350nm,0.6s
LSA Lhasa 67.60 304 P **P 03 21 43.6 +0.9**
LSA Lhasa 67.60 304 P **P 03 21 43.8 +1.1**
LSA pP **pP 03 23 29.2 +3.3**
SPIA Saint Paul Isl 67.64 21 P **P 03 21 42.6 +0.9**
SPIA IAmb IAmb 03 21 47.2
comp=Z,366nm,0.8s
SPIA Saint Paul Isl 67.64 21 P **P 03 21 42.4 +0.7**
baz=220
SPIA S **S 03 29 60.0 +1.1**
baz=220
YAK Yakutsk 67.89 348 P **P 03 21 43.8 +0.6**
YAK Yakutsk 67.89 348*c i*P **P 03 21 43.5 +0.4**
YAK *e*S **S 03 30 01.7 0.0**
YAK *e* 03 30 47.7
YAK pmax pmax
comp=Z,1µm,1.1s
YAK pmax pmax
comp=N,410nm,1.0s
YAK pmax pmax
comp=E,137nm,1.0s
YAK pmax pmax
comp=Z,2µm,4.5s
YAK pmax pmax
comp=N,1µm,4.1s
YAK pmax pmax
comp=E,537nm,3.0s
YAK smax smax
comp=N,20µm,6.1s
YAK smax smax
comp=E,2µm,1.9s
YAK Yakutsk 67.89 348 ⇑P **P 03 21 43.5 +0.4**
YAK Yakutsk 67.89 348 P **P 03 21 43.6 +0.4**
comp=E,173nm,0.6s,baz=152,slow=2.1,SNR=90
YAK S **S 03 30 02.7 +1.1**
comp=E,11nm,0.5s,baz=245,slow=1.5,SNR=1.3
comp=E,173nm,0.6s
YAK Yakutsk 67.89 348 P **P 03 21 43.5 +0.4**
YAK pP **pP 03 23 25.6 0.0**
YAK sP **PP 03 24 21.3 -0.1**
ZAK Zakamensk 68.54 328 *e*P **P 03 21 47.8 +0.2**
ZAK *e* 03 23 37.3
ZAK pmax pmax
comp=Z,1µm,1.0s
ZAK pmax pmax
comp=Z,337nm,1.1s
FALS False Pass 68.64 25 P **P 03 21 49.0 +1.2**
FALS False Pass 68.64 25 P **P 03 21 48.2 +0.3**
baz=228
FALS S **S 03 30 10.3 -0.4**
baz=228
BOD Bodaibo 68.76 339⇓*i*P **P 03 21 48.4 -0.1**
BOD pmax pmax
comp=Z,788nm,1.3s
SLGI Shiliguri 69.04 300 *e*P **P 03 21 51.6 +0.7**
GTK Tadong 69.05 301⇑*i*P **P 03 21 52.2 +1.1**
GTK IAmb IAmb 03 21 57.3
comp=Z,466nm,0.9s
GTK *i* x **pP 03 23 32.5 -2.6**
GTK *ex* **sP 03 24 26.5 -1.1**
CASY Casey 69.06 197 P **P 03 21 50.3 +0.1**
CASY IAmb IAmb 03 21 54.7
comp=Z,371nm,0.9s
CASY Casey 69.06 197 ⇓P **P 03 21 50.0 -0.2**
CASY Casey 69.06 197 P **P 03 21 50.1 -0.2**
CASY pP **pP 03 23 34.8 +2.1**
CASY sP **PP 03 24 28.7 -2.5**
IRK Irkutsk 69.14 330 *e*P **P 03 21 51.0 0.0**
IRK *e* 03 23 37.9
IRK *e*S **S 03 30 21.9 +5.3**
IRK pmax pmax
comp=Z,2µm,1.5s
TAPN Taplejung 69.82 301 *e*P **P 03 21 56.7 +0.7**
comp=Z,2µm,0.7s
BWNR Bhubaneshwar 69.85 293⇑*i*P **P 03 21 56.4 +0.5**
BWNR *i* pP **pP 03 23 38.1 -2.4**
BWNR *e*PP **PP 03 24 32.9 -6.2**
ODAN Odare 69.96 300 *e*P **P 03 21 57.5 +0.7**
SDPT Sand Point 70.24 26 P **P 03 21 57.6 +0.1**
SDPT Sand Point 70.24 26 P **P 03 21 57.6 +0.1**
baz=230,SNR=48
SDPT S **S 03 30 28.8 -0.3**
baz=230
CNBA Chernabura Isl 70.31 27 P **P 03 21 58.2 +0.3**
CNBA IAmb IAmb 03 22 04.4
comp=Z,312nm,1.0s
CHNA Chernabura Isl 70.31 27 P **P 03 21 58.3 +0.4**
baz=232,SNR=66
CHNA S **S 03 30 28.4 -1.5**
baz=232
MOY Mondy 70.46 329 *e*P **P 03 22 00.0 +0.9**
MOY *e* 03 23 44.6
MOY pmax pmax
comp=Z,1µm,2.4s
BOK Bokaro 70.54 297⇑*i*P **P 03 22 00.1 +0.1**
BOK *i* x **pP 03 23 42.9 -1.8**
BOK *ex* **sP 03 24 34.9 -2.2**
RAMN Ramite 70.67 300 *e*P **P 03 22 01.4 +0.4**
comp=Z,846nm,0.6s
JIRN Jiri 71.20 301 *e*P **P 03 22 04.9 +0.6**
comp=Z,2µm,0.7s
S14K Fog Glacier 71.24 26 P **P 03 22 04.2 +0.7**
baz=231,SNR=20
S14K S **S 03 30 40.9 +0.3**
baz=231
GUN Gumba 71.53 301 *e*P **P 03 22 07.0 +0.8**
comp=Z,4µm,0.7s
CHGN Chignik 71.75 26 P **P 03 22 06.4 0.0**
baz=232,SNR=36
CHGN S **S 03 30 45.0 -1.0**
baz=232
KNGR Kungurtug, Tuv 71.75 327 *i* P **P 03 22 06.2 -0.5**
RAGD RAYAGADA 71.82 292 *e*P **P 03 22 08.4 +0.8**
PKI Pulchoki 71.85 300 *e*P **P 03 22 08.3 +0.3**
PKIN Phulchoki 71.86 300 *e*P **P 03 22 08.3 +0.3**
JHSG JHARSUGUGA 72.01 294 *e*P **P 03 22 08.9 +0.3**
KKN Kakani 72.02 301 *e*P **P 03 22 09.3 +0.5**
DMN Daman 72.12 300 *e*P **P 03 22 10.1 +0.6**

comp=Z,2µm,0.7s
BILL Bilibino 72.20 5 P **P 03 22 09.6 +0.8**
BILL Bilibino 72.20 5*de*P **P 03 22 09.3 +0.5**
BILL *i* *PP **pP 03 23 51.2 -1.6**
BILL *e* 03 24 49.5
BILL *i* S **SKiKP 03 30 52.4 +0.9**
BILL *e*SS **SS 03 35 40.8 -0.8**
BILL pmax pmax
comp=Z,871nm,1.3s
BILL MLR MLR
comp=Z,3µm,17.0s
GAMB Gambell 72.33 16 P **P 03 22 10.7 +1.1**
GAMB IAmb IAmb 03 24 03.3
comp=Z,961nm,1.6s
GAMB Gambell 72.33 16 P **P 03 22 10.4 +0.9**
baz=217,SNR=22
GAMB S **S 03 30 54.3 +2.0**
baz=217
GKN Gorkha 72.62 301 *e*P **P 03 22 12.6 +0.3**
CHIR Chirikof Islan 72.72 28 P **P 03 22 12.3 +0.3**
CHIR IAmb IAmb 03 22 20.1
comp=Z,414nm,0.8s
CHIR Chirikof Islan 72.72 28 P **P 03 22 12.7 +0.7**
baz=235,SNR=33
CHIR S **S 03 30 56.0 -0.9**
baz=235
PALK Pallekele 72.74 279 P **P 03 22 13.6 +0.5**
PALK IAmb IAmb 03 22 23.6
comp=Z,404nm,0.9s
PALK Pallekele 72.74 279*c i*P **P 03 22 13.9 +0.8**
PALK pmax pmax
comp=Z,511nm,1.0s
PALK Pallekele 72.74 279 P **P 03 22 13.5 +0.5**
PALK Pallekele 72.74 279 ⇑P **P 03 22 13.7 +0.6**
PALK ⇑P **P 03 22 13.9 +0.8**
R16K Pilot Point 72.89 25 P **P 03 22 13.6 +0.7**
baz=233,SNR=10
R16K S **S 03 30 59.3 +0.7**
baz=233
VLK Valmikinagar 73.12 300⇑*i*P **P 03 22 15.8 +0.9**
VLK *i* x **pP 03 23 58.6 -1.9**
VLK *ex* **sP 03 24 51.5 -1.1**
VAR Varanasi 73.42 298 *e*P **P 03 22 16.8 +0.1**
R17K Ugashik Creek 73.44 26 P **P 03 22 16.6 +0.4**
baz=234,SNR=144
R17K S **S 03 31 05.6 +0.7**
baz=234
DANN Dangsing 73.45 301 *e*P **P 03 22 17.2 0.0**
comp=Z,2µm,0.8s
KOLN Koldanda 73.46 300 *e*P **P 03 22 17.5 +0.4**
BLSP Bilaspur 73.57 294⇑*i*P **P 03 22 17.1 -0.6**
BLSP *i* x **pP 03 23 58.6 -5.0**
BLSP *ex* **sP 03 24 52.4 -3.2**
P16K Nushagak River 73.61 24 P **P 03 22 17.2 +0.2**
baz=232,SNR=54
P16K S **S 03 31 05.8 -0.8**
baz=232
SII Sitkinak Islan 73.81 27 P **P 03 22 19.0 +0.7**
SII Sitkinak Islan 73.81 27 P **P 03 22 19.0 +0.7**
baz=236,SNR=66
SII S **S 03 31 08.0 -1.0**
baz=236
O16K Kokwok River B 73.92 24 P **P 03 22 19.1 +0.3**
baz=232,SNR=72
O16K S **S 03 31 09.8 -0.1**
baz=232
VNDA Vanda 73.93 178 P **P 03 22 19.0 +0.4**
VNDA *PP **pP 03 24 04.8 +1.7**
VNDA Vanda 73.93 178 P **P 03 22 19.0 +0.4**
comp=Z,176nm,0.9s,baz=331,slow=6.4,SNR=292
VNDA pP **pP 03 24 04.8 +1.7**
comp=Z,36nm,0.9s,baz=319,slow=5.9,SNR=2.2
VNDA S **S 03 31 10.7 +1.1**
comp=Z,2.4nm,1.0s,baz=341,slow=5.0,SNR=1.8
comp=Z,176nm,0.9s
Q16K King Salmon 73.95 25 P **P 03 22 18.9 0.0**
baz=233
Q16K S **S 03 31 09.2 -1.1**
baz=233
VJD Vijayawada 73.99 288 *e*P **P 03 22 19.7 -0.4**
PYUN Piuthan 74.06 300 *e*P **P 03 22 20.5 -0.1**
comp=Z,2µm,0.9s
N16K Nishlik Lake 74.20 23 P **P 03 22 21.9 +1.5**
baz=231,SNR=125
N16K S **S 03 31 16.5 +3.3**
baz=231
P17K Kvichak River 74.35 24 P **P 03 22 20.9 -0.3**
baz=233,SNR=42
P17K S **S 03 31 13.4 -1.2**
baz=233
O17K Koliganek Bris 74.43 24 P **P 03 22 22.4 +0.7**
baz=233,SNR=154
O17K S **S 03 31 15.8 +0.3**
baz=233
SBA Scott Base 74.47 177 P **P 03 22 23.3 +1.6**
SBA Scott Base 74.47 177 P **P 03 22 23.3 +1.6**
SBA pmax pmax
comp=Z,256nm,1.1s
ALBI Allahabad 74.49 297⇑*i*P **P 03 22 22.7 -0.1**
ALBI *i* x **pP 03 24 02.5 -6.5**
ALBI *ex* **sP 03 24 58.3 -2.6**
OHAK Old Harbor 74.58 27 IAmb IAmb 03 22 30.2
comp=Z,265nm,0.7s
OHAK Old Harbor 74.58 27 P **P 03 22 23.2 +0.6**
baz=237,SNR=80
OHAK S **S 03 31 15.9 -1.4**
baz=237
ANM Nome 74.73 17 IAmb IAmb 03 24 18.9
comp=Z,758nm,1.4s
ANM Nome 74.73 17 P **P 03 22 24.4 +1.1**
baz=224,SNR=36
ANM S **S 03 31 21.5 +2.7**
baz=224
TNA Tin City 74.75 16 P **P 03 22 23.9 +0.6**
baz=221,SNR=26
TNA S **S 03 31 20.8 +2.0**
baz=221
TNA Tin City 74.75 16 ⇑P **P 03 22 23.9 +0.6**
WMQ Urumqi 74.92 317 ⇑P **P 03 22 25.8 +0.9**
WMQ pP pwP 03 24 13.0 -0.3
WMQ sP sP 03 25 06.5 +4.1
WMQ S **S 03 31 22.0 +0.3**
WMQ sS sS 03 34 30.5 -0.4
WMQ pmax pmax
comp=Z,590nm,1.3s
WMQ pmax pmax
comp=Z,12µm,4.1s
P18K Big Mountain, 74.97 25 P **P 03 22 24.4 -0.3**
baz=234
P18K S **S 03 31 20.4 -1.2**
baz=234
BRCI Bahraich 75.16 300 *e*P **P 03 22 26.7 +0.2**
KDAK Kodiak Island 75.21 27 P **P 03 22 26.8 +0.8**
KDAK Kodiak Island 75.21 27 P **P 03 22 26.8 +0.8**
KDAK pmax pmax
comp=Z,185nm,1.1s
KDAK Kodiak Island 75.21 27 P **P 03 22 26.9 +0.8**
baz=237
KDAK S **S 03 31 22.9 -1.2**
baz=237
KDAK Kodiak Island 75.21 27 ⇓P **P 03 22 26.4 +0.3**
O18K Koktuh Hills 75.24 24 P **P 03 22 26.5 +0.2**
baz=234
O18K S **S 03 31 24.6 +0.1**
baz=234
Q19K Cape Douglas, 75.37 26 P **P 03 22 27.1 0.0**
baz=236,SNR=185
Q19K S **S 03 31 26.1 +0.2**
baz=236
N18K Kilae Creek 75.45 23 IAmb IAmb 03 24 21.6
comp=Z,738nm,1.4s
N18K Kilae Creek 75.45 23 P **P 03 22 29.0 +1.6**
baz=234,SNR=252
N18K S **S 03 31 29.7 +2.9**
baz=234
SALM Salem 75.69 283 *e*P **P 03 22 29.2 -0.4**
JBP Jabalpur 75.72 295⇓*e*P **P 03 22 28.4 -1.3**
JBP *e*S **S 03 31 28.0 -2.9**
Q20K Shuyak Island 75.74 26 P **P 03 22 29.9 +0.8**
baz=237,SNR=27
Q20K S **S 03 31 29.7 -0.1**
baz=237
O19K Port Alsworth 75.80 24 P **P 03 22 29.4 +0.1**
baz=235
O19K S **S 03 31 29.7 -0.7**
baz=235

SVW2 Sparrevohn 75.82 23 IAmb IAmb 03 22 38.8
comp=Z,273nm,0.8s
P19K Oil Pt 75.95 25 P **P 03 22 30.4 +0.2**
baz=236,SNR=231
P19K S **S 03 31 31.6 -0.5**
baz=236
N19K Bonanza Creek 76.09 24 P **P 03 22 31.8 +0.7**
baz=235,SNR=155
N19K S **S 03 31 34.8 +1.0**
baz=235
HYB Hyderabad 76.11 289 *e*P **P 03 22 31.5 -0.5**
HYB *i* x **pP 03 24 14.8 -3.3**
HYB *ex* **sP 03 25 04.9 -4.8**
HYBB Hyderabad (bro 76.11 289 *e*P **P 03 22 31.9 -0.1**
HYBB IVmB_BB 03 22 36.0
comp=Z,2µm,1.4s
HYBB *e*PcP **PcP 03 22 41.9 +0.2**
HYBB *e*pP **pP 03 24 17.0 -1.2**
HYBB *e*sP **sP 03 25 06.2 -3.5**
HYBB *e*PP **PP 03 25 31.0 -0.8**
HYBB *e*S **S 03 31 37.4 +1.9**
HYBB *e*ScS **ScS 03 32 02.3 +1.3**
HYBB *e*SS **SS 03 36 44.0 +1.5**
HYBB IVMsBB 03 43 19.7
comp=Z,3µm,28.5s
HYBB *e*SKKSdf **SKKSdf 03 47 47.4 -3.2**
ILSW Iliamna Southw 76.17 25 IAmb IAmb 03 22 35.3
comp=Z,516nm,1.4s
NGP Nagpur 76.22 293⇑*i*P **P 03 22 32.4 -0.2**
NGP *i* x **pP 03 24 18.2 -1.2**
KOD Kodaikanal 76.24 281 *e*P **P 03 22 33.9 +0.7**
KOD *i* x **pP 03 24 16.2 -3.0**
O20K Slope Mountain 76.44 25 P **P 03 22 32.9 -0.2**
baz=237,SNR=144
O20K S **S 03 31 36.7 -0.8**
baz=237
TRD Trivandrum 76.56 280 *e*P **P 03 22 34.6 +0.1**
TRD IAmb IAmb 03 22 39.0
comp=Z,268nm,0.7s
HOM Homer 76.63 25 P **P 03 22 34.7 +0.7**
baz=238,SNR=34
HOM S **S 03 31 40.4 +1.1**
baz=238
LGTI Lohaghat 76.70 301⇑*i*P **P 03 22 35.9 +0.9**
L19K White Mountain 76.74 22 IAmb IAmb 03 22 42.6
comp=Z,454nm,1.0s
L19K White Mountain 76.74 22 P **P 03 22 35.8 +1.2**
baz=234,SNR=304
L19K S **S 03 31 43.4 +2.8**
baz=234
PTH Pithoragarh 76.75 301 *e*P **P 03 22 35.6 +0.1**
PTH *i* x **pP 03 24 20.1 -2.2**
TTA Tatalina 76.76 21 P **P 03 22 35.6 +0.9**
baz=233,SNR=111
TTA S **S 03 31 42.7 +1.9**
baz=233
TTA Tatalina 76.76 21 ⇑P **P 03 22 35.6 +0.9**
M19K Big River Lodg 76.76 23 IAmb IAmb 03 22 40.1
comp=Z,904nm,1.8s
M19K Big River Lodg 76.76 23 P **P 03 22 36.1 +1.4**
baz=235,SNR=268
M19K S **S 03 31 43.5 +2.8**
baz=235
TIXI Tiksi 76.80 352 P **P 03 22 34.7 0.0**
TIXI IAmb IAmb 03 22 38.2
comp=Z,949nm,1.8s
TIXI Tiksi 76.80 352*ce*P **P 03 22 33.7 -1.0**
TIXI pmax pmax
comp=Z,509nm,1.7s
TIXI MLR MLR
comp=Z,3µm,16.0s
TIXI Tiksi 76.80 352 ⇑P **P 03 22 34.0 -0.7**
TIXI Tiksi 76.80 352 P **P 03 22 34.0 -0.7**
comp=Z,128nm,0.8s,baz=90,slow=23,SNR=47
TIXI S **S 03 31 40.2 -0.6**
comp=Z,6.8nm,0.7s,baz=90,slow=24,SNR=2.4
comp=Z,128nm,0.8s
BRLK Bradley Lake 77.01 26 IAmb IAmb 03 22 43.1
comp=Z,291nm,0.8s
BRSE Bradley Lake S 77.06 26 P **P 03 22 37.0 +0.7**
baz=239,SNR=82
BRSE S **S 03 31 45.1 +1.1**
baz=239
DGZ Jazzator, Alta 77.19 323*c i*P **P 03 22 37.4 -0.1**
DGZ pmax pmax
comp=Z,736nm,1.0s
N20K Mount Spurr 77.23 24 P **P 03 22 37.0 -0.3**
baz=237
N20K S **S 03 31 45.2 -0.6**
baz=237
SPCR Spurr Chakacha 77.23 24 P **P 03 22 37.0 -0.3**
baz=237,SNR=11
SPCR S **S 03 31 44.8 -1.0**
baz=237
M20K Styx River 77.24 23 IAmb IAmb 03 24 34.9
comp=Z,416nm,1.1s
M20K Styx River 77.24 23 P **P 03 22 38.5 +1.1**
baz=236
M20K S **S 03 31 47.6 +1.7**
baz=236
L20K Farewell, AK 77.29 22 P **P 03 22 38.8 +1.2**
baz=235,SNR=185
L20K S **S 03 31 49.4 +3.1**
baz=235
PCHI Peechi 77.37 282⇑*e*P **P 03 22 39.8 +0.8**
PCHI *e*S **S 03 31 49.0 +0.1**
JHNI Jhansi 77.42 297⇑*i*P **P 03 22 37.6 -1.4**
JHNI *i* x **pP 03 24 21.1 -5.2**
JHNI *ex* **sP 03 25 12.0 -6.0**
CAPN Captain Cook N 77.43 25 P **P 03 22 39.9 +1.6**
baz=238,SNR=13
CAPN S **S 03 31 49.8 +2.1**
baz=238
GCSA Galena City Sc 77.56 20 P **P 03 22 39.8 +0.9**
baz=232,SNR=63
GCSA S **S 03 31 51.3 +2.4**
baz=232
K20K Telida 77.72 22 P **P 03 22 41.0 +1.1**
baz=235,SNR=267
K20K S **S 03 31 54.1 +3.3**
baz=235
SEW Seward 77.81 26 P **P 03 22 41.0 +0.7**
baz=240,SNR=116
SEW S **S 03 31 49.9 -1.9**
baz=240
O22K Cooper Landing 77.88 25 P **P 03 22 41.2 +0.5**
baz=239,SNR=54
O22K S **S 03 31 53.0 +0.5**
baz=239
ZSN Zaisan 78.01 320*c i*P **P 03 22 42.2 +0.4**
ZSN *i* S **S 03 31 54.5 0.0**
ZSN pmax pmax
comp=Z,461nm,1.8s
ZSN Zaisan 78.01 320⇑*i*P **P 03 22 42.3 +0.4**
comp=Z,461nm,1.8s,baz=320
ZSN *i* S **S 03 31 54.5 0.0**
baz=320
AKL Akola 78.03 292⇑*i*P **P 03 22 42.1 -0.4**
AKL *i* x **pP 03 24 25.0 -4.4**
AKL *ex* **sP 03 25 20.8 -0.4**
BHPL Bhopal 78.05 295⇑*i*P **P 03 22 40.9 -1.6**
BHPL IAmb IAmb 03 22 44.3
comp=Z,467nm,0.7s
BHPL *i* x **pP 03 24 25.9 -4.1**
BHPL *ex* **sP 03 25 15.8 -5.6**
LATR Latur 78.13 290⇑*i*P **P 03 22 42.6 -0.3**
LATR *i* x x 03 24 26.0
PPLA Purkeypile 78.17 23 IAmb IAmb 03 22 50.3
comp=Z,883nm,2.0s
PPLA Purkeypile 78.17 23 P **P 03 22 42.5 +0.1**
baz=237,SNR=70
PPLA S **S 03 31 54.9 -0.9**
baz=237
J20K Nowinta River 78.17 21 IAmb IAmb 03 22 48.5
comp=Z,466nm,1.2s
J20K Nowinta River 78.17 21 P **P 03 22 43.5 +1.3**
baz=235,SNR=265
J20K S **S 03 31 58.8 +3.4**
baz=235
RC01 Rabbit Creek A 78.19 25 IAmb IAmb 03 24 36.2
comp=Z,415nm,1.1s
RC01 Rabbit Creek A 78.19 25 P **P 03 22 42.7 +0.3**
baz=239,SNR=152
RC01 S **S 03 31 55.8 0.0**
baz=239
M22K Willow 78.37 24 IAmb IAmb 03 24 39.2

comp=Z,645nm,1.1s
M22K Willow 78.37 24 P P 03 22 43.1 -0.2
baz=239,SNR=60
M22K S S 03 31 56.4 -1.2
baz=239
CAST Castle Rocks 78.50 22 P P 03 22 44.1 0.0
baz=237
CAST S S 03 31 58.6 -0.3
baz=237
CUT Chulitna 78.65 23 IAmb IAmb 03 22 49.1
comp=Z,337nm,1.1s
CUT Chulitna 78.65 23 P P 03 22 44.2 -0.6
baz=238,SNR=22
CUT S S 03 31 58.3 -2.2
baz=238
PWL Port Wells 78.67 25 P P 03 22 45.4 +0.4
baz=241,SNR=400
PWL S S 03 32 01.4 +0.6
baz=241
CHUM Lake Minchumin 78.67 22 P P 03 22 45.7 +0.8
baz=236,SNR=37
CHUM S S 03 32 01.1 +0.5
baz=236
PMR Palmer 78.70 24 P P 03 22 45.2 +0.1
baz=240,SNR=28
PMR S S 03 32 00.1 -0.9
baz=240
DDI Dehra Dun 78.74 302⇑ *i*P P 03 22 46.4 +0.3
DDI IAmb IAmb 03 22 51.7
comp=Z,231nm,0.7s
DDI *i* x **pP** 03 24 34.7 +1.0
DDI *ex* **sP** 03 25 25.6 +0.5
Q23K Middleton Isla 78.86 27 IAmb IAmb 03 22 53.7
comp=Z,306nm,0.9s
Q23K Middleton Isla 78.86 27 P P 03 22 47.0 +1.1
baz=243,SNR=11
Q23K S S 03 32 04.0 +1.3
baz=243
MID Middleton Isla 78.86 27 IAmb IAmb 03 22 53.7
comp=Z,296nm,0.9s
KNK Knik Glacier 78.89 25 P P 03 22 46.7 +0.5
baz=240,SNR=55
KNK S S 03 32 03.4 +0.3
baz=240
KTH Kantishna Hill 79.01 22 IAmb IAmb 03 22 51.2
comp=Z,447nm,1.3s
MNGI Mangalore 79.11 284 *e*P P 03 22 47.8 -0.5
SML Sawmill 79.13 24 IAmb IAmb 03 24 43.8
comp=Z,943nm,1.3s
SML Sawmill 79.13 24 P P 03 22 48.1 +0.5
baz=240,SNR=240
SML S S 03 32 05.9 +0.1
baz=240
SONA Sohna 79.19 300 *e*P P 03 22 47.6 -0.9
TRF Thorofare Moun 79.19 23 P P 03 22 47.4 -0.5
baz=238,SNR=76
TRF S S 03 32 05.0 -1.5
baz=238
GLI Glacier Island 79.21 26 IAmb IAmb 03 22 52.2
comp=Z,268nm,0.8s
GLI Glacier Island 79.21 26 P P 03 22 48.3 +0.4
baz=242,SNR=62
GLI S S 03 32 06.6 +0.2
baz=242
HIN Hinchinbrook I 79.24 26 IAmb IAmb 03 22 55.4
comp=Z,404nm,0.9s
BPAW Bear Paw Mtn. 79.28 22 P P 03 22 48.0 -0.2
baz=238,SNR=47
BPAW S S 03 32 06.3 -0.8
baz=238
M23K Glacier View 79.38 25 P P 03 22 49.0 +0.2
baz=241,SNR=60
M23K S S 03 32 07.5 -0.6
baz=241
FID Port Fidalgo 79.41 26 IAmb IAmb 03 22 56.0
comp=Z,253nm,0.8s
MK31 Makanchi Array 79.48 319 IAmb IAmb 03 22 55.3
comp=Z,315nm,0.9s
MK31 Makanchi Array 79.48 319 *i* P P 03 22 49.5 -0.2
MK31 pmax pmax
comp=Z,529nm,0.9s
MKAR Makanchi Array 79.48 319 P P 03 22 50.0 +0.3
MKAR *PP **pP** 03 24 38.0 +1.0
MKAR Makanchi Array 79.48 319 P P 03 22 50.0 +0.3
comp=Z,318nm,0.8s,baz=101,slow=6.3,SNR=401
MKAR pP **pP** 03 24 38.0 +1.0
comp=Z,61nm,0.9s,baz=31,slow=12,SNR=2.4
MKAR PKKPbc **PKKPbc** 03 41 36.2 -0.1
comp=Z,6.1nm,0.7s,baz=273,slow=1.5,SNR=17
MKAR PKPPKP P'P'df 03 49 22.6 -15
comp=Z,2.4nm,1.1s,baz=296,slow=3.9,SNR=5.7
comp=Z,318nm,0.8s
H21K Melozitna Rive 79.49 20 P P 03 22 50.1 +0.8
baz=236,SNR=106
H21K S S 03 32 10.9 +1.7
baz=236
I21K Tanana 79.51 21 IAmb IAmb 03 24 46.3
comp=Z,516nm,1.2s
I21K Tanana 79.51 21 P P 03 22 50.3 +1.0
baz=236,SNR=111
I21K S S 03 32 12.1 +2.8
baz=236
WAT1 Susitna Watana 79.55 24 P P 03 22 49.7 0.0
baz=240
WAT1 S S 03 32 08.9 -1.1
baz=240
SCM Sheep Creek Mo 79.56 25 IAmb IAmb 03 22 58.4
comp=Z,330nm,0.9s
SCM Sheep Creek Mo 79.56 25 P P 03 22 50.5 +0.7
baz=241,SNR=167
SCM S S 03 32 10.4 +0.2
baz=241
EYAK Cordova Ski Ar 79.64 26 P P 03 22 50.9 +0.8
baz=243,SNR=38
EYAK S S 03 32 12.0 +1.2
baz=243
SMLA Simla 79.64 302⇑ *i*P P 03 22 50.9 +0.1
SMLA *i* x **pP** 03 24 35.4 -3.3
SMLA *ex* **sP** 03 25 28.6 -1.4
MAKZ Makanchi 79.69 319 P P 03 22 51.3 +0.5
MAKZ IAmb IAmb 03 22 54.2
comp=Z,565nm,0.8s
MAKZ Makanchi 79.69 319 *i* P P 03 22 49.6 -1.2
MAKZ pmax pmax
comp=Z,557nm,0.8s
KUDL Kundal 79.69 299 *e*P P 03 22 49.8 -1.3
RND Reindeer 79.72 23 IAmb IAmb 03 22 57.1
comp=Z,293nm,0.9s
G21K Allakaket 79.75 19 P P 03 22 51.3 +0.7
baz=235,SNR=186
G21K S S 03 32 14.2 +2.4
baz=235
WAT6 Susitna Watana 79.76 24 P P 03 22 51.2 +0.3
baz=241,SNR=36
WAT6 S S 03 32 11.9 -0.5
baz=241
MCK McKinley 79.86 23 IAmb IAmb 03 22 55.7
comp=Z,888nm,1.2s
MCK McKinley 79.86 23 P P 03 22 51.0 -0.3
baz=240,SNR=292
MCK S S 03 32 11.6 -1.5
baz=240
MLY Manley 79.87 21 IAmb IAmb 03 24 47.7
comp=Z,323nm,1.1s
MLY Manley 79.87 21 P P 03 22 51.7 +0.4
baz=238,SNR=396
MLY S S 03 32 13.6 +0.4
baz=238
H08S2 Diego Garcia H 79.89 263 P P 03 22 53.5 +1.3
baz=24,slow=5.9,SNR=22
H08S3 Diego Garcia H 79.90 263 P P 03 22 53.6 +1.3
baz=24,slow=5.9,SNR=21
H08S1 Diego Garcia H 79.91 263 P P 03 22 53.6 +1.3
baz=24,slow=5.9,SNR=20
DGAR Diego Garcia 79.94 263 P P 03 22 53.2 +0.5
DGAR IAmb IAmb 03 22 56.7
comp=Z,1μm,1.4s
DGAR Diego Garcia 79.94 263 P P 03 22 53.2 +0.5
DGAR pmax pmax
comp=Z,1μm,1.5s
KAIM Kayak Island 79.96 27 IAmb IAmb 03 22 55.6
comp=Z,224nm,0.8s
KAIM Kayak Island 79.96 27 P P 03 22 53.2 +1.4
baz=244,SNR=39
KAIM S S 03 32 17.5 +3.4
baz=244
KLU Klutina 80.00 25 IAmb IAmb 03 22 59.8
comp=Z,366nm,1.0s
KLU Klutina 80.00 25 P P 03 22 53.0 +0.9
baz=243,SNR=268
KLU S S 03 32 15.8 +1.1
baz=243
RAGM Ragged Mountai 80.04 27 IAmb IAmb 03 23 00.0
comp=Z,306nm,0.9s
H22K Ishtalitna Cre 80.11 20 P P 03 22 53.4 +0.8
baz=237,SNR=113
H22K S S 03 32 17.2 +1.6
baz=237
DHY Denali Highway 80.14 24 P P 03 22 53.5 +0.5
baz=241,SNR=174
DHY S S 03 32 15.8 -0.5
baz=241
F21K Alatna River 80.16 19 P P 03 22 53.4 +0.5
baz=235,SNR=113
F21K S S 03 32 17.5 +1.4
baz=235
M24K Tolsona, Glenn 80.17 25 IAmb IAmb 03 23 00.9
comp=Z,294nm,0.7s
M24K Tolsona, Glenn 80.17 25 P P 03 22 54.1 +1.1
baz=242,SNR=95
M24K S S 03 32 17.9 +1.5
baz=242
HMT Hamilton 80.21 27 IAmb IAmb 03 23 01.9
comp=Z,389nm,1.0s
ZAA0 Zalesovo Array 80.22 326 IAmb IAmb 03 22 57.9
comp=Z,930nm,1.4s
ZALV Zalesovo Beam 80.22 326 P P 03 22 52.6 -0.8
ZALV *PP **pwP** 03 24 42.8 -0.9
ZALV Zalesovo Beam 80.22 326 P P 03 22 52.6 -0.8
comp=Z,237nm,0.7s,baz=112,slow=6.3,SNR=166
ZALV pP **pwP** 03 24 42.8 -0.9
comp=Z,207nm,0.9s,baz=104,slow=6.3,SNR=6.7
ZALV S S 03 32 13.5 -3.6
comp=Z,0.9nm,0.5s,baz=220,slow=14,SNR=1.3
ZALV PKKPbc **PKKPbc** 03 41 34.7 -0.3
comp=Z,4.0nm,0.5s,baz=316,slow=2.9,SNR=9.5
ZALV PKPPKP P'P'df 03 49 20.6 -15
comp=Z,3.2nm,0.8s,baz=320,slow=3.8,SNR=2.9
comp=Z,237nm,0.7s
KAD Karad 80.23 288 *e*P P 03 22 53.2 -1.0
NEA2 Nenana 80.25 22 IAmb IAmb 03 22 57.6
comp=Z,478nm,1.4s
NEA2 Nenana 80.25 22 P P 03 22 52.8 -0.4
baz=239,SNR=233
NEA2 S S 03 32 15.6 -1.4
baz=239
SUCK Suckling Hills 80.31 27 IAmb IAmb 03 23 02.7
comp=Z,359nm,1.2s
BHK Bhakra 80.32 303⇑ *i*P P 03 22 53.9 -0.5
BHK *i* x **pP** 03 24 38.7 -3.9
BMRM Bremner River 80.33 26 IAmb IAmb 03 22 59.3
comp=Z,322nm,1.1s
BMRM Bremner River 80.33 26 P P 03 22 54.5 +0.7
baz=244,SNR=105
BMRM S S 03 32 19.9 +1.8
baz=244
GOA Goa 80.36 286 *e*P P 03 22 55.0 +0.1
GOA IAmb IAmb 03 22 57.5
comp=Z,134nm,0.7s
MNCI Minicoy 80.37 279 ⇓P P 03 22 56.6 +1.6
I23K Minto, Yukon-K 80.43 21 P P 03 22 54.2 +0.1
baz=239,SNR=54
I23K S S 03 32 18.5 -0.3
baz=239
SHLS Shalkode 80.44 315 *e*P P 03 22 53.4 -1.5
SHLS Shalkode 80.44 315⇑ *i*P P 03 22 53.7 -1.2
comp=Z,334nm,1.7s,baz=315
SHLS *i* S S 03 32 17.1 -2.9
baz=315
PDGK Podgornoye 80.46 315 *i* P P 03 22 53.8 -1.2
PDGK pmax pmax
comp=Z,407nm,1.2s
BERG Berg Lake 80.48 27 IAmb IAmb 03 23 03.4
comp=Z,388nm,0.8s
WRH Wood River Hil 80.55 22 IAmb IAmb 03 22 59.2
comp=Z,384nm,1.2s
BGLC Bering Glacier 80.56 27 P P 03 22 56.4 +1.5
baz=245
BGLC S S 03 32 23.4 +3.2
baz=245
N25K Chitina, Valde 80.61 25 IAmb IAmb 03 23 00.4
comp=Z,531nm,1.7s
N25K Chitina, Valde 80.61 25 P P 03 22 56.4 +1.0
baz=244,SNR=100
N25K S S 03 32 21.7 +0.7
baz=244
G22K Bettles 80.63 19 P P 03 22 55.8 +0.6
baz=237
G22K S S 03 32 23.0 +2.3
baz=237
POO Poona 80.69 289 *e*P P 03 22 55.5 -1.1
H23K Yukon River 80.71 21 P P 03 22 56.4 +0.7
baz=239,SNR=147
H23K S S 03 32 23.0 +1.3
baz=239
HARP HAARP 80.73 25 P P 03 22 56.7 +0.9
baz=243,SNR=24
HARP S S 03 32 23.1 +1.1
baz=243
F22K John River 80.74 19 P P 03 22 56.7 +0.9
baz=236
F22K S S 03 32 23.2 +1.3
baz=236
UZB Uzunbulak 80.75 315 *i* P P 03 22 56.9 +0.3
UZB *i* S S 03 32 23.1 -0.2
UZB pmax pmax
comp=Z,228nm,2.4s
UZB Uzunbulak 80.75 315 *i* P P 03 22 56.9 +0.3
comp=Z,228nm,2.4s,baz=315
UZB *i* S S 03 32 23.2 -0.2
baz=315
SNH Sunshine Point 80.78 27 IAmb IAmb 03 23 01.4
comp=Z,455nm,0.8s
TCOL CIGO, UAF Yank 80.84 22 IAmb IAmb 03 22 59.8
comp=Z,327nm,0.8s
TCOL CIGO, UAF Yank 80.84 22 P P 03 22 55.8 -0.5
baz=240,SNR=75
TCOL S S 03 32 20.6 -2.3
baz=240
COLA College 80.84 22 P P 03 22 56.0 -0.3
COLA IAmb IAmb 03 22 59.8
comp=Z,329nm,0.8s
COLA College 80.84 22 P P 03 22 56.0 -0.3
COLA pmax pmax
comp=Z,329nm,0.9s
COLA College 80.84 22 P P 03 22 55.8 -0.5
baz=240
COLA S S 03 32 21.3 -1.7
baz=240
COLA College 80.84 22 ⇑P P 03 22 55.6 -0.7
PAX Paxson 80.86 24 P P 03 22 56.7 +0.1
baz=243,SNR=70
PAX S S 03 32 22.5 -1.0
baz=243
GLB Gilahina Butte 80.88 26 IAmb IAmb 03 23 02.2
comp=Z,398nm,1.2s
WAX Waxell Ridge 80.89 27 IAmb IAmb 03 23 05.6
comp=Z,258nm,0.8s
HDA Harding Lake 80.95 22 P P 03 22 56.3 -0.7
baz=241,SNR=137
HDA S S 03 32 22.6 -1.5
baz=241
HDA S S 03 32 22.6 -1.5
baz=241
G23K Bananza Creek 81.01 20 P P 03 22 58.0 +0.7
baz=238,SNR=185
G23K S S 03 32 27.0 +2.2
baz=238
TGL Tana Glacier 81.03 27 IAmb IAmb 03 23 05.0
comp=Z,338nm,1.2s
AJM Ajmer 81.05 297⇑ *i*P P 03 22 58.0 -0.3
AJM *i* x **pP** 03 24 42.6 -4.2
AJM *ex* **sP** 03 25 35.5 -2.7
KPKS Kokpek 81.06 315*c* *i*P P 03 22 58.3 +0.2
KPKS *i* S S 03 32 27.0 +0.7
KPKS pmax pmax
comp=Z,530nm,1.8s
KPKS Kokpek 81.06 315⇑ *i*P P 03 22 58.3 +0.2
comp=Z,530nm,1.8s,baz=315
KPKS *i* S S 03 32 27.0 +0.7
baz=315
THN Thein Dam 81.09 303⇑ *i*P P 03 22 58.3 0.0
THN *i* x **pP** 03 24 43.6 -3.1
THN *ex* **sP** 03 25 30.6 -7.3
POKR Poker Plat Res 81.12 22 P P 03 22 57.1 -0.7
baz=241,SNR=20
POKR S S 03 32 24.1 -1.8
baz=241
K24K Donnelly Dome 81.12 23 P P 03 22 58.3 +0.4
baz=242,SNR=168
K24K S S 03 32 25.6 -0.4
baz=242
ILAR Eielson Array 81.15 22 P P 03 22 56.6 -1.4
ILAR *PP **pP** 03 24 45.7 +0.3
ILAR Eielson Array 81.15 22 P P 03 22 56.6 -1.4
comp=Z,127nm,0.7s,baz=246,slow=4.3,SNR=362
ILAR pP **pP** 03 24 45.7 +0.3
comp=Z,47nm,0.9s,baz=247,slow=5.4,SNR=4.1
ILAR S S 03 32 22.1 -4.1
comp=Z,4.9nm,1.1s,baz=322,slow=2.3,SNR=3.6
ILAR PKKPbc **PKKPbc** 03 41 32.8 -0.6
comp=Z,3.1nm,0.7s,baz=2.6,slow=1.9,SNR=18
ILAR PKPPKP P'P'df 03 49 17.1 -16
comp=Z,1.2nm,1.0s,baz=59,slow=1.5,SNR=4.5
comp=Z,127nm,0.7s
SATY Saty 81.17 314*c* *i*P P 03 22 59.0 +0.3
SATY *i* S S 03 32 27.8 +0.4
SATY pmax pmax
comp=Z,538nm,1.9s
SATY Saty 81.17 314⇑ *i*P P 03 22 59.1 +0.3
comp=Z,538nm,1.9s,baz=314
SATY *i* S S 03 32 27.9 +0.4
baz=314
ZHN Zhinishke 81.17 315 *i* P P 03 22 58.8 +0.1
ZHN *e*S S 03 32 27.3 -0.2
ZHN pmax pmax
comp=Z,21nm,0.1s
ZHN Zhinishke 81.17 315 *i* P P 03 22 58.9 +0.1
comp=Z,21nm,0.1s,baz=314
ZHN *e*S S 03 32 27.4 -0.1
baz=314
MESA MESA 81.19 27 IAmb IAmb 03 23 06.2
comp=Z,257nm,0.9s
MESA MESA 81.19 27 P P 03 22 59.4 +0.9
baz=246,SNR=42
MESA S S 03 32 28.8 +1.7
baz=246
MCARA McCarthy VSAT 81.20 26 P P 03 22 59.3 +1.0
baz=245,SNR=59
MCARA S S 03 32 27.7 +0.9
baz=245
E22K Anaktuvuk Pass 81.21 18 P P 03 22 59.1 +0.8
baz=236
E22K S S 03 32 27.4 +0.7
baz=236
H24K Noodor Dome 81.31 21 P P 03 22 58.5 -0.4
baz=240,SNR=122
H24K S S 03 32 27.8 -0.1
baz=240
RIDG Independent Ri 81.46 23 IAmb IAmb 03 23 04.1
comp=Z,386nm,1.2s
RIDG Independent Ri 81.46 23 P P 03 22 59.9 +0.3
baz=243,SNR=205
RIDG S S 03 32 29.3 -0.2
baz=243
TDK Taldyqorghan 81.62 316*c* *i*P P 03 23 01.4 +0.5
TDK *i* S S 03 32 31.5 -0.3
TDK pmax pmax
comp=Z,2μm,2.2s
TDK Taldyqorghan 81.62 316⇑ *i*P P 03 23 01.4 +0.5
comp=Z,2μm,2.2s,baz=316
TDK *i* S S 03 32 31.5 -0.3
baz=316
M26K Nabesna, AK 81.64 25 P P 03 23 01.2 +0.6
baz=245,SNR=80
M26K S S 03 32 31.9 +0.6
baz=245
J25K Salcha River, 81.65 23 IAmb IAmb 03 23 04.8
comp=Z,672nm,1.2s
J25K Salcha River, 81.65 23 P P 03 23 00.7 +0.1
baz=243,SNR=506
J25K S S 03 32 30.3 -1.1
baz=243
TABL Table Mountain 81.66 27 IAmb IAmb 03 23 05.7
comp=Z,262nm,0.8s
BOM Bombay 81.71 290 *e*P P 03 23 00.4 -1.4
BOM *i* x x 03 24 46.5
BOM *ex* x x 03 25 41.3
DOT Dot Lake 81.73 24 IAmb IAmb 03 23 08.2
comp=Z,247nm,1.0s
A21K Barrow 81.75 15 IAmb IAmb 03 23 06.3
comp=Z,504nm,1.1s
A21K Barrow 81.75 15 P P 03 23 01.2 +0.3
baz=231
A21K S S 03 32 32.0 +0.1
baz=231
L26K Log Cabin Wild 81.75 24 P P 03 23 01.8 +0.7
baz=245,SNR=115
L26K S S 03 32 33.3 +0.9
baz=245
CTG Chitna Glacier 81.78 27 P P 03 23 02.6 +1.2
baz=247,SNR=141
CTG S S 03 32 34.7 +1.8
baz=247
CTGM Chitina Glacie 81.78 27 IAmb IAmb 03 23 09.2
comp=Z,264nm,0.9s
SEM Semipalatinsk 81.80 322*c* *i*P P 03 23 00.7 -1.2
SEM pmax pmax
comp=Z,464nm,1.8s
SEM Semipalatinsk 81.80 322⇑ *i*P P 03 23 00.7 -1.2
comp=Z,464nm,1.8s,baz=322
JMU Jammu 81.82 304⇑ *i*P P 03 23 03.3 +1.2
JMU *i* x **pP** 03 24 47.5 -3.1
G24K Hadweenzic Riv 81.88 20 P P 03 23 02.6 +0.9
baz=240,SNR=137
G24K S S 03 32 35.3 +1.8
baz=240
SCRK Sand Creek 81.91 23 P P 03 23 02.3 +0.3
baz=244,SNR=127
SCRK S S 03 32 34.2 +0.2
baz=244
PCA Pinnacle 81.94 28 IAmb IAmb 03 23 10.8
comp=Z,330nm,0.9s
PINM Pinnacle 81.94 28 P P 03 23 03.1 +0.9
baz=248,SNR=48
PINM S S 03 32 35.9 +1.5
baz=248
PRP Porcupine Dome 82.01 22 P P 03 23 00.9 -1.6
baz=242,SNR=51
PRP S S 03 32 32.7 -2.4
baz=242
D23K Nanushuk River 82.01 18 P P 03 23 03.9 +1.5
baz=237,SNR=240
D23K S S 03 32 37.0 +2.2
baz=237
M27K Edge Creek, AK 82.10 25 IAmb IAmb 03 23 08.2
comp=Z,304nm,0.9s
M27K Edge Creek, AK 82.10 25 P P 03 23 04.2 +1.1
baz=246,SNR=368
M27K S S 03 32 37.3 +1.3
baz=246
F24K Squaw Lake 82.15 20 P P 03 23 04.3 +1.2
baz=240,SNR=167
F24K S S 03 32 38.4 +2.2
baz=240
MDOK Medeo 82.16 314 *i* P P 03 23 04.5 +0.7
MDOK *e*S S 03 32 34.4 -3.1
MDOK Medeo 82.16 314 *i* P P 03 23 04.5 +0.7
baz=314
MDOK *e*S S 03 32 34.4 -3.1
baz=314
BCPM Bancas Point 82.18 28 IAmb IAmb 03 23 08.5
comp=Z,273nm,0.8s
TOLK Toolik Lake Re 82.18 18 IAmb IAmb 03 23 08.9
comp=Z,330nm,1.1s
TOLK Toolik Lake Re 82.18 18 P P 03 23 04.0 +0.8
baz=238,SNR=100
TOLK S S 03 32 37.8 +1.3
baz=238
PNL Peninsula 82.19 28 P P 03 23 04.6 +1.2
baz=249,SNR=68
PNL S S 03 32 38.9 +2.1
baz=249
KSH Kashi 82.20 311 P P 03 23 06.5 +2.4
KSH pP pwP 03 24 54.0 -0.6
KSH sP sP 03 25 48.5 +5.1
KSH PP **PP** 03 26 25.5 +4.1
KSH SKS S 03 32 36.5 -1.5
KSH S **SKKSac** 03 32 43.3 +1.4
KSH pmax pmax
comp=Z,350nm,1.4s
KSH pmax pmax

comp=Z,9µm,7.4s
O28M Mount Upton 82.22 27 P P 03 23 04.9 +0.9
baz=248,SNR=107
O28M S S 03 32 39.1 +1.4
baz=248
KNDC Almaty 82.23 314 P P 03 23 03.1 -1.0
E24K Your Creek 82.23 19 P P 03 23 04.2 +0.7
baz=239
E24K S S 03 32 38.1 +1.0
baz=239
H25K Birch Creek 82.25 21 P P 03 23 04.1 +0.6
baz=242,SNR=58
H25K S S 03 32 37.4 +0.3
baz=242
AAA Alma-Ata 82.26 314*c i* P P 03 23 05.0 +0.8
AAA *eS* S 03 32 36.7 -1.6
AAA pmax pmax
comp=Z,2µm,2.0s
AAA Alma-Ata 82.26 314⇑*i* P P 03 23 05.0 +0.8
comp=Z,2µm,2.0s,baz=314
AAA *eS* S 03 32 36.8 -1.6
baz=314
J26L Joseph Creek 82.30 23 P P 03 23 04.5 +0.6
baz=244,SNR=155
J26L S S 03 32 38.0 +0.1
baz=244
CHKK Chushkaly 82.35 315⇑*i* P P 03 23 04.5 -0.1
CHKK Chushkaly 82.35 315⇑*i* P P 03 23 04.5 -0.1
baz=315
L27K Beaver Creek, 82.40 25 P P 03 23 05.5 +1.0
baz=246,SNR=139
L27K S S 03 32 39.6 +0.7
baz=246
BCAR Beaver Creek A 82.42 25 P P 03 23 05.7 +1.1
YUK3 Moose Creek 82.48 26 P P 03 23 06.3 +1.1
baz=248,SNR=54
YUK3 S S 03 32 41.2 +1.1
baz=248
C23K Itkillik River 82.51 17 P P 03 23 05.8 +1.0
baz=237,SNR=68
C23K S S 03 32 40.2 +0.6
baz=237
ULHL Ulahol 82.55 313 P P 03 23 06.8 +0.9
SNR=69
BVCY Beaver Creek 82.55 25 P P 03 23 06.5 +1.3
baz=247,SNR=182
BVCY S S 03 32 42.6 +2.2
baz=247
NRN Naryn 82.56 312 IAmb IAmb 03 23 10.0
comp=Z,961nm,1.8s
D24K Happy Valley 82.68 18 P P 03 23 06.9 +1.2
baz=239
D24K S S 03 32 42.6 +1.2
baz=239
K27K Chicken 82.69 24 IAmb IAmb 03 23 11.5
comp=Z,412nm,1.4s
K27K Chicken 82.69 24 P P 03 23 07.3 +1.5
baz=246
K27K S S 03 32 43.7 +2.1
baz=246
O29M Mount Kennedy 82.80 28 P P 03 23 08.1 +1.5
baz=250,SNR=60
O29M S S 03 32 46.1 +3.0
baz=250
I26K Coal Creek Min 82.81 22 P P 03 23 06.7 +0.3
baz=245
I26K S S 03 32 42.4 -0.3
baz=245
BOOM Boomskoye usch 82.81 313 IAmb IAmb 03 23 11.2
comp=Z,477nm,0.8s
KUU Kurty 82.82 315*c i* P P 03 23 07.0 0.0
KUU *eS* S 03 32 37.4 -6.3
KUU pmax pmax
comp=Z,2µm,1.8s
KUU Kurty 82.82 315⇑*i* P P 03 23 07.0 0.0
comp=Z,2µm,1.8s,baz=315
KUU *eS* S 03 32 37.5 -6.3
baz=315
KURK Kurchatov 82.89 322 P P 03 23 07.1 -0.1
KURK Kurchatov 82.89 322*ce* P P 03 23 06.6 -0.5
KURK pmax pmax
comp=Z,1µm,1.7s
KURK Kurchatov 82.89 322 P P 03 23 07.0 -0.1
KURK S S 03 32 37.0 -7.0
KURBB Kurchatov Arra 82.92 322 P P 03 23 05.2 -2.1
KURBB Kurchatov Arra 82.92 322 P P 03 23 06.8 -0.4
comp=Z,218nm,0.8s,baz=109,slow=3.8,SNR=431
KURBB pP **pP 03 24 56.2 +0.4**
comp=Z,47nm,0.9s,baz=104,slow=5.1,SNR=1.7
KURBB S S 03 32 40.3 -4.0
comp=Z,3.2nm,1.2s,baz=92,slow=10,SNR=1.6
KURBB PKKPbc **PKKPbc 03 41 26.7 -1.9**
comp=Z,14nm,0.8s,baz=293,slow=2.8,SNR=25
KURBB PKPPKP **P'P'df 03 49 27.7 -3.5**
comp=Z,1.6nm,0.2s,baz=288,slow=3.0,SNR=11
comp=Z,218nm,0.8s
F25K Christian Rive 82.94 20 P P 03 23 08.2 +1.1
baz=242,SNR=114
F25K S S 03 32 45.0 +0.9
baz=242
P29M Windy Craggy 82.96 29 P P 03 23 08.7 +1.3
baz=250,SNR=50
P29M S S 03 32 46.2 +1.6
baz=250
C24K Franklin Bluff 83.01 17 P P 03 23 08.4 +1.1
baz=239
C24K S S 03 32 45.3 +0.8
baz=239
YUK6 Outpost Mounta 83.12 27 P P 03 23 09.6 +1.3
baz=250,SNR=57
YUK6 S S 03 32 49.2 +2.7
baz=250
YUK4 Talbot Arm 83.13 27 P P 03 23 10.2 +1.9
baz=249,SNR=19
YUK4 S S 03 32 49.3 +2.8
baz=249
TKM2 Tokmak 2 83.15 314 P P 03 23 09.3 +0.4
SNR=308
TKM2 Tokmak 2 83.15 314 *i* P P 03 23 08.3 -0.6
E25K Arctic Village 83.21 19 P P 03 23 09.5 +1.1
baz=242,SNR=44
E25K S S 03 32 49.0 +2.3
baz=242
G26K Porcupine Rive 83.29 21 P P 03 23 10.1 +1.3
baz=244,SNR=295
G26K S S 03 32 49.3 +2.0
baz=244
NIL Nilore 83.33 304 P P 03 23 10.6 +0.8
NIL Nilore 83.33 304 P P 03 23 10.6 +0.8
NIL pmax pmax
comp=Z,606nm,0.7s
SIT Sitka 83.35 32 P P 03 23 10.7 +1.5
baz=253,SNR=24
SIT S S 03 32 50.4 +2.0
baz=253
EGAK Eagle 83.36 23 IAmb IAmb 03 25 08.8
comp=Z,602nm,1.6s
EGAK Eagle 83.36 23 P P 03 23 10.0 +0.8
baz=247,SNR=196
EGAK S S 03 32 50.1 +1.9
baz=247
HYT Haines Junctio 83.47 28 IAmb IAmb 03 23 14.8
comp=Z,243nm,0.8s
HYT Haines Junctio 83.47 28 P P 03 23 11.4 +1.3
baz=250,SNR=202
HYT S S 03 32 51.0 +1.2
baz=250
F26K Sheenjek River 83.49 20 P P 03 23 11.1 +1.3
baz=244,SNR=99
F26K S S 03 32 50.4 +0.9
baz=244
P30M Million Dollar 83.49 28 P P 03 23 11.5 +1.5
baz=251
P30M S S 03 32 51.8 +2.0
baz=251
I27K Kandik River 83.52 22 P P 03 23 11.0 +1.0
baz=246,SNR=216
I27K S S 03 32 51.6 +1.7
baz=246
D25K Kavik River 83.52 18 P P 03 23 10.4 +0.4
baz=241
D25K S S 03 32 50.9 +1.1
baz=241
PLBC Pleasant Camp 83.56 29 P P 03 23 11.4 +1.1
baz=252,SNR=42
PLBC S S 03 32 51.8 +1.4
baz=252
KBK Karagaybulak 83.57 313 P P 03 23 11.5 +0.6
SNR=81
M29M Somme Creek 83.60 26 P P 03 23 11.7 +1.2
baz=249,SNR=293
M29M S S 03 32 52.4 +1.4
baz=249
CHMS Chumysh 83.77 314 P P 03 23 12.2 +0.4
SNR=189
CHMS Chumysh 83.77 314 *i* P P 03 23 11.4 -0.4
CHMS pmax pmax
comp=Z,843nm,1.1s
DAWY Dawson 83.80 24 IAmb IAmb 03 23 17.5
comp=Z,477nm,1.4s
DAWY Dawson 83.80 24 P P 03 23 12.6 +1.2
baz=248,SNR=249
DAWY S S 03 32 53.3 +0.7
baz=248
UCH Uchtor 83.80 313 P P 03 23 13.7 +1.2
SNR=46
H27K Steamboat Moun 83.80 22 P P 03 23 12.6 +1.1
baz=246,SNR=238
H27K S S 03 32 54.9 +2.3
baz=246
DIB Dawson Inlet, 83.87 36 IAmb IAmb 03 23 20.8
comp=Z,674nm,1.8s
H02S1 DAWSON INLET T 83.87 36 P P 03 23 12.9 +0.9
SNR=83
N30M Aishikik Lake 83.88 27 P P 03 23 13.2 +1.3
baz=251,SNR=88
N30M S S 03 32 54.8 +1.3
baz=251
AAK Ala-Archa 83.89 313 P P 03 23 13.2 +0.6
SNR=128
AAK Ala-Archa 83.89 313 P P 03 23 13.3 +0.8
AAK IAmb IAmb 03 23 16.3
comp=Z,299nm,0.9s
AAK Ala-Archa 83.89 313*ce* P P 03 23 12.5 -0.1
AAK pmax pmax
comp=Z,687nm,1.7s
AAK Ala-Archa 83.89 313 P P 03 23 13.0 +0.5
AAK S S 03 32 51.0 -3.7
AAK Ala-Archa 83.89 313 *i* P P 03 23 12.9 +0.3
SNR=137
SGDS Sogindy 83.94 314*c i* P P 03 23 12.7 0.0
SGDS *eS* S 03 32 46.6 -8.4
SGDS pmax pmax
comp=Z,357nm,1.7s
SGDS Sogindy 83.94 314⇑*i* P P 03 23 12.7 0.0
comp=Z,357nm,1.7s,baz=314
SGDS *eS* S 03 32 46.7 -8.4
baz=314
G27K Doyon Strip 83.99 21 P P 03 23 13.3 +1.0
baz=246,SNR=105
G27K S S 03 32 57.3 +2.9
baz=246
USP Ospenovka 84.00 314 P P 03 23 13.3 +0.4
SNR=227
BESE Bessie Mountai 84.04 30 IAmb IAmb 03 23 18.1
comp=Z,237nm,1.0s
SKAG Skagway 84.07 29 IAmb IAmb 03 23 18.1
comp=Z,484nm,1.8s
SKAG Skagway 84.07 29 P P 03 23 14.2 +1.4
baz=252,SNR=32
SKAG S S 03 32 58.4 +3.1
baz=252
SKAG Skagway 84.07 29 ⇑P P 03 23 14.3 +1.6
SKAG ⇑P P 03 23 14.5 +1.7
CRAG Craig 84.09 33 P P 03 23 14.5 +1.6
baz=255,SNR=12
CRAG S S 03 32 58.5 +2.9
baz=255
CRAG Craig 84.09 33 ⇑P P 03 23 14.1 +1.2
CRAG ⇑P P 03 23 14.5 +1.6
O30N Mendenhall 84.11 28 P P 03 23 14.3 +1.2
baz=252,SNR=132
O30N S S 03 32 57.9 +2.0
baz=252
C26K Camden Bay 84.25 18 P P 03 23 14.9 +1.4
baz=243,SNR=36
C26K S S 03 32 58.3 +1.5
baz=243
M30M Minto, Yukon 84.38 26 P P 03 23 15.5 +1.2
baz=251,SNR=153
M30M S S 03 32 59.9 +1.6
baz=251
AML Almayashu 84.38 313 P P 03 23 16.2 +0.9
SNR=250
HG4B Hotspring 84.41 37 IAmb IAmb 03 23 18.4
comp=Z,236nm,0.8s
J29M Klondike Camp 84.42 24 IAmb IAmb 03 23 22.4
comp=Z,226nm,0.8s
J29M Klondike Camp 84.42 24 P P 03 23 15.8 +1.3
baz=249,SNR=12
J29M S S 03 33 00.1 +1.4
baz=249
EKS2 Erin-Say 84.42 313 P P 03 23 15.8 +0.7
SNR=143
JASL Jaisalmer 84.42 297 *eP* P 03 23 14.4 -0.9
N31M Braeburn, Yuko 84.48 27 IAmb IAmb 03 23 21.0
comp=Z,666nm,1.3s
N31M Braeburn, Yuko 84.48 27 P P 03 23 16.3 +1.4
baz=252,SNR=152
N31M S S 03 33 01.2 +1.8
baz=252
K29M Barlow Dome 84.49 25 P P 03 23 16.2 +1.2
baz=250,SNR=422
K29M S S 03 33 00.9 +1.3
baz=250
C27K Jago River 84.50 18 P P 03 23 15.8 +1.1
baz=244,SNR=56
C27K S S 03 33 00.2 +1.0
baz=244
T33K Petersburg 84.53 32 P P 03 23 16.3 +1.2
baz=255
T33K S S 03 33 02.6 +2.7
baz=255
E27K Coleen River 84.58 20 P P 03 23 16.1 +0.9
baz=246,SNR=133
E27K S S 03 33 01.7 +1.6
baz=246
WHY Whitehorse 84.64 28 IAmb IAmb 03 23 20.9
comp=Z,183nm,0.8s
WHY Whitehorse 84.64 28 P P 03 23 17.1 +1.3
baz=253,SNR=97
WHY S S 03 33 03.5 +2.3
baz=253
BTLS Baital 84.65 316*c i* P P 03 23 15.7 -0.3
BTLS *eS* S 03 32 51.2 -10
BTLS pmax pmax
comp=Z,789nm,2.5s
BTLS Baital 84.65 316⇑*i* P P 03 23 15.8 -0.3
comp=Z,789nm,2.5s,baz=316
BTLS *eS* S 03 32 51.2 -10
baz=316
I29M Ogilvie Camp, 84.70 23 P P 03 23 16.6 +0.8
baz=249,SNR=7.1
I29M S S 03 33 01.9 +0.6
baz=249
WRAK Wrangell Islan 84.75 33 IAmb IAmb 03 23 26.0
comp=Z,282nm,1.1s
WRAK Wrangell Islan 84.75 33 P P 03 23 17.3 +1.1
baz=255,SNR=51
WRAK S S 03 33 04.8 +2.7
baz=255
V35K Ketchikan 84.88 34 P P 03 23 17.5 +0.6
baz=256,SNR=70
V35K S S 03 33 05.4 +2.0
baz=256
P32M Atlin 84.89 29 P P 03 23 17.6 +0.6
baz=254,SNR=45
P32M S S 03 33 06.2 +2.7
baz=254
MAYO Mayo, Yukon 85.09 25 P P 03 23 19.1 +1.3
baz=252,SNR=70
MAYO S S 03 33 07.6 +2.4
baz=252
M31M Drury Creek, Y 85.32 27 P P 03 23 19.2 +0.3
baz=253,SNR=125
M31M S S 03 33 08.3 +0.8
baz=253
RUBB Prince Rupert 85.42 35 IAmb IAmb 03 23 23.3
comp=Z,281nm,0.8s
GRNB Grenville Isla 85.48 35 IAmb IAmb 03 23 29.6
comp=Z,290nm,1.1s
P33M Teslin, Yukon 85.50 29 P P 03 23 20.5 +0.6
baz=255,SNR=83
P33M S S 03 33 11.8 +2.4
baz=255
N32M Quiet Lake 85.63 28 P P 03 23 21.5 +1.0
baz=254
N32M S S 03 33 12.7 +2.3
baz=254
EPYK Eagle Plains 85.66 22 IAmb IAmb 03 23 28.1
comp=Z,413nm,0.9s
EPYK Eagle Plains 85.66 22 P P 03 23 21.3 +0.8
baz=251,SNR=152
EPYK S S 03 33 11.1 +0.5
baz=251
S34M Telegraph Cree 85.76 31 P P 03 23 22.4 +1.3
baz=256,SNR=89
S34M S S 03 33 15.6 +3.9
baz=256
FARO Faro, Yukon 85.80 27 IAmb IAmb 03 23 24.7
comp=Z,191nm,1.0s
FARO Faro, Yukon 85.80 27 P P 03 23 22.1 +0.9
baz=254,SNR=124
FARO S S 03 33 13.2 +1.1
baz=254
T35M Bob Quinn 86.01 32 P P 03 23 23.5 +1.1
baz=257,SNR=59
T35M S S 03 33 17.6 +3.3
baz=257
R33M Jennings River 86.20 30 P P 03 23 24.6 +1.2
baz=256,SNR=95
R33M S S 03 33 18.8 +2.7
baz=256
DZA Taraz 86.23 313*c i* P P 03 23 23.5 -0.2
DZA *eS* **SKSac 03 32 59.3 -3.0**
DZA pmax pmax
comp=Z,61nm,0.1s
DZA Taraz 86.23 313⇑*i* P P 03 23 23.6 -0.2
comp=Z,61nm,0.1s,baz=313
DZA *eS* **SKSac 03 32 59.3 -3.0**
baz=313
QSPA South Pole Qui 86.26 180 P P 03 23 23.4 -0.1
comp=Z,773nm,1.0s,baz=351,slow=1.6,SNR=157
QSPA pP **pP 03 25 13.3 +1.9**
comp=Z,54nm,0.7s,baz=322,slow=1.6,SNR=3.9
QSPA sP **sP 03 26 04.0 +2.4**
comp=Z,160nm,1.0s,baz=23,slow=5.5,SNR=2.3
QSPA S S 03 33 02.6 -14
comp=Z,7.7nm,1.1s,baz=115,slow=21,SNR=6.5
QSPA ScS **SKKSac 03 33 14.4 +3.1**
comp=Z,10nm,1.1s,baz=102,slow=23,SNR=3.3
QSPA PKKPbc **PKKPbc 03 41 20.2 -1.9**
comp=Z,4.6nm,0.7s,baz=281,slow=1.2,SNR=9.9
comp=Z,773nm,1.0s
OTUK Ortayu 86.37 319 *i* P P 03 23 21.7 -2.6
BRZS Berezniki 86.45 320*c i* P P 03 23 23.4 -1.2
BRZS *eS* **SKSac 03 33 02.2 -1.0**
BRZS Berezniki 86.45 320⇑*i* P P 03 23 23.4 -1.2
baz=320
BRZS *eS* **SKSac 03 33 02.2 -1.0**
baz=320
DLBC Dease Lake 86.45 31 IAmb IAmb 03 23 30.0
comp=Z,383nm,1.4s
DLBC Dease Lake 86.45 31 P P 03 23 25.6 +1.1
baz=257,SNR=99
DLBC S S 03 33 22.3 +3.8
baz=257
MAW Mawson 86.57 203 P P 03 23 24.7 -0.1
MAW Mawson 86.57 203 P P 03 23 24.7 -0.1
comp=Z,52nm,0.8s,baz=231,slow=22,SNR=4.2
MAW PKKPbc **PKKPbc 03 41 18.7 -1.8**
comp=Z,2.1nm,0.5s,baz=264,slow=4.3,SNR=7.0
comp=Z,52nm,0.8s
MMPY Sheldon Lake, 86.84 27 P P 03 23 27.0 +0.8
baz=256,SNR=95
MMPY S S 03 33 23.2 +1.3
baz=256
KK31 Karatay Array 86.86 313 IAmb IAmb 03 25 23.1
comp=Z,511nm,1.3s
KK31 Karatay Array 86.86 313*ce* P P 03 23 25.7 -1.0
KK31 pmax pmax
comp=Z,114nm,0.8s
KKAR Karatay Array 86.86 313 IAmb IAmb 03 25 23.1
comp=Z,511nm,1.3s
KKAR Karatay Array 86.86 313 ⇑P P 03 23 26.2 -0.5
KKAR ⇑P P 03 23 26.5 -0.2
KBL Kabul 86.91 305 P P 03 23 27.5 +0.1
KBL Kabul 86.91 305 P P 03 23 27.5 +0.1
KBL pmax pmax
comp=Z,201nm,1.2s
KBL Kabul 86.91 305 P P 03 23 26.2 -1.2
SNR=40
KBL S **SKSac 03 33 01.4 -5.7**
IUG luzhnay 87.08 312*c i* P P 03 23 27.7 -0.1
IUG *eS* **SKSac 03 33 05.5 -2.1**
IUG luzhnay 87.08 312⇑*i* P P 03 23 27.8 -0.1
baz=312
IUG *eS* **SKSac 03 33 05.6 -2.1**
baz=312
KMPM Mount Pierce 87.13 49 IAmb IAmb 03 23 32.0
comp=Z,179nm,0.8s
KBO Bosley Butte 87.28 48 IAmb IAmb 03 23 33.1
comp=Z,428nm,1.5s
KEBM Edson Butte 87.28 47 IAmb IAmb 03 23 34.2
comp=Z,149nm,0.9s
KRMB Red Mountain 87.43 48 IAmb IAmb 03 23 33.9
comp=Z,256nm,1.4s
WTLY Watson Lake, Y 87.43 29 P P 03 23 30.2 +1.2
baz=258,SNR=8.7
WTLY S S 03 33 29.9 +2.3
baz=258
INK Inuvik 87.44 21 IAmb IAmb 03 25 27.9
comp=Z,336nm,1.1s
INK Inuvik 87.44 21 P P 03 23 28.7 -0.1
INK *PP **pP 03 25 18.1 -1.2**
INK Inuvik 87.44 21 P P 03 23 28.7 -0.1
baz=254,SNR=64
INK S S 03 33 26.5 -0.6
baz=254
INK Inuvik 87.44 21 ⇑P P 03 23 28.8 -0.1
INK ⇑P P 03 23 28.8 -0.1
INK ⇓P P 03 23 32.8 +4.1
INK Inuvik 87.44 21 P P 03 23 28.7 -0.1
comp=Z,70nm,0.9s,baz=247,slow=4.8,SNR=47
INK pP **pP 03 25 18.1 -1.2**
comp=Z,42nm,0.9s,baz=263,slow=6.1,SNR=2.7
INK S **SKSac 03 33 08.0 -0.4**
comp=Z,5.2nm,1.1s,baz=56,slow=30,SNR=8.0
INK ScS **S 03 33 25.3 -1.8**
comp=Z,24nm,1.2s,baz=139,slow=32,SNR=15
INK PKKPbc **PKKPbc 03 41 17.4 -1.2**
comp=Z,21nm,1.1s,baz=24,slow=1.9,SNR=12
INK PKPPKP **P'P'df 03 49 21.0 -0.9**
comp=Z,5.6nm,1.2s,baz=54,slow=4.7,SNR=4.3
comp=Z,70nm,0.9s
J01E Myrtle Point 87.61 47 P P 03 23 30.6 +0.4
baz=263,SNR=86
J01E S S 03 33 32.5 +2.7
baz=263
K02D Willamette Mer 87.75 47 P P 03 23 31.3 +0.3
baz=263,SNR=90
K02D S S 03 33 33.5 +2.2
baz=263
L02F Cave Junction 87.75 48 P P 03 23 31.3 +0.4
baz=263,SNR=37
L02F S S 03 33 35.0 +3.8
baz=263
I02E Swisshome, OR 87.79 46 IAmb IAmb 03 23 40.5
comp=Z,201nm,0.8s
I02E Swisshome, OR 87.79 46 P P 03 23 31.5 +0.5
baz=263,SNR=15
I02E S S 03 33 34.1 +2.7
baz=263
C03A Quillayute Air 87.80 42 IAmb IAmb 03 23 34.7
comp=Z,137nm,0.9s
TGTN Hyland Airport 87.97 28 P P 03 23 32.4 +0.9
baz=258,SNR=40
TGTN S S 03 33 34.6 +2.1
baz=258
I03D Drain, OR 88.10 46 P P 03 23 32.9 +0.4
baz=263,SNR=70
I03D S S 03 33 36.3 +2.0
baz=263
RADR Rader Ridge 88.12 43 IAmb IAmb 03 23 37.5
comp=Z,206nm,0.8s
NLWA Neilton Lookou 88.20 42 ⇑P P 03 23 33.8 +0.9
NLWA ⇑P P 03 23 33.9 +1.0
WISH Wishkah 88.23 43 IAmb IAmb 03 23 36.5
comp=Z,148nm,0.9s
COR Corvallis 88.24 45 P P 03 23 34.1 +1.0
COR IAmb IAmb 03 23 42.1
comp=Z,154nm,1.0s
COR Corvallis 88.24 45 P P 03 23 34.1 +1.0

COR pmax pmax
comp=Z,154nm,1.0s
COR Corvallis 88.24 45 ⇑P **P 03 23 34.4 +1.3**
COR ⇓P **P 03 23 34.7 +1.6**
COR ⇑P **PcP 03 23 37.7 +3.4**
HUMO Hull Mountain 88.26 47 IAmb IAmb 03 23 36.9
comp=Z,210nm,0.9s
E03A Lebam 88.30 43 IAmb IAmb 03 23 36.9
comp=Z,197nm,0.9s
YBH Yreka Blue Hor 88.34 48 IAmb IAmb 03 23 37.9
comp=Z,204nm,1.1s
G03D McMinnville, O 88.34 45 P P **03 23 33.9 +0.4**
baz=263,SNR=11
G03D S **S 03 33 38.2 +1.7**
baz=263
BVA0 Borovoye Array 88.34 323 *i* P **P 03 23 32.0 -1.4**
BVAR Borovoye Array 88.34 323 P **P 03 23 32.4 -1.0**
BVAR *PP **pP 03 25 23.7 +0.1**
BVAR Borovoye Array 88.34 323 P **P 03 23 32.4 -1.0**
comp=Z,205nm,0.8s,baz=106,slow=5.3,SNR=303
BVAR pP **pP 03 25 23.7 +0.1**
comp=Z,24nm,0.8s,baz=129,slow=6.3,SNR=2.9
BVAR S **SKSac 03 33 12.4 -2.0**
comp=Z,1.8nm,0.8s,baz=198,slow=4.4,SNR=2.6
BVAR ScS **S 03 33 34.8 -1.4**
comp=Z,5.1nm,1.0s,baz=69,slow=8.1,SNR=5.1
BVAR PKPPKP **P'P'df 03 49 16.5 -4.6**
comp=Z,0.8nm,0.8s,baz=279,slow=2.8,SNR=2.8
comp=Z,205nm,0.8s
BRVK Borovoye 88.41 323 P **P 03 23 32.9 -0.8**
BRVK IAmb IAmb 03 23 35.8
comp=Z,370nm,1.0s
BRVK Borovoye 88.41 323 *ce* P **P 03 23 31.5 -2.2**
BRVK pmax pmax
comp=Z,737nm,1.7s
BRVK Borovoye 88.41 323 P **P 03 23 32.1 -1.6**
BRVK S **SKSac 03 33 11.0 -3.8**
BUCK Buck Mountain 88.42 46 IAmb IAmb 03 23 39.0
comp=Z,220nm,1.0s
B04A Port Angeles 88.53 42 IAmb IAmb 03 23 39.1
comp=Z,125nm,0.8s
F04D Rainier, OR 88.62 44 P **P 03 23 35.1 +0.2**
baz=263
F04D S **S 03 33 40.6 +1.6**
baz=263
H04D Lebanon 88.64 45 IAmb IAmb 03 23 38.9
comp=Z,418nm,1.6s
H04D Lebanon 88.64 45 P **P 03 23 35.2 +0.3**
baz=264,SNR=37
H04D S **S 03 33 40.3 +1.0**
baz=264
L04D Klamath Falls 88.70 48 IAmb IAmb 03 23 38.6
comp=Z,286nm,0.9s
L04D Klamath Falls 88.70 48 P **P 03 23 35.5 0.0**
baz=264,SNR=83
L04D S **S 03 33 42.1 +1.8**
baz=264
I04A Tendick Farm, 88.79 46 P **P 03 23 35.4 -0.3**
baz=264,SNR=74
I04A S **S 03 33 41.0 +0.2**
baz=264
SAO San Andreas Ge 88.81 53 ⇓P **P 03 23 36.1 +0.2**
J04D Umpqua Nationa 88.95 47 P **P 03 23 37.1 +0.3**
baz=264,SNR=221
J04D S **S 03 33 43.6 +1.0**
baz=264
H04A Detroit Lake 89.04 45 IAmb IAmb 03 23 40.3
comp=Z,222nm,1.4s
BBGB Big Mountain B 89.12 53 IAmb IAmb 03 23 56.0
comp=Z,144nm,0.8s
K04D Chiloquin, OR 89.14 47 P **P 03 23 37.9 +0.3**
baz=264,SNR=24
K04D S **S 03 33 46.4 +2.1**
baz=264
PMPB Monarch Peak 89.28 54 IAmb IAmb 03 23 45.0
comp=Z,363nm,1.8s
AFDM Forest Hills D 89.38 51 IAmb IAmb 03 23 42.5
comp=Z,152nm,1.1s
D05A Enumclaw 89.44 43 IAmb IAmb 03 23 49.3
comp=Z,173nm,1.1s
HOOD Mount Hood Mea 89.49 45 IAmb IAmb 03 23 42.8
comp=Z,204nm,1.3s
J05D Fort Rock, OR 89.59 47 P **P 03 23 40.3 +0.6**
baz=265,SNR=326
J05D S **S 03 33 49.2 +0.9**
baz=265
I05D Terrebonne, OR 89.61 46 P **P 03 23 39.6 +0.1**
baz=264,SNR=72
I05D S **S 03 33 48.9 +0.6**
baz=264
PAGB Antelope Grade 89.68 54 IAmb IAmb 03 23 44.7
comp=Z,161nm,0.9s
G05D Wamic, OR 89.71 45 P **P 03 23 40.0 0.0**
baz=264,SNR=16
G05D S **S 03 33 50.2 +1.0**
baz=264
CMB Columbia Colle 89.76 52 IAmb IAmb 03 23 44.1
comp=Z,382nm,1.9s
PINE Pine Mountain 89.85 46 IAmb IAmb 03 23 44.2
comp=Z,250nm,0.9s
SMMC Simmler 89.85 55 P **P 03 23 41.5 +0.6**
baz=265,SNR=23
SMMC S **S 03 33 52.3 +1.4**
baz=265
BEKR Beckworth 89.94 50 IAmb IAmb 03 23 46.0
comp=Z,416nm,1.6s
PKM Mcpherson Peak 89.97 55 P **P 03 23 42.1 +0.5**
baz=266,SNR=29
PKM S **S 03 33 53.2 +1.0**
baz=266
SBC Santa Barbara 90.02 56 P **P 03 23 41.9 +0.4**
baz=266
SBC S **S 03 33 52.6 +0.4**
baz=266
SCZ2 Santa Cruz Isl 90.05 56 P **P 03 23 41.5 -0.3**
baz=266
SCZ2 S **S 03 33 52.4 -0.2**
baz=266
EMB Emerald Bay 90.06 51 IAmb IAmb 03 23 45.3
comp=Z,129nm,1.1s
FLDN Fort Liard 90.07 30 P **P 03 23 41.6 +0.4**
baz=263
FLDN S **S 03 33 53.0 +1.4**
baz=263
SNCC San Nicolas Is 90.08 57 P **P 03 23 41.9 0.0**
baz=266,SNR=5.9
SNCC S **S 03 33 54.5 +1.6**
baz=266
MOD Modoc Plateau 90.15 48 IAmb IAmb 03 23 45.4
comp=Z,193nm,1.0s
VOG Valley Oaks Go 90.43 54 P **P 03 23 43.4 0.0**
baz=266,SNR=6.3
VOG S **S 03 33 53.8 -2.0**
baz=266
VCNR Virginia City 90.44 51 IAmb IAmb 03 23 47.0
comp=Z,110nm,0.9s
WRGLY Wrigley 90.46 27 P **P 03 23 43.4 +0.5**
baz=263,SNR=28
WRGLY S **S 03 33 54.4 -0.5**
baz=263
PNTR Pine Nut 90.46 51 IAmb IAmb 03 23 47.3
comp=Z,180nm,1.0s
VES Vestal, Richgr 90.63 54 P **P 03 23 44.0 -0.4**
baz=266,SNR=60
VES S **S 03 33 56.2 -1.4**
baz=266
PAHR Pah Rah Range 90.67 50 IAmb IAmb 03 23 47.9
comp=Z,111nm,1.0s
PLTX Planet X, Gerl 90.68 49 IAmb IAmb 03 23 48.1
comp=Z,168nm,1.1s
YERR Yerington 90.73 51 IAmb IAmb 03 23 48.2
comp=Z,122nm,1.0s
F07A Phinny Hill Vi 90.74 44 IAmb IAmb 03 23 48.7
comp=Z,210nm,1.7s
MDPB Devils Postpil 90.76 53 IAmb IAmb 03 23 48.5
comp=Z,155nm,1.0s
ARVC Arvin 90.79 55 P **P 03 23 45.5 +0.3**
baz=266,SNR=22
ARVC S **S 03 33 58.5 -0.7**
baz=266
OMMB Old Mammoth Mi 90.82 53 IAmb IAmb 03 23 54.9
comp=Z,145nm,1.2s
OSI Osito Audit: C 90.84 56 P **P 03 23 44.9 -0.7**
baz=266
OSI S **S 03 34 00.6 +0.8**
baz=266
SCI2 San Clemente I 90.88 57 P **P 03 23 45.0 -0.6**
baz=266

SCI2 S **S 03 34 01.1 +1.1**
baz=266
I07A Izee 90.91 46 IAmb IAmb 03 23 48.9
comp=Z,145nm,1.0s
MLAC Mammoth, Mammc 90.95 53 P **P 03 23 46.2 0.0**
baz=266,SNR=9.1
MLAC S **S 03 33 57.4 -3.7**
baz=266
A36M Sachs Harbour 91.00 18 IAmb IAmb 03 23 49.5
comp=Z,172nm,0.9s
A36M Sachs Harbour 91.00 18 P **P 03 23 45.0 -0.3**
baz=261
A36M S **S 03 33 57.7 -1.8**
baz=261
C36M Paulatuk 91.01 21 IAmb IAmb 03 25 44.6
comp=Z,171nm,1.1s
C36M Paulatuk 91.01 21 P **P 03 23 45.1 -0.2**
baz=262,SNR=11
C36M S **S 03 33 56.9 -2.7**
baz=262
CIS Catalina Islan 91.02 57 P **P 03 23 46.4 +0.1**
baz=266,SNR=32
CIS S **S 03 34 02.1 +0.8**
baz=266
HAWA Hanford 91.06 44 ⇓P **P 03 23 46.2 +0.1**
HAWA ⇑P **PcP 03 23 46.7 -0.1**
ISA Isabella, Lake 91.11 55 P **P 03 23 46.8 0.0**
baz=266,SNR=46
ISA S **S 03 34 00.3 -1.8**
baz=266
FMP Fort Macarthur 91.14 56 P **P 03 23 46.6 -0.2**
baz=266
FMP S **S 03 34 03.1 +0.8**
baz=266
DECC Green Verdugo 91.14 56 P **P 03 23 47.2 +0.4**
baz=266,SNR=14
DECC S **S 03 34 02.7 +0.3**
baz=266
LHV Little Huntoon 91.26 52 IAmb IAmb 03 23 51.0
comp=Z,186nm,0.9s
PASC Pasadena Art C 91.26 56 IAmb IAmb 03 23 50.7
comp=Z,239nm,0.9s
RYN Ryan 91.27 52 IAmb IAmb 03 23 50.7
comp=Z,128nm,1.0s
G08A Pilot Rock 91.38 45 IAmb IAmb 03 23 51.5
comp=Z,148nm,1.4s
TIN Tinemaha, Big 91.40 53 P **P 03 23 48.4 +0.3**
baz=266,SNR=15
TIN S **S 03 34 04.7 -0.1**
baz=266
WVOR Wild Horse Val 91.42 48 ⇓P P 03 23 40.9 -7.3
WVOR ⇑P **PcP 03 23 44.7 -4.0**
WVOR ⇑P P 03 23 48.1 0.0
WVOR ⇑P P 03 23 48.1 0.0
WVOR ⇑P P 03 23 50.7 +2.6
NVAR Mina Array Bea 91.43 52 P **P 03 23 48.6 +0.3**
comp=Z,91nm,0.7s,baz=255,slow=6.6,SNR=219
NVAR PP **PP 03 27 34.1 -0.7**
comp=Z,11nm,1.0s,baz=273,slow=8.7,SNR=1.5
NVAR PKPPKP **P'P'df 03 49 11.2 -5.5**
comp=Z,0.6nm,0.7s,baz=58,slow=4.0,SNR=4.3
comp=Z,91nm,0.7s
CCAC Calif City Air 91.46 55 IAmb IAmb 03 23 52.0
comp=Z,147nm,1.2s
EDW2 Edwards Air Fo 91.46 55 P **P 03 23 48.9 +0.6**
baz=266,SNR=115
EDW2 S **S 03 34 07.2 +2.0**
baz=266
CWC Cottonwood Cre 91.48 54 P **P 03 23 48.7 +0.1**
baz=266
CWC S **S 03 34 05.8 +0.2**
baz=266
NV11 Mina Array Sit 91.54 52 IAmb IAmb 03 23 52.0
comp=Z,161nm,1.1s
J08A Circle Bar Ran 91.60 47 IAmb IAmb 03 23 51.9
comp=Z,126nm,0.9s
KVN Kaiserville 91.62 51 IAmb IAmb 03 23 52.2
comp=Z,109nm,0.9s
DSP Deep Springs 91.63 53 IAmb IAmb 03 23 52.6
comp=Z,173nm,0.9s
BFSC Mount Baldy Ra 91.70 56 P **P 03 23 49.8 +0.3**
baz=267,SNR=40
BFSC S **S 03 34 08.3 +0.8**
baz=267
LRMC Laurel Mtn Rad 91.75 55 P **P 03 23 50.5 +0.7**
baz=267,SNR=111
LRMC S **S 03 34 08.5 +0.6**
baz=267
MPMC Manual Prospec 91.94 54 P **P 03 23 51.2 +0.5**
baz=267,SNR=160
MPMC S **S 03 34 10.1 +0.5**
baz=267
MURC Murrieta 92.05 57 P **P 03 23 51.2 +0.1**
baz=267,SNR=29
MURC S **S 03 34 10.6 +0.2**
baz=267
109C Camp Elliot, M 92.08 57 P **P 03 23 51.9 +0.7**
baz=267,SNR=24
109C S **S 03 34 10.4 -0.2**
baz=267
GRAC Grapevine Rang 92.09 53 IAmb IAmb 03 23 59.8
comp=Z,134nm,0.8s
GRAC Grapevine Rang 92.09 53 P **P 03 23 51.6 +0.4**
baz=267,SNR=87
GRAC S **S 03 34 10.1 -0.6**
baz=267
MZP Montezuma Peak 92.11 53 IAmb IAmb 03 23 54.7
comp=Z,123nm,0.9s
RRX Edison Barstow 92.28 55 P **P 03 23 52.6 +0.5**
baz=267,SNR=13
RRX S **S 03 34 11.3 -1.0**
baz=267
BBRC Big Bear Solar 92.31 56 P **P 03 23 52.6 +0.1**
baz=267,SNR=38
BBRC S **S 03 34 11.8 -1.2**
baz=267
BAR Barrett 92.44 58 IAmb IAmb 03 24 01.9
comp=Z,315nm,1.6s
GSC Goldstone, Bar 92.45 55 IAmb IAmb 03 23 56.3
comp=Z,97nm,0.9s
GSC Goldstone, Bar 92.45 55 P **P 03 23 53.4 +0.5**
baz=267,SNR=73
GSC S **S 03 34 14.4 +0.4**
baz=267
FURC Furnace Creek, 92.46 54 P **P 03 23 53.2 +0.4**
baz=267,SNR=281
FURC S **S 03 34 13.3 -0.5**
baz=267
TKX Tecate 92.49 58 IAmb IAmb 03 23 57.5
comp=Z,127nm,0.9s
HRA Herat 92.50 304 IAmb IAmb 03 25 50.2
comp=Z,157nm,1.2s
BMO Blue Mountains 92.52 45 IAmb IAmb 03 23 55.9
comp=Z,148nm,1.4s
GWY Greenwater Val 92.61 54 IAmb IAmb 03 23 56.8
comp=Z,102nm,0.9s
MONP2 Monument Peak 92.66 57 P **P 03 23 55.0 +0.9**
baz=267,SNR=87
MONP2 S **S 03 34 16.1 -0.1**
baz=267
PFO Pinyon Flats O 92.66 57 P **P 03 23 55.4 +1.4**
PFO IAmb IAmb 03 23 57.5
comp=Z,115nm,0.9s
PFO Pinyon Flats O 92.66 57 P **P 03 23 55.4 +1.4**
PFO pmax pmax
comp=Z,115nm,0.9s
PFO Pinyon Flats O 92.66 57 P **P 03 23 54.2 +0.2**
baz=267,SNR=79
PFO S **S 03 34 15.7 -0.3**
baz=267
TPFO Pinon Flats 92.67 57 P **P 03 23 54.5 +0.5**
baz=267,SNR=84
TPFO S **S 03 34 15.3 -0.7**
baz=267
PMD Palm Desert 92.73 57 IAmb IAmb 03 23 57.6
comp=Z,129nm,0.9s
NEW Newport 92.80 42 P **P 03 23 53.8 -0.4**
baz=268,SNR=44
NEW S **S 03 34 14.8 -1.5**
baz=268
HEC Hector,Ludlow 92.82 55 P **P 03 23 54.7 +0.1**
baz=268,SNR=114
HEC S **S 03 34 14.9 -2.3**
baz=268
IKP In-Ko-Pah, Jac 92.91 58 P **P 03 23 56.1 +1.0**
baz=268,SNR=43
IKP S **S 03 34 18.0 -0.1**
baz=268

SHOC Shoshone, Teco 92.91 54 P **P 03 23 55.3 +0.3**
baz=268,SNR=142
SHOC S **S 03 34 18.0 +0.1**
baz=268
RMX La Rumorosa 92.94 58 IAmb IAmb 03 24 00.2
comp=Z,101nm,1.0s
TPNV Topopah Spring 92.98 53 P **P 03 23 55.6 +0.2**
baz=268,SNR=276
TPNV S **S 03 34 17.5 -1.2**
baz=268
NGCH Negor - Chabah 93.04 295 P **P 03 23 57.1 +1.4**
SNR=5.3
NGCH S **SKSac 03 33 42.8 +0.8**
BELC Belle Mtn. Jos 93.06 56 P **P 03 23 56.3 +0.5**
baz=268
BELC S **S 03 34 19.8 +0.3**
baz=268
YUH Yuha Desert 93.07 58 IAmb IAmb 03 24 00.4
comp=Z,145nm,1.1s
TUQ Turquoise Moun 93.18 55 P **P 03 23 56.6 +0.2**
baz=268,SNR=134
TUQ S **S 03 34 20.3 -0.1**
baz=268
SWSC Sam W. Stewart 93.18 57 P **P 03 23 56.9 +0.7**
baz=268,SNR=62
SWSC S **S 03 34 20.3 +0.1**
baz=268
GMRC Granite Mounta 93.37 56 P **P 03 23 57.4 +0.2**
baz=268,SNR=187
GMRC S **S 03 34 22.7 +0.6**
baz=268
S11A Rachel 93.41 53 IAmb IAmb 03 24 03.2
comp=Z,89nm,0.9s
BC3 Big Chuckawall 93.50 57 P **P 03 23 58.2 +0.4**
baz=268,SNR=108
BC3 S **S 03 34 22.9 -0.3**
baz=268
MFID Camas Ranch 93.53 47 IAmb IAmb 03 24 02.4
comp=Z,291nm,1.9s
R11A Troy Canyon, C 93.56 52 IAmb IAmb 03 24 01.9
comp=Z,155nm,1.4s
R11A Troy Canyon, C 93.56 52 P **P 03 23 58.1 +0.1**
baz=268,SNR=148
R11A S **S 03 34 23.2 -0.5**
baz=268
IRM Iron Mountain 93.78 56 P **P 03 23 59.4 +0.4**
baz=268,SNR=184
IRM S **S 03 34 26.0 +0.6**
baz=268
SHPR Sheep Range 93.84 54 IAmb IAmb 03 24 03.0
comp=Z,118nm,0.9s
WTNK Soaring Height 93.95 54 IAmb IAmb 03 24 08.4
comp=Z,23nm,0.8s
PRN Pahroc Range 93.95 53 IAmb IAmb 03 24 03.9
comp=Z,220nm,1.3s
GLA Glamis 94.00 57 IAmb IAmb 03 24 04.9
comp=Z,175nm,1.1s
GLA Glamis 94.00 57 P **P 03 24 00.9 +0.9**
baz=268,SNR=40
GLA S **S 03 34 27.4 -0.1**
baz=268
V12A Nelson 94.06 55 IAmb IAmb 03 24 05.3
comp=Z,103nm,0.8s
NEE2 Needles Airpor 94.23 56 P **P 03 24 01.7 +0.7**
baz=268,SNR=9.5
NEE2 S **S 03 34 28.1 -1.2**
baz=268
BLYC Blythe 94.28 57 IAmb IAmb 03 24 06.7
comp=Z,121nm,0.9s
YKA Yellowknife Ar 94.47 28 P **P 03 24 01.1 -0.3**
YKA *PP **pP 03 25 53.4 +1.2**
YKA Yellowknife Ar 94.47 28 P **P 03 24 01.1 -0.3**
comp=Z,22nm,0.7s,baz=271,slow=4.8,SNR=102
YKA pP **pP 03 25 53.4 +1.2**
comp=Z,67nm,1.0s,baz=269,slow=4.7,SNR=5.3
YKA PKiKP **PKiKP 03 28 41.9 +0.8**
comp=Z,1.2nm,0.6s,baz=260,slow=0.8,SNR=6.7
YKA ScS **S 03 34 28.5 -1.6**
comp=Z,0.4nm,0.7s,baz=355,slow=25,SNR=2.5
YKA PKKPbc **PKKPdf 03 40 59.8 +0.8**
comp=Z,13nm,0.9s,baz=89,slow=4.5,SNR=37
comp=Z,22nm,0.7s
JLN Jalan Bani Buh 94.49 292 P **P 03 24 05.0 +2.6**
SNR=12
SPR3 Spring Creek 3 94.55 51 IAmb IAmb 03 24 07.5
comp=Z,128nm,0.9s
HLID Hailey 94.56 47 P **P 03 24 02.7 +0.2**
baz=269,SNR=16
HLID S **S 03 34 32.2 +0.1**
baz=269
PDMCI Parker Dam,Lak 94.61 56 P **P 03 24 03.0 +0.3**
baz=269,SNR=54
PDMCI S **S 03 34 32.4 -0.1**
baz=269
AB31 Akbulak array 94.62 319 *i* P **P 03 24 00.3 -2.1**
AB31 pmax pmax
comp=Z,54nm,0.8s
ABKAR Akbulak array 94.62 319 IAmb IAmb 03 24 03.3
comp=Z,68nm,0.9s
W13A Hualapai Mount 94.84 55 IAmb IAmb 03 24 07.7
comp=Z,92nm,1.0s
WBK Wadi Bani Khal 94.91 292 P **P 03 24 03.6 -0.8**
SNR=11
WBK S **SKSac 03 33 52.9 +0.7**
PSUT Pine Spring 94.92 52 IAmb IAmb 03 24 13.4
comp=Z,72nm,0.9s
MSO Missoula 94.92 43 P **P 03 24 04.2 +0.2**
baz=270
MSO S **S 03 34 32.7 -2.3**
baz=270
WALA Waterton Lakes 94.94 41 IAmb IAmb 03 24 08.3
comp=Z,97nm,1.1s
WSAR Wadi Sarin 95.24 293 P **P 03 24 05.0 -0.8**
comp=Z,29nm,0.9s,baz=93,slow=7.2,SNR=3.3
WSAR pP **pP 03 25 59.0 +1.8**
comp=Z,53nm,1.1s,baz=109,slow=6.6,SNR=6.0
WSAR PP **PP 03 28 04.6 +0.2**
comp=Z,22nm,1.1s,baz=117,slow=8.8,SNR=4.3
comp=Z,29nm,0.9s
EDM Edmonton 95.26 37 IAmb IAmb 03 24 08.4
comp=Z,149nm,0.9s
LCMT Little Creek M 95.39 53 IAmb IAmb 03 24 09.9
comp=Z,76nm,1.0s
ARU Arti 95.39 326 P **P 03 24 04.0 -1.6**
ARU IAmb IAmb 03 24 06.7
comp=Z,113nm,0.9s
ARU Arti 95.39 326 *d i* P **P 03 24 02.9 -2.8**
ARU *PP **pP 03 25 55.5 -1.2**
ARU *SP **sP 03 26 46.5 -0.5**
ARU 03 28 00.8
ARU S **SKSac 03 33 49.7 -3.5**
ARU SP **SP 03 36 00.7 +0.6**
ARU PS PS 03 36 42.7 -23
ARU pmax pmax
comp=Z,159nm,1.0s
ARU Arti 95.39 326 PP **PP 03 28 05.2 +0.8**
comp=Z,58nm,0.9s,baz=80,slow=11,SNR=5.0
ARU S **SKSac 03 33 49.4 -3.8**
comp=Z,2.4nm,0.3s,baz=266,slow=23,SNR=1.5
ARU PKPPKP **PKKPdf 03 40 56.8 -0.4**
comp=Z,4.1nm,0.4s,baz=167,slow=2.4,SNR=6.2
ARU PKPPKP **P'P'df 03 49 07.5 -0.2**
comp=Z,1.8nm,0.3s,baz=185,slow=4.5,SNR=3.9
214A Organ Pipe Nat 95.68 58 P **P 03 24 08.9 +1.2**
baz=269,SNR=37
214A S **S 03 34 43.6 +1.7**
baz=269
JMDO Jabal Madar 95.70 292 P **P 03 24 08.4 +0.5**
SNR=6.3
JMDO S **SKSac 03 33 55.7 -0.7**
BIDO Bidbid 95.72 293 P **P 03 24 07.3 -0.7**
SNR=26
DUG Dugway, Tooele 95.74 50 P **P 03 24 07.7 -0.2**
baz=270,SNR=33
DUG S **S 03 34 42.4 0.0**
baz=270
HVU Hansel Valley 95.76 49 IAmb IAmb 03 24 11.3
comp=Z,63nm,0.9s
SMDO Samad 95.77 293 P **P 03 24 10.3 +2.0**
SNR=6.1
AKTO Aktyubinsk 95.86 320 *i* P **P 03 24 04.2 -3.8**
AKTO pmax pmax
comp=Z,78nm,1.0s
AKTO Aktyubinsk 95.86 320 P **P 03 24 05.8 -2.2**
comp=Z,34nm,0.8s,baz=71,slow=7.4,SNR=12
AKTO pP **pP 03 25 58.9 -0.2**
comp=Z,37nm,1.1s,baz=78,slow=7.4,SNR=2.6
GEYT Alibeck 95.92 308 P **P 03 24 07.9 -0.7**

comp=Z,43nm,0.8s,baz=343,slow=1.5,SNR=36
GEYT pP **pP** 03 26 00.8 +1.0
comp=Z,155nm,1.2s,baz=357,slow=3.0,SNR=12
GEYT PP **PP** 03 28 10.3 +1.1
comp=Z,24nm,0.9s,baz=86,slow=4.9,SNR=2.7
comp=Z,43nm,0.8s
GYA0 ALIBECK ARRAY 95.92 308 P **P** 03 24 07.3 -1.3
PKCU Pink Cliffs 96.13 53 IAmb IAmb 03 24 14.3
comp=Z,154nm,1.2s
U15A North Rim 96.15 54 IAmb IAmb 03 24 13.7
comp=Z,70nm,0.9s
DQM DQM 96.16 290 P **P** 03 24 09.5 -0.5
MVU Marysvale 96.21 52 P **P** 03 24 09.8 -0.4
MVU IAmb IAmb 03 24 19.0
comp=Z,85nm,0.9s
MTPU Mount Pierson 96.23 52 P **P** 03 24 11.2 +0.7
MTPU IAmb IAmb 03 24 19.8
comp=Z,63nm,0.8s
HOQ Hogain 96.47 293 P **P** 03 24 10.1 -1.3
SNR=18
BOZ Bozeman (W) 96.54 45 P **P** 03 24 10.9 -0.5
baz=271,SNR=38
BOZ S **S** 03 34 46.7 -2.2
baz=271
BSY Bisya 96.55 292 P **P** 03 24 10.2 -1.5
SNR=7.5
MPU Maple Canyon 96.64 50 P **P** 03 24 11.6 -0.4
HWUT Hardware Ranch 96.67 49 P **P** 03 24 11.3 -0.8
YHL Hebgen Lake 96.88 45 P **P** 03 24 13.4 +0.3
WUAZ Wupatki 96.89 55 P **P** 03 24 14.1 +0.8
WUAZ IAmb IAmb 03 24 17.1
comp=Z,72nm,0.9s
WUAZ Wupatki 96.89 55 Pdiff **P** 03 24 13.8 +0.6
baz=270
WUAZ S **S** 03 34 53.9 +1.5
baz=270
TMUT Trail Mountain 96.98 51 IAmb IAmb 03 24 23.6
comp=Z,89nm,0.8s
Q16A Castle Valley 97.02 51 IAmb IAmb 03 24 22.4
comp=Z,47nm,0.8s
IMW Indian Meadow 97.08 46 P **P** 03 24 13.7 -0.3
TPAW Teton Pass 97.08 47 P **P** 03 24 12.9 -1.1
ARQ Araqi 97.19 293 P **P** 03 24 13.5 -1.1
SNR=12
H17A Grant Village 97.32 46 P **P** 03 24 15.7 +0.6
H17A Grant Village 97.32 46 Pdiff **P** 03 24 15.5 +0.4
baz=272
H17A S **S** 03 34 58.1 +2.2
baz=272
LOHW Long Hollow 97.33 47 P Pdif 03 24 15.0 0.0
TUC Tucson 97.40 58 P **P** 03 24 15.9 +0.4
TUC Tucson 97.40 58 P **P** 03 24 15.9 +0.4
TUC pmax pmax
comp=Z,18nm,0.9s
TUC Tucson 97.40 58 Pdiff **P** 03 24 16.1 +0.6
baz=270
TUC S **S** 03 34 58.4 +1.8
baz=270
UOSS Minazif 97.50 295 P Pdif 03 24 14.5 -1.4
UOSS Minazif 97.50 295 P Pdif 03 24 14.3 -1.6
UOSS Minazif 97.50 295 *i* Pdiff Pdif 03 24 13.7 -2.2
SNR=11
SRU San Rafael Swe 97.52 51 P Pdif 03 24 15.6 -0.4
SRU IAmb IAmb 03 24 18.5
comp=Z,42nm,0.9s
SRU San Rafael Swe 97.52 51 P Pdif 03 24 15.6 -0.4
SRU pmax pmax
comp=Z,42nm,0.9s
MASF Masafi 97.54 295 P Pdif 03 24 15.6 -0.6
SNR=15
MSFE Esma-Masafi 97.54 295 *i* Pdiff Pdif 03 24 15.0 -1.1
SNR=9.0
HATD Hatta, Dubai 97.56 294 P Pdif 03 24 15.2 -1.1
SNR=11
HATD Hatta, Dubai 97.56 294 *i* Pdiff Pdif 03 24 14.2 -2.1
SNR=7.8
SHME Shamm 97.56 296 P Pdif 03 24 15.3 -0.9
SNR=11
SHME Shamm 97.56 296 *i* Pdiff Pdif 03 24 14.8 -1.4
SNR=14
ASHO Ashiyiah 97.63 294 P Pdif 03 24 15.2 -1.4
SNR=12
ASHO Ashiyiah 97.63 294 *i* Pdiff Pdif 03 24 15.2 -1.4
SNR=7.2
EGMT Eagleton 97.73 42 IAmb IAmb 03 24 24.5
comp=Z,44nm,0.8s
EGMT Eagleton 97.73 42 Pdiff Pdif 03 24 16.2 -0.4
baz=273
ALNE Al Ain 97.90 294 P Pdif 03 24 17.7 -0.1
SNR=21
ALNE Al Ain 97.90 294 *i* Pdiff Pdif 03 24 17.8 0.0
SNR=10
NAZ Nazwa, Dubai 97.99 295 P **P** 03 24 20.0 +1.9
SNR=8.1
NAZ Nazwa, Dubai 97.99 295 *i* Pdiff **P** 03 24 21.0 +2.8
SNR=7.0
UMQ Umm Al-Quwin 97.99 295 Pdiff Pdif 03 24 16.0 -2.1
FAQ Al Faqa, Dubai 98.05 294 P Pdif 03 24 16.9 -1.4
SNR=7.9
FAQ Al Faqa, Dubai 98.05 294 *i* Pdiff Pdif 03 24 16.3 -2.0
SNR=6.9
BW06 Boulder Array 98.13 47 Pdiff Pdif 03 24 17.9 -0.7
baz=272
PDAR Pinedale Array 98.13 47 P Pdif 03 24 17.6 -1.0
comp=Z,25nm,0.8s,baz=247,slow=2.5,SNR=108
PDAR pP pP 03 26 11.1 +1.6
comp=Z,4.9nm,0.8s,baz=212,slow=2.2,SNR=2.3
PDAR PP **PP** 03 28 26.2 +0.2
comp=Z,4.5nm,0.8s,baz=239,slow=5.4,SNR=1.3
PDAR PKKPbc **PKKPbc** 03 40 50.8 +0.3
comp=Z,4.0nm,0.9s,baz=106,slow=5.3,SNR=8.4
PDAR PKPPKP **P'P'df** 03 49 04.4 +0.6
comp=Z,0.5nm,0.7s,baz=150,slow=3.8,SNR=3.5
comp=Z,25nm,0.8s
RLMT Red Lodge 98.22 45 Pdiff Pdif 03 24 18.3 -0.6
baz=273
W18A Petrified Fore 98.24 55 Pdiff **P** 03 24 19.7 +0.4
baz=271
ASUD Al Ashush, Dub 98.29 294 P Pdif 03 24 18.7 -0.7
SNR=6.7
ASUD Al Ashush, Dub 98.29 294 Pdiff Pdif 03 24 15.6 -3.8
AJN Ajban 98.60 294 P Pdif 03 24 20.5 -0.3
SNR=7.5
MVCO Mesa Verde 99.17 53 Pdiff **Pdif** 03 24 23.8 +0.4
baz=272
O20A White River Ci 99.24 50 Pdiff **Pdif** 03 24 22.6 -1.0
baz=273
RES Resolute Bay 99.35 14 P **Pdif** 03 24 22.6 -0.4
RES Resolute Bay 99.35 14 P **Pdif** 03 24 22.6 -0.4
comp=Z,36nm,1.0s,baz=315,slow=7.4,SNR=3.8
comp=Z,36nm,1.0s
121A Cookes Peak, D 99.94 58 P **Pdif** 03 24 28.9 +2.1
baz=272
121A Cookes Peak, D 99.94 58 Pdiff **Pdif** 03 24 27.5 +0.6
baz=272
MZR Muzera 99.98 293 P **Pdif** 03 24 26.2 -0.8
SNR=12
MZR Muzera 99.98 293 Pdiff **Pdif** 03 24 24.2 -2.8
KIRV Kirov 100.09 329 *i* P **Pdif** 03 24 24.8 -1.8
KIRV Kirov 100.09 329 P **Pdif** 03 24 24.9 -1.7
comp=Z,14nm,0.5s,baz=86,slow=5.0,SNR=11
KIRV PP **PP** 03 28 40.0 +0.2
comp=Z,53nm,0.8s,baz=86,slow=10,SNR=5.2
KIRV S **SKSac** 03 34 15.9 -0.8
comp=Z,5.7nm,0.5s,baz=273,slow=23,SNR=15
KIRV PKKPbc **PKKPbc** 03 40 45.3 +0.1
comp=Z,14nm,0.7s,baz=21,slow=1.4,SNR=4.5
ABTO Aybut 100.13 287 P **Pdif** 03 24 26.3 -1.5
LAO LASA Array 100.23 43 P **Pdif** 03 24 28.1 +0.4
baz=276
LAO LASA Array 100.23 43 Pdiff **Pdif** 03 24 27.5 -0.2
baz=276
K22A Casper 100.37 47 P **Pdif** 03 24 28.6 +0.1
baz=275
K22A Casper 100.37 47 Pdiff **Pdif** 03 24 27.8 -0.7
baz=275
S22A 4UR Ranch, Cre 100.47 52 Pdiff **Pdif** 03 24 29.3 0.0
baz=273
Y22A Socorro 100.57 56 P **Pdif** 03 24 31.7 +2.1
baz=273,SNR=16
Y22D IRIS PASSCAL I 100.60 56 Pdiff **Pdif** 03 24 29.7 0.0
baz=273
ANMO Albuquerque 100.94 55 P **Pdif** 03 24 33.2 +1.9
baz=273,SNR=19
ANMO Albuquerque 100.94 55 Pdiff **Pdif** 03 24 30.9 -0.3
baz=273
ANMO Albuquerque 100.94 55 PKPPKP **P'P'df** 03 49 01.4 +2.4
comp=Z,0.5nm,0.3s,baz=214,slow=7.6,SNR=3.2
N23A Red Feather La 100.94 49 Pdiff **Pdif** 03 24 30.2 -1.0
baz=275
ISCO Idaho Springs 101.28 50 P **Pdif** 03 24 33.4 +0.6
baz=275
ISCO Idaho Springs 101.28 50 Pdiff **Pdif** 03 24 32.3 -0.5
baz=275
NVL N'lazarevskaya 101.33 192 *e*P **Pdif** 03 24 34.7 +2.8
NVL *e*PPP PPP 03 31 01.1
NVL *e*SS SS 03 42 40.9 -0.2
NVL pmax pmax
comp=Z,16nm,0.8s
NVL MLR MLR
comp=Z,6μm,17.0s
PRGR Permogore 101.34 332 *e*P **Pdif** 03 24 28.4 -3.7
PRGR *e* 03 28 47.5
PRGR *e*S **SKSac** 03 34 18.5 -4.1
DGMT Dagmar 101.39 41 Pdiff **Pdif** 03 24 31.8 -1.0
baz=277
SDCO Great Sand Dun 101.53 52 P **Pdif** 03 24 34.8 +0.9
baz=274,SNR=31
SDCO Great Sand Dun 101.53 52 Pdiff **Pdif** 03 24 33.9 0.0
baz=274
Q24A Divide 101.70 51 Pdiff **Pdif** 03 24 34.5 -0.3
baz=275
HOPEN Hopen 101.87 349 *e*Pdif **Pdif** 03 24 36.1 +1.9
HOPEN *e*PP **PP** 03 28 52.0 -0.5
HOPEN *e*SKSac **SKSac** 03 34 22.3 -2.2
HOPEN *e*SP **SP** 03 37 08.4 +0.2
HOPEN *i* 03 37 57.1
HOPEN *e*SS **SS** 03 42 48.6 -0.1
MNTX Cornudas Mount 102.01 59 P **Pdif** 03 24 37.2 +1.3
baz=273,SNR=20
MNTX Cornudas Mount 102.01 59 Pdiff **Pdif** 03 24 36.2 +0.4
baz=273
TROLL Troll, Antarti 102.03 189 PKKP **PKKPdf** 03 40 38.6 -6.6
TROLL Troll, Antarti 102.03 189 PKiKP **PKiKP** 03 28 52.8 -1.8
TROLL Troll, Antarti 102.03 189 Pdiff **Pdif** 03 24 34.8 -0.5
TROLL Troll, Antarti 102.03 189 pPdiff pPdif 03 26 28.8 +3.1
TROLL Troll, Antarti 102.03 189 sPdiff 03 27 14.0
RSSD Black Hills 102.03 46 P **Pdif** 03 24 36.3 +0.4
baz=277
RSSD Black Hills 102.03 46 Pdiff **Pdif** 03 24 35.6 -0.3
baz=277
BELG Belogornoye 102.14 323 *i* P **Pdif** 03 24 34.3 -1.6
BELG pmax pmax
comp=Z,24nm,1.0s
BELG Belogornoye 102.14 323 P **Pdif** 03 24 33.9 -2.0
comp=Z,68nm,0.8s,baz=278,slow=2.2,SNR=5.2
BELG PP **PP** 03 28 56.3 +1.1
comp=Z,50nm,1.0s,baz=197,slow=2.1,SNR=2.3
BELG S **SKSac** 03 34 25.4 -1.3
comp=Z,16nm,1.1s,baz=90,slow=21,SNR=8.1
BELG PKKPbc **PKKPbc** 03 40 38.7 -0.4
comp=Z,26nm,0.9s,baz=168,slow=5.1,SNR=5.0
SPA0 Spitsbergen Ar 102.22 352 *e*Pdif **Pdif** 03 24 35.1 -0.7
SPA0 *e*PP **PP** 03 28 56.8 +1.7
SPA0 *e*SKSac **SKSac** 03 34 24.1 -2.1
SPA0 *e*SP **SP** 03 37 14.0 +2.1
SPITS Spitsbergen Ar 102.22 352 P **Pdif** 03 24 33.9 -1.9
SPITS Spitsbergen Ar 102.22 352 P **Pdif** 03 24 33.9 -1.9
comp=Z,8.6nm,0.5s,baz=82,slow=6.0,SNR=17
SPITS PKKPbc **PKKPbc** 03 40 38.3 -1.4
comp=Z,3.6nm,0.7s,baz=183,slow=5.0,SNR=4.6
SHMA Al-Shehemyia 102.23 296 P **Pdif** 03 24 35.1 -1.8
KBS Kingsbay 102.26 353 *i* P **PP** 03 28 58.0 +2.6
KBS Kingsbay 102.26 353 *e*Pdif **Pdif** 03 24 36.1 +0.2
KBS *e*PP **PP** 03 28 58.2 +2.9
KBS *e*SKSac **SKSac** 03 34 25.4 -1.0
KBS *e*SP **SP** 03 37 15.1 +2.8
T25A Trinidad 102.44 53 Pdiff **Pdif** 03 24 37.3 -0.6
baz=275
SNAA Sanae 103.11 188 PKKP 03 40 34.4
SNAA Sanae 103.11 188 Pdiff **Pdif** 03 24 39.3 -0.7
SNAA Sanae 103.11 188 pPdiff pPdif 03 26 33.3 +3.0
SNAA Sanae 103.11 188 Pdiff **Pdif** 03 24 39.0 -0.9
comp=Z,14nm,1.1s,baz=87,slow=4.5,SNR=11
SNAA PP **PP** 03 29 01.5 -0.1
comp=Z,6.6nm,0.6s,baz=156,slow=6.9,SNR=4.6
SNAA PKKPbc **PKKPbc** 03 40 34.3 -2.9
comp=Z,6.9nm,1.1s,baz=313,slow=4.6,SNR=4.8
VOI Vohitsoka 103.38 247 P **Pdif** 03 24 46.9 +4.6
OPO Ambohidratompo 103.54 250 Pdiff **Pdif** 03 24 44.7 +1.6
comp=Z,6.5nm,0.8s,baz=102,slow=6.3,SNR=5.0
TXAR Lajitas Array 103.62 61 Pdiff **Pdif** 03 24 45.1 +1.9
comp=Z,1.5nm,1.0s,baz=270,slow=3.8,SNR=12
TXAR PP **PP** 03 29 08.6 +1.5
comp=Z,18nm,1.0s,baz=243,slow=5.2,SNR=8.3
TXAR PKKPbc **PKKPbc** 03 40 32.0 -2.1
comp=Z,1.0nm,0.8s,baz=89,slow=3.7,SNR=2.8
TXAR PKKPab PKKPdf 03 40 58.0 +16
comp=Z,3.3nm,0.9s,baz=120,slow=6.1,SNR=6.5
TXAR PKPPKP **P'P'df** 03 48 57.2 +3.1
comp=Z,0.8nm,0.9s,baz=123,slow=3.3,SNR=3.7
KSCO Kaye Shedlock' 103.66 51 P **Pdif** 03 24 43.9 +0.7
baz=276,SNR=5.3
KSCO Kaye Shedlock' 103.66 51 Pdiff **Pdif** 03 24 42.7 -0.5
baz=276
MAK Makhachkala 103.67 313 *i* P **Pdif** 03 24 37.7 -5.2
MAK *e* 03 29 04.4
MAK *e*PPP PPP 03 31 24.3
MAK *e* 03 34 28.5
MAK *e* 03 35 13.7
MAK *e*SS SS 03 43 09.6 -5.5
MAK *e*SSS SSS 03 47 15.9
MAK pmax pmax
comp=Z,188nm,1.3s
MAK MLR MLR
comp=Z,2μm,17.0s
OGNE Ogallala 103.88 49 Pdiff **Pdif** 03 24 43.9 -0.1
baz=277
MSTX Muleshoe 104.04 56 P **Pdif** 03 24 46.3 +1.3
baz=275
MSTX Muleshoe 104.04 56 Pdiff **Pdif** 03 24 45.5 +0.5
baz=275
APA Apatity 104.30 340 *i* P **Pdif** 03 24 39.4 -5.8
APA *i* 03 35 46.0
APA pmax pmax
comp=Z,24nm,0.9s
VNA3 Neumayer Olymp 104.31 186 PKiKP **PKiKP** 03 28 59.4 +0.8
VNA3 Neumayer Olymp 104.31 186 Pdiff **Pdif** 03 24 44.5 -0.7
BJO1 Bjornoya 104.32 348 *e*Pdif **Pdif** 03 24 44.8 -0.3
BJO1 *e*PP **PP** 03 29 11.4 +0.9
BJO1 *e*SKSac **SKSac** 03 34 34.7 -1.1
BJO1 *e*SP **SP** 03 37 35.2 +1.6
VNA2 Neumayer--Watz 104.37 187 PKiKP **PKiKP** 03 29 00.8 +2.1
VNA2 Neumayer--Watz 104.37 187 Pdiff **Pdif** 03 24 45.0 -0.5
baz=171,slow=5.7
KLMR Klimovskoe 104.40 332 *e*P **Pdif** 03 24 41.4 -4.3
KLMR *e* 03 29 07.7
KLMR *e*SS SS 03 43 22.3 -1.5
KLMR pmax pmax
comp=Z,143nm,1.3s
KLMR Klimovskoe 104.40 332 *e*Pdif **Pdif** 03 24 41.4 -4.3
KLMR AMP 03 24 46.7
comp=Z,143nm,1.3s
KLMR *e*pPdif **pPdif** 03 26 37.1 +0.1
KLMR *e*PP **PP** 03 29 07.7 -3.8
KLMR *e* 03 30 45.4
KLMR *e*PKKP **PKKPbc** 03 40 32.2 -0.7
KLMR *e*SS **SS** 03 43 22.3 -1.5
KLMR *e*SS **SS** 03 43 22.3 -1.5
MDND Maddock 104.53 42 Pdiff **Pdif** 03 24 46.1 -0.6
baz=281
VNA1 Neumayer--Stat 104.73 186 P **Pdif** 03 24 46.8 -0.3
AMTX Amarillo 104.85 55 Pdiff **Pdif** 03 24 47.7 -0.8
baz=276
GROC Groznyy 104.88 314 *e*P **Pdif** 03 24 47.0 -1.3
GROC *e* 03 29 15.8
GROC *e* 03 34 38.8
GROC pmax pmax
comp=Z,224nm,1.3s
SUSD Miller 105.59 45 Pdiff **Pdif** 03 24 49.0 -2.5
baz=280
HAMF Hammerfest 105.67 344 *e*Pdif **Pdif** 03 24 51.5 +0.3
HAMF *e*PP **PP** 03 29 21.2 +0.7
HAMF *e*SKSac **SKSac** 03 34 43.3 +1.3
HAMF *e*SP **SP** 03 37 49.5 +1.8
ARA0 ARCESS Array S 105.81 343 *e*Pdif **Pdif** 03 24 52.0 +0.1
ARA0 *e*PP **PP** 03 29 22.2 +0.6
ARA0 *e*SKSac **SKSac** 03 34 43.0 +0.3
ARA0 *e*SP **SP** 03 37 49.4 +0.2
ARCES ARCESS Array B 105.81 343 Pdiff **Pdif** 03 24 52.4 +0.5
comp=Z,14nm,0.9s,baz=54,slow=8.2,SNR=14
ARCES PKiKP **PKiKP** 03 29 02.0 +0.6
comp=Z,7.3nm,0.7s,baz=93,slow=0.9,SNR=16
ARCES PKKPbc **PKKPbc** 03 40 27.2 -1.7
comp=Z,8.3nm,0.5s,baz=245,slow=2.7,SNR=31
CBKS Cedar Bluff 105.92 51 Pdiff **Pdif** 03 24 54.2 +1.1
baz=278
VRH Novokhopyorsk 105.98 322 *e*P **Pdif** 03 24 52.4 -0.6
VRH *e* 03 34 41.9
VRH *e*SP SP 03 37 53.2 +1.4
VRH pmax pmax
comp=Z,20nm,0.7s
VRH pmax pmax
comp=Z,130nm,1.5s
GNI Garni 106.13 311 Pdiff **Pdif** 03 24 53.9 -0.3
comp=Z,2.9nm,0.4s,baz=214,slow=3.2,SNR=11
GNI PP **PP** 03 29 23.1 -2.0
comp=Z,13nm,0.8s,baz=96,slow=8.3,SNR=3.3
ZEI Tsey 106.31 313 *e*P **Pdif** 03 24 53.0 -2.0
ZEI pmax pmax
comp=Z,12nm,0.8s
ULM Lac du Bonnet 106.40 39 PKiKP **PKiKP** 03 29 03.0 0.0
comp=Z,4.3nm,0.5s,baz=275,slow=4.1,SNR=5.8
ULM PKKPab **PKKPab** 03 40 44.1 +1.0
comp=Z,12nm,1.1s,baz=28,slow=3.2,SNR=4.5
BGNE Belgrade 106.71 48 Pdiff **Pdif** 03 24 56.2 -0.3
baz=280
KTK1 Kautokeino 106.77 343 *e*Pdif **Pdif** 03 24 54.2 -2.0
KTK1 *e*PP **PP** 03 29 29.0 +0.5
KTK1 *e*SKSac **SKSac** 03 34 48.3 +1.4
KTK1 *e* 03 38 04.3
ABTX Abilene, Hawle 106.78 57 Pdiff **Pdif** 03 24 57.5 +0.4
baz=276
KBZ Khabaz 106.86 315 Pdiff **Pdif** 03 24 58.1 +1.1
comp=Z,3.3nm,0.9s,baz=87,slow=3.4,SNR=7.3
KBZ PP **PP** 03 29 29.7 -0.3
comp=Z,35nm,0.9s,baz=68,slow=7.2,SNR=9.9
JCT Junction City 106.88 59 Pdiff **Pdif** 03 24 59.1 +1.6
baz=276
AGMN Agassiz Nation 106.88 41 Pdiff **Pdif** 03 24 57.1 0.0
baz=284
KIV Kislovodsk 106.97 315 ǁP PKiKP 03 28 28.2 -36
KIV Kislovodsk 106.97 315 *e*P **Pdif** 03 25 00.2 +2.5
MOS Moscow 107.02 328 *i* P **Pdif** 03 24 55.3 -2.2
MOS pmax pmax
comp=Z,83nm,1.1s
JETT Jettan, Norway 107.23 344 *e*Pdif **Pdif** 03 24 57.5 -0.7
JETT *e*PP **PP** 03 29 33.2 +1.3
JETT *e* 03 34 52.0
JETT *e*SP SP 03 38 06.9 +3.3
WMOK Wichita Mounta 107.24 55 Pdiff **Pdif** 03 24 58.7 -0.4
baz=278
LPSR Galich'ya Gora 107.26 324 *e*P **Pdif** 03 24 55.4 -3.3
LPSR *e* 03 34 48.6
LPSR pmax pmax
comp=Z,20nm,0.9s
LPSR pmax pmax
comp=Z,100nm,1.2s
VORR Voronezh 107.37 323 *e*P **Pdif** 03 24 58.0 -1.2
VORR *e* 03 29 33.1
VORR *e* 03 34 51.2
VORR pmax pmax
comp=Z,60nm,0.4s
ECSD EROS Data Cent 107.38 45 Pdiff **Pdif** 03 24 59.2 -0.3
baz=282
833A Chaparral WMA, 107.44 62 Pdiff **Pdif** 03 25 01.6 +1.6
baz=275
VSR Storozhevoye 107.52 323 *e*P **Pdif** 03 24 57.9 -2.0
VSR *e* 03 34 47.6
VSR *e*SP SP 03 37 59.8 -7.8
VSR pmax pmax
comp=Z,20nm,1.7s
VSR pmax pmax
comp=Z,140nm,1.5s
TRO Tromso 107.58 345 *e*Pdif **Pdif** 03 24 59.4 -0.3
TRO *e*PP **PP** 03 29 35.7 +1.5
TRO *e*SKSac **SKSac** 03 34 48.4 -1.9
TRO *e*SP **SP** 03 38 07.7 +0.6
OBN Obninsk 107.79 327 *d i*P **Pdif** 03 25 00.1 -0.8
OBN *i* 03 29 33.3
OBN *i* 03 34 52.7
OBN *e*SS SS 03 44 05.6 -4.0
OBN Obninsk 107.79 327 PP **PP** 03 29 33.7 -2.5
comp=Z,33nm,1.2s,baz=159,slow=2.0,SNR=5.3
OBN PKKPbc **PKKPbc** 03 40 20.3 -2.0
comp=Z,2.4nm,0.4s,baz=51,slow=6.8,SNR=3.7
KSU1 Kansas State U 108.28 50 Pdiff **Pdif** 03 25 03.7 +0.2
baz=280
WHTX Lake Whitney, 108.70 58 Pdiff **Pdif** 03 25 05.7 +0.1
baz=278
435B Jarrell 108.74 59 Pdiff **Pdif** 03 25 06.3 +0.6
baz=277
TUL1 Leonard 109.48 53 Pdiff **Pdif** 03 25 08.3 -0.7
baz=280
SPMN Marine on St. 109.69 43 Pdiff **Pdif** 03 25 10.1 +0.4
baz=285
STEI Steigen 109.72 344 *e*Pdif **Pdif** 03 25 07.5 -1.8
STEI *e*PP **PP** 03 29 52.3 +2.7
STEI *e*SKSac **SKSac** 03 34 58.8 -0.6
STEI *e* 03 38 20.2
EYMN Ely 109.80 40 Pdiff **Pdif** 03 25 10.9 +0.7
baz=287
FINES FINESS Array B 110.04 336 Pdiff **Pdif** 03 25 09.2 -1.6
comp=Z,6.2nm,0.5s,baz=73,slow=4.8,SNR=18
FINES PKiKP **PKiKP** 03 29 09.6 +0.1
comp=Z,3.8nm,0.5s,baz=117,slow=4.1,SNR=11
FINES PP **PP** 03 29 51.4 -0.7
comp=Z,22nm,0.7s,baz=61,slow=9.0,SNR=8.1
FINES PKKPbc **PKKPbc** 03 40 12.7 -2.8
comp=Z,5.4nm,0.4s,baz=222,slow=3.0,SNR=31
FAUS Fauske 110.09 344 *e* **Pdif** 03 25 06.4 -4.6
FAUS *e*PP **PP** 03 29 55.7 +3.5
FAUS *e*SKSac **SKSac** 03 34 59.4 -1.5
FAUS *e*SP **SP** 03 38 30.4 -0.1
SCIA State Center 110.23 47 Pdiff **Pdif** 03 25 12.3 +0.1
baz=284
ATD Arta Tunnel 110.25 281 PP **PP** 03 29 56.4 +1.1
comp=Z,7.1nm,0.4s,baz=60,slow=5.5,SNR=7.5
ANN Anapa 110.43 317 *i* P **Pdif** 03 25 09.4 -3.5
ANN *i* 03 29 09.9
ANN *e* 03 29 58.0
ANN *e*PPP PPP 03 32 20.9
ANN *e* 03 35 02.0
ANN *e*SP SP 03 38 35.8 +0.8
ANN *e*PS **PS** 03 39 33.2 -0.8
ANN pmax pmax
comp=E,35nm,1.2s
ANN pmax pmax
comp=N,31nm,1.1s
ANN pmax pmax
comp=E,65nm,1.1s
ANN pmax pmax
comp=N,32nm,1.0s
ANN pmax pmax
comp=Z,58nm,1.0s
ANN pmax pmax
comp=E,22nm,1.0s
P38A Dawn 110.51 49 P **PKiKP** 03 29 11.2 +0.2
baz=283
SUMG Summit 110.85 4 *e*P **PKiKP** 03 29 12.9 +1.7
NATX Nacogdoches 111.08 57 Pdiff **Pdif** 03 25 17.6 +1.5
baz=279
MOR8 Moi Rana 111.18 343 *e*Pdif **Pdif** 03 25 16.9 +1.1
MOR8 *e*PP **PP** 03 29 58.5 -1.5
MOR8 *e*SKSac **SKSac** 03 35 04.3 -1.2
MOR8 *e*SP **SP** 03 38 37.5 -3.1
VSU Vasula 111.29 333 *e*P **Pdif** 03 25 17.4 +1.0
MEF Metsahovi 111.39 335 *e*P **Pdif** 03 25 15.4 -1.4
MIAR Mount Ida 111.50 54 Pdiff **Pdif** 03 25 17.0 -1.0
baz=281
P40A Paris 111.65 49 P **PKiKP** 03 29 13.4 +0.2
baz=284
JMIC Jan Mayen 111.73 353 *e*Pdif **Pdif** 03 25 19.5 +1.4
JMIC *e*PP **PP** 03 30 04.1 +0.4
JMIC *e* 03 35 13.5
JMIC *e*SP SP 03 38 44.0 -1.4
JFWS Jewell Farm 112.09 45 Pdiff **Pdif** 03 25 19.0 -1.4
baz=286
CMIG Matias Romero 112.43 73 PKKPab PKKPab 03 40 17.7 +1.2
comp=E,3.0nm,0.8s,baz=73,slow=8.4,SNR=4.0
MTSE Matsula 112.46 334 *e*P **Pdif** 03 25 22.6 +1.0
CCM Cathedral Cave 112.61 50 Pdiff **Pdif** 03 25 22.1 -0.7
baz=284
MNK Minsk 112.64 329 *i* P **Pdif** 03 25 23.4 +0.9
MNK *i* PS **PKKPbc** 03 40 08.5 +1.7
MNK *i* SS SS 03 45 13.5 -0.2

MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=Z,8.0nm,0.7s
MNK MLR MLR
comp=E,401nm,19.0s
MNK MLR MLR
comp=Z,3µm,19.0s
MNK Minsk 112.64 329 *i* P **Pdif 03 25 23.5 +0.9**
comp=E,1.0nm,0.7s
MNK *i* P **Pdif 03 25 23.5 +0.9**
MNK *i* P **Pdif 03 25 23.5 +0.9**
comp=Z,8.0nm,0.7s,baz=62
MNK *i* pP pPdif 03 26 43.1 -31
MNK *i* PP PP 03 29 56.8 -14
MNK *i* PPP PPP 03 31 34.5
MNK *i* SKS SKSac 03 34 49.7 -22
MNK *i* SKKS SKSdf 03 35 50.4 +11
MNK *i* SP SP 03 38 17.0 -38
MNK *i* PS **PKKPbc 03 40 08.5 +1.7**
MNK *i* SS **SS 03 45 13.5 -0.2**
MNK *i* SSS SSS 03 49 21.4
MNK *i* LRM MLR 04 17 10.5
MNK *i* LRM MLR 04 17 31.4
comp=E,401nm,19.2s
MNK *i* LRM MLR 04 17 33.8
comp=Z,3µm,19.2s
NACGM Naroch 113.01 329 ⇓ *e*P **Pdif 03 25 20.1 -4.1**
baz=61
NSS Namsos 113.09 343 *e* **PP 03 30 10.4 -2.9**
NSS *e*SP SP 03 39 02.3 +4.3
FVM French Village 113.25 50 P **PKiKP 03 29 16.2 -0.1**
baz=284
HDIL Hopedale 113.43 47 PKiKP **PKiKP 03 29 16.0 -0.6**
baz=286
AKASG Malin Array Be 113.58 325 Pdiff **Pdif 03 25 25.0 -1.8**
comp=Z,5.3nm,0.7s,baz=52,slow=5.0,SNR=21
AKASG PKP **PKiKP 03 29 16.2 -0.3**
comp=Z,7.9nm,0.5s,baz=60,slow=2.2,SNR=20
AKASG PKKPbc **PKKPbc 03 40 00.8 -2.8**
comp=Z,4.9nm,0.5s,baz=264,slow=3.7,SNR=20
AKBB Malin Array Si 113.58 325 *c i* PKiKP **PKiKP 03 29 17.8 +1.3**
ASF Jabal al Asfar 113.78 304 PKP **PKiKP 03 29 17.7 +0.1**
comp=Z,5.6nm,0.8s,baz=67,slow=2.5,SNR=5.8
ASF PP **PP 03 30 20.8 +1.1**
comp=Z,60nm,1.1s,baz=105,slow=5.0,SNR=9.6
ASF PKKPbc **PKKPbc 03 40 02.3 -0.1**
comp=Z,15nm,1.1s,baz=242,slow=3.5,SNR=8.6
L44A Lake County Fo 113.95 45 PKiKP **PKiKP 03 29 17.5 0.0**
baz=288
PABE Paberze 114.11 331 *e*P **Pdif 03 25 29.8 +0.7**
ICESG Greenland Ices 114.18 5 *i* P **PKiKP 03 29 18.4 +0.8**
VBMS Vicksburg 114.47 56 PKiKP PKPdf 03 29 18.4 -0.4
baz=282
TBLU Trondheim 114.54 342 *e*PP **PP 03 30 23.1 -0.4**
TBLU *e*SP SP 03 39 09.7 -1.5
BRTR Keskin Array B 114.55 312 *c i* PKiKP PKPdf 03 29 18.6 -0.3
BRTR pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 114.55 312 PKP PKPdf 03 29 18.8 -0.2
comp=Z,4.6nm,0.7s,baz=124,slow=9.5,SNR=12
BRTR PP **PP 03 30 23.5 -1.3**
comp=Z,24nm,1.0s,baz=136,slow=4.3,SNR=4.3
BRTR PKKPbc **PKKPbc 03 39 59.1 -1.1**
comp=Z,11nm,0.9s,baz=198,slow=3.8,SNR=8.7
SFJD Kangerlussuaq 114.76 10 *i* P PKPdf 03 29 17.1 -1.2
SFJD Kangerlussuaq 114.76 10 PKKPbc PKKPbc 03 39 59.9 -0.2
comp=Z,17nm,0.8s,baz=160,slow=5.8,SNR=4.3
OLIL Olney 114.82 49 P **PKiKP 03 29 19.6 +0.3**
baz=286
MMAI Mount Meron Ar 114.84 305 PKP **PKiKP 03 29 21.1 +1.5**
comp=Z,1.4nm,0.4s,baz=68,slow=9.1,SNR=4.7
MMAI PP **PP 03 30 26.5 -0.5**
comp=Z,8.4nm,0.9s,baz=135,slow=57,SNR=5.3
MMAI PKKPbc **PKKPbc 03 39 59.7 +0.9**
comp=Z,7.9nm,0.6s,baz=248,slow=0.9,SNR=11
OXF Oxford 114.88 54 PKiKP PKPdf 03 29 19.2 -0.3
baz=283
Y45A Yeager Farm, C 114.92 54 P **PKiKP 03 29 19.8 +0.2**
baz=283
SFIN Lafayette 115.09 47 PKiKP **PKPdf 03 29 19.5 -0.2**
baz=288
ANTO Ankara 115.13 313 ⇓P **PKPdf 03 29 19.9 -0.1**
ANTO Ankara 115.13 313 **PKiKP 03 29 20.1 +0.2**
ANTO Ankara 115.13 313 ⇓PKiKP **PKPdf 03 29 19.9 -0.1**
SORM Soroca 115.17 322 ⇑P **PKiKP 03 29 19.8 +0.1**
SORM Soroca 115.17 322 ⇑PKiKP **PKiKP 03 29 19.8 +0.1**
GLMI Grayling 115.32 42 PKiKP **PKiKP 03 29 20.3 +0.2**
baz=292
KIS Kishinev 115.35 321 *e*P **Pdif 03 25 27.6 -7.2**
KIS Kishinev 115.35 321 *e*PP PKiKP 03 29 56.2 +36
comp=Z,1µm,15.7s
KIS Kishinev 115.35 321 *e*PPP PPP 03 32 39.5
KIS *e*SKSP 03 39 17.5
KIS *e*LQ LQ 03 57 02.8
KIS *e*LR LR 03 59 46.2
comp=Z,2µm,30.0s
KIS Kishinev 115.35 321 *e*P **Pdif 03 25 27.6 -7.2**
KIS *e* 03 39 17.5
KIS pmax pmax
comp=Z,1µm,15.7s
KMBO Kilima Mbogo 115.38 267 PKIKP **PKiKP 03 29 22.6 +1.2**
KMBO Kilima Mbogo 115.38 267 PKP **PKiKP 03 29 22.6 +1.2**
comp=Z,14nm,1.0s,baz=33,slow=1.4,SNR=13
KMBO PP **PP 03 30 31.4 -0.2**
comp=Z,8.0nm,1.1s,baz=110,slow=7.0,SNR=5.5
KMBO PKKPbc **PKKPbc 03 39 56.5 -0.1**
comp=Z,6.3nm,0.9s,baz=277,slow=1.6,SNR=7.5
MILM Milestii Mici 115.39 321 *e*P **Pdif 03 25 32.6 -2.3**
MILM Milestii Mici 115.39 321 *e*PPP PPP 03 32 09.0
MILM *e*SKSP 03 39 17.2
MILM *e*LQ LQ 03 56 41.4
MILM *e*LR LR 03 59 47.0
comp=Z,6µm,30.0s
MILM Milestii Mici 115.39 321 *e*P **Pdif 03 25 27.6 -7.3**
MILM *e* 03 39 17.5
MILM pmax pmax
comp=Z,1µm,15.7s
146A Union 115.59 56 P **PKiKP 03 29 21.0 0.0**
baz=283
NC303 NORSAR Array S 115.68 340 *e*Pdif **PKiKP 03 29 20.9 +0.6**
NC303 IVmB_BB 03 29 26.6
comp=Z,709nm,3.6s
WVT Waverly 115.73 52 **PKiKP 03 29 21.2 +0.1**
WVT Waverly 115.73 52 PKIKP **PKiKP 03 29 21.2 +0.1**
WVT Waverly 115.73 52 PKiKP **PKPdf 03 29 21.0 -0.1**
baz=285
DOMB Dombas 115.82 342 *e*Pdif **Pdif 03 25 37.0 +0.4**
DOMB *e* 03 30 12.2
DOMB *e*PP **PP 03 30 31.9 -0.6**
DOMB *i* 03 36 44.4
DOMB *e* 03 39 30.5
NB2 NORSAR Subarra 115.87 340 PKPdf **PKPdf 03 29 20.1 -0.6**
comp=Z,2.1nm,0.7s,baz=44,slow=1.9
NOA NORSAR Array B 115.87 340 PKIKP **PKPdf 03 29 19.9 -0.8**
NOA NORSAR Array B 115.87 340 Pdiff **Pdif 03 25 37.4 +0.6**
comp=Z,2.3nm,0.8s,baz=46,slow=4.7,SNR=8.0
NOA PKP **PKPdf 03 29 19.9 -0.8**
comp=Z,5.1nm,0.7s,baz=45,slow=1.8,SNR=18
NOA PP **PP 03 30 30.4 -2.4**
comp=Z,5.6nm,0.9s,baz=40,slow=9.0,SNR=12
MOL Molde 115.87 343 *e*PP **PP 03 30 33.2 +0.5**
MOL *e*SKSac **SKSac 03 35 24.5 +0.8**
MOL *e*SP **SP 03 39 26.0 +2.7**
EIL Elat 115.90 301 PKP **PKiKP 03 29 22.4 +0.8**
comp=Z,16nm,0.9s,baz=12,slow=5.6,SNR=6.9
EIL PP **PP 03 30 35.9 +1.4**
comp=Z,36nm,1.0s,baz=102,slow=2.2,SNR=7.6
EIL PKKPbc **PKKPbc 03 39 54.9 -0.2**
comp=Z,16nm,0.7s,baz=328,slow=6.1,SNR=9.4
DY2G Dye2 115.93 9 *i* P **PKPdf 03 29 20.7 -0.2**
N47A Urbana 115.94 46 **PKPdf 03 29 20.9 -0.4**
N47A Urbana 115.94 46 P **PKPdf 03 29 21.0 -0.4**
baz=289
N47A P **PKPdf 03 29 21.0 -0.4**
baz=289
NC602 NORSAR Array S 115.98 340 **PKPdf 03 29 20.8 -0.1**
T47A Sharon Grove 116.06 50 P **PKiKP 03 29 21.9 +0.1**
baz=286
TLCR 116.07 319 ⇑P PKPdf 03 29 13.4 -8.1
TLCR 116.07 319 ⇑PKIKP PKPdf 03 29 13.4 -8.1
VASR Vaslui 116.14 321 ⇑P **PKPdf 03 29 20.6 -1.0**
WCI Wyandotte Cave 116.32 49 **PKiKP 03 29 23.1 +0.9**
WCI Wyandotte Cave 116.32 49 PKIKP **PKiKP 03 29 23.1 +0.9**
WCI Wyandotte Cave 116.32 49 PKiKP **PKPdf 03 29 21.8 -0.4**
baz=287
AKN Aaknes 116.34 343 *e*Pdif **Pdif 03 25 41.6 +2.7**
AKN *e*PP **PP 03 30 37.5 +1.5**
AKN *e* 03 35 29.8
AKN *e* 03 39 36.1
VARL Varlezi 116.41 320 ⇑P **PKPdf 03 29 21.9 -0.2**
TPGR Topolog 116.46 319 ⇑P PKPdf 03 29 13.3 -9.0
L48A N Adams 116.48 44 P **PKPdf 03 29 21.8 -0.6**
baz=290
L48A P **PKPdf 03 29 21.8 -0.6**
baz=290
O48B Farmland 116.53 46 P **PKPdf 03 29 22.0 -0.5**
baz=289
O48B Farmland 116.53 46 PKiKP **PKPdf 03 29 22.0 -0.5**
baz=289
P48A Milroy 116.59 47 **PKiKP 03 29 24.1 +1.4**
P48A Milroy 116.59 47 P **PKPdf 03 29 22.5 -0.2**
baz=288
P48A P **PKPdf 03 29 22.5 -0.2**
baz=288
COYC Coyhaique 116.83 146 **PKiKP 03 29 23.9 +0.9**
OSL Oslo 116.84 340 *e*PP **PP 03 30 38.6 -0.9**
OSL *e* 03 35 30.6
OSL *e*SP SP 03 39 30.6 -1.5
HARR Harsova 116.84 319 ⇓P PKPpre 03 29 15.1
HARR Harsova 116.84 319 ⇓PKIKP PKPpre 03 29 15.1
MOPA Mopani 116.84 241 *i* P **PKiKP 03 29 24.2 +0.5**
MOPA Mopani 116.84 241 *i* P **PKiKP 03 29 24.2 +0.5**
AAM Ann Arbor 116.89 44 PKiKP **PKiKP 03 29 23.3 +0.1**
baz=291
TESR Tescani 116.91 321 ⇓P **PKiKP 03 29 24.2 +1.1**
LVV L'vov 116.95 325 *e*P **Pdif 03 25 41.7 -0.2**
LVV *i* 03 29 23.2
LVV *e* 03 30 43.6
LVV *e*PPP PPP 03 33 18.4
LVV *e* 03 35 24.5
LVV *e*PS **PS 03 40 38.5 +5.9**
LVV *e*SS SS 03 46 17.5 +7.6
N49A Columbus Grove 117.01 45 P **PKiKP 03 29 23.8 +0.3**
baz=290
N49A P **PKiKP 03 29 23.8 +0.3**
baz=290
BIZ Bicaz 117.06 322 ⇓P **PKiKP 03 29 25.9 +2.5**
NUUK Nuuk 117.08 12 *i* P **PKiKP 03 29 22.9 0.0**
P49A Miami Univ. Ec 117.09 47 P **PKPdf 03 29 23.5 -0.1**
baz=289
P49A Miami Univ. Ec 117.09 47 PKiKP **PKPdf 03 29 23.1 -0.6**
baz=289
VRI Vrincioaia 117.14 321 ⇑P **PKiKP 03 29 25.9 +2.3**
VRI Vrincioaia 117.14 321 ⇑PKIKP **PKiKP 03 29 25.9 +2.3**
O49A Covington 117.15 46 P **PKPdf 03 29 23.3 -0.4**
baz=290
O49A P **PKPdf 03 29 23.3 -0.4**
baz=290
LRAL Lakeview Retre 117.18 55 P **PKPdf 03 29 23.8 -0.2**
baz=284
LRAL Lakeview Retre 117.18 55 PKiKP **PKPdf 03 29 23.4 -0.6**
baz=284
U49A Red Boiling Sp 117.22 51 P **PKPdf 03 29 23.7 -0.3**
baz=287
BURAR Bucovina Array 117.30 323 ⇓P **PKiKP 03 29 25.5 +1.5**
BURAR Bucovina Array 117.30 323 ⇓PKIKP **PKiKP 03 29 25.5 +1.5**
FOO Floro 117.36 343 *e*Pdif **Pdif 03 25 41.4 -2.0**
FOO *e* 03 30 21.6
FOO *e*PP **PP 03 30 43.9 +1.0**
FOO *e* 03 35 34.2
FOO *e*SP SP 03 39 36.6 -0.1
HYA Hoyanger 117.37 343 IVmB_BB 03 29 29.9
comp=Z,1µm,10.1s
HYA *e*PP **PP 03 30 43.1 0.0**
HYA *e* 03 35 36.6
HYA *e*SP SP 03 39 37.5 +0.7
KONO Kongsberg 117.44 340 *e*Pdif **Pdif 03 25 45.6 +1.8**
KONO *e* 03 30 20.3
KONO *e*PP **PP 03 30 43.8 +0.2**
KONO *e*SKSac **SKSac 03 35 30.7 +1.2**
KONO *e*SP **SP 03 39 37.1 -0.4**
Y49A Blount Mountai 117.45 54 P **PKPdf 03 29 23.6 -0.9**
baz=285
BRAL Brewton 117.58 57 PKiKP **PKPdf 03 29 23.9 -0.9**
baz=283
OZUR 117.63 321 ⇑P **PKiKP 03 29 25.0 +0.4**
M50A Fremont 117.64 45 P **PKPdf 03 29 24.3 -0.3**
baz=291
M50A P **PKPdf 03 29 24.3 -0.3**
baz=291
R50A Paris 117.78 48 P **PKPdf 03 29 24.5 -0.5**
baz=289
R50A P **PKPdf 03 29 24.5 -0.5**
baz=289
T50A Nancy 117.79 50 P **PKPdf 03 29 24.5 -0.6**
baz=288
T50A P **PKPdf 03 29 24.5 -0.6**
baz=288
MLR Muntele Rosu 117.79 320 ⇑P **PKiKP 03 29 27.0 +2.0**
MLR Muntele Rosu 117.79 320 **PKiKP 03 29 25.5 +0.5**
MLR Muntele Rosu 117.79 320 ⇑PKIKP **PKiKP 03 29 27.0 +2.0**
MLR Muntele Rosu 117.79 320 PKP **PKiKP 03 29 25.1 +0.1**
comp=Z,16nm,1.0s,baz=112,slow=22,SNR=8.5
MLR PKKPbc **PKKPbc 03 39 47.6 -1.6**
comp=Z,11nm,0.6s,baz=185,slow=2.4,SNR=18
KWP Kalwaria Pacla 117.79 326 *e*Pdif **Pdif 03 25 45.9 +0.3**
KWP *e*PP **PKPdf 03 29 24.7 0.0**
SUE Sulen 117.88 343 *e*Pdif **Pdif 03 25 44.9 -0.8**
SUE *e*PP **PP 03 30 47.0 +0.5**
SUE *e* 03 35 41.1
SUE *e*SP SP 03 39 41.4 +0.1
MTO3 Montecristo 117.89 76 **PKPdf 03 29 25.7 -0.4**
SECR 117.91 320 ⇓P **PKPdf 03 29 25.0 -0.1**
DOPR Dopca 117.94 321 ⇑P **PKiKP 03 29 28.0 +2.9**
W50A Signal Mountai 117.96 52 P **PKPdf 03 29 25.0 -0.5**
baz=286
250A Grady 118.04 56 P **PKPdf 03 29 25.4 -0.3**
baz=284
ACSO Alum Creek Sta 118.11 46 P **PKiKP 03 29 25.7 0.0**
baz=291
ACSO Alum Creek Sta 118.11 46 PKiKP **PKPdf 03 29 24.9 -0.7**
baz=291
ASK Askoy 118.21 342 *e* 03 35 40.0
ASK *e*SP SP 03 39 44.6 +0.3
ODD1 Odda 118.22 341 *e* 03 35 37.1
RAZG Razgrad 118.23 318 ⇓P PKiKP 03 29 59.7 +34
ELL Elmali 118.23 310 **PKPdf 03 29 26.0 -0.1**
ELL Elmali 118.23 310 PKIKP **PKPdf 03 29 26.0 -0.1**
BER Bergen 118.25 342 *e*PP **PP 03 30 49.4 +0.4**
BER *e*SKSac **SKSac 03 35 30.9 -1.5**
BER *e*SKSac SKSdf 03 35 37.6 -12
BER *e* 03 36 53.7
Q51A Peebles 118.26 47 **PKPdf 03 29 25.8 -0.1**
Q51A Peebles 118.26 47 P **PKPdf 03 29 25.6 -0.4**
baz=290
Q51A P **PKPdf 03 29 25.6 -0.4**
baz=290
N51A Ashland 118.29 45 P **PKPdf 03 29 25.5 -0.4**
baz=292
N51A P **PKPdf 03 29 25.5 -0.4**
baz=292
SGRR Singureni 118.31 319 ⇑P **PKPdf 03 29 20.4 -5.4**
VOIR 118.38 321 ⇑P **PKiKP 03 29 30.9 +4.8**
VOIR 118.38 321 ⇑PKIKP **PKiKP 03 29 30.9 +4.8**
KOLS Kolonicke sedl 118.39 325 *e*PKIKP **PKPdf 03 29 25.9 0.0**
KOLS *i* 03 39 48.3
KOLS Kolonicke sedl 118.39 325 *e*PKP **PKPdf 03 29 25.9 0.0**
KOLS *e* 03 39 48.3
X51A Calhoun 118.49 52 P **PKPdf 03 29 25.8 -0.7**
baz=286
X51A P **PKPdf 03 29 25.8 -0.7**
baz=286
V51A Loudon 118.53 51 **PKPdf 03 29 26.0 -0.5**
V51A Loudon 118.53 51 P **PKPdf 03 29 26.1 -0.5**
baz=288
UZH Uzhgorod 118.53 325 *e*P **Pdif 03 25 43.0 -5.9**
UZH *e* 03 29 25.8
UZH *i* 03 35 29.2
UZH MLR MLR
comp=Z,350nm,18.0s
S51A Beattyville 118.54 49 **PKPdf 03 29 26.2 -0.3**
S51A Beattyville 118.54 49 P **PKPdf 03 29 26.2 -0.3**
baz=289
S51A P **PKPdf 03 29 26.2 -0.3**
baz=289
MUSN Musina, Limpop 118.56 242 *i* P **PKiKP 03 29 27.4 +0.3**
MUSN Musina, Limpop 118.56 242 *i* P **PKiKP 03 29 27.4 +0.3**
Z51A Franklin 118.58 54 P **PKPdf 03 29 26.5 -0.3**
baz=286
BLS5 Blasjo 118.66 341 *e*Pdif **Pdif 03 25 51.3 +2.1**
BLS5 IVmB_BB 03 29 29.8
comp=Z,766nm,3.5s
BLS5 *e*PP **PP 03 30 53.4 +1.4**
BLS5 *e* 03 35 44.5
BLS5 *e* 03 39 30.8
ARR Arges 118.67 321 ⇑P **PKiKP 03 29 29.3 +2.6**
SZH Strazhica 118.74 318 P **PKiKP 03 29 28.8 +2.0**
M52A Chesterland 118.77 44 P **PKPdf 03 29 26.5 -0.3**
baz=293
M52A P **PKPdf 03 29 26.5 -0.3**
baz=293
HUMR Humele 118.83 320 ⇓P **PKiKP 03 29 27.2 +0.3**
HOMB Homborsund 118.84 339 *e*Pdif **Pdif 03 25 54.5 +4.4**
HOMB *e*PP **PP 03 30 53.7 +0.6**
HOMB *e*SKSac **SKSac 03 35 32.1 -2.4**
HOMB *e*SKSac SKSdf 03 35 39.0 -12
HOMB *i* 03 37 04.8
HOMB *e* 03 46 28.9
TZTN Tazewell 118.92 50 PKiKP **PKPdf 03 29 27.0 -0.3**
baz=288
P52A Corning 118.93 46 **PKPdf 03 29 27.2 0.0**
P52A Corning 118.93 46 PKiKP **PKPdf 03 29 26.4 -0.8**
baz=291
O52A Adamsville 118.97 46 **PKPdf 03 29 27.3 -0.1**
O52A Adamsville 118.97 46 P **PKPdf 03 29 27.2 -0.1**
baz=292
O52A P **PKPdf 03 29 27.2 -0.1**
baz=292
TKL Tuckaleechee C 119.02 51 P **PKPdf 03 29 27.0 -0.5**
baz=288
Q52A Bidwell 119.07 47 P **PKPdf 03 29 27.1 -0.4**
baz=291
Q52A P **PKPdf 03 29 27.1 -0.4**
baz=291
W52A Murphy 119.07 52 P **PKPdf 03 29 27.5 -0.1**
baz=287
OJC Ojcow 119.08 327 *e*Pdif **Pdif 03 25 50.8 -0.6**
OJC *e*PP **PKPdf 03 29 26.9 -0.2**
V52A Sevierville 119.10 51 P **PKPdf 03 29 27.5 -0.2**
baz=288
152A Waverly Hall 119.13 55 **PKPdf 03 29 27.8 0.0**
152A Waverly Hall 119.13 55 P **PKPdf 03 29 27.6 -0.2**
baz=286
PVL Pavlikeni 119.16 318 P **PKiKP 03 29 30.8 +3.2**
DRGR 119.20 323 ⇓P **PKPdf 03 29 27.6 0.0**
DRGR 119.20 323 ⇓PKIKP **PKPdf 03 29 27.6 0.0**
KMY Karmoy 119.21 342 *e* 03 35 44.6
KMY *e*SP SP 03 39 54.0 +0.7
SNART Snartemo 119.24 340 *e*PP **PP 03 30 57.5 +1.7**
SNART *e* 03 35 41.4
NIE Niedzica 119.24 326 *e*Pdif **Pdif 03 25 52.7 +0.6**
NIE *e*PP **PKiKP 03 29 28.5 +0.8**
352A Blakely 119.27 56 **PKiKP 03 29 28.3 +0.1**
352A Blakely 119.27 56 P **PKPdf 03 29 28.0 0.0**
baz=285
M53A WI Miller and 119.28 44 PKiKP **PKPdf 03 29 27.3 -0.5**
baz=293
Y52A Lilburn 119.33 53 P **PKPdf 03 29 28.2 0.0**
baz=287
Y52A P **PKPdf 03 29 28.2 0.0**
baz=287
O53A New Philadelph 119.36 45 PKiKP **PKPdf 03 29 27.6 -0.4**
baz=292
N53A Lisbon 119.41 45 P **PKPdf 03 29 27.9 -0.2**
baz=293
N53A P **PKPdf 03 29 27.9 -0.2**
baz=293
LL04 Puerto Octay 119.43 142 **PKiKP 03 29 28.8 +0.6**
ERPA Erie 119.48 43 **PKPdf 03 29 27.8 -0.4**
ERPA Erie 119.48 43 PKiKP **PKPdf 03 29 27.3 -0.8**
baz=294
DIM Dimitrovgrad 119.50 317 P **PKiKP 03 29 29.3 +1.0**
P53A Whipple 119.52 46 P **PKPdf 03 29 28.2 -0.2**
baz=292
P53A P **PKPdf 03 29 28.2 -0.2**
baz=292
ALN Alexandroupoli 119.61 316 P **PKPdf 03 29 27.2 -1.2**
V53A Saluda 119.76 51 P **PKPdf 03 29 28.5 -0.5**
baz=289
V53A P **PKPdf 03 29 28.5 -0.5**
baz=289
SCHQ Schefferville 119.80 25 PKP **PKiKP 03 29 29.2 +0.6**
comp=Z,6.8nm,0.7s,baz=344,slow=2.7,SNR=20
SCHQ PKKPbc **PKKPbc 03 39 41.9 -0.3**
comp=Z,7.4nm,0.8s,baz=188,slow=2.3,SNR=6.2
GZR Gura Zlata 119.83 322 ⇑P **PKiKP 03 29 29.6 +0.7**
GZR Gura Zlata 119.83 322 ⇑PKIKP **PKiKP 03 29 29.6 +0.7**
LANS Liptovska Anna 119.85 327 *e*PKIKP **PKiKP 03 29 30.2 +1.4**
LANS Liptovska Anna 119.85 327 *e*PKP **PKiKP 03 29 30.2 +1.4**
LANS *e* 03 39 44.7
RDO Rodhopi 119.87 316 P **PKPdf 03 29 28.4 -0.5**
RDO Rodhopi 119.87 316 **PKPdf 03 29 28.3 -0.6**
BG3 Lake Jocassee 119.88 51 **PKiKP 03 29 29.6 +0.3**
CASEE Lake Jocassee 119.88 51 P **PKiKP 03 29 29.3 0.0**
baz=288
GOGA Godfrey 119.93 53 P **PKPdf 03 29 28.9 -0.4**
baz=287
GOGA Godfrey 119.93 53 PKiKP **PKPdf 03 29 28.3 -1.0**
baz=287
TGUH Tegucigalpa,Un 119.93 76 *e*P **PKiKP 03 29 30.0 0.0**
O54A Avella 119.98 45 P **PKiKP 03 29 29.3 0.0**
baz=293
O54A P **PKiKP 03 29 29.3 0.0**
baz=293
PRK Paraskevi 120.08 314 P **PKiKP 03 29 30.5 +1.0**
SIRR Siria 120.09 323 ⇓P **PKiKP 03 29 29.4 +0.1**
Q54A Coxs Mills 120.11 46 **PKiKP 03 29 29.8 +0.2**
Q54A Coxs Mills 120.11 46 P **PKPdf 03 29 29.2 -0.3**
baz=292
Q54A P **PKPdf 03 29 29.2 -0.3**
baz=292
OKC Ostrava-Krasne 120.18 328 *e*PKIKP **PKiKP 03 29 31.7 +2.3**
OKC *e* 03 31 05.6
OKC *e*SS SS 03 46 55.5 +4.7
OKC Ostrava-Krasne 120.18 328 *e*PKPDF **PKiKP 03 29 31.7 +2.3**
OKC *e*PP **PP 03 31 05.6 +3.0**
OKC *e*SS SS 03 46 55.5 +4.7
S54A Dingess, Beckl 120.18 48 **PKiKP 03 29 29.9 +0.1**
S54A Dingess, Beckl 120.18 48 P **PKPdf 03 29 29.4 -0.3**
baz=291
S54A P **PKPdf 03 29 29.4 -0.3**
baz=291
RZN Rozhen 120.21 317 P **PKiKP 03 29 31.1 +1.1**
PGB Panagyurishte 120.22 318 P **PKiKP 03 29 31.6 +1.8**
U54A Nelsons Funny 120.24 49 P **PKPdf 03 29 29.7 -0.2**
baz=290
U54A P **PKPdf 03 29 29.7 -0.2**
baz=290
BOSA Boshof 120.25 234 **PKiKP 03 29 30.4 +0.1**
BOSA Boshof 120.25 234 PKIKP **PKiKP 03 29 30.5 +0.1**
BOSA Boshof 120.25 234 *i* P **PKiKP 03 29 30.5 +0.1**
BOSA Boshof 120.25 234 *i* P **PKiKP 03 29 30.5 +0.1**
BOSA Boshof 120.25 234 PKP **PKiKP 03 29 30.8 +0.4**
comp=Z,17nm,0.6s,baz=115,slow=1.4,SNR=31
BOSA PKKPbc **PKKPbc 03 39 39.5 -0.4**
comp=Z,8.3nm,0.8s,baz=300,slow=4.3,SNR=13
LRW Lerwick 120.27 345 *e*P **PKPdf 03 29 27.5 -1.6**
PSZ Piszkesteto 120.27 325 ⇑P **PKPdf 03 29 29.4 -0.2**
PSZ Piszkesteto 120.27 325 ⇑PKIKP **PKPdf 03 29 29.4 -0.2**
PSZ Piszkesteto 120.27 325 PKP **PKiKP 03 29 30.7 +1.0**
BLWY Bulawayo 120.31 244 *i* P **PKiKP 03 29 30.7 0.0**
BLWY Bulawayo 120.31 244 *i* P **PKiKP 03 29 30.7 0.0**
MATP Matopo 120.32 244 *i* P **PKiKP 03 29 30.6 0.0**
MATP Matopo 120.32 244 *i* P **PKiKP 03 29 30.6 0.0**
TIGA Tifton 120.38 56 **PKiKP 03 29 30.4 +0.1**
TIGA Tifton 120.38 56 PKiKP **PKPdf 03 29 29.7 -0.5**
baz=286
J55A Hilton 120.43 41 **PKiKP 03 29 30.2 +0.1**
J55A Hilton 120.43 41 P **PKPdf 03 29 29.3 -0.6**
baz=297
J55A P **PKPdf 03 29 29.3 -0.6**
baz=297
BZS Buzias 120.43 322 ⇑P **PKiKP 03 29 30.3 +0.3**
BZS Buzias 120.43 322 ⇑PKIKP **PKiKP 03 29 30.3 +0.3**
154A Montrose 120.45 54 P **PKiKP 03 29 30.4 0.0**
baz=287
IVI Ivigtut 120.48 12 *i* P **PKPdf 03 29 29.4 -0.1**
MORC Moravsky Berou 120.53 328 ⇑P **PKiKP 03 29 30.3 +0.1**
MORC Moravsky Berou 120.53 328 ⇑PKIKP **PKiKP 03 29 30.3 +0.1**
MORC Moravsky Berou 120.53 328 *e*PDIFF **Pdif 03 25 57.5 -0.4**
MORC Moravsky Berou 120.53 328 *e*PKP **PKPdf 03 29 30.0 0.0**
MORC *e*PP **PP 03 31 07.1 +2.0**

MORC e 03 37 16.6
MORC ePKKP PKKPbc 03 39 38.0 -1.4
KSP Ksiaz 120.55 330 ePdif Pdif 03 25 59.5 +1.6
KSP ePP PKiKP 03 29 31.1 +1.0
VYHS Vyhne 120.56 326 i P Pdif 03 25 58.9 +0.9
VYHS e 03 29 30.9
VYHS e 03 31 04.0
VYHS Vyhne 120.56 326 ePKP PKiKP 03 29 30.9 +0.7
VYHS ePP PP 03 31 03.9 -1.3
VYHS e 03 39 35.4
VYHS Vyhne 120.56 326 ePDIFF Pdif 03 25 58.9 +0.9
MCWV Mont Chateau 120.56 45 P PKPdf 03 29 30.3 0.0
baz=293
MCWV Mont Chateau 120.56 45 PKiKP PKPdf 03 29 29.5 -0.8
baz=293
M55A Ridgway 120.58 43 PKiKP 03 29 30.5 0.0
M55A Ridgway 120.58 43 P PKiKP 03 29 30.4 0.0
baz=295
M55A P PKiKP 03 29 30.4 0.0
baz=295
LIA Limnos Island 120.61 315 P PKPdf 03 29 29.1 -1.3
MMNY Mt. Morris Dam 120.61 41 PKPdf 03 29 30.1 -0.2
HODGE Hodges 120.64 52 P PKiKP 03 29 30.7 0.0
baz=288
THAS Thassos island 120.65 316 P PKPpre 03 29 19.1
PLCA Paso Flores 120.67 143 PKiKP PKiKP 03 29 30.8 0.0
PLCA Paso Flores 120.67 143 eP PKiKP 03 29 31.4 +0.7
PLCA Paso Flores 120.67 143 PKP PKiKP 03 29 30.8 0.0
comp=Z,67nm,0.7s,baz=242,slow=1.8,SNR=44
PLCA PKKPab PKKPbc 03 39 39.6 +0.8
comp=Z,6.1nm,0.6s,baz=50,slow=5.0,SNR=10
BLKB Belogradchik 120.72 320 ⇓P PKiKP 03 29 31.2 +0.5
PSDB Penn State Uni 120.73 43 P PKPdf 03 29 30.2 -0.5
baz=295
KRLC Kraliky 120.76 329 ePKIKP PKPdf 03 29 29.8 -0.7
KRLC e 03 31 07.6
KRLC eSS SS 03 47 00.2 +1.9
KRLC Kraliky 120.76 329 ePKPDF PKPdf 03 29 29.8 -0.7
KRLC ePP PP 03 31 07.6 +1.0
KRLC ePKKP PKKPbc 03 39 38.6 0.0
KRLC eSS SS 03 47 00.2 +1.9
OSTC Ostas 120.76 329 ePKPDF PKPdf 03 29 30.1 -0.3
OSTC ePP PP 03 31 03.6 -2.9
OSTC ePKKP PKKPbc 03 39 38.8 +0.2
OSTC eSS SS 03 47 01.0 +2.8
MDVR Moldovita 120.78 321 ⇑P PKPdf 03 29 29.9 -0.7
VTS Vitosha 120.80 318 ⇑P PKPdf 03 29 28.1 -2.8
VTS Vitosha 120.80 318 ⇑PKIKP PKPdf 03 29 28.1 -2.8
VTS Vitosha 120.80 318 P PKPdf 03 29 30.8 -0.1
PAULI Pauline 120.81 51 P PKPdf 03 29 30.9 0.0
baz=289
DPC Dobruska-Polom 120.83 329 ePKIKP PKPdf 03 29 29.7 -0.9
DPC e 03 31 07.4
DPC Dobruska-Polom 120.83 329 ePKPDF PKPdf 03 29 29.7 -0.9
DPC ePP PP 03 31 07.4 +0.4
DPC ePKKP PKKPbc 03 39 38.4 +0.1
DPC eSS SS 03 47 09.7 +11
BANR Banloc 120.84 322 ⇓P PKiKP 03 29 32.5 +1.7
R55A Marlinton 120.89 47 PKPdf 03 29 31.1 0.0
R55A Marlinton 120.89 47 P PKPdf 03 29 30.8 -0.3
baz=292
R55A P PKPdf 03 29 30.8 -0.3
baz=292
UPC Upice 120.89 329 ePKIKP PKiKP 03 29 31.7 +0.9
UPC e 03 31 09.2
UPC eSS SS 03 47 05.8 +5.9
UPC Upice 120.89 329 ePKPDF PKiKP 03 29 31.7 +0.9
UPC ePP PP 03 31 09.2 +1.8
UPC ePKKP PKKPab 03 39 39.6 +0.7
UPC eSS SS 03 47 05.8 +5.9
MMB Musomiste 120.92 317 P PKPdf 03 29 30.3 -0.7
V55A Taylorsville 120.93 50 PKiKP 03 29 31.4 +0.1
V55A Taylorsville 120.93 50 P PKPdf 03 29 31.2 +0.1
baz=290
V55A P PKPdf 03 29 31.2 +0.1
baz=290
NVR Nevrokopi 120.93 317 P PKPdf 03 29 28.8 -2.2
JAVC Velka Javorina 120.99 327 ePDIFF Pdif 03 26 00.7 +0.8
JAVC Velka Javorina 120.99 327 ePKP PKiKP 03 29 31.8 +0.7
JAVC ePP PP 03 31 07.2 -1.0
JAVC e 03 37 18.9
JAVC ePKKP PKKPab 03 39 38.7 +0.1
J56A Wolcott 121.05 41 P PKPdf 03 29 30.0 -1.2
baz=298
J56A P PKPdf 03 29 30.0 -1.2
baz=298
BLA Blacksburg 121.06 48 P PKPdf 03 29 31.0 -0.5
baz=291
BLA Blacksburg 121.06 48 PKiKP PKPdf 03 29 30.6 -0.8
baz=291
KOKK Kokkinochori, 121.06 316 P PKPdf 03 29 29.4 -1.9
KMSC Kings Mountain 121.08 51 P PKPdf 03 29 31.4 -0.1
baz=289
KMSC Kings Mountain 121.08 51 PKiKP PKPdf 03 29 30.8 -0.7
baz=289
L56A Greenwood 121.10 42 P PKPdf 03 29 30.8 -0.6
baz=296
L56A P PKPdf 03 29 30.8 -0.6
baz=296
255A Hazlehurst 121.16 55 PKPdf 03 29 31.7 0.0
255A Hazlehurst 121.16 55 P PKPdf 03 29 30.9 -0.8
baz=287
SRS Serrai 121.22 317 P PKPdf 03 29 29.8 -1.8
SRO Srobarova 121.22 326 ePKIKP PKiKP 03 29 32.6 +1.1
SRO Srobarova 121.22 326 ePKP PKiKP 03 29 32.6 +1.1
KKB Krupnik 121.24 318 P PKiKP 03 29 33.4 +1.7
VRAC Vranov 121.31 328 ⇑P PKiKP 03 29 33.0 +1.4
VRAC Vranov 121.31 328 ⇑PKIKP PKiKP 03 29 33.0 +1.4
VRAC Vranov 121.31 328 ePDIFF Pdif 03 26 02.0 +0.7
VRAC Vranov 121.31 328 ePKP PKPdf 03 29 31.1 -0.4
VRAC ePP PP 03 31 08.5 -1.7
VRAC e 03 37 19.2
VRAC ePKKP PKKPbc 03 39 36.7 +0.2
MATN Matagalpa 121.31 77 PKPdf 03 29 32.2 -0.3
SMOL Smolenice 121.32 327 ePKIKP PKiKP 03 29 32.2 +0.5
SMOL e 03 31 11.7
BOVS Bovan 121.33 320 ⇑P PKPdf 03 29 31.4 -0.3
LBTB Lobatse 121.35 238 PKiKP PKiKP 03 29 32.8 +0.2
LBTB Lobatse 121.35 238 i P PKiKP 03 29 32.6 0.0
LBTB Lobatse 121.35 238 i P PKiKP 03 29 32.6 0.0
LBTB Lobatse 121.35 238 PKP PKiKP 03 29 32.8 +0.2
comp=Z,35nm,0.8s,baz=236,slow=1.3,SNR=32
LBTB PKKPab PKKPab 03 39 37.1 -0.6
comp=Z,22nm,0.8s,baz=278,slow=4.4,SNR=23
U56A King 121.39 49 P PKPdf 03 29 32.0 0.0
baz=291
U56A P PKPdf 03 29 32.0 0.0
baz=291
JSC Jenkinsville 121.41 52 P PKiKP 03 29 32.2 0.0
baz=289
MODS Modra-Piesok 121.48 327 i P Pdif 03 26 00.8 -1.3
MODS e 03 29 31.8
MODS e 03 31 10.5
MODS Modra-Piesok 121.48 327 ePDIFF Pdif 03 26 00.8 -1.3
MODS Modra-Piesok 121.48 327 ePKP PKPdf 03 29 31.8 -0.1
MODS ePP PP 03 31 10.5 -1.0
WCNY West Carthage 121.49 39 P PKPdf 03 29 31.4 -0.6
baz=299
CSKK Cskako 121.50 325 PKPDF PKPdf 03 29 31.5 -0.4
CSKK Cskako 121.50 325 PKP PKiKP 03 29 32.6 +0.5
K57A Scipio Center 121.53 41 PKPdf 03 29 31.6 -0.5
K57A Scipio Center 121.53 41 P PKPdf 03 29 31.6 -0.5
baz=298
SSPA Standing Stone 121.53 44 PKiKP 03 29 32.6 +0.3
SSPA Standing Stone 121.53 44 P PKPdf 03 29 32.0 -0.2
baz=295
SSPA Standing Stone 121.53 44 PKiKP PKPdf 03 29 31.4 -0.7
baz=295
J57A Williamstown 121.54 40 P PKPdf 03 29 31.7 -0.4
baz=298
J57A P PKPdf 03 29 31.7 -0.4
baz=298
KRUC Moravsky 121.56 328 ePDIFF Pdif 03 26 02.1 -0.3
KRUC Moravsky 121.56 328 ePKP PKPdf 03 29 31.7 -0.3
KRUC ePP PP 03 31 12.1 +0.2
KRUC e 03 37 19.3
KRUC ePKKP PKKPab 03 39 36.1 +0.1
PVCC Panska Ves 121.61 330 ePKIKP PKiKP 03 29 33.3 +1.1
PVCC e 03 31 09.4
PVCC eSS SS 03 47 14.4 +5.6
PVCC Panska Ves 121.61 330 ePKPDF PKiKP 03 29 33.3 +1.1
PVCC ePP PP 03 31 09.4 -2.7
PVCC eSS SS 03 47 14.4 +5.6

PAIG Paliouri 121.66 315 P PKPdf 03 29 31.1 -1.3
KNT Kendrikon 121.67 317 P PKPdf 03 29 30.5 -1.9
ZST Bratislava 121.68 327 ePKIKP PKiKP 03 29 32.6 +0.2
ZST e 03 31 12.8
ZST Bratislava 121.68 327 ePKP PKiKP 03 29 32.6 +0.2
ZST ePP PP 03 31 12.8 +0.1
BRG Berggiesshubel 121.70 331 ⇓ePdif Pdif 03 26 03.4 +0.5
BRG Amp 03 26 05.1
comp=Z,4.7nm,1.0s
BRG ⇓pPiff 03 28 00.1
BRG Amp 03 28 02.5
comp=Z,7.6nm,1.2s
BRG Berggiesshubel 121.70 331 i PKP PKiKP 03 29 32.6 +0.2
BRG Amp 03 29 35.6
comp=Z,41nm,1.2s
BRG ex x 03 30 42.3
BRG Amp 03 30 48.1
comp=Z,36nm,1.4s
BRG PP PP 03 31 07.1 -5.6
BRG Amp 03 31 11.6
comp=Z,56nm,1.3s
BRG SKP 03 32 22.6
BRG Amp 03 32 31.0
comp=Z,59nm,1.3s
BRG ex x 03 32 57.9
BRG Amp 03 33 04.7
comp=Z,56nm,1.4s
BRG Berggiesshubel 121.70 331 ex x 03 33 57.0
BRG Berggiesshubel 121.70 331 SKS SKSdf 03 35 47.0 -10
BRG Berggiesshubel 121.70 331 i PKIKP PKiKP 03 29 32.5 +0.2
BRG 03 32 22.6
BRG e 03 33 57.0
BRG 03 35 47.0
BRG SS SS 03 47 10.0 +0.1
BRG pmax pmax
comp=Z,41nm,1.2s
BRG pmax pmax
comp=Z,36nm,1.4s
BRG pmax pmax
comp=Z,56nm,1.3s
BRG pmax pmax
comp=Z,59nm,1.3s
BRG pmax pmax
comp=Z,56nm,1.4s
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG pmax pmax
comp=Z,12nm,1.3s
HOPE Hope Point 121.72 174 PKPdf 03 29 32.2 +0.1
HOPE Hope Point 121.72 174 PKIKP PKPdf 03 29 32.2 +0.1
SANT Santorini 121.74 311 ⇑P PKPdf 03 29 31.0 -1.7
M57A Sunshine Farm, 121.75 43 P PKPdf 03 29 32.6 0.0
baz=296,SNR=26
M57A P PKPdf 03 29 32.6 0.0
baz=296,SNR=26
FRGS Fruska Gora 121.77 322 ⇑P PKiKP 03 29 33.0 +0.3
FRGS Fruska Gora 121.77 322 eP PKPdf 03 29 31.2 -1.3
BMNY Brushton-Moira 121.78 38 P PKPdf 03 29 32.3 -0.1
baz=300,SNR=20
656A Willston 121.81 58 PKPdf 03 29 32.9 -0.1
LONY Lake Ozonia 121.84 38 PKiKP 03 29 33.0 +0.2
LONY Lake Ozonia 121.84 38 PKiKP PKPdf 03 29 32.2 -0.5
baz=300
CLL Collm 121.87 331 ePdif Pdif 03 26 03.0 -0.7
CLL epPdif pPdif 03 27 56.0 +1.1
CLL e(sPdif) 03 28 47.0
CLL ePKPdf PKiKP 03 29 33.0 +0.3
comp=Z,20nm,0.8s
CLL i PKiKP PKPdf 03 29 35.0 +2.5
comp=Z,40nm,0.8s
CLL ex x 03 30 48.0
CLL ePP PP 03 31 13.0 -0.9
comp=Z,699nm,2.7s
CLL ePPlp 03 31 19.0
comp=Z,3μm,20.7s
CLL ex x 03 32 00.0
CLL eSKPdf SKPdf 03 32 18.0 -2.5
CLL ex x 03 32 27.0
CLL epPP 03 32 54.0
CLL i PKSdf PKSdf 03 33 03.2 -5.7
CLL ex x 03 33 13.0
CLL ePPP PPP 03 33 59.0
CLL epPPP 03 35 25.0
CLL eSKSac SKSac 03 35 47.0 +1.7
CLL ePPPP 03 35 50.0
CLL eSKKSac SKKSac 03 37 14.0 -7.7
CLL eSdif Sdif 03 38 17.0 -2.8
CLL esSKSac sSKSac 03 39 14.0 -5.0
CLL ePKPPbc PKPbc 03 39 33.0 -1.4
comp=Z,33nm,1.3s
CLL ex x 03 39 41.0
CLL ePKKPdf PKKPdf 03 40 05.0 -2.7
comp=Z,18nm,1.5s
CLL eSP SP 03 40 17.0 -0.4
CLL ePS PS 03 41 13.0 -2.8
CLL i x x 03 41 34.0
comp=Z,26nm,1.2s
CLL eSPP SPP 03 41 46.0
CLL ePPS PPS 03 42 56.0
CLL ePKKSbc PKKSbc 03 43 23.0 -1.6
CLL ePKKSdf PKKSdf 03 43 39.0 -6.2
CLL ex x 03 47 09.0
CLL eSS SS 03 47 16.0 +4.0
CLL ex x 03 48 08.0
CLL esSS 03 50 18.0
CLL eSSS SSS 03 51 48.0
CLL esSSS 03 54 42.0
CLL LmV 04 19 00.0
comp=Z,6μm,20.8s
TREC Trest 121.90 328 ePKIKP PKiKP 03 29 33.1 +0.3
TREC e 03 31 14.8
TREC eSS SS 03 47 16.8 +4.2
TREC Trest 121.90 328 ePKPDF PKiKP 03 29 33.1 +0.3
TREC ePP PP 03 31 14.8 +0.6
TREC ePKKP PKKPab 03 39 35.8 +1.2
TREC eSS SS 03 47 16.8 +4.2
MORH Mrgy, Hungar 121.91 324 ⇓P PKPdf 03 29 31.9 -0.7
MORH Mrgy, Hungar 121.91 324 PKPDF PKPdf 03 29 30.9 -1.8
MORH Mrgy, Hungar 121.91 324 PKP PKPdf 03 29 32.7 0.0
MBAR Mbarara 121.91 267 PKiKP 03 29 34.5 +0.4
MBAR Mbarara 121.91 267 PKIKP PKiKP 03 29 34.4 +0.4
MBAR Mbarara 121.91 267 PKP PKiKP 03 29 34.4 +0.3
comp=Z,19nm,0.7s,baz=81,slow=2.8,SNR=15
MBAR PP 03 31 15.5 -0.6
comp=Z,5.2nm,0.8s,baz=59,slow=5.4,SNR=5.4
MBAR PKKPab PKKPab 03 39 34.8 -0.3
comp=Z,1.6nm,0.3s,baz=150,slow=5.5,SNR=4.9
BIRD Birdtown, Kers 121.92 51 P PKiKP 03 29 33.2 -0.1
baz=290,SNR=16
P57A Homestead Farm 121.92 45 P PKPdf 03 29 33.0 +0.1
baz=294,SNR=17
P57A P PKPdf 03 29 33.0 +0.1
baz=294,SNR=17
S57A Dark Hollow, R 121.93 47 P PKPdf 03 29 32.8 -0.2
baz=293,SNR=9.5
S57A P PKPdf 03 29 32.8 -0.2
baz=293,SNR=9.5
PRU Pruhonice 121.96 330 ePKIKP PKiKP 03 29 33.2 +0.3
PRU e 03 31 11.6
PRU eSS SS 03 47 16.8 +3.6
PRU Pruhonice 121.96 330 ePKPDF PKiKP 03 29 33.2 +0.3
PRU ePP PP 03 31 11.6 -2.9
PRU ePKKP PKKPbc 03 39 32.2 -1.9
PRU eSS SS 03 47 16.8 +3.6
MNTQ Montreal, Queb 121.97 37 PKiKP 03 29 33.5 +0.5
EGYH Egyhazaskeszo 122.00 326 PKPDF PKiKP 03 29 33.0 0.0
EGYH Egyhazaskeszo 122.00 326 PKP PKiKP 03 29 35.1 +2.0
LSZ Lusaka 122.00 250 PKIKP PKiKP 03 29 34.2 +0.1
LSZ Lusaka 122.00 250 PKP PKiKP 03 29 34.2 +0.1
comp=Z,28nm,0.6s,baz=146,slow=2.0,SNR=19
LSZ PKKPab PKKPab 03 39 34.5 -0.3
comp=Z,25nm,0.9s,baz=300,slow=1.2,SNR=31
T57A Hurt 122.00 48 P PKPdf 03 29 32.9 -0.3
baz=292,SNR=20
T57A P PKPdf 03 29 32.9 -0.3
baz=292,SNR=20
MPLH Magyarpolny 122.02 325 PKPDF PKPdf 03 29 32.6 -0.3
MPLH Magyarpolny 122.02 325 PKP PKiKP 03 29 33.8 +0.7
J58A Remsen 122.02 40 P PKPdf 03 29 32.7 -0.3
baz=299,SNR=25
J58A P PKPdf 03 29 32.7 -0.3
baz=299,SNR=25
SUR Sutherland 122.04 228 PKP PKiKP 03 29 34.2 +0.3
comp=Z,22nm,0.8s,baz=172,slow=5.2,SNR=20

SUR PKKPab PKKPab 03 39 34.9 0.0
comp=Z,22nm,0.8s,baz=298,slow=3.6,SNR=13
W57A Gilead 122.11 50 P PKPdf 03 29 33.1 -0.3
baz=290,SNR=16
W57A P PKPdf 03 29 33.1 -0.3
baz=290,SNR=16
BINY Binghamton 122.12 41 P PKPdf 03 29 33.0 -0.3
baz=298,SNR=13
BINY Binghamton 122.12 41 PKiKP PKPdf 03 29 32.7 -0.6
baz=298
Y57A Sumter 122.18 52 PKiKP 03 29 33.7 0.0
Y57A Sumter 122.18 52 P PKPdf 03 29 33.5 -0.1
baz=289,SNR=19
Y57A P PKPdf 03 29 33.5 -0.1
baz=289,SNR=19
DIVS Divibare 122.19 321 PKPdf 03 29 33.2 -0.3
DIVS Divibare 122.19 321 eP PKPdf 03 29 33.0 -0.4
DION Dionisos Attik 122.22 313 P PKPdf 03 29 33.0 -0.6
XOR Xorichti 122.23 315 P PKPdf 03 29 31.7 -1.9
N58A Sunbury 122.25 43 P PKPdf 03 29 33.1 -0.4
baz=296,SNR=24
N58A P PKPdf 03 29 33.1 -0.4
baz=296,SNR=24
SOP Sopron 122.28 326 PKPDF PKiKP 03 29 34.3 +0.7
SOP Sopron 122.28 326 PKP PKiKP 03 29 35.2 +1.6
PTL Penteli 122.28 313 P PKPdf 03 29 32.8 -0.9
SKO Skopje 122.28 319 i P PKPdf 03 29 33.6 0.0
KOVH Kovagotottos 122.29 324 PKP PKPdf 03 29 33.1 -0.3
NCB Newcomb 122.39 39 P PKPdf 03 29 33.6 -0.2
baz=300,SNR=17
JTS Las Juntas de 122.40 80 PKiKP 03 29 34.7 -0.1
JTS Las Juntas de 122.40 80 PKIKP PKiKP 03 29 34.7 -0.1
JTS Las Juntas de 122.40 80 eP PKiKP 03 29 37.9 +3.1
LIT Litokhoron 122.41 316 P PKPdf 03 29 32.4 -1.5
RONA Rosalia, Austr 122.41 327 eP PKiKP 03 29 34.3 +0.4
comp=Z,36nm,1.1s,SNR=15
RONA eP PP 03 31 19.8 +2.1
comp=Z,88nm,1.3s
RONA eP PKKPab 03 39 31.2 -1.2
comp=Z,21nm,1.4s
VLY Voula,Athens 122.41 313 P PKPdf 03 29 30.9 -3.0
J59A Piesco 122.47 39 P PKPdf 03 29 33.6 -0.3
baz=300,SNR=23
J59A P PKPdf 03 29 33.6 -0.3
baz=300,SNR=23
CONA Conrad Observa 122.51 327 eP PKiKP 03 29 34.5 +0.3
comp=Z,28nm,0.9s,SNR=14
CONA P PP 03 31 20.5 +2.0
comp=Z,56nm,1.2s
CONA eP PKKPbc 03 39 32.1 0.0
comp=Z,24nm,1.3s
KTI Kastanea 122.54 317 P PKPdf 03 29 34.4 +0.1
V58A Windy Hill, Pi 122.55 49 PKiKP 03 29 34.6 +0.2
V58A Windy Hill, Pi 122.55 49 P PKPdf 03 29 34.0 -0.3
baz=291,SNR=12
V58A P PKPdf 03 29 34.0 -0.3
baz=291,SNR=12
IDI Anoyia 122.56 310 P PKiKP 03 29 35.0 +0.4
IDI Anoyia 122.56 310 PKP PKPdf 03 29 34.2 -0.2
comp=Z,18nm,0.6s,baz=241,slow=15,SNR=15
IDI PP PP 03 31 20.0 +0.7
comp=Z,30nm,0.9s,baz=102,slow=7.5,SNR=3.6
IDI PKKPbc PKKPab 03 39 32.3 +0.5
comp=Z,72nm,0.8s,baz=220,slow=5.8,SNR=20
KSPA Keystone Colle 122.56 42 PKPdf 03 29 33.7 -0.4
KSPA Keystone Colle 122.56 42 P PKPdf 03 29 33.7 -0.4
baz=298,SNR=6.9
R58B Mineral 122.64 47 P PKPdf 03 29 34.0 -0.4
baz=294,SNR=20
R58B P PKPdf 03 29 34.0 -0.4
baz=294,SNR=20
NHSC New Hope 122.65 53 P PKiKP 03 29 35.1 +0.4
baz=289
NHSC New Hope 122.65 53 PKiKP PKPdf 03 29 34.4 -0.1
baz=289
LKR Lokris 122.66 314 P PKPdf 03 29 32.8 -1.6
L59A Walton 122.74 41 PKiKP 03 29 35.0 +0.3
L59A Walton 122.74 41 P PKPdf 03 29 34.3 -0.3
baz=298,SNR=17
L59A P PKPdf 03 29 34.3 -0.3
baz=298,SNR=17
JSRW J. Sargeant Re 122.75 47 PKiKP 03 29 34.8 0.0
SDMD Soldier's Deli 122.78 45 P PKPdf 03 29 34.4 -0.2
baz=295,SNR=18
Y58A Scranton 122.78 52 P PKiKP 03 29 35.2 +0.3
baz=290
Y58A P PKiKP 03 29 35.2 +0.3
baz=290
A252A Venje 122.80 324 i P PKPdf 03 29 33.8 -0.7
CKRC Cesky Krumlov 122.80 329 ePKPDF PKPdf 03 29 34.3 -0.1
CKRC ePP PP 03 31 19.9 -0.3
CKRC ePKKP PKKPab 03 39 29.1 -1.5
CKRC eSS SS 03 47 35.8 +12
KZN Kozani 122.81 317 P PKPdf 03 29 33.2 -1.5
X58A Rowland 122.82 51 P PKPdf 03 29 34.8 0.0
baz=290
X58A P PKPdf 03 29 34.8 0.0
baz=290
RUDO Rudo 122.82 321 eP PKPdf 03 29 33.4 -1.2
NKC Novy Kostel 122.84 331 ePKIKP PKiKP 03 29 34.8 +0.1
NKC e 03 31 21.7
NKC Novy Kostel 122.84 331 ePKPDF PKiKP 03 29 34.8 +0.1
NKC ePP PP 03 31 21.7 +1.3
NKC ePKKP PKKPbc 03 39 32.1 +1.3
CBN Corbin Frederi 122.91 46 PKPdf 03 29 34.8 0.0
CBN Corbin Frederi 122.91 46 P PKPdf 03 29 34.9 0.0
baz=294
CBN Corbin Frederi 122.91 46 PKiKP PKPdf 03 29 34.6 -0.2
baz=294
HCNY Howe Caverns 122.91 40 P PKPdf 03 29 34.5 -0.2
baz=299,SNR=14
ESPN Las Esperanzas 122.94 78 PKPdf 03 29 35.1 -0.5
THL Klokotos Trika 122.97 316 P PKPdf 03 29 32.9 -2.0
KHC Kasperske Hory 122.98 329 i P Pdif 03 26 07.0 -1.8
KHC e 03 29 34.4
KHC e 03 32 24.0
KHC eSS SS 03 47 25.5 -0.7
KHC Kasperske Hory 122.98 329 ePDIF Pdif 03 26 07.0 -1.8
KHC ePKPDF PKPdf 03 29 34.4 -0.4
KHC ePP PP 03 31 17.2 -4.2
KHC eSKP 03 32 24.0
KHC ePKKP PKKPab 03 39 29.0 -0.9
KHC ex x 03 39 32.5
KHC eSS SS 03 47 25.5 -0.7
LINV Loch Inver, As 123.01 346 eP PKPdf 03 29 33.4 -1.0
ACCN Adirondack Com 123.04 39 P PKPdf 03 29 34.6 -0.3
baz=300,SNR=7.1
DWPF Disney Wildern 123.06 59 PKiKP 03 29 35.8 +0.1
DWPF Disney Wildern 123.06 59 P PKPdf 03 29 35.3 -0.1
baz=285
DWPF Disney Wildern 123.06 59 PKiKP PKPdf 03 29 35.4 0.0
baz=285
KRND KRANIDI 123.07 313 P PKPdf 03 29 33.3 -1.9
ARSA Arzberg 123.10 326 eP PKiKP 03 29 35.3 0.0
comp=Z,6.3nm,1.0s
ARSA eP PP 03 31 24.3 +2.1
comp=Z,43nm,1.2s
ARSA eP PKKPbc 03 39 31.0 +1.3
comp=Z,23nm,1.3s
GEC2 GERESS Array S 123.10 329 PKPdf 03 29 35.2 +0.1
GERES GERESS Array B 123.10 329 PKIKP PKPdf 03 29 34.8 -0.3
GERES GERESS Array B 123.10 329 Pdiff Pdif 03 26 10.5 +1.2
comp=Z,1.0nm,0.8s,baz=66,slow=4.8,SNR=8.5
GERES PKP PKPdf 03 29 34.8 -0.3
comp=Z,15nm,0.7s,baz=70,slow=2.0,SNR=34
GERES PKKPbc PKKPbc 03 39 31.0 +1.1
comp=Z,7.3nm,0.9s,baz=234,slow=3.3,SNR=14
OHR Ohrid 123.11 318 i P PKiKP 03 29 35.7 +0.2
VT1 Waterbury 123.11 38 PKPdf 03 29 35.1 0.0
VT1 Waterbury 123.11 38 P PKPdf 03 29 35.1 0.0
baz=302,SNR=14
KOGS Kog 123.16 325 ePP PP 03 31 26.6 +3.9
KOGS e 03 32 03.0
KOGS epPP 03 33 03.6
KOGS e 03 34 06.4
KOGS eSP SP 03 40 28.1 -1.0
KOGS epSP 03 42 03.7
KOGS e 04 01 56.5
MCVT Middlebury Col 123.17 38 P PKPdf 03 29 35.1 -0.1
baz=301,SNR=14
A052A Srbac 123.17 323 eP PKPdf 03 29 34.5 -0.7
IMMV Iera Moni Meta 123.19 311 P PKiKP 03 29 35.7 -0.1
NEST Nestorio 123.26 317 P PKPdf 03 29 34.8 -0.8
T59A Double "B" Far 123.27 47 P PKPdf 03 29 35.5 -0.1
baz=293

T59A P PKPdf 03 29 35.5 -0.1
baz=293
UPM Unac-Piva 123.32 321 *e*P **PKPdf** 03 29 35.6 -0.2
U59A Littleton 123.33 48 P **PKPdf** 03 29 35.1 -0.6
baz=293
U59A P **PKPdf** 03 29 35.1 -0.6
baz=293
KBN Korca 123.34 317 **PKPdf** 03 29 35.7 0.0
KBN Korca 123.34 317 PKIKP **PKPdf** 03 29 35.7 0.0
Y59A Loris 123.38 51 **PKiKP** 03 29 35.8 -0.1
Y59A Loris 123.38 51 P **PKPdf** 03 29 35.9 0.0
baz=290
Y59A P **PKPdf** 03 29 35.9 0.0
baz=290
EVR Evrytania 123.40 315 P **PKPdf** 03 29 35.4 -0.5
MOA Molln 123.42 328 *e*P **PKiKP** 03 29 35.8 -0.1
comp=Z,9.2nm,0.6s,SNR=7.6
MOA *e*P **PP** 03 31 27.3 +2.9
comp=Z,25nm,0.9s
MOA *e*P **PKKPbc** 03 39 31.8 +3.3
comp=Z,27nm,1.2s
MDO Dochfour 123.44 345 *e*P **PKPdf** 03 29 34.1 -1.2
GEDE Greenville 123.44 44 P **PKPdf** 03 29 35.5 -0.3
baz=297,SNR=16
VLI Veliai 123.49 312 P **PKiKP** 03 29 38.1 +1.8
PDG Podgorica 123.49 320 ⇓P **PKiKP** 03 29 36.8 +0.6
PSUB Penn St. - Bra 123.52 43 P **PKPdf** 03 29 35.6 -0.3
baz=297
KLV Kalavryta, Ach 123.52 314 P **PKPdf** 03 29 34.9 -1.3
NPNY Mohonk Preserv 123.54 41 P **PKPdf** 03 29 35.6 -0.4
baz=299
ANKY Antikythira Is 123.55 311 P **PKiKP** 03 29 37.0 +0.6
ODNJ Ogdensburg 123.56 42 P **PKPdf** 03 29 35.6 -0.4
baz=298,SNR=19
BLY Banja Luka 123.56 323 *e*P **PKPdf** 03 29 35.6 -0.3
A051A Mrakovica 123.58 324 *e*P **PKPdf** 03 29 35.4 -0.7
TUPA Temple Univers 123.59 43 P **PKiKP** 03 29 36.4 0.0
baz=297,SNR=9.7
KAC Achnashellach 123.62 346 *e*P **PKPdf** 03 29 34.2 -1.5
TIR Tirane 123.62 319 ⇓P **PKPdf** 03 29 33.6 -2.5
TIR Tirane 123.62 319 **PKPdf** 03 29 36.0 -0.1
TIR Tirane 123.62 319 ⇓PKIKP **PKPdf** 03 29 33.6 -2.5
DRME Dracevica, Mon 123.65 320 *e*P **PKPdf** 03 29 35.4 -0.8
LBNH Lisbon 123.67 37 **PKiKP** 03 29 37.0 +0.5
LBNH Lisbon 123.67 37 PKIKP **PKiKP** 03 29 37.0 +0.5
LBNH Lisbon 123.67 37 P **PKPdf** 03 29 36.0 -0.1
baz=303,SNR=8.4
LBNH Lisbon 123.67 37 PKiKP **PKPdf** 03 29 36.2 0.0
baz=303
CNNC Cliffs of the 123.68 50 P **PKPdf** 03 29 36.6 +0.1
baz=292
CNNC Cliffs of the 123.68 50 PKiKP **PKPdf** 03 29 36.0 -0.4
baz=292
PERS Pernice 123.69 326 *e*Pdiff **Pdif** 03 26 14.4 +2.4
PERS *ep*Pdiff **pPdif** 03 28 01.5 -1.7
PERS *es*Pdiff **sPdif** 03 28 56.8 +3.5
PERS *i* PKPdf **PKPdf** 03 29 35.5 -0.7
PERS *i* PP **PP** 03 31 30.5 +4.3
PERS *ep*PP 03 33 07.4
PERS *e*PKKP **PKKPab** 03 39 26.3 -0.5
PERS *es*P SP 03 40 32.1 -1.6
BRY Bratogost 123.71 321 *e*P **PKPdf** 03 29 36.0 -0.5
SOKA Soboth 123.71 326 *e*P **PKPdf** 03 29 35.5 -0.8
comp=Z,34nm,1.3s,SNR=14
SOKA *e*P **PP** 03 31 28.1 +1.7
comp=Z,34nm,1.1s
SOKA *e*P **PKKPab** 03 39 26.4 -0.5
comp=Z,23nm,1.1s
D62A Allapoint, All 123.71 33 P **PKPdf** 03 29 35.5 -0.6
baz=307
D62A P **PKPdf** 03 29 35.5 -0.6
baz=307
E62A Clayton Lake 123.72 34 P **PKPdf** 03 29 35.8 -0.4
baz=306,SNR=10
E62A P **PKPdf** 03 29 35.8 -0.4
baz=306,SNR=10
HNH Hanover 123.73 38 P **PKiKP** 03 29 36.7 +0.1
baz=302
JAN Janina 123.74 316 P **PKPdf** 03 29 35.1 -1.4
J61A Chester 123.75 39 **PKiKP** 03 29 37.2 +0.5
J61A Chester 123.75 39 P **PKiKP** 03 29 36.7 +0.1
baz=302
J61A P **PKiKP** 03 29 36.7 +0.1
baz=302
BRNJ Basking Ridge 123.77 42 **PKiKP** 03 29 36.8 +0.1
BRNJ Basking Ridge 123.77 42 P **PKPdf** 03 29 36.5 +0.1
baz=298,SNR=12
BRNY Black Rk. Fore 123.79 41 P **PKPdf** 03 29 36.0 -0.5
baz=299,SNR=7.6
T60A Surry 123.80 47 P **PKPdf** 03 29 36.7 +0.1
baz=294
T60A P **PKPdf** 03 29 36.7 +0.1
baz=294
MGRS Mrkonjic Grad 123.80 323 *e*P **PKPdf** 03 29 33.1 -3.4
PANJ Princeton 123.82 43 P **PKiKP** 03 29 36.7 -0.1
baz=298,SNR=10.0
BIOA Bad Ischl, Aus 123.85 328 *e*P **PKPdf** 03 29 35.5 -1.0
comp=Z,25nm,1.4s,SNR=12
BIOA P **PP** 03 31 30.1 +2.9
comp=Z,59nm,1.3s
BIOA *e*P **PKKPbc** 03 39 27.0 +0.1
comp=Z,14nm,1.1s
Y60A Bolivia 123.88 51 P **PKiKP** 03 29 37.4 +0.2
baz=291
Y60A P **PKiKP** 03 29 37.4 +0.2
baz=291
F62A Pittston Farm, 123.89 35 **PKiKP** 03 29 37.1 +0.2
F62A Pittston Farm, 123.89 35 P **PKPdf** 03 29 36.5 0.0
baz=305,SNR=11
F62A P **PKPdf** 03 29 36.5 0.0
baz=305,SNR=11
TREB Trebinje 123.92 321 *e*P **PKiKP** 03 29 37.2 +0.2
SRKY Kupres RS 123.94 323 *e*P **PKPdf** 03 29 36.3 -0.5
H62A Milan 123.95 37 P **PKPdf** 03 29 36.3 -0.4
baz=304,SNR=9.5
H62A P **PKPdf** 03 29 36.3 -0.4
baz=304,SNR=9.5
G62A West of Eustis 123.96 36 P **PKPdf** 03 29 36.9 +0.2
baz=304,SNR=8.0
G62A P **PKPdf** 03 29 36.9 +0.2
baz=304,SNR=8.0
CRES Cresnjev 123.97 325 *e*P **PKPdf** 03 29 34.5 -2.2
HCY Herceg Novi 123.97 320 *e*P **PKPdf** 03 29 36.3 -0.5
RLS Riolos of Patr 124.01 314 P **PKiKP** 03 29 37.3 0.0
ITM Ithomi 124.04 313 P **PKPdf** 03 29 36.1 -1.0
PAL Palisades 124.06 42 P **PKPdf** 03 29 36.9 0.0
baz=299,SNR=12
PAL Palisades 124.06 42 PKiKP **PKPdf** 03 29 36.6 -0.4
baz=299
OBKA Obir 124.08 326 *e*P **PKPdf** 03 29 35.6 -1.4
OBKA Obir 124.08 326 *e*P **PKPdf** 03 29 35.7 -1.3
comp=Z,27nm,1.5s,SNR=6.4
OBKA *e*P **PP** 03 31 30.7 +1.9
comp=Z,36nm,1.2s
OBKA *e*P **PKKPab** 03 39 25.0 -0.2
comp=Z,12nm,0.9s
A050A Klekovaca 124.10 323 *e*P **PKPdf** 03 29 36.0 -1.1
L61B Northampton 124.14 40 P **PKPdf** 03 29 36.8 -0.3
baz=301,SNR=12
L61B Northampton 124.14 40 PKiKP **PKPdf** 03 29 36.6 -0.5
baz=301
I62A Tamworth 124.22 37 P **PKiKP** 03 29 37.6 0.0
baz=303,SNR=10
I62A P **PKiKP** 03 29 37.6 0.0
baz=303,SNR=10
FFD Franklin Falls 124.25 38 P **PKiKP** 03 29 38.2 +0.6
baz=302,SNR=5.8
STON Ston 124.25 321 *e*P **PKPdf** 03 29 35.1 -2.2
STON Ston 124.25 321 *i* P **PKPdf** 03 29 34.8 -2.5
INVG Invergeldie, C 124.25 345 *e*P **PKPdf** 03 29 36.0 -0.9
LKD2 Lefkada island 124.26 315 P **PKiKP** 03 29 37.9 +0.1
BOJS Bojanci 124.27 325 *e*P **PKPdf** 03 29 36.1 -1.2
RICI Ricice 124.27 322 *i* P **PKPdf** 03 29 36.6 -0.8
K62A Royalston 124.31 39 P **PKiKP** 03 29 38.0 +0.2
baz=301,SNR=7.0
K62A P **PKiKP** 03 29 38.0 +0.2
baz=301,SNR=7.0
LJU Ljubljana 124.36 326 *i* Pdiff **Pdif** 03 26 17.2 +2.3
LJU *i* pPdiff **pPdif** 03 28 06.2 -0.1
LJU *es*Pdiff **sPdif** 03 29 00.3 +4.0
LJU *i* PKPdf **PKPdf** 03 29 37.2 -0.2
LJU *e* 03 30 51.5
LJU *e*PP **PP** 03 31 34.8 +4.1
LJU *ep*PP 03 33 12.5
LJU *e*SKSac **SKSac** 03 35 57.0 +3.4
LJU *e*SKKSac **SKKSac** 03 37 38.0 0.0
LJU *e*PKKP **PKKPbc** 03 39 24.8 0.0
LJU *e* 03 39 31.2
LJU *ep*SP 03 42 17.3
LJU *es*SP 03 43 07.6
LJU *e*SS **SS** 03 47 48.1 +4.5
LJU *e* 03 50 26.8
LJU *e* 04 02 12.0
KBA Koelnbreinsper 124.39 327 *e*P **PKPdf** 03 29 36.1 -1.6
comp=Z,16nm,1.2s,SNR=8.9
KBA *e*P **PP** 03 31 33.2 +2.2
comp=Z,79nm,1.7s
KBA *e*P **PKKPab** 03 39 23.4 -0.6
comp=Z,18nm,0.9s
KEK Kerkira 124.43 317 P **PKPdf** 03 29 36.9 -0.9
KIJV Kijevo 124.44 323 *i* P **PKPdf** 03 29 36.7 -0.9
MAKA Makarska 124.45 322 *i* P **PKPdf** 03 29 36.6 -1.0
F63A Nahmakanta, Br 124.50 35 P **PKiKP** 03 29 37.9 -0.2
baz=306,SNR=8.9
F63A P **PKiKP** 03 29 37.9 -0.2
baz=306,SNR=8.9
MYKA Terra Mystica 124.50 327 *e*P **PKPdf** 03 29 37.5 -0.3
comp=Z,24nm,1.6s,SNR=6.0
MYKA *e*P **PP** 03 31 33.7 +2.1
comp=Z,40nm,0.9s
MYKA *e*P **PKKPab** 03 39 23.3 -0.1
comp=Z,11nm,0.7s
UDBI Udbina 124.53 324 *i* P **PKPdf** 03 29 37.1 -0.8
I63A Otisfield 124.58 37 P **PKiKP** 03 29 38.3 +0.1
baz=304
I63A P **PKiKP** 03 29 38.3 +0.1
baz=304
CEY Cerknica 124.60 326 *e*P **PKPdf** 03 29 37.1 -0.8
PKME Peaks-Kenny Pk 124.65 35 P **PKiKP** 03 29 38.3 0.0
baz=306,SNR=6.5
PKME Peaks-Kenny Pk 124.65 35 PKiKP **PKPdf** 03 29 37.6 -0.4
baz=306
BRU2 Volcan 124.67 82 *e*P **PKiKP** 03 29 42.8 +3.3
HRV Adam Dziewonsk 124.82 39 **PKiKP** 03 29 38.8 0.0
HRV Adam Dziewonsk 124.82 39 ⇓PKIKP **PKiKP** 03 29 39.2 +0.4
HRV Adam Dziewonsk 124.82 39 P **PKiKP** 03 29 38.6 -0.2
baz=302
HRV Adam Dziewonsk 124.82 39 PKiKP **PKPdf** 03 29 38.1 -0.3
baz=302
F64A Sherman 124.83 34 P **PKPdf** 03 29 38.2 -0.1
baz=307,SNR=7.7
F64A P **PKPdf** 03 29 38.2 -0.1
baz=307,SNR=7.7
WVL Waterville 124.84 36 P **PKPdf** 03 29 38.5 +0.2
baz=305,SNR=6.4
UNH University of 124.93 38 P **PKiKP** 03 29 39.1 +0.2
baz=303
MORI Morici 124.94 323 *i* P **PKPdf** 03 29 38.0 -0.5
SKDS Skadanscina 124.95 326 *e*P **PKPdf** 03 29 37.8 -0.8
EKA Eskdalemuir Ar 124.97 343 PKKPbc PKKPbc 03 39 21.9 -0.8
comp=Z,1.1nm,0.3s,baz=214,slow=4.1,SNR=16
ABTA Abfaltersbach 125.04 328 *e*P **PKPdf** 03 29 37.8 -1.0
comp=Z,51nm,1.0s,SNR=14
ABTA *e*P **PP** 03 31 36.9 +1.7
comp=Z,54nm,1.6s
ABTA *e*P **PKKPbc** 03 39 22.8 +0.5
comp=Z,28nm,0.9s,SNR=11
VIRC Vir 125.08 324 *i* P **PKPdf** 03 29 38.5 -0.3
WATA Walderalm 125.16 329 *e*P **PKPdf** 03 29 38.6 -0.5
comp=Z,32nm,1.1s,SNR=12
WATA *e*P **PP** 03 31 38.3 +2.4
comp=Z,49nm,1.2s
WTTA Wattenberg 125.18 328 *e*P **PKPdf** 03 29 38.8 -0.4
comp=Z,92nm,1.3s,SNR=19
WTTA *e*P **PP** 03 31 38.5 +2.3
comp=Z,103nm,1.4s
WTTA *e*P **PKKPbc** 03 39 23.2 +1.4
comp=Z,8.3nm,0.7s
A253A Karojba, Istri 125.21 325 *i* P **PKPdf** 03 29 38.7 -0.4
DUGI Dugi Otok 125.25 324 *i* P **PKPdf** 03 29 38.9 -0.3
MOTA Moosalm 125.40 329 *e*P **PKPdf** 03 29 38.4 -1.2
comp=Z,34nm,1.0s,SNR=12
MOTA *e*P **PP** 03 31 39.7 +2.2
comp=Z,66nm,1.1s
MOTA *e*P **PKKPbc** 03 39 22.5 +1.6
comp=Z,11nm,0.8s
SQTA Sankt Quirin 125.43 329 *e*P **PKPdf** 03 29 38.8 -0.8
comp=Z,57nm,1.4s,SNR=14
SQTA *e*P **PP** 03 31 40.0 +2.3
comp=Z,66nm,1.3s
SQTA *e*P **PKKPbc** 03 39 22.6 +1.8
comp=Z,17nm,1.2s
RETA Reutte 125.48 329 *e*P **PKPdf** 03 29 38.9 -0.7
comp=Z,19nm,1.2s,SNR=8.8
RETA *e*P **PP** 03 31 39.7 +1.8
comp=Z,79nm,1.6s
RETA *e*P **PKKPbc** 03 39 21.9 +1.4
comp=Z,9.4nm,0.8s
BTNL Ternell 125.50 334 *d*PKiKP **PKiKP** 03 29 40.2 +0.3
BEBN Eben Emael 125.53 335 *d*PKiKP **PKiKP** 03 29 41.4 +1.5
MEM Membach 125.53 335 *d*PKiKP **PKiKP** 03 29 40.2 +0.3
KESW Keswick, Cumbr 125.60 343 *e*P **PKPdf** 03 29 38.4 -1.1
G65A Princeton 125.67 34 P **PKPdf** 03 29 40.1 +0.2
baz=307,SNR=17
G65A P **PKPdf** 03 29 40.1 +0.2
baz=307,SNR=17
BHOU Houvegnez 125.72 334 *d*PKPdf **PKPdf** 03 29 38.5 -1.4
BHOU *d*PKIKP **PKiKP** 03 29 40.3 -0.1
BSTI Sart Tilman 125.74 335 *d*PKiKP **PKiKP** 03 29 40.8 +0.4
FETA Feichten 125.81 329 *e*P **PKPdf** 03 29 39.9 -0.5
comp=Z,44nm,1.0s,SNR=12
FETA *e*P **PP** 03 31 42.0 +1.7
comp=Z,48nm,1.1s
FETA *e*P **PKKPbc** 03 39 21.1 +1.7
comp=Z,16nm,0.8s
BCLA Clavier 125.97 335 *d*PKiKP **PKiKP** 03 29 41.2 +0.3
MATE Matera 126.04 319 ⇑P **PKPdf** 03 29 40.5 -0.3
DAVA Damuels 126.06 329 *e*P **PKPdf** 03 29 40.1 -0.8
comp=Z,28nm,1.0s,SNR=9.8
DAVA *e*P **PP** 03 31 44.2 +2.4
comp=Z,108nm,1.6s
DAVA *e*P **PKKPbc** 03 39 19.2 +0.8
comp=Z,17nm,0.8s
BFO Black Forest 126.12 331 **PKPdf** 03 29 40.8 0.0
BFO Black Forest 126.12 331 PKIKP **PKPdf** 03 29 40.8 0.0
WLF Walferdange 126.17 334 *d*PKiKP **PKiKP** 03 29 41.6 +0.4
LBWR Ladybower, Pea 126.20 341 *e*P **PKPdf** 03 29 38.4 -2.4
RCHB Rochefort 126.20 335 *d*PKiKP **PKiKP** 03 29 41.7 +0.4
PPLP Puerto Lpez 126.23 95 *e*P **PKiKP** 03 29 42.8 +0.3
BMRD Maredsous 126.29 335 *d*PKiKP **PKiKP** 03 29 41.4 -0.1
DAVOX Davos/Dischmat 126.40 329 PP **PP** 03 31 43.9 -0.3
comp=Z,30nm,1.0s,baz=112,slow=2.9,SNR=6.2
DAVOX PKKPbc **PKKPab** 03 39 15.7 +0.3
comp=Z,22nm,0.9s,baz=236,slow=3.2,SNR=12
DAVOX SKKP 03 42 48.5
comp=Z,8.9nm,1.0s,baz=259,slow=11,SNR=5.0
DOU Dourbes 126.52 335 *d*PKiKP **PKiKP** 03 29 43.4 +1.4
CACAO El Cacao, Vera 126.52 84 *e*P **PKiKP** 03 29 45.7 +2.8
TIP Timpagrande 126.75 318 ⇓P **PKPdf** 03 29 40.8 -1.5
YLL Llanberis 127.17 343 *e*P **PKPdf** 03 29 41.0 -1.6
TRQA Tornquist 127.44 145 **PKPdf** 03 29 43.9 +0.2
TRQA Tornquist 127.44 145 PKIKP **PKPdf** 03 29 43.9 +0.2
BCIP Isla Barro Col 127.48 81 *e*P **PKPdf** 03 29 36.9 -7.4
COHC Cochancay 127.64 96 *e*P **PKPdf** 03 29 44.7 +0.1
UPA Univ. de Panam 127.79 82 *e*P **PKPdf** 03 29 43.8 -1.1
MCH1 Michaelchurch 127.80 341 *e*P **PKPdf** 03 29 42.0 -1.8
ATAH Atahualpa 127.81 102 PKP **PKiKP** 03 29 46.6 +0.5
comp=Z,89nm,0.7s,baz=255,slow=1.0,SNR=34
ATAH PP **PP** 03 31 55.1 -0.1
comp=Z,28nm,0.9s,baz=248,slow=6.5,SNR=3.3
SWN1 Swindon 127.82 340 *e*P **PKPdf** 03 29 41.3 -2.5
MONM Monmouth 127.88 341 *e*P **PKPdf** 03 29 42.1 -1.9
NNA Nana 128.28 108 **PKPdf** 03 29 45.7 -0.1
NNA Nana 128.28 108 *c* iPKIKP **PKiKP** 03 29 46.9 +0.4
NNA pmax pmax
comp=Z,190nm,1.0s
NNA Nana 128.28 108 PKP **PKPdf** 03 29 46.1 +0.2
comp=Z,101nm,1.0s,baz=285,slow=4.2,SNR=16
OTAV Otavalo 128.70 93 **PKPdf** 03 29 47.0 -0.2
OTAV Otavalo 128.70 93 ⇑PKIKP **PKPdf** 03 29 47.2 0.0
OTAV Otavalo 128.70 93 *e*P **PKPdf** 03 29 45.7 -1.5
OTAV Otavalo 128.70 93 *e*P **PKPdf** 03 29 47.5 +0.3
MTDJ Mount Denham 128.73 70 *e*P **PKiKP** 03 29 47.7 +0.3
CUSE Cuicocha Este 128.76 93 *e*P **PKiKP** 03 29 49.6 +1.6
VAE Valguarnera 129.21 317 SKPbc SKPbc 03 32 22.8 +1.0
comp=Z,16nm,0.6s,baz=21,slow=10.0,SNR=4.4
UPD2 Meteti 129.30 82 *e*P **PKiKP** 03 29 49.6 +1.1
BONI La Bonita 129.64 92 *e*P **PKPdf** 03 29 48.7 -0.1
BBAC Balboa, Cauca 130.02 90 *e*P **PKPdf** 03 29 48.7 -0.8
TSUM Tsumeb 130.40 241 **PKPdf** 03 29 49.8 0.0
YOTC Yotoco, Valle 131.00 88 *e*P **PKPdf** 03 29 50.6 -0.5
PLMC San Jos del P 131.08 87 *e*P **PKPdf** 03 29 48.7 -2.6
DBBC Dabeiba 131.14 84⇑ *e*P **PKPdf** 03 29 49.6 -1.7
CBOC Ciudad Bolivar 131.35 85 *e*P **PKPdf** 03 29 51.6 -0.3
FLOC Florencia 131.59 91 *e*P **PKiKP** 03 29 53.6 +0.3
LVC Limon Verde 131.62 125 **PKPdf** 03 29 51.7 -0.7
LVC Limon Verde 131.62 125 PKIKP **PKiKP** 03 29 53.3 -0.2
LVC Limon Verde 131.62 125 *e*P **PKPdf** 03 29 51.7 -0.7
LVC Limon Verde 131.62 125 PKP **PKiKP** 03 29 53.3 -0.2
comp=Z,64nm,0.6s,baz=250,slow=4.3,SNR=29
LVC PP **PP** 03 32 20.7 +1.7
comp=Z,16nm,1.0s,baz=199,slow=6.2,SNR=3.8
LVC SKPbc **SKPab** 03 32 32.1 -0.4
comp=Z,135nm,1.0s,baz=233,slow=2.8,SNR=12
GARC Garzon, Huila 131.78 90 *e*P **PKPdf** 03 29 51.6 -1.2
UREC San Jos de Ur 131.79 83 *e*P **PKiKP** 03 29 54.6 +1.0
HELC Santa Helena 131.83 85 *e*P **PKiKP** 03 29 54.6 +0.4
BETC Betania 131.85 90 *e*P **PKiKP** 03 29 54.6 +0.8
ANIL Santa Ana 131.95 87 *e*P **PKPdf** 03 29 53.6 +0.4
GUY2C Guyana, Caldas 131.99 86 *e*P **PKPdf** 03 29 52.6 -0.9
SJCC San Jacinto, C 132.03 80 *e*P **PKPdf** 03 29 51.6 -1.4
PTLC Puerto Leguiza 132.34 93 *e*P **PKPdf** 03 29 52.6 -1.0
ZARC Zaragoza, Cauc 132.47 83 *e*P **PKPdf** 03 29 48.7 -5.1
NORC Norcasia 132.49 86 *e*P **PKiKP** 03 29 54.6 -0.5
SMRC Santa Marta, M 132.86 78 *e*P **PKPdf** 03 29 50.6 -3.8
PTBC PUERTO BERRIO 132.89 85 *e*P **PKPdf** 03 29 53.6 -1.0
ARGC Ariguani, Magd 132.95 80⇑ *e*P **PKPdf** 03 29 50.6 -4.0
ROSC El Rosal 133.03 87 PKIKP **PKPdf** 03 29 55.5 +0.2
ROSC El Rosal 133.03 87 *e*P **PKPdf** 03 29 55.5 +0.2
ROSC El Rosal 133.03 87 PKhKP PKPpre 03 29 43.6
comp=Z,9.5nm,0.5s,baz=63,slow=4.5,SNR=3.9
ROSC PKP **PKPdf** 03 29 55.5 +0.2
comp=Z,58nm,0.5s,baz=120,slow=10,SNR=12
ROSC PP **PP** 03 32 28.4 -0.3
comp=Z,15nm,0.5s,baz=89,slow=1.3,SNR=6.5
CZSB Cruzeiro do Su 133.23 104 *e*P **PKPdf** 03 29 55.2 0.0
SPBC San Pablo de B 133.28 86 *e*P **PKPdf** 03 29 52.6 -2.8
MACC Macarena, Meta 133.42 91 *e*P **PKPdf** 03 29 54.6 -1.0
KEST Kesra 133.57 318 PKhKP PKPpre 03 29 43.1
comp=Z,3.3nm,0.7s,baz=249,slow=0.6,SNR=6.5
KEST SKPbc **SKPbc** 03 32 37.0 -0.2
comp=Z,37nm,0.9s,baz=52,slow=5.2,SNR=8.2
BRRC Barranca, Sant 133.61 84 *e*P PKPpre 03 29 47.7
CHIC Chingaza 133.62 87 *e*P **PKPdf** 03 29 56.5 +0.1
VILC Villavicencio, 133.65 88 *e*P **PKPdf** 03 29 56.5 +0.4
LL1C La Loma 1 Cana 133.65 80 *e*P **PKPdf** 03 29 55.5 -0.4
LL6C La Loma 6 Bece 133.92 80 *e*P **PKPdf** 03 29 54.6 -1.9
OCAC Ocana 133.96 82 *e*P PKPpre 03 29 44.7
MAHO Mahon 134.07 326 PKP **PKPdf** 03 29 55.8 -0.2
BARC Barichara 134.15 84⇓ *e*P **PKPdf** 03 29 57.5 +0.3
CRJC Cerrejon, Guaj 134.19 78 *e*P PKPpre 03 29 47.7
RUSC La Rusia 134.26 85 *e*P **PKPdf** 03 29 57.6 -0.2
SDSC Presa de Saban 134.37 67 *e*P **PKPdf** 03 29 56.5 -0.7
PAMC Pamplona, Colo 134.61 83 *e*P **PKiKP** 03 29 59.5 -0.4
GUVC San Jose del G 134.66 90 *e*P **PKPdf** 03 29 55.5 -2.4
LPAZ La Paz 134.95 117 PKIKP **PKPdf** 03 29 59.8 +0.7
LPAZ La Paz 134.95 117 *e*P **PKPdf** 03 29 55.5 -3.6
LPAZ La Paz 134.95 117 PKhKP PKPpre 03 29 45.4
comp=Z,12nm,0.8s,baz=277,slow=2.1,SNR=18
LPAZ PKP **PKPdf** 03 29 59.8 +0.7
comp=Z,80nm,0.6s,baz=8.1,slow=3.5,SNR=21
URIC Uribia, Colomb 134.98 77 *e*P **PKiKP** 03 29 59.5 -0.5
PTGC Puerto Gaitan, 135.20 88 *e*P **PKPdf** 03 29 57.5 -1.4
TAMC Tame, Arauca 135.54 85 *e*P **PKiKP** 03 30 00.5 -0.8
SOCV Socops 136.39 82 *e*P PKPpre 03 29 55.5
ITQB Itaqui 136.48 142 *e*P **PKPdf** 03 30 01.2 +0.4
SDV Santo Domingo 136.57 81 PKPpre 03 29 51.5
SDV Santo Domingo 136.57 81 *e*P **PKPdf** 03 29 59.1 -2.5
SDV Santo Domingo 136.57 81 PKhKP PKPpre 03 29 52.4
comp=Z,41nm,0.7s,baz=324,slow=0.8,SNR=15
SDV PKP **PKPdf** 03 30 01.7 0.0
comp=Z,324nm,0.8s,baz=99,slow=2.0,SNR=35
SDV PP **PP** 03 32 49.8 -0.7
comp=Z,115nm,1.1s,baz=261,slow=0.7,SNR=9.9
TBTG Tabatinga, AM 136.64 100 *e*P **PKPdf** 03 30 02.4 +0.9
TBTG Tabatinga, AM 136.64 100 *e*P **PKPdf** 03 30 02.2 +0.6
PLTB Pedras Altas 136.72 146 *e*P **PKPdf** 03 30 01.6 +0.4
UCM Universidad Co 137.60 333 PKP **PKPdf** 03 30 02.4 -0.2
CPSB Cacapava Do Su 137.84 145 *e*P **PKPdf** 03 30 04.2 +0.8
PBRG Braganca 137.85 337 *i* - 03 32 56.5
PBRG *e*PKPdf PKPpre 03 29 54.9
PBRG *e*- 03 34 33.9
PGAV Gavieira, Arco 138.29 339 *i* - 03 32 57.3
PGAV *e*PKPdf PKPpre 03 29 55.7
PGAV *e*- 03 34 40.2
PGAV Gavieira, Arco 138.29 339 *e*SS SS 03 50 39.9 +9.0
CPUP Villa Florida 138.29 137 *e*P **PKPdf** 03 30 04.2 -0.1
CPUP Villa Florida 138.29 137 PKhKP PKPpre 03 29 53.7
comp=Z,12nm,0.8s,baz=241,slow=4.9,SNR=17
CPUP PP **PP** 03 32 58.6 -0.9
comp=Z,19nm,0.8s,baz=293,slow=4.9,SNR=3.2
CPUP SKKPbc SKKPbc 03 41 35.2 -0.6
comp=Z,8.2nm,1.1s,baz=3.3,slow=3.9,SNR=2.9
PCAB Cabril 138.42 338 *e*- 03 34 44.1
PCAB *e*PKPdf PKPpre 03 29 56.8
ESDC Sonseca Array 138.44 333 PKhKP PKPpre 03 29 55.9
comp=Z,4.1nm,0.8s,baz=22,slow=3.2,SNR=12
ESDC SKPbc **SKPbc** 03 32 52.3 +0.5
comp=Z,28nm,1.0s,baz=29,slow=6.0,SNR=9.4
ESDC PKKP **PKKPdf** 03 39 36.0 +0.2
comp=Z,1.8nm,0.9s,baz=276,slow=1.5,SNR=4.6
ESDC SKKPbc **SKKPbc** 03 41 37.8 +1.6
comp=Z,3.5nm,0.9s,baz=223,slow=3.6,SNR=4.2
MVO Moncorvo 138.51 337 *i* - 03 32 56.5
MVO *e*- 03 34 41.1
MVO Moncorvo 138.51 337 *e*SS SS 03 50 40.6 +7.1
CART Cartagena 138.59 328 PKP PKPpre 03 29 53.9
POLO Lamas de Olo 138.63 338 *e*PKPdf **PKPdf** 03 29 58.0 -6.6
POLO *i* - 03 32 58.1
POLO *e*- 03 34 44.1
PVRL Vila Real 138.68 338 *e*- 03 34 48.0
PVRL *e*PKPdf PKPpre 03 29 58.0
PAB San Pablo 138.72 333 ⇑PKHKP PKPpre 03 29 57.8
ETMB Extrema 138.91 109 *e*P **PKPdf** 03 30 04.7 -1.0
PTO Porto 139.13 338 *e*PKPdf PKPpre 03 29 59.1
PVIS Viseu 139.23 337 *e*PKPdf PKPpre 03 29 59.9
SJG San Juan 139.30 66 PKPpre 03 29 58.4
SJG San Juan 139.30 66 PKHKP PKPpre 03 29 58.4
SJG San Juan 139.30 66 SKPbc **SKPbc** 03 32 54.3 -0.3
comp=Z,38nm,1.0s,baz=356,slow=6.3,SNR=1.5
MTE Manteigas 139.37 337 *i* - 03 32 58.9
MTE *e*PKPdf PKPpre 03 30 00.4
MTE *e*- 03 34 49.0
MTE Manteigas 139.37 337 *e*SS SS 03 50 53.8 +10
PCBR Castelo Branco 139.82 336 *e*- 03 34 50.6
PCBR *e*PKPdf PKPpre 03 30 01.1
COI Coimbra 139.87 337 *i* - 03 33 00.5
COI *e*PKPdf PKPpre 03 30 01.3
COI *e*- 03 34 51.3
PCAS Casmilo, Conde 140.04 337 *i* - 03 33 01.3
PCAS *e*- 03 34 53.9
CNLB Canela 140.12 147 *e*P **PKPdf** 03 30 08.5 +0.9
PMRV Marv??o 140.13 336 *i* - 03 33 02.3
PMRV *e*PKPdf PKPpre 03 30 02.6
PMRV *e*- 03 34 52.6
PMRV Marv??o 140.13 336 *e*SS SS 03 51 03.0 +11
PSBE So Bento 140.62 337 *i* - 03 33 02.6
PSBE *e*PKPdf PKPpre 03 30 04.3
PSBE *e*- 03 34 55.9
CDVI St. Croix 140.67 66 *e*P PKPpre 03 29 59.4
PESTR Estremoz 140.69 336 *i* - 03 33 03.5
PESTR *e*PKPdf PKPpre 03 30 03.8
PESTR *e*- 03 34 55.6
ITAB Concordia 140.97 143 *e*P **PKPdf** 03 30 08.0 -1.1
EMAL Malaga-Limoner 140.98 330 PKP PKPpre 03 29 58.2
PBAR Barrancos 141.04 334 *e*PKPdf **PKPdf** 03 30 06.4 -2.5
PBAR *i* - 03 33 04.8
PBAR *e*- 03 34 57.7
EVO Evora 141.15 336 PKP PKPpre 03 29 58.3
EVO Evora 141.15 336 *e*PKPdf **PKPdf** 03 30 05.8 -3.3
EVO *i* - 03 33 04.8
EVO *e*- 03 34 58.7
CHAS Isla Isabel II 141.15 327 PKP PKPpre 03 30 00.4
SIV San Ignacio 141.23 121 PKhKP PKPpre 03 30 03.5
comp=Z,74nm,0.8s,baz=239,slow=3.2,SNR=76
SIV SKPbc **SKPbc** 03 33 00.1 +0.3
comp=Z,75nm,1.0s,baz=242,slow=5.7,SNR=2.6
PACT Alcochete 141.28 337 *i* - 03 33 04.8
PACT *e*PKPdf PKPpre 03 30 04.2
PACT *e*- 03 34 59.8
PMAFR Mafra 141.29 337 *e*PKPdf **PKPdf** 03 30 05.5 -3.8
PMAFR *i* - 03 33 04.8

PMAFR e- 03 34 58.7
WMELI Melilla 141.33 327 PKP PKPpre 03 30 00.8
TAF Taforalt 141.41 326 P **PKPdf 03 30 07.0 -2.8**
GOG Mont Gurugu 141.43 327 P **PKPdf 03 30 07.0 -2.8**
PMST Lisbon--Monsan 141.44 337 ePKPdf **PKPdf 03 30 06.8 -2.8**
PMST i- 03 33 04.8
PMST e- 03 34 59.8
LIS Lisbon 141.44 337 ePKPdf **PKPdf 03 30 07.4 -2.2**
LIS Lisbon 141.44 337 i- 03 33 05.7
LIS e- 03 34 57.7
PBEJ Beja 141.52 335 ePKPdf **PKPdf 03 30 07.7 -2.1**
PBEJ e- 03 35 01.8
TER01 Tubaro-SC 141.66 148 eP **PKPdf 03 30 10.5 +0.2**
PNCL Nicolau / Gran 141.72 336 ePKPdf **PKPdf 03 30 07.9 -2.2**
PNCL i- 03 33 07.0
PNCL e- 03 35 03.9
MESJ Messejana 141.82 335 ePKPdf **PKPdf 03 30 07.7 -2.6**
MESJ Messejana 141.82 335 ePKPdf **PKPdf 03 30 08.6 -1.7**
MESJ i- 03 33 07.3
MESJ e- 03 35 02.9
JBK JBK 141.85 326 P **PKPdf 03 30 08.0 -2.8**
PCVE Castro Verde 141.92 335 ePKPdf **PKPdf 03 30 08.9 -1.6**
PCVE i- 03 33 07.3
PCVE e- 03 35 02.9
PALE Palemas 141.93 328 P **PKPdf 03 30 07.0 -3.7**
PVAQ Vaqueiros 141.98 334 ePKPdf **PKPdf 03 30 08.7 -1.9**
PVAQ i- 03 33 07.0
PVAQ e- 03 35 03.9
SFS San Fernando 142.07 332 PKP **PKPdf 03 30 05.0 -5.8**
SMRT St. Maarten 142.12 65 ePKPdf 03 30 02.1 -9.2
CEU Ceuta 142.13 331 PKP **PKPdf 03 30 03.4 -7.4**
PBDV Barranco-do-Ve 142.21 335 ePKPdf **PKPdf 03 30 08.6 -2.4**
PBDV i- 03 33 08.3
PBDV e- 03 35 05.7
PBDV e- 03 35 06.0
PTEO Sao Teotonio 142.28 336 ePKPdf **PKPdf 03 30 07.2 -3.9**
PTEO i- 03 33 07.7
PTEO e- 03 35 02.9
SMIR Smir Dam 142.30 330 P **PKPdf 03 30 09.0 -2.2**
PCRV Puerto La Cruz 142.34 78 PKhKP PKPpre 03 30 06.3
comp=Z,310nm,0.9s,baz=211,slow=1.2,SNR=81
AKLM AKL 142.43 328 P **PKPdf 03 30 09.0 -2.6**
MORF Marmelete 142.46 335 ePKPdf **PKPdf 03 30 09.1 -2.4**
MORF Marmelete 142.46 335 i- 03 33 08.6
MORF e- 03 35 06.4
SKI Saint Kitts 142.64 66 eP PKPpre 03 29 59.6
FIGM Figuig 142.66 322 P **PKPdf 03 30 09.0 -3.2**
PFVI Vila Bisbo 142.68 335 **PKPdf 03 30 10.3 -1.5**
PFVI Vila Bisbo 142.68 335 ePKPdf **PKPdf 03 30 09.8 -2.0**
PFVI i- 03 33 08.6
PFVI e- 03 35 08.5
CHEFC Chefchaouen 142.74 330 P **PKPdf 03 30 10.0 -2.2**
PTGB Pitanga 142.85 141 eP **PKPdf 03 30 12.0 -0.6**
PTLB Pontes e Lacer 143.13 122 PKPab 03 30 10.7 0.0
PTLB Pontes e Lacer 143.13 122 eP **PKPdf 03 30 13.3 +0.1**
AQDB Aquidauana 143.15 132 eP PKPbc 03 30 11.3 +0.1
RSA Sarsar 143.16 330 P **PKPdf 03 30 12.0 -0.9**
RSA Sarsar 143.16 330 P **PKPdf 03 30 13.0 +0.1**
MBFL Flemmings, Mon 143.29 67 eP PKPbc 03 30 12.5 +0.8
ANWB Willy Bob 143.41 65 **PKPdf 03 30 13.0 -0.6**
ANWB Willy Bob 143.41 65 eP PKPbc 03 30 12.2 +0.3
ANWB Willy Bob 143.41 65 eP PKPab 03 30 10.1 -1.6
EKNA AfricaArray - 143.53 272⫛ eP **PKPdf 03 30 13.5 -0.5**
LCRM LCR 143.59 328 P PKPab 03 30 12.1 -0.1
LCRM LCR 143.59 328 P **PKPdf 03 30 15.0 +1.2**
ANBD Bethesda, Anti 143.61 66 eP PKPbc 03 30 12.7 +0.1
TRCB Terra Rica 143.82 138 eP PKPab 03 30 12.8 -0.4
IFR Ifrane 143.87 328 PKP PKPab 03 30 11.5 -1.7
H07N1 FLORES T-PHASB 143.99 5 ePKP PKPab 03 30 13.5 +0.2
H07N1 FLORES T-PHASB 143.99 5 PKP **PKPdf 03 30 15.3 +1.2**
SNR=19
ABD La Joyeuse, An 144.04 67 eP PKPbc 03 30 11.9 -2.0
CBE Ff, Capester 144.04 68 eP PKPbc 03 30 13.2 -0.8
TDBA Terre de Bas, 144.08 68 eP PKPbc 03 30 12.5 -1.7
MDT Midelt 144.12 326 P **PKPdf 03 30 14.7 +0.1**
MDT Midelt 144.12 326 PKP **PKPdf 03 30 14.5 -0.1**
comp=Z,53nm,0.5s,baz=73,slow=3.8,SNR=96
MDT SKPbc **SKPbc 03 33 06.5 0.0**
comp=Z,26nm,0.9s,baz=92,slow=1.3,SNR=3.7
CZD Col de Zad 144.19 327 P **PKPdf 03 30 15.3 +0.3**
TIJ01 Guaruva-PR 144.24 145 eP PKPbc 03 30 14.5 -0.1
H07S1 FLORES T-PHASB 144.30 5 ePKP PKPbc 03 30 13.8 -0.4
H07S1 FLORES T-PHASB 144.30 5 PKP **PKPdf 03 30 15.7 +1.0**
SNR=25
MDVC Dominica, Viel 144.35 68 eP PKPbc 03 30 14.3 -0.7
MAGL Barre de l'ile 144.38 68 eP PKPbc 03 30 11.1 -3.9
DSLB Salisbury 144.39 69 eP PKPbc 03 30 14.8 -0.3
MDN Morne-Daniel 144.45 69 eP **PKiKP 03 30 19.0 -0.3**
H05N1 Guadeloupe/Mar 144.48 67 PKP PKPbc 03 30 14.6 -0.8
SNR=114
DLPL La Plaine 144.58 69 eP **PKiKP 03 30 19.5 -0.1**
ZHG ZHG 144.71 329 P **PKPab 03 30 17.0 +0.7**
SRBC Serra Branca 144.81 1 ePKP **PKiKP 03 30 18.1 -1.4**
PGRA Graciosa 144.82 1 ePKP **PKPab 03 30 17.4 +1.0**
FDF Fort de France 144.82 70 eP **PKPdf 03 30 15.8 -0.4**
GRGR Grenville 144.92 74 eP **PKPdf 03 30 11.3 -5.0**
BIM Bigot 144.95 70 eP **PKPdf 03 30 16.1 -0.3**
ILAM Ilet Lapin Mar 145.07 69 eP **PKPdf 03 30 13.1 -3.4**
GCMP Grenada, Carri 145.07 73 eP **PKPdf 03 30 12.1 -4.4**
SVB Belmont 145.07 72 eP **PKPdf 03 30 15.3 -1.3**
PAGU Agualva, Azore 145.09 360 ePKP **PKPab 03 30 17.6 +0.2**
ROSA Rosais 145.12 1 ePKP **PKiKP 03 30 19.4 -0.7**
PSCM Serra do Cume 145.16 360 ePKP **PKiKP 03 30 19.0 -1.2**
SLBI Saint Lucia, B 145.16 71 eP **PKPdf 03 30 14.7 -2.0**
MPOM Morne Pois Mar 145.17 70 eP **PKPdf 03 30 17.1 +0.4**
H05S1 Guadeloupe/Mar 145.19 70 PKPbc **PKPbc 03 30 17.2 -0.3**
SNR=166
ADH Angra Heroismo 145.20 0 ePKP **PKPab 03 30 17.6 -0.2**
PCED Cedros 145.20 2 ePKP **PKPab 03 30 18.5 +0.7**
AVE Averroes 145.21 330 PKP **PKPdf 03 30 15.6 -0.8**
AVE Averroes 145.21 330 P **PKPdf 03 30 17.7 -0.4**
PMAN Manadas 145.22 1 ePKP **PKPab 03 30 18.0 +0.1**
CALA Caldeira 145.25 2 ePKP **PKPbc 03 30 17.4 +0.2**
MCLT Moule a Chique 145.27 71 eP **PKPbc 03 30 18.1 +0.2**
PICO Pico 145.34 2 ePKP **PKPab 03 30 18.7 +0.2**
PPNO Prainha do Nor 145.37 1 ePKP **PKPab 03 30 18.5 -0.1**
PCAN Candelaria 145.37 2 ePKP **PKPab 03 30 18.8 +0.2**
PID Ribeirinha 145.41 1 ePKP **PKPab 03 30 18.5 -0.2**
PCMB Pacaembu 145.56 138 eP **PKPdf 03 30 17.8 +0.5**
SALV Santo Antonio 145.76 125 eP **PKPbc 03 30 18.8 -0.4**
MACA Manacapuru-AM 145.88 101 eP **PKPbc 03 30 19.6 -0.1**
PSET Sete Cidades 146.00 358 ePKP **PKPbc 03 30 19.0 -0.4**
PCALD Caldeiras da R 146.02 358 ePKP **PKPdf 03 30 17.1 -0.5**
PET01 Itanhaem-SP 146.03 146 eP **PKPbc 03 30 19.6 -0.2**
BART Pico Bartolome 146.03 357 ePKP **PKPbc 03 30 19.4 -0.1**
PGRON Lagoa das Cont 146.04 357 ePKP **PKPdf 03 30 18.5 +0.8**
CMLA Cha da Macela 146.06 358 ePKP **PKPab 03 30 21.0 -0.2**
CMLA Cha da Macela 146.06 358 P **PKiKP 03 30 22.9 +0.8**
PDA Ponta Delgada 146.08 358 ePKP **PKPab 03 30 21.3 0.0**
SRHM Skhour des Reh 146.12 330 P **PKPab 03 30 21.0 -0.8**
TOSP Speyside 146.15 75 eP **PKiKP 03 30 23.0 +0.2**
C2SB Chapadao do Su 146.32 132 eP **PKPbc 03 30 19.7 -1.1**
BCHC Barbados, Cave 146.64 72 eP **PKiKP 03 30 23.9 0.0**
BBGH Gun Hill 146.71 72 eP **PKPab 03 30 27.0 +2.4**
BBGH Gun Hill 146.71 72 eP **PKiKP 03 30 23.9 -0.1**
BOAV Boa Vista 146.73 91 **PKPdf 03 30 19.8 +0.4**
BOAV Boa Vista 146.73 91 eP **PKPdf 03 30 19.6 +0.1**
PSMN Pico do Norte, 146.79 357 ePKP **PKPbc 03 30 22.3 +0.8**
PSMA Santa Maria 146.80 357 ePKP **PKPbc 03 30 22.2 +0.6**
PDRB Porto dos Gac 146.95 118 eP **PKPdf 03 30 20.2 +0.4**
OUK Oukaimeden 147.11 328 P **PKPbc 03 30 22.1 -1.0**
VAO Valinhos 147.21 145 eP **PKPdf 03 30 20.1 0.0**
RCLB Rio Claro- Sao 147.33 144 eP **PKPdf 03 30 21.1 +0.8**
ITRB Iturama 147.48 136 eP **PKPdf 03 30 21.7 +1.1**
PARB Paraibuna 147.69 147 eP **PKPdf 03 30 19.9 -1.0**
BB19B Bebedouro 147.73 141 eP **PKPdf 03 30 20.9 -0.1**
CLDB Colider 148.09 117 eP **PKPdf 03 30 22.5 +0.8**
MAN01 Angra dos Reis 148.95 149 eP **PKPdf 03 30 24.9 +2.0**
PMPST Porto Santo, M 149.04 342 ePKPdf **PKiKP 03 30 28.8 +0.4**
PMPS Porto Santo 149.06 342 ePKPdf **PKiKP 03 30 29.2 +0.8**
PMOZ Porto Moniz, M 149.54 343 ePKPdf **PKiKP 03 30 30.9 +1.4**
PMOZ Porto Moniz, M 149.54 343 eSS SS 03 52 36.7 -1.6
PMAR Madeira 149.55 343 ePKPdf **PKiKP 03 30 31.1 +1.4**
FUL Funchal 149.61 343 ePKPdf **PKiKP 03 30 30.7 +1.2**
VAS01 Vassouras-RJ 149.71 149 eP **PKPdf 03 30 25.2 +1.1**
TOA0 Torodi Ar. Sit 149.92 290 **PKPdf 03 30 25.3 +0.8**
TORD Torodi Ar. Bea 149.92 290 PKP **PKPdf 03 30 25.1 +0.5**
comp=Z,79nm,1.1s,baz=8.1,slow=1.4,SNR=50
TORD PKPbc **PKPbc 03 30 29.5 -0.5**
comp=Z,182nm,0.9s,baz=48,slow=2.1,SNR=29

NPGB Novo Progresso 149.96 111 eP **PKPdf 03 30 24.9 +0.2**
BSCB Bom Sucesso 150.03 146 eP **PKPdf 03 30 24.9 +0.2**
IPMB Ipameri, GO 150.13 137 eP **PKPdf 03 30 25.5 +0.6**
DUB01 Friburgo-RJ 150.41 151 eP **PKPdf 03 30 27.0 +1.8**
ITTB Itaituba 150.41 105 eP **PKPdf 03 30 25.4 0.0**
PMNB Patos De Minas 150.91 140 eP **PKPdf 03 30 25.7 -0.4**
CAM01 Campos-RJ 150.97 152 eP **PKPdf 03 30 26.2 +0.2**
SNDB Serra Nova Dou 151.45 123 eP **PKPdf 03 30 27.2 +0.3**
BDFB Brasilia 151.85 134 PKIKP **PKPdf 03 30 28.0 +0.4**
BDFB 03 30 34.8
BDFB Brasilia 151.85 134 eP **PKPdf 03 30 27.7 +0.1**
BDFB Brasilia 151.85 134 PKP **PKPdf 03 30 28.0 +0.4**
comp=Z,85nm,0.8s,baz=105,slow=0.9,SNR=30
BDFB PKPbc **PKiKP 03 30 34.8 +0.1**
comp=Z,434nm,0.7s,baz=173,slow=0.3,SNR=35
MALB Monte Alegre 152.42 101 eP **PKPdf 03 30 28.4 0.0**
ALF01 Guarapari-ES 152.45 152 eP **PKPdf 03 30 28.0 -0.2**
DIAM Diamantina, MG 152.79 144 eP **PKPdf 03 30 29.6 +0.7**
RIB01 Linhares ES 153.72 151 eP **PKPdf 03 30 30.4 +0.3**
SJMB Sao Joao De Ma 153.84 149 eP **PKPdf 03 30 31.5 +1.2**
MC01 Montes Claros 153.85 141 eP **PKPdf 03 30 30.5 +0.1**
MDP Montagnes des 154.62 86 PKP **PKPdf 03 30 31.3 -0.2**
comp=Z,69nm,1.1s,baz=198,slow=3.4,SNR=10
MDP PKPab **PKPab 03 30 56.8 -1.0**
comp=Z,171nm,0.9s,baz=292,slow=5.5,SNR=5.5
KOWA Kowa 154.72 297 **PKPdf 03 30 31.7 +0.1**
KOWA Kowa 154.72 297 P **PKPdf 03 30 32.3 +0.7**
KOWA Kowa 154.72 297 PKP **PKPdf 03 30 31.8 +0.3**
comp=Z,111nm,0.8s,baz=87,slow=0.8,SNR=15
KOWA PKPab **PKPab 03 30 57.5 -0.5**
comp=Z,19nm,0.7s,baz=83,slow=7.3,SNR=6.2
KOWA PP **PP 03 34 36.7 +0.6**
comp=Z,60nm,0.9s,baz=245,slow=6.1,SNR=3.8
JANB Januaria 154.83 138 eP **PKPdf 03 30 31.9 +0.2**
NAN01 Guarapari, ES 155.10 150 eP **PKPdf 03 30 32.4 +0.4**
PRPB Parauapebas 155.41 113 eP **PKPdf 03 30 32.6 0.0**
SMTB Santa Maria do 156.18 122 eP **PKPdf 03 30 33.7 +0.1**
SDBA SAO DESIDERIO 156.24 133 eP **PKPdf 03 30 33.4 -0.2**
GUA01 Guaratinga, BA 156.33 149 eP **PKPdf 03 30 32.3 -1.3**
KIC Kosan Boka 157.45 278⫛ ePKP1 **PKPdf 03 30 34.5 -0.7**
comp=Z,24nm,0.8s
CMC01 Camacan, BA 157.49 148 eP **PKPdf 03 30 35.4 +0.3**
DBIC Dimbokro 157.53 278 PKIKP **PKPdf 03 30 35.3 +0.1**
DBIC 03 31 09.5
DBIC Dimbokro 157.53 278 PKP **PKPdf 03 30 35.3 +0.1**
comp=Z,33nm,1.1s,baz=50,slow=1.8,SNR=16
DBIC PKPab **PKPab 03 31 09.5 -0.8**
comp=Z,73nm,0.6s,baz=86,slow=4.2,SNR=17
DBIC PP **PP 03 34 54.0 +2.2**
comp=Z,24nm,0.8s,baz=67,slow=7.2,SNR=3.9
TIC Toumodi 157.69 278⫛ ePKP1 **PKPdf 03 30 35.2 -0.3**
comp=Z,34nm,0.9s
LIC Lamto 157.74 277⫛ ePKP1 **PKPdf 03 30 35.5 0.0**
comp=Z,69nm,1.0s
TMAB Tom-Au,PA,Br 158.29 106 eP **PKPdf 03 30 36.7 +0.5**
GDU01 Guandu, BA 158.80 145 eP **PKPdf 03 30 36.9 +0.2**
ROSB Rosrio 161.89 111 eP **PKPdf 03 30 40.0 -0.2**
NBLA Lagarto - SE 162.02 144 eP **PKPdf 03 30 41.1 +0.9**
NBAN Anadia - AL 163.95 146 eP **PKPdf 03 30 42.5 +0.4**
BBTS Babate 164.84 317 PKP **PKPdf 03 30 42.7 0.0**
comp=Z,57nm,0.8s,baz=108,slow=1.4,SNR=12
BBTS PKPab **PKPab 03 31 42.3 +0.2**
comp=Z,109nm,0.8s,baz=7.4,slow=1.4,SNR=15
NBRF Rio Formoso - 165.40 147 eP **PKPdf 03 30 44.0 +0.7**
RCBR Riachuelo 167.18 137 PKIKP **PKPdf 03 30 44.9 +0.2**
RCBR 03 31 52.7
RCBR Riachuelo 167.18 137 eP **PKPdf 03 30 44.8 0.0**
RCBR Riachuelo 167.18 137 PKP **PKPdf 03 30 44.9 +0.2**
comp=Z,27nm,1.0s,baz=17,slow=6.4,SNR=3.7
RCBR PKPab **PKPab 03 31 52.7 +0.2**
comp=Z,46nm,0.8s,baz=356,slow=6.6,SNR=7.6

*IDC **31** 03:16:07.2±0.6,55˚.20S×31˚.57W,h0km,mb4.5/19, mbtmp4.5/19, Error ellipse: s-maj=20.5km s-min=13.5km az=24.0*
*NEIC **31** 03:16:08.8±1.9,55˚.2S±0˚.1×31˚.7W±0˚.2,h10km±1km, mb5.0/31, Error ellipse: s-maj=23.6km s-min=13.4km az=199.0*
ISC 31 03:16:08.7±0.4,**55˚.16S**±0˚.08×**31˚.73W**±0˚.07,**h10**km,**n132,** σ0**91**/127,**mb4.8**/34,**3C,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.90**	**286**	Pn		**Pn**		**03 16 54.5**	**-0.4**
HOPE				Sn		**Sn**		**03 17 29.8**	**+0.2**
EFI	**East Falkland**	**16.04**	**272**			**P**		**03 19 57.9**	**+0.3**
VNA1	**Neumayer--Stat**	**18.64**	**155**	P		**Pn**		**03 20 27.9**	**+1.6**
VNA3	**Neumayer Olymp**	**18.74**	**158**	P		**P**		**03 20 27.2**	**-0.1**
VNA2	**Neumayer--Watz**	**19.03**	**155**	P		**Pn**		**03 20 35.3**	**+4.1**
	baz=311,slow=13								
SNAA	**Sanae**	**20.64**	**154**	P		**P**		**03 20 45.9**	**-2.1**
SNAA	**Sanae**	**20.64**	**154**	P		**P**		**03 20 47.8**	**-0.2**
SNAA	**Sanae**	**20.64**	**154**	P		**P**		**03 20 47.5**	**-0.4**
	7.0nm,0.9s,baz=309,slow=11,SNR=18								
	7.0nm,0.9s								
SMAI	**San Martin Ant**	**20.84**	**218**			**P**		**03 20 50.1**	**0.0**
TROLL	**Troll, Antarti**	**22.21**	**152**	P		**P**		**03 21 04.9**	**-0.1**
BELA	**Belgrano 2**	**22.84**	**182**	P		**P**		**03 21 10.8**	**-0.7**
MG05	**Puerto Natales**	**24.30**	**261**	P		**P**		**03 21 25.0**	**-1.0**
PLTB	**Pedras Altas**	**28.04**	**318**	eP		**P**		**03 22 00.5**	**+0.6**
CPSB	**Cacapava Do Su**	**29.19**	**319**	eP		**P**		**03 22 11.0**	**+0.9**
PLCA	**Paso Flores**	**29.30**	**283**	eP		**P**		**03 22 11.4**	**+0.2**
PLCA	**Paso Flores**	**29.30**	**283**	P		**P**		**03 22 12.0**	**+0.8**
	4.2nm,0.9s,baz=114,slow=8.2,SNR=5.1								
	4.2nm,0.9s								
RODS	**Rosario do Sul**	**29.92**	**316**	eP		**P**		**03 22 17.3**	**+0.8**
ALGR	**Alto Alegre (B**	**30.49**	**321**	eP		**P**		**03 22 22.7**	**+1.0**
UNIS	**Unistalda (Bra**	**31.01**	**318**	eP		**P**		**03 22 26.4**	**+0.2**
ITQB	**Itaqui**	**31.09**	**315**	eP		**P**		**03 22 27.2**	**+0.3**
ITAB	**Concordia**	**31.60**	**324**	eP		**P**		**03 22 33.0**	**+1.6**
CRSM	**Crissiumal (Br**	**32.04**	**321**	eP		**P**		**03 22 35.8**	**+0.5**
PET01	**Itanhaem-SP**	**32.91**	**333**	eP		**P**		**03 22 44.5**	**+1.6**
FRBT	**Francisco Belt**	**33.08**	**323**	eP		**P**		**03 22 45.3**	**+0.8**
MAN01	**Angra dos Reis**	**33.52**	**339**	eP		**P**		**03 22 50.0**	**+1.7**
PTGB	**Pitanga**	**33.91**	**325**	eP		**P**		**03 22 51.9**	**+0.1**
CPUP	**Villa Florida**	**34.34**	**317**	P		**P**		**03 22 55.4**	**0.0**
CPUP	**Villa Florida**	**34.34**	**317**	eP		**P**		**03 22 55.4**	**0.0**
CPUP	**Villa Florida**	**34.34**	**317**	P		**P**		**03 22 55.2**	**-0.1**
	3.9nm,0.5s,baz=152,slow=7.0,SNR=17								
	3.9nm,0.5s								
MT09	**Talagante**	**34.59**	**292**	P		**P**		**03 22 57.0**	**-0.6**
MT09					IAmb	IAmb		03 22 57.6	
	comp=Z,15nm,0.7s								
PEL	**Peldehue**	**34.91**	**293**	P		**P**		**03 23 00.4**	**0.0**
PEL					IAmb	IAmb		03 23 03.4	
	comp=Z,36nm,1.1s								
QSPA	**South Pole Qui**	**35.09**	**180**	P		**P**		**03 23 01.8**	**0.0**
	comp=Z,5.2nm,1.0s,baz=212,slow=2.8,SNR=11								
	comp=Z,5.2nm,1.0s								
VA03	**San Esteban**	**35.14**	**293**	P		**P**		**03 23 02.5**	**+0.1**
VA03					IAmb	IAmb		03 23 04.1	
	comp=Z,15nm,0.8s								
ROC1	**El Roble**	**35.22**	**293**	P		**P**		**03 23 02.5**	**-0.7**
ROC1					IAmb	IAmb		03 23 17.9	
	comp=Z,19nm,0.7s								
BSCB	**Bom Sucesso**	**35.50**	**339**	eP		**P**		**03 23 06.8**	**+1.3**
VA06	**Patapilco**	**35.69**	**293**	P		**P**		**03 23 07.3**	**+0.4**
BB19B	**Bebedouro**	**36.32**	**333**	eP		**P**		**03 23 13.8**	**+1.3**
CO02	**Combarbal**	**36.60**	**295**	P		**P**		**03 23 15.4**	**+0.5**
CO03	**El Pedregal**	**36.72**	**295**	P		**P**		**03 23 16.4**	**+0.4**
CO01	**Juntas del Tor**	**37.10**	**297**	P		**P**		**03 23 21.1**	**+1.7**
CO01					IAmb	IAmb		03 23 24.4	
	comp=Z,14nm,0.7s								
ANTJ	**Antonio Joao (**	**37.77**	**321**	eP		**P**		**03 23 25.9**	**+1.1**
NAN01	**Guarapari, ES**	**37.80**	**347**	eP		**P**		**03 23 25.7**	**+0.7**
DIAM	**Diamantina, MG**	**37.91**	**341**	eP		**P**		**03 23 27.0**	**+0.8**
PMNB	**Patos De Minas**	**38.24**	**337**	eP		**P**		**03 23 29.9**	**+1.0**
GUA01	**Guaratinga, BA**	**39.00**	**348**	eP		**P**		**03 23 36.1**	**+1.0**
AQDB	**Aquidauana**	**39.06**	**323**	P		**P**		**03 23 34.4**	**-1.2**
AQDB	**Aquidauana**	**39.06**	**323**	eP		**P**		**03 23 35.2**	**-0.5**
IPMB	**Ipameri, GO**	**39.19**	**335**	eP		**P**		**03 23 38.1**	**+1.3**
MC01	**Montes Claros**	**39.51**	**341**	eP		**P**		**03 23 39.1**	**-0.4**
GO02	**Mina Guanaco**	**40.81**	**302**	P		**P**		**03 23 51.7**	**+1.1**
GO02					IAmb	IAmb		03 23 51.9	
	comp=Z,20nm,0.7s								
JANB	**Januaria**	**41.19**	**341**	eP		**P**		**03 23 53.9**	**+0.5**
BDFB	**Brasilia**	**41.40**	**336**	P		**P**		**03 23 56.6**	**+1.4**
BDFB					IAmb	IAmb		03 23 57.4	
	comp=Z,30nm,1.6s								
BDFB	**Brasilia**	**41.40**	**336**	eP		**P**		**03 23 56.6**	**+1.4**
BDFB	**Brasilia**	**41.40**	**336**	P		**P**		**03 23 55.9**	**+0.7**
	comp=Z,5.3nm,0.6s,baz=140,slow=5.5,SNR=13								
	comp=Z,5.3nm,0.6s								
LVC	**Limon Verde**	**42.65**	**304**	eP		**P**		**03 24 06.1**	**+0.5**
LVC	**Limon Verde**	**42.65**	**304**	P		**P**		**03 24 06.1**	**+0.5**
	comp=Z,4.4nm,0.6s,baz=144,slow=5.4								
	comp=Z,4.4nm,0.6s								
SALV	**Santo Antonio**	**43.32**	**325**	eP		**P**		**03 24 11.1**	**+0.4**
SDBA	**SAO DESIDERIO**	**43.88**	**341**	eP		**P**		**03 24 15.5**	**+0.2**
PB01	**IPOC Station P**	**44.26**	**305**	P		**P**		**03 24 18.8**	**+0.4**
PB01					IAmb	IAmb		03 24 20.8	
	comp=Z,19nm,0.9s								
NBLA	**Lagarto - SE**	**44.32**	**351**	eP		**P**		**03 24 19.4**	**+0.6**
PTLB	**Pontes e Lacer**	**44.92**	**321**	P		**P**		**03 24 23.2**	**-0.3**
PTLB					IAmb	IAmb		03 24 23.9	
	comp=Z,7.3nm,0.7s								
PTLB	**Pontes e Lacer**	**44.92**	**321**	eP		**P**		**03 24 23.6**	**+0.1**
SIV	**San Ignacio**	**45.14**	**318**	P		**P**		**03 24 24.9**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=155,slow=9.2								
SIV					PcP	**PcP**		**03 26 05.7**	**0.0**
	comp=Z,2.2nm,0.7s,baz=88,slow=7.1,SNR=5.1								
	comp=Z,2.2nm,0.5s								
GO01	**Chusmiza**	**45.31**	**306**	P		**P**		**03 24 27.9**	**+0.7**
GO01					IAmb	IAmb		03 24 28.9	
	comp=Z,13nm,0.8s								
SNDB	**Serra Nova Dou**	**45.74**	**333**	eP		**P**		**03 24 30.8**	**+0.8**
PB16	**IPOC Station P**	**46.62**	**307**	P		**P**		**03 24 38.1**	**+0.5**
PB16					IAmb	IAmb		03 24 44.6	
	comp=Z,31nm,1.8s								
PDRB	**Porto dos Gac**	**47.67**	**326**	eP		**P**		**03 24 44.8**	**-0.4**
LPAZ	**La Paz**	**47.79**	**310**	P		**P**		**03 24 47.5**	**+0.7**
LPAZ					IAmb	IAmb		03 24 48.6	
	comp=Z,12nm,0.8s								
LPAZ	**La Paz**	**47.79**	**310**	eP		**P**		**03 24 47.8**	**+1.0**
LPAZ	**La Paz**	**47.79**	**310**	P		**P**		**03 24 47.6**	**+0.8**
	comp=Z,10nm,0.7s,baz=139,slow=5.5,SNR=58								
LPAZ					PcP	**PcP**		**03 26 16.0**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=135,slow=5.7,SNR=2.2								
	comp=Z,10nm,0.7s								
SMTB	**Santa Maria do**	**47.87**	**339**	eP		**P**		**03 24 47.7**	**+1.0**
H10S2	**ASCENSION HYDR**	**48.04**	**23**	T		T		04 16 54.1	
	baz=27,slow=74,SNR=68								
H10S3	**ASCENSION HYDR**	**48.04**	**23**	T		T		04 16 54.0	
	baz=193,slow=74,SNR=118								
CLDB	**Colider**	**48.07**	**327**	eP		**P**		**03 24 47.8**	**-0.5**
BOSA	**Boshof**	**48.31**	**81**	P		**P**		**03 24 49.8**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=186,slow=11,SNR=4.8								
	comp=Z,4.4nm,0.9s								
H10N3	**ASCENSION HYDR**	**49.15**	**23**	T		T		04 18 16.0	
	baz=192,slow=76,SNR=67								
H10N1	**ASCENSION HYDR**	**49.15**	**23**	T		T		04 18 17.9	
	baz=192,slow=76,SNR=102								
H10N2	**ASCENSION HYDR**	**49.17**	**23**	T		T		04 18 14.4	
	baz=192,slow=76,SNR=123								
PRPB	**Parauapebas**	**50.96**	**337**	eP		**P**		**03 25 11.1**	**+0.8**
LBTB	**Lobatse**	**51.28**	**78**	P		**P**		**03 25 12.3**	**-0.5**
LBTB	**Lobatse**	**51.28**	**78**	P		**P**		**03 25 12.2**	**-0.6**
	comp=Z,4.1nm,0.7s,baz=215,slow=7.7,SNR=7.6								
	comp=Z,4.1nm,0.7s								
NPGB	**Novo Progresso**	**51.56**	**329**	eP		**P**		**03 25 14.6**	**-0.3**
ETMB	**Extrema**	**52.78**	**316**	P		**P**		**03 25 23.6**	**-0.2**
ETMB					IAmb	IAmb		03 25 25.8	
	comp=Z,22nm,1.9s								
ETMB	**Extrema**	**52.78**	**316**	eP		**P**		**03 25 23.8**	**-0.1**
ROSB	**Rosrio**	**53.07**	**344**	eP		**P**		**03 25 26.7**	**+0.7**
ITTB	**Itaituba**	**54.22**	**330**	eP		**P**		**03 25 34.4**	**0.0**
TMAB	**Tom-Au,PA,Br**	**54.28**	**340**	eP		**P**		**03 25 36.2**	**+1.3**
MALB	**Monte Alegre**	**56.22**	**333**	eP		**P**		**03 25 49.0**	**+0.2**
MATP	**Matopo**	**56.54**	**77**	P		**P**		**03 25 50.4**	**-1.0**
MATP	**Matopo**	**56.54**	**77**	P		**P**		**03 25 50.4**	**-1.0**
	comp=Z,5.1nm,0.8s,baz=214,slow=6.6,SNR=11								
	comp=Z,5.1nm,0.8s								
MACA	**Manacapuru-AM**	**56.89**	**325**	eP		**P**		**03 25 52.9**	**-0.8**
CZSB	**Cruzeiro do Su**	**57.40**	**310**	eP		**P**		**03 25 57.4**	**+0.1**
LSZ	**Lusaka**	**60.52**	**74**	P		**P**		**03 26 18.2**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=211,slow=7.0,SNR=7.1								
	comp=Z,1.5nm,0.3s								
ATAH	**Atahualpa**	**60.54**	**304**	P		**P**		**03 26 21.8**	**+2.3**
	comp=Z,8.9nm,0.8s,baz=165,slow=9.3,SNR=5.8								
	comp=Z,8.9nm,0.8s								
BOAV	**Boa Vista**	**62.06**	**327**	P		**P**		**03 26 28

OK032				Sg		Sg	03 24 36.4	+0.6
KAN14	Manchester OK	0.44	351			Pg	03 24 31.7	+0.1
KAN14				Sg		Sg	03 24 37.8	+0.3
KAN17	Caldwell West	0.53	10	Pg		Pg	03 24 33.4	0.0
BLOK	Blackwell	0.59	65	Pg		Pg	03 24 34.4	0.0
KAN05	Bluff City Nor	0.59	1			Pg	03 24 34.4	0.0
KAN13	South Haven SW	0.59	33	Pg		Pg	03 24 34.4	-0.1
KAN10	Anthony SW Sta	0.63	344	Pg		Pg	03 24 35.0	-0.1
KAN01	Argonia South	0.64	9	Pg		Pg	03 24 35.4	0.0
KAN09	Caldwell North	0.65	19	Pg		Pg	03 24 35.5	-0.1
OK035	E0210 Rd and N	0.69	286	Pg		Pg	03 24 36.2	-0.2
OK038	West end E0370	0.70	267	Pg		Pg	03 24 35.4	-1.1
KAN08	Anthony NE Sta	0.71	354			Pg	03 24 36.5	-0.2
KAN16	Harper SW Stat	0.72	348			Pg	03 24 36.7	-0.3
KAN06	Argonia West S	0.73	1			Pg	03 24 37.0	-0.1
KS20	Mayfield South	0.76	20			Pg	03 24 37.4	-0.2
KAN12	Harper NE Stat	0.78	353	Pg		Pg	03 24 37.8	-0.3
KS21	Milan North St	0.79	13			Pg	03 24 37.9	-0.3
OK029	Liberty Lake	0.80	154	Pg		Pg	03 24 38.3	-0.1
NOKA	Waynoka	0.85	278	Pg		Pg	03 24 39.1	-0.3
BCOK	Bluff Creek, N	0.89	166	Pg		Pg	03 24 39.7	-0.4
BCOK				lAmb_Lg			03 24 52.1	
	comp=Z,80nm,0.9s							
U32A	Winter Ranch,	0.92	262	Pg		Pg	03 24 40.2	-0.4
U32A	Winter Ranch,	0.92	262	P		Pg	03 24 40.3	-0.4
	baz=80							
U32A				S		Sg	03 24 52.9	+0.4
	baz=80							
QUOK	Quay	1.01	110			Pg	03 24 42.1	-0.3
OK031	S. Brethren Rd	1.01	124			Pg	03 24 42.3	-0.2
OK025	Westminster Rd	1.03	155			Pg	03 24 42.6	-0.2
OK030	Cody Creek RV	1.06	123			Pg	03 24 43.1	-0.3
OK034	N. Norfolk Rd.	1.07	118			Pg	03 24 43.2	-0.4
CSTR	Hydro, Custer	1.09	217			Pg	03 24 43.7	-0.3
OKCSW	OKLAHOMA CITY	1.17	162	Pg		Pg	03 24 44.8	-0.6
T35A	Sooner Cattle	1.17	70	Pg		Pg	03 24 44.9	-0.5
T35B	Sooner Cattle	1.17	70	P		Pg	03 24 44.9	-0.5
	baz=251							
T35B				S		Sg	03 25 00.6	-0.1
	baz=251							
DEOK	Depew	1.30	121			Pn	03 24 47.1	-0.5
FNO	Franklin	1.32	163			Pn	03 24 47.4	-0.4
ELIS	Ellis County	1.32	250	Pn		Pn	03 24 47.6	-0.2
TUL1	Leonard	1.79	109			Pn	03 24 54.8	+0.5
TUL1				lAmb_Lg			03 25 21.5	
	comp=Z,126nm,1.1s							
TUL1	Leonard	1.79	109	P		Pn	03 24 55.2	+0.9
	baz=291							
TUL1				S		Sb	03 25 19.3	+0.6
	baz=291							
X34A	Smith Ranch, M	1.91	179			Pn	03 24 56.9	+1.0
WMOK	Wichita Mounta	1.92	203			Pn	03 24 56.5	+0.5
WMOK	Wichita Mounta	1.92	203	P		Pn	03 24 56.9	+0.8
	baz=22							
WMOK				S		Sb	03 25 22.6	+0.1
	baz=22							
R32A	Long Quarter,	2.01	341			Pn	03 24 57.9	+0.6
R32A	Long Quarter,	2.01	341	P		Pb	03 24 58.8	-1.1
	baz=161							
R32A				S		Sb	03 25 26.1	+1.0
	baz=161							
RLO	Rose Lookout	2.33	98			Pn	03 25 02.3	+0.6
LOOK	Love County	2.58	167			Pn	03 25 06.2	+1.0
LOOK				lAmb_Lg			03 25 50.3	
	comp=Z,25nm,0.8s							
CBKS	Cedar Bluff	2.73	328	P		Pn	03 25 08.1	+1.0
	baz=147							
KSU1	Kansas State U	2.77	21			Pn	03 25 07.1	-0.6
KSU1	Kansas State U	2.77	21	P		Pn	03 25 08.5	+0.8
	baz=202							
X37A	Clayton	2.81	133			Pn	03 25 09.2	+0.9
X37A				lAmb_Lg			03 25 55.9	
	comp=Z,84nm,0.7s							
X37A	Clayton	2.81	133	P		Pn	03 25 09.5	+1.2
	baz=314							
U38A	Gravette	2.82	91			Pn	03 25 09.2	+0.9
HHAR	Hobbs	3.19	93			Pn	03 25 14.2	+0.7
HHAR				lAmb_Lg			03 26 07.5	
	comp=Z,41nm,0.9s							
Z35A	Perchaven, San	3.22	171			Pn	03 25 15.0	+1.1
Z35A	Perchaven, San	3.22	171	P		Pn	03 25 15.1	+1.1
	baz=351							
AMTX	Amarillo	3.50	243			Pn	03 25 19.6	+1.8
S39A	Bolivar	3.83	71	Pn		Pn	03 25 22.3	+0.1
MIAR	Mount Ida	4.02	118			Pn	03 25 26.0	+1.1
MIAR				lAmb_Lg			03 26 37.4	
	comp=Z,35nm,0.8s							
Z38A	Mt. Pleasant	4.03	143	Pn		Pn	03 25 24.6	-0.3
Z38A				lAmb_Lg			03 26 35.0	
	comp=Z,55nm,0.8s							
ABTX	Abilene, Hawle	4.15	201	lAmb_Lg			03 26 36.7	
	comp=Z,55nm,1.1s							
N33B	J Bar K, Exete	4.23	4	P		Pn	03 25 27.2	-0.6
	baz=185							
N33A	J Bar K, Exete	4.23	4	lAmb_Lg			03 26 46.4	
	comp=Z,31nm,1.1s							
KSCO	Kaye Shedlock'	4.51	305	Pn		Pn	03 25 31.6	-0.2
KSCO				lAmb_Lg			03 26 50.8	
	comp=Z,31nm,0.7s							
WHTX	Lake Whitney,	4.53	175	Pn		Pn	03 25 32.3	+0.4
WHTX	Lake Whitney,	4.53	175	P		Pn	03 25 32.3	+0.4
	baz=356							
MGMO	Mountain Grove	4.54	80			Pn	03 25 32.0	-0.2
P38A	Dawn	4.62	47	Pn		Pn	03 25 33.2	0.0
P38A				lAmb_Lg			03 27 02.4	
	comp=Z,29nm,0.8s							
N35A	Tabor	4.68	21	Pn		Pn	03 25 33.8	-0.1
FCAR	Ozark Folk Cen	4.70	96	Pn		Pn	03 25 34.7	+0.5
WHAR	Wooly Hollow	4.70	103	Pn		Pn	03 25 35.8	+1.5
WHAR				lAmb_Lg			03 26 59.4	
	comp=Z,36nm,0.7s							
R40A	Maddies Statio	4.80	67	Pn		Pn	03 25 35.7	0.0
R40A	Maddies Statio	4.80	67	P		Pn	03 25 35.9	+0.3
	baz=250							
WLAR	White Oak Lake	4.82	124	Pn		Pn	03 25 36.4	+0.5
WLAR				lAmb_Lg			03 27 06.4	
	comp=Z,44nm,0.9s							
UALR	University of	4.83	109	lAmb_Lg			03 27 04.7	
	comp=Z,35nm,1.0s							
BGNE	Belgrade	4.89	358	Pn		Pn	03 25 36.8	0.0
BGNE				lAmb_Lg			03 27 11.5	
	comp=Z,37nm,0.9s							
BGNE	Belgrade	4.89	358	P		Pn	03 25 36.8	0.0
	baz=177							
T25A	Trinidad	5.28	279	lAmb_Lg			03 27 17.4	
	comp=Z,31nm,1.0s							
OGNE	Ogallala	5.48	325	lAmb_Lg			03 27 22.3	
	comp=Z,36nm,0.8s							
P40A	Paris	5.50	55	lAmb_Lg			03 27 25.4	
	comp=Z,32nm,0.8s							
CCM	Cathedral Cave	5.51	72	lAmb_Lg			03 27 20.8	
	comp=Z,41nm,1.0s							
L34A	Svendsen Farm,	5.56	12	lAmb_Lg			03 27 27.4	
	comp=Z,46nm,0.7s							
FVM	French Village	6.12	74	lAmb_Lg			03 27 41.7	
	comp=Z,25nm,1.0s							
Q24A	Divide	6.26	295	lAmb_Lg			03 27 44.6	
	comp=Z,25nm,0.8s							
PARMO	Parma	6.54	86			Pn	03 25 59.5	0.0
PARMO				lAmb_Lg			03 27 53.4	
	comp=Z,30nm,0.7s							
CGM3	Cape Girardeau	6.63	81			Pn	03 26 00.4	-0.4
CGM3				lAmb_Lg			03 27 56.8	
	comp=Z,24nm,1.1s							
ISCO	Idaho Springs	6.92	301	lAmb_Lg			03 28 11.2	
	comp=Z,17nm,1.0s							
HICK	Hickman	6.96	87	lAmb_Lg			03 28 15.4	
	comp=Z,34nm,0.7s							
S44A	Carbondale	6.99	78	lAmb_Lg			03 28 11.3	
	comp=Z,25nm,0.8s							
W45A	Hickory Valley	7.19	98	lAmb_Lg			03 28 13.6	
	comp=Z,27nm,0.7s							
L40A	Anamosa	7.57	41	lAmb_Lg			03 28 24.7	
	comp=Z,21nm,0.8s							
PHWY	Pilot Hill	7.60	311	lAmb_Lg			03 28 33.3	
	comp=Z,16nm,0.8s							
Y22D	IRIS PASSCAL I	7.78	254	lAmb_Lg			03 28 43.6	
	comp=Z,32nm,0.9s							
MNTX	Cornudas Mount	7.86	234	lAmb_Lg			03 28 37.4	
	comp=Z,19nm,1.3s							
OLIL	Olney	8.07	71	lAmb_Lg			03 28 53.0	
	comp=Z,25nm,1.0s							
O44A	Mansfield	8.24	61	lAmb_Lg			03 28 45.2	
	comp=Z,23nm,0.8s							
833A	Chaparral WMA,	8.27	189	lAmb_Lg			03 29 06.5	
	comp=Z,15nm,1.1s							
L42A	Oliver, Polo	8.40	47	lAmb_Lg			03 28 53.4	
	comp=Z,26nm,0.8s							
JFWS	Jewell Farm	8.68	40	lAmb_Lg			03 29 17.1	
	comp=Z,27nm,0.7s							
RSSD	Black Hills	8.93	330	lAmb_Lg			03 29 09.4	
	comp=Z,19nm,1.1s							
K22A	Casper	9.05	315	lAmb_Lg			03 29 22.6	
	comp=Z,25nm,0.9s							
F33A	5 Mile Ranch,	9.39	7	lAmb_Lg			03 29 45.2	
	comp=Z,15nm,0.9s							
SPMN	Marine on St.	9.51	22	lAmb_Lg			03 29 24.2	
	comp=Z,19nm,1.1s							
F36A	Milaca	9.89	18	lAmb_Lg			03 29 48.5	
	comp=Z,18nm,0.8s							

ROM 31 03:29:41.0±0.1, 42°908N±0'.004×13°219E±0'.005, h10km, ML2.5/8, 1D, Error ellipse: s-maj=0.5km s-min=0.2km az=44.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
MC2	Monte Cornacci	0.02	282	P	Pg	03 29 43.0		-0.1
MMO1	Montemonaco	0.08	96	P	Pg	03 29 43.7		+0.3
MMO1				S	Sg	03 29 45.4		+0.2
T1242	Castelluccio d	0.08	188	P	Pg	03 29 43.6		+0.1
T1242				S	Sg	03 29 45.2		-0.1
T1242				AML	AML			
	comp=E,13500µm,0.2s							
T1242				AML	AML			
	comp=N,8260µm,1.4s							
T1242				AML	AML			
	comp=E,13500µm,0.2s							
T1242				AML	AML			
	comp=N,8255µm,1.4s							
T1242				AML	AML			
	comp=E,13500µm,0.2s							
T1242				AML	AML			
	comp=N,8100µm,1.4s							
T1242				AML	AML			
	comp=N,8105µm,1.4s							
T1242				AML	AML			
	comp=E,13450µm,0.2s							
T1242				AML	AML			
	comp=N,5893µm,0.2s							
T1242				AML	AML			
	comp=E,13461µm,0.2s							
T1242				AML	AML			
	comp=E,13496µm,0.2s							
T1242				AML	AML			
	comp=N,6038µm,0.1s							
NRCA	Norcia	0.11	226	P	Pg	03 29 44.1		+0.3
NRCA				S	Sg	03 29 46.1		+0.4
FEMA	Monte Fema	0.14	294	P	Pg	03 29 44.8		+0.6
FEMA				S	Sg	03 29 47.3		+0.8
FDMO	Fiordimonte	0.16	323	P	Pg	03 29 45.3		+0.7
FDMO				S	Sg	03 29 48.2		+1.2
T1244	Arquata del Tr	0.16	159	P	Pg	03 29 45.3		+0.7
T1244				S	Sg	03 29 48.5		+1.4
T1241	Roccafluvione,	0.17	108	P	Pg	03 29 45.5		+0.8
T1241				S	Sg	03 29 48.2		+1.0
CSP1	Cessapalombo	0.18	357	S	Sg	03 29 46.0		-1.8
T1202	Accumoli, Fraz	0.20	179	P	Pg	03 29 46.2		+0.8
T1202				S	Sg	03 29 49.9		+1.6
T1202				AML	AML			
	comp=E,4060µm,1.2s							
T1202				AML	AML			
	comp=N,4370µm,1.6s							
T1202				AML	AML			
	comp=E,3923µm,0.3s							
T1202				AML	AML			
	comp=N,3966µm,0.3s							
T1204	Amatrice, Fraz	0.24	163	P	Pg	03 29 46.6		+0.5
T1204				S	Sg	03 29 51.4		+2.0
CESI	CESI - Serrava	0.25	293	P	Pg	03 29 46.8		+0.6
CESI				S	Sb	03 29 51.1		-1.0
T1243	Rocca Santa Ma	0.27	141	P	Pg	03 29 47.1		+0.5
T1243				S	Sb	03 29 51.7		-1.0
SMA1	SAN MARTINO	0.29	163	⇓P	Pg	03 29 42.0		-5.0
SMA1				AML	AML			
	comp=E,832µm,0.3s							
SMA1				AML	AML			
	comp=N,834µm,0.9s							
SMA1				AML	AML			
	comp=E,832µm,0.3s							
SMA1				AML	AML			
	comp=E,832µm,0.3s							
SMA1				AML	AML			
	comp=N,768µm,0.2s							
LNSS	Leonessa	0.33	203	P	Pg	03 29 48.0		+0.4
LNSS				S	Sb	03 29 53.6		-0.9
LNSS				AML	AML			
	comp=E,4095µm,0.2s							
LNSS				AML	AML			
	comp=N,5360µm,0.3s							
LNSS				AML	AML			
	comp=E,4092µm,0.2s							
LNSS				AML	AML			
	comp=N,5357µm,0.3s							
OFFI	Offida	0.34	85	S	Sg	03 29 50.0		-2.4
CAMP	Campotosto	0.40	159	P	Pg	03 29 49.0		+0.1
CAMP				S	Sb	03 29 55.6		-0.9
CAMP				AML	AML			
	comp=E,390µm,0.2s							
CAMP				AML	AML			
	comp=N,285µm,0.8s							
CAMP				AML	AML			
	comp=E,390µm,0.2s							
CAMP				AML	AML			
	comp=N,254µm,0.2s							
RM33	Pellescritta (	0.40	180	AML	AML			
	comp=E,641µm,0.3s							
RM33				AML	AML			
	comp=E,642µm,0.3s							
RM33				AML	AML			
	comp=E,644µm,0.7s							
RM33				AML	AML			
	comp=E,644µm,0.7s							
RM33				AML	AML			
	comp=N,507µm,0.6s							
RM33				AML	AML			
	comp=N,543µm,1.1s							
RM33				AML	AML			
	comp=E,641µm,0.3s							
RM33				AML	AML			
	comp=N,417µm,0.1s							
RM33				AML	AML			
	comp=E,609µm,0.3s							
RM33				AML	AML			
	comp=N,429µm,0.1s							
TERO	Teramo	0.40	135	AML	AML			
	comp=E,972µm,0.3s							
TERO				AML	AML			
	comp=N,762µm,1.4s							
TERO				AML	AML			
	comp=E,915µm,1.0s							
TERO				AML	AML			
	comp=E,970µm,0.3s							
TERO				AML	AML			
	comp=N,762µm,1.4s							
TERO				AML	AML			
	comp=N,632µm,1.4s							
ASSB	Assisi San Ben	0.43	288	S	Sg	03 29 50.0		-5.3

*PDG **31** 04:27:40.2±4.0, 41°.50N×21°.68E, h11km±11km, ML2.1/10, Error ellipse: s-maj=31.3km s-min=25.1km az=90.0*
*BEO **31** 04:28:02.2±0.5, 42°.13N×20°.27E, h0km, ML1.9/6*
ISC 31 04:28:01.3±1.3, 42°09N±0'.04×20°26E±0'.02, h9km±9km, n35, σ1.8s12/63, 13C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
PVY	Plav	0.56	337	⇓*i* Pg	Pg	04 28 12.0		-0.1
PVY				*i* Sg	Sb	04 28 20.6		-0.8
PVY	Plav	0.56	337	⇑*i* Pn	Pg	04 28 12.0		-0.1
PVY				*i* Sn	Sg	04 28 20.2		+0.7
DRME	Dracevica, Mon	0.80	278	⇑*i* Pg	Pg	04 28 16.3		-0.5
DRME				*i* Sg	Sb	04 28 29.3		+0.9
DRME	Dracevica, Mon	0.80	278	⇑*i* Pn	Pg	04 28 15.2		-1.6
DRME				*i* Sn	Sb	04 28 28.7		+0.3
PDG	Podgorica	0.82	295	*e* Pg	Pg	04 28 16.7		-0.4
PDG				*e* Sg	Sg	04 28 28.0		+0.2
TTG	Podgorica	0.82	295	⇓*i* Pg	Pg	04 28 16.5		-0.6
TTG				*i* Sg	Sb	04 28 29.5		+0.6
TTG	Podgorica	0.82	295	⇓*i* Pn	Pg	04 28 15.5		-1.6
TTG				*i* Sn	Sb	04 28 28.8		-0.1
IVA	Berane	0.83	341	⇑*i* Pg	Pg	04 28 16.4		-1.0
IVA				*i* Sg	Sb	04 28 29.3		0.0
IVA	Berane	0.83	341	⇑*i* Pn	Pg	04 28 17.2		-0.2
IVA				*i* Sn	Sb	04 28 29.3		0.0
KOME	Kolasin	0.94	325	⇑*i* Pg	Pg	04 28 18.8		-0.7
KOME				*i* Sg	Sn	04 28 33.4		-1.1
KOME	Kolasin	0.94	325	⇑*i* Pn	Pg	04 28 18.7		-0.7
KOME				*i* Sn	Sb	04 28 33.1		+0.6
BUM	Brajici-Budva	1.03	282	*e* Pg	Pg	04 28 20.9		-0.3
BUM				*i* Sg	Sn	04 28 37.4		+0.7
BUM	Brajici-Budva	1.03	282	⇑*i* Pn	Pg	04 28 18.7		-2.5
BUM				*i* Sn	Sn	04 28 36.9		+0.2
CEME	Cevo	1.09	295	*e* Pg	Pg	04 28 21.7		-0.7
CEME				*i* Sg	Sn	04 28 38.7		+0.5
CEME	Cevo	1.09	295	⇑*i* Pn	Pg	04 28 21.2		-1.2
CEME				*i* Sn	Sn	04 28 38.3		+0.1
NKME	Niksic	1.18	306	⇑*i* Pg	Pb	04 28 22.8		-1.1
NKME				*i* Sg	Sn	04 28 41.8		+1.5
NKME	Niksic	1.18	306	⇓*i* Pn	Pb	04 28 20.7		-3.2
NKME				*i* Sn	Sn	04 28 39.8		-0.5
SJES	Sjenica	1.19	350	*e* Pg	Pb	04 28 23.5		-0.7
SJES				*e* Sg	Sg	04 28 39.5		-0.3
SELS	Selova	1.30	29	*e* Pg	Pn	04 28 25.0		-0.7
SELS				*e* Sg	Sg	04 28 43.0		-0.2
HCY	Herceg Novi	1.36	286	⇓*i* Pg	Pn	04 28 26.1		-0.4
HCY				*i* Sg	Sg	04 28 47.4		+2.4
HCY	Herceg Novi	1.36	286	⇓*i* Pn	Pn	04 28 26.4		-0.1
HCY				*i* Sn	Sg	04 28 47.0		+2.0
BARS	Barje	1.37	57	*e* Pg	Pn	04 28 26.4		-0.2
BARS				*e* Sg	Sg	04 28 45.2		-0.1
PRVS	Prvonek	1.42	72	*e* Pg	Pn	04 28 27.6		+0.3
PRVS				*e* Sg	Sn	04 28 45.9		-0.2
IVAS	Ivanjica	1.49	357	*e* Pg	Pn	04 28 27.6		-0.8
IVAS				*e* Sg	Sn	04 28 47.3		-0.7
UPM	Unac-Piva	1.50	319	*e* Pg	Pn	04 28 28.9		+0.3
UPM				*e* Sg	Sg	04 28 51.1		+1.6
UPM	Unac-Piva	1.50	319	⇑*i* Pn	Pb	04 28 29.2		-0.2
UPM				*i* Sn	Sg	04 28 51.9		+2.4
BRY	Bratogost	1.51	303	⇑*i* Pg	Pn	04 28 28.8		+0.1
BRY				*i* Sg	Sg	04 28 51.3		+1.4
BRY	Bratogost	1.51	303	⇑*i* Pn	Pn	04 28 17.5		-11
BRY				*i* Sn	Sg	04 28 53.1		+3.2
BOSS	Bosilegrad	1.70	75	*e* Pg	Pb	04 28 33.2		+0.4
BOSS				*e* Sg	Sb	04 28 54.8		+0.5
BOVS	Bovan	1.88	34	*e* Pn	Pb	04 28 35.7		-0.1
BBLS	Lazići	1.89	341	*e* Pn	Pn	04 28 34.8		+1.0
DIVS	Divibare	2.02	355	*e* Pn	Pn	04 28 35.9		+0.2
ZAPS	Zavoj	2.12	55	*e* Pn	Pn	04 28 37.2		+0.2
TRUS	Trudelj	2.14	3	*e* Pn	Pn	04 28 38.5		+1.3
ZAGS	Zajecar	2.26	39	*e* Pn	Pn	04 28 40.2		+1.4

*NOU **31** 04:36:30.4, 38°.99S×176°.88E, h31km, MLv3.8/8, North Island, New Zealand*
WEL 31 04:36:31.3±0.3, 39°S±3°×17°7E±°, h36km±4km, M3.0/31, ML3.3/31, MLv3.0/31, Error ellipse: s-maj=0.0km s-min=0.0km az=157.9, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
MTHZ	Maungataniwha	0.13	54	P	Pn	04 36 38.8		-4.4
MTHZ				S	Sn	04 36 44.6		-10
NMHZ	Naumai	0.19	156	P	Pn	04 36 39.5		-1.4
NMHZ				S	Sn	04 36 46.3		-3.9
MRHZ	Matea Rd	0.25	292	P	Pn	04 36 40.0		+0.3
MRHZ				S	Sn	04 36 46.3		-1.0
BKZ	Black Stump Fm	0.29	215	P	Pn	04 36 40.0		+0.5
BKZ	Black Stump Fm	0.29	215	P	Pn	04 36 40.0		+0.5
BKZ				S	Sn	04 36 46.7		+0.1
RAHZ	Arahi	0.29	88	P	Pn	04 36 40.3		+0.8
RAHZ				S	Sn	04 36 47.3		+0.8
WHHZ	Waihua	0.43	110	P	Pn	04 36 42.0		+1.2
WHHZ				S	Sn	04 36 51.0		+3.2
MUGZ	Murupara	0.45	6	P	Pn	04 36 41.8		+0.8
MUGZ				S	Sn	04 36 50.2		+2.1
ALRZ	Allen Road	0.46	322	P	Pn	04 36 42.3		+1.0
HATZ	Hinemaiaia	0.48	274	P	Pn	04 36 42.5		+0.8
PRRZ	Plateau Road	0.49	330	P	Pn	04 36 42.6		+0.9
SNGZ	Shannon Statio	0.51	74	P	Pn	04 36 43.1		+1.0
SNGZ				S	Sn	04 36 53.2		+3.6
KWHZ	Kaweka Forest	0.55	204	P	Pn	04 36 43.3		+0.6
KWHZ				S	Sn	04 36 53.1		+2.5
WPRZ	Whakapapatarin	0.59	313	P	Pn	04 36 43.9		+0.5
RRRZ	Republican Roa	0.61	345	P	Pn	04 36 43.9		+0.4
HRRZ	Handcock Road	0.63	328	P	Pn	04 36 44.4		+0.6
WHTZ	Whakaora	0.64	294	P	Pn	04 36 45.0		+1.0
WHTZ				S	Sn	04 36 56.4		+3.4
RITZ	Rihia Road	0.67	265	P	Pn	04 36 45.0		+0.7
RAGZ	Rawiri	0.70	52	P	Pn	04 36 45.5		+0.8
TARZ	Mount Tarawera	0.71	347	P	Pn	04 36 45.6		+0.7
HSRZ	Hossack Road	0.71	329	P	Pn	04 36 45.8		+1.0
HLRZ	Highlands Stat	0.73	337	P	Pn	04 36 46.0		+0.9
RATZ	Rangitukua	0.73	274	P	Pn	04 36 46.0		+0.8
URZ	Urewera	0.74	25	P	Pn	04 36 45.2		+0.1
URZ	Urewera	0.74	25	P	Pn	04 36 45.2		+0.1
GRRZ	Galatos Road	0.74	321	P	Pn	04 36 46.3		+1.0
BHHZ	Black Hill Sta	0.75	222	P	Pn	04 36 46.1		+0.6
KNZ	Kokohu	0.76	98	P	Pn	04 36 45.7		+0.3
KRHZ	Kereru	0.76	200	P	Pn	04 36 46.1		+0.6
CKHZ	Cape Kidnapper	0.79	159	P	Pn	04 36 46.1		+0.3
KATZ	Kakaramea	0.79	266	P	Pn	04 36 46.6		+0.6
WATZ	Wairara	0.79	286	P	Pn	04 36 47.2		+1.2
ETVZ	East Tongariro	0.81	255	P	Pn	04 36 46.7		+0.5
TMVZ	Te Maari	0.81	256	P	Pn	04 36 46.7		+0.5
MKRZ	Makatiti	0.81	346	P	Pn	04 36 47.2		+1.0
EDRZ	Edgecumbe	0.82	2	P	Pn	04 36 46.7		+0.3
KUTZ	Kaahu Road	0.82	302	P	Pn	04 36 47.0		+0.7
NTVZ	North Tongarir	0.82	258	P	Pn	04 36 46.9		+0.4
OTVZ	Oturere	0.85	253	P	Pn	04 36 47.3		+0.5
KRVZ	Karewarewa	0.85	258	P	Pn	04 36 47.2		+0.4
RIGZ	Rimuhau	0.85	75	P	Pn	04 36 47.1		+0.4
OMRZ	Omania	0.86	342	P	Pn	04 36 47.2

BFZ	**Birch Farm**	**1.79 191**	P	Pn	04 36 57.8	-1.8
BFZ	**Birch Farm**	**1.79 191**	P	Pn	04 36 57.9	-1.7
MXZ	**Matakaoa Point**	**1.85 43**	P	Pn	04 37 01.4	+0.9
LREZ	**Lake Rotokare**	**1.87 253**	P	Pn	04 37 01.6	+0.9
MRZ	**Mangatainoka R**	**1.94 206**	P	Pn	04 37 00.1	-1.5
TIWZ	**Tintock**	**1.95 199**	P	Pn	04 37 00.4	-1.5
PREZ	**Palmer Road**	**2.03 257**	P	Pn	04 37 04.7	+1.8
NEZ	**North Egmont**	**2.06 260**	P	Pn	04 37 05.1	+1.7
KHEZ	**Kahui Hut**	**2.13 259**	P	Pn	04 37 06.5	+2.1
PKE	**Pukeiti**	**2.14 262**	P	Pn	04 37 06.0	+1.6
HOWZ	**Holdsworth Sta**	**2.17 205**	P	Pn	04 37 02.9	-2.0
OGWZ	**Otaki Gorge**	**2.23 212**	P	Pn	04 37 04.8	-0.8
NBEZ	**Newall Road No**	**2.24 260**	P	Pn	04 37 08.0	+2.2
TMWZ	**Te Maipa**	**2.27 196**	P	Pn	04 37 03.8	-2.4
KIW	**Kapiti Island**	**2.38 215**	P	Pn	04 37 06.4	-1.3
SNZO	**South Karori**	**2.83 212**	P	Pn	04 37 14.2	+0.3
DUWZ	**D'Urville Isla**	**2.85 228**	P	Pn	04 37 14.4	+0.2
PLWZ	**Palliser**	**2.87 202**	P	Pn	04 37 11.3	-3.1
TCW	**Tory Channel**	**2.95 219**	P	Pn	04 37 14.6	-0.9
NNZ	**Nelson**	**3.43 227**	P	Pn	04 37 26.7	+4.6
TKNZ	**Takaka Hill**	**3.57 233**	P	Pn	04 37 28.5	+4.4
QRZ	**Quartz Range**	**3.73 238**	P	Pn	04 37 27.1	+0.8
QRZ	**Quartz Range**	**3.73 238**	P	Pn	04 37 26.4	+0.1
MRNZ	**Matariki Terra**	**3.91 230**	P	Pn	04 37 29.0	+0.3
THZ	**Tophouse**	**4.06 225**	P	Pn	04 37 30.0	-0.9
KHZ	**Kahutara**	**4.24 214**	P	Pn	04 37 33.6	+0.4
OUZ	**Omahuta**	**4.46 325**	P	Pn	04 37 38.1	+1.8
OUZ	**Omahuta**	**4.46 325**	P	Pn	04 37 38.0	+1.7
DSZ	**Denniston Nort**	**4.69 232**	P	Pn	04 37 41.3	+1.8
WVZ	**Waitaha Valley**	**6.13 226**	P	Pn	04 38 05.0	+5.8
ARCZ	**Arundel**	**6.51 218**	P	Pn	04 38 10.0	+5.5
GCSZ	**Gaunt Creek Bo**	**6.51 226**	P	Pn	04 38 08.7	+4.2
TMZ	**Timaru**	**6.92 216**	P	Pn	04 38 08.7	-1.5
FOZ	**Fox Glacier**	**6.94 226**	P	Pn	04 38 14.8	+4.5
CTZ	**Chatham Island**	**6.95 136**	P	Pn	04 38 08.5	-1.9
JCZ	**Jackson Bay**	**7.86 227**	P	Pn	04 38 28.0	+4.9

*INET **31** 04:46:43.5±1.5, 14°.62N×89°.80W, h15km±8km, MW4.1*
*SNET **31** 04:46:44.7±1.4, 14°.08N×89°.67W, h2km±3km, ML4.3*
*NEIC **31** 04:46:45.1±1.6, 14°.06N±0°.05×89°.71W±0°.04, h2km±9km, mb4.2/13, Md4.6(SNET), Error ellipse: s-maj=7.5km s-min=5.8km az=164.0*
*UCR **31** 04:46:45.3±1.4, 14°.07N×89°.67W, h5km±3km, ML4.4, mb4.2(NEIC)*
*IDC **31** 04:46:47.4±6.1, 14°.62N×89°.53W, h0km, mb3.7/3, mbtmp3.7/5, ML3.8/2, MS4.4/2, Error ellipse: s-maj=133.8km s-min=29.6km az=8.0*
*GCG **31** 04:46:49.0±1.4, 14°.13N×89°.68W, h2km, MD4.1*

ISC 31 04:46:45.4±0.9, 14°.09N±0°.03×89°.67W±0°.02, h6km±7km, n113, σ0s91/141, mb4.0/5, 33C-12D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LOAL	**Lomas de Alarc**	**0.14**	**229**	⇓*iP*		**Pg**		**04 46 47.8**	**-0.6**
LOAL				*eS*		**Sg**		**04 46 49.9**	**-0.4**
LOAL	**Lomas de Alarc**	**0.14**	**229**	⇓*iP*		**Pg**		**04 46 47.8**	**-0.6**
LOAL				*eS*		**Sg**		**04 46 49.9**	**-0.4**
UNIC	**Universidad Ca**	**0.16**	**132**	⇑*iP*		**Pg**		**04 46 49.3**	**+0.6**
UNIC				*eS*		**Sg**		**04 46 52.4**	**+1.5**
UNIC	**Universidad Ca**	**0.16**	**132**	⇑*iP*		**Pg**		**04 46 49.3**	**+0.6**
UNIC				*eS*		**Sg**		**04 46 52.4**	**+1.5**
RTR	**El Retiro**	**0.19**	**173**	⇓*iP*		**Pg**		**04 46 49.7**	**+0.3**
RTR	**El Retiro**	**0.19**	**173**	⇓*iP*		**Pg**		**04 46 49.7**	**+0.3**
NUBE	**Las Nubes**	**0.21**	**209**	⇓*iP*		**Pg**		**04 46 49.2**	**-0.6**
NUBE				*eS*		**Sg**		**04 46 52.2**	**-0.5**
NUBE	**Las Nubes**	**0.21**	**209**	⇓*iP*		**Pg**		**04 46 49.2**	**-0.6**
NUBE				*eS*		**Sg**		**04 46 52.2**	**-0.5**
SNJE	**San Jose**	**0.23**	**164**	⇓*iP*		**Pg**		**04 46 50.4**	**+0.3**
SNJE	**San Jose**	**0.23**	**164**	⇓*iP*		**Pg**		**04 46 50.4**	**+0.3**
CEVE	**Cerro Verde**	**0.27**	**170**	⇓*iP*		**Pg**		**04 46 50.9**	**+0.2**
CEVE				*eS*		**Sg**		**04 46 56.7**	**+2.4**
CEVE	**Cerro Verde**	**0.27**	**170**	⇓*iP*		**Pg**		**04 46 50.9**	**+0.2**
CEVE				*eS*		**Sg**		**04 46 56.7**	**+2.4**
CEDA	**San Andres**	**0.39**	**137**	⇑*iP*		**Pg**		**04 46 53.3**	**+0.3**
CEDA				*eS*		**Sg**		**04 46 59.8**	**+1.6**
CEDA				IAML				04 47 02.7	
	comp=Z,46μm,0.6s								
CEDA	**San Andres**	**0.39**	**137**	⇑*iP*		**Pg**		**04 46 53.3**	**+0.3**
CEDA				*eS*		**Sg**		**04 46 59.8**	**+1.6**
CEDA				IAML				04 47 02.7	
	comp=Z,46μm,0.6s								
MTO3	**Montecristo**	**0.43**	**44**	Pg		**Pb**		**04 46 54.3**	**-1.3**
MTO3				Sg		**Sb**		**04 47 01.1**	**-1.3**
MTO3	**Montecristo**	**0.43**	**44**	⇑*iP*		**Pb**		**04 46 54.3**	**-1.3**
MTO3				*eS*		**Sb**		**04 47 01.3**	**-1.1**
MTO3	**Montecristo**	**0.43**	**44**	⇑*iP*		**Pb**		**04 46 54.3**	**-1.3**
MTO3				*eS*		**Sb**		**04 47 01.3**	**-1.1**
JAYA	**Jayaque - finc**	**0.48**	**154**	⇓*eP*		**Pg**		**04 46 54.9**	**0.0**
JAYA				IAML				04 47 04.0	
	comp=Z,16μm,0.2s								
JAYA	**Jayaque - finc**	**0.48**	**154**	⇓*eP*		**Pg**		**04 46 54.9**	**0.0**
JAYA				IAML				04 47 04.0	
	comp=Z,16μm,0.2s								
BOQS	**Boqueron**	**0.52**	**133**	⇑*iP*		**Pg**		**04 46 56.0**	**+0.5**
BOQS	**Boqueron**	**0.52**	**133**	⇑*iP*		**Pg**		**04 46 56.0**	**+0.5**
UEES	**Universidad Ev**	**0.56**	**132**	⇑*eP*		**Pg**		**04 46 56.5**	**+0.2**
UEES	**Universidad Ev**	**0.56**	**132**	⇑*eP*		**Pg**		**04 46 56.5**	**+0.2**
ITCA	**Escuela Especi**	**0.56**	**137**	⇑*eP*		**Pg**		**04 46 56.6**	**+0.3**
ITCA				*eS*		**Sg**		**04 47 05.1**	**+1.4**
ITCA	**Escuela Especi**	**0.56**	**137**	⇑*eP*		**Pg**		**04 46 56.6**	**+0.3**
ITCA				*eS*		**Sg**		**04 47 05.1**	**+1.4**
ESQI	**Esquipulas**	**0.57**	**34**	Pg		**Pb**		**04 46 56.8**	**-1.0**
ESQI				Sg		**Sb**		**04 47 05.3**	**-0.9**
ESQI	**Esquipulas**	**0.57**	**34**	⇑*iP*		**Pb**		**04 46 56.8**	**-1.0**
SEMO	**Seminario San**	**0.58**	**132**	*eP*		**Pg**		**04 46 56.8**	**+0.1**
SNET	**Serv Nac Est T**	**0.59**	**133**	Pg		**Pg**		**04 46 56.8**	**0.0**
SNET	**Serv Nac Est T**	**0.59**	**133**	⇑*eP*		**Pg**		**04 46 56.9**	**+0.2**
SNET				*eS*		**Sg**		**04 47 05.6**	**+1.2**
SNET	**Serv Nac Est T**	**0.59**	**133**	⇑*eP*		**Pg**		**04 46 56.9**	**+0.2**
SNET				*eS*		**Sg**		**04 47 05.6**	**+1.2**
UESS	**Universidad de**	**0.59**	**129**	*eP*		**Pg**		**04 46 57.0**	**+0.2**
UESS	**Universidad de**	**0.59**	**129**	*eP*		**Pg**		**04 46 57.0**	**+0.2**
UTEC	**Universidad Te**	**0.60**	**130**	⇑*iP*		**Pg**		**04 46 57.1**	**+0.1**
UTEC	**Universidad Te**	**0.60**	**130**	⇑*iP*		**Pg**		**04 46 57.1**	**+0.1**
IGN	**Direccin Gen**	**0.61**	**128**	⇑*eP*		**Pg**		**04 46 57.4**	**+0.1**
IGN	**Direccin Gen**	**0.61**	**128**	⇑*eP*		**Pg**		**04 46 57.3**	**+0.1**
IGN				⇑*eP*		**Pg**		**04 46 57.4**	**+0.1**
LFU	**La Fuente**	**0.64**	**122**	⇑*iP*		**Pg**		**04 46 58.1**	**+0.4**
LFU	**La Fuente**	**0.64**	**122**	⇑*iP*		**Pg**		**04 46 58.1**	**+0.4**
LBRS	**Las Brisas**	**0.70**	**120**	⇑*iP*		**Pg**		**04 46 59.2**	**+0.3**
LBRS	**Las Brisas**	**0.70**	**120**	⇑*iP*		**Pg**		**04 46 59.2**	**+0.3**
LLGN	**La Laguna**	**0.71**	**84**	⇑*eP*		**Pg**		**04 46 59.3**	**+0.2**
LLGN				*eS*		**Sg**		**04 47 10.0**	**-0.3**
LLGN	**La Laguna**	**0.71**	**84**	⇑*eP*		**Pg**		**04 46 59.3**	**+0.2**
LLGN				*eS*		**Sb**		**04 47 10.0**	**-0.3**
LFRS	**El Faro**	**0.75**	**128**	⇑*iP*		**Pg**		**04 46 59.9**	**0.0**
LFRS	**El Faro**	**0.75**	**128**	⇑*iP*		**Pg**		**04 46 59.9**	**0.0**
PAVA	**Las Pavas**	**0.81**	**118**	⇑*eP*		**Pg**		**04 47 00.9**	**0.0**
PAVA				*eS*		**Sb**		**04 47 13.1**	**0.0**
PAVA	**Las Pavas**	**0.81**	**118**	⇑*eP*		**Pg**		**04 47 00.9**	**0.0**
PAVA				*eS*		**Sb**		**04 47 13.1**	**0.0**
NBG	**Las Nubes**	**0.82**	**307**	*eP*		**Pn**		**04 47 05.0**	**+1.2**
NBG				*eS*		**Sn**		**04 47 18.9**	**+2.6**
P5NO	**Presa 5 de nov**	**0.89**	**97**	⇑*eP*		**Pg**		**04 47 02.0**	**-0.6**
SNVI	**San Vicente**	**0.94**	**120**	*eP*		**Pg**		**04 47 03.5**	**0.0**
SNVI	**San Vicente**	**0.94**	**120**	*eP*		**Pg**		**04 47 03.5**	**0.0**
PCG	**Pacaya**	**0.96**	**288**	⇑*iP*		**Pn**		**04 47 07.0**	**+1.3**
UESV	**Universidad de**	**0.97**	**118**	*eP*		**Pg**		**04 47 03.7**	**-0.4**
UESV	**Universidad de**	**0.97**	**118**	*eP*		**Pg**		**04 47 03.7**	**-0.4**
MRL	**Marmol**	**0.98**	**359**	*iP*		**Pn**		**04 47 08.6**	**+2.6**
MRL				*eS*		**Sn**		**04 47 23.3**	**+2.9**
PQSS	**Presa 15 de Se**	**1.17**	**113**	*eP*		**Pg**		**04 47 07.2**	**-0.8**
PQSS	**Presa 15 de Se**	**1.17**	**113**	*eP*		**Pg**		**04 47 07.2**	**-0.8**
FUG	**Fuego 3**	**1.19**	**288**	⇑*eP*		**Pn**		**04 47 10.7**	**+1.9**
FUG				*eS*		**Sn**		**04 47 26.2**	**+0.9**
PACA	**Pacayal**	**1.45**	**115**	*eP*		**Pn**		**04 47 12.0**	**-0.3**
PACA	**Pacayal**	**1.45**	**115**	*eP*		**Pn**		**04 47 12.0**	**-0.3**
CAHU	**Cacacuatique**	**1.45**	**102**	*iP*		**Pn**		**04 47 11.8**	**-0.6**
CAHU	**Cacacuatique**	**1.45**	**102**	*iP*		**Pn**		**04 47 11.8**	**-0.6**
RANC	**El Ranchito**	**1.49**	**116**	*eP*		**Pn**		**04 47 12.7**	**-0.2**
RANC	**El Ranchito**	**1.49**	**116**	*eP*		**Pn**		**04 47 12.7**	**-0.2**
STG3	**Santiaguito 3,**	**1.94**	**289**	*eP*		**Pg**		**04 47 23.3**	**+0.6**
STG3				*eS*		**Sg**		**04 47 48.9**	**+1.0**
CNCH	**Conchagua**	**1.96**	**114**	*eP*		**Pn**		**04 47 19.6**	**+0.3**
CNCH	**Conchagua**	**1.96**	**114**	*eP*		**Pn**		**04 47 19.6**	**+0.3**
RTAL	**Retalhuleu**	**2.01**	**283**	Pn		**Pn**		**04 47 19.8**	**-0.1**
RTAL				Sg		**Sn**		**04 47 46.1**	**+0.7**
RTAL	**Retalhuleu**	**2.01**	**283**	*eS*		**Sb**		**04 47 46.9**	**-0.7**

HUEH	**Huehuetenango**	**2.15**	**305**	Pn		**Pn**		**04 47 21.7**	**-0.3**
HUEH	**Huehuetenango**	**2.15**	**305**	*eP*		**Pn**		**04 47 22.2**	**+0.1**
HUEH				*eS*		**Sb**		**04 47 52.1**	**+0.1**
HUEH	**Huehuetenango**	**2.15**	**305**	*eP*		**Pn**		**04 47 22.2**	**+0.1**
HUEH				*eS*		**Sb**		**04 47 52.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.33**	**91**	Pn		**Pn**		**04 47 23.6**	**-0.8**
PETF	**Flores**	**2.82**	**356**	Pn		**Pn**		**04 47 30.3**	**-0.7**
CRIN	**San Cristobal**	**2.90**	**118**	Pn		**Pn**		**04 47 32.8**	**+0.5**
CRIN	**San Cristobal**	**2.90**	**118**	*eP*		**Pn**		**04 47 34.4**	**+2.2**
CRIN				*eS*		**Sb**		**04 48 12.7**	**-0.8**
CNGN	**Cerro Negro**	**3.30**	**118**	Pn		**Pn**		**04 47 37.9**	**+0.2**
RCON	**San Juan de Ri**	**3.47**	**100**	*eP*		**Pn**		**04 47 39.4**	**-0.7**
COPN	**Copaltepe**	**3.55**	**122**	*eP*		**Pn**		**04 47 41.7**	**+0.5**
MATN	**Matagalpa**	**3.82**	**107**	Pn		**Pn**		**04 47 44.0**	**-0.9**
MATN	**Matagalpa**	**3.82**	**107**	*eP*		**Pn**		**04 47 44.4**	**-0.5**
BOAB	**BOACO BROADBAN**	**4.23**	**112**	Pn		**Pn**		**04 47 53.1**	**+2.7**
ACON	**Acoyapa**	**4.86**	**115**	Pn		**Pn**		**04 47 58.1**	**-1.1**
HZTE	**Horizontes, Gu**	**5.21**	**130**	Pn		**Pn**		**04 48 03.2**	**-0.7**
ORTG	**Ortega, Santa**	**5.54**	**132**	Pn		**Pn**		**04 48 09.8**	**+1.3**
CMIG	**Matias Romero**	**5.84**	**301**	Pn		**Pn**		**04 48 13.6**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=108,slow=12,SNR=17								
CMIG				Lg		Lg		04 49 47.2	
	comp=Z,5.0nm,0.3s,baz=224,slow=4.3,SNR=8.7								
	comp=Z,7.6nm,0.6s								
TEIG	**Tepich**	**6.25**	**12**			**Pn**		**04 48 17.7**	**-0.5**
JACO	**JACO, Garabito**	**6.59**	**131**	Pn		**Pn**		**04 48 24.0**	**+1.1**
RIMA	**Rio Macho**	**7.12**	**126**	Pn		**Pn**		**04 48 31.2**	**+0.8**
SRBA	**San Rafael, Bu**	**7.84**	**127**	Pn		**Pn**		**04 48 40.6**	**+0.4**
DRK0	**Durika**	**7.91**	**127**	Pn		**Pn**		**04 48 41.6**	**+0.3**
SOR	**Soroa**	**10.71**	**35**	Pn		**Pn**		**04 49 19.2**	**-0.3**
833A	**Chaparral WMA,**	**16.80**	**329**			**P**		**04 50 42.5**	**-1.1**
344A	**Westbrook Farm**	**17.31**	**357**	Pn		**Pn**		**04 50 47.7**	**-0.1**
344A				lAmb		lAmb		04 50 53.2	
	comp=Z,23nm,1.1s								
342A	**Flagon Creek P**	**17.38**	**352**			**P**		**04 50 51.3**	**+1.3**
342A				lAmb		lAmb		04 50 54.3	
	comp=Z,21nm,1.1s								
WLAR	**White Oak Lake**	**19.76**	**351**	P		**P**		**04 51 15.9**	**-0.3**
WLAR				lAmb		lAmb		04 51 23.1	
	comp=Z,12nm,1.0s								
TX32	**Lajitas Array**	**19.95**	**322**	P		**P**		**04 51 18.9**	**+0.6**
TXAR	**Lajitas Array**	**19.95**	**322**	P		**P**		**04 51 18.9**	**+0.6**
TXAR	**Lajitas Array**	**19.95**	**322**	P		**P**		**04 51 19.3**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=141,slow=10,SNR=14								
	comp=Z,1.9nm,0.8s								
TX31	**Lajitas Ar. Si**	**19.95**	**322**	P		**P**		**04 51 19.2**	**+0.8**
TX31				lAmb		lAmb		04 51 24.2	
	comp=Z,12nm,1.0s								
MIAR	**Mount Ida**	**20.67**	**351**	P		Pn		04 51 27.4	-1.0
MIAR				lAmb		lAmb		04 51 31.9	
	comp=Z,18nm,1.1s								
X37A	**Clayton**	**21.05**	**347**	P		**P**		**04 51 29.7**	**-0.4**
X37A				lAmb		lAmb		04 51 44.1	
	comp=Z,5.0nm,0.7s								
BAUV	**El Baul**	**21.80**	**101**	P		**P**		**04 51 38.1**	**-0.3**
TKL	**Tuckaleechee C**	**22.12**	**13**	LR		LR		05 01 00.4	
	comp=Z,1μm,19.7s,baz=51,slow=40								
WMOK	**Wichita Mounta**	**22.14**	**340**	P		**P**		**04 51 41.1**	**-0.9**
AMTX	**Amarillo**	**23.37**	**334**	P		**P**		**04 51 53.6**	**-1.4**
AMTX				lAmb		lAmb		04 51 56.1	
	comp=Z,7.4nm,1.0s								
S44A	**Carbondale**	**23.51**	**1**	P		**P**		**04 51 56.3**	**+0.1**
SIUC	**Southern Illin**	**23.53**	**1**	P		**P**		**04 51 56.2**	**-0.2**
NVAR	**Mina Array Bea**	**35.05**	**319**	P		**P**		**04 53 40.1**	**+0.6**
	comp=Z,0.7nm,1.0s,baz=134,slow=6.4,SNR=4.6								
	comp=Z,0.7nm,1.0s								
SCHQ	**Schefferville**	**44.38**	**19**	P		**P**		**04 54 55.0**	**-1.6**
	comp=Z,2.4nm,0.8s,baz=224,slow=15,SNR=1.7								
	comp=Z,2.4nm,0.8s								
ILAR	**Eielson Array**	**63.66**	**336**	P		**P**		**04 57 16.6**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=134,slow=4.5,SNR=4.6								
	comp=Z,0.4nm,0.9s								
GERES	**GERESS Array B**	**88.09**	**40**	LR		LR		05 33 41.6	
	comp=Z,159nm,20.1s,baz=170,slow=32								
PZH	**PanZhiHua**	**138.15**	**345**	PKP		**PKPdf**		**05 06 12.0**	**-0.4**

GUC 31 05:11:26.4±0.7, 24°.08S×67°.52W, h236km±10km, ML3.6, 7C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.28**	**332**	*eP*		Pn		05 12 00.0	-2.1
LVC	**Limon Verde**	**1.95**	**319**	*iP*		Pn		05 12 07.1	-0.6
LVC				*eS*		S		05 12 38.8	-1.2
LVC				IAML				05 12 42.6	
	209nm,0.3s								
PB15	**IPOC Station P**	**1.99**	**296**	⇑*iP*		Pn		05 12 08.1	+0.2
PB15				*eS*		S		05 12 40.4	0.0
GO02	**Mina Guanaco**	**2.17**	**240**	⇑*iP*		Pn		05 12 09.6	-0.1
GO02				*eS*		S		05 12 45.1	-0.6
PB06	**IPOC Station P**	**2.33**	**306**	⇑*iP*		Pn		05 12 11.6	+0.4
PB06				*eS*		S		05 12 45.0	-1.3
PB06				IAML				05 12 48.5	
	comp=E,148nm,0.4s								
PB14	**IPOC Station P**	**2.69**	**258**	*eP*		Pn		05 12 15.6	+0.6
PB14				*eS*		S		05 12 52.5	-0.6
PB14				IAML				05 12 53.8	
	comp=E,78nm,0.3s								
PB09	**IPOC Station P**	**2.78**	**325**	*iP*		Pn		05 12 15.9	+0.1
PB09				*eS*		S		05 12 53.6	-1.1
PB09				IAML				05 12 55.3	
	comp=E,64nm,0.3s								
PB04	**IPOC Station P**	**2.98**	**305**	⇑*iP*		Pn		05 12 18.7	+0.6
PB04				*eS*		S		05 12 59.1	+0.4
PB07	**IPOC Station P**	**3.21**	**317**	⇑*iP*		Pn		05 12 20.9	+0.3
PB07				*eS*		S		05 13 01.7	-1.5
PB02	**IPOC Station P**	**3.52**	**321**	⇑*iP*		Pn		05 12 24.0	-0.2
PB02				⇓*eS*		S		05 13 08.1	-1.5
PB01	**IPOC Station P**	**3.53**	**329**	⇑*iP*		Pn		05 12 23.7	-0.5
PB01				*eS*		S		05 13 08.5	-1.3
AC06	**Mina Casimiro**	**4.14**	**218**	*eP*		Pn		05 12 30.4	-0.9
AC06				*eS*		S		05 13 19.9	-2.8
AC05	**El Transito**	**5.34**	**207**	*eP*		Pn		05 12 45.0	-1.0
AC05				*eS*		S		05 13 47.7	-1.7

*AZER **31** 05:12:53.6±0.1, 41°.24N×48°.43E, h5km, Error ellipse: s-maj=0.9km s-min=0.6km az=262.0*
*IDC **31** 05:12:54.4±0.9, 41°.24N×48°.47E, h0km, mb3.9/9, mbtmp3.8/17, ML3.7/6, Error ellipse: s-maj=18.1km s-min=10.0km az=164.0*
*MOS **31** 05:12:54.6±1.0, 41°.20N×48°.68E, h9km, mb4.0/3, Error ellipse: s-maj=7.7km s-min=4.6km az=133.6*
*DRS **31** 05:12:55.4±0.0, 41°.06N×48°.61E, h20km*

ISC 31 05:12:56.5±0.8, 41°.26N±0°.01×48°.44E±0°.02, h11km±5km, n124, σ1s92/194, mb3.8/8, 2C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QUBA	**Quba, Azerbaij**	**0.10**	**25**	P		**Pg**		**05 12 58.8**	**-0.5**
	SNR=183								
QUBA				S		**Sg**		**05 13 00.3**	**-1.1**
XNQ	**Khinaliq**	**0.24**	**248**	P		**Pg**		**05 13 00.3**	**-1.4**
	SNR=4181								
XNQ				S		**Sg**		**05 13 05.5**	**+0.4**
QSAR	**Qusar**	**0.28**	**333**	P		**Pg**		**05 13 02.2**	**-0.1**
	SNR=146								
QSAR				S		**Sb**		**05 13 09.4**	**+0.9**
SIZA	**Siyzn**	**0.40**	**118**	P		**Pg**		**05 13 04.1**	**-0.3**
	SNR=1238								
SIZA				S		**Sn**		**05 13 13.4**	**+3.7**
KSMR	**Kasumkent**	**0.41**	**326**	*ePG*		**Pg**		**05 13 05.2**	**+0.5**
KSMR				*eS*		**Sb**		**05 13 12.8**	**+0.6**
KSMR	**Kasumkent**	**0.41**	**326**	*ePg*		**Pg**		**05 13 05.3**	**+0.5**
KSMR				*eSg*		**Sb**		**05 13 12.8**	**+0.6**
	5μm,0.5s								
PQL	**Pirkuli**	**0.49**	**166**	P		**Pg**		**05 13 05.0**	**-1.1**
	SNR=173								
PQL				S		**Sg**		**05 13 13.9**	**+1.3**
IML	**Ismayilli**	**0.51**	**202**	P		**Pg**		**05 13 05.3**	**-1.2**
	SNR=340								
IML				S		**Sg**		**05 13 14.7**	**+1.5**
ATGJ	**Altiaghaj**	**0.55**	**137**	P		**Pg**		**05 13 06.4**	**-1.0**
	SNR=38								
ATGJ				S		**Sb**		**05 13 16.7**	**+0.4**
QBL	**Gabala**	**0.55**	**235**	P		**Pg**		**05 13 05.8**	**-1.5**
	SNR=11								
QBL				S		**Sg**		**05 13 15.0**	**+0.4**
AKT	**Akhty**	**0.57**	**292**	*ePG*		**Pg**		**05 13 07.5**	**-0.2**
AKT				*iS*		**Sg**		**05 13 17.3**	**+2.0**
AKT				pmax	pmax				
	comp=Z,2μm,0.3s								
AKT				smax	smax				
	comp=N,5μm,0.5s								
AKT	**Akhty**	**0.57**	**292**	*ePg*		**Pg**		**05 13 07.5**	**-0.2**
	comp=N,2μm,0.3s								
AKT				*eSg*		**Sg**		**05 13 16.9**	**+1.5**
	comp=N,287nm,0.2s								
GBS	**Qobustan**	**0.82**	**152**	P		**Pb**		**05 13 12.7**	**-0.2**
	SNR=14								
GBS				S		**Sn**		**05 13 27.8**	**+1.4**
KDMR	**Kurdemir**	**0.91**	**192**	P		**Pb**		**05 13 12.8**	**-1.5**
	SNR=12								
KDMR				S		**Sg**		**05 13 28.6**	**+2.7**
SEKA	**Sheki**	**0.94**	**267**	PG		**Pb**		**05 13 13.1**	**-1.7**
SEKA	**Sheki**	**0.94**	**267**	P		**Pb**		**05 13 13.2**	**-1.7**
	SNR=168								
SEKA				S		**Sb**		**05 13 27.4**	**+0.1**
URKR	**Urkarakh**	**1.08**	**327**	*ePG*		**Pb**		**05 13 17.4**	**0.0**
URKR				*iS*		**Sn**		**05 13 34.2**	**+1.3**
URKR				pmax	pmax				
	comp=Z,288nm,0.2s								
URKR				smax	smax				
	comp=N,731nm,0.4s								
URKR	**Urkarakh**	**1.08**	**327**	*ePg*		**Pb**		**05 13 17.4**	**0.0**
	comp=N,287nm,0.2s								
URKR				*eSg*		**Sn**		**05 13 33.7**	**+0.8**
	comp=N,13nm,0.1s								
MNGR	**Mingechevir, A**	**1.13**	**245**	PG		**Pn**		**05 13 17.1**	**-1.3**
MNGR	**Mingechevir, A**	**1.13**	**245**	P		**Pn**		**05 13 17.1**	**-1.3**
	SNR=6.7								
MNGR				S		**Sb**		**05 13 33.3**	**+0.5**
ZRD	**Zardab**	**1.14**	**210**	P		**Pn**		**05 13 17.4**	**-1.0**
	SNR=24								
ZRD				S		**Sb**		**05 13 35.0**	**+2.0**
GOBA	**Gobu**	**1.31**	**131**	P		**Pg**		**05 13 24.0**	**+2.3**
	SNR=31								
KMKR	**Kumukh**	**1.32**	**311**	*ePG*		**Pn**		**05 13 21.4**	**+0.2**
KMKR				*iS*		**Sg**		**05 13 41.5**	**+2.3**
KMKR				pmax	pmax				
	comp=Z,659nm,0.6s								
KMKR				smax	smax				
	comp=N,951nm,0.4s								
**

GDB	**GEDABAY**	**2.10**	**256**	Pn		**Pn**	**05 13 31.8**	**-0.1**
	SNR=117							
GDB				Sn		**Sn**	**05 14 00.7**	**+2.6**
DBC	**Dubki**	**2.12**	**326**	⇑*i*PN		**Pb**	**05 13 35.6**	**+0.5**
DBC				*i* S		**Sg**	**05 14 09.4**	**+4.6**
DBC				pmax	pmax			
	comp=Z,19nm,0.1s							
DBC				pmax	pmax			
	comp=E,127nm,0.5s							
DBC				smax	smax			
	comp=N,232nm,0.4s							
DBC	**Dubki**	**2.12**	**326**	*e*Pn		**Pb**	**05 13 33.7**	**-1.4**
	comp=N,13nm,0.1s							
DBC				*e*Sn		**Sb**	**05 14 02.3**	**+0.9**
	comp=N,386nm,0.5s							
DLMR	**Dylym**	**2.25**	**324**	*e*PN		**Pb**	**05 13 35.8**	**-1.4**
DLMR				*e*S		**Sb**	**05 14 06.3**	**+1.3**
DLMR				*i* S		**Sg**	**05 14 07.1**	**-1.7**
DLMR				pmax	pmax			
	comp=Z,184nm,0.6s							
DLMR				smax	smax			
	comp=E,1µm,0.4s							
DLMR				smax	smax			
	comp=N,387nm,0.5s							
DLMR				smax	smax			
	comp=E,999nm,0.4s							
DLMR	**Dylym**	**2.25**	**324**	*e*Pn		**Pb**	**05 13 35.8**	**-1.4**
	comp=E,185nm,0.6s							
DLMR				*e*Sn		**Sb**	**05 14 06.4**	**+1.3**
	comp=E,386nm,0.5s							
DGRG	**David-gareji**	**2.31**	**276**	P		**Pn**	**05 13 36.3**	**+1.7**
DGRG				S		**Sg**	**05 14 13.5**	**+2.6**
DGRG	**David-gareji**	**2.31**	**276**	PN		**Pn**	**05 13 36.3**	**+1.7**
DGRG				S		**Sg**	**05 14 13.5**	**+2.6**
QZX	**Qazax, Azerbai**	**2.32**	**266**	Pn		**Pn**	**05 13 35.9**	**+1.2**
	SNR=65							
QZX				Sn		**Sb**	**05 14 07.3**	**+0.1**
YRD	**Yardimli**	**2.35**	**184**	Pn		**Pn**	**05 13 35.7**	**+0.4**
	SNR=23							
YRD				Sn		**Sn**	**05 14 07.2**	**+2.9**
LKRN	**Lenkeran, Azer**	**2.56**	**174**	PN		**Pn**	**05 13 38.9**	**+0.9**
LKRN	**Lenkeran, Azer**	**2.56**	**174**	Pn		**Pn**	**05 13 38.9**	**+0.9**
	SNR=6.4							
LKRN				Sg		**Sb**	**05 14 14.2**	**+0.1**
LRK	**Lerik**	**2.62**	**182**	Pn		**Pn**	**05 13 39.3**	**+0.3**
	SNR=42							
LRK				Sg		**Sb**	**05 14 17.2**	**+1.3**
ASTR	**Astara**	**2.71**	**174**	Pn		**Pn**	**05 13 40.7**	**+0.6**
ASTR				Sg		**Sb**	**05 14 20.0**	**+1.5**
GROC	**Groznyy**	**2.76**	**316**	*i* PN		**Pn**	**05 13 42.5**	**+1.8**
BTNK	**Botanikuri**	**2.77**	**280**	P		Pn	05 13 35.2	-5.7
BTNK	**Botanikuri**	**2.77**	**280**	PN		Pn	05 13 35.2	-5.6
SEAG	**Tbilisi Sea**	**2.77**	**282**	P		**Pn**	**05 13 43.4**	**+2.4**
SEAG	**Tbilisi Sea**	**2.77**	**282**	PN		**Pn**	**05 13 43.4**	**+2.4**
SBZ	**Shahbuz**	**2.89**	**231**	Pn		**Pn**	**05 13 43.6**	**+1.0**
	SNR=21							
SBZ				Sg		**Sb**	**05 14 24.4**	**+0.9**
ORD	**Ordubad**	**2.99**	**220**	Pn		**Pn**	**05 13 44.6**	**+0.6**
	SNR=25							
ORD				Sg		**Sb**	**05 14 27.4**	**+0.9**
GNI	**Garni**	**3.02**	**250**	PN		**Pn**	**05 13 46.8**	**+2.3**
GNI							05 14 26.8	
GNI	**Garni**	**3.02**	**250**	Pn		**Pn**	**05 13 46.8**	**+2.3**
	comp=E,17nm,0.4s,baz=161,slow=4.8,SNR=7.9							
GNI				Sn		**Sb**	**05 14 26.8**	**-0.6**
	comp=E,6.4nm,0.3s,baz=332,slow=16,SNR=5.8							
NAX	**Nakhchivan**	**3.07**	**228**	Pg		**Pn**	**05 13 48.1**	**+3.0**
NAX				Sg		**Sb**	**05 14 30.6**	**+1.9**
HYR	**Heyderabad**	**3.14**	**242**	Pg		**Pn**	**05 13 49.3**	**+3.3**
	SNR=12							
HYR				Sg		**Sb**	**05 14 32.1**	**+1.4**
PNSH	**Pansheti**	**3.16**	**297**	P		**Pb**	**05 13 50.7**	**-2.2**
PNSH	**Pansheti**	**3.16**	**297**	PN		**Pb**	**05 13 50.7**	**-2.2**
DMNI	**Dmanisi**	**3.20**	**273**	P		**Pn**	**05 13 48.6**	**+1.7**
DMNI				S		**Sb**	**05 14 30.4**	**-2.1**
DMNI	**Dmanisi**	**3.20**	**273**	PN		**Pn**	**05 13 48.6**	**+1.7**
DMNI				S		**Sb**	**05 14 30.4**	**-2.1**
AKH	**Akhalkalaki**	**3.73**	**274**	P		**Pn**	**05 13 57.0**	**+2.8**
AKH	**Akhalkalaki**	**3.73**	**274**	PN		**Pn**	**05 13 57.0**	**+2.8**
ONI	**Oni**	**3.95**	**291**	P		**Pn**	**05 14 00.5**	**+3.4**
ONI	**Oni**	**3.95**	**291**	PN		**Pn**	**05 14 00.5**	**+3.4**
ABS	**Abastumani**	**4.25**	**278**	P		Pn	05 14 06.9	+5.5
ABS	**Abastumani**	**4.25**	**278**	PN		Pn	05 14 06.9	+5.5
KBZ	**Khabaz**	**4.78**	**303**	*e*PN		**Pn**	**05 14 12.7**	**+4.3**
KBZ				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KBZ	**Khabaz**	**4.78**	**303**	Pn		**Pn**	**05 14 10.7**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=122,slow=9.5,SNR=3.1							
SHA1	**Shidzhatmaz**	**4.94**	**302**	*i* PN		**Pn**	**05 14 14.4**	**+3.5**
KVAR	**Kislovodsk Arr**	**5.02**	**304**	Pn		**Pn**	**05 14 14.0**	**+2.1**
	baz=133,slow=19							
	comp=Z,2.0nm,0.4s							
KIV	**Kislovodsk**	**5.02**	**304**	*e*PN		**Pn**	**05 14 14.5**	**+2.6**
KIV				*e*S		**Sn**	**05 15 15.4**	**+5.4**
KIV				pmax	pmax			
	comp=Z,18nm,1.1s							
GEYT	**Alibeck**	**8.18**	**111**	Pn		**Pn**	**05 14 54.1**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=293,slow=19,SNR=8.0							
GEYT				Sn		**Sn**	**05 16 27.1**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=46,slow=8.5,SNR=3.8							
	comp=Z,5.8nm,0.5s							
BELG	**Belogornoye**	**11.15**	**357**	P		**Pn**	**05 15 35.2**	**-0.5**
BELG	**Belogornoye**	**11.15**	**357**	Pn		**Pn**	**05 15 35.2**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=204,slow=4.6,SNR=5.5							
BELG				Sn		**Sn**	**05 17 37.3**	**-2.9**
	comp=Z,1.4nm,0.3s,baz=86,slow=23,SNR=3.4							
	comp=Z,8.6nm,0.5s							
AKTO	**Aktyubinsk**	**11.34**	**33**	P		**Pn**	**05 15 37.2**	**-1.2**
AKTO	**Aktyubinsk**	**11.34**	**33**	⇓Pn		**Pn**	**05 15 37.5**	**-0.9**
	comp=Z,2.9nm,0.6s							
AKTO				⇓Sn		**Sn**	**05 17 40.7**	**-4.3**
	comp=Z,4.1nm,0.7s							
AKTO	**Aktyubinsk**	**11.34**	**33**	Pn		**Pn**	**05 15 37.2**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=197,slow=11,SNR=5.4							
AKTO				Sn		**Sn**	**05 17 47.4**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=334,slow=20,SNR=3.5							
	comp=Z,1.5nm,0.3s							
AB31	**Akbulak array**	**11.37**	**42**	P		**Pn**	**05 15 38.9**	**0.0**
AB31				S		**Sn**	**05 17 43.4**	**-2.5**
AB31	**Akbulak array**	**11.37**	**42**	⇓Pn		**Pn**	**05 15 38.9**	**0.0**
	comp=Z,3.2nm,0.9s,baz=236,slow=15,SNR=18							
AB31				⇑Sn		**Sn**	**05 17 43.4**	**-2.5**
	comp=Z,4.2nm,0.8s,baz=232,slow=24,SNR=4.1							
AKASG	**Malin Array Be**	**16.31**	**312**	*e*P		**P**	**05 16 49.3**	**+1.0**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**16.31**	**312**	Pn		**Pn**	**05 16 42.3**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=122,slow=11,SNR=2.0							
	comp=Z,0.1nm,0.3s							
BVAR	**Borovoye Array**	**18.92**	**44**	P		**Pn**	**05 17 16.5**	**-1.3**
BVAR	**Borovoye Array**	**18.92**	**44**	P		**Pn**	**05 17 16.5**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=227,slow=10.0,SNR=6.6							
	comp=Z,0.7nm,0.4s							
KURBB	**Kurchatov Arra**	**22.79**	**56**	P		**P**	**05 17 58.7**	**-0.3**
	comp=Z,1.3nm,0.2s,baz=259,slow=11,SNR=4.8							
	comp=Z,1.3nm,0.2s							
KURK	**Kurchatov**	**22.86**	**55**	P		**P**	**05 17 58.7**	**-1.1**
FINES	**FINESS Array B**	**24.33**	**334**	*e*P		**P**	**05 18 13.5**	**-0.4**
FINES				pmax	pmax			
	comp=Z,4.0nm,0.7s							
FINES	**FINESS Array B**	**24.33**	**334**	P		**P**	**05 18 13.6**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=135,slow=8.9,SNR=16							
	comp=Z,4.2nm,0.7s							
MKAR	**Makanchi Array**	**24.83**	**66**	*e*P		**P**	**05 18 22.3**	**+3.5**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**24.83**	**66**	P		**P**	**05 18 18.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=255,slow=13,SNR=3.9							
	comp=Z,0.7nm,0.5s							
GERES	**GERESS Array B**	**25.51**	**299**	P		**P**	**05 18 25.3**	**+0.4**
GERES	**GERESS Array B**	**25.51**	**299**	P		**P**	**05 18 25.3**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=79,slow=2.1,SNR=1.3							
	comp=Z,0.2nm,0.4s							
HFS	**Hagfors**	**28.50**	**323**	P		**P**	**05 18 50.0**	**-1.6**
HFS	**Hagfors**	**28.50**	**323**	P		**P**	**05 18 50.0**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=124,slow=12,SNR=1.3							
	comp=Z,0.5nm,0.5s							
NOA	**NORSAR Array B**	**29.99**	**324**	P		**P**	**05 19 02.7**	**-2.1**
NOA	**NORSAR Array B**	**29.99**	**324**	P		**P**	**05 19 02.7**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=103,slow=7.2,SNR=3.5							
	comp=Z,0.4nm,0.6s							
ARCES	**ARCESS Array B**	**30.77**	**344**	*e*P		**P**	**05 19 11.7**	**+0.1**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ARCES	**ARCESS Array B**	**30.77**	**344**	P		**P**	**05 19 10.4**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=158,slow=7.8,SNR=5.8							
	comp=Z,1.5nm,0.8s							
KSRS	**Korea Array**	**59.51**	**65**	P		**P**	**05 22 59.1**	**-0.7**
KSRS	**Korea Array**	**59.51**	**65**	P		**P**	**05 22 59.1**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=291,slow=7.5,SNR=2.3							
	comp=Z,1.3nm,0.6s							
WRA	**Warramunga Arr**	**99.91**	**108**	P		**Pdif**	**05 26 40.7**	**-0.8**
WRA	**Warramunga Arr**	**99.91**	**108**	P		**Pdif**	**05 26 40.7**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=314,slow=4.7,SNR=2.2							
	comp=Z,0.2nm,0.5s							

*NOU **31** 05:22:58.8,38.80S×174.88E,h244km, MLv3.8/8, North Island, New Zealand*
*WEL **31** 05:23:11.0,39°S±9.9°×17°5E±°, h147km±19km, M2.6/38, ML2.1/8, MLv2.6/38, Error ellipse: s-maj=0.0km s-min=0.0km az=136.0*
ISC 31 05:23:03.6±1.7, 39.06S±0.07×174.92E±0.06, h192km, n96, σ1°82/96, North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.40**	**125**	P		**Pn**	**05 23 31.8**	**+2.3**
TWVZ	**Taurewa**	**0.40**	**92**	P		**Pn**	**05 23 31.4**	**+1.9**
WTVZ	**West Tongariro**	**0.52**	**96**	P		**Pn**	**05 23 32.0**	**+2.1**
FWVZ	**Far West T-bar**	**0.53**	**112**	P		**Pn**	**05 23 32.3**	**+2.2**
MTVZ	**Mangateitei**	**0.54**	**128**	P		**Pn**	**05 23 32.3**	**+2.4**
NGZ	**Ngauruhoe**	**0.54**	**103**	P		**Pn**	**05 23 32.2**	**+2.1**
NNVZ	**North Ngauruho**	**0.55**	**98**	P		**Pn**	**05 23 32.1**	**+2.0**
KRVZ	**Karewarewa**	**0.56**	**94**	P		**Pn**	**05 23 32.1**	**+1.9**
WHVZ	**Whangaehu Hut**	**0.56**	**114**	P		**Pn**	**05 23 32.0**	**+1.8**
LREZ	**Lake Rotokare**	**0.57**	**225**	P		**Pn**	**05 23 32.9**	**+2.9**
SNVZ	**South Ngauruho**	**0.57**	**103**	P		**Pn**	**05 23 32.4**	**+2.2**
NTVZ	**North Tongarir**	**0.59**	**94**	P		**Pn**	**05 23 32.3**	**+2.0**
OTVZ	**Oturere**	**0.59**	**100**	P		**Pn**	**05 23 32.5**	**+2.2**
WNVZ	**Wahianoa**	**0.59**	**117**	P		**Pn**	**05 23 32.6**	**+2.3**
TUVZ	**Tukino**	**0.61**	**110**	P		**Pn**	**05 23 32.6**	**+2.3**
KATZ	**Kakaramea**	**0.61**	**82**	P		**Pn**	**05 23 32.3**	**+2.0**
TMVZ	**Te Maari**	**0.61**	**96**	P		**Pn**	**05 23 32.5**	**+2.1**
ETVZ	**East Tongariro**	**0.62**	**97**	P		**Pn**	**05 23 32.5**	**+2.1**
PREZ	**Palmer Road**	**0.66**	**244**	P		**Pn**	**05 23 33.4**	**+3.0**
NEZ	**North Egmont**	**0.68**	**252**	P		**Pn**	**05 23 33.5**	**+2.9**
WAZ	**Wangaui**	**0.70**	**176**	P		**Pn**	**05 23 33.7**	**+3.1**
MOVZ	**Moawhango**	**0.73**	**119**	P		**Pn**	**05 23 32.7**	**+1.8**
PKE	**Pukeiti**	**0.74**	**259**	P		**Pn**	**05 23 33.6**	**+2.7**
KHEZ	**Kahui Hut**	**0.74**	**251**	P		**Pn**	**05 23 33.8**	**+2.8**
NBEZ	**Newall Road No**	**0.85**	**255**	P		**Pn**	**05 23 34.3**	**+2.9**
BHHZ	**Black Hill Sta**	**0.98**	**116**	P		**Pn**	**05 23 34.0**	**+1.6**
OHWZ	**Ohakea**	**1.19**	**165**	P		**Pn**	**05 23 36.9**	**+3.1**
MRHZ	**Matea Rd**	**1.19**	**80**	P		**Pn**	**05 23 34.2**	**+0.2**
KWHZ	**Kaweka Forest**	**1.22**	**108**	P		**Pn**	**05 23 35.8**	**+1.6**
BKZ	**Black Stump Fm**	**1.23**	**95**	P		**Pn**	**05 23 35.5**	**+1.2**
BKZ	**Black Stump Fm**	**1.23**	**95**	P		**Pn**	**05 23 35.1**	**+0.9**
KRHZ	**Kereru**	**1.27**	**118**	P		**Pn**	**05 23 36.1**	**+1.6**
TSZ	**Takapari Road**	**1.28**	**142**	P		**Pn**	**05 23 36.8**	**+2.1**
PNHZ	**Pukenui**	**1.31**	**131**	P		**Pn**	**05 23 36.7**	**+1.9**
NMHZ	**Naumai**	**1.47**	**92**	P		**Pn**	**05 23 37.5**	**+1.1**
POWZ	**Post Office Ro**	**1.48**	**154**	P		**Pn**	**05 23 38.4**	**+2.0**
MTHZ	**Maungataniwha**	**1.51**	**83**	P		**Pn**	**05 23 38.2**	**+0.2**
WPHZ	**Waipukurau**	**1.54**	**131**	P		**Pn**	**05 23 38.7**	**+1.8**
DVHZ	**Dannevirke**	**1.57**	**143**	P		**Pn**	**05 23 38.8**	**+1.7**
ARHZ	**Aropaoanui**	**1.62**	**98**	P		**Pn**	**05 23 38.9**	**+1.2**
MRZ	**Mangatainoka R**	**1.68**	**163**	P		**Pn**	**05 23 40.0**	**+1.8**
KAHZ	**Kahuranaki**	**1.68**	**116**	P		**Pn**	**05 23 39.8**	**+1.5**
RAHZ	**Arahi**	**1.69**	**86**	P		**Pn**	**05 23 42.9**	**+4.5**
PRWZ	**Pori Road**	**1.70**	**152**	P		**Pn**	**05 23 40.3**	**+2.0**
OGWZ	**Otaki Gorge**	**1.77**	**174**	P		**Pn**	**05 23 41.2**	**+2.1**
PRHZ	**Porangahau**	**1.79**	**133**	P		**Pn**	**05 23 40.8**	**+1.5**
KIW	**Kapiti Island**	**1.80**	**180**	P		**Pn**	**05 23 41.2**	**+1.9**
ANWZ	**Angora Road**	**1.84**	**140**	P		**Pn**	**05 23 41.5**	**+1.7**
TIWZ	**Tintock**	**1.87**	**157**	P		**Pn**	**05 23 41.7**	**+1.6**
URZ	**Urewera**	**1.89**	**66**	P		**Pn**	**05 23 39.1**	**-1.2**
URZ	**Urewera**	**1.89**	**66**	P		**Pn**	**05 23 39.1**	**-1.2**
HOWZ	**Holdsworth Sta**	**1.89**	**166**	P		**Pn**	**05 23 41.8**	**+1.5**
DUWZ	**D'Urville Isla**	**1.90**	**204**	P		**Pn**	**05 23 42.4**	**+1.9**
BFZ	**Birch Farm**	**1.92**	**148**	P		**Pn**	**05 23 41.9**	**+1.4**
BFZ	**Birch Farm**	**1.92**	**148**	P		**Pn**	**05 23 41.8**	**+1.2**
CAW	**Cannon Point**	**2.05**	**177**	P		**Pn**	**05 23 43.5**	**+1.6**
MTW	**Mount Morrison**	**2.14**	**168**	P		**Pn**	**05 23 44.1**	**+1.1**
MWZ	**Matawai**	**2.16**	**71**	P		**Pn**	**05 23 42.4**	**-0.9**
TMWZ	**Te Maipa**	**2.18**	**160**	P		**Pn**	**05 23 44.5**	**+1.1**
TCW	**Tory Channel**	**2.21**	**193**	P		**Pn**	**05 23 45.4**	**+1.8**
RIGZ	**Rimuhau**	**2.25**	**82**	P		**Pn**	**05 23 43.5**	**-0.6**
SNZO	**South Karori**	**2.25**	**184**	P		**Pn**	**05 23 45.5**	**+1.4**
PAWZ	**Paruwai Farm**	**2.35**	**171**	P		**Pn**	**05 23 46.3**	**+1.0**
MSWZ	**Moikau Station**	**2.37**	**174**	P		**Pn**	**05 23 46.4**	**+1.0**
TRWZ	**Traveller**	**2.41**	**166**	P		**Pn**	**05 23 46.9**	**+1.0**
RUGZ	**Raukumara Rang**	**2.42**	**64**	P		**Pn**	**05 23 43.8**	**-2.4**
NNZ	**Nelson**	**2.46**	**208**	P		**Pn**	**05 23 47.5**	**+1.1**
TKNZ	**Takaka Hill**	**2.48**	**217**	P		**Pn**	**05 23 47.3**	**+0.6**
TUWZ	**Tuamarina**	**2.48**	**197**	P		**Pn**	**05 23 48.3**	**+1.6**
PLWZ	**Palliser**	**2.52**	**174**	P		**Pn**	**05 23 47.9**	**+0.8**
QRZ	**Quartz Range**	**2.55**	**225**	P		**Pn**	**05 23 47.8**	**+0.3**
QRZ	**Quartz Range**	**2.55**	**225**	P		**Pn**	**05 23 47.8**	**+0.4**
HAZ	**Te Kaha**	**2.60**	**61**	P		**Pn**	**05 23 45.1**	**-2.9**
BSWZ	**Blackbirch Sta**	**2.77**	**196**	P		**Pn**	**05 23 51.5**	**+1.5**
MRNZ	**Matariki Terra**	**2.87**	**215**	P		**Pn**	**05 23 51.4**	**+0.3**
THZ	**Tophouse**	**3.11**	**209**	P		**Pn**	**05 23 54.4**	**+0.4**
KHZ	**Kahutara**	**3.51**	**197**	P		**Pn**	**05 23 59.6**	**+0.7**
KHZ	**Kahutara**	**3.51**	**197**	P		**Pn**	**05 23 59.4**	**+0.5**
DSZ	**Denniston Nort**	**3.59**	**221**	P		**Pn**	**05 23 59.3**	**-0.5**
GVZ	**Greta Valley S**	**4.16**	**199**	P		**Pn**	**05 24 06.7**	**-0.3**
LTZ	**Lake Taylor**	**4.23**	**208**	P		**Pn**	**05 24 07.5**	**-0.4**
AMCZ	**Amberley**	**4.46**	**202**	P		**Pn**	**05 24 10.1**	**-0.6**
INZ	**Inchbonnie**	**4.51**	**215**	P		**Pn**	**05 24 10.6**	**-0.8**
OXZ	**Oxford**	**4.79**	**206**	P		**Pn**	**05 24 13.8**	**-1.2**
OKCZ	**Okains Bay**	**4.87**	**196**	P		**Pn**	**05 24 15.0**	**-0.9**
MQZ	**McQueen's Vall**	**4.95**	**199**	P		**Pn**	**05 24 15.2**	**-1.8**
RACZ	**Rakaia**	**5.11**	**203**	P		**Pn**	**05 24 17.6**	**-1.5**
GCSZ	**Gaunt Creek Bo**	**5.49**	**218**	P		**Pn**	**05 24 22.5**	**-1.5**
RPZ	**Rata Peaks**	**5.49**	**211**	P		**Pn**	**05 24 22.1**	**-1.9**
RPZ	**Rata Peaks**	**5.49**	**211**	P		**Pn**	**05 24 22.9**	**-1.7**
ARCZ	**Arundel**	**5.63**	**209**	P		**Pn**	**05 24 24.2**	**-1.7**
FOZ	**Fox Glacier**	**5.89**	**219**	P		**Pn**	**05 24 27.6**	**-1.6**
TMZ	**Timaru**	**6.07**	**208**	P		**Pn**	**05 24 30.2**	**-1.4**
ODZ	**Otahua Downs**	**6.77**	**207**	P		**Pn**	**05 24 39.5**	**-1.2**
ODZ	**Otahua Downs**	**6.77**	**207**	P		**Pn**	**05 24 39.5**	**-1.2**
JCZ	**Jackson Bay**	**6.80**	**221**	P		**Pn**	**05 24 38.7**	**-2.4**

IDC 31 05:31:36.5±2.4, 53.61N×86.94E, h0km, mbtmp3.3/2, ML2.2/2, Error ellipse: s-maj=22.4km s-min=12.7km az=76.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**286**	*i*			05 39 30.0	
	baz=101,slow=335,SNR=1.7							
ZALV	**Zalesovo Beam**	**1.30**	**286**	Pg		Pg	05 32 00.2	-1.2
	1.2nm,0.3s,baz=107,slow=17,SNR=37							
ZALV				Lg		Lg	05 32 18.6	
	1.8nm,0.3s,baz=106,slow=27,SNR=31							
ZALV				Rg		Rg	05 32 25.3	
	44nm,1.1s,baz=87,slow=33,SNR=14							
KURBB	**Kurchatov Arra**	**5.98**	**243**	Pn		Pn	05 33 06.8	+0.6
	baz=62,slow=14,SNR=11							
KURBB				Lg		Lg	05 34 45.9	
	0.1nm,0.3s,baz=60,slow=32,SNR=6.8							
	2.9nm,0.8s							
MKAR	**Makanchi Array**	**7.45**	**205**	Pn		Pn	05 33 28.0	+1.7
	0.2nm,0.3s,baz=25,slow=12,SNR=8.5							
MKAR				Sn		Sn	05 34 50.7	-0.7
	0.1nm,0.3s,baz=23,slow=28,SNR=3.1							
MKAR				Lg		Lg	05 35 31.7	
	0.1nm,0.3s,baz=24,slow=22,SNR=8.1							
	1.5nm,0.7s							

*BJI **31** 05:37:20.9±0.0, 14.97S×168.02E, h99km, mb4.7/12, mB5.3/7*
*NEIC **31** 05:37:23.0±2.3, 15.4S±0.1×167.83E±0.06, h109km±8km, mb4.6/25, Error ellipse: s-maj=15.4km s-min=7.6km az=193.0*
*IDC **31** 05:37:23.5±2.4, 15.33S×167.57E, h105km±19km, mb4.1/13, mbtmp4.4/14, MS4.0/2, Error ellipse: s-maj=20.3km s-min=17.2km az=111.0*
*NOU **31** 05:37:25.3, 15.40S×167.57E, h118km, mb4.9/37, Vanuatu Islands*
ISC 31 05:37:25.4±0.5, 15.42S±0.06×167.65E±0.08, h124km, n117, σ1°26/116, mb4.5/22, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.35**	**167**	P		**Pn**	**05 38 04.3**	**+0.9**
RTV	**Rentapao**	**2.47**	**163**	P		**Pn**	**05 38 06.3**	**+1.4**
LIFNC	**LIFOU**	**5.34**	**184**			**Pn**	**05 38 40.2**	**-2.7**
LIFNC	**LIFOU**	**5.34**	**184**	P		**Pn**	**05 38 41.0**	**-1.9**
KOUNC	**Koumac, New Ca**	**6.02**	**212**			**Pn**	**05 38 52.1**	**0.0**
KOUNC	**Koumac, New Ca**	**6.02**	**212**	P		**Pn**	**05 38 52.1**	**0.0**
MARNC	**Mare, Loyalty**	**6.04**	**177**	Pn		**Pn**	**05 38 51.3**	**-1.0**
MARNC	**Mare, Loyalty**	**6.04**	**177**	P		**Pn**	**05 38 51.5**	**-0.8**
YATNC	**Mamie plateau,**	**6.64**	**186**	P		**Pn**	**05 38 59.4**	**-1.1**
DZM	**Mont Dzumac**	**6.71**	**190**			**Pn**	**05 39 00.7**	**-0.9**
DZM	**Mont Dzumac**	**6.71**	**190**	P		**Pn**	**05 39 01.6**	**+0.1**
	64nm,0.4s,baz=119,slow=23,SNR=68							
DZM				S		**Sn**	**05 40 17.2**	**+0.5**
	119nm,0.6s,baz=324,slow=20,SNR=10							
ONTNC	**Ouen Toro**	**6.94**	**189**			**Pn**	**05 39 04.1**	**-0.5**
OUENC	**Ouen Island, N**	**7.00**	**186**			**Pn**	**05 39 03.4**	**-1.9**
PINNC	**Pines Island,**	**7.15**	**182**			**Pn**	**05 39 04.7**	**-2.7**
MSVF	**Nonsavu**	**10.23**	**104**	P		Pn	05 39 54.8	+5.7
	11nm,0.8s,baz=262,slow=13,SNR=4.7							
EIDS	**Eidsvold**	**18.39**	**235**	P		**Pn**	**05 41 32.1**	**-0.4**
EIDS	**Eidsvold**	**18.39**	**235**	P		**Pn**	**05 41 32.0**	**-0.4**
OUZ	**Omahuta**	**20.42**	**166**	P		**P**	**05 41 53.8**	**+1.0**
OUZ				IAmb		IAmb	05 41 56.1	
	comp=Z,23nm,1.1s							
RMQ	**Roma**	**20.76**	**235**	P		**P**	**05 41 56.5**	**-0.1**
CTA	**Charters Tower**	**20.89**	**254**	P		**P**	**05 41 58.9**	**+0.9**
CTA	**Charters Tower**	**20.89**	**254**	P		**P**	**05 41 58.5**	**+0.5**
	comp=Z,6.2nm,0.5s,baz=82,slow=11,SNR=12							
	comp=Z,6.2nm,0.5s							
CTAO	**Charters Tower**	**20.89**	**254**	P		**P**	**05 41 57.7**	**-0.3**
CTAO	**Charters Tower**	**20.89**	**254**	P		**P**	**05 41 58.8**	**+0.8**
ARMA	**Armidale**	**20.95**	**222**	P		**P**	**05 41 59.5**	**+0.9**
ARMA				IAmb		IAmb	05 42 02.2	
	comp=Z,28nm,1.2s							
ARMA	**Armidale**	**20.95**	**222**	P		**P**	**05 41 59.5**	**+0.9**
NIUE	**Niue**	**21.72**	**103**	P		**P**	**05 42 04.3**	**-2.5**
COEN	**Coen**	**23.72**	**270**	P		**P**	**05 42 26.0**	**-0.3**
COEN				IAmb		IAmb	05 42 27.8	
	comp=Z,12nm,0.8s							
COEN	**Coen**	**23.72**	**270**	P		**P**	**05 42 26.2**	**-0.1**
HAZ	**Te Kaha**	**23.98**	**160**	P		**P**	**05 42 28.6**	**+0.2**
RUGZ	**

SNAA	**Sanae**	**92.88**	**183**	P	**P**	**05 50 23.5**	**-0.5**
SNAA	**Sanae**	**92.88**	**183**	P	**P**	**05 50 23.6**	**-0.3**
SNAA				IAmb	IAmb	05 50 25.7	
	comp=Z,6.1nm,1.2s						
WMQ	**Urumqi**	**93.47**	**314**	*eP*	**P**	**05 50 27.0**	**-0.1**
VNA3	**Neumayer Olymp**	**93.53**	**181**	P	**P**	**05 50 26.3**	**-0.6**
VNA2	**Neumayer--Watz**	**93.80**	**182**	P	**P**	**05 50 27.6**	**-0.5**
	baz=186,slow=4.7						
VNA1	**Neumayer--Stat**	**94.10**	**181**	P	**P**	**05 50 29.1**	**-0.3**
MKAR	**Makanchi Array**	**97.96**	**316**	P	Pdif	05 50 48.0	+0.5
	comp=Z,0.5nm,0.5s,baz=99,slow=4.9,SNR=4.7						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**97.99**	**27**	P	**P**	**05 50 46.3**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=259,slow=4.4,SNR=3.2						
	comp=Z,0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**98.17**	**324**	P	**P**	**05 50 47.5**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=66,slow=3.5,SNR=1.9						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**121.01**	**345**	PKP	**PKiKP**	**05 56 02.9**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=71,slow=1.7,SNR=29						
BOSA	**Boshof**	**123.08**	**220**	PKP	**PKPdf**	**05 56 07.8**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=107,slow=1.6,SNR=2.7						
FINES	**FINESS Array B**	**126.50**	**338**	PKP	**PKiKP**	**05 56 13.7**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=122,slow=10,SNR=4.2						
NB2	**NORSAR Subarra**	**131.39**	**345**	PKPdf	**PKiKP**	**05 56 23.8**	**0.0**
	comp=Z,0.7nm,0.8s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**131.39**	**345**	PKP	**PKPdf**	**05 56 22.4**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=29,slow=2.0,SNR=3.9						
CLL	**Collm**	**138.84**	**336**	*i* PKPdf	**PKiKP**	**05 56 38.4**	**-0.7**
GERES	**GERESS Array B**	**140.43**	**333**	PKP	**PKiKP**	**05 56 42.0**	**-0.7**
	comp=Z,0.3nm,0.2s,baz=0.0,slow=2.7,SNR=3.5						
KEST	**Kesra**	**151.98**	**320**	PKPbc	**PKiKP**	**05 57 06.7**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=118,slow=4.5,SNR=4.6						

*IDC **31** 05:41:28.1±3.3,9.85S×119.42E,h0km,mb3.9/2, mbtmp3.6/4,ML3.1/2,MS3.8/2,Error ellipse: s-maj=258.0km s-min=28.2km az=50.0*
*DJA **31** 05:41:33.3±1.0,10.5±6°×11.9E±°,h10km±5km,M3.4/6, MLv3.4/6*
ISC 31 05:41:30.8±1.1,10.18S±0.08×119.20E±0.05,h10km,n15, σ1s60/13,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.57**	**19**	P	**Pb**	**05 41 42.9**	**0.0**
WBSI				S	**Sb**	**05 41 49.8**	**-1.2**
BASI	**Baing, Sumba**	**1.35**	**92**	P	**Pn**	**05 41 57.1**	**+1.3**
BASI				S	**Sg**	**05 42 16.5**	**+2.0**
PLAI	**Plampang**	**1.94**	**314**	P	**Pn**	**05 42 04.6**	**+0.7**
PLAI				S	**Sn**	**05 42 29.8**	**+1.4**
TWSI	**Taliwang, Sumb**	**2.70**	**302**	P	**Pn**	**05 42 15.6**	**+1.3**
TWSI				S	**Sn**	**05 42 48.8**	**+1.7**
EDFI	**Ende, Flores**	**2.84**	**60**	P	**Pn**	**05 42 17.0**	**+0.7**
BSSI	**Bau Bau, Buton**	**4.21**	**18**	P	**Pn**	**05 42 36.0**	**+0.9**
FITZ	**Fitzroy Crossi**	**10.05**	**142**	LR	LR	05 47 50.1	
	comp=Z,232nm,21.3s,baz=268,slow=38						
WRA	**Warramunga Arr**	**17.53**	**125**	P	**Pn**	**05 45 33.2**	**-2.3**
	0.1nm,0.3s,baz=294,slow=14,SNR=2.0						
WRA				S	Sn	05 48 36.7	-14
	0.2nm,0.3s,baz=302,slow=23,SNR=1.7						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**19.41**	**136**	P	**P**	**05 45 58.0**	**+0.7**
	0.1nm,0.3s,baz=320,slow=12,SNR=3.2						
	0.5nm,0.5s						
H08S2	**Diego Garcia H**	**46.18**	**269**	T	T	06 39 25.2	
	baz=96,slow=75,SNR=5.6						
H08S3	**Diego Garcia H**	**46.20**	**269**	T	T	06 39 15.8	
	baz=96,slow=75,SNR=4.2						
H08S1	**Diego Garcia H**	**46.20**	**269**	T	T	06 39 22.8	
	baz=96,slow=75,SNR=4.5						
MKAR	**Makanchi Array**	**65.59**	**333**	P	**P**	**05 52 12.8**	**-2.1**
	0.7nm,0.6s,baz=151,slow=6.3,SNR=5.4						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**70.21**	**339**	P	P	05 52 40.7	-3.0
	0.8nm,0.5s,baz=127,slow=3.8,SNR=2.8						
	0.8nm,0.5s						
VNDA	**Vanda**	**70.80**	**171**	LR	LR	06 22 10.4	
	comp=Z,142nm,19.0s,baz=245,slow=34						

*IDC **31** 06:14:54.5±1.4,2.30N×126.80E,h0km,mb3.5/6, mbtmp3.5/6,MS4.2/1,Error ellipse: s-maj=103.6km s-min=20.0km az=71.0*
*DJA **31** 06:15:01.3±2.0,2.7±3.3°×12.7E±°,h26km±21km,M3.4/7, MLv3.4/7*
ISC 31 06:15:01.3±1.0,2.39N±0.10×127.1E±0.1,h53km,n11, σ0s73/11,mb3.6/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.64**	**169**	P	**Pn**	**06 15 28.4**	**+0.6**
SGSI	**Sangihe**	**1.99**	**310**	P	**Pn**	**06 15 32.8**	**+0.2**
SGSI				S	**Sn**	**06 15 56.4**	**0.0**
LBMI	**Labuha**	**3.04**	**171**	P	**Pn**	**06 15 47.2**	**+0.2**
GTOI	**Gorontalo**	**4.40**	**247**	P	**Pn**	**06 16 05.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.41**	**184**	P	**P**	**06 19 34.1**	**0.0**
	0.5nm,0.3s,baz=352,slow=7.1,SNR=2.0						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**23.32**	**162**	P	**P**	**06 20 03.8**	**-1.2**
	0.8nm,0.5s,baz=339,slow=11,SNR=14						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.75**	**166**	P	**P**	**06 20 34.9**	**-1.3**
	0.1nm,0.5s,baz=345,slow=6.7,SNR=1.6						
	0.1nm,0.5s						
PSI	**Prapat**	**28.10**	**271**	LR	LR	06 33 60.0	
	comp=Z,437nm,18.7s,baz=192,slow=41						
STKA	**Stephens Creek**	**36.77**	**159**	P	**P**	**06 22 04.5**	**+0.5**
	1.6nm,0.7s,baz=324,slow=12,SNR=3.4						
	1.6nm,0.7s						
SONM	**Songino Array**	**48.66**	**342**	P	**P**	**06 23 40.8**	**+0.5**
	0.3nm,0.4s,baz=158,slow=9.2,SNR=1.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**06 24 54.2**	**-0.3**
	0.4nm,0.5s,baz=114,slow=7.8,SNR=5.1						
	0.4nm,0.5s						

*IDC **31** 06:15:52.4±3.6,21.36S×68.72W,h97km±48km,mb3.5/2, mbtmp3.7/4,Error ellipse: s-maj=64.9km s-min=26.4km az=106.0*
*GUC **31** 06:15:52.2±0.4,21.38S×68.83W,h115km±2km,ML3.5*
ISC 31 06:15:52.3±0.9,21.36S±0.04×68.92W±0.09,h116km±9km, n15,σ0s69/25,7C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.53**	**215**	⇑*iP*	**Pn**	**06 16 10.2**	**0.0**
PB09				*i* S	**Sn**	**06 16 24.0**	**+0.3**
PB09				IAML		06 16 26.1	
	comp=N,1μm,0.3s						
PB01	**IPOC Station P**	**0.62**	**301**	⇓*iP*	**Pn**	**06 16 10.6**	**-0.2**
PB01				*i* S	**Sn**	**06 16 24.7**	**0.0**
PB02	**IPOC Station P**	**0.92**	**273**	⇑*iP*	**Pn**	**06 16 13.5**	**+0.2**
PB02				*i* S	**Sn**	**06 16 29.6**	**+0.5**
PB07	**IPOC Station P**	**0.97**	**248**	⇑*iP*	**Pn**	**06 16 14.0**	**+0.1**
PB07				*i* S	**Sn**	**06 16 30.6**	**+0.3**
LVC	**Limon Verde**	**1.24**	**180**	⇑*iP*	**Pn**	**06 16 16.5**	**-0.5**
LVC				*i* S	**Sn**	**06 16 35.0**	**-0.6**
TA01	**Diego Aracena**	**1.42**	**304**	⇓*iP*	**Pn**	**06 16 18.4**	**-0.2**
TA01				*i* S	**Sn**	**06 16 38.6**	**0.0**
TA01				IAML		06 16 40.0	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**1.47**	**204**	⇑*iP*	**Pn**	**06 16 19.1**	**-0.1**
PB06				*i* S	**Sn**	**06 16 39.7**	**-0.1**
PB06				IAML		06 16 40.4	
	comp=E,818nm,0.2s						
PB04	**IPOC Station P**	**1.50**	**230**	⇑*iP*	**Pn**	**06 16 19.4**	**-0.2**
PB04				*i* S	**Sn**	**06 16 40.3**	**-0.1**
PB04				IAML		06 16 45.2	
	comp=N,486nm,0.3s						
GO01	**Chusmiza**	**1.71**	**351**	*eP*	**Pn**	**06 16 22.2**	**-0.3**
GO01				*i* S	**Sn**	**06 16 45.3**	**0.0**
GO01				IAML		06 16 48.9	
PB12	**IPOC Station P**	**3.04**	**334**	*eP*	**Pn**	**06 16 37.4**	**-1.8**
PB12				IAML		06 17 18.9	
	comp=N,127nm,0.0s						
PB16	**IPOC Station P**	**3.06**	**349**	⇑*eP*	**Pn**	**06 16 40.2**	**+0.3**
LPAZ	**La Paz**	**5.10**	**9**	P	**Pn**	**06 17 08.0**	**+0.7**
	comp=N,0.9nm,0.3s,baz=180,slow=8.7,SNR=21						
LPAZ				S	**Sn**	**06 18 04.3**	**-1.0**
	comp=N,1.7nm,0.5s,baz=258,slow=6.0,SNR=1.8						
PLCA	**Paso Flores**	**19.36**	**184**	P	**Pn**	**06 20 10.1**	**-1.0**
	comp=N,3.0nm,0.9s,baz=351,slow=13,SNR=3.1						
BDFB	**Brasilia**	**20.61**	**77**	P	**P**	**06 20 22.1**	**-0.6**
	comp=N,2.0nm,0.5s,baz=265,slow=9.9,SNR=5.9						
	comp=N,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.32**	**70**	P	**P**	**06 27 36.1**	**+1.5**
	comp=N,0.5nm,0.5s,baz=250,slow=5.6,SNR=3.8						
	comp=N,0.5nm,0.5s						

IDC 31 06:28:22.2±5.8,19.14S×178.08W,h531km±48km, mb3.0/3,mbtmp4.0/4,Error ellipse: s-maj=217.3km s-min=28.9km az=157.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.93**	**290**	P	P	06 29 42.2	-0.1
	38nm,0.8s,baz=125,slow=9.2,SNR=13						
WRA	**Warramunga Arr**	**44.73**	**261**	P	P	06 35 47.4	-1.0
	0.5nm,0.5s,baz=99,slow=6.9,SNR=22						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.77**	**255**	P	P	06 35 49.5	+0.7
	6.7nm,0.6s,baz=88,slow=8.2,SNR=118						
	6.7nm,0.6s						
TXAR	**Lajitas Array**	**86.39**	**57**	P	P	06 40 08.6	-0.1
	0.3nm,0.7s,baz=212,slow=6.8,SNR=3.7						
	0.3nm,0.7s						

IDC 31 06:40:50.6±3.2,54.11N×86.58E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=25.6km s-min=15.3km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**262**	*i*		06 47 20.0	
	baz=80,slow=326,SNR=1.3						
ZALV	**Zalesovo Beam**	**1.05**	**262**	Pg	Pg	06 41 10.1	-0.7
	0.5nm,0.3s,baz=82,slow=20,SNR=2.8						
ZALV				Lg	Lg	06 41 25.4	
	1.3nm,0.3s,baz=81,slow=27,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.04**	**238**	Pn	Pn	06 42 22.2	+1.1
	0.1nm,0.3s,baz=54,slow=13,SNR=3.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.81**	**202**	Pn	Pn	06 42 46.2	+0.7
	0.2nm,0.3s,baz=24,slow=13,SNR=1.9						
	0.2nm,0.3s						

*NEIC **31** 07:04:14.0±1.5,33.264N±0.010×116.114W±0.010, h20km±2km,Error ellipse: s-maj=1.8km s-min=0.6km az=139.0*
*ANF **31** 07:04:13.3±0.2,33.27N×116.10W,h15km,ML3.1/20, Error ellipse: s-maj=1.5km s-min=1.4km az=19.0*
*PAS **31** 07:04:14.2±1.7,33.267N±0.009×116.12W±0.01, h3km±6km,ML3.1/162,ML3.0/48(NEIC),Error ellipse: s-maj=1.4km s-min=1.2km az=63.0*
ISC 31 07:04:14.0±0.8,33.26N±0.01×116.12W±0.01,h17km±6km, n100,σ0s75/137,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALN	**Salton City**	**0.11**	**79**		**Pg**	**07 04 19.1**	**+1.4**
SLH	**Sleepy Hollow**	**0.13**	**240**		**Pb**	**07 04 17.6**	**-0.5**
SLH					**Sb**	**07 04 20.2**	**-0.5**
ERRC	**Elmore Ranch**	**0.28**	**120**		**Pg**	**07 04 20.7**	**+0.5**
ERRC					**Sg**	**07 04 25.4**	**+1.0**
SUP	**Superstition M**	**0.39**	**141**		**Pg**	**07 04 22.0**	**-0.1**
SUP					**Sg**	**07 04 27.6**	**+0.1**
CRR	**Carrizo Plain**	**0.39**	**162**		**Pg**	**07 04 22.2**	**+0.1**
CRR					**Sg**	**07 04 28.5**	**+0.9**
CTCC	**Cactus City**	**0.41**	**15**		**Sg**	**07 04 28.2**	**0.0**
SWSC	**Sam W. Stewart**	**0.41**	**140**		**Sg**	**07 04 28.2**	**0.0**
SWSC	**Sam W. Stewart**	**0.41**	**140**	P	**Pg**	**07 04 22.4**	**0.0**
	baz=321,SNR=253						
SWSC				S	**Sg**	**07 04 28.0**	**-0.2**
	baz=321						
JUEM	**Julian Eagle M**	**0.44**	**246**		**Pg**	**07 04 23.1**	**0.0**
PMD	**Palm Desert**	**0.45**	**331**		**Pg**	**07 04 22.5**	**-0.6**
PMD				IAML		07 04 28.6	
	comp=N,875nm,0.5s						
PMD				IAML		07 04 28.7	
	comp=E,1μm,0.5s						
MONP2	**Monument Peak**	**0.45**	**215**		**Pg**	**07 04 23.2**	**0.0**
MONP2					**Sg**	**07 04 29.4**	**-0.1**
MONP2	**Monument Peak**	**0.45**	**215**	P	**Pg**	**07 04 23.2**	**0.0**
	baz=34,SNR=81						
MONP2				S	**Sg**	**07 04 29.1**	**-0.3**
	baz=34						
MATG	**Mataguay Scout**	**0.45**	**263**		**Pg**	**07 04 23.2**	**-0.1**
MATG					**Sg**	**07 04 29.8**	**+0.4**
XPFO	**Pion Flat**	**0.45**	**321**		**Pg**	**07 04 22.7**	**-0.5**
PFO	**Pinyon Flats O**	**0.45**	**321**		**Pg**	**07 04 22.8**	**-0.5**
PFO	**Pinyon Flats O**	**0.45**	**321**		**Pg**	**07 04 22.8**	**-0.5**
PFO					**Sg**	**07 04 28.9**	**-0.7**
PFO	**Pinyon Flats O**	**0.45**	**321**	P	**Pg**	**07 04 22.8**	**-0.5**
	baz=140,SNR=122						
PFO				S	**Sg**	**07 04 28.7**	**-0.9**
	baz=140						
CTW	**Cottonwood Mou**	**0.46**	**26**		**Pg**	**07 04 23.1**	**-0.4**
CTW					**Sg**	**07 04 29.5**	**-0.3**
FRD	**Ford Ranch, An**	**0.47**	**300**		**Sg**	**07 04 29.8**	**-0.2**
FRD	**Ford Ranch, An**	**0.47**	**300**		**Pg**	**07 04 23.2**	**-0.4**
FRD					**Sg**	**07 04 30.1**	**+0.1**
WEMD	**Westmorland, C**	**0.50**	**116**		**Pg**	**07 04 24.7**	**+0.6**
WEMD					**Sb**	**07 04 32.7**	**+1.5**
SNDA	**J Saunders Pla**	**0.51**	**305**		**Sg**	**07 04 31.4**	**+0.2**
BZNA	**Buzz No.'s Pla**	**0.52**	**297**		**Sg**	**07 04 31.5**	**0.0**
COK2	**Cook Ranch 2**	**0.52**	**141**		**Pg**	**07 04 24.9**	**+0.4**
COK2					**Sb**	**07 04 33.0**	**+1.1**
DNR	**Dunn Ranch,Anz**	**0.53**	**306**		**Sg**	**07 04 32.3**	**+0.4**
HAY	**Hayfield**	**0.57**	**39**		**Sg**	**07 04 25.5**	**0.0**
HAY					**Sg**	**07 04 33.7**	**+0.5**
IMPE	**Imperial**	**0.59**	**127**		**Pb**	**07 04 26.2**	**+0.4**
IMPE					**Sb**	**07 04 35.7**	**+2.0**
CRY	**Cary Ranch**	**0.60**	**301**		**Pb**	**07 04 26.0**	**-0.2**
CRY					**Sg**	**07 04 34.1**	**0.0**
IKP	**In-Ko-Pah, Jac**	**0.61**	**180**		**Pb**	**07 04 25.8**	**-0.4**
IKP					**Sb**	**07 04 35.6**	**+1.1**
IKP	**In-Ko-Pah, Jac**	**0.61**	**180**	P	**Pb**	**07 04 25.8**	**-0.4**
	baz=360,SNR=214						
IKP				S	**Sg**	**07 04 34.1**	**-0.1**
	baz=360						
GVDA	**Garner Valley**	**0.62**	**311**		**Pb**	**07 04 26.1**	**-0.4**
GVDA					**Sg**	**07 04 34.2**	**-0.5**
YUH	**Yuha Desert**	**0.63**	**165**	Pg	**Pb**	**07 04 26.3**	**-0.2**
YUH				IAML		07 04 37.1	
	comp=N,492nm,0.1s						
YUH				IAML		07 04 40.3	
	comp=E,585nm,0.5s						
YUH	**Yuha Desert**	**0.63**	**165**		**Sb**	**07 04 35.1**	**+0.1**
PLM	**Palomar**	**0.63**	**279**		**Pb**	**07 04 26.0**	**-0.7**
PLM					**Sg**	**07 04 35.3**	**+0.2**
RMX	**La Rumorosa**	**0.66**	**177**		**Pb**	**07 04 27.6**	**+0.6**
RMX					**Sn**	**07 04 38.3**	**-0.3**
BC3	**Big Chuckawall**	**0.68**	**54**		**Pb**	**07 04 27.0**	**-0.5**
BC3					**Sb**	**07 04 36.3**	**-0.3**
BC3	**Big Chuckawall**	**0.68**	**54**	P	**Pb**	**07 04 27.0**	**-0.5**
	baz=235,SNR=164						
BC3				S	**Sb**	**07 04 36.3**	**-0.3**
	baz=235						
SGL	**Mount Signal**	**0.69**	**152**		**Pb**	**07 04 27.2**	**-0.4**
SGL					**Sb**	**07 04 37.2**	**+0.4**
SNR	**Schaffner Ranc**	**0.69**	**125**		**Pb**	**07 04 27.5**	**-0.1**
SNR					**Sn**	**07 04 39.1**	**-0.2**
DREC	**Desert Rsrch C**	**0.72**	**129**		**Pb**	**07 04 28.2**	**+0.1**
DREC					**Sn**	**07 04 40.5**	**+0.6**
EW2	**E Wide Canyon**	**0.72**	**340**		Pn	07 04 37.4	+7.9
DPP	**Dos Picos Cty**	**0.74**	**250**		**Pb**	**07 04 28.1**	**-0.3**
BAR	**Barrett**	**0.74**	**219**		Pn	07 04 38.0	+8.3
BAR	**Barrett**	**0.74**	**219**	Pg	**Pb**	**07 04 28.3**	**-0.2**
BAR	**Barrett**	**0.74**	**219**	IAML		07 04 40.3	
	comp=E,1μm,0.4s						
BAR				IAML		07 04 40.5	
	comp=N,1μm,0.4s						
BELC	**Belle Mtn. Jos**	**0.75**	**8**	P	**Pb**	**07 04 28.2**	**-0.4**
	baz=188,SNR=104						
BELC				S	**Sb**	**07 04 37.9**	**-0.6**
	baz=188						
DEVC	**Devers**	**0.78**	**330**		**Pb**	**07 04 28.9**	**-0.2**
DEVC					**Sb**	**07 04 39.7**	**+0.3**
POB	**Polly Butte**	**0.80**	**303**		**Pb**	**07 04 28.9**	**-0.5**
POB					**Sb**	**07 04 40.1**	**+0.1**
TKX	**Tecate**	**0.80**	**211**		**Pb**	**07 04 29.5**	**0.0**
TKX					**Sb**	**07 04 39.9**	**-0.2**
BLAC	**Blackrock camp**	**0.84**	**344**		**Sb**	**07 04 41.1**	**-0.2**
DGR	**Domenigoni Val**	**0.84**	**298**		**Pb**	**07 04 29.4**	**-0.8**
DGR					**Sb**	**07 04 40.8**	**-0.5**
UABX	**UABC, Campus M**	**0.84**	**138**		**Pb**	**07 04 30.0**	**-0.2**
UABX					**Sg**	**07 04 42.8**	**+1.2**
TPC	**Twentynine Pal**	**0.85**	**4**		**Pb**	**07 04 29.9**	**-0.4**
BACC	**Bachelor Mtn.**	**0.85**	**295**		**Pb**	**07 04 30.2**	**-0.1**
DUZA	**Dulzura**	**0.85**	**221**		**Pb**	**07 04 30.1**	**-0.3**
DUZA					**Sb**	**07 04 41.3**	**-0.2**
HMTC	**Hemet**	**0.87**	**301**		**Pb**	**07 04 30.0**	**-0.7**
HMTC					**Sb**	**07 04 41.8**	**-0.2**
SDRC	**San Diego Road**	**0.87**	**233**		**Sb**	**07 04 41.7**	**-0.3**
MTRP	**Mission Trails**	**0.90**	**241**		**Sb**	**07 04 43.0**	**+0.1**
109C	**Camp Elliot, M**	**0.91**	**246**		**Pb**	**07 04 31.2**	**-0.2**
109C				IAML		07 04 43.5	
	comp=E,755nm,0.3s						
109C	**Camp Elliot, M**	**0.91**	**246**	P	**Pb**	**07 04 31.1**	**-0.2**
	baz=65,SNR=79						
109C				S	**Sb**	**07 04 43.1**	**0.0**
	baz=65						
CPE	**Camp Elliot**	**0.91**	**246**		**Sb**	**07 04 43.0**	**0.0**
COA	**Coachella**	**0.92**	**115**		**Pb**	**07 04 30.7**	**-0.8**
OLP	**Otay Lakes Par**	**0.94**	**227**		**Pb**	**07 04 31.8**	**-0.1**
MURC	**Murrieta**	**0.96**	**291**	P	**Pb**	**07 04 32.3**	**0.0**
	baz=110,SNR=143						
MURC				S	**Sb**	**07 04 44.9**	**+0.2**
	baz=110						
CBX	**Cerro Bola**	**1.05**	**206**		**Pb**	**07 04 34.0**	**+0.2**
CBX				IAML		07 04 49.4	
	comp=N,518nm,0.6s						
CBX				IAML		07 04 51.6	
	comp=E,476nm,0.7s						
CPBX	**Cerro Prieto**	**1.08**	**141**		**Pb**	**07 04 32.7**	**-1.5**
CPBX				IAML		07 04 54.2	
	comp=N,634nm,0.4s						
TJX	**Tijuana**	**1.09**	**227**		**Pb**	**07 04 34.6**	**+0.3**
GLA	**Glamis**	**1.10**	**100**		**Pb**	**07 04 33.6**	**-1.0**
GLA				IAML		07 04 53.8	
	comp=E,534nm,0.6s						
GLA				IAML		07 05 00.7	
	comp=N,241nm,0.7s						
GLA	**Glamis**	**1.10**	**100**	P	**Pb**	**07 04 33.5**	**-1.2**
	baz=282,SNR=25						
GLA				S	**Sb**	**07 04 47.3**	**-1.3**
	baz=282						
ELS	**Elsinore Mount**	**1.16**	**290**		**Pn**	**07 04 35.3**	**-0.3**
BBRC	**Big Bear Solar**	**1.21**	**326**	Pg	**Pn**	**07 04 36.6**	**+0.3**
	baz=146						
BBRC				S	**Sb**	**07 04 52.3**	**+0.4**
	baz=146						
IRM	**Iron Mountain**	**1.21**	**42**		**Pn**	**07 04 36.2**	**0.0**
IRM	**Iron Mountain**	**1.21**	**42**	P	**Pn**	**07 04 35.3**	**-0.9**
	baz=222,SNR=69						
IRM				S	**Sb**	**07 04 51.9**	**+0.2**
	baz=222						
ESJX	**Sierra Juarez**	**1.26**	**174**	Pg	**Pn**	**07 04 36.4**	**-0.5**
ESJX				IAML		07 04 59.5	
	comp=E,183nm,0.5s						
BLYC	**Blythe**	**1.42**	**69**	Pn	**Pn**	**07 04 38.1**	**-0.9**
BLYC				IAML		07 04 59.6	
	comp=N,295nm,0.5s						
BLYC				IAML		07 05 00.2	
	comp=E,178nm,0.5s						
CCX	**Cicese**	**1.46**	**199**		**Pn**	**07 04 40.0**	**+0.4**
CCX				IAML		07 05 01.2	
	comp=N,335nm,0.4s						
CCX				IAML		07 05 02.2	
	comp=E,318nm,0.6s						
GMRC	**Granite Mounta**	**1.57**	**14**		**Pb**	**07 04 43.8**	**+1.1**
GMRC	**Granite Mounta**	**1.57**	**14**	Pg	**Pb**	**07 04 43.5**	**+0.9**
	baz=194						
HEC	**Hector,Ludlow**	**1.58**	**353**		**Pb**	**07 04 43.8**	**+1.0**
HEC	**Hector,Ludlow**	**1.58**	**353**	Pg	**Pb**	**07 04 43.7**	**+1.0**
	baz=173						
BFSC	**Mount Baldy Ra**	**1.61**	**308**	Pb	**Pn**	**07 04 43.1**	**+1.2**
	baz=127						
BFSC				S	**Sb**	**07 05 03.9**	**+0.3**
	baz=127						
RRX	**Edison Barstow**	**1.77**	**336**	Pg	**Pb**	**07 04 46.8**	**+0.8**
	baz=155						
RRX				S	**Sb**	**07 05 09.9**	**+1.9**
	baz=155						
FMP	**Fort Macarthur**	**1.88**	**285**	Pb	**Pb**	**07 04 47.7**	**0.0**
	baz=103						
CIS	**Catalina Islan**	**1.93**	**275**	Pb	**Pn**	**07 04 48.1**	**+2.0**
	baz=93						
PDMCI	**Parker Dam,Lak**	**1.95**	**57**	Sb	**Sb**	**07 05 13.8**	**+0.8**
	baz=238						
PASC	**Pasadena Art C**	**1.95**	**298**		**Pb**	**07 04 48.8**	**-0.3**
NEE2	**Needles Airpor**	**1.95**	**39**	Sb	**Sb**	**07 05 14.3**	**+1.1**
	baz=220						
113A	**Mohawk Valley,**	**2.03**	**103**		**Pb**	**07 04 46.6**	**-0.9**
DECC	**Green Verdugo**	**2.10**	**299**	Sb	**Sb**	**07 05 19.2**	**+1.8**
	baz=118						
GSC	**Goldstone, Bar**	**2.12**	**345**	IAML		07 05 33.8	
	comp=E,87nm,1.0s						
CCAC	**Calif City Air**	**2.46**	**321**	Pn	**Pn**	**07 04 55.6**	**+2.2**
W13A	**Hualapai Mount**	**2.60**	**45**		**Pn**	**07 04 56.6**	**+1.1**
Y14A	**Wickenburg**	**2.68**	**75**	Pn	**Pn**	**07 04 56.8**	**+0.4**
GWY	**Greenwater Val**	**2.96**	**351**	IAML		07 05 49.4	
	comp=E,52nm,0.4s						
GWY				IAML		07 05 50.5	
	comp=N,37nm,0.4s						
**214

MKAR				Pg	**Pg**	**07 17 10.2**	**+0.4**	
	0.5nm,0.3s,baz=326,slow=13,SNR=12							
MKAR				Sn	**Sb**	**07 17 51.6**	**-0.8**	
	0.5nm,0.3s,baz=336,slow=21,SNR=7.8							
MKAR				Lg	Lg	07 18 04.7		
	1.5nm,0.3s,baz=323,slow=25,SNR=16							
	0.3nm,0.2s							
ZSN	**Zaisan**	**4.67**	**121**	Pg	**Pb**	**07 17 19.7**	**+1.8**	
	4.6nm,0.2s							
ZSN				Lg	Lg	07 18 32.0		
	13nm,0.6s							
I46RU	**ZALESOVO INFRA**	**5.38**	**40**	*i*		07 49 30.0		
	baz=227,slow=327,SNR=1.2							
ZALV	**Zalesovo Beam**	**5.38**	**40**	Pn	Pb	07 17 22.8	-7.2	
	0.7nm,0.3s,baz=230,slow=14,SNR=5.2							
ZALV				Lg	Lg	07 18 47.6		
	0.3nm,0.3s,baz=224,slow=29,SNR=1.8							
	1.9nm,0.2s							
ARXS	**Arharly**	**5.82**	**188**	Pg	**Pb**	**07 17 37.4**	**-0.2**	
	0.4nm,0.3s							
ARXS				Lg	Lg	07 19 02.5		
	20nm,0.8s							
BVA0	**Borovoye Array**	**6.15**	**303**	⇑Sn	**Sn**	**07 18 38.3**	**+0.1**	
	1.9nm,0.7s,baz=111,slow=22,SNR=4.9							
BVA0				⇓Lg	Lg	07 19 08.8		
	4.1nm,1.1s							
BVAR	**Borovoye Array**	**6.15**	**303**	Pn	**Pn**	**07 17 29.9**	**+2.7**	
	0.1nm,0.3s,baz=125,slow=12,SNR=1.6							
BVAR				Sn	**Sn**	**07 18 38.6**	**+0.4**	
	0.3nm,0.3s,baz=107,slow=24,SNR=3.9							
BVAR				Lg	Lg	07 19 08.8		
	0.1nm,0.3s,baz=128,slow=26,SNR=2.8							
	0.2nm,0.3s							
BRVK	**Borovoye**	**6.22**	**303**	⇓Sn	**Sn**	**07 18 40.2**	**+0.2**	
	2.1nm,0.7s							
BRVK				⇓Lg	Lg	07 19 10.6		
	3.2nm,0.6s							
KUU	**Kurty**	**6.35**	**197**	Pg	**Pb**	**07 17 44.5**	**-2.1**	
	2.2nm,0.4s							
KUU				Lg	Lg	07 19 13.9		
	11nm,0.7s							

*IDC **31** 07:18:27.5±0.8,28°.30N×139°.01E,h520km±20km,mb3.1/7, mbtmp4.1/12,Error ellipse: s-maj=50.5km s-min=11.4km az=74.0*
*JMA **31** 07:18:28.0±0.2,28°.2N±2°×13°.9E±°,h548km,MV4.0/41,W OFF OGASAWARA*
ISC 31 07:18:27.8±0.8,28°.29N±0°.10×139°.0E±0°.1,h524km,n23, σ1§26/26,mb3.7/7,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.03**	**112**	P	**P**	**07 19 41.7**	**+0.8**
JCJ	**Chichijima**	**3.03**	**112**	P	**P**	**07 19 40.7**	**-0.2**
	66nm,0.4s,baz=268,slow=22,SNR=5.7						
JCJ				S	**S**	**07 20 39.9**	**-0.5**
	96nm,0.6s,baz=277,slow=22,SNR=2.8						
JHH2	**Haha-jima-NKT2**	**3.24**	**120**	P	**P**	**07 19 43.7**	**+1.4**
JHH2				*eS*	**S**	**07 20 43.1**	**+0.2**
JHJ2	**Mitsune**	**4.86**	**8**	P	**P**	**07 19 56.3**	**+1.6**
JHJ	**Hachijo jima 2**	**4.86**	**7**	P	**P**	**07 19 55.1**	**+0.3**
	42nm,0.2s,baz=248,slow=23,SNR=9.8						
JHJ				S	**S**	**07 21 05.8**	**-0.1**
	81nm,0.3s,baz=82,slow=22,SNR=6.7						
JTNC	**Tanabenakahech**	**6.25**	**333**	P	**P**	**07 20 09.6**	**+2.2**
JIE	**Ise**	**6.41**	**342**	P	**P**	**07 20 11.2**	**+2.4**
BSO1	**Boso 1**	**6.56**	**14**	P	**P**	**07 20 11.0**	**+1.3**
BSO3	**Boso 3**	**6.62**	**11**	P	**P**	**07 20 11.1**	**+0.5**
HMMJ	**Hamamatsu 2**	**6.64**	**351**	*eP*	**P**	**07 20 13.0**	**+1.8**
BSO4	**Boso 4**	**6.78**	**9**	P	**P**	**07 20 13.5**	**+1.2**
JOD2	**Odawara 2**	**6.96**	**0**	*eP*	**P**	**07 20 14.3**	**+0.1**
JAO	**Obara**	**7.12**	**348**	P	**P**	**07 20 17.7**	**+1.8**
MJAR	**Matsushiro Arr**	**8.26**	**355**	P	**P**	**07 20 24.6**	**-2.7**
	11nm,0.3s,baz=168,slow=12,SNR=37						
KSRS	**Korea Array**	**13.06**	**317**	P	**P**	**07 21 15.7**	**-1.6**
	1.2nm,0.5s,baz=134,slow=10,SNR=2.4						
USRK	**Ussuriysk Ar.**	**16.86**	**342**	P	**P**	**07 21 55.9**	**-0.3**
	8.1nm,0.6s,baz=168,slow=10,SNR=18						
KLR	**Kul'dur**	**21.65**	**347**	P	**P**	**07 22 40.1**	**+0.3**
	2.0nm,0.6s,baz=209,slow=5.9,SNR=7.5						
	2.0nm,0.6s						
MKAR	**Makanchi Array**	**47.56**	**309**	P	**P**	**07 26 15.4**	**-0.2**
	0.3nm,0.4s,baz=85,slow=9.7,SNR=5.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**48.16**	**186**	P	**P**	**07 26 20.5**	**+0.2**
	0.6nm,0.3s,baz=0.8,slow=7.6,SNR=42						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**50.21**	**314**	P	**P**	**07 26 34.8**	**-0.4**
	1.2nm,0.3s,baz=92,slow=7.8,SNR=15						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**51.89**	**186**	P	**P**	**07 26 47.1**	**-0.5**
	0.2nm,0.3s,baz=6.9,slow=8.5,SNR=2.0						
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**55.27**	**317**	P	**P**	**07 27 11.4**	**+0.1**
	1.8nm,0.5s,baz=77,slow=9.3,SNR=8.3						
	1.8nm,0.5s						
FINES	**FINESS Array B**	**75.63**	**333**	P	**P**	**07 29 18.1**	**-0.5**
	0.9nm,0.3s,baz=57,slow=5.1,SNR=11						
	0.9nm,0.3s						

IDC 31 07:22:51.2±3.4,54°.23N×87°.23E,h0km,mbtmp2.7/2, ML2.3/2,Error ellipse: s-maj=29.8km s-min=21.4km az=46.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.45**	**260**	*i*		07 30 52.2	
	baz=77,slow=327,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.45**	**260**	Pg	Pn	07 23 17.3	-1.3
	0.9nm,0.3s,baz=83,slow=12,SNR=5.9						
ZALV				Lg	Lg	07 23 37.4	
	0.6nm,0.3s,baz=82,slow=23,SNR=3.5						
KURBB	**Kurchatov Arra**	**6.43**	**239**	Pn	Pn	07 24 27.4	+0.4
	baz=56,slow=13,SNR=2.8						
KURBB				Lg	Lg	07 26 16.2	
	baz=55,slow=33,SNR=2.9						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**8.08**	**205**	Pn	Pn	07 24 51.1	+1.4
	0.1nm,0.3s,baz=28,slow=13,SNR=1.3						
	0.3nm,0.7s						

*IDC **31** 07:26:00.7±0.8,25°.76N×127°.80E,h0km,mb4.0/14, mbtmp4.0/15,ML2.6/1,MS3.7/7,Error ellipse: s-maj=27.7km s-min=17.3km az=71.0*
*JMA **31** 07:26:02.2±0.3,26°.1N±1°×12°.9E±°,h39km±4km,MV3.9/12, NEAR OKINAWAJIMA ISLAND*
*NIED **31** 07:26:02.2,26°.02N×128°.58E,h39km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.46; Mθθ-0.71; Mϕϕ-2.75; Mrθ0.06; Mθϕ-3.05; Mϕr0.22; Fault plane solution: M₀4.21000×10¹⁵ NP1: ϕs218.00000°,δ44.00000°,λ94.00000°. NP2:ϕs33.00000°, δ46.00000°,λ87.00000°.*
ISC 31 07:26:00.9±1.6,25°.98N±0°.05×128°.59E±0°.04,h17km±10km, n30,σ1§21/34,mb4.0/14,MS3.7/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.74**	**317**	P	**Pg**	**07 26 15.3**	**-0.1**
JNTH				S	**Sg**	**07 26 25.1**	**-0.1**
JJT3	**Tamagusuku3**	**0.74**	**283**	P	**Pn**	**07 26 16.1**	**-0.5**
JJT3				S	**Sb**	**07 26 26.5**	**+1.2**
JOW	**Kunigami**	**0.89**	**342**	P	**Pb**	**07 26 18.2**	**+0.1**
JOW				S	**Sb**	**07 26 29.4**	**-0.3**
JYRO	**Yoronjima**	**1.05**	**353**	P	**Pb**	**07 26 20.3**	**-0.4**
JYRO				S	**Sb**	**07 26 32.9**	**-1.2**
JIH	**Iheya**	**1.19**	**332**	P	**Pn**	**07 26 22.7**	**-0.1**
JAGN	**Aguni-jima**	**1.35**	**297**	P	**Pn**	**07 26 25.0**	**-0.1**
JAGN				S	**Sn**	**07 26 41.8**	**-0.8**
JOKE	**Okinoerabujima**	**1.38**	**359**	P	**Pn**	**07 26 25.3**	**-0.1**
JOKE				S	**Sn**	**07 26 41.7**	**-1.5**
JKE	**Kume jima 2**	**1.66**	**282**	P	**Pn**	**07 26 28.6**	**-0.7**
JKE				S	**Sn**	**07 26 48.9**	**-1.3**
JTK	**Tokunoshima**	**1.83**	**10**	P	**Pn**	**07 26 31.6**	**0.0**
JTK				S	**Sn**	**07 26 53.5**	**-0.8**
JMZ	**Minamidaito 2**	**2.37**	**93**	P	**Pn**	**07 26 38.8**	**-0.3**
JMZ				S	**Sn**	**07 27 05.2**	**-2.6**
JKDJ	**Kitadaitoujima**	**2.44**	**90**	P	**Pn**	**07 26 39.9**	**0.0**
JKDJ				S	**Sn**	**07 27 07.5**	**-1.9**
KSRS	**Korea Array**	**11.45**	**357**	LR	LR	07 33 29.0	
	comp=Z,303nm,18.6s,baz=180,slow=38						
MJAR	**Matsushiro Arr**	**13.35**	**36**	Pn	**P**	**07 29 21.7**	**+2.5**
	baz=228,slow=8.3,SNR=4.8						
	1.6nm,0.7s						
KLR	**Kul'dur**	**23.34**	**5**	LR	LR	07 41 44.6	
	comp=Z,93nm,18.0s,baz=200,slow=40						
SONM	**Songino Array**	**27.94**	**327**	P	**P**	**07 31 51.3**	**+0.8**
	1.6nm,0.6s,baz=140,slow=9.2,SNR=10						
SONM				LR	LR	07 44 11.3	
	comp=Z,185nm,19.0s,baz=160,slow=39						
	1.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.40**	**261**	P	**P**	**07 31 51.5**	**-3.3**
	0.6nm,0.3s,baz=37,slow=9.1,SNR=1.2						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**41.94**	**312**	P	**P**	**07 33 50.2**	**-0.6**
	0.6nm,0.5s,baz=86,slow=9.7,SNR=9.4						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**42.64**	**323**	LR	LR	07 53 10.5	
	comp=Z,74nm,19.4s,baz=183,slow=38						
KURBB	**Kurchatov Arra**	**45.26**	**317**	P	**P**	**07 34 16.5**	**-0.8**
	1.0nm,0.4s,baz=104,slow=8.1,SNR=9.6						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**45.99**	**172**	P	**P**	**07 34 24.6**	**+1.2**
	1.6nm,0.6s,baz=353,slow=8.4,SNR=22						
	1.6nm,0.6s						
ASAR	**Alice Springs**	**49.62**	**174**	P	**P**	**07 34 52.9**	**+1.2**
	0.9nm,0.7s,baz=3.5,slow=12,SNR=13						
ASAR				LR	LR	07 58 44.4	
	comp=Z,67nm,18.4s,baz=274,slow=40						
	0.9nm,0.7s						
BVAR	**Borovoye Array**	**50.67**	**318**	P	**P**	**07 34 59.4**	**+0.1**
	1.0nm,0.7s,baz=93,slow=7.4,SNR=7.1						
	1.0nm,0.7s						
ILAR	**Eielson Array**	**64.50**	**28**	P	P	07 36 41.9	+5.4
	0.4nm,0.8s,baz=276,slow=7.9,SNR=4.5						
	0.4nm,0.8s						
INK	**Inuvik**	**68.99**	**23**	P	P	07 37 12.4	+7.5
	1.9nm,0.8s,baz=292,slow=5.4,SNR=2.6						
	1.9nm,0.8s						
KBZ	**Khabaz**	**69.57**	**310**	P	**P**	**07 37 09.8**	**+0.8**
	1.0nm,0.4s,baz=212,slow=4.8,SNR=2.2						
	1.0nm,0.4s						
FINES	**FINESS Array B**	**73.24**	**331**	P	**P**	**07 37 31.1**	**+0.3**
	2.4nm,0.9s,baz=29,slow=3.2,SNR=6.0						
	2.4nm,0.9s						
AKASG	**Malin Array Be**	**75.93**	**320**	P	**P**	**07 37 47.0**	**+0.4**
	0.6nm,0.5s,baz=54,slow=6.6,SNR=5.5						
AKASG				LR	LR	08 14 04.3	
	comp=Z,68nm,18.3s,baz=52,slow=38						
	0.6nm,0.5s						
BRTR	**Keskin Array B**	**77.44**	**308**	P	**P**	**07 37 56.9**	**+1.2**
	3.0nm,0.9s,baz=131,slow=3.8,SNR=7.5						
	3.0nm,0.9s						
NOA	**NORSAR Array B**	**79.68**	**334**	P	**P**	**07 38 08.0**	**+0.5**
	2.1nm,1.0s,baz=50,slow=5.7,SNR=3.5						
	2.1nm,1.0s						
EKA	**Eskdalemuir Ar**	**89.14**	**335**	LR	LR	08 25 03.8	
	comp=Z,46nm,19.3s,baz=340,slow=40						

IDC 31 07:30:06.2±3.1,53°.96N×86°.69E,h0km,mbtmp2.7/2, ML2.4/2,Error ellipse: s-maj=25.8km s-min=15.3km az=62.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.10**	**270**	*i*		07 37 00.0	
	baz=86,slow=327,SNR=1.1						
ZALV	**Zalesovo Beam**	**1.10**	**270**	Pg	Pb	07 30 28.5	+0.3
	0.7nm,0.3s,baz=90,slow=12,SNR=4.4						
ZALV				Lg	Lg	07 30 41.6	
	1.6nm,0.3s,baz=91,slow=30,SNR=7.3						
KURBB	**Kurchatov Arra**	**6.02**	**240**	Pn	Pn	07 31 37.0	+0.6
	0.1nm,0.3s,baz=57,slow=14,SNR=5.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.71**	**203**	Pn	Pn	07 32 00.4	+0.7
	0.1nm,0.3s,baz=27,slow=12,SNR=1.4						
	0.1nm,0.3s						

*WEL **31** 07:37:22.8±0.9,45°.5S±5°×16°.8E±°,h62km±9km,M3.7/9, ML3.9/9,MLv3.7/9,Error ellipse: s-maj=0.0km s-min=0.0km az=138.7,confirmed*
*NOU **31** 07:37:26.2,44°.52S×168°.76E,h85km,mb4.4/6,South Island, New Zealand*
ISC 31 07:37:22.4±1.5,44°.65S±0°.05×168°.26E±0°.06,h76km±11km, n73,σ1§49/81,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.23**	**265**	P	**Pn**	**07 37 33.9**	**0.0**
MSZ				S	**Sn**	**07 37 41.9**	**-0.4**
WKZ	**Wanaka**	**0.57**	**108**	P	**Pn**	**07 37 37.8**	**+1.3**
WKZ				S	**Sn**	**07 37 48.2**	**+1.3**
JCZ	**Jackson Bay**	**0.69**	**34**	P	**Pn**	**07 37 38.0**	**+0.2**
JCZ				S	**Sn**	**07 37 49.7**	**+0.5**
MLZ	**Mavora Lakes**	**0.72**	**188**	P	**Pn**	**07 37 38.4**	**+0.4**
MLZ				S	**Sn**	**07 37 50.8**	**+1.2**
EAZ	**Earnscleugh**	**0.95**	**128**	P	**Pn**	**07 37 41.5**	**+1.0**
EAZ				S	**Sn**	**07 37 54.8**	**+0.7**
DCZ	**Deep Cove**	**1.13**	**223**	P	Pn	07 37 41.8	-1.0
DCZ				S	**Sn**	**07 37 59.0**	**+1.0**
WHZ	**Wether Hill Ro**	**1.26**	**190**	P	**Pn**	**07 37 44.8**	**+0.3**
WHZ				S	**Sn**	**07 38 01.3**	**+0.3**
LBZ	**Lake Benmore**	**1.41**	**80**	P	**Pn**	**07 37 46.5**	**+0.1**
LBZ				S	**Sn**	**07 38 03.6**	**-0.8**
FOZ	**Fox Glacier**	**1.59**	**46**	P	**Pn**	**07 37 47.9**	**-0.7**
TUZ	**Tuapeka**	**1.62**	**144**	P	**Pn**	**07 37 50.0**	**+0.8**
TUZ				S	**Sn**	**07 38 08.5**	**-0.9**
ODZ	**Otahua Downs**	**1.75**	**104**	P	**Pn**	**07 37 51.1**	**+0.3**
ODZ	**Otahua Downs**	**1.75**	**104**	P	**Pn**	**07 37 51.1**	**+0.3**
PYZ	**Puysegur Point**	**1.88**	**216**	P	**Pn**	**07 37 52.8**	**+0.3**
SYZ	**Scrubby Hill**	**1.98**	**162**	P	**Pn**	**07 37 54.5**	**+0.5**
TMZ	**Timaru**	**1.99**	**83**	P	**Pn**	**07 37 53.6**	**-0.4**
GCSZ	**Gaunt Creek Bo**	**2.00**	**49**	P	**Pn**	**07 37 53.0**	**-1.2**
HHSZ	**Highcliff Hill**	**2.06**	**128**	P	**Pn**	**07 37 56.2**	**+1.2**
APZ	**The Paps**	**2.19**	**185**	P	**Pn**	**07 37 56.6**	**-0.1**
ARCZ	**Arundel**	**2.21**	**72**	P	**Pn**	**07 37 56.0**	**-1.1**
RPZ	**Rata Peaks**	**2.22**	**66**	P	**Pn**	**07 37 56.3**	**-0.9**
RPZ	**Rata Peaks**	**2.22**	**66**	P	**Pn**	**07 37 56.2**	**-0.9**
WVZ	**Waitaha Valley**	**2.39**	**50**	P	**Pn**	**07 37 58.0**	**-1.4**
WACZ	**Wakanui South**	**2.67**	**76**	P	**Pn**	**07 38 02.1**	**-1.1**
RACZ	**Rakaia**	**2.94**	**73**	P	**Pn**	**07 38 05.8**	**-1.1**
INZ	**Inchbonnie**	**3.01**	**51**	P	**Pn**	**07 38 06.4**	**-1.4**
OXZ	**Oxford**	**3.04**	**65**	P	**Pn**	**07 38 05.9**	**-2.2**
MQZ	**McQueen's Vall**	**3.30**	**75**	P	**Pn**	**07 38 10.0**	**-1.7**
AKCZ	**Akaroa Harbour**	**3.43**	**79**	P	**Pn**	**07 38 12.5**	**-1.0**
LTZ	**Lake Taylor**	**3.46**	**59**	P	**Pn**	**07 38 11.9**	**-2.1**
AMCZ	**Amberley**	**3.50**	**67**	P	**Pn**	**07 38 12.9**	**-1.6**
OKCZ	**Okains Bay**	**3.58**	**77**	P	**Pn**	**07 38 14.7**	**-0.8**
GVZ	**Greta Valley S**	**3.85**	**66**	P	**Pn**	**07 38 17.5**	**-1.7**
DSZ	**Denniston Nort**	**3.90**	**43**	P	**Pn**	**07 38 18.2**	**-1.7**
KHZ	**Kahutara**	**4.45**	**62**	P	**Pn**	**07 38 26.0**	**-1.3**
KHZ	**Kahutara**	**4.45**	**62**	P	**Pn**	**07 38 25.1**	**-2.3**
THZ	**Tophouse**	**4.46**	**51**	P	**Pn**	**07 38 25.3**	**-2.3**
MRNZ	**Matariki Terra**	**4.63**	**47**	P	**Pn**	**07 38 28.8**	**-1.2**
QRZ	**Quartz Range**	**4.95**	**41**	P	**Pn**	**07 38 33.2**	**-1.1**
QRZ	**Quartz Range**	**4.95**	**41**	P	**Pn**	**07 38 32.7**	**-1.6**
TKNZ	**Takaka Hill**	**5.00**	**45**	P	**Pn**	**07 38 34.4**	**-0.6**
BSWZ	**Blackbirch Sta**	**5.05**	**56**	P	**Pn**	**07 38 36.5**	**+0.9**
NNZ	**Nelson**	**5.09**	**49**	P	**Pn**	**07 38 35.8**	**-0.4**
TUWZ	**Tuamarina**	**5.27**	**54**	P	**Pn**	**07 38 41.3**	**+2.7**
TCW	**Tory Channel**	**5.60**	**54**	P	**Pn**	**07 38 44.2**	**+1.1**
DUWZ	**D'Urville Isla**	**5.68**	**49**	P	**Pn**	**07 38 44.5**	**+0.3**
CAW	**Cannon Point**	**6.13**	**57**	P	**Pn**	**07 38 48.4**	**-2.0**
MTW	**Mount Morrison**	**6.36**	**59**	P	**Pn**	**07 38 51.7**	**-1.8**
OGWZ	**Otaki Gorge**	**6.37**	**55**	P	**Pn**	**07 38 51.8**	**-1.8**
HOWZ	**Holdsworth Sta**	**6.53**	**57**	P	**Pn**	**07 38 53.9**	**-1.9**
MRZ	**Mangatainoka R**	**6.71**	**56**	P	**Pn**	**07 38 55.2**	**-3.1**
NBEZ	**Newall Road No**	**6.81**	**40**	P	**Pn**	**07 38 59.7**	**0.0**
KHEZ	**Kahui Hut**	**6.86**	**41**	P	**Pn**	**07 39 01.2**	**+0.8**
PREZ	**Palmer Road**	**6.89**	**42**	P	**Pn**	**07 39 01.4**	**+0.6**
NEZ	**North Egmont**	**6.92**	**41**	P	**Pn**	**07 39 01.8**	**+0.6**
PKE	**Pukeiti**	**6.93**	**40**	P	**Pn**	**07 39 01.2**	**-0.1**
WAZ	**Wanganui**	**6.99**	**48**	P	**Pn**	**07 39 04.0**	**+1.9**
PKVZ	**Pokaka**	**7.52**	**47**	P	**Pn**	**07 39 11.9**	**+2.5**
WNVZ	**Wahianoa**	**7.63**	**48**	P	**Pn**	**07 39 14.6**	**+3.7**
FWVZ	**Far West T-bar**	**7.66**	**48**	P	**Pn**	**07 39 14.4**	**+3.0**
NGZ	**Ngauruhoe**	**7.74**	**48**	P	**Pn**	**07 39 15.1**	**+2.7**
SNVZ	**South Ngauruho**	**7.75**	**48**	P	**Pn**	**07 39 14.8**	**+2.1**
WTVZ	**West Tongariro**	**7.78**	**47**	P	**Pn**	**07 39 15.6**	**+2.6**
OTVZ	**Oturere**	**7.78**	**48**	P	**Pn**	**07 39 14.5**	**+1.4**
ETVZ	**East Tongariro**	**7.83**	**48**	P	**Pn**	**07 39 16.9**	**+3.2**
HIZ	**Hauiti**	**7.88**	**41**	P	**Pn**	**07 39 13.6**	**-0.6**
HIZ	**Hauiti**	**7.88**	**41**	P	**Pn**	**07 39 13.7**	**-0.5**
TLZ	**Tolley Road**	**8.35**	**43**	P	**Pn**	**07 39 20.5**	**-0.2**
MKAZ	**Moumakai**	**9.17**	**37**	P	**Pn**	**07 39 33.0**	**+1.2**
MBAZ	**Motutapu North**	**9.35**	**35**	P	**Pn**	**07 39 36.2**	**+1.9**
WIAZ	**Waiheke Island**	**9.43**	**36**	P	**Pn**	**07 39 36.8**	**+1.4**
WCZ	**Waipu Caves**	**9.87**	**30**	P	**Pn**	**07 39 42.0**	**+0.6**
OUZ	**Omahuta**	**10.27**	**25**	P	**Pn**	**07 39 47.1**	**+0.2**
OUZ	**Omahuta**	**10.27**	**25**	P	**Pn**	**07 39 47.7**	**+0.8**

*SOME **31** 07:51:52.0,42°.95N×80°.57E,h25km*
*NNC **31** 07:51:53.1±0.9,43°.03N×80°.45E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=7.3km s-min=4.8km az=1.0*
ISC 31 07:51:54.6±1.9,43°.03N±0°.07×80°.28E±0°.07,h10km,n37, σ1§69/63,3C-3D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.61**	**283**	*eP*	**Pg**	**07 52 02.4**	**-4.2**
	86nm,0.3s						
SHLS				*eS*	**Sg**	**07 52 10.1**	**-4.6**
	250nm,0.3s						
SHLS	**Shalkode**	**0.61**	**283**	P	**Pg**	**07 52 02.3**	**-4.2**
	96nm,0.2s						
SHLS				S	**Sg**	**07 52 10.1**	**-4.6**
	250nm,0.3s						
PDGK	**Podgornoye**	**0.65**	**298**	⇑P	**Pg**	**07 52 07.8**	**+0.5**
	13nm,0.2s						
PDGK				⇑S	**Sb**	**07 52 18.6**	**+1.2**
	41nm,0.3s						
UZB	**Uzynbulak**	**0.93**	**278**	*eP*	**Pg**	**07 52 12.7**	**+0.1**
	14nm,0.2s						
UZB				*eS*	**Sn**	**07 52 27.5**	**+0.1**
	60nm,0.2s						
KPKS	**Kokpek**	**1.25**	**291**	*eP*	**Pb**	**07 52 18.2**	**-0.1**
	28nm,0.1s						
KPKS				*eS*	**Sg**	**07 52 37.2**	**+2.4**
	283nm,0.4s						
KPKS	**Kokpek**	**1.25**	**291**	P	**Pb**	**07 52 18.2**	**-0.1**
	28nm,0.2s						
KPKS				S	**Sg**	**07 52 37.0**	**+2.2**
	283nm,0.4s						
DJR	**Jarkent**	**1.35**	**345**	*eP*	**Pn**	**07 52 19.0**	**-0.7**
	10nm,0.3s						
DJR				*eS*	**Sg**	**07 52 38.4**	**+0.1**
	58nm,0.3s						
DJR	**Jarkent**	**1.35**	**345**	P	**Pn**	**07 52 18.9**	**-0.7**
	27nm,0.3s						
DJR				S	**Sg**	**07 52 38.2**	**0.0**
	58nm,0.3s						
ZHN	**Zhinishke**	**1.36**	**277**	*eP*	**Pb**	**07 52 20.4**	**+0.1**
	49nm,0.2s						
ZHN				*eS*	**Sg**	**07 52 41.0**	**+2.6**
	177nm,0.3s						
ZHN	**Zhinishke**	**1.36**	**277**	P	**Pb**	**07 52 20.4**	**+0.1**
	49nm,0.2s						
ZHN				S	**Sg**	**07 52 41.0**	**+2.6**
	177nm,0.3s						
KNOS	**Konyrlen**	**1.56**	**329**	*eP*	**Pb**	**07 52 23.5**	**-0.1**
	15nm,0.2s						
KNOS				*eS*	**Sg**	**07 52 46.0**	**+1.4**
	96nm,0.3s						
KURS	**Kuram**	**1.61**	**287**	*eP*	**Pb**	**07 52 25.0**	**+0.5**
	9.7nm,0.6s						
KURS				*eS*	**Sg**	**07 52 48.8**	**+2.4**
	52nm,0.5s						
BLB	**Baldybastay**	**1.69**	**310**	*eP*	**Pb**	**07 52 26.3**	**+0.3**
	33nm,0.3s						
BLB				*eS*	**Sg**	**07 52 51.2**	**+2.1**
	152nm,0.3s						
BLB	**Baldybastay**	**1.69**	**310**	Pg	**Pb**	**07 52 25.8**	**-0.2**
	30nm,0.2s						
ARXS	**Arharly**	**2.14**	**305**	*eP*	**Pb**	**07 52 33.3**	**-0.2**
	9.8nm,0.3s						
ARXS				*eS*	**Sg**	**07 53 03.1**	**-0.4**
	70nm,0.4s						
KOTS	**Kotyrbulak**	**2.33**	**276**	*eP*	**Pb**	**07 52 37.7**	**+0.9**
	9.2nm,0.4s						
KOTS				*eS*	**Sg**	**07 53 10.7**	**+1.2**
	154nm,0.6s						
KOTS	**Kotyrbulak**	**2.33**	**276**	Pg	**Pb**	**07 52 37.7**	**+0.9**
	9.2nm,0.4s						
KOTS				Lg	Lg	07 53 10.7	
	154nm,0.6s						
MDOK	**Medeo**	**2.37**	**274**	*eP*	**Pb**	**07 52 38.4**	**+0.9**
	7.0nm,0.5s						
MDOK				*eS*	**Sg**	**07 53 11.9**	**+1.0**
	85nm,0.5s						
MDOK	**Medeo**	**2.37**	**274**	Pg	**Pb**	**07 52 38.4**	**+0.9**
	7.0nm,0.5s						
MDOK				P

IDC ***31*** *07:53:30.6±4.6, 51°.22N×179°.03W, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=87.4km s-min=45.5km az=29.0*

AEIC ***31*** *07:53:39.8±1.1, 51°.07N±0°.05×177°.75W±0°.07, h26km±7km, Error ellipse: s-maj=8.2km s-min=6.2km az=166.0*

NEIC ***31*** *07:53:39.3±1.0, 51°.07N±0°.02×177°.75W±0°.07, h27km±8km, mb3.8/32, ML3.3/23(AEIC), Error ellipse: s-maj=6.5km s-min=2.6km az=91.0*

ISC 31 07:53:40.0±1.1, 51°.10N±0°.09×177°.78W±0°.05, h34km, n73, σ0s81/70, mb3.7/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPA	**Tanaga Point A**	**0.72**	**358**		**Pn**	**07 53 53.9**	**+0.2**
TAPA					**Sn**	**07 54 03.4**	**-0.2**
KIMD	**Kanaga Island**	**0.75**	**27**		**Pn**	**07 53 54.0**	**-0.1**
TASE	**Tanaga Southea**	**0.75**	**348**		**Pn**	**07 53 54.7**	**+0.4**
KIWB	**Kanaga Island**	**0.85**	**27**		**Pn**	**07 53 55.6**	**+0.1**
KIKV	**Kanaga Island**	**0.87**	**26**		**Pn**	**07 53 55.9**	**+0.1**
KIKV					**Sb**	**07 54 08.5**	**+0.5**
KICM	**Kanaga Island**	**0.90**	**24**		**Pn**	**07 53 56.5**	**+0.4**
GALAA	**Gareloi Lava P**	**0.91**	**317**		**Pn**	**07 53 57.0**	**+0.6**
GAEA	**Gareloi East**	**0.91**	**319**		**Pn**	**07 53 56.9**	**+0.5**
GANO	**Gareloi North**	**0.96**	**319**		**Pn**	**07 53 58.3**	**+1.2**
ADK	**Adak**	**1.04**	**41**		**Pn**	**07 53 57.8**	**-0.3**
ADK				Sn	**Sn**	**07 54 12.3**	**+0.7**
GSCK	**Great Sitkin C**	**1.36**	**47**		**Pn**	**07 54 02.9**	**+0.3**
GSTD	**Great Sitkin T**	**1.40**	**46**		**Pn**	**07 54 03.4**	**+0.3**
GSTD					**Sb**	**07 54 23.6**	**+0.5**
GSMY	**Great Sitkin M**	**1.43**	**48**		**Pn**	**07 54 03.7**	**+0.2**
GSTR	**Great Sitkin T**	**1.47**	**46**		**Pn**	**07 54 04.7**	**+0.7**
CERAA	**Semis' Rag'd T**	**1.78**	**298**		**Pn**	**07 54 09.9**	**+1.6**
CEPE	**Semis' Perret**	**1.82**	**299**		**Pn**	**07 54 09.8**	**+0.9**
CESW	**Semis' Southwe**	**1.84**	**297**		**Pn**	**07 54 09.9**	**+0.7**
AMKA	**Amchitka**	**1.86**	**280**		**Pn**	**07 54 09.5**	**+0.2**
KOKL	**Mount Kliuchef**	**2.54**	**60**		**Pn**	**07 54 20.4**	**+1.5**
KOFP	**Korovin Flat P**	**2.58**	**61**		**Pn**	**07 54 20.4**	**+1.1**
NIKH	**Nikolski High**	**5.82**	**68**	Pn	**Pn**	**07 55 04.9**	**+1.2**
UNV	**Unalaska Valle**	**7.42**	**64**	Pn	**Pn**	**07 55 26.8**	**+1.2**
SPIA	**Saint Paul Isl**	**7.52**	**33**	Pn	**Pn**	**07 55 26.8**	**-0.3**
AKUT	**Akutan**	**7.92**	**63**	Pn	**Pn**	**07 55 32.7**	**+0.3**
SDPT	**Sand Point**	**11.20**	**61**	Pn	**Pn**	**07 56 16.4**	**-1.0**
CNBA	**Chernabura Isl**	**11.58**	**64**	Pn	**Pn**	**07 56 21.7**	**-0.9**
PEA0B	**Petropavlovsk-**	**15.18**	**287**	Pn	**Pn**	**07 57 09.4**	**-2.2**
OHAK	**Old Harbor**	**15.55**	**57**	Pn	**Pn**	**07 57 15.9**	**-0.4**
KDAK	**Kodiak Island**	**16.05**	**56**	Pn	**Pn**	**07 57 22.9**	**+0.1**
KDAK				IAmb	IAmb	07 57 30.0	
	comp=Z,16nm,1.4s						
N19K	**Bonanza Creek**	**16.18**	**44**		**Pn**	**07 57 23.3**	**-1.3**
N19K				IAmb	IAmb	07 57 29.8	
	comp=Z,3.6nm,0.6s						
P19K	**Oil Pt**	**16.28**	**49**		**Pn**	**07 57 25.6**	**-0.2**
P19K				IAmb	IAmb	07 57 38.2	
	comp=Z,6.9nm,0.7s						
TTA	**Tatalina**	**16.65**	**36**	Pn	**Pn**	**07 57 30.1**	**-0.4**
TTA				IAmb	IAmb	07 58 04.9	
	comp=Z,4.9nm,0.5s						
M19K	**Big River Lodg**	**16.73**	**41**		**Pn**	**07 57 31.5**	**0.0**
CNPM	**China Poot**	**17.20**	**50**		**Pn**	**07 57 37.5**	**+0.2**
J20K	**Nowinta River**	**18.05**	**35**		**P**	**07 57 49.2**	**+1.2**
PPLA	**Purkeypile**	**18.11**	**40**	P	**P**	**07 57 49.5**	**+0.7**
O22K	**Cooper Landing**	**18.22**	**48**	P	**Pn**	**07 57 50.6**	**+0.7**
SEW	**Seward**	**18.23**	**49**	P	**P**	**07 57 49.0**	**-1.0**
CAST	**Castle Rocks**	**18.41**	**38**	P	**P**	**07 57 52.0**	**0.0**
KTH	**Kantishna Hill**	**18.93**	**39**	P	**P**	**07 57 56.6**	**-1.1**
KTH				IAmb	IAmb	07 58 00.4	
	comp=Z,5.2nm,0.6s						
PWL	**Port Wells**	**18.99**	**48**	P	**P**	**07 57 58.0**	**-0.3**
PWL				IAmb	IAmb	07 58 03.8	
	comp=Z,8.2nm,1.4s						
IMAR	**Indian Mountai**	**19.29**	**30**	P	**P**	**07 58 02.0**	**+0.5**
H21K	**Melozitna Rive**	**19.39**	**32**	P	**P**	**07 58 01.7**	**-1.0**
H21K				IAmb	IAmb	07 58 10.0	
	comp=Z,7.4nm,1.5s						
RND	**Reindeer**	**19.70**	**40**	P	**P**	**07 58 06.3**	**+0.3**
RND				IAmb	IAmb	07 58 10.7	
	comp=Z,3.9nm,0.9s						
MLY	**Manley**	**19.75**	**35**	P	**Pn**	**07 58 07.8**	**-0.5**
SCM	**Sheep Creek Mo**	**19.76**	**45**	P	**P**	**07 58 07.7**	**+1.0**
SCM				IAmb	IAmb	07 58 10.6	
	comp=Z,7.9nm,1.3s						
MCK	**McKinley**	**19.81**	**39**	P	**P**	**07 58 05.8**	**-1.4**
MCK				IAmb	IAmb	07 58 11.6	
	comp=Z,2.6nm,0.7s						
FID	**Port Fidalgo**	**19.83**	**49**	P	**P**	**07 58 07.5**	**0.0**
DHY	**Denali Highway**	**20.18**	**42**	P	**P**	**07 58 11.5**	**+0.2**
CCB	**Clear Creek Bl**	**20.66**	**38**	P	**P**	**07 58 16.9**	**+0.5**
BMRM	**Bremner River**	**20.77**	**49**	P	**P**	**07 58 17.7**	**-0.1**
BMRM				IAmb	IAmb	07 58 27.9	
	comp=Z,4.1nm,0.8s						
N25K	**Chitina, Valde**	**20.93**	**47**	P	**P**	**07 58 19.5**	**0.0**
PAX	**Paxson**	**20.95**	**43**	P	**P**	**07 58 20.9**	**+1.2**
PAX				IAmb	IAmb	07 58 26.4	
	comp=Z,2.4nm,0.6s						
IL31		**21.07**	**38**	P	**P**	**07 58 21.6**	**+0.9**
IL31				IAmb	IAmb	07 58 36.2	
	comp=Z,5.2nm,1.5s						
ILAR	**Eielson Array**	**21.07**	**38**	P	**P**	**07 58 21.0**	**+0.2**
ILAR	**Eielson Array**	**21.07**	**38**	P	**P**	**07 58 21.1**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=239,slow=9.6,SNR=10						
	comp=Z,0.4nm,0.5s						
J25K	**Salcha River,**	**21.59**	**39**	P	**P**	**07 58 26.4**	**-0.2**
DOT	**Dot Lake**	**21.78**	**42**	P	**P**	**07 58 29.0**	**+0.5**
DOT				IAmb	IAmb	07 58 34.2	
	comp=Z,2.3nm,0.7s						
SCRK	**Sand Creek**	**21.92**	**41**	P	**P**	**07 58 29.9**	**-0.2**
SCRK				IAmb	IAmb	07 58 34.7	
	comp=Z,2.5nm,0.9s						
J26L	**Joseph Creek**	**22.27**	**40**	P	**P**	**07 58 33.9**	**0.0**
J26L				IAmb	IAmb	07 58 42.2	
	comp=Z,2.2nm,0.8s						
CTGM	**Chitina Glacie**	**22.34**	**50**	P	**P**	**07 58 34.3**	**-0.4**
BCAR	**Beaver Creek A**	**22.58**	**44**	P	**P**	**07 58 37.1**	**-0.1**
INK	**Inuvik**	**27.32**	**34**	P	**P**	**07 59 19.3**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=239,slow=11,SNR=5.0						
	comp=Z,0.8nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.56**	**207**	T	T	08 36 21.8	
	baz=18,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**33.57**	**207**	T	T	08 36 22.9	
	baz=18,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**33.58**	**207**	T	T	08 36 23.4	
	baz=18,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**34.77**	**206**	T	T	08 37 44.9	
	baz=17,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**34.79**	**206**	T	T	08 37 56.7	
	baz=17,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**34.79**	**206**	T	T	08 38 07.0	
	baz=17,slow=76,SNR=13						
YKA	**Yellowknife Ar**	**34.96**	**46**	P	**P**	**08 00 27.1**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=288,slow=8.9,SNR=1.5						
	comp=Z,0.3nm,0.6s						
NEW	**Newport**	**38.38**	**70**	P	**P**	**08 00 59.1**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=296,slow=16,SNR=2.7						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**45.78**	**73**	P	**P**	**08 01 59.4**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=312,slow=3.6,SNR=12						
	comp=Z,1.1nm,0.7s						
ARCES	**ARCESS Array B**	**58.47**	**351**	P	P	08 03 26.0	-5.9
	comp=Z,1.1nm,0.7s,baz=16,slow=10,SNR=1.1						
	comp=Z,1.1nm,0.7s						

IDC ***31*** *07:57:39.7±1.5, 14°.61N×92°.71W, h0km, mb4.0/11, mbtmp4.0/13, ML3.3/1, MS3.4/8, Error ellipse: s-maj=56.5km s-min=17.2km az=44.0*

UCR ***31*** *07:57:40.9±0.9, 14°.22N×93°.27W, h11km±94km, ML4.1*

SNET ***31*** *07:57:40.8±1.0, 14°.21N×93°.27W, h10km±18km, ML4.5*

MEX ***31*** *07:57:42.0±1.0, 14°.09N×93°.48W, h16km±999km, MD4.1*

NEIC ***31*** *07:57:45.6±2.3, 14°.49N±0°.04×93°.17W±0°.05, h23km±9km, mb4.2/21, Md4.1/22(MEX), Error ellipse: s-maj=7.4km s-min=4.9km az=49.0*

GCG ***31*** *07:57:51.9±4.9, 14°.27N×93°.15W, h30km, MD4.5*

ISC 31 07:57:41.1±1.6, 14°.24N±0°.05×93°.47W±0°.04, h23km±12km, n101, σ2s39/105, mb4.2/18, MS3.4/7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.35**	**60**		**Pn**	**07 58 02.9**	**-1.7**
THIG					**Sn**	**07 58 19.4**	**-2.3**
THIG		**1.35**	**60**	*eP*	**Pn**	**07 58 02.9**	**-1.7**
THIG				*eS*	**Sn**	**07 58 19.4**	**-2.3**
PCIG		**1.48**	**10**		**Pn**	**07 58 04.9**	**-1.4**
PCIG					**Sn**	**07 58 17.5**	**-7.5**
PCIG		**1.48**	**10**	*eP*	**Pn**	**07 58 04.9**	**-1.4**
PCIG				*eS*	**Sn**	**07 58 17.5**	**-7.5**
RTAL	**Retalhuleu**	**1.75**	**80**	Pn	**Pn**	**07 58 08.6**	**-1.4**
RTAL	**Retalhuleu**	**1.75**	**80**	*eP*	**Pn**	**07 58 08.1**	**-1.9**
STG3	**Santiaguito 3,**	**1.90**	**75**	*eP*	**Pb**	**07 58 16.5**	**+1.3**
STG3				*eS*	Sb	07 58 47.8	+9.2
CARR	**Arriaga**	**2.04**	**348**	*eP*	**Pn**	**07 58 14.3**	**+0.1**
CARR				*eS*	**Sn**	**07 58 40.0**	**+1.1**
HUEH	**Huehuetenango**	**2.19**	**60**		**Pn**	**07 58 16.0**	**-0.4**
HUEH	**Huehuetenango**	**2.19**	**60**	*eP*	**Pn**	**07 58 16.1**	**-0.3**
HUEH	**Huehuetenango**	**2.19**	**60**	*eP*	**Pn**	**07 58 16.1**	**-0.3**
CCIG	**Comitan**	**2.41**	**32**	*eP*	**Pn**	**07 58 20.5**	**+1.2**
CCIG				*eS*	**Sn**	**07 58 44.4**	**-3.8**
TGIG		**2.55**	**8**		**Pn**	**07 58 22.4**	**+1.2**
TGIG					**Sn**	**07 58 52.9**	**+1.4**
TGIG		**2.55**	**8**	*eP*	**Pn**	**07 58 22.4**	**+1.2**
TGIG				*eS*	**Sn**	**07 58 52.9**	**+1.4**
NILT	**Santiago Nilte**	**2.56**	**335**	*i P*	**Pn**	**07 58 22.2**	**+1.0**
NILT				*eS*	**Sn**	**07 58 51.8**	**0.0**
PCG	**Pacaya**	**2.78**	**86**	*eP*	**Pb**	**07 58 29.5**	**-0.8**
HUIG	**Huatulco**	**2.97**	**301**		**Pn**	**07 58 27.2**	**+0.3**
HUIG	**Huatulco**	**2.97**	**301**	*eP*	**Pn**	**07 58 27.2**	**+0.3**
HUIG				*eS*	**Sn**	**07 58 57.4**	**-4.4**
NBG	**Las Nubes**	**3.05**	**83**	*eP*	**Pb**	**07 58 34.2**	**-0.7**
NBG				*eS*	**Sb**	**07 59 18.1**	**+6.3**
UXUV	**UXUV**	**3.13**	**348**	*eP*	**Pn**	**07 58 31.2**	**+2.1**
UXUV				*eS*	**Sn**	**07 59 07.9**	**+2.1**
CMIG	**Matias Romero**	**3.15**	**335**		**Pn**	**07 58 31.5**	**+2.2**
CMIG					**Sb**	**07 59 13.3**	**-1.0**
CMIG	**Matias Romero**	**3.15**	**335**	*eP*	**Pn**	**07 58 30.2**	**+0.9**
CMIG				*eS*	**Sn**	**07 59 01.1**	**-5.2**
CMIG	**Matias Romero**	**3.15**	**335**	Pn	**Pn**	**07 58 31.5**	**+2.2**
	3.7nm,0.3s,baz=150,slow=12,SNR=49						
CMIG					Sn	**Sb**	**07 59 13.3**	**-1.0**
	29nm,0.3s,baz=121,slow=17,SNR=4.5						
	50nm,0.7s						
RTR	**El Retiro**	**3.73**	**95**	*eP*	**Pn**	**07 58 35.7**	**-1.8**
RTR	**El Retiro**	**3.73**	**95**	*eP*	**Pn**	**07 58 35.7**	**-1.8**
CEVE	**Cerro Verde**	**3.76**	**96**	*eS*	**Sn**	**07 59 20.3**	**-1.3**
CEVE				IAML		07 59 34.2	
	comp=Z,916nm,0.6s						
CEVE	**Cerro Verde**	**3.76**	**96**	*eS*	**Sn**	**07 59 20.3**	**-1.3**
CEVE				IAML		07 59 34.2	
	comp=Z,916nm,0.6s						
MRL	**Marmol**	**3.76**	**77**	*eP*	**Pb**	**07 58 43.6**	**-3.4**
JAYA	**Jayaque - finc**	**3.95**	**98**	*eP*	**Pn**	**07 58 38.8**	**-1.7**
JAYA	**Jayaque - finc**	**3.95**	**98**	*eP*	**Pn**	**07 58 38.8**	**-1.7**
PEIG	**Puerto Escondi**	**3.96**	**297**	*eP*	**Pn**	**07 58 41.6**	**+1.1**
PEIG				*eS*	**Sn**	**07 59 22.1**	**-4.1**
CEDA	**San Andres**	**3.98**	**96**	*eP*	**Pn**	**07 58 38.8**	**-2.0**
CEDA	**San Andres**	**3.98**	**96**	*eP*	**Pn**	**07 58 38.8**	**-2.0**
MTO3	**Montecristo**	**3.99**	**87**		**Pn**	**07 58 39.1**	**-2.0**
MTO3	**Montecristo**	**3.99**	**87**	*eP*	**Pn**	**07 58 39.5**	**-1.6**
MTO3	**Montecristo**	**3.99**	**87**	*eP*	**Pn**	**07 58 39.5**	**-1.6**
ESQI	**Esquipulas**	**4.02**	**85**		**Pn**	**07 58 40.1**	**-1.3**
ESQI	**Esquipulas**	**4.02**	**85**	*eP*	**Pn**	**07 58 39.4**	**-2.0**
SNET	**Serv Nac Est T**	**4.15**	**97**		**Pn**	**07 58 42.8**	**-0.4**
PETF	**Flores**	**4.38**	**52**		**Pn**	**07 58 45.1**	**-1.1**
PETF	**Flores**	**4.38**	**52**	*eP*	**Pn**	**07 58 44.8**	**-1.4**
PETF	**Flores**	**4.38**	**52**	*eP*	**Pn**	**07 58 44.8**	**-1.4**
COEG	**Centro de Oper**	**4.50**	**97**	*eP*	**Pn**	**07 58 46.6**	**-1.4**
COEG	**Centro de Oper**	**4.50**	**97**	*eP*	**Pn**	**07 58 46.6**	**-1.4**
SCLA	**Alcaldia de Sa**	**4.64**	**96**	*eP*	**Pn**	**07 58 49.3**	**-0.6**
SCLA	**Alcaldia de Sa**	**4.64**	**96**	*eP*	**Pn**	**07 58 49.3**	**-0.6**
TGUH	**Tegucigalpa,Un**	**6.02**	**91**	Pn	**Pn**	**07 59 07.6**	**-1.3**
MATN	**Matagalpa**	**7.45**	**99**	Pn	**Pn**	**07 59 27.8**	**-0.9**
TEIG	**Tepich**	**7.75**	**39**	Pn	**Pn**	**07 59 31.5**	**-1.2**
HZTE	**Horizontes, Gu**	**8.45**	**114**	Pn	**Pn**	**07 59 43.4**	**+1.2**
ORTG	**Ortega, Santa**	**8.73**	**115**		**Pn**	**07 59 47.1**	**+1.0**
RIMA	**Rio Macho**	**10.40**	**114**		**Pn**	**08 00 10.8**	**+1.7**
SOR	**Soroa**	**13.07**	**48**	Pn	**Pn**	**08 00 43.4**	**-2.0**
833A	**Chaparral WMA,**	**15.06**	**340**	Pn	**P**	**08 01 16.1**	**-1.6**
HKT	**Hockley**	**15.79**	**352**	Pn	**P**	**08 01 24.6**	**-1.2**
435B	**Jarrell**	**16.90**	**348**	Pn	**P**	**08 01 38.4**	**+0.3**
JCT	**Junction City**	**17.18**	**341**	P	**P**	**08 01 42.8**	**+1.4**
TXAR	**Lajitas Array**	**17.74**	**330**		**P**	**08 01 51.4**	**+3.9**
TXAR	**Lajitas Array**	**17.74**	**330**	P	**P**	**08 01 49.5**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=151,slow=11,SNR=8.9						
TXAR					LR	LR	08 08 36.0	
	comp=Z,43nm,18.3s,baz=135,slow=37						
TX32	**Lajitas Array**	**17.74**	**330**	P	**P**	**08 01 51.4**	**+3.9**
WHTX	**Lake Whitney,**	**18.05**	**349**	P	**P**	**08 01 52.2**	**+1.5**
WLAR	**White Oak Lake**	**19.37**	**1**	P	**Pn**	**08 02 07.0**	**+0.5**
WLAR				IAmb	IAmb	08 02 22.3	
	comp=Z,11nm,0.9s						
MIAR	**Mount Ida**	**20.22**	**360**		Pn	08 02 16.1	-0.5
MIAR				IAmb	IAmb	08 02 23.6	
	comp=Z,11nm,1.0s						
HTMS	**Hat Mesa**	**20.39**	**335**	P	Pn	08 02 19.3	+0.7
CLN7	**Carlsbad 7**	**20.41**	**334**	P	Pn	08 02 21.0	+2.1
GDL2	**Guadalupe Moun**	**20.46**	**333**	P	Pn	08 02 21.9	+2.3
MNTX	**Cornudas Mount**	**20.52**	**330**	P	Pn	08 02 22.2	+2.1
MNTX				IAmb	IAmb	08 02 24.6	
	comp=Z,4.4nm,0.8s						
ROSC	**El Rosal**	**21.05**	**114**	P	**P**	**08 02 25.4**	**+1.2**
MSTX	**Muleshoe**	**21.38**	**338**	P	**P**	**08 02 29.7**	**+2.4**
MSTX				IAmb	IAmb	08 02 38.4	
	comp=Z,8.6nm,1.1s						
OK025	**Westminster Rd**	**21.54**	**351**		**P**	**08 02 30.6**	**+1.8**
FCAR	**Ozark Folk Cen**	**21.60**	**3**	P	**P**	**08 02 31.3**	**+1.9**
FCAR				IAmb	IAmb	08 02 32.8	
	comp=Z,7.6nm,0.7s						
OK030	**Cody Creek RV**	**21.80**	**353**		**P**	**08 02 33.1**	**+1.4**
OK030				IAmb	IAmb	08 02 34.3	
	comp=Z,8.2nm,0.8s						
AMTX	**Amarillo**	**21.85**	**342**	P	**P**	**08 02 34.7**	**+2.5**
OK034	**N. Norfolk Rd.**	**21.88**	**353**		**P**	**08 02 34.0**	**+1.6**
OK034				IAmb	IAmb	08 02 35.0	
	comp=Z,10nm,0.7s						
121A	**Cookes Peak, D**	**22.41**	**327**	P	**P**	**08 02 42.3**	**+3.9**
121A				IAmb	IAmb	08 02 47.6	
	comp=Z,13nm,1.1s						
SDV	**Santo Domingo**	**22.99**	**101**	P	**P**	**08 02 41.4**	**-3.3**
	comp=Z,6.5nm,0.5s,baz=342,slow=13,SNR=1.5						
	comp=Z,6.5nm,0.5s						
CRNM	**Carthage**	**23.02**	**331**	P	**P**	**08 02 48.5**	**+3.7**
TKL	**Tuckaleechee C**	**23.04**	**21**	LR	LR	08 13 21.7	
	comp=Z,57nm,19.3s,baz=207,slow=42						
KAN09	**Caldwell North**	**23.10**	**352**	P	**P**	**08 02 45.9**	**+0.4**
BNM	**Barren Site**	**23.13**	**331**	P	**P**	**08 02 49.8**	**+3.8**
ANMO	**Albuquerque**	**23.71**	**333**	P	**P**	**08 02 54.9**	**+3.2**
ANMO				IAmb	IAmb	08 03 03.6	
	comp=Z,5.0nm,1.0s						
ANMO	**Albuquerque**	**23.71**	**333**	P	**P**	**08 02 54.3**	**+2.6**
	comp=Z,1.4nm,0.7s,baz=142,slow=14,SNR=5.7						
	comp=Z,1.4nm,0.7s						
T25A	**Trinidad**	**24.81**	**339**	P	**P**	**08 03 04.8**	**+3.0**
T25A				IAmb	IAmb	08 03 11.2	
	comp=Z,8.6nm,1.0s						
MVCO	**Mesa Verde**	**26.51**	**332**	P	**P**	**08 03 20.3**	**+3.1**
MVCO				IAmb	IAmb	08 03 24.2	
	comp=Z,4.1nm,0.9s						
PDAR	**Pinedale Array**	**31.63**	**337**	P	**P**	**08 04 04.7**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=142,slow=3.4,SNR=4.1						
	comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**32.60**	**322**	P	**P**	**08 04 15.3**	**+4.0**
	comp=Z,1.9nm,0.8s,baz=134,slow=9.0,SNR=17						
	comp=Z,1.9nm,0.8s						
SNOW	**Snow King Moun**	**32.68**	**336**	P	**P**	**08 04 15.1**	**+3.1**
SADO	**Sadowa**	**32.78**	**19**	LR	LR	08 18 44.5	
	comp=Z,60nm,19.6s,baz=196,slow=39						
ULM	**Lac du Bonnet**	**35.97**	**357**	P	**P**	**08 04 37.2**	**-2.9**
	comp=Z,1.9nm,0.6s,baz=143,slow=8.3,SNR=3.1						
	comp=Z,1.9nm,0.6s						
NEW	**Newport**	**39.17**	**335**	LR	LR	08 24 27.0	
	comp=Z,51nm,19.7s,baz=148,slow=41						
LPAZ	**La Paz**	**39.33**	**140**	P	**P**	**08 05 09.3**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=243,slow=3.4,SNR=3.8						
	comp=Z,0.7nm,0.7s						
SCHQ	**Schefferville**	**45.51**	**21**	LR	LR	08 26 18.0	
	comp=Z,88nm,18.6s,baz=178,slow=38						
YKA	**Yellowknife Ar**	**50.48**	**347**	P	**P**	**08 06 38.1**	**+1.1**
	comp=Z,5.3nm,0.7s,baz=151,slow=7.4,SNR=31						
	comp=Z,5.3nm,0.7s						
DLBC	**Dease Lake**	**51.86**	**337**	P	**P**	**08 06 50.5**	**+2.9**
	comp=Z,5.0nm,1.1s,baz=110,slow=6.7,SNR=3.6						
	comp=Z,5.0nm,1.1s						
INK	**Inuvik**	**59.81**	**344**	P	**P**	**08 07 44.4**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=101,slow=13,SNR=4.3						
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**62.06**	**337**	P	**P**	**08 08 00.7**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=158,slow=4.4,SNR=9.9						
	comp=Z,1.0nm,1.0s						
BORG	**Borgarnes**	**69.62**	**26**	LR	LR	08 37 49.9	
	comp=Z,40nm,19.1s,baz=322,slow=35						
ESDC	**Sonseca Array**	**80.69**	**51**	P	**P**	**08 09 50.6**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=288,slow=4.4,SNR=4.8						
	comp=Z,0.5nm,0.5s						
NOA	**NORSAR Array B**	**84.62**	**28**	LR	LR	08 47 02.4	
	comp=Z,16nm,19.5s,baz=255,slow=35						
DBIC	**Dimbokro**	**87.05**	**84**	LR	LR	08 49 56.3	
	comp=Z,22nm,18.0s,baz=172,slow=36						
CMAR	**Chiang Mai Arr**	**145.28**	**339**	PKPbc	**PKPdf**	**08 17 18.9**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=351,slow=3.9,SNR=6.8						

ROM 31 08:12:20.5±0.1, 42°.807N±0°.002×13°.117E±0°.004, h15km, ML1.9/10, 5C-3D, Error ellipse: s-maj=0.3km s-min=0.0km az=282.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1242	**Castelluccio d**	**0.07**	**71**	P	Pg	08 12 23.5	-0.1
T1242				S	Sg	08 12 25.3	-0.3
T1242				AML	AML		
	comp=E,130μm,0.2s						
T1242				AML	AML		
	comp=N,210μm,0.5s						
T1242				AML	AML		
	comp=E,1175μm,1.3s						
T1242				AML	AML		
	comp=N,2050μm,0.5s						
T1242				AML	AML		
	comp=E,1166μm,1.3s						
T1242				AML	AML		
	comp=N,2000μm,0.4s						
T1242				AML	AML		
	comp=N,2045μm,0.5s						
T1242				AML	AML		
	comp=E,1176μm,1.3s						
T1242				AML	AML		
	comp=E,1167μm,1.3s						
T1242	**Castelluccio d**	**0.07**	**71**	P	Pg	08 12 23.5	-0.1
T1242				S	Sg	08 12 25.6	0.0
T1242				AML	AML		
	comp=E,1175μm,1.3s						
T1242				AML	AML		
	comp=N,2045μm,0.6s						
T1242				AML	AML		
	comp=E,1167μm,1.3s						
T1242				AML	AML		
	comp=N,2000μm,0.4s						
T1242				AML	AML		
	comp=E,1175μm,1.3s						
T1242				AML	AML		
	comp=N,2050μm,0.5s						
T1242				AML	AML		
	comp=E,1166μm,1.3s						
T1242				AML	AML		
	comp=N,2000μm,0.4s						
T1242				AML	AML		
	comp=E,1176μm,1.3s						
T1242				AML	AML		
	comp=E,1167μm,1.3s						
T1242				AML	AML		
	comp=N,2045μm,0.5s						
T1242				AML	AML		
	comp=N,2000μm,0.4s						
MC2	**Monte Cornacci**	**0.12**	**27**	P	Pg	08 12 24.3	+0.1
MC2				S	Sg	08 12 26.9	+0.2
MC2	**Monte Cornacci**	**0.12**	**27**	P	Pg	08 12 24.2	+0.1
MC2				S	Sg	08 12 26.9	+0.3
T1202	**Accumoli, Fraz**	**0.13**	**142**	P	Pg	08 12 24.5	+0.3
T1202				S	Sb	08 12 27.4	-0.2
T1202				AML	AML		
	comp=E,1080μm,0.7s						
T1202				AML	AML		
	comp=N,1775μm,0.2s						
T1202	**Accumoli, Fraz**	**0.13**	**142**	P	Pg	08 12 24.4	+0.2
T1202				S	Sb	08 12 27.3	-0.2
T1244	**Arquata del Tr**	**

T1241				AML	AML			
	comp=E,242µm,1.0s							
T1241				AML	AML			
	comp=N,318µm,0.4s							
T1241				AML	AML			
	comp=N,318µm,0.4s							
T1241				AML	AML			
	comp=E,242µm,1.0s							
SMA1	**SAN MARTINO**	**0.24**	**138**	P	Pg	08 12 25.4	-0.3	
SMA1				AML	AML			
	comp=E,414µm,0.4s							
SMA1				AML	AML			
	comp=N,234µm,0.6s							
SMA1				AML	AML			
	comp=N,234µm,0.6s							
SMA1				AML	AML			
	comp=E,414µm,0.4s							
CESI	**CESI - Serrava**	**0.25**	**322**	P	Pg	08 12 26.4	+0.4	
CESI				S	Sb	08 12 30.5	-0.5	
CESI				AML	AML			
	comp=E,159µm,0.6s							
CESI				AML	AML			
	comp=N,230µm,0.6s							
CESI				AML	AML			
	comp=E,160µm,0.6s							
CESI	**CESI - Serrava**	**0.25**	**322**	P	Pg	08 12 26.4	+0.4	
CESI				S	Sb	08 12 30.7	-0.3	
CESI				AML	AML			
	comp=E,159µm,0.6s							
CESI				AML	AML			
	comp=N,230µm,0.6s							
CESI				AML	AML			
	comp=N,230µm,0.6s							
CESI				AML	AML			
	comp=E,160µm,0.6s							
T1243	**Rocca Santa Ma**	**0.27**	**114**	P	Pg	08 12 26.3	+0.1	
T1243				S	Sb	08 12 31.0	-0.5	
T1243	**Rocca Santa Ma**	**0.27**	**114**	P	Pg	08 12 26.4	+0.1	
T1243				S	Sg	08 12 30.8	+0.6	
CSP1	**Cessapalombo**	**0.29**	**13**	⇑P	Pg	08 12 27.0	+0.3	
RM33	**Pellescritta (**	**0.31**	**166**	P	Pg	08 12 27.1	+0.2	
RM33				S	Sb	08 12 32.5	-0.1	
RM33				AML	AML			
	comp=E,206µm,0.1s							
RM33				AML	AML			
	comp=N,208µm,1.0s							
RM33				AML	AML			
	comp=E,206µm,0.1s							
RM33				AML	AML			
	comp=N,208µm,1.0s							
ARRO	**Arrone**	**0.34**	**229**	P	Pb	08 12 27.9	-0.4	
ARRO				S	Sb	08 12 33.6	0.0	
ARRO				AML	AML			
	comp=E,97µm,0.2s							
ARRO				AML	AML			
	comp=N,96µm,0.2s							
ARRO				AML	AML			
	comp=N,96µm,0.2s							
ARRO				AML	AML			
	comp=E,97µm,0.2s							
CAMP	**Campotosto**	**0.35**	**141**	P	Pb	08 12 28.7	+0.3	
CAMP				AML	AML			
	comp=E,39µm,1.0s							
CAMP				AML	AML			
	comp=N,43µm,0.7s							
CAMP				AML	AML			
	comp=N,43µm,0.7s							
CAMP				AML	AML			
	comp=E,39µm,1.0s							
TERO	**Teramo**	**0.40**	**117**	P	Pg	08 12 28.7	+0.1	
TERO				AML	AML			
	comp=E,105µm,1.0s							
TERO				AML	AML			
	comp=N,126µm,1.4s							
TERO				AML	AML			
	comp=E,106µm,1.0s							
TERO	**Teramo**	**0.40**	**117**	P	Pg	08 12 28.2	-0.4	
TERO				AML	AML			
	comp=E,105µm,1.0s							
TERO				AML	AML			
	comp=N,126µm,1.4s							
TERO				AML	AML			
	comp=E,106µm,1.0s							
TERO				AML	AML			
	comp=N,126µm,1.4s							
ASSB	**Assisi San Ben**	**0.41**	**305**	⇑P	Pg	08 12 29.1	+0.3	
ASSB				AML	AML			
	comp=E,67µm,1.2s							
ASSB				AML	AML			
	comp=N,63µm,1.1s							
ASSB				AML	AML			
	comp=N,63µm,1.1s							
ASSB				AML	AML			
	comp=E,67µm,1.2s							
SNTG	**Esanatoglia**	**0.47**	**344**	⇑P	Pg	08 12 30.1	+0.3	
SNTG				AML	AML			
	comp=E,58µm,0.1s							
SNTG				AML	AML			
	comp=N,55µm,0.3s							
SNTG				AML	AML			
	comp=E,58µm,0.1s							
SNTG				AML	AML			
	comp=N,55µm,0.3s							
GIGS	**Gran Sasso**	**0.49**	**137**	⇓P	Pg	08 12 30.3	+0.2	
ATCC	**AVT- Casa Cast**	**0.52**	**317**	⇑P	Pb	08 12 31.1	-0.2	
EL6	**Elcito**	**0.52**	**359**	⇑P	Pg	08 12 31.0	+0.1	
EL6				S	Sb	08 12 40.0	+1.1	
EL6				AML	AML			
	comp=E,121µm,0.5s							
EL6				AML	AML			
	comp=N,109µm,0.4s							
EL6				AML	AML			
	comp=N,109µm,0.4s							
EL6				AML	AML			
	comp=E,121µm,0.5s							
FIAM	**Fiamignano**	**0.54**	**180**	⇓P	Pg	08 12 31.1	-0.1	
FIAM				AML	AML			
	comp=E,51µm,0.6s							
FIAM				AML	AML			
	comp=N,42µm,0.6s							
FIAM				AML	AML			
	comp=E,51µm,0.6s							
FIAM				AML	AML			
	comp=N,42µm,0.6s							
VCEL	**Villa Celiera**	**0.68**	**127**	P	Pb	08 12 34.1	+0.1	
FSSB	**Fossombrone**	**0.92**	**344**	⇓P	Pn	08 12 40.0	+1.1	
OSSC	**Osservatorio P**	**1.54**	**298**	S	Sg	08 13 11.0	+0.8	

*JMA **31** 08:19:55.2±0.2, 44°N±1°×14°3E±°, h199km±2km, MV3.1/36, ABASHIRI REGION*

*IDC **31** 08:19:59.6±8.2, 44°.55N×143°.33E, h221km±63km, mb3.1/7, mbtmp3.7/9, Error ellipse: s-maj=68.4km s-min=18.8km az=167.0*

ISC 31 08:19:54.8±0.7, **44°.08N**±0°.07×**143°.53E**±0°.06, **h201**km±6km, **n24**, σ0**s84**/31, **mb3.2**/7, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMP	**Maruseppu**	**0.14**	**239**	*eP*	**Pn**	**08 20 21.4**	**+0.2**
JMP				*eS*	**Sn**	**08 20 41.3**	**-0.1**
JTKR	**Abashiri--Toko**	**0.29**	**112**	*eP*	**Pn**	**08 20 22.0**	**+0.6**
JTKR				*eS*	**Sn**	**08 20 42.1**	**+0.3**
ASAJ	**Asahikawa**	**0.67**	**273**	*eP*	**Pn**	**08 20 23.1**	**+0.4**
ASAJ				*eS*	**Sn**	**08 20 44.3**	**0.0**
JAR	**Ashorobuto**	**0.80**	**167**	*eP*	**Pn**	**08 20 24.0**	**+0.6**
JAR				*eS*	**Sn**	**08 20 46.0**	**+0.5**
JRA	**Rausu**	**1.16**	**97**	*eP*	**Pn**	**08 20 26.6**	**+0.9**
JSS	**Shosan**	**1.25**	**285**	*eP*	**Pn**	**08 20 27.4**	**+1.1**
JHR	**Hokuryu**	**1.35**	**256**	*eP*	**Pn**	**08 20 27.6**	**+0.4**
JAK	**Akkeshi**	**1.38**	**142**	*eP*	**Pn**	**08 20 28.0**	**+0.5**
JAK				*eS*	**Sn**	**08 20 52.3**	**-0.4**
JCH	**Churui**	**1.47**	**185**	*eP*	**Pn**	**08 20 28.1**	**-0.3**
JCH				*eS*	**Sn**	**08 20 52.5**	**-1.8**
JWK2	**Keihoku**	**1.70**	**317**	*eP*	**Pn**	**08 20 30.3**	**0.0**
NEM2	**Nemuro 2**	**1.76**	**113**	*eP*	**Pn**	**08 20 30.6**	**-0.3**
NEM2				*eS*	**Sn**	**08 20 57.6**	**-1.3**
JNBK	**Urakawa-nobuka**	**1.89**	**198**	*eP*	**Pn**	**08 20 32.2**	**-0.1**
JNBK				*eS*	**Sn**	**08 21 00.5**	**-0.8**
JEW	**Eniwo**	**1.96**	**231**	*eP*	**Pn**	**08 20 33.3**	**+0.4**
JRBN	**Rebuntou**	**2.21**	**308**	*eP*	**Pn**	**08 20 34.3**	**-1.1**
PETK	**Petropavlovsk-** 1.5nm,0.8s,baz=244,slw=11,SNR=1.6	**13.00**	**41**	P	**P**	**08 22 53.7**	**-1.6**
SEY	**Seymchan** 3.4nm,0.8s,baz=210,slw=2.4,SNR=7.0	**19.57**	**12**	P	**P**	**08 24 05.8**	**-1.3**
SONM	**Songino Array** 1.3nm,0.5s,baz=81,slow=8.8,SNR=4.4	**25.92**	**291**	P	**P**	**08 25 09.1**	**+0.7**
	1.3nm,0.5s						
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=96,slow=7.5,SNR=2.7	**42.10**	**296**	P	**P**	**08 27 26.6**	**-0.4**
	0.4nm,0.6s						
ILAR	**Eielson Array** 0.3nm,0.4s,baz=254,slow=5.5,SNR=9.9	**42.77**	**36**	P	**P**	**08 27 32.4**	**+0.4**
	0.3nm,0.4s						
INK	**Inuvik** 1.1nm,0.4s,baz=297,slow=9.6,SNR=13	**47.43**	**30**	P	**P**	**08 28 08.4**	**-0.2**
	1.1nm,0.4s						
YKA	**Yellowknife Ar** 0.3nm,0.5s,baz=304,slow=7.6,SNR=6.3	**56.96**	**33**	P	**P**	**08 29 19.9**	**+1.1**
	0.3nm,0.5s						
FINES	**FINESS Array B** 0.8nm,0.5s,baz=52,slow=9.9,SNR=5.1	**63.36**	**332**	P	**P**	**08 30 02.0**	**-0.1**
	0.8nm,0.5s						
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=300,slow=4.5,SNR=3.6	**84.61**	**54**	P	**P**	**08 32 07.3**	**+1.5**
	0.2nm,0.5s						
SIV	**San Ignacio** 0.6nm,0.6s,baz=325,slow=0.8,SNR=4.4	**145.09**	**44**	PKP	PKPbc	08 39 09.7	+1.4

*IDC **31** 08:20:31.6±0.7, 33°.14N×141°.09E, h0km, mb4.0/13, mbtmp4.1/17, ML3.7/4, Error ellipse: s-maj=19.2km s-min=13.9km az=71.0*

*NIED **31** 08:20:36.6, 33°.26N×140°.96E, h49km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.76; Mθθ1.48; Mφφ-2.23; Mrθ-1.23; Mθφ0.60; Mφr1.05; Fault plane solution: M0 2.60000×10^15^ NP1: φs213.00000°, δ47.00000°, λ165.00000°. NP2: φs313.00000°, δ79.00000°, λ44.00000°.*

*JMA **31** 08:20:36.6±0.2, 33°.3N±0°.4×141°.0E±0°.9, h49km, MD4.4/36, MV4.1/36, E OFF HACHIJOJIMA ISLAND*

*NEIC **31** 08:20:37.7±2.0, 33°.16N±0°.07×140°.91E±0°.03, h40km±9km, mb4.5/16, Error ellipse: s-maj=9.9km s-min=3.3km az=184.0*

ISC 31 08:20:38.2±0.6, **33°.19N**±0°.06×**140°.94E**±0°.06, **h48**km, **n87**, σ1**s16**/77, **mb4.2**/20, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.95**	**265**		**Pn**	**08 20 54.2**	**-0.9**
JHJ2	**Mitsune**	**0.95**	**265**	P	**Pn**	**08 20 54.3**	**-0.9**
JHJ2				S	**Sn**	**08 21 06.8**	**-0.9**
JHJ2	**Mitsune**	**0.95**	**265**	A	A	08 20 54.3	
	comp=E,22nm,0.4s,comp=E,11nm,3.5s						
JHCJ	**Hachijojimakas**	**0.97**	**263**	P	**Pn**	**08 20 54.4**	**-1.1**
JHCJ	**Hachijojimakas**	**0.97**	**263**	A	A	08 20 54.4	
	comp=Z,6.0nm,6.9s,comp=Z,9.0nm,3.6s,comp=Z,10.0nm,4.6s						
JHJ	**Hachijo jima 2**	**0.97**	**266**		**Pn**	**08 20 54.1**	**-1.5**
JHJ					**Sn**	**08 21 06.7**	**-1.6**
JHJ	**Hachijo jima 2**	**0.97**	**266**	Pn	**Pn**	**08 20 54.1**	**-1.5**
	1µm,0.3s,baz=134,slow=6.2,SNR=47						
JHJ				Sn	**Sn**	**08 21 06.7**	**-1.6**
	3µm,0.3s,baz=73,slow=19,SNR=36						
JAOM	**Aogashimamukai**	**1.23**	**234**	P	**Pn**	**08 20 58.5**	**-0.6**
JAOM	**Aogashimamukai**	**1.23**	**234**	A	A	08 20 58.5	
	comp=E,22nm,0.6s,comp=E,16nm,1.8s						
JMKN	**Mikurajimanish**	**1.32**	**302**	P	**Pn**	**08 20 59.0**	**-1.4**
JMKN	**Mikurajimanish**	**1.32**	**302**	A	A	08 20 59.0	
	comp=E,9.0nm,1.7s,comp=E,10.0nm,4.0s						
BSO1	**Boso 1**	**1.46**	**1**	*eP*	**Pn**	**08 21 00.3**	**-1.3**
BSO3	**Boso 3**	**1.64**	**348**	P	**Pn**	**08 21 03.0**	**-1.5**
JNIO	**Niijimaoohara**	**1.81**	**310**	A	A	08 21 05.7	
	comp=E,13nm,5.0s,comp=E,14nm,1.3s						
JSKK	**Shikinejimakit**	**1.84**	**309**	A	A	08 21 06.1	
	comp=E,12nm,4.4s,comp=E,9.0nm,5.7s						
BSO4	**Boso 4**	**1.86**	**345**	P	**Pn**	**08 21 06.3**	**-1.2**
JTHY	**Toshimahigashi**	**1.91**	**314**	*eP*	**Pn**	**08 21 07.4**	**-1.0**
JTHY	**Toshimahigashi**	**1.91**	**314**	A	A	08 21 07.4	
	comp=E,10.0nm,5.9s,comp=E,12nm,5.5s						
JIM2	**Oshima 3**	**1.97**	**321**	P	**Pn**	**08 21 07.7**	**-1.5**
JIM2				*eS*	**Sn**	**08 21 29.6**	**-3.1**
JIM2	**Oshima 3**	**1.97**	**321**	A	A	08 21 07.7	
	comp=E,6.0nm,0.8s,comp=E,8.0nm,4.6s						
JIZS	**Izushimoda**	**2.29**	**312**	P	**Pn**	**08 21 13.1**	**-0.5**
JIZS	**Izushimoda**	**2.29**	**312**	A	A	08 21 13.1	
	comp=E,4.0nm,4.2s,comp=E,3.0nm,6.1s						
JHTM	**Izuhatsuma**	**2.38**	**318**	A	A	08 21 13.7	
	comp=E,6.0nm,4.9s,comp=E,7.0nm,3.8s						
JOD2	**Odawara 2**	**2.57**	**324**	P	**Pn**	**08 21 16.1**	**-1.3**
JFNN	**Fujinakano**	**2.73**	**317**	*eP*	**Pn**	**08 21 19.8**	**+0.1**
TK02	**Tokai 2**	**2.76**	**287**	P	**Pn**	**08 21 19.8**	**0.0**
TK04	**Tokai 4**	**2.82**	**296**	*eP*	**Pn**	**08 21 21.0**	**+0.4**
SHZ3	**Shizuoka 3**	**2.94**	**310**	*eP*	**Pn**	**08 21 22.8**	**+0.4**
JYN	**Shimob**	**3.04**	**320**	*eP*	**Pn**	**08 21 23.8**	**0.0**
JYT	**Yasato**	**3.09**	**349**		**Pn**	**08 21 23.7**	**-0.7**
JGF	**Kuroka**	**3.81**	**310**		**Pn**	**08 21 35.1**	**+0.6**
INU	**Inuyama**	**3.90**	**305**		**Pn**	**08 21 36.1**	**+0.5**
MJAR	**Matsushiro Arr** 3.6nm,0.3s,baz=130,slow=13,SNR=88	**4.02**	**327**	Pn	**Pn**	**08 21 37.4**	**+0.1**
MJAR				Sn	**Sn**	**08 22 23.9**	**+0.6**
	1.0nm,0.3s,baz=327,slow=19,SNR=4.3 102nm,0.7s						
MAJO	**Matsushiro**	**4.03**	**327**		**Pn**	**08 21 37.9**	**+0.5**
JMM	**Marumori**	**4.66**	**359**		**Pn**	**08 21 44.9**	**-1.2**
JSD	**Sado**	**5.30**	**336**	Pn	**Pn**	**08 21 54.1**	**-0.7**
JMN	**Monobe**	**5.93**	**277**	Pn	**Pn**	**08 22 03.7**	**+0.2**
JCJ	**Chichijima**	**6.17**	**170**	Pn	**Pn**	**08 22 05.6**	**-1.3**
JCJ	**Chichijima**	**6.17**	**170**	Pn	**Pn**	**08 22 04.5**	**-2.4**
	14nm,0.3s,baz=272,slow=20,SNR=2.1 77nm,0.7s						
JHS	**Saijyo**	**6.74**	**288**	Pn	**Pn**	**08 22 15.5**	**+1.0**
JTM	**Tenmabayashi**	**7.58**	**1**		**Pn**	**08 22 25.1**	**-0.9**
ERM	**Erimo**	**8.98**	**11**	Pn	**Pn**	**08 22 44.2**	**-1.0**
KSRS	**Korea Array**	**11.45**	**295**		**Pn**	**08 23 20.3**	**+1.3**
KSRS	**Korea Array** 0.1nm,0.3s,baz=114,slow=14,SNR=7.7 4.9nm,0.9s	**11.45**	**295**	Pn	**Pn**	**08 23 20.3**	**+1.3**
KLR	**Kul'dur** 0.2nm,0.3s,baz=132,slow=8.3,SNR=4.7 2.3nm,0.7s	**17.43**	**340**	P	**Pn**	**08 24 35.7**	**-2.0**
H11N2	**WAKE ISLAND Hy** baz=305,slow=75,SNR=113	**26.74**	**114**	T	T	08 55 10.6	
H11N1	**WAKE ISLAND Hy** baz=305,slow=75,SNR=79	**26.74**	**114**	T	T	08 55 13.8	
H11N3	**WAKE ISLAND Hy** baz=305,slow=75,SNR=118	**26.76**	**114**	T	T	08 55 10.7	
H11S3	**WAKE ISLAND Hy** baz=307,slow=75,SNR=20	**27.31**	**116**	T	T	08 55 52.3	
H11S1	**WAKE ISLAND Hy** baz=307,slow=75,SNR=12	**27.31**	**116**	T	T	08 55 54.4	
H11S2	**WAKE ISLAND Hy** baz=307,slow=75,SNR=15	**27.32**	**116**	T	T	08 56 00.1	
SONM	**Songino Array** 0.8nm,0.7s,baz=106,slow=9.4,SNR=4.1 0.8nm,0.7s	**29.77**	**310**	P	**P**	**08 26 40.9**	**+0.6**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=99,slow=7.4,SNR=1.8	**44.29**	**315**	P	**P**	**08 28 41.9**	**-1.2**
ZALV				PcP	**PP**	**08 30 28.3**	**+1.5**
	1.3nm,0.4s,baz=67,slow=3.7,SNR=4.1 0.6nm,0.3s						
MK31	**Makanchi Array**	**45.92**	**305**	P	**P**	**08 28 55.8**	**-0.3**
MK31				IAmb	IAmb	08 29 00.4	
	comp=Z,5.2nm,1.4s						
MKAR	**Makanchi Array**	**45.92**	**305**	P	**P**	**08 28 54.9**	**-1.3**
MKAR	**Makanchi Array**	**45.92**	**305**	P	**P**	**08 28 55.8**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=88,slow=9.8,SNR=4.8 comp=Z,0.8nm,0.6s						
KURK	**Kurchatov**	**48.07**	**311**	P	**P**	**08 29 12.5**	**-0.3**
KURK				IAmb	IAmb	08 29 16.6	
	comp=Z,6.8nm,1.0s						
KNRA	**Kununurra**	**49.97**	**195**	P	**P**	**08 29 26.1**	**-1.5**
KNRA				IAmb	IAmb	08 29 28.1	
	comp=Z,5.3nm,0.8s						
IMAR	**Indian Mountai**	**50.17**	**29**	P	**P**	**08 29 29.4**	**+0.8**
KDAK	**Kodiak Island**	**50.25**	**40**	P	**P**	**08 29 29.9**	**+0.6**
KDAK				IAmb	IAmb	08 30 11.6	
	comp=Z,14nm,1.5s						
H21K	**Melozitna Rive**	**50.52**	**29**	P	**P**	**08 29 32.5**	**+1.3**
PWL	**Port Wells**	**52.36**	**36**	P	**P**	**08 29 45.8**	**+0.7**
PWL				IAmb	IAmb	08 29 50.1	
	comp=Z,5.1nm,1.0s						
MDM	**Murphy Dome**	**52.39**	**30**	P	**P**	**08 29 46.4**	**+1.1**
ILAR	**Eielson Array**	**52.96**	**31**	P	**P**	**08 29 49.4**	**-0.1**
ILAR	**Eielson Array**	**52.96**	**31**	P	**P**	**08 29 49.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=270,slow=6.2,SNR=11 comp=Z,0.6nm,0.6s						
WB0	**Warramunga Arr**	**53.03**	**188**	P	**P**	**08 29 49.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.06**	**198**	P	**P**	**08 29 50.6**	**0.0**
FITZ				IAmb	IAmb	08 30 17.2	
	comp=Z,6.6nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.06**	**198**	P	**P**	**08 29 50.2**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=338,slow=6.1,SNR=5.4 comp=Z,0.9nm,0.6s						
WRAB	**Tennant Creek**	**53.20**	**188**	P	**P**	**08 29 51.0**	**-0.7**
WR0	**Warramunga Arr**	**53.21**	**188**	P	**P**	**08 29 51.2**	**-0.5**
WB2	**Warramunga Arr**	**53.21**	**188**	P	**P**	**08 29 51.1**	**-0.7**
WRA	**Warramunga Arr**	**53.21**	**188**	P	**P**	**08 29 50.2**	**-1.6**
WRA	**Warramunga Arr**	**53.21**	**188**	P	**P**	**08 29 50.9**	**-0.9**
	comp=Z,7.6nm,0.6s,baz=3.7,slow=7.6,SNR=188 comp=Z,7.6nm,0.6s						
KK31	**Karatay Array**	**54.78**	**302**	P	**P**	**08 30 02.2**	**-0.9**
KKAR	**Karatay Array**	**54.78**	**302**	P	**P**	**08 30 01.4**	**-1.8**
AS31	**Alice Springs**	**56.94**	**188**	P	**P**	**08 30 17.2**	**-1.4**
AS31				IAmb	IAmb	08 30 20.1	
	comp=Z,2.5nm,0.6s						
ASAR	**Alice Springs**	**56.94**	**188**	P	**P**	**08 30 17.0**	**-1.6**
ASAR	**Alice Springs**	**56.94**	**188**	P	**P**	**08 30 18.1**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=356,slow=6.4,SNR=55 comp=Z,2.7nm,0.6s						
ABKAR	**Akbulak array**	**60.16**	**312**	P	**P**	**08 30 40.2**	**-0.7**
ABKAR				IAmb	IAmb	08 30 47.6	
	comp=Z,1.4nm,0.7s						
STKA	**Stephens Creek**	**64.73**	**179**	P	**P**	**08 31 11.8**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=29,slow=3.6,SNR=3.7 comp=Z,1.6nm,0.7s						
FINES	**FINESS Array B**	**72.03**	**333**	P	**P**	**08 31 58.8**	**+2.0**
	comp=Z,1.7nm,0.8s,baz=72,slow=6.2,SNR=4.8 comp=Z,1.7nm,0.8s						
KBZ	**Khabaz**	**73.12**	**311**	P	**P**	**08 32 05.6**	**+2.0**
KBZ	**Khabaz**	**73.12**	**311**	P	**P**	**08 32 05.6**	**+2.0**
	comp=Z,2.1nm,0.7s,baz=147,slow=7.6,SNR=4.3 comp=Z,2.1nm,0.7s						
AKASG	**Malin Array Be**	**77.10**	**323**	P	**P**	**08 32 27.9**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=51,slow=5.6,SNR=5.0 comp=Z,0.6nm,0.4s						
NVAR	**Mina Array Bea**	**77.62**	**52**	P	**P**	**08 32 29.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=271,slow=5.0,SNR=2.9 comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**92.77**	**52**	P	**P**	**08 33 46.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=279,slow=2.1,SNR=7.0 comp=Z,0.5nm,0.7s						
LPAZ	**La Paz** comp=Z,0.8nm,0.7s,baz=200,slow=7.7,SNR=1.9	**148.84**	**64**	PKPbc	**PKPbc**	**08 40 21.1**	**-0.7**

IDC 31 08:29:44.5±2.0, **6°.23S**×**130°.02E**, **h0**km, **mb3.9**/1, **mbtmp4.0**/5, **ML4.0**/4, **Error ellipse: s-maj=53.4km s-min=27.1km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.42**	**237**	Pn	Pn	08 31 34.8	+0.6
	9.5nm,0.3s,baz=271,slw=1.7,SNR=7.0						
BATI				Sn	Sn	08 32 47.6	-12
	5.2nm,0.3s,baz=60,slow=22,SNR=1.9 44nm,0.5s						
FITZ	**Fitzroy Crossi**	**12.54**	**200**	Pn	Pn	08 32 42.6	-1.7
	0.4nm,0.3s,baz=14,slow=11,SNR=12						
FITZ				Sn	Sn	08 34 45.4	-20
	0.8nm,0.3s,baz=360,slow=23,SNR=6.3 2.6nm,0.5s						
WRA	**Warramunga Arr**	**14.26**	**163**	Pn	Pn	08 33 08.7	+0.8
	0.6nm,0.3s,baz=347,slow=14,SNR=25						
WRA				Sn	Sn	08 35 37.5	-9.5
	1.3nm,0.3s,baz=329,slow=23,SNR=9.3 0.5nm,0.4s						
ASAR	**Alice Springs**	**17.73**	**168**	P	Pn	08 33 53.4	+0.4
	0.3nm,0.3s,baz=339,slow=9.7,SNR=16						
ASAR				S	Sn	08 36 58.6	-13
	0.5nm,0.3s,baz=345,slow=25,SNR=7.7 1.0nm,0.5s						
MKAR	**Makanchi Array**	**67.60**	**327**	P	P	08 40 43.0	0.0
	0.6nm,0.5s,baz=114,slow=8.3,SNR=8.0 0.6nm,0.5s						

VAO 31 08:42:18.6±0.7, **10°.28S**×**71°.10W**, **h617**km±6km, **mb3.7, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**2.99**	**328**	*eP*	P	08 43 39.7	+0.5
CZSB				*eS*	S	08 44 44.5	-0.2
ETMB	**Extrema**	**4.83**	**85**	*eP*	P	08 43 51.6	+0.3
ETMB				*eS*	S	08 45 07.5	+0.6
LPAZ	**La Paz**	**6.64**	**155**	*eP*	P	08 44 06.1	-0.7
VILB	**Vilhena**	**11.00**	**105**	*eP*	P	08 44 47.2	-0.5
MACA	**Manacapuru-AM**	**12.52**	**56**	*eP*	P	08 45 02.8	+0.3
PDRB	**Pedro dos Gac**	**14.17**	**97**	*eP*	P	08 45 18.8	+0.1
CLDB	**Colider**	**15.06**	**94**	*eP*	P	08 45 26.9	+0.1
NPGB	**Novo Progresso**	**15.89**	**80**	*eP*	P	08 45 35.1	+0.7
ITTB	**Itaituba**	**16.32**	**70**	*eP*	P	08 45 38.6	+0.2

IDC 31 08:42:38.6±7.8, **6°.16S**×**154°.15E**, **h0**km, **mb3.9**/3, **mbtmp3.9**/3, **MS4.0**/1, **Error ellipse: s-maj=239.1km s-min=42.0km az=110.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.62**	**233**	P	P	08 47 53.0	+1.4
	3.1nm,0.5s,baz=64,slow=10,SNR=51 3.1nm,0.5s						
ASAR	**Alice Springs**	**26.12**	**226**	P	P	08 48 13.4	-1.1
	0.9nm,0.5s,baz=57,slow=9.8,SNR=19 0.9nm,0.5s						
RAO	**Raoul Island**	**34.97**	**134**	LR	LR	09 01 19.7	
	comp=Z,219nm,20.0s,baz=140,slow=32						
MKAR	**Makanchi Array**	**82.23**	**319**	P	P	08 55 01.8	0.0
	0.5nm,0.8s,baz=117,slow=5.0,SNR=2.7 0.5nm,0.8s						

*IDC **31** 08:42:40.1±0.8, 54°.77S×30°.39W, h0km, mb4.2/8, mbtmp4.2/9, ML3.7/1, MS3.3/2, Error ellipse: s-maj=29.3km s-min=17.1km az=69.0*

*NEIC **31** 08:42:43.1±1.1, 54°.9S±0°.1×30°.7W±0°.2, h15km±5km, mb4.4/15, Error ellipse: s-maj=20.5km s-min=15.5km az=203.0*

ISC 31 08:42:41.8±0.6, **54°.76S**±0°.10×**30°.7W**±0°.1, **h10**km, **n33**, σ1**s72**/32, **mb4.3**/11, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.40**	**276**	Pn	**Pn**	**08 43 33.6**	**-1.1**
VNA1	**Neumayer--Stat**	**18.77**	**157**	P	Pn	08 47 07.5	+6.5
VNA3	**Neumayer Olymp**	**18.91**	**159**	P	**Pn**	**08 47 08.6**	**+5.9**
VNA2	**Neumayer--Watz** baz=317,slow=12	**19.17**	**157**	P	**Pn

comp=Z,6.3nm,1.1s
PB16 IPOC Station P 46.85 305 P P 08 51 13.8 +1.4
PB16 IAmb IAmb 08 51 49.3
comp=Z,7.8nm,1.4s
SBA Scott Base 47.21 185 P P 08 51 14.0 0.0
SBA IAmb IAmb 08 51 33.1
comp=Z,3.4nm,1.4s
VNDA Vanda 47.76 184 P P 08 51 17.7 -0.5
VNDA Vanda 47.76 184 P P 08 51 17.8 -0.5
comp=Z,1.5nm,0.7s,baz=184,slow=6.1,SNR=13
comp=Z,1.5nm,0.7s
LPAZ La Paz 47.99 308 P P 08 51 22.6 +1.2
LPAZ IAmb IAmb 08 51 46.7
comp=Z,2.5nm,0.7s
LPAZ La Paz 47.99 308 P P 08 51 22.6 +1.2
comp=Z,1.3nm,0.6s,baz=145,slow=5.5,SNR=7.1
comp=Z,1.3nm,0.6s
TOA0 Torodi Ar. Sit 72.99 33 P P 08 54 11.3 -0.1
TOA0 IAmb IAmb 08 54 12.7
comp=Z,2.1nm,0.8s
TORD Torodi Ar. Bea 72.99 33 P P 08 54 11.1 -0.3
comp=Z,4.2nm,0.4s,baz=194,slow=4.6,SNR=11
comp=Z,4.2nm,0.4s
KIBK Kibwezi 75.95 74 P P 08 54 29.1 +0.2
YKA Yellowknife Ar 133.87 320 PKP PKPdf 09 01 56.9 -0.6
comp=Z,1.2nm,0.7s,baz=124,slow=2.4,SNR=9.9
ILAR Eielson Array 147.76 314 PKPbc PKPbc 09 02 24.9 -0.4
comp=Z,4.3nm,0.7s,baz=127,slow=2.0,SNR=50
SONM Songino Array 152.66 87 PKPbc PKPbc 09 02 37.1 -0.7
comp=Z,1.0nm,0.6s,baz=218,slow=3.0,SNR=3.9

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*IGIL **31** 08:44:23.4, 37.°39N× 15.°67W, h30km, ML3.2*
*MDD **31** 08:44:25.1±0.9, 37.°66N× 15.°24W, h0km, Mb4.1/13, M_mb3.5/14, Error ellipse: s-maj=7.8km s-min=6.2km az=32.0*
*INMG **31** 08:44:26.0±2.6, 37.°46N× 15.°67W, h31km±21km, ML3.1, Error ellipse: s-maj=9.1km s-min=8.1km az=81.0*
*CNRM **31** 08:44:34.2, 37.°13N× 14.°61W, h11km, ml3.5*

ISC 31 08:44:26.4±3.4, 37.°46N±0.°07× 14.°9W±0.°2, h10km, n48, σ2s26/85, 13C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMAFR	**Mafra**	**4.68**	**70**	*eP*		**Pn**	**08 45 39.0**	**+2.0**
PMAFR				S		**Sn**	**08 46 33.4**	**+2.0**
PMAFR				A		A	08 46 38.7	
	45nm,0.2s							
PMST	**Lisbon--Monsan**	**4.70**	**72**	*eP*		**Pn**	**08 45 38.6**	**+1.3**
PMST				S		**Sn**	**08 46 33.4**	**+1.6**
PMST				A		A	08 46 47.3	
	34nm,0.6s							
PFVI	**Vila Bisbo**	**4.86**	**92**	*eP*		**Pn**	**08 45 41.5**	**+1.9**
PFVI				S		**Sn**	**08 46 34.6**	**-1.3**
PFVI	**Vila Bisbo**	**4.86**	**92**	*eP*		**Pn**	**08 45 41.3**	**+1.7**
PFVI				S		**Sn**	**08 46 36.6**	**+0.7**
PFVI				A		A	08 46 44.9	
	10nm,0.1s							
PTEO	**Sao Teotonio**	**4.92**	**87**	S		**Sn**	**08 46 38.1**	**+0.8**
PTEO				A		A	08 46 39.2	
	17nm,0.5s							
PACT	**Alcochete**	**4.97**	**73**	S		**Sn**	**08 46 40.2**	**+1.7**
PACT				A		A	08 46 44.1	
	24nm,0.4s							
MORF	**Marmelete**	**4.99**	**90**	*eP*		**Pn**	**08 45 42.7**	**+1.4**
MORF				*eS*		**Sn**	**08 46 40.6**	**+1.5**
MORF				IAML			08 46 45.1	
	comp=N,24nm,0.2s							
MORF	**Marmelete**	**4.99**	**90**	*eP*		**Pn**	**08 45 42.3**	**+0.9**
MORF				S		**Sn**	**08 46 40.6**	**+1.5**
MORF				A		A	08 46 49.3	
	comp=N,17nm,0.2s							
PNCL	**Nicolau / Gran**	**5.10**	**81**	*eP*		**Pn**	**08 45 44.4**	**+1.6**
PNCL				S		**Sn**	**08 46 43.2**	**+1.5**
PNCL				A		A	08 46 49.3	
	comp=N,15nm,0.3s							
PSBE	**So Bento**	**5.22**	**65**	*eP*		**Pn**	**08 45 45.8**	**+1.3**
PSBE				S		**Sn**	**08 46 45.7**	**+1.0**
PSBE				A		A	08 46 54.1	
	comp=N,21nm,0.4s							
MESJ	**Messejana**	**5.32**	**84**	*eP*		**Pn**	**08 45 47.4**	**+1.5**
MESJ				*eS*		**Sn**	**08 46 48.6**	**+1.3**
MESJ				IAML			08 46 51.8	
	comp=N,34nm,0.2s							
MESJ	**Messejana**	**5.32**	**84**	*eP*		**Pn**	**08 45 48.2**	**+2.3**
MESJ				S		**Sn**	**08 46 49.1**	**+1.8**
MESJ				A		A	08 46 52.4	
	comp=N,17nm,0.6s							
PCVE	**Castro Verde**	**5.46**	**86**	*eP*		**Pn**	**08 45 49.5**	**+1.7**
PCVE				S		**Sn**	**08 46 52.3**	**+1.5**
PCVE				A		A	08 46 58.3	
	comp=N,8.5nm,0.1s							
PMTG	**Montargil**	**5.50**	**71**	*eP*		**Pn**	**08 45 49.7**	**+1.4**
PMTG				S		**Sn**	**08 46 52.8**	**+1.1**
PMTG				A		A	08 46 55.3	
	comp=N,12nm,0.2s							
PBDV	**Barranco-do-Ve**	**5.57**	**90**	S		**Sn**	**08 46 54.7**	**+1.4**
PBDV				A		A	08 47 06.3	
	comp=N,9.2nm,1.2s							
PBEJ	**Beja**	**5.61**	**82**	S		**Sn**	**08 46 55.7**	**+1.3**
PBEJ				A		A	08 47 02.9	
	comp=N,6.7nm,0.2s							
PCAS	**Casmilo, Conde**	**5.64**	**61**	*eP*		**Pn**	**08 45 51.0**	**+0.7**
PCAS				S		**Sn**	**08 46 55.4**	**+0.3**
PCAS				A		A	08 47 00.4	
	comp=N,8.4nm,0.2s							
PVAQ	**Vaqueiros**	**5.73**	**88**	P		**Pn**	**08 45 53.1**	**+1.7**
PVAQ				S		**Sn**	**08 46 56.9**	**-0.3**
PVAQ	**Vaqueiros**	**5.73**	**88**	*eP*		**Pn**	**08 45 52.5**	**+1.1**
PVAQ				A		A	08 47 03.5	
	comp=N,12nm,0.1s							
EGRO	**El Granado**	**5.91**	**87**	Pn		**Pn**	**08 45 56.2**	**+2.3**
EGRO				⇑*i*Vmb_V			08 45 57.6	
	comp=N,83nm,SNR=0.8							
EGRO				Sn		**Sn**	**08 47 02.7**	**+1.0**
PESTR	**Estremoz**	**5.94**	**74**	P		**Pn**	**08 45 57.1**	**+2.7**
PESTR				S		**Sn**	**08 47 03.5**	**+1.0**
PESTR	**Estremoz**	**5.94**	**74**	*eP*		**Pn**	**08 45 55.5**	**+1.1**
PESTR				S		**Sn**	**08 47 03.1**	**+0.6**
PESTR				A		A	08 47 05.8	
	comp=N,9.6nm,0.5s							
PMRV	**Marv??o**	**6.22**	**69**	*eP*		**Pn**	**08 45 59.5**	**+1.2**
PMRV				S		**Sn**	**08 47 09.8**	**+0.4**
PMRV				A		A	08 47 12.2	
	comp=N,18nm,0.2s							
PCBR	**Castelo Branco**	**6.29**	**66**	*eP*		**Pn**	**08 46 00.5**	**+1.4**
PCBR				S		**Sn**	**08 47 11.3**	**+0.3**
PCBR				A		A	08 47 14.3	
	comp=N,7.3nm,0.2s							
EBAD	**Badajoz**	**6.36**	**76**	Pn		**Pn**	**08 46 01.7**	**+1.6**
EBAD				⇑*i*Vmb_V			08 46 03.2	
	comp=N,58nm,SNR=1.1							
EBAD				Sn		**Sn**	**08 47 12.6**	**-0.3**
MTE	**Manteigas**	**6.45**	**61**	S		**Sn**	**08 47 14.9**	**-0.2**
EMIN	**Mina Concepcio**	**6.55**	**85**	Pn		**Pn**	**08 46 05.5**	**+2.8**
EMIN				⇑*i*Vmb_V			08 46 06.4	
	comp=N,47nm,SNR=0.7							
EMIN				Sn		**Sn**	**08 47 17.9**	**+0.4**
EZAM	**Zamans**	**6.70**	**44**	Pn		**Pn**	**08 46 03.1**	**-1.7**
EZAM				Sn		**Sn**	**08 47 16.2**	**-4.9**
POLO	**Lamas de Olo**	**6.75**	**52**	*eP*		**Pn**	**08 46 05.9**	**+0.3**
POLO				S		**Sn**	**08 47 20.2**	**-2.5**
POLO				A		A	08 47 35.2	
	comp=N,2.0nm,0.3s							
PCAB	**Cabril**	**6.80**	**49**	*eP*		**Pn**	**08 46 05.7**	**-0.5**
PCAB				S		**Sn**	**08 47 22.0**	**-1.8**
PCAB				A		A	08 47 27.5	
	comp=N,9.7nm,0.1s							
PGAV	**Gavieira, Arco**	**6.81**	**47**	*eP*		**Pn**	**08 46 06.0**	**-0.5**
PGAV				S		**Sn**	**08 47 21.9**	**-2.3**
PGAV				A		A	08 47 28.2	
	comp=N,8.9nm,0.4s							
ELOB	**Lobios**	**6.88**	**48**	Pn		**Pn**	**08 46 06.5**	**-0.8**
ELOB				⇑*i*Vmb_V			08 46 06.9	
	comp=N,149nm,SNR=2.3							
ELOB				Sn		**Sn**	**08 47 21.2**	**-4.5**
EMAZ	**Mazaricos**	**7.12**	**38**	Pn		**Pn**	**08 46 08.7**	**-1.9**
EMAZ				⇑*i*Vmb_V			08 46 09.2	
	comp=N,146nm,SNR=1.2							
MVO	**Moncorvo**	**7.14**	**56**	*eP*		**Pn**	**08 46 11.2**	**+0.2**
MVO				S		**Sn**	**08 47 30.7**	**-1.5**
MVO				A		A	08 47 34.8	
	comp=N,8.3nm,0.3s							
EAGO	**Agolada(Pontev**	**7.47**	**42**	Pn		**Pn**	**08 46 13.8**	**-1.6**
EAGO				⇑*i*Vmb_V			08 46 14.8	
	comp=N,434nm,SNR=6.4							
EAGO				Sn		**Sn**	**08 47 34.5**	**-5.6**
ECAB	**El Cabril**	**7.54**	**82**	Pn		**Pn**	**08 46 18.8**	**+2.4**
ECAB				⇑*i*Vmb_V			08 46 19.9	
	comp=N,52nm,SNR=1.1							
ECAB				Sn		**Sn**	**08 47 40.2**	**-1.8**
PBRG	**Braganca**	**7.65**	**53**	*eP*		**Pn**	**08 46 17.8**	**-0.1**
ECAL	**Calabor**	**7.73**	**52**	Pn		**Pn**	**08 46 18.6**	**-0.4**
ECAL				⇑*i*Vmb_V			08 46 19.6	
	comp=N,136nm,SNR=1.8							
ECAL				Sn		**Sn**	**08 47 42.4**	**-4.2**
ZHG	**ZHG**	**7.85**	**118**	P		**Pn**	**08 46 21.0**	**+0.4**
ZHG				S		**Sn**	**08 47 44.5**	**-5.1**
EADA	**Adamuz**	**8.21**	**82**	Pn		**Pn**	**08 46 27.2**	**+1.6**
EADA				⇑*i*Vmb_V			08 46 27.8	
	comp=N,43nm,SNR=1.2							
EADA				Sn		**Sn**	**08 47 58.1**	**-0.3**
OUK	**Oukaimeden**	**8.53**	**135**	P		**Pn**	**08 46 30.1**	**-0.2**
OUK				S		**Sn**	**08 48 00.5**	**-6.4**
PAB	**San Pablo**	**8.54**	**73**	Pn		**Pn**	**08 46 30.8**	**+0.7**
PAB				⇑*i*Vmb_V			08 46 31.1	
	comp=N,49nm,SNR=1.1							
PAB				Sn		**Sn**	**08 48 03.9**	**-2.7**
TTIG	**Tnine Tigouga,**	**8.74**	**140**	P		**Pn**	**08 46 32.7**	**-0.3**
TTIG				S		**Sn**	**08 48 05.6**	**-5.9**
GUD	**Guadarrama**	**8.95**	**66**	⇑*i*Vmb_V			08 46 36.9	
	comp=N,20nm,SNR=0.5							
GUD				Sn		**Sn**	**08 48 14.3**	**-2.5**
EARI	**Arriondas**	**9.42**	**49**	Pn		**Pn**	**08 46 42.3**	**+0.1**
EARI				⇑*i*Vmb_V			08 46 43.1	
	comp=N,114nm,SNR=1.4							
MD31	**MD31**	**9.49**	**116**	P		**Pn**	**08 46 43.3**	**+0.2**
MD31				S		**Sn**	**08 48 23.6**	**-6.4**
MDT	**Midelt**	**9.63**	**116**	P		**Pn**	**08 46 45.6**	**+0.5**
MDT				S		**Sn**	**08 48 28.0**	**-5.3**
ETOR	**Torete**	**10.53**	**67**	Pn		**Pn**	**08 46 59.2**	**+1.7**
ETOR				⇑*i*Vmb_V			08 46 60.0	
	comp=N,23nm,SNR=0.4							

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*IDC **31** 08:51:11.6±2.0, 26.°05N× 129.°69E, h0km, mb3.5/3, mbtmp3.6/4, ML3.1/1, MS2.8/1, Error ellipse: s-maj=139.5km s-min=24.5km az=75.0*
*JMA **31** 08:51:12.4±0.1, 26.°1N±0.°5× 129.°3E±0.°3, h43km, MV3.8/17, NEAR OKINAWAJIMA ISLAND*
*NIED **31** 08:51:12.4, 26.°13N× 129.°34E, h43km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=4.60; Mθθ=2.76; Mφφ=1.84; Mrθ=1.88; Mθφ=2.83; Mφr=1.99; Fault plane solution: M0=5.60000×10^14^ NP1:φ=54.00000°, δ=31.00000°, λ=-84.00000°. NP2:φ=226.00000°, δ=60.00000°, λ=-94.00000°.*

ISC 31 08:51:10.7±1.8, 26.°14N±0.°06× 129.°32E±0.°05, h2km±12km, n19, σ2s52/19, mb3.4/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOW	**Kunigami**	**1.16**	**307**	P		**Pg**	**08 51 33.0**	**0.0**
JYRO	**Yoronjima**	**1.18**	**319**	P		**Pg**	**08 51 33.1**	**-0.2**
JYRO				S		**Sg**	**08 51 48.3**	**-0.3**
JNTH	**Nagotoyohara**	**1.22**	**288**	P		**Pg**	**08 51 33.6**	**-0.5**
JNTH				S		**Sg**	**08 51 49.2**	**-0.9**
JJT3	**Tamagusuku3**	**1.38**	**271**	P		Pn	08 51 36.5	-0.4
JJT3				S		**Sg**	**08 51 53.6**	**-1.5**
JOKE	**Okinoerabujima**	**1.39**	**331**	P		Pn	08 51 36.3	-0.8
JOKE				S		**Sb**	**08 51 53.6**	**-2.0**
JIH	**Iheya**	**1.50**	**307**	P		Pn	08 51 38.1	-0.5
JIH				S		**Sn**	**08 51 56.6**	**-2.3**
JTK	**Tokunoshima**	**1.68**	**349**	P		Pn	08 51 40.2	-0.8
JTK				S		**Sn**	**08 52 00.1**	**-3.0**
JMZ	**Minamidaito 2**	**1.74**	**100**	P		Pn	08 51 40.6	-1.2
JMZ				S		**Sn**	**08 52 00.9**	**-3.7**
JKDJ	**Kitadaitoujima**	**1.79**	**96**	P		Pn	08 51 41.6	-1.0
JKDJ				S		**Sn**	**08 52 02.5**	**-3.4**
JAGN	**Aguni-jima**	**1.92**	**284**	P		Pn	08 51 44.0	-0.3
JAGN				S		**Sn**	**08 52 06.1**	**-2.8**
JAMN	**Amaminishikomi**	**2.10**	**357**	P		Pn	08 51 46.3	-0.5
JAMN				S		**Sn**	**08 52 10.7**	**-2.8**
JZK	**Kikaishima**	**2.25**	**15**	P		Pn	08 51 48.7	-0.2
JZK				S		**Sn**	**08 52 15.3**	**-1.8**
JAM	**Amami Oshima**	**2.28**	**6**	P		Pn	08 51 48.6	-0.7
JAM				S		**Sn**	**08 52 15.0**	**-3.0**
JKE	**Kume jima 2**	**2.28**	**275**	P		Pn	08 51 48.6	-0.8
KSRS	**Korea Array**	**11.35**	**354**	Pn		**Pn**	**08 53 56.2**	**+2.5**
	0.1nm,0.3s,baz=174,slow=15,SNR=3.1							
	1.8nm,0.8s							
SONM	**Songino Array**	**28.17**	**326**	P		**P**	**08 57 08.1**	**+3.6**
	0.4nm,0.6s,baz=134,slow=8.3,SNR=2.2							
	0.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**29.07**	**261**	LR		LR	09 09 21.1	
	comp=Z,19nm,19.2s,baz=245,slow=37							
WRA	**Warramunga Arr**	**46.06**	**173**	P		**P**	**08 59 35.8**	**-0.3**
	0.6nm,0.6s,baz=354,slow=8.4,SNR=10							
	0.6nm,0.6s							
ASAR	**Alice Springs**	**49.71**	**174**	P		**P**	**09 00 05.0**	**+0.7**
	0.2nm,0.5s,baz=6.3,slow=14,SNR=9.0							
	0.2nm,0.5s							

IDC 31 09:05:12.2±3.0, 53.°77N× 86.°96E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.6km s-min=16.2km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**279**	*i*			09 13 20.0	
	baz=98,slow=331,SNR=1.0							
ZALV	**Zalesovo Beam**	**1.28**	**279**	Pg		Pg	09 05 35.6	-1.2
	1.1nm,0.3s,baz=100,slow=16,SNR=7.0							
ZALV				Lg		Lg	09 05 53.7	
	1.0nm,0.3s,baz=97,slow=30,SNR=5.6							
KURBB	**Kurchatov Arra**	**6.06**	**242**	Pn		Pn	09 06 44.2	+1.1
	0.1nm,0.3s,baz=56,slow=13,SNR=4.1							
	0.7nm,0.6s							
MKAR	**Makanchi Array**	**7.59**	**205**	Pn		Pn	09 07 05.2	+1.1
	0.2nm,0.3s,baz=18,slow=12,SNR=2.3							
	0.3nm,0.4s							

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*IDC **31** 09:07:10.1±0.6, 34.°29N× 86.°27E, h0km, mb4.1/20, mbtmp4.1/24, ML3.8/4, MS3.3/3, Error ellipse: s-maj=17.6km s-min=12.9km az=48.0*
*NEIC **31** 09:07:16.4±1.9, 34.°51N±0.°07× 86.°3E±0.°1, h30km±6km, mb4.2/12, Error ellipse: s-maj=16.9km s-min=4.7km az=57.0*

ISC 31 09:07:15.7±0.4, 34.°42N±0.°06× 86.°25E±0.°07, h35km, n65, σ0s99/64, mb4.1/24, 2C-1D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**6.28**	**137**			**Pn**	**09 08 47.9**	**+1.5**
DANN	**Dangsing**	**6.42**	**200**	*eP*		**Pn**	**09 08 49.1**	**+1.0**
	20nm,0.4s							
GUN	**Gumba**	**6.50**	**183**	*eP*		**Pn**	**09 08 50.9**	**+1.7**
	29nm,0.6s							
JIRN	**Jiri**	**6.74**	**180**	*eP*		**Pn**	**09 08 53.8**	**+1.2**
DMN	**Daman**	**6.86**	**189**	*eP*		**Pn**	**09 08 55.4**	**+1.2**
	30nm,0.5s							
PKIN	**Phulchoki**	**6.86**	**186**	*eP*		**Pn**	**09 08 56.0**	**+1.8**
	27nm,0.5s							
PKI	**Pulchoki**	**6.87**	**186**	*eP*		**Pn**	**09 08 56.1**	**+1.8**
PYUN	**Piuthan**	**6.89**	**205**	*eP*		**Pn**	**09 08 53.7**	**-0.8**
	37nm,0.8s							
KOLN	**Koldanda**	**7.01**	**200**	*eP*		**Pn**	**09 08 56.6**	**+0.5**
	5.6nm,0.8s							
TAPN	**Taplejung**	**7.16**	**170**	*eP*		**Pn**	**09 08 58.5**	**+0.2**
RAMN	**Ramite**	**7.46**	**178**	*eP*		**Pn**	**09 09 02.4**	**+0.1**
ODAN	**Odare**	**7.60**	**172**	*eP*		**Pn**	**09 09 04.2**	**-0.1**
	9.8nm,1.0s							
SMLA	**Simla**	**8.32**	**249**	*eP*		**Pn**	**09 09 13.7**	**-0.2**
NRN	**Naryn**	**10.69**	**314**	Pn		**Pn**	**09 09 47.7**	**+1.0**
NIL	**Nilore**	**10.81**	**270**			**Pn**	**09 09 49.4**	**+1.3**
AAK	**Ala-Archa**	**12.32**	**315**	Pn		**Pn**	**09 10 08.0**	**-0.7**
MK31	**Makanchi Array**	**12.71**	**348**			**Pn**	**09 10 13.9**	**-0.1**
MKAR	**Makanchi Array**	**12.71**	**348**	Pn		**Pn**	**09 10 13.4**	**-0.5**
MKAR	**Makanchi Array**	**12.71**	**348**	Pn		**Pn**	**09 10 12.9**	**-1.0**
	0.4nm,0.3s,baz=154,slow=14,SNR=10							
	1.4nm,0.7s							
BTK	**Batken**	**13.51**	**299**	Pn		**Pn**	**09 10 23.8**	**-1.2**
GAR	**Garm**	**13.57**	**294**	Pn		**Pn**	**09 10 24.7**	**-1.1**
KBL	**Kabul**	**14.20**	**275**	Pn		**Pn**	**09 10 32.3**	**-2.2**
CHGR	**Chuyangaron**	**14.37**	**292**			**Pn**	**09 10 37.4**	**+0.7**

KKAR	**Karatay Array**	**15.01**	**310**	Pn		**Pn**	**09 10 45.2**	**0.0**
KURBB	**Kurchatov Arra**	**17.14**	**343**	P		**Pn**	**09 11 12.3**	**-0.1**
	0.1nm,0.3s,baz=160,slow=11,SNR=23							
	6.1nm,0.8s							
KURK	**Kurchatov**	**17.21**	**343**	P		**P**	**09 11 13.8**	**-0.6**
KURK				IAmb		IAmb	09 11 21.1	
	comp=Z,27nm,1.2s							
HYBB	**Hyderabad (bro**	**18.28**	**204**	*e*Pn		**Pn**	**09 11 29.1**	**+2.3**
HYBB				*e*Sn		**S**	**09 14 53.8**	**-0.1**
CRAI	**Chiangrai**	**18.87**	**135**	P		**Pn**	**09 11 35.0**	**+1.2**
CHTO	**Chiang Mai**	**19.22**	**141**	P		**Pn**	**09 11 38.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**19.52**	**141**	P		**Pn**	**09 11 41.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**19.52**	**141**	P		**P**	**09 11 38.8**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=329,slow=12,SNR=9.3							
	comp=Z,1.0nm,0.3s							
ZAA0	**Zalesovo Array**	**19.55**	**357**	P		**P**	**09 11 39.5**	**-0.7**
ZALV	**Zalesovo Beam**	**19.55**	**357**	P		**Pn**	**09 11 41.1**	**-0.5**
ZALV	**Zalesovo Beam**	**19.55**	**357**	P		**P**	**09 11 40.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=171,slow=10,SNR=9.6							
ZALV				LR		LR	09 19 37.4	
	comp=Z,82nm,19.7s,baz=238,slow=38							
	comp=Z,3.8nm,0.7s							
SONM	**Songino Array**	**20.16**	**42**	P		Pn	09 11 47.6	-1.5
SONM				IAmb		IAmb	09 11 55.1	
	comp=Z,7.7nm,1.0s							
SONM	**Songino Array**	**20.16**	**42**	P		Pn	09 11 48.2	-1.0
	comp=Z,6.6nm,1.0s,baz=232,slow=12,SNR=25							
	comp=Z,6.6nm,1.0s							
ULN	**Ulaanbaatar**	**20.55**	**43**	P		**P**	**09 11 51.9**	**+0.5**
ULN				IAmb		IAmb	09 11 54.9	
	comp=Z,11nm,0.9s							
BVAR	**Borovoye Array**	**21.75**	**334**	P		**P**	**09 12 04.5**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=161,slow=14,SNR=3.2							
	comp=Z,0.4nm,0.3s							
GEYT	**Alibeck**	**22.94**	**287**	P		**P**	**09 12 16.6**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=104,slow=9.2,SNR=2.1							
GEYT				LR		LR	09 23 10.3	
	comp=Z,153nm,19.5s,baz=127,slow=42							
	comp=Z,1.9nm,0.6s							
ABKAR	**Akbulak array**	**24.41**	**315**	P		**P**	**09 12 31.4**	**+0.6**
ABKAR	**Akbulak array**	**24.41**	**315**	P		**P**	**09 12 31.6**	**+0.9**
ABKAR				IAmb		IAmb	09 12 35.4	
	comp=Z,4.3nm,0.7s							
UBPT	**Khong Chiam**	**25.75**	**133**	P		**P**	**09 12 42.8**	**-0.4**
AKTO	**Aktyubinsk**	**26.06**	**316**	P		**P**	**09 12 46.4**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=140,slow=6.1,SNR=5.5							
AKTO				LR		LR	09 24 57.4	
	comp=Z,46nm,21.7s,baz=141,slow=41							
	comp=Z,2.7nm,0.8s							
WSAR	**Wadi Sarin**	**26.56**	**253**	P		**P**	**09 12 49.7**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=0.1,slow=14,SNR=5.3							
	comp=Z,2.9nm,0.7s							
PALK	**Pallekele**	**27.50**	**192**	P		**P**	**09 12 57.3**	**-1.6**
	comp=Z,17nm,1.1s,baz=67,slow=3.9,SNR=3.9							
	comp=Z,17nm,1.1s							
KSRS	**Korea Array**	**33.68**	**73**	P		**P**	**09 13 52.7**	**-0.6**
KSRS	**Korea Array**	**33.68**	**73**	P		**P**	**09 13 52.7**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=260,slow=7.5,SNR=5.9							
	comp=Z,2.5nm,0.7s							
RAYN	**Ar Rayn**	**37.05**	**264**	P		**P**	**09 14 23.6**	**+1.1**
RAYN				IAmb		IAmb	09 14 25.3	
	comp=Z,4.1nm,1.1s							
AKASG	**Malin Array Be**	**43.91**	**310**	P		**P**	**09 15 19.8**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=78,slow=7.7,SNR=5.0							
	comp=Z,1.1nm,0.7s							
ARCES	**ARCESS Array B**	**48.02**	**336**	P		**P**	**09 15 52.1**	**+1.1**
	comp=Z,2.1nm,1.0s,baz=104,slow=10,SNR=3.6							
	comp=Z,2.1nm,1.0s							
NOA	**NORSAR Array B**	**53.45**	**324**	P		**P**	**09 16 32.2**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=83,slow=7.2,SNR=4.3							
	comp=Z,1.3nm,0.7s							
GERES	**GERESS Array B**	**54.11**	**309**	P		**P**	**09 16 37.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=79,slow=6.9,SNR=7.9							
	comp=Z,1.2nm,0.7s							
ESDC	**Sonseca Array**	**69.18**	**304**	P		**P**	**09 18 18.8**	**0.0**
	comp=Z,1.6nm,0.9s,baz=47,slow=7.5,SNR=10							
	comp=Z,1.6nm,0.9s							
WRA	**Warramunga Arr**	**70.81**	**132**	P		**P**	**09 18 27.5**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=325,slow=6.5,SNR=16							
	comp=Z,1.1nm,0.7s							
ILAR	**Eielson Array**	**72.79**	**21**	P		**P**	**09 18 40.6**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=310,slow=5.0,SNR=10							
	comp=Z,0.8nm,0.7s							
ASAR	**Alice Springs**	**73.39**	**135**	P		**P**	**09 18 44.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=319,slow=6.1,SNR=13							
	comp=Z,0.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.25**	**278**	P		**P**	**09 19 12.0**	**-0.3**
	comp=Z,4.9nm,0.3s,baz=47,slow=4.1,SNR=1.8							
	comp=Z,4.9nm,0.3s							
YKA	**Yellowknife Ar**	**81.97**	**10**	P		**P**	**09 19 31.1**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=337,slow=6.1,SNR=7.7							
	com

89nm,0.4s
PYUN Piuthan 6.67 204 eP Pn 09 26 45.0 +2.2
PKIN Phulchoki 6.67 185 eP Pn 09 26 46.3 +3.4
130nm,0.5s
PKI Pulchoki 6.68 185 eP Pn 09 26 46.4 +3.4
108nm,0.4s
KOLN Koldanda 6.80 199 eP Pn 09 26 47.6 +3.1
PTH Pithoragarh 6.83 228 eP Pn 09 26 49.2 +4.2
TAPN Taplejung 7.02 168 eP Pn 09 26 49.9 +2.2
228nm,0.7s
VLK Valmikinagar 7.17 196 eP Pn 09 26 52.2 +2.8
VLK ex x 09 26 52.5
VLK i Rg Rg 09 29 26.3
GTK Tadong 7.24 162 eP Pn 09 26 54.0 +3.4
RAMN Ramite 7.29 176 eP Pn 09 26 52.8 +1.5
74nm,0.4s
GOMU GeErMu 7.41 72 Pn Pn 09 26 54.5 +1.4
GOMU Sn Sn 09 28 19.5 +3.3
GOMU LR LR
comp=N,2μm,7.4s
GOMU LR LR
comp=E,1μm,8.9s
GOMU LR LR
comp=Z,2μm,9.2s
ODAN Odare 7.45 171 eP Pn 09 26 55.0 +1.5
SMLA Simla 8.12 250 ePN Pn 09 27 05.5 +3.0
SMLA i x x 09 27 40.1
SMLA i x x 09 29 29.4
SMLA IAMs_20 IAMs_20 09 30 40.9
comp=Z,1μm,5.1s
BHK Bhakra 8.60 254 eP Pn 09 27 13.3 +4.2
THN Thein Dam 8.85 261 eP Pn 09 27 15.2 +2.7
GUWA GUWAHATI 9.38 147 eP Pn 09 27 20.2 +0.4
ZIRO ZIRO 9.46 133 ex x 09 27 59.4
TEZP TEZPUR 9.56 141 ex x 09 28 00.6
WMQ Urumqi 9.64 7 eP Pn 09 27 23.0 -0.4
WMQ S Sn 09 29 14.0 +3.6
WMQ pmax pmax
comp=Z,31nm,1.3s
WMQ smax smax
comp=Z,27nm,1.5s
WMQ smax smax
comp=Z,22nm,0.7s
WMQ LR LR
comp=Z,930nm,11.3s
WMQ LR LR
comp=Z,1μm,11.3s
WMQ LR LR
comp=Z,230nm,15.7s
ALBI Allahabad 9.65 204 eP Pn 09 27 24.8 +1.4
KSH Kashi 9.65 306 P Pn 09 27 30.3 +6.8
KSH pmax pmax
comp=Z,10.0nm,1.0s
KSH LR LR
comp=Z,1μm,10.6s
KSH LR LR
comp=Z,1μm,9.1s
KSH LR LR
comp=Z,2μm,10.7s
SHL Shillong 10.01 148 Pn 09 27 27.2 -1.4
SHL Shillong 10.01 148 P Pn 09 27 27.2 -1.4
SHL Shillong 10.01 148 eP Pn 09 27 30.8 +2.2
KUDL Kundal 10.21 236 eP Pn 09 27 33.3 +2.2
SHLS Shalkode 10.28 332 eP Pn 09 27 30.2 -2.0
PDGK Podgornoye 10.42 332 P Pn 09 27 33.3 -0.7
CHCP Chirah Chowk 10.66 270 P Pn 09 27 40.0 +2.7
NIL Nilore 10.67 270 Pn Pn 09 27 37.2 -0.2
NIL Nilore 10.67 270 P Pn 09 27 37.2 -0.2
NRN Naryn 10.71 315 Pn Pn 09 27 37.8 -0.4
NRN Naryn 10.71 315 P Pn 09 27 37.8 -0.4
KPKS Kokpek 10.85 330 eP Pn 09 27 39.3 -0.7
JHNI Jhansi 10.92 219 eP Pn 09 27 40.4 -0.5
IMP Imphal 11.62 142 eP Pn 09 27 50.1 -0.4
CEP Cherat 11.76 272 P Pn 09 27 54.1 +1.6
CEP S Sn 09 30 04.0 +1.5
ARXS Arharly 11.82 330 eP Pn 09 27 51.9 -1.3
TKM2 Tokmak 2 11.91 320 P Pn 09 27 54.3 -0.3
THW Thamme Wali 12.05 267 P Pn 09 27 56.4 +0.1
GTA Gaotai 12.15 61 eP Pn 09 28 00.5 +2.7
GTA pmax pmax
comp=Z,4.0nm,1.3s
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=Z,2μm,15.3s
GTA LR LR
comp=Z,940nm,15.3s
GTA LR LR
comp=Z,810nm,16.0s
OHH Osh 12.28 305 P Pn 09 28 02.1 +2.6
AAK Ala-Archa 12.34 316 Pn Pn 09 28 00.3 -0.1
AAK Ala-Archa 12.34 316 eP Pn 09 28 00.5 +0.1
AJM Ajmer 12.54 235 eP Pn 09 28 04.4 +1.4
BLSP Bilaspur 12.56 197 eP Pn 09 28 02.1 -1.2
DRK Karamyk 12.56 299 Pn Pn 09 28 04.5 +1.0
MK31 Makanchi Array 12.86 348 Pn Pn 09 28 05.8 -1.4
MK31 Makanchi Array 12.86 348 P Pn 09 28 05.5 -1.7
MKAR Makanchi Array 12.86 348 Pn 09 28 04.2 -3.0
MKAR Makanchi Array 12.86 348 i P Pn 09 28 09.1 +1.9
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 12.86 348 Pn Pn 09 28 03.4 -3.8
comp=Z,0.1nm,0.3s,baz=160,slow=7.8,SNR=11
MKAR LR LR 09 33 54.3
comp=Z,120nm,19.1s,baz=170,slow=41
comp=Z,3.2nm,0.9s
MAKZ Makanchi 12.92 347 Pn Pn 09 28 06.3 -1.9
MAKZ Makanchi 12.92 347 P Pn 09 28 06.3 -1.9
BHPL Bhopal 13.33 217 eP Pn 09 28 12.3 -1.6
ARK Arkit 13.43 308 P Pn 09 28 15.7 +0.6
BTK Batken 13.47 300 Pn 09 28 16.3 +0.5
BTK Batken 13.47 300 P Pn 09 28 16.3 +0.5
GAR Garm 13.51 295 Pn 09 28 15.0 -1.3
TRKS Terek-Say 13.84 306 P Pn 09 28 23.2 +2.3
KBL Kabul 14.07 276 Pn Pn 09 28 22.9 -1.2
KBL Kabul 14.07 276 P Pn 09 28 22.9 -1.2
CHGR Chuyangaron 14.30 293 Pn 09 28 27.6 +0.5
CHGR Chuyangaron 14.30 293 P Pn 09 28 27.6 +0.5
LZH Lanzhou 14.65 78 eP P 09 28 35.0 -2.8
LZH pP Pn 09 28 40.0 +8.0
LZH sP 09 28 43.5
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.2s
LZH LR LR
comp=Z,2μm,14.8s
LZH LR LR
comp=Z,870nm,12.4s
LZH LR LR
comp=Z,910nm,14.8s
IUG luzhnay 14.86 307 eP Pn 09 28 35.8 +1.2
KK31 Karatay Array 15.01 311 Pn 09 28 35.2 -1.4
KK31 Karatay Array 15.01 311 P Pn 09 28 35.2 -1.4
KK31 pmax pmax
comp=Z,13nm,1.3s
KKAR Karatay Array 15.01 311 Pn 09 28 35.3 -1.2
KKAR Karatay Array 15.01 311 Pn Pn 09 28 35.2 -1.4
KKAR Karatay Array 15.01 311 eP Pn 09 28 36.8 +0.2
CD2 Chengdu 15.28 98 P P 09 28 43.0 -1.6
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=Z,1μm,7.1s
CD2 LR LR
comp=Z,2μm,8.4s
CD2 LR LR
comp=Z,1μm,8.6s
PZH PanZhiHua 15.56 116 P Pn 09 28 41.3 -2.7
PZH S Sn 09 31 37.0 +1.7
PZH SS S 09 31 50.0 +0.1
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,190nm,6.9s
PZH LR LR
comp=Z,600nm,8.2s
PZH LR LR
comp=Z,550nm,9.1s
PZH LR LR
comp=Z,660nm,9.0s
KMI Kunming 17.08 118 ⇓P P 09 29 04.3 -0.6
KMI pP pP 09 29 12.0 -3.5
KMI S Sn 09 32 11.5 -0.9
KMI pmax pmax
comp=Z,25nm,1.4s
KMI LR LR
comp=Z,320nm,10.0s
KMI LR LR
comp=Z,490nm,9.6s
KMI LR LR
comp=Z,500nm,9.6s
KURBB Kurchatov Arra 17.27 344 P Pn 09 29 02.5 -2.8
KURBB Kurchatov Arra 17.27 344 P Pn 09 29 02.5 -2.8
comp=Z,0.1nm,0.3s,baz=161,slow=10,SNR=25
KURBB LR LR 09 36 40.8
comp=Z,233nm,18.6s,baz=141,slow=40
comp=Z,14nm,0.9s
KURK Kurchatov 17.33 344 Pn Pn 09 29 04.0 -2.1
KURK IAmb IAmb 09 29 12.5
comp=Z,56nm,1.1s
KURK Kurchatov 17.33 344 ceP Pn 09 29 04.3 -1.8
KURK pmax pmax
comp=Z,84nm,1.7s
HYBB Hyderabad (bro 18.06 204 ePn P 09 29 16.0 +0.5
HYBB eSn S 09 32 39.3 -1.6
HYB Hyderabad 18.06 204 ex x 09 29 12.9
HYB IAmb IAmb 09 29 19.9
comp=Z,24nm,0.7s
CRAI Chiangrai 18.86 134 P Pn 09 29 25.3 +0.4
XAN Xi'an 18.91 84 ⇑iP P 09 29 23.5 -1.3
XAN pP Pn 09 29 28.5 +2.9
XAN pmax pmax
comp=Z,10.0nm,1.3s
CHTO Chiang Mai 19.18 140 P P 09 29 27.1 -0.6
CHTO Chiang Mai 19.18 140 P P 09 29 27.1 -0.6
CHTO pmax pmax
comp=Z,19nm,0.9s
GYA Guiyang 19.37 108 ⇓iP P 09 29 29.0 -1.0
GYA pP pP 09 29 38.8 -1.9
GYA S S 09 33 04.8 -2.5
GYA pmax pmax
comp=Z,28nm,1.1s
GYA pmax pmax
comp=Z,290nm,5.2s
GYA LR LR
comp=Z,820nm,6.2s
GYA LR LR
comp=Z,900nm,7.5s
GYA LR LR
comp=Z,800nm,8.2s
CM31 Chiang Mai Arr 19.47 141 P P 09 29 31.6 +0.7
CM31 IAmb IAmb 09 29 41.0
comp=Z,50nm,1.1s
CMAR Chiang Mai Arr 19.47 141 P P 09 29 30.3 -0.6
CMAR Chiang Mai Arr 19.47 141 iP Pn 09 29 32.7 +0.3
CMAR pmax pmax
comp=Z,13nm,1.0s
CMAR Chiang Mai Arr 19.47 141 P P 09 29 30.4 -0.6
comp=Z,0.3nm,0.3s,baz=324,slow=12,SNR=36
comp=Z,7.6nm,0.8s
HRA Herat 19.68 277 P Pn 09 29 34.4 -0.6
ZAA0 Zalesovo Array 19.71 358 P 09 29 32.4 -1.0
ZAA0 IAmb IAmb 09 29 59.3
comp=Z,32nm,1.1s
ZALV Zalesovo Beam 19.71 358 P P 09 29 32.3 -1.0
ZALV Zalesovo Beam 19.71 358 P P 09 29 32.3 -1.0
ZALV Zalesovo Beam 19.71 358 P P 09 29 32.7 -0.6
comp=Z,0.8nm,0.3s,baz=179,slow=10,SNR=19
ZALV LR LR 09 37 50.7
comp=Z,222nm,18.6s,baz=190,slow=39
comp=Z,4.8nm,0.7s
ENH Enshi 20.18 95 P P 09 29 37.0 -1.6
SONM Songino Array 20.39 42 P P 09 29 39.3 -1.6
SONM Songino Array 20.39 42 P P 09 29 39.3 -1.6
SONM pmax pmax
comp=Z,17nm,1.2s
SONM Songino Array 20.39 42 P P 09 29 40.3 -0.6
comp=Z,8.9nm,1.1s,baz=232,slow=12,SNR=24
SONM LR LR 09 38 17.5
comp=Z,284nm,20.8s,baz=234,slow=39
comp=Z,8.9nm,1.1s
ZAK Zakamensk 20.46 33 eP P 09 29 35.0 -6.6
ZAK pmax pmax
comp=Z,13nm,1.3s
MOY Mondy 20.48 27 eP P 09 29 42.0 +0.2
MOY pmax pmax
comp=Z,39nm,2.0s
ULN Ulaanbaatar 20.78 43 P P 09 29 43.1 -2.1
ULN IAmb IAmb 09 29 49.5
comp=Z,44nm,1.2s
ULN Ulaanbaatar 20.78 43 ceP P 09 29 45.3 +0.2
ULN pmax pmax
comp=Z,60nm,1.7s
HHC Hu-ho-hao-te 21.22 64 eP P 09 29 49.8 -0.1
HHC S Sn 09 33 47.0 -4.8
HHC pmax pmax
comp=Z,54nm,0.9s
HHC pmax pmax
comp=Z,280nm,5.8s
HHC LR LR
comp=Z,810nm,12.1s
HHC LR LR
comp=Z,1μm,12.1s
HHC LR LR
comp=Z,1μm,12.7s
LYN LuoYang 21.77 82 eP P 09 29 57.5 +1.8
LYN PP PnPn 09 30 22.5 +5.2
LYN pmax pmax
comp=Z,10.0nm,0.5s
LYN pmax pmax
comp=Z,190nm,8.9s
LYN LR LR
comp=Z,560nm,7.0s
LYN LR LR
comp=Z,400nm,8.3s
LYN LR LR
comp=Z,500nm,11.5s
BVA0 Borovoye Array 21.85 334 i P P 09 29 55.8 -0.6
BVAR Borovoye Array 21.85 334 P P 09 29 56.8 +0.4
BVAR Borovoye Array 21.85 334 P P 09 29 56.8 +0.4
comp=Z,5.7nm,1.0s,baz=167,slow=14,SNR=11
comp=Z,5.7nm,1.0s
BRVK Borovoye 21.91 334 P P 09 29 57.0 -0.1
BRVK IAmb IAmb 09 30 03.1
comp=Z,28nm,1.1s
BRVK Borovoye 21.91 334 ceP P 09 29 58.2 +1.1
BRVK pmax pmax
comp=Z,49nm,1.7s
IRK Irkutsk 22.23 30 pmax pmax
comp=Z,60nm,1.6s
GEYT Alibeck 22.85 287 P P 09 30 08.6 +1.3
GEYT IAmb IAmb 09 30 15.8
comp=Z,36nm,1.1s
GEYT Alibeck 22.85 287 P P 09 30 09.3 +2.0
comp=Z,16nm,1.1s,baz=103,slow=6.4,SNR=16
GEYT LR LR 09 40 47.1
comp=Z,666nm,20.7s,baz=98,slow=41
comp=Z,16nm,1.1s
GYA0 ALIBECK ARRAY 22.85 287 P P 09 30 09.2 +1.9
GYA0B ALIBECK ARRAY 22.85 287 P P 09 30 08.1 +0.8
GYA0B IAmb IAmb 09 30 15.7
comp=Z,32nm,1.1s
GULI GuiLin 22.86 106 ⇑P P 09 30 09.8 +2.4
GULI S S 09 34 18.3 +3.7
GULI pmax pmax
comp=Z,10.0nm,0.8s
GULI LR LR
comp=Z,220nm,12.8s
GULI LR LR
comp=Z,540nm,7.8s
GULI LR LR
comp=Z,750nm,8.6s
PBA Port Blair 23.30 163 P P 09 30 11.5 -0.3
HNS HongShan 23.39 74 ⇑P P 09 30 13.0 +0.3
HNS S S 09 34 27.5 +4.2
HNS pmax pmax
comp=Z,44nm,1.3s
HNS LR LR
comp=Z,690nm,12.0s
HNS LR LR
comp=Z,600nm,11.8s
CNSH ChangSha 23.72 97 ⇑P P 09 30 17.5 +1.6
CNSH pmax pmax
comp=Z,38nm,1.2s
CNSH LR LR
comp=Z,640nm,11.9s
CNSH LR LR
comp=Z,680nm,8.7s
CNSH LR LR
comp=Z,660nm,8.8s
WHN Wuhan 24.13 91 ⇑P P 09 30 22.5 +2.8
WHN pP pP 09 30 27.0 -4.2
WHN S S 09 34 38.5 +3.3
WHN pmax pmax
comp=Z,28nm,0.8s
WHN pmax pmax
comp=Z,410nm,5.2s
WHN LR LR
comp=Z,810nm,7.6s
WHN LR LR
comp=Z,990nm,5.0s
WHN LR LR
comp=Z,1μm,14.1s
AB31 Akbulak array 24.43 316 i P P 09 30 22.8 +0.5
ABKAR Akbulak array 24.43 316 P P 09 30 22.9 +0.6
ABKAR Akbulak array 24.43 316 P P 09 30 22.2 -0.1
ABKAR IAmb IAmb 09 30 23.7
comp=Z,8.6nm,0.9s
UBPT Khong Chiam 25.74 132 P P 09 30 33.9 -0.5
QIZ Qiongzhong 26.01 120 P P 09 30 34.5 -2.4
QIZ S S 09 35 08.0 +2.6
QIZ LR LR
comp=Z,300nm,7.9s
QIZ LR LR
comp=Z,380nm,8.6s
QIZ LR LR
comp=Z,460nm,10.3s
AKTO Aktyubinsk 26.08 317 P P 09 30 37.3 0.0
AKTO Aktyubinsk 26.08 317 P P 09 30 37.6 +0.3
comp=Z,8.9nm,1.0s,baz=115,slow=9.0,SNR=16
comp=Z,8.9nm,1.0s
WSAR Wadi Sarin 26.36 253 P P 09 30 41.3 +1.3
comp=Z,12nm,0.9s,baz=101,slow=13,SNR=5.9
WSAR LR LR 09 43 24.9
comp=Z,114nm,18.4s,baz=108,slow=42
comp=Z,12nm,0.9s
MAK Makhachkala 31.15 298 eP P 09 31 21.6 -0.8
MAK e 09 32 23.1
MAK eS S 09 36 25.2 -0.6
MAK eSS SnSn 09 38 09.2 +0.1
MAK pmax pmax
comp=Z,265nm,1.8s
MAK MLR MLR
comp=Z,130nm,14.0s
BELG Belogornoye 32.83 315 LR LR 09 45 55.2
comp=Z,169nm,20.5s,baz=57,slow=38
GNI Garni 33.22 292 P P 09 31 41.0 +0.1
GNI IAmb IAmb 09 31 53.0
comp=Z,7.5nm,0.6s
GNI Garni 33.22 292 P P 09 31 41.0 +0.1
GNI pmax pmax
comp=Z,8.0nm,0.6s
TJN Taejon 33.58 74 ceP P 09 31 47.5 +3.7
KSRS Korea Array 33.87 72 P P 09 31 44.2 -2.1
KSRS Korea Array 33.87 72 P P 09 31 44.3 -2.1
KSRS Korea Array 33.87 72 P P 09 31 44.2 -2.1
comp=Z,5.9nm,0.9s,baz=270,slow=8.1,SNR=9.1
KSRS LR LR 09 47 07.7
comp=Z,178nm,20.5s,baz=280,slow=39
comp=Z,5.9nm,0.9s
ONI Oni 34.12 297 P P 09 31 48.7 +0.2
ONI IAmb IAmb 09 31 52.6
comp=Z,12nm,1.1s
ONI Oni 34.12 297 P P 09 31 48.7 +0.2
ONI pmax pmax
comp=Z,13nm,1.1s
KIRV Kirov 34.38 326 ceP P 09 31 51.4 +0.9
KIRV Kirov 34.38 326 LR LR 09 46 09.5
comp=Z,127nm,18.5s,baz=120,slow=37
KBZ Khabaz 34.53 299 LR LR 09 48 48.9
comp=Z,152nm,18.8s,baz=103,slow=41
GEVA Gevas 34.68 289 P P 09 31 52.8 -0.8
KVAR Kislovodsk Arr 34.68 299 LR LR 09 47 25.3
comp=Z,282nm,20.9s,slow=39
KIV Kislovodsk 34.69 299 P P 09 31 52.0 -1.5
KIV IAmb IAmb 09 32 18.4
comp=Z,5.7nm,0.7s
KIV Kislovodsk 34.69 299 eP P 09 31 52.5 -1.0
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,61nm,16.0s
GURO Guroymak-BITLI 35.45 290 P P 09 31 59.7 -0.5
VRH Novokhopyorsk 36.09 312 eP P 09 32 05.0 -0.3
VRH pmax pmax
comp=Z,20nm,0.8s
USRK Ussuriysk Ar. 36.52 60 P P 09 32 06.9 -2.1
USRK Ussuriysk Ar. 36.52 60 P P 09 32 06.9 -2.1
MARD Mardin 36.61 288 P P 09 32 10.8 +0.7
MARD IAmb IAmb 09 32 17.2
comp=Z,7.4nm,1.0s
KLR Kul'dur 36.64 52 ceP P 09 32 13.4 +3.4
KLR pmax pmax
comp=Z,1.0nm,0.3s
KLR Kul'dur 36.64 52 LR LR 09 46 45.7
comp=Z,84nm,20.8s,baz=237,slow=36
RAYN Ar Rayn 36.88 264 P P 09 32 12.7 +0.3
RAYN IAmb IAmb 09 32 13.9
comp=Z,8.4nm,1.1s
RAYN Ar Rayn 36.88 264 P P 09 32 12.7 +0.3
RAYN pmax pmax
comp=Z,8.0nm,1.1s
PRGR Permogore 37.51 329 eP P 09 32 15.8 -1.4
VSR Storozhevoye 37.68 311 eP P 09 32 18.1 -0.7
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORR Voronezh 37.72 312 eP P 09 32 23.8 +4.7
VORR pmax pmax
comp=Z,40nm,0.4s
LPSR Galich'ya Gora 38.04 313 eP P 09 32 21.8 0.0
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ANN Anapa 38.46 301 eP P 09 32 30.2 +4.8
ANN pmax pmax
comp=Z,97nm,1.2s
YAK Yakutsk 39.03 31 ceP P 09 32 33.7 +3.7
YAK pmax pmax
comp=Z,11nm,0.6s
YAK Yakutsk 39.03 31 LR LR 09 50 59.6
comp=Z,75nm,20.6s,baz=268,slow=40
MOS Moscow 39.40 318 eP P 09 32 32.4 -0.8
MOS pmax pmax
comp=Z,40nm,0.7s
OBN Obninsk 39.86 317 ceP P 09 32 38.8 +1.8
OBN e 09 34 11.7
OBN pmax pmax
comp=Z,35nm,1.7s
KLMR Klimovskoe 39.88 326 eP P 09 32 35.4 -1.7
KLMR e 09 34 42.8
KLMR pmax pmax
comp=Z,24nm,1.1s
KLMR Klimovskoe 39.88 326 eP P 09 32 35.5 -1.7
KLMR AMP 09 32 38.7
comp=Z,24nm,1.1s
KLMR ePcP PcP 09 34 42.9 +0.6
SBUM Sibu 39.94 137 P P 09 32 37.9 -0.3
SBUM IAmb IAmb 09 32 42.6
comp=Z,20nm,1.5s
MYLDM Lahad Datu 41.70 127 P P 09 32 51.8 -0.8
MYLDM IAmb IAmb 09 33 00.2
comp=Z,27nm,1.4s
BRTR Keskin Array B 41.75 293 P P 09 32 53.9 +0.9
BRTR Keskin Array B 41.75 293 P P 09 32 53.4 +0.4
BRTR Keskin Array B 41.75 293 P P 09 32 53.4 +0.4
comp=Z,0.8nm,0.7s,baz=108,slow=4.7,SNR=1.9
comp=Z,0.8nm,0.7s
MJAR Matsushiro Arr 42.14 71 P P 09 32 54.6 -1.4
MJAR Matsushiro Arr 42.14 71 P P 09 32 54.6 -1.4
comp=Z,4.6nm,1.0s,baz=292,slow=6.7,SNR=5.9
MJAR LR LR 09 51 51.2
comp=Z,87nm,19.0s,baz=283,slow=38
comp=Z,4.6nm,1.0s
ANTO Ankara 42.37 294 P P 09 32 57.5 -0.4
ANTO IAmb IAmb 09 33 05.3
comp=Z,23nm,1.4s
ANTO Ankara 42.37 294 P P 09 32 57.5 -0.4
ANTO pmax pmax
comp=Z,23nm,1.4s
EIL Elat 43.25 279 LR LR 09 54 44.0
comp=Z,189nm,20.0s,baz=90,slow=41
DGAR Diego Garcia 43.40 200 P P 09 33 06.4 +0.1
DGAR Diego Garcia 43.40 200 P P 09 33 06.4 +0.1
DGAR pmax pmax
comp=Z,252nm,1.1s
TIXI Tiksi 43.62 18 P P 09 33 04.5 -3.1

TIXI IAmb IAmb 09 33 08.3
comp=Z,13nm,1.5s
TIXI Tiksi 43.62 18 P **P** **09 33 04.5 -3.1**
TIXI pmax pmax
comp=Z,13nm,1.5s
TIXI Tiksi 43.62 18 LR LR 09 51 55.8
comp=Z,155nm,19.5s,baz=183,slow=37
AKASG Malin Array Be 43.91 310 P **P** **09 33 09.9 -0.2**
AKASG Malin Array Be 43.91 310 P **P** **09 33 09.3 -0.9**
AKASG Malin Array Be 43.91 310 P **P** **09 33 09.3 -0.9**
comp=Z,2.6nm,0.8s,baz=72,slow=6.8,SNR=17
AKASG LR LR 09 55 02.1
comp=Z,170nm,18.4s,baz=66,slow=41
comp=Z,2.6nm,0.8s
AKBB Malin Array Si 43.91 310 P **P** **09 33 09.9 -0.2**
AKBB IAmb IAmb 09 33 11.4
comp=Z,13nm,1.1s
AKBB Malin Array Si 43.91 310 *ce*P **P** **09 33 11.0 +0.8**
JHJ Hachijo jima 2 44.27 76 LR LR 09 53 46.9
comp=Z,106nm,18.3s,baz=95,slow=39
MNK Minsk 44.79 315 *i* P **P** **09 33 16.7 -0.4**
MNK *i* S **S** **09 39 52.4 +0.7**
MNK *i* SS **SS** **09 43 13.9 +0.9**
MNK pmax pmax
comp=E,3.0nm,1.0s
MNK pmax pmax
comp=Z,17nm,1.0s
MNK MLR MLR
comp=Z,80nm,18.0s
MNK MLR MLR
comp=E,44nm,18.0s
MNK Minsk 44.79 315 *i* P **P** **09 33 16.8 -0.4**
comp=E,3.0nm,1.0s
MNK *i* P **P** **09 33 16.8 -0.4**
MNK *i* P **P** **09 33 16.8 -0.4**
comp=Z,17nm,1.0s,baz=92
MNK *i* PcP PP 09 35 11.6 +10
MNK *i* PP PcP 09 35 12.9 +14
MNK *i* PPP PPP 09 36 02.5
MNK *i* S **S** **09 39 52.4 +0.7**
MNK *i* SS **SS** **09 43 14.0 +0.9**
MNK *i* LQ LQ 09 48 41.1
MNK *i* LR LR 09 50 56.6
MNK *i* LRM MLR 09 52 32.3
comp=Z,80nm,18.3s
MNK *i* LRM MLR 09 52 41.1
comp=E,44nm,18.3s
MNK *i* LRM MLR 09 52 56.4
ELL Elmali 45.24 290 P **P** **09 33 21.4 +0.3**
ELL Elmali 45.24 290 P **P** **09 33 21.4 +0.3**
ELL pmax pmax
comp=Z,92nm,1.3s
NACGM Naroch 45.44 316 *e*P **P** **09 33 23.1 +0.8**
baz=92
VSU Vasula 45.68 321 *e*P **P** **09 33 25.2 +1.1**
FINES FINESS Array B 46.34 325 P **P** **09 33 29.1 -0.2**
FINES FINESS Array B 46.34 325 P **P** **09 33 29.1 -0.2**
comp=Z,3.7nm,1.0s,baz=81,slow=9.1,SNR=2.5
FINES LR LR 09 53 45.3
comp=Z,83nm,20.2s,baz=102,slow=37
comp=Z,3.7nm,1.0s
MLR Muntele Rosu 46.50 303 P **P** **09 33 30.9 -0.1**
MLR Muntele Rosu 46.50 303 P **P** **09 33 30.9 -0.1**
MLR pmax pmax
comp=Z,22nm,1.1s
MLR Muntele Rosu 46.50 303 LR LR 09 55 52.2
comp=Z,160nm,20.8s,baz=73,slow=40
PABE Paberze 47.06 317 P **P** **09 33 34.4 -0.7**
PABE Paberze 47.06 317 *e*P **P** **09 33 35.9 +0.8**
MTSE Matsula 47.23 321 *e*P **P** **09 33 37.0 +0.7**
ARCES ARCESS Array B 48.12 336 P **P** **09 33 43.3 +0.2**
ARCES ARCESS Array B 48.12 336 P **P** **09 33 43.2 +0.2**
comp=Z,5.9nm,1.0s,baz=108,slow=11,SNR=6.5
ARCES LR LR 09 54 20.8
comp=Z,111nm,18.2s,baz=100,slow=36
comp=Z,5.9nm,1.0s
KWP Kalwaria Pacla 48.16 309 P **P** **09 33 43.5 -0.2**
KWP Kalwaria Pacla 48.16 309 P **P** **09 33 43.5 -0.2**
KWP pmax pmax
comp=Z,99nm,1.1s
RAF Rauma 48.38 324 *e*P **P** **09 33 45.4 +0.3**
MA2 Magadan 48.52 38 *ce*P P 09 33 50.7 +4.4
MA2 pmax pmax
comp=Z,27nm,2.5s
MA2 Magadan 48.52 38 LR LR 09 55 24.4
comp=Z,150nm,19.2s,baz=286,slow=38
SEY Seymchan 49.43 33 *ce*P **P** **09 33 54.4 +1.2**
SEY pmax pmax
comp=Z,8.0nm,1.3s
OJC Ojcow 49.95 310 P **P** **09 33 56.3 -1.1**
OJC IAmb IAmb 09 33 58.2
comp=Z,16nm,1.5s
OJC Ojcow 49.95 310 P **P** **09 33 56.3 -1.1**
OJC pmax pmax
comp=Z,16nm,1.5s
KAPI Kappang 50.35 134 LR LR 09 57 11.9
comp=Z,120nm,19.1s,baz=270,slow=38
DIVS Divibare 50.92 302 P **P** **09 34 04.5 -0.3**
DIVS IAmb IAmb 09 34 06.8
comp=Z,8.1nm,1.1s
MORC Moravsky Berou 51.46 310 P **P** **09 34 08.5 -0.3**
MORC IAmb IAmb 09 34 11.0
comp=Z,12nm,1.3s
MORC Moravsky Berou 51.46 310 P **P** **09 34 08.5 -0.3**
MORC pmax pmax
comp=Z,12nm,1.3s
MORC Moravsky Berou 51.46 310 *e*P **P** **09 34 10.1 +1.3**
JAVC Velka Javorina 51.54 308 *e*P **P** **09 34 11.5 +2.1**
KRLC Kraliky 51.89 310 *e*P **P** **09 34 12.9 +0.9**
KRLC Kraliky 51.89 310 *e*P **P** **09 34 12.9 +0.9**
DPC Dobruska-Polom 52.13 310 *e*P **P** **09 34 15.0 +1.2**
DPC Dobruska-Polom 52.13 310 *e*P **P** **09 34 15.0 +1.2**
VRAC Vranov 52.15 309 LR LR 09 58 55.3
comp=Z,88nm,18.0s,baz=79,slow=39
OSTC Ostas 52.16 311 *e*P **P** **09 34 15.1 +1.1**
UPC Upice 52.30 311 *e*P **P** **09 34 16.5 +1.5**
UPC Upice 52.30 311 *e*P **P** **09 34 16.5 +1.5**
KRUC Moravsky 52.32 309 *e*P **P** **09 34 16.5 +1.3**
HFS Hagfors 52.38 323 LR LR 09 57 21.5
comp=Z,147nm,18.1s,baz=88,slow=37
SPITS Spitsbergen Ar 52.60 346 LR LR 09 59 50.6
comp=Z,108nm,19.9s,baz=88,slow=40
PETK Petropavlovsk- 52.82 46 P **P** **09 34 17.6 -1.2**
PETK Petropavlovsk- 52.82 46 P **P** **09 34 17.6 -1.2**
NB2 NORSAR Subarra 53.51 324 P **P** **09 34 23.0 -0.8**
comp=Z,11nm,1.1s,baz=84,slow=7.4
NOA NORSAR Array B 53.51 324 P **P** **09 34 23.3 -0.5**
NOA NORSAR Array B 53.51 324 P **P** **09 34 23.3 -0.5**
NOA NORSAR Array B 53.51 324 P **P** **09 34 23.3 -0.5**
comp=Z,4.0nm,0.9s,baz=84,slow=7.3,SNR=5.4
NOA LR LR 09 57 32.7
comp=Z,100nm,19.8s,baz=80,slow=36
comp=Z,4.0nm,0.9s
BRG Berggiesshubel 53.53 311 *e*P **P** **09 34 25.1 +1.1**
BRG Amp 09 34 26.1
comp=Z,13nm,1.2s
BRG Berggiesshubel 53.53 311 *e*P **P** **09 34 25.1 +1.1**
BRG pmax pmax
comp=Z,13nm,1.2s
CKRC Cesky Krumlov 53.72 309 *e*P **P** **09 34 26.6 +1.1**
CLL Collm 54.02 312 *i* P **P** **09 34 28.2 +0.6**
CLL *i* Pmax 09 34 30.9
comp=Z,7.0nm,1.1s
CLL *e*PP 09 36 39.0
CLL *es*PP 09 36 42.0
CLL LmV 10 00 00.0
comp=Z,100nm,19.1s
GEC2 GERESS Array S 54.11 309 P **P** **09 34 29.2 +0.7**
GEC2 IAmb IAmb 09 34 30.5
comp=Z,16nm,1.3s
GERES GERESS Array B 54.11 309 P **P** **09 34 28.6 +0.2**
GERES GERESS Array B 54.11 309 P **P** **09 34 27.8 -0.6**
GERES GERESS Array B 54.11 309 P **P** **09 34 27.8 -0.6**
comp=Z,2.7nm,0.7s,baz=90,slow=5.3,SNR=21
GERES LR LR 10 01 03.5
comp=Z,137nm,18.0s,baz=72,slow=40
comp=Z,2.7nm,0.7s
KHC Kasperske Hory 54.12 309 *e*P **P** **09 34 29.3 +0.8**
KHC Kasperske Hory 54.12 309 *e*P **P** **09 34 29.3 +0.8**
CIMO Cimolais 55.56 306 P **P** **09 34 38.9 0.0**
CIMO IAmb IAmb 09 34 42.9
comp=Z,12nm,1.3s
GUMO Guam 56.76 96 LR LR 09 59 53.9
comp=Z,30nm,20.5s,baz=291,slow=37
BATI Baumata 56.80 134 LR LR 10 04 01.5
comp=Z,378nm,18.6s,baz=276,slow=41
DAVOX Davos/Dischmat 57.12 307 LR LR 10 04 17.6
comp=Z,32nm,21.1s,baz=83,slow=41
KMBO Kilima Mbogo 57.70 243 P **P** **09 34 54.5 -0.2**
KMBO IAmb IAmb 09 34 56.8
comp=Z,16nm,1.4s
KMBO Kilima Mbogo 57.70 243 *i* P **P** **09 34 57.2 +2.5**
KMBO pmax pmax
comp=Z,2.0nm,0.5s
KMBO Kilima Mbogo 57.70 243 P **P** **09 34 54.3 -0.4**
comp=Z,4.6nm,0.9s,baz=44,slow=11,SNR=6.4
KMBO LR LR 09 58 38.4
comp=Z,82nm,19.7s,baz=90,slow=35
comp=Z,4.6nm,0.9s
ECH Echery 58.47 310 P **P** **09 34 58.8 -0.6**
ECH IAmb IAmb 09 35 00.9
comp=Z,6.1nm,1.0s
ECH Echery 58.47 310 P **P** **09 34 58.8 -0.6**
ECH pmax pmax
comp=Z,6.0nm,1.0s
WLF Walferdange 58.67 311 P **P** **09 35 02.0 +1.2**
WLF Walferdange 58.67 311 P **P** **09 35 02.0 +1.2**
WLF pmax pmax
comp=Z,20nm,1.3s
SENIN Lac Senin/Sane 58.95 308 P **P** **09 35 02.8 -0.3**
SENIN IAmb IAmb 09 35 32.5
comp=Z,9.8nm,1.4s
JMIC Jan Mayen 59.50 338 LR LR 10 02 34.8
comp=Z,91nm,18.9s,baz=354,slow=38
CLF Chambon-Foret 61.63 311 P **P** **09 35 21.1 0.0**
EKA Eskdalemuir Ar 62.22 320 LR LR 10 03 18.1
comp=Z,96nm,18.8s,baz=31,slow=37
MBAR Mbarara 62.27 248 P **P** **09 35 26.0 -0.1**
PSA00 Pilbara Seismi 64.14 145 IAmb IAmb 09 35 41.4
comp=Z,5.3nm,0.9s
KNRA Kununurra 64.15 133 P **P** **09 35 37.0 -1.1**
KNRA IAmb IAmb 09 35 42.7
comp=Z,9.9nm,1.1s
FITZ Fitzroy Crossi 64.25 138 P **P** **09 35 38.6 -0.2**
SUMG Summit 66.88 344 P **P** **09 35 54.6 -0.9**
SUMG Summit 66.88 344 P **P** **09 35 54.6 -0.9**
SUMG pmax pmax
comp=Z,14nm,1.2s
VOI Vohitsoka 67.19 220 P **P** **09 35 57.7 -0.1**
ESBB Sonseca Array 69.16 304 P **P** **09 36 10.3 +0.3**
ESBB IAmb IAmb 09 36 15.1
comp=Z,6.5nm,1.0s
ESDC Sonseca Array 69.16 304 P **P** **09 36 10.2 +0.1**
ESDC IAmb IAmb 09 36 11.2
comp=Z,5.5nm,1.1s
ESDC Sonseca Array 69.16 304 P **P** **09 36 10.0 0.0**
comp=Z,4.9nm,0.9s,baz=53,slow=6.1,SNR=28
ESDC LR LR 10 09 19.2
comp=Z,30nm,18.1s,baz=41,slow=38
comp=Z,4.9nm,0.9s
PAB San Pablo 69.48 304 P **P** **09 36 12.6 +0.5**
PAB San Pablo 69.48 304 P **P** **09 36 12.6 +0.5**
PAB pmax pmax
comp=Z,15nm,1.3s
IMAR Indian Mountai 70.08 22 P **P** **09 36 14.1 -1.1**
WB0 Warramunga Arr 70.70 132 P **P** **09 36 19.1 -0.5**
WB0 IAmb IAmb 09 36 22.8
comp=Z,7.2nm,0.8s
WRA Warramunga Arr 70.80 132 P **P** **09 36 19.6 -0.6**
WRA Warramunga Arr 70.80 132 P **P** **09 36 19.6 -0.6**
comp=Z,3.9nm,0.7s,baz=326,slow=6.5,SNR=24
comp=Z,3.9nm,0.7s
WRAB Tennant Creek 70.80 132 P **P** **09 36 20.1 -0.1**
WRAB IAmb IAmb 09 36 23.6
comp=Z,7.5nm,0.8s
WRAB Tennant Creek 70.80 132 *ce*P **P** **09 36 23.7 +3.5**
WRAB pmax pmax
comp=Z,7.0nm,0.8s
WB2 Warramunga Arr 70.81 132 P **P** **09 36 20.1 -0.2**
WB2 IAmb IAmb 09 36 24.7
comp=Z,6.0nm,0.8s
WR0 Warramunga Arr 70.94 132 IAmb IAmb 09 36 25.3
comp=Z,4.8nm,0.8s
RES Resolute Bay 71.34 0 LR LR 10 08 19.8
comp=Z,50nm,22.0s,baz=21,slow=36
L19K White Mountain 72.19 26 P **P** **09 36 27.4 -0.7**
L19K IAmb IAmb 09 36 32.7
comp=Z,7.8nm,1.1s
BPAW Bear Paw Mtn. 72.21 23 P **P** **09 36 27.6 -0.6**
BPAW IAmb IAmb 09 36 29.4
comp=Z,7.2nm,0.7s
NEA2 Nenana 72.47 22 IAmb IAmb 09 36 34.4
comp=Z,7.4nm,1.2s
M20K Styx River 73.00 25 P **P** **09 36 32.1 -0.9**
M20K IAmb IAmb 09 36 37.4
comp=Z,8.0nm,1.3s
ILAR Eielson Array 73.00 21 P **P** **09 36 31.6 -1.2**
ILAR Eielson Array 73.00 21 P **P** **09 36 31.6 -1.2**
ILAR Eielson Array 73.00 21 P **P** **09 36 31.7 -1.1**
comp=Z,1.9nm,0.9s,baz=301,slow=5.1,SNR=13
ILAR LR LR 10 10 41.7
comp=Z,67nm,18.9s,baz=266,slow=38
comp=Z,1.9nm,0.9s
AS31 Alice Springs 73.36 135 P **P** **09 36 34.8 -0.7**
ASAR Alice Springs 73.36 135 P **P** **09 36 35.4 -0.1**
ASAR Alice Springs 73.36 135 P **P** **09 36 35.4 -0.1**
ASAR Alice Springs 73.36 135 P **P** **09 36 35.5 -0.1**
comp=Z,3.2nm,0.8s,baz=322,slow=6.0,SNR=33
comp=Z,3.2nm,0.8s
SFJD Kangerlussuaq 73.85 344 P **P** **09 36 39.3 +1.6**
SFJD Kangerlussuaq 73.85 344 P **P** **09 36 39.3 +1.6**
comp=Z,10nm,0.4s,baz=54,slow=14,SNR=7.3
SFJD LR LR 10 13 45.6
comp=Z,49nm,18.3s,baz=32,slow=40
comp=Z,10nm,0.4s
SML Sawmill 74.69 24 P **P** **09 36 42.5 -0.3**
SML IAmb IAmb 09 36 46.2
comp=Z,8.0nm,0.9s
BCAR Beaver Creek A 75.78 20 P **P** **09 36 48.5 -0.5**
N25K Chitina, Valde 76.05 22 P **P** **09 36 51.0 +0.4**
N25K IAmb IAmb 09 36 51.9
comp=Z,6.6nm,1.1s
TOA0 Torodi Ar. Sit 78.13 278 P **P** **09 37 02.2 -0.8**
TOA0 IAmb IAmb 09 37 04.0
comp=Z,12nm,1.1s
TORD Torodi Ar. Bea 78.13 278 P **P** **09 37 03.2 +0.2**
TORD Torodi Ar. Bea 78.13 278 P **P** **09 37 02.4 -0.7**
comp=Z,6.1nm,0.4s,baz=53,slow=5.6,SNR=2.7
comp=Z,6.1nm,0.4s
N31M Braeburn, Yuko 78.73 19 IAmb IAmb 09 37 06.8
comp=Z,7.1nm,0.9s
FRB Frobisher Bay 80.28 349 LR LR 10 15 27.0
comp=Z,52nm,21.7s,baz=16,slow=38
KOWA Kowa 82.06 282 P **P** **09 37 24.6 +0.3**
YKA Yellowknife Ar 82.17 10 P **P** **09 37 23.1 -0.9**
YKA Yellowknife Ar 82.17 10 P **P** **09 37 23.1 -0.9**
comp=Z,2.0nm,0.9s,baz=343,slow=4.5,SNR=6.2
YKA LR LR 10 17 35.2
comp=Z,47nm,19.3s,baz=324,slow=38
comp=Z,2.0nm,0.9s
LBTB Lobatse 82.25 233 P **P** **09 37 25.5 +0.5**
LBTB Lobatse 82.25 233 P **P** **09 37 25.5 +0.5**
DLBC Dease Lake 82.85 18 LR LR 10 20 16.4
comp=Z,83nm,18.3s,baz=292,slow=40
STKA Stephens Creek 84.00 135 P **P** **09 37 33.5 -0.3**
STKA Stephens Creek 84.00 135 P **P** **09 37 32.7 -1.1**
STKA Stephens Creek 84.00 135 P **P** **09 37 32.6 -1.1**
comp=Z,6.0nm,1.0s,baz=315,slow=4.9,SNR=6.7
STKA LR LR 10 19 18.0
comp=Z,176nm,18.6s,baz=207,slow=39
comp=Z,6.0nm,1.0s
BOSA Boshof 84.94 230 P **P** **09 37 39.2 +0.5**
BOSA Boshof 84.94 230 P **P** **09 37 38.9 +0.1**
BOSA Boshof 84.94 230 P **P** **09 37 38.9 +0.1**
comp=Z,16nm,1.1s,baz=64,slow=6.3,SNR=6.4
comp=Z,16nm,1.1s
DBIC Dimbokro 87.06 276 P **P** **09 37 49.2 -0.3**
DBIC Dimbokro 87.06 276 P **P** **09 37 49.2 -0.3**
DBIC pmax pmax
comp=Z,21nm,1.0s
DBIC Dimbokro 87.06 276 P **P** **09 37 50.1 +0.6**
comp=Z,18nm,1.0s,baz=59,slow=5.9,SNR=13
DBIC LR LR 10 19 06.4
comp=Z,64nm,19.0s,baz=63,slow=37
comp=Z,18nm,1.0s
KIC Kosan Boka 87.14 276 ⇑ *i* PKP1 **P** **09 37 50.6 +0.7**
comp=Z,8.9nm,0.5s
TIC Toumodi 87.21 276 ⇓ *i* PKP1 **P** **09 37 50.6 +0.3**
comp=Z,5.3nm,0.2s
LIC Lamto 87.45 276 ⇓ *i* PKP1 **P** **09 37 51.6 +0.2**
comp=Z,17nm,0.4s
BBB Bella Bella 88.88 20 LR LR 10 21 25.3
comp=Z,52nm,19.2s,baz=306,slow=38
BBTS Babate 91.95 289 LR LR 10 27 02.2
comp=Z,66nm,19.2s,baz=58,slow=40
NEW Newport 95.28 15 LR LR 10 27 03.8
comp=Z,30nm,18.1s,baz=336,slow=39
YBH Yreka Blue Hor 99.90 21 LR LR 10 27 25.8
comp=Z,28nm,20.2s,baz=320,slow=38
TXAR Lajitas Array 116.09 9 PKIKP **PKiKP** **09 43 44.8 -2.1**
TXAR Lajitas Array 116.09 9 PKP **PKiKP** **09 43 44.8 -2.1**
comp=Z,0.5nm,0.9s,baz=5.2,slow=1.4,SNR=4.1
TROLL Troll, Antarti 120.23 201 PKPdf **PKiKP** **09 43 53.6 +0.1**
SNAA Sanae 121.77 202 PKPdf **PKiKP** **09 43 58.1 +1.6**
SNAA Sanae 121.77 202 PP PP 09 45 29.8 -0.5
VNA2 Neumayer--Watz 123.06 203 PKPdf **PKiKP** **09 44 00.4 +1.5**
baz=296,slow=1.2
VNA2 Neumayer--Watz 123.06 203 PP PP 09 45 41.4 +2.5
VNA1 Neumayer--Stat 123.30 203 PKPdf **PKiKP** **09 43 59.6 +0.2**
VNA3 Neumayer Olymp 123.84 203 PKPdf **PKPdf** **09 44 00.0 -0.2**
SIV San Ignacio 145.35 293 **PKPbc** **09 44 41.3 -0.3**
SIV San Ignacio 145.35 293 PKPbc **PKPbc** **09 44 41.3 -0.3**
comp=Z,3.6nm,1.0s,baz=37,slow=4.7,SNR=9.6
CPUP Villa Florida 147.56 274 PKIKP **PKPdf** **09 44 45.3 +0.1**
CPUP Villa Florida 147.56 274 PKPbc **PKPdf** **09 44 45.2 +0.1**
comp=Z,5.9nm,1.0s,baz=130,slow=0.9,SNR=5.8
ATAH Atahualpa 149.44 328 PKPbc **PKiKP** **09 44 54.5 -0.3**
comp=Z,19nm,1.0s,baz=6.2,slow=6.2,SNR=7.2
LPAZ La Paz 150.74 301 PKIKP **PKPdf** **09 44 51.3 0.0**
LPAZ 09 44 56.5
LPAZ La Paz 150.74 301 PKP **PKPdf** **09 44 51.3 0.0**
comp=Z,2.4nm,0.9s,baz=50,slow=2.9,SNR=4.4
LPAZ PKPbc **PKPbc** **09 44 56.5 -0.4**
comp=Z,3.2nm,1.1s,baz=32,slow=7.1,SNR=6.5

*IDC **31** 09:39:54.0± 1.3, 34°.25N × 86°.34E, h0km, mb3.5/5, mbtmp3.6/9, ML3.9/3, Error ellipse: s-maj=48.4km s-min=18.2km az=61.0*

ISC 31 09:39:59.3±0.8, 34°.45N±0°.08 × 86°.4E±0°.1, h35km, n19, σ1§50/19, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**6.49**	**201**	*e*P		**Pn**		**09 41 32.7**	**0.0**
	18nm,0.5s								
GUN	**Gumba**	**6.54**	**184**	*e*P		**Pn**		**09 41 36.0**	**+2.6**
	22nm,0.5s								
GKN	**Gorkha**	**6.61**	**194**	*e*P		**Pn**		**09 41 35.6**	**+1.5**
JIRN	**Jiri**	**6.78**	**182**	*e*P		**Pn**		**09 41 38.8**	**+2.2**
	17nm,0.4s								
PKIN	**Phulchoki**	**6.91**	**188**	*e*P		**Pn**		**09 41 40.2**	**+1.8**
	22nm,0.6s								
PKI	**Pulchoki**	**6.92**	**187**	*e*P		**Pn**		**09 41 39.8**	**+1.3**
	7.2nm,0.3s								
PYUN	**Piuthan**	**6.98**	**206**	*e*P		**Pn**		**09 41 37.5**	**-1.8**
KOLN	**Koldanda**	**7.09**	**201**	*e*P		**Pn**		**09 41 40.7**	**-0.1**
TAPN	**Taplejung**	**7.17**	**171**	*e*P		**Pn**		**09 41 41.5**	**-0.5**
	19nm,0.5s								
RAMN	**Ramite**	**7.48**	**179**	*e*P		**Pn**		**09 41 46.9**	**+0.7**
	12nm,0.4s								
MKAR	**Makanchi Array**	**12.72**	**347**	Pn		**Pn**		**09 42 56.7**	**-0.9**
	0.1nm,0.3s,baz=179,slow=14,SNR=4.4								
	0.7nm,0.7s								
KURBB	**Kurchatov Arra**	**17.16**	**343**	P		**Pn**		**09 43 56.3**	**+0.2**
	0.3nm,0.3s,baz=157,slow=11,SNR=8.9								
	2.1nm,0.2s								
CMAR	**Chiang Mai Arr**	**19.45**	**142**	P		**P**		**09 44 20.9**	**-2.1**
	0.7nm,0.3s,baz=323,slow=10,SNR=2.3								
	1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**19.52**	**357**	P		**P**		**09 44 23.9**	**+0.4**
	0.7nm,0.4s,baz=164,slow=13,SNR=1.8								
SONM	**Songino Array**	**20.05**	**42**	P		**Pn**		**09 44 31.7**	**+0.3**
	1.8nm,0.9s,baz=234,slow=13,SNR=6.6								
	1.8nm,0.9s								
BVAR	**Borovoye Array**	**21.79**	**333**	P		**P**		**09 44 50.7**	**+2.7**
	0.4nm,0.5s,baz=147,slow=8.6,SNR=1.4								
	0.4nm,0.5s								
AKTO	**Aktyubinsk**	**26.13**	**316**	P		**P**		**09 45 30.6**	**+0.6**
	0.7nm,0.4s,baz=110,slow=16,SNR=2.6								
	0.7nm,0.4s								
WRA	**Warramunga Arr**	**70.73**	**132**	P		**P**		**09 51 11.3**	**-0.7**
	0.5nm,0.7s,baz=326,slow=6.6,SNR=7.8								
	0.5nm,0.7s								
ASAR	**Alice Springs**	**73.31**	**135**	P		**P**		**09 51 27.4**	**-0.1**
	0.3nm,0.7s,baz=320,slow=6.8,SNR=5.8								
	0.3nm,0.7s								

IDC 31 09:53:03.5±3.4, 53°.81N × 91°.06E, h0km, mbtmp3.5/3, ML3.0/3, Error ellipse: s-maj=28.2km s-min=24.5km az=40.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.70**	**275**	*i*				10 15 30.0	
	baz=89,slow=329,SNR=1.0								
ZALV	**Zalesovo Beam**	**3.70**	**275**	Pn		Pn		09 54 03.7	+1.8
	1.8nm,0.3s,baz=93,slow=10,SNR=6.6								
ZALV						Lg	Lg	09 54 58.3	
	3.5nm,0.3s,baz=90,slow=23,SNR=6.8								
	3.6nm,0.4s								
KURBB	**Kurchatov Arra**	**8.33**	**253**	Pn		Pn		09 55 04.8	-0.6
	0.2nm,0.3s,baz=65,slow=15,SNR=5.2								
KURBB						Sn	Sn	09 56 39.3	-0.8
	0.1nm,0.3s,baz=68,slow=27,SNR=12								
KURBB						Lg	Lg	09 57 26.7	
	0.4nm,0.3s,baz=63,slow=31,SNR=6.6								
	1.8nm,0.3s								
MKAR	**Makanchi Array**	**8.99**	**222**	Pn		Pn		09 55 14.8	+0.3
	0.4nm,0.3s,baz=42,slow=15,SNR=7.3								
MKAR						Sn	Sn	09 56 56.4	+0.1
	0.4nm,0.3s,baz=39,slow=25,SNR=4.1								
MKAR						Lg	Lg	09 57 45.4	
	0.1nm,0.3s,baz=40,slow=25,SNR=5.4								
	1.2nm,0.5s								
SONM	**Songino Array**	**11.38**	**115**	Lg		Lg		09 59 01.3	
	0.3nm,0.3s,baz=297,slow=29,SNR=13								
BVAR	**Borovoye Array**	**12.36**	**275**	Sn		Sn		09 58 29.1	+10
	0.3nm,0.3s,baz=86,slow=23,SNR=4.0								

*JMA **31** 09:54:51.8± 0.5, 32°.N± 4°.× 13°.8E± °, h356km, MV3.2/52, FAR S OFF TOKAI DISTRICT*

*IDC **31** 09:54:54.0± 1.2, 32°.56N × 137°.99E, h340km± 29km, mb2.9/4, mbtmp3.7/7, Error ellipse: s-maj=68.7km s-min=16.8km az=60.0*

ISC 31 09:54:54.9±1.0, 32°.78N±0°.09 × 138°.06E±0°.09, h350km, n25, σ1§39/29, mb3.0/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.49**	**76**	P		**Pn**		**09 55 43.1**	**+0.2**
	103nm,0.7s,baz=84,slow=21,SNR=5.2								
JHJ						S	**S**	09 56 23.9	+2.5
	40nm,0.3s,baz=61,slow=19,SNR=3.9								
JIE	**Ise**	**1.97**	**325**	P		**Pn**		**09 55 46.1**	**+0.3**
JKN2	**Miekihoku**	**2.09**	**315**	P		**Pn**		**09 55 46.3**	**-0.4**
JTNC	**Tanabenakahech**	**2.30**	**297**	P		**Pn**		**09 55 47.4**	**-0.9**
JWY	**Kouya**	**2.51**	**306**	P		**Pn**		**09 55 49.9**	**-0.1**
JOD2	**Odawara 2**	**2.62**	**19**	P		**Pn**		**09 55 52.2**	**+1.4**
BSO3	**Boso 3**	**2.87**	**45**	S		**S**		**09 56 38.6**	**-0.6**
BSO4	**Boso 4**	**2.91**	**40**	S		**S**		**09 56 40.6**	**+0.4**
JYTA	**Yamagatataniai**	**3.02**	**339**	P		**Pn**		**09 55 54.9**	**+0.7**
BSO1	**Boso 1**	**3.07**	**52**	S		**S**		**09 56 41.2**	**-0.8**
JHU	**Hanno**	**3.23**	**18**	P		**Pn**		**09 55 57.0**	**+0.8**
JHU				S		**S**		**09 56 45.2**	**-0.4**
JRY	**Ryogami san**	**3.31**	**12**	P		**Pn**		**09 55 58.7**	**+1.8**
JWT	**Wachi**	**3.33**	**319**	P		**Pn**		**09 55 57.3**	**+0.1**
MJAR	**Matsushiro Arr**	**3.76**	**2**	P		**Pn**		**09 56 00.1**	**-1.2**
	1.3nm,0.4s,baz=175,slow=11,SNR=6.9								
MAT	**Matsushiro**	**3.76**	**2**	P		**Pn**		**09 56 02.5**	**+1.2**
JAG	**Ashikaga**	**3.81**	**17**	P		**Pn**		**09 56 01.9**	**0.0**
JYT	**Yasato**	**3.87**	**27**	P		**Pn**		**09 56 02.1**	**-0.3**
JYT				S		**S**		**09 56 53.7**	**-3.2**
JHO	**Hitachi**	**4.35**	**28**	P		**Pn**		**09 56 06.8**	**-0.5**
JFK	**Kawauchi**	**5.13**	**26**	P		**Pn**		**09 56 16.0**	**+0.2**
JFK				S		**S**		**09 57 18.4**	**-2.9**
KSRS	**Korea Array**	**9.52**	**302**	P		**Pn**		**09 57 06.8**	**-0.2**
	2.6nm,0.7s,baz=106,slow=13,SNR=5.3								
USRK	**Ussuriysk Ar.**	**12.35**	**339**	P		**Pn**		**09 57 41.4**	**+0.8**
	4.5nm,0.5s,baz=145,slow=10,SNR=16								
SONM	**Songino Array**	**28.21**	**312**	P		**P**		**10 00 19.3**	**+2.7**
	1.6nm,0.8s,baz=117,slow=8.3,SNR=2.2								
	1.6nm,0.8s								
MKAR	**Makanchi Array**	**44.19**	**305**	P		**P**		**10 02 29.8**	**-0.5**
	0.6nm,0.7s,baz=76,slow=6.1,SNR=2.6								

0.6nm,0.7s
WRA **Warramunga Arr** **52.54** **184** P **P** **10 03 31.7** **-1.8**
0.3nm,0.3s,baz=360,slow=7.6,SNR=32
0.3nm,0.3s
ASAR **Alice Springs** **56.27** **185** P **P** **10 03 58.6** **-1.5**
0.2nm,0.6s,baz=11,slow=8.7,SNR=5.0
0.2nm,0.6s

IDC 31 10:44:09.6±5.9, 53.59N×91.07E, h0km, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=62.5km s-min=31.2km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.73**	**278**	*i*				11 06 40.0	
	baz=89,slow=329,SNR=0.6								
ZALV	**Zalesovo Beam**	**3.73**	**278**	Pn		Pn		10 45 10.1	+1.8
	0.4nm,0.3s,baz=98,slow=15,SNR=4.5								
ZALV					Lg	Lg		10 46 08.0	
	0.9nm,0.3s,baz=95,slow=27,SNR=5.3								
	0.7nm,0.3s								
KURBB	**Kurchatov Arra**	**8.27**	**254**	Pn		Pn		10 46 10.1	-0.6
	0.1nm,0.3s,baz=64,slow=15,SNR=2.9								
	0.9nm,0.6s								
MKAR	**Makanchi Array**	**8.82**	**223**	Pn		Pn		10 46 18.9	+0.5
	0.1nm,0.3s,baz=32,slow=14,SNR=2.7								
	0.6nm,0.8s								

BJI ***31*** *10:45:57.9±0.0, 32.51N×131.03E, h10km, mb4.5/54, mB5.1/42, Ms5.1/57, Ms7 4.9/54*

IDC ***31*** *10:46:00.4±0.4, 32.72N×130.62E, h0km, mb4.5/41, mbtmp4.5/45, ML3.5/3, MS4.2/66, Error ellipse: s-maj=13.1km s-min=10.2km az=65.0*

NIED ***31*** *10:46:02.7, 32.72N×130.62E, h13km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr=2.48; Mθθ=2.70; Mφφ=-0.23; Mrθ=1.31; Mθφ=0.15; Mφr=0.56; Fault plane solution: M0=2.96000×10^16 NP1: φs=262.00000°, δ=32.00000°, λ=-108.00000°. NP2: φs=103.00000°, δ=59.00000°, λ=-79.00000°.*

NEIC ***31*** *10:46:02.6±1.2, 32.69N±0.04×130.57E±0.05, h10km±1km, mb5.1/266, Mww4.9 Error ellipse: s-maj=8.2km s-min=5.5km az=61.0*

MOS ***31*** *10:46:02.1±1.0, 32.66N×130.58E, h22km, mb5.1/48, MS4.6/11, Error ellipse: s-maj=7.5km s-min=4.2km az=115.6*

JMA ***31*** *10:46:02.7±0.0, 32.7N±0.1×130.6E±0.1, h13km, MD5.2/20, MW4.9/20, NW KUMAMOTO PREF*

JMA Felt V J1 at NW KUMAMOTO PREF .

GCMT ***31*** *10:46:03.6±0.2, 32.68N±0.01×130.52E±0.03, h19km, MW5.1/100, Moment Tensor Solution. s37,c50; s100,c144; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.24±.22; Mθθ 4.28±.14; Mφφ=-0.03±.14; Mrθ=1.68±.25; Mθφ 0.09±.08; Mφr 2.45±.37; Best double couple: M0 5.12400×10^16 NP1:φs 113.00000°, δ61.00000°, λ=-65.00000°. NP2:φs 249.00000°, δ38.00000°, λ=-127.00000°. Principal axes: T 4.6340, Plg12.0000°, Azm185.0000°; N 0.9830, Plg22.0000°, Azm280.0000°; P -5.6150, Plg65.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***31*** *10:46:05, 32.70N×130.67E, h12km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^16 Nm; Mrr=2.78; Mθθ 2.90; Mφφ=-0.12; Mrθ=1.20; Mθφ 0.07; Mφr 0.50; Fault plane solution: M0 3.13000×10^16 NP1: φs=259.00000°, δ34.00000°, λ=-106.00000°. NP2: φs=98.00000°, δ57.00000°, λ=-79.00000°. Principal axes: T 3.1439, Plg11.0000°, Azm181.0000°; N -0.0323, Plg9.0000°, Azm272.0000°; P -3.1115, Plg75.0000°, Azm40.0000°;*

ISC 31 10:46:02.8±0.5, 32.70N±0.03×130.61E±0.03, h14km±2km, h15km:pP-P, n834, σ1§24/655, mb5.0/230, MS4.4/88, 14C-48D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.23**	**132**	*i*	P		**Pg**	**10 46 07.8**	**-0.1**
JIU3				*e*	S		**Sg**	**10 46 11.4**	**+0.2**
JIU3	**Izumi3**	**0.23**	**132**	A		A		10 46 07.8	
	comp=E,420nm,3.3s,comp=E,348nm,2.0s								
JTA	**Tamana**	**0.27**	**346**	*e*	P		**Pg**	**10 46 08.1**	**-0.4**
JTA				*e*	S		**Sg**	**10 46 11.8**	**-0.7**
JTA	**Tamana**	**0.27**	**346**	A		A		10 46 08.1	
	comp=E,281nm,6.8s,comp=E,362nm,5.1s								
JHD	**Hondo**	**0.47**	**240**	A		A		10 46 12.1	
	comp=E,152nm,4.5s,comp=E,155nm,1.4s								
JNU	**Nakatsue**	**0.47**	**28**	A		A		10 46 11.7	
	comp=E,263nm,1.2s,comp=E,194nm,2.6s								
JZO	**Okuchi**	**0.56**	**181**	A		A		10 46 13.9	
	comp=E,80nm,3.2s,comp=E,214nm,5.7s								
JUR	**Ureshino**	**0.68**	**305**	A		A		10 46 15.7	
	comp=E,105nm,4.7s,comp=E,65nm,6.9s								
NGSJ	**Nagasakinomoza**	**0.69**	**265**	A		A		10 46 16.0	
	comp=E,69nm,6.6s,comp=E,36nm,3.2s								
JKIT	**Kitakata**	**0.71**	**96**	A		A		10 46 16.2	
	comp=E,72nm,4.6s,comp=E,101nm,1.6s								
JFI	**Itaya**	**0.75**	**346**	A		A		10 46 16.7	
	comp=E,53nm,0.8s,comp=E,164nm,5.6s								
JTSN	**Tsuno**	**0.88**	**121**	A		A		10 46 19.4	
	comp=E,71nm,2.5s,comp=E,156nm,0.3s								
JTZ	**Takazaki**	**0.89**	**153**	*i*	P		**Pb**	**10 46 20.2**	**+0.2**
JTZ					S		**Sb**	**10 46 32.5**	**+0.7**
JTZ	**Takazaki**	**0.89**	**153**	A		A		10 46 20.2	
	comp=E,67nm,6.3s,comp=E,120nm,6.2s								
JHHC	**Hyugahichiya**	**0.90**	**106**	A		A		10 46 19.7	
	comp=E,48nm,1.0s,comp=E,119nm,1.2s								
JBEP	**Beppuamama**	**0.92**	**46**	A		A		10 46 19.7	
	comp=E,143nm,1.6s,comp=E,154nm,2.2s								
JFA	**Akaike**	**1.02**	**9**	A		A		10 46 21.4	
	comp=E,109nm,1.0s,comp=E,96nm,6.0s								
JUS	**Usuki**	**1.02**	**69**	A		A		10 46 21.6	
	comp=E,147nm,0.9s,comp=E,195nm,1.5s								
JSKE	**Saikikamae**	**1.09**	**85**	A		A		10 46 22.8	
	comp=E,39nm,4.4s,comp=E,57nm,3.9s								
JSU	**Suzuyama**	**1.20**	**186**				**Pb**	**10 46 25.1**	**-0.1**
JSU							**Sn**	**10 46 42.0**	**+0.8**
JSU	**Suzuyama**	**1.20**	**186**	A		A		10 46 25.0	
	comp=E,30nm,5.9s,comp=E,78nm,6.3s								
JNKG	**Nichinankitago**	**1.22**	**148**	A		A		10 46 25.4	
	comp=E,92nm,3.8s,comp=E,88nm,2.5s								
JKI	**Kunimi**	**1.23**	**41**	A		A		10 46 24.9	
	comp=E,167nm,1.3s,comp=E,189nm,1.2s								
JSJ	**Shimokoshiki**	**1.27**	**217**	A		A		10 46 26.2	
	comp=E,24nm,2.1s,comp=E,50nm,6.0s								
JSJ	**Shimokoshiki**	**1.27**	**217**	P		**Pn**		**10 46 25.2**	**-0.9**
JNAR	**Kushima--Naru**	**1.30**	**154**	A		A		10 46 26.6	
	comp=E,98nm,2.2s,comp=E,109nm,6.2s								
JII	**Iki**	**1.32**	**326**	A		A		10 46 26.5	
	comp=E,124nm,2.1s,comp=E,99nm,5.7s								
JII	**Iki**	**1.32**	**326**	⇓P		**Pn**		**10 46 26.2**	**-0.5**
JTSR	**Tashiro 2**	**1.55**	**170**	A		A		10 46 30.6	
	comp=E,25nm,4.5s,comp=E,28nm,7.7s								
JFU	**Fukue jima 2**	**1.57**	**269**	A		A		10 46 30.7	
	comp=E,35nm,6.3s,comp=E,14nm,5.8s								
JTY	**Toyota**	**1.60**	**14**	A		A		10 46 30.8	
	comp=E,59nm,1.4s,comp=E,62nm,6.4s								
JKD	**Kudamatsu**	**1.71**	**38**	A		A		10 46 32.5	
	comp=E,68nm,3.3s,comp=E,61nm,3.8s								
UWA2	**Uwa jima 2**	**1.77**	**73**	A		A		10 46 33.4	
	comp=E,38nm,1.7s,comp=E,33nm,7.8s								
UWA2	**Uwa jima 2**	**1.77**	**73**	⇓P		**Pn**		**10 46 32.9**	**0.0**
JNA	**Nagahama**	**1.78**	**61**	A		A		10 46 33.6	
	comp=E,21nm,6.1s,comp=E,44nm,1.9s								
JNA	**Nagahama**	**1.78**	**61**	⇓P		**Pn**		**10 46 32.8**	**-0.3**
JTO	**Tosashimizu**	**1.85**	**85**	A		A		10 46 34.7	
	comp=E,36nm,1.7s,comp=E,51nm,1.6s								
JTO	**Tosashimizu**	**1.85**	**85**	⇓P		**Pn**		**10 46 34.9**	**+0.8**
JTSM	**Tsushimamitsus**	**1.93**	**328**	A		A		10 46 35.7	
	comp=E,31nm,7.3s,comp=E,32nm,3.6s								
JTSM	**Tsushimamitsus**	**1.93**	**328**	⇓P		**Pn**		**10 46 34.4**	**-0.7**
JTN	**Tanegashima 3**	**2.06**	**171**	A		A		10 46 38.1	
	comp=E,24nm,4.6s,comp=E,21nm,8.3s								
JTN	**Tanegashima 3**	**2.06**	**171**	P		**Pn**		**10 46 37.8**	**+0.8**
JTU	**Tsushima**	**2.08**	**331**	Pn		**Pn**		**10 46 36.6**	**-0.6**
JTU	**Tsushima**	**2.08**	**331**	A		A		10 46 37.9	
	comp=E,29nm,7.4s,comp=E,36nm,5.9s								
JTU	**Tsushima**	**2.08**	**331**	⇓P		**Pn**		**10 46 36.5**	**-0.7**
JHGM	**Hagimishima**	**2.12**	**12**	A		A		10 46 38.4	
	comp=E,68nm,1.6s,comp=E,177nm,1.6s								
JHIK	**Hikimi**	**2.13**	**31**	A		A		10 46 38.6	
	comp=E,38nm,6.3s,comp=E,54nm,3.5s								
JKU	**Kubokawa**	**2.15**	**73**	A		A		10 46 38.9	
	comp=E,39nm,5.6s,comp=E,47nm,5.5s								
JKU	**Kubokawa**	**2.15**	**73**	⇓P		**Pn**		**10 46 38.8**	**+0.7**
JHM	**Kurahashi**	**2.15**	**48**	A		A		10 46 38.9	
	comp=E,40nm,1.0s,comp=E,37nm,1.4s								
JKC	**Kuchinoerabu**	**2.26**	**189**	A		A		10 46 41.0	
	comp=E,13nm,3.0s,comp=E,25nm,6.1s								
JET	**Tanbara**	**2.31**	**62**	A		A		10 46 41.2	
	comp=E,22nm,1.3s,comp=E,30nm,2.0s								
JMTN	**Minamitane**	**2.31**	**174**	A		A		10 46 41.7	
	comp=E,23nm,6.1s,comp=E,28nm,4.8s								
JYAK	**Yakushimahirau**	**2.46**	**182**	A		A		10 46 43.8	
	comp=E,9.0nm,8.6s,comp=E,12nm,9.2s								
JHT	**Toyohira**	**2.47**	**37**	A		A		10 46 43.5	
	comp=E,26nm,1.5s,comp=E,36nm,5.5s								
JHT	**Toyohira**	**2.47**	**37**	P		**Pn**		**10 46 43.2**	**+0.6**
JKHR	**Kochiharuno**	**2.55**	**71**	A		A		10 46 44.8	
	comp=E,42nm,3.8s,comp=E,37nm,1.3s								
KSBUS	**Busan**	**2.83**	**334**	Pn		**Pn**		**10 46 47.7**	**+0.2**
JGT2	**ShimaneMisato**	**2.83**	**33**	A		A		10 46 48.7	
	comp=E,32nm,1.7s,comp=E,41nm,5.2s								
JGT2	**ShimaneMisato**	**2.83**	**33**	⇓P		**Pn**		**10 46 48.4**	**+0.8**
JJG	**Jouge**	**2.87**	**47**	A		A		10 46 49.2	
	comp=E,17nm,2.8s,comp=E,30nm,5.4s								
JNN	**Nakanoshima**	**2.92**	**193**	A		A		10 46 50.4	
	comp=E,15nm,6.4s,comp=E,14nm,6.7s								
JMN	**Monobe**	**2.92**	**69**	Pn		**Pn**		**10 46 49.7**	**+0.8**
JMN	**Monobe**	**2.92**	**69**	A		A		10 46 50.0	
	comp=E,42nm,5.7s,comp=E,45nm,5.5s								
MRT2	**Murotomisaki 2**	**3.04**	**76**	A		A		10 46 51.8	
	comp=E,14nm,1.1s,comp=E,18nm,7.3s								
JHS	**Saijyo**	**3.10**	**42**	Pn		**Pn**		**10 46 52.6**	**+1.3**
JHS	**Saijyo**	**3.10**	**42**	A		A		10 46 52.5	
	comp=E,22nm,2.3s,comp=E,22nm,2.7s								
JHS	**Saijyo**	**3.10**	**42**	⇓P		**Pn**		**10 46 52.3**	**+1.1**
JJS	**Sakaide**	**3.23**	**58**	A		A		10 46 54.4	
	comp=E,17nm,1.7s,comp=E,23nm,8.7s								
JMAF	**Mimaanabuki**	**3.25**	**65**	A		A		10 46 54.7	
	comp=E,21nm,1.7s,comp=E,20nm,3.1s								
JISK	**Izumosakaura**	**3.35**	**33**	A		A		10 46 56.1	
	comp=E,64nm,2.4s,comp=E,48nm,3.8s								
JAI	**Aioi**	**3.40**	**70**	A		A		10 46 56.8	
	comp=E,23nm,6.4s,comp=E,25nm,5.0s								
JNM	**Ikuma**	**3.43**	**35**	A		A		10 46 57.2	
	comp=E,74nm,1.9s,comp=E,54nm,1.5s								
JAD	**Aida**	**3.71**	**52**	A		A		10 47 01.1	
	comp=E,19nm,3.8s,comp=E,16nm,2.9s								
JKR	**Kurayoshi**	**3.77**	**44**	A		A		10 47 02.0	
	comp=E,30nm,1.8s,comp=E,29nm,4.6s								
NAWB	**Namwon**	**3.81**	**316**	Pn		**Pn**		**10 47 00.6**	**-0.3**
JAWN	**Awajishima-nag**	**4.00**	**62**	A		A		10 47 05.3	
	comp=E,12nm,6.0s,comp=E,25nm,3.0s								
JWM	**Minabe**	**4.13**	**73**	A		A		10 47 07.2	
	comp=E,14nm,5.8s,comp=E,15nm,1.6s								
JOI	**OKI**	**4.19**	**31**	A		A		10 47 07.9	
	comp=E,18nm,2.1s,comp=E,15nm,1.4s								
JMIK	**Miki**	**4.25**	**59**	A		A		10 47 08.9	
	comp=E,12nm,1.2s,comp=E,25nm,3.2s								
JTNC	**Tanabenakahech**	**4.33**	**74**	A		A		10 47 10.1	
	comp=E,14nm,2.1s,comp=E,13nm,3.6s								
JWKM	**Wakayamakushim**	**4.38**	**79**	A		A		10 47 10.8	
	comp=E,11nm,1.6s,comp=E,18nm,6.7s								
JKSM	**Kasumi**	**4.42**	**48**	A		A		10 47 11.2	
	comp=E,15nm,1.7s,comp=E,18nm,2.1s								
JWY	**Kouya**	**4.43**	**69**	A		A		10 47 11.4	
	comp=E,22nm,6.1s,comp=E,16nm,4.3s								
TJN	**Taejon**	**4.54**	**325**	Pn		**Pn**		**10 47 11.2**	**+0.2**
TJN	**Taejon**	**4.54**	**325**	*de*	P	**Pn**		**10 47 11.3**	**+0.2**
JHE	**Heguri**	**4.66**	**64**	A		A		10 47 14.5	
	comp=E,9.0nm,7.7s,comp=E,11nm,10.7s								
JMMH	**Miemihama**	**4.67**	**75**	A		A		10 47 14.8	
	comp=E,11nm,6.9s,comp=E,8.0nm,4.9s								
JNTK	**Naratenkawa**	**4.67**	**69**	A		A		10 47 14.8	
	comp=E,13nm,6.4s,comp=E,12nm,2.7s								
KSCHJ	**Chungju**	**4.69**	**333**			**Pn**		**10 47 12.9**	**-0.2**
JKY	**Yasaka**	**4.73**	**51**	A		A		10 47 15.6	
	comp=E,16nm,3.1s,comp=E,15nm,3.3s								
JKY	**Yasaka**	**4.73**	**51**	P		**Pn**		**10 47 14.7**	**+1.0**
JWT	**Wachi**	**4.74**	**56**	A		A		10 47 15.7	
	comp=E,9.0nm,4.0s,comp=E,15nm,9.3s								
JKN2	**Miekihoku**	**4.97**	**71**	A		A		10 47 19.0	
	comp=E,12nm,6.7s,comp=E,12nm,2.5s								
KSRS	**Korea Array**	**5.23**	**336**			**Pn**		**10 47 21.1**	**+0.6**
KSRS	**Korea Array**	**5.23**	**336**	P		**Pn**		**10 47 21.1**	**+0.6**
KSRS	**Korea Array**	**5.23**	**336**	Pn		**Pn**		**10 47 21.1**	**+0.6**
KSRS	3.7nm,0.3s,baz=154,slow=14,SNR=18				Lg	Lg		10 48 43.7	
	15nm,0.3s,baz=153,slow=30,SNR=5.3								
	8.4nm,0.3s								
KSAR	**Wonju Array Be**	**5.23**	**335**			**Pn**		**10 47 21.3**	**+0.8**
KSAR	**Wonju Array Be**	**5.23**	**335**	P		**Pn**		**10 47 21.3**	**+0.8**
TSUJ	**Tsu 2**	**5.24**	**66**	A		A		10 47 22.7	
	comp=E,14nm,6.8s,comp=E,15nm,4.7s								
JFM	**Mihama**	**5.27**	**56**	A		A		10 47 23.2	
	comp=E,10.0nm,6.5s,comp=E,15nm,11.3s								
KS19	**Wonju Array Si**	**5.29**	**336**			**Pn**		**10 47 21.6**	**+0.2**
JIE	**Ise**	**5.36**	**70**	A		A		10 47 24.4	
	comp=E,10.0nm,6.8s,comp=E,10.0nm,7.1s								
JIE	**Ise**	**5.36**	**70**	P		**Pn**		**10 47 24.4**	**+2.1**
JEG	**Eigenji**	**5.38**	**62**	A		A		10 47 24.7	
	comp=E,7.0nm,7.0s,comp=E,11nm,2.4s								
JAA	**Atsumi**	**5.78**	**69**	A		A		10 47 30.3	
	comp=E,11nm,6.3s,comp=E,8.0nm,7.0s								
INCN	**Inchon**	**5.78**	**327**	Pn		**Pn**		**10 47 28.4**	**+0.3**
INCN	**Inchon**	**5.78**	**327**	P		**Pn**		**10 47 28.4**	**+0.3**
JYTA	**Yamagatataniai**	**5.84**	**59**	P		**Pn**		**10 47 30.6**	**+1.8**
SEHB	**SEOHWA**	**5.88**	**342**	Pn		**Pn**		**10 47 31.3**	**+1.8**
JKG	**Kaga**	**5.92**	**51**	A		A		10 47 32.2	
	comp=E,16nm,3.2s,comp=E,11nm,2.0s								
INU	**Inuyama**	**5.94**	**62**	Pn		**Pn**		**10 47 32.2**	**+2.0**
JAO	**Obara**	**6.08**	**63**	A		A		10 47 34.5	
	comp=E,9.0nm,7.8s,comp=E,14nm,7.0s								
JOW	**Kunigami**	**6.19**	**200**	Pn		**Pn**		**10 47 37.5**	**+3.7**
JGF	**Kuroka**	**6.29**	**61**	Pn		**Pn**		**10 47 36.0**	**+0.8**
JJH	**Hakui**	**6.59**	**49**	A		A		10 47 41.6	
	comp=E,10.0nm,4.3s,comp=E,9.0nm,4.5s								
MAJO	**Matsushiro**	**7.34**	**56**	Pn		**Pn**		**10 47 50.9**	**+1.4**
MAJO	**Matsushiro**	**7.34**	**56**	*c*	P	**Pn**		**10 47 50.7**	**+1.2**
MJAR	**Matsushiro Arr**	**7.34**	**56**	P		**Pn**		**10 47 49.9**	**+0.4**
MJAR	**Matsushiro Arr**	**7.34**	**56**	Pn		**Pn**		**10 47 49.9**	**+0.4**
	0.8nm,0.3s,baz=244,slow=13,SNR=43								
MJAR					Lg	Lg		10 49 56.4	
	0.2nm,0.3s,baz=235,slow=27,SNR=5.2								
MJAR					LR	LR		10 50 29.8	
	comp=E,2μm,19.8s,baz=242,slow=37								
	18nm,0.7s								
JHJ	**Hachijo jima 2**	**7.72**	**84**			**Pn**		**10 47 55.0**	**+0.2**
JHJ	**Hachijo jima 2**	**7.72**	**84**	Pn		**Pn**		**10 47 55.0**	**+0.2**
	120nm,0.3s,baz=114,slow=23,SNR=18								
JHJ					LR	LR		10 51 02.4	
	comp=Z,2μm,19.2s,baz=295,slow=39								
JHJ2	**Mitsune**	**7.75**	**84**	Pn		**Pn**		**10 47 55.2**	**+0.1**
JSD	**Sado**	**8.21**	**47**			**Pn**		**10 48 03.5**	**+2.1**
JMM	**Marumori**	**9.79**	**55**			**Pn**		**10 48 24.5**	**+1.5**
NJ2	**Nanjing**	**9.96**	**269**	⇑	*i*	P	**Pn**	**10 48 23.5**	**-2.0**
NJ2						S	**Sn**	**10 50 16.5**	**-0.6**
NJ2					pmax	pmax			
	comp=Z,18nm,1.1s								
NJ2					pmax	pmax			
	comp=Z,690nm,4.1s								
NJ2					LR	LR			
	comp=N,2μm,6.8s								
NJ2					LR	LR			
	comp=E,4μm,11.9s								
NJ2					LR	LR			
	comp=Z,3μm,11.8s								
JCJ	**Chichijima**	**11.49**	**116**		LR	LR		10 52 48.5	
	comp=Z,613nm,19.1s,baz=338,slow=36								
USRK	**Ussuriysk Ar.**	**11.53**	**5**	Pn		**Pn**		**10 48 48.4**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=184,slow=11,SNR=12								
USRK					LR	LR		10 52 38.0	
	comp=Z,896nm,20.9s,baz=257,slow=34								
JTM	**Tenmabayashi**	**11.63**	**43**			**Pn**		**10 48 49.1**	**+0.8**
YULB	**Yu-li**	**12.39**	**224**	Pn		**Pn**		**10 48 56.6**	**-2.1**
QZH	**Quanzhou**	**13.06**	**237**	P		**P**		**10 49 16.8**	**-1.4**
QZH					S	**S**		**10 51 53.0**	**-5.2**
QZH					LR	LR			
	comp=N,1μm,10.4s								
QZH					LR	LR			
	comp=E,2μm,11.4s								
QZH					LR	LR			
	comp=Z,2μm,10.4s								
BNX	**BinXian**	**13.25**	**350**	⇑	P	**P**		**10 49 17.0**	**-3.2**
BNX					pmax	pmax			
	comp=Z,20nm,1.3s								
BNX					pmax	pmax			
	comp=Z,940nm,3.9s								
HNS	**HongShan**	**13.84**	**294**	⇓	P	**Pn**		**10 49 18.5**	**0.0**
HNS					S	**Sn**		**10 51 58.0**	**+6.0**
HNS					pmax	pmax			
	comp=Z,5.0nm,0.9s								
HNS					pmax	pmax			
	comp=Z,520nm,8.1s								
HNS					LR	LR			
	comp=Z,4μm,16.1s								
HNS					LR	LR			
	comp=Z,3μm,16.7s								
HNS					LR	LR			
	comp=Z,3μm,13.3s								
WHN	**Wuhan**	**14.02**	**266**		P	**P**		**10 49 26.0**	**-2.9**
WHN					S	**Sn**		**10 52 05.0**	**+8.6**
WHN					LR	LR			
	comp=Z,5μm,11.7s								
WHN					LR	LR			
	comp=Z,14μm,10.8s								
WHN					LR	LR			
	comp=Z,18μm,10.8s								
LYN	**LuoYang**	**15.23**	**282**	*e*	P	**P**		**10 49 42.8**	**+0.5**
LYN					S	**S**		**10 52 42.0**	**-0.5**
LYN					pmax	pmax			
	comp=E,240nm,5.8s								
LYN					LR	LR			
	comp=Z,2μm,10.8s								
LYN					LR	LR			
	comp=Z,2μm,12.1s								
LYN					LR	LR			
	comp=Z,4μm,11.3s								
CNSH	**ChangSha**	**15.90**	**258**	⇓	P	**P**		**10 49 50.5**	**+0.8**
CNSH					S	**S**		**10 52 52.5**	**-3.8**
CNSH					LR	LR			
	comp=Z,3μm,9.6s								
CNSH					LR	LR			
	comp=Z,3μm,11.9s								
CNSH					LR	LR			
	comp=Z,3μm,11.8s								
XLT	**XiLinHaoTe**	**15.95**	**319**	⇓	*i* P	**Pn**		**10 49 48.3**	**+1.6**
XLT					pP	P		10 49 51.8	+1.5
XLT					S	**Sn**		**10 52 46.0**	**+2.7**
XLT					pmax	pmax			
	comp=Z,19nm,1.5s								
XLT					pmax	pmax			
	comp=Z,390nm,4.1s								
XLT					LR	LR			
	comp=Z,6μm,9.8s								
XLT					LR	LR			
	comp=Z,6μm,10.0s								
KLR	**Kul'dur**	**16.54**	**3**	⇑	*e* P	**P**		**10 49 56.8**	**+0.1**
KLR					pmax	pmax			
	comp=Z,160nm,1.3s								
KLR	**Kul'dur**	**16.54**	**3**	Pn		**Pn**		**10 49 54.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=211,slow=10,SNR=7.4								
KLR					LR	LR		10 55 50.0	
	comp=Z,523nm,19.4s,baz=186,slow=36								
	comp=Z,26nm,1.4s								
YSS	**Yuzh-Sakhalins**	**16.99**	**30**	*ce*	P	**P**		**10 50 01.9**	**+0.2**
YSS					pmax	pmax			
	comp=Z,84nm,2.5s								
HHC	**Hu-ho-hao-te**	**17.27**	**303**	*e*	P	**P**		**10 50 05.3**	**+0.3**
HHC					S	**S**		**10 53 22.0**	**-2.3**
HHC					pmax	pmax			
	comp=Z,23nm,0.5s								
HHC					pmax	pmax			
	comp=Z,940nm,5.7s								
HHC					LR	LR			
	comp=Z,3μm,9.8s								
HHC					LR	LR			
	comp=Z,5μm,11.4s								
HHC					LR	LR			
	comp=Z,6μm,10.5s								
XAN	**Xi'an**	**18.17**	**280**		P	P		10 50 26.3	+11
XAN					pP	sP		10 50 35.0	+14
XAN					pmax	pmax			
	comp=Z,23nm,1.1s								
XAN	**Xi'an**	**18.17**	**280**		P	**P**		**10 50 16.5**	**+1.6**
XAN					pP	sP		10 50 22.8	+1.9
XAN					S	**S**		**10 53 50.0**	**+7.4**
XAN					pmax	pmax			
	comp=Z,9.0nm,1.2s								
XAN					pmax	pmax			
	comp=Z,610nm,6.3s								
XAN					LR	LR			
	comp=Z,2μm,12.8s								
XAN					LR	LR			
	comp=Z,4μm,13.1s								
XAN					LR	LR			
	comp=Z,4μm,12.5s								
BTO	**Baotou**	**18.28**	**301**	*e*	P	**Pn**		**10 50 11.5**	**-4.5**
BTO					S	S		10 53 56.5	+12
BTO					LR	LR			
	comp=N,9μm,14.3s								
BTO					LR	LR			
	comp=E,7μm,11.1s								
KUR	**Kuril'sk**	**18.30**	**42**	*e*	P	**Pn**		**10 50 14.4**	**-1.7**
KUR					M

comp=Z,3µm,17.2s
CD2 Chengdu 22.87 273 P P 10 51 08.0 +2.1
CD2 S S 10 55 17.8 +2.6
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 LR LR
comp=Z,4µm,13.2s
CD2 LR LR
comp=Z,5µm,11.6s
CD2 LR LR
comp=Z,7µm,12.0s
GUMO Guam 23.06 142 P P 10 51 06.9 -0.9
GUMO Guam 23.06 142 P P 10 51 06.9 -0.9
GUMO pmax pmax
comp=Z,248nm,1.8s
GUMO Guam 23.06 142 P P 10 51 06.8 -0.9
comp=Z,71nm,1.2s,baz=327,slow=16,SNR=3.7
GUMO LR LR 10 59 37.9
comp=Z,349nm,18.6s,baz=344,slow=35
comp=Z,71nm,1.2s
QIZ Qiongzhong 23.06 239 P P 10 51 07.8 -0.1
QIZ S S 10 55 17.5 -1.0
QIZ pmax pmax
comp=Z,470nm,3.8s
QIZ LR LR
comp=Z,2µm,12.0s
QIZ LR LR
comp=Z,1µm,11.0s
QIZ LR LR
comp=Z,2µm,11.1s
ULN Ulaanbaatar 23.37 317 *ce*P P **10 51 11.5 +0.5**
ULN pmax pmax
comp=Z,30nm,1.3s
SONM Songino Array 23.74 317 P P 10 51 14.5 0.0
SONM Songino Array 23.74 317 P P 10 51 14.5 0.0
SONM pmax pmax
comp=Z,49nm,1.7s
SONM Songino Array 23.74 317 P P 10 51 15.0 +0.4
comp=Z,12nm,0.9s,baz=127,slow=8.4,SNR=27
SONM LR LR 10 59 41.8
comp=Z,350nm,18.3s,baz=104,slow=35
comp=Z,12nm,0.9s
KMI Kunming 25.49 260 ⇓P P **10 51 34.5 +3.6**
KMI pP sP 10 51 37.5 +0.4
KMI sP pP 10 51 39.0 +3.7
KMI S S **10 56 06.0 +8.1**
KMI pmax pmax
comp=Z,15nm,0.9s
KMI pmax pmax
comp=Z,330nm,5.9s
KMI LR LR
comp=Z,2µm,10.0s
KMI LR LR
comp=Z,2µm,11.5s
KMI LR LR
comp=Z,3µm,11.4s
GTA Gaotai 25.70 294 ⇓P P **10 51 32.8 +0.2**
GTA pP sP 10 51 37.3 -1.5
GTA sP pP 10 51 40.3 +3.3
GTA S S **10 56 01.8 +0.9**
GTA sS sS 10 56 10.8 +2.5
GTA pmax pmax
comp=Z,20nm,1.2s
GTA pmax pmax
comp=Z,280nm,5.1s
GTA LR LR
comp=Z,1µm,13.5s
GTA LR LR
comp=Z,2µm,12.4s
GTA LR LR
comp=Z,2µm,12.0s
PZH PanZhiHua 25.80 264 P P 10 51 33.8 +0.2
PZH sP **sP 10 51 42.0 +2.2**
PZH S S **10 56 01.8 -0.9**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,370nm,5.9s
PZH LR LR
comp=Z,1µm,10.6s
PZH LR LR
comp=Z,1µm,11.4s
PZH LR LR
comp=Z,1µm,11.5s
DAV Davao City (W) 25.93 191 LR LR 11 03 48.6
comp=Z,566nm,18.1s,baz=4.0,slow=41
ZAK Zakamensk 26.80 319 *eP* P **10 51 41.9 -0.5**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
BOD Bodaibo 27.55 341 *eP* P **10 51 49.1 +0.2**
BOD pmax pmax
comp=Z,28nm,1.6s
PETK Petropavlovsk- 28.17 36 LR LR 11 03 45.6
comp=Z,261nm,18.2s,baz=201,slow=38
PET Petropavlovsk 28.59 36 P P **10 51 57.1 -1.1**
PET IAmb IAmb 10 52 36.6
comp=Z,30nm,1.2s
YAK Yakutsk 29.35 359 P P **10 52 03.7 -1.1**
YAK IAmb IAmb 10 52 08.5
comp=Z,54nm,1.3s
YAK Yakutsk 29.35 359 *eP* P **10 52 04.1 -0.8**
YAK pmax pmax
comp=Z,27nm,1.1s
YAK pmax pmax
comp=N,18nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK Yakutsk 29.35 359 LR LR 11 03 21.3
comp=E,348nm,21.1s,baz=102,slow=36
GOMU GeErMu 29.62 287 P P **10 52 09.0 +1.0**
GOMU pP sP 10 52 15.5 +1.2
GOMU sP pP 10 52 17.5 +5.0
GOMU S S **10 56 56.5 -6.7**
GOMU pmax pmax
comp=E,7.0nm,0.9s
GOMU pmax pmax
comp=E,87nm,5.7s
GOMU LR LR
comp=E,630nm,14.3s
GOMU LR LR
comp=E,310nm,12.6s
GOMU LR LR
comp=E,380nm,11.2s
KKM Kota Kinabalu 29.72 210 P P **10 52 07.5 -1.2**
MA2 Magadan 30.04 21 LR LR 11 04 49.8
comp=E,368nm,18.8s,baz=188,slow=38
KNGR Kungurtug, Tuv 30.18 316⇑ *eP* P **10 52 13.3 +0.8**
KNGR pmax pmax
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 31.56 252 P P **10 52 24.0 -0.9**
CHTO Chiang Mai 31.56 252 P P **10 52 24.0 -0.9**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
CM31 Chiang Mai Arr 31.75 251 P P **10 52 25.5 -1.0**
CMAR Chiang Mai Arr 31.75 251 P P **10 52 25.9 -0.7**
CMAR Chiang Mai Arr 31.75 251 P P **10 52 27.8 +1.2**
CMAR 10 55 18.2
CMAR Chiang Mai Arr 31.75 251 P P **10 52 27.8 +1.2**
comp=Z,2.8nm,1.0s,baz=44,slow=6.6,SNR=12
CMAR PcP **PcP 10 55 18.2 +0.3**
comp=Z,0.9nm,0.7s,baz=311,slow=0.9,SNR=5.6
CMAR LR LR 11 07 13.1
comp=Z,458nm,19.4s,baz=65,slow=40
comp=Z,2.8nm,1.0s
SEY Seymchan 33.25 18⇓ *eP* P **10 52 39.5 +0.4**
SEY pmax pmax
comp=Z,21nm,1.7s
SIJI Sorong 33.40 179 LR LR 11 05 30.0
comp=Z,256nm,19.6s,baz=30,slow=35
MPSI Mapaga 33.74 200 P P **10 52 44.7 +0.8**
comp=Z,7.7nm,1.1s
SBUM Sibu 34.70 214 P P **10 52 52.4 +0.2**
WMQ Urumqi 35.12 301 *eP* P **10 52 56.3 +0.5**
WMQ pP sP 10 53 02.8 +0.7
WMQ PP **PP 10 54 18.8 +3.4**
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ LR LR
comp=Z,2µm,18.9s
WMQ LR LR
comp=Z,1µm,16.9s
WMQ LR LR
comp=Z,530nm,18.9s
SHEM Shemya Is, Ala 36.98 44 LR LR 11 07 01.6
comp=Z,176nm,21.5s,baz=250,slow=34
JIRN Jiri 38.52 274 *eP* P **10 53 26.6 +1.4**

ZAA0 Zalesovo Array 38.63 317 P P **10 53 24.9 -0.4**
ZALV Zalesovo Beam 38.63 317 P P **10 53 25.2 -0.2**
ZALV Zalesovo Beam 38.63 317 *i* P P **10 53 25.8 +0.4**
ZALV pmax pmax
comp=Z,3.0nm,0.9s
ZALV Zalesovo Beam 38.63 317 P P **10 53 25.9 +0.4**
comp=Z,4.6nm,1.0s,baz=98,slow=6.6,SNR=10
ZALV LR LR 11 10 28.7
comp=Z,390nm,20.4s,baz=102,slow=38
comp=Z,4.6nm,1.0s
GUN Gumba 38.70 275 *e*P P **10 53 27.7 +1.0**
comp=Z,104nm,1.0s
KAPI Kappang 38.90 197 LR LR 11 09 07.9
comp=Z,180nm,21.2s,baz=22,slow=36
TIXI Tiksi 39.02 359 P P **10 53 28.0 -0.4**
TIXI Tiksi 39.02 359 *ce*P P **10 53 29.6 +1.2**
TIXI pmax pmax
comp=Z,17nm,1.7s
TIXI Tiksi 39.02 359 P P **10 53 27.3 -1.1**
comp=Z,2.9nm,0.8s,baz=270,slow=24,SNR=7.6
TIXI LR LR 11 09 57.5
comp=Z,378nm,19.6s,baz=179,slow=37
comp=Z,2.9nm,0.8s
MK31 Makanchi Array 39.11 306 P P **10 53 29.2 -0.4**
MK31 Makanchi Array 39.11 306 *c* iP P **10 53 29.7 +0.1**
MKAR Makanchi Array 39.11 306 P P **10 53 29.2 -0.4**
MKAR Makanchi Array 39.11 306 *i* P P **10 53 29.8 +0.2**
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 39.11 306 P P **10 53 29.9 +0.2**
comp=Z,4.4nm,0.8s,baz=96,slow=11,SNR=13
MKAR LR LR 11 10 49.8
comp=Z,322nm,19.6s,baz=104,slow=38
comp=Z,4.4nm,0.8s
PKI Pulchoki 39.20 275 *e*P P **10 53 31.0 +0.1**
comp=Z,28nm,1.0s
DANN Dangsing 40.34 277 *e*P P **10 53 41.0 +0.7**
comp=Z,62nm,0.9s
KOLN Kolda 40.66 276 *e*P P **10 53 42.3 -0.6**
SEM Semipalatinsk 40.77 311 *e*P P **10 53 42.0 -1.5**
SEM pmax pmax
comp=Z,7.0nm,1.0s
SEM Semipalatinsk 40.77 311 *e*P P **10 53 42.0 -1.5**
comp=Z,6.8nm,1.0s,baz=310
BILL Bilibino 40.90 20 P P **10 53 45.1 +1.0**
BILL IAmb IAmb 10 53 47.3
comp=Z,39nm,1.2s
BILL Bilibino 40.90 20 *de*P P **10 53 45.7 +1.6**
BILL *e* 10 55 21.0
BILL pmax pmax
comp=Z,28nm,1.3s
BILL MLR MLR
comp=Z,344nm,13.0s
PYUN Piuthan 41.06 277 *e*P P **10 53 46.6 +0.4**
comp=Z,97nm,1.1s
UZB Uzynbulak 41.43 300 *e*P P **10 53 47.8 -1.1**
UZB Uzynbulak 41.43 300 *e*P P **10 53 47.9 -1.1**
baz=299
KPKS Kokpek 41.66 300 *e*P P **10 53 49.6 -1.1**
KPKS Kokpek 41.66 300 *e*P P **10 53 49.7 -1.1**
baz=300
TDK Taldyqorghan 41.80 303 *e*P P **10 53 51.3 -0.5**
TDK Taldyqorghan 41.80 303 *e*P P **10 53 51.4 -0.5**
baz=302
KURK Kurchatov 41.83 311 P P **10 53 51.7 -0.2**
KURK Kurchatov 41.83 311 *d* iP P **10 53 51.8 -0.2**
KURK pmax pmax
comp=Z,26nm,1.3s
KURBB Kurchatov Arra 41.88 311 P P **10 53 52.4 0.0**
comp=Z,11nm,0.9s,baz=98,slow=9.2,SNR=43
KURBB LR LR 11 12 19.3
comp=Z,620nm,19.9s,baz=72,slow=38
comp=Z,11nm,0.9s
SATY Saty 41.88 300 *e*P P **10 53 51.7 -1.0**
SATY Saty 41.88 300 *e*P P **10 53 51.8 -1.0**
baz=299
PSI Prapat 42.04 232 LR LR 11 11 58.1
comp=Z,513nm,19.7s,baz=49,slow=37
KRVT Keravat (AS076 42.04 147 LR LR 11 08 46.0
comp=Z,168nm,20.9s,baz=118,slow=32
CHKK Chushkaly 42.86 301 *e*P P **10 53 59.9 -0.6**
CHKK Chushkaly 42.86 301 *e*P P **10 53 59.9 -0.6**
baz=301
MDOK Medeo 42.87 300 *e*P P **10 53 59.8 -0.9**
MDOK pmax pmax
comp=Z,8.0nm,0.4s
MDOK Medeo 42.87 300 *e*P P **10 53 59.9 -0.9**
comp=Z,7.5nm,0.4s,baz=300
AAA Alma-Ata 42.96 300 *e*P P **10 54 01.4 0.0**
AAA Alma-Ata 42.96 300 *e*P P **10 54 01.4 0.0**
baz=300
KUU Kurty 43.33 301 *e*P P **10 54 03.2 -1.0**
KUU pmax pmax
comp=Z,10.0nm,1.3s
KUU Kurty 43.33 301 *e*P P **10 54 03.3 -1.0**
comp=Z,10nm,1.3s,baz=301
TKM2 Tokmak 2 43.95 300 P P **10 54 09.9 +0.4**
KSH Kashi 44.09 295 P P 10 54 15.5 +4.9
KSH LR LR
comp=Z,500nm,16.8s
KSH LR LR
comp=Z,830nm,17.9s
KSH LR LR
comp=Z,530nm,15.8s
SGDS Sogindy 44.60 301 *e*P P **10 54 13.4 -1.2**
SGDS Sogindy 44.60 301 *e*P P **10 54 13.4 -1.2**
baz=300
AAK Ala-Archa 44.79 300 P P **10 54 16.3 +0.1**
AAK Ala-Archa 44.79 300 *de*P P **10 54 16.6 +0.4**
AAK pmax pmax
comp=Z,13nm,1.3s
BTLS Baital 44.88 303 *e*P P **10 54 16.0 -0.7**
BTLS pmax pmax
comp=Z,16nm,2.0s
BTLS Baital 44.88 303 *e*P P **10 54 16.1 -0.7**
comp=Z,16nm,2.0s,baz=302
LEM Lembang 44.99 213 P P **10 54 18.7 +0.7**
LEM Lembang 44.99 213 P P **10 54 18.7 +0.7**
comp=Z,44nm,0.8s,baz=109,slow=9.0,SNR=7.3
comp=Z,44nm,0.8s
BRZS Berezniki 45.60 310 *e*P P **10 54 21.5 -0.9**
BRZS pmax pmax
comp=Z,14nm,1.5s
BRZS Berezniki 45.60 310 *e*P P **10 54 21.5 -0.9**
comp=Z,14nm,1.5s,baz=310
BVA0 Borovoye Array 47.04 314 *i* P P **10 54 33.6 0.0**
BVAR Borovoye Array 47.04 314 P P **10 54 34.0 +0.4**
BVAR Borovoye Array 47.04 314 P P **10 54 34.0 +0.4**
comp=Z,7.0nm,0.7s,baz=95,slow=9.4,SNR=56
BVAR LR LR 11 14 43.3
comp=Z,411nm,19.4s,baz=93,slow=37
comp=Z,7.0nm,0.7s
DZA Taraz 47.06 300 *e*P P **10 54 33.8 -0.2**
DZA Taraz 47.06 300 *e*P P **10 54 33.9 -0.2**
baz=300
BRVK Borovoye 47.11 314 P P **10 54 34.2 +0.1**
BRVK IAmb IAmb 10 54 39.3
comp=Z,33nm,1.2s
BRVK Borovoye 47.11 314 *d* iP P **10 54 34.5 +0.4**
BRVK pmax pmax
comp=Z,15nm,0.9s
KK31 Karatay Array 47.63 301 IAmb IAmb 10 54 44.3
comp=Z,20nm,0.8s
KK31 Karatay Array 47.63 301 *i* P P **10 54 39.1 +0.7**
KKAR Karatay Array 47.63 301 P P **10 54 38.8 +0.4**
KKAR IAmb IAmb 10 54 44.3
comp=Z,20nm,0.8s
KKAR Karatay Array 47.63 301 P P **10 54 38.8 +0.4**
KKAR pmax pmax
comp=Z,20nm,0.8s
IUG luzhnay 48.13 300 *e*P P **10 54 41.4 -0.9**
IUG luzhnay 48.13 300 *e*P P **10 54 41.5 -0.9**
baz=299
KNRA Kunumurra 48.14 182 P P **10 54 41.2 -1.2**
KNRA IAmb IAmb 10 54 43.0
comp=Z,32nm,1.3s
TNA Tin City 48.97 29 P P **10 54 49.1 +0.8**
baz=259
HYBB Hyderabad (bro 49.09 265 *e*P P **10 54 50.5 +0.6**
HYBB *es*P **pP 10 54 54.4 -0.1**
HYBB *eS* S **11 01 55.4 +0.7**
HNR Honiara 50.38 141 LR LR 11 13 58.2
comp=Z,83nm,20.4s,baz=330,slow=33
FITZ Fitzroy Crossi 50.73 186 P P **10 55 01.6 -0.6**
FITZ Fitzroy Crossi 50.73 186 P P **10 55 02.2 0.0**
comp=Z,4.8nm,0.9s,baz=16,slow=9.7,SNR=6.2

comp=Z,4.8nm,0.9s
WRAB Tennant Creek 52.46 176⇑ *e*P P **10 55 14.7 -0.4**
WRAB pmax pmax
comp=Z,5.0nm,1.2s
WRA Warramunga Arr 52.47 176 P P **10 55 13.6 -1.5**
WRA Warramunga Arr 52.47 176 *i* P P **10 55 14.6 -0.5**
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 52.47 176 P P **10 55 14.7 -0.5**
comp=Z,2.5nm,0.8s,baz=351,slow=7.8,SNR=6.9
comp=Z,2.5nm,0.8s
WR0 Warramunga Arr 52.50 175 P P **10 55 14.7 -0.7**
CHNA Chernabura Isl 52.63 43 P P **10 55 15.1 -0.9**
baz=275
CNBA Chernabura Isl 52.63 43 P P **10 55 15.4 -0.6**
CNBA IAmb IAmb 10 55 16.4
comp=Z,22nm,1.0s
N16K Nishlik Lake 52.72 36 P P **10 55 18.0 +1.3**
baz=272,SNR=9.3
O16K Kokwok River B 53.10 37 P P **10 55 20.8 +1.4**
baz=273,SNR=9.2
P16K Nushagak River 53.18 38 P P **10 55 21.1 +1.1**
baz=274,SNR=5.1
GCSA Galena City Sc 53.53 31 P P **10 55 23.5 +1.0**
baz=270
O17K Koliganek Bris 53.59 37 P P **10 55 24.0 +0.9**
baz=274
A21K Barrow 53.88 22 P P **10 55 25.8 +0.8**
baz=266
Q16K King Salmon 53.90 38 P P **10 55 26.4 +1.1**
baz=275
AB31 Akbulak array 53.91 310 *i* P P **10 55 25.3 -0.3**
ABKAR Akbulak array 53.91 310 P P **10 55 25.5 0.0**
ABKAR IAmb IAmb 10 55 30.6
comp=Z,14nm,1.1s
TTA Tatalina 53.95 33 P P **10 55 26.4 +0.6**
TTA Tatalina 53.95 33 P P **10 55 26.4 +0.6**
TTA Tatalina 53.95 33 P P **10 55 26.7 +0.9**
baz=272
P17K Kvichak River 53.97 37 P P **10 55 26.9 +1.2**
baz=275
N18K Kilae Creek 54.13 36 P P **10 55 28.0 +0.9**
N18K IAmb IAmb 10 55 30.1
comp=Z,24nm,1.4s
N18K Kilae Creek 54.13 36 P P **10 55 28.5 +1.4**
baz=274,SNR=9.3
R17K Ugashik Creek 54.13 39 P P **10 55 27.1 0.0**
baz=276
SVW2 Sparrevohn 54.25 35 IAmb IAmb 10 55 30.8
comp=Z,14nm,1.1s
L19K White Mountain 54.53 34 P P **10 55 30.7 +0.8**
L19K IAmb IAmb 10 55 32.6
comp=Z,22nm,1.2s
L19K White Mountain 54.53 34 P P **10 55 31.1 +1.2**
baz=274,SNR=15
O18K Koktuh Hills 54.54 37 IAmb IAmb 10 55 33.4
comp=Z,22nm,1.1s
O18K Koktuh Hills 54.54 37 P P **10 55 31.3 +1.3**
baz=275,SNR=6.4
P18K Big Mountain, 54.57 37 P P **10 55 31.3 +1.0**
baz=276
CTA Charters Tower 54.58 162 P P **10 55 30.6 -0.1**
CTA Charters Tower 54.58 162 P P **10 55 30.6 -0.1**
comp=Z,5.9nm,0.9s,baz=307,slow=10,SNR=2.6
CTA LR LR 11 19 46.8
comp=Z,114nm,18.2s,baz=350,slow=37
comp=Z,5.9nm,0.9s
J20K Nowinta River 54.73 31 IAmb IAmb 10 55 34.2
comp=Z,34nm,1.3s
J20K Nowinta River 54.73 31 P P **10 55 32.9 +1.6**
baz=273,SNR=24
M19K Big River Lodg 54.76 34 P P **10 55 33.0 +1.4**
baz=274,SNR=5.9
CHIR Chirikof Islan 54.77 42 P P **10 55 32.0 +0.4**
baz=278
N19K Bonanza Creek 54.81 35 P P **10 55 33.3 +1.3**
baz=275
K20K Telida 54.81 32 IAmb IAmb 10 55 34.9
comp=Z,30nm,1.2s
K20K Telida 54.81 32 P P **10 55 33.4 +1.4**
baz=274,SNR=21
F21K Alatna River 54.89 27 P P **10 55 32.8 +0.4**
baz=272
G21K Allakaket 54.90 28 P P **10 55 33.6 +1.1**
baz=272
AKTO Aktyubinsk 54.92 312 P P **10 55 32.8 -0.2**
AKTO Aktyubinsk 54.92 312 P P **10 55 32.8 -0.2**
comp=Z,6.0nm,0.8s,baz=79,slow=5.4,SNR=18
AKTO LR LR 11 18 18.2
comp=Z,320nm,18.2s,baz=81,slow=35
comp=Z,6.0nm,0.8s
O19K Port Alsworth 54.95 36 IAmb IAmb 10 55 35.4
comp=Z,27nm,1.2s
O19K Port Alsworth 54.95 36 P P **10 55 33.9 +1.0**
baz=276
L20K Farewell, AK 54.96 33 P P **10 55 34.4 +1.3**
baz=274,SNR=14
H21K Melozitna Rive 55.22 29 IAmb IAmb 10 55 37.5
comp=Z,16nm,1.4s
H21K Melozitna Rive 55.22 29 P P **10 55 36.0 +1.1**
baz=273,SNR=6.3
M20K Styx River 55.36 34 P P **10 55 37.3 +1.3**
baz=276,SNR=6.2
F22K John River 55.38 27 P P **10 55 37.3 +1.3**
baz=272,SNR=10.0
Q19K Cape Douglas, 55.43 38 P P **10 55 36.4 0.0**
baz=277
SII Sitkinak Islan 55.46 41 P P **10 55 36.7 0.0**
baz=278
E22K Anaktuvuk Pass 55.49 26 P P **10 55 37.7 +0.9**
baz=272
P19K Oil Pt 55.55 37 IAmb IAmb 10 55 40.0
comp=Z,28nm,1.2s
P19K Oil Pt 55.55 37 P P **10 55 37.7 +0.4**
baz=277
CHUM Lake Minchumin 55.55 32 P P **10 55 38.7 +1.4**
baz=275,SNR=5.3
I21K Tanana 55.59 30 IAmb IAmb 10 55 40.5
comp=Z,38nm,1.4s
I21K Tanana 55.59 30 P P **10 55 38.3 +0.8**
baz=274
G22K Bettles 55.67 28 P P **10 55 38.9 +0.8**
baz=274
CAST Castle Rocks 55.70 32 P P **10 55 39.0 +0.7**
CAST IAmb IAmb 10 55 41.1
comp=Z,29nm,1.4s
CAST Castle Rocks 55.70 32 P P **10 55 39.7 +1.4**
baz=275
PPLA Purkeypile 55.70 33 P P **10 55 39.9 +1.4**
baz=276,SNR=9.1
H22K Ishtalitna Cre 55.79 29 P P **10 55 40.6 +1.6**
baz=274,SNR=12
O20K Slope Mountain 55.80 36 P P **10 55 39.6 +0.4**
baz=277
OHAK Old Harbor 55.85 40 IAmb IAmb 10 55 40.9
comp=Z,43nm,1.4s
OHAK Old Harbor 55.85 40 P P **10 55 39.7 +0.3**
baz=279,SNR=7.4
C23K Itkillik River 55.86 24 P P **10 55 39.6 +0.3**
baz=272
N20K Mount Spurr 55.87 35 P P **10 55 40.7 +1.0**
baz=277
SPCR Spurr Chakacha 55.87 35 P P **10 55 40.8 +1.1**
baz=277
D23K Nanushuk River 55.87 25 P P **10 55 39.9 +0.4**
baz=273
SPU Mount Spurr 55.95 35 P P **10 55 40.7 +0.5**
BPAW Bear Paw Mtn. 56.12 31 IAmb IAmb 10 55 44.0
comp=Z,20nm,1.1s
BPAW Bear Paw Mtn. 56.12 31 P P **10 55 42.2 +0.8**
baz=276
Q20K Shuyak Island 56.12 38 P P **10 55 41.1 -0.2**
baz=278
MLY Manley 56.13 30 IAmb IAmb 10 55 44.2
comp=Z,20nm,1.2s
MLY Manley 56.13 30 P P **10 55 42.8 +1.4**
baz=275,SNR=22
ASAR Alice Springs 56.14 176 P P **10 55 41.7 -0.2**
ASAR Alice Springs 56.14 176 P P **10 55 41.6 -0.2**
comp=Z,3.7nm,0.9s,baz=354,slow=5.9,SNR=15
ASAR LR LR 11 19 03.3
comp=Z,131nm,20.9s,baz=60,slow=35
comp=Z,3.7nm,0.9s
KDAK Kodiak Island 56.14 39 P P **10 55 41.7 +0.1**
KDAK IAmb IAmb 10 55 43.1
comp=Z,35nm,1.1s
KDAK Kodiak Island 56.14 39 P P **10 55 41.7 +0.1**
KDAK pmax pmax

	comp=Z,35nm,1.2s									
KDAK	**Kodiak Island**	**56.14**	**39**	P	**P**	**10 55 41.8**	**+0.2**			
	baz=279									
KTH	**Kantishna Hill**	**56.20**	**32**	IAmb	IAmb	10 55 44.6				
	comp=Z,42nm,1.3s									
G23K	**Bananza Creek**	**56.27**	**28**	P	**P**	**10 55 43.4**	**+1.0**			
	baz=275,SNR=5.1									
TOLK	**Toolik Lake Re**	**56.30**	**26**	P	**P**	**10 55 42.7**	**+0.2**			
	baz=274									
HOM	**Homer**	**56.35**	**37**	P	**P**	**10 55 42.6**	**-0.4**			
	baz=278									
TRF	**Thorofare Moun**	**56.50**	**32**	P	**P**	**10 55 44.8**	**+0.6**			
	baz=277,SNR=5.9									
D24K	**Happy Valley**	**56.53**	**25**	P	**P**	**10 55 45.2**	**+1.0**			
	baz=274									
C24K	**Franklin Bluff**	**56.53**	**24**	P	**P**	**10 55 44.9**	**+0.7**			
	baz=274									
H23K	**Yukon River**	**56.55**	**29**	IAmb	IAmb	10 55 47.6				
	comp=Z,39nm,1.2s									
H23K	**Yukon River**	**56.55**	**29**	P	**P**	**10 55 46.4**	**+2.0**			
	baz=276,SNR=31									
CUT	**Chulitna**	**56.64**	**33**	P	**P**	**10 55 45.1**	**+0.1**			
	baz=278									
BRLK	**Bradley Lake**	**56.72**	**36**	IAmb	IAmb	10 55 48.0				
	comp=Z,27nm,1.2s									
E24K	**Your Creek**	**56.74**	**26**	P	**P**	**10 55 47.0**	**+1.2**			
	baz=275									
BRSE	**Bradley Lake S**	**56.79**	**36**	P	**P**	**10 55 45.6**	**-0.6**			
	baz=279,SNR=8.7									
M22K	**Willow**	**56.80**	**34**	P	**P**	**10 55 46.0**	**-0.1**			
	baz=278,SNR=7.9									
NEA2	**Nenana**	**56.89**	**31**	IAmb	IAmb	10 55 49.3				
	comp=Z,29nm,1.0s									
NEA2	**Nenana**	**56.89**	**31**	P	**P**	**10 55 47.9**	**+1.1**			
	baz=277,SNR=7.0									
F24K	**Squaw Lake**	**57.03**	**27**	P	**P**	**10 55 48.6**	**+0.9**			
	baz=276									
MCK	**McKinley**	**57.06**	**32**	IAmb	IAmb	10 55 50.0				
	comp=Z,28nm,1.4s									
MCK	**McKinley**	**57.06**	**32**	P	**P**	**10 55 48.3**	**+0.3**			
	baz=278,SNR=7.4									
RC01	**Rabbit Creek A**	**57.08**	**35**	IAmb	IAmb	10 55 49.7				
	comp=Z,31nm,1.2s									
RC01	**Rabbit Creek A**	**57.08**	**35**	P	**P**	**10 55 48.3**	**+0.1**			
	baz=279,SNR=6.7									
O22K	**Cooper Landing**	**57.18**	**35**	P	**P**	**10 55 48.8**	**-0.1**			
	baz=279									
H24K	**Noodor Dome**	**57.23**	**29**	IAmb	IAmb	10 55 52.3				
	comp=Z,22nm,1.1s									
H24K	**Noodor Dome**	**57.23**	**29**	P	**P**	**10 55 51.1**	**+1.9**			
	baz=277,SNR=17									
G24K	**Hadweenzic Riv**	**57.28**	**28**	P	**P**	**10 55 51.3**	**+1.8**			
	baz=277,SNR=8.9									
PMR	**Palmer**	**57.29**	**34**	IAmb	IAmb	10 55 51.1				
	comp=Z,31nm,1.2s									
PMR	**Palmer**	**57.29**	**34**	P	**P**	**10 55 49.6**	**0.0**			
	baz=279,SNR=17									
WAT1	**Susitna Watana**	**57.36**	**33**	P	**P**	**10 55 50.3**	**0.0**			
	baz=279									
TCOL	**CIGO, UAF Yank**	**57.37**	**30**	IAmb	IAmb	10 55 52.6				
	comp=Z,23nm,1.2s									
TCOL	**CIGO, UAF Yank**	**57.37**	**30**	P	**P**	**10 55 50.9**	**+0.8**			
	baz=279									
COLA	**College**	**57.37**	**30**	P	**P**	**10 55 51.1**	**+1.0**			
COLA				IAmb	IAmb	10 55 52.6				
	comp=Z,16nm,1.1s									
COLA	**College**	**57.37**	**30**	*ce*P	**P**	**10 55 51.4**	**+1.3**			
COLA				pmax	pmax					
	comp=Z,11nm,1.3s									
COLA	**College**	**57.37**	**30**	P	**P**	**10 55 51.1**	**+1.0**			
	baz=278									
SEW	**Seward**	**57.37**	**36**	P	**P**	**10 55 50.2**	**-0.1**			
	baz=280,SNR=11									
D25K	**Kavik River**	**57.38**	**25**	P	**P**	**10 55 49.7**	**-0.5**			
	baz=276									
POKR	**Poker Plat Res**	**57.51**	**30**	P	**P**	**10 55 52.2**	**+1.0**			
	baz=278,SNR=7.1									
SML	**Sawmill**	**57.63**	**34**	IAmb	IAmb	10 55 53.9				
	comp=Z,27nm,1.1s									
SML	**Sawmill**	**57.63**	**34**	P	**P**	**10 55 52.3**	**+0.2**			
	baz=280,SNR=12									
KNK	**Knik Glacier**	**57.63**	**34**	P	**P**	**10 55 52.6**	**+0.5**			
	baz=280,SNR=11									
WAT6	**Susitna Watana**	**57.77**	**33**	P	**P**	**10 55 53.2**	**0.0**			
	baz=280									
PWL	**Port Wells**	**57.79**	**35**	IAmb	IAmb	10 55 54.6				
	comp=Z,36nm,1.2s									
PWL	**Port Wells**	**57.79**	**35**	P	**P**	**10 55 53.1**	**-0.1**			
	baz=280,SNR=12									
ILAR	**Eielson Array**	**57.79**	**30**	P	**P**	**10 55 53.2**	**0.0**			
ILAR	**Eielson Array**	**57.79**	**30**	P	**P**	**10 55 53.1**	**0.0**			
	comp=Z,5.2nm,0.9s,baz=283,slow=5.6,SNR=29									
ILAR				LR	LR	11 20 48.4				
	comp=Z,167nm,19.6s,baz=283,slow=36									
	comp=Z,5.2nm,0.9s									
E25K	**Arctic Village**	**57.83**	**26**	P	**P**	**10 55 53.6**	**+0.2**			
	baz=278									
HDA	**Harding Lake**	**57.83**	**31**	IAmb	IAmb	10 55 54.6				
	comp=Z,25nm,1.1s									
HDA	**Harding Lake**	**57.83**	**31**	P	**P**	**10 55 53.5**	**+0.1**			
	baz=279,SNR=15									
DHY	**Denali Highway**	**57.85**	**32**	P	**P**	**10 55 53.7**	**-0.1**			
	baz=280,SNR=9.4									
F25K	**Christian Rive**	**57.87**	**27**	P	**P**	**10 55 54.2**	**+0.4**			
	baz=278,SNR=5.1									
M23K	**Glacier View**	**57.91**	**34**	P	**P**	**10 55 53.9**	**-0.1**			
	baz=280									
H25K	**Birch Creek**	**58.00**	**28**	P	**P**	**10 55 56.5**	**+2.0**			
	baz=279,SNR=13									
GEYT	**Alibeck**	**58.02**	**297**	P	**P**	**10 55 55.1**	**-0.1**			
	comp=Z,2.4nm,0.6s,baz=45,slow=8.6,SNR=3.5									
GEYT				LR	LR	11 21 35.7				
	comp=Z,237nm,18.2s,baz=66,slow=37									
	comp=Z,2.4nm,0.6s									
SCM	**Sheep Creek Mo**	**58.09**	**34**	P	**P**	**10 55 56.4**	**+1.0**			
	baz=280,SNR=15									
PRP	**Porcupine Dome**	**58.24**	**29**	IAmb	IAmb	10 55 58.8				
	comp=Z,11nm,1.0s									
PRP	**Porcupine Dome**	**58.24**	**29**	P	**P**	**10 55 57.0**	**+0.5**			
	baz=280,SNR=14									
C27K	**Jago River**	**58.27**	**24**	P	**P**	**10 55 57.6**	**+1.1**			
	baz=279									
KIRV	**Kirov**	**58.29**	**323**⇑	*e*P	**P**	**10 55 56.6**	**-0.1**			
GLI	**Glacier Island**	**58.38**	**35**	IAmb	IAmb	10 55 59.8				
	comp=Z,31nm,1.2s									
GLI	**Glacier Island**	**58.38**	**35**	P	**P**	**10 55 57.5**	**+0.2**			
	baz=281									
F26K	**Sheenjek River**	**58.42**	**27**	P	**P**	**10 55 58.6**	**+1.1**			
	baz=280,SNR=8.7									
K24K	**Donnelly Dome**	**58.43**	**31**	P	**P**	**10 55 57.7**	**-0.1**			
	baz=280,SNR=7.5									
J25K	**Salcha River,**	**58.46**	**30**	P	**P**	**10 55 58.7**	**+0.7**			
	baz=280,SNR=8.2									
M24K	**Tolsona, Glenn**	**58.58**	**33**	P	**P**	**10 55 59.7**	**+0.9**			
	baz=281,SNR=5.3									
G26K	**Porcupine Rive**	**58.69**	**27**	P	**P**	**10 56 01.0**	**+1.7**			
	baz=280,SNR=9.5									
PAX	**Paxson**	**58.73**	**32**	P	**P**	**10 56 00.2**	**+0.4**			
	baz=281,SNR=9.3									
HIN	**Hinchinbrook I**	**58.76**	**35**	IAmb	IAmb	10 56 01.5				
	comp=Z,16nm,0.9s									
KLU	**Klutina**	**58.81**	**34**	IAmb	IAmb	10 56 02.5				
	comp=Z,15nm,1.0s									
KLU	**Klutina**	**58.81**	**34**	P	**P**	**10 56 00.7**	**+0.3**			
	baz=282,SNR=10									
RIDG	**Independent Ri**	**58.85**	**31**	IAmb	IAmb	10 56 02.3				
	comp=Z,22nm,1.5s									
RIDG	**Independent Ri**	**58.85**	**31**	P	**P**	**10 56 00.5**	**-0.2**			
	baz=281									
HARP	**HAARP**	**58.98**	**33**	P	**P**	**10 56 02.6**	**+1.1**			
	baz=282,SNR=5.6									
Q23K	**Middleton Isla**	**59.04**	**36**	P	**P**	**10 56 02.9**	**+1.0**			
	baz=283									
EYAK	**Cordova Ski Ar**	**59.09**	**35**	IAmb	IAmb	10 56 05.5				
	comp=Z,14nm,1.0s									
EYAK	**Cordova Ski Ar**	**59.09**	**35**	P	**P**	**10 56 03.1**	**+0.8**			
	baz=282									
SCRK	**Sand Creek**	**59.18**	**31**	IAmb	IAmb	10 56 04.5				
	comp=Z,28nm,1.1s									
SCRK	**Sand Creek**	**59.18**	**31**	P	**P**	**10 56 03.1**	**+0.1**			
	baz=282,SNR=22									
DOT	**Dot Lake**	**59.21**	**31**	IAmb	IAmb	10 56 04.5				
	comp=Z,26nm,1.3s									
J26L	**Joseph Creek**	**59.25**	**30**	P	**P**	**10 56 03.4**	**0.0**			
	baz=282,SNR=9.3									
I26K	**Coal Creek Min**	**59.26**	**29**	P	**P**	**10 56 03.4**	**+0.1**			
	baz=282									
E27K	**Coleen River**	**59.28**	**26**	P	**P**	**10 56 04.8**	**+1.3**			
	baz=282									
N25K	**Chitina, Valde**	**59.41**	**34**	P	**P**	**10 56 05.7**	**+1.1**			
	baz=283,SNR=11									
PRGR	**Permogore**	**59.49**	**326**	*e*P	**P**	**10 56 05.5**	**+0.5**			
G27K	**Doyon Strip**	**59.54**	**27**	P	**P**	**10 56 06.4**	**+1.0**			
	baz=282,SNR=7.8									
BMRM	**Bremner River**	**59.55**	**34**	P	**P**	**10 56 06.3**	**+0.8**			
	baz=283,SNR=13									
L26K	**Log Cabin Wild**	**59.66**	**32**	IAmb	IAmb	10 56 08.8				
	comp=Z,27nm,1.4s									
L26K	**Log Cabin Wild**	**59.66**	**32**	P	**P**	**10 56 07.4**	**+1.1**			
	baz=283,SNR=11									
H27K	**Steamboat Moun**	**59.72**	**28**	P	**P**	**10 56 08.5**	**+1.9**			
	baz=283,SNR=12									
GLB	**Gilahina Butte**	**59.82**	**34**	IAmb	IAmb	10 56 09.7				
	comp=Z,22nm,1.2s									
I27K	**Kandik River**	**59.82**	**29**	P	**P**	**10 56 08.8**	**+1.5**			
	baz=283,SNR=25									
KAIM	**Kayak Island**	**59.88**	**35**	P	**P**	**10 56 08.9**	**+1.2**			
	baz=284									
M26K	**Nabesna, AK**	**59.97**	**32**	P	**P**	**10 56 09.4**	**+1.0**			
	baz=284,SNR=31									
K27K	**Chicken**	**59.99**	**31**	IAmb	IAmb	10 56 10.9				
	comp=Z,24nm,1.1s									
K27K	**Chicken**	**59.99**	**31**	P	**P**	**10 56 09.2**	**+0.8**			
	baz=284									
MCARA	**McCarthy VSAT**	**60.20**	**34**	P	**P**	**10 56 10.6**	**+0.6**			
	baz=284,SNR=7.9									
EGAK	**Eagle**	**60.20**	**30**	P	**P**	**10 56 10.2**	**+0.4**			
	baz=284									
L27K	**Beaver Creek,**	**60.33**	**32**	IAmb	IAmb	10 56 13.5				
	comp=Z,22nm,1.1s									
L27K	**Beaver Creek,**	**60.33**	**32**	P	**P**	**10 56 12.2**	**+1.4**			
	baz=284,SNR=22									
BGLC	**Bering Glacier**	**60.39**	**35**	P	**P**	**10 56 12.4**	**+1.2**			
	baz=285									
TGL	**Tana Glacier**	**60.45**	**34**	IAmb	IAmb	10 56 13.7				
	comp=Z,23nm,1.0s									
M27K	**Edge Creek, AK**	**60.48**	**32**	IAmb	IAmb	10 56 14.3				
	comp=Z,14nm,1.0s									
M27K	**Edge Creek, AK**	**60.48**	**32**	P	**P**	**10 56 13.0**	**+1.0**			
	baz=285,SNR=14									
SNH	**Sunshine Point**	**60.59**	**35**	IAmb	IAmb	10 56 15.1				
	comp=Z,21nm,0.9s									
ISLE	**upper Island**	**60.72**	**34**	IAmb	IAmb	10 56 23.1				
	comp=Z,14nm,1.0s									
BELG	**Belogornoye**	**60.79**	**316**	P	**P**	**10 56 12.9**	**-1.2**			
BELG	**Belogornoye**	**60.79**	**316**	P	**P**	**10 56 12.9**	**-1.2**			
	comp=Z,11nm,0.8s,baz=4.9,slow=2.7,SNR=6.8									
BELG				LR	LR	11 24 55.7				
	comp=Z,277nm,18.9s,baz=13,slow=38									
	comp=Z,11nm,0.8s									
BVCY	**Beaver Creek**	**60.92**	**32**	P	**P**	**10 56 15.8**	**+0.9**			
	baz=285									
MESA	**MESA**	**61.02**	**35**	P	**P**	**10 56 16.6**	**+0.9**			
	baz=286									
CTG	**Chitna Glacier**	**61.09**	**34**	P	**P**	**10 56 17.0**	**+0.8**			
	baz=286,SNR=7.3									
CTGM	**Chitina Glacie**	**61.10**	**34**	IAmb	IAmb	10 56 18.4				
	comp=Z,18nm,1.0s									
DAWY	**Dawson**	**61.12**	**30**	P	**P**	**10 56 16.8**	**+0.6**			
	baz=286,SNR=10									
I29M	**Ogilvie Camp,**	**61.22**	**29**	IAmb	IAmb	10 56 19.3				
	comp=Z,16nm,1.1s									
I29M	**Ogilvie Camp,**	**61.22**	**29**	P	**P**	**10 56 17.4**	**+0.6**			
	baz=286,SNR=14									
YUK3	**Moose Creek**	**61.28**	**33**	P	**P**	**10 56 18.2**	**+0.7**			
	baz=286									
LOGN	**Logan Glacier**	**61.29**	**34**	IAmb	IAmb	10 56 25.6				
	comp=Z,22nm,1.5s									
J29M	**Klondike Camp**	**61.51**	**30**	P	**P**	**10 56 19.9**	**+1.1**			
	baz=286									
EPYK	**Eagle Plains**	**61.56**	**27**	P	**P**	**10 56 20.3**	**+1.1**			
	baz=287,SNR=14									
O28M	**Mount Upton**	**61.69**	**34**	P	**P**	**10 56 21.6**	**+1.2**			
	baz=287,SNR=5.6									
PINM	**Pinnacle**	**61.86**	**35**	P	**P**	**10 56 22.0**	**+0.7**			
	baz=287									
K29M	**Barlow Dome**	**61.98**	**30**	P	**P**	**10 56 23.1**	**+1.0**			
	baz=287,SNR=12									
M29M	**Somme Creek**	**61.99**	**32**	P	**P**	**10 56 23.7**	**+1.5**			
	baz=287,SNR=15									
INK	**Inuvik**	**62.15**	**25**	P	**P**	**10 56 23.4**	**+0.4**			
INK				IAmb	IAmb	10 56 24.3				
	comp=Z,16nm,1.1s									
INK	**Inuvik**	**62.15**	**25**	P	**P**	**10 56 23.4**	**+0.4**			
INK				pmax	pmax					
	comp=Z,15nm,1.2s									
INK	**Inuvik**	**62.15**	**25**	P	**P**	**10 56 23.5**	**+0.4**			
	baz=288,SNR=6.9									
INK	**Inuvik**	**62.15**	**25**	LR	LR	11 25 50.5				
	comp=Z,129nm,18.2s,baz=267,slow=38									
YUK4	**Talbot Arm**	**62.23**	**33**	P	**P**	**10 56 25.3**	**+1.3**			
	baz=288									
PNL	**Peninsula**	**62.40**	**35**	P	**P**	**10 56 25.8**	**+1.0**			
	baz=288									
YUK6	**Outpost Mounta**	**62.49**	**33**	P	**P**	**10 56 27.3**	**+1.5**			
	baz=288									
KLMR	**Klimovskoe**	**62.55**	**327**	*e*P	**P**	**10 56 22.7**	**-3.0**			
KLMR				pmax	pmax					
	comp=Z,19nm,1.2s									
KLMR	**Klimovskoe**	**62.55**	**327**	*e*P	**P**	**10 56 22.8**	**-3.0**			
KLMR				AMP		10 56 28.9				
	comp=Z,19nm,1.2s									
KLMR				LQ	LQ	11 18 33.7				
KLMR				LQ	LQ	11 18 33.7				
KLMR				LQ	LQ	11 24 36.3				
O29M	**Mount Kennedy**	**62.59**	**34**	P	**P**	**10 56 27.7**	**+1.5**			
	baz=288,SNR=6.5									
M30M	**Minto, Yukon**	**62.68**	**31**	P	**P**	**10 56 27.2**	**+0.5**			
M30M	**Minto, Yukon**	**62.68**	**31**	P	**P**	**10 56 27.9**	**+1.2**			
	baz=289,SNR=11									
MAYO	**Mayo, Yukon**	**62.74**	**30**	P	**P**	**10 56 28.4**	**+1.3**			
	baz=289									
APA	**Apatity**	**62.88**	**335**⇓	*i*P	**P**	**10 56 25.6**	**-2.3**			
APA				pmax	pmax					
	comp=Z,10.0nm,1.2s									
APA				MLR	MLR					
	comp=Z,400nm,15.0s									
N30M	**Aishikik Lake**	**62.91**	**33**	P	**P**	**10 56 29.8**	**+1.5**			
	baz=289,SNR=6.8									
HYT	**Haines Junctio**	**62.93**	**33**	P	**P**	**10 56 30.1**	**+1.6**			
	baz=289,SNR=13									
SPITS	**Spitsbergen Ar**	**62.95**	**348**	LR	LR	11 25 43.9				
	comp=Z,206nm,18.3s,baz=27,slow=38									
P29M	**Windy Craggy**	**63.21**	**35**	P	**P**	**10 56 32.1**	**+1.9**			
	baz=289,SNR=8.3									
P30M	**Million Dollar**	**63.41**	**34**	P	**P**	**10 56 32.9**	**+1.2**			
	baz=290									
A36M	**Sachs Harbour**	**63.45**	**20**	P	**P**	**10 56 32.4**	**+0.8**			
	baz=294,SNR=6.5									
N31M	**Braeburn, Yuko**	**63.49**	**32**	IAmb	IAmb	10 56 35.0				
	comp=Z,22nm,1.1s									
N31M	**Braeburn, Yuko**	**63.49**	**32**	P	**P**	**10 56 33.7**	**+1.6**			
	baz=290,SNR=9.6									
O30N	**Mendenhall**	**63.60**	**33**	P	**P**	**10 56 34.1**	**+1.2**			
	baz=290									
M31M	**Drury Creek, Y**	**63.86**	**31**	IAmb	IAmb	10 56 37.1				
	comp=Z,16nm,1.4s									
M31M	**Drury Creek, Y**	**63.86**	**31**	P	**P**	**10 56 35.9**	**+1.3**			
	baz=291,SNR=6.6									
PLBC	**Pleasant Camp**	**63.92**	**35**	P	**P**	**10 56 36.5**	**+1.5**			
	baz=290									
WHY	**Whitehorse**	**64.19**	**33**	P	**P**	**10 56 38.1**	**+1.3**			
	baz=291,SNR=7.2									
FARO	**Faro, Yukon**	**64.31**	**31**	IAmb	IAmb	10 56 40.0				
	comp=Z,22nm,1.1s									
FARO	**Faro, Yukon**	**64.31**	**31**	P	**P**	**10 56 38.9**	**+1.4**			
	baz=292,SNR=20									
DZM	**Mont Dzumac**	**64.33**	**143**	*e*LR	LR	11 15 50.5				
	comp=Z,334nm,23.3s									
DZM	**Mont Dzumac**	**64.33**	**143**	LR	LR	11 21 02.9				
	comp=Z,162nm,22.0s,baz=14,slow=33									
SKAG	**Skagway**	**64.42**	**34**	IAmb	IAmb	10 56 41.0				
	comp=Z,24nm,1.2s									
SKAG	**Skagway**	**64.42**	**34**	P	**P**	**10 56 39.5**	**+1.3**			
	baz=291,SNR=6.1									
VRH	**Novokhopyorsk**	**64.64**	**316**	*e*P	**P**	**10 56 37.5**	**-2.3**			
VRH				pmax	pmax					
	comp=Z,10.0nm,0.6s									
ARCES	**ARCESS Array B**	**64.78**	**338**	P	**P**	**10 56 41.1**	**+0.7**			
ARCES	**ARCESS Array B**	**64.78**	**338**	P	**P**	**10 56 41.0**	**+0.7**			
	comp=Z,3.4nm,0.8s,baz=348,slow=5.1,SNR=6.3									
ARCES				LR	LR	11 29 54.4				
	comp=Z,615nm,18.4s,baz=56,slow=41									
	comp=Z,3.4nm,0.8s									
N32M	**Quiet Lake**	**64.83**	**32**	P	**P**	**10 56 42.1**	**+1.1**			
	baz=292									
C36M	**Paulatuk**	**64.93**	**22**	P	**P**	**10 56 41.9**	**+0.6**			
	baz=296									
MMPY	**Sheldon Lake,**	**65.06**	**30**	P	**P**	**10 56 43.3**	**+0.9**			
	baz=293,SNR=6.1									
STKA	**Stephens Creek**	**65.06**	**170**⇑	*e*P	**P**	**10 56 42.4**	**-0.2**			
STKA	**Stephens Creek**	**65.06**	**170**	P	**P**	**10 56 42.5**	**0.0**			
	comp=Z,2.2nm,0.6s,baz=354,slow=10,SNR=3.6									
STKA				LR	LR	11 26 06.7				
	comp=Z,172nm,19.1s,baz=8.7,slow=37									
	comp=Z,2.2nm,0.6s									
P32M	**Atlin**	**65.13**	**34**	P	**P**	**10 56 43.0**	**+0.1**			
	baz=292									
MOS	**Moscow**	**65.25**	**322**	*e*P	**P**	**10 56 41.7**	**-2.0**			
P33M	**Teslin, Yukon**	**65.31**	**33**	P	**P**	**10 56 45.0**	**+0.9**			
P33M				IAmb	IAmb	10 56 46.8				
	comp=Z,21nm,1.1s									
P33M	**Teslin, Yukon**	**65.31**	**33**	P	**P**	**10 56 45.2**	**+1.1**			
	baz=293,SNR=7.6									
SIT	**Sitka**	**65.31**	**37**	P	**P**	**10 56 45.1**	**+1.1**			
	baz=292									
LPSR	**Galich'ya Gora**	**65.73**	**318**	*e*P	**P**	**10 56 46.5**	**-0.3**			
LPSR				pmax	pmax					
	comp=Z,10.0nm,0.8s									
VORR	**Voronezh**	**65.93**	**317**	*e*P	**P**	**10 56 48.9**	**+0.8**			
VORR				pmax	pmax					
	comp=Z,90nm,0.4s									
OBN	**Obninsk**	**66.05**	**321**⇓	*e*P	**P**	**10 56 49.2**	**+0.4**			
OBN				pmax	pmax					
	comp=Z,22nm,1.7s									
OBN	**Obninsk**	**66.05**	**321**	P	**P**	**10 56 48.9**	**+0.2**			
	comp=Z,5.3nm,0.3s,baz=79,slow=9.9,SNR=5.4									
	comp=Z,5.3nm,0.3s									
VSR	**Storozhevoye**	**66.13**	**317**	*e*P	**P**	**10 56 47.5**	**-1.9**			
VSR				pmax	pmax					
	comp=Z,10.0nm,0.7s									
ZEI	**Tsey**	**66.45**	**307**	*e*P	**P**	**10 56 50.6**	**-1.3**			
ZEI				pmax	pmax					
	comp=Z,11nm,1.1s									
R33M	**Jennings River**	**66.50**	**34**	P	**P**	**10 56 52.9**	**+1.1**			
	baz=295									
T33K	**Petersburg**	**66.60**	**37**	P	**P**	**10 56 53.8**	**+1.5**			
	baz=294,SNR=5.9									
KBZ	**Khabaz**	**66.75**	**308**	*d*P	**P**	**10 56 53.6**	**+0.1**			
KBZ	**Khabaz**	**66.75**	**308**	P	**P**	**10 56 53.5**	**+0.1**			
	comp=Z,9.0nm,0.8s,baz=82,slow=2.7,SNR=17									
KBZ				LR	LR	11 26 54.1				
	comp=Z,221nm,18.2s,baz=92,slow=37									
	comp=Z,9.0nm,0.8s									
KVAR	**Kislovodsk Arr**	**66.79**	**308**	P	**P**	**10 56 54.3**	**+0.3**			
	comp=Z,2.8nm,0.3s									
	comp=Z,2.8nm,0.3s									
TGTN	**Hyland Airport**	**66.80**	**31**	P	**P**	**10 56 54.6**	**+1.0**			
	baz=296,SNR=5.1									
KIV	**Kislovodsk**	**66.80**	**308**	P	**P**	**10 56 54.1**	**+0.1**			
KIV	**Kislovodsk**	**66.80**	**308**	*e*P	**P**	**10 56 54.5**	**+0.5**			
KIV				pmax	pmax					
	comp=Z,25nm,1.0s									
KIV				MLR	MLR					
	comp=Z,216nm,17.0s									
GNI	**Garni**	**66.93**	**304**	*de*P	**P**	**10 56 56.2**	**+1.2**			
GNI				pmax	pmax					
	comp=Z,11nm,1.4s									
GNI	**Garni**	**66.93**	**304**	P	**P**	**10 56 55.4**	**+0.5**			
	comp=Z,4.5nm,0.6s,baz=232,slow=4.3,SNR=5.5									
GNI				LR	LR	11 27 48.6				
	comp=Z,136nm,19.5s,baz=162,slow=38									
	comp=Z,4.5nm,0.6s									
S34M	**Telegraph Cree**	**67.04**	**35**	P	**P**	**10 56 55.9**	**+0.8**			
	baz=295									
WRAK	**Wrangell Islan**	**67.07**	**37**	P	**P**	**10 56 56.4**	**+1.1**			
	baz=295									
DLBC	**Dease Lake**	**67.35**	**34**	LR	LR	11 27 23.7				
	comp=Z,114nm,19.2s,baz=296,slow=37									
WRGLY	**Wrigley**	**68.00**	**28**	P	**P**	**10 57 01.4**	**+0.3**			
	baz=299									
FIA1	**FINESS Array S**	**68.29**	**330**	P	**P**	**10 57 02.7**	**-0.2**			
FIA1				IAmb	IAmb	10 57 03.7				
	comp=Z,16nm,1.1s									
FINES	**FINESS Array B**	**68.29**	**330**	P	**P**	**10 57 02.1**	**-0.7**			
FINES	**FINESS Array B**	**68.29**	**330**	P	**P**	**10 57 02.2**	**-0.7**			
FINES	**FINESS Array B**	**68.29**	**330**	P	**P**	**10 57 02.2**	**-0.7**			
	comp=Z,2.6nm,0.4s,baz=64,slow=6.4,SNR=23									
FINES				LR	LR	11 30 02.6				
	comp=Z,326nm,18.2s,baz=66,slow=39									
	comp=Z,2.6nm,0.4s									
RES	**Resolute Bay**	**68.82**	**12**	LR	LR

NOA	NORSAR Array B	74.44	334	P		P		10 57 39.2	-1.0
NOA	NORSAR Array B	74.44	334	P		P		10 57 39.2	-1.0
	comp=Z,2.5nm,0.7s,baz=49,slow=5.8,SNR=6.9								
NOA				LR		LR		11 35 33.3	
	comp=Z,207nm,18.2s,baz=35,slow=40								
	comp=Z,2.5nm,0.7s								
BR131	Keskin Array S	74.73	307	*de*P		P		10 57 42.2	-0.2
BRTR	Keskin Array B	74.73	307	P		P		10 57 42.1	-0.3
BRTR	Keskin Array B	74.73	307	*i* P		P		10 57 42.5	+0.1
BRTR				pmax		pmax			
	comp=Z,7.0nm,0.9s								
BRTR	Keskin Array B	74.73	307	P		P		10 57 41.6	-0.8
	comp=Z,4.4nm,0.8s,baz=104,slow=5.2,SNR=13								
BRTR				LR		LR		11 35 33.0	
	comp=Z,140nm,18.4s,baz=60,slow=40								
	comp=Z,4.4nm,0.8s								
SUMG	Summit	74.73	357	P		P		10 57 42.0	-0.1
SUMG	Summit	74.73	357	P		P		10 57 42.0	-0.1
SUMG				pmax		pmax			
	comp=Z,86nm,1.8s								
LVV	L'vov	75.30	320	*e*P		P		10 57 43.9	-1.4
BUR08	Bucovina Ar. S	75.84	318	IAmb		IAmb		10 57 53.6	
	comp=Z,11nm,1.0s								
BURAR	Bucovina Array	75.85	318	P		P		10 57 48.6	0.0
ASF	Jabal al Asfar	76.20	299	P		P		10 57 51.6	+0.7
ASF	Jabal al Asfar	76.20	299	P		P		10 57 51.5	+0.7
	comp=Z,5.7nm,0.9s,baz=258,slow=3.2,SNR=7.0								
	comp=Z,5.7nm,0.9s								
MLR	Muntele Rosu	76.58	316	P		P		10 57 52.6	-0.3
MLR	Muntele Rosu	76.58	316	P		P		10 57 52.6	-0.3
	comp=Z,2.0nm,0.4s,baz=0.5,slow=19,SNR=3.9								
MLR				LR		LR		11 35 18.2	
	comp=Z,298nm,18.1s,baz=49,slow=39								
	comp=Z,2.0nm,0.4s								
MMAI	Mount Meron Ar	76.86	301	P		P		10 57 54.5	-0.1
	comp=Z,0.4nm,0.3s,baz=96,slow=15,SNR=2.0								
MMAI				LR		LR		11 34 12.9	
	comp=Z,88nm,18.9s,baz=216,slow=38								
	comp=Z,0.4nm,0.3s								
UZH	Uzhgorod	76.91	320	*e*P		P		10 57 55.1	+0.7
UZH				*e*				10 58 00.2	
UZH				*e*				10 58 07.2	
D05A	Enumclaw	77.22	42	IAmb		IAmb		10 57 58.0	
	comp=Z,14nm,1.0s								
F04D	Rainier, OR	77.26	43	P		P		10 57 55.7	-0.8
	baz=304								
G03D	McMinnville, O	77.60	44	P		P		10 57 58.9	+0.6
	baz=304								
I02E	Swisshome, OR	77.86	45	P		P		10 58 00.5	+0.6
	baz=304								
EDM	Edmonton	78.05	34	IAmb		IAmb		10 58 02.7	
	comp=Z,14nm,1.3s								
LANS	Liptovska Anna	78.12	321	*e*P		P		10 58 02.7	+1.4
LANS				pmax		pmax			
	comp=Z,7.0nm,1.3s								
LANS	Liptovska Anna	78.12	321	*e*P		P		10 58 02.7	+1.4
J01E	Myrtle Point	78.34	46	P		P		10 58 03.1	+0.6
	baz=304								
I03D	Drain, OR	78.39	45	P		P		10 58 03.0	+0.2
	baz=304								
OKC	Ostrava-Krasne	78.39	322	AMS		AMS		11 36 50.0	
	comp=Z,600nm,13.1s								
PSZ	Piszkesteto	78.62	320	P		P		10 58 03.2	-1.0
PSZ	Piszkesteto	78.62	320	P		P		10 58 03.2	-1.0
PSZ				pmax		pmax			
	comp=Z,60nm,1.7s								
G05D	Wamic, OR	78.71	43	P		P		10 58 04.5	-0.1
	baz=305								
MORC	Moravsky Berou	78.74	323	P		P		10 58 04.7	0.0
MORC				IAmb		IAmb		10 58 06.6	
	comp=Z,41nm,1.7s								
MORC	Moravsky Berou	78.74	323	P		P		10 58 04.7	0.0
MORC				pmax		pmax			
	comp=Z,41nm,1.7s								
MORC	Moravsky Berou	78.74	323	*e*P		P		10 58 05.2	+0.5
K02D	Willamette Mer	78.77	46	P		P		10 58 04.9	-0.2
	baz=304								
VYHS	Vyhne	78.85	321	*e*P		P		10 58 06.5	+1.2
VYHS				pmax		pmax			
	comp=Z,39nm,1.7s								
VYHS	Vyhne	78.85	321	*e*P		P		10 58 06.5	+1.2
I04A	Tendick Farm,	78.90	45	P		P		10 58 05.7	0.0
	baz=305								
EIL	Elat	78.91	298	LR		LR		11 36 40.4	
	comp=Z,69nm,18.2s,baz=85,slow=38								
OSTC	Ostas	78.93	324	*e*P		P		10 58 06.1	+0.4
OSTC				AMS		AMS		11 35 30.0	
	comp=Z,500nm,13.1s								
KRLC	Kraliky	78.95	323	*e*P		P		10 58 06.0	+0.1
KRLC				MLR		MLR			
	comp=Z,500nm,15.1s								
KRLC	Kraliky	78.95	323	*e*P		P		10 58 06.0	+0.1
KRLC				AMS		AMS		11 37 10.0	
	comp=Z,500nm,15.1s								
DPC	Dobruska-Polom	79.01	323	*e*P		P		10 58 07.2	+1.0
DPC				MLR		MLR			
	comp=Z,500nm,14.5s								
DPC	Dobruska-Polom	79.01	323	*e*P		P		10 58 07.2	+1.0
DPC				AMS		AMS		11 35 50.0	
	comp=Z,500nm,14.5s								
UPC	Upice	79.06	324	AMS		AMS		11 35 30.0	
	comp=Z,600nm,13.3s								
L02F	Cave Junction	79.15	47	P		P		10 58 06.9	-0.2
	baz=304								
I05D	Terrebonne, OR	79.22	44	P		P		10 58 08.1	+0.6
	baz=305								
JAVC	Velka Javorina	79.24	322	*e*P		P		10 58 09.0	+1.5
NEW	Newport	79.25	39	P		P		10 58 07.9	+0.3
	baz=308								
NEW	Newport	79.25	39	LR		LR		11 34 11.5	
	comp=Z,86nm,20.0s,baz=313,slow=36								
J04D	Umpqua Nationa	79.40	45	P		P		10 58 08.4	-0.2
	baz=305								
VRAC	Vranov	79.52	323	P		P		10 58 08.9	-0.1
VRAC	Vranov	79.52	323	*e*P		P		10 58 09.5	+0.6
VRAC	Vranov	79.52	323	P		P		10 58 08.9	-0.1
	comp=Z,6.0nm,0.9s,baz=52,slow=5.9,SNR=13								
VRAC				LR		LR		11 34 14.9	
	comp=Z,213nm,18.9s,baz=60,slow=36								
	comp=Z,6.0nm,0.9s								
SMOL	Smolenice	79.58	322	*e*P		P		10 58 10.7	+1.4
SMOL				pmax		pmax			
	comp=Z,39nm,2.1s								
MODS	Modra-Piesok	79.74	322	*e*P		P		10 58 11.5	+1.3
MODS				pmax		pmax			
	comp=Z,78nm,1.6s								
MODS	Modra-Piesok	79.74	322	*e*P		P		10 58 11.5	+1.3
PVCC	Panska Ves	79.77	324	AMS		AMS		11 37 20.0	
	comp=Z,600nm,15.8s								
PINE	Pine Mountain	79.77	44	IAmb		IAmb		10 58 12.9	
	comp=Z,23nm,1.5s								
KRUC	Moravsky	79.77	322	*e*P		P		10 58 10.9	+0.6
BRG	Berggiesshubel	79.85	325	*e*P		P		10 58 11.2	+0.5
BRG				Amp				10 58 13.3	
	comp=Z,12nm,1.2s								
BRG	Berggiesshubel	79.85	325	*e*P		P		10 58 11.2	+0.5
BRG				pmax		pmax			
	comp=Z,12nm,1.2s								
L04D	Klamath Falls	79.86	46	IAmb		IAmb		10 58 13.2	
	comp=Z,28nm,1.4s								
L04D	Klamath Falls	79.86	46	P		P		10 58 11.9	+0.7
	baz=305								
J05D	Fort Rock, OR	79.89	45	P		P		10 58 12.0	+0.7
	baz=306								
ZST	Bratislava	79.94	321	*e*P		P		10 58 12.4	+1.2
ZST				pmax		pmax			
	comp=Z,137nm,1.7s								
ZST	Bratislava	79.94	321	*e*P		P		10 58 12.4	+1.2
K04D	Chiloquin, OR	79.96	46	P		P		10 58 12.1	+0.5
	baz=305								
CLL	Collm	80.02	326	IAmb		IAmb		10 58 16.4	
	comp=Z,23nm,1.1s								
CLL	Collm	80.02	326	⇓*i* P		P		10 58 11.4	-0.2
CLL				*i* x		x		10 58 15.5	
	comp=Z,29nm,1.2s								
CLL				*e*S		S		11 08 24.0	+8.9
CLL				*e*SS		SS		11 13 48.0	+24
CLL				*ex*		x		11 17 48.0	
TREC	Trest	80.09	323	AMS		AMS		11 38 00.0	
	comp=Z,500nm,14.5s								
PRU	Pruhonice	80.12	324	*e*P		P		10 58 12.6	+0.4
PRU				MLR		MLR			
	comp=Z,500nm,16.0s								
PRU	Pruhonice	80.12	324	*e*P		P		10 58 12.6	+0.4
PRU				AMS		AMS		11 36 40.0	
	comp=Z,500nm,16.0s								
BORG	Borgarnes	80.41	348	LR		LR		11 34 56.7	
	comp=Z,82nm,18.1s,baz=15,slow=36								
K05A	Summer Lake	80.42	45	P		P		10 58 13.8	-0.4
K05A				IAmb		IAmb		10 58 16.6	
	comp=Z,35nm,1.8s								
SFJD	Kangerlussuaq	80.61	0	LR		LR		11 35 41.1	
	comp=Z,130nm,19.1s,baz=349,slow=37								
RONA	Rosalia, Austr	80.68	321	*e*P		P		10 58 16.2	+0.9
	comp=Z,22nm,1.7s,SNR=7.6								
CONA	Conrad Observa	80.76	322	*e*P		P		10 58 16.8	+1.0
	comp=Z,14nm,1.1s,SNR=13								
CKRC	Cesky Krumlov	80.99	323	*e*P		P		10 58 17.2	+0.3
NKC	Novy Kostel	80.99	325	AMS		AMS		11 38 00.0	
	comp=Z,800nm,15.4s								
KHC	Kasperske Hory	81.16	324	*e*P		P		10 58 17.8	0.0
KHC				MLR		MLR			
	comp=Z,400nm,19.0s								
KHC	Kasperske Hory	81.16	324	*e*P		P		10 58 17.8	0.0
KHC				AMS		AMS		11 37 20.0	
	comp=Z,400nm,19.0s								
GERES	GERESS Array B	81.28	323	P		P		10 58 17.8	-0.7
GERES	GERESS Array B	81.28	323	P		P		10 58 18.4	-0.1
GERES	GERESS Array B	81.28	323	P		P		10 58 18.4	-0.1
	comp=Z,0.5nm,0.3s,baz=29,slow=3.0,SNR=12								
	comp=Z,0.5nm,0.3s								
ARSA	Arzberg	81.37	321	*e*P		P		10 58 19.5	+0.5
	comp=Z,7.9nm,0.9s								
MOA	Molln	81.64	322	*e*P		P		10 58 20.9	+0.6
	comp=Z,12nm,1.6s								
MSO	Missoula	81.83	39	P		P		10 58 21.1	-0.4
	baz=310								
FFC	Flin Flon	81.90	28	P		P		10 58 21.6	0.0
FFC				IAmb		IAmb		10 58 23.1	
	comp=Z,42nm,1.6s								
FFC	Flin Flon	81.90	28	P		P		10 58 21.6	0.0
FFC				pmax		pmax			
	comp=Z,42nm,1.6s								
GRFO	Grafenberg	81.94	325	P		P		10 58 22.2	+0.3
GRFO	Grafenberg	81.94	325	P		P		10 58 22.2	+0.3
GRFO				pmax		pmax			
	comp=Z,79nm,1.0s								
SOKA	Soboth	81.99	321	*e*P		P		10 58 22.5	+0.2
	comp=Z,10nm,0.9s,SNR=12								
BIOA	Bad Ischl, Aus	82.06	323	*e*P		P		10 58 23.1	+0.5
	comp=Z,12nm,1.2s								
OBKA	Obir	82.36	321	*e*P		P		10 58 24.3	+0.1
	comp=Z,8.8nm,0.9s								
KBA	Knebeinsper	82.62	322	*e*P		P		10 58 25.5	-0.2
	comp=Z,14nm,1.2s,SNR=7.0								
FRB	Frobisher Bay	82.68	8	LR		LR		11 37 10.0	
	comp=Z,249nm,19.5s,baz=11,slow=37								
MYKA	Terra Mystica	82.75	322	*e*P		P		10 58 25.9	-0.4
	comp=Z,6.4nm,0.7s								
URZ	Urewera	82.80	145	LR		LR		11 31 07.0	
	comp=Z,84nm,18.3s,baz=31,slow=33								
PAHR	Pah Rah Range	83.13	47	IAmb		IAmb		10 58 30.3	
	comp=Z,17nm,1.4s								
EGMT	Eagleton	83.19	36	IAmb		IAmb		10 58 30.1	
	comp=Z,17nm,1.3s								
EGMT	Eagleton	83.19	36	P		P		10 58 28.8	+0.3
	baz=313								
SABO	M.te Sabotino	83.20	321	IAmb		IAmb		10 58 30.1	
	comp=Z,67nm,1.5s								
ABTA	Abfaltersbach	83.26	322	*e*P		P		10 58 28.3	-0.7
	comp=Z,12nm,1.3s,SNR=5.9								
WATA	Walderalm	83.35	323	*e*P		P		10 58 29.3	-0.2
	comp=Z,3.4nm,0.6s								
WTTA	Wattenberg	83.37	323	*e*P		P		10 58 29.5	-0.1
	comp=Z,15nm,1.3s,SNR=8.1								
MOTA	Moosalm	83.58	323	*e*P		P		10 58 30.3	-0.3
	comp=Z,8.7nm,0.9s								
CIMO	Cimolais	83.59	322	IAmb		IAmb		10 58 30.9	
	comp=Z,40nm,1.7s								
SQTA	Sankt Quirin	83.61	323	*e*P		P		10 58 30.6	-0.2
	comp=Z,4.3nm,0.7s								
YERR	Yerington	83.65	47	IAmb		IAmb		10 58 33.2	
	comp=Z,31nm,1.6s								
RETA	Reutte	83.66	324	*e*P		P		10 58 30.1	-0.8
	comp=Z,19nm,1.2s,SNR=10								
HLID	Hailey	83.66	42	P		P		10 58 31.5	+0.3
	baz=310								
BTNL	Ternell	83.69	328	*d*P		P		10 58 30.7	-0.2
BTNL				*d*PcP		PcP		10 58 35.0	-0.2
MEM	Membach	83.72	328	*d*P		P		10 58 30.1	-1.0
MEM				*d*PcP		PcP		10 58 35.1	-0.1
EKA	Eskdalemuir Ar	83.80	335	P		P		10 58 30.7	-0.7
EKA	Eskdalemuir Ar	83.80	335	P		P		10 58 30.6	-0.7
	comp=Z,3.4nm,0.8s,baz=37,slow=4.9,SNR=3.3								
EKA				LR		LR		11 38 56.4	
	comp=Z,224nm,18.3s,baz=29,slow=38								
	comp=Z,3.4nm,0.8s								
BOZ	Bozeman (W)	83.85	39	IAmb		IAmb		10 58 34.0	
	comp=Z,25nm,1.9s								
BOZ	Bozeman (W)	83.85	39	P		P		10 58 32.2	+0.1
	baz=312								
BHOU	Houvegnez	83.91	328	*d*P		P		10 58 32.0	-0.1
BHOU				*d*PcP		PcP		10 58 36.1	0.0
BSTI	Sart Tilman	83.94	328	*d*P		P		10 58 32.4	+0.2
FETA	Feichten	83.99	323	*e*P		P		10 58 32.5	-0.3
	comp=Z,8.4nm,0.9s,SNR=5.5								
BMN	Battle Mountai	84.00	45	IAmb		IAmb		10 58 35.3	
	comp=Z,21nm,1.5s								
BCLA	Clavier	84.17	328	*d*P		P		10 58 32.6	-0.8
DAVA	Damuels	84.23	324	*e*P		P		10 58 33.9	-0.1
	comp=Z,44nm,1.4s,SNR=13								
BFO	Black Forest	84.26	325	P		P		10 58 33.6	-0.4
BFO	Black Forest	84.26	325	P		P		10 58 33.6	-0.4
BFO				pmax		pmax			
	comp=Z,36nm,1.1s								
RYN	Ryan	84.31	47	IAmb		IAmb		10 58 36.7	
	comp=Z,23nm,1.5s								
KVN	Kaiserville	84.32	47	IAmb		IAmb		10 58 36.6	
	comp=Z,29nm,1.5s								
WLF	Walferdange	84.33	327	P		P		10 58 33.9	-0.4
WLF	Walferdange	84.33	327	P		P		10 58 33.9	-0.4
WLF				pmax		pmax			
	comp=Z,36nm,1.1s								
WLF	Walferdange	84.33	327	*d*P		P		10 58 34.6	+0.3
WLF				*d*PcP		pP		10 58 38.9	-0.2
RCHB	Rochefort	84.40	328	*d*P		P		10 58 33.9	-0.7
RCHB				*d*PcP		pP		10 58 38.5	-0.8
BMRD	Maredsous	84.49	329	*d*P		P		10 58 34.4	-0.6
BMRD				*d*PcP		PcP		10 58 38.8	+0.2
RPZ	Rata Peaks	84.55	152	LR		LR		11 31 38.1	
	comp=Z,196nm,19.7s,baz=306,slow=32								
MDPB	Devils Postpil	84.57	48	IAmb		IAmb		10 58 37.9	
	comp=Z,17nm,1.5s								
NVAR	Mina Array Bea	84.57	47	P		P		10 58 36.5	+0.6
	comp=Z,1.6nm,0.7s,baz=296,slow=4.7,SNR=23								
	comp=Z,1.6nm,0.7s								
DAVOX	Davos/Dischmat	84.58	324	P		P		10 58 36.3	+0.5
DAVOX	Davos/Dischmat	84.58	324	P		P		10 58 36.3	+0.5
	comp=Z,9.4nm,0.8s,baz=84,slow=4.1,SNR=16								
DAVOX				LR		LR		11 39 37.5	
	comp=Z,339nm,18.0s,baz=76,slow=38								
	comp=Z,9.4nm,0.8s								
YHL	Hebgen Lake	84.58	39	IAmb		IAmb		10 58 38.2	
	comp=Z,11nm,1.4s								
OMMB	Old Mammoth Mi	84.63	48	IAmb		IAmb		10 58 37.6	
	comp=Z,12nm,1.5s								
DOU	Dourbes	84.72	328	*d*P		P		10 58 35.6	-0.6
DOU				*d*PcP		PcP		10 58 39.6	0.0
YMR	Madison River	84.82	39	IAmb		IAmb		10 58 39.4	
	comp=Z,10nm,1.4s								
ELK	Elko	84.98	44	P		P		10 58 38.6	+0.6
ELK	Elko	84.98	44	P		P		10 58 38.6	+0.6
ELK				pmax		pmax			
	comp=Z,6.0nm,1.3s								
YPP	Pitchstone Pla	85.17	39	IAmb		IAmb		10 58 58.0	
	comp=Z,11nm,1.4s								
LKWY	Lake	85.19	39	IAmb		IAmb		10 58 41.9	
	comp=Z,12nm,1.4s								
H17A	Grant Village	85.21	39	IAmb		IAmb		10 58 42.9	
	comp=Z,21nm,1.4s								
H17A	Grant Village	85.21	39	P		P		10 58 41.3	+2.2
	baz=312								
SMMC	Simmler	85.38	51	P		P		10 58 40.1	+0.2
	baz=307								
RLMT	Red Lodge	85.40	38	P		P		10 58 40.2	+0.2
	baz=313								
DGMT	Dagmar	85.53	33	P		P		10 58 40.4	0.0
	baz=316								
TPAW	Teton Pass	85.61	40	IAmb		IAmb		11 00 34.7	
	comp=Z,9.4nm,0.8s								
VES	Vestal, Richgr	85.66	50	P		P		10 58 41.4	+0.3
	baz=308								
LCH	Last Change Ra	85.72	48	IAmb		IAmb		10 58 43.6	
	comp=Z,20nm,1.6s								
HVU	Hansel Valley	85.73	42	IAmb		IAmb		10 58 44.0	
	comp=Z,17nm,1.8s								
PKM	Mcpherson Peak	85.76	51	P		P		10 58 42.1	+0.1
	baz=307								
TIP	Timpagrande	85.80	315	IAmb		IAmb		10 58 48.1	
	comp=Z,20nm,1.4s								
LAO	LASA Array	85.84	35	IAmb		IAmb		10 58 43.3	
	comp=Z,9.3nm,1.1s								
LAO	LASA Array	85.84	35	P		P		10 58 42.8	+0.9
	baz=315								
LAO	LASA Array	85.84	35	P		P		10 58 42.3	+0.3
	baz=315								
CWC	Cottonwood Cre	85.93	49	P		P		10 58 42.3	-0.5
	baz=308								
R11A	Troy Canyon, C	86.29	46	P		P		10 58 45.1	+0.6
	baz=310								
HWUT	Hardware Ranch	86.53	42	IAmb		IAmb		10 58 47.9	
	comp=Z,16nm,1.3s								
MPMC	Manual Prospec	86.54	49	P		P		10 58 46.1	+0.3
	baz=309								
SPR3	Spring Creek 3	86.63	45	P		P		10 58 45.1	-1.2
SPR3				IAmb		IAmb		10 58 49.1	
	comp=Z,17nm,1.7s								
FURC	Furnace Creek,	86.69	48	P		P		10 58 46.5	+0.3
	baz=309								
DUG	Dugway, Tooele	86.75	43	IAmb		IAmb		10 58 49.0	
	comp=Z,15nm,1.4s								
DUG	Dugway, Tooele	86.75	43	P		P		10 58 47.4	+0.7
	baz=311								
TPNV	Topopah Spring	86.77	48	IAmb		IAmb		10 58 48.6	
	comp=Z,27nm,1.7s								
TPNV	Topopah Spring	86.77	48	P		P		10 58 47.3	+0.4
	baz=309								
LRMC	Laurel Mtn Rad	86.78	49	P		P		10 58 47.0	+0.1
	baz=308								
BW06	Boulder Array	86.85	40	IAmb		IAmb		10 58 48.4	
	comp=Z,13nm,1.6s								
BW06	Boulder Array	86.85	40	P		P		10 58 47.3	+0.1
	baz=313								
PDAR	Pinedale Array	86.85	40	P		P		10 58 47.4	+0.2
	comp=Z,2.2nm,0.9s,baz=304,slow=0.9,SNR=17								
PDAR				LR		LR		11 39 26.4	
	comp=Z,72nm,19.3s,baz=333,slow=37								
	comp=Z,2.2nm,0.9s								
EDW2	Edwards Air Fo	86.95	50	P		P		10 58 47.8	+0.2
	baz=308								
GWY	Greenwater Val	86.98	48	IAmb		IAmb		10 58 53.1	
	comp=Z,15nm,1.6s								
QSM	Queen of Sheba	87.00	49	IAmb		IAmb		10 58 50.3	
	comp=Z,19nm,1.4s								
PRN	Pahroc Range	87.22	47	IAmb		IAmb		10 58 51.2	
	comp=Z,11nm,1.4s								
NLU	North Lily Min	87.33	43	IAmb		IAmb		10 59 01.2	
	comp=Z,20nm,2.0s								
SHOC	Shoshone, Teco	87.41	48	P		P		10 58 50.0	+0.2
	baz=309								
GSC	Goldstone, Bar	87.45	49	P		P		10 58 50.6	+0.5
	baz=309								
MPU	Maple Canyon	87.55	43	IAmb		IAmb		10 58 52.7	
	comp=Z,14nm,1.5s								
BFSC	Mount Baldy Ra	87.56	50	P		P		10 58 50.7	0.0
	baz=308								
CIS	Catalina Islan	87.58	51	P		P		10 58 50.3	-0.4
	baz=308								
RRX	Edison Barstow	87.59	50	P		P		10 58 50.7	0.0
	baz=309								
SHPR	Sheep Range	87.72	47	IAmb		IAmb		10 58 53.8	
	comp=Z,11nm,1.5s								
ULM	Lac du Bonnet	87.73	28	*di* P		P		10 58 50.7	-0.3
ULM	Lac du Bonnet	87.73	28	P		P		10 58 50.9	-0.1
	comp=Z,18nm,1.0s,baz=322,slow=5.1,SNR=14								
ULM				LR		LR		11 40 53.5	
	comp=Z,65nm,19.6s,baz=327,slow=38								
	comp=Z,18nm,1.0s								
SCI2	San Clemente I	87.75	52	P		P		10 58 52.0	+0.5
	baz=308								
TUQ	Turquoise Moun	87.92	49	P		P		10 58 53.0	+0.6
	baz=309								
HEC	Hector Ludlow	88.05	49	P		P		10 58 53.2	+0.2
	baz=309								
MDND	Maddock	88.05	31	P		P		10 58 53.1	+0.5
	baz=320								
MURC	Murrieta	88.26	51	P		P		10 58 53.9	0.0
	baz=309								
SSB	Saint Sauveur	88.26	325	IAmb		IAmb		10 58 53.5	
	comp=Z,9.2nm,1.2s								
TMUT	Trail Mountain	88.27	43	IAmb		IAmb		10 59 06.5	
	comp=Z,15nm,1.9s								
RDMU	Red Mountain	88.34	41	IAmb		IAmb		10 58 55.6	
	comp=Z,19nm,1.6s								
V12A	Nelson	88.41	48	IAmb		IAmb		10 58 56.8	
	comp=Z,9.6nm,1.5s								
P17A	Butcher Ranch,	88.42	43	IAmb		IAmb		10 58 57.0	
	comp=Z,22nm,1.4s								
GMRC	Granite Mounta	88.50	49	P		P		10 58 54.9	-0.2
	baz=310								
MTPU	Mount Pierson	88.53	45	IAmb		IAmb		10 58 58.5	
	comp=Z,20nm,1.6s								
K22A	Casper	88.54	38	IAmb		IAmb		10 58 56.0	
	comp=Z,7.3nm,1.1s								
K22A	Casper	88.54	38	P		P		10 58 55.2	-0.1
	baz=315								
K22A	Casper	88.54	38	P		P		10 58 55.3	0.0
	baz=315								
Q16A	Castle Valley	88.54	43	IAmb		IAmb		10 59 01.4	
	comp=Z,22nm,1.6s								
PFO	Pinyon Flats O	88.73	50

	comp=Z,4.3nm,0.2s							
F33A	**5 Mile Ranch,**	**91.04**	**31**	P		**P**	**10 59 07.2**	**+0.5**
	baz=322							
ISCO	**Idaho Springs**	**91.05**	**40**	P		**P**	**10 59 08.0**	**+0.8**
	baz=316							
ISCO	**Idaho Springs**	**91.05**	**40**	P		**P**	**10 59 06.9**	**-0.3**
	baz=316							
PPT	**Papeete**	**91.09**	**110**	LR		LR	11 30 44.1	
	comp=Z,40nm,21.9s,baz=304,slow=30							
PPT2	**Papeete2**	**91.10**	**110**	*e*LR		LR	11 28 15.9	
	comp=Z,128nm,23.8s							
MVCO	**Mesa Verde**	**91.25**	**43**	P		**P**	**10 59 08.1**	**0.0**
	baz=314							
EYMN	**Ely**	**91.29**	**27**	P		**P**	**10 59 08.2**	**+0.4**
	baz=326							
EYMN	**Ely**	**91.29**	**27**	P		**P**	**10 59 07.7**	**-0.1**
	baz=326							
X16A	**Lo Mia Camp, P**	**91.38**	**47**	IAmb		IAmb	10 59 11.1	
	comp=Z,8.4nm,1.4s							
SCHQ	**Schefferville**	**91.54**	**10**	LR		LR	11 42 48.3	
	comp=Z,150nm,19.6s,baz=26,slow=37							
S22A	**4UR Ranch, Cre**	**91.83**	**42**	IAmb		IAmb	10 59 13.3	
	comp=Z,13nm,1.5s							
S22A	**4UR Ranch, Cre**	**91.83**	**42**	P		**P**	**10 59 11.0**	**+0.1**
	baz=315							
Q24A	**Divide**	**91.90**	**40**	P		**P**	**10 59 11.4**	**+0.2**
	baz=316							
214A	**Organ Pipe Nat**	**92.15**	**50**	P		**P**	**10 59 12.2**	**+0.1**
	baz=311							
ECSD	**EROS Data Cent**	**92.56**	**32**	IAmb		IAmb	11 02 21.3	
	comp=Z,15nm,1.6s							
ECSD	**EROS Data Cent**	**92.56**	**32**	P		**P**	**10 59 13.8**	**+0.1**
	baz=322							
ECSD	**EROS Data Cent**	**92.56**	**32**	P		**P**	**10 59 13.9**	**+0.1**
	baz=322							
SDCO	**Great Sand Dun**	**92.57**	**41**	IAmb		IAmb	10 59 16.4	
	comp=Z,16nm,1.9s							
SDCO	**Great Sand Dun**	**92.57**	**41**	P		**P**	**10 59 15.1**	**+0.8**
	baz=316							
SDCO	**Great Sand Dun**	**92.57**	**41**	P		**P**	**10 59 14.2**	**-0.1**
	baz=316							
SPMN	**Marine on St.**	**93.00**	**29**	P		**P**	**10 59 15.9**	**+0.2**
	baz=325							
TUC	**Tucson**	**93.20**	**48**	P		**P**	**10 59 16.4**	**-0.6**
TUC	**Tucson**	**93.20**	**48**	P		**P**	**10 59 16.4**	**-0.6**
TUC				pmax		pmax		
	comp=Z,5.0nm,1.2s							
TUC	**Tucson**	**93.20**	**48**	P		**P**	**10 59 16.3**	**-0.7**
	baz=312							
KSCO	**Kaye Shedlock'**	**93.21**	**39**	P		**P**	**10 59 16.4**	**-0.6**
	baz=318							
T25A	**Trinidad**	**93.61**	**41**	P		**P**	**10 59 19.2**	**+0.2**
	baz=316							
BGNE	**Belgrade**	**93.66**	**35**	P		**P**	**10 59 19.1**	**+0.3**
	baz=321							
ANMO	**Albuquerque**	**94.01**	**44**	P		**P**	**10 59 20.6**	**-0.3**
ANMO	**Albuquerque**	**94.01**	**44**	*de*P		**P**	**10 59 21.9**	**+1.1**
ANMO				pmax		pmax		
	comp=Z,9.0nm,2.5s							
ANMO	**Albuquerque**	**94.01**	**44**	P		**P**	**10 59 21.8**	**+0.9**
	baz=315							
ANMO	**Albuquerque**	**94.01**	**44**	P		**P**	**10 59 21.0**	**+0.1**
	baz=315							
ANMO	**Albuquerque**	**94.01**	**44**	LR		LR	11 43 38.3	
	comp=Z,49nm,18.0s,baz=320,slow=37							
G40A	**Rib Lake**	**94.01**	**28**	IAmb		IAmb	10 59 21.7	
	comp=Z,8.7nm,0.9s							
CBKS	**Cedar Bluff**	**94.86**	**37**	P		**P**	**10 59 24.3**	**-0.2**
	baz=320							
ESDC	**Sonseca Array**	**96.59**	**326**	P		**P**	**10 59 30.3**	**-2.1**
	comp=Z,0.7nm,0.8s,baz=17,slow=6.7,SNR=2.4							
ESDC				LR		LR	11 45 41.3	
	comp=Z,160nm,19.2s,baz=30,slow=37							
	comp=Z,0.7nm,0.8s							
MSTX	**Muleshoe**	**96.83**	**42**	P		**P**	**10 59 33.7**	**+0.1**
	baz=317							
SADO	**Sadowa**	**98.28**	**21**	LR		LR	11 48 27.5	
	comp=Z,116nm,18.8s,baz=358,slow=38							
LPIG	**La Paz**	**98.98**	**54**	LR		LR	11 41 26.5	
	comp=Z,16nm,18.2s,baz=250,slow=34							
TXAR	**Lajitas Array**	**99.66**	**46**	P		**Pdif**	**10 59 45.6**	**-0.8**
TXAR	**Lajitas Array**	**99.66**	**46**	P		**Pdif**	**10 59 45.5**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=319,slow=2.5,SNR=1.9							
TXAR				PP		**PP**	**11 03 50.3**	**+0.5**
	comp=Z,0.7nm,1.0s,baz=308,slow=6.2,SNR=4.1							
	comp=Z,0.2nm,0.6s							
TROLL	**Troll, Antarti**	**132.27**	**199**	PKPdf		**PKPdf**	**11 05 15.5**	**0.0**
SNAA	**Sanae**	**133.91**	**199**	PKPdf		**PKiKP**	**11 05 20.5**	**+0.8**
VNA2	**Neumayer--Watz**	**135.55**	**198**	PKPdf		**PKiKP**	**11 05 22.7**	**-0.3**
	baz=48,slow=1.4							
TBTG	**Tabatinga, AM**	**145.75**	**38**			**PKPdf**	**11 05 40.4**	**-1.2**
CZSB	**Cruzeiro do Su**	**147.05**	**46**			**PKPdf**	**11 05 43.8**	**0.0**
ETMB	**Extrema**	**152.43**	**38**	PKPdf		**PKPdf**	**11 05 51.5**	**-0.8**
ETMB				PKPab		**sPKPbc**	**11 06 06.9**	**+1.2**
SAML	**Samuel**	**153.14**	**31**			**PKPdf**	**11 05 53.0**	**-0.3**
SAML				PKPab		**PKPab**	**11 06 11.3**	**-0.8**
SAML	**Samuel**	**153.14**	**31**	PKIKP		**PKPdf**	**11 05 53.0**	**-0.3**
SAML							11 06 11.3	
PTLB	**Pontes e Lacer**	**160.68**	**30**	PKPab		**PKPab**	**11 06 42.8**	**-1.6**

*IDC **31** 10:46:14.0±7.3,0˚.55S×132˚.90E,h0km,mb3.8/2, mbtmp3.6/4,ML3.4/2, Error ellipse: s-maj=109.3km s-min=15.6km az=10.0*

*DJA **31** 10:46:19.7±1.1,2˚.5S×4˚×13˚.0E±˚,h10km,M3.7/5,mb4.3/1, mB5.5/1,MLv3.5/5,Mw(mB)4.9/1*

ISC 31 10:46:15.4±1.5,0˚.6S±0˚.1×132˚.81E±0˚.07,h10km,n8, σ0˚.63/10,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.57**	**261**	Pg	**Pb**	**10 46 44.1**	**-0.5**
	38nm,0.3s,baz=250,slow=23,SNR=121						
SIJI				Lg	Lg	10 47 06.3	
	49nm,0.3s,baz=264,slow=22,SNR=20						
SWI	**Sorong**	**1.57**	**261**	P	**Pb**	**10 46 44.1**	**-0.6**
SWI				S	**Sb**	**10 47 05.3**	**+0.7**
FAKI	**Fak Fak**	**2.36**	**194**	P	**Pb**	**10 46 57.8**	**-0.3**
FAKI				S	**Sb**	**10 47 27.0**	**-0.3**
BAKI	**Biak**	**3.34**	**100**	P	**Sn**	**10 47 47.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**18.75**	**202**	P	**Pn**	**10 50 35.0**	**-0.1**
	0.1nm,0.3s,baz=28,slow=15,SNR=1.6						
	1.2nm,1.0s						
WRA	**Warramunga Arr**	**19.27**	**176**	P	**Pn**	**10 50 41.5**	**+0.1**
	0.1nm,0.3s,baz=356,slow=11,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**22.94**	**177**	P	**P**	**10 51 21.2**	**+1.2**
	0.7nm,0.4s,baz=357,slow=12,SNR=23						
	0.7nm,0.4s						
STKA	**Stephens Creek**	**32.18**	**166**	P	**P**	**10 52 43.3**	**-0.3**
	2.6nm,1.0s,baz=355,slow=11,SNR=3.0						
	2.6nm,1.0s						

*IDC **31** 10:47:33.0±0.7,10˚.89S×166˚.11E,h0km,mb4.2/13, mbtmp4.3/14,ML5.3/1,MS3.8/13,Error ellipse: s-maj=22.1km s-min=18.6km az=94.0*

*NEIC **31** 10:47:42.3±0.8,10˚.9S±0˚.1×166˚.0E±0˚.1,h61km±14km, mb4.5/17,Error ellipse: s-maj=22.3km s-min=15.3km az=47.0*

*NOU **31** 10:47:42.3,10˚.98S×165˚.81E,h21km,mb4.9/11,Santa Cruz Islands*

ISC 31 10:47:41.6±0.7,10˚.93S±0˚.07×166˚.0E±0˚.1,h61km,n70, σ1˚.09/54,mb4.4/20,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.10**	**284**		**Pn**	**10 49 09.4**	**+0.2**
HNR	**Honiara**	**6.10**	**284**	P	**Pn**	**10 49 09.5**	**+0.2**
HNR	**Honiara**	**6.10**	**284**	Pn	**Pn**	**10 49 07.6**	**-1.6**
	72nm,0.3s,baz=177,slow=6.2,SNR=13						
HNR				LR	LR	10 51 42.8	
	comp=Z,1μm,20.6s,baz=116,slow=40						
	216nm,0.3s						
KOUNC	**Koumac, New Ca**	**9.70**	**189**		**Pn**	**10 49 59.8**	**+1.3**
KOUNC				Sn	**Sn**	**10 51 43.5**	**-2.5**
KOUNC	**Koumac, New Ca**	**9.70**	**189**	P	**Pn**	**10 49 59.5**	**+1.0**
MARNC	**Mare, Loyalty**	**10.68**	**170**	Pn	**Pn**	**10 50 11.8**	**0.0**
MARNC	**Mare, Loyalty**	**10.68**	**170**	P	**Pn**	**10 50 12.8**	**+1.0**
DZM	**Mont Dzumac**	**11.09**	**178**	*e*LR	LR	10 53 07.1	
	comp=Z,703nm,26.9s						
DZM	**Mont Dzumac**	**11.09**	**178**	Pn	**Pn**	**10 50 18.4**	**+0.9**
DZM	**Mont Dzumac**	**11.09**	**178**	P	**Pn**	**10 50 18.2**	**+0.7**
DZM	**Mont Dzumac**	**11.09**	**178**	Pn	**Pn**	**10 50 16.6**	**-1.0**
	1.5nm,0.3s,baz=124,slow=23,SNR=33						
DZM				Sn	**Sn**	**10 52 17.6**	**-2.4**
	0.7nm,0.3s,baz=162,slow=20,SNR=1.9						
DZM				LR	LR	10 53 14.5	
	comp=Z,126nm,18.3s,baz=38,slow=31						
YATNC	**Mamie plateau,**	**11.10**	**176**	P	**Pn**	**10 50 18.5**	**+0.9**
NOUC	**Port Laguerre**	**11.11**	**178**	P	**Pn**	**10 50 19.8**	**+2.0**
ONTNC	**Ouen Toro**	**11.32**	**178**	Pn	**Pn**	**10 50 21.4**	**+0.8**
ONTNC	**Ouen Toro**	**11.32**	**178**	P	**Pn**	**10 50 23.2**	**+2.6**
OUENC	**Ouen Island, N**	**11.45**	**176**	Pn	**Pn**	**10 50 23.4**	**+1.0**
OUENC	**Ouen Island, N**	**11.45**	**176**	P	**Pn**	**10 50 25.0**	**+2.6**
PINNC	**Pines Island,**	**11.70**	**173**	Pn	**Pn**	**10 50 26.5**	**+0.6**
MSVF	**Noisyvu**	**13.52**	**121**	LR	LR	10 55 10.7	
	comp=Z,533nm,19.1s,baz=324,slow=34						
PMG	**Port Moresby**	**18.57**	**273**	LR	LR	10 59 08.6	
	comp=Z,406nm,18.6s,baz=114,slow=37						
EIDS	**Eidsvold**	**20.12**	**222**	P	Pn	10 52 12.9	-0.1
EIDS				IAmb	IAmb	10 52 27.1	
	comp=Z,24nm,1.3s						
CTA	**Charters Tower**	**21.04**	**242**	LR	LR	10 59 29.7	
	comp=Z,200nm,18.6s,baz=82,slow=34						
ARMA	**Armidale**	**23.53**	**212**	P	**P**	**10 52 47.5**	**+1.0**
ARMA				IAmb	IAmb	10 52 49.8	
	comp=Z,31nm,1.4s						
OUZ	**Omahuta**	**25.16**	**165**	P	**P**	**10 53 03.0**	**+1.8**
OUZ				IAmb	IAmb	10 53 20.5	
	comp=Z,27nm,1.5s						
CAN	**Canberra**	**28.76**	**210**	P	**P**	**10 53 34.0**	**+0.4**
URZ	**Urewera**	**28.99**	**162**	P	**P**	**10 53 34.4**	**-1.1**
	comp=Z,3.9nm,0.4s,baz=301,slow=24,SNR=10						
URZ				LR	LR	11 03 59.5	
	comp=Z,159nm,19.4s,baz=31,slow=34						
	comp=Z,3.9nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**29.24**	**1**	T	T	11 24 03.8	
	baz=181,slow=76,SNR=246						
H11S3	**WAKE ISLAND Hy**	**29.25**	**1**	T	T	11 24 03.5	
	baz=181,slow=76,SNR=209						
H11S1	**WAKE ISLAND Hy**	**29.26**	**1**	T	T	11 24 03.7	
	baz=181,slow=76,SNR=127						
BKZ	**Black Stump Fm**	**29.64**	**163**	P	**P**	**10 53 41.9**	**+0.5**
H11N1	**WAKE ISLAND Hy**	**30.46**	**2**	T	T	11 25 34.5	
	baz=128,slow=76,SNR=197						
H11N3	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	11 25 34.9	
	baz=182,slow=76,SNR=128						
H11N2	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	11 25 35.9	
	baz=182,slow=76,SNR=146						
STKA	**Stephens Creek**	**30.67**	**223**	P	**P**	**10 53 50.8**	**+0.4**
STKA	**Stephens Creek**	**30.67**	**223**	P	**P**	**10 53 50.9**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=34,slow=7.4,SNR=3.9						
STKA				LR	LR	11 05 14.7	
	comp=Z,276nm,19.3s,baz=29,slow=34						
	comp=Z,1.5nm,0.9s						
WR0	**Warramunga Arr**	**31.54**	**250**	P	**P**	**10 53 57.6**	**-0.7**
WB0	**Warramunga Arr**	**31.63**	**250**	P	**P**	**10 53 59.4**	**+0.2**
WB0				IAmb	IAmb	10 54 19.2	
	comp=Z,7.1nm,0.8s						
WRAB	**Tennant Creek**	**31.71**	**250**	P	**P**	**10 53 59.6**	**-0.2**
WRAB				IAmb	IAmb	10 54 23.5	
	comp=Z,16nm,1.5s						
WB2	**Warramunga Arr**	**31.71**	**250**	P	**P**	**10 54 00.0**	**+0.2**
WB2				IAmb	IAmb	10 54 00.7	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**31.72**	**250**	P	**P**	**10 53 59.6**	**-0.4**
WRA	**Warramunga Arr**	**31.72**	**250**	P	**P**	**10 53 60.0**	**0.0**
	comp=Z,2.1nm,0.6s,baz=82,slow=8.7,SNR=29						
	comp=Z,2.1nm,0.6s						
TOO	**Toolangi**	**32.28**	**211**	P	**P**	**10 54 05.7**	**+1.1**
RPZ	**Rata Peaks**	**32.96**	**173**	P	**P**	**10 54 10.3**	**-0.2**
	comp=Z,11nm,0.7s,baz=309,slow=4.3,SNR=9.1						
RPZ				LR	LR	11 05 44.9	
	comp=Z,132nm,21.7s,baz=311,slow=33						
	comp=Z,11nm,0.7s						
AS31	**Alice Springs**	**33.03**	**243**	P	**P**	**10 54 11.1**	**-0.3**
ASAR	**Alice Springs**	**33.03**	**243**	P	**P**	**10 54 11.6**	**+0.2**
ASAR	**Alice Springs**	**33.03**	**243**	P	**P**	**10 54 10.9**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=64,slow=10,SNR=42						
	comp=Z,1.6nm,0.5s						
MTN	**Manton Dam**	**34.12**	**263**	P	**P**	**10 54 19.8**	**-1.1**
RAR	**Rarotonga**	**34.41**	**112**	LR	LR	11 07 15.2	
	comp=Z,24nm,18.4s,baz=284,slow=34						
BBOO	**Buckleboo**	**35.06**	**227**	P	**P**	**10 54 29.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**39.61**	**255**	P	**P**	**10 55 08.0**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=60,slow=7.6,SNR=6.1						
	comp=Z,5.8nm,0.8s						
PPT2	**Papeete2**	**43.52**	**104**	*e*LR	LR	11 08 09.4	
	comp=Z,194nm,24.8s						
TBI	**Tubuai**	**44.18**	**112**	*e*LR	LR	11 08 26.6	
	comp=Z,291nm,27.0s						
NWAO	**Narrogin (SRO)**	**49.70**	**236**	LR	LR	11 17 54.9	
	comp=Z,262nm,18.1s,baz=264,slow=37						
PETK	**Petropavlovsk-**	**64.17**	**354**	LR	LR	11 21 18.3	
	comp=Z,59nm,19.4s,baz=169,slow=32						
VNDA	**Vanda**	**66.61**	**181**	P	**P**	**10 58 24.5**	**-0.6**
VNDA				IAmb	IAmb	10 58 26.5	
	comp=Z,5.2nm,1.4s						
VNDA	**Vanda**	**66.61**	**181**	P	**P**	**10 58 23.6**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=333,slow=8.4,SNR=3.8						
	comp=Z,0.8nm,0.8s						
SBA	**Scott Base**	**66.91**	**180**	P	**P**	**10 58 28.3**	**+1.2**
SBA				IAmb	IAmb	10 58 29.5	
	comp=Z,13nm,1.4s						
MA2	**Magadan**	**71.33**	**352**	LR	LR	11 24 48.4	
	comp=Z,68nm,20.4s,baz=170,slow=31						
CMAR	**Chiang Mai Arr**	**72.26**	**293**	P	**P**	**10 59 01.6**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=108,slow=2.9,SNR=4.8						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**78.70**	**324**	P	**P**	**10 59 37.3**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=145,slow=7.8,SNR=2.3						
	comp=Z,0.4nm,0.4s						
QSPA	**South Pole Qui**	**79.07**	**180**	P	**P**	**10 59 39.7**	**+0.4**
QSPA				IAmb	IAmb	10 59 56.3	
	comp=Z,5.7nm,1.1s						
ILAR	**Eielson Array**	**83.34**	**18**	P	**P**	**11 00 01.6**	**0.0**
	comp=Z,1.3nm,0.5s,baz=239,slow=4.8,SNR=29						
	comp=Z,1.3nm,0.5s						
MAW	**Mawson**	**84.91**	**202**	P	**P**	**11 00 10.4**	**+0.8**
	comp=Z,2.3nm,0.5s,baz=109,slow=4.4,SNR=5.0						
	comp=Z,2.3nm,0.5s						
MKAR	**Makanchi Array**	**93.58**	**317**	P	**P**	**11 00 50.4**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=90,slow=8.6,SNR=3.6						
	comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**94.78**	**27**	P	**P**	**11 00 55.0**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=261,slow=4.4,SNR=4.5						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**95.59**	**61**	LR	LR	11 39 31.5	
	comp=Z,38nm,18.1s,baz=308,slow=33						
ARCES	**ARCESS Array B**	**116.28**	**346**	PKP	**PKPdf**	**11 06 17.0**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=66,slow=1.5,SNR=11						
BOSA	**Boshof**	**125.34**	**223**	PKP	**PKiKP**	**11 06 38.5**	**+1.6**
	comp=Z,3.0nm,1.0s,baz=87,slow=4.4,SNR=3.7						
KEST	**Kesra**	**147.45**	**323**	PKPbc	**PKPbc**	**11 07 19.6**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=66,slow=6.9,SNR=4.2						
ESDC	**Sonseca Array**	**150.01**	**344**	PKPbc	**PKPbc**	**11 07 25.5**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=358,slow=4.7,SNR=4.9						

ROM 31 10:56:42.7±0.1,42˚.801N±0˚.003×13˚.214E±0˚.006, h14km,ML1.3/2,1D,Error ellipse: s-maj=0.5km s-min=0.0km az=69.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.03**	**346**	P	Pg	10 56 45.4	0.0
T1242				S	Sg	10 56 47.3	0.0
T1242				AML	AML		
	comp=E,64μm,0.8s						
T1242				AML	AML		
	comp=N,78μm,1.1s						
T1242				AML	AML		
	comp=E,64μm,0.8s						
T1242				AML	AML		
	comp=N,93μm,0.2s						
T1202	**Accumoli, Fraz**	**0.10**	**175**	P	Pg	10 56 46.2	+0.3
T1202				S	Sg	10 56 48.7	+0.6
MC2	**Monte Cornacci**	**0.11**	**351**	P	Pg	10 56 46.3	+0.1
MC2				S	Sg	10 56 49.0	+0.4
MMO1	**Montemonaco**	**0.13**	**40**	P	Pg	10 56 46.5	+0.2
MMO1				S	Sg	10 56 49.1	+0.4
T1241	**Roccafluvione,**	**0.17**	**71**	P	Pg	10 56 45.2	-1.6
T1243	**Rocca Santa Ma**	**0.20**	**121**	P	Pg	10 56 47.5	+0.1
T1243				S	Sg	10 56 51.0	+0.6
T1215	**Vallo di Nera,**	**0.25**	**270**	P	Pg	10 56 48.2	+0.1
CSP1	**Cessapalombo**	**0.29**	**359**	P	Pg	10 56 49.2	+0.3
CSP1				S	Sb	10 56 54.0	-0.6
CSP1				AML	AML		
	comp=N,50μm,1.6s						
CSP1				AML	AML		
	comp=E,76μm,1.6s						
RM33	**Pellescritta (**	**0.29**	**180**	P	Pg	10 56 49.3	+0.4
RM33				S	Sg	10 56 53.6	+0.6
TERO	**Teramo**	**0.34**	**122**	P	Pg	10 56 49.8	+0.2
TERO				S	Sb	10 56 55.4	-0.5
FIU1	**Fiuminata**	**0.44**	**332**	S	Sn	10 57 01.0	-1.6
INTR	**Introdacqua**	**0.94**	**147**	P	Pb	10 56 59.5	-1.4

*BEO **31** 11:26:01.6±0.8,42˚.82N×13˚.05E,h0km,ML4.0/5*

*IDC **31** 11:26:01.9±1.0,42˚.91N×13˚.23E,h0km,mb4.0/8, mbtmp3.9/14,ML3.9/6,MS3.4/6,Error ellipse: s-maj=18.5km s-min=13.1km az=83.0*

*ROM **31** 11:26:01.5±0.0,42˚.832N±0˚.002×13˚.126E±0˚.004, h10km,ML3.8/68,Mw3.9,Error ellipse: s-maj=0.3km s-min=0.1km az=63.0,Moment Tensor Solution. Moment tensor: Scale 1014Nm; Mrr=7.77; Mθθ0.44; Mφφ7.33; Mrθ0.14; Mrφ-3.61; Mθφ-3.33; Fault plane solution: Ms8.97772×1014 NP1:φs147.00000°,δ35.00000°, λ-105.00000°. NP2:φs345.00000°,δ56.00000°, λ-80.00000°.*

*LDG **31** 11:26:01.2±0.4,42˚.87N×13˚.18E,h11km,Md3.8/2, Ml3.3/23 Error ellipse: s-maj=7.6km s-min=4.8km az=129.0*

*PDG **31** 11:26:02.0±0.5,42˚.83N×13˚.14E,h11km,ML4.0/11,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*PRU **31** 11:26:02.2±0.0,42˚.80N×13˚.46E,h0km*

*STR **31** 11:26:06.1±1.8,43˚N±8˚×1˚3E±1˚5,h10km,mb4.2/16, Error ellipse: s-maj=0.0km s-min=0.0km az=103.9, preliminary*

ISC 31 11:26:02.4±0.7,42˚.83N±0˚.01×13˚.09E±0˚.02,h11km±3km, n341,σ2s02/392,mb4.2/7,MS3.6/5,64C-12D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1212	**Cascia, Frazio**	**0.08**	**204**	⇑P	**Pg**	**11 26 04.7**	**-0.2**
T1212				S	**Sg**	**11 26 06.8**	**0.0**
T1216	**Preci, Frazion**	**0.08**	**321**	⇑P	**Pg**	**11 26 04.5**	**-0.5**
T1216				S	**Sg**	**11 26 06.4**	**-0.4**
T1242	**Castelluccio d**	**0.09**	**88**	⇓P	**Pg**	**11 26 03.8**	**-1.3**
T1242				S	**Sg**	**11 26 05.1**	**-1.9**
T1213	**Norcia, Frazio**	**0.10**	**165**	⇓P	**Pg**	**11 26 04.6**	**-0.6**
T1213				S	**Sg**	**11 26 06.6**	**-0.7**
T1214	**Arquata del Tr**	**0.11**	**127**	⇓P	**Pg**	**11 26 04.4**	**-1.0**
T1214				S	**Sg**	**11 26 06.3**	**-1.3**
MC2	**Monte Cornacci**	**0.11**	**40**	⇑P	**Pg**	**11 26 04.4**	**-1.1**
MC2				S	**Sg**	**11 26 06.4**	**-1.4**
FEMA	**Monte Fema**	**0.14**	**348**	⇑P	**Pg**	**11 26 05.2**	**-0.6**
FEMA				S	**Sg**	**11 26 07.8**	**-0.5**
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
FEMA				AML	AML		
T1218	**Civita (PG)**	**0.16**	**173**	⇑P	**Pg**	**11 26 05.6**	**-0.4**
T1218				S	**Sg**	**11 26 08.3**	**-0.2**
T1202	**Accumoli, Fraz**	**0.16**	**141**	⇓P	**Pg**	**11 26 05.4**	**-0.7**
T1202				S	**Sg**	**11 26 08.3**	**-0.3**
T1215	**Vallo di Nera,**	**0.16**	**262**	⇑P	**Pg**	**11 26 06.2**	**+0.1**
T1215				S	**Sg**	**11 26 09.5**	**+0.8**
T1215				AML	AML		
	comp=E,37650μm,1.3s						
T1215				AML	AML		
	comp=N,35250μm,1.1s						
T1215				AML	AML		
	comp=E,37700μm,1.3s						
T1215				AML	AML		
	comp=N,35650μm,1.2s						
T1215				AML	AML		
	comp=E,36000μm,1.3s						
T1215				AML	AML		
	comp=N,35600μm,1.2s						
T1215				AML	AML		
	comp=E,37700μm,1.3s						
T1244	**Arquata del Tr**	**0.17**	**114**	⇑P	**Pg**	**11 26 05.3**	**-0.8**
T1244				S	**Sg**	**11 26 08.3**	**-0.5**
MMO1	**Montemonaco**	**0.19**	**67**	⇑P	**Pg**	**11 26 05.4**	**-1.1**
MMO1				S	**Sg**	**11 26 08.2**	**-1.2**
MMO1				AML	AML		
MMO1				AML	AML		
T1201	**Domo (RI)**	**0.21**	**145**	⇑P	**Pg**	**11 26 06.5**	**-0.3**
T1201				S	**Sg**	**11 26 10.2**	**+0.4**
FDMO	**Fiordimonte**	**0.21**	**360**	⇑P	**Pg**	**11 26 06.3**	**-0.6**
FDMO				S	**Sg**	**11 26 09.8**	**-0.2**
FDMO				AML	AML		
	comp=N,37950μm,0.2s						
FDMO				AML	AML		
	comp=E,39750μm,0.2s						
CESI	**CESI - Serrava**	**0.23**	**323**	⇑P	**Pg**	**11 26 06.9**	**-0.2**
CESI				S	**Sg**	**11 26 10.9**	**+0.5**
CESI				AML	AML		
	comp=E,48600μm,0.4s						
CESI				AML	AML		
	comp=N,83500μm,0.2s						
T1204	**Amatrice, Fraz**	**0.23**	**132**	⇑P	**Pg**	**11 26 06.5**	**-0.7**
T1204				S	**Sg**	**11 26 10.1**	**-0.3**
RM33	**Leonessa**	**0.23**	**189**	⇑P	**Pg**	**11 26 07.0**	**-0.2**
LNSS				S	**Sg**	**11 26 10.9**	**+0.5**
T1241	**Roccafluvione,**	**0.25**	**83**	⇑P	**Pg**	**11 26 06.6**	**-1.1**
T

ASSB AML AML
comp=N,21450µm,0.2s
SSM1 San Severino M 0.41 9 P Pg 11 26 09.7 -0.8
GAG1 Gagliole 0.41 358 P Pg 11 26 09.9 -0.6
GAG1 AML AML
comp=E,36150µm,0.5s
GAG1 AML AML
comp=N,37450µm,0.6s
GAG1 AML AML
comp=E,36100µm,0.5s
GAG1 AML AML
comp=N,37400µm,0.6s
MNTP Montappone 0.42 42 ⇑P Pg 11 26 10.2 -0.5
MNTP AML AML
comp=E,41150µm,1.5s
MNTP AML AML
comp=N,31850µm,1.3s
MNTP AML AML
comp=E,41200µm,1.5s
TERO Teramo 0.43 118 ⇑P Pg 11 26 09.6 -1.3
TERO S Sg 11 26 16.0 -0.6
TERO AML AML
comp=E,73150µm,0.5s
TERO AML AML
TERO AML AML
comp=E,77900µm,0.5s
TERO AML AML
TERO AML AML
CESX Cesi 0.43 240 ⇑P Pg 11 26 10.7 -0.3
CESX AML AML
comp=E,22600µm,0.7s
CESX AML AML
comp=N,16700µm,1.4s
MTL1 Matelica 0.43 352 P Pg 11 26 10.5 -0.4
MTL1 AML AML
comp=E,28650µm,1.1s
MTL1 AML AML
comp=E,28600µm,1.1s
MTL1 AML AML
comp=N,31250µm,0.8s
SNTG Esanatoglia 0.44 346 P Pg 11 26 10.4 -0.7
SNTG AML AML
comp=E,1018µm,0.7s
SNTG AML AML
comp=N,1032µm,0.3s
SNTG AML AML
comp=E,7855µm,0.7s
SNTG AML AML
comp=N,8750µm,0.3s
SNTG AML AML
comp=E,1020µm,0.7s
SNTG AML AML
comp=N,1030µm,0.3s
OFFI Offida 0.45 76 ⇑P Pg 11 26 10.9 -0.4
ATCC AVT- Casa Cast 0.49 318 ⇑P Pg 11 26 11.6 -0.4
ATCC AML AML
comp=E,21900µm,0.9s
ATCC AML AML
comp=N,16950µm,0.7s
ATCC AML AML
comp=E,21850µm,0.9s
EL6 Elcito 0.50 1 ⇑P Pg 11 26 10.4 -1.9
TRE1 Treia 0.51 19 P Pg 11 26 11.9 -0.5
TRE1 AML AML
comp=E,23750µm,0.3s
TRE1 AML AML
comp=N,17800µm,0.9s
TRE1 AML AML
comp=E,23750µm,0.3s
TRE1 AML AML
comp=N,17800µm,0.9s
GIGS Gran Sasso 0.52 137 ⇑P Pg 11 26 11.0 -1.5
GIGS S Sg 11 26 18.6 -0.7
GIGS AML AML
comp=N,7515µm,0.5s
GIGS AML AML
comp=E,14750µm,0.6s
FOSV Fossato di Vic 0.53 333 ⇑P Pg 11 26 12.1 -0.6
FOSV AML AML
comp=N,10255µm,0.4s
FOSV AML AML
comp=E,8970µm,0.4s
CING Cingoli 0.56 8 P Pg 11 26 11.9 -1.3
CING AML AML
comp=N,5125µm,0.2s
CING AML AML
comp=E,8205µm,0.9s
FIAM Fiamignano 0.56 178 P Pg 11 26 12.4 -0.9
MURB Monte Urbino 0.60 317 ⇑P Pg 11 26 13.6 -0.5
MURB AML AML
comp=E,23700µm,0.9s
MURB AML AML
comp=N,23200µm,0.3s
MURB AML AML
comp=E,25000µm,0.9s
MURB AML AML
comp=N,22800µm,0.9s
TRTR Tortoreto Alta 0.61 91 ⇑P Pg 11 26 14.0 -0.2
CADA Capodarco di F 0.61 53 P Pg 11 26 14.4 +0.1
MMUR Monte Murano 0.62 354 P Pg 11 26 13.6 -0.8
CIMA Civitanova Mar 0.64 41 P Pg 11 26 14.6 -0.3
ATTE AVT- Monte Tez 0.66 305 ⇑P Pg 11 26 14.4 -0.7
ATTE AML AML
comp=E,5480µm,1.1s
ATTE AML AML
comp=N,4405µm,0.4s
ATFO Monte Foce - G 0.66 325 ⇑P Pg 11 26 14.5 -0.7
ATFO AML AML
comp=N,5500µm,0.5s
ATFO AML AML
comp=E,6880µm,0.4s
FAGN Fagnano 0.67 147 P Pg 11 26 13.9 -1.4
PP3 Marolino 0.67 34 ⇑P Pg 11 26 15.0 -0.4
PP3 AML AML
comp=E,36200µm,0.5s
PP3 AML AML
comp=N,26700µm,0.7s
PP3 AML AML
comp=N,25650µm,0.7s
PP3 AML AML
comp=E,35850µm,0.5s
ARVD Arcevia 0.68 351 P Pg 11 26 14.6 -1.0
ARVD AML AML
comp=N,3715µm,0.6s
ARVD AML AML
comp=E,4860µm,0.6s
VCEL Villa Celiera 0.70 128 ⇑P Pg 11 26 14.7 -1.3
MGAB Montegabbione 0.72 277 ⇑P Pg 11 26 16.0 -0.4
MGAB AML AML
comp=N,9515µm,0.4s
MGAB AML AML
comp=E,19000µm,0.5s
MGAB AML AML
comp=N,8585µm,0.9s
MGAB AML AML
comp=E,16100µm,0.5s
SRES S.Oreste - Sor 0.73 216 ⇑P Pg 11 26 15.5 -0.9
SRES AML AML
comp=E,11650µm,0.6s
SRES AML AML
comp=N,8900µm,1.4s
FRON Frontone 0.74 339 ⇑P Pg 11 26 15.7 -1.1
FRON AML AML
comp=N,6180µm,0.6s
FRON AML AML
comp=E,4130µm,1.4s
ATVO AVT- Monte Val 0.75 318 ⇑P Pg 11 26 16.0 -0.9
ATVO AML AML
comp=N,4060µm,0.5s
ATVO AML AML
comp=E,4365µm,0.9s
T0110 Collepietro 0.79 139 P Pg 11 26 15.4 -2.1
ATMI Monte Miggiano 0.79 310 P Pg 11 26 17.0 -0.6
ATMI AML AML
comp=E,11305µm,0.4s
ATMI AML AML
comp=N,11950µm,0.8s
ATPI Pietralunga - 0.80 321 ⇑P Pg 11 26 16.9 -1.0
ATPI AML AML
comp=E,5130µm,0.5s
ATPI AML AML
comp=N,4650µm,1.3s
COR1 Corinaldo 0.81 355 P Pg 11 26 17.6 -0.4
COR1 AML AML
comp=N,12300µm,0.5s
COR1 AML AML
comp=E,11530µm,0.4s
AOI Ancona 0.81 27 ⇑P Pg 11 26 16.9 -1.2
AOI AML AML
comp=E,5705µm,0.7s
AOI AML AML
comp=N,6455µm,0.9s
PIEI Pieia 0.82 330 ⇑P Pg 11 26 17.0 -1.2
PIEI AML AML
comp=E,3435µm,1.0s
PIEI AML AML
comp=N,3245µm,1.5s
PTQR Pietraquaria 0.84 164 P Pg 11 26 16.8 -1.7
MTCE Montecelio 0.84 198 ⇑P Pg 11 26 17.1 -1.5
NARO Abbazia di Nar 0.87 335 P Pg 11 26 17.9 -1.2
NARO AML AML
comp=E,3730µm,1.0s
NARO AML AML
comp=N,2215µm,1.1s
SACS San Casciano d 0.87 272 P Pg 11 26 18.7 -0.4
SACS AML AML
comp=E,7080µm,1.6s
SACS AML AML
comp=N,6775µm,0.9s
SACS AML AML
comp=N,6990µm,0.9s
SACS AML AML
comp=E,6915µm,1.6s
CERT Cerreto 0.88 185 P Pg 11 26 18.2 -1.2
APEC Apecchio 0.88 326 P Pg 11 26 18.6 -0.8
SENI Senigallia 0.89 7 P Pg 11 26 18.9 -0.6
FSSB Fossombrone 0.90 345 P Pg 11 26 18.5 -1.2
FSSB AML AML
comp=E,12300µm,0.4s
FSSB AML AML
comp=N,14900µm,0.3s
BADI Badiali 0.92 318 P Pg 11 26 19.2 -1.0
BADI AML AML
comp=N,3575µm,1.0s
BADI AML AML
comp=E,346µm,1.1s
CAFI Castiglion Fio 0.96 302 ⇑P Pg 11 26 20.2 -0.8
CAFI AML AML
comp=E,3075µm,0.7s
CAFI AML AML
comp=N,3410µm,0.9s
CAFI AML AML
comp=N,3270µm,0.9s
CAFI AML AML
comp=E,3160µm,0.7s
LATE Laterza 0.97 258 P Pg 11 26 20.3 -0.8
RCAV Rocca di Cave 0.98 186 P Pg 11 26 20.0 -1.3
INTR Introdacqua 1.01 143 P Pg 11 26 19.5 -2.4
INTR AML AML
comp=E,17250µm,0.7s
INTR AML AML
comp=N,26200µm,1.0s
INTR AML AML
comp=N,17µm,1.0s
PARC Parchiule 1.03 323 P Pg 11 26 21.2 -1.1
PARC AML AML
comp=E,3650µm,0.8s
PARC AML AML
comp=N,3070µm,1.0s
SF03 Valle Cupa 1.03 269 P Pg 11 26 21.4 -0.8
VVLD Villa Vallelon 1.03 157 P Pg 11 26 20.8 -1.5
SF11 Podere del Sol 1.04 273 P Pg 11 26 21.2 -1.2
MCIV Monte Civitell 1.04 268 P Pg 11 26 21.5 -0.9
MCIV AML AML
comp=N,2025µm,1.6s
MCIV AML AML
comp=E,2140µm,1.1s
GUAR Guarcino 1.04 171 P Pg 11 26 21.3 -1.2
SF04 Casetta 1.05 271 P Pg 11 26 21.6 -1.1
SF04 AML AML
comp=N,2935µm,1.4s
SF04 AML AML
comp=E,2606µm,0.3s
RMP Rome, Mte Porz 1.05 196 P Pg 11 26 21.0 -1.7
SF13 Bagnolo 1.08 270 P Pb 11 26 21.8 -1.3
SF14 Selvena 1.09 267 P Pb 11 26 22.0 -1.2
VIVA Pratoni del Vi 1.10 193 P Pb 11 26 23.5 0.0
MA9 Marino 1.10 197 P Pb 11 26 23.3 -0.1
RDP Rocca di Papa 1.10 195 P Pb 11 26 22.1 -1.4
TOLF Tolfa 1.11 227 ⇑P Pb 11 26 22.6 -1.0
TOLF AML AML
comp=E,6300µm,1.2s
TOLF AML AML
comp=N,3930µm,1.1s
SF01 Poggio Pratacc 1.12 270 P Pb 11 26 23.2 -0.6
SF01 AML AML
comp=E,2830µm,0.8s
SF01 AML AML
comp=N,2790µm,1.5s
CPGN Carpegna, Ital 1.12 330 P Pb 11 26 23.9 -0.1
PESA Pesaro 1.13 351 P Pb 11 26 22.6 -1.4
PESA AML AML
comp=N,6680µm,1.3s
PESA AML AML
comp=E,5850µm,0.6s
CRE Caprese Michel 1.15 314 P Pb 11 26 23.0 -1.4
CRE AML AML
comp=N,1880µm,1.0s
CRE AML AML
comp=E,1820µm,1.5s
LAV9 Lanuvio 1.18 194 P Pb 11 26 24.6 -0.3
ARCI Arcidosso 1.19 272 P Pb 11 26 24.0 -1.0
ARCI AML AML
comp=E,966µm,1.2s
ARCI AML AML
comp=N,792µm,1.2s
POFI Posta Fibreno 1.20 157 P Pb 11 26 23.2 -2.0
GiUL Giuliano Di Ro 1.27 174 P Pn 11 26 24.8 -1.4
LATB Latina 1.33 184 P Pn 11 26 25.5 -1.4
ASQU Asqua 1.36 316 AML AML
comp=N,1740µm,0.7s
ASQU AML AML
comp=E,1350µm,0.8s
RNI2 Rionero Sannit 1.37 145 P Pb 11 26 27.8 -0.3
CERA Filignano 1.41 150 P Pn 11 26 27.2 -0.9
SFI Santa Sofia 1.41 320 P Pn 11 26 28.4 +0.4
SFI AML AML
comp=E,1350µm,1.6s
SFI AML AML
comp=E,1320µm,1.6s
SFI AML AML
comp=N,1400µm,1.2s
SFI AML AML
comp=N,1440µm,1.2s
FRES Fresagrandinar 1.45 126 P Pb 11 26 29.1 -0.2
CSNT Castellina Chi 1.47 297 P Pn 11 26 28.3 -0.5
CSNT AML AML
comp=E,797µm,1.1s
CSNT AML AML
comp=N,750µm,0.6s
FROS Frosini 1.47 286 P Pn 11 26 28.4 -0.4
OSSC Osservatorio P 1.52 298 P Pn 11 26 29.3 -0.2
RUFI Rufina 1.54 312 P Pn 11 26 29.4 -0.3
CASP Castiglione de 1.64 270 ⇑P Pn 11 26 30.7 -0.4
CASP AML AML
comp=N,438µm,1.0s
CASP AML AML
comp=E,522µm,1.1s
VAGA Valle Agricola 1.65 148 P Pn 11 26 31.5 +0.2
BSSO Busso 1.70 138 P Pn 11 26 32.7 +0.6
SEI Scarperia 1.76 315 AML AML
comp=E,1405µm,0.5s
SEI AML AML
comp=N,1820µm,0.7s
MODR Mondragone 1.78 160 P Pn 11 26 33.6 +0.5
CIGN Sant'Elia a Pi 1.79 130 P Pn 11 26 33.6 +0.4
PIGN Pignataro Magg 1.82 153 P Pn 11 26 34.6 +1.0
DUGI Dugi Otok 1.85 50 ePn Pn 11 26 33.7 -0.4
SACR S. Croce Del S 1.87 139 P Pb 11 26 35.6 -1.0
MELA Melanico ??? S 1.88 126 P Pn 11 26 35.2 +0.7
MTCR Monte La Croce 1.94 309 P Pn 11 26 35.2 -0.2
VITU Vitulano (BN) 2.00 145 P Pn 11 26 37.4 +1.1
VIRC Vir 2.05 44 ePn Pn 11 26 36.0 -0.7
POPM Popiglio 2.09 306 P Pn 11 26 37.1 -0.3
POPM AML AML
comp=E,433µm,0.9s
POPM AML AML
comp=N,436µm,1.3s
BRJN Brijuni 2.13 13 P Pn 11 26 37.4 -0.5
NVLJ Novalja 2.17 36 ePn Pn 11 26 37.5 -0.8
MORI Morici 2.17 61 ePn Pn 11 26 38.0 -0.5
RABC Rab 2.28 32 ePn Pn 11 26 39.3 -0.6
MSAG Monte S. Angel 2.37 117 P Pn 11 26 41.5 +0.2
HVAR Hvar 2.49 81 ePn Pn 11 26 42.3 -0.5
HVAR Hvar 2.49 81 P Pn 11 26 42.7 -0.1
EQUI Equi 2.52 303 AML AML
comp=N,274µm,1.0s
EQUI AML AML
comp=E,243µm,0.9s
UDBI Udbina 2.58 48 i Pn Pn 11 26 44.8 +0.7
A250A Rusevo Krmpots 2.61 30 ePn Pn 11 26 44.0 -0.5
PLMA Palmaria, Port 2.66 299 P Pn 11 26 45.9 +0.8
PLMA AML AML
comp=E,124µm,1.3s
PLMA AML AML
comp=N,166µm,0.8s
KIJV Kijevo 2.69 63 ePn Pn 11 26 45.9 +0.3
LSTV Lastovo 2.80 90 ePn Pn 11 26 46.7 -0.4
SKDS Skadanscina 2.80 13 ePn Pn 11 26 45.9 -1.2
SKDS Skadanscina 2.80 13 ePn Pn 11 26 46.4 -0.8
SKDS eSn Sn 11 27 19.2 -1.7
SKDS IAML 11 27 24.5
comp=Z,110nm,0.4s
PALZ Palazzo San Ge 2.85 130 P Pn 11 26 48.1 +0.2
SMPL Sampolo 2.91 257 P Pn 11 26 49.6 +1.0
SMPL Sampolo 2.91 257 P Pn 11 26 48.8 +0.2
SMPL AML AML
comp=E,53µm,1.1s
SMPL AML AML
comp=N,60µm,1.2s
MAKA Makarska 2.92 80 ePn Pn 11 26 49.1 +0.4
MSSA Maissana 2.99 301 P Pn 11 26 50.1 +0.2
MSSA AML AML
comp=E,190µm,0.9s
MSSA AML AML
comp=N,192µm,0.8s
A050A Klekovaca 3.00 55 ePn Pn 11 26 50.3 +0.4
PGF Pioggiola 3.03 266 eP Pn 11 26 51.0 +0.7
PGF eSn Sn 11 27 22.6 -4.0
comp=N,17nm,0.3s
PGF Pioggiola 3.03 266 P Pn 11 26 51.1 +0.7
RICI Ricice 3.03 76 i Pn Pn 11 26 50.6 +0.3
CEY Cerknica 3.07 18 ePn Pn 11 26 50.4 -0.4
BOJS Bojanci 3.10 29 ePn Pn 11 26 52.1 +0.9
BOJS Bojanci 3.10 29 ePn Pn 11 26 52.0 +0.8
BOJS IAML 11 27 48.9
BOJS Bojanci 3.10 29 AML AML
comp=N,1027µm,1.4s
BOJS AML AML
comp=E,1335µm,1.5s
ROVR Rover Verones 3.17 333 P Pn 11 26 53.5 +1.1
ROVR AML AML
comp=N,208µm,1.0s
ROVR AML AML
comp=E,116µm,1.0s
SABO M.te Sabotino 3.17 6 P Pn 11 26 52.1 -0.1
SABO AML AML
comp=E,2865µm,0.7s
SABO AML AML
comp=E,742µm,0.7s
SABO AML AML
comp=N,738µm,0.8s
SABO AML AML
comp=N,2840µm,0.9s
CGRP Cima Grappa 3.19 344 P Pn 11 26 53.0 +0.4
CGRP AML AML
comp=E,682µm,0.5s
CGRP AML AML
comp=N,656µm,0.6s
SRKY Kupres RS 3.22 66 ePn Pn 11 26 53.7 +0.8
VARN Col Varnada, M 3.25 348 P Pn 11 26 54.3 +1.0
VARN AML AML
comp=E,846µm,1.1s
VARN AML AML
comp=N,676µm,0.7s
AMUR Altamura 3.25 125 P Pn 11 26 53.6 +0.2
MGRS Mrkonjic Grad 3.31 60 ePn Pn 11 26 54.8 +0.7
AJAC Base Áreonaval 3.33 256 P Pn 11 26 55.5 +1.2
DOSS Dosso del Somm 3.34 337 P Pn 11 26 55.7 +0.9
DOSS AML AML
comp=N,342µm,0.8s
DOSS AML AML
comp=E,343µm,0.8s
DOSS AML AML
comp=E,404µm,0.7s
DOSS AML AML
comp=N,368µm,0.5s
SALO Salr 3.35 327 P Pn 11 26 56.2 +1.6
SALO AML AML
comp=E,404µm,1.0s
SALO AML AML
comp=N,558µm,1.3s
LJU Ljubljana 3.38 17 P Pn 11 26 55.5 +0.5
LJU AML AML
comp=N,2785µm,0.8s
LJU AML AML
comp=E,2170µm,1.3s
STON Ston 3.39 88 ePn Pn 11 26 53.6 -1.6
STON Ston 3.39 88 ePn Pn 11 26 53.8 -1.4
STON Ston 3.39 88 ePn Pn 11 26 54.2 -1.0
STON eSn Sn 11 27 35.1 -0.3
STON Ston 3.39 88 P Pn 11 26 54.0 -1.2
MPRI Monte Prat 3.42 359 P Pn 11 26 56.0 +0.3
MPRI AML AML
comp=E,538µm,0.8s
MPRI AML AML
comp=N,746µm,0.7s
MAGA Magasa 3.44 330 P Pn 11 26 56.6 +0.6
MAGA AML AML
comp=E,1270µm,0.5s
MAGA AML AML
comp=N,605µm,0.5s
STAL STALIGIAL 3.44 356 AML AML
comp=E,384µm,0.6s
STAL AML AML
comp=E,487µm,0.4s
STAL AML AML
comp=N,404µm,0.3s
STAL AML AML
comp=N,429µm,1.0s
CRES Cresnjev 3.45 29 ePn Pn 11 26 55.6 -0.4
MATE Matera 3.47 128 ⇑P Pn 11 26 57.3 +1.0
LUSI Trento, Gardas 3.49 335 AML AML
comp=E,314µm,0.8s
LUSI AML AML
comp=N,357µm,0.5s
CIMO Cimolais 3.52 353 AML AML
comp=E,139µm,1.5s
CIMO AML AML
comp=N,157µm,0.6s
CIMO AML AML
comp=E,140µm,1.5s
CIMO AML AML
comp=N,144µm,0.6s
A051A Mrakovica 3.52 50 ePn Pn 11 26 57.0 -0.1
BLY Banja Luka 3.53 56 ePn Pn 11 27 00.4 +3.2
PTCC Patocco-Chiusa 3.58 3 P Pn 11 26 57.4 -0.5
PTCC AML AML
comp=N,168µm,0.6s
PTCC AML AML
comp=E,205µm,0.8s
GAGG Gaggia 3.60 336 AML AML
comp=E,467µm,0.8s
GAGG AML AML
comp=N,332µm,0.8s
ZONE Zone 3.63 325 AML AML
comp=N,303µm,0.6s
ZONE AML AML
comp=E,212µm,0.9s
ZAG Zagreb 3.65 34 AML AML
comp=E,956µm,0.9s
ZAG AML AML
comp=N,868µm,1.6s
DBRK Dubrovnik 3.73 91 ePn Pn 11 26 59.1 -0.7
ZOU Zoufplan 3.73 359 AML AML
comp=E,408µm,1.6s
ZOU AML AML
comp=E,425µm,1.6s
ZOU AML AML
comp=N,279µm,1.5s
ZOU AML AML
comp=N,284µm,1.2s
ACOM Acomizza, Ital 3.73 4 AML AML
comp=N,360µm,0.8s
ACOM AML AML
comp=E,408µm,1.0s

ACOM AML AML
comp=E,432µm,0.8s
ACOM AML AML
comp=N,369µm,0.8s
MYKA Terra Mystica 3.82 6 *i* Pn **Pn 11 27 01.8 +0.6**
comp=N,12nm,0.3s,SNR=16
OBKA Obir 3.83 15 *e*Pn **Pn 11 27 01.5 +0.2**
OBKA Obir 3.83 15 *e*Pn **Pn 11 27 01.7 +0.4**
comp=N,2.5nm,0.1s
TREB Trebinje 3.87 90 *e*Pn **Pn 11 27 02.6 +0.7**
ABTA Abfaltersbach 3.94 354 *e*Pn **Pn 11 27 04.1 +1.2**
comp=N,69nm,0.6s,SNR=47
HCY Herceg Novi 4.00 94 *e*Pn **Pn 11 27 02.7 -1.0**
HCY Herceg Novi 4.00 94 ⇑*i*Pn **Pn 11 27 04.2 +0.5**
HCY *i* Sn **Sn 11 27 51.1 +0.5**
BRY Bratogost 4.01 87 *e*Pn **Pn 11 27 03.9 +0.1**
BRY Bratogost 4.01 87 ⇓*i*Pn **Pn 11 27 03.8 0.0**
BRY *i* Sn **Sn 11 27 51.2 +0.4**
PERS Pernice 4.07 20 *i* Pn **Pn 11 27 06.4 +1.7**
SOKA Soboth 4.09 19 *e*Pn **Pn 11 27 06.9 +1.9**
comp=N,3.2nm,0.3s
SBF Sospel 4.25 286 *e*P **Pn 11 27 08.0 +0.9**
SBF *e*Sn **Sn 11 27 51.7 -5.1**
comp=N,26nm,0.5s
KBA Koelnbreinsper 4.26 2 *e*Pn **Pn 11 27 08.0 +0.7**
comp=N,32nm,0.7s,SNR=29
ROSI Rosskopf 4.27 344 AML AML
comp=E,282µm,0.8s
ROSI AML AML
comp=N,386µm,0.7s
UPM Unac-Piva 4.28 83 *e*Pn **Pn 11 27 09.1 +1.5**
CEME Cevo 4.31 92 ⇑*i*Pn **Pn 11 27 08.2 +0.3**
CEME *i* Sn **Sn 11 27 58.6 +0.5**
TURF col de Turini 4.31 287 P **Pn 11 27 09.8 +1.8**
NKME Niksic 4.32 89 ⇓*i*Pn **Pn 11 27 07.8 -0.2**
NKME *i* Sn **Sn 11 27 58.8 +0.5**
BUM Brajici-Budva 4.32 95 ⇑*i*Pn **Pn 11 27 08.4 +0.4**
BUM *i* Sn **Sn 11 27 58.9 +0.5**
VARE Varese 4.34 316 AML AML
comp=E,164µm,0.8s
VARE AML AML
comp=N,118µm,0.6s
NKY Niksic 4.34 88 ⇓*i*Pn **Pn 11 27 08.7 +0.3**
NKY *i* Sn **Sn 11 27 59.5 +0.4**
SPIF crte de Spivo 4.44 288 P **Pn 11 27 12.3 +2.6**
FETA Feichten 4.52 339 *i* Pn **Pn 11 27 13.6 +2.8**
comp=N,13nm,0.3s,SNR=6.4
DRME Dracevica, Mon 4.55 96 *e*Pn **Pn 11 27 11.7 +0.6**
DRME Dracevica, Mon 4.55 96 ⇑*i*Pn **Pn 11 27 11.8 +0.6**
DRME *i* Sn **Sn 11 28 04.4 +0.4**
WTTA Wattenberg 4.56 347 *e*Pn **Pn 11 27 13.8 +2.4**
comp=N,10nm,0.3s,SNR=9.7
DAVOX Davos/Dischmat 4.57 331 Pn **Pn 11 27 13.3 +1.8**
comp=N,5.3nm,0.3s,baz=145,slow=16,SNR=29
DAVOX Sn **Sn 11 28 08.6 +3.9**
comp=N,1.3nm,0.3s,baz=311,slow=19,SNR=1.6
DAVOX LR LR 11 29 02.8
comp=N,93nm,19.4s,baz=74,slow=40
comp=N,17nm,0.5s
PDG Podgorica 4.57 93 ⇑P **Pn 11 27 11.9 +0.5**
TTG Podgorica 4.57 93 ⇑*i*Pn **Pn 11 27 11.7 +0.3**
TTG *i* Sn **Sn 11 28 04.9 +0.5**
TIP Timpagrande 4.58 141 ⇓P **Pn 11 27 12.6 +1.0**
SQTA Sankt Quirin 4.59 344 *e*Pn **Pn 11 27 14.3 +2.5**
comp=N,11nm,0.3s
CALF Calern 4.60 284 P **Pn 11 27 13.4 +1.5**
ISO Isola 4.60 289 P **Pn 11 27 15.3 +3.4**
WATA Walderalm 4.63 347 *i* Pn **Pn 11 27 15.7 +3.2**
comp=N,13nm,0.3s,SNR=12
PLE Pljevlja 4.64 82 ⇓*i*Pn **Pn 11 27 13.1 +0.6**
PLE *i* Sn **Sn 11 28 06.5 +0.1**
RUDO Rudo 4.66 78 *e*Pn **Pn 11 27 10.2 -2.4**
BBLS Lazići 4.72 75 *e*Pn **Pn 11 27 14.5 +0.9**
KOME Kolasin 4.72 88 ⇓*i*Pn **Pn 11 27 14.7 +1.1**
KOME *i* Sn **Sn 11 28 08.4 -0.1**
MOTA Moosalm 4.73 343 *e*Pn **Pn 11 27 16.5 +2.7**
comp=N,13nm,0.4s,SNR=8.3
ARSA Arzberg 4.75 20 *e*Pn **Pn 11 27 15.1 +1.2**
comp=N,2.8nm,0.3s
SURF Saint Ours 4.84 292 P **Pn 11 27 16.8 +1.4**
KOVH Kovagotottos 4.85 46 P **Pn 11 27 16.9 +1.7**
KOVH S **Sn 11 28 09.2 -2.1**
LMR La Mourre 4.85 278 *e*P **Pn 11 27 16.1 +0.9**
LMR *e*Sn **Sn 11 28 05.8 -5.5**
comp=N,3.6nm,0.4s
BIOA Bad Ischl, Aus 4.88 4 *e*Pn **Pn 11 27 16.8 +1.1**
comp=N,19nm,0.4s,SNR=14
RETA Reutte 4.94 341 *e*Pn **Pn 11 27 17.9 +1.2**
comp=N,6.0nm,0.3s
MBDF Montbardon 4.95 295 *e*P **Pn 11 27 18.3 +1.5**
MBDF *e*Sn **Sn 11 28 08.3 -5.9**
comp=N,10nm,0.5s
TRIGF Trigance 4.96 283 P **Pn 11 27 18.8 +1.8**
IVA Berane 5.00 87 ⇑*i*Pn **Pn 11 27 18.0 +0.5**
IVA *i* Sn **Sn 11 28 15.3 0.0**
DAVA Damuels 5.01 334 *e*Pn **Pn 11 27 20.7 +3.1**
comp=N,20nm,0.6s,SNR=13
OGAG Argentiere 5.02 291 P **Pn 11 27 22.2 +4.5**
FLAF Flassans-sur-I 5.04 279 P **Pn 11 27 19.5 +1.7**
SJES Sjenica 5.06 83 *e*Pn **Pn 11 27 19.5 +1.2**
SJES *e*Sn **Sn 11 28 17.0 +0.2**
PVY Plav 5.07 90 ⇑*i*Pn **Pn 11 27 19.0 +0.6**
PVY *i* Sn **Sn 11 28 16.9 0.0**
MOA Molln 5.09 9 *e*Pn **Pn 11 27 19.4 +0.8**
MOA *e*Sn **Sn 11 28 16.1 -1.3**
MOA Molln 5.09 9 *e*Pn **Pn 11 27 19.2 +0.6**
comp=N,3.9nm,0.2s
DIVS Divibare 5.18 73 *e*Pn **Pn 11 27 20.8 +0.9**
DIVS Divibare 5.18 73 *e*Pn **Pn 11 27 20.5 +0.6**
DIVS *e*Sn **Sn 11 28 19.9 +0.2**
IVAS Ivanjica 5.22 79 *e*Pn **Pn 11 27 20.4 0.0**
IVAS *e*Sn **Sn 11 28 20.7 +0.2**
MORH Mrgy, Hungar 5.22 48 P **Pn 11 27 24.6 +4.2**
TIR Tirane 5.25 104 ⇑P **Pn 11 27 21.3 +0.5**
LPG La Plagne 5.28 303 *e*P **Pn 11 27 23.1 +1.6**
LPG *e*Sn **Sn 11 28 16.4 -6.1**
comp=N,12nm,0.6s
LPL La Plagne 5.30 303 *e*P **Pn 11 27 23.7 +2.0**
LPL *e*Sn **Sn 11 28 16.9 -6.0**
comp=N,8.6nm,0.5s
RONA Rosalia, Austr 5.37 24 *i* Pn **Pn 11 27 22.8 +0.3**
comp=N,3.8nm,0.2s
ARTF Artigues 5.38 281 P **Pn 11 27 24.5 +1.9**
FRGS Fruska Gora 5.38 62 ⇑P **Pn 11 27 22.4 -0.2**
FRGS Fruska Gora 5.38 62 *e*Pn **Pn 11 27 19.5 -3.1**
FRGS Fruska Gora 5.38 62 *e*Pn **Pn 11 27 22.6 0.0**
RSL Roselend 5.45 304 P **Pn 11 27 27.2 +3.5**
CONA Conrad Observa 5.46 20 *e*Pn **Pn 11 27 23.6 -0.2**
comp=N,1.8nm,0.2s
TRUS Trudelj 5.50 73 *e*Pn **Pn 11 27 24.9 +0.7**
GDM Grand'Maison 5.56 298 P **Pn 11 27 28.8 +3.6**
OGSI Sixt 5.57 308 P **Pn 11 27 28.5 +3.2**
SMRF Simiane la Rot 5.59 284 *e*P **Pn 11 27 28.0 +2.5**
SMRF *e*Sn **Sn 11 28 23.6 -6.2**
comp=N,2.1nm,0.3s
ORIF Oris-en-Rattie 5.62 294 *e*P **Pn 11 27 28.1 +2.2**
ORIF *e*Sn **Sn 11 28 24.0 -6.4**
comp=N,4.4nm,0.3s
ORIF Oris-en-Rattie 5.62 294 P **Pn 11 27 29.7 +3.8**
GRUS Gruza 5.66 77 *e*Pn **Pn 11 27 27.0 +0.6**
SELS Selova 5.90 83 *e*Pn **Pn 11 27 30.0 +0.3**
BALST Balsthal 5.91 322 P **Pn 11 27 31.4 +1.5**
OHR Ohrid 6.00 104 *i* Pn **Pn 11 27 33.2 +2.1**
GERES GERESS Array B 6.04 4 Pn **Pn 11 27 30.8 -0.8**
comp=N,1.3nm,0.3s,baz=196,slow=14,SNR=17
GERES Sn **Sn 11 28 40.2 -0.5**
comp=N,3.4nm,0.3s,baz=173,slow=25,SNR=8.0
comp=N,2.6nm,0.3s
CKRC Cesky Krumlov 6.05 8 *e*PN **Pn 11 27 31.3 -0.5**
CKRC *e*SN **Sn 11 28 39.7 -1.4**
BOURR Bourrignon 6.17 320 P **Pn 11 27 35.1 +1.7**
FELD Feldberg im Sc 6.19 326 P **Pn 11 27 34.6 +0.8**
BRANT Les Verrieres 6.24 313 P **Pn 11 27 36.2 +1.7**
CABF La Chapelle 6.26 310 *e*P **Pn 11 27 36.4 +1.7**
CABF *e*Sn **Sn 11 28 39.3 -7.0**
comp=N,5.1nm,0.4s
OG35 Corcelles 6.27 303 P **Pn 11 27 37.7 +2.8**
MODS Modra-Piesok 6.28 26 *e*PN **Pn 11 27 37.7 +2.8**
KIZ Kirchzarten 6.29 326 P **Pn 11 27 35.8 +0.7**
KIZ Kirchzarten 6.29 326 S **Sn 11 28 47.1 +0.3**
KHC Kasperske Hory 6.32 3 *e*PN **Pn 11 27 35.7 +0.3**
KHC *e*SN **Sn 11 28 46.1 -1.4**
BOVS Bovan 6.35 80 ⇑P **Pn 11 27 36.2 +0.4**
BOVS Bovan 6.35 80 *e*Pn **Pn 11 27 35.1 -0.7**
BOVS *e*Sn **Sn 11 28 47.5 -0.7**
CHMF Charmoille 6.35 316 P **Pn 11 27 37.2 +1.2**
VIVF Saint-Julien-l 6.42 291 *e*P **Pn 11 27 39.5 +2.7**
VIVF *e*Sn **Sn 11 28 43.2 -6.8**
comp=N,6.2nm,0.7s
BARS Barje 6.42 87 *e*Pn **Pn 11 27 37.2 +0.4**
BFO Black Forest 6.44 330 P **Pn 11 27 38.0 +0.9**
VOGT Vogtsburg - To 6.49 326 P **Pn 11 27 38.7 +0.9**
MDVR Moldovita 6.54 70 ⇓P **Pn 11 27 38.8 +0.2**
MOF Molkenrain 6.55 322 P **Pn 11 27 39.2 +0.5**
BOUC Bouclans 6.55 315 P **Pn 11 27 40.1 +1.5**
OPP Oppenau 6.63 331 P **Pn 11 27 40.9 +1.2**
PRVS Prvonek 6.63 90 *e*Pn **Pn 11 27 40.2 +0.4**
KRUC Moravsky 6.65 19 *e*PN **Pn 11 27 39.4 -0.6**
HINF Hinteralfeld 6.65 321 *e*P **Pn 11 27 41.5 +1.5**
HINF *e*Sn **Sn 11 28 48.4 -7.4**
comp=N,52nm,0.7s
RONF Ronchamp 6.67 319 P **Pn 11 27 41.2 +0.9**
BZS Buzias 6.73 63 ⇑P **Pn 11 27 41.6 +0.5**
ZAGS Zajecar 6.74 78 *e*Pn **Pn 11 27 41.0 -0.2**
ECH Echery 6.81 324 P **Pn 11 27 42.9 +0.7**
ECH S **Sn 11 28 59.2 -0.5**
JAVC Velka Javorina 6.83 26 *e*PN **Pn 11 27 42.5 0.0**
LASF Ste Croix 6.83 284 *e*P **Pn 11 27 44.7 +2.1**
LASF *e*Sn **Sn 11 28 53.3 -7.0**
comp=N,2.2nm,0.4s
STIP Stip 6.84 96 *i* Pn **Pn 11 27 45.0 +2.3**
WLS Welschbruch 6.88 326 P **Pn 11 27 43.8 +0.5**
VRAC Vranov 6.93 19 *e*PN **Pn 11 27 43.0 -0.8**
BOSS Bosilegrad 6.93 90 *e*Pn **Pn 11 27 44.0 +0.1**
VYHS Vyhne 6.95 33 *e*PN **Pn 11 27 47.5 +3.4**
ZAPS Zavoj 7.01 83 *e*Pn **Pn 11 27 45.2 +0.3**
HAU Haudompre 7.02 320 *e*P **Pn 11 27 45.9 +0.8**
HAU *e*Sn **Sn 11 28 57.3 -7.6**
comp=N,45nm,0.6s
BLKB Belogradchik 7.05 80 ⇑P **Pn 11 27 45.5 0.0**
HERR Herculane 7.05 70 ⇓P **Pn 11 27 46.1 +0.7**
PRU Pruhonice 7.23 7 *e*SN **Sn 11 29 08.6 -1.5**
GZR Gura Zlata 7.43 66 ⇑P **Pn 11 27 50.3 -0.4**
KKB Krupnik 7.47 94 P **Pn 11 27 51.8 +0.6**
VTS Vitosha 7.47 88 ⇑P **Pn 11 27 52.3 +0.9**
VTS Vitosha 7.47 88 P **Pn 11 27 52.1 +0.6**
SMF Signal de Mont 7.61 303 *e*P **Pn 11 27 54.0 +0.8**
SMF *e*Sn **Sn 11 29 11.6 -7.8**
comp=N,7.9nm,0.5s
KEST Kesra 7.66 204 Pn **Pn 11 27 57.9 +4.0**
comp=N,0.5nm,0.3s,baz=326,slow=14,SNR=5.5
comp=N,1.4nm,0.4s
PAGF Fort de Pagny 7.71 321 *e*P **Pn 11 27 57.2 +2.7**
PAGF *e*Sn **Sn 11 29 13.7 -8.0**
comp=N,17nm,0.7s
LOR Lormes 7.90 307 *e*P **Pn 11 27 59.4 +2.2**
baz=123
LOR *e*Sn **Sn 11 29 18.5 -8.0**
comp=N,5.6nm,0.4s
DRGR 7.91 57 ⇑P **Pn 11 27 57.5 +0.2**
AVF Avril sur Loir 7.98 303 *e*P **Pn 11 28 00.2 +2.0**
AVF *e*Sn **Sn 11 29 20.1 -8.2**
comp=N,3.8nm,0.7s
MTLF Montolieu 7.98 277 P Pn 11 28 05.1 +6.9
MMB Musomiste 7.99 95 P **Pn 11 28 02.6 +4.1**
SSF Saint Saulge 8.01 305 *e*P **Pn 11 28 00.8 +2.2**
SSF *e*Sn **Sn 11 29 21.1 -8.0**
comp=N,6.3nm,0.7s
BRG Berggiesshubel 8.07 4 *e*P **Pn 11 28 01.2 +1.7**
BRG Amp 11 28 05.0
comp=Z,2.4nm,0.5s
BRG *ex* x 11 29 28.5
BRG *ex* x 11 30 27.5
BRG Amp 11 31 00.6
comp=Z,25nm,1.4s
BRG Amp 11 37 32.0
comp=E,0.4nm,17.6s
BRG Amp 11 37 46.0
comp=N,0.4nm,17.2s
BRG Amp 11 38 00.0
comp=Z,0.7nm,16.4s
PGB Panagyurishte 8.17 88 P **Pn 11 28 02.1 +1.2**
BGF Bois d'Agland 8.20 301 *e*P **Pn 11 28 03.5 +2.3**
BGF *e*Sn **Sn 11 29 25.6 -8.1**
comp=Z,7.8nm,0.5s
CAF Calviac 8.24 289 *e*P **Pn 11 28 04.3 +2.5**
CAF *e*Sn **Sn 11 29 26.8 -8.0**
comp=Z,0.5nm,0.3s
CLL Collm 8.49 360 *ex* x 11 28 17.0
CLL *e*Sn Sn 11 29 20.0 -21
CLL *ex* x 11 29 50.0
CLL *ex* x 11 30 12.0
CLL *ex* x 11 30 25.0
CLL *e*Sg **Sg 11 30 33.0 -1.5**
comp=Z,34nm,1.5s
RZN Rozhen 8.70 94 P **Pn 11 28 09.7 +1.4**
VOIR 8.99 69 ⇑P **Pn 11 28 11.6 -0.5**
KDZ Kurdzhali 9.22 93 P **Pn 11 28 17.2 +1.9**
MLR Muntele Rosu 9.62 70 ⇑P **Pn 11 28 21.0 +0.2**
MLR Muntele Rosu 9.62 70 Pn **Pn 11 28 20.8 0.0**
comp=Z,0.3nm,0.3s,baz=214,slow=11,SNR=1.8
comp=Z,1.5nm,0.5s
ESDC Sonseca Array 13.21 262 Pn **Pn 11 29 13.3 +3.3**
comp=Z,0.2nm,0.3s,baz=70,slow=11,SNR=2.4
comp=Z,0.6nm,0.9s
EKA Eskdalemuir Ar 16.38 325 Pn **P 11 29 54.2 -0.7**
baz=134,slow=14
comp=Z,0.6nm,0.4s
MMAI Mount Meron Ar 20.09 112 P Pn 11 30 38.0 +0.2
comp=Z,0.7nm,0.2s,baz=309,slow=8.5,SNR=5.1
comp=Z,0.7nm,0.2s
FINES FINESS Array B 20.21 18 P **P 11 30 37.8 +0.9**
comp=Z,1.3nm,0.7s,baz=200,slow=9.7,SNR=7.1
comp=Z,1.3nm,0.7s
KBZ Khabaz 21.67 77 P **P 11 30 56.0 +3.2**
comp=Z,6.3nm,0.9s,baz=297,slow=9.4,SNR=10
KBZ LR LR 11 40 20.2
comp=Z,106nm,18.8s,baz=7.0,slow=40
BELG Belogornoye 24.96 55 P **P 11 31 27.0 +1.5**
comp=Z,16nm,0.8s,baz=271,slow=1.2,SNR=6.0
BELG LR LR 11 41 54.9
comp=Z,78nm,21.3s,baz=257,slow=38
comp=Z,16nm,0.8s
TORD Torodi Ar. Bea 31.17 202 P **P 11 32 21.9 +0.5**
comp=Z,4.6nm,0.3s,baz=19,slow=8.4,SNR=2.3
comp=Z,4.6nm,0.3s
ZALV Zalesovo Beam 46.95 50 LR LR 11 55 48.3
comp=Z,62nm,19.6s,baz=227,slow=38
MKAR Makanchi Array 47.81 60 P **P 11 34 38.0 -1.8**
comp=Z,0.8nm,0.6s,baz=283,slow=7.0,SNR=5.1
comp=Z,0.8nm,0.6s
SONM Songino Array 61.84 50 P **P 11 36 21.6 +0.2**
comp=Z,1.2nm,0.6s,baz=288,slow=8.1,SNR=6.6
comp=Z,1.2nm,0.6s
YKA Yellowknife Ar 66.98 336 LR LR 12 06 20.2
comp=Z,51nm,19.2s,baz=322,slow=36
ILAR Eielson Array 71.60 351 P **P 11 37 24.2 +1.0**
comp=Z,0.3nm,0.8s,baz=0.5,slow=7.0,SNR=5.1
comp=Z,0.3nm,0.8s
CMAR Chiang Mai Arr 74.71 79 P **P 11 37 44.0 +1.7**
comp=Z,0.8nm,0.3s,baz=308,slow=6.6,SNR=4.2
comp=Z,0.8nm,0.3s
BBB Bella Bella 79.59 337 LR LR 12 17 01.9
comp=Z,29nm,19.4s,baz=359,slow=38

*ROM **31** 11:52:31.3±0.0,42.853N±0.002×13.221E±0.004, h8km,ML3.6/61,Mw3.4, Error ellipse: s-maj=0.3km s-min=0.1km az=246.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr0.02; Mθθ-0.49; Mφφ0.48; Mrθ0.06; Mrφ-1.52; Mθφ-0.05; Fault plane solution: M₀1.60182×10¹⁴ NP1:φs189.00000°,δ87.00000°, λ1.00000°. NP2:φs99.00000°,δ89.00000°,λ177.00000°.*
*PRU **31** 11:52:31.3±0.0,42.74N×13.71E,h10km*
*LDG **31** 11:52:32.8±0.2,42.74N×13.13E,h10km,Ml3.1/22,Error ellipse: s-maj=6.9km s-min=4.2km az=45.0*

ISC 31 11:52:31.1±0.7,42.84N±0.01×13.19E±0.01,h13km±4km, n214,σ1s78/283,16C-32D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1242	**Castelluccio d**	**0.02**	**144**	⇑P	**Pg**	**11 52 32.9**	**-0.7**
T1242				S	**Sg**	**11 52 33.9**	**-1.6**
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
MC2	**Monte Cornacci**	**0.07**	**0**	⇓P	**Pg**	**11 52 33.4**	**-0.7**
MC2				S	**Sg**	**11 52 35.1**	**-1.1**
T1214	**Arquata del Tr**	**0.09**	**171**	⇑P	**Pg**	**11 52 34.1**	**0.0**
T1214				S	**Sg**	**11 52 36.2**	**-0.1**
MMO1	**Montemonaco**	**0.12**	**61**	⇑P	**Pg**	**11 52 33.7**	**-0.7**
MMO1				S	**Sg**	**11 52 35.5**	**-1.3**
MMO1				AML	AML		
comp=N,85100µm,0.6s							
MMO1				AML	AML		
T1244	**Arquata del Tr**	**0.12**	**138**	⇓P	**Pg**	**11 52 34.6**	**+0.1**
T1244				S	**Sg**	**11 52 36.9**	**+0.1**
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1213	**Norcia, Frazio**	**0.13**	**202**	⇑P	**Pg**	**11 52 35.0**	**+0.4**
T1213				S	**Sg**	**11 52 37.8**	**+0.8**
T1216	**Preci, Frazion**	**0.13**	**291**	⇑P	**Pg**	**11 52 35.1**	**+0.5**
T1216				S	**Sg**	**11 52 38.1**	**+1.0**
T1212	**Cascia, Frazio**	**0.14**	**229**	⇑P	**Pg**	**11 52 35.4**	**+0.7**
T1202	**Accumoli, Fraz**	**0.14**	**170**	⇑P	**Pg**	**11 52 35.3**	**+0.4**
T1202				S	**Sg**	**11 52 38.2**	**+0.8**
T1202				AML	AML		
comp=N,75850µm,1.2s							
T1202				AML	AML		
comp=E,81850µm,0.7s							
T1202				AML	AML		
comp=N,75800µm,1.2s							
T1202				AML	AML		
comp=E,81900µm,0.7s							
FEMA	**Monte Fema**	**0.16**	**319**	⇓P	**Pg**	**11 52 35.4**	**+0.4**
FEMA				S	**Sg**	**11 52 38.4**	**+0.6**
FEMA				AML	AML		
comp=E,38900µm,0.4s							
FEMA				AML	AML		
comp=N,28500µm,1.3s							
FEMA				AML	AML		
comp=E,38850µm,0.4s							
T1241	**Roccafluvione,**	**0.18**	**86**	⇑P	**Pg**	**11 52 35.2**	**-0.1**
T1241				S	**Sg**	**11 52 37.9**	**-0.2**
T1241				AML	AML		
comp=N,90950µm,0.4s							
T1241				AML	AML		
T1241				AML	AML		
T1241				AML	AML		
comp=N,91550µm,0.4s							
T1218	**Civita (PG)**	**0.18**	**198**	⇑P	**Pg**	**11 52 36.0**	**+0.6**
T1218				S	**Sg**	**11 52 39.8**	**+1.5**
T1201	**Domo (RI)**	**0.19**	**167**	⇓P	**Pg**	**11 52 36.3**	**+0.8**
T1201				S	**Sg**	**11 52 39.9**	**+1.4**
T1201				AML	AML		
comp=E,57350µm,0.7s							
T1201				AML	AML		
comp=N,36650µm,0.8s							
T1201				AML	AML		
comp=E,57400µm,0.7s							
T1201				AML	AML		
comp=N,36600µm,0.8s							
T1204	**Amatrice, Fraz**	**0.19**	**151**	⇓P	**Pg**	**11 52 36.0**	**+0.4**
T1204				S	**Sg**	**11 52 39.6**	**+1.0**
FDMO	**Fiordimonte**	**0.21**	**339**	⇓P	**Pg**	**11 52 36.0**	**+0.2**
FDMO				S	**Sg**	**11 52 39.8**	**+0.9**
FDMO				AML	AML		
comp=E,24250µm,0.2s							
FDMO				AML	AML		
comp=N,28700µm,0.2s							
SMA1	**SAN MARTINO**	**0.24**	**153**	⇓P	**Pg**	**11 52 36.7**	**+0.4**
SMA1				S	**Sg**	**11 52 40.5**	**+0.7**
SMA1				AML	AML		
comp=E,32300µm,0.5s							
SMA1				AML	AML		
comp=N,24150µm,0.9s							
T1215	**Vallo di Nera,**	**0.24**	**260**	⇑P	**Pg**	**11 52 37.2**	**+0.9**
T1215				S	**Sg**	**11 52 41.6**	**+1.8**
T1215				AML	AML		
comp=E,8555µm,0.8s							
T1215				AML	AML		
comp=E,9120µm,0.8s							
T1215				AML	AML		
comp=N,13400µm,0.5s							
T1215				AML	AML		
comp=E,9085µm,0.8s							
T1215				AML	AML		
comp=N,13450µm,0.5s							
T1215				AML	AML		
comp=E,9125µm,0.8s							
T1215				AML	AML		
comp=N,13400µm,0.7s							
T1215				AML	AML		
comp=E,8570µm,0.8s							
T1243	**Rocca Santa Ma**	**0.24**	**128**	⇓P	**Pg**	**11 52 36.5**	**+0.1**
T1243				S	**Sg**	**11 52 40.1**	**+0.2**
CSP1	**Cessapalombo**	**0.25**	**2**	⇑P	**Pg**	**11 52 36.5**	**0.0**
CSP1				S	**Sg**	**11 52 40.8**	**+0.7**
CSP1				AML	AML		
comp=E,38050µm,1.2s							
CSP1				AML	AML		
comp=N,34650µm,0.6s							
CSP1				AML	AML		
comp=E,38100µm,1.2s							
CESI	**CESI - Serrava**	**0.27**	**308**	⇓P	**Pb**	**11 52 37.5**	**-0.3**
CESI				S	**Sb**	**11 52 42.1**	**-0.2**
CESI				AML	AML		
comp=E,15400µm,0.8s							
CESI				AML	AML		
comp=N,27150µm,1.3s							
LNSS	**Leonessa**	**0.27**	**205**	⇑P	**Pb**	**11 52 37.5**	**-0.3**
LNSS				S	**Sb**	**11 52 42.6**	**+0.3**
LNSS				AML	AML		
comp=N,34600µm,0.3s							
LNSS				AML	AML		
comp=E,56600µm,0.5s							
RM33	**Pellescritta (**	**0.34**	**177**	⇓P	**Pb**	**11 52 38.7**	**-0.3**
RM33				S	**Sb**	**11 52 44.6**	**+0.3**
RM33				AML	AML		
comp=E,16250µm,1.5s							
RM33				AML	AML		
comp=N,10655µm,1.4s							
RM33				AML	AML		
comp=E,15915µm,1.5s							
RM33				AML	AML		
comp=N,10535µm,0.4s							
RM33				AML	AML		
comp=E,16300µm,1.5s							
RM33				AML	AML		
comp=E,15880µm,1.5s							
RM33				AML	AML		
comp=N,10575µm,0.4s							
RM33				AML	AML		
comp=N,10690µm,1.4s							
CAMP	**Campotosto**	**0.35**	**152**	⇓P	**Pg**	**11 52 38.5**	**+0.3**
CAMP				S	**Sb**	**11 52 44.2**	**-0.5**
CAMP				AML	AML		
comp=E,11950µm,0.3s							
CAMP				AML	AML		
comp=N,10350µm,1.6s							
MDAR	**Monte D'Aria**	**0.35**	**354**	P	**Pg**	**11 52 38.5**	**+0.2**
MDAR				S	**Sb**	**11 52 44.3**	**-0.5**
SEF1	**Sefro**	**0.35**	**330**	P	**Pg**	**11 52 38.8**	**+0.5**
SEF1				AML	AML		
comp=E,14650µm,1.5s							
SEF1				AML	AML		
comp=N,14390µm,0.9s							
MNTP	**Montappone**	**0.36**	**35**	P	**Pb**	**11 52 39.1**	**-0.2**
MNTP				AML	AML		
comp=N,21750µm,0.4s							
MNTP				AML	AML		
comp=E,28600µm,0.6s							
PIO1	**Pioraco**	**0.37**	**336**	P	**Pg**	**11 52 39.0**	**+0.4**
PIO1				S	**Sb**	**11 52 45.4**	**+0.2**
PIO1				AML	AML		
comp=E,7205µm,0.5s							
PIO1				AML	AML		
comp=N,9850µm,0.6s							
PIO1				AML	AML		
comp=E,7180µm,0.5s							
PIO1				AML	AML		
comp=N,9835µm,0.6s							
OFFI	**Offida**	**0.38**	**76**	⇑P	**Pb**	**11 52 39.6**	**0.0**
OFFI				AML	AML		

OFFI AML AML
comp=N,33100µm,0.6s
TERO Teramo 0.38 126 ⇓P **Pg 11 52 38.8 +0.1**
TERO S **Sb 11 52 44.7 -0.7**
TERO AML AML
comp=E,23700µm,0.3s
TERO AML AML
comp=N,28650µm,0.4s
TERO AML AML
comp=N,27150µm,0.4s
TERO AML AML
comp=E,24850µm,0.3s
TERO AML AML
comp=E,23750µm,0.3s
SSM1 San Severino M 0.39 359 P **Pg 11 52 39.1 +0.2**
SSM1 S **Sb 11 52 45.7 0.0**
FIU1 Fiuminata 0.39 331 P **Pg 11 52 39.4 +0.4**
FIU1 S **Sb 11 52 46.1 +0.2**
FIU1 AML AML
comp=E,5365µm,0.5s
FIU1 AML AML
comp=N,4970µm,0.9s
T1211 Morro Reatino 0.40 219 P **Pb 11 52 39.8 -0.2**
T1211 S **Sb 11 52 46.3 +0.3**
GAG1 Gagliole 0.40 347 P **Pg 11 52 39.6 +0.4**
GAG1 S **Sb 11 52 46.5 +0.3**
GAG1 AML AML
comp=E,26100µm,1.0s
GAG1 AML AML
comp=N,24950µm,0.5s
GAG1 AML AML
comp=E,26100µm,0.9s
ARRO Arrone 0.41 230 ⇑P **Pb 11 52 40.2 0.0**
ARRO S **Sb 11 52 47.2 +0.9**
ARRO AML AML
comp=N,4960µm,1.0s
ARRO AML AML
comp=N,4965µm,1.0s
ARRO AML AML
comp=E,4215µm,1.0s
MTL1 Matelica 0.43 342 P **Pg 11 52 40.3 +0.5**
ASSB Assisi San Ben 0.44 297 ⇑P **Pg 11 52 40.4 +0.6**
ASSB S **Sb 11 52 47.6 +0.4**
ASSB AML AML
comp=E,10250µm,0.1s
ASSB AML AML
comp=N,9075µm,0.3s
SNTG Esanatoglia 0.45 336 ⇓P **Pg 11 52 40.3 +0.2**
SNTG S **Sb 11 52 47.9 +0.3**
SNTG AML AML
comp=E,602µm,0.2s
SNTG AML AML
comp=E,5095µm,0.2s
SNTG AML AML
comp=N,4920µm,0.5s
SNTG AML AML
comp=E,602µm,0.2s
SNTG AML AML
comp=N,664µm,0.5s
TRE1 Treia 0.48 11 P **Pb 11 52 41.4 0.0**
GIGS Gran Sasso 0.48 144 ⇓P **Pg 11 52 40.5 -0.1**
GIGS S **Sb 11 52 48.5 0.0**
GIGS AML AML
comp=E,1700µm,0.6s
GIGS AML AML
comp=N,1680µm,0.8s
EL6 Elcito 0.49 352 ⇓P **Pg 11 52 41.0 +0.2**
EL6 S **Sb 11 52 49.0 +0.2**
EL6 AML AML
comp=E,10850µm,1.0s
EL6 AML AML
comp=N,11040µm,0.6s
EL6 AML AML
comp=E,10900µm,1.0s
EL6 AML AML
comp=N,11075µm,0.6s
CESX Cesi 0.51 243 P **Pb 11 52 41.8 -0.1**
CESX S **Sb 11 52 50.4 +1.3**
CESX AML AML
comp=E,4715µm,0.5s
CESX AML AML
comp=N,5005µm,0.7s
ATCC AVT- Casa Cast 0.53 310 ⇓P **Pb 11 52 42.1 -0.1**
ATCC S **Sb 11 52 50.8 +1.0**
ATCC AML AML
comp=E,6960µm,0.9s
ATCC AML AML
comp=E,6965µm,0.9s
ATCC AML AML
comp=N,7210µm,0.5s
CING Cingoli 0.53 0 P **Pg 11 52 41.5 -0.1**
CING AML AML
comp=E,7735µm,0.6s
CING AML AML
comp=N,4710µm,1.2s
CADA Capodarco di F 0.55 50 P **Pb 11 52 43.1 +0.5**
FOSV Fossato di Vic 0.55 325 ⇓P **Pg 11 52 42.3 +0.4**
FIAM Fiamignano 0.58 185 ⇑P **Pg 11 52 42.8 +0.4**
FIAM S **Sb 11 52 51.9 +0.6**
FIAM AML AML
comp=E,5880µm,0.4s
FIAM AML AML
comp=N,3775µm,0.6s
CIMA Civitanova Mar 0.58 37 P **Pb 11 52 43.5 +0.4**
MMUR Monte Murano 0.61 347 P **Pg 11 52 43.3 +0.1**
MMUR S **Sb 11 52 52.8 +0.5**
MMUR AML AML
comp=N,5150µm,0.4s
MMUR AML AML
comp=E,8025µm,0.5s
PP3 Marolino 0.62 30 P **Pb 11 52 44.0 +0.2**
PP3 AML AML
comp=E,13800µm,0.5s
PP3 AML AML
comp=E,13800µm,0.4s
PP3 AML AML
comp=N,12100µm,0.4s
PP3 AML AML
comp=E,13850µm,0.5s
PP3 AML AML
comp=E,13850µm,0.4s
PP3 AML AML
comp=N,12700µm,0.4s
MURB Monte Urbino 0.64 311 ⇓P **Pb 11 52 44.2 0.0**
MURB AML AML
comp=E,13300µm,0.3s
MURB AML AML
comp=N,9835µm,0.3s
MURB AML AML
comp=N,9860µm,0.3s
MURB AML AML
comp=E,14950µm,0.3s
MURB AML AML
comp=E,13350µm,0.3s
MURB AML AML
comp=N,10000µm,0.3s
FAGN Fagnano 0.65 153 P **Pg 11 52 43.9 +0.2**
FAGN S **Sb 11 52 54.1 +0.9**
FAGN AML AML
comp=E,9905µm,0.4s
FAGN AML AML
comp=N,10385µm,0.4s
VCEL Villa Celiera 0.66 133 ⇓P **Pg 11 52 44.2 +0.2**
VCEL S **Sb 11 52 54.0 +0.4**
VCEL AML AML
comp=E,6450µm,0.6s
VCEL AML AML
comp=N,7875µm,0.7s
VCEL AML AML
comp=N,7870µm,0.7s
VCEL AML AML
comp=E,6455µm,0.6s
SSFR Montelago di S 0.66 333 ⇓P **Pg 11 52 44.2 +0.1**
SSFR S **Sb 11 52 54.4 +0.6**
SSFR AML AML
comp=E,8560µm,0.2s
SSFR AML AML
comp=E,8425µm,0.2s
SSFR AML AML
comp=N,7080µm,0.2s
SSFR AML AML
comp=N,6630µm,1.1s
ARVD Arcevia 0.68 345 ⇓P **Pg 11 52 44.4 0.0**
ARVD AML AML
comp=E,3530µm,0.5s
ARVD AML AML
comp=N,2125µm,0.7s
ATFO Monte Foce - G 0.69 319 ⇓P **Pg 11 52 44.9 +0.3**
ATFO S **Sb 11 52 55.5 +0.9**
ATFO AML AML
comp=N,2515µm,0.4s
ATFO AML AML
comp=N,2510µm,0.4s
ATFO AML AML
comp=E,2420µm,1.4s
ATTE AVT- Monte Tez 0.71 300 P **Pg 11 52 45.3 +0.4**
ATTE AML AML
comp=N,2045µm,0.3s
ATTE AML AML
comp=E,2430µm,0.5s
FRON Frontone 0.76 333 ⇓P **Pg 11 52 45.8 0.0**
FRON S **Sb 11 52 57.0 +0.7**
FRON AML AML
comp=N,4040µm,0.8s
FRON AML AML
comp=N,1995µm,0.5s
T0110 Collepietro 0.76 145 ⇓P **Pg 11 52 45.5 -0.3**
T0110 S **Sb 11 52 56.7 +0.3**
T0110 AML AML
comp=E,7050µm,0.4s
T0110 AML AML
comp=N,6795µm,0.4s
AOI Ancona 0.77 23 P **Pg 11 52 46.2 +0.1**
AOI S **Sb 11 52 57.2 +0.5**
AOI AML AML
comp=E,3170µm,0.5s
AOI AML AML
comp=N,3550µm,0.6s
ATVO AVT- Monte Val 0.79 313 ⇓P **Pg 11 52 46.5 +0.1**
ATVO S **Sb 11 52 58.6 +1.3**
ATVO AML AML
comp=N,2020µm,1.5s
ATVO AML AML
comp=E,1875µm,0.5s
SRES S.Oreste - Sor 0.79 220 P **Pg 11 52 46.6 +0.2**
MGAB Montegabbione 0.80 275 P **Pg 11 52 46.7 +0.1**
MGAB AML AML
comp=E,3230µm,1.5s
MGAB AML AML
comp=E,3675µm,0.5s
MGAB AML AML
comp=N,7955µm,0.6s
MGAB AML AML
comp=E,3235µm,1.5s
MGAB AML AML
comp=N,7880µm,0.6s
COR1 Corinaldo 0.80 350 P **Pb 11 52 47.4 +0.5**
COR1 AML AML
comp=N,6515µm,1.0s
COR1 AML AML
comp=E,5705µm,1.2s
ATMI Monte Miggiano 0.83 306 P **Pb 11 52 47.8 +0.3**
ATMI AML AML
comp=E,5530µm,0.5s
ATMI AML AML
comp=N,5225µm,0.5s
PTQR Pietraquaria 0.84 169 P **Pg 11 52 46.9 -0.4**
PTQR AML AML
comp=E,1265µm,1.1s
PTQR AML AML
comp=N,1170µm,0.4s
ATPI Pietralunga - 0.84 317 ⇓P **Pg 11 52 47.5 +0.1**
ATPI AML AML
comp=N,1690µm,0.7s
ATPI AML AML
comp=E,1985µm,0.4s
ATPI AML AML
comp=N,1695µm,0.7s
PIEI Pieia 0.84 326 ⇓P **Pg 11 52 47.3 -0.1**
PIEI AML AML
comp=E,1850µm,0.2s
PIEI AML AML
comp=N,1335µm,0.7s
MPAG Monte Paganucc 0.85 338 ⇓P **Pg 11 52 47.5 0.0**
MPAG AML AML
comp=E,2415µm,0.9s
MPAG AML AML
comp=N,1780µm,1.1s
SENI Senigallia 0.86 2 P **Pg 11 52 47.4 -0.4**
SENI AML AML
comp=N,10850µm,0.5s
SENI AML AML
comp=E,3465µm,1.0s
SENI AML AML
comp=N,2495µm,1.0s
SENI AML AML
comp=E,12450µm,0.4s
MTCE Montecelio 0.89 202 P **Pb 11 52 48.7 +0.4**
NARO Abbazia di Nar 0.89 330 ⇓P **Pg 11 52 48.0 -0.3**
NARO AML AML
comp=N,1066µm,0.7s
NARO AML AML
comp=E,1198µm,1.5s
FSSB Fossombrone 0.90 341 ⇓P **Pg 11 52 48.5 0.0**
FSSB AML AML
comp=E,4985µm,1.4s
FSSB AML AML
comp=N,10355µm,0.5s
CERT Cerreto 0.91 190 P **Pg 11 52 48.6 -0.1**
CERT AML AML
comp=E,3130µm,0.5s
CERT AML AML
comp=N,2685µm,0.6s
APEC Apecchio 0.91 322 P **Pg 11 52 48.7 0.0**
SACS San Casciano d 0.94 271 P **Pb 11 52 50.1 +0.7**
SACS AML AML
comp=E,1445µm,1.2s
SACS AML AML
comp=E,1305µm,1.2s
SACS AML AML
comp=N,1775µm,1.0s
SACS AML AML
comp=N,1815µm,0.9s
BADI Badiali 0.96 314 ⇓P **Pg 11 52 49.8 +0.2**
INTR Introdacqua 0.99 147 P **Pg 11 52 49.1 -1.0**
INTR AML AML
comp=E,2µm,1.1s
INTR AML AML
comp=N,3µm,0.7s
INTR AML AML
comp=E,1770µm,1.1s
INTR AML AML
comp=N,4065µm,0.7s
PE3 Peglio 0.99 329 P **Pg 11 52 50.2 0.0**
PE3 AML AML
comp=E,9µm,0.5s
PE3 AML AML
comp=N,9µm,0.4s
CAFI Castiglion Fio 1.02 299 P **Pb 11 52 51.0 +0.4**
CAFI AML AML
comp=E,1145µm,0.6s
CAFI AML AML
comp=N,938µm,0.9s
VVLD Villa Vallelon 1.02 162 P **Pg 11 52 50.4 -0.4**
GUAR Guarcino 1.05 175 P **Pb 11 52 51.7 +0.5**
GUAR AML AML
comp=E,2125µm,1.1s
GUAR AML AML
comp=N,3150µm,0.6s
PARC Parchiule 1.06 319 ⇓P **Pg 11 52 51.6 -0.1**
PARC AML AML
comp=E,1905µm,0.7s
PARC AML AML
comp=N,1110µm,1.6s
LPEL Lama dei Pelig 1.08 137 P **Pb 11 52 52.0 +0.2**
SF03 Valle Cupa 1.11 268 P **Pn 11 52 52.8 +0.5**
SF11 Podere del Sol 1.11 272 P **Pn 11 52 53.2 +0.8**
MCIV Monte Civitell 1.12 267 P **Pn 11 52 53.3 +0.8**
PESA Pesaro 1.13 347 P **Pn 11 52 53.1 +0.6**
PESA AML AML
comp=N,3535µm,0.6s
PESA AML AML
comp=E,3190µm,1.6s
CPGN Carpegna, Ital 1.15 327 P **Pn 11 52 53.6 +0.6**
SF13 Bagnolo 1.16 269 P **Pn 11 52 53.9 +0.9**
SF14 Selvena 1.16 266 P **Pg 11 52 53.8 +0.3**
TOLF Tolfa 1.18 229 P **Pb 11 52 53.6 +0.3**
TOLF AML AML
comp=E,744µm,0.9s
TOLF AML AML
comp=N,560µm,0.4s
POFI Posta Fibreno 1.19 161 P **Pb 11 52 53.3 -0.3**
POFI AML AML
comp=E,1225µm,0.8s
POFI AML AML
comp=N,819µm,0.6s
CRE Caprese Michel 1.19 311 P **Pn 11 52 54.1 +0.5**
CRE AML AML
comp=N,710µm,0.6s
CRE AML AML
comp=E,705µm,0.6s
LRP Arpino 1.23 166 P **Pn 11 52 54.1 +0.1**
ARCI Arcidosso 1.26 271 P **Pn 11 52 55.0 +0.5**
ARCI AML AML
comp=N,224µm,1.0s
ARCI AML AML
comp=E,272µm,0.8s
GIUL Giuliano Di Ro 1.28 178 P **Pg 11 52 55.9 +0.1**
RNI2 Rionero Sannit 1.35 148 P **Pb 11 52 56.2 0.0**
LATB Latina 1.36 187 P **Pb 11 52 56.5 +0.1**
CERA Filignano 1.39 153 P **Pn 11 52 56.5 +0.3**
ASQU Asqua 1.40 313 P **Pb 11 52 56.2 -0.2**
FRES Fresagrandinar 1.40 128 P **Pn 11 52 56.7 +0.4**
SFI Santa Sofia 1.44 318 P **Pb 11 52 58.4 +0.5**
CSNT Castellina Chi 1.52 295 P **Pb 11 52 59.4 +0.1**
FROS Frosini 1.54 284 P **Pn 11 52 59.2 +1.0**
RUFI Rufina 1.58 310 P **Pb 11 53 00.5 +0.4**
VAGA Valle Agricola 1.62 151 P **Pb 11 53 00.8 -0.2**
LMD Lutirano 1.64 319 P **Pb 11 53 01.6 +0.4**
BSSO Busso 1.66 141 P **Pb 11 53 02.1 +0.5**
CASP Castiglione de 1.71 269 P **Pb 11 53 02.2 -0.2**
CASP AML AML
comp=E,75µm,1.4s
CASP AML AML
comp=N,124µm,0.8s
MODR Mondragone 1.77 163 P **Pb 11 53 03.8 +0.3**
DUGI Dugi Otok 1.78 49 *e*Pn **Pn 11 53 02.8 +1.3**
PTRJ Pietraroja 1.78 146 P **Pb 11 53 03.3 -0.4**
BRIS BRISIGHELLA 1.79 317 P **Pn 11 53 02.3 +0.7**
MPPT Montemurlo 1.89 307 P **Pn 11 53 04.8 +1.6**
MPPT AML AML
comp=E,494µm,1.0s
MPPT AML AML
comp=N,376µm,0.9s
VIRC Vir 1.98 42 *e*Pn **Pn 11 53 05.3 +1.0**
VIRC Sn **Sb 11 53 31.6 0.0**
MTCR Monte La Croce 1.99 307 P **Pn 11 53 06.2 +1.7**
APRC Apricena 2.06 121 P **Pb 11 53 07.3 -1.0**
MORI Morici 2.10 60 *e*Pn **Pn 11 53 07.1 +1.2**
NVLI Novalja 2.11 35 *i* Pn **Pn 11 53 07.0 +0.9**
SGRT San Giovanni R 2.19 119 P **Pn 11 53 09.1 +1.9**
RABC Rab 2.23 31 *e*Pn **Pn 11 53 08.5 +0.8**
MAIM Mastiano 2.24 299 P **Pn 11 53 09.4 +1.6**
MAIM AML AML
comp=N,153µm,1.1s
MAIM AML AML
comp=E,178µm,0.6s
MSAG Monte S. Angel 2.31 118 P **Pn 11 53 11.0 +2.1**
HVAR Hvar 2.41 81 *e*Pn **Pn 11 53 11.5 +1.2**
UDBI Udbina 2.51 47 *e*Pn **Pn 11 53 14.0 +2.3**
A250A Rusevo Krmpots 2.56 28 *e*Pn **Pn 11 53 13.8 +1.4**
KIJV Kijevo 2.61 63 *i* Pn **Pn 11 53 15.0 +2.0**
VULT Monte Vulture 2.62 135 P **Pn 11 53 14.1 +1.0**
LSTV Lastovo 2.73 90 *e*Pn **Pn 11 53 15.7 +1.1**
SKDS Skadanscina 2.77 12 *e*Pn **Pn 11 53 16.2 +1.1**
SKDS Skadanscina 2.77 12 *i* Pn **Pn 11 53 16.2 +1.1**
SKDS *e*Sn **Sn 11 53 49.5 +1.1**
SKDS IAML 11 53 52.5
comp=Z,18nm,0.2s
PALZ Palazzo San Ge 2.81 132 P **Pn 11 53 16.8 +1.1**
KNDS Knezji Dol 2.82 17 *e*Pn **Pn 11 53 17.4 +1.5**
KNDS *e*Sn **Sn 11 53 52.1 +2.4**
KNDS IAML 11 54 19.0
comp=Z,156nm,0.7s
MAKA Makarska 2.84 80 *e*Pn **Pn 11 53 17.9 +1.8**
A050A Klekovaca 2.92 55 *e*Pn **Pn 11 53 19.1 +1.7**
PZUN Potenza 2.94 137 AML AML
comp=N,265µm,0.4s
PZUN AML AML
comp=E,157µm,0.8s
RICI Ricice 2.96 76 *e*Pn **Pn 11 53 19.6 +1.9**
CEY Cerknica 3.03 17 *e*Pn **Pn 11 53 20.1 +1.4**
CEY Cerknica 3.03 17 *i* Pn **Pn 11 53 20.3 +1.5**
CEY *i* Sn **Sn 11 53 56.5 +1.6**
BOJS Bojanci 3.04 28 *e*Pn **Pn 11 53 21.6 +2.7**
BOJS Bojanci 3.04 28 P **Pn 11 53 20.0 +1.1**
PGF Pioggiola 3.10 266 *e*Pn **Pn 11 53 21.2 +1.4**
PGF *e*Sn **Sn 11 53 55.0 -1.8**
comp=E,6.7nm,0.4s
JAVS Javornik 3.11 11 *i* Pn **Pn 11 53 21.0 +1.0**
JAVS *e*Sn **Sn 11 53 58.9 +1.9**
JAVS IAML 11 54 20.4
comp=Z,58nm,0.5s
SABO M.te Sabotino 3.15 5 P **Pn 11 53 21.4 +1.0**
SABO AML AML
comp=E,380µm,0.6s
SABO AML AML
comp=N,2025µm,0.7s
SABO AML AML
comp=E,1610µm,0.6s
SABO AML AML
comp=N,537µm,0.6s
ROVR Rover Verones 3.19 332 P **Pn 11 53 23.1 +2.0**
CGRP Cima Grappa 3.19 342 P **Pn 11 53 23.2 +2.0**
MGRS Mrkonjic Grad 3.23 60 *e*Pn **Pn 11 53 24.3 +2.7**
STON Ston 3.32 88 *e*Pn **Pn 11 53 23.2 +0.6**
DOSS Dosso del Somm 3.36 335 P **Pn 11 53 25.7 +2.3**
SALO Salr 3.37 326 P **Pn 11 53 24.6 +1.1**
CRES Cresnjev 3.40 28 *e*Pn **Pb 11 53 28.5 -2.6**
MPRI Monte Prat 3.40 358 P **Pn 11 53 25.5 +1.6**
STAL STALIGIAL 3.43 354 P **Pn 11 53 25.5 +1.2**
STAL AML AML
comp=N,185µm,0.6s
STAL AML AML
comp=E,258µm,0.9s
A051A Mrakovica 3.45 50 *e*Pn **Pn 11 53 26.8 +2.2**
MAGA Magasa 3.46 329 P **Pn 11 53 26.9 +2.1**
BLY Banja Luka 3.46 55 *e*Pn **Pb 11 53 31.8 -0.4**
CIMO Cimolais 3.51 351 P **Pn 11 53 26.5 +1.2**
CIMO AML AML
comp=N,58µm,1.2s
CIMO AML AML
comp=E,75µm,0.7s
PTCC Patocco-Chiusa 3.56 2 P **Pn 11 53 27.3 +1.2**
PTCC AML AML
comp=E,98µm,1.6s
PTCC AML AML
comp=N,94µm,0.7s
GAGG Gaggia 3.61 335 P **Pn 11 53 29.2 +2.3**
CLUD Cludinico 3.62 357 P **Pn 11 53 28.4 +1.6**
ACOM Acomizza, Ital 3.71 3 P **Pn 11 53 30.1 +1.8**
OBKA Obir 3.79 14 *e*Pn **Pn 11 53 30.8 +1.5**
OBKA Obir 3.79 14 *e*Pn **Pn 11 53 30.6 +1.3**
comp=N,1.4nm,0.2s
MYKA Terra Mystica 3.80 5 *e*Pn **Pn 11 53 31.3 +1.9**
comp=N,3.9nm,0.3s,SNR=4.9
TREB Trebinje 3.80 90 *e*Pn **Pn 11 53 30.7 +1.4**
BOSI Bolzano 3.89 341 AML AML
comp=N,758µm,0.8s
BOSI AML AML
comp=E,754µm,1.3s
BRY Bratogost 3.93 87 *e*Pn **Pn 11 53 33.1 +1.8**
HCY Herceg Novi 3.93 94 *e*Pn **Pn 11 53 32.5 +1.4**
ABTA Abfaltersbach 3.93 353 *i* Pn **Pn 11 53 33.8 +2.6**
comp=E,7.0nm,0.3s,SNR=20
SOKA Soboth 4.05 18 *e*Pn **Pn 11 53 35.3 +2.5**
comp=E,1.0nm,0.3s
UPM Unac-Piva 4.21 83 *e*Pn **Pn 11 53 37.8 +2.7**
KBA Koelnbreinsper 4.24 1 *i* Pn **Pn 11 53 37.7 +2.2**
comp=E,3.7nm,0.2s,SNR=12
SBF Sospel 4.32 286 *e*Pn **Pn 11 53 37.6 +1.1**
SBF *e*Sn **Sn 11 54 25.0 -1.7**
comp=E,14nm,0.5s
DRME Dracevica, Mon 4.48 96 *e*Pn **Pn 11 53 41.2 +2.5**
FETA Feichten 4.53 338 *i* Pn **Pn 11 53 43.5 +4.0**
comp=E,4.7nm,0.4s,SNR=10
WTTA Wattenberg 4.55 347 *e*Pn **Pn 11 53 43.1 +3.2**
comp=E,2.6nm,0.2s,SNR=5.2
SQTA Sankt Quirin 4.60 343 *i* Pn **Pn 11 53 43.7 +3.4**
comp=E,5.6nm,0.2s,SNR=5.6
WATA Walderalm 4.63 346 *e*Pn **Pn 11 53 44.9 +4.0**
comp=E,4.0nm,0.2s,SNR=8.5
MOTA Moosalm 4.74 343 *e*Pn **Pn 11 53 45.7 +3.4**
comp=E,9.0nm,0.5s
BIOA Bad Ischl, Aus 4.86 4 *e*Pn **Pn 11 53 46.1 +2.2**

	comp=E,3.4nm,0.2s								
LMR	**La Mourre**	**4.92**	**278**	*e*Pn		**Pn**	**11 53 45.4**	**+0.7**
LMR				*e*Sn		**Sn**	**11 54 38.1**	**-3.3**
	comp=E,3.6nm,0.4s								
MBDF	**Montbardon**	**5.01**	**294**	*e*Pn		**Pn**	**11 53 47.6**	**+1.5**
MBDF				*e*Sn		**Sn**	**11 54 44.9**	**+0.9**
	comp=E,9.5nm,0.7s								
MOA	**Molln**	**5.06**	**8**	*e*Pn		**Pn**	**11 53 48.9**	**+2.2**
	comp=E,1.8nm,0.2s								
RONA	**Rosalia, Austr**	**5.33**	**23**	*e*Pn		**Pn**	**11 53 53.2**	**+2.9**
	comp=E,0.8nm,0.3s								
LPG	**La Plagne**	**5.34**	**302**	*e*Pn		**Pn**	**11 53 53.1**	**+2.4**
LPG				*e*Sn		**Sn**	**11 54 50.9**	**-1.2**
	comp=E,7.0nm,0.5s								
LPL	**La Plagne**	**5.36**	**302**	*e*Pn		**Pn**	**11 53 53.1**	**+2.2**
LPL				*e*Sn		**Sn**	**11 54 45.5**	**-7.0**
	comp=E,3.8nm,0.4s								
CONA	**Conrad Observa**	**5.42**	**19**	*e*Pn		**Pn**	**11 53 53.9**	**+2.2**
	comp=E,0.8nm,0.2s								
SMRF	**Simiane la Rot**	**5.66**	**284**	*e*Pn		**Pn**	**11 53 58.3**	**+3.4**
ORIF	**Oris-en-Rattie**	**5.68**	**294**	*e*Pn		**Pn**	**11 53 57.1**	**+1.9**
ORIF				*e*Sn		**Sn**	**11 54 57.9**	**-2.3**
	comp=E,1.9nm,0.3s								
CKRC	**Cesky Krumlov**	**6.03**	**7**	*e*PN		**Pn**	**11 54 01.1**	**+1.2**
CKRC				*e*SN		**Sn**	**11 55 07.7**	**-1.1**
KHC	**Kasperske Hory**	**6.29**	**2**	*e*PN		**Pn**	**11 54 04.2**	**+0.6**
KHC				*e*SN		**Sn**	**11 55 15.2**	**-0.1**
CABF	**La Chapelle**	**6.31**	**309**	*e*Pn		**Pn**	**11 54 06.7**	**+2.9**
CABF				*e*Sn		**Sn**	**11 55 11.2**	**-4.5**
	comp=E,4.0nm,0.6s								
VIVF	**Saint-Julien-l**	**6.48**	**291**	*e*Pn		**Pn**	**11 54 04.6**	**-1.5**
VIVF				*e*Sn		**Sn**	**11 55 15.1**	**-4.8**
	comp=E,3.8nm,0.6s								
HINF	**Hinteralfeld**	**6.68**	**320**	*e*Pn		**Pn**	**11 54 10.9**	**+2.0**
HINF				*e*Sn		**Sn**	**11 55 23.5**	**-1.4**
	comp=E,7.2nm,0.4s								
LASF	**Ste Croix**	**6.90**	**283**	*e*Pn		**Pn**	**11 54 13.1**	**+1.1**
HAU	**Haudompre**	**7.06**	**319**	*e*Pn		**Pn**	**11 54 14.7**	**+0.7**
HAU				*e*Sn		**Sn**	**11 55 30.8**	**-3.3**
	comp=E,17nm,0.5s								
SMF	**Signal de Mont**	**7.66**	**303**	*e*Pn		**Pn**	**11 54 23.9**	**+1.5**
SMF				*e*Sn		**Sn**	**11 55 43.8**	**-5.2**
	comp=E,2.5nm,0.4s								
PAGF	**Fort de Pagny**	**7.74**	**320**	*e*Pn		**Pn**	**11 54 24.7**	**+1.3**
PAGF				*e*Sn		**Sn**	**11 55 45.9**	**-4.9**
	comp=E,19nm,0.7s								
SFTF	**Sexfontaines**	**7.84**	**316**	*e*Pn		**Pn**	**11 54 23.6**	**-1.2**
	baz=133								
SFTF				*e*Sn		**Sn**	**11 55 47.1**	**-6.2**
	comp=E,7.2nm,0.4s								
LOR	**Lormes**	**7.95**	**307**	*e*Pn		**Pn**	**11 54 24.9**	**-1.4**
	baz=128								
LOR				*e*Sn		**Sn**	**11 55 51.2**	**-4.8**
	comp=E,3.1nm,0.4s								
AVF	**Avril sur Loir**	**8.03**	**303**	*e*Pn		**Pn**	**11 54 27.8**	**+0.4**
AVF				*e*Sn		**Sn**	**11 55 51.9**	**-6.0**
	comp=E,0.6nm,0.3s								
MTLF	**Montolieu**	**8.05**	**277**	*e*P		**Pn**	**11 54 32.0**	**+4.4**
MTLF				*e*Sn		**Sn**	**11 55 54.4**	**-4.1**
	comp=E,0.7nm,0.3s								
BRG	**Berggiesshubel**	**8.05**	**3**	*e*P		**Pn**	**11 54 24.5**	**-3.1**
BRG				Amp			11 54 28.3	
	comp=Z,2.2nm,0.6s								
BRG				*ex*		x	11 56 02.4		
BRG				*ex*		x	11 56 55.9		
BRG				Amp			11 57 16.6		
	comp=Z,6.5nm,1.2s								
SSF	**Saint Saulge**	**8.06**	**305**	*e*P		**Pn**	**11 54 31.3**	**+3.5**
SSF				*e*Sn		**Sn**	**11 55 54.4**	**-4.3**
	comp=Z,2.5nm,0.4s								
SAVF	**Savonnieres en**	**8.07**	**318**	*e*Pn		**Pn**	**11 54 28.6**	**+0.7**
BGF	**Bois d'Agland**	**8.25**	**300**	*e*Pn		**Pn**	**11 54 30.7**	**+0.3**
CAF	**Calviac**	**8.30**	**288**	*e*P		**Pn**	**11 54 35.9**	**+4.7**
CAF				*e*Sn		**Sn**	**11 55 58.4**	**-6.4**
	comp=Z,0.3nm,0.2s								
TCF	**Toulx Ste Croi**	**8.56**	**297**	*e*P		**Pn**	**11 54 39.3**	**+4.6**
TCF				*e*Sn		**Sn**	**11 56 05.1**	**-6.0**
	comp=Z,1.2nm,0.5s								
EPF	**Esparros**	**9.43**	**276**	*e*Pn		**Pn**	**11 54 45.1**	**-1.5**
BAIF	**Baives**	**9.51**	**322**	*e*Sn		**Sn**	**11 56 30.6**	**-3.7**
ETSF	**Etsaut**	**10.10**	**275**	*e*P		**Pn**	**11 54 59.5**	**+3.7**
LDF	**La Druitiere**	**10.93**	**306**	*e*P		Pn	11 55 13.0	+5.9
GRR	**Gorron**	**11.29**	**304**	*e*P		Pn	11 55 18.2	+6.2
SGMF	**Saint Gilles**	**12.29**	**302**	*e*Pn		**Pn**	**11 55 25.2**	**-0.4**

*IDC **31** 11:52:42.8±1.2,28°.07N×139°.34E,h494km±27km,mb3.0/5, mbtmp3.9/7,Error ellipse: s-maj=68.9km s-min=14.8km az=80.0*

*JMA **31** 11:52:44.1±0.2,28°N±2°×14°0E±°,h529km,MV3.9/43,W OFF OGASAWARA*

ISC 31 11:52:43.5±0.9,28°.06N±0°.08×139°.5E±0°.1,h507km,n22, σ1s79/28,mb3.3/5,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.55**	**111**	P	**P**	**11 53 52.9**	**+0.6**
CBIJ				*e*S	**S**	**11 54 47.7**	**-0.4**
JCJ	**Chichijima**	**2.55**	**111**	P	**P**	**11 53 52.8**	**+0.5**
	34nm,0.3s,baz=120,slow=23,SNR=12						
JCJ				S	**S**	**11 54 47.1**	**-1.1**
	52nm,0.4s,baz=128,slow=21,SNR=5.7						
JHH2	**Haha-jima-NKT2**	**2.76**	**120**	P	**P**	**11 53 55.0**	**+1.5**
JHH2				*e*S	**S**	**11 54 50.6**	**+0.2**
BSO1	**Boso 1**	**6.69**	**10**	P	**P**	**11 54 28.3**	**+2.2**
BSO1				S	**S**	**11 55 51.9**	**+1.5**
JIE	**Ise**	**6.76**	**340**	P	**P**	**11 54 30.9**	**+3.5**
JKN2	**Miekihoku**	**6.76**	**337**	*e*P	**P**	**11 54 29.9**	**+2.5**
BSO3	**Boso 3**	**6.78**	**7**	*e*P	**P**	**11 54 29.1**	**+1.9**
BSO3				*e*S	**S**	**11 55 52.1**	**-0.2**
JOD2	**Odawara 2**	**7.19**	**357**	*e*P	**P**	**11 54 33.6**	**+1.8**
JNY	**Yasuok**	**7.41**	**349**	*e*P	**P**	**11 54 36.4**	**+2.3**
JHU	**Hanno**	**7.77**	**359**	*e*P	**P**	**11 54 37.3**	**-0.3**
JHU				*e*S	**S**	**11 56 06.1**	**-5.1**
JRY	**Ryogami san**	**7.95**	**356**	P	**P**	**11 54 40.2**	**+0.7**
JYT	**Yasato**	**8.16**	**4**	P	**P**	**11 54 41.8**	**+0.2**
JAG	**Ashikaga**	**8.34**	**360**	P	**P**	**11 54 43.2**	**-0.3**
MJAR	**Matsushiro Arr**	**8.53**	**353**	P	**P**	**11 54 43.3**	**-2.2**
	1.0nm,0.3s,baz=169,slow=11,SNR=5.9						
JHO	**Hitachi**	**8.57**	**6**	P	**P**	**11 54 46.8**	**+1.0**
JFK	**Kawauchi**	**9.35**	**7**	P	**P**	**11 54 55.4**	**+1.4**
JMK	**Ichinoseki**	**10.96**	**7**	*e*P	**P**	**11 55 12.3**	**+1.5**
WRA	**Warramunga Arr**	**47.98**	**187**	P	**P**	**12 00 36.0**	**0.0**
	0.6nm,0.5s,baz=2.8,slow=7.7,SNR=17						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**48.04**	**309**	P	**P**	**12 00 35.4**	**-0.8**
	0.4nm,0.5s,baz=90,slow=8.9,SNR=4.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**51.71**	**187**	P	**P**	**12 01 03.5**	**+0.1**
	0.3nm,0.4s,baz=17,slow=12,SNR=7.0						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**71.85**	**340**	P	**P**	**12 03 14.8**	**+0.6**
	3.5nm,1.1s,baz=0.0,slow=4.9,SNR=3.9						
	3.5nm,1.1s						
FINES	**FINESS Array B**	**76.03**	**333**	P	**P**	**12 03 37.8**	**-0.2**
	1.2nm,0.3s,baz=75,slow=5.7,SNR=14						
	1.2nm,0.3s						

*DDA **31** 12:06:20.6±0.0,39°.56N×26°.09E,h12km,ML2.3*

*THE **31** 12:06:20.8,39°.57N×26°.04E,h12km±1km,ML2.4/6,Error ellipse: s-maj=1.5km s-min=0.7km az=122.0*

*ISK **31** 12:06:20.1,39°.56N×26°.04E,h6km,ML2.5/12*

*ATH **31** 12:06:21.2,39°.55N×26°.02E,h15km±2km,ML2.3/5,Error ellipse: s-maj=3.0km s-min=1.1km az=229.0*

ISC 31 12:06:20.2±0.8,39°.56N±0°.01×26°.07E±0°.02,h15km±5km, n40,σ0s58/73,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOCA	**Canakkale, Ayv**	**0.08**	**140**	P	**Pg**	**12 06 23.4**	**0.0**
KOCA				*i* AML	AML	12 06 25.0	
	comp=E,2μm,0.4s						
KOCA				S	**Sg**	**12 06 25.3**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.12**	**156**	PG	**Pg**	**12 06 23.4**	**-0.3**
GPNR				SG	**Sb**	**12 06 25.8**	**-0.9**
BOZC	**Bozcaada**	**0.28**	**357**	PG	**Pg**	**12 06 26.4**	**+0.2**
BOZC				SG	**Sb**	**12 06 31.0**	**-0.5**
BOZC	**Bozcaada**	**0.28**	**357**	P	**Pg**	**12 06 26.6**	**+0.4**
BOZC				S	**Sb**	**12 06 30.9**	**-0.5**
BOZC				*i* AML	AML	12 06 31.0	
	comp=E,460nm,0.5s						
BOZC				*i* AML	AML	12 06 31.0	
	comp=N,438nm,0.3s						
EZN	**Ezine**	**0.33**	**37**	P	**Pg**	**12 06 27.4**	**+0.4**
EZN				S	**Sg**	**12 06 32.1**	**+0.4**
	638nm,0.2s						
EZN	**Ezine**	**0.33**	**37**	PG	**Pg**	**12 06 27.3**	**+0.3**
EZN				SG	**Sb**	**12 06 32.5**	**-0.3**
PRK	**Paraskevi**	**0.35**	**154**	P	**Pb**	**12 06 28.7**	**+0.5**
PRK				S	**Sb**	**12 06 34.0**	**+0.5**
	828nm,0.3s						
PRK	**Paraskevi**	**0.35**	**154**	P	**Pb**	**12 06 28.7**	**+0.5**
PRK				S	**Sb**	**12 06 33.5**	**0.0**
PRK				AML	AML	12 06 34.4	
	comp=E,1829μm,0.2s						
PRK				AML	AML	12 06 35.6	
	comp=N,1470μm,0.3s						
SIGR	**SIGRI**	**0.39**	**206**	P	**Pg**	**12 06 28.1**	**0.0**
SIGR				S	**Sg**	**12 06 33.7**	**+0.2**
	comp=N,1μm,0.2s						
SIGR	**SIGRI**	**0.39**	**206**	PG	**Pg**	**12 06 28.1**	**0.0**
SIGR				SG	**Sg**	**12 06 33.6**	**+0.1**
SIGR	**SIGRI**	**0.39**	**206**	P	**Pg**	**12 06 28.1**	**0.0**
SIGR				S	**Sg**	**12 06 33.6**	**+0.1**
SIGR				AML	AML	12 06 34.0	
	comp=E,2903μm,0.3s						
SIGR				AML	AML	12 06 34.8	
	comp=N,2383μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.41**	**64**	P	**Pg**	**12 06 28.6**	**+0.1**
BAYC				S	**Sg**	**12 06 34.3**	**+0.2**
ECEA	**Canakkale, Ece**	**0.49**	**9**	P	**Pb**	**12 06 30.4**	**-0.1**
ECEA				*i* AML	AML	12 06 38.0	
	comp=N,409nm,0.4s						
ECEA				S	**Sb**	**12 06 38.2**	**+0.8**
AYVA	**Ayvalik**	**0.54**	**118**	P	**Pg**	**12 06 31.1**	**+0.1**
AYVA				S	**Sb**	**12 06 39.1**	**+0.2**
AYVA				*i* AML	AML	12 06 43.0	
	comp=N,248nm,0.3s						
GOKA	**anakkale-Gk**	**0.64**	**349**	P	**Pg**	**12 06 32.4**	**-0.4**
GOKA				S	**Sb**	**12 06 42.8**	**+1.0**
GOKA				*i* AML	AML	12 06 47.0	
	comp=N,141nm,0.2s						
GADA	**Gvkgeada**	**0.64**	**348**	PG	**Pg**	**12 06 32.8**	**0.0**
LIA	**Limnos Island**	**0.76**	**296**	P	**Pg**	**12 06 35.6**	**+0.5**
LIA				S	**Sg**	**12 06 45.4**	**+0.2**
	comp=N,248nm,0.4s						
LIA	**Limnos Island**	**0.76**	**296**	P	**Pg**	**12 06 35.6**	**+0.5**
LIA				S	**Sg**	**12 06 45.3**	**+0.2**
LIA				AML	AML	12 06 47.4	
	comp=E,552μm,0.3s						
LIA				AML	AML	12 06 49.7	
	comp=N,431μm,0.4s						
BUHA	**Balikesir, Bur**	**0.78**	**94**	P	**Pb**	**12 06 35.4**	**-0.1**
BUHA				S	**Sg**	**12 06 46.3**	**+0.6**
BUHA				*i* AML	AML	12 06 49.0	
	comp=N,129nm,0.3s						
BUHA				*i* AML	AML	12 06 50.0	
	comp=N,127nm,0.5s						
DKL	**Dikili**	**0.81**	**127**	PG	**Pn**	**12 06 36.7**	**-0.4**
DKL				SG	**Sn**	**12 06 45.5**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.89**	**20**	PG	**Pg**	**12 06 37.7**	**+0.2**
GELI				SG	**Sn**	**12 06 50.6**	**-0.2**
ZEDA	**zmir-Bergama**	**0.98**	**127**	P	**Pg**	**12 06 39.5**	**+0.3**
ZEDA				S	**Sn**	**12 06 53.6**	**+0.5**
ZEDA				*i* AML	AML	12 06 54.0	
	comp=N,94nm,0.5s						
ZEDA				*i* AML	AML	12 06 54.0	
	comp=N,104nm,0.6s						
SMTH	**Samothraki Isl**	**1.00**	**336**	P	**Pn**	**12 06 39.4**	**-0.3**
SMTH				S	**Sn**	**12 06 53.2**	**-0.3**
	comp=N,62nm,0.1s						
SMTH	**Samothraki Isl**	**1.00**	**336**	P	**Pn**	**12 06 39.4**	**-0.3**
SMTH				S	**Sn**	**12 06 53.1**	**-0.3**
SMTH				AML	AML	12 06 54.2	
	comp=N,139μm,0.2s						
SMTH				AML	AML	12 06 54.3	
	comp=E,108μm,0.2s						
CAVK	**Edirne/Enez-Ca**	**1.13**	**4**	P	**Pg**	**12 06 42.1**	**+0.1**
CAVK				S	**Sg**	**12 06 58.1**	**+1.3**
CAVK				*i* AML	AML	12 07 02.0	
	comp=E,67nm,0.5s						
CAVK				*i* AML	AML	12 07 06.0	
	comp=E,87nm,0.8s						
ENEZ	**Enez**	**1.17**	**3**	P	**Pg**	**12 06 42.5**	**-0.4**
ENEZ				S	**Sg**	**12 06 58.2**	**0.0**
ENEZ	**Enez**	**1.17**	**3**	PN	**Pg**	**12 06 42.9**	**0.0**
ENEZ				SN	**Sg**	**12 06 59.8**	**+1.6**
CHOS	**Chios island**	**1.18**	**181**	P	**Pn**	**12 06 41.6**	**-0.5**
CHOS				S	**Sn**	**12 06 58.0**	**+0.1**
	comp=E,198nm,0.3s						
CHOS	**Chios island**	**1.18**	**181**	P	**Pn**	**12 06 41.7**	**-0.5**
CHOS				S	**Sg**	**12 06 58.4**	**+0.1**
CHOS				AML	AML	12 07 03.4	
	comp=E,426μm,0.3s						
CHOS				AML	AML	12 07 03.9	
	comp=N,368μm,0.3s						
BALY	**Balya**	**1.21**	**81**	P	**Pn**	**12 06 41.8**	**-0.8**
BALY				S	**Sb**	**12 06 57.8**	**-0.4**
BALY				*i* AML	AML	12 06 59.0	
	comp=N,54nm,0.5s						
BALY				*i* AML	AML	12 07 00.0	
	comp=N,97nm,0.7s						
URLA	**Izmir**	**1.27**	**161**	P	**Pn**	**12 06 41.9**	**-1.5**
URLA				S	**Sn**	**12 07 00.4**	**+0.2**
URLA				*i* AML	AML	12 07 04.0	
	comp=N,53nm,0.7s						
ALN	**Alexandroupoli**	**1.33**	**359**	PN	**Pg**	**12 06 45.5**	**-0.4**
GONE	**Gonen-Balikesi**	**1.33**	**68**	PN	**Pg**	**12 06 45.9**	**0.0**
KESN	**Edirne-Kesan**	**1.34**	**20**	P	**Pb**	**12 06 45.7**	**+0.3**
KESN				S	**Sg**	**12 07 04.0**	**+0.2**
KESN				*i* AML	AML	12 07 04.0	
	comp=N,90nm,0.5s						
KESN				*i* AML	AML	12 07 12.0	
	comp=N,74nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**1.36**	**166**	P	**Pb**	**12 06 45.8**	**+0.4**
ZEYE				S	**Sg**	**12 07 06.9**	**+2.6**
BLCB	**Balcova**	**1.40**	**147**	PN	**Pg**	**12 06 46.8**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.41**	**37**	PN	**Pg**	**12 06 46.8**	**-0.5**
RKY				SN	**Sg**	**12 07 06.2**	**+0.5**
EDC	**Edincik**	**1.58**	**60**	PN	**Pb**	**12 06 49.4**	**+0.2**
UKOP	**Uzunkopru-Edir**	**1.62**	**15**	PN	**Pb**	**12 06 49.8**	**0.0**
RDO	**Rodhopi**	**1.63**	**346**	PN	**Pb**	**12 06 49.5**	**-0.5**

*ASRS **31** 12:16:25.7±0.2,50°.1N×91°.2E±0°.9,h10km,MLh4.0/22, Error ellipse: s-maj=3.2km s-min=1.7km az=159.3, confirmed*

*IDC **31** 12:16:27.1±1.5,50°.23N×91°.33E,h0km,mb3.6/1, mbtmp3.3/4,ML2.6/3,Error ellipse: s-maj=25.6km s-min=15.2km az=13.0*

*NNC **31** 12:16:33.6±2.5,50°.17N×90°.84E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=23.0km s-min=12.7km az=94.0*

ISC 31 12:16:28.7±0.8,50°.26N±0°.03×91°.22E±0°.03,h10km,n44, σ2s78/73,8C-3D,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLNR	**Muhor-Tarhata,**	**1.84**	**256**	Pg	**Pg**	**12 17 02.4**	**-1.6**
SLNR				Sg	**Sg**	**12 17 26.4**	**-1.6**
CUR	**Chagan-Uzun**	**1.85**	**266**	Pg	**Pg**	**12 17 02.1**	**-2.1**
CUR				Sg	**Sg**	**12 17 26.4**	**-1.9**
ULGR	**Ulagan, Altay**	**2.12**	**281**	⇑Pg	**Pg**	**12 17 08.1**	**-1.2**
ULGR				Sg	**Sg**	**12 17 35.9**	**-0.8**
AKAR	**Aktash**	**2.31**	**273**	Pg	**Pg**	**12 17 10.6**	**-2.4**
AKAR				Sg	**Sg**	**12 17 40.7**	**-2.2**
CHBI	**Chibit, Altay**	**2.39**	**273**	Pg	**Pg**	**12 17 12.7**	**-1.7**
CHBI				Sg	**Sg**	**12 17 44.4**	**-0.9**
KZLR	**Kyzyl**	**2.50**	**53**	Pg	**Pg**	**12 17 14.1**	**-2.5**
KZLR				Sg	**Sg**	**12 17 45.9**	**-3.1**
DGZ	**Jazzator, Alta**	**2.51**	**259**	Pg	**Pg**	**12 17 14.4**	**-2.4**
DGZ				Sg	**Sg**	**12 17 46.6**	**-2.7**
ERNS	**Erzin**	**2.52**	**88**	Pg	**Pb**	**12 17 12.9**	**-1.2**
ERNS				Sg	**Sg**	**12 17 46.8**	**-2.9**
DJO	**Djoy, Khakassi**	**2.52**	**360**	Pg	**Pg**	**12 17 14.7**	**-2.3**
DJO				Sg	**Sg**	**12 17 47.8**	**-2.0**
DJOS	**Djoyskaya Sosn**	**2.54**	**2**	Pg	**Pg**	**12 17 15.6**	**-1.8**
DJOS				Sg	**Sg**	**12 17 49.0**	**-1.3**
CERR	**Cheremushki**	**2.60**	**3**	Pg	**Pg**	**12 17 16.7**	**-1.7**
CERR				Sg	**Sg**	**12 17 50.3**	**-1.8**
ARDR	**Aradan**	**2.70**	**30**	Pg	**Pb**	**12 17 17.4**	**+0.2**
ARDR				Sg	**Sb**	**12 17 51.6**	**+1.3**
ARTR	**Artybash**	**2.93**	**303**	Pg	**Pg**	**12 17 22.1**	**-2.7**
ARTR				Sg	**Sg**	**12 17 59.7**	**-3.0**
TASR	**Tashtagol**	**3.26**	**321**	Pg	**Pg**	**12 17 27.7**	**-3.4**
TASR				Sg	**Sb**	**12 18 08.6**	**+2.3**
LUZB	**Luzhba, Kemero**	**3.70**	**338**	Pg	**Pb**	**12 17 33.9**	**-0.1**
LUZB				Sg	**Sb**	**12 18 21.7**	**+2.9**
GALT	**Gorno-Altaysk,**	**3.73**	**299**	Pg	**Pb**	**12 17 36.0**	**+1.3**
GALT				Sg	**Sg**	**12 18 25.8**	**-2.7**
MALIN	**Malinovka, Kuz**	**4.00**	**324**	Pg	**Pb**	**12 17 40.6**	**+1.4**
MALIN				Sg	**Sg**	**12 18 34.3**	**-2.8**
KNGR	**Kungurtug, Tuv**	**4.04**	**83**	Pn	**Pn**	**12 17 32.8**	**+2.2**
KNGR				Pg	**Pb**	**12 17 40.0**	**0.0**
KNGR				Sg	**Sg**	**12 18 37.9**	**-0.4**
UKR	**Ust'-Kan**	**4.17**	**282**	Pg	**Pg**	**12 17 44.3**	**-4.2**
UKR				Sg	**Sg**	**12 18 39.6**	**-2.8**
ELT	**Eltsovka**	**4.31**	**316**	Pn	**Pn**	**12 17 36.7**	**+2.4**
ELT				Pg	**Pb**	**12 17 46.3**	**+1.8**
ELT				Sg	**Sb**	**12 18 40.6**	**+4.0**
VCHU	**Verkh-Chumysh,**	**4.73**	**323**	Pg	**Pg**	**12 17 56.0**	**-3.2**
VCHU				Sg	**Sg**	**12 18 56.6**	**-3.8**
KOTO	**Kotino, Kuzbas**	**4.74**	**328**	Sg	**Sg**	**12 18 58.5**	**-2.2**
POMOR	**Pomortsevo, Ku**	**5.05**	**327**	Pg	**Pg**	**12 18 01.6**	**-3.8**
POMOR				Sg	**Sg**	**12 19 10.8**	**0.0**
BJR1	**Bachatsky 1, K**	**5.10**	**323**	Pg	**Pb**	**12 18 00.3**	**+2.4**
BJR1				Sg	**Sg**	**12 19 06.7**	**-5.6**
SALR	**Pechorkino, Sa**	**5.36**	**323**	Pg	**Pb**	**12 18 04.5**	**+2.1**
SALR				Sg	**Sb**	**12 19 11.7**	**+4.9**
ZAA0	**Zalesovo Array**	**5.40**	**316**	⇑Pg	**Pg**	**12 18 11.0**	**-1.1**
	0.5nm,0.6s						
ZAA0				⇑Lg	Lg	12 19 19.7	
	5.7nm,0.7s						
ZALV	**Zalesovo Beam**	**5.40**	**316**	Pn	**Pn**	**12 17 50.1**	**+0.9**
	0.2nm,0.3s,baz=132,slow=13,SNR=3.3						
ZALV				Lg	Lg	12 19 20.4	
	3.3nm,0.3s,baz=131,slow=32,SNR=7.5						
	0.9nm,0.4s						
BRCR	**Berchikul'**	**5.67**	**343**	Pg	**Pb**	**12 18 10.0**	**+2.4**
BRCR				Sg	**Sg**	**12 19 23.7**	**-6.8**
SHTK	**Zheleznogorsk-**	**6.25**	**12**	Pg	**Pb**	**12 18 20.8**	**+3.3**
SHTK				Sg	**Sg**	**12 19 43.8**	**-5.3**
GZLN	**Zheleznogorsk**	**6.32**	**13**	Pg	Pg	12 18 24.5	-5.0
GZLN				Sg	**Sg**	**12 19 48.7**	**-2.6**
MOY	**Mondy**	**6.33**	**73**	Pg	**Pb**	**12 18 19.7**	**+0.7**
MOY				Sg	**Sg**	**12 19 45.5**	**-6.3**
NVS	**Novosibirsk**	**6.69**	**316**	Sg	**Sg**	**12 19 59.8**	**-3.4**
NVSII	**Novosibirsk**	**6.69**	**316**	Sg	**Sg**	**12 19 58.4**	**-4.8**
MK31	**Makanchi Array**	**6.87**	**243**	⇓Pn	**Pn**	**12 18 10.6**	**+1.1**
	0.1nm,0.2s,baz=54,slow=14,SNR=19						
MK31				Pg	Pg	12 18 35.1	-5.1
	10.0nm,0.7s,baz=61,slow=16,SNR=15						
MK31				⇓Lg	Lg	12 20 04.6	
	17nm,0.6s,baz=54,slow=32,SNR=7.4						
MKAR	**Makanchi Array**	**6.87**	**243**	Pn	**Pn**	**12 18 10.1**	**+0.7**
MKAR				Pg	**Pg**	**12 18 39.3**	**-0.9**
MKAR				Sg	**Sg**	**12 20 06.4**	**-2.7**
MKAR	**Makanchi Array**	**6.87**	**243**	Pn	**Pn**	**12 18 11.1**	**+1.7**
	0.3nm,0.3s,baz=52,slow=15,SNR=10.0						
MKAR				Lg	Lg	12 20 05.2	
	1.9nm,0.3s,baz=62,slow=31,SNR=5.8						
	0.5nm,0.3s						
MAKZ	**Makanchi**	**7.04**	**244**	⇓Lg	Lg	12 20 09.7	
	18nm,0.8s						
MAKZ	**Makanchi**	**7.04**	**244**	Pn	**Pn**	**12 18 11.3**	**-0.6**
MAKZ				Pg	**Pg**	**12 18 41.1**	**-2.4**
MAKZ				Sg	**Sg**	**12 20 09.9**	**-4.7**
KURK	**Kurchatov**	**8.05**	**278**	⇑Pn	Pn	12 18 29.1	+3.5
	3.3nm,0.6s						
KURK				⇑Lg	Lg	12 20 40.4	
	10nm,0.6s						
KURBB	**Kurchatov Arra**	**8.12**	**277**	⇑Pn	**Pn**	**12 18 29.8**	**+3.3**
	1.8nm,0.4s						
KURBB				⇑Lg	Lg	12 20 44.7	
	37nm,0.7s						
KURBB	**Kurchatov Arra**	**8.12**	**277**	Pn	**Pn**	**12 18 27.0**	**+0.6**
	0.1nm,0.3s,baz=92,slow=14,SNR=12						
KURBB				Lg	Lg	12 20 46.2	
	0.3nm,0.3s,baz=83,slow=32,SNR=5.8						
	0.7nm,0.4s						
SONM	**Songino Array**	**10.25**	**98**	Pg	Pn	12 19 34.6	+39
	baz=295,slow=17						
SONM				Lg	Lg	12 21 48.1	
	0.5nm,0.3s,baz=278,slow=22,SNR=5.0						
AB31	**Akbulak array**	**20.16**	**279**	Pg	Pn	12 21 11.8	+7.0
	0.6nm,0.7s,baz=338,slow=16,SNR=4.3						
AB31				⇑Lg	Lg	12 22 16.4	
	0

	comp=Z,58nm,26.0s						
PPT2	**Papeete2**	**44.18**	**312**	*e*LR	LR	12 56 50.8	
	comp=Z,46nm,23.2s						
PMOR	**Pomariorio Ree**	**45.77**	**316**	*e*T	T	13 33 40.0	
	1.5nm,0.3s						
DZM	**Mont Dzumac**	**64.73**	**267**	*e*LR	LR	13 06 04.6	
	comp=Z,130nm,21.9s						
ASAR	**Alice Springs**	**81.84**	**241**	P	P	12 49 51.3	-0.4
	0.5nm,0.9s,baz=149,slow=5.3,SNR=3.0						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**84.67**	**243**	P	P	12 50 07.0	+0.6
	0.6nm,0.9s,baz=147,slow=4.9,SNR=2.8						
	0.6nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**97.04**	**292**	T	T	14 37 48.7	
	baz=144,slow=75,SNR=39						
H11S3	**WAKE ISLAND Hy**	**97.06**	**292**	T	T	14 37 48.5	
	baz=144,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**97.06**	**292**	T	T	14 37 46.1	
	baz=144,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**97.92**	**292**	T	T	14 38 51.5	
	baz=144,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**97.93**	**292**	T	T	14 38 49.8	
	baz=144,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**97.94**	**292**	T	T	14 38 49.5	
	baz=144,slow=76,SNR=17						
SONM	**Songino Array**	**152.41**	**275**	PKPbc	PKPbc	12 57 27.6	-0.2
	0.4nm,0.5s,baz=131,slow=3.5,SNR=2.4						
ZALV	**Zalesovo Beam**	**167.26**	**279**	PKPab	PKPab	12 58 41.8	-0.5
	0.7nm,0.3s,baz=116,slow=6.6,SNR=4.6						

*ISK **31** 12:40:30.7, 38.82N×43.69E, h7km, ML2.7/9*
*DDA **31** 12:40:31.3±0.0, 38.95N×43.52E, h7km±6km, ML2.3*
ISC 31 12:40:30.8±1.5, 38.91N±0.04×43.59E±0.03, h5km±13km, n13, σ0.76/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.35**	**206**	PG	**Pb**	**12 40 38.7**	**-0.8**
CLDR	**Caldiran**	**0.35**	**48**	PG	**Pg**	**12 40 37.7**	**+0.1**
CLDR				SG	**Sb**	**12 40 44.2**	**-1.4**
CLDR	**Caldiran**	**0.35**	**48**	P	**Pg**	**12 40 37.7**	**+0.1**
CLDR				S	**Sb**	**12 40 44.6**	**-1.0**
CLDR				*i* AML	AML	12 40 46.0	
	comp=N,451nm,0.6s						
CLDR				*i* AML	AML	12 40 50.0	
	comp=E,395nm,1.2s						
OZAP	**Van, Ozalp-Mer**	**0.40**	**127**	P	**Pb**	**12 40 40.4**	**-0.1**
OZAP				S	**Sb**	**12 40 48.7**	**+1.7**
OZAP				*i* AML	AML	12 40 53.0	
	comp=E,246nm,0.6s						
ADCV	**BITLIS_Adilcev**	**0.68**	**262**	P	**Pg**	**12 40 43.9**	**+0.1**
ADCV				S	**Sb**	**12 40 54.6**	**-0.4**
ADCV				*i* AML	AML	12 40 55.0	
	comp=E,170nm,0.5s						
ADCV				*i* AML	AML	12 40 55.0	
	comp=N,129nm,0.4s						
GEVA	**Gevas**	**0.72**	**215**	P	**Pg**	**12 40 44.6**	**0.0**
GEVA				S	**Sb**	**12 40 56.3**	**+0.1**
AKDM	**Akdamar-Van**	**0.75**	**220**	PG	**Pg**	**12 40 45.6**	**+0.5**
AKDM				SG	**Sb**	**12 40 56.2**	**-0.7**
AGRB	**Hanur-Agry**	**0.81**	**326**	PG	**Pn**	**12 40 48.9**	**-0.1**
AGRB				SG	**Sn**	**12 41 02.2**	**+0.7**
MLAZ	**Malazgirt-MUS**	**0.84**	**287**	PG	**Pn**	**12 40 49.2**	**-0.2**
MLAZ				SG	**Sn**	**12 41 02.6**	**+0.4**
TASB	**TASBURUN-IGDIR**	**1.19**	**25**	PN	**Pn**	**12 40 54.8**	**+0.7**
GURO	**Guroymak-BITLI**	**1.27**	**254**	PN	**Pg**	**12 40 56.1**	**+1.1**
GNI	**Garni**	**1.53**	**35**	PN	**Pb**	**12 40 59.6**	**-0.1**
CUKT	**Cukurca**	**1.66**	**179**	PN	**Pn**	**12 40 59.8**	**-0.8**

*SOME **31** 12:44:12.7, 43.55N×82.42E, h5km*
*NNC **31** 12:44:13.8±1.3, 43.62N×82.40E, h0km, mb3.2, mpv3.2,*
Error ellipse: s-maj=11.4km s-min=3.9km az=134.0
ISC 31 12:44:13.5±1.9, 43.55N±0.08×82.34E±0.09, h10km, n29, σ1.9/62/43, 3C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**2.00**	**294**	*e*P	**Pb**	**12 44 51.0**	**+1.0**
DJR	19nm,0.1s			*e*S	**Sg**	**12 45 19.1**	**+1.5**
	43nm,0.3s						
DJR	**Jarkent**	**2.00**	**294**	Lg	Lg	12 45 19.3	
	36nm,0.3s						
PDGK	**Podgornoye**	**2.08**	**265**	⇑Pg	**Pb**	**12 44 51.3**	**-0.2**
PDGK	1.4nm,0.3s			⇑Lg	Lg	12 45 21.3	
	24nm,0.5s						
SHLS	**Shalkode**	**2.13**	**260**	*e*P	**Pn**	**12 44 48.8**	**-0.6**
SHLS	12nm,0.4s			*e*S	**Sn**	**12 45 14.8**	**-1.1**
	226nm,0.5s						
SHLS	**Shalkode**	**2.13**	**260**	Pg	**Pn**	**12 44 48.7**	**-0.6**
SHLS	13nm,0.1s			Lg	Lg	12 45 15.3	
	134nm,0.4s						
KNOS	**Konyrlen**	**2.42**	**291**	*e*P	**Pg**	**12 44 58.9**	**-0.9**
KNOS	4.5nm,0.1s			*e*S	**Sg**	**12 45 32.2**	**+1.0**
	40nm,0.5s						
UZB	**Uzynbulak**	**2.45**	**262**	*e*P	**Pg**	**12 44 59.6**	**-0.8**
UZB	1.3nm,0.2s			*e*S	**Sg**	**12 45 33.4**	**+1.1**
	27nm,0.3s						
UZB	**Uzynbulak**	**2.45**	**262**	Pg	**Pg**	**12 44 59.7**	**-0.8**
UZB	1.9nm,0.1s			Lg	Lg	12 45 33.9	
	24nm,0.2s						
UZB	**Uzynbulak**	**2.45**	**262**	*e*P	**Pg**	**12 44 59.8**	**-0.7**
	2.0nm,0.3s						
KPKS	**Kokpek**	**2.66**	**269**	*e*P	**Pg**	**12 45 03.2**	**-1.2**
KPKS	2.6nm,0.2s			*e*S	**Sg**	**12 45 39.5**	**+0.6**
	22nm,0.2s						
KPKS	**Kokpek**	**2.66**	**269**	Pg	**Pg**	**12 45 03.7**	**-0.7**
KPKS	3.4nm,0.1s			Lg	Lg	12 45 40.5	
	26nm,0.2s						
BLB	**Baldybastay**	**2.84**	**282**	*e*P	**Pb**	**12 45 06.1**	**+1.7**
BLB	4.5nm,0.2s			*e*S	**Sg**	**12 45 45.1**	**+0.2**
	27nm,0.7s						
BLB	**Baldybastay**	**2.84**	**282**	Pg	**Pb**	**12 45 06.1**	**+1.7**
BLB	7.2nm,0.2s			Lg	Lg	12 45 44.3	
	9.4nm,0.3s						
ZHN	**Zhinishke**	**2.87**	**264**	*e*P	**Pg**	**12 45 08.3**	**-0.2**
ZHN	11nm,0.2s			*e*S	**Sg**	**12 45 48.1**	**+2.4**
	34nm,0.3s						
SATY	**Saty**	**2.91**	**262**	*e*P	**Pb**	**12 45 07.6**	**+2.0**
SATY	3.2nm,0.1s			*e*S	**Sg**	**12 45 47.5**	**+0.6**
	33nm,0.2s						
SATY	**Saty**	**2.91**	**262**	Pg	**Pg**	**12 45 09.5**	**+0.3**
SATY				Lg	Lg	12 45 50.2	
	33nm,0.1s						
MK31	**Makanchi Array**	**3.24**	**359**	⇑Pn	**Pn**	**12 45 04.6**	**+0.2**
	0.2nm,0.4s,baz=177,slow=9.4,SNR=29						
MK31				⇓Pg	**Pg**	**12 45 13.4**	**-2.2**
	1.0nm,0.3s,baz=176,slow=17,SNR=29						
MK31				⇓Sn	**Sn**	**12 45 44.1**	**+1.0**
	0.4nm,0.2s						
MK31				⇓Lg	Lg	12 45 55.0	
	3.9nm,0.5s,baz=184,slow=26,SNR=6.4						
MAKZ	**Makanchi**	**3.26**	**356**	⇓Lg	Lg	12 45 56.4	
	3.5nm,0.6s						
ARXS	**Arharly**	**3.33**	**283**	*e*P	**Pb**	**12 45 14.9**	**+2.3**
	1.5nm,0.9s						
ARXS				*e*S	**Sg**	**12 45 60.0**	**-0.3**
	5.5nm,0.4s						
ARXS	**Arharly**	**3.33**	**283**	Pg	**Pg**	**12 45 15.2**	**-2.0**
	4.7nm,0.5s						
ARXS				Lg	Lg	12 46 00.1	
	11nm,0.3s						
KOTS	**Kotyrbulak**	**3.82**	**267**	*e*P	**Pg**	**12 45 24.2**	**-2.5**
	2.8nm,0.5s						
KOTS				*e*S	**Sg**	**12 46 15.8**	**-0.4**
	24nm,0.5s						
KOTS	**Kotyrbulak**	**3.82**	**267**	Pg	**Pg**	**12 45 25.2**	**-1.5**
	2.8nm,0.3s						
KOTS				Lg	Lg	12 46 15.7	
	22nm,0.4s						
MDOK	**Medeo**	**3.88**	**266**	*e*P	**Pg**	**12 45 25.4**	**-2.3**
	1.6nm,0.6s						
MDOK				*e*S	**Sg**	**12 46 17.7**	**-0.2**
	4.7nm,0.4s						
KTBS	**Karatobe**	**4.11**	**274**	*e*P	**Pb**	**12 45 29.2**	**+3.3**
	3.0nm,0.6s						
KTBS				*e*S	**Sg**	**12 46 24.9**	**-0.5**
	12nm,0.6s						
KTBS	**Karatobe**	**4.11**	**274**	Pg	**Pg**	**12 45 29.7**	**-2.4**
	3.0nm,0.8s						
KTBS				Lg	Lg	12 46 25.2	
	10nm,0.5s						
DGS	**Degeres**	**4.79**	**269**	*e*P	**Pg**	**12 45 42.7**	**-2.6**
	1.2nm,0.5s						
DGS				*e*S	**Sg**	**12 46 47.2**	**-0.1**
	5.9nm,0.6s						
DGS	**Degeres**	**4.79**	**269**	Pg	**Pg**	**12 45 42.4**	**-2.9**
	2.3nm,0.2s						
DGS				Lg	Lg	12 46 45.9	
	5.3nm,0.3s						
KRBS	**Karabastau**	**4.84**	**274**	*e*P	**Pg**	**12 45 43.3**	**-2.8**
	0.5nm,0.5s						
KRBS				*e*S	**Sg**	**12 46 48.5**	**-0.3**
	2.1nm,0.7s						
KRBS	**Karabastau**	**4.84**	**274**	Pg	**Pg**	**12 45 43.5**	**-2.7**
	0.5nm,0.2s						
KRBS				Lg	Lg	12 46 48.5	
	1.5nm,0.3s						

SOME 31 12:44:39.5, 44.17N×79.50E, h10km, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**0.27**	**52**	*e*P	Pg	12 44 44.5	-0.4
	5.6nm,0.1s						
DJR				*e*S	Sg	12 44 48.2	-0.4
	19nm,0.1s						
KNOS	**Konyrlen**	**0.30**	**310**	*e*P	Pg	12 44 45.2	-0.4
	7.3nm,0.2s						
KNOS				*e*S	Sg	12 44 49.0	-0.7
	28nm,0.1s						
BLB	**Baldybastay**	**0.74**	**265**	*e*P	Pg	12 44 53.5	-0.3
	1.6nm,0.1s						
BLB				*e*S	Sg	12 45 03.7	+0.2
	8.1nm,0.2s						
KPKS	**Kokpek**	**0.92**	**220**	*e*P	Pg	12 44 57.1	-0.1
	6.1nm,0.1s						
KPKS				*e*S	Sb	12 45 09.7	-0.1
	15nm,0.2s						
UZB	**Uzynbulak**	**1.08**	**199**	*e*S	Sg	12 45 14.3	+0.1
	5.8nm,0.3s						
ARXS	**Arharly**	**1.20**	**273**	*e*P	Pb	12 45 01.5	-1.0
	1.3nm,0.2s						
ARXS				*e*S	Sb	12 45 17.2	-0.9
	3.0nm,0.3s						
SATY	**Saty**	**1.36**	**216**	*e*P	Pn	12 45 04.2	-0.5
	1.5nm,0.3s						
SATY				*e*S	Sb	12 45 21.9	-0.9
	9.2nm,0.3s						

*IDC **31** 12:51:53.7±0.9, 52.49S×118.64W, h0km, mb3.9/5,*
mbtmp3.9/5, MS3.9/6, Error ellipse: s-maj=51.0km
s-min=25.7km az=141.0
ISC 31 12:51:54.6±1.1, 53.0S±0.5×118.3W±0.3, h10km, n30, σ0.82/8, mb4.1/5, MS3.9/6, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**33.86**	**71**	T	T	13 34 23.6	
	baz=222,SNR=62						
H03S1	**Juan Fernandez**	**33.86**	**72**	T	T	13 34 24.9	
	baz=222,SNR=64						
H03S3	**Juan Fernandez**	**33.87**	**72**	T	T	13 34 24.0	
	baz=222,SNR=61						
H03N3	**Juan Fernandez**	**34.13**	**71**	T	T	13 34 45.0	
	baz=224,slow=72,SNR=185						
H03N2	**Juan Fernandez**	**34.14**	**71**	T	T	13 34 30.0	
	baz=224,slow=72,SNR=213						
H03N1	**Juan Fernandez**	**34.15**	**71**	T	T	13 34 35.5	
	baz=224,slow=72,SNR=161						
PLCA	**Paso Flores**	**34.26**	**89**	LR	LR	13 08 39.1	
	comp=Z,268nm,21.4s,baz=209,slow=29						
VNDA	**Vanda**	**36.83**	**201**	P	P	12 59 07.7	+5.5
	1.7nm,1.1s,baz=104,slow=3.6,SNR=4.8						
	1.7nm,1.1s						
QSPA	**South Pole Qui**	**37.24**	**180**	LR	LR	13 10 56.0	
	comp=Z,134nm,21.1s,baz=92,slow=30						
PPT	**Papeete**	**42.92**	**313**	LR	LR	13 12 57.5	
	comp=Z,64nm,20.9s,baz=154,slow=30						
RPZ	**Rata Peaks**	**46.06**	**252**	LR	LR	13 16 45.0	
	comp=Z,131nm,18.1s,baz=104,slow=32						
LVC	**Limon Verde**	**48.08**	**71**	LR	LR	13 15 16.0	
	comp=Z,102nm,21.1s,baz=190,slow=29						
CPUP	**Villa Florida**	**52.08**	**84**	LR	LR	13 19 18.9	
	comp=Z,240nm,19.9s,baz=234,slow=32						
LPAZ	**La Paz**	**53.57**	**66**	P	**P**	**13 01 16.8**	**+0.5**
	3.7nm,1.2s,baz=212,slow=8.8,SNR=5.2						
	3.7nm,1.2s						
H01W1	**Cape Leeuwin H**	**81.34**	**221**	T	T	14 34 34.6	
	baz=151,slow=76,SNR=10						
H01W2	**Cape Leeuwin H**	**81.35**	**221**	T	T	14 34 33.2	
	baz=151,slow=76,SNR=12						
H01W3	**Cape Leeuwin H**	**81.36**	**221**	T	T	14 34 34.1	
	baz=151,slow=76,SNR=11						
ASAR	**Alice Springs**	**81.46**	**242**	P	**P**	**13 04 11.5**	**-0.5**
	1.5nm,0.9s,baz=144,slow=4.9,SNR=11						
	1.5nm,0.9s						
TXAR	**Lajitas Array**	**82.94**	**13**	P	**P**	**13 04 18.9**	**-0.5**
	0.2nm,0.7s,baz=186,slow=6.4,SNR=1.3						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**84.24**	**244**	P	**P**	**13 04 26.0**	**-0.4**
	1.8nm,0.9s,baz=142,slow=4.7,SNR=10						
	1.8nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**95.86**	**293**	T	T	14 52 04.5	
	baz=144,slow=76,SNR=78						
H11S3	**WAKE ISLAND Hy**	**95.87**	**293**	T	T	14 52 04.0	
	baz=144,slow=76,SNR=58						
H11S1	**WAKE ISLAND Hy**	**95.88**	**293**	T	T	14 52 04.6	
	baz=144,slow=76,SNR=60						
H11N3	**WAKE ISLAND Hy**	**96.73**	**294**	T	T	14 53 07.2	
	baz=144,slow=76,SNR=73						
H11N1	**WAKE ISLAND Hy**	**96.74**	**294**	T	T	14 53 09.0	
	baz=144,slow=76,SNR=55						
H11N2	**WAKE ISLAND Hy**	**96.75**	**294**	T	T	14 53 09.9	
	baz=144,slow=76,SNR=47						
GERES	**GERESS Array B**	**149.92**	**78**	PKPbc	**PKPbc**	**13 11 43.5**	**-0.8**
	0.3nm,0.3s,baz=262,slow=2.7,SNR=4.4						
SONM	**Songino Array**	**151.40**	**278**	PKPbc	**PKiKP**	**13 11 48.4**	**+0.1**
	1.5nm,0.8s,baz=123,slow=2.6,SNR=6.6						
MKAR	**Makanchi Array**	**165.37**	**253**	PKPab	**PKPab**	**13 12 57.5**	**+1.0**
	1.8nm,0.8s,baz=104,slow=7.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**166.19**	**283**	PKPab	**PKPab**	**13 13 00.7**	**+0.9**
	0.5nm,0.4s,baz=104,slow=4.6,SNR=2.0						

DJA 31 13:13:35.2±1.0, 5.7N±7.9×96.7E±, h14km±10km, M3.9/8, mb3.6/2, MLv4.0/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**1.06**	**74**	P	Pg	13 13 55.6	0.0
LHMI				S	Sb	13 14 09.1	+0.1
KCSI	**Kotacane, Aceh**	**2.31**	**127**	P	Pb	13 14 15.1	-1.6
KCSI				S	Sn	13 14 42.8	+1.7
TSI	**Tuntungan**	**2.99**	**118**	P	Pn	13 14 20.8	-1.4
GSI	**Gunungsitoli**	**3.96**	**155**	P	Pn	13 14 35.2	-0.4
GSI				S	Sn	13 15 21.6	-0.2

*IDC **31** 13:17:08.9±0.7, 53.10S×118.39W, h0km, mb4.1/9,*
mbtmp4.1/9, MS4.2/45, Error ellipse: s-maj=27.4km
s-min=22.0km az=137.0
*GCMT **31** 13:17:13.0±0.2, 53.21S±0.02×118.11W±0.02, h17km±1km,*
MW5.1/94, Moment Tensor Solution. s39,c41; s94,c123;
Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.24±.19;
Mθθ-3.02±.14; Mφφ4.27±.16; Mrθ-2.22±.42; Mθφ-1.87±.14;
Mφr-0.86±.33; Best double couple: M=4.85400×10^16
NP1:φ=27.00000°, δ70.00000°, λ-27.00000°. NP2:
φ=126.00000°, δ65.00000°, λ-158.00000°. Principal axes:
T 4.7400, Plg3.0000°, Azm77.0000°; N 0.2390,
Plg57.0000°, Azm173.0000°; P -4.9690, Plg32.0000°,
Azm345.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Surface-wave
location Triangular moment-rate function
ISC 31 13:17:10.5±0.7, 53.1S±0.2×118.4W±0.2, h10km, n72, σ0.90/16, mb4.1/9, MS4.3/48, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**26.81**	**18**	LR	LR	13 30 59.2	
	comp=Z,281nm,19.7s,baz=18,slow=31						
PMSA	**Palmer Station**	**29.36**	**135**	LR	LR	13 32 10.8	
	comp=Z,144nm,19.9s,baz=270,slow=31						
H03S2	**Juan Fernandez**	**33.92**	**71**	T	T	13 59 33.4	
	baz=222,SNR=156						
H03S1	**Juan Fernandez**	**33.93**	**71**	T	T	13 59 34.4	
	baz=222,SNR=174						
H03S3	**Juan Fernandez**	**33.94**	**71**	T	T	13 59 33.5	
	baz=222,SNR=190						
H03N3	**Juan Fernandez**	**34.20**	**71**	T	T	13 59 50.5	
	baz=224,slow=71,SNR=712						
H03N2	**Juan Fernandez**	**34.21**	**71**	T	T	13 59 46.1	
	baz=224,slow=71,SNR=1133						
H03N1	**Juan Fernandez**	**34.22**	**71**	T	T	13 59 46.1	
	baz=224,slow=71,SNR=604						
PLCA	**Paso Flores**	**34.28**	**88**	LR	LR	13 34 34.6	
	comp=Z,542nm,19.3s,baz=220,slow=30						
VNDA	**Vanda**	**36.68**	**201**	P	**P**	**13 24 17.6**	**+0.7**
	1.4nm,1.1s,baz=90,slow=6.1,SNR=1.9						
VNDA				LR	LR	13 34 48.7	
	comp=Z,200nm,21.5s,baz=90,slow=29						
	1.4nm,1.1s						
QSPA	**South Pole Qui**	**37.09**	**180**	P	**P**	**13 24 21.2**	**+0.5**
	3.4nm,1.0s,baz=120,slow=5.2,SNR=7.5						
QSPA				LR	LR	13 37 52.5	
	comp=Z,462nm,19.1s,baz=103,slow=34						
	3.4nm,1.0s						
TBI	**Tubuai**	**37.92**	**309**	*e*LR	LR	13 34 37.3	
	comp=Z,319nm,25.5s						
TBI	**Tubuai**	**37.92**	**309**	*e*T	T	14 04 38.0	
	4.5nm,0.3s						
PPT2	**Papeete2**	**42.99**	**314**	*e*LR	LR	13 37 00.2	
	comp=Z,198nm,26.5s						
PPT	**Papeete**	**43.01**	**314**	LR	LR	13 38 25.1	
	comp=Z,66nm,18.2s,baz=144,slow=30						
RAR	**Rarotonga**	**44.86**	**299**	LR	LR	13 39 10.0	
	comp=Z,262nm,18.6s,baz=150,slow=30						
URZ	**Urewera**	**45.89**	**262**	LR	LR	13 40 36.0	
	comp=Z,629nm,19.6s,baz=211,slow=31						
RPZ	**Rata Peaks**	**46.00**	**252**	LR	LR	13 40 28.4	
	comp=Z,272nm,18.8s,baz=99,slow=30						
TAOE	**Nuku Hiva Isla**	**47.52**	**330**	*e*LR	LR	13 39 14.0	
	comp=Z,388nm,25.0s						
SNAA	**Sanae**	**47.58**	**157**	P	**P**	**13 25 45.0**	**-0.8**
	0.9nm,0.8s,baz=256,slow=8.9,SNR=8.7						
SNAA				LR	LR	13 43 57.3	
	comp=Z,324nm,21.3s,baz=242,slow=34						
	0.9nm,0.8s						
LVC	**Limon Verde**	**48.15**	**70**	LR	LR	13 40 30.3	
	comp=Z,399nm,21.9s,baz=214,slow=29						
RAO	**Raoul Island**	**49.10**	**275**	LR	LR	13 42 24.2	
	comp=Z,214nm,20.1s,baz=134,slow=31						
CPUP	**Villa Florida**	**52.12**	**84**	LR	LR	13 45 25.1	
	comp=Z,1μm,18.6s,baz=229,slow=32						
NNA	**Nana**	**52.67**	**55**	LR	LR	13 42 46.1	
	comp=Z,328nm,19.3s,baz=206,slow=29						
LPAZ	**La Paz**	**53.65**	**66**	P	**P**	**13 26 33.7**	**+0.9**
	6.6nm,1.2s,baz=214,slow=7.1,SNR=7.5						
LPAZ				LR	LR	13 43 39.0	
	comp=Z,503nm,21.5s,baz=198,slow=30						
	6.6nm,1.2s						
ATAH	**Atahualpa**	**56.15**	**50**	LR	LR	13 45 25.0	
	comp=Z,385nm,18.3s,baz=219,slow=30						
AFI	**Afiamalu**	**57.35**	**292**	LR	LR	13 45 35.6	
	comp=Z,164nm,20.3s,baz=146,slow=30						
SIV	**San Ignacio**	**57.87**	**73**	LR	LR	13 47 34.4	
	comp=Z,223nm,20.1s,baz=222,slow=32						
MAW	**Mawson**	**59.61**	**181**	LR	LR	13 50 54.5	
	comp=Z,148nm,21.0s,baz=170,slow=34						
MSVF	**Nonsavu**	**60.19**	**280**	LR	LR	13 46 45.6	
	comp=Z,247nm,21.9s,baz=194,slow=30						
DZM	**Mont Dzumac**	**63.84**	**268**	*e*LR	LR	13 46 14.9	
	comp=Z,820nm,25.6s						
DZM	**Mont Dzumac**	**63.84**	**268**	LR	LR	13 49 11.5	
	comp=Z,278nm,20.4s,baz=197,slow=30						
BDFB	**Brasilia**	**65.85**	**84**	LR	LR	13 53 18.0	
	comp=Z,614nm,21.6s,baz=182,slow=33						
ROSC	**El Rosal**	**68.59**	**48**	LR	LR	13 53 05.1	
	comp=Z,937nm,19.2s,baz=236,slow=31						
STKA	**Stephens Creek**	**70.74**	**243**	P	**P**	**13 28 27.8**	**+1.1**
	0.8nm,0.5s,baz=131,slow=9.3,SNR=3.8						
STKA				LR	LR	13 52 55.4	
	comp=Z,297nm,21.0s,baz=186,slow=30						
	0.8nm,0.5s						
CMIG	**Matias Romero**	**72.79**	**24**	LR	LR	13 53 44.2	
	comp=Z,59nm,18.8s,baz=191,slow=30						
SDV	**Santo Domingo**	**73.84**	**50**	LR	LR	13 56 04.5	
	comp=Z,137nm,21.3s,baz=193,slow=32						
LPIG	**La Paz**	**77.20**	**8**	LR	LR	13 53 21.9	
	comp=Z,32nm,20.1s,baz=196,slow=28						
CTA	**Charters Tower**	**77.34**	**254**	LR	LR	13 58 18.4	
	comp=Z,160nm,18.9s,baz=88,slow=32						
HNR	**Honiara**	**77.54**	**271**	LR	LR	13 56 12.9	
	comp=Z,106nm,18.7s,baz=185,slow=30						
MDP	**Montagnes des**	**79.83**	**67**	LR	LR	14 00 51.7	
	comp=Z,143nm,19.7s,baz=60,slow=33						
RCBR	**Riachuelo**	**80.84**	**87**	LR	LR	14 03 06.2	
	comp=Z,807nm,18.7s,baz=347,slow=34						
H01W1	**Cape Leeuwin H**	**81.22**	**221**	T	T	14 59 50.9	
	baz=152,slow=76,SNR=17						
H01W2	**Cape Leeuwin H**	**81.22**	**221**	T	T	14 59 52.6	
	baz=152,slow=76,SNR=15						
H01W3	**Cape Leeuwin H**	**81.23**	**221**	T	T	14 59 51.2	
	baz=152,slow=76,SNR=16						
ASAR	**Alice Springs**	**81.37**	**242**	P	**P**	**13 29 27.2**	**-0.2**
	2.0nm,0.8s,baz=142,slow=5.3,SNR=11						
ASAR				LR	LR	13 59 30.7	
	comp=Z,324nm,20.9s,baz=100,slow=31						
	2.0nm,0.8s						
TXAR	**Lajitas Array**	**83.08**	**13**	P	**P**	**13 29 36.4**	**+0.3**
	0.4nm,0.9s,baz=178,slow=9.5,SNR=3.7						
TXAR				LR	LR	14 00 54.5	
	comp=Z,42nm,18.2s,baz=210,slow=32						
	0.4nm,0.9s						
SJG	**San Juan**	**83.98**	**49**	LR	LR	14 05 04.3	
	comp=Z,70nm,18.0s,baz=162,slow=34						
WRA	**Warramunga Arr**	**84.16**	**245**	P	**P**	**13 29 40.9**	**-1.0**
	2.4nm,1.0s,baz=145,slow=4.8,SNR=12						
WRA				LR	LR	14 02 50.5	
	comp=Z,325nm,19.2s,baz=154,slow=33						
	2.4nm,1.0s						
PMG	**Port Moresby**	**85.24**	**261**	LR	LR	14 05 09.3	
	comp=Z,166nm,19.2s,baz=122,slow=34						
PFO	**Pinyon Flats O**	**86.37**	**2**

1.6nm,0.8s,baz=199,slow=2.6,SNR=3.6
MKAR Makanchi Array 165.31 253 PKPab **PKPab 13 38 12.7 +0.6**
1.2nm,0.8s,baz=104,slow=5.1,SNR=6.4
ZALV Zalesovo Beam 166.20 283 PKPab **PKPab 13 38 16.1 +0.4**
0.4nm,0.4s,baz=116,slow=3.4,SNR=3.6

*LDG **31** 13:22:59.4, 42.65N× 13.27E, h30km*
*ROM **31** 13:23:04.2±0.0, 42.751N±0.002× 13.231E±0.004, h11km, ML3.8/6, Mw3.3, Error ellipse: s-maj=0.3km s-min=0.2km az=244.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=0.65; Mθθ 0.32; Mϕϕ 0.33; Mrθ=-0.15; Mθϕ=-0.57; Mϕr 0.86; Fault plane solution: M0 1.18508×10^14^ NP1:ϕ=288.00000°, δ=29.00000°, λ=-140.00000°. NP2:ϕ=161.00000°, δ=71.00000°, λ=-67.00000°.*
*PDG **31** 13:23:05.6±0.3, 42.65N× 13.29E, h13km±14km, ML3.7/8 Error ellipse: s-maj=4.9km s-min=23.5km az=0.0*
*PRU **31** 13:23:07.8±0.0, 42.92N× 13.71E, h0km*

ISC 31 13:23:03.5±0.7, **42.75N**±0.001× **13.16E**±0.002, **h16**km±3km, **n171**, σ **2.20**/234, **36C-17D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1213	**Norcia, Frazio**	**0.04**	**220**	⇓P	**Pg**	**13 23 07.0**	**+0.6**
T1213				S	**Sg**	**13 23 08.9**	**+0.5**
T1214	**Arquata del Tr**	**0.04**	**78**	⇓P	**Pg**	**13 23 06.4**	**-0.2**
T1214				S	**Sg**	**13 23 07.9**	**-0.8**
T1202	**Accumoli, Fraz**	**0.07**	**134**	⇓P	**Pg**	**13 23 06.8**	**0.0**
T1202				S	**Sg**	**13 23 08.7**	**-0.2**
T1212	**Cascia, Frazio**	**0.08**	**270**	P	**Pg**	**13 23 07.9**	**+1.1**
T1212				S	**Sg**	**13 23 10.5**	**+1.5**
T1242	**Castelluccio d**	**0.09**	**24**	⇓P	**Pg**	**13 23 07.1**	**+0.1**
T1242				S	**Sg**	**13 23 08.9**	**-0.3**
T1218	**Civita (PG)**	**0.09**	**200**	⇑P	**Pg**	**13 23 07.7**	**+0.8**
T1218				S	**Sg**	**13 23 10.2**	**+1.0**
NRCA	**Norcia**	**0.09**	**339**	P	**Pg**	**13 23 07.5**	**+0.6**
NRCA				S	**Sg**	**13 23 09.7**	**+0.6**
NRCA				END			
T1244	**Arquata del Tr**	**0.10**	**87**	⇑P	**Pg**	**13 23 06.8**	**-0.3**
T1244				S	**Sg**	**13 23 08.5**	**-0.9**
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1201	**Domo (RI)**	**0.12**	**144**	⇑P	**Pg**	**13 23 07.6**	**+0.4**
T1201				S	**Sg**	**13 23 09.9**	**+0.3**
T1204	**Amatrice, Fraz**	**0.14**	**123**	⇑P	**Pg**	**13 23 07.4**	**-0.1**
T1204				S	**Sg**	**13 23 09.7**	**-0.5**
MC2	**Monte Cornacci**	**0.16**	**9**	⇑P	**Pb**	**13 23 08.3**	**0.0**
MC2				S	**Sb**	**13 23 11.5**	**0.0**
LNSS	**Leonessa**	**0.17**	**210**	⇑P	**Pb**	**13 23 09.1**	**+0.7**
LNSS				S	**Sb**	**13 23 12.8**	**+1.2**
T1216	**Preci, Frazion**	**0.17**	**324**	⇓P	**Pb**	**13 23 09.0**	**+0.6**
T1216				S	**Sb**	**13 23 12.4**	**+0.8**
SMA1	**SAN MARTINO**	**0.18**	**132**	⇑P	**Pg**	**13 23 08.0**	**0.0**
SMA1				S	**Sg**	**13 23 10.8**	**-0.2**
MMO1	**Montemonaco**	**0.19**	**40**	⇑P	**Pg**	**13 23 08.2**	**0.0**
MMO1				S	**Sg**	**13 23 11.2**	**-0.2**
MMO1				AML	AML		
	comp=E,61600μm,0.3s						
MMO1				AML	AML		
	comp=N,41200μm,0.8s						
T1215	**Vallo di Nera,**	**0.22**	**283**	⇑P	**Pb**	**13 23 10.2**	**+1.0**
T1215				S	**Sb**	**13 23 14.6**	**+1.7**
T1243	**Rocca Santa Ma**	**0.22**	**104**	⇑P	**Pg**	**13 23 08.3**	**-0.3**
T1243				S	**Sg**	**13 23 11.3**	**-0.9**
FEMA	**Monte Fema**	**0.23**	**340**	P	**Pb**	**13 23 09.7**	**+0.4**
FEMA				S	**Sb**	**13 23 13.8**	**+0.6**
T1241	**Roccafluvione,**	**0.23**	**63**	⇑P	**Pg**	**13 23 08.5**	**-0.2**
T1241				S	**Sg**	**13 23 11.8**	**-0.5**
RM33	**Pellescritta (**	**0.25**	**170**	⇑P	**Pb**	**13 23 09.8**	**+0.1**
RM33				S	**Sb**	**13 23 14.1**	**+0.3**
FDMO	**Fiordimonte**	**0.29**	**350**	⇓P	**Pb**	**13 23 10.6**	**+0.2**
FDMO				S	**Sb**	**13 23 15.5**	**+0.5**
T1246	**Crognaleto (TE**	**0.30**	**124**	⇑P	**Pg**	**13 23 09.9**	**-0.1**
T1246				S	**Sg**	**13 23 14.1**	**-0.2**
T1211	**Morro Reatino**	**0.31**	**226**	⇑P	**Pb**	**13 23 11.5**	**+0.8**
T1211				S	**Sb**	**13 23 17.4**	**+1.7**
CESI	**CESI - Serrava**	**0.31**	**324**	⇓P	**Pb**	**13 23 11.5**	**+0.7**
CESI				S	**Sb**	**13 23 17.0**	**+1.3**
T1247	**Pizzolo (AQ)**	**0.33**	**161**	⇑P	**Pg**	**13 23 10.9**	**+0.6**
T1247				S	**Sb**	**13 23 16.2**	**+0.1**
CSP1	**Cessapalombo**	**0.34**	**6**	⇑P	**Pb**	**13 23 11.3**	**0.0**
CSP1				S	**Sb**	**13 23 16.8**	**+0.2**
TERO	**Teramo**	**0.35**	**111**	P	**Pg**	**13 23 16.0**	**-0.2**
TERO				S	**Sg**	**13 23 15.4**	**-0.5**
TERO				AML	AML		
	comp=E,12350μm,0.9s						
TERO				AML	AML		
	comp=N,17300μm,0.6s						
TERO				AML	AML		
	comp=E,13150μm,0.9s						
TERO				AML	AML		
	comp=N,18000μm,0.6s						
TERO				AML	AML		
	comp=E,12300μm,0.9s						
SEF1	**Sefro**	**0.42**	**339**	P	**Pb**	**13 23 13.1**	**+0.5**
GIGS	**Gran Sasso**	**0.43**	**135**	⇓P	**Pg**	**13 23 11.9**	**-0.3**
GIGS				S	**Sg**	**13 23 17.9**	**-0.2**
OFFI	**Offida**	**0.43**	**65**	⇑P	**Pb**	**13 23 12.9**	**+0.2**
MDAR	**Monte D'Aria**	**0.44**	**359**	P	**Pb**	**13 23 13.1**	**+0.1**
CESX	**Cesi**	**0.45**	**252**	⇑P	**Pb**	**13 23 13.9**	**+0.9**
MNTP	**Montappone**	**0.45**	**31**	⇑P	**Pb**	**13 23 13.4**	**+0.3**
ASSB	**Assisi San Ben**	**0.47**	**309**	P	**Pb**	**13 23 14.1**	**+0.7**
FIU1	**Fiuminata**	**0.47**	**339**	P	**Pb**	**13 23 13.9**	**+0.5**
SSM1	**San Severino M**	**0.48**	**2**	P	**Pb**	**13 23 13.7**	**+0.1**
FIAM	**Fiamignano**	**0.48**	**183**	⇑P	**Pb**	**13 23 13.9**	**+0.2**
FIAM				S	**Sb**	**13 23 21.5**	**+0.9**
GAG1	**Gagliole**	**0.49**	**352**	P	**Pb**	**13 23 14.3**	**+0.5**
SNTG	**Esanatoglia**	**0.53**	**343**	P	**Pb**	**13 23 14.8**	**+0.3**
TRTR	**Tortoreto Alta**	**0.56**	**84**	⇑P	**Pb**	**13 23 15.5**	**+0.6**
ATCC	**AVT- Casa Cast**	**0.58**	**319**	⇓P	**Pb**	**13 23 16.1**	**+0.8**
EL6	**Elcito**	**0.58**	**356**	⇑P	**Pb**	**13 23 15.6**	**+0.2**
FAGN	**Fagnano**	**0.58**	**147**	P	**Pg**	**13 23 14.2**	**-0.8**
FOSV	**Fossato di Vic**	**0.62**	**332**	P	**Pb**	**13 23 16.4**	**+0.5**
VCEL	**Villa Celiera**	**0.62**	**125**	⇓P	**Pg**	**13 23 15.6**	**-0.1**
CING	**Cingoli**	**0.62**	**3**	⇑P	**Pb**	**13 23 16.2**	**+0.1**
CADA	**Capodarco di F**	**0.63**	**45**	P	**Pn**	**13 23 17.1**	**-0.6**
MURB	**Monte Urbino**	**0.69**	**318**	P	**Pn**	**13 23 18.3**	**-0.5**
T0110	**Collepietro**	**0.70**	**139**	⇓P	**Pg**	**13 23 16.7**	**-0.5**
SRES	**S.Oreste - Sor**	**0.70**	**223**	⇑P	**Pb**	**13 23 17.9**	**+0.6**
PP3	**Marolino**	**0.71**	**28**	P	**Pb**	**13 23 18.1**	**+0.6**
PP3				AML	AML		
	comp=E,25250μm,0.5s						
PP3				AML	AML		
	comp=N,23250μm,0.4s						
PP3				AML	AML		
	comp=E,24100μm,0.5s						
PP3				AML	AML		
	comp=N,25550μm,0.4s						
SSFR	**Montelago di S**	**0.74**	**338**	P	**Pb**	**13 23 18.8**	**+0.7**
ATTE	**AVT- Monte Tez**	**0.74**	**307**	P	**Pn**	**13 23 19.1**	**-0.3**
ATFO	**Monte Foce - G**	**0.75**	**325**	P	**Pb**	**13 23 19.0**	**+0.8**
PTQR	**Pietraquaria**	**0.75**	**166**	⇑P	**Pg**	**13 23 17.8**	**-0.3**
ARVD	**Arcevia**	**0.76**	**348**	P	**Pg**	**13 23 18.9**	**+0.5**
MGAB	**Montegabbione**	**0.79**	**282**	P	**Pn**	**13 23 20.3**	**+0.3**
MTCE	**Montecelio**	**0.79**	**203**	⇑P	**Pb**	**13 23 19.1**	**+0.2**
CERT	**Cerreto**	**0.81**	**189**	⇑P	**Pb**	**13 23 19.3**	**0.0**
FRON	**Frontone**	**0.83**	**338**	P	**Pg**	**13 23 20.1**	**+0.5**
ATVO	**AVT- Monte Val**	**0.84**	**319**	P	**Pn**	**13 23 20.6**	**-0.1**
AOI	**Ancona**	**0.86**	**22**	P	**Pg**	**13 23 20.4**	**+0.2**
ATMI	**Monte Miggiano**	**0.87**	**312**	P	**Pn**	**13 23 22.4**	**+1.2**
ATPI	**Pietralunga -**	**0.89**	**322**	P	**Pn**	**13 23 21.7**	**+0.3**
PIEI	**Pieia**	**0.91**	**330**	P	**Pn**	**13 23 21.8**	**+0.1**
SACS	**San Casciano d**	**0.92**	**276**	⇑P	**Pn**	**13 23 22.8**	**+0.9**
INTR	**Introdacqua**	**0.92**	**143**	P	**Pb**	**13 23 20.5**	**-0.7**
MPAG	**Monte Paganucc**	**0.92**	**342**	P	**Pn**	**13 23 22.1**	**+0.2**
VVLD	**Villa Vallelon**	**0.94**	**158**	P	**Pb**	**13 23 21.6**	**+0.1**
NARO	**Abbazia di Nar**	**0.96**	**334**	P	**Pb**	**13 23 21.8**	**+0.1**
GUAR	**Guarcino**	**0.96**	**173**	P	**Pn**	**13 23 22.8**	**+0.4**
FSSB	**Fossombrone**	**0.98**	**344**	P	**Pn**	**13 23 23.1**	**+0.4**
LPEL	**Lama dei Pelig**	**1.04**	**132**	P	**Pb**	**13 23 22.1**	**-1.0**
RDP	**Rocca di Papa**	**1.04**	**198**	P	**Pn**	**13 23 23.9**	**+0.3**
PE3	**Peglio**	**1.06**	**333**	P	**Pg**	**13 23 24.8**	**+0.8**
MCIV	**Monte Civitell**	**1.09**	**272**	⇑P	**Pg**	**13 23 26.2**	**+1.6**
TOLF	**Tolfa**	**1.10**	**232**	⇑P	**Pg**	**13 23 25.1**	**+0.4**
SF04	**Casetta**	**1.10**	**275**	P	**Pg**	**13 23 26.1**	**+1.3**
POFI	**Posta Fibreno**	**1.11**	**158**	P	**Pb**	**13 23 24.6**	**+0.1**
PARC	**Parchiule**	**1.12**	**323**	P	**Pg**	**13 23 25.8**	**+0.6**
CRE	**Caprese Michel**	**1.24**	**315**	P	**Pg**	**13 23 28.0**	**+0.6**
ARCI	**Arcidosso**	**1.24**	**275**	P	**Pg**	**13 23 28.9**	**+1.5**
CERA	**Filignano**	**1.32**	**151**	P	**Pb**	**13 23 27.9**	**0.0**
MIDA	**Miranda**	**1.38**	**143**	P	**Pn**	**13 23 28.3**	**+0.2**
OSSC	**Osservatorio P**	**1.60**	**300**	AML	AML		
	comp=N,178μm,0.8s						
OSSC				AML	AML		
	comp=E,202μm,0.7s						
DUGI	**Dugi Otok**	**1.86**	**48**	*e*Pn	**Pn**	**13 23 35.9**	**+1.1**
VIRC	**Vir**	**2.07**	**41**	*e*Pn	**Pn**	**13 23 39.0**	**+1.5**
MORI	**Morici**	**2.17**	**58**	*e*Pn	**Pn**	**13 23 40.3**	**+1.4**
BRJN	**Brijuni**	**2.20**	**11**	*e*Pn	**Pn**	**13 23 40.8**	**+1.4**
NVLJ	**Novalja**	**2.20**	**34**	*e*Pn	**Pn**	**13 23 40.4**	**+1.0**
SMRN	**Sveta Marina**	**2.40**	**17**	*e*Pn	**Pn**	**13 23 43.5**	**+1.4**
HVAR	**Hvar**	**2.45**	**79**	*e*Pn	**Pn**	**13 23 44.2**	**+1.3**
A253A	**Karojba, Istri**	**2.58**	**10**	*e*Pn	**Pn**	**13 23 46.3**	**+1.6**
UDBI	**Udbina**	**2.60**	**46**	*e*Pn	**Pn**	**13 23 47.1**	**+2.2**
A250A	**Rusevo Krmpots**	**2.65**	**28**	*e*Pn	**Pn**	**13 23 47.3**	**+1.6**
KIJV	**Kijevo**	**2.68**	**61**	*i* Pn	**Pn**	**13 23 48.3**	**+2.3**
LSTV	**Lastovo**	**2.75**	**88**	*e*Pn	**Pn**	**13 23 48.1**	**+1.1**
PLIT	**Plitvice**	**2.78**	**39**	*e*Pn	**Pn**	**13 23 49.3**	**+1.9**
SKDS	**Skadanscina**	**2.86**	**12**	*e*Pn	**Pn**	**13 23 49.5**	**+1.0**
SKDS	**Skadanscina**	**2.86**	**12**	*i* Pn	**Pn**	**13 23 50.2**	**+1.7**
SKDS				*e*Sn	**Sn**	**13 24 24.4**	**+1.8**
SKDS				IAML		13 24 29.0	
	comp=Z,30nm,0.2s						
MAKA	**Makarska**	**2.88**	**78**	*e*Pn	**Pn**	**13 23 50.4**	**+1.7**
A050A	**Klekovaca**	**3.00**	**54**	*e*Pn	**Pn**	**13 23 52.5**	**+2.0**
RICI	**Ricice**	**3.00**	**74**	*e*Pn	**Pn**	**13 23 52.5**	**+2.1**
PGF	**Pioggiola**	**3.07**	**268**	*e*P	**Pn**	**13 23 51.5**	**0.0**
PGF				*e*Sn	**Sn**	**13 24 21.8**	**-6.2**
	comp=Z,9.3nm,0.5s						
CEY	**Cerknica**	**3.12**	**17**	*e*Pn	**Pn**	**13 23 53.9**	**+1.8**
BOJS	**Bojanci**	**3.14**	**28**	*e*Pn	**Pn**	**13 23 54.4**	**+2.1**
BOJS	**Bojanci**	**3.14**	**28**	*i* Pn	**Pn**	**13 23 54.9**	**+2.7**
BOJS				*i* Sn	**Sn**	**13 24 31.5**	**+2.1**
BOJS				IAML		13 24 39.5	
	comp=Z,26nm,0.4s						
SRKY	**Kupres RS**	**3.20**	**64**	*e*Pn	**Pn**	**13 23 53.8**	**+0.5**
MGRS	**Mrkonjic Grad**	**3.30**	**58**	*e*Pn	**Pn**	**13 23 56.8**	**+2.2**
OZLJ	**Ozalj**	**3.31**	**29**	*e*Pn	**Pn**	**13 23 56.8**	**+2.2**
STON	**Ston**	**3.34**	**86**	*e*Pn	**Pn**	**13 23 55.6**	**+0.5**
STON	**Ston**	**3.34**	**86**	*e*Pn	**Pn**	**13 23 55.2**	**+0.1**
CRES	**Cresnjev**	**3.49**	**27**	*e*Pn	**Pn**	**13 24 00.4**	**+3.3**
A051A	**Mrakovica**	**3.53**	**49**	*e*Pn	**Pb**	**13 24 05.3**	**-0.3**
TREB	**Trebinje**	**3.83**	**89**	*e*Pn	**Pn**	**13 24 03.7**	**+2.0**
MOSL	**Moslavina**	**3.86**	**41**	*e*Pn	**Pn**	**13 24 03.0**	**+0.8**
OBKA	**Obir**	**3.89**	**14**	*e*Pn	**Pn**	**13 24 02.2**	**-0.5**
OBKA	**Obir**	**3.89**	**14**	*e*Pn	**Pn**	**13 24 05.8**	**+3.2**
	comp=Z,1.1nm,0.2s						
OBKA				*e*Sn	**Sg**	**13 25 09.8**	**+1.5**
	comp=Z,21nm,0.6s						
MYKA	**Terra Mystica**	**3.89**	**5**	*e*Pn	**Pn**	**13 24 05.9**	**+3.2**
	comp=Z,7.3nm,0.5s						
MYKA				*e*Sn	**Sn**	**13 24 52.8**	**+4.7**
	comp=Z,9.5nm,0.3s						
HCY	**Herceg Novi**	**3.95**	**93**	*e*Pn	**Pn**	**13 24 05.6**	**+2.1**
HCY	**Herceg Novi**	**3.95**	**93**	⇑*i*Pn	**Pn**	**13 24 05.1**	**+1.6**
HCY				*e*Sn	**Sn**	**13 24 51.9**	**+2.4**
BRY	**Bratogost**	**3.96**	**86**	*e*Pn	**Pn**	**13 24 05.6**	**+1.9**
BRY	**Bratogost**	**3.96**	**86**	⇑*i*Pn	**Pn**	**13 24 06.3**	**+2.6**
BRY				*e*Sn	**Sn**	**13 24 52.3**	**+2.4**
ABTA	**Abfaltersbach**	**4.02**	**354**	*e*Pn	**Pn**	**13 24 07.6**	**+3.1**
	comp=Z,6.2nm,0.2s						
ABTA				*e*Sn	**Sn**	**13 24 56.0**	**+4.7**
	comp=Z,14nm,0.3s						
PERS	**Pernice**	**4.13**	**19**	*i* Pn	**Pn**	**13 24 09.8**	**+3.8**
PERS				*e*Sn	**Sn**	**13 24 56.4**	**+2.5**
PERS				IAML		13 25 03.0	
	comp=Z,6.2nm,0.2s						
SOKA	**Soboth**	**4.15**	**18**	*e*Pn	**Pn**	**13 24 09.7**	**+3.4**
	comp=Z,1.0nm,0.3s						
SOKA				*e*Sn	**Sn**	**13 24 57.5**	**+3.0**
	comp=Z,4.6nm,0.3s						
UPM	**Unac-Piva**	**4.24**	**82**	*e*Pn	**Pn**	**13 24 10.9**	**+3.3**
UPM	**Unac-Piva**	**4.24**	**82**	⇓*i*Pn	**Pn**	**13 24 10.4**	**+2.8**
UPM				*e*Sn	**Sn**	**13 24 58.6**	**+1.7**
CEME	**Cevo**	**4.25**	**91**	⇑*i*Pn	**Pn**	**13 24 10.2**	**+2.5**
CEME				*e*Sn	**Sn**	**13 24 59.3**	**+2.2**
BUM	**Brajici-Budva**	**4.26**	**94**	⇑*i*Pn	**Pn**	**13 24 10.2**	**+2.4**
BUM				*e*Sn	**Sn**	**13 24 59.8**	**+2.5**
NKME	**Niksic**	**4.27**	**88**	⇓*i*Pn	**Pn**	**13 24 10.7**	**+2.8**
NKME				*e*Sn	**Sn**	**13 24 59.5**	**+2.1**
NKY	**Niksic**	**4.30**	**87**	⇑*i*Pn	**Pn**	**13 24 10.9**	**+2.6**
NKY				*e*Sn	**Sn**	**13 24 59.8**	**+1.7**
SBF	**Sospel**	**4.32**	**287**	*e*Pn	**Pn**	**13 24 06.2**	**-2.4**
SBF				*e*Sn	**Sn**	**13 24 53.0**	**-5.7**
	comp=Z,14nm,0.3s						
KBA	**Koelnbreinsper**	**4.33**	**2**	*e*Pn	**Pn**	**13 24 12.1**	**+3.3**
	comp=Z,1.1nm,0.2s						
KBA				*e*Sn	**Sn**	**13 25 00.4**	**+1.4**
	comp=Z,14nm,0.5s						
DRME	**Dracevica, Mon**	**4.50**	**95**	*e*Pn	**Pn**	**13 24 13.3**	**+2.4**
DRME	**Dracevica, Mon**	**4.50**	**95**	⇓*i*Pn	**Pn**	**13 24 13.4**	**+2.5**
DRME				*e*Sn	**Sn**	**13 25 04.9**	**+2.0**
TTG	**Podgorica**	**4.51**	**92**	⇑*i*Pn	**Pn**	**13 24 13.4**	**+2.2**
TTG				*e*Sn	**Sn**	**13 25 05.4**	**+2.1**
FETA	**Feichten**	**4.60**	**339**	*e*Pn	**Pn**	**13 24 16.7**	**+4.1**
	comp=Z,2.2nm,0.4s						
FETA				*e*Sn	**Sn**	**13 25 12.4**	**+6.6**
	comp=Z,4.2nm,0.4s						
KOME	**Kolasin**	**4.68**	**87**	⇓*i*Pn	**Pn**	**13 24 16.1**	**+2.5**
KOME				*e*Sn	**Sn**	**13 25 10.0**	**+2.4**
WATA	**Walderalm**	**4.72**	**347**	*e*Sn	**Sb**	**13 25 16.3**	**-6.3**
	comp=Z,9.6nm,0.3s						
ARSA	**Arzberg**	**4.80**	**20**	*e*Pn	**Pb**	**13 24 23.1**	**-4.1**
	comp=Z,3.1nm,0.4s						
ARSA				*e*Sn	**Sn**	**13 25 10.2**	**-0.3**
	comp=Z,2.6nm,0.3s						
MOTA	**Moosalm**	**4.82**	**343**	*e*Pn	**Pb**	**13 24 23.8**	**-3.8**
	comp=Z,2.6nm,0.2s						
LMR	**La Mourre**	**4.91**	**279**	*e*P	**Pn**	**13 24 18.0**	**+1.4**
LMR				*e*Sn	**Sn**	**13 25 05.8**	**-7.2**
	comp=Z,5.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**4.95**	**4**	*e*Sn	**Sn**	**13 25 17.4**	**+3.3**
	comp=Z,9.7nm,0.4s						
IVA	**Berane**	**4.96**	**86**	⇓*i*Pn	**Pn**	**13 24 20.3**	**+2.9**
IVA				*e*Sn	**Sn**	**13 25 16.9**	**+2.5**
PVY	**Plav**	**5.02**	**89**	⇓*i*Pn	**Pn**	**13 24 20.9**	**+2.7**
PVY				*e*Sn	**Sn**	**13 25 17.7**	**+1.7**
RETA	**Reutte**	**5.03**	**341**	*e*Pn	**Pn**	**13 24 22.9**	**+4.6**
	comp=Z,3.6nm,0.3s						
RETA				*e*Sn	**Sn**	**13 25 21.7**	**+5.6**
	comp=Z,7.7nm,0.4s						
MBDF	**Montbardon**	**5.03**	**295**	*e*P	**Pn**	**13 24 16.7**	**-1.7**
MBDF				*e*Sn	**Sn**	**13 25 08.7**	**-7.6**
	comp=Z,4.5nm,0.5s						
DAVA	**Damuels**	**5.09**	**334**	*e*Pn	**Pb**	**13 24 27.7**	**-4.7**
	comp=Z,4.0nm,0.3s						
DAVA				*e*Sn	**Sn**	**13 25 21.4**	**+3.5**
	comp=Z,8.6nm,0.3s						
DIVS	**Divibare**	**5.16**	**73**	*e*Pn	**Pn**	**13 24 19.0**	**-1.1**
MOA	**Molln**	**5.16**	**8**	*e*Pn	**Pn**	**13 24 23.4**	**+3.3**
	comp=Z,4.1nm,0.3s						
MOA				*e*Sn	**Sn**	**13 25 21.8**	**+2.6**
	comp=Z,5.3nm,0.3s						
LPG	**La Plagne**	**5.37**	**303**	*e*P	**Pn**	**13 24 20.5**	**-2.7**
LPG				*e*Sn	**Sn**	**13 25 17.4**	**-7.3**
	comp=Z,9.6nm,0.5s						
LPL	**La Plagne**	**5.39**	**303**	*e*P	**Pn**	**13 24 22.4**	**-1.0**
LPL				*e*Sn	**Sn**	**13 25 18.5**	**-6.7**
	comp=Z,7.8nm,0.5s						
RONA	**Rosalia, Austr**	**5.42**	**23**	*e*Pn	**Pn**	**13 24 24.0**	**+0.3**
	comp=Z,1.1nm,0.1s						
CONA	**Conrad Observa**	**5.52**	**19**	*e*Pn	**Pn**	**13 24 25.7**	**+0.7**
	comp=Z,1.2nm,0.2s						
CONA				*e*Sn	**Sn**	**13 25 28.4**	**+0.2**
	comp=Z,4.3nm,0.3s						
SMRF	**Simiane la Rot**	**5.66**	**285**	*e*P	**Pn**	**13 24 29.1**	**+2.1**
SMRF				*e*Sn	Sn	13 25 22.2	-9.5
	comp=Z,5.4nm,0.6s						
ORIF	**Oris-en-Rattie**	**5.69**	**295**	*e*P	**Pn**	**13 24 25.9**	**-1.6**
ORIF				*e*Sn	Sn	13 25 22.8	-10
	comp=Z,2.6nm,0.4s						
CABF	**La Chapelle**	**6.35**	**310**	*e*Pn	**Pn**	**13 24 33.0**	**-3.4**
CABF				*e*Sn	Sn	13 25 39.2	-9.4
	comp=Z,3.5nm,0.5s						
KHC	**Kasperske Hory**	**6.39**	**2**	*e*PN	**Pn**	**13 24 40.1**	**+3.2**
KHC				*e*SN	**Sn**	**13 25 49.8**	**+0.3**
VIVF	**Saint-Julien-l**	**6.49**	**292**	*e*P	**Pn**	**13 24 36.9**	**-1.5**
HINF	**Hinteralfeld**	**6.74**	**321**	*e*P	**Pn**	**13 24 42.6**	**+0.8**
HINF				*e*Sn	**Sn**	**13 25 51.3**	**-6.9**
	comp=Z,8.2nm,0.3s						
HAU	**Haudompre**	**7.11**	**320**	*e*P	**Pn**	**13 24 46.3**	**-0.6**
HAU				*e*Sn	**Sn**	**13 26 02.4**	**-4.9**
	comp=Z,20nm,0.5s						
SMF	**Signal de Mont**	**7.69**	**304**	*e*P	**Pn**	**13 24 53.0**	**-1.8**
SMF				*e*Sn	Sn	13 26 10.8	-11
	comp=Z,1.5nm,0.2s						
PAGF	**Fort de Pagny**	**7.79**	**321**	*e*P	**Pn**	**13 24 55.1**	**-1.1**
LOR	**Lormes**	**7.99**	**308**	*e*P	**Pn**	**13 25 00.2**	**+1.3**
	baz=120						
LOR				*e*Sn	Sn	13 26 19.8	-9.0
	comp=Z,1.4nm,0.4s						
SAVF	**Savonnieres en**	**8.12**	**319**	*e*P	**Pn**	**13 24 58.7**	**-2.0**
CAF	**Calviac**	**8.31**	**289**	*e*P	**Pn**	**13 25 04.3**	**+1.0**
EPF	**Esparros**	**9.41**	**276**	*e*P	**Pn**	**13 25 19.0**	**+0.5**
BAIF	**Baives**	**9.57**	**323**	*e*P	**Pn**	**13 25 22.7**	**+2.2**
BAIF				*e*Sn	Sn	13 26 57.2	-10
	comp=Z,3.6nm,0.4s						
ETSF	**Etsaut**	**10.08**	**275**	*e*P	**Pn**	**13 25 23.5**	**-4.1**
LDF	**La Druitiere**	**10.97**	**307**	*e*P	**Pn**	**13 25 39.8**	**+0.1**

*SSNC **31** 13:26:45.3±1.2, 19.52N× 77.88W, h14km±17km, MD3.0, ML2.8, MW3.0*
*JSN **31** 13:26:46.1±0.9, 16.53N× 77.32W, h0km±583km, MD3.3*

ISC 31 13:26:42.3±2.4, **19.51N**±0.04× **77.88W**±0.08, **h12**km±16km, **n9**, σ **0.99**/15, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**0.99**	**56**	*e*P	**Pb**	**13 27 01.7**	**+0.1**
LMGC				*e*S	**Sg**	**13 27 14.2**	**-0.4**
LMGC				IAML		13 27 16.5	
	comp=E,244nm,0.1s						
LMGC				IAML		13 27 16.5	
	comp=N,213nm,0.1s						
MTDJ	**Mount Denham**	**1.31**	**165**	*e*P	**Pb**	**13 27 07.4**	**+0.4**
MTDJ				*e*S	**Sb**	**13 27 22.6**	**-1.4**
MTDJ				IAML		13 27 24.7	
	comp=N,24μm,0.2s						
MTDJ				IAML		13 27 24.8	
	comp=N,27μm,0.2s						
MCJ	**Malvern**	**1.58**	**173**	*i* P	**Pb**	**13 27 11.7**	**+0.1**
MCJ				*i* S	**Sn**	**13 27 30.9**	**+0.1**
CCCC	**Cccc**	**1.69**	**4**	*e*P	**Pn**	**13 27 12.0**	**+0.3**
CCCC				*e*S	**Sn**	**13 27 32.8**	**-0.5**
CCCC				IAML		13 27 37.3	
	comp=E,34nm,0.3s						
CCCC				IAML		13 27 39.1	
	comp=N,26nm,0.3s						
STH	**Stony Hill**	**1.75**	**144**	*i* P	**Pb**	**13 27 14.1**	**-0.3**
GWJ	**Greenwich**	**1.80**	**142**	*i* P	**Pn**	**13 27 14.2**	**+0.9**
HOJ	**Hope**	**1.84**	**144**	*i* P	**Pn**	**13 27 14.1**	**+0.3**
RCC	**Rio Carpintero**	**2.12**	**76**	*e*P	**Pn**	**13 27 17.6**	**+0.1**
RCC				*e*S	**Sn**

KLR **Kul'dur** 31.53 340 LR LR 14 09 15.5
comp=Z,40nm,19.5s,baz=189,slow=40

TOLI2 **Tolitoli** 32.11 237 P **P** **13 54 40.2 -1.0**
HNS **HongShan** 33.08 308 ⇑P **P** **13 54 50.0 +0.5**
HNS pmax pmax
comp=Z,17nm,1.0s

KKM **Kota Kinabalu** 33.28 249 P **P** **13 54 51.5 -0.1**
LYN **LuoYang** 33.88 302 ⇑P **P** **13 54 56.0 -0.4**
LYN pmax pmax
comp=Z,10.0nm,0.6s

COEN **Coen** 34.18 187 P **P** **13 54 59.1 0.0**
COEN IAmb IAmb 13 55 23.8
comp=Z,13nm,1.1s

ENH **Enshi** 35.49 294 P **P** **13 55 10.4 -0.1**
ENH IAmb IAmb 13 55 11.2
comp=Z,11nm,0.7s

TTSI **Tana Toraja** 35.50 232 P **P** **13 55 09.6 -1.0**
comp=Z,3µmcomp=Z,16nm,0.6s

MTN **Manton Dam** 36.48 207 P **P** **13 55 18.3 -0.6**
KAPI **Kappang** 36.88 230⇑*eP* **P** **13 55 21.3 -1.1**
KAPI pmax pmax
comp=Z,6.0nm,1.0s

SBUM **Sibu** 38.49 247 P **P** **13 55 36.7 +0.6**
SBUM IAmb IAmb 13 55 38.4
comp=Z,16nm,0.9s

SHEM **Shemya Is, Ala** 38.53 26 LR LR 14 07 39.4
comp=Z,60nm,21.6s,baz=334,slow=30

MA2 **Magadan** 39.41 3⇓*eP* **P** **13 55 43.5 +0.2**
MA2 pmax pmax
comp=Z,29nm,2.4s

MA2 **Magadan** 39.41 3 P **P** **13 55 43.3 0.0**
comp=Z,6.8nm,0.8s,baz=170,slow=2.4,SNR=5.9
comp=Z,6.8nm,0.8s

MA2 **Magadan** 39.41 3 P **P** **13 55 43.9 +0.6**
MA2 pP **pP** **13 55 51.2 -0.1**
KNRA **Kununurra** 40.03 208 P **P** **13 55 48.5 -0.3**
WRAB **Tennant Creek** 41.84 198 P **P** **13 56 03.4 -0.4**
WRAB IAmb IAmb 13 56 04.3
comp=Z,31nm,1.4s

WRAB **Tennant Creek** 41.84 198⇑*eP* **P** **13 56 03.6 -0.2**
WRAB pmax pmax
comp=Z,17nm,1.3s

WRAB **Tennant Creek** 41.84 198 P **P** **13 56 03.4 -0.3**
WRAB pP **pP** **13 56 13.4 +1.0**
WRA **Warramunga Arr** 41.86 198 P **P** **13 56 03.6 -0.2**
WRA **Warramunga Arr** 41.86 198 *i* P **P** **13 56 03.2 -0.6**
WRA pmax pmax
comp=Z,8.0nm,1.0s

WRA **Warramunga Arr** 41.86 198 P **P** **13 56 03.2 -0.6**
comp=Z,7.9nm,1.0s,baz=26,slow=9.0,SNR=43
WRA PcP **PcP** **13 57 59.3 -0.1**
comp=Z,3.1nm,0.8s,baz=9.7,slow=3.3,SNR=8.3
comp=Z,7.9nm,1.0s

PZH **PanZhiHua** 42.11 287 ⇑P **P** **13 56 07.3 +1.1**
PZH pmax pmax
comp=Z,30nm,1.1s

PZH pmax pmax
comp=Z,80nm,3.5s

ULN **Ulaanbaatar** 42.56 320*de*P **P** **13 56 10.0 +0.5**
ULN pmax pmax
comp=Z,16nm,1.7s

ULN **Ulaanbaatar** 42.56 320 P **P** **13 56 10.1 +0.6**
SONM **Songino Array** 42.95 320 P **P** **13 56 13.2 +0.5**
SONM **Songino Array** 42.95 320 P **P** **13 56 13.2 +0.5**
SONM pmax pmax
comp=Z,6.0nm,0.7s

SONM **Songino Array** 42.95 320 P **P** **13 56 12.9 +0.3**
comp=Z,6.0nm,0.7s,baz=135,slow=8.0,SNR=30
comp=Z,6.0nm,0.7s

YAK **Yakutsk** 43.55 348⇓*eP* **P** **13 56 19.5 +2.4**
YAK pmax pmax
comp=Z,15nm,1.3s

FITZ **Fitzroy Crossi** 43.58 211 P **P** **13 56 17.7 -0.1**
AS31 **Alice Springs** 45.50 197 P **P** **13 56 32.5 -0.7**
ASAR **Alice Springs** 45.51 197 P **P** **13 56 32.2 -1.0**
ASAR **Alice Springs** 45.51 197 P **P** **13 56 32.2 -1.0**
ASAR **Alice Springs** 45.51 197 P **P** **13 56 32.1 -1.1**
comp=Z,3.4nm,0.7s,baz=15,slow=6.8,SNR=33
comp=Z,3.4nm,0.7s

CMAR **Chiang Mai Arr** 45.52 276 P **P** **13 56 34.4 +0.9**
CMAR **Chiang Mai Arr** 45.52 276*ce*P **P** **13 56 34.5 +0.9**
CMAR pmax pmax
comp=Z,3.0nm,0.6s

CMAR **Chiang Mai Arr** 45.52 276 P **P** **13 56 33.2 -0.3**
comp=Z,2.0nm,0.6s,baz=81,slow=5.0,SNR=11
CMAR PcP **PcP** **13 58 12.9 +0.9**
comp=Z,1.2nm,0.8s,baz=64,slow=2.7,SNR=4.2
CMAR LR LR 14 13 42.9
comp=Z,33nm,21.5s,baz=180,slow=34
comp=Z,2.0nm,0.6s

ZAK **Zakamensk** 45.88 322 *eP* **P** **13 56 36.2 +0.2**
ZAK pmax pmax
comp=Z,9.0nm,1.0s

MYKOM **Kota Tinggi** 46.18 252 P **P** **13 56 39.4 +0.7**
MYKOM IAmb IAmb 13 56 41.2
comp=Z,15nm,0.8s

IPM **Ipoh** 47.62 257 P **P** **13 56 50.4 +0.4**
IPM IAmb IAmb 13 56 51.8
comp=Z,16nm,1.0s

KULM **Kulim** 47.65 258 P **P** **13 56 50.4 +0.2**
KULM IAmb IAmb 13 57 09.6
comp=Z,16nm,1.2s

GOMU **GeErMu** 48.35 301⇑*eP* **P** **13 56 58.0 +2.2**
GOMU pP pP 13 57 02.8 -1.2
GOMU sP sP 13 57 04.5 -3.0
GOMU pmax pmax
comp=Z,11nm,0.9s

GOMU pmax pmax
comp=Z,57nm,4.2s

MBWA **Marble Bar** 49.15 215 P **P** **13 57 01.4 -0.1**
MBWA pP **pP** **13 57 11.0 +0.9**
MBWA sP **pwP** **13 57 15.5 -1.6**
BILL **Bilibino** 49.30 9⇓*eP* **P** **13 57 02.7 +0.5**
BILL *i* 13 58 55.8
BILL pmax pmax
comp=Z,9.0nm,1.0s

PSA00 **Pilbara Seismi** 49.42 214 P **P** **13 57 03.7 0.0**
PSA00 IAmb IAmb 13 57 04.0
comp=Z,11nm,0.9s

PSI **Prapat** 50.21 256 LR LR 14 20 33.9
comp=Z,191nm,18.3s,baz=114,slow=39

SHL **Shillong** 51.02 287 P **P** **13 57 16.4 +0.3**
SHL **Shillong** 51.02 287 P **P** **13 57 16.4 +0.3**
SHL pmax pmax
comp=Z,43nm,0.8s

LSA **Lhasa** 51.35 292 P **P** **13 57 20.2 +1.4**
LSA **Lhasa** 51.35 292 P **P** **13 57 20.2 +1.4**
LSA pmax pmax
comp=Z,29nm,0.7s

LSA **Lhasa** 51.35 292 P **P** **13 57 21.0 +2.2**
GSI **Gunungsitoli** 52.05 255 P **P** **13 57 24.1 +0.4**
STKA **Stephens Creek** 52.06 186⇑*eP* **P** **13 57 21.4 -2.0**
STKA **Stephens Creek** 52.06 186 P **P** **13 57 22.2 -1.1**
comp=Z,2.6nm,0.7s,baz=357,slow=10,SNR=5.5
comp=Z,2.6nm,0.7s

TIXI **Tiksi** 52.57 353⇑*eP* **P** **13 57 26.9 +0.2**
TIXI pmax pmax
comp=Z,3.0nm,0.9s

BBOO **Buckleboo** 53.79 192 P **P** **13 57 35.4 -0.7**
CHGN **Chignik** 53.81 34 P **P** **13 57 35.1 -0.9**
CHGN IAmb IAmb 13 57 52.8
comp=Z,13nm,1.2s

FORT **Forrest** 53.95 201 P **P** **13 57 38.4 +1.2**
TAPN **Taplejung** 54.55 290 *eP* **P** **13 57 43.5 +1.2**
ODAN **Odare** 54.89 289 *eP* **P** **13 57 45.6 +0.9**
comp=Z,13nm,1.4s

DGZ **Jazzator, Alta** 55.44 317⇓*eP* **P** **13 57 48.8 +0.6**
DGZ pmax pmax
comp=Z,20nm,1.1s

RAMN **Ramite** 55.58 289 *eP* **P** **13 57 50.6 +0.9**
JIRN **Jiri** 55.86 290 *eP* **P** **13 57 53.1 +1.2**
comp=Z,74nm,0.8s

GUN **Gumba** 56.11 291 *eP* **P** **13 57 54.9 +1.3**
N18K **Kilae Creek** 56.52 30 P **P** **13 57 55.8 +0.2**
PKI **Pulchoki** 56.56 290 *eP* **P** **13 57 57.3 +0.5**
O18K **Koktuh Hills** 56.57 31 P **P** **13 57 56.1 +0.2**
O18K IAmb IAmb 13 57 59.7
comp=Z,9.6nm,0.9s

PKIN **Phulchoki** 56.57 290 *eP* **P** **13 57 57.1 +0.3**
comp=Z,39nm,0.8s

KKN **Kakani** 56.65 291 *eP* **P** **13 57 57.5 +0.2**
comp=Z,7.5nm,1.1s

OHAK **Old Harbor** 56.78 34 P **P** **13 57 57.0 -0.4**
OHAK IAmb IAmb 13 59 05.0
comp=Z,28nm,1.7s

SVW2 **Sparrevohn** 56.80 29 P **P** **13 57 57.7 +0.1**
DMN **Daman** 56.82 290 *eP* **P** **13 57 59.5 +0.9**
ZSN **Zaisan** 56.83 314 *eP* **P** **13 57 58.1 +0.1**
ZSN pmax pmax
comp=Z,7.0nm,1.0s

ZSN **Zaisan** 56.83 314 *eP* **P** **13 57 58.1 +0.1**
comp=Z,7.4nm,1.0s,baz=314

GKN **Gorkha** 57.19 291 *eP* **P** **13 58 01.8 +0.8**
comp=Z,112nm,1.0s

N19K **Bonanza Creek** 57.21 30 P **P** **13 58 00.7 +0.1**
N19K IAmb IAmb 13 58 04.6
comp=Z,11nm,0.9s

KDAK **Kodiak Island** 57.29 34 P **P** **13 58 00.2 -0.8**
KDAK IAmb IAmb 13 58 05.9
comp=Z,6.2nm,0.8s

KDAK **Kodiak Island** 57.29 34 P **P** **13 58 00.2 -0.8**
KDAK pmax pmax
comp=Z,6.0nm,0.8s

KDAK **Kodiak Island** 57.29 34 P **P** **13 57 58.6 -2.4**
KDAK pP **pP** **13 58 09.6 +0.1**
KDAK sP **sP** **13 58 13.4 +0.4**
L19K **White Mountain** 57.49 28 P **P** **13 58 02.2 -0.2**
ZAA0 **Zalesovo Array** 57.76 322 P **P** **13 58 03.7 -0.7**
ZAA0 IAmb IAmb 13 58 04.9
comp=Z,8.9nm,0.7s

ZALV **Zalesovo Beam** 57.76 322 P **P** **13 58 04.1 -0.3**
ZALV **Zalesovo Beam** 57.76 322 *i* P **P** **13 58 04.0 -0.3**
ZALV pmax pmax
comp=Z,8.0nm,0.6s

ZALV **Zalesovo Beam** 57.76 322 P **P** **13 58 04.1 -0.3**
comp=Z,8.1nm,0.6s,baz=102,slow=7.3,SNR=33
comp=Z,8.1nm,0.6s

DANN **Dangsing** 57.91 291 *eP* **P** **13 58 07.3 +1.0**
comp=Z,147nm,0.7s

KOLN **Koldanda** 58.13 291 *eP* **P** **13 58 07.6 -0.1**
M20K **Styx River** 58.16 29 P **P** **13 58 07.4 +0.2**
J20K **Nowinta River** 58.46 26 P **P** **13 58 10.2 +1.1**
J20K IAmb IAmb 13 58 13.6
comp=Z,8.7nm,1.0s

MK31 **Makanchi Array** 58.52 313 P **P** **13 58 10.3 +0.4**
MK31 IAmb IAmb 13 58 11.4
comp=Z,8.3nm,1.1s

MK31 **Makanchi Array** 58.52 313 P **P** **13 58 10.3 +0.4**
MK31 pmax pmax
comp=Z,8.0nm,1.1s

MKAR **Makanchi Array** 58.52 313 P **P** **13 58 10.0 +0.1**
MKAR **Makanchi Array** 58.52 313*c* *i*P **P** **13 58 10.3 +0.4**
MKAR pmax pmax
comp=Z,5.0nm,0.8s

MKAR **Makanchi Array** 58.52 313 P **P** **13 58 10.4 +0.4**
comp=Z,5.2nm,0.8s,baz=92,slow=9.4,SNR=24
comp=Z,5.2nm,0.8s

PYUN **Piuthan** 58.62 291 *eP* **P** **13 58 11.7 +0.6**
comp=Z,20nm,1.0s

MAKZ **Makanchi** 58.74 313 P **P** **13 58 11.7 +0.3**
MAKZ IAmb IAmb 13 58 13.0
comp=Z,16nm,1.2s

MAKZ **Makanchi** 58.74 313 P **P** **13 58 11.7 +0.3**
MAKZ pmax pmax
comp=Z,16nm,1.2s

MAKZ **Makanchi** 58.74 313 P **P** **13 58 11.7 +0.3**
CAST **Castle Rocks** 59.09 27 P **P** **13 58 13.5 0.0**
CAST IAmb IAmb 13 58 17.2
comp=Z,6.8nm,1.0s

SEW **Seward** 59.42 31 P **P** **13 58 15.4 -0.4**
SEW IAmb IAmb 13 58 21.7
comp=Z,12nm,1.0s

H21K **Melozitna Rive** 59.50 25 P **P** **13 58 16.6 +0.2**
H21K IAmb IAmb 13 58 20.4
comp=Z,5.9nm,0.9s

SEM **Semipalatinsk** 60.12 317 *eP* **P** **13 58 19.4 -1.7**
SEM **Semipalatinsk** 60.12 317 *eP* **P** **13 58 19.5 -1.7**
baz=317

PWL **Port Wells** 60.13 31 P **P** **13 58 20.3 -0.5**
PWL IAmb IAmb 13 58 23.8
comp=Z,13nm,1.1s

SML **Sawmill** 60.34 30 P **P** **13 58 21.4 -0.8**
SML IAmb IAmb 13 58 25.4
comp=Z,9.7nm,1.0s

BWN **Browne** 60.42 27 P **P** **13 58 22.4 -0.2**
PDGK **Podgornoye** 60.42 309 *i* P **P** **13 58 22.7 -0.5**
PDGK pmax pmax
comp=Z,7.0nm,0.8s

SHLS **Shalkode** 60.44 309 *eP* **P** **13 58 21.0 -2.3**
SHLS **Shalkode** 60.44 309 *eP* **P** **13 58 21.0 -2.3**
baz=309

UZB **Uzynbulak** 60.76 309 *eP* **P** **13 58 25.1 -0.4**
UZB **Uzynbulak** 60.76 309 *eP* **P** **13 58 25.2 -0.4**
baz=309

SCM **Sheep Creek Mo** 60.81 30 P **P** **13 58 25.3 -0.1**
SCM **Sheep Creek Mo** 60.81 30 P **P** **13 58 25.3 -0.1**
SCM pmax pmax
comp=Z,16nm,1.0s

KPKS **Kokpek** 61.00 309 *eP* **P** **13 58 26.2 -0.9**
KPKS **Kokpek** 61.00 309 *eP* **P** **13 58 26.2 -0.9**
baz=309

DHY **Denali Highway** 61.05 28 P **P** **13 58 27.3 +0.1**
DHY IAmb IAmb 13 58 49.9
comp=Z,13nm,1.6s

KURK **Kurchatov** 61.17 317 P **P** **13 58 27.6 -0.4**
KURK IAmb IAmb 13 58 28.9
comp=Z,8.3nm,0.8s

KURK **Kurchatov** 61.17 317*de*P **P** **13 58 27.8 -0.2**
KURK pmax pmax
comp=Z,14nm,1.3s

KURK **Kurchatov** 61.17 317 P **P** **13 58 28.0 0.0**
TDK **Taldyqorghan** 61.19 311 *eP* **P** **13 58 28.4 +0.2**
TDK **Taldyqorghan** 61.19 311 *eP* **P** **13 58 28.5 +0.2**
baz=311

SATY **Saty** 61.21 309 *eP* **P** **13 58 28.0 -0.6**
SATY pmax pmax
comp=Z,6.0nm,1.4s

SATY **Saty** 61.21 309 *eP* **P** **13 58 28.0 -0.6**
comp=Z,6.4nm,1.4s,baz=309

KLU **Klutina** 61.40 30 P **P** **13 58 29.5 0.0**
ILAR **Eielson Array** 61.65 26 P **P** **13 58 29.5 -1.5**
ILAR **Eielson Array** 61.65 26 P **P** **13 58 29.5 -1.5**
ILAR **Eielson Array** 61.65 26 P **P** **13 58 29.4 -1.6**
comp=Z,2.4nm,0.8s,baz=260,slow=6.0,SNR=18
comp=Z,2.4nm,0.8s

BMRM **Bremner River** 61.94 31 P **P** **13 58 33.2 +0.2**
BMRM IAmb IAmb 13 58 40.7
comp=Z,13nm,1.1s

HMT **Hamilton** 62.01 32 P **P** **13 58 33.3 -0.2**
MDOK **Medeo** 62.20 309 *eP* **P** **13 58 35.4 +0.1**
MDOK **Medeo** 62.20 309 *eP* **P** **13 58 35.4 +0.1**
baz=309

CHKK **Chushkaly** 62.22 310 *eP* **P** **13 58 35.3 0.0**
CHKK **Chushkaly** 62.22 310 *eP* **P** **13 58 35.3 0.0**
baz=310

BERG **Berg Lake** 62.29 32 P **P** **13 58 35.5 +0.1**
GLB **Gilahina Butte** 62.39 30 P **P** **13 58 35.9 -0.2**
GLB IAmb IAmb 13 58 39.8
comp=Z,11nm,1.1s

KUU **Kurty** 62.69 310 *eP* **P** **13 58 38.1 -0.3**
KUU pmax pmax
comp=Z,9.0nm,0.7s

KUU **Kurty** 62.69 310 *eP* **P** **13 58 38.1 -0.3**
comp=Z,8.5nm,0.7s,baz=310

FYU **Fort Yukon** 62.72 25 P **P** **13 58 38.9 +0.8**
MCARA **McCarthy VSAT** 62.76 31 P **P** **13 58 38.7 +0.2**
MCARA IAmb IAmb 13 58 39.8
comp=Z,8.2nm,0.9s

L26K **Log Cabin Wild** 62.85 29 P **P** **13 58 39.3 +0.3**
J26L **Joseph Creek** 62.99 27 P **P** **13 58 39.5 -0.6**
J26L IAmb IAmb 13 58 43.2
comp=Z,7.1nm,0.9s

BMAR **Burnt Mountain** 63.15 24 P **P** **13 58 41.4 +0.3**
KSH **Kashi** 63.24 305 P **P** **13 58 46.0 +3.8**
KSH pmax pmax
comp=Z,5.0nm,0.7s

TKM2 **Tokmak 2** 63.28 309 *i* P **P** **13 58 42.9 +0.3**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s

SGDS **Sogindy** 63.95 309 *i* P **P** **13 58 46.3 -0.5**
SGDS **Sogindy** 63.95 309 *i* P **P** **13 58 46.4 -0.5**
baz=309

AAK **Ala-Archa** 64.11 308⇑*eP* **P** **13 58 48.6 +0.6**
AAK pmax pmax
comp=Z,5.0nm,1.7s

BTLS **Baital** 64.27 311 *eP* **P** **13 58 48.1 -0.7**
BTLS pmax pmax
comp=Z,5.0nm,1.3s

BTLS **Baital** 64.27 311 *eP* **P** **13 58 48.1 -0.7**
comp=Z,4.7nm,1.3s,baz=311

HYBB **Hyderabad (bro** 64.70 280 *eP* **P** **13 58 52.3 +0.3**
HYBB *ep*P **sP** **13 59 03.7 -0.3**
HYBB *e*PcP **PcP** **13 59 26.1 +0.5**
HYBB *e*PP **PP** **14 01 15.1 +0.5**
HYBB *eS* **S** **14 07 30.9 +0.4**
HYBB *e*ScS **SKSac** **14 08 43.9 -0.8**
BRZS **Berezniki** 64.97 317 *eP* **P** **13 58 52.1 -1.1**
BRZS **Berezniki** 64.97 317 *eP* **P** **13 58 52.2 -1.1**
baz=317

BVA0 **Borovoye Array** 66.29 320 *i* P **P** **13 59 01.6 -0.1**
BVAR **Borovoye Array** 66.29 320 P **P** **13 59 01.7 0.0**
BVAR **Borovoye Array** 66.29 320 P **P** **13 59 01.7 0.0**
comp=Z,6.8nm,0.5s,baz=90,slow=7.3,SNR=7.0
comp=Z,6.8nm,0.5s

BRVK **Borovoye** 66.35 320*d* iP **P** **13 59 02.3 +0.2**
BRVK pmax pmax
comp=Z,16nm,1.3s

BRVK **Borovoye** 66.35 320 P **P** **13 59 02.3 +0.2**
BRVK pP **sP** **13 59 12.8 -0.7**
BRVK sP **pwP** **13 59 16.7 -2.0**
DZA **Taraz** 66.41 309 *eP* **P** **13 59 00.8 -1.8**
DZA **Taraz** 66.41 309 *eP* **P** **13 59 00.9 -1.8**
baz=309

KK31 **Karatay Array** 66.98 309 P **P** **13 59 06.6 +0.3**
KK31 IAmb IAmb 13 59 07.7
comp=Z,6.1nm,0.8s

KK31 **Karatay Array** 66.98 309 P **P** **13 59 06.6 +0.3**
KK31 pmax pmax
comp=Z,6.0nm,0.8s

KKAR **Karatay Array** 66.98 309 P **P** **13 59 06.5 +0.1**
KKAR **Karatay Array** 66.98 309 P **P** **13 59 06.6 +0.3**
KKAR IAmb IAmb 13 59 07.7
comp=Z,6.1nm,0.8s

KKAR **Karatay Array** 66.98 309 P **P** **13 59 06.5 +0.1**
KKAR pmax pmax
comp=Z,6.0nm,0.8s

INK **Inuvik** 67.41 23 P **P** **13 59 07.4 -1.1**
INK **Inuvik** 67.41 23 P **P** **13 59 07.4 -1.1**
comp=Z,5.7nm,1.1s,baz=188,slow=15,SNR=3.1
comp=Z,5.7nm,1.1s

IUG **luzhnay** 67.45 308 *eP* **P** **13 59 09.2 -0.2**
IUG **luzhnay** 67.45 308 *eP* **P** **13 59 09.2 -0.2**
baz=308

GAR **Garm** 67.66 305 P **P** **13 59 11.0 +0.2**
GAR IAmb IAmb 13 59 14.8
comp=Z,13nm,1.2s

CHGR **Chuyangaron** 68.61 305 P **P** **13 59 17.1 +0.4**
CHGR **Chuyangaron** 68.61 305 P **P** **13 59 17.1 +0.4**
CHGR pmax pmax
comp=Z,25nm,1.0s

KBL **Kabul** 69.41 300 P **P** **13 59 22.4 +0.4**
KBL **Kabul** 69.41 300 P **P** **13 59 22.4 +0.4**
KBL pmax pmax
comp=Z,21nm,0.9s

BBB **Bella Bella** 71.05 40 LR LR 14 27 01.8
comp=Z,32nm,19.2s,baz=262,slow=33

ARU **Arti** 72.72 324 P **P** **13 59 41.0 -0.3**
ARU IAmb IAmb 13 59 42.2
comp=Z,10nm,0.9s

ARU **Arti** 72.72 324*d* *i*P **P** **13 59 41.0 -0.3**
ARU 13 59 59.6
ARU 14 02 20.8
ARU S **S** **14 09 07.0 +2.7**
ARU SS **SS** **14 13 42.9 -0.9**
ARU pmax pmax
comp=Z,13nm,1.0s

ARU **Arti** 72.72 324 P **P** **13 59 41.3 -0.1**
comp=Z,4.7nm,0.5s,baz=131,slow=3.9,SNR=10
comp=Z,4.7nm,0.5s

AB31 **Akbulak array** 73.27 317 *i* P **P** **13 59 44.5 -0.2**
AB31 pmax pmax
comp=Z,7.0nm,0.7s

ABKAR **Akbulak array** 73.27 317 P **P** **13 59 44.5 -0.2**
AKTO **Aktyubinsk** 74.25 318 P **P** **13 59 49.6 -0.9**
AKTO **Aktyubinsk** 74.25 318 P **P** **13 59 49.6 -0.9**
comp=Z,3.0nm,0.6s,baz=98,slow=8.0,SNR=12
comp=Z,3.0nm,0.6s

YKA **Yellowknife Ar** 75.97 28*ce*P **P** **14 00 02.4 +2.3**
YKA pmax pmax
comp=Z,4.0nm,0.7s

YKA **Yellowknife Ar** 75.97 28 P **P** **13 59 59.4 -0.8**
comp=Z,3.8nm,0.7s,baz=291,slow=5.8,SNR=10
YKA LR LR 14 32 02.6
comp=Z,49nm,20.3s,baz=333,slow=35
comp=Z,3.8nm,0.7s

KIRV **Kirov** 77.00 328*de*P **P** **14 00 06.0 0.0**
GEYT **Alibeck** 77.24 306 P **P** **14 00 08.2 +0.3**
GEYT **Alibeck** 77.24 306 P **P** **14 00 07.6 -0.3**
comp=Z,4.4nm,0.8s,baz=29,slow=3.4,SNR=6.6
comp=Z,4.4nm,0.8s

GYA0B **ALIBECK ARRAY** 77.24 306 P **P** **14 00 08.3 +0.5**
PRGR **Permogore** 77.83 331 *eP* **P** **14 00 08.3 -2.3**
E09A **Wood Farm, Sta** 78.67 45 P **P** **14 00 15.6 0.0**
NEW **Newport** 78.80 43 P **P** **14 00 16.3 0.0**
NEW **Newport** 78.80 43 P **P** **14 00 16.3 0.0**
NEW pmax pmax
comp=Z,3.0nm,0.8s

NEW **Newport** 78.80 43 LR LR 14 29 23.4
comp=Z,62nm,19.4s,baz=249,slow=31

J08A **Circle Bar Ran** 79.39 48 P **P** **14 00 20.1 +0.3**
J08A IAmb IAmb 14 00 24.1
comp=Z,12nm,1.2s

BELG **Belogornoye** 79.94 322*c* *i*P **P** **14 00 23.1 +0.7**
BELG pmax pmax
comp=Z,7.0nm,1.0s

BELG **Belogornoye** 79.94 322 P **P** **14 00 22.9 +0.5**
comp=Z,41nm,1.0s,baz=70,slow=1.8,SNR=13
comp=Z,41nm,1.0s

NVAR **Mina Array Bea** 81.04 52 P **P** **14 00 28.2 -0.6**
NVAR **Mina Array Bea** 81.04 52 P **P** **14 00 29.2 +0.3**
comp=Z,3.5nm,0.8s,baz=264,slow=6.3,SNR=18
NVAR LR LR 14 30 18.6
comp=Z,37nm,19.8s,baz=262,slow=31
comp=Z,3.5nm,0.8s

ARCES **ARCESS Array B** 81.53 342 P **P** **14 00 30.6 0.0**
ARCES **ARCESS Array B** 81.53 342 P **P** **14 00 30.6 0.0**
comp=Z,3.0nm,0.8s,baz=40,slow=6.4,SNR=4.8
comp=Z,3.0nm,0.8s

ELK **Elko** 82.51 49 LR LR 14 31 22.1
comp=Z,36nm,19.4s,baz=272,slow=31

LRM **Limekiln Ridge** 82.63 44 P **P** **14 00 36.8 -0.4**
VRH **Novokhopyorsk** 83.79 322 *eP* **P** **14 00 40.4 -2.2**
VRH pmax pmax
comp=Z,10.0nm,0.6s

MOS **Moscow** 84.01 328 *eP* **P** **14 00 42.4 -1.3**
PFO **Pinyon Flats O** 84.05 57 LR LR 14 37 16.7
comp=Z,27nm,19.3s,baz=254,slow=35

LPSR **Galich'ya Gora** 84.75 324 *eP* **P** **14 00 46.3 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s

OBN **Obninsk** 84.84 327⇑*eP* **P** **14 00 47.7 -0.1**
OBN *e* 14 04 04.6
OBN pmax pmax
comp=Z,33nm,1.7s

VORR **Voronezh** 85.01 324 *eP* P 14 00 53.9 +5.1
VORR pmax pmax
comp=Z,70nm,0.4s

NLU **North Lily Min** 85.05 49 P **P** **14 00 49.7 +0.1**
VSR **Storozhevoye** 85.23 323 *eP* **P** **14 00 48.6 -1.3**
VSR pmax pmax
comp=Z,6.0nm,0.6s

PDAR **Pinedale Array** 85.71 46 P **P** **14 00 53.1 +0.2**
comp=Z,0.7nm,0.7s,baz=228,slow=1.8,SNR=4.5
PDAR LR LR 14 32 38.1
comp=Z,30nm,19.8s,baz=314,slow=31
comp=Z,0.7nm,0.7s

Q16A **Castle Valley** 86.10 50 P **P** **14 00 54.9 +0.1**
KBZ **Khabaz** 86.15 315⇓*eP* **P** **14 00 55.1 +0.5**
KBZ pmax pmax
comp=Z,3.0nm,0.9s

KBZ **Khabaz** 86.15 315 P **P** **14 00 54.1 -0.5**
comp=Z,3.2nm,0.9s,baz=88,slow=0.6,SNR=5.4
comp=Z,3.2nm,0.9s

FINES **FINESS Array B** 86.15 336 *i* P **P** **14 00 54.0 -0.3**
FINES pmax pmax
comp=Z,2.0nm,0.7s

FINES **FINESS Array B** 86.15 336 P **P** **14 00 53.5 -0.8**
comp=Z,2.0nm,0.7s,baz=101,slow=6.0,SNR=8.8
FINES LR LR 14 44 22.8
comp=Z,40nm,19.8s,baz=260,slow=39
comp=Z,2.0nm,0.7s

SRU **San Rafael Swe** 86.48 50 P **P** **14 00 56.1 -0.6**
SRU IAmb IAmb 14 00 59.9
comp=Z,4.2nm,0.8s

SRU **San Rafael Swe** 86.48 50 P **P** **14 00 56.1 -0.6**
SRU pmax pmax

comp=Z,4.0nm,0.8s
PV13 Radium Mtn., P 88.09 50 P **P 14 01 04.0 -0.5**
PV13 IAmb IAmb 14 01 08.4
comp=Z,8.9nm,1.3s
NACGM Naroch 89.72 330⇓*eP* P 14 01 19.1 +7.6
baz=54
ANMO Albuquerque 91.17 52 LR LR 14 35 27.9
comp=Z,27nm,20.1s,baz=292,slow=31
LPIG La Paz 92.58 63 LR LR 14 36 54.2
comp=Z,47nm,19.2s,baz=224,slow=32
BRTR Keskin Array B 94.13 315 LR LR 14 49 21.9
comp=Z,60nm,18.6s,baz=296,slow=39
TXAR Lajitas Array 95.76 56 LR LR 14 40 15.5
comp=Z,20nm,18.9s,baz=320,slow=33
LPAZ La Paz 146.18 89 PKP2 **PKPab 14 07 56.2 +0.2**
LPAZ La Paz 146.18 89 PKPbc **PKPab 14 07 56.2 +0.2**
comp=Z,1.7nm,0.8s,baz=340,slow=7.6,SNR=5.5

IDC ***31*** *13:52:50.0±2.8, 24°.005S×66°.74W, h165km±39km, mb4.2/1, mbtmp4.2/5, Error ellipse: s-maj=42.2km s-min=31.4km az=140.0*
NEIC ***31*** *13:52:50.7±1.2, 24°.055S±0°.08×67°.1W±0°.1, h211km±14km, mb3.6/1, Md3.5(SJA), Error ellipse: s-maj=20.0km s-min=11.9km az=99.0*
GUC ***31*** *13:52:52.1±0.6, 24°.015S×67°.25W, h217km±10km, ML4.1*
ISC 31 13:52:50.3±0.8, 24°.045S±0°.05×67°.1W±0°.1, h204km±13km**, n46, σ1**§**12/61, 14C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AF01	**San Pedro de A**	**1.49**	**316**			**Pn**	**13 53 26.1**	**+1.4**
LVC	**Limon Verde**	**2.22**	**310**	Pn		**Pn**	**13 53 33.0**	**+1.2**
LVC	**Limon Verde**	**2.22**	**310**⇑*eP*			**Pn**	**13 53 32.6**	**+0.8**
LVC				*eS*		**S**	**13 54 03.4**	**-0.1**
LVC	**Limon Verde**	**2.22**	**310**	P		**Pn**	**13 53 33.1**	**+1.4**
	84nm,0.3s,baz=127,slow=6.0,SNR=322							
LVC				S		**S**	**13 54 03.1**	**-0.4**
	80nm,0.4s,baz=272,slow=6.2,SNR=22							
PB15	**IPOC Station P**	**2.36**	**290**			**Pn**	**13 53 34.4**	**+1.3**
PB15	**IPOC Station P**	**2.36**	**290**⇑*eP*			**Pn**	**13 53 34.6**	**+1.5**
PB15				*eS*		**S**	**13 54 06.3**	**+0.4**
GO02	**Mina Guanaco**	**2.56**	**244**	Pn		**Pn**	**13 53 36.6**	**+1.2**
GO02	**Mina Guanaco**	**2.56**	**244**⇑*eP*			**Pn**	**13 53 36.7**	**+1.3**
GO02				*eS*		**S**	**13 54 10.9**	**+0.8**
GO02				IAML			13 54 12.4	
	comp=N,1μm,0.2s							
PB06	**IPOC Station P**	**2.67**	**299**			**Pn**	**13 53 37.4**	**+0.9**
PB06	**IPOC Station P**	**2.67**	**299**⇑*iP*			**Pn**	**13 53 37.9**	**+1.4**
PB06				*i* S		**S**	**13 54 11.5**	**-0.3**
PB06				IAML			13 54 14.1	
	comp=E,736nm,0.3s							
PB09	**IPOC Station P**	**3.01**	**318**			**Pn**	**13 53 41.8**	**+1.4**
PB09	**IPOC Station P**	**3.01**	**318**⇑*iP*			**Pn**	**13 53 42.0**	**+1.6**
PB09				*eS*		**S**	**13 54 19.4**	**+0.4**
PB09				IAML			13 54 20.8	
	comp=N,213nm,0.5s							
PB14	**IPOC Station P**	**3.11**	**258**	Pn		**Pn**	**13 53 42.2**	**+0.6**
PB14	**IPOC Station P**	**3.11**	**258**⇑*iP*			**Pn**	**13 53 42.6**	**+0.9**
PB14				*eS*		**S**	**13 54 20.4**	**-0.9**
PB14				IAML			13 54 26.4	
	comp=E,110nm,0.4s							
PB10	**IPOC Station P**	**3.25**	**279**	Pn		**Pn**	**13 53 44.1**	**+1.1**
PB10	**IPOC Station P**	**3.25**	**279**⇑*iP*			**Pn**	**13 53 44.4**	**+1.3**
PB10				*eS*		**S**	**13 54 22.7**	**-1.0**
PB04	**IPOC Station P**	**3.31**	**300**			**Pn**	**13 53 44.8**	**+0.7**
PB04	**IPOC Station P**	**3.31**	**300**⇑*iP*			**Pn**	**13 53 44.9**	**+0.9**
PB04				⇑*eS*		**S**	**13 54 24.7**	**-0.8**
AC02	**Maricunga**	**3.35**	**213**	Pn		**Pn**	**13 53 46.1**	**+1.3**
AC02	**Maricunga**	**3.35**	**213**⇑*eP*			**Pn**	**13 53 46.2**	**+1.4**
PB07	**IPOC Station P**	**3.48**	**311**			**Pn**	**13 53 46.6**	**+0.6**
PB07	**IPOC Station P**	**3.48**	**311**⇑*eP*			**Pn**	**13 53 46.8**	**+0.8**
PB07				*eS*		**S**	**13 54 27.8**	**-1.3**
PB01	**IPOC Station P**	**3.73**	**323**			**Pn**	**13 53 49.4**	**+0.3**
PB01	**IPOC Station P**	**3.73**	**323**⇑*eP*			**Pn**	**13 53 49.6**	**+0.6**
PB01				*eS*		**S**	**13 54 33.2**	**-1.3**
PB02	**IPOC Station P**	**3.77**	**315**			**Pn**	**13 53 49.7**	**+0.2**
PB02	**IPOC Station P**	**3.77**	**315**⇑*iP*			**Pn**	**13 53 50.0**	**+0.5**
PB02				*eS*		**S**	**13 54 33.5**	**-1.9**
AC01	**Pan de Azucar**	**3.84**	**236**			**Pn**	**13 53 50.1**	**-0.1**
AC01	**Pan de Azucar**	**3.84**	**236**⇑*eP*			**Pn**	**13 53 50.2**	**0.0**
AC01				*eS*		**S**	**13 54 35.2**	**-1.5**
AC06	**Mina Casimiro**	**4.45**	**221**	Pn		**Pn**	**13 53 57.2**	**-0.5**
AC06	**Mina Casimiro**	**4.45**	**221**	*eP*		**Pn**	**13 53 57.8**	**+0.1**
TA01	**Diego Aracena**	**4.51**	**319**	Pn		**Pn**	**13 53 59.1**	**+0.5**
GO01	**Chusmiza**	**4.78**	**335**	*eP*		**Pn**	**13 54 04.9**	**+2.4**
GO01				*eS*		**S**	**13 54 59.6**	**+0.7**
AC05	**El Transito**	**5.58**	**210**	Pn		**Pn**	**13 54 12.1**	**-0.1**
AC05	**El Transito**	**5.58**	**210**	*eP*		**Pn**	**13 54 12.6**	**+0.3**
AC05				*eS*		S	13 55 08.4	-8.4
LCO	**Las Campanas**	**5.93**	**213**			**Pn**	**13 54 16.0**	**-0.9**
PB16	**IPOC Station P**	**6.12**	**338**	Pn		**Pn**	**13 54 20.3**	**+0.5**
GO04	**Tololo Observa**	**6.96**	**208**	Pn		**Pn**	**13 54 29.9**	**-0.2**
LPAZ	**La Paz**	**7.78**	**352**	Pn		**Pn**	**13 54 42.0**	**+0.7**
LPAZ	**La Paz**	**7.78**	**352**	P		**Pn**	**13 54 42.7**	**+1.4**
	comp=E,2.7nm,0.4s,baz=176,slow=9.5,SNR=17							
LPAZ				S		**S**	**13 56 08.4**	**-1.1**
	comp=E,1.1nm,0.6s,baz=74,slow=18,SNR=2.2							
CO02	**Combarbal**	**7.95**	**205**	Pn		**Pn**	**13 54 42.2**	**-0.7**
SIV	**San Ignacio**	**9.78**	**36**			**Pn**	**13 55 05.1**	**-1.7**
SIV	**San Ignacio**	**9.78**	**36**	P		**Pn**	**13 55 05.1**	**-1.7**
	comp=E,1.3nm,0.4s,baz=208,slow=14,SNR=7.1							
TRCB	**Terra Rica**	**13.30**	**88**	P		**P**	**13 55 53.7**	**-0.5**
BDFB	**Brasilia**	**19.75**	**68**	P		**P**	**13 57 03.3**	**-1.7**
	comp=E,8.4nm,0.4s,baz=239,slow=12,SNR=12							
SNAA	**Sanae**	**59.33**	**161**	P		**P**	**14 02 31.2**	**+0.8**
SNAA				IAmb		IAmb	14 02 36.1	
	comp=Z,1.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**76.63**	**69**	P		**P**	**14 04 21.4**	**+2.4**
	comp=Z,1.7nm,0.3s,baz=255,slow=5.5,SNR=2.1							
	comp=Z,1.7nm,0.3s							

IDC ***31*** *13:55:53.9±0.9, 55°.095S×30°.86W, h0km, mb4.1/7, mbtmp4.2/7, Error ellipse: s-maj=41.7km s-min=18.6km az=65.0*
NEIC ***31*** *13:55:55.8±1.0, 55°.15S±0°.1×30°.8W±0°.2, h10km±2km, mb4.9/22, Error ellipse: s-maj=22.3km s-min=17.4km az=37.0*
ISC 31 13:55:55.6±0.7, 55°.09S±0°.1×30°.8W±0°.1, h10km**, n41, σ0§72/35, mb4.8/14, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**3.37**	**280**			**Pn**	**13 56 49.0**	**+0.8**
EFI	**East Falkland**	**16.56**	**270**	Pn		**Pn**	**13 59 47.5**	**-0.1**
EFI				IAmb		IAmb	13 59 54.0	
	comp=Z,128nm,1.4s							
VNA3	**Neumayer Olymp**	**18.68**	**159**	P		**Pn**	**14 00 13.9**	**+0.1**
SNAA	**Sanae**	**20.54**	**155**	P		**P**	**14 00 33.9**	**+0.1**
SNAA	**Sanae**	**20.54**	**155**	P		**P**	**14 00 33.5**	**-0.3**
SNAA	**Sanae**	**20.54**	**155**	P		**P**	**14 00 32.1**	**-1.7**
	comp=Z,2.6nm,0.7s,baz=318,slow=8.3,SNR=14							
	comp=Z,2.6nm,0.7s							
SMAI	**San Martin Ant**	**21.26**	**218**	P		**P**	**14 00 40.3**	**-1.2**
TROLL	**Troll, Antarti**	**22.09**	**153**	P		**P**	**14 00 52.2**	**+1.5**
LL07	**Hotel Espejo d**	**30.07**	**276**	P		**P**	**14 02 05.3**	**+0.6**
LL04	**Puerto Octay**	**30.70**	**280**	P		**P**	**14 02 10.3**	**0.0**
LL04				IAmb		IAmb	14 02 38.8	
	comp=Z,38nm,1.5s							
CPUP	**Villa Florida**	**34.60**	**315**	P		**P**	**14 02 44.4**	**-0.1**
CPUP				IAmb		IAmb	14 02 55.7	
	comp=Z,33nm,1.9s							
CPUP	**Villa Florida**	**34.60**	**315**	P		**P**	**14 02 43.8**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=154,slow=7.3,SNR=7.2							
	comp=Z,3.3nm,0.7s							
GO05	**Huala**	**34.60**	**288**	P		**P**	**14 02 45.3**	**+0.8**
QSPA	**South Pole Qui**	**35.23**	**180**	P		**P**	**14 02 50.5**	**+0.7**
QSPA				IAmb		IAmb	14 03 09.4	
	comp=Z,12nm,1.4s							
QSPA	**South Pole Qui**	**35.23**	**180**	P		**P**	**14 02 48.9**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=237,slow=1.7,SNR=7.6							
	comp=Z,1.8nm,0.8s							
CO01	**Juntas del Tor**	**37.51**	**296**	P		**P**	**14 03 09.9**	**+0.2**
CO01				IAmb		IAmb	14 03 50.0	
	comp=Z,60nm,2.0s							
AC05	**El Transito**	**38.52**	**296**	P		**P**	**14 03 17.6**	**-0.5**
AC04	**Llanos de Chal**	**39.44**	**296**	P		**P**	**14 03 26.1**	**+0.5**
GO02	**Mina Guanaco**	**41.18**	**301**	P		**P**	**14 03 40.2**	**-0.3**
GO02				IAmb		IAmb	14 04 04.1	
	comp=Z,68nm,1.8s							
PB02	**IPOC Station P**	**44.57**	**303**	P		**P**	**14 04 08.2**	**+0.4**
PB01	**IPOC Station P**	**44.61**	**304**	P		**P**	**14 04 08.0**	**-0.1**
PB01				IAmb		IAmb	14 04 38.3	
	comp=Z,31nm,1.5s							
PTLB	**Pontes e Lacer**	**45.15**	**320**	P		**P**	**14 04 12.2**	**0.0**
PTLB				IAmb		IAmb	14 04 13.3	
	comp=Z,5.8nm,0.8s							
SIV	**San Ignacio**	**45.39**	**317**	P		**P**	**14 04 13.9**	**-0.4**
SIV	**San Ignacio**	**45.39**	**317**	P		**P**	**14 04 13.9**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=137,slow=9.7,SNR=4.5							
	comp=Z,0.7nm,0.3s							
GO01	**Chusmiza**	**45.65**	**305**	P		**P**	**14 04 16.6**	**-0.2**
GO01				IAmb		IAmb	14 04 17.9	
	comp=Z,8.2nm,0.8s							
PB16	**IPOC Station P**	**46.95**	**306**	P		**P**	**14 04 27.5**	**+0.4**
PB16				IAmb		IAmb	14 06 14.9	
	comp=Z,27nm,1.8s							
VNDA	**Vanda**	**47.48**	**184**	P		**P**	**14 04 30.9**	**+1.0**
VNDA	**Vanda**	**47.48**	**184**	P		**P**	**14 04 30.4**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=192,slow=6.1,SNR=3.8							
	comp=Z,0.4nm,0.7s							
H10S2	**ASCENSION HYDR**	**47.72**	**22**	T		T	14 56 42.4	
H10S3	**ASCENSION HYDR**	**47.72**	**22**	T		T	14 56 29.0	
	SNR=3.2							
LPAZ	**La Paz**	**48.10**	**309**	P		**P**	**14 04 36.7**	**+0.5**
LPAZ				IAmb		IAmb	14 04 37.3	
	comp=Z,6.1nm,0.6s							
LPAZ	**La Paz**	**48.10**	**309**	P		**P**	**14 04 36.6**	**+0.5**
	comp=Z,5.7nm,0.5s,baz=105,slow=5.6,SNR=29							
	comp=Z,5.7nm,0.5s							
H10N1	**ASCENSION HYDR**	**48.83**	**22**	T		T	14 57 43.0	
	baz=194							
H10N3	**ASCENSION HYDR**	**48.83**	**22**	T		T	14 57 41.9	
	baz=194,slow=74,SNR=4.9							
H10N2	**ASCENSION HYDR**	**48.85**	**22**	T		T	14 57 44.7	
	baz=194,slow=74,SNR=4.6							
SAML	**Samuel**	**52.63**	**318**	P		**P**	**14 05 09.7**	**0.0**
TOA0	**Torodi Ar. Sit**	**73.25**	**33**	P		**P**	**14 07 26.5**	**-0.3**
TOA0				IAmb		IAmb	14 08 53.9	
	comp=Z,8.9nm,1.6s							
TORD	**Torodi Ar. Bea**	**73.25**	**33**	P		**P**	**14 07 28.3**	**+1.5**
	comp=Z,2.8nm,0.3s,baz=197,slow=7.5,SNR=1.8							
	comp=Z,2.8nm,0.3s							
ZALV	**Zalesovo Beam**	**143.78**	**64**	PKP		PKPbc	14 15 27.6	+0.3
	comp=Z,1.1nm,0.6s,baz=205,slow=4.1,SNR=5.2							
ILAR	**Eielson Array**	**147.90**	**314**	PKPbc		**PKPbc**	**14 15 39.0**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=114,slow=1.8,SNR=22							
SONM	**Songino Array**	**152.74**	**87**	PKPbc		**PKPbc**	**14 15 50.8**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=221,slow=1.3,SNR=3.9							

IDC 31 14:35:57.9±1.5, 27°.01N×104°.35E, h0km, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=95.0km s-min=24.5km az=65.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SONM	**Songino Array**	**20.85**	**4**	P		P	14 40 41.7	+0.4
	0.2nm,0.4s,baz=180,slow=9.7,SNR=2.0							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**26.32**	**324**	P		P	14 41 35.1	-0.3
	0.4nm,0.8s,baz=136,slow=12,SNR=1.7							
	0.4nm,0.8s							
WRA	**Warramunga Arr**	**54.98**	**145**	P		P	14 45 30.4	-0.7
	0.5nm,0.7s,baz=334,slow=8.3,SNR=9.4							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**57.91**	**148**	P		P	14 45 52.6	+0.7
	0.3nm,0.9s,baz=328,slow=7.2,SNR=6.2							
	0.3nm,0.9s							

IDC 31 14:40:23.1±2.1, 7°.87S×158°.27E, h0km, mb3.7/3, mbtmp3.8/4, ML4.1/1, MS2.8/1, Error ellipse: s-maj=47.5km s-min=25.0km az=26.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**2.27**	**133**	Pn		Pn	14 41 01.5	-0.3
	50nm,0.3s,baz=288,slow=4.2,SNR=26							
HNR				Sn		Sb	14 41 32.5	-1.1
	171nm,0.3s,baz=106,slow=22,SNR=19							
HNR				LR		LR	14 41 57.9	
	comp=Z,200nm,18.3s,baz=199,slow=42							
	170nm,0.3s							
WRA	**Warramunga Arr**	**26.10**	**240**	P		P	14 45 59.1	+0.3
	1.9nm,0.7s,baz=67,slow=10.0,SNR=22							
	1.9nm,0.7s							
H11S3	**WAKE ISLAND Hy**	**27.49**	**18**	T		T	15 14 34.1	
	baz=198,slow=76,SNR=25							
H11S2	**WAKE ISLAND Hy**	**27.49**	**18**	T		T	15 14 34.8	
	baz=198,slow=76,SNR=34							
H11S1	**WAKE ISLAND Hy**	**27.50**	**18**	T		T	15 14 39.9	
	baz=198,slow=76,SNR=16							
ASAR	**Alice Springs**	**28.14**	**233**	P		P	14 46 16.9	-0.3
	0.4nm,0.7s,baz=67,slow=8.8,SNR=6.5							
	0.4nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**28.70**	**17**	T		T	15 16 13.7	
	baz=196,slow=74,SNR=7.9							
H11N3	**WAKE ISLAND Hy**	**28.71**	**17**	T		T	15 16 17.6	
	baz=196,slow=74,SNR=6.9							
H11N2	**WAKE ISLAND Hy**	**28.72**	**17**	T		T	15 16 29.7	
	baz=196							
MKAR	**Makanchi Array**	**86.22**	**318**	P		P	14 53 06.6	0.0
	0.4nm,0.7s,baz=92,slow=5.2,SNR=3.2							
	0.4nm,0.7s							

GEN 31 15:07:41.5, 44°.13N×8°.10E, h5km, MI0.2, 1C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RORO	**Rocca Rossa**	**0.03**	**243**	P		Pg	15 07 43.0	+0.4
RORO				S		Sg	15 07 44.1	+0.7
RORO	**Rocca Rossa**	**0.03**	**243**	P		Pg	15 07 43.0	+0.4
CANO	**Canova, Maglio**	**0.13**	**50**	P		Pg	15 07 45.0	+0.9
CANO				S		Sg	15 07 46.8	+0.9
CANO	**Canova, Maglio**	**0.13**	**50**	⇑P		Pg	15 07 45.1	+0.9
CANO				AML		AML		
	comp=E,84μm,1.2s							
CANO				AML		AML		
	comp=N,61μm,1.4s							
CANO				AML		AML		
	comp=N,61μm,1.4s							
CANO				AML		AML		
	comp=E,84μm,1.2s							
MGRO	**Montegrosso**	**0.23**	**249**	P		Pg	15 07 46.9	+0.9
MGRO				S		Sg	15 07 52.1	+3.0
MGRO	**Montegrosso**	**0.23**	**249**	P		Pg	15 07 46.9	+0.8
IMI	**Imperia**	**0.26**	**215**	P		Pg	15 07 47.3	+0.6
IMI				S		Sg	15 07 51.0	+0.8
IMI	**Imperia**	**0.26**	**215**	P		Pb	15 07 47.8	-1.0
TURF	**col de Turini**	**0.54**	**254**	P		Pb	15 07 52.8	-0.7
TURF				S		Sb	15 08 01.1	-0.5
EUCT	**Pavia**	**1.30**	**34**	⇓P		Pn	15 08 05.5	-0.9
MILN	**Milano**	**1.57**	**30**	⇓P		Pn	15 08 10.4	+0.2

ROM 31 15:07:44.5±0.1, 42°.629N±0°.005×13°.328E±0°.006, h10km, Md1.3/3, ML1.3/6, 3C, Error ellipse: s-maj=0.7km s-min=0.3km az=333.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMA1	**SAN MARTINO**	**0.01**	**73**	P		Pg	15 07 46.6	+0.1
SMA1				S		Sg	15 07 47.8	0.0
SMA1				END				
T1243	**Rocca Santa Ma**	**0.11**	**53**	⇑P		Pg	15 07 48.0	+0.6
T1243				S		Sg	15 07 50.2	+0.7
T1243				END				
RM33	**Pellescritta (**	**0.15**	**215**	⇑P		Pg	15 07 48.5	+0.6
RM33				S		Sg	15 07 50.9	+0.6
RM33				AML		AML		
	comp=E,200μm,0.1s							
RM33				AML		AML		
	comp=N,211μm,0.3s							
RM33				END				
TERO	**Teramo**	**0.20**	**92**	P		Pb	15 07 49.6	-0.8
TERO				S		Sg	15 07 53.0	+1.2
LNSS	**Leonessa**	**0.21**	**263**	⇑P		Pb	15 07 49.9	-0.7
LNSS				S		Sg	15 07 53.5	+1.3
LNSS				AML		AML		
	comp=N,108μm,0.6s							
LNSS				AML		AML		
	comp=E,86μm,0.8s							
T1242	**Castelluccio d**	**0.22**	**336**	P		Pb	15 07 50.5	-0.2
T1242				S		Sg	15 07 52.9	+0.5
T1242				AML		AML		
	comp=E,116μm,0.1s							
T1242				AML		AML		
	comp=N,144μm,0.3s							
T1241	**Roccafluvione,**	**0.24**	**19**	P		Pg	15 07 50.2	+0.7
T1241				S		Sg	15 07 54.3	+1.4
T1241				AML		AML		
	comp=E,39μm,1.0s							
T1241				AML		AML		
	comp=N,52μm,1.5s							
GIGS	**Gran Sasso**	**0.25**	**135**	P		Pb	15 07 50.8	-0.5
GIGS				S		Sg	15 07 54.2	+1.0
T1215	**Vallo di Nera,**	**0.38**	**297**	AML		AML		
	comp=N,46μm,1.6s							
T1215				AML		AML		
	comp=E,112μm,1.6s							

IDC ***31*** *15:15:19.9±3.5, 5°.63S×146°.05E, h88km±31km, mb3.4/3, mbtmp4.0/6, MS3.6/1, Error ellipse: s-maj=32.7km s-min=24.6km az=111.0*
ISC 31 15:15:20.9±2.6, 5°.75S±0°.2×145°.9E±0°.1, h69km**, n19, σ1§57/20, mb3.7/3, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**3.85**	**161**	P		**Pn**	**15 16 18.3**	**+0.7**
	43nm,0.3s,baz=7.8,slow=11,SNR=150							
PMG				S		**Sn**	**15 17 02.1**	**+0.5**
	26nm,0.3s,baz=207,slow=7.8,SNR=3.0							
COEN	**Coen**	**8.59**	**198**	P		Pn	15 17 31.5	+8.9
MTSU	**Mount Surprise**	**12.41**	**187**	P		**P**	**15 18 20.8**	**-3.4**
CTA	**Charters Tower**	**14.26**	**179**	P		**P**	**15 18 45.7**	**+0.9**
CTA	**Charters Tower**	**14.26**	**179**	P		**Pn**	**15 18 38.0**	**-1.6**
	2.5nm,0.7s,baz=7.1,slow=16,SNR=1.7							
CTAO	**Charters Tower**	**14.26**	**179**	P		**P**	**15 18 45.7**	**+0.9**
KDU	**Kakadu**	**14.93**	**242**	P		**P**	**15 18 54.8**	**+2.5**
QIS	**Mount Isa**	**15.94**	**202**	P		**P**	**15 19 03.7**	**+0.2**
WRAB	**Tennant Creek**	**18.03**	**217**	P		**Pn**	**15 19 27.1**	**+0.2**
WRA	**Warramunga Arr**	**18.04**	**217**	P		**Pn**	**15 19 26.5**	**-0.6**
	2.2nm,0.3s,baz=38,slow=11,SNR=68							
WRA				S		**S**	**15 22 50.5**	**+1.1**
	1.7nm,1.0s,baz=40,slow=21,SNR=4.6							
KNRA	**Kununurra**	**19.50**	**238**	P		**Pn**	**15 19 44.6**	**+0.1**
ASAR	**Alice Springs**	**21.23**	**212**	P		**P**	**15 20 00.1**	**-1.2**
	3.3nm,0.9s,baz=47,slow=8.0,SNR=60							
ASAR				S		**S**	**15 23 54.5**	**+0.7**
	1.4nm,0.8s,baz=30,slow=22,SNR=8.1							
	3.3nm,0.9s							
INKA	**Innaminka**	**22.42**	**192**	P		**P**	**15 20 15.7**	**+1.7**
FITZ	**Fitzroy Crossi**	**23.28**	**236**	P		**P**	**15 20 22.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.28**	**236**	P		**P**	**15 20 21.0**	**-1.9**
	0.5nm,0.4s,baz=61,slow=8.1,SNR=9.4							
	0.5nm,0.4s							
OOD	**Oodnadatta**	**23.98**	**203**	P		**P**	**15 20 31.0**	**+1.9**
LCRK	**Leigh Creek**	**25.61**	**195**	P		**P**	**15 20 46.2**	**+2.2**
STKA	**Stephens Creek**	**26.31**	**188**	P		**P**	**15 20 50.6**	**+0.4**
	0.9nm,0.4s,baz=5.5,slow=13,SNR=4.3							
	0.9nm,0.4s							
MSVF	**Nonsavu**	**33.59**	**114**	LR		LR	15 33 30.9	
	comp=Z,101nm,21.8s,baz=181,slow=33							

IDC ***31*** *15:17:57.1±5.5, 37°.01N×71°.94E, h120km±45km, mb3.2/3, mbtmp3.7/9, Error ellipse: s-maj=54.6km s-min=19.1km az=160.0*
NNC ***31*** *15:18:03.4±3.9, 37°.75N×71°.91E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=29.9km s-min=22.2km az=170.0*
ISC 31 15:18:01.3±1.3, 37°.3N±0°.1×71°.85E±0°.08, h150km**, n19, σ1§44/25, mb3.5/3, 2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AML	**Almayashu**	**5.00**	**16**	P		**Pn**	**15 19 15.8**	**+0.8**
	SNR=218							
UCH	**Uchtor**	**5.30**	**22**	P		**Sn**	**15 20 17.6**	**-2.3**
	SNR=10.0							
EKS2	**Erkin-Say**	**5.53**	**15**	P		**Pn**	**15 19 23.4**	**+1.6**
	SNR=20							
AAK	**Ala-Archa**	**5.68**	**20**	P		**Pn**	**15 19 25.1**	**+1.3**
	SNR=13							
KK31	**Karatay Array**	**5.86**	**350**	⇓P		**Pn**	**15 19 27.0**	**+1.0**
	2.2nm,0.3s,baz=158,slow=11,SNR=62							
KK31				⇓S		**Sn**	**15 20 31.3**	**-1.1**
	30nm,0.4s,baz=164,slow=22,SNR=26							
CHMS	**Chumysh**	**6.08**	**21**	P		**Pn**	**15 19 30.0**	**+1.0**
	SNR=8.7							
CHMS	**Chumysh**	**6.08**	**21**	⇑P		**Pn**	**15 19 29.4**	**+0.3**
	10.0nm,0.6s							
CHMS				⇓S		**Sn**	**15 20 35.0**	**-2.8**
	14nm,0.8s							
TKM2	**Tokmak 2**	**6.28**	**26**	P		**Pn**	**15 19 32.1**	**+0.2**
	SNR=6.2							
TKM2	**Tokmak 2**	**6.28**	**26**	⇑P		**Pn**	**15 19 31.9**	**0.0**
	4.0nm,0.7s							
TKM2				⇓S		**Sn**	**15 20 41.7**	**-1.0**
	15nm,0.9s							
GEYT	**Alibeck**	**10.91**	**277**	P		**Pn**	**15 20 32.3**	**-1.0**
	1.9nm,0.4s,baz=102,slow=12,SNR=6.1							
GEYT				S		**Sn**	**15 22

comp=Z,111nm,0.8s
KS21 Milan North St 2.29 139 Pn 15 27 43.4 +0.6
KSU1 Kansas State U 2.30 87 Pn **Pn 15 27 43.3 +0.4**
KSU1 Kansas State U 2.30 87 P **Pn 15 27 43.5 +0.6**
baz=269
KSU1 S **Sn 15 28 13.2 +1.5**
baz=269
KSU1 Kansas State U 2.30 87 P **Pn 15 27 43.1 +0.2**
baz=269
KSU1 S **Sn 15 28 12.7 +1.0**
baz=269
KAN05 Bluff City Nor 2.33 145 Pn 15 27 44.1 +0.7
KAN05 lAmb_Lg 15 28 22.2
comp=Z,87nm,1.0s
KAN01 Argonia South 2.35 142 Pn 15 27 44.3 +0.7
N33B J Bar K, Exete 2.36 43 P **Pn 15 27 44.3 +0.6**
baz=224,SNR=7.5
N33B S **Sn 15 28 15.3 +2.1**
baz=224
N33A J Bar K, Exete 2.36 43 Pn 15 27 43.2 -0.6
N33A lAmb_Lg 15 28 19.6
comp=Z,102nm,0.8s
KSCO Kaye Shedlock' 2.39 271 Pn **Pn 15 27 44.5 +0.3**
KSCO Kaye Shedlock' 2.39 271 Pb **Pb 15 27 47.1 -0.7**
baz=88,SNR=10.0
KSCO S **Sn 15 28 14.1 +0.2**
baz=88
KS20 Mayfield South 2.39 138 Pn 15 27 44.3 +0.1
KS20 lAmb_Lg 15 28 23.4
comp=Z,94nm,0.8s
OK035 E0210 Rd and N 2.41 163 Pn 15 27 44.9 +0.5
OK035 lAmb_Lg 15 28 25.7
comp=Z,90nm,0.8s
KAN14 Manchester OK 2.42 148 Pn 15 27 45.1 +0.5
KAN14 lAmb_Lg 15 28 22.5
comp=Z,75nm,1.0s
KAN09 Caldwell North 2.43 140 Pn **Pn 15 27 45.3 +0.6**
KAN09 lAmb_Lg 15 28 27.0
comp=Z,97nm,0.7s
KAN17 Caldwell West 2.43 144 Pn 15 27 45.4 +0.7
NOKA Waynoka 2.44 168 Pn 15 27 45.1 +0.3
NOKA lAmb_Lg 15 28 27.6
comp=Z,78nm,0.8s
OK032 Salt Plains WL 2.46 154 Pn 15 27 45.6 +0.5
GC02 Grant County # 2.55 148 Pn **Pn 15 27 46.1 -0.3**
KAN13 South Haven SW 2.60 140 Pn 15 27 47.8 +0.9
KAN13 lAmb_Lg 15 28 32.5
comp=Z,75nm,0.7s
BGNE Belgrade 2.62 24 Pn 15 27 47.6 +0.3
BGNE Belgrade 2.62 24 P **Pn 15 27 47.8 +0.5**
baz=205,SNR=21
BGNE S **Sn 15 28 20.3 +0.8**
baz=205
BGNE Belgrade 2.62 24 P **Pn 15 27 47.6 +0.3**
baz=205,SNR=19
BGNE S **Sn 15 28 20.3 +0.8**
baz=205
OK038 West end E0370 2.62 165 Pn 15 27 48.0 +0.7
OGNE Ogallala 2.70 316 Pn 15 27 49.0 +0.6
OGNE lAmb_Lg 15 28 32.5
comp=Z,94nm,0.8s
OGNE Ogallala 2.70 316 P **Pn 15 27 49.0 +0.6**
baz=135
OGNE S **Sb 15 28 25.6 -1.0**
baz=135
OGNE Ogallala 2.70 316 P **Pn 15 27 49.0 +0.6**
baz=135,SNR=12
OGNE S **Sn 15 28 22.5 +0.9**
baz=135
CROK Carrier 2.81 153 Pn 15 27 50.6 +0.7
CROK lAmb_Lg 15 28 40.8
comp=Z,48nm,0.8s
BLOK Blackwell 2.92 140 Pn 15 27 52.0 +0.5
BLOK lAmb_Lg 15 28 42.2
comp=Z,44nm,0.8s
ELIS Ellis County 2.96 178 Pn **Pn 15 27 52.6 +0.7**
T35A Sooner Cattle 3.20 130 Pn **Pn 15 27 56.1 +0.8**
T35A lAmb_Lg 15 28 50.5
comp=Z,53nm,1.1s
T35B Sooner Cattle 3.20 130 P **Pn 15 27 55.9 +0.6**
baz=312
CSTR Hydro, Custer 3.44 168 Pn **Pn 15 27 59.1 +0.5**
CSTR lAmb_Lg 15 29 01.2
comp=Z,8.7nm,0.8s
N35A Tabor 3.53 57 Pn **Pn 15 27 59.0 -0.8**
QUOK Quay 3.64 141 Pn **Pn 15 28 02.0 +0.7**
K31A O'Neill 3.65 9 Pn **Pn 15 28 02.3 +0.9**
BCOK Bluff Creek, N 3.70 155 Pn **Pn 15 28 02.1 -0.1**
BCOK lAmb_Lg 15 29 06.7
comp=Z,59nm,0.7s
OK031 S. Brethren Rd 3.75 144 Pn **Pn 15 28 04.0 +1.1**
OK034 N. Norfolk Rd. 3.77 142 Pn **Pn 15 28 03.3 +0.2**
OK030 Cody Creek RV 3.80 144 Pn **Pn 15 28 04.0 +0.5**
L34A Svendsen Farm, 3.81 39 Pn **Pn 15 28 03.2 -0.6**
OK025 Westminster Rd 3.87 152 lAmb_Lg 15 29 12.4
comp=Z,44nm,0.7s
DEOK Depew 4.00 142 lAmb_Lg 15 29 19.0
comp=Z,36nm,0.9s
T25A Trinidad 4.26 245 Pn **Pn 15 28 07.6 -2.5**
T25A Trinidad 4.26 245 P **Pn 15 28 09.3 -0.8**
baz=62
T25A S **Sn 15 28 59.7 -0.7**
baz=62
TUL1 Leonard 4.32 135 Pn **Pn 15 28 09.7 -0.9**
TUL1 lAmb_Lg 15 29 25.4
comp=Z,57nm,0.9s
TUL1 Leonard 4.32 135 P **Pn 15 28 11.3 +0.6**
baz=317
TUL1 Leonard 4.32 135 P **Pn 15 28 10.6 -0.1**
baz=317
TUL1 S **Sn 15 29 01.3 -0.2**
baz=317
WMOK Wichita Mounta 4.32 171 Pn **Pn 15 28 10.5 -0.3**
WMOK lAmb_Lg 15 29 23.7
comp=Z,44nm,1.1s
WMOK Wichita Mounta 4.32 171 P **Pn 15 28 10.2 -0.6**
baz=352,SNR=6.6
WMOK S **Sn 15 29 00.8 -0.8**
baz=352
Q24A Divide 4.35 271 Pn **Pn 15 28 09.9 -1.5**
Q24A lAmb_Lg 15 29 34.9
comp=Z,36nm,0.7s
Q24A Divide 4.35 271 P **Pn 15 28 11.0 -0.4**
baz=87,SNR=7.6
Q24A S **Sn 15 29 02.5 -0.2**
baz=87
AMTX Amarillo 4.47 203 Pn **Pn 15 28 12.6 -0.2**
AMTX Amarillo 4.47 203 P **Pn 15 28 12.4 -0.4**
baz=22
AMTX S **Sn 15 29 05.5 +0.3**
baz=22
RLO Rose Lookout 4.60 127 Pn **Pn 15 28 14.6 +0.1**
RLO lAmb_Lg 15 29 32.6
comp=Z,40nm,0.7s
X34A Smith Ranch, M 4.63 162 Pn **Pn 15 28 15.1 +0.2**
P38A Dawn 4.72 81 Pn **Pn 15 28 13.9 -2.2**
P38A Dawn 4.72 81 P **Pn 15 28 16.5 +0.4**
baz=265
ISCO Idaho Springs 4.75 281 Pn **Pn 15 28 16.7 -0.2**
ISCO lAmb_Lg 15 29 34.2
comp=Z,48nm,0.8s
ISCO Idaho Springs 4.75 281 P **Pn 15 28 17.1 +0.2**
baz=97
ISCO Idaho Springs 4.75 281 P **Pn 15 28 17.0 +0.1**
baz=97,SNR=12
ISCO S **Sn 15 29 10.9 -1.6**
baz=97
SDCO Great Sand Dun 4.84 257 Pn **Pn 15 28 17.8 -0.3**
SDCO lAmb_Lg 15 29 40.1
comp=Z,34nm,0.8s
SDCO Great Sand Dun 4.84 257 P **Pn 15 28 18.5 +0.5**
baz=73
SDCO Great Sand Dun 4.84 257 P **Pn 15 28 17.6 -0.4**
baz=73,SNR=6.6
SDCO Sb **Sb 15 29 31.1 +2.8**
baz=73
U38A Gravette 4.85 121 Pn **Pn 15 28 18.3 +0.3**
PHWY Pilot Hill 5.05 299 Pn **Pn 15 28 20.6 -0.4**
S39A Bolivar 5.08 103 Pn **Pn 15 28 21.1 -0.1**
S39A lAmb_Lg 15 29 53.1
comp=Z,53nm,0.9s
N38A Joes South For 5.18 68 Pn **Pn 15 28 21.6 -0.9**
ECSD EROS Data Cent 5.20 24 Pn **Pn 15 28 22.9 +0.1**
ECSD lAmb_Lg 15 29 46.7
comp=Z,51nm,0.9s
ECSD EROS Data Cent 5.20 24 P **Pn 15 28 22.9 +0.1**
baz=206,SNR=8.3
ECSD S **Sn 15 29 21.8 -1.5**
baz=206
HHAR Hobbs 5.24 120 Pn **Pn 15 28 22.8 -0.5**
N23A Red Feather La 5.25 293 Pn **Pn 15 28 23.2 -0.4**
N23A Red Feather La 5.25 293 P **Pn 15 28 23.8 +0.2**
baz=109,SNR=8.0
N23A S **Sn 15 29 23.0 -1.7**
baz=109
LOOK Love County 5.38 158 lAmb_Lg 15 30 00.9
comp=Z,51nm,0.8s
SUSD Miller 5.43 5 Pn **Pn 15 28 24.7 -1.3**
SUSD Miller 5.43 5 P **Pn 15 28 26.2 +0.2**
baz=185
SUSD S **Sn 15 29 26.9 -2.0**
baz=185
X37A Clayton 5.56 141 Pn **Pn 15 28 26.6 -1.1**
X37A Clayton 5.56 141 P **Pn 15 28 28.2 +0.6**
baz=324
SCIA State Center 5.63 57 lAmb_Lg 15 30 05.1
comp=Z,31nm,0.8s
SCIA State Center 5.63 57 S **Sn 15 29 33.3 -0.5**
baz=241
MSTX Muleshoe 5.67 208 Pn **Pn 15 28 28.8 -0.5**
MSTX lAmb_Lg 15 30 08.6
comp=Z,40nm,0.9s
MSTX Muleshoe 5.67 208 P **Pn 15 28 29.2 -0.1**
baz=26
MSTX S **Sn 15 29 34.5 -0.3**
baz=26
SMCO Snowmass 5.77 274 lAmb_Lg 15 30 21.2
comp=Z,30nm,0.8s
S22A 4UR Ranch, Cre 5.85 260 Pn **Pn 15 28 31.4 -0.6**
S22A lAmb_Lg 15 30 17.8
comp=Z,27nm,1.1s
P40A Paris 5.85 83 Pn **Pn 15 28 31.6 -0.2**
P40A lAmb_Lg 15 30 14.0
comp=Z,45nm,0.8s
Z35A Perchaven, San 5.98 161 Pn **Pn 15 28 33.0 -0.5**
MGMO Mountain Grove 6.05 106 lAmb_Lg 15 30 17.8
comp=Z,35nm,0.8s
RSSD Black Hills 6.10 328 Pn **Pn 15 28 36.6 +1.3**
K38A Parkersburg 6.30 53 Pn **Pn 15 28 39.8 +2.0**
K38A lAmb_Lg 15 30 27.2
comp=Z,21nm,0.7s
ABTX Abilene, Hawle 6.39 181 lAmb_Lg 15 30 36.4
comp=Z,28nm,0.8s
ABTX Abilene, Hawle 6.39 181 S **Sn 15 29 49.0 -3.4**
baz=0.5
K22A Casper 6.40 307 Pn **Pn 15 28 38.8 -0.6**
K22A Casper 6.40 307 P **Pn 15 28 39.1 -0.3**
baz=122
K22A Sb **Sb 15 30 19.2 +6.0**
baz=122
RWWY Rawlins 6.42 297 Pn **Pn 15 28 40.1 +0.4**
RWWY lAmb_Lg 15 30 39.6
comp=Z,23nm,0.9s
MIAR Mount Ida 6.56 131 Pn **Pn 15 28 41.4 0.0**
MIAR lAmb_Lg 15 30 52.1
comp=Z,20nm,0.8s
MIAR Mount Ida 6.56 131 P **Pn 15 28 41.9 +0.5**
baz=315
MIAR Mount Ida 6.56 131 P **Pn 15 28 41.1 -0.4**
baz=315
MIAR S **Sn 15 29 56.4 -0.3**
baz=315
FCAR Ozark Folk Cen 6.69 116 Pn **Pn 15 28 43.3 0.0**
FCAR lAmb_Lg 15 30 45.7
comp=Z,27nm,0.9s
O20A White River Ci 6.79 282 lAmb_Lg 15 30 57.1
comp=Z,25nm,0.9s
I37A Lemond, Waseca 6.80 41 Pn **Pn 15 28 44.5 -0.2**
I37A lAmb_Lg 15 30 47.2
comp=Z,28nm,0.9s
Z38A Mt. Pleasant 6.84 146 lAmb_Lg 15 30 59.0
comp=Z,29nm,0.8s
ANMO Albuquerque 6.85 236 S **Sn 15 30 02.9 -1.3**
baz=51
WHAR Wendy Hollow 6.90 120 Pn **Pn 15 28 45.9 -0.3**
L40A Anamosa 7.04 62 lAmb_Lg 15 30 50.3
comp=Z,22nm,1.0s
WHTX Lake Whitney, 7.22 166 Pn **Pn 15 28 50.1 -0.4**
WHTX Lake Whitney, 7.22 166 P **Pn 15 28 50.0 -0.6**
baz=347
F33A Mile Ranch, 7.23 18 Pn **Pn 15 28 49.8 -0.8**
F33A lAmb_Lg 15 30 53.6
comp=Z,21nm,0.8s
PV02 Paradox Valley 7.23 266 lAmb_Lg 15 31 03.5
comp=Z,20nm,1.2s
FVM Frch Village 7.24 95 lAmb_Lg 15 31 05.9
comp=Z,28nm,1.0s
PV12 Saucer Basin, 7.26 267 lAmb_Lg 15 31 05.5
comp=Z,23nm,1.1s
PV11 David Mesa, Pa 7.32 267 lAmb_Lg 15 31 02.0
comp=Z,25nm,1.0s
PV04 Paradox Valley 7.33 268 lAmb_Lg 15 31 05.1
comp=Z,22nm,1.0s
PV23 Carpenter Ridg 7.41 269 Pn **Pn 15 28 52.7 -0.7**
PV23 lAmb_Lg 15 31 03.2
comp=Z,24nm,0.8s
PV14 Lion Creek, Pa 7.43 268 lAmb_Lg 15 31 03.4
comp=Z,18nm,1.1s
PV10 Paradox Valley 7.44 268 lAmb_Lg 15 31 11.3
comp=Z,20nm,1.2s
WLAR White Oak Lake 7.45 134 lAmb_Lg 15 31 17.7
comp=Z,24nm,0.8s
E28A Huff 7.59 354 Pn **Pn 15 28 54.5 -1.1**
RDMU Red Mountain 7.86 285 lAmb_Lg 15 31 29.8
comp=Z,19nm,1.1s
SPMN Mane on St. 7.97 37 lAmb_Lg 15 31 28.3
comp=Z,21nm,1.0s
SPMN Marine on St. 7.97 37 S **Sn 15 30 30.5 -1.0**
baz=221
CGM3 Cape Girardeau 7.99 99 lAmb_Lg 15 31 22.2
comp=Z,38nm,0.9s
JFWS Jewell Farm 8.05 58 lAmb_Lg 15 31 23.9
comp=Z,19nm,0.8s
L42A Oliver, Polo 8.11 65 lAmb_Lg 15 31 24.5
comp=Z,26nm,0.8s
F36A Milaca 8.16 31 lAmb_Lg 15 31 30.0
comp=Z,15nm,0.9s
NATX Nacogdoches 8.28 150 lAmb_Lg 15 31 48.6
comp=Z,16nm,0.7s
435B Jarrell 8.38 168 lAmb_Lg 15 31 47.3
comp=Z,24nm,0.9s
BW06 Boulder Array 8.44 299 Pn **Pn 15 29 06.9 -0.6**
BW06 Boulder Array 8.44 299 P **Pn 15 29 07.1 -0.4**
baz=113
PD31 Pinedale Array 8.44 299 Pn **Pn 15 29 07.0 -0.4**
MNTX Cornudas Mount 8.71 215 lAmb_Lg 15 31 45.0
comp=Z,21nm,1.2s
121A Cookes Peak, D 9.30 228 lAmb_Lg 15 32 01.8
comp=Z,13nm,1.3s

ATH 31 15:27:22.4,36°47N×21°38E,h27km±12km,ML2.1/4,Error ellipse: s-maj=13.1km s-min=1.8km az=16.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.52**	**35**	P	Pb	15 27 32.7	-0.2
PYL				S	Sb	15 27 40.1	0.0
PYL				AML	AML	15 27 40.4	
	comp=N,593μm,0.4s						
PYL				AML	AML	15 27 40.7	
	comp=E,811μm,0.3s						
ITM	**Ithomi**	**0.83**	**32**	P	Pb	15 27 37.9	-0.4
ITM				S	Sb	15 27 49.0	-0.1
ITM				AML	AML	15 27 50.4	
	comp=N,308μm,0.3s						
ITM				AML	AML	15 27 51.1	
	comp=E,248μm,0.3s						
VLI	**Velíai**	**1.28**	**79**	P	Pb	15 27 45.4	-0.4
VLI				S	Sb	15 28 02.7	+0.8
VLI				AML	AML	15 28 07.8	
	comp=N,76μm,0.6s						
VLI				AML	AML	15 28 08.7	
	comp=E,91μm,0.6s						
KTHA	**Kythira Island**	**1.38**	**98**	P	Pb	15 27 47.2	-0.3
KTHA				S	Sb	15 28 04.9	+0.2
KTHA				AML	AML	15 28 10.4	
	comp=N,67μm,0.5s						
KTHA				AML	AML	15 28 16.3	
	comp=E,155μm,0.8s						
ANKY	**Antikythira Is**	**1.67**	**111**	P	Pb	15 27 51.8	-0.7

ROM 31 15:30:57.1±0.1,42°760N±0°004×13°193E±0°006,h11km,ML1.2/5,1C-3D,Error ellipse: s-maj=0.5km s-min=0.4km az=102.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1202	**Accumoli, Fraz**	**0.06**	**158**	P	Pg	15 30 59.8	+0.2
T1202				S	Sg	15 31 01.5	+0.2
T1202				AML	AML		
	comp=E,321μm,0.2s						
T1202				AML	AML		
	comp=N,521μm,0.8s						
T1242	**Castelluccio d**	**0.07**	**7**	⇓P	Pg	15 30 59.9	+0.2
T1242				S	Sg	15 31 01.5	0.0
T1242				AML	AML		
	comp=N,313μm,0.5s						
T1242				AML	AML		
	comp=E,178μm,1.2s						
T1242				AML	AML		
	comp=N,314μm,0.5s						
MC2	**Monte Cornacci**	**0.15**	**359**	⇓P	Pg	15 31 01.3	+0.5
SMA1	**SAN MARTINO**	**0.17**	**141**	AML	AML		
	comp=N,105μm,0.3s						
SMA1				AML	AML		
	comp=E,114μm,0.3s						
SMA1				AML	AML		
	comp=N,61μm,0.4s						
SMA1				AML	AML		
	comp=E,114μm,0.3s						
SMA1				AML	AML		
	comp=N,61μm,0.4s						
SMA1				AML	AML		
	comp=E,114μm,0.3s						
MMO1	**Montemonaco**	**0.17**	**35**	P	Pg	15 31 01.6	+0.6
MMO1				AML	AML		
	comp=E,140μm,0.8s						
MMO1				AML	AML		
	comp=N,66μm,1.1s						
MMO1	**Montemonaco**	**0.17**	**35**	S	Sg	15 31 04.5	+0.8
LNSS	**Leonessa**	**0.19**	**216**	P	Pg	15 31 01.9	+0.5
LNSS				S	Sg	15 31 05.0	+0.8
LNSS				AML	AML		
	comp=E,196μm,0.2s						
LNSS				AML	AML		
	comp=N,142μm,0.4s						
LNSS				AML	AML		
	comp=E,196μm,0.2s						
T1243	**Rocca Santa Ma**	**0.20**	**108**	P	Pg	15 31 02.0	+0.6
T1243				S	Sg	15 31 05.1	+0.6
T1241	**Roccafluvione,**	**0.20**	**61**	P	Pg	15 31 02.1	+0.7
T1241				S	Sg	15 31 05.5	+1.1
T1215	**Vallo di Nera,**	**0.24**	**280**	⇓P	Pg	15 31 02.6	+0.4
T1215				S	Sg	15 31 06.5	+0.9
RM33	**Pellescritta (**	**0.25**	**176**	P	Pb	15 31 03.5	-0.2
RM33				S	Sg	15 31 06.8	+0.9
FDMO	**Fiordimonte**	**0.29**	**344**	⇑P	Pb	15 31 03.7	-0.6
FDMO				S	Sb	15 31 08.1	-1.1
CSP1	**Cessapalombo**	**0.33**	**1**	P	Pg	15 31 04.5	+0.6
TERO	**Teramo**	**0.33**	**114**	P	Pg	15 31 04.1	+0.3
TERO				S	Sg	15 31 09.2	+1.0
TERO				AML	AML		
	comp=E,23μm,0.8s						
TERO				AML	AML		
	comp=N,33μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.76**	**306**	S	Sn	15 31 27.0	+1.7
COR1	**Corinaldo**	**0.88**	**351**	P	Pn	15 31 15.6	+0.1
INTR	**Introdacqua**	**0.92**	**145**	AML	AML		
	comp=N,173nm,1.1s						
INTR				AML	AML		
	comp=E,185nm,1.5s						
INTR				AML	AML		
	comp=E,184nm,1.5s						
INTR				AML	AML		
	comp=N,174nm,1.1s						

*HEL **31** 15:34:56.2±0.1,61°08N×30°16E,h0km,ML2.5,Explosion IDC **31** 15:34:58.8±1.2,61°05N×29°88E,h0km,mbtmp3.3/4, ML3.2/4,Error ellipse: s-maj=10.8km s-min=10.0km az=36.0*

ISC 31 15:34:55.0±1.1,61°09N±0°05×30°02E±0°06,h0km,n16, σ1°68/20,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUFX	**Ruokolahti**	**0.62**	**304**	*e*P	**Pb**	**15 35 08.3**	**-0.2**
RUFX				*e*S	**Sb**	**15 35 17.3**	**-0.5**
VJF	**Virojoki**	**1.33**	**246**	*e*P	**Pn**	**15 35 20.7**	**0.0**
JOF	**Joensuu**	**1.93**	**18**	*e*P	**Pb**	**15 35 30.2**	**-0.8**
JOF				*e*S	**Sn**	**15 35 54.5**	**+0.5**
FIA1	**FINESS Array S**	**1.94**	**282**	*e*P	**Pg**	**15 35 31.4**	**-0.6**
FIA1				*e*SG	**Sg**	**15 35 58.0**	**+0.9**
FINES	**FINESS Array B**	**1.94**	**282**	Pg	**Pb**	**15 35 31.3**	**+0.2**
	4.3nm,0.3s,baz=105,slow=16,SNR=143						
FINES				Lg	Lg	15 35 57.8	
	5.1nm,0.3s,baz=103,slow=24,SNR=4.8						
KAF	**Kangasniemi**	**2.05**	**302**	MSG		15 36 04.4	
	comp=Z,22nm,0.2s						
PVF	**Pernaja**	**2.11**	**257**	*e*P	**Pb**	**15 35 33.6**	**-0.4**
PVF				*e*SG	**Sg**	**15 36 04.0**	**+1.4**
PVF				MSG		15 36 06.1	
	comp=Z,55nm,0.2s						
KEF	**Keuruu**	**2.68**	**296**	MSG		15 36 21.8	
	comp=Z,8.1nm,0.2s						
NUR	**Nurmijrvi**	**2.70**	**260**	MSG		15 36 23.0	
	comp=Z,21nm,0.2s						
MEF	**Metsahovi**	**2.90**	**255**	MSG		15 36 29.2	
	comp=Z,22nm,0.2s						
VSU	**Vasula**	**3.12**	**214**	*e*P	**Pn**	**15 35 47.4**	**+2.1**
VSU				*e*S	**Sn**	**15 36 25.6**	**+2.4**
MTSE	**Matsula**	**3.93**	**235**	*e*P	**Pn**	**15 35 58.3**	**+1.8**
MTSE				*e*SG	**Sg**	**15 36 58.5**	**-2.6**
HFS	**Hagfors**	**8.09**	**270**	Pn	**Pn**	**15 36 54.8**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=72,slow=14,SNR=14						
HFS				Sn	**Sn**	**15 38 22.6**	**-3.0**
	comp=Z,0.6nm,0.3s,baz=79,slow=24,SNR=5.2						
HFS				Lg	Lg	15 39 09.0	
	comp=Z,1.4nm,0.3s,baz=75,slow=29,SNR=6.7						
	comp=Z,1.3nm,0.3s						
ARCES	**ARCESS Array B**	**8.68**	**349**	Pn	**Pn**	**15 37 02.8**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=165,slow=14,SNR=9.0						
ARCES				Sn	**Sn**	**15 38 38.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=163,slow=23,SNR=4.3						
ARCES				Lg	Lg	15 39 29.4	
	comp=Z,0.5nm,0.3s,baz=163,slow=29,SNR=5.0						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B**	**9.11**	**278**	Pn	**Pn**	**15 37 08.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=78,slow=14,SNR=22						
NOA				Lg	Lg	15 39 42.7	
	baz=39,slow=25,SNR=1.9						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**10.43**	**183**	Pn	**Pn**	**15 37 22.6**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=358,slow=13,SNR=4.3						
	comp=Z,0.3nm,0.3s						

*NEIC **31** 15:39:07.3±1.5,56°1S±0°1×27°4W±0°2,h103km±5km, mb5.1/53,Error ellipse: s-maj=18.5km s-min=13.6km az=224.0*
*IDC **31** 15:39:08.6±1.4,56°11S×27°28W,h116km±10km,mb4.5/13, mbtmp4.9/15,MS3.5/18,Error ellipse: s-maj=14.3km s-min=11.6km az=72.0*

ISC 31 15:39:07.1±0.6,56°12S±0°06×27°36W±0°08,h107km±4km, n304,σ0°75/317,mb5.1/40,1C-2D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.54**	**286**	Pn	**Pn**	**15 40 26.3**	**-0.8**
ORCD	**Orcadas**	**10.21**	**236**	Pn	Pn	15 41 25.5	-4.8
VNA1	**Neumayer--Stat**	**16.77**	**158**	P	**Pn**	**15 42 53.2**	**-1.8**
VNA1	**Neumayer--Stat**	**16.77**	**158**	ScP	**ScP**	**15 51 01.3**	**+0.4**
VNA3	**Neumayer Olymp**	**16.96**	**160**	P	**Pn**	**15 42 56.6**	**-0.8**
VNA3	**Neumayer Olymp**	**16.96**	**160**	PcP	**PcP**	**15 47 38.1**	**+1.3**
VNA3				S	S	15 46 22.5	+14
VNA3	**Neumayer Olymp**	**16.96**	**160**	ScP	**ScP**	**15 51 01.1**	**-0.3**
VNA2	**Neumayer--Watz**	**17.16**	**158**	P	**P**	**15 42 59.3**	**-0.5**
	baz=313,slow=13						
VNA2	**Neumayer--Watz**	**17.16**	**158**	PcP	**PcP**	**15 47 37.4**	**+0.3**
VNA2				S	S	15 46 27.1	+14
VNA2	**Neumayer--Watz**	**17.16**	**158**	ScP	**ScP**	**15 51 01.8**	**0.0**
EFI	**East Falkland**	**18.54**	**271**	P	**P**	**15 43 15.0**	**0.0**
SNAA	**Sanae**	**18.72**	**156**	P	**P**	**15 43 17.2**	**+0.3**

SNAA Sanae 18.72 156 PcP **PcP** 15 47 40.8 +1.0
SNAA S **S** 15 46 40.9 -3.1
SNAA Sanae 18.72 156 ScP **ScP** 15 51 05.0 -0.2
SNAA Sanae 18.72 156 **P** 15 43 17.2 +0.3
SNAA Sanae 18.72 156 P **P** 15 43 17.0 +0.1
38nm,0.6s,baz=306,slow=9.7,SNR=364
SNAA PcP **PcP** 15 47 40.3 +0.6
2.0nm,0.6s,baz=266,slow=6.2,SNR=5.9
SNAA LR LR 15 49 15.9
comp=Z,25nm,21.4s,baz=308,slow=32
PMSA Palmer Station 19.78 229 P **Pn** 15 43 30.1 -0.7
PMSA Palmer Station 19.78 229 P **Pn** 15 43 30.2 -0.7
69nm,0.7s,baz=64,slow=6.4,SNR=18
PMSA LR LR 15 49 42.2
comp=Z,123nm,18.8s,baz=56,slow=32
TROLL Troll, Antarti 20.23 153 P **P** 15 43 33.4 +0.1
TROLL Troll, Antarti 20.23 153 PcP **PcP** 15 47 43.7 +1.1
TROLL S **S** 15 47 16.8 +2.7
TROLL Troll, Antarti 20.23 153 ScP **ScP** 15 51 08.7 -0.1
SMAI San Martin Ant 21.65 220 P **P** 15 43 50.0 +1.6
BELA Belgrano 2 22.00 184 P **P** 15 43 51.7 -0.4
MG02 Cerro Sombrero 24.29 260 P **P** 15 44 12.8 -1.3
MG05 Puerto Natales 26.59 260 P **P** 15 44 32.4 -2.5
MG05 IAmb IAmb 15 45 19.2
comp=Z,96nm,1.6s
TRQA Tornquist 29.26 293 P **P** 15 44 58.9 0.0
PLTB Pedras Altas 30.47 312 P **P** 15 45 10.6 +1.0
PLTB IAmb IAmb 15 45 11.3
comp=Z,14nm,0.6s
PLTB Pedras Altas 30.47 312 *e*P **P** 15 45 10.7 +1.1
PLCA Paso Flores 31.92 280 P **P** 15 45 22.6 +0.3
comp=Z,2.0nm,0.9s,baz=228,slow=4.3,SNR=3.0
PLCA PcP **PcP** 15 48 10.7 +0.6
comp=Z,3.1nm,0.8s,baz=110,slow=2.7,SNR=5.8
PLCA ScP **ScP** 15 51 40.9 -2.4
comp=Z,1.0nm,0.6s,baz=29,slow=7.3,SNR=4.0
PLCA LR LR 15 57 53.3
comp=Z,30nm,18.3s,baz=153,slow=35
comp=Z,2.0nm,0.9s
ITAB Concordia 33.91 318 P **P** 15 45 41.2 +1.6
QSPA South Pole Qui 34.13 180 P **P** 15 45 42.3 +0.9
comp=Z,31nm,0.6s,baz=200,slow=2.7,SNR=206
QSPA PcP **PcP** 15 48 16.0 +0.2
comp=Z,9.1nm,0.7s,baz=8.2,slow=1.0,SNR=6.5
QSPA ScP **ScP** 15 51 48.8 -1.8
comp=Z,3.3nm,0.8s,baz=232,slow=0.3,SNR=7.3
QSPA LR LR 15 58 40.1
comp=Z,55nm,21.5s,baz=226,slow=34
comp=Z,31nm,0.6s
QSPA South Pole Qui 34.13 180 P **P** 15 45 42.5 +1.1
PTGB Pitanga 36.18 320 *e*P **P** 15 45 59.6 +0.4
BO02 Sierra Bellavi 36.35 287 P **P** 15 46 02.2 +1.6
BO02 IAmb IAmb 15 46 32.4
comp=Z,59nm,1.9s
BO02 **PcP** 15 48 22.9 +0.1
CPUP Villa Florida 36.79 312 P **P** 15 46 04.3 +0.1
CPUP PcP **PcP** 15 48 24.5 +0.4
CPUP Villa Florida 36.79 312 *e*P **P** 15 46 04.9 +0.7
CPUP Villa Florida 36.79 312 P **P** 15 46 03.9 -0.4
comp=Z,7.7nm,0.7s,baz=150,slow=7.5,SNR=17
CPUP PcP **PcP** 15 48 24.2 +0.1
comp=Z,4.3nm,0.7s,baz=191,slow=0.7,SNR=7.4
comp=Z,7.7nm,0.7s
CPUP Villa Florida 36.79 312 P **P** 15 46 04.4 +0.1
CPUP pP **pP** 15 46 26.6 -1.1
CPUP sP **sP** 15 46 39.4 -0.2
MT09 Talagante 37.24 288 P **P** 15 46 06.2 -2.0
MT09 IAmb IAmb 15 46 39.3
comp=Z,77nm,1.6s
MT02 Curacav 37.72 289 P **P** 15 46 10.8 -1.3
TRCB Terra Rica 38.14 320 *e*P **P** 15 46 16.2 +0.4
BB19B Bebedouro 38.39 327 *e*P **P** 15 46 18.1 +0.2
PCMB Pacaembu 38.76 323 *e*P **P** 15 46 21.2 +0.3
SJMB Sao Joao De Ma 38.78 339 *e*P **P** 15 46 20.4 -0.8
CO02 Combarbal 39.25 291 P **P** 15 46 25.4 +0.3
DIAM Diamantina, MG 39.72 335 *e*P **P** 15 46 28.5 -0.6
MAW Mawson 40.15 144 P **P** 15 46 32.7 +0.8
MAW Mawson 40.15 144 P **P** 15 46 32.1 +0.2
comp=Z,12nm,0.6s,baz=225,slow=7.8,SNR=54
MAW ScP **ScP** 15 52 12.6 -0.3
comp=Z,5.6nm,0.9s,baz=265,slow=6.0,SNR=9.0
comp=Z,12nm,0.6s
PMNB Patos De Minas 40.19 331 *e*P **P** 15 46 32.2 -0.6
SUR Sutherland 40.75 75 LR LR 16 00 33.9
comp=Z,107nm,18.2s,baz=161,slow=32
LCO Las Campanas 40.84 293 P **P** 15 46 37.7 -0.7
AQDB Aquidauana 41.39 318 P **P** 15 46 42.7 +0.1
AQDB IAmb IAmb 15 46 43.3
comp=Z,51nm,1.7s
AQDB Aquidauana 41.39 318 *e*P **P** 15 46 43.0 +0.4
AC02 Maricunga 41.82 297 P **P** 15 46 47.5 +0.8
AC02 IAmb IAmb 15 46 48.6
comp=Z,26nm,0.8s
GO02 Mina Guanaco 43.44 298 P **P** 15 46 59.8 +0.2
GO02 PcP **PcP** 15 48 46.7 +0.7
PB15 IPOC Station P 45.02 299 P **P** 15 47 12.3 +0.2
PB15 IAmb IAmb 15 47 15.8
comp=Z,20nm,0.8s
LVC Limon Verde 45.25 300 P **P** 15 47 14.9 +0.8
LVC IAmb IAmb 15 47 17.4
comp=Z,28nm,0.7s
LVC PcP **PcP** 15 48 52.5 +0.2
LVC Limon Verde 45.25 300 *e*P **P** 15 47 15.2 +1.1
LVC Limon Verde 45.25 300 LR LR 16 08 25.8
comp=Z,27nm,18.6s,baz=176,slow=39
LVC Limon Verde 45.25 300 P **P** 15 47 15.2 +1.1
PB06 IPOC Station P 45.49 300 P **P** 15 47 16.0 +0.2
PB06 IAmb IAmb 15 47 22.8
comp=Z,45nm,1.3s
SALV Santo Antonio 45.58 320 *e*P **P** 15 47 17.0 +0.7
SBA Scott Base 46.00 184 P **P** 15 47 20.4 +1.5
SBA IAmb IAmb 15 47 22.8
comp=Z,22nm,0.9s
SBA Scott Base 46.00 184 P **P** 15 47 20.7 +1.8
SBA ScP **ScP** 15 52 37.7 +1.3
BOSA Boshof 46.08 76 P **P** 15 47 19.6 -0.6
comp=Z,5.5nm,1.1s,baz=256,slow=4.2,SNR=2.4
BOSA LR LR 16 05 25.3
comp=Z,61nm,18.4s,baz=195,slow=34
comp=Z,5.5nm,1.1s
PB04 IPOC Station P 46.09 299 P **P** 15 47 20.6 +0.1
PB04 IAmb IAmb 15 47 21.6
comp=Z,34nm,0.6s
PB07 IPOC Station P 46.48 300 P **P** 15 47 24.0 +0.5
PB07 PcP **PcP** 15 48 57.3 +1.0
VNDA Vanda 46.50 183 P **P** 15 47 23.9 +1.1
VNDA IAmb IAmb 15 47 25.8
comp=Z,23nm,0.8s
VNDA Vanda 46.50 183 P **P** 15 47 24.1 +1.3
comp=Z,19nm,0.8s,baz=186,slow=6.4,SNR=45
VNDA ScP **ScP** 15 52 38.4 -0.1
comp=Z,1.0nm,0.8s,baz=170,slow=2.4,SNR=4.4
VNDA LR LR 16 05 06.0
comp=Z,62nm,18.4s,baz=220,slow=34
comp=Z,19nm,0.8s
VNDA Vanda 46.50 183 P **P** 15 47 24.0 +1.3
VNDA pP **pP** 15 47 48.2 +0.9
VNDA sP **sP** 15 47 59.3 +0.1
VNDA ScP **ScP** 15 52 39.8 +1.2
PB01 IPOC Station P 46.86 301 P **P** 15 47 27.1 +0.7
PTLB Pontes e Lacer 47.28 316 IAmb IAmb 15 47 30.9
comp=Z,17nm,0.7s
PTLB Pontes e Lacer 47.28 316 *e*P **P** 15 47 29.4 -0.2
SIV San Ignacio 47.55 314 LR LR 16 07 42.6
comp=Z,25nm,20.2s,baz=110,slow=36
TA01 Diego Aracena 47.61 300 P **P** 15 47 32.2 +0.1
TA01 IAmb IAmb 15 47 57.8
comp=Z,53nm,1.4s
CCD Concordia, Ant 47.62 170 P **P** 15 47 32.5 +0.5
CCD ScP **ScP** 15 52 42.9 -0.9
GO01 Chusmiza 47.90 302 P **P** 15 47 35.8 +0.9
GO01 PcP **PcP** 15 49 02.5 +0.7
H10S2 ASCENSION HYDR 48.09 17 T T 16 39 49.8
baz=189,slow=74,SNR=7.9
H10S3 ASCENSION HYDR 48.10 17 T T 16 39 52.5
baz=31,slow=74,SNR=12
LBTB Lobatse 49.12 73 P **P** 15 47 44.1 +0.4
comp=Z,3.0nm,0.6s,baz=195,slow=6.7,SNR=4.9
LBTB LR LR 16 04 57.3
comp=Z,41nm,18.0s,baz=180,slow=32
comp=Z,3.0nm,0.6s
H10N1 ASCENSION HYDR 49.21 17 T T 16 41 04.6
baz=200
H10N3 ASCENSION HYDR 49.21 17 T T 16 41 12.8
baz=200,slow=74,SNR=11
H10N2 ASCENSION HYDR 49.23 17 T T 16 41 13.4
baz=200,slow=74,SNR=4.4
TSUM Tsumeb 49.80 61 LR LR 16 07 21.1
comp=Z,56nm,18.1s,baz=156,slow=34
PDRB Porto dos Gac 49.92 321 *e*P **P** 15 47 50.0 +0.2
VILB Vilhena 49.97 316 P **P** 15 47 50.2 +0.1
VILB IAmb IAmb 15 47 51.1
comp=Z,19nm,0.7s
VILB Vilhena 49.97 316 *e*P **P** 15 47 50.0 -0.2
CLDB Colider 50.28 323 *e*P **P** 15 47 52.4 -0.2
LPAZ La Paz 50.34 305 P **P** 15 47 54.5 +0.9
LPAZ IAmb IAmb 15 47 55.6
comp=Z,18nm,0.7s
LPAZ PcP **PcP** 15 49 11.7 +0.8
LPAZ La Paz 50.34 305 *e*P **P** 15 47 55.0 +1.4
LPAZ La Paz 50.34 305 P **P** 15 47 54.9 +1.2
comp=Z,8.3nm,0.3s,baz=150,slow=6.2,SNR=60
LPAZ PcP **PcP** 15 49 11.8 +1.0
comp=Z,5.1nm,0.6s,baz=98,slow=3.3,SNR=5.9
LPAZ ScP **ScP** 15 52 57.0 +0.5
comp=Z,0.9nm,0.4s,baz=163,slow=2.2,SNR=4.9
comp=Z,8.3nm,0.3s
LPAZ La Paz 50.34 305 P **P** 15 47 54.9 +1.2
LPAZ pP **pP** 15 48 18.4 -0.3
LPAZ ScP **ScP** 15 52 56.6 +0.2
SAML Samuel 54.78 315 P **P** 15 48 25.9 +0.2
SAML Samuel 54.78 315 P **P** 15 48 25.9 +0.2
SAML pP **pP** 15 48 50.0 -1.0
ETMB Extrema 55.24 311 P **P** 15 48 28.6 -0.4
ETMB IAmb IAmb 15 48 30.1
comp=Z,7.7nm,0.9s
ETMB Extrema 55.24 311 *e*P **P** 15 48 28.9 0.0
DRV Dumont d'Urvil 57.17 174 P **P** 15 48 42.1 +0.2
LSZ Lusaka 58.49 69 LR LR 16 13 13.1
comp=Z,60nm,18.1s,baz=174,slow=35
BOAV Boa Vista 64.28 323 P **P** 15 49 30.4 -0.4
BOAV IAmb IAmb 15 49 31.5
comp=Z,9.9nm,0.7s
MDP Montagnes des 64.45 332 LR LR 16 16 47.3
comp=Z,30nm,19.2s,baz=308,slow=35
LIC Lamto 64.80 25⇓ *e*P **P** 15 49 34.7 +0.5
comp=Z,35nm,0.5s
KIC Kosan Boka 65.00 25⇑ *i*P **P** 15 49 36.2 +0.7
comp=Z,10nm,0.6s
TIC Toumodi 65.21 25⇓ *e*P **P** 15 49 37.2 +0.3
comp=Z,27nm,0.6s
DBIC Dimbokro 65.27 25 P **P** 15 49 37.8 +0.6
DBIC Dimbokro 65.27 25 P **P** 15 49 37.8 +0.6
comp=Z,8.9nm,0.6s,baz=193,slow=6.8,SNR=15
DBIC LR LR 16 12 30.4
comp=Z,36nm,18.1s,baz=164,slow=31
comp=Z,8.9nm,0.6s
DBIC Dimbokro 65.27 25 P **P** 15 49 37.8 +0.6
ARNL Arenillas 67.07 300 P **P** 15 49 48.7 -0.1
PORT Chimborazo Vol 68.27 303 IAmb IAmb 15 50 15.2
comp=Z,11nm,0.7s
PULU Pululahua 69.45 304 P **P** 15 50 04.9 +0.8
OTAV Otavalo 69.61 304 P **P** 15 50 06.4 +1.1
OTAV Otavalo 69.61 304 *e*P **P** 15 50 07.2 +2.0
OTAV Otavalo 69.61 304 P **P** 15 50 07.1 +1.8
BBTS Babate 71.09 11 LR LR 16 13 04.4
comp=Z,34nm,20.9s,baz=155,slow=29
KOWA Kowa 73.03 24 LR LR 16 15 40.3
comp=Z,41nm,21.0s,baz=174,slow=30
BAUV El Baul 73.04 318 P **P** 15 50 25.0 -0.2
BAUV IAmb IAmb 15 50 26.6
comp=Z,23nm,0.9s
TOA0 Torodi Ar. Sit 73.16 30 P **P** 15 50 26.3 +0.4
TORD Torodi Ar. Bea 73.16 30 P **P** 15 50 25.8 -0.1
TORD Torodi Ar. Bea 73.16 30 P **P** 15 50 26.7 +0.8
comp=Z,11nm,0.6s,baz=198,slow=6.5,SNR=61
comp=Z,11nm,0.6s
BIRV Birongo 73.80 320 P **P** 15 50 30.6 +1.0
BIRV IAmb IAmb 15 50 31.6
comp=Z,16nm,0.8s
SDV Santo Domingo 73.99 315 P **P** 15 50 31.4 +0.4
SDV IAmb IAmb 15 50 32.3
comp=Z,13nm,0.7s
SDV Santo Domingo 73.99 315 *e*P **P** 15 50 32.0 +1.0
LBZ Lake Benmore 78.78 193 P **P** 15 50 56.5 -1.0
LBZ IAmb IAmb 15 52 11.5
comp=Z,100nm,1.8s
RPZ Rata Peaks 79.33 193 P **P** 15 51 00.6 +0.1
comp=Z,6.4nm,0.6s,baz=187,slow=4.1,SNR=8.4
comp=Z,6.4nm,0.6s
DRK0 Durika 79.77 304 IAmb IAmb 15 51 06.4
comp=Z,47nm,0.9s
THZ Tophouse 80.98 195 IAmb IAmb 15 51 15.8
comp=Z,24nm,0.7s
TAU Tasmania Unive 81.24 176 P **P** 15 51 10.8 0.0
TAU IAmb IAmb 15 51 11.6
comp=Z,34nm,0.8s
NNZ Nelson 81.45 196 P **P** 15 51 11.3 -0.6
ACON Acoyapa 83.04 303 P **P** 15 51 21.1 +0.6
ACON IAmb IAmb 15 51 21.4
comp=Z,48nm,1.3s
URZ Urewera 83.71 199 LR LR 16 25 39.2
comp=Z,79nm,18.7s,baz=31,slow=33
MTO3 Montecristo 87.13 301 IAmb IAmb 15 51 42.1
comp=Z,21nm,0.8s
STKA Stephens Creek 91.85 171 P **P** 15 52 03.2 +0.3
STKA Stephens Creek 91.85 171 P **P** 15 52 03.0 +0.1
comp=Z,5.3nm,0.7s,baz=153,slow=4.8,SNR=14
STKA PP **PP** 15 55 43.3 +1.0
comp=Z,1.8nm,0.9s,baz=178,slow=7.4,SNR=3.7
comp=Z,5.3nm,0.7s
ESDC Sonseca Array 97.48 18 LR LR 16 34 19.5
comp=Z,23nm,18.5s,baz=167,slow=34
ASAR Alice Springs 98.95 163 P **P** 15 52 34.8 -0.7
ASAR Alice Springs 98.95 163 P **P** 15 52 35.0 -0.4
comp=Z,3.7nm,0.7s,baz=185,slow=3.3,SNR=56
ASAR PP **PP** 15 56 33.7 -3.8
comp=Z,1.3nm,0.7s,baz=188,slow=6.9,SNR=9.5
comp=Z,3.7nm,0.7s
AS31 Alice Springs 98.95 163 P **P** 15 52 34.8 -0.6
WRA Warramunga Arr 102.67 162 P **Pdif** 15 52 51.0 -0.9
comp=Z,0.6nm,0.5s,baz=195,slow=4.4,SNR=17
WRA PP **PP** 15 57 05.7 +0.2
comp=Z,1.7nm,1.1s,baz=185,slow=6.1,SNR=5.1
P18A Preston Nutter 118.21 300 **PKPdf** 15 57 40.8 -0.4
MSU Marysvale 118.30 297 PKPdf **PKPdf** 15 57 41.2 -0.1
MVU Marysvale 118.31 297 PKPdf **PKiKP** 15 57 41.8 +0.4
SPR3 Spring Creek 3 119.75 296 PKPdf **PKiKP** 15 57 44.3 0.0
PDAR Pinedale Array 120.30 302 PKP **PKPdf** 15 57 43.9 -1.1
comp=Z,0.4nm,0.4s,baz=114,slow=5.2,SNR=6.8
NOA NORSAR Array B 120.71 21 PKP **PKPdf** 15 57 44.4 -0.5
comp=Z,0.5nm,0.6s,baz=244,slow=2.0,SNR=2.1
NVAR Mina Array Bea 121.34 293 PKP **PKiKP** 15 57 48.2 +1.0
comp=Z,1.4nm,0.6s,baz=118,slow=2.7,SNR=12
ELK Elko 121.53 297 PKPdf **PKiKP** 15 57 48.1 +0.5
FINES FINESS Array B 124.49 28 PKP **PKPdf** 15 57 52.0 0.0
comp=Z,3.0nm,0.5s,baz=151,slow=1.7,SNR=30
CMAR Chiang Mai Arr 125.13 111 PKP **PKiKP** 15 57 55.1 0.0
comp=Z,1.3nm,0.6s,baz=243,slow=3.8,SNR=7.8
K05A Summer Lake 125.84 295 PKPdf **PKiKP** 15 57 57.1 +1.1
G08A Pilot Rock 126.72 298 PKPdf **PKiKP** 15 57 57.8 +0.2
ABKAR Akbulak array 127.49 56 PKPdf **PKPdf** 15 57 57.5 -0.7
KKAR Karatay Array 128.33 68 PKPdf **PKPdf** 15 57 59.8 -0.3
ARCES ARCESS Array B 131.04 22 PKP **PKPdf** 15 58 04.8 +0.4
comp=Z,2.1nm,0.6s,baz=220,slow=2.0,SNR=14
PZH PanZhiHua 133.18 108 PKP **PKPdf** 15 58 09.0 -0.9
YKA Yellowknife Ar 136.16 318 PKP **PKPdf** 15 58 14.3 +0.1
comp=Z,2.1nm,0.6s,baz=119,slow=2.6,SNR=15
YKA SKPbc **SKPbc** 16 01 34.3 -1.7
comp=Z,1.4nm,0.7s,baz=128,slow=3.5,SNR=7.0
MKAR Makanchi Array 137.00 72 PKP **PKPdf** 15 58 15.8 -0.5
comp=Z,0.4nm,0.6s,baz=228,slow=1.2,SNR=2.7
MKAR SKPbc **SKPbc** 16 01 37.0 -2.2
comp=Z,0.8nm,0.8s,baz=232,slow=3.3,SNR=4.1
WMQ Urumqi 138.01 79 *e*P **PKiKP** 15 58 19.8 -0.6
WMQ LR LR
comp=N,460nm,20.5s
WMQ LR LR
comp=Z,140nm,16.1s
ZALV Zalesovo Beam 142.49 64 PKPdf **PKPdf** 15 58 25.1 -0.9
ZALV Zalesovo Beam 142.49 64 PKP **PKPdf** 15 58 27.0 +1.0
comp=Z,3.4nm,0.5s,baz=248,slow=3.2,SNR=12
ZALV SKPbc **SKPbc** 16 01 52.5 -1.2
comp=Z,0.6nm,0.5s,baz=318,slow=1.9,SNR=3.9
A36M Sachs Harbour 144.22 328 PKPdf PKPbc 15 58 27.6 +0.5
A36M Sachs Harbour 144.22 328 P PKPbc 15 58 27.5 +0.5
baz=108
N31M Braeburn, Yuko 144.27 309 P PKPbc 15 58 27.9 +0.3
baz=114,SNR=8.1
P29M Windy Craggy 144.35 305 P PKPbc 15 58 28.3 +0.5
baz=116

HYT Haines Junctio 144.76 307 P **PKPdf** 15 58 30.0 +0.1
baz=114,SNR=14
N30M Ashikik Lake 144.83 308 P **PKPdf** 15 58 30.2 +0.2
baz=114,SNR=35
PNL Peninsula 145.13 305 P **PKPab** 15 58 30.8 +0.3
baz=115
M30M Minto, Yukon 145.14 310 **PKPbc** 15 58 30.0 -0.3
M30M Minto, Yukon 145.14 310 P **PKPab** 15 58 30.6 +0.1
baz=112,SNR=28
MAYO Mayo, Yukon 145.15 312 P **PKPab** 15 58 30.7 +0.3
baz=112
LYN LuoYang 145.18 111 *e*PKPbc **PKPbc** 15 58 30.5 -0.7
YUK6 Outpost Mounta 145.19 307 P **PKPab** 15 58 31.1 +0.1
baz=114
YUK4 Talbot Arm 145.47 308 P **PKPab** 15 58 32.0 +0.1
baz=113,SNR=17
PINM Pinnacle 145.70 305 P **PKPbc** 15 58 32.4 +0.3
baz=114,SNR=6.8
INK Inuvik 145.80 321 PKPdf **PKPbc** 15 58 31.7 -0.4
INK Inuvik 145.80 321 P **PKPbc** 15 58 32.4 +0.3
baz=107,SNR=15
INK Inuvik 145.80 321 PKPbc **PKPab** 15 58 32.5 -0.2
comp=Z,26nm,0.8s,baz=93,slow=3.6,SNR=36
M29M Somme Creek 145.81 309 P **PKPab** 15 58 33.0 -0.1
baz=112,SNR=42
K29M Barlow Dome 145.91 312 P **PKPbc** 15 58 32.9 +0.2
baz=110,SNR=43
O28M Mount Upton 145.94 306 P **PKPab** 15 58 33.5 -0.3
baz=113,SNR=11
EPYK Eagle Plains 146.41 317 P **PKPbc** 15 58 34.0 -0.1
baz=107,SNR=16
MESA MESA 146.52 305 P **PKPbc** 15 58 35.2 +0.5
baz=113
CTG Chitna Glacier 146.54 306 P **PKPbc** 15 58 35.1 +0.4
baz=112,SNR=9.7
I29M Ogilvie Camp, 146.73 314 P **PKPbc** 15 58 34.7 -0.3
baz=108,SNR=8.9
DAWY Dawson 146.77 312 **PKPbc** 15 58 35.1 0.0
DAWY Dawson 146.77 312 P **PKPbc** 15 58 35.2 0.0
baz=109,SNR=11
BVCY Beaver Creek 146.84 309 P **PKPbc** 15 58 35.7 +0.3
baz=110,SNR=21
M27K Edge Creek, AK 147.27 308 **PKPbc** 15 58 36.8 0.0
M27K Edge Creek, AK 147.27 308 P **PKPbc** 15 58 36.7 0.0
baz=110,SNR=22
L27K Beaver Creek, 147.48 310 P **PKPbc** 15 58 37.4 +0.2
baz=109,SNR=8.1
KAIM Kayak Island 147.57 303 PKPbc **PKPbc** 15 58 37.9 +0.6
KAIM Kayak Island 147.57 303 P **PKPbc** 15 58 38.0 +0.6
baz=112
EGAK Eagle 147.71 313 P **PKPbc** 15 58 37.5 -0.1
baz=106,SNR=8.8
M26K Nabesna, AK 147.78 308 P **PKPbc** 15 58 37.6 -0.4
baz=109
BMRM Bremner River 148.03 305 PKPbc **PKPbc** 15 58 38.8 +0.2
BMRM Bremner River 148.03 305 P **PKPbc** 15 58 38.9 +0.2
baz=110,SNR=8.7
I27K Kandik River 148.12 314 P **PKPbc** 15 58 39.1 +0.3
baz=105,SNR=17
L26K Log Cabin Wild 148.13 309 P **PKPbc** 15 58 39.0 +0.2
baz=108,SNR=7.5
N25K Chitina, Valde 148.24 306 PKPdf **PKPdf** 15 58 34.5 -1.2
N25K PKPbc **PKPbc** 15 58 39.7 +0.5
N25K Chitina, Valde 148.24 306 P **PKPbc** 15 58 39.6 +0.4
baz=109,SNR=10
H27K Steamboat Moun 148.24 315 P **PKPbc** 15 58 39.6 +0.5
baz=104,SNR=32
EYAK Cordova Ski Ar 148.41 304 P **PKPbc** 15 58 40.2 +0.7
baz=110
G27K Doyon Strip 148.43 316 P **PKPbc** 15 58 39.8 +0.3
baz=103,SNR=7.9
J26L Joseph Creek 148.64 312 P **PKPbc** 15 58 40.8 +0.6
baz=105,SNR=26
SCRK Sand Creek 148.67 311 P **PKPbc** 15 58 40.9 +0.6
baz=106,SNR=19
E27K Coleen River 148.69 319 P **PKPbc** 15 58 40.4 +0.3
baz=101
HARP HAARP 148.73 307 P **PKPbc** 15 58 40.8 +0.5
baz=107
KLU Klutina 148.80 306 PKPbc **PKPbc** 15 58 41.2 +0.5
KLU Klutina 148.80 306 P **PKiKP** 15 58 41.6 -0.3
baz=108,SNR=16
RIDG Independent Ri 148.98 310 P **PKiKP** 15 58 41.9 -0.3
baz=106,SNR=39
PAX Paxson 149.04 308 P **PKPbc** 15 58 41.5 +0.3
baz=108,SNR=12
M24K Tolsona, Glenn 149.10 307 PKPbc **PKPbc** 15 58 41.3 -0.1
M24K Tolsona, Glenn 149.10 307 P **PKiKP** 15 58 42.5 0.0
baz=107,SNR=7.2
G26K Porcupine Rive 149.28 316 P **PKPbc** 15 58 42.0 +0.4
baz=101,SNR=9.3
HHC Hu-ho-hao-te 149.32 102 *e*P **PKPdf** 15 58 39.0 +0.8
K24K Donnelly Dome 149.39 310 P **PKPbc** 15 58 42.2 +0.2
baz=105,SNR=5.2
J25K Salcha River, 149.42 312 P **PKPbc** 15 58 42.5 +0.4
baz=104,SNR=9.9
SCM Sheep Creek Mo 149.54 306 P **PKiKP** 15 58 43.1 -0.3
baz=107,SNR=14
F26K Sheenjek River 149.55 318 P **PKiKP** 15 58 43.1 -0.1
baz=99,SNR=9.1
C27K Jago River 149.66 322 P **PKiKP** 15 58 43.2 -0.3
baz=96
BMAR Burnt Mountain 149.67 317 PKPbc **PKiKP** 15 58 43.1 -0.4
PRP Porcupine Dome 149.69 313 PKPbc **PKPbc** 15 58 43.0 +0.2
PRP Porcupine Dome 149.69 313 P **PKPbc** 15 58 43.2 +0.4
baz=102,SNR=16
M23K Glacier View 149.71 306 P **PKPbc** 15 58 43.1 +0.3
baz=107,SNR=8.4
PWL Port Wells 149.72 304 P **PKiKP** 15 58 43.3 -0.4
baz=108,SNR=20
DHY Denali Highway 149.90 308 P **PKiKP** 15 58 44.0 -0.3
baz=105,SNR=15
WAT6 Susitna Watana 149.94 307 P **PKPbc** 15 58 43.8 +0.3
baz=105,SNR=9.8
KNK Knik Glacier 149.94 305 P **PKPbc** 15 58 43.7 +0.4
baz=107,SNR=7.2
H25K Birch Creek 149.95 315 P **PKiKP** 15 58 43.9 -0.1
baz=100,SNR=6.7
SML Sawmill 149.99 305 P **PKPbc** 15 58 43.8 +0.2
baz=106,SNR=18
SEW Seward 150.01 302 P **PKPbc** 15 58 43.7 +0.2
baz=108,SNR=7.8
HDA Harding Lake 150.04 311 P **PKPbc** 15 58 43.7 +0.2
baz=103,SNR=8.4
IL31 150.09 312 PKPbc **PKPbc** 15 58 43.4 -0.2
ILAR Eielson Array 150.09 312 PKPbc **PKPbc** 15 58 43.8 +0.1
comp=Z,20nm,0.8s,baz=134,slow=1.9,SNR=114
F25K Christian Rive 150.10 317 P **PKiKP** 15 58 44.3 -0.1
baz=98,SNR=8.5
C26K Camden Bay 150.11 322 P **PKiKP** 15 58 44.9 +0.7
baz=95
E25K Arctic Village 150.15 318 P **PKiKP** 15 58 44.5 0.0
baz=98,SNR=12
WAT1 Susitna Watana 150.36 307 P **PKPbc** 15 58 44.6 +0.2
baz=104
POKR Poker Plat Res 150.39 312 PKPbc **PKPbc** 15 58 44.2 -0.1
POKR Poker Plat Res 150.39 312 P **PKPbc** 15 58 44.6 +0.3
baz=101
RC01 Rabbit Creek A 150.44 304 P **PKPbc** 15 58 45.1 -0.2
baz=107,SNR=6.1
BRSE Bradley Lake S 150.51 301 P **PKPbc** 15 58 45.0 +0.2
baz=108,SNR=20
COLA College 150.51 312 PKPbc **PKPbc** 15 58 43.2 -1.3
COLA PKPab **PKPab** 15 58 52.2 +0.5
D25K Kavik River 150.57 321 P **PKiKP** 15 58 45.1 -0.3
baz=95
G24K Hadweenzic Riv 150.68 315 P **PKiKP** 15 58 45.5 -0.1
baz=98,SNR=11
H24K Noodor Dome 150.70 314 P **PKPbc** 15 58 45.2 +0.1
baz=100,SNR=10
MCK McKinley 150.74 309 P **PKiKP** 15 58 45.6 -0.2
baz=102,SNR=21
KDAK Kodiak Island 150.76 296 P **PKiKP** 15 58 45.9 -0.1
baz=110
M22K Willow 150.79 305 P **PKiKP** 15 58 45.7 -0.2
baz=105,SNR=10
SONM Songino Array 150.83 87 PKPbc **PKPbc** 15 58 46.2 +0.2
comp=Z,5.2nm,0.5s,baz=222,slow=2.5,SNR=21
HOM Homer 150.92 300 P **PKiKP** 15 58 46.1 -0.1
baz=108
OHAK Old Harbor 150.92 295 PKPbc **PKPbc** 15 58 45.9 +0.2
OHAK PKPab **PKPab** 15 58 54.4 +0.7
OHAK Old Harbor 150.92 295 P **PKiKP** 15 58 46.1 -0.2
baz=111,SNR=30
F24K Squaw Lake 150.94 317 P **PKiKP** 15 58 46.2 0.0
baz=97,SNR=6.8
Q20K Shuyak Island 150.95 298 P **PKiKP** 15 58 46.5 +0.1

baz=109,SNR=15
NEA2 Nenana 150.97 311 P PKPbc 15 58 45.4 -0.3
baz=101,SNR=14
CUT Chulitna 151.03 306 PKPbc PKiKP 15 58 46.3 -0.1
CUT Chulitna 151.03 306 P PKiKP 15 58 46.3 -0.1
baz=104,SNR=7.9
SII Sitkinak Islan 151.13 293 P PKiKP 15 58 46.7 -0.1
baz=112,SNR=21
E24K Your Creek 151.23 318 P PKiKP 15 58 46.7 0.0
baz=95,SNR=7.0
TRF Thorofare Moun 151.27 308 P PKPbc 15 58 46.9 +0.2
baz=102,SNR=24
H23K Yukon River 151.38 313 P PKPbc 15 58 46.9 +0.2
baz=98,SNR=7.3
SKT Skwentna 151.50 305 P PKPbc 15 58 47.2 +0.1
baz=104,SNR=28
O20K Slope Mountain 151.51 301 P PKPbc 15 58 47.2 0.0
baz=106
CHIR Chirikof Islan 151.60 291 P PKPbc 15 58 47.5 +0.1
baz=112,SNR=5.9
N20K Mount Spurr 151.62 303 P PKPbc 15 58 47.1 -0.3
baz=105
Q19K Cape Douglas, 151.67 298 P PKPbc 15 58 47.5 0.0
baz=108
TOLK Toolik Lake Re 151.67 319 P PKiKP 15 58 47.6 0.0
baz=93,SNR=17
G23K Bananza Creek 151.68 315 P PKiKP 15 58 48.0 +0.3
baz=96,SNR=19
P19K Oil Pt 151.69 300 P PKPbc 15 58 47.5 0.0
baz=107,SNR=11
BPAW Bear Paw Mtn. 151.70 310 P PKPbc 15 58 47.6 +0.2
baz=100,SNR=18
MLY Manley 151.75 312 P PKiKP 15 58 48.0 +0.1
baz=99,SNR=12
PPLA Purkeypile 152.00 307 P PKPbc 15 58 48.3 0.0
baz=102,SNR=7.6
CAST Castle Rocks 152.06 308 P PKPbc 15 58 47.9 -0.3
baz=101
C23K Itkillik River 152.07 322 P PKiKP 15 58 48.2 -0.1
baz=90
M20K Styx River 152.21 304 PKPbc PKPbc 15 58 48.0 -0.8
M20K Styx River 152.21 304 P PKPbc 15 58 48.4 -0.3
baz=103,SNR=16
CHUM Lake Minchumin 152.24 309 P PKPbc 15 58 48.6 0.0
baz=100
I21K Tanana 152.29 312 P PKPbc 15 58 48.5 -0.2
baz=98
O19K Port Alsworth 152.36 301 P PKPbc 15 58 48.5 -0.4
baz=105
E22K Anaktuvuk Pass 152.48 318 P PKiKP 15 58 49.3 0.0
baz=92
P18K Big Mountain, 152.59 299 P PKPbc 15 58 49.1 -0.4
baz=106
F22K John River 152.59 317 P PKiKP 15 58 50.0 +0.4
baz=93,SNR=11
N19K Bonanza Creek 152.60 302 P PKPbc 15 58 49.0 -0.6
baz=104,SNR=12
R17K Ugashik Creek 152.64 295 P PKiKP 15 58 49.9 0.0
baz=109,SNR=18
L20K Farewell, AK 152.68 306 P PKPbc 15 58 49.4 -0.2
baz=101
H21K Melozitna Rive 152.69 313 P PKiKP 15 58 49.8 0.0
baz=96,SNR=9.3
O18K Koktuh Hills 152.70 300 P PKPbc 15 58 49.5 -0.3
baz=105,SNR=9.9
M19K Big River Lodg 152.80 304 P PKPbc 15 58 49.8 -0.1
baz=102
K20K Telida 152.93 307 P PKPbc 15 58 50.1 -0.1
baz=100,SNR=5.9
G21K Allakaket 153.05 314 P PKiKP 15 58 50.7 +0.2
baz=94,SNR=5.8
L19K White Mountain 153.07 305 PKPbc PKPbc 15 58 49.9 -0.6
L19K White Mountain 153.07 305 P PKiKP 15 58 51.4 +0.7
baz=101
F21K Alatna River 153.08 316 P PKiKP 15 58 50.8 +0.3
baz=92,SNR=6.3
J20K Nowinta River 153.08 309 P PKiKP 15 58 50.8 +0.2
baz=98
Q16K King Salmon 153.09 297 P PKPbc 15 58 50.6 0.0
baz=107
P17K Kvichak River 153.13 298 P PKPbc 15 58 50.5 -0.1
baz=106,SNR=5.4
N18K Kilae Creek 153.24 301 PKPbc PKPbc 15 58 50.4 -0.5
N18K Kilae Creek 153.24 301 P PKPbc 15 58 50.7 -0.3
baz=103
CHNA Chernabura Isl 153.32 287 P PKPbc 15 58 51.1 -0.1
baz=113
O17K Koliganek Bris 153.60 299 P PKPbc 15 58 51.6 -0.1
baz=104,SNR=6.1
TTA Tatalina 153.73 306 P PKiKP 15 58 52.7 +0.7
baz=99
S14K Fog Glacier 153.82 291 P PKiKP 15 58 52.7 +0.3
baz=110
A21K Barrow 153.96 325 P PKiKP 15 58 52.8 +0.6
baz=81
O16K Kokwok River B 154.05 298 P PKiKP 15 58 52.9 +0.2
baz=104
N16K Nishlik Lake 154.58 300 P PKiKP 15 58 55.9 +2.0
baz=102

*KRNET **31** 15:47:11.1±0.1,39.°77N×69.°60E,h13km,mb2.6*
ISC 31 15:47:10.9±1.2,39.°80N±0.°05×69.°57E±0.°06,h10km,n5,
σ1§22/10,6C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.98**	**144**	⇓*i*P	**Pg**	**15 47 29.4**	**-0.5**
GAR	baz=44			⇓*i*S	**Sb**	**15 47 42.9**	**-0.3**
BTK	**Batken**	**0.99**	**74**	⇑*i*P	**Pg**	**15 47 30.0**	**-0.1**
BTK	baz=73			⇑*i*S	**Sb**	**15 47 43.8**	**+0.3**
CHGR	**Chuyangaron**	**1.18**	**196**	⇑*i*P	**Pg**	**15 47 33.4**	**-0.2**
CHGR	baz=97			⇑*i*S	**Sn**	**15 47 49.5**	**-0.3**
DRK	**Karamyk**	**1.75**	**100**	⇑*i*P	**Pg**	**15 47 43.7**	**-0.8**
DRK	baz=99			⇑*i*S	**Sg**	**15 48 07.4**	**+0.1**
KK31	**Karatay Array**	**3.38**	**12**	⇓Pg	**Pb**	**15 48 12.7**	**+1.8**
KK31	0.7nm,0.3s,baz=194,slow=17,SNR=6.4			⇓Sn	**Sg**	**15 48 57.0**	**-2.5**
	0.9nm,0.2s,baz=196,slow=31,SNR=14						

*IDC **31** 15:50:07.0±1.8,4.°21S×153.°81E,h344km±14km,mb3.2/3,*
mbtmp4.0/4,Error ellipse: s-maj=35.2km s-min=26.9km
az=162.0
ISC 31 15:50:06.3±1.9,4.°1S±0.°2×153.°8E±0.°2,h350km,n6,
σ1§39/7,mb3.2/3,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.79**	**262**	P	**Pn**	**15 50 55.3**	**-0.9**
	213nm,0.3s,baz=263,slow=0.6,SNR=107						
CTA	**Charters Tower**	**17.55**	**204**	P	**P**	**15 53 50.0**	**+1.4**
	10nm,1.2s,baz=27,slow=13,SNR=2.7						
DZM	**Mont Dzumac**	**21.69**	**147**	P	**P**	**15 54 29.1**	**-0.9**
	14nm,1.1s,baz=288,slow=20,SNR=3.0						
	14nm,1.1s						
WRA	**Warramunga Arr**	**24.68**	**229**	P	**P**	**15 54 57.9**	**+1.0**
	0.5nm,0.4s,baz=54,slow=9.4,SNR=18						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**27.37**	**223**	P	**P**	**15 55 21.1**	**+0.3**
	0.5nm,0.4s,baz=54,slow=8.8,SNR=27						
ASAR				S	**S**	**15 59 33.3**	**-1.6**
	0.1nm,0.5s,baz=49,slow=13,SNR=1.4						
	0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**151.02**	**290**	PKPbc	**PKiKP**	**16 09 20.6**	**+0.9**
	0.1nm,0.3s,baz=80,slow=1.6,SNR=1.7						

ROM 31 16:00:36.2±0.1,42.°733N±0.°003×13.°187E±0.°007,
h10km,ML2.1/7,Error ellipse: s-maj=0.6km
s-min=0.3km az=109.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1202	**Accumoli, Fraz**	**0.04**	**136**	P	Pg	16 00 38.4	+0.1
T1202				S	Sg	16 00 39.6	-0.2
T1202				AML	AML		
	comp=E,2955μm,0.4s						
T1202				AML	AML		
	comp=E,2950μm,0.2s						
T1202				AML	AML		
	comp=N,7725μm,0.1s						
T1244	**Arquata del Tr**	**0.09**	**73**	P	Pg	16 00 39.2	+0.5
T1244				S	Sg	16 00 41.1	+0.6
T1244				AML	AML		
	comp=E,2250μm,0.2s						
T1244				AML	AML		
	comp=N,1085μm,0.4s						
T1244				AML	AML		
	comp=E,2185μm,0.2s						
T1244				AML	AML		
	comp=N,1054μm,0.4s						
T1244				AML	AML		
	comp=E,2255μm,0.2s						
T1244				AML	AML		
	comp=N,1085μm,0.4s						
T1242	**Castelluccio d**	**0.10**	**8**	P	Pg	16 00 39.2	+0.3
T1242				S	Sg	16 00 41.1	+0.2
T1242				AML	AML		
	comp=E,84μm,0.5s						
T1242				AML	AML		
	comp=N,144μm,0.2s						
T1242				AML	AML		
	comp=E,890μm,1.0s						
T1242				AML	AML		
	comp=N,974μm,0.3s						
T1242				AML	AML		
	comp=E,818μm,1.0s						
T1242				AML	AML		
	comp=E,890μm,1.0s						
T1242				AML	AML		
	comp=N,957μm,0.3s						
T1242				AML	AML		
	comp=N,974μm,0.3s						
LNSS	**Leonessa**	**0.17**	**220**	P	Pg	16 00 40.7	+0.7
LNSS				S	Sg	16 00 43.8	+1.3
MC2	**Monte Cornacci**	**0.18**	**1**	P	Pg	16 00 40.7	+0.5
MC2				S	Sg	16 00 44.3	+1.3
MMO1	**Montemonaco**	**0.20**	**32**	P	Pg	16 00 40.8	+0.4
MMO1				S	Sg	16 00 44.3	+1.0
MMO1				AML	AML		
	comp=E,307μm,0.4s						
MMO1				AML	AML		
	comp=N,229μm,1.3s						
MMO1				AML	AML		
	comp=N,230μm,1.3s						
RM33	**Pellescritta (**	**0.23**	**175**	P	Pg	16 00 41.6	+0.7
RM33				S	Sg	16 00 45.5	+1.5
T1215	**Vallo di Nera,**	**0.24**	**287**	P	Pg	16 00 41.9	+0.6
T1215				S	Sg	16 00 45.8	+1.2
FDMO	**Fiordimonte**	**0.31**	**346**	P	Pg	16 00 43.1	+0.5
FDMO				S	Sb	16 00 48.6	-0.5
TERO	**Teramo**	**0.33**	**110**	AML	AML		
	comp=N,490μm,0.1s						
TERO				AML	AML		
	comp=E,311μm,0.1s						
CESI	**CESI - Serrava**	**0.34**	**323**	P	Pg	16 00 43.5	+0.5
CESI				S	Sb	16 00 48.9	-1.1
CSP1	**Cessapalombo**	**0.36**	**2**	P	Pg	16 00 44.0	+0.6
CSP1				S	Sb	16 00 49.8	-0.8

*IDC **31** 16:02:04.6±3.9,29.°44S×70.°73W,h86km±36km,mb3.3/1,*
mbtmp3.7/3,Error ellipse: s-maj=88.4km s-min=17.3km
az=124.0
*GUC **31** 16:02:06.2±0.7,29.°61S×70.°68W,h94km±4km,ML4.1*
ISC 31 16:02:05.3±0.8,29.°51S±0.°03×70.°75W±0.°07,h106km±6km,
n35,σ1§03/48,9C-4D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.50**	**5**	⇑*e*P	**Pn**	**16 02 21.9**	**-0.1**
LCO				*e*S	**Sn**	**16 02 34.4**	**-0.1**
CO05	**La Serena**	**0.59**	**226**	⇑*e*P	**Pn**	**16 02 22.7**	**+0.4**
CO05				*i* S	**Sn**	**16 02 35.2**	**+0.1**
CO05				IAML		16 02 36.1	
	comp=N,10μm,0.3s						
GO04	**Tololo Observa**	**0.66**	**184**	⇓*e*P	**Pn**	**16 02 23.4**	**+0.2**
GO04				*e*S	**Sn**	**16 02 36.4**	**-0.3**
GO04				IAML		16 02 38.5	
	comp=N,19μm,0.2s						
CO01	**Juntas del Tor**	**0.73**	**129**	⇓*e*P	**Pn**	**16 02 24.1**	**+0.2**
CO01				*i* S	**Sn**	**16 02 37.2**	**-0.6**
AC05	**El Transito**	**0.79**	**32**	⇑*e*P	**Pn**	**16 02 25.2**	**+1.0**
AC05				*e*S	**Sn**	**16 02 39.2**	**+0.8**
AC05				IAML		16 02 39.5	
	comp=N,7μm,0.2s						
CO03	**El Pedregal**	**1.32**	**178**	⇓*e*P	**Pn**	**16 02 30.5**	**+0.6**
CO03				*e*S	**Sn**	**16 02 48.4**	**-0.1**
CO03				IAML		16 02 50.0	
	comp=E,6μm,0.1s						
AC04	**Llanos de Chal**	**1.33**	**348**	⇑*e*P	**Pn**	**16 02 31.2**	**+1.3**
AC04				*e*S	**Sn**	**16 02 49.3**	**+0.8**
AC04				IAML		16 02 52.6	
	comp=N,1μm,0.2s						
CO06	**Fray Jorge**	**1.39**	**213**	⇑*e*P	**Pn**	**16 02 30.6**	**+0.1**
CO06				*e*S	**Sn**	**16 02 49.9**	**+0.2**
CO06				IAML		16 02 50.7	
	comp=N,2μm,0.2s						
CO02	**Combarbal**	**1.70**	**187**	⇑*e*P	**Pn**	**16 02 34.8**	**+0.3**
CO02				*e*S	**Sn**	**16 02 56.7**	**+0.1**
AC06	**Mina Casimiro**	**2.17**	**9**	⇑*e*P	**Pn**	**16 02 40.7**	**+0.3**
AC06				*e*S	**Sn**	**16 03 07.6**	**+0.4**
VA06	**Catapilco**	**3.08**	**189**	*e*P	**Pn**	**16 02 52.1**	**0.0**
VA06				IAML		16 03 42.6	
	comp=N,679nm,0.6s						
VA03	**San Esteban**	**3.25**	**177**	⇑*e*P	**Pn**	**16 02 55.4**	**+0.8**
VA03				*e*S	**Sn**	**16 03 33.1**	**+0.6**
VA03				IAML		16 03 58.0	
	comp=N,721nm,0.5s						
VA03				⇓*e*		16 04 01.7	
ROCH	**El Roble**	**3.46**	**184**	*e*P		16 02 57.1	
ROCH				*e*P	**Pn**	**16 02 57.1**	**-0.4**
ROCH				IAML		16 03 55.7	
	comp=N,331nm,0.3s						
PEL	**Peldehue**	**3.62**	**179**	*e*P	**Pn**	**16 02 59.5**	**-0.1**
PEL				IAML		16 03 48.6	
	comp=N,151nm,0.5s						
MT02	**Curacav**	**3.75**	**185**	*e*P	**Pn**	**16 03 00.5**	**-0.7**
FCH	**Farellones**	**3.82**	**174**	*e*P	**Pn**	**16 03 03.6**	**+1.1**
MT05	**Renca**	**3.87**	**180**	*e*P	**Pn**	**16 03 03.0**	**+0.2**
MT03	**Universidad Ad**	**3.98**	**177**	*e*P	**Pn**	**16 03 05.0**	**+0.6**
VA05	**Santo Domingo**	**4.20**	**190**	*e*P	**Pn**	**16 03 05.9**	**-1.3**
MT09	**Talagante**	**4.26**	**183**	*e*P	**Pn**	**16 03 07.7**	**-0.5**
MT01	**Popeta**	**4.36**	**186**	⇑*e*P	**Pn**	**16 03 08.4**	**-1.0**
GO02	**Mina Guanaco**	**4.45**	**14**	*e*P	**Pn**	**16 03 10.6**	**-0.4**
LVC	**Limon Verde**	**7.07**	**14**	P	**Pn**	**16 03 44.7**	**-1.8**
LVC	comp=N,1.5nm,0.3s,baz=186,slow=9.2,SNR=8.5			S	**Sn**	**16 05 02.6**	**-2.9**
	comp=N,3.2nm,0.4s,baz=22,slow=22,SNR=1.3						
H03N1	**Juan Fernandez**	**8.00**	**239**	P	**Pn**	**16 03 58.9**	**+0.5**
H03N1	baz=105,slow=18,SNR=62			T	T	16 11 59.2	
	baz=65,slow=72,SNR=195						
H03N2	**Juan Fernandez**	**8.01**	**239**	P	**Pn**	**16 03 59.4**	**+0.8**
H03N2	baz=105,slow=18,SNR=35			T	T	16 11 57.2	
	baz=65,slow=72,SNR=160						
H03N3	**Juan Fernandez**	**8.01**	**239**	P	**Pn**	**16 03 58.9**	**+0.2**
H03N3	baz=105,slow=18,SNR=32			T	T	16 11 51.6	
	baz=65,slow=72,SNR=137						
H03S3	**Juan Fernandez**	**8.18**	**236**	P	**Pn**	**16 04 00.9**	**0.0**
	SNR=13						
H03S1	**Juan Fernandez**	**8.18**	**236**	P	**Pn**	**16 04 00.4**	**-0.5**
	SNR=11						
H03S2	**Juan Fernandez**	**8.20**	**236**	P	**Pn**	**16 04 00.8**	**-0.4**
	SNR=12						
SIV	**San Ignacio**	**16.13**	**36**	P	**P**	**16 05 45.8**	**-1.5**
	comp=N,0.8nm,0.5s,baz=216,slow=8.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**81.64**	**70**	P	**P**	**16 14 13.3**	**+1.2**
	comp=N,0.5nm,0.8s,baz=243,slow=6.3,SNR=3.1						
	comp=N,0.5nm,0.8s						
ASAR	**Alice Springs**	**122.06**	**207**	PKP	**PKiKP**	**16 20 49.0**	**+0.8**
	comp=N,0.6nm,0.7s,baz=76,slow=2.7,SNR=9.8						
WRA	**Warramunga Arr**	**125.20**	**209**	PKP	**PKiKP**	**16 20 55.1**	**+0.6**
	comp=N,0.4nm,0.8s,baz=155,slow=1.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**149.81**	**29**	PKPbc	**PKPab**	**16 21 44.7**	**-3.6**
	comp=N,1.7nm,0.5s,baz=300,slow=3.3,SNR=6.6						
ZALV				pPKPbc	**pPKPbc**	**16 22 12.9**	**+0.8**
	comp=N,1.1nm,0.5s,baz=323,slow=5.0,SNR=3.6						
MKAR	**Makanchi Array**	**152.86**	**43**	PKPbc	**PKiKP**	**16 21 51.9**	**+1.9**
	comp=N,0.4nm,0.6s,baz=273,slow=2.2,SNR=2.2						

*IDC **31** 16:08:18.8±2.9,6.°12S×154.°43E,h70km±25km,mb3.7/6,*
mbtmp4.1/9,MS3.2/5,Error ellipse: s-maj=23.8km
s-min=17.3km az=89.0
*NEIC **31** 16:08:19.1±1.3,6.°0S±0.°1×154.°5E±0.°1,h78km±9km,*
mb4.3/21,Error ellipse: s-maj=18.0km s-min=16.0km
az=92.0
ISC 31 16:08:17.1±0.6,6.°05S±0.°06×154.°58E±0.°08,h61km,n48,
σ1§00/45,mb4.2/15,Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.03**	**307**	Pn	**Pn**	**16 09 03.6**	**+0.8**
KRVT	**Keravat (AS076**	**3.08**	**304**		**Pn**	**16 09 04.8**	**+1.5**
KRVT	**Keravat (AS076**	**3.08**	**304**	P	**Pn**	**16 09 04.8**	**+1.5**
	255nm,0.3s,baz=259,slow=1.5,SNR=267						
KRVT				S	**Sn**	**16 09 38.9**	**0.0**
	223nm,0.6s,baz=19,slow=12,SNR=6.2						
HNR	**Honiara**	**6.29**	**123**	LR	LR	16 12 15.0	
	comp=Z,351nm,18.4s,baz=223,slow=37						
PMG	**Port Moresby**	**8.07**	**245**	Pn	**Pn**	**16 10 13.0**	**+1.3**
PMG	**Port Moresby**	**8.07**	**245**	P	**Pn**	**16 10 12.7**	**+1.0**
	13nm,0.5s,baz=64,slow=13,SNR=9.3						
PMG				S	**Sn**	**16 11 40.2**	**-1.4**
	52nm,0.6s,baz=119,slow=16,SNR=8.2						
PMG				LR	LR	16 13 30.0	
	comp=Z,84nm,19.1s,baz=84,slow=39						
MANU	**Manus Island**	**8.22**	**299**	Pn	**Pn**	**16 10 14.7**	**+0.9**
PATS	**Pohnpei**	**13.34**	**16**	Pn	**Pn**	**16 11 21.4**	**-2.3**
COEN	**Coen**	**13.70**	**234**	P	**P**	**16 11 35.8**	**+0.5**
EIDS	**Eidsvold**	**19.50**	**190**	P	**P**	**16 12 38.7**	**-0.7**
DZM	**Mont Dzumac**	**19.62**	**145**	P	**P**	**16 12 41.6**	**+0.8**
DZM				IAmb	IAmb	16 12 45.7	
	comp=Z,46nm,1.5s						
DZM	**Mont Dzumac**	**19.62**	**145**	P	**P**	**16 12 41.7**	**+0.8**
	comp=Z,6.5nm,0.6s,baz=342,slow=24,SNR=9.4						
ONTNC	**Ouen Toro**	**19.82**	**146**	P	**P**	**16 12 44.0**	**+1.1**
OUENC	**Ouen Island, N**	**20.12**	**145**	P	**P**	**16 12 46.6**	**+0.5**
OUENC				IAmb	IAmb	16 12 54.2	
	comp=Z,29nm,1.0s						
GUMO	**Guam**	**21.77**	**334**	LR	LR	16 21 54.1	
	comp=Z,32nm,18.2s,baz=113,slow=38						
WR0	**Warramunga Arr**	**23.88**	**233**	P	**P**	**16 13 24.9**	**-0.3**
WR0				IAmb	IAmb	16 13 43.6	
	comp=Z,8.4nm,0.9s						
WB0	**Warramunga Arr**	**23.89**	**233**	P	**P**	**16 13 26.0**	**+0.6**
WRAB	**Tennant Creek**	**24.02**	**233**	P	**P**	**16 13 25.9**	**-0.6**
WRAB				IAmb	IAmb	16 13 44.9	
	comp=Z,6.5nm,0.8s						
WB2	**Warramunga Arr**	**24.02**	**233**	P	**P**	**16 13 26.2**	**-0.3**
WRA	**Warramunga Arr**	**24.03**	**233**	P	**P**	**16 13 25.6**	**-1.0**
WRA	**Warramunga Arr**	**24.03**	**233**	P	**P**	**16 13 26.0**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=57,slow=9.9,SNR=14						
WRA				PcP	**PcP**	**16 17 08.1**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=57,slow=2.6,SNR=15						
	comp=Z,1.2nm,0.6s						
MTN	**Manton Dam**	**24.08**	**252**	P	**P**	**16 13 25.2**	**-1.9**
MTN				IAmb	IAmb	16 13 56.2	
	comp=Z,10nm,0.8s						
ARMA	**Armidale**	**24.40**	**186**	P	**P**	**16 13 30.0**	**+0.1**
ARMA				IAmb	IAmb	16 14 01.6	
	comp=Z,9.9nm,1.1s						
AS31	**Alice Springs**	**26.50**	**227**	P	**P**	**16 13 48.2**	**-0.8**
ASAR	**Alice Springs**	**26.50**	**227**	P	**P**	**16 13 48.2**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=57,slow=9.3,SNR=28						
ASAR				PcP	**PcP**	**16 17 13.6**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=56,slow=2.3,SNR=14						
	comp=Z,0.5nm,0.4s						
KNRA	**Kununurra**	**27.06**	**247**	P	**P**	**16 13 54.4**	**+0.3**
KNRA				IAmb	IAmb	16 14 14.9	
	comp=Z,8.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**27.16**	**26**	T	T	16 42 38.0	
	baz=202,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**27.16**	**26**	T	T	16 42 38.5	
	baz=202,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**27.18**	**26**	T	T	16 42 31.2	
	baz=202,slow=76,SNR=7.3						
FITZ	**Fitzroy Crossi**	**30.67**	**244**	P	**P**	**16 14 25.1**	**-1.1**
FITZ				IAmb	IAmb	16 14 44.2	
	comp=Z,4.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**30.67**	**244**	LR	LR	16 26 53.3	
	comp=Z,68nm,18.8s,baz=5.5,slow=36						
BBOO	**Buckleboo**	**31.72**	**211**	P	**P**	**16 14 34.1**	**-1.1**
AFI	**Afiamalu**	**34.01**	**106**	LR	LR	16 26 13.6	
	comp=Z,61nm,20.6s,baz=254,slow=32						
URZ	**Urewera**	**38.03**	**151**	P	**P**	**16 15 30.0**	**+0.5**
BKZ	**Black Stump Fm**	**38.45**	**152**	P	**P**	**16 15 32.5**	**-0.6**
THZ	**Tophouse**	**39.12**	**158**	P	**P**	**16 15 38.0**	**-0.7**
TUWZ	**Tuamarina**	**39.23**	**157**	P	**P**	**16 15 39.3**	**-0.2**
LTZ	**Lake Taylor**	**39.79**	**160**	P	**P**	**16 15 44.1**	**-0.2**
VNDA	**Vanda**	**71.53**	**178**	P	**P**	**16 19 31.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=342,slow=6.4,SNR=3.6						
	comp=Z,0.4nm,0.6s						
L19K	**White Mountain**	**78.24**	**22**	P	**P**	**16 20 11.5**	**+1.5**
L19K				IAmb	IAmb	16 20 36.0	
	comp=Z,5.7nm,1.2s						
IMAR	**Indian Mountai**	**80.98**	**19**	P	**P**	**16 20 25.9**	**+1.1**
TGL	**Tana Glacier**	**82.33**	**26**	P	**P**	**16 20 30.5**	**-1.7**
TGL				IAmb	IAmb	16 20 33.8	
	comp=Z,3.4nm,0.6s						
QSPA	**South Pole Qui**	**83.92**	**180**	P	**P**	**16 20 40.1**	**-0.2**
QSPA				IAmb	IAmb	16 20 40.9	
	comp=Z,3.6nm,0.7s						
MAW	**Mawson**	**85.10**	**203**	P	**P**	**16 20 46.0**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=80,slow=7.6,SNR=4.3						
	comp=Z,1.5nm,0.7s						
NVAR	**Mina Array Bea**	**91.47**	**52**	P	**P**	**16 21 19.3**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=254,slow=6.7,SNR=9.4						
	comp=Z,1.4nm,0.8s						
PDAR	**Pinedale Array**	**98.38**	**48**	P	**P**	**16 21 48.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=240,slow=3.5,SNR=5.0						
	comp=Z,0.4nm,0.6s						
BOSA	**Boshof**	**120.28**	**232**	PKP	**PKiKP**	**16 27 02.8**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=191,slow=2.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.37**	**287**	PKPbc	**PKPbc**	**16 28 06.9**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=36,slow=2.2,SNR=13						

*MEX **31** 16:09:50.8±0.8,16.°12N×91.°15W,h11km±48km,MD4.4*
*NEIC **31** 16:09:50.6±2.6,16.°02N±0.°03×91.°36W±0.°03,h10km±1km,*
mb4.2/24,Md4.4/36(MEX),Error ellipse: s-maj=5.8km
s-min=4.8km az=290.0
*IDC **31** 16:09:54.9±6.2,15.°57N×91.°54W,h56km±57km,mb3.6/7,*
mbtmp3.9/8,ML3.3/1,MS3.4/9,Error ellipse: s-maj=43.8km
s-min=19.0km az=46.0
*GCG **31** 16:09:59.9±0.7,15.°97N×91.°11W,h150km±17km,MD4.3*
ISC 31 16:09:49.8±1.3,15.°98N±0.°04×91.°38W±0.°03,h6km±9km,
n105,σ1§67/116,mb4.1/12,MS3.4/8,1D,
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUEH	**Huehuetenango**	**0.67**	**191**	Pg	**Pn**	**16 10 03.5**	**-2.5**
HUEH				Sg	**Sb**	**16 10 12.7**	**-1.0**
CCIG	**Comitan**	**0.79**	**292**	*i* P	**Pb**	**16 10 06.4**	**+0.3**
CCIG				*i* S	**Sb**	**16 10 18.8**	**+1.6**
STG3	**Santiaguito 3,**	**1.28**	**189**	*e*P	Pn	16 10 24.8	+10
STG3				*e*S	Sn	16 10 51.0	+19
THIG		**1.37**	**219**		**Pg**	**16 10 16.8**	**+0.8**
THIG					**Sn**	**16 10 35.8**	**+1.9**
THIG		**1.37**	**219**	*e*P	**Pg**	**16 10 16.8**	**+0.8**
THIG				*i* S	**Sn**	**16 10 35.8**	**+1.9**
RTAL	**Retalhuleu**	**1.48**	**192**	Pn	**Pg**	**16 10 18.4**	**+0.3**
FUG	**Fuego 3**	**1.61**	**161**	⇓*e*P	Pg	16 10 30.4	+10
FUG				*e*S	Sg	16 10 54.5	+13
NBG	**Las Nubes**	**1.70**	**144**	*e*P	Pg	16 10 31.2	+8.7
NBG				*e*S	Sg	16 10 56.2	+12
PETF	**Flores**	**1.72**	**57**		**Pn**	**16 10 19.3**	**-1.0**
PCG	**Pacaya**	**1.74**	**155**	*e*P	Pg	16 10 32.3	+9.0
PCIG		**1.80**	**261**		**Pb**	**

MRL				*eS*		**Sg**	**16 10 53.7**	**+4.2**
ESQI	**Esquipulas**	**2.42**	**125**			**Pn**	**16 10 29.5**	**-0.5**
CARR	**Arriaga**	**2.45**	**277**	*eP*		**Pn**	**16 10 30.5**	**+0.1**
CARR				*eS*		**Sn**	**16 11 01.3**	**+0.5**
SLOZ	**Alcaldia de Sa**	**2.48**	**141**	*eS*		**Sg**	**16 11 08.6**	**-0.9**
MTO3	**Montecristo**	**2.50**	**129**			**Pn**	**16 10 30.5**	**-0.7**
NUBE	**Las Nubes**	**2.58**	**143**	*eS*		**Sg**	**16 11 11.6**	**-1.1**
NUBE	**Las Nubes**	**2.58**	**143**	*eS*		**Sg**	**16 11 11.6**	**-1.1**
JAYA	**Jayaque - finc**	**2.97**	**141**	*eP*		**Pn**	**16 10 38.3**	**+0.6**
JAYA	**Jayaque - finc**	**2.97**	**141**	*eP*		**Pn**	**16 10 38.3**	**+0.6**
SCIG	**Sabancuy**	**2.98**	**3**	*i P*		**Pn**	**16 10 36.7**	**-0.9**
SCIG				*eS*		**Sn**	**16 11 10.8**	**-2.9**
NILT	**Santiago Nilte**	**3.17**	**281**	*eP*		**Pn**	**16 10 41.4**	**+1.1**
NILT				*eS*		**Sn**	**16 11 19.6**	**+1.2**
PAVA	**Las Pavas**	**3.26**	**133**	*eS*		**Sg**	**16 11 32.5**	**-2.1**
PAVA	**Las Pavas**	**3.26**	**133**	*eS*		**Sg**	**16 11 32.5**	**-2.1**
COEG	**Centro de Oper**	**3.37**	**134**	*eS*		**Sg**	**16 11 35.3**	**-2.6**
COEG	**Centro de Oper**	**3.37**	**134**	*eS*		**Sg**	**16 11 35.3**	**-2.6**
SCLA	**Alcaldia de Sa**	**3.42**	**131**	*eS*		**Sg**	**16 11 37.0**	**-2.7**
SCLA	**Alcaldia de Sa**	**3.42**	**131**	*eS*		**Sg**	**16 11 37.0**	**-2.7**
CMIG	**Matias Romero**	**3.54**	**289**			**Pn**	**16 10 44.5**	**-1.0**
CMIG	**Matias Romero**	**3.54**	**289**			**Sn**	**16 11 26.5**	**-1.2**
CMIG	**Matias Romero**	**3.54**	**289**	*eP*		**Pn**	**16 10 44.5**	**-1.0**
CMIG				*i S*		**Sn**	**16 11 27.9**	**+0.2**
CMIG	**Matias Romero**	**3.54**	**289**	S		**Sn**	**16 11 26.5**	**-1.2**
HUIG	**Huatulco**	**4.56**	**268**			**Pn**	**16 10 59.0**	**-0.4**
HUIG						**Sn**	**16 11 53.2**	**+0.5**
HUIG	**Huatulco**	**4.56**	**268**	*eP*		**Pn**	**16 10 59.0**	**-0.4**
HUIG				*eS*		**Sn**	**16 11 53.2**	**+0.5**
TEIG	**Tepich**	**5.15**	**34**	Pn		**Pn**	**16 11 06.7**	**-0.8**
VHO	**Vista Hermosa**	**5.25**	**283**	*eP*		**Pn**	**16 11 06.9**	**-2.2**
VHO				*eS*		**Sn**	**16 12 07.7**	**-2.5**
PEIG	**Puerto Escondi**	**5.55**	**271**	*eP*		**Pn**	**16 11 15.0**	**+1.9**
PEIG				*eS*		**Sn**	**16 12 17.8**	**+0.5**
TOIG	**Toxpalan**	**5.83**	**292**	*eP*		**Pn**	**16 11 14.3**	**-2.7**
TOIG				*eS*		**Sn**	**16 12 21.2**	**-3.2**
YOIG	**Yosondua**	**5.99**	**279**	*eP*		**Pn**	**16 11 21.1**	**+1.8**
YOIG				*eS*		**Sn**	**16 12 27.2**	**-1.2**
MATN	**Matagalpa**	**6.09**	**119**	Pn		**Pn**	**16 11 19.8**	**-0.7**
JAUV	**Jalcomulco**	**6.17**	**304**	*eP*		**Pn**	**16 11 19.9**	**-1.7**
JAUV				*eS*		**Sn**	**16 12 30.5**	**-2.1**
TXIG	**Tlaxiaco**	**6.26**	**283**	*eP*		**Pn**	**16 11 23.4**	**+0.4**
TXIG				*eS*		**Sn**	**16 12 35.0**	**-0.1**
PNIG	**Pinotepa**	**6.50**	**275**			**Pn**	**16 11 25.3**	**-0.8**
PNIG						**Sn**	**16 12 37.5**	**-3.2**
PNIG	**Pinotepa**	**6.50**	**275**	*eP*		**Pn**	**16 11 25.3**	**-0.8**
PNIG				*eS*		**Sn**	**16 12 37.5**	**-3.2**
BOAB	**BOACO BROADBAN**	**6.55**	**122**	Pn		**Pn**	**16 11 25.6**	**-1.2**
ORTG	**Ortega, Santa**	**8.02**	**133**	Pn		**Pn**	**16 11 49.2**	**+2.1**
JTS	**Las Juntas de**	**8.43**	**131**	Pn		**Pn**	**16 11 56.3**	**+3.6**
RIMA	**Rio Macho**	**9.58**	**129**	Pn		**Pn**	**16 12 11.0**	**+2.5**
SOR	**Soroa**	**10.40**	**48**	Pn		**Pn**	**16 12 18.8**	**-0.8**
LCCY	**Blossom Villag**	**11.36**	**70**	Pn		**Pn**	**16 12 31.4**	**-1.3**
MTDJ	**Mount Denham**	**13.42**	**78**	Pn		**Pn**	**16 13 03.7**	**+2.6**
WHTX	**Lake Whitney,**	**16.87**	**342**			**P**	**16 13 49.4**	**+0.6**
LRAL	**Lakeview Retre**	**17.44**	**12**			**Pn**	**16 13 54.2**	**+0.4**
TX31	**Lajitas Ar. Si**	**17.45**	**322**			**P**	**16 13 56.4**	**+1.0**
TX32	**Lajitas Array**	**17.45**	**322**			**P**	**16 13 56.3**	**+0.9**
TXAR	**Lajitas Array**	**17.45**	**322**			**P**	**16 13 57.4**	**+2.0**
TXAR	**Lajitas Array**	**17.45**	**322**	P		**P**	**16 13 56.9**	**+1.5**
	baz=147,slow=10,SNR=6.7							
	1.1nm,1.0s							
X48A	**Hartselle**	**18.80**	**11**	P		**P**	**16 14 11.5**	**+1.4**
X48A				IAmb		IAmb	16 14 19.6	
	comp=Z,6.4nm,0.8s							
X37A	**Clayton**	**18.88**	**350**	P		**Pn**	**16 14 14.6**	**+3.2**
X37A				IAmb		IAmb	16 14 24.9	
	comp=Z,14nm,1.2s							
PLAL	**Pickwick Lake**	**19.15**	**8**	P		**P**	**16 14 15.9**	**+1.9**
WHAR	**Wooly Hollow**	**19.25**	**358**	P		**Pn**	**16 14 18.4**	**+2.5**
WHAR				IAmb		IAmb	16 14 20.8	
	comp=Z,15nm,1.2s							
LPIG	**La Paz**	**19.52**	**297**	LR		LR	16 22 01.0	
	comp=Z,101nm,18.4s,baz=178,slow=37							
WMOK	**Wichita Mounta**	**19.83**	**342**	P		**P**	**16 14 20.5**	**-0.9**
GDL2	**Guadalupe Moun**	**20.00**	**326**	P		**P**	**16 14 25.1**	**+1.7**
WVT	**Waverly**	**20.32**	**8**	P		**P**	**16 14 27.8**	**+1.1**
MSTX	**Muleshoe**	**20.65**	**332**	P		**P**	**16 14 31.9**	**+1.5**
MSTX				IAmb		IAmb	16 14 35.1	
	comp=Z,5.9nm,0.8s							
TKL	**Tuckaleechee C**	**20.74**	**18**	P		Pn	16 14 34.9	+1.2
	comp=Z,6.1nm,1.0s,baz=175,slow=11,SNR=3.5							
TKL				LR		LR	16 23 31.4	
	comp=Z,80nm,19.9s,baz=188,slow=39							
	comp=Z,6.1nm,1.0s							
AMTX	**Amarillo**	**20.97**	**336**	P		**P**	**16 14 33.0**	**-0.9**
AMTX				IAmb		IAmb	16 14 39.8	
	comp=Z,7.2nm,0.7s							
T47A	**Sharon Grove**	**21.27**	**9**	P		**P**	**16 14 38.0**	**+1.1**
T47A				IAmb		IAmb	16 14 49.5	
	comp=Z,9.8nm,0.7s							
SDV	**Santo Domingo**	**21.43**	**107**	P		**P**	**16 14 37.8**	**-1.3**
SDV				IAmb		IAmb	16 14 46.6	
	comp=Z,8.0nm,0.6s							
SDV	**Santo Domingo**	**21.43**	**107**	P		**P**	**16 14 39.2**	**+0.1**
	comp=Z,4.6nm,0.4s,baz=306,slow=12,SNR=5.1							
	comp=Z,4.6nm,0.4s							
S44A	**Carbondale**	**21.71**	**5**	P		**P**	**16 14 39.8**	**-1.9**
S44A				IAmb		IAmb	16 14 47.5	
	comp=Z,13nm,0.8s							
SIUC	**Southern Illin**	**21.73**	**5**	P		**P**	**16 14 41.6**	**-0.4**
BNM	**Barren Site**	**22.71**	**326**	P		**P**	**16 14 54.5**	**+1.8**
BOSC	**San Juan Bosco**	**22.88**	**145**	P		**P**	**16 14 54.5**	**0.0**
BOSC				IAmb		IAmb	16 14 57.5	
	comp=Z,7.1nm,1.1s							
LENM	**Lemitar**	**22.91**	**325**	P		**P**	**16 14 54.8**	**0.0**
BAUV	**El Baul**	**23.82**	**104**	P		**P**	**16 15 01.8**	**-2.0**
T25A	**Trinidad**	**24.04**	**334**	P		**P**	**16 15 07.2**	**+1.3**
ATAH	**Atahualpa**	**26.32**	**150**	LR		LR	16 24 02.5	
	comp=Z,41nm,18.6s,baz=304,slow=32							
SADO	**Sadowa**	**30.50**	**17**	LR		LR	16 29 03.0	
	comp=Z,78nm,19.5s,baz=161,slow=37							
WCT	**Wildcat Mounta**	**30.52**	**318**	P		**P**	**16 16 03.9**	**-0.2**
MOOW	**Moose Ponds**	**32.21**	**333**	P		**P**	**16 16 20.2**	**+1.2**
MOOW				IAmb		IAmb	16 16 26.3	
	comp=Z,2.9nm,1.3s							
B35A	**Bob, Littlefor**	**32.35**	**357**	P		**P**	**16 16 22.1**	**+2.2**
NVAR	**Mina Array Bea**	**32.55**	**319**	P		**P**	**16 16 23.8**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=138,slow=9.8,SNR=8.7							
	comp=Z,0.5nm,0.7s							
MCMT	**McKenzie Canyo**	**33.99**	**332**	P		**P**	**16 16 35.5**	**+0.9**
ULM	**Lac du Bonnet**	**34.38**	**355**	LR		LR	16 31 50.3	
	comp=Z,29nm,18.3s,baz=344,slow=38							
LRM	**Limekiln Ridge**	**34.59**	**334**	P		**P**	**16 16 37.9**	**-1.9**
KRMB	**Red Mountain**	**37.85**	**319**	P		**P**	**16 17 08.7**	**+1.0**
KRMB				IAmb		IAmb	16 17 32.7	
	comp=Z,9.5nm,1.3s							
MDP	**Montagnes des**	**39.51**	**102**	LR		LR	16 35 33.3	
	comp=Z,45nm,18.0s,baz=288,slow=39							
PB16	**IPOC Station P**	**40.33**	**147**	P		**P**	**16 17 29.3**	**+0.3**
PB16				IAmb		IAmb	16 18 12.5	
	comp=Z,9.8nm,1.3s							
SCHQ	**Schefferville**	**43.17**	**21**	LR		LR	16 36 37.4	
	comp=Z,72nm,19.7s,baz=154,slow=37							
SIV	**San Ignacio**	**43.63**	**135**	P		**P**	**16 17 52.5**	**-3.0**
SIV	**San Ignacio**	**43.63**	**135**	P		**P**	**16 17 52.5**	**-3.0**
	comp=Z,3.3nm,0.8s,baz=295,slow=9.3,SNR=15							
	comp=Z,3.3nm,0.8s							
YKA	**Yellowknife Ar**	**49.26**	**346**	P		**P**	**16 18 39.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=145,slow=7.6,SNR=2.7							
	comp=Z,0.6nm,0.6s							
SFJD	**Kangerlussuaq**	**57.46**	**18**	LR		LR	16 45 06.4	
	comp=Z,36nm,18.2s,baz=220,slow=36							
RES	**Resolute Bay**	**58.74**	**359**	LR		LR	16 46 15.9	
	comp=Z,42nm,20.2s,baz=36,slow=37							
ESDC	**Sonseca Array**	**78.02**	**52**	P		**P**	**16 21 51.2**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=288,slow=5.1,SNR=5.3							
	comp=Z,0.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**89.33**	**77**	P		**P**	**16 22 46.0**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=283,slow=5.8,SNR=2.1							
	comp=Z,0.3nm,0.5s							
CMAR	**Chiang Mai Arr**	**144.30**	**343**	PKP		**PKPab**	**16 29 23.8**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=347,slow=4.0,SNR=4.7							
FITZ	**Fitzroy Crossi**	**144.58**	**261**	PKP		**PKPab**	**16 29 24.9**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=162,slow=3.2,SNR=6.9							

IDC ***31*** *16:16:11.4±0.7,6.76N×72.93W,h165km±9km,mb3.1/3, mbtmp3.7/5,Error ellipse: s-maj=32.3km s-min=7.6km az=131.0*
RSNC ***31*** *16:16:12.0±1.0,6.81N×73.12W,h151km±4km,ML3.6*
ISC 31 16:16:11.0±0.8,6.84N±0.03×73.10W±0.04,h156km±6km, n39,σ1§22/63,mb3.3/3,2C-6D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**198**	⇓*iP*	**Pn**	**16 16 32.4**	**-0.1**
BARC				*eS*	**Sn**	**16 16 47.8**	**-1.1**
BARC				*i*		16 16 48.6	
	comp=Z,1μm,0.2s						
PAMC	**Pamplona, Colo**	**0.64**	**39**	⇓*eP*	**Pn**	**16 16 35.2**	**+0.8**
PAMC				*eS*	**Sn**	**16 16 52.3**	**0.0**
PAMC				*i*		16 16 54.6	
	comp=Z,2μm,0.5s						
BRRC	**Barranca, Sant**	**0.66**	**294**	⇓*iP*	**Pn**	**16 16 34.2**	**+0.2**
BRRC				*eS*	**Sn**	**16 16 51.4**	**0.0**
BRRC				*i*		16 16 54.5	
	comp=Z,838nm,0.3s						
RUSC	**La Rusia**	**0.94**	**179**	⇓*iP*	**Pn**	**16 16 36.3**	**-0.2**
RUSC				*eS*	**Sn**	**16 16 55.1**	**-0.8**
RUSC				*i*		16 16 57.0	
	comp=Z,325nm,0.3s						
TAMC	**Tame, Arauca**	**1.36**	**107**	⇓*iP*	**Pn**	**16 16 40.8**	**+1.1**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*eP*	**Pn**	**16 16 38.8**	**-1.0**
PTBC				*eS*	**Sn**	**16 16 59.3**	**-2.6**
PTBC				*i*		16 17 01.2	
	comp=Z,350nm,0.2s						
OCAC	**Ocana**	**1.41**	**351**	⇑*eP*	**Pn**	**16 16 40.4**	**+0.1**
OCAC				*eS*	**Sn**	**16 17 02.4**	**-0.5**
OCAC				*i*		16 17 11.9	
	comp=Z,760nm,0.4s						
SPBC	**San Pablo de B**	**1.52**	**219**	*eP*	**Pn**	**16 16 41.3**	**-0.1**
SPBC				*eS*	**Sn**	**16 17 03.6**	**-1.1**
SPBC				*i*		16 17 06.0	
	comp=Z,744nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*eP*	**Pn**	**16 16 45.0**	**+0.1**
ZARC				*eS*	**Sn**	**16 17 10.9**	**-0.2**
ZARC				*i*		16 17 16.5	
	comp=Z,510nm,0.3s						
NORC	**Norcasia**	**2.16**	**234**	*eP*	**Pn**	**16 16 48.2**	**-0.3**
NORC				*eS*	**Sn**	**16 17 17.0**	**-0.4**
NORC				*i*		16 17 18.9	
	comp=Z,269nm,0.2s						
CHIC	**Chingaza**	**2.28**	**196**	⇑*eP*	**Pn**	**16 16 50.6**	**+0.4**
CHIC				*eS*	**Sn**	**16 17 19.5**	**-0.9**
CHIC				*i*		16 17 23.5	
	comp=Z,285nm,0.4s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**16 16 52.1**	**+1.3**
	comp=Z,147nm,0.3s,baz=126,slow=23,SNR=164						
ROSC				S	**Sn**	**16 17 23.7**	**+2.4**
	comp=Z,556nm,0.3s,baz=144,slow=20,SNR=12						
UREC	**San Jos de Ur**	**2.58**	**291**	*eP*	**Pn**	**16 16 52.0**	**-1.4**
UREC				*i*		16 17 37.5	
	comp=Z,303nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*eS*	**Sn**	**16 17 32.1**	**+2.6**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*eP*	**Pn**	**16 16 56.5**	**+0.4**
GUY2C				*eS*	**Sn**	**16 17 32.8**	**+1.8**
GUY2C				*i*		16 17 38.6	
	comp=Z,169nm,0.2s						
VILC	**Villavicencio,**	**2.77**	**192**	*eP*	**Pn**	**16 16 55.7**	**-0.2**
VILC				*eS*	**Sn**	**16 17 30.6**	**-0.1**
VILC				*i*		16 17 35.9	
	comp=Z,352nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	⇓*iP*	**Pn**	**16 16 55.7**	**-0.4**
PTGC				*eS*	**Sn**	**16 17 29.0**	**-1.9**
PTGC				*i*		16 17 31.7	
	comp=Z,408nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*eP*	**Pn**	**16 17 00.0**	**+0.6**
CBOC				*eS*	**Sn**	**16 17 36.2**	**-0.7**
CBOC				*i*		16 17 47.5	
	comp=Z,46nm,0.4s						
DBBC	**Dabeiba**	**3.09**	**274**	*eP*	**Pn**	**16 16 59.7**	**-0.1**
DBBC				*eS*	**Sn**	**16 17 35.6**	**-2.1**
DBBC				*i*		16 17 40.1	
	comp=Z,98nm,0.6s						
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**16 17 01.9**	**+0.8**
	comp=Z,12nm,0.3s,baz=217,slow=6.0,SNR=13						
SDV				S	**Sn**	**16 17 39.5**	**-0.5**
	comp=Z,143nm,0.5s,baz=50,slow=22,SNR=40						
ARGC	**Ariguani, Magd**	**3.21**	**339**	*eP*	**Pn**	**16 17 02.9**	**+1.6**
ARGC				*eS*	**Sn**	**16 17 40.9**	**+0.5**
ARGC				*i*		16 17 49.5	
	comp=Z,64nm,0.2s						
ANIL	**Santa Ana**	**3.27**	**225**	*eP*	**Pn**	**16 17 03.7**	**+1.4**
ANIL				*eS*	**Sn**	**16 17 42.6**	**+0.6**
ANIL				*i*		16 17 50.2	
	comp=Z,433nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*	**Pn**	**16 17 06.6**	**-0.6**
SJCC				*eS*	**Sn**	**16 17 47.8**	**-3.2**
SJCC				*i*		16 17 52.1	
	comp=Z,88nm,0.7s						
PLMC	**San Jos del P**	**3.70**	**239**	*eP*	**Pn**	**16 17 08.2**	**+0.6**
PLMC				*eS*	**Sn**	**16 17 52.0**	**+0.3**
PLMC				*i*		16 17 56.4	
	comp=Z,58nm,0.3s						
LCBC	**Los crdobas,**	**3.81**	**302**	*eS*	**Sn**	**16 17 55.3**	**+1.3**
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*eP*	**Pn**	**16 17 12.7**	**-1.0**
CRJC				*eS*	**Sn**	**16 18 00.5**	**-2.0**
CRJC				*i*		16 18 03.6	
	comp=Z,107nm,0.2s						
GUVC	**San Jose del G**	**4.29**	**174**	*eP*	**Pn**	**16 17 15.1**	**-0.2**
GUVC				*eS*	**Sn**	**16 18 03.7**	**-1.7**
GUVC				*i*		16 18 08.6	
	comp=Z,109nm,0.3s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*eP*	**Pn**	**16 17 14.9**	**-0.5**
SMRC	**Santa Marta, M**	**4.44**	**346**	*eP*	**Pn**	**16 17 17.2**	**0.0**
SMRC				*eS*	**Sn**	**16 18 05.7**	**-3.2**
SMRC				*i*		16 18 10.9	
	comp=Z,51nm,0.2s						
CAPC	**Capurgana**	**4.58**	**293**	*eP*	**Pn**	**16 17 18.3**	**-0.6**
CAPC				*i*		16 18 12.2	
	comp=Z,41nm,0.4s						
MACC	**Macarena, Meta**	**4.72**	**189**	*eP*	**Pn**	**16 17 19.4**	**-1.4**
MACC				*i*		16 18 20.2	
	comp=Z,38nm,0.7s						
GARC	**Garzon, Huila**	**5.20**	**207**	*eP*	**Pn**	**16 17 26.9**	**-0.5**
GARC				*i*		16 18 28.7	
	comp=Z,52nm,0.2s						
FLOC	**Florencia**	**5.80**	**206**	*eP*	**Pn**	**16 17 34.9**	**-0.4**
FLOC				*i*		16 18 43.6	
	comp=Z,8.9nm,0.3s						
BBAC	**Balboa, Cauca**	**6.32**	**221**	*eP*	**Pn**	**16 17 43.7**	**+1.4**
BBAC				*i*		16 18 57.9	
	comp=Z,7.5nm,0.4s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**16 23 02.2**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=121,slow=8.7,SNR=7.0						
	comp=Z,0.3nm,0.4s						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**16 24 35.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=128,slow=10,SNR=2.7						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**16 26 23.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=136,slow=6.1,SNR=4.0						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPbc**	**16 35 40.9**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=117,slow=3.6,SNR=14						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**16 35 44.1**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=106,slow=3.0,SNR=18						

IDC 31 16:23:27.9±3.7,2.94S×140.00E,h0km,mb3.1/3, mbtmp3.2/4,ML3.4/1,Error ellipse: s-maj=114.5km s-min=30.8km az=92.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.78**	**198**	P	Pn	16 27 36.4	-0.6
	0.1nm,0.3s,baz=18,slow=13,SNR=11						
	0.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.62**	**222**	P	P	16 28 09.2	+0.3
	1.1nm,0.7s,baz=54,slow=11,SNR=2.2						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**21.43**	**195**	P	P	16 28 18.0	+0.2
	0.3nm,0.9s,baz=28,slow=9.6,SNR=13						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**70.75**	**322**	P	P	16 34 46.0	-0.1
	0.4nm,0.8s,baz=98,slow=2.2,SNR=2.0						
	0.4nm,0.8s						

BJI ***31*** *16:28:52.7±0.0,24.47N×122.24E,h21km,mb4.3/39, mB4.8/29,ML4.5/9,Ms4.6/45,Ms7 4.3/41*
IDC ***31*** *16:28:52.0±0.7,24.54N×122.22E,h0km,mb4.1/16, mbtmp4.1/16,MS3.9/38,Error ellipse: s-maj=26.4km s-min=14.7km az=68.0*
JMA ***31*** *16:28:53.7±0.2,24.3N±0.9×121.9E±0.6,h49km±2km, MD4.9/14,MV4.5/14,TAIWAN REGION*
NIED ***31*** *16:28:53.7,24.28N×121.92E,h49km,MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm;*

Mrr4.69; Mθθ4.16; Mϕϕ-8.85; Mrθ3.14; Mϕθ-1.61; Mϕr3.03; Fault plane solution: M₀8.77000×10¹⁵ NP1: ϕc151.00000°,δ45.00000°,λ32.00000°. NP2:ϕs38.00000°, δ68.00000°,λ131.00000°.
NEIC ***31*** *16:28:54.3±1.6,24.43N±0.04×122.00E±0.02,h12km±4km, mb4.5/55,ML4.8(TAP) Error ellipse: s-maj=5.7km s-min=2.8km az=192.0*
TAP ***31*** *16:28:54.4,24.46N×121.97E,h18km,ML4.9,C*
ASIES ***31*** *16:28:55.0,24.46N×121.93E,h14km,MW4.5*
ISC 31 16:28:54.5±0.8,24.48N±0.01×122.02E±0.02,h14km±5km, n335,σ1§25/430,mb4.4/46,MS4.0/37,19C-46D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.20**	**310**	⇓*iP*	**Pg**	**16 28 59.3**	**+0.3**
	baz=326						
TWC				*i S*	**Sg**	**16 29 02.1**	**+0.1**
	baz=326						
EWUT	**Wuta**	**0.22**	**260**	⇓*iP*	**Pg**	**16 28 58.1**	**-1.3**
	baz=274						
EWUT				S	**Sg**	**16 29 01.5**	**-1.2**
	baz=274						
ENA	**Nanau**	**0.26**	**258**	⇓*iP*	**Pb**	**16 28 59.6**	**-1.4**
	baz=268						
ENA				S	**Sg**	**16 29 02.9**	**-0.8**
	baz=268						
EHP	**Heping Village**	**0.30**	**235**	⇑*iP*	**Pg**	**16 29 00.3**	**-0.5**
	baz=240						
EHP				*i S*	**Sg**	**16 29 04.6**	**-0.5**
	baz=240						
NDS	**Dongshan**	**0.31**	**299**	⇓*iP*	**Pg**	**16 29 00.1**	**-0.8**
	baz=303						
NDS				S	**Sg**	**16 29 03.9**	**-1.4**
	baz=303						
EGS		**0.37**	**348**	⇑*iP*	**Pb**	**16 29 02.9**	**0.0**
	baz=352						
EGS				*eS*	**Sb**	**16 29 07.9**	**-0.7**
	baz=352						
ILA	**Ilan**	**0.37**	**319**	⇓*iP*	**Pb**	**16 29 02.8**	**-0.2**
	baz=323						
ILA				*eS*	**Sb**	**16 29 07.9**	**-0.7**
	baz=323						
TWE	**Neicheng**	**0.40**	**307**	⇓*iP*	**Pb**	**16 29 02.6**	**-0.7**
	baz=315						
TWE				*i S*	**Sb**	**16 29 08.1**	**-1.3**
	baz=315						
NTC	**Toucheng**	**0.41**	**336**	⇑*iP*	**Pb**	**16 29 03.5**	**-0.1**
	baz=341						
NTC				S	**Sb**	**16 29 08.7**	**-0.9**
	baz=341						
ENTT	**Nioudou**	**0.44**	**291**	⇓*iP*	**Pg**	**16 29 02.2**	**-1.1**
	baz=297						
ENTT				*eS*	**Sg**	**16 29 08.2**	**-1.0**
	baz=297						
LATG	**Datong**	**0.45**	**277**	⇓*iP*	**Pb**	**16 29 03.1**	**-1.2**
	baz=282						
LATG				*eS*	**Sg**	**16 29 09.1**	**-0.4**
	baz=282						
NDT	**Datong Townshi**	**0.47**	**285**	⇓*iP*	**Pb**	**16 29 04.2**	**-0.5**
	baz=290						
NDT				S	**Sg**	**16 29 10.0**	**-0.3**
	baz=290						
FUSB	**Fushanzhiwuyua**	**0.48**	**305**	⇓*iP*	**Pb**	**16 29 04.3**	**-0.5**
	baz=311						
FUSB				*i S*	**Sg**	**16 29 09.8**	**-0.6**
	baz=311						
ETL	**Fush Village**	**0.48**	**228**	P	**Pg**	**16 29 03.1**	**-1.0**
	baz=235						
ETL				*eS*	**Sg**	**16 29 09.6**	**-0.9**
	baz=235						
NACB	**Ninganchiao**	**0.49**	**231**		**Pg**	**16 29 02.9**	**-1.3**
NACB				Sg	**Sg**	**16 29 09.4**	**-1.5**
NACB	**Ninganchiao**	**0.49**	**231**	⇓*iP*	**Pg**	**16 29 03.1**	**-1.1**
	baz=239						
NACB				*i S*	**Sg**	**16 29 09.6**	**-1.2**
	baz=239						
TIPB	**Shuangxi**	**0.52**	**341**	⇑*iP*	**Pb**	**16 29 05.4**	**-0.1**
	baz=344						
TIPB				*eS*	**Sb**	**16 29 12.0**	**-0.8**
	baz=344						
TWB1	**Santiao Chiao**	**0.52**	**357**	⇑*iP*	**Pb**	**16 29 05.6**	**0.0**
	baz=354						
TWB1				*eS*	**Sb**	**16 29 12.3**	**

	baz=254								
FUSS				*e*S		**Sg**	**16 29 17.8**		**-1.0**
	baz=254								
WHF	**Hehuan Shan**	**0.76**	**244**	⇓*i*P		**Pg**	**16 29 08.2**		**-1.3**
	baz=254								
WHF				*e*S		**Sg**	**16 29 17.4**		**-2.2**
	baz=254								
YM01	**YM01**	**0.78**	**329**	*e*P		**Pn**	**16 29 10.4**		**-0.8**
	baz=337								
YM01				*e*S		**Sb**	**16 29 19.4**		**-0.9**
	baz=337								
NWRT	**Kuosheng**	**0.79**	**336**	*e*P		**Pn**	**16 29 10.7**		**-0.6**
	baz=338								
NWRT				*e*S		**Sb**	**16 29 20.7**		**+0.1**
	baz=338								
TWT	**Tachien**	**0.80**	**254**	*e*P		**Pb**	**16 29 09.4**		**-0.9**
	baz=256								
TWT				*e*S		**Sg**	**16 29 19.4**		**-1.2**
	baz=256								
TDCB	**Techi**	**0.81**	**254**	⇓*i*P		**Pg**	**16 29 09.4**		**-1.0**
	baz=256								
TDCB				*e*S		**Sg**	**16 29 18.9**		**-2.1**
	baz=256								
TWS1	**Kuangyinshan**	**0.82**	**319**	⇓*i*P		**Pn**	**16 29 11.4**		**-0.4**
	baz=315								
TWS1				*e*S		**Sn**	**16 29 22.6**		**-1.1**
	baz=315								
NFF	**Wufeng Townshi**	**0.83**	**280**	⇓*i*P		**Pg**	**16 29 09.1**		**-1.6**
	baz=283								
NFF				*e*S		**Sg**	**16 29 18.9**		**-2.7**
	baz=283								
NTY	**Taoyuan**	**0.83**	**308**	*e*P		**Pn**	**16 29 11.7**		**-0.2**
	baz=312								
NTY				*e*S		**Sn**	**16 29 23.5**		**-0.4**
	baz=312								
ANP	**Anpu**	**0.83**	**327**	P		**Pn**	**16 29 11.3**		**-0.7**
	baz=319								
ANP				*e*S		**Sn**	**16 29 22.8**		**-1.3**
	baz=319								
JYNG	**Yonagunijimaku**	**0.85**	**92**	P		**Pn**	**16 29 11.0**		**-1.1**
JYNG				S		**Sb**	**16 29 22.6**		**+0.2**
JYNG	**Yonagunijimaku**	**0.85**	**92**	A		A	16 29 11.0		
	comp=E,47nm,2.1s,comp=E,49nm,2.6s								
ESL	**Shilin**	**0.85**	**219**	*e*P		**Pg**	**16 29 09.7**		**-1.4**
	baz=223								
ESL				*e*S		**Sb**	**16 29 22.2**		**-0.3**
	baz=223								
CHGB	**Renai**	**0.88**	**241**	⇓*i*P		**Pg**	**16 29 10.3**		**-1.2**
	baz=249								
CHGB				*e*S		**Sg**	**16 29 21.9**		**-1.1**
	baz=249								
TWY	**Chenhua**	**0.88**	**335**	⇑*i*P		**Pn**	**16 29 12.2**		**-0.3**
	baz=337								
TWY				*e*S		**Sb**	**16 29 23.3**		**+0.2**
	baz=337								
NJD	**Zhudong**	**0.88**	**287**	*e*P		**Pn**	**16 29 12.5**		**-0.1**
	baz=282								
TEGC	**Jichi Village**	**0.88**	**209**	*e*P		**Pn**	**16 29 12.0**		**-0.6**
	baz=208								
NCU	**National Centr**	**0.90**	**303**	⇓*i*P		**Pn**	**16 29 12.6**		**-0.2**
	baz=313								
NCU				*e*S		**Sn**	**16 29 25.2**		**-0.3**
	baz=313								
NCUH	**Zhongli**	**0.90**	**303**	⇓*i*P		**Pn**	**16 29 12.8**		**0.0**
	baz=306								
NCUH				S		**Sn**	**16 29 26.1**		**+0.5**
	baz=306								
YOJ	**Yonaguni jima**	**0.91**	**91**	Pg		**Pn**	**16 29 11.7**		**-1.2**
YOJ				Sg		**Sb**	**16 29 23.9**		**-0.1**
YOJ	**Yonaguni jima**	**0.91**	**91**	P		**Pn**	**16 29 12.2**		**-0.7**
YOJ	**Yonaguni jima**	**0.91**	**91**	⇓*i*P		**Pn**	**16 29 11.9**		**-1.0**
	baz=79								
YOJ				*e*S		**Sb**	**16 29 24.2**		**+0.1**
	baz=79								
YOJ	**Yonaguni jima**	**0.91**	**91**	P		**Pn**	**16 29 11.7**		**-1.2**
YOJ				*e*S		**Sn**	**16 29 24.5**		**-1.4**
YOJ	**Yonaguni jima**	**0.91**	**91**	A		A	16 29 11.7		
	comp=E,42nm,1.1s,comp=E,55nm,1.8s								
LIOB	**Emei**	**0.92**	**280**	⇓*i*P		**Pb**	**16 29 12.2**		**-0.2**
	baz=283								
LIOB				*e*S		**Sb**	**16 29 24.9**		**+0.3**
	baz=283								
OWD	**Renai**	**0.93**	**236**	⇓*i*P		**Pg**	**16 29 11.2**		**-1.3**
	baz=241								
OWD				*e*S		**Sg**	**16 29 22.4**		**-2.3**
	baz=241								
NSTT	**Nanjuang**	**0.94**	**279**	⇓*i*P		**Pb**	**16 29 12.1**		**-0.4**
	baz=282								
NSTT				*e*S		**Sg**	**16 29 22.9**		**-2.0**
	baz=282								
HSN1	**Hsinchu**	**0.95**	**288**	P		**Pn**	**16 29 14.1**		**+0.5**
	baz=285								
WUSB	**Renai**	**0.95**	**239**	⇓*i*P		**Pg**	**16 29 11.8**		**-1.2**
	baz=246								
WUSB				*e*S		**Sg**	**16 29 24.0**		**-1.5**
	baz=246								
EGFH	**Guangfu**	**0.97**	**214**	*e*P		**Pg**	**16 29 12.1**		**-1.3**
	baz=231								
EGFH				*e*S		**Sb**	**16 29 26.7**		**+0.8**
	baz=231								
SBCB	**Hsinchu**	**0.99**	**288**	⇓*i*P		**Pn**	**16 29 14.1**		**+0.1**
	baz=286								
SBCB				*e*S		**Sn**	**16 29 27.8**		**0.0**
	baz=286								
WHP	**Taichung City**	**1.00**	**258**	*e*P		**Pb**	**16 29 12.9**		**-0.7**
	baz=261								
WHP				*e*S		**Sg**	**16 29 25.7**		**-1.1**
	baz=261								
HSN	**Hsinchu**	**1.00**	**289**	⇓P		**Pn**	**16 29 14.1**		**-0.2**
	baz=289								
HSN				*e*S		**Sb**	**16 29 27.3**		**+0.5**
	baz=289								
NHW	**Xinwu Township**	**1.02**	**301**	*e*P		**Pn**	**16 29 16.0**		**+1.5**
	baz=303								
NHW				*e*S		**Sg**	**16 29 25.1**		**-2.6**
	baz=303								
NJN	**Zhunan**	**1.06**	**281**	*e*P		**Pn**	**16 29 15.6**		**+0.5**
	baz=276								
WPL	**Puli Township**	**1.07**	**244**	*e*P		**Pb**	**16 29 14.6**		**-0.3**
	baz=251								
WPL				*e*S		**Sg**	**16 29 27.8**		**-1.5**
	baz=251								
VWDT	**VWDT**	**1.08**	**228**	⇓*i*P		**Pg**	**16 29 13.8**		**-1.6**
	baz=234								
VWDT				*e*S		**Sb**	**16 29 29.3**		**+0.4**
	baz=234								
DPDB	**Guoxing**	**1.09**	**246**	P		**Pn**	**16 29 15.1**		**-0.4**
	baz=255								
WCS	**Beigang Elemen**	**1.09**	**247**	⇓P		**Pg**	**16 29 13.4**		**-2.2**
	baz=250								
WCS				*e*S		**Sg**	**16 29 27.6**		**-2.3**
	baz=250								
NMLH	**Miaoli**	**1.12**	**273**	⇓P		**Pn**	**16 29 17.0**		**+1.2**
	baz=286								
NMLH				S		**Sb**	**16 29 30.6**		**+0.5**
	baz=286								
HGSD	**Ruisui**	**1.12**	**209**	⇑P		**Pg**	**16 29 15.0**		**-1.2**
	baz=211								
HGSD				*e*S		**Sn**	**16 29 32.4**		**+1.2**
	baz=211								
TWQ1	**Liyutan**	**1.14**	**263**	⇓*i*P		**Pn**	**16 29 16.0**		**-0.1**
	baz=278								
PCYT	**Pengchaiyu**	**1.14**	**3**	⇑P		**Pn**	**16 29 15.4**		**-0.7**
	baz=5.0								
NSY	**Sanyi**	**1.14**	**267**	⇓P		**Pn**	**16 29 16.5**		**+0.3**
	baz=275								
NSY				*e*S		**Sg**	**16 29 29.8**		**-1.8**
	baz=275								
EHY	**Hungye**	**1.16**	**213**	P		**Pg**	**16 29 14.6**		**-2.3**
	baz=226								
EHY				*e*S		**Sg**	**16 29 30.8**		**-1.2**
	baz=226								
SMLT	**Sun Moon Lake**	**1.18**	**240**	*e*P		**Pg**	**16 29 15.8**		**-1.5**
	baz=248								
SMLT				*e*S		**Sb**	**16 29 32.6**		**+0.6**
	baz=248								
SSLB	**Suanglung**	**1.19**	**235**			**Pg**	**16 29 16.1**		**-1.4**
SSLB				Sg		**Sg**	**16 29 30.4**		**-2.7**
SSLB	**Suanglung**	**1.19**	**235**	P		**Pb**	**16 29 16.5**		**-0.5**
SSLB	**Suanglung**	**1.19**	**235**	⇓*i*P		**Pg**	**16 29 15.8**		**-1.7**
	baz=243								
SSLB				*e*S		**Sg**	**16 29 30.3**		**-2.7**
	baz=243								
TYC	**Yuchr**	**1.20**	**242**	⇓P		**Pg**	**16 29 16.1**		**-1.7**
	baz=248								
TYC				*e*S		**Sg**	**16 29 32.2**		**-1.2**
	baz=248								
WDJ	**Dajia District**	**1.26**	**264**	⇓P		**Pg**	**16 29 18.6**		**-0.2**
	baz=267								
WDJ				*e*S		**Sg**	**16 29 34.0**		**-1.2**
	baz=267								
TCU	**Taichung**	**1.27**	**255**	*e*P		**Pg**	**16 29 19.5**		**+0.6**
	baz=258								
TCU				*e*S		**Sn**	**16 29 35.3**		**+0.6**
	baz=258								
YULB	**Yu-li**	**1.27**	**211**			**Pn**	**16 29 15.8**		**-2.1**
YULB	**Yu-li**	**1.27**	**211**	⇑P		**Pn**	**16 29 16.1**		**-1.9**
	baz=211								
ECBN	**Changbin**	**1.27**	**204**	*e*P		**Pn**	**16 29 16.5**		**-1.5**
	baz=188								
WWF	**Wufeng**	**1.28**	**250**	P		**Pg**	**16 29 19.1**		**0.0**
	baz=250								
WWF				*e*S		**Sn**	**16 29 36.1**		**+1.1**
	baz=250								
EYUL	**Yuli**	**1.30**	**210**	*e*P		**Pn**	**16 29 17.5**		**-0.8**
	baz=228								
EYUL				*e*S		**Sb**	**16 29 34.0**		**-1.3**
	baz=228								
TWF1	**Yuli**	**1.30**	**210**	*e*P		**Pn**	**16 29 17.0**		**-1.4**
	baz=224								
WHYT	**Xinyi Township**	**1.32**	**234**	*e*P		**Pg**	**16 29 19.6**		**-0.3**
	baz=242								
WHYT				*e*S		**Sn**	**16 29 37.1**		**+1.1**
	baz=242								
WJS	**Zhushan**	**1.35**	**241**	P		**Pg**	**16 29 20.2**		**-0.3**
	baz=245								
WJS				*e*S		**Sn**	**16 29 37.7**		**+1.0**
	baz=245								
WNT1	**Nantou City**	**1.35**	**245**	P		**Pg**	**16 29 20.7**		**+0.3**
	baz=246								
WNT	**Mingjian**	**1.36**	**244**	⇑*i*P		**Pg**	**16 29 21.0**		**+0.4**
	baz=248								
WNT				*e*S		**Sg**	**16 29 39.1**		**+0.8**
	baz=248								
YUS	**Yu-Shan**	**1.39**	**225**	⇑*i*P		**Pn**	**16 29 19.5**		**-0.4**
	baz=228								
YUS				*e*S		**Sb**	**16 29 37.4**		**-0.9**
	baz=228								
WCHH	**Zhanghua**	**1.39**	**253**	⇓P		**Pg**	**16 29 20.9**		**-0.3**
	baz=257								
WCHH				*e*S		**Sg**	**16 29 39.4**		**0.0**
	baz=257								
WYL	**Yuanlin Townsh**	**1.41**	**249**	P		**Pg**	**16 29 21.3**		**-0.3**
	baz=264								
WYL				*e*S		**Sg**	**16 29 39.3**		**-0.7**
	baz=264								
FULB	**Fuli**	**1.44**	**207**	*e*P		**Pn**	**16 29 19.4**		**-0.9**
	baz=226								
FULB				*e*S		**Sb**	**16 29 39.8**		**+0.4**
	baz=226								
ALS	**Alishan**	**1.47**	**229**	*i* P		**Pb**	**16 29 21.1**		**-0.7**
	baz=232								
ALS				*e*S		**Sn**	**16 29 40.7**		**+0.5**
	baz=232								
CHN5	**Tsauling**	**1.51**	**234**	*e*P		**Pb**	**16 29 21.8**		**-0.6**
	baz=239								
CHN5				*e*S		**Sg**	**16 29 43.2**		**0.0**
	baz=239								
WGK	**Gukeng**	**1.55**	**239**	P		**Pg**	**16 29 23.9**		**-0.4**
	baz=240								
ECS	**Chishang**	**1.56**	**208**	*e*P		**Pn**	**16 29 21.6**		**-0.4**
	baz=222								
WDLH	**Douliu**	**1.56**	**240**	P		**Pg**	**16 29 23.5**		**-1.1**
	baz=244								
WDLH				*e*S		**Sg**	**16 29 44.6**		**-0.4**
	baz=244								
IRIF	**Iriomote-Funau**	**1.57**	**95**	P		**Pn**	**16 29 21.1**		**-0.9**
IRIF				*e*S		**Sn**	**16 29 41.1**		**-1.1**
IRIF	**Iriomote-Funau**	**1.57**	**95**	A		A	16 29 21.1		
	comp=E,17nm,1.8s,comp=E,28nm,1.3s								
ELDTW	**Lidau**	**1.58**	**216**	*e*P		**Pn**	**16 29 21.4**		**-0.9**
	baz=219								
ELDTW				*e*S		**Sb**	**16 29 43.5**		**0.0**
	baz=219								
WRL	**Guolierlin Hig**	**1.60**	**249**	*e*P		**Pn**	**16 29 22.5**		**0.0**
	baz=265								
WRL				*e*S		**Sg**	**16 29 45.3**		**-0.9**
	baz=265								
EDH	**Donghe**	**1.64**	**204**	*e*P		**Pn**	**16 29 21.5**		**-1.4**
	baz=186								
EDH				*e*S		**Sn**	**16 29 44.7**		**+0.8**
	baz=186								
WCKO	**Fanlu**	**1.66**	**231**	*e*P		**Pb**	**16 29 23.9**		**-1.0**
	baz=236								
WCKO				*e*S		**Sb**	**16 29 46.3**		**+0.7**
	baz=236								
WTK	**Tuku**	**1.68**	**242**	*e*P		**Pb**	**16 29 25.4**		**0.0**
	baz=247								
WTK				*e*S		**Sg**	**16 29 47.4**		**-1.4**
	baz=247								
HATJ	**Hateruma jima**	**1.69**	**104**	P		**Pn**	**16 29 23.6**		**-0.1**
HATJ	**Hateruma jima**	**1.69**	**104**	A		A	16 29 23.6		
	comp=E,30nm,2.8s,comp=E,44nm,2.6s								
CHN2	**Minshiung**	**1.70**	**236**	*e*P		**Pg**	**16 29 25.8**		**-1.3**
	baz=241								
CHN2				*e*S		**Sg**	**16 29 48.2**		**-1.0**
	baz=241								
STYH	**Taoyuan**	**1.73**	**221**	*e*P		**Pn**	**16 29 24.3**		**+0.1**
	baz=212								
STYH				*e*S		**Sn**	**16 29 46.1**		**0.0**
	baz=212								
TPUB	**Ta-pu**	**1.73**	**227**			**Pn**	**16 29 24.9**		**+0.6**
TPUB	**Ta-pu**	**1.73**	**227**	P		**Pb**	**16 29 26.2**		**+0.1**
TPUB	**Ta-pu**	**1.73**	**227**	P		**Pb**	**16 29 25.7**		**-0.5**
	baz=232								
TPUB				*e*S		**Sg**	**16 29 49.8**		**-0.4**
	baz=232								
STYT	**Tauyuan**	**1.75**	**221**	*e*P		**Pn**	**16 29 24.8**		**+0.2**
	baz=222								
CHY	**Chiayi**	**1.75**	**236**	*e*P		**Pb**	**16 29 26.4**		**-0.1**
	baz=241								
CHY				*e*S		**Sg**	**16 29 50.4**		**-0.6**
	baz=241								
LONT	**Longtian**	**1.77**	**208**	*e*P		**Pn**	**16 29 23.4**		**-1.3**
	baz=208								
WTP	**Ta-pu**	**1.78**	**226**	⇑*i*P		**Pb**	**16 29 26.2**		**-0.8**
	baz=231								
WTP				*e*S		**Sb**	**16 29 49.6**		**+0.4**
	baz=231								
JKRS	**Kuro-shima**	**1.83**	**97**	P		**Pn**	**16 29 25.3**		**-0.4**
JKRS				*e*S		**Sn**	**16 29 47.4**		**-1.3**
JKRS	**Kuro-shima**	**1.83**	**97**	A		A	16 29 25.3		
	comp=E,29nm,1.7s,comp=E,24nm,4.4s								
WSF	**Szhu**	**1.84**	**243**	*e*P		**Pb**	**16 29 27.1**		**-1.0**
	baz=248								
WSF				*e*S		**Sb**	**16 29 51.4**		**+0.5**
	baz=248								
TWGBT	**Beinan**	**1.87**	**208**	*e*P		**Pn**	**16 29 24.5**		**-1.7**
	baz=191								
TWG	**Pinlang**	**1.87**	**208**			**Pn**	**16 29 24.6**		**-1.6**
LDUT	**Ludao**	**1.87**	**196**	*e*P		**Pn**	**16 29 24.1**		**-2.0**
	baz=181								
SNST	**Tainan City**	**1.87**	**228**	*e*P		**Pb**	**16 29 28.4**		**-0.2**
	baz=233								
SNST				*e*S		**Sb**	**16 29 53.0**		**+1.1**
	baz=233								
CHN1	**Nanshi**	**1.88**	**227**	*e*P		**Pb**	**16 29 27.9**		**-0.7**
	baz=231								
CHN1				*e*S		**Sb**	**16 29 52.8**		**+0.8**
	baz=231								
WSL	**Shuilin Townsh**	**1.89**	**240**	*e*P		**Pn**	**16 29 27.0**		**+0.5**
	baz=245								
WSL				*e*S		**Sg**	**16 29 53.9**		**-1.6**
	baz=245								
TTN	**Taitung**	**1.90**	**205**	*e*P		**Pn**	**16 29 25.5**		**-1.0**
	baz=205								
SGST	**Jiashian**	**1.91**	**224**	*e*P		**Pn**	**16 29 27.3**		**+0.5**
	baz=213								
SGST				*e*S		**Sb**	**16 29 52.3**		**-0.7**
	baz=213								
ICHU	**Yijhu**	**1.94**	**235**	*e*P		**Pb**	**16 29 29.1**		**-0.6**
	baz=236								
JIJ	**Ishigaki jima**	**1.94**	**93**	P		**Pn**	**16 29 26.2**		**-1.0**
JIJ				*e*S		**Sn**	**16 29 50.1**		**-1.4**
JIJ	**Ishigaki jima**	**1.94**	**93**	A		A	16 29 26.2		
	comp=E,4.0nm,8.2s,comp=E,6.0nm,1.6s								
CHN3	**Shinhua**	**2.06**	**228**	*e*P		**Pb**	**16 29 31.1**		**-0.6**
	baz=232								
CHN3				*e*S		**Sb**	**16 29 58.3**		**+1.1**
	baz=232								
SSHA	**Shanhua**	**2.07**	**230**	*e*P		**Pb**	**16 29 31.4**		**-0.6**
	baz=235								
SSHA				*e*S		**Sb**	**16 29 58.9**		**+1.3**
	baz=235								
SHHT	**Tainan City**	**2.11**	**227**	*e*P		**Pb**	**16 29 31.3**		**-1.3**
	baz=231								
SHHT				*e*S		**Sg**	**16 30 00.4**		**-2.0**
	baz=231								
ECL	**Taimali**	**2.11**	**208**	*e*P		**Pn**	**16 29 28.2**		**-1.3**
	baz=193								
SCLT	**Jiali**	**2.12**	**232**	*e*P		**Pb**	**16 29 30.9**		**-1.8**
	baz=237								
SCLT				*e*S		**Sb**	**16 29 59.9**		**+1.0**
	baz=237								
SCST	**Cishan**	**2.12**	**222**	*e*P		**Pb**	**16 29 31.4**		**-1.2**
	baz=222								
SSD	**Sandimen**	**2.14**	**217**	*e*P		**Pn**	**16 29 30.8**		**+0.9**
	baz=232								
SSD				*e*S		**Sb**	**16 29 58.9**		**-0.8**
	baz=232								
TSMG	**Majia**	**2.17**	**216**	*e*P		**Pb**	**16 29 32.3**		**-1.4**
	baz=220								
TSMG				*e*S		**Sn**	**16 29 59.0**		**+1.9**
	baz=220								
TAI1	**Yung-k'ang**	**2.18**	**229**	*e*P		**Pb**	**16 29 32.8**		**-0.9**
	baz=229								
TWM1	**Shoushan**	**2.20**	**222**	*e*P		**Pb**	**16 29 33.6**		**-0.7**
	baz=225								
TWM1				*e*S		**Sb**	**16 30 01.7**		**+0.2**
	baz=225								
TSCK	**Chigu Township**	**2.21**	**233**	*e*P		**Pn**	**16 29 31.6**		**+0.8**
	baz=238								
TSCK				*e*S		**Sn**	**16 29 59.5**		**+1.5**
	baz=238								
SGLT	**Jiouru**	**2.24**	**219**	*e*P		**Pb**	**16 29 34.0**		**-0.9**
	baz=223								
SGLT				*e*S		**Sb**	**16 30 01.1**		**-1.3**
	baz=223								
MASBT	**Mashibuluo**	**2.25**	**215**	*e*P		**Pn**	**16 29 32.0**		**+0.5**
	baz=219								
MASBT				*e*S		**Sb**	**16 30 02.5**		**-0.3**
	baz=219								
EAST	**Anshuo**	**2.35**	**207**	*e*P		**Pn**	**16 29 32.7**		**-0.1**
	baz=193								
TAW	**Tawu**	**2.35**	**206**	*e*P		**Pn**	**16 29 31.6**		**-1.1**
	baz=207								
TAWH	**Dawu Township**	**2.37**	**206**	*e*P		**Pn**	**16 29 32.0**		**-1.0**
	baz=207								
VWUC	**VWUC**	**2.39**	**283**	*e*P		**Pn**	**16 29 32.4**		**-0.9**
	baz=283								
SSPT	**Xinbi**	**2.39**	**214**	*e*P		**Pb**	**16 29 35.7**		**-1.7**
	baz=218								
SSPT				*e*S		**Sb**	**16 30 05.3**		**-1.5**
	baz=218								
PNG	**Penghu**	**2.43**	**248**	*e*P		**Pn**	**16 29 33.9**		**0.0**
	baz=253								
PNG				*e*S		**Sn**	**16 30 02.5**		**-0.8**
	baz=253								
PHUB	**P'eng-hu**	**2.43**	**247**	*e*P		**Pn**	**16 29 33.6**		**-0.3**
	baz=252								
PHUB				*e*S		**Sn**	**16 30 03.3**		**-0.2**
	baz=252								
WSSB	**Gushan**	**2.44**	**222**	*e*P		**Pb**	**16 29 36.2**		**-2.0**
	baz=222								
JTJ	**Tarama**	**2.45**	**86**	P		**Pn**	**16 29 34.1**		**0.0**
JTJ				S		**Sn**	**16 30 03.5**		**-0.4**
JTJ	**Tarama**	**2.45**	**86**	A		A	16 29 34.1		
	comp=E,12nm,2.6s,comp=E,12nm,2.2s								
SCZT	**Fangliau**	**2.46**	**212**	*e*P		**Pn**	**16 29 35.4**		**+1.1**
	baz=216								
SCZT				*e*S		**Sb**	**16 30 07.7**		**-1.1**
	baz=216								
LAY	**Lan-yu**	**2.47**	**190**	*e*P		**Pn**	**16 29 32.5**		**-2.0**
	baz=186								
WDGT	**Dungji**	**2.48**	**241**	*e*P		**Pn**	**16 29 35.1**		**+0.6**
	baz=246								
WDGT				*e*S		**Sn**	**16 30 05.5**		**+0.9**
	baz=246								
LYUB	**Lan-yu**	**2.50**	**189**	*e*P		**Pn**	**16 29 31.4**		**-3.5**
	baz=186								
MATB	**Ma-tsu**	**2.50**	**312**	*e*P		**Pn**	**16 29 35.4**		**+0.5**
	baz=312								
SLIU	**Shizi**	**2.52**	**207**	*e*P		**Pn**	**16 29 35.5**		**+0.4**
	baz=195								
WLCH	**Liuqiu**	**2.60**	**216**	*e*P		**Pb**	**16 29 39.3**		**-1.7**
	baz=216								
SMST	**Manzhou Townsh**	**2.68**	**204**	*e*P		**Pn**	**16 29 37.3**		**0.0**
	baz=189								
VCHM	**Qimei**	**2.69**	**242**	*e*P		**Pn**	**16 29 37.3**		**-0.1**
	baz=242								
HEN	**Hengchun**	**2.73**	**206**	*e*P		**Pn**	**16 29 39.6**		**+1.6**
	baz=193								
TWKBT	**Hengchun**	**2.76**	**204**	*e*P		**Pn**	**16 29 37.9**		**-0.5**
	baz=190								
TWK1	**Hengchun**	**2.76**	**204**	*e*P		**Pn**	**16 29 38.0**		**-0.4**
	baz=189								
TSEB	**Hengchuen, Pin**	**2.77**	**202**	*e*P		**Pn**	**16 29 40.6**		**+2.1**
	baz=188								
JIRB	**Irabujima**	**2.89**	**83**	P		**Pn**	**16 29 40.6**		**+0.3**
JIRB	**Irabujima**	**2.89**	**83**	A		A	16 29 40.6		
	comp=E,7.0nm,3.9s,comp=E,6.0nm,3.0s								
XPSS	**Dashiqiu**	**2.94**	**326**	*e*P		**Pn**	**16 29 40.1**		**-0.8**
	baz=326								
JIKM	**Ikemajima**	**2.97**	**81**	P		**Pn**	**16 29 41.8**		**+0.4**
JIKM				*e*S		**Sn**	**16 30 17.1**		**+0.3**
JIKM	**Ikemajima**	**2.97**	**81**	A		A	16 29 41.8		
	comp=E,10.0nm,3.7s,comp=E,7.0nm,5.5s								
JMJ	**Miyako jima 2**	**3.00**	**83**	P		**Pn**	**16 29 43.2**		**+1.5**
JMJ2	**Miyako jima3**	**3.03**	**84**	P		**Pn**	**16 29 42.9**		**+0.8**
JMJ2				*e*S		**Sn**	**16 30 18.3**		**+0.1**
JMJ2	**Miyako jima3**	**3.03**	**84**	A		A	16 29 42.9		
	comp=E,13nm,2.1s,comp=E,10.0nm,3.0s								
JOGS	**Gusukube**	**3.10**	**84**	P		**Pn**	**16 29 43.5**		**+0.4**
JOGS	**Gusukube**	**3.10**	**84**	A		A	16 29 43.5		
	comp=E,14nm,3.6s,comp=E,20nm,3.1s								
MHZQ	**Yeshan**	**3.15**	**301**	*e*P		**Pn**	**16 29 43.5**		**-0.2**
	baz=301								
QZH	**Quanzhou**	**3.15**	**279**	⇓*i*Pn		**Pn**	**16 29 43.3**		**-0.4**
QZH				Sn		**Sn**	**16 30 20.0**		**-1.1**
QZH				smax	smax				
	comp=N,720nm,0.6s								
QZH				smax	smax				
	comp=E,360nm,0.6s								
QZH				LR	LR				
	comp=E,4μm

KSRS	Korea Array	13.88	20		P	n	**16 32 11.7 +0.8**
KSRS	Korea Array	13.88	20	Pn	Pn		**16 32 11.7 +0.8**
	comp=Z,0.2nm,0.3s,baz=208,slow=13,SNR=2.4						
KSRS				LR	LR		16 38 09.0
	comp=Z,365nm,18.7s,baz=205,slow=40						
GYA	Guiyang	14.01	281	⇑P	P	n	**16 32 13.3 +0.5**
GYA				S	S	n	**16 34 50.8 +2.6**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GYA				LR	LR		
	comp=Z,1μm,7.4s						
GYA				LR	LR		
	comp=Z,2μm,12.6s						
GYA				LR	LR		
	comp=Z,2μm,11.4s						
HNS	HongShan	14.31	336	⇓P	P		**16 32 23.3 -0.6**
HNS				S	S		**16 35 12.3 -3.4**
HNS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HNS				LR	LR		
	comp=N,1μm,16.3s						
HNS				LR	LR		
	comp=E,2μm,16.3s						
HNS				LR	LR		
	comp=Z,460nm,13.5s						
XAN	Xi'an	14.86	313	⇑*i*P	P		**16 32 33.8 +3.7**
XAN				pP	Pn		16 32 38.5 +14
XAN				S	S		16 35 42.0 +15
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
XAN				LR	LR		
	comp=N,2μm,11.7s						
XAN				LR	LR		
	comp=E,2μm,10.8s						
XAN				LR	LR		
	comp=Z,1μm,9.4s						
BJI	Beijing	16.27	344	P	Pn	n	**16 32 43.3 +0.6**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BJI				LR	LR		
	comp=Z,120nm,18.3s						
BJI				LR	LR		
	comp=Z,1μm,19.3s						
CD2	Chengdu	17.38	296	P	P		**16 33 01.5 +3.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=Z,1μm,13.9s						
CD2				LR	LR		
	comp=Z,1μm,10.2s						
CD2				LR	LR		
	comp=Z,2μm,10.8s						
KMI	Kunming	17.51	276	⇓P	Pn	n	**16 32 58.8 +0.1**
KMI				pP	sP		16 33 02.5 -2.2
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				LR	LR		
	comp=Z,640nm,8.4s						
KMI				LR	LR		
	comp=Z,2μm,10.2s						
KMI				LR	LR		
	comp=Z,2μm,12.8s						
JHJ	Hachijo jima 2	17.77	57	LR	LR		16 39 40.2
	comp=Z,339nm,20.5s,baz=12,slow=37						
JCJ	Chichijima	18.35	78	LR	LR		16 38 39.0
	comp=Z,100nm,21.9s,baz=292,slow=32						
MJAR	Matsushiro Arr	18.39	45	LR	LR		16 41 15.4
	comp=Z,372nm,19.6s,baz=226,slow=41						
PZH	PanZhiHua	18.41	281	P	Pn	n	**16 33 08.5 -1.2**
PZH				S	Sn	n	**16 36 35.8 +0.5**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,210nm,8.0s						
PZH				LR	LR		
	comp=Z,550nm,10.0s						
PZH				LR	LR		
	comp=Z,1μm,11.5s						
PZH				LR	LR		
	comp=Z,1μm,12.7s						
HHC	Hu-ho-hao-te	18.52	334	*e*P	Pn	n	**16 33 12.5 +1.7**
HHC				pmax	pmax		
	comp=Z,29nm,0.6s						
HHC				pmax	pmax		
	comp=Z,370nm,4.6s						
HHC				LR	LR		
	comp=Z,1μm,12.1s						
HHC				LR	LR		
	comp=Z,2μm,14.0s						
HHC				LR	LR		
	comp=Z,720nm,14.6s						
LZH	Lanzhou	19.46	311	*e*P	Pn	n	**16 33 24.5 +2.2**
LZH				pP	sP		16 33 28.8 +2.2
LZH				sP	pP		16 33 31.8 +7.0
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,390nm,4.8s						
LZH				LR	LR		
	comp=Z,830nm,13.7s						
LZH				LR	LR		
	comp=Z,760nm,13.1s						
LZH				LR	LR		
	comp=Z,1μm,15.1s						
CN2	Changchun	19.48	7	*e*P	Pn	n	**16 33 21.0 -1.2**
CN2				*es*P	sP		16 33 28.0 +1.5
CN2				*e*S	Sn	n	**16 36 55.8 -4.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,720nm,10.0s						
CN2				LR	LR		
	comp=Z,840nm,10.0s						
CN2				LR	LR		
	comp=Z,660nm,12.0s						
MYLDM	Lahad Datu	19.49	191	P	P		**16 33 21.8 +0.5**
MYLDM				IAmb	IAmb		16 33 41.7
	comp=Z,27nm,1.3s						
XLT	XiLinHaoTe	19.97	347	⇓*i*P	Pn	n	**16 33 29.3 +1.1**
XLT				pP	sP		16 33 33.3 +1.3
XLT				S	S		**16 37 07.8 -3.0**
XLT				pmax	pmax		
	comp=Z,17nm,0.9s						
XLT				pmax	pmax		
	comp=Z,270nm,5.6s						
XLT				LR	LR		
	comp=Z,1μm,17.8s						
XLT				LR	LR		
	comp=Z,390nm,12.7s						
USRK	Ussuriysk Ar.	21.29	20	P	P		**16 33 42.8 +2.1**
USRK	Ussuriysk Ar.	21.29	20	P	P		**16 33 42.9 +2.2**
	comp=Z,1.6nm,0.7s,baz=202,slow=12,SNR=4.1						
USRK				LR	LR		16 41 52.0
	comp=Z,336nm,18.4s,baz=219,slow=37						
CMAR	Chiang Mai Arr	22.28	259	P	P		**16 33 53.4 +1.8**
	comp=Z,1.1nm,0.9s,baz=64,slow=9.1,SNR=3.6						
	comp=Z,1.1nm,0.9s						
TOLI2	Tolitoli	23.27	183	P	P		**16 33 58.7 -3.1**
SBUM	Sibu	23.86	205	P	P		**16 34 05.3 -2.3**
GTA	Gaotai	23.92	314	⇓P	P		**16 34 09.5 +1.2**
GTA				pP	sP		16 34 14.0 0.0
GTA				sP	pP		16 34 17.0 +4.7
GTA				S	S		**16 38 25.5 +1.1**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,74nm,4.6s						
GTA				LR	LR		
	comp=Z,470nm,14.9s						
GTA				LR	LR		
	comp=Z,430nm,16.7s						
GTA				LR	LR		
	comp=Z,320nm,15.3s						
GUMO	Guam	24.13	113	LR	LR		16 43 23.7
	comp=Z,199nm,19.2s,baz=282,slow=36						
TNTI	Ternate	24.13	167	P	P		**16 34 10.0 -0.2**
TNTI				IAmb	IAmb		16 34 23.9
	comp=Z,12nm,0.9s						
HIA	Hailar	24.80	356	P	P		**16 34 17.8 +1.7**
HIA				IAmb	IAmb		16 34 19.4
	comp=Z,8.1nm,0.7s						
LBMI	Labuha	25.53	167	P	P		**16 34 24.1 +1.1**
	comp=Z,502nmcomp=Z,28nm,1.0s						
KLR	Kul'dur	25.86	15	P	P		**16 34 28.4 +2.7**
KLR	Kul'dur	25.86	15	P	P		**16 34 28.4 +2.7**
	comp=Z,5.1nm,0.7s,baz=222,slow=5.5,SNR=11						
KLR				LR	LR		16 45 13.8
	comp=Z,241nm,20.2s,baz=197,slow=38						
GOMU	GeErMu	26.13	303	P	P		**16 34 31.0 +2.3**
GOMU				pP	sP		16 34 34.3 -0.2
GOMU				sP	pP		16 34 35.5 +2.7
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,86nm,4.2s						
GOMU				LR	LR		
	comp=Z,850nm,18.3s						
GOMU				LR	LR		
	comp=Z,390nm,17.9s						
GOMU				LR	LR		
	comp=Z,320nm,15.4s						
ULN	Ulaanbaatar	26.18	337	P	P		**16 34 29.6 +0.8**
ULN				IAmb	IAmb		16 34 38.0
	comp=Z,5.5nm,0.7s						
SONM	Songino Array	26.40	336	P	P		**16 34 31.8 +1.0**
SONM				IAmb	IAmb		16 34 33.8
	comp=Z,9.4nm,1.0s						
SONM	Songino Array	26.40	336	P	P		**16 34 31.6 +0.8**
	comp=Z,6.1nm,0.9s,baz=152,slow=8.7,SNR=28						
	comp=Z,6.1nm,0.9s						
SHL	Shillong	27.30	279	P	P		**16 34 39.7 +0.6**
BRDH	Bariadhala	27.87	273	LR	LR		16 46 03.9
	comp=Z,235nm,19.6s,baz=136,slow=37						
PSI	Prapat	31.00	230	LR	LR		16 49 01.6
	comp=Z,321nm,18.4s,baz=162,slow=39						
WMQ	Urumqi	34.00	313	*e*P	P		**16 35 38.5 +0.5**
WMQ				LR	LR		
	comp=Z,360nm,16.7s						
WMQ				LR	LR		
	comp=Z,440nm,12.7s						
WMQ				LR	LR		
	comp=Z,120nm,11.7s						
YAK	Yakutsk	37.89	6	P	P		**16 36 11.6 +0.6**
YAK	Yakutsk	37.89	6	LR	LR		16 52 28.5
	comp=Z,163nm,19.9s,baz=246,slow=38						
MK31	Makanchi Array	38.66	315	P	P		**16 36 16.9 -0.8**
MKAR	Makanchi Array	38.66	315	P	P		**16 36 17.8 +0.1**
MKAR	Makanchi Array	38.66	315	P	P		**16 36 18.4 +0.7**
	comp=Z,1.0nm,0.5s,baz=100,slow=9.6,SNR=20						
	comp=Z,1.0nm,0.5s						
PETK	Petropavlovsk-	39.20	34	LR	LR		16 53 23.3
	comp=Z,174nm,18.2s,baz=226,slow=38						
ZAA0	Zalesovo Array	40.41	327	P	P		**16 36 31.6 -0.5**
ZALV	Zalesovo Beam	40.41	327	P	P		**16 36 30.8 -1.4**
ZALV	Zalesovo Beam	40.41	327	P	P		**16 36 31.7 -0.4**
	comp=Z,1.7nm,0.4s,baz=115,slow=8.6,SNR=10						
ZALV				LR	LR		16 53 01.1
	comp=Z,164nm,18.5s,baz=116,slow=36						
	comp=Z,1.7nm,0.4s						
MA2	Magadan	40.42	22	LR	LR		16 54 18.9
	comp=Z,173nm,18.6s,baz=224,slow=38						
KSH	Kashi	41.38	303	P	P		16 36 45.3 +4.8
KSH				sP	sP		16 36 51.3 +4.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRN	Naryn	41.63	305	P	P		**16 36 42.5 -0.3**
H11N1	WAKE ISLAND Hy	41.72	87	T	T		17 22 07.0
	baz=283,slow=74,SNR=6.5						
H11N2	WAKE ISLAND Hy	41.72	87	T	T		17 22 08.7
	baz=111,slow=74,SNR=7.0						
KURK	Kurchatov	42.35	320	P	P		**16 36 48.1 -0.1**
AAK	Ala-Archa	42.93	307	LR	LR		16 57 24.7
	comp=Z,141nm,18.1s,baz=95,slow=40						
DRK	Karamyk	44.58	302	P	P		**16 37 06.8 +0.1**
DRK				IAmb	IAmb		16 37 15.7
	comp=Z,7.7nm,1.2s						
GAR	Garm	45.71	301	P	P		**16 37 16.3 +0.8**
GAR				IAmb	IAmb		16 37 23.0
	comp=Z,7.2nm,0.7s						
WRA	Warramunga Arr	45.76	164	P	P		**16 37 15.1 -0.7**
WRA	Warramunga Arr	45.76	164	P	P		**16 37 14.5 -1.3**
	comp=Z,2.7nm,0.9s,baz=347,slow=8.6,SNR=30						
	comp=Z,2.7nm,0.9s						
WB2	Warramunga Arr	45.76	164	P	P		**16 37 15.7 -0.1**
WB2				IAmb	IAmb		16 37 22.5
	comp=Z,7.2nm,1.0s						
WR0	Warramunga Arr	45.83	163	P	P		**16 37 14.8 -1.5**
WR0				IAmb	IAmb		16 37 20.0
	comp=Z,4.8nm,0.8s						
KK31	Karatay Array	45.89	307	P	P		**16 37 17.1 +0.4**
KKAR	Karatay Array	45.89	307	P	P		**16 37 17.1 +0.4**
KBL	Kabul	46.72	295	P	P		**16 37 23.8 +0.2**
TIXI	Tiksi	47.36	3	P	P		**16 37 26.3 -1.4**
TIXI				IAmb	IAmb		16 37 34.7
	comp=Z,5.8nm,0.9s						
TIXI	Tiksi	47.36	3	P	P		**16 37 26.7 -1.0**
	comp=Z,2.8nm,0.6s,baz=97,slow=20,SNR=14						
TIXI				LR	LR		17 00 02.3
	comp=Z,374nm,18.2s,baz=181,slow=40						
	comp=Z,2.8nm,0.6s						
BVAR	Borovoye Array	47.92	320	LR	LR		16 57 20.0
	comp=Z,124nm,21.1s,baz=104,slow=36						
BRVK	Borovoye	48.00	320	P	P		**16 37 32.1 -0.9**
BRVK				IAmb	IAmb		16 37 35.3
	comp=Z,3.6nm,0.9s						
AS31	Alice Springs	49.23	166	P	P		**16 37 42.1 -0.6**
ASAR	Alice Springs	49.23	166	P	P		**16 37 43.0 +0.2**
	comp=Z,0.7nm,0.4s,baz=352,slow=7.0,SNR=32						
	comp=Z,0.7nm,0.4s						
ABKAR	Akbulak array	53.78	314	P	P		**16 38 16.5 -0.1**
ABKAR				IAmb	IAmb		16 38 26.2
	comp=Z,3.0nm,0.7s						
GEYT	Alibeck	55.30	300	P	P		**16 38 27.2 -0.7**
GEYT				IAmb	IAmb		16 38 38.1
	comp=Z,4.7nm,0.8s						
GEYT	Alibeck	55.30	300	P	P		**16 38 29.2 +1.3**
	comp=Z,2.5nm,0.7s,baz=181,slow=5.9,SNR=5.5						
	comp=Z,2.5nm,0.7s						
GYA0B	ALIBECK ARRAY	55.30	300	P	P		**16 38 29.2 +1.3**
ARU	Arti	55.33	323	P	P		**16 38 26.7 -1.0**
ARU				IAmb	IAmb		16 38 33.3
	comp=Z,4.8nm,0.7s						
ARU	Arti	55.33	323	LR	LR		17 02 31.7
	comp=Z,137nm,18.3s,baz=116,slow=36						
STKA	Stephens Creek	59.09	161	P	P		**16 38 54.5 0.0**
	comp=Z,1.6nm,0.6s,baz=323,slow=10,SNR=4.9						
	comp=Z,1.6nm,0.6s						
BELG	Belogornoye	61.58	318	LR	LR		17 06 37.0
	comp=Z,92nm,18.9s,baz=19,slow=37						
GNI	Garni	65.26	305	LR	LR		17 11 24.3
	comp=Z,47nm,21.5s,baz=80,slow=39						
KBZ	Khabaz	65.88	309	LR	LR		17 10 17.4
	comp=Z,112nm,18.4s,baz=65,slow=38						
H21K	Melozitna Rive	66.00	27	P	P		**16 39 40.9 +0.6**
H21K				IAmb	IAmb		16 39 46.5
	comp=Z,5.3nm,1.3s						
CAST	Castle Rocks	66.59	29	P	P		**16 39 44.1 0.0**
PPLA	Purkeypile	66.61	30	P	P		**16 39 45.4 +0.9**
PPLA				IAmb	IAmb		16 39 48.5
	comp=Z,7.1nm,1.2s						
TOLK	Toolik Lake Re	66.88	23	P	P		**16 39 47.6 +1.7**
MLY	Manley	66.94	27	P	P		**16 39 46.5 +0.1**
MLY				IAmb	IAmb		16 39 48.1
	comp=Z,2.2nm,0.9s						
OHAK	Old Harbor	66.94	36	P	P		**16 39 45.6 -0.9**
OHAK				IAmb	IAmb		16 39 53.4
	comp=Z,6.7nm,1.1s						
H23K	Yukon River	67.31	26	P	P		**16 39 49.4 +0.7**
NEA2	Nenana	67.71	28	P	P		**16 39 50.9 -0.4**
NEA2				IAmb	IAmb		16 39 59.8
	comp=Z,3.9nm,1.1s						
H24K	Noodor Dome	67.98	26	P	P		**16 39 53.3 +0.3**
H24K				IAmb	IAmb		16 40 01.3
	comp=Z,2.9nm,1.1s						
MDM	Murphy Dome	68.00	27	P	P		**16 39 53.4 +0.3**
RND	Reindeer	68.02	29	P	P		**16 39 52.5 -0.8**
RND				IAmb	IAmb		16 40 00.7
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	68.60	27	P	P		**16 39 56.3 -0.5**
	comp=Z,0.3nm,0.5s,baz=292,slow=9.6,SNR=5.1						
ILAR				LR	LR		17 12 25.9
	comp=Z,52nm,18.8s,baz=292,slow=38						
	comp=Z,0.3nm,0.5s						
BMAR	Burnt Mountain	68.94	24	P	P		**16 39 57.8 -1.2**
SCM	Sheep Creek Mo	69.03	31	P	P		**16 39 58.2 -1.5**
SPITS	Spitsbergen Ar	69.35	348	LR	LR		17 14 19.4
	comp=Z,76nm,18.4s,baz=26,slow=39						
ARCES	ARCESS Array B	69.55	338	P	P		**16 40 02.3 -0.3**
	comp=Z,1.0nm,0.7s,baz=83,slow=7.4,SNR=1.0						
	comp=Z,1.0nm,0.7s						
I26K	Coal Creek Min	70.02	26	P	P		**16 40 06.3 +0.7**
I26K				IAmb	IAmb		16 40 24.2
	comp=Z,5.5nm,1.4s						
J26L	Joseph Creek	70.06	27	P	P		**16 40 06.2 +0.2**
J26L				IAmb	IAmb		16 40 14.2
	comp=Z,7.4nm,1.5s						
GLB	Gilahina Butte	70.76	31	P	P		**16 40 10.0 -0.2**
GLB				IAmb	IAmb		16 40 15.2
	comp=Z,2.1nm,0.8s						
EGAK	Eagle	70.98	27	P	P		**16 40 11.4 -0.1**
L27K	Beaver Creek,	71.19	29	P	P		**16 40 13.1 +0.2**
L27K				IAmb	IAmb		16 40 42.8
	comp=Z,4.6nm,1.4s						
BCAR	Beaver Creek A	71.21	29	P	P		**16 40 12.6 -0.3**
M27K	Edge Creek, AK	71.38	29	P	P		**16 40 14.2 +0.1**
FIA1	FINESS Array S	71.57	330	P	P		**16 40 14.2 -0.8**
FINES	FINESS Array B	71.57	330	P	P		**16 40 14.9 -0.1**
FINES	FINESS Array B	71.57	330	P	P		**16 40 14.6 -0.4**
	comp=Z,2.0nm,0.5s,baz=72,slow=6.2,SNR=19						
FINES				LR	LR		17 14 04.1
	comp=Z,87nm,18.2s,baz=76,slow=38						
	comp=Z,2.0nm,0.5s						
LOGN	Logan Glacier	72.24	31	P	P		**16 40 19.0 -0.4**
LOGN				IAmb	IAmb		16 40 36.9
	comp=Z,8.9nm,1.5s						
INK	Inuvik	72.66	22	LR	LR		17 15 16.9
	comp=Z,72nm,18.1s,baz=354,slow=38						
AKASG	Malin Array Be	73.15	318	P	P		**16 40 24.0 -0.7**
	comp=Z,0.2nm,0.2s,baz=56,slow=6.7,SNR=2.1						
AKASG				LR	LR		17 12 56.4
	comp=Z,82nm,19.5s,baz=42,slow=36						
	comp=Z,0.2nm,0.2s						
M30M	Minto, Yukon	73.54	28	P	P		**16 40 28.0 +1.2**
M30M				IAmb	IAmb		16 40 30.1
	comp=Z,8.4nm,1.4s						
BRTR	Keskin Array B	73.61	307	LR	LR		17 18 16.1
	comp=Z,59nm,21.3s,baz=92,slow=40						
MMAI	Mount Meron Ar	74.41	299	LR	LR		17 19 09.7
	comp=Z,116nm,18.0s,baz=214,slow=40						
EIL	Elat	75.90	296	LR	LR		17 20 35.0
	comp=Z,79nm,18.6s,baz=89,slow=41						
NC405	NORSAR Array S	78.07	332	P	P		**16 40 52.5 -0.2**
RES	Resolute Bay	78.25	9	LR	LR		17 19 43.4
	comp=Z,96nm,18.9s,baz=9.0,slow=39						
NB2	NORSAR Subarra	78.31	332	P	P		**16 40 55.6 +1.5**
	comp=Z,8.3nm,1.1s,baz=54,slow=5.9						
NOA	NORSAR Array B	78.31	332	P	P		**16 40 52.9 -1.2**
	comp=Z,1.5nm,0.8s,baz=58,slow=5.8,SNR=4.6						
NOA				LR	LR		17 16 30.2
	comp=Z,70nm,18.6s,baz=60,slow=36						
	comp=Z,1.5nm,0.8s						
VRAC	Vranov	81.20	320	LR	LR		17 19 09.4
	comp=Z,66nm,19.4s,baz=52,slow=37						
IDI	Anoyia	81.69	305	LR	LR		17 22 40.1
	comp=Z,25nm,18.8s,baz=95,slow=40						
YKA	Yellowknife Ar	82.40	23	P	P		**16 41 15.0 -1.1**
	comp=Z,1.2nm,0.6s,baz=314,slow=4.7,SNR=7.9						
YKA				LR	LR		17 24 03.8
	comp=Z,30nm,19.0s,baz=334,slow=40						
	comp=Z,1.2nm,0.6s						
GERES	GERESS Array B	83.09	321	P	P		**16 41 20.5 +0.5**
OPO	Ambohidratompo	84.50	247	LR	LR		17 17 23.0
	comp=Z,60nm,18.6s,baz=150,slow=34						
DAVOX	Davos/Dischmat	86.36	320	LR	LR		17 22 43.4
	comp=Z,132nm,18.2s,baz=72,slow=37						
BORG	Borgarnes	86.63	345	LR	LR		17 22 51.6
	comp=Z,34nm,20.8s,baz=46,slow=37						
PINE	Pine Mountain	90.91	40	P	P		**16 41 57.4 -0.9**
FRB	Frobisher Bay	91.67	5	LR	LR		17 27 03.8
	comp=Z,75nm,18.9s,baz=260,slow=38						
MOD	Modoc Plateau	92.39	41	P	P		**16 42 04.5 -0.8**
MOD				IAmb	IAmb		16 42 15.6
	comp=Z,2.4nm,0.8s						
RYN	Ryan	95.44	43	P	P		**16 42 18.7 -0.6**
NVAR	Mina Array Bea	95.70	43	P	P		**16 42 19.8 -0.7**
	comp=Z,0.4nm,0.6s,baz=282,slow=4.9,SNR=4.4						
	comp=Z,0.4nm,0.6s						
LSZ	Lusaka	99.59	258	LR	LR		17 27 43.9
	comp=Z,52nm,18.4s,baz=155,slow=35						
TROLL	Troll, Antarti	122.08	199	PKPdf	PKiKP		**16 47 48.8 +0.5**
SNAA	Sanae	123.76	198	PKPdf	PKPdf		**16 47 49.6 -1.7**
VNA3	Neumayer Olymp	125.87	197	PKPdf	PKPdf		**16 47 53.0 -2.2**

*IDC **31** 16:34:27.6±2.4, 6.°90S×129.°45E, h0km, mb3.6/1, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=89.0km s-min=30.3km az=76.0*
ISC 31 16:34:29.5±1.2, **7.°0S**±0.°1×**129.°6E**±0.°2, **h10**km, **n10,**
s18°15/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.96	120	P	P		16 35 16.7	+10
FAKI	Fak Fak	4.83	33	P	P	b	**16 35 55.1**	**+0.8**
MTN	Manton Dam	6.01	166	P	Pn		16 36 05.1	+6.5
KDU	Kakadu	6.33	154	P	Pn		16 36 09.2	+6.2
KAPI	Kappang	9.98	281	P	Pn		16 37 01.4	+8.3
FITZ	Fitzroy Crossi	11.70	199	P	P	n	**16 37 17.5**	**+0.9**
FITZ	Fitzroy Crossi	11.70	199	Pn	Pn	n	**16 37 17.4**	**+0.9**
	0.3nm,0.3s,baz=25,slow=9.6,SNR=26							
FITZ				Sn	Sn		16 39 15.8	-12
	baz=168,slow=20							
	0.8nm,0.3s							
WRA	Warramunga Arr	13.68	161	Pn	Pn	n	**16 37 43.5**	**-0.1**
	0.3nm,0.3s,baz=341,slow=13,SNR=6.5							
WRA				Sn	Sn		16 40 04.6	-11
	0.8nm,0.3s,baz=330,slow=25,SNR=11							
	0.3nm,0.4s							
ASAR	Alice Springs	17.09	166	P	P		**16 38 29.9**	**-0.5**
	0.2nm,0.3s,baz=338,slow=10.0,SNR=4.3							
	0.4nm,0.4s							
MKAR	Makanchi Array	68.00	327	P	P		**16 45 27.8**	**-1.2**
	0.7nm,1.0s,baz=119,slow=8.2,SNR=2.2							
	0.7nm,1.0s							

*JMA **31** 16:47:23.8±0.2, 24.°3N±0.°9×121.°9E±0.°9, h46km±3km, MV3.1/10, TAIWAN REGION*
*TAP **31** 16:47:24.5, 24.°46N×121.°96E, h18km, ML3.4, C*
ISC 31 16:47:23.9±0.9, **24.°46N**±0.°01×**122.°00E**±0.°02, **h13**km±6km,
n110, σ0°76/193, **11C-17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.20	266	⇓*i*P	P	g	**16 47 28.1**	**-0.2**
	baz=272							
EWUT				S	Sg		**16 47 30.9**	**-0.5**
	baz=272							
TWC	Suao	0.20	318	⇓*i*P	Pb		**16 47 29.3**	**-0.3**
	baz=328							
TWC				*i* S	Sg		**16 47 31.9**	**+0.4**
	baz=328							
ENA	Nanau	0.24	263	⇓*i*P	Pb		**16 47 29.6**	**-0.6**
	baz=267							
ENA				*i* S	Sg		**16 47 32.9**	**+0.5**
	baz=267							
EHP	Heping Village	0.28	238	P	Pb		**16 47 30.2**	**-0.6**
	baz=238							
EHP				S	Sg		**16 47 34.6**	**+1.0**
	baz=238							
NDS	Dongshan	0.31	304	⇓*i*P	Pg		**16 47 30.2**	**-0.1**
	baz=303							
NDS				S	Sg		**16 47 34.0**	**-0.7**
	baz=303							
ILA	Ilan	0.38	323	⇑*i*P	Pb		**16 47 32.8**	**+0.2**
	baz=324							
ILA				*i* S	Sb		**16 47 38.1**	**-0.4**
	baz=324							
EGS		0.39	351	⇑*i*P	Pb		**16 47 32.9**	**+0.1**
	baz=353							
EGS				S	Sg		**16 47 37.2**	**+0.2**
	baz=353							
TWE	Neicheng	0.40	311	⇓*i*P	Pb		**16 47 32.7**	**-0.3**
	baz=315							
TWE				*i* S	Sg		**16 47 37.5**	**+0.2**
	baz=315							
NTC	Toucheng	0.42	339	⇑*i*P	Pb		**16 47 33.3**	**0.0**
	baz=342							
NTC				*i* S	Sg		**16 47 38.6**	**+0.5**
	baz=342							
ENTT	Nioudou	0.43	295	⇓*i*P	Pg		**16 47 32.2**	**-0.3**
	baz=297

baz=234
ETL S **Sb** 16 47 39.5 -1.1
baz=234
NACB Ninganchiao 0.47 233 i P Pg 16 47 33.1 0.0
baz=238
NACB *i* S **Sg** 16 47 39.4 +0.1
baz=238
NDT Datong Townshi 0.47 288 i P Pb 16 47 34.2 +0.1
baz=289
NDT S **Sb** 16 47 40.0 -0.9
baz=289
FUSB Fushanzhiwuyua 0.48 309 i P Pb 16 47 34.3 0.0
baz=311
FUSB S **Sb** 16 47 40.3 -1.1
baz=311
TWD Chiawan 0.53 224 i P Pg 16 47 34.2 -0.1
baz=226
TWD S **Sg** 16 47 41.4 +0.2
baz=226
ETLH Xiulin Townshi 0.54 242 P Pg 16 47 34.3 -0.2
baz=248
ETLH S **Sb** 16 47 41.8 -1.2
baz=248
TIPB Shuangxi 0.54 343 i P Pb 16 47 35.4 +0.1
baz=345
TIPB S **Sg** 16 47 41.9 +0.3
baz=345
TWB1 Santiao Chiao 0.55 359 i P Pb 16 47 35.6 +0.1
baz=354
TWB1 S **Sg** 16 47 42.9 +0.9
baz=354
NNSB Datong 0.56 267 i P Pb 16 47 35.3 -0.5
baz=268
NNSB S **Sg** 16 47 42.1 -0.4
baz=268
NNSH Datong 0.56 267 i P Pb 16 47 35.3 -0.5
baz=268
NNSH S **Sg** 16 47 42.2 -0.3
baz=268
NNS Nan Shan 0.57 268 i P Pg 16 47 34.4 -0.7
baz=269
NNS *i* S **Sg** 16 47 41.6 -1.2
baz=269
HWA Hwalien 0.60 217 eP Pb 16 47 37.1 +0.8
baz=219
YHNB Yeheng 0.61 290 i P Pb 16 47 36.5 0.0
baz=294
YHNB S **Sg** 16 47 43.6 -0.3
baz=294
NSK Sanguang 0.62 290 i P Pg 16 47 35.7 -0.5
baz=292
NSK S **Sg** 16 47 42.9 -1.5
baz=292
NWF Wu-fen Shan 0.64 342 i P Pb 16 47 37.7 +0.6
baz=335
NWF *i* S **Sb** 16 47 45.9 -0.2
baz=335
WFSB Wu-fen Shan 0.64 342 i P Pb 16 47 37.6 +0.6
baz=335
WFSB S **Sb** 16 47 45.5 -0.4
baz=335
SXI1 Grass Mountain 0.64 350 i P Pb 16 47 37.6 +0.5
baz=357
SXI1 S **Sb** 16 47 45.8 -0.3
baz=357
TWA Mucha 0.64 324 P Pb 16 47 37.7 +0.6
baz=334
TWA S **Sb** 16 47 45.5 -0.5
baz=334
NHDH Xindian Distri 0.66 319 eP Pb 16 47 38.2 +0.8
baz=310
NHDH *e*S **Sb** 16 47 46.2 -0.4
baz=310
ETM Tongmen 0.67 223 eP Pg 16 47 37.1 0.0
baz=224
TEYL Yanliau Villag 0.69 212 eP Pn 16 47 39.0 -0.5
baz=223
TEYL *e*S **Sn** 16 47 51.4 +1.2
baz=223
NHY Taipei 0.70 326 eP Pn 16 47 39.7 +0.1
baz=334
NHY *e*S **Sb** 16 47 48.2 +0.7
baz=334
TNOU National Taiwa 0.72 343 P Pb 16 47 39.0 +0.6
baz=339
TNOU S **Sb** 16 47 47.8 -0.4
baz=339
FUSS Fushou 0.72 253 P Pb 16 47 38.1 -0.4
baz=253
FUSS S **Sg** 16 47 46.9 -0.6
baz=253
TAP Taipei 0.73 322 eP Pn 16 47 39.5 -0.5
baz=316
TAP *e*S **Sb** 16 47 48.8 +0.2
baz=316
WHF Hehuan Shan 0.74 245 i P Pg 16 47 38.2 -0.2
baz=253
WHF S **Sb** 16 47 48.5 -0.7
baz=253
TWT Tachien 0.78 255 eP Pb 16 47 39.6 +0.1
baz=249
TWT *e*S **Sb** 16 47 49.7 -0.3
baz=249
YM01 YM01 0.79 330 P Pn 16 47 40.6 -0.3
baz=332
YM01 S **Sb** 16 47 50.2 -0.1
baz=332
TDCB Techi 0.79 255 eP Pb 16 47 39.7 -0.1
baz=256
TDCB S **Sg** 16 47 49.4 -0.4
baz=256
YM08 YM08 0.82 333 eP Pn 16 47 40.9 -0.3
baz=324
NFF Wufeng Townshi 0.82 282 eP Pg 16 47 39.3 -0.6
baz=283
NFF *e*S **Sg** 16 47 49.4 -1.2
baz=283
ESL Shilin 0.82 219 eP Pg 16 47 39.9 0.0
baz=224
TWS1 Kuangyinshan 0.83 321 P Pn 16 47 41.6 +0.2
baz=315
TWS1 S **Sn** 16 47 53.5 -0.1
baz=315
ANP Anpu 0.85 329 eP Pn 16 47 41.7 0.0
baz=319
ANP *e*S **Sb** 16 47 52.3 +0.4
baz=319
CHGB Renai 0.85 242 P Pg 16 47 40.3 -0.2
baz=250
CHGB S **Sb** 16 47 51.7 -0.5
baz=250
JYNG Yonagunijimaku 0.86 90 P Pg 16 47 41.0 +0.4
JYNG S **Sg** 16 47 53.0 +1.1
TWY Chenhua 0.89 336 P Pn 16 47 42.4 +0.2
baz=338
TWY *e*S **Sb** 16 47 53.2 +0.1
baz=338
NCU National Centr 0.90 305 P Pn 16 47 42.9 +0.6
baz=313
NCU S **Sn** 16 47 55.3 +0.1
baz=313
NCUH Zhongli 0.90 305 eP Pn 16 47 42.9 +0.6
baz=306
NCUH *e*S **Sn** 16 47 55.8 +0.6
baz=306
OWD Renai 0.90 236 P Pg 16 47 41.3 -0.1
baz=237
OWD S **Sb** 16 47 53.3 -0.3
baz=237
LIOB Emei 0.92 282 P Pn 16 47 42.7 +0.1
baz=282
YOJ Yonaguni jima 0.92 90 eP Pg 16 47 41.9 +0.1
baz=79
YOJ *e*S **Sg** 16 47 54.3 +0.6
baz=79
YOJ Yonaguni jima 0.92 90 P Pg 16 47 41.8 +0.1
YOJ *e*S **Sg** 16 47 54.5 +0.7
NSTT Nanjuang 0.93 281 P Pb 16 47 42.0 +0.1
baz=282
NSTT S **Sb** 16 47 54.1 0.0
baz=282
WUSB Renai 0.93 240 P Pg 16 47 41.8 -0.1
baz=246
WUSB S **Sb** 16 47 54.2 -0.2
baz=246
EGFH Guangfu 0.94 214 P Pb 16 47 42.6 +0.4
baz=229
WHP Taichung City 0.98 260 P Pn 16 47 43.4 -0.1
baz=260
WHP *e*S **Sb** 16 47 55.5 -0.3
baz=260
SBCB Hsinchu 0.98 290 eP Pn 16 47 44.2 +0.8
baz=286
SBCB *e*S **Sn** 16 47 58.9 +1.6
baz=286
HSN Hsinchu 1.00 290 eP Pn 16 47 44.0 +0.3
baz=288
HSN *e*S **Sn** 16 47 57.3 -0.4
baz=288
VWDT VWDT 1.05 228 P Pg 16 47 44.3 +0.1
baz=234
VWDT S **Sn** 16 47 59.0 0.0
baz=234
WCS Beigang Elemen 1.07 248 P Pb 16 47 43.6 -0.8
baz=248
HGSD Ruisui 1.10 209 eP Pn 16 47 45.5 +0.4
baz=224
NMLH Miaoli 1.10 274 eP Pn 16 47 47.1 +1.9
baz=274
TWQ1 Liyutan 1.12 265 eP Pn 16 47 46.8 +1.4
baz=273
NSY Sanyi 1.13 268 eP Pn 16 47 47.0 +1.4
baz=268
EHY Hungye 1.13 213 eP Pb 16 47 45.1 -0.3
baz=212
SMLT Sun Moon Lake 1.16 241 P Pn 16 47 46.6 +0.7
baz=247
SSLB Suanglung 1.17 235 eP Pg 16 47 46.2 -0.2
baz=242
SSLB *e*S **Sb** 16 48 00.4 -0.7
baz=242
TYC Yuchr 1.18 242 eP Pn 16 47 46.3 +0.1
baz=248
YULB Yu-li 1.24 211 eP Pn 16 47 46.8 -0.3
baz=211
TCU Taichung 1.25 256 eP Pg 16 47 49.2 +1.3
baz=255
EYUL Yuli 1.27 210 eP Pb 16 47 48.1 +0.3
baz=223
WHYT Xinyi Township 1.29 234 eP Pg 16 47 49.2 +0.4
baz=241
WHYT *e*S **Sg** 16 48 07.6 +1.9
baz=241
WJS Zhushan 1.32 242 eP Pg 16 47 50.5 +1.1
baz=232
WNT Mingjian 1.33 245 eP Pg 16 47 49.7 +0.1
baz=244
WNT *e*S **Sg** 16 48 10.3 +3.4
baz=244
YUS Yu-Shan 1.36 225 P Pg 16 47 50.0 -0.2
baz=224
FULB Fuli 1.41 207 eP Pn 16 47 49.5 +0.1
baz=222
ALS Alishan 1.44 229 eP Pg 16 47 51.5 -0.2
baz=219
ALS *e*S **Sg** 16 48 12.8 +2.3
baz=219
CHN5 Tsauling 1.48 235 eP Pg 16 47 52.1 -0.3
baz=235
WDLH Douliu 1.54 240 eP Pg 16 47 53.5 0.0
baz=244
WDLH *e*S **Sg** 16 48 15.9 +2.4
baz=244
ELDTW Lidau 1.55 216 eP Pn 16 47 51.8 +0.4
baz=203
IRIF Iriomote-Funau 1.58 94 P Pn 16 47 51.0 -0.7
IRIF *e*S **Sn** 16 48 10.8 -1.3
WRL Guolierlin Hig 1.58 250 eP Pb 16 47 52.6 -0.4
baz=265
WRL *e*S **Sg** 16 48 14.6 -0.3
baz=265
EDH Donghe 1.61 203 eP Pn 16 47 51.2 -0.9
baz=185
EDH *e*S **Sn** 16 48 13.0 +0.2
baz=185
WCKO Fanlu 1.63 232 eP Pb 16 47 54.0 +0.1
baz=235
WCKO *e*S **Sg** 16 48 17.8 +1.4
baz=235
WTK Tuku 1.66 243 eP Pg 16 47 55.2 -0.6
baz=246
WTK *e*S **Sg** 16 48 18.5 +1.1
baz=246
CHN2 Minshiung 1.67 237 eP Pg 16 47 56.2 +0.2
baz=240
CHN2 *e*S **Sg** 16 48 20.0 +2.2
baz=240
CHN4 Tsaushan 1.69 230 eP Pb 16 47 55.0 -0.1
baz=233
CHN4 *e*S **Sg** 16 48 18.8 +0.2
baz=233
HATJ Hateruma jima 1.69 103 eP Pn 16 47 53.1 -0.2
HATJ *e*S **Sn** 16 48 14.3 -0.6
STYH Taoyuan 1.70 221 eP Pn 16 47 54.2 +0.8
baz=222
TPUB Ta-pu 1.70 228 eP Pg 16 47 56.1 -0.6
baz=230
TPUB *e*S **Sg** 16 48 18.3 -0.5
baz=230
WTP Ta-pu 1.75 227 eP Pb 16 47 56.0 0.0
baz=230
WTP *e*S **Sg** 16 48 20.6 +0.3
baz=230
WSF Szhu 1.82 244 eP Pb 16 47 56.6 -0.5
baz=247
WSF *e*S **Sg** 16 48 22.6 +0.2
baz=247
TWK Hsinying 1.82 230 P Pb 16 47 57.9 +0.7
baz=233
TWK S **Sg** 16 48 22.6 0.0
baz=233
TWGBT Beinan 1.84 208 eP Pn 16 47 54.8 -0.4
baz=194
LDUT Ludao 1.84 195 eP Pn 16 47 53.8 -1.5
baz=180
LDUT *e*S **Sn** 16 48 16.8 -1.7
baz=180
JKRS Kuro-shima 1.85 96 P Pn 16 47 55.4 +0.1
JKRS S **Sn** 16 48 17.8 -0.8
SNST Tainan City 1.85 228 eP Pb 16 47 58.5 +0.9
baz=232
SNST *e*S **Sg** 16 48 23.6 +0.2
baz=232
CHN1 Nanshi 1.85 227 P Pb 16 47 58.1 +0.4
baz=231
CHN1 S **Sg** 16 48 23.4 -0.1
baz=231
WSL Shuilin Townsh 1.87 240 eP Pn 16 47 56.8 +1.1
baz=244
WSL *e*S **Sg** 16 48 23.5 -0.6
baz=244
SGST Jiashian 1.89 224 eP Pn 16 47 57.2 +1.3
baz=213
SGST *e*S **Sg** 16 48 23.5 -1.2
baz=213
ICHU Yijhu 1.92 236 eP Pb 16 47 58.8 0.0
baz=224
ICHU *e*S **Sg** 16 48 25.4 -0.2
baz=224
JIJ Ishigaki jima 1.96 92 P Pn 16 47 56.4 -0.5
JIJ *e*S **Sn** 16 48 19.5 -1.8
ECL Taimali 2.09 208 eP Pn 16 47 58.1 -0.6
baz=196
SSD Sandimen 2.12 217 eP Pb 16 48 01.6 -0.6
baz=208
TSMG Majia 2.14 216 eP Pb 16 48 02.5 -0.1
baz=231
TSMG *e*S **Sb** 16 48 30.1 +0.9
baz=231
MASBT Mashibuluo 2.23 215 eP Pn 16 48 02.1 +1.5
baz=218
MASBT *e*S **Sb** 16 48 32.6 +1.0
baz=218
EAST Anshuo 2.32 207 eP Pn 16 48 02.5 +0.6
baz=197
JTJ Tarama 2.47 85 eP Pn 16 48 04.1 +0.2
JTJ S **Sn** 16 48 33.8 -0.2

*IDC **31** 17:08:18.8±0.8,22°.48S×172°.97E,h0km,mb4.3/11, mbtmp4.4/13,ML5.4/2,MS3.8/34,Error ellipse: s-maj=21.9km s-min=17.5km az=129.0*
*NEIC **31** 17:08:20.4±2.1,22°.50S±0°.10×173°.03E±0°.08,h10km±1km, mb4.7/49,Error ellipse: s-maj=16.7km s-min=12.2km az=170.0*

*NOU **31** 17:08:24.2,22°.32S×172°.96E,h33km,mb4.8/41, Southeast of Loyalty Islands*
ISC 31 17:08:23.2±0.4,22°.50S±0°.07×173°.00E±0°.05,h32km,n164, σ1§10/132,mb4.7/30,MS3.8/32,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.72**	**281**		**Pn**	**17 09 31.7**	**-0.6**
MARNC				Sn	**Sn**	**17 10 25.0**	**-1.0**
MARNC	**Mare, Loyalty**	**4.72**	**281**	P	**Pn**	**17 09 31.7**	**-0.6**
PINNC	**Pines Island,**	**5.14**	**268**		**Pn**	**17 09 37.5**	**-0.4**
PINNC				Sn	**Sn**	**17 10 37.3**	**+1.1**
PINNC	**Pines Island,**	**5.14**	**268**	P	**Pn**	**17 09 38.4**	**+0.5**
LIFNC	**LIFOU**	**5.63**	**287**	Pn	**Pn**	**17 09 43.5**	**-1.1**
LIFNC	**LIFOU**	**5.63**	**287**	P	**Pn**	**17 09 44.5**	**-0.2**
YATNC	**Mamie plateau,**	**5.68**	**273**	P	**Pn**	**17 09 44.5**	**-0.9**
OUENC	**Ouen Island, N**	**5.70**	**270**		**Pn**	**17 09 45.6**	**0.0**
OUENC	**Ouen Island, N**	**5.70**	**270**	P	**Pn**	**17 09 45.7**	**0.0**
ONTNC	**Ouen Toro**	**6.06**	**271**	Pn	**Pn**	**17 09 50.6**	**0.0**
ONTNC	**Ouen Toro**	**6.06**	**271**	P	**Pn**	**17 09 51.4**	**+0.7**
DZM	**Mont Dzumac**	**6.09**	**273**	*e*Pn	**Pn**	**17 09 49.7**	**-1.4**
	52nm,0.8s						
DZM				*e*LR	LR	17 11 14.2	
	comp=Z,1μm,24.3s						
DZM	**Mont Dzumac**	**6.09**	**273**		**Pn**	**17 09 51.0**	**-0.1**
DZM	**Mont Dzumac**	**6.09**	**273**	P	**Pn**	**17 09 51.2**	**+0.1**
DZM	**Mont Dzumac**	**6.09**	**273**	Pn	**Pn**	**17 09 51.0**	**-0.1**
	24nm,0.3s,baz=136,slow=13,SNR=246						
DZM				Sn	**Sn**	**17 10 58.1**	**-1.7**
	baz=89,slow=22						
	39nm,0.3s						
NOUC	**Port Laguerre**	**6.22**	**272**	P	**Pn**	**17 09 52.8**	**0.0**
MSVF	**Nonsavu**	**6.71**	**46**	Pn	**Pn**	**17 09 59.0**	**-0.6**
MSVF	**Nonsavu**	**6.71**	**46**	Pn	**Pn**	**17 09 58.9**	**-0.8**
	5.2nm,0.3s,baz=222,slow=20,SNR=8.3						
MSVF				LR	LR	17 11 58.1	
	comp=Z,671nm,21.4s,baz=169,slow=33						
	11nm,0.4s						
KOUNC	**Koumac, New Ca**	**8.34**	**282**	Pn	**Pn**	**17 10 22.7**	**+0.7**
KOUNC	**Koumac, New Ca**	**8.34**	**282**	P	**Pn**	**17 10 22.9**	**+0.9**
LKBA	**Tubou, Lakemba**	**8.77**	**63**	P	**Pn**	**17 10 29.3**	**+1.4**
RAO	**Raoul Island**	**10.58**	**131**	LR	LR	17 14 00.6	
	comp=Z,791nm,20.5s,baz=134,slow=32						
MXZ	**Matakaoa Point**	**15.69**	**164**	P	**P**	**17 12 07.4**	**+1.7**
MXZ				IAmb	IAmb	17 12 09.8	
	comp=Z,61nm,1.1s						
HIZ	**Hauiti**	**16.04**	**175**	P	**P**	**17 12 11.4**	**+1.8**
HIZ				IAmb	IAmb	17 12 14.1	
	comp=Z,84nm,1.3s						
URZ	**Urewera**	**16.10**	**168**	P	**P**	**17 12 09.4**	**-0.8**
URZ				IAmb	IAmb	17 12 13.7	
	comp=Z,50nm,0.9s						
URZ	**Urewera**	**16.10**	**168**	P	**P**	**17 12 10.3**	**+0.1**
URZ	**Urewera**	**16.10**	**168**	Pn	**P**	**17 12 09.9**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=299,slow=23,SNR=15						
URZ				LR	LR	17 16 54.2	
	comp=Z,236nm,21.7s,baz=31,slow=32						
AFI	**Afiamalu**	**16.78**	**62**	LR	LR	17 17 17.0	
	comp=Z,266nm,21.0s,baz=243,slow=32						
BKZ	**Black Stump Fm**	**16.88**	**171**	P	**P**	**17 12 19.0**	**+0.1**
HNR	**Honiara**	**18.05**	**314**	P	**P**	**17 12 32.3**	**+0.5**
HNR	**Honiara**	**18.05**	**314**	LR	LR	17 18 34.7	
	comp=Z,187nm,18.3s,baz=154,slow=34						
QRZ	**Quartz Range**	**18.28**	**181**	P	**P**	**17 12 34.4**	**+0.2**
BFZ	**Birch Farm**	**18.33**	**172**	P	**P**	**17 12 34.2**	**-0.7**
BFZ				IAmb	IAmb	17 12 36.1	
	comp=Z,41nm,0.8s						
BFZ	**Birch Farm**	**18.33**	**172**	P	**Pn**	**17 12 35.9**	**+0.9**
TUWZ	**Tuamarina**	**18.89**	**178**	P	**P**	**17 12 41.2**	**+0.3**
MSWZ	**Moikau Station**	**18.96**	**175**	P	**P**	**17 12 40.0**	**-1.7**
KHZ	**Kahutara**	**19.87**	**179**	P	**P**	**17 12 51.4**	**-0.2**
KHZ	**Kahutara**	**19.87**	**179**	P	**Pn**	**17 12 55.5**	**+2.1**
	comp=Z,51nm,2.0s						
LTZ	**Lake Taylor**	**20.23**	**182**	P	**P**	**17 12 57.0**	**+1.2**
LTZ				IAmb	IAmb	17 12 57.9	
	comp=Z,30nm,0.7s						
EIDS	**Eidsvold**	**20.24**	**258**	P	**P**	**17 12 56.2**	**+0.3**
EIDS				IAmb	IAmb	17 13 02.5	
	comp=Z,48nm,0.9s						
EIDS	**Eidsvold**	**20.24**	**258**	P	Pn	17 12 58.4	+0.5
ARMA	**Armidale**	**20.67**	**243**	P	**P**	**17 13 00.2**	**-0.5**
ARMA	**Armidale**	**20.67**	**243**	P	Pn	17 13 02.6	-0.5
RK1H	**Rockhampton Ha**	**20.75**	**263**	P	Pn	17 13 04.1	+0.2
OXZ	**Oxford**	**20.79**	**182**	P	**P**	**17 13 00.8**	**-0.8**
OXZ				IAmb	IAmb	17 13 06.6	
	comp=Z,60nm,1.3s						
FOZ	**Fox Glacier**	**21.14**	**186**	P	**P**	**17 13 03.4**	**-2.0**
FOZ				IAmb	IAmb	17 13 14.4	
	comp=Z,62nm,1.5s						
RPZ	**Rata Peaks**	**21.22**	**184**	P	**P**	**17 13 06.5**	**+0.2**
RPZ				IAmb	IAmb	17 13 11.4	
	comp=Z,69nm,1.5s						
RPZ	**Rata Peaks**	**21.22**	**184**	P	**P**	**17 13 07.8**	**+1.5**
RPZ	**Rata Peaks**	**21.22**	**184**	P	**P**	**17 13 07.9**	**+1.6**
	comp=Z,7.4nm,0.7s,baz=334,slow=2.4,SNR=7.0						
RPZ				LR	LR	17 20 17.6	
	comp=Z,294nm,18.9s,baz=352,slow=34						
	comp=Z,7.4nm,0.7s						
LBZ	**Lake Benmore**	**21.95**	**185**	P	**P**	**17 13 14.7**	**+0.5**
LBZ				IAmb	IAmb	17 13 38.0	
	comp=Z,32nm,1.3s						
RMQ	**Roma**	**22.41**	**255**	P	**P**	**17 13 21.7**	**+2.5**
ODZ	**Otahua Downs**	**22.57**	**184**	P	**P**	**17 13 21.4**	**+0.6**
MLZ	**Mavora Lakes**	**23.16**	**189**	P	**P**	**17 13 25.9**	**-1.0**
MLZ				IAmb	IAmb	17 13 46.1	
	comp=Z,33nm,1.3s						
WHZ	**Wether Hill Ro**	**23.70**	**189**	P	**P**	**17 13 33.3**	**+1.1**
WHZ				IAmb	IAmb	17 13 50.1	
	comp=Z,43nm,1.3s						
PYZ	**Puysegur Point**	**24.16**	**191**	P	**P**	**17 13 36.2**	**-0.3**
CNB	**Canberra Magne**	**24.24**	**233**	P	**P**	**17 13 39.1**	**+1.7**
CAN	**Canberra**	**24.52**	**233**	P	**P**	**17 13 40.3**	**+0.4**
CAN				IAmb	IAmb	17 13 44.0	
	comp=Z,41nm,1.4s						
CTA	**Charters Tower**	**25.03**	**270**	P	**P**	**17 13 46.0**	**+1.4**
CTA	**Charters Tower**	**25.03**	**270**	P	**P**	**17 13 45.2**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=92,slow=12,SNR=10						
CTA				LR	LR	17 23 05.4	
	comp=Z,269nm,19.3s,baz=93,slow=36						
	comp=Z,6.9nm,0.8s						
CTAO	**Charters Tower**	**25.03**	**270**	P	**P**	**17 13 44.4**	**-0.2**
CTAO				IAmb	IAmb	17 14 06.4	
	comp=Z,21nm,1.1s						
CTAO	**Charters Tower**	**25.03**	**270**	P	**P**	**17 13 46.1**	**+1.4**
RAR	**Rarotonga**	**25.29**	**92**	LR	LR	17 23 31.8	
	comp=Z,98nm,18.1s,baz=266,slow=36						
CMSA	**Cobar Meteorol**	**25.89**	**244**	P	**P**	**17 13 53.5**	**+1.2**
RABL	**Rabaul**	**27.17**	**309**	P	**P**	**17 14 03.6**	**-0.4**
KRVT	**Keravat (AS076**	**27.19**	**309**	P	**P**	**17 14 04.8**	**+0.6**
KRVT	**Keravat (AS076**	**27.19**	**309**	P	**P**	**17 14 04.8**	**+0.6**
	comp=Z,95nm,1.1s,baz=43,slow=1.2,SNR=10.0						
MTSU	**Mount Surprise**	**27.23**	**274**	P	**P**	**17 14 05.1**	**+0.6**
TOO	**Toolangi**	**28.03**	**231**	P	**P**	**17 14 12.2**	**+0.7**
TOO				IAmb	IAmb	17 14 21.7	
	comp=Z,12nm,1.3s						
TOO	**Toolangi**	**28.03**	**231**	P	**P**	**17 14 13.5**	**+2.0**
STKA	**Stephens Creek**	**29.37**	**245**	P	**P**	**17 14 23.6**	**+0.1**
STKA	**Stephens Creek**	**29.37**	**245**	P	**P**	**17 14 24.6**	**+1.1**
STKA	**Stephens Creek**	**29.37**	**245**	P	**P**	**17 14 23.4**	**-0.1**
	comp=Z,3.2nm,0.5s,baz=86,slow=10,SNR=14						
STKA				LR	LR	17 24 49.0	
	comp=Z,290nm,20.8s,baz=58,slow=34						
	comp=Z,3.2nm,0.5s						
COEN	**Coen**	**29.53**	**282**	P	**P**	**17 14 25.5**	**+0.5**
INKA	**Innaminka**	**29.62**	**253**	P	**P**	**17 14 26.7**	**+1.0**
ARPS	**Mount Arapiles**	**30.44**	**235**	P	**P**	**17 14 35.6**	**+2.7**
QIS	**Mount Isa**	**31.09**	**267**	P	**P**	**17 14 39.2**	**+0.3**
HTT	**Hallett**	**31.88**	**243**	P	**P**	**17 14 46.6**	**+0.9**
LCRK	**Leigh Creek**	**32.03**	**248**	P	**P**	**17 14 47.6**	**+0.6**
OOD	**Oodnadatta**	**34.10**	**253**	P	**P**	**17 15 06.0**	**+0.9**
BBOO	**Buckleboo**	**34.15**	**244**	P	**P**	**17 15 05.6**	**+0.2**
BBOO				IAmb	IAmb	17 15 08.1	
	comp=Z,12nm,0.8s						
BBOO	**Buckleboo**	**34.15**	**244**	P	**P**	**17 15 05.8**	**+0.3**
TBI	**Tubuai**	**34.52**	**99**	*e*S	**S**	**17 20 34.5**	**-1.1**
	comp=Z,70nm,26.2s						
TBI				*e*LR	LR	17 24 22.3	
	comp=Z,222nm,27.2s						
PPT2	**Papeete2**	**35.43**	**89**	*e*LR	LR	17 24 48.6	
	comp=Z,223nm,24.8s						
PPT	**Papeete**	**35.44**	**89**	LR	LR	17 27 44.1	
	comp=Z,39nm,20.4s,baz=258,slow=33						
MULG	**Mulgathing**	**35.60**	**249**	P	**P**	**17 15 18.1**	**+0.1**
WR0	**Warramunga Arr**	**35.88**	**267**	P	**P**	**17 15 18.3**	**-2.2**

WR0				IAmb	IAmb	17 15 21.1	
	comp=Z,16nm,1.5s						
AS31	**Alice Springs**	**35.91**	**260**	P	**P**	**17 15 20.2**	**-0.6**
ASAR	**Alice Springs**	**35.91**	**260**	P	**P**	**17 15 18.9**	**-1.9**
ASAR	**Alice Springs**	**35.91**	**260**	P	**P**	**17 15 19.9**	**-0.9**
	comp=Z,6.5nm,0.8s,baz=85,slow=8.4,SNR=46						
ASAR				LR	LR	17 29 48.6	
	comp=Z,182nm,20.5s,baz=96,slow=36 comp=Z,6.5nm,0.8s						
WB0	**Warramunga Arr**	**36.05**	**267**	P	**P**	**17 15 20.2**	**-1.8**
WB2	**Warramunga Arr**	**36.05**	**267**	P	**P**	**17 15 20.2**	**-1.8**
WRAB	**Tennant Creek**	**36.06**	**267**	P	**P**	**17 15 19.8**	**-2.3**
WRA	**Warramunga Arr**	**36.07**	**267**	P	**P**	**17 15 19.9**	**-2.2**
WRA	**Warramunga Arr**	**36.07**	**267**	P	**P**	**17 15 20.4**	**-1.8**
	comp=Z,3.6nm,0.9s,baz=98,slow=8.2,SNR=16						
WRA				LR	LR	17 30 30.1	
	comp=Z,284nm,18.1s,baz=89,slow=37 comp=Z,3.6nm,0.9s						
FORT	**Forrest**	**40.79**	**249**	P	**P**	**17 16 01.0**	**-0.7**
FORT	**Forrest**	**40.79**	**249**	P	**P**	**17 16 01.6**	**-0.1**
WRKA	**Warakurna**	**40.85**	**257**	P	**P**	**17 16 02.0**	**-0.4**
MTN	**Manton Dam**	**40.91**	**276**	P	**P**	**17 16 01.2**	**-1.7**
MTN				IAmb	IAmb	17 16 02.5	
	comp=Z,25nm,1.4s						
MTN	**Manton Dam**	**40.91**	**276**	P	**P**	**17 16 02.1**	**-0.8**
H11S2	**WAKE ISLAND Hy**	**41.20**	**351**	T	T	17 59 52.9	
	baz=171,slow=76,SNR=48						
H11S3	**WAKE ISLAND Hy**	**41.21**	**351**	T	T	17 59 53.5	
	baz=171,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**41.22**	**351**	T	T	17 59 51.0	
	baz=171,slow=76,SNR=40						
KNRA	**Kununurra**	**42.24**	**271**	P	**P**	**17 16 12.6**	**-1.2**
KNRA				IAmb	IAmb	17 16 14.3	
	comp=Z,16nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**42.38**	**351**	T	T	18 01 23.5	
	baz=172,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**42.38**	**351**	T	T	18 01 20.4	
	baz=172,slow=76,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**42.40**	**351**	T	T	18 01 20.9	
	baz=172,slow=76,SNR=5.9						
FAKI	**Fak Fak**	**44.04**	**290**	P	**P**	**17 16 27.8**	**-0.5**
FAKI	**Fak Fak**	**44.04**	**290**	P	**P**	**17 16 28.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**44.50**	**267**	P	**P**	**17 16 31.9**	**0.0**
FITZ	**Fitzroy Crossi**	**44.50**	**267**	P	**P**	**17 16 32.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**44.50**	**267**	LR	LR	17 36 47.1	
	comp=Z,99nm,19.4s,baz=120,slow=38						
GUMO	**Guam**	**45.24**	**320**	LR	LR	17 32 51.2	
	comp=Z,134nm,21.6s,baz=140,slow=33						
SIJI	**Sorong**	**45.91**	**292**	LR	LR	17 35 40.7	
	comp=Z,92nm,20.5s,baz=86,slow=36						
TAOE	**Nuku Hiva Isla**	**46.90**	**81**	*e*LR	LR	17 30 08.8	
	comp=Z,211nm,25.4s						
BATI	**Baumata**	**48.69**	**276**	LR	LR	17 36 10.3	
	comp=Z,368nm,20.3s,baz=249,slow=34						
MBWA	**Marble Bar**	**49.25**	**261**	P	**P**	**17 17 08.3**	**-0.8**
MBWA				IAmb	IAmb	17 17 10.3	
	comp=Z,14nm,1.1s						
MBWA	**Marble Bar**	**49.25**	**261**	P	**P**	**17 17 08.9**	**-0.2**
NWAO	**Narrogin (SRO)**	**49.96**	**245**	LR	LR	17 37 26.3	
	comp=Z,225nm,18.5s,baz=338,slow=35						
MORW	**Morawa**	**51.30**	**250**	P	**P**	**17 17 23.6**	**-1.0**
KAPI	**Kappang**	**54.25**	**280**	LR	LR	17 43 30.0	
	comp=Z,53nm,18.1s,baz=130,slow=39						
VNDA	**Vanda**	**55.34**	**183**	P	**P**	**17 17 52.6**	**-0.8**
VNDA	**Vanda**	**55.34**	**183**	P	**P**	**17 17 54.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=5.4,slow=8.4,SNR=16						
VNDA				LR	LR	17 38 07.6	
	comp=Z,63nm,19.9s,baz=8.0,slow=32 comp=Z,1.1nm,0.6s						
SBA	**Scott Base**	**55.49**	**182**	P	**P**	**17 17 56.0**	**+1.5**
TOLI2	**Tolitoli**	**56.01**	**288**	P	**P**	**17 17 58.9**	**-0.3**
TOLI2	**Tolitoli**	**56.01**	**288**	P	**P**	**17 17 59.9**	**+0.7**
JHJ	**Hachijo jima 2**	**63.75**	**329**	LR	LR	17 47 16.5	
	comp=Z,13nm,18.2s,baz=78,slow=37						
LEM	**Lembang**	**64.69**	**273**	LR	LR	17 50 02.3	
	comp=Z,158nm,18.3s,baz=220,slow=39						
MJAR	**Matsushiro Arr**	**67.29**	**330**	P	**P**	**17 19 14.9**	**0.0**
	comp=Z,3.0nm,0.9s,baz=156,slow=6.5,SNR=5.4						
MJAR				LR	LR	17 49 24.2	
	comp=Z,33nm,18.3s,baz=184,slow=37 comp=Z,3.0nm,0.9s						
QSPA	**South Pole Qui**	**67.57**	**180**	P	**P**	**17 19 16.2**	**-0.3**
QSPA				IAmb	IAmb	17 19 39.0	
	comp=Z,8.2nm,1.2s						
KULM	**Kulim**	**75.86**	**282**	P	**P**	**17 20 07.6**	**+0.6**
PET	**Petropavlovsk**	**76.23**	**351**	P	**P**	**17 20 08.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**76.26**	**331**	P	**P**	**17 20 08.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**76.26**	**331**	P	**P**	**17 20 10.0**	**+1.5**
	comp=Z,4.4nm,0.9s,baz=108,slow=6.2,SNR=5.7 comp=Z,4.4nm,0.9s						
PETK	**Petropavlovsk-**	**76.45**	**351**	P	**P**	**17 20 10.4**	**+0.9**
PETK	**Petropavlovsk-**	**76.45**	**351**	P	**P**	**17 20 11.1**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=184,slow=13,SNR=6.8						
PETK				LR	LR	17 50 51.8	
	comp=Z,47nm,18.5s,baz=137,slow=33 comp=Z,4.4nm,0.8s						
NIKH	**Nikolski High**	**76.79**	**11**	P	**P**	**17 20 10.5**	**-0.8**
BELA	**Belgrano 2**	**78.54**	**174**	P	**P**	**17 20 19.5**	**-1.5**
BELA				IAmb	IAmb	17 20 30.3	
	comp=Z,7.3nm,1.4s						
SMAI	**San Martin Ant**	**79.62**	**161**	P	**P**	**17 20 24.6**	**-2.3**
SMAI				IAmb	IAmb	17 20 28.6	
	comp=Z,14nm,1.1s						
MA2	**Magadan**	**83.79**	**349**	LR	LR	17 51 06.1	
	comp=Z,40nm,20.8s,baz=122,slow=31						
OHAK	**Old Harbor**	**84.31**	**18**	P	**P**	**17 20 52.2**	**+0.7**
OHAK				IAmb	IAmb	17 20 53.3	
	comp=Z,6.1nm,0.9s						
PZH	**PanZhiHua**	**84.41**	**302**	P	**P**	**17 20 54.0**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,7.0s						
HHC	**Hu-ho-hao-te**	**84.98**	**318**	*e*P	**P**	**17 20 57.5**	**+2.0**
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,4.6s						
TROLL	**Troll, Antarti**	**85.51**	**183**	P	**P**	**17 20 56.6**	**-1.2**
TROLL	**Troll, Antarti**	**85.51**	**183**	pP	pP	17 21 07.5	+1.0
SNAA	**Sanae**	**86.04**	**181**	P	**P**	**17 20 58.2**	**-2.1**
SNAA	**Sanae**	**86.04**	**181**	pP	pP	17 21 10.2	+1.2
SNAA	**Sanae**	**86.04**	**181**	P	**P**	**17 20 58.6**	**-1.8**
VNA3	**Neumayer Olymp**	**86.49**	**179**	P	**P**	**17 21 03.7**	**+1.2**
VNA3	**Neumayer Olymp**	**86.49**	**179**	pP	pP	17 21 12.5	+1.0
ISA	**Isabella, Lake**	**86.86**	**49**	P	**P**	**17 21 04.7**	**-0.2**
ISA				IAmb	IAmb	17 21 07.3	
	comp=Z,3.8nm,0.9s						
YBH	**Yreka Blue Hor**	**87.25**	**42**	LR	LR	17 51 34.5	
	comp=Z,39nm,21.9s,baz=249,slow=30						
LPIG	**La Paz**	**87.70**	**63**	LR	LR	17 51 13.8	
	comp=Z,38nm,18.4s,baz=232,slow=29						
NVAR	**Mina Array Bea**	**88.37**	**47**	P	**P**	**17 21 12.4**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=224,slow=6.3,SNR=4.6 comp=Z,0.5nm,0.6s						
YAK	**Yakutsk**	**91.05**	**341**	LR	LR	18 01 47.4	
	comp=Z,44nm,18.3s,baz=62,slow=35						
ELK	**Elko**	**91.57**	**46**	LR	LR	17 55 13.4	
	comp=Z,45nm,20.0s,baz=250,slow=31						
SONM	**Songino Array**	**91.94**	**322**	LR	LR	18 00 04.1	
	comp=Z,28nm,21.1s,baz=183,slow=34						
ILAR	**Eielson Array**	**92.33**	**16**	P	**P**	**17 21 28.7**	**-1.1**
	comp=Z,0.8nm,0.2s,baz=227,slow=6.1,SNR=9.7						
ILAR				LR	LR	17 56 37.3	
	comp=Z,26nm,19.5s,baz=246,slow=31 comp=Z,0.8nm,0.2s						
DLBC	**Dease Lake**	**93.35**	**26**	LR	LR	17 56 09.3	
	comp=Z,40nm,21.4s,baz=302,slow=31						
NEW	**Newport**	**94.04**	**39**	LR	LR	17 58 22.0	
	comp=Z,56nm,18.4s,baz=285,slow=32						
TXAR	**Lajitas Array**	**95.26**	**61**	LR	LR	17 55 56.8	
	comp=Z,42nm,20.6s,baz=229,slow=30						
TIXI	**Tiksi**	**98.67**	**347**	LR	LR	18 04 48.9	
	comp=Z,35nm,18.0s,baz=181,slow=34						
WMQ	**Urumqi**	**101.99**	**312**	*e*P	**Pdif**	**17 22 15.3**	**+1.2**
CLL	**Collm**	**147.32**	**337**	*e*PKPdf	**PKPdf**	**17 28 01.0**	**+0.1**
	comp=Z,3.0nm,0.9s						
CLL				*i* PKPbc	**PKPbc**	**17 28 03.2**	**-0.1**
	comp=Z,4.0nm,1.0s						
CLL				*i* PKPab	**PKiKP**	**17 28 05.7**	**+0.1**
GERES	**GERESS Array B**	**149.00**	**333**	PKPbc	**PKPbc**	**17 28 07.5**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=25,slow=4.4,SNR=4.3						

*JMA **31** 17:47:07.6±0.1,24.4°N±0.4×121.9°E±0.5,h40km±2km, MV2.1/8,TAIWAN REGION*

*TAP **31** 17:47:08.7,24.48°N×121.89°E,h12km,ML2.5,D*
ISC 31 17:47:07.5±0.9,24.47°N±0.02×121.98°E±0.02,h14km±6km, n69,σ0.58/131,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.18**	**319**	P			**Pb**	**17 47 12.8**	**+0.1**
	baz=348								
TWC				S			**Sb**	**17 47 15.5**	**-0.6**
	baz=348								
EWUT	**Wuta**	**0.18**	**262**	P			**Pg**	**17 47 11.6**	**-0.2**
	baz=249								
EWUT				S			**Sg**	**17 47 14.4**	**-0.2**
	baz=249								
ENA	**Nanau**	**0.22**	**259**	P			**Pb**	**17 47 13.1**	**-0.2**
	baz=246								
ENA				S			**Sg**	**17 47 16.2**	**+0.6**
	baz=246								
EHP	**Heping Village**	**0.27**	**234**	*e*S			**Sb**	**17 47 18.6**	**0.0**
	baz=215								
NDS	**Dongshan**	**0.29**	**304**	*e*P			**Pg**	**17 47 13.5**	**0.0**
	baz=314								
NDS				*e*S			**Sg**	**17 47 17.3**	**-0.4**
	baz=314								
ILA	**Ilan**	**0.36**	**324**	*e*P			**Pb**	**17 47 16.4**	**+0.7**
	baz=337								
ILA				*e*S			**Sb**	**17 47 21.5**	**+0.3**
	baz=337								
EGS		**0.38**	**353**	*e*P			**Pb**	**17 47 16.5**	**+0.6**
	baz=8.0								
EGS				*e*S			**Sb**	**17 47 22.9**	**+1.3**
	baz=8.0								
TWE	**Neicheng**	**0.38**	**311**	P			**Pb**	**17 47 16.1**	**+0.2**
	baz=321								
TWE				*e*S			**Sb**	**17 47 21.3**	**-0.4**
	baz=321								
NTC	**Toucheng**	**0.41**	**340**	*e*P			**Pb**	**17 47 16.8**	**+0.4**
	baz=352								
NTC				*e*S			**Sb**	**17 47 22.1**	**-0.4**
	baz=352								
ENTT	**Nioudou**	**0.41**	**294**	P			**Pg**	**17 47 15.6**	**-0.2**
	baz=298								
ENTT				S			**Sg**	**17 47 21.3**	**0.0**
	baz=298								
LATG	**Datong**	**0.42**	**279**	P			**Pb**	**17 47 16.6**	**-0.1**
	baz=279								
LATG				*e*S			**Sg**	**17 47 22.1**	**+0.5**
	baz=279								
NDT	**Datong Townshi**	**0.45**	**287**	*e*P			**Pb**	**17 47 17.1**	**0.0**
	baz=289								
NDT				*e*S			**Sg**	**17 47 22.5**	**+0.1**
	baz=289								
ETL	**Fush Village**	**0.45**	**226**	*e*P			**Pb**	**17 47 16.9**	**-0.2**
	baz=216								
ETL				*e*S			**Sb**	**17 47 23.9**	**+0.1**
	baz=216								
FUSB	**Fushanzhiwuyua**	**0.46**	**309**	*i* P			**Pb**	**17 47 17.8**	**+0.4**
	baz=315								
FUSB				*e*S			**Sg**	**17 47 23.1**	**+0.3**
	baz=315								
NACB	**Ninganchiao**	**0.46**	**230**	P			**Pg**	**17 47 16.8**	**+0.2**
	baz=221								
NACB				*e*S			**Sg**	**17 47 23.1**	**+0.3**
	baz=221								
TIPB	**Shuangxi**	**0.52**	**344**	*e*P			**Pb**	**17 47 19.0**	**+0.6**
	baz=353								
TIPB				*e*S			**Sb**	**17 47 25.6**	**-0.2**
	baz=353								
TWD	**Chiawan**	**0.52**	**222**	*e*P			**Pg**	**17 47 18.0**	**+0.2**
	baz=212								
TWD				*e*S			**Sg**	**17 47 25.0**	**+0.2**
	baz=212								
ETLH	**Xiulin Townshi**	**0.53**	**240**	*e*P			**Pb**	**17 47 18.3**	**-0.2**
	baz=233								
ETLH				*e*S			**Sg**	**17 47 24.9**	**0.0**
	baz=233								
TWB1	**Santiao Chiao**	**0.54**	**1**	*e*P			**Pb**	**17 47 19.1**	**+0.4**
	baz=10.0								
TWB1				*e*S			**Sb**	**17 47 26.9**	**+0.6**
	baz=10.0								
NNSB	**Datong**	**0.55**	**266**	P			**Pb**	**17 47 18.7**	**-0.1**
	baz=263								
NNSB				S			**Sg**	**17 47 25.9**	**+0.3**
	baz=263								
NNS	**Nan Shan**	**0.55**	**267**	P			**Pg**	**17 47 17.9**	**-0.5**
	baz=264								
NNS				S			**Sg**	**17 47 25.4**	**-0.4**
	baz=264								
YHNB	**Yeheng**	**0.58**	**290**	P			**Pb**	**17 47 19.8**	**+0.3**
	baz=291								
YHNB				*e*S			**Sg**	**17 47 27.1**	**+0.3**
	baz=291								
HWA	**Hwalien**	**0.60**	**215**	*e*P			**Pn**	**17 47 20.6**	**-0.9**
	baz=206								
HWA				*e*S			**Sn**	**17 47 29.7**	**-1.3**
	baz=206								
NSK	**Sanguang**	**0.60**	**290**	P			**Pg**	**17 47 18.9**	**-0.4**
	baz=292								
NSK				*e*S			**Sg**	**17 47 27.0**	**-0.3**
	baz=292								
TWA	**Mucha**	**0.62**	**325**	*e*P			**Pb**	**17 47 20.5**	**+0.3**
	baz=331								
TWA				*e*S			**Sb**	**17 47 28.9**	**+0.2**
	baz=331								
NWF	**Wu-fen Shan**	**0.62**	**343**	*e*P			**Pn**	**17 47 21.3**	**-0.7**
	baz=350								
NWF				*e*S			**Sb**	**17 47 29.7**	**+0.8**
	baz=350								
SXI1	**Grass Mountain**	**0.63**	**351**	*e*P			**Pn**	**17 47 21.2**	**-0.9**
	baz=359								
SXI1				*e*S			**Sb**	**17 47 29.7**	**+0.7**
	baz=359								
NHDH	**Xindian Distri**	**0.64**	**320**	*e*P			**Pb**	**17 47 20.9**	**+0.5**
	baz=325								
NHDH				*e*S			**Sb**	**17 47 29.7**	**+0.4**
	baz=325								
FUSS	**Fushou**	**0.71**	**252**	*e*P			**Pb**	**17 47 21.6**	**-0.1**
	baz=248								
FUSS				*e*S			**Sg**	**17 47 30.9**	**+0.2**
	baz=248								
TAP	**Taipei**	**0.71**	**323**	*e*S			**Sb**	**17 47 31.6**	**+0.3**
	baz=328								
WHF	**Hehuan Shan**	**0.73**	**244**	*e*P			**Pg**	**17 47 21.6**	**-0.1**
	baz=239								
WHF				*e*S			**Sb**	**17 47 32.0**	**-0.2**
	baz=239								
TWT	**Tachien**	**0.77**	**254**	*e*S			**Sb**	**17 47 33.2**	**+0.2**
	baz=250								
YM01	**YM01**	**0.77**	**331**	*e*P			**Pn**	**17 47 24.0**	**0.0**
	baz=336								
YM01				*e*S			**Sb**	**17 47 33.6**	**+0.6**
	baz=336								
NFF	**Wufeng Townshi**	**0.80**	**282**	*e*S			**Sg**	**17 47 32.7**	**-0.9**
	baz=282								
TWS1	**Kuangyinshan**	**0.81**	**321**	*e*P			**Pn**	**17 47 25.2**	**+0.8**
	baz=325								
TWS1				*e*S			**Sn**	**17 47 36.4**	**+0.2**
	baz=325								
ESL	**Shilin**	**0.82**	**217**	*e*P			**Pn**	**17 47 24.7**	**0.0**
	baz=211								
ESL				*e*S			**Sn**	**17 47 36.0**	**-0.6**
	baz=211								
ANP	**Anpu**	**0.83**	**330**	*e*P			**Pn**	**17 47 24.6**	**-0.2**
	baz=335								
ANP				*e*S			**Sb**	**17 47 35.4**	**+0.7**
	baz=335								
CHGB	**Renai**	**0.84**	**241**	*e*P			**Pb**	**17 47 24.3**	**+0.3**
	baz=237								
CHGB				*e*S			**Sb**	**17 47 35.9**	**+0.6**
	baz=237								
TWY	**Chenhua**	**0.87**	**337**	*e*P			**Pn**	**17 47 25.3**	**0.0**
	baz=342								
TWY				*e*S			**Sn**	**17 47 36.9**	**-0.9**
	baz=342								
JYNG	**Yonagunijimaku**	**0.88**	**91**	P			**Pg**	**17 47 24.5**	**0.0**
JYNG				*e*S			**Sg**	**17 47 36.1**	**+0.1**
LIOB	**Emei**	**0.90**	**281**	*e*P			**Pn**	**17 47 25.8**	**+0.2**
	baz=281								
LIOB				*e*S			**Sn**	**17 47 37.8**	**-0.7**
	baz=281								
OWD	**Renai**	**0.90**	**235**	*e*P			**Pg**	**17 47 25.1**	**+0.2**
	baz=231								
OWD				*e*S			**Sb**	**17 47 37.1**	**+0.3**
	baz=231								
NSTT	**Nanjuang**	**0.91**	**280**	*e*P			**Pn**	**17 47 26.1**	**+0.3**
	baz=280								
NSTT				*e*S			**Sg**	**17 47 37.2**	**+0.3**
	baz=280								
WUSB	**Renai**	**0.92**	**239**	*e*P			**Pb**	**17 47 25.1**	**-0.2**
	baz=235								
WUSB				*e*S			**Sn**	**17 47 38.3**	**-0.9**
	baz=235								
YOJ	**Yonaguni jima**	**0.94**	**90**	P			**Pb**	**17 47 25.5**	**0.0**
YOJ				*e*S			**Sg**	**17 47 38.2**	**+0.2**
EGFH	**Guangfu**	**0.94**	**212**	*e*P			**Pn**	**17 47 27.0**	**+0.7**
	baz=207								
EGFH				*e*S			**Sn**	**17 47 40.3**	**+0.7**
	baz=207								
WHP	**Taichung City**	**0.96**	**259**	*e*P			**Pn**	**17 47 26.3**	**-0.3**
	baz=256								
WHP				*e*S			**Sg**	**17 47 39.1**	**+0.4**
	baz=256								
VWDT	**VWDT**	**1.05**	**227**	*e*P			**Pg**	**17 47 28.4**	**+0.8**
	baz=223								
VWDT				*e*S			**Sn**	**17 47 42.3**	**+0.2**
	baz=223								
WCS	**Beigang Elemen**	**1.06**	**247**	*e*P			**Pg**	**17 47 28.2**	**+0.3**
	baz=244								
WCS				*e*S			**Sg**	**17 47 41.5**	**-0.3**
	baz=244								
HGSD	**Ruisui**	**1.10**	**208**	*e*P			**Pg**	**17 47 29.9**	**+1.2**
	baz=203								
HGSD				*e*S			**Sn**	**17 47 45.1**	**+1.7**
	baz=203								
EHY	**Hungye**	**1.13**	**212**	*e*P			**Pg**	**17 47 30.2**	**+0.9**
	baz=207								
EHY				*e*S			**Sn**	**17 47 45.8**	**+1.5**
	baz=207								
SMLT	**Sun Moon Lake**	**1.15**	**240**	*e*P			**Pg**	**17 47 29.6**	**0.0**
	baz=236								
SMLT				*e*S			**Sn**	**17 47 44.8**	**0.0**
	baz=236								
SSLB	**Suanglung**	**1.16**	**234**	*e*P			**Pg**	**17 47 29.6**	**-0.2**
	baz=230								
SSLB				*e*S			**Sg**	**17 47 45.3**	**+0.4**
	baz=230								
TYC	**Yuchr**	**1.17**	**241**	*e*P			**Pg**	**17 47 29.9**	**-0.1**
	baz=238								
TYC				*e*S			**Sg**	**17 47 45.3**	**0.0**
	baz=238								
YULB	**Yu-li**	**1.24**	**210**	*e*P			**Pg**	**17 47 31.8**	**+0.4**
	baz=206								
YULB				*e*S			**Sg**	**17 47 48.6**	**+1.0**
	baz=206								
EYUL	**Yuli**	**1.27**	**209**	*e*P			**Pg**	**17 47 32.5**	**+0.5**
	baz=204								
EYUL				*e*S			**Sg**	**17 47 50.0**	**+1.4**
	baz=204								
WHYT	**Xinyi Township**	**1.29**	**233**	*e*S			**Sg**	**17 47 49.2**	**+0.2**
	baz=230								
ALS	**Alishan**	**1.44**	**229**	*e*P			**Pg**	**17 47 35.0**	**-0.2**
	baz=225								
ALS				*e*S			**Sg**	**17 47 53.4**	**-0.5**
	baz=225								
WDLH	**Douliu**	**1.53**	**240**	*e*S			**Sb**	**17 47 55.6**	**+0.8**
	baz=237								
IRIF	**Iriomote-Funau**	**1.60**	**94**	P			**Pn**	**17 47 34.5**	**-0.8**
IRIF				S			**Sn**	**17 47 54.8**	**-1.0**
EDH	**Donghe**	**1.61**	**203**	*e*P			**Pb**	**17 47 37.6**	**+0.5**
	baz=199								
EDH				*e*S			**Sg**	**17 47 58.3**	**-1.2**
	baz=199								
WCKO	**Fanlu**	**1.62**	**231**	*e*P			**Pb**	**17 47 36.7**	**-0.5**
	baz=228								
WCKO				*e*S			**Sb**	**17 47 57.0**	**-0.6**
	baz=228								
CHN4	**Tsaushan**	**1.69**	**229**	*e*P			**Pb**	**17 47 38.0**	**-0.3**
	baz=226								
TPUB	**Ta-pu**	**1.70**	**227**	*e*P			**Pb**	**17 47 38.5**	**0.0**
	baz=224								
TPUB				*e*S			**Sb**	**17 48 00.1**	**+0.4**
	baz=224								
STYH	**Taoyuan**	**1.70**	**221**	*e*P			**Pb**	**17 47 38.1**	**-0.4**
	baz=217								
STYH				*e*S			**Sb**	**17 47 59.5**	**-0.3**
	baz=217								
WTP	**Ta-pu**	**1.75**	**226**	*e*P			**Pb**	**17 47 38.8**	**-0.6**
	baz=223								
WTP				*e*S			**Sb**	**17 48 00.7**	**-0.4**
	baz=223								
TWK	**Hsinying**	**1.82**	**229**	*e*P			**Pb**	**17 47 40.3**	**-0.2**
	baz=226								
TWK				*e*S			**Sb**	**17 48 02.1**	**-1.1**
	baz=226								
JKRS	**Kuro-shima**	**1.86**	**97**	P			**Pn**	**17 47 39.1**	**+0.2**
JKRS				S			**Sn**	**17 48 01.8**	**-0.5**
JIJ	**Ishigaki jima**	**1.98**	**93**	P			**Pn**	**17 47 40.3**	**-0.2**
JIJ				S			**Sn**	**17 48 03.2**	**-1.8**

*IDC **31** 18:04:11.0±0.9,54.95°S×31.26°W,h0km,mb4.1/6, mbtmp4.1/6,MS3.3/2,Error ellipse: s-maj=41.2km s-min=19.6km az=70.0*
*NEIC **31** 18:04:12.7±1.2,55.02°S±0.09×31.5°W±0.3,h10km±2km, mb4.4/6,Error ellipse: s-maj=31.4km s-min=10.3km az=68.0*
ISC 31 18:04:12.3±0.8,55.0°S±0.1×31.4°W±0.2,h10km,n27, σ0.59/21,mb4.2/8,South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.02**	**281**				**Pn**	**18 04 59.7**	**-0.4**
VNA1	**Neumayer--Stat**	**18.74**	**156**	P			**P**	**18 08 30.3**	**-0.5**
VNA3	**Neumayer Olymp**	**18.86**	**158**	P			**P**	**18 08 31.7**	**-0.4**
PMSA	**Palmer Station**	**18.87**	**226**	LR			LR	18 14 46.4	
	comp=Z,124nm,18.7s,baz=64,slow=34								
VNA2	**Neumayer--Watz**	**19.14**	**156**	P			**P**	**18 08 34.5**	**-0.8**
	baz=307,slow=11								
SNAA	**Sanae**	**20.74**	**155**	P			**P**	**18 08 52.7**	**0.0**
SNAA	**Sanae**	**20.74**	**155**	P			**P**	**18 08 52.0**	**-0.7**
SNAA	**Sanae**	**20.74**	**155**	P			**P**	**18 08 52.7**	**0.0**
	6.4nm,0.7s,baz=307,slow=11,SNR=18								
SNAA				LR			LR	18 15 40.9	
	comp=Z,44nm,18.6s,baz=3.5,slow=33 6.4nm,0

ROM 31 18:11:29.0±0.0, 40.74N×13.91E, h2km, Md2.3, Tyrrhenian Sea

*PRU **31** 18:12:51.8±0.0, 42.81N×13.33E, h0km, M4.1*
*ROM **31** 18:12:52.2±0.0, 42.822N±0.003×13.255E±0.005, h9km, ML3.7/94, Mw3.5, Error ellipse: s-maj=0.4km s-min=0.1km az=244.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.29; Mθθ=1.85; Mφφ=2.13; Mrθ=0.50; Mθφ=0.10; Mφr=-0.26; Fault plane solution: M0=2.08002×10^14 NP1:φs=225.00000°, δ=74.00000°, λ=-8.00000°. NP2:φs=318.00000°, δ=83.00000°, λ=-164.00000°.*
*PDG **31** 18:12:52.8±0.6, 42.83N×13.25E, h12km, ML3.8/11 Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*IDC **31** 18:12:52.5±1.5, 42.95N×13.12E, h0km, mb3.6/5, mbtmp3.6/6, ML3.7/1, MS2.9/4, Error ellipse: s-maj=35.1km s-min=15.2km az=86.0*
*BEO **31** 18:12:52.8±0.8, 42.78N×13.22E, h0km, ML3.7/6*
*NEIC **31** 18:12:52.6±1.4, 42.86N±0.03×13.22E±0.05, h3km±6km, mb4.1/5, Error ellipse: s-maj=5.9km s-min=4.4km az=116.0*
*LDG **31** 18:12:54.6±0.1, 42.76N×13.24E, h9km, Ml3.4/31, Error ellipse: s-maj=3.4km s-min=2.4km az=41.0*

ISC 31 18:12:52.8±0.6, 42.81N±0.01×13.21E±0.02, h11km±3km, n406, σt1.84/457, mb3.9/7, 52C-34D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
T1242	**Castelluccio d**	**0.02**	**344**	⇑P	**Pg**	**18 12 54.0**	**-1.0**
T1242				S	**Sg**	**18 12 55.2**	**-1.3**
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
NRCA	**Norcia**	**0.07**	**287**	Pg	**Pg**	**18 12 55.2**	**-0.1**
NRCA	**Norcia**	**0.07**	**287**	⇑P	**Pg**	**18 12 55.1**	**-0.1**
NRCA				S	**Sg**	**18 12 57.2**	**+0.1**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1244	**Arquata del Tr**	**0.08**	**131**	⇓P	**Pg**	**18 12 54.8**	**-0.6**
T1244				S	**Sg**	**18 12 56.4**	**-0.9**
MC2	**Monte Cornacci**	**0.10**	**351**	⇑P	**Pg**	**18 12 55.1**	**-0.7**
MC2				S	**Sg**	**18 12 57.0**	**-0.9**
T1202	**Accumoli, Fraz**	**0.11**	**175**	⇓P	**Pg**	**18 12 55.8**	**0.0**
T1202				S	**Sg**	**18 12 58.6**	**+0.8**
MMO1	**Montemonaco**	**0.12**	**44**	⇑P	**Pg**	**18 12 54.8**	**-1.1**
MMO1				S	**Sg**	**18 12 56.3**	**-1.8**
MMO1				AML	AML		
MMO1				AML	AML		
T1204	**Amatrice, Fraz**	**0.16**	**150**	⇓P	**Pg**	**18 12 56.2**	**-0.2**
T1204				S	**Sg**	**18 12 59.4**	**+0.4**
T1201	**Domo (RI)**	**0.16**	**169**	⇓P	**Pg**	**18 12 56.6**	**+0.2**
T1201				S	**Sg**	**18 13 00.3**	**+1.3**
T1241	**Roccafluvione,**	**0.17**	**75**	⇑P	**Pg**	**18 12 55.7**	**-0.9**
T1241				S	**Sg**	**18 12 58.3**	**-0.9**
T1241				AML	AML		
	comp=E,96750μm,0.3s						
T1241				AML	AML		
	comp=E,93900μm,0.3s						
T1241				AML	AML		
	comp=N,80050μm,0.6s						
T1241				AML	AML		
	comp=N,82300μm,0.6s						
T1241				AML	AML		
	comp=E,96850μm,0.3s						
FEMA	**Monte Fema**	**0.19**	**322**	⇑P	**Pg**	**18 12 57.0**	**0.0**
FEMA				S	**Sg**	**18 13 00.8**	**+0.8**
FEMA				AML	AML		
	comp=N,67150μm,0.2s						
FEMA				AML	AML		
	comp=E,74950μm,0.6s						
FEMA				AML	AML		
	comp=N,67100μm,0.2s						
SMA1	**SAN MARTINO**	**0.20**	**153**	⇓P	**Pg**	**18 12 56.9**	**-0.3**
SMA1				S	**Sg**	**18 13 00.4**	**+0.2**
SMA1				AML	AML		
	comp=E,63700μm,0.5s						
SMA1				AML	AML		
	comp=N,61150μm,0.6s						
T1243	**Rocca Santa Ma**	**0.21**	**123**	⇑P	**Pg**	**18 12 56.7**	**-0.6**
T1243				S	**Sg**	**18 12 60.0**	**-0.4**
FDMO	**Fiordimonte**	**0.24**	**338**		**Pg**	**18 12 57.4**	**-0.5**
FDMO				Sg	**Sg**	**18 13 01.9**	**+0.6**
FDMO	**Fiordimonte**	**0.24**	**338**	⇑P	**Pg**	**18 12 57.6**	**-0.2**
FDMO				S	**Sg**	**18 13 02.0**	**+0.8**
FDMO				AML	AML		
	comp=E,47250μm,0.2s						
FDMO				AML	AML		
	comp=N,63050μm,0.4s						
LNSS	**Leonessa**	**0.24**	**211**	⇓P	**Pg**	**18 12 58.3**	**+0.4**
LNSS				S	**Sg**	**18 13 03.1**	**+1.8**
LNSS				AML	AML		
	comp=E,76300μm,0.7s						
LNSS				AML	AML		
	comp=N,51500μm,0.4s						
T1215	**Vallo di Nera,**	**0.25**	**268**	⇑P	**Pg**	**18 12 58.5**	**+0.4**
T1215				S	**Sb**	**18 13 03.3**	**-0.6**
T1215				AML	AML		
	comp=E,28000μm,1.1s						
T1215				AML	AML		
	comp=N,14650μm,0.2s						
T1215				AML	AML		
	comp=N,13420μm,0.2s						
T1215				AML	AML		
	comp=E,28050μm,1.1s						
T1215				AML	AML		
	comp=E,28800μm,1.1s						
T1215				AML	AML		
	comp=N,13445μm,0.2s						
CSP1	**Cessapalombo**	**0.28**	**359**	⇓P	**Pg**	**18 12 58.1**	**-0.4**
CSP1				S	**Sg**	**18 13 02.8**	**+0.4**
CSP1				AML	AML		
	comp=N,57200μm,0.5s						
CSP1				AML	AML		
	comp=E,57500μm,0.5s						
CESI	**CESI - Serrava**	**0.30**	**311**	⇑P	**Pg**	**18 12 59.0**	**+0.2**
CESI				S	**Sb**	**18 13 04.4**	**-0.8**
CESI				AML	AML		
CESI				AML	AML		
	comp=E,64300μm,0.4s						
RM33	**Pellescritta (**	**0.30**	**180**	⇓P	**Pg**	**18 12 59.0**	**+0.1**
RM33				S	**Sb**	**18 13 04.7**	**-0.6**
RM33				AML	AML		
	comp=E,19850μm,0.3s						
RM33				AML	AML		
	comp=N,16050μm,0.9s						
RM33				AML	AML		
	comp=E,20100μm,0.3s						
RM33				AML	AML		
	comp=N,16100μm,0.9s						
CAMP	**Campotosto**	**0.31**	**152**		**Pg**	**18 12 58.7**	**-0.4**
CAMP				Sg	**Sg**	**18 13 03.4**	**0.0**
CAMP	**Campotosto**	**0.31**	**152**	⇓P	**Pg**	**18 12 58.7**	**-0.4**
CAMP				S	**Sg**	**18 13 04.0**	**+0.6**
CAMP				AML	AML		
	comp=E,19500μm,0.6s						
CAMP				AML	AML		
	comp=N,24550μm,0.5s						
TERO	**Teramo**	**0.35**	**123**	⇑P	**Pg**	**18 12 59.0**	**-0.7**
TERO				S	**Sg**	**18 13 04.4**	**0.0**
TERO				AML	AML		
	comp=N,95300μm,0.2s						
TERO				AML	AML		
	comp=E,90700μm,0.2s						
TERO				AML	AML		
TERO				AML	AML		
	comp=N,95150μm,0.2s						
TERO				AML	AML		
	comp=E,84700μm,0.2s						
OFFI	**Offida**	**0.37**	**70**	⇑P	**Pg**	**18 13 00.2**	**0.0**
OFFI				AML	AML		
	comp=E,34150μm,0.6s						
OFFI				AML	AML		
	comp=N,40550μm,0.6s						
MNTP	**Montappone**	**0.38**	**30**	P	**Pg**	**18 13 00.2**	**-0.1**
MDAR	**Monte D'Aria**	**0.38**	**353**	P	**Pg**	**18 13 00.0**	**-0.4**
MDAR				S	**Sg**	**18 13 06.5**	**+0.9**
MDAR				AML	AML		
	comp=N,53500μm,1.3s						
MDAR				AML	AML		
	comp=E,45050μm,1.0s						
SEF1	**Sefro**	**0.39**	**330**	P	**Pg**	**18 13 00.4**	**-0.1**
SEF1				S	**Sb**	**18 13 06.9**	**-0.8**
SEF1				AML	AML		
	comp=E,46550μm,1.1s						
SEF1				AML	AML		
	comp=N,68700μm,0.3s						
SEF1				AML	AML		
	comp=E,46500μm,1.1s						
SEF1				AML	AML		
	comp=N,68700μm,0.2s						
PIO1	**Pioraco**	**0.40**	**336**	P	**Pg**	**18 13 00.6**	**-0.1**
PIO1				S	**Sb**	**18 13 07.4**	**-0.8**
PIO1				AML	AML		
	comp=E,21900μm,0.4s						
PIO1				AML	AML		
	comp=N,26800μm,0.3s						
PIO1				AML	AML		
	comp=E,21850μm,0.4s						
PIO1				AML	AML		
	comp=N,26800μm,0.3s						
ARRO	**Arrone**	**0.40**	**235**	⇓P	**Pg**	**18 13 01.1**	**+0.3**
ARRO				AML	AML		
	comp=E,10455μm,1.4s						
ARRO				AML	AML		
	comp=N,7395μm,0.7s						
ARRO				AML	AML		
	comp=E,10460μm,1.4s						
ARRO				AML	AML		
	comp=N,7400μm,0.7s						
SSM1	**San Severino M**	**0.42**	**357**	⇓P	**Pg**	**18 13 00.7**	**-0.4**
FIU1	**Fiuminata**	**0.43**	**332**	P	**Pg**	**18 13 01.1**	**-0.2**
FIU1				AML	AML		
	comp=E,13250μm,0.4s						
FIU1				AML	AML		
	comp=N,14250μm,1.3s						
FIU1				AML	AML		
	comp=E,13200μm,0.4s						
GAG1	**Gaglole**	**0.44**	**346**	P	**Pg**	**18 13 01.2**	**-0.3**
GAG1				S	**Sb**	**18 13 08.4**	**-0.8**
GAG1				AML	AML		
	comp=E,54100μm,0.7s						
GAG1				AML	AML		
	comp=N,72600μm,0.3s						
GIGS	**Gran Sasso**	**0.45**	**144**	⇓P	**Pg**	**18 13 00.7**	**-0.9**
GIGS				S	**Sg**	**18 13 07.6**	**+0.1**
GIGS				AML	AML		
	comp=N,3855μm,0.7s						
GIGS				AML	AML		
	comp=E,4080μm,1.1s						
ASSB	**Assisi San Ben**	**0.47**	**300**	⇑P	**Pg**	**18 13 02.0**	**0.0**
ASSB				S	**Sb**	**18 13 09.7**	**-0.3**
ASSB				AML	AML		
	comp=N,24350μm,0.9s						
ASSB				AML	AML		
	comp=E,43250μm,0.2s						
MTL1	**Matelica**	**0.47**	**342**	P	**Pg**	**18 13 01.8**	**-0.2**
MTL1				AML	AML		
	comp=E,37700μm,0.5s						
MTL1				AML	AML		
	comp=N,38550μm,0.5s						
MTL1				AML	AML		
	comp=E,37650μm,0.5s						
SNTG	**Esanatoglia**	**0.48**	**336**	⇑P	**Pg**	**18 13 01.9**	**-0.4**
SNTG				S	**Sb**	**18 13 09.9**	**-0.6**
SNTG				AML	AML		
	comp=E,1260μm,0.5s						
SNTG				AML	AML		
	comp=N,1390μm,1.3s						
SNTG				AML	AML		
	comp=E,9700μm,0.5s						
SNTG				AML	AML		
	comp=N,11950μm,1.3s						
SNTG				AML	AML		
	comp=E,1260μm,0.5s						
TRE1	**Treia**	**0.50**	**8**	P	**Pg**	**18 13 02.6**	**-0.1**
TRE1				AML	AML		
	comp=N,21750μm,1.3s						
TRE1				AML	AML		
	comp=E,24050μm,0.5s						
CESX	**Cesi**	**0.51**	**247**		**Pg**	**18 13 02.7**	**0.0**
CESX	**Cesi**	**0.51**	**247**	⇑P	**Pg**	**18 13 02.8**	**+0.1**
CESX				AML	AML		
	comp=E,10105μm,0.4s						
CESX				AML	AML		
	comp=N,11755μm,0.4s						
EL6	**Elcito**	**0.52**	**351**	⇓P	**Pg**	**18 13 02.5**	**-0.5**
FIAM	**Fiamignano**	**0.55**	**187**	⇓P	**Pg**	**18 13 03.2**	**-0.3**
FIAM				S	**Sb**	**18 13 12.1**	**-0.3**
FIAM				AML	AML		
	comp=N,6745μm,0.5s						
FIAM				AML	AML		
	comp=E,5635μm,0.2s						
CADA	**Capodarco di F**	**0.56**	**46**	P	**Pb**	**18 13 04.2**	**-0.3**
CADA				AML	AML		
	comp=E,29900μm,0.4s						
CADA				AML	AML		
	comp=N,33250μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.56**	**312**	⇑P	**Pg**	**18 13 03.7**	**0.0**
ATCC				S	**Sb**	**18 13 13.1**	**+0.3**
ATCC				AML	AML		
	comp=N,19100μm,0.6s						
ATCC				AML	AML		
	comp=E,20400μm,0.3s						
CING	**Cingoli**	**0.56**	**359**	P	**Pg**	**18 13 03.1**	**-0.7**
CING				AML	AML		
	comp=N,10535μm,0.3s						
CING				AML	AML		
	comp=E,10745μm,0.5s						
FOSV	**Fossato di Vic**	**0.58**	**326**	⇑P	**Pg**	**18 13 03.9**	**-0.3**
FOSV				S	**Sb**	**18 13 13.6**	**+0.2**
FOSV				AML	AML		
	comp=E,17350μm,1.3s						
FOSV				AML	AML		
	comp=N,67400μm,0.3s						
FOSV				AML	AML		
	comp=N,67450μm,0.3s						
CIMA	**Civitanova Mar**	**0.60**	**34**	P	**Pg**	**18 13 04.6**	**+0.2**
FAGN	**Fagnano**	**0.61**	**153**	⇓P	**Pg**	**18 13 03.6**	**-1.1**
FAGN				AML	AML		
	comp=N,13650μm,0.5s						
FAGN				AML	AML		
	comp=E,19600μm,0.4s						
VCEL	**Villa Celiera**	**0.62**	**132**	⇓P	**Pg**	**18 13 04.4**	**-0.6**
VCEL				AML	AML		
	comp=N,16400μm,0.6s						
VCEL				AML	AML		
	comp=N,16450μm,0.6s						
VCEL				AML	AML		
	comp=E,14150μm,0.5s						
PP3	**Marolino**	**0.64**	**27**	⇑P	**Pg**	**18 13 05.1**	**0.0**
PP3				AML	AML		
	comp=E,23700μm,0.7s						
PP3				AML	AML		
	comp=N,24150μm,0.4s						
PP3				AML	AML		
	comp=E,24600μm,0.5s						
PP3				AML	AML		
	comp=E,23750μm,0.7s						
PP3				AML	AML		
	comp=N,23550μm,0.4s						
MMUR	**Monte Murano**	**0.65**	**346**	P	**Pg**	**18 13 04.8**	**-0.6**
MMUR				AML	AML		
	comp=E,19700μm,0.3s						
MMUR				AML	AML		
	comp=N,15250μm,0.4s						
MMUR				AML	AML		
	comp=E,19650μm,0.3s						
MURB	**Monte Urbino**	**0.68**	**312**		**Pg**	**18 13 05.6**	**-0.3**
MURB	**Monte Urbino**	**0.68**	**312**	⇑P	**Pg**	**18 13 05.8**	**-0.1**
MURB				AML	AML		
	comp=E,28700μm,0.2s						
MURB				AML	AML		
	comp=N,39500μm,0.3s						
MURB				AML	AML		
	comp=E,31750μm,0.2s						
MURB				AML	AML		
	comp=N,42350μm,0.3s						
MURB				AML	AML		
	comp=N,39500μm,0.3s						
SSFR	**Montelago di S**	**0.70**	**333**	⇑P	**Pg**	**18 13 05.8**	**-0.5**
SSFR				AML	AML		
	comp=E,26950μm,0.3s						
SSFR				AML	AML		
	comp=N,16200μm,0.2s						
SSFR				AML	AML		
	comp=E,28450μm,0.3s						
SSFR				AML	AML		
	comp=N,18200μm,0.3s						
ARVD	**Arcevia**	**0.71**	**344**	⇓P	**Pg**	**18 13 06.0**	**-0.7**
ARVD				AML	AML		
	comp=E,5130μm,0.3s						
ARVD				AML	AML		
	comp=E,5135μm,0.3s						
ARVD				AML	AML		
	comp=N,3560μm,0.7s						
T0110	**Collepietro**	**0.72**	**144**	⇓P	**Pg**	**18 13 05.7**	**-1.0**
T0110				AML	AML		
	comp=E,14750μm,0.7s						
T0110				AML	AML		
	comp=N,11285μm,0.6s						
ATFO	**Monte Foce - G**	**0.73**	**320**	⇑P	**Pg**	**18 13 06.5**	**-0.4**
ATFO				AML	AML		
	comp=E,6340μm,1.1s						
ATFO				AML	AML		
	comp=N,5525μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.74**	**302**	⇑P	**Pg**	**18 13 06.8**	**-0.3**
ATTE				AML	AML		
	comp=N,4345μm,0.3s						
ATTE				AML	AML		
	comp=E,5495μm,0.5s						
SRES	**S.Oreste - Sor**	**0.77**	**222**	P	**Pg**	**18 13 07.5**	**-0.2**
SRES				AML	AML		
	comp=E,3165μm,0.6s						
SRES				AML	AML		
	comp=N,4045μm,0.4s						
AOI	**Ancona**	**0.79**	**21**	P	**Pg**	**18 13 07.3**	**-0.8**
AOI				AML	AML		
	comp=N,3835μm,1.5s						
AOI				AML	AML		
	comp=E,4805μm,0.3s						
PTQR	**Pietraquaria**	**0.80**	**170**	P	**Pg**	**18 13 07.0**	**-1.3**
PTQR				AML	AML		
	comp=E,1375μm,0.5s						
PTQR				AML	AML		
	comp=N,1685μm,1.4s						
MGAB	**Montegabbione**	**0.81**	**277**	⇑P	**Pg**	**18 13 08.5**	**-0.1**
MGAB				AML	AML		
	comp=E,10055μm,0.4s						
MGAB				AML	AML		
	comp=N,9055μm,0.4s						
MGAB				AML	AML		
	comp=E,10280μm,0.4s						
MGAB				AML	AML		
	comp=N,9675μm,0.4s						
ATVO	**AVT- Monte Val**	**0.82**	**314**	⇑P	**Pg**	**18 13 08.1**	**-0.5**
ATVO				AML	AML		
	comp=E,5290μm,0.4s						
ATVO				AML	AML		
	comp=N,4940μm,0.4s						
COR1	**Corinaldo**	**0.83**	**349**	⇓P	**Pg**	**18 13 08.9**	**0.0**
COR1				AML	AML		
	comp=E,11500μm,1.0s						
COR1				AML	AML		
	comp=N,8235μm,0.7s						
COR1				AML	AML		
	comp=E,6078μm,1.0s						
COR1				AML	AML		
	comp=N,7860μm,0.8s						
COR1				AML	AML		
	comp=E,6032μm,1.0s						
COR1				AML	AML		
	comp=N,7845μm,0.8s						
COR1				AML	AML		
	comp=E,11500μm,1.0s						
COR1				AML	AML		
	comp=N,8235μm,0.7s						
MTCE	**Montecelio**	**0.86**	**204**	⇓P	**Pg**	**18 13 08.4**	**-1.0**
MTCE				AML	AML		
	comp=N,2415μm,1.4s						
MTCE				AML	AML		
	comp=E,3945μm,1.4s						
ATMI	**Monte Miggiano**	**0.87**	**307**	P	**Pg**	**18 13 09.1**	**-0.4**
ATMI				AML	AML		
	comp=E,14400μm,1.1s						
ATMI				AML	AML		
	comp=N,12150μm,0.3s						
ATPI	**Pietralunga -**	**0.87**	**317**	⇑P	**Pg**	**18 13 09.0**	**-0.6**
ATPI				AML	AML		
	comp=E,3855μm,0.4s						
ATPI				AML	AML		
	comp=N,3345μm,0.5s						
CERT	**Cerreto**	**0.88**	**191**	⇓P	**Pg**	**18 13 08.6**	**-1.1**
CERT				AML	AML		
	comp=E,4910μm,0.5s						
CERT				AML	AML		
	comp=N,2990μm,0.4s						
SENI	**Senigallia**	**0.89**	**1**	P	**Pg**	**18 13 09.7**	**-0.3**
NARO	**Abbazia di Nar**	**0.92**	**330**	⇑P	**Pg**	**18 13 09.6**	**-1.0**
NARO				AML	AML		
	comp=N,2300μm,1.0s						
NARO				AML	AML		
	comp=E,2395μm,1.4s						
FSSB	**Fossombrone**	**0.94**	**340**	P	**Pg**	**18 13 10.1**	**-0.8**
FSSB				AML	AML		
	comp=E,12050μm,0.4s						
FSSB				AML	AML		
	comp=N,17000μm,0.6s						
APEC	**Apecchio**	**0.94**	**322**	P	**Pg**	**18 13 10.7**	**-0.3**
APEC				AML	AML		
	comp=E,1085μm,1.1s						
APEC				AML	AML		
	comp=N,1086μm,1.5s						
INTR	**Introdacqua**	**0.95**	**147**	⇓P	**Pg**	**18 13 09.4**	**-1.7**
INTR				AML	AML		
	comp=E,3μm,0.9s						
INTR				AML	AML		
	comp=N,4μm,0.9s						
INTR				AML	AML		
	comp=E,2985μm,0.9s						
INTR				AML	AML		
	comp=N,4μm,0.9s						
INTR				AML	AML		
	comp=N,6315μm,0.9s						
INTR				AML	AML		
	comp=E,3μm,0.9s						
SACS	**San Casciano d**	**0.96**	**273**	⇑P	**Pg**	**18 13 11.1**	**-0.1**
SACS				AML	AML		
	comp=N,2710μm,1.0s						
SACS				AML	AML		
	comp=E,2700μm,0.6s						
SACS				AML	AML		
	comp=N,2810μm,0.7s						
SACS				AML	AML		
	comp=E,2980μm,0.6s						
RCAV	**Rocca di Cave**	**0.98**	**192**	P	**Pg**	**18 13 10.6**	**-1.2**
VVLD	**Villa Vallelon**	**0.99**	**162**	P	**Pg**	**18 13 10.4**	**-1.4**
VVLD				AML	AML		
	comp=E,2395μm,0.8s						
VVLD				AML	AML		
	comp=N,2775μm,0.5s						
BADI	**Badiali**	**0.99**	**315**	⇑P	**Pg**	**18 13 11.2**	**-0.7**
GUAR	**Guarcino**	**1.02**	**176**	P	**Pg**	**18 13 11.4**	**-1.0**
GUAR				AML	AML		
	comp=E,1985μm,0.6s						
GUAR				AML	AML		
	comp=N,2645μm,0.9s						
PE3	**Peglio**	**1.03**	**330**	P	**Pg**	**18 13 11.9**	**-0.6**
PE3				AML	AML		
	comp=N,25μm,0.4s						
PE3				AML	AML		
	comp=E,23μm,0.5s						
CAFI	**Castiglion Fio**	**1.05**	**300**	⇑P	**Pg**	**18 13 12.5**	**-0.5**
CAFI				AML	AML		
	comp=E,2355μm,0.7s						
CAFI				AML	AML		
	comp=N,2330μm,0.6s						
CAFI				AML	AML		
	comp=E,2440μm,0.7s						
CAFI				AML	AML		
	comp=N,2210μm,0.6s						
LPEL	**Lama dei Pelig**	**1.05**	**136**	P	**Pg**	**18 13 11.0**	**-2.0**
LPEL				AML	AML		
	comp=E,3335μm,0.5s						
LPEL				AML	AML		
	comp=N,3040μm,0.9s						
LATE	**Laterza**	**1.06**	**260**		**Pg**	**18 13 12.8**	**-0.3**
LATE	**Laterza**	**1.06**	**260**	⇓P	**Pg**	**18 13 13.3**	**+0.2**
RMP	**Rome, Mte Porz**	**1.07**	**201**	AML	AML		
	comp=E,2870μm,0.3s						

RMP AML AML
comp=N,3135μm,1.5s
PARC Parchiule 1.10 320 ⇑P **Pg 18 13 13.2 -0.8**
PARC AML AML
comp=N,1930μm,0.8s
PARC AML AML
comp=E,2850μm,0.7s
SSP9 Sansepolcro 1.10 314 P **Pg 18 13 12.9 -1.0**
SSP9 AML AML
comp=E,1905μm,0.7s
SSP9 AML AML
comp=N,1890μm,0.5s
VIVA Pratoni del Vi 1.11 197 AML AML
comp=E,7605μm,0.5s
VIVA AML AML
comp=N,7175μm,0.4s
RDP Rocca di Papa 1.11 199 P **Pg 18 13 14.2 0.0**
RDP AML AML
comp=N,7945μm,0.5s
RDP AML AML
comp=E,6220μm,0.5s
SF03 Valle Cupa 1.12 270 P **Pg 18 13 14.3 -0.1**
SF11 Podere del Sol 1.13 273 P **Pg 18 13 14.3 -0.2**
MCIV Monte Civitell 1.13 269 P **Pg 18 13 14.4 -0.2**
MCIV AML AML
comp=N,1088μm,0.7s
MCIV AML AML
comp=E,1440μm,0.3s
SF04 Casetta 1.14 272 P **Pg 18 13 14.6 -0.1**
POFI Posta Fibreno 1.16 161 P **Pg 18 13 13.3 -1.7**
POFI AML AML
comp=N,1885μm,0.8s
POFI AML AML
comp=E,1590μm,1.2s
PESA Pesaro 1.16 347 P **Pb 18 13 14.7 -0.2**
PESA AML AML
comp=N,6565μm,0.3s
PESA AML AML
comp=E,7315μm,0.6s
TOLF Tolfa 1.17 231 ⇑P **Pb 18 13 14.7 -0.3**
TOLF AML AML
comp=N,2545μm,0.4s
TOLF AML AML
comp=E,1800μm,0.5s
SF13 Bagnolo 1.17 271 P **Pb 18 13 14.8 -0.3**
CPGN Carpegna, Ital 1.18 327 AML AML
CPGN AML AML
CPGN AML AML
CPGN AML AML
LRP Arpino 1.20 166 AML AML
comp=N,1520μm,0.6s
LRP AML AML
comp=E,1105μm,0.7s
SF01 Poggio Pratacc 1.21 271 P **Pb 18 13 15.9 +0.1**
SF01 AML AML
comp=E,2920μm,0.5s
SF01 AML AML
comp=N,2725μm,0.4s
CRE Caprese Michel 1.23 312 P **Pb 18 13 15.4 -0.6**
CRE AML AML
comp=E,1220μm,1.4s
CRE AML AML
comp=N,1640μm,0.9s
GIUL Giuliano Di Ro 1.25 179 P **Pn 18 13 16.3 0.0**
ARCI Arcidosso 1.28 272 P **Pb 18 13 17.2 +0.2**
ARCI AML AML
comp=E,474μm,0.6s
ARCI AML AML
comp=N,388μm,0.4s
RNI2 Rionero Sannit 1.31 147 P **Pn 18 13 16.1 -1.0**
LATB Latina 1.33 188 P **Pn 18 13 15.9 -1.4**
CERA Filignano 1.35 153 P **Pn 18 13 16.4 -1.3**
CERA AML AML
comp=E,2935μm,0.6s
CERA AML AML
comp=N,1790μm,0.7s
CERA AML AML
comp=E,2820μm,0.6s
CERA AML AML
comp=N,1700μm,0.7s
FRES Fresagrandinar 1.37 127 P **Pg 18 13 18.9 -0.1**
FRES AML AML
comp=N,1260μm,0.7s
FRES AML AML
comp=E,2000μm,0.5s
MIDA Miranda 1.40 146 P **Pn 18 13 16.9 -1.6**
MIDA AML AML
comp=E,1870μm,1.1s
MIDA AML AML
comp=N,1480μm,0.7s
ASQU Asqua 1.43 314 ⇑P **Pn 18 13 18.9 +0.1**
ASQU AML AML
comp=N,1015μm,0.8s
ASQU AML AML
comp=E,1275μm,1.0s
TRIV Trivento 1.44 136 P **Pn 18 13 19.4 +0.5**
TRIV AML AML
comp=N,2025μm,1.2s
TRIV AML AML
comp=E,2795μm,0.8s
SFI Santa Sofia 1.48 318 P **Pn 18 13 19.9 +0.5**
SFI AML AML
comp=E,1062μm,1.6s
SFI AML AML
comp=E,1097μm,0.6s
SFI AML AML
comp=N,962μm,1.6s
SFI AML AML
comp=N,1012μm,1.6s
CSNT Castellina Chi 1.55 296 P **Pn 18 13 21.0 +0.5**
CSNT AML AML
comp=N,573μm,0.6s
CSNT AML AML
comp=E,430μm,0.7s
FROS Frosini 1.56 285 P **Pn 18 13 21.0 +0.5**
VAGA Valle Agricola 1.59 151 P **Pn 18 13 20.7 -0.3**
VAGA AML AML
comp=N,1158μm,0.6s
VAGA AML AML
comp=N,1195μm,0.6s
VAGA AML AML
comp=E,1010μm,1.0s
VAGA AML AML
comp=E,1028μm,0.9s
OSSC Osservatorio P 1.60 297 **Pn 18 13 21.6 +0.5**
OSSC Osservatorio P 1.60 297 P **Pn 18 13 22.0 +0.8**
OSSC AML AML
comp=E,563μm,0.9s
OSSC AML AML
comp=N,563μm,1.0s
LMD Lutirano 1.67 320 P **Pb 18 13 23.2 -0.4**
LMD AML AML
comp=N,950μm,1.1s
LMD AML AML
comp=E,740μm,0.8s
CIGN Sant'Elia a Pi 1.71 132 P **Pn 18 13 23.5 +0.9**
CIGN AML AML
comp=E,848μm,0.9s
CIGN AML AML
comp=N,820μm,0.7s
TRIF Trifonti 1.72 281 P **Pn 18 13 23.2 +0.5**
TRIF AML AML
comp=N,532μm,0.4s
TRIF AML AML
comp=E,626μm,0.4s
CASP Castiglione de 1.73 270 Pn **Pn 18 13 22.9 +0.1**
CASP Castiglione de 1.73 270 P **Pn 18 13 23.1 +0.3**
CASP AML AML
comp=E,244μm,0.8s
CASP AML AML
comp=N,174μm,1.2s
MODR Mondragone 1.74 163 AML AML
comp=E,322μm,0.7s
MODR AML AML
comp=N,544μm,0.8s
PTRJ Pietraroja 1.75 145 P **Pb 18 13 24.7 -0.2**
DUGI Dugi Otok 1.79 48 *e*Pn **Pn 18 13 23.0 -0.7**
MELA Melanico ??? S 1.80 127 ⇑P **Pn 18 13 25.0 +1.2**
MELA AML AML
comp=N,2645μm,0.6s
MELA AML AML
comp=E,2750μm,0.4s
MELA AML AML
comp=N,2740μm,0.6s
MELA AML AML
comp=E,2620μm,0.4s

BRIS BRISIGHELLA 1.82 318 P **Pb 18 13 26.2 0.0**
TREM Isole Tremiti 1.83 111 AML AML
comp=E,1915μm,0.6s
TREM AML AML
comp=N,2400μm,0.7s
MPPT Montemurlo 1.92 307 P **Pn 18 13 26.1 +0.5**
MPPT AML AML
comp=E,500μm,1.4s
MPPT AML AML
comp=N,414μm,0.5s
VITU Vitulano (BN) 1.94 147 AML AML
comp=N,916μm,0.6s
VITU AML AML
comp=E,740μm,0.6s
VIRC Vir 2.00 42 *e*Pn **Pn 18 13 25.9 -0.6**
MTCR Monte La Croce 2.02 308 P **Pn 18 13 27.1 +0.2**
APRC Apricena 2.03 121 P **Pn 18 13 27.5 +0.5**
APRC AML AML
comp=N,1640μm,0.5s
APRC AML AML
comp=E,1155μm,0.6s
PAOL Paolisi 2.05 150 **Pn 18 13 27.8 +0.5**
MORI Morici 2.10 59 *e*Pn **Pn 18 13 27.6 -0.3**
NVLJ Novalja 2.12 34 *i* Pn **Pn 18 13 27.9 -0.4**
BRJN Brijuni 2.13 10 *e*Pn **Pn 18 13 27.8 -0.5**
BRJN Brijuni 2.13 10 P **Pn 18 13 28.0 -0.3**
SGRT San Giovanni R 2.16 118 **Pn 18 13 29.5 +0.8**
SGRT San Giovanni R 2.16 118 P **Pn 18 13 29.4 +0.6**
SGRT AML AML
comp=E,1330μm,0.7s
SGRT AML AML
comp=N,1204μm,0.5s
POPM Popiglio 2.17 305 AML AML
comp=N,285μm,0.3s
POPM AML AML
comp=E,316μm,1.6s
CELB S.Piero in Cam 2.21 269 P **Pn 18 13 29.7 +0.3**
CELB AML AML
comp=E,108μm,0.5s
CELB AML AML
comp=N,93μm,1.1s
ZCCA Zocca 2.24 314 **Pb 18 13 33.4 +0.2**
RABC Rab 2.25 30 *e*Pn **Pn 18 13 29.4 -0.5**
BDI Bagni Di Lucca 2.28 304 P **Pn 18 13 30.5 +0.1**
BDI AML AML
comp=E,374μm,1.0s
BDI AML AML
comp=N,316μm,1.1s
BDI AML AML
comp=E,141μm,1.1s
BDI AML AML
comp=N,118μm,1.1s
MSAG Monte S. Angel 2.29 118 P **Pn 18 13 31.3 +0.8**
MSAG AML AML
comp=N,2720μm,0.3s
MSAG AML AML
comp=E,1205μm,0.5s
MSAG AML AML
comp=E,1325μm,0.5s
MSAG AML AML
comp=N,2640μm,0.4s
SGTA Sant Agata di 2.32 135 P **Pn 18 13 32.8 +1.8**
SGTA AML AML
comp=E,587μm,0.8s
SGTA AML AML
comp=N,452μm,0.6s
SMRN Sveta Marina 2.33 17 *e*Pn **Pn 18 13 30.4 -0.6**
HVAR Hvar 2.40 80 *e*Pn **Pn 18 13 31.8 -0.3**
HVAR Hvar 2.40 80 ⇑P **Pn 18 13 32.1 0.0**
SNAL S. Angelo Dei 2.40 141 P **Pn 18 13 34.2 +2.0**
SNAL AML AML
comp=E,692μm,1.1s
SNAL AML AML
comp=N,608μm,0.8s
VLC Villacollemand 2.46 304 **Pn 18 13 32.9 +0.1**
VLC Villacollemand 2.46 304 P **Pn 18 13 32.8 -0.1**
VLC AML AML
comp=N,179μm,1.3s
VLC AML AML
comp=E,155μm,1.0s
VLC AML AML
comp=N,159μm,1.6s
VLC AML AML
comp=E,164μm,1.1s
A253A Karojba, Istri 2.52 10 *e*Pn **Pn 18 13 32.9 -0.8**
UDBI Udbina 2.52 46 *e*Pn **Pn 18 13 34.3 +0.4**
CAPA Cerignola FG 2.55 130 AML AML
comp=E,942μm,0.7s
CAPA AML AML
comp=N,888μm,0.8s
A250A Rusevo Krmpots 2.58 28 *e*Pn **Pn 18 13 34.6 0.0**
VULT Monte Vulture 2.58 135 P **Pn 18 13 36.2 +1.6**
VULT AML AML
comp=N,744μm,1.0s
VULT AML AML
comp=E,636μm,0.6s
EQUI Equi 2.60 302 P **Pn 18 13 35.5 +0.6**
EQUI AML AML
comp=N,149μm,0.8s
EQUI AML AML
comp=E,168μm,0.8s
KIJV Kijevo 2.62 62 *e*Pn **Pn 18 13 35.5 +0.5**
PLIT Plitvice 2.70 39 *e*Pn **Pn 18 13 36.4 +0.1**
LSTV Lastovo 2.71 90 *e*Pn **Pn 18 13 36.1 -0.2**
PALZ Palazzo San Ge 2.77 131 P **Pn 18 13 37.6 +0.4**
PALZ AML AML
comp=N,984μm,1.0s
PALZ AML AML
comp=E,820μm,0.9s
TEOL Teolo 2.78 337 **Pn 18 13 38.4 +1.1**
SKDS Skadanscina 2.79 12 *e*Pn **Pn 18 13 36.6 -0.9**
MAKA Makarska 2.83 79 *e*Pn **Pn 18 13 38.2 +0.3**
MRVN Minervino Murg 2.83 127 P **Pn 18 13 38.7 +0.6**
MRVN AML AML
comp=N,320μm,0.5s
MRVN AML AML
comp=E,268μm,1.2s
ACER Acerenza 2.88 134 AML AML
comp=E,431μm,0.5s
ACER AML AML
comp=N,598μm,0.7s
PZUN Potenza 2.91 137 AML AML
comp=E,226μm,0.7s
PZUN AML AML
comp=N,192μm,0.5s
A050A Klekovaca 2.93 54 *e*Pn **Pn 18 13 40.1 +0.7**
RICI Ricice 2.95 75 *i* Pn **Pn 18 13 40.3 +0.7**
SMPL Sampolo 2.99 257 P **Pn 18 13 41.1 +0.9**
SMPL AML AML
comp=N,26μm,1.6s
SMPL AML AML
comp=E,31μm,1.3s
CEY Cerknica 3.05 16 *e*Pn **Pn 18 13 40.8 -0.3**
BOJS Bojanci 3.07 28 *e*Pn **Pn 18 13 41.5 +0.3**
BOJS Bojanci 3.07 28 P **Pn 18 13 41.9 +0.7**
BOJS AML AML
comp=N,496μm,1.2s
BOJS AML AML
comp=E,704μm,1.4s
MSSA Maissana 3.08 301 **Pn 18 13 42.1 +0.7**
MSSA Maissana 3.08 301 P **Pn 18 13 42.3 +0.9**
MSSA AML AML
comp=E,106μm,0.6s
MSSA AML AML
comp=N,104μm,0.5s
PGF Pioggiola 3.12 267 *e*Pn **Pn 18 13 43.4 +1.4**
PGF *e*Sn **Sn 18 14 18.8 -0.5**
comp=N,27nm,0.6s
SRKY Kupres RS 3.14 65 *e*Pn **Pn 18 13 43.4 +1.1**
AMUR Altamura 3.17 126 AML AML
comp=N,318μm,0.5s
AMUR AML AML
comp=E,398μm,0.6s
SABO M.te Sabotino 3.18 5 **Pn 18 13 42.4 -0.4**
SABO M.te Sabotino 3.18 5 P **Pn 18 13 42.6 -0.2**
SABO AML AML
comp=E,470μm,1.5s
SABO AML AML
comp=N,2390μm,0.7s
SABO AML AML
comp=E,1970μm,1.6s
SABO AML AML
comp=N,612μm,0.7s
ROVR Rover Verones 3.22 332 AML AML
comp=E,99μm,0.5s
ROVR AML AML

comp=N,154μm,0.9s
CGRP Cima Grappa 3.23 342 AML AML
comp=N,84μm,1.5s
CGRP AML AML
comp=E,62μm,0.6s
MGRS Mrkonjic Grad 3.24 59 *e*Pn **Pn 18 13 45.1 +1.5**
OZLJ Ozalj 3.24 29 *e*Pn **Pn 18 13 43.7 +0.2**
VARN Col Varnada, M 3.28 346 AML AML
comp=E,192μm,0.6s
VARN AML AML
comp=N,113μm,0.3s
STON Ston 3.30 87 *e*Pn **Pn 18 13 43.4 -1.0**
STON Ston 3.30 87 *e*Pn **Pn 18 13 43.5 -1.0**
STON Ston 3.30 87 *e*Pn **Pn 18 13 43.6 -0.8**
STON *e*Sn **Sn 18 14 23.2 -0.4**
STON Ston 3.30 87 AML AML
comp=E,130μm,0.3s
STON AML AML
comp=N,141μm,1.1s
LJU Ljubljana 3.37 16 AML AML
comp=N,2190μm,0.8s
LJU AML AML
comp=E,1455μm,0.9s
MATE Matera 3.39 128 ⇓P **Pn 18 13 47.1 +1.5**
DOSS Dosso del Somm 3.39 335 AML AML
comp=N,276μm,0.4s
DOSS AML AML
comp=E,260μm,1.6s
DOSS AML AML
comp=N,268μm,0.5s
DOSS AML AML
comp=E,280μm,0.5s
SALO Salr 3.41 326 Pn **Pn 18 13 47.4 +1.5**
SALO Salr 3.41 326 AML AML
comp=E,310μm,0.7s
SALO AML AML
comp=N,432μm,1.0s
CRES Cresnjev 3.42 27 *e*Pn **Pn 18 13 46.4 +0.4**
CUC Castrocucco 3.43 144 **Pn 18 13 48.3 +2.0**
MPRI Monte Prat 3.43 357 AML AML
comp=N,516μm,0.4s
MPRI AML AML
comp=E,318μm,0.6s
A051A Mrakovica 3.46 49 *e*Pn **Pn 18 13 47.2 +0.5**
STAL STALIGIAL 3.47 354 **Pn 18 13 46.7 0.0**
STAL STALIGIAL 3.47 354 AML AML
comp=N,262μm,0.6s
STAL AML AML
comp=E,389μm,1.5s
STAL AML AML
comp=E,324μm,0.6s
STAL AML AML
comp=N,356μm,0.8s
BLY Banja Luka 3.47 55 *e*Pn **Pn 18 13 48.1 +1.4**
MAGA Magasa 3.50 329 AML AML
comp=N,490μm,0.4s
MAGA AML AML
comp=E,776μm,0.4s
CIMO Cimolais 3.54 351 **Pn 18 13 47.7 -0.1**
CIMO Cimolais 3.54 351 AML AML
comp=N,39μm,0.6s
CIMO AML AML
comp=N,40μm,0.6s
CIMO AML AML
comp=E,33μm,1.0s
LUSI Trento, Gardas 3.54 333 AML AML
comp=N,324μm,0.3s
LUSI AML AML
comp=E,238μm,0.6s
PTCC Patocco-Chiusa 3.59 2 AML AML
comp=E,144μm,0.4s
PTCC AML AML
comp=N,136μm,0.5s
DBRK Dubrovnik 3.64 91 *e*Pn **Pn 18 13 48.4 -0.6**
PRED Cave del Predi 3.64 4 **Pn 18 13 48.8 -0.3**
GAGG Gaggia 3.65 335 AML AML
comp=N,244μm,0.8s
GAGG AML AML
comp=E,401μm,0.8s
CLUD Cludinico 3.65 356 Pn **Pn 18 13 49.3 +0.1**
CLUD Cludinico 3.65 356 AML AML
comp=E,240μm,0.7s
CLUD AML AML
comp=N,168μm,0.6s
ZONE Zone 3.69 324 AML AML
comp=N,258μm,0.3s
ZONE AML AML
comp=E,268μm,0.3s
ACOM Acomizza, Ital 3.74 3 AML AML
comp=N,274μm,0.7s
ACOM AML AML
comp=N,280μm,0.5s
ACOM AML AML
comp=E,284μm,0.6s
ACOM AML AML
comp=E,281μm,1.6s
ZOU Zoufplan 3.75 357 AML AML
comp=N,210μm,1.5s
ZOU AML AML
comp=E,204μm,0.7s
MABI Malga Bissina 3.77 330 AML AML
comp=E,139μm,1.5s
MABI AML AML
comp=N,104μm,0.5s
TREB Trebinje 3.79 90 *e*Pn **Pn 18 13 51.8 +0.7**
MOSL Moslavina 3.79 41 *e*Pn **Pn 18 13 50.8 -0.3**
OBKA Obir 3.82 14 *e*Pn **Pn 18 13 51.4 -0.2**
OBKA Obir 3.82 14 *e*Pn **Pn 18 13 51.9 +0.3**
comp=N,1.1nm,0.1s
OBKA *e*Sn **Sg 18 15 00.4 +5.0**
comp=N,56nm,0.5s
MYKA Terra Mystica 3.83 4 *e*Pn **Pn 18 13 52.5 +0.8**
comp=N,4.1nm,0.2s
MYKA *e*Sn **Sn 18 14 40.0 +3.2**
comp=N,18nm,0.4s
QLNO Quiliano 3.84 295 AML AML
comp=E,39μm,0.6s
QLNO AML AML
comp=N,50μm,1.3s
KOSI Kohlern 3.88 341 AML AML
comp=E,370μm,0.8s
KOSI AML AML
comp=N,242μm,1.2s
HCY Herceg Novi 3.92 94 *e*Pn **Pn 18 13 53.4 +0.6**
HCY Herceg Novi 3.92 94⇑*i*Pn **Pn 18 13 53.5 +0.6**
HCY *i* Sn **Sn 18 14 40.0 +1.2**
BRY Bratogost 3.92 87 *e*Pn **Pn 18 13 53.5 +0.5**
BRY Bratogost 3.92 87⇑*i*Pn **Pn 18 13 53.8 +0.8**
BRY *i* Sn **Sn 18 14 40.2 +1.1**
ABTA Abfaltersbach 3.97 353 *i* Pn **Pn 18 13 54.7 +1.1**
comp=N,28nm,0.4s,SNR=34
ABTA *e*Sn **Sb 18 14 48.0 -2.8**
comp=N,44nm,0.6s
SOKA Soboth 4.08 18 *e*Pn **Pn 18 13 55.7 +0.5**
comp=N,4.1nm,0.3s
UPM Unac-Piva 4.19 83 *e*Pn **Pn 18 13 58.5 +1.6**
UPM Unac-Piva 4.19 83⇓*i*Pn **Pn 18 13 58.1 +1.2**
UPM *i* Sn **Sn 18 14 46.6 +0.6**
RISI Rein 4.21 349 AML AML
comp=N,389μm,0.5s
RISI AML AML
comp=E,444μm,0.4s
CEME Cevo 4.22 92⇑*i*Pn **Pn 18 13 58.0 +0.9**
CEME *i* Sn **Sn 18 14 47.2 +0.9**
NKME Niksic 4.23 89⇑*i*Pn **Pn 18 13 58.3 +1.1**
NKME *i* Sn **Sn 18 14 47.9 +1.3**
BUM Brajici-Budva 4.23 95⇑*i*Pn **Pn 18 13 58.2 +1.0**
BUM *i* Sn **Sn 18 14 47.6 +1.0**
NKY Niksic 4.25 88⇑*i*Pn **Pn 18 13 58.6 +1.0**
NKY *i* Sn **Sn 18 14 48.6 +1.3**
KBA Koelnbreinsper 4.27 1 *e*Pn **Pn 18 13 59.2 +1.4**
comp=E,2.7nm,0.1s,SNR=10
KBA *e*Sn **Sn 18 14 48.2 +0.4**
comp=E,33nm,0.4s
MUGIO Muggio 4.31 318 AML AML
comp=E,79μm,0.6s
MUGIO AML AML
comp=N,61μm,0.3s
SBF Sospel 4.34 286 *e*Pn **Pn 18 13 59.5 +0.7**
SBF *e*Sn **Sn 18 14 47.4 -2.0**
comp=N,36nm,0.5s
FUORN Ofenpass-Fuorn 4.35 332 Pn **Pn 18 14 01.5 +2.5**
VARE Varese 4.41 315 AML AML
comp=E,123μm,0.3s
VARE AML AML
comp=N,124μm,0.9s

DRME	Dracevica, Mon	4.46	96	ePn		Pn	18 14 01.6	+1.2
DRME	Dracevica, Mon	4.46	96⇑	iPn		Pn	18 14 01.6	+1.2
DRME				iSn		Sn	18 14 53.4	+1.1
PDG	Podgorica	4.48	93	⇑P		Pn	18 14 01.8	+1.3
PDG	Podgorica	4.48	93	Pn		Pn	18 14 01.0	+0.5
TTG	Podgorica	4.48	93	⇓iPn		Pn	18 14 01.5	+0.9
TTG				iSn		Sn	18 14 53.9	+1.3
TIP	Timpagrande	4.51	142	⇑P		Pn	18 14 06.6	+5.4
TIP	Timpagrande	4.51	142			Pn	18 14 02.7	+1.5
CGL	Cagliari Serpe	4.54	222	AML	AML			
	comp=E,114µm,0.4s							
CGL				AML	AML			
	comp=N,82µm,0.4s							
FETA	Feichten	4.56	338	iPn		Pn	18 14 04.6	+2.7
	comp=N,9.9nm,0.4s,SNR=9.9							
FETA				eSn		Sn	18 15 01.4	+6.4
	comp=N,14nm,0.6s							
RUDO	Rudo	4.57	78	ePn		Pn	18 14 02.6	+0.7
WTTA	Wattenberg	4.59	346	ePn		Pn	18 14 04.7	+2.4
	comp=N,5.4nm,0.2s							
WTTA				eSn		Sn	18 15 01.6	+5.9
	comp=N,28nm,0.4s							
WTTA	Wattenberg	4.59	346	AML	AML			
	comp=N,142µm,0.7s							
WTTA				AML	AML			
	comp=E,204µm,1.1s							
DAVOX	Davos/Dischmat	4.62	330	Pn		Pn	18 14 06.1	+3.4
	comp=E,5.3nm,0.3s,baz=147,slow=19,SNR=37							
DAVOX				Sn		Sn	18 14 58.5	+2.1
	comp=E,2.4nm,0.3s,baz=352,slow=22,SNR=3.9							
SQTA	Sankt Quirin	4.63	343	iPn		Pn	18 14 05.1	+2.3
	comp=E,12nm,0.2s,SNR=18							
SQTA				eSn		Sb	18 15 04.0	-5.9
	comp=E,30nm,0.3s							
KOME	Kolasin	4.64	87⇓	iPn		Pn	18 14 03.8	+0.9
KOME				iSn		Sn	18 14 57.7	+1.0
BBLS	Lazići	4.64	75	ePn		Pn	18 14 04.5	+1.6
BBLS				eSn		Sn	18 14 58.0	+1.2
WATA	Walderalm	4.67	346	iPn		Pn	18 14 05.9	+2.5
	comp=E,6.3nm,0.2s,SNR=8.7							
ARSA	Arzberg	4.73	19	ePn		Pn	18 14 04.2	+0.1
	comp=E,1.2nm,0.2s							
ARSA				eSn		Sn	18 14 56.9	-2.0
	comp=E,14nm,0.4s							
TRAV	Traversella	4.77	306	AML	AML			
	comp=E,50µm,1.0s							
TRAV				AML	AML			
	comp=N,47µm,0.4s							
MOTA	Moosalm	4.77	343	iPn		Pn	18 14 07.9	+3.1
	comp=N,7.6nm,0.4s,SNR=7.5							
KOVH	Kovagotottos	4.79	45	P		Pn	18 14 04.4	-0.5
KOVH				S		Sn	18 14 59.0	-1.5
SCTE	Santa Cesarea	4.81	123	Pn		Pn	18 14 06.4	+1.3
BIOA	Bad Ischl, Aus	4.89	3	iPn		Pn	18 14 07.1	+0.8
	comp=N,7.4nm,0.2s,SNR=12							
IVA	Berane	4.91	87⇑	iPn		Pn	18 14 07.8	+1.1
IVA				iSn		Sn	18 15 04.5	+0.9
LMR	La Mourre	4.94	278	ePn		Pn	18 14 07.6	+0.7
LMR				eSn		Sn	18 15 01.8	-2.2
	comp=N,4.9nm,0.5s							
PVY	Plav	4.98	90⇑	iPn		Pn	18 14 08.9	+1.3
PVY				iSn		Sn	18 15 06.0	+0.8
SJES	Sjenica	4.98	83	ePn		Pn	18 14 09.3	+1.7
SJES				eSn		Sn	18 15 05.2	+0.1
RETA	Reutte	4.99	341	iPn		Pn	18 14 11.0	+3.4
	comp=N,5.7nm,0.2s,SNR=10							
CEL	Celeste	4.99	155			Pn	18 14 09.7	+2.1
MBDF	Montbardon	5.04	295	ePn		Pn	18 14 09.8	+1.3
MBDF				eSn		Sn	18 15 04.0	-2.8
	comp=N,17nm,0.6s							
DAVA	Damuels	5.06	333	iPn		Pn	18 14 11.7	+3.0
	comp=N,20nm,0.5s,SNR=11							
DAVA				eSn		Sn	18 15 09.5	+2.3
	comp=N,65nm,0.7s							
MOA	Molln	5.09	8	ePn		Pn	18 14 10.3	+1.2
MOA				eSn		Sn	18 15 08.4	+0.6
MOA	Molln	5.09	8	eSn		Sn	18 15 10.0	+2.1
	comp=N,14nm,0.5s							
DIVS	Divibare	5.10	73			Pn	18 14 10.4	+1.1
DIVS	Divibare	5.10	73	ePn		Pn	18 14 10.1	+0.9
DIVS	Divibare	5.10	73	ePn		Pn	18 14 09.9	+0.7
IVAS	Ivanjica	5.13	79	ePn		Pn	18 14 10.2	+0.6
IVAS				eSn		Sn	18 15 08.9	0.0
MORH	Mrgy, Hungar	5.16	47	⇑P		Pb	18 14 26.7	+3.6
MORH	Mrgy, Hungar	5.16	47	P		Pn	18 14 10.3	+0.3
TIR	Tirane	5.16	104	⇓P		Pn	18 14 10.9	+0.9
TIR	Tirane	5.16	104	P		Pn	18 14 11.2	+1.2
TIR	Tirane	5.16	104	Pn		Pn	18 14 10.6	+0.5
BNI	Bardonecchia	5.22	298	Pn		Pn	18 14 11.2	+0.3
VLO	Vlora	5.26	114			Pn	18 14 12.0	+0.7
FRGS	Fruska Gora	5.31	62	⇓P		Pn	18 14 12.1	+0.1
FRGS	Fruska Gora	5.31	62	ePn		Pn	18 14 11.4	-0.6
FRGS	Fruska Gora	5.31	62	ePn		Pn	18 14 11.1	-0.9
RONA	Rosalia, Austr	5.35	23	ePn		Pn	18 14 12.7	+0.1
	comp=N,2.6nm,0.2s							
RONA				eSn		Sn	18 15 12.9	-1.3
	comp=N,2.3nm,0.2s							
LPG	La Plagne	5.37	302	ePn		Pn	18 14 16.0	+2.9
LPG				eSn		Sn	18 15 10.8	-4.2
	comp=N,12nm,0.5s							
LPL	La Plagne	5.39	302	ePn		Pn	18 14 16.1	+2.8
LPL				eSn		Sn	18 15 10.4	-5.0
	comp=N,9.3nm,0.4s							
TRUS	Trudelj	5.42	72	ePn		Pn	18 14 14.0	+0.5
CONA	Conrad Observa	5.45	19	ePn		Pn	18 14 14.1	+0.1
	comp=N,1.7nm,0.2s							
CONA				eSn		Sn	18 15 15.4	-1.2
	comp=N,6.3nm,0.4s							
PHP	Peshkopia	5.48	99	P		Pn	18 14 16.6	+2.1
PHP				S		Sn	18 15 12.1	-5.4
SENIN	Lac Senin/Sane	5.51	312	Pn		Pn	18 14 18.8	+3.8
GRUS	Gruza	5.58	76	ePn		Pn	18 14 16.2	+0.5
SMRF	Simiane la Rot	5.68	284	ePn		Pn	18 14 19.2	+2.0
SMRF				eSn		Sn	18 15 20.4	-2.1
	comp=N,2.4nm,0.4s							
ORIF	Oris-en-Rattie	5.70	294	ePn		Pn	18 14 19.2	+1.7
ORIF				eSn		Sn	18 15 19.7	-3.3
	comp=N,12nm,0.6s							
SELS	Selova	5.81	83	ePn		Pn	18 14 19.4	+0.4
KEK	Kerkira	5.85	120	P		Pn	18 14 21.0	+1.5
KEK				S		Sn	18 15 18.6	-7.9
KEK	Kerkira	5.85	120	Pn		Pn	18 14 20.1	+0.7
SRN	Sarande	5.89	118	P		Pn	18 14 21.1	+1.1
OHR	Ohrid	5.91	104	iPn		Pn	18 14 22.1	+1.9
ZST	Bratislava	6.04	26	ePN		Pn	18 14 20.2	-1.8
GEC2	GERESS Array S	6.04	3	Pn		Pn	18 14 22.2	0.0
GERES	GERESS Array B	6.04	3			Pn	18 14 21.9	-0.3
GERES	GERESS Array B	6.04	3	Pn		Pn	18 14 21.9	-0.3
	comp=N,1.0nm,0.3s,baz=176,slow=13,SNR=30							
GERES				Sn		Sn	18 15 28.2	-3.2
	comp=N,3.5nm,0.3s,baz=182,slow=22,SNR=7.3							
	comp=N,1.4nm,0.3s							
CKRC	Cesky Krumlov	6.06	7	ePN		Pn	18 14 21.8	-0.5
CKRC				eSN		Sn	18 15 28.9	-2.7
KBN	Korca	6.08	109			Pn	18 14 23.4	+0.8
SKO	Skopje	6.15	95	iPn		Pn	18 14 25.0	+1.4
LSK	Leskovik	6.15	113	P		Pn	18 14 25.6	+1.9
MODS	Modra-Piesok	6.25	26	ePN		Pn	18 14 25.3	+0.4
BOVS	Bovan	6.26	80	⇑P		Pn	18 14 24.9	-0.2
BOVS	Bovan	6.26	80	ePn		Pn	18 14 25.1	0.0
KHC	Kasperske Hory	6.33	2			Pn	18 14 25.2	-0.8
KHC	Kasperske Hory	6.33	2	ePN		Pn	18 14 25.5	-0.5
KHC				eSN		Sn	18 15 36.3	-1.9
BARS	Barje	6.33	87	ePn		Pn	18 14 26.8	+0.8
BARS				eSn		Sn	18 15 36.6	-1.7
CABF	La Chapelle	6.34	309	ePn		Pn	18 14 28.0	+1.8
CABF				eSn		Sn	18 15 35.2	-3.4
	comp=N,14nm,0.7s							
MDVR	Moldovita	6.46	69	⇑P		Pn	18 14 29.7	+1.9
BFO	Black Forest	6.49	330	Pn		Pn	18 14 31.6	+3.4
VIVF	Saint-Julien-l	6.50	291	ePn		Pn	18 14 30.5	+2.0
VIVF				eSn		Sn	18 15 38.8	-3.8
	comp=N,1.4nm,0.4s							
PRVS	Prvonek	6.54	90	ePn		Pn	18 14 29.9	+0.9
JAN	Janina	6.56	116	P		Pn	18 14 30.2	+0.9
KRUC	Moravsky	6.63	18	ePN		Pn	18 14 30.1	-0.1
KRUC				eSN		Sn	18 15 42.9	-2.8
ZAGS	Zajecar	6.66	78	ePn		Pn	18 14 30.7	+0.2
BZS	Buzias	6.66	62	⇓P		Pn	18 14 30.8	+0.3
HINF	Hinteralfeld	6.72	320	ePn		Pn	18 14 31.8	+0.4
HINF				eSn		Sn	18 15 44.9	-3.0
	comp=N,31nm,0.5s							
STIP	Stip	6.75	96	iPn		Pn	18 14 34.6	+2.8
JAVC	Velka Javorina	6.80	26	ePN		Pn	18 14 32.7	+0.2
BOSS	Bosilegrad	6.84	90	ePn		Pn	18 14 34.0	+0.9
ECH	Echery	6.87	324	Pn		Pn	18 14 34.2	+0.7
TSLK	Tsoukalades, L	6.91	123	P		Pn	18 14 36.1	+2.1
VRAC	Vranov	6.91	19	⇑P		Pn	18 14 34.3	+0.3
VRAC	Vranov	6.91	19	ePN		Pn	18 14 33.7	-0.3
VRAC	Vranov	6.91	19	LR	LR		18 17 24.4	
	comp=N,26nm,19.6s,baz=270,slow=40							
VYHS	Vyhne	6.91	33	ePN		Pn	18 14 35.9	+1.9
ZAPS	Zavoj	6.92	83	ePn		Pn	18 14 35.0	+0.8
LASF	Ste Croix	6.92	284	ePn		Pn	18 14 35.0	+0.8
LASF				eSn		Sn	18 15 47.9	-5.1
	comp=N,1.5nm,0.5s							
LKD2	Lefkada island	6.93	123	P		Pn	18 14 36.3	+2.0
BLKB	Belogradchik	6.96	80	⇑P		Pn	18 14 35.8	+1.1
HERR	Herculane	6.97	70	⇑P		Pn	18 14 34.6	-0.2
HAU	Haudompre	7.09	319	ePn		Pn	18 14 37.7	+1.2
HAU				eSn		Sn	18 15 52.7	-4.3
	comp=N,26nm,0.5s							
PRU	Pruhonice	7.24	7	eSN		Sn	18 15 58.1	-2.5
GZR	Gura Zlata	7.35	66	⇓P		Pn	18 14 43.4	+3.3
KKB	Krupnik	7.38	94	P		Pn	18 14 41.8	+1.4
VTS	Vitosha	7.39	88	⇓P		Pn	18 14 40.9	+0.2
VTS	Vitosha	7.39	88			Pn	18 14 40.7	0.0
VTS	Vitosha	7.39	88	P		Pn	18 14 41.5	+0.8
NKC	Novy Kostel	7.44	356	eSN		Sn	18 16 03.0	-2.7
LIT	Litokhoron	7.48	108	Pn		Pn	18 14 42.2	+0.4
MORC	Moravsky Berou	7.58	22	⇓P		Pn	18 14 35.8	-7.5
MORC	Moravsky Berou	7.58	22	ePN		Pn	18 14 44.7	+1.4
EVR	Evrytania	7.59	118	P		Pn	18 14 45.4	+2.0
KRLC	Kraliky	7.67	17	ePN		Pn	18 14 43.6	-0.9
KRLC				eSN		Sn	18 16 07.1	-4.2
SMF	Signal de Mont	7.69	303	ePn		Pn	18 14 44.4	-0.3
SMF				eSn		Sn	18 16 09.7	-2.2
	comp=N,2.9nm,0.3s							
MPEP	Malo Peshtene	7.73	82	P		Pn	18 14 48.1	+2.9
PAGF	Fort de Pagny	7.77	320	ePn		Pn	18 14 45.4	-0.4
	baz=142							
PAGF	Fort de Pagny	7.77	320	eP		Pn	18 14 50.4	+4.6
PAGF				eSn		Sn	18 16 08.2	-5.6
	comp=N,17nm,0.6s							
ANX	Ano Chora	7.84	120	P		Pn	18 14 49.6	+2.7
ANX				S		Sn	18 16 08.0	-7.7
SFTF	Sexfontaines	7.87	316	ePn		Pn	18 14 47.1	-0.1
SFTF	Sexfontaines	7.87	316	eP		Pn	18 14 52.6	+5.4
	baz=132							
SFTF				eSn		Sn	18 16 12.6	-3.7
	comp=N,9.7nm,0.3s							
MMB	Musomiste	7.90	95	P		Pn	18 14 49.9	+2.2
EFP	Efpalio	7.93	121	P		Pn	18 14 50.6	+2.6
LOR	Lormes	7.98	307	ePn		Pn	18 14 48.9	+0.2
	baz=121							
LOR				eSn		Sn	18 16 15.2	-3.7
	comp=N,4.7nm,0.3s							
AVF	Avril sur Loir	8.06	303	ePn		Pn	18 14 48.9	-0.8
AVF				eSn		Sn	18 16 16.0	-4.8
	comp=N,3.5nm,0.6s							
MEZF	Maizieres J'vi	8.06	318	ePn		Pn	18 14 51.4	+1.6
	baz=138							
MEZF				eSn		Sn	18 16 15.9	-5.0
	comp=N,7.5nm,0.5s							
MTLF	Montolieu	8.07	277	ePn		Pn	18 14 49.7	-0.2
MTLF	Montolieu	8.07	277	eP		Pn	18 14 55.4	+5.5
MTLF				eSn		Sn	18 16 17.8	-3.3
	comp=N,1.5nm,0.5s							
PGB	Panagyurishte	8.08	88	P		Pn	18 14 52.0	+1.9
BRG	Berggiesshubel	8.08	3	eP		Pb	18 15 05.7	-7.1
BRG				Amp			18 15 08.0	
	comp=Z,2.0nm,0.6s							
BRG				ex	x		18 16 15.9	
BRG				ex	x		18 17 15.5	
BRG				Amp			18 17 36.2	
	comp=Z,5.2nm,0.9s							
SSF	Saint Saulge	8.09	305	ePn		Pn	18 14 48.9	-1.3
SSF				eSn		Sn	18 16 18.8	-2.8
	comp=Z,4.3nm,0.5s							
SAVF	Savonnieres en	8.10	319	ePn		Pn	18 14 50.9	+0.6
	baz=138							
SAVF				eSn		Sn	18 16 17.4	-4.5
	comp=Z,7.1nm,0.5s							
BGF	Bois d'Agland	8.28	300	ePn		Pn	18 14 51.3	-1.5
BGF				eSn		Sn	18 16 21.0	-5.3
	comp=Z,5.4nm,0.4s							
KLV	Kalavryta, Ach	8.31	122	P		Pn	18 14 55.8	+2.5
CAF	Calviac	8.33	288	ePn		Pn	18 14 55.4	+1.9
CAF				eSn		Sn	18 16 21.8	-5.7
	comp=Z,2.1nm,0.6s							
CLL	Collm	8.50	359	ePn		Pn	18 14 56.0	+0.2
CLL				ex	x		18 15 06.0	
CLL				eSn	Sn		18 16 12.0	-20
CLL				ex	x		18 16 28.0	
CLL				ex	x		18 16 41.0	
CLL				ex	x		18 17 09.0	
CLL				eSg	Sg		18 17 21.0	-4.4
	comp=Z,12nm,1.1s							
CLL				LmV			19 18 00.0	
	comp=Z,100nm,20.0s							
TCF	Toulx Ste Croi	8.59	298	ePn		Pn	18 14 56.7	-0.4
TCF				eSn		Sn	18 16 27.9	-6.0
	comp=Z,1.9nm,0.4s							
RZN	Rozhen	8.61	94	P		Pn	18 14 59.5	+2.0
HYF	Humbligny	8.71	304	eP		Pn	18 15 02.7	+4.0
HYF				eSn		Sn	18 16 30.9	-5.9
	comp=Z,30nm,0.4s							
RJF	Les Rejaudoux	8.78	290	ePn		Pn	18 14 58.6	-1.1
RJF	Les Rejaudoux	8.78	290	eP		Pn	18 15 05.2	+5.5
VOIR		8.91	69	⇓P		Pn	18 15 04.2	+2.7
KDZ	Kurdzhali	9.13	93	P		Pn	18 15 05.1	+0.6
LFF	La Frestale	9.26	288	ePn		Pn	18 15 07.7	+1.6
LFF				eSn		Sn	18 16 43.7	-6.5
	comp=Z,3.7nm,0.4s							
GIVF	Givet	9.30	324	ePn		Pn	18 15 07.9	+1.1
GIVF				eSn		Sn	18 16 44.2	-7.2
RDO	Rodhopi	9.33	96	Pn		Pn	18 15 04.7	-2.5
EPF	Esparros	9.45	276	ePn		Pn	18 15 07.8	-1.1
EPF				eSn		Sn	18 16 50.2	-4.9
	comp=Z,0.6nm,0.3s							
MLR	Muntele Rosu	9.54	69	⇑P		Pn	18 15 14.2	+4.1
MLR	Muntele Rosu	9.54	69	LR	LR		18 19 06.5	
	comp=Z,72nm,19.9s,baz=280,slow=39							
BAIF	Baives	9.54	323	ePn		Pn	18 15 09.8	-0.2
ETSF	Etsaut	10.12	275	ePn		Pn	18 15 18.6	+0.6
ESDC	Sonseca Array	13.30	262	LR	LR		18 21 04.0	
	comp=Z,54nm,18.1s,baz=54,slow=37							
MMAI	Mount Meron Ar	20.00	112	P		Pn	18 17 27.5	+0.2
	comp=Z,2.1nm,0.7s,baz=322,slow=9.1,SNR=5.7							
	comp=Z,2.1nm,0.7s							
FINES	FINESS Array B	20.19	18	P		P	18 17 27.8	+0.6
	comp=Z,1.7nm,0.9s,baz=203,slow=14,SNR=2.1							
	comp=Z,1.7nm,0.9s							
TORD	Torodi Ar. Bea	31.19	202	P		P	18 19 13.6	+1.6
	comp=Z,0.6nm,0.7s,baz=19,slow=8.1,SNR=3.6							
	comp=Z,0.6nm,0.7s							
ARU	Arti	31.75	49	P		P	18 19 17.4	+0.8
BRVK	Borovoye	38.62	54	P		P	18 20 17.5	+1.7
BRVK				IAmb	IAmb		18 20 22.0	
	comp=Z,3.0nm,0.7s							
KK31	Karatay Array	41.22	69	P		P	18 20 40.4	+2.8
KKAR	Karatay Array	41.22	69			P	18 20 40.4	+2.8
KKAR				IAmb	IAmb		18 20 43.5	
	comp=Z,3.8nm,1.5s							
ZALV	Zalesovo Beam	46.89	50	P		P	18 21 21.1	-1.7
MK31	Makanchi Array	47.74	60	P		P	18 21 29.3	-0.3
MK31				IAmb	IAmb		18 21 30.3	
	comp=Z,2.5nm,1.1s							
MKAR	Makanchi Array	47.74	60	P		P	18 21 31.0	+1.4
MKAR	Makanchi Array	47.74	60	P		P	18 21 31.4	+1.8
	comp=Z,0.7nm,0.6s,baz=289,slow=7.2,SNR=5.1							
	comp=Z,0.7nm,0.6s							
WMQ	Urumqi	52.43	62	eP		P	18 22 09.0	+3.7
SONM	Songino Array	61.78	50	P		P	18 23 12.6	+1.1
	comp=Z,0.7nm,0.8s,baz=287,slow=7.4,SNR=2.5							
	comp=Z,0.7nm,0.8s							
INK	Inuvik	66.43	347	LR	LR		18 57 20.4	
	comp=Z,20nm,19.1s,baz=224,slow=40							
HHC	Hu-ho-hao-te	68.89	54	eP		P	18 23 57.3	-0.4
PZH	PanZhiHua	71.49	71	P		P	18 24 15.0	+1.2
PZH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
PZH				pmax	pmax			
	comp=Z,110nm,6.8s							

*IDC **31** 18:14:31.8±1.0, 12°.56N×87°.06W, h61km±6km, mb3.9/8,*

mbtmp4.2/9, MS3.2/20, Error ellipse: s-maj=35.6km s-min=15.8km az=65.0
*INET **31** 18:14:32.3±0.6, 12°.26N×87°.51W, h29km±16km, MW4.8*
*UCR **31** 18:14:32.5±2.0, 12°.32N×87°.47W, h35km±999km, ML4.3, mb4.4(NEIC)*
*NEIC **31** 18:14:33.0±1.9, 12°.39N±0°.06×87°.47W±0°.06, h58km±10km, mb4.4/96, Md4.4(SNET), Error ellipse: s-maj=9.9km s-min=7.1km az=216.0*

ISC 31 18:14:32.2±0.6, 12°.34N±0°.04×87°.46W±0°.04, h64km±5km, n219, σ1§16/217, mb4.4/51, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
TEL3	Telica 3	0.64	69	eP		Pn	18 14 45.8			-0.3
CSGN	Cosiguina Volc	0.64	351	eP		Pn	18 14 45.8			-0.4
TELN	Telica	0.67	66	eP		Pn	18 14 46.3			-0.1
CNGN	Cerro Negro	0.76	78			Pn	18 14 46.9			-0.6
CNGN	Cerro Negro	0.76	78	eP		Pn	18 14 46.9			-0.6
MOMN	Momotombo	0.90	85	eP		Pn	18 14 48.8			-0.4
CNCH	Conchagua	1.00	339	eP		Pn	18 14 50.3			-0.3
CNCH				eS		Sn	18 15 04.1			-0.1
CNCH				IAML			18 15 06.4			
	comp=Z,31µm,0.4s									
CNCH	Conchagua	1.00	339	eP		Pn	18 14 50.3			-0.3
CNCH				eS		Sn	18 15 04.1			-0.1
CNCH				IAML			18 15 06.4			
	comp=Z,31µm,0.4s									
APYN	Apoyeque	1.09	95	eP		Pn	18 14 50.1			-1.4
APYN				eS		Sn	18 15 03.9			-2.1
BRAN	Las Pilas	1.15	70	eP		Pn	18 14 51.7			-0.6
MGAN	Managua	1.20	99	eP		Pn	18 14 52.7			-0.3
MGAN				eP		Pn	18 14 52.7			-0.3
WILN	Americas 2	1.25	98	eP		Pn	18 14 53.4			-0.3
HUEN		1.25	90	eP		Pn	18 14 53.8			0.0
LCY	Lacayo	1.35	323	eP		Pn	18 14 55.1			-0.1
LCY	Lacayo	1.35	323	eP		Pn	18 14 55.1			-0.1
PACA	Pacayal	1.41	323	eP		Pn	18 14 55.9			0.0
PACA				eS		Sn	18 15 14.6			+0.9
PACA				IAML			18 15 18.3			
	comp=Z,29µm,0.3s									
PACA	Pacayal	1.41	323	eP		Pn	18 14 55.9			0.0
PACA				eS		Sn	18 15 14.6			+0.9
PACA				IAML			18 15 18.3			
	comp=Z,29µm,0.3s									
PACA	Pacayal	1.41	323	eP		Pn	18 14 55.8			-0.2
CAHU	Cacacuatique	1.60	333	eP		Pn	18 14 59.1			+0.5
CAHU	Cacacuatique	1.60	333	eP		Pn	18 14 59.1			+0.5
MATN	Matagalpa	1.61	68			Pn	18 14 58.6			+0.1
MATN	Matagalpa	1.61	68	eP		Pn	18 14 58.6			+0.1
MATN				eS		Sn	18 15 18.9			+0.5
RCON	San Juan de Ri	1.71	48	eP		Pn	18 15 03.7			+3.8
TGUH	Tegucigalpa,Un	1.72	6			Pn	18 15 00.8			+0.8
TGUH				Sn		Sn	18 15 19.6			-1.6
TGUH	Tegucigalpa,Un	1.72	6	eP		Pn	18 15 00.9			+0.8
TGUH	Tegucigalpa,Un	1.72	6	eP		Pn	18 15 00.9			+0.8
TGUH	Tegucigalpa,Un	1.72	6	eP		Pn	18 15 00.9			+0.8
BOAB	BOACO BROADBAN	1.75	86			Pn	18 15 00.3			-0.1
BOAB	BOACO BROADBAN	1.75	86	eP		Pn	18 15 00.2			-0.1
LFRS	El Faro	2.02	309	eP		Pn	18 15 03.6			-0.5
LFRS	El Faro	2.02	309	eP		Pn	18 15 03.6			-0.5
P5NO	Presa 5 de nov	2.07	322	eP		Pn	18 15 04.6			-0.1
SNET	Serv Nac Est T	2.19	308			Pn	18 15 06.4			0.0
ACON	Acoyapa	2.26	99			Pn	18 15 06.7			-0.6
ACON	Acoyapa	2.26	99	eP		Pn	18 15 06.6			-0.6
ACON	Acoyapa	2.26	99	eP		Pn	18 15 06.8			-0.5
HZTE	Horizontes, Gu	2.44	131			Pn	18 15 10.5			+0.8
HZTE	Horizontes, Gu	2.44	131	eP		Pn	18 15 10.6			+1.0
GBS3	Finca Las Img	2.50	128	eP		Pn	18 15 11.4			+0.8
GB1A	Borinquen Arri	2.52	127	eP		Pn	18 15 10.6			-0.3
LAPC	Finca la Perla	2.52	128	eP		Pn	18 15 10.4			-0.5
BUEV	Buena Vista	2.52	127	eP		Pn	18 15 13.2			+2.2
BUAI	Buenos Aires	2.54	125	eP		Pn	18 15 10.6			-0.5
GPS2	Hotel Rincn d	2.59	127	eP		Pn	18 15 13.0			+1.1
LIM1	Limonal	2.71	127	eP		Pn	18 15 14.6			+1.2
GUAB	Guayabo de Bag	2.72	126	eP		Pn	18 15 14.3			+

	comp=Z,11nm,0.8s								
Y52A	**Lilburn**	**21.65**	**8**	P		**P**	**18 19 19.6 +2.3**
Y52A				IAmb		IAmb	18 19 22.0		
	comp=Z,19nm,0.8s								
X48A	**Hartselle**	**22.02**	**1**	P		**P**	**18 19 22.6 +1.3**
X48A				IAmb		IAmb	18 19 30.0		
	comp=Z,11nm,0.8s								
HODGE	**Hodges**	**22.30**	**11**	P		**P**	**18 19 26.7 +2.4**
HODGE				IAmb		IAmb	18 19 44.7		
	comp=Z,9.4nm,0.8s								
PCRV	**Puerto La Cruz**	**22.48**	**93**	LR		LR	18 31 01.3		
	comp=Z,46nm,18.6s,slow=45								
TX31	**Lajitas Ar. Si**	**22.66**	**321**	P		**P**	**18 19 28.4 +0.1**
TX32	**Lajitas Array**	**22.66**	**321**	P		**P**	**18 19 28.4 +0.1**
TXAR	**Lajitas Array**	**22.66**	**321**	P		**P**	**18 19 28.4 +0.1**
TXAR	**Lajitas Array**	**22.66**	**321**	P		**P**	**18 19 28.6 +0.3**
	comp=Z,6.6nm,0.7s,baz=137,slow=9.5,SNR=71								
TXAR				ScP		**ScP**	**18 26 52.0 +0.7**		
	comp=Z,0.8nm,1.0s,baz=130,slow=3.9,SNR=5.4								
TXAR				LR		LR	18 28 44.5		
	comp=Z,21nm,20.0s,baz=134,slow=38								
	comp=Z,6.6nm,0.7s								
MIAR	**Mount Ida**	**22.80**	**347**	P		**P**	**18 19 29.6 0.0**
SWET	**Sewanee**	**22.82**	**3**	P		**P**	**18 19 31.1 +1.2**
W50A	**Signal Mountai**	**22.84**	**5**	P		**P**	**18 19 30.2 +0.1**
W50A				IAmb		IAmb	18 19 41.5		
	comp=Z,9.6nm,0.8s								
BG3	**Lake Jocassee**	**22.93**	**10**	P		**P**	**18 19 33.4 +2.5**
BG3				IAmb		IAmb	18 19 49.4		
	comp=Z,28nm,1.1s								
CPCT	**Cooper Cave**	**23.16**	**6**	P		**P**	**18 19 35.1 +1.8**
CPCT				IAmb		IAmb	18 20 00.4		
	comp=Z,18nm,1.3s								
X37A	**Clayton**	**23.29**	**343**	P		**P**	**18 19 36.6 +2.2**
X37A				IAmb		IAmb	18 19 38.6		
	comp=Z,8.4nm,0.8s								
LOOK	**Love County**	**23.31**	**339**	P		**P**	**18 19 35.9 +1.2**
LOOK				IAmb		IAmb	18 19 38.5		
	comp=Z,24nm,0.9s								
TKL	**Tuckaleechee C**	**23.46**	**8**	P		**P**	**18 19 38.1 +2.1**
TKL				IAmb		IAmb	18 19 53.3		
	comp=Z,18nm,1.1s								
TKL	**Tuckaleechee C**	**23.46**	**8**	P		**P**	**18 19 36.5 +0.5**
	comp=Z,11nm,0.8s,baz=193,slow=11,SNR=9.7								
TKL				LR		LR	18 28 50.3		
	comp=Z,35nm,19.4s,baz=155,slow=37								
CLTN	**Cedars of Leba**	**23.67**	**2**	P		**P**	**18 19 39.8 +1.9**
LCAR	**Lake Charles**	**23.86**	**353**	P		**P**	**18 19 40.5 +0.8**
LCAR				IAmb		IAmb	18 19 42.8		
	comp=Z,15nm,1.3s								
X34A	**Smith Ranch, M**	**24.09**	**339**	P		**P**	**18 19 42.6 +0.8**
X34A				IAmb		IAmb	18 19 45.6		
	comp=Z,19nm,1.0s								
U49A	**Red Boiling Sp**	**24.12**	**3**	P		**P**	**18 19 43.6 +1.6**
U49A				IAmb		IAmb	18 19 45.0		
	comp=Z,6.5nm,0.7s								
FNO	**Franklin**	**24.53**	**340**	P		**P**	**18 19 46.8 +1.0**
V58A	**Windy Hill, Pi**	**24.54**	**16**	P		**P**	**18 19 46.8 +0.9**
V58A				IAmb		IAmb	18 20 05.5		
	comp=Z,21nm,0.9s								
T47A	**Sharon Grove**	**24.55**	**1**	P		**P**	**18 19 46.4 +0.5**
T47A				IAmb		IAmb	18 20 03.9		
	comp=Z,11nm,0.9s								
WMOK	**Wichita Mounta**	**24.56**	**337**	P		**P**	**18 19 46.0 0.0**
U54A	**Nelsons Funny**	**24.61**	**11**	P		**P**	**18 19 49.6 +3.1**
TUL1	**Leonard**	**24.65**	**344**	P		**P**	**18 19 47.1 +0.3**
CZSB	**Cruzeiro do Su**	**24.75**	**143**	P		**P**	**18 19 49.5 +1.6**
CZSB				IAmb		IAmb	18 19 51.8		
	comp=Z,24nm,0.8s								
DEOK	**Depew**	**24.79**	**342**	P		**P**	**18 19 48.0 -0.2**
DEOK				IAmb		IAmb	18 19 51.0		
	comp=Z,9.1nm,0.9s								
U38A	**Gravette**	**24.80**	**347**	P		**P**	**18 19 47.3 -0.9**
HTMS	**Hat Mesa**	**24.94**	**326**	P		**P**	**18 19 49.6 -0.1**
CLN7	**Carlsbad 7**	**24.99**	**326**	P		**P**	**18 19 49.5 -0.7**
OK034	**N. Norfolk Rd.**	**25.01**	**342**	P		**P**	**18 19 49.8 -0.3**
OK034				IAmb		IAmb	18 19 54.1		
	comp=Z,9.9nm,0.7s								
GDL2	**Guadalupe Moun**	**25.14**	**325**	P		**P**	**18 19 50.7 -0.8**
QUOK	**Quay**	**25.16**	**342**	P		**P**	**18 19 51.0 -0.4**
QUOK				IAmb		IAmb	18 19 52.8		
	comp=Z,11nm,0.8s								
S44A	**Carbondale**	**25.30**	**357**	P		**P**	**18 19 52.9 +0.1**
S44A				IAmb		IAmb	18 19 58.3		
	comp=Z,14nm,1.1s								
CSTR	**Hydro, Custer**	**25.33**	**338**	P		**P**	**18 19 51.9 -1.1**
CSTR				IAmb		IAmb	18 19 54.9		
	comp=Z,1.7nm,0.7s								
MNTX	**Cornudas Mount**	**25.37**	**322**	P		**P**	**18 19 53.9 +0.4**
S51A	**Beattyville**	**25.43**	**7**	P		**P**	**18 19 55.1 +1.2**
S51A				IAmb		IAmb	18 20 14.0		
	comp=Z,12nm,1.0s								
MSTX	**Muleshoe**	**25.66**	**330**	P		**P**	**18 19 56.1 -0.1**
MSTX				IAmb		IAmb	18 19 57.1		
	comp=Z,12nm,0.8s								
S39A	**Bolivar**	**25.79**	**349**	P		**P**	**18 19 56.4 -0.7**
CCM	**Cathedral Cave**	**25.84**	**353**	P		**P**	**18 19 57.3 -0.3**
CCM				IAmb		IAmb	18 20 21.5		
	comp=Z,18nm,1.4s								
BLOK	**Blackwell**	**25.85**	**342**	P		**P**	**18 19 57.6 -0.1**
BLOK				IAmb		IAmb	18 20 00.5		
	comp=Z,8.8nm,0.9s								
OK038	**West end E0370**	**26.10**	**339**	P		**P**	**18 19 57.0 -3.0**
U32A	**Winter Ranch,**	**26.10**	**338**	P		**P**	**18 19 57.9 -2.1**
NOKA	**Waynoka**	**26.30**	**339**	P		**P**	**18 20 01.6 -0.3**
NOKA				IAmb		IAmb	18 20 21.0		
	comp=Z,45nm,1.0s								
NNA	**Nana**	**26.36**	**156**	LR		LR	18 29 09.2		
	comp=Z,37nm,21.3s,baz=337,slow=33								
Q51A	**Peebles**	**26.83**	**7**	P		**P**	**18 20 05.8 -0.8**
Q51A				IAmb		IAmb	18 20 25.5		
	comp=Z,10.0nm,0.8s								
P38A	**Dawn**	**27.71**	**350**	P		**P**	**18 20 14.2 -0.1**
P38A				IAmb		IAmb	18 20 14.8		
	comp=Z,6.5nm,0.5s								
LENM	**Lemitar**	**28.07**	**324**	P		**P**	**18 20 19.1 +1.2**
ANMO	**Albuquerque**	**28.35**	**326**	LR		LR	18 33 57.6		
	comp=Z,28nm,18.6s,baz=121,slow=41								
M57A	**Sunshine Farm,**	**30.27**	**16**	P		**P**	**18 20 37.8 +0.7**
M57A				IAmb		IAmb	18 20 56.8		
	comp=Z,7.1nm,0.8s								
ETMB	**Extrema**	**30.49**	**135**	P		**P**	**18 20 38.5 -0.9**
ETMB				IAmb		IAmb	18 20 40.4		
	comp=Z,6.1nm,1.0s								
S22A	**4UR Ranch, Cre**	**30.66**	**329**	P		**P**	**18 20 41.6 +0.6**
GLMI	**Grayling**	**32.47**	**4**	P		**P**	**18 20 55.9 -0.5**
SADO	**Sadowa**	**33.10**	**11**	LR		LR	18 34 39.1		
	comp=Z,56nm,18.2s,baz=175,slow=37								
SUSD	**Miller**	**33.48**	**345**	P		**P**	**18 21 04.0 -1.3**
SRU	**San Rafael Swe**	**33.61**	**327**	P		**P**	**18 21 07.1 +0.4**
SRU				IAmb		IAmb	18 21 09.5		
	comp=Z,3.1nm,0.7s								
MTPU	**Mount Pierson**	**33.79**	**324**	P		**P**	**18 21 10.5 +2.0**
MTPU				IAmb		IAmb	18 21 13.5		
	comp=Z,4.0nm,0.7s								
P18A	**Preston Nutter**	**33.84**	**328**	P		**P**	**18 21 09.1 +0.3**
P18A				IAmb		IAmb	18 21 27.8		
	comp=Z,5.3nm,1.2s								
PFO	**Pinyon Flats O**	**33.88**	**313**	LR		LR	18 36 38.9		
	comp=Z,31nm,20.7s,baz=121,slow=39								
P17A	**Butcher Ranch,**	**33.98**	**327**	P		**P**	**18 21 09.8 -0.1**
P17A				IAmb		IAmb	18 21 13.3		
	comp=Z,6.3nm,0.9s								
MVU	**Marysvale**	**34.12**	**324**	P		**P**	**18 21 12.1 +0.9**
F33A	**5 Mile Ranch,**	**34.23**	**349**	P		**P**	**18 21 10.3 -1.4**
MPU	**Maple Canyon**	**34.85**	**327**	P		**P**	**18 21 17.1 -0.4**
MPU				IAmb		IAmb	18 21 18.7		
	comp=Z,3.6nm,0.7s								
PSUT	**Pine Spring**	**35.10**	**323**	P		**P**	**18 21 20.9 +1.3**
PSUT				IAmb		IAmb	18 21 24.2		
	comp=Z,3.2nm,0.8s								
BW06	**Boulder Array**	**35.87**	**332**	P		**P**	**18 21 26.0 -0.2**
PD31	**Pinedale Array**	**35.87**	**332**	P		**P**	**18 21 26.0 -0.2**
PDAR	**Pinedale Array**	**35.87**	**332**	P		**P**	**18 21 25.6 -0.6**
PDAR	**Pinedale Array**	**35.87**	**332**	P		**P**	**18 21 25.8 -0.4**
	comp=Z,1.5nm,0.8s,baz=126,slow=9.7,SNR=14								
PDAR				LR		LR	18 40 33.6		
	comp=Z,28nm,19.1s,baz=121,slow=44								
	comp=Z,1.5nm,0.8s								
E28A	**Huff**	**35.91**	**344**	P		**P**	**18 21 26.5 +0.2**
HWUT	**Hardware Ranch**	**35.97**	**329**	P		**P**	**18 21 27.3 +0.3**
BGU	**Big Grassy Mou**	**36.25**	**326**	P		**P**	**18 21 30.1 +0.8**
BGU				IAmb		IAmb	18 21 48.1		
	comp=Z,3.5nm,1.1s								
GO01	**Chusmiza**	**36.54**	**150**	P		**P**	**18 21 33.6 +1.3**
GO01				IAmb		IAmb	18 21 34.7		
	comp=Z,5.8nm,0.8s								
AHID	**Auburn Hatcher**	**36.60**	**330**	P		**P**	**18 21 32.8 +0.5**
HVU	**Hansel Valley**	**36.72**	**328**	P		**P**	**18 21 34.4 +1.1**
REDW	**Red Top Meadow**	**36.93**	**331**	P		**P**	**18 21 35.5 +0.3**
SNOW	**Snow King Moun**	**36.96**	**331**	P		**P**	**18 21 35.8 +0.2**
TPAW	**Teton Pass**	**37.08**	**331**	P		**P**	**18 21 36.4 -0.2**
MOOW	**Moose Ponds**	**37.18**	**332**	P		**P**	**18 21 37.5 +0.2**
MOOW				IAmb		IAmb	18 21 41.3		
	comp=Z,3.9nm,0.8s								
FXWY	**Fox Creek**	**37.23**	**331**	P		**P**	**18 21 37.3 -0.4**
ELK	**Elko**	**37.35**	**324**	P		**P**	**18 21 39.3 +0.4**
IMW	**Indian Meadow**	**37.38**	**332**	P		**P**	**18 21 38.6 -0.5**
IMW				IAmb		IAmb	18 21 56.8		
	comp=Z,5.8nm,1.2s								
NVAR	**Mina Array Bea**	**37.78**	**319**	P		**P**	**18 21 43.5 +1.0**
NVAR	**Mina Array Bea**	**37.78**	**319**	P		**P**	**18 21 43.5 +1.0**
	comp=Z,1.5nm,0.7s,baz=127,slow=6.4,SNR=9.4								
NVAR				PcP		**PcP**	**18 23 57.3 -0.9**		
	comp=Z,0.6nm,0.6s,baz=101,slow=4.7,SNR=4.5								
NVAR				ScP		**ScP**	**18 27 40.3 0.0**		
	comp=Z,0.9nm,0.8s,baz=126,slow=4.9,SNR=4.7								
NVAR				LR		LR	18 38 46.7		
	comp=Z,59nm,18.4s,baz=88,slow=38								
	comp=Z,1.5nm,0.7s								
YMR	**Madison River**	**37.99**	**332**	P		**P**	**18 21 44.9 +0.7**
YMR				IAmb		IAmb	18 21 48.1		
	comp=Z,4.3nm,0.8s								
KVN	**Kaiserville**	**38.02**	**320**	P		**P**	**18 21 45.7 +1.3**
YHL	**Hebgen Lake**	**38.23**	**332**	P		**P**	**18 21 47.7 +1.5**
YHL				IAmb		IAmb	18 22 06.3		
	comp=Z,11nm,1.5s								
ULM	**Lac du Bonnet**	**38.43**	**351**	P		**P**	**18 21 45.8 -1.7**
	comp=Z,1.7nm,0.4s,baz=163,slow=11,SNR=5.0								
ULM				LR		LR	18 39 19.5		
	comp=Z,23nm,18.6s,baz=162,slow=39								
	comp=Z,1.7nm,0.4s								
HLID	**Hailey**	**38.84**	**328**	P		**P**	**18 21 51.6 +0.4**
MCMT	**McKenzie Canyo**	**38.98**	**331**	P		**P**	**18 21 53.5 +1.0**
BOZ	**Bozeman (W)**	**39.00**	**333**	P		**P**	**18 21 52.9 +0.3**
LRM	**Limekiln Ridge**	**39.55**	**332**	P		**P**	**18 21 57.8 +0.6**
YBH	**Yreka Blue Hor**	**42.43**	**320**	LR		LR	18 41 34.1		
	comp=Z,44nm,21.0s,baz=158,slow=38								
NEW	**Newport**	**43.51**	**331**	LR		LR	18 42 56.4		
	comp=Z,19nm,18.2s,baz=112,slow=39								
HOOD	**Mount Hood Mea**	**43.89**	**325**	P		**P**	**18 22 33.0 +0.5**
HOOD				IAmb		IAmb	18 22 51.2		
	comp=Z,11nm,0.9s								
SCHQ	**Schefferville**	**45.39**	**17**	P		**P**	**18 22 43.5 -0.6**
SCHQ	**Schefferville**	**45.39**	**17**	P		**P**	**18 22 42.7 -1.5**
	comp=Z,5.2nm,0.7s,baz=227,slow=8.2,SNR=7.7								
	comp=Z,5.2nm,0.7s								
CPUP	**Villa Florida**	**48.33**	**143**	P		**P**	**18 23 06.0 -1.5**
	comp=Z,1.7nm,0.6s,baz=338,slow=6.0,SNR=4.0								
	comp=Z,1.7nm,0.6s								
FRB	**Frobisher Bay**	**53.04**	**10**	LR		LR	18 47 13.5		
	comp=Z,43nm,18.4s,baz=216,slow=37								
YKA	**Yellowknife Ar**	**53.72**	**345**	LR		LR	18 47 59.2		
	comp=Z,35nm,19.8s,baz=340,slow=38								
PLCA	**Paso Flores**	**55.07**	**164**	P		**P**	**18 23 58.1 +0.5**
PLCA	**Paso Flores**	**55.07**	**164**	P		**P**	**18 23 58.0 +0.3**
	comp=Z,4.5nm,0.9s,baz=329,slow=7.1,SNR=8.9								
	comp=Z,4.5nm,0.9s								
SFJD	**Kangerlussuaq**	**59.83**	**16**	LR		LR	18 50 16.1		
	comp=Z,13nm,18.3s,baz=222,slow=36								
ILAR	**Eielson Array**	**66.12**	**336**	P		**P**	**18 25 10.6 -1.8**
	comp=Z,0.4nm,0.2s,baz=131,slow=3.7,SNR=1.4								
ILAR				pP		**pP**	**18 25 29.2 -0.5**		
	comp=Z,0.6nm,0.9s,baz=120,slow=8.4,SNR=2.9								
	comp=Z,0.4nm,0.2s								
ESDC	**Sonseca Array**	**77.26**	**52**	pP		pP	18 26 36.8 -0.8		
	comp=Z,1.5nm,1.0s,baz=290,slow=5.7,SNR=5.2								
GERES	**GERESS Array B**	**88.03**	**40**	pP		pP	18 27 30.7 -2.9		
	comp=Z,0.2nm,0.3s,baz=286,slow=2.4,SNR=2.3								
MA2	**Magadan**	**94.54**	**334**	LR		LR	19 18 41.4		
	comp=Z,24nm,19.1s,baz=28,slow=41								
AKASG	**Malin Array Be**	**96.61**	**35**	LR		LR	19 07 46.7		
	comp=Z,29nm,19.4s,baz=216,slow=33								
ASAR	**Alice Springs**	**139.22**	**249**	PKP		**PKPdf**	**18 33 52.9 +0.1**		
	comp=Z,0.8nm,0.8s,baz=93,slow=1.4,SNR=8.4								
ASAR				pPKP		**pPKPdf**	**18 34 11.5 0.0**		
	comp=Z,1.2nm,0.8s,baz=124,slow=1.6,SNR=5.9								
ASAR				SKPbc		**SKiKP**	**18 37 24.8 -0.9**		
	comp=Z,1.2nm,0.8s,baz=102,slow=2.9,SNR=11								
WRA	**Warramunga Arr**	**139.23**	**254**	PKP		**PKPdf**	**18 33 52.9 0.0**		
	comp=Z,1.0nm,0.6s,baz=90,slow=2.3,SNR=10								
WRA				pPKP		**pPKPdf**	**18 34 12.4 +0.9**		
	comp=Z,1.3nm,0.7s,baz=90,slow=2.0,SNR=4.4								
WRA				SKPbc		**SKiKP**	**18 37 25.1 -0.7**		
	comp=Z,0.8nm,0.9s,baz=90,slow=4.0,SNR=6.1								
PZH	**PanZhiHua**	**140.37**	**347**	PKP		**PKPdf**	**18 33 51.0 -3.9**		
CMAR	**Chiang Mai Arr**	**148.76**	**348**	PKPbc		**PKPdf**	**18 34 11.0 +1.6**		
	comp=Z,0.7nm,0.7s,baz=345,slow=3.6,SNR=4.1								

JMA ***31*** *18:16:38.7±0.1,24.3N±0.4×122.0E±0.3,h43km±1km, MV2.2/10,TAIWAN REGION*
TAP ***31*** *18:16:39.1,24.47N×121.93E,h13km,ML2.6,B*
ISC 31 18:16:37.9±0.9,24.44N±0.02×122.04E±0.02,h13km±7km, n73,σ0.76/128,2C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.24**	**272**	⇓P		**Pg**	**18 16 42.7**	**-0.3**
EWUT	baz=261			S		**Sg**	**18 16 45.7**	**-0.7**
TWC	**Suao**	**0.24**	**315**	⇓*i*P		**Pg**	**18 16 43.8**	**+0.7**
TWC	baz=334			*i* S		**Sg**	**18 16 46.6**	**0.0**
ENA	**Nanau**	**0.27**	**268**	⇓*i*P		**Pg**	**18 16 44.0**	**+0.4**
ENA	baz=256			*i* S		**Sg**	**18 16 47.8**	**+0.4**
NDS	**Dongshan**	**0.35**	**304**	⇓P		**Pg**	**18 16 44.7**	**-0.4**
NDS	baz=310			S		**Sg**	**18 16 48.7**	**-1.2**
EGS		**0.42**	**346**	⇑*i*P		**Pb**	**18 16 47.3**	**+0.1**
EGS	baz=1.0			*i* S		**Sb**	**18 16 53.5**	**0.0**
ILA	**Ilan**	**0.42**	**321**	*i* P		**Pb**	**18 16 47.5**	**+0.2**
ILA	baz=331			*i* S		**Sg**	**18 16 52.8**	**+0.8**
TWE	**Neicheng**	**0.44**	**310**	⇓*i*P		**Pg**	**18 16 47.3**	**+0.6**
TWE	baz=317			*i* S		**Sg**	**18 16 52.4**	**-0.2**
NTC	**Toucheng**	**0.46**	**335**	*e*P		**Pg**	**18 16 47.7**	**+0.7**
NTC	baz=346			*e*S		**Sg**	**18 16 53.2**	**+0.1**
ETL	**Fush Village**	**0.47**	**234**	P		**Pg**	**18 16 47.6**	**+0.4**
ETL	baz=222			S		**Sg**	**18 16 54.3**	**+0.8**
ENTT	**Nioudou**	**0.48**	**295**	⇓*i*P		**Pg**	**18 16 46.7**	**-0.6**
ENTT	baz=297			*i* S		**Sg**	**18 16 52.9**	**-0.8**
LATG	**Datong**	**0.48**	**282**	⇓P		**Pg**	**18 16 47.7**	**+0.3**
LATG	baz=280			S		**Sg**	**18 16 53.9**	**+0.1**
NACB	**Ninganchiao**	**0.48**	**237**	P		**Pg**	**18 16 47.6**	**+0.2**
NACB	baz=226			S		**Sg**	**18 16 54.3**	**+0.5**
NDT	**Datong Townshi**	**0.51**	**289**	P		**Pb**	**18 16 48.8**	**0.0**
NDT	baz=289			S		**Sg**	**18 16 54.5**	**-0.2**
FUSB	**Fushanzhiwuyua**	**0.52**	**308**	⇓P		**Pg**	**18 16 48.7**	**+0.5**
FUSB	baz=312			S		**Sg**	**18 16 54.7**	**-0.5**
TWD	**Chiawan**	**0.54**	**229**	*i* P		**Pg**	**18 16 48.9**	**+0.4**
TWD	baz=218			S		**Sb**	**18 16 57.2**	**+0.3**
ETLH	**Xiulin Townshi**	**0.56**	**246**	P		**Pg**	**18 16 49.0**	**+0.2**
ETLH	baz=237			S		**Sg**	**18 16 56.8**	**+0.5**
TIPB	**Shuangxi**	**0.57**	**340**	*i* P		**Pg**	**18 16 49.8**	**+0.8**
TIPB	baz=348			*i* S		**Sg**	**18 16 56.7**	**+0.1**
TWB1	**Santiao Chiao**	**0.57**	**355**	*i* P		**Pb**	**18 16 50.0**	**+0.2**
TWB1	baz=6.0			*i* S		**Sb**	**18 16 58.1**	**+0.2**
NNSB	**Datong**	**0.60**	**269**	⇓P		**Pg**	**18 16 49.8**	**+0.2**
NNSB	baz=265			S		**Sg**	**18 16 58.1**	**+0.4**
HWA	**Hwalien**	**0.61**	**221**	*e*P		**Pb**	**18 16 50.7**	**+0.3**
HWA	baz=210			*e*S		**Sb**	**18 16 59.5**	**+0.6**
NNS	**Nan Shan**	**0.61**	**270**	⇓*i*P		**Pg**	**18 16 48.7**	**-1.1**
NNS	baz=266			*i* S		**Sg**	**18 16 56.6**	**-1.3**
YHNB	**Yeheng**	**0.65**	**291**	⇓P		**Pg**	**18 16 50.9**	**+0.3**
YHNB	baz=291			S		**Sg**	**18 16 58.6**	**-0.5**
NSK	**Sanguang**	**0.67**	**291**	*i* P		**Pg**	**18 16 50.2**	**-0.7**
NSK	baz=291			*i* S		**Sg**	**18 16 58.0**	**-1.7**
SXI1	**Grass Mountain**	**0.67**	**347**	⇑P		**Pb**	**18 16 52.0**	**+0.4**
SXI1	baz=355			S		**Sg**	**18 17 00.6**	**+0.7**
NWF	**Wu-fen Shan**	**0.67**	**340**	*i* P		**Pb**	**18 16 52.1**	**+0.5**
NWF	baz=347			*i* S		**Sg**	**18 17 00.9**	**+0.9**
TWA	**Mucha**	**0.68**	**323**	*e*P		**Pg**	**18 16 52.1**	**+0.9**
TWA	baz=328			S		**Sg**	**18 17 00.2**	**0.0**
NHDH	**Xindian Distri**	**0.70**	**318**	*i* S		**Sb**	**18 17 01.1**	**-0.6**
WHF	**Hehuan Shan**	**0.76**	**248**	*i* P		**Pg**	**18 16 52.7**	**-0.1**
WHF	baz=241			*i* S		**Sb**	**18 17 04.2**	**+0.3**
TAP	**Taipei**	**0.77**	**321**	P		**Pn**	**18 16 54.0**	**-0.5**
TAP	baz=326			S		**Sb**	**18 17 04.0**	**+0.3**
TWT	**Tachien**	**0.81**	**257**	P		**Pb**	**18 16 53.9**	**-0.1**
TWT	baz=252			*e*S		**Sb**	**18 17 04.8**	**-0.1**
JYNG	**Yonagunijimaku**	**0.82**	**89**	P		**Pn**	**18 16 55.5**	**+0.2**
JYNG				*e*S		**Sn**	**18 17 07.7**	**+0.3**
YM01	**YM01**	**0.83**	**329**	P		**Pn**	**18 16 55.1**	**-0.3**
YM01	baz=334			S		**Sb**	**18 17 04.8**	**-0.4**
ESL	**Shilin**	**0.83**	**222**	P		**Pn**	**18 16 54.7**	**-0.7**
ESL	baz=214			S		**Sn**	**18 17 06.4**	**-1.1**
NFF	**Wufeng Townshi**	**0.86**	**283**	P		**Pb**	**18 16 54.1**	**-0.7**
NFF	baz=282			S		**Sb**	**18 17 05.3**	**-1.0**
TWS1	**Kuangyinshan**	**0.87**	**320**	*i* P		**Pn**	**18 16 56.1**	**+0.2**
TWS1	baz=323			S		**Sg**	**18 17 07.7**	**+1.5**
CHGB	**Renai**	**0.87**	**245**	P		**Pg**	**18 16 55.4**	**+0.6**
CHGB	baz=239			*e*S		**Sn**	**18 17 08.0**	**-0.9**
ANP	**Anpu**	**0.88**	**328**	*i* P		**Pn**	**18 16 56.3**	**+0.1**
ANP	baz=332			S		**Sg**	**18 17 07.5**	**+0.8**
YOJ	**Yonaguni jima**	**0.89**	**88**	P		**Pn**	**18 16 56.5**	**+0.3**
	baz=89							
YOJ	**Yonaguni jima**	**0.89**	**88**	P		**Pn**	**18 16 56.4**	**+0.2**
YOJ				*e*S		**Sn**	**18 17 09.1**	**+0.2**
OWD	**Renai**	**0.92**	**239**	P		**Pb**	**18 16 55.7**	**-0.2**
OWD	baz=233			S		**Sn**	**18 17 09.8**	**-0.2**
TWY	**Chenhua**	**0.93**	**335**	*i* P		**Pn**	**18 16 57.2**	**+0.5**
TWY	baz=339			S		**Sg**	**18 17 08.9**	**+0.9**
NCUH	**Zhongli**	**0.94**	**304**	P		**Pn**	**18 16 57.2**	**+0.3**
EGFH	**Guangfu**	**0.95**	**216**	*e*P		**Pn**	**18 16 57.4**	**+0.4**
EGFH	baz=210			*e*S		**Sn**	**18 17 11.6**	**+1.2**
WUSB	**Renai**	**0.95**	**242**	P		**Pb**	**18 16 56.4**	**0.0**
WUSB	baz=237			*e*S		**Sn**	**18 17 10.4**	**-0.3**
LIOB	**Emei**	**0.96**	**283**	P		**Pg**	**18 16 57.7**	**+1.3**
LIOB	baz=282			*e*S		**Sb**	**18 17 08.2**	**-0.8**
NSTT	**Nanjuang**	**0.97**	**282**	P		**Pn**	**18 16 57.0**	**-0.2**
NSTT	baz=280			S		**Sb**	**18 17 07.7**	**-1.6**
WHP	**Taichung City**	**1.01**	**261**	P		**Pg**	**18 16 58.0**	**+0.6**
WHP	baz=258			*e*S		**Sg**	**18 17 11.1**	**+0.5**
SBCB	**Hsinchu**	**1.02**	**290**	*e*P		**Pb**	**18 16 57.4**	**-0.1**
SBCB	baz=290			*e*S		**Sb**	**18 17 10.1**	**-0.8**
VWDT	**VWDT**	**1.07**	**231**	P		**Pg**	**18 16 59.5**	**+1.0**
VWDT	baz=225			S		**Sg**	**18 17 14.7**	**+2.3**
HGSD	**Ruisui**	**1.10**	**211**	*e*P		**Pg**	**18 16 59.9**	**+0.8**
WCS	**Beigang Elemen**	**1.10**	**250**	*e*P		**Pb**	**18 16 57.6**	**-1.2**
EHY	**Hungye**	**1.14**	**215**	P		**Pg**	**18 16 59.8**	**0.0**
EHY	baz=209			*e*S		**Sg**	**18 17 17.1**	**+2.5**
TWQ1	**Liyutan**	**1.16**	**266**	*e*P		**Pn**	**18 16 59.4**	**-0.5**
TWQ1	baz=263			*e*S		**Sb**	**18 17 14.5**	**-0.3**
SMLT	**Sun Moon Lake**	**1.18**	**242**	*e*P		**Pg**	**18 17 01.2**	**+0.6**
SMLT	baz=238			*e*S		**Sb**	**18 17 14.6**	**-0.9**
SSLB	**Suanglung**	**1.18**	**237**	P		**Pg**	**18 17 00.6**	**

WTP	**Ta-pu**	**1.76**	**228**	*e*P		**Pb**	18 17 10.4	**+0.2**
	baz=224							
JKRS	**Kuro-shima**	**1.81**	**96**	*e*P		**Pb**	18 17 09.9	**-1.0**
JKRS				S		**Sb**	18 17 32.0	**-1.5**
JIJ	**Ishigaki jima**	**1.92**	**92**	*e*P		**Pb**	18 17 11.1	**-1.7**
JIJ				*e*S		**Sn**	18 17 33.5	**-0.9**
JISG	**Ishigakijimahi**	**2.07**	**85**	P		**Pn**	18 17 12.9	**+0.5**
JISG				*e*S		**Sb**	18 17 38.7	**-2.5**
JTJ	**Tarama**	**2.43**	**85**	*e*P		**Pn**	18 17 18.6	**+1.2**
JTJ				S		**Sn**	18 17 48.0	**+0.9**

*IDC **31** 18:18:17.5±0.8,54°.98S×31°.35W,h0km,mb4.0/7, mbtmp4.1/7,Error ellipse: s-maj=31.7km s-min=20.0km az=67.0*
*NEIC **31** 18:18:18.3±1.6,55°.1S±0°.1×31°.5W±0°.2,h10km±2km, mb4.7/7,Error ellipse: s-maj=24.3km s-min=18.0km az=57.0*

ISC 31 18:18:19.0±0.6,**54°.99S**±0°.09×**31°.5W**±0°.1,**h10**km,**n30, s0=91/25,mb4.3/10,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**2.96**	**282**		**Pn**	18 19 05.7	**-0.3**
ORCD	**Orcadas**	**9.08**	**225**	Pn	**Pn**	18 20 29.7	**-0.2**
VNA1	**Neumayer--Stat**	**18.74**	**156**	P	**P**	18 22 38.4	**+0.9**
VNA3	**Neumayer Olymp**	**18.86**	**158**	P	**Pn**	18 22 40.6	**+1.2**
VNA2	**Neumayer--Watz**	**19.14**	**156**	P	**P**	18 22 42.3	**+0.3**
	baz=315,slow=10						
SNAA	**Sanae**	**20.74**	**155**	P	**P**	18 22 58.9	**-0.6**
SNAA	**Sanae**	**20.74**	**155**	P	**P**	18 22 57.8	**-1.6**
SNAA	**Sanae**	**20.74**	**155**	P	**P**	18 22 58.8	**-0.6**
	7.7nm,0.9s,baz=312,slow=9.4,SNR=15						
	7.7nm,0.9s						
TROLL	**Troll, Antarti**	**22.31**	**153**	P	**P**	18 23 16.2	**-0.2**
BELA	**Belgrano 2**	**23.01**	**182**	P	**P**	18 23 21.9	**-1.7**
CPUP	**Villa Florida**	**34.29**	**316**	P	**P**	18 25 05.7	**+0.4**
	1.4nm,0.6s,baz=153,slow=7.0,SNR=3.5						
	1.4nm,0.6s						
QSPA	**South Pole Qui**	**35.26**	**180**	P	**P**	18 25 13.5	**0.0**
	2.0nm,0.8s,baz=207,slow=3.1,SNR=5.0						
	2.0nm,0.8s						
VNDA	**Vanda**	**47.49**	**184**	P	**P**	18 26 53.8	**+0.4**
	1.0nm,0.8s,baz=196,slow=4.8,SNR=7.0						
	1.0nm,0.8s						
LPAZ	**La Paz**	**47.77**	**309**	P	**P**	18 26 57.4	**+0.4**
LPAZ				IAmb	IAmb	18 27 07.8	
	comp=Z,6.6nm,1.0s						
LPAZ	**La Paz**	**47.77**	**309**	P	**P**	18 26 57.5	**+0.5**
	comp=Z,3.8nm,0.7s,baz=152,slow=5.4,SNR=15						
	comp=Z,3.8nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.84**	**23**	T	T	19 18 23.6	
	baz=195						
H10S3	**ASCENSION HYDR**	**47.84**	**23**	T	T	19 18 20.6	
	baz=25						
H10N3	**ASCENSION HYDR**	**48.95**	**23**	T	T	19 19 47.5	
	baz=194						
H10N1	**ASCENSION HYDR**	**48.95**	**23**	T	T	19 19 40.0	
	baz=194						
H10N2	**ASCENSION HYDR**	**48.97**	**23**	T	T	19 19 42.8	
	baz=194,SNR=24						
LBTB	**Lobatse**	**51.14**	**78**	P	**P**	18 27 21.7	**-0.4**
	comp=Z,2.7nm,1.0s,baz=222,slow=7.7,SNR=1.9						
	comp=Z,2.7nm,1.0s						
SAML	**Samuel**	**52.34**	**319**	P	**P**	18 27 29.7	**-1.2**
SAML				IAmb	IAmb	18 27 32.2	
	comp=Z,4.6nm,0.9s						
BOAV	**Boa Vista**	**61.98**	**327**	P	**P**	18 28 38.3	**-0.8**
BOAV				IAmb	IAmb	18 28 43.0	
	comp=Z,11nm,1.4s						
OTAV	**Otavalo**	**67.03**	**308**	P	**P**	18 29 13.0	**+0.3**
OTAV				IAmb	IAmb	18 29 15.5	
	comp=Z,6.1nm,1.1s						
BAUV	**El Baul**	**70.64**	**321**	P	**P**	18 29 34.6	**0.0**
BAUV				IAmb	IAmb	18 29 35.8	
	comp=Z,8.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.45**	**34**	P	**P**	18 29 51.0	**-0.4**
	comp=Z,0.9nm,0.9s,baz=209,slow=5.7,SNR=3.4						
	comp=Z,0.9nm,0.9s						
FINES	**FINESS Array B**	**124.64**	**30**	PKP	**PKPdf**	18 37 17.5	**+0.4**
	comp=Z,1.6nm,0.7s,baz=346,slow=0.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**144.13**	**65**	PKP	**PKPab**	18 37 52.1	**+0.8**
	comp=Z,0.4nm,0.4s,baz=214,slow=4.0,SNR=3.0						
ILAR	**Eielson Array**	**147.58**	**314**	PKPbc	**PKPdf**	18 38 01.6	**+2.3**
	comp=Z,4.8nm,1.1s,baz=135,slow=1.7,SNR=18						
SONM	**Songino Array**	**153.14**	**88**	PKPbc	**PKPbc**	18 38 15.3	**-0.7**
	comp=Z,0.8nm,0.5s,baz=239,slow=3.2,SNR=5.4						

TEH 31 18:19:27.8,30°.55N×57°.55E,h8km,ML3.9,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMN	**Cheshme madani**	**0.69**	**181**	*e*Pg	Pg	18 19 41.1	0.0
CHMN				*e*Sg	Sg	18 19 50.8	+0.7
TVBK	**TV Kerman**	**0.89**	**231**	*e*Pg	Pg	18 19 45.1	+0.2
TVBK				*e*Sg	Sb	18 19 57.8	+0.1
TVBK				*e*		18 20 02.7	
	comp=E,44μm,0.2s						
KRBR	**Kerman**	**0.89**	**231**	*e*Pn	Pg	18 19 45.2	+0.3
KHGB	**Koh Gabri**	**0.94**	**260**	*e*Pg	Pg	18 19 45.4	-0.6
NGRK	**Negar Kerman**	**1.15**	**218**	*e*Pg	Pg	18 19 49.8	-0.1
NGRK				*e*Sg	Sg	18 20 05.0	+0.1
KBAM	**BAM**	**1.61**	**151**	*e*Pn	Pn	18 19 57.2	+0.5
KBAM				*e*		18 20 24.8	
	comp=Z,12μm,0.2s						
BSRN	**Basiran**	**1.95**	**43**	*e*Pn	Pb	18 20 02.8	-0.9
IBAF	**Bafgh**	**1.99**	**302**	*e*		18 20 04.9	
	comp=Z,13μm,0.3s						
IBAF				*e*Pn	Pb	18 20 03.6	-0.8
IKOO	**Kooshah**	**2.24**	**33**	*e*Pn	Pn	18 20 06.9	+1.4
NHDN	**Nehbandan**	**2.31**	**68**	*e*Pn	Pb	18 20 08.1	-1.6
ITEG	**Tejag**	**2.55**	**23**	*e*Pn	Pn	18 20 10.8	+1.1
ITEG				*e*		18 20 56.8	
	comp=Z,4μm,0.2s						
TPRV	**Parvadeh(Tabas**	**2.58**	**344**	*e*Pn	Pn	18 20 11.2	+1.3
TPRV				*e*		18 20 56.4	
	comp=Z,8μm,0.3s						
KHNJ	**Kahnooj**	**2.60**	**177**	*e*Pn	Pb	18 20 13.1	-1.6
IMEH	**Mehriz**	**2.66**	**289**	*e*Pn	Pn	18 20 13.0	+1.8
IMEH				*e*		18 20 54.2	
	comp=Z,3μm,0.6s						
IDAH	**Dahanechah**	**2.94**	**42**	*e*Pn	Pn	18 20 17.2	+2.1
IDAH				*e*		18 20 28.7	
	comp=Z,2μm,0.4s						
ZHSF	**Zahedan**	**2.95**	**108**	*e*Pn	Pn	18 20 17.1	+2.0
ZHDN	**Zahedan**	**3.05**	**111**	*e*Pn	Pn	18 20 18.1	+1.6
TKDS	**Koohdasht(Taba**	**3.08**	**353**	*e*Pn	Pn	18 20 18.5	+1.7
TKDS				*e*		18 21 15.1	
	comp=Z,4μm,0.4s						
TABS	**Tabas**	**3.11**	**353**	*e*Pn	Pn	18 20 18.7	+1.4
YZKH	**Yazd**	**3.12**	**307**	*e*Pn	Pn	18 20 19.2	+1.8
AFRZ	**Afriz**	**3.12**	**23**	*e*Pn	Pn	18 20 19.0	+1.5
AFRZ				*e*		18 20 28.6	
	comp=Z,2μm,0.4s						
ICHK	**Chekchek**	**3.17**	**303**	*e*Pn	Pn	18 20 20.8	+2.5
IMON	**Monand**	**3.19**	**34**	*e*Pn	Pn	18 20 20.2	+1.7
IMON				*e*		18 21 23.0	
	comp=Z,3μm,0.3s						
GENO	**Geno**	**3.36**	**201**	*e*Pn	Pn	18 20 24.2	+3.4
TNSJ	**Nastanj**	**3.50**	**347**	*e*Pn	Pn	18 20 23.6	+1.0
ISAD	**Sadrabad**	**3.58**	**293**	*e*Pn	Pn	18 20 25.8	+1.9
ISAD				*e*		18 21 29.6	
	comp=Z,1μm,0.5s						
SHRT	**Shahrakht**	**3.86**	**36**	*e*Pn	Pn	18 20 29.3	+1.7
NASN	**Na'in**	**4.62**	**300**	*e*Pn	Pn	18 20 40.2	+1.9
IZEF	**Zefreh**	**5.03**	**299**	*e*Pn	Pn	18 20 45.9	+2.1
TBJM	**Torbat-e-JAM**	**5.25**	**26**	*e*Pn	Pn	18 20 48.6	+1.8
SRVN	**Saravan**	**5.28**	**125**	*e*Pn	Pn	18 20 49.6	+2.5
SHRO	**Shahrood**	**5.58**	**347**	*e*Pn	Pn	18 20 52.7	+1.5
AHBU	**AHRAM**	**5.70**	**254**	*e*Pn	Pn	18 20 54.2	+1.5
KRSH	**Karshahi**	**5.71**	**308**	*e*Pn	Pn	18 20 55.0	+1.9
IKLH	**Kolahrood**	**5.78**	**300**	*e*Pn	Pn	18 20 56.7	+2.6
SBZV	**Sabzevar**	**5.82**	**0**	*e*Pn	Pn	18 20 56.8	+2.1
JRKH	**Jarkhoshk**	**5.83**	**23**	*e*Pn	Pn	18 20 56.5	+1.8
ISFB	**Sefidab**	**5.87**	**312**	*e*Pn	Pn	18 20 57.2	+2.0
IPAY	**Payeh**	**6.01**	**11**	*e*Pn	Pn	18 20 59.7	+2.5
IAKL	**Akhelmad**	**6.12**	**9**	*e*Pn	Pn	18 21 00.5	+1.7
IVRN	**Varamin**	**6.61**	**314**	*e*Pn	Pn	18 21 06.3	+1.0
IGLO	**Ghaloghah**	**6.70**	**333**	*e*Pn	Pn	18 21 09.2	+2.5
DAMV	**Damavand**	**6.90**	**319**	*e*Pn	Pn	18 21 11.2	+1.7
MRVT	**Maraveh tapeh**	**7.19**	**351**	*e*Pn	Pn	18 21 15.4	+2.1
ASAO	**Ashtian**	**7.50**	**304**	*e*Pn	Pn	18 21 19.2	+1.5
CHTH	**Charan**	**7.58**	**316**	*e*Pn	Pn	18 21 20.6	+1.7

*IDC **31** 18:19:27.8±0.9,54°.81S×31°.05W,h0km,mb4.2/6, mbtmp4.2/6,MS3.6/3,Error ellipse: s-maj=52.7km s-min=20.0km az=61.0*
*NEIC **31** 18:19:30.1±1.9,54°.8S±0°.1×31°.2W±0°.2,h13km±6km, mb4.5/8,Error ellipse: s-maj=20.6km s-min=11.9km az=224.0*

ISC 31 18:19:29.0±0.8,**54°.8S**±0°.1×**31°.2W**±0°.1,**h10**km,**n32, s0=80/26,mb4.4/8,South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**3.15**	**277**	Pn	**Pn**	18 20 17.5	**-1.0**
ORCD	**Orcadas**	**9.39**	**225**	Pn	**Pn**	18 21 43.9	**-0.2**
VNA1	**Neumayer--Stat**	**18.85**	**156**	P	**Pn**	18 23 49.0	**-0.3**
VNA3	**Neumayer Olymp**	**18.98**	**159**	P	**Pn**	18 23 51.3	**+0.4**
PMSA	**Palmer Station**	**19.10**	**225**	LR	LR	18 30 13.0	
	comp=Z,268nm,18.8s,baz=76,slow=34						
VNA2	**Neumayer--Watz**	**19.25**	**156**	P	**Pn**	18 23 55.2	**+1.1**
	baz=314,slow=12						
SNAA	**Sanae**	**20.84**	**155**	P	**P**	18 24 09.5	**-1.0**
SNAA	**Sanae**	**20.84**	**155**	P	**P**	18 24 10.1	**-0.4**
SNAA				IAmb	IAmb	18 24 24.2	
	comp=Z,19nm,1.0s						
SNAA	**Sanae**	**20.84**	**155**	P	**P**	18 24 09.7	**-0.8**
	comp=Z,6.6nm,0.9s,baz=298,slow=7.8,SNR=4.9						
SNAA				LR	LR	18 30 42.0	
	comp=Z,83nm,19.6s,baz=318,slow=32						
	comp=Z,6.6nm,0.9s						
TROLL	**Troll, Antarti**	**22.40**	**153**	P	**P**	18 24 27.9	**+0.6**
BELA	**Belgrano 2**	**23.23**	**182**	P	**P**	18 24 35.5	**-0.4**
BELA				IAmb	IAmb	18 24 38.9	
	comp=Z,17nm,1.3s						
CPUP	**Villa Florida**	**34.29**	**315**		**P**	18 26 16.1	**+0.9**
CPUP	**Villa Florida**	**34.29**	**315**	P	**P**	18 26 16.1	**+0.9**
	comp=Z,3.2nm,1.0s,baz=133,slow=5.7,SNR=3.6						
	comp=Z,3.2nm,1.0s						
QSPA	**South Pole Qui**	**35.48**	**180**	P	**P**	18 26 27.0	**+1.6**
QSPA	**South Pole Qui**	**35.48**	**180**	P	**P**	18 26 26.0	**+0.6**
	comp=Z,5.9nm,0.9s,baz=204,slow=6.3,SNR=8.0						
	comp=Z,5.9nm,0.9s						
MAW	**Mawson**	**42.50**	**146**		**P**	18 27 23.7	**0.0**
MAW	**Mawson**	**42.50**	**146**	P	**P**	18 27 23.8	**0.0**
	comp=Z,3.2nm,0.9s,baz=258,slow=10,SNR=3.1						
	comp=Z,3.2nm,0.9s						
H10S2	**ASCENSION HYDR**	**47.56**	**22**	T	T	19 19 31.0	
	baz=27,slow=74,SNR=5.7						
H10S3	**ASCENSION HYDR**	**47.56**	**22**	T	T	19 19 26.2	
	baz=193,slow=74,SNR=15						
VNDA	**Vanda**	**47.72**	**184**	P	**P**	18 28 04.4	**-0.8**
	comp=Z,1.5nm,0.8s,baz=195,slow=5.6,SNR=4.0						
	comp=Z,1.5nm,0.8s						
LPAZ	**La Paz**	**47.80**	**309**	P	**P**	18 28 08.1	**+0.9**
LPAZ	**La Paz**	**47.80**	**309**	P	**P**	18 28 07.8	**+0.6**
	comp=Z,2.4nm,0.6s,baz=130,slow=9.8,SNR=6.0						
LPAZ				LR	LR	18 51 26.5	
	comp=Z,58nm,18.0s,baz=200,slow=40						
	comp=Z,2.4nm,0.6s						
H10N1	**ASCENSION HYDR**	**48.67**	**22**	T	T	19 20 53.0	
	baz=192,slow=75,SNR=8.7						
H10N3	**ASCENSION HYDR**	**48.67**	**22**	T	T	19 20 58.1	
	baz=192,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**48.69**	**22**	T	T	19 20 57.9	
	baz=192,slow=75,SNR=13						
SAML	**Samuel**	**52.32**	**319**	P	**P**	18 28 40.9	**+0.1**
SAML				IAmb	IAmb	18 28 42.6	
	comp=Z,9.4nm,1.1s						
ETMB	**Extrema**	**52.74**	**315**	P	**P**	18 28 44.4	**+0.5**
ETMB				IAmb	IAmb	18 28 45.8	
	comp=Z,10nm,1.5s						
CMAR	**Chiang Mai Arr**	**127.64**	**114**	PKP	**PKiKP**	18 38 34.5	**-0.4**
	comp=Z,1.1nm,0.7s,baz=221,slow=4.5,SNR=5.8						
YKA	**Yellowknife Ar**	**133.73**	**320**	PKP	**PKiKP**	18 38 45.4	**-0.3**
	comp=Z,1.1nm,0.6s,baz=127,slow=2.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**143.85**	**64**	PKP	**PKPdf**	18 39 01.4	**-1.8**
	comp=Z,1.2nm,0.6s,baz=236,slow=4.4,SNR=4.6						
ILAR	**Eielson Array**	**147.59**	**314**	PKPbc	**PKPbc**	18 39 12.2	**+0.1**
	comp=Z,4.2nm,1.0s,baz=118,slow=1.3,SNR=5.0						
SONM	**Songino Array**	**152.92**	**87**	PKPbc	**PKiKP**	18 39 25.8	**0.0**
	comp=Z,1.5nm,0.7s,baz=186,slow=3.8,SNR=7.4						

KRSZO 31 18:22:25.6±1.1,**46°.96N**×**17°.48E,h9**km±8km,**ML1.6**/6, **Error ellipse: s-maj=5.1km s-min=4.4km az=15.0, Hungary**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPLH	**Magyarpolny**	**0.22**	**12**	Pg	Pg	18 22 30.4	+0.4
	comp=Z,0.2nm,SNR=9.8						
MPLH				Lg	Lg	18 22 34.2	
MPLH	**Magyarpolny**	**0.22**	**12**	P	Pg	18 22 30.4	+0.4
MPLH				S	Sg	18 22 34.2	+1.0
A261A	**Ohid**	**0.22**	**268**	Pg	Pg	18 22 29.6	-0.6
	comp=Z,0.4nm,SNR=7.6						
A261A				Lg	Lg	18 22 33.5	
TIH	**Tihany**	**0.29**	**101**	Pg	Pg	18 22 31.3	-0.2
	comp=Z,0.2nm,SNR=2.6						
TIH				Lg	Lg	18 22 38.8	
TIH	**Tihany**	**0.29**	**101**	P	Pg	18 22 31.3	-0.2
TIH				S	Sb	18 22 38.8	+0.8
A263A	**Hollad**	**0.34**	**199**	Lg	Lg	18 22 39.0	
EGYH	**Egyhazaskeszo**	**0.47**	**348**	Pg	Pg	18 22 34.8	0.0
	comp=Z,0.1nm,SNR=2.2						
EGYH				Lg	Lg	18 22 43.4	
EGYH	**Egyhazaskeszo**	**0.47**	**348**	P	Pg	18 22 34.8	0.0
EGYH				S	Sb	18 22 43.4	+0.2
CSKK	**Cskako**	**0.67**	**53**	Pg	Pg	18 22 36.1	-2.6
	comp=Z,0.5nm,SNR=2.6						
CSKK	**Cskako**	**0.67**	**53**	P	Pg	18 22 36.1	-2.6
KOVH	**Kovagotottos**	**0.97**	**153**	Sn	Sn	18 22 59.3	0.0
KOVH	**Kovagotottos**	**0.97**	**153**	S	Sn	18 22 59.3	0.0
KOGS	**Kog**	**0.99**	**239**	Pn	Pn	18 22 45.3	-0.3
	comp=Z,0.2nm,SNR=2.0						
KOGS				Lg	Lg	18 22 59.2	
MORH	**Mrgy, Hungar**	**1.10**	**132**	Lg	Lg	18 23 02.4	
CONA	**Conrad Observa**	**1.46**	**312**	Sn	Sg	18 23 12.4	-0.3

ROM 31 18:22:41.5±0.1,**42°.831N**±0°.004×**13°.257E**±0°.005, **h9**km,**ML1.5**/11,**1D,Error ellipse: s-maj=0.5km s-min=0.4km az=46.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.04**	**267**	P	Pg	18 22 43.4	-0.1
T1242				S	Sg	18 22 44.5	-0.4
T1242				AML	AML		
	comp=E,183μm,0.9s						
T1242				AML	AML		
	comp=N,678μm,0.1s						
T1242				AML	AML		
	comp=E,900μm,0.2s						
T1242				AML	AML		
	comp=N,2240μm,0.1s						
T1242				AML	AML		
	comp=E,900μm,0.2s						
T1244	**Arquata del Tr**	**0.08**	**158**	P	Pg	18 22 44.2	+0.4
T1244				AML	AML		
	comp=E,1965μm,0.2s						
T1244				AML	AML		
	comp=N,1034μm,0.4s						
MMO1	**Montemonaco**	**0.09**	**37**	P	Pg	18 22 44.2	+0.3
MMO1				S	Sg	18 22 45.8	+0.1
MMO1				AML	AML		
	comp=N,320μm,0.1s						
MMO1				AML	AML		
	comp=E,323μm,0.1s						
MC2	**Monte Cornacci**	**0.10**	**329**	P	Pg	18 22 44.4	+0.2
MC2				S	Sg	18 22 46.5	+0.4
NRCA	**Norcia**	**0.10**	**271**	P	Pg	18 22 44.6	+0.4
NRCA				AML	AML		
	comp=N,758μm,1.0s						
NRCA				AML	AML		
	comp=E,980μm,0.7s						
T1202	**Accumoli, Fraz**	**0.13**	**190**	P	Pg	18 22 45.2	+0.7
T1202				S	Sg	18 22 48.0	+1.3
T1241	**Roccafluvione,**	**0.13**	**79**	P	Pg	18 22 45.1	+0.6
T1241				S	Sg	18 22 47.7	+1.1
T1241				AML	AML		
	comp=E,144μm,0.9s						
T1241				AML	AML		
	comp=N,142μm,0.9s						
T1243	**Rocca Santa Ma**	**0.20**	**134**	P	Pg	18 22 46.2	+0.6
T1243				S	Sg	18 22 49.4	+1.0
FDMO	**Fiordimonte**	**0.24**	**329**	AML	AML		
	comp=N,114μm,0.2s						
FDMO				AML	AML		
	comp=E,106μm,1.0s						
CSP1	**Cessapalombo**	**0.26**	**352**	P	Pg	18 22 47.7	+0.8
CSP1				S	Sb	18 22 52.4	-0.8
LNSS	**Leonessa**	**0.28**	**215**	P	Pn	18 22 52.3	+0.5
LNSS				AML	AML		
	comp=N,51μm,0.1s						
LNSS				AML	AML		
	comp=E,72μm,0.8s						
T1215	**Vallo di Nera,**	**0.29**	**264**	P	Pg	18 22 47.6	+0.3
T1215				S	Sb	18 22 52.7	-1.0
CESI	**CESI - Serrava**	**0.31**	**304**	P	Pg	18 22 48.2	+0.5
CESI				S	Sb	18 22 54.0	-0.5
RM33	**Pellescritta (**	**0.32**	**186**	AML	AML		
	comp=N,47μm,0.4s						
RM33				AML	AML		
	comp=E,49μm,0.2s						
TERO	**Teramo**	**0.33**	**129**	P	Pg	18 22 48.4	+0.4
TERO				S	Sb	18 22 54.0	-0.9
TERO				AML	AML		
	comp=E,113μm,0.2s						
TERO				AML	AML		
	comp=N,132μm,0.5s						
SRES	**S.Oreste - Sor**	**0.81**	**223**	P	Pn	18 23 00.5	+1.5
SRES				AML	AML		
	comp=E,53μm,0.2s						
SRES				AML	AML		
	comp=N,48μm,0.4s						
PE3	**Peglio**	**1.03**	**328**	S	Sn	18 23 18.0	+1.4
ARCI	**Arcidosso**	**1.31**	**272**	P	Pn	18 23 04.1	-1.9
CMPR	**Campora**	**2.94**	**148**	⇓P	Pn	18 23 29.8	+1.4

*PDG **31** 18:23:17.7±0.2,43°.15N×17°.98E,h7km±1km,ML1.9/12, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*RHSSO **31** 18:23:18.6±0.2,43°.10N×17°.97E,h3km,2km,ML1.9/10*
*BEO **31** 18:23:19.9±1.0,43°.07N×18°.09E,h8km±4km,ML1.7/5*

ISC 31 18:23:17.5±1.1,**43°.13N**±0°.02×**17°.96E**±0°.02,**h0**km±10km, **n53,s0=88/95,18C-8D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.32**	**216**	*e*Pg	**Pg**	18 23 23.2	**-0.5**
STON				*e*Sg	**Sg**	18 23 28.6	**+0.8**
STON	**Ston**	**0.32**	**216**	*e*Pg	**Pg**	18 23 23.1	**-0.5**
STON				Sg	**Sg**	18 23 28.0	**+0.2**
DBRK	**Dubrovnik**	**0.48**	**163**	*i* Pg	**Pg**	18 23 25.9	**-0.8**
BRY	**Bratogost**	**0.48**	**118**	⇑*i*Pg	**Pg**	18 23 26.6	**-0.2**
BRY				*e*Sg	**Sg**	18 23 33.6	**+0.6**
BRY	**Bratogost**	**0.48**	**118**	⇑*i*Pg	**Pg**	18 23 26.5	**-0.2**
BRY				*e*Sg	**Sg**	18 23 34.2	**+1.2**
BRY	**Bratogost**	**0.48**	**118**	⇑*i*Pg	**Pg**	18 23 26.5	**-0.2**
BRY				*i* Sg	**Sg**	18 23 34.5	**+1.5**
TREB	**Trebinje**	**0.50**	**145**	⇑*i*Pg	**Pg**	18 23 27.1	**0.0**
TREB				*e*Sg	**Sg**	18 23 34.8	**+1.2**
TREB	**Trebinje**	**0.50**	**145**	*e*Pg	**Pg**	18 23 27.1	**0.0**
TREB				*e*Sg	**Sg**	18 23 34.8	**+1.2**
UPM	**Unac-Piva**	**0.70**	**84**	⇑*i*Pg	**Pg**	18 23 30.8	**-0.1**
UPM				*e*Sg	**Sg**	18 23 41.2	**+1.3**
UPM	**Unac-Piva**	**0.70**	**84**	⇑*i*Pg	**Pg**	18 23 30.2	**-0.6**
UPM				*e*Sg	**Sg**	18 23 40.8	**+0.9**
UPM	**Unac-Piva**	**0.70**	**84**	⇑*i*Pg	**Pg**	18 23 30.3	**-0.6**
UPM				*i* Sg	**Sb**	18 23 41.8	**-1.0**
RICI	**Ricice**	**0.70**	**301**	*e*Pg	**Pg**	18 23 30.5	**-0.4**
MAKA	**Makarska**	**0.70**	**283**	*e*Pg	**Pg**	18 23 30.4	**-0.5**
HCY	**Herceg Novi**	**0.79**	**150**	⇑*i*Pg	**Pg**	18 23 32.2	**-0.3**
HCY				*e*Sg	**Sg**	18 23 43.3	**+0.5**
HCY	**Herceg Novi**	**0.79**	**150**	⇑*i*Pg	**Pg**	18 23 32.3	**-0.3**
HCY				*e*Sg	**Sb**	18 23 45.2	**-0.1**
HCY	**Herceg Novi**	**0.79**	**150**	⇓*i*Pg	**Pg**	18 23 32.1	**-0.5**
HCY				*i* Sg	**Sb**	18 23 45.2	**-0.1**
NKME	**Niksic**	**0.82**	**116**	⇑*i*Pg	**Pg**	18 23 32.7	**-0.4**
NKME				*e*Sg	**Sb**	18 23 45.3	**-0.8**
NKME	**Niksic**	**0.82**	**116**	⇑*i*Pg	**Pg**	18 23 32.7	**-0.4**
NKME				*i* Sg	**Sb**	18 23 46.2	**+0.1**
NKY	**Niksic**	**0.82**	**112**	⇓*i*Pg	**Pg**	18 23 32.8	**-0.5**
NKY				*e*Sg	**Sb**	18 23 45.4	**-1.0**
LSTV	**Lastovo**	**0.86**	**246**	*e*Pg	**Pg**	18 23 33.2	**-0.8**
CEME	**Cevo**	**0.92**	**129**	⇑*i*Pg	**Pg**	18 23 34.3	**-0.7**
CEME				*e*Sg	**Sb**	18 23 49.1	**+0.1**
CEME	**Cevo**	**0.92**	**129**	⇓*i*Pg	**Pg**	18 23 34.3	**-0.7**
CEME				*i* Sg	**Sb**	18 23 49.3	**+0.3**
BUM	**Brajici-Budva**	**1.08**	**140**	⇓*i*Pg	**Pg**	18 23 37.7	**-0.5**
BUM				*e*Sg	**Sn**	18 23 54.9	**-0.6**
BUM	**Brajici-Budva**	**1.08**	**140**	⇑*i*Pg	**Pg**	18 23 37

comp=N,11836µm,0.3s
DION **Dionisos Attik** **0.33 164** P **Pg** **18 29 33.0 0.0**
DION S **Sg** **18 29 37.7 0.0**
comp=N,43µm,0.4s
DION **Dionisos Attik** **0.33 164** P **Pg** **18 29 33.0 0.0**
DION S **Sg** **18 29 37.6 0.0**
DION AML AML 18 29 38.2
comp=E,64223µm,0.4s
DION AML AML 18 29 38.5
comp=N,49287µm,0.3s
PTL **Penteli** **0.35 173** P **Pg** **18 29 33.2 0.0**
PTL S **Sg** **18 29 37.9 -0.2**
comp=N,9µm,0.3s
PTL **Penteli** **0.35 173** P **Pg** **18 29 33.3 0.0**
PTL S **Sg** **18 29 37.7 -0.4**
PTL AML AML 18 29 38.6
comp=N,14993µm,0.2s
PTL AML AML 18 29 38.7
comp=E,21691µm,0.4s
ATH **Athens Observa** **0.43 190** P **Pg** **18 29 34.7 0.0**
ATH S **Sg** **18 29 41.0 +0.4**
comp=E,10µm,0.2s
ATH **Athens Observa** **0.43 190** P **Pg** **18 29 34.7 0.0**
ATH S **Sg** **18 29 40.4 -0.2**
ATH AML AML 18 29 41.8
comp=E,23539µm,0.2s
ATH AML AML 18 29 42.2
comp=N,17248µm,0.2s
ATHU **Athens Univers** **0.43 183** P **Pg** **18 29 34.6 -0.1**
ATHU S **Sg** **18 29 40.2 -0.4**
comp=N,4µm,0.3s
VILL **Villia** **0.46 240** P **Pg** **18 29 35.1 -0.1**
VILL S **Sg** **18 29 42.1 +0.7**
comp=N,5µm,0.3s
VIL2 **Platees** **0.47 247** P **Pg** **18 29 35.1 -0.3**
VIL2 S **Sg** **18 29 42.0 +0.3**
VIL2 AML AML 18 29 45.0
comp=N,8378µm,0.3s
VIL2 AML AML 18 29 48.4
comp=E,9823µm,0.4s
VLY **Voula,Athens** **0.54 182** P **Pg** **18 29 36.6 -0.2**
VLY S **Sg** **18 29 43.7 -0.4**
comp=E,11µm,0.4s
VLY **Voula,Athens** **0.54 182** P **Pg** **18 29 36.6 -0.2**
VLY S **Sg** **18 29 43.6 -0.5**
VLY AML AML 18 29 47.3
comp=E,27712µm,0.4s
VLY AML AML 18 29 47.5
comp=N,18051µm,0.2s
ATAL **Atalanti** **0.69 296** P **Pg** **18 29 39.4 -0.1**
ATAL S **Sn** **18 29 50.8 -1.1**
comp=N,3µm,0.3s
ATAL **Atalanti** **0.69 296** P **Pg** **18 29 38.9 -0.6**
ATAL S **Sg** **18 29 48.9 +0.2**
ATAL AML AML 18 29 52.2
comp=N,7687µm,0.3s
ATAL AML AML 18 29 52.8
comp=E,2977µm,0.3s
SKY **Skiros Island** **0.75 50** P **Pg** **18 29 40.4 -0.3**
SKY S **Sb** **18 29 51.8 +0.8**
comp=E,13µm,0.5s
SKY **Skiros Island** **0.75 50** P **Pg** **18 29 40.3 -0.4**
SKY S **Sb** **18 29 51.6 +0.6**
SKY AML AML 18 29 54.6
comp=E,30541µm,0.4s
SKY AML AML 18 29 54.8
comp=N,23042µm,0.5s
LTK **Loutraki** **0.77 241** P **Pg** **18 29 40.7 -0.3**
LTK S **Sb** **18 29 52.4 +1.0**
comp=N,7µm,0.5s
LTK **Loutraki** **0.77 241** P **Pg** **18 29 40.7 -0.3**
LTK S **Sb** **18 29 51.4 0.0**
LTK AML AML 18 29 55.0
comp=E,16998µm,0.5s
LTK AML AML 18 29 55.3
comp=N,24512µm,0.4s
LOUT **Loutraki** **0.78 239** P **Pg** **18 29 40.7 -0.5**
LOUT S **Sn** **18 29 53.2 -0.9**
comp=N,8µm,0.2s
EPID **Epidavros** **0.95 215** P **Pb** **18 29 44.0 -0.4**
EPID S **Sn** **18 29 58.5 0.0**
comp=N,8µm,0.3s
EPID **Epidavros** **0.95 215** P **Pb** **18 29 44.0 -0.4**
THAL **Thalero** **0.97 249** P **Pb** **18 29 44.7 0.0**
THAL S **Sn** **18 29 58.5 -0.4**
comp=N,6µm,0.2s
THAL **Thalero** **0.97 249** P **Pb** **18 29 44.6 -0.2**
THAL AML AML 18 30 01.3
comp=E,10820µm,0.2s
THAL AML AML 18 30 02.5
comp=N,10569µm,0.3s
AXAR **Agios Charalam** **0.98 293** P **Pb** **18 29 44.4 -0.4**
AXAR S **Sn** **18 29 59.4 +0.4**
comp=N,3µm,0.3s
AXAR **Agios Charalam** **0.98 293** P **Pb** **18 29 44.3 -0.4**
AXAR S **Sb** **18 29 57.2 -0.4**
AXAR AML AML 18 30 08.3
comp=N,5061µm,0.3s
AXAR AML AML 18 30 08.6
comp=E,4062µm,0.5s
NEO **Neokhori** **1.02 333** P **Pb** **18 29 45.4 -0.1**
NEO S **Sg** **18 29 59.4 +0.3**
comp=E,3µm,0.3s
NEO **Neokhori** **1.02 333** P **Pb** **18 29 45.6 +0.1**
NEO AML AML 18 30 01.4
comp=E,6168µm,0.3s
NEO AML AML 18 30 02.6
comp=N,7082µm,0.3s
DLFA **Delphi** **1.04 275** P **Pb** **18 29 45.8 0.0**
DLFA AML AML 18 30 08.9
comp=N,1377µm,0.5s
DLFA AML AML 18 30 17.5
comp=E,1681µm,0.5s
XOR **Xorichti** **1.08 334** P **Pb** **18 29 46.5 -0.1**
XOR S **Sn** **18 30 01.8 +0.2**
comp=E,1µm,0.3s
XOR **Xorichti** **1.08 334** P **Pb** **18 29 46.5 -0.1**
XOR S **Sb** **18 30 00.5 -0.1**
XOR AML AML 18 30 02.6
comp=E,1986µm,0.2s
XOR AML AML 18 30 05.1
comp=N,3075µm,0.4s
KRND **KRANIDI** **1.14 208** P **Pb** **18 29 47.2 -0.3**
KRND S **Sn** **18 30 03.7 +0.7**
comp=N,2µm,0.6s
KRND **KRANIDI** **1.14 208** P **Pb** **18 29 47.2 -0.3**
KRND S **Sb** **18 30 01.6 -0.6**
KRND AML AML 18 30 05.4
comp=N,3882µm,0.5s
KRND AML AML 18 30 07.9
comp=E,4326µm,0.7s
KLV **Kalavryta, Ach** **1.36 255** P **Pn** **18 29 50.8 +0.2**
KLV S **Sn** **18 30 08.2 -0.2**
KLV AML AML 18 30 11.8
comp=N,1239µm,0.6s
KLV AML AML 18 30 13.0
comp=E,938µm,0.6s
PSRA **Psara** **1.38 83** P **Pb** **18 29 51.6 -0.1**
SERG **Sergoula** **1.38 271** P **Pn** **18 29 51.2 +0.3**
PAIG **Paliouri** **1.53 356** P **Pn** **18 29 52.4 -0.6**
CHOS **Chios island** **1.76 90** P **Pn** **18 29 56.2 0.0**
SIGR **SIGRI** **1.79 62** P **Pn** **18 29 56.1 -0.5**
SIGR **SIGRI** **1.79 62** PN **Pn** **18 29 56.0 -0.5**
VLI **Veliai** **1.81 203** P **Pn** **18 29 57.6 +0.7**
APE **Apeiranthos** **1.90 134** PN **Pn** **18 29 57.9 -0.2**
ITM **Ithomi** **1.93 231** PN **Pn** **18 29 58.9 +0.5**
ITM SN **Sb** **18 30 24.6 -0.3**
OUR **Ouranopolis** **1.94 4** PN **Pn** **18 29 58.2 -0.4**
URLA **Izmir** **2.19 90** PN **Pn** **18 30 01.9 -0.1**
KTHA **Kythira Island** **2.22 196** PN **Pn** **18 30 03.0 +0.5**
BOZC **Bozcaada** **2.26 50** PN **Pn** **18 30 02.8 -0.2**
HORT **Hortiatis** **2.27 346** PN **Pn** **18 30 02.8 -0.4**
GADA **Gvkgeada** **2.41 41** PN **Pn** **18 30 05.0 -0.1**
EZN **Ezine** **2.42 53** PN **Pn** **18 30 04.9 -0.3**
DKL **Dikili** **2.51 73** PN **Pn** **18 30 06.4 0.0**
KNT **Kendrikon** **2.85 346** PN **Pn** **18 30 11.2 +0.1**
GELI **Tayfur-Gelibol** **2.87 45** PN **Pn** **18 30 11.3 -0.1**
IMMV **Iera Moni Meta** **2.93 177** PN **Pn** **18 30 13.2 +0.9**
ENEZ **Enez** **2.95 37** PN **Pn** **18 30 12.6 +0.1**
KOSK **Kos Island** **3.00 122** PN **Pn** **18 30 13.7 +0.5**
ALN **Alexandroupoli** **3.03 34** PN **Pn** **18 30 13.5 -0.1**
RDO **Rodhopi** **3.05 25** PN **Pn** **18 30 13.1 -0.7**
BODT **Bodrum** **3.08 115** PN **Pn** **18 30 13.8 -0.4**
IDI **Anoyia** **3.22 164** ⇓P **Pn** **18 30 16.7 +0.4**
IDI **Anoyia** **3.22 164** PN **Pn** **18 30 16.9 +0.6**
AYDB **Zeytinkoy-Aydi** **3.24 97** PN **Pn** **18 30 16.9 +0.2**
KDZ **Kurdzhali** **3.47 20** PN **Pn** **18 30 18.7 -1.0**
KKB **Krupnik** **3.51 351** P **Pn** **18 30 20.6 +0.4**
GVDS **Gavdos** **3.55 176** PN **Pn** **18 30 22.1 +1.3**
GVD **Gavdhos** **3.56 176** PN **Pn** **18 30 22.2 +1.3**
PLD **Plovdiv** **3.77 10** PN **Pn** **18 30 24.2 +0.5**
ZKR **Zakros** **3.80 149** PN **Pn** **18 30 25.7 +1.5**
EDRB **Edirne** **4.11 32** PN **Pn** **18 30 29.2 +0.7**
VTS **Vitosha** **4.24 354** ⇓P **Pn** **18 30 31.2 +0.9**
VTS **Vitosha** **4.24 354** P **Pn** **18 30 31.1 +0.7**
TVSB **Tavsanli** **4.53 75** PN **Pn** **18 30 35.5 +1.2**
BLKB **Belogradchik** **5.29 351** ⇓P **Pn** **18 30 45.1 +0.4**
PDG **Podgorica** **5.32 321** ⇑P **Pn** **18 30 47.6 +2.6**
BOVS **Bovan** **5.47 344** ⇓P **Pn** **18 30 46.8 -0.3**
TIP **Timpagrande** **5.57 280** ⇓P **Pn** **18 30 50.3 +1.8**
ICOR **Ion Corvin** **6.46 26** ⇓P **Pn** **18 31 00.8 +0.2**
HERR **Herculane** **6.56 351** ⇓P **Pn** **18 31 01.1 -1.0**
MDVR **Moldovita** **6.57 347** ⇓P **Pn** **18 31 01.8 -0.4**
HARR **Harsova** **7.00 25** ⇑P **Pn** **18 31 06.1 -2.0**
GZR **Gura Zlata** **7.03 354** ⇑P **Pn** **18 31 07.9 -0.8**
VOIR **7.09 7** ⇓P **Pn** **18 31 09.6 +0.1**
MLR **Muntele Rosu** **7.26 12** ⇑P **Pn** **18 31 08.6 -3.3**
DOPR **Dopca** **7.65 8** ⇑P **Pn** **18 31 17.9 +0.8**
PLOR **Plostina** **7.74 15** ⇑P **Pn** **18 31 18.0 -0.3**
VRI **Vrincioaia** **7.77 15** ⇓P **Pn** **18 31 20.9 +2.2**

NEIC ***31*** *18:29:48.3±1.1, 53.93N±0.08×163.15W±0.04, h21km±15km, ML2.7/6, ML2.7/17(AEIC), Error ellipse: s-maj=11.2km s-min=3.3km az=176.0*

AEIC 31 18:29:48.4±1.1, 53.95N±0.04×163.17W±0.04, h13km±6km, Error ellipse: s-maj=5.0km s-min=3.2km az=176.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**0.78**	**334**		Pg	18 30 03.5	0.0
ISLZ	**Isanotski Laza**	**0.84**	**338**		Pg	18 30 04.3	-0.4
ISLZ					Sb	18 30 16.4	+0.3
SSLS	**Shishaldin Sou**	**0.91**	**328**		Pg	18 30 05.8	-0.2
FALS	**False Pass**	**0.92**	**351**		Pg	18 30 05.7	-0.5
FALS					Sb	18 30 19.1	+0.7
SSBA	**Shishaldin**	**1.00**	**326**		Pb	18 30 06.9	-0.7
SSBA					Sg	18 30 21.2	+0.4
WESN	**West Dahl Nort**	**1.04**	**307**		Pb	18 30 08.2	-0.1
WECS	**Westdahl Cape**	**1.11**	**302**		Pb	18 30 09.0	-0.5
AKSA	**Akutan Strait**	**1.50**	**278**		Pn	18 30 13.9	-1.1
AKSA					Sn	18 30 34.4	0.0
AKUT	**Akutan**	**1.55**	**278**	Pn	Pn	18 30 14.4	-1.2
AKUT				IAML		18 30 38.0	
	comp=N,67nm,0.5s						
AKUT				IAML		18 30 45.8	
	comp=E,112nm,1.8s						
HAG	**Hague Volcano**	**1.56**	**28**		Pn	18 30 15.2	-0.6
UNV	**Unalaska Valle**	**1.98**	**268**	Pn	Pn	18 30 20.8	-0.7
SDPT	**Sand Point**	**2.10**	**47**		Pn	18 30 22.6	-0.6
SDPT					Sn	18 30 48.1	-1.0
SDPT	**Sand Point**	**2.10**	**47**	IAML		18 30 55.9	
	comp=N,123nm,1.1s						
CNBA	**Chernabura Isl**	**2.27**	**66**	Pn	Pn	18 30 23.8	-1.7
CNBA				IAML		18 31 11.1	
	comp=N,20nm,0.9s						
CHGN	**Chignik**	**3.61**	**47**	Pn	Pn	18 30 42.9	-1.0
P18K	**Big Mountain,**	**6.99**	**35**	Pn	Pn	18 31 28.7	-1.7
KDAK	**Kodiak Island**	**7.08**	**53**	Pn	Pn	18 31 30.4	-1.2
O18K	**Koktuh Hills**	**7.35**	**33**	Pn	Pn	18 31 36.7	+1.4
EYAK	**Cordova Ski Ar**	**11.49**	**48**	Pn	Pn	18 32 31.2	-0.8
KTH	**Kantishna Hill**	**11.51**	**28**	Pn	Pn	18 32 30.3	-2.1

ROM 31 18:33:18.1±0.1, 42.833N±0.004×13.251E±0.005, h9km, ML1.8/9, 3C-4D, Error ellipse: s-maj=0.4km s-min=0.3km az=86.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.04**	**265**	P	Pg	18 33 19.9	-0.1
T1242				S	Sg	18 33 20.9	-0.4
T1242				AML	AML		
	comp=E,2035µm,0.2s						
T1242				AML	AML		
	comp=N,6510µm,0.3s						
T1242				AML	AML		
	comp=E,2035µm,0.2s						
T1242				AML	AML		
	comp=N,6445µm,0.3s						
T1242				AML	AML		
	comp=E,2005µm,0.2s						
T1244	**Arquata del Tr**	**0.08**	**156**	P	Pg	18 33 20.7	+0.3
T1244				S	Sg	18 33 22.4	+0.4
T1244				AML	AML		
	comp=E,2005µm,0.2s						
T1244				AML	AML		
	comp=N,1235µm,0.5s						
T1244				AML	AML		
	comp=E,2010µm,0.2s						
T1244				AML	AML		
	comp=N,1235µm,0.5s						
MMO1	**Montemonaco**	**0.09**	**40**	P	Pg	18 33 20.8	+0.3
MMO1				S	Sg	18 33 22.4	+0.2
MC2	**Monte Cornacci**	**0.09**	**331**	P	Pg	18 33 21.0	+0.4
MC2				S	Sg	18 33 23.0	+0.5
NRCA	**Norcia**	**0.10**	**271**	P	Pg	18 33 21.0	+0.4
NRCA				S	Sg	18 33 23.0	+0.6
NRCA				AML	AML		
	comp=N,1770µm,0.4s						
NRCA				AML	AML		
	comp=N,1905µm,0.1s						
NRCA				AML	AML		
	comp=E,2105µm,1.3s						
NRCA				AML	AML		
	comp=E,2310µm,1.3s						
NRCA				AML	AML		
	comp=N,1775µm,0.4s						
T1202	**Accumoli, Fraz**	**0.13**	**189**	P	Pg	18 33 21.6	+0.5
T1202				S	Sg	18 33 24.4	+1.2
T1202				AML	AML		
	comp=E,1050µm,0.2s						
T1202				AML	AML		
	comp=N,1170µm,0.8s						
T1202				AML	AML		
	comp=E,1048µm,0.2s						
T1202				AML	AML		
	comp=N,1168µm,0.8s						
T1202				AML	AML		
	comp=E,1045µm,0.2s						
T1202				AML	AML		
	comp=N,1164µm,0.8s						
T1241	**Roccafluvione,**	**0.14**	**80**	P	Pg	18 33 21.6	+0.5
T1241				S	Sg	18 33 24.2	+1.0
FDMO	**Fiordimonte**	**0.24**	**330**	P	Pg	18 33 23.6	+0.7
FDMO				AML	AML		
	comp=E,146µm,0.3s						
FDMO				AML	AML		
	comp=N,182µm,1.0s						
LNSS	**Leonessa**	**0.28**	**214**	S	Sg	18 33 25.0	-2.4
T1215	**Vallo di Nera,**	**0.28**	**264**	⇑P	Pg	18 33 24.4	+0.6
CESI	**CESI - Serrava**	**0.31**	**304**	⇓P	Pg	18 33 25.0	+0.7
CESI				AML	AML		
	comp=E,263µm,0.4s						
CESI				AML	AML		
	comp=N,524µm,0.3s						
RM33	**Pellescritta (**	**0.32**	**185**	P	Pg	18 33 25.2	+0.6
RM33				S	Sb	18 33 30.6	-0.9
OFFI	**Offida**	**0.34**	**72**	S	Sg	18 33 27.0	-2.2
SNTG	**Esanatoglia**	**0.48**	**332**	⇑P	Pg	18 33 28.0	+0.5
SNTG				S	Sb	18 33 37.0	+1.0
SNTG				AML	AML		
	comp=N,38µm,0.9s						
SNTG				AML	AML		
	comp=E,39µm,1.6s						
ASSB	**Assisi San Ben**	**0.48**	**296**	P	Pg	18 33 27.9	+0.4
ASSB				AML	AML		
	comp=N,102µm,0.1s						
ASSB				AML	AML		
	comp=E,157µm,0.2s						
EL6	**Elcito**	**0.51**	**348**	⇑P	Pg	18 33 28.6	+0.6
EL6				S	Sb	18 33 38.0	+1.1
CESX	**Cesi**	**0.54**	**246**	S	Sb	18 33 39.0	+1.2
CING	**Cingoli**	**0.54**	**356**	⇓P	Pb	18 33 29.4	-0.5
CING				AML	AML		
	comp=E,44µm,0.3s						
CING				AML	AML		
	comp=N,74µm,1.5s						
ATCC	**AVT- Casa Cast**	**0.57**	**308**	⇓P	Pg	18 33 29.7	+0.5
ATCC				AML	AML		
	comp=N,57µm,1.0s						
ATCC				AML	AML		
	comp=E,83µm,0.8s						
FOSV	**Fossato di Vic**	**0.58**	**322**	⇓P	Pg	18 33 30.0	+0.5
FOSV				S	Sb	18 33 40.0	+0.9
FOSV				AML	AML		
	comp=E,59µm,0.3s						
FOSV				AML	AML		
	comp=N,125µm,0.3s						
ARVD	**Arcevia**	**0.70**	**341**	P	Pb	18 33 32.3	-0.3
ARVD				S	Sn	18 33 44.0	-1.4
SRES	**S.Oreste - Sor**	**0.81**	**223**	S	Sb	18 33 46.0	+0.6
NARO	**Abbazia di Nar**	**0.92**	**328**	P	Pn	18 33 39.5	+2.2

IDC ***31*** *19:02:13.5±2.1, 36.17N×5.60W, h0km, mb3.7/2, mbtmp3.5/5, ML3.5/3, MS3.4/2, Error ellipse: s-maj=51.7km s-min=16.1km az=96.0*

NEIC ***31*** *19:02:15.3±1.4, 36.23N±0.06×5.46W±0.04, h10km±2km, Error ellipse: s-maj=9.6km s-min=4.9km az=353.0*

LDG ***31*** *19:02:15.8±0.2, 36.14N×5.41W, h10km, Ml3.4/15, Error ellipse: s-maj=4.4km s-min=2.3km az=170.0*

INMG ***31*** *19:02:15.2±2.0, 36.23N×5.41W, h4km±5km, ML3.3, Error ellipse: s-maj=4.2km s-min=3.1km az=16.0*

IGIL ***31*** *19:02:16.2, 36.23N×5.42W, h11km, ML3.2*

MDD ***31*** *19:02:16.3±0.5, 36.23N×5.42W, h12km±5km, mb_Lg3.5/21, Error ellipse: s-maj=4.3km s-min=2.5km az=0.0*

CNRM ***31*** *19:02:17.4, 36.11N×5.47W, h53km, ml3.2*

ISC 31 19:02:14.9±1.0, 36.24N±0.02×5.33W±0.02, h19km±3km, n137, σ1§80/200, mb3.9/3, 1C-6D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EJIF	**Jimena Fronter**	**0.24**	**332**	Pg	**Pg**	**19 02 19.2**	**-1.3**
CEU	**Ceuta**	**0.34**	**186**	P	**Pg**	**19 02 22.6**	**+0.1**
CEU				S	**Sb**	**19 02 28.8**	**+1.2**
ECEU	**Ceuta**	**0.35**	**186**	Pg	**Pg**	**19 02 22.5**	**+0.2**
ECEU				Sg	**Sb**	**19 02 28.5**	**+0.9**
ECEU				*i* Vmb_Lg		19 02 33.5	
EMIJ	**Mijas**	**0.55**	**54**	Pg	**Pg**	**19 02 25.7**	**-0.4**
EMIJ				*i* Vmb_Lg		19 02 35.0	
EMIJ				Sg	**Sb**	**19 02 35.1**	**+1.7**
SMIR	**Smir Dam**	**0.56**	**184**	P	**Pg**	**19 02 26.1**	**0.0**
SMIR				S	**Sn**	**19 02 36.6**	**0.0**
SFS	**San Fernando**	**0.74**	**288**	P	**Pn**	**19 02 31.8**	**+1.5**
SFS				S	**Sn**	**19 02 48.9**	**+7.8**
SFS	**San Fernando**	**0.74**	**288**	Pg	**Pn**	**19 02 31.4**	**+1.1**
SFS	**San Fernando**	**0.74**	**288**	P	**Pn**	**19 02 31.9**	**+1.6**
SFS	**San Fernando**	**0.74**	**288**	P	**Pn**	**19 02 31.9**	**+1.6**
SFS				S	**Sn**	**19 02 42.1**	**+1.1**
ESPR	**Espera**	**0.75**	**326**	Pg	**Pn**	**19 02 31.1**	**+0.6**
ESPR				Sg	**Sg**	**19 02 39.8**	**0.0**
ESPR				*i* Vmb_Lg		19 02 51.4	
EMAL	**Malaga-Limoner**	**0.89**	**54**	P	**Pb**	**19 02 30.9**	**-0.8**
EMAL				S	**Sb**	**19 02 43.0**	**-0.2**
CHEFC	**Chefchaouen**	**1.13**	**180**	P	**Pg**	**19 02 39.0**	**+2.0**
CHEFC	**Chefchaouen**	**1.13**	**180**	P	**Pg**	**19 02 37.2**	**+0.2**
CHEFC				S	**Sb**	**19 02 48.0**	**-2.4**
EGOR	**Sierra Gorda,**	**1.31**	**48**	Pn	**Pn**	**19 02 38.2**	**-0.1**
EGOR				*i* Vmb_Lg		19 03 22.5	
RSA	**Sarsar**	**1.41**	**197**	P	**Pg**	**19 02 43.0**	**+0.7**
RSA	**Sarsar**	**1.41**	**197**	P	**Pg**	**19 02 41.7**	**-0.5**
RSA				S	**Sn**	**19 02 56.6**	**-1.1**
ELGU	**Los Guajares,**	**1.51**	**65**	Pn	**Pn**	**19 02 39.0**	**-1.9**
PALE	**Palemas**	**1.53**	**132**	P	**Pg**	**19 02 45.0**	**+0.6**
PALE	**Palemas**	**1.53**	**132**	P	**Pn**	**19 02 42.3**	**+1.1**
PALE				S	**Sn**	**19 03 01.3**	**+0.7**
EQUE	**Quentar**	**1.80**	**57**	Pn	**Pn**	**19 02 45.5**	**+0.5**
EQUE				Sn	**Sb**	**19 03 10.5**	**+1.1**
EQUE				*i* Vmb_Lg		19 03 34.3	
ECAB	**El Cabril**	**1.83**	**358**	Pn	**Pn**	**19 02 46.6**	**+1.2**
ECAB				Sn	**Sn**	**19 03 09.4**	**+1.4**
ECAB				*i* Vmb_Lg		19 03 16.9	
EMIN	**Mina Concepcio**	**1.86**	**325**	Pn	**Pn**	**19 02 45.7**	**0.0**
EMIN				Sn	**Sb**	**19 03 10.3**	**-1.0**
EMIN				*i* Vmb_Lg		19 03 24.8	
EADA	**Adamuz**	**2.01**	**17**	Pn	**Pn**	**19 02 49.7**	**+1.8**
EADA				Sn	Sg	19 03 22.5	+2.8
EADA				*i* Vmb_Lg		19 03 27.0	
EBER	**Berja**	**2.07**	**71**	Pn	**Pn**	**19 02 48.8**	**0.0**
EBER				Sn	**Sn**	**19 03 14.6**	**+0.5**
EBER				*i* Vmb_Lg		19 03 46.1	
WMELI	**Melilla**	**2.14**	**115**	P	**Pb**	**19 02 53.8**	**+0.7**
WMELI				S	**Sn**	**19 03 13.9**	**-1.7**
EGRO	**El Granado**	**2.15**	**307**	Pn	**Pn**	**19 02 49.8**	**0.0**
EGRO				Sn	**Sn**	**19 03 15.9**	**0.0**
EGRO				*i* Vmb_Lg		19 03 18.9	
GOG	**Mont Gurugu**	**2.15**	**118**	P	**Pn**	**19 02 50.0**	**+0.1**
GOG				S	**Sn**	**19 03 18.3**	**+2.2**
PVAQ	**Vaqueiros**	**2.24**	**302**	Pn	**Pn**	**19 02 50.7**	**-0.2**
PVAQ	**Vaqueiros**	**2.24**	**302**	P	**Pn**	**19 02 50.7**	**-0.2**
PVAQ				S	**Sn**	**19 03 17.9**	**-0.1**
PVAQ	**Vaqueiros**	**2.24**	**302**	⇓*i*Pn	**Pn**	**19 02 50.9**	**0.0**
PVAQ				*e*Sn	**Sn**	**19 03 18.3**	**+0.3**
PVAQ				A	A	19 03 27.1	
	81nm,0.8s						
PBDV	**Barranco-do-Ve**	**2.31**	**296**	⇓*i*Pn	**Pn**	**19 02 47.9**	**-4.1**
PBDV				*e*Sn	**Sn**	**19 03 16.1**	**-3.9**
PBDV				A	A	19 03 49.0	
	64nm,0.5s						
PBAR	**Barrancos**	**2.36**	**325**	⇓*i*Pn	**Pn**	**19 02 52.8**	**+0.2**
PBAR				*e*Sn	**Sn**	**19 03 23.0**	**+1.9**
PBAR				A	A	19 03 49.9	
	71nm,0.5s						
EQES	**Quesada**	**2.39**	**49**	Pn	**Pb**	**19 02 56.6**	**-0.7**
EQES				Sn	**Sn**	**19 03 24.4**	**+2.6**
EQES				*i* Vmb_Lg		19 03 55.0	
PCVE	**Castro Verde**	**2.58**	**303**	⇓*i*Pn	**Pn**	**19 02 55.5**	**-0.1**
PCVE				*e*Sn	**Sn**	**19 03 24.4**	**-2.0**
PCVE				A	A	19 03 42.2	
	44nm,0.6s						
CHAS	**Isla Isabel II**	**2.59**	**113**	P	**Pn**	**19 02 56.5**	**+0.8**
CHAS				S	**Sn**	**19 03 24.1**	**-2.5**
ENIJ	**Nijar**	**2.62**	**73**	Pn	**Pn**	**19 02 57.2**	**+1.0**
ENIJ				Sn	**Sn**	**19 03 29.1**	**+1.6**
ENIJ				*i* Vmb_Lg		19 03 35.8	
PBEJ	**Beja**	**2.70**	**312**	*e*Pn	**Pn**	**19 02 57.3**	**0.0**
PBEJ				*e*Sn	**Sn**	**19 03 30.0**	**+0.6**
PBEJ				A	A	19 03 53.0	
	54nm,0.6s						
IFR	**Ifrane**	**2.73**	**176**	P	**Pb**	**19 03 01.7**	**-1.5**
IFR				S	**Sb**	**19 03 34.4**	**-1.9**
TAF	**Taforalt**	**2.77**	**120**	P	**Pb**	**19 03 04.0**	**+0.1**
MESJ	**Messejana**	**2.81**	**305**	*e*P	**Pn**	**19 02 58.7**	**-0.1**
MESJ				*e*S	**Sn**	**19 03 29.3**	**-2.8**
MESJ				IAML		19 03 34.2	
	comp=E,65nm,0.4s						
MESJ	**Messejana**	**2.81**	**305**	⇓*e*Pn	**Pn**	**19 02 58.8**	**0.0**
MESJ				*e*Sn	**Sn**	**19 03 32.6**	**+0.5**
MESJ				A	A	19 03 41.6	
	comp=E,37nm,0.6s						
EBAD	**Badajoz**	**2.84**	**332**	Pn	**Pn**	**19 02 59.5**	**+0.2**
EBAD				Sn	**Sn**	**19 03 32.2**	**-0.8**
EBAD				*i* Vmb_Lg		19 03 52.8	
MORF	**Marmelete**	**2.87**	**293**	*e*P	**Pn**	**19 02 59.3**	**-0.4**
MORF				*e*S	**Sn**	**19 03 31.0**	**-2.7**
MORF				IAML		19 03 41.8	
	comp=N,120nm,0.4s						
MORF	**Marmelete**	**2.87**	**293**	*e*Pn	**Pn**	**19 02 59.3**	**-0.4**
MORF				*e*Sn	**Sn**	**19 03 33.0**	**-0.7**
MORF				A	A	19 04 10.0	
	comp=N,30nm,0.8s						
PFVI	**Vila Bisbo**	**2.95**	**289**	Pn	**Pn**	**19 03 00.0**	**-0.7**
PFVI	**Vila Bisbo**	**2.95**	**289**	P	**Pn**	**19 03 00.9**	**+0.3**
PFVI				S	**Sn**	**19 03 35.3**	**-0.2**
PFVI	**Vila Bisbo**	**2.95**	**289**	*e*Pn	**Pn**	**19 03 01.0**	**+0.3**
PFVI				*e*Sn	**Sn**	**19 03 34.7**	**-0.8**
PFVI				A	A	19 03 42.3	
	comp=N,33nm,0.4s						
JBK	**JBK**	**2.96**	**129**	P	**Pn**	**19 03 00.5**	**-0.5**
JBK				S	**Sn**	**19 03 36.7**	**+0.7**
ZHG	**ZHG**	**2.99**	**202**	P	**Pn**	**19 03 01.6**	**+0.2**
ZHG				S	**Sn**	**19 03 36.1**	**-0.6**
PTEO	**Sao Teotonio**	**3.02**	**297**	*e*Pn	**Pn**	**19 03 01.8**	**+0.2**
PTEO				*e*Sn	**Sn**	**19 03 38.9**	**+1.7**
PTEO				A	A	19 03 49.6	

comp=N,52nm,0.8s
PNCL Nicolau / Gran 3.16 307 ⇓*e*Pn **Pn 19 03 03.7 +0.1**
PNCL *e*Sn **Sn 19 03 41.4 +0.6**
PNCL A A 19 04 05.0
comp=N,30nm,0.5s
PESTR Estremoz 3.18 326 Pn **Pn 19 03 04.2 +0.3**
PESTR Estremoz 3.18 326 P **Pn 19 03 06.1 +2.3**
PESTR Estremoz 3.18 326 P **Pn 19 03 04.2 +0.3**
PESTR S **Sn 19 03 43.6 +2.4**
PESTR Estremoz 3.18 326 *e*Pn **Pn 19 03 04.2 +0.3**
PESTR *e*Sn **Sn 19 03 42.1 +0.9**
PESTR A A 19 04 02.2
comp=N,61nm,0.5s
CZD Col de Zad 3.21 176 P **Pn 19 03 02.3 -2.3**
CZD S **Sn 19 03 39.3 -3.2**
EZAR Zarzadilla de 3.33 60 Sn **Sb 19 03 54.7 +1.0**
PAB San Pablo 3.39 13 Pn **Pn 19 03 08.2 +1.4**
PAB San Pablo 3.39 13 Pn **Pn 19 03 08.6 +1.8**
PAB *i* Vmb_Lg 19 04 16.0
PAB San Pablo 3.39 13 P **Pn 19 03 10.7 +3.8**
MD31 MD31 3.40 172 P **Pn 19 03 08.7 +1.7**
MD31 S **Sn 19 03 47.4 +0.5**
AVE Averroes 3.40 211 Pn **Pn 19 03 07.4 +0.5**
MDT Midelt 3.47 170 P **Pn 19 03 09.8 +1.8**
MDT S **Sn 19 03 48.6 -0.1**
MDT Midelt 3.47 170 Pn **Pn 19 03 09.9 +1.8**
comp=N,3.4nm,0.3s,baz=170,slow=8.4,SNR=62
MDT Sn **Sn 19 03 50.7 +2.1**
comp=N,11nm,0.3s,baz=336,slow=19,SNR=9.5
comp=N,13nm,0.2s
PMRV Marv??o 3.57 333 *e*Pn **Pn 19 03 11.0 +1.7**
PMRV *e*Sn **Sn 19 03 52.1 +1.1**
PMRV A A 19 04 15.9
comp=N,68nm,0.5s
ESDC Sonseca Array 3.59 17 **Pn 19 03 11.1 +1.5**
ESDC Sonseca Array 3.59 17 Pn **Pn 19 03 11.5 +1.9**
comp=N,1.4nm,0.3s,baz=199,slow=13,SNR=33
ESDC Lg Lg 19 04 13.1
comp=N,8.3nm,0.3s,baz=202,slow=28,SNR=9.3
comp=N,2.3nm,0.3s
ESBB Sonseca Array 3.59 17 **Pn 19 03 11.3 +1.6**
PMTG Montargil 3.64 322 *e*Pn **Pn 19 03 10.4 +0.2**
PMTG *e*Sn **Sn 19 03 53.4 +0.8**
PMTG A A 19 04 25.4
comp=N,58nm,0.5s
CART Cartagena 3.72 68 Pn **Pn 19 03 14.2 +2.9**
PACT Alcochete 3.76 313 *e*Pn **Pn 19 03 12.7 +0.9**
PACT *e*Sn **Sn 19 03 57.6 +2.1**
ETOB Tobarra 3.85 50 Pn **Pn 19 03 15.4 +2.3**
ETOB *i* Vmb_Lg 19 04 45.9
PMST Lisbon--Monsan 3.95 310 *e*Pn **Pn 19 03 15.1 +0.7**
PMST *e*Sn **Sn 19 04 02.4 +2.2**
PMST A A 19 04 26.6
comp=N,53nm,0.8s
PCBR Castelo Branco 3.97 335⇑ *e*Pn **Pn 19 03 16.5 +1.7**
PCBR *e*Sn **Sn 19 04 00.7 -0.1**
PCBR A A 19 04 05.3
comp=N,50nm,0.5s
PMAFR Mafra 4.14 312 *e*Pn **Pn 19 03 17.6 +0.4**
PMAFR *e*Sn **Sn 19 04 07.3 +2.2**
PMAFR A A 19 04 39.8
comp=N,61nm,0.6s
PSBE So Bento 4.26 321 *e*Pn **Pn 19 03 19.6 +0.8**
PSBE *e*Sn **Sn 19 04 07.8 -0.2**
PSBE A A 19 04 42.9
comp=N,49nm,0.6s
UCM Universidad Co 4.38 21 P **Pn 19 03 22.7 +2.4**
UCM S **Sn 19 04 05.7 -5.2**
GUD Guadarrama 4.49 12 Pn **Pn 19 03 23.8 +1.8**
MTE Manteigas 4.50 338 Pn **Pn 19 03 23.1 +1.0**
MTE Manteigas 4.50 338 *e*Pn **Pn 19 03 23.5 +1.4**
MTE *e*Sn **Sn 19 04 14.2 +0.3**
MTE A A 19 04 44.9
comp=N,97nm,0.6s
AFON Font Roja 4.51 56 Pn **Pn 19 03 26.2 +3.9**
PCAS Casmilo, Conde 4.55 328 *e*Pn **Pn 19 03 23.3 +0.6**
PCAS *e*Sn **Sn 19 04 14.6 -0.5**
PCAS A A 19 04 53.1
comp=N,48nm,0.5s
COI Coimbra 4.64 329 Pn **Pn 19 03 24.8 +0.9**
COI Coimbra 4.64 329 *e*Pn **Pn 19 03 25.1 +1.1**
COI *e*Sn **Sn 19 04 16.6 -0.7**
PVIS Viseu 4.90 337 *e*Pn **Pn 19 03 28.8 +1.2**
PVIS *e*Sn **Sn 19 04 21.7 -2.0**
PVIS A A 19 05 13.8
comp=N,22nm,0.5s
MVO Moncorvo 5.09 345 *e*Pn **Pn 19 03 31.6 +1.4**
MVO *e*Sn **Sn 19 04 27.8 -0.7**
MVO A A 19 05 12.4
comp=N,59nm,0.6s
ETOR Torete 5.24 28 Pn **Pn 19 03 34.3 +2.0**
ETOR *i* Vmb_Lg 19 05 18.9
PVRL Vila Real 5.36 340 *e*Pn **Pn 19 03 35.3 +1.4**
PVRL *e*Sn **Sn 19 04 31.1 -4.0**
PVRL A A 19 04 38.2
comp=N,24nm,0.5s
OUK Oukaimeden 5.45 204 P **Pn 19 03 34.9 -0.5**
OUK S **Sn 19 04 32.4 -5.3**
POLO Lamas de Olo 5.47 340 *e*Pn **Pn 19 03 37.0 +1.5**
POLO *e*Sn **Sn 19 04 36.2 -1.7**
POLO A A 19 05 26.6
comp=N,14nm,0.7s
PTO Porto 5.52 333 *e*Pn **Pn 19 03 36.9 +0.9**
PTO *e*Sn **Sn 19 04 37.8 -1.1**
EMOS Mosqueruela 5.61 41 Pn **Pn 19 03 40.0 +2.5**
EMOS *i* Vmb_Lg 19 05 41.5
PBRG Braganca 5.66 349 *e*Pn **Pn 19 03 39.5 +1.5**
PBRG *e*Sn **Sn 19 04 41.4 -1.1**
PBRG A A 19 05 25.8
comp=N,20nm,0.5s
ECAL Calabor 5.79 350 Pn **Pn 19 03 41.4 +1.5**
PCAB Cabril 5.85 340 *e*Pn **Pn 19 03 42.4 +1.8**
PCAB *e*Sn **Sn 19 04 45.6 -1.5**
ELOB Lobios 6.00 340 Pn **Pn 19 03 44.3 +1.5**
ELOB *i* Vmb_Lg 19 05 37.3
PGAV Gavieira, Arco 6.15 339 *e*Pn **Pn 19 03 46.7 +1.9**
PGAV *e*Sn **Sn 19 04 53.9 -0.8**
PGAV A A 19 05 46.9
comp=N,32nm,0.6s
EARI Arriondas 7.05 1 Pn **Pn 19 04 00.8 +3.7**
EARI *i* Vmb_Lg 19 06 27.4
EPON Pontenova 7.21 349 Pn **Pn 19 04 01.3 +2.0**
SJPF Ste Jean 7.55 23 *e*Pn **Pn 19 04 06.8 +2.8**
SJPF *e*Sn **Sn 19 05 26.7 -2.4**
comp=N,7.2nm,0.6s
SJPF *e*Sg Sb 19 06 16.3 +21
comp=N,20nm,0.9s
EALK Alkurruntz 7.56 22 Pn **Pn 19 04 06.4 +2.3**
ETSF Etsaut 7.60 28 *e*Pn **Pn 19 04 07.0 +2.4**
ETSF Etsaut 7.60 28 *e*P Pn 19 04 11.1 +6.5
ETSF *e*Sn **Sn 19 05 28.6 -1.6**
comp=N,3.7nm,0.5s
ETSF *e*Sg Sb 19 06 17.2 +21
comp=N,6.1nm,0.7s
EPF Esparros 8.07 31 *e*Pn **Pn 19 04 12.8 +1.8**
EPF Esparros 8.07 31 *e*P Pn 19 04 17.8 +6.8
EPF *e*Sn **Sn 19 05 38.8 -2.9**
comp=N,6.3nm,0.6s
EPF *e*Sg Sb 19 06 29.9 +20
comp=N,10nm,0.8s
MTLF Montolieu 9.16 37 *e*Pn **Pn 19 04 27.4 +1.4**
MTLF *e*Sn **Sn 19 06 06.0 -2.5**
comp=N,29nm,1.7s
MTLF *e*Sg 19 07 05.5
comp=N,2.7nm,0.7s
LFF La Frestale 9.83 26 *e*Pn **Pn 19 04 36.0 +0.8**
CAF Calviac 10.33 31 *e*Pn **Pn 19 04 42.7 +0.6**
CAF *e*Sn **Sn 19 06 33.4 -3.9**
comp=N,0.7nm,0.2s
RJF Les Rejaudoux 10.43 28 *e*Pn **Pn 19 04 44.3 +0.9**
RJF *e*Sn **Sn 19 06 37.3 -2.4**
comp=N,1.1nm,0.4s
LASF Ste Croix 10.51 39 *e*Pn **Pn 19 04 45.3 +0.8**
LASF Ste Croix 10.51 39 *e*P Pn 19 04 51.9 +7.4
LASF *e*Sg 19 07 48.2
comp=N,1.4nm,0.5s
MFF Saint Martin d 11.05 19 *e*Pn **Pn 19 04 52.0 +0.1**
MFF *e*Sn **Sn 19 06 48.6 -6.3**
comp=N,2.3nm,0.5s
VIVF Saint-Julien-l 11.48 38 *e*Pn **Pn 19 04 57.0 -0.7**
TCF Toulx Ste Croi 11.52 27 *e*Pn **Pn 19 04 59.2 +0.9**
QUIF Quistinic 11.78 7 *e*Pn **Pn 19 05 01.8 +0.1**
QUIF *e*Sn Sn 19 07 04.3 -8.2
comp=N,4.8nm,0.5s
BGF Bois d'Agland 11.99 28 *e*Pn **Pn 19 05 06.0 +1.3**
SGMF Saint Gilles 12.18 9 *e*Pn **Pn 19 05 08.0 +0.8**
ROSF Rostrenen 12.18 7 *e*Pn **Pn 19 05 08.2 +0.9**
AVF Avril sur Loir 12.38 29 *e*Pn **Pn 19 05 09.1 -0.9**
SMF Signal de Mont 12.45 31 *e*Pn **Pn 19 05 11.9 +0.8**
MBDF Montbardon 12.51 44 *e*P P 19 05 18.6 -5.0
HYF Humbligny 12.51 26 *e*P P 19 05 18.4 -5.1
GRR Gorron 12.58 14 *e*Pn **Pn 19 05 13.3 +0.6**
PGF Pioggiola 12.74 56 *e*Pn **Pn 19 05 15.6 +0.5**
LDF La Druitiere 12.92 16 *e*Pn **Pn 19 05 17.8 +0.4**
LPG La Plagne 12.99 41 *e*P Pn 19 05 23.5 +4.9
LPL La Plagne 12.99 41 *e*P P 19 05 24.3 -4.7
FLN La Foliniere 13.01 14 *e*Pn **Pn 19 05 19.2 +0.6**
baz=195
CABF La Chapelle 13.43 36 *e*P **P 19 05 30.7 -3.0**
GERES GERESS Array B 18.78 42 P **Pn 19 06 35.0 +1.4**
comp=N,0.1nm,0.3s,baz=228,slow=14,SNR=3.9
comp=N,0.2nm,0.6s
KHC Kasperske Hory 18.88 41 P **Pn 19 06 37.9 +3.2**
KHC IAmb IAmb 19 06 56.8
comp=Z,5.0nm,1.5s
KHC Kasperske Hory 18.88 41 *e*P **Pn 19 06 36.9 +2.2**
TOA0 Torodi Ar. Sit 23.85 163 P **P 19 07 29.1 +2.1**
TOA0 IAmb IAmb 19 07 35.0
comp=Z,6.3nm,1.3s
TORD Torodi Ar. Bea 23.85 163 P **P 19 07 28.1 +1.0**
comp=Z,1.4nm,0.7s,baz=348,slow=10,SNR=10.0
comp=Z,1.4nm,0.7s
MLR Muntele Rosu 25.26 59 LR LR 19 19 46.7
comp=Z,78nm,18.1s,baz=263,slow=41
FINES FINESS Array B 32.03 28 P **P 19 08 43.9 +4.0**
comp=Z,1.4nm,0.9s,baz=205,slow=8.4,SNR=3.5
comp=Z,1.4nm,0.9s
ZALV Zalesovo Beam 61.74 42 LR LR 19 40 17.2
comp=Z,36nm,21.2s,baz=215,slow=37

IDC 31 19:05:19.4±1.8, 10°70'S×164°09'E, h0km, mb3.7/3, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=51.5km s-min=33.3km az=129.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.53**	**169**	Pn	Pn	19 08 04.4	-1.1
	0.7nm,0.3s,baz=345,slow=20,SNR=2.0						
	5.1nm,0.5s						
CTA	**Charters Tower**	**19.55**	**239**	P	Pn	19 09 54.3	+4.2
	4.9nm,0.8s,baz=71,slow=14,SNR=3.1						
H11S2	**WAKE ISLAND Hy**	**29.12**	**5**	T	T	19 41 54.8	
	baz=183						
H11S3	**WAKE ISLAND Hy**	**29.13**	**5**	T	T	19 42 44.9	
	baz=183						
H11S1	**WAKE ISLAND Hy**	**29.14**	**5**	T	T	19 42 33.9	
	baz=183						
WRA	**Warramunga Arr**	**30.09**	**249**	P	P	19 11 30.9	+0.1
	0.3nm,0.3s,baz=77,slow=8.8,SNR=9.2						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**31.51**	**242**	P	P	19 11 43.4	0.0
	0.3nm,0.6s,baz=64,slow=10,SNR=5.5						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**83.71**	**19**	P	P	19 17 50.0	+0.2
	0.4nm,0.2s,baz=212,slow=6.2,SNR=4.5						
	0.4nm,0.2s						

*IDC **31** 19:20:23.1±1.0, 20°11N×147°19E, h0km, mb3.7/9, mbtmp3.7/9, MS3.2/3, Error ellipse: s-maj=31.3km s-min=22.4km az=92.0*

ISC 31 19:20:28.9±1.0, 20°1N±0°2×147°1E±0°2, h40km, n11, σ0s59/9, mb3.7/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.83**	**199**	LR	LR	19 24 20.2	
	comp=Z,40nm,20.2s,baz=40,slow=35						
KSRS	**Korea Array**	**24.07**	**320**	P	**P**	**19 25 40.7**	**+0.2**
	1.7nm,0.9s,baz=123,slow=10,SNR=3.1						
	1.7nm,0.9s						
SIJI	**Sorong**	**26.00**	**219**	LR	LR	19 34 07.7	
	comp=Z,68nm,20.9s,baz=146,slow=32						
WRA	**Warramunga Arr**	**41.72**	**198**	P	**P**	**19 28 13.8**	**-0.4**
	0.9nm,1.0s,baz=1.1,slow=8.8,SNR=3.3						
WRA				LR	LR	19 44 46.1	
	comp=Z,106nm,18.4s,baz=334,slow=35						
	0.9nm,1.0s						
SONM	**Songino Array**	**42.94**	**320**	P	**P**	**19 28 23.5**	**-0.5**
	0.9nm,0.7s,baz=136,slow=7.8,SNR=6.6						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**45.37**	**197**	P	**P**	**19 28 43.7**	**+0.1**
	0.4nm,0.8s,baz=9.8,slow=15,SNR=5.5						
	0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**57.76**	**322**	P	**P**	**19 30 15.5**	**-0.3**
	1.3nm,0.7s,baz=107,slow=9.5,SNR=5.4						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**58.50**	**313**	P	**P**	**19 30 22.2**	**+1.0**
	0.8nm,0.9s,baz=106,slow=11,SNR=3.7						
	0.8nm,0.9s						
ILAR	**Eielson Array**	**61.80**	**26**	P	**P**	**19 30 43.2**	**-0.2**
	0.5nm,0.7s,baz=262,slow=5.5,SNR=5.2						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**76.12**	**28**	P	**P**	**19 32 12.0**	**-0.4**
	1.0nm,0.7s,baz=286,slow=6.8,SNR=3.2						
	1.0nm,0.7s						
NVAR	**Mina Array Bea**	**81.21**	**52**	P	**P**	**19 32 41.8**	**+0.6**
	0.8nm,0.7s,baz=262,slow=5.4,SNR=5.0						
	0.8nm,0.7s						

NOU 31 19:34:19.6, 16°28S×167°64E, h20km, mb4.2/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.53**	**160**	P	Pn	19 34 46.0	+0.2
KOUNC	**Koumac, New Ca**	**5.31**	**216**	P	Pn	19 35 36.9	-0.9
YATNC	**Mamie plateau,**	**5.79**	**187**	P	Pn	19 35 43.8	-0.6
DZM	**Mont Dzumac**	**5.87**	**191**	P	Pn	19 35 45.1	-0.5
NOUC	**Port Laguerre**	**5.93**	**192**	P	Pn	19 35 46.4	+0.1
ONTNC	**Ouen Toro**	**6.10**	**190**	P	Pn	19 35 49.6	+0.9

*KRNET **31** 19:57:21.9±0.1, 39°05N×72°72E, h14km, mb2.8*

ISC 31 19:57:29.7±2.2, 39°2N±0°1×72°47E±0°09, h31km, n5, σ2s48/10, 11C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.57**	**295**	⇑*i*P	**Pn**	**19 57 38.0**	**-4.0**
	baz=2.0						
DRK				⇑*i*S	**Sb**	**19 57 49.7**	**0.0**
	baz=2.0						
BTK	**Batken**	**1.52**	**303**	⇑*e*P	**Pn**	**19 57 55.2**	**+0.4**
	baz=5.0						
BTK				⇑*i*S	**Sb**	**19 58 19.4**	**+3.3**
	baz=5.0						
GAR	**Garm**	**1.69**	**263**	⇑*i*P	**Pn**	**19 57 56.6**	**-0.6**
	baz=69						
GAR				⇑*i*S	**Sb**	**19 58 22.3**	**+1.1**
	baz=69						
ARLS	**Aral**	**2.98**	**28**	⇑*e*P	**Pn**	**19 58 13.9**	**-1.0**
	baz=23						
ARLS				⇑*i*S	**Sn**	**19 58 51.7**	**+2.1**
	baz=23						
KK31	**Karatay Array**	**4.13**	**340**	⇑Pn	**Pn**	**19 58 31.2**	**+0.5**
	0.7nm,0.4s,baz=148,slow=12,SNR=5.9						
KK31				⇑Sn	**Sb**	**19 59 28.2**	**-3.0**
	0.9nm,0.4s,baz=159,slow=15,SNR=4.8						
KK31				⇑Lg	Lg	19 59 51.7	
	1.9nm,0.5s,baz=147,slow=27						

*IGIL **31** 20:05:24.2, 36°68N×12°77W, h10km*
*MDD **31** 20:05:26.9±1.1, 36°94N×12°55W, h10km±24km, Mb3.9/5, M_mb3.2/5, Error ellipse: s-maj=30.9km s-min=7.7km az=57.0*
*INMG **31** 20:05:28.9±1.3, 36°69N×12°73W, h58km, ML2.4, Error ellipse: s-maj=8.1km s-min=4.8km az=97.0*
*CNRM **31** 20:05:35.9, 36°69N×11°14W, h217km, ml0.9*

ISC 31 20:05:25.5±3.8, 36°9N±0°1×12°5W±0°2, h10km, n37, σ1s89/61, 5C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.92**	**85**	P	**Pn**	**20 06 12.3**	**+0.4**
PFVI				S	**Sn**	**20 06 46.5**	**-0.6**
PFVI	**Vila Bisbo**	**2.92**	**85**	*e*P	**Pn**	**20 06 12.7**	**+0.7**
PFVI				A	A	20 06 55.4	
	9.2nm,0.8s						
PTEO	**Sao Teotonio**	**3.05**	**77**	*e*P	**Pn**	**20 06 15.5**	**+1.7**
PTEO				S	**Sn**	**20 06 50.4**	**+0.1**
MORF	**Marmelete**	**3.07**	**81**	*e*P	**Pn**	**20 06 14.9**	**+0.8**
MORF	**Marmelete**	**3.07**	**81**	*e*P	**Pn**	**20 06 15.0**	**+0.8**
MORF				S	**Sn**	**20 06 51.9**	**+1.0**
PMAFR	**Mafra**	**3.24**	**50**	*e*P	**Pn**	**20 06 18.4**	**+2.0**
PMAFR				S	**Sn**	**20 06 56.1**	**+1.1**
PMAFR				A	A	20 06 58.1	
	25nm,0.7s						
PNCL	**Nicolau / Gran**	**3.35**	**68**	*e*P	**Pn**	**20 06 19.4**	**+1.5**
PNCL				S	**Sn**	**20 06 57.6**	**-0.1**
PNCL				A	A	20 07 01.1	
	3.4nm,0.4s						
PACT	**Alcochete**	**3.42**	**56**	*e*P	**Pn**	**20 06 21.1**	**+2.3**
PACT				S	**Sn**	**20 07 01.0**	**+1.6**
PACT				A	A	20 07 07.1	
	30nm,0.8s						
MESJ	**Messejana**	**3.50**	**73**	*e*P	**Pn**	**20 06 21.9**	**+1.9**
MESJ				S	**Sn**	**20 07 02.2**	**+0.7**
MESJ				A	A	20 07 22.7	
	3.1nm,0.7s						
PCVE	**Castro Verde**	**3.60**	**77**	*e*P	**Pn**	**20 06 22.8**	**+1.4**
PCVE				S	**Sn**	**20 07 03.4**	**-0.5**
PCVE				A	A	20 07 23.6	
	2.5nm,0.9s						
PBDV	**Barranco-do-Ve**	**3.64**	**83**	*e*P	**Pn**	**20 06 19.5**	**-2.4**
PBDV				S	**Sn**	**20 07 03.3**	**-1.6**
PBEJ	**Beja**	**3.82**	**72**	*e*P	**Pn**	**20 06 26.0**	**+1.6**
PVAQ	**Vaqueiros**	**3.82**	**81**	P	**Pn**	**20 06 24.9**	**+0.5**
PVAQ				S	**Sn**	**20 07 04.2**	**-5.2**
PVAQ	**Vaqueiros**	**3.82**	**81**	*e*P	**Pn**	**20 06 25.6**	**+1.2**
PVAQ				S	**Sn**	**20 07 10.0**	**+0.6**
PSBE	**So Bento**	**3.88**	**47**	*e*P	**Pn**	**20 06 28.4**	**+3.1**
PSBE				S	**Sn**	**20 07 11.7**	**+0.7**
PSBE				A	A	20 07 17.4	
	7.6nm,0.6s						
PMTG	**Montargil**	**3.98**	**56**	*e*P	**Pn**	**20 06 27.9**	**+1.3**
PMTG				S	**Sn**	**20 07 12.8**	**-0.5**
PMTG				A	A	20 07 17.6	
	2.5nm,0.5s						
EGRO	**El Granado**	**4.02**	**80**	P	**Pn**	**20 06 28.6**	**+1.4**
EGRO				⇑*i*Vmb_V		20 06 29.2	
	136nm,SNR=1.5						
EGRO				S	**Sn**	**20 07 14.5**	**+0.2**
PESTR	**Estremoz**	**4.32**	**62**	P	**Pn**	**20 06 30.6**	**-0.7**
PESTR				S	**Sn**	**20 07 18.6**	**-3.1**
PESTR	**Estremoz**	**4.32**	**62**	*e*P	**Pn**	**20 06 32.8**	**+1.5**
PESTR				S	**Sn**	**20 07 20.3**	**-1.4**
PESTR				A	A	20 07 27.3	
	1.5nm,0.2s						
PCAS	**Casmilo, Conde**	**4.42**	**44**	*e*P	**Pn**	**20 06 34.9**	**+2.3**
PCAS				S	**Sn**	**20 07 23.9**	**-0.2**
PCAS				A	A	20 07 27.0	
	5.2nm,0.6s						
PBAR	**Barrancos**	**4.49**	**72**	*e*P	**Pn**	**20 06 35.1**	**+1.5**
PBAR				S	**Sn**	**20 07 25.0**	**-0.9**
PBAR				A	A	20 07 35.5	
	1.2nm,0.6s						
EBAD	**Badajoz**	**4.69**	**65**	P	**Pn**	**20 06 37.7**	**+1.4**
EBAD				⇑*i*Vmb_V		20 06 39.7	
	115nm,SNR=2.0						
EBAD				S	**Sn**	**20 07 29.2**	**-1.6**
EMIN	**Mina Concepcio**	**4.69**	**78**	P	**Pn**	**20 06 37.4**	**+1.0**
EMIN				⇑*i*Vmb_V		20 06 38.4	
	82nm,SNR=1.4						
EMIN				S	**Sn**	**20 07 29.4**	**-1.5**
PMRV	**Marv??o**	**4.72**	**56**	*e*P	**Pn**	**20 06 38.3**	**+1.5**
PMRV				S	**Sn**	**20 07 29.8**	**-1.8**
PMRV				A	A	20 07 32.7	
	2.8nm,0.2s						
PCBR	**Castelo Branco**	**4.89**	**52**	*e*P	**Pn**	**20 06 41.0**	**+1.9**
PCBR				S	**Sn**	**20 07 35.0**	**-0.7**
PCBR				A	A	20 07 39.4	
	1.9nm,0.5s						
PVIS	**Viseu**	**5.21**	**42**	S	**Sn**	**20 07 42.0**	**-1.7**
PVIS				A	A	20 07 43.4	
	9.0nm,0.3s						
ESPR	**Espera**	**5.29**	**88**	P	**Pn**	**20 06 45.5**	**+0.9**
ESPR				⇑*i*Vmb_V		20 06 45.9	
	124nm,SNR=2.3						
ESPR				S	**Sn**	**20 07 45.2**	**-0.4**
PVRL	**Vila Real**	**5.71**	**39**	S	**Sn**	**20 07 54.6**	**-1.4**
ECAB	**El Cabril**	**5.72**	**76**	P	**Pn**	**20 06 51.2**	**+0.7**
ECAB				⇑*i*Vmb_V		20 06 53.2	
	54nm,SNR=1.5						
ECAB				S	**Sn**	**20 07 52.4**	**-3.8**
POLO	**Lamas de Olo**	**5.75**	**38**	S	**Sn**	**20 07 54.0**	**-3.0**
POLO				A	A	20 07 59.4	
	1.3nm,0.7s						
PCAB	**Cabril**	**5.90**	**34**	S	**Sn**	**20 07 59.7**	**-0.9**
MVO	**Moncorvo**	**5.99**	**43**	*e*P	**Pn**	**20 06 56.0**	**+1.7**
MVO				S	**Sn**	**20 08 00.5**	**-2.5**
MVO				A	A	20 08 04.6	
	3.2nm,0.6s						
PGAV	**Gavieira, Arco**	**6.00**	**31**	S	**Sn**	**20 08 01.3**	**-1.9**
PGAV				A	A	20 08 13.9	
	3.4nm,0.8s						
ELOB	**Lobios**	**6.01**	**33**	S	**Sn**	**20 08 00.8**	**-2.6**
EMAZ	**Mazaricos**	**6.60**	**23**	S	**Sn**	**20 08 11.9**	**-5.9**
MD31	**MD31**	**7.50**	**120**	P	Pn	20 07 12.0	-3.1
MD31				S	Sn	20 08 24.3	-16
MDT	**Midelt**	**7.64**	**120**	P	Pn	20 07 13.8	-3.2
MDT				S	Sn	20 08 25.6	-18

*PRU **31** 20:08:00.9±0.0, 42°75N×13°41E, h0km*
*ROM **31** 20:08:03.0±0.0, 42°821N±0°002×13°131E±0°003, h10km, ML3.5/107, Error ellipse: s-maj=0.3km s-min=0.1km az=68.0*
*IDC **31** 20:08:03.0±1.4, 42°93N×12°83E, h0km, mb3.4/4, mbtmp3.5/5, ML3.7/1, MS2.6/1, Error ellipse: s-maj=45.7km s-min=15.4km az=96.0*
*BEO **31** 20:08:05.6±0.8, 42°83N×13°32E, h0km, ML3.5/6*
*LDG **31** 20:08:05.0±0.1, 42°74N×13°11E, h11km, MI3.2/27, Error ellipse: s-maj=3.6km s-min=2.2km az=44.0*

ISC 31 20:08:03.3±0.7, 42°81N±0°01×13°11E±0°01, h12km±3km, n302, σ1s75/380, mb3.6/3, 44C-9D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.02**	**5**	⇓P	**Pg**	**20 08 04.9**	**-0.6**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1242	**Castelluccio d**	**0.07**	**76**	⇓P	**Pg**	**20 08 05.3**	**-0.6**
T1242				S	**Sg**	**20 08 06.6**	**-1.2**
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1212	**Cascia, Frazio**	**0.08**	**219**	⇑*i*P	**Pg**	**20 08 06.1**	**+0.2**
T1212				S	**Sg**	**20 08 08.1**	**+0.2**
T1213	**Norcia, Frazio**	**0.09**	**173**	⇑*e*P	**Pg**	**20 08 06.0**	**0.0**
T1213				S	**Sg**	**20 08 07.8**	**-0.2**
T1214	**Arquata del Tr**	**0.09**	**127**	⇓*i*P	**Pg**	**20 08 05.8**	**-0.3**
T1214				S	**Sg**	**20 08 07.5**	**-0.7**
T1216	**Preci, Frazion**	**0.10**	**319**	⇑*e*P	**Pg**	**20 08 06.1**	**-0.1**
T1216				S	**Sg**	**20 08 08.1**	**-0.2**
MC2	**Monte Cornacci**	**0.12**	**30**	⇑P	**Pg**	**20 08 06.0**	**-0.4**
MC2				S	**Sg**	**20 08 08.1**	**-0.7**
T1202	**Accumoli, Fraz**	**0.14**	**143**	⇓P	**Pg**	**20 08 06.8**	**+0.1**
T1202				S	**Sg**	**20 08 09.4**	**+0.3**
T1202				AML	AML		
	comp=E,63450μm,0.9s						
T1202				AML	AML		
	comp=E,63550μm,0.9s						
T1202				AML	AML		
T1218	**Civita (PG)**	**0.14**	**179**	⇑*i*P	**Pg**	**20 08 07.0**	**+0.2**
T1218				S	**Sg**	**20 08 09.8**	**+0.5**
T1244	**Arquata del Tr**	**0.15**	**112**	⇑P	**Pg**	**20 08 06.8**	**0.0**
T1244				S	**Sg**	**20 08 09.6**	**+0.3**
T1244				AML	AML		
	comp=E,90300μm,0.5s						
T1244				AML	AML		

comp=N,77600µm,1.5s
T1244 AML AML
comp=E,90350µm,0.4s
T1244 AML AML
comp=N,77600µm,1.6s
T1244 AML AML
comp=E,90200µm,0.4s
T1244 AML AML
comp=N,77050µm,1.6s
T1244 AML AML
comp=E,90300µm,0.4s
T1244 AML AML
comp=E,90150µm,0.4s
FEMA Monte Fema 0.16 343 P **Pg 20 08 06.9 -0.1**
FEMA S **Sg 20 08 09.5 -0.2**
FEMA AML AML
comp=E,76350µm,0.3s
FEMA AML AML
comp=E,76400µm,0.3s
FEMA AML AML
comp=N,75550µm,0.6s
FEMA AML AML
comp=N,75550µm,0.6s
FEMA AML AML
comp=E,76400µm,0.3s
MMO1 Montemonaco 0.18 61 ⇑P **Pg 20 08 07.0 -0.3**
MMO1 S **Sg 20 08 09.8 -0.4**
T1215 Vallo di Nera, 0.18 267 ⇑P **Pg 20 08 07.7 +0.4**
T1215 S **Sg 20 08 11.0 +0.9**
T1215 AML AML
comp=N,15550µm,0.9s
T1215 AML AML
comp=N,15650µm,0.9s
T1215 AML AML
comp=E,18400µm,0.1s
T1215 AML AML
comp=E,17650µm,0.1s
T1215 AML AML
comp=N,15500µm,0.9s
T1215 AML AML
comp=N,15700µm,0.9s
T1215 AML AML
comp=E,18450µm,0.1s
T1201 Domo (RI) 0.19 147 ⇓P **Pg 20 08 07.8 +0.4**
T1201 S **Sg 20 08 11.4 +1.1**
T1201 AML AML
comp=E,43200µm,0.8s
T1201 AML AML
comp=N,39050µm,0.7s
T1204 Amatrice, Fraz 0.20 132 ⇑P **Pg 20 08 07.8 +0.1**
T1204 S **Sg 20 08 11.4 +0.6**
LNSS Leonessa 0.22 194 ⇑P **Pg 20 08 08.2 +0.3**
LNSS S **Sg 20 08 12.1 +1.0**
LNSS AML AML
comp=E,55850µm,0.2s
LNSS AML AML
comp=N,59800µm,0.5s
FDMO Fiordimonte 0.22 355 ⇑P **Pg 20 08 07.9 -0.1**
FDMO S **Sg 20 08 11.5 +0.2**
FDMO AML AML
comp=E,22250µm,0.2s
FDMO AML AML
comp=N,26650µm,0.4s
T1241 Roccafluviove, 0.24 79 ⇑P **Pg 20 08 08.1 -0.2**
T1241 S **Sg 20 08 11.9 +0.2**
T1241 AML AML
comp=E,41950µm,0.4s
T1241 AML AML
comp=N,33750µm,0.7s
T1241 AML AML
comp=E,42000µm,0.4s
T1241 AML AML
comp=E,40000µm,0.4s
T1241 AML AML
comp=N,33800µm,0.7s
CESI CESI - Serrava 0.24 322 ⇑P **Pg 20 08 08.6 +0.1**
CESI S **Sg 20 08 12.7 +0.8**
CESI AML AML
comp=E,41850µm,0.4s
CESI AML AML
comp=N,79650µm,0.5s
SMA1 SAN MARTINO 0.25 138 ⇑P **Pg 20 08 08.5 0.0**
SMA1 S **Sg 20 08 12.5 +0.6**
SMA1 AML AML
comp=E,28250µm,0.5s
SMA1 AML AML
comp=N,27050µm,0.3s
T1243 Rocca Santa Ma 0.27 115 ⇑P **Pg 20 08 08.7 -0.2**
T1243 S **Sg 20 08 13.1 +0.3**
CSP1 Cessapalombo 0.29 14 ⇑P **Pg 20 08 08.9 -0.3**
CSP1 S **Sg 20 08 13.5 +0.3**
CSP1 AML AML
comp=E,33350µm,0.5s
CSP1 AML AML
comp=N,40550µm,0.4s
CSP1 AML AML
comp=E,33300µm,0.5s
CSP1 AML AML
comp=N,40500µm,0.4s
RM33 Pellescritta (0.31 166 ⇑P **Pg 20 08 09.8 +0.1**
RM33 S **Sg 20 08 15.4 +1.5**
RM33 AML AML
comp=E,9105µm,1.0s
RM33 AML AML
comp=E,9170µm,1.0s
RM33 AML AML
comp=E,9095µm,1.0s
RM33 AML AML
comp=N,12500µm,0.3s
RM33 AML AML
comp=E,9150µm,1.0s
RM33 AML AML
comp=N,12450µm,0.3s
RM33 AML AML
comp=N,12550µm,0.3s
RM33 AML AML
comp=E,9080µm,1.0s
T1211 Morro Reatino 0.34 214 ⇑*i*P **Pg 20 08 10.4 +0.3**
T1211 S **Sg 20 08 16.3 +1.6**
ARRO Arrone 0.35 228 ⇓P **Pg 20 08 10.0 -0.2**
ARRO S **Sb 20 08 16.8 0.0**
CAMP Campotosto 0.35 142 P **Pg 20 08 10.2 -0.1**
CAMP S **Sg 20 08 15.8 +0.7**
CAMP AML AML
comp=N,5560µm,0.4s
CAMP AML AML
comp=E,5975µm,1.2s
SEF1 Sefro 0.35 340 P **Pg 20 08 10.4 0.0**
SEF1 S **Sg 20 08 15.9 +0.7**
SEF1 AML AML
comp=E,25450µm,0.2s
SEF1 AML AML
comp=E,25450µm,0.2s
SEF1 AML AML
comp=N,19000µm,0.2s
T1246 Crognaleto (TE 0.36 129 ⇑*i*P **Pg 20 08 10.3 -0.2**
T1246 S **Sg 20 08 15.9 +0.5**
PIO1 Pioraco 0.38 346 P **Pg 20 08 10.7 -0.1**
PIO1 S **Sg 20 08 16.7 +0.8**
PIO1 AML AML
comp=E,6860µm,0.9s
PIO1 AML AML
comp=N,9175µm,0.9s
PIO1 AML AML
comp=N,9165µm,0.9s
PIO1 AML AML
comp=E,6860µm,0.9s
MDAR Monte D'Aria 0.38 3 P **Pg 20 08 10.6 -0.2**
MDAR S **Sg 20 08 16.6 +0.6**
MDAR AML AML
comp=E,18850µm,0.3s
MDAR AML AML
comp=N,17100µm,0.2s
T1247 Pizzolo (AQ) 0.40 160 *e*P **Pg 20 08 11.2 0.0**
T1247 S **Sg 20 08 17.7 +1.3**
FIU1 Fiuminata 0.40 341 P **Pg 20 08 11.1 -0.1**
FIU1 S **Sg 20 08 17.4 +0.9**
FIU1 AML AML
comp=E,7965µm,0.4s
FIU1 AML AML
comp=N,8545µm,1.0s
FIU1 AML AML
comp=E,7930µm,0.4s
FIU1 AML AML
comp=N,8555µm,1.0s
ASSB Assisi San Ben 0.40 305 P **Pg 20 08 11.3 0.0**
ASSB S **Sg 20 08 17.7 +1.0**
ASSB AML AML
comp=N,13400µm,0.3s
ASSB AML AML
comp=E,17300µm,0.3s
TERO Teramo 0.41 117 ⇑P **Pg 20 08 11.0 -0.4**
TERO S **Sg 20 08 17.2 +0.4**
TERO AML AML
comp=E,11700µm,0.7s
TERO AML AML
comp=N,17550µm,0.6s
TERO AML AML
comp=E,11750µm,0.7s
TERO AML AML
comp=N,16400µm,0.6s
TERO AML AML
comp=E,12700µm,0.7s
MNTP Montappone 0.42 39 ⇑P **Pg 20 08 11.8 +0.3**
MNTP S **Sb 20 08 18.4 -0.5**
MNTP AML AML
comp=N,21650µm,1.5s
MNTP AML AML
comp=E,25950µm,0.5s
MNTP AML AML
comp=N,21650µm,1.5s
SSM1 San Severino M 0.42 7 P **Pg 20 08 11.3 -0.2**
SSM1 S **Sg 20 08 17.8 +0.7**
GAG1 Gagliole 0.43 356 P **Pg 20 08 11.7 0.0**
GAG1 S **Sg 20 08 18.4 +1.0**
GAG1 AML AML
comp=N,26850µm,0.9s
GAG1 AML AML
comp=N,26900µm,0.9s
GAG1 AML AML
comp=E,24700µm,0.3s
CESX Cesi 0.44 243 ⇑P **Pg 20 08 12.1 +0.1**
CESX AML AML
comp=E,7290µm,0.5s
CESX AML AML
comp=N,5995µm,0.4s
MTL1 Matelica 0.45 350 P **Pg 20 08 12.1 0.0**
MTL1 S **Sg 20 08 18.9 +0.8**
MTL1 AML AML
comp=N,13900µm,0.4s
MTL1 AML AML
comp=E,21900µm,0.5s
MTL1 AML AML
comp=N,13850µm,0.4s
SNTG Esanatoglia 0.46 344 P **Pg 20 08 12.1 -0.2**
SNTG S **Sg 20 08 18.9 +0.4**
GIGS Gran Sasso 0.49 137 ⇑P **Pg 20 08 12.4 -0.6**
GIGS S **Sg 20 08 20.2 +0.6**
GIGS AML AML
comp=N,1375µm,1.5s
GIGS AML AML
comp=E,2210µm,0.4s
ATCC AVT- Casa Cast 0.51 317 ⇑P **Pg 20 08 13.2 0.0**
ATCC S **Sb 20 08 21.3 -0.3**
ATCC AML AML
comp=N,9950µm,1.6s
ATCC AML AML
comp=E,10800µm,0.3s
ATCC AML AML
comp=N,9955µm,1.6s
EL6 Elcito 0.52 359 ⇑P **Pg 20 08 13.1 -0.3**
EL6 S **Sg 20 08 20.5 +0.2**
TRE1 Treia 0.52 16 P **Pg 20 08 13.6 +0.2**
TRE1 AML AML
comp=E,18400µm,1.6s
TRE1 AML AML
comp=N,15700µm,1.0s
FIAM Fiamignano 0.54 180 ⇑P **Pg 20 08 13.7 -0.2**
FIAM S **Sg 20 08 22.1 +1.0**
FIAM AML AML
comp=E,5435µm,1.5s
FIAM AML AML
comp=N,5040µm,0.2s
FOSV Fossato di Vic 0.55 332 ⇑P **Pg 20 08 13.7 -0.2**
FOSV S **Sg 20 08 22.3 +1.1**
FOSV AML AML
comp=E,4150µm,1.3s
FOSV AML AML
comp=N,5870µm,0.2s
CING Cingoli 0.57 6 ⇑P **Pg 20 08 13.8 -0.5**
CING S **Sb 20 08 22.8 -0.4**
CING AML AML
comp=N,7040µm,0.2s
CING AML AML
comp=E,6035µm,0.4s
TRTR Tortoreto Alta 0.59 90 ⇑*i*P **Pb 20 08 15.4 -0.1**
TRTR S **Sb 20 08 23.5 -0.4**
CADA Capodarco di F 0.61 51 P **Pb 20 08 16.1 +0.2**
CADA AML AML
comp=N,15250µm,1.1s
CADA AML AML
comp=E,18800µm,1.4s
MURB Monte Urbino 0.62 316 ⇑P **Pg 20 08 15.3 -0.1**
MURB AML AML
comp=E,15050µm,0.4s
MURB AML AML
comp=N,14650µm,0.9s
MURB AML AML
comp=E,14550µm,0.3s
MURB AML AML
comp=E,15000µm,0.4s
MURB AML AML
comp=N,15450µm,0.8s
MURB AML AML
comp=N,14650µm,0.9s
MMUR Monte Murano 0.63 352 P **Pg 20 08 15.3 -0.3**
MMUR S **Sb 20 08 25.2 0.0**
MMUR AML AML
comp=E,11250µm,0.6s
MMUR AML AML
comp=N,6170µm,0.4s
CIMA Civitanova Mar 0.64 40 P **Pb 20 08 16.3 -0.1**
FAGN Fagnano 0.65 147 P **Pg 20 08 15.4 -0.4**
FAGN AML AML
comp=E,6745µm,0.6s
FAGN AML AML
comp=N,5600µm,0.3s
SSFR Montelago di S 0.67 339 P **Pg 20 08 16.1 -0.1**
SSFR AML AML
comp=N,12500µm,0.2s
SSFR AML AML
comp=N,12300µm,0.2s
SSFR AML AML
comp=E,9400µm,0.2s
SSFR AML AML
comp=E,9100µm,0.2s
PP3 Marolino 0.67 33 P **Pg 20 08 16.3 0.0**
PP3 AML AML
comp=N,12350µm,0.9s
PP3 AML AML
comp=N,12400µm,0.9s
PP3 AML AML
comp=N,13100µm,0.9s
PP3 AML AML
comp=E,21850µm,0.3s
PP3 AML AML
comp=E,22700µm,0.3s
ATTE AVT- Monte Tez 0.68 305 ⇑P **Pg 20 08 16.1 -0.3**
ATTE AML AML
comp=E,2735µm,0.6s
ATTE AML AML
comp=N,3070µm,0.6s
ATFO Monte Foce - G 0.68 325 P **Pg 20 08 16.1 -0.4**
ATFO AML AML
comp=E,3605µm,0.6s
ATFO AML AML
comp=N,3740µm,0.4s
VCEL Villa Celiera 0.68 128 ⇑P **Pg 20 08 16.1 -0.3**
VCEL AML AML
comp=E,5375µm,0.8s
VCEL AML AML
comp=N,5975µm,1.0s
VCEL AML AML
comp=N,5980µm,1.0s
ARVD Arcevia 0.70 350 ⇑P **Pg 20 08 16.3 -0.5**
ARVD AML AML
comp=N,2130µm,0.6s
ARVD AML AML
comp=E,2895µm,0.8s
SRES S.Oreste - Sor 0.73 218 ⇑P **Pg 20 08 17.1 -0.3**
SRES AML AML
comp=E,2180µm,0.9s
SRES AML AML
comp=N,1535µm,1.1s
MGAB Montegabbione 0.74 278 ⇑P **Pg 20 08 17.6 -0.1**
MGAB AML AML
comp=E,8515µm,0.4s
MGAB AML AML
comp=N,6800µm,0.6s
MGAB AML AML
comp=E,8510µm,0.4s
MGAB AML AML
comp=N,7350µm,0.5s
MGAB AML AML
comp=E,10325µm,0.4s
FRON Frontone 0.76 338 P **Pg 20 08 17.1 -0.8**
FRON AML AML
comp=E,3170µm,0.5s
FRON AML AML
comp=N,3810µm,1.4s
FRON AML AML
comp=N,3805µm,1.4s
T0110 Collepietro 0.77 140 P **Pg 20 08 17.3 -0.8**
T0110 AML AML
comp=E,3975µm,0.7s
T0110 AML AML
comp=N,5095µm,0.5s
ATVO AVT- Monte Val 0.77 318 ⇑P **Pg 20 08 17.6 -0.5**
ATVO AML AML
comp=E,2185µm,0.8s
ATVO AML AML
comp=N,2495µm,0.5s
ATMI Monte Miggiano 0.81 310 P **Pg 20 08 18.7 -0.2**
ATMI AML AML
comp=E,9090µm,0.6s
ATMI AML AML
comp=N,8715µm,0.9s
AOI Ancona 0.82 26 ⇑P **Pg 20 08 18.6 -0.5**
AOI AML AML
comp=N,4165µm,0.9s
AOI AML AML
comp=E,4660µm,0.5s
PTQR Pietraquaria 0.82 165 P **Pg 20 08 18.6 -0.5**
PTQR AML AML
comp=N,1390µm,1.1s
PTQR AML AML
comp=E,1058µm,1.1s
ATPI Pietralunga - 0.82 321 ⇑P **Pg 20 08 18.7 -0.5**
ATPI AML AML
comp=E,2285µm,1.2s
ATPI AML AML
comp=N,2245µm,0.4s
ATPI AML AML
comp=N,2240µm,0.4s
COR1 Corinaldo 0.82 354 P **Pg 20 08 19.3 +0.1**
COR1 AML AML
comp=E,8235µm,0.5s
COR1 AML AML
comp=N,4785µm,0.9s
COR1 AML AML
comp=N,4790µm,0.9s
COR1 AML AML
comp=E,4390µm,0.5s
COR1 AML AML
comp=E,8230µm,0.5s
COR1 AML AML
comp=N,5105µm,1.4s
MTCE Montecelio 0.84 199 ⇑P **Pg 20 08 18.4 -0.9**
MTCE AML AML
comp=N,1500µm,0.9s
MTCE AML AML
comp=E,2500µm,0.4s
MPAG Monte Paganucc 0.86 343 P **Pg 20 08 19.1 -0.7**
MPAG AML AML
comp=N,2360µm,0.6s
MPAG AML AML
comp=N,2485µm,0.6s
MPAG AML AML
comp=N,2355µm,0.6s
MPAG AML AML
comp=E,2750µm,1.3s
MPAG AML AML
comp=E,2735µm,1.3s
CERT Cerreto 0.87 186 P **Pg 20 08 18.9 -1.1**
CERT AML AML
comp=E,4085µm,0.4s
CERT AML AML
comp=N,2765µm,0.3s
SACS San Casciano d 0.89 273 ⇑P **Pg 20 08 20.3 -0.1**
SACS AML AML
comp=E,2455µm,1.6s
SACS AML AML
comp=E,2425µm,1.6s
SACS AML AML
comp=N,2785µm,0.5s
SACS AML AML
comp=N,2890µm,0.5s
NARO Abbazia di Nar 0.89 334 P **Pg 20 08 19.6 -0.8**
NARO AML AML
comp=E,1505µm,0.3s
NARO AML AML
comp=N,1184µm,1.3s
SENI Senigallia 0.90 6 P **Pg 20 08 19.2 -1.4**
SENI AML AML
comp=E,15250µm,0.3s
SENI AML AML
comp=N,14450µm,0.6s
SENI AML AML
comp=E,3260µm,0.9s
SENI AML AML
comp=N,2690µm,0.5s
SENI AML AML
comp=N,14400µm,0.6s
SENI AML AML
comp=N,2690µm,0.5s
SENI AML AML
comp=E,3255µm,0.9s
SENI AML AML
comp=E,15200µm,0.3s
APEC Apecchio 0.90 326 P **Pg 20 08 19.8 -0.8**
APEC AML AML
comp=E,537µm,0.6s
APEC AML AML
comp=N,1070µm,1.1s
FSSB Fossombrone 0.91 345 P **Pg 20 08 20.3 -0.6**
FSSB AML AML
comp=E,6650µm,0.4s
FSSB AML AML
comp=N,9020µm,0.3s
BADI Badiali 0.94 318 P **Pg 20 08 20.9 -0.5**
BADI AML AML
comp=E,106µm,0.7s
BADI AML AML
comp=N,1695µm,0.5s
RCAV Rocca di Cave 0.97 187 P **Pg 20 08 21.5 -0.5**
LATE Laterza 0.98 259 P **Pg 20 08 22.1 -0.2**
CAFI Castiglion Fio 0.99 302 P **Pg 20 08 21.8 -0.5**
CAFI AML AML
comp=N,2370µm,0.7s
CAFI AML AML
comp=E,2855µm,0.5s
CAFI AML AML
comp=E,2780µm,0.4s
CAFI AML AML
comp=N,2520µm,0.7s
PE3 Peglio 0.99 333 P **Pg 20 08 22.0 -0.3**
INTR Introdacqua 0.99 143 P **Pg 20 08 21.2 -1.2**
INTR AML AML
comp=N,3220µm,0.8s
INTR AML AML
comp=E,2235µm,0.5s
VVLD Villa Vallelon 1.01 158 P **Pg 20 08 22.2 -0.6**
GUAR Guarcino 1.03 172 P **Pg 20 08 22.9 -0.2**
GUAR AML AML
comp=E,1770µm,1.2s
GUAR AML AML
comp=N,1955µm,1.0s
SSP9 Sansepolcro 1.04 317 P **Pg 20 08 23.0 -0.4**
SSP9 AML AML
comp=N,1624µm,1.4s
SSP9 AML AML
comp=E,1240µm,0.9s
RMP Rome, Mte Porz 1.05 197 P **Pg 20 08 22.4 -1.0**
RMP AML AML
comp=E,2380µm,1.5s
RMP AML AML
comp=N,3000µm,0.6s
SF03 Valle Cupa 1.05 270 P **Pg 20 08 22.9 -0.5**
PARC Parchiule 1.05 323 P **Pg 20 08 22.9 -0.7**

PARC AML AML
comp=E,1825µm,0.6s
PARC AML AML
comp=N,1625µm,0.7s
SF11 Podere del Sol 1.06 274 P **Pg** 20 08 23.4 -0.1
MCIV Monte Civitell 1.06 269 P **Pg** 20 08 23.3 -0.3
MCIV AML AML
comp=N,1420µm,0.8s
MCIV AML AML
comp=E,1130µm,1.0s
SF04 Casetta 1.07 272 P **Pg** 20 08 23.5 -0.3
VIVA Pratoni del Vi 1.09 194 P **Pg** 20 08 24.1 -0.2
VIVA AML AML
comp=N,5630µm,0.3s
VIVA AML AML
comp=E,4010µm,0.3s
RDP Rocca di Papa 1.09 196 P **Pg** 20 08 23.9 -0.4
RDP AML AML
comp=N,4400µm,0.6s
RDP AML AML
comp=E,4130µm,1.5s
MA9 Marino 1.09 198 P **Pg** 20 08 24.9 +0.6
SF13 Bagnolo 1.10 271 P **Pg** 20 08 23.8 -0.5
LPEL Lama dei Pelig 1.10 134 P **Pg** 20 08 22.8 -1.7
LPEL AML AML
comp=E,1490µm,0.7s
LPEL AML AML
comp=N,1700µm,0.6s
SF14 Selvena 1.10 268 P **Pb** 20 08 23.9 -0.4
TOLF Tolfa 1.11 228 P **Pb** 20 08 24.0 -0.5
TOLF AML AML
comp=E,1255µm,0.8s
TOLF AML AML
comp=N,1010µm,0.4s
SF01 Poggio Pratacc 1.14 270 P **Pb** 20 08 24.8 -0.1
SF01 AML AML
comp=E,1650µm,0.6s
SF01 AML AML
comp=N,1490µm,0.8s
CPGN Carpegna, Ital 1.14 330 P **Pb** 20 08 25.4 +0.3
PESA Pesaro 1.15 350 P **Pb** 20 08 24.6 -0.4
PESA AML AML
comp=E,3330µm,0.3s
PESA AML AML
comp=N,2960µm,1.1s
CRE Caprese Michel 1.17 314 P **Pb** 20 08 25.0 -0.5
CRE AML AML
comp=N,1165µm,1.2s
CRE AML AML
comp=E,998µm,0.6s
LAV9 Lanuvio 1.18 195 P **Pb** 20 08 25.3 -0.2
POFI Posta Fibreno 1.18 158 P **Pb** 20 08 24.7 -0.9
POFI AML AML
comp=E,950µm,0.6s
POFI AML AML
comp=N,674µm,0.8s
ARCI Arcidosso 1.21 272 P **Pb** 20 08 26.3 +0.3
LRP Arpino 1.22 163 P **Pn** 20 08 26.5 +0.4
LRP AML AML
comp=E,540µm,0.3s
LRP AML AML
comp=N,938µm,0.5s
RSM Repubblica di 1.22 337 P **Pg** 20 08 27.0 +0.3
GIUL Giuliano Di Ro 1.26 175 P **Pn** 20 08 26.1 -0.6
LATB Latina 1.32 185 P **Pn** 20 08 27.1 -0.5
LATB AML AML
comp=N,297µm,0.7s
LATB AML AML
comp=E,294µm,0.5s
RNI2 Rionero Sannit 1.35 145 P **Pn** 20 08 28.6 +0.5
RNI2 AML AML
comp=N,1405µm,0.9s
RNI2 AML AML
comp=N,1360µm,0.9s
RNI2 AML AML
comp=E,1050µm,0.7s
RNI2 AML AML
comp=E,996µm,0.7s
ASQU Asqua 1.38 316 P **Pn** 20 08 29.1 +0.7
ASQU AML AML
comp=N,852µm,1.1s
ASQU AML AML
comp=E,513µm,1.0s
CERA Filignano 1.39 151 P **Pn** 20 08 28.4 -0.1
FRES Fresagrandinar 1.43 125 P **Pn** 20 08 28.1 -0.9
FRES AML AML
comp=E,646µm,0.6s
FRES AML AML
comp=N,418µm,0.8s
SFI Santa Sofia 1.43 320 P **Pn** 20 08 29.5 +0.4
MIDA Miranda 1.45 144 P **Pn** 20 08 29.1 -0.2
MIDA AML AML
comp=E,823µm,1.1s
MIDA AML AML
comp=N,630µm,0.9s
CSNT Castellina Chi 1.49 297 P **Pn** 20 08 30.6 +0.7
CSNT AML AML
comp=N,360µm,0.6s
CSNT AML AML
comp=E,324µm,0.7s
FROS Frosini 1.49 286 P **Pn** 20 08 30.1 +0.2
TRIV Trivento 1.49 134 P **Pn** 20 08 30.2 +0.3
TRIV AML AML
comp=N,768µm,0.9s
TRIV AML AML
comp=E,1084µm,0.8s
TRIV AML AML
comp=N,808µm,0.9s
TRIV AML AML
comp=E,964µm,0.8s
OSSC Osservatorio P 1.54 298 P **Pn** 20 08 31.4 +0.8
RUFI Rufina 1.56 312 P **Pn** 20 08 31.4 +0.6
LMD Lutirano 1.63 321 P **Pn** 20 08 32.2 +0.4
LMD AML AML
comp=N,683µm,0.9s
LMD AML AML
comp=E,440µm,0.5s
VAGA Valle Agricola 1.63 149 P **Pn** 20 08 32.7 +0.9
VAGA AML AML
comp=E,306µm,0.5s
VAGA AML AML
comp=N,418µm,1.3s
TRIF Trifonti 1.65 281 P **Pn** 20 08 32.5 +0.4
TRIF AML AML
comp=N,332µm,0.6s
TRIF AML AML
comp=E,370µm,0.7s
CASP Castiglione de 1.65 270 ⇑P **Pn** 20 08 32.2 +0.1
CASP AML AML
comp=N,144µm,1.0s
CASP AML AML
comp=E,246µm,0.7s
BSSO Busso 1.68 138 P **Pn** 20 08 32.3 -0.2
MODR Mondragone 1.76 161 P **Pn** 20 08 34.7 +1.1
CIGN Sant'Elia a Pi 1.77 130 P **Pb** 20 08 35.6 0.0
DUGI Dugi Otok 1.84 50 *i* Pn **Pn** 20 08 35.0 +0.2
SACR S. Croce Del S 1.85 139 P **Pb** 20 08 37.0 +0.1
MELA Melanico ??? S 1.86 126 P **Pn** 20 08 36.3 +1.3
MELA AML AML
comp=E,1300µm,0.5s
MELA AML AML
comp=N,1125µm,0.5s
MELA AML AML
comp=E,1240µm,0.5s
MELA AML AML
comp=N,1110µm,0.5s
MPPT Montemurlo 1.87 309 P **Pn** 20 08 35.8 +0.7
MPPT AML AML
comp=E,296µm,0.7s
MPPT AML AML
comp=N,262µm,1.0s
TREM Isole Tremiti 1.90 110 P **Pn** 20 08 35.7 +0.1
TREM AML AML
comp=E,1000µm,0.7s
TREM AML AML
comp=N,1065µm,0.6s
MTCR Monte La Croce 1.96 309 P **Pn** 20 08 36.7 +0.2
VIRC Vir 2.04 43 *e*Pn **Pn** 20 08 37.5 +0.1
APRC Apricena 2.09 119 P **Pn** 20 08 39.0 +0.9
APRC AML AML
comp=N,604µm,0.6s
APRC AML AML
comp=E,486µm,0.2s
POPM Popiglio 2.11 306 P **Pn** 20 08 39.1 +0.7
POPM AML AML
comp=E,204µm,1.1s

POPM AML AML
comp=N,189µm,1.5s
CELB S.Piero in Cam 2.14 269 P **Pn** 20 08 39.1 +0.2
CELB AML AML
comp=E,73µm,0.7s
CELB AML AML
comp=N,73µm,1.3s
BRJN Brijuni 2.14 12 *e*Pn **Pn** 20 08 38.9 +0.1
BRJN Brijuni 2.14 12 P **Pn** 20 08 39.1 +0.3
MORI Morici 2.17 60 *e*Pn **Pn** 20 08 39.3 +0.2
NVLJ Novalja 2.17 35 *e*Pn **Pn** 20 08 39.0 -0.1
MAIM Mastiano 2.21 301 P **Pn** 20 08 40.4 +0.7
MAIM AML AML
comp=N,210µm,0.7s
MAIM AML AML
comp=E,162µm,0.9s
SGRT San Giovanni R 2.22 118 P **Pn** 20 08 41.2 +1.2
SGRT AML AML
comp=E,544µm,0.8s
SGRT AML AML
comp=N,393µm,0.5s
RABC Rab 2.28 31 *e*Pn **Pn** 20 08 40.9 +0.1
SMRN Sveta Marina 2.35 18 *e*Pn **Pn** 20 08 41.7 +0.1
MSAG Monte S. Angel 2.35 117 P **Pn** 20 08 43.2 +1.4
MSAG AML AML
comp=E,707µm,0.5s
MSAG AML AML
comp=N,1016µm,0.6s
VLC Villacollemand 2.40 305 P **Pn** 20 08 42.6 +0.2
VLC AML AML
comp=E,105µm,0.8s
VLC AML AML
comp=E,101µm,0.7s
VLC AML AML
comp=N,120µm,0.7s
VLC AML AML
comp=N,116µm,0.7s
SNAL S. Angelo Dei 2.45 140 P **Pn** 20 08 45.5 +2.4
HVAR Hvar 2.48 80 *e*Pn **Pn** 20 08 43.6 +0.2
HVAR Hvar 2.48 80 P **Pn** 20 08 44.0 +0.6
A253A Karojba, Istri 2.53 11 *e*Pn **Pn** 20 08 44.1 -0.1
EQUI Equi 2.54 303 P **Pn** 20 08 44.7 +0.4
EQUI AML AML
comp=E,119µm,0.5s
EQUI AML AML
comp=N,122µm,0.9s
UDBI Udbina 2.58 47 *e*Pn **Pn** 20 08 46.1 +1.2
A250A Rusevo Krmpots 2.62 29 *e*Pn **Pn** 20 08 45.9 +0.5
VULT Monte Vulture 2.63 134 AML AML
comp=E,274µm,0.5s
VULT AML AML
comp=N,377µm,0.7s
KIJV Kijevo 2.68 62 *e*Pn **Pn** 20 08 47.4 +1.2
RIY Rijeka 2.70 21 *e*Pn **Pn** 20 08 47.1 +0.6
PLIT Plitvice 2.75 40 *e*Pn **Pn** 20 08 48.2 +1.0
LSTV Lastovo 2.78 90 *e*Pn **Pn** 20 08 47.7 +0.1
SKDS Skadanscina 2.81 13 *e*Pn **Pn** 20 08 47.7 -0.3
MRVN Minervino Murg 2.89 126 P **Pn** 20 08 50.3 +1.1
MRVN AML AML
comp=N,85µm,1.0s
MRVN AML AML
comp=E,114µm,0.9s
MAKA Makarska 2.90 79 *e*Pn **Pn** 20 08 50.0 +0.7
A050A Klekovaca 2.99 55 *e*Pn **Pn** 20 08 51.7 +1.1
RICI Ricice 3.02 76 *e*Pn **Pn** 20 08 52.0 +1.1
PGF Pioggiola 3.04 266 *e*Pn **Pn** 20 08 52.5 +1.2
PGF *e*Sn **Sn** 20 09 26.6 -1.2
comp=E,60nm,1.2s
CEY Cerknica 3.07 17 *e*Pn **Pn** 20 08 51.5 -0.2
BOJS Bojanci 3.10 29 *e*Pn **Pn** 20 08 53.1 +1.1
BOJS Bojanci 3.10 29 P **Pn** 20 08 53.3 +1.3
BOJS AML AML
comp=E,462µm,0.9s
BOJS AML AML
comp=N,362µm,1.5s
SABO M.te Sabotino 3.19 6 P **Pn** 20 08 53.4 +0.2
SABO AML AML
comp=E,1264µm,0.5s
SABO AML AML
comp=N,420µm,0.9s
SABO AML AML
comp=N,1515µm,0.9s
SABO AML AML
comp=E,292µm,0.5s
ROVR Rover Verones 3.19 333 P **Pn** 20 08 54.8 +1.4
SRKY Kupres RS 3.21 66 *e*Pn **Pn** 20 08 55.5 +1.9
CGRP Cima Grappa 3.21 343 P **Pn** 20 08 54.6 +0.9
CGRP AML AML
comp=N,308µm,0.4s
CGRP AML AML
comp=E,432µm,0.4s
CGRP AML AML
comp=E,407µm,0.4s
CGRP AML AML
comp=N,310µm,0.6s
AMUR Altamura 3.23 125 P **Pn** 20 08 55.0 +1.2
AMUR AML AML
comp=E,154µm,0.8s
AMUR AML AML
comp=N,168µm,0.3s
OZLJ Ozalj 3.27 30 *e*Pn **Pn** 20 08 55.0 +0.7
MGRS Mrkonjic Grad 3.30 60 *e*Pn **Pn** 20 08 56.8 +2.0
STON Ston 3.38 87 *e*Pn **Pn** 20 08 55.1 -0.6
STON Ston 3.38 87 *e*Pn **Pn** 20 08 55.1 -0.6
STON Ston 3.38 87 *e*Pn **Pn** 20 08 55.5 -0.2
STON *e*Sn **Sn** 20 09 35.7 0.0
STON *e*Sn **Sb** 20 09 36.5 -7.5
STON Ston 3.38 87 P **Pn** 20 08 55.5 -0.2
STON AML AML
comp=N,78µm,0.8s
STON AML AML
comp=E,71µm,1.2s
LJU Ljubljana 3.39 17 P **Pn** 20 08 56.9 +0.9
LJU AML AML
comp=E,1080µm,1.5s
LJU AML AML
comp=N,1415µm,0.6s
MPRI Monte Prat 3.43 359 P **Pn** 20 08 57.7 +1.1
MPRI AML AML
comp=E,268µm,0.7s
MPRI AML AML
comp=N,310µm,0.8s
CRES Cresnjev 3.45 28 *e*Pn **Pn** 20 08 57.5 +0.7
MAGA Magasa 3.46 330 P **Pn** 20 08 58.3 +1.2
MAGA AML AML
comp=E,495µm,0.7s
MAGA AML AML
comp=N,298µm,0.5s
STAL STALIGIAL 3.46 355 P **Pn** 20 08 57.6 +0.6
STAL AML AML
comp=N,224µm,1.4s
STAL AML AML
comp=E,254µm,0.4s
LUSI Trento, Gardas 3.51 334 AML AML
comp=N,216µm,0.7s
LUSI AML AML
comp=E,158µm,0.7s
A051A Mrakovica 3.52 50 *e*Pn **Pn** 20 08 58.8 +1.0
BLY Banja Luka 3.53 55 *e*Pn **Pn** 20 09 01.2 +3.3
CIMO Cimolais 3.53 352 P **Pn** 20 08 58.4 +0.5
CIMO AML AML
comp=E,52µm,1.0s
CIMO AML AML
comp=E,48µm,0.6s
CIMO AML AML
comp=N,56µm,1.2s
CIMO AML AML
comp=N,55µm,0.6s
NOCI Noci 3.58 123 AML AML
comp=N,160µm,0.9s
NOCI AML AML
comp=E,106µm,1.3s
PTCC Patocco-Chiusa 3.60 3 AML AML
comp=E,128µm,0.4s
PTCC AML AML
comp=N,122µm,0.8s
CLUD Cludinico 3.65 357 AML AML
comp=E,150µm,0.9s
CLUD AML AML
comp=N,148µm,0.8s
ZONE Zone 3.65 325 AML AML
comp=N,143µm,0.7s
ZONE AML AML
comp=E,109µm,0.3s
DBRK Dubrovnik 3.71 91 *e*Pn **Pn** 20 09 00.7 +0.3

ZOU Zoufplan 3.75 359 AML AML
comp=E,164µm,1.0s
ZOU AML AML
comp=N,130µm,1.1s
MOSL Moslavina 3.83 42 *e*Pn **Pn** 20 09 01.8 -0.3
MYKA Terra Mystica 3.83 5 *i* Pn **Pn** 20 09 03.9 +1.7
comp=N,6.1nm,0.3s,SNR=5.6
OBKA Obir 3.83 15 *e*Pn **Pn** 20 09 03.2 +1.0
OBKA Obir 3.83 15 *e*Pn **Pn** 20 09 03.6 +1.4
comp=N,7.1nm,0.3s
OBKA *e*Sn **Sn** 20 09 47.5 +0.3
comp=N,21nm,0.4s
TREB Trebinje 3.86 90 *e*Pn **Pn** 20 09 03.3 +0.9
LOBO Lobor 3.96 31 *e*Pn **Pn** 20 09 03.2 -0.5
ABTA Abfaltersbach 3.96 354 *i* Pn **Pn** 20 09 05.7 +1.8
comp=N,52nm,0.6s,SNR=46
HCY Herceg Novi 3.99 93 *e*Pn **Pn** 20 09 04.9 +0.7
BRY Bratogost 3.99 87 *e*Pn **Pn** 20 09 05.7 +1.3
KALN Kalnik 4.09 35 *e*Pn **Pn** 20 09 04.8 -0.8
SOKA Soboth 4.10 19 *e*Pn **Pn** 20 09 06.7 +0.9
comp=N,2.6nm,0.2s
UPM Unac-Piva 4.27 83 *e*Pn **Pn** 20 09 10.3 +2.1
KBA Koelnbreinsper 4.27 2 *i* Pn **Pn** 20 09 09.5 +1.3
comp=N,18nm,0.5s,SNR=16
SBF Sospel 4.27 286 *e*Pn **Pn** 20 09 09.4 +1.2
SBF *e*Sn **Sn** 20 09 56.4 -1.6
comp=N,17nm,0.5s
A252A Venje 4.30 51 *e*Pn **Pn** 20 09 08.8 +0.3
VSL Villasalto 4.35 222 AML AML
VSL AML AML
DRME Dracevica, Mon 4.53 96 *e*Pn **Pn** 20 09 13.3 +1.6
FETA Feichten 4.54 339 *e*Pn **Pn** 20 09 15.0 +3.1
comp=N,3.4nm,0.3s
FETA *e*Sn **Sn** 20 10 10.7 +6.1
comp=N,12nm,0.6s
PDG Podgorica 4.55 93 ⇑P **Pn** 20 09 14.0 +2.1
WTTA Wattenberg 4.57 347 *i* Pn **Pn** 20 09 15.5 +3.1
comp=N,1.8nm,0.2s,SNR=7.5
WTTA *e*Sn **Sn** 20 10 09.6 +4.1
comp=N,27nm,0.5s
DAVOX Davos/Dischmat 4.59 331 Pn **Pn** 20 09 16.1 +3.5
comp=N,3.0nm,0.3s,baz=149,slow=14,SNR=23
DAVOX Sn **Sn** 20 10 09.0 +3.1
comp=N,1.8nm,0.3s,baz=291,slow=23,SNR=2.2
DAVOX LR LR 20 11 17.0
comp=N,64nm,18.3s,baz=220,slow=44
SQTA Sankt Quirin 4.61 344 *i* Pn **Pn** 20 09 15.4 +2.6
comp=N,5.9nm,0.2s,SNR=8.2
RUDO Rudo 4.64 78 *e*Pn **Pn** 20 09 13.2 0.0
WATA Walderalm 4.65 347 *i* Pn **Pn** 20 09 17.0 +3.6
comp=N,3.5nm,0.2s,SNR=12
BBLS Lazići 4.71 75 *e*Pn **Pn** 20 09 16.0 +1.8
MOTA Moosalm 4.75 343 *i* Pn **Pn** 20 09 17.6 +2.7
comp=N,9.2nm,0.7s,SNR=6.7
ARSA Arzberg 4.75 20 *e*Pn **Pn** 20 09 15.2 +0.5
comp=N,4.4nm,0.4s
KOVH Kovagotottos 4.84 46 P **Pn** 20 09 15.7 -0.3
KOVH S **Sn** 20 10 09.3 -2.6
LMR La Mourre 4.87 278 *e*Pn **Pn** 20 09 16.8 +0.6
LMR *e*Sn **Sn** 20 10 10.6 -1.9
comp=N,14nm,1.0s
BIOA Bad Ischl, Aus 4.89 4 *i* Pn **Pn** 20 09 18.5 +1.8
comp=N,5.7nm,0.2s,SNR=20
RETA Reutte 4.96 341 *e*Pn **Pn** 20 09 21.1 +3.4
comp=N,2.4nm,0.2s
MBDF Montbardon 4.97 295 *e*Pn **Pn** 20 09 19.3 +1.4
MBDF Montbardon 4.97 295 *e*P Pn 20 09 22.8 +4.9
MBDF *e*Sn **Sn** 20 10 13.8 -1.6
comp=N,14nm,0.6s
DAVA Damuels 5.03 334 *e*Pn **Pn** 20 09 22.3 +3.7
comp=N,5.0nm,0.3s
SJES Sjenica 5.05 83 *e*Pn **Pn** 20 09 20.8 +1.9
SJES *e*Sn **Sn** 20 10 16.2 -1.0
MOA Molln 5.10 9 *e*Pn **Pn** 20 09 21.0 +1.5
MOA *e*Sn **Sn** 20 10 20.3 +1.9
MOA Molln 5.10 9 *i* Pn **Pn** 20 09 21.3 +1.8
comp=N,4.5nm,0.2s,SNR=7.3
DIVS Divibare 5.17 73 *e*Pn **Pn** 20 09 21.0 +0.5
DIVS Divibare 5.17 73 *e*Pn **Pn** 20 09 22.1 +1.6
IVAS Ivanjica 5.20 79 *e*Pn **Pn** 20 09 21.7 +0.7
IVAS *e*Sn **Sn** 20 10 19.7 -1.2
MORH Mrgy, Hungar 5.22 47 ⇓P **Pg** 20 09 44.3 +1.2
MORH Mrgy, Hungar 5.22 47 P **Pn** 20 09 22.8 +1.7
LPG La Plagne 5.30 303 *e*Pn **Pn** 20 09 23.6 +1.0
LPG La Plagne 5.30 303 *e*P **Pn** 20 09 27.3 +4.7
LPG *e*Sn **Sn** 20 10 22.1 -1.7
comp=N,16nm,0.8s
LPL La Plagne 5.33 303 *e*P **Pn** 20 09 27.0 +4.2
LPL *e*Sn **Sn** 20 10 21.2 -3.0
comp=N,16nm,0.9s
MPLH Magyarpolny 5.37 34 P **Pn** 20 09 22.2 -1.0
FRGS Fruska Gora 5.37 62 *e*Pn **Pn** 20 09 19.2 -4.0
RONA Rosalia, Austr 5.38 24 *e*Pn **Pn** 20 09 24.1 +0.7
comp=N,4.5nm,0.3s
CONA Conrad Observa 5.47 20 *e*Pn **Pn** 20 09 25.1 +0.5
comp=N,2.5nm,0.3s
CONA *e*Sn **Sn** 20 10 27.8 +0.3
comp=N,8.6nm,0.7s
TRUS Trudelj 5.49 73 *e*Pn **Pn** 20 09 25.8 +1.0
SMRF Simiane la Rot 5.61 285 *e*P **Pn** 20 09 30.3 +3.7
SMRF *e*Sn **Sn** 20 10 28.1 -2.9
comp=N,12nm,1.0s
ORIF Oris-en-Rattie 5.64 294 *e*P **Pn** 20 09 31.2 +4.3
ORIF *e*Sn **Sn** 20 10 29.7 -1.9
comp=N,18nm,0.9s
GRUS Gruza 5.65 76 *e*Pn **Pn** 20 09 28.1 +1.1
SELS Selova 5.88 83 *e*Pn **Pn** 20 09 31.4 +1.1
OHR Ohrid 5.98 104 *i* Pn **Pn** 20 09 34.4 +2.8
GERES GERESS Array B 6.05 4 Pn **Pn** 20 09 32.7 +0.1
comp=N,1.1nm,0.3s,baz=171,slow=13,SNR=22
GERES Sn **Sn** 20 10 40.3 -1.4
comp=N,3.4nm,0.3s,baz=181,slow=24,SNR=13
comp=N,1.2nm,0.3s
CKRC Cesky Krumlov 6.07 8 *e*PN **Pn** 20 09 32.8 0.0
CKRC *e*SN **Sn** 20 10 40.9 -1.2
MODS Modra-Piesok 6.28 26 *e*PN **Pn** 20 09 38.1 +2.4
CABF La Chapelle 6.28 310 *e*Pn **Pn** 20 09 36.7 +0.9
CABF *e*Sn **Sn** 20 10 44.0 -3.5
comp=N,54nm,1.6s
KHC Kasperske Hory 6.33 3 *e*PN **Pn** 20 09 36.6 +0.2
KHC *e*SN **Sn** 20 10 46.2 -2.4
BOVS Bovan 6.33 80 ⇑P **Pn** 20 09 36.7 +0.3
BOVS Bovan 6.33 80 *e*Pn **Pn** 20 09 36.9 +0.5
BARS Barje 6.40 87 *e*Pn **Pn** 20 09 39.0 +1.6
BARS *e*Sn **Sn** 20 10 48.4 -2.0
VIVF Saint-Julien-l 6.44 291 *e*P **Pn** 20 09 42.4 +4.5
VIVF *e*Sn **Sn** 20 10 47.8 -3.5
PRVS Prvonek 6.62 90 *e*Pn **Pn** 20 09 41.6 +1.3
KRUC Moravsky 6.66 19 *e*PN **Pn** 20 09 41.0 +0.2
KRUC *e*SN **Sn** 20 10 51.8 -4.8
HINF Hinteralfeld 6.67 321 *e*Pn **Pn** 20 09 41.7 +0.6
HINF *e*Sn **Sn** 20 10 54.4 -2.6
comp=N,15nm,0.5s
BZS Buzias 6.72 62 ⇑P **Pn** 20 09 43.3 +1.5
ZAGS Zajecar 6.73 78 *e*Pn **Pn** 20 09 42.6 +0.8
STIP Stip 6.83 96 *i* Pn **Pn** 20 09 46.5 +3.3
LASF Ste Croix 6.85 284 *e*Pn **Pn** 20 09 45.2 +1.6
LASF *e*Sn **Sn** 20 10 55.1 -6.4
comp=N,2.4nm,0.6s
VYHS Vyhne 6.95 33 *e*PN **Pn** 20 09 48.8 +3.9
ZAPS Zavoj 6.99 83 *e*Pn **Pn** 20 09 46.7 +1.2
ZAPS *e*Sn **Sn** 20 11 00.3 -4.7
HERR Herculane 7.04 70 ⇓P **Pn** 20 09 50.1 +4.1
HAU Haudompre 7.04 320 *e*Pn **Pn** 20 09 46.5 +0.3
HAU *e*Sn **Sn** 20 11 03.2 -2.9
comp=N,25nm,0.6s
PRU Pruhonice 7.25 7 *e*SN **Sn** 20 11 07.6 -3.5
GZR Gura Zlata 7.42 66 ⇓P **Pn** 20 09 53.4 +2.0
NKC Novy Kostel 7.44 357 *e*SN **Sn** 20 11 13.7 -2.1
SMF Signal de Mont 7.63 303 *e*Pn **Pn** 20 09 54.8 +0.6
SMF *e*Sn **Sn** 20 11 17.2 -3.4
comp=N,8.6nm,0.7s
KRLC Kraliky 7.69 18 *e*PN **Pn** 20 09 54.3 -0.8
PAGF Fort de Pagny 7.73 321 *e*Pn **Pn** 20 09 56.4 +0.9
baz=139
PAGF *e*Sn **Sn** 20 11 19.5 -3.4
comp=N,20nm,0.7s
SFTF Sexfontaines 7.82 316 *e*Pn **Pn** 20 09 57.2 +0.4
SFTF *e*Sn **Sn** 20 11 22.2 -3.1
comp=N,8.9nm,0.6s
LOR Lormes 7.92 307 *e*Pn **Pn** 20 09 59.1 +0.9
baz=122
LOR Lormes 7.92 307 *e*P Pn 20 10 03.3 +5.1
baz=129

LOR				*e*Sn		**Sn**	**20 11 25.5**	**-2.3**
	comp=N,6.3nm,0.5s							
MTLF	**Montolieu**	**7.99**	**277**	*e*P		Pn	20 10 04.6	+5.4
MTLF				*e*Sn		**Sn**	**20 11 27.5**	**-2.1**
	comp=N,1.6nm,0.7s							
AVF	**Avril sur Loir**	**8.00**	**303**	*e*Pn		**Pn**	**20 09 59.8**	**+0.6**
AVF				*e*Sn		**Sn**	**20 11 23.7**	**-5.9**
	comp=N,0.9nm,0.4s							
MEZF	**Maizieres J'vi**	**8.01**	**318**	*e*Pn		**Pn**	**20 09 59.5**	**+0.1**
MEZF				*e*Sn		**Sn**	**20 11 25.4**	**-4.5**
	comp=N,1.7nm,0.3s							
SSF	**Saint Saulge**	**8.03**	**305**	*e*Pn		**Pn**	**20 10 00.1**	**+0.4**
SSF				*e*Sn		**Sn**	**20 11 26.1**	**-4.3**
	comp=N,3.8nm,0.6s							
SAVF	**Savonnieres en**	**8.05**	**319**	*e*P		**Pn**	**20 10 04.8**	**+4.8**
	baz=138							
SAVF				*e*S		**Sn**	**20 11 38.3**	**+7.3**
	comp=N,11nm,0.8s							
BRG	**Berggiesshubel**	**8.08**	**4**	*e*(P)		**Pb**	**20 10 24.9**	**+1.7**
BRG				Amp			20 10 26.6	
	comp=Z,2.6nm,0.7s							
BRG				*ex*	x		20 11 29.5	
BRG				*ex*	x		20 12 17.9	
BRG				Amp			20 12 30.7	
	comp=Z,3.7nm,0.8s							
BGF	**Bois d'Agland**	**8.22**	**301**	*e*Pn		**Pn**	**20 10 02.4**	**+0.1**
BGF				*e*Sn		**Sn**	**20 11 30.7**	**-4.3**
	comp=Z,3.9nm,0.4s							
CAF	**Calviac**	**8.26**	**289**	*e*Pn		**Pn**	**20 10 04.2**	**+1.3**
CAF				*e*Sn		**Sn**	**20 11 29.3**	**-6.8**
	comp=Z,0.4nm,0.4s							
CLL	**Collm**	**8.50**	**360**	*e*Pn		**Pn**	**20 10 08.0**	**+1.9**
CLL				*e*Pg		**Pg**	**20 10 44.0**	**-1.8**
CLL				*ex*	x		20 11 39.0	
CLL				*ex*	x		20 11 51.0	
CLL				*ex*	x		20 12 08.0	
CLL				*ex*	x		20 12 14.0	
CLL				*e*Sg		**Sg**	**20 12 34.0**	**-1.8**
	comp=Z,11nm,1.3s							
TCF	**Toulx Ste Croi**	**8.53**	**298**	*e*Pn		**Pn**	**20 10 08.7**	**+2.2**
TCF				*e*Sn		**Sn**	**20 11 36.7**	**-5.9**
	comp=Z,0.6nm,0.3s							
HYF	**Humbligny**	**8.65**	**305**	*e*Pn		**Pn**	**20 10 09.8**	**+1.6**
RJF	**Les Rejaudoux**	**8.71**	**291**	*e*Pn		**Pn**	**20 10 08.5**	**-0.6**
RJF				*e*Sn		**Sn**	**20 11 41.1**	**-6.1**
	comp=Z,0.2nm,0.1s							
LFF	**La Frestale**	**9.19**	**288**	*e*Pn		**Pn**	**20 10 13.8**	**-1.7**
GIVF	**Givet**	**9.26**	**325**	*e*P		Pn	20 10 21.8	+5.2
EPF	**Esparros**	**9.38**	**276**	*e*Pn		**Pn**	**20 10 17.2**	**-1.0**
BAIF	**Baives**	**9.50**	**323**	*e*Pn		**Pn**	**20 10 18.0**	**-1.8**
ETSF	**Etsaut**	**10.04**	**275**	*e*P		**Pn**	**20 10 30.4**	**+3.0**
ETSF				*e*Sn		Sn	20 12 11.9	-8.1
	comp=Z,0.5nm,0.4s							
GRR	**Gorron**	**11.26**	**304**	*e*Pn		**Pn**	**20 10 44.1**	**+0.2**
ROSF	**Rostrenen**	**12.73**	**301**	*e*Pn		**Pn**	**20 11 04.4**	**+0.4**
FINES	**FINESS Array B**	**20.21**	**18**	P		Pn	20 12 39.4	-0.3
	comp=Z,1.0nm,0.6s,baz=196,slow=14,SNR=1.9							
	comp=Z,1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**31.17**	**202**	P		**P**	**20 14 23.4**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=16,slow=9.4,SNR=6.7							
	comp=Z,0.6nm,0.8s							
MKAR	**Makanchi Array**	**47.80**	**60**	P		**P**	**20 16 43.2**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=288,slow=6.3,SNR=2.4							
	comp=Z,0.4nm,0.7s							
SONM	**Songino Array**	**61.84**	**50**	P		**P**	**20 18 24.7**	**+2.6**
	comp=Z,0.2nm,0.4s,baz=289,slow=9.0,SNR=2.9							
	comp=Z,0.2nm,0.4s							

*IDC **31** 20:22:43.9±3.6,36°.09N×71°.37E,h75km±32km,mb3.5/8, mbtmp4.0/13,MS2.6/1,Error ellipse: s-maj=27.4km s-min=19.0km az=14.0*
*NNC **31** 20:22:48.3±3.1,36°.88N×71°.16E,h0km,mb4.6,mpv4.4, Error ellipse: s-maj=25.2km s-min=18.3km az=1.0*
*NEIC **31** 20:22:48.2±0.5,36°.42N±0°.05×71°.37E±0°.08, h109km±11km,mb4.0/3,Error ellipse: s-maj=10.3km s-min=5.4km az=60.0*

ISC 31 20:22:46.7±0.5,36°.33N±0°.04×71°.46E±0°.06,h114km,n72, σ2°06/86,mb3.5/7,4C-7D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.53**	**171**	P	**Pn**	**20 23 30.2**	**+3.4**
CEP				S	**Sn**	**20 24 02.0**	**+4.5**
KBL	**Kabul**	**2.66**	**229**	Pn	**Pn**	**20 23 29.8**	**+1.2**
GAR	**Garm**	**2.81**	**342**		**Pn**	**20 23 30.5**	**+0.1**
CHGR	**Chuyangaron**	**2.96**	**322**		**Pn**	**20 23 31.5**	**-0.8**
CHCP	**Chirah Chowk**	**3.05**	**150**	P	**Pn**	**20 23 36.3**	**+2.8**
NIL	**Nilore**	**3.05**	**151**	Pn	**Pn**	**20 23 36.5**	**+2.9**
DRK	**Karamyk**	**3.16**	**5**		**Pn**	**20 23 35.5**	**+0.4**
THW	**Thamme Wali**	**3.54**	**176**	P	**Pn**	**20 23 41.8**	**+1.8**
BTK	**Batken**	**3.76**	**353**	Pn	**Pn**	**20 23 44.0**	**+1.1**
SARP	**Sargodha**	**4.51**	**167**	P	**Pn**	**20 23 54.0**	**+1.0**
JMU	**Jammu**	**4.59**	**141**	*e*P	**Pn**	**20 23 55.6**	**+1.5**
JMU				*e*S	**Sn**	**20 24 46.1**	**-0.2**
THN	**Thein Dam**	**5.25**	**137**	*e*P	**Pn**	**20 24 05.0**	**+2.1**
THN				*e*S	**Sn**	**20 25 01.2**	**-0.9**
AML	**Almayashu**	**6.05**	**16**	P	**Pn**	**20 24 14.7**	**+0.6**
	SNR=207						
NRN	**Naryn**	**6.21**	**33**	Pn	**Pn**	**20 24 16.3**	**+0.1**
BHK	**Bhakra**	**6.41**	**138**	*e*P	**Pn**	**20 24 20.2**	**+1.6**
BHK				*e*S	**Sn**	**20 25 28.1**	**-2.2**
EKS2	**Erkin-Say**	**6.57**	**15**	P	**Pn**	**20 24 21.8**	**+1.0**
	SNR=26						
AAK	**Ala-Archa**	**6.72**	**20**	P	**Pn**	**20 24 24.2**	**+1.3**
	SNR=27						
AAK	**Ala-Archa**	**6.72**	**20**	Pn	**Pn**	**20 24 23.9**	**+0.9**
AAK	**Ala-Archa**	**6.72**	**20**	P	**Pn**	**20 24 24.2**	**+1.3**
	23nm,0.4s,baz=187,slow=5.8,SNR=47						
AAK				S	**Sn**	**20 25 36.6**	**-1.5**
	7.7nm,0.5s,baz=310,slow=18,SNR=8.0						
AAK				LR	LR	20 27 34.7	
	comp=Z,51nm,19.6s,baz=152,slow=42						
KK31	**Karatay Array**	**6.80**	**354**	Pn	**Pn**	**20 24 24.0**	**+0.1**
KK31	**Karatay Array**	**6.80**	**354**	⇓P	**Pn**	**20 24 23.9**	**+0.1**
	45nm,0.5s,baz=179,slow=13,SNR=344						
KK31				⇓S	**Sn**	**20 25 35.8**	**-4.1**
	4.7nm,0.4s,baz=181,slow=24,SNR=5.2						
KKAR	**Karatay Array**	**6.80**	**354**	Pn	**Pn**	**20 24 23.9**	**0.0**
KKAR	**Karatay Array**	**6.80**	**354**		**Pn**	**20 24 24.1**	**+0.2**
KBK	**Karagaybulak**	**6.87**	**22**	P	**Pn**	**20 24 27.0**	**+2.1**
	SNR=11						
ULHL	**Ulahol**	**6.97**	**31**	P	**Pn**	**20 24 29.2**	**+2.8**
	SNR=8.2						
SMLA	**Simla**	**7.04**	**136**	*e*P	**Pn**	**20 24 27.8**	**+0.7**
SMLA				*e*S	**Sn**	**20 25 42.5**	**-3.1**
SMLA				IAML		20 25 44.9	
	comp=N,152nm,0.2s						
SMLA				IAML		20 25 45.8	
	comp=E,113nm,0.2s						
CHMS	**Chumysh**	**7.13**	**20**	P	**Pn**	**20 24 29.1**	**+0.7**
	SNR=22						
CHMS	**Chumysh**	**7.13**	**20**	⇓P	**Pn**	**20 24 28.9**	**+0.6**
	comp=E,16nm,0.5s						
CHMS				⇑S	**Sn**	**20 25 45.2**	**-2.6**
	comp=E,8.8nm,0.7s						
USP	**Ospenovka**	**7.31**	**18**	P	**Pn**	**20 24 31.1**	**+0.2**
	SNR=12						
TKM2	**Tokmak 2**	**7.32**	**25**	P	**Pn**	**20 24 32.4**	**+1.3**
	SNR=31						
TKM2	**Tokmak 2**	**7.32**	**25**	⇑P	**Pn**	**20 24 32.1**	**+1.1**
	comp=E,15nm,0.6s						
TKM2				⇑S	**Sn**	**20 25 52.0**	**-0.6**
	comp=E,4.3nm,0.6s						
MDOK	**Medeo**	**8.07**	**31**	P	**Pn**	**20 24 43.0**	**+1.9**
	comp=E,7.4nm,0.9s						
KUDL	**Kundal**	**9.21**	**151**	*e*P	**Pn**	**20 24 55.7**	**-0.8**
KUDL				*e*S	**Sn**	**20 26 31.7**	**-6.6**
PDGK	**Podgornoye**	**9.33**	**39**	⇓P	**Pn**	**20 24 57.7**	**-0.5**
	comp=E,3.1nm,0.7s						
PDGK				⇓S	**Sn**	**20 26 44.8**	**+3.5**
	comp=E,8.4nm,1.1s						
AJM	**Ajmer**	**10.19**	**164**	*e*P	**Pn**	**20 25 10.3**	**+0.4**
GEYT	**Alibeck**	**10.77**	**282**	Pn	**Pn**	**20 25 16.0**	**-1.6**
GEYT	**Alibeck**	**10.77**	**282**	P	**Pn**	**20 25 15.3**	**-2.4**
	comp=E,2.2nm,0.3s,baz=121,slow=9.3,SNR=13						
GEYT				S	Sn	20 27 08.3	-7.8
	comp=E,3.8nm,0.3s,baz=290,slow=28,SNR=13						
GYA0B	**ALIBECK ARRAY**	**10.77**	**282**	Pn	**Pn**	**20 25 16.7**	**-0.9**
PYUN	**Piuthan**	**12.75**	**127**	*e*P	**Pn**	**20 25 41.6**	**-2.4**
	comp=E,37nm,0.4s						
DANN	**Dangsing**	**13.09**	**124**	*e*P	**Pn**	**20 25 46.8**	**-1.8**
	comp=E,10nm,0.2s						

MK31	**Makanchi Array**	**13.22**	**34**	Pn		**Pn**	**20 25 51.0**	**+1.2**
MKAR	**Makanchi Array**	**13.22**	**34**	Pn		**Pn**	**20 25 49.9**	**+0.1**
MKAR	**Makanchi Array**	**13.22**	**34**	P		**Pn**	**20 25 50.7**	**+0.8**
	comp=E,0.9nm,0.6s,baz=217,slow=15,SNR=8.1							
KOLN	**Koldanda**	**13.37**	**126**	*e*P		**Pn**	**20 25 50.0**	**-2.1**
GKN	**Gorkha**	**13.90**	**123**	*e*P		**Pn**	**20 25 57.4**	**-1.6**
	comp=E,20nm,0.3s							
DMN	**Daman**	**14.47**	**123**	*e*P		**Pn**	**20 26 04.3**	**-2.1**
	comp=E,16nm,0.3s							
KKN	**Kakani**	**14.48**	**122**	*e*P		**Pn**	**20 26 05.0**	**-1.4**
PKIN	**Phulchoki**	**14.69**	**123**	*e*P		**Pn**	**20 26 07.3**	**-1.9**
PKI	**Pulchoki**	**14.70**	**123**	*e*P		**Pn**	**20 26 07.5**	**-1.9**
	comp=E,9.9nm,0.3s							
KURBB	**Kurchatov Arra**	**15.17**	**17**	P		**P**	**20 26 17.5**	**+0.4**
	comp=E,1.8nm,0.2s,baz=204,slow=10,SNR=6.2							
JIRN	**Jiri**	**15.19**	**121**	*e*P		**Pn**	**20 26 14.0**	**-1.5**
	comp=E,24nm,0.4s							
KURK	**Kurchatov**	**15.28**	**18**	Pn		**Pn**	**20 26 14.2**	**-1.9**
KURK				IAmb		IAmb	20 26 21.3	
	comp=Z,2.4nm,0.7s							
AB31	**Akbulak array**	**15.41**	**331**	P		**Pn**	**20 26 17.4**	**-0.4**
	comp=Z,2.8nm,0.3s,baz=139,slow=12,SNR=241							
AB31				⇓S		**Sn**	**20 29 03.5**	**-4.6**
	comp=Z,1.3nm,0.5s,baz=154,slow=23,SNR=7.0							
ABKAR	**Akbulak array**	**15.41**	**331**	P		**Pn**	**20 26 15.6**	**-2.1**
ABKAR				IAmb		IAmb	20 26 17.7	
	comp=Z,7.2nm,0.4s							
RAMN	**Ramite**	**15.91**	**122**	*e*P		**Pn**	**20 26 22.5**	**-1.9**
TAPN	**Taplejung**	**16.44**	**118**	*e*P		**Pn**	**20 26 30.3**	**-0.7**
	comp=Z,14nm,0.3s							
BVAR	**Bovoye Array**	**16.71**	**358**	P		**Pn**	**20 26 32.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=156,slow=8.8,SNR=5.8							
AKTO	**Aktyubinsk**	**17.11**	**330**	⇑P		**P**	**20 26 39.1**	**+0.6**
	comp=Z,4.5nm,0.5s							
AKTO				⇓S		**Sn**	**20 29 44.5**	**-4.6**
	comp=Z,2.7nm,0.8s							
AKTO	**Aktyubinsk**	**17.11**	**330**	P		**P**	**20 26 39.3**	**+0.8**
	comp=Z,6.2nm,0.3s,baz=139,slow=12,SNR=30							
HYBB	**Hyderabad (bro**	**19.86**	**160**	*e*P		**Pn**	**20 27 11.4**	**-0.1**
HYBB				*e*S		**Sn**	**20 30 50.9**	**-4.5**
ZAA0	**Zalesovo Array**	**19.92**	**24**	P		**P**	**20 27 09.5**	**+0.3**
ZAA0				IAmb		IAmb	20 27 12.6	
	comp=Z,4.2nm,0.5s							
ZALV	**Zalesovo Beam**	**19.92**	**24**	P		**P**	**20 27 09.8**	**+0.6**
ZALV	**Zalesovo Beam**	**19.92**	**24**	P		**P**	**20 27 10.6**	**+1.4**
	comp=Z,3.5nm,0.3s,baz=207,slow=9.6,SNR=30							
	comp=Z,3.5nm,0.3s							
AKASG	**Malin Array Be**	**33.34**	**309**	P		**P**	**20 29 16.3**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=79,slow=7.4,SNR=5.1							
	comp=Z,0.2nm,0.3s							
FINES	**FINESS Array B**	**37.83**	**326**	P		**P**	**20 29 54.7**	**+2.9**
	comp=Z,0.7nm,0.3s,baz=121,slow=8.6,SNR=13							
	comp=Z,0.7nm,0.3s							
ARCES	**ARCESS Array B**	**41.44**	**338**	P		**P**	**20 30 24.3**	**+2.7**
	comp=Z,0.4nm,0.4s,baz=112,slow=8.9,SNR=1.1							
	comp=Z,0.4nm,0.4s							
NB2	**NORSAR Subarra**	**44.74**	**323**	P		**P**	**20 30 50.5**	**+2.1**
	comp=Z,0.7nm,0.4s,baz=97,slow=7.9							
NOA	**NORSAR Array B**	**44.74**	**323**	P		**P**	**20 30 50.4**	**+2.1**
NOA	**NORSAR Array B**	**44.74**	**323**	P		**P**	**20 30 50.4**	**+2.1**
	comp=Z,0.7nm,0.4s,baz=104,slow=7.1,SNR=7.8							
	comp=Z,0.7nm,0.4s							
TORD	**Torodi Ar. Bea**	**66.08**	**269**	P		**P**	**20 33 22.0**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=51,slow=6.0,SNR=29							
	comp=Z,0.8nm,0.4s							
WRA	**Warramunga Arr**	**81.59**	**122**	P		**P**	**20 34 53.9**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=323,slow=5.0,SNR=6.9							
	comp=Z,0.3nm,0.6s							
ASAR	**Alice Springs**	**83.86**	**125**	P		**P**	**20 35 05.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=305,slow=5.0,SNR=6.5							
	comp=Z,0.3nm,0.6s							

*IDC **31** 20:30:21.1±1.9,9°.28S×113°.49E,h0km,mb3.7/6, mbtmp3.7/7,ML3.0/1,Error ellipse: s-maj=110.4km s-min=17.4km az=52.0*
*DJA **31** 20:30:29.1±0.4,9°.5S±6°×11°.3E±°,h62km±17km,M4.0/19, mb4.1/5,MLv4.0/19*

ISC 31 20:30:28.3±1.2,9°.38S±0°.08×113°.46E±0°.04,h59km±13km, n32,σ1°60/40,mb3.6/6,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.10**	**359**	P	**Pn**	**20 30 48.1**	**+0.5**
GMJI				S	**Sn**	**20 31 02.3**	**+0.4**
JAGI	**Jajag, Banyuwa**	**1.13**	**37**	P	**Pn**	**20 30 48.4**	**+0.4**
JAGI				S	**Sn**	**20 31 02.5**	**-0.2**
BLJI	**Banyuglugur**	**1.63**	**5**	P	**Pn**	**20 30 57.2**	**+2.5**
BLJI				S	**Sn**	**20 31 17.1**	**+2.4**
ABJI	**Asem Bagus**	**1.75**	**26**	P	**Pn**	**20 30 59.2**	**+2.9**
DNP	**Denpasar**	**1.86**	**68**	P	**Pn**	**20 30 59.6**	**+1.8**
DNP				S	**Sn**	**20 31 22.4**	**+2.1**
PWJI	**Pagerwojo**	**2.12**	**309**	P	**Pn**	**20 31 02.6**	**+1.2**
PWJI				S	**Sn**	**20 31 27.0**	**+0.3**
SRBI	**Singaraja**	**2.16**	**53**	P	**Pn**	**20 31 03.5**	**+1.7**
SRBI				S	**Sn**	**20 31 27.2**	**-0.3**
KMMI	**Kalianget**	**2.37**	**12**	P	**Pn**	**20 31 07.0**	**+2.2**
PCJI	**Pacitan**	**2.55**	**297**	P	**Pn**	**20 31 07.8**	**+0.6**
PCJI				S	**Sn**	**20 31 35.1**	**-2.0**
NGJI	**Ngawi**	**2.81**	**315**	P	**Pn**	**20 31 11.3**	**+0.4**
TBJI	**Tambak Boyo**	**3.01**	**328**	P	**Pn**	**20 31 13.5**	**0.0**
UGM	**Wanagama**	**3.25**	**296**	P	**Pn**	**20 31 17.5**	**+0.6**
UGM				S	**Sn**	**20 31 54.7**	**+0.3**
TWSI	**Taliwang, Sumb**	**3.44**	**80**	P	**Pn**	**20 31 20.3**	**+0.9**
TWSI				S	**Sn**	**20 31 58.4**	**-0.5**
YOGI	**Yogyakarta**	**3.50**	**296**	P	**Pn**	**20 31 22.4**	**+2.2**
BWJI	**Bawean**	**3.60**	**347**	P	**Pn**	**20 31 20.6**	**-1.0**
PLAI	**Plampang**	**4.29**	**83**	P	**Pn**	**20 31 32.8**	**+1.7**
PLAI				S	**Sn**	**20 32 19.9**	**-0.1**
WBSI	**Waikabubak, Su**	**5.85**	**93**	P	**Pn**	**20 31 54.7**	**+2.2**
	0.2nm26nm,0.9s						
PBKI	**Bangkalan Bun**	**6.87**	**345**	P	**Pn**	**20 32 01.9**	**-4.5**
BSSI	**Bau Bau, Buton**	**7.67**	**66**	P	**Pn**	**20 32 18.4**	**+1.0**
	0.1nm25nm,2.0s						
BKSI	**Bulukumba**	**7.74**	**59**	P	**Pn**	**20 32 18.8**	**+0.5**
	0.0nm12nm,0.9s						
EDFI	**Ende, Flores**	**8.15**	**86**	P	**Pn**	**20 32 23.5**	**-0.6**
TPI	**Tanjungpandan**	**8.76**	**318**	P	**Pn**	**20 32 30.4**	**-1.9**
FITZ	**Fitzroy Crossi**	**14.65**	**128**	Pn	**Pn**	**20 33 49.8**	**-2.6**
	0.1nm,0.3s,baz=304,slow=9.2,SNR=0.8						
FITZ				Sn	Sn	20 36 19.8	-14
	0.1nm,0.3s,baz=173,slow=20,SNR=6.3						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**22.73**	**120**	P	**P**	**20 35 25.2**	**-0.4**
	0.6nm,0.4s,baz=300,slow=11,SNR=27						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**24.15**	**129**	P	**P**	**20 35 39.3**	**+0.2**
	0.5nm,0.3s,baz=303,slow=8.9,SNR=23						
ASAR				PcP	**PcP**	**20 39 20.1**	**+1.2**
	0.4nm,0.5s,baz=308,slow=1.8,SNR=6.6						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.15**	**333**	P	**P**	**20 36 41.3**	**-0.4**
	0.4nm,0.4s,baz=158,slow=8.6,SNR=2.9						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**34.37**	**135**	P	**P**	**20 37 10.8**	**+1.0**
	0.9nm,0.3s,baz=307,slow=9.3,SNR=7.1						
	0.9nm,0.3s						
H08S2	**Diego Garcia H**	**40.54**	**269**	T	T	21 21 11.1	
	baz=93,slow=74,SNR=5.6						
H08S3	**Diego Garcia H**	**40.55**	**269**	T	T	21 21 08.8	
	baz=93,slow=74,SNR=3.8						
H08S1	**Diego Carcia H**	**40.56**	**269**	T	T	21 21 11.8	
	baz=93						
SONM	**Songino Array**	**57.31**	**354**	P	**P**	**20 40 10.3**	**+0.2**
	1.0nm,0.5s,baz=173,slow=9.1,SNR=7.2						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**62.45**	**336**	P	**P**	**20 40 45.3**	**-0.1**
	0.4nm,0.5s,baz=145,slow=7.2,SNR=9.7						
	0.4nm,0.5s						

IDC 31 20:46:56.1±1.4,3°.09N×125°.80E,h0km,mb3.4/4, mbtmp3.4/4,MS2.7/1,Error ellipse: s-maj=150.0km s-min=22.9km az=68.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**21.54**	**60**	LR	LR	20 59 21.3	
	comp=Z,24nm,21.4s,baz=152,slow=35						
WRA	**Warramunga Arr**	**24.38**	**160**	P	P	20 52 16.3	0.0
	0.8nm,0.6s,baz=337,slow=11,SNR=25						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**27.74**	**164**	P	P	20 52 47.1	+0.4
	0.2nm,0.7s,baz=345,slow=6.9,SNR=2.2						
	0.2nm,0.7s						
SONM	**Songino Array**	**47.61**	**342**	P	P	20 55 31.9	-2.1
	0.3nm,0.7s,baz=129,slow=5.9,SNR=2.2						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**57.55**	**326**	P	P	20 56 48.6	+1.0
	0.4nm,0.5s,baz=118,slow=7.9,SNR=5.0						
	0.4nm,0.5s						

*MOS **31** 21:05:46.0±0.0,43°.37N×41°.00E,h1km,MPVA4.1*

ISC 31 21:05:45.8±1.0,43°.34N±0°.02×40°.97E±0°.02,h10km±9km, n50,σ0°98/90,4C-1D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARXR	**Arkhyz**	**0.32**	**44**	*i* Pg	**Pg**	**21 05 52.3**	**+0.1**
ARXR	**Arkhyz**	**0.32**	**44**	*i* Pg	**Pg**	**21 05 52.2**	**+0.1**
ARXR				*e*Sg	**Sg**	**21 05 56.0**	**-0.5**
VSLR	**Vesyoloye**	**0.69**	**281**	⇑*i*Pg	**Pg**	**21 05 58.9**	**-0.3**
VSLR				*i* S	**Sg**	**21 06 09.1**	**+0.8**
VSLR	**Vesyoloye**	**0.69**	**281**	*i* Pg	**Pg**	**21 05 58.9**	**-0.3**
VSLR				*e*Sg	**Sg**	**21 06 09.3**	**+1.0**
AHMR	**Akhmetovskaya**	**0.82**	**4**	*i* PG	**Pg**	**21 06 01.1**	**-0.5**
AHMR				*i* S	**Sb**	**21 06 12.4**	**-1.0**
AHMR	**Akhmetovskaya**	**0.82**	**4**	*i* Pg	**Pg**	**21 06 01.1**	**-0.5**
AHMR				*i* Sg	**Sb**	**21 06 12.4**	**-1.0**
SOC	**Sochi**	**0.95**	**286**	*e*PG	**Pg**	**21 06 02.3**	**-1.7**
SOC				*e*		21 06 16.0	
SOC				pmax	pmax		
	comp=Z,69nm,0.3s						
SOC				smax	smax		
	comp=E,79nm,0.3s						
SOC				smax	smax		
	comp=N,395nm,0.3s						
SOC	**Sochi**	**0.95**	**286**	*e*Pg	**Pg**	**21 06 02.5**	**-1.5**
SOC				*e*Sg	**Sg**	**21 06 16.2**	**-0.1**
NEY	**Neytrino**	**1.28**	**93**	*e*PG	**Pn**	**21 06 09.6**	**-0.3**
NEY				*e*S	**Sb**	**21 06 26.8**	**+0.1**
NEY	**Neytrino**	**1.28**	**93**	*e*Pg	**Pn**	**21 06 09.6**	**-0.3**
NEY				*e*Sg	**Sb**	**21 06 26.2**	**-0.4**
SHA1	**Shidzhatmaz**	**1.29**	**71**	*e*PG	**Pb**	**21 06 10.2**	**-0.1**
SHA1				*e*S	**Sb**	**21 06 26.6**	**-0.4**
SHA1	**Shidzhatmaz**	**1.29**	**71**	*e*Pg	**Pb**	**21 06 10.2**	**-0.1**
SHA1				*i* Sg	**Sg**	**21 06 27.0**	**-0.3**
LZRR	**Lazarevskoye**	**1.30**	**298**	*i* PG	**Pg**	**21 06 11.2**	**+0.5**
LZRR				*i* S	**Sg**	**21 06 30.7**	**+3.1**
LZRR	**Lazarevskoye**	**1.30**	**298**	*i* Pg	**Pg**	**21 06 11.2**	**+0.5**
LZRR				*e*Sg	**Sg**	**21 06 28.3**	**+0.6**
LABN	**Labinsk**	**1.32**	**352**	⇑*i*PG	**Pg**	**21 06 11.4**	**+0.4**
LABN				*i* S	**Sg**	**21 06 30.2**	**+2.0**
LABN	**Labinsk**	**1.32**	**352**	*i* Pg	**Pg**	**21 06 11.4**	**+0.4**
LABN				*e*Sg	**Sg**	**21 06 29.3**	**+1.2**
KIV	**Kislovodsk**	**1.39**	**63**	*e*PG	**Pn**	**21 06 11.5**	**+0.2**
KIV				*i* S	**Sg**	**21 06 29.9**	**-0.6**
KIV	**Kislovodsk**	**1.39**	**63**	*e*Pg	**Pn**	**21 06 11.6**	**+0.2**
KIV				*e*Sg	**Sn**	**21 06 29.7**	**-0.1**
KIV0	**Kislovodsk Arr**	**1.40**	**63**	*e*Pg	**Pn**	**21 06 11.6**	**+0.1**
KIV0				*e*Sg	**Sn**	**21 06 29.9**	**0.0**
KBZ	**Khabaz**	**1.46**	**74**	⇓*i*PG	**Pb**	**21 06 13.0**	**+0.1**
KBZ				*i* S	**Sg**	**21 06 31.8**	**-0.8**
KBZ	**Khabaz**	**1.46**	**74**	*i* Pg	**Pb**	**21 06 13.0**	**+0.1**
KBZ				*i* Sg	**Sg**	**21 06 31.8**	**-0.8**
GOYR	**Goytkh**	**1.47**	**309**	⇑*i*PG	**Pb**	**21 06 13.3**	**+0.1**
GOYR				*e*S	**Sg**	**21 06 34.4**	**+1.4**
GOYR	**Goytkh**	**1.47**	**309**	*i* Pg	**Pb**	**21 06 13.3**	**+0.1**
GOYR				*e*Sg	**Sg**	**21 06 34.4**	**+1.4**
BEYR	**Belyy Ugol+**	**1.50**	**63**	*e*PG	**Pb**	**21 06 13.6**	**-0

Mθθ8.29; Mϕϕ-0.04; Mrθ-5.03; Mϕϕ-0.08; Mϕr1.82; Fault plane solution: M₀9.85000×10¹⁵ NP1:ϕ₁100.72000°, δ61.48000°, λ-80.18000°. NP2:ϕ₂260.80000°, δ30.03000°, λ-107.42000°. Principal axes: T 9.7303, Plg16.0000°, Azm184.0000°; N 0.2323, Plg9.0000°, Azm276.0000°; P -9.9626, Plg72.0000°, Azm33.0000°;

NIED ***31*** *21:33:49.5, 32.˚73N×130.˚62E, h12km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-0.77; Mθθ0.82; Mϕϕ-0.05; Mrθ-0.87; Mϕϕ-0.08; Mϕr0.25; Fault plane solution: M₀1.21000×10¹⁶ NP1: ϕs266.00000°, δ22.00000°, λ-107.00000°. NP2: ϕs104.00000°, δ69.00000°, λ-84.00000°.*

KEA ***31*** *21:33:49.2, 32.˚49N×130.˚64E, h12km, MS4.8/2*

GCMT ***31*** *21:33:51.5±0.4, 32.˚70N±0.˚02×130.˚50E±0.˚04, h21km±1km, MW4.8/70, Moment Tensor Solution. s20,c22; s70,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.78±.14; Mθθ1.63±.09; Mϕϕ0.14±.08; Mrθ-0.74±.12; Mϕϕ-0.07±.05; Mϕr0.46±.15; Best double couple: M₀1.91200×10¹⁶ NP1:ϕs104.00000°, δ58.00000°, λ-78.00000°. NP2: ϕs263.00000°, δ34.00000°, λ-108.00000°. Principal axes: T 1.8020, Plg12.0000°, Azm186.0000°; N 0.2190, Plg10.0000°, Azm278.0000°; P -2.0220, Plg74.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 21:33:50.0±0.6, 32.72N±0.˚03×130.˚59E±0.˚04, h16km±3km, n735, σ1°12/700, mb4.9/163, MS4.0/39, 38C-61D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTA	**Tamana**	**0.24**	**348**	*i* P	**Pg**	**21 33 54.9**	**-0.6**
JTA				S	**Sg**	**21 33 58.5**	**-0.6**
JTA	**Tamana**	**0.24**	**348**	A	A	21 33 54.9	
comp=E,182nm,2.3s,comp=E,259nm,0.6s							
JIU3	**Izumi3**	**0.25**	**133**	*i* P	**Pg**	**21 33 54.7**	**-0.9**
JIU3				S	**Sg**	**21 33 58.4**	**-1.0**
JIU3	**Izumi3**	**0.25**	**133**	A	A	21 33 54.7	
comp=E,148nm,2.1s,comp=E,188nm,1.0s							
JHD	**Hondo**	**0.46**	**236**	A	A	21 33 58.9	
comp=E,112nm,0.9s,comp=E,211nm,1.2s							
JNU	**Nakatsue**	**0.46**	**31**	A	A	21 33 58.4	
comp=E,114nm,1.0s,comp=E,128nm,0.8s							
JZO	**Okuchi**	**0.58**	**180**	A	A	21 34 00.7	
comp=E,51nm,1.3s,comp=E,68nm,3.4s							
JUR	**Ureshino**	**0.66**	**304**	A	A	21 34 02.4	
comp=E,61nm,1.3s,comp=E,26nm,2.0s							
JFI	**Itaya**	**0.72**	**346**	A	A	21 34 03.4	
comp=E,77nm,0.9s,comp=E,77nm,4.8s							
JKIT	**Kitakata**	**0.73**	**98**	A	A	21 34 03.1	
comp=E,24nm,1.2s,comp=E,38nm,3.9s							
JTSN	**Tsuno**	**0.91**	**122**	A	A	21 34 06.2	
comp=E,40nm,2.0s,comp=E,68nm,0.6s							
JBEP	**Beppuamama**	**0.92**	**48**	A	A	21 34 06.5	
comp=E,78nm,1.9s,comp=E,75nm,2.3s							
JTZ	**Takazaki**	**0.92**	**153**	*i* P	**Pb**	**21 34 07.2**	**-0.4**
JTZ				S	**Sb**	**21 34 18.7**	**-0.9**
JTZ	**Takazaki**	**0.92**	**153**	A	A	21 34 07.2	
comp=E,67nm,1.6s,comp=E,59nm,0.9s							
JHHC	**Hyugahichiya**	**0.92**	**107**	A	A	21 34 06.6	
comp=E,36nm,0.8s,comp=E,57nm,1.0s							
JFA	**Akaike**	**1.00**	**10**	A	A	21 34 08.1	
comp=E,60nm,1.1s,comp=E,48nm,6.9s							
JUS	**Usuki**	**1.03**	**70**	A	A	21 34 08.4	
comp=E,57nm,0.9s,comp=E,71nm,1.0s							
JSKE	**Saikikamae**	**1.10**	**86**	A	A	21 34 09.6	
comp=E,13nm,1.7s,comp=E,26nm,1.1s							
JSU	**Suzuyama**	**1.22**	**186**		**Pn**	**21 34 12.1**	**-0.4**
JSU	**Suzuyama**	**1.22**	**186**	A	A	21 34 11.9	
comp=E,22nm,1.6s,comp=E,36nm,6.7s							
JKI	**Kunimi**	**1.22**	**42**	A	A	21 34 11.7	
comp=E,58nm,1.2s,comp=E,86nm,1.2s							
JNKG	**Nichinankitago**	**1.25**	**148**	A	A	21 34 12.3	
comp=E,42nm,1.2s,comp=E,43nm,2.2s							
JSJ	**Shimokoshiki**	**1.28**	**216**	A	A	21 34 13.1	
comp=E,18nm,1.6s,comp=E,24nm,6.7s							
JII	**Iki**	**1.29**	**326**	A	A	21 34 13.2	
comp=E,80nm,1.8s,comp=E,52nm,4.6s							
JNAR	**Kushima--Naru**	**1.32**	**154**	A	A	21 34 13.5	
comp=E,57nm,1.3s,comp=E,53nm,1.5s							
JFU	**Fukue jima 2**	**1.56**	**268**	A	A	21 34 17.5	
comp=E,14nm,5.1s,comp=E,14nm,1.8s							
JTSR	**Tashiro 2**	**1.58**	**170**	A	A	21 34 17.5	
comp=E,13nm,5.4s,comp=E,13nm,5.7s							
JTY	**Toyota**	**1.58**	**14**	A	A	21 34 17.6	
comp=E,31nm,1.0s,comp=E,39nm,1.6s							
JKD	**Kudamatsu**	**1.71**	**39**	A	A	21 34 19.2	
comp=E,21nm,5.2s,comp=E,24nm,2.2s							
UWA2	**Uwa jima 2**	**1.78**	**73**	A	A	21 34 20.2	
comp=E,14nm,1.6s,comp=E,14nm,6.7s							
JNA	**Nagahama**	**1.79**	**62**	A	A	21 34 20.4	
comp=E,9.0nm,6.3s,comp=E,14nm,2.6s							
JTO	**Tosashimizu**	**1.86**	**85**	A	A	21 34 21.5	
comp=E,12nm,2.2s,comp=E,24nm,2.0s							
JTSM	**Tsushimamitsus**	**1.90**	**328**	A	A	21 34 22.4	
comp=E,17nm,0.7s,comp=E,24nm,4.9s							
JTU	**Tsushima**	**2.05**	**331**	Pn	**Pn**	**21 34 23.1**	**-0.8**
JTU	**Tsushima**	**2.05**	**331**	A	A	21 34 24.7	
comp=E,14nm,0.9s,comp=E,23nm,0.9s							
JTN	**Tanegashima 3**	**2.09**	**171**	A	A	21 34 25.0	
comp=E,11nm,4.9s,comp=E,11nm,6.4s							
JHGM	**Hagimishima**	**2.10**	**12**	A	A	21 34 25.2	
comp=E,35nm,0.7s,comp=E,84nm,1.9s							
JHIK	**Hikimi**	**2.12**	**31**	A	A	21 34 25.3	
comp=E,14nm,8.3s,comp=E,22nm,3.8s							
JHM	**Kurahashi**	**2.15**	**48**	A	A	21 34 25.7	
comp=E,17nm,1.8s,comp=E,14nm,1.9s							
JKU	**Kubokawa**	**2.16**	**74**	A	A	21 34 25.7	
comp=E,16nm,5.1s,comp=E,18nm,4.5s							
JKC	**Kuchinoerabu**	**2.28**	**189**	A	A	21 34 27.9	
comp=E,10.0nm,2.9s,comp=E,13nm,6.7s							
JET	**Tanbara**	**2.31**	**62**	A	A	21 34 28.0	
comp=E,8.0nm,4.2s,comp=E,16nm,2.8s							
JMTN	**Minamitane**	**2.33**	**173**	A	A	21 34 28.6	
comp=E,10.0nm,8.3s,comp=E,13nm,7.7s							
JHT	**Toyohira**	**2.46**	**38**	A	A	21 34 30.3	
comp=E,8.0nm,1.8s,comp=E,15nm,5.7s							
JKHR	**Kochiharuno**	**2.56**	**71**	A	A	21 34 31.6	
comp=E,17nm,1.2s,comp=E,15nm,4.6s							
KSBUS	**Busan**	**2.80**	**334**		**Pn**	**21 34 33.9**	**-0.3**
JGT2	**ShimaneMisato**	**2.83**	**34**	A	A	21 34 35.5	
comp=E,12nm,1.6s,comp=E,18nm,5.2s							
JJG	**Jouge**	**2.87**	**47**	A	A	21 34 36.0	
comp=E,8.0nm,8.3s,comp=E,9.0nm,2.8s							
JMN	**Monobe**	**2.93**	**69**		**Pn**	**21 34 36.0**	**0.0**
JMN	**Monobe**	**2.93**	**69**	A	A	21 34 36.9	
comp=E,16nm,4.2s,comp=E,16nm,4.6s							
MRT2	**Murotomisaki 2**	**3.05**	**77**	A	A	21 34 38.6	
comp=E,7.0nm,5.6s,comp=E,6.0nm,5.3s							
JHS	**Saijyo**	**3.09**	**42**	Pn	**Pn**	**21 34 38.5**	**+0.3**
JHS	**Saijyo**	**3.09**	**42**	A	A	21 34 39.2	
comp=E,8.0nm,5.0s,comp=E,9.0nm,2.5s							
JJS	**Sakaide**	**3.24**	**59**	A	A	21 34 41.2	
comp=E,5.0nm,2.3s							
JMAF	**Mimaanabuki**	**3.25**	**65**	A	A	21 34 41.5	
comp=E,9.0nm,1.4s,comp=E,8.0nm,3.0s							
JISK	**Izumosakaura**	**3.34**	**33**	A	A	21 34 42.8	
comp=E,23nm,2.5s,comp=E,19nm,1.3s							
JAI	**Aioi**	**3.40**	**71**	A	A	21 34 43.6	
comp=E,9.0nm,5.8s,comp=E,9.0nm,5.8s							
JNM	**Ikuma**	**3.42**	**35**	A	A	21 34 44.0	
comp=E,26nm,2.2s,comp=E,24nm,1.4s							
JAD	**Aida**	**3.71**	**52**	A	A	21 34 47.9	
comp=E,6.0nm,5.4s,comp=E,7.0nm,3.5s							
JKR	**Kurayoshi**	**3.77**	**44**	A	A	21 34 48.8	
comp=E,11nm,1.7s,comp=E,10.0nm,4.6s							
NAWB	**Namwon**	**3.78**	**316**	Pn	**Pn**	**21 34 47.6**	**0.0**
JAWN	**Awajishima-nag**	**4.00**	**63**	A	A	21 34 52.1	
comp=E,5.0nm,2.3s,comp=E,9.0nm,3.4s							
JWM	**Minabe**	**4.14**	**73**	A	A	21 34 54.0	
comp=E,5.0nm,5.9s,comp=E,6.0nm,2.4s							
TJN	**Taejon**	**4.51**	**325**	*d* iP	**Pn**	**21 34 57.7**	**0.0**
KSCHJ	**Chungju**	**4.67**	**333**		**Pn**	**21 34 59.6**	**-0.2**
KSRS	**Korea Array**	**5.20**	**336**		**Pn**	**21 35 07.6**	**+0.4**
KSRS	**Korea Array**	**5.20**	**336**	P	**Pn**	**21 35 07.6**	**+0.4**
KSRS	**Korea Array**	**5.20**	**336**	Pn	**Pn**	**21 35 07.6**	**+0.4**
2.8nm,0.3s,baz=151,slow=13,SNR=19							
KSRS				Lg	Lg	21 36 31.3	
25nm,0.3s,baz=155,slow=30,SNR=7.8							
KSRS				LR	LR	21 37 26.6	
comp=Z,1μm,19.4s,baz=155,slow=42 7.8nm,0.4s							
KSAR	**Wonju Array Be**	**5.21**	**336**	Pn	**Pn**	**21 35 07.8**	**+0.6**
KSAR	**Wonju Array Be**	**5.21**	**336**	P	**Pn**	**21 35 07.8**	**+0.6**
KS19	**Wonju Array Si**	**5.26**	**336**		**Pn**	**21 35 07.8**	**-0.2**
INCN	**Inchon**	**5.75**	**327**	Pn	**Pn**	**21 35 14.2**	**-0.5**
INCN	**Inchon**	**5.75**	**327**	P	**Pn**	**21 35 14.3**	**-0.5**
SEHB	**SEOHWA**	**5.85**	**342**		**Pn**	**21 35 16.6**	**+0.5**
INU	**Inuyama**	**5.94**	**62**		**Pn**	**21 35 18.6**	**+1.3**
JOW	**Kunigami**	**6.21**	**200**		**Pn**	**21 35 20.2**	**-0.8**
JGF	**Kuroka**	**6.30**	**61**		**Pn**	**21 35 22.9**	**+0.7**
HJU	**Haeju**	**6.63**	**325**	P	**Pn**	**21 35 29.5**	**+2.8**
HJU				pP	**pPn**	**21 35 31.6**	**+1.0**
HJU				S	**Sn**	**21 36 45.8**	**+3.8**
HJU				AMS	AMS		
comp=N,2μm,1.3s							
HJU				AMS	AMS		
comp=E,1μm,1.0s							
HJU				AMS	AMS		
comp=Z,2μm,1.2s							
MAJO	**Matsushiro**	**7.34**	**57**		**Pn**	**21 35 37.5**	**+1.0**
MAJO	**Matsushiro**	**7.34**	**57**	*d* iP	**Pn**	**21 35 37.9**	**+1.4**
MJAR	**Matsushiro Arr**	**7.34**	**57**	P	**Pn**	**21 35 36.4**	**-0.2**
MJAR	**Matsushiro Arr**	**7.34**	**57**	Pn	**Pn**	**21 35 36.4**	**-0.2**
comp=Z,0.7nm,0.3s,baz=238,slow=12,SNR=40							
MJAR				LR	LR	21 38 17.1	
comp=Z,688nm,19.5s,baz=242,slow=37 comp=Z,13nm,0.5s							
JHJ	**Hachijo jima 2**	**7.74**	**85**		**Pn**	**21 35 42.6**	**+0.7**
JHJ	**Hachijo jima 2**	**7.74**	**85**	Pn	**Pn**	**21 35 42.6**	**+0.7**
comp=Z,68nm,0.3s,baz=238,slow=22,SNR=21							
JHJ				LR	LR	21 38 58.5	
comp=Z,564nm,18.1s,baz=291,slow=40 comp=Z,187nm,0.4s							
JHJ2	**Mitsune**	**7.76**	**85**	Pn	**Pn**	**21 35 42.3**	**0.0**
SSE	**Sheshan**	**8.16**	**261**	P	**Pn**	**21 35 48.3**	**+0.5**
SSE				S	**Sn**	**21 37 19.0**	**-0.7**
SSE				pmax	pmax		
comp=Z,11nm,0.6s							
SSE				pmax	pmax		
comp=Z,150nm,3.1s							
SSE				LR	LR		
comp=Z,730nm,12.0s							
SSE				LR	LR		
comp=Z,1μm,11.7s							
JSD	**Sado**	**8.20**	**48**	Pn	**Pn**	**21 35 48.2**	**-0.1**
JYT	**Yasato**	**8.66**	**64**	Pn	**Pn**	**21 35 56.2**	**+1.6**
SUJ	**Sinuiju**	**8.85**	**328**	P	**Pn**	**21 35 59.9**	**+2.7**
SUJ				sP	**sPn**	**21 36 05.2**	**+1.9**
SUJ				S	Sn	21 37 46.3	+10
SUJ				AMS	AMS		
comp=N,760nm,1.2s							
SUJ				AMS	AMS		
comp=E,1μm,1.8s							
SUJ				AMS	AMS		
comp=Z,1μm,1.9s							
NJ2	**Nanjing**	**9.95**	**269**	*e*P	**Pn**	**21 36 10.3**	**-2.0**
NJ2				pmax	pmax		
comp=Z,8.0nm,0.5s							
NJ2				LR	LR		
comp=Z,800nm,6.5s							
NJ2				LR	LR		
comp=Z,900nm,6.9s							
NJ2				LR	LR		
comp=Z,1μm,9.2s							
USRK	**Ussuriysk Ar.**	**11.51**	**5**	Pn	**Pn**	**21 36 35.5**	**+1.9**
USRK	**Ussuriysk Ar.**	**11.51**	**5**	P	**Pn**	**21 36 35.5**	**+1.9**
USRK	**Ussuriysk Ar.**	**11.51**	**5**	Pn	**Pn**	**21 36 36.8**	**+3.2**
comp=Z,0.8nm,0.3s,baz=190,slow=13,SNR=28							
USRK				LR	LR	21 40 32.4	
comp=Z,426nm,18.8s,baz=247,slow=35							
JCJ	**Chichijima**	**11.51**	**116**	LR	LR	21 40 35.0	
comp=Z,237nm,19.2s,baz=318,slow=35							
USA0B	**Ussuriysk Arra**	**11.51**	**5**	Pn	**Pn**	**21 36 35.7**	**+2.1**
USA0B	**Ussuriysk Arra**	**11.51**	**5**	P	**Pn**	**21 36 35.7**	**+2.1**
NACB	**Ninganchiao**	**11.62**	**225**	Pn	**Pn**	**21 36 38.0**	**+2.7**
CN2	**Changchun**	**11.77**	**341**	*e*P	**Pn**	**21 36 39.8**	**+2.6**
CN2				*e*PP	**PnPn**	**21 36 49.5**	**+4.4**
CN2				*e*S	**Sn**	**21 38 52.5**	**+4.3**
CN2				*es*S		21 38 57.5	
CN2				pmax	pmax		
comp=Z,10.0nm,1.0s							
CN2				LR	LR		
comp=Z,3μm,12.0s							
CN2				LR	LR		
comp=Z,2μm,12.0s							
CN2				LR	LR		
comp=Z,3μm,13.0s							
SSLB	**Suanglung**	**12.30**	**226**	Pn	**Pn**	**21 36 46.3**	**+1.7**
BNX	**BinXian**	**13.23**	**350**	⇑P	**Pn**	**21 37 01.3**	**+4.2**
BNX				pmax	pmax		
comp=Z,13nm,1.1s							
BNX				pmax	pmax		
comp=Z,540nm,5.0s							
BJT	**Baijiatuau**	**13.71**	**306**	Pn	**Pn**	**21 37 05.3**	**+1.7**
BJT	**Baijiatuau**	**13.71**	**306**	P	**Pn**	**21 37 05.4**	**+1.7**
BJI	**Beijing**	**13.71**	**306**	P	**Pn**	**21 37 05.5**	**+1.8**
BJI				pmax	pmax		
comp=Z,7.0nm,0.8s							
BJI				pmax	pmax		
comp=Z,220nm,7.7s							
BJI				LR	LR		
comp=Z,170nm,10.9s							
BJI				LR	LR		
comp=Z,2μm,12.4s							
BJI				LR	LR		
comp=Z,2μm,12.4s							
HNS	**HongShan**	**13.82**	**294**	⇑P	**P**	**21 37 13.5**	**-0.1**
HNS				S	**S**	**21 39 54.8**	**-5.7**
HNS				pmax	pmax		
comp=Z,13nm,1.2s							
HNS				LR	LR		
comp=N,2μm,15.9s							
HNS				LR	LR		
comp=E,960nm,13.7s							
HNS				LR	LR		
comp=Z,1μm,13.7s							
LYN	**LuoYang**	**15.21**	**282**	*e*P	**Pn**	**21 37 26.3**	**+2.2**
LYN				pP	P	21 37 29.5	+0.4
LYN				pmax	pmax		
comp=Z,10.0nm,0.8s							
LYN				pmax	pmax		
comp=Z,240nm,5.3s							
LYN				LR	LR		
comp=Z,700nm,11.4s							
LYN				LR	LR		
comp=Z,1μm,11.1s							
LYN				LR	LR		
comp=Z,1μm,11.0s							
CNSH	**ChangSha**	**15.89**	**258**	⇑P	**P**	**21 37 38.8**	**+2.2**
CNSH				S	**S**	**21 40 40.8**	**-2.1**
CNSH				LR	LR		
comp=N,1μm,10.5s							
CNSH				LR	LR		
comp=E,1μm,11.9s							
CNSH				LR	LR		
comp=Z,1μm,11.8s							
XLT	**XiLinHaoTe**	**15.92**	**319**	⇑*i*P	**P**	**21 37 35.5**	**-1.5**
XLT				sP	sP	21 37 42.5	-1.1
XLT				S	**Sn**	**21 40 23.0**	**-6.5**
XLT				pmax	pmax		
comp=Z,14nm,1.2s							
XLT				pmax	pmax		
comp=Z,220nm,3.9s							
XLT				LR	LR		
comp=Z,2μm,9.7s							
XLT				LR	LR		
comp=Z,3μm,10.8s							
KLR	**Kul'dur**	**16.51**	**3**	⇑*e*P	**P**	**21 37 42.3**	**-1.1**
KLR				pmax	pmax		
comp=Z,29nm,1.2s							
KLR	**Kul'dur**	**16.51**	**3**	LR	LR	21 43 44.3	
comp=Z,298nm,18.4s,baz=188,slow=36							
YSS	**Yuzh-Sakhalins**	**16.98**	**30**	*e*P	**Pn**	**21 37 44.9**	**-1.8**
YSS				pmax	pmax		
comp=Z,60nm,1.3s							
YSS				MLR	MLR		
comp=Z,900nm,16.0s							
HHC	**Hu-ho-hao-te**	**17.24**	**303**	*e*P	**P**	**21 37 51.5**	**-0.2**
HHC				S	**Sn**	**21 41 01.8**	**0.0**
HHC				pmax	pmax		
comp=Z,15nm,0.7s							
HHC				pmax	pmax		
comp=Z,550nm,6.9s							
HHC				LR	LR		
comp=Z,1μm,8.6s							
HHC				LR	LR		
comp=Z,2μm,8.9s							
HHC				LR	LR		
comp=Z,3μm,10.2s							
XAN	**Xi'an**	**18.15**	**280**	P	**P**	**21 38 03.0**	**+1.3**
XAN				pP	sP	21 38 13.0	+4.8
XAN				pmax	pmax		
comp=Z,10.0nm,1.6s							
XAN				pmax	pmax		
comp=Z,300nm,6.9s							
XAN				LR	LR		
comp=Z,1μm,9.3s							
XAN				LR	LR		
comp=Z,760nm,8.3s							
XAN				LR	LR		
comp=Z,2μm,11.8s							
ENH	**Enshi**	**18.16**	**268**		**P**	**21 38 01.8**	**-0.1**
KUR	**Kuril'sk**	**18.29**	**42**	⇑*e*P	**Pn**	**21 38 02.1**	**-0.9**
KUR				pmax	pmax		
comp=Z,156nm,1.2s							
HIA	**Hailar**	**18.41**	**337**		**Pn**	**21 38 05.5**	**+1.0**
HIA	**Hailar**	**18.41**	**337**	*de*P	**Pn**	**21 38 06.1**	**+1.6**
HIA				pmax	pmax		
comp=Z,21nm,1.1s							
TYV	**Tymovskoe**	**20.18**	**23**	*e*P	Pn	21 38 32.4	+6.7
ZEA	**Zeya**	**21.14**	**354**	*e*P	**P**	**21 38 35.5**	**+1.4**
ZEA				*e*S	**S**	**21 42 19.3**	**-9.3**
ZEA				*e*		21 42 42.8	
ZEA				pmax	pmax		
comp=N,80nm,1.0s							
ZEA				pmax	pmax		
comp=Z,130nm,0.9s							
ZEA				pmax	pmax		
comp=Z,300nm,3.2s							
ZEA				smax	smax		
comp=E,300nm,4.5s							
ZEA				MLR	MLR		
comp=E,300nm,10.0s							
ZEA				MLR	MLR		
comp=N,600nm,9.0s							
ZEA				MLR	MLR		
comp=Z,600nm,8.0s							
GYA	**Guiyang**	**21.70**	**260**	⇑*i*P	**P**	**21 38 42.5**	**+2.0**
GYA				sP	sP	21 38 47.3	+0.2
GYA				S	**S**	**21 42 40.0**	**-0.3**
GYA				pmax	pmax		
comp=Z,15nm,1.0s							
GYA				pmax	pmax		
comp=Z,140nm,5.0s							
GYA				LR	LR		
comp=Z,670nm,10.6s							
GYA				LR	LR		
comp=Z,940nm,11.3s							
GYA				LR	LR		
comp=Z,1μm,10.8s							
LZH	**Lanzhou**	**22.30**	**286**	*e*P	**P**	**21 38 46.3**	**-0.6**
LZH				pP	pP	21 38 50.0	-1.4
LZH				sP	sP	21 38 52.0	-1.5
LZH				PP	**PnPn**	**21 39 16.0**	**+6.5**
LZH				S	**S**	**21 42 42.8**	**-8.9**
LZH				sS	pS	21 42 54.5	-3.6
LZH				pmax	pmax		
comp=Z,18nm,1.2s							
LZH				pmax	pmax		
comp=Z,150nm,4.5s							
LZH				LR	LR		
comp=Z,600nm,12.0s							
LZH				LR	LR		
comp=Z,830nm,14.1s							
LZH				LR	LR		
comp=Z,910nm,14.4s							
CD2	**Chengdu**	**22.86**	**273**	P	**P**	**21 38 53.0**	**+0.3**
CD2				pP	pP	21 38 54.0	-3.3
CD2				sP	sP	21 38 57.5	-1.9
CD2				S	**S**	**21 43 03.0**	**+1.3**
CD2				pmax	pmax		
comp=Z,50nm,1.4s							
CD2				LR	LR		
comp=Z,2μm,13.9s							
CD2				LR	LR		
comp=Z,2μm,11.8s							
CD2				LR	LR		
comp=Z,2μm,11.6s							
QIZ	**Qiongzhong**	**23.06**	**239**	P	**P**	**21 38 55.8**	**+0.9**
QIZ				S	**S**	**21 43 09.5**	**+4.2**
QIZ				LR	LR		
comp=Z,940nm,9.6s							
QIZ				LR	LR		
comp=Z,480nm,10.0s							
QIZ				LR	LR		
comp=Z,960nm,11.5s							
GUMO	**Guam**	**23.08**	**142**	LR	LR	21 47 15.1	
comp=Z,124nm,19.3s,baz=336,slow=35							
ULN	**Ulaanbaatar**	**23.35**	**317**	P	**P**	**21 38 57.2**	**-0.5**
ULN				IAmb	IAmb	21 39 04.5	
comp=Z,36nm,1.0s							
ULN	**Ulaanbaatar**	**23.35**	**317**	*de*P	**P**	**21 38 57.6**	**-0.1**
ULN				pmax	pmax		
comp=Z,37nm,1.1s							
SONM	**Songino Array**	**23.71**	**317**	P	**P**	**21 39 00.7**	**-0.5**
SONM	**Songino Array**	**23.71**	**317**	P	**P**	**21 39 00.7**	**-0.5**
SONM				pmax	pmax		
comp=Z,16nm,0.9s							
SONM	**Songino Array**	**23.71**	**317**	P	**P**	**21 39 01.4**	**+0.1**
comp=Z,14nm,0.9s,baz=127,slow=8.9,SNR=42							
SONM				LR	LR	21 48 14.6	
comp=Z,230nm,18.3s,baz=118,slow=37 comp=Z,14nm,0.9s							
KMI	**Kunming**	**25.48**	**260**	⇓P	**P**	**21 39 19.0**	**+1.2**
KMI				pP	pP	21 39 20.5	-2.1
KMI				pmax	pmax		
comp=Z,10.0nm,0.8s							
KMI				LR	LR		
comp=Z,560nm,10.7s							
KMI				LR	LR		
comp=Z,890nm,12.3s							
KMI				LR	LR		
comp=Z,1μm,12.5s							
GTA	**Gaotai**	**25.68**	**294**	⇑P	**P**	**21 39 20.0**	**+0.6**
GTA				pP	sP	21 39 25.0	-1.3
GTA				sS	sS	21 43 58.5	+3.0
GTA				pmax	pmax		
comp=Z,26nm,1.0s							
GTA				pmax	pmax		
comp=Z,110nm,5.8s							
GTA				LR	LR		
comp=Z,950nm,14.9s							
GTA				LR	LR		
comp=Z,820nm,13.1s							
GTA				LR	LR		
comp=Z,870nm,13.1s							
PZH	**PanZhiHua**	**25.79**	**264**	P	**P**	**21 39 21.5**	**+1.0**
PZH				pP	**pP**	**21 39 24.3**	**-1.0**
PZH				S	**S**	**21 43 49.3**	**0.0**
PZH				pmax	pmax		
comp=Z,30nm,1.4s							
PZH				pmax	pmax		
comp=Z,80nm,8.4s							
PZH				LR	LR		
comp=Z,830nm,11.6s							
PZH				LR	LR		
comp=Z,1μm,12.6s							
PZH				LR	LR		
comp=Z,710nm,11.6s							
DAV	**Davao City (W)**	**25.95**	**191**	LR	LR	21 51 34.9	
comp=Z,248nm,18.1s,baz=10,slow=41							
ZAK	**Zakamensk**	**26.77**	**319**	*e*P	**P**	**21 39 29.3**	**+0.2**
ZAK				pmax	pmax		
comp=Z,9.0nm,1.3s							
PEA0B	**Petropavlovsk-**	**28.16**	**36**	⇑*e*P	**P**	**21 39 40.8**	**-0.6**
PETK	**Petropavlovsk-**	**28.16**	**36**	LR	LR	21 51 33.5	
comp=Z,90nm,18.6s,baz=216,slow=38							
PET	**Petropavlovsk**	**28.59**	**36**	⇑*e*P	**P**	**21 39 45.5**	**+0.4**
PET				pmax	pmax		
comp=Z,24nm,1.3s							
MOY	**Mondy**	**28.67**	**320**	*e*P	**P**

YAK MLR MLR
comp=N,223nm,18.0s
YAK MLR MLR
comp=E,74nm,11.0s
YAK Yakutsk 29.33 359 P **P 21 39 50.6 -1.1**
comp=E,3.3nm,0.3s,baz=12,slow=2.8,SNR=2.0
YAK LR LR 21 51 06.5
comp=E,191nm,20.7s,baz=96,slow=36
comp=E,3.3nm,0.3s
GOMU GeErMu 29.60 287 P **P 21 39 56.3 +1.5**
GOMU pP sP 21 40 00.5 -1.2
GOMU sP pP 21 40 01.8 +2.1
GOMU PcP **PcP 21 43 01.8 +2.4**
GOMU S **S 21 44 49.0 -0.7**
GOMU sS sS 21 44 56.3 -1.5
GOMU pmax pmax
comp=E,3.0nm,0.8s
GOMU pmax pmax
comp=E,73nm,4.1s
GOMU LR LR
comp=E,230nm,12.7s
GOMU LR LR
comp=E,190nm,11.2s
GOMU LR LR
comp=E,180nm,10.2s
MYLDM Lahad Datu 29.64 205 P **P 21 39 53.9 -0.9**
MYLDM IAmb IAmb 21 40 56.7
comp=Z,19nm,1.3s
CRAI Chiangrai 29.66 253 P **P 21 39 55.6 +0.5**
MA2 Magadan 30.02 21⇑ *e*P **P 21 39 57.4 -0.5**
MA2 pmax pmax
comp=Z,14nm,1.3s
MA2 Magadan 30.02 21 LR LR 21 52 27.4
comp=Z,191nm,18.2s,baz=182,slow=37
KNGR Kungurtug, Tuv 30.15 316⇓ *e*P **P 21 39 57.8 -1.4**
KNGR pmax pmax
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 31.55 252 P **P 21 40 11.5 -0.3**
CHTO Chiang Mai 31.55 252 P **P 21 40 11.5 -0.3**
CHTO pmax pmax
comp=Z,8.0nm,1.0s
CM31 Chiang Mai Arr 31.74 251 P **P 21 40 13.8 +0.3**
CM31 IAmb IAmb 21 40 20.6
comp=Z,21nm,1.4s
CMAR Chiang Mai Arr 31.74 251 P **P 21 40 14.0 +0.6**
CMAR Chiang Mai Arr 31.74 251 P **P 21 40 14.6 +1.1**
CMAR 21 43 05.2
CMAR Chiang Mai Arr 31.74 251 P **P 21 40 14.6 +1.1**
comp=Z,2.8nm,0.9s,baz=55,slow=6.0,SNR=15
CMAR PcP **PcP 21 43 05.2 +0.3**
comp=Z,1.6nm,0.7s,baz=34,slow=2.0,SNR=4.2
CMAR LR LR 21 54 04.8
comp=Z,218nm,19.4s,baz=55,slow=38
comp=Z,2.8nm,0.9s
SEY Seymchan 33.23 18⇑ *e*P **P 21 40 26.9 +0.9**
SEY pmax pmax
comp=Z,10.0nm,1.7s
SEY Seymchan 33.23 18 P **P 21 40 25.5 -0.4**
comp=Z,2.4nm,0.6s,baz=194,slow=7.2,SNR=4.5
comp=Z,2.4nm,0.6s
SIJI Sorong 33.42 179 LR LR 21 53 16.8
comp=Z,152nm,19.9s,baz=67,slow=35
LSA Lhasa 33.74 276 P **P 21 40 32.0 +0.6**
LSA IAmb IAmb 21 40 38.4
comp=Z,27nm,1.6s
LSA Lhasa 33.74 276 P **P 21 40 32.0 +0.6**
LSA pmax pmax
comp=Z,27nm,1.6s
SHL Shillong 34.41 268 P **P 21 40 36.3 -0.6**
SHL IAmb IAmb 21 40 47.4
comp=Z,13nm,1.1s
SHL Shillong 34.41 268 P **P 21 40 36.3 -0.6**
SHL pmax pmax
comp=Z,13nm,1.1s
WMQ Urumqi 35.10 301 *e*P **P 21 40 43.5 +1.0**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ LR LR
comp=Z,470nm,19.9s
WMQ LR LR
comp=Z,320nm,18.7s
WMQ LR LR
comp=Z,200nm,18.7s
FAKI Fak Fak 35.48 177 P **P 21 40 46.0 +0.1**
FAKI IAmb IAmb 21 40 51.4
comp=Z,34nm,1.0s
DGZ Jazzator, Alta 36.06 311⇓ *e*P **P 21 40 50.5 -0.3**
DGZ pmax pmax
comp=Z,4.0nm,0.9s
SHEM Shemya Is, Ala 36.98 44 LR LR 21 55 00.4
comp=Z,80nm,21.7s,baz=41,slow=34
ZSN Zaisan 37.39 307 *e*P **P 21 41 02.2 +0.2**
ZSN Zaisan 37.39 307 *e*P **P 21 41 02.3 +0.2**
baz=307
ZAA0 Zalesovo Array 38.60 317 P **P 21 41 11.9 -0.3**
ZALV Zalesovo Beam 38.60 317 P **P 21 41 11.4 -0.8**
ZALV Zalesovo Beam 38.60 317 *i* P **P 21 41 12.3 +0.2**
ZALV pmax pmax
comp=Z,8.0nm,1.1s
ZALV Zalesovo Beam 38.60 317 P **P 21 41 11.8 -0.3**
comp=Z,8.2nm,1.1s,baz=101,slow=7.7,SNR=14
ZALV LR LR 21 58 14.6
comp=Z,236nm,19.2s,baz=98,slow=38
comp=Z,8.2nm,1.1s
GUN Gumba 38.68 275 *e*P **P 21 41 14.6 +1.0**
comp=Z,74nm,0.8s
KAPI Kappang 38.92 197⇑ *e*P **P 21 41 14.8 -0.3**
KAPI pmax pmax
comp=Z,16nm,1.2s
KAPI Kappang 38.92 197 LR LR 22 00 06.5
comp=Z,92nm,18.1s,baz=358,slow=40
TIXI Tiksi 39.00 359 P **P 21 41 14.2 -0.9**
TIXI Tiksi 39.00 359⇓ *e*P **P 21 41 13.8 -1.4**
TIXI pmax pmax
comp=Z,12nm,1.7s
TIXI Tiksi 39.00 359 LR LR 21 57 32.7
comp=Z,214nm,19.8s,baz=180,slow=37
MK31 Makanchi Array 39.09 306 P **P 21 41 15.4 -0.9**
MK31 Makanchi Array 39.09 306 *d* P **P 21 41 16.0 -0.4**
MKAR Makanchi Array 39.09 306 P **P 21 41 16.2 -0.2**
MKAR Makanchi Array 39.09 306 *i* P **P 21 41 16.2 -0.2**
MKAR pmax pmax
comp=Z,6.0nm,0.9s
MKAR Makanchi Array 39.09 306 P **P 21 41 16.0 -0.3**
comp=Z,5.6nm,0.9s,baz=92,slow=8.6,SNR=26
MKAR LR LR 21 58 36.9
comp=Z,169nm,19.6s,baz=106,slow=38
comp=Z,5.6nm,0.9s
PKI Pulchoki 39.19 275 *e*P **P 21 41 18.0 +0.2**
comp=Z,36nm,1.1s
PKIN Phulchoki 39.19 275 *e*P **P 21 41 18.1 +0.3**
comp=Z,21nm,0.9s
KKN Kakani 39.22 275 *e*P **P 21 41 18.6 +0.7**
MAKZ Makanchi 39.30 306 P **P 21 41 17.4 -0.8**
MAKZ Makanchi 39.30 306 P **P 21 41 17.4 -0.8**
MAKZ pmax pmax
comp=Z,10.0nm,1.0s
GKN Gorkha 39.70 276 *e*P **P 21 41 22.1 +0.3**
DANN Dangsing 40.32 277 *e*P **P 21 41 28.1 +0.9**
KOLN Koldanda 40.64 276 *e*P **P 21 41 30.2 +0.5**
comp=Z,5.2nm,1.3s
SEM Semipalatinsk 40.74 311 *e*P **P 21 41 29.8 -0.5**
SEM pmax pmax
comp=Z,20nm,1.3s
SEM Semipalatinsk 40.74 311 *e*P **P 21 41 29.8 -0.5**
comp=Z,20nm,1.3s,baz=311
BILL Bilibino 40.88 20 P **P 21 41 31.4 +0.5**
BILL IAmb IAmb 21 41 32.9
comp=Z,94nm,1.9s
BILL Bilibino 40.88 20 *de*P **P 21 41 32.2 +1.3**
BILL pmax pmax
comp=Z,34nm,1.7s
PYUN Piuthan 41.05 277 *e*P **P 21 41 33.7 +0.7**
UZB Uzynbulak 41.40 300 *e*P **P 21 41 35.4 -0.3**
UZB Uzynbulak 41.40 300 *e*P **P 21 41 35.5 -0.3**
baz=300
KPKS Kokpek 41.63 300 *e*P **P 21 41 37.2 -0.3**
KPKS Kokpek 41.63 300 *e*P **P 21 41 37.2 -0.3**
baz=300
TDK Taldyqorghan 41.77 303 *e*P **P 21 41 39.1 +0.6**
TDK Taldyqorghan 41.77 303 *e*P **P 21 41 39.2 +0.6**
baz=303
KURK Kurchatov 41.80 311 P **P 21 41 38.3 -0.4**
KURK IAmb IAmb 21 41 39.9
comp=Z,24nm,1.0s

KURK Kurchatov 41.80 311 *d* P **P 21 41 38.5 -0.2**
KURK pmax pmax
comp=Z,22nm,0.8s
SATY Saty 41.86 300 *e*P **P 21 41 39.4 0.0**
SATY Saty 41.86 300 *e*P **P 21 41 39.5 0.0**
baz=300
PSI Prapat 42.04 232 LR LR 22 00 48.5
comp=Z,357nm,18.1s,baz=42,slow=38
CHKK Chushkaly 42.84 301 *e*P **P 21 41 47.2 -0.1**
CHKK Chushkaly 42.84 301 *e*P **P 21 41 47.2 -0.1**
baz=301
MDOK Medeo 42.84 300 *i* P **P 21 41 48.2 +0.7**
MDOK Medeo 42.84 300 *i* P **P 21 41 48.2 +0.7**
baz=300
AAA Alma-Ata 42.94 300 *e*P **P 21 41 49.0 +0.9**
AAA pmax pmax
comp=Z,15nm,0.8s
AAA Alma-Ata 42.94 300 *e*P **P 21 41 49.0 +0.9**
comp=Z,15nm,0.8s,baz=300
KUU Kurty 43.30 301 *e*P **P 21 41 51.1 0.0**
KUU pmax pmax
comp=Z,22nm,1.1s
KUU Kurty 43.30 301 *e*P **P 21 41 51.1 0.0**
comp=Z,22nm,1.1s,baz=301
NRN Naryn 43.79 298 P **P 21 41 55.3 0.0**
NRN Naryn 43.79 298 P **P 21 41 55.3 0.0**
NRN pmax pmax
comp=Z,5.0nm,0.8s
TKM2 Tokmak 2 43.92 300 P **P 21 41 57.3 +1.0**
SNR=23
KSH Kashi 44.07 295 P **P 21 42 01.3 +3.9**
KSH pP sP 21 42 05.8 +1.4
KSH pmax pmax
comp=Z,8.0nm,0.8s
KSH LR LR
comp=Z,190nm,15.2s
KSH LR LR
comp=Z,250nm,13.4s
KSH LR LR
comp=Z,280nm,13.7s
KBK Karagaybulak 44.43 300 P **P 21 42 01.3 +1.0**
SNR=6.4
CHMS Chumysh 44.53 300 P **P 21 42 01.8 +0.8**
SNR=7.3
SGDS Sogindy 44.58 301 *d* P **P 21 42 01.3 0.0**
SGDS Sogindy 44.58 301 ⇓ *i* P **P 21 42 01.3 0.0**
baz=301
USP Ospenovka 44.69 300 P **P 21 42 03.0 +0.7**
SNR=5.5
AAK Ala-Archa 44.76 300 P **P 21 42 03.2 +0.3**
AAK Ala-Archa 44.76 300 *de*P **P 21 42 03.4 +0.4**
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 44.76 300 LR LR 22 00 15.3
comp=Z,117nm,18.2s,baz=68,slow=36
BTLS Baital 44.86 303 *d* P **P 21 42 03.6 +0.1**
BTLS pmax pmax
comp=Z,9.0nm,1.4s
BTLS Baital 44.86 303⇓ *i* P **P 21 42 03.6 +0.1**
comp=Z,9.4nm,1.4s,baz=303
AML Almayashu 45.41 299 P **P 21 42 09.6 +1.2**
SNR=15
BRZS Berezniki 45.58 310 *d* P **P 21 42 09.4 +0.3**
BRZS pmax pmax
comp=Z,9.0nm,1.1s
BRZS Berezniki 45.58 310 ⇓ *i* P **P 21 42 09.4 +0.3**
comp=Z,9.0nm,1.1s,baz=310
BVAR Borovoye Array 47.02 314 LR LR 22 02 30.2
comp=Z,172nm,18.9s,baz=95,slow=37
DZA Taraz 47.04 300 *e*P **P 21 42 21.0 +0.3**
DZA Taraz 47.04 300 *e*P **P 21 42 21.1 +0.3**
baz=300
BRVK Borovoye 47.08 314 P **P 21 42 21.1 +0.2**
BRVK Borovoye 47.08 314 *d* P **P 21 42 21.2 +0.3**
BRVK pmax pmax
comp=Z,23nm,0.7s
DRK Karamyk 47.26 296 P **P 21 42 22.9 +0.1**
DRK IAmb IAmb 21 42 24.2
comp=Z,6.0nm,0.8s
NIL Nilore 47.45 288 P **P 21 42 24.3 +0.2**
NIL IAmb IAmb 21 42 31.8
comp=Z,16nm,1.2s
NIL Nilore 47.45 288 P **P 21 42 24.3 +0.2**
NIL pmax pmax
comp=Z,16nm,1.2s
KK31 Karatay Array 47.60 301 P **P 21 42 25.6 +0.4**
KK31 Karatay Array 47.60 301 P **P 21 42 25.6 +0.4**
KK31 pmax pmax
comp=Z,28nm,0.9s
KKAR Karatay Array 47.60 301 P **P 21 42 25.7 +0.6**
KKAR Karatay Array 47.60 301 P **P 21 42 25.7 +0.6**
BTK Batken 47.89 297 P **P 21 42 27.2 -0.3**
BTK IAmb IAmb 21 42 41.8
comp=Z,32nm,1.8s
BTK Batken 47.89 297 P **P 21 42 27.2 -0.3**
BTK pmax pmax
comp=Z,32nm,1.8s
IUG luzhnay 48.10 300 *d* P **P 21 42 29.8 +0.7**
IUG luzhnay 48.10 300 ⇓ *i* P **P 21 42 29.8 +0.7**
baz=300
GAR Garm 48.48 295 P **P 21 42 31.9 -0.2**
GAR IAmb IAmb 21 42 37.2
comp=Z,13nm,0.7s
TAS Tashkent 48.79 299 P **P 21 42 34.1 -0.2**
TAS Tashkent 48.79 299 P **P 21 42 34.1 -0.2**
TAS pmax pmax
comp=Z,29nm,0.7s
HYBB Hyderabad (bro 49.08 265 *e*P **P 21 42 37.0 +0.2**
HYBB *ep*P **pP 21 42 39.7 -2.2**
HYBB *e*S **S 21 49 41.0 -0.3**
CHGR Chuyangaron 49.44 295 P **P 21 42 39.6 +0.2**
CHGR IAmb IAmb 21 42 44.6
comp=Z,24nm,0.8s
CHGR Chuyangaron 49.44 295 P **P 21 42 39.6 +0.2**
CHGR pmax pmax
comp=Z,24nm,0.8s
ANM Nome 49.86 31 P **P 21 42 42.4 +0.2**
baz=262
KBL Kabul 50.57 290 P **P 21 42 47.6 -0.6**
KBL Kabul 50.57 290 P **P 21 42 47.6 -0.6**
KBL pmax pmax
comp=Z,6.0nm,1.2s
RDOG Red Dog Mine 51.32 26 P **P 21 42 53.6 +0.4**
baz=262
WRAB Tennant Creek 52.48 176⇑ *e*P **P 21 43 04.6 +2.4**
WRAB pmax pmax
comp=Z,16nm,2.2s
WRA Warramunga Arr 52.49 176 P **P 21 43 03.0 +0.7**
WRA Warramunga Arr 52.49 176 *i* P **P 21 43 05.0 +2.7**
WRA pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 52.49 176 P **P 21 43 01.3 -1.0**
comp=Z,4.2nm,1.0s,baz=352,slow=8.0,SNR=16
comp=Z,4.2nm,1.0s
WB2 Warramunga Arr 52.49 176 P **P 21 43 02.0 -0.3**
WB2 IAmb IAmb 21 44 12.7
comp=Z,14nm,1.2s
WR0 Warramunga Arr 52.52 175 P **P 21 43 02.7 +0.2**
WR0 IAmb IAmb 21 43 06.0
comp=Z,13nm,1.1s
CHNA Chernabura Isl 52.62 43 P **P 21 43 03.2 +0.3**
baz=275
N16K Nishlik Lake 52.71 36 P **P 21 43 04.1 +0.5**
baz=272,SNR=6.9
O16K Kokwok River B 53.09 37 P **P 21 43 06.6 +0.3**
baz=273,SNR=7.9
P16K Nushagak River 53.17 38 P **P 21 43 07.5 +0.5**
baz=274
O17K Koliganek Bris 53.58 37 P **P 21 43 10.1 +0.2**
baz=274
ARU Arti 53.71 319 P **P 21 43 10.9 -0.2**
ARU IAmb IAmb 21 43 14.1
comp=Z,17nm,0.9s
ARU Arti 53.71 319 *d* P **P 21 43 10.8 -0.2**
ARU pmax pmax
comp=Z,21nm,1.0s
ARU Arti 53.71 319 LR LR 22 07 05.6
comp=Z,138nm,18.2s,baz=98,slow=37
ABKAR Akbulak array 53.88 310 P **P 21 43 12.1 -0.2**
ABKAR Akbulak array 53.88 310 P **P 21 43 12.2 -0.2**
ABKAR IAmb IAmb 21 43 13.7
comp=Z,20nm,1.2s
TTA Tatalina 53.94 33 P **P 21 43 13.0 +0.3**
TTA IAmb IAmb 21 43 15.2
comp=Z,11nm,1.2s
TTA Tatalina 53.94 33 P **P 21 43 13.0 +0.3**

TTA pmax pmax
comp=Z,11nm,1.2s
TTA Tatalina 53.94 33 P **P 21 43 13.4 +0.7**
baz=272,SNR=8.8
P17K Kvichak River 53.96 37 P **P 21 43 13.3 +0.6**
baz=275,SNR=5.3
N18K Kilae Creek 54.12 36 P **P 21 43 14.5 +0.5**
N18K IAmb IAmb 21 43 16.6
comp=Z,13nm,1.2s
N18K Kilae Creek 54.12 36 P **P 21 43 14.4 +0.5**
baz=274,SNR=6.9
R17K Ugashik Creek 54.13 39 P **P 21 43 14.8 +0.8**
baz=276
SVW2 Sparrevohn 54.24 35 P **P 21 43 15.2 +0.4**
SVW2 IAmb IAmb 21 43 17.3
comp=Z,9.8nm,1.0s
L19K White Mountain 54.52 34 P **P 21 43 17.6 +0.8**
L19K IAmb IAmb 21 43 19.2
comp=Z,20nm,1.4s
L19K White Mountain 54.52 34 P **P 21 43 17.4 +0.5**
baz=274,SNR=13
O18K Koktuh Hills 54.53 37 P **P 21 43 17.3 +0.4**
baz=275
P18K Big Mountain, 54.56 37 P **P 21 43 17.8 +0.6**
baz=276
J20K Nowinta River 54.72 31 P **P 21 43 19.0 +0.8**
baz=273,SNR=16
M19K Big River Lodg 54.75 34 P **P 21 43 19.3 +0.8**
baz=274,SNR=5.1
CHIR Chirikof Islan 54.76 42 P **P 21 43 18.9 +0.3**
baz=278
K20K Telida 54.80 32 P **P 21 43 19.4 +0.6**
baz=274,SNR=18
N19K Bonanza Creek 54.80 35 P **P 21 43 19.8 +0.8**
baz=275
IMAR Indian Mountai 54.81 29 P **P 21 43 19.2 +0.4**
F21K Alatna River 54.87 28 P **P 21 43 19.9 +0.6**
baz=272
G21K Allakaket 54.88 28 P **P 21 43 19.7 +0.4**
baz=272,SNR=8.8
AKTO Aktyubinsk 54.90 312 LR LR 22 09 04.1
comp=Z,110nm,18.1s,baz=80,slow=39
L20K Farewell, AK 54.95 33 P **P 21 43 20.5 +0.5**
baz=274,SNR=11
PSA00 Pilbara Seismi 54.96 192 P **P 21 43 20.3 0.0**
H21K Melozitna Rive 55.21 29 P **P 21 43 22.4 +0.7**
baz=273,SNR=5.5
M20K Styx River 55.35 34 P **P 21 43 23.6 +0.7**
baz=276
F22K John River 55.37 27 P **P 21 43 23.4 +0.6**
baz=272
Q19K Cape Douglas, 55.42 38 P **P 21 43 23.1 -0.3**
Q19K IAmb IAmb 21 43 24.0
comp=Z,11nm,0.6s
Q19K Cape Douglas, 55.42 38 P **P 21 43 22.8 -0.6**
baz=277
SII Sitkinak Islan 55.45 41 P **P 21 43 23.2 -0.5**
baz=278
E22K Anaktuvuk Pass 55.48 26 P **P 21 43 23.8 +0.1**
baz=272
CHUM Lake Minchumin 55.54 32 P **P 21 43 24.5 +0.4**
baz=275
P19K Oil Pt 55.54 37 P **P 21 43 24.2 0.0**
baz=277
I21K Tanana 55.58 30 P **P 21 43 24.7 +0.3**
baz=274,SNR=10
G22K Bettles 55.66 28 P **P 21 43 25.1 +0.1**
baz=274
RSO Redoubt South 55.69 36 P **P 21 43 26.2 +0.7**
CAST Castle Rocks 55.69 32 P **P 21 43 26.2 +0.9**
CAST IAmb IAmb 21 43 27.6
comp=Z,12nm,0.9s
CAST Castle Rocks 55.69 32 P **P 21 43 26.1 +0.9**
baz=275
PPLA Purkeypile 55.69 33 P **P 21 43 25.8 +0.4**
baz=276
H22K Ishtalitna Cre 55.78 29 P **P 21 43 26.3 +0.4**
baz=274,SNR=9.2
O20K Slope Mountain 55.80 36 P **P 21 43 26.5 +0.4**
baz=277
OHAK Old Harbor 55.84 40 P **P 21 43 26.5 +0.1**
baz=279,SNR=6.6
D23K Nanushuk River 55.86 25 P **P 21 43 26.5 +0.1**
baz=273
N20K Mount Spurr 55.86 35 P **P 21 43 26.7 +0.1**
baz=277
SPCR Spurr Chakacha 55.86 35 P **P 21 43 26.7 +0.1**
baz=277
HRA Herat 55.97 292 P **P 21 43 28.2 +0.3**
HRA IAmb IAmb 21 43 34.0
comp=Z,10nm,1.1s
SKT Skwentna 56.09 34 P **P 21 43 28.8 +0.6**
baz=277,SNR=7.4
BPAW Bear Paw Mtn. 56.10 31 P **P 21 43 28.8 +0.6**
BPAW IAmb IAmb 21 43 30.5
comp=Z,9.5nm,1.0s
BPAW Bear Paw Mtn. 56.10 31 P **P 21 43 28.6 +0.4**
baz=276,SNR=12
Q20K Shuyak Island 56.11 38 P **P 21 43 27.7 -0.6**
baz=278
MLY Manley 56.12 30 P **P 21 43 28.9 +0.6**
baz=276,SNR=17
KDAK Kodiak Island 56.13 39 P **P 21 43 28.6 +0.2**
KDAK Kodiak Island 56.13 39 P **P 21 43 28.6 +0.2**
KDAK pmax pmax
comp=Z,44nm,1.3s
KDAK Kodiak Island 56.13 39 P **P 21 43 28.1 -0.3**
baz=279
AS31 Alice Springs 56.16 176 P **P 21 43 29.0 0.0**
ASAR Alice Springs 56.16 176 P **P 21 43 29.1 +0.1**
ASAR Alice Springs 56.16 176 P **P 21 43 29.1 +0.1**
ASAR Alice Springs 56.16 176 P **P 21 43 28.7 -0.4**
comp=Z,5.0nm,0.9s,baz=358,slow=5.6,SNR=12
comp=Z,5.0nm,0.9s
G23K Bananza Creek 56.26 28 P **P 21 43 29.6 +0.3**
baz=275,SNR=6.2
D24K Happy Valley 56.51 25 P **P 21 43 32.1 +1.0**
baz=274
C24K Franklin Bluff 56.52 24 P **P 21 43 31.9 +1.0**
baz=274
H23K Yukon River 56.54 29 P **P 21 43 32.9 +1.6**
H23K IAmb IAmb 21 43 34.1
comp=Z,21nm,0.9s
H23K Yukon River 56.54 29 P **P 21 43 32.2 +0.9**
baz=276,SNR=21
I23K Minto, Yukon-K 56.69 30 P **P 21 43 33.6 +1.3**
baz=277,SNR=6.1
E24K Your Creek 56.73 26 P **P 21 43 33.1 +0.5**
baz=276
BRSE Bradley Lake S 56.78 36 P **P 21 43 34.0 +0.9**
baz=279
NEA2 Nenana 56.88 31 P **P 21 43 34.0 +0.3**
baz=277,SNR=19
F24K Squaw Lake 57.01 27 P **P 21 43 35.0 +0.4**
baz=276
MCK McKinley 57.05 32 P **P 21 43 35.0 0.0**
baz=278,SNR=5.9
RC01 Rabbit Creek A 57.07 35 P **P 21 43 34.9 -0.2**
RC01 IAmb IAmb 21 43 36.2
comp=Z,29nm,1.3s
RC01 Rabbit Creek A 57.07 35 P **P 21 43 35.1 +0.1**
baz=279,SNR=5.9
MDM Murphy Dome 57.19 30 P **P 21 43 36.4 +0.4**
H24K Noodor Dome 57.22 29 P **P 21 43 37.4 +1.3**
baz=278,SNR=15
G24K Hadweenzic Riv 57.27 28 P **P 21 43 37.4 +1.0**
baz=277,SNR=8.6
PMR Palmer 57.28 34 P **P 21 43 37.2 +0.7**
baz=279
WAT1 Susitna Watana 57.35 33 P **P 21 43 37.3 +0.1**
baz=279
COLA College 57.36 30⇓ *e*P **P 21 43 37.4 +0.4**
COLA pmax pmax
comp=Z,12nm,1.7s
SEW Seward 57.36 36 P **P 21 43 37.0 -0.1**
baz=280,SNR=8.5
D25K Kavik River 57.37 25 P **P 21 43 37.6 +0.5**
baz=277
POKR Poker Plat Res 57.50 30 P **P 21 43 38.9 +0.8**
POKR Poker Plat Res 57.50 30 P **P 21 43 39.1 +1.0**
baz=278
SML Sawmill 57.62 34 P **P 21 43 39.6 +0.6**
baz=280,SNR=10
KNK Knik Glacier 57.62 34 P **P 21 43 39.5 +0.4**
baz=280,SNR=10.0
WAT6 Susitna Watana 57.76 33 P **P 21 43 40.0 -0.1**
baz=280,SNR=8.7

PWL **Port Wells** 57.78 35 P P 21 43 40.1 0.0
PWL IAmb IAmb 21 43 41.2
comp=Z,21nm,1.0s
PWL **Port Wells** 57.78 35 P P 21 43 39.6 -0.5
baz=280,SNR=9.6
IL31 57.78 30 P P 21 43 40.2 +0.2
IL31 IAmb IAmb 21 43 43.1
comp=Z,8.3nm,0.9s
ILAR **Eielson Array** 57.78 30 P P 21 43 39.8 -0.3
ILAR **Eielson Array** 57.78 30 P P 21 43 39.8 -0.3
ILAR 21 44 31.3
ILAR **Eielson Array** 57.78 30 P P 21 43 39.8 -0.3
comp=Z,5.4nm,0.8s,baz=271,slow=5.4,SNR=39
ILAR PcP PcP 21 44 31.3 -1.3
comp=Z,1.3nm,0.8s,baz=300,slow=4.2,SNR=4.6
ILAR LR LR 22 10 33.3
comp=Z,88nm,18.2s,baz=266,slow=38
comp=Z,5.4nm,0.8s
E25K **Arctic Village** 57.81 26 P P 21 43 40.9 +0.6
baz=278
HDA **Harding Lake** 57.81 31 P P 21 43 39.9 -0.4
baz=279,SNR=15
DHY **Denali Highway** 57.84 32 P P 21 43 40.8 +0.1
baz=280,SNR=7.2
F25K **Christian Rive** 57.86 27 P P 21 43 41.7 +1.0
baz=278
M23K **Glacier View** 57.90 34 P P 21 43 41.7 +0.7
baz=280,SNR=5.8
H25K **Birch Creek** 57.99 28 P P 21 43 42.6 +1.1
baz=279,SNR=10
GEYT **Alibeck** 57.99 297 P P 21 43 42.0 -0.1
GEYT **Alibeck** 57.99 297 P P 21 43 42.6 +0.6
comp=Z,2.0nm,0.7s,baz=22,slow=1.6,SNR=4.8
comp=Z,2.0nm,0.7s
GYA0B **ALIBECK ARRAY** 57.99 297 P P 21 43 42.3 +0.3
SCM **Sheep Creek Mo** 58.08 34 P P 21 43 42.8 +0.5
baz=280,SNR=13
PRP **Porcupine Dome** 58.23 29 P P 21 43 44.0 +0.7
baz=280,SNR=19
C27K **Jago River** 58.26 24 P P 21 43 43.7 +0.4
baz=279
KIRV **Kirov** 58.26 323 *de* P P 21 43 43.3 -0.2
GLI **Glacier Island** 58.37 35 P P 21 43 44.5 +0.3
baz=281
F26K **Sheenjek River** 58.41 27 P P 21 43 45.4 +0.9
baz=280,SNR=6.4
K24K **Donnelly Dome** 58.42 31 P P 21 43 44.5 -0.1
baz=281
J25K **Salcha River,** 58.45 30 P P 21 43 45.7 +0.9
baz=280,SNR=6.1
M24K **Tolsona, Glenn** 58.56 33 P P 21 43 46.4 +0.8
baz=281
G26K **Porcupine Rive** 58.67 27 P P 21 43 47.3 +1.0
baz=280,SNR=8.3
PAX **Paxson** 58.72 32 P P 21 43 46.6 -0.2
baz=281,SNR=11
KLU **Klutina** 58.80 34 P P 21 43 47.7 +0.3
baz=282,SNR=10.0
DIV **Divide** 58.95 34 P P 21 43 49.0 +0.6
DIV IAmb IAmb 21 43 50.2
comp=Z,20nm,0.8s
Q23K **Middleton Isla** 59.03 36 P P 21 43 49.7 +0.8
baz=283
EYAK **Cordova Ski Ar** 59.09 35 P P 21 43 49.4 +0.2
baz=283
SCRK **Sand Creek** 59.17 31 P P 21 43 49.4 -0.5
baz=282,SNR=23
J26L **Joseph Creek** 59.24 30 P P 21 43 49.4 -1.0
baz=282,SNR=11
I26K **Coal Creek Min** 59.24 29 P P 21 43 50.1 -0.2
baz=282
E27K **Coleen River** 59.27 26 P P 21 43 50.8 +0.4
baz=282
N25K **Chitina, Valde** 59.40 34 P P 21 43 52.2 +0.7
baz=283,SNR=11
PRGR **Permogore** 59.47 326 *e* P P 21 43 50.6 -1.2
G27K **Doyon Strip** 59.53 27 P P 21 43 52.8 +0.6
baz=282,SNR=9.5
BMRM **Bremner River** 59.54 34 P P 21 43 52.9 +0.4
baz=283,SNR=17
L26K **Log Cabin Wild** 59.65 32 P P 21 43 53.5 +0.4
baz=283,SNR=8.2
H27K **Steamboat Moun** 59.70 28 P P 21 43 54.7 +1.2
baz=283,SNR=9.6
I27K **Kandik River** 59.81 29 P P 21 43 55.3 +1.1
baz=283,SNR=28
KAIM **Kayak Island** 59.88 35 P P 21 43 55.5 +0.9
baz=284
M26K **Nabesna, AK** 59.95 32 P P 21 43 56.0 +0.7
M26K **Nabesna, AK** 59.95 32 P P 21 43 56.3 +1.0
baz=284,SNR=26
K27K **Chicken** 59.98 31 P P 21 43 55.8 +0.5
baz=284
EGAK **Eagle** 60.19 30 P P 21 43 57.1 +0.4
EGAK **Eagle** 60.19 30 P P 21 43 57.2 +0.4
baz=284,SNR=5.9
MCARA **McCarthy VSAT** 60.19 34 P P 21 43 57.6 +0.8
baz=284,SNR=7.0
L27K **Beaver Creek,** 60.32 32 P P 21 43 58.5 +0.8
baz=284,SNR=29
BCAR **Beaver Creek A** 60.34 32 P P 21 43 59.0 +1.1
M27K **Edge Creek, AK** 60.47 32 P P 21 43 59.6 +0.7
baz=285,SNR=14
ISLE **Juniper Island** 60.71 34 P P 21 44 01.0 +0.5
ISLE IAmb IAmb 21 44 02.0
comp=Z,14nm,0.9s
BELG **Belogornoye** 60.77 316 *de* P P 21 44 00.4 -0.4
BELG pmax pmax
comp=Z,4.0nm,1.0s
CTG **Chitna Glacier** 61.08 34 P P 21 44 03.3 +0.2
baz=286,SNR=9.0
I29M **Ogilvie Camp,** 61.20 29 P P 21 44 04.3 +0.6
baz=286
YUK3 **Moose Creek** 61.27 33 P P 21 44 05.1 +0.7
baz=286
EPYK **Eagle Plains** 61.55 27 P P 21 44 06.8 +0.7
EPYK **Eagle Plains** 61.55 27 P P 21 44 06.7 +0.7
baz=287,SNR=22
O28M **Mount Upton** 61.68 34 P P 21 44 08.2 +0.9
baz=287
PINM **Pinnacle** 61.85 35 P P 21 44 08.9 +0.7
baz=287
K29M **Barlow Dome** 61.97 30 P P 21 44 09.9 +0.9
baz=288,SNR=12
M29M **Somme Creek** 61.98 32 P P 21 44 10.4 +1.4
baz=287,SNR=19
INK **Inuvik** 62.14 25 P P 21 44 10.4 +0.5
INK **Inuvik** 62.14 25 P P 21 44 10.4 +0.5
comp=Z,2.2nm,0.3s,baz=318,slow=6.2,SNR=9.5
INK LR LR 22 13 27.8
comp=Z,96nm,18.3s,baz=248,slow=38
comp=Z,2.2nm,0.3s
YUK4 **Talbot Arm** 62.23 33 P P 21 44 11.8 +0.9
baz=288,SNR=6.1
PNL **Peninsula** 62.39 35 P P 21 44 12.7 +1.0
baz=288
YUK6 **Outpost Mounta** 62.48 33 P P 21 44 13.8 +1.2
baz=288,SNR=5.4
KLMR **Klimovskoe** 62.52 327 *e* P P 21 44 10.5 -2.1
KLMR *e* 21 44 49.1
KLMR pmax pmax
comp=Z,12nm,1.1s
KLMR **Klimovskoe** 62.52 327 *e* P P 21 44 10.5 -2.1
KLMR AMP 21 44 19.7
comp=Z,12nm,1.1s
KLMR *e* PcP PcP 21 44 49.1 -2.5
O29M **Mount Kennedy** 62.58 34 P P 21 44 14.6 +1.4
baz=288,SNR=8.5
M30M **Minto, Yukon** 62.67 31 P P 21 44 14.8 +1.2
baz=289,SNR=11
APA **Apatity** 62.85 335 ⇓ *i* P P 21 44 14.0 -0.6
APA pmax pmax
comp=Z,7.0nm,0.8s
APA MLR MLR
comp=Z,200nm,11.0s
N30M **Aishikik Lake** 62.90 33 P P 21 44 16.0 +0.8
baz=289,SNR=7.0
HYT **Haines Junctio** 62.92 33 P P 21 44 16.6 +1.2
HYT IAmb IAmb 21 44 18.0
comp=Z,21nm,1.0s
HYT **Haines Junctio** 62.92 33 P P 21 44 16.6 +1.2
baz=289,SNR=13
SPB2 **Spitsbergen Ar** 62.92 348 P P 21 44 15.1 +0.1
SPITS **Spitsbergen Ar** 62.93 348 P P 21 44 15.0 -0.1
SPITS pmax pmax
comp=Z,148nm,1.9s
P29M **Windy Craggy** 63.20 35 P P 21 44 18.4 +1.2
baz=289,SNR=5.6
KBS **Kingsbay** 63.27 349 ⇑ *e* P P 21 44 17.6 +0.3
KBS pmax pmax
comp=Z,42nm,2.1s
P30M **Million Dollar** 63.40 34 P P 21 44 19.7 +1.2
baz=290
A36M **Sachs Harbour** 63.44 20 P P 21 44 19.4 +0.9
A36M IAmb IAmb 21 44 21.4
comp=Z,15nm,0.8s
A36M **Sachs Harbour** 63.44 20 P P 21 44 19.3 +0.9
baz=294,SNR=8.4
N31M **Braeburn, Yuko** 63.48 32 P P 21 44 20.1 +1.1
baz=290,SNR=6.6
O30N **Mendenhall** 63.59 33 P P 21 44 20.5 +0.7
baz=290
M31M **Drury Creek, Y** 63.85 31 P P 21 44 21.7 +0.3
baz=291
KEV **Kevo** 64.19 338 P P 21 44 23.1 -0.3
KEV **Kevo** 64.19 338 P P 21 44 23.1 -0.3
KEV pmax pmax
comp=Z,145nm,2.0s
FARO **Faro, Yukon** 64.30 31 P P 21 44 25.0 +0.6
baz=292,SNR=12
SKAG **Skagway** 64.41 34 P P 21 44 26.0 +0.9
baz=291
VRH **Novokhopyorsk** 64.62 316 *e* P P 21 44 25.3 -1.3
VRH pmax pmax
comp=Z,10.0nm,0.6s
ARCES **ARCESS Array B** 64.76 338 P P 21 44 26.9 -0.3
ARCES **ARCESS Array B** 64.76 338 P P 21 44 26.9 -0.3
ARCES pmax pmax
comp=Z,92nm,2.0s
ARCES **ARCESS Array B** 64.76 338 P P 21 44 26.5 -0.7
comp=Z,5.9nm,0.8s,baz=68,slow=6.7,SNR=6.9
ARCES LR LR 22 17 41.0
comp=Z,327nm,18.1s,baz=38,slow=41
comp=Z,5.9nm,0.8s
N32M **Quiet Lake** 64.82 32 P P 21 44 28.4 +0.6
baz=292
C36M **Paulatuk** 64.92 22 P P 21 44 28.5 +0.3
baz=296,SNR=6.6
MMPY **Sheldon Lake,** 65.05 30 P P 21 44 30.0 +0.7
baz=293,SNR=7.0
STKA **Stephens Creek** 65.09 170 ⇑ *e* P P 21 44 31.5 +1.8
STKA **Stephens Creek** 65.09 170 P P 21 44 30.7 +0.9
comp=Z,4.1nm,1.0s,baz=355,slow=7.0,SNR=5.6
comp=Z,4.1nm,1.0s
P32M **Atlin** 65.12 34 P P 21 44 30.8 +0.9
baz=292
MOS **Moscow** 65.23 322 *e* P P 21 44 29.0 -1.5
MOS pmax pmax
comp=Z,44nm,0.7s
P33M **Teslin, Yukon** 65.30 33 P P 21 44 31.8 +0.8
baz=293,SNR=8.7
EUNU **Eureka** 65.62 7 P P 21 44 33.7 +1.0
LPSR **Galich'ya Gora** 65.71 318 *e* P P 21 44 32.7 -0.9
LPSR pmax pmax
comp=Z,9.0nm,0.5s
VORR **Voronezh** 65.90 317 *e* P P 21 44 34.8 -0.1
VORR pmax pmax
comp=Z,30nm,0.4s
OBN **Obninsk** 66.02 321 P P 21 44 35.1 -0.5
OBN **Obninsk** 66.02 321 ⇑ *e* P P 21 44 35.5 -0.1
OBN *e* 21 47 00.2
OBN pmax pmax
comp=Z,35nm,1.7s
OBN MLR MLR
comp=Z,63nm,13.0s
OBN **Obninsk** 66.02 321 P P 21 44 35.5 -0.1
comp=Z,2.3nm,0.5s,baz=95,slow=12,SNR=4.6
comp=Z,2.3nm,0.5s
GOF **Gofitskoye** 66.10 309 ⇑ *e* P P 21 44 36.5 +0.2
VSR **Storozhevoye** 66.10 317 *e* P P 21 44 35.0 -1.2
VSR pmax pmax
comp=Z,20nm,1.3s
VALR **Valaam** 66.24 329 *de* P P 21 44 36.9 0.0
VALR pmax pmax
comp=Z,10.0nm,0.8s
ZEI **Tsey** 66.42 307 *e* P P 21 44 38.4 -0.3
ZEI pmax pmax
comp=Z,8.0nm,0.9s
R33M **Jennings River** 66.49 34 P P 21 44 39.6 +0.9
baz=295
KBZ **Khabaz** 66.72 308 *de* P P 21 44 40.6 +0.3
KBZ **Khabaz** 66.72 308 P P 21 44 40.9 +0.6
comp=Z,16nm,0.9s,baz=91,slow=2.3,SNR=25
comp=Z,16nm,0.9s
KIV **Kislovodsk** 66.77 308 ⇑ P P 21 44 41.2 +0.4
KIV **Kislovodsk** 66.77 308 P P 21 44 41.3 +0.5
KIV **Kislovodsk** 66.77 308 *e* P P 21 44 41.3 +0.5
KIV pmax pmax
comp=Z,32nm,1.1s
KIV MLR MLR
comp=Z,78nm,17.0s
TGTN **Hyland Airport** 66.78 31 P P 21 44 41.5 +1.0
baz=296,SNR=6.2
GNI **Garni** 66.90 304 P P 21 44 42.1 +0.4
GNI IAmb IAmb 21 45 13.4
comp=Z,19nm,1.1s
GNI **Garni** 66.90 304 ⇑ *e* P P 21 44 42.1 +0.4
GNI pmax pmax
comp=Z,13nm,1.1s
T35M **Bob Quinn** 67.87 36 P P 21 44 48.7 +1.3
baz=296
FIA1 **FINESS Array S** 68.26 330 P P 21 44 48.5 -1.2
FIA1 IAmb IAmb 21 44 49.6
comp=Z,8.4nm,0.7s
FINES **FINESS Array B** 68.27 330 P P 21 44 49.2 -0.5
FINES **FINESS Array B** 68.27 330 *i* P P 21 44 49.0 -0.7
FINES pmax pmax
comp=Z,8.0nm,0.7s
FINES **FINESS Array B** 68.27 330 P P 21 44 49.0 -0.7
comp=Z,7.5nm,0.7s,baz=71,slow=5.7,SNR=73
comp=Z,7.5nm,0.7s
RES **Resolute Bay** 68.80 12 LR LR 22 18 55.7
comp=Z,52nm,18.1s,baz=353,slow=39
GEVA **Gevas** 68.86 303 P P 21 44 54.0 -0.1
GEVA IAmb IAmb 21 45 00.7
comp=Z,9.1nm,1.0s
VSU **Vasula** 69.42 327 ⇑ *e* P P 21 44 56.6 -0.3
VSU pmax pmax
comp=Z,34nm,0.9s
VSU **Vasula** 69.42 327 *e* P P 21 44 56.9 0.0
GURO **Guroymak-BITLI** 69.48 303 P P 21 44 58.1 +0.2
NEEM **North Greenlan** 70.08 0 *i* P P 21 45 00.6 -0.5
NEEM IAmb IAmb 21 45 06.1
comp=Z,16nm,1.0s
MTSE **Matsula** 70.61 328 *e* P P 21 45 04.0 -0.3
MNK **Minsk** 70.80 323 *i* P P 21 45 05.2 -0.3
MNK *i* 21 45 25.7
MNK *i* 21 47 41.8
MNK *i* PPP PPP 21 49 24.5
MNK *i* S S 21 54 20.5 +0.9
MNK *i* 21 55 08.5
MNK *i* SS SS 21 58 53.7 +2.6
MNK pmax pmax
comp=Z,9.0nm,1.0s
MNK pmax pmax
comp=E,1.0nm,1.0s
MNK MLR MLR
comp=Z,230nm,17.0s
MNK MLR MLR
comp=E,47nm,18.0s
MNK **Minsk** 70.80 323 *i* P P 21 45 05.2 -0.3
comp=E,1.0nm,1.0s
MNK *i* P P 21 45 05.2 -0.3
baz=61
MNK *i* P P 21 45 05.2 -0.3
comp=Z,9.0nm,1.0s
MNK *i* PcP PcP 21 45 25.7 -0.5
MNK *i* PP PP 21 47 41.9 -0.1
MNK *i* PPP PPP 21 49 24.5
MNK *i* S S 21 54 20.5 +0.9
MNK *i* SS SS 21 58 53.7 +2.6
MNK *i* SSS SSS 22 02 12.5
MNK *i* LQ LQ 22 10 28.9
MNK *i* LR LR 22 12 27.7
MNK *i* LRM MLR 22 19 21.7
MNK *i* LRM MLR 22 20 05.8
comp=Z,230nm,17.5s
MNK *i* LRM MLR 22 20 32.7
comp=E,47nm,17.6s
MARD **Mardin** 70.92 302 P P 21 45 06.6 -0.2
MARD IAmb IAmb 21 45 09.1
comp=Z,11nm,0.8s
ISAL **Salakas** 71.14 324 *e* P P 21 45 08.2 +0.6
baz=60
NACGM **Naroch** 71.16 324 *e* P P 21 45 07.9 +0.2
YKA **Yellowknife Ar** 71.80 26 *ce* P P 21 45 11.6 +0.2
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA **Yellowknife Ar** 71.80 26 P P 21 45 11.4 0.0
comp=Z,1.2nm,0.7s,baz=303,slow=6.1,SNR=4.5
comp=Z,1.2nm,0.7s
AKASG **Malin Array Be** 71.97 319 P P 21 45 12.2 -0.4
AKASG IAmb IAmb 21 45 13.7
comp=Z,22nm,1.8s
AKASG **Malin Array Be** 71.97 319 P P 21 45 12.2 -0.4
AKASG pmax pmax
comp=Z,21nm,1.8s
AKASG **Malin Array Be** 71.97 319 P P 21 45 12.0 -0.6
comp=Z,5.5nm,0.5s,baz=54,slow=6.6,SNR=32
comp=Z,5.5nm,0.5s
AKBB **Malin Array Si** 71.97 319 P P 21 45 11.8 -0.8
AKBB IAmb IAmb 21 45 12.6
comp=Z,12nm,0.6s
AKBB **Malin Array Si** 71.97 319 *d* P P 21 45 11.8 -0.8
PABE **Paberze** 72.23 325 P P 21 45 13.8 -0.3
PABE **Paberze** 72.23 325 *e* P P 21 45 13.8 -0.3
BNN **Bunyan** 73.64 306 P P 21 45 22.4 -0.6
PURM **Purcari** 73.68 315 ⇑ P P 21 45 20.1 -2.8
RAYN **Ar Rayn** 73.75 288 P P 21 45 23.5 -0.3
RAYN IAmb IAmb 21 45 29.6
comp=Z,17nm,1.2s
RAYN **Ar Rayn** 73.75 288 ⇓ P P 21 45 23.5 -0.3
SORM **Soroca** 73.75 317 ⇓ P P 21 45 21.7 -1.6
SORM **Soroca** 73.75 317 ⇓ P P 21 45 21.7 -1.6
HFS **Hagfors** 74.04 332 P P 21 45 23.8 -1.0
HFS **Hagfors** 74.04 332 P P 21 45 23.8 -1.0
comp=Z,6.6nm,0.6s,baz=50,slow=4.6,SNR=22
comp=Z,6.6nm,0.6s
MILM **Milestii Mici** 74.11 316 ⇓ P P 21 45 22.8 -2.6
MILM **Milestii Mici** 74.11 316 ⇓ P P 21 45 22.8 -2.6
NC405 **NORSAR Array S** 74.18 334 P P 21 45 25.0 -0.5
NC405 IAmb IAmb 21 45 25.3
comp=Z,26nm,0.9s
NB2 **NORSAR Subarra** 74.41 334 P P 21 45 25.5 -1.5
comp=Z,2.1nm,0.6s,baz=48,slow=5.9
NOA **NORSAR Array B** 74.41 334 P P 21 45 25.8 -1.2
NOA **NORSAR Array B** 74.41 334 P P 21 45 25.8 -1.2
comp=Z,6.1nm,0.9s,baz=49,slow=5.7,SNR=17
comp=Z,6.1nm,0.9s
BR131 **Keskin Array S** 74.71 307 P P 21 45 28.8 -0.4
BR131 IAmb IAmb 21 45 30.4
comp=Z,17nm,0.9s
BR131 **Keskin Array S** 74.71 307 *de* P P 21 45 29.1 -0.1
BRTR **Keskin Array B** 74.71 307 P P 21 45 28.8 -0.4
BRTR **Keskin Array B** 74.71 307 *ce* P P 21 45 29.6 +0.4
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BRTR **Keskin Array B** 74.71 307 P P 21 45 29.1 -0.1
comp=Z,7.3nm,0.8s,baz=99,slow=5.6,SNR=18
comp=Z,7.3nm,0.8s
SUMG **Summit** 74.71 357 P P 21 45 29.1 +0.2
SUMG IAmb IAmb 21 45 30.3
comp=Z,25nm,1.0s
SUMG **Summit** 74.71 357 P P 21 45 29.1 +0.2
SUMG pmax pmax
comp=Z,25nm,1.0s
SUMG **Summit** 74.71 357 *i* P P 21 45 29.3 +0.3
SUMG IAmb IAmb 21 45 30.1
comp=Z,25nm,1.0s
VASR **Vaslui** 74.86 316 ⇑ P P 21 45 28.0 -1.7
TLCR 75.01 314 ⇓ P P 21 45 30.4 -0.2
TLCR 75.01 314 ⇓ P P 21 45 30.4 -0.2
LVV **L'vov** 75.27 320 *e* P P 21 45 31.6 -0.5
GHRR 75.39 316 ⇓ P P 21 45 33.3 +0.5
TPGR **Topolog** 75.42 314 ⇑ P P 21 45 33.2 +0.2
TESR **Tescani** 75.59 316 ⇑ P P 21 45 33.3 -0.7
BIZ **Bicaz** 75.68 317 ⇓ P P 21 45 34.8 +0.3
TLBR **Topalu** 75.81 314 ⇑ P P 21 45 35.0 -0.3
BUR08 **Bucovina Ar. S** 75.81 318 P P 21 45 35.3 -0.1
BUR08 IAmb IAmb 21 45 36.7
comp=Z,8.8nm,1.0s
BURAR **Bucovina Array** 75.82 318 ⇑ P P 21 45 35.1 -0.3
BURAR **Bucovina Array** 75.82 318 P P 21 45 35.4 0.0
BURAR IAmb IAmb 21 45 37.0
comp=Z,9.1nm,1.1s
BURAR **Bucovina Array** 75.82 318 ⇑ P P 21 45 35.1 -0.3
BEL **Belsk** 75.83 323 *e* P P 21 45 35.9 +0.6
VRI **Vrincioaia** 75.89 316 ⇑ P P 21 45 36.5 +0.7
VRI **Vrincioaia** 75.89 316 ⇑ P P 21 45 36.5 +0.7
PLOR **Plostina** 75.95 316 ⇓ P P 21 45 36.4 +0.3
PLOR **Plostina** 75.95 316 ⇓ P P 21 45 36.4 +0.3
KWP **Kalwaria Pacla** 76.09 320 *e* P P 21 45 37.5 +0.7
KWP **Kalwaria Pacla** 76.09 320 P P 21 45 36.9 +0.1
KWP **Kalwaria Pacla** 76.09 320 P P 21 45 36.9 +0.1
KWP pmax pmax
comp=Z,353nm,1.1s
ASF **Jabal al Asfar** 76.17 299 P P 21 45 38.5 +0.8
ASF **Jabal al Asfar** 76.17 299 P P 21 45 38.5 +0.8
comp=Z,4.5nm,0.7s,baz=184,slow=3.3,SNR=9.0
comp=Z,4.5nm,0.7s
COVR **Voineasa-Covas** 76.21 316 ⇓ P P 21 45 38.4 +0.8
OZUR 76.32 316 ⇓ P P 21 45 39.0 +0.7
DOPR **Dopca** 76.62 316 ⇑ P P 21 45 32.8 -7.1
GKP **Gorka Klasztor** 76.74 325 *e* P P 21 45 40.7 +0.3
MMAI **Mount Meron Ar** 76.84 301 P P P 21 45 41.7 +0.3
comp=Z,6.8nm,1.0s,baz=20,slow=6.2,SNR=7.0
comp=Z,6.8nm,1.0s
UZH **Uzhgorod** 76.88 320 *e* P P 21 45 41.2 -0.1
UZH *e* 21 45 45.5
UZH *i* 21 45 52.2
OJC **Ojcow** 77.29 322 *e* P P 21 45 43.1 -0.4
OJC **Ojcow** 77.29 322 P P 21 45 42.8 -0.7
OJC **Ojcow** 77.29 322 P P 21 45 42.8 -0.7
OJC pmax pmax
comp=Z,27nm,1.0s
CSS **Mathiatis** 77.33 303 P P 21 45 43.3 -0.8
CSS IAmb IAmb 21 45 49.2
comp=Z,22nm,1.1s
NIE **Niedzica** 77.50 321 *e* P P 21 45 46.0 +1.3
DRGR 77.70 318 ⇓ P P 21 45 46.0 0.0
DRGR 77.70 318 ⇓ P P 21 45 46.0 0.0
I02E **Swisshome, OR** 77.86 45 P P 21 45 47.1 +0.3
baz=304
LANS **Liptovska Anna** 78.09 321 *e* P P 21 45 49.3 +1.2
LANS pmax pmax
comp=Z,5.0nm,1.0s
LANS **Liptovska Anna** 78.09 321 *e* P P 21 45 49.3 +1.2
ICESG **Greenland Ices** 78.23 356 *i* P P 21 45 48.4 -0.5
ICESG IAmb IAmb 21 45 49.7
comp=Z,20nm,0.9s
H04D **Lebanon** 78.29 44 P P 21 45 49.4 +0.1
baz=305
J01E **Myrtle Point** 78.34 46 P P 21 45 50.1 +0.6
baz=304
OKC **Ostrava-Krasne** 78.37 322 *e* P P 21 45 50.1 +0.5
OKC **Ostrava-Krasne** 78.37 322 *e* P P 21 45 50.1 +0.5
I03D **Drain, OR** 78.39 45 P P 21 45 50.4 +0.6
baz=304
PSZ **Piszkesteto** 78.60 320 ⇑ P P 21 45 51.9 +0.9
PSZ **Piszkesteto** 78.60 320 P P 21 45 51.1 +0.2
PSZ IAmb IAmb 21 45 52.7
comp=Z,16nm,1.1s
PSZ **Piszkesteto** 78.60 320 ⇑ P P 21 45 51.9 +0.9
KSP **Ksiaz** 78.69 324 *e* P P 21 45 52.1 +0.8
G05D **Wamic, OR** 78.71 43 P P 21 45 51.9 +0.3
baz=305
MORC **Moravsky Berou** 78.72 323 ⇓ P P 21 45 52.1 +0.6
MORC **Moravsky Berou** 78.72 323 P P 21 45 51.8 +0.2
MORC IAmb IAmb 21 45 53.1
comp=Z,16nm,1.1s
MORC **Moravsky Berou** 78.72 323 ⇓ P P 21 45 52.1 +0.6
MORC **Moravsky Berou** 78.72 323 *e* P P 21 45 51.8 +0.2
ELL **Elmali** 78.76 306 P P 21 45 51.9 -0.2
ELL **Elmali** 78.76 306 P P 21 45 51.9 -0.2
ELL pmax pmax
comp=Z,47nm,0.7s
K02D **Willamette Mer** 78.76 46 P P 21 45 52.5 +0.5
baz=304
VYHS **Vyhne** 78.82 321 *e* P P 21 45 53.1 +1.0
VYHS pmax pmax
comp=Z,22nm,1.3s
VYHS **Vyhne** 78.82 321 *e* P P 21 45 53.1 +1.0
I04A **Tendick Farm,** 78.89 45 P P 21 45 53.1 +0.4
baz=305
OSTC **Ostas** 78.91 324 *e* P P 21 45 52.8 +0.3
KRLC **Kraliky** 78.92 323 *e* P P 21 45 52.8 +0.1
KRLC **Kraliky** 78.92 323 *e* P P 21 45 52.8 +0.1

DPC	Dobruska-Polom	78.98	323	eP	P	21 45 53.3	+0.3
DPC	Dobruska-Polom	78.98	323	eP	P	21 45 53.3	+0.3
D08A	Wollman Farm,	78.99	41	P	P	21 45 53.1	+0.1
PUNG	Punghina	79.01	316	⇓P	P	21 45 54.6	+1.4
UPC	Upice	79.04	324	eP	P	21 45 53.5	+0.3
UPC	Upice	79.04	324	eP	P	21 45 53.5	+0.3
JAVC	Velka Javorina	79.21	322	eP	P	21 45 55.6	+1.3
NEW	Newport	79.24	39	P	P	21 45 55.2	+0.7
	baz=308						
J04D	Umpqua Nationa	79.39	45	P	P	21 45 55.7	+0.1
	baz=305						
VRAC	Vranov	79.49	323	P	P	21 45 56.4	+0.6
VRAC	Vranov	79.49	323	eP	P	21 45 56.3	+0.5
VRAC	Vranov	79.49	323	P	P	21 45 56.4	+0.6
	comp=Z,8.2nm,0.8s,baz=63,slow=5.9,SNR=15						
	comp=Z,8.2nm,0.8s						
SRO	Srobarova	79.51	321	eP	P	21 45 56.6	+0.8
SRO	Srobarova	79.51	321	eP	P	21 45 56.6	+0.8
SMOL	Smolenice	79.55	322	eP	P	21 45 57.3	+1.2
MODS	Modra-Piesok	79.72	322	eP	P	21 45 58.5	+1.5
MODS				pmax	pmax		
	comp=Z,41nm,1.2s						
MODS	Modra-Piesok	79.72	322	eP	P	21 45 58.5	+1.5
PVCC	Panska Ves	79.74	324	eP	P	21 45 57.5	+0.4
PVCC	Panska Ves	79.74	324	eP	P	21 45 57.5	+0.4
KRUC	Moravsky	79.75	322	eP	P	21 45 57.6	+0.5
PINE	Pine Mountain	79.77	44	P	P	21 45 58.4	+0.8
VTS	Vitosha	79.78	314	P	P	21 45 58.1	+0.5
VTS				IAmb	IAmb	21 45 59.4	
	comp=Z,47nm,2.0s						
VTS	Vitosha	79.78	314	P	P	21 45 58.2	+0.5
VTS				pmax	pmax		
	comp=Z,47nm,2.0s						
BRG	Berggiesshubel	79.82	325	eP	P	21 45 58.0	+0.5
BRG				Amp		21 46 01.1	
	comp=Z,7.8nm,1.0s						
BRG				ex	x	21 47 31.5	
BRG				Amp		21 47 45.3	
	comp=Z,6.8nm,1.2s						
BRG	Berggiesshubel	79.82	325	eP	P	21 45 58.0	+0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
L04D	Klamath Falls	79.86	46	P	P	21 45 58.4	+0.3
	baz=305						
J05D	Fort Rock, OR	79.89	45	P	P	21 45 58.7	+0.5
	baz=306						
ZST	Bratislava	79.92	321	eP	P	21 45 59.0	+0.9
ZST				pmax	pmax		
	comp=Z,45nm,1.4s						
ZST	Bratislava	79.92	321	eP	P	21 45 59.0	+0.9
CLL	Collm	79.99	326	P	P	21 45 58.1	-0.3
CLL				IAmb	IAmb	21 45 59.4	
	comp=Z,26nm,1.0s						
CLL	Collm	79.99	326	P	P	21 45 58.1	-0.3
CLL				pmax	pmax		
	comp=Z,27nm,1.0s						
CLL	Collm	79.99	326	⇓iP	P	21 45 58.4	0.0
	comp=Z,29nm,1.0s						
CLL				ix	x	21 46 02.3	
	comp=Z,21nm,1.0s						
CLL				ePP	PP	21 49 00.0	+0.4
TREC	Trest	80.06	323	eP	P	21 45 59.1	+0.2
TREC	Trest	80.06	323	eP	P	21 45 59.1	+0.2
PRU	Pruhonice	80.10	324	eP	P	21 45 59.0	0.0
PRU	Pruhonice	80.10	324	eP	P	21 45 59.0	0.0
ARG	Arkhangelos	80.25	307	P	P	21 45 59.7	-0.4
ARG	Arkhangelos	80.25	307	P	P	21 45 59.7	-0.4
ARG				pmax	pmax		
	comp=Z,56nm,1.3s						
FRGS	Fruska Gora	80.30	318	⇑P	P	21 45 57.1	-3.1
SFJD	Kangerlussuaq	80.59	0	eP	P	21 45 59.8	-1.5
SFJD				IAmb	IAmb	21 46 01.6	
	comp=Z,164nm,2.2s						
JTMT	Jette	81.06	38	P	P	21 46 04.7	+0.3
DY2G	Dye2	81.09	359	iP	P	21 46 03.7	-0.6
DY2G				IAmb	IAmb	21 46 04.8	
	comp=Z,26nm,1.1s						
GEC2	GERESS Array S	81.25	323	P	P	21 46 05.1	-0.3
GEC2				IAmb	IAmb	21 46 30.8	
	comp=Z,17nm,1.3s						
GERES	GERESS Array B	81.25	323	P	P	21 46 04.8	-0.6
GERES	GERESS Array B	81.25	323	P	P	21 46 04.8	-0.6
GERES	GERESS Array B	81.25	323	P	P	21 46 05.5	+0.1
	comp=Z,2.1nm,0.7s,baz=33,slow=2.3,SNR=7.3						
	comp=Z,2.1nm,0.7s						
FFC	Flin Flon	81.89	28	P	P	21 46 08.3	-0.2
FFC				IAmb	IAmb	21 46 11.2	
	comp=Z,17nm,1.4s						
FFC	Flin Flon	81.89	28	P	P	21 46 08.3	-0.2
FFC				pmax	pmax		
	comp=Z,17nm,1.4s						
GRA1	Grafenberg Arr	81.92	325	P	P	21 46 09.1	+0.4
GRF	Grafenberg Arr	81.92	325	P	P	21 46 09.1	+0.4
GRF				pmax	pmax		
	comp=Z,76nm,1.4s						
GRFO	Grafenberg	81.92	325	P	P	21 46 09.1	+0.4
GRFO	Grafenberg	81.92	325	P	P	21 46 09.1	+0.4
GRFO				pmax	pmax		
	comp=Z,80nm,1.4s						
BEKR	Beckworth	82.43	47	P	P	21 46 11.3	-0.5
FRB	Frobisher Bay	82.66	8	LR	LR	22 25 05.6	
	comp=Z,113nm,19.2s,baz=2.5,slow=37						
MFID	Camas Ranch	82.95	42	P	P	21 46 14.5	+0.1
EGMT	Eagleton	83.18	36	P	P	21 46 15.5	0.0
	baz=313						
CMB	Columbia Colle	83.50	49	P	P	21 46 16.9	-0.4
CMB				IAmb	IAmb	21 46 19.3	
	comp=Z,12nm,1.5s						
CMB	Columbia Colle	83.50	49	P	P	21 46 16.9	-0.4
CMB				pmax	pmax		
	comp=Z,12nm,1.5s						
STU	Stuttgart	83.52	325	P	P	21 46 16.4	-0.7
STU	Stuttgart	83.52	325	P	P	21 46 16.4	-0.7
STU				pmax	pmax		
	comp=Z,29nm,1.0s						
HLID	Hailey	83.65	42	P	P	21 46 18.6	+0.5
	baz=310						
BTNL	Ternell	83.66	328	dP	P	21 46 17.3	-0.5
	comp=Z,9.6nm,1.1s						
MEM	Membach	83.70	328	dP	P	21 46 17.5	-0.4
	comp=Z,12nm,1.0s						
EKA	Eskdalemuir Ar	83.77	335	P	P	21 46 17.4	-0.8
EKA	Eskdalemuir Ar	83.77	335	P	P	21 46 17.4	-0.8
	comp=Z,4.7nm,0.8s,baz=46,slow=5.2,SNR=7.4						
	comp=Z,4.7nm,0.8s						
ITM	Ithomi	83.78	310	P	P	21 46 17.4	-1.3
BOZ	Bozeman (W)	83.84	39	P	P	21 46 19.6	+0.6
	baz=312						
BHOU	Houvegnez	83.88	328	dP	P	21 46 18.9	0.0
BHOU				dx	x	21 46 23.5	
BSTI	Sart Tilman	83.91	328	dP	P	21 46 18.8	-0.2
BMN	Battle Mountai	84.00	45	P	P	21 46 19.9	0.0
BMN				IAmb	IAmb	21 46 21.8	
	comp=Z,7.8nm,1.2s						
BMN	Battle Mountai	84.00	45	P	P	21 46 19.9	0.0
BMN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BCLA	Clavier	84.14	328	dP	P	21 46 19.7	-0.5
BCLA				dPcP	PcP	21 46 23.7	-0.4
BFO	Black Forest	84.24	325	P	P	21 46 20.0	-0.8
BFO	Black Forest	84.24	325	P	P	21 46 20.0	-0.8
BFO				pmax	pmax		
	comp=Z,30nm,0.9s						
WLF	Walferdange	84.31	327	P	P	21 46 21.1	0.0
WLF	Walferdange	84.31	327	P	P	21 46 21.1	0.0
WLF				pmax	pmax		
	comp=Z,33nm,0.9s						
WLF	Walferdange	84.31	327	dP	P	21 46 21.4	+0.3
	comp=Z,23nm,1.0s						
RCHB	Rochefort	84.37	328	dP	P	21 46 20.7	-0.7
	comp=Z,15nm,1.0s						
BMRD	Maredsous	84.47	329	dP	P	21 46 21.4	-0.5
	comp=Z,17nm,0.9s						
DAVOX	Davos/Dischmat	84.55	324	P	P	21 46 22.9	+0.3
DAVOX	Davos/Dischmat	84.55	324	P	P	21 46 22.9	+0.3
	comp=Z,23nm,0.9s,baz=316,slow=2.0,SNR=6.0						
	comp=Z,23nm,0.9s						
NVAR	Mina Array Bea	84.57	47	P	P	21 46 22.9	0.0
NVAR	Mina Array Bea	84.57	47	P	P	21 46 23.3	+0.4
	comp=Z,3.6nm,0.8s,baz=298,slow=5.2,SNR=17						
	comp=Z,3.6nm,0.8s						
NV11	Mina Array Sit	84.66	47	P	P	21 46 23.0	-0.3
NV11				IAmb	IAmb	21 46 24.2	
	comp=Z,10.0nm,1.5s						
DOU	Dourbes	84.69	328	dP	P	21 46 22.6	-0.4
DOU				dx	x	21 46 27.4	
ECH	Echery	84.87	326	P	P	21 46 23.3	-0.7
ECH	Echery	84.87	326	P	P	21 46 23.3	-0.7
ECH				pmax	pmax		
	comp=Z,21nm,1.0s						
H17A	Grant Village	85.20	39	P	P	21 46 27.7	+1.7
	baz=312						
IMW	Indian Meadow	85.34	40	P	P	21 46 27.0	+0.2
RLMT	Red Lodge	85.39	38	P	P	21 46 27.2	+0.3
	baz=313						
CWC	Cottonwood Cre	85.93	49	P	P	21 46 30.5	+0.8
	baz=308						
R11A	Troy Canyon, C	86.29	46	P	P	21 46 32.0	+0.5
	baz=310						
NRS	Narsarsuaq	86.40	358	iP	P	21 46 27.3	-3.9
NRS				IAmb	IAmb	21 46 29.7	
	comp=Z,38nm,0.8s						
MPMC	Manuel Prospec	86.54	49	P	P	21 46 33.2	+0.4
	baz=309						
DUG	Dugway, Tooele	86.74	43	P	P	21 46 33.4	-0.2
DUG	Dugway, Tooele	86.74	43	P	P	21 46 33.4	-0.2
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	Dugway, Tooele	86.74	43	P	P	21 46 34.2	+0.6
	baz=311						
TPNV	Topopah Spring	86.76	48	P	P	21 46 33.9	+0.1
	baz=309						
BW06	Boulder Array	86.84	40	P	P	21 46 33.9	-0.3
	baz=313						
PD31	Pinedale Array	86.84	40	P	P	21 46 33.8	-0.4
PDAR	Pinedale Array	86.84	40	P	P	21 46 33.7	-0.4
PDAR	Pinedale Array	86.84	40	P	P	21 46 33.9	-0.3
	comp=Z,2.3nm,0.8s,baz=294,slow=0.9,SNR=25						
	comp=Z,2.3nm,0.8s						
EDW2	Edwards Air Fo	86.95	50	P	P	21 46 34.4	-0.2
	baz=308						
ULM	Lac du Bonnet	87.72	28	P	P	21 46 37.6	-0.2
ULM	Lac du Bonnet	87.72	28	ceP	P	21 46 37.9	0.0
ULM	Lac du Bonnet	87.72	28	P	P	21 46 37.7	-0.2
	comp=Z,16nm,0.8s,baz=322,slow=4.6,SNR=22						
	comp=Z,16nm,0.8s						
SSB	Saint Sauveur	88.24	325	P	P	21 46 39.7	-0.9
SSB				IAmb	IAmb	21 46 41.1	
	comp=Z,7.8nm,0.9s						
SSB	Saint Sauveur	88.24	325	P	P	21 46 39.7	-0.9
SSB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
K22A	Casper	88.53	38	P	P	21 46 41.1	-1.0
	baz=315						
RSSD	Black Hills	88.75	36	P	P	21 46 43.3	+0.1
RSSD	Black Hills	88.75	36	P	P	21 46 43.3	+0.1
RSSD				pmax	pmax		
	comp=Z,29nm,1.7s						
RSSD	Black Hills	88.75	36	P	P	21 46 43.0	-0.2
	baz=317						
RSSD	Black Hills	88.75	36	P	P	21 46 42.5	-0.7
	baz=317						
RWWY	Rawlins	88.85	39	P	P	21 46 43.3	-0.5
RWWY				IAmb	IAmb	21 46 44.9	
	comp=Z,6.5nm,0.8s						
AGMN	Agassiz Nation	89.27	29	P	P	21 46 44.9	-0.4
AGMN				IAmb	IAmb	21 46 45.4	
	comp=Z,5.9nm,0.8s						
AGMN	Agassiz Nation	89.27	29	P	P	21 46 44.8	-0.4
	baz=322						
AGMN	Agassiz Nation	89.27	29	P	P	21 46 45.2	-0.1
	baz=322						
B35A	Bob, Littlefor	90.08	28	P	P	21 46 49.5	+0.4
	baz=324						
N23A	Red Feather La	90.08	39	P	P	21 46 50.0	+0.3
N23A				IAmb	IAmb	21 46 51.6	
	comp=Z,12nm,1.2s						
N23A	Red Feather La	90.08	39	P	P	21 46 49.9	+0.3
	baz=316						
PV15	Paradox Valley	90.47	42	P	P	21 46 51.5	0.0
PV15				IAmb	IAmb	21 46 53.3	
	comp=Z,13nm,1.2s						
WUAZ	Wupatki	90.69	46	P	P	21 46 52.7	+0.3
	baz=312						
SMCO	Snowmass	90.74	41	P	P	21 46 52.7	-0.1
ISCO	Idaho Springs	91.04	40	P	P	21 46 53.6	-0.6
	baz=316						
MVCO	Mesa Verde	91.24	43	P	P	21 46 55.7	+0.6
	baz=314						
EYMN	Ely	91.28	27	P	P	21 46 54.7	0.0
EYMN	Ely	91.28	27	P	P	21 46 54.9	+0.2
	baz=326						
EYMN	Ely	91.28	27	P	P	21 46 54.7	0.0
	baz=326						
X16A	Lo Mia Camp, P	91.38	47	P	P	21 46 56.1	+0.4
X16A				IAmb	IAmb	21 46 57.7	
	comp=Z,8.6nm,1.5s						
SCHQ	Schefferville	91.52	10	LR	LR	22 30 34.4	
	comp=Z,108nm,19.8s,baz=224,slow=37						
S22A	4UR Ranch, Cre	91.82	42	P	P	21 46 58.4	+0.6
	baz=315						
Q24A	Divide	91.89	40	P	P	21 46 58.0	-0.1
	baz=316						
214A	Organ Pipe Nat	92.14	50	P	P	21 46 59.0	0.0
	baz=311						
ECSD	EROS Data Cent	92.55	32	P	P	21 47 00.1	-0.5
	baz=322						
ECSD	EROS Data Cent	92.55	32	P	P	21 47 00.8	+0.2
	baz=322						
SDCO	Great Sand Dun	92.57	41	P	P	21 47 01.1	-0.1
	baz=316						
TUC	Tucson	93.19	48	P	P	21 47 04.1	+0.1
	baz=312						
T25A	Trinidad	93.61	41	P	P	21 47 06.1	+0.2
	baz=316						
G40A	Rib Lake	94.00	28	P	P	21 47 07.5	+0.2
	baz=327						
ANMO	Albuquerque	94.00	44	⇑eP	P	21 47 09.2	+1.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ANMO	Albuquerque	94.00	44	P	P	21 47 08.2	+0.5
	baz=315						
ESDC	Sonseca Array	96.56	326	P	P	21 47 18.1	-1.1
	comp=Z,1.5nm,1.0s,baz=18,slow=5.5,SNR=6.8						
	comp=Z,1.5nm,1.0s						
TXAR	Lajitas Array	99.65	46	PP	PP	21 51 40.0	+3.3
	comp=Z,0.5nm,1.0s,baz=309,slow=5.7,SNR=2.6						
TORD	Torodi Ar. Bea	113.20	304	PP	PP	21 53 15.1	-1.6
	comp=Z,0.7nm,1.0s,baz=50,slow=9.5,SNR=3.4						
TROLL	Troll, Antarti	132.29	199	PKPdf	PKPdf	21 53 01.8	-0.6
TROLL	Troll, Antarti	132.29	199	PP	PP	21 55 27.5	+2.0
SNAA	Sanae	133.93	199	PKPdf	PKPdf	21 53 04.2	-1.2
TBTG	Tabatinga, AM	145.74	38	PKPdf	PKPdf	21 53 27.2	-1.3
CZSB	Cruzeiro do Su	147.05	46	PKPbc	PKPdf	21 53 31.1	+0.4
MACA	Manacapuru-AM	148.75	22	PKPbc	PKPbc	21 53 35.5	-1.8

LJU ***31*** *21:41:59.5, 46.˚39N×15.˚07E, h0km, Confirmed Rockburst*
VIE 31 21:41:59.7±0.7, 46.˚40N×15.˚09E, h0km, ml0.7/2, Error ellipse: s-maj=4.4km s-min=2.0km az=147.0 23 km NW of Celje Suspected Mining induced., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOKA	Soboth	0.28	352	ePg	Pg	21 42 05.1	-0.1
	0.5nm,0.2s						
SOKA				eSg	Sg	21 42 08.8	0.0
	0.8nm,0.1s						
OBKA	Obir	0.39	287	ePg	Pg	21 42 07.3	+0.2
	0.7nm,0.1s						
OBKA				eSg	Sg	21 42 12.9	+0.7
	6.4nm,0.5s						

PRU ***31*** *21:42:51.3±0.0, 42.˚79N×13.˚28E, h0km*
ROM ***31*** *21:42:52.2±0.0, 42.˚776N±0.˚002×13.˚168E±0.˚003, h10km, ml3.5/85, Error ellipse: s-maj=0.2km s-min=0.1km az=69.0*
VIE ***31*** *21:42:52.8, 42.˚84N×13.˚06E, h0km, mb3.6/3, ML3.5/1 115 km NNE of Rome*
IDC ***31*** *21:42:52.1±1.4, 42.˚87N×13.˚01E, h0km, mb3.6/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=37.8km s-min=14.9km az=91.0*
LDG ***31*** *21:42:54.3±0.1, 42.˚64N×13.˚12E, h11km, Ml3.5/31, Error ellipse: s-maj=4.7km s-min=2.5km az=40.0*
BEO ***31*** *21:42:55.1±0.8, 42.˚85N×13.˚36E, h0km, ML3.6/7*

ISC 31 21:42:52.4±0.7, 42.˚77N±0.˚01×13.˚14E±0.˚02, h12km±4km, n326, σ1.˚76/368, 60C-13D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	Norcia	0.07	342	⇑P	Pg	21 42 54.6	-0.4
NRCA				S	Sg	21 42 56.0	-0.9
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
T1242	Castelluccio d	0.08	35	⇓P	Pg	21 42 54.5	-0.6
T1242				S	Sg	21 42 55.9	-1.2
T1242				AML	AML		
T1242				AML	AML		
T1202	Accumoli, Fraz	0.09	136	⇓P	Pg	21 42 55.1	0.0
T1202				S	Sg	21 42 57.0	-0.2
T1202				AML	AML		
T1202				AML	AML		
T1244	Arquata del Tr	0.11	94	⇑P	Pg	21 42 55.4	-0.1
T1244				S	Sg	21 42 57.6	-0.1
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1244				AML	AML		
T1201	Domo (RI)	0.13	144	⇑P	Pg	21 42 56.1	+0.4
T1201				S	Sg	21 42 58.9	+0.7
T1201				AML	AML		
	comp=E,54600μm,0.4s						
T1201				AML	AML		
	comp=N,73700μm,0.6s						
T1201				AML	AML		
	comp=E,54650μm,0.4s						
MC2	Monte Cornacci	0.15	13	⇓P	Pg	21 42 55.8	-0.3
MC2				S	Sg	21 42 58.3	-0.5
T1204	Amatrice, Fraz	0.15	125	⇑P	Pg	21 42 56.2	+0.2
T1204				S	Sg	21 42 59.1	+0.4
LNSS	Leonessa	0.18	205	⇑P	Pg	21 42 57.0	+0.6
LNSS				S	Sg	21 43 00.5	+1.2
LNSS				AML	AML		
	comp=N,94200μm,1.4s						
LNSS				AML	AML		
MMO1	Montemonaco	0.19	45	⇑P	Pg	21 42 56.3	-0.3
MMO1				S	Sg	21 42 59.4	-0.2
MMO1				AML	AML		
	comp=E,68950μm,1.0s						
MMO1				AML	AML		
	comp=N,59300μm,0.3s						
MMO1				AML	AML		
	comp=E,69000μm,1.0s						
MMO1				AML	AML		
	comp=N,59350μm,0.3s						
SMA1	SAN MARTINO	0.20	134	⇑P	Pg	21 42 56.9	+0.2
SMA1				S	Sg	21 43 00.3	+0.7
SMA1				AML	AML		
	comp=E,51550μm,0.5s						
SMA1				AML	AML		
	comp=N,43550μm,0.3s						
T1215	Vallo di Nera,	0.21	280	⇑P	Pg	21 42 57.3	+0.4
T1215				S	Sg	21 43 00.9	+1.0
T1215				AML	AML		
	comp=N,17450μm,0.7s						
T1215				AML	AML		
	comp=N,17600μm,0.2s						
T1215				AML	AML		
	comp=E,19900μm,0.5s						
T1215				AML	AML		
	comp=N,17650μm,0.2s						
T1215				AML	AML		
	comp=E,20950μm,0.5s						
FEMA	Monte Fema	0.21	341	⇑P	Pg	21 42 57.0	0.0
FEMA				S	Sg	21 43 00.4	+0.3
FEMA				AML	AML		
	comp=N,22800μm,0.5s						
FEMA				AML	AML		
	comp=N,22750μm,0.5s						
FEMA				AML	AML		
	comp=E,37600μm,1.3s						
T1241	Roccafluvione,	0.23	67	⇑P	Pg	21 42 57.2	-0.1
T1241				S	Sg	21 43 00.6	+0.1
T1241				AML	AML		
	comp=N,31300μm,0.5s						
T1241				AML	AML		
	comp=E,52650μm,0.5s						
T1241				AML	AML		
	comp=N,29400μm,0.5s						
T1241				AML	AML		
	comp=E,52600μm,0.5s						
T1241				AML	AML		
	comp=N,31250μm,0.5s						
T1241				AML	AML		
	comp=E,51550μm,0.5s						
T1243	Rocca Santa Ma	0.23	107	⇑P	Pg	21 42 57.2	-0.1
T1243				S	Sg	21 43 01.0	+0.3
RM33	Pellescritta (	0.26	168	P	Pg	21 42 58.2	+0.4
RM33				S	Sg	21 43 02.7	+1.2
RM33				AML	AML		
	comp=E,27000μm,0.6s						
RM33				AML	AML		
	comp=N,25850μm,0.3s						
RM33				AML	AML		
	comp=E,26450μm,0.6s						
RM33				AML	AML		
	comp=E,26500μm,0.6s						
RM33				AML	AML		
	comp=N,25150μm,0.3s						
RM33				AML	AML		
	comp=E,26950μm,0.6s						
RM33				AML	AML		
	comp=N,25850μm,0.3s						
FDMO	Fiordimonte	0.27	351	⇑P	Pg	21 42 58.0	-0.1
FDMO				S	Sg	21 43 02.5	+0.6
FDMO				AML	AML		
	comp=E,12050μm,1.0s						
FDMO				AML	AML		
	comp=N,13450μm,1.2s						
CESI	CESI - Serrava	0.30	324	⇑P	Pg	21 42 58.7	+0.2
CESI				S	Sg	21 43 03.5	+0.9
CESI				AML	AML		
	comp=N,30150μm,1.1s						
CESI				AML	AML		
	comp=E,18450μm,0.4s						
CAMP	Campotosto	0.30	139	⇑P	Pg	21 42 58.6	+0.1
CAMP				S	Sg	21 43 03.6	+0.9
CAMP				AML	AML		
	comp=N,7310μm,0.7s						
CAMP				AML	AML		
	comp=E,13550μm,0.7s						
T1246	Crognaleto (TE	0.32	125	⇑P	Pg	21 42 58.8	0.0
T1246				S	Sg	21 43 03.8	+0.7
CSP1	Cessapalombo	0.33	8	⇑P	Pg	21 42 58.9	-0.1
CSP1				S	Sg	21 43 04.2	+0.7
CSP1				AML	AML		
	comp=N,19650μm,0.8s						
CSP1				AML	AML		
	comp=E,25000μm,1.5s						
ARRO	Arrone	0.34	236	⇑P	Pg	21 42 59.7	+0.5
ARRO				S	Sb	21 43 05.6	-0.1
ARRO				AML	AML		
	comp=E,12150μm,0.9s						
ARRO				AML	AML		
	comp=N,8715μm,0.6s						
T1247	Pizzolo (AQ)	0.34	161	⇑P	Pg	21 42 59.6	+0.3
T1247				S	Sg	21 43 04.9	+1.0
TERO	Teramo	0.37	113	⇑P	Pg	21 42 59.5	-0.2
TERO				S	Sg	21 43 05.1	+0.5
TERO				AML	AML		
	comp=E,10760μm,0.7s						
TERO				AML	AML		
	comp=E,11325μm,0.7s						
TERO				AML	AML		
	comp=N,13900μm,0.5s						
TERO				AML	AML		
	comp=N,13250μm,0.5s						
SEF1	Sefro	0.41	339	P	Pg	21 43 00.5	0.0
SEF1				S	Sg	21 43 06.5	+0.6
SEF1				AML	AML		
	comp=E,16600μm,0.3s						
SEF1				AML	AML		
	comp=N,15150μm,0.2s						
SEF1				AML	AML		
	comp=E,16650μm,0.3s						

MDAR Monte D'Aria 0.43 360 P **Pg** 21 43 00.8 -0.1
MDAR S **Sg** 21 43 07.5 +0.9
MDAR AML AML
comp=N,5900µm,1.6s
MDAR AML AML
comp=E,5995µm,1.5s
PIO1 Pioraco 0.43 344 P **Pg** 21 43 00.9 0.0
PIO1 S **Sg** 21 43 07.7 +1.1
PIO1 AML AML
comp=E,6765µm,0.6s
PIO1 AML AML
comp=N,8650µm,0.5s
PIO1 AML AML
comp=N,8645µm,0.5s
PIO1 AML AML
comp=E,6765µm,0.6s
MNTP Montappone 0.44 33 ⇑P **Pg** 21 43 01.4 +0.3
MNTP AML AML
comp=E,20850µm,1.2s
MNTP AML AML
comp=N,18950µm,0.3s
MNTP AML AML
comp=E,20850µm,1.2s
MNTP AML AML
comp=N,18950µm,0.3s
CESX Cesi 0.44 250 ⇑P **Pg** 21 43 01.4 +0.3
CESX S **Sg** 21 43 08.5 +1.5
CESX AML AML
comp=N,7360µm,0.2s
CESX AML AML
comp=E,8605µm,0.8s
GIGS Gran Sasso 0.45 135 ⇑P **Pg** 21 43 00.8 -0.3
GIGS S **Sg** 21 43 07.5 +0.5
GIGS AML AML
comp=N,1975µm,0.6s
GIGS AML AML
comp=E,3755µm,0.2s
FIU1 Fiuminata 0.45 340 P **Pg** 21 43 01.2 0.0
ASSB Assisi San Ben 0.45 308 ⇑P **Pg** 21 43 01.4 +0.1
ASSB S **Sg** 21 43 08.1 +0.8
ASSB AML AML
comp=E,10435µm,0.9s
ASSB AML AML
comp=N,11000µm,0.2s
SSM1 San Severino M 0.46 3 P **Pg** 21 43 01.4 -0.1
SSM1 S **Sg** 21 43 08.7 +1.0
GAG1 Gagliole 0.48 353 P **Pg** 21 43 01.8 +0.1
GAG1 S **Sg** 21 43 09.2 +1.1
GAG1 AML AML
comp=N,16750µm,1.1s
GAG1 AML AML
comp=N,16750µm,1.2s
GAG1 AML AML
comp=E,12300µm,0.5s
FIAM Fiamignano 0.50 182 ⇓P **Pg** 21 43 02.2 +0.1
FIAM AML AML
comp=E,5900µm,0.6s
FIAM AML AML
comp=N,6400µm,0.9s
MTL1 Matelica 0.50 349 P **Pg** 21 43 02.2 0.0
MTL1 AML AML
comp=E,12300µm,0.4s
MTL1 AML AML
comp=N,14950µm,0.5s
MTL1 AML AML
comp=E,12300µm,0.4s
SNTG Esanatoglia 0.51 343 ⇑P **Pg** 21 43 02.2 -0.2
SNTG AML AML
comp=E,476µm,0.6s
SNTG AML AML
comp=N,3220µm,0.6s
SNTG AML AML
comp=N,420µm,0.7s
SNTG AML AML
comp=E,3460µm,0.5s
ATCC AVT- Casa Cast 0.56 319 ⇑P **Pg** 21 43 03.4 +0.1
TRE1 Treia 0.56 13 P **Pg** 21 43 03.0 -0.3
EL6 Elcito 0.56 357 P **Pg** 21 43 03.2 -0.3
EL6 S **Sg** 21 43 11.9 +0.9
EL6 AML AML
comp=E,7845µm,0.3s
EL6 AML AML
comp=N,7810µm,0.6s
EL6 AML AML
comp=E,7870µm,0.3s
TRTR Tortoreto Alta 0.57 85 ⇑P **Pb** 21 43 04.3 +0.1
FAGN Fagnano 0.60 147 ⇑P **Pg** 21 43 03.6 -0.4
FAGN AML AML
comp=N,8455µm,1.4s
FAGN AML AML
comp=E,14250µm,0.8s
FOSV Fossato di Vic 0.60 332 ⇑P **Pg** 21 43 03.9 -0.2
FOSV AML AML
comp=E,2580µm,1.4s
FOSV AML AML
comp=N,4120µm,0.4s
CING Cingoli 0.61 4 ⇑P **Pg** 21 43 03.9 -0.4
VCEL Villa Celiera 0.63 126 ⇑P **Pg** 21 43 04.5 -0.2
VCEL AML AML
comp=E,8625µm,0.9s
VCEL AML AML
comp=N,9765µm,0.4s
VCEL AML AML
comp=N,9770µm,0.4s
MURB Monte Urbino 0.67 318 ⇑P **Pg** 21 43 05.4 -0.1
MURB AML AML
comp=E,8620µm,0.2s
MURB AML AML
comp=N,10335µm,0.3s
MURB AML AML
comp=N,11100µm,0.2s
MURB AML AML
comp=E,10165µm,0.2s
MURB AML AML
comp=N,10325µm,0.3s
MURB AML AML
comp=E,8595µm,0.2s
MMUR Monte Murano 0.69 351 P **Pg** 21 43 05.4 -0.3
MMUR AML AML
comp=N,5160µm,0.7s
MMUR AML AML
comp=E,6705µm,1.6s
PP3 Marolino 0.70 29 ⇑P **Pg** 21 43 06.3 +0.4
PP3 AML AML
comp=N,11850µm,0.3s
PP3 AML AML
comp=E,30400µm,0.4s
PP3 AML AML
comp=E,29750µm,0.4s
PP3 AML AML
comp=N,11150µm,0.3s
SRES S.Oreste - Sor 0.71 222 P **Pg** 21 43 06.0 -0.1
SRES AML AML
comp=E,3085µm,0.6s
SRES AML AML
comp=N,2445µm,1.6s
T0110 Collepietro 0.71 139 P **Pg** 21 43 05.5 -0.7
T0110 AML AML
comp=E,8350µm,0.5s
T0110 AML AML
comp=N,8540µm,0.4s
SSFR Montelago di S 0.72 339 P **Pg** 21 43 06.1 -0.2
SSFR AML AML
comp=N,4735µm,0.8s
SSFR AML AML
comp=N,4725µm,0.8s
SSFR AML AML
comp=E,5340µm,0.2s
SSFR AML AML
comp=E,5150µm,0.2s
ATTE AVT- Monte Tez 0.72 307 ⇑P **Pg** 21 43 06.2 -0.2
ATTE AML AML
comp=E,2625µm,0.5s
ATTE AML AML
comp=N,1850µm,0.9s
ATFO Monte Foce - G 0.73 325 P **Pg** 21 43 06.3 -0.3
ATFO AML AML
comp=E,3050µm,0.3s
ATFO AML AML
comp=N,2980µm,1.0s
ATFO AML AML
comp=N,2975µm,1.0s
ATSC Scheggia e Pas 0.74 333 ⇑P **Pg** 21 43 06.2 -0.5
ATSC S **Sg** 21 43 17.1 +0.7
ARVD Arcevia 0.75 349 ⇑P **Pg** 21 43 06.3 -0.5
ARVD AML AML
comp=E,2175µm,0.7s
ARVD AML AML
comp=N,2025µm,0.7s
PTQR Pietraquaria 0.77 166 P **Pg** 21 43 06.7 -0.6
PTQR AML AML
comp=N,1505µm,1.6s
PTQR AML AML
comp=E,1360µm,0.7s
ATLO AVT- Montelove 0.77 316 ⇑P **Pg** 21 43 06.9 -0.4
ATLO S **Sg** 21 43 18.1 +0.7
MGAB Montegabbione 0.77 281 P **Pg** 21 43 07.4 0.0
MGAB AML AML
comp=N,6480µm,0.4s
MGAB AML AML
comp=N,7010µm,0.3s
MGAB AML AML
comp=E,6395µm,0.5s
MGAB AML AML
comp=N,6475µm,0.4s
MGAB AML AML
comp=E,6520µm,0.5s
MTCE Montecelio 0.80 202 P **Pg** 21 43 07.2 -0.6
MTCE AML AML
comp=E,3520µm,1.6s
MTCE AML AML
comp=N,2495µm,0.9s
TB02 Pietralunga 0.81 319 ⇑P **Pg** 21 43 07.6 -0.4
TB02 S **Sg** 21 43 19.2 +0.6
ATVA AVT- Monte Val 0.81 309 ⇑P **Pg** 21 43 07.8 -0.3
FRON Frontone 0.81 338 ⇑P **Pg** 21 43 07.4 -0.6
FRON AML AML
comp=N,3190µm,0.6s
FRON AML AML
comp=E,1840µm,1.6s
ATVO AVT- Monte Val 0.82 319 ⇑P **Pg** 21 43 07.7 -0.5
ATVO AML AML
comp=N,2000µm,0.5s
ATVO AML AML
comp=E,2345µm,1.1s
CERT Cerreto 0.82 188 P **Pg** 21 43 07.8 -0.5
CERT AML AML
comp=E,4490µm,0.4s
CERT AML AML
comp=N,2740µm,0.9s
ATBU Serra di Buran 0.83 329 ⇑P **Pg** 21 43 08.2 -0.3
TB03 Pietralunga 0.83 320 ⇑P **Pg** 21 43 07.9 -0.5
AOI Ancona 0.85 23 ⇑P **Pg** 21 43 08.4 -0.5
AOI AML AML
comp=E,2875µm,1.1s
AOI AML AML
comp=N,2560µm,1.3s
ATMI Monte Miggiano 0.86 312 P **Pg** 21 43 09.0 0.0
ATMI AML AML
comp=E,5790µm,0.6s
ATMI AML AML
comp=N,7075µm,0.6s
COR1 Corinaldo 0.87 353 P **Pg** 21 43 09.1 -0.1
COR1 AML AML
comp=N,5760µm,1.5s
COR1 AML AML
comp=E,2860µm,1.4s
COR1 AML AML
comp=N,6085µm,1.5s
COR1 AML AML
comp=E,5625µm,0.6s
ATPC Poggio Castell 0.87 325 ⇑P **Pg** 21 43 08.8 -0.5
ATPI Pietralunga - 0.87 322 ⇑P **Pg** 21 43 08.8 -0.5
ATPI AML AML
comp=N,1620µm,0.4s
ATPI AML AML
comp=N,1625µm,0.4s
ATPI AML AML
comp=E,2185µm,0.6s
MPAG Monte Paganucc 0.91 342 P **Pg** 21 43 09.4 -0.5
SACS San Casciano d 0.91 276 P **Pg** 21 43 10.0 0.0
SACS AML AML
comp=N,2340µm,1.0s
SACS AML AML
comp=E,1990µm,0.8s
SACS AML AML
comp=N,2530µm,1.0s
SACS AML AML
comp=E,2165µm,0.6s
RCAV Rocca di Cave 0.93 189 P **Pg** 21 43 09.5 -0.7
NARO Abbazia di Nar 0.94 334 P **Pg** 21 43 09.7 -0.8
NARO AML AML
comp=E,1485µm,1.1s
NARO AML AML
comp=N,1325µm,0.6s
INTR Introdacqua 0.94 143 ⇑P **Pg** 21 43 09.3 -1.2
INTR AML AML
comp=E,3µm,0.5s
INTR AML AML
comp=N,3µm,0.6s
INTR AML AML
comp=E,2805µm,0.5s
INTR AML AML
comp=N,3µm,0.6s
INTR AML AML
comp=E,3µm,0.5s
INTR AML AML
comp=N,5030µm,0.6s
SENI Senigallia 0.94 4 P **Pg** 21 43 10.2 -0.3
APEC Apecchio 0.95 327 P **Pg** 21 43 10.7 -0.1
VVLD Villa Vallelon 0.96 158 P **Pg** 21 43 10.0 -0.9
VVLD AML AML
comp=E,1785µm,1.0s
VVLD AML AML
comp=N,2120µm,0.6s
FSSB Fossombrone 0.96 344 P **Pg** 21 43 10.3 -0.7
FSSB AML AML
comp=E,4875µm,1.3s
FSSB AML AML
comp=N,5305µm,0.4s
ATMC Monte Cedrone 0.97 315 P **Pg** 21 43 10.8 -0.4
GUAR Guarcino 0.98 173 ⇑P **Pg** 21 43 11.7 +0.5
GUAR AML AML
comp=E,2630µm,0.6s
GUAR AML AML
comp=N,2560µm,0.5s
BADI Badiali 0.99 319 P **Pg** 21 43 11.0 -0.5
LATE Laterza 1.00 262 P **Pg** 21 43 11.4 -0.2
RMP Rome, Mte Porz 1.01 199 P **Pg** 21 43 10.9 -0.8
RMP AML AML
comp=N,3985µm,0.9s
RMP AML AML
comp=E,2975µm,1.0s
CAFI Castiglion Fio 1.03 304 ⇑P **Pg** 21 43 11.6 -0.6
CAFI AML AML
comp=E,992µm,0.5s
CAFI AML AML
comp=N,1635µm,0.9s
CAFI AML AML
comp=N,1720µm,0.9s
CAFI AML AML
comp=E,975µm,0.5s
PE3 Peglio 1.04 333 P **Pg** 21 43 11.9 -0.6
PE3 AML AML
comp=E,25000µm,0.1s
PE3 AML AML
comp=N,11µm,1.2s
VIVA Pratoni del Vi 1.05 195 P **Pg** 21 43 12.7 +0.1
VIVA AML AML
comp=E,4890µm,0.4s
VIVA AML AML
comp=N,6090µm,0.5s
LPEL Lama dei Pelig 1.05 133 P **Pg** 21 43 11.2 -1.4
LPEL AML AML
comp=N,2085µm,0.6s
LPEL AML AML
comp=E,2305µm,0.7s
RDP Rocca di Papa 1.05 198 P **Pg** 21 43 12.6 -0.1
RDP AML AML
comp=E,6595µm,0.5s
RDP AML AML
comp=N,6375µm,0.7s
MA9 Marino 1.06 200 P **Pg** 21 43 12.6 -0.1
SAMA S.Maria delle 1.07 203 P **Pb** 21 43 12.4 -0.4
SF03 Valle Cupa 1.07 272 P **Pb** 21 43 13.3 +0.4
MCIV Monte Civitell 1.08 271 P **Pb** 21 43 13.1 0.0
MCIV AML AML
comp=N,928µm,0.7s
MCIV AML AML
comp=E,1330µm,0.5s
SF11 Podere del Sol 1.08 276 P **Pb** 21 43 13.3 +0.2
SF04 Casetta 1.09 274 P **Pb** 21 43 12.8 -0.5
SSP9 Sansepolcro 1.10 318 P **Pb** 21 43 13.2 -0.1
SSP9 AML AML
comp=E,1126µm,1.6s
SSP9 AML AML
comp=N,1240µm,1.6s
TOLF Tolfa 1.10 231 ⇑P **Pb** 21 43 13.0 -0.3
TOLF AML AML
comp=E,1635µm,0.5s
TOLF AML AML
comp=N,2010µm,0.3s
PARC Parchiule 1.10 323 P **Pb** 21 43 13.0 -0.4
PARC AML AML
comp=N,1320µm,0.7s
PARC AML AML
comp=E,1815µm,0.9s
SF13 Bagnolo 1.12 273 P **Pb** 21 43 13.6 -0.2
SF14 Selvena 1.13 270 P **Pb** 21 43 13.5 -0.3
POFI Posta Fibreno 1.13 158 P **Pb** 21 43 12.9 -0.9
POFI AML AML
comp=E,1370µm,1.1s
POFI AML AML
comp=N,1090µm,0.8s
SF01 Poggio Pratacc 1.16 273 P **Pb** 21 43 14.3 -0.2
PESA Pesaro 1.20 349 P **Pb** 21 43 14.4 -0.5
PESA AML AML
comp=E,2825µm,0.4s
PESA AML AML
comp=N,2640µm,0.4s
GIUL Giuliano Di Ro 1.21 176 P **Pn** 21 43 14.9 -0.2
GIUL AML AML
comp=E,702µm,0.8s
GIUL AML AML
comp=N,979µm,0.9s
CRE Caprese Michel 1.22 315 P **Pn** 21 43 14.8 -0.6
CRE AML AML
comp=E,752µm,0.3s
CRE AML AML
comp=N,864µm,0.3s
ARCI Arcidosso 1.23 275 P **Pn** 21 43 15.6 +0.1
ARCI AML AML
comp=E,431µm,0.7s
ARCI AML AML
comp=N,284µm,1.1s
LATB Latina 1.28 186 P **Pn** 21 43 15.8 -0.2
RNI2 Rionero Sannit 1.30 144 P **Pn** 21 43 16.1 -0.3
CERA Filignano 1.33 151 P **Pn** 21 43 16.0 -0.9
CERA AML AML
comp=E,1785µm,0.6s
CERA AML AML
comp=E,1850µm,0.6s
CERA AML AML
comp=N,1142µm,0.9s
CERA AML AML
comp=N,1195µm,0.5s
FRES Fresagrandinar 1.38 124 P **Pn** 21 43 17.6 +0.2
FRES AML AML
comp=E,1160µm,0.7s
FRES AML AML
comp=N,687µm,0.8s
MIDA Miranda 1.39 143 P **Pn** 21 43 17.1 -0.7
MIDA AML AML
comp=E,863µm,0.9s
MIDA AML AML
comp=N,1230µm,0.7s
ASQU Asqua 1.43 317 P **Pn** 21 43 18.2 0.0
TRIV Trivento 1.44 133 P **Pn** 21 43 18.3 -0.1
TRIV AML AML
comp=E,1650µm,0.8s
TRIV AML AML
comp=E,1670µm,0.8s
TRIV AML AML
comp=N,1390µm,1.1s
TRIV AML AML
comp=N,1365µm,1.2s
SFI Santa Sofia 1.48 321 P **Pn** 21 43 19.5 +0.6
FROS Frosini 1.52 288 P **Pn** 21 43 20.6 +1.1
CSNT Castellina Chi 1.53 298 P **Pn** 21 43 20.2 +0.7
VAGA Valle Agricola 1.57 149 P **Pn** 21 43 20.5 +0.3
OSSC Osservatorio P 1.58 299 P **Pn** 21 43 21.1 +0.8
RUFI Rufina 1.60 313 P **Pn** 21 43 21.1 +0.5
BSSO Busso 1.63 138 P **Pn** 21 43 22.0 +1.1
BSSO AML AML
comp=N,204µm,1.3s
BSSO AML AML
comp=E,220µm,1.6s
CASP Castiglione de 1.68 272 P **Pn** 21 43 21.8 +0.3
CASP AML AML
comp=N,153µm,0.9s
CASP AML AML
comp=E,210µm,0.8s
LMD Lutirano 1.68 322 P **Pn** 21 43 22.6 +1.0
TRIF Trifonti 1.68 283 P **Pn** 21 43 22.0 +0.3
TRIF AML AML
comp=E,350µm,1.5s
TRIF AML AML
comp=N,216µm,0.5s
MODR Mondragone 1.71 161 P **Pn** 21 43 23.2 +1.2
CIGN Sant'Elia a Pi 1.72 130 P **Pn** 21 43 22.7 +0.6
CIGN AML AML
comp=E,668µm,1.5s
CIGN AML AML
comp=N,680µm,0.9s
SACR S. Croce Del S 1.79 139 P **Pn** 21 43 24.0 +0.8
SACR AML AML
comp=N,408µm,1.5s
SACR AML AML
comp=E,346µm,1.2s
MELA Melanico ??? S 1.81 125 P **Pn** 21 43 24.6 +1.2
MELA AML AML
comp=N,1210µm,1.5s
MELA AML AML
comp=N,1280µm,0.5s
MELA AML AML
comp=E,1302µm,0.8s
MELA AML AML
comp=E,1395µm,0.8s
BRIS BRISIGHELLA 1.82 320 P **Pn** 21 43 23.4 -0.2
DUGI Dugi Otok 1.86 48 *e*Pn **Pn** 21 43 24.4 +0.4
MPPT Montemurlo 1.91 309 P **Pn** 21 43 25.7 +0.8
MPPT AML AML
comp=E,227µm,0.6s
MPPT AML AML
comp=N,223µm,0.5s
MTCR Monte La Croce 2.01 310 P **Pn** 21 43 26.4 +0.2
APRC Apricena 2.05 119 P **Pn** 21 43 26.9 +0.3
APRC AML AML
comp=N,945µm,0.6s
APRC AML AML
comp=E,722µm,0.5s
VIRC Vir 2.06 42 *e*Pn **Pn** 21 43 27.2 +0.4
POPM Popiglio 2.16 307 P **Pn** 21 43 28.8 +0.6
POPM AML AML
comp=E,140µm,0.5s
POPM AML AML
comp=N,175µm,1.5s
CELB S.Piero in Cam 2.16 270 AML AML
comp=E,92µm,0.5s
CELB AML AML
comp=N,78µm,0.7s
MORI Morici 2.17 59 *e*Pn **Pn** 21 43 28.9 +0.6
SGRT San Giovanni R 2.18 117 AML AML
comp=N,622µm,0.6s
SGRT AML AML
comp=E,757µm,0.5s
BRJN Brijuni 2.18 11 *e*Pn **Pn** 21 43 28.7 +0.2
BRJN Brijuni 2.18 11 P **Pn** 21 43 29.0 +0.5
NVLJ Novalja 2.19 34 *e*Pn **Pn** 21 43 28.9 +0.3
MSAG Monte S. Angel 2.31 116 AML AML
comp=N,1410µm,0.4s
MSAG AML AML
comp=E,840µm,0.6s
RABC Rab 2.31 30 *e*Pn **Pn** 21 43 30.8 +0.5
SMRN Sveta Marina 2.38 17 *e*Pn **Pn** 21 43 31.1 -0.2
GSCL Gusciola 2.44 311 AML AML
comp=N,202µm,1.1s
GSCL AML AML
comp=E,234µm,1.0s
VLC Villacollemand 2.44 306 AML AML
comp=E,76µm,1.3s
VLC AML AML
comp=N,111µm,0.8s
HVAR Hvar 2.46 79 *e*Pn **Pn** 21 43 32.8 +0.4
MCRV Calabrutti - M 2.49 142 AML AML
comp=E,166µm,0.7s
MCRV AML AML
comp=N,144µm,0.6s

CAPA Cerignola FG 2.56 128 AML AML
comp=E,582µm,1.0s
CAPA AML AML
comp=N,612µm,0.8s
A253A Karojba, Istri 2.57 11 ePn Pn 21 43 33.6 -0.3
VULT Monte Vulture 2.58 134 AML AML
comp=N,475µm,0.4s
VULT AML AML
comp=E,351µm,0.4s
UDBI Udbina 2.59 46 ePn Pn 21 43 35.8 +1.6
A250A Rusevo Krmpots 2.65 28 ePn Pn 21 43 35.5 +0.6
KIJV Kijevo 2.68 61 i Pn Pn 21 43 36.5 +1.2
RIY Rijeka 2.73 20 ePn Pn 21 43 36.7 +0.6
LSTV Lastovo 2.76 89 ePn Pn 21 43 36.9 +0.5
PLIT Plitvice 2.77 39 ePn Pn 21 43 37.7 +1.1
PALZ Palazzo San Ge 2.78 130 AML AML
comp=E,518µm,0.9s
PALZ AML AML
comp=N,476µm,1.4s
MRVN Minervino Murg 2.84 126 AML AML
comp=N,140µm,0.6s
MRVN AML AML
comp=E,106µm,0.8s
SKDS Skadanscina 2.85 12 ePn Pn 21 43 37.5 -0.2
MAKA Makarska 2.89 78 ePn Pn 21 43 38.7 +0.5
A050A Klekovaca 3.00 54 ePn Pn 21 43 41.1 +1.3
RICI Ricice 3.01 75 ePn Pn 21 43 41.3 +1.5
MSSA Maissana 3.06 302 AML AML
comp=E,60µm,0.9s
MSSA AML AML
comp=N,75µm,0.8s
PGF Pioggiola 3.06 267 ePn Pn 21 43 42.0 +1.3
PGF eSn Sn 21 44 15.9 -1.5
comp=N,23nm,0.7s
CEY Cerknica 3.11 17 ePn Pn 21 43 41.7 +0.4
BOJS Bojanci 3.13 28 ePn Pn 21 43 41.3 -0.2
BOJS Bojanci 3.13 28 AML AML
comp=E,512µm,0.8s
BOJS AML AML
comp=N,410µm,0.7s
AMUR Altamura 3.18 125 AML AML
comp=N,167µm,0.5s
AMUR AML AML
comp=E,178µm,0.4s
SRKY Kupres RS 3.21 65 ePn Pn 21 43 44.7 +2.0
SABO M.te Sabotino 3.23 6 AML AML
comp=N,1430µm,0.6s
SABO AML AML
comp=N,1960µm,0.6s
SABO AML AML
comp=E,360µm,0.6s
SABO AML AML
comp=N,537µm,0.6s
ROVR Rover Verones 3.24 333 AML AML
comp=E,62µm,0.6s
ROVR AML AML
comp=N,97µm,0.8s
MIGL Miglionico 3.28 130 AML AML
comp=E,463µm,1.1s
MIGL AML AML
comp=N,446µm,0.8s
OZLJ Ozalj 3.30 30 ePn Pn 21 43 44.8 +1.0
MGRS Mrkonjic Grad 3.30 59 ePn Pn 21 43 46.4 +2.5
STON Ston 3.35 87 ePn Pn 21 43 44.4 -0.2
STON Ston 3.35 87 ePn Pn 21 43 44.4 -0.2
STON Ston 3.35 87 ePn Pn 21 43 44.4 -0.2
STON eSn Sn 21 44 22.2 -2.1
STON Ston 3.35 87 AML AML
comp=E,80µm,0.5s
STON AML AML
comp=N,91µm,0.4s
PRIJ Prijedor 3.40 48 ePn Pb 21 43 51.0 -1.5
DOSS Dosso del Somm 3.42 336 AML AML
comp=E,205µm,0.8s
DOSS AML AML
comp=N,184µm,0.8s
DOSS AML AML
comp=E,183µm,0.5s
DOSS AML AML
comp=N,171µm,0.5s
LJU Ljubljana 3.42 16 AML AML
comp=E,1008µm,0.7s
LJU AML AML
comp=N,1135µm,0.9s
CRES Cresnjev 3.48 28 ePn Pn 21 43 46.3 -0.1
STAL STALIGIAL 3.51 355 AML AML
comp=E,238µm,0.4s
STAL AML AML
comp=N,196µm,0.3s
MAGA Magasa 3.51 330 AML AML
comp=N,283µm,0.4s
MAGA AML AML
comp=E,380µm,0.5s
A051A Mrakovica 3.53 49 ePn Pn 21 43 48.3 +1.2
BLY Banja Luka 3.54 55 ePn Pb 21 43 51.5 -3.3
NOCI Noci 3.54 123 AML AML
comp=E,132µm,1.0s
NOCI AML AML
comp=N,148µm,1.1s
CIMO Cimolais 3.58 352 AML AML
comp=N,73µm,0.6s
CIMO AML AML
comp=E,53µm,1.4s
CIMO AML AML
comp=N,84µm,0.6s
CIMO AML AML
comp=E,54µm,1.5s
PTCC Patocco-Chiusa 3.64 2 AML AML
comp=E,96µm,0.5s
PTCC AML AML
comp=N,77µm,1.0s
GAGG Gaggia 3.67 335 AML AML
comp=N,158µm,0.9s
GAGG AML AML
comp=E,208µm,1.0s
DBRK Dubrovnik 3.69 90 ePn Pn 21 43 49.3 +0.1
ACOM Acomizza, Ital 3.79 4 AML AML
comp=N,186µm,0.6s
ACOM AML AML
comp=E,188µm,1.0s
ZOU Zoufplan 3.79 358 AML AML
comp=E,153µm,1.3s
ZOU AML AML
comp=N,158µm,1.2s
TAR1 Taranto 3.83 124 AML AML
comp=N,102µm,0.9s
TAR1 AML AML
comp=E,158µm,0.6s
TREB Trebinje 3.83 89 ePn Pn 21 43 52.6 +1.4
OBKA Obir 3.88 15 ePn Pn 21 43 48.6 -3.3
OBKA Obir 3.88 15 ePn Pn 21 43 49.4 -2.5
comp=E,0.5nm,0.1s
MYKA Terra Mystica 3.88 5 ePn Pn 21 43 53.2 +1.3
comp=E,4.2nm,0.2s
KOSI Kohlern 3.91 342 AML AML
comp=N,144µm,1.1s
KOSI AML AML
comp=E,180µm,0.9s
HCY Herceg Novi 3.96 93 ePn Pn 21 43 54.2 +1.2
BRY Bratogost 3.97 86 ePn Pn 21 43 54.3 +1.1
LOBO Lobor 3.98 31 ePn Pn 21 43 53.6 +0.3
ABTA Abfaltersbach 4.01 354 i Pn Pn 21 43 55.5 +1.9
comp=E,21nm,0.5s,SNR=15
UPM Unac-Piva 4.25 82 ePn Pn 21 43 59.5 +2.4
RISI Rein 4.25 350 AML AML
comp=E,296µm,0.5s
RISI AML AML
comp=N,333µm,0.5s
SBF Sospel 4.31 287 ePn Pn 21 43 58.8 +1.0
SBF eSn Sn 21 44 45.3 -2.7
comp=N,16nm,0.5s
KBA Koelnbreinsper 4.32 2 i Pn Pn 21 43 59.6 +1.6
comp=N,12nm,0.5s,SNR=13
VSL Villasalto 4.33 222 AML AML
VSL AML AML
DRME Dracevica, Mon 4.50 95 ePn Pn 21 44 02.0 +1.6
TIP Timpagrande 4.51 141 ⇓P Pb 21 44 08.9 -2.6
PDG Podgorica 4.52 92 ⇑P Pn 21 44 02.3 +1.7
FETA Feichten 4.59 339 i Pn Pn 21 44 04.9 +3.1
comp=N,4.3nm,0.4s,SNR=7.2
WTTA Wattenberg 4.62 347 Pn Pn 21 44 05.4 +3.2
comp=N,5.1nm,0.3s,SNR=10
WTTA eSn Sn 21 45 01.0 +5.1
comp=N,47nm,0.9s
RUDO Rudo 4.63 77 ePn Pn 21 44 03.7 +1.5
DAVOX Davos/Dischmat 4.64 331 Pn Pn 21 44 05.6 +3.2
comp=N,2.5nm,0.3s,baz=144,slow=17,SNR=26
DAVOX Sn Sn 21 44 59.4 +3.1
comp=N,1.1nm,0.3s,baz=147,slow=18,SNR=3.3
SQTA Sankt Quirin 4.66 344 i Pn Pn 21 44 06.0 +3.3
comp=N,11nm,0.4s,SNR=10
BBLS Lazići 4.70 74 ePn Pn 21 44 05.4 +2.2
BBLS eSn Sn 21 44 58.2 +0.6
WATA Walderalm 4.70 347 Pn Pn 21 44 06.6 +3.4
comp=N,4.1nm,0.2s,SNR=15
ARSA Arzberg 4.79 20 ePn Pn 21 44 05.7 +1.4
comp=N,2.0nm,0.3s
MOTA Moosalm 4.80 343 Pn Pn 21 44 08.5 +3.9
comp=N,4.8nm,0.3s,SNR=11
KOVH Kovagotottos 4.86 45 P Pn 21 44 06.0 +0.7
KOVH S Sn 21 45 00.4 -1.1
LMR La Mourre 4.89 279 ePn Pn 21 44 06.4 +0.6
LMR eSn Sn 21 44 59.3 -3.0
comp=N,31nm,1.5s
BIOA Bad Ischl, Aus 4.94 4 Pn Pn 21 44 08.9 +2.5
comp=N,14nm,0.3s,SNR=9.4
RETA Reutte 5.01 341 i Pn Pn 21 44 10.9 +3.4
comp=N,5.0nm,0.3s,SNR=6.8
RETA eSn Sn 21 45 10.7 +5.4
comp=N,10nm,0.5s
MBDF Montbardon 5.02 295 ePn Pn 21 44 08.9 +1.3
MBDF eSn Sn 21 45 03.8 -1.7
comp=N,11nm,0.6s
SJES Sjenica 5.03 82 ePn Pn 21 44 10.3 +2.5
SJES eSn Sn 21 45 03.1 -2.8
DAVA Damuels 5.08 334 Pn Pn 21 44 13.2 +4.7
comp=N,3.6nm,0.3s,SNR=11
DAVA eSn Sn 21 45 12.7 +5.6
comp=N,9.7nm,0.4s
MOA Molln 5.15 8 ePn Pn 21 44 10.2 +1.0
MOA eSn Sn 21 45 08.4 -0.2
MOA Molln 5.15 8 i Pn Pn 21 44 10.6 +1.3
comp=N,2.6nm,0.3s,SNR=7.3
DIVS Divibare 5.16 73 ePn Pn 21 44 10.4 +0.9
DIVS Divibare 5.16 73 ePn Pn 21 44 10.9 +1.4
DIVS eSn Sn 21 45 08.9 -0.2
IVAS Ivanjica 5.19 79 ePn Pn 21 44 11.1 +1.2
IVAS eSn Sn 21 45 08.3 -1.4
TIR Tirane 5.20 104 ⇓P Pn 21 44 11.6 +1.7
MORH Mrgy, Hungar 5.23 47 ⇓P Pg 21 44 30.1 -2.4
MORH Mrgy, Hungar 5.23 47 ⇑P Pn 21 44 15.4 +5.1
LPG La Plagne 5.35 303 ePn Pn 21 44 14.7 +2.4
LPG eSn Sn 21 45 11.2 -2.8
comp=N,13nm,0.8s
LPL La Plagne 5.37 303 ePn Pn 21 44 14.7 +2.2
LPL eSn Sn 21 45 10.5 -3.9
comp=N,14nm,0.8s
FRGS Fruska Gora 5.37 61 ePn Pn 21 44 11.6 -0.8
MPLH Magyarpolny 5.40 34 P Pn 21 44 12.8 +0.1
RONA Rosalia, Austr 5.41 23 ePn Pn 21 44 15.0 +2.0
comp=N,3.7nm,0.3s
TRUS Trudelj 5.48 72 ePn Pn 21 44 14.9 +1.1
CONA Conrad Observa 5.51 19 Pn Pn 21 44 15.3 +1.1
comp=N,3.7nm,0.3s,SNR=9.2
CONA eSn Sn 21 45 17.5 0.0
comp=N,6.4nm,0.6s
PHP Peshkopia 5.52 99 P Pn 21 44 17.1 +2.6
GRUS Gruza 5.64 76 ePn Pn 21 44 17.2 +1.2
SMRF Simiane la Rot 5.65 285 ePn Pn 21 44 18.0 +1.8
SMRF eSn Sn 21 45 21.9 +0.9
comp=N,12nm,1.1s
ORIF Oris-en-Rattie 5.68 295 ePn Pn 21 44 20.4 +3.8
ORIF eSn Sn 21 45 18.9 -2.9
comp=N,8.8nm,0.7s
SELS Selova 5.87 83 ePn Pn 21 44 20.3 +1.1
KEK Kerkira 5.87 119 P Pn 21 44 21.4 +2.2
KEK S Sn 21 45 05.7 -21
SRN Sarande 5.91 117 P Pn 21 44 21.8 +2.1
OHR Ohrid 5.94 104 i Pn Pn 21 44 23.0 +2.7
GERES GERESS Array B 6.09 3 Pn Pn 21 44 22.6 +0.3
comp=N,0.7nm,0.3s,baz=172,slow=13,SNR=18
GERES Sn Sn 21 45 30.7 -1.3
comp=N,2.1nm,0.3s,baz=184,slow=24,SNR=7.2
comp=N,1.4nm,0.5s
KBN Korca 6.11 108 P Pn 21 44 24.9 +2.4
CKRC Cesky Krumlov 6.11 7 ePN Pn 21 44 22.2 -0.3
CKRC eSN Sn 21 45 29.8 -2.5
LSK Leskovik 6.18 113 P Pn 21 44 25.6 +2.1
MODS Modra-Piesok 6.31 26 ePN Pn 21 44 29.3 +4.0
BOVS Bovan 6.32 79 ePn Pn 21 44 26.3 +1.0
CABF La Chapelle 6.33 310 ePn Pn 21 44 26.8 +1.2
CABF eSn Sn 21 45 35.1 -2.7
comp=N,10nm,0.7s
KHC Kasperske Hory 6.37 3 ePN Pn 21 44 26.2 +0.1
KHC eSN Sn 21 45 36.8 -2.0
NEST Nestorio 6.38 109 P Pn 21 44 28.7 +2.5
BARS Barje 6.38 87 ePn Pn 21 44 27.7 +1.5
VIVF Saint-Julien-l 6.47 292 ePn Pn 21 44 30.4 +2.9
VIVF eSn Sn 21 45 38.8 -2.5
comp=N,0.6nm,0.4s
MDVR Moldovita 6.52 69 ⇑P Pn 21 44 30.4 +2.2
PRVS Prvonek 6.59 89 ePn Pn 21 44 30.4 +1.3
KRUC Moravsky 6.69 19 ePN Pn 21 44 29.9 -0.5
ZAGS Zajecar 6.71 78 ePn Pn 21 44 31.6 +0.8
HINF Hinteralfeld 6.72 321 ePn Pn 21 44 31.6 +0.7
HINF eSn Sn 21 45 45.0 -2.4
comp=N,14nm,0.6s
STIP Stip 6.80 96 i Pn Pn 21 44 35.4 +3.5
JAVC Velka Javorina 6.87 26 ePN Pn 21 44 32.8 -0.1
LASF Ste Croix 6.89 284 ePn Pn 21 44 34.8 +1.6
LASF eSn Sn 21 45 46.7 -4.8
comp=N,1.9nm,0.5s
BOSS Bosilegrad 6.89 89 ePn Pn 21 44 34.5 +1.3
TSLK Tsoukalades, L 6.92 122 P Pn 21 44 36.3 +2.6
LKD2 Lefkada island 6.95 122 P Pn 21 44 36.4 +2.4
LKD2 S Sn 21 45 33.7 -19
VRAC Vranov 6.97 19 ePN Pn 21 44 33.8 -0.5
ZAPS Zavoj 6.97 83 ePn Pn 21 44 35.9 +1.5
ZAPS eSn Sn 21 45 50.0 -3.6
VYHS Vyhne 6.98 33 ePN Pn 21 44 39.1 +4.7
BLKB Belogradchik 7.02 80 ⇑P Pg 21 45 11.4 +4.7
HERR Herculane 7.03 69 ⇓P Pn 21 44 38.5 +3.4
HAU Haudompre 7.09 320 ePn Pn 21 44 36.8 +0.8
HAU eSn Sn 21 45 53.3 -3.2
comp=N,12nm,0.3s
GZR Gura Zlata 7.42 66 ⇓P Pn 21 44 42.6 +2.1
VTS Vitosha 7.44 88 ⇑P Pn 21 44 43.1 +2.3
NKC Novy Kostel 7.49 357 eSN Sn 21 46 03.8 -2.3
EVR Evrytania 7.61 117 P Pn 21 44 46.0 +2.8
SMF Signal de Mont 7.68 304 ePn Pn 21 44 44.0 0.0
SMF eSn Sn 21 46 06.8 -4.1
comp=N,8.2nm,0.6s
KRLC Kraliky 7.73 18 ePN Pn 21 44 44.8 +0.1
PAGF Fort de Pagny 7.78 321 ePn Pn 21 44 46.3 +1.0
baz=143
PAGF eSn Sn 21 46 10.2 -3.1
comp=N,100nm,1.0s
ANX Ano Chora 7.86 119 P Pn 21 44 49.9 +3.3
SFTF Sexfontaines 7.87 316 ePn Pn 21 44 47.4 +0.8
baz=148
SFTF eSn Sn 21 46 12.2 -3.4
comp=N,102nm,1.1s
EFP Efpalio 7.95 120 P Pn 21 44 50.8 +3.1
LOR Lormes 7.97 308 ePn Pn 21 44 48.2 +0.2
baz=123
LOR eSn Sn 21 46 14.2 -3.8
comp=N,3.0nm,0.3s
MTLF Montolieu 8.02 278 ePn Pn 21 44 47.7 -1.0
MTLF eSn Sn 21 46 15.6 -3.8
comp=N,0.3nm,0.3s
AVF Avril sur Loir 8.04 303 ePn Pn 21 44 48.6 -0.4
AVF eSn Sn 21 46 15.5 -4.3
comp=N,83nm,1.7s
MEZF Maizieres J'vi 8.06 318 ePn Pn 21 44 49.8 +0.6
baz=141
MEZF eSn Sn 21 46 16.5 -3.8
comp=N,111nm,1.4s
SSF Saint Saulge 8.07 305 ePn Pn 21 44 49.4 0.0
SSF eSn Sn 21 46 16.2 -4.4
comp=N,19nm,1.1s
SAVF Savonnieres en 8.11 319 ePn Pn 21 44 50.6 +0.8
baz=142
SAVF eSn Sn 21 46 17.8 -3.5
comp=N,46nm,1.1s
MESR Meseseni 8.22 54 ⇑P Pn 21 44 57.6 +6.2
BGF Bois d'Agland 8.26 301 ePn Pn 21 44 51.8 -0.2
BGF eSn Sn 21 46 20.2 -5.0
comp=N,27nm,1.2s
CAF Calviac 8.29 289 ePn Pn 21 44 53.2 +0.7
CAF eSn Sn 21 46 21.2 -4.9
comp=N,34nm,1.2s
KLV Kalavryta, Ach 8.33 121 P Pn 21 44 56.3 +3.3
CLL Collm 8.55 359 eSg Sg 21 47 27.0 +0.6
TCF Toulx Ste Croi 8.57 298 ePn Pn 21 44 56.1 -0.1
TCF eSn Sn 21 46 28.6 -4.2
comp=N,17nm,1.1s
ARR Arges 8.67 69 ⇑P Pn 21 45 00.7 +3.0
HYF Humbligny 8.70 305 eSn Sn 21 46 31.6 -4.3
comp=N,136nm,1.4s
RJF Les Rejaudoux 8.75 291 ePn Pn 21 45 00.0 +1.3
RJF eSn Sn 21 46 32.4 -4.9
comp=N,41nm,1.1s
HUMR Humele 8.76 74 ⇑P Pn 21 44 59.7 +0.8
KOLS Kolonicke sedl 8.86 43 eP Pg 21 45 40.7 -1.2
KOLS Kolonicke sedl 8.86 43 eP Pg 21 45 40.7 -1.2
COPA Copaceanca 8.89 77 ⇑P Pg 21 45 45.6 +3.2
VOIR 8.97 69 ⇑P Pn 21 45 08.4 +6.6
LFF La Frestale 9.22 288 ePn Pn 21 45 05.8 +0.7
LFF eSn Sn 21 46 43.4 -5.4
comp=N,36nm,1.1s
GIVF Givet 9.31 325 ePn Pn 21 45 07.8 +1.4
EPF Esparros 9.40 276 ePn Pn 21 45 09.0 +1.3
EPF eSn Sn 21 46 44.9 -8.5
comp=N,0.2nm,0.2s
BAIF Baives 9.55 323 ePn Pn 21 45 09.6 0.0
MLR Muntele Rosu 9.60 69 ⇓P Pn 21 45 07.4 -3.0
NEHR Nehoiu 9.83 70 ⇑P Pn 21 45 14.7 +1.2
ETSF Etsaut 10.07 275 ePn Pn 21 45 15.9 -0.9
ETSF eSn Sn 21 47 01.0 -8.7
comp=N,6.6nm,0.9s
MFF Saint Martin d 10.21 297 ePn Pn 21 45 18.1 -0.6
PANC Panciu 10.51 68 ⇓P Pn 21 45 23.0 +0.3
ICOR Ion Corvin 10.75 78 ⇑P Pn 21 45 29.8 +3.8
CFR Carcaliu 11.07 72 ⇓P Pn 21 45 32.6 +2.2
CFR Carcaliu 11.07 72 ⇓P Pn 21 45 32.6 +2.2
SGMF Saint Gilles 12.30 302 ePn Pn 21 45 48.5 +1.3
QUIF Quistinic 12.57 300 ePn Pn 21 45 50.3 -0.6
MMAI Mount Meron Ar 20.03 112 P Pn 21 47 28.2 +1.2
comp=N,1.4nm,0.7s,baz=318,slow=10,SNR=2.9
comp=N,1.4nm,0.7s
FINES FINESS Array B 20.25 18 P Pn 21 47 30.1 +0.9
comp=N,2.4nm,0.9s,baz=224,slow=12,SNR=4.0
TORD Torodi Ar. Bea 31.13 202 P P 21 49 12.8 +1.9
comp=N,0.8nm,0.7s,baz=21,slow=7.6,SNR=7.0
comp=N,0.8nm,0.7s
MKAR Makanchi Array 47.80 60 P P 21 51 31.3 +1.8
comp=N,0.4nm,0.5s,baz=289,slow=7.4,SNR=5.3
comp=N,0.4nm,0.5s

LJU 31 21:43:37.9,46°39N×15°07E,h0km,Confirmed Rockburst,Northwestern Balkan Peninsula

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*WEL **31** 22:04:00,37°08S×179°22E,h15km,ML5.7,Mw5.8, Moment Tensor Solution. s5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.35; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$0.48; $M_{r\theta}$3.06; $M_{\theta\phi}$-0.33; $M_{r\phi}$5.00; Fault plane solution: M_o5.89000×10^{17} NP1: ϕ_s314.00000°,δ4.00000°,λ-167.00000°. NP2: ϕ_s211.00000°,δ89.00000°,λ-86.00000°. Principal axes: T -60451.5000, Plg44.0000°, Azm297.0000°; N 3200.0200, Plg4.0000°, Azm30.0000°; P 57251.4700, Plg46.0000°, Azm125.0000°;*
*BJI **31** 22:04:32.6±0.0,37°10S×179°42E,h21km,mb5.3/32, mB5.8/36,Ms5.5/49,Ms7 5.4/47*
*MOS **31** 22:04:34.1±0.9,37°03S×178°81E,h18km,mb5.8/17, MS5.5/26,Error ellipse: s-maj=10.8km s-min=8.1km az=112.4*
*NEIC **31** 22:04:35.2±1.9,37°13S±0°06×178°93E±0°10,h15km±3km, mb5.8/127,Ms_20 5.5/374,Mww5.8,Error ellipse: s-maj=11.1km s-min=9.4km az=90.0*
*NOU **31** 22:04:38.3,37°38S×179°11E,h42km,ML5.7/119,Off E. Coast of N. Island, N.Z.*
*GCMT **31** 22:04:40.2±0.1,37°09S±0°01×179°05E±0°01,h27km, MW5.8/145,Moment Tensor Solution. s137,c268; s145,c305; Duration: 2τ0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.01±.04; $M_{\theta\theta}$-1.32±.03; $M_{\phi\phi}$1.32±.03; $M_{r\theta}$4.79±.10; $M_{\theta\phi}$0.26±.02; $M_{r\phi}$4.10±.09; Best double couple: M_o6.44700×10^{17} NP1:ϕ_s230.00000°,δ90.00000°, λ-78.00000°. NP2:ϕ_s320.00000°,δ12.00000°, λ-180.00000°. Principal axes: T 6.4730, Plg44.0000°, Azm308.0000°; N -0.0480, Plg12.0000°, Azm50.0000°; P -6.4210, Plg44.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*IDC **31** 22:04:40.0±1.0,36°96S×178°80E,h50km±8km,mb5.4/28, mbtmp5.6/29,MS5.3/51 Error ellipse: s-maj=9.4km s-min=8.1km az=149.0*
*NEIC **31** 22:04:42,37°11S×179°12E,h20km,Moment Tensor Solution. Duration: 14τ0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.59; $M_{\theta\theta}$-1.31; $M_{\phi\phi}$1.90; $M_{r\theta}$4.90; $M_{\theta\phi}$0.63; $M_{r\phi}$4.32; Fault plane solution: M_o6.78000×10^{17} NP1: ϕ_s329.00000°,δ15.00000°,λ-168.00000°. NP2: ϕ_s228.00000°,δ87.00000°,λ-75.00000°. Principal axes: T 6.8525, Plg40.0000°, Azm305.0000°; N -0.1566, Plg14.0000°, Azm48.0000°; P -6.6959, Plg46.0000°, Azm153.0000°;*

ISC 31 22:04:37.2±0.6,37°13S±0°03×179°00E±0°03,h33km±2km, n1219,σ1τ68/1056,mb5.8/169,MS5.5/261,38C-12D,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res	
				Op	ISC	h	m	s	ISC
MXZ	**Matakaoa Point**	**0.70**	**232**	Pn	**Pn**	**22**	**04**	**50.5**	**-0.3**
MXZ	**Matakaoa Point**	**0.70**	**232**	P	**Pn**	**22**	**04**	**50.6**	**-0.3**
MXZ				S	**Sn**	**22**	**05**	**03.0**	**+2.5**
WMGZ	**Waiomatatini S**	**0.83**	**214**	P	**Pb**	**22**	**04**	**53.9**	**+0.7**
WMGZ				S	**Sb**	**22**	**05**	**07.7**	**+3.6**
PKGZ	**Pakihiroa**	**1.05**	**224**	P	**Pb**	**22**	**04**	**57.0**	**-0.1**
PKGZ				S	**Sb**	**22**	**05**	**12.7**	**+2.1**
PUZ	**Puketiti**	**1.11**	**212**	P	**Pb**	**22**	**04**	**57.4**	**-0.6**
PUZ				S	**Sb**	**22**	**05**	**14.6**	**+2.5**
HAZ	**Te Kaha**	**1.15**	**237**	P	**Pn**	**22**	**04**	**57.5**	**+0.4**
HAZ				S	**Sb**	**22**	**05**	**16.9**	**+3.6**
TWGZ	**Tauwhareparae**	**1.32**	**218**	P	**Pb**	**22**	**05**	**00.6**	**-0.9**
TWGZ				S	**Sb**	**22**	**05**	**20.5**	**+2.3**
RUGZ	**Raukumara Rang**	**1.34**	**231**	P	**Pb**	**22**	**05**	**01.6**	**-0.3**
RUGZ				S	**Sb**	**22**	**05**	**20.3**	**+1.5**
CNGZ	**Carnagh Statio**	**1.49**	**205**	P	**Pn**	**22**	**05**	**02.8**	**+1.2**
WIZ	**White Island**	**1.50**	**254**	P	**Pn**	**22**	**05**	**02.2**	**+0.4**
WSRZ	**White Island S**	**1.50**	**255**	P	**Pb**	**22**	**05**	**03.2**	**-1.4**
WSRZ				S	**Sb**	**22**	**05**	**24.3**	**+1.0**
TKGZ	**Te Karaka**	**1.59**	**215**	P	**Pn**	**22**	**05**	**03.7**	**+0.6**
TKGZ				S	**Sb**	**22**	**05**	**25.9**	**0.0**
MWZ	**Matawai**	**1.68**	**224**	P	**Pn**	**22**	**05**	**05.6**	**+1.3**
WHRZ	**Whale Island**	**1.77**	**245**	P	**Pb**	**22**	**05**	**07.5**	**-1.5**
RIGZ	**Rimuhau**	**1.85**	**212**	P	**Pn**	**22**	**05**	**07.2**	**+0.5**
RIGZ				S	**Sb**	**22**	**05**	**32.1**	**-1.2**
RAGZ	**Rawiri**	**1.85**	**222**	P	**Pn**	**22**	**05**	**07.9**	**+1.1**
RAGZ				S	**Sb**	**22**	**05**	**31.8**	**-1.6**
URZ	**Urewera**	**1.88**	**233**		**Pn**	**22**	**05**	**08.5**	**+1.5**
URZ	**Urewera**	**1.88**	**233**	P	**Pb**	**22**	**05**	**08.9**	**-1.9**
URZ	**Urewera**	**1.88**	**233**	P	**Pn**	**22**	**05**	**08.3**	**+1.4**
	8µm,0.4s,baz=302,slow=24,SNR=2662								
URZ				S	**Sb**	**22**	**05**	**32.6**	**-1.3**
	15µm,0.5s,baz=356,slow=20,SNR=14								
URZ	**Urewera**	**1.88**	**233**	P	**Pn**	**22**	**05**	**08.4**	**+1.4**
URZ				S	**Sb**	**22**	**05**	**33.5**	**-0.4**
PRGZ	**Paritu Road**	**1.99**	**206**	P	**Pn**	**22**	**05**	**08.8**	**+0.2**
PRGZ				S	**Sn**	**22**	**05**	**33.8**	**+1.3**
MARZ	**Manawahe**	**2.04**	**245**	P	**Pn**	**22**	**05**	**10.9**	**+1.6**
MARZ				S	**Sb**	**22**	**05**	**37.4**	**-1.2**
EDRZ	**Edgecumbe**	**2.04**	**241**	P	**Pn**	**22**	**05**	**11.4**	**+2.0**
OPRZ	**Ohinepanea**	**2.07**	**249**	P	**Pn**	**22**	**05**	**11.3**	**+1.6**
SNGZ	**Shannon Statio**	**2.11**	**218**	P	**Pn**	**22**	**05**	**10.7**	**+0.5**
SNGZ				S	**Sb**	**22**	**05**	**39.1**	**-1.4**
KNZ	**Kokohu**	**2.16**	**209**	P	**Pn**	**22**	**05**	**10.5**	**-0.4**
KNZ				S	**Sn**	**22**	**05**	**36.5**	**0.0**
MHGZ	**Mahia Peninsul**	**2.19**	**203**	P	**Pn**	**22**	**05**	**11.3**	**-0.1**
MYRZ	**Mayor Island**	**2.21**	**265**	P	**Pn**	**22**	**05**	**12.1**	**+0.6**
MUGZ	**Murupara**	**2.22**	**232**	P	**Pn**	**22**	**05**	**13.0**	**+1.2**
MKRZ	**Makatiti**	**2.25**	**243**	P	**Pn**	**22**	**05**	**14.6**	**+2.4**
LIRZ	**Lichensteins R**	**2.25**	**246**	P	**Pn**	**22**	**05**	**14.9**	**-2.4**
TGRZ	**Tauranga**	**2.26**	**254**	P	**Pn**	**22**	**05**	**14.1**	**+1.8**
TARZ	**Mount Tarawera**	**2.27**	**240**	P	**Pn**	**22**	**05**	**14.4**	**+2.0**
OMRZ	**Omania**	**2.30**	**244**	P	**Pn**	**22**	**05**	**14.9**	**+2.0**

RRRZ	Republican Roa	2.31	238	P		Pn	22 05 14.6	+1.6		
RAHZ	Arahi	2.34	220	P		Pn	22 05 13.9	+0.5		
KARZ	Kaharoa	2.36	247	P		Pn	22 05 15.5	+1.7		
HLRZ	Highlands Stat	2.38	241	P		Pn	22 05 16.1	+2.1		
WHHZ	Waihua	2.39	215	P		Pn	22 05 14.5	+0.4		
MTHZ	Maungataniwha	2.42	224	P		Pn	22 05 15.7	+1.2		
NGRZ	Ngongotaha	2.44	246	P		Pn	22 05 17.3	+2.6		
UTU	Utuhina	2.46	244	P		Pb	22 05 18.4	-2.4		
PRRZ	Plateau Road	2.48	236	P		Pn	22 05 16.4	+1.1		
HSRZ	Hossack Road	2.48	241	P		Pn	22 05 17.7	+2.4		
HRRZ	Handcock Road	2.49	239	P		Pn	22 05 17.1	+1.6		
KMRZ	Kaimai	2.54	253	P		Pn	22 05 17.7	+1.6		
ALRZ	Allen Road	2.54	235	P		Pn	22 05 17.6	+1.4		
GRRZ	Galatos Road	2.59	241	P		Pn	22 05 19.0	+2.0		
NMHZ	Naumai	2.62	221	P		Pn	22 05 18.0	+0.7		
WPRZ	Whakapapatarin	2.64	237	P		Pn	22 05 19.3	+1.7		
ARHZ	Aropaoanui	2.65	216	P		Pn	22 05 17.9	+0.2		
KUZ	Kuaotunu	2.66	277	P		Pn	22 05 18.0	+0.3		
MRHZ	Matea Rd	2.66	229	P		Pn	22 05 18.6	+0.8		
BKZ	Black Stump Fm	2.83	223	Pn		Pn	22 05 20.5	+0.3		
BKZ	Black Stump Fm	2.83	223	P		Pn	22 05 21.3	+1.1		
BKZ	Black Stump Fm	2.83	223	P		Pn	22 05 20.8	+0.5		
TOZ	Tahuroa Road	2.85	257	P		Pn	22 05 21.5	+1.2		
WHTZ	Whakaora	2.85	237	P		Pn	22 05 22.3	+1.8		
KUTZ	Kaahu Road	2.86	241	P		Pn	22 05 22.2	+1.6		
HATZ	Hinemaiaia	2.89	232	P		Pn	22 05 21.9	+0.9		
CKHZ	Cape Kidnapper	2.94	210	P		Pn	22 05 20.9	-0.8		
GRZ	Great Barrier	2.98	286	P		Pn	22 05 23.0	+0.8		
TLZ	Tolley Road	3.00	245	P		Pn	22 05 24.4	+2.0		
WATZ	Wairara	3.03	238	P		Pn	22 05 24.6	+1.7		
KWHZ	Kaweka Forest	3.06	221	P		Pn	22 05 23.2	-0.1		
MKAZ	Moumakai	3.07	269	P		Pn	22 05 24.4	+1.0		
RATZ	Rangitukua	3.08	235	P		Pn	22 05 25.3	+1.6		
RITZ	Rihia Road	3.09	232	P		Pn	22 05 24.9	+1.2		
WIAZ	Waiheke Island	3.12	275	P		Pn	22 05 25.0	+1.0		
KAHZ	Kahuranaki	3.14	211	P		Pn	22 05 23.6	-0.8		
KATZ	Kakaramea	3.19	234	P		Pn	22 05 26.4	+1.1		
KRHZ	Kereru	3.25	219	P		Pn	22 05 25.2	-0.7		
ETAZ	East Tamaki Re	3.26	272	P		Pn	22 05 27.8	+1.7		
TMVZ	Te Maari	3.27	232	P		Pn	22 05 26.7	+0.5		
NTVZ	North Tongarir	3.28	232	P		Pn	22 05 26.9	+0.5		
ETVZ	East Tongariro	3.28	231	P		Pn	22 05 26.7	+0.4		
KRVZ	Karewarewa	3.30	232	P		Pn	22 05 27.3	+0.6		
BHHZ	Black Hill Sta	3.30	224	P		Pn	22 05 26.8	+0.2		
MBAZ	Motutapu North	3.31	275	P		Pn	22 05 28.4	+1.8		
OTVZ	Oturere	3.32	231	P		Pn	22 05 27.4	+0.4		
NNVZ	North Ngauruho	3.33	232	P		Pn	22 05 27.9	+0.7		
WTVZ	West Tongariro	3.34	233	P		Pn	22 05 28.1	+0.8		
SNVZ	South Ngauruho	3.35	231	P		Pn	22 05 27.8	+0.3		
NGZ	Ngauruhoe	3.37	232	P		Pn	22 05 28.2	+0.5		
ABAZ	Army Bay	3.38	278	P		Pn	22 05 29.6	+1.9		
TUVZ	Tukino	3.39	230	P		Pn	22 05 28.3	+0.3		
TWVZ	Taurewa	3.41	234	P		Pn	22 05 29.3	+1.1		
EPAZ	Eden Park BICE	3.42	273	P		Pn	22 05 30.5	+2.4		
MOVZ	Moawhango	3.42	227	P		Pn	22 05 28.1	-0.2		
HBAZ	Herne Bay Bore	3.43	273	P		Pn	22 05 30.7	+2.4		
WHVZ	Whangaehu Hut	3.44	230	P		Pn	22 05 29.1	+0.3		
FWVZ	Far West T-bar	3.45	231	P		Pn	22 05 29.5	+0.7		
DRZ	Dome Shelter	3.45	231	P		Pn	22 05 29.6	+0.7		
WNVZ	Wahianoa	3.46	230	P		Pn	22 05 29.1	+0.1		
TRVZ	Turoa	3.48	230	P		Pn	22 05 30.0	+0.8		
AWAZ	Awhitu Peninsu	3.48	270	P		Pn	22 05 30.8	+1.7		
PNHZ	Pukenui	3.54	217	P		Pn	22 05 28.4	-1.5		
WTAZ	Waiatarua	3.55	272	P		Pn	22 05 31.9	+1.9		
WPHZ	Waipukurau	3.55	214	P		Pn	22 05 28.8	-1.2		
HIZ	Hauiti	3.56	246	Pn		Pn	22 05 32.5	+2.3		
HIZ	Hauiti	3.56	246	P		Pn	22 05 32.7	+2.5		
RVAZ	Riverhead Bore	3.56	274	P		Pn	22 05 32.1	+2.0		
MTVZ	Mangateitei	3.58	230	P		Pn	22 05 30.7	+0.3		
PKVZ	Pokaka	3.60	232	P		Pn	22 05 31.9	+1.2		
ANWZ	Angora Road	3.87	210	P		Pn	22 05 32.6	-1.8		
WCZ	Waipu Caves	3.93	286	P		Pn	22 05 36.8	+1.5		
WAZ	Wanganui	4.10	229	P		Pn	22 05 38.0	+0.4		
BFZ	Birch Farm	4.15	210	Pn		Pn	22 05 35.5	-2.7		
BFZ	Birch Farm	4.15	210	P		Pn	22 05 36.2	-2.0		
MHEZ	Mangahewa	4.17	241	P		Pn	22 05 43.1	+4.6		
OHWZ	Ohakea	4.21	222	P		Pn	22 05 39.4	+0.3		
LREZ	Lake Rotokare	4.30	236	P		Pn	22 05 41.7	+1.4		
DREZ	Durham Road	4.30	240	P		Pn	22 05 43.7	+3.3		
PREZ	Palmer Road	4.41	238	P		Pn	22 05 45.1	+3.3		
NEZ	North Egmont	4.42	240	P		Pn	22 05 45.2	+3.2		
PKE	Pukeiti	4.46	241	P		Pn	22 05 45.0	+2.5		
KHEZ	Kahui Hut	4.48	240	P		Pn	22 05 45.2	+2.3		
NBEZ	Newall Road No	4.57	241	P		Pn	22 05 48.0	+3.9		
NMEZ	Namu Road	4.57	269	P		Pn	22 05 48.6	+3.9		
OUZ	Omahuta	4.77	292	Pn		Pn	22 05 49.0	+2.2		
OUZ	Omahuta	4.77	292	P		Pn	22 05 49.2	+2.4		
OUZ	Omahuta	4.77	292	P		Pn	22 05 48.6	+1.9		
MSWZ	Moikau Station	5.17	213	Pn		Pn	22 05 48.2	-4.2		
PLWZ	Palliser	5.30	212	Pn		Pn	22 05 49.8	-4.3		
SNZO	South Karori	5.34	217	Pn		Pn	22 05 51.0	-3.6		
SNZO	South Karori	5.34	217	P		Pn	22 05 52.9	-1.7		
TUWZ	Tuamarina	5.81	221	Pn		Pn	22 05 58.3	-2.8		
CMWZ	Cape Campbell	5.92	217	Pn		Pn	22 06 00.1	-2.4		
CMWZ	Cape Campbell	5.92	217	P		Pn	22 06 01.4	-1.1		
NNZ	Nelson	5.98	225	Pn		Pn	22 06 00.7	-2.6		
QRZ	Quartz Range	6.25	232	P		Pn	22 06 06.2	-0.9		
KHZ	Kahutara	6.75	217	Pn		Pn	22 06 10.6	-3.3		
CTZ	Chatham Island	7.39	155	P		Pn	22 06 21.3	-1.5		
OXZ	Oxford	8.16	219	Pn		Pn	22 06 29.9	-3.4		
RAO	Raoul Island	8.27	19	S		Sn	22 08 02.2	-5.0		
	749nm,0.3s,baz=275,slow=23,SNR=2.4									
RAO				LR		LR	22 09 13.7			
	comp=Z,15µm,21.5s,baz=190,slow=34									
RPZ	Rata Peaks	8.94	220	Pn		Pn	22 06 40.0	-4.0		
RPZ	Rata Peaks	8.94	220	P		Pn	22 06 40.7	-3.3		
RPZ	Rata Peaks	8.94	220	P		Pn	22 06 40.2	-3.8		
	77nm,0.3s,baz=253,slow=1.2,SNR=27									
RPZ				S		Sn	22 08 13.8	-10		
	184nm,0.3s,baz=308,slow=23,SNR=15									
ODZ	Otahua Downs	10.11	216	P		Pn	22 06 55.2	-4.8		
NFK	Norfolk Island	12.28	308	P		P	22 07 36.5	-5.2		
	baz=12									
NFK	Norfolk Island	12.28	308	P		Pn	22 07 35.3	+5.5		
PYZ	Puysegur Point	12.88	222	Pn		Pn	22 07 34.6	-3.4		
PINNC	Pines Island,	17.58	322			Pn	22 08 38.5	-1.1		
PINNC	Pines Island,	17.58	322	P		P	22 08 43.7	+3.2		
OUENC	Ouen Island, N	18.04	321			Pn	22 08 44.8	-0.6		
OUENC	Ouen Island, N	18.04	321	P		P	22 08 49.2	+3.6		
MARNC	Mare, Loyalty	18.27	326			P	22 08 46.9	-1.2		
MARNC	Mare, Loyalty	18.27	326	P		Pn	22 08 49.8	+1.6		
YATNC	Mamie plateau,	18.32	322	P		Pn	22 08 52.1	+3.3		
ONTNC	Ouen Toro	18.33	320	P		P	22 08 47.2	-1.5		
ONTNC	Ouen Toro	18.33	320	P		Pn	22 08 55.0	+6.1		
DZM	Mont Dzumac	18.53	321	*e*Pn		Pn	22 08 53.6	+2.1		
	429nm,1.2s									
DZM				*e*LR		LR	22 13 13.9			
	comp=Z,63µm,24.4s									
DZM	Mont Dzumac	18.53	321	P		P	22 08 50.0	-1.0		
DZM	Mont Dzumac	18.53	321	P		Pn	22 08 54.4	+2.9		
DZM	Mont Dzumac	18.53	321	P		Pn	22 08 53.1	+1.6		
	41nm,0.9s,baz=236,slow=11,SNR=14									
DZM				LR		LR	22 15 06.4			
	comp=Z,36µm,19.0s,baz=135,slow=34									
NOUC	Port Laguerre	18.58	320	P		Pn	22 08 56.1	+4.2		
LKBA	Tubou, Lakemba	18.93	6	P		Pn	22 08 57.0	+0.9		
LIFNC	LIFOU	19.24	325	P		P	22 08 57.2	-1.6		
LIFNC	LIFOU	19.24	325	P		Pn	22 09 02.5	+2.5		
MSVF	Nonsavu	19.34	357	P		P	22 08 58.6	-1.4		
MSVF	Nonsavu	19.34	357	*e*P		P	22 08 59.1	-0.9		
MSVF				pmax		pmax				
	comp=Z,133nm,0.8s									
MSVF	Nonsavu	19.34	357	P		Pn	22 09 01.8	+0.6		
MSVF	Nonsavu	19.34	357	P		P	22 08 59.6	-0.3		
	comp=Z,43nm,0.7s,baz=277,slow=23,SNR=9.1									
MSVF				LR		LR	22 14 50.9			
	comp=Z,24µm,21.7s,baz=204,slow=32									
TAVE	Taveuni	20.37	3	P		Pn	22 09 14.5	+1.2		
NIUE	Niue	20.44	31	P		Pn	22 09 13.0	-1.1		
	baz=20,SNR=5.0									
NIUE				S		S	22 12 39.8	-19		
	baz=20,SNR=5.0									
NIUE	Niue	20.44	31	P		P	22 09 10.8	-1.0		
NIUE				IAmb		IAmb	22 09 25.0			
	comp=Z,419nm,1.0s									
NIUE	Niue	20.44	31	P		Pn	22 09 14.7	+0.6		
DGTI	Dogotuki	20.76	2	P		Pn	22 09 18.2	+0.3		
KOUNC	Koumac, New Ca	20.91	318			Pn	22 09 19.0	-0.5		
KOUNC				IAmb		IAmb	22 09 20.7			
	comp=Z,315nm,1.1s									
KOUNC	Koumac, New Ca	20.91	318	P		Pn	22 09 20.2	+0.6		
DVP	Devils Point	21.55	331	P		P	22 09 25.8	+2.0		
MCQ	Macquarie Isla	22.16	212	P		P	22 09 29.1	-1.0		
	baz=22,SNR=5.4									
MCQ	Macquarie Isla	22.16	212	P		P	22 09 28.7	-1.3		
NTLH	Newcastle Hard	22.72	273	P		P	22 09 37.1	+0.8		
SYDH	Sydney Hard Ro	23.23	270	P		P	22 09 44.4	+2.9		
ARMA	Armidale	23.67	278	P		P	22 09 46.7	+0.8		
	baz=24,SNR=19									
ARMA	Armidale	23.67	278	P		P	22 09 47.8	+1.8		
ARMA				IAmb		IAmb	22 09 51.5			
	comp=Z,454nm,1.6s									
ARMA	Armidale	23.67	278	P		P	22 09 49.1	+3.2		
MILA	Mila	23.77	261	P		P	22 09 47.4	+0.6		
	baz=24,SNR=29									
CNB	Canberra Magne	23.94	265	P		P	22 09 50.6	+2.2		
	baz=24,SNR=28									
CNB	Canberra Magne	23.94	265	P		P	22 09 50.9	+2.5		
CAN	Canberra	24.23	265	P		P	22 09 52.5	+1.5		
CAN				IAmb		IAmb	22 09 55.3			
	comp=Z,386nm,1.5s									
CAN				IAMs_20		IAMs_20	22 18 09.3			
	comp=Z,14µm,20.0s									
CAN	Canberra	24.23	265	P		P	22 09 52.5	+1.5		
CAN				pmax		pmax				
	comp=Z,386nm,1.5s									
CAN				MLR		MLR				
	comp=Z,14µm,20.0s									
CAN	Canberra	24.23	265	P		P	22 09 53.7	+2.7		
GLAD	Gladstone	24.30	251	P		P	22 09 51.2	-0.4		
RAR	Rarotonga	24.31	55	P		P	22 09 52.9	+1.1		
AFI	Afiamalu	24.55	22	P		P	22 09 53.0	-1.0		
AFI				IAmb		IAmb	22 10 23.4			
	comp=Z,241nm,0.8s									
AFI	Afiamalu	24.55	22	P		P	22 09 54.7	+0.6		
AFI	Afiamalu	24.55	22	P		P	22 09 54.7	+0.6		
AFI	Afiamalu	24.55	22	P		P	22 09 54.7	+0.6		
	comp=Z,163nm,0.2s,baz=124,slow=22,SNR=15									
	comp=Z,163nm,0.2s									
TAU	Tasmania Unive	24.85	247	P		P	22 09 56.5	0.0		
TAU				IAmb		IAmb	22 10 02.2			
	comp=Z,663nm,1.7s									
TAU	Tasmania Unive	24.85	247	IAMs_20		IAMs_20	22 19 10.6			
	comp=Z,13µm,19.0s									
TAU	Tasmania Unive	24.85	247	P		P	22 09 56.6	0.0		
TAU				pmax		pmax				
	comp=Z,663nm,1.7s									
TAU				MLR		MLR				
	comp=Z,13µm,19.0s									
TAU	Tasmania Unive	24.85	247	P		P	22 09 56.5	0.0		
MOO	Moorlands	24.93	248	P		P	22 09 58.6	+1.4		
	baz=25,SNR=14									
MOO	Moorlands	24.93	248	P		P	22 09 59.3	+2.0		
CORO	Coronation Par	24.95	250	P		P	22 10 00.3	+2.8		
EIDS	Eidsvold	26.50	288	P		P	22 10 12.6	+1.0		
	baz=27,SNR=22									
EIDS				S		S	22 14 45.4	+1.8		
	baz=27,SNR=6.5									
EIDS	Eidsvold	26.50	288	P		P	22 10 11.2	-0.4		
EIDS				IAmb		IAmb	22 10 23.1			
	comp=Z,206nm,1.2s									
EIDS	Eidsvold	26.50	288	P		P	22 10 13.3	+1.7		
TOO	Toolangi	26.57	259	P		P	22 10 13.5	+1.3		
	baz=27,SNR=21									
TOO	Toolangi	26.57	259	P		P	22 10 12.6	+0.4		
TOO				IAmb		IAmb	22 10 15.6			
	comp=Z,250nm,1.4s									
TOO	Toolangi	26.57	259	P		P	22 10 12.6	+0.4		
TOO				pmax		pmax				
	comp=Z,250nm,1.5s									
TOO	Toolangi	26.57	259	P		P	22 10 14.0	+1.8		
RMQ	Roma	27.70	284	P		P	22 10 24.5	+2.0		
	baz=28,SNR=117									
RMQ				S		S	22 15 07.2	+4.6		
	baz=28,SNR=11									
RMQ	Roma	27.70	284	P		P	22 10 24.9	+2.4		
BRAT	Ballarat	27.79	258	P		P	22 10 24.3	+1.2		
CMSA	Cobar Meteorol	27.98	272	P		P	22 10 25.8	+0.9		
	baz=28,SNR=26									
CMSA	Cobar Meteorol	27.98	272	P		P	22 10 26.4	+1.5		
RK1H	Rockhampton Ha	28.05	291	P		P	22 10 27.8	+2.2		
	comp=Z,27nm,1.0s									
ARPS	Mount Arapiles	29.58	259	P		P	22 10 40.5	+1.5		
	baz=30,SNR=14									
ARPS	Mount Arapiles	29.58	259	P		P	22 10 40.8	+1.7		
TBI	Tubuai	30.36	72	*e*LR		LR	22 18 37.4			
	comp=Z,9µm,26.8s									
TBI	Tubuai	30.36	72	*e*T		T	22 42 18.4			
	comp=Z,102nm,0.3s									
STKA	Stephens Creek	31.13	268	P		P	22 10 53.8	+0.9		
	baz=31,SNR=31									
STKA	Stephens Creek	31.13	268	P		P	22 10 53.1	+0.3		
STKA	Stephens Creek	31.13	268	*e*P		P	22 10 53.0	+0.2		
STKA	Stephens Creek	31.13	268	P		P	22 10 54.0	+1.1		
STKA	Stephens Creek	31.13	268	P		P	22 10 53.9	+1.1		
	comp=Z,82nm,0.9s,baz=102,slow=10,SNR=99									
STKA				LR		LR	22 22 45.3			
	comp=Z,10µm,19.7s,baz=102,slow=35									
	comp=Z,82nm,0.9s									
QLP	Quilpie	31.19	280	P		P	22 10 54.5	+1.1		
HNR	Honiara	32.52	323	P		P	22 11 03.9	-1.2		
HNR	Honiara	32.52	323	P		P	22 11 05.4	+0.3		
HNR	Honiara	32.52	323	P		P	22 11 06.5	+1.4		
HNR	Honiara	32.52	323	P		P	22 11 05.4	+0.3		
	comp=Z,348nm,0.8s,baz=234,slow=5.1,SNR=12									
HNR				LR		LR	22 23 12.1			
	comp=Z,6µm,18.5s,baz=155,slow=34									
	comp=Z,348nm,0.8s									
TWOA	Tennyson Woods	32.57	261	P		P	22 11 05.8	+0.4		
HTT	Hallett	32.76	264	P		P	22 11 07.8	+0.6		
	baz=33,SNR=61									
HTT	Hallett	32.76	264	P		P	22 11 08.4	+1.2		
CTA	Charters Tower	33.17	292	P		P	22 11 11.3	+0.5		
CTA	Charters Tower	33.17	292	P		P	22 11 12.2	+1.3		
CTA	Charters Tower	33.17	292	P		P	22 11 11.3	+0.5		
	comp=Z,120nm,1.0s,baz=126,slow=8.6,SNR=44									
CTA				LR		LR	22 23 21.1			
	comp=Z,9µm,21.5s,baz=124,slow=34									
	comp=Z,120nm,1.0s									
CTAO	Charters Tower	33.17	292	P		P	22 11 11.3	+0.5		
CTAO	Charters Tower	33.17	292	IAMs_20		IAMs_20	22 22 46.3			
	comp=Z,10µm,22.0s									
CTAO	Charters Tower	33.17	292	P		P	22 11 11.4	+0.5		
CTAO				pmax		pmax				
	comp=Z,242nm,1.2s									
CTAO				MLR		MLR				
	comp=Z,10µm,22.0s									
CTAO	Charters Tower	33.17	292	P		P	22 11 12.1	+1.2		
INKA	Innaminka	33.43	275	P		P	22 11 14.6	+1.6		
PAE	Paea	33.74	63	*e*P		P	22 11 15.9	+0.1		
	comp=Z,50nm,1.3s									
PAE	Paea	33.74	63	*e*T		T	22 46 37.3			
	comp=Z,8.2nm,0.3s									
PPT2	Papeete2	33.79	63	*e*P		P	22 11 15.9	-0.4		
	comp=Z,105nm,1.3s									
PPT2				*e*S		S	22 16 38.7	+0.5		
	comp=Z,420nm,24.5s									
PPT2				*e*LR		LR	22 20 13.4			
	comp=Z,8µm,24.5s									
PPT2	Papeete2	33.79	63	*e*T		T	22 46 41.7			
	comp=Z,18nm,0.3s									
PPT	Papeete	33.81	63	P		P	22 11 18.7	+2.3		
PPT	Papeete	33.81	63	P		P	22 11 18.7	+2.3		
PPT	Papeete	33.81	63	P		P	22 11 18.7	+2.3		
	comp=Z,78nm,0.9s,baz=250,slow=23,SNR=3.7									
PPT				LR		LR	22 22 10.4			
	comp=Z,3µm,20.4s,baz=232,slow=31									
	comp=Z,78nm,0.9s									
WHYH	Whyalla	33.95	264	P		P	22 11 17.9	+0.4		
	comp=Z,193nm,1.0s									
TIAR	Tiarei	33.98	64	*e*P		P	22 11 19.1	+1.2		
	comp=Z,18nm,0.8s									
TIAR	Tiarei	33.98	64	*e*T		T	22 46 42.0			
	comp=Z,4.2nm,0.3s									
LCRK	Leigh Creek	34.35	269	P		P	22 11 21.6	+0.6		
MEH	Mehetia	34.70	65	*e*P		P	22 11 25.0	+0.9		
	comp=Z,51nm,1.2s									
MEH	Mehetia	34.70	65	*e*T		T	22 47 44.0			
	comp=Z,34nm,0.3s									
BBOO	Buckleboo	35.23	264	P		P	22 11 27.9	-0.7		
	baz=35,SNR=62									
BBOO	Buckleboo	35.23	264	P		P	22 11 27.9	-0.7		
BBOO	Buckleboo	35.23	264	P		P	22 11 28.7	+0.1		
MTSU	Mount Surprise	35.82	292	P		P	22 11 34.4	+0.6		
	baz=36,SNR=32									
MTSU	Mount Surprise	35.82	292	P		P	22 11 35.3	+1.5		
VAH	Vaihoa	36.75	63	*e*T		T	22 50 22.9			
	comp=Z,32nm,0.2s									
OOD	Oodnadatta	37.44	272	P		P	22 11 47.9	+0.4		
MULG	Mulgathing	37.73	267	P		P	22 11 49.7	-0.2		
QIS	Mount Isa	37.95	285	P		P	22 11 52.1	+0.3		
	baz=38,SNR=239									
QIS				S		S	22 17 39.5	-2.2		
	baz=38,SNR=9.1									
QIS	Mount Isa	37.95	285	P		P	22 11 52.6	+0.7		
COEN	Coen	39.36	296	P		P	22 12 04.1	+0.4		
	baz=40,SNR=109									
COEN				S		S	22 18 03.5	+0.5		
	baz=40,SNR=8.2									
COEN	Coen	39.36	296	P		P	22 12 03.8	+0.1		
COEN	Coen	39.36	296	P		P	22 12 04.4	+0.7		
PMG	Port Moresby	39.87	306	P		P	22 12 07.9	-0.1		
PMG				IAmb		IAmb	22 12 10.2			
	comp=Z,268nm,1.0s									
PMG	Port Moresby	39.87	306	IAMs_20		IAMs_20	22 26 43.9			
	comp=Z,9µm,20.0s									
PMG	Port Moresby	39.87	306	P		P	22 12 08.5	+0.6		
PMG	Port Moresby	39.87	306	P		P	22 12 08.5	+0.6		
	comp=Z,265nm,1.0s,baz=123,slow=4.8,SNR=25									
PMG				LR		LR	22 27 14.2			
	comp=Z,8µm,18.4s,baz=166,slow=34									
	comp=Z,265nm,1.0s									
AS31	Alice Springs	40.78	276	P		P	22 12 14.5	-1.0		
AS31				IAmb		IAmb	22 12 17.2			
	comp=Z,83nm,0.7s									
ASAR	Alice Springs	40.78	276	P		P	22 12 14.6	-0.9		
ASAR	Alice Springs	40.78	276	P		P	22 12 14.7	-0.8		
ASAR				S		S	22 18 21.2	-3.1		
ASAR	Alice Springs	40.78	276	P		P	22 12 14.7	-0.8		
	comp=Z,237nm,0.8s,baz=117,slow=7.2,SNR=521									
ASAR				ScP		ScP	22 18 01.3	-2.0		
	comp=Z,5.0nm,0.9s,baz=120,slow=3.9,SNR=6.0									
ASAR				S		S	22 18 21.2	-3.1		
	comp=Z,19nm,1.0s,baz=118,slow=12,SNR=14									
ASAR				LR		LR	22 30 51.7			
	comp=Z,5µm,18.2s,baz=126,slow=39									
	comp=Z,237nm,0.8s									
KRVT	Keravat (AS076	40.97	316	P		P	22 12 16.3	-0.7		
	comp=Z,569nm,0.8s,baz=202,slow=1.0,SNR=52									
	comp=Z,569nm,0.8s									
RABL	Rabaul	40.99	317	P		P	22 12 16.3	-0.9		
RABL	Rabaul	40.99	317	P		P	22 12 18.3	+1.1		
SBA	Scott Base	41.16	184	P		P	22 12 19.1	+1.2		
SBA	Scott Base	41.16	184	P		P	22 12 19.1	+1.2		
SBA				pmax		pmax				
	comp=Z,106nm,1.3s									
SBA				MLR		MLR				
	comp=Z,4µm,20.0s									
VNDA	Vanda	41.17	186	P		P	22 12 19.1	+1.1		
VNDA	Vanda	41.17	186	P		P	22 12 20.6	+2.6		
VNDA	Vanda	41.17	186	P		P	22 12 20.6	+2.6		
	comp=Z,7.8nm,1.0s,baz=5.7,slow=8.8,SNR=30	

comp=Z,4µm,18.8s,baz=120,slow=37
comp=Z,246nm,0.9s

SMPI Sarmi 50.95 304 P **P** **22 13 34.5 -1.2**
comp=Z,2µmcomp=Z,4µmcomp=Z,59nm,1.3s

MUN Mundaring 51.15 256 P **P** **22 13 36.7 -0.3**
baz=51,SNR=34

MUN Mundaring 51.15 256 P **P** **22 13 36.6 -0.5**

BLDU Ballidu 51.32 258 P **P** **22 13 37.3 -1.1**
baz=51,SNR=44

BLDU Ballidu 51.32 258 P **P** **22 13 37.6 -0.8**

MEEK Meekatharra 51.57 263 P **P** **22 13 39.3 -1.1**
baz=52,SNR=55

MEEK Meekatharra 51.57 263 P **P** **22 13 39.8 -0.6**

SAUI Saumlaki 52.00 292 P **P** **22 13 43.4 -0.3**

SAUI Saumlaki 52.00 292 P **P** **22 13 44.0 +0.4**
comp=Z,10µmcomp=Z,314nm,1.2s

MORW Morawa 52.51 259 P **P** **22 13 46.1 -1.2**
baz=52,SNR=36

MORW Morawa 52.51 259 P **P** **22 13 46.1 -1.2**
MORW IAmb IAmb 22 13 54.9
comp=Z,72nm,0.9s

MORW Morawa 52.51 259 P **P** **22 13 47.3 0.0**

SRPI Serui, Papua 52.70 301 P **P** **22 13 48.8 0.0**
comp=Z,2µmcomp=Z,81nm,0.5s

QSPA South Pole Qui 52.99 180 P **P** **22 13 52.0 +1.5**

QSPA South Pole Qui 52.99 180 P **P** **22 13 52.7 +2.2**
comp=Z,158nm,0.9s,baz=34,slow=3.1,SNR=175

QSPA LR LR 22 32 21.5
comp=Z,6µm,21.9s,baz=42,slow=31
comp=Z,158nm,0.9s

PSA00 Pilbara Seismi 53.05 270 P **P** **22 13 49.9 -1.5**
PSA00 IAmb IAmb 22 13 52.1
comp=Z,237nm,1.4s

PSA00 Pilbara Seismi 53.05 270 P **P** **22 13 49.9 -1.5**
PSA00 IAmb IAmb 22 13 57.9
comp=Z,109nm,1.3s

PSA00 Pilbara Seismi 53.05 270 P **P** **22 13 50.9 -0.4**

BAKI Biak 53.29 302 P **P** **22 13 52.4 -0.7**
comp=Z,114µmcomp=Z,4µmcomp=Z,314nm,1.2s

MBWA Marble Bar 53.35 270 P **P** **22 13 52.2 -1.3**
MBWA IAmb IAmb 22 13 53.8
comp=Z,152nm,1.1s

MBWA Marble Bar 53.35 270 P **P** **22 13 52.8 -0.8**

JOHN Johnston Islan 54.66 14 P **P** **22 14 02.8 -0.1**
JOHN IAmb IAmb 22 14 19.5
comp=Z,150nm,1.1s

FAKI Fak Fak 54.74 297 P **P** **22 14 02.0 -1.8**
FAKI IAmb IAmb 22 14 04.7
comp=Z,59nm,0.9s
FAKI IAMs_20 IAMs_20 22 37 24.9
comp=Z,3µm,21.0s

FAKI Fak Fak 54.74 297 P **P** **22 14 01.9 -1.8**
comp=Z,2µmcomp=Z,87nm,1.0s

FAKI Fak Fak 54.74 297 P **P** **22 14 03.0 -0.7**

BATI Baumata 56.41 284 P **P** **22 14 15.4 -0.4**
comp=Z,1µmcomp=Z,92nm,1.1s

BATI Baumata 56.41 284 P **P** **22 14 15.5 -0.2**
comp=Z,135nm,1.0s,baz=75,slow=1.7,SNR=11

BATI LR LR 22 38 31.3
comp=Z,13µm,21.3s,baz=134,slow=36
comp=Z,135nm,1.0s

MSAI Masohi 56.84 294 P **P** **22 14 19.2 +0.4**
comp=Z,22nm,0.9s

SIJI Sorong 56.87 298 P **P** **22 14 17.8 -1.2**
comp=Z,115nm,0.9s,baz=108,slow=4.9,SNR=34

SIJI LR LR 22 38 57.8
comp=Z,5µm,21.1s,baz=125,slow=36
comp=Z,115nm,0.9s

SWI Sorong 56.88 298 P **P** **22 14 18.2 -0.9**
comp=Z,3µmcomp=Z,4µmcomp=Z,206nm,1.3s

GIRL Giralia 56.99 265 P **P** **22 14 21.6 +1.8**
baz=57,SNR=5.0

GIRL Giralia 56.99 265 P **P** **22 14 19.7 -0.1**

AAI Ambon 57.15 293 P **P** **22 14 19.3 -1.7**
comp=Z,2µmcomp=Z,76nm,0.8s

NLAI Namlea 58.26 292 P **P** **22 14 27.6 -1.2**
comp=Z,79µmcomp=Z,90nm,1.7s

MMRI Maumere 58.48 284 P **P** **22 14 28.5 -1.8**

MMRI Maumere 58.48 284 P **P** **22 14 29.1 -1.2**
comp=Z,3µmcomp=Z,6µmcomp=Z,390nm,1.2s

MMRI Maumere 58.48 284 P **P** **22 14 31.0 +0.7**

BASI Baing, Sumba 58.81 281 P **P** **22 14 32.8 +0.2**
comp=Z,5µmcomp=Z,364nm,1.6s

EDFI Ende, Flores 58.84 284 P **P** **22 14 31.5 -1.4**
comp=Z,1µmcomp=Z,65nm,1.0s

LBMI Labuha 59.73 295 P **P** **22 14 38.3 -0.7**
comp=Z,2µmcomp=Z,2µmcomp=Z,113nm,1.5s

GUMO Guam 59.81 321 LR LR 22 37 17.8
comp=Z,2µm,21.6s,baz=146,slow=33

SANI Sanana 59.88 293 P **P** **22 14 37.9 -2.1**
comp=Z,3µmcomp=Z,3µmcomp=Z,240nm,1.1s

SANI Sanana 59.88 293 P **P** **22 14 39.7 -0.3**

WBSI Waikabubak, Su 60.09 281 P **P** **22 14 40.7 -0.8**
comp=Z,2µmcomp=Z,133nm,1.2s

BBSI Bau Bau 60.20 287 P **P** **22 14 42.0 -0.2**
comp=Z,156nmcomp=Z,10nm,1.1s

RPN Rapa Nui 60.22 103 LR LR 22 34 09.8
comp=Z,3µm,21.1s,baz=232,slow=29

TNTI Ternate 60.79 296 P **P** **22 14 45.1 -1.2**
TNTI IAmb IAmb 22 14 51.8
comp=Z,74nm,1.1s

TNTI Ternate 60.79 296 P **P** **22 14 45.6 -0.7**
comp=Z,1µmcomp=Z,1µmcomp=Z,31nm,1.1s

TNTI Ternate 60.79 296 P **P** **22 14 46.4 +0.1**

KHLU Kahalu`u 61.19 27 P **P** **22 14 47.8 -1.0**

BSSI Bau Bau, Buton 61.38 285 P **P** **22 14 49.0 -1.3**
comp=Z,1µmcomp=Z,675nmcomp=Z,47nm,1.3s

PLAI Plampang 61.84 281 P **P** **22 14 52.3 -1.1**
comp=Z,2µmcomp=Z,109nm,1.1s

PLAI Plampang 61.84 281 P **P** **22 14 53.7 +0.3**

KEKH Kekaha 62.13 22 P **P** **22 14 55.7 +0.7**

KIP Kipapa 62.14 24⇑*e*P **P** **22 14 55.8 +0.7**
KIP pmax pmax
comp=Z,190nm,1.2s

KIP Kipapa 62.14 24 P **P** **22 14 57.5 +2.4**

KIP Kipapa 62.14 24 P **P** **22 14 57.3 +2.2**

BKSI Bulukumba 62.18 285 P **P** **22 14 54.3 -1.3**
comp=Z,2µmcomp=Z,1µmcomp=Z,75nm,1.2s

OPA Opana 62.39 24 P **P** **22 14 57.0 +0.2**

OPA Opana 62.39 24 P **P** **22 14 57.0 +0.2**
OPA pmax pmax
comp=Z,267nm,1.2s

TWSI Taliwang, Sumb 62.60 280 P **P** **22 14 57.4 -1.1**
comp=Z,1µmcomp=Z,80nm,1.6s

KAPI Kappang 62.66 285 P **P** **22 14 57.1 -1.7**
KAPI IAmb IAmb 22 15 15.4
comp=Z,125nm,1.2s

KAPI Kappang 62.66 285 IAMs_20 IAMs_20 22 43 04.6
comp=Z,4µm,20.0s

KAPI Kappang 62.66 285*ce*P **P** **22 14 57.7 -1.1**
KAPI pmax pmax
comp=Z,39nm,1.1s

KAPI Kappang 62.66 285 P **P** **22 14 59.5 +0.7**

KAPI Kappang 62.66 285 P **P** **22 14 58.0 -0.9**
comp=Z,23nm,0.8s,baz=98,slow=3.5,SNR=9.4

KAPI LR LR 22 43 16.9
comp=Z,4µm,20.0s,baz=134,slow=37
comp=Z,23nm,0.8s

LUWI Luwuk 62.93 291 P **P** **22 15 00.1 -0.6**
LUWI IAMs_20 IAMs_20 22 43 39.0
comp=Z,3µm,19.0s

LUWI Luwuk 62.93 291 P **P** **22 15 00.4 -0.3**
comp=Z,3µmcomp=Z,143nm,1.2s

LUWI Luwuk 62.93 291 P **P** **22 15 01.2 +0.5**

KMSI Cibinong 63.12 293 P **P** **22 15 00.5 -1.4**
comp=Z,5µmcomp=Z,144nm,1.0s

SPSI Sidrap Palu 63.31 286 P **P** **22 15 01.6 -1.6**
comp=Z,1µmcomp=Z,82nm,1.0s

BELA Belgrano 2 63.46 172 P **P** **22 15 03.2 0.0**

APSI Ampana 63.86 290 P **P** **22 15 05.4 -1.4**
comp=Z,2µmcomp=Z,146nm,1.4s

TTSI Tana Toraja 63.86 287 P **P** **22 15 05.7 -1.1**
comp=Z,1µmcomp=Z,69nm,1.0s

GTOI Gorontalo 63.87 293 P **P** **22 15 06.2 -0.7**
comp=Z,446nmcomp=Z,37nm,1.1s

DNP Denpasar 63.96 279 P **P** **22 15 07.7 +0.3**
comp=Z,35µmcomp=Z,305nm,0.8s

SGSI Sangihe 64.13 297 P **P** **22 15 06.6 -1.9**
comp=Z,2µmcomp=Z,72nm,0.9s

SMAI San Martin Ant 64.15 158 P **P** **22 15 09.2 +1.4**
SMAI IAmb IAmb 22 15 12.3
comp=Z,128nm,1.1s

SRBI Singaraja 64.31 280 P **P** **22 15 08.6 -1.2**
comp=Z,3µmcomp=Z,198nm,1.1s

MRSI Marisa 64.56 292 P **P** **22 15 08.6 -2.8**
comp=Z,2µmcomp=Z,1µmcomp=Z,52nm,1.0s

JAGI Jajag, Banyuwa 64.92 279 P **P** **22 15 13.1 -0.6**
comp=Z,2µmcomp=Z,111nm,1.3s

JAGI Jajag, Banyuwa 64.92 279 P **P** **22 15 15.1 +1.4**

MAW Mawson 65.15 202 P **P** **22 15 16.2 +1.8**
baz=65,SNR=32

MAW Mawson 65.15 202 P **P** **22 15 14.8 +0.4**

MAW Mawson 65.15 202 P **P** **22 15 15.8 +1.4**

MAW Mawson 65.15 202 P **P** **22 15 15.8 +1.4**
comp=Z,23nm,1.1s,baz=114,slow=9.2,SNR=17

MAW LR LR 22 42 59.1
comp=Z,4µm,19.4s,baz=106,slow=35
comp=Z,23nm,1.1s

ABJI Asem Bagus 65.25 279 P **P** **22 15 14.1 -1.8**
comp=Z,2µmcomp=Z,180nm,1.3s

GMJI Gumukmas 65.59 278 P **P** **22 15 16.8 -1.3**
comp=Z,2µmcomp=Z,202nm,1.1s

DDMP Don Marcelino, 65.70 299⇑*i*P **P** **22 15 16.5 -2.2**

BLJI Banyuglugur 65.79 279 P **P** **22 15 18.0 -1.4**
comp=Z,114nm,1.1s

KMMI Kalianget 65.92 280 P **P** **22 15 17.3 -2.9**
comp=Z,2µmcomp=Z,102nm,0.9s

MPSI Mapaga 65.99 290 P **P** **22 15 17.3 -3.4**
comp=Z,1µmcomp=Z,75nm,0.9s

DAV Davao City (W) 66.47 300 P **P** **22 15 23.1 -0.6**

DAV Davao City (W) 66.47 300 P **P** **22 15 24.8 +1.1**
comp=Z,456nm,0.7s

DAV Davao City (W) 66.47 300 P **P** **22 15 23.4 -0.3**
comp=Z,159nm,0.3s,baz=119,slow=1.5,SNR=18

DAV LR LR 22 46 54.2
comp=Z,1µm,18.1s,baz=144,slow=38
comp=Z,159nm,0.3s

SKMP Bagumbayan, Su 66.81 298⇑*i*P **P** **22 15 24.4 -1.4**

PWJI Pagerwojo 67.04 277 P **P** **22 15 25.5 -1.9**
comp=Z,166nm,1.0s

PMSA Palmer Station 67.18 156 P **P** **22 15 27.8 +0.3**
PMSA IAmb IAmb 22 15 30.1
comp=Z,92nm,1.2s

PMSA Palmer Station 67.18 156*e*P **P** **22 15 29.3 +1.8**

PMSA Palmer Station 67.18 156 P **P** **22 15 28.6 +1.2**
comp=Z,62nm,1.2s,baz=215,slow=8.8,SNR=5.4

PMSA LR LR 22 41 25.8
comp=Z,4µm,18.1s,baz=233,slow=33
comp=Z,62nm,1.2s

BKB Balikpapan 67.23 287 IAMs_20 IAMs_20 22 48 35.3
comp=Z,4µm,19.0s

BUKP Musuan 67.41 300⇓*e*P **P** **22 15 30.3 +0.6**

BBKI Banjar Baru 67.43 283 P **P** **22 15 29.3 -0.6**
comp=Z,2µmcomp=Z,135nm,1.0s

PCJI Pacitan 67.44 277 P **P** **22 15 30.0 +0.1**
comp=Z,3µmcomp=Z,381nm,1.1s

SMKI Samarinda 67.52 288 P **P** **22 15 30.6 +0.2**

NGJI Ngawi 67.70 278 P **P** **22 15 26.9 -4.7**

GLSP General Luna, 68.04 302⇓*e*P **P** **22 15 32.2 -1.4**

UGM Wanagama 68.12 277 P **P** **22 15 34.4 +0.1**

SMRI Semarang 68.70 277 P **P** **22 15 36.5 -1.4**
SMRI IAMs_20 IAMs_20 22 47 15.5
comp=Z,3µm,20.0s

SMRI Semarang 68.70 277 P **P** **22 15 35.7 -2.2**
comp=Z,134nm,1.1s

SMRI Semarang 68.70 277 P **P** **22 15 39.2 +1.3**
comp=Z,136nm,1.1s

MTKI Muara Teweh, K 68.97 285 P **P** **22 15 38.5 -1.0**
comp=Z,1µmcomp=Z,9µmcomp=Z,51nm,1.3s

MSLP Maasin 69.15 301⇓*e*P **P** **22 15 43.4 +2.8**

BESP Borongan 69.82 303⇑*i*P **P** **22 15 45.1 +0.5**

MYLDM Lahad Datu 70.24 293 P **P** **22 15 47.5 +0.2**
MYLDM IAmb IAmb 22 16 30.0
comp=Z,108nm,1.1s

PBKI Pangkalan Bun 70.38 282 P **P** **22 15 46.6 -1.6**
comp=Z,3µmcomp=Z,114nm,0.9s

XMI Christmas Isla 70.48 272 P **P** **22 15 50.0 +1.1**
comp=Z,159nm,1.0s

XMIS Christmas Isla 70.50 272 P **P** **22 15 47.9 -1.1**
XMIS IAmb IAmb 22 16 01.3
comp=Z,116nm,1.0s

XMIS Christmas Isla 70.50 272 P **P** **22 15 50.0 +1.0**
comp=Z,140nm,0.9s

LEM Lembang 71.08 276 LR LR 22 49 36.1
comp=Z,4µm,19.2s,baz=132,slow=38

TROLL Troll, Antarti 71.13 181 P **P** **22 15 53.1 +1.0**

CNJI Cibinong 71.18 275 P **P** **22 15 51.3 -1.8**
comp=Z,3µmcomp=Z,278nm,1.0s

SNAA Sanae 71.49 179 P **P** **22 15 55.0 +0.9**

SNAA Sanae 71.49 179 P **P** **22 15 54.6 +0.4**
SNAA IAmb IAmb 22 15 57.2
comp=Z,158nm,1.3s
SNAA IAMs_20 IAMs_20 22 43 10.3
comp=Z,3µm,22.0s

SNAA Sanae 71.49 179*d i*P **P** **22 15 55.2 +1.0**
SNAA pmax pmax
comp=Z,140nm,1.3s

SNAA Sanae 71.49 179 LR LR 22 45 30.2
comp=Z,3µm,19.5s,baz=193,slow=34

VNA3 Neumayer Olymp 71.75 177 P **P** **22 15 56.4 +0.7**

USHA Ushuaia 71.77 146 LR LR 22 42 05.5
comp=Z,3µm,18.7s,baz=232,slow=31

DBJI Dramaga 71.93 276 P **P** **22 15 55.3 -2.3**
comp=Z,6µmcomp=Z,194nm,0.8s

NVL N'lazarevskaya 72.01 184⇑*i*P **P** **22 15 57.1 -0.1**
NVL *e*S **S** **22 25 13.0 -3.0**
NVL pmax pmax
comp=Z,106nm,1.3s

VNA2 Neumayer--Watz 72.15 178 P **P** **22 15 59.1 +1.1**
baz=184,slow=5.2

STKI Sintang 72.25 284 P **P** **22 15 58.9 -0.6**
comp=Z,2µmcomp=Z,34nm,1.0s

VNA1 Neumayer--Stat 72.40 177 P **P** **22 16 00.7 +1.3**

KKM Kota Kinabalu 72.51 292 P **P** **22 15 59.8 -1.3**
KKM IAmb IAmb 22 16 20.7
comp=Z,60nm,0.8s

KKM Kota Kinabalu 72.51 292 P **P** **22 16 01.9 +0.8**

JCJ Chichijima 72.66 326 LR LR 22 43 22.1
comp=Z,1µm,21.4s,baz=142,slow=32

SBUM Sibu 73.19 286 P **P** **22 16 04.2 -0.9**

TPI Tanjungpandan 73.50 279 P **P** **22 16 05.0 -1.9**
comp=Z,24nm,2.0s

KASI Kota Agung 74.33 275 P **P** **22 16 10.9 -0.9**
comp=Z,81nm,1.1s

TGY Tagaytay City 74.65 301 LR LR 22 51 11.6
comp=Z,706nm,19.3s,baz=86,slow=38

LWLI Liwa 74.99 275 P **P** **22 16 14.5 -1.2**
comp=Z,88nm,0.8s

PPBI Pangkal Pinang 75.06 279 P **P** **22 16 14.0 -2.0**
comp=Z,73nm,1.1s

PMBI Palembang 75.67 277 P **P** **22 16 19.5 0.0**

COYC Coyhaique 75.77 137 P **P** **22 16 21.1 +1.5**
COYC IAmb IAmb 22 16 22.7
comp=Z,70nm,1.1s

ORCD Orcadas 76.12 160 P **P** **22 16 21.0 -0.4**
ORCD IAmb IAmb 22 16 23.1
comp=Z,180nm,1.2s

AY01 Puyuhuapi 76.17 136 P **P** **22 16 22.1 +0.2**

MNAI Manna 76.26 275 IAMs_20 IAMs_20 22 54 28.7
comp=Z,3µm,20.0s

KSI Kapahiang 76.97 275 P **P** **22 16 25.4 -1.6**
comp=Z,127nm,0.8s

DSRI Dabo 77.31 279 P **P** **22 16 27.2 -1.6**
comp=Z,18nm,1.6s

LL02 Futaleuf 77.40 135 P **P** **22 16 29.9 +1.0**
LL02 IAmb IAmb 22 16 31.7
comp=Z,60nm,1.1s

EFI East Falkland 78.48 148 P **P** **22 16 35.7 +1.0**

EFI East Falkland 78.48 148 P **P** **22 16 35.7 +1.0**
EFI pmax pmax
comp=Z,543nm,2.0s

LL04 Puerto Octay 78.52 133 P **P** **22 16 36.0 +0.8**

KRJI Kerinci 78.81 276 P **P** **22 16 34.6 -2.7**
comp=Z,3µmcomp=Z,278nm,0.9s

H03S2 Juan Fernandez 78.81 124 T T 23 43 12.6
baz=230,SNR=112

H03S1 Juan Fernandez 78.82 124 T T 23 43 13.8
baz=230,SNR=79

H03S3 Juan Fernandez 78.83 124 T T 23 43 13.5
baz=230,SNR=86

JHJ Hachijo jima 2 78.89 327 LR LR 22 51 06.1
comp=Z,526nm,19.2s,baz=164,slow=35

H03N3 Juan Fernandez 79.04 124 T T 23 43 20.8
baz=234,slow=72,SNR=197

H03N2 Juan Fernandez 79.05 124 T T 23 43 12.8
baz=234,slow=72,SNR=127

H03N1 Juan Fernandez 79.06 124 T T 23 43 16.5
baz=234,slow=72,SNR=140

MYKOM Kota Tinggi 79.28 280 P **P** **22 16 39.6 -0.1**

PLCA Paso Flores 79.72 134 P **P** **22 16 42.4 +0.6**
PLCA IAmb IAmb 22 16 44.8
comp=Z,62nm,1.1s

PLCA Paso Flores 79.72 134 P **P** **22 16 43.6 +1.8**

PLCA Paso Flores 79.72 134*e*P **P** **22 16 43.9 +2.1**

PLCA Paso Flores 79.72 134 P **P** **22 16 43.6 +1.8**
comp=Z,24nm,0.9s,baz=222,slow=6.1,SNR=31

PLCA LR LR 22 43 38.2
comp=Z,1µm,21.4s,baz=227,slow=29
comp=Z,24nm,0.9s

GO06 Curarrehue 79.92 132 P **P** **22 16 43.5 +0.5**

TWG Pinlang 80.81 308 IAMs_20 IAMs_20 22 48 20.7
comp=Z,2µm,20.0s

YULB Yu-li 81.08 308 P **P** **22 16 47.4 -1.8**

TPUB Ta-pu 81.44 308 P **P** **22 16 49.6 -1.4**
TPUB IAMs_20 IAMs_20 22 46 49.5
comp=Z,3µm,22.0s

TPUB Ta-pu 81.44 308 P **P** **22 16 52.5 +1.5**

NACB Ninganchiao 81.46 309 IAMs_20 IAMs_20 22 46 35.3
comp=Z,3µm,22.0s

SSLB Suanglung 81.58 308 P **P** **22 16 49.6 -2.3**
SSLB IAmb IAmb 22 16 55.2
comp=Z,55nm,0.8s

SSLB Suanglung 81.58 308 P **P** **22 16 51.0 -0.8**

INU Inuyama 81.98 326 P **P** **22 16 55.0 +1.4**

DLV T Lat 82.11 291 P **P** **22 16 56.6 +1.6**
comp=Z,58nm,1.1s

ML02 Panimavida 82.42 129 P **P** **22 16 57.0 +0.8**
ML02 IAmb IAmb 22 16 59.3
comp=Z,166nm,1.5s

MJAR Matsushiro Arr 82.48 328 P **P** **22 16 54.6 -1.6**

MJAR Matsushiro Arr 82.48 328 P **P** **22 16 54.6 -1.6**
comp=Z,3.4nm,0.8s,baz=153,slow=6.1,SNR=8.4

MJAR LR LR 22 48 58.7
comp=Z,655nm,21.6s,baz=148,slow=32

MAJO Matsushiro 82.48 328 P **P** **22 16 54.7 -1.5**

MAJO Matsushiro 82.48 328⇑*e*P **P** **22 16 54.6 -1.6**
MAJO pmax pmax
comp=Z,56nm,2.5s

MAJO Matsushiro 82.48 328 P **P** **22 16 55.9 -0.3**

GO05 Huala 82.59 129 P **P** **22 16 58.0 +0.9**
GO05 IAmb IAmb 22 17 00.3
comp=Z,123nm,1.4s

IPM Ipoh 83.14 281 P **P** **22 16 59.0 -1.3**

IPM Ipoh 83.14 281 P **P** **22 17 00.2 -0.1**

BO02 Sierra Bellavi 83.45 129 P **P** **22 17 02.7 +1.1**
BO02 IAmb IAmb 22 17 04.7
comp=Z,90nm,1.1s

RPSI Rantau Prapat 83.71 278 P **P** **22 17 02.0 -1.2**

MT01 Popeta 83.76 128 P **P** **22 17 03.8 +0.6**
MT01 IAmb IAmb 22 17 06.0
comp=Z,85nm,0.9s

PSI Prapat 83.78 278 P **P** **22 17 02.0 -1.6**
PSI pmax pmax
comp=Z,30nm,1.0s
PSI MLR MLR
comp=Z,5µm,21.0s

PSI Prapat 83.78 278 LR LR 22 55 04.5
comp=Z,5µm,21.6s,baz=138,slow=36

QZH Quanzhou 83.91 307⇑*i*P **P** **22 17 03.8 0.0**
QZH S **S** **22 27 24.0 -1.2**
QZH pmax pmax
comp=Z,520nm,3.2s
QZH LR LR
comp=Z,1µm,21.3s
QZH LR LR
comp=Z,690nm,20.4s
QZH LR LR
comp=Z,880nm,22.7s

KULM Kulim 83.94 281 P **P** **22 17 04.2 -0.1**
KULM IAmb IAmb 22 20 17.6
comp=Z,45nm,1.3s
KULM IAMs_20 IAMs_20 22 56 47.4
comp=Z,3µm,20.0s

GSI Gunungsitoli 83.94 276 P **P** **22 17 04.0 -0.4**

GSI Gunungsitoli 83.94 276 P **P** **22 17 03.5 -0.9**
comp=Z,168nm,1.0s

GSI Gunungsitoli 83.94 276 P **P** **22 17 05.9 +1.5**

HOPE Hope Point 83.95 160 P **P** **22 17 04.9 +1.2**

HOPE Hope Point 83.95 160 P **P** **22 17 04.9 +1.2**
HOPE pmax pmax
comp=Z,328nm,1.3s

MT09 Talagante 83.98 128 P **P** **22 17 05.6 +1.1**
MT09 IAmb IAmb 22 17 06.6
comp=Z,48nm,1.0s

MT05 Renca 84.39 128 P **P** **22 17 07.0 +0.5**

PEL Peldehue 84.59 128 P **P** **22 17 07.9 +0.4**
PEL IAmb IAmb 22 17 10.0
comp=Z,59nm,0.9s

PEL Peldehue 84.59 128 P **P** **22 17 07.9 +0.4**
PEL pmax pmax
comp=Z,59nm,0.9s
PEL MLR MLR
comp=Z,4µm,21.0s

KCSI Kotacane, Aceh 85.13 278 P P 22 17 04.3 -6.0

CO02 Combarbal 85.66 126 P **P** **22 17 14.4 +1.5**
CO02 IAmb IAmb 22 17 16.2
comp=Z,99nm,0.9s

QIZ Qiongzhong 85.75 298 P **P** **22 17 13.3 +0.1**
QIZ S **S** **22 27 38.5 -5.3**
QIZ pmax pmax
comp=Z,390nm,6.1s
QIZ LR LR
comp=Z,610nm,23.5s
QIZ LR LR
comp=Z,870nm,26.3s
QIZ LR LR
comp=Z,2µm,27.0s

CO03 El Pedregal 86.10 126 P **P** **22 17 16.3 +1.1**
CO03 IAmb IAmb 22 17 17.6
comp=Z,94nm,1.1s

YUK Yuzh-Kuril'sk 86.20 337 P P 22 17 29.2 +14
YUK *e*S **SKSac** **22 27 33.6 -4.5**
YUK pmax pmax
comp=Z,460nm,1.1s
YUK pmax pmax
comp=E,212nm,1.3s
YUK pmax pmax
comp=N,203nm,1.1s
YUK MLR MLR
comp=Z,2µm,18.0s

TRQA Tornquist 86.39 136 P **P** **22 17 16.6 +0.3**
TRQA IAmb IAmb 22 17 19.2
comp=Z,89nm,1.7s

TRQA Tornquist 86.39 136 P **P** **22 17 16.6 +0.3**
TRQA pmax pmax
comp=Z,89nm,1.7s
TRQA MLR MLR
comp=Z,3µm,22.0s

TRQA Tornquist 86.39 136*e*P **P** **22 17 19.9 +3.6**

UBPT Khong Chiam 86.49 292 P **P** **22 17 16.9 0.0**
UBPT IAmb IAmb 22 17 20.0
comp=Z,39nm,1.0s

SSE Sheshan 86.77 313 P **P** **22 17 19.5 +1.5**
SSE S **S** **22 27 58.5 +5.2**
SSE pmax pmax
comp=Z,19nm,0.7s
SSE pmax pmax
comp=Z,170nm,4.3s
SSE LR LR
comp=Z,370nm,22.8s
SSE LR LR
comp=Z,490nm,22.8s

SRIT Nakonsritamara 86.78 283 P **P** **22 17 18.2 -0.3**

ZON Zonda 86.92 128 P **P** **22 17 19.6 +0.5**
ZON IAmb IAmb 22 17 22.4
comp=Z,114nm,1.5s

ZON Zonda 86.92 128 P **P** **22 17 19.6 +0.5**
ZON pmax pmax
comp=Z,114nm,1.5s

CO01 Juntas del Tor 87.06 126 P **P** **22 17 21.1 +1.1**
CO01 IAmb IAmb 22 17 23.5
comp=Z,64nm,1.4s

LCO Las Campanas 87.30 125 P **P** **22 17 21.7 +0.5**
LCO IAmb IAmb 22 17 41.9
comp=Z,68nm,1.2s

LCO Las Campanas 87.30 125 P **P** **22 17 21.7 +0.5**
LCO pmax pmax
comp=Z,69nm,1.2s
LCO MLR MLR
comp=Z,4µm,22.0s

TJN Taejon 87.40 321*de*P **P** **22 17 21.0 +0.1**

AC05 El Transito 87.69 125 P **P** **22 17 24.2 +1.3**
AC05 IAmb IAmb 22 17 26.3
comp=Z,74nm,1.0s

KSRS Korea Array 87.96 322 P **P** **22 17 23.9 +0.3**

KSRS Korea Array 87.96 322 P **P** **22 17 23.9 +0.3**
comp=Z,14nm,0.8s,baz=147,slow=5.3,SNR=30

KSRS PP **PP** **22 20 49.4 -1.2**
comp=Z,8.5nm,1.1s,baz=144,slow=8.7,SNR=8.8
KSRS LR LR 22 52 55.0
comp=Z,390nm,21.3s,baz=140,slow=33
comp=Z,14nm,0.8s
KSAR Wonju Array Be 87.97 322 P **P** **22 17 23.7 +0.1**
KSAR Wonju Array Be 87.97 322 P **P** **22 17 23.7 +0.1**
KS19 Wonju Array Si 88.03 322 P **P** **22 17 24.2 +0.3**
KS19 IAmb IAmb 22 17 24.6
comp=Z,63nm,1.3s
ADK Adak 88.72 3 P **P** **22 17 26.9 +0.1**
ADK Adak 88.72 3 P **P** **22 17 26.9 +0.1**
ADK pmax pmax
comp=Z,148nm,1.3s
ADK MLR MLR
comp=Z,3μm,20.0s
ADK Adak 88.72 3 P **P** **22 17 28.6 +1.8**
comp=Z,91nm,0.9s
NJ2 Nanjing 88.83 313 ⇑P **P** **22 17 27.5 -0.3**
NJ2 S **S** **22 28 14.5 +1.6**
NJ2 pmax pmax
comp=Z,16nm,1.1s
NJ2 pmax pmax
comp=Z,420nm,4.7s
NJ2 LR LR
comp=Z,1μm,23.7s
NJ2 LR LR
comp=Z,840nm,23.7s
NJ2 LR LR
comp=Z,2μm,25.0s
SHEM Shemya Is, Ala 89.59 357 LR LR 22 51 18.5
comp=Z,3μm,21.7s,baz=136,slow=31
SKR Severo-Kuril's 89.73 346 *e*P P 22 17 38.0 +6.5
SKR pmax pmax
comp=Z,54nm,1.7s
SKR pmax pmax
comp=Z,100nm,8.2s
YSS Yuzh-Sakhalins 89.79 336 *e*P **P** **22 17 33.1 +1.2**
YSS *e* 22 21 02.0
YSS *e* 22 27 58.2
YSS *e*S **S** **22 28 22.7 +1.5**
YSS pmax pmax
comp=Z,40nm,1.6s
LPIG La Paz 90.15 60 LR LR 22 50 23.7
comp=Z,1μm,20.3s,baz=228,slow=30
NIKH Nikolski High 90.35 7 P **P** **22 17 34.7 +0.4**
NIKH Nikolski High 90.35 7 P **P** **22 17 34.6 +0.2**
baz=190
PB14 IPOC Station P 90.39 122 P **P** **22 17 35.9 0.0**
PB14 IAmb IAmb 22 17 39.3
comp=Z,45nm,1.1s
WHN Wuhan 90.50 309 P **P** **22 17 35.8 +0.1**
WHN S **S** **22 28 28.3 -0.2**
WHN LR LR
comp=Z,4μm,22.1s
WHN LR LR
comp=Z,1μm,14.4s
WHN LR LR
comp=Z,4μm,21.9s
GO02 Mina Guanaco 90.58 122 P **P** **22 17 38.2 +1.4**
GO02 IAmb IAmb 22 17 40.3
comp=Z,64nm,0.9s
USRK Ussuriysk Ar. 91.47 328 P **P** **22 17 39.9 +0.1**
USRK Ussuriysk Ar. 91.47 328 P **P** **22 17 39.9 +0.1**
comp=Z,11nm,1.0s,baz=138,slow=4.3,SNR=9.4
USRK LR LR 22 57 48.5
comp=Z,289nm,19.6s,baz=233,slow=35
comp=Z,11nm,1.0s
UNV Unalaska Valle 91.47 9 P **P** **22 17 40.3 +0.8**
UNV Unalaska Valle 91.47 9 P **P** **22 17 40.8 +1.3**
baz=191
PET Petropavlovsk 91.51 348 *e*P **P** **22 17 39.2 -0.5**
PET *e* 22 28 07.8
PET *e*S **S** **22 28 35.3 -1.3**
PET *e*PS **PS** **22 29 48.6 -1.6**
PET *e*SS **SS** **22 34 42.2 -2.2**
PET *e*SSS SSS 22 38 28.1
PET pmax pmax
comp=Z,50nm,0.7s
PET pmax pmax
comp=Z,600nm,7.2s
PET pmax pmax
comp=Z,200nm,15.8s
PET pmax pmax
comp=Z,100nm,13.7s
PET MLR MLR
comp=Z,1μm,23.0s
PET Petropavlovsk 91.51 348 P **P** **22 17 41.3 +1.6**
comp=Z,151nm,0.9s
PEA0B Petropavlovsk- 91.76 347 P **P** **22 17 41.5 +0.6**
PEA0B IAmb IAmb 22 17 58.7
comp=Z,57nm,1.0s
PEA0B Petropavlovsk- 91.76 347 *c*e**P** **P** **22 17 41.9 +1.0**
PETK Petropavlovsk- 91.76 347 P **P** **22 17 41.1 +0.2**
PETK Petropavlovsk- 91.76 347 P **P** **22 17 41.1 +0.2**
PETK Petropavlovsk- 91.76 347 P **P** **22 17 40.8 -0.1**
comp=Z,14nm,0.8s,baz=178,slow=11,SNR=17
PETK LR LR 22 54 07.8
comp=Z,2μm,20.1s,baz=163,slow=32
comp=Z,14nm,0.8s
BAR Barrett 91.78 50 P **P** **22 17 42.9 +1.3**
BAR IAmb IAmb 22 18 06.2
comp=Z,38nm,1.2s
SAO San Andreas Ge 91.89 44 IAMs_20 IAMs_20 22 50 56.2
comp=Z,2μm,21.0s
ELS Elsinore Mount 91.99 48 P **P** **22 17 43.8 +1.1**
ELS IAmb IAmb 22 17 52.9
comp=Z,38nm,1.3s
MONP2 Monument Peak 92.07 49 P **P** **22 17 45.3 +2.1**
baz=226
IKP In-Ko-Pah, Jac 92.10 50 P **P** **22 17 45.0 +1.9**
baz=226
MURC Murrieta 92.10 49 P **P** **22 17 44.9 +1.8**
baz=226
MCCM Marconi Confer 92.11 42 IAMs_20 IAMs_20 23 00 15.1
comp=Z,1μm,18.0s
SWSC Sam W. Stewart 92.49 50 P **P** **22 17 46.9 +2.1**
baz=226
EDW2 Edwards Air Fo 92.52 47 P **P** **22 17 47.6 +2.6**
baz=225
TPFO Pinon Flats 92.55 49 P **P** **22 17 45.8 +0.6**
baz=226
PFO Pinyon Flats O 92.55 49 ⇑*e*P **P** **22 17 45.6 +0.3**
PFO pmax pmax
comp=Z,11nm,1.1s
PFO Pinyon Flats O 92.55 49 P **P** **22 17 47.0 +1.7**
baz=226
PFO Pinyon Flats O 92.55 49 P **P** **22 17 46.0 +0.8**
comp=Z,5.7nm,1.0s,baz=274,slow=5.0,SNR=6.1
PFO LR LR 22 54 39.7
comp=Z,666nm,18.6s,baz=228,slow=32
comp=Z,5.7nm,1.0s
HOPS Hopland Field 92.63 41 IAMs_20 IAMs_20 22 54 47.8
comp=Z,2μm,20.0s
LVC Limon Verde 92.75 121 P **P** **22 17 49.8 +2.9**
LVC Limon Verde 92.75 121 *e*P **P** **22 17 49.9 +2.9**
LVC Limon Verde 92.75 121 P **P** **22 17 49.8 +2.9**
comp=Z,14nm,1.1s,baz=174,slow=4.2,SNR=7.6
LVC LR LR 22 50 28.1
comp=Z,3μm,21.0s,baz=187,slow=30
comp=Z,14nm,1.1s
ISA Isabella, Lake 92.79 46 P **P** **22 17 46.6 +0.3**
ISA Isabella, Lake 92.79 46 P **P** **22 17 46.6 +0.3**
ISA pmax pmax
comp=Z,17nm,1.2s
ISA Isabella, Lake 92.79 46 P **P** **22 17 47.4 +1.2**
baz=225
TIA Tai'an 92.80 314 ⇑P **P** **22 17 46.0 -0.2**
TIA S **S** **22 28 51.0 +1.9**
TIA pmax pmax
comp=Z,260nm,4.5s
TIA LR LR
comp=Z,750nm,18.8s
TIA LR LR
comp=Z,590nm,21.6s
TIA LR LR
comp=Z,2μm,23.3s
GYA Guiyang 92.81 301 ⇑*i*P **P** **22 17 47.0 +0.4**
GYA pP pP 22 17 54.0 -2.6
GYA PP **PP** **22 21 26.5 -3.0**
GYA SKS **SKSac** **22 28 17.5 -0.6**
GYA S **S** **22 28 49.8 -0.1**
GYA SS **SS** **22 35 03.3 -0.9**
GYA pmax pmax
comp=Z,12nm,0.9s
GYA pmax pmax
comp=Z,210nm,6.2s
GYA LR LR
comp=Z,490nm,21.4s
GYA LR LR
comp=Z,510nm,20.8s
GYA LR LR
comp=Z,1μm,24.0s
BELC Belle Mtn. Jos 93.09 49 P **P** **22 17 49.6 +1.8**
baz=226
GLA Glamis 93.16 50 P **P** **22 17 50.4 +2.4**
baz=227
BC3 Big Chuckawall 93.19 50 P **P** **22 17 50.7 +2.5**
baz=226
CM31 Chiang Mai Arr 93.34 291 P **P** **22 17 48.2 -0.9**
CM31 IAmb IAmb 22 17 53.1
comp=Z,60nm,1.2s
CMAR Chiang Mai Arr 93.34 291 P **P** **22 17 48.2 -0.9**
CMAR Chiang Mai Arr 93.34 291 *c*e**P** **P** **22 17 49.0 -0.1**
CMAR pmax pmax
comp=Z,23nm,0.8s
CMAR Chiang Mai Arr 93.34 291 P **P** **22 17 48.5 -0.6**
comp=Z,18nm,0.8s,baz=150,slow=3.4,SNR=30
CMAR PP **PP** **22 21 29.6 -4.0**
comp=Z,7.0nm,0.9s,baz=141,slow=6.0,SNR=12
CMAR LR LR 23 01 21.7
comp=Z,734nm,21.8s,baz=120,slow=36
comp=Z,18nm,0.8s
CRAI Chiangrai 93.36 293 P **P** **22 17 50.2 +1.0**
ENH Enshi 93.41 306 IAMs_20 IAMs_20 22 54 59.7
comp=Z,2μm,22.0s
CNBA Chernabura Isl 93.42 12 P **P** **22 17 49.2 +0.7**
CNBA IAmb IAmb 22 17 50.6
comp=Z,54nm,1.0s
CNBA IAMs_20 IAMs_20 22 55 43.3
comp=Z,2μm,20.0s
CHNA Chernabura Isl 93.43 12 P **P** **22 17 49.4 +0.9**
baz=197
HEC Hetor,Ludlow 93.46 48 P **P** **22 17 51.6 +2.2**
baz=226
GSC Goldstone, Bar 93.51 48 P **P** **22 17 52.1 +2.5**
baz=226
CHTO Chiang Mai 93.55 291 P **P** **22 17 49.7 -0.4**
CHTO IAmb IAmb 22 17 54.0
comp=Z,40nm,1.2s
CHTO Chiang Mai 93.55 291 IAMs_20 IAMs_20 23 01 16.5
comp=Z,1μm,21.0s
CHTO Chiang Mai 93.55 291 P **P** **22 17 49.7 -0.4**
CHTO pmax pmax
comp=Z,40nm,1.2s
CHTO MLR MLR
comp=Z,1μm,21.0s
CHTO Chiang Mai 93.55 291 P **P** **22 17 50.4 +0.3**
MPMC Manual Prospec 93.63 47 P **P** **22 17 53.2 +2.8**
baz=226
214A Organ Pipe Nat 93.68 52 P **P** **22 17 51.4 +1.0**
214A Organ Pipe Nat 93.68 52 P **P** **22 17 52.8 +2.4**
baz=228
IRM Iron Mountain 93.72 49 P **P** **22 17 52.3 +1.8**
baz=227
GMRC Granite Mounta 93.83 49 P **P** **22 17 53.5 +2.3**
baz=226
NNA Nana 93.85 108 LR LR 22 51 55.0
comp=Z,2μm,19.3s,baz=230,slow=30
CN2 Changchun 94.06 324 *e*P **P** **22 17 50.3 -1.5**
CN2 *es*P sP 22 18 05.0 -0.3
CN2 SKS **SKSac** **22 28 21.5 -2.4**
CN2 *e*sS sS 22 29 15.5 -0.8
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,190nm,4.0s
CN2 LR LR
comp=Z,1μm,24.0s
CN2 LR LR
comp=Z,840nm,24.0s
CN2 LR LR
comp=Z,2μm,26.0s
LYN LuoYang 94.40 311 *e*P **P** **22 17 52.8 -0.8**
LYN PP **PP** **22 21 39.5 -2.2**
LYN S **S** **22 29 07.5 +4.3**
LYN pmax pmax
comp=Z,190nm,5.1s
LYN LR LR
comp=Z,2μm,20.6s
LYN LR LR
comp=Z,810nm,20.6s
LYN LR LR
comp=Z,2μm,20.6s
PDMCI Parker Dam,Lak 94.43 50 P **P** **22 17 56.0 +2.3**
baz=227
KMI Kunming 94.69 298 ⇓P **P** **22 17 56.5 +1.0**
KMI pP pP 22 18 03.0 -2.4
KMI PP **PP** **22 21 43.8 -0.6**
KMI SKS **SKSac** **22 28 30.5 +1.8**
KMI S **ScS** **22 29 09.0 +1.3**
KMI SS **SS** **22 35 32.5 +1.2**
KMI pmax pmax
comp=Z,7.0nm,0.9s
KMI pmax pmax
comp=Z,160nm,12.0s
KMI LR LR
comp=Z,620nm,22.7s
KMI LR LR
comp=Z,760nm,31.8s
KMI LR LR
comp=Z,2μm,31.0s
NVAR Mina Array Bea 94.83 44 P **P** **22 17 57.6 +1.8**
comp=Z,2.7nm,1.0s,baz=220,slow=7.8,SNR=8.7
NVAR PKKPbc **PKKPdf** **22 34 55.0 +2.0**
comp=Z,0.5nm,0.6s,baz=192,slow=0.9,SNR=4.2
NVAR LR LR 22 53 28.4
comp=Z,1μm,20.7s,baz=229,slow=31
comp=Z,2.7nm,1.0s
S14K Fog Glacier 94.83 12 P **P** **22 17 56.1 +1.0**
baz=197
YBH Yreka Blue Hor 94.83 40 LR LR 22 52 17.1
comp=Z,773nm,21.9s,baz=228,slow=30
TPNV Topopah Spring 94.97 47 IAMs_20 IAMs_20 23 03 52.9
comp=Z,1μm,18.0s
HNS HongShan 95.02 314 ⇑P **P** **22 17 53.8 -2.5**
HNS SKS **SKSac** **22 28 30.8 +1.5**
HNS S **ScS** **22 29 09.0 -0.4**
HNS SS **SS** **22 35 40.8 +5.6**
HNS pmax pmax
comp=Z,180nm,8.3s
HNS LR LR
comp=Z,290nm,23.0s
HNS LR LR
comp=Z,1μm,22.0s
HNS LR LR
comp=Z,2μm,23.7s
CHGN Chignik 95.03 12 P **P** **22 17 56.4 +0.5**
CHGN IAmb IAmb 22 17 57.6
comp=Z,33nm,0.9s
CHGN Chignik 95.03 12 P **P** **22 17 57.0 +1.1**
baz=198
K02D Willamette Mer 95.05 39 P **P** **22 17 56.2 -0.4**
baz=222
CHIR Chirikof Islan 95.09 14 IAMs_20 IAMs_20 22 54 02.3
comp=Z,2μm,21.0s
PB16 IPOC Station P 95.17 117 P **P** **22 17 58.5 +0.1**
PB16 IAmb IAmb 22 18 02.3
comp=Z,65nm,1.6s
UNM Universidad Na 95.19 70 IAMs_20 IAMs_20 22 52 23.0
comp=Z,2μm,20.0s
J01E Myrtle Point 95.27 38 IAMs_20 IAMs_20 22 56 51.3
comp=Z,2μm,20.0s
J01E Myrtle Point 95.27 38 P **P** **22 17 57.7 +0.4**
baz=222
L04D Klamath Falls 95.39 40 P **P** **22 17 59.1 +0.9**
baz=223
ITQB Itaqui 95.55 134 *e*P **P** **22 18 00.0 +0.8**
KLR Kul'dur 95.64 331 ⇑*e*P **P** **22 17 58.3 -0.6**
KLR pmax pmax
comp=Z,32nm,3.3s
KLR MLR MLR
comp=Z,944nm,20.0s
KLR Kul'dur 95.64 331 LR LR 22 56 02.4
comp=Z,1μm,21.4s,baz=153,slow=32
PLTB Pedras Altas 95.66 137 *e*P **P** **22 18 02.9 +3.2**
ATAH Atahualpa 95.68 103 LR LR 22 51 07.5
comp=Z,3μm,22.0s,baz=248,slow=29
I03D Drain, OR 95.95 38 P **P** **22 18 01.8 +1.4**
baz=222
I02E Swisshome, OR 96.00 37 IAMs_20 IAMs_20 22 54 36.8
comp=Z,2μm,21.0s
BJI Beijing 96.02 317 P **P** **22 18 00.3 -0.6**
BJI SKS **SKSac** **22 28 31.5 -3.0**
BJI S **ScS** **22 29 24.8 +7.2**
BJI pmax pmax
comp=Z,5.0nm,0.8s
BJI LR LR
comp=Z,280nm,22.7s
BJI LR LR
comp=Z,340nm,22.4s
BJI LR LR
comp=Z,2μm,30.3s
SII Sitkinak Islan 96.06 15 IAMs_20 IAMs_20 22 55 25.1
comp=Z,2μm,21.0s
SII Sitkinak Islan 96.06 15 P **P** **22 18 01.6 +1.0**
baz=201
MOD Modoc Plateau 96.20 41 IAMs_20 IAMs_20 22 54 14.0
comp=Z,1μm,20.0s
J04D Umpqua Nationa 96.23 39 IAMs_20 IAMs_20 22 57 36.9
comp=Z,1μm,19.0s
XAN Xi'an 96.25 308 P **P** **22 18 02.5 +0.4**
XAN pP pP 22 18 08.3 -3.7
XAN SKS **SKSac** **22 28 32.3 -3.9**
XAN pmax pmax
comp=Z,10.0nm,1.6s
XAN pmax pmax
comp=Z,410nm,4.3s
XAN LR LR
comp=Z,610nm,21.4s
XAN LR LR
comp=Z,890nm,23.4s
XAN LR LR
comp=Z,770nm,24.8s
PZH PanZhiHua 96.25 298 *e*P **P** **22 18 01.5 -0.9**
PZH PP **PP** **22 21 55.3 -1.0**
PZH SKS **SKSac** **22 28 32.0 -4.7**
PZH S **S** **22 29 18.8 -1.1**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,120nm,7.7s
PZH LR LR
comp=Z,550nm,19.2s
PZH LR LR
comp=Z,560nm,19.0s
PZH LR LR
comp=Z,830nm,19.1s
I04A Tendick Farm, 96.48 38 P **P** **22 18 03.5 +0.5**
baz=223
COR Corvallis 96.62 37 IAMs_20 IAMs_20 22 54 46.1
comp=Z,2μm,20.0s
R17K Ugashik Creek 96.66 13 P **P** **22 18 04.8 +1.5**
baz=199
J05D Fort Rock, OR 96.70 39 P **P** **22 18 05.0 +0.9**
baz=224
CPSB Cacapava Do Su 96.79 136 *e*P **P** **22 18 06.4 +1.6**
H04D Lebanon 96.85 38 IAMs_20 IAMs_20 22 55 26.2
comp=Z,1μm,20.0s
OHAK Old Harbor 96.86 15 P **P** **22 18 04.8 +0.6**
OHAK Old Harbor 96.86 15 P **P** **22 18 04.6 +0.4**
baz=202
G03D McMinnville, O 97.10 37 IAMs_20 IAMs_20 22 55 08.7
comp=Z,1μm,20.0s
CMIG Matias Romero 97.11 74 LR LR 22 54 58.4
comp=Z,674nm,18.6s,baz=220,slow=31
PINE Pine Mountain 97.22 39 P Pdif 22 18 07.8 +1.2
WVOR Wild Horse Val 97.45 41 IAMs_20 IAMs_20 22 58 04.2
comp=Z,2μm,20.0s
LPAZ La Paz 97.51 117 P Pdif 22 18 09.6 +0.5
LPAZ La Paz 97.51 117 P Pdif 22 18 10.8 +1.6
LPAZ La Paz 97.51 117 *e*P Pdif 22 18 11.4 +2.3
LPAZ La Paz 97.51 117 P Pdif 22 18 10.8 +1.6
comp=Z,3.6nm,0.7s,baz=202,slow=5.1,SNR=14
LPAZ PP **PP** **22 22 08.6 +2.5**
comp=Z,7.0nm,1.3s,baz=215,slow=9.3,SNR=5.9
LPAZ LR LR 22 52 59.5
comp=Z,924nm,21.4s,baz=200,slow=30
comp=Z,3.6nm,0.7s
KDAK Kodiak Island 97.53 15 IAMs_20 IAMs_20 22 56 21.8
comp=Z,2μm,21.0s
CD2 Chengdu 97.60 303 P Pdif 22 18 11.0 +2.6
CD2 PP **PP** **22 22 10.0 +3.4**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,180nm,5.7s
CD2 LR LR
comp=Z,690nm,17.9s
CD2 LR LR
comp=Z,880nm,21.1s
CD2 LR LR
comp=Z,1μm,21.1s
CPUP Villa Florida 97.61 131 P Pdif 22 18 09.6 +0.9
CPUP Villa Florida 97.61 131 *e*P Pdif 22 18 09.8 +1.1
CPUP Villa Florida 97.61 131 P Pdif 22 18 09.6 +1.0
comp=Z,2.0nm,0.7s,baz=247,slow=7.8,SNR=4.5
CPUP LR LR 22 55 10.7
comp=Z,5μm,20.0s,baz=232,slow=31
comp=Z,2.0nm,0.7s
P16K Nushagak River 97.70 12 P Pdif 22 18 08.7 +0.7
baz=198
TXAR Lajitas Array 98.04 59 P Pdif 22 18 11.9 +1.4
TXAR Lajitas Array 98.04 59 P Pdif 22 18 11.9 +1.4
comp=Z,0.4nm,0.8s,baz=212,slow=4.4,SNR=5.4
TXAR LR LR 22 56 00.4
comp=Z,893nm,18.6s,baz=230,slow=31
P17K Kvichak River 98.12 12 P Pdif 22 18 10.0 +0.1
baz=200
ELK Elko 98.13 44 IAMs_20 IAMs_20 23 00 44.5
comp=Z,2μm,19.0s
ELK Elko 98.13 44 LR LR 22 56 31.6
comp=Z,1μm,19.9s,baz=230,slow=32
O16K Kokwok River B 98.22 12 P **P** **22 18 10.2 -0.1**
baz=198
MNTX Cornudas Mount 98.34 57 IAMs_20 IAMs_20 22 56 12.6
comp=Z,1μm,20.0s
Q19K Cape Douglas, 98.38 14 IAMs_20 IAMs_20 23 00 12.3
comp=Z,1μm,20.0s
Q19K Cape Douglas, 98.38 14 P **P** **22 18 09.8 -1.3**
baz=202
P18K Big Mountain, 98.52 13 P **P** **22 18 11.4 -0.3**
baz=200
O17K Koliganek Bris 98.56 12 P **P** **22 18 11.8 0.0**
baz=199
XLT XiLinHaoTe 98.76 319 *e*P Pdif 22 18 14.5 +1.2
XLT sS sS 22 29 57.0 -0.1
XLT pmax pmax
comp=Z,6.0nm,1.1s
XLT pmax pmax
comp=Z,200nm,4.6s
XLT LR LR
comp=Z,990nm,20.5s
XLT LR LR
comp=Z,1μm,23.2s
O18K Koktuh Hills 98.96 13 P Pdif 22 18 14.2 +0.6
baz=200
N16K Nishlik Lake 98.96 11 P Pdif 22 18 14.0 +0.3
baz=198
P19K Oil Pt 99.13 14 IAMs_20 IAMs_20 23 05 58.2
comp=Z,1μm,19.0s
P19K Oil Pt 99.13 14 P **Pdif** **22 18 15.4 +1.0**
baz=202
HHC Hu-ho-hao-te 99.15 315 *e*P **Pdif** **22 18 18.5 +3.4**
HHC SS SS 22 36 39.0 +5.3
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,200nm,4.6s
HHC LR LR
comp=Z,1μm,19.7s
HHC LR LR
comp=Z,2μm,19.7s
HHC LR LR
comp=Z,3μm,21.0s
MA2 Magadan 99.15 346 LR LR 22 56 38.1
comp=Z,3μm,21.9s,baz=167,slow=32
G08A Pilot Rock 99.28 39 **Pdif** **22 18 16.1 +0.5**
O19K Port Alsworth 99.44 13 IAMs_20 IAMs_20 22 56 54.2
comp=Z,1μm,21.0s
HOM Homer 99.45 15 IAMs_20 IAMs_20 22 57 55.6
comp=Z,2μm,20.0s
ILSW Iliamna Southw 99.46 14 P **Pdif** **22 18 15.8 -0.2**
ILSW IAmb IAmb 22 18 19.1
comp=Z,12nm,1.0s
SNET Serv Nac Est T 99.51 80 IAMs_20 IAMs_20 22 57 22.2
comp=Z,2μm,18.0s
N18K Kilae Creek 99.61 12 IAMs_20 IAMs_20 23 01 04.9
comp=Z,1μm,20.0s
N18K Kilae Creek 99.61 12 P **Pdif** **22 18 17.3 +0.7**

baz=200
ANMO **Albuquerque** 99.66 53 IAMs_20 IAMs_20 22 57 25.3
comp=Z,1µm,20.0s
ANMO **Albuquerque** 99.66 53⇑ *e*P **Pdif** **22 18 18.8 +1.2**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO **Albuquerque** 99.66 53 LR LR 22 55 44.5
comp=Z,715nm,21.2s,baz=240,slow=31
BRLK **Bradley Lake** 99.70 15 IAMs_20 IAMs_20 22 57 40.9
comp=Z,2µm,21.0s
HAWA **Hanford** 99.76 38 IAMs_20 IAMs_20 22 56 59.3
comp=Z,2µm,21.0s
BMO **Blue Mountains** 99.82 40 IAMs_20 IAMs_20 22 59 40.9
comp=Z,1µm,20.0s
N19K **Bonanza Creek** 99.98 13 IAMs_20 IAMs_20 22 57 21.7
comp=Z,1µm,22.0s
N19K **Bonanza Creek** 99.98 13 P **Pdif** **22 18 18.5 +0.2**
baz=201
O22K **Cooper Landing** 100.60 15 IAMs_20 IAMs_20 23 00 07.0
comp=Z,1µm,21.0s
P23K **Montague Islan** 100.67 16 P **Pdif** **22 18 21.5 +0.3**
baz=207
HIA **Hailar** 100.75 325 IAMs_20 IAMs_20 22 59 07.8
comp=Z,1µm,22.0s
LZH **Lanzhou** 100.76 307 *e*P **Pdif** **22 18 25.0 +2.5**
LZH pP pPdif 22 18 31.5 -1.0
LZH sP sP 22 18 37.5 +1.5
LZH SS SS 22 36 56.5 +0.1
LZH pmax pmax
comp=Z,10.0nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.5s
LZH LR LR
comp=Z,450nm,16.8s
LZH LR LR
comp=Z,1µm,17.2s
LZH LR LR
comp=Z,1µm,17.8s
N20K **Mount Spurr** 100.76 14 P **Pdif** **22 18 22.8 +1.1**
baz=203
SPCR **Spurr Chakacha** 100.76 14 P **Pdif** **22 18 23.2 +1.5**
baz=203
HWUT **Hardware Ranch** 100.78 46 IAMs_20 IAMs_20 22 56 47.7
comp=Z,1µm,21.0s
JTS **Las Juntas de** 100.92 85 IAMs_20 IAMs_20 22 54 09.6
comp=Z,2µm,20.0s
M19K **Big River Lodg** 101.02 12 IAMs_20 IAMs_20 23 01 49.1
comp=Z,1µm,20.0s
M19K **Big River Lodg** 101.02 12 P **Pdif** **22 18 23.9 +1.2**
baz=201
KVTX **Kingsville** 101.03 64 IAMs_20 IAMs_20 22 58 29.6
comp=Z,1µm,20.0s
FIS **Fire Island** 101.10 15 IAMs_20 IAMs_20 22 58 47.3
comp=Z,2µm,21.0s
RC01 **Rabbit Creek A** 101.15 15 IAMs_20 IAMs_20 22 58 24.6
comp=Z,1µm,21.0s
RC01 **Rabbit Creek A** 101.15 15 P **Pdif** **22 18 24.2 +0.8**
baz=205
L19K **White Mountain** 101.20 12 IAMs_20 IAMs_20 23 01 51.8
comp=Z,1µm,20.0s
L19K **White Mountain** 101.20 12 P **Pdif** **22 18 24.3 +0.7**
baz=201
M20K **Styx River** 101.22 13 IAMs_20 IAMs_20 22 57 49.4
comp=Z,2µm,22.0s
M20K **Styx River** 101.22 13 P **Pdif** **22 18 24.4 +0.6**
baz=202
HIN **Hinchinbrook I** 101.23 17 IAMs_20 IAMs_20 23 02 03.7
comp=Z,2µm,20.0s
PWL **Port Wells** 101.23 16 P **Pdif** **22 18 24.4 +0.7**
baz=206
KAIM **Kayak Island** 101.31 18 IAMs_20 IAMs_20 23 01 19.9
comp=Z,1µm,20.0s
GLI **Glacier Island** 101.52 16 IAMs_20 IAMs_20 23 02 43.6
comp=Z,1µm,20.0s
GLI **Glacier Island** 101.52 16 P **Pdif** **22 18 26.1 +1.1**
baz=207
FID **Port Fidalgo** 101.55 17 IAMs_20 IAMs_20 23 02 34.0
comp=Z,1µm,20.0s
SUCK **Suckling Hills** 101.59 18 IAMs_20 IAMs_20 23 01 30.4
comp=Z,2µm,20.0s
SKT **Skwentna** 101.61 14 IAMs_20 IAMs_20 23 07 25.7
comp=Z,1µm,20.0s
SKT **Skwentna** 101.61 14 P **Pdif** **22 18 25.7 +0.3**
baz=204
BOAB **BOACO BROADBAN** 101.61 83 IAMs_20 IAMs_20 22 53 50.9
comp=Z,2µm,21.0s
L20K **Farewell, AK** 101.64 12 P **Pdif** **22 18 27.0 +1.4**
baz=202
RAGM **Ragged Mountai** 101.65 17 IAMs_20 IAMs_20 23 04 49.9
comp=Z,2µm,19.0s
HMT **Hamilton** 101.70 18 IAMs_20 IAMs_20 23 07 20.4
comp=Z,1µm,19.0s
KNK **Knik Glacier** 101.71 15 P **Pdif** **22 18 27.2 +1.4**
baz=206
TTA **Tatalina** 101.72 11 Pdif **Pdif** **22 18 25.9 0.0**
TTA **Tatalina** 101.72 11 P **Pdif** **22 18 25.9 0.0**
TTA **Tatalina** 101.72 11 P **Pdif** **22 18 26.9 +1.0**
baz=200
AHID **Auburn Hatcher** 101.79 45 IAMs_20 IAMs_20 22 59 56.4
comp=Z,1µm,20.0s
BERG **Berg Lake** 101.89 18 IAMs_20 IAMs_20 23 02 00.3
comp=Z,1µm,20.0s
WRAK **Wrangell Islan** 101.91 25 IAMs_20 IAMs_20 22 57 49.6
comp=Z,2µm,19.0s
SNH **Sunshine Point** 101.92 18 IAMs_20 IAMs_20 23 04 44.1
comp=Z,2µm,19.0s
SML **Sawmill** 102.09 15 IAMs_20 IAMs_20 23 00 43.5
comp=Z,1µm,20.0s
ANM **Nome** 102.11 7 IAMs_20 IAMs_20 22 59 24.4
comp=Z,2µm,20.0s
WAX **Waxell Ridge** 102.15 18 IAMs_20 IAMs_20 23 02 09.2
comp=Z,2µm,20.0s
BMRM **Bremner River** 102.17 17 P **Pdif** **22 18 29.3 +1.3**
baz=209
CUT **Chulitna** 102.24 14 IAMs_20 IAMs_20 22 59 17.5
comp=Z,2µm,20.0s
NEW **Newport** 102.24 38 IAMs_20 IAMs_20 22 58 32.9
comp=Z,2µm,20.0s
REDW **Red Top Meadow** 102.31 45 IAMs_20 IAMs_20 23 00 22.2
comp=Z,1µm,20.0s
SCM **Sheep Creek Mo** 102.33 16 P **Pdif** **22 18 29.8 +1.1**
baz=207
KLU **Klutina** 102.33 16 IAMs_20 IAMs_20 23 03 20.0
comp=Z,1µm,20.0s
TPAW **Teton Pass** 102.34 44 IAMs_20 IAMs_20 23 00 31.8
comp=Z,1µm,20.0s
YAH **Yahtse** 102.36 19 IAMs_20 IAMs_20 23 04 48.6
comp=Z,2µm,20.0s
FXWY **Fox Creek** 102.39 44 IAMs_20 IAMs_20 23 03 21.2
comp=Z,1µm,19.0s
ISLE **Juniper Island** 102.41 18 IAMs_20 IAMs_20 23 01 57.1
comp=Z,1µm,20.0s
TGL **Tana Glacier** 102.42 18 IAMs_20 IAMs_20 23 05 03.3
comp=Z,1µm,19.0s
K20K **Telida** 102.43 12 P **Pdif** **22 18 29.3 +0.3**
baz=202
SNOW **Snow King Moun** 102.43 45 IAMs_20 IAMs_20 23 00 36.3
comp=Z,1µm,19.0s
BCPM **Bancas Point** 102.57 20 IAMs_20 IAMs_20 23 02 58.3
comp=Z,2µm,19.0s
TABL **Table Mountain** 102.58 19 IAMs_20 IAMs_20 23 05 05.6
comp=Z,2µm,19.0s
IMW **Indian Meadow** 102.61 44 IAMs_20 IAMs_20 23 03 29.8
comp=Z,1µm,19.0s
LOHW **Long Hollow** 102.61 45 IAMs_20 IAMs_20 23 00 32.1
comp=Z,1µm,19.0s
MOOW **Moose Ponds** 102.62 44 IAMs_20 IAMs_20 23 03 28.3
comp=Z,1µm,19.0s
SIV **San Ignacio** 102.64 121 PP **PP** **22 22 46.2 +1.8**
comp=Z,1.5nm,1.0s,baz=228,slow=13,SNR=3.5
AMTX **Amarillo** 102.73 56 IAMs_20 IAMs_20 22 59 30.9
comp=Z,2µm,19.0s
N25K **Chitina, Valde** 102.74 17 P **Pdif** **22 18 33.2 +2.7**
baz=209
CAST **Castle Rocks** 102.83 13 IAMs_20 IAMs_20 23 09 08.0
comp=Z,1µm,20.0s
CAST **Castle Rocks** 102.83 13 P **Pdif** **22 18 30.8 0.0**
baz=203
WAT6 **Susitna Watana** 102.91 15 P **Pdif** **22 18 32.4 +1.0**
baz=207
LOGN **Logan Glacier** 102.94 19 IAMs_20 IAMs_20 23 05 17.2
comp=Z,2µm,19.0s
CTGM **Chitina Glacie** 102.98 19 IAMs_20 IAMs_20 23 05 27.1
comp=Z,1µm,19.0s
435B **Jarrell** 103.13 61 IAMs_20 IAMs_20 22 59 34.2
comp=Z,2µm,19.0s
KTH **Kantishna Hill** 103.17 13 IAMs_20 IAMs_20 23 02 02.8
comp=Z,2µm,20.0s

J20K **Nowinta River** 103.18 12 IAMs_20 IAMs_20 22 57 27.2
comp=Z,1µm,22.0s
J20K **Nowinta River** 103.18 12 P **Pdif** **22 18 33.5 +1.2**
baz=202
RND **Reindeer** 103.43 14 IAMs_20 IAMs_20 23 03 29.7
comp=Z,2µm,21.0s
DHY **Denali Highway** 103.43 15 IAMs_20 IAMs_20 23 01 23.8
comp=Z,1µm,20.0s
BPAW **Bear Paw Mtn.** 103.65 13 IAMs_20 IAMs_20 23 01 20.7
comp=Z,1µm,21.0s
MCK **McKinley** 103.70 14 P **Pdif** **22 18 36.6 +1.9**
baz=206
PAX **Paxson** 103.74 16 P **Pdif** **22 18 36.1 +1.1**
baz=208
M26K **Nabesna, AK** 103.80 17 P **Pdif** **22 18 37.2 +2.0**
baz=210
M27K **Edge Creek, AK** 104.03 18 IAMs_20 IAMs_20 23 05 57.0
comp=Z,1µm,20.0s
M27K **Edge Creek, AK** 104.03 18 P **Pdif** **22 18 37.8 +1.4**
baz=211
L26K **Log Cabin Wild** 104.26 17 IAMs_20 IAMs_20 23 04 03.0
comp=Z,1µm,20.0s
BCIP **Isla Barro Col** 104.35 89 IAMs_20 IAMs_20 22 55 58.4
comp=Z,2µm,20.0s
K24K **Donnelly Dome** 104.41 15 P **Pdif** **22 18 38.2 +0.3**
baz=208
NEA2 **Nenana** 104.46 14 IAMs_20 IAMs_20 23 02 30.0
comp=Z,2µm,20.0s
I21K **Tanana** 104.47 12 IAMs_20 IAMs_20 23 03 54.3
comp=Z,1µm,20.0s
WRH **Wood River Hil** 104.53 14 IAMs_20 IAMs_20 23 00 06.0
comp=Z,2µm,21.0s
MLY **Manley** 104.55 13 P **Pdif** **22 18 39.1 +0.7**
baz=204
RIDG **Independent Ri** 104.55 16 IAMs_20 IAMs_20 23 04 04.6
comp=Z,1µm,20.0s
RIDG **Independent Ri** 104.55 16 P **Pdif** **22 18 38.9 +0.4**
baz=209
WMOK **Wichita Mounta** 104.58 57 IAMs_20 IAMs_20 22 59 35.0
comp=Z,2µm,20.0s
L27K **Beaver Creek,** 104.65 17 P **PKiKP** **22 22 55.1 +0.7**
baz=211
R33M **Jennings River** 104.70 24 P **PKiKP** **22 22 57.0 +2.3**
baz=219
HDA **Harding Lake** 104.70 15 IAMs_20 IAMs_20 23 04 29.6
comp=Z,1µm,20.0s
CCB **Clear Creek Bu** 104.75 14 IAMs_20 IAMs_20 23 00 33.6
comp=Z,2µm,21.0s
H21K **Melozitna Rive** 104.78 12 IAMs_20 IAMs_20 22 58 15.3
comp=Z,1µm,22.0s
H21K **Melozitna Rive** 104.78 12 P **PKiKP** **22 22 56.7 +2.3**
baz=203
I23K **Minto, Yukon-K** 104.90 13 IAMs_20 IAMs_20 23 03 03.8
comp=Z,2µm,20.0s
N31M **Braeburn, Yuko** 104.91 21 P **PKiKP** **22 22 56.1 +1.2**
baz=216
TCOL **CIGO, UAF Yank** 104.94 14 IAMs_20 IAMs_20 23 00 39.7
comp=Z,2µm,21.0s
COLA **College** 104.94 14 IAMs_20 IAMs_20 23 00 28.7
comp=Z,2µm,21.0s
MDM **Murphy Dome** 104.94 14 IAMs_20 IAMs_20 23 00 39.9
comp=Z,2µm,22.0s
SCRK **Sand Creek** 104.95 16 P **PKiKP** **22 22 58.0 +3.0**
baz=210
ILAR **Eielson Array** 105.04 14 Pdiff **Pdif** **22 18 42.3 +1.7**
comp=Z,1.9nm,0.9s,baz=212,slow=5.0,SNR=10
ILAR PKiKP **PKiKP** **22 22 55.9 +1.0**
comp=Z,1.6nm,0.8s,baz=272,slow=3.7,SNR=4.1
ILAR SKP 22 26 28.9
comp=Z,2.3nm,1.1s,baz=244,slow=3.2,SNR=5.7
ILAR PKKPbc **PKKPbc** **22 34 26.1 +2.3**
comp=Z,1.1nm,0.9s,baz=1.1,slow=4.5,SNR=5.6
J25K **Salcha River,** 105.21 15 IAMs_20 IAMs_20 23 04 20.9
comp=Z,1µm,20.0s
J25K **Salcha River,** 105.21 15 P **PKiKP** **22 22 57.5 +2.1**
baz=209
H22K **Ishtalitna Cre** 105.23 12 P **PKiKP** **22 22 56.6 +1.3**
baz=204
POKR **Poker Plat Res** 105.24 14 IAMs_20 IAMs_20 23 00 48.7
comp=Z,2µm,21.0s
BILL **Bilibino** 105.29 355 IAMs_20 IAMs_20 23 03 09.7
comp=Z,1µm,20.0s
N32M **Quiet Lake** 105.42 22 P **PKiKP** **22 22 57.0 +1.2**
baz=218
K27K **Chicken** 105.42 17 IAMs_20 IAMs_20 23 04 56.6
comp=Z,1µm,21.0s
K27K **Chicken** 105.42 17 P **PKiKP** **22 22 57.8 +2.1**
baz=211
G21K **Allakaket** 105.46 11 P **PKiKP** **22 22 57.4 +1.7**
baz=202
H23K **Yukon River** 105.48 13 IAMs_20 IAMs_20 23 02 07.1
comp=Z,1µm,21.0s
H23K **Yukon River** 105.48 13 P **PKiKP** **22 22 57.3 +1.5**
baz=206
J26L **Joseph Creek** 105.50 16 Pdif **Pdif** **22 18 43.1 +0.3**
J26L **Joseph Creek** 105.50 16 P **PKiKP** **22 22 56.8 +0.8**
baz=210
M30M **Minto, Yukon** 105.52 20 IAMs_20 IAMs_20 23 01 23.3
comp=Z,2µm,20.0s
L29M **L29M** 105.60 19 P **PKiKP** **22 22 58.1 +2.0**
baz=214
OK038 **West end E0370** 105.61 56 IAMs_20 IAMs_20 23 07 08.9
comp=Z,1µm,19.0s
NATX **Nacogdoches** 105.75 62 IAMs_20 IAMs_20 23 01 17.4
comp=Z,1µm,20.0s
RDOG **Red Dog Mine** 105.75 7 IAMs_20 IAMs_20 23 06 18.6
comp=Z,2µm,21.0s
OK035 **E0210 Rd and N** 105.76 56 IAMs_20 IAMs_20 23 01 02.9
comp=Z,1µm,20.0s
EGMT **Eagle** 105.84 41 IAMs_20 IAMs_20 23 03 22.3
comp=Z,2µm,20.0s
PRP **Porcupine Dome** 105.97 15 P **PKiKP** **22 22 58.1 +1.2**
baz=209
OK025 **Westminster Rd** 106.04 57 IAMs_20 IAMs_20 23 01 11.4
comp=Z,1µm,20.0s
OK029 **Liberty Lake** 106.08 57 IAMs_20 IAMs_20 23 01 01.5
comp=Z,1µm,19.0s
G22K **Bettles** 106.15 12 P **PKiKP** **22 22 58.4 +1.5**
baz=205
G23K **Bananza Creek** 106.20 12 P **PKiKP** **22 22 59.1 +2.0**
baz=205
EGAK **Eagle** 106.27 17 IAMs_20 IAMs_20 23 08 10.0
comp=Z,1µm,19.0s
I26K **Coal Creek Min** 106.28 16 IAMs_20 IAMs_20 23 05 37.3
comp=Z,2µm,20.0s
K29M **Barlow Dome** 106.37 19 P **PKiKP** **22 22 59.6 +2.0**
baz=215
SONM **Songin Array** 106.45 318 PKiKP **PKiKP** **22 22 58.5 +0.3**
comp=Z,1.7nm,0.8s,baz=120,slow=2.5,SNR=5.5
SONM PKKPbc **PKKPbc** **22 34 20.3 +1.3**
comp=Z,2.3nm,0.9s,baz=313,slow=1.9,SNR=9.2
YAK **Yakutsk** 106.53 338 IAMs_20 IAMs_20 23 00 20.2
comp=Z,2µm,22.0s
H25K **Birch Creek** 106.57 14 P **PKiKP** **22 22 59.8 +2.0**
baz=209
F22K **John River** 106.58 11 P **PKiKP** **22 22 59.2 +1.4**
baz=204
G24K **Hadweenzic Riv** 106.64 13 P **PKiKP** **22 23 00.8 +2.8**
baz=207
RSSD **Black Hills** 106.69 47 IAMs_20 IAMs_20 23 00 45.1
comp=Z,1µm,21.0s
J29M **Klondike Camp** 106.69 18 IAMs_20 IAMs_20 23 09 54.4
comp=Z,1µm,19.0s
GOMU **GeErMu** 106.73 303 Pdif **Pdif** **22 18 51.3 +2.0**
GOMU SKS SKSdf 22 29 25.3 -44
GOMU SS **SS** **22 38 21.8 +2.7**
GOMU AMB AMB
comp=Z,81nm,4.9s
GOMU LR LR
comp=Z,420nm,22.0s
GOMU LR LR
comp=Z,390nm,18.0s
GOMU LR LR
comp=Z,650nm,20.1s
I27K **Kandik River** 106.87 16 P **PKiKP** **22 23 00.9 +2.5**
baz=212
E22K **Anaktuvuk Pass** 107.21 11 P **PKiKP** **22 23 02.4 +3.4**
baz=204
F24K **Squaw Lake** 107.30 13 P **PKiKP** **22 23 00.4 +1.3**
baz=207
H27K **Steamboat Moun** 107.42 16 P **PKiKP** **22 23 02.3 +2.9**
baz=212
I29M **Ogilvie Camp,** 107.42 17 IAMs_20 IAMs_20 23 05 59.6
comp=Z,1µm,21.0s
I29M **Ogilvie Camp,** 107.42 17 P **PKiKP** **22 23 00.2 +0.8**
baz=214
G26K **Porcupine Rive** 107.57 14 P **PKiKP** **22 23 02.2 +2.6**
baz=210

E24K **Your Creek** 107.70 12 P **PKiKP** **22 23 01.1 +1.3**
baz=207
F25K **Christian Rive** 107.77 13 P **PKiKP** **22 23 02.6 +2.5**
baz=209
TOLK **Toolik Lake Re** 108.03 12 P **PKiKP** **22 23 02.5 +2.0**
baz=206
MIAR **Mount Ida** 108.04 60 IAMs_20 IAMs_20 23 03 06.5
comp=Z,1µm,20.0s
F26K **Sheenjek River** 108.15 14 P **PKiKP** **22 23 03.5 +2.8**
baz=210
D23K **Nanushuk River** 108.15 11 P **PKiKP** **22 23 03.6 +2.9**
baz=205
HYBB **Hyderabad (bro** 108.50 278 *e*PKiKP **PKiKP** **22 23 03.0 +0.1**
HYBB *ep*PKiKP **pPKiKP** **22 23 08.1 -5.0**
HYBB *e*PP **PP** **22 23 27.5 -0.8**
HYBB *e*SKiKP **SKiKP** **22 26 38.1 +2.5**
EPYK **Eagle Plains** 108.63 17 P **PKiKP** **22 23 04.0 +2.3**
baz=216
E27K **Coleen River** 109.07 15 P **PKiKP** **22 23 05.8 +3.4**
baz=212
DGMT **Dagmar** 109.10 43 IAMs_20 IAMs_20 23 04 39.6
comp=Z,1µm,20.0s
G30M **tAoh Zraii Nji** 109.24 17 P **PKiKP** **22 23 03.9 +1.1**
baz=216
C27K **Jago River** 109.90 13 P **PKiKP** **22 23 06.0 +2.1**
baz=211
INK **Inuvik** 110.92 17 *i* PKiKP **PKiKP** **22 23 06.5 +0.7**
INK **Inuvik** 110.92 17 PKiKP **PKiKP** **22 23 06.5 +0.7**
comp=Z,1.8nm,0.3s,baz=109,slow=1.6,SNR=5.7
OXF **Oxford** 110.94 62 IAMs_20 IAMs_20 23 03 19.8
comp=Z,1µm,20.0s
CCM **Cathedral Cave** 111.48 58 IAMs_20 IAMs_20 23 04 19.7
comp=Z,1µm,20.0s
SDV **Santo Domingo** 111.53 95 IAMs_20 IAMs_20 23 01 25.5
comp=Z,1µm,21.0s
PLAL **Pickwick Lake** 112.12 62 IAMs_20 IAMs_20 23 04 07.2
comp=Z,1µm,20.0s
SCIA **State Center** 112.14 54 IAMs_20 IAMs_20 23 10 29.8
comp=Z,1µm,18.0s
YKA **Yellowknife Ar** 112.57 27 *i* PKiKP **PKiKP** **22 23 09.3 +0.2**
YKA **Yellowknife Ar** 112.57 27 PKiKP **PKiKP** **22 23 09.3 +0.2**
comp=Z,4.0nm,0.8s,baz=226,slow=1.6,SNR=5.7
YKA PP **PP** **22 23 56.0 -0.8**
comp=Z,11nm,1.1s,baz=234,slow=6.8,SNR=12
YKA SKP 22 26 42.9
comp=Z,5.1nm,1.1s,baz=238,slow=1.8,SNR=6.4
YKA PKKPbc **PKKPbc** **22 33 59.5 0.0**
comp=Z,1.8nm,0.8s,baz=52,slow=3.5,SNR=4.8
KNGR **Kungurtug, Tuv** 112.82 317 *d* iPKiKP **PKiKP** **22 23 10.0 -0.2**
WVT **Waverly** 112.87 61 IAMs_20 IAMs_20 23 05 47.0
comp=Z,2µm,20.0s
MSEY **Mahe Island** 113.03 245 IAMs_20 IAMs_20 23 06 10.1
comp=Z,2µm,20.0s
FFC **Flin Flon** 113.66 38 IAMs_20 IAMs_20 23 05 26.9
comp=Z,1µm,20.0s
AGMN **Agassiz Nation** 113.72 47 IAMs_20 IAMs_20 23 06 17.9
comp=Z,1µm,20.0s
C36M **Paulatuk** 114.03 19 IAMs_20 IAMs_20 23 09 52.3
comp=Z,1µm,20.0s
HDIL **Hopedale** 114.04 57 IAMs_20 IAMs_20 23 06 26.3
comp=Z,1µm,20.0s
TIXI **Tiksi** 114.07 345 IAMs_20 IAMs_20 23 04 17.5
comp=Z,2µm,22.0s
TIXI **Tiksi** 114.07 345 ⇑PKiKP PKPdf 22 23 10.6 -1.1
TIXI **Tiksi** 114.07 345 PKiKP PKPdf 22 23 10.8 -0.9
comp=Z,16nm,0.9s,baz=92,slow=22,SNR=39
GOGA **Godfrey** 114.65 66 IAMs_20 IAMs_20 23 07 58.3
comp=Z,1µm,20.0s
ULM **Lac du Bonnet** 114.66 45 ⇑*i*PKiKP PKPdf 22 23 13.3 -0.2
WCI **Wyandotte Cave** 114.96 60 IAMs_20 IAMs_20 23 06 00.9
comp=Z,1µm,21.0s
WMQ **Urumqi** 115.33 307 *e*PKP **PKPdf** **22 23 15.0 -0.1**
WMQ PP **PP** **22 24 21.8 +4.8**
WMQ AMB AMB
comp=Z,170nm,5.1s
WMQ LR LR
comp=Z,580nm,20.9s
WMQ LR LR
comp=Z,650nm,20.9s
WMQ LR LR
comp=Z,690nm,20.9s
A36M **Sachs Harbour** 115.55 17 **PKiKP** **22 23 15.6 +1.0**
A36M **Sachs Harbour** 115.55 17 P **PKiKP** **22 23 16.2 +1.7**
baz=227
HQIL **Hanson Quary C** 115.59 56 IAMs_20 IAMs_20 23 07 43.2
comp=Z,1µm,20.0s
L44A **Lake County Fo** 115.73 55 IAMs_20 IAMs_20 23 12 58.8
comp=Z,970nm,19.0s
TZTN **Tazewell** 116.09 63 IAMs_20 IAMs_20 23 06 00.4
comp=Z,1µm,20.0s
EYMN **Ely** 116.12 48 IAMs_20 IAMs_20 23 11 42.8
comp=Z,1µm,19.0s
COWI **Conover** 116.73 51 IAMs_20 IAMs_20 23 06 53.0
comp=Z,1µm,21.0s
DGZ **Jazzator, Alta** 118.12 313 ⇑*i*PKiKP **PKPdf** **22 23 19.3 -1.1**
GRTK **Grand Turk** 118.17 83 IAMs_20 IAMs_20 23 10 35.5
comp=Z,981nm,19.0s
P52A **Corning** 118.49 60 P **PKiKP** **22 23 21.5 +0.2**
baz=244
AAM **Ann Arbor** 118.61 57 IAMs_20 IAMs_20 23 09 16.2
comp=Z,1µm,19.0s
BLA **Blacksburg** 118.62 63 IAMs_20 IAMs_20 23 07 40.5
comp=Z,1µm,20.0s
ZSN **Zaisan** 118.72 309 *e*PKiKP **PKPdf** **22 23 20.7 -0.7**
ZSN **Zaisan** 118.72 309 *e*PKP **PKPdf** **22 23 20.8 -0.7**
baz=310
O53A **New Philadelph** 119.39 60 P **PKiKP** **22 23 23.4 +0.4**
baz=244
MK31 **Makanchi Array** 120.06 308 PKPdf **PKPdf** **22 23 22.4 -1.7**
MK31 **Makanchi Array** 120.06 308 *c* *i*PKiKP **PKPdf** **22 23 22.6 -1.5**
MKAR **Makanchi Array** 120.06 308 PKPdf **PKPdf** **22 23 22.3 -1.8**
MKAR **Makanchi Array** 120.06 308 PKiKP **PKPdf** **22 23 22.6 -1.5**
MKAR **Makanchi Array** 120.06 308 PKP **PKPdf** **22 23 22.6 -1.5**
comp=Z,13nm,0.9s,baz=83,slow=2.3,SNR=40
MKAR PKKPbc **PKKPbc** **22 33 33.9 +1.3**
comp=Z,1.5nm,0.8s,baz=300,slow=5.1,SNR=7.6
MCWV **Mont Chateau** 120.09 61 IAMs_20 IAMs_20 23 09 05.2
comp=Z,1µm,22.0s
MAKZ **Makanchi** 120.26 308 PKPdf **PKPdf** **22 23 22.8 -1.7**
MAKZ **Makanchi** 120.26 308 ⇓PKiKP **PKPdf** **22 23 23.3 -1.2**
M53A **WI Miller and** 120.26 59 P **PKiKP** **22 23 25.8 +1.1**
baz=245
SJG **San Juan** 120.34 90 IAMs_20 IAMs_20 23 10 01.0
comp=Z,884nm,19.0s
SHLS **Shalkode** 120.44 303 *e*PKiKP **PKPdf** **22 23 23.9 -1.1**
SHLS **Shalkode** 120.44 303 *e*PKP **PKPdf** **22 23 23.9 -1.1**
baz=303
UZB **Uzynbulak** 120.73 303 *e*PKiKP **PKPdf** **22 23 25.1 -0.5**
UZB **Uzynbulak** 120.73 303 *e*PKP **PKPdf** **22 23 25.2 -0.5**
baz=303
NIL **Nilore** 120.83 291 IAMs_20 IAMs_20 23 15 22.6
comp=Z,1µm,21.0s
KPKS **Kokpek** 121.08 303 *i* PKiKP **PKPdf** **22 23 25.3 -0.9**
KPKS **Kokpek** 121.08 303 *i* PKP **PKPdf** **22 23 25.3 -0.9**
baz=303
SATY **Saty** 121.11 303 *i* PKiKP **PKPdf** **22 23 25.4 -0.9**
SATY **Saty** 121.11 303 *i* PKP **PKPdf** **22 23 25.5 -0.9**
baz=303
CBN **Corbin Frederi** 121.23 64 IAMs_20 IAMs_20 23 09 19.5
comp=Z,1µm,20.0s
ZAA0 **Zalesovo Array** 121.28 316 PKPdf **PKPdf** **22 23 24.0 -2.1**
ZALV **Zalesovo Beam** 121.28 316 PKPdf **PKPdf** **22 23 23.8 -2.4**
ZALV **Zalesovo Beam** 121.28 316 PKiKP **PKPdf** **22 23 24.3 -1.8**
ZALV **Zalesovo Beam** 121.28 316 PKP **PKPdf** **22 23 24.3 -1.8**
comp=Z,6.2nm,0.7s,baz=158,slow=1.6,SNR=31
KSH **Kashi** 121.35 298 PKP **PKiKP** **22 23 27.3 +0.2**
KSH PP **PP** **22 25 03.3 +4.4**
KSH LR LR
comp=Z,880nm,22.3s
KSH LR LR
comp=Z,840nm,24.4s
KSH LR LR
comp=Z,1µm,26.8s
TDK **Taldyqorghan** 121.86 305 *e*PKiKP **PKPdf** **22 23 26.2 -1.3**
TDK **Taldyqorghan** 121.86 305 *e*PKP **PKPdf** **22 23 26.3 -1.3**
baz=305
SSPA **Standing Stone** 121.86 61 IAMs_20 IAMs_20 23 14 16.1
comp=Z,1µm,19.0s
MDOK **Medeo** 122.06 302 *e*PKiKP **PKPdf** **22 23 27.5 -0.7**
MDOK *e* 22 25 01.5
MDOK **Medeo** 122.06 302 *e*PKP **PKPdf** **22 23 27.6 -0.7**
baz=302
MDOK *e*PP **PP** **22 25 01.5 -2.1**
baz=302
AAA **Alma-Ata** 122.17 302 *e*PKiKP **PKPdf** **22 23 27.5 -0.8**
AAA **Alma-Ata** 122.17 302 *e*PKP **PKPdf** **22 23 27.6 -0.8**
baz=302

ULHL **Ulahol** 122.25 301 P PKiKP 22 23 28.9 0.0
SNR=8.3
CHKK **Chushkaly** 122.36 303 *e*PKiKP PKPdf 22 23 26.9 -1.7
CHKK **Chushkaly** 122.36 303 *e*PKP PKPdf 22 23 26.9 -1.7
baz=303
BIM **Bigot** 122.40 96 IAMs_20 IAMs_20 23 14 56.7
comp=Z,941nm,22.0s
FDF **Fort de France** 122.46 96 IAMs_20 IAMs_20 23 14 48.3
comp=Z,906nm,20.0s
SADO **Sadowa** 122.60 56 PKP PKiKP 22 23 29.6 +0.5
comp=Z,6.2nm,0.6s,baz=95,slow=1.1,SNR=4.8
SEM **Semipalatinsk** 122.67 311 *e*PKiKP PKPdf 22 23 27.4 -1.8
SEM **Semipalatinsk** 122.67 311 *e*PKP PKPdf 22 23 27.5 -1.8
baz=311
L56A **Greenwood** 122.68 59 PKPdf PKPdf 22 23 29.2 0.0
TDBA **Terre de Bas,** 122.70 95 IAMs_20 IAMs_20 23 10 06.7
comp=Z,835nm,18.0s
KUU **Kurty** 122.81 303 *i* PKiKP PKPdf 22 23 28.2 -1.3
KUU **Kurty** 122.81 303 *i* PKP PKPdf 22 23 28.2 -1.3
baz=303
TKM2 **Tokmak 2** 122.95 302 P PKPdf 22 23 29.0 -1.0
SNR=14
KBK **Karagaybulak** 123.30 301 P PKPdf 22 23 30.5 -0.1
SNR=9.9
CHMS **Chumysh** 123.56 301 P PKPdf 22 23 30.1 -0.8
SNR=12
AAK **Ala-Archa** 123.60 301 P PKPdf 22 23 31.1 -0.1
SNR=5.7
AAK **Ala-Archa** 123.60 301 PKPdf PKPdf 22 23 30.2 -0.9
AAK **Ala-Archa** 123.60 301 IAMs_20 IAMs_20 23 15 49.0
comp=Z,1μm,22.0s
AAK **Ala-Archa** 123.60 301 *d* iPKiKP PKPdf 22 23 31.0 -0.2
AAK pmax pmax
comp=Z,20nm,1.7s
KURK **Kurchatov** 123.75 311 PKPdf PKPdf 22 23 29.2 -1.7
KURK **Kurchatov** 123.75 311 *c* iPKiKP PKPdf 22 23 29.7 -1.3
KURK pmax pmax
comp=Z,91nm,1.7s
KURBB **Kurchatov Arra** 123.77 311 PKP PKPdf 22 23 29.8 -1.2
baz=116,slow=1.9
KURBB PP PP 22 25 12.1 -2.7
comp=Z,2.6nm,0.9s,baz=113,slow=7.3,SNR=6.2
KURBB PKKPbc PKKPbc 22 33 19.9 +1.4
comp=Z,1.2nm,0.8s,baz=294,slow=4.6,SNR=6.5
SGDS **Sogindy** 123.81 302 *e*PKiKP PKPdf 22 23 30.3 -1.1
SGDS **Sogindy** 123.81 302 *e*PKP PKPdf 22 23 30.4 -1.1
baz=302
USP **Ospenovka** 123.83 302 P PKPdf 22 23 30.8 -0.7
SNR=8.7
AML **Almayashu** 123.96 300 P PKPdf 22 23 31.9 -0.3
SNR=23
EKS2 **Erkin-Say** 124.10 301 P PKPdf 22 23 31.6 -0.5
SNR=18
J57A **Williamstown** 124.22 58 PKPdf PKPdf 22 23 31.8 -0.3
NBRF **Rio Formoso -** 124.33 138 *e*P PKiKP 22 23 35.6 +2.0
KBL **Kabul** 124.36 290 PKPdf PKPdf 22 23 32.4 -0.6
KBL **Kabul** 124.36 290 PKiKP PKPdf 22 23 32.4 -0.6
BTLS **Baital** 124.76 304 *e*PKiKP PKPdf 22 23 32.2 -0.9
BTLS **Baital** 124.76 304 *e*PKP PKPdf 22 23 32.3 -0.9
baz=304
PAL **Palisades** 124.79 62 IAMs_20 IAMs_20 23 12 48.7
comp=Z,1μm,20.0s
PAL **Palisades** 124.79 62 P PKiKP 22 23 33.8 +0.2
baz=248
TRY **Troy** 125.58 60 PKPdf PKiKP 22 23 35.1 0.0
YLE **Yale** 125.59 62 IAMs_20 IAMs_20 23 13 32.1
comp=Z,1μm,20.0s
LONY **Lake Ozonia** 125.59 57 IAMs_20 IAMs_20 23 16 18.1
comp=Z,1μm,19.0s
ACCN **Adirondack Com** 125.80 59 PKPdf PKiKP 22 23 35.5 0.0
DZA **Taraz** 125.87 300 *e*PKiKP PKPdf 22 23 34.4 -0.9
DZA **Taraz** 125.87 300 *e*PKP PKPdf 22 23 34.4 -0.9
baz=300
CHGR **Chuyangaron** 125.90 295 PKPdf PKPdf 22 23 34.4 -1.2
CHGR **Chuyangaron** 125.90 295 PKiKP PKPdf 22 23 34.4 -1.2
L61B **Northampton** 126.17 60 P PKiKP 22 23 36.6 +0.2
baz=250
KK31 **Karatay Array** 126.50 300 PKPdf PKPdf 22 23 35.4 -1.2
KK31 **Karatay Array** 126.50 300 PKiKP PKPdf 22 23 35.4 -1.2
KKAR **Karatay Array** 126.50 300 PKPdf PKPdf 22 23 35.3 -1.3
KKAR **Karatay Array** 126.50 300 PKiKP PKPdf 22 23 35.3 -1.3
IUG **luzhnay** 126.52 299 *i* PKiKP PKPdf 22 23 36.4 -0.3
IUG **luzhnay** 126.52 299 *i* PKP PKPdf 22 23 36.4 -0.3
baz=299
KIBK **Kibwezi** 126.57 232 IAMs_20 IAMs_20 23 18 23.0
comp=Z,994nm,18.0s
BRYW **Bryant College** 126.78 61 IAMs_20 IAMs_20 23 12 50.3
comp=Z,1μm,21.0s
BRZS **Berezniki** 127.16 309 *e*PKiKP PKPdf 22 23 36.3 -1.2
BRZS **Berezniki** 127.16 309 *e*PKP PKPdf 22 23 36.4 -1.2
baz=309
LBNH **Lisbon** 127.27 59 IAMs_20 IAMs_20 23 14 44.6
comp=Z,1μm,20.0s
I62A **Tamworth** 127.56 59 PKPdf PKiKP 22 23 39.0 0.0
H62A **Milan** 127.90 58 PKPdf PKiKP 22 23 40.0 +0.3
KMBO **Kilima Mbogo** 128.01 232 PKPdf PKPdf 22 23 40.2 -0.4
KMBO **Kilima Mbogo** 128.01 232 IAMs_20 IAMs_20 23 19 40.5
comp=Z,1μm,19.0s
KMBO **Kilima Mbogo** 128.01 232 ⇑ *i* PKiKP PKPdf 22 23 39.6 -1.1
KMBO **Kilima Mbogo** 128.01 232 PKP PKPdf 22 23 40.3 -0.4
comp=Z,9.7nm,0.9s,baz=23,slow=2.1,SNR=13
BVAR **Borovoye Array** 129.28 312 SKPab SKPab 22 26 59.5 0.0
comp=Z,5.8nm,0.9s,baz=101,slow=4.7,SNR=6.0
BRVK **Borovoye** 129.35 312 PKPdf PKPdf 22 23 40.5 -1.1
BRVK **Borovoye** 129.35 312 *c* iPKiKP PKPdf 22 23 41.0 -0.6
BRVK pmax pmax
comp=Z,59nm,1.7s
UOSS **Minazif** 130.17 273 PKPdf PKPdf 22 23 43.4 -0.7
UOSS **Minazif** 130.17 273 IAMs_20 IAMs_20 23 15 53.4
comp=Z,799nm,20.0s
LODK **Lodwar** 132.70 234 PKPdf PKiKP 22 23 49.9 -0.5
LODK IAMs_20 IAMs_20 23 26 15.9
comp=Z,753nm,20.0s
SCHQ **Schefferville** 132.81 46 SKPab SKPbc 22 27 13.5 +0.5
comp=Z,6.0nm,0.7s,baz=259,slow=7.3,SNR=6.3
GEYT **Alibeck** 133.81 290 PKPdf PKPdf 22 23 49.9 -0.8
GEYT **Alibeck** 133.81 290 PKP PKPdf 22 23 50.2 -0.5
comp=Z,5.8nm,0.9s,baz=230,slow=3.7,SNR=8.8
GEYT SKPbc SKPbc 22 27 14.4 -2.6
comp=Z,8.1nm,1.1s,baz=202,slow=6.9,SNR=6.3
GYA0B **ALIBECK ARRAY** 133.81 290 PKPdf PKPdf 22 23 50.4 -0.2
NEEM **North Greenlan** 134.33 14 *i* P PKiKP 22 23 51.6 -0.5
ABKAR **Akbulak array** 135.10 306 PKPdf PKPdf 22 23 52.3 -0.3
ABKAR **Akbulak array** 135.10 306 PKPdf PKPdf 22 23 52.1 -0.5
ARU **Arti** 136.44 316 PKPdf PKPdf 22 23 54.2 -0.7
ARU IAMs_20 IAMs_20 23 32 49.0
comp=Z,945nm,20.0s
ARU **Arti** 136.44 316 *c* iPKiKP PKPdf 22 23 54.1 -0.7
ARU pmax pmax
comp=Z,47nm,1.3s
ARU **Arti** 136.44 316 PKP PKPdf 22 23 54.3 -0.5
comp=Z,6.7nm,0.3s,baz=76,slow=1.7,SNR=19
ARU SKPbc SKPbc 22 27 23.0 -1.6
comp=Z,10.0nm,0.9s,baz=251,slow=1.9,SNR=7.0
AKTO **Aktyubinsk** 136.49 307 PKiKP PKPdf 22 23 54.1 -1.1
AKTO **Aktyubinsk** 136.49 307 PKP PKPdf 22 23 54.1 -1.1
comp=Z,4.1nm,0.5s,baz=101,slow=6.5,SNR=14
AKTO PP PP 22 26 32.7 -4.7
comp=Z,1.7nm,0.8s,baz=205,slow=11,SNR=4.7
AKTO SKPbc SKPbc 22 27 23.3 -1.6
comp=Z,5.9nm,0.9s,baz=136,slow=6.4,SNR=5.8
KBS **Kingsbay** 137.76 356 IAMs_20 IAMs_20 23 21 47.3
comp=Z,870nm,20.0s
KBS **Kingsbay** 137.76 356 *c* iPKiKP PKiKP 22 23 58.0 -0.7
KBS pmax pmax
comp=Z,17nm,0.8s
KBS **Kingsbay** 137.76 356 *i* P PKiKP 22 23 57.8 -0.9
KBS **Kingsbay** 137.76 356 *e*P PKiKP 22 23 58.4 -0.3
KBS IAmb IAmb 22 24 00.2
comp=Z,20nm,1.0s
RAYN **Ar Rayn** 138.03 265 PKPdf PKPdf 22 23 57.7 -1.2
RAYN **Ar Rayn** 138.03 265 ⇑ PKHKP PKPpre 22 23 49.9
ILULI **Ilulissat** 138.11 24 *i* P PKiKP 22 24 00.7 +1.1
SPA0 **Spitsbergen Ar** 138.20 355 *e*P PKiKP 22 23 59.6 -0.1
SPA0 IAmb IAmb 22 24 01.4
comp=Z,73nm,1.1s
SPITS **Spitsbergen Ar** 138.20 355 PKiKP PKPdf 22 23 57.3 -0.3
SPB2 **Spitsbergen Ar** 138.20 355 PKPdf PKPdf 22 23 57.9 +0.3
SFJD **Kangerlussuaq** 139.13 27 IAMs_20 IAMs_20 23 22 23.5
comp=Z,1μm,21.0s
NUUK **Nuuk** 139.63 32 *i* P PKPdf 22 23 57.4 -3.0
SUMG **Summit** 139.84 17 PKPdf PKPdf 22 24 01.1 -0.1
SUMG **Summit** 139.84 17 PKiKP PKPdf 22 24 01.1 -0.1
SUMG MLR MLR
comp=Z,1μm,20.0s
SUMG **Summit** 139.84 17 *i* P PKPdf 22 23 55.5 -5.7
DY2G **Dye2** 140.92 27 *i* P PKPdf 22 23 58.9 -4.2
KIRV **Kirov** 141.15 320 PKhKP PKPpre 22 23 59.9
comp=Z,26nm,0.8s,baz=148,slow=1.6,SNR=14
KIRV SKPbc SKPbc 22 27 37.2 -0.4
comp=Z,10nm,0.8s,baz=92,slow=3.3,SNR=11
ICESG **Greenland Ices** 141.73 21 *i* P PKPdf 22 24 00.5 -4.2
IVI **Ivigtut** 142.09 35 PKPdf PKPdf 22 24 06.3 +1.4
IVI **Ivigtut** 142.09 35 *i* P PKiKP 22 24 06.6 -1.3
PRGR **Permogore** 142.21 326 *e*PKiKP PKPdf 22 24 02.2 -3.0
MAK **Makhachkala** 142.83 294 *i* P Pdif 22 21 32.5 +3.4
MAK *e*PPP PPP 22 30 22.9
MAK pmax pmax
comp=Z,115nm,1.1s
BELG **Belogornoye** 143.01 310 PKhKP PKPpre 22 24 03.0
comp=Z,34nm,0.8s,baz=159,slow=0.2,SNR=8.5
BELG SKPbc SKPbc 22 27 41.4 -1.1
comp=Z,56nm,1.1s,baz=245,slow=1.4,SNR=7.1
LVZ **Lovozero** 143.33 338 ⇑ *e*PKiKP PKPdf 22 24 08.6 +1.5
APA **Apatity** 143.91 338 ⇑ *i* PKHKP PKPpre 22 23 57.3
APA *i* 22 27 19.0
APA pmax pmax
comp=Z,44nm,0.6s
APA pmax pmax
comp=Z,71nm,0.6s
APA MLR MLR
comp=Z,1μm,18.0s
HAMF **Hammerfest** 143.98 346 *e*P PKPdf 22 24 08.6 +0.5
HAMF IAmb IAmb 22 24 11.8
comp=Z,64nm,1.0s
GROC **Groznyy** 144.10 295 *e*PKHKP PKPpre 22 24 05.2
GROC *e* 22 27 19.3
GROC pmax pmax
comp=Z,117nm,0.8s
ANGG **Ammassalik, Gr** 144.40 25 *i* P PKPab 22 24 06.6 -0.5
GNI **Garni** 144.45 289 PKPdf PKPbc 22 24 08.6 -0.1
GNI **Garni** 144.45 289 *de*PKiKP PKPdf 22 24 09.5 -0.6
GNI **Garni** 144.45 289 SKPbc SKPbc 22 27 44.9 -1.7
comp=Z,10nm,1.0s,baz=264,slow=2.2,SNR=4.6
ARCES **ARCESS Array B** 144.51 344 PKPdf PKPab 22 24 07.2 -0.3
ARCES **ARCESS Array B** 144.51 344 PKiKP PKPab 22 24 07.1 -0.5
ARCES **ARCESS Array B** 144.51 344 PKP PKPab 22 24 07.1 -0.5
comp=Z,19nm,0.7s,baz=14,slow=1.5,SNR=50
SCO **Scoresbysund** 144.78 12 *i* P PKPbc 22 24 08.8 +0.2
SCO **Scoresbysund** 144.78 12 *i* P PKPbc 22 24 09.0 +0.5
KLMR **Klimovskoe** 145.24 326 *e*PKHKP PKPpre 22 24 06.3
KLMR pmax pmax
comp=Z,224nm,1.3s
KLMR **Klimovskoe** 145.24 326 *e*PKPdf PKPbc 22 24 06.4 -3.9
KLMR AMP 22 24 11.4
comp=Z,224nm,1.3s
KLMR *e*SKP 22 27 45.6
KLMR LQ LQ 23 19 48.5
KLMR LQ LQ 23 19 48.5
KLMR LR LR 23 23 04.2
GEVA **Gevas** 145.38 286 PKPbc 22 24 10.3 -1.4
KTK1 **Kautokeino** 145.41 345 *e*P PKPdf 22 24 10.1 -0.6
KTK1 IAmb IAmb 22 24 19.8
comp=Z,98nm,1.1s
ZEI **Tsey** 145.44 294 *i* PKP2 PKPdf 22 24 09.2 -2.6
ZEI pmax pmax
comp=Z,78nm,1.4s
JETT **Jettan, Norway** 145.50 347 *e*P PKPdf 22 24 10.4 -0.4
JETT IAmb IAmb 22 24 10.7
comp=Z,57nm,1.0s
TRO **Tromso** 145.70 348 *e*P PKPdf 22 24 11.0 -0.1
TRO IAmb IAmb 22 24 13.1
comp=Z,218nm,1.3s
GOF **Gofitskoye** 146.22 298 ⇑ *e*PKP2 PKPdf 22 24 13.3 +0.6
GOF pmax pmax
comp=Z,145nm,1.1s
KBZ **Khabaz** 146.25 295 *ce*PKP2 PKPdf 22 24 12.3 -0.5
KBZ **Khabaz** 146.25 295 PKPbc PKPdf 22 24 13.0 +0.2
comp=Z,21nm,0.9s,baz=76,slow=1.7,SNR=19
KIV **Kislovodsk** 146.42 296 IAMs_20 IAMs_20 23 33 50.2
comp=Z,669nm,20.0s
KIV **Kislovodsk** 146.42 296 *i* PKiKP PKPdf 22 24 12.3 -1.0
KIV *e* 22 27 33.1
KIV *e*SS SS 22 46 26.9 -6.9
KIV *e*SSS SSS 22 52 01.9
KIV pmax pmax
comp=Z,23nm,1.1s
VRH **Novokhopyorsk** 146.78 309 *e*PKiKP PKPdf 22 24 13.3 -0.1
VRH pmax pmax
comp=Z,90nm,0.7s
MARD **Mardin** 146.93 283 PKPdf PKPdf 22 24 14.5 +0.1
STEI **Steigen** 147.83 349 *e*P PKPbc 22 24 17.1 -0.5
STEI IAmb IAmb 22 24 18.3
comp=Z,265nm,1.0s
LOF **Lofoten** 147.90 350 *e*P PKPbc 22 24 17.4 -0.4
LOF IAmb IAmb 22 24 18.2
comp=Z,183nm,1.0s
MOS **Moscow** 148.09 318 *e*PKiKP PKPdf 22 24 14.8 -0.7
MOS *e* 22 27 48.9
MOS *e*PPP PPP 22 31 06.8
MOS pmax pmax
comp=Z,173nm,1.1s
LPSR **Galich'ya Gora** 148.23 312 *e*PKiKP PKPdf 22 24 15.6 -0.2
LPSR pmax pmax
comp=Z,160nm,1.2s
VORR **Voronezh** 148.25 310 *e*PKiKP PKPdf 22 24 15.8 -0.1
VORR pmax pmax
comp=Z,180nm,1.1s
FAUS **Fauske** 148.32 348 *e*P PKPbc 22 24 18.4 -0.5
FAUS IAmb IAmb 22 24 19.5
comp=Z,162nm,1.0s
VSR **Storozhevoye** 148.37 309 *e*PKiKP PKPdf 22 24 15.9 -0.2
VSR pmax pmax
comp=Z,70nm,1.0s
SOC **Sochi** 148.55 295 *e*PKHKP PKPpre 22 24 14.8
SOC *i* 22 24 20.2
SOC *e* 22 27 49.7
SOC *e*PPP PPP 22 31 06.3
SOC *e*SS SS 22 46 52.3 -5.4
SOC *e*SSS SSS 22 52 35.7
SOC pmax pmax
comp=Z,32nm,1.0s
SOC pmax pmax
comp=Z,40nm,0.8s
SOC MLR MLR
comp=Z,645nm,19.0s
ASF **Jabal al Asfar** 148.58 272 PKPbc 22 24 20.5 -0.4
ASF **Jabal al Asfar** 148.58 272 PKP2 PKPbc 22 24 20.5 -0.4
ASF **Jabal al Asfar** 148.58 272 PKPbc PKPbc 22 24 20.5 -0.4
comp=Z,64nm,1.1s,baz=174,slow=1.1,SNR=25
VALR **Valaam** 148.61 331 *ce*PKiKP PKPdf 22 24 15.6 -0.5
OBN **Obninsk** 148.86 317 *de*PKiKP PKPdf 22 24 16.7 0.0
OBN *e* 22 27 51.5
OBN *e*SS SS 22 47 02.1 +2.1
OBN pmax pmax
comp=Z,182nm,1.3s
OBN MLR MLR
comp=Z,883nm,22.0s
OBN **Obninsk** 148.86 317 PKP PKPdf 22 24 16.9 +0.1
comp=Z,7.6nm,0.6s,baz=20,slow=2.0,SNR=8.6
OBN PKPbc PKPbc 22 24 20.1 -0.6
comp=Z,14nm,0.7s,baz=78,slow=4.2,SNR=4.8
LIC **Lamto** 149.02 172 *e*PKP1 PKPbc 22 24 22.3 -0.1
comp=Z,168nm,0.9s
KIC **Kosan Boka** 149.18 173 ⇑ *e*PKP1 PKPbc 22 24 23.0 +0.2
comp=Z,64nm,0.4s
EIL **Elat** 149.22 267 PKPbc PKPbc 22 24 22.5 0.0
comp=Z,94nm,1.1s,baz=64,slow=0.7,SNR=22
TIC **Toumodi** 149.43 172 ⇑ *e*PKP1 PKPbc 22 24 23.6 +0.1
comp=Z,90nm,1.0s
DBIC **Dimbokro** 149.48 172 PKPbc PKPbc 22 24 23.2 -0.4
DBIC **Dimbokro** 149.48 172 PKP2 PKPbc 22 24 23.2 -0.4
DBIC **Dimbokro** 149.48 172 PKPbc PKiKP 22 24 24.2 -0.4
comp=Z,27nm,0.9s,baz=159,slow=3.2,SNR=20
KONS **Konsvik** 149.48 349 *e*P PKPbc 22 24 21.4 -0.5
KONS IAmb IAmb 22 24 22.1
comp=Z,113nm,0.9s
MOR8 **Moi Rana** 149.56 348 *e*P PKPbc 22 24 21.3 -0.9
MOR8 IAmb IAmb 22 24 21.9
comp=Z,84nm,0.9s
BORG **Borgarnes** 149.82 17 PKPbc PKiKP 22 24 23.3 -0.4
BORG **Borgarnes** 149.82 17 PKP2 PKPbc 22 24 23.0 +0.2
BORG **Borgarnes** 149.82 17 PKPbc PKPbc 22 24 23.0 +0.2
comp=Z,40nm,0.9s,baz=219,slow=1.4,SNR=8.5
MMAI **Mount Meron Ar** 150.04 273 PKPbc PKPbc 22 24 24.8 +0.3
comp=Z,17nm,0.6s,baz=313,slow=9.0,SNR=26
ANN **Anapa** 150.21 297 *e*PKiKP PKPbc 22 24 23.7 -0.7
ANN pmax pmax
comp=Z,81nm,0.9s
FIA1 **FINESS Array S** 150.35 334 PKPdf PKPdf 22 24 18.2 -0.7
FIA1 PKPbc PKPbc 22 24 23.6 -0.6
FINES **FINESS Array B** 150.35 334 PKiKP PKPdf 22 24 18.5 -0.4
FINES 22 24 23.6
FINES **FINESS Array B** 150.35 334 PKP PKPdf 22 24 18.5 -0.4
comp=Z,74nm,0.8s,baz=64,slow=2.3,SNR=110
FINES PKPbc PKPbc 22 24 23.6 -0.6
comp=Z,75nm,0.8s,baz=38,slow=4.5,SNR=48
BNN **Bunyan** 151.03 285 PKPdf 22 24 18.6 -2.3
NSS **Namsos** 151.49 348 *e*P PKPbc 22 24 26.4 -0.4
NSS IAmb IAmb 22 24 27.3
comp=Z,289nm,1.2s
MEF **Metsahovi** 151.79 333 *e*P PKPbc 22 24 26.6 -1.0
VSU **Vasula** 152.03 329 *e*P PKPbc 22 24 27.0 -1.2
RAF **Rauma** 152.11 336 *e*P PKPbc 22 24 26.6 -1.6
SIM **Simferopol'** 152.55 298 *i* PKiKP PKiKP 22 24 30.0 -0.1
SIM *e* 22 24 31.2
SIM *e* 22 24 37.0
SIM pmax pmax
comp=Z,31nm,0.9s
SIM pmax pmax
comp=Z,47nm,0.9s
BR131 **Keskin Array S** 152.84 286 PKPdf 22 24 22.7 -1.0
BR131 PKPbc 22 24 29.5 -1.3
BR131 **Keskin Array S** 152.84 286 PKiKP PKPbc 22 24 29.5 -1.3
BRTR **Keskin Array B** 152.84 286 PKPdf 22 24 21.7 -1.9
BRTR PKPbc 22 24 30.5 -0.4
BRTR **Keskin Array B** 152.84 286 PKiKP PKPdf 22 24 22.4 -1.3
BRTR 22 24 30.1
BRTR **Keskin Array B** 152.84 286 PKP PKPdf 22 24 22.4 -1.3
comp=Z,2.1nm,0.8s,baz=176,slow=5.0,SNR=7.6
BRTR PKPbc PKPbc 22 24 30.1 -0.8
comp=Z,10nm,0.7s,baz=150,slow=3.7,SNR=20
BRTR PKPab PKPab 22 24 42.4 +0.4
comp=Z,27nm,1.0s,baz=131,slow=1.7,SNR=7.2
ILGA **Ilgaz** 152.88 289 PKPbc PKPbc 22 24 31.1 +0.1
TBLU **Trondheim** 152.96 349 *e*P PKPbc 22 24 28.6 -1.5
TBLU IAmb IAmb 22 24 29.6
comp=Z,87nm,0.9s
MTSE **Matsula** 153.04 331 *e*P PKPbc 22 24 29.2 -1.1
ANTO **Ankara** 153.50 286 PKPbc PKPbc 22 24 31.7 -0.5
ANTO **Ankara** 153.50 286 PKiKP PKPbc 22 24 31.7 -0.5
ANTO MLR MLR
comp=Z,1μm,21.0s
MNK **Minsk** 153.69 321 *i* PKiKP PKPdf 22 24 20.7 -3.4
MNK *i* 22 24 29.8
MNK *i* 22 28 19.0
MNK *i* PPP PPP 22 31 48.6
MNK *i* SS SS 22 47 57.6 +4.3
MNK *i* SSS SSS 22 53 50.5
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=Z,21nm,1.0s
MNK **Minsk** 153.69 321 *i* LRM MLR 23 33 28.9
comp=E,96nm,20.1s
MNK **Minsk** 153.69 321 *i* PKP PKPdf 22 24 20.8 -3.4
comp=E,2.0nm,1.0s
MNK **Minsk** 153.69 321 *i* PKP PKPdf 22 24 20.8 -3.4
baz=60
MNK **Minsk** 153.69 321 *i* PKP PKPdf 22 24 20.8 -3.4
comp=Z,21nm,1.0s
MNK **Minsk** 153.69 321 *i* PKiKP PKPbc 22 24 29.9 -2.1
MNK **Minsk** 153.69 321 *i* SKP 22 27 42.3
MNK **Minsk** 153.69 321 *i* PKS 22 27 49.1
MNK **Minsk** 153.69 321 *i* PP PP 22 28 19.0 -0.4
MNK **Minsk** 153.69 321 *i* SKS SKSdf 22 30 47.1 -41
MNK **Minsk** 153.69 321 *i* PPP PPP 22 31 48.6
MNK **Minsk** 153.69 321 *i* SKKS 22 32 49.5
MNK **Minsk** 153.69 321 *i* SS SS 22 47 57.6 +4.4
MNK **Minsk** 153.69 321 *i* SSS SSS 22 53 50.6
MNK **Minsk** 153.69 321 *i* LR LR 23 28 52.1
MNK **Minsk** 153.69 321 *i* LRM MLR 23 33 28.9
comp=Z,645nm,20.1s
MNK **Minsk** 153.69 321 *i* LRM MLR 23 33 28.9
MOL **Molde** 153.99 351 *e*P PKPbc 22 24 31.5 -0.8
NACGM **Naroch** 154.03 322 *e*PKP PKPdf 22 24 18.5 -6.2
IIGN **Ignalina** 154.06 323 *e*P PKPbc 22 24 32.7 -0.1
DOMB **Dombas** 154.29 349 *e*P PKPbc 22 24 32.9 -0.2
DOMB IAmb IAmb 22 24 34.0
comp=Z,42nm,0.9s
AKN **Aaknes** 154.44 351 *e*P PKiKP 22 24 33.9 +0.5
AKN IAmb IAmb 22 24 34.6
comp=Z,74nm,0.9s
AKASG **Malin Array Be** 154.56 312 PKPdf PKPdf 22 24 23.9 -1.6
AKASG **Malin Array Be** 154.56 312 PKiKP PKPdf 22 24 23.4 -2.1
AKASG 22 24 33.4
AKASG **Malin Array Be** 154.56 312 PKP PKPdf 22 24 23.4 -2.1
comp=Z,4.6nm,0.9s,baz=57,slow=2.0,SNR=16
AKASG PKPbc PKPbc 22 24 33.4 -0.5
comp=Z,5.5nm,0.5s,baz=57,slow=2.9,SNR=14
NC303 **NORSAR Array S** 154.66 346 PKPdf PKPdf 22 24 24.4 -0.9
NC303 **NORSAR Array S** 154.66 346 *e*P PKPbc 22 24 33.7 -0.2
NC303 IAmb IAmb 22 24 34.7
comp=Z,46nm,0.8s
NB2 **NORSAR Subarra** 154.85 346 PKPdf PKPbc 22 24 33.6 -0.8
comp=Z,19nm,0.8s,baz=27,slow=1.8
NB2 **NORSAR Subarra** 154.85 346 PKPdf PKPbc 22 24 33.6 -0.8
baz=27,slow=1.8
NOA **NORSAR Array B** 154.85 346 PKiKP PKPdf 22 24 25.1 -0.6
NOA 22 24 34.0
NOA **NORSAR Array B** 154.85 346 PKP PKPdf 22 24 25.1 -0.6
comp=Z,9.8nm,1.1s,baz=33,slow=1.8,SNR=15
NOA PKPbc PKPbc 22 24 34.0 -0.3
comp=Z,18nm,0.8s,baz=32,slow=2.0,SNR=28
PABE **Paberze** 155.03 325 PKPdf PKPdf 22 24 24.2 -1.8
PABE **Paberze** 155.03 325 *e*P PKPbc 22 24 33.9
HFS **Hagfors** 155.13 342 PKiKP PKPdf 22 24 25.6 -0.4
HFS 22 24 34.1
HFS 22 24 50.6
HFS **Hagfors** 155.13 342 PKP PKPdf 22 24 25.6 -0.4
comp=Z,8.5nm,1.1s,baz=289,slow=4.5,SNR=4.0
HFS PKPbc pPKPdf 22 24 34.1 -2.2
comp=Z,23nm,0.9s,baz=132,slow=2.2,SNR=21
HFS PKPab PKPab 22 24 50.6 -0.3
comp=Z,13nm,0.7s,baz=49,slow=4.5,SNR=6.6
SKAR **Skarslia** 155.70 349 *e*P PKPdf 22 24 36.3 +9.5
TOA0 **Torodi Ar. Sit** 156.00 186 PKPdf PKPdf 22 24 28.2 -0.4
TOA0 PKPab PKPab 22 24 55.5 -0.1
TORD **Torodi Ar. Bea** 156.00 186 PKPdf PKPdf 22 24 26.8 -1.8
TORD PKPab PKPab 22 24 55.4 -0.2
TORD **Torodi Ar. Bea** 156.00 186 PKP PKPdf 22 24 29.3 +0.7
comp=Z,15nm,1.1s,baz=190,slow=0.2,SNR=19
TORD PKPab PKPab 22 24 56.2 +0.6
comp=Z,43nm,0.9s,baz=158,slow=5.0,SNR=14
KARP **Karpathos** 157.29 275 IAMs_20 IAMs_20 23 34 34.5
comp=Z,954nm,22.0s
KOWA **Kowa** 157.30 172 PKPab PKPab 22 25 02.1 +0.8
comp=Z,10nm,1.0s,baz=311,slow=2.1,SNR=4.2
LVV **L'vov** 157.97 313 *e*PKiKP PKPdf 22 24 27.1 -2.9
BUR08 **Bucovina Ar. S** 158.08 307 PKPdf PKPdf 22 24 30.4 0.0
SANT **Santorini** 158.81 276 IAMs_20 IAMs_20 23 53 08.6
comp=Z,608nm,20.0s
IDI **Anoyia** 159.05 273 IAMs_20 IAMs_20 23 47 57.0
comp=Z,882nm,22.0s
OKC **Ostrava-Krasne** 161.25 319 AMS AMS 23 39 30.0
comp=Z,900nm,22.0s
MORC **Moravsky Berou** 161.60 319 PKPdf PKPdf 22 24 33.6 -0.6
MORC **Moravsky Berou** 161.60 319 PKiKP PKPdf 22 24 33.6 -0.6
MORC **Moravsky Berou** 161.60 319 *e*PKP PKPdf 22 24 33.8 -0.4
MORC *e* 22 25 19.0
EKA **Eskdalemuir Ar** 161.73 4 PKP2 PKPab 22 25 18.7 -0.8
EKA **Eskdalemuir Ar** 161.73 4 PKPab PKPab 22 25 18.7 -0.8
comp=Z,7.8nm,0.9s,baz=344,slow=2.8,SNR=9.3
OSTC **Ostas** 161.78 323 AMS AMS 23 35 50.0
comp=Z,1μm,23.3s
KRLC **Kraliky** 161.81 321 AMS AMS 23 36 30.0
comp=Z,1μm,20.8s
DPC **Dobruska-Polom** 161.86 322 *e*PKP2 PKPab 22 25 19.2 -1.2
DPC MLR MLR
comp=Z,1μm,24.0s
DPC **Dobruska-Polom** 161.86 322 *e*PKPAB PKPab 22 25 19.2 -1.2
DPC AMS AMS 23 36 00.0
comp=Z,1μm,24.0s
UPC **Upice** 161.91 323 *e*PKP2 PKPab 22 25 19.7 -0.8
UPC MLR MLR
comp=Z,1μm,19.8s
UPC **Upice** 161.91 323 *e*PKPAB PKPab 22 25 19.7 -0.8
UPC AMS AMS 23 40 40.0
comp=Z,1μm,19.8s
JAVC **Velka Javorina** 162.06 317 *e*PKP PKPdf 22 24 34.7 0.0
JAVC *e* 22 25 21.5
VRAC **Vranov** 162.38 319 PKiKP PKPdf 22 24 35.0 0.0
VRAC 22 25 22.1

VRAC	**Vranov**	**162.38**	**319**	*e*PKP	**PKPdf**	**22 24 35.3**	**+0.3**
VRAC				*e*		22 25 22.6	
VRAC	**Vranov**	**162.38**	**319**	PKP	**PKPdf**	**22 24 35.0**	**0.0**
	comp=Z,2.5nm,0.5s,baz=97,slow=4.0,SNR=4.9						
VRAC				PKPab	**PKPab**	**22 25 22.1**	**-0.5**
	comp=Z,23nm,1.1s,baz=43,slow=4.6,SNR=7.0						
PVCC	**Panska Ves**	**162.57**	**325**	*e*PKP2	**PKPab**	**22 25 22.5**	**-0.9**
PVCC				MLR	MLR		
	comp=Z,2µm,24.3s						
PVCC	**Panska Ves**	**162.57**	**325**	*e*PKPAB	**PKPab**	**22 25 22.5**	**-0.9**
PVCC				AMS	AMS	23 37 30.0	
	comp=Z,2µm,24.3s						
BRG	**Berggiesshubel**	**162.61**	**327**	*e*PKP	**PKPdf**	**22 24 35.8**	**+0.6**
BRG				Amp		22 24 38.5	
	comp=Z,14nm,1.4s						
BRG				*ex*	x	22 24 53.4	
BRG				Amp		22 24 55.1	
	comp=Z,12nm,1.2s						
BRG				*ex*	x	22 25 23.8	
BRG				Amp		22 25 32.2	
	comp=Z,17nm,1.1s						
BRG	**Berggiesshubel**	**162.61**	**327**	*ex*	x	22 49 28.0	
BRG	**Berggiesshubel**	**162.61**	**327**	*e*PKIKP	**PKPdf**	**22 24 35.7**	**+0.6**
BRG				*e*		22 49 28.0	
BRG				pmax	pmax		
	comp=Z,14nm,1.4s						
BRG				pmax	pmax		
	comp=Z,12nm,1.2s						
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BRG				pmax	pmax		
	comp=N,842nm,19.6s						
BRG				MLR	MLR		
	comp=E,749nm,20.4s						
BRG				MLR	MLR		
	comp=Z,2µm,23.2s						
KRUC	**Moravsky**	**162.63**	**319**	*e*PKP	**PKPdf**	**22 24 35.5**	**+0.3**
KRUC				*e*		22 25 22.9	
CLL	**Collm**	**162.68**	**329**	*e*PKPdf	**PKPdf**	**22 24 34.0**	**-1.2**
CLL				*e*PKPdif	**sPKPdf**	**22 24 50.0**	**+1.1**
CLL				*i* PKPab	**PKPab**	**22 25 22.5**	**-1.3**
	comp=Z,12nm,1.1s						
CLL				*ep*PKPab	**pPKPab**	**22 25 32.0**	**-1.7**
CLL				*e*SKPdf	**SKPdf**	**22 28 06.0**	**+1.5**
CLL				*e*PP	**PP**	**22 29 11.0**	**+2.6**
CLL				*ex*	x	22 29 25.0	
CLL				*e*SKSdf	**SKSdf**	**22 31 42.0**	**+4.9**
CLL				*e*PPP	PPP	22 32 54.0	
CLL				*e*SKKSac	**SKKSac**	**22 35 48.0**	**-5.8**
CLL				*e*PPPrev		22 36 42.0	
CLL				*e*PSKS		22 39 25.0	
CLL				*e*PPS	PPS	22 42 29.0	
CLL				*ex*	x	22 44 18.0	
CLL				*ex*	x	22 45 46.0	
CLL				*e*SS	**SS**	**22 49 29.0**	**+0.5**
CLL				*e*PSPS		22 50 54.0	
CLL				*ex*	x	22 51 30.0	
CLL				*e*SSS	SSS	22 55 42.0	
CLL				*ex*	x	23 00 24.0	
CLL				Lm	MLR	23 52 00.0	
	comp=N,800nm,19.9s						
CLL				Lm	MLR	23 52 00.0	
	comp=E,600nm,21.5s						
CLL				Lm	MLR	23 52 00.0	
	comp=Z,1µm,20.8s						
TREC	**Trest**	**162.95**	**321**	*e*PKP2	**PKPab**	**22 25 23.9**	**-1.3**
TREC				MLR	MLR		
	comp=Z,1µm,19.0s						
TREC	**Trest**	**162.95**	**321**	*e*PKPAB	**PKPab**	**22 25 23.9**	**-1.3**
TREC				AMS	AMS	23 37 10.0	
	comp=Z,1µm,19.0s						
PRU	**Pruhonice**	**162.96**	**324**	*e*PKP2	**PKPab**	**22 25 24.4**	**-0.7**
PRU				MLR	MLR		
	comp=Z,2µm,24.4s						
PRU	**Pruhonice**	**162.96**	**324**	*e*PKPAB	**PKPab**	**22 25 24.4**	**-0.7**
PRU				AMS	AMS	23 34 00.0	
	comp=Z,2µm,24.4s						
NKC	**Novy Kostel**	**163.72**	**328**	AMS	AMS	23 41 50.0	
	comp=Z,1µm,22.5s						
KHC	**Kasperske Hory**	**164.00**	**323**	AMS	AMS	23 34 20.0	
	comp=Z,2µm,25.7s						
GERES	**GERESS Array B**	**164.14**	**322**	PKP2	**PKPab**	**22 25 29.6**	**-0.9**
GERES	**GERESS Array B**	**164.14**	**322**	PKPab	**PKPab**	**22 25 29.6**	**-0.9**
	comp=Z,10nm,1.1s,baz=150,slow=17,SNR=7.7						
TAM	**Tamanrasset**	**164.64**	**203**	PKPdf	**PKPdf**	**22 24 35.4**	**-2.7**
TAM	**Tamanrasset**	**164.64**	**203**	PKIKP	**PKPdf**	**22 24 35.4**	**-2.7**
PMOZ	**Porto Moniz, M**	**166.04**	**103**	*e*LR	LR	23 23 41.0	
	comp=Z,705nm,22.0s						
BMRD	**Maredsous**	**166.20**	**344**	*d*PKP	**PKPab**	**22 25 38.0**	**-1.2**
KEST	**Kesra**	**171.55**	**264**	PKPab	**PKPab**	**22 26 05.0**	**+1.3**
	comp=Z,11nm,1.0s,baz=161,slow=1.7,SNR=6.1						
PGAV	**Gavieira, Arco**	**172.59**	**47**	*e*SS	SS	22 51 25.3	+16
PGAV	**Gavieira, Arco**	**172.59**	**47**	*e*LR	LR	23 30 46.7	
	comp=Z,1µm,20.0s						
POLO	**Lamas de Olo**	**173.24**	**49**	*e*PKP	**PKPdf**	**22 24 46.1**	**+3.2**
POLO				*e*-		22 26 14.6	
PVRL	**Vila Real**	**173.34**	**50**	*e*PKP	**PKPdf**	**22 24 44.2**	**+1.3**
PVRL				*e*-		22 26 16.8	
PSBE	**So Bento**	**173.43**	**66**	*e*PKP	**PKPdf**	**22 24 48.4**	**+5.4**
PCAS	**Casmilo, Conde**	**173.44**	**61**	*e*PKP	**PKPdf**	**22 24 46.7**	**+3.8**
PVIS	**Viseu**	**173.54**	**54**	*e*PKP	**PKPdf**	**22 24 46.6**	**+3.6**
PVIS				*e*-		22 26 10.8	
PBRG	**Braganca**	**173.56**	**42**	*e*PKP	**PKPdf**	**22 24 41.4**	**-1.6**
PBRG				*e*-		22 26 15.3	
PFVI	**Vila Bisbo**	**173.75**	**88**	*e*PKP	**PKPdf**	**22 24 41.8**	**-1.3**
MVO	**Moncorvo**	**173.82**	**47**	*e*PKP	**PKPdf**	**22 24 46.0**	**+2.9**
MVO				*e*-		22 26 17.9	
MVO	**Moncorvo**	**173.82**	**47**	*e*SS	SS	22 50 55.9	-25
MVO	**Moncorvo**	**173.82**	**47**	*e*LR	LR	23 27 17.8	
	comp=Z,1µm,20.0s						
MTE	**Manteigas**	**173.93**	**55**	*e*PKP	**PKPdf**	**22 24 46.1**	**+2.9**
MTE	**Manteigas**	**173.93**	**55**	*e*SS	SS	22 51 33.5	+11
MTE	**Manteigas**	**173.93**	**55**	*e*LR	LR	23 26 54.3	
	comp=Z,1µm,22.0s						
PNCL	**Nicolau / Gran**	**173.94**	**78**	*e*PKP	**PKPdf**	**22 24 43.9**	**+0.8**
PNCL				*e*-		22 26 23.4	
PMTG	**Montargil**	**173.98**	**69**	*e*PKP	**PKPdf**	**22 24 46.4**	**+3.3**
MESJ	**Messejana**	**174.21**	**81**	*e*PKP	**PKPdf**	**22 24 46.8**	**+3.6**
PCBR	**Castelo Branco**	**174.24**	**60**	*e*PKP	**PKPdf**	**22 24 46.2**	**+3.0**
EVO	**Evora**	**174.27**	**74**	*e*PKP	**PKPdf**	**22 24 46.1**	**+2.8**
PCVE	**Castro Verde**	**174.37**	**83**	*e*PKP	**PKPdf**	**22 24 46.5**	**+3.2**
PBDV	**Barranco-do-Ve**	**174.46**	**87**	*e*PKP	**PKPdf**	**22 24 44.0**	**+0.6**
PBDV				*e*-		22 26 14.7	
PBEJ	**Beja**	**174.47**	**79**	*e*PKP	**PKPdf**	**22 24 42.8**	**-0.5**
PMRV	**Marv??o**	**174.47**	**64**	*e*SS	SS	22 51 43.2	+15
PMRV	**Marv??o**	**174.47**	**64**	*e*LR	LR	23 26 35.1	
	comp=Z,1µm,18.0s						
PESTR	**Estremoz**	**174.51**	**70**	*e*PKP	**PKPdf**	**22 24 42.1**	**-1.3**
PESTR				*e*-		22 26 16.6	
PVAQ	**Vaqueiros**	**174.63**	**85**	*e*LR	LR	23 26 35.9	
	comp=Z,1µm,20.0s						
MDT	**Midelt**	**174.77**	**144**	PKP	**PKPdf**	**22 24 43.3**	**-0.4**
	comp=Z,4.2nm,1.0s,baz=337,slow=9.9,SNR=4.7						
MDT				PKPab	**PKPab**	**22 26 20.9**	**+3.0**
	comp=Z,3.9nm,0.8s,baz=222,slow=5.9,SNR=6.4						
PBAR	**Barrancos**	**175.09**	**76**	*e*PKP	**PKPdf**	**22 24 46.6**	**+3.1**
ESDC	**Sonseca Array**	**176.56**	**42**	PKP	**PKPdf**	**22 24 46.0**	**+2.1**
	comp=Z,6.6nm,1.1s,baz=343,slow=2.2,SNR=24						
ESDC				PKPab	**PKPab**	**22 26 27.0**	**+1.3**
	comp=Z,7.0nm,1.1s,baz=335,slow=3.7,SNR=8.4						
ESDC				PP	**PP**	**22 30 16.6**	**-2.0**
	comp=Z,5.2nm,1.3s,baz=316,slow=3.9,SNR=6.0						

ROM 31 22:13:39.7±0.3, 43°91N±0°01×13°22E±0°02, h23km±2km, ML1.8/4, 2C-3D, Error ellipse: s-maj=1.3km s-min=0.4km az=233.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PESA	**Pesaro**	**0.28**	**278**	⇓P	Pb	22 13 46.0	-0.3
PESA				S	Sb	22 13 51.8	+1.1
PESA				AML	AML		
	comp=E,324µm,0.5s						
PESA				AML	AML		
	comp=N,405µm,0.2s						
PESA				AML	AML		
	comp=E,499µm,1.2s						
PESA				AML	AML		
	comp=N,733µm,1.1s						
PESA				AML	AML		
	comp=E,3575µm,1.5s						
PESA				AML	AML		
	comp=N,3260µm,1.0s						
PESA				AML	AML		
	comp=N,337µm,0.2s						
PESA				AML	AML		
	comp=E,258µm,0.1s						
PESA				END			
COR1	**Corinaldo**	**0.32**	**211**	P	Pb	22 13 46.9	+0.1
COR1				S	Sn	22 13 53.6	-1.2
COR1				AML	AML		
	comp=E,7505µm,0.6s						
COR1				AML	AML		
	comp=N,6795µm,0.6s						
COR1				AML	AML		
	comp=E,3720µm,0.6s						
COR1				AML	AML		
	comp=N,6505µm,0.6s						
COR1				AML	AML		
	comp=N,334µm,0.4s						
COR1				AML	AML		
	comp=N,320µm,0.1s						
COR1				END			
FSSB	**Fossombrone**	**0.39**	**237**	⇓P	Pb	22 13 47.6	-0.3
FSSB				AML	AML		
	comp=E,150µm,0.2s						
FSSB				AML	AML		
	comp=N,216µm,0.5s						
FSSB				AML	AML		
	comp=E,1490µm,0.3s						
FSSB				AML	AML		
	comp=N,1765µm,0.4s						
FSSB				AML	AML		
	comp=E,7290µm,0.5s						
FSSB				AML	AML		
	comp=N,11135µm,0.4s						
FSSB				AML	AML		
	comp=E,115µm,0.3s						
FSSB				END			
MPAG	**Monte Paganucc**	**0.43**	**231**	P	Pb	22 13 48.3	-0.4
MPAG				AML	AML		
	comp=E,56µm,0.5s						
MPAG				AML	AML		
	comp=N,52µm,1.3s						
MPAG				AML	AML		
	comp=E,380µm,1.1s						
MPAG				AML	AML		
	comp=N,482µm,0.4s						
MPAG				AML	AML		
	comp=E,2725µm,0.7s						
MPAG				AML	AML		
	comp=N,2325µm,0.7s						
MPAG				AML	AML		
	comp=E,2500µm,0.4s						
MPAG				AML	AML		
	comp=N,2155µm,0.7s						
AOI	**Ancona**	**0.45**	**142**	P	Pb	22 13 48.5	-0.4
AOI				S	Sb	22 13 55.7	+0.5
ARVD	**Arcevia**	**0.46**	**207**	P	Pb	22 13 48.6	-0.4
ARVD				AML	AML		
	comp=E,38µm,1.3s						
ARVD				AML	AML		
	comp=N,37µm,0.6s						
ARVD				AML	AML		
	comp=E,2575µm,0.7s						
ARVD				AML	AML		
	comp=N,1790µm,1.4s						
ARVD				AML	AML		
	comp=N,2180µm,0.8s						
ARVD				AML	AML		
	comp=E,34µm,0.2s						
CING	**Cingoli**	**0.53**	**182**	P	Pb	22 13 50.1	-0.2
CING				AML	AML		
	comp=E,9830µm,0.3s						
CING				AML	AML		
	comp=N,7130µm,0.3s						
FRON	**Frontone**	**0.53**	**223**	P	Pb	22 13 50.3	0.0
FRON				AML	AML		
	comp=E,1555µm,0.3s						
FRON				AML	AML		
	comp=N,3095µm,1.5s						
FRON				AML	AML		
	comp=E,2205µm,0.4s						
FRON				AML	AML		
	comp=N,3285µm,0.7s						
NARO	**Abbazia di Nar**	**0.55**	**238**	P	Pb	22 13 50.4	-0.3
NARO				AML	AML		
	comp=E,40µm,1.4s						
NARO				AML	AML		
	comp=N,35µm,0.3s						
NARO				AML	AML		
	comp=E,618µm,0.7s						
NARO				AML	AML		
	comp=N,490µm,1.0s						
NARO				AML	AML		
	comp=E,1240µm,1.3s						
NARO				AML	AML		
	comp=N,1335µm,1.3s						
PE3	**Peglio**	**0.57**	**249**	P	Pb	22 13 51.1	+0.2
SSFR	**Montelago di S**	**0.57**	**215**	P	Pb	22 13 51.0	0.0
SSFR				AML	AML		
	comp=E,7095µm,0.2s						
SSFR				AML	AML		
	comp=N,6810µm,0.7s						
SSFR				AML	AML		
	comp=E,6585µm,0.2s						
SSFR				AML	AML		
	comp=N,6670µm,0.8s						
EL6	**Elcito**	**0.58**	**189**	P	Pb	22 13 51.0	-0.3
EL6				AML	AML		
	comp=E,10680µm,1.2s						
EL6				AML	AML		
	comp=N,11505µm,0.3s						
EL6				AML	AML		
	comp=E,10670µm,1.2s						
EL6				AML	AML		
	comp=N,11475µm,0.3s						
ATBU	**Serra di Buran**	**0.65**	**229**	P	Pb	22 13 52.4	0.0
APEC	**Apecchio**	**0.68**	**240**	P	Pb	22 13 52.8	0.0
ATPC	**Poggio Castell**	**0.70**	**233**	P	Pb	22 13 53.2	0.0
ATPI	**Pietralunga -**	**0.75**	**233**	P	Pb	22 13 54.1	0.0
ATPI				AML	AML		
	comp=E,1925µm,0.6s						
ATPI				AML	AML		
	comp=N,1265µm,0.5s						
ATPI				AML	AML		
	comp=E,2055µm,0.6s						
ATPI				AML	AML		
	comp=N,9660µm,0.5s						
PARC	**Parchiule**	**0.76**	**251**	P	Pb	22 13 54.2	0.0
PARC				AML	AML		
	comp=E,380µm,0.4s						
PARC				AML	AML		
	comp=N,477µm,0.5s						
PARC				AML	AML		
	comp=E,2650µm,0.8s						
PARC				AML	AML		
	comp=N,1175µm,0.9s						
ATVO	**AVT- Monte Val**	**0.79**	**229**	P	Pn	22 13 55.7	+0.2
ATVO				AML	AML		
	comp=E,2710µm,0.4s						
ATVO				AML	AML		
	comp=N,2205µm,0.6s						
CSP1	**Cessapalombo**	**0.81**	**181**	P	Pn	22 13 56.8	+1.0
CSP1				AML	AML		
	comp=E,20000µm,0.6s						
CSP1				AML	AML		
	comp=N,30150µm,0.8s						
CSP1				AML	AML		
	comp=E,19950µm,0.6s						
CSP1				AML	AML		
	comp=N,30100µm,0.8s						
FDMO	**Fiordimonte**	**0.87**	**187**	AML	AML		
	comp=N,22000µm,0.2s						
FDMO				AML	AML		
	comp=E,24300µm,0.3s						
CESI	**CESI - Serrava**	**0.93**	**195**	P	Pn	22 13 57.7	+0.3
CESI				AML	AML		
	comp=E,20550µm,0.2s						
CESI				AML	AML		
	comp=N,41600µm,0.4s						
ASSB	**Assisi San Ben**	**0.95**	**206**	AML	AML		
	comp=E,6120µm,1.4s						
ASSB				AML	AML		
	comp=N,6510µm,0.8s						
MMO1	**Montemonaco**	**1.01**	**176**	AML	AML		
	comp=N,47600µm,0.9s						
MMO1				AML	AML		
	comp=E,51900µm,0.6s						
MMO1				AML	AML		
	comp=E,51950µm,0.6s						
MMO1				AML	AML		
	comp=N,47550µm,0.9s						
T1241	**Roccafluvione,**	**1.06**	**172**	AML	AML		
	comp=E,52350µm,0.2s						
T1241				AML	AML		
	comp=E,52150µm,0.2s						
T1241				AML	AML		
	comp=N,62100µm,0.2s						
T1241				AML	AML		
	comp=N,59900µm,0.2s						
T1241				AML	AML		
	comp=E,52150µm,0.1s						
T1241				AML	AML		
	comp=N,62150µm,0.3s						
BRJN	**Brijuni**	**1.07**	**20**	*e*Pg	Pb	22 13 59.9	+0.4
BRJN				Sg	Sn	22 14 15.7	+2.3
BRJN	**Brijuni**	**1.07**	**20**	P	Pb	22 13 59.8	+0.3
NRCA	**Norcia**	**1.07**	**184**	P	Pb	22 14 00.7	+1.1
NRCA				AML	AML		
	comp=E,72300µm,0.2s						
NRCA				AML	AML		
	comp=N,64850µm,1.2s						
NRCA				AML	AML		
	comp=E,78800µm,0.1s						
NRCA				AML	AML		
	comp=N,71650µm,1.2s						
T1242	**Castelluccio d**	**1.07**	**181**	AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1244	**Arquata del Tr**	**1.15**	**177**	AML	AML		
T1244				AML	AML		
T1244				AML	AML		
SMA1	**SAN MARTINO**	**1.28**	**176**	AML	AML		
	comp=E,90550µm,0.3s						
SMA1				AML	AML		
	comp=N,73650µm,0.4s						
MGAB	**Montegabbione**	**1.28**	**220**	AML	AML		
	comp=E,3720µm,0.6s						
MGAB				AML	AML		
	comp=E,3715µm,0.6s						
MGAB				AML	AML		
	comp=N,4870µm,0.4s						
MGAB				AML	AML		
	comp=E,4260µm,0.6s						
MGAB				AML	AML		
	comp=N,4740µm,0.4s						
LNSS	**Leonessa**	**1.31**	**186**	AML	AML		
	comp=N,93950µm,0.3s						
LNSS				AML	AML		
	comp=E,86050µm,0.3s						
TERO	**Teramo**	**1.31**	**168**	AML	AML		
	comp=N,25650µm,0.5s						
TERO				AML	AML		
	comp=E,20750µm,0.3s						
TERO				AML	AML		
	comp=N,23300µm,0.5s						
TERO				AML	AML		
	comp=E,22200µm,0.3s						
SMRN	**Sveta Marina**	**1.31**	**30**	*e*Pg	Pn	22 14 02.9	+0.3
DUGI	**Dugi Otok**	**1.33**	**86**	*e*Pn	Pn	22 14 02.9	+0.1
NVLJ	**Novalja**	**1.35**	**60**	*e*Pn	Pb	22 14 04.0	-0.3
CAMP	**Campotosto**	**1.38**	**174**	AML	AML		
	comp=N,21250µm,0.2s						
CAMP				AML	AML		
	comp=E,22300µm,0.2s						
VIRC	**Vir**	**1.38**	**73**	*e*Pn	Pn	22 14 03.9	+0.5
RM33	**Pellescritta (**	**1.40**	**180**	AML	AML		
	comp=N,41000µm,0.4s						
RM33				AML	AML		
	comp=N,42050µm,0.4s						
RM33				AML	AML		
	comp=E,35800µm,0.4s						
RM33				AML	AML		
	comp=E,35500µm,0.4s						
RABC	**Rab**	**1.40**	**52**	*e*Pn	Pb	22 14 04.8	-0.3
RABC				Sg	Sb	22 14 23.8	+1.2
A253A	**Karojba, Istri**	**1.45**	**17**	*e*Pn	Pn	22 14 04.8	+0.3
A253A				Sg	Sb	22 14 25.1	+1.0
RIY	**Rijeka**	**1.68**	**32**	*e*Pn	Pn	22 14 08.6	+0.9
RIY				Sn	Sb	22 14 31.9	+1.3
MORI	**Morici**	**1.80**	**90**	*e*Pn	Pn	22 14 10.5	+1.3
BDI	**Bagni Di Lucca**	**1.90**	**276**	S	Sb	22 14 41.0	+3.9
PLIT	**Plitvice**	**1.98**	**60**	*e*Pn	Pb	22 14 14.1	-0.9
PLIT				Sn	Sb	22 14 38.5	-0.7
SARZ	**Sarezzano**	**3.24**	**289**	P	Pb	22 14 34.5	-1.9
STON	**Ston**	**3.42**	**106**	⇑P	Pn	22 14 33.2	+1.6
CET2	**Cetraro**	**4.83**	**154**	⇑P	Pb	22 14 59.5	-4.1
SPS2	**Spezzano della**	**5.16**	**152**	⇓P	Pn	22 15 01.2	+5.6

*STR **31** 22:14:04.8±6.1, 43°N±26°×1°4E±4°, h5km, MLv3.6/7, Error ellipse: s-maj=0.1km s-min=0.0km az=117.3, preliminary*
*ROM **31** 22:14:09.7±0.0, 42°741N±0°002×13°234E±0°004, h9km, ML3.5/116, Error ellipse: s-maj=0.3km s-min=0.1km az=244.0*
*PRU **31** 22:14:09.3±0.0, 42°75N×13°49E, h0km*
*IDC **31** 22:14:09.4±1.5, 42°79N×13°45E, h0km, mb3.6/2, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=35.3km s-min=16.0km az=93.0*
*LDG **31** 22:14:11.4±0.1, 42°62N×13°21E, h11km, Ml3.3/29, Error ellipse: s-maj=5.3km s-min=3.0km az=39.0*

ISC 31 22:14:09.9±0.7, 42°74N±0°01×13°21E±0°01, h13km±3km, n291,σ1§58/358, 55C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1214	**Arquata del Tr**	**0.02**	**357**	⇓P	**Pg**	**22 14 11.6**	**-0.8**
T1214				S	**Sg**	**22 14 12.7**	**-1.5**
T1202	**Accumoli, Fraz**	**0.04**	**162**	⇑P	**Pg**	**22 14 12.0**	**-0.4**
T1202				S	**Sg**	**22 14 13.5**	**-0.7**
T1213	**Norcia, Frazio**	**0.06**	**258**	⇑P	**Pg**	**22 14 12.5**	**-0.1**
T1213				S	**Sg**	**22 14 14.2**	**-0.3**
T1244	**Arquata del Tr**	**0.07**	**74**	⇑*i*P	**Pg**	**22 14 12.0**	**-0.6**
T1244				S	**Sg**	**22 14 13.3**	**-1.3**
T1244				AML	AML		
T1244				AML	AML		
T1201	**Domo (RI)**	**0.09**	**160**	⇑P	**Pg**	**22 14 12.8**	**0.0**
T1201				S	**Sg**	**22 14 14.9**	**0.0**
T1242	**Castelluccio d**	**0.09**	**357**	⇑P	**Pg**	**22 14 12.5**	**-0.5**
T1242				S	**Sg**	**22 14 14.3**	**-0.8**
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1242				AML	AML		
T1218	**Civita (PG)**	**0.10**	**226**	P	**Pg**	**22 14 13.1**	**+0.1**
T1218				S	**Sg**	**22 14 15.6**	**+0.4**
T1204	**Amatrice, Fraz**	**0.10**	**128**	⇑P	**Pg**	**22 14 12.7**	**-0.3**
T1204				S	**Sg**	**22 14 14.7**	**-0.6**
T1204				AML	AML		
	comp=E,902µm,0.6s						
T1204				AML	AML		
	comp=N,841µm,0.2s						
NRCA	**Norcia**	**0.12**	**324**	⇑P	**Pg**	**22 14 13.1**	**-0.2**
NRCA				S	**Sg**	**22 14 15.4**	**-0.2**
NRCA				AML	AML		
	comp=N,64850µm,1.2s						
NRCA				AML	AML		
	comp=E,72250µm,0.2s						
NRCA				AML	AML		
	comp=E,78800µm,0.1s						
NRCA				AML	AML		
	comp=N,71650µm,1.2s						
NRCA				AML	AML		
	comp=N,64850µm,1.2s						
NRCA				AML	AML		
	comp=E,72300µm,0.2s						
T1212	**Cascia, Frazio**	**0.12**	**276**	⇑P	**Pg**	**22 14 13.4**	**+0.2**
T1212				S	**Sg**	**22 14 16.1**	**+0.5**
SMA1	**SAN MARTINO**	**0.14**	**139**	⇑P	**Pg**	**22 14 13.4**	**-0.1**
SMA1				S	**Sg**	**22 14 15.9**	**-0.2**
SMA1				AML	AML		
	comp=N,73650µm,0.4s						
SMA1				AML	AML		
	comp=N,73600µm,0.4s						
SMA1				AML	AML		
	comp=E,90550µm,0.3s						
MC2	**Monte Cornacci**	**0.17**	**355**	⇑P	**Pg**	**22 14 13.9**	**-0.2**
MC2				S	**Sg**	**22 14 17.1**	**0.0**
T1243	**Rocca Santa Ma**	**0.18**	**103**	⇑P	**Pg**	**22 14 13.7**	**-0.4**

T1243 S Sg 22 14 16.5 -0.5
MMO1 Montemonaco 0.18 28 ⇑P Pg 22 14 13.8 -0.4
MMO1 S Sg 22 14 17.1 +0.1
MMO1 AML AML
comp=E,51900µm,0.6s
MMO1 AML AML
comp=E,51950µm,0.6s
MMO1 AML AML
comp=N,47550µm,0.9s
MMO1 AML AML
comp=N,47600µm,0.9s
LNSS Leonessa 0.18 223 ⇑*i*P Pg 22 14 14.6 +0.5
LNSS S Sg 22 14 18.3 +1.2
LNSS AML AML
comp=N,94000µm,0.3s
LNSS AML AML
comp=E,86050µm,0.3s
LNSS AML AML
comp=N,93950µm,0.3s
T1241 Roccafluvione, 0.20 54 ⇑P Pg 22 14 14.1 -0.3
T1241 S Sg 22 14 17.2 -0.3
T1241 AML AML
comp=N,62100µm,0.2s
T1241 AML AML
comp=E,52350µm,0.2s
T1241 AML AML
comp=N,62150µm,0.2s
T1241 AML AML
comp=N,59900µm,0.2s
T1241 AML AML
comp=E,52150µm,0.2s
T1216 Preci, Frazion 0.21 317 ⇑P Pg 22 14 14.6 +0.1
T1216 S Sg 22 14 18.4 +0.8
RM33 Pellescritta (0.23 179 ⇑P Pg 22 14 15.2 +0.3
RM33 S Sg 22 14 19.1 +0.8
RM33 AML AML
comp=E,35800µm,0.4s
RM33 AML AML
comp=N,41000µm,0.4s
RM33 AML AML
comp=E,35800µm,0.4s
RM33 AML AML
comp=N,42050µm,0.4s
RM33 AML AML
comp=E,35500µm,0.4s
RM33 AML AML
comp=E,35750µm,0.4s
RM33 AML AML
comp=E,35450µm,0.4s
RM33 AML AML
comp=N,42100µm,0.4s
CAMP Campotosto 0.25 144 ⇑P Pg 22 14 15.2 -0.1
CAMP S Sg 22 14 19.3 +0.4
FEMA Monte Fema 0.25 332 ⇑P Pg 22 14 15.4 +0.1
FEMA S Sg 22 14 19.8 +0.7
FEMA AML AML
comp=N,22000µm,1.2s
FEMA AML AML
comp=E,32050µm,0.8s
FEMA AML AML
comp=N,22000µm,1.3s
T1215 Vallo di Nera, 0.26 284 ⇑P Pg 22 14 15.8 +0.3
T1215 S Sb 22 14 20.4 -0.5
T1215 AML AML
comp=E,11300µm,0.4s
T1215 AML AML
comp=N,10810µm,1.0s
T1215 AML AML
comp=N,10705µm,1.0s
T1215 AML AML
comp=E,11350µm,0.4s
T1215 AML AML
comp=E,11350µm,0.3s
T1215 AML AML
comp=N,10700µm,1.0s
T1215 AML AML
comp=N,10775µm,1.0s
T1246 Crognaleto (TE 0.26 126 ⇑P Pg 22 14 15.3 -0.1
T1246 S Sg 22 14 19.4 +0.2
T1247 Pizzolo (AQ) 0.30 168 ⇑P Pg 22 14 16.4 +0.2
T1247 S Sb 22 14 21.6 -0.6
FDMO Fiordimonte 0.31 343 ⇑P Pg 22 14 16.3 -0.1
FDMO S Sg 22 14 21.4 +0.8
FDMO AML AML
comp=E,24300µm,0.3s
FDMO AML AML
comp=N,22000µm,0.2s
TERO Teramo 0.31 111 ⇑P Pg 22 14 16.0 -0.3
TERO S Sg 22 14 20.8 +0.1
TERO AML AML
comp=E,20750µm,0.3s
TERO AML AML
comp=N,23300µm,0.5s
TERO AML AML
comp=E,22200µm,0.3s
TERO AML AML
comp=N,23350µm,0.5s
TERO AML AML
comp=N,25650µm,0.5s
T1211 Morro Reatino 0.33 232 ⇑P Pg 22 14 17.1 +0.4
T1211 S Sb 22 14 23.1 0.0
CESI CESI - Serrava 0.35 320 ⇑P Pg 22 14 17.2 +0.2
CESI S Sb 22 14 23.1 -0.5
CESI AML AML
comp=E,20550µm,0.2s
CESI AML AML
comp=N,41600µm,0.4s
CSP1 Cessapalombo 0.35 359 ⇑P Pg 22 14 17.0 -0.1
CSP1 S Sg 22 14 22.8 +0.8
ARRO Arrone 0.36 244 ⇑P Pg 22 14 17.7 +0.4
ARRO AML AML
comp=E,11250µm,0.3s
ARRO AML AML
comp=N,8135µm,0.8s
GIGS Gran Sasso 0.39 137 ⇑P Pg 22 14 17.3 -0.5
GIGS S Sg 22 14 23.3 +0.2
GIGS AML AML
comp=N,3120µm,0.4s
GIGS AML AML
comp=E,2320µm,0.4s
OFFI Offida 0.40 60 ⇑P Pb 22 14 18.5 -0.4
OFFI S Sb 22 14 25.9 +0.9
OFFI AML AML
comp=E,25850µm,0.5s
OFFI AML AML
comp=N,27700µm,0.5s
MNTP Montappone 0.44 25 ⇑P Pg 22 14 19.1 +0.3
MNTP S Sb 22 14 26.9 +0.7
SEF1 Sefro 0.45 335 P Pg 22 14 18.9 0.0
SEF1 S Sb 22 14 26.1 -0.4
SEF1 AML AML
comp=E,15300µm,0.2s
SEF1 AML AML
comp=N,12250µm,1.6s
SEF1 AML AML
comp=N,12300µm,1.6s
SEF1 AML AML
comp=E,15250µm,0.2s
MDAR Monte D'Aria 0.46 354 P Pg 22 14 18.8 -0.2
MDAR S Sb 22 14 26.2 -0.5
MDAR AML AML
comp=E,10450µm,0.3s
MDAR AML AML
comp=E,10500µm,0.3s
MDAR AML AML
comp=N,12050µm,0.7s
PIO1 Pioraco 0.47 339 P Pg 22 14 19.0 -0.2
FIAM Fiamignano 0.47 188 ⇑P Pg 22 14 19.4 +0.1
FIAM S Sb 22 14 26.9 -0.2
FIAM AML AML
comp=E,12200µm,0.9s
FIAM AML AML
comp=N,8625µm,0.9s
CESX Cesi 0.48 255 ⇑P Pg 22 14 19.6 +0.1
CESX S Sb 22 14 27.3 0.0
CESX AML AML
comp=N,6105µm,0.8s
CESX AML AML
comp=E,7280µm,1.0s
SSM1 San Severino M 0.49 357 P Pg 22 14 19.5 -0.1
FIU1 Fiuminata 0.49 336 P Pg 22 14 19.6 -0.1
FIU1 S Sb 22 14 27.5 -0.2
FIU1 AML AML
comp=E,5035µm,0.7s
FIU1 AML AML
comp=N,5675µm,1.3s

ASSB Assisi San Ben 0.51 307 P Pg 22 14 19.9 0.0
ASSB AML AML
comp=E,6120µm,1.4s
ASSB AML AML
comp=N,6510µm,0.8s
GAG1 Gagliole 0.51 348 P Pg 22 14 20.0 0.0
GAG1 S Sb 22 14 28.2 0.0
GAG1 AML AML
comp=E,17850µm,0.5s
GAG1 AML AML
comp=N,15700µm,0.5s
GAG1 AML AML
comp=E,17800µm,0.5s
TRTR Tortoreto Alta 0.52 82 ⇑P Pb 22 14 21.0 +0.1
MTL1 Matelica 0.54 344 P Pg 22 14 20.4 -0.2
FAGN Fagnano 0.55 149 P Pg 22 14 20.5 -0.2
FAGN AML AML
comp=E,13200µm,0.5s
FAGN AML AML
comp=N,12615µm,0.3s
SNTG Esanatoglia 0.55 339 ⇑P Pg 22 14 20.6 -0.2
SNTG S Sb 22 14 29.3 -0.1
SNTG AML AML
comp=E,432µm,0.5s
SNTG AML AML
comp=N,474µm,0.5s
SNTG AML AML
comp=E,3485µm,0.5s
SNTG AML AML
comp=N,474µm,0.5s
SNTG AML AML
comp=N,3490µm,0.4s
SNTG AML AML
comp=E,432µm,0.5s
TRE1 Treia 0.58 7 P Pg 22 14 21.3 0.0
TRE1 AML AML
comp=E,25950µm,0.4s
TRE1 AML AML
comp=N,30800µm,0.3s
TRE1 AML AML
comp=N,30850µm,0.3s
VCEL Villa Celiera 0.58 126 P Pg 22 14 21.2 0.0
VCEL S Sb 22 14 29.8 -0.3
VCEL AML AML
comp=E,9435µm,1.3s
VCEL AML AML
comp=N,8800µm,1.6s
VCEL AML AML
comp=E,9425µm,1.3s
VCEL AML AML
comp=N,8805µm,1.6s
EL6 Elcito 0.60 352 ⇑P Pg 22 14 21.3 -0.4
EL6 S Sb 22 14 30.9 +0.2
EL6 AML AML
comp=E,10680µm,1.2s
EL6 AML AML
comp=N,11505µm,0.3s
EL6 AML AML
comp=E,10670µm,1.2s
EL6 AML AML
comp=N,11475µm,0.3s
EL6 AML AML
comp=N,11485µm,0.3s
EL6 AML AML
comp=E,10685µm,1.2s
CADA Capodarco di F 0.61 41 P Pb 22 14 22.9 +0.4
CADA AML AML
comp=N,13150µm,1.1s
CADA AML AML
comp=E,16650µm,1.6s
ATCC AVT- Casa Cast 0.61 317 P Pg 22 14 21.9 0.0
ATCC S Sb 22 14 31.7 +0.6
ATCC AML AML
comp=E,5680µm,1.4s
ATCC AML AML
comp=N,4925µm,0.5s
ATCC AML AML
comp=E,5675µm,1.4s
CING Cingoli 0.64 359 ⇑P Pg 22 14 21.9 -0.4
CING S Sb 22 14 32.2 +0.3
CING AML AML
comp=E,9830µm,0.3s
CING AML AML
comp=N,7130µm,0.3s
FOSV Fossato di Vic 0.65 330 ⇑P Pg 22 14 22.3 -0.2
FOSV S Sb 22 14 32.5 +0.4
FOSV AML AML
comp=E,4305µm,0.4s
FOSV AML AML
comp=N,5455µm,1.4s
T0110 Collepietro 0.66 140 ⇑P Pg 22 14 22.4 -0.4
T0110 AML AML
comp=E,8065µm,0.5s
T0110 AML AML
comp=N,7640µm,0.8s
PP3 Marolino 0.70 24 ⇑P Pb 22 14 23.9 -0.2
PP3 AML AML
comp=E,20300µm,0.4s
PP3 AML AML
comp=N,15800µm,0.4s
PP3 AML AML
comp=E,20250µm,0.4s
PP3 AML AML
comp=E,20350µm,0.6s
PP3 AML AML
comp=N,15250µm,0.3s
PP3 AML AML
comp=N,15850µm,0.4s
SRES S.Oreste - Sor 0.72 226 ⇑P Pg 22 14 23.6 -0.3
SRES AML AML
comp=E,2260µm,1.3s
SRES AML AML
comp=N,2155µm,0.4s
MMUR Monte Murano 0.72 348 P Pg 22 14 23.5 -0.4
MURB Monte Urbino 0.73 316 P Pg 22 14 24.0 -0.1
MURB AML AML
comp=N,12300µm,0.3s
MURB AML AML
comp=E,9015µm,0.3s
MURB AML AML
comp=N,12000µm,0.3s
MURB AML AML
comp=E,9990µm,0.3s
PTQR Pietraquaria 0.73 169 ⇑P Pg 22 14 23.3 -0.8
PTQR AML AML
comp=E,1485µm,0.6s
PTQR AML AML
comp=N,1465µm,1.2s
SSFR Montelago di S 0.77 336 P Pg 22 14 24.4 -0.4
SSFR AML AML
comp=E,7095µm,0.2s
SSFR AML AML
comp=N,6810µm,0.7s
SSFR AML AML
comp=E,6585µm,0.2s
SSFR AML AML
comp=N,6670µm,0.8s
ATTE AVT- Monte Tez 0.78 306 P Pg 22 14 25.1 +0.1
ATTE AML AML
comp=N,1690µm,0.5s
ATTE AML AML
comp=E,1715µm,0.8s
ATFO Monte Foce - G 0.78 324 P Pg 22 14 24.9 -0.2
ATFO AML AML
comp=E,2785µm,0.5s
ATFO AML AML
comp=N,2210µm,0.5s
ARVD Arcevia 0.79 346 ⇑P Pg 22 14 24.6 -0.6
ARVD S Sb 22 14 36.6 +0.6
ARVD AML AML
comp=E,2575µm,0.7s
ARVD AML AML
comp=N,2180µm,0.8s
MTCE Montecelio 0.79 206 ⇑P Pg 22 14 24.6 -0.8
MTCE AML AML
comp=N,1905µm,0.8s
MTCE AML AML
comp=E,3980µm,0.5s
CERT Cerreto 0.81 192 P Pg 22 14 24.8 -0.8
CERT AML AML
comp=E,5615µm,0.5s
CERT AML AML
comp=N,3680µm,1.1s
MGAB Montegabbione 0.83 283 P Pb 22 14 26.2 0.0
MGAB AML AML
comp=E,3715µm,0.6s

MGAB AML AML
comp=E,4260µm,0.6s
MGAB AML AML
comp=N,4870µm,0.4s
MGAB AML AML
comp=N,4740µm,0.4s
MGAB AML AML
comp=E,3720µm,0.6s
MGAB AML AML
comp=N,4865µm,0.4s
FRON Frontone 0.86 336 ⇑P Pg 22 14 25.7 -0.8
FRON S Sb 22 14 39.0 +0.8
FRON AML AML
comp=E,2205µm,0.4s
FRON AML AML
comp=N,3285µm,0.7s
FRON AML AML
comp=N,3280µm,0.7s
AOI Ancona 0.86 19 ⇑P Pg 22 14 26.0 -0.6
AOI AML AML
comp=E,4060µm,0.3s
AOI AML AML
comp=N,4505µm,0.3s
ATVO AVT- Monte Val 0.87 318 P Pg 22 14 26.2 -0.6
ATVO AML AML
comp=N,2205µm,0.6s
ATVO AML AML
comp=E,2710µm,0.4s
ATVO AML AML
comp=E,2715µm,0.4s
INTR Introdacqua 0.89 144 P Pg 22 14 25.9 -1.3
INTR AML AML
comp=E,2µm,0.9s
INTR AML AML
comp=N,3µm,0.8s
INTR AML AML
comp=E,2465µm,0.9s
INTR AML AML
comp=N,3µm,0.8s
INTR AML AML
comp=N,4800µm,0.8s
INTR AML AML
comp=E,2µm,0.9s
COR1 Corinaldo 0.91 350 P Pg 22 14 27.4 0.0
COR1 AML AML
comp=E,3720µm,0.6s
COR1 AML AML
comp=N,6505µm,0.6s
COR1 AML AML
comp=N,6500µm,0.6s
COR1 AML AML
comp=E,7505µm,0.6s
COR1 AML AML
comp=N,6790µm,0.6s
COR1 AML AML
comp=E,3745µm,0.6s
RCAV Rocca di Cave 0.91 193 P Pg 22 14 26.6 -1.0
RCAV AML AML
comp=E,4085µm,0.6s
RCAV AML AML
comp=N,5020µm,1.2s
ATMI Monte Miggiano 0.91 311 P Pb 22 14 27.9 +0.3
ATMI AML AML
comp=N,3825µm,0.3s
ATMI AML AML
comp=E,4510µm,0.3s
VVLD Villa Vallelon 0.92 160 P Pg 22 14 26.9 -0.8
ATPI Pietralunga - 0.93 321 P Pg 22 14 27.3 -0.5
ATPI AML AML
comp=E,2055µm,0.6s
ATPI AML AML
comp=N,9660µm,0.5s
ATPI AML AML
comp=N,9675µm,0.5s
GUAR Guarcino 0.95 175 P Pg 22 14 28.2 0.0
GUAR AML AML
comp=E,2820µm,0.5s
GUAR AML AML
comp=N,3475µm,0.7s
MPAG Monte Paganucc 0.95 340 ⇑P Pg 22 14 27.6 -0.7
MPAG AML AML
comp=E,2500µm,0.4s
MPAG AML AML
comp=N,2155µm,0.7s
MPAG AML AML
comp=E,2505µm,0.4s
SACS San Casciano d 0.96 277 P Pg 22 14 28.5 0.0
SACS AML AML
comp=N,2275µm,0.6s
SACS AML AML
comp=E,2260µm,1.1s
SACS AML AML
comp=E,2265µm,1.1s
SACS AML AML
comp=N,2020µm,0.6s
NARO Abbazia di Nar 0.99 332 ⇑P Pg 22 14 28.1 -0.9
NARO AML AML
comp=N,1335µm,1.3s
NARO AML AML
comp=E,1240µm,1.3s
LPEL Lama dei Pelig 1.00 133 P Pg 22 14 27.5 -1.7
LPEL AML AML
comp=E,2655µm,0.5s
LPEL AML AML
comp=N,2105µm,1.2s
APEC Apecchio 1.00 325 P Pg 22 14 28.8 -0.5
FSSB Fossombrone 1.00 342 P Pg 22 14 28.6 -0.7
FSSB AML AML
comp=E,7290µm,0.5s
FSSB AML AML
comp=N,11135µm,0.4s
FSSB AML AML
comp=E,7295µm,0.5s
VIVA Pratoni del Vi 1.04 198 P Pb 22 14 29.6 -0.2
VIVA AML AML
comp=N,6915µm,0.4s
VIVA AML AML
comp=E,5900µm,0.5s
LATE Laterza 1.04 264 P Pg 22 14 30.1 +0.1
RDP Rocca di Papa 1.04 201 P Pb 22 14 29.1 -0.9
RDP AML AML
comp=N,5925µm,0.5s
RDP AML AML
comp=E,6565µm,0.9s
BADI Badiali 1.05 318 P Pb 22 14 29.8 -0.2
MA9 Marino 1.05 203 P Pb 22 14 29.5 -0.4
POFI Posta Fibreno 1.09 160 P Pb 22 14 29.7 -0.9
POFI AML AML
comp=N,1029µm,0.9s
POFI AML AML
comp=E,1645µm,0.5s
CAFI Castiglion Fio 1.09 303 P Pb 22 14 30.6 0.0
CAFI AML AML
comp=N,1095µm,1.2s
CAFI AML AML
comp=E,770µm,0.5s
PE3 Peglio 1.09 332 P Pb 22 14 30.4 -0.3
PE3 AML AML
comp=N,11µm,0.4s
PE3 AML AML
comp=E,12µm,1.0s
TOLF Tolfa 1.12 233 ⇑P Pb 22 14 30.7 -0.5
TOLF AML AML
comp=E,1435µm,0.5s
TOLF AML AML
comp=N,1035µm,0.8s
LAV9 Lanuvio 1.12 200 P Pb 22 14 31.3 +0.1
LAV9 AML AML
comp=N,3405µm,0.4s
LAV9 AML AML
comp=E,4580µm,0.4s
LAV9 AML AML
comp=N,3605µm,0.4s
LAV9 AML AML
comp=E,4500µm,0.4s
LRP Arpino 1.12 165 P Pb 22 14 30.9 -0.3
LRP AML AML
comp=E,962µm,0.5s
LRP AML AML
comp=N,1335µm,0.5s
MCIV Monte Civitell 1.13 273 P Pg 22 14 31.7 0.0
MCIV AML AML
comp=E,1002µm,0.7s
MCIV AML AML
comp=N,933µm,0.6s
SF11 Podere del Sol 1.13 277 P Pn 22 14 31.9 +0.3
SF04 Casetta 1.15 275 P Pb 22 14 31.8 +0.2

SSP9	Sansepolcro	1.15 317	P	Pg	22 14 32.2	+0.1	
PARC	Parchiule	1.16 322	P	Pb	22 14 31.7	-0.1	
PARC			AML	AML			
	comp=N,1175µm,0.9s						
PARC			AML	AML			
	comp=E,2650µm,0.8s						
SF13	Bagnolo	1.17 274	P	Pn	22 14 32.4	+0.2	
SF14	Selvena	1.18 271	P	Pb	22 14 32.1	0.0	
GIUL	Giuliano Di Ro	1.18 178	P	Pb	22 14 31.5	-0.7	
GIUL			AML	AML			
	comp=E,1570µm,0.8s						
GIUL			AML	AML			
	comp=N,1510µm,0.6s						
PESA	Pesaro	1.23 347	P	Pn	22 14 33.1	+0.2	
PESA			AML	AML			
	comp=E,3575µm,1.5s						
PESA			AML	AML			
	comp=N,3260µm,1.0s						
RNI2	Rionero Sannit	1.25 146	P	Pn	22 14 33.2	0.0	
RNI2			AML	AML			
	comp=N,1420µm,1.4s						
RNI2			AML	AML			
	comp=N,1485µm,1.4s						
RNI2			AML	AML			
	comp=E,1655µm,1.2s						
RNI2			AML	AML			
	comp=E,1600µm,1.3s						
LATB	Latina	1.26 189	AML	AML			
	comp=E,482µm,0.8s						
LATB			AML	AML			
	comp=N,417µm,1.0s						
LIK	San Giovanni I	1.26 168	⇑P	Pn	22 14 27.2	-6.0	
CRE	Caprese Michel	1.27 314	P	Pn	22 14 33.2	-0.4	
CRE			AML	AML			
	comp=E,778µm,0.5s						
CRE			AML	AML			
	comp=N,764µm,0.7s						
ARCI	Arcidosso	1.28 276	P	Pb	22 14 34.1	+0.1	
ARCI			AML	AML			
	comp=E,316µm,0.8s						
ARCI			AML	AML			
	comp=N,289µm,0.9s						
CERA	Filignano	1.29 152	P	Pn	22 14 33.3	-0.4	
CERA			AML	AML			
	comp=N,1685µm,0.6s						
CERA			AML	AML			
	comp=E,1325µm,1.4s						
CERA			AML	AML			
	comp=N,1760µm,0.6s						
CERA			AML	AML			
	comp=E,1300µm,1.4s						
RSM	Repubblica di	1.31 335	P	Pg	22 14 35.6	+0.4	
FRES	Fresagrandinar	1.32 125	P	Pg	22 14 35.7	+0.3	
FRES			AML	AML			
	comp=E,926µm,0.7s						
FRES			AML	AML			
	comp=N,624µm,0.5s						
MIDA	Miranda	1.34 144	P	Pn	22 14 33.6	-0.9	
MIDA			AML	AML			
	comp=E,1105µm,1.2s						
MIDA			AML	AML			
	comp=N,898µm,0.9s						
TRIV	Trivento	1.39 134	P	Pb	22 14 35.7	-0.1	
TRIV			AML	AML			
	comp=N,884µm,1.1s						
TRIV			AML	AML			
	comp=E,912µm,1.3s						
TRIV			AML	AML			
	comp=N,824µm,1.1s						
TRIV			AML	AML			
	comp=E,993µm,1.3s						
ASQU	Asqua	1.48 316	P	Pn	22 14 36.6	+0.2	
VAGA	Valle Agricola	1.53 150	P	Pn	22 14 37.7	+0.7	
BSSO	Busso	1.57 139	P	Pn	22 14 38.3	+0.6	
CSNT	Castellina Chi	1.59 298	P	Pb	22 14 38.8	-0.4	
CSNT			AML	AML			
	comp=N,302µm,0.5s						
CSNT			AML	AML			
	comp=E,373µm,0.7s						
OSSC	Osservatorio P	1.64 299	P	Pn	22 14 39.4	+0.9	
OSSC			AML	AML			
	comp=N,220µm,1.0s						
OSSC			AML	AML			
	comp=E,276µm,0.8s						
RUFI	Rufina	1.66 312	P	Pn	22 14 39.5	+0.7	
CIGN	Sant'Elia a Pi	1.66 130	P	Pb	22 14 40.6	+0.2	
CIGN			AML	AML			
	comp=E,396µm,0.7s						
CIGN			AML	AML			
	comp=N,398µm,1.3s						
PTRJ	Pietraroja	1.69 144	AML	AML			
	comp=E,780µm,0.9s						
PTRJ			AML	AML			
	comp=N,444µm,0.5s						
CASP	Castiglione de	1.73 273	P	Pn	22 14 40.2	+0.5	
CASP			AML	AML			
	comp=N,137µm,1.1s						
CASP			AML	AML			
	comp=E,122µm,0.7s						
LMD	Lutirano	1.73 321	P	Pb	22 14 41.0	-0.6	
LMD			AML	AML			
	comp=N,452µm,1.3s						
LMD			AML	AML			
	comp=E,484µm,0.5s						
TRIF	Trifonti	1.74 283	P	Pn	22 14 40.5	+0.7	
TRIF			AML	AML			
	comp=N,222µm,0.6s						
TRIF			AML	AML			
	comp=E,270µm,0.8s						
MELA	Melanico ??? S	1.76 125	P	Pn	22 14 40.9	+0.8	
MELA			AML	AML			
	comp=N,1685µm,0.5s						
MELA			AML	AML			
	comp=N,1595µm,0.5s						
MELA			AML	AML			
	comp=E,1235µm,0.6s						
MELA			AML	AML			
	comp=E,1176µm,0.5s						
TREM	Isole Tremiti	1.81 109	P	Pn	22 14 41.6	+0.8	
TREM			AML	AML			
	comp=E,1625µm,0.8s						
TREM			AML	AML			
	comp=N,1190µm,0.9s						
SEI	Scarperia	1.89 315	P	Pn	22 14 43.0	+1.0	
SEI			AML	AML			
	comp=E,673µm,0.5s						
SEI			AML	AML			
	comp=N,1195µm,0.5s						
MPPT	Montemurlo	1.97 309	P	Pn	22 14 43.8	+0.7	
MPPT			AML	AML			
	comp=E,272µm,0.7s						
MPPT			AML	AML			
	comp=N,229µm,0.8s						
APRC	Apricena	1.99 119	P	Pn	22 14 44.1	+0.8	
APRC			AML	AML			
	comp=E,613µm,0.4s						
APRC			AML	AML			
	comp=N,630µm,0.5s						
MOCO	Biccari - m.te	1.99 133	AML	AML			
	comp=E,210µm,1.6s						
MOCO			AML	AML			
	comp=N,146µm,1.0s						
VIRC	Vir	2.05 40	ePn	Pn	22 14 44.6	+0.5	
MTCR	Monte La Croce	2.06 309	P	Pn	22 14 45.1	+0.6	
SGRT	San Giovanni R	2.12 117	P	Pn	22 14 45.7	+0.5	
SGRT			AML	AML			
	comp=E,644µm,1.0s						
SGRT			AML	AML			
	comp=N,568µm,0.8s						
MORI	Morici	2.14 57	ePn	Pn	22 14 46.0	+0.6	
NVLJ	Novalja	2.19 33	ePn	Pn	22 14 46.3	+0.4	
PII	Pisa	2.19 298	P	Pn	22 14 46.8	+0.7	
PII			AML	AML			
	comp=N,224µm,0.5s						
PII			AML	AML			
	comp=E,160µm,0.7s						
BRJN	Brijuni	2.20 10	P	Pn	22 14 46.8	+0.6	
CELB	S.Piero in Cam	2.21 271	AML	AML			
	comp=E,115µm,0.8s						
CELB			AML	AML			
	comp=N,183µm,0.1s						
MSAG	Monte S. Angel	2.25 116	P	Pn	22 14 47.8	+0.9	
MSAG			AML	AML			
	comp=E,764µm,0.5s						
MSAG			AML	AML			
	comp=N,1205µm,0.4s						

SGTA	Sant Agata di	2.27 134	P	Pn	22 14 47.0	-0.2	
SGTA			AML	AML			
	comp=E,387µm,0.9s						
SGTA			AML	AML			
	comp=N,210µm,1.2s						
MAIM	Mastiano	2.31 302	P	Pn	22 14 48.6	+1.0	
MAIM			AML	AML			
	comp=N,178µm,0.7s						
MAIM			AML	AML			
	comp=E,242µm,0.9s						
RABC	Rab	2.31 29	ePn	Pn	22 14 48.5	+0.8	
HVAR	Hvar	2.42 78	ePn	Pn	22 14 49.7	+0.5	
HVAR	Hvar	2.42 78	P	Pn	22 14 50.2	+1.0	
VLC	Villacollemand	2.50 306	P	Pn	22 14 50.9	+0.6	
VLC			AML	AML			
	comp=N,96µm,0.9s						
VLC			AML	AML			
	comp=E,83µm,0.7s						
VULT	Monte Vulture	2.53 134	P	Pn	22 14 51.9	+1.1	
VULT			AML	AML			
	comp=E,303µm,0.5s						
VULT			AML	AML			
	comp=N,486µm,0.7s						
UDBI	Udbina	2.58 45	ePn	Pn	22 14 53.1	+1.7	
EQUI	Equi	2.64 304	P	Pn	22 14 53.2	+0.9	
EQUI			AML	AML			
	comp=E,69µm,0.7s						
EQUI			AML	AML			
	comp=N,106µm,0.5s						
A250A	Rusevo Krmpots	2.65 27	ePn	Pn	22 14 53.3	+0.9	
KIJV	Kijevo	2.65 60	ePn	Pn	22 14 53.8	+1.4	
LSTV	Lastovo	2.71 88	ePn	Pn	22 14 54.0	+0.8	
PLMA	Palmaria, Port	2.78 299	AML	AML			
	comp=E,80µm,0.6s						
PLMA			AML	AML			
	comp=N,78µm,1.6s						
ACER	Acerenza	2.83 133	P	Pn	22 14 55.8	+1.0	
MAKA	Makarska	2.85 78	ePn	Pn	22 14 56.1	+1.1	
SKDS	Skadanscina	2.87 11	ePn	Pn	22 14 55.5	+0.1	
RICI	Ricice	2.97 74	i Pn	Pn	22 14 58.1	+1.3	
A050A	Klekovaca	2.98 53	ePn	Pb	22 15 00.4	-2.5	
SMPL	Sampolo	2.98 259	P	Pn	22 14 58.7	+1.8	
PGF	Pioggiola	3.11 268	ePn	Pn	22 15 00.5	+1.7	
PGF			eSn	Sn	22 15 31.7	-4.2	
	comp=N,23nm,0.9s						
PGF	Pioggiola	3.11 268	P	Pn	22 15 00.5	+1.7	
CEY	Cerknica	3.12 16	ePn	Pn	22 14 59.6	+0.7	
AMUR	Altamura	3.13 125	P	Pn	22 15 00.1	+1.2	
AMUR			AML	AML			
	comp=N,219µm,0.3s						
AMUR			AML	AML			
	comp=E,176µm,1.0s						
BOJS	Bojanci	3.13 27	ePn	Pn	22 15 00.3	+1.3	
BOJS	Bojanci	3.13 27	P	Pn	22 15 00.4	+1.3	
BOJS			AML	AML			
	comp=N,344µm,0.4s						
BOJS			AML	AML			
	comp=E,477µm,0.5s						
SRKY	Kupres RS	3.17 64	ePn	Pn	22 15 01.4	+1.7	
MIGL	Miglionico	3.23 130	P	Pn	22 15 01.6	+1.3	
MIGL			AML	AML			
	comp=N,457µm,0.8s						
MIGL			AML	AML			
	comp=E,386µm,1.0s						
SABO	M.te Sabotino	3.25 5	P	Pn	22 15 01.1	+0.4	
SABO			AML	AML			
	comp=E,1500µm,0.8s						
SABO			AML	AML			
	comp=N,1950µm,0.8s						
SABO			AML	AML			
	comp=E,352µm,0.5s						
SABO			AML	AML			
	comp=N,508µm,0.8s						
MGRS	Mrkonjic Grad	3.28 58	ePn	Pn	22 15 03.5	+2.5	
ROVR	Rover Verones	3.29 333	P	Pn	22 15 02.1	+0.8	
ROVR			AML	AML			
	comp=N,93µm,0.4s						
ROVR			AML	AML			
	comp=E,69µm,0.9s						
CGRP	Cima Grappa	3.30 343	P	Pn	22 15 02.5	+1.0	
CGRP			AML	AML			
	comp=N,291µm,0.7s						
CGRP			AML	AML			
	comp=E,318µm,0.5s						
STON	Ston	3.31 86	ePn	Pn	22 15 01.5	+0.2	
STON	Ston	3.31 86	ePn	Pn	22 15 01.5	+0.2	
STON	Ston	3.31 86	P	Pn	22 15 01.6	+0.2	
STON			AML	AML			
	comp=E,110µm,0.3s						
STON			AML	AML			
	comp=N,90µm,0.3s						
STON			AML	AML			
	comp=N,90µm,0.3s						
STON			AML	AML			
	comp=E,110µm,0.3s						
STON	Ston	3.31 86	AML	AML			
	comp=E,110µm,0.3s						
STON	Ston	3.31 86	AML	AML			
	comp=N,90µm,0.3s						
VARN	Col Varnada, M	3.35 347	P	Pn	22 15 03.2	+1.1	
VARN			AML	AML			
	comp=E,375µm,0.8s						
VARN			AML	AML			
	comp=N,306µm,0.7s						
PRIJ	Prijedor	3.38 47	ePn	Pg	22 15 13.4	-1.3	
LJU	Ljubljana	3.44 15	P	Pn	22 15 04.3	+1.1	
LJU			AML	AML			
	comp=N,1430µm,0.3s						
LJU			AML	AML			
	comp=E,1110µm,1.0s						
LTRZ	Laterza	3.44 127	P	Pn	22 15 04.3	+1.0	
DOSS	Dosso del Somm	3.46 336	P	Pn	22 15 04.8	+1.1	
DOSS			AML	AML			
	comp=N,190µm,0.7s						
DOSS			AML	AML			
	comp=N,202µm,0.8s						
DOSS			AML	AML			
	comp=E,207µm,0.7s						
DOSS			AML	AML			
	comp=E,190µm,0.8s						
SALO	Salr	3.47 327	P	Pn	22 15 05.1	+1.5	
SALO			AML	AML			
	comp=E,202µm,0.7s						
NOCI	Noci	3.48 123	P	Pn	22 15 05.1	+1.3	
NOCI			AML	AML			
	comp=N,141µm,0.4s						
NOCI			AML	AML			
	comp=E,127µm,0.4s						
CRES	Cresnjev	3.48 27	ePn	Pn	22 15 03.3	-0.5	
MPRI	Monte Prat	3.51 357	P	Pn	22 15 05.2	+0.9	
MPRI			AML	AML			
	comp=N,354µm,0.8s						
MPRI			AML	AML			
	comp=E,284µm,0.9s						
A051A	Mrakovica	3.51 48	ePn	Pn	22 15 07.0	+2.8	
BLY	Banja Luka	3.51 54	ePn	Pb	22 15 08.8	-3.1	
STAL	STALIGIAL	3.54 354	P	Pn	22 15 05.5	+0.8	
STAL			AML	AML			
	comp=E,262µm,0.6s						
STAL			AML	AML			
	comp=N,176µm,0.9s						
MAGA	Magasa	3.56 329	P	Pn	22 15 06.6	+1.6	
MAGA			AML	AML			
	comp=N,278µm,0.4s						
MAGA			AML	AML			
	comp=E,488µm,0.5s						
LUSI	Trento, Gardas	3.61 334	P	Pn	22 15 07.0	+1.4	
LUSI			AML	AML			
	comp=E,182µm,0.9s						
LUSI			AML	AML			
	comp=N,198µm,0.4s						
CIMO	Cimolais	3.61 351	P	Pn	22 15 06.7	+1.0	
CIMO			AML	AML			
	comp=E,70µm,0.9s						
CIMO			AML	AML			
	comp=N,65µm,0.8s						
CIMO			AML	AML			
	comp=N,71µm,0.8s						
CIMO			AML	AML			
	comp=E,63µm,0.9s						
DBRK	Dubrovnik	3.64 89	ePn	Pn	22 15 06.7	+0.7	
GAGG	Gaggia	3.71 335	P	Pn	22 15 08.0	+0.9	
GAGG			AML	AML			
	comp=N,207µm,0.8s						
GAGG			AML	AML			
	comp=E,189µm,1.0s						

TREB	Trebinje	3.79 89	ePn	Pn	22 15 09.5	+1.5	
ZOU	Zoufplan	3.82 358	P	Pn	22 15 09.4	+0.8	
ZOU			AML	AML			
	comp=E,155µm,1.2s						
ZOU			AML	AML			
	comp=N,144µm,1.0s						
MABI	Malga Bissina	3.84 331	P	Pn	22 15 09.9	+1.1	
MABI			AML	AML			
	comp=N,51µm,0.6s						
MABI			AML	AML			
	comp=E,67µm,0.4s						
OBKA	Obir	3.89 14	ePn	Pn	22 15 10.0	+0.5	
OBKA	Obir	3.89 14	ePn	Pn	22 15 12.1	+2.6	
	comp=E,2.3nm,0.3s						
MYKA	Terra Mystica	3.90 4	i Pn	Pn	22 15 11.3	+1.6	
	comp=E,7.8nm,0.3s,SNR=6.3						
HCY	Herceg Novi	3.91 92	ePn	Pn	22 15 11.3	+1.6	
BRY	Bratogost	3.92 86	ePn	Pn	22 15 11.1	+1.1	
KOSI	Kohlern	3.95 341	P	Pn	22 15 11.7	+1.3	
KOSI			AML	AML			
	comp=N,171µm,1.0s						
KOSI			AML	AML			
	comp=E,192µm,1.0s						
ABTA	Abfaltersbach	4.04 353	i Pn	Pn	22 15 13.3	+1.8	
	comp=E,32nm,0.5s,SNR=30						
SOKA	Soboth	4.15 18	ePn	Pn	22 15 14.4	+1.3	
	comp=E,3.1nm,0.3s						
SPS2	Spezzano della	4.17 144	AML	AML			
	comp=E,23µm,0.7s						
SPS2			AML	AML			
	comp=N,23µm,0.8s						
UPM	Unac-Piva	4.21 82	ePn	Pn	22 15 16.5	+2.6	
RISI	Rein	4.29 350	P	Pn	22 15 15.8	+0.7	
KBA	Koelnbreinsper	4.34 1	i Pn	Pn	22 15 17.6	+1.8	
	comp=N,3.7nm,0.2s,SNR=5.9						
KBA			eSn	Sn	22 16 06.4	+0.1	
	comp=N,17nm,0.4s						
VSL	Villasalto	4.34 223	P	Pn	22 15 17.5	+1.9	
VSL			AML	AML			
VSL			AML	AML			
SBF	Sospel	4.36 287	ePn	Pn	22 15 16.9	+0.9	
SBF			eSn	Sn	22 16 05.3	-1.4	
	comp=N,34nm,0.7s						
MUGIO	Muggio	4.37 318	AML	AML			
	comp=E,41µm,0.6s						
MUGIO			AML	AML			
	comp=N,36µm,0.8s						
ROSI	Rosskopf	4.38 344	P	Pn	22 15 17.7	+1.4	
TURF	col de Turini	4.42 288	P	Pn	22 15 18.8	+2.0	
DRME	Dracevica, Mon	4.45 95	ePn	Pn	22 15 19.1	+1.9	
PDG	Podgorica	4.47 92	⇑P	Pn	22 15 20.4	+2.9	
SPIF	crte de Spivo	4.55 289	P	Pn	22 15 22.5	+3.9	
RUDO	Rudo	4.59 77	ePn	Pn	22 15 20.3	+1.3	
FETA	Feichten	4.63 338	ePn	Pn	22 15 23.7	+3.9	
	comp=N,2.3nm,0.3s						
WTTA	Wattenberg	4.66 347	ePn	Pn	22 15 23.6	+3.4	
	comp=N,3.2nm,0.3s						
DAVOX	Davos/Dischmat	4.69 331	Pn	Pn	22 15 23.6	+3.1	
	comp=N,2.0nm,0.3s,baz=85,slow=3.5,SNR=17						
DAVOX			Sn	Sn	22 16 19.4	+4.5	
	comp=N,2.0nm,0.3s,baz=293,slow=24,SNR=3.6						
	comp=N,12nm,0.7s						
SQTA	Sankt Quirin	4.70 343	i Pn	Pn	22 15 23.7	+3.1	
	comp=N,6.1nm,0.2s,SNR=7.4						
SQTA			eSn	Sn	22 16 19.9	+4.8	
	comp=N,20nm,0.4s						
CALF	Calern	4.70 285	P	Pn	22 15 22.6	+1.9	
WATA	Walderalm	4.74 346	i Pn	Pn	22 15 24.9	+3.7	
	comp=N,6.2nm,0.3s,SNR=11						
ARSA	Arzberg	4.80 19	ePn	Pn	22 15 22.9	+0.9	
	comp=N,3.4nm,0.3s						
MOTA	Moosalm	4.84 343	i Pn	Pn	22 15 27.0	+4.4	
	comp=N,3.6nm,0.3s,SNR=5.3						
LMR	La Mourre	4.95 279	ePn	Pn	22 15 24.3	+0.4	
LMR			eSn	Sn	22 16 17.5	-3.5	
	comp=N,38nm,1.6s						
BIOA	Bad Ischl, Aus	4.96 3	i Pn	Pn	22 15 25.5	+1.3	
	comp=N,9.5nm,0.3s,SNR=12						
RETA	Reutte	5.05 341	ePn	Pn	22 15 28.8	+3.3	
	comp=N,4.2nm,0.3s						
RETA			eSn	Sn	22 16 29.0	+5.2	
	comp=N,10.0nm,0.5s						
MBDF	Montbardon	5.07 295	ePn	Pn	22 15 27.2	+1.4	
MBDF			eSn	Sn	22 16 22.5	-1.8	
	comp=N,17nm,1.0s						
TRIGF	Trigance	5.07 284	P	Pn	22 15 28.1	+2.4	
DIVS	Divibare	5.12 72	ePn	Pn	22 15 29.3	+2.9	
DAVA	Damuels	5.12 334	ePn	Pn	22 15 30.0	+3.5	
	comp=N,5.5nm,0.4s						
TIR	Tirane	5.15 103	⇑P	Pn	22 15 28.5	+1.8	
MOA	Molln	5.17 8	ePn	Pn	22 15 29.0	+2.1	
	comp=N,4.9nm,0.3s						
DIX	Grande Dixence	5.33 311	P	Pn	22 15 31.2	+1.7	
FRGS	Fruska Gora	5.34 61	⇑P	Pg	22 15 54.2	+1.9	
FRGS	Fruska Gora	5.34 61	ePn	Pn	22 15 30.3	+0.9	
LPG	La Plagne	5.41 303	ePn	Pn	22 15 32.4	+1.9	
LPG			eSn	Sn	22 16 29.9	-2.8	
	comp=N,12nm,0.8s						
RONA	Rosalia, Austr	5.42 23	ePn	Pn	22 15 31.7	+1.2	
	comp=N,1.7nm,0.2s						
LPL	La Plagne	5.43 303	ePn	Pn	22 15 32.7	+2.0	
LPL			eSn	Sn	22 16 31.4	-1.7	
	comp=N,6.0nm,0.5s						
ARTF	Artigues	5.48 281	P	Pn	22 15 33.3	+2.0	
CONA	Conrad Observa	5.52 19	i Pn	Pn	22 15 32.9	+1.1	
	comp=N,1.8nm,0.3s,SNR=7.8						
CONA			eSn	Sn	22 16 34.1	-1.0	
	comp=N,5.5nm,0.4s						
RSL	Roselend	5.58 304	P	Pn	22 15 35.8	+3.1	
SMRF	Simiane la Rot	5.70 285	ePn	Pn	22 15 36.7	+2.3	
SMRF			eSn	Sn	22 16 38.5	-1.2	
	comp=N,1.8nm,0.5s						
ORIF	Oris-en-Rattie	5.73 295	ePn	Pn	22 15 38.2	+3.4	
ORIF			eSn	Sn	22 16 38.2	-2.3	
	comp=N,11nm,0.8s						
AIGLE	Aigle	5.74 311	P	Pn	22 15 37.1	+2.2	
SLE	Schleitheim	6.03 328	P	Pn	22 15 40.4	+1.6	
GERES	GERESS Array B	6.12 3	Pn	Pn	22 15 40.5	+0.4	
	comp=N,0.8nm,0.3s,baz=174,slow=13,SNR=19						
GERES			Sn	Sn	22 16 49.7	-0.3	
	comp=N,2.2nm,0.3s,baz=177,slow=25,SNR=8.5						
	comp=N,1.3nm,0.4s						
CKRC	Cesky Krumlov	6.13 7	ePN	Pn	22 15 40.2	0.0	
CKRC			eSN	Sn	22 16 48.5	-1.7	
MODS	Modra-Piesok	6.32 25	ePN	Pn	22 15 43.1	+0.3	
BRANT	Les Verrieres	6.37 314	P	Pn	22 15 46.1	+2.6	
CABF	La Chapelle	6.38 310	ePn	Pn	22 15 43.8	0.0	
CABF			eSn	Sn	22 16 54.5	-2.1	
	comp=N,24nm,1.1s						
OG35	Corcelles	6.39 304	P	Pn	22 15 44.4	+0.6	
KHC	Kasperske Hory	6.40 2	ePN	Pn	22 15 44.8	+0.9	
KHC			eSN	Sn	22 16 56.0	-0.8	
KIZ	Kirchzarten	6.41 326	P	Pn	22 15 45.5	+1.4	
VIVF	Saint-Julien-l	6.53 292	ePn	Pn	22 15 46.2	+0.5	
VIVF			eSn	Sn	22 16 57.6	-2.5	
	comp=N,2.1nm,0.5s						
BZS	Buzias	6.69 62	⇓P	Pn	22 15 48.3	+0.4	
KRUC	Moravsky	6.70 18	ePN	Pn	22 15 48.5	+0.5	
KRUC			eSN	Sn	22 17 02.0	-2.2	
HINF	Hinteralfeld	6.77 321	ePn	Pn	22 15 49.6	+0.6	
HINF			eSn	Sn	22 17 04.1	-1.9	
	comp=N,8.8nm,0.4s						
JAVC	Velka Javorina	6.87 25	ePN	Pn	22 15 51.3	+0.9	
LASF	Ste Croix	6.94 284	ePn	Pn	22 15 52.4	+1.0	
LASF			eSn	Sn	22 17 08.3	-1.9	
	comp=N,3.8nm,0.8s						
VYHS	Vyhne	6.98 32	ePN	Pn	22 15 53.6	+1.8	
VRAC	Vranov	6.98 19	ePN	Pn	22 15 52.4	+0.6	
VRAC	Vranov	6.98 19	Pn	Pn	22 15 52.6	+0.8	
	comp=N,0.2nm,0.3s,baz=194,slow=14,SNR=4.1						
	comp=N,1.5nm,0.6s						
HAU	Haudompre	7.15 320	ePn	Pn	22 15 54.1	0.0	
HAU			eSn	Sn	22 17 12.6	-2.6	
	comp=N,20nm,0.5s						
GZR	Gura Zlata	7.38 66	⇓P	Pn	22 15 57.5	0.0	
VTS	Vitosha	7.39 88	⇓P	Pn	22 15 57.9	+0.3	
DEV	Deva	7.63 62	⇓P	Pn	22 16 04.6	+3.9	
MORC	Moravsky Berou	7.65 22	⇑P	Pn	22 16 05.2	+4.1	
SMF	Signal de Mont	7.73 304	ePn	Pn	22 16 00.9	-1.3	
SMF			eSn	Sn	22 17 26.8	-2.8	
	comp=N,10.0nm,0.7s						
KRLC	Kraliky	7.74 17	ePN	Pn	22 16 02.7	+0.4	
PAGF	Fort de Pagny	7.83 321	ePn	Pn	22 16 03.7	+0.2	
	baz=141						
PAGF			eSn	Sn	22 17 29.2	-2.7	

	comp=N,9,6nm,0.6s								
SFTF	**Sexfontaines**	**7.93**	**316**	*e*Pn	**Pn**	**22**	**16**	**06.4**	**+1.6**
	baz=136								
SFTF				*e*Sn	**Sn**	**22**	**17**	**30.2**	**-4.1**
	comp=N,35nm,1.4s								
LOR	**Lormes**	**8.03**	**308**	*e*Pn	**Pn**	**22**	**16**	**05.9**	**-0.3**
	baz=129								
LOR				*e*Sn	**Sn**	**22**	**17**	**32.7**	**-4.1**
	comp=N,3.4nm,0.4s								
MTLF	**Montolieu**	**8.08**	**278**	*e*Pn	**Pn**	**22**	**16**	**09.4**	**+2.5**
MTLF				*e*Sn	**Sn**	**22**	**17**	**36.5**	**-1.6**
	comp=N,1.0nm,0.4s								
AVF	**Avril sur Loir**	**8.10**	**303**	*e*Pn	**Pn**	**22**	**16**	**05.9**	**-1.3**
MEZF	**Maizieres J'vi**	**8.12**	**318**	*e*Pn	**Pn**	**22**	**16**	**08.6**	**+1.2**
	baz=139								
MEZF				*e*Sn	**Sn**	**22**	**17**	**36.0**	**-3.0**
	comp=N,11nm,0.8s								
SSF	**Saint Saulge**	**8.13**	**305**	*e*Pn	**Pn**	**22**	**16**	**07.7**	**+0.1**
SSF				*e*Sn	**Sn**	**22**	**17**	**34.7**	**-4.7**
	comp=N,14nm,1.2s								
BRG	**Berggiesshubel**	**8.15**	**3**	*e*(P)	**Pg**	**22**	**16**	**44.6**	**-1.3**
BRG				Amp		22	16	47.1	
	comp=Z,1.6nm,0.5s								
BRG				*ex*	x	22	17	40.2	
BRG				Amp		22	18	29.0	
	comp=E,0.3nm,9.8s								
BRG				*ex*	x	22	18	31.3	
BRG				Amp		22	18	36.0	
	comp=Z,0.8nm,9.4s								
BRG				Amp		22	18	40.0	
	comp=N,0.5nm,10.5s								
BRG				Amp		22	19	06.9	
	comp=Z,9.8nm,1.3s								
SAVF	**Savonnieres en**	**8.16**	**319**	*e*Pn	**Pn**	**22**	**16**	**08.3**	**+0.3**
	baz=141								
SAVF				*e*Sn	**Sn**	**22**	**17**	**36.3**	**-3.7**
	comp=Z,6.9nm,0.4s								
BGF	**Bois d'Agland**	**8.32**	**301**	*e*Pn	**Pn**	**22**	**16**	**10.5**	**+0.3**
BGF				*e*Sn	**Sn**	**22**	**17**	**39.5**	**-4.4**
	comp=Z,4.6nm,0.3s								
CAF	**Calviac**	**8.35**	**289**	*e*Pn	**Pn**	**22**	**16**	**10.9**	**+0.2**
CAF				*e*Sn	**Sn**	**22**	**17**	**39.3**	**-5.5**
	comp=Z,1.0nm,0.5s								
CLL	**Collm**	**8.57**	**359**	*e*Pn	**Pn**	**22**	**16**	**16.0**	**+2.3**
CLL				*ex*	x	22	17	39.0	
CLL				*ex*	x	22	17	57.0	
CLL				*e*Sg	**Sg**	**22**	**18**	**37.0**	**-7.9**
	comp=Z,8.0nm,1.0s								
TCF	**Toulx Ste Croi**	**8.62**	**298**	*e*Pn	**Pn**	**22**	**16**	**14.3**	**-0.1**
TCF				*e*Sn	**Sn**	**22**	**17**	**47.4**	**-4.1**
	comp=Z,26nm,1.7s								
ARR	**Arges**	**8.64**	**68**	⇑P	Pn	22	16	00.7	-14
RJF	**Les Rejaudoux**	**8.81**	**291**	*e*P	Pn	22	16	21.9	+5.0
RJF				*e*Sn	**Sn**	**22**	**17**	**52.8**	**-3.2**
	comp=Z,0.6nm,0.5s								
LFF	**La Frestale**	**9.28**	**288**	*e*P	**Pn**	**22**	**16**	**25.3**	**+2.0**
LFF				*e*Sn	**Sn**	**22**	**18**	**05.3**	**-2.2**
	comp=Z,3.6nm,0.6s								
GIVF	**Givet**	**9.37**	**325**	*e*Pn	**Pn**	**22**	**16**	**24.9**	**+0.4**
BAIF	**Baives**	**9.60**	**323**	*e*Pn	**Pn**	**22**	**16**	**28.0**	**+0.3**
LDF	**La Druitiere**	**11.01**	**307**	*e*P	Pn	22	16	52.6	+5.6
FLN	**La Foliniere**	**11.30**	**307**	*e*P	Pn	22	16	57.0	+6.0
GRR	**Gorron**	**11.36**	**305**	*e*P	**Pn**	**22**	**16**	**54.7**	**+2.9**
TORD	**Torodi Ar. Bea**	**31.12**	**202**	P	**P**	**22**	**20**	**30.2**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=11,slow=8.7,SNR=4.4								
	comp=Z,0.8nm,0.8s								
MKAR	**Makanchi Array**	**47.77**	**60**	P	**P**	**22**	**22**	**47.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=282,slow=7.2,SNR=3.3								
	comp=Z,0.6nm,0.7s								

WEL ***31*** *22:16:09.3±1.1, 37°S±6°×17°9E±°, h24km±10km, M3.6/12, ML3.8/18, MLv3.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=114.1, confirmed*

ISC 31 22:16:06.4±3.2, 37.13S±0.09×179.4E±0.1, h24km±15km, n30, σ1$57/45, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.98**	**243**	P	**Pb**	**22 16 24.6**	**-0.1**
MXZ				S	**Sb**	**22 16 35.0**	**-2.2**
WMGZ	**Waiomatatini S**	**1.05**	**228**	P	**Pn**	**22 16 27.9**	**+2.3**
WMGZ				S	**Sn**	**22 16 41.3**	**+1.9**
PKGZ	**Pakihiroa**	**1.30**	**234**	P	**Pb**	**22 16 31.0**	**+0.7**
PKGZ				S	**Sb**	**22 16 46.5**	**-0.1**
PUZ	**Puketiti**	**1.31**	**224**	P	**Pn**	**22 16 31.1**	**+1.9**
PUZ				S	**Sb**	**22 16 48.2**	**+1.4**
HAZ	**Te Kaha**	**1.44**	**244**	P	**Pn**	**22 16 31.6**	**+0.7**
HAZ				S	**Sb**	**22 16 49.9**	**-0.5**
TWGZ	**Tauwhareparae**	**1.54**	**227**	P	**Pn**	**22 16 34.8**	**+2.3**
TWGZ				S	**Sb**	**22 16 53.2**	**-0.3**
RUGZ	**Raukumara Rang**	**1.61**	**238**	P	**Pb**	**22 16 35.7**	**+0.1**
RUGZ				S	**Sn**	**22 16 53.7**	**+0.2**
CNGZ	**Carnagh Statio**	**1.66**	**215**	P	**Pn**	**22 16 36.9**	**+2.9**
TKGZ	**Te Karaka**	**1.80**	**223**	P	**Pn**	**22 16 37.4**	**+1.5**
TKGZ				S	**Sn**	**22 16 59.3**	**+1.3**
MWZ	**Matawai**	**1.92**	**230**	P	**Pn**	**22 16 39.3**	**+1.7**
MWZ				S	**Sn**	**22 17 01.3**	**+0.4**
RIGZ	**Rimuhau**	**2.04**	**219**	P	**Pn**	**22 16 41.2**	**+1.9**
RIGZ				S	**Sn**	**22 17 04.7**	**+0.6**
WHRZ	**Whale Island**	**2.07**	**249**	P	**Pn**	**22 16 40.8**	**+1.2**
WHRZ				S	**Sn**	**22 17 04.6**	**0.0**
URZ	**Urewera**	**2.14**	**237**	P	**Pn**	**22 16 42.3**	**+1.7**
URZ				S	**Sn**	**22 17 06.4**	**-0.1**
PRGZ	**Paritu Road**	**2.16**	**213**	P	**Pn**	**22 16 42.8**	**+1.9**
SNGZ	**Shannon Statio**	**2.32**	**224**	P	**Pn**	**22 16 44.5**	**+1.3**
SNGZ				S	**Sn**	**22 17 11.2**	**+0.2**
KNZ	**Kokohu**	**2.33**	**215**	P	**Pn**	**22 16 44.5**	**+1.3**
KUZ	**Kuaotunu**	**2.98**	**276**	P	**Pn**	**22 16 52.1**	**0.0**
BKZ	**Black Stump Fm**	**3.07**	**228**	P	**Pn**	**22 16 54.6**	**+1.1**
GRZ	**Great Barrier**	**3.29**	**284**	P	**Pn**	**22 16 57.0**	**+0.6**
TLZ	**Tolley Road**	**3.29**	**247**	P	**Pn**	**22 16 58.2**	**+1.7**
PXZ	**Pawanui**	**3.52**	**214**	P	**Pn**	**22 16 59.3**	**-0.3**
PRHZ	**Porangahau**	**3.81**	**214**	P	**Pn**	**22 17 03.2**	**-0.4**
PRHZ				S	**Sn**	**22 17 44.3**	**-3.3**
MTVZ	**Mangateitei**	**3.83**	**233**	P	**Pn**	**22 17 02.4**	**-1.6**
MTVZ				S	**Sn**	**22 17 45.1**	**-3.1**
BFZ	**Birch Farm**	**4.32**	**214**	P	**Pn**	**22 17 09.7**	**-0.9**
MRZ	**Mangatainoka R**	**4.62**	**219**	P	**Pn**	**22 17 13.7**	**-1.0**
TMWZ	**Te Maipa**	**4.82**	**213**	P	**Pn**	**22 17 15.9**	**-1.6**
HOWZ	**Holdsworth Sta**	**4.83**	**218**	P	**Pn**	**22 17 16.3**	**-1.3**
OGWZ	**Otaki Gorge**	**4.95**	**221**	P	**Pn**	**22 17 18.1**	**-1.1**
MTW	**Mount Morrison**	**5.04**	**216**	P	**Pn**	**22 17 18.6**	**-1.8**
PLWZ	**Palliser**	**5.48**	**215**	P	**Pn**	**22 17 24.4**	**-2.1**

ATH 31 22:19:17.3, 38°28N×20°43E, h14km±1km, ML2.0/2, Error ellipse: s-maj=2.2km s-min=0.8km az=267.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.02**	**183**	P	Pg	22 19 19.6	-0.2
KEF4				S	Sg	22 19 21.4	-0.1
KEF3	**Kipouria, Keph**	**0.10**	**218**	P	Pg	22 19 20.2	-0.2
KEF3				S	Sg	22 19 22.4	-0.1
ARGA	**Argostoli. Kep**	**0.11**	**158**	P	Pg	22 19 20.5	-0.1
ARGA				S	Sb	22 19 23.5	-0.3
VLS	**Valsamata**	**0.17**	**129**	P	Pg	22 19 21.0	-0.4
VLS				S	Sg	22 19 23.9	-0.2
VLS				AML	AML	22 19 24.0	
	comp=N,1663μm,0.1s						
VLS				AML	AML	22 19 24.1	
	comp=E,1323μm,0.1s						
FSK	**Fiskardo**	**0.21**	**31**	P	Pg	22 19 22.3	+0.3
FSK				S	Sg	22 19 25.0	-0.1
FSK				AML	AML	22 19 26.0	
	comp=N,640μm,0.1s						
FSK				AML	AML	22 19 26.4	
	comp=E,1753μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.21**	**143**	P	Pg	22 19 21.9	-0.1
PSDA				S	Sg	22 19 25.6	+0.5
EVGI	**Lefkada island**	**0.39**	**28**	P	Pg	22 19 24.6	-0.5
EVGI				S	Sg	22 19 30.4	+0.1
LKD2	**Lefkada island**	**0.54**	**20**	P	Pg	22 19 27.6	-0.4
LKD2				S	Sg	22 19 35.5	+0.4
TSLK	**Tsoukalades, L**	**0.57**	**18**	P	Pg	22 19 28.2	-0.3
TSLK				S	Sb	22 19 36.6	-0.4
LTHK	**Lithakia**	**0.66**	**150**	P	Pg	22 19 29.7	-0.4
RLS	**Riolos of Patr**	**0.85**	**105**	P	Pg	22 19 33.0	-0.8
PVO	**Paravola**	**0.93**	**68**	P	Pb	22 19 34.9	-0.2
DRO	**Drossia**	**1.06**	**108**	P	Pb	22 19 37.1	-0.3
ANX	**Ano Chora**	**1.22**	**75**	P	Pn	22 19 39.5	-0.4
LAKA	**Lakka**	**1.22**	**91**	P	Pn	22 19 39.4	-0.5
SERG	**Sergoula**	**1.29**	**84**	P	Pn	22 19 40.3	-0.5
KLV	**Kalavryta, Ach**	**1.38**	**99**	P	Pn	22 19 42.1	0.0

ROM 31 22:20:49.0±0.1, 42°821N±0.001×13°231E±0.003, h6km, Md1.1/3, Error ellipse: s-maj=0.2km s-min=0.1km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1242	**Castelluccio d**	**0.02**	**294**	P	Pg	22 20 50.3	0.0
T1242				S	Sg	22 20 51.2	-0.1
T1242				AML	AML		
	comp=E,234μm,0.2s						
T1242				AML	AML		
	comp=E,234μm,0.2s						
T1242				AML	AML		
	comp=N,414μm,0.3s						
T1242				END			
T1244	**Arquata del Tr**	**0.08**	**142**	P	Pg	22 20 51.1	+0.2
T1244				S	Sg	22 20 52.7	+0.5
T1244				END			
MMO1	**Montemonaco**	**0.11**	**42**	P	Pg	22 20 51.6	+0.3
MMO1				S	Sg	22 20 53.6	+0.6
MMO1				END			

IDC ***31*** *22:20:51.5±1.3, 41°.19N×20°.34E, h0km, mb3.9/10, mbtmp3.9/15, ML3.7/5, Error ellipse: s-maj=22.5km s-min=15.2km az=24.0*
LDG ***31*** *22:20:51.9±0.2, 41°.28N×20°.49E, h2km, Ml4.0/17, Error ellipse: s-maj=6.2km s-min=3.7km az=54.0*
BEO ***31*** *22:20:51.5±0.5, 41°.17N×20°.49E, h0km, ML4.0/9*
PRU ***31*** *22:20:52.7±0.0, 40°.88N×20°.04E, h1km, M4.3*
MED_RC ***31*** *22:20:52.0±0.6, 41°.38N×20°.47E, h14km±2km, MW4.2/10, Moment Tensor Solution.Mantle waves: s10,c18; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; Mrr-1.67±.33; Mθθ0.49±.18; Mϕϕ1.18±.23; Mrθ-0.22±.31; Mθϕ1.15±.14; Mϕr-1.93±.46; Best double couple: M=2.70000×10^{15} NP1=ϕs15.00000°, δ69.00000°, λ-109.00000°. NP2=ϕs239.00000°, δ28.00000°, λ-49.00000°. Principal axes: T 2.7300, Plg22.0000°, Azm119.0000°; N -0.0500, Plg18.0000°, Azm22.0000°; P -2.6800, Plg61.0000°, Azm257.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
TIR ***31*** *22:20:52.1, 41°.29N×20°.40E, h2km±2km, Md3.9, Ml4.2*
PDG ***31*** *22:20:53.1±0.6, 41°.29N×20°.39E, h9km±1km, MD4.2/12, ML4.2/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
THE ***31*** *22:20:53.4, 41°.31N×20°.43E, h0km±2km, ML3.7/10, Error ellipse: s-maj=2.1km s-min=0.8km az=338.0*
NEIC ***31*** *22:20:53.1±1.5, 41°.32N±0°.03×20°.36E±0°.06, h3km±5km, mb4.4/7, ML4.2(TIR), Error ellipse: s-maj=6.6km s-min=4.0km az=87.0*
DDA ***31*** *22:20:54.1±0.0, 41°.25N×20°.32E, h19km±1km, MW4.1*

ISC 31 22:20:53.8±0.9, 41°28N±0°.01×20°36E±0°.02, h14km±6km, n361, σ2$23/438, mb4.2/14, 31C-34D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.37**	**117**	*i* Pg	**Pg**	**22 21 00.4**	**-1.0**
OHR				*i* Sg	**Sg**	**22 21 06.7**	**+0.1**
OHR				*e*Lg	Lg	22 21 07.2	
	comp=N,26μm,0.5s						
OHR				*e*Lg	Lg	22 21 07.8	
	comp=E,35μm,0.7s						
TIR	**Tirane**	**0.38**	**280**	⇓P	**Pg**	**22 21 00.2**	**-1.2**
TIR	**Tirane**	**0.38**	**280**	P	**Pg**	**22 21 00.7**	**-0.7**
TIR				S	**Sb**	**22 21 07.7**	**-0.2**
	comp=E,8μm,0.4s						
TIR	**Tirane**	**0.38**	**280**	Pg	**Pg**	**22 21 00.2**	**-1.2**
TIR				Sg	**Sb**	**22 21 07.4**	**-0.5**
TIR	**Tirane**	**0.38**	**280**	*e*Pg	**Pg**	**22 21 00.6**	**-0.8**
TIR				*e*Sg	**Sb**	**22 21 07.7**	**-0.2**
TIR	**Tirane**	**0.38**	**280**	⇑*i*Pg	**Pg**	**22 21 00.2**	**-1.2**
TIR				*i* Sg	**Sb**	**22 21 07.7**	**-0.2**
TIR	**Tirane**	**0.38**	**280**	P	**Pg**	**22 21 00.3**	**-1.2**
	baz=279						
TIR				S	**Sg**	**22 21 07.1**	**+0.5**
	baz=279						
TIR				AMP			
	comp=N,32nm,0.3s,baz=279						
PHP	**Peshkopia**	**0.41**	**9**	P	**Pg**	**22 21 00.7**	**-1.3**
PHP				S	**Sg**	**22 21 07.1**	**-0.5**
	comp=N,70μm,0.5s						
PHP	**Peshkopia**	**0.41**	**9**		**Pg**	**22 21 00.8**	**-1.2**
PHP					**Sg**	**22 21 07.1**	**-0.5**
PHP	**Peshkopia**	**0.41**	**9**	P	**Pg**	**22 21 00.8**	**-1.2**
	baz=4.0						
PHP				S	**Sg**	**22 21 07.1**	**-0.5**
	baz=4.0						
PHP				AMP			
	comp=N,124nm,0.7s,baz=4.0						
KBN	**Korca**	**0.73**	**154**	P	**Pg**	**22 21 06.6**	**-1.5**
KBN				S	**Sb**	**22 21 18.6**	**+0.3**
	comp=N,9μm,0.6s						
KBN	**Korca**	**0.73**	**154**		**Pg**	**22 21 06.4**	**-1.7**
KBN	**Korca**	**0.73**	**154**		**Sg**	**22 21 17.9**	**+0.2**
KBN	**Korca**	**0.73**	**154**	P	**Pg**	**22 21 06.3**	**-1.8**
	baz=155						
KBN				S	**Sg**	**22 21 17.9**	**+0.2**
	baz=155						
KBN				AMP			
	comp=N,36nm,0.7s,baz=155						
FIER	**Fieri**	**0.82**	**227**		**Pg**	**22 21 09.7**	**-0.1**
FIER	**Fieri**	**0.82**	**227**	P	**Pg**	**22 21 09.7**	**-0.1**
	baz=229						
NEST	**Nestorio**	**1.01**	**149**	P	**Pb**	**22 21 11.9**	**-1.2**
NEST				S	**Sg**	**22 21 27.1**	**+0.5**
	comp=N,4μm,0.6s						
VLO	**Vlora**	**1.04**	**219**	P	**Pg**	**22 21 14.1**	**+0.2**
VLO				S	**Sn**	**22 21 30.5**	**+2.3**
	comp=N,5μm,0.5s						
VLO	**Vlora**	**1.04**	**219**		**Pb**	**22 21 12.6**	**-1.0**
VLO	**Vlora**	**1.04**	**219**	P	**Pb**	**22 21 13.6**	**0.0**
	baz=221						
VLO				S	**Sn**	**22 21 29.2**	**+1.0**
	baz=221						
SKO	**Skopje**	**1.06**	**49**	*i* Pg	**Pb**	**22 21 12.2**	**-1.8**
SKO				*i* Sg	**Sb**	**22 21 27.9**	**+0.2**
BCI	**Bajram Curri**	**1.10**	**349**		**Pb**	**22 21 14.0**	**-0.7**
BCI					**Sn**	**22 21 30.9**	**+1.0**
BCI	**Bajram Curri**	**1.10**	**349**	P	**Pb**	**22 21 14.0**	**-0.7**
	baz=348						
BCI				S	**Sn**	**22 21 30.9**	**+1.0**
	baz=348						
BCI				AMP			
	comp=N,44nm,0.9s,baz=348						
LSK	**Leskovik**	**1.15**	**171**	P	**Pb**	**22 21 14.4**	**-1.0**
LSK				S	**Sn**	**22 21 32.9**	**+2.0**
	comp=N,8μm,0.9s						
LSK	**Leskovik**	**1.15**	**171**		**Pb**	**22 21 14.2**	**-1.1**
LSK					**Sn**	**22 21 32.2**	**+1.3**
LSK	**Leskovik**	**1.15**	**171**	P	**Pb**	**22 21 14.2**	**-1.1**
	baz=172						
LSK				S	**Sn**	**22 21 32.2**	**+1.3**
	baz=172						
LSK				AMP			
	comp=N,32nm,0.8s,baz=172						
PENT	**Pentalofos**	**1.24**	**151**	P	**Pn**	**22 21 16.3**	**-0.4**
DRME	**Dracevica, Mon**	**1.26**	**316**	*e*Pn	**Pn**	**22 21 16.2**	**-0.7**
DRME	**Dracevica, Mon**	**1.26**	**316**	⇑*i*Pg	**Pn**	**22 21 16.3**	**-0.7**
DRME				*i* Sg	**Sg**	**22 21 36.4**	**+1.9**
PVY	**Plav**	**1.34**	**347**	⇑*i*Pg	**Pn**	**22 21 17.7**	**-0.5**
PVY				*i* Sg	**Sg**	**22 21 38.7**	**+1.5**
PDG	**Podgorica**	**1.41**	**325**	⇑P	**Pb**	**22 21 19.6**	**-0.3**
PDG	**Podgorica**	**1.41**	**325**		**Pn**	**22 21 18.9**	**-0.1**
PDG	**Podgorica**	**1.41**	**325**	*e*Pg	**Pn**	**22 21 19.3**	**+0.2**
PDG				*e*Sg	**Sg**	**22 21 41.9**	**+2.6**
TTG	**Podgorica**	**1.41**	**325**	⇓*i*Pg	**Pn**	**22 21 19.2**	**+0.2**
TTG				*i* Sg	**Sg**	**22 21 41.1**	**+1.8**
SRN	**Sarande**	**1.43**	**191**	P	**Pg**	**22 21 20.7**	**-0.5**
SRN				S	**Sg**	**22 21 41.9**	**+2.1**
	comp=N,2μm,1.0s						
SRN	**Sarande**	**1.43**	**191**		**Pb**	**22 21 20.4**	**+0.2**
SRN					**Sg**	**22 21 41.6**	**+1.8**
SRN	**Sarande**	**1.43**	**191**	P	**Pb**	**22 21 20.4**	**+0.2**
	baz=193						
SRN				S	**Sg**	**22 21 41.6**	**+1.8**
	baz=193						
SRN				AMP			
	comp=N,7.9nm,1.1s,baz=193						

STIP	**Stip**	**1.43**	**73**	*i* Pn	**Pg**	**22**	**21**	**22.1**	**+0.7**
STIP				*i* Sn	**Sg**	**22**	**21**	**44.6**	**+4.6**
KZN	**Kozani**	**1.45**	**132**	P	**Pn**	**22**	**21**	**19.3**	**-0.3**
KZN				S	**Sg**	**22**	**21**	**41.0**	**+0.5**
	comp=N,3μm,0.6s								
BUM	**Brajici-Budva**	**1.50**	**313**	⇓*i*Pg	**Pn**	**22**	**21**	**20.4**	**+0.2**
BUM				*i* Sg	**Sg**	**22**	**21**	**43.6**	**+1.6**
KEK	**Kerkira**	**1.62**	**195**	P	**Pb**	**22**	**21**	**23.2**	**-0.3**
KEK				S	**Sg**	**22**	**21**	**46.5**	**+0.4**
	comp=N,1μm,0.9s								
KEK	**Kerkira**	**1.62**	**195**	Pn	**Pn**	**22**	**21**	**22.5**	**+0.6**
BEY	**Berane**	**1.63**	**348**	*i* Pn	**Pb**	**22**	**21**	**22.9**	**-0.8**
IVA	**Berane**	**1.63**	**348**	⇓*i*Pn	**Pb**	**22**	**21**	**22.8**	**-0.8**
IVA				*i* Sn	**Sg**	**22**	**21**	**46.5**	**+0.3**
CEME	**Cevo**	**1.66**	**320**	⇑*i*Pn	**Pb**	**22**	**21**	**23.4**	**-0.7**
CEME				*i* Sn	**Sg**	**22**	**21**	**48.1**	**+0.9**
JAN	**Janina**	**1.67**	**167**	P	**Pn**	**22**	**21**	**23.0**	**+0.5**
KOME	**Kolasin**	**1.69**	**338**	⇓*i*Pn	**Pb**	**22**	**21**	**23.8**	**-0.9**
KOME				*i* Sn	**Sg**	**22**	**21**	**48.2**	**0.0**
PRVS	**Prvonek**	**1.77**	**46**	*e*Pg	**Pn**	**22**	**21**	**24.3**	**+0.3**
PRVS				*e*Sg	**Sg**	**22**	**21**	**49.8**	**-1.1**
HCY	**Herceg Novi**	**1.81**	**311**	*e*Pn	**Pb**	**22**	**21**	**26.2**	**-0.6**
HCY	**Herceg Novi**	**1.81**	**311**	⇑*i*Pn	**Pb**	**22**	**21**	**25.8**	**-1.0**
HCY				*i* Sn	**Sg**	**22**	**21**	**51.9**	**-0.3**
NKME	**Niksic**	**1.82**	**325**	⇓*i*Pn	**Pb**	**22**	**21**	**25.8**	**-1.0**
NKME				*i* Sn	**Sg**	**22**	**21**	**51.8**	**-0.4**
BARS	**Barje**	**1.88**	**35**	*e*Pg	**Pn**	**22**	**21**	**26.0**	**+0.5**
BARS	**Barje**	**1.88**	**35**	⇓*i*Pn	**Pn**	**22**	**21**	**25.9**	**+0.5**
SCTE	**Santa Cesarea**	**1.88**	**231**	Pn	**Pn**	**22**	**21**	**25.9**	**+0.5**
SCTE	**Santa Cesarea**	**1.88**	**231**	P	**Pb**	**22**	**21**	**28.8**	**+1.0**
	baz=232								
KNT	**Kendrikon**	**1.92**	**93**	P	**Pn**	**22**	**21**	**26.3**	**+0.2**
KNT				S	**Sn**	**22**	**21**	**50.4**	**+0.5**
	comp=N,1μm,0.9s								
KNT	**Kendrikon**	**1.92**	**93**	*i* Pn	**Pn**	**22**	**21**	**26.2**	**+0.2**
KNT				*i* Sn	**Sn**	**22**	**21**	**50.6**	**+0.7**
BOSS	**Bosilegrad**	**2.00**	**52**	*e*Pg	**Pn**	**22**	**21**	**27.5**	**+0.4**
BOSS				*e*Sg	**Sb**	**22**	**21**	**54.2**	**-0.3**
SJES	**Sjenica**	**2.00**	**352**	*e*Pn	**Pb**	**22**	**21**	**29.7**	**-0.3**
SJES				*e*Sn	**Sb**	**22**	**21**	**54.2**	**-0.5**
LIT	**Litokhoron**	**2.00**	**125**	SPECP		22	21	27.0	
LIT				P	**Pn**	**22**	**21**	**27.1**	**-0.1**
LIT				S	**Sn**	**22**	**21**	**51.9**	**-0.1**
SELS	**Selova**	**2.02**	**16**	*e*Pg	**Pn**	**22**	**21**	**27.8**	**+0.4**
SELS				*e*Sg	**Sg**	**22**	**21**	**57.6**	**-1.1**
TREB	**Trebinje**	**2.07**	**314**	*e*Pn	**Pb**	**22**	**21**	**30.2**	**-0.9**
TREB	**Trebinje**	**2.07**	**314**	*e*Pn	**Pn**	**22**	**21**	**29.6**	**+1.5**
THE	**Thessaloniki**	**2.08**	**107**		**Pn**	**22**	**21**	**28.3**	**+0.1**
THE	**Thessaloniki**	**2.08**	**107**	*i* Pn	**Pn**	**22**	**21**	**28.1**	**-0.1**
THE				*i* Sn	**Sn**	**22**	**21**	**54.2**	**+0.4**
THE	**Thessaloniki**	**2.08**	**107**	P	**Pn**	**22**	**21**	**28.3**	**+0.1**
	baz=107								
BRY	**Bratogost**	**2.11**	**321**	*e*Pn	**Pb**	**22**	**21**	**30.9**	**-1.0**
BRY	**Bratogost**	**2.11**	**321**	⇓*i*Pn	**Pb**	**22**	**21**	**30.8**	**-1.1**
BRY				*i* Sn	**Sb**	**22**	**21**	**59.1**	**+1.1**
DBRK	**Dubrovnik**	**2.15**	**311**	*e*Pg	**Pb**	**22**	**21**	**31.4**	**-1.1**
DBRK				Sg	**Sb**	**22**	**21**	**58.8**	**-0.3**
PLE	**Pljevlja**	**2.17**	**341**	⇓*i*Pn	**Pb**	**22**	**21**	**31.8**	**-1.1**
PLE				*i* Sn	**Sb**	**22**	**21**	**59.8**	**+0.2**
UPM	**Unac-Piva**	**2.20**	**331**	*e*Pn	**Pb**	**22**	**21**	**33.4**	**-0.1**
UPM	**Unac-Piva**	**2.20**	**331**	⇓*i*Pn	**Pb**	**22**	**21**	**33.1**	**-0.4**
UPM				*i* Sn	**Sb**	**22**	**22**	**00.5**	**-0.2**
IVAS	**Ivanjica**	**2.30**	**356**	*e*Pn	**Pn**	**22**	**21**	**31.8**	**+0.5**
SOH	**Sokhos**	**2.31**	**100**	*i* Pn	**Pn**	**22**	**21**	**31.9**	**+0.5**
SOH				*i* Sn	**Sn**	**22**	**22**	**00.7**	**+1.0**
RUDO	**Rudo**	**2.45**	**343**	*e*Pn	**Pb**	**22**	**21**	**35.6**	**-1.9**
SRS	**Serrai**	**2.45**	**93**	*i* Pn	**Pn**	**22**	**21**	**33.5**	**+0.2**
SRS				*i* Sn	**Sn**	**22**	**22**	**02.8**	**-0.1**
LKD2	**Lefkada island**	**2.50**	**175**		**Pn**	**22**	**21**	**35.7**	**+1.7**
LKD2	**Lefkada island**	**2.50**	**175**	P	**Pn**	**22**	**21**	**35.7**	**+1.7**
	baz=175								
VTS	**Vitosha**	**2.53**	**57**	⇑P	**Pn**	**22**	**21**	**35.5**	**+1.0**
VTS	**Vitosha**	**2.53**	**57**	Pn	**Pn**	**22**	**21**	**34.8**	**+0.3**
VTS	**Vitosha**	**2.53**	**57**	*i* Sn	**Sn**	**22**	**22**	**06.2**	**+1.1**
VTS				*i* Pn	**Pn**	**22**	**21**	**35.1**	**+0.

ARMN P Pn 22 22 13.2 +0.2
CAMP Campotosto 5.33 286 Pn 22 22 13.4 +0.4
RABC Rab 5.36 312 *e*Pn Pn 22 22 13.7 +0.4
VOIR 5.38 38 ⇓P Pn 22 22 14.8 +1.2
BUHA Balikesir, Bur 5.43 107 SPECP 22 22 15.0
BUHA P Pn 22 22 15.4 +1.2
SULR 5.50 50 ⇓P Pn 22 22 17.2 +2.1
A250A Rusevo Krmpots 5.50 315 *e*Pn Pn 22 22 16.4 +1.1
NRCA Norcia 5.61 288 Pn 22 22 17.2 +0.4
BOJS Bojanci 5.62 320 *e*Pn Pn 22 22 18.3 +1.4
VIZE Kirklareli, Vi 5.63 85 SPECP 22 22 15.0
VIZE P Pn 22 22 15.8 -1.2
ZEDA zmir-Bergama 5.64 112 P Pn 22 22 15.8 -1.4
FDMO Fiordimonte 5.68 290 22 22 17.7 0.0
CRES Cresnjev 5.77 324 *e*Pn Pn 22 22 20.5 +1.6
RASA Rasa 5.79 57 ⇑P Pn 22 22 18.3 -0.9
MLR Muntele Rosu 5.85 42 ⇓P Pn 22 22 21.1 +0.9
MLR Muntele Rosu 5.85 42 Pn Pn 22 22 20.5 +0.4
MLR Muntele Rosu 5.85 42 Pn Pn 22 22 21.6 +1.5
comp=N,1.6nm,0.3s,baz=207,slow=6.2,SNR=15
comp=N,11nm,0.6s
TIH Tihany 5.89 343 P Pn 22 22 21.8 +1.3
TIH S Sn 22 23 33.9 +6.2
CJR Cluj-Napoca 5.91 22 ⇑P Pn 22 22 22.9 +2.0
ISR Istrita 5.93 48 ⇓P Pn 22 22 22.3 +1.2
DOPR Dopca 5.94 36 ⇑P Pn 22 22 21.5 +0.2
STEP BALIKESIR_Sava 5.94 106 P Pn 22 22 23.0 +1.7
CBBR Cluj-Babes-Bol 5.95 22 ⇑P Pn 22 22 26.2 +4.8
CESX Cesi 5.95 285 22 22 21.9 +0.5
NEHR Nehoiu 5.99 44 ⇓P Pn 22 22 23.7 +1.7
BSZH Besenyszg 6.02 359 ⇑P Pn 22 22 22.8 +0.5
BSZH Besenyszg 6.02 359 P Pn 22 22 25.5 +3.2
BSZH S Sn 22 23 36.7 +5.9
MURB Monte Urbino 6.14 291 Pn 22 22 24.7 +0.7
MESR Meseseni 6.15 17 ⇓P Pb 22 22 35.2 -5.5
RAFF Raffo Rosso 6.17 231 Pn Pn 22 22 22.8 -1.6
ICOR Ion Corvin 6.17 60 ⇓P Pn 22 22 25.7 +1.3
CEY Cerknica 6.20 318 *e*Pn Pn 22 22 25.8 +1.0
LTVH Ltavrtes, Hu 6.20 10 P Pn 22 22 26.8 +2.0
LTVH S Sn 22 23 38.4 +3.0
MPLH Magyarpolny 6.22 342 P Pn 22 22 28.6 +3.5
MPLH S Sn 22 23 41.2 +5.2
COVR Voineasa-Covas 6.23 41 ⇓P Pn 22 22 26.9 +1.6
CSKK Cskako 6.26 347 P Pn 22 22 29.4 +3.7
CSKK S Sn 22 23 40.9 +3.9
BUD Budapest 6.27 352 P Pn 22 22 29.0 +3.2
BUD S Sn 22 22 42.7 +5.5
SKDS Skadanscina 6.28 315 *e*Pn Pn 22 22 25.5 -0.5
PLOR Plostina 6.46 43 ⇑P Pn 22 22 30.7 +2.3
ARCR ARCALIA 6.47 25 ⇓P Pn 22 22 29.9 +1.3
EGYH Egyhazaskeszo 6.51 342 P Pn 22 22 32.7 +3.7
VRI Vrincioaia 6.51 43 ⇓P Pn 22 22 31.2 +2.2
HARR Harsova 6.51 56 ⇑P Pn 22 22 30.5 +1.4
LATE Laterza 6.51 285 Pn 22 22 28.8 -0.4
TLBR Topalu 6.52 57 ⇑P Pn 22 22 30.5 +1.4
TRI Trieste 6.52 315 Pn 22 22 28.9 -0.4
SOKA Soboth 6.62 326 *i* Pn Pn 22 22 32.4 +1.8
comp=N,15nm,0.5s,SNR=22
SOKA *e*Sn Sn 22 23 49.0 +3.1
comp=N,8.3nm,0.7s
PSZ Piszkesteto 6.64 357 ⇑P Pn 22 22 32.0 +1.0
PSZ Piszkesteto 6.64 357 Pn Pn 22 22 31.0 0.0
PSZ Piszkesteto 6.64 357 P Pn 22 22 32.0 +1.0
PSZ S Sn 22 23 48.6 +2.2
CLTB Caltabellotta 6.65 239 Pn 22 22 32.0 +0.9
SRO Srobarova 6.69 348 *e*PN Pn 22 22 35.9 +4.4
SRO *e*SN Sn 22 23 50.8 +3.3
OBKA Obir 6.70 323 *e*Pn Pn 22 22 33.3 +1.5
OBKA Obir 6.70 323 *i* Pn Pn 22 22 33.8 +2.1
comp=N,9.4nm,0.4s,SNR=6.9
TIRR Tirgusor 6.71 59 ⇓P Pn 22 22 32.3 +0.4
TIRR Tirgusor 6.71 59 ⇓P Pn 22 22 32.3 +0.4
TIRR Tirgusor 6.71 59 Pn 22 22 31.4 -0.5
SABO M.te Sabotino 6.79 316 Pn 22 22 32.8 -0.1
CFR Carcaliu 6.89 53 ⇓P Pn 22 22 34.6 +0.4
TPGR Topolog 6.90 56 ⇑P Pn 22 22 35.6 +1.2
ARSA Arzberg 6.90 331 *e*Pn Pn 22 22 36.9 +2.4
comp=N,5.2nm,0.4s
ARSA *e*Sn Sn 22 23 55.5 +2.8
comp=N,12nm,0.7s
TESR Tescani 6.92 39 ⇑P Pn 22 22 38.2 +3.4
IDI Anoyia 6.96 148 Pn Pn 22 22 35.7 +0.3
IDI Anoyia 6.96 148 Pn Pn 22 22 36.0 +0.6
comp=N,1.4nm,0.3s,baz=345,slow=13,SNR=8.2
IDI Sn Sn 22 23 52.0 -2.4
comp=N,1.4nm,0.3s,baz=77,slow=21,SNR=2.0
comp=N,3.3nm,0.4s
BIZ Bicaz 7.00 34 ⇓P Pn 22 22 29.5 -6.4
RONA Rosalia, Austr 7.04 337 *i* Pn Pn 22 22 41.2 +4.8
comp=N,3.3nm,0.5s,SNR=7.4
RONA *e*Sn Sn 22 24 00.6 +4.3
comp=N,9.2nm,0.6s
OSSC Osservatorio P 7.11 291 Pn Pn 22 22 37.7 +0.4
PRED Cave del Predi 7.12 319 Pn 22 22 37.9 +0.4
KECS Kecovo 7.20 1 *e*PN Pn 22 22 40.2 +1.7
KECS *e*SN Sn 22 24 04.1 +4.0
MYKA Terra Mystica 7.21 320 *e*Pn Pn 22 22 44.1 +5.3
comp=N,5.0nm,0.5s
BURAR Bucovina Array 7.22 27 ⇑P Pn 22 22 40.7 +1.8
BURAR Bucovina Array 7.22 27 Pn Pn 22 22 39.4 +0.5
CASP Castiglione de 7.23 285 Pn Pn 22 22 37.7 -1.2
BUR08 Bucovina Ar. S 7.24 27 Pn Pn 22 22 40.2 +1.0
ZST Bratislava 7.29 343 *e*PN Pn 22 22 44.8 +5.0
ZST *e*SN Sn 22 24 04.1 +1.9
VYHS Vyhne 7.29 352 *e*PN Pn 22 22 42.9 +3.1
VYHS *e*SN Sn 22 24 03.9 +1.6
TLCR 7.30 55 ⇑P Pn 22 22 41.9 +2.0
CONA Conrad Observa 7.38 336 *e*Pn Pn 22 22 46.1 +5.1
comp=N,4.9nm,0.7s
MODS Modra-Piesok 7.42 344 *e*PN Pn 22 22 46.3 +4.7
MODS *e*SN Sn 22 24 06.6 +1.1
STAL STALIGIAL 7.44 315 Pn 22 22 41.5 -0.4
CLUD Cludinico 7.48 316 Pn Pn 22 22 42.2 -0.2
ANDZ Kutahya, Merke 7.49 101 P Pn 22 22 42.7 0.0
TEOL Teolo 7.53 306 Pn Pn 22 22 42.5 -0.6
ZCCA Zocca 7.55 297 Pn 22 22 43.6 +0.2
PASA Karahalli, USA 7.61 110 SPECP 22 22 46.0
PASA P Pn 22 22 46.3 +2.0
CIMO Cimolais 7.62 314 Pn Pn 22 22 44.0 -0.3
TAVA DENIZLI_Tavas 7.64 117 SPECP 22 22 46.0
TAVA P Pn 22 22 46.6 +1.8
KBA Koelnbreinsper 7.68 321 *i* Pn Pn 22 22 47.5 +2.3
comp=N,14nm,0.9s,SNR=8.5
KOLS Kolonicke sedl 7.77 9 *e*PN Pn 22 22 48.9 +2.5
BORA Eskisehir 7.81 97 Pn 22 22 46.6 -0.4
JAVC Velka Javorina 7.81 347 *e*PN Pn 22 22 50.1 +3.1
JAVC *e*SN Sn 22 24 19.8 +4.7
KARP Karpathos 7.83 135 Pn Pn 22 22 47.0 -0.2
ABTA Abfaltersbach 7.86 317 *i* Pn Pn 22 22 49.6 +1.9
comp=N,5.6nm,0.4s,SNR=11
MOA Molln 7.87 329 *i* Pn Pn 22 22 52.0 +4.2
comp=N,7.4nm,0.6s,SNR=12
MOA *e*Sn Sn 22 24 20.8 +4.2
comp=N,7.0nm,0.5s
VLC Villacollemand 7.88 295 Pn Pn 22 22 49.0 +1.0
LANS Liptovska Anna 7.89 356 *e*PN Pn 22 22 54.1 +6.0
LANS *e*SN Sn 22 24 23.1 +6.0
BIOA Bad Ischl, Aus 8.01 325 *i* Pn Pn 22 22 53.8 +4.2
comp=N,8.9nm,0.4s,SNR=15
NIE Niedzica 8.14 360 *e*PKP Pn 22 22 54.7 +3.3
KRUC Moravsky 8.27 342 *e*PN Pn 22 22 55.9 +2.8
KRUC *e*SN Sn 22 24 30.3 +4.0
MILM Milestii Mici 8.29 44 ⇓P Pn 22 22 57.2 +3.8
SALO Salr 8.36 304 Pn Pn 22 22 54.7 +0.2
VRAC Vranov 8.45 343 ⇓P Pn 22 23 00.7 +5.0
VRAC Vranov 8.45 343 *e*PN Pn 22 22 59.1 +3.4
KWP Kalwaria Pacla 8.51 10 Pn 22 22 57.7 +1.2
PGF Pioggiola 8.56 282 *e*Pn Pn 22 22 56.1 -1.3
PGF *e*Sn Sn 22 24 28.8 -5.0
PURM Purcari 8.64 49 ⇑P Pn 22 22 58.7 +0.5
WTTA Wattenberg 8.65 317 *i* Pn Pn 22 23 01.7 +3.1
comp=N,14nm,0.5s,SNR=8.9
WTTA *e*Sn Sn 22 24 39.7 +3.7
comp=N,22nm,0.6s
CKRC Cesky Krumlov 8.66 332 *e*PN Pn 22 23 02.1 +3.5
OKC Ostrava-Krasne 8.70 350 AMS AMS 22 26 30.0
comp=N,300nm,11.2s
ELL Elmali 8.70 118 Pn Pn 22 22 58.2 -1.1
TREC Trest 8.71 338 AMS AMS 22 26 30.0
comp=N,1μm,9.7s
MORC Moravsky Berou 8.72 348 ⇑P Pn 22 23 03.6 +4.2
MORC Moravsky Berou 8.72 348 Pn Pn 22 23 00.3 +0.8
MORC Moravsky Berou 8.72 348 *e*PN Pn 22 23 03.3 +3.9
WATA Walderalm 8.73 317 *i* Pn Pn 22 23 02.7 +3.0
comp=N,14nm,0.5s,SNR=15
SQTA Sankt Quirin 8.85 315 *i* Pn Pn 22 23 03.9 +2.6
comp=N,6.0nm,0.4s,SNR=10.0
GEC2 GERESS Array S 8.91 330 Pn Pn 22 23 02.3 +0.3
GERES GERESS Array B 8.91 330 Pn Pn 22 23 02.5 +0.5
GERES GERESS Array B 8.91 330 Pn Pn 22 23 03.8 +1.8
comp=N,0.5nm,0.3s,baz=159,slow=16,SNR=25
comp=N,3.5nm,0.8s
OJC Ojcow 8.95 358 *e*PKP Pn 22 23 05.1 +2.6
OJC Ojcow 8.95 358 Pn Pn 22 23 02.6 +0.1
MOTA Moosalm 8.98 316 *i* Pn Pn 22 23 05.8 +2.6
comp=N,12nm,0.6s,SNR=7.0
FETA Feichten 8.99 313 *e*Pn Pn 22 23 06.7 +3.5
comp=N,5.6nm,0.7s
KRLC Kraliky 9.14 345 *e*PN Pn 22 23 09.6 +4.4
KRLC *e*SN Sn 22 24 51.2 +3.4
KRLC AMS AMS 22 26 50.0
comp=N,500nm,9.0s
KHC Kasperske Hory 9.19 331 Pn 22 23 07.2 +1.4
KHC Kasperske Hory 9.19 331 *e*PN Pn 22 23 08.0 +2.2
KHC *e*SN Sn 22 24 51.2 +2.2
KHC AMS AMS 22 26 50.0
comp=N,700nm,12.6s
RETA Reutte 9.25 315 *e*Pn Pn 22 23 11.0 +4.3
comp=N,1.9nm,0.3s
DAVOX Davos/Dischmat 9.33 310 Pn Pn 22 23 09.2 +1.2
comp=N,0.4nm,0.3s,baz=128,slow=19,SNR=6.6
DAVOX Sn Sn 22 24 50.9 -1.9
comp=N,0.2nm,0.3s,baz=152,slow=24,SNR=3.3
comp=N,6.6nm,0.4s
DPC Dobruska-Polom 9.49 344 *e*PN Pn 22 23 14.2 +4.2
DPC AMS AMS 22 27 10.0
comp=N,900nm,7.9s
PRU Pruhonice 9.61 337 AMS AMS 22 27 00.0
comp=N,900nm,9.8s
DAVA Damuels 9.61 312 *e*Pn Pn 22 23 17.1 +5.4
comp=N,3.1nm,0.4s
UPC Upice 9.71 343 AMS AMS 22 27 10.0
comp=N,800nm,9.0s
OSTC Ostas 9.71 344 AMS AMS 22 27 20.0
comp=N,800nm,9.4s
SBF Sospel 9.88 289 *e*Pn Pn 22 23 16.0 +0.7
SBF *e*Sn Sn 22 24 58.8 -7.1
comp=N,4.3nm,0.4s
PVCC Panska Ves 10.09 338 AMS AMS 22 27 20.0
comp=N,900nm,9.2s
LMR La Mourre 10.46 286 *e*Pn Pn 22 23 21.7 -1.5
LMR *e*Sn Sn 22 25 16.2 -4.0
comp=N,0.8nm,0.3s
NKC Novy Kostel 10.51 331 AMS AMS 22 27 40.0
comp=N,500nm,10.1s
MBDF Montbardon 10.53 294 *e*Pn Pn 22 23 22.8 -1.5
MBDF Montbardon 10.53 294 *e*P Pn 22 23 28.8 +4.5
MBDF *e*Sn Sn 22 25 16.0 -6.1
comp=N,2.9nm,0.5s
GRA1 Grafenberg Arr 10.57 326 Pn Pn 22 23 26.6 +1.9
BNI Bardonecchia 10.68 295 Pn Pn 22 23 27.6 +1.3
SENIN Lac Senin/Sane 10.71 303 Pn Pn 22 23 27.5 +0.7
LPG La Plagne 10.76 298 *e*Pn Pn 22 23 25.7 -1.9
LPG *e*Sn Sn 22 25 18.7 -9.2
comp=N,18nm,0.8s
LPL La Plagne 10.78 298 *e*Pn Pn 22 23 24.9 -2.9
LPL La Plagne 10.78 298 *e*P Pn 22 23 31.3 +3.5
LPL *e*Sn Sn 22 25 21.8 -6.4
comp=N,22nm,0.9s
STU Stuttgart 10.88 317 Pn Pn 22 23 30.5 +1.6
BFO Black Forest 11.07 314 Pn 22 23 32.0 +0.4
ORIF Oris-en-Rattie 11.19 294 *e*P Pn 22 23 36.2 +2.9
ORIF *e*Sn Sn 22 25 32.7 -5.5
comp=N,5.7nm,0.7s
SMRF Simiane la Rot 11.22 289 *e*P Pn 22 23 38.3 +4.6
SMRF *e*Sn Sn 22 25 33.7 -5.1
comp=N,11nm,1.1s
CLL Collm 11.24 336 Pn Pn 22 23 35.1 +1.3
CLL Collm 11.24 336 *e*Pn Pn 22 23 37.0 +3.2
CLL *e*Pg 22 24 22.0
CLL *e*x x 22 24 58.0
CLL *e*x x 22 25 08.0
CLL *e*Sn Sn 22 25 13.0 -26
CLL *e*x x 22 26 21.0
CLL *e*Sg 22 26 50.0
CLL Lmax 22 28 00.0
AKASG Malin Array Be 11.25 30 Pn Pn 22 23 34.7 +0.7
comp=N,0.3nm,0.3s,baz=219,slow=13,SNR=4.7
comp=N,0.3nm,0.4s
CABF La Chapelle 11.58 302 *e*Pn Pn 22 23 36.5 -2.1
CABF *e*Sn Sn 22 25 39.7 -8.0
comp=N,73nm,1.6s
HINF Hinteralfeld 11.63 309 *e*Pn Pn 22 23 36.8 -2.5
HINF *e*Sn Sn 22 25 40.5 -8.4
comp=N,22nm,1.0s
ECH Echery 11.66 311 Pn 22 23 40.7 +1.1
VIVF Saint-Julien-l 12.01 293 *e*Pn Pn 22 23 42.3 -2.2
VIVF Saint-Julien-l 12.01 293 *e*P Pn 22 23 48.7 +4.2
VIVF *e*Sn Sn 22 25 52.1 -6.2
comp=N,26nm,1.1s
HAU Haudompre 12.02 309 *e*Pn Pn 22 23 42.5 -2.1
HAU *e*Sn Sn 22 25 51.2 -7.2
comp=N,27nm,1.0s
SSB Saint Sauveur 12.20 294 Pn Pn 22 23 47.7 +0.7
LASF Ste Croix 12.46 288 *e*Pn Pn 22 23 48.7 -1.9
LASF Ste Croix 12.46 288 *e*P Pn 22 23 55.0 +4.4
LASF *e*Sn Sn 22 26 01.5 -7.7
comp=N,57nm,1.6s
PAGF Fort de Pagny 12.65 310 *e*Pn Pn 22 23 52.0 -1.2
baz=123
SFTF Sexfontaines 12.89 308 *e*Pn Pn 22 23 54.1 -2.3
baz=127
MEZF Maizieres J'vi 13.02 309 *e*Pn Pn 22 23 55.3 -2.9
baz=130
SMF Signal de Mont 13.04 300 *e*Pn Pn 22 23 55.6 -2.9
LOR Lormes 13.24 302 *e*Pn Pn 22 23 58.3 -2.9
baz=118
LOR *e*Sn Sn 22 26 19.0 -9.2
comp=N,5.5nm,0.4s
SSF Saint Saulge 13.40 301 *e*Pn Pn 22 24 01.6 -1.7
AVF Avril sur Loir 13.41 300 *e*Pn Pn 22 24 01.0 -2.5
BGF Bois d'Agland 13.67 299 *e*Pn Pn 22 24 05.5 -1.6
CAF Calviac 13.85 291 *e*Pn Pn 22 24 08.1 -1.5
TCF Toulx Ste Croi 14.03 297 *e*Pn Pn 22 24 09.9 -2.1
TCF Toulx Ste Croi 14.03 297 *e*P Pn 22 24 14.5 +2.5
TCF *e*Sn Sn 22 26 38.7 -8.6
comp=N,0.7nm,0.3s
HWQ Hawqa 14.16 115 *e*P P 22 24 23.6 +2.1
BHL Bhannes 14.18 116 *e*P P 22 24 24.6 +3.0
BAIF Baives 14.28 313 *e*Pn Pn 22 24 13.2 -2.1
RJF Les Rejaudoux 14.29 293 *e*Pn Pn 22 24 12.0 -3.6
LFF La Frestale 14.78 291 *e*Pn Pn 22 24 20.1 -2.2
ISAL Salakas 14.79 13 *e*P P 22 24 32.5 +4.2
EPF Esparros 14.95 283 *e*Pn Pn 22 24 22.8 -1.8
ETSF Etsaut 15.61 283 *e*Pn Pn 22 24 30.9 -2.5
MFF Saint Martin d 15.68 297 *e*Pn Pn 22 24 33.2 -1.0
SJPF Ste Jean 16.10 284 *e*P P 22 24 43.5 +0.7
LDF La Druitiere 16.21 304 *e*Pn Pn 22 24 37.7 -3.2
FLN La Foliniere 16.49 304 *e*Pn Pn 22 24 40.4 -4.1
GRR Gorron 16.61 302 *e*Pn Pn 22 24 40.7 -5.3
FINES FINESS Array B 20.49 8 P P 22 25 30.8 -0.1
comp=N,12nm,0.8s,baz=178,slow=8.3,SNR=0.7
comp=N,12nm,0.8s
NOA NORSAR Array B 20.56 347 P P 22 25 32.3 +0.5
NOA NORSAR Array B 20.56 347 P P 22 25 32.3 +0.5
comp=N,5.2nm,0.9s,baz=156,slow=11,SNR=4.5
comp=N,5.2nm,0.9s
BRVK Borovoye 35.23 53 P P 22 27 48.0 +0.7
BRVK IAmb IAmb 22 27 52.8
comp=Z,11nm,1.3s
KURBB Kurchatov Arra 40.55 56 P P 22 28 32.6 +0.3
comp=Z,0.4nm,0.4s,baz=288,slow=9.9,SNR=3.6
comp=Z,0.4nm,0.4s
KURK Kurchatov 40.59 56 P P 22 28 32.5 -0.2
KURK IAmb IAmb 22 28 35.0
comp=Z,6.4nm,1.4s
ZAA0 Zalesovo Array 43.76 50 P P 22 28 58.5 0.0
ZAA0 IAmb IAmb 22 29 02.6
comp=Z,5.9nm,1.2s
ZALV Zalesovo Beam 43.76 50 P P 22 28 58.7 +0.2
ZALV Zalesovo Beam 43.76 50 P P 22 28 58.9 +0.4
comp=Z,2.0nm,0.5s,baz=287,slow=7.7,SNR=6.3
comp=Z,2.0nm,0.5s
MK31 Makanchi Array 43.85 61 P P 22 28 59.9 +0.6
MKAR Makanchi Array 43.85 61 P P 22 29 00.1 +0.8
MKAR Makanchi Array 43.85 61 P P 22 29 00.5 +1.1
comp=Z,0.6nm,0.5s,baz=275,slow=7.9,SNR=10
comp=Z,0.6nm,0.5s
WMQ Urumqi 48.42 63 *e*P P 22 29 37.3 +1.9
SONM Songino Array 58.62 52 P P 22 30 50.2 0.0
SONM IAmb IAmb 22 30 54.1
comp=Z,4.4nm,1.3s
SONM Songino Array 58.62 52 P P 22 30 50.9 +0.7
comp=Z,1.2nm,0.8s,baz=291,slow=9.4,SNR=6.6
comp=Z,1.2nm,0.8s
ULN Ulaanbaatar 58.99 52 P P 22 30 52.7 -0.2
ULN IAmb IAmb 22 30 56.7
comp=Z,5.9nm,1.4s
HHC Hu-ho-hao-te 65.40 57 *e*P P 22 31 34.5 -1.4
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,260nm,4.4s
PZH PanZhiHua 66.86 74 P P 22 31 45.8 +0.2
PZH pmax pmax
comp=Z,10.0nm,1.1s
CMAR Chiang Mai Arr 69.61 83 P P 22 32 01.7 -1.0
comp=Z,0.6nm,0.3s,baz=312,slow=7.2,SNR=2.0
comp=Z,0.6nm,0.3s
YKA Yellowknife Ar 70.44 340 P P 22 32 07.2 +0.2
comp=Z,1.1nm,0.7s,baz=37,slow=5.9,SNR=4.1
comp=Z,1.1nm,0.7s
IMAR Indian Mountai 72.97 357 P P 22 32 23.0 +0.7
H21K Melozitna Rive 73.26 357 P P 22 32 25.3 +1.3
ILAR Eielson Array 73.81 354 P P 22 32 27.9 +0.7
comp=Z,0.7nm,0.8s,baz=359,slow=4.3,SNR=5.1
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 92.75 314 P P 22 34 05.1 -0.7
comp=Z,0.4nm,0.8s,baz=31,slow=5.5,SNR=3.7
comp=Z,0.4nm,0.8s

BEO ***31*** *22:33:34.8±0.7, 41°.19N×20°.49E, h0km, ML2.5/7*
ATH ***31*** *22:33:34.1, 41°.37N×20°.34E, h3km±4km, ML2.3/3, Error ellipse: s-maj=5.0km s-min=2.9km az=76.0*
THE ***31*** *22:33:35.5, 41°.32N×20°.42E, h7km±1km, ML2.3/4, Error ellipse: s-maj=1.2km s-min=0.4km az=24.0*
TIR ***31*** *22:33:35.1, 41°.28N×20°.37E, h4km±1km, Md2.8, Ml2.7*
PDG ***31*** *22:33:35.6±0.2, 41°.25N×20°.34E, h8km, ML2.9/10, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
SKO ***31*** *22:33:36.3, 41°.20N×20°.33E, h8km*
ISC 31 22:33:36.1±1.0, **41°.28N**±0°.02×**20°.37E**±0°.02, **h4**km±9km, **n61**, σ1s**00**/95, **6C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.37**	**117**	*i* Pg		**Pg**	**22 33 43.2**	**+0.1**
OHR				*i* Sg		**Sg**	**22 33 49.1**	**+1.1**
OHR				*e*Lg		Lg	22 33 49.3	
	comp=N,274nm,0.5s							
TIR	**Tirane**	**0.38**	**281**	P		**Pg**	**22 33 43.4**	**-0.1**
TIR				S		**Sg**	**22 33 49.6**	**+1.1**
	comp=N,372nm,0.5s							
TIR	**Tirane**	**0.38**	**281**	*e*Pg		**Pg**	**22 33 42.9**	**-0.6**
TIR				*e*Sg		**Sg**	**22 33 49.7**	**+1.2**
TIR	**Tirane**	**0.38**	**281**	*i* Pg		**Pg**	**22 33 43.3**	**-0.2**
TIR				*i* Sg		**Sb**	**22 33 50.2**	**-1.5**
TIR	**Tirane**	**0.38**	**281**	P		**Pg**	**22 33 43.2**	**-0.2**
	baz=280							
TIR				S		**Sg**	**22 33 49.7**	**+1.2**
	baz=280							
PHP	**Peshkopia**	**0.41**	**8**	P		**Pg**	**22 33 42.4**	**-1.6**
PHP				S		**Sg**	**22 33 48.0**	**-1.4**
PHP	**Peshkopia**	**0.41**	**8**	P		**Pg**	**22 33 43.6**	**-0.4**
	baz=7.0							
PHP				S		**Sg**	**22 33 50.3**	**+0.9**
	baz=7.0							
PHP				AMP				
	comp=N,2.8nm,0.2s,baz=7.0							
KBN	**Korca**	**0.73**	**154**	P		**Pg**	**22 33 49.8**	**-0.2**
KBN				S		**Sb**	**22 34 00.8**	**-0.8**
	comp=N,370nm,0.5s							
KBN	**Korca**	**0.73**	**154**	P		**Pg**	**22 33 50.0**	**0.0**
	baz=154							
KBN				S		**Sb**	**22 34 00.8**	**-0.8**
	baz=154							
KBN				AMP				
	comp=N,1.4nm,0.8s,baz=154							
NEST	**Nestorio**	**1.00**	**149**	P		**Pg**	**22 33 54.4**	**-0.9**
NEST				S		**Sb**	**22 34 09.5**	**-0.2**
	comp=N,150nm,0.4s							
NEST	**Nestorio**	**1.00**	**149**	P		**Pg**	**22 33 54.1**	**-1.2**
NEST				S		**Sb**	**22 34 09.9**	**+0.2**
NEST				AML	AML	22 34 10.6		
	comp=E,431μm,0.4s							
NEST				AML	AML	22 34 10.7		
	comp=N,315μm,0.5s							
SKO	**Skopje**	**1.06**	**49**	*i* Pg		**Pb**	**22 33 57.3**	**+0.2**
SKO				*i* Sg		**Sg**	**22 34 10.0**	**-0.3**
BCI	**Bajram Curri**	**1.11**	**349**	P		**Pg**	**22 33 57.2**	**-0.2**
	baz=349							
BCI				S		**Sb**	**22 34 13.3**	**+0.6**
	baz=349							
BCI				AMP				
	comp=N,0.9nm,0.8s,baz=349							
LSK	**Leskovik**	**1.14**	**171**	P		**Pg**	**22 33 57.0**	**-0.9**
LSK				S		**Sn**	**22 34 14.8**	**-0.1**
	comp=N,185nm,0.9s							
LSK	**Leskovik**	**1.14**	**171**	P		**Pg**	**22 33 56.7**	**-1.2**
	baz=171							
LSK				S		**Sn**	**22 34 15.1**	**+0.2**
	baz=171							
LSK				AMP				
	comp=E,0.6nm,0.7s,baz=171							
PENT	**Pentalofos**	**1.23**	**151**	P		**Pg**	**22 33 59.4**	**-0.2**
PENT				S		**Sb**	**22 34 16.4**	**+0.2**
DRME	**Dracevica, Mon**	**1.27**	**316**	*e*Pn		**Pg**	**22 33 58.9**	**-1.5**
DRME	**Dracevica, Mon**	**1.27**	**316**	⇑*i* Pg		**Pg**	**22 33 58.9**	**-1.5**
DRME				*i* Sg		**Sn**	**22 34 18.9**	**+0.9**
PVY	**Plav**	**1.35**	**347**	⇓*i* Pg		**Pn**	**22 34 01.0**	**-0.8**
PVY				*i* Sg		**Sn**	**22 34 22.2**	**+1.9**
PDG	**Podgorica**	**1.42**	**325**	*e*Pg		**Pn**	**22 34 01.8**	**-0.8**
PDG				*e*Sg		**Sg**	**22 34 24.3**	**+2.6**
PDG	**Podgorica**	**1.42**	**325**	*i* Pn		**Pn**	**22 34 01.9**	**-0.7**
TTG	**Podgorica**	**1.42**	**325**	⇓*i* Pg		**Pn**	**22 34 01.9**	**-0.7**
TTG				*i* Sg		**Sg**	**22 34 24.2**	**+2.6**
SRN	**Sarande**	**1.42**	**191**	P		**Pn**	**22 34 01.7**	**-0.9**
SRN	**Sarande**	**1.42**	**191**	P		**Pg**	**22 34 03.8**	**+0.5**
	baz=192							
SRN				S		**Sg**	**22 34 24.0**	**+2.2**
	baz=192							
SRN				AMP				
	comp=E,0.1nm,0.6s,baz=192							
STIP	**Stip**	**1.43**	**72**	*i* Pn		**Pg**	**22 34 04.8**	**+1.4**
KZN	**Kozani**	**1.44**	**132**	P		**Pn**	**22 34 02.5**	**-0.5**
KZN				S		**Sg**	**22 34 22.6**	**+0.2**
KZN				AML	AML	22 34 25.4		
	comp=N,174μm,0.4s							
KZN				AML	AML	22 34 29.2		
	comp=E,165μm,0.4s							
BUM	**Brajici-Budva**	**1.50**	**313**	⇑*i* Pg		**Pn**	**22 34 03.3**	**-0.5**
BUM				*i* Sg		**Sg**	**22 34 26.6**	**+2.2**
KEK	**Kerkira**	**1.62**	**196**	P		**Pb**	**22 34 05.8**	**-0.7**
KEK				S		**Sb**	**22 34 27.5**	**+0.2**
KEK				AML	AML	22 34 32.3		
	comp=E,122μm,0.5s							
KEK				AML	AML	22 34 41.6		
	comp=N,97μm,0.5s							
BEY	**Berane**	**1.63**	**348**	*i* Pn		**Pg**	**22 34 07.5**	**+0.2**
IVA	**Berane**	**1.63**	**348**	⇓*i* Pn		**Pb**	**22 34 06.8**	**0.0**
IVA				*i* Sn		**Sg**	**22 34 30.2**	**+1.7**
JAN	**Janina**	**1.66**	**167**	P		**Pn**	**22 34 06.1**	**+0.1**
CEME	**Cevo**	**1.67**	**320**	⇓*i* Pn		**Pn**	**22 34 06.0**	**-0.1**
CEME				*i* Sn		**Sg**	**22 34 30.5**	**+0.9**
KOME	**Kolasin**	**1.69**	**338**	⇑*i* Pn		**Pn**	**22 34 06.7**	**+0.2**
KOME				*i* Sn		**Sg**	**22 34 31.5**	**+1.0**
PRVS	**Prvonek**	**1.77**	**46**	*e*Pg		**Pn**	**22 34 07.1**	**-0.4**
PRVS				*e*Sg		**Sn**	**22 34 30.8**	**+0.3**
HCY	**Herceg Novi**	**1.82**	**311**	*e*Pn		**Pn**	**22 34 08.5**	**+0.3**
HCY	**Herceg Novi**	**1.82**	**311**	⇑*i* Pn		**Pn**	**22 34 08.1**	**-0.1**
HCY				*i* Sn		**Sg**	**22 34 34.2**	**-0.4**
NKME	**Niksic**	**1.82**	**325**	⇑*i* Pn		**Pn**	**22 34 08.6**	**+0.4**
NKME				*i* Sn		**Sg**	**22 34 34.2**	**-0.5**
BARS	**Barje**	**1.88**	**35**	*e*Pn		**Pn**	**22 34 08.5**	**-0.5**
BOSS	**Bosilegrad**	**1.99**	**52**	*e*Pg		**Pn**	**22 34 09.9**	**-0.6**
BOSS				*e*Sg		**Sn**	**22 34 36.0**	**+0.1**
SJES	**Sjenica**	**2.00**	**352**	*e*Pn		**Pb**	**22 34 12.0**	**-1.1**
SELS	**Selova**	**2.02**	**16**	*e*Pg		**Pn**	**22 34 11.3**	**+0.4**
SELS				*e*Sg		**Sg

BRY	**Bratogost**	2.12 321	⇓	*i* Pn		**Pn**	22 34 12.7	**+0.3**
BRY				*i* Sn		**Sb**	22 34 41.7	**-0.1**
UPM	**Unac-Piva**	2.21 331		*e*Pn		**Pb**	22 34 16.4	**-0.3**
UPM	**Unac-Piva**	2.21 331	⇑	*i* Pn		**Pn**	22 34 13.8	**+0.1**
UPM				*i* Sn		**Sb**	22 34 43.8	**-0.6**
IVAS	**Ivanjica**	2.30 356		*e*Pn		**Pn**	22 34 14.6	**-0.2**
RUDO	**Rudo**	2.45 343		*e*Pn		**Pn**	22 34 14.3	**-2.5**
VTS	**Vitosha**	2.52 57		*i* Pn		**Pn**	22 34 17.9	**-0.1**
STON	**Ston**	2.54 310		*e*Pn		**Pn**	22 34 17.3	**-0.8**
ZAPS	**Zavoj**	2.61 39		*e*Pn		**Pn**	22 34 19.2	**+0.2**
GRUS	**Gruza**	2.62 6		*e*Pn		**Pn**	22 34 19.2	**0.0**
BBLS	**Lazići**	2.68 345		*e*Pn		**Pb**	22 34 22.5	**-2.2**
DIVS	**Divibare**	2.83 355		*e*Pn		**Pn**	22 34 22.0	**-0.1**
ZAGS	**Zajecar**	2.88 28		*e*Pn		**Pn**	22 34 22.5	**-0.3**
TRUS	**Trudelj**	2.94 1		*e*Pn		**Pn**	22 34 24.1	**+0.5**
SRKY	**Kupres RS**	3.65 321		*e*Pn		**Pn**	22 34 33.1	**-0.3**
FRGS	**Fruska Gora**	3.90 354		*e*Pn		**Pn**	22 34 38.1	**+1.4**
BLY	**Banja Luka**	4.18 327		*e*Pn		**Pn**	22 34 43.3	**+2.7**
A050A	**Klekovaca**	4.27 320		*e*Pn		**Pn**	22 34 43.1	**+1.3**
A051A	**Mrakovica**	4.51 327		*e*Pn		**Pn**	22 34 45.1	**-0.1**

TRN 31 22:38:27.4,14°95N×59°46W,h46km,MD3.6,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**1.38**	**263**	*e*P	Pn	22 38 51.3	+1.0
ILAM				*e*S	Sn	22 39 08.6	+1.3
MPOM	**Morne Pois Mar**	**1.45**	**250**	*e*P	Pn	22 38 52.3	+1.2
MPOM				*e*S	Sn	22 39 11.2	+2.2
MVM	**Montagne Vaucl**	**1.45**	**255**	*e*P	Pn	22 38 52.5	+1.3
LPMF	**Morne Lapointe**	**1.51**	**256**	*e*P	Pn	22 38 53.2	+1.2
ZAM	**Aeronautique**	**1.56**	**257**	*e*P	Pn	22 38 53.9	+1.2
TRMF	**Trois Ilets**	**1.59**	**255**	*e*P	Pn	22 38 54.7	+1.5
BIM	**Bigot**	**1.62**	**255**	*e*P	Pn	22 38 54.9	+1.4
BIM				*e*S	Sn	22 39 15.6	+2.4
BAMF	**Morne Balai**	**1.64**	**266**	*e*P	Pn	22 38 55.6	+1.7
FDF	**Fort de France**	**1.65**	**263**	*e*P	Pn	22 38 55.2	+1.2
FDF				*e*S	Sn	22 39 16.0	+1.9
SVN	**Savane Anatole**	**1.66**	**267**	*e*P	Pn	22 38 56.3	+2.2
GBMF	**Grand Be**	**1.66**	**265**	*e*P	Pn	22 38 56.0	+1.9
PML	**Morne Lenard**	**1.68**	**265**	*e*P	Pn	22 38 56.5	+2.1
PCM	**Pelee Case Pet**	**1.70**	**266**	*e*P	Pn	22 38 56.4	+1.7
SLBI	**Saint Lucia, B**	**1.73**	**238**	*e*P	Pn	22 38 56.8	+1.7
SLBI				*e*S	Sn	22 39 17.9	+1.9
DLPL	**La Plaine**	**1.77**	**283**	*e*S	Sn	22 39 19.2	+2.2
BBGH	**Gun Hill**	**1.79**	**183**	*e*P	Pn	22 38 57.1	+1.2
BBGH				*e*S	Sn	22 39 19.9	+2.4
MCLT	**Moule a Chique**	**1.89**	**230**	*e*P	Pn	22 38 59.5	+2.2
MCLT				*e*S	Sn	22 39 21.4	+1.4
DSLB	**Salisbury**	**1.96**	**285**	*e*P	Pn	22 39 00.8	+2.6
DSLB				*e*S	Sn	22 39 24.4	+2.8
MAGL	**Barre de l'ile**	**2.02**	**300**	*e*P	Pn	22 39 00.7	+1.6
MAGL				*e*S	Sn	22 39 25.2	+2.0
MDCT	**Cottage Hill,**	**2.05**	**289**	*e*P	Pn	22 39 01.8	+2.3
MDCT				*e*S	Sn	22 39 25.9	+2.1
TDBA	**Terre de Bas,**	**2.29**	**293**	*e*P	Pn	22 39 05.9	+3.2
TDBA				*e*S	Sn	22 39 31.6	+2.0
TBG	**Guadaloupe-3**	**2.30**	**293**	*e*P	Pn	22 39 05.0	+2.2
CBE	**Ff, Capester**	**2.35**	**299**	*e*P	Pn	22 39 05.6	+1.9
CBE				*e*S	Sn	22 39 33.1	+1.7
SVB	**Belmont**	**2.41**	**227**	*e*P	Pn	22 39 06.6	+2.2
SVB				*e*S	Sn	22 39 34.6	+1.9
ABD	**La Joyeuse, An**	**2.48**	**308**	*e*P	Pn	22 39 07.5	+2.1
ANBD	**Bethesda, Anti**	**3.05**	**314**	*e*P	Pn	22 39 14.5	+1.3
ANBD				*e*S	Sn	22 39 49.5	+1.1
GCMP	**Grenada, Carri**	**3.10**	**218**	*e*S	Sn	22 39 50.9	+1.1
ANWB	**Willy Bob**	**3.51**	**321**	*e*P	Pn	22 39 20.4	+0.9
ANWB				*e*S	Sn	22 40 00.1	+0.3

BEO ***31*** *22:50:33.2±0.8, 40°.94N×20°.33E, h0km, ML2.7/6*
ATH ***31*** *22:50:35.8, 41°.42N×20°.41E, h10km±31km, ML2.4/3, Error ellipse: s-maj=31.6km s-min=2.5km az=0.0*
TIR ***31*** *22:50:35.8, 41°.28N×20°.38E, h1km±1km, Md2.9, Ml2.6*
THE ***31*** *22:50:37.3, 41°.27N×20°.39E, h0km±2km, ML2.4/3, Error ellipse: s-maj=2.4km s-min=0.5km az=27.0*
PDG ***31*** *22:50:38.3±0.6, 41°.33N×20°.31E, h0km±11km, ML2.9/10, Error ellipse: s-maj=0.7km s-min=1.2km az=0.0*

ISC 31 22:50:37.4±1.0, 41°.28N±0°.02×20°.37E±0°.02, h7km±9km, n77, σ1§09/111, 4C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.37**	**117**	*i* Pg	**Pg**	**22 50 44.6**	**0.0**
OHR				*i* Sg	**Sb**	**22 50 50.7**	**-1.6**
OHR				*e*Lg	Lg	22 50 50.8	
	comp=N,380nm,0.3s						
TIR	**Tirane**	**0.38**	**280**	P	**Pg**	**22 50 44.7**	**-0.2**
TIR				S	**Sb**	**22 50 51.2**	**-1.4**
	comp=N,650nm,0.2s						
TIR	**Tirane**	**0.38**	**280**	*e*Pg	**Pg**	**22 50 44.3**	**-0.5**
TIR				*e*Sg	**Sb**	**22 50 51.2**	**-1.4**
TIR	**Tirane**	**0.38**	**280**	*i* Pg	**Pg**	**22 50 44.6**	**-0.2**
TIR				*i* Sg	**Sb**	**22 50 51.4**	**-1.2**
TIR	**Tirane**	**0.38**	**280**	P	**Pg**	**22 50 44.6**	**-0.2**
	baz=281						
TIR				S	**Sg**	**22 50 50.7**	**+0.8**
	baz=281						
TIR				AMP			
	comp=N,2.5nm,0.1s,baz=281						
PHP	**Peshkopia**	**0.41**	**8**	P	**Pg**	**22 50 44.9**	**-0.4**
PHP				S	**Sg**	**22 50 51.6**	**+1.0**
PHP	**Peshkopia**	**0.41**	**8**	P	**Pg**	**22 50 44.9**	**-0.4**
	baz=6.0						
PHP				S	**Sg**	**22 50 51.5**	**+0.8**
	baz=6.0						
PHP				AMP			
	comp=N,2.6nm,0.2s,baz=6.0						
KBN	**Korca**	**0.73**	**154**	P	**Pg**	**22 50 50.7**	**-0.8**
KBN				S	**Sg**	**22 51 01.4**	**+0.4**
	comp=N,378nm,0.6s						
KBN	**Korca**	**0.73**	**154**	P	**Pg**	**22 50 50.6**	**-0.8**
	baz=154						
KBN				S	**Sb**	**22 51 01.9**	**-0.8**
	baz=154						
KBN				AMP			
	comp=N,1.4nm,0.8s,baz=154						
NEST	**Nestorio**	**1.01**	**149**	P	**Pg**	**22 50 55.7**	**-1.1**
NEST				S	**Sb**	**22 51 10.3**	**-0.5**
	comp=N,182nm,0.3s						
NEST	**Nestorio**	**1.01**	**149**	P	**Pg**	**22 50 55.7**	**-1.1**
NEST				S	**Sb**	**22 51 11.5**	**+0.7**
NEST				AML	AML	22 51 12.0	
	comp=E,466μm,0.4s						
NEST				AML	AML	22 51 14.6	
	comp=N,406μm,0.4s						
BCI	**Bajram Curri**	**1.11**	**348**	P	**Pg**	**22 50 58.0**	**-0.6**
	baz=349						
BCI				S	**Sn**	**22 51 14.8**	**-0.1**
	baz=349						
BCI				AMP			
	comp=E,0.7nm,0.4s,baz=349						
LSK	**Leskovik**	**1.15**	**171**	P	**Pg**	**22 50 58.2**	**-1.2**
LSK				S	**Sb**	**22 51 15.0**	**+0.3**
LSK	**Leskovik**	**1.15**	**171**	P	**Pg**	**22 50 58.1**	**-1.2**
	baz=171						
LSK				S	**Sn**	**22 51 16.2**	**+0.3**
	baz=171						
LSK				AMP			
	comp=N,0.8nm,0.7s,baz=171						
PENT	**Pentalofos**	**1.23**	**151**	P	**Pb**	**22 51 00.6**	**-0.5**
PENT				S	**Sn**	**22 51 18.6**	**+0.5**
DRME	**Dracevica, Mon**	**1.26**	**316**	*e*Pn	**Pg**	**22 50 59.6**	**-2.0**
DRME	**Dracevica, Mon**	**1.26**	**316**	⇓ *i* Pg	**Pg**	**22 51 00.3**	**-1.3**
DRME				*i* Sg	**Sn**	**22 51 19.2**	**+0.5**
PVY	**Plav**	**1.35**	**347**	⇑ *i* Pg	**Pn**	**22 51 01.6**	**-1.1**
PVY				*i* Sg	**Sn**	**22 51 22.3**	**+1.4**
PDG	**Podgorica**	**1.42**	**324**	*e*Pg	**Pn**	**22 51 02.9**	**-0.6**
PDG				*e*Sg	**Sn**	**22 51 25.5**	**+3.1**
PDG	**Podgorica**	**1.42**	**324**	*i* Pn	**Pn**	**22 51 03.1**	**-0.4**
TTG	**Podgorica**	**1.42**	**324**	⇓ *i* Pg	**Pn**	**22 51 03.2**	**-0.4**
TTG				*i* Sg	**Sn**	**22 51 24.4**	**+2.0**
SRN	**Sarande**	**1.43**	**191**	P	**Pb**	**22 51 03.9**	**-0.4**
SRN	**Sarande**	**1.43**	**191**	P	**Pg**	**22 51 05.0**	**+0.2**
	baz=192						
SRN				S	**Sg**	**22 51 25.5**	**+2.2**
	baz=192						
SRN				AMP			
	comp=E,0.1nm,0.5s,baz=192						
STIP	**Stip**	**1.43**	**73**	*i* Pn	**Pg**	**22 51 06.2**	**+1.4**

KZN	**Kozani**	**1.45**	**132**	P		**Pn**	22 51 03.5	**-0.5**
KZN	**Kozani**	**1.45**	**132**	P		**Pn**	22 51 03.3	**-0.7**
KZN				S		**Sn**	22 51 23.9	**+0.6**
KZN				AML	AML		22 51 26.8	
	comp=N,224μm,0.4s							
KZN				AML	AML		22 51 27.2	
	comp=E,196μm,0.5s							
BUM	**Brajici-Budva**	**1.50**	**313**	⇓ *i* Pg		**Pn**	22 51 04.4	**-0.4**
BUM				*i* Sg		**Sg**	22 51 27.4	**+1.8**
KEK	**Kerkira**	**1.63**	**196**	P		**Pb**	22 51 06.9	**-0.8**
KEK	**Kerkira**	**1.63**	**196**	P		**Pn**	22 51 07.7	**0.0**
KEK				S		**Sg**	22 51 31.5	**+1.9**
KEK				AML	AML		22 51 33.7	
	comp=E,136μm,0.5s							
KEK				AML	AML		22 51 37.5	
	comp=N,114μm,0.7s							
BEY	**Berane**	**1.63**	**348**	*i* Pn		**Pg**	22 51 08.8	**+0.2**
IVA	**Berane**	**1.63**	**348**	⇓ *i* Pg		**Pb**	22 51 07.4	**-0.4**
IVA				*i* Sg		**Sg**	22 51 31.5	**+1.8**
CEME	**Cevo**	**1.66**	**320**	⇑ *i* Pn		**Pn**	22 51 07.2	**+0.2**
CEME				*i* Sn		**Sg**	22 51 32.6	**+1.8**
JAN	**Janina**	**1.67**	**167**	P		**Pn**	22 51 07.3	**+0.3**
JAN	**Janina**	**1.67**	**167**	P		**Pg**	22 51 09.2	**-0.1**
KOME	**Kolasin**	**1.69**	**338**	⇓ *i* Pn		**Pb**	22 51 08.4	**-0.5**
KOME				*i* Sn		**Sg**	22 51 33.9	**+2.2**
PRVS	**Prvonek**	**1.77**	**46**	*e*Pn		**Pb**	22 51 08.1	**-0.4**
HCY	**Herceg Novi**	**1.82**	**310**	*e*Pn		**Pb**	22 51 10.2	**-0.8**
HCY	**Herceg Novi**	**1.82**	**310**	⇑ *i* Pn		**Pb**	22 51 10.2	**-0.8**
HCY				*i* Sn		**Sg**	22 51 37.1	**+1.3**
NKME	**Niksic**	**1.82**	**325**	⇓ *i* Pn		**Pb**	22 51 10.5	**-0.5**
NKME				*i* Sn		**Sg**	22 51 37.5	**+1.7**
BARS	**Barje**	**1.88**	**35**	*e*Pn		**Pb**	22 51 11.0	**-1.0**
BARS				*e*Sn		**Sg**	22 51 38.8	**+1.2**
KNT	**Kendrikon**	**1.91**	**93**	P		**Pn**	22 51 10.2	**-0.2**
KNT	**Kendrikon**	**1.91**	**93**	*i* Pn		**Pn**	22 51 10.2	**-0.2**
KNT	**Kendrikon**	**1.91**	**93**	P		**Pn**	22 51 10.2	**-0.2**
KNT				S		**Sn**	22 51 34.9	**+0.1**
BOSS	**Bosilegrad**	**1.99**	**52**	*e*Pn		**Pn**	22 51 11.3	**-0.2**
SJES	**Sjenica**	**2.00**	**352**	*e*Pn		**Pb**	22 51 13.4	**-0.7**
SJES				*e*Sn		**Sg**	22 51 42.5	**+0.9**
LIT	**Litokhoron**	**2.00**	**125**	P		**Pn**	22 51 11.6	**0.0**
SELS	**Selova**	**2.02**	**16**	*e*Pn		**Pn**	22 51 12.0	**+0.2**
TREB	**Trebinje**	**2.08**	**314**	*e*Pn		**Pb**	22 51 14.7	**-0.7**
BRY	**Bratogost**	**2.11**	**321**	*e*Pn		**Pb**	22 51 15.3	**-0.8**
BRY	**Bratogost**	**2.11**	**321**	⇑ *i* Pn		**Pn**	22 51 14.4	**+1.1**
BRY				*i* Sn		**Sg**	22 51 44.6	**-0.7**
DBRK	**Dubrovnik**	**2.16**	**311**	*e*Pn		**Pn**	22 51 14.2	**+0.4**
UPM	**Unac-Piva**	**2.20**	**331**	*e*Pn		**Pg**	22 51 18.4	**-1.2**
IVAS	**Ivanjica**	**2.30**	**356**	*e*Pn		**Pn**	22 51 15.4	**-0.4**
IVAS				*e*Sn		**Sg**	22 51 49.7	**-1.5**
SOH	**Sokhos**	**2.31**	**101**	*i* Pn		**Pn**	22 51 15.9	**+0.1**
RUDO	**Rudo**	**2.45**	**343**	*e*Pn		**Pn**	22 51 19.2	**+1.4**
VTS	**Vitosha**	**2.52**	**57**	*i* Pn		**Pn**	22 51 19.2	**+0.3**
STON	**Ston**	**2.54**	**310**	*e*Pn		**Pn**	22 51 18.6	**-0.4**
STON	**Ston**	**2.54**	**310**	*e*Pn		**Pn**	22 51 19.2	**+0.2**
ZAPS	**Zavoj**	**2.61**	**39**	*e*Pn		**Pb**	22 51 22.3	**-2.1**
GRUS	**Gruza**	**2.62**	**6**	*e*Pn		**Pn**	22 51 20.4	**+0.3**
BBLS	**Lazići**	**2.68**	**345**	*e*Pn		**Pn**	22 51 22.2	**+1.2**
BBLS				*e*Sn		**Sb**	22 51 59.5	**+0.7**
DIVS	**Divibare**	**2.83**	**355**	*e*Pn		**Pn**	22 51 24.0	**+0.9**
ZAGS	**Zajecar**	**2.88**	**28**	*e*Pn		**Pn**	22 51 25.0	**+1.3**
TRUS	**Trudelj**	**2.94**	**1**	*e*Pn		**Pn**	22 51 25.1	**+0.6**
LSTV	**Lastovo**	**2.98**	**301**	*e*Pn		**Pn**	22 51 25.0	**-0.1**
MAKA	**Makarska**	**3.19**	**310**	*e*Pn		**Pn**	22 51 28.1	**+0.2**
HVAR	**Hvar**	**3.47**	**304**	*e*Pn		**Pn**	22 51 31.6	**-0.2**
SRKY	**Kupres RS**	**3.65**	**321**	*e*Pn		**Pn**	22 51 36.2	**+1.8**
FRGS	**Fruska Gora**	**3.90**	**354**	*e*Pn		**Pn**	22 51 37.4	**-0.3**
KIJV	**Kijevo**	**3.99**	**314**	*e*Pn		**Pn**	22 51 39.6	**+0.6**
BLY	**Banja Luka**	**4.18**	**327**	*e*Pn		**Pb**	22 51 47.7	**-3.5**
A050A	**Klekovaca**	**4.26**	**320**	*e*Pn		**Pn**	22 51 43.8	**+1.1**
MORI	**Morici**	**4.30**	**308**	*e*Pn		**Pn**	22 51 42.7	**-0.5**
A051A	**Mrakovica**	**4.50**	**327**	*e*Pn		**Pn**	22 51 47.6	**+1.5**
UDBI	**Udbina**	**4.68**	**315**	*e*Pn		**Pn**	22 51 50.8	**+2.2**
DUGI	**Dugi Otok**	**4.76**	**306**	*e*Pn		**Pn**	22 51 50.5	**+0.9**
VIRC	**Vir**	**4.93**	**309**	*e*Pn		**Pn**	22 51 51.2	**-0.6**

NEIC ***31*** *22:52:58.0±0.9, 36°.91S±0°.08×178°.91E±0°.09, h10km±1km, mb4.3/6, Error ellipse: s-maj=16.4km s-min=6.0km az=317.0*
WEL ***31*** *22:52:59.7±1.3, 37°S±5°×17°9E±1°.0, h17km±8km, M3.7/13, ML3.9/13, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=104.5, confirmed*
IDC ***31*** *22:53:02.4±2.9, 36°.76S×178°.01E, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=60.9km s-min=26.7km az=97.0*

ISC 31 22:52:58.2±2.6, 37°.14S±0°.06×179°.21E±0°.08, h15km±13km, n90, σ1§12/100, mb4.3/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.83**	**239**		**Pb**	**22 53 13.8**	**-0.5**
MXZ					**Sb**	**22 53 24.3**	**-1.1**
MXZ	**Matakaoa Point**	**0.83**	**239**	P	**Pb**	**22 53 14.1**	**-0.2**
MXZ				S	**Sb**	**22 53 24.5**	**-0.9**
WMGZ	**Waiomatatini S**	**0.93**	**222**	P	**Pn**	**22 53 17.6**	**+1.0**
WMGZ				S	**Sn**	**22 53 31.0**	**+1.3**
PKGZ	**Pakihiroa**	**1.17**	**230**	P	**Pn**	**22 53 20.4**	**+0.4**
PKGZ				S	**Sg**	**22 53 36.2**	**+0.2**
PUZ	**Puketiti**	**1.20**	**219**	P	**Pn**	**22 53 20.9**	**+0.5**
PUZ				S	**Sg**	**22 53 37.9**	**+1.0**
HAZ	**Te Kaha**	**1.29**	**241**	P	**Pn**	**22 53 21.0**	**-0.6**
HAZ				S	**Sg**	**22 53 39.3**	**-0.5**
TWGZ	**Tauwhareparae**	**1.42**	**223**	P	**Pn**	**22 53 24.2**	**+0.7**
TWGZ				S	**Sb**	**22 53 43.5**	**+1.1**
RUGZ	**Raukumara Rang**	**1.47**	**235**	P	**Pn**	**22 53 25.3**	**+1.0**
RUGZ				S	**Sb**	**22 53 43.9**	**0.0**
CNGZ	**Carnagh Statio**	**1.56**	**210**	P	**Pn**	**22 53 26.2**	**+0.9**
WIZ	**White Island**	**1.65**	**256**	P	**Pn**	**22 53 26.9**	**+0.3**
TKGZ	**Te Karaka**	**1.69**	**219**	P	**Pn**	**22 53 27.5**	**+0.4**
TKGZ				S	**Sn**	**22 53 49.1**	**+0.7**
MWZ	**Matawai**	**1.79**	**228**	P	**Pn**	**22 53 29.0**	**+0.4**
MWZ				S	**Sn**	**22 53 50.6**	**-0.4**
WHRZ	**Whale Island**	**1.91**	**247**	P	**Pn**	**22 53 30.9**	**+0.6**
RIGZ	**Rimuhau**	**1.94**	**216**	P	**Pn**	**22 53 31.0**	**+0.3**
RAGZ	**Rawiri**	**1.96**	**226**	P	**Pn**	**22 53 31.5**	**+0.5**
RAGZ				S	**Sn**	**22 53 54.7**	**-0.7**
URZ	**Urewera**	**2.00**	**235**		**Pn**	**22 53 32.0**	**+0.6**
URZ				Sn	**Sn**	**22 53 55.5**	**-0.7**
URZ	**Urewera**	**2.00**	**235**	Pn	**Pn**	**22 53 32.2**	**+0.7**
	23nm,0.3s,baz=251,slow=3.4,SNR=155						
URZ				Sn	**Sn**	**22 53 56.1**	**-0.2**
	37nm,0.3s,baz=172,slow=22,SNR=20						
URZ	**Urewera**	**2.00**	**235**	P	**Pn**	**22 53 32.1**	**+0.7**
PRGZ	**Paritu Road**	**2.07**	**210**	P	**Pn**	**22 53 32.5**	**+0.1**
EDRZ	**Edgecumbe**	**2.19**	**243**	P	**Pn**	**22 53 35.0**	**+1.0**
SNGZ	**Shannon Statio**	**2.21**	**221**	P	**Pn**	**22 53 34.4**	**+0.1**
OPRZ	**Ohinepanea**	**2.22**	**251**	P	**Pn**	**22 53 34.7**	**+0.3**
KNZ	**Kokohu**	**2.24**	**212**	P	**Pn**	**22 53 34.2**	**-0.5**
MHGZ	**Mahia Peninsul**	**2.26**	**207**	P	**Pn**	**22 53 35.0**	**0.0**
MYRZ	**Mayor Island**	**2.37**	**266**	P	**Pn**	**22 53 36.8**	**+0.3**
MKRZ	**Makatiti**	**2.39**	**244**	P	**Pn**	**22 53 38.2**	**+1.3**
TARZ	**Mount Tarawera**	**2.41**	**242**	P	**Pn**	**22 53 38.0**	**+0.9**
RAHZ	**Arahi**	**2.44**	**223**	P	**Pn**	**22 53 37.6**	**+0.1**
RRRZ	**Republican Roa**	**2.45**	**240**	P	**Pn**	**22 53 39.0**	**+1.4**
WHHZ	**Waihua**	**2.48**	**218**	P	**Pn**	**22 53 38.2**	**+0.1**
KARZ	**Kaharoa**	**2.51**	**249**	P	**Pn**	**22 53 39.3**	**+0.8**
HLRZ	**Highlands Stat**	**2.52**	**243**	P	**Pn**	**22 53 39.6**	**+1.0**
MTHZ	**Maungataniwha**	**2.54**	**227**	P	**Pn**	**22 53 39.4**	**+0.5**
HSRZ	**Hossack Road**	**2.62**	**243**	P	**Pn**	**22 53 41.2**	**+1.1**
KMRZ	**Kaimai**	**2.69**	**254**	P	**Pn**	**22 53 41.3**	**+0.3**
NMHZ	**Naumai**	**2.72**	**223**	P	**Pn**	**22 53 41.8**	**+0.3**
ARHZ	**Aropaoanui**	**2.75**	**219**	P	**Pn**	**22 53 41.6**	**-0.1**
KUZ	**Kuaotunu**	**2.82**	**277**	P	**Pn**	**22 53 41.4**	**-1.3**
BKZ	**Black Stump Fm**	**2.95**	**226**		**Pn**	**22 53 44.3**	**-0.2**
BKZ	**Black Stump Fm**	**2.95**	**226**	P	**Pn**	**22 53 44.5**	**0.0**
TOZ	**Tahuroa Road**	**3.01**	**257**	P	**Pn**	**22 53 44.7**	**-0.5**
CKHZ	**Cape Kidnapper**	**3.02**	**213**	P	**Pn**	**22 53 44.5**	**-1.0**
GRZ	**Great Barrier**	**3.14**	**285**	P	**Pn**	**22 53 47.2**	**+0.1**
KWHZ	**Kaweka Forest**	**3.16**	**223**	P	**Pn**	**22 53 47.0**	**-0.5**
KAHZ	**Kahuranaki**	**3.22**	**214**	P	**Pn**	**22 53 47.1**	**-1.1**
MKAZ	**Moumakai**	**3.23**	**269**	P	**Pn**	**22 53 47.8**	**-0.5**
WIAZ	**Waiheke Island**	**3.28**	**275**	P	**Pn**	**22 53 48.2**	**-0.2**
KATZ	**Kakaramea**	**3.32**	**235**	P	**Pn**	**22 53 50.6**	**+0.9**
KRHZ	**Kereru**	**3.35**	**221**	P	**Pn**	**22 53 48.8**	**-1.2**
TMVZ	**Te Maari**	**3.40**	**233**	P	**Pn**	**22 53 50.4**	**-0.3**
ETVZ	**East Tongariro**	**3.40**	**233**	P	**Pn**	**22 53 50.5**	**-0.4**
NTVZ	**North Tongariro**	**3.40**	**234**	P	**Pn**	**22 53 50.6**	**-0.3**
BHHZ	**Black Hill Sta**	**3.41**	**226**	P	**Pn**	**22 53 50.6**	**-0.3**

KRVZ	**Karewarewa**	**3.42**	**234**	P		**Pn**	22 53 51.0	**-0.2**
ETAZ	**East Tamaki Re**	**3.43**	**272**	P		**Pn**	22 53 51.9	**+0.9**
OTVZ	**Oturere**	**3.45**	**233**	P		**Pn**	22 53 51.1	**-0.4**
NNVZ	**North Ngauruho**	**3.46**	**234**	P		**Pn**	22 53 52.0	**+0.3**
WTVZ	**West Tongariro**	**3.47**	**234**	P		**Pn**	22 53 52.0	**+0.3**
MBAZ	**Motutapu North**	**3.47**	**275**	P		**Pn**	22 53 52.2	**+0.6**
SNVZ	**South Ngauruho**	**3.48**	**233**	P		**Pn**	22 53 51.5	**-0.4**
NGZ	**Ngauruhoe**	**3.50**	**233**	P		**Pn**	22 53 51.9	**-0.2**
TUVZ	**Tukino**	**3.52**	**232**	P		**Pn**	22 53 52.4	**0.0**
MOVZ	**Moawhango**	**3.54**	**229**	P		**Pn**	22 53 52.1	**-0.5**
TWVZ	**Taurewa**	**3.54**	**236**	P		**Pn**	22 53 53.0	**+0.2**
ABAZ	**Army Bay**	**3.55**	**277**	P		**Pn**	22 53 53.5	**+0.9**
WNVZ	**Wahianoa**	**3.58**	**231**	P		**Pn**	22 53 52.7	**-0.7**
AWAZ	**Awhitu Peninsu**	**3.65**	**270**	P		**Pn**	22 53 54.0	**+0.6**
WTAZ	**Waiatarua**	**3.71**	**272**	P		**Pn**	22 53 55.6	**+0.6**
PRHZ	**Porangahau**	**3.72**	**212**	P		**Pn**	22 53 53.3	**-1.8**
TSZ	**Takapari Road**	**3.87**	**220**	P		**Pn**	22 53 55.1	**-2.0**
WCZ	**Waipu Caves**	**4.09**	**286**	P		**Pn**	22 54 00.4	**+0.2**
WAZ	**Wanganui**	**4.22**	**230**	P		**Pn**	22 54 01.8	**-0.2**
BFZ	**Birch Farm**	**4.23**	**212**	Pn		**Pn**	22 53 58.9	**-3.2**
PRWZ	**Pori Road**	**4.25**	**216**	P		**Pn**	22 54 00.6	**-1.7**
NEZ	**North Egmont**	**4.55**	**241**	P		**Pn**	22 54 09.3	**+2.7**
PKE	**Pukeiti**	**4.60**	**242**	P		**Pn**	22 54 11.0	**+3.8**
OUZ	**Omahuta**	**4.92**	**291**	P		**Pn**	22 54 12.3	**+0.7**
QRZ	**Quartz Range**	**6.37**	**233**	Pn		Pn	22 54 27.2	-4.3
CTZ	**Chatham Island**	**7.32**	**156**	P		**Pn**	22 54 45.3	**+0.9**
MQZ	**McQueen's Vall**	**8.25**	**215**	Pn		Pn	22 54 52.0	-5.2
ASAR	**Alice Springs**	**40.95**	**276**	P		**P**	23 00 38.1	**-2.3**
ASAR	**Alice Springs**	**40.95**	**276**	P		**P**	23 00 38.7	**-1.6**
	0.9nm,0.5s,baz=118,slow=8.1,SNR=15							
	0.9nm,0.5s							
WRA	**Warramunga Arr**	**42.55**	**281**	P		**P**	23 00 51.0	**-2.5**
WRA	**Warramunga Arr**	**42.55**	**281**	P		**P**	23 00 51.5	**-2.0**
	0.4nm,0.4s,baz=121,slow=7.7,SNR=9.8							
	0.4nm,0.4s							
WB0	**Warramunga Arr**	**42.61**	**281**	P		**P

MRSI	**Marisa**	**5.88**	**234**	P		**Pn**	**23 12 25.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**21.97**	**183**	P		**P**	**23 15 48.0**	**-2.9**
	1.9nm,0.4s,baz=13,slow=9.2,SNR=14							
	1.9nm,0.4s							
WRA	**Warramunga Arr**	**24.94**	**163**	P		**P**	**23 16 17.5**	**-2.6**
	5.7nm,0.9s,baz=342,slow=11,SNR=31							
	5.7nm,0.9s							
ASAR	**Alice Springs**	**28.37**	**166**	P		**P**	**23 16 50.8**	**-0.1**
	0.7nm,0.7s,baz=344,slow=9.7,SNR=6.8							
	0.7nm,0.7s							
STKA	**Stephens Creek**	**38.39**	**159**	P		**P**	**23 18 16.4**	**-1.4**
	3.9nm,0.6s,baz=336,slow=9.8,SNR=12							
	3.9nm,0.6s							
SONM	**Songino Array**	**47.04**	**341**	P		**P**	**23 19 28.9**	**+1.0**
	0.4nm,0.6s,baz=160,slow=9.2,SNR=2.7							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**57.32**	**325**	P		**P**	**23 20 44.9**	**+0.7**
	0.4nm,0.5s,baz=118,slow=7.5,SNR=7.8							
	0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**60.34**	**333**	P		**P**	**23 21 03.4**	**-1.5**
	0.5nm,0.4s,baz=134,slow=8.3,SNR=2.0							
	0.5nm,0.4s							
ILAR	**Eielson Array**	**84.90**	**25**	P		**P**	**23 23 31.1**	**+0.4**
	0.3nm,0.6s,baz=251,slow=4.7,SNR=2.4							
	0.3nm,0.6s							

*TIR **31** 23:14:53.1,41˚.28N×20˚.38E,h2km±1km,Md2.9,Ml2.7*
*BEO **31** 23:14:53.2±0.7,41˚.16N×20˚.43E,h0km,ML2.7/6*
*ATH **31** 23:14:53.5,41˚.37N×20˚.41E,h10km±31km,ML2.3/4,Error ellipse: s-maj=31.6km s-min=1.7km az=0.0*
*SKO **31** 23:14:54.8,41˚.28N×20˚.35E,h8km*
*THE **31** 23:14:54.5,41˚.28N×20˚.39E,h0km±2km,ML2.4/5,Error ellipse: s-maj=2.5km s-min=0.7km az=344.0*
*PDG **31** 23:14:56.2±0.5,41˚.36N×20˚.22E,h1km±1km,ML2.9/12, Error ellipse: s-maj=1.6km s-min=2.8km az=0.0*

ISC 31 23:14:54.3±1.1,41˚.28N±0˚.02×20˚.37E±0˚.02,h3km±9km, n79,σ0s97/119,8C-5D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHR	**Ohrid**	**0.36**	**117**	⇑*i*	Pg	**Pg**	**23 15 01.7**	**+0.4**
OHR				*i*	Sg	**Sb**	**23 15 08.2**	**-1.3**
OHR				*e*	Lg	Lg	23 15 08.3	
	comp=N,309nm,0.5s							
TIR	**Tirane**	**0.39**	**281**	P		**Pg**	**23 15 01.9**	**+0.2**
TIR				S		**Sg**	**23 15 08.0**	**+1.3**
	comp=N,708nm,0.2s							
TIR	**Tirane**	**0.39**	**281**	*e*Pg		**Pg**	**23 15 01.5**	**-0.2**
TIR				*e*Sg		**Sg**	**23 15 08.0**	**+1.3**
TIR	**Tirane**	**0.39**	**281**	*i*	Pg	**Pg**	**23 15 01.6**	**-0.1**
TIR				*i*	Sg	**Sb**	**23 15 08.2**	**-1.9**
TIR	**Tirane**	**0.39**	**281**	P		**Pg**	**23 15 01.4**	**-0.2**
	baz=281							
TIR				S		**Sg**	**23 15 07.6**	**+0.9**
	baz=281							
TIR				AMP				
	comp=N,2.9nm,0.1s,baz=281							
PHP	**Peshkopia**	**0.41**	**8**	P		**Pg**	**23 15 02.0**	**-0.2**
PHP				S		**Sb**	**23 15 09.2**	**-1.7**
PHP	**Peshkopia**	**0.41**	**8**	P		**Pg**	**23 15 02.0**	**-0.2**
	baz=6.0							
PHP				S		**Sg**	**23 15 08.5**	**+0.9**
	baz=6.0							
PHP				AMP				
	comp=N,3.9nm,0.5s,baz=6.0							
KBN	**Korca**	**0.72**	**154**	P		**Pg**	**23 15 07.7**	**-0.5**
KBN				S		**Sb**	**23 15 19.3**	**-0.6**
	comp=N,535nm,0.4s							
KBN	**Korca**	**0.72**	**154**	P		**Pg**	**23 15 07.7**	**-0.5**
	baz=154							
KBN				S		**Sb**	**23 15 18.7**	**-1.2**
	baz=154							
KBN				AMP				
	comp=N,2.0nm,0.4s,baz=154							
NEST	**Nestorio**	**1.00**	**149**	P		**Pg**	**23 15 12.8**	**-0.7**
NEST				S		**Sb**	**23 15 28.5**	**+0.6**
	comp=N,222nm,0.4s							
NEST	**Nestorio**	**1.00**	**149**	P		**Pg**	**23 15 12.8**	**-0.7**
NEST				S		**Sb**	**23 15 28.3**	**+0.3**
NEST				AML		AML	23 15 29.1	
	comp=E,632μm,0.3s							
NEST				AML		AML	23 15 29.2	
	comp=N,483μm,0.4s							
VLO	**Vlora**	**1.04**	**220**	P		**Pb**	**23 15 14.5**	**-0.4**
	baz=220							
SKO	**Skopje**	**1.06**	**49**	*i*	Pg	**Pg**	**23 15 14.1**	**-0.5**
SKO				*i*	Sg	**Sb**	**23 15 28.9**	**-0.7**
BCI	**Bajram Curri**	**1.11**	**348**	P		**Pb**	**23 15 15.7**	**-0.5**
	baz=349							
BCI				S		**Sn**	**23 15 32.2**	**-0.5**
	baz=349							
BCI				AMP				
	comp=E,0.6nm,0.3s,baz=349							
LSK	**Leskovik**	**1.14**	**171**	P		**Pg**	**23 15 15.3**	**-0.8**
LSK				S		**Sn**	**23 15 32.6**	**-0.7**
	comp=E,258nm,0.8s							
LSK	**Leskovik**	**1.14**	**171**	P		**Pg**	**23 15 15.3**	**-0.8**
	baz=171							
LSK				S		**Sn**	**23 15 33.2**	**-0.1**
	baz=171							
LSK				AMP				
	comp=E,0.8nm,0.7s,baz=171							
PENT	**Pentalofos**	**1.23**	**151**	P		**Pb**	**23 15 17.9**	**-0.2**
PENT				S		**Sb**	**23 15 34.4**	**0.0**
DRME	**Dracevica, Mon**	**1.27**	**316**	*e*Pn		**Pg**	**23 15 17.3**	**-1.3**
DRME	**Dracevica, Mon**	**1.27**	**316**	⇑*i*	Pg	**Pg**	**23 15 17.3**	**-1.3**
DRME				*i*	Sg	**Sn**	**23 15 37.0**	**+0.5**
PVY	**Plav**	**1.35**	**347**	⇑*i*	Pg	**Pn**	**23 15 18.8**	**-1.4**
PVY				*i*	Sg	**Sn**	**23 15 39.9**	**+1.2**
PDG	**Podgorica**	**1.42**	**325**	*e*Pg		**Pn**	**23 15 19.7**	**-1.3**
PDG				*e*Sg		**Sn**	**23 15 42.6**	**+2.4**
PDG	**Podgorica**	**1.42**	**325**	*i*	Pn	**Pn**	**23 15 20.1**	**-0.8**
SRN	**Sarande**	**1.42**	**191**	P		**Pg**	**23 15 21.4**	**-0.1**
SRN				S		**Sn**	**23 15 41.8**	**+1.7**
SRN	**Sarande**	**1.42**	**191**	P		**Pg**	**23 15 22.3**	**+0.8**
	baz=192							
SRN				S		**Sn**	**23 15 42.4**	**+2.3**
	baz=192							
SRN				AMP				
	comp=N,0.2nm,0.5s,baz=192							
TTG	**Podgorica**	**1.42**	**325**	⇑*i*	Pg	**Pn**	**23 15 20.1**	**-0.8**
TTG				*i*	Sg	**Sn**	**23 15 41.6**	**+1.4**
STIP	**Stip**	**1.43**	**72**	*i*	Pn	**Pg**	**23 15 23.2**	**+1.6**
KZN	**Kozani**	**1.44**	**132**	P		**Pn**	**23 15 20.4**	**-0.9**
KZN				S		**Sn**	**23 15 41.4**	**+0.7**
KZN				AML		AML	23 15 45.5	
	comp=E,195μm,0.4s							
KZN				AML		AML	23 15 47.1	
	comp=N,266μm,0.5s							
BUM	**Brajici-Budva**	**1.50**	**313**	⇑*i*	Pg	**Pn**	**23 15 21.5**	**-0.7**
BUM				*i*	Sg	**Sg**	**23 15 43.5**	**+0.9**
KEK	**Kerkira**	**1.62**	**196**	P		**Pb**	**23 15 24.6**	**-0.2**
KEK				S		**Sg**	**23 15 46.6**	**+0.3**
KEK				AML		AML	23 15 52.7	
	comp=E,113μm,0.4s							
KEK				AML		AML	23 15 55.0	
	comp=N,138μm,0.4s							
BEY	**Berane**	**1.63**	**348**	*i*	Pn	**Pg**	**23 15 25.9**	**+0.3**
IVA	**Berane**	**1.63**	**348**	⇓*i*	Pg	**Pb**	**23 15 24.3**	**-0.8**
IVA				*i*	Sg	**Sg**	**23 15 48.4**	**+1.6**
JAN	**Janina**	**1.66**	**167**	P		**Pg**	**23 15 25.7**	**-0.3**
CEME	**Cevo**	**1.67**	**320**	⇑*i*	Pg	**Pn**	**23 15 24.0**	**-0.4**
CEME				*i*	Sg	**Sg**	**23 15 48.6**	**+0.7**
KOME	**Kolasin**	**1.70**	**338**	⇓*i*	Pn	**Pb**	**23 15 25.2**	**-1.0**
KOME				*i*	Sn	**Sg**	**23 15 50.0**	**+1.2**
PRVS	**Prvonek**	**1.77**	**45**	*e*Pn		**Pn**	**23 15 25.1**	**-0.7**
HCY	**Herceg Novi**	**1.82**	**311**	*e*Pn		**Pn**	**23 15 27.0**	**+0.4**
HCY	**Herceg Novi**	**1.82**	**311**	⇓*i*	Pn	**Pn**	**23 15 26.9**	**+0.4**
HCY				*i*	Sn	**Sg**	**23 15 52.3**	**-0.6**
NKME	**Niksic**	**1.83**	**325**	⇓*i*	Pn	**Pn**	**23 15 27.0**	**+0.4**
NKME				*i*	Sn	**Sg**	**23 15 52.8**	**-0.1**
BARS	**Barje**	**1.88**	**35**	*e*Pn		**Pn**	**23 15 26.7**	**-0.6**
SCTE	**Santa Cesarea**	**1.88**	**231**	P		**Pb**	**23 15 28.7**	**-0.5**
SCTE				S		**Sg**	**23 15 54.1**	**-0.6**
SCTE				AML		AML	23 16 01.1	
	comp=E,30μm,0.5s							
SCTE				AML		AML	23 16 08.0	
	comp=N,26μm,0.6s							
KNT	**Kendrikon**	**1.91**	**93**	P		**Pn**	**23 15 27.3**	**-0.4**
KNT				S		**Sn**	**23 15 52.4**	**+0.1**
	comp=N,30nm,0.8s							
KNT	**Kendrikon**	**1.91**	**93**	P		**Pn**	**23 15 27.3**	**-0.4**
KNT				S		**Sn**	**23 15 52.0**	**-0.3**

BOSS	**Bosilegrad**	**1.99**	**52**	*e*Pn		**Pn**	**23 15 28.2**	**-0.7**
SJES	**Sjenica**	**2.01**	**352**	*e*Pn		**Pb**	**23 15 30.7**	**-0.7**
SJES				*e*Sn		**Sb**	**23 15 57.0**	**+0.2**
THE	**Thessaloniki**	**2.07**	**107**	*i*	Pn	**Pn**	**23 15 29.4**	**-0.4**
TREB	**Trebinje**	**2.08**	**314**	*e*Pn		**Pb**	**23 15 32.8**	**+0.1**
BRY	**Bratogost**	**2.12**	**321**	*e*Pn		**Pn**	**23 15 31.1**	**+0.4**
BRY	**Bratogost**	**2.12**	**321**	⇑*i*	Pn	**Pb**	**23 15 31.8**	**-1.6**
BRY				*i*	Sn	**Sb**	**23 15 59.7**	**-0.4**
DBRK	**Dubrovnik**	**2.16**	**311**	*e*Pn		**Pn**	**23 15 31.0**	**-0.1**
PLE	**Pljevlja**	**2.18**	**341**	⇑*i*	Pn	**Pb**	**23 15 33.8**	**-0.6**
PLE				*i*	Sn	**Sb**	**23 16 01.6**	**-0.2**
UPM	**Unac-Piva**	**2.21**	**331**	*e*Pn		**Pb**	**23 15 34.2**	**-0.8**
UPM	**Unac-Piva**	**2.21**	**331**	⇓*i*	Pn	**Pb**	**23 15 34.0**	**-1.0**
UPM				*i*	Sn	**Sb**	**23 16 02.3**	**-0.5**
SOH	**Sokhos**	**2.30**	**100**	*i*	Pn	**Pn**	**23 15 33.0**	**-0.2**
IVAS	**Ivanjica**	**2.31**	**356**	*e*Pn		**Pn**	**23 15 32.9**	**-0.3**
IVAS				*e*Sn		**Sb**	**23 16 04.2**	**-1.2**
RUDO	**Rudo**	**2.46**	**343**	*e*Pn		**Pn**	**23 15 36.1**	**+0.9**
LKD2	**Lefkada island**	**2.49**	**175**	P		**Pn**	**23 15 36.9**	**+1.1**
	baz=174							
VTS	**Vitosha**	**2.52**	**57**	*i*	Pn	**Pn**	**23 15 36.5**	**+0.2**
STON	**Ston**	**2.55**	**310**	*e*Pn		**Pn**	**23 15 35.4**	**-1.0**
STON	**Ston**	**2.55**	**310**	*e*Pn		**Pn**	**23 15 35.2**	**-1.2**
BOVS	**Bovan**	**2.56**	**22**	*e*Pn		**Pb**	**23 15 38.9**	**-1.9**
ZAPS	**Zavoj**	**2.61**	**39**	*e*Pn		**Pn**	**23 15 38.1**	**+0.8**
BBLS	**Lazići**	**2.69**	**345**	*e*Pn		**Pn**	**23 15 40.1**	**+1.7**
BBLS				*e*Sn		**Sn**	**23 16 13.4**	**+1.9**
DIVS	**Divibare**	**2.83**	**355**	*e*Pn		**Pn**	**23 15 40.2**	**-0.2**
DIVS	**Divibare**	**2.83**	**355**	*e*Pn		**Pn**	**23 15 40.3**	**-0.2**
DIVS				*e*Sn		**Sn**	**23 16 17.1**	**+1.9**
LSTV	**Lastovo**	**2.99**	**301**	*e*Pn		**Pn**	**23 15 41.7**	**-0.8**
HVAR	**Hvar**	**3.48**	**304**	*e*Pn		**Pn**	**23 15 48.0**	**-1.2**
SRKY	**Kupres RS**	**3.66**	**321**	*e*Pn		**Pn**	**23 15 53.5**	**+1.7**
FRGS	**Fruska Gora**	**3.90**	**354**	*e*Pn		**Pn**	**23 15 56.4**	**+1.3**
KIJV	**Kijevo**	**4.00**	**314**	*e*Pn		**Pn**	**23 15 56.5**	**+0.1**
BLY	**Banja Luka**	**4.18**	**327**	*e*Pn		**Pn**	**23 15 56.9**	**-2.0**
A050A	**Klekovaca**	**4.27**	**320**	*e*Pn		**Pn**	**23 16 01.9**	**+1.7**
MORI	**Morici**	**4.31**	**308**	*e*Pn		**Pn**	**23 15 59.6**	**-1.0**
A051A	**Mrakovica**	**4.51**	**327**	*e*Pn		**Pn**	**23 16 04.4**	**+0.9**
A252A	**Venje**	**4.55**	**337**	*e*Pn		**Pn**	**23 16 05.1**	**+1.2**
UDBI	**Udbina**	**4.69**	**315**	*e*Pn		**Pn**	**23 16 06.9**	**+0.9**
DUGI	**Dugi Otok**	**4.77**	**306**	*e*Pn		**Pn**	**23 16 07.0**	**0.0**
VIRC	**Vir**	**4.94**	**309**	*e*Pn		**Pn**	**23 16 08.7**	**-0.6**
CRES	**Cresnjev**	**5.78**	**324**	*e*Pn		**Pn**	**23 16 21.4**	**+0.5**
CEY	**Cerknica**	**6.21**	**318**	*e*Pn		**Pn**	**23 16 27.7**	**+0.9**

IDC 31 23:23:00.5±292.0,12˚.02N×43˚.33E,h0km,Error ellipse: s-maj=131.4km s-min=14.6km az=16.0,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I19DJ	**I19DJ**	**0.57**	**196**	*i*			23 26 00.0	
	0.1nm,0.6s,baz=16,slow=313,SNR=0.6							
I32KE	**NAIROBI INFRAS**	**14.68**	**207**	*i*			00 53 00.0	
	baz=22,slow=324,SNR=1.4							
I48TN	**KESRA INFRASON**	**38.76**	**313**	*i*			03 23 20.0	
	baz=116,slow=322,SNR=0.7							
I26DE	**FREYUNG INFRAS**	**44.18**	**332**	*i*			03 50 50.0	
	baz=137,slow=327,SNR=0.7							

*PRE **31** 23:26:50.6±2.6,27˚.00S×26˚.60E,h2km,ML3.1,Fault plane solution: NP1:φs357.17000°,δ45.86000°, λ-76.00000°.*
*NEIC **31** 23:26:50.9±1.0,26˚.96S±0˚.04×26˚.56E±0˚.06,h1km±4km, mb4.2/4,Error ellipse: s-maj=7.8km s-min=6.4km az=91.0*
*IDC **31** 23:26:51.5±1.4,27˚.00S×26˚.55E,h0km,mb3.9/2, mbtmp3.9/7,ML3.7/3,Error ellipse: s-maj=25.1km s-min=10.1km az=97.0*
*BUL **31** 23:26:52.3±1.1,27˚.09S×26˚.76E,h7km±10km,MD4.1*
*EAF **31** 23:26:52.4±1.2,27˚.10S×26˚.78E,h8km±12km,MD3.8*

ISC 31 23:26:52.1±1.1,26˚.98S±0˚.03×26˚.60E±0˚.03,h16km±7km, n71,σ1s79/127,mb4.1/4,7C-15D,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRYS	**Parys**	**0.68**	**85**	⇑*i*	P	**Pg**	**23 27 05.1**	**-0.5**
PRYS					AMPG		23 27 05.3	
	comp=Z,4μm,0.1s							
PRYS					AMSG		23 27 13.2	
	comp=Z,3μm,0.2s							
PRYS					AMSG		23 27 13.3	
	comp=Z,4μm,0.3s							
PRYS				*e*S		**Sg**	**23 27 13.5**	**-1.2**
PRYS					IAML		23 27 19.4	
	comp=Z,630nm,0.7s							
SWZ	**Schweizer**	**1.15**	**260**	*e*P		**Pg**	**23 27 13.6**	**-0.7**
SWZ					AMPG		23 27 15.3	
	comp=Z,5μm,0.2s							
SWZ				*e*S		**Sg**	**23 27 27.7**	**-1.5**
SWZ					AMSG		23 27 27.8	
	comp=Z,2μm,0.1s							
SWZ					AMSG		23 27 27.8	
	comp=Z,3μm,0.1s							
SWZ					IAML		23 27 32.0	
	comp=Z,761nm,0.4s							
KSR	**Koster**	**1.16**	**14**	⇑*i*	P	**Pg**	**23 27 14.0**	**-0.5**
KSR					AMPG		23 27 16.0	
	comp=Z,17μm,0.1s							
KSR				*e*S		**Sg**	**23 27 29.4**	**-0.3**
KSR					AMSG		23 27 30.1	
	comp=N,12μm,0.2s							
KSR					AMSG		23 27 30.2	
	comp=Z,10μm,0.2s							
KSR					IAML		23 27 33.4	
	comp=Z,1μm,0.4s							
HRAO	**HartRAO**	**1.46**	**42**	⇑*i*	P	**Pn**	**23 27 19.5**	**+1.6**
HRAO				*e*S		**Sg**	**23 27 38.4**	**-0.9**
SNKL	**Senekal, Frees**	**1.66**	**141**	⇓*i*	P	**Pn**	**23 27 22.0**	**+1.3**
SNKL				*e*S		**Sb**	**23 27 44.1**	**+1.1**
SNKL					IAML		23 27 46.0	
	comp=Z,664nm,0.4s							
SLR	**Silverton**	**1.96**	**51**	⇓*i*	P	**Pn**	**23 27 26.7**	**+2.0**
SLR				*e*S		**Sn**	**23 27 51.3**	**+2.3**
SLR					IAML		23 27 54.5	
	comp=Z,447nm,0.3s							
BOSA	**Boshof**	**2.01**	**216**			**Pn**	**23 27 26.4**	**+0.9**
BOSA					Sn	**Sn**	**23 27 51.6**	**+1.2**
BOSA	**Boshof**	**2.01**	**216**	⇓*i*	P	**Pn**	**23 27 26.4**	**+0.9**
BOSA				*e*S		**Sn**	**23 27 53.1**	**+2.7**
BOSA					IAML		23 27 53.9	
	comp=Z,136nm,0.2s							
BOSA	**Boshof**	**2.01**	**216**	*i*	P	**Pn**	**23 27 26.4**	**+0.9**
BOSA				*i*	S	**Sn**	**23 27 51.6**	**+1.2**
BOSA	**Boshof**	**2.01**	**216**	*i*	P	**Pn**	**23 27 26.4**	**+0.9**
BOSA				*i*	S	**Sn**	**23 27 51.6**	**+1.2**
BOSA	**Boshof**	**2.01**	**216**	Pn		**Pn**	**23 27 26.4**	**+0.9**
	comp=Z,44nm,0.3s,baz=37,slow=12,SNR=528							
BOSA					Pg	**Pb**	**23 27 27.9**	**-0.4**
	comp=Z,44nm,0.3s,baz=41,slow=15,SNR=98							
BOSA					Lg	Lg	23 27 53.0	
	comp=Z,66nm,0.3s,baz=315,slow=21,SNR=12							
LBTB	**Lobatse**	**2.16**	**335**			**Pn**	**23 27 29.8**	**+2.4**
LBTB					Sg	**Sb**	**23 27 58.9**	**+1.6**
LBTB	**Lobatse**	**2.16**	**335**	⇓*i*	P	**Pn**	**23 27 29.9**	**+2.5**
LBTB				*e*S		**Sn**	**23 27 56.5**	**+2.6**
LBTB					IAML		23 28 00.1	
	comp=Z,271nm,0.4s							
LBTB	**Lobatse**	**2.16**	**335**	*i*	P	**Pn**	**23 27 30.1**	**+2.7**
LBTB				*i*	S	**Sb**	**23 27 59.2**	**+1.9**
LBTB	**Lobatse**	**2.16**	**335**	*i*	P	**Pn**	**23 27 30.1**	**+2.7**
LBTB				*i*	S	**Sb**	**23 27 59.2**	**+1.9**
LBTB	**Lobatse**	**2.16**	**335**	Pn		**Pn**	**23 27 30.1**	**+2.7**
	comp=Z,20nm,0.3s,baz=153,slow=17,SNR=363							
LBTB					Pg	**Pb**	**23 27 31.4**	**+0.6**
	comp=Z,20nm,0.3s,baz=152,slow=17,SNR=68							
LBTB					Lg	Lg	23 27 59.1	
	comp=Z,75nm,0.3s,baz=61,slow=21,SNR=72							
	comp=Z,45nm,0.3s							
NWCL	**Newcastle**	**3.03**	**105**	*e*P		**Pn**	**23 27 40.1**	**+0.7**
NWCL				*e*S		**Sn**	**23 28 16.5**	**+1.1**
NWCL					IAML		23 28 29.2	
	comp=Z,208nm,0.4s							
CRLN	**Carolina, Mapu**	**3.23**	**73**	⇑*i*	P	**Pn**	**23 27 42.8**	**+0.6**
CRLN				*e*S		**Sn**	**23 28 22.1**	**+1.7**
CRLN					IAML		23 28 35.7	
	comp=Z,35nm,0.4s							
LEPH	**Lephalale, Lim**	**3.29**	**20**	⇓*i*	P	**Pn**	**23 27 45.0**	**+1.9**
LEPH				*e*S		**Sn**	**23 28 23.9**	**+1.9**
LEPH					IAML		23 28 37.7	

	comp=Z,91nm,0.5s							
HVD	**Gariep Dam**	**3.74**	**195**	⇓*i*	P	**Pn**	**23 27 49.8**	**+0.6**
HVD				*e*S		**Sn**	**23 28 32.3**	**-0.6**
HVD					IAML		23 28 57.0	
	comp=Z,44nm,0.3s							
PKA	**Prieska**	**4.32**	**231**	⇑*i*	P	**Pn**	**23 27 57.0**	**-0.1**
PKA				*e*S		**Sn**	**23 28 47.8**	**+0.6**
PKA					IAML		23 29 22.3	
	comp=Z,69nm,0.6s							
KSTD	**Kokstad**	**4.33**	**147**	⇓*i*	P	**Pn**	**23 27 59.7**	**+2.3**
KSTD				*e*S		**Sn**	**23 28 48.7**	**+1.0**
KSTD					IAML		23 29 09.2	
	comp=Z,35nm,0.6s							
POGA	**Pongola**	**4.57**	**96**			**Pn**	**23 28 01.0**	**+0.5**
POGA	**Pongola**	**4.57**	**96**	*e*P		**Pn**	**23 28 01.2**	**+0.7**
POGA				*e*S		**Sn**	**23 28 54.1**	**+0.9**
POGA					IAML		23 29 19.9	
	comp=Z,38nm,0.5s							
UPI	**Upington**	**4.93**	**253**	⇑*i*	P	**Pn**	**23 28 07.0**	**+1.4**
UPI				*e*S		**Sn**	**23 29 02.2**	**-0.1**
UPI					IAML		23 29 29.0	
	comp=Z,20nm,0.6s							
KEIM	**Keimoes**	**5.27**	**250**	⇑*i*	P	**Pn**	**23 28 10.6**	**+0.4**
KEIM				*e*S		**Sn**	**23 29 09.5**	**-1.1**
KEIM					IAML		23 29 37.5	
	comp=Z,35nm,0.4s							
BFON	**Badsfontein, M**	**5.43**	**207**	⇓*i*	P	**Pn**	**23 28 13.6**	**+1.2**
BFON				*e*S		**Sn**	**23 29 13.4**	**-1.2**
BFON					IAML		23 29 40.0	
	comp=Z,29nm,0.5s							
MUSN	**Musina, Limpop**	**5.54**	**33**	⇓*i*	P	**Pn**	**23 28 14.8**	**+0.9**
MUSN				*e*S		**Sn**	**23 29 17.8**	**+0.5**
MUSN					IAML		23 29 44.7	
	comp=Z,21nm,0.5s							
MUSN	**Musina, Limpop**	**5.54**	**33**	*i*	P	**Pn**	**23 28 14.5**	**+0.6**
MUSN				*i*	S	**Sn**	**23 29 14.6**	**-2.6**
MUSN	**Musina, Limpop**	**5.54**	**33**	*i*	P	**Pn**	**23 28 14.5**	**+0.6**
MUSN				*i*	S	**Sn**	**23 29 14.6**	**-2.6**
MOPA	**Mopani**	**5.55**	**53**	⇓*i*	P	**Pn**	**23 28 14.4**	**+0.4**
MOPA				*e*S		**Sn**	**23 29 15.4**	**-2.1**
MOPA					IAML		23 29 52.9	
	comp=Z,4.5nm,0.5s							
MOPA	**Mopani**	**5.55**	**53**	*i*	P	**Pn**	**23 28 15.1**	**+1.1**
MOPA				*i*	S	**Sn**	**23 29 12.5**	**-5.0**
MOPA	**Mopani**	**5.55**	**53**	*i*	P	**Pn**	**23 28 15.1**	**+1.1**
MOPA				*i*	S	**Sn**	**23 29 12.5**	**-5.0**
GRAF	**Camdeboo Natio**	**5.59**	**199**	⇓*i*	P	**Pn**	**23 28 16.1**	**+1.6**
GRAF				*e*S		**Sn**	**23 29 17.4**	**-1.1**
GRAF					IAML		23 29 44.6	
	comp=Z,29nm,0.6s							
BRAK	**Brakfontein**	**5.77**	**213**	*e*P		**Pn**	**23 28 17.8**	**+0.7**
BRAK				*e*S		**Sn**	**23 29 22.2**	**-0.8**
BRAK					IAML		23 29 49.8	
	comp=Z,26nm,0.5s							
AUGR	**Augrabies**	**5.77**	**252**	*e*S		**Sn**	**23 29 22.0**	**-1.0**
AUGR					IAML		23 29 50.3	
	comp=Z,61nm,0.7s							
SOE	**Somerset East**	**5.78**	**189**	Pn		**Pn**	**23 28 17.7**	**+0.5**
SOE	**Somerset East**	**5.78**	**189**	*e*P		**Pn**	**23 28 17.5**	**+0.3**
SOE				*e*S		**Sn**	**23 29 22.1**	**-1.1**
SOE					IAML		23 29 53.7	
	comp=Z,18nm,0.4s							
ROOI	**Rooidraai Farm**	**6.10**	**205**	*e*P		**Pn**	**23 28 22.1**	**+0.5**
ROOI				*e*S		**Sn**	**23 29 28.9**	**-2.2**
ROOI					IAML		23 30 02.1	
	comp=Z,27nm,0.5s							
ARMS	**Ukamas**	**6.18**	**259**	*e*P		**Pn**	**23 28 24.0**	**+1.3**
ARMS				*e*S		**Sn**	**23 29 32.2**	**-0.9**
ARMS					IAML		23 30 06.6	
	comp=Z,44nm,0.4s							
GRAN	**Grantham**	**6.55**	**215**	*e*P		**Pn**	**23 28 29.7**	**+1.9**
GRAN				*e*S		**Sn**	**23 29 41.3**	**-0.9**
GRAN					IAML		23 30 26.0	
	comp=Z,29nm,0.4s							
FRAZ	**Fraserburg**	**6.69**	**221**	⇓*i*	P	**Pn**	**23 28 30.5**	**+0.7**
FRAZ				*e*S		**Sn**	**23 29 44.3**	**-1.4**
FRAZ					IAML		23 30 19.7	
	comp=Z,20nm,0.7s							
MATP	**Matopo**	**6.76**	**15**			**Pn**	**23 28 31.9**	**+1.2**
MATP	**Matopo**	**6.76**	**15**	⇓*i*	P	**Pn**	**23 28 32.2**	**+1.5**
MATP				*e*S		**

SNAA	Sanae	47.62 192	P	P	23 35 28.2	+1.2	
	comp=Z,1.5nm,0.8s,baz=77,slow=7.4,SNR=5.9						
	comp=Z,1.5nm,0.8s						
KOWA	Kowa	50.83 320	P	P	23 35 52.7	+0.6	
KOWA			IAmb	IAmb	23 36 03.6		
	comp=Z,5.1nm,1.4s						
NVAR	Mina Array Bea	148.51 300	PKPbc	PKiKP	23 46 42.2	+2.2	
	comp=Z,0.3nm,0.5s,baz=94,slow=2.7,SNR=4.1						

*NOU **31** 23:33:54.7, 37˚.07S×179˚.70W, h0km, mb4.0/6, East of North Island, N.Z.*
*WEL **31** 23:34:07.2±1.5, 37˚S±11˚×17˚9E±1˚0, h12km±9km, M3.2/7, ML3.4/7, MLv3.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=143.2, confirmed*
ISC 31 23:34:02.6±2.8, 37˚.16S±0˚.07×179˚.4E±0˚.1, h6km±12km, n71, σ1°26/78, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.94**	**245**	P	**Pn**	**23 34 22.1**	**-0.2**
MXZ				S	**Sg**	**23 34 32.8**	**-0.1**
WMGZ	**Waiomatatini S**	**1.01**	**229**	P	**Pn**	**23 34 25.2**	**+1.9**
PKGZ	**Pakihiroa**	**1.26**	**235**	P	**Pg**	**23 34 28.3**	**+1.5**
PKGZ				S	**Sn**	**23 34 44.1**	**0.0**
PUZ	**Puketiti**	**1.27**	**224**	P	**Pg**	**23 34 28.6**	**+1.6**
PUZ				S	**Sn**	**23 34 45.0**	**+0.8**
HAZ	**Te Kaha**	**1.40**	**245**	P	**Pg**	**23 34 29.5**	**0.0**
HAZ				S	**Sg**	**23 34 47.8**	**+0.2**
TWGZ	**Tauwhareparae**	**1.50**	**227**	P	**Pg**	**23 34 32.1**	**+0.7**
TWGZ				S	**Sg**	**23 34 51.5**	**+0.7**
RUGZ	**Raukumara Rang**	**1.57**	**239**	P	**Pg**	**23 34 32.9**	**+0.2**
RUGZ				S	**Sn**	**23 34 51.8**	**+0.1**
CNGZ	**Carnagh Statio**	**1.61**	**215**	P	**Pg**	**23 34 34.1**	**+0.6**
TKGZ	**Te Karaka**	**1.76**	**223**	P	**Pb**	**23 34 35.1**	**-0.1**
TKGZ				S	**Sn**	**23 34 56.6**	**+0.4**
WIZ	**White Island**	**1.78**	**258**	P	**Pg**	**23 34 35.7**	**-1.0**
MWZ	**Matawai**	**1.87**	**231**	P	**Pb**	**23 34 36.8**	**-0.5**
MWZ				S	**Sn**	**23 34 59.0**	**-0.2**
RIGZ	**Rimuhau**	**2.00**	**219**	P	**Pb**	**23 34 38.6**	**-0.8**
WHRZ	**Whale Island**	**2.03**	**249**	P	**Pb**	**23 34 39.1**	**-0.8**
RAGZ	**Rawiri**	**2.04**	**229**	P	**Pb**	**23 34 39.2**	**-1.0**
URZ	**Urewera**	**2.10**	**238**	P	**Pb**	**23 34 40.1**	**-1.0**
URZ	**Urewera**	**2.10**	**238**	P	**Pb**	**23 34 40.0**	**-1.1**
PRGZ	**Paritu Road**	**2.12**	**213**	P	**Pb**	**23 34 40.1**	**-1.2**
SNGZ	**Shannon Statio**	**2.28**	**224**	P	**Pb**	**23 34 42.0**	**-2.1**
KNZ	**Kokohu**	**2.29**	**215**	P	**Pn**	**23 34 41.8**	**+0.9**
MHGZ	**Mahia Peninsul**	**2.30**	**210**	P	**Pb**	**23 34 42.7**	**-1.8**
OPRZ	**Ohinepanea**	**2.34**	**252**	P	**Pb**	**23 34 43.0**	**-2.2**
MYRZ	**Mayor Island**	**2.50**	**266**	P	**Pb**	**23 34 45.1**	**-2.9**
MKRZ	**Makatiti**	**2.51**	**246**	P	**Pb**	**23 34 46.1**	**-2.0**
RAHZ	**Arahi**	**2.52**	**225**	P	**Pn**	**23 34 45.2**	**+1.1**
TARZ	**Mount Tarawera**	**2.52**	**244**	P	**Pb**	**23 34 45.7**	**-2.5**
WHHZ	**Waihua**	**2.55**	**221**	P	**Pn**	**23 34 45.8**	**+1.3**
MTHZ	**Maungataniwha**	**2.62**	**229**	P	**Pb**	**23 34 47.1**	**-2.8**
NMHZ	**Naumai**	**2.80**	**226**	P	**Pn**	**23 34 49.3**	**+1.4**
ARHZ	**Aropaoanui**	**2.81**	**221**	P	**Pn**	**23 34 49.1**	**+1.1**
MRHZ	**Matea Rd**	**2.87**	**234**	P	**Pn**	**23 34 50.3**	**+1.3**
KUZ	**Kuaotunu**	**2.96**	**277**	P	**Pn**	**23 34 50.1**	**+0.1**
BKZ	**Black Stump Fm**	**3.02**	**252**	P	**Pn**	**23 34 52.0**	**+1.3**
BKZ	**Black Stump Fm**	**3.03**	**228**	P	**Pn**	**23 34 52.2**	**+1.1**
CKHZ	**Cape Kidnapper**	**3.08**	**215**	P	**Pn**	**23 34 52.1**	**+0.4**
TOZ	**Tahuroa Road**	**3.13**	**258**	P	**Pn**	**23 34 53.8**	**+1.3**
KWHZ	**Kaweka Forest**	**3.24**	**225**	P	**Pn**	**23 34 54.7**	**+0.6**
GRZ	**Great Barrier**	**3.28**	**285**	P	**Pn**	**23 34 55.8**	**+1.4**
KAHZ	**Kahuranaki**	**3.28**	**216**	P	**Pn**	**23 34 54.9**	**+0.4**
MKAZ	**Moumakai**	**3.37**	**270**	P	**Pn**	**23 34 56.3**	**+0.6**
WIAZ	**Waiheke Island**	**3.42**	**275**	P	**Pn**	**23 34 57.1**	**+0.7**
KRHZ	**Kereru**	**3.42**	**223**	P	**Pn**	**23 34 56.6**	**+0.1**
PXZ	**Pawanui**	**3.48**	**214**	P	**Pn**	**23 34 56.8**	**-0.3**
BHHZ	**Black Hill Sta**	**3.49**	**227**	P	**Pn**	**23 34 58.3**	**+0.8**
TMVZ	**Te Maari**	**3.49**	**235**	P	**Pn**	**23 34 58.3**	**+0.8**
ETVZ	**East Tongariro**	**3.50**	**235**	P	**Pn**	**23 34 58.4**	**+0.8**
NTVZ	**North Tongarir**	**3.50**	**235**	P	**Pn**	**23 34 58.4**	**+0.7**
KRVZ	**Karewarewa**	**3.52**	**236**	P	**Pn**	**23 34 58.7**	**+0.8**
OTVZ	**Oturere**	**3.54**	**235**	P	**Pn**	**23 34 58.9**	**+0.7**
NNVZ	**North Ngauruho**	**3.56**	**235**	P	**Pn**	**23 34 59.8**	**+1.4**
WTVZ	**West Tongariro**	**3.56**	**235**	P	**Pn**	**23 34 59.8**	**+1.4**
SNVZ	**South Ngauruho**	**3.57**	**234**	P	**Pn**	**23 34 59.4**	**+0.7**
NGZ	**Ngauruhoe**	**3.59**	**235**	P	**Pn**	**23 34 59.8**	**+0.9**
MBAZ	**Motutapu North**	**3.61**	**275**	P	**Pn**	**23 35 00.9**	**+1.9**
MOVZ	**Moawhango**	**3.62**	**231**	P	**Pn**	**23 35 00.2**	**+0.9**
WNVZ	**Wahianoa**	**3.68**	**233**	P	**Pn**	**23 35 01.0**	**+0.8**
ABAZ	**Army Bay**	**3.69**	**277**	P	**Pn**	**23 35 02.1**	**+2.0**
WPHZ	**Waipukurau**	**3.70**	**218**	P	**Pn**	**23 35 00.2**	**-0.1**
PNHZ	**Pukenui**	**3.71**	**221**	P	**Pn**	**23 35 00.1**	**-0.3**
PRHZ	**Porangahau**	**3.77**	**214**	P	**Pn**	**23 35 00.8**	**-0.4**
HIZ	**Hauiti**	**3.82**	**248**	P	**Pn**	**23 35 04.2**	**+2.2**
TSZ	**Takapari Road**	**3.94**	**222**	P	**Pn**	**23 35 03.0**	**-0.6**
WCZ	**Waipu Caves**	**4.23**	**285**	P	**Pn**	**23 35 09.0**	**+1.5**
BFZ	**Birch Farm**	**4.28**	**214**	P	**Pn**	**23 35 07.3**	**-0.9**
BFZ	**Birch Farm**	**4.28**	**214**	P	**Pn**	**23 35 07.0**	**-1.2**
PRWZ	**Pori Road**	**4.30**	**217**	P	**Pn**	**23 35 07.9**	**-0.7**
OUZ	**Omahuta**	**5.06**	**291**	P	**Pn**	**23 35 20.9**	**+1.9**
OUZ	**Omahuta**	**5.06**	**291**	P	**Pn**	**23 35 20.8**	**+1.9**
QRZ	**Quartz Range**	**6.46**	**233**	P	**Pn**	**23 35 40.4**	**+2.1**
QRZ	**Quartz Range**	**6.46**	**233**	P	**Pn**	**23 35 37.1**	**-1.1**
KHZ	**Kahutara**	**6.91**	**219**	P	**Pn**	**23 35 45.2**	**+0.9**
CTZ	**Chatham Island**	**7.24**	**156**	P	Pn	23 35 54.2	+5.3

*WEL **31** 23:36:43.3±1.7, 37˚S±13˚×17˚9E±1˚1, h19km±13km, M3.5/7, ML3.9/7, MLv3.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=143.9, confirmed*
ISC 31 23:36:41.9±2.8, 37˚.17S±0˚.08×179˚.3E±0˚.1, h17km±12km, n71, σ0°82/78, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.87**	**243**	P	**Pb**	**23 36 58.1**	**-0.4**
MXZ				S	**Sb**	**23 37 09.7**	**-0.3**
WMGZ	**Waiomatatini S**	**0.95**	**227**	P	**Pg**	**23 37 01.3**	**+1.0**
WMGZ				S	**Sn**	**23 37 14.7**	**+1.1**
PKGZ	**Pakihiroa**	**1.20**	**233**	P	**Pn**	**23 37 04.3**	**+0.4**
PKGZ				S	**Sn**	**23 37 19.8**	**-0.1**
PUZ	**Puketiti**	**1.21**	**222**	P	**Pn**	**23 37 04.7**	**+0.6**
PUZ				S	**Sn**	**23 37 21.0**	**+0.8**
HAZ	**Te Kaha**	**1.33**	**244**	P	**Pn**	**23 37 05.4**	**-0.3**
HAZ				S	**Sg**	**23 37 23.7**	**-1.2**
TWGZ	**Tauwhareparae**	**1.44**	**225**	P	**Pn**	**23 37 08.1**	**+0.8**
TWGZ				S	**Sb**	**23 37 27.2**	**+0.8**
RUGZ	**Raukumara Rang**	**1.50**	**238**	P	**Pn**	**23 37 09.2**	**+1.0**
RUGZ				S	**Sb**	**23 37 27.8**	**-0.5**
CNGZ	**Carnagh Statio**	**1.56**	**213**	P	**Pn**	**23 37 10.1**	**+1.2**
TKGZ	**Te Karaka**	**1.70**	**221**	P	**Pn**	**23 37 11.3**	**+0.5**
TKGZ				S	**Sn**	**23 37 32.1**	**-0.1**
MWZ	**Matawai**	**1.81**	**230**	P	**Pn**	**23 37 12.8**	**+0.4**
RIGZ	**Rimuhau**	**1.95**	**218**	P	**Pn**	**23 37 14.7**	**+0.4**
WHRZ	**Whale Island**	**1.96**	**249**	P	**Pn**	**23 37 15.0**	**+0.6**
RAGZ	**Rawiri**	**1.98**	**228**	P	**Pn**	**23 37 15.3**	**+0.5**
URZ	**Urewera**	**2.04**	**237**	P	**Pn**	**23 37 16.0**	**+0.5**
PRGZ	**Paritu Road**	**2.07**	**212**	P	**Pn**	**23 37 16.4**	**+0.5**
SNGZ	**Shannon Statio**	**2.22**	**223**	P	**Pn**	**23 37 18.1**	**+0.1**
EDRZ	**Edgecumbe**	**2.23**	**244**	P	**Pn**	**23 37 18.7**	**+0.6**
KNZ	**Kokohu**	**2.24**	**214**	P	**Pn**	**23 37 17.9**	**-0.4**
MHGZ	**Mahia Peninsul**	**2.26**	**208**	P	**Pn**	**23 37 18.8**	**+0.3**
OPRZ	**Ohinepanea**	**2.27**	**252**	P	**Pn**	**23 37 19.0**	**+0.3**
MYRZ	**Mayor Island**	**2.43**	**267**	P	**Pn**	**23 37 20.6**	**-0.3**
TARZ	**Mount Tarawera**	**2.44**	**243**	P	**Pn**	**23 37 21.8**	**+0.7**
RAHZ	**Arahi**	**2.46**	**224**	P	**Pn**	**23 37 21.3**	**+0.1**
RRRZ	**Republican Roa**	**2.48**	**241**	P	**Pn**	**23 37 22.0**	**+0.4**
WHHZ	**Waihua**	**2.50**	**220**	P	**Pn**	**23 37 21.9**	**+0.2**
MTHZ	**Maungataniwha**	**2.56**	**228**	P	**Pn**	**23 37 23.1**	**+0.4**
NMHZ	**Naumai**	**2.76**	**225**	P	**Pn**	**23 37 25.4**	**+0.2**
ARHZ	**Aropaoanui**	**2.76**	**220**	P	**Pn**	**23 37 25.3**	**0.0**
MRHZ	**Matea Rd**	**2.81**	**233**	P	**Pn**	**23 37 26.1**	**0.0**
KUZ	**Kuaotunu**	**2.88**	**277**	P	**Pn**	**23 37 25.6**	**-1.5**
BKZ	**Black Stump Fm**	**2.97**	**227**	P	**Pn**	**23 37 28.2**	**-0.1**
CKHZ	**Cape Kidnapper**	**3.03**	**214**	P	**Pn**	**23 37 27.5**	**-1.6**
TOZ	**Tahuroa Road**	**3.06**	**258**	P	**Pn**	**23 37 28.6**	**-0.9**
KWHZ	**Kaweka Forest**	**3.18**	**224**	P	**Pn**	**23 37 30.6**	**-0.6**
GRZ	**Great Barrier**	**3.21**	**286**	P	**Pn**	**23 37 30.9**	**-0.6**
KAHZ	**Kahuranaki**	**3.23**	**215**	P	**Pn**	**23 37 30.9**	**-1.0**
MKAZ	**Moumakai**	**3.29**	**270**	P	**Pn**	**23 37 31.7**	**-1.1**
WIAZ	**Waiheke Island**	**3.34**	**275**	P	**Pn**	**23 37 32.4**	**-1.0**
KRHZ	**Kereru**	**3.37**	**222**	P	**Pn**	**23 37 33.0**	**-0.7**
TMVZ	**Te Maari**	**3.42**	**234**	P	**Pn**	**23 37 34.1**	**-0.5**
PXZ	**Pawanui**	**3.43**	**213**	P	**Pn**	**23 37 32.9**	**-1.6**
BHHZ	**Black Hill Sta**	**3.43**	**227**	P	**Pn**	**23 37 34.4**	**-0.3**
ETVZ	**East Tongariro**	**3.43**	**234**	P	**Pn**	**23 37 34.2**	**-0.6**
NTVZ	**North Tongarir**	**3.43**	**235**	P	**Pn**	**23 37 34.3**	**-0.4**
KRVZ	**Karewarewa**	**3.45**	**235**	P	**Pn**	**23 37 34.8**	**-0.2**
OTVZ	**Oturere**	**3.48**	**234**	P	**Pn**	**23 37 34.8**	**-0.6**
NNVZ	**North Ngauruho**	**3.49**	**235**	P	**Pn**	**23 37 35.7**	**+0.1**
WTVZ	**West Tongariro**	**3.50**	**235**	P	**Pn**	**23 37 35.7**	**0.0**
SNVZ	**South Ngauruho**	**3.50**	**234**	P	**Pn**	**23 37 35.2**	**-0.6**
NGZ	**Ngauruhoe**	**3.52**	**234**	P	**Pn**	**23 37 35.6**	**-0.5**
MBAZ	**Motutapu North**	**3.54**	**275**	P	**Pn**	**23 37 36.3**	**+0.3**
TUVZ	**Tukino**	**3.54**	**233**	P	**Pn**	**23 37 36.0**	**-0.3**
MOVZ	**Moawhango**	**3.56**	**230**	P	**Pn**	**23 37 35.9**	**-0.6**
TWVZ	**Taurewa**	**3.58**	**237**	P	**Pn**	**23 37 36.8**	**+0.1**
WNVZ	**Wahianoa**	**3.61**	**232**	P	**Pn**	**23 37 36.5**	**-0.8**
ABAZ	**Army Bay**	**3.61**	**278**	P	**Pn**	**23 37 37.2**	**+0.1**
WPHZ	**Waipukurau**	**3.65**	**217**	P	**Pn**	**23 37 36.4**	**-1.2**
PNHZ	**Pukenui**	**3.65**	**221**	P	**Pn**	**23 37 36.2**	**-1.5**
AWAZ	**Awhitu Peninsu**	**3.71**	**270**	P	**Pn**	**23 37 38.9**	**+0.4**
PRHZ	**Porangahau**	**3.72**	**213**	P	**Pn**	**23 37 36.8**	**-1.8**
HIZ	**Hauiti**	**3.75**	**248**	P	**Pn**	**23 37 40.2**	**+1.2**
WTAZ	**Waiatarua**	**3.77**	**272**	P	**Pn**	**23 37 39.3**	**-0.1**
TSZ	**Takapari Road**	**3.88**	**221**	P	**Pn**	**23 37 38.9**	**-1.9**
DVHZ	**Dannevirke**	**3.96**	**217**	P	**Pn**	**23 37 40.6**	**-1.4**
WCZ	**Waipu Caves**	**4.16**	**286**	P	**Pn**	**23 37 44.3**	**-0.4**
WAZ	**Wanganui**	**4.25**	**231**	P	**Pn**	**23 37 46.2**	**+0.4**
PRWZ	**Pori Road**	**4.25**	**216**	P	**Pn**	**23 37 44.2**	**-1.7**
LREZ	**Lake Rotokare**	**4.47**	**238**	P	Pn	23 37 54.6	+5.8
OUZ	**Omahuta**	**4.99**	**291**	P	**Pn**	**23 37 56.3**	**+0.2**
QRZ	**Quartz Range**	**6.40**	**233**	P	**Pn**	**23 38 13.9**	**-1.5**
CTZ	**Chatham Island**	**7.26**	**156**	P	**Pn**	**23 38 28.7**	**+1.5**

*OSPL **31** 23:39:29.5±3.3, 19˚.05N×67˚.65W, h4km±53km, ML2.2*
*NEIC **31** 23:39:32.5±1.2, 18˚.92N±0˚.08×67˚.72W±0˚.04, h38km±70km, Error ellipse: s-maj=12.2km s-min=6.0km az=188.0*
*RSPR **31** 23:39:33.5, 18˚.99N×67˚.65W, h41km±18km, MD2.9/5*
ISC 31 23:39:27.5±1.8, 19˚.2N±0˚.1×67˚.61W±0˚.05, h27km, n29, σ0°87/29, 3C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.84**	**146**	Pn	**Pn**	**23 39 43.7**	**+0.1**
AGPR				IAML		23 40 00.6	
	comp=N,92nm,1.6s						
AGPR	**Aguadilla, PR**	**0.84**	**146**	*eS*	**Sb**	**23 39 52.4**	**-2.1**
AGPR				IAML		23 39 56.6	
	comp=Z,58nm,1.6s						
PCDR	**Punta Cana, DR**	**0.98**	**228**	Pn	**Pn**	**23 39 45.2**	**-0.2**
PCDR				IAML		23 40 09.9	
	comp=E,82nm,2.3s						
PCDR	**Punta Cana, DR**	**0.98**	**228**	*i* P	**Pn**	**23 39 45.3**	**-0.2**
PCDR				IAML		23 40 00.1	
	comp=Z,116nm,1.6s						
LSP	**Las Mesas**	**1.10**	**153**	*eP*	**Pb**	**23 39 49.2**	**+1.2**
LSP	**Las Mesas**	**1.10**	**153**	*eS*	**Sb**	**23 40 01.8**	**-0.2**
AOPR	**Arecibo Observ**	**1.15**	**135**	*eP*	**Pb**	**23 39 50.8**	**+2.0**
AOPR	**Arecibo Observ**	**1.15**	**135**		**Pb**	**23 39 50.8**	**+2.0**
AOPR	**Arecibo Observ**	**1.15**	**135**	IAML		23 40 11.4	
	comp=N,45nm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.25**	**158**	*eP*	**Pb**	**23 39 51.4**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.25**	**158**		**Pb**	**23 39 51.4**	**+0.9**
CRPR					**Sb**	**23 40 05.8**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.25**	**158**	IAML		23 40 08.6	
	comp=E,37nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.25**	**158**	*i* P	**Pb**	**23 39 50.9**	**+0.4**
CRPR				*eS*	**Sb**	**23 40 05.7**	**-0.4**
CRPR				IAML		23 40 08.3	
	comp=Z,49nm,0.9s						
MLPR	**Magueyes Islan**	**1.31**	**156**	*eP*	**Pn**	**23 39 50.1**	**+0.1**
MLPR	**Magueyes Islan**	**1.31**	**156**	*eS*	**Sn**	**23 40 06.3**	**-0.3**
MLPR	**Magueyes Islan**	**1.31**	**156**		**Pn**	**23 39 50.1**	**+0.1**
MLPR					**Sn**	**23 40 06.3**	**-0.3**
MLPR	**Magueyes Islan**	**1.31**	**156**	IAML		23 40 08.0	
	comp=E,48nm,0.3s						
MLPR				IAML		23 40 15.2	
	comp=N,30nm,2.5s						
CELP	**Cerrillos**	**1.46**	**138**	*eP*	**Pb**	**23 39 54.6**	**+0.6**
CELP	**Cerrillos**	**1.46**	**138**	*eS*	**Sb**	**23 40 11.8**	**-0.4**
CELP	**Cerrillos**	**1.46**	**138**		**Pb**	**23 39 54.6**	**+0.6**
CELP					**Sb**	**23 40 11.8**	**-0.4**
CELP	**Cerrillos**	**1.46**	**138**	IAML		23 40 42.1	
	comp=E,22nm,2.3s						
OBIP	**Obispado Ponce**	**1.47**	**139**	*eS*	**Sb**	**23 40 12.3**	**-0.2**
OBIP	**Obispado Ponce**	**1.47**	**139**		**Sb**	**23 40 12.3**	**-0.2**
OBIP	**Obispado Ponce**	**1.47**	**139**	Pn	**Pb**	**23 39 53.4**	**+0.8**
DR12	**Loma Pena Alta**	**1.72**	**258**	*eP*	**Pb**	**23 39 59.2**	**+0.8**
DR12	**Loma Pena Alta**	**1.72**	**258**	Pn	**Pb**	**23 39 58.9**	**+0.4**
CBYP	**Canovanas**	**1.89**	**118**	Pn	**Pb**	**23 40 02.1**	**+0.8**
HUMP	**Col San Antoni**	**1.96**	**121**	Pn	**Pb**	**23 40 02.5**	**+0.1**
HUMP				IAML		23 40 43.8	
	comp=N,19nm,1.2s						
MTP	**Monte Pirata**	**2.22**	**118**	Pn	**Pb**	**23 40 06.5**	**-0.5**
MTP				IAML		23 40 59.5	
	comp=N,17nm,2.7s						
MTP				IAML		23 41 26.4	
	comp=E,15nm,3.1s						

*IDC **31** 23:47:22.5±1.2, 56˚.24N×163˚.27E, h0km, mb3.3/5, mbtmp3.3/6, ML2.7/1, Error ellipse: s-maj=45.1km s-min=24.1km az=156.0*
*MOS **31** 23:47:22.4±0.6, 56˚.16N×163˚.53E, h6km, mb3.9/1, Error ellipse: s-maj=8.5km s-min=5.5km az=46.3*
*KRSC **31** 23:47:23.1±1.3, 56˚.01N×163˚.42E, h6km±19km, ML4.3*
ISC 31 23:47:24.7±1.2, 56˚.22N±0˚.05×163˚.41E±0˚.04, h16km±7km, n90, σ1°15/115, mb3.5/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.33**	**268**	PN	**Pg**	**23 47 31.2**	**-0.3**
KBTR	**Krutoberegovo**	**0.33**	**268**	*eP*	**Pg**	**23 47 31.2**	**-0.3**
KBG	**Krutoberegovo**	**0.39**	**275**	PN	**Pg**	**23 47 32.4**	**-0.3**
KBG				S	**Sg**	**23 47 38.1**	**0.0**
KBG	**Krutoberegovo**	**0.39**	**275**	*eP*	**Pg**	**23 47 32.4**	**-0.3**
KBG				*eS*	**Sg**	**23 47 38.1**	**0.0**
SMKR	**Semkarok**	**1.14**	**289**	PN	**Pn**	**23 47 45.4**	**-0.6**
SMKR				S	**Sg**	**23 48 02.8**	**+1.3**
SMKR	**Semkarok**	**1.14**	**289**	*eP*	**Pn**	**23 47 45.4**	**-0.6**
SMKR				*eS*	**Sg**	**23 48 02.8**	**+1.3**
BDR	**Baidarnaya**	**1.27**	**287**	PN	**Pb**	**23 47 47.8**	**-0.5**
BDR				S	**Sg**	**23 48 06.9**	**+1.2**
BDR	**Baidarnaya**	**1.27**	**287**	*eP*	**Pb**	**23 47 47.8**	**-0.5**
BDR				*eS*	**Sg**	**23 48 06.9**	**+1.2**
SRKR	**Sorokina**	**1.32**	**290**	PN	**Pb**	**23 47 48.5**	**-0.5**
SRKR				S	**Sg**	**23 48 07.5**	**+0.3**
SRKR	**Sorokina**	**1.32**	**290**	*eP*	**Pb**	**23 47 48.5**	**-0.5**
SRKR				*eS*	**Sg**	**23 48 07.5**	**+0.3**
ZLN	**Zelenaya**	**1.47**	**263**	PN	**Pn**	**23 47 51.1**	**+0.5**
ZLN				S	**Sb**	**23 48 11.0**	**+0.8**
ZLN	**Zelenaya**	**1.47**	**263**	*eP*	**Pn**	**23 47 51.1**	**+0.5**
ZLN				*eS*	**Sb**	**23 48 11.0**	**+0.8**
CIRR	**Tsirk**	**1.49**	**267**	PN	**Pn**	**23 47 51.4**	**+0.5**
CIRR	**Tsirk**	**1.49**	**267**	*eP*	**Pn**	**23 47 51.4**	**+0.5**
LGNR	**Loginova**	**1.53**	**266**	*eS*	**Sb**	**23 48 12.4**	**+0.4**
KLY	**Klyuchi**	**1.54**	**275**	PN	**Pn**	**23 47 49.8**	**-1.6**
KLY				S	**Sn**	**23 48 08.7**	**-2.4**
KLY	**Klyuchi**	**1.54**	**275**	*eP*	**Pn**	**23 47 49.8**	**-1.6**
KLY				*eS*	**Sn**	**23 48 08.7**	**-2.4**
BZGR	**Bezymyannyi-Gr**	**1.55**	**261**	PN	**Pb**	**23 47 52.5**	**-0.5**
BZGR				S	**Sb**	**23 48 13.0**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.55**	**261**	*eP*	**Pb**	**23 47 52.5**	**-0.5**
BZGR				*eS*	**Sb**	**23 48 13.0**	**+0.7**
KRSR	**Krestovskiy**	**1.59**	**271**	PN	**Pn**	**23 47 52.3**	**+0.1**
KRSR				S	**Sb**	**23 48 13.6**	**+0.1**
KRSR	**Krestovskiy**	**1.59**	**271**	*eP*	**Pn**	**23 47 52.3**	**+0.1**
KRSR				*eS*	**Sb**	**23 48 13.6**	**+0.1**
BZWR	**Bezymyannyi-We**	**1.65**	**262**	PN	**Pn**	**23 47 53.8**	**+0.6**
BZWR				S	**Sb**	**23 48 15.6**	**+0.2**
BZWR	**Bezymyannyi-We**	**1.65**	**262**	*eP*	**Pn**	**23 47 53.8**	**+0.6**
BZWR				*eS*	**Sb**	**23 48 15.6**	**+0.2**
BZMR	**Bezymyannaya**	**1.66**	**261**	PN	**Pn**	**23 47 54.1**	**+0.8**
BZMR	**Bezymyannaya**	**1.66**	**261**	*eP*	**Pn**	**23 47 54.1**	**+0.8**
KIRR	**Kirishev**	**1.74**	**262**	PN	**Pn**	**23 47 55.0**	**+0.7**
KIRR	**Kirishev**	**1.74**	**262**	*eP*	**Pn**	**23 47 55.0**	**+0.7**
BKI	**Bering**	**1.77**	**124**	PN	**Pn**	**23 47 54.8**	**+0.2**
BKI				S	**Sn**	**23 48 17.0**	**+0.2**
BKI	**Bering**	**1.77**	**124**	*eP*	**Pn**	**23 47 54.8**	**+0.2**
BKI				*eS*	**Sn**	**23 48 17.0**	**+0.2**
KPT	**Kopyto**	**1.80**	**263**	PN	**Pn**	**23 47 56.1**	**+0.9**
KPT	**Kopyto**	**1.80**	**263**	*eP*	**Pn**	**23 47 56.1**	**+0.9**
KMNR	**Kamenistaya**	**1.84**	**257**	PN	**Pb**	**23 47 57.1**	**-0.9**
KMNR	**Kamenistaya**	**1.84**	**257**	*eP*	**Pb**	**23 47 57.1**	**-0.9**
MKZ	**Mys Kozlova**	**1.93**	**211**	PN	**Pn**	**23 47 55.6**	**-1.1**
MKZ	**Mys Kozlova**	**1.93**	**211**	*eP*	**Pn**	**23 47 55.6**	**-1.1**
KOZ	**Kozyrevsk**	**1.98**	**267**	PN	**Pn**	**23 47 58.4**	**+0.8**
KOZ				S	**Sb**	**23 48 25.8**	**+0.9**
KOZ	**Kozyrevsk**	**1.98**	**267**	*eP*	**Pn**	**23 47 58.4**	**+0.8**
KOZ				*eS*	**Sb**	**23 48 25.8**	**+0.9**
SRDR	**Sredinnyy**	**2.06**	**274**	PN	**Pb**	**23 48 00.1**	**-1.6**
SRDR				S	**Sb**	**23 48 26.4**	**-0.7**
SRDR	**Sredinnyy**	**2.06**	**274**	*eP*	**Pb**	**23 48 00.1**	**-1.6**
SRDR				*eS*	**Sb**	**23 48 26.4**	**-0.7**
TUMR	**Tumrok**	**2.07**	**244**	PN	**Pn**	**23 47 59.9**	**+1.0**
TUMR				S	**Sb**	**23 48 27.2**	**-0.2**
TUMR	**Tumrok**	**2.07**	**244**	*eP*	**Pn**	**23 47 59.9**	**+1.0**
TUMR				*eS*	**Sb**	**23 48 27.2**	**-0.2**
ESO	**Esso**	**2.66**	**265**	PN	**Pn**	**23 48 09.2**	**+2.4**
ESO	**Esso**	**2.66**	**265**	*eP*	**Pn**	**23 48 09.2**	**+2.4**
SPN	**Mys Shipunski**	**3.70**	**214**	PN	**Pn**	**23 48 20.0**	**-1.1**
SPN	**Mys Shipunski**	**3.70**	**214**	*eP*	**Pn**	**23 48 20.0**	**-1.1**
SPN				*eS*	**Sn**	**23 49 01.0**	**-3.3**
NLC	**Nalytchevo**	**3.86**	**219**	PN	**Pn**	**23 48 23.6**	**+0.3**
NLC	**Nalytchevo**	**3.86**	**219**	*eP*	**Pn**	**23 48 23.6**	**+0.3**
SDLR	**Sedlovina**	**3.95**	**223**	PN	**Pn**	**23 48 25.5**	**+0.9**
SDLR	**Sedlovina**	**3.95**	**223**	*eP*	**Pn**	**23 48 25.5**	**+0.9**
KRX	**Arik**	**3.98**	**226**	PN	**Pn**	**23 48 26.4**	**+1.3**
KRX	**Arik**	**3.98**	**226**	*eP*	**Pn**	**23 48 26.4**	**+1.3**
KRER	**Koryakskii**	**3.98**	**225**	PN	**Pn**	**23 48 26.5**	**+1.3**
KRER	**Koryakskii**	**3

az=158.0

ISC 31 23:51:17.9±0.7,**22.2S**±0.1×**172.75E**±0.07,**h35**km,**n24**,
σ1§**99**/26,**mb4.3**/9,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**4.44**	**279**	Pn	**Pn**	**23 52 23.9**	**+1.1**
PINNC	**Pines Island,**	**4.92**	**264**	Pn	**Pn**	**23 52 30.1**	**+0.8**
OUENC	**Ouen Island, N**	**5.47**	**267**	Pn	**Pn**	**23 52 38.9**	**+1.9**
ONTNC	**Ouen Toro**	**5.83**	**268**	Pn	**Pn**	**23 52 41.9**	**0.0**
DZM	**Mont Dzumac**	**5.85**	**270**	Pn	**Pn**	**23 52 43.6**	**+1.4**
DZM	**Mont Dzumac**	**5.85**	**270**	P	**Pn**	**23 52 43.3**	**+1.1**
	5.5nm,0.9s,baz=118,slow=17,SNR=1.4						
DZM				S	**Sn**	**23 53 51.2**	**+3.2**
	6.8nm,0.6s,baz=126,slow=23,SNR=1.4						
MSVF	**Nonsavu**	**6.68**	**49**	Pn	**Pn**	**23 52 51.6**	**-2.1**
MSVF	**Nonsavu**	**6.68**	**49**	P	**Pn**	**23 52 54.9**	**+1.2**
	21nm,0.7s,baz=241,slow=19,SNR=7.4						
MSVF				S	**Sn**	**23 54 12.0**	**+3.3**
	3.9nm,0.6s,baz=105,slow=23,SNR=0.9						
EIDS	**Eidsvold**	**20.07**	**257**	P	**Pn**	**23 55 48.6**	**-1.6**
LBZ	**Lake Benmore**	**22.22**	**185**	P	**P**	**23 56 08.8**	**-2.5**
LBZ				IAmb	IAmb	23 56 30.7	
	comp=Z,36nm,1.4s						
CTAO	**Charters Tower**	**24.79**	**270**	P	**P**	**23 56 34.6**	**-2.1**
ASAR	**Alice Springs**	**35.73**	**260**	P	**P**	**23 58 11.3**	**-2.2**
	comp=Z,2.2nm,0.9s,baz=86,slow=9.3,SNR=12						
	comp=Z,2.2nm,0.9s						
WB0	**Warramunga Arr**	**35.83**	**267**	P	**P**	**23 58 14.3**	**0.0**
WB0				IAmb	IAmb	23 58 23.9	
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	**35.85**	**266**	P	**P**	**23 58 14.9**	**+0.4**
WRA	**Warramunga Arr**	**35.85**	**266**	P	**P**	**23 58 11.4**	**-3.1**
	comp=Z,0.2nm,0.4s,baz=96,slow=8.4,SNR=2.8						
	comp=Z,0.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**44.28**	**266**	P	**P**	**23 59 23.6**	**-0.9**
FITZ				IAmb	IAmb	23 59 35.7	
	comp=Z,7.7nm,0.9s						
VNDA	**Vanda**	**55.61**	**183**	P	**P**	**00 00 51.3**	**+1.6**
VNDA				IAmb	IAmb	00 00 59.1	
	comp=Z,3.4nm,1.2s						
VNDA	**Vanda**	**55.61**	**183**	P	**P**	**00 00 51.4**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=11,slow=7.9,SNR=5.0						
	comp=Z,0.6nm,0.8s						
SBA	**Scott Base**	**55.77**	**182**	P	**P**	**00 00 53.0**	**+2.2**
SBA				IAmb	IAmb	00 00 54.3	
	comp=Z,6.7nm,1.0s						
QSPA	**South Pole Qui**	**67.86**	**180**	P	**P**	**00 02 13.8**	**+1.3**
SNAA	**Sanae**	**86.32**	**181**	P	**P**	**00 03 57.2**	**+1.2**
SNAA				IAmb	IAmb	00 04 02.9	
	comp=Z,2.7nm,1.1s						
ILAR	**Eielson Array**	**92.12**	**16**	P	**P**	**00 04 19.6**	**-3.5**
	comp=Z,0.3nm,0.5s,baz=214,slow=5.0,SNR=4.3						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**148.63**	**333**	PKPbc	**PKPdf**	**00 10 58.0**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=41,slow=7.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**167.60**	**225**	PKP	**PKPdf**	**00 11 20.4**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=159,slow=4.5,SNR=2.7						

ISC Computed Locations for August 2016

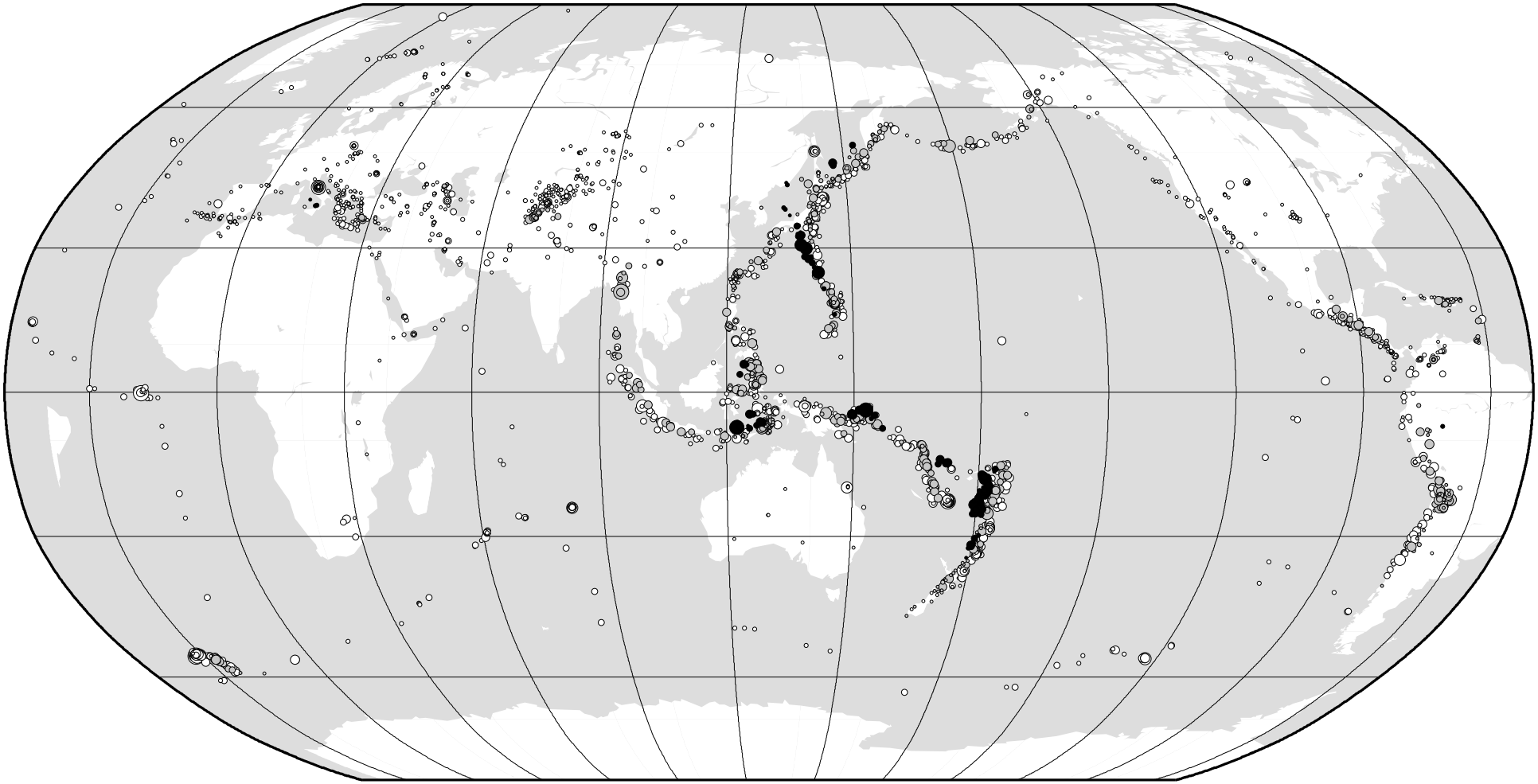

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3194 Events